Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

NORS ***01*** *00:03:21.1±0.0,42.18N×44.87E,h8km,MPVA3.3*
TIP ***01*** *00:03:22.4,42.36N×44.86E,h16km±1km*
ISC 01 00:03:23.2±1.0,42°30N±0.02×44°84E±0.02,h11km±9km,
n27,σ1°17/52,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUDG	**Gudauri**	**0.31**	**303**	P	**Pg**	**00 03 29.6**	**-0.1**
GUDG				S	**Sg**	**00 03 34.3**	**+0.2**
PNSH	**Pansheti**	**0.38**	**334**	P	**Pg**	**00 03 29.6**	**-1.2**
PNSH				S	**Sg**	**00 03 34.3**	**-1.5**
MTEO	**Meteo**	**0.44**	**330**	P	**Pg**	**00 03 31.1**	**-1.0**
MTEO				S	**Sg**	**00 03 37.1**	**-1.0**
BTNK	**Botanikuri**	**0.61**	**183**	P	**Pn**	**00 03 36.3**	**-1.6**
VLKR	**Vladikavkaz**	**0.76**	**351**	*e*Pg	**Pb**	**00 03 38.2**	**-0.3**
VLKR				*e*Sg	**Sg**	**00 03 49.9**	**+2.0**
KMGR	**Komgaron**	**0.76**	**2**	*i* Pg	**Pb**	**00 03 38.0**	**-0.5**
KMGR				*e*Sg	**Sn**	**00 03 50.8**	**-0.6**
ZEI	**Tsey**	**0.85**	**306**	*e*Pg	**Pb**	**00 03 38.5**	**-1.5**
ZEI				*e*Sg	**Sb**	**00 03 51.2**	**-0.3**
TRLG	**Trialeti**	**0.93**	**216**	P	**Pn**	**00 03 41.9**	**-0.5**
TRLG				S	**Sn**	**00 03 56.0**	**+0.2**
KORR	**Kora**	**0.97**	**325**	*i* Pg	**Pb**	**00 03 42.0**	**0.0**
KORR				*e*Sg	**Sn**	**00 03 57.4**	**+0.8**
ARNR	**Ardon**	**0.97**	**335**	*i* Pg	**Pb**	**00 03 42.1**	**0.0**
ARNR				*e*Sg	**Sn**	**00 03 57.5**	**+0.9**
BRNG	**Burnasheti**	**1.01**	**229**	P	**Pn**	**00 03 43.5**	**+0.1**
BRNG				S	**Sn**	**00 03 58.6**	**+0.9**
ONI	**Oni**	**1.06**	**286**	P	**Pb**	**00 03 43.3**	**-0.4**
ONI				S	**Sg**	**00 03 59.8**	**+2.2**
DMNI	**Dmanisi**	**1.08**	**207**	P	**Pg**	**00 03 43.8**	**-0.2**
DMNI				S	**Sn**	**00 03 59.5**	**+0.1**
DIGR	**Digorskoe uzhe**	**1.10**	**303**	*i* Pg	**Pn**	**00 03 43.8**	**-1.0**
DIGR				*e*Sg	**Sg**	**00 04 00.7**	**+1.8**
BKRG	**Bakuriani**	**1.12**	**242**	P	**Pg**	**00 03 44.9**	**+0.2**
BKRG				S	**Sg**	**00 04 00.1**	**+0.9**
LGD	**Lagodekhi**	**1.15**	**113**	P	**Pg**	**00 03 44.6**	**-0.7**
LGD				S	**Sg**	**00 04 00.8**	**+0.7**
GROC	**Groznyy**	**1.15**	**38**	*e*Pg	**Pg**	**00 03 45.3**	**-0.1**
GROC				*e*Sg	**Sg**	**00 04 01.9**	**+1.6**
DVE	**Vedeno**	**1.16**	**55**	*e*Pg	**Pn**	**00 03 44.2**	**-1.2**
DVE				*e*Sg	**Sn**	**00 03 59.8**	**-1.4**
STDR	**Stavd-Durt**	**1.21**	**332**	*e*Pg	**Pg**	**00 03 47.3**	**+0.8**
STDR				*e*Sg	**Sg**	**00 04 05.7**	**+3.3**
DDFL	**Dedoflistskaro**	**1.28**	**131**	P	**Pg**	**00 03 49.2**	**+1.4**
AKH	**Akhalkalaki**	**1.34**	**229**	P	**Pg**	**00 03 48.5**	**-0.4**
AKH				S	**Sg**	**00 04 07.8**	**+1.5**
TKB	**Tkibuli**	**1.37**	**273**	P	**Pg**	**00 03 49.3**	**-0.2**
TKB				S	**Sg**	**00 04 08.0**	**+0.8**
BGD	**Bogdanovka**	**1.39**	**222**	P	**Pg**	**00 03 49.4**	**-0.4**
BGD				S	**Sg**	**00 04 08.8**	**+0.9**
TRKR	**Terskaya**	**1.43**	**357**	*e*Pg	**Pb**	**00 03 50.1**	**+0.3**
TRKR				*i* Sg	**Sg**	**00 04 12.1**	**+2.9**
PRTR	**Priterechnaya**	**1.51**	**345**	*e*Pg	**Pb**	**00 03 51.8**	**+0.6**
PRTR				*e*Sg	**Sg**	**00 04 13.8**	**+2.0**
ABS	**Abastumani**	**1.60**	**251**	P	**Pb**	**00 03 52.8**	**-0.1**
ABS				S	**Sg**	**00 04 14.9**	**+0.2**
NEY	**Neytrino**	**1.82**	**302**	*e*Pg	**Pb**	**00 03 56.8**	**+0.1**
NEY				*e*Sg	**Sg**	**00 04 21.9**	**0.0**

JMA 01 00:10:33.0±0.2,25°07N×123°57E,h19km,M2.6,
Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.75**	**169**	P	Pb	00 10 47.1	-0.3
YOJ	**Yonaguni jima**	**0.79**	**220**	P	Pb	00 10 47.9	-0.2
YOJ				*e*S	Sb	00 10 57.8	-0.7
JISG	**Ishigakijimahi**	**0.83**	**125**	P	Pb	00 10 48.6	-0.2
JISG				*e*S	Sb	00 10 59.4	-0.1
JYNG	**Yonagunijimaku**	**0.84**	**223**	P	Pb	00 10 48.6	-0.3
JYNG				*e*S	Sb	00 10 59.2	-0.6
JIJ	**Ishigaki jima**	**0.88**	**143**	P	Pb	00 10 49.0	-0.6
JIJ				*e*S	Sg	00 11 01.3	-0.4
JKRS	**Kuro-shima**	**0.92**	**154**	P	Pb	00 10 50.2	-0.1
JKRS				*e*S	Sb	00 11 02.1	-0.1
HATJ	**Hateruma jima**	**1.03**	**168**	P	Pb	00 10 52.0	-0.2
HATJ				*e*S	Sb	00 11 05.6	+0.2

TAP 01 00:11:01.9,24°35N×121°77E,h16km,ML1.9,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.08**	**341**	P	Pg	00 11 05.5	+0.3
ENA	baz=345			S	Sg	00 11 08.3	+1.0
EWUT	**Wuta**	**0.09**	**5**	P	Pg	00 11 05.5	+0.3
EWUT	baz=5.0			S	Sg	00 11 08.5	+1.0
NACB	**Ninganchiao**	**0.24**	**222**	*e*P	Pg	00 11 07.4	+0.2
NACB	baz=221			S	Sb	00 11 11.6	-0.2
TWC	**Suao**	**0.27**	**16**	*e*P	Pg	00 11 07.7	0.0
TWC	baz=17			*e*S	Sg	00 11 12.0	+0.4
NDS	**Dongshan**	**0.28**	**350**	P	Pb	00 11 08.6	-0.1
NDS	baz=350			S	Sb	00 11 13.3	+0.1
ETLH	**Xiulin Townshi**	**0.30**	**241**	*e*P	Pb	00 11 08.7	-0.2
ETLH	baz=241			S	Sb	00 11 13.9	+0.2
TWD	**Chiawan**	**0.31**	**210**	*e*P	Pb	00 11 09.5	+0.4
ENTT	**Nioudou**	**0.34**	**327**	P	Pb	00 11 09.8	+0.2
ENTT	baz=327			S	Sb	00 11 15.4	+0.6
NDT	**Datong Townshi**	**0.34**	**317**	*e*P	Pb	00 11 10.0	+0.4
NDT	baz=316			S	Sb	00 11 15.5	+0.7
NNSB	**Datong**	**0.36**	**282**	P	Pb	00 11 10.2	+0.2
NNSB	baz=282			S	Sb	00 11 15.8	+0.3
NNSH	**Datong**	**0.36**	**282**	*e*P	Pb	00 11 10.2	+0.2
NNSH	baz=282			*e*S	Sb	00 11 15.8	+0.4
NNS	**Nan Shan**	**0.37**	**284**	*e*P	Pb	00 11 10.4	+0.2
NNS	baz=283			S	Sb	00 11 15.9	+0.2
TWE	**Neicheng**	**0.38**	**346**	*e*S	Sb	00 11 16.6	+0.7
YHNB	**Yeheng**	**0.48**	**312**	*e*P	Pb	00 11 12.4	+0.5
YHNB	baz=311			S	Sb	00 11 19.2	+0.4
NWLT	**Wulai**	**0.49**	**330**	*e*P	Pg	00 11 11.3	-0.4
NWLT	baz=330			S	Sb	00 11 19.4	+0.4
FUSS	**Fushou**	**0.49**	**258**	*e*P	Pb	00 11 12.6	+0.3
FUSS	baz=257			S	Sb	00 11 19.9	+0.6
NSK	**Sanguang**	**0.49**	**311**	*e*P	Pb	00 11 12.4	+0.1
NSK	baz=311			S	Sb	00 11 19.6	+0.4
WHF	**Hehuan Shan**	**0.50**	**246**	P	Pb	00 11 12.4	-0.2
WHF	baz=245			S	Sb	00 11 20.1	+0.2
TDCB	**Techi**	**0.57**	**260**	P	Pb	00 11 13.8	+0.3
TDCB	baz=259			S	Sb	00 11 22.0	+0.6
CHGB	**Renai**	**0.62**	**242**	*e*P	Pb	00 11 14.4	0.0
CHGB	baz=241			S	Sb	00 11 23.8	+0.9
WHP	**Taichung City**	**0.76**	**265**	*e*P	Pb	00 11 16.9	+0.2
WHP	baz=264			*e*S	Sn	00 11 28.1	-1.0
	baz=264						

VWDT	**VWDT**	**0.83**	**224**	*e*P	Pg	00 11 17.9	-0.1
VWDT	baz=223			*e*S	Sn	00 11 29.9	-0.8
EHY	**Hungye**	**0.94**	**206**	*e*P	Pb	00 11 19.2	-0.5
EHY	baz=205			*e*S	Sn	00 11 33.6	+0.2
YULB	**Yu-li**	**1.05**	**204**	*e*P	Pb	00 11 21.6	-0.1
YULB	baz=204			*e*S	Sb	00 11 35.5	+0.3

IDC ***01*** *00:12:33.8±2.1,5.48S×152.77E,h0km,mb3.6/5,*
mb1 3.8/5,mb1mx3.6/37,mbtmp3.6/5,Error ellipse:
s-maj=88.5km s-min=26.1km az=125.0
ISC 01 00:12:39.2±1.7,5.6S±0.3×152.8E±0.3,h37km,n9,σ1s21/7,
mb3.4/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**16.90**	**282**	P	**P**	**00 16 34.0**	**-0.8**
BAKI	**Biak**	**17.19**	**284**	P	P	00 16 43.5	+5.5
FAKI	**Fak Fak**	**20.64**	**277**	P	Pn	00 17 19.7	+1.5
WRA	**Warramunga Arr**	**22.92**	**230**	P	**P**	**00 17 41.2**	**+1.0**
	0.6nm,0.6s,baz=52,slow=9.8,SNR=9.0						
ASAR	**Alice Springs**	**25.57**	**223**	P	**P**	**00 18 05.1**	**+0.2**
	0.5nm,0.8s,baz=54,slow=9.0,SNR=5.3						
FITZ	**Fitzroy Crossi**	**29.27**	**243**	P	**P**	**00 18 38.0**	**-0.1**
	1.5nm,0.6s,baz=62,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**80.89**	**319**	P	**P**	**00 24 51.1**	**+1.5**
	0.3nm,0.7s,baz=96,slow=6.2,SNR=3.8						
ILAR	**Eielson Array**	**82.89**	**22**	P	**P**	**00 24 59.5**	**-0.3**
	0.2nm,0.6s,baz=241,slow=5.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**150.51**	**287**	PKPbc	**PKPbc**	**00 32 26.7**	**-1.4**
	0.5nm,0.7s,baz=105,slow=4.5,SNR=2.4						

ECX ***01*** *00:13:43.7±0.7,31.25N×115.89W,h9km±5km,MD1.8,*
ML2.0
MEX ***01*** *00:13:44.0±0.4,31.11N×115.93W,h12km±12km,MD3.7*
ISC 01 00:13:38.6±2.3,31.07N±0.09×115.98W±0.06,h4km±12km,
n9,σ1s21/18,4C-2D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTX	**Valle De La Tr**	**0.36**	**27**	⇑*i*P	**Pb**	**00 13 47.4**	**-0.3**
VTX				*e*S	**Sg**	**00 13 50.2**	**-0.2**
SPIG	**San Pedro Mart**	**0.44**	**93**	⇑*i*P	**Pn**	**00 13 51.7**	**-0.4**
	baz=279,slow=16						
SPIG				*i* S	**Sb**	**00 13 57.7**	**+1.4**
SPIG	**San Pedro Mart**	**0.44**	**93**	⇑*e*P	**Pn**	**00 13 51.5**	**-0.8**
SPIG				*e*S	**Sb**	**00 13 57.5**	**+1.2**
SPX	**San Pedro Mart**	**0.44**	**94**	⇑*e*P	**Pn**	**00 13 51.7**	**-0.4**
SPX				*i* S	**Sb**	**00 13 57.7**	**+1.3**
SPX				⇓*e*		00 13 58.4	
SPX				IAML		00 13 58.4	
	comp=N,145nm,0.1s						
SJX	**San Joaquin**	**0.69**	**2**	*e*P	**Pn**	**00 13 57.2**	**+2.0**
SJX				*e*S	**Sn**	**00 14 07.4**	**+0.9**
SJX				IAML		00 14 08.3	
	comp=N,96nm,0.2s						
SJX				⇓*e*		00 14 08.3	
ECBX	**El Chinero**	**0.89**	**63**	*e*P	**Pb**	**00 13 57.1**	**+0.5**
ECBX				*e*S	**Sg**	**00 14 07.2**	**-0.1**
CBX	**Cerro Bola**	**1.37**	**335**	*e*P	**Pb**	**00 14 05.2**	**+0.3**
CBX				*e*S	**Sg**	**00 14 21.7**	**-1.0**
CBX				⇑*e*		00 14 24.3	
CBX				IAML		00 14 24.3	
	comp=E,20nm,0.2s						
TJIG	**Tijuana**	**1.48**	**337**	*e*P	**Pg**	**00 14 07.0**	**-0.1**
TJIG				*e*S	**Sn**	**00 14 24.4**	**-1.6**
MBIG	**Mexicali**	**1.49**	**26**	*i* P	**Pn**	**00 14 05.5**	**-0.7**
MBIG				*i* S	**Sn**	**00 14 23.9**	**-2.2**

NEIC ***01*** *00:32:06.5±2.0,18.39S±0.09×168.5E±0.1,h70km±4km,*
mb4.6/8,Error ellipse: s-maj=18.5km s-min=11.9km
az=107.0
IDC ***01*** *00:32:06.6±7.1,18.57S×168.57E,h77km±69km,mb3.5/6,*
mb1 3.8/7,mb1mx3.6/23,mbtmp3.8/7,ML4.1/1,MS3.5/1,
Ms1 3.5/1,ms1mx2.7/22,Error ellipse: s-maj=62.5km
s-min=32.2km az=166.0
NOU ***01*** *00:32:45.8,21.12S×167.09E,h0km,MLv3.4,Loyalty*
Islands
ISC 01 00:32:03.0±0.8,18.37S±0.06×168.6E±0.2,h37km,n25,
σ1s75/25,mb4.0/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.22**	**334**		**Pn**	**00 32 54.4**	**+3.4**
YATNC	**Mamie plateau,**	**4.02**	**204**	P	**Pn**	**00 33 04.0**	**+1.9**
DZM	**Mont Dzumac**	**4.22**	**209**	P	**Pn**	**00 33 06.8**	**+1.9**
	13nm,0.3s,baz=28,slow=17,SNR=88						
DZM				S	**Sn**	**00 33 51.7**	**-1.3**
	38nm,0.3s,baz=114,slow=20,SNR=23						
DZM	**Mont Dzumac**	**4.22**	**209**		**Pn**	**00 33 06.5**	**+1.6**
DZM	**Mont Dzumac**	**4.22**	**209**	P	**Pn**	**00 33 06.9**	**+2.0**
OUENC	**Ouen Island, N**	**4.37**	**202**	P	**Pn**	**00 33 10.0**	**+3.2**
ONTNC	**Ouen Toro**	**4.42**	**207**	P	**Pn**	**00 33 10.3**	**+2.7**
BKZ	**Black Stump Fm**	**21.82**	**163**		**P**	**00 36 53.0**	**+1.0**
BKZ				IAmb	IAmb	00 37 42.5	
	comp=Z,31nm,1.6s						
THZ	**Tophouse**	**23.60**	**172**	P	**P**	**00 37 12.4**	**+1.9**
THZ				IAmb	IAmb	00 38 08.1	
	comp=Z,39nm,1.3s						
MSWZ	**Moikau Station**	**23.66**	**168**	P	**P**	**00 37 11.6**	**+0.5**
LTZ	**Lake Taylor**	**24.53**	**174**	P	**P**	**00 37 20.0**	**+0.9**
LTZ				IAmb	IAmb	00 37 21.8	
	comp=Z,44nm,1.8s						
WR0	**Warramunga Arr**	**32.22**	**262**	P	**P**	**00 38 28.0**	**0.0**
WB0	**Warramunga Arr**	**32.37**	**262**	P	**P**	**00 38 28.0**	**-1.3**
WB2	**Warramunga Arr**	**32.40**	**262**	P	**P**	**00 38 31.1**	**+1.5**
WRA	**Warramunga Arr**	**32.41**	**262**	P	**P**	**00 38 28.1**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=85,slow=8.3,SNR=5.2						
AS31	**Alice Springs**	**32.80**	**255**	P	**P**	**00 38 32.4**	**-0.7**
ASAR	**Alice Springs**	**32.80**	**255**	P	**P**	**00 38 32.2**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=83,slow=8.7,SNR=14						
FITZ	**Fitzroy Crossi**	**40.77**	**263**	P	**P**	**00 39 40.9**	**-0.1**
FITZ				IAmb	IAmb	00 39 41.5	
	comp=Z,5.0nm,0.7s						
NWAO	**Narrogin (SRO)**	**48.11**	**242**	LR	LR	01 00 52.6	
	comp=Z,56nm,20.6s,baz=301,slow=36						
CMAR	**Chiang Mai Arr**	**77.63**	**294**	P	**P**	**00 43 55.5**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=111,slow=4.9,SNR=4.0						
SONM	**Songino Array**	**86.19**	**323**	P	**P**	**00 44 40.1**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=121,slow=6.3,SNR=6.2						
ILAR	**Eielson Array**	**89.58**	**17**	P	**P**	**00 44 54.2**	**-2.0**
	comp=Z,0.3nm,0.7s,baz=223,slow=6.1,SNR=2.2						
TXAR	**Lajitas Array**	**96.85**	**61**	P	**P**	**00 45 31.4**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=216,slow=4.5,SNR=2.4						
ARCES	**ARCESS Array B**	**124.09**	**345**	PKP	**PKPdf**	**00 50 54.9**	**-2.0**
	comp=Z,3.9nm,1.1s,baz=25,slow=2.4,SNR=11						
DAVOX	**Davos/Dischmat**	**146.71**	**333**	PKPbc	**PKPbc**	**00 51 40.4**	**-0.8**
	comp=Z,2.0nm,0.4s,baz=2.7,slow=4.5,SNR=7.0						

MEX 01 00:35:02.1±0.4,16.36N×98.95W,h16km±36km,MD3.7,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.41**	**336**	*i* P	Pg	00 35 09.2	-1.3
CRIG				*i* S	Sg	00 35 14.6	-1.5
PNIG	**Pinotepa**	**0.79**	**88**	*i* P	Pb	00 35 14.8	-2.8
PNIG				*i* S	Sb	00 35 24.6	-3.5
TLIG	**Tlapa**	**1.25**	**17**	*e*P	Pn	00 35 22.3	-2.8
TLIG				*i* S	Sb	00 35 36.4	-5.0
YOIG	**Yosondua**	**1.44**	**70**	*e*P	Pn	00 35 24.2	-3.5
YOIG				*e*S	Sn	00 35 41.1	-5.4
TXIG	**Tlaxiaco**	**1.44**	**52**	*e*P	Pn	00 35 24.8	-3.0
TXIG				*i* S	Sn	00 35 41.2	-5.3
MEIG	**Mezcala**	**1.68**	**338**	*i* P	Pn	00 35 28.2	-2.7
MEIG				*i* S	Sn	00 35 47.1	-5.1
FTIG	**Fresnillo de T**	**1.73**	**27**	*e*P	Pn	00 35 29.0	-2.6
FTIG				*i* S	Sn	00 35 48.4	-5.0
PEIG	**Puerto Escondi**	**1.77**	**102**	*i* P	Pn	00 35 28.4	-3.7

MEX 01 00:35:21.1±0.4,16.35N×98.97W,h15km,MD3.6,1D,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIG	**Cruz Grande**	**0.41**	**338**	*i* P	Pg	00 35 28.0	-1.4
CRIG				*i* S	Sg	00 35 34.8	-0.2
PNIG	**Pinotepa**	**0.81**	**87**	*i* P	Pg	00 35 34.2	-2.7
PNIG				*i* S	Sg	00 35 44.0	-3.6
TLIG	**Tlapa**	**1.26**	**18**	*i* P	Pn	00 35 41.0	-3.3
TLIG				*e*S	Sb	00 35 56.2	-4.7
YOIG	**Yosondua**	**1.46**	**70**	⇓*i*P	Pn	00 35 43.8	-3.4
YOIG				*i* S	Sn	00 36 00.8	-5.3
TXIG	**Tlaxiaco**	**1.46**	**52**	*i* P	Pn	00 35 43.2	-4.0
TXIG				*i* S	Sn	00 36 01.0	-5.2
PEIG	**Puerto Escondi**	**1.79**	**101**	*i* P	Pn	00 35 48.9	-2.6
PEIG				*i* S	Sn	00 36 09.5	-4.4
PEIG	**Puerto Escondi**	**1.79**	**101**	*i* S	Pn	00 35 49.3	-2.2

AEIC ***01*** *00:41:00±1.6,56.45N±0.06×169.6W±0.1,h30km±8km,*
Error ellipse: s-maj=12.1km s-min=7.0km az=65.0
NEIC 01 00:41:01.4±1.7,56.54N±0.03×169.3W±0.1,h18km±8km,
ML3.1(AEIC),Error ellipse: s-maj=11.5km s-min=3.7km
az=78.0,Pribilof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPIA	**Saint Paul Isl**	**0.81**	**322**		Pb	00 41 16.6	-0.3
MSW	**Makushin Switc**	**3.01**	**150**		Pn	00 41 47.5	-0.6
AKRB	**Akutan Reef Bi**	**3.05**	**141**		Pn	00 41 48.9	+0.3
MAPS	**Pakushin South**	**3.06**	**152**		Pn	00 41 48.4	-0.4
MNAT	**Makushin Natee**	**3.07**	**149**		Pn	00 41 48.3	-0.6
AKV	**Akutan Volcano**	**3.09**	**140**		Pn	00 41 49.8	+0.6
MGOD	**Makushin Gods**	**3.09**	**152**		Pn	00 41 49.2	0.0
AKUT	**Akutan**	**3.15**	**138**	Pn	Pn	00 41 49.8	-0.2
WECS	**Westdahl Cape**	**3.28**	**126**		Pn	00 41 51.8	0.0
WESP	**Westdahl Peak**	**3.33**	**126**		Pn	00 41 52.5	0.0
ATKA	**Atka Island**	**5.20**	**215**	Pn	Pn	00 42 20.4	+2.3
GSTD	**Great Sitkin T**	**6.01**	**224**		Pn	00 42 34.3	+5.0
GSTD	**Great Sitkin T**	**6.01**	**224**		Pn	00 42 34.3	+5.0
CHGN	**Chignik**	**6.06**	**88**	Pn	Pn	00 42 30.8	+0.8
GAMB	**Gambell**	**7.35**	**352**	Pn	Pn	00 42 48.3	+0.7

NEIC ***01*** *00:41:57.2±0.4,51.4N±0.1×177.91W±0.06,h59km±11km,*
Error ellipse: s-maj=20.1km s-min=5.7km az=176.0
AEIC 01 00:41:56±0.4,51.5N±0.1×177.90W±0.07,h60km±8km,
ML2.6,Error ellipse: s-maj=18.3km s-min=3.7km
az=162.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**0.35**	**346**		Pn	00 42 08.2	+1.6
TAFP	**Tanaga Falls P**	**0.41**	**353**		Pn	00 42 08.3	+1.3
TANO	**Tanaga North**	**0.44**	**342**		Pn	00 42 08.9	+1.5
KIMD	**Kanaga Island**	**0.49**	**57**		Pn	00 42 09.4	+1.5
KIKV	**Kanaga Island**	**0.59**	**50**		Pn	00 42 10.5	+1.5
GAEA	**Gareloi East**	**0.60**	**299**		Pn	00 42 10.6	+1.5
GALAA	**Gareloi Lava P**	**0.60**	**296**		Pn	00 42 10.7	+1.6
KICM	**Kanaga Island**	**0.61**	**46**		Pn	00 42 10.9	+1.8
ADK	**Adak**	**0.85**	**62**	Pn	Pn	00 42 13.2	+1.2
ADK				Sn	Sn	00 42 25.4	+1.5
ADAG	**Mount Adagdak**	**0.94**	**59**		Pn	00 42 14.9	+1.7
GSTD	**Great Sitkin T**	**1.22**	**62**		Pn	00 42 18.4	+1.4
GSMY	**Great Sitkin M**	**1.27**	**64**		Pn	00 42 19.1	+1.5
GSTR	**Great Sitkin T**	**1.29**	**62**	Pn	Pn	00 42 19.7	+1.9
CERAA	**Semis' Rag'd T**	**1.56**	**286**		Pn	00 42 22.8	+1.4
CESW	**Semis' Southwe**	**1.63**	**285**		Pn	00 42 23.7	+1.3
AMKA	**Amchitka**	**1.76**	**267**	Pn	Pn	00 42 24.8	+0.7
LSNW	**Little Sitkin**	**2.28**	**283**		Pn	00 42 32.5	+1.3
ATKA	**Atka Island**	**2.40**	**71**		Pn	00 42 34.4	+1.5
NIKH	**Nikolski High**	**5.75**	**72**	Pn	Pn	00 43 13.1	-5.5

IDC ***01*** *00:47:05.9±2.2,5.14S×152.71E,h0km,mb3.8/8,*
mb1 3.9/8,mb1mx3.7/39,mbtmp3.8/8,MS3.8/1,Ms1 3.8/1,
ms1mx2.7/37,Error ellipse: s-maj=87.4km s-min=21.4km
az=120.0
ISC 01 00:47:10.7±1.9,5.2S±0.3×152.9E±0.4,h35km,n11,
σ0s77/10,mb3.6/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.01**	**233**		**Sn**	**00 50 10.4**	**+0.9**
	4.2nm,0.3s,baz=115,slow=15,SNR=2.7						
WRA	**Warramunga Arr**	**23.21**	**229**	P	**P**	**00 52 13.5**	**-1.3**
	0.5nm,0.5s,baz=54,slow=9.7,SNR=5.3						
ASAR	**Alice Springs**	**25.87**	**223**	P	**P**	**00 52 39.7**	**+0.2**
	0.8nm,0.6s,baz=60,slow=8.8,SNR=10						
FITZ	**Fitzroy Crossi**	**29.50**	**242**	P	**P**	**00 53 11.8**	**-0.2**
	0.7nm,0.4s,baz=78,slow=9.3,SNR=6.4						
LEM	**Lembang**	**45.00**	**266**	LR	LR	01 17 53.5	
	comp=Z,95nm,18.1s,baz=150,slow=41						
PETK	**Petropavlovsk-**	**58.26**	**3**	P	**P**	**00 57 01.8**	**+0.2**
	2.2nm,0.8s,baz=193,slow=5.0,SNR=1.8						
MKAR	**Makanchi Array**	**80.68**	**319**	P	**P**	**00 59 20.6**	**+0.3**
	0.2nm,0.4s,baz=99,slow=5.6,SNR=7.5						
ZALV	**Zalesovo Beam**	**81.54**	**326**	P	**P**	**00 59 23.8**	**-0.8**
	0.4nm,0.4s,baz=121,slow=5.8,SNR=2.2						
ILAR	**Eielson Array**	**82.53**	**22**	P	**P**	**00 59 30.4**	**+0.8**
	0.3nm,0.7s,baz=251,slow=5.6,SNR=3.2						
NRIK	**Noril'sk**	**86.38**	**341**	P	**P**	**00 59 49.0**	**-0.1**
	1.6nm,0.5s,baz=136,slow=4.6,SNR=5.4						
TORD	**Torodi Ar. Bea**	**150.49**	**287**	PKPbc	**PKPbc**	**01 06 59.5**	**-0.4**
	0.5nm,0.4s,baz=74,slow=2.4,SNR=7.6						

GUC ***01*** *00:47:28.4±0.6,23.29S×68.70W,h109km±3km,ML3.5*
IDC ***01*** *00:47:28.7±1.2,23.11S×68.50W,h100km±10km,mb3.7/4,*
mb1 3.7/6,mb1mx3.4/28,mbtmp3.9/6,Error ellipse:
s-maj=31.1km s-min=21.8km az=128.0
ISC 01 00:47:27.7±0.9,23.27S±0.05×68.58W±0.07,h101km±8km,
n21,σ1s23/35,mb3.8/4,7C-1D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.72**	**335**	P	**Pn**	**00 47 46.7**	**+0.9**
	72nm,0.3s,baz=160,slow=5.9,SNR=574						
LVC				S	**Sn**	**00 48 00.1**	**+0.8**
	289nm,0.3s,baz=330,slow=19,SNR=23						
LVC	**Limon Verde**	**0.72**	**335**	⇓*i

comp=E,3.6nm,0.3s,baz=250,slow=11,SNR=66
SIV S **Sn** **00 51 36.9 -4.9**
comp=E,0.2nm,0.3s,baz=89,slow=23,SNR=1.8
QSPA South Pole Qui 66.94 180 P **P** **00 58 11.0 +1.8**
comp=E,1.4nm,0.8s,baz=333,slow=0.8,SNR=5.7
ULM Lac du Bonnet 77.08 342 P **P** **00 59 10.2 +0.5**
comp=E,0.5nm,0.4s,baz=169,slow=8.5,SNR=5.3
TORD Torodi Ar. Bea 77.67 70 P **P** **00 59 14.4 +0.7**
comp=E,0.8nm,0.5s,baz=255,slow=5.2,SNR=8.5
YKA Yellowknife Ar 92.94 340 P **P** **01 00 28.9 -0.1**
comp=E,0.2nm,0.9s,baz=134,slow=5.3,SNR=4.3
MKAR Makanchi Array 146.86 38 PKPbc **PKPbc** **01 06 57.6 -0.7**
comp=E,0.3nm,0.7s,baz=303,slow=2.3,SNR=4.1

NNC 01 00:48:43.1±1.3, 54.67N×83.66E, h0km, mb 3.6, mpv 3.1, 10C-4D, Error ellipse: s-maj=11.4km s-min=3.5km az=16.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.99**	**136**	⇑P	Pg	00 49 01.7	-0.4
	1.4nm,0.5s						
ZAA0				⇓S	Sb	00 49 16.0	-0.8
	18nm,0.7s						
KURBB	**Kurchatov Arra**	**5.11**	**220**	⇑Pn	Pn	00 50 01.9	+1.1
	0.8nm,0.3s						
KURBB				⇑Pg	Pg	00 50 17.9	-3.1
	3.0nm,0.6s						
KURBB				⇓Sn	Sn	00 51 00.9	+0.4
	9.8nm,0.7s						
KURBB				⇑Lg	Lg	00 51 27.2	
	50nm,0.6s						
MK31	**Makanchi Array**	**7.93**	**187**	⇓Pn	Pn	00 50 40.1	+0.5
	0.7nm,0.5s,baz=17,slow=13,SNR=28						
MK31				⇑Sn	Sn	00 52 11.4	+1.4
	0.5nm,0.5s,baz=17,slow=22,SNR=2.6						
MK31				⇓Lg	Lg	00 52 53.6	
	3.7nm,0.7s,baz=23,slow=30,SNR=7.7						
MAKZ	**Makanchi**	**7.94**	**188**	⇑Pn	Pn	00 50 40.3	+0.6
	0.8nm,0.5s						
MAKZ				⇑Sn	Sn	00 52 10.7	+0.5
	1.1nm,0.5s						
MAKZ				⇑Lg	Lg	00 52 54.7	
	2.4nm,0.7s						
BRVK	**Borovoye**	**8.07**	**264**	⇑Pn	Pn	00 50 41.9	+0.5
	1.2nm,0.6s						
BRVK				⇑Sn	Sn	00 52 13.3	0.0
	2.4nm,0.8s						

*IDC **01** 01:13:11.7±0.9, 5.65S×152.40E, h0km, mb4.2/15, mb1 4.4/16, mb1mx4.2/52, mbtmp4.2/16, ML2.3/1, MS3.3/2, Ms1 3.2/2, ms1mx2.9/31, Error ellipse: s-maj=28.6km s-min=15.0km az=120.0*
*NEIC **01** 01:13:13.8±2.0, 5.54S±0.07×152.3E±0.1, h10km±1km, mb4.6/43, Error ellipse: s-maj=23.7km s-min=11.0km az=105.0*
ISC 01 01:13:18.1±0.7, 5.55S±0.08×152.3E±0.1, h40km, n76, σ0892/77, mb4.5/37, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.35**	**355**		**Pn**	**01 13 41.0**	**+0.4**
PMG	**Port Moresby**	**6.37**	**233**	Pn	**Pn**	**01 14 49.5**	**0.0**
	4.2nm,0.3s,baz=54,slow=8.9,SNR=9.7						
PMG				S	**Sn**	**01 16 02.2**	**+1.2**
	16nm,0.3s,baz=69,slow=16,SNR=8.7						
PMG				LR	LR	01 17 01.9	
	comp=Z,137nm,21.8s,baz=90,slow=36						
PMG	**Port Moresby**	**6.37**	**233**		**Pn**	**01 14 51.5**	**+2.0**
EIDS	**Eidsvold**	**19.75**	**183**	P	**Pn**	**01 17 46.1**	**-0.3**
SIJI	**Sorong**	**21.49**	**282**	P	**P**	**01 18 02.9**	**-0.8**
	6.5nm,0.7s,baz=156,slow=23,SNR=1.5						
MTN	**Manton Dam**	**22.09**	**249**	P	**P**	**01 18 09.6**	**-0.5**
MTN				IAmb	IAmb	01 18 13.9	
	comp=Z,20nm,0.8s						
WB0	**Warramunga Arr**	**22.43**	**229**	P	**P**	**01 18 12.7**	**-1.0**
WB0				IAmb	IAmb	01 18 19.5	
	comp=Z,17nm,1.2s						
WR0	**Warramunga Arr**	**22.43**	**229**	P	**P**	**01 18 13.8**	**+0.1**
WB2	**Warramunga Arr**	**22.56**	**229**	P	**P**	**01 18 13.8**	**-1.3**
WRA	**Warramunga Arr**	**22.57**	**229**	P	**P**	**01 18 13.9**	**-1.4**
	comp=Z,4.5nm,0.6s,baz=55,slow=10.0,SNR=56						
WRA				S	**S**	**01 22 19.0**	**-1.3**
	comp=Z,1.4nm,1.0s,baz=56,slow=16,SNR=4.4						
WRA	**Warramunga Arr**	**22.57**	**229**	P	**P**	**01 18 14.4**	**-0.8**
AS31	**Alice Springs**	**25.26**	**223**	P	**P**	**01 18 42.0**	**+1.2**
ASAR	**Alice Springs**	**25.26**	**223**	P	**P**	**01 18 40.0**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=64,slow=8.8,SNR=40						
ASAR	**Alice Springs**	**25.26**	**223**	P	**P**	**01 18 41.7**	**+0.9**
STKA	**Stephens Creek**	**28.05**	**200**	P	**P**	**01 19 04.6**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=53,slow=10,SNR=1.6						
STKA				LR	LR	01 29 05.8	
	comp=Z,108nm,21.4s,baz=16,slow=34						
FITZ	**Fitzroy Crossi**	**28.86**	**242**	P	**P**	**01 19 12.0**	**-1.1**
	comp=Z,4.6nm,0.6s,baz=59,slow=7.2,SNR=30						
FITZ	**Fitzroy Crossi**	**28.86**	**242**	P	**P**	**01 19 12.2**	**-0.9**
FITZ				IAmb	IAmb	01 19 18.1	
	comp=Z,8.7nm,0.8s						
KSAR	**Wonju Array Be**	**48.44**	**334**	P	**P**	**01 21 53.9**	**-2.7**
NJ2	**Nanjing**	**49.10**	**322**	*e*P	**P**	**01 22 02.0**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**57.73**	**296**	P	**P**	**01 23 06.2**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=100,slow=5.2,SNR=5.9						
PETK	**Petropavlovsk-**	**58.61**	**4**	P	**P**	**01 23 10.8**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=119,slow=5.2,SNR=5.9						
HHC	**Hu-ho-hao-te**	**59.36**	**325**	*e*P	**P**	**01 23 17.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,85nm,6.1s						
LZH	**Lanzhou**	**61.41**	**316**	*e*P	**P**	**01 23 31.4**	**+0.7**
LZH				pP	pP	01 23 35.0	-6.5
LZH				sP	sP	01 23 40.5	-5.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
GTA	**Gaotai**	**65.86**	**318**	*e*P	P	01 24 06.1	+6.1
GTA				pP	pwP	01 24 17.3	+2.4
GTA				sP	PcP	01 24 22.8	-7.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**66.68**	**328**	P	**P**	**01 24 05.7**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=137,slow=4.9,SNR=13						
SONM	**Songino Array**	**66.68**	**328**	P	**P**	**01 24 05.8**	**+0.7**
SONM				IAmb	IAmb	01 24 07.0	
	comp=Z,2.9nm,0.9s						
VNDA	**Vanda**	**72.11**	**178**	P	**P**	**01 24 36.2**	**-1.7**
	comp=Z,0.6nm,0.8s,baz=346,slow=6.1,SNR=2.5						
VNDA	**Vanda**	**72.11**	**178**	P	**P**	**01 24 37.3**	**-0.7**
SBA	**Scott Base**	**72.66**	**177**	P	**P**	**01 24 42.5**	**+1.2**
SBA				IAmb	IAmb	01 24 42.9	
	comp=Z,5.6nm,1.2s						
BILL	**Bilibino**	**74.08**	**5**	P	**P**	**01 24 50.6**	**+0.9**
BILL				IAmb	IAmb	01 24 50.9	
	comp=Z,6.1nm,1.1s						
GAMB	**Gambell**	**74.23**	**16**	P	**P**	**01 24 51.6**	**+1.0**
GAMB				IAmb	IAmb	01 24 52.3	
	comp=Z,7.6nm,1.0s						
WMQ	**Urumqi**	**75.94**	**318**	*e*P	**P**	**01 25 01.7**	**+0.7**
ANM	**Nome**	**76.64**	**17**	P	**P**	**01 25 05.4**	**+1.0**
TNA	**Tin City**	**76.65**	**16**	P	**P**	**01 25 06.1**	**+1.7**
RDOG	**Red Dog Mine**	**79.83**	**16**	P	**P**	**01 25 23.2**	**+1.1**
PPLA	**Purkeypile**	**80.05**	**23**	P	**P**	**01 25 23.4**	**-0.1**
MK31	**Makanchi Array**	**80.55**	**319**	P	**P**	**01 25 25.6**	**-0.8**
MKAR	**Makanchi Array**	**80.55**	**319**	P	**P**	**01 25 26.6**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=105,slow=6.6,SNR=5.7						
MKAR	**Makanchi Array**	**80.55**	**319**	P	**P**	**01 25 25.9**	**-0.6**
MAKZ	**Makanchi**	**80.76**	**319**	P	**P**	**01 25 27.4**	**-0.1**
KTH	**Kantishna Hill**	**80.89**	**22**	P	**P**	**01 25 27.0**	**-1.0**
KTH				IAmb	IAmb	01 25 32.9	
	comp=Z,4.6nm,0.9s						
BPAW	**Bear Paw Mtn.**	**81.16**	**22**	P	**P**	**01 25 29.6**	**+0.3**
IMAR	**Indian Mountai**	**81.25**	**20**	P	**P**	**01 25 29.9**	**+0.2**
ZALV	**Zalesovo Beam**	**81.49**	**326**	P	**P**	**01 25 30.9**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=93,slow=5.9,SNR=8.4						
ZALV	**Zalesovo Beam**	**81.49**	**326**	P	**P**	**01 25 30.8**	**-0.4**
RND	**Reindeer**	**81.61**	**23**	P	**P**	**01 25 31.3**	**-0.4**
MCK	**McKinley**	**81.74**	**23**	P	**P**	**01 25 31.3**	**-1.0**
MLY	**Manley**	**81.76**	**21**	P	**P**	**01 25 32.5**	**0.0**
MLY				IAmb	IAmb	01 25 34.1	
	comp=Z,5.1nm,0.6s						
NEA2	**Nenana**	**82.13**	**22**	P	**P**	**01 25 33.8**	**-0.6**
NEA2				IAmb	IAmb	01 25 35.7	
	comp=Z,6.7nm,1.0s						
WRH	**Wood River Hil**	**82.44**	**22**	P	**P**	**01 25 35.2**	**-0.7**
WRH				IAmb	IAmb	01 25 37.3	
	comp=Z,11nm,1.4s						
CCB	**Clear Creek Bu**	**82.63**	**22**	P	**P**	**01 25 35.7**	**-1.2**
CCB				IAmb	IAmb	01 25 38.0	
	comp=Z,4.1nm,1.0s						
TCOL	**CIGO, UAF Yank**	**82.72**	**22**	P	**P**	**01 25 37.3**	**-0.1**
COLA	**College**	**82.73**	**22**	P	**P**	**01 25 37.1**	**-0.3**
GLB	**Gilahina Butte**	**82.75**	**26**	P	**P**	**01 25 38.5**	**+0.8**
GLB				IAmb	IAmb	01 25 54.6	
	comp=Z,5.1nm,0.9s						
IL31		**83.04**	**22**	P	**P**	**01 25 37.8**	**-1.2**
IL31				IAmb	IAmb	01 25 39.5	
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**83.04**	**22**	P	**P**	**01 25 38.3**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=253,slow=5.3,SNR=26						
ILAR	**Eielson Array**	**83.04**	**22**	P	**P**	**01 25 38.1**	**-1.0**
MENT	**Mentasta**	**83.44**	**24**	P	**P**	**01 25 41.6**	**+0.3**
MENT				IAmb	IAmb	01 25 43.4	
	comp=Z,5.9nm,0.9s						
DOT	**Dot Lake**	**83.61**	**24**	P	**P**	**01 25 42.2**	**+0.1**
CTGM	**Chitina Glacie**	**83.64**	**27**	P	**P**	**01 25 43.2**	**+0.7**
SCRK	**Sand Creek**	**83.79**	**23**	P	**P**	**01 25 42.8**	**-0.3**
SCRK				IAmb	IAmb	01 25 47.8	
	comp=Z,4.1nm,1.0s						
BCAR	**Beaver Creek A**	**84.29**	**25**	P	**P**	**01 25 45.8**	**+0.1**
K27K	**Chicken**	**84.57**	**24**	P	**P**	**01 25 48.5**	**+1.6**
K27K				IAmb	IAmb	01 25 50.3	
	comp=Z,7.1nm,1.2s						
AAK	**Ala-Archa**	**84.81**	**314**	P	**P**	**01 25 50.1**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=119,slow=5.3,SNR=9.9						
AAK	**Ala-Archa**	**84.81**	**314**	P	**P**	**01 25 48.8**	**0.0**
AAK				IAmb	IAmb	01 25 50.6	
	comp=Z,5.0nm,0.9s						
BMAR	**Burnt Mountain**	**85.12**	**20**	P	**P**	**01 25 50.0**	**+0.3**
EGAK	**Eagle**	**85.24**	**23**	P	**P**	**01 25 51.1**	**+0.8**
EGAK				IAmb	IAmb	01 25 53.0	
	comp=Z,4.6nm,0.9s						
HYT	**Haines Junctio**	**85.33**	**28**	P	**P**	**01 25 51.7**	**+0.8**
HYT				IAmb	IAmb	01 25 54.9	
	comp=Z,5.3nm,0.9s						
KKAR	**Karatay Array**	**87.77**	**313**	P	**P**	**01 26 02.6**	**-0.6**
INK	**Inuvik**	**89.33**	**21**	P	**P**	**01 26 10.5**	**+0.6**
	comp=Z,2.3nm,1.0s,baz=215,slow=7.2,SNR=5.9						
INK	**Inuvik**	**89.33**	**21**	P	**P**	**01 26 10.0**	**+0.1**
INK				IAmb	IAmb	01 26 29.8	
	comp=Z,6.2nm,1.4s						
BRVK	**Borovoye**	**89.60**	**323**	P	**P**	**01 26 10.6**	**-1.0**
BRVK				IAmb	IAmb	01 26 11.5	
	comp=Z,5.0nm,1.1s						
YKA	**Yellowknife Ar**	**96.32**	**28**	P	**P**	**01 26 43.2**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=268,slow=4.4,SNR=15						
TOA0	**Torodi Ar. Sit**	**150.04**	**287**	PKPbc	**PKPbc**	**01 33 04.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**150.04**	**287**	PKPbc	**PKPbc**	**01 33 04.8**	**-0.8**
	comp=Z,2.1nm,0.8s,baz=59,slow=2.5,SNR=11						
TORD	**Torodi Ar. Bea**	**150.04**	**287**	PKPbc	**PKPbc**	**01 33 05.0**	**-0.5**

*NEIC **01** 01:14:45.5±1.5, 5.37S±0.09×147.5E±0.1, h159km±7km, mb4.5/12, Error ellipse: s-maj=19.7km s-min=12.2km az=98.0*
*IDC **01** 01:14:46.9±3.6, 5.44S×147.61E, h176km±41km, mb3.6/6, mb1 3.9/8, mb1mx3.5/51, mbtmp4.2/8, MS3.5/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=62.4km s-min=24.2km az=122.0*
ISC 01 01:14:46.3±0.8, 5.44S±0.07×147.6E±0.2, h170km, n29, σ1909/27, mb4.0/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.97**	**186**	P	**Pn**	**01 15 47.8**	**+1.1**
	34nm,0.3s,baz=9.5,slow=12,SNR=14						
PMG				S	**Sn**	**01 16 31.3**	**-2.7**
	22nm,0.3s,baz=32,slow=20,SNR=1.9						
PMG	**Port Moresby**	**3.97**	**186**		**Pn**	**01 15 47.3**	**+0.6**
PMG				Sn	**Sn**	**01 16 31.1**	**-2.8**
COEN	**Coen**	**9.52**	**207**	Pn	**Pn**	**01 17 01.7**	**+2.0**
CTAO	**Charters Tower**	**14.62**	**185**	P	**P**	**01 18 08.2**	**+1.2**
SAUI	**Saumlaki**	**16.37**	**260**		**P**	**01 18 24.8**	**-1.6**
MTN	**Manton Dam**	**17.82**	**244**		**Pn**	**01 18 44.2**	**+0.2**
WB0	**Warramunga Arr**	**19.18**	**221**	P	**P**	**01 18 57.4**	**+0.3**
WB0				IAmb	IAmb	01 19 01.5	
	comp=Z,13nm,0.7s						
WR0	**Warramunga Arr**	**19.22**	**220**	P	**P**	**01 18 57.5**	**0.0**
WR0				IAmb	IAmb	01 18 58.5	
	comp=Z,14nm,0.5s						
WB2	**Warramunga Arr**	**19.33**	**221**	P	**P**	**01 18 58.7**	**0.0**
WB2				IAmb	IAmb	01 19 04.4	
	comp=Z,19nm,0.5s						
WRA	**Warramunga Arr**	**19.34**	**221**	P	**P**	**01 18 59.1**	**+0.3**
	comp=Z,3.7nm,0.3s,baz=48,slow=11,SNR=50						
EIDS	**Eidsvold**	**20.10**	**171**	P	Pn	01 19 10.4	-0.4
EIDS				IAmb	IAmb	01 19 11.6	
	comp=Z,24nm,1.4s						
AS31	**Alice Springs**	**22.41**	**215**	P	**P**	**01 19 31.7**	**+0.7**
AS31				IAmb	IAmb	01 19 32.1	
	comp=Z,5.0nm,0.3s						
ASAR	**Alice Springs**	**22.41**	**215**	P	**P**	**01 19 31.1**	**+0.1**
	comp=Z,7.6nm,0.7s,baz=45,slow=9.0,SNR=11						
FITZ	**Fitzroy Crossi**	**24.85**	**238**	P	**P**	**01 19 53.4**	**+0.1**
	comp=Z,6.0nm,0.6s,baz=60,slow=6.4,SNR=14						
FITZ	**Fitzroy Crossi**	**24.85**	**238**	P	**P**	**01 19 54.2**	**+0.9**
MORW	**Morawa**	**37.98**	**228**	P	**P**	**01 21 47.8**	**-0.1**
KS19	**Wonju Array Si**	**46.50**	**338**	P	**P**	**01 22 55.5**	**-1.1**
KS19				IAmb	IAmb	01 22 56.1	
	comp=Z,17nm,1.2s						
ERM	**Erimo**	**47.40**	**356**		**P**	**01 23 03.5**	**+0.1**
PETK	**Petropavlovsk-**	**58.95**	**7**	LR	LR	01 44 01.2	
	comp=Z,19nm,21.2s,baz=162,slow=30						
SONM	**Songino Array**	**64.20**	**330**	P	**P**	**01 25 03.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=131,slow=6.2,SNR=1.9						
VNDA	**Vanda**	**72.44**	**177**	P	**P**	**01 25 54.3**	**+0.7**
MKAR	**Makanchi Array**	**77.43**	**320**	P	**P**	**01 26 23.4**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=95,slow=6.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**78.85**	**328**	P	**P**	**01 26 29.7**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=115,slow=6.5,SNR=1.7						
ILAR	**Eielson Array**	**84.74**	**23**	P	**P**	**01 27 00.4**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=257,slow=5.4,SNR=2.1						
NRIK	**Noril'sk**	**84.92**	**342**	LR	LR	02 05 38.0	
	comp=Z,47nm,18.5s,baz=218,slow=36						
CBYP	**Canovanas**	**144.96**	**66**	PKPbc	PKPbc	01 34 04.0	+0.1
TOA0	**Torodi Ar. Sit**	**145.51**	**285**		**PKPdf**	**01 34 05.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**145.51**	**285**	PKPbc	**PKPbc**	**01 34 05.6**	**0.0**
	comp=Z,1.0nm,0.6s,baz=64,slow=3.1,SNR=5.5						
SAML	**Samuel**	**146.17**	**115**	PKPbc	**PKPbc**	**01 34 07.7**	**0.0**

*IDC **01** 01:23:17.7±1.6, 55.80N×154.02W, h0km, mb3.8/6, mb1 3.8/9, mb1mx3.5/44, mbtmp3.7/9, ML3.4/3, MS2.3/1, Ms1 2.3/1, ms1mx2.1/46, Error ellipse: s-maj=32.3km s-min=24.9km az=172.0*
*NEIC **01** 01:23:20.5±1.6, 56.00N±0.07×153.65W±0.10, h24km±6km, Error ellipse: s-maj=9.8km s-min=7.9km az=160.0*
*AEIC **01** 01:23:21±1.5, 56.00N±0.06×153.7W±0.1, h22km±6km, ML3.3, mb3.9/4(NEIC), ML3.4/18(NEIC), Error ellipse: s-maj=8.3km s-min=8.0km az=223.0*
ISC 01 01:23:21.8±0.9, 56.12N±0.08×153.59W±0.05, h23km, n90, σ1921/86, mb4.0/6, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**0.55**	**324**		**Pb**	**01 23 32.5**	**-0.3**
SII	**Sitkinak Islan**	**0.55**	**324**		**Sb**	**01 23 41.5**	**+1.2**
SII				IAML		01 23 42.6	
	comp=N,11μm,0.8s						
SII				IAML		01 23 44.5	
	comp=E,8μm,0.6s						
OHAK	**Old Harbor**	**1.12**	**9**		**Pn**	**01 23 41.6**	**-0.5**
OHAK				IAML		01 24 03.8	
	comp=N,599nm,0.5s						
OHAK				IAML		01 24 05.8	
	comp=E,898nm,0.8s						
KDAK	**Kodiak Island**	**1.76**	**18**	Pn	**Pn**	**01 23 51.0**	**+0.2**
	comp=E,15nm,0.3s,baz=186,slow=6.4,SNR=430						
KDAK				Sn	**Sn**	**01 24 11.4**	**-1.0**
	comp=E,25nm,0.3s,baz=62,slow=22,SNR=32						
KDAK				Lg	Lg	01 24 24.7	
	comp=E,14nm,0.3s,baz=107,slow=20,SNR=8.9						
KDAK				LR	LR	01 24 29.8	
	comp=E,67nm,21.9s,baz=248,slow=34						
KDAK	**Kodiak Island**	**1.76**	**18**		**Pn**	**01 23 50.5**	**-0.3**
PLK3	**Peulik 3**	**2.15**	**318**		**Pn**	**01 23 55.6**	**-0.7**
PLK3					**Sn**	**01 24 22.0**	**-0.2**
CAHL	**Cahill**	**2.15**	**335**		**Pn**	**01 23 55.6**	**-0.7**
PLK2	**Peulik 2**	**2.23**	**319**		**Pn**	**01 23 56.8**	**-0.5**
KBM	**Katmai Bkd Mtn**	**2.33**	**339**		**Pn**	**01 23 59.0**	**+0.2**
PLK1	**Peulik 1**	**2.36**	**317**		**Pn**	**01 23 58.5**	**-0.6**
PLBL	**Peulik Blue Cr**	**2.38**	**313**		**Pn**	**01 23 59.1**	**-0.2**
KAHC	**Katmai Hardscr**	**2.65**	**344**		**Pn**	**01 24 02.9**	**-0.3**
CHGN	**Chignik**	**2.70**	**276**	Pn	**Pn**	**01 24 01.5**	**-2.2**
CHGN				IAML		01 24 40.3	
	comp=E,95nm,0.2s						
CHGN				IAML		01 24 56.0	
	comp=N,136nm,0.9s						
VNSG	**Veniaminof 6**	**3.08**	**272**		**Pn**	**01 24 07.3**	**-1.7**
VNHG	**Veniaminof 1**	**3.12**	**274**		**Pn**	**01 24 08.3**	**-1.3**
VNKR	**Veniaminof 5**	**3.24**	**271**		**Pn**	**01 24 08.4**	**-2.7**
AUCH	**Augustine Cone**	**3.26**	**1**		**Pn**	**01 24 12.0**	**+0.6**
AUL	**Augustine Lava**	**3.27**	**1**		**Pn**	**01 24 12.1**	**+0.5**
OPT	**Oil Point**	**3.55**	**3**		**Pn**	**01 24 15.9**	**+0.4**
CNPM	**China Poot**	**3.64**	**19**		**Pn**	**01 24 17.2**	**+0.5**
CNPM				IAML		01 25 33.5	
	comp=N,41nm,1.4s						
CNPM				IAML		01 25 34.6	
	comp=E,63nm,1.0s						
HOM	**Homer**	**3.70**	**16**	Pn	**Pn**	**01 24 18.5**	**+1.0**
IVE	**Iliamna Volcan**	**3.92**	**4**		**Pn**	**01 24 20.9**	**+0.2**
BRLK	**Bradley Lake**	**3.93**	**20**		**Pn**	**01 24 20.8**	**+0.1**
BRLK				IAML		01 25 40.7	
	comp=E,59nm,0.7s						
BRSE	**Bradley Lake S**	**3.94**	**22**		**Pn**	**01 24 20.5**	**-0.3**
SDPT	**Sand Point**	**3.97**	**262**	Pn	**Pn**	**01 24 19.5**	**-1.7**
SDPT				IAML		01 25 43.0	
	comp=E,70nm,2.1s						
SDPT				IAML		01 26 06.0	
	comp=N,96nm,2.3s						
RED	**Redoubt Volcan**	**4.34**	**5**		**Pn**	**01 24 26.3**	**0.0**
RSO	**Redoubt South**	**4.38**	**5**	Pn	**Pn**	**01 24 27.7**	**+0.7**
SEW	**Seward**	**4.56**	**27**	Pn	**Pn**	**01 24 28.8**	**-0.5**
SLKM	**Skilak Lake**	**4.75**	**21**		**Pn**	**01 24 31.4**	**-0.5**
DT1	**Dutton Round H**	**5.03**	**262**		**Pn**	**01 24 33.6**	**-2.1**
SVW2	**Sparrevohn**	**5.10**	**349**		**Pn**	**01 24 36.8**	**0.0**
SVW2				IAML		01 26 14.2	
	comp=E,14nm,1.9s						
FIS	**Fire Island**	**5.34**	**18**	Pn	**Pn**	**01 24 40.4**	**+0.4**
RC01	**Rabbit Creek A**	**5.38**	**20**	Pn	**Pn**	**01 24 40.8**	**+0.3**
STLK	**Strandline Lak**	**5.47**	**9**		**Pn**	**01 24 41.6**	**-0.3**
PWL	**Port Wells**	**5.50**	**28**		**Pn**	**01 24 41.5**	**-0.7**
SUA	**Susitna One**	**5.56**	**14**	Pn	**Pn**	**01 24 44.1**	**+0.9**
GLI	**Glacier Island**	**5.86**	**33**	Pn	**Pn**	**01 24 45.8**	**-1.4**
KNK	**Knik Glacier**	**5.94**	**25**	Pn	**Pn**	**01 24 48.4**	**+0.1**
PMR	**Palmer**	**5.96**	**21**	Pn	**Pn**	**01 24 50.3**	**+1.9**
FID	**Port Fidalgo**	**5.96**	**36**	Pn	**Pn**	**01 24 46.7**	**-1.8**
EYAK	**Cordova Ski Ar**	**6.07**	**40**	Pn	**Pn**	**01 24 49.9**	**0.0**
GHO	**Glory Hole Cre**	**6.16**	**21**	Pn	**Pn**	**01 24 51.6**	**+0.2**
KAIM	**Kayak Island**	**6.19**	**48**	Pn	**Pn**	**01 24 53.4**	**+1.8**
SML	**Sawmill**	**6.32**	**23**	Pn	**Pn**	**01 24 53.4**	**-0.1**
RAGM	**Ragged Mountai**	**6.36**	**44**	Pn	**Pn**	**01 24 53.9**	**-0.2**
HMT	**Hamilton**	**6.49**	**46**	Pn	**Pn**	**01 24 56.4**	**+0.6**
SCM	**Sheep Creek Mo**	**6.58**	**27**	Pn	**Pn**	**01 24 57.0**	**-0.1**
KLU	**Klutina**	**6.70**	**33**	Pn	**Pn**	**01 24 58.6**	**-0.1**
BMRM	**Bremner River**	**6.76**	**40**	Pn	**Pn**	**01 24 59.3**	**-0.3**
M24K	**Tolsona, Glenn**	**7.11**	**29**	Pn	**Pn**	**01 25 06.8**	**+2.4**
N25K	**Chitina, Valde**	**7.21**	**37**	Pn	**Pn**	**01 25 05.7**	**0.0**
VRDI	**Verde Repeater**	**7.36**	**42**	Pn	**Pn**	**01 25 07.4**	**-0.5**
GLB	**Gilahina Butte**	**7.37**	**40**		**Pn**	**01 25 07.3**	**-0.6**
MESA	**MESA**	**7.38**	**52**	Pn	**Pn**	**01 25 09.4**	**+1.2**
TRF	**Thorofare Moun**	**7.54**	**11**	Pn	**Pn**	**01 25 12.3**	**+1.9**
YAH	**Yahtse**	**7.56**	**51**		**Pn**	**01 25 10.7**	**0.0**
KTH	**Kantishna Hill**	**7.58**	**9**	Pn	**Pn**	**01 25 12.6**	**+1.9**
MCARA	**McCarthy VSAT**	**7.62**	**42**	Pn	**Pn**	**01 25 13.2**	**+2.0**
BALM	**Baldy**	**7.67**	**45**		**Pn**	**01 25 11.8**	**-0.2**
PTPK	**Patty Peak**	**7.71**	**44**		**Pn**	**01 25 12.8**	**+0.2**
GRNC	**Granite Creek**	**7.74**	**48**	Pn	**Pn**	**01 25 13.6**	**+0.4**
TABL	**Table Mountain**	**7.86**	**51**	Pn	**Pn**	**01 25 15.1**	**+0.4**
BARN	**Barnard Glacie**	**7.96**	**47**	Pn	**Pn**	**01 25

	50nm,1.2s							
NBAN	**Anadia - AL**	**22.87**	**281**	*eP*	**P**	**01 50 16.3**	**-3.5**
KIC	**Kosan Boka**	**22.92**	**23**	*eP*	**P**	**01 50 20.8**	**+0.6**
	52nm,1.3s							
NBPV	**Pedro Velho**	**23.03**	**289**	*eP*	**P**	**01 50 20.7**	**-0.8**
TIC	**Toumodi**	**23.08**	**22**	*eP*	**P**	**01 50 21.6**	**-0.3**
DBIC	**Dimbokro**	**23.16**	**22**	P	**P**	**01 50 21.9**	**-0.9**
	5.7nm,0.9s,baz=215,slow=10,SNR=4.1							
DBIC				LR	LR	01 57 09.0		
	comp=Z,99nm,20.0s,baz=182,slow=31							
DBIC	**Dimbokro**	**23.16**	**22**	P	**P**	**01 50 22.0**	**-0.7**
RCBR	**Riachuelo**	**23.82**	**290**	P	**P**	**01 50 28.5**	**-0.9**
	8.3nm,0.9s,baz=94,slow=4.2,SNR=2.5							
RCBR				LR	LR	01 57 17.6		
	comp=Z,155nm,21.6s,baz=126,slow=30							
RCBR	**Riachuelo**	**23.82**	**290**	P	**P**	**01 50 28.0**	**-1.4**
RCBR				IAmb	IAmb	01 50 31.7		
	comp=Z,33nm,1.4s							
RCBR	**Riachuelo**	**23.82**	**290**	*eP*	**P**	**01 50 29.5**	**+0.1**
NBLA	**Lagarto - SE**	**24.00**	**277**	*eP*	**P**	**01 50 30.1**	**-1.0**
NBLI	**Livramento-PB**	**24.21**	**286**	*eP*	**P**	**01 50 31.8**	**-1.3**
NBTA	**Tacaratu-PE**	**24.71**	**281**	*eP*	**P**	**01 50 36.9**	**-0.8**
NBPA	**Parau_RN**	**24.96**	**289**	*eP*	**P**	**01 50 40.9**	**+1.1**
NBIT	**Itapeh - BA**	**25.06**	**267**	*eP*	**P**	**01 50 41.4**	**+0.7**
GDU01	**Guandu, BA**	**25.30**	**270**	*eP*	**P**	**01 50 43.5**	**+0.7**
NAN01	**Guarapari, ES**	**25.70**	**260**	*eP*	**P**	**01 50 47.2**	**+0.7**
NBMA	**Muriti-CE**	**25.91**	**284**	*eP*	**P**	**01 50 49.3**	**+0.9**
NBPN	**Ponto Novo - B**	**26.35**	**276**	*eP*	**P**	**01 50 52.2**	**-0.2**
SJMB	**Sao Joao De Ma**	**26.75**	**258**	*eP*	**P**	**01 50 55.9**	**-0.1**
NBPB	**Pedra_Branca-C**	**27.31**	**287**	*eP*	**P**	**01 51 00.3**	**-0.8**
CAM01	**Campos-RJ**	**27.55**	**252**	*eP*	**P**	**01 51 04.6**	**+1.5**
JANB	**Januaria**	**29.75**	**266**	*eP*	**P**	**01 51 23.0**	**0.0**
SDBA	**SAO DESIDERIO**	**30.61**	**271**	*eP*	**P**	**01 51 30.3**	**-0.2**
KOWA	**Kowa**	**30.76**	**18**	P	**P**	**01 51 31.4**	**-0.3**
	comp=Z,5.3nm,0.8s,baz=199,slow=9.1,SNR=13							
KOWA	**Kowa**	**30.76**	**18**	P	**P**	**01 51 31.7**	**0.0**
KOWA				IAmb	IAmb	01 51 38.3		
	comp=Z,14nm,1.1s							
TOA0	**Torodi Ar. Sit**	**31.74**	**29**	P	**P**	**01 51 40.6**	**+0.3**
TOA0				IAmb	IAmb	01 51 46.4		
	comp=Z,10nm,1.1s							
TORD	**Torodi Ar. Bea**	**31.74**	**29**	P	**P**	**01 51 39.5**	**-0.8**
	comp=Z,5.5nm,1.0s,baz=216,slow=7.3,SNR=12							
TORD				LR	LR	02 02 10.0		
	comp=Z,174nm,21.1s,baz=210,slow=32							
TORD	**Torodi Ar. Bea**	**31.74**	**29**	P	**P**	**01 51 40.0**	**-0.4**
ROSB	**Rosrio**	**32.50**	**289**	*eP*	**P**	**01 51 48.7**	**+1.6**
VAO	**Valinhos**	**32.58**	**251**	*eP*	**P**	**01 51 48.0**	**+0.2**
PET01	**Itanhaem-SP**	**33.06**	**248**	*eP*	**P**	**01 51 51.2**	**-0.7**
SPB	**Sao Paulo**	**33.09**	**250**	*eP*	**P**	**01 51 53.0**	**+0.8**
BDFB	**Brasilia**	**33.28**	**264**	P	**P**	**01 51 54.1**	**0.0**
	comp=Z,5.9nm,0.8s,baz=47,slow=6.1,SNR=6.4							
BDFB				LR	LR	02 02 45.4		
	comp=Z,221nm,20.6s,baz=98,slow=32							
BDFB	**Brasilia**	**33.28**	**264**	P	**P**	**01 51 53.5**	**-0.6**
BDFB				IAmb	IAmb	01 51 56.0		
	comp=Z,7.2nm,0.8s							
IPMB	**Ipameri, GO**	**33.40**	**260**	*eP*	**P**	**01 51 55.6**	**+0.6**
BB19B	**Bebedouro**	**33.81**	**254**	*eP*	**P**	**01 51 59.3**	**+0.8**
SMTB	**Santa Maria do**	**33.88**	**276**	*eP*	**P**	**01 51 59.7**	**+0.4**
PEXB	**Peixe**	**33.94**	**271**	*eP*	**P**	**01 51 59.7**	**0.0**
FRTB	**Fartura**	**34.99**	**251**	*eP*	**P**	**01 52 09.2**	**+0.4**
SUR	**Sutherland**	**35.66**	**125**	P	**P**	**01 52 14.0**	**-0.6**
	comp=Z,6.6nm,1.0s,baz=248,slow=5.4,SNR=2.5							
PCMB	**Pacaembu**	**36.39**	**254**	*eP*	**P**	**01 52 21.4**	**+0.6**
PRPB	**Parauapebas**	**36.72**	**280**	*eP*	**P**	**01 52 23.7**	**+0.1**
SNDB	**Serra Nova Dou**	**36.85**	**270**	*eP*	**P**	**01 52 25.2**	**+0.5**
ARAG	**Araguaiana, MT**	**36.93**	**264**	*eP*	**P**	**01 52 25.8**	**+0.4**
PTGB	**Pitanga**	**37.44**	**249**	*eP*	**P**	**01 52 29.2**	**-0.5**
LBTB	**Lobatse**	**37.94**	**112**	P	**P**	**01 52 33.6**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=282,slow=10,SNR=4.7							
LBTB	**Lobatse**	**37.94**	**112**	P	**P**	**01 52 34.2**	**+0.2**
BOSA	**Boshof**	**38.27**	**117**	P	**P**	**01 52 36.9**	**+0.2**
	comp=Z,6.7nm,1.2s,baz=274,slow=8.4,SNR=4.2							
BOSA				LR	LR	02 05 18.7		
	comp=Z,109nm,20.9s,baz=347,slow=31							
LSZ	**Lusaka**	**40.19**	**96**	P	**P**	**01 52 54.1**	**+1.1**
	comp=Z,3.7nm,0.8s,baz=268,slow=7.9,SNR=8.7							
LSZ	**Lusaka**	**40.19**	**96**	P	**P**	**01 52 53.9**	**+0.9**
MATP	**Matopo**	**40.28**	**104**	P	**P**	**01 52 53.9**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=273,slow=10,SNR=9.2							
AQDB	**Aquidauana**	**40.49**	**256**	*eP*	**P**	**01 52 54.8**	**-0.5**
MCPB	**Macapa, AP**	**40.78**	**287**	*eP*	**P**	**01 52 57.8**	**+0.1**
CLDB	**Colider**	**41.39**	**270**	*eP*	**P**	**01 53 03.4**	**+0.6**
NPGB	**Novo Progresso**	**41.79**	**276**	*eP*	**P**	**01 53 06.4**	**+0.3**
ITQB	**Itaqui**	**42.24**	**242**	*eP*	**P**	**01 53 11.1**	**+1.6**
MALB	**Monte Alegre**	**42.29**	**284**	*eP*	**P**	**01 53 09.3**	**-0.8**
CPUP	**Villa Florida**	**42.36**	**247**	P	**P**	**01 53 09.8**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=78,slow=9.8,SNR=4.8							
CPUP				LR	LR	02 09 38.8		
	comp=Z,108nm,18.3s,baz=60,slow=35							
CPUP	**Villa Florida**	**42.36**	**247**	P	**P**	**01 53 11.0**	**+0.5**
CPUP	**Villa Florida**	**42.36**	**247**	*eP*	**P**	**01 53 11.2**	**+0.7**
ITTB	**Itaituba**	**42.88**	**280**	*eP*	**P**	**01 53 15.3**	**+0.4**
MDP	**Montagnes des**	**42.63**	**294**	LR	LR	02 07 14.3		
	comp=Z,67nm,21.4s,baz=76,slow=30							
PTLB	**Pontes e Lacer**	**43.98**	**263**	*eP*	**P**	**01 53 24.6**	**+0.8**
VILB	**Vilhena**	**45.31**	**267**	*eP*	**P**	**01 53 35.9**	**+1.5**
SIV	**San Ignacio**	**45.78**	**262**	P	**P**	**01 53 38.3**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=88,slow=9.6,SNR=6.8							
MACA	**Manacapuru-AM**	**47.95**	**279**	*eP*	**P**	**01 53 56.1**	**+0.9**
PTGA	**Pitinga**	**48.03**	**283**	*eP*	**P**	**01 53 56.8**	**+1.0**
SAML	**Samuel**	**48.90**	**271**	P	**P**	**01 54 03.6**	**+1.1**
SAML				IAmb	IAmb	01 54 04.8		
	comp=Z,17nm,1.3s							
SAML	**Samuel**	**48.90**	**271**	*eP*	**P**	**01 54 03.5**	**+1.0**
BOAV	**Boa Vista**	**49.65**	**286**	*eP*	**P**	**01 54 08.7**	**+0.5**
ETMB	**Extrema**	**51.65**	**269**	*eP*	**P**	**01 54 24.0**	**+0.7**
KMBO	**Kilima Mbogo**	**51.94**	**79**	P	**P**	**01 54 26.6**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=244,slow=7.5,SNR=3.7							
KMBO				LR	LR	02 13 52.2		
	comp=Z,45nm,20.3s,baz=108,slow=33							
LPAZ	**La Paz**	**52.50**	**261**	P	**P**	**01 54 29.3**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=114,slow=10,SNR=5.4							
LPAZ	**La Paz**	**52.50**	**261**	P	**P**	**01 54 28.9**	**-1.4**
LPAZ	**La Paz**	**52.50**	**261**	*eP*	**P**	**01 54 30.1**	**-0.3**
LVC	**Limon Verde**	**52.76**	**253**	*eP*	**P**	**01 54 33.1**	**+1.2**
PB08	**IPOC Station P**	**53.12**	**256**	P	**P**	**01 54 33.8**	**-0.8**
PB08				IAmb	IAmb	01 54 35.0		
	comp=Z,14nm,1.1s							
MNMC	**Minye Minye**	**53.61**	**257**	P	**P**	**01 54 37.4**	**-0.7**
MNMC				IAmb	IAmb	01 54 52.3		
	comp=Z,5.5nm,0.9s							
PB07	**IPOC Station P**	**53.71**	**254**	P	**P**	**01 54 38.8**	**+0.1**
PB07				IAmb	IAmb	01 54 39.6		
	comp=Z,14nm,0.8s							
PSGCX	**Pisagua**	**54.07**	**257**	P	**P**	**01 54 40.4**	**-0.9**
LCO	**Las Campanas**	**54.38**	**245**	P	**P**	**01 54 43.6**	**0.0**
LCO				IAmb	IAmb	01 54 52.6		
	comp=Z,13nm,1.1s							
GO04	**Tololo Observa**	**54.51**	**244**	P	**P**	**01 54 44.2**	**-0.3**
KEST	**Kesra**	**54.89**	**23**	P	**P**	**01 54 47.0**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=206,slow=14,SNR=2.4							
KEST				LR	LR	02 16 59.0		
	comp=Z,86nm,18.5s,baz=302,slow=35							
ESDC	**Sonseca Array**	**55.10**	**9**	LR	LR	02 16 23.3		
	comp=Z,85nm,19.0s,baz=5.0,slow=34							
BI02	**San Fabin de**	**55.45**	**236**	P	**P**	**01 54 51.0**	**-0.1**
BI02				IAmb	IAmb	01 54 51.9		
	comp=Z,20nm,1.2s							
PLCA	**Paso Flores**	**55.50**	**231**	LR	LR	02 15 53.9		
	comp=Z,89nm,19.3s,baz=144,slow=33							
OPO	**Ambohidratompo**	**57.98**	**103**	LR	LR	02 15 48.7		
	comp=Z,46nm,20.0s,baz=36,slow=32							
CZSB	**Cruzeiro do Su**	**58.36**	**270**	*eP*	**P**	**01 55 11.5**	**-0.4**
SDV	**Santo Domingo**	**61.40**	**289**	P	**P**	**01 55 34.0**	**+0.9**
SDV				IAmb	IAmb	01 55 39.4		
	comp=Z,11nm,1.0s							
SDV	**Santo Domingo**	**61.40**	**289**	*eP*	**P**	**01 55 33.3**	**+0.3**
GCPR	**Guaynabo City**	**61.48**	**301**	P	**P**	**01 55 31.3**	**-1.9**
ROSC	**El Rosal**	**63.40**	**283**	P	**P**	**01 55 46.2**	**-0.4**
	comp=Z,4.7nm,0.4s,baz=293,slow=21,SNR=4.0							
ROSC				LR	LR	02 23 12.5		
	comp=Z,185nm,18.3s,baz=125,slow=36							
ROSC	**El Rosal**	**63.40**	**283**	P	**P**	**01 55 46.6**	**0.0**
OTAV	**Otavalo**	**65.92**	**277**	*eP*	**P**	**01 56 04.6**	**+1.3**
GERES	**GERESS Array B**	**67.98**	**19**	P	**P**	**01 56 14.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=172,slow=11,SNR=3.5							
BRTR	**Keskin Array B**	**69.92**	**37**	P	**P**	**01 56 28.0**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=219,slow=5.7,SNR=4.8							
BRTR				LR	LR	02 27 24.3		
	comp=Z,23nm,19.1s,baz=218,slow=36							
MLR	**Muntele Rosu**	**69.98**	**28**	P	**P**	**01 56 27.8**	**0.0**
QSPA	**South Pole Qui**	**75.17**	**180**	P	**P**	**01 56 59.9**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=215,slow=1.7,SNR=8.3							
QSPA	**South Pole Qui**	**75.17**	**180**	P	**P**	**01 57 00.2**	**+1.8**
QSPA				IAmb	IAmb	01 57 13.6		
	comp=Z,14nm,1.4s							
AKASG	**Malin Array Be**	**75.34**	**26**	P	**P**	**01 56 59.2**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=223,slow=5.8,SNR=10							
KBZ	**Khabaz**	**77.83**	**38**	P	**P**	**01 57 14.5**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=206,slow=7.4,SNR=4.3							
NOA	**NORSAR Array B**	**78.30**	**12**	LR	LR	02 34 26.0		
	comp=Z,18nm,18.0s,baz=75,slow=38							
FINES	**FINESS Array B**	**82.39**	**18**	P	**P**	**01 57 38.0**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=194,slow=5.3,SNR=8.8							
SCM	**Sheep Creek Mo**	**122.95**	**336**	PKPdf	**PKPdf**	**02 04 09.2**	**-3.0**
RC01	**Rabbit Creek A**	**124.32**	**336**	PKPdf	**PKiKP**	**02 04 14.5**	**-0.5**
MJAR	**Matsushiro Arr**	**146.89**	**44**	PKPbc	**PKPbc**	**02 04 59.1**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=292,slow=4.1,SNR=4.1							

IDC ***01*** *02:01:55.0±1.6,5.°30S×152.°80E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/43, mbtmp3.8/9, MS3.5/2, Ms1 3.5/2, ms1mx2.9/42, Error ellipse: s-maj=63.9km s-min=19.6km az=124.0*

NEIC ***01*** *02:02:01.2±1.9,5.°30S±0.°09×152.°6E±0.°2, h38km±7km, mb4.7/21, Error ellipse: s-maj=24.3km s-min=11.7km az=74.0*

ISC 01 02:02:01.2±0.7,5.°31S±0.°09×152.°6E±0.°2, h40km, n35, σ0s87/35, mb4.6/20, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.18**	**340**			**Pn**	**02 02 20.8**	**-0.5**
RABL						**Sn**	**02 02 36.5**	**+0.3**
WB0	**Warramunga Arr**	**22.79**	**229**	P		**P**	**02 07 01.5**	**+0.9**
WR0	**Warramunga Arr**	**22.80**	**229**	P		**P**	**02 07 02.1**	**+1.4**
WB2	**Warramunga Arr**	**22.93**	**229**	P		**P**	**02 07 03.0**	**+0.9**
WRA	**Warramunga Arr**	**22.94**	**229**	P		**P**	**02 07 02.8**	**+0.6**
	1.3nm,0.6s,baz=50,slow=9.8,SNR=14							
ASAR	**Alice Springs**	**25.62**	**223**	P		**P**	**02 07 28.2**	**+1.1**
	1.1nm,0.4s,baz=58,slow=8.8,SNR=14							
FITZ	**Fitzroy Crossi**	**29.21**	**242**	P		**P**	**02 07 59.6**	**+0.3**
	1.0nm,0.7s,baz=44,slow=7.8,SNR=7.6							
CMWZ	**Cape Campbell**	**41.10**	**155**	P		**P**	**02 09 41.6**	**+0.3**
MORW	**Morawa**	**41.85**	**231**	P		**P**	**02 09 45.5**	**-2.1**
KSRS	**Korea Array**	**48.35**	**334**	LR		LR	02 28 18.5	
	comp=Z,32nm,20.5s,baz=200,slow=33							
PETK	**Petropavlovsk-**	**58.36**	**4**	P		**P**	**02 11 51.6**	**-0.7**
	3.0nm,1.0s,baz=160,slow=4.6,SNR=1.4							
SONM	**Songino Array**	**66.63**	**328**	P		**P**	**02 12 49.7**	**+1.9**
	0.2nm,0.5s,baz=147,slow=7.8,SNR=1.9							
SONM				LR		LR	02 39 48.1	
	comp=Z,70nm,20.5s,baz=182,slow=34							
ANM	**Nome**	**76.33**	**17**	P		**P**	**02 13 46.2**	**+0.5**
CNPM	**China Poot**	**78.27**	**26**	P		**P**	**02 13 56.7**	**-0.1**
BRLK	**Bradley Lake**	**78.55**	**26**	P		**P**	**02 13 57.9**	**-0.4**
SUA	**Susitna One**	**79.51**	**24**	P		**P**	**02 14 02.6**	**-1.1**
SUA				IAmb		IAmb	02 15 35.2	
	comp=Z,18nm,1.8s							
RDOG	**Red Dog Mine**	**79.53**	**16**	P		**P**	**02 14 04.3**	**+0.8**
RDOG				IAmb		IAmb	02 14 04.8	
	comp=Z,5.5nm,0.6s							
MKAR	**Makanchi Array**	**80.55**	**319**	P		**P**	**02 14 09.8**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=94,slow=7.7,SNR=1.7							
KTH	**Kantishna Hill**	**80.57**	**22**	P		**P**	**02 14 08.6**	**-0.7**
KTH				IAmb		IAmb	02 15 38.4	
	comp=Z,28nm,2.0s							
BPAW	**Bear Paw Mtn.**	**80.84**	**22**	P		**P**	**02 14 09.6**	**-1.1**
BPAW				IAmb		IAmb	02 16 30.1	
	comp=Z,18nm,2.0s							
MLY	**Manley**	**81.44**	**21**	P		**P**	**02 14 13.9**	**+0.1**
MLY				IAmb		IAmb	02 14 14.6	
	comp=Z,3.4nm,0.6s							
ZALV	**Zalesovo Beam**	**81.44**	**326**	P		**P**	**02 14 13.7**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=115,slow=6.8,SNR=2.4							
HMT	**Hamilton**	**81.73**	**27**	P		**P**	**02 14 15.4**	**-0.1**
NEA2	**Nenana**	**81.81**	**22**	P		**P**	**02 14 15.1**	**-0.6**
NEA2				IAmb		IAmb	02 16 19.6	
	comp=Z,16nm,1.9s							
WRH	**Wood River Hil**	**82.11**	**22**	P		**P**	**02 14 16.7**	**-0.7**
WRH				IAmb		IAmb	02 14 28.1	
	comp=Z,17nm,1.9s							
CCB	**Clear Creek Bu**	**82.31**	**22**	P		**P**	**02 14 17.4**	**-0.9**
CCB				IAmb		IAmb	02 14 21.8	
	comp=Z,17nm,2.0s							
ILAR	**Eielson Array**	**82.71**	**22**	P		**P**	**02 14 19.1**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=242,slow=5.5,SNR=16							
DOT	**Dot Lake**	**83.28**	**24**	P		**P**	**02 14 23.8**	**+0.3**
DOT				IAmb		IAmb	02 17 28.1	
	comp=Z,10nm,1.7s							
CTGM	**Chitina Glacie**	**83.30**	**27**	P		**P**	**02 14 24.2**	**+0.4**
CTGM				IAmb		IAmb	02 14 38.6	
	comp=Z,16nm,1.6s							
SCRK	**Sand Creek**	**83.46**	**23**	P		**P**	**02 14 24.8**	**+0.2**
TOLK	**Toolik Lake Re**	**83.77**	**18**	P		**P**	**02 14 26.7**	**+0.8**
TOLK				IAmb		IAmb	02 14 45.4	
	comp=Z,12nm,1.7s							
YKA	**Yellowknife Ar**	**95.98**	**28**	P		**P**	**02 15 24.0**	**+0.2**
	comp=Z,0.1nm,0.6s,baz=269,slow=4.5,SNR=5.6							
Y45A	**Yeager Farm, C**	**116.01**	**55**	PKPdf		**PKiKP**	**02 20 41.2**	**+0.8**
TOA0	**Torodi Ar. Sit**	**150.24**	**287**	PKPbc		**PKPbc**	**02 21 48.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**150.24**	**287**	PKPbc		**PKiKP**	**02 21 50.1**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=86,slow=2.0,SNR=1.8							

BJI ***01*** *02:09:05.1±0.0,0.°44N×124.°38E, h220km, mB4.8/41, mb5.0/71*

GCMT ***01*** *02:09:10.2±0.3,0.°88N±0.°02×124.°15E±0.°02, h214km±2km, MW5.0/102, Moment Tensor Solution. s36,c38; s102,c132; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.55±.14; Mθθ=2.37±.17; Mϕϕ=0.81±.19; Mrθ=2.66±.12; Mθϕ=3.16±.13; Mϕr=0.78±.14; Best double couple: Mo=4.67500×10^16 NP1:ϕs18.00000°,δ49.00000°, λ=-162.00000°. NP2:ϕs276.00000°,δ77.00000°, λ=-42.00000°. Principal axes: T 4.9000, Plg17.0000°, Azm333.0000°; N -0.4470, Plg46.0000°, Azm82.0000°; P -4.4500, Plg39.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***01*** *02:09:10,0.°95N×124.°29E, h211km, mb5.2*

DJA ***01*** *02:09:11.5±0.1,1.°N±2.°×12.°4E±.°, h220km±2km, M5.0/79, mb5.2/79, mB5.4/45, MLv5.4/22, Mw(mB)4.9/45, MwMwp5.4/3, Mwp5.6/3*

NEIC ***01*** *02:09:11.2±1.9,0.°93N±0.°07×124.°01E±0.°07, h223km±5km, mb4.9/134, Error ellipse: s-maj=9.9km s-min=9.4km az=201.0*

IDC ***01*** *02:09:12.8±0.6,0.°92N×123.°97E, h233km±4km, mb4.5/36, mb1 4.6/43, mb1mx4.5/51, mbtmp5.1/43, Error ellipse: s-maj=9.2km s-min=5.5km az=84.0*

ISC 01 02:09:10.9±0.4,0.°86N±0.°03×123.°99E±0.°04, h219km±3km, h220km:pP-P, n393, σ1s49/430, mb4.9/150, 9C-6D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.28**	**181**	P		**Pn**	**02 09 40.1**	**+0.4**
GTOI	**Gorontalo**	**1.00**	**257**	P		**Pn**	**02 09 43.8**	**+1.1**
MRSI	**Marisa**	**2.08**	**260**	P		**Pn**	**02 09 52.6**	**+0.9**
LUWI	**Luwuk**	**2.24**	**213**	Pn		**Pn**	**02 09 53.1**	**-0.2**
LUWI	**Luwuk**	**2.24**	**213**	P		**Pn**	**02 09 53.1**	**-0.2**
APSI	**Ampana**	**2.92**	**233**	P		**Pn**	**02 10 01.3**	**+0.6**
SGSI	**Sangihe**	**3.21**	**29**	P		**Pn**	**02 10 04.7**	**+0.7**
TOLI2	**Tolitoli**	**3.21**	**275**	Pn		**Pn**	**02 10 04.5**	**+0.5**
TNTI	**Ternate**	**3.38**	**91**	Pn		**Pn**	**02 10 05.4**	**-0.6**
TNTI	**Ternate**	**3.38**	**91**	P		**Pn**	**02 10 05.4**	**-0.6**
SANI	**Sanana**	**3.51**	**145**	P		**Pn**	**02 10 06.0**	**-1.6**
TTSI	**Tana Toraja**	**5.69**	**227**	P		**Pn**	**02 10 36.3**	**+1.8**
	3.4nm9μm1μm,0.9s							
SPSI	**Sidrap Palu**	**6.38**	**221**	P		**Pn**	**02 10 44.9**	**+1.6**
	1.8nm5μm576nm,0.8s							
BNSI	**Bone**	**6.50**	**217**	P		**Pn**	**02 10 46.6**	**+1.7**
	1.5nm6μm451nm,1.2s							
SMKI	**Samarinda**	**6.90**	**259**	P		**Pn**	**02 10 52.3**	**+2.2**
	2.8nm10μm354nm,0.8s							
MYLDM	**Lahad Datu**	**6.96**	**308**	Pn		**Pn**	**02 10 53.0**	**+2.2**
KAPI	**Kappang**	**7.20**	**216**	P		**Pn**	**02 10 55.9**	**+2.0**
	6.6nm,0.3s,baz=21,slow=8.5,SNR=174							
KAPI				S		**S**	**02 12 15.2**	**-0.9**
	3.7nm,0.3s,baz=192,slow=22,SNR=6.0							
KAPI	**Kappang**	**7.20**	**216**	Pn		**Pn**	**02 10 55.2**	**+1.3**
BKSI	**Bulukumba**	**7.25**	**212**	P		**Pn**	**02 10 56.1**	**+1.6**
	0.5nm4μm139nm,0.9s							
BKB	**Balikpapan**	**7.39**	**253**	Pn		**Pn**	**02 10 56.7**	**+0.3**
BKB	**Balikpapan**	**7.39**	**253**	P		**Pn**	**02 10 57.3**	**+0.9**
	0.8nm223nm,0.8s							
SWI	**Sorong**	**7.47**	**103**	P		**Pn**	**02 10 57.8**	**+0.4**
	0.8nm2μm179nm,0.8s							
SIJI	**Sorong**	**7.48**	**103**	P		**Pn**	**02 10 58.1**	**+0.6**
	9.2nm,0.3s,baz=310,slow=9.8,SNR=26							
SIJI						**S**	**02 12 19.3**	**-3.3**
	4.1nm,0.3s,baz=159,slow=24,SNR=10							
KBKI	**Kotabaru**	**8.84**	**242**	P		**Pn**	**02 11 15.6**	**+0.6**
	2μm227nm,0.9s							
FAKI	**Fak Fak**	**9.07**	**114**	Pn		**Pn**	**02 11 16.9**	**-1.2**
FAKI	**Fak Fak**	**9.07**	**114**	P		**Pn**	**02 11 17.6**	**-0.5**
	4μm484nm,1.0s							
MTKI	**Muara Teweh, K**	**9.26**	**259**	P		**Pn**	**02 11 22.2**	**+1.7**
KKM	**Kota Kinabalu**	**9.31**	**304**	Pn		**Pn**	**02 11 21.7**	**+0.5**
LLP	**Lapu-Lapu**	**9.40**	**360**	*eP*		**Pn**	**02 11 24.4**	**+2.2**
LLP				*eS*		**S**	**02 13 08.5**	**+0.5**
MMRI	**Maumere**	**9.59**	**190**	Pn		**Pn**	**02 11 26.2**	**+1.5**
EDFI	**Ende, Flores**	**9.81**	**193**	P		**Pn**	**02 11 29.7**	**+2.1**
	798nm86nm,0.9s							
BBKI	**Banjar Baru**	**10.10**	**245**	P		**Pn**	**02 11 33.3**	**+2.1**
	5μm185nm,1.8s							
SOEI	**Soe**	**10.54**	**178**	Pn		**Pn**	**02 11 39.9**	**+2.8**
SOEI	**Soe**	**10.54**	**178**	P		**P**	**02 11 40.6**	**-2.8**
	2μm263nm,0.9s							
KMPI	**Kaimana, Papua**	**10.70**	**115**	P		**Pn**	**02 11 39.7**	**+0.8**
	5μm528nm,1.2s							
RCP	**Roxas**	**10.71**	**353**	*eP*		**Pn**	**02 11 40.7**	**+1.7**
BATI	**Baumata**	**10.99**	**182**	P		**P**	**02 11 45.6**	**-2.7**
	12nm,0.3s,baz=148,slow=1.5,SNR=6.7							
BATI						S	02 14 01.5	+16
	20nm,0.3s,baz=95,slow=18,SNR=21							
BATI	**Baumata**	**10.99**	**182**	P		**P**	**02 11 46.1**	**-2.2**
	2μm210nm,0.6s							
SAUI	**Saumlaki**	**11.41**	**140**	Pn		**Pn**	**02 11 48.5**	**+0.6**
SAUI	**Saumlaki**	**11.41**	**140**	P		**Pn**	**02 11 48.7**	**+0.7**
	459nm,0.9s							
PLAI	**Plampang**	**11.44**	**213**	P		**Pn**	**02 11 50.4**	**+2.1**
	8μm1μm,0.8s							
BASI	**Baing, Sumba**	**11.51**	**197**	P		**P**	**02 11 52.2**	**-1.8**
	2μm253nm,0.8s							
SBUM	**Sibu**	**11.87**	**278**	Pn		**Pn**	**02 11 55.0**	**+1.2**
TWSI	**Taliwang, Sumb**	**11.87**	**216**	P		**P**	**02 11 56.2**	**-1.8**
	3μm368nm,0.9s							
SRBI	**Singaraja**	**12.46**	**224**	P		**P**	**02 12 03.3**	**-1.3**
	5μm589nm,1.0s							
STKI	**Sintang**	**12.53**	**266**	P		**P**	**02 12 04.5

comp=Z,79nm,1.2s
PSI Prapat 25.12 275 P **P 02 14 16.1 -0.2**
comp=Z,23nm,0.8s,baz=177,slow=1.1,SNR=24
GIRL Giralia 25.22 202 P **P 02 14 18.3 +1.6**
baz=25,SNR=13
GIRL Giralia 25.22 202 P **P 02 14 18.2 +1.4**
GIRL PcP **PcP 02 17 46.3 +1.9**
PMG Port Moresby 25.23 114 P **P 02 14 18.8 +1.8**
comp=Z,15nm,0.6s,baz=274,slow=9.2,SNR=5.4
PMG Port Moresby 25.23 114 P **P 02 14 17.7 +0.7**
PMG IAmb IAmb 02 14 22.0
comp=Z,27nm,0.8s
SRAK Srakaew 25.34 302 P **P 02 14 24.0 +6.0**
comp=Z,74nm,0.6s
KHON Khomkaen 25.92 308 P **P 02 14 26.8 +3.6**
WRKA Warakurna 26.08 171 P **P 02 14 25.5 +1.0**
baz=26,SNR=136
JOW Kunigami 26.16 9 P **P 02 14 25.8 +0.6**
comp=Z,88nm,0.7s,baz=195,slow=7.3,SNR=14
JOW Kunigami 26.16 9 P **P 02 14 26.0 +0.8**
QIS Mount Isa 26.21 145 P **P 02 14 26.8 +1.0**
baz=26,SNR=33
AS31 Alice Springs 26.21 159 P **P 02 14 26.1 +0.2**
AS31 PcP **PcP 02 17 47.6 +0.9**
ASAR Alice Springs 26.21 159 P **P 02 14 26.6 +0.7**
comp=Z,18nm,0.7s,baz=338,slow=7.3,SNR=141
ASAR PcP **PcP 02 17 47.3 +0.6**
comp=Z,11nm,0.3s,baz=348,slow=2.2,SNR=18
ASAR S **S 02 18 40.3 -1.3**
comp=Z,20nm,1.0s,baz=343,slow=17,SNR=12
ASAR ScP **ScP 02 21 05.5 -0.2**
comp=Z,7.4nm,0.8s,baz=349,slow=3.0,SNR=10
ASAR Alice Springs 26.21 159 P **P 02 14 26.1 +0.3**
ASPA Alice Springs 26.21 159 P **P 02 14 26.6 +0.8**
baz=26
CHAI Chaiyaphum 26.35 306 P **P 02 14 29.1 +2.0**
comp=Z,23nm,0.7s
GSI Gunungsitoli 26.41 271 P **P 02 14 27.3 -0.4**
GSI PcP **PcP 02 17 48.9 +1.6**
GSI Gunungsitoli 26.41 271 P **P 02 14 27.9 +0.2**
comp=Z,74nm,1.1s
NONG Nongkai 26.68 311 P **P 02 14 32.0 +2.0**
comp=Z,23nm,0.9s
TPTI 26.89 275 P **P 02 14 32.4 +0.4**
comp=Z,430nmcomp=Z,20nm,0.7s
MLSI Meulaboh, Aceh 27.76 278 P **P 02 14 39.4 -0.3**
comp=Z,1µmcomp=Z,162nm,0.8s
UTHA Uthaitani 28.28 302 P **P 02 14 45.9 +1.6**
comp=Z,250nmcomp=Z,27nm,0.7s
UTTA Uttaradit 28.50 307 P **P 02 14 50.0 +3.9**
comp=Z,12nm,0.7s
SUKH Sukhothai 29.10 306 P **P 02 14 53.4 +2.0**
comp=Z,28nm,1.0s
LAMP Lampang 29.66 308 P **P 02 14 59.2 +2.8**
comp=Z,14nm,0.7s
CM04 Chiang Mai Arr 30.11 307 P **P 02 15 03.2 +2.8**
comp=Z,5.7nm,1.2s
CM09 Chiang Mai Arr 30.12 307 P **P 02 15 03.0 +2.5**
comp=Z,9.2nm,0.9s
CM01 Chiang Mai Arr 30.14 307 P **P 02 15 03.5 +2.8**
comp=Z,6.8nm,0.7s
CM05 Chiang Mai Arr 30.14 307 P **P 02 15 03.0 +2.3**
comp=Z,58nmcomp=Z,3.7nm,0.9s
CM31 Chiang Mai Arr 30.17 307 P **P 02 15 00.3 -0.6**
CM31 IAmb IAmb 02 15 04.3
comp=Z,16nm,1.1s
CMAR Chiang Mai Arr 30.17 307 P **P 02 15 01.9 +0.9**
comp=Z,1.4nm,0.3s,baz=138,slow=8.3,SNR=16
CMAR PcP **PcP 02 17 57.7 +1.1**
comp=Z,2.8nm,0.6s,baz=162,slow=1.7,SNR=6.2
CMAR ScP **ScP 02 21 18.9 +0.8**
comp=Z,3.2nm,0.8s,baz=153,slow=2.3,SNR=16
CMAR Chiang Mai Arr 30.17 307 P **P 02 15 02.1 +1.2**
CM13 Chiang Mai Arr 30.18 307 P **P 02 15 02.4 +1.4**
comp=Z,97nmcomp=Z,6.2nm,1.1s
CM34 Chiang Mai Arr 30.22 308 P **P 02 15 03.0 +1.6**
CM32 Chiang Mai Arr 30.35 307 P **P 02 15 04.0 +1.5**
CMMT Chiang Mai 30.36 308 P **P 02 15 03.1 +0.5**
comp=Z,11nm,1.0s
CHTO Chiang Mai 30.36 308 P **P 02 15 03.5 +0.9**
CHTO IAmb IAmb 02 15 05.6
comp=Z,18nm,1.0s
GYA Guiyang 30.43 328 ⇓P **P 02 15 05.0 +1.8**
GYA S **S 02 19 54.6 +6.7**
GYA pmax pmax
comp=Z,33nm,1.0s
MORW Morawa 30.71 194 P **P 02 15 05.8 +0.3**
baz=31,SNR=24
MORW Morawa 30.71 194 P **P 02 15 05.9 +0.3**
MORW PcP **PcP 02 17 58.9 +1.1**
MHMT Maesarieng 30.84 305 P **P 02 15 08.4 +1.6**
WHN Wuhan 30.91 344 ⇓P **P 02 15 09.0 +1.8**
WHN pmax pmax
comp=Z,140nm,0.9s
JSU Suzuyama 31.09 11 IAmb IAmb 02 15 11.8
comp=Z,42nm,0.9s
JCJ Chichijima 31.40 32 P **P 02 15 10.2 -1.5**
comp=Z,154nm,0.5s,baz=257,slow=4.3,SNR=37
NJ2 Nanjing 31.41 352 *e*P **P 02 15 13.2 +1.7**
NJ2 pmax pmax
comp=Z,48nm,0.7s
KMI Kunming 31.67 321 ⇑P **P 02 15 16.6 +2.3**
KMI pP pP 02 15 59.8 +2.8
KMI sP sP 02 16 24.7 +3.0
KMI pmax pmax
comp=Z,17nm,0.7s
FORT Forrest 31.70 173 P **P 02 15 15.1 +0.9**
baz=32,SNR=180
FORT Forrest 31.70 173 P **P 02 15 14.7 +0.6**
FORT PcP **PcP 02 18 01.1 +0.6**
BLDU Ballidu 32.05 192 P **P 02 15 17.3 +0.1**
baz=32,SNR=43
KMBL Kambalda 32.11 183 P **P 02 15 18.1 +0.4**
baz=32,SNR=48
JNU Nakatsue 32.74 11 P **P 02 15 22.9 -0.4**
comp=Z,32nm,0.8s,baz=205,slow=4.5,SNR=12
JNU Nakatsue 32.74 11 IAmb IAmb 02 15 26.6
comp=Z,32nm,0.8s
KLBR Kellerberrin 32.81 190 P **P 02 15 24.1 +0.3**
baz=33,SNR=30
MUN Mundaring 33.48 192 P **P 02 15 29.9 +0.3**
baz=34,SNR=5.7
QLP Quilpie 33.55 146 P **P 02 15 31.5 +1.2**
baz=34,SNR=5.4
JMN Monobe 33.99 15 P **P 02 15 34.5 +0.4**
NWAO Narrogin (SRO) 34.20 190 P **P 02 15 36.6 +0.8**
comp=Z,29nm,0.7s,baz=28,slow=8.3,SNR=21
NWAO Narrogin (SRO) 34.20 190 P **P 02 15 36.1 +0.3**
baz=34,SNR=20
NWAO Narrogin (SRO) 34.20 190 P **P 02 15 36.7 +0.9**
NWAO IAmb IAmb 02 15 38.1
comp=Z,47nm,0.8s
BBOO Buckleboo 35.37 162 P **P 02 15 46.4 +0.6**
baz=36,SNR=35
BBOO Buckleboo 35.37 162 P **P 02 15 46.3 +0.5**
BBOO IAmb IAmb 02 15 47.4
comp=Z,40nm,0.9s
CD2 Chengdu 35.51 329 ⇓*i*P **P 02 15 47.9 +0.8**
CD2 pP pP 02 16 32.8 +2.3
CD2 S **S 02 21 08.0 +1.8**
CD2 pmax pmax
comp=Z,100nm,0.9s
CD2 pmax pmax
comp=Z,130nm,5.2s
TIA Tai'an 35.75 350 P **P 02 15 47.6 -1.4**
TIA pmax pmax
comp=Z,55nm,1.1s
XAN Xi'an 35.90 338 P **P 02 15 49.8 -0.6**
XAN pmax pmax
comp=Z,21nm,0.8s
XAN pmax pmax
comp=Z,180nm,3.5s
XAN LR LR
comp=Z,320nm,14.6s
XAN LR LR
comp=Z,340nm,16.8s
XAN LR LR
comp=Z,250nm,13.3s
INU Inuyama 36.40 18 IAmb IAmb 02 15 58.5
comp=Z,53nm,1.0s
STKA Stephens Creek 36.58 154 P **P 02 15 57.1 +1.1**
comp=Z,51nm,0.8s,baz=326,slow=9.4,SNR=73
STKA S **S 02 21 21.1 -1.1**
comp=Z,6.5nm,0.8s,baz=54,slow=23,SNR=7.5
STKA Stephens Creek 36.58 154 P **P 02 15 57.2 +1.1**
baz=37,SNR=66
STKA Stephens Creek 36.58 154 P **P 02 15 57.3 +1.2**
STKA PcP **PcP 02 18 15.0 +0.5**
KSAR Wonju Array Be 36.58 5 P **P 02 15 55.8 -0.2**
KSRS Korea Array 36.60 5 P **P 02 15 56.1 0.0**
comp=Z,14nm,0.8s,baz=181,slow=9.6,SNR=28
KSRS ScP **ScP 02 21 39.9 -0.3**
comp=Z,5.8nm,0.7s,baz=190,slow=4.1,SNR=9.9
KS19 Wonju Array Si 36.64 5 IAmb IAmb 02 15 59.3
comp=Z,28nm,1.0s
JGF Kuroka 36.74 18 IAmb IAmb 02 15 58.8
comp=Z,30nm,0.8s
HTT Hallett 36.89 159 P **P 02 15 59.9 +1.1**
baz=37,SNR=26
EIDS Eidsvold 36.97 137 P **P 02 16 00.3 +0.9**
baz=37,SNR=12
MJAR Matsushiro Arr 37.88 19 P **P 02 16 05.8 -1.1**
comp=Z,39nm,0.8s,baz=192,slow=8.9,SNR=76
MJAR ScP **S 02 21 42.7 +1.0**
comp=Z,9.4nm,1.1s,baz=206,slow=3.9,SNR=12
MJAR Matsushiro Arr 37.88 19 P **P 02 16 05.4 -1.5**
MAJO Matsushiro 37.88 19 P **P 02 16 05.4 -1.5**
MAJO IAmb IAmb 02 16 06.9
comp=Z,52nm,0.9s
MAT Matsushiro 37.88 19 P **P 02 16 05.7 -1.2**
MAT S **S 02 21 44.8 +3.1**
DL2 Dalian 37.93 357 P **P 02 16 08.6 +1.3**
DL2 pmax pmax
comp=Z,43nm,0.9s
TIY Taiyuan 38.19 345 *e*P **P 02 16 10.6 +1.0**
TIY pmax pmax
comp=Z,100nm,0.6s
CMSA Cobar Meteorol 38.23 149 P **P 02 16 11.7 +1.8**
baz=38,SNR=42
JSD Sado 39.26 18 IAmb IAmb 02 16 19.5
comp=Z,31nm,0.6s
SHL Shillong 39.52 311 IAmb IAmb 02 16 22.6
comp=Z,32nm,0.9s
BJT Baijiatuan 39.62 351 P **P 02 16 20.3 -1.0**
BJT IAmb IAmb 02 16 23.2
comp=Z,45nm,0.8s
BJI Beijing 39.65 351 P **P 02 16 21.7 +0.2**
BJI pmax pmax
comp=Z,58nm,1.3s
LZH Lanzhou 39.73 334 *e*P **P 02 16 23.1 +0.6**
LZH pP pP 02 17 08.7 +2.0
LZH sP sP 02 17 30.1 -0.8
LZH sS sS 02 23 30.4 -0.6
LZH pmax pmax
comp=Z,110nm,1.3s
LZH pmax pmax
comp=Z,170nm,5.0s
LZH LR LR
comp=Z,320nm,13.2s
LZH LR LR
comp=Z,270nm,13.5s
LZH LR LR
comp=Z,360nm,15.7s
JMM Marumori 39.95 21 IAmb IAmb 02 16 26.1
comp=Z,73nm,0.8s
ARMA Armidale 40.74 142 P **P 02 16 32.2 +1.4**
baz=41,SNR=7.0
ARPS Mount Arapiles 40.94 158 P **P 02 16 33.6 +1.4**
baz=41,SNR=19
HHC Hu-ho-hao-te 41.37 346 *e*P **P 02 16 36.5 +0.7**
HHC S **S 02 22 41.7 +7.9**
HHC pmax pmax
comp=Z,44nm,0.9s
HHC pmax pmax
comp=Z,130nm,4.4s
BTO Baotou 41.55 344 P **P 02 16 38.5 +1.3**
YNG Young 41.80 149 P **P 02 16 41.1 +1.9**
baz=42,SNR=12
LSA Lhasa 42.41 316 P **P 02 16 46.2 +1.4**
LSA pmax pmax
comp=Z,120nm,0.7s
LSA Lhasa 42.41 316 P **P 02 16 45.6 +0.8**
LSA IAmb IAmb 02 16 47.7
comp=Z,23nm,0.7s
MGCD Mangrove Creek 42.44 146 P **P 02 16 47.5 +3.2**
baz=42,SNR=6.6
CAN Canberra 42.91 149 P **P 02 16 50.2 +2.0**
CAN IAmb IAmb 02 16 51.5
comp=Z,76nm,0.8s
TOO Toolangi 43.10 155 P **P 02 16 52.1 +2.4**
baz=43,SNR=24
TOO Toolangi 43.10 155 P **P 02 16 52.0 +2.3**
TOO IAmb IAmb 02 16 53.1
comp=Z,68nm,0.9s
ODAN Odare 43.63 309 *e*P **P 02 16 55.3 +1.0**
comp=Z,61nm,0.9s
TAPN Taplejung 43.63 310 *e*P **P 02 16 55.4 +1.0**
comp=Z,40nm,0.8s
USRK Ussurysk Ar. 43.74 8 P **P 02 16 54.4 -0.2**
comp=Z,52nm,0.7s,baz=193,slow=7.1,SNR=197
USRK ScP **ScP 02 22 06.4 -1.7**
comp=Z,4.9nm,0.9s,baz=206,slow=4.9,SNR=7.3
USA0B Ussuriysk Arra 43.74 8 P **P 02 16 54.5 -0.1**
USA0B IAmb IAmb 02 16 55.5
comp=Z,67nm,0.8s
MDJ Mudanjiang 43.86 6 P **P 02 16 55.1 -0.4**
MDJ pmax pmax
comp=Z,25nm,1.2s
MDJ pmax pmax
comp=Z,58nm,3.1s
MDJ Mudanjiang 43.86 6 IAmb IAmb 02 16 59.6
comp=Z,32nm,0.6s
GTA Gaotai 44.27 333 P **P 02 16 59.6 +0.5**
GTA pP pP 02 17 45.7 +1.5
GTA sP sP 02 18 13.3 +5.1
GTA ScP **ScP 02 22 09.7 -0.9**
GTA S **S 02 23 15.9 -0.2**
GTA ScS **ScS 02 26 30.7 -3.1**
GTA pmax pmax
comp=Z,76nm,0.9s
GTA pmax pmax
comp=Z,170nm,4.6s
GTA LR LR
comp=Z,170nm,14.5s
GTA LR LR
comp=Z,230nm,16.4s
GTA LR LR
comp=Z,120nm,14.2s
RAMN Ramite 44.29 309 *e*P **P 02 17 01.0 +1.5**
comp=Z,78nm,0.9s
JEW Eniwo 44.64 18 IAmb IAmb 02 17 24.1
comp=Z,67nm,0.9s
JIRN Jiri 44.95 310 *e*P **P 02 17 05.3 +0.3**
comp=Z,62nm,0.8s
GUN Gumba 45.32 310 *e*P **P 02 17 08.7 +0.9**
comp=Z,81nm,0.7s
PKI Pulchoki 45.51 309 *e*P **P 02 17 09.7 +0.4**
comp=Z,29nm,0.8s
PKIN Pulchoki 45.53 309 *e*P **P 02 17 09.9 +0.6**
comp=Z,26nm,0.7s
KKN Kakani 45.72 309 *e*P **P 02 17 11.6 +0.8**
comp=Z,42nm,0.8s
DMN Daman 45.77 309 *e*P **P 02 17 12.1 +0.9**
comp=Z,66nm,1.0s
ASAJ Asahikawa 46.15 19 P **P 02 17 14.2 +0.6**
comp=Z,54nm,0.7s,baz=228,slow=11,SNR=24
JKA Kamikawa-asahi 46.15 19 P **P 02 17 14.1 +0.5**
JKA IAmb IAmb 02 17 15.0
comp=Z,66nm,0.9s
GKN Gorkha 46.32 309 *e*P **P 02 17 16.1 +0.7**
comp=Z,62nm,0.8s
DANN Dangsing 47.17 309 *e*P **P 02 17 22.3 +0.2**
comp=Z,104nm,0.7s
HYB Hyderabad 47.60 293 *i* P **P 02 17 24.0 -1.3**
KLR Kul'dur 48.65 7 P **P 02 17 32.1 -0.6**
comp=Z,32nm,0.6s,baz=203,slow=4.9,SNR=121
KLR ScP **ScP 02 22 27.0 -1.5**
comp=Z,1.5nm,0.8s,baz=275,slow=2.5,SNR=3.7
YSS Yuzh-Sakhalins 48.75 17 P **P 02 17 33.4 -0.1**
YSS IAmb IAmb 02 17 34.4
comp=Z,56nm,1.2s
ULN Ulaanbaatar 49.08 345 P **P 02 17 35.4 -0.8**
SONM Songino Array 49.22 344 P **P 02 17 36.5 -0.8**
comp=Z,14nm,0.8s,baz=157,slow=9.0,SNR=94
SONM ScP **ScP 02 22 29.7 -1.5**
comp=Z,4.2nm,0.9s,baz=163,slow=5.0,SNR=9.6
SONM Songino Array 49.22 344 P **P 02 17 36.5 -0.8**
SONM ScP **ScP 02 22 29.3 -1.8**
TLY Talaya 53.47 344 P **P 02 18 08.6 +0.1**
comp=Z,11nm,0.7s,baz=158,slow=4.7,SNR=9.6
TLY Talaya 53.47 344 P **P 02 18 08.1 -0.4**
TLY IAmb IAmb 02 18 09.3
comp=Z,17nm,0.9s
WMQ Urumqi 53.59 328 *e*P **P 02 18 11.2 +1.6**
WMQ pP pwP 02 19 04.3 +0.6
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ pmax pmax
comp=Z,280nm,4.7s
WMQ Urumqi 53.59 328 IAmb IAmb 02 18 12.1
comp=Z,62nm,1.4s
ZSN Zaisan 57.49 329 *e*P **P 02 18 36.6 -0.7**
baz=329
ZSN *e*S **S 02 26 16.4 -0.8**
baz=329
NIL Nilore 57.58 310 P **P 02 18 37.7 -0.4**
NIL IAmb IAmb 02 18 39.6
comp=Z,25nm,1.1s
SHLS Shalkode 57.88 323 *e*P **P 02 18 38.2 -1.9**
comp=Z,17nm,0.9s,baz=323
SHLS *e*S **S 02 26 18.5 -4.0**
baz=323
UZB Uzynbulak 58.14 322 *e*P **P 02 18 41.6 -0.4**
baz=322
UZB *e*S **S 02 26 25.0 -1.0**
baz=322
MK31 Makanchi Array 58.42 328 P **P 02 18 42.9 -0.8**
MK31 IAmb IAmb 02 18 44.9
comp=Z,18nm,0.8s
MKAR Makanchi Array 58.42 328 P **P 02 18 43.0 -0.7**
comp=Z,25nm,0.7s,baz=123,slow=7.7,SNR=150
MKAR pP **pwP 02 19 37.5 -1.0**
comp=Z,21nm,1.0s,baz=121,slow=8.7,SNR=6.7
MKAR ScP **ScP 02 23 09.5 -1.8**
comp=Z,8.4nm,0.8s,baz=116,slow=5.5,SNR=15
MKAR S **S 02 26 29.4 +0.2**
comp=Z,1.1nm,0.8s,baz=133,slow=12,SNR=6.3
MKAR PKPPKP P'P'df 02 48 29.4 +8.4
comp=Z,1.1nm,1.0s,baz=318,slow=1.6,SNR=5.8
MKAR Makanchi Array 58.42 328 P **P 02 18 42.7 -1.0**
SATY Saty 58.47 322 *e*P **P 02 18 44.2 -0.1**
comp=Z,16nm,0.8s,baz=322
SATY *e*S **S 02 26 29.5 -0.6**
baz=322
KPKS Kokpek 58.52 323 *e*P **P 02 18 44.2 -0.4**
comp=Z,28nm,0.8s,baz=322
MAKZ Makanchi 58.59 327 P **P 02 18 44.1 -0.8**
MAKZ IAmb IAmb 02 18 46.0
comp=Z,17nm,0.7s
PETK Petropavlovsk- 59.12 23 P **P 02 18 49.2 +0.9**
comp=Z,27nm,0.7s,baz=208,slow=3.1,SNR=38
TNSS Tian-Shan 59.36 321 *e*P **P 02 18 50.7 0.0**
baz=321
MDOK Medeo 59.36 322 *e*P **P 02 18 50.3 -0.1**
baz=321
MDOK *e*S **S 02 26 41.0 -0.7**
baz=321
AAA Alma-Ata 59.47 322 *e*P **P 02 18 51.1 +0.1**
comp=Z,13nm,0.6s,baz=321
TDK Taldyqorghan 59.54 324 *e*P **P 02 18 50.8 -0.6**
comp=Z,22nm,0.6s,baz=324
CHKK Chushkaly 59.76 322 *e*P **P 02 18 52.0 -1.0**
baz=322
TKM2 Tokmak 2 60.14 321 P **P 02 18 55.3 -0.5**
SNR=19
KUU Kurty 60.18 322 *e*P **P 02 18 55.4 -0.4**
comp=Z,42nm,0.7s,baz=322
KUU *e*S **S 02 26 51.1 -0.8**
baz=322
KBK Karagaybulak 60.42 320 P **P 02 18 58.1 +0.5**
SNR=15
UCH Uchtor 60.49 320 P **P 02 18 59.1 +0.6**
SNR=19
AAK Ala-Archa 60.71 320 P **P 02 19 00.0 +0.4**
SNR=12
AAK Ala-Archa 60.71 320 P **P 02 18 59.3 -0.3**
AAK IAmb IAmb 02 19 01.5
comp=Z,15nm,0.9s
CHMS Chumysh 60.72 320 P **P 02 18 59.2 -0.3**
SNR=5.2
LBZ Lake Benmore 60.93 144 P **P 02 19 02.1 +1.3**
LBZ IAmb IAmb 02 19 03.0
comp=Z,28nm,0.8s
AML Almayashu 60.98 319 P **P 02 19 01.7 0.0**
SNR=23
USP Ospenovka 61.01 321 P **P 02 19 01.2 -0.3**
SNR=29
SGDS Sogindy 61.02 321 *e*P **P 02 19 01.4 -0.1**
baz=321
RPZ Rata Peaks 61.08 143 P **P 02 19 03.0 +1.1**
RPZ IAmb IAmb 02 19 04.3
comp=Z,54nm,1.1s
RPZ PcP **PcP 02 19 43.9 +1.3**
KBL Kabul 61.15 310 P **P 02 19 01.9 -0.8**
KBL IAmb IAmb 02 19 04.2
comp=Z,46nm,1.5s
YAK Yakutsk 61.17 3 P **P 02 19 01.7 -0.3**
comp=Z,157nm,0.7s,baz=180,slow=2.5,SNR=10
YAK Yakutsk 61.17 3 P **P 02 19 01.6 -0.5**
EKS2 Erkin-Say 61.18 320 P **P 02 19 02.9 +0.2**
SNR=27
THZ Tophouse 61.20 140 IAmb IAmb 02 19 26.4
comp=Z,15nm,1.0s
OXZ Oxford 61.47 142 IAmb IAmb 02 19 07.0
comp=Z,14nm,0.6s
NGZ Ngauruhoe 61.75 136 P **P 02 19 09.1 +2.4**
OTVZ Oturere 61.79 136 P **P 02 19 08.8 +1.9**
TMVZ Te Maari 61.80 136 P **P 02 19 09.3 +2.5**
ETVZ East Tongariro 61.81 136 P **P 02 19 09.2 +2.3**
OPRZ Ohinepanea 61.83 135 P **P 02 19 04.9 -2.0**
ZAA0 Zalesovo Array 61.95 335 P **P 02 19 05.7 -1.7**
ZAA0 IAmb IAmb 02 19 07.7
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 61.95 335 P **P 02 19 05.9 -1.6**
comp=Z,7.5nm,0.6s,baz=116,slow=6.8,SNR=32
ZALV pP **pwP 02 20 01.3 -1.8**
comp=Z,2.9nm,0.7s,baz=123,slow=7.3,SNR=2.6
ZALV S **S 02 27 11.1 -2.8**
comp=Z,1.5nm,0.7s,baz=144,slow=10.0,SNR=6.3
ZALV PKPPKP **P'P'df 02 48 19.9 +4.8**
comp=Z,0.7nm,0.5s,baz=297,slow=6.5,SNR=4.2
ZALV Zalesovo Beam 61.95 335 P **P 02 19 05.5 -1.9**
SNZO South Karori 62.15 139 P **P 02 19 09.1 +0.1**
MA2 Magadan 62.16 15 P **P 02 19 09.5 +0.8**
comp=Z,72nm,0.7s,baz=198,slow=6.2,SNR=66
MA2 pP **pwP 02 20 02.7 -0.8**
comp=Z,16nm,0.7s,baz=184,slow=9.5,SNR=3.8
MA2 Magadan 62.16 15 P **P 02 19 09.5 +0.8**
BTLS Baital 62.18 322 *e*P **P 02 19 08.3 -0.9**
baz=322
BHHZ Black Hill Sta 62.22 136 P **P 02 19 10.6 +1.0**
BKZ Black Stump Fm 62.37 136 IAmb IAmb 02 19 12.6
comp=Z,60nm,1.4s
URZ Urewera 62.41 135 IAmb IAmb 02 19 11.7
comp=Z,11nm,0.6s
URZ Urewera 62.41 135 P **P 02 19 11.4 +0.7**
KWHZ Kaweka Forest 62.44 136 P **P 02 19 12.7 +1.6**
MCHZ McNeill Hill 62.63 136 P **P 02 19 14.1 +1.9**
PLWZ Palliser 62.64 139 P **P 02 19 12.2 -0.1**
RUGZ Raukumara Rang 62.69 134 P **P 02 19 13.0 +0.2**
DZA Taraz 62.88 319 *e*P **P 02 19 12.8 -1.1**
baz=319
IUG Iuzhnay 63.42 318 *e*P **P 02 19 16.7 -0.8**
comp=Z,7.6nm,0.9s,baz=318
KK31 Karatay Array 63.52 319 IAmb IAmb 02 19 19.7
comp=Z,25nm,1.2s
KKAR Karatay Array 63.52 319 P **P 02 19 17.5 -0.5**
KKAR IAmb IAmb 02 19 19.7
comp=Z,25nm,1.2s
BRLS Borolday 63.93 319 *e*P **P 02 19 20.5 -0.2**
comp=Z,9.5nm,0.7s,baz=318
SEY Seymchan 65.44 14 P **P 02 19 30.6 +0.5**
comp=Z,20nm,0.9s,baz=212,slow=6.0,SNR=34
BRZS Berezniki 65.49 326 *e*P **P 02 19 29.7 -1.0**
comp=Z,8.1nm,0.8s,baz=326
HRA Herat 66.43 307 P **P 02 19 37.5 +0.3**
CASY Casey 67.67 186 P **P 02 19 44.8 +0.7**
CASY IAmb IAmb 02 19 45.8
comp=Z,34nm,0.8s
BRVK Borovoye 68.34 328 P **P 02 19 47.6 -0.9**
BRVK IAmb IAmb 02 19 50.0
comp=Z,23nm,1.1s
SOCY Socotra 70.27 283 IAmb IAmb 02 20 00.2
comp=Z,16nm,0.9s
GEYT Alibeck 70.59 310 P **P 02 20 03.3 +0.6**
comp=Z,5.9nm,0.8s,baz=142,slow=5.1,SNR=9.9
TIXI Tiksi 70.75 2 P **P 02 20 01.7 -1.1**
comp=Z,77nm,0.9s,baz=155,slow=2.2,SNR=128
TIXI Tiksi 70.75 2 P **P 02 20 01.5 -1.3**

NRIK	**Noril'sk**	**72.58**	**347**	P		**P**	**02 20 13.2**	**-0.6**
	comp=Z,16nm,0.6s,baz=127,slow=5.3,SNR=34							
NRIK	**Noril'sk**	**72.58**	**347**	IAmb		IAmb	02 20 14.1	
	comp=Z,20nm,0.8s							
ABKAR	**Akbulak array**	**72.67**	**322**	P		**P**	**02 20 13.5**	**-1.2**
ABKAR				IAmb		IAmb	02 20 16.2	
	comp=Z,23nm,1.3s							
BILL	**Bilibino**	**73.02**	**15**	P		**P**	**02 20 15.3**	**-1.1**
ARU	**Arti**	**75.92**	**329**	P		**P**	**02 20 31.5**	**-1.8**
ARU				IAmb		IAmb	02 20 34.4	
	comp=Z,18nm,0.8s							
ABPO	**Ambohimpanom**	**77.77**	**250**	P		**P**	**02 20 43.6**	**-1.0**
ABPO				IAmb		IAmb	02 20 45.5	
	comp=Z,24nm,0.7s							
CRZF	**Crozet Islands**	**78.37**	**222**	P		**P**	**02 20 47.7**	**+0.5**
RAYN	**Ar Rayn**	**79.10**	**294**	P		**P**	**02 20 49.9**	**-1.8**
MAW	**Mawson**	**80.13**	**200**	P		**P**	**02 20 57.2**	**+1.1**
	comp=Z,23nm,0.6s,baz=68,slow=5.5,SNR=41							
MAW	**Mawson**	**80.13**	**200**	P		**P**	**02 20 57.3**	**+1.1**
	baz=80,SNR=24							
VNDA	**Vanda**	**80.95**	**172**	P		**P**	**02 21 01.1**	**+0.7**
	comp=Z,14nm,0.8s,baz=318,slow=6.0,SNR=112							
VNDA	**Vanda**	**80.95**	**172**	P		**P**	**02 21 00.5**	**+0.1**
VNDA				IAmb		IAmb	02 21 02.1	
	comp=Z,18nm,1.0s							
GNI	**Garni**	**81.22**	**310**	P		**P**	**02 21 03.4**	**+0.5**
SBA	**Scott Base**	**81.89**	**172**	P		**P**	**02 21 06.5**	**+1.2**
SBA				IAmb		IAmb	02 21 08.2	
	comp=Z,14nm,1.1s							
GEVA	**Gevas**	**82.35**	**308**	IAmb		IAmb	02 21 11.2	
	comp=Z,16nm,0.8s							
KBZ	**Khabaz**	**82.96**	**314**	P		**P**	**02 21 11.4**	**-0.1**
	comp=Z,5.1nm,0.8s,baz=131,slow=3.8,SNR=12							
MARD	**Mardin**	**84.07**	**307**	P		**P**	**02 21 17.6**	**+0.1**
MARD				IAmb		IAmb	02 21 19.6	
	comp=Z,11nm,0.7s							
KDAK	**Kodiak Island**	**85.77**	**32**	P		**P**	**02 21 25.1**	**-0.2**
	comp=Z,5.3nm,0.6s,baz=318,slow=6.3,SNR=5.8							
IMAR	**Indian Mountai**	**86.07**	**24**	P		**P**	**02 21 27.0**	**+0.4**
KLMR	**Klimovskoe**	**86.55**	**331**	*eP*		**P**	**02 21 27.0**	**-2.1**
KLMR				AMP			02 21 31.2	
	comp=Z,32nm,1.0s							
KLMR				*ep*		**pwP**	**02 22 24.5**	**-1.7**
KLMR				*es*		**sP**	**02 22 43.8**	**0.0**
KLMR				*eP*		**PP**	**02 24 51.3**	**-2.7**
KMBO	**Kilima Mbogo**	**86.75**	**269**	P		**P**	**02 21 32.0**	**+0.6**
	comp=Z,11nm,1.0s,baz=67,slow=5.7,SNR=19							
GAZ	**Gaziantep**	**86.91**	**307**	IAmb		IAmb	02 21 34.0	
	comp=Z,17nm,0.8s							
COLD	**Coldfoot**	**87.59**	**23**	P		**P**	**02 21 34.2**	**+0.3**
KNK	**Knik Glacier**	**88.08**	**29**	IAmb		IAmb	02 21 37.3	
	comp=Z,12nm,1.1s							
SYO	**Syowa Base**	**88.78**	**201⇑**	*eP*		**P**	**02 21 40.4**	**+1.0**
SYO	**Syowa Base**	**88.78**	**201⇑**	*ep*		pP	02 22 36.4	+3.7
ILAR	**Eielson Array**	**88.86**	**25**	P		**P**	**02 21 38.4**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=258,slow=4.5,SNR=10							
ILAR				PKKPbc		**PKKPbc**	**02 39 19.6**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=57,slow=2.9,SNR=4.9							
BRTR	**Keskin Array B**	**89.73**	**310**	P		**P**	**02 21 45.7**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=108,slow=7.0,SNR=7.9							
BRTR	**Keskin Array B**	**89.73**	**310**	P		**P**	**02 21 44.8**	**+0.1**
BMAR	**Burnt Mountain**	**89.77**	**23**	P		**P**	**02 21 45.1**	**+0.9**
MCARA	**McCarthy VSAT**	**90.69**	**29**	IAmb		IAmb	02 21 52.5	
	comp=Z,7.1nm,0.8s							
QSPA	**South Pole Qui**	**90.78**	**180**	P		**P**	**02 21 49.8**	**+0.8**
QSPA				IAmb		IAmb	02 21 51.3	
	comp=Z,13nm,0.8s							
BCAR	**Beaver Creek A**	**91.17**	**27**	P		**P**	**02 21 50.6**	**-0.2**
BARN	**Barnard Glacie**	**91.37**	**29**	IAmb		IAmb	02 21 53.8	
	comp=Z,7.8nm,0.7s							
CTGM	**Chitina Glacie**	**91.54**	**29**	IAmb		IAmb	02 21 54.6	
	comp=Z,6.7nm,0.8s							
ARA0	**ARCESS Array S**	**92.18**	**340**	*eP*		**P**	**02 21 54.1**	**-1.2**
ARCES	**ARCESS Array B**	**92.18**	**340**	P		**P**	**02 21 53.6**	**-1.7**
	comp=Z,2.8nm,0.6s,baz=88,slow=4.8,SNR=22							
AKASG	**Malin Array Be**	**92.37**	**321**	P		**P**	**02 21 55.3**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=71,slow=4.4,SNR=5.6							
HAMF	**Hammerfest**	**92.62**	**341**	*eP*		**P**	**02 21 55.6**	**-1.6**
SPA0	**Spitsbergen Ar**	**92.75**	**349**	*eP*		**P**	**02 21 57.3**	**-0.4**
FINES	**FINESS Array B**	**93.04**	**332**	P		**P**	**02 21 58.2**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=67,slow=6.0,SNR=7.8							
KTK1	**Kautokeino**	**93.06**	**339**	*eP*		**P**	**02 21 58.4**	**-1.0**
NACGM	**Naroch**	**93.46**	**325**	*i P*		**P**	**02 21 59.7**	**-1.7**
NACGM				*i P*		**P**	**02 21 59.7**	**-1.7**
NACGM				*i P*		**P**	**02 21 59.7**	**-1.7**
NACGM				*i* pP		pP	02 22 43.5	-11
NACGM				*i* sP		**sP**	**02 23 21.0**	**+4.1**
NACGM				*i* PP		**PP**	**02 25 43.0**	**-5.8**
NACGM				*i* PPP		PPP	02 27 47.7	
NACGM				*i* S		**SKSac**	**02 32 19.7**	**+5.1**
NACGM				*i* SKS		**S**	**02 32 47.6**	**-2.6**
NACGM				*i* sS		**pS**	**02 33 53.3**	**-4.0**
NACGM				*i* PS		PS	02 35 45.7	+73
NACGM				*i* PS		PS	02 35 50.0	+77
NACGM				*i* SS		**SS**	**02 39 11.7**	**-0.5**
NACGM				*i* SSS		SSS	02 42 37.7	
CFR	**Carcaliu**	**93.53**	**315**	⇓P		**P**	**02 22 01.0**	**-1.0**
INK	**Inuvik**	**93.82**	**21**	P		**P**	**02 22 02.7**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=269,slow=5.4,SNR=7.1							
INK	**Inuvik**	**93.82**	**21**			**P**	**02 22 02.4**	**-0.4**
JETT	**Jettan, Norway**	**93.93**	**340**	*eP*		**P**	**02 22 01.7**	**-1.7**
TRO	**Tromso**	**94.42**	**340**	*eP*		**P**	**02 22 03.7**	**-1.8**
TESR	**Tescani**	**94.44**	**317**	⇑P		**P**	**02 22 05.5**	**-0.7**
VRI	**Vrincioaia**	**94.45**	**316**	⇑P		**P**	**02 22 06.3**	**0.0**
WHY	**Whitehorse**	**94.71**	**29**	IAmb		IAmb	02 22 09.2	
	comp=Z,6.5nm,0.9s							
BURAR	**Bucovina Array**	**95.29**	**318**	⇓P		**P**	**02 22 10.4**	**+0.2**
BURAR	**Bucovina Array**	**95.29**	**318**	P		**P**	**02 22 08.9**	**-1.3**
BUR08	**Bucovina Ar. S**	**95.30**	**318**	P		**P**	**02 22 10.1**	**-0.1**
LSZ	**Lusaka**	**95.82**	**255**	P		**P**	**02 22 12.7**	**-0.6**
STEI	**Steigen**	**96.18**	**339**	*eP*		**P**	**02 22 11.4**	**-2.1**
LOF	**Lofoten**	**96.72**	**339**	*eP*		**P**	**02 22 15.5**	**-0.5**
BOSA	**Boshof**	**98.08**	**241**	P		**P**	**02 22 22.8**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=289,slow=4.3,SNR=3.6							
DOMB	**Dombas**	**100.69**	**334**	*e*Pdif		**Pdif**	**02 22 31.4**	**-2.5**
RES	**Resolute Bay**	**101.10**	**10**	P		**Pdif**	**02 22 35.0**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=313,slow=4.3,SNR=6.9							
RES	**Resolute Bay**	**101.10**	**10**			**Pdif**	**02 22 35.0**	**-0.5**
SNAA	**Sanae**	**101.75**	**195**	Pdiff		**Pdif**	**02 22 39.8**	**+1.2**
GERES	**GERESS Array B**	**102.58**	**321**	PP		**PKiKP**	**02 27 01.7**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=71,slow=7.4,SNR=2.2							
YKA	**Yellowknife Ar**	**103.23**	**24**	Pdiff		**Pdif**	**02 22 45.1**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=300,slow=4.2,SNR=6.5							
YKA				PKiKP		**PKiKP**	**02 27 03.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=321,slow=1.0,SNR=5.0							
YKA				PKKPbc		**PKKPbc**	**02 38 38.6**	**-3.8**
	comp=Z,2.0nm,0.7s,baz=113,slow=3.0,SNR=39							
VNA2	**Neumayer--Watz**	**103.37**	**195**	Pdiff		**Pdif**	**02 22 45.7**	**+0.1**
VNA3	**Neumayer Olymp**	**103.73**	**194**	Pdiff		**Pdif**	**02 22 48.0**	**+0.7**
VNA1	**Neumayer--Stat**	**103.77**	**195**	Pdiff		**Pdif**	**02 22 49.1**	**+1.7**
NVAR	**Mina Array Bea**	**110.86**	**48**	PKiKP		**PKiKP**	**02 27 19.4**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=270,slow=0.9,SNR=3.2							
PDAR	**Pinedale Array**	**115.31**	**41**	PKP		**PKPdf**	**02 27 29.1**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=333,slow=0.3,SNR=3.4							
PDAR				PKKPbc		**PKKPbc**	**02 38 00.8**	**-2.7**
	comp=Z,0.4nm,0.5s,baz=128,slow=6.8,SNR=5.1							
ULM	**Lac du Bonnet**	**118.78**	**28**	PKP		**PKPdf**	**02 27 32.5**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=325,slow=7.1,SNR=4.2							
TOA0	**Torodi Ar. Sit**	**121.13**	**286**	PKPdf		**PKPdf**	**02 27 37.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**121.13**	**286**	PKP		**PKPdf**	**02 27 38.3**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=60,slow=1.9,SNR=30							
TORD				SKP			02 30 51.0	
	comp=Z,1.9nm,0.8s,baz=64,slow=2.3,SNR=5.8							
TORD				PKKPbc		**PKKPab**	**02 37 43.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=268,slow=5.0,SNR=4.4							
TORD	**Torodi Ar. Bea**	**121.13**	**286**			**PKPdf**	**02 27 38.1**	**-0.6**
TXAR	**Lajitas Array**	**125.51**	**52**	PKP		**PKiKP**	**02 27 47.9**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=204,slow=2.7,SNR=5.8							
KOWA	**Kowa**	**126.34**	**289**	PKP		**PKPdf**	**02 27 48.4**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=56,slow=3.0,SNR=7.1							
KOWA	**Kowa**	**126.34**	**289**	PKPdf		**PKPdf**	**02 27 47.5**	**-1.1**
KIC	**Kosan Boka**	**128.32**	**279**	*eP*		**PKPdf**	**02 27 51.6**	**-0.9**
	comp=Z,5.9nm,0.6s							
DBIC	**Dimbokro**	**128.40**	**279**	PKP		**PKPdf**	**02 27 52.6**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=117,slow=2.0,SNR=5.0							
DBIC				SKPbc		SKPbc	02 30 51.2	
	comp=Z,3.8nm,0.7s,baz=100,slow=7.2,SNR=5.0							
S39A	**Bolivar**	**128.45**	**38**	PKPdf		**PKPdf**	**02 27 51.5**	**-0.6**
TIC	**Toumodi**	**128.57**	**279**	*eP*		**PKPdf**	**02 27 53.1**	**+0.2**
LIC	**Lamto**	**128.62**	**279**	*eP*		**PKPdf**	**02 27 53.2**	**+0.2**
	comp=Z,22nm,0.8s							
U40A	**Yellville**	**129.59**	**39**	PKPdf		**PKPdf**	**02 27 54.0**	**-0.3**
PLCA	**Paso Flores**	**138.17**	**163**	PKP		**PKiKP**	**02 28 11.8**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=212,slow=5.4,SNR=6.7							
PLCA				SKPbc		**SKPbc**	**02 31 23.9**	**0.0**
	comp=Z,3.3nm,0.8s,baz=218,slow=2.3,SNR=7.8							
CPUP	**Villa Florida**	**154.64**	**177**	PKP		**PKPdf**	**02 28 38.1**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=117,slow=1.2,SNR=5.7							
CPUP				PKPbc		**PKiKP**	**02 28 47.5**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=29,slow=0.7,SNR=5.2							
CPUP				PKPab		**PKPab**	**02 29 02.7**	**+0.7**
	comp=Z,7.3nm,0.9s,baz=197,slow=3.6,SNR=8.1							
LPAZ	**La Paz**	**160.56**	**143**	PKP		**PKPdf**	**02 28 47.4**	**+1.2**
	comp=Z,2.6nm,0.9s,baz=52,slow=2.9,SNR=5.8							
LPAZ				PKPab		**PKPab**	**02 29 31.2**	**+2.5**
	comp=Z,5.5nm,0.7s,baz=188,slow=4.4,SNR=11							
LPAZ	**La Paz**	**160.56**	**143**	PKPdf		**PKPdf**	**02 28 46.8**	**+0.6**
BDFB	**Brasilia**	**163.32**	**208**	PKPab		**PKPab**	**02 29 41.1**	**+1.0**
	comp=Z,9.6nm,0.8s,baz=142,slow=3.1,SNR=12							

*IDC **01** 02:35:30.9±1.6, 4.°29N×125.°38E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.7/40, mbtmp4.0/6, ML4.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/33, Error ellipse: s-maj=71.8km s-min=24.1km az=63.0*
*DJA **01** 02:35:34.0±2.3, 4.°N±15.°×12.°6E±.°, h18km±13km, M4.2/4, mb4.3/3, MLv4.1/4*
*NEIC **01** 02:35:40.4±1.7, 4.°0N±0.°1×125.°37E±0.°06, h58km±13km, mb4.3/7, Error ellipse: s-maj=16.1km s-min=8.0km az=183.0*
ISC 01 02:35:37.0±0.9, 4.°2N±0.°1×125.°32E±0.°10, h35km, n24, σ1s03/21, mb4.2/9, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.53**	**157**	P	**Pn**	**02 35 48.7**	**+0.6**
TNTI	**Ternate**	**3.95**	**149**	Pn	**Pn**	**02 36 36.8**	**+1.6**
GTOI	**Gorontalo**	**4.21**	**213**	P	**Pn**	**02 36 40.5**	**+1.8**
TOLI2	**Tolitoli**	**5.46**	**236**		**Pn**	**02 36 56.5**	**+0.5**
SANI	**Sanana**	**6.22**	**174**	P	**Pn**	**02 37 06.6**	**+0.2**
	14nm,0.6s						
APSI	**Ampana**	**6.25**	**216**	P	Pn	02 37 13.0	+6.3
MYLDM	**Lahad Datu**	**6.87**	**279**	Pn	Pn	02 37 20.1	+4.8
SIJI	**Sorong**	**7.77**	**130**	Pn	**Pn**	**02 37 27.9**	**+0.2**
	4.5nm,0.3s,baz=332,slow=16,SNR=4.8						
FAKI	**Fak Fak**	**9.88**	**135**	Pn	**Pn**	**02 37 58.1**	**+1.5**
JAY	**Jayapura**	**16.75**	**113**	LR	LR	02 44 09.7	
	comp=Z,47nm,21.9s,baz=232,slow=31						
FITZ	**Fitzroy Crossi**	**22.14**	**179**	P	**P**	**02 40 29.8**	**0.0**
	2.8nm,0.7s,baz=22,slow=12,SNR=15						
FITZ	**Fitzroy Crossi**	**22.14**	**179**	P	**P**	**02 40 30.3**	**+0.6**
FITZ				IAmb	IAmb	02 40 34.9	
	comp=Z,3.9nm,0.9s						
WB0	**Warramunga Arr**	**25.41**	**160**	P	**P**	**02 41 00.9**	**-0.5**
WB0				IAmb	IAmb	02 41 02.6	
	comp=Z,11nm,0.5s						
WRA	**Warramunga Arr**	**25.56**	**160**	P	**P**	**02 41 01.8**	**-1.0**
	comp=Z,6.6nm,0.8s,baz=342,slow=10,SNR=54						
WRA	**Warramunga Arr**	**25.56**	**160**	P	**P**	**02 41 02.5**	**-0.2**
WB2	**Warramunga Arr**	**25.56**	**160**	P	**P**	**02 41 01.9**	**-0.9**
WB2				IAmb	IAmb	02 41 04.2	
	comp=Z,9.8nm,0.8s						
WR0	**Warramunga Arr**	**25.64**	**160**	P	**P**	**02 41 02.4**	**-1.1**
WR0				IAmb	IAmb	02 41 05.0	
	comp=Z,4.9nm,0.8s						
ASAR	**Alice Springs**	**28.91**	**164**	P	**P**	**02 41 32.0**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=341,slow=7.8,SNR=7.5						
BBOO	**Buckleboo**	**38.17**	**165**	P	**P**	**02 42 52.8**	**-0.4**
EIDS	**Eidsvold**	**38.57**	**141**	P	**P**	**02 42 55.6**	**-1.1**
EIDS				IAmb	IAmb	02 42 59.4	
	comp=Z,23nm,1.4s						
STKA	**Stephens Creek**	**39.06**	**158**	P	**P**	**02 43 00.5**	**-0.2**
	comp=Z,1.5nm,0.3s,baz=342,slow=12,SNR=4.6						
STKA	**Stephens Creek**	**39.06**	**158**	P	**P**	**02 43 00.9**	**+0.2**
MKAR	**Makanchi Array**	**56.39**	**326**	P	**P**	**02 45 13.8**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=108,slow=9.9,SNR=4.5						
GSTR	**Great Sitkin T**	**67.83**	**35**	P	**P**	**02 46 33.2**	**+1.6**

*NEIC **01** 02:48:32.8±0.9, 26.°38S±0.°09×27.°7E±0.°1, h5km±2km, Error ellipse: s-maj=18.6km s-min=13.2km az=47.0*
PRE 01 02:48:26.0±1.0, 26.°34S×28.°27E, h2km, ML2.4, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLR	**Silverton**	**0.60**	**1**	*eP*	Pg	02 48 37.2	-0.4
SLR				*eS*	Sg	02 48 45.6	+0.2
SLR				AML	AML	02 48 50.8	
	comp=Z,90nm,0.2s						
SLR	**Silverton**	**0.60**	**1**	*eP*	Pg	02 48 37.2	-0.4
SLR				*eS*	Sg	02 48 45.6	+0.2
SLR				AML	AML	02 48 50.8	
	comp=Z,90nm,0.2s						
WDLM	**Western Deep L**	**0.77**	**264**	*eP*	Pg	02 48 40.6	-0.1
WDLM				*eS*	Sg	02 48 50.7	+0.1
WDLM				AML	AML	02 48 57.2	
	comp=Z,205nm,0.2s						
WDLM	**Western Deep L**	**0.77**	**264**	*eP*	Pg	02 48 40.6	-0.1
WDLM				*eS*	Sg	02 48 50.7	+0.1
WDLM				AML	AML	02 48 57.2	
	comp=Z,205nm,0.2s						
PRYS	**Parys**	**1.00**	**234**	*eP*	Pg	02 48 45.5	+0.3
PRYS				*eS*	Sg	02 48 58.9	+0.7
PRYS				AML	AML	02 49 10.7	
	comp=Z,53nm,0.1s						
PRYS	**Parys**	**1.00**	**234**	*eP*	Pg	02 48 45.5	+0.3
PRYS				*eS*	Sg	02 48 58.9	+0.7
PRYS				AML	AML	02 49 10.7	
	comp=Z,53nm,0.1s						
KSR	**Koster**	**1.33**	**291**	*eP*	Pn	02 48 51.7	-0.1
KSR				*eS*	Sn	02 49 10.2	+0.1
KSR				AML	AML	02 49 13.1	
	comp=Z,547nm,0.1s						
KSR	**Koster**	**1.33**	**291**	*eP*	Pn	02 48 51.7	-0.1
KSR				*eS*	Sn	02 49 10.2	+0.1
KSR				AML	AML	02 49 13.1	
	comp=Z,547nm,0.1s						
LBTB	**Lobatse**	**2.75**	**298**	*eP*	Pn	02 49 12.0	+0.8
LBTB				*eS*	Sn	02 49 46.0	+0.8
LBTB				AML	AML	02 49 59.2	
	comp=Z,29nm,0.3s						
LBTB	**Lobatse**	**2.75**	**298**	*eP*	Pn	02 49 12.0	+0.8
LBTB				*eS*	Sn	02 49 46.0	+0.8
LBTB				AML	AML	02 49 59.2	
	comp=Z,29nm,0.3s						
LBTB	**Lobatse**	**2.75**	**298**		Pn	02 49 12.1	+0.9
LBTB					Sb	02 49 49.0	-1.2
LBTB				IAmb_Lg		02 49 49.7	
	comp=Z,6.5nm,0.8s						
SWZ	**Schweizer**	**2.76**	**252**	*eP*	Pn	02 49 12.5	+1.1
SWZ				*eS*	Sn	02 49 45.9	+0.5
SWZ				AML	AML	02 49 53.7	
	comp=Z,25nm,0.3s						
SWZ	**Schweizer**	**2.76**	**252**	*eP*	Pn	02 49 12.5	+1.1
SWZ				*eS*	Sn	02 49 45.9	+0.5
SWZ				AML	AML	02 49 53.7	
	comp=Z,25nm,0.3s						
BOSA	**Boshof**	**3.51**	**229**	*eP*	Pn	02 49 22.6	+0.9
BOSA				*eS*	Sn	02 50 03.2	-0.6
BOSA				AML	AML	02 50 19.6	
	comp=Z,25nm,0.7s						
BOSA	**Boshof**	**3.51**	**229**	*eP*	Pn	02 49 22.6	+0.9
BOSA				*eS*	Sn	02 50 03.2	-0.6
BOSA				AML	AML	02 50 19.6	
	comp=Z,25nm,0.7s						
BOSA	**Boshof**	**3.51**	**229**		Pn	02 49 23.0	+1.3
BOSA				IAmb_Lg		02 50 17.1	
	comp=Z,18nm,1.0s						
UPI	**Upington**	**6.56**	**251**	*eP*	Pn	02 50 04.2	+0.6
UPI				*eS*	Sn	02 51 15.7	-3.3
UPI				AML	AML	02 51 32.5	
	comp=Z,1.4nm,0.4s						
UPI	**Upington**	**6.56**	**251**	*eP*	Pn	02 50 04.2	+0.6
UPI				*eS*	Sn	02 51 15.7	-3.3
UPI				AML	AML	02 51 32.5	
	comp=Z,1.4nm,0.4s						
SOE	**Somerset East**	**6.77**	**200**	*eP*	Pn	02 50 07.4	+0.9
SOE				*eS*	Sn	02 51 21.5	-2.8
SOE				AML	AML	02 51 37.0	
	comp=Z,4.1nm,0.6s						
SOE	**Somerset East**	**6.77**	**200**	*eP*	Pn	02 50 07.4	+0.9
SOE				*eS*	Sn	02 51 21.5	-2.8
SOE				AML	AML	02 51 37.0	
	comp=Z,4.1nm,0.6s						
SUR	**Sutherland**	**8.86**	**225**		Pn	02 50 37.7	+2.4
SUR				Sn	Sn	02 52 11.7	-4.2
CVNA	**Calvinia**	**9.04**	**234**	*eP*	Pn	02 50 38.2	+0.5
CVNA				*eS*	Sn	02 52 15.3	-4.9
CVNA				AML	AML	02 53 09.9	
	comp=Z,2.9nm,0.5s						
CVNA	**Calvinia**	**9.04**	**234**	*eP*	Pn	02 50 38.2	+0.5
CVNA				*eS*	Sn	02 52 15.3	-4.9
CVNA				AML	AML	02 53 09.9	
	comp=Z,2.9nm,0.5s						

*IDC **01** 02:55:52.8±5.0, 87.°00N×52.°92E, h0km, mb3.3/2, mb1 3.9/4, mb1mx3.3/44, mbtmp3.6/4, ML3.5/2, MS3.3/5, Ms1 3.3/5, ms1mx2.8/33, Error ellipse: s-maj=145.3km s-min=25.2km az=114.0*
*IEPN **01** 02:55:54.0, 86.°47N×66.°81E, h10km*
ISC 01 02:55:52.3±1.3, 86.°62N±0.°10×58.°6E±0.°1, h10km, n10, σ2s90/12, MS3.3/4, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFI	**Zemlya Franca-**	**5.95**	**197**	*eP*	**Pn**	**02 57 21.2**	**+0.9**
ZFI				*eS*	**Sn**	**02 58 25.3**	**-3.0**
KBS	**Kingsbay**	**9.15**	**242**	*eP*	**Pn**	**02 58 06.4**	**+2.3**
KBS				*eS*	**Sn**	**02 59 44.1**	**-2.7**
SPA0	**Spitsbergen Ar**	**9.65**	**236**	*eP*	**Pn**	**02 58 13.0**	**+2.1**
SPA0				*eS*	**Sn**	**02 59 55.5**	**-3.8**
SPITS	**Spitsbergen Ar**	**9.65**	**236**	Pn	**Pn**	**02 58 12.4**	**+1.5**
	baz=6.3,slow=14,SNR=4.6						
SPITS				Sn	**Sn**	**02 59 56.9**	**-2.4**
	baz=188,slow=8.7,SNR=1.4						
HSPB	**Hornsund (broa**	**10.85**	**235**	P	**Pn**	**02 58 30.5**	**+3.3**
ARCES	**ARCESS Array B**	**17.84**	**219**	P	**P**	**03 00 04.4**	**+3.6**
	baz=2.5,slow=10,SNR=2.2						
ARCES				LR	LR	03 06 34.0	
	comp=Z,68nm,19.0s,baz=270,slow=36						
FINES	**FINESS Array B**	**25.91**	**216**	LR	LR	03 11 09.6	
	comp=Z,113nm,18.7s,baz=37,slow=35						
YAK	**Yakutsk**	**27.20**	**103**	LR	LR	03 12 49.4	
	comp=Z,36nm,18.6s,baz=267,slow=37						
YKA	**Yellowknife Ar**	**31.04**	**354**	P	**P**	**03 02 09.0**	**-0.6**
	0.1nm,0.7s,baz=352,slow=7.3,SNR=2.9						
YKA				LR	LR	03 14 45.0	
	comp=Z,41nm,18.7s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**64.07**	**343**	P	**P**	**03 06 24.3**	**-1.7**
	0.4nm,0.7s,baz=6.9,slow=4.6,SNR=4.6						
TXAR				LR	LR	03 34 03.3	
	comp=Z,25nm,18.5s,baz=0.0,slow=36						

*IDC **01** 03:12:22.0±1.0, 42.°68N×123.°22E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.5/42, mbtmp3.5/9, ML2.9/3, MS3.5/1, Ms1 3.5/1, ms1mx2.4/47, Error ellipse: s-maj=24.5km s-min=16.7km az=11.0*
ISC 01 03:12:23.7±0.7, 42.°70N±0.°09×123.°41E±0.°08, h10km, n12, σ2s01/13, mb3.8/6, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**6.28**	**145**	Pn	**Pn**	**03 13 57.1**	**+0.8**
	0.3nm,0.3s,baz=320,slow=13,SNR=1.9						
KSRS				Pg	**Pb**	**03 14 14.0**	**+0.9**
	0.7nm,0.3s,baz=333,slow=15,SNR=4.0						
KSRS				Lg	Lg	03 15 47.3	
	2.8nm,0.3s,baz=324,slow=30,SNR=6.1						
USRK	**Ussuriysk Ar.**	**6.42**	**74**	Pn	**Pn**	**03 14 00.9**	**+2.6**
	baz=251,slow=13,SNR=19						
USRK				Pg	**Pg

DOT						IAmb	IAmb	03 26 05.5		
	comp=Z,2.4nm,0.8s									
PRP	**Porcupine Dome**	**83.90**	**22**	P		**P**	**P**	**03 26 05.8**	**0.0**	
PRP						IAmb	IAmb	03 26 12.8		
	comp=Z,5.3nm,1.0s									
BCAR	**Beaver Creek A**	**84.29**	**25**	P		**P**		**03 26 08.7**	**+1.1**	
BMAR	**Burnt Mountain**	**85.12**	**20**	P		**P**		**03 26 12.8**	**+1.0**	
YKA	**Yellowknife Ar**	**96.31**	**28**	P		**P**		**03 27 05.5**	**+1.2**	
	comp=Z,0.2nm,0.8s,baz=268,slow=4.4,SNR=4.7									
TORD	**Torodi Ar. Bea**	**150.13**	**287**	PKPbc		**PKPbc**		**03 33 27.0**	**-0.8**	
	comp=Z,0.7nm,0.9s,baz=108,slow=3.2,SNR=2.8									

*IDC **01** 03:35:13.5±1.5,5°.37S×146°.38E,h0km,mb3.4/3, mb1 3.8/5,mb1mx3.5/24,mbtmp3.6/5,ML2.8/2,MS2.8/1, Ms1 2.8/1,ms1mx2.4/28,Error ellipse: s-maj=55.8km s-min=28.0km az=119.0*

ISC 01 03:35:18.9±1.3,5°.6S±0°.1×146°.5E±0°.2,h35km,n6,σ1s01/8, mb3.6/3,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.88**	**170**	Pn	**Pn**	**03 36 16.4**	**+0.3**
	7.4nm,0.3s,baz=293,slow=15,SNR=5.3						
PMG				Sn	**Sn**	**03 36 59.9**	**-0.6**
	4.6nm,0.3s,baz=218,slow=16,SNR=1.9						
PMG				LR	LR	03 38 05.5	
	comp=Z,109nm,19.5s,baz=249,slow=42						
WRA	**Warramunga Ar**	**18.54**	**218**	P	**Pn**	**03 39 32.6**	**-0.6**
	0.1nm,0.3s,baz=40,slow=12,SNR=7.9						
WRA				PcP	**PcP**	**03 44 02.5**	**+0.8**
	0.0nm,0.3s,baz=22,slow=1.9,SNR=6.6						
ASAR	**Alice Springs**	**21.70**	**213**	P	**P**	**03 40 08.4**	**+1.4**
	0.4nm,0.6s,baz=49,slow=8.8,SNR=5.5						
FITZ	**Fitzroy Crossi**	**23.86**	**237**	P	**P**	**03 40 28.2**	**-1.1**
	0.7nm,0.4s,baz=44,slow=8.4,SNR=6.9						
ILAR	**Eielson Array**	**85.28**	**23**	P	**P**	**03 47 51.3**	**-0.5**
	0.4nm,0.8s,baz=252,slow=5.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**144.48**	**285**	PKP	**PKPab**	**03 54 51.3**	**+0.3**
	0.9nm,1.0s,baz=62,slow=3.4,SNR=2.7						

*MAN **01** 04:04:08.8,18°.64N×120°.82E,h21km,MS4.9*
*NEIC **01** 04:04:09.6±2.3,18°.66N±0°.04×120°.80E±0°.04,h40km±8km, mb4.3/27,Error ellipse: s-maj=7.6km s-min=2.5km az=140.0*
*BJI **01** 04:04:09.1±0.0,18°.82N×120°.68E,h20km,mB4.6/24, mb4.4/36,ML4.2/1,Ms4.1/15,Ms7 3.9/16*
*IDC **01** 04:04:11.5±3.3,18°.53N×121°.08E,h63km±31km,mb3.8/20, mb1 4.0/23,mb1mx3.8/51,mbtmp4.2/23,ML4.2/3,MS3.7/26, Ms1 3.7/26,ms1mx3.6/57,Error ellipse: s-maj=20.0km s-min=11.4km az=73.0*

ISC 01 04:04:10.2±0.8,18°.67N±0°.03×120°.82E±0°.04,h40km±8km, n140,σ1s70/127,mb4.3/41,MS3.7/26,4C-3D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.82**	**205**	⇑eP	**Pn**	**04 04 23.5**	**-1.8**
SIPP				eS	**Sn**	**04 04 37.0**	**+0.8**
APYP	**Conner**	**0.90**	**153**	eP	**Pn**	**04 04 25.2**	**-1.2**
APYP				eS	**Sn**	**04 04 37.6**	**-0.7**
SZP	**Santa**	**1.17**	**197**		**Pn**	**04 04 28.6**	**-1.4**
SZP				Sn	**Sn**	**04 04 43.0**	**-1.7**
SGCP	**Mt. Cagua**	**1.24**	**110**	eP	**Pn**	**04 04 30.0**	**-1.1**
SGCP				eS	**Sn**	**04 04 47.7**	**+1.1**
CVP	**Callao Caves**	**1.36**	**135**	⇓eP	**Pn**	**04 04 32.2**	**-0.4**
CVP				i S	**Sn**	**04 04 50.3**	**+0.9**
BBP	**Basco**	**2.06**	**31**	eP	**Pn**	**04 04 42.3**	**-0.1**
BBP				eS	**Sn**	**04 05 09.3**	**+2.4**
BCP	**Baguio City**	**2.25**	**185**	⇑iP	**Pn**	**04 04 44.8**	**-0.3**
BCP				i S	**Sn**	**04 05 11.0**	**-0.8**
BOLP	**Bolinao**	**2.44**	**201**	eP	**Pn**	**04 04 46.6**	**-0.9**
BOLP				eS	**Sn**	**04 05 20.3**	**+4.2**
QVP	**Quezon City--P**	**4.03**	**177**	eP	**Pn**	**04 05 10.3**	**+0.9**
POLP	**Polilio Island**	**4.07**	**165**	eP	**Pn**	**04 05 09.9**	**0.0**
TWG	**Pinlang**	**4.13**	**3**		**Pn**	**04 05 10.2**	**-0.6**
TWG				Sn	**Sn**	**04 05 56.2**	**-1.7**
MACP	**Maragondon, Ca**	**4.39**	**181**	eP	**Pn**	**04 05 15.7**	**+1.4**
MACP				eS	**Sn**	**04 06 05.6**	**+1.4**
TGY	**Tagaytay City**	**4.55**	**179**	P	**Pn**	**04 05 18.4**	**+1.9**
	28nm,0.3s,baz=322,slow=3.2,SNR=10						
TGY	**Tagaytay City**	**4.55**	**179**	eP	**Pn**	**04 05 13.8**	**-2.7**
LQP	**Lukban**	**4.59**	**171**	⇑eP	**Pn**	**04 05 18.5**	**+1.2**
LQP				i S	Sn	04 05 51.0	-18
TPUB	**Ta-pu**	**4.61**	**358**		**Pn**	**04 05 17.0**	**-0.4**
YULB	**Yu-li**	**4.72**	**5**		**Pn**	**04 05 17.9**	**-1.0**
JCNP	**Jose Panganiba**	**4.72**	**157**	eP	**Pn**	**04 05 20.6**	**+1.8**
LUBP	**Lubang**	**4.94**	**186**	eP	**Pn**	**04 05 24.2**	**+2.2**
LUBP				eS	Sn	04 06 28.8	+11
GQP	**Guinayangan**	**4.99**	**162**	⇓eP	**Pn**	**04 05 23.9**	**+1.3**
GQP				eS	**Sn**	**04 06 21.6**	**+2.5**
SSLB	**Suanglung**	**5.09**	**1**		**Pn**	**04 05 23.8**	**-0.2**
PGP	**Puerto Galera**	**5.14**	**179**	⇓eP	**Pn**	**04 05 26.0**	**+1.3**
NACB	**Ninganchiao**	**5.52**	**7**		**Pn**	**04 05 29.0**	**-0.9**
YHNB	**Yeheng**	**5.99**	**5**		**Pn**	**04 05 37.0**	**+0.7**
YOJ	**Yonaguni jima**	**6.11**	**19**		**Pn**	**04 05 38.9**	**+0.9**
KNMB	**Chin-men Tao**	**6.19**	**339**	Pn	**Pn**	**04 05 37.5**	**-1.5**
KNMB					**Sn**	**04 06 45.3**	**-3.2**
QIZ	**Qiongzhong**	**10.40**	**274**	P	**Pn**	**04 06 35.2**	**-1.6**
QIZ				S	**Sn**	**04 08 36.6**	**+4.5**
QIZ				pmax	pmax		
	comp=Z,19nm,0.5s						
QIZ				LR	LR		
	comp=N,500nm,19.1s						
QIZ				LR	LR		
	comp=E,390nm,16.7s						
QIZ				LR	LR		
	comp=Z,410nm,16.7s						
QIZ	**Qiongzhong**	**10.40**	**274**		**Pn**	**04 06 35.3**	**-1.6**
QIZ					**Sn**	**04 08 29.6**	**-2.4**
JOW	**Kunigami**	**10.64**	**39**	P	**Pn**	**04 06 39.3**	**-0.8**
	5.3nm,0.3s,baz=217,slow=15,SNR=6.2						
JOW	**Kunigami**	**10.64**	**39**		**Pn**	**04 06 38.2**	**-1.9**
MYLDM	**Lahad Datu**	**13.60**	**190**	Pn	**Pn**	**04 07 19.1**	**-1.5**
GYA	**Guiyang**	**15.19**	**303**	eP	**P**	**04 07 49.5**	**+3.0**
GYA				pmax	pmax		
	comp=Z,13nm,1.5s						
GYA				LR	LR		
	comp=Z,280nm,17.5s						
JNU	**Nakatsue**	**16.98**	**30**	P	**P**	**04 08 05.4**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=207,slow=9.0,SNR=3.0						
JNU				LR	LR	04 14 33.9	
	comp=Z,386nm,20.1s,baz=208,slow=37						
TOLI2	**Tolitoli**	**17.45**	**180**		**Pn**	**04 08 08.2**	**-2.5**
TOLI2				IAmb	IAmb	04 08 20.8	
	comp=Z,21nm,1.0s						
KMI	**Kunming**	**17.95**	**294**	⇑P	**Pn**	**04 08 13.6**	**-3.4**
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI				LR	LR		
	comp=Z,580nm,12.2s						
KMI				LR	LR		
	comp=Z,410nm,13.2s						
KMI				LR	LR		
	comp=Z,380nm,14.7s						
GTOI	**Gorontalo**	**18.05**	**173**	P	**Pn**	**04 08 17.3**	**-0.8**
MRSI	**Marisa**	**18.12**	**176**	P	**Pn**	**04 08 21.6**	**+2.7**
	comp=Z,2µmcomp=Z,25nm,0.5s						
SBUM	**Sibu**	**18.19**	**209**	P	**P**	**04 08 18.6**	**-1.0**
XAN	**Xi'an**	**18.62**	**328**	P	**Pn**	**04 08 26.0**	**+1.0**
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
XAN	**Xi'an**	**18.62**	**328**		**P**	**04 08 24.6**	**+0.2**
APSI	**Ampana**	**19.48**	**178**	P	**Pn**	**04 08 37.2**	**+1.9**
	comp=Z,880nmcomp=Z,22nm,1.0s						
CD2	**Chengdu**	**19.67**	**312**	P	**Pn**	**04 08 38.4**	**+0.8**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				LR	LR		
	comp=Z,510nm,13.1s						
CD2				LR	LR		
	comp=Z,600nm,12.0s						
CD2				LR	LR		
	comp=Z,670nm,11.4s						
LUWI	**Luwuk**	**19.69**	**174**	P	**Pn**	**04 08 40.0**	**+2.2**
KSRS	**Korea Array**	**19.72**	**17**	P	**P**	**04 08 36.6**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=205,slow=12,SNR=8.3						
KSRS				LR	LR	04 17 14.3	
	comp=Z,226nm,18.2s,baz=194,slow=40						
KSM	**Kuching**	**19.96**	**212**	P	**P**	**04 08 38.6**	**-0.5**
CM34	**Chiang Mai Arr**	**20.52**	**274**	P	Pn	04 08 48.0	+0.4
CM35	**Chiang Mai Arr**	**20.52**	**273**	P	Pn	04 08 51.0	+3.4
CM36	**Chiang Mai Arr**	**20.59**	**273**	P	Pn	04 08 51.0	+2.6
STKI	**Sintang**	**20.64**	**207**	P	**P**	**04 08 47.7**	**+1.2**
UTHA	**Uthaitani**	**20.66**	**265**	P	Pn	04 08 58.4	+9.2
CM09	**Chiang Mai Arr**	**20.69**	**273**	P	Pn	04 08 53.1	+3.5
	comp=Z,12nm,0.9s						
CM04	**Chiang Mai Arr**	**20.71**	**273**	P	Pn	04 08 51.4	+1.6
	comp=Z,127nmcomp=Z,18nm,0.9s						
CMMT	**Chiang Mai**	**20.71**	**274**	P	Pn	04 08 51.2	+1.4
	comp=Z,6.3nm,0.7s						
CM33	**Chiang Mai Arr**	**20.71**	**274**	P	Pn	04 08 50.0	+0.2
CHTO	**Chiang Mai**	**20.71**	**274**	P	**P**	**04 08 47.0**	**-0.4**
CHTO				IAmb	IAmb	04 09 05.3	
	comp=Z,10nm,1.0s						
CM01	**Chiang Mai Arr**	**20.73**	**273**	P	Pn	04 08 52.4	+2.4
	comp=Z,124nmcomp=Z,17nm,1.0s						
CM02	**Chiang Mai Arr**	**20.74**	**273**	P	Pn	04 08 53.1	+3.0
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**20.74**	**273**	P	Pn	04 08 50.4	+0.3
	comp=Z,7.6nm,0.7s,baz=84,slow=8.9,SNR=22						
CMAR				LR	LR	04 16 39.1	
	comp=Z,97nm,19.4s,baz=85,slow=36						
CMAR	**Chiang Mai Arr**	**20.74**	**273**	P	**P**	**04 08 48.8**	**+1.3**
CM05	**Chiang Mai Arr**	**20.74**	**273**	P	Pn	04 08 52.0	+1.9
	comp=Z,102nmcomp=Z,13nm,0.9s						
CM15	**Chiang Mai Arr**	**20.76**	**273**	P	Pn	04 08 53.4	+3.1
	comp=Z,15nm,1.0s						
CM13	**Chiang Mai Arr**	**20.77**	**273**	P	Pn	04 08 52.9	+2.3
	comp=Z,104nmcomp=Z,14nm,0.9s						
SANI	**Sanana**	**21.21**	**166**	P	**P**	**04 08 50.8**	**-1.8**
	comp=Z,22nm,1.1s						
SIJI	**Song**	**21.97**	**151**	LR	LR	04 19 15.8	
	comp=Z,75nm,18.4s,baz=102,slow=42						
BBKI	**Banjar Baru**	**22.77**	**196**	P	**P**	**04 09 08.1**	**-1.2**
LZH	**Lanzhou**	**22.92**	**323**	eP	**P**	**04 09 12.2**	**+1.3**
LZH				pP	pP	04 09 18.5	-1.7
LZH				sP	pwP	04 09 22.1	-2.0
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=Z,300nm,12.1s						
LZH				LR	LR		
	comp=Z,410nm,13.0s						
LZH				LR	LR		
	comp=Z,320nm,15.2s						
MJAR	**Matsushiro Arr**	**23.48**	**37**	LR	LR	04 17 44.7	
	comp=Z,63nm,19.8s,baz=225,slow=35						
HHC	**Hu-ho-hao-te**	**23.49**	**342**	eP	**P**	**04 09 17.2**	**+0.8**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,4.1s						
HHC				LR	LR		
	comp=Z,340nm,10.3s						
HHC				LR	LR		
	comp=Z,200nm,10.1s						
HHC				LR	LR		
	comp=Z,330nm,12.1s						
KAPI	**Kappang**	**23.56**	**183**	LR	LR	04 18 51.0	
	comp=Z,200nm,19.9s,baz=4.5,slow=38						
KULM	**Kulim**	**23.75**	**238**	P	**P**	**04 09 18.6**	**-0.4**
KULM				IAmb	IAmb	04 09 20.4	
	comp=Z,16nm,1.0s						
IPM	**Ipoh**	**23.93**	**236**	P	**P**	**04 09 20.1**	**-0.7**
IPM				IAmb	IAmb	04 09 21.2	
	comp=Z,11nm,0.8s						
FAKI	**Fak Fak**	**24.23**	**151**	P	**P**	**04 09 22.1**	**-1.4**
TPI	**Tanjungpandan**	**24.93**	**213**	P	**P**	**04 09 29.6**	**-0.2**
	comp=Z,9.3nm,0.9s						
USRK	**Usuriysk Ar.**	**27.12**	**18**	P	**P**	**04 09 52.9**	**+3.6**
	comp=Z,1.6nm,0.6s,baz=212,slow=9.6,SNR=3.7						
USRK				LR	LR	04 20 27.8	
	comp=Z,144nm,21.0s,baz=188,slow=36						
GTA	**Gaotai**	**27.52**	**323**	eP	**P**	**04 09 57.8**	**+4.6**
GTA				pP	pP	04 10 05.7	+2.4
GTA				sP	sP	04 10 10.0	+2.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SHL	**Shillong**	**27.63**	**290**	P	**P**	**04 09 53.8**	**-0.6**
SHL				IAmb	IAmb	04 10 07.6	
	comp=Z,8.7nm,0.9s						
KLSI		**28.11**	**216**	P	P	04 09 53.9	-4.6
JAY	**Jayapura**	**28.75**	**135**	LR	LR	04 21 15.6	
	comp=Z,101nm,20.3s,baz=10,slow=36						
BATI	**Baumata**	**28.83**	**174**	LR	LR	04 24 03.5	
	comp=Z,347nm,19.6s,baz=239,slow=42						
SONM	**Songino Array**	**31.38**	**341**	P	**P**	**04 10 28.5**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=158,slow=9.4,SNR=12						
SONM				LR	LR	04 23 58.9	
	comp=Z,204nm,18.8s,baz=156,slow=38						
SONM	**Songino Array**	**31.38**	**341**	P	**P**	**04 10 27.8**	**+0.6**
ODAN	**Odare**	**31.81**	**291**	eP	**P**	**04 10 32.7**	**+1.3**
	comp=Z,20nm,0.6s						
RAMN	**Ramite**	**32.52**	**291**	eP	**P**	**04 10 39.2**	**+1.5**
	comp=Z,27nm,0.6s						
JIRN	**Jiri**	**32.98**	**292**	eP	**P**	**04 10 43.2**	**+1.4**
	comp=Z,43nm,1.2s						
GUN	**Gumba**	**33.28**	**293**	eP	**P**	**04 10 45.9**	**+1.4**
	comp=Z,37nm,0.9s						
PKI	**Puhoki**	**33.65**	**292**	eP	**P**	**04 10 48.1**	**+0.4**
DMN	**Daman**	**33.92**	**292**	eP	**P**	**04 10 50.9**	**+0.9**
	comp=Z,20nm,0.8s						
GKN	**Gorkha**	**34.39**	**292**	eP	**P**	**04 10 54.4**	**+0.5**
	comp=Z,11nm,0.3s						
DANN	**Dangsing**	**35.20**	**293**	eP	**P**	**04 11 02.4**	**+1.4**
FITZ	**Fitzroy Crossi**	**36.85**	**172**	P	**P**	**04 11 11.7**	**-3.1**
	comp=Z,1.0nm,0.4s,baz=23,slow=3.2,SNR=16						
FITZ	**Fitzroy Crossi**	**36.85**	**172**	IAmb	IAmb	04 11 25.2	
	comp=Z,2.7nm,0.8s						
WMQ	**Urumqi**	**37.41**	**319**	eP	**P**	**04 11 22.2**	**+2.7**
WRAB	**Tennant Creek**	**40.60**	**160**	P	**P**	**04 11 43.3**	**-2.9**
WRAB				IAmb	IAmb	04 11 56.2	
	comp=Z,3.6nm,0.9s						
WRA	**Warramunga Arr**	**40.60**	**160**	P	**P**	**04 11 43.0**	**-3.3**
	comp=Z,0.9nm,0.5s,baz=333,slow=10,SNR=28						
WB2	**Warramunga Ar**	**40.61**	**160**	P	**P**	**04 11 43.5**	**-2.9**
WB2				IAmb	IAmb	04 11 46.8	
	comp=Z,2.5nm,0.7s						
WB2				PP	**PP**	**04 13 21.2**	**+0.7**
WR0	**Warramunga Arr**	**40.69**	**160**	P	**P**	**04 11 44.0**	**-2.9**
WR0				IAmb	IAmb	04 11 48.1	
	comp=Z,4.4nm,1.1s						
MK31	**Makanchi Array**	**42.20**	**320**	P	**P**	**04 11 58.6**	**-0.6**
MKAR	**Makanchi Array**	**42.20**	**320**	P	**P**	**04 12 00.8**	**+1.6**
	comp=Z,1.6nm,0.6s,baz=115,slow=10,SNR=31						
MKAR				PcP	**PcP**	**04 13 53.0**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=86,slow=3.8,SNR=2.2						
MKAR				LR	LR	04 32 14.2	
	comp=Z,76nm,18.6s,baz=100,slow=40						
MKAR	**Makanchi Array**	**42.20**	**320**	P	**P**	**04 12 00.6**	**+1.4**
MAKZ	**Makanchi**	**42.40**	**320**	P	**P**	**04 12 00.9**	**+0.1**
AS31	**Alice Springs**	**43.98**	**163**	P	**P**	**04 12 13.3**	**-0.4**
ASAR	**Alice Springs**	**43.98**	**163**	P	**P**	**04 12 11.3**	**-2.4**
	comp=Z,1.1nm,0.4s,baz=342,slow=7.0,SNR=16						
ASAR				LR	LR	04 33 49.4	
	comp=Z,49nm,19.0s,baz=308,slow=41						
ULHL	**Ulahol**	**44.39**	**312**	P	**P**	**04 12 19.6**	**+2.4**
	SNR=9.2						
PETK	**Petropavlovsk-**	**44.68**	**31**	LR	LR	04 32 56.4	
	comp=Z,73nm,19.1s,baz=247,slow=39						
ZALV	**Zalesovo Beam**	**44.76**	**330**	P	**P**	**04 12 20.2**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=105,slow=11,SNR=3.8						
ZALV				LR	LR	04 31 55.0	
	comp=Z,78nm,18.1s,baz=128,slow=37						
ZALV	**Zalesovo Beam**	**44.76**	**330**	P	**P**	**04 12 20.0**	**+0.4**
NIL	**Nilore**	**44.84**	**299**	P	**P**	**04 12 19.6**	**-1.0**
TKM2	**Tokmak 2**	**45.05**	**313**	P	**P**	**04 12 24.5**	**+2.1**
	SNR=7.4						
KBK	**Karagaybulak**	**45.43**	**312**	P	**P**	**04 12 27.9**	**+2.5**
	SNR=9.9						
UCH	**Uchtor**	**45.61**	**311**	P	**P**	**04 12 29.9**	**+2.8**
	SNR=15						
AAK	**Ala-Archa**	**45.74**	**312**	P	**P**	**04 12 29.9**	**+2.0**
	comp=Z,1.7nm,0.5s,baz=141,slow=12,SNR=7.0						
AAK	**Ala-Archa**	**45.74**	**312**	P	**P**	**04 12 26.8**	**-1.0**
AAK				IAmb	IAmb	04 12 40.6	
	comp=Z,3.1nm,0.7s						
AML	**Almayashu**	**46.17**	**311**	P	**P**	**04 12 33.9**	**+2.4**
	SNR=12						
KURK	**Kurchatov**	**46.20**	**324**	P	**P**	**04 12 32.4**	**+1.3**
KURBB	**Kurchatov Arra**	**46.21**	**324**	P	**P**	**04 12 32.4**	**+1.3**
	comp=Z,3.7nm,0.5s,baz=123,slow=7.6,SNR=27						
MA2	**Magadan**	**46.21**	**21**	LR	LR	04 32 56.0	
	comp=Z,129nm,19.2s,baz=230,slow=37						
KK31	**Karatay Array**	**48.69**	**311**	P	**P**	**04 12 50.6**	**0.0**
KK31				IAmb	IAmb	04 12 53.3	
	comp=Z,4.4nm,0.8s						
KKAR	**Karatay Array**	**48.69**	**311**	P	**P**	**04 12 50.9**	**+0.3**
KKAR				IAmb	IAmb	04 12 53.3	
	comp=Z,4.4nm,0.8s						
SEY	**Seymchan**	**49.27**	**18**	P	**P**	**04 12 55.1**	**+0.4**
	comp=Z,0.8nm,0.2s,baz=348,slow=23,SNR=4.9						
NWAO	**Narrogin (SRO)**	**51.42**	**184**	LR	LR	04 35 58.4	
	comp=Z,7.1nm,21.5s,baz=323,slow=37						
EIDS	**Eidsvold**	**52.76**	**145**	P	**P**	**04 13 20.8**	**-0.6**
TIXI	**Tiksi**	**53.19**	**3**	P	**P**	**04 13 23.3**	**-0.6**
TIXI				IAmb	IAmb	04 13 42.2	
	comp=Z,2.5nm,0.8s						
STKA	**Stephens Creek**	**54.07**	**158**	P	**P**	**04 13 29.3**	**-1.6**
	comp=Z,2.3nm,0.9s,baz=347,slow=14,SNR=2.6						
STKA				LR	LR	04 38 51.9	
	comp=Z,69nm,19.6s,baz=20,slow=39						
NRIK	**Noril'sk**	**54.63**	**346**	P	**P**	**04 13 34.9**	**+0.4**
	comp=Z,5.5nm,0.6s,baz=129,slow=7.8,SNR=11						
NRIK				LR	LR	04 38 54.8	
	comp=Z,139nm,19.8s,baz=100,slow=38						
NRIK	**Noril'sk**	**54.63**	**346**	P	**P**	**04 13 34.9**	**+0.4**
ABKAR	**Akbulak array**	**57.13**	**317**	P	**P**	**04 13 52.9**	**+0.2**
ABKAR				IAmb	IAmb	04 14 04.8	
	comp=Z,3.4nm,1.1s						
GEYT	**Alibeck**	**57.41**	**303**	LR	LR	04 41 36.7	
	comp=Z,87nm,19.0s,baz=50,slow=39						
AKTO	**Aktyubinsk**	**58.55**	**318**	LR	LR	04 40 29.6	
	comp=Z,53nm,19.1s,baz=121,slow=37						
ARU	**Arti**	**59.35**	**325**	LR	LR	04 42 46.0	
	comp=Z,76nm,19.0s,baz=104,slow=39						
KBZ	**Khabaz**	**68.71**	**310**	P	**P**	**04 15 10.4**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=56,slow=13,SNR=3.9						
KBZ				LR	LR	04 48 41.9	
	comp=Z,64nm,18.0s,baz=76,slow=39						
RAYN	**Ar Rayn**	**69.70**	**289**	P	**P**	**04 15 15.9**	**-0.5**
ILAR	**Eielson Array**	**74.26**	**26**	P	**P**	**04 15 41.5**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=262,slow=5.0,SNR=9.6						
ARCES	**ARCESS Array B**	**74.51**	**339**	P	**P**	**04 15 44.0**	**-0.2**
	comp=Z,4.4nm,1.0s,baz=53,slow=8.1,SNR=4.7						
ARCES				LR	LR	04 50 24.4	
	comp=Z,50nm,18.7s,baz=25,slow=37						
FINES	**FINESS Array B**	**76.03**	**330**	P	**P**	**04 15 52.5**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=50,slow=5.7,SNR=13						
FINES				LR	LR	04 51 13.8	
	comp=Z,101nm,18.5s,baz=96,slow=37						
AKASG	**Malin Array Be**	**76.77**	**319**	P	**P**	**04 15 56.6**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=61,slow=5.3,SNR=5.5						
NACGM	**Naroch**	**77.22**	**324**	iP	P	04 16 08.7	+8.7
NACGM				i P	P	04 16 08.7	+8.7
NACGM				i P	P	04 16 08.7	+8.7
NACGM				i PcP	sP	04 16 16.3	+0.8
NACGM				i PP	PP	04 19 05.1	+11
NACGM				i PPP	PPP	04 20 57.7	
NACGM				i S	S	04 26 02.9	+16
NACGM				i ScS	ScS	04 26 27.4	+13
NACGM				i PS		04 27 39.3	
NACGM				i SS	SS	04 31 38.7	+54
NACGM				i SSS	SSS	04 34 42.3	
NACGM				i LQ	LQ	04 45 44.8	
NACGM				i LR	LR	04 51 34.7	
INK	**Inuvik**	**78.44**	**21**	P	**P**	**04 16 05.7**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=324,slow=4.3,SNR=4.4						
NOA	**NORSAR Array B**	**82.92**	**332**	P	**P**	**04 16 29.7**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=64,slow=5.0,SNR=3.6						
NOA				LR	LR	04 56 29.1	
	comp=Z,99nm,18.5s,baz=70,slow=38						
YKA	**Yellowknife Ar**	**88.16**	**22**	P	**P**	**04 16 56.0**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=312,slow=4.1,SNR=51						
PPT	**Papeete**	**95.12**	**107**	LR	LR	04 57 56.1	
	comp=Z,20nm,18.9s,baz=342,slow=34						

*NEIC **01** 04:24:48.1±1.2,21°.8N±0°.2×144°.7E±0°.7,h100km±30km, mb4.1/6,Error ellipse: s-maj=97.3km s-min=14.6km az=70.0*
*IDC **01** 04:24:51.8±4.7,21°.73N×144°.42E,h127km±30km,mb3.5/4, mb1 3.7/5,mb1mx3.2/58,mbtmp4.0/5,MS3.6/1,Ms1 3.6/1, ms1mx2.6/35,Error ellipse: s-maj=122.6km s-min=17.5km az=82.0*

ISC 01 04:24:48.9±2.2,21°.7N±0°.2×144°.5E±0°.7,h100km,n14, σ0s97/16,mb4.0/8,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.81**	**339**	P	**Pn**	**04 26 14.9**	**+2.3**
	2.5nm,0.3s,baz=238,slow=20,SNR=2.3						
JCJ				S	**Sn**	**04 27 19.2**	**+1.3**
	11nm,0.3s,baz=292,slow=23,SNR=8.5						
JCJ	**Chichijima**	**5.81**	**339**	Pn	**Pn**	**04 26 11.7**	**-0.9**
JCJ				Sn	**Sn**	**04 27 17.4**	**-0.5**
COEN	**Coen**	**35.43**	**182**	P	**P**	**04

RTCV	**Cerro Valdivia**	**6.31**	**49**	*e*P		**Pn**	**04 37 02.1**	**+1.4**
RTCV				*e*S		**Sn**	**04 38 13.1**	**+1.5**
RTCV				IAML			04 39 10.4	
	comp=Z,25nm,1.2s							
GO04	**Tololo Observa**	**6.58**	**26**	*e*P		**Pn**	**04 37 04.8**	**+0.2**
GO04				*e*S		**Sn**	**04 38 15.8**	**-2.7**
RTLL	**Cerro Villicun**	**6.73**	**46**	*e*P		**Pn**	**04 37 08.1**	**+1.6**
AVFE	**Valle Fertil**	**7.81**	**47**	*e*P		**Pn**	**04 37 21.0**	**-0.4**
AVFE				*e*S		**Sn**	**04 38 46.4**	**-2.3**
MRA	**San Martin**	**7.89**	**64**	*e*P		**Pn**	**04 37 23.7**	**+1.1**
ACHE	**Chepes**	**7.97**	**54**	*e*P		**Pn**	**04 37 23.7**	**+0.1**
ACHE				*e*P			04 37 23.8	
AGUA	**GUANDACOL**	**8.16**	**37**	*e*P		**Pn**	**04 37 27.4**	**+1.2**
AGUA				*e*S		**Sn**	**04 38 55.7**	**-1.6**
TCA	**Tanti**	**9.28**	**62**	*e*P		**Pn**	**04 37 40.8**	**-0.7**

*IDC **01** 04:45:15.0±2.1,51.°50N×173.°43W,h0km,mb3.3/6, mb1 3.6/7,mb1mx3.5/50,mbtmp3.3/7,ML3.6/1,Error ellipse: s-maj=58.0km s-min=26.3km az=0.0*
*NEIC **01** 04:45:20.5±1.6,51.°54N±0.°09×173.°5W±0.°2,h38km±70km, Error ellipse: s-maj=14.7km s-min=13.1km az=98.0*
*AEIC **01** 04:45:23±2.3,51.°8N±0.°1×173.°7W±0.°2,h59km±10km, ML2.9/16,Error ellipse: s-maj=16.1km s-min=13.2km az=148.0*

ISC 01 04:45:20.9±1.0,51.°6N±0.°1×173.°41W±0.°07,h37km,n26, σ0s81/23,mb3.4/6,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.77**	**321**			**Pn**	**04 45 34.8**	**-0.3**
ATKA	**Atka Island**	**0.77**	**321**		Sn	**Sn**	**04 45 45.3**	**-0.1**
KOFP	**Korovin Flat P**	**0.79**	**328**			**Pn**	**04 45 35.6**	**+0.1**
KOKL	**Mount Kliuchef**	**0.86**	**326**			**Pn**	**04 45 36.8**	**+0.2**
KOKL						**Sn**	**04 45 48.9**	**+0.9**
GSMY	**Great Sitkin M**	**1.70**	**286**			**Pn**	**04 45 47.0**	**-1.0**
GSTR	**Great Sitkin T**	**1.71**	**287**			**Pn**	**04 45 47.5**	**-0.6**
GSTD	**Great Sitkin T**	**1.75**	**286**			**Pn**	**04 45 47.9**	**-0.9**
GSTD						**Sn**	**04 46 09.7**	**-0.1**
ADAG	**Mount Adagdak**	**2.02**	**282**			**Pn**	**04 45 52.4**	**+0.1**
ADK	**Adak**	**2.05**	**279**			**Pn**	**04 45 52.8**	**+0.1**
ADK					Sn	**Sn**	**04 46 16.3**	**-0.7**
KIKV	**Kanaga Island**	**2.35**	**278**			**Pn**	**04 45 57.5**	**+0.6**
KIMD	**Kanaga Island**	**2.38**	**275**			**Pn**	**04 45 57.9**	**+0.6**
TAFP	**Tanaga Falls P**	**2.86**	**278**			**Pn**	**04 46 04.7**	**+0.9**
TASE	**Tanaga Southea**	**2.89**	**276**			**Pn**	**04 46 05.4**	**+1.1**
ILAR	**Eielson Array**	**19.01**	**36**	P		**P**	**04 49 39.5**	**+0.4**
	0.2nm,0.3s,baz=225,slow=8.9,SNR=12							
INK	**Inuvik**	**25.36**	**34**	P		**P**	**04 50 44.0**	**+0.1**
	0.4nm,0.3s,baz=262,slow=5.8,SNR=4.8							
YKA	**Yellowknife Ar**	**32.61**	**47**	P		**P**	**04 51 47.9**	**-0.6**
	0.1nm,0.3s,baz=274,slow=7.4,SNR=2.4							
H11N2	**WAKE ISLAND Hy**	**35.37**	**213**	T		T	05 30 06.5	
	baz=21,slow=76,SNR=7.2							
H11N3	**WAKE ISLAND Hy**	**35.38**	**213**	T		T	05 30 16.3	
	baz=21,slow=76,SNR=9.4							
H11N1	**WAKE ISLAND Hy**	**35.39**	**213**	T		T	05 30 10.5	
	baz=21,slow=76,SNR=8.8							
H11S1	**WAKE ISLAND Hy**	**36.57**	**213**	T		T	05 31 30.9	
	baz=20,slow=76,SNR=15							
H11S2	**WAKE ISLAND Hy**	**36.59**	**213**	T		T	05 31 30.6	
	baz=20,slow=76,SNR=9.0							
H11S3	**WAKE ISLAND Hy**	**36.59**	**213**	T		T	05 31 30.4	
	baz=20,slow=76,SNR=4.7							
PDAR	**Pinedale Array**	**43.01**	**76**	P		**P**	**04 53 18.3**	**+1.7**
	0.1nm,0.4s,baz=287,slow=6.3,SNR=2.7							
SONM	**Songino Array**	**49.52**	**299**	P		**P**	**04 54 08.3**	**+0.7**
	0.3nm,0.4s,baz=81,slow=5.0,SNR=2.2							
TXAR	**Lajitas Array**	**55.28**	**85**	P		**P**	**04 54 48.8**	**-1.7**
	0.8nm,1.2s,baz=332,slow=3.5,SNR=2.6							
MKAR	**Makanchi Array**	**62.47**	**311**	P		**P**	**04 55 39.5**	**-0.6**
	0.1nm,0.3s,baz=46,slow=6.2,SNR=2.6							

*STR **01** 04:58:09.0±0.6,44.°N±4.°×1.°2E±.°,h13km±9km,mb3.8/3, MLv3.5/23,smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*IDC **01** 04:58:09.1±1.6,44.°28N×12.°04E,h0km,mb3.5/2, mb1 3.7/4,mb1mx3.3/42,mbtmp3.4/4,ML3.4/2,Error ellipse: s-maj=28.7km s-min=15.7km az=98.0*
*BGR **01** 04:58:10.1±0.9,44.°08N×11.°87E,h10km,ML3.7/5,Error ellipse: s-maj=16.7km s-min=10.0km az=104.0*
*PRU **01** 04:58:11.2±0.0,44.°33N×11.°69E,h14km*
*GEN **01** 04:58:11,44.°21N×11.°74E,h23km±3km,Ml3.2*
*ROM **01** 04:58:11.5±0.1,44.°180N±0.°004×11.°710E±0.°005, h21km,ML3.2/1,Error ellipse: s-maj=0.5km s-min=0.1km az=224.0*
*LDG **01** 04:58:11.5±0.2,44.°23N×11.°74E,h23km,Ml3.6/23,Error ellipse: s-maj=5.0km s-min=3.6km az=65.0*

ISC 01 04:58:11.2±0.9,44.°21N±0.°01×11.°73E±0.°01,h18km±3km, n219,σ1s97/302,4C-1D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
FAEN	**Faenza**	**0.13**	**54**	P		**Pb**	**04 58 16.4**	**+1.9**
FAEN				S		**Sb**	**04 58 20.8**	**+4.3**
BRIS	**BRISIGHELLA**	**0.17**	**248**	⇑P		**Pg**	**04 58 14.9**	**-0.8**
BRIS				S		**Sg**	**04 58 18.1**	**-0.7**
BRIS				AML		AML		
	comp=E,47550μm,0.3s							
BRIS				AML		AML		
	comp=N,73800μm,0.3s							
BRIS				AML		AML		
	comp=E,47550μm,0.3s							
BRIS				AML		AML		
	comp=N,73800μm,0.3s							
MTRZ	**Monterenzio**	**0.25**	**311**	P		**Pb**	**04 58 17.6**	**+0.5**
MTRZ				S		**Sb**	**04 58 22.4**	**+1.3**
MTRZ				AML		AML		
	comp=E,19050μm,0.5s							
MTRZ				AML		AML		
	comp=N,17800μm,0.4s							
MTRZ				AML		AML		
	comp=N,17750μm,0.4s							
MTRZ				AML		AML		
	comp=E,19450μm,0.5s							
MTRZ				AML		AML		
	comp=N,17850μm,0.4s							
SEI	**Scarperia**	**0.31**	**240**	P		**Pg**	**04 58 17.7**	**-0.3**
SEI				S		**Sb**	**04 58 22.9**	**-0.2**
SEI				AML		AML		
	comp=N,25100μm,0.3s							
SEI				AML		AML		
	comp=E,10700μm,0.7s							
SEI				AML		AML		
	comp=N,25100μm,0.3s							
SFI	**Santa Sofia**	**0.32**	**165**	⇑P		**Pb**	**04 58 18.1**	**-0.4**
SFI				S		**Sb**	**04 58 23.8**	**+0.5**
SFI				AML		AML		
	comp=E,12795μm,1.0s							
SFI				AML		AML		
	comp=N,15840μm,0.4s							
SFI				AML		AML		
	comp=E,8830μm,0.3s							
SFI				AML		AML		
	comp=E,12810μm,1.0s							
SFI				AML		AML		
	comp=N,15830μm,0.4s							
SFI				AML		AML		
	comp=E,8825μm,0.3s							
SFI				AML		AML		
	comp=N,20250μm,0.4s							
SFI				AML		AML		
	comp=E,12780μm,0.9s							
SFI				AML		AML		
	comp=N,15830μm,0.4s							
SFI				AML		AML		
	comp=N,15830μm,0.4s							
SFI				AML		AML		
	comp=E,8800μm,0.3s							
SFI				AML		AML		
	comp=N,20300μm,0.4s							
CMPO	**Campotto Po**	**0.37**	**8**	P		**Pb**	**04 58 20.2**	**+0.9**
RUFI	**Rufina**	**0.41**	**203**	P		**Pg**	**04 58 19.4**	**-0.2**
RUFI				S		**Sb**	**04 58 25.8**	**0.0**
RUFI				AML		AML		
	comp=E,5340μm,0.9s							
RUFI				AML		AML		
	comp=E,5345μm,0.9s							
RUFI				AML		AML		
	comp=E,5335μm,0.9s							
RUFI				AML		AML		
	comp=N,5520μm,0.4s							
ASQU	**Asqua**	**0.42**	**174**	⇑P		**Pb**	**04 58 19.7**	**-0.5**
ASQU				S		**Sb**	**04 58 25.8**	**-0.4**
ASQU				AML		AML		
	comp=E,4695μm,0.2s							
ASQU				AML		AML		
	comp=N,10725μm,0.4s							
FNVD	**Fontana Vidola**	**0.44**	**264**	P		**Pg**	**04 58 20.0**	**-0.2**
FNVD				S		**Sb**	**04 58 26.9**	**+0.1**
FNVD				AML		AML		
	comp=E,8400μm,1.5s							
FNVD				AML		AML		
	comp=N,7680μm,0.4s							
FIU	**Minerbio Fiu**	**0.46**	**338**	P		**Pb**	**04 58 21.4**	**+0.6**
FIU				AML		AML		
	comp=E,8450μm,1.1s							
FIU				AML		AML		
	comp=E,8440μm,1.1s							
FIU				AML		AML		
	comp=N,3910μm,1.4s							
FIU				AML		AML		
	comp=E,8415μm,1.1s							
PTF	**Prato**	**0.54**	**242**	P		**Pg**	**04 58 21.0**	**-1.1**
PTF				S		**Sb**	**04 58 29.7**	**+0.1**
ZCCA	**Zocca**	**0.56**	**284**	P		**Pb**	**04 58 23.2**	**+0.7**
ZCCA				AML		AML		
	comp=E,1293μm,0.5s							
ZCCA				AML		AML		
	comp=E,1363μm,0.5s							
ZCCA				AML		AML		
	comp=N,1425μm,1.3s							
ZCCA				AML		AML		
	comp=N,1160μm,0.8s							
ZCCA				AML		AML		
	comp=E,1290μm,0.5s							
MTCR	**Monte La Croce**	**0.56**	**251**	P		**Pg**	**04 58 21.9**	**-0.5**
MTCR				AML		AML		
	comp=E,2530μm,0.4s							
MTCR				AML		AML		
	comp=N,3595μm,0.4s							
MTCR				AML		AML		
	comp=E,2525μm,0.4s							
MTCR				AML		AML		
	comp=N,3600μm,0.4s							
RSM	**Repubblica di**	**0.59**	**118**	P		**Pb**	**04 58 23.6**	**+0.5**
CPGN	**Carpegna, Ital**	**0.59**	**134**	P		**Pb**	**04 58 23.4**	**+0.2**
CPGN				S		**Sb**	**04 58 31.6**	**+0.4**
CRE	**Caprese Michel**	**0.61**	**165**	P		**Pg**	**04 58 22.9**	**-0.5**
CRE				S		**Sb**	**04 58 32.5**	**+0.7**
CRE				AML		AML		
	comp=E,2200μm,0.3s							
CRE				AML		AML		
	comp=N,7260μm,0.3s							
CRE				AML		AML		
	comp=E,2205μm,0.3s							
CRE				AML		AML		
	comp=N,7265μm,0.3s							
PARC	**Parchiule**	**0.67**	**147**	P		**Pg**	**04 58 23.7**	**-0.8**
PARC				S		**Sb**	**04 58 33.4**	**0.0**
PARC				AML		AML		
	comp=N,1330μm,0.5s							
PARC				AML		AML		
	comp=E,1550μm,0.4s							
PARC				AML		AML		
	comp=N,1335μm,0.5s							
CRMI	**Carmignano**	**0.69**	**233**	P		**Pg**	**04 58 24.4**	**-0.4**
CRMI				AML		AML		
	comp=E,375μm,0.3s							
CRMI				AML		AML		
	comp=N,408μm,0.4s							
RAVA	**Ravarino**	**0.70**	**321**	P		**Pb**	**04 58 25.4**	**+0.6**
RAVA				AML		AML		
	comp=E,4515μm,1.0s							
RAVA				AML		AML		
	comp=N,7670μm,0.6s							
SSP9	**Sansepolcro**	**0.70**	**155**	P		**Pg**	**04 58 24.4**	**-0.7**
SSP9				AML		AML		
	comp=E,1144μm,0.5s							
SSP9				AML		AML		
	comp=N,1825μm,0.5s							
FERS	**Ferrara-Casagl**	**0.70**	**349**	P		**Pb**	**04 58 25.7**	**+0.7**
POPM	**Popiglio**	**0.72**	**257**	P		**Pg**	**04 58 25.1**	**-0.3**
POPM				S		**Sb**	**04 58 36.4**	**+1.6**
POPM	**Popiglio**	**0.72**	**257**	P		**Pg**	**04 58 24.6**	**-0.8**
POPM				AML		AML		
	comp=E,1435μm,0.3s							
POPM				AML		AML		
	comp=N,1970μm,0.8s							
OSSC	**Osservatorio P**	**0.77**	**207**	P		**Pb**	**04 58 26.2**	**0.0**
OSSC				S		**Sb**	**04 58 36.5**	**+0.2**
OSSC				AML		AML		
	comp=E,1845μm,0.4s							
OSSC				AML		AML		
	comp=N,5590μm,0.5s							
OSSC				AML		AML		
	comp=N,1855μm,0.4s							
OSSC				AML		AML		
	comp=E,5495μm,0.5s							
OSSC				AML		AML		
	comp=N,5590μm,0.5s							
BADI	**Badiali**	**0.80**	**152**	P		**Pg**	**04 58 25.8**	**-1.0**
BADI				AML		AML		
	comp=N,1940μm,0.4s							
BADI				AML		AML		
	comp=E,1955μm,0.6s							
BADI				AML		AML		
	comp=N,1945μm,0.4s							
CSNT	**Castellina Chi**	**0.81**	**203**	P		**Pg**	**04 58 26.5**	**-0.5**
CSNT				S		**Sg**	**04 58 37.2**	**-0.5**
CSNT				AML		AML		
	comp=E,1995μm,0.5s							
CSNT				AML		AML		
	comp=N,3395μm,0.6s							
BDI	**Bagni Di Lucca**	**0.83**	**260**	P		**Pg**	**04 58 26.9**	**-0.6**
BDI				AML		AML		
	comp=E,1895μm,0.4s							
BDI				AML		AML		
	comp=N,2135μm,0.6s							
BDI				AML		AML		
	comp=E,2275μm,0.4s							
BDI				AML		AML		
	comp=N,2245μm,0.4s							
CAVE	**Cavezzo**	**0.83**	**322**	P		**Pb**	**04 58 27.5**	**+0.3**
CAVE				AML		AML		
	comp=E,2110μm,1.3s							
CAVE				AML		AML		
	comp=N,3520μm,0.9s							
CAVE				AML		AML		
	comp=N,3515μm,0.9s							
CAVE				AML		AML		
	comp=E,2115μm,1.3s							
PESA	**Pesaro**	**0.84**	**108**	P		**Pn**	**04 58 28.1**	**-0.2**
PESA				AML		AML		
	comp=N,3230μm,0.6s							
PESA				AML		AML		
	comp=E,4080μm,0.4s							
ADRI	**Adria, Italy**	**0.85**	**14**	*e*Pg		**Pn**	**04 58 28.6**	**+0.3**
SERM	**Sermide**	**0.85**	**339**	P		**Pn**	**04 58 28.8**	**+0.4**
SERM				S		**Sn**	**04 58 40.2**	**-0.2**
SERM				AML		AML		
	comp=N,1820μm,0.6s							
SERM				AML		AML		
	comp=E,3765μm,0.4s							
ATPI	**Pietralunga -**	**0.90**	**147**	P		**Pg**	**04 58 28.0**	**-0.9**
ATPI				AML		AML		
	comp=E,906μm,0.8s							
ATPI				AML		AML		
	comp=N,1243μm,0.6s							
ATPI				AML		AML		
	comp=N,1242μm,0.6s							
CARD	**Cardoso**	**0.92**	**259**	P		**Pb**	**04 58 28.6**	**0.0**
CARD	**Cardoso**	**0.92**	**259**	P		**Pb**	**04 58 28.3**	**-0.3**
CARD				AML		AML		
	comp=E,1220μm,0.7s							
CARD				AML		AML		
	comp=N,1390μm,0.5s							
CARD				AML		AML		
	comp=N,1385μm,0.5s							
CARD				AML		AML		
	comp=E,1221μm,0.7s							
FSSB	**Fossombrone**	**0.92**	**124**	P		**Pb**	**04 58 28.2**	**-0.5**
FSSB				AML		AML		
	comp=E,2075μm,0.7s							
FSSB				AML		AML		
	comp=E,2070μm,0.7s							
FSSB				AML		AML		
	comp=N,3960μm,0.3s							
NOVE	**Novellara**	**0.93**	**309**	P		**Pn**	**04 58 29.9**	**+0.5**
NOVE				AML		AML		
	comp=N,2720μm,0.4s							
NOVE				AML		AML		
	comp=N,2715μm,0.4s							
NOVE				AML		AML		
	comp=E,4080μm,0.6s							
MAIM	**Mastiano**	**0.94**	**252**	P		**Pb**	**04 58 28.7**	**-0.3**
MAIM	**Mastiano**	**0.94**	**252**	P		**Pb**	**04 58 28.3**	**-0.8**
MPAG	**Monte Paganucc**	**0.95**	**128**	P		**Pb**	**04 58 28.9**	**-0.3**
MPAG				AML		AML		
	comp=E,1166μm,0.4s							
MPAG				AML		AML		
	comp=N,1556μm,1.0s							
MPAG				AML		AML		
	comp=E,1150μm,0.4s							
MPAG				AML		AML		
	comp=N,1550μm,1.0s							
MPAG				AML		AML		
	comp=E,1146μm,0.4s							
SARO	**Sassorosso**	**0.96**	**269**	P		**Pg**	**04 58 29.6**	**-0.2**
SARO				S		**Sn**	**04 58 45.6**	**+2.6**
SARO	**Sassorosso**	**0.96**	**269**	P		**Pb**	**04 58 29.1**	**-0.2**
SARO				AML		AML		
	comp=N,969μm,0.7s							
SARO				AML		AML		
	comp=E,645μm,1.1s							
ATVO	**AVT- Monte Val**	**0.96**	**149**	P		**Pb**	**04 58 28.8**	**-0.6**
ATVO				S		**Sb**	**04 58 41.5**	**-0.4**
ATVO				AML		AML		
	comp=E,1345μm,0.5s							
ATVO				AML		AML		
	comp=N,1360μm,0.7s							
ERBM	**Eremo**	**0.97**	**283**	P		**Pn**	**04 58 30.6**	**+0.6**
ERBM				AML		AML		
	comp=N,1154μm,1.2s							
ERBM				AML		AML		
	comp=E,772μm,1.1s							
VLC	**Villacollemand**	**0.97**	**267**	P		**Pg**	**04 58 29.9**	**-0.2**
VLC				AML		AML		
	comp=E,982μm,1.0s							
VLC				AML		AML		
	comp=E,948μm,1.0s							
VLC				AML		AML		
	comp=N,802μm,0.7s							
VLC				AML		AML		
	comp=N,806μm,0.8s							
PII	**Pisa**	**1.00**	**241**	P		**Pb**	**04 58 29.1**	**-0.9**
PII				AML		AML		
	comp=N,1565μm,0.4s							
PII				AML		AML		
	comp=E,1630μm,0.5s							
SBPO	**S.Benedetto Po**	**1.02**	**326**	P		**Pn**	**04 58 31.1**	**+0.5**
ATFO	**Monte Foce - G**	**1.04**	**144**	P		**Pb**	**04 58 30.5**	**-0.3**
ATFO				AML		AML		
	comp=E,1117μm,1.3s							
ATFO				AML		AML		
	comp=N,1410μm,0.4s							
FROS	**Frosini**	**1.09**	**203**	P		**Pb**	**04 58 31.1**	**-0.4**
FROS				AML		AML		
	comp=E,1074μm,0.5s							
FROS				AML		AML		
	comp=N,1350μm,0.7s							
ATTE	**AVT- Monte Tez**	**1.11**	**156**	P		**Pb**	**04 58 31.5**	**-0.5**
ATTE				AML		AML		
	comp=N,658μm,0.4s							
ATTE				AML		AML		
	comp=E,682μm,0.5s							
ARVD	**Arcevia**	**1.13**	**129**	P		**Pg**	**04 58 32.5**	**-0.7**
ARVD				AML		AML		
	comp=N,652μm,0.7s							
ARVD				AML		AML		
	comp=E,585μm,0.8s							
EQUI	**Equi**	**1.14**	**268**	P		**Pb**	**04 58 32.5**	**+0.1**
EQUI				S		**Sn**	**04 58 49.9**	**+2.5**
EQUI	**Equi**	**1.14**	**268**	P		**Pb**	**04 58 32.3**	**-0.1**
EQUI				AML		AML		
	comp=E,893μm,0.7s							
EQUI				AML		AML		
	comp=N,1205μm,1.3s							
TEOL	**Teolo**	**1.15**	**358**	⇑*e*Pg		**Pb**	**04 58 31.8**	**-0.8**
TEOL				*e*Sg		**Sb**	**04 58 47.6**	**+0.5**
TEOL	**Teolo**	**1.15**	**358**	P		**Pb**	**04 58 31.8**	**-0.8**
ATCC	**AVT- Casa Cast**	**1.22**	**147**	P		**Pb**	**04 58 33.7**	**-0.1**
ATCC				AML		AML		
	comp=N,1500μm,0.6s							
ATCC				AML		AML		
	comp=E,1395μm,0.4s							
GRAM	**Graiana**	**1.23**	**284**	P		**Pg**	**04 58 35.7**	**+0.8**
GRAM	**Graiana**	**1.23**	**284**	P		**Pg**	**04 58 34.6**	**-0.3**
GRAM				AML		AML		
	comp=E,1490μm,0.9s							
GRAM				AML		AML		
	comp=N,1295μm,0.6s							
TRIF	**Trifonti**	**1.25**	**209**	P		**Pn**	**04 58 32.9**	**-0.9**
TRIF				AML		AML		
	comp=N,409μm,0.8s							
TRIF				AML		AML		
	comp=E,498μm,0.7s							
ZOVE	**Zovencedo**	**1.25**	**352**	P		**Pn**	**04 58 33.2**	**-0.7**
EL6	**Elcito**	**1.33**	**131**	P		**Pb**	**04 58 35.9**	**+0.2**
ASSB	**Assisi San Ben**	**1.35**	**150**	P		**Pb**	**04 58 35.7**	**-0.3**
ASSB				AML		AML		
	comp=N,442μm,0.9s							
ASSB				AML		AML		
	comp=E,422μm,0.7s							
PLMA	**Palmaria, Port**	**1.36**	**264**	P		**Pn**	**04 58 35.3**	**-0.1**
PLMA				AML		AML		
	comp=E,493μm,0.8s							
PLMA				AML		AML		
	comp=N,712μm,0.6s							
ARCI	**Arcidosso**	**1.37**	**188**	P		**Pn**	**04 58 35.1**	**-0.5**
ARCI				AML		AML		
	comp=E,284μm,0.9s							
ARCI				AML		AML		
	comp=N,694μm,0.9s							
IESO	**Jesolo**	**1.43**	**24**	*e*Pg		**Pn**	**04 58 36.0**	**-0.3**
MARN	**Marana (Italy)**	**1.47**	**346**	*e*Pg		**Pn**	**04 58 36.8**	**-0.1**
MARN				*e*Sg		**Sn**	**04 58 55.3**	**-0.4**
FDMO	**Fiordimonte**	**1.54**	**140**	P		**Pb**	**04 58 38.8**	**-0.3**
FDMO				AML		AML		
	comp=N,328μm,0.8s							
FDMO				AML		AML		
	comp=E,342μm,1.0s							
MOMA	**Monte Martano**	**1.54**	**156**	P		**Pn**	**04 58 38.4**	**+0.5**
MOMA				AML		AML		
	comp=E,432μm,0.6s							
MOMA				AML		AML		
	comp=N,357μm,0.4s							
CSP1	**Cessapalombo**	**1.55**	**136**	P		**Pb**	**04 58 39.1**	**-0.3**
CSP1				AML		AML		
	comp=N,1225μm,0.5s							
CSP1				AML		AML		
	comp=E,1012μm,0.7s							
CASP	**Castiglione de**	**1.56**	**204**	P		**Pn**	**04 58 37.2**	**-0.8**
CASP				AML		AML		
	comp=E,296μm,0.4s							
CASP				AML		AML		
	comp=N,332μm,0.9s							
MSSA	**Maissana**	**1.59**	**274**	P		**Pn**	**04 58 39.4**	**+0.8**
MSSA				AML		AML		
	comp=E,586μm,1.3s							
MSSA				AML		AML		
	comp=N,682μm,0.7s							
BALD	**Monte Baldo**	**1.61**	**337**	*e*Pg		**Pn**	**04 58 38.3**	**-0.6**
MTLO	**Montello**	**1.62**	**9**	*e*Pg		**Pn**	**04 58 38.6**	**-0.3**
MTLO				*e*Sg		**Sn**	**04 58 59.1**	**-0.2**
GARGN	**Gargnano BS**	**1.66**	**333**	*e*Pg		**Pn**	**04 58 39.2**	**-0.3**
CGRP	**Cima Grappa**	**1.67**	**2**	*e*Pg		**Pn**	**04 58 39.1**	**-0.6**
ED06	**Collalto TV**	**1.68**	**11**	*e*Pg		**Pn**	**04 58 39.2**	**-0.5**
BOB	**Bobbio (Coli)**	**1.73**	**290**	P		**Pn**	**04 58 41.5**	**+1.1**
BOB				AML		AML		
	comp=E,685μm,0.7s							
BOB				AML		AML		
	comp=N,591μm,1.0s							
GORR	**Gorreto**	**1.79**	**284**	P		**Pb**	**04 58 43.7**	**+0.2**
GORR	**Gorreto**	**1.79**	**284**	P		**Pn**	**04 58 42.4**	**+1.1**
GORR				AML		AML		
	comp=N,580μm,1.6s							
GORR				AML		AML		
	comp=E,494μm,0.9s							
MABI	**Malga Bissina**	**2.03**	**335**	AML		AML		
	comp=N,144μm,0.3s							

MABI					AML	AML		
	comp=E,145µm,0.4s							
MDI	**Monti di Nese**	**2.12**	**318**		P	**Pn**	**04 58 45.6**	**-0.3**
MDI					AML	AML		
	comp=E,274µm,0.5s							
MDI					AML	AML		
	comp=N,268µm,1.1s							
RIY	**Rijeka**	**2.25**	**59**	*e*Pn		**Pn**	**04 58 47.4**	**-0.2**
RIY					Sn	**Sn**	**04 59 15.5**	**+0.5**
NVLJ	**Novalja**	**2.28**	**80**	*e*Pn		**Pn**	**04 58 48.4**	**+0.4**
NVLJ					Sn	**Sn**	**04 59 15.7**	**+0.2**
PCP	**Piancastagn**	**2.31**	**279**	||P		**Pn**	**04 58 49.5**	**+1.1**
PCP					AML	AML		
	comp=E,130µm,1.6s							
PCP					AML	AML		
	comp=N,111µm,0.8s							
DUGI	**Dugi Otok**	**2.41**	**94**	*e*Pn		**Pn**	**04 58 49.7**	**0.0**
DUGI					Sn	**Sn**	**04 59 18.9**	**+0.2**
ABSI	**Aberstueckl**	**2.53**	**354**	P		**Pn**	**04 58 51.7**	**+0.1**
ABTA	**Abfaltersbach**	**2.59**	**12**	*e*Pn		**Pn**	**04 58 52.7**	**+0.4**
	comp=N,2.0nm,0.2s							
ABTA					Pg	**Pg**	**04 59 00.9**	**-0.1**
	comp=N,27nm,0.4s							
ABTA					Sn	**Sn**	**04 59 23.0**	**-0.5**
	comp=N,91nm,0.5s							
PGF	**Pioggiola**	**2.59**	**231**	*e*Pn		**Pn**	**04 58 50.8**	**-1.6**
PGF	**Pioggiola**	**2.59**	**231**	*e*P		**Pn**	**04 58 54.0**	**+1.6**
PGF				*e*Sn		**Sn**	**04 59 22.7**	**-0.8**
	comp=N,109nm,0.3s							
PGF	**Pioggiola**	**2.59**	**231**	P		**Pn**	**04 58 52.0**	**-0.4**
PGF	**Pioggiola**	**2.59**	**231**	S		**Sn**	**04 59 22.7**	**-0.8**
ROSI	**Rosskopf**	**2.72**	**355**	P		**Pn**	**04 58 55.0**	**+0.7**
ROSI					AML	AML		
	comp=E,308µm,0.5s							
ROSI					AML	AML		
	comp=N,447µm,0.9s							
RISI	**Rein**	**2.75**	**5**	P		**Pn**	**04 58 55.3**	**+0.7**
RISI					AML	AML		
	comp=E,988µm,0.5s							
RISI					AML	AML		
	comp=N,824µm,0.4s							
MYKA	**Terra Mystica**	**2.77**	**28**	*e*Pn		**Pn**	**04 58 54.3**	**-0.5**
	comp=N,2.9nm,0.2s							
MYKA					Sn	**Sn**	**04 59 28.1**	**+0.4**
	comp=N,21nm,0.3s							
SMPL	**Sampolo**	**2.77**	**221**	P		**Pn**	**04 58 57.4**	**+2.7**
DAVOX	**Davos/Dischmat**	**2.88**	**334**	Pn		**Pn**	**04 58 58.1**	**+1.7**
	comp=N,3.0nm,0.3s,baz=153,slow=13,SNR=23							
DAVOX					Sn	**Sn**	**04 59 33.9**	**+3.2**
	comp=N,2.7nm,0.3s,baz=99,slow=13,SNR=4.5							
DAVOX					Lg	Lg	04 59 42.6	
	comp=N,6.7nm,0.3s,baz=8,slow=20,SNR=3.6							
ZIRJ	**Zirje**	**2.88**	**100**	*e*Pn		**Pn**	**04 58 56.1**	**-0.1**
ZIRJ					Sn	**Sn**	**04 59 29.6**	**-0.8**
MORI	**Morici**	**2.89**	**96**	*e*Pn		**Pn**	**04 58 57.3**	**+1.0**
MORI					Sn	**Sn**	**04 59 31.3**	**+0.7**
FETA	**Feichten**	**2.89**	**346**	*e*Pn		**Pn**	**04 58 57.9**	**+1.3**
	comp=N,14nm,0.4s,SNR=23							
UDBI	**Udbina**	**2.91**	**82**	*e*Pn		**Pn**	**04 58 58.3**	**+1.6**
SAOF	**Saorge**	**3.02**	**267**	P		**Pn**	**04 58 58.7**	**+0.5**
SAOF				S		**Sn**	**04 59 34.9**	**+1.1**
SQTA	**Sankt Quirin**	**3.03**	**353**	*i* Pn		**Pn**	**04 58 59.8**	**+1.4**
	comp=N,8.0nm,0.2s,SNR=18							
OBKA	**Obir**	**3.04**	**40**	*i* Pn		**Pn**	**04 58 58.4**	**-0.1**
	comp=N,3.2nm,0.3s							
WTTA	**Wattenberg**	**3.05**	**359**	*e*Pn		**Pn**	**04 59 00.2**	**+1.5**
	comp=N,3.0nm,0.2s							
WTTA				*e*Sn		**Sn**	**04 59 36.8**	**+1.9**
	comp=N,64nm,0.3s							
KBA	**Koelnbreinsper**	**3.08**	**21**	*i* Pn		**Pn**	**04 58 59.3**	**+0.1**
	comp=N,1.4nm,0.1s,SNR=6.5							
KBA				*e*Sn		**Sn**	**04 59 34.6**	**-1.0**
	comp=N,26nm,0.4s							
SBF	**Sospel**	**3.12**	**265**	*e*Pn		**Pn**	**04 58 58.9**	**-0.6**
SBF	**Sospel**	**3.12**	**265**	*e*P		**Pn**	**04 59 01.5**	**+2.0**
SBF				*e*Sn		**Sn**	**04 59 34.6**	**-1.7**
	comp=N,133nm,0.9s							
WATA	**Walderalm**	**3.12**	**358**	*i* Pn		**Pn**	**04 59 01.5**	**+1.8**
	comp=N,3.9nm,0.2s,SNR=9.6							
WATA				*e*Sn		**Sn**	**04 59 39.2**	**+2.6**
	comp=N,20nm,0.2s							
TURF	**col de Turini**	**3.13**	**267**	P		**Pn**	**04 59 00.4**	**+0.5**
TURF				S		**Sn**	**04 59 37.8**	**+0.9**
AJAC	**Base Areonaval**	**3.15**	**225**	P		**Pn**	**04 59 02.4**	**+2.4**
MOTA	**Moosalm**	**3.16**	**352**	*e*Pn		**Pn**	**04 59 01.7**	**+1.4**
	comp=N,7.2nm,0.3s,SNR=11							
MOTA				*e*Sn		**Sn**	**04 59 40.1**	**+2.5**
	comp=N,26nm,0.3s							
DAVA	**Damuels**	**3.33**	**338**	*e*Pn		**Pn**	**04 59 04.4**	**+1.7**
	comp=N,8.5nm,0.3s,SNR=5.4							
DAVA				*e*Sn		**Sn**	**04 59 44.4**	**+2.6**
	comp=N,9.2nm,0.2s							
ISO	**Isola**	**3.37**	**271**	P		**Pn**	**04 59 04.0**	**+1.0**
KIJV	**Kijevo**	**3.37**	**92**	*e*Pn		**Pn**	**04 59 03.6**	**+0.6**
KIJV				Sn		**Sn**	**04 59 43.3**	**+0.7**
SOKA	**Soboth**	**3.39**	**42**	*e*Pn		**Pn**	**04 59 02.1**	**-1.1**
	comp=N,3.2nm,0.3s							
EMBD	**Embd. Matterta**	**3.41**	**307**	P		**Pn**	**04 59 03.8**	**+0.3**
CALF	**Calern**	**3.50**	**264**	P		**Pn**	**04 59 05.4**	**+0.5**
HVAR	**Hvar**	**3.58**	**105**	*e*Pn		**Pn**	**04 59 06.0**	**+0.3**
HVAR				Sn		**Sn**	**04 59 46.9**	**-0.6**
DIX	**Grande Dixence**	**3.58**	**303**	P		**Pn**	**04 59 05.8**	**-0.3**
MBDF	**Montbardon**	**3.59**	**280**	*e*Pn		**Pn**	**04 59 05.4**	**-0.7**
MBDF	**Montbardon**	**3.59**	**280**	*e*P		**Pn**	**04 59 07.4**	**+1.3**
MBDF				*e*Sn		**Sn**	**04 59 45.3**	**-2.7**
	comp=N,37nm,0.7s							
UBR	**Ueberruh**	**3.65**	**342**	*e*Pn		**Pn**	**04 59 07.7**	**+0.9**
	SNR=3.6							
UBR				*e*Sn		**Sn**	**04 59 50.1**	**+0.7**
	SNR=2.3							
OGAG	**Argentiere**	**3.73**	**276**	P		**Pn**	**04 59 08.6**	**+0.6**
OGMO	**Fort Saint-Gob**	**3.73**	**287**	P		**Pn**	**04 59 07.6**	**-0.5**
FRF	**La Foret Royal**	**3.73**	**262**	*e*Pn		**Pn**	**04 59 06.7**	**-1.2**
FRF	**La Foret Royal**	**3.73**	**262**	*e*P		**Pn**	**04 59 10.3**	**+2.4**
FRF	**La Foret Royal**	**3.73**	**262**	*e*Pg		**Pb**	**04 59 19.3**	**+2.7**
FRF				*e*Sn		**Sn**	**04 59 49.4**	**-2.0**
	comp=N,61nm,0.7s							
LPG	**La Plagne**	**3.77**	**292**	*e*Pn		**Pn**	**04 59 07.3**	**-1.4**
LPG	**La Plagne**	**3.77**	**292**	*e*P		**Pn**	**04 59 10.3**	**+1.6**
LPG				*e*Sn		**Sn**	**04 59 49.5**	**-3.2**
	comp=N,32nm,0.5s							
LPL	**La Plagne**	**3.79**	**292**	*e*Pn		**Pn**	**04 59 07.7**	**-1.2**
LPL	**La Plagne**	**3.79**	**292**	*e*P		**Pn**	**04 59 10.6**	**+1.7**
LPL				*e*Sn		**Sn**	**04 59 49.7**	**-3.3**
	comp=N,23nm,0.4s							
LMR	**La Mourre**	**3.88**	**259**	*e*Pn		**Pn**	**04 59 08.5**	**-1.5**
LMR	**La Mourre**	**3.88**	**259**	*e*P		**Pn**	**04 59 12.7**	**+2.7**
LMR	**La Mourre**	**3.88**	**259**	*e*Pg		**Pb**	**04 59 21.7**	**+2.6**
LMR				*e*Sn		**Sn**	**04 59 52.6**	**-2.5**
	comp=N,43nm,0.8s							
RSL	**Roselend**	**3.91**	**294**	P		**Pn**	**04 59 10.6**	**0.0**
AIGLE	**Aigle**	**3.99**	**304**	S		**Sn**	**04 59 57.3**	**-0.5**
AIGLE	**Aigle**	**3.99**	**304**	P		**Pn**	**04 59 12.7**	**+1.2**
ARSA	**Arzberg**	**4.03**	**40**	*e*Pn		**Pn**	**04 59 11.2**	**-0.9**
	comp=N,2.8nm,0.2s							
MOA	**Mollin**	**4.04**	**25**	*i* Pn		**Pn**	**04 59 12.0**	**-0.2**
	comp=N,1.8nm,0.1s,SNR=7.3							
MOA				*e*Sn		**Sn**	**04 59 58.6**	**-0.5**
	comp=N,34nm,0.5s							
GDM	**Grand'Maison**	**4.12**	**286**	P		**Pn**	**04 59 13.9**	**+0.5**
GDM				S		**Sn**	**05 00 02.5**	**+1.2**
SULZ	**Cheisacher**	**4.17**	**324**	P		**Pn**	**04 59 14.1**	**+0.2**
SLE	**Schleitheim**	**4.21**	**329**	P		**Pn**	**04 59 14.4**	**-0.1**
BALST	**Balsthal**	**4.21**	**319**	P		**Pn**	**04 59 14.4**	**-0.1**
ORIF	**Oris-en-Rattie**	**4.24**	**282**	*e*Pn		**Pn**	**04 59 14.5**	**-0.5**
ORIF	**Oris-en-Rattie**	**4.24**	**282**	*e*P		**Pn**	**04 59 17.0**	**+2.0**
ORIF				*e*Sn		**Sn**	**05 00 01.4**	**-2.7**
	comp=N,20nm,0.4s							
ORIF	**Oris-en-Rattie**	**4.24**	**282**	P		**Pn**	**04 59 16.2**	**+1.2**
GUT	**Gutenstein**	**4.26**	**336**	P		**Pn**	**04 59 15.5**	**+0.2**
BSTF	**la Bastide-des**	**4.40**	**268**	P		**Pn**	**04 59 18.0**	**+0.9**
SMRF	**Simiane la Rot**	**4.44**	**269**	*e*Pn		**Pn**	**04 59 15.8**	**-1.9**
SMRF	**Simiane la Rot**	**4.44**	**269**	*e*P		**Pn**	**04 59 19.5**	**+1.8**
BOURR	**Bourrignon**	**4.47**	**317**	P		**Pn**	**04 59 18.1**	**0.0**
FELD	**Feldberg im Sc**	**4.49**	**326**	P		**Pn**	**04 59 18.7**	**+0.2**
OGSM	**Saint Maurice**	**4.51**	**290**	P		**Pn**	**04 59 19.2**	**+0.6**
OGSM				S		**Sn**	**05 00 09.3**	**-1.2**
RUSF	**Rustrel**	**4.51**	**269**	P		**Pn**	**04 59 20.4**	**+1.7**
BRANT	**Les Verrieres**	**4.59**	**308**	P		**Pn**	**04 59 20.0**	**+0.2**
BRANT	**Les Verrieres**	**4.59**	**308**	S		**Sn**	**05 00 09.2**	**-3.4**
KIZ	**Kirchzarten**	**4.59**	**326**	P		**Pn**	**04 59 19.7**	**0.0**
CABF	**La Chapelle**	**4.64**	**303**	*e*Pn		**Pn**	**04 59 20.2**	**-0.3**
CABF				*e*Sn		**Sn**	**05 00 10.4**	**-3.5**
	comp=N,92nm,1.4s							
LOMF	**Lomont**	**4.65**	**314**	P		**Pn**	**04 59 20.3**	**-0.3**
LOMF	**Lomont**	**4.65**	**314**	S		**Sn**	**05 00 10.9**	**-3.2**
CHMF	**Charmoille**	**4.67**	**312**	P		**Pn**	**04 59 20.8**	**-0.1**
CHMF				S		**Sn**	**05 00 10.5**	**-4.2**
CONA	**Conrad Observa**	**4.70**	**36**	*e*Pn		**Pn**	**04 59 21.5**	**+0.2**
	comp=N,0.7nm,0.1s							
OG35	**Corcelles**	**4.73**	**295**	P		**Pn**	**04 59 21.6**	**-0.1**
OG35				S		**Sn**	**05 00 13.5**	**-2.5**
BFO	**Black Forest**	**4.74**	**331**	*e*Pn		**Pn**	**04 59 21.9**	**0.0**
	SNR=3.2							
GEC2	**GERESS Array S**	**4.83**	**16**	*e*Pn		**Pn**	**04 59 22.7**	**-0.4**
	SNR=3.7							
GEC2				*e*Sn		**Sn**	**05 00 16.6**	**-2.0**
	SNR=4.9							
GERES	**GERESS Array B**	**4.83**	**16**	Pn		**Pn**	**04 59 22.2**	**-0.8**
	comp=N,1.4nm,0.3s,baz=193,slow=13,SNR=22							
GERES				Sn		**Sn**	**05 00 16.0**	**-2.5**
	comp=N,10nm,0.3s,baz=204,slow=24,SNR=24							
MOF	**Molkenrain**	**4.85**	**320**	P		**Pn**	**04 59 22.9**	**-0.4**
OPP	**Oppenau**	**4.94**	**331**	P		**Pn**	**04 59 24.4**	**-0.1**
OPP				S		**Sn**	**05 00 17.0**	**-4.1**
CKRC	**Cesky Krumlov**	**4.94**	**20**	*e*SN		**Sn**	**05 00 17.7**	**-3.5**
HINF	**Hinteralfeld**	**4.95**	**318**	*e*Pn		**Pn**	**04 59 22.5**	**-2.2**
HINF	**Hinteralfeld**	**4.95**	**318**	*e*P		**Pn**	**04 59 25.8**	**+1.1**
HINF				*e*Sn		**Sn**	**05 00 18.1**	**-3.4**
	comp=N,16nm,0.5s							
WET	**Wettzell**	**5.00**	**9**	*e*Pn		**Pn**	**04 59 24.6**	**-0.7**
	SNR=2.7							
WET				*e*Sn		**Sn**	**05 00 18.9**	**-3.6**
	SNR=5.4							
KHC	**Kasperske Hory**	**5.08**	**14**	*e*PN		**Pn**	**04 59 25.6**	**-0.9**
KHC				*e*PG		**Pg**	**04 59 46.0**	**-2.5**
KHC				*e*SN		**Sn**	**05 00 21.2**	**-3.5**
KHC				*e*SG		**Sg**	**05 00 58.5**	**+4.3**
VIVF	**Saint-Julien-l**	**5.09**	**280**	*e*Pn		**Pn**	**04 59 25.5**	**-1.1**
VIVF	**Saint-Julien-l**	**5.09**	**280**	*e*P		**Pn**	**04 59 28.8**	**+2.2**
VIVF				*e*Sn		**Sn**	**05 00 21.5**	**-3.3**
	comp=N,19nm,0.9s							
ECH	**Echery**	**5.11**	**323**	P		**Pn**	**04 59 26.5**	**-0.4**
ECH				S		**Sn**	**05 00 21.5**	**-3.8**
ECH	**Echery**	**5.11**	**323**	P		**Pn**	**04 59 26.8**	**0.0**
ECH	**Echery**	**5.11**	**323**	P		**Pn**	**04 59 26.5**	**-0.4**
ECH				S		**Sn**	**05 00 21.5**	**-3.8**
WLS	**Welschbruch**	**5.18**	**326**	P		**Pn**	**04 59 27.7**	**-0.2**
WLS				S		**Sn**	**05 00 23.3**	**-3.9**
CDF	**Champ du Feu**	**5.21**	**325**	*e*Pn		**Pn**	**04 59 27.2**	**-1.1**
CDF	**Champ du Feu**	**5.21**	**325**	*e*P		**Pn**	**04 59 29.8**	**+1.5**
CDF				*e*Sn		**Sn**	**05 00 24.5**	**-3.5**
	comp=N,15nm,0.6s							
SSB	**Saint Sauveur**	**5.23**	**284**	P		**Pn**	**04 59 28.3**	**-0.3**
SSB				S		**Sn**	**05 00 26.2**	**-2.2**
HAU	**Haudompre**	**5.33**	**317**	*e*Pn		**Pn**	**04 59 28.5**	**-1.4**
HAU	**Haudompre**	**5.33**	**317**	*e*P		**Pn**	**04 59 31.1**	**+1.2**
HAU				*e*Sn		**Sn**	**05 00 27.0**	**-3.8**
	comp=N,40nm,0.4s							
GRF	**Grafenberg Arr**	**5.49**	**357**	*e*Sn		**Sn**	**05 00 30.9**	**-3.9**
	SNR=2.7							
ROTZ	**Rotzenmuhle**	**5.56**	**3**	*e*Pn		**Pn**	**04 59 32.2**	**-0.9**
	SNR=2.3							
ROTZ				*e*Sn		**Sn**	**05 00 30.8**	**-5.8**
	SNR=4.3							
MODS	**Modra-Piesok**	**5.66**	**41**	*e*PN		**Pn**	**04 59 34.5**	**0.0**
MODS				*e*SN		**Sn**	**05 00 35.5**	**-3.5**
LASF	**Ste Croix**	**5.67**	**271**	*e*Pn		**Pn**	**04 59 33.4**	**-1.1**
PBCC	**Pribram**	**5.69**	**15**	*e*SN		**Sn**	**05 00 35.0**	**-4.6**
MANZ	**Manzenberg**	**5.78**	**2**	*e*Sn		**Sn**	**05 00 37.7**	**-4.2**
	SNR=3.7							
PAGF	**Fort de Pagny**	**6.01**	**318**	*e*Pn		**Pn**	**04 59 37.7**	**-1.5**
PAGF				*e*Sn		**Sn**	**05 00 43.6**	**-3.9**
	comp=N,94nm,1.4s							
SMF	**Signal de Mont**	**6.06**	**296**	*e*Pn		**Pn**	**04 59 38.7**	**-1.2**
SMF				*e*Sn		**Sn**	**05 00 44.8**	**-4.0**
	comp=N,20nm,0.6s							
PRU	**Pruhonice**	**6.09**	**17**	*e*SN		**Sn**	**05 00 44.0**	**-5.4**
WERN	**Wernitzgruen**	**6.09**	**4**	*e*Sn		**Sn**	**05 00 45.5**	**-4.1**
	SNR=3.4							
SFTF	**Sexfontaines**	**6.12**	**313**	*e*Pn		**Pn**	**04 59 39.2**	**-1.6**
GUNZ	**Gunzen**	**6.17**	**4**	*e*Pn		**Pn**	**04 59 41.5**	**+0.1**
	SNR=2.5							
GUNZ				*e*Sn		**Sn**	**05 00 46.2**	**-5.3**
	SNR=2.7							
TANN	**Tannenbergstha**	**6.22**	**4**	*e*Pn		**Pn**	**04 59 41.7**	**-0.5**
	SNR=2.2							
TANN				*e*Sn		**Sn**	**05 00 48.5**	**-4.4**
	SNR=3.2							
LOR	**Lormes**	**6.30**	**302**	*e*Pn		**Pn**	**04 59 42.0**	**-1.2**
LOR	**Lormes**	**6.30**	**302**	*e*P		**Pn**	**04 59 45.7**	**+2.5**
LOR				*e*Sn		**Sn**	**05 00 49.5**	**-5.2**
	comp=N,29nm,0.3s							
LOR	**Lormes**	**6.30**	**302**	P		**Pn**	**04 59 43.1**	**-0.1**
LOR	**Lormes**	**6.30**	**302**	S		**Sn**	**05 00 49.6**	**-5.0**
MEZF	**Maizieres J'vi**	**6.30**	**315**	*e*Pn		**Pn**	**04 59 40.6**	**-2.6**
MEZF				*e*Sn		**Sn**	**05 00 51.0**	**-3.7**
	comp=N,6.9nm,0.4s							
SAVF	**Savonnieres en**	**6.34**	**316**	*e*Pn		**Pn**	**04 59 43.2**	**-0.6**
AVF	**Avril sur Loir**	**6.43**	**297**	*e*Pn		**Pn**	**04 59 43.3**	**-1.6**
AVF	**Avril sur Loir**	**6.43**	**297**	*e*P		**Pn**	**04 59 46.4**	**+1.5**
AVF				*e*Sn		**Sn**	**05 00 53.0**	**-4.8**
	comp=N,19nm,1.2s							
SSF	**Saint Saulge**	**6.43**	**299**	*e*Pn		**Pn**	**04 59 43.0**	**-2.0**
SSF	**Saint Saulge**	**6.43**	**299**	*e*P		**Pn**	**04 59 47.1**	**+2.1**
SSF				*e*Sn		**Sn**	**05 00 53.1**	**-4.8**
	comp=N,14nm,0.4s							
MOX	**Moxa**	**6.43**	**359**	*e*Pn		**Pn**	**04 59 44.0**	**-1.0**
	SNR=1.8							
MOX				*e*Sn		**Sn**	**05 00 52.7**	**-5.3**
	SNR=4.6							
BGF	**Bois d'Agland**	**6.68**	**294**	*e*Pn		Pn	04 59 39.6	-8.8
BGF	**Bois d'Agland**	**6.68**	**294**	*e*P		**Pn**	**04 59 51.3**	**+2.9**
BGF				*e*Sn		**Sn**	**05 00 59.7**	**-4.4**
	comp=N,15nm,0.4s							
BRG	**Berggiesshubel**	**6.83**	**12**	Pg		**Pg**	**05 00 20.0**	**-1.9**
BRG				Sn		**Sn**	**05 01 02.5**	**-5.2**
BRG				*ex*		x	05 01 15.3	
BRG				*ex*		x	05 01 47.9	
BRG				Amp			05 02 04.3	
	comp=Z,11nm,0.8s							
DPC	**Dobruska-Polom**	**6.89**	**25**	*e*SN		**Sn**	**05 01 03.6**	**-5.6**
CAF	**Calviac**	**6.94**	**279**	*e*Pn		**Pn**	**04 59 50.9**	**-1.1**
MTLF	**Montolieu**	**6.94**	**266**	*e*Pn		**Pn**	**04 59 49.3**	**-2.7**
MTLF	**Montolieu**	**6.94**	**266**	P		**Pn**	**04 59 53.2**	**+1.2**
TCF	**Toulx Ste Croi**	**7.03**	**290**	*e*Pn		**Pn**	**04 59 49.1**	**-4.2**
TCF				*e*Sn		**Sn**	**05 01 08.0**	**-4.8**
	comp=Z,40nm,1.1s							
HYF	**Humbligny**	**7.06**	**299**	*e*Sn		**Sn**	**05 01 07.8**	**-5.5**
CLL	**Collm**	**7.15**	**6**	*e*(Sn)		**Sn**	**05 01 10.0**	**-5.5**
CLL				*e*Sg		**Sg**	**05 02 04.0**	**+3.5**
TORD	**Torodi Ar. Bea**	**32.13**	**199**	P		**P**	**05 04 39.8**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=8,slow=7.5,SNR=3.0							
YKA	**Yellowknife Ar**	**65.31**	**336**	P		**P**	**05 08 51.8**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=46,slow=6.9,SNR=7.1							

WEL 01 05:07:27.3, 43.3°S±8.°×16.°7E±.°, h33km, M3.9/19, mB4.3/3, ML4.0/19, MLv3.9/19, Mw(mB)3.5/3, Error ellipse: s-maj=0.0km s-min=0.0km az=51.4, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MSZ	**Milford Sound**	**1.89**	**148**	P	Pb	05 07 59.5		-1.6
MSZ				S	Sn	05 08 19.5		-0.3
JCZ	**Jackson Bay**	**1.93**	**122**	P	Pn	05 07 59.1		+1.3
JCZ				S	Sn	05 08 19.3		-1.6
FOZ	**Fox Glacier**	**2.45**	**102**	P	Pn	05 08 04.9		-0.1
WKZ	**Wanaka**	**2.51**	**135**	P	Pb	05 08 09.5		-2.3
WKZ				S	Sn	05 08 37.4		+2.2
GCSZ	**Gaunt Creek Bo**	**2.80**	**96**	P	Pn	05 08 09.2		-0.6
WVZ	**Waitaha Valley**	**3.10**	**91**	P	Pn	05 08 13.1		-0.7
WVZ				S	Sn	05 08 44.2		-5.4
RPZ	**Rata Peaks**	**3.37**	**102**	P	Pn	05 08 19.5		+1.9
RPZ				S	Sn	05 08 56.0		-0.5
ARCZ	**Arundel**	**3.50**	**106**	P	Pn	05 08 20.7		+1.3
TMZ	**Timaru**	**3.51**	**113**	P	Pn	05 08 20.9		+1.4
INZ	**Inchbonnie**	**3.64**	**86**	P	Pn	05 08 20.0		-1.4
INZ				S	Sn	05 08 57.1		-6.0
WACZ	**Wakanui South**	**3.97**	**104**	P	Pn	05 08 26.7		+0.9
OXZ	**Oxford**	**4.05**	**95**	P	Pn	05 08 27.0		0.0
OXZ				S	Sn	05 09 09.8		-3.3
RACZ	**Rakaia**	**4.15**	**101**	P	Pn	05 08 29.3		+1.0
LTZ	**Lake Taylor**	**4.24**	**88**	P	Pn	05 08 29.4		-0.2
LTZ				S	Sn	05 09 12.8		-5.1
AKCZ	**Akaroa Harbour**	**4.72**	**102**	P	Pn	05 08 36.7		+0.5
GVZ	**Greta Valley S**	**4.79**	**91**	P	Pn	05 08 36.7		-0.4
GVZ				S	Sn	05 09 26.0		-5.3
THZ	**Tophouse**	**4.92**	**77**	P	Pn	05 08 37.4		-1.5
THZ				S	Sn	05 09 28.7		-5.9
KHZ	**Kahutara**	**5.22**	**85**	P	Pn	05 08 42.8		-0.1
KHZ				S	Sn	05 09 37.5		-4.5
NNZ	**Nelson**	**5.44**	**72**	P	Pn	05 08 45.2		-0.8
NNZ				S	Sn	05 09 39.9		-7.5
BSWZ	**Blackbirch Sta**	**5.62**	**78**	P	Pn	05 08 49.2		+0.6
BSWZ				S	Sn	05 09 48.3		-3.7
DUWZ	**D'Urville Isla**	**5.98**	**70**	P	Pn	05 08 53.0		-0.4
DUWZ				S	Sn	05 09 54.4		-6.4
TCW	**Tory Channel**	**6.07**	**75**	P	Pn	05 08 54.6		-0.1
BHW	**Baring Head**	**6.43**	**78**	P	Pn	05 08 58.2		-1.4
BHW				S	Sn	05 10 04.9		-6.9
KIW	**Kapiti Island**	**6.64**	**73**	P	Pn	05 09 01.7		-0.9
KIW				S	Sn	05 10 12.2		-4.9
MSWZ	**Moikau Station**	**6.70**	**79**	P	Pn	05 09 01.0		-2.3
MSWZ				S	Sn	05 10 10.2		-8.2

IDC 01 05:15:00.3±4.4, 30.°34S×138.°44E, h0km, mb1 3.0/3, mb1mx3.0/18, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=114.0km s-min=17.0km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
STKA	**Stephens Creek**	**3.11**	**120**	Pn	Pn	05 15 51.1		+0.5
	0.3nm,0.3s,baz=298,slow=11,SNR=1.4							
STKA				Sn	Sn	05 16 28.9		+0.4
	1.2nm,0.3s,baz=287,slow=12,SNR=7.0							
STKA				Lg	Lg	05 16 38.8		
	1.4nm,0.3s,baz=184,slow=24,SNR=6.7							
ASAR	**Alice Springs**	**7.78**	**328**	Pn	Pn	05 16 54.7		-0.1
	0.1nm,0.3s,baz=148,slow=12,SNR=4.3							
ASAR				Sn	Sn	05 18 23.7		0.0
	0.1nm,0.3s,baz=153,slow=21,SNR=2.9							
WRA	**Warramunga Arr**	**11.00**	**339**	Pn	Pn	05 17 39.4		+0.4
	0.1nm,0.3s,baz=156,slow=12,SNR=5.0							

*IDC **01** 05:32:09.0±0.8, 28.°03N×131.°13E, h0km, mb3.7/12, mb1 3.9/15, mb1mx3.8/58, mbtmp3.8/15, ML3.9/3, MS3.0/3, Ms1 3.1/3, ms1mx2.7/45, Error ellipse: s-maj=24.1km s-min=16.5km az=87.0*
*JMA **01** 05:32:10.7±0.1, 28.°02N×131.°17E, h86km±2km, M3.7*
*NEIC **01** 05:32:13.7±2.5, 28.°01N±0.°06×131.°10E±0.°06, h35km±8km, mb4.5/6, Error ellipse: s-maj=8.2km s-min=7.2km az=150.0*

ISC 01 05:32:12.6±2.3, 28.°01N±0.°04×131.°14E±0.°05, h29km±17km, n62, σ1.°54/80, mb3.8/15, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JZK	**Kikaishima**	**1.08**	**287**	P	Pn	**05 32 31.6**		**-0.2**
JZK				eS	Sb	**05 32 47.3**		**

FINES	**FINES Array B**	**72.59**	**331**	P		**P**		**05 43 36.9**	**0.0**
	comp=Z,2.1nm,1.1s,baz=70,slow=12,SNR=0.9								
YKA	**Yellowknife Ar**	**75.81**	**26**	P		**P**		**05 43 55.9**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=298,slow=5.3,SNR=7.4								
BRTR	**Keskin Array B**	**77.98**	**309**	P		**P**		**05 44 09.3**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=20,slow=1.7,SNR=3.7								
NOA	**NORSAR Array B**	**78.85**	**335**	P		**P**		**05 44 12.8**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=51,slow=5.6,SNR=2.5								
TORD	**Torodi Ar. Bea**	**116.21**	**303**	PKP		**PKPdf**		**05 50 54.1**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=11,slow=1.5,SNR=1.7								

*IDC **01** 05:33:32.6±0.7, 16°.27S×177°.98E, h0km, mb4.1/9, mb1 4.4/9, mb1mx4.1/36, mbtmp4.1/9, MS3.7/14, Ms1 3.7/14, ms1mx3.5/34, Error ellipse: s-maj=26.4km s-min=17.1km az=122.0*

*NEIC **01** 05:33:35.9±1.9, 16°.39S±0°.05×177°.8E±0°.2, h26km±5km, mb4.6/32, Error ellipse: s-maj=22.8km s-min=6.9km az=83.0*

ISC 01 05:33:35.5±0.6, 16°.35S±0°.07×177°.9E±0°.1, h21km, n61, σ1§24/48, mb4.6/23, MS3.7/12, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**1.38**	**173**	Pn		**Pn**	**05 33 59.8**	**+0.2**
	48nm,0.3s,baz=359,slow=6.2,SNR=61							
MSVF				Sn		**Sb**	**05 34 20.6**	**+2.6**
	372nm,0.3s,baz=133,slow=23,SNR=8.4							
MSVF	**Nonsavu**	**1.38**	**173**			**Pn**	**05 33 59.6**	**-0.1**
MSVF				Sn		**Sn**	**05 34 13.2**	**-4.2**
DZM	**Mont Dzumac**	**12.19**	**240**	LR		LR	05 40 24.7	
	comp=Z,330nm,19.7s,baz=40,slow=33							
HNR	**Honiara**	**18.76**	**289**	LR		LR	05 44 08.0	
	comp=Z,182nm,20.2s,baz=98,slow=34							
RAR	**Rarotonga**	**21.71**	**106**	LR		LR	05 44 26.8	
	comp=Z,328nm,20.9s,baz=282,slow=30							
LTZ	**Lake Taylor**	**26.77**	**189**	P		**P**	**05 39 13.3**	**-0.6**
LTZ				IAmb		IAmb	05 39 36.7	
	comp=Z,16nm,1.2s							
PPT	**Papeete**	**31.15**	**97**	LR		LR	05 49 12.3	
	comp=Z,46nm,19.2s,baz=254,slow=30							
H11S2	**WAKE ISLAND Hy**	**36.33**	**342**	T		T	06 18 48.9	
	baz=163,slow=76,SNR=7.4							
STKA	**Stephens Creek**	**36.33**	**238**	P		**P**	**05 40 41.0**	**+2.9**
	comp=Z,3.4nm,0.8s,baz=87,slow=8.1,SNR=5.3							
STKA				LR		LR	05 53 48.5	
	comp=Z,96nm,19.2s,baz=31,slow=33							
STKA	**Stephens Creek**	**36.33**	**238**	P		**P**	**05 40 38.4**	**+0.4**
H11S3	**WAKE ISLAND Hy**	**36.33**	**342**	T		T	06 18 48.6	
	baz=163,slow=76,SNR=10.0							
H11S1	**WAKE ISLAND Hy**	**36.34**	**342**	T		T	06 18 49.5	
	baz=163,slow=76,SNR=9.1							
BBOO	**Buckleboo**	**41.10**	**239**	P		**P**	**05 41 16.0**	**-2.0**
WB0	**Warramunga Arr**	**41.39**	**259**	P		**P**	**05 41 19.3**	**-1.2**
WRA	**Warramunga Arr**	**41.43**	**258**	P		**P**	**05 41 21.3**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=91,slow=8.8,SNR=5.5							
WRA				LR		LR	05 56 40.5	
	comp=Z,74nm,20.3s,baz=295,slow=33							
WRA	**Warramunga Arr**	**41.43**	**258**	P		**P**	**05 41 19.1**	**-1.8**
ASAR	**Alice Springs**	**41.81**	**253**	P		**P**	**05 41 25.1**	**+1.1**
	comp=Z,3.0nm,0.9s,baz=85,slow=8.9,SNR=16							
ASAR				PcP		**PcP**	**05 43 22.1**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=101,slow=4.8,SNR=1.5							
ASAR				LR		LR	05 57 21.4	
	comp=Z,110nm,20.1s,baz=13,slow=34							
FITZ	**Fitzroy Crossi**	**49.78**	**260**	LR		LR	06 02 07.9	
	comp=Z,118nm,19.6s,baz=71,slow=34							
FITZ	**Fitzroy Crossi**	**49.78**	**260**	P		**P**	**05 42 28.9**	**+2.0**
JCJ	**Chichijima**	**55.36**	**321**	LR		LR	06 01 52.0	
	comp=Z,92nm,21.2s,baz=171,slow=31							
JSG	**Sagara**	**63.22**	**324**			**S**	**05 52 31.3**	**-1.7**
MJAR	**Matsushiro Arr**	**64.57**	**325**	LR		LR	06 06 57.9	
	comp=Z,29nm,22.0s,baz=0.0,slow=31							
ASAJ	**Asahikawa**	**68.25**	**333**	LR		LR	06 09 04.2	
	comp=Z,59nm,19.6s,baz=118,slow=31							
KSRS	**Korea Array**	**71.20**	**320**	LR		LR	06 10 49.1	
	comp=Z,61nm,19.2s,baz=166,slow=31							
QSPA	**South Pole Qui**	**73.69**	**180**	P		**P**	**05 45 08.1**	**+0.5**
NVAR	**Mina Array Bea**	**80.83**	**46**	P		**P**	**05 45 48.1**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=240,slow=7.2,SNR=7.3							
NVAR	**Mina Array Bea**	**80.83**	**46**	P		**P**	**05 45 47.2**	**-1.0**
NV11	**Mina Array Sit**	**80.94**	**46**	P		**P**	**05 45 47.7**	**-0.9**
NV11				IAmb		IAmb	05 45 50.1	
	comp=Z,8.0nm,1.2s							
SHPR	**Sheep Range**	**82.14**	**48**	P		**P**	**05 45 55.1**	**+0.1**
PRN	**Pahroc Range**	**82.62**	**48**	P		**P**	**05 45 58.0**	**+0.4**
PRN				IAmb		IAmb	05 45 59.4	
	comp=Z,6.9nm,1.1s							
R11A	**Troy Canyon, C**	**82.68**	**47**	P		**P**	**05 45 57.8**	**0.0**
RND	**Reindeer**	**83.61**	**14**	P		**P**	**05 46 01.8**	**-0.1**
TUC	**Tucson**	**83.62**	**54**	P		**P**	**05 46 04.1**	**+1.4**
TUC				IAmb		IAmb	05 46 22.5	
	comp=Z,5.1nm,1.4s							
LCMT	**Little Creek M**	**83.74**	**49**	P		**P**	**05 46 03.4**	**+0.1**
LCMT				IAmb		IAmb	05 46 11.7	
	comp=Z,4.4nm,1.1s							
CCUT	**Cedar City**	**83.89**	**48**	P		**P**	**05 46 04.8**	**+0.7**
CCUT				IAmb		IAmb	05 46 06.2	
	comp=Z,7.7nm,1.3s							
PSUT	**Pine Spring**	**83.97**	**47**	P		**P**	**05 46 04.7**	**+0.2**
PSUT				IAmb		IAmb	05 46 05.9	
	comp=Z,4.8nm,1.0s							
ELK	**Elko**	**84.01**	**45**	P		**P**	**05 46 05.4**	**+0.7**
ELK				IAmb		IAmb	05 46 06.2	
	comp=Z,4.2nm,1.1s							
KNB	**Kanab**	**84.05**	**49**	P		**P**	**05 46 06.1**	**+1.1**
BELA	**Belgrano 2**	**84.13**	**173**	P		**P**	**05 46 04.5**	**+0.1**
WUAZ	**Wupatki**	**84.48**	**51**	P		**P**	**05 46 07.2**	**0.0**
WUAZ				IAmb		IAmb	05 46 09.0	
	comp=Z,6.1nm,1.1s							
MFID	**Camas Ranch**	**84.87**	**42**	P		**P**	**05 46 08.3**	**-0.6**
MFID				IAmb		IAmb	05 46 10.3	
	comp=Z,4.4nm,1.1s							
CMAR	**Chiang Mai Arr**	**85.00**	**291**	LR		LR	06 23 33.3	
	comp=Z,35nm,19.2s,baz=105,slow=35							
DOT	**Dot Lake**	**85.02**	**16**	P		**P**	**05 46 08.6**	**-0.4**
BCAR	**Beaver Creek A**	**85.18**	**17**	P		**P**	**05 46 09.2**	**-0.7**
ILAR	**Eielson Array**	**85.23**	**14**	P		**P**	**05 46 09.5**	**-0.5**
	comp=Z,3.5nm,1.0s,baz=233,slow=6.4,SNR=15							
ILAR	**Eielson Array**	**85.23**	**14**	P		**P**	**05 46 08.7**	**-1.3**
HLID	**Hailey**	**85.85**	**42**	P		**P**	**05 46 14.3**	**+0.4**
SRU	**San Rafael Swe**	**86.57**	**48**	P		**P**	**05 46 16.5**	**-1.0**
SRU				IAmb		IAmb	05 46 20.3	
	comp=Z,5.9nm,1.3s							
DLMT	**Dillon**	**87.81**	**41**	P		**P**	**05 46 23.6**	**+0.2**
BMAR	**Burnt Mountain**	**87.95**	**14**	P		**P**	**05 46 23.1**	**-0.3**
TXAR	**Lajitas Array**	**88.21**	**59**	P		**P**	**05 46 26.6**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=235,slow=4.4,SNR=7.1							
TXAR	**Lajitas Array**	**88.21**	**59**	P		**P**	**05 46 24.8**	**-0.8**
YHL	**Hebgen Lake**	**88.50**	**42**	P		**P**	**05 46 27.9**	**+1.1**
YHL				IAmb		IAmb	05 46 29.1	
	comp=Z,4.2nm,1.0s							
BOZ	**Bozeman (W)**	**88.53**	**41**	P		**P**	**05 46 26.9**	**+0.1**
BOZ				IAmb		IAmb	05 46 28.2	
	comp=Z,3.8nm,1.2s							
BW06	**Boulder Array**	**88.72**	**45**	IAmb		IAmb	05 46 28.8	
	comp=Z,4.0nm,1.1s							
PD31	**Pinedale Array**	**88.72**	**45**	IAmb		IAmb	05 46 28.8	
	comp=Z,4.5nm,1.3s							
PDAR	**Pinedale Array**	**88.72**	**45**	P		**P**	**05 46 27.6**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=222,slow=4.0,SNR=7.4							
PDAR	**Pinedale Array**	**88.72**	**45**	P		**P**	**05 46 26.8**	**-1.0**
SONM	**Songino Array**	**90.07**	**320**	P		**P**	**05 46 34.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=104,slow=4.9,SNR=2.5							
YKA	**Yellowknife Ar**	**94.44**	**25**	P		**P**	**05 46 53.2**	**-0.4**
	comp=Z,0.4nm,1.0s,baz=250,slow=4.0,SNR=5.5							
PLCA	**Paso Flores**	**94.96**	**135**	LR		LR	06 20 19.3	
	comp=Z,29nm,20.7s,baz=183,slow=30							

*ISU **01** 05:36:12, 40°.70N×72°.74E, h5km*

*KRNET **01** 05:36:12.8±0.1, 40°.68N×72°.72E, h12km, mb3.5*

*SOME **01** 05:36:16.9, 40°.87N×72°.77E, h15km*

*NNC **01** 05:36:16.5±1.8, 40°.77N×72°.71E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=16.0km s-min=6.0km az=176.0*

ISC 01 05:36:12.2±1.0, 40°.70N±0°.02×72°.78E±0°.02, h6km±9km, n76, σ1§46/117, 38C-4D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHH	**Osh**	**0.17**	**179**	⇓*i*P		**Pg**	**05 36 15.7**	**+0.1**
	baz=61							
OHH				⇓*i*S		**Sg**	**05 36 18.5**	**+0.6**
	baz=61							
OHH	**Osh**	**0.17**	**179**	*e*P		**Pg**	**05 36 15.0**	**-0.6**

ARSB	**Arslanbob**	**0.65**	**13**	⇑*i*P		**Pb**		**05 36 25.5**	**-0.5**
	baz=17								
ARSB				⇑*i*S		**Sb**		**05 36 35.4**	**+0.1**
	baz=17								
ARSB	**Arslanbob**	**0.65**	**13**	*e*P		**Pb**		**05 36 25.0**	**-1.0**
ARSB				*e*S		**Sb**		**05 36 34.0**	**-1.3**
FRG	**Fergana**	**0.76**	**273**	*e*P		**Pg**		**05 36 27.0**	**+0.2**
FRG				*e*S		**Sb**		**05 36 39.0**	**+0.5**
NAM	**Namangan**	**0.90**	**289**	*e*P		**Pn**		**05 36 33.0**	**+1.6**
NAM				*e*S		**Sn**		**05 36 44.0**	**-0.8**
DRK	**Karamyk**	**1.43**	**212**	⇑*i*P		**Pn**		**05 36 39.1**	**+0.2**
	baz=11								
DRK				⇑*i*S		**Sn**		**05 36 58.0**	**-0.2**
	baz=11								
TRKS	**Terek-Say**	**1.50**	**304**	⇑*i*P		**Pn**		**05 36 39.3**	**-0.4**
	baz=4.0								
TRKS				⇑*i*S		**Sb**		**05 36 58.8**	**-1.0**
	baz=4.0								
AML	**Almayashu**	**1.59**	**25**	⇑*i*P		**Pg**		**05 36 43.6**	**+0.9**
	baz=27								
AML				⇑*i*S		**Sg**		**05 37 05.6**	**+2.3**
	baz=27								
AML	**Almayashu**	**1.59**	**25**	P		**Pg**		**05 36 42.7**	**+0.1**
	SNR=137								
BTK	**Batken**	**1.63**	**248**	⇑*i*P		**Pn**		**05 36 42.3**	**+0.8**
	baz=47								
BTK				⇑*i*S		**Sn**		**05 37 04.1**	**+1.2**
	baz=47								
BTK	**Batken**	**1.63**	**248**	*e*P		**Pn**		**05 36 42.0**	**+0.5**
BTK				*e*S		**Sg**		**05 37 06.0**	**+1.5**
ARLS	**Aral**	**1.64**	**44**	⇑*i*P		**Pg**		**05 36 44.4**	**+0.7**
	baz=45								
ARLS				⇑*i*S		**Sg**		**05 37 07.8**	**+2.8**
	baz=45								
MNAS	**Manas**	**1.80**	**353**	⇑*e*P		**Pg**		**05 36 46.5**	**-0.2**
	baz=55								
MNAS				⇑*i*S		**Sg**		**05 37 10.9**	**+0.8**
	baz=55								
UCH	**Uchtor**	**2.01**	**40**	⇑*i*P		**Pg**		**05 36 50.8**	**+0.1**
	baz=41								
UCH				⇑*i*S		**Sg**		**05 37 18.4**	**+1.7**
	baz=41								
UCH	**Uchtor**	**2.01**	**40**	P		**Pg**		**05 36 50.2**	**-0.5**
	SNR=128								
EKS2	**Erkin-Say**	**2.10**	**20**	⇑*e*P		**Pg**		**05 36 51.4**	**-1.0**
	baz=22								
EKS2				⇑*i*S		**Sg**		**05 37 19.7**	**0.0**
	baz=22								
EKS2	**Erkin-Say**	**2.10**	**20**	P		**Pg**		**05 36 52.0**	**-0.5**
	SNR=46								
CHMG	**Chimgan**	**2.26**	**293**	*e*P		**Pb**		**05 36 53.0**	**-0.5**
CHMG				*e*S		**Sg**		**05 37 24.0**	**-0.8**
AAK	**Ala-Archa**	**2.33**	**33**	⇑*i*P		**Pb**		**05 36 55.0**	**+0.4**
	baz=34								
AAK				⇑*i*S		**Sg**		**05 37 25.6**	**-1.3**
	baz=34								
AAK	**Ala-Archa**	**2.33**	**33**	P		**Pg**		**05 36 55.5**	**-1.3**
	SNR=61								
AAK	**Ala-Archa**	**2.33**	**33**	⇑Pn		**Pg**		**05 36 55.4**	**-1.3**
	15nm,0.3s								
AAK				⇑Sn		**Sg**		**05 37 28.6**	**+1.7**
	64nm,0.5s								
DZA	**Taraz**	**2.45**	**334**	*e*P		**Pg**		**05 37 00.6**	**+1.5**
	139nm,0.1s								
DZA				*e*S		**Sg**		**05 37 30.6**	**-0.2**
	112nm,0.3s								
DZA	**Taraz**	**2.45**	**334**	Pg		**Pg**		**05 37 00.6**	**+1.5**
	139nm,0.1s								
DZA				Lg		Lg		05 37 30.6	
	112nm,0.3s								
IUG	**Iuzhnay**	**2.53**	**306**	*e*P		**Pg**		**05 37 01.1**	**+0.5**
	29nm,0.3s								
IUG				*e*S		**Sg**		**05 37 31.8**	**-1.5**
	154nm,0.4s								
IUG	**Iuzhnay**	**2.53**	**306**	Pg		**Pg**		**05 37 01.1**	**+0.5**
	29nm,0.3s								
IUG				Lg		Lg		05 37 31.8	
	154nm,0.4s								
KBK	**Karagaybulak**	**2.54**	**39**	⇑*i*P		**Pb**		**05 36 57.9**	**-0.4**
	baz=40								
KBK				⇑*i*S		**Sb**		**05 37 30.7**	**+0.8**
	baz=40								
KBK	**Karagaybulak**	**2.54**	**39**	P		**Pg**		**05 36 59.6**	**-1.3**
	SNR=21								
TAS	**Tashkent**	**2.71**	**285**	*e*S		**Sg**		**05 37 39.0**	**-0.3**
CHMS	**Chumysh**	**2.73**	**32**	⇑*i*P		**Pb**		**05 37 00.2**	**-1.2**
	baz=33								
CHMS				⇑*i*S		**Sb**		**05 37 35.0**	**-0.2**
	baz=33								
USP	**Ospenovka**	**2.87**	**26**	P		**Pb**		**05 37 02.2**	**-1.6**
	SNR=5.3								
KK31	**Karatay Array**	**2.94**	**326**	Pn		**Pn**		**05 37 01.3**	**+1.8**
	3.6nm,0.6s,baz=140,slow=13,SNR=103								
KK31				⇓Pg		**Pg**		**05 37 09.0**	**+0.5**
	5.4nm,0.3s,baz=143,slow=17,SNR=30								
KK31				⇑Lg		Lg		05 37 44.9	
	22nm,0.6s,baz=139,slow=29,SNR=9.5								
BOOM	**Boomskoye usch**	**2.97**	**52**	⇑*e*P		**Pb**		**05 37 04.1**	**-1.5**
	baz=52								
BOOM				⇑*i*S		**Sb**		**05 37 41.2**	**-1.0**
	baz=52								
ULHL	**Ulahol**	**3.02**	**58**	⇑*e*P		**Pb**		**05 37 04.4**	**-2.2**
	baz=58								
ULHL				⇑*i*S		**Sb**		**05 37 42.4**	**-1.4**
	baz=58								
ULHL	**Ulahol**	**3.02**	**58**	P		**Pb**		**05 37 05.6**	**-1.0**
	SNR=8.4								
TKM2	**Tokmak 2**	**3.06**	**42**	⇑*e*P		**Pb**		**05 37 05.3**	**-1.9**
	baz=43								
TKM2				⇑*i*S		**Sb**		**05 37 43.5**	**-1.4**
	baz=43								
TKM2	**Tokmak 2**	**3.06**	**42**	P		**Pb**		**05 37 05.8**	**-1.3**
	SNR=11								
TKM2	**Tokmak 2**	**3.06**	**42**	⇑Pn		**Pb**		**05 37 05.5**	**-1.7**
	3.1nm,0.3s								
TKM2				⇓Lg		Lg		05 37 54.5	
	13nm,0.5s								
BRLS	**Boroldav**	**3.21**	**318**	*e*P		**Pg**		**05 37 11.5**	**-2.1**
	5.9nm,0.1s								
BRLS				*e*S		**Sb**		**05 37 49.4**	**+0.5**
	42nm,0.3s								
BRLS	**Boroldav**	**3.21**	**318**	Pg		**Pg**		**05 37 11.5**	**-2.1**
	32nm,0.2s								
BRLS				Lg		Lg		05 37 49.4	
	42nm,0.3s								
KST	**Kastek**	**3.34**	**44**	*e*P		**Pg**		**05 37 14.7**	**-1.5**
	8.5nm,0.3s								
KST				*e*S		**Sb**		**05 37 54.6**	**+1.8**
	24nm,0.6s								
KST	**Kastek**	**3.34**	**44**	Pg		**Pg**		**05 37 14.6**	**-1.5**
	8.5nm,0.3s								
KRBS	**Karabastau**	**3.69**	**35**	*e*P		**Pg**		**05 37 23.3**	**+0.5**
	10.0nm,0.4s								
KRBS				*e*S		**Sg**		**05 38 09.7**	**-1.0**
	14nm,0.6s								
KRBS	**Karabastau**	**3.69**	**35**	Pg		**Pg**		**05 37 23.3**	**+0.5**
	10.0nm,0.4s								
KRBS				Lg		Lg		05 38 10.8	
	14nm,0.6s								
IZV	**Izvestkoviy**	**3.69**	**49**	*e*P		**Pg**		**05 37 22.4**	**-0.5**
	4.3nm,0.4s								
IZV				*e*S		**Sg**		**05 38 08.2**	**-2.6**
	15nm,0.7s								
IZV	**Izvestkoviy**	**3.69**	**49**	Pg		**Pg**		**05 37 21.8**	**-1.2**
	4.4nm,0.6s								
IZV				Lg		Lg		05 38 08.4	
	15nm,0.7s								
TNSS	**Tian-Shan**	**3.89**	**52**	*e*P		**Pg**		**05 37 28.4**	**+1.6**
	3.8nm,0.3s								
TNSS				*e*S		**Sg**		**05 38 18.1**	**+0.9**
	8.8nm,0.4s								
TNSS	**Tian-Shan**	**3.89**	**52**	Pg		**Pg**		**05 37 28.4**	**+1.6**
	3.8nm,0.3s								
TNSS				Lg		Lg		05 38 18.1	
	8.8nm,0.4s								
MDOK	**Medeo**	**4.03**	**51**	*e*P		**Pg**		**05 37 30.4**	**+1.1**
	4.6nm,0.4s								
MDOK				*e*S		**Sg**		**05 38 21.5**	**0.0**
	9.6nm,0.8s								
MDOK	**Medeo**	**4.03**	**51**	⇑Pg		**Pg**		**05 37 30.4**	**+1.1**
	5.7nm,0.8s								
MDOK				⇑Lg		Lg		05 38 24.6	
	24nm,1.1s								
MDOK	**Medeo**	**4.03**	**51**	Pg		**Pg**		**05 37 30.3**	**+1.1**
	4.6nm,0.4s								
MDOK				Lg		Lg		05 38 21.5	
	9.6nm,0.8s								
KOTS	**Kotyrbulak**	**4.11**	**50**	*e*P		**Pg**		**05 37 32.3**	**+1.5**
	13nm,0.4s								
KOTS				*e*S		**Sg**		**05 38 24.9**	**+0.9**
	14nm,0.4s								
KOTS	**Kotyrbulak**	**4.11**	**50**	Pg		**Pg**		**05 37 32.3**	**+1.5**
	13nm,0.4s								
KOTS				Lg		Lg		05 38 24.9	
	14nm,0.4s								
KUU	**Kurty**	**4.14**	**38**	*e*P		**Pg**		**05 37 31.6**	**+0.1**
	4.2nm,0.3s								
KUU				*e*S		**Sg**		**05 38 23.6**	**-1.6**
	14nm,1.1s								
KUU	**Kurty**	**4.14**	**38**	Pg		**Pg**		**05 37 31.6**	**+0.1**
	4.2nm,0.3s								
KUU				Lg		Lg		05 38 23.6	
	14nm,1.1s								
KTBS	**Karatobe**	**4.18**	**43**	*e*P		**Pg**		**05 37 32.1**	**-0.1**
	5.3nm,0.6s								
KTBS				*e*S		**Sg**		**05 38 24.7**	**-1.7**
	26nm,0.7s								
KTBS	**Karatobe**	**4.18**	**43**	Pg		**Pg**		**05 37 32.1**	**-0.1**
	5.3nm,0.6s								
KTBS				Lg		Lg		05 38 25.7	
	26nm,0.7s								
BTLS	**Baital**	**4.44**	**12**	*e*P		**Pg**		**05 37 38.5**	**+1.3**
	3.9nm,0.5s								
BTLS				*e*S		**Sg**		**05 38 35.6**	**+0.8**
	12nm,0.5s								
BTLS	**Baital**	**4.44**	**12**	Pg		**Pg**		**05 37 38.5**	**+1.3**
	3.9nm,0.5s								
BTLS				Lg		Lg		05 38 35.6	
	12nm,0.5s								
SATY	**Saty**	**4.82**	**59**	*e*P		**Pg**		**05 37 45.0**	**+0.6**
	4.9nm,0.8s								
SATY				*e*S		**Sg**		**05 38 46.7**	**-0.1**
	8.8nm,0.5s								
SATY	**Saty**	**4.82**	**59**	Pg		**Pg**		**05 37 45.1**	**+0.6**
	4.9nm,0.8s								
SATY				Lg		Lg		05 38 46.7	
	8.8nm,0.5s								
ARXS	**Arharly**	**5.13**	**45**	*e*P		**Pg**		**05 37 50.5**	**+0.1**
	3.5nm,0.4s								
ARXS				*e*S		**Sg**		**05 38 56.1**	**-0.6**
	8.5nm,0.6s								
ARXS	**Arharly**	**5.13**	**45**	Pg		**Pg**		**05 37 50.5**	**+0.1**
	3.5nm,0.4s								
ARXS				Lg		Lg		05 38 56.1	
	8.5nm,0.6s								
KPKS	**Kokpek**	**5.19**	**56**	*e*P		**Pg**		**05 37 51.5**	**0.0**
	6.0nm,0.4s								
KPKS				*e*S		**Sg**		**05 38 57.8**	**-1.0**
	15nm,0.4s								
UZB	**Uzynbulak**	**5.26**	**60**	*e*P		**Pg**		**05 37 52.3**	**-0.6**
	3.5nm,0.2s								
UZB				*e*S		**Sg**		**05 38 59.1**	**-2.0**
	5.2nm,0.5s								
UZB	**Uzynbulak**	**5.26**	**60**	Pg		**Pg**		**05 37 52.3**	**-0.6**
	3.5nm,0.2s								
UZB				Lg		Lg		05 38 59.1	
	5.2nm,0.5s								
MNBS	**Baschi**	**5.36**	**49**	*e*P		**Pg**		**05 37 54.8**	**-0.1**
	2.1nm,0.5s								
MNBS				*e*S		**Sg**		**05 39 03.3**	**-0.9**
	9.7nm,0.6s								
MNBS	**Baschi**	**5.36**	**49**	Pg		**Pg**		**05 37 54.8**	**-0.1**
	2.1nm,0.5s								
MNBS				Lg		Lg		05 39 03.3	
	9.7nm,0.6s								
SHLS	**Shalkode**	**5.56**	**62**	*e*P		**Pg**		**05 38 02.8**	**+4.2**
	5.0nm,0.5s								
SHLS				*e*S		**Sg**		**05 39 17.0**	**+6.5**
	19nm,0.5s								
SHLS	**Shalkode**	**5.56**	**62**	Pg		**Pg**		**05 38 02.7**	**+4.2**
	5.0nm,0.5s								
SHLS				Lg		Lg		05 39 17.0	
	19nm,0.5s								
KTMS	**Ketmen**	**6.27**	**62**	*e*P		**Pg**		**05 38 10.7**	**-1.5**
	1.4nm,0.3s								
KTMS				*e*S		**Sg**		**05 39 30.7**	**-2.7**
	4.0nm,0.4s								
KTMS	**Ketmen**	**6.27**	**62**	Pg		**Pg**		**05 38 10.7**	**-1.5**
	1.4nm,0.3s								
KTMS				Lg		Lg		05 39 30.7	
	4.0nm,0.4s								
DJR	**Jarkent**	**6.33**	**53**	*e*P		**Pg**		**05 38 14.9**	**+1.6**
	0.7nm,0.1s								
DJR				*e*S		**Sg**		**05 39 38.0**	**+2.8**
	6.6nm,1.3s								
DJR	**Jarkent**	**6.33**	**53**	Pg		**Pg**		**05 38 14.9**	**+1.6**
	0.7nm,0.1s								
DJR				Lg		Lg		05 39 37.9	
	6.6nm,1.3s								
MK31	**Makanchi Array**	**9.19**	**45**	⇑Lg		Lg		05 41 05.2	
	0.6nm,0.6

comp=Z,79nm,18.2s,baz=280,slow=39
AS31 Alice Springs 25.66 224 P **P** **06 07 16.7 -0.3**
ASAR Alice Springs 25.66 224 LR LR 06 16 29.5
comp=Z,113nm,20.9s,baz=312,slow=35
ASAR Alice Springs 25.66 224 P **P** **06 07 16.3 -0.7**
STKA Stephens Creek 28.16 201 P **P** **06 07 38.3 -1.1**
comp=Z,3.1nm,0.8s,baz=32,slow=12,SNR=5.7
STKA LR LR 06 19 39.2
comp=Z,114nm,18.5s,baz=9.7,slow=38
FITZ Fitzroy Crossi 29.45 243 P **P** **06 07 49.2 -1.7**
comp=Z,9.1nm,0.6s,baz=75,slow=7.2,SNR=65
FITZ Fitzroy Crossi 29.45 243 P **P** **06 07 48.9 -2.0**
NWAO Narrogin (SRO) 42.93 226 LR LR 06 28 34.4
comp=Z,136nm,18.4s,baz=31,slow=38
NJ2 Nanjing 49.69 321 *e*P **P** **06 10 39.3 +0.5**
NJ2 pmax pmax
comp=Z,15nm,0.6s
CMAR Chiang Mai Arr 58.47 296 P **P** **06 11 43.4 +0.2**
comp=Z,1.0nm,0.3s,baz=109,slow=4.6,SNR=6.6
CMAR LR LR 06 38 02.4
comp=Z,31nm,19.3s,baz=250,slow=37
PETK Petropavlovsk- 58.72 3 P **P** **06 11 44.9 +0.6**
comp=Z,2.3nm,0.7s,baz=166,slow=5.9,SNR=4.5
PETK LR LR 06 32 50.0
comp=Z,20nm,20.6s,baz=186,slow=32
HHC Hu-ho-hao-te 59.91 325 *e*P **P** **06 11 54.1 +1.2**
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,76nm,5.8s
LZH Lanzhou 62.03 316 *e*P **P** **06 12 09.2 +1.7**
LZH pP pP 06 12 15.0 -2.0
LZH sP sP 06 12 18.8 -3.2
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,73nm,6.5s
LZH LR LR
comp=N,190nm,16.3s
LZH LR LR
comp=E,200nm,15.7s
LZH LR LR
comp=Z,140nm,17.9s
MA2 Magadan 65.09 359 P **P** **06 12 27.1 +0.1**
comp=Z,2.0nm,0.2s,baz=144,slow=14,SNR=3.7
SONM Songino Array 67.20 328 P **P** **06 12 40.8 -0.1**
comp=Z,0.8nm,0.6s,baz=138,slow=4.6,SNR=5.2
SEY Seymchan 68.44 360 P **P** **06 12 48.3 +0.1**
comp=Z,1.1nm,0.4s,baz=210,slow=9.3,SNR=6.2
BILL Bilibino 74.16 5 P **P** **06 13 23.8 +1.0**
BILL IAmb IAmb 06 13 25.2
comp=Z,7.3nm,0.9s
GAMB Gambell 74.18 15 P **P** **06 13 23.4 +0.5**
WMQ Urumqi 76.56 317 *e*P **P** **06 13 39.4 +2.3**
ANM Nome 76.56 17 P **P** **06 13 36.9 +0.3**
CNPM China Point 78.42 25 P **P** **06 13 48.3 +1.1**
TIXI Tiksi 78.81 352 P **P** **06 13 47.9 -1.1**
comp=Z,0.7nm,0.3s,baz=134,slow=6.2,SNR=1.8
SUA Susitna One 79.68 24 P **P** **06 13 54.3 +0.2**
SUA IAmb IAmb 06 13 56.8
comp=Z,4.8nm,0.8s
PWL Port Wells 80.36 25 P **P** **06 13 58.7 +1.0**
SML Sawmill 80.84 24 P **P** **06 14 01.4 +1.1**
SML IAmb IAmb 06 14 01.9
comp=Z,6.2nm,0.8s
TRF Thorofare Moun 80.93 22 IAmb IAmb 06 14 02.9
comp=Z,5.2nm,1.0s
IMAR Indian Mountai 81.15 19 P **P** **06 14 02.5 +0.7**
MK31 Makanchi Array 81.15 319 P **P** **06 14 02.8 +0.6**
MKAR Makanchi Array 81.15 319 P **P** **06 14 01.6 -0.7**
comp=Z,1.2nm,0.8s,baz=101,slow=6.0,SNR=11
MKAR Makanchi Array 81.15 319 P **P** **06 14 02.2 0.0**
MAKZ Makanchi 81.36 319 P **P** **06 14 04.2 +0.9**
RND Reindeer 81.46 23 P **P** **06 14 03.9 +0.3**
RND IAmb IAmb 06 14 13.4
comp=Z,5.8nm,0.9s
MLY Manley 81.63 21 P **P** **06 14 04.4 -0.1**
MLY IAmb IAmb 06 14 07.2
comp=Z,6.7nm,1.2s
KLU Klutina 81.69 25 IAmb IAmb 06 14 08.1
comp=Z,9.8nm,1.3s
NEA2 Nenana 82.00 22 P **P** **06 14 06.3 0.0**
NEA2 IAmb IAmb 06 14 07.0
comp=Z,4.6nm,1.0s
ZALV Zalesovo Beam 82.02 326 P **P** **06 14 05.3 -1.4**
comp=Z,1.8nm,0.5s,baz=119,slow=6.1,SNR=6.8
ZALV Zalesovo Beam 82.02 326 P **P** **06 14 05.5 -1.1**
WRH Wood River Hil 82.30 22 IAmb IAmb 06 14 08.7
comp=Z,8.1nm,1.3s
CCB Clear Creek Bu 82.49 22 IAmb IAmb 06 14 08.9
comp=Z,4.6nm,1.1s
GLB Gilahina Butte 82.56 26 P **P** **06 14 09.3 -0.1**
GLB IAmb IAmb 06 14 20.7
comp=Z,4.5nm,0.8s
TCOL CIGO, UAF Yank 82.59 22 IAmb IAmb 06 14 09.9
comp=Z,5.3nm,0.8s
COLA College 82.59 22 P **P** **06 14 09.8 +0.5**
IL31 82.90 22 IAmb IAmb 06 14 11.3
comp=Z,4.4nm,1.1s
ILAR Eielson Array 82.90 22 P **P** **06 14 10.2 -0.8**
comp=Z,2.2nm,0.9s,baz=258,slow=5.2,SNR=16
ILAR Eielson Array 82.90 22 P **P** **06 14 10.7 -0.2**
DOT Dot Lake 83.45 24 P **P** **06 14 13.8 -0.1**
L27K Beaver Creek, 84.10 25 IAmb IAmb 06 14 20.3
comp=Z,4.2nm,1.1s
NIL Nilore 84.67 304 P **P** **06 14 22.8 +2.0**
BMAR Burnt Mountain 85.00 20 P **P** **06 14 21.3 -0.4**
EGAK Eagle 85.09 23 IAmb IAmb 06 14 25.3
comp=Z,6.2nm,1.2s
AAK Ala-Archa 85.45 313 P **P** **06 14 25.0 +0.4**
AAK IAmb IAmb 06 14 33.8
comp=Z,4.7nm,0.8s
DAWY Dawson 85.51 24 P **P** **06 14 25.7 +1.4**
KKAR Karatay Array 88.41 313 P **P** **06 14 39.1 +0.2**
INK Inuvik 89.20 21 P **P** **06 14 41.6 -0.4**
comp=Z,4.3nm,1.1s,baz=228,slow=6.1,SNR=7.3
INK Inuvik 89.20 21 P **P** **06 14 42.7 +0.8**
INK IAmb IAmb 06 14 44.6
comp=Z,5.1nm,1.2s
C36M Paulatuk 92.78 21 IAmb IAmb 06 15 01.4
comp=Z,2.6nm,0.9s
YKA Yellowknife Ar 96.11 28 P **P** **06 15 15.1 +1.2**
comp=Z,0.7nm,0.8s,baz=268,slow=4.2,SNR=12
SZCU Shurtz Canyon 96.51 53 P **P** **06 15 14.2 -2.5**
PDAR Pinedale Array 99.28 48 LR LR 06 56 34.9
comp=Z,24nm,18.2s,baz=324,slow=33
BDFB Brasilia 150.27 136 PKPbc **PKiKP** **06 21 40.0 +0.4**
comp=Z,1.4nm,0.5s,baz=86,slow=3.3,SNR=3.1
TORD Torodi Ar. Bea 150.80 287 PKPbc **PKiKP** **06 21 40.5 -0.1**
comp=Z,0.8nm,0.4s,baz=58,slow=2.0,SNR=11
TORD Torodi Ar. Bea 150.80 287 **PKPbc** **06 21 40.2 +0.2**

IDC 01 06:25:19.5±1.6, 3.°34S×130.°53E, h0km, mb3.5/2, mb1 3.6/5, mb1mx3.4/28, mbtmp3.5/5, ML3.4/3, Error ellipse: s-maj=69.2km s-min=23.3km az=88.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.56**	**17**	Pn	Pn	06 26 02.5	+0.3
	4.3nm,0.3s,baz=196,slow=19,SNR=39			Sn	Sn	06 26 25.5	-8.7
	11nm,0.3s,baz=254,slow=23,SNR=6.2						
FITZ	**Fitzroy Crossi**	**15.43**	**198**	Pn	Pn	06 28 58.6	-0.1
	0.1nm,0.3s,baz=18,slow=13,SNR=1.2						
FITZ				Sn	Sn	06 31 40.7	-10
	0.1nm,0.3s,baz=347,slow=5.8,SNR=2.2						
WRA	**Warramunga Arr**	**16.91**	**168**	Pn	Pn	06 29 16.5	-1.3
	0.2nm,0.3s,baz=352,slow=12,SNR=14						
WRA				Sn	Sn	06 32 08.4	-18
	0.1nm,0.3s,baz=359,slow=23,SNR=2.3						
ASAR	**Alice Springs**	**20.47**	**171**	P	P	06 29 59.6	+0.7
	1.9nm,0.4s,baz=351,slow=10,SNR=48						
MKAR	**Makanchi Array**	**65.50**	**326**	P	P	06 36 04.5	-0.2
	0.3nm,0.8s,baz=116,slow=8.6,SNR=2.1						

*FUNV **01** 06:31:59.5, 10.°58N×62.°58W, h14km, MW3.2*
*TRN **01** 06:31:59.6, 10.°42N×62.°58W, h12km, MD3.6*
ISC 01 06:31:57.7±1.1, 10.°41N±0.°08×62.°65W±0.°03, h10km, n9, σ1°43/16, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.63**	**294**	*e*P	**Pg**	**06 32 10.2**	**+0.2**
CRUV				*e*S	**Sg**	**06 32 19.4**	**+1.2**
TPP	**Pointe-a-Pierr**	**1.19**	**95**	*e*P	**Pn**	**06 32 21.6**	**+1.2**
TRN	**Trinidad (W)**	**1.25**	**79**	*e*P	**Pg**	**06 32 21.3**	**-0.5**
TRN				*e*S	**Sn**	**06 32 38.8**	**+0.6**
PCRV	**Puerto La Cruz**	**1.97**	**263**	*e*P	**Pn**	**06 32 32.5**	**+1.3**
PCRV				*e*S	**Sn**	**06 32 57.0**	**+1.0**
GRGR	**Grenville**	**1.97**	**30**	*e*P	**Pb**	**06 32 32.9**	**-0.8**
GRGR				*e*S	**Sb**	**06 32 57.4**	**-1.0**
GCMP	**Grenada, Carri**	**2.38**	**30**	*e*S	**Sn**	**06 33 06.2**	**0.0**
BIRV	**Birongo**	**3.56**	**271**	*e*P	**Pn**	**06 32 54.9**	**+1.8**
BIRV				*e*S	**Sn**	**06 33 34.0**	**-1.2**
BAUV	**El Baul**	**5.51**	**255**	*e*P	**Pn**	**06 33 21.1**	**+1.2**
BAUV				*e*S	**Sn**	**06 34 21.0**	**-2.4**
MAPV	**Macapo**	**5.74**	**265**	*e*P	**Pn**	**06 33 23.6**	**+0.4**
MAPV				*e*S	**Sn**	**06 34 26.6**	**-2.6**

NNC 01 07:02:07.5±3.0, 41.°79N×78.°22E, h0km, mb3.2, mpv3.1, 1C-1D, Error ellipse: s-maj=20.6km s-min=13.6km az=162.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOTS	**Kotyrbulak**	**1.66**	**331**	P	Pn	07 02 37.4	-0.7
	4.8nm,0.1s						
KOTS				S	Sb	07 03 00.6	-0.1
	6.9nm,0.3s						
IZV	**Izvestkoviy**	**1.73**	**317**	P	Pn	07 02 38.7	-0.2
	4.1nm,0.1s						
IZV				S	Sg	07 03 03.1	+0.2
	4.1nm,0.2s						
KST	**Kastek**	**2.09**	**308**	Pg	Pn	07 02 43.6	-0.3
	2.7nm,0.2s						
KST				Lg	Lg	07 03 10.9	
	2.9nm,0.4s						
KTBS	**Karatobe**	**2.23**	**330**	Pg	Pn	07 02 47.3	+1.4
	3.3nm,0.1s						
KTBS				Lg	Lg	07 03 17.2	
	11nm,0.8s						
TKM2	**Tokmak 2**	**2.25**	**301**	⇑Pn	Pn	07 02 46.9	+0.6
	1.1nm,0.5s						
TKM2				⇓Sn	Sb	07 03 18.4	+0.7
	1.0nm,0.3s						
KRBS	**Karabastau**	**2.68**	**316**	Pg	Pb	07 02 55.1	-1.3
	1.1nm,0.2s						
KRBS				Lg	Lg	07 03 30.3	
	2.2nm,0.3s						

KRNET 01 07:02:48.0±0.1, 42.°27N×78.°22E, h5km, mb1.9, 10C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.25**	**33**	⇑*i*P	Pg	07 02 52.9	0.0
	baz=31						
PRZ				⇑*i*S	Sg	07 02 57.6	+1.3
	baz=31						
ANVS	**Anan'yevo**	**0.65**	**322**	⇑*i*P	Pg	07 03 00.7	+0.1
	baz=22						
ANVS				⇑*i*S	Sg	07 03 09.7	+0.6
	baz=22						
KDJ	**Kajisay**	**0.78**	**260**	⇑*i*P	Pg	07 03 02.5	-0.5
	baz=60						
KDJ				⇑*i*S	Sg	07 03 14.0	+0.8
	baz=60						
ULHL	**Ulahol**	**1.47**	**270**	⇑*i*P	Pb	07 03 15.9	0.0
	baz=70						
ULHL				⇑*i*S	Sg	07 03 36.9	+1.8
	baz=70						
BOOM	**Boomskoye usch**	**1.70**	**278**	⇑*i*P	Pg	07 03 20.6	0.0
	baz=78						
BOOM				⇑*i*S	Sg	07 03 44.7	+2.1
	baz=78						
TKM2	**Tokmak 2**	**2.04**	**289**	⇓*i*P	Pg	07 03 26.7	-0.4
	baz=89						
TKM2				⇓*i*S	Sg	07 03 55.4	+1.9
	baz=89						

IDC 01 07:24:17.0±2.5, 5.°61S×152.°82E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/41, mbtmp3.5/4, MS3.4/1, Ms1 3.4/1, ms1mx2.4/19, Error ellipse: s-maj=140.6km s-min=31.3km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**22.02**	**282**	LR	LR	07 39 30.2	
	comp=Z,88nm,18.2s,baz=228,slow=42						
WRA	**Warramunga Arr**	**22.94**	**230**	P		07 29 21.9	-1.1
	0.7nm,0.6s,baz=54,slow=9.5,SNR=7.5						
ASAR	**Alice Springs**	**25.58**	**224**	P		07 29 48.9	+0.8
	0.3nm,0.6s,baz=60,slow=9.1,SNR=4.8						
FITZ	**Fitzroy Crossi**	**29.30**	**243**	P		07 30 21.3	-0.2
	0.8nm,0.6s,baz=72,slow=9.8,SNR=1.8						
ILAR	**Eielson Array**	**82.89**	**22**	P		07 36 43.6	+0.3
	0.6nm,1.1s,baz=226,slow=4.8,SNR=2.8						

*JMA **01** 07:31:22.9±0.1, 23.°45N×121.°65E, h0km, M2.8*
*TAP **01** 07:31:24.7, 23.°48N×121.°50E, h25km, ML3.2, C*
ISC 01 07:31:24.7±0.9, 23.°48N±0.°02×121.°54E±0.°02, h27km±5km, n91, σ0°84/161, 1C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.11**	**278**	⇑P	**Pb**	**07 31 29.7**	**0.0**
	baz=282						
HGSD				S	**Sb**	**07 31 33.3**	**+0.2**
	baz=282						
EHY	**Hungye**	**0.20**	**278**	⇓*i*P	**Pb**	**07 31 30.2**	**-0.4**
	baz=280						
EHY				*i* S	**Sb**	**07 31 33.9**	**-0.8**
	baz=280						
EGFH	**Guangfu**	**0.22**	**331**	*i* P	**Pb**	**07 31 30.9**	**+0.1**
	baz=328						
EGFH				*i* S	**Sb**	**07 31 35.6**	**+0.6**
	baz=328						
YULB	**Yu-li**	**0.24**	**249**	⇓P	**Pb**	**07 31 30.8**	**-0.4**
	baz=261						
YULB				S	**Sb**	**07 31 35.0**	**-0.5**
	baz=261						
EYUL	**Yuli**	**0.24**	**238**	*i* P	**Pb**	**07 31 31.3**	**+0.1**
	baz=247						
EYUL				*i* S	**Sb**	**07 31 36.2**	**+0.7**
	baz=247						
TWF1	**Yuli**	**0.26**	**241**	⇓*i*P	**Pb**	**07 31 31.2**	**-0.2**
	baz=250						
TWF1				*i* S	**Sb**	**07 31 35.6**	**-0.2**
	baz=250						
ESL	**Shilin**	**0.35**	**343**	*i* P	**Pb**	**07 31 32.2**	**-0.5**
	baz=340						
ESL				*i* S	**Sb**	**07 31 37.6**	**-0.5**
	baz=340						
FULB	**Fuli**	**0.36**	**219**	P	**Pb**	**07 31 33.2**	**+0.3**
	baz=234						
FULB				S	**Sn**	**07 31 40.1**	**-0.4**
	baz=234						
VWDT	**VWDT**	**0.46**	**307**	⇓P	**Pb**	**07 31 34.1**	**-0.2**
	baz=307						
VWDT				S	**Sb**	**07 31 40.5**	**-0.4**
	baz=307						
HWA	**Hwalien**	**0.50**	**7**	*e*P	**Pn**	**07 31 36.0**	**-0.1**
	baz=356						
YUS	**Yu-Shan**	**0.54**	**271**	⇓*i*P	**Pb**	**07 31 35.4**	**-0.6**
	baz=281						
YUS				S	**Sb**	**07 31 42.9**	**-0.9**
	baz=281						
EDH	**Donghe**	**0.55**	**204**	*i* P	**Pb**	**07 31 36.2**	**+0.3**
	baz=218						
EDH				S	**Sn**	**07 31 44.6**	**-0.5**
	baz=218						
ELDTW	**Lidau**	**0.56**	**239**	*i* P	**Pb**	**07 31 35.0**	**-1.1**
	baz=245						
ELDTW				*i* S	**Sb**	**07 31 42.1**	**-1.8**
	baz=245						
TWD	**Chiawan**	**0.60**	**5**	P	**Pb**	**07 31 37.1**	**+0.3**
	baz=350						
TWD				S	**Sn**	**07 31 46.1**	**-0.3**
	baz=350						
SSLB	**Suanglung**	**0.62**	**300**	⇓P	**Pb**	**07 31 36.2**	**-0.9**
	baz=293						
SSLB				S	**Sb**	**07 31 44.0**	**-1.5**
	baz=293						
WHYT	**Xinyi Township**	**0.67**	**289**	P	**Pb**	**07 31 37.6**	**-0.3**
	baz=287						
WHYT				S	**Sb**	**07 31 46.5**	**-0.3**
	baz=287						
CHGB	**Renai**	**0.67**	**330**	⇓P	**Pb**	**07 31 37.6**	**-0.5**
	baz=337						
CHGB				S	**Sb**	**07 31 45.8**	**-1.3**
	baz=337						
ALS	**Alishan**	**0.68**	**273**	⇓*i*P	**Pb**	**07 31 37.8**	**-0.4**
	baz=282						
ALS				*i* S	**Sb**	**07 31 46.9**	**-0.5**
	baz=282						
LONT	**Longtian**	**0.68**	**214**	P	**Pb**	**07 31 37.1**	**-1.0**
	baz=214						
LONT				*e*S	**Sb**	**07 31 47.1**	**0.0**
	baz=214						
NACB	**Ninganchiao**	**0.69**	**4**	P	**Pb**	**07 31 38.2**	**-0.1**
	baz=350						
NACB				*e*S	**Sb**	**07 31 46.9**	**-0.7**
	baz=350						
WHF	**Hehuan Shan**	**0.71**	**339**	*i* P	**Pb**	**07 31 38.0**	**-0.9**
	baz=338						
WHF				S	**Sb**	**07 31 46.7**	**-1.7**
	baz=338						
SMLT	**Sun Moon Lake**	**0.71**	**305**	⇓P	**Pb**	**07 31 38.1**	**-0.6**
	baz=305						
SMLT				S	**Sb**	**07 31 47.2**	**-1.0**
	baz=305						
ETLH	**Xiulin Townshi**	**0.73**	**356**	*e*P	**Pb**	**07 31 37.8**	**-1.1**
	baz=342						
ETLH				S	**Sn**	**07 31 49.4**	**-0.3**
	baz=342						
WPL	**Puli Township**	**0.76**	**315**	*e*P	**Pb**	**07 31 39.1**	**-0.2**
	baz=320						
WPL				*e*S	**Sn**	**07 31 49.9**	**-0.4**
	baz=320						
STYH	**Taoyuan**	**0.77**	**247**	*i* P	**Pb**	**07 31 38.9**	**-0.6**
	baz=247						
STYH				S	**Sb**	**07 31 48.9**	**-0.7**
	baz=247						
TWGBT	**Beinan**	**0.78**	**213**	*e*P	**Pb**	**07 31 38.0**	**-1.8**
	baz=212						
TWG	**Pinlang**	**0.78**	**214**	P	**Pb**	**07 31 39.6**	**-0.2**
	baz=213						
TWG				S	**Sb**	**07 31 48.3**	**-1.7**
	baz=213						
STYT	**Tauyuan**	**0.79**	**247**	*i* P	**Pb**	**07 31 39.5**	**-0.4**
	baz=246						
STYT				*i* S	**Sb**	**07 31 49.4**	**-0.8**
	baz=246						
DPDB	**Guoxing**	**0.79**	**315**	*e*P	**Pb**	**07 31 39.5**	**-0.4**
	baz=319						
DPDB				*e*S	**Sn**	**07 31 50.5**	**-0.7**
	baz=319						
CHN5	**Tsauling**	**0.80**	**279**	*i* P	**Pn**	**07 31 40.2**	**-0.2**
	baz=285						
CHN5				S	**Sn**	**07 31 50.7**	**-0.8**
	baz=285						
LDUT	**Ludao**	**0.80**	**185**	P	**Pb**	**07 31 39.0**	**-1.1**
	baz=171						
LDUT				S	**Sb**	**07 31 49.6**	**-0.9**
	baz=171						
FUSS	**Fushou**	**0.81**	**340**	*e*P	**Pb**	**07 31 39.7**	**-0.8**
	baz=338						
FUSS				*e*S	**Sb**	**07 31 50.4**	**-0.8**
	baz=338						
WJS	**Zhushan**	**0.82**	**295**	*e*P	**Pn**	**07 31 40.6**	**0.0**
	baz=289						
WJS				*e*S	**Sn**	**07 31 51.9**	**0.0**
	baz=289						
TWT	**Tachien**	**0.84**	**337**	P	**Pb**	**07 31 40.6**	**-0.3**
	baz=333						
TWT				S	**Sb**	**07 31 50.8**	**-1.1**
	baz=333						
TDCB	**Techi**	**0.85**	**336**	*e*P	**Pb**	**07 31 40.5**	**-0.5**
	baz=333						
TDCB				S	**Sb**	**07 31 50.3**	**-1.8**
	baz=333						
TPUB	**Ta-pu**	**0.86**	**258**	P	**Pn**	**07 31 41.0**	**-0.1**
	baz=261						
TPUB				S	**Sn**	**07 31 52.6**	**-0.1**
	baz=261						
CHN4	**Tsaushan**	**0.88**	**262**	*i* P	**Pn**	**07 31 41.7**	**+0.3**
	baz=259						
CHN4				S	**Sn**	**07 31 54.3**	**+0.9**
	baz=259						
WNT	**Mingjian**	**0.88**	**297**	P	**Pn**	**07 31 41.5**	**+0.1**
	baz=297						
WNT				*i* S	**Sn**	**07 31 53.9**	**+0.6**
	baz=297						
WTP	**Ta-pu**	**0.88**	**255**	P	**Pn**	**07 31 41.6**	**+0.1**
	baz=257						
WTP				S	**Sn**	**07 31 53.3**	**-0.1**
	baz=257						
WNT1	**Nantou City**	**0.90**	**299**	*e*P	**Pn**	**07 31 42.5**	**+0.9**
	baz=298						
WNT1				*e*S	**Sn**	**07 31 54.4**	**+0.7**
	baz=298						
WDLH	**Douliu**	**0.94**	**283**	*e*P	**Pn**	**07 31 42.7**	**+0.4**
	baz=284						
WDLH				*e*S	**Sn**	**07 31 55.6**	**+0.7**
	baz=284						
SLGT	**Liugui**	**0.95**	**240**	*i* P	**Pn**	**07 31 42.4**	**0.0**
	baz=241						
SLGT				*i* S	**Sn**	**07 31 55.3**	**+0.1**
	baz=241						
NNSB	**Datong**	**0.96**	**351**	P	**Pn**	**07 31 42.2**	**-0.3**
	baz=348						
NNSB				S	**Sb**	**07 31 53.8**	**-1.4**
	baz=348						
NNSH	**Datong**	**0.96**	**351**	*e*P	**Pn**	**07 31 42.1**	**-0.5**
	baz=347						
NNSH				S	**Sb**	**07 31 53.6**	**-1.6**
	baz=347						
ENA	**Nanau**	**0.96**	**11**	*e*P	**Pn**	**07 31 42.8**	**+0.3**
	baz=352						
ENA				*e*S	**Sb**	**07 31 55.4**	**+0.2**
	baz=352						
WHP	**Taichung City**	**0.97**	**326**	*e*P	**Pb**	**07 31 43.2**	**+0.3**
	baz=327						
WHP				*e*S	**Sn**	**07 31 55.3**	**-0.3**
	baz=327						
NNS	**Nan Shan**	**0.97**	**351**	P	**Pn**	**07 31 42.4**	**-0.3**
	baz=347						
NNS				S	**Sb**	**07 31 54.3**	**-1.3**
	baz=347						
CHN1	**Nanshi**	**0.98**	**253**	*i* P	**Pb**	**07 31 43.4**	**+0.3**
	baz=256						
CHN1				*i* S	**Sn**	**07 31 56.6**	**+0.9**
	baz=256						
EWUT	**Wuta**	**0.99**	**13**	*e*S	**Sb**	**07 31 55.7**	**-0.2**
	baz=352						
TWK	**Hsinying**	**0.99**	**258**	*i* P	**Pb**	**07 31 43.2**	**-0.1**
	baz=260						
TWK				*i* S	**Sn**	**07 31 57.0**	**+0.8**
	baz=260						
SNST	**Tainan City**	**0.99**	**255**	*e*P	**Pb**	**07 31 43.0**	**-0.4**
	baz=258						
SNST				S	**Sn**	**07 31 57.0**	**+0.9**
	baz=258						
CHY	**Chiayi**	**1.03**	**271**	*e*S	**Sn**	**07 31 57.5**	**+0.5**
	baz=274						
TCU	**Taichung**	**1.04**	**310**	*e*S	**Sn**	**07 31 58.7**	**+1.5**
	baz=309						
WTK	**Tuku**	**1.08**	**281**	*e*P	**Pb**	**07 31 44.5**	**-0.3**
	baz=283						
WTK				*e*S	**Sn**	**07 31 59.3**	**+1.1**
	baz=283						
SSD	**Sandimen**	**1.11**	**229**	*e*P	**Pb**	**07 31 45.0**	**-0.3**
	baz=231						
SSD				*e*S	**Sb**	**07 31 59.4**	**+0.1**
	baz=231						
NDT	**Datong Townshi**	**1.12**	**359**	*e*P	**Pn**	**07 31 44.9**	**+0.2**
	baz=347						
NDT				*e*S	**Sn**	**07 31 59.5**	**+0.2**
	baz=347						
TSMG	**Majia**	**1.13**	**227**	*e*P	**Pb**	**07 31 45.8**	**+0.2**
	baz=230						
SCST	**Cishan**	**1.13**	**239**	*e*P	**Pb**	**07 31 47.1**	**+1.4**
	baz=234						
SCST				*e*S	**Sb**	**07 32 03.3**	**+3.3**
	baz=234						
WRL	**Guolierlin Hig**	**1.15**	**292**	*e*S	**Sb**	**07 32 01.2**	**+0.7**
	baz=291						
CHN3	**Shinhua**	**1.15**	**250**	*e*S	**Sb**	**07 32 04.0**	**+3.4**
	baz=264						
TWC	**Suao**	**1.16**	**14**	*e*P	**Pn**	**07 31 45.6**	**+0.4**
	baz=352						
TWC				*e*S	**Sn**	**07 32 00.1**	**-0.2**
	baz=352						
NDS	**Dongshan**	**1.16**	**8**	*e*P	**Pb**	**07 31 46.0**	**-0.2**
	baz=348						

NDS				*e*S		**Sn**	07 32 00.2	-0.1
	baz=348							
ICHU	**Yijhu**	**1.17**	**265**	*e*S		**Sb**	07 32 01.3	+0.3
	baz=268							
WDJ	**Dajia District**	**1.20**	**317**	*e*S		**Sb**	07 32 04.3	+2.5
	baz=314							
YHNB	**Yeheng**	**1.20**	**353**	*e*P		**Pn**	07 31 45.6	-0.2
	baz=347							
YHNB				*e*S		**Sn**	07 32 00.8	-0.5
	baz=347							
MASBT	**Mashibuluo**	**1.20**	**224**	*e*P		**Pn**	07 31 45.3	-0.5
	baz=228							
MASBT				*e*S		**Sb**	07 32 01.2	-0.8
	baz=228							
NSK	**Sanguang**	**1.21**	**352**	P		**Pb**	07 31 46.5	-0.5
	baz=346							
NSK				*e*S		**Sn**	07 32 01.4	0.0
	baz=346							
WSF	**Szhu**	**1.22**	**278**	*e*S		**Sb**	07 32 03.6	+1.1
	baz=280							
CHN8	**Yiju**	**1.23**	**264**	*e*S		**Sb**	07 32 03.3	+0.5
	baz=267							
NSTT	**Nanjuang**	**1.25**	**337**	*e*P		**Pb**	07 31 48.8	+1.1
	baz=339							
NSTT				*e*S		**Sb**	07 32 04.0	+0.6
	baz=339							
LIOB	**Emei**	**1.26**	**338**	*e*P		**Pb**	07 31 47.2	-0.6
	baz=340							
LIOB				*e*S		**Sb**	07 32 03.4	-0.3
	baz=340							
EAST	**Anshuo**	**1.26**	**211**	*e*P		**Pn**	07 31 45.3	-1.4
	baz=194							
NWLT	**Wulai**	**1.29**	**358**	*e*P		**Pb**	07 31 48.5	0.0
	baz=352							
NWLT				*e*S		**Sb**	07 32 04.3	-0.4
	baz=352							
SSPT	**Xinbi**	**1.34**	**222**	*e*P		**Pb**	07 31 49.5	+0.4
	baz=218							
SCZT	**Fangliau**	**1.39**	**218**	*e*P		**Pn**	07 31 48.9	+0.5
	baz=221							
SCZT				*e*S		**Sb**	07 32 06.5	-0.9
	baz=221							
EGS		**1.41**	**15**	*e*P		**Pb**	07 31 50.0	-0.4
	baz=354							
EGS				*e*S		**Sb**	07 32 08.2	+0.3
	baz=354							
SLIU	**Shizi**	**1.43**	**209**	*e*P		**Pn**	07 31 49.0	0.0
	baz=191							
SLIU				*e*S		**Sn**	07 32 07.3	+0.4
	baz=191							
LAY	**Lan-yu**	**1.43**	**180**	P		**Pn**	07 31 48.1	-0.9
	baz=165							
LAY				*e*S		**Sn**	07 32 06.2	-0.7
	baz=165							
YOJ	**Yonaguni jima**	**1.66**	**54**	P		**Pn**	07 31 53.0	+0.9
YOJ	**Yonaguni jima**	**1.66**	**54**	*e*P		**Pn**	07 31 52.4	+0.2
	baz=72							
YOJ				*e*S		**Sn**	07 32 14.2	+1.6
	baz=72							
TNOU	**National Taiwa**	**1.68**	**7**	*e*S		**Sb**	07 32 14.9	-0.8
	baz=358							
TSEB	**Hengchuen, Pin**	**1.68**	**201**	*e*S		**Sn**	07 32 13.8	+0.8
	baz=198							
WDGT	**Dungji**	**1.74**	**263**	*e*P		**Pn**	07 31 52.7	-0.5
	baz=267							
WDGT				*e*S		**Sn**	07 32 14.2	-0.4
	baz=267							
PHUB	**P'eng-hu**	**1.81**	**272**	*e*S		**Sn**	07 32 16.7	+0.4
	baz=275							
PNG	**Penghu**	**1.83**	**273**	*e*P		**Pn**	07 31 54.1	-0.3
	baz=276							
PNG				*e*S		**Sn**	07 32 17.0	+0.4
	baz=276							
HATJ	**Hateruma jima**	**2.15**	**74**	P		**Pn**	07 31 59.3	+0.4
HATJ				S		**Sn**	07 32 25.2	+0.5
IRIF	**Iriomote-Funau**	**2.18**	**66**	P		**Pn**	07 32 00.0	+0.8
IRIF				*e*S		**Sn**	07 32 26.5	+1.2
JKRS	**Kuro-shima**	**2.38**	**71**	P		**Pn**	07 32 03.1	+1.1
JKRS				*e*S		**Sn**	07 32 31.5	+1.1
VWUC	**VWUC**	**2.43**	**309**	*e*P		**Pn**	07 32 03.6	+0.9
	baz=308							
JIJ	**Ishigaki jima**	**2.54**	**69**	P		**Pn**	07 32 04.7	+0.5
JISG	**Ishigakijimahi**	**2.76**	**66**	P		**Pn**	07 32 07.5	+0.2

NNC ***01*** *07:32:25.5±2.6, 55°.55N×86°.45E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=33.4km s-min=18.4km az=123.0, Suspected Mining explosion.*

IDC ***01*** *07:32:29.7±3.2, 55°.48N×85°.91E, h0km, mb1 2.9/2, mb1mx2.8/50, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=25.5km s-min=21.9km az=60.0*

ISC 01 07:32:27.1±4.0, 55°.5N±0°.2×86°.4E±0°.2, h0km, n8, σ1s 34/11, 4C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**211**	*i*			07 42 36.2	
	baz=19,slow=338,SNR=1.2							
ZAA0	**Zalesovo Array**	**1.81**	**211**	⇓Pn		**Pn**	**07 32 58.2**	**-1.3**
	0.8nm,0.5s							
ZAA0				⇑Sn		**Sb**	**07 33 23.8**	**-0.6**
	1.2nm,0.3s							
ZALV	**Zalesovo Beam**	**1.81**	**211**	Pg		**Pn**	**07 32 58.5**	**-1.0**
	6.0nm,0.3s,baz=23,slow=19,SNR=52							
ZALV				Lg		Lg	07 33 23.1	
	4.7nm,0.3s,baz=24,slow=26,SNR=12							
KURBB	**Kurchatov Arra**	**6.81**	**227**	Pn		**Pn**	**07 34 07.9**	**-0.2**
	0.1nm,0.3s,baz=45,slow=14,SNR=8.5							
KURBB				Lg		Lg	07 35 58.3	
	0.0nm,0.3s,baz=18,slow=28,SNR=4.5							
KURBB	**Kurchatov Arra**	**6.81**	**227**	⇑Pn		**Pn**	**07 34 07.5**	**-0.6**
	1.8nm,0.9s							
KURBB				⇑Sn		**Sn**	**07 35 28.4**	**+2.1**
	1.6nm,0.7s							
KURBB				⇓Lg		Lg	07 36 03.9	
	4.9nm,0.6s							
MK31	**Makanchi Array**	**9.10**	**198**	⇑Pn		**Pn**	**07 34 41.0**	**+1.4**
	0.2nm,0.5s,baz=26,slow=12							
MK31				⇓Sn		**Sn**	**07 36 22.2**	**-0.5**
	0.1nm,0.4s							
MK31				⇓Lg		Lg	07 37 12.8	
	0.8nm,0.7s,baz=13,slow=26							
MKAR	**Makanchi Array**	**9.10**	**198**	Pn		**Pn**	**07 34 40.5**	**+0.9**
	0.1nm,0.3s,baz=18,slow=14,SNR=5.7							
MKAR				Sn		**Sn**	**07 36 21.4**	**-1.3**
	0.1nm,0.3s,baz=13,slow=27,SNR=2.5							
MKAR				Lg		Lg	07 37 12.7	
	0.0nm,0.3s,baz=19,slow=32,SNR=2.7							
MAKZ	**Makanchi**	**9.14**	**199**	⇓Sn		**Sn**	**07 36 25.1**	**+1.3**
	1.0nm,0.9s							
MAKZ				⇓Lg		Lg	07 37 18.2	
	1.6nm,1.1s							

IDC ***01*** *07:33:49.8±1.0, 44°.22N×16°.12E, h0km, mb3.9/11, mb1 4.0/18, mb1mx3.9/47, mbtmp3.9/18, ML3.8/6, MS3.3/13, Ms1 3.3/13, ms1mx3.0/57, Error ellipse: s-maj=17.8km s-min=10.7km az=55.0*

BGR ***01*** *07:33:49.5±0.9, 44°.15N×17°.18E, h10km, ML4.1, Error ellipse: s-maj=21.1km s-min=13.3km az=76.0*

KRSZO ***01*** *07:33:51.0±0.7, 44°.28N×16°.37E, h3km±4km, ML4.3/38, Error ellipse: s-maj=2.7km s-min=2.4km az=99.0*

BEO ***01*** *07:33:51.2±0.6, 44°.39N×16°.28E, h0km, ML3.9/16*

PDG ***01*** *07:33:51.8±0.7, 44°.31N×16°.40E, h3km±1km, MD4.4/11, ML4.3/14, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

MED_RC ***01*** *07:33:53.0±0.7, 44°.33N×16°.41E, h10km, MW4.2/8, Moment Tensor Solution.Mantle waves: s8,c12; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr0.25±.28; Mθθ-2.22±.25; Mφφ 1.97±.20; Mrθ-1.61±.80; Mθφ-0.55±.26; Mφr-1.14±.66; Best double couple: Mo2.88000×10^15 NP1:φs221.00000°,δ90.00000°,λ42.00000°. NP2: φs131.00000°,δ90.00000°,λ179.00000°. Principal axes: T 2.5500, Plg28.0000°, Azm94.0000°; N 0.6600, Plg48.0000°, Azm221.0000°; P -3.2100, Plg28.0000°, Azm347.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

RHSSO ***01*** *07:33:53.8±0.3, 44°.35N×16°.42E, h8km±2km, ML4.1/15*

LDG ***01*** *07:33:53.0±0.1, 44°.38N×16°.38E, h10km, Ml4.2/20, Error ellipse: s-maj=3.6km s-min=2.1km az=26.0*

PRU ***01*** *07:33:53.8±0.0, 44°.41N×16°.48E, h1km, M4.1*

NEIC ***01*** *07:33:54.9±1.9, 44°.28N±0°.04×16°.33E±0°.07, h25km±3km, mb4.1/6, ML4.1(VIE), Error ellipse: s-maj=7.3km s-min=5.1km az=103.0*

ISC 01 07:33:51.5±1.0, 44°.28N±0°.01×16°.34E±0°.02, h5km±7km, n325, σ2s09/500, mb4.0/13, MS3.4/5, 27C-21D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KIJV	**Kijevo**	**0.28**	**170**	*e*Pg		**Pg**	**07 33 56.4**	**-0.6**
KIJV				Sg		**Sg**	**07 34 00.8**	**+0.2**
UDBI	**Udbina**	**0.48**	**301**	*i* Pg		**Pg**	**07 34 00.7**	**0.0**
UDBI				Sg		**Sg**	**07 34 07.6**	**+0.6**
MGRS	**Mrkonjic Grad**	**0.55**	**75**	⇑*i*Pg		**Pg**	**07 34 02.1**	**0.0**
MGRS				*e*Sg		**Sg**	**07 34 10.1**	**+0.8**
MORI	**Morici**	**0.61**	**228**	*i* Pg		**Pg**	**07 34 02.7**	**-0.6**
MORI				Sg		**Sg**	**07 34 11.9**	**+0.7**
PRIJ	**Prijedor**	**0.75**	**21**	*e*Pg		**Pg**	**07 34 06.3**	**+0.5**
PRIJ				*e*Sg		**Sg**	**07 34 15.7**	**+0.2**
BLY	**Banja Luka**	**0.77**	**52**	*e*Pg		**Pg**	**07 34 06.3**	**+0.1**
BLY				*e*Sg		**Sg**	**07 34 14.3**	**-1.8**
BLY	**Banja Luka**	**0.77**	**52**	⇑*i*Pg		**Pg**	**07 34 06.3**	**+0.1**
BLY				*e*Sg		**Sg**	**07 34 16.4**	**+0.3**
BLY	**Banja Luka**	**0.77**	**52**	Pg		**Pg**	**07 34 06.3**	**+0.1**
	comp=Z,36nm,SNR=338							
BLY				Lg		Lg	07 34 14.3	
BLY				Sg		**Sg**	**07 34 16.4**	**+0.3**
BLY				Sb		**Sb**	**07 34 16.6**	**-1.4**
ZIRJ	**Zirje**	**0.80**	**219**	*e*Pg		**Pg**	**07 34 05.8**	**-1.0**
ZIRJ				Sg		**Sg**	**07 34 17.8**	**+0.6**
MRAK	**Mrakovica**	**0.84**	**29**	*e*Sg		**Sg**	**07 34 18.7**	**+0.3**
DUGI	**Dugi Otok**	**0.96**	**253**	*i* Pg		**Pg**	**07 34 09.0**	**-0.9**
DUGI				Sg		**Sb**	**07 34 24.5**	**+0.8**
HVAR	**Hvar**	**1.10**	**176**	*e*Pg		**Pg**	**07 34 11.3**	**-1.3**
HVAR				Sg		**Sb**	**07 34 28.0**	**+0.3**
MAKA	**Makarska**	**1.11**	**153**	*e*Pg		**Pg**	**07 34 12.0**	**-0.7**
MAKA				Sg		**Sn**	**07 34 28.6**	**-0.6**
BOJS	**Bojanci**	**1.45**	**328**	*i* Pn		**Pn**	**07 34 18.0**	**-0.3**
BOJS				*i*			07 34 21.9	
BOJS				*i* Sn		**Sg**	**07 34 39.4**	**+1.4**
BOJS				IAML			07 34 45.9	
	comp=Z,826nm,0.4s							
OZLJ	**Ozalj**	**1.47**	**335**	*i* Pn		**Pb**	**07 34 19.4**	**+0.2**
OZLJ				Sn		**Sg**	**07 34 39.4**	**+0.7**
ZAG	**Zagreb**	**1.57**	**351**	*e*Pn		**Pb**	**07 34 20.8**	**0.0**
ZAG				Sg		**Sg**	**07 34 42.1**	**+0.3**
PTJ	**Puntijarka**	**1.65**	**351**	*e*Pn		**Pb**	**07 34 21.8**	**-0.5**
PTJ				Sn		**Sg**	**07 34 44.6**	**+0.2**
CRES	**Cresnjev**	**1.67**	**338**	⇓*i*Pn		**Pn**	**07 34 21.9**	**+0.6**
CRES				*e*Sn		**Sb**	**07 34 43.9**	**0.0**
CRES	**Cresnjev**	**1.67**	**338**	Pg		**Pn**	**07 34 21.9**	**+0.6**
CRES				Lg		Lg	07 34 43.9	
RIY	**Rijeka**	**1.68**	**309**	*e*Pn		**Pb**	**07 34 23.1**	**+0.3**
RIY				Sg		**Sg**	**07 34 47.5**	**+2.0**
STON	**Ston**	**1.72**	**144**	*e*Pg		**Pg**	**07 34 24.0**	**-0.4**
STON				Sn		**Sg**	**07 34 47.1**	**+0.4**
KALN	**Kalnik**	**1.85**	**3**	*i* Pn		**Pn**	**07 34 24.2**	**+0.3**
HAPS	**Han Pijesak,Bl**	**1.89**	**95**	*e*Pg		**Pn**	**07 34 24.8**	**+0.4**
HAPS				*e*Sg		**Sg**	**07 34 53.5**	**+1.3**
HAPS	**Han Pijesak,Bl**	**1.89**	**95**	⇓*i*Pn		**Pn**	**07 34 24.6**	**+0.2**
HAPS				*e*Sn		**Sn**	**07 34 48.5**	**-0.2**
CEY	**Cerknica**	**1.99**	**318**	⇑*i*Pn		**Pb**	**07 34 27.5**	**-0.6**
CEY				*e*Sn		**Sb**	**07 34 53.3**	**+0.1**
BRY	**Bratogost**	**2.11**	**130**	*e*Pn		**Pb**	**07 34 29.5**	**-0.8**
BRY				*e*Sn		**Sb**	**07 34 56.0**	**-0.8**
BRY	**Bratogost**	**2.11**	**130**	⇑*i*Pn		**Pb**	**07 34 28.9**	**-1.4**
BRY				*i* Sn		**Sb**	**07 34 57.5**	**+0.7**
TREB	**Trebinje**	**2.14**	**136**	*e*Pn		**Pb**	**07 34 29.8**	**-0.9**
TREB				*e*Sn		**Sb**	**07 34 56.5**	**-1.0**
TREB	**Trebinje**	**2.14**	**136**	⇑*i*Pn		**Pb**	**07 34 29.5**	**-1.2**
TREB				*e*Sn		**Sb**	**07 34 57.3**	**-0.2**
UPM	**Unac-Piva**	**2.15**	**119**	*e*Pn		**Pn**	**07 34 29.4**	**+1.3**
UPM	**Unac-Piva**	**2.15**	**119**	⇑*i*Pn		**Pn**	**07 34 29.3**	**+1.2**
UPM				*i* Sn		**Sb**	**07 34 58.2**	**+0.2**
KOGS	**Kog**	**2.17**	**358**	Pn		**Pn**	**07 34 28.4**	**+0.3**
	comp=Z,3.4nm,SNR=39							
KOGS				Sn		**Sn**	**07 34 55.1**	**-0.3**
KOVH	**Kovagotottos**	**2.20**	**34**	Pn		**Pn**	**07 34 28.0**	**-0.6**
	comp=Z,3.2nm,SNR=98							
KOVH				Sn		**Sn**	**07 34 54.6**	**-1.5**
BEHE	**Becsehely**	**2.21**	**8**	*e*Pn		**Pn**	**07 34 30.0**	**+1.2**
BEHE				*e*Sn		**Sn**	**07 34 56.5**	**+0.1**
BEHE	**Becsehely**	**2.21**	**8**	Pn		**Pn**	**07 34 30.0**	**+1.2**
BEHE				Pg		**Pb**	**07 34 31.4**	**-0.5**
	comp=Z,11nm,SNR=91							
BEHE				Sn		**Sn**	**07 34 56.5**	**+0.1**
BEHE				Lg		Lg	07 34 58.3	
BBLS	**Lazići**	**2.25**	**100**	*e*Pn		**Pn**	**07 34 30.4**	**+1.0**
BBLS				*e*Sn		**Sb**	**07 35 00.0**	**-0.7**
BBLS	**Lazići**	**2.25**	**100**	⇑*i*Pn		**Pn**	**07 34 30.4**	**+1.0**
BBLS				*e*Sn		**Sn**	**07 34 58.5**	**+1.0**
BBLS	**Lazići**	**2.25**	**100**	Pn		**Pn**	**07 34 30.3**	**+1.0**
	comp=Z,21nm,SNR=77							
BBLS				Sg		**Sn**	**07 34 56.8**	**-0.7**
BBLS				Sn		**Sn**	**07 34 58.5**	**+1.0**
BBLS				Lg		Lg	07 35 00.0	
RUDO	**Rudo**	**2.29**	**106**	*e*Pn		**Pn**	**07 34 31.0**	**+1.2**
RUDO				*e*Sn		**Sn**	**07 34 59.3**	**+0.9**
TEKS	**Tekeris**	**2.30**	**82**	*e*Pn		**Pn**	**07 34 30.6**	**+0.6**
TEKS				*e*Sn		**Sn**	**07 34 59.9**	**+1.2**
TEKS	**Tekeris**	**2.30**	**82**	⇑*i*Pn		**Pn**	**07 34 30.7**	**+0.7**
TEKS				*e*Sn		**Sn**	**07 34 58.6**	**-0.1**
TRI	**Trieste**	**2.32**	**309**	Pn		**Pn**	**07 34 31.6**	**+1.4**
TRI	**Trieste**	**2.32**	**309**	Pg		**Pn**	**07 34 31.6**	**+1.4**
TRI				Pn		**Pb**	**07 34 32.9**	**-0.7**
	comp=Z,2.3nm,SNR=22							
TRI				Sn		**Sn**	**07 35 00.4**	**+1.4**
PLE	**Pljevlja**	**2.41**	**112**	⇓*i*Pn		**Pn**	**07 34 32.8**	**+1.3**
PLE				*i* Sn		**Sb**	**07 35 04.3**	**-0.9**
HCY	**Herceg Novi**	**2.42**	**139**	⇑*i*Pn		**Pb**	**07 34 33.9**	**-1.4**
HCY				*e*Sn		**Sb**	**07 35 04.0**	**-1.4**
HCY	**Herceg Novi**	**2.42**	**139**	⇑*i*Pn		**Pn**	**07 34 33.2**	**+1.7**
HCY				*i* Sn		**Sb**	**07 35 05.0**	**-0.4**
NKY	**Niksic**	**2.42**	**126**	⇓*i*Pn		**Pn**	**07 34 33.2**	**+1.4**
NKY				*i* Sn		**Sb**	**07 35 05.0**	**-0.8**
NKME	**Niksic**	**2.43**	**128**	⇑*i*Pn		**Pn**	**07 34 33.3**	**+1.5**
NKME				*i* Sn		**Sb**	**07 35 05.2**	**-0.7**
MORH	**Mrgy, Hungar**	**2.53**	**39**	⇑P		**Pn**	**07 34 32.6**	**-0.4**
MORH	**Mrgy, Hungar**	**2.53**	**39**	Pg		**Pn**	**07 34 32.7**	**-0.4**
	comp=Z,1.9nm,SNR=54							
MORH				Pn		**Pn**	**07 34 33.6**	**+0.5**
MORH				Lg		Lg	07 35 02.0	
MORH				Sn		**Sn**	**07 35 04.2**	**0.0**
CEME	**Cevo**	**2.56**	**132**	⇓*i*Pn		**Pn**	**07 34 35.2**	**+1.6**
CEME				*i* Sn		**Sb**	**07 35 08.5**	**-1.0**
OBKA	**Obir**	**2.56**	**331**	Pn		**Pn**	**07 34 34.3**	**+0.7**
	comp=Z,21nm,0.2s,SNR=20							
OBKA	**Obir**	**2.56**	**331**			**Pn**	**07 34 34.3**	**+0.7**
OBKA	**Obir**	**2.56**	**331**	Pn		**Pn**	**07 34 34.3**	**+0.7**
	comp=Z,21nm,0.2s,SNR=20							
OBKA				Pg		**Pb**	**07 34 36.1**	**-1.8**
	comp=Z,2.2nm,SNR=32							
OBKA	**Obir**	**2.56**	**331**	*e*Pn		**Pn**	**07 34 35.5**	**+1.8**
	SNR=49							
OBKA	**Obir**	**2.56**	**331**	*e*Pn		**Pn**	**07 34 35.5**	**+1.8**
	SNR=49							
SGRT	**San Giovanni R**	**2.56**	**190**	Pn		**Pn**	**07 34 33.5**	**-0.2**
SOKA	**Soboth**	**2.57**	**340**	*e*Pn		**Pn**	**07 34 34.2**	**+0.4**
	comp=Z,50nm,0.4s,SNR=28							
SOKA				*e*Sn		**Sn**	**07 35 05.4**	**+0.1**
	comp=Z,150nm,0.7s							
SOKA	**Soboth**	**2.57**	**340**			**Pn**	**07 34 34.2**	**+0.4**
SOKA						**Sn**	**07 35 05.4**	**+0.1**
FRGS	**Fruska Gora**	**2.63**	**69**	*e*Pn		**Pn**	**07 34 34.3**	**-0.2**
FRGS				*e*Sn		**Sn**	**07 35 06.9**	**+0.2**
FRGS	**Fruska Gora**	**2.63**	**69**	⇑P		**Pn**	**07 34 34.6**	**+0.1**
FRGS				⇓S		**Sn**	**07 35 06.6**	**-0.1**
FRGS	**Fruska Gora**	**2.63**	**69**	*e*Pn		**Pn**	**07 34 35.8**	**+1.3**
FRGS				*e*Sn		**Sn**	**07 35 07.1**	**+0.4**
DIVS	**Divibare**	**2.63**	**93**			**Pn**	**07 34 35.1**	**+0.4**
DIVS	**Divibare**	**2.63**	**93**	Pg		**Pn**	**07 34 34.9**	**+0.3**
	comp=Z,2.4nm,SNR=53							
DIVS				Pn		**Pn**	**07 34 35.1**	**+0.4**
DIVS				Sn		**Sn**	**07 35 07.4**	**+0.4**
KOME	**Kolasin**	**2.72**	**121**	⇓*i*Pn		**Pn**	**07 34 37.3**	**+1.5**
KOME				*i* Sn		**Sb**	**07 35 12.1**	**-2.1**
BUM	**Brajici-Budva**	**2.72**	**136**	*e*Pn		**Pn**	**07 34 37.5**	**+1.7**
BUM				*i* Sn		**Sb**	**07 35 12.4**	**-1.8**
NRCA	**Norcia**	**2.75**	**239**			**Pn**	**07 34 36.9**	**+0.7**
PDG	**Podgorica**	**2.82**	**130**	*e*Pn		**Pb**	**07 34 40.1**	**-2.1**
PDG				*e*Sn		**Sb**	**07 35 14.9**	**-2.1**
PDG	**Podgorica**	**2.82**	**130**	⇑P		**Pn**	**07 34 39.1**	**+2.0**
PDG				⇓S		**Sn**	**07 35 13.4**	**+2.0**
PDG	**Podgorica**	**2.82**	**130**	*e*Pn		**Pb**	**07 34 39.8**	**-2.4**
PDG				*e*Sn		**Sn**	**07 35 13.9**	**+2.5**
PDG	**Podgorica**	**2.82**	**130**	Pn		**Pb**	**07 34 40.2**	**-2.1**
TTG	**Podgorica**	**2.82**	**130**	⇑*i*Pn		**Pn**	**07 34 38.8**	**+1.7**
TTG				*i* Sn		**Sb**	**07 35 14.7**	**-2.3**
SJES	**Sjenica**	**2.82**	**110**	*e*Pn		**Pn**	**07 34 38.6**	**+1.3**
SJES				*e*Sn		**Sn**	**07 35 14.2**	**+2.5**
TIH	**Tihany**	**2.84**	**22**	Pn		**Pn**	**07 34 38.6**	**+1.2**
	comp=Z,6.1nm,SNR=29							
TIH				Sn		**Sn**	**07 35 06.8**	**-5.1**
IVAS	**Ivanjica**	**2.84**	**103**	*e*Pn		**Pn**	**07 34 37.9**	**+0.4**
IVAS				*e*Sn		**Sb**	**07 35 15.1**	**-2.7**
AQU	**L'Aquila**	**2.88**	**229**			**Pn**	**07 34 39.2**	**+1.2**
AQU	**L'Aquila**	**2.88**	**229**	Pg		**Pn**	**07 34 39.1**	**+1.1**
	comp=Z,3.2nm,SNR=22							
AQU				Pn		**Pb**	**07 34 40.6**	**-2.7**
AQU				Lg		Lg	07 35 14.7	
AQU				Sn		**Sb**	**07 35 17.0**	**-1.8**
INTR	**Introdacqua**	**2.88**	**219**	Pn		**Pn**	**07 34 38.4**	**+0.4**
TRUS	**Trudelj**	**2.92**	**90**	*e*Pn		**Pn**	**07 34 38.9**	**+0.3**
IVA	**Berane**	**2.94**	**117**	⇓*i*Pn		**Pn**	**07 34 40.4**	**+1.5**
IVA				*i* Sn		**Sn**	**07 35 17.5**	**+2.9**
MURB	**Monte Urbino**	**2.94**	**251**	Pn		**Pn**	**07 34 39.8**	**+0.9**
DRME	**Dracevica, Mon**	**2.95**	**134**	⇑*i*Pn		**Pb**	**07 34 41.9**	**-2.6**
DRME				*e*Sn		**Sn**	**07 35 17.1**	**+2.4**
DRME	**Dracevica, Mon**	**2.95**	**134**	⇑*i*Pn		**Pn**	**07 34 40.6**	**+1.7**
DRME				*i* Sn		**Sb**	**07 35 18.0**	**-2.8**
BEO	**Beograd**	**3.00**	**78**	Pn		**Pn**	**07 34 39.0**	**-0.6**
	comp=Z,1.3nm,SNR=9.6							
MPLH	**Magyarpolny**	**3.01**	**16**	Pn		**Pn**	**07 34 41.0**	**+1.2**
	comp=Z,1.5nm,SNR=28							
MPLH				Sn		**Sn**	**07 35 16.0**	**-0.1**
MYKA	**Terra Mystica**	**3.02**	**322**	*e*Pn		**Pn**	**07 34 42.0**	**+2.0**
	comp=Z,10nm,0.3s							
MYKA	**Terra Mystica**	**3.02**	**322**			**Pn**	**07 34 42.0**	**+2.0**
ARSA	**Arzberg**	**3.02**	**349**	*e*Pn		**Pn**	**07 34 40.6**	**+0.7**
	comp=Z,8.2nm,0.2s,SNR=22							
ARSA				Sn		**Sn**	**07 35 15.2**	**-1.3**
	comp=Z,72nm,0.7s							
ARSA	**Arzberg**	**3.02**	**349**			**Pn**	**07 34 40.6**	**+0.7**
ARSA						**Sn**	**07 35 15.2**	**-1.3**
ARSA	**Arzberg**	**3.02**	**349**	Sn		**Sn**	**07 35 15.2**	**-1.3**
	comp=Z,72nm,0.7s							
ARSA				Pg		**Pn**	**07 34 40.6**	**+0.7**
	comp=Z,8.2nm,0.2s,SNR=22							
ARSA				Pn		**Pn**	**07 34 40.8**	**+0.8**
	comp=Z,0.6nm,SNR=13							
ARSA	**Arzberg**	**3.02**	**349**	*e*Pn		**Pn**	**07 34 41.0**	**+1.0**
	SNR=29							
ARSA				*e*Sn		**Sn**	**07 35 15.3**	**-1.3**
	SNR=2.0							
ARSA	**Arzberg**	**3.02**	**349**	*e*Pn		**Pn**	**07 34 41.0**	**+1.0**
	SNR=29							
ARSA				*e*Sn		**Sn**	**07 35 15.3**	**-1.3**
	SNR=2.0							
PVY	**Plav**	**3.13**	**121**	⇑*i*Pn		**Pn**	**07 34 43.0**	**+1.5**
PVY				*i* Sn		**Sn**	**07 35 22.1**	**+2.8**
ULC	**Ulcinj**	**3.15**	**136**	⇑*i*Pn		**Pn**	**07 34 43.3**	**+1.7**
ULC				*i* Sn		**Sn**	**07 35 22.8**	**+3.3**
GRUS	**Gruza**	**3.18**	**96**	*e*Pn		**Pn**	**07 34 42.8**	**+0.8**
ZOU	**Zoufplan**	**3.29**	**315**	Pn		**Pn**	**07 34 45.1**	**+1.4**
CSKK	**Cskako**	**3.36**	**23**	Pn		**Pn**	**07 34 45.3**	**+0.7**
	comp=Z,0.8nm,SNR=18							
CSKK				Sn		**Sn**	**07 35 20.5**	**-4.4**
SOP	**Sopron**	**3.41**	**3**	Pn		**Pn**	**07 34 46.1**	**+0.9**
	comp=Z,0.5nm,SNR=7.3							
SOP				Sn		**Sn**	**07 35 23.6**	**-2.3**
TEOL	**Teolo**	**3.49**	**290**	Pn		**Pn**	**07 34 47.9**	**+1.5**
KBA	**Koelnbreinsper**	**3.50**	**324**	*i* Pn		**Pn**	**

SIRR	**Siria**	**4.25**	**60**	⇓P		**Pn**	**07 34 57.2**	**+0.3**
SIRR	**Siria**	**4.25**	**60**	Pn		**Pn**	**07 34 57.1**	**+0.3**
	comp=Z,0.4nm,SNR=8.9							
ZAGS	**Zajecar**	**4.28**	**94**	*e*Pn		**Pn**	**07 34 57.5**	**+0.4**
SMOL	**Smolenice**	**4.30**	**10**	*e*Pn		**Pn**	**07 34 58.4**	**+0.9**
SMOL				*e*SN		**Sn**	**07 35 46.1**	**-1.9**
SALO	**Salr**	**4.34**	**290**	Pn		**Pn**	**07 34 58.7**	**+0.7**
HERR	**Herculane**	**4.38**	**80**	⇑P		**Pn**	**07 34 59.3**	**+0.7**
PSZ	**Piszkesteto**	**4.40**	**33**	⇑P		**Pn**	**07 34 59.2**	**+0.3**
PSZ	**Piszkesteto**	**4.40**	**33**	Pn		**Pn**	**07 34 59.4**	**+0.5**
PSZ	**Piszkesteto**	**4.40**	**33**	Pn		**Pn**	**07 34 59.0**	**+0.1**
	comp=Z,0.4nm,SNR=12							
PSZ				Pg		**Pn**	**07 34 59.2**	**+0.3**
PSZ				Pb		**Pn**	**07 34 59.4**	**+0.5**
PSZ				Sn		**Sn**	**07 35 47.6**	**-2.9**
WTTA	**Wattenberg**	**4.44**	**314**	*e*Pn		**Pn**	**07 35 01.8**	**+2.2**
	comp=Z,14nm,0.2s,SNR=12							
WTTA				*e*Sn		**Sn**	**07 35 56.8**	**+5.1**
	comp=Z,126nm,0.8s							
WTTA	**Wattenberg**	**4.44**	**314**			**Pn**	**07 35 01.8**	**+2.2**
WTTA						**Sn**	**07 35 56.8**	**+5.1**
WTTA	**Wattenberg**	**4.44**	**314**	*e*Pn		**Pn**	**07 35 02.2**	**+2.6**
	SNR=20							
WTTA				*e*Sn		**Sn**	**07 35 57.6**	**+5.9**
	SNR=3.2							
WTTA	**Wattenberg**	**4.44**	**314**	*e*Pn		**Pn**	**07 35 02.2**	**+2.6**
	SNR=20							
WTTA				*e*Sn		**Sn**	**07 35 57.6**	**+5.9**
	SNR=3.2							
SCTE	**Santa Cesarea**	**4.49**	**159**	Pn		**Pn**	**07 35 00.4**	**+0.3**
WATA	**Walderalm**	**4.52**	**314**	*i* Pn		**Pn**	**07 35 02.9**	**+2.3**
	comp=Z,5.8nm,0.2s,SNR=17							
WATA				*e*Sn		**Sn**	**07 35 58.8**	**+5.2**
	comp=Z,129nm,0.9s							
WATA	**Walderalm**	**4.52**	**314**			**Pn**	**07 35 02.9**	**+2.3**
WATA						**Sn**	**07 35 58.8**	**+5.2**
VYHS	**Vyhne**	**4.56**	**21**	*e*PN		**Pn**	**07 35 02.0**	**+1.0**
VYHS				*e*SN		**Sn**	**07 35 52.4**	**-1.9**
VYHS	**Vyhne**	**4.56**	**21**	Lg		Lg	07 35 52.4	
VYHS				Pn		**Pn**	**07 35 01.5**	**+0.5**
	comp=Z,0.1nm,SNR=10							
VYHS				Pg		**Pn**	**07 35 02.0**	**+1.0**
VYHS				Sn		**Sn**	**07 35 52.7**	**-1.6**
OHR	**Ohrid**	**4.56**	**132**	*i* Pn		**Pn**	**07 35 04.3**	**+3.2**
SQTA	**Sankt Quirin**	**4.64**	**311**	*i* Pn		**Pn**	**07 35 04.9**	**+2.6**
	comp=Z,9.7nm,0.3s,SNR=8.8							
SQTA	**Sankt Quirin**	**4.64**	**311**			**Pn**	**07 35 04.9**	**+2.6**
ZAPS	**Zavoj**	**4.67**	**100**	*e*Pn		**Pn**	**07 35 04.0**	**+1.4**
ZAPS				*e*Sn		**Sn**	**07 35 57.2**	**+0.1**
JAVC	**Velka Javorina**	**4.67**	**11**	*e*PN		**Pn**	**07 35 03.5**	**+0.9**
JAVC				*e*SN		**Sn**	**07 35 57.1**	**-0.1**
GZR	**Gura Zlata**	**4.71**	**74**	⇓P		**Pn**	**07 35 03.6**	**+0.4**
GZR	**Gura Zlata**	**4.71**	**74**	Pn		**Pn**	**07 35 03.3**	**+0.1**
	comp=Z,0.3nm,SNR=6.9							
GZR				Pg		**Pn**	**07 35 03.6**	**+0.4**
CKRC	**Cesky Krumlov**	**4.75**	**344**	*e*PN		**Pn**	**07 35 04.8**	**+1.1**
CKRC				*e*SN		**Sn**	**07 35 57.7**	**-1.4**
MOTA	**Moosalm**	**4.77**	**312**	*e*Pn		**Pn**	**07 35 06.6**	**+2.5**
	comp=Z,12nm,0.4s,SNR=14							
MOTA				*e*Sn		**Sn**	**07 36 03.7**	**+3.9**
	comp=Z,63nm,0.6s							
MOTA	**Moosalm**	**4.77**	**312**			**Pn**	**07 35 06.6**	**+2.5**
MOTA						**Sn**	**07 36 03.7**	**+3.9**
KRUC	**Moravsky**	**4.78**	**0**	*e*PN		**Pn**	**07 35 04.5**	**+0.4**
KRUC				*e*SN		**Sn**	**07 35 58.3**	**-1.5**
FETA	**Feichten**	**4.79**	**307**	*e*Pn		**Pn**	**07 35 07.1**	**+2.7**
	comp=Z,1.0nm,0.2s							
FETA	**Feichten**	**4.79**	**307**			**Pn**	**07 35 07.1**	**+2.7**
BOSS	**Bosilegrad**	**4.82**	**110**	*e*Pn		**Pn**	**07 35 05.7**	**+1.1**
GEC2	**GERESS Array S**	**4.91**	**339**	Pn		**Pn**	**07 35 06.4**	**+0.4**
GEC2	**GERESS Array S**	**4.91**	**339**	*e*Pn		**Pn**	**07 35 06.7**	**+0.7**
	SNR=12							
GEC2				*e*Sn		**Sn**	**07 36 02.2**	**-1.0**
	SNR=6.0							
GEC2	**GERESS Array S**	**4.91**	**339**	*e*Pn		**Pn**	**07 35 06.7**	**+0.7**
	SNR=12							
GEC2				*e*Sn		**Sn**	**07 36 02.2**	**-1.0**
	SNR=6.0							
GERES	**GERESS Array B**	**4.91**	**339**	Pn		**Pn**	**07 35 06.8**	**+0.8**
	comp=Z,4.2nm,0.3s,baz=157,slow=14,SNR=23							
GERES				Sn		**Sn**	**07 36 01.4**	**-1.8**
	comp=Z,14nm,0.3s,baz=149,slow=23,SNR=13							
GERES				LR		LR	07 37 32.8	
	comp=Z,291nm,18.6s,baz=100,slow=45							
GERES	**GERESS Array B**	**4.91**	**339**	Pn		**Pn**	**07 35 07.0**	**+1.1**
KBN	**Korca**	**4.92**	**136**	P		**Pn**	**07 35 08.8**	**+2.8**
VRAC	**Vranov**	**5.03**	**2**	Pn		**Pn**	**07 35 08.1**	**+0.6**
	comp=Z,3.4nm,0.3s,baz=186,slow=11,SNR=21							
VRAC				Sn		**Sn**	**07 36 01.0**	**-5.0**
	comp=Z,1.5nm,0.3s,baz=272,slow=22,SNR=2.3							
VRAC				LR		LR	07 37 01.3	
	comp=Z,191nm,19.6s,baz=220,slow=38							
VRAC	**Vranov**	**5.03**	**2**	⇓P		**Pn**	**07 35 07.8**	**+0.3**
VRAC	**Vranov**	**5.03**	**2**	*e*PN		**Pn**	**07 35 07.6**	**+0.1**
VRAC				*e*SN		**Sn**	**07 36 02.6**	**-3.4**
RETA	**Reutte**	**5.04**	**311**	*i* Pn		**Pn**	**07 35 09.9**	**+2.1**
	comp=Z,5.2nm,0.3s							
RETA				*e*Sn		**Sn**	**07 36 10.7**	**+4.3**
	comp=Z,30nm,0.4s							
RETA	**Reutte**	**5.04**	**311**			**Pn**	**07 35 09.9**	**+2.1**
RETA						**Sn**	**07 36 10.7**	**+4.3**
KECS	**Kecovo**	**5.09**	**33**	*e*PN		**Pn**	**07 35 09.7**	**+1.4**
KECS				*e*SN		**Sn**	**07 36 05.4**	**-2.0**
KECS				*e*LG		Lg	07 36 43.6	
KECS	**Kecovo**	**5.09**	**33**	x		x	07 35 12.0	
	comp=Z,288nm,0.7s							
KECS				Pn		**Pn**	**07 35 09.4**	**+1.1**
	comp=Z,288nm,0.7s,SNR=5.6							
KECS				Pg		**Pn**	**07 35 09.7**	**+1.4**
KECS				Sn		**Sn**	**07 36 05.3**	**-2.0**
KECS				Lg		Lg	07 36 43.6	
KECS				Pn				
KECS				Pn				
FNA	**Florina**	**5.11**	**131**	P		**Pn**	**07 35 11.2**	**+2.6**
FNA				S		**Sn**	**07 36 12.1**	**+4.2**
FNA	**Florina**	**5.11**	**131**	Pn		**Pn**	**07 35 11.1**	**+2.5**
TIP	**Timpagrande**	**5.11**	**176**	⇑P		**Pn**	**07 35 10.0**	**+1.3**
TIP	**Timpagrande**	**5.11**	**176**	Pn		**Pn**	**07 35 08.7**	**+0.1**
DRGR		**5.13**	**58**	⇓P		**Pn**	**07 35 09.5**	**+0.5**
DRGR		**5.13**	**58**	x		x	07 35 10.8	
	comp=Z,45nm,0.8s							
DRGR				Pg		**Pn**	**07 35 09.3**	**+0.3**
	comp=Z,45nm,0.8s,SNR=20							
DRGR				Pn		**Pn**	**07 35 09.5**	**+0.5**
DRGR				Sn		**Sn**	**07 36 07.5**	**-1.1**
DRGR				Pg				
DAVOX	**Davos/Dischmat**	**5.18**	**301**	Pn		**Pn**	**07 35 11.6**	**+1.9**
	comp=Z,4.9nm,0.3s,baz=120,slow=19,SNR=18							
DAVOX				Sn		**Sn**	**07 36 08.8**	**-1.1**
	comp=Z,3.2nm,0.3s,baz=54,slow=14,SNR=7.1							
LSK	**Leskovik**	**5.20**	**141**	P		**Pn**	**07 35 11.9**	**+2.0**
NEST	**Nestorio**	**5.21**	**136**	P		**Pn**	**07 35 12.7**	**+2.7**
NEST				S		**Sn**	**07 36 13.3**	**+2.9**
KEK	**Kerkira**	**5.24**	**149**	P		**Pn**	**07 35 11.5**	**+1.1**
KEK				S		**Sn**	**07 36 11.3**	**+0.1**
VTS	**Vitosha**	**5.29**	**106**	*e*Pn		**Pn**	**07 35 12.4**	**+1.2**
VTS	**Vitosha**	**5.29**	**106**	⇓P		**Pn**	**07 35 12.7**	**+1.5**
VTS	**Vitosha**	**5.29**	**106**	Pn		**Pn**	**07 35 12.4**	**+1.2**
VTS	**Vitosha**	**5.29**	**106**	Pn		**Pn**	**07 35 12.4**	**+1.2**
	comp=Z,43nm,0.9s,SNR=15							
VTS				x		x	07 35 12.6	
	comp=Z,42nm,0.9s							
VTS				Pn				
LANS	**Liptovska Anna**	**5.33**	**23**	*e*PN		**Pn**	**07 35 13.5**	**+1.9**
LANS				*e*SN		**Sn**	**07 36 12.9**	**-0.4**
LANS				*e*LG		Lg	07 36 55.1	
LANS	**Liptovska Anna**	**5.33**	**23**	Sn		**Sn**	**07 36 12.9**	**-0.4**
LANS				Lg		Lg	07 36 55.1	
TUE	**Stuetta**	**5.39**	**296**	Pn		**Pn**	**07 35 14.2**	**+1.6**
LOT	**Lotru**	**5.41**	**75**	Pn		**Pn**	**07 35 13.3**	**+0.5**
	comp=Z,37nm,0.6s,SNR=9.2							
LOT				x		x	07 35 14.8	
	comp=Z,37nm,0.6s							
LOT				Pn				
WET	**Wettzell**	**5.42**	**335**	*e*Pn		**Pn**	**07 35 14.1**	**+1.3**
	SNR=1.9							
WET				*e*Sn		**Sn**	**07 36 14.7**	**-0.8**
	SNR=1.6							
WET	**Wettzell**	**5.42**	**335**	*e*Pn		**Pn**	**07 35 14.1**	**+1.3**
	SNR=1.9							
WET				*e*Sn		**Sn**	**07 36 14.7**	**-0.8**
	SNR=1.6							
DAVA	**Damuels**	**5.42**	**306**	*i* Pn		**Pn**	**07 35 16.1**	**+3.0**
	comp=Z,3.7nm,0.3s							
DAVA	**Damuels**	**5.42**	**306**			**Pn**	**07 35 16.1**	**+3.0**
DAVA	**Damuels**	**5.42**	**306**	*e*Pn		**Pn**	**07 35 15.6**	**+2.5**
	SNR=4.1							
DAVA	**Damuels**	**5.42**	**306**	*e*Pn		**Pn**	**07 35 15.6**	**+2.5**
	SNR=4.1							
VAY	**Valandovo**	**5.46**	**121**	*i* Pn		**Pn**	**07 35 16.1**	**+2.8**
MORC	**Moravsky Berou**	**5.56**	**8**	*e*PN		**Pn**	**07 35 15.7**	**+0.9**
MORC				*e*SN		**Sn**	**07 36 16.8**	**-2.3**
MORC	**Moravsky Berou**	**5.56**	**8**	Pn		**Pn**	**07 35 16.7**	**+1.9**
GRG	**Griva**	**5.57**	**124**	P		**Pn**	**07 35 17.7**	**+2.7**
IGT	**Igoumenitsa**	**5.60**	**146**	P		**Pn**	**07 35 16.4**	**+1.0**
IGT				S		**Sn**	**07 36 21.3**	**+1.2**
PGF	**Pioggiola**	**5.62**	**255**	*e*Pn		**Pn**	**07 35 16.0**	**+0.3**
PGF				*e*Sn		**Sn**	**07 36 16.8**	**-3.8**
	comp=Z,284nm,1.5s							
PBCC	**Pribram**	**5.64**	**344**	*e*PN		**Pn**	**07 35 17.6**	**+1.7**
PBCC				*e*SN		**Sn**	**07 36 19.0**	**-1.9**
CJR	**Cluj-Napoca**	**5.65**	**62**	Pn		**Pn**	**07 35 18.3**	**+2.2**
	comp=Z,109nm,0.8s,SNR=6.7							
CJR				Pn				
KZN	**Kozani**	**5.66**	**133**	P		**Pn**	**07 35 18.2**	**+2.0**
OKC	**Ostrava-Krasne**	**5.70**	**12**	x		**Pn**	**07 35 18.8**	**+2.2**
	comp=Z,34nm,0.9s							
OKC				Pn		Pb	07 35 21.7	-9.5
	comp=Z,0.1nm,SNR=3.0							
OKC				Sn		**Sn**	**07 36 18.8**	**-3.5**
OKC				Pn				
	comp=Z,34nm,0.9s							
KPRO	**Kipourio**	**5.71**	**137**	P		**Pn**	**07 35 18.9**	**+2.0**
NIE	**Niedzica**	**5.81**	**26**	x		**Pn**	**07 35 21.8**	**+3.5**
	comp=Z,13nm,0.9s							
NIE				Pn		Pb	07 35 25.8	-7.5
NIE				Sn		**Sn**	**07 36 24.2**	**-1.1**
CRVS	**Cervenica-Dubn**	**5.82**	**36**	*e*PN		**Pn**	**07 35 20.4**	**+2.1**
CRVS				*e*SN		**Sn**	**07 36 23.3**	**-2.0**
CRVS	**Cervenica-Dubn**	**5.82**	**36**	Pn		**Pn**	**07 35 20.3**	**+2.1**
	comp=Z,4.8nm,0.8s,SNR=2.4							
CRVS				x		x	07 35 20.9	
	comp=Z,4.7nm,0.8s							
CRVS				Sn		**Sn**	**07 36 23.3**	**-2.0**
CRVS				Pn				
PRU	**Pruhonice**	**5.84**	**349**	*e*PN		**Pn**	**07 35 19.7**	**+1.1**
PRU				*e*SN		**Sn**	**07 36 22.9**	**-3.0**
DPC	**Dobruska-Polom**	**6.07**	**360**	*e*PN		**Pn**	**07 35 21.9**	**+0.1**
DPC				*e*SN		**Sn**	**07 36 28.1**	**-3.6**
ROTZ	**Rotzenmuhle**	**6.17**	**334**	*e*Pn		**Pn**	**07 35 25.1**	**+1.9**
	SNR=3.6							
ROTZ				*e*Sn		**Sn**	**07 36 31.8**	**-2.2**
	SNR=2.7							
ROTZ	**Rotzenmuhle**	**6.17**	**334**	*e*Pn		**Pn**	**07 35 25.1**	**+1.9**
	SNR=3.6							
ROTZ				*e*Sn		**Sn**	**07 36 31.8**	**-2.2**
	SNR=2.7							
KOLS	**Kolonicke sedl**	**6.19**	**39**	*e*PN		Pn	07 35 30.4	+6.9
KOLS				*e*PG		**Pg**	**07 35 49.4**	**-0.6**
KOLS				*e*SN		**Sn**	**07 36 32.3**	**-2.3**
KOLS				*e*LG		Lg	07 37 43.3	
OSTC	**Ostas**	**6.28**	**359**	*e*PN		**Pn**	**07 35 25.1**	**+0.4**
OSTC				*e*SN		**Sn**	**07 36 34.2**	**-2.5**
VOIR		**6.30**	**76**	⇓P		**Pn**	**07 35 25.1**	**+0.1**
CHVC	**Chvalec**	**6.31**	**358**	*e*PN		**Pn**	**07 35 24.9**	**-0.2**
THL	**Klokotos Trika**	**6.33**	**136**	P		**Pn**	**07 35 26.0**	**+0.6**
NYDR	**Nydri-Lefkada**	**6.45**	**148**	P		**Pn**	**07 35 26.9**	**-0.1**
KSP	**Ksiaz**	**6.57**	**360**	x		**Pn**	**07 35 30.7**	**+2.1**
	comp=Z,16nm,0.9s							
KSP				Pn		**Pn**	**07 35 31.9**	**+3.4**
	comp=Z,0.1nm,SNR=2.3							
KSP				Pn				
	comp=Z,8.9nm,0.9s							
STU	**Stuttgart**	**6.67**	**315**	Pn		**Pn**	**07 35 30.7**	**+0.7**
SENIN	**Lac Senin/Sane**	**6.70**	**291**	Pn		**Pn**	**07 35 32.3**	**+1.7**
BRG	**Berggiesshubel**	**6.79**	**347**	*e*Pn		**Pn**	**07 35 32.9**	**+1.3**
BRG				Amp			07 35 34.6	
	comp=Z,11nm,1.2s							
BRG				*ex*		x	07 36 40.3	
BRG				*ex*		x	07 37 03.9	
BRG				*ex*		x	07 37 18.9	
BRG				Amp			07 37 25.9	
	comp=Z,28nm,1.1s							
MBDF	**Montbardon**	**6.86**	**277**	*e*Pn		**Pn**	**07 35 31.1**	**-1.6**
MBDF	**Montbardon**	**6.86**	**277**	*e*P		**Pn**	**07 35 36.6**	**+3.9**
MBDF				*e*Sn		**Sn**	**07 36 46.1**	**-5.0**
	comp=Z,42nm,0.7s							
BFO	**Black Forest**	**6.87**	**309**	Pn		**Pn**	**07 35 33.5**	**+0.7**
BFO	**Black Forest**	**6.87**	**309**	*e*Pn		**Pn**	**07 35 33.4**	**+0.7**
	SNR=4.0							
BFO	**Black Forest**	**6.87**	**309**	*e*Pn		**Pn**	**07 35 33.4**	**+0.7**
	SNR=4.0							
AGG	**Agios Georgios**	**6.91**	**137**	P		**Pn**	**07 35 34.4**	**+1.1**
AGG				S		**Sn**	**07 36 53.0**	**+0.7**
AGG	**Agios Georgios**	**6.91**	**137**	Pn		**Pn**	**07 35 34.8**	**+1.4**
LPG	**La Plagne**	**6.92**	**283**	*e*Pn		**Pn**	**07 35 33.6**	**-0.1**
LPG				*e*Sn		**Sn**	**07 36 47.6**	**-5.2**
	comp=Z,64nm,0.7s							
BNI	**Bardonecchia**	**6.93**	**280**	Pn		**Pn**	**07 35 35.6**	**+1.9**
MLR	**Muntele Rosu**	**6.93**	**77**	Pn		**Pn**	**07 35 36.8**	**+3.1**
	comp=Z,0.4nm,0.3s,baz=270,slow=16,SNR=2.8							
MLR				Lg		Lg	07 37 30.1	
	comp=Z,0.5nm,0.3s,baz=310,slow=22,SNR=1.2							
MLR				LR		LR	07 38 41.9	
	comp=Z,237nm,18.3s,baz=339,slow=41							
MLR	**Muntele Rosu**	**6.93**	**77**	⇑P		**Pn**	**07 35 34.6**	**+0.9**
MLR	**Muntele Rosu**	**6.93**	**77**	Pn		**Pn**	**07 35 36.1**	**+2.4**
MLR	**Muntele Rosu**	**6.93**	**77**	Pn		**Pn**	**07 35 34.6**	**+0.9**
MLR				Pg		**Pn**	**07 35 36.1**	**+2.4**
MLR				Pb		**Pn**	**07 35 36.8**	**+3.1**
	comp=Z,0.4nm,0.3s,SNR=2.8							
MLR				x		x	07 35 38.4	
	comp=Z,18nm,0.9s							
MLR				x		x	07 35 43.1	
MLR				Lg		Lg	07 37 30.1	
	comp=Z,0.5nm,0.3s,SNR=1.2							
MLR				LR		LR	07 38 41.9	
	comp=Z,237nm,18.3s							
LPL	**La Plagne**	**6.93**	**284**	*e*Pn		**Pn**	**07 35 34.9**	**+1.1**
LPL				*e*Sn		**Sn**	**07 36 48.2**	**-4.9**
	comp=Z,42nm,0.5s							
BURAR	**Bucovina Array**	**7.03**	**59**	⇓P		**Pn**	**07 35 35.2**	**+0.2**
BURAR	**Bucovina Array**	**7.03**	**59**	Pn		**Pn**	**07 35 37.2**	**+2.2**
BUR08	**Bucovina Ar. S**	**7.03**	**58**	Pn		**Pn**	**07 35 38.1**	**+3.0**
FRF	**La Foret Royal**	**7.04**	**268**	*e*Pn		**Pn**	**07 35 34.1**	**-0.9**
FRF				*e*Sn		**Sn**	**07 36 50.5**	**-4.8**
	comp=Z,91nm,1.0s							
XOR	**Xorichti**	**7.09**	**131**	P		**Pn**	**07 35 36.1**	**+0.3**
MOX	**Moxa**	**7.12**	**335**	*e*Pn		**Pn**	**07 35 37.3**	**+1.0**
	SNR=4.6							
MOX	**Moxa**	**7.12**	**335**	*e*Pn		**Pn**	**07 35 37.3**	**+1.0**
	SNR=4.6							
LMR	**La Mourre**	**7.17**	**266**	*e*Pn		**Pn**	**07 35 35.9**	**-1.0**
LMR				*e*Sn		**Sn**	**07 36 53.7**	**-5.0**
	comp=Z,171nm,1.6s							
BIZ	**Bicaz**	**7.35**	**65**	⇑P		**Pn**	**07 35 39.7**	**+0.4**
CLL	**Collm**	**7.38**	**343**	*e*Pn		Pn	07 35 48.0	+8.3
CLL				*e*Sn		**Sn**	**07 36 57.0**	**-6.7**
CLL				*e*Sb		**Sb**	**07 37 28.0**	**-0.1**
CLL				*e*Sg		**Sg**	**07 37 52.0**	**+3.8**
	comp=Z,70nm,1.1s							
HINF	**Hinteralfeld**	**7.49**	**302**	*e*Pn		**Pn**	**07 35 40.6**	**-0.6**
HINF				*e*Sn		**Sn**	**07 37 00.3**	**-6.1**
	comp=Z,32nm,0.6s							
ORIF	**Oris-en-Rattie**	**7.49**	**279**	*e*Pn		**Pn**	**07 35 41.3**	**-0.1**
ORIF	**Oris-en-Rattie**	**7.49**	**279**	*e*P		**Pn**	**07 35 45.5**	**+4.1**
ORIF				*e*Sn		**Sn**	**07 37 01.5**	**-5.2**
	comp=Z,52nm,0.6s							
ATAL	**Atalanti**	**7.50**	**136**	P		**Pn**	**07 35 42.4**	**+0.9**
CDF	**Champ du Feu**	**7.51**	**307**	*e*Pn		**Pn**	**07 35 41.7**	**+0.1**
CDF				*e*Sg		**Sg**	**07 37 46.2**	**-6.1**
	comp=Z,147nm,1.5s							
VRI	**Vrincioaia**	**7.53**	**74**	x		**Pn**	**07 35 44.9**	**+3.1**
	comp=Z,9.7nm,1.1s							
VRI				Pn		Pb	07 35 51.9	-11
CABF	**La Chapelle**	**7.58**	**292**	*e*Pn		**Pn**	**07 35 43.0**	**+0.5**
SMRF	**Simiane la Rot**	**7.75**	**271**	*e*Pn		**Pn**	**07 35 45.0**	**+0.1**
HAU	**Haudompre**	**7.87**	**302**	*e*Pn		**Pn**	**07 35 47.4**	**+0.9**
HAU				*e*Sn		**Sn**	**07 37 10.0**	**-5.9**
	comp=Z,63nm,0.8s							
ITM	**Ithomi**	**8.26**	**147**	Pn		**Pn**	**07 35 53.2**	**+1.3**
VIVF	**Saint-Julien-l**	**8.35**	**278**	*e*Pn		**Pn**	**07 35 52.5**	**-0.6**
VIVF	**Saint-Julien-l**	**8.35**	**278**	*e*P		**Pn**	**07 35 57.6**	**+4.5**
VIVF				*e*Sn		**Sn**	**07 37 22.5**	**-5.2**
	comp=Z,23nm,0.8s							
PAGF	**Fort de Pagny**	**8.48**	**304**	*e*Pn		**Pn**	**07 35 53.8**	**-1.1**
	baz=120							
SMF	**Signal de Mont**	**9.10**	**289**	*e*Pn		**Pn**	**07 36 01.7**	**-1.6**
SMF				*e*Sn		**Sn**	**07 37 38.6**	**-7.4**
	comp=Z,41nm,0.8s							
LOR	**Lormes**	**9.22**	**293**	*e*Pn		**Pn**	**07 36 04.6**	**-0.4**
	baz=115							
LOR				*e*Sn		**Sn**	**07 37 42.0**	**-7.0**
	comp=Z,14nm,0.5s							
SSF	**Saint Saulge**	**9.40**	**292**	*e*Pn		**Pn**	**07 36 06.3**	**-1.2**
SSF				*e*Sn		**Sn**	**07 37 45.8**	**-7.7**
	comp=Z,14nm,0.7s							
MEM	**Membach**	**9.43**	**316**	*d*Pn		**Pn**	**07 36 09.2**	**+1.4**
MEM				*d*Sn		**Sn**	**07 37 54.2**	**0.0**
AVF	**Avril sur Loir**	**9.45**	**290**	*e*Pn		**Pn**	**07 36 07.7**	**-0.4**
AVF				*e*Sn		**Sn**	**07 37 47.8**	**-6.9**
	comp=Z,28nm,1.0s							
BGF	**Bois d'Agland**	**9.76**	**288**	*e*Pn		**Pn**	**07 36 12.0**	**-0.3**
BGF				*e*Sn		**Sn**	**07 37 54.8**	**-7.4**
	comp=Z,18nm,0.5s							
GIVF	**Givet**	**9.76**	**311**	*e*Pn		**Pn**	**07 36 09.6**	**-2.7**
BGES	**Gesves**	**9.77**	**313**	*dx*		x	07 36 31.2	
HYF	**Humbligny**	**10.03**	**292**	*e*Pn		**Pn**	**07 36 14.4**	**-1.6**
TCF	**Toulx Ste Croi**	**10.16**	**286**	*e*Pn		**Pn**	**07 36 17.3**	**-0.6**
TCF				*e*Sn		**Sn**	**07 38 05.1**	**-7.0**
	comp=Z,9.0nm,0.6s							
CAF	**Calviac**	**10.20**	**279**	*e*Pn		**Pn**	**07 36 16.6**	**-1.9**
CAF	**Calviac**	**10.20**	**279**	*e*P		**Pn**	**07 36 23.2**	**+4.7**
RJF	**Les Rejaudoux**	**10.59**	**281**	*e*Pn		**Pn**	**07 36 22.4**	**-1.3**
RJF	**Les Rejaudoux**	**10.59**	**281**	*e*P		**Pn**	**07 36 28.2**	**+4.5**
AKASG	**Malin Array Be**	**10.82**	**49**	Pn		**Pn**	**07 36 28.7**	**+1.9**
	comp=Z,1.1nm,0.3s,baz=238,slow=13,SNR=4.4							
IDI	**Anoyia**	**11.13**	**141**	Pn		**Pn**	**07 36 29.9**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=336,slow=16,SNR=1.7							
IDI				Sn		Sn	07 38 25.4	-11
	comp=Z,0.5nm,0.3s,baz=147,slow=9.6,SNR=1.6							
IDI				LR		LR	07 41 24.5	
	comp=Z,104nm,18.6s,baz=12,slow=41							
IDI	**Anoyia**	**11.13**	**141**	Pn		**Pn**	**07 36 32.2**	**+1.0**
BRTR	**Keskin Array B**	**13.64**	**104**	LR		LR	07 43 07.8	
	comp=Z,164nm,19.4s,baz=298,slow=40							
ESDC	**Sonseca Array**	**15.77**	**260**	Pn		**Pn**	**07 37 36.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=72,slow=12,SNR=11							
ESDC	**Sonseca Array**	**15.77**	**260**	IAmb		IAmb	07 37 40.2	
	comp=Z,2.1nm,1.1s							
HFS	**Hagfors**	**15.96**	**355**	LR		LR	07 44 14.1	
	comp=Z,124nm,20.9s,baz=245,slow=39							
CSS	**Mathiatis**	**16.04**	**120**	Pn		**P**	**07 37 39.8**	**-1.3**
NOA	**NORSAR Array B**	**17.06**	**351**	LR		LR	07 44 16.0	
	comp=Z,64nm,18.8s,baz=255,slow=37							
FINES	**FINESS Array B**	**18.13**	**15**	P		**Pn**	**07 38 03.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=177,slow=9.5,SNR=4.7							
FINES	**FINESS Array B**	**18.13**	**15**	P		**P**	**07 38 06.5**	**+2.4**
MMAI	**Mount Meron Ar**	**18.61**	**121**	P		**Pn**	**07 38 10.3**	**+0.4**
	comp=Z,4.1nm,0.3s

SDLR Sedlovina 1.79 262 PN Pn 08 11 56.5 -0.8
SDLR Sedlovina 1.79 262 eP Pn 08 11 56.5 -0.8
KZV Kizimen 1.80 331 PN Pn 08 11 57.1 -0.4
KZV S Sn 08 12 19.7 +0.4
KZV Kizimen 1.80 331 eP Pn 08 11 57.1 -0.4
KZV eS Sn 08 12 19.7 +0.4
UGLR Uglovaya 1.84 260 PN Pn 08 11 57.5 -0.5
UGLR S Sn 08 12 20.2 +0.1
UGLR Uglovaya 1.84 260 eP Pn 08 11 57.5 -0.5
UGLR eS Sn 08 12 20.2 +0.1
SMAR Somma 1.84 262 PN Pn 08 11 57.3 -0.8
SMAR Somma 1.84 262 eP Pn 08 11 57.3 -0.8
TUMD Tumrok D 1.85 334 eP Pn 08 11 57.4 -0.7
TUMD eS Sn 08 12 20.2 -0.2
KRER Koryakskii 1.87 263 PN Pn 08 11 57.9 -0.5
KRER S Sn 08 12 21.0 +0.1
KRER Koryakskii 1.87 263 eP Pn 08 11 57.9 -0.5
KRER eS Sn 08 12 21.0 +0.1
AVH Avacha 1.88 262 PN Pn 08 11 58.2 -0.3
AVH S Sn 08 12 21.7 +0.6
AVH Avacha 1.88 262 eP Pn 08 11 58.2 -0.3
AVH eS Sn 08 12 21.7 +0.6
KRX Arik 1.92 265 PN Pn 08 11 58.4 -0.7
KRX S Sn 08 12 22.1 0.0
KRX Arik 1.92 265 eP Pn 08 11 58.4 -0.7
KRX eS Sn 08 12 22.1 0.0
DALK Dalny 1.93 255 PN Pn 08 11 58.4 -0.6
DALK S Sn 08 12 22.5 +0.5
DALK Dalny 1.93 255 eP Pn 08 11 58.4 -0.6
DALK eS Sn 08 12 22.5 +0.5
KOK Koryaka 1.93 263 PN Pn 08 11 58.6 -0.7
KOK Koryaka 1.93 263 eP Pn 08 11 58.6 -0.7
PET Petropavlovsk 1.98 256 ePN Pn 08 11 59.4 -0.4
PET eS Sn 08 12 25.5 +2.0
PET pmax pmax
comp=Z,117nm,0.5s
PET smax smax
comp=E,2μm,0.6s
PET smax smax
comp=N,1μm,0.9s
PET MLR MLR
comp=Z,5μm,9.0s
PET MLR MLR
comp=Z,4μm,12.0s
PET Petropavlovsk 1.98 256 eP Pn 08 11 59.8 0.0
PET Petropavlovsk 1.98 256 Pn 08 11 59.5 -0.4
TUMR Tumrok 1.99 331 PN Pn 08 12 00.0 -0.1
TUMR S Sn 08 12 25.3 +1.4
TUMR Tumrok 1.99 331 eP Pn 08 12 00.0 -0.1
TUMR eS Sn 08 12 25.3 +1.4
RUS Russkaya 2.30 242 PN Pn 08 12 04.1 -0.1
RUS S Sn 08 12 31.9 +0.5
RUS Russkaya 2.30 242 eP Pn 08 12 04.1 -0.1
RUS eS Sn 08 12 31.9 +0.5
GNL Ganaly 2.33 275 PN Pn 08 12 04.9 +0.3
GNL Ganaly 2.33 275 eP Pn 08 12 04.9 +0.3
KRMR Karymshinskiy 2.35 253 PN Pn 08 12 06.0 +1.2
KRMR Karymshinskiy 2.35 253 eP Pn 08 12 06.0 +1.2
KMNR Kamenistaya 2.39 338 PN Pn 08 12 06.6 +1.0
KMNR S Sn 08 12 36.7 +2.9
KMNR Kamenistaya 2.39 338 eP Pn 08 12 06.6 +1.0
KMNR eS Sn 08 12 36.7 +2.9
MTVR Mutnovka 2.46 246 PN Pn 08 12 06.5 0.0
MTVR S Sn 08 12 36.6 +1.2
MTVR Mutnovka 2.46 246 eP Pn 08 12 06.5 0.0
MTVR eS Sn 08 12 36.6 +1.2
BZGR Bezymyannyi-Gr 2.48 345 PN Pn 08 12 07.8 +1.0
BZGR Bezymyannyi-Gr 2.48 345 eP Pn 08 12 07.8 +1.0
GRL Gorelyy 2.48 248 PN Pn 08 12 08.0 +1.2
GRL Gorelyy 2.48 248 eP Pn 08 12 08.0 +1.2
BZMR Bezymyannaya 2.51 342 PN Pn 08 12 09.5 +2.3
BZMR Bezymyannaya 2.51 342 eP Pn 08 12 09.5 +2.3
PEA0B Petropavlovsk- 2.52 261 cePN Pn 08 12 07.8 +0.5
PEA0B Petropavlovsk- 2.52 261 Pn Pn 08 12 08.2 +1.0
PETK Petropavlovsk- 2.52 261 Pn Pn 08 12 07.7 +0.4
comp=Z,26nm,0.3s,baz=77,slow=16,SNR=492
PETK Sn Sn 08 12 37.7 +0.8
comp=Z,30nm,0.3s,baz=76,slow=14,SNR=8.4
PETK LR LR 08 13 17.1
comp=Z,2μm,18.4s,baz=159,slow=46
BZWR Bezymyannyi-We 2.54 343 PN Pn 08 12 10.9 +3.3
BZWR Bezymyannyi-We 2.54 343 eP Pn 08 12 10.9 +3.3
ZLN Zelenaya 2.54 347 PN Pb 08 12 11.6 -1.9
ZLN Zelenaya 2.54 347 eP Pb 08 12 11.6 -1.9
KIRR Kirishev 2.55 341 PN Pn 08 12 09.7 +1.9
KIRR S Sn 08 12 41.2 +3.4
KIRR Kirishev 2.55 341 eP Pn 08 12 09.7 +1.9
KIRR eS Sn 08 12 41.2 +3.4
ASAK Asacha 2.66 245 PN Pn 08 12 10.2 +1.0
ASAK S Sn 08 12 42.3 +2.1
ASAK Asacha 2.66 245 eP Pn 08 12 10.2 +1.0
ASAK eS Sn 08 12 42.3 +2.1
KBTR Krutoberegovo 2.72 12 PN Pn 08 12 09.1 -0.8
KBTR Krutoberegovo 2.72 12 eP Pn 08 12 09.1 -0.8
KBG Krutoberegovo 2.75 10 PN Pn 08 12 10.3 -0.1
KBG Krutoberegovo 2.75 10 eP Pn 08 12 10.3 -0.1
KOZ Kozyrevsk 2.75 336 PN Pn 08 12 11.3 +0.9
KOZ Kozyrevsk 2.75 336 eP Pn 08 12 11.3 +0.9
KRSR Krestovskiy 2.77 345 PN Pn 08 12 12.0 +1.3
KRSR S Sn 08 12 45.1 +2.1
KRSR Krestovskiy 2.77 345 eP Pn 08 12 12.0 +1.3
KRSR eS Sn 08 12 45.1 +2.1
KLY Klyuchi 2.85 347 PN Pn 08 12 12.1 +0.4
KLY S Sn 08 12 45.6 +0.8
KLY Klyuchi 2.85 347 eP Pn 08 12 12.1 +0.4
KLY eS Sn 08 12 45.6 +0.8
KDTR Khodutka, Kamc 2.88 234 PN Pn 08 12 12.2 0.0
KDTR S Sn 08 12 46.1 +0.5
KDTR Khodutka, Kamc 2.88 234 eP Pn 08 12 12.2 0.0
KDTR eS Sn 08 12 46.1 +0.5
APC Apacha 2.88 259 PN Pn 08 12 13.4 +1.2
APC Apacha 2.88 259 eP Pn 08 12 13.4 +1.2
BKI Bering 2.93 54 PN Pn 08 12 11.3 -1.5
BKI Bering 2.93 54 eP Pn 08 12 11.3 -1.5
BKI eS Sn 08 12 42.9 -3.9
ESO Esso 2.99 324 PN Pn 08 12 14.8 +1.1
ESO S Sn 08 12 50.9 +2.5
ESO Esso 2.99 324 eP Pn 08 12 14.8 +1.1
ESO eS Sn 08 12 50.9 +2.5
SRDR Sredinnyy 3.02 337 PN Pn 08 12 14.6 +0.4
SRDR S Sn 08 12 50.2 +0.9
SRDR Sredinnyy 3.02 337 eP Pn 08 12 14.6 +0.4
SRDR eS Sn 08 12 50.2 +0.9
BDR Baidarnaya 3.04 353 PN Pn 08 12 15.2 +0.8
BDR S Sn 08 12 51.4 +1.7
BDR Baidarnaya 3.04 353 eP Pn 08 12 15.2 +0.8
BDR eS Sn 08 12 51.4 +1.7
SMKR Semkarok 3.04 356 PN Pn 08 12 15.1 +0.7
SMKR S Sn 08 12 51.0 +1.3
SMKR Semkarok 3.04 356 eP Pn 08 12 15.1 +0.7
SMKR eS Sn 08 12 51.0 +1.3
SRKR Sorokina 3.13 353 eP Pn 08 12 16.2 +0.6
MIPR Malaya Ipel'ka 3.33 249 PN Pn 08 12 20.2 +1.8
MIPR Malaya Ipel'ka 3.33 249 eP Pn 08 12 20.2 +1.8
PAU Pauzhetka 3.72 238 PN Pn 08 12 24.6 +1.0
PAU Pauzhetka 3.72 238 eP Pn 08 12 24.6 +1.0
SKR Severo-Kuril's 4.55 233 ePN Pn 08 12 34.6 -0.5
SKR eS Sn 08 13 28.7 +1.9
SKR pmax pmax
comp=Z,57nm,1.0s
SKR smax smax
comp=N,267nm,1.2s
SKR smax smax
comp=E,185nm,0.8s
SKR MLR MLR
comp=Z,500nm,14.0s
SKR MLR MLR
comp=Z,700nm,16.0s
ALID Alaid 4.71 238 PN Pn 08 12 40.0 +2.6
ALID Alaid 4.71 238 eP Pn 08 12 40.0 +2.6
OSSR Ossora 5.75 6 PN Pn 08 12 50.8 -0.7
OSSR Ossora 5.75 6 eP Pn 08 12 50.8 -0.7
SMY Shemya 7.42 91 PN Pn 08 13 14.7 +0.2
SMY Shemya 7.42 91 Pn Pn 08 13 14.7 +0.2
MA2 Magadan 8.58 319 Pn Pn 08 13 31.7 +1.3
comp=Z,1.0nm,0.3s,baz=128,slow=8.7,SNR=15
MA2 LR LR 08 17 28.4
comp=Z,553nm,18.6s,baz=138,slow=43
MA2 Magadan 8.58 319 cePN Pn 08 13 30.6 +0.2
MA2 pmax pmax
comp=Z,18nm,0.8s
MA2 Magadan 8.58 319 Pn Pn 08 13 32.3 +2.0
SEY Seymchan 10.63 336 Pn Pn 08 14 00.6 +2.3
comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=1.8
SEY Seymchan 10.63 336 i PN Pn 08 13 58.1 -0.2
AMKA Amchitka 10.88 95 Pn Pn 08 14 03.1 +1.3
TYV Tymovskoe 12.07 265 ePN Pn 08 14 22.1 +4.0
TYV pmax pmax
comp=Z,15nm,1.2s
YSS Yuzh-Sakhalins 13.86 249 eP Pn 08 14 42.6 +0.1
YSS MLR MLR
comp=Z,1μm,15.0s
ATKA Atka Island 14.52 86 Pn Pn 08 14 50.6 -0.9
BILL Bilibino 14.69 7⇑ eP Pn 08 14 51.6 -2.1
BILL eS Sn 08 17 39.3 +4.3
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,198nm,12.0s
BILL Bilibino 14.69 7 Pn Pn 08 14 55.1 +1.4
JKA Kamikawa-asahi 15.75 241 Pn Pn 08 15 06.6 -1.2
JKA IAmb IAmb 08 15 23.1
comp=Z,68nm,1.1s
ASAJ Asahikawa 15.76 241 Pn Pn 08 15 07.4 -0.5
comp=Z,1.3nm,0.3s,baz=72,slow=11,SNR=28
GRNR Gornyy 15.81 270⇓ iP P 08 15 12.9 +0.8
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR MLR MLR
comp=E,290nm,14.0s
GRNR MLR MLR
comp=N,240nm,12.0s
ERM Erimo 17.00 235 i P Pn 08 15 19.2 -4.4
GAMB Gambell 17.01 43 Pn Pn 08 15 24.4 +0.8
YAK Yakutsk 18.94 309 eP P 08 15 43.5 -3.0
YAK eS Sn 08 19 13.2 -4.8
YAK pmax pmax
comp=Z,13nm,0.7s
YAK smax smax
comp=E,40nm,1.9s
YAK smax smax
comp=N,13nm,1.5s
YAK MLR MLR
comp=Z,581nm,20.0s
YAK MLR MLR
comp=N,124nm,13.0s
YAK MLR MLR
comp=E,333nm,16.0s
KLR Kul'dur 19.19 269 P P 08 15 48.8 -0.5
comp=E,0.2nm,0.3s,baz=54,slow=10,SNR=9.0
KLR LR LR 08 24 15.0
comp=E,403nm,18.2s,baz=88,slow=40
KLR Kul'dur 19.19 269 ceP P 08 15 48.6 -0.7
KLR pmax pmax
comp=Z,13nm,1.1s
TNA Tin City 19.23 40 P Pn 08 15 51.5 +0.8
TNA IAmb IAmb 08 15 52.4
comp=Z,29nm,0.8s
ANM Nome 19.88 43 P Pn 08 15 58.6 +0.1
ANM pmax pmax
comp=Z,20nm,1.2s
ANM Nome 19.88 43 P Pn 08 15 58.6 +0.1
USA0B Ussuriysk Arra 21.61 256 i P P 08 16 15.3 -0.2
USA0B Ussuriysk Arra 21.61 256 P P 08 16 15.9 +0.4
USRK Ussuriysk Ar. 21.61 256 P P 08 16 15.1 -0.4
comp=Z,5.5nm,0.8s,baz=50,slow=11,SNR=9.9
USRK LR LR 08 25 33.2
comp=Z,401nm,18.1s,baz=50,slow=39
USRK Ussuriysk Ar. 21.61 256 P P 08 16 15.3 -0.2
RDOG Red Dog Mine 22.06 35 P P 08 16 20.4 +0.2
JSD Sado 22.45 236 P P 08 16 25.4 +0.7
TIXI Tiksi 23.11 334 P P 08 16 30.5 -0.7
comp=Z,3.2nm,0.7s,baz=118,slow=13,SNR=4.5
TIXI Tiksi 23.11 334 ceP P 08 16 28.6 -2.6
TIXI pmax pmax
comp=Z,24nm,1.3s
TIXI Tiksi 23.11 334 P P 08 16 29.0 -2.2
MAJO Matsushiro 23.66 234 i P P 08 16 35.8 -1.1
MAJO pmax pmax
comp=Z,39nm,1.2s
MAJO Matsushiro 23.66 234 P P 08 16 37.1 +0.2
MJAR Matsushiro Arr 23.66 234 P P 08 16 38.1 +1.2
comp=Z,25nm,1.1s,baz=19,slow=10,SNR=26
MJAR Matsushiro Arr 23.66 234 P P 08 16 38.4 +1.4
MAT Matsushiro 23.66 234 P P 08 16 37.7 +0.8
SVW2 Sparrevohn 23.81 55 P P 08 16 39.1 +1.0
RSO Redoubt South 25.23 56 P P 08 16 52.1 +0.8
OHAK Old Harbor 25.39 64 P P 08 16 52.4 -0.1
OHAK IAmb IAmb 08 16 55.5
comp=Z,17nm,0.8s
PPLA Purkeypile 25.40 50 P P 08 16 53.9 +1.1
KDAK Kodiak Island 25.66 62 P P 08 16 54.8 -0.2
comp=Z,6.2nm,0.5s,baz=312,slow=8.5,SNR=11
SKT Skwentna 25.73 52 P P 08 16 56.3 +0.7
BPAW Bear Paw Mtn. 25.96 47 P P 08 16 57.8 +0.1
KTH Kantishna Hill 25.98 49 P P 08 16 58.6 +0.6
KTH IAmb IAmb 08 17 10.9
comp=Z,12nm,0.9s
CNPM China Poot 26.09 58 P P 08 16 59.1 +0.2
CNPM IAmb IAmb 08 17 00.6
comp=Z,31nm,1.2s
MLY Manley 26.11 45 P P 08 16 59.7 +0.6
SUA Susitna One 26.13 53 P P 08 16 59.5 +0.2
TRF Thorofare Moun 26.26 49 P P 08 17 00.6 0.0
TRF IAmb IAmb 08 17 02.1
comp=Z,15nm,1.0s
HIA Hailar 26.32 278 P P 08 16 58.6 -2.5
HIA pmax pmax
comp=Z,10.0nm,0.6s
HIA Hailar 26.32 278 P P 08 16 58.5 -2.5
HIA IAmb IAmb 08 17 02.0
comp=Z,9.8nm,0.6s
COLD Coldfoot 26.52 40 P P 08 17 02.6 -0.2
I23K Minto, Yukon-K 26.70 45 P P 08 17 04.8 +0.6
NEA2 Nenana 26.80 46 P P 08 17 05.5 +0.1
BOD Bodaibo 26.84 299 eP P 08 17 01.5 -4.2
BOD pmax pmax
comp=Z,9.0nm,1.3s
MCK McKinley 26.86 48 P P 08 17 06.0 +0.1
MCK pmax pmax
comp=Z,14nm,1.0s
MCK McKinley 26.86 48 P P 08 17 06.0 +0.1
MCK IAmb IAmb 08 17 07.0
comp=Z,14nm,1.0s
RND Reindeer 26.91 49 P P 08 17 05.8 -0.5
RND pmax pmax
comp=Z,17nm,1.0s
RND Reindeer 26.91 49 P P 08 17 05.8 -0.5
RND IAmb IAmb 08 17 07.0
comp=Z,18nm,1.0s
TOLK Toolik Lake Re 26.96 37 P P 08 17 06.8 0.0
GHO Glory Hole Cre 26.97 53 P P 08 17 07.0 +0.1
MDM Murphy Dome 27.17 46 P P 08 17 08.7 +0.1
WRH Wood River Hil 27.23 47 P P 08 17 08.7 -0.4
WRH IAmb IAmb 08 17 22.2
comp=Z,17nm,1.0s
KNK Knik Glacier 27.23 53 P P 08 17 09.3 +0.2
SML Sawmill 27.25 52 P P 08 17 09.5 +0.1
COLA College 27.33 46 i P P 08 17 05.8 -4.2
COLA pmax pmax
comp=Z,8.0nm,1.2s
CCB Clear Creek Bu 27.35 46 P P 08 17 09.7 -0.5
CCB IAmb IAmb 08 17 23.1
comp=Z,14nm,1.0s
PWL Port Wells 27.35 54 P P 08 17 09.9 -0.4
PWL IAmb IAmb 08 17 11.5
comp=Z,19nm,1.0s
SCM Sheep Creek Mo 27.72 52 P P 08 17 13.4 -0.2
SCM pmax pmax
comp=Z,25nm,1.0s
SCM Sheep Creek Mo 27.72 52 P P 08 17 13.4 -0.2
IL31 27.74 46 P P 08 17 13.3 -0.3
ILAR Eielson Array 27.74 46 P P 08 17 13.9 +0.1
comp=Z,4.4nm,0.8s,baz=262,slow=8.2,SNR=45
ILAR LR LR 08 29 16.1
comp=Z,116nm,18.1s,baz=300,slow=39
ILAR Eielson Array 27.74 46 P P 08 17 12.9 -0.8
ILAR Eielson Array 27.74 46 P P 08 17 12.9 -0.8
M24K Tolsona, Glenn 28.23 52 P P 08 17 18.3 +0.1
M24K IAmb IAmb 08 17 39.0
comp=Z,32nm,1.4s
PRP Porcupine Dome 28.31 44 P P 08 17 18.9 0.0
PRP IAmb IAmb 08 17 32.0
comp=Z,12nm,1.0s
KSRS Korea Array 28.36 249 P P 08 17 19.8 +0.4
comp=Z,2.4nm,0.7s,baz=45,slow=8.9,SNR=6.6
KSRS LR LR 08 27 47.6
comp=Z,232nm,20.3s,baz=56,slow=35
KSAR Wonju Array Be 28.39 249 P P 08 17 20.3 +0.6
KSAR Wonju Array Be 28.39 249 P P 08 17 20.3 +0.6
KLU Klutina 28.43 53 P P 08 17 19.8 -0.2
KLU IAmb IAmb 08 17 22.0
comp=Z,13nm,1.1s
PAX Paxson 28.47 50 P P 08 17 20.9 +0.6
PAX pmax pmax
comp=Z,4.0nm,1.1s
PAX Paxson 28.47 50 P P 08 17 20.9 +0.6
DOT Dot Lake 29.04 48 P P 08 17 24.5 -0.7
SCRK Sand Creek 29.04 47 P P 08 17 24.4 -1.0
SCRK IAmb IAmb 08 17 37.5
comp=Z,11nm,1.0s
BMRM Bremner River 29.14 54 IAmb IAmb 08 17 28.3
comp=Z,12nm,0.9s
RAGM Ragged Mountai 29.21 55 P P 08 17 26.4 -0.4
RAGM IAmb IAmb 08 17 29.4
comp=Z,30nm,1.4s
GLB Gilahina Butte 29.44 53 IAmb IAmb 08 17 52.3
comp=Z,13nm,1.4s
VRDI Verde Repeater 29.64 53 P P 08 17 31.6 +0.8
MCARA McCarthy VSAT 29.82 53 P P 08 17 34.3 +2.1
K27K Chicken 29.88 47 P P 08 17 33.1 +0.4
K27K IAmb IAmb 08 17 33.9
comp=Z,10nm,0.8s
CRQM Cirque 29.88 54 P P 08 17 33.7 +0.7
BCAR Beaver Creek A 30.12 49 P P 08 17 36.1 +1.2
EGAK Eagle 30.19 46 P P 08 17 34.8 -0.6
EGAK IAmb IAmb 08 17 47.5
comp=Z,9.7nm,0.8s
BARN Barnard Glacie 30.53 53 P P 08 17 39.7 +1.0
BARN IAmb IAmb 08 17 40.8
comp=Z,8.1nm,0.8s
GRNC Granite Creek 30.55 54 P P 08 17 39.9 +1.0
GRNC IAmb IAmb 08 17 52.2
comp=Z,13nm,1.2s
YAH Yahtse 30.64 54 P P 08 17 41.0 +1.3
CTGM Chitina Glacie 30.71 53 P P 08 17 41.0 +0.8
CTGM IAmb IAmb 08 17 42.2
comp=Z,9.6nm,0.9s
LOGN Logan Glacier 30.89 53 IAmb IAmb 08 17 43.7
comp=Z,10nm,0.8s
DAWY Dawson 31.04 47 P P 08 17 43.4 +0.4
HYT Haines Junctio 32.56 53 P P 08 17 57.6 +1.1
HYT IAmb IAmb 08 17 58.8
comp=Z,11nm,0.9s
INK Inuvik 32.86 38 P P 08 17 59.2 +0.4
comp=Z,2.3nm,0.5s,baz=278,slow=6.6,SNR=17
WHY Whitehorse 33.84 52 IAmb IAmb 08 18 10.4
comp=Z,9.5nm,0.9s
H11N2 WAKE ISLAND Hy 33.99 171 T T 08 55 40.7
baz=355,slow=76,SNR=99
H11N3 WAKE ISLAND Hy 34.00 171 T T 08 55 41.7
baz=355,slow=76,SNR=109
H11N1 WAKE ISLAND Hy 34.01 171 T T 08 55 42.0
baz=355,slow=76,SNR=88
ULN Ulaanbaatar 34.41 283 i P P 08 18 14.0 +1.2
ULN pmax pmax
comp=Z,2.0nm,0.6s
BESE Bessie Mountai 34.51 56 P P 08 18 15.1 +1.8
TLY Talaya 34.53 291 i P P 08 18 13.2 -0.4
TLY pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 34.81 284 P P 08 18 15.2 -0.9
comp=Z,0.8nm,0.6s,baz=62,slow=7.2,SNR=4.1
SONM PcP PcP 08 20 49.7 +0.9
comp=Z,0.4nm,0.4s,baz=73,slow=2.4,SNR=2.8
SONM LR LR 08 34 21.5
comp=Z,336nm,18.1s,baz=60,slow=40
SONM Songino Array 34.81 284 IAmb IAmb 08 18 21.6
comp=Z,0.9nm,0.8s
C36M Paulatuk 36.07 35 IAmb IAmb 08 18 43.1
comp=Z,5.3nm,0.9s
NRIK Noril'sk 36.13 325 LR LR 08 34 44.0
comp=Z,293nm,18.5s,baz=81,slow=39
DLBC Dease Lake 36.93 54 P P 08 18 36.2 +2.1
comp=Z,3.5nm,0.8s,baz=288,slow=9.3,SNR=8.1
DLBC Dease Lake 36.93 54 P P 08 18 36.2 +2.1
DLBC IAmb IAmb 08 18 37.7
comp=Z,8.5nm,1.1s
EUNU Eureka 41.25 14 P P 08 19 10.3 +0.4
EUNU IAmb IAmb 08 19 11.1
comp=Z,8.3nm,0.7s
YKA Yellowknife Ar 42.11 43 P P 08 19 17.4 +0.3
comp=Z,0.7nm,0.5s,baz=299,slow=7.3,SNR=19
YKA LR LR 08 39 11.9
comp=Z,61nm,18.2s,baz=0.0,slow=40
RES Resolute Bay 42.50 23 P P 08 19 20.1 0.0
comp=Z,1.4nm,0.8s,baz=306,slow=8.9,SNR=7.6
RES Resolute Bay 42.50 23 P P 08 19 20.1 0.0
RES pmax pmax
comp=Z,4.0nm,1.3s
ZALV Zalesovo Beam 43.40 303 LR LR 08 39 02.7
comp=Z,272nm,18.9s,baz=70,slow=38
GTA Gaotai 43.59 277 eP P 08 19 28.8 -0.7
GTA pP pP 08 19 36.6 -1.5
GTA sP sP 08 19 41.3 -0.4
GTA pmax pmax
comp=Z,5.0nm,1.0s
DGZ Jazzator, Alta 44.40 297 i P P 08 19 33.6 -2.3
DGZ pmax pmax
comp=Z,2.0nm,0.9s
D05A Enumclaw 46.83 65 P P 08 19 57.1 +2.1
B08A Colville Reser 47.54 62 IAmb IAmb 08 20 02.4
comp=Z,8.3nm,0.8s
NEEM North Greenlan 47.66 9⇑ iP P 08 20 01.1 -0.3
NEW Newport 48.76 61 P P 08 20 10.9 +0.9
comp=Z,4.1nm,0.9s,baz=320,slow=9.3,SNR=5.7
YBH Yreka Blue Hor 49.88 71 LR LR 08 38 29.5
comp=Z,88nm,21.6s,baz=308,slow=32
K05A Summer Lake 50.25 69 P P 08 20 23.1 +1.6
JTMT Jette 50.57 60 P P 08 20 25.5 +1.7
BRVK Borovoye 50.94 309 ceP P 08 20 23.3 -3.1
BRVK pmax pmax
comp=Z,2.0nm,0.6s
BRVK Borovoye 50.94 309 P P 08 20 25.2 -1.2
MOD Modoc Plateau 51.12 70 P P 08 20 29.3 +1.2
MSO Missoula 51.34 61 P P 08 20 29.2 -0.4
MSO IAmb IAmb 08 20 31.6
comp=Z,7.4nm,1.3s
FFC Flin Flon 51.95 47 i P P 08 20 29.2 -4.7
ORV Oroville 52.02 73 sP 08 20 47.5 +0.7
ORV IAmb IAmb 08 20 48.1
comp=Z,4.2nm,0.8s
BEKR Beckworth 52.45 72 P P 08 20 39.6 +1.6
BEKR sP 08 20 51.5 +1.2
BEKR IAmb IAmb 08 20 52.0
comp=Z,5.8nm,0.9s
PAHR Pah Rah Range 53.11 71 IAmb IAmb 08 20 57.0
comp=Z,5.9nm,0.9s
ARCES ARCESS Array B 53.17 342 P P 08 20 42.9 +0.2
comp=Z,2.4nm,0.8s,baz=32,slow=8.7,SNR=1.9
BOZ Bozeman (W) 53.36 61 sP 08 20 57.5 +0.6
BOZ IAmb IAmb 08 20 58.2
comp=Z,4.2nm,0.9s
SUMG Summit 53.37 7 i P P 08 20 44.7 +0.1
YERR Yerington 53.69 72 IAmb IAmb 08 20 50.0
comp=Z,8.7nm,1.1s
YERR sP 08 21 00.6 +1.2
ARU Arti 53.76 318 P P 08 20 45.7 -1.5
comp=Z,1.3nm,0.3s,baz=337,slow=7.7,SNR=8.7
ARU LR LR 08 46 56.2
comp=Z,190nm,19.1s,baz=42,slow=40
ARU Arti 53.76 318 ci P P 08 20 45.3 -1.9
ARU S S 08 28 22.4 +3.4
ARU SS SKiKP 08 31 56.4 -1.5
ARU pmax pmax
comp=Z,5.0nm,0.7s
WAKR Walker 53.91 72 P P 08 20 50.9 +2.0
WAKR IAmb IAmb 08 21 03.5
comp=Z,7.0nm,0.8s
NVAR Mina Array Bea 54.60 72 P P 08 20 55.9 +2.0
comp=Z,3.3nm,0.6s,baz=302,slow=7.3,SNR=21
NVAR Mina Array Bea 54.60 72 P P 08 20 55.5 +1.6
RLMT Red Lodge 54.91 60 P P 08 20 57.6 +1.6
RLMT IAmb IAmb 08 21 10.1
comp=Z,5.4nm,0.8s
JMIC Jan Mayen 55.57 356 LR LR 08 44 43.0
comp=Z,73nm,20.5s,baz=44,slow=36
KIRV Kirov 55.64 324 LR LR 08 49 12.0
comp=Z,119nm,19.6s,baz=35,slow=41
KIRV Kirov 55.64 324 i P P 08 20 59.7 -1.0
BGU Big Grassy Mou 55.80 66 P P 08 21 04.0 +1.6

BGU IAmb IAmb 08 21 32.8
comp=Z,13nm,1.4s
AAK Ala-Archa 55.80 297 P P 08 21 02.3 -0.1
comp=Z,0.5nm,0.3s,baz=90,slow=6.0,SNR=4.3
AAK Ala-Archa 55.80 297 *ceP* **P 08 21 00.3 -2.1**
AAK pmax pmax
comp=Z,18nm,2.5s
PDAR Pinedale Array 56.38 62 P P 08 21 07.7 +1.0
comp=Z,2.0nm,0.7s,baz=326,slow=3.2,SNR=19
JLU Jordanelle 56.88 65 P P 08 21 11.8 +1.5
NLU North Lily Min 57.00 66 P P 08 21 11.8 +0.8
NLU IAmb IAmb 08 21 25.3
comp=Z,9.1nm,1.1s
KLMR Klimovskoe 57.07 330 *eP* **P 08 21 06.9 -4.0**
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 57.07 330 *eP* **P 08 21 07.0 -4.0**
KLMR AMP 08 21 23.1
comp=Z,15nm,1.2s
PRN Pahroc Range 57.15 70 P P 08 21 13.7 +1.7
PRN IAmb IAmb 08 21 26.5
comp=Z,4.4nm,0.8s
KKAR Karatay Array 57.57 300 P P 08 21 12.3 -2.5
KKAR Karatay Array 57.57 300 P P 08 21 12.3 -2.5
Q16A Castle Valley 58.23 66 IAmb IAmb 08 21 22.4
comp=Z,3.6nm,0.9s
RSSD Black Hills 58.27 58 P P 08 21 20.7 +0.7
RSSD *SP **sP** **08 21 32.9 +0.6**
RSSD Black Hills 58.27 58 P P 08 21 20.7 +0.7
RSSD **sP** **08 21 32.9 +0.6**
RSSD IAmb IAmb 08 21 33.9
comp=Z,6.3nm,0.8s
AKTO Aktyubinsk 58.28 313 P P 08 21 17.7 -1.9
comp=Z,1.1nm,0.6s,baz=107,slow=2.3,SNR=4.1
ABKAR Akbulak array 58.28 311 P P 08 21 17.9 -1.8
ABKAR Akbulak array 58.28 311 IAmb IAmb 08 21 18.9
comp=Z,4.0nm,1.2s
LCMT Little Creek M 58.44 69 IAmb IAmb 08 21 35.7
comp=Z,5.2nm,1.0s
SRU San Rafael Swe 58.44 66 P P 08 21 22.4 +1.2
SRU pmax pmax
comp=Z,8.0nm,0.8s
SRU San Rafael Swe 58.44 66 P P 08 21 22.4 +1.2
KNB Kanab 58.67 69 IAmb IAmb 08 21 26.0
comp=Z,6.0nm,1.1s
CHTO Chiang Mai 59.02 260 P P 08 21 25.0 -0.2
CHTO pmax pmax
comp=Z,12nm,0.8s
CHTO Chiang Mai 59.02 260 P P 08 21 25.0 -0.2
CMAR Chiang Mai Arr 59.30 259 P P 08 21 28.0 +0.9
comp=Z,6.5nm,0.7s,baz=21,slow=7.3,SNR=31
CMAR LR LR 08 49 32.1
comp=Z,102nm,19.8s,baz=200,slow=39
CMAR Chiang Mai Arr 59.30 259 P P 08 21 28.3 +1.2
PV22 Blue Mesa, Par 59.80 65 sP 08 21 43.9 +1.0
PV22 IAmb IAmb 08 21 44.5
comp=Z,4.6nm,0.8s
PV04 Paradox Valley 59.84 65 IAmb IAmb 08 21 44.9
comp=Z,7.7nm,1.0s
PV17 East Wray Mesa 59.89 65 P P 08 21 32.5 +1.3
PV16 Nyswonger Mesa 59.89 65 IAmb IAmb 08 21 33.7
comp=Z,8.0nm,1.1s
PV11 David Mesa, Pa 59.92 65 P P 08 21 32.6 +1.1
PV11 **sP** **08 21 44.6 +0.9**
PV18 Skein Mesa, Pa 59.94 65 P P 08 21 33.0 +1.4
PV12 Saucer Basin, 59.95 65 P P 08 21 33.6 +1.9
PV05 Paradox Valley 59.96 66 P P 08 21 33.6 +1.8
PV03 Paradox Valley 59.97 65 IAmb IAmb 08 21 47.2
comp=Z,8.5nm,1.1s
FINES FINESS Array B 60.10 337 P P 08 21 31.5 -0.5
comp=Z,4.3nm,0.7s,baz=35,slow=7.9,SNR=9.2
FINES LR LR 08 52 59.2
comp=Z,79nm,20.0s,baz=31,slow=42
FINES FINESS Array B 60.10 337 *iP* **P 08 21 31.7 -0.3**
FINES pmax pmax
comp=Z,4.0nm,0.7s
PV15 Paradox Valley 60.10 65 P P 08 21 34.9 +2.1
PV15 IAmb IAmb 08 21 35.0
comp=Z,5.5nm,0.8s
BELG Belogornoye 61.04 320 LR LR 08 51 04.3
comp=Z,219nm,19.3s,baz=167,slow=39
BELG Belogornoye 61.04 320 *iP* **P 08 21 36.7 -1.8**
BELG pmax pmax
comp=Z,2.0nm,0.8s
OBN Obninsk 62.68 328⇑*eP* **P 08 21 48.4 -1.1**
OBN *e* 08 24 11.1
OBN *eS* **S 08 30 21.7 +6.4**
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,148nm,15.0s
NOA NORSAR Array B 63.38 345 P P 08 21 54.2 0.0
comp=Z,1.6nm,0.7s,baz=20,slow=6.6,SNR=7.6
ANMO Albuquerque 63.70 66 *iP* **P 08 21 53.1 -3.8**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
MNTX Cornudas Mount 66.73 68 P P 08 22 16.6 +0.2
MNTX **pwP** **08 22 30.3 +0.3**
MNTX IAmb IAmb 08 22 30.6
comp=Z,4.1nm,1.1s
GEYT Alibeck 67.71 304 P P 08 22 22.0 -0.5
comp=Z,4.0nm,0.7s,baz=350,slow=6.0,SNR=5.8
GEYT Alibeck 67.71 304 *ceP* **P 08 22 20.6 -1.9**
GEYT IAmb IAmb 08 22 22.5
comp=Z,3.7nm,0.7s
WMOK Wichita Mounta 67.97 61 IAmb IAmb 08 22 25.8
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 68.75 330 P P 08 22 27.7 -1.0
comp=Z,1.4nm,0.5s,baz=30,slow=6.3,SNR=6.2
AKASG Malin Array Be 68.75 330 *iP* **P 08 22 27.5 -1.2**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 68.75 330 P P 08 22 27.7 -1.0
AKBB Malin Array Si 68.75 330 *ceP* **P 08 22 25.8 -2.9**
TX31 Lajitas Ar. Si 69.49 68 P P 08 22 34.7 +0.9
TX32 Lajitas Array 69.49 68 IAmb IAmb 08 22 35.8
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 69.49 68 P P 08 22 35.0 +1.2
comp=Z,2.8nm,0.7s,baz=300,slow=4.4,SNR=50
TXAR Lajitas Array 69.49 68 P P 08 22 34.5 +0.7
TXAR Lajitas Array 69.49 68 P P 08 22 34.5 +0.7
KIV Kislovodsk 69.81 318 *eP* **P 08 22 32.7 -2.8**
KIV pmax pmax
comp=Z,14nm,1.0s
KIV MLR MLR
comp=Z,396nm,17.0s
KBZ Khabaz 69.91 318 P P 08 22 36.2 +0.2
comp=Z,5.5nm,0.9s,baz=245,slow=4.5,SNR=6.8
KBZ LR LR 08 57 15.1
comp=Z,191nm,19.1s,baz=360,slow=39
KBZ Khabaz 69.91 318 *ceP* **P 08 22 35.9 -0.1**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
ZEI Tsey 70.28 316 *eP* P 08 22 23.2 -15
ZEI pmax pmax
comp=Z,7.0nm,1.0s
CLL Collm 72.28 340 *eP* **P 08 22 51.0 +0.7**
CLL *epP* **pP** **08 23 01.0 +1.6**
CLL Lm MLR 09 20 00.0
comp=Z,600nm,18.8s
CLL Collm 72.28 340 *eP* **P 08 22 51.0 +0.7**
CLL *e* 08 23 01.0
KOLS Kolonicke sedl 72.31 333 *eP* **P 08 22 51.1 +0.6**
KOLS Kolonicke sedl 72.31 333 *eP* **P 08 22 51.1 +0.6**
WVT Waverly 72.34 53 P P 08 22 51.1 +0.2
WVT pmax pmax
comp=Z,4.0nm,0.8s
WVT Waverly 72.34 53 P P 08 22 51.1 +0.2
WVT IAmb IAmb 08 22 51.5
comp=Z,4.1nm,0.8s
DPC Dobruska-Polom 72.47 338 *eP* **P 08 22 51.2 -0.3**
DPC *e* 08 23 03.5
DPC Dobruska-Polom 72.47 338 *eP* **P 08 22 51.2 -0.3**
DPC *epP* **sP** **08 23 03.5 -0.5**
BUR08 Bucovina Ar. S 72.67 331 P P 08 22 52.7 -0.1
BUR08 IAmb IAmb 08 22 53.0
comp=Z,9.6nm,1.4s
BURAR Bucovina Array 72.69 331⇑P **P 08 22 52.4 -0.5**
BURAR Bucovina Array 72.69 331 P P 08 22 52.2 -0.7
BURAR IAmb IAmb 08 22 53.8
comp=Z,3.2nm,0.7s
VRAC Vranov 73.39 337⇓P **P 08 22 56.1 -0.8**
KHC Kasperske Hory 74.23 339 *eP* **P 08 23 04.1 +2.3**
KHC *e* 08 23 14.0
KHC Kasperske Hory 74.23 339 *eP* **P 08 23 04.1 +2.3**
KHC *epP* **sP** **08 23 14.0 -0.4**
ZST Bratislava 74.31 336 *eP* **P 08 23 00.9 -1.3**
ZST Bratislava 74.31 336 *eP* **P 08 23 00.9 -1.3**
CKRC Cesky Krumlov 74.36 338 *eP* **P 08 23 01.4 -1.2**
MLR Muntele Rosu 74.39 329⇓P **P 08 23 01.9 -1.0**
GERES GERESS Array B 74.47 339 P P 08 23 03.6 +0.3
comp=Z,0.4nm,0.3s,baz=10,slow=6.1,SNR=2.1
VOIR 74.71 330⇓P **P 08 23 05.0 +0.3**
ARR Arges 74.89 330⇓P **P 08 23 05.7 -0.1**
BRTR Keskin Array B 76.92 322 P P 08 23 17.5 0.0
comp=Z,1.7nm,0.8s,baz=330,slow=1.7,SNR=7.7
WB2 Warramunga Arr 76.95 206 P P 08 23 17.3 -0.2
WB2 IAmb IAmb 08 23 29.0
comp=Z,6.1nm,1.1s
WRA Warramunga Arr 76.95 206 P P 08 23 18.3 +0.7
comp=Z,1.3nm,0.6s,baz=20,slow=6.0,SNR=17
WRA Warramunga Arr 76.95 206 P P 08 23 17.4 -0.2
WRA Warramunga Arr 76.95 206 P P 08 23 17.4 -0.2
ASAR Alice Springs 80.62 206 P P 08 23 39.1 +1.4
comp=Z,1.4nm,0.9s,baz=18,slow=6.1,SNR=13
ASAR Alice Springs 80.62 206 P P 08 23 38.6 +0.9
ESDC Sonseca Array 86.33 349 P P 08 24 08.4 +1.2
comp=Z,0.4nm,0.4s,baz=7.8,slow=5.8,SNR=4.3

*IDC **01** 08:17:23.3±0.3,29.4°42S×71.6°67W,h0km,mb5.0/27, mb1 5.0/31,mb1mx5.0/37,mbtmp5.0/31,ML4.8/4,MS4.8/22, Ms1 4.8/22,ms1mx4.8/28,Error ellipse: s-maj=14.6km s-min=10.4km az=93.0*
*SJA **01** 08:17:24.8±0.5,29.1°57S×71.2°98W,h45km±11km,ML5.4, MW5.6*
*MOS **01** 08:17:24.8±1.4,29.4°35S×71.2°82W,h23km,mb5.7/29,Error ellipse: s-maj=10.8km s-min=6.4km az=98.0*
*VAO **01** 08:17:25.4±0.3,29.4°35S×71.6°65W,h10km,mb5.2*
*BJI **01** 08:17:25.0±0.0,29.4°30S×71.6°70W,h14km,mB5.3/22, Ms5.4/18,Ms7 5.3/18*
*GUC **01** 08:17:26.9±0.7,29.4°35S×71.6°61W,h37km±5km,ML5.5*
*NEIC **01** 08:17:27.9±2.0,29.4°34S±0.05×71.2°72W±0.08,h32km±3km, mb5.4/306,Mwr5.2/29,Mww5.4,ML5.5(GUC), Mwc5.3(GCMT),Error ellipse: s-maj=10.5km s-min=6.9km az=92.0*
*NEIC **01** 08:17:27.5,29.2°32S×71.2°83W,h36km,Moment Tension Solution. Moment tensor: Scale 10^16^Nm; Mrr6.14; Mθθ0.43; Mϕϕ-6.57; Mrθ-1.66; Mθϕ 1.22; Mϕr-5.49; Fault plane solution: M₀8.66000×10^16^ NP1:φ₁187.57000°, δ66.35000°, λ105.32000°. NP2:φ₂333.24000°, δ27.94000°, λ58.90000°. Principal axes: T 8.6619, Plg65.0000°, Azm124.0000°; N -0.0113, Plg14.0000°, Azm1.0000°; P -8.6506, Plg20.0000°, Azm266.0000°;*
*GCMT **01** 08:17:30.9±0.2,29.4°48S±0.01×71.9°97W±0.01,h29km, MW5.4/121,Moment Tension Solution. s95,c135; s121,c188; Duration: 1ŝ2 Moment tensor: Scale 10^17^ Nm; Mrr0.56±.02; Mθθ 0.21±.02; Mϕϕ-0.76±.02; Mrθ-0.53±.03; Mrϕ 0.54±.01; Mθϕ-0.91±.04; Best double couple: M₀1.36300×10^17^ NP1:φ₁304.00000°, δ36.00000°, λ25.00000°. NP2:φ₂193.00000°, δ76.00000°, λ124.00000°. Principal axes: T 1.4460, Plg48.0000°, Azm140.0000°; N -0.1660, Plg33.0000°, Azm4.0000°; P -1.2800, Plg23.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **01** 08:17:31,29.4°44S×72.0°01W,h23km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr0.43; Mθθ0.25; Mϕϕ-0.68; Mrθ-0.40; Mθϕ 0.50; Mϕr-0.77; Fault plane solution: M₀1.16000×10^17^ NP1:φ₁301.00000°, δ38.00000°, λ22.00000°. NP2:φ₂194.00000°, δ76.00000°, λ126.00000°. Principal axes: T 1.1945, Plg46.0000°, Azm141.0000°; N -0.0636, Plg35.0000°, Azm4.0000°; P -1.1309, Plg23.0000°, Azm257.0000°;*
*NEIC **01** 08:17:32,29.4°42S×71.6°69W,h18km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr0.45; Mθθ0.30; Mϕϕ-0.75; Mrθ-0.83; Mθϕ 0.41; Mϕr-1.44; Fault plane solution: M₀1.83000×10^17^ NP1:φ₁310.00000°, δ23.00000°, λ17.00000°. NP2:φ₂203.00000°, δ83.00000°, λ112.00000°. Principal axes: T 1.9305, Plg47.0000°, Azm136.0000°; N -0.2108, Plg22.0000°, Azm21.0000°; P -1.7197, Plg35.0000°, Azm275.0000°;*
ISC 01 08:17:26.0±0.3,29.36S±0.03×71.83W±0.05,h21km±3km, h21km:pP-P,n727,σ1§30/653,mb5.5/189,MS4.9/26, 61C-36D,Fault plane solution: NP1:φ₁201.00771°, δ88.84558°, λ137.06892°. **NP2:**φ₂292.08142°, δ47.07974°, λ1.57652°. **Principal axes:** T Plg29.7206°, Azm147.6021°; N Plg47.0564°, Azm19.7670°; P Plg27.8578°, Azm255.1631°; **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**1.04**	**71**	⇓*iP*		**Pn**	**08 17 46.5**	**+0.8**
LCO				*eS*		**Sb**	**08 17 59.3**	**+0.4**
LCO	**Las Campanas**	**1.04**	**71**	P		**Pn**	**08 17 46.4**	**+0.8**
LCO	**Las Campanas**	**1.04**	**71**	Pn		**Pn**	**08 17 46.4**	**+0.8**
GO04	**Tololo Observa**	**1.21**	**133**	⇓*iP*		**Pn**	**08 17 48.1**	**+0.2**
GO04				*iS*		**Sb**	**08 18 03.5**	**-0.1**
GO04	**Tololo Observa**	**1.21**	**133**			**Pb**	**08 17 48.7**	**+0.3**
AC04	**Llanos de Chal**	**1.32**	**30**	⇓*eP*		**Pn**	**08 17 49.4**	**+0.1**
AC04				*iS*		**Sn**	**08 18 06.1**	**-0.2**
AC04	**Llanos de Chal**	**1.32**	**30**			**Pn**	**08 17 49.7**	**+0.4**
CO03	**El Pedregal**	**1.78**	**147**	⇑*iP*		**Pn**	**08 17 56.1**	**+0.5**
CO03				*iS*		**Sn**	**08 18 17.4**	**-0.3**
CO03				IAML			08 18 18.5	
comp=E,82µm,0.3s								
CO03	**El Pedregal**	**1.78**	**147**	Pn		**Pn**	**08 17 56.2**	**+0.5**
GO03	**Copiap**	**2.25**	**39**	⇓*iP*		**Pn**	**08 18 02.6**	**+0.6**
GO03				*eS*		**Sn**	**08 18 30.7**	**+1.5**
GO03				IAML			08 18 45.2	
comp=N,19µm,0.5s								
GO03	**Copiap**	**2.25**	**39**	Pn		**Pn**	**08 18 02.7**	**+0.6**
RTLS	**Leoncito**	**3.27**	**139**	*iP*		**Pn**	**08 18 19.9**	**+3.6**
RTLS				*iS*		**Sb**	**08 19 00.3**	**-2.7**
RTLS				IAML			08 19 11.8	
comp=Z,7µm,2.0s								
AC01	**Pan de Azucar**	**3.38**	**19**	⇓*iP*		**Pn**	**08 18 16.9**	**-0.6**
AC01				*iS*		**Sn**	**08 18 53.9**	**-3.1**
AC01				IAML			08 19 24.8	
comp=E,18µm,0.9s								
AC01	**Pan de Azucar**	**3.38**	**19**	Pn		**Pn**	**08 18 16.9**	**-0.6**
AC02	**Maricunga**	**3.46**	**44**	⇓*iP*		**Pn**	**08 18 20.9**	**+1.8**
AC02				*eS*		**Sn**	**08 19 01.8**	**+2.0**
AC02				IAML			08 19 25.0	
comp=E,10µm,0.5s								
AC02	**Maricunga**	**3.46**	**44**	Pn		**Pn**	**08 18 20.9**	**+1.7**
ZON	**Zonda**	**3.49**	**130**	P		**Pn**	**08 18 22.3**	**+3.2**
ZON	**Zonda**	**3.49**	**130**			**Pn**	**08 18 22.3**	**+3.2**
ZON	**Zonda**	**3.49**	**130**	*iP*		**Pn**	**08 18 22.3**	**+3.2**
ZON				IAML			08 19 28.5	
comp=Z,7µm,1.2s								
RTLL	**Cerro Villicun**	**3.50**	**125**	*iP*		**Pn**	**08 18 22.5**	**+3.2**
RTLL				IAML			08 19 27.6	
comp=Z,7µm,0.4s								
AUSP	**Uspallata**	**3.55**	**144**	*iP*		**Pn**	**08 18 23.7**	**+3.5**
VA03	**San Esteban**	**3.57**	**162**	⇑*iP*		**Pn**	**08 18 21.5**	**+1.3**
VA03				*iS*		**Sn**	**08 19 02.8**	**+1.0**
VA03	**San Esteban**	**3.57**	**162**			**Pn**	**08 18 21.6**	**+1.3**
RTCV	**Cerro Valdivia**	**3.78**	**132**	*iP*		**Pn**	**08 18 26.5**	**+3.4**
RTCV				IAML			08 19 57.3	
comp=Z,2µm,3.3s								
PEL	**Peldehue**	**3.90**	**166**	P		**Pn**	**08 18 25.7**	**+1.0**
PEL	**Peldehue**	**3.90**	**166**	Pn		**Pn**	**08 18 25.7**	**+1.0**
PEL	**Peldehue**	**3.90**	**166**	*iP*		**Pn**	**08 18 25.8**	**+1.0**
MT02	**Curacav**	**3.94**	**172**	⇑*iP*		**Pn**	**08 18 25.0**	**-0.2**
MT02	**Curacav**	**3.94**	**172**	Pn		**Pn**	**08 18 25.1**	**-0.1**
ASAL	**Salagasta**	**4.12**	**142**	*iP*		**Pn**	**08 18 31.4**	**+3.5**
ASAL				IAML			08 19 54.5	
comp=Z,2µm,1.3s								
MT05	**Renca**	**4.13**	**167**	⇑*iP*		**Pn**	**08 18 28.7**	**+0.8**
MT05	**Renca**	**4.13**	**167**	Pn		**Pn**	**08 18 28.7**	**+0.8**
ACLC	**CERRO LA CRUZ**	**4.26**	**92**	*iP*		**Pn**	**08 18 32.6**	**+2.8**
ACLC				IAML			08 19 47.2	
comp=Z,8µm,2.3s								
FSR	**Penalolen**	**4.26**	**165**	*eP*		**Pn**	**08 18 31.7**	**+2.0**
FSR				*iS*		**Sn**	**08 19 20.1**	**+1.3**
ARCO	**CERRO ARCO**	**4.27**	**145**	*iP*		**Pn**	**08 18 33.6**	**+3.7**
ARCO				IAML			08 19 49.0	
comp=Z,5µm,1.8s								

MT03 Universidad Ad 4.28 165⇑*iP* **Pn 08 18 31.0 +1.0**
MT03 *iS* **Sn 08 19 20.6 +1.2**
VA05 Santo Domingo 4.29 178⇑*iP* **Pn 08 18 29.3 -0.8**
MT09 Talagante 4.47 171⇑*iP* **Pn 08 18 33.1 +0.5**
AAGR Agrelo 4.52 146 *iP* **Pn 08 18 37.3 +4.0**
AAGR IAML 08 20 39.7
comp=Z,2µm,1.8s
GO02 Mina Guanaco 4.63 26⇓*iP* **Pn 08 18 34.8 -0.2**
GO02 Mina Guanaco 4.63 26 Pn **Pn 08 18 35.5 +0.5**
LMEL Las Melosas 4.69 163⇑*iP* **Pn 08 18 37.3 +1.6**
APLL PUNTA DE LOS L 4.72 104 *iP* **Pn 08 18 38.6 +2.6**
APLL IAML 08 20 47.2
comp=Z,8µm,2.4s
PB14 IPOC Station P 4.88 15⇑*eP* **Pn 08 18 36.9 -1.5**
PB14 IPOC Station P 4.88 15 Pn **Pn 08 18 37.0 -1.5**
BO02 Sierra Bellavi 5.49 171 Pn **Pn 08 18 46.9 +0.2**
PB10 IPOC Station P 5.93 11 Pn **Pn 08 18 50.6 -2.0**
PB10 IPOC Station P 5.93 11 *iP* **Pn 08 18 50.3 -2.3**
PB10 IAML 08 20 51.0
comp=Z,1µm,1.1s
PB15 IPOC Station P 6.48 20 Pn 08 18 59.8 -0.6
PB06 IPOC Station P 6.93 18 Pn **Pn 08 19 04.5 -1.9**
PB04 IPOC Station P 7.15 13 Pn 08 19 06.9 -2.7
LVC Limon Verde 7.21 22 Pn **Pn 08 19 09.7 -0.9**
comp=Z,11nm,0.3s,baz=202,slow=10.0,SNR=118
LVC Sn **Sn 08 20 28.7 -3.3**
comp=Z,34nm,0.3s,baz=343,slow=19,SNR=1.9
LVC LR LR 08 22 04.0
comp=Z,11µm,18.4s,baz=221,slow=39
LVC Limon Verde 7.21 22 *eP* **Pn 08 19 09.3 -1.2**
H03N1 Juan Fernandez 7.29 234 T T 08 26 56.6
baz=63,slow=72,SNR=1111
H03N2 Juan Fernandez 7.31 234 T T 08 26 57.0
baz=63,slow=72,SNR=1117
H03N3 Juan Fernandez 7.31 234 T T 08 26 51.4
baz=63,slow=72,SNR=925
BI03 Tigo 7.54 187 Pn 08 19 12.9 -1.7
TA01 Diego Aracena 8.88 10 Pn 08 19 30.3 -2.8
MNMC Minye Minye 10.38 12 Pn **Pn 08 19 50.9 -3.0**
PLCA Paso Flores 11.40 175 Pn **Pn 08 20 06.8 -0.9**
comp=Z,8.1nm,0.3s,baz=342,slow=12,SNR=238
PLCA LR LR 08 24 32.3
comp=Z,7µm,18.6s,baz=350,slow=38
PLCA Paso Flores 11.40 175 P **Pn 08 20 07.5 -0.2**
PLCA Paso Flores 11.40 175 Pn **Pn 08 20 07.5 -0.2**
PLCA Paso Flores 11.40 175 *eP* **Pn 08 20 07.1 -0.5**
CPUP Villa Florida 13.18 80 Pn **Pn 08 20 30.4 -1.5**
comp=Z,0.3nm,0.3s,baz=257,slow=11,SNR=8.3
CPUP Sn **Sn 08 22 58.1 +0.2**
comp=Z,3.6nm,0.3s,baz=239,slow=12,SNR=1.7
CPUP LR LR 08 26 00.1
comp=Z,11µm,18.4s,baz=262,slow=40
CPUP Villa Florida 13.18 80 P **Pn 08 20 31.2 -0.8**
CPUP 08 22 58.2
CPUP Villa Florida 13.18 80 Pn 08 20 31.2 -0.8
ITQB Itaqui 13.25 95 *eP* **Pn 08 20 31.8 -1.1**
LPAZ La Paz 13.44 15 Pn **Pn 08 20 34.4 -1.8**
comp=Z,0.8nm,0.3s,baz=205,slow=8.6,SNR=26
LPAZ LR LR 08 26 39.0
comp=Z,4µm,19.0s,baz=195,slow=41
LPAZ La Paz 13.44 15 Pn 08 20 34.2 -2.0
GO07 Milladeo Hill, 13.81 186 Pn 08 20 37.7 -2.8
PLTB Pedras Altas 15.88 103 *eP* **Pn 08 21 06.0 -2.4**
CPSB Cacapava Do Su 15.99 98 *eP* **Pn 08 21 09.7 0.0**
SIV San Ignacio 16.58 39 Pn **Pn 08 21 11.3 -6.0**
comp=Z,1.4nm,0.3s,baz=249,slow=10,SNR=16
SIV LR LR 08 28 14.7
comp=Z,3µm,21.7s,baz=224,slow=39
AQDB Aquidauana 17.08 62 *eP* **Pn 08 21 23.0 -0.6**
ITAB Concordia 17.48 88 *eP* **Pn 08 21 26.7 -1.8**
NNA Nana 17.90 344 P P 08 21 37.9 +3.5
comp=Z,0.9nm,0.3s,baz=175,slow=15,SNR=7.3
NNA LR LR 08 26 52.5
comp=Z,3µm,21.6s,baz=168,slow=32
NNA Nana 17.90 344 P Pn 08 21 33.1 -0.7
NNA pmax pmax
comp=Z,70nm,1.0s
NNA Nana 17.90 344 P Pn 08 21 33.1 -0.7
PTLB Pontes e Lacer 18.12 43 *eP* **Pn 08 21 36.4 -0.1**
PTGB Pitanga 18.20 80 *eP* **Pn 08 21 37.2 -0.3**
PP1B Ponte de Pedra 19.43 57 *eP* **P 08 21 51.7 +0.6**
VILB Vilhena 19.57 36 *eP* **P 08 21 52.3 -0.4**
TER01 Tubaro-SC 19.88 93 *eP* **P 08 21 56.1 +0.1**
PCMB Pacaembu 20.09 72 *eP* **P 08 21 58.2 -0.1**
ETMB Extrema 20.14 16 *eP* **P 08 21 58.8 0.0**
TIJ01 Guaruva-PR 20.66 84 *eP* **P 08 22 02.2 -2.4**
FRTB Fartura 20.82 78 *eP* **P 08 22 05.9 -0.3**
CZSB Cruzeiro do Su 21.53 358 *eP* **P 08 22 15.9 +2.0**
ITRB Iturama 21.74 69 *eP* **P 08 22 15.4 -0.7**
SAML Samuel 21.86 24 P P 08 22 18.5 +1.1
SAML pmax pmax
comp=Z,99nm,1.0s
SAML Samuel 21.86 24 P P 08 22 18.5 +1.1
GO09 Cerro Castillo 21.89 181 P P 08 22 17.6 0.0
GO09 IAmb IAmb 08 22 21.0
comp=Z,296nm,1.2s
PET01 Itanhaem-SP 22.47 83 *eP* **P 08 22 23.3 -1.6**
SPB Sao Paulo 22.56 81 P P 08 22 23.9 -1.0
SPB IAmb IAmb 08 22 35.9
comp=Z,143nm,1.0s
SPB Sao Paulo 22.56 81 *eP* **P 08 22 24.6 -0.3**
BB19B Bebedouro 22.61 74 *eP* **P 08 22 24.1 -1.5**
ARAG Araguaiana, MT 22.89 58 *eP* **P 08 22 27.0 -1.5**
ATAH Atahualpa 22.95 343 P P 08 22 31.9 +2.4
comp=Z,5.2nm,0.6s,baz=185,slow=11,SNR=3.3
ATAH LR LR 08 29 39.5
comp=Z,2µm,21.1s,baz=193,slow=32
VAO Valinhos 23.17 80 *eP* **P 08 22 30.2 -1.1**
CLDB Colider 23.71 42 *eP* **P 08 22 36.2 -0.4**
GO10 Punta Arenas 23.79 179 P P 08 22 38.8 +1.7
PARB Paraibuna 24.21 82 *eP* **P 08 22 40.3 -1.1**
IPMB Ipameri, GO 24.36 68 *eP* **P 08 22 42.3 -0.6**
EFI East Falkland 24.55 159 P P 08 22 42.2 -1.9
EFI pmax pmax
comp=Z,268nm,1.4s
EFI East Falkland 24.55 159 P P 08 22 42.2 -1.9
ESAR Angra dos Reis 25.34 82 *eP* **P 08 22 51.4 -0.1**
USHA Ushuaia 25.58 175 P P 08 22 53.6 +0.2
comp=Z,248nm,1.1s,baz=317,slow=4.2,SNR=15
SNDB Serra Nova Dou 25.78 52 *eP* **P 08 22 55.2 -0.4**
BSCB Bom Sucesso 25.82 77 *eP* **P 08 22 56.0 0.0**
BDFB Brasilia 25.82 63 P P 08 22 55.8 -0.3
comp=Z,47nm,0.6s,baz=240,slow=8.0,SNR=62
BDFB LR LR 08 34 39.6
comp=Z,4µm,18.1s,baz=239,slow=40
BDFB Brasilia 25.82 63 P P 08 22 55.8 -0.3
BDFB pmax pmax
comp=Z,451nm,1.4s
BDFB Brasilia 25.82 63 P P 08 22 55.8 -0.3
VAS01 Vassouras-RJ 26.46 81 *eP* **P 08 23 01.9 +0.1**
NPGB Novo Progresso 27.08 38 *eP* **P 08 23 06.6 -0.8**
PEXB Peixe 27.81 57 *eP* **P 08 23 13.8 -0.1**
MACA Manacapuru-AM 28.12 24 *eP* **P 08 23 16.8 +0.2**
CAM01 Campos-RJ 28.17 82 *eP* **P 08 23 16.8 -0.3**
JANB Januaria 29.09 67 *eP* **P 08 23 25.1 -0.2**
ITTB Itaituba 29.16 35 *eP* **P 08 23 25.5 -0.3**
ALF01 Guarapari-ES 29.43 80 *eP* **P 08 23 27.2 -1.1**
PTLC Puerto Leguiza 29.50 354 *eP* **P 08 23 28.9 +0.1**
SJMB Sao Joao De Ma 29.85 76 *eP* **P 08 23 31.8 -0.2**
OTAV Otavalo 30.10 347 P P 08 23 36.6 +1.9
OTAV pmax pmax
comp=Z,28nm,1.1s
OTAV Otavalo 30.10 347 P P 08 23 36.6 +1.9
SDBA SAO DESIDERIO 30.17 62 *eP* **P 08 23 34.7 -0.2**
RIB01 Linhares ES 30.25 78 *eP* **P 08 23 35.8 +0.2**
SMTB Santa Maria do 30.54 53 *eP* **P 08 23 38.3 +0.2**
PTGA Pitinga 30.63 24 P P 08 23 39.1 +0.2
comp=Z,16nm,0.9s,baz=197,slow=9.6,SNR=15
PTGA Pitinga 30.63 24 P P 08 23 38.2 -0.7
PTGA Pitinga 30.63 24 *eP* **P 08 23 39.1 +0.2**
GCUF Volcan Galeras 30.86 349 *eP* **P 08 23 49.0 +7.5**
PRPB Parauapebas 31.04 46 *eP* **P 08 23 41.8 -0.7**
NAN01 Guarapari, ES 31.13 76 *eP* **P 08 23 42.8 -0.6**
MACC Macarena, Meta 31.38 356 *eP* **P 08 23 43.2 -2.3**
BBAC Balboa, Cauca 31.63 350 *eP* **P 08 23 52.0 +4.1**
SOTA Rioblanco 31.64 351 *eP* **P 08 23 51.1 +2.8**
MALB Monte Alegre 32.06 35 *eP* **P 08 23 51.5 0.0**
RPN Rapa Nui 33.02 265 P P 08 24 01.7 +1.8
comp=Z,35nm,0.6s,baz=130,slow=8.5,SNR=3.7
RPN LR LR 08 33 43.5
comp=Z,2µm,20.7s,baz=109,slow=30
NBIT Itapeh - BA 33.13 71 *eP* **P 08 24 01.0 +0.1**
ORTC Ortega, Tolima 33.24 354 *eP* **P 08 24 04.8 +3.0**

VILC Villavicencio, 33.32 357 eP P 08 24 04.5 +1.8
BOAV Boa Vista 33.38 21 eP P 08 24 03.2 +0.2
GDU01 Guandu, BA 33.65 69 eP P 08 24 05.0 -0.5
ROSC El Rosal 34.08 356 P P 08 24 12.4 +2.9
comp=Z,5.6nm,0.4s,baz=234,slow=11,SNR=2.8
ROSC LR LR 08 38 58.5
comp=Z,1μm,18.4s,baz=194,slow=38
ROSC El Rosal 34.08 356 P P 08 24 12.0 +2.4
ROSC pmax pmax
comp=Z,64nm,1.2s
ROSC El Rosal 34.08 356 P P 08 24 12.0 +2.4
ROSC IAmb IAmb 08 24 28.5
comp=Z,64nm,1.2s
MCPB Macapa, AP 34.46 37 eP P 08 24 12.2 -0.2
TMAB Tom-Au,PA,Br 35.06 44 eP P 08 24 18.2 +0.5
RUSC La Rusia 35.06 358 eP P 08 24 18.4 +0.3
CBOC Ciudad Bolivar 35.25 353 eP P 08 24 23.9 +4.5
HOPE Hope Point 35.65 144 P P 08 24 23.3 +1.1
HOPE pmax pmax
comp=Z,393nm,1.7s
HOPE Hope Point 35.65 144 P P 08 24 23.3 +1.1
PMSA Palmer Station 35.77 174 P P 08 24 23.3 +0.1
comp=Z,136nm,1.1s,baz=352,slow=9.2,SNR=5.5
PMSA Palmer Station 35.77 174 P P 08 24 24.1 +0.9
PMSA Palmer Station 35.77 174 eP P 08 24 24.4 +1.2
BRRC Barranca, Sant 36.30 357 eP P 08 24 31.6 +3.4
DBBC Dabeiba 36.41 353 eP P 08 24 29.7 +0.4
NBLA Lagarto - SE 36.61 67 eP P 08 24 30.4 -0.6
ZARC Zaragoza, Cauc 36.75 355 eP P 08 24 32.6 +0.5
ROSB Rosrio 37.21 50 eP P 08 24 35.6 -0.5
NBTA Tacaratu-PE 37.49 64 eP P 08 24 38.1 -0.4
NBMA Muriti-CE 38.02 61 eP P 08 24 42.9 -0.2
SDV Santo Domingo 38.04 2 P P 08 24 43.1 -0.1
SDV Santo Domingo 38.04 2 eP P 08 24 43.4 +0.2
NBPB Pedra_Branca-C 38.58 58 eP P 08 24 47.6 -0.1
NBAN Anadia - AL 38.59 67 eP P 08 24 47.2 -0.5
MDP Montagnes des 38.90 31 P P 08 24 50.4 +0.1
comp=Z,29nm,1.0s,baz=184,slow=9.0,SNR=5.0
NBLI Livramento-PB 39.43 63 eP P 08 24 54.7 -0.2
RIOS Rincon, Osa 39.48 342 P P 08 24 55.9 +0.9
RIOS IAmb IAmb 08 25 11.6
comp=Z,100nm,0.8s
PCRV Puerto La Cruz 39.91 11 P P 08 24 59.2 +0.5
comp=Z,28nm,1.1s,baz=192,slow=9.3,SNR=3.7
NBRF Rio Formoso - 40.08 67 eP P 08 24 59.0 -1.2
PEZE Perez Zeledon, 40.17 342 P P 08 25 01.6 +0.7
NBPA Parau_RN 40.31 61 eP P 08 25 02.5 +0.4
CAO2 Cobano, Puntar 40.87 340 P P 08 25 07.3 +0.6
HDC Heredia 40.88 341 P P 08 25 07.2 +0.3
RCBR Riachuelo 41.19 62 P P 08 25 09.3 -0.1
comp=Z,20nm,1.0s,baz=250,slow=8.3,SNR=5.4
RCBR Riachuelo 41.19 62 P P 08 25 09.0 -0.4
RCBR sP 08 25 18.4 +0.4
RCBR IAmb IAmb 08 25 19.8
comp=Z,113nm,1.4s
RCBR Riachuelo 41.19 62 eP P 08 25 08.7 -0.7
NBPV Pedro Velho 41.30 64 eP P 08 25 10.3 +0.1
JTS Las Juntas de 41.40 340 iP P 08 25 11.5 +0.5
JTS pmax pmax
comp=Z,44nm,1.2s
JTS Las Juntas de 41.40 340 P P 08 25 13.1 +2.1
ORTG Ortega, Santa 41.62 340 P P 08 25 15.0 +2.2
COVE Coope Vega, Sa 41.65 341 P P 08 25 13.3 +0.4
COVE IAmb IAmb 08 25 29.7
comp=Z,108nm,0.9s
GRGR Grenville 42.40 15 P P 08 25 19.5 +0.4
ESPN Las Esperanzas 43.03 342 P P 08 25 24.7 +0.5
ACON Acoyapa 43.05 341 P P 08 25 25.8 +1.3
BOAB BOACO BROADBAND 43.65 340 P P 08 25 30.9 +1.6
BOAB IAmb IAmb 08 25 45.4
comp=Z,82nm,1.1s
TGUH Tegucigalpa,Un 45.66 339 P P 08 25 47.0 +1.6
TGUH IAmb IAmb 08 25 55.6
comp=Z,85nm,1.1s
MTO3 Montecristo 46.68 336 P P 08 25 54.5 +0.9
MTO3 IAmb IAmb 08 26 04.1
comp=Z,55nm,1.3s
MLPR Magueyes Islan 47.27 6 P P 08 25 57.0 -0.9
OBIP Obispado Ponce 47.39 7 P P 08 25 58.3 -0.5
PDPR Patillas Dam, 47.43 8 P P 08 25 57.4 -1.7
PDPR IAmb IAmb 08 26 13.0
comp=Z,48nm,1.1s
SJG San Juan 47.51 7 P P 08 26 00.7 +1.0
comp=Z,15nm,0.8s,baz=232,slow=10,SNR=3.2
SJG San Juan 47.51 7 P P 08 25 58.8 -0.9
SJG IAmb IAmb 08 26 13.6
comp=Z,35nm,1.0s
AOPR Arecibo Observ 47.67 7 P P 08 25 59.8 -1.2
CBYP Canovanas 47.70 8 IAmb IAmb 08 26 15.1
comp=Z,68nm,1.1s
DR12 Loma Pena Alta 47.92 3 P P 08 26 02.7 -0.3
PETF Flores 49.19 337 P P 08 26 13.5 +0.8
PETF IAmb IAmb 08 26 23.0
comp=Z,66nm,1.2s
BELA Belgrano 2 51.41 171 P P 08 26 28.9 0.0
TLIG Tlapa 53.31 328 P P 08 26 45.2 +1.4
TLIG IAmb IAmb 08 26 55.3
comp=Z,82nm,1.3s
VNA3 Neumayer Olymp 53.60 159 P P 08 26 45.5 +0.3
VNA1 Neumayer--Stat 53.89 158 P P 08 26 47.8 +0.6
VNA2 Neumayer--Watz 54.23 159 P P 08 26 50.1 +0.3
baz=288,slow=8.3
SNAA Sanae 55.83 159 P P 08 27 01.6 +0.1
SNAA Sanae 55.83 159 P P 08 27 01.5 +0.1
comp=Z,156nm,0.8s,baz=279,slow=6.7,SNR=186
SNAA LR LR 08 49 14.1
comp=Z,1μm,21.6s,baz=322,slow=34
SNAA Sanae 55.83 159 P P 08 27 01.1 -0.3
RKT Rikitea 56.39 260 eS S 08 34 56.0 +0.1
comp=Z,732nm,30.2s
RKT eLQ LQ 08 41 11.8
comp=Z,331nm,33.5s
RKT eLR LR 08 43 34.3
comp=Z,1μm,23.5s
ASCN Ascension 57.87 80 P P 08 27 16.5 -0.2
ZAIG Zacatecas 59.67 327 P P 08 27 31.4 +2.1
ZAIG IAmb IAmb 08 27 41.2
comp=Z,34nm,1.2s
553A Crawfordville 60.42 347 pP 08 27 42.8 +3.3
NVL N'lazarevskaya 60.52 158 eP P 08 27 32.2 -2.0
NVL pmax pmax
comp=Z,225nm,1.2s
QSPA South Pole Qui 60.87 180 P P 08 27 37.4 +0.6
346A Big Creek Wild 62.69 343 P P 08 27 49.5 +0.3
344A Westbrook Farm 63.09 342 P P 08 27 52.6 +0.7
833A Chaparral WMA, 63.12 333 P 08 27 55.9
baz=153
HKT Hockley 63.26 337 iP P 08 27 54.5 +1.6
HKT pmax pmax
comp=Z,44nm,1.4s
HKT Hockley 63.26 337 P P 08 27 54.6 +1.7
HKT IAmb IAmb 08 28 03.8
comp=Z,47nm,1.4s
342A Flagon Creek P 63.46 340 P P 08 27 55.3 +1.0
VBMS Vicksburg 63.76 342 P P 08 27 56.4 +0.2
Y52A Lilburn 63.93 349 IAmb IAmb 08 28 06.5
comp=Z,58nm,1.6s
Z47A Carrollton 64.09 345 IAmb IAmb 08 28 13.0
comp=Z,18nm,0.7s
NATX Nacogdoches 64.54 339 P P 08 28 02.4 +1.0
NATX IAmb IAmb 08 28 12.2
comp=Z,56nm,1.1s
435B Jarrell 64.64 336 P P 08 28 02.8 +0.7
435B IAmb IAmb 08 28 12.7
comp=Z,35nm,1.1s
HPIG 64.68 327 P P 08 28 05.7 +2.9
HPIG IAmb IAmb 08 28 13.8
comp=Z,55nm,1.2s
X51A Calhoun 64.76 348 IAmb IAmb 08 28 17.4
comp=Z,44nm,0.9s
FPAL Fort Paine 64.87 347 P P 08 28 04.1 +0.6
X48A Hartselle 65.07 346 IAmb IAmb 08 28 14.2
comp=Z,61nm,1.2s
237A Washetta, Mont 65.13 338 P P 08 28 06.5 +1.3
237A pwP 08 28 14.7 -0.6
V58A Windy Hill, Pi 65.17 353 IAmb IAmb 08 28 20.0
comp=Z,24nm,0.9s
JCT Junction City 65.20 334 P 08 28 07.7
baz=153,SNR=34
V56A Mocksville 65.33 352 P 08 28 07.7
baz=172
W50A Signal Mountai 65.46 348 IAmb IAmb 08 28 21.9
comp=Z,23nm,0.7s
V55A Taylorsville 65.46 352 IAmb IAmb 08 28 16.9
comp=Z,61nm,1.4s
CPCT Cooper Cave 65.56 349 P P 08 28 07.8 -0.2
SWET Sewanee 65.59 347 IAmb IAmb 08 28 22.6
comp=Z,27nm,0.8s
U59A Littleton 65.60 355 IAmb IAmb 08 28 23.4
comp=Z,44nm,1.1s
TKL Tuckaleechee C 65.64 349 IAmb IAmb 08 28 22.8
comp=Z,26nm,1.0s
OXF Oxford 65.66 344 P 08 28 09.5
baz=163
WHTX Lake Whitney, 65.69 336 P 08 28 10.6
baz=156,SNR=8.9
WHTX Lake Whitney, 65.69 336 P P 08 28 10.1 +1.2
V52A Sevierville 65.79 350 P P 08 28 09.3 -0.2
V52A IAmb IAmb 08 28 23.8
comp=Z,39nm,1.1s
TXAR Lajitas Array 65.80 330 P P 08 28 11.5 +1.7
comp=Z,2.3nm,0.8s,baz=150,slow=8.4,SNR=17
TXAR LR LR 08 52 36.2
comp=Z,651nm,19.8s,baz=0.0,slow=32
TXAR PKP2bc 08 56 49.9
comp=Z,2.0nm,1.1s,baz=266,slow=3.6,SNR=9.6
TXAR Lajitas Array 65.80 330 P P 08 28 11.7 +1.9
TXAR Lajitas Array 65.80 330 P P 08 28 11.7 +1.9
TX32 Lajitas Array 65.80 330 IAmb IAmb 08 28 25.6
comp=Z,20nm,0.8s
PLAL Pickwick Lake 65.80 345 IAmb IAmb 08 28 18.5
comp=Z,36nm,1.2s
U56A King 65.85 352 P 08 28 10.6
baz=172
U56A King 65.85 352 IAmb IAmb 08 28 25.2
comp=Z,25nm,0.8s
Z38A Mt. Pleasant 66.03 339 P P 08 28 12.2 +1.1
Z38A pwP 08 28 20.9 -0.1
Z38A IAmb IAmb 08 28 21.7
comp=Z,62nm,1.2s
X43A Marvell 66.03 343 P 08 28 13.2
baz=162
T59A Double "B" Far 66.20 355 IAmb IAmb 08 28 27.7
comp=Z,30nm,0.8s
U54A Nelsons Funny 66.20 351 P 08 28 13.1
baz=170
U54A Nelsons Funny 66.20 351 IAmb IAmb 08 28 27.0
comp=Z,32nm,0.8s
T58A Grand View Acr 66.25 354 P 08 28 13.5
baz=174
V48A Smith Brothers 66.27 347 IAmb IAmb 08 28 22.0
comp=Z,69nm,1.4s
CLTN Cedars of Leba 66.51 347 IAmb IAmb 08 28 23.6
comp=Z,36nm,1.2s
MIAR Mount Ida 66.79 341 P 08 28 17.3
baz=159,SNR=8.1
MIAR Mount Ida 66.80 341 P P 08 28 16.9 +1.0
MIAR pmax pmax
comp=Z,48nm,1.3s
MIAR Mount Ida 66.80 341 P P 08 28 16.9 +1.0
MIAR IAmb IAmb 08 28 26.0
comp=Z,48nm,1.3s
U49A Red Boiling Sp 66.82 348 P P 08 28 16.1 +0.1
U49A IAmb IAmb 08 28 25.4
comp=Z,54nm,1.6s
TAOE Nuku Hiva Isla 66.84 273 eS S 08 37 05.0 -3.7
comp=Z,207nm,24.9s
TAOE Nuku Hiva Isla 66.84 273 eLR LR 08 48 30.0
comp=Z,954nm,26.2s
WVT Waverly 66.85 346 P 08 28 16.6
baz=165
WVT Waverly 66.86 346 P P 08 28 15.8 -0.4
WVT pmax pmax
comp=Z,28nm,0.9s
WVT Waverly 66.86 346 P P 08 28 15.8 -0.4
WVT IAmb IAmb 08 28 31.9
comp=Z,28nm,0.9s
S58A Poland Farm, P 66.87 355 P 08 28 17.7
baz=174
HBAR Harrisburg 66.96 343 P P 08 28 16.8 -0.2
S59A Mechanicsville 66.96 355 P 08 28 18.5
baz=175
W41B Gary Mavity, V 67.01 342 P 08 28 18.8
baz=161,SNR=5.4
ABTX Abilene, Hawle 67.05 335 P 08 28 19.7
baz=154,SNR=9.5
ABTX Abilene, Hawle 67.05 335 P P 08 28 19.7 +2.0
WHAR Wooly Hollow 67.13 342 P P 08 28 19.5 +1.5
WHAR IAmb IAmb 08 28 34.3
comp=Z,31nm,1.1s
T50A Nancy 67.15 349 IAmb IAmb 08 28 27.4
comp=Z,51nm,1.6s
GNAR Gosnell 67.19 344 P P 08 28 19.7 +1.4
LNXT Lenox 67.20 345 P P 08 28 18.7 +0.3
R58B Mineral 67.21 355 P 08 28 20.3
baz=174
R58B Mineral 67.21 355 P P 08 28 19.4 +1.0
R58B IAmb IAmb 08 28 35.0
comp=Z,34nm,0.8s
PEBM Pemiscott Bayo 67.30 344 P P 08 28 19.2 +0.1
X37A Clayton 67.38 339 P P 08 28 20.5 +0.9
X37A IAmb IAmb 08 28 29.9
comp=Z,47nm,1.3s
R59A King George, V 67.38 355 P 08 28 21.6
baz=175
S54A Dingess, Beckl 67.39 352 P 08 28 19.8
baz=171
W39A Magazine 67.46 341 P 08 28 21.7
baz=159,SNR=8.1
R58A Rapidan 67.55 355 P 08 28 22.2
baz=174
LCAR Lake Charles 67.57 343 P P 08 28 19.3 -1.5
LCAR IAmb IAmb 08 28 30.4
comp=Z,63nm,1.2s
R57A Stanardsville 67.59 354 P 08 28 22.4
baz=174
SBA Scott Base 67.65 191 P P 08 28 22.6 +1.7
SBA pmax pmax
comp=Z,49nm,1.3s
SBA Scott Base 67.65 191 P P 08 28 22.6 +1.7
SBA IAmb IAmb 08 28 24.1
comp=Z,48nm,1.3s
FCAR Ozark Folk Cen 67.65 342 IAmb IAmb 08 28 30.9
comp=Z,35nm,1.3s
R54A Victor 67.73 352 P 08 28 22.4
baz=171
U40A Yellville 68.29 342 P 08 28 26.7
baz=160
U40A Yellville 68.29 342 IAmb IAmb 08 28 35.1
comp=Z,53nm,1.2s
Q57A Strasburg 68.31 354 P 08 28 26.5
baz=174
R49A Shelbyville 68.44 349 IAmb IAmb 08 28 35.4
comp=Z,56nm,1.6s
HHAR Hobbs 68.52 341 IAmb IAmb 08 28 36.7
comp=Z,42nm,1.1s
WCI Wyandotte Cave 68.58 348 P 08 28 27.4
baz=166
WCI Wyandotte Cave 68.58 348 P P 08 28 27.3 +0.2
WCI pmax pmax
comp=Z,26nm,1.1s
WCI Wyandotte Cave 68.58 348 P P 08 28 27.2 +0.2
MNTX Cornudas Mount 68.58 330 P 08 28 27.5
baz=149,SNR=31
MNTX Cornudas Mount 68.58 330 IAmb IAmb 08 28 42.0
comp=Z,27nm,0.8s
WMOK Wichita Mounta 68.64 336 P 08 28 29.6
baz=155,SNR=10
WMOK Wichita Mounta 68.64 336 P P 08 28 26.3 -1.3
TBI Tubuai 68.65 255 eLR LR 08 49 16.7
comp=Z,818nm,26.8s,baz=103
TBI Tubuai 68.65 255 eT T 09 43 38.0
comp=Z,26nm,0.2s
Q52A Bidwell 68.66 351 IAmb IAmb 08 28 42.0
comp=Z,29nm,1.0s
VNDA Vanda 68.68 191 P P 08 28 28.8 +1.5
comp=Z,12nm,1.0s,baz=142,slow=5.0,SNR=38
VNDA LR LR 08 53 15.7
comp=Z,222nm,21.7s,baz=138,slow=31
VNDA Vanda 68.68 191 P P 08 28 28.6 +1.2
TUL1 Leonard 68.72 339 P 08 28 29.2
baz=158,SNR=6.9
P57A Homestead Farm 68.73 355 P 08 28 30.3
baz=174
P57A Homestead Farm 68.73 355 IAmb IAmb 08 28 45.2
comp=Z,41nm,0.9s
P59A Jarrettsville 68.74 356 P 08 28 30.2
baz=176
P56A Dayton Farm, R 68.82 354 P 08 28 30.2
baz=173
Q51A Peebles 68.87 350 IAmb IAmb 08 28 43.8
comp=Z,29nm,0.9s
HSIG 69.03 324 P P 08 28 30.8 +0.6
HSIG IAmb IAmb 08 28 41.2
comp=Z,65nm,1.5s
OK030 Cody Creek RV 69.05 338 P P 08 28 28.0 -2.1
OK030 IAmb IAmb 08 28 39.7
comp=Z,63nm,1.3s
BCOK Bluff Creek, N 69.08 338 P P 08 28 31.4 +1.2
MVL Millersville 69.13 356 IAmb IAmb 08 28 47.2
comp=Z,47nm,1.2s
OK029 Liberty Lake 69.15 338 IAmb IAmb 08 28 40.4
comp=Z,53nm,1.0s
P51A Williamsport 69.28 351 IAmb IAmb 08 28 46.1
comp=Z,36nm,0.8s
O58A Lewisberry 69.28 356 P 08 28 33.2
baz=175
P52A Corning 69.30 352 P 08 28 30.9
baz=170
P52A Corning 69.30 352 IAmb IAmb 08 28 46.3
comp=Z,34nm,0.9s
PAGS Pennsylvania G 69.38 356 IAmb IAmb 08 28 48.8
comp=Z,29nm,1.0s
O57A Amberson 69.42 355 P 08 28 34.1
baz=175
OLIL Olney 69.42 346 P P 08 28 31.9 -0.4
O59A Robesonia 69.43 356 P 08 28 33.9
baz=176
MSTX Muleshoe 69.45 333 P 08 28 33.9
baz=151,SNR=11
CCM Cathedral Cave 69.48 344 P 08 28 33.7
baz=162
CCM Cathedral Cave 69.48 344 P P 08 28 33.8 +1.1
CCM pmax pmax
comp=Z,102nm,1.4s
CCM Cathedral Cave 69.48 344 P P 08 28 33.8 +1.1
P49A Miami Univ. Ec 69.58 349 P 08 28 32.9
baz=168
P49A Miami Univ. Ec 69.58 349 IAmb IAmb 08 29 06.5
comp=Z,110nm,1.9s
P48A Milroy 69.62 349 IAmb IAmb 08 28 42.4
comp=Z,56nm,1.4s
S39A Bolivar 69.67 342 P P 08 28 35.0 +1.1
S39A IAmb IAmb 08 28 43.8
comp=Z,53nm,1.2s
MEH Mehetia 69.72 260 eT T 09 44 59.0
comp=Z,26nm,0.2s
Q44A Meyer Farm, Va 69.78 346 IAmb IAmb 08 28 43.5
comp=Z,40nm,1.1s
O53A New Philadelph 69.80 352 P 08 28 35.2
baz=171
O53A New Philadelph 69.80 352 IAmb IAmb 08 28 44.8
comp=Z,53nm,1.4s
AMTX Amarillo 69.83 334 P 08 28 37.0
baz=152
AMTX Amarillo 69.83 334 P P 08 28 36.2 +1.2
AMTX IAmb IAmb 08 28 54.6
comp=Z,52nm,1.1s
T35A Sooner Cattle 69.88 339 IAmb IAmb 08 28 45.4
comp=Z,51nm,1.4s
N60A Cedar Hill Far 69.94 357 P 08 28 37.4
baz=177
R40A Maddies Statio 69.96 343 P P 08 28 35.9 +0.2
N58A Sunbury 69.99 356 P 08 28 37.1
baz=175
N58A Sunbury 69.99 356 P P 08 28 37.2 +1.5
N58A IAmb IAmb 08 28 55.7
comp=Z,42nm,1.0s
ACSO Alum Creek Sta 70.00 351 P 08 28 36.5
baz=170
N59A State Game Lan 70.01 357 P 08 28 37.9
baz=176
P46A Rosedale 70.10 347 P P 08 28 36.8 +0.3
P46A IAmb IAmb 08 28 51.7
comp=Z,55nm,0.9s
SYO Syowa Base 70.12 159⇑ iP P 08 28 34.2 -2.1
SYO Syowa Base 70.12 159⇑ epP pP 08 28 43.2 +0.8
SYO Syowa Base 70.12 159⇑ esP sP 08 28 47.0 +2.6
O49A Covington 70.16 350 IAmb IAmb 08 28 51.1
comp=Z,35nm,0.9s
N56A West Decatur 70.17 355 P 08 28 38.1
baz=174
KAN13 South Haven SW 70.27 338 P P 08 28 38.5 +0.9
N54A Moraine State 70.37 353 P 08 28 39.3
baz=172
N54A Moraine State 70.37 353 IAmb IAmb 08 28 53.1
comp=Z,27nm,0.9s
121A Cookes Peak, D 70.37 328 P P 08 28 38.2 -0.4
121A IAmb IAmb 08 28 50.1
comp=Z,46nm,1.1s
M60A Port Jervis 70.37 358 P 08 28 39.3
baz=177
M62A Hamden 70.45 359 P 08 28 40.3
baz=179
KAN05 Bluff City Nor 70.48 338 P P 08 28 38.7 -0.2
M57A Sunshine Farm, 70.51 356 P 08 28 40.4
baz=175
N51A Ashland 70.60 352 IAmb IAmb 08 28 48.8
comp=Z,66nm,1.6s
M59A Waymart 70.62 357 P 08 28 41.3
baz=177
M56A Emporium 70.73 355 P 08 28 41.5
baz=174
M56A Emporium 70.73 355 IAmb IAmb 08 28 55.5
comp=Z,43nm,1.1s
M55A Ridgway 70.76 354 IAmb IAmb 08 28 56.4
comp=Z,43nm,0.9s
SFIN Lafayette 70.81 348 P 08 28 40.6
baz=166
SFIN Lafayette 70.81 348 IAmb IAmb 08 28 49.5
comp=Z,51nm,1.4s
L63A North Scituate 70.86 0 P 08 28 42.4
baz=180
O44A Mansfield 70.86 347 P P 08 28 41.2 +0.1
L63A North Scituate 70.86 0 IAmb IAmb 08 29 02.3
comp=Z,57nm,1.0s
M54A Oil Creek Stat 70.88 354 P 08 28 42.0
baz=179
M54A Oil Creek Stat 70.88 354 IAmb IAmb 08 28 56.8
comp=Z,31nm,0.9s
M53A WI Miller and 70.91 353 P 08 28 42.2
baz=172
M53A WI Miller and 70.91 353 P P 08 28 41.6 +0.2
M53A IAmb IAmb 08 28 56.1
comp=Z,40nm,1.1s
BRYW Bryant College 70.92 0 IAmb IAmb 08 29 02.7
comp=Z,49nm,1.0s
M51A Elyria 70.98 352 P 08 28 42.4
baz=170
L60A Shokan 71.02 358 P 08 28 42.5
baz=178
ALLY Alegheny Colle 71.07 353 IAmb IAmb 08 28 57.9
comp=Z,31nm,0.9s
P40A Paris 71.07 344 P P 08 28 42.9 +0.4
M52A Chesterland 71.09 352 P P 08 28 42.8 +0.3
M52A sP 08 28 51.3 +1.0
M52A IAmb IAmb 08 28 58.4
comp=Z,33nm,0.9s
L58A Harry Jones Me 71.14 357 P 08 28 44.4
baz=176
PPT2 Papeete2 71.14 260 eS S 08 37 55.8 -3.8
comp=Z,392nm,28.5s
PPT2 Papeete2 71.14 260 eLR LR 08 50 21.9
comp=Z,2μm,22.8s,baz=115
PPT2 Papeete2 71.14 260 eT T 09 46 40.3
comp=Z,2.8nm,0.3s
M50A Fremont 71.16 351 IAmb IAmb 08 28 57.8
comp=Z,40nm,0.8s
L59A Walton 71.25 357 P 08 28 43.8
baz=177
L59A Walton 71.25 357 IAmb IAmb 08 29 00.6
comp=Z,35nm,1.0s
QUA2 Belchertown 71.28 360 IAmb IAmb 08 28 54.4
comp=Z,73nm,1.5s
BINY Binghamton 71.30 357 P 08 28 45.3
baz=176
L56A Greenwood 71.33 356 P 08 28 44.9
baz=175
L56A Greenwood 71.33 356 IAmb IAmb 08 29 00.3
comp=Z,45nm,0.9s
L53A Girard 71.38 353 P 08 28 45.3
baz=172
HDIL Hopedale 71.42 346 P 08 28 45.5
baz=164
HDIL Hopedale 71.42 346 IAmb IAmb 08 28 53.9
comp=Z,50nm,1.1s
L61B Northampton 71.45 359 P 08 28 46.0
baz=179

HRV Adam Dziewonsk 71.50 0 P 08 28 46.4
baz=180
ERPA Erie 71.51 354 P 08 28 45.8
baz=172
ERPA Erie 71.52 354 P P 08 28 45.3 +0.2
ERPA IAmb IAmb 08 29 00.2
comp=Z,41nm,0.9s
P38A Dawn 71.54 342 P P 08 28 44.6 -0.6
P38A IAmb IAmb 08 28 54.9
comp=Z,38nm,1.1s
TUC Tucson 71.61 326 P P 08 28 48.2 +2.2
TUC pmax pmax
comp=Z,22nm,1.3s
TUC Tucson 71.61 326 P P 08 28 48.2 +2.2
K60A Five Rivers En 71.64 358 P 08 28 47.4
baz=178
K62A Royalston 71.66 360 P 08 28 47.8
baz=180
WVNY West Valley, N 71.68 355 IAmb IAmb 08 29 02.8
comp=Z,55nm,0.9s
TRY Troy 71.75 359 IAmb IAmb 08 29 04.4
comp=Z,38nm,0.9s
ANMO Albuquerque 71.82 331 *i* P P 08 28 47.7 +0.4
ANMO pmax pmax
comp=Z,27nm,1.3s
K59A Cooperstown 71.83 358 P 08 28 48.2
baz=177
K58A Earlville 71.85 357 P 08 28 46.9
baz=176
K57A Scipio Center 71.86 356 P 08 28 47.7
baz=176
K56A Middlesex 71.87 356 P 08 28 48.1
baz=175
L48A N Adams 71.89 350 P P 08 28 46.7 -0.6
L48A IAmb IAmb 08 29 02.1
comp=Z,32nm,0.8s
N41A Harden Midland 71.91 345 P P 08 28 47.4 0.0
N41A IAmb IAmb 08 28 56.9
comp=Z,53nm,1.0s
KSU1 Kansas State U 71.92 340 P P 08 28 47.7 +0.1
R32A Long Quarter, 71.95 338 P P 08 28 47.6 -0.2
R32A IAmb IAmb 08 28 58.2
comp=Z,57nm,1.3s
M44A Midewin, Midew 71.97 347 P P 08 28 48.0 +0.2
M44A IAmb IAmb 08 29 02.1
comp=Z,48nm,1.1s
J62A Henniker 72.22 0 P 08 28 51.2
baz=180
HQIL Hanson Quary C 72.33 347 P P 08 28 51.2 +1.3
214A Organ Pipe Nat 72.34 324 P 08 28 53.2
baz=143,SNR=13
214A Organ Pipe Nat 72.34 324 P P 08 28 52.3 +2.0
214A IAmb IAmb 08 29 11.0
comp=Z,89nm,1.3s
J61A Chester 72.35 359 P 08 28 52.1
baz=179
ACCN Adirondack Com 72.40 359 IAmb IAmb 08 28 53.1
comp=Z,58nm,1.5s
J56A Wolcott 72.42 356 P 08 28 50.9
baz=175
J56A Wolcott 72.42 356 P P 08 28 50.0 -0.4
J59A Piesco 72.50 358 P 08 28 52.5
baz=178
J57A Williamstown 72.51 357 P 08 28 52.2
baz=176
J57A Williamstown 72.51 357 P P 08 28 51.0 0.0
N38A Joes South For 72.56 343 IAmb IAmb 08 29 01.1
comp=Z,87nm,1.4s
CBKS Cedar Bluff 72.65 337 P P 08 28 49.9 -2.1
CBKS *PP pwP 08 29 01.8 -0.3
CBKS Cedar Bluff 72.65 337 P P 08 28 49.9 -2.1
CBKS pwP 08 29 01.8 -0.3
CBKS IAmb IAmb 08 29 02.4
comp=Z,45nm,1.1s
HNH Hanover 72.70 360 IAmb IAmb 08 29 09.7
comp=Z,39nm,1.2s
I58A Old Forge 72.75 358 P 08 28 53.4
baz=177
I60A Shoreham 72.85 359 P 08 28 54.1
baz=179
T25A Trinidad 72.86 333 P 08 28 56.2
baz=151,SNR=10.0
T25A Trinidad 72.86 333 IAmb IAmb 08 29 04.8
comp=Z,62nm,1.2s
L42A Oliver, Polo 72.89 346 P P 08 28 54.2 +0.9
L42A IAmb IAmb 08 29 02.8
comp=Z,41nm,1.2s
I57A Carthage 73.02 357 P 08 28 54.9
baz=176
I63A Otisfield 73.06 1 P P 08 28 56.7 +2.5
I63A IAmb IAmb 08 29 05.6
comp=Z,64nm,1.4s
PECO Prince Edward 73.09 356 P P 08 28 55.2 +0.9
PECO IAmb IAmb 08 29 04.5
comp=Z,100nm,1.7s
LIC Lamto 73.18 73 *e*P P 08 28 55.5 -0.2
comp=Z,121nm,1.3s
J47A Sunmer 73.22 350 IAmb IAmb 08 29 04.4
comp=Z,112nm,1.6s
LBNH Lisbon 73.24 360 P 08 28 56.4
baz=180
N35A Tabor 73.27 341 IAmb IAmb 08 29 05.0
comp=Z,33nm,0.8s
L40A Anamosa 73.28 345 IAmb IAmb 08 29 05.1
comp=Z,64nm,1.1s
I51A Listowel 73.29 353 P 08 28 56.0
baz=172
TIC Toumodi 73.42 72 *e*P P 08 28 57.0 -0.1
H58A Gabriels 73.45 358 P 08 28 57.3
baz=178
KIC Kosan Boka 73.49 73 *e*P P 08 28 57.6 +0.1
comp=Z,192nm,1.2s
H61A Lyndonville 73.53 360 P 08 28 58.8
baz=180
H57A Richville 73.53 357 P 08 28 58.2
baz=177
DBIC Dimbokro 73.56 72 P P 08 28 58.2 +0.3
comp=Z,66nm,1.0s,baz=209,slow=6.6,SNR=41
DBIC LR LR 08 59 17.7
comp=Z,797nm,19.4s,baz=210,slow=34
DBIC Dimbokro 73.56 72 P P 08 28 58.1 +0.2
LONY Lake Ozonia 73.66 358 P 08 28 59.0
baz=178
H59A Cadyville 73.66 359 P 08 28 59.1
baz=178
H63A New Sharon 73.68 1 P 08 29 00.5
baz=182
SDCO Great Sand Dun 73.82 333 P 08 29 00.1
baz=150,SNR=6.3
H53A Bobcaygeon 73.83 355 P 08 28 59.7
baz=174
KSCO Kaye Shedlock' 73.83 335 P P 08 29 01.5 +2.4
JFWS Jewell Farm 73.88 346 P 08 28 59.9
baz=163
SADO Sadowa 74.07 355 IAmb IAmb 08 29 16.3
comp=Z,40nm,0.9s
G63A Kingsbury 74.14 2 P 08 29 01.8
baz=182
G57A Newington 74.16 358 P 08 29 01.7
baz=177
PLVO Plevna 74.19 356 P P 08 29 01.8 +1.0
G62A West of Eustis 74.22 1 P 08 29 03.1
baz=181
G62A West of Eustis 74.23 1 IAmb IAmb 08 29 04.5
comp=Z,48nm,1.2s
S22A 4UR Ranch, Cre 74.36 332 P 08 29 08.8
baz=149,SNR=7.7
I42A Draeger Farm, 74.55 347 IAmb IAmb 08 29 12.8
comp=Z,82nm,1.6s
MVCO Mesa Verde 74.61 330 P 08 29 09.1
baz=147,SNR=13
G54A Lake Saint Pet 74.61 355 P 08 29 04.0
baz=174
Q24A Divide 74.73 334 P 08 29 06.8
baz=150,SNR=8.9
F64A Sherman 74.93 3 P 08 29 06.5
baz=183
F60A Warwick 74.97 360 P 08 29 06.5
baz=180
BC3 Big Chuckawall 75.04 323 P 08 29 09.1
baz=142,SNR=7.1
LMN Caledonia Moun 75.12 5 IAmb IAmb 08 29 10.4
comp=Z,39nm,1.1s
ALGO Algonquin Park 75.16 356 P 08 29 06.8
baz=174
E60A Ste Agathe de 75.37 0 P 08 29 08.3
baz=180
E58A La Victoria 75.38 359 P 08 29 07.7
baz=179
PV01 Paradox Valley 75.42 331 IAmb IAmb 08 29 19.9
comp=Z,50nm,1.4s
E61A Lac Etchemin 75.44 1 P 08 29 09.6
baz=181
E63A Oxbow 75.48 2 P 08 29 10.0
baz=183
PFO Pinyon Flats O 75.54 323 P P 08 29 11.6 +2.5
comp=Z,4.0nm,1.0s,baz=152,slow=6.2,SNR=3.1
PFO Pinyon Flats O 75.54 323 *i* P P 08 29 08.6 -0.5
PFO pmax pmax
comp=Z,45nm,1.2s
PFO Pinyon Flats O 75.54 323 P P 08 29 10.3 +1.2
PV13 Radium Mtn., P 75.55 331 P P 08 29 10.1 +0.9
PV13 IAmb IAmb 08 29 20.2
comp=Z,57nm,1.3s
PV02 Paradox Valley 75.55 331 P P 08 29 10.5 +1.3
PV02 IAmb IAmb 08 29 20.4
comp=Z,44nm,1.3s
E56A St. Veronique 75.60 358 P 08 29 09.5
baz=177
ISCO Idaho Springs 75.64 334 P 08 29 12.1
baz=150,SNR=9.5
ISCO Idaho Springs 75.64 334 P P 08 29 11.1 +1.4
ISCO pmax pmax
comp=Z,39nm,1.5s
ISCO Idaho Springs 75.64 334 P P 08 29 11.1 +1.4
SMCO Snowmass 75.64 332 IAmb IAmb 08 29 26.1
comp=Z,170nm,1.1s
PV19 Morning Glory 75.74 331 P P 08 29 12.3 +2.0
K31A O'Neill 75.79 340 P P 08 29 11.6 +1.4
PV14 Lion Creek, Pa 75.81 331 P P 08 29 10.4 -0.3
PV22 Blue Mesa, Par 75.85 331 P P 08 29 11.4 +0.5
D60A Saint Jean D'O 75.92 1 P 08 29 12.4
baz=181
GMRC Granite Mounta 76.03 324 P 08 29 14.7
baz=142
D55A Sainte-Anne-du 76.09 357 P 08 29 12.5
baz=177
D56A ZEC Mazanza, M 76.09 358 P 08 29 12.4
baz=177
D58A Chemin du LacG 76.10 359 P 08 29 13.1
baz=179
D62A Allapoint, All 76.12 2 P 08 29 13.4
baz=182
G40A Rib Lake 76.13 347 P P 08 29 12.3 +0.3
ECSD EROS Data Cent 76.20 342 P 08 29 13.3
baz=158
ECSD EROS Data Cent 76.20 342 IAmb IAmb 08 29 22.5
comp=Z,67nm,1.2s
E46A Sault Ste Mari 76.21 351 P P 08 29 12.2 -0.2
E46A IAmb IAmb 08 29 22.0
comp=Z,62nm,1.3s
LATQ La Tuque 76.39 359 P 08 29 14.4
baz=179
BATG Bathurst New B 76.45 4 P P 08 29 15.2 +1.4
E43A Lone Tree Farm 76.62 349 P P 08 29 15.1 +0.3
SPMN Marine on St. 76.64 345 P 08 29 15.5
baz=161
N23A Red Feather La 76.71 334 P 08 29 18.5
baz=150,SNR=10
PHWY Pilot Hill 76.88 335 IAmb IAmb 08 29 27.7
comp=Z,60nm,1.6s
SUR Sutherland 76.94 120 P P 08 29 18.5 +1.1
SUR IAmb IAmb 08 29 33.9
comp=Z,78nm,1.2s
O20A White River Ci 76.97 332 P 08 29 19.4
baz=148
O20A White River Ci 76.97 332 IAmb IAmb 08 29 28.4
comp=Z,69nm,1.1s
EDW2 Edwards Air Fo 77.32 323 P 08 29 25.9
baz=140
D41A Chassel 77.55 348 P P 08 29 21.1 +1.2
D41A IAmb IAmb 08 29 37.3
comp=Z,40nm,0.9s
MAW Mawson 77.57 164 P P 08 29 20.3 +0.3
comp=Z,40nm,0.6s,baz=218,slow=7.5,SNR=78
RWWY Rawlins 77.88 334 IAmb IAmb 08 29 33.3
comp=Z,66nm,1.1s
RDMU Red Mountain 77.88 332 IAmb IAmb 08 29 33.1
comp=Z,63nm,1.2s
MPMC Manual Prospec 77.96 324 P 08 29 29.4
baz=140
TPNV Topopah Spring 78.02 325 P 08 29 29.7
baz=141
ISA Isabella, Lake 78.17 323 P 08 29 29.7
baz=140,SNR=6.5
K22A Casper 78.44 335 P 08 29 27.4
baz=150
K22A Casper 78.44 335 IAmb IAmb 08 29 36.3
comp=Z,52nm,0.9s
KOWA Kowa 78.58 66 P P 08 29 27.0 +0.6
VES Vestal, Richgr 78.63 323 P 08 29 29.3
baz=139,SNR=9.9
R11A Troy Canyon, C 78.79 326 P 08 29 31.6
baz=142
RSSD Black Hills 78.83 337 P 08 29 28.9
baz=152
RSSD Black Hills 78.83 337 P P 08 29 28.9 +1.4
RSSD pmax pmax
comp=Z,21nm,1.0s
RSSD Black Hills 78.83 337 P P 08 29 28.9 +1.4
MATQ Matagami 78.93 356 P 08 29 27.8
baz=175
DUG Dugway, Tooele 78.97 329 P 08 29 31.2
baz=144,SNR=8.0
DUG Dugway, Tooele 78.97 329 IAmb IAmb 08 29 39.5
comp=Z,52nm,1.4s
TCUT Toone Canyon 79.11 331 IAmb IAmb 08 29 40.0
comp=Z,87nm,1.6s
DRLN Deer Lake 79.30 9 P P 08 29 31.1 +1.5
DRLN IAmb IAmb 08 29 31.8
comp=Z,60nm,1.1s
HWUT Hardware Ranch 79.58 331 IAmb IAmb 08 29 42.0
comp=Z,45nm,1.1s
BW06 Boulder Array 79.72 333 P 08 29 33.5
baz=147
BW06 Boulder Array 79.72 333 P P 08 29 33.1 +0.7
PDAR Pinedale Array 79.72 333 P P 08 29 33.8 +1.4
comp=Z,1.7nm,0.7s,baz=142,slow=9.0,SNR=15
PDAR PKKPbc PKKPbc 08 48 19.1 -2.3
comp=Z,0.6nm,0.7s,baz=270,slow=1.5,SNR=5.2
PDAR LR LR 09 01 54.3
comp=Z,488nm,19.5s,baz=158,slow=34
PDAR Pinedale Array 79.72 333 P P 08 29 32.7 +0.4
B35A Bob, Littlefor 79.81 345 IAmb IAmb 08 29 42.1
comp=Z,66nm,1.6s
E28A Huff 79.96 340 P P 08 29 34.5 +1.2
NVAR Mina Array Bea 80.19 325 P P 08 29 37.2 +2.2
comp=Z,2.1nm,0.8s,baz=134,slow=5.2,SNR=2.8
NVAR PKKPbc PKKPbc 08 48 19.4 -0.5
comp=Z,0.3nm,0.3s,baz=283,slow=2.0,SNR=4.4
NVAR LR LR 08 58 52.4
comp=Z,405nm,21.0s,baz=102,slow=31
AGMN Agassiz Nation 80.25 344 P 08 29 35.3
baz=159
AGMN Agassiz Nation 80.25 344 P P 08 29 34.9 +0.1
REDW Red Top Meadow 80.74 332 IAmb IAmb 08 30 13.0
comp=Z,52nm,1.4s
MDND Maddock 80.80 341 P 08 29 39.4
baz=156
FLWY Flagg Ranch 81.27 333 P P 08 29 41.8 +1.2
FLWY IAmb IAmb 08 29 51.6
comp=Z,51nm,1.3s
PNTR Pine Nut 81.35 324 pP 08 29 48.4 +1.4
RLMT Red Lodge 81.59 334 P 08 29 43.9
baz=148
RLMT Red Lodge 81.59 334 IAmb IAmb 08 29 53.0
comp=Z,85nm,1.9s
PAHR Pah Rah Range 81.71 325 IAmb IAmb 08 29 54.3
comp=Z,45nm,1.3s
YHH Holmes Hill 81.92 333 IAmb IAmb 08 30 00.5
comp=Z,36nm,1.1s
ULM Lac du Bonnet 82.08 345 P P 08 29 45.4 +0.9
comp=Z,13nm,0.9s,baz=162,slow=3.7,SNR=26
ULM LR LR 09 08 15.5
comp=Z,233nm,18.8s,baz=140,slow=37
ULM Lac du Bonnet 82.08 345 *c i*P P 08 29 44.4 0.0
ULM Lac du Bonnet 82.08 345 IAmb IAmb 08 29 59.2
comp=Z,32nm,1.0s
BOSA Boshof 82.09 118 P P 08 29 45.0 -0.4
comp=Z,22nm,0.8s,baz=231,slow=5.3,SNR=27
BOSA LR LR 09 02 38.5
comp=Z,615nm,19.0s,baz=226,slow=33
BOSA Boshof 82.09 118 P P 08 29 45.0 -0.4
BOSA pmax pmax
comp=Z,38nm,1.0s
BOSA Boshof 82.09 118 P P 08 29 45.0 -0.4
BOSA IAmb IAmb 08 29 46.4
comp=Z,38nm,0.9s
QLMT Earthquake Lak 82.19 333 P P 08 29 46.8 +1.3
HLID Hailey 82.39 330 P 08 29 48.6
baz=144
TORD Torodi Ar. Bea 82.48 70 P P 08 29 47.6 +0.2
comp=Z,74nm,0.9s,baz=260,slow=4.7,SNR=203
TORD LR LR 09 05 01.2
comp=Z,971nm,19.6s,baz=230,slow=35
TORD Torodi Ar. Bea 82.48 70 P P 08 29 47.4 0.0
ORV Oroville 82.68 324 IAmb IAmb 08 29 59.1
comp=Z,64nm,1.4s
DGMT Dagmar 82.72 339 P 08 29 49.4
baz=152
BOZ Bozeman (W) 82.90 333 P 08 29 50.0
baz=146
O03E Paynes Creek 83.38 324 P 08 29 54.0
baz=138
J08A Circle Bar Ran 84.06 328 IAmb IAmb 08 30 05.9
comp=Z,56nm,1.3s
LBTB Lobatse 84.11 115 P P 08 29 55.7 -0.2
LBTB pmax pmax
comp=Z,97nm,1.1s
LBTB Lobatse 84.11 115 P P 08 29 55.7 -0.2
M04C Macdoel 84.50 325 P 08 30 00.3
baz=138
CASY Casey 84.66 181 P P 08 29 58.5 +0.8
BMO Blue Mountains 84.69 329 P P 08 29 59.2 +1.1
BMO pmax pmax
comp=Z,35nm,1.8s
BMO Blue Mountains 84.69 329 P P 08 29 59.2 +1.1
MSO Missoula 84.83 332 P 08 30 00.7
baz=144
YBH Yreka Blue Hor 84.90 324 P P 08 30 01.3 +1.9
comp=Z,2.2nm,1.1s,baz=141,slow=6.5,SNR=2.5
I07A Izee 85.09 328 P P 08 30 00.9 +0.6
J05D Fort Rock, OR 85.32 326 P 08 30 03.4
baz=138
F10A Beach Ranch, E 85.53 330 IAmb IAmb 08 32 44.5
comp=Z,42nm,1.6s
PINE Pine Mountain 85.56 327 IAmb IAmb 08 30 23.9
comp=Z,22nm,0.8s
K02D Willamette Mer 86.09 324 P 08 30 07.7
baz=137
WALA Waterton Lakes 86.63 334 IAmb IAmb 08 30 23.3
comp=Z,26nm,1.0s
BKZ Black Stump Fm 86.78 226 IAmb IAmb 08 31 01.4
comp=Z,18nm,0.5s
H04A Detroit Lake 86.82 327 IAmb IAmb 08 30 24.5
comp=Z,24nm,1.0s
G05D Wamic, OR 86.82 327 P 08 30 11.2
baz=138
HAWA Hanford 86.87 329 IAmb IAmb 08 30 19.6
comp=Z,77nm,1.9s
URZ Urewera 86.92 227 P P 08 30 11.2 +1.7
comp=Z,8.3nm,0.9s,baz=127,slow=20,SNR=2.7
E07A Sunnyside 87.14 329 pP 08 30 20.4 +4.4
LTZ Lake Taylor 87.17 222 P P 08 30 11.8 +1.1
LTZ IAmb IAmb 08 30 26.5
comp=Z,32nm,1.0s
NEW Newport 87.28 332 pP 08 30 19.3 +2.7
RPZ Rata Peaks 87.29 220 P P 08 30 12.7 +1.4
comp=Z,16nm,0.9s,baz=34,slow=4.0,SNR=7.3
RPZ Rata Peaks 87.29 220 P P 08 30 13.1 +1.9
THZ Tophouse 87.43 223 P P 08 30 14.4 +2.4
THZ IAmb IAmb 08 30 30.8
comp=Z,19nm,0.8s
FFC Flin Flon 87.67 343 P P 08 30 12.2 -0.3
FFC pmax pmax
comp=Z,33nm,1.7s
FFC Flin Flon 87.67 343 P P 08 30 12.2 -0.3
FFC IAmb IAmb 08 30 21.9
comp=Z,33nm,1.7s
LTY Liberty 88.03 329 P P 08 30 15.1 +0.6
LTY IAmb IAmb 08 30 23.9
comp=Z,21nm,1.2s
D05A Enumclaw 88.58 328 P P 08 30 17.0 +0.1
D03D Eldon 89.34 328 P 08 30 21.5
baz=137
FCC Fort Churchill 89.72 349 IAmb IAmb 08 30 24.1
comp=Z,26nm,1.0s
TAM Tamanrasset 90.66 64 P P 08 30 27.7 +0.2
TAM pmax pmax
comp=Z,12nm,1.2s
TAM Tamanrasset 90.66 64 P P 08 30 27.7 +0.2
LSZ Lusaka 91.08 108 P P 08 30 30.2 +0.5
LSZ pmax pmax
comp=Z,60nm,1.3s
LSZ Lusaka 91.08 108 P P 08 30 30.2 +0.5
PAB San Pablo 92.91 46 P P 08 30 38.8 +1.3
PAB pmax pmax
comp=Z,15nm,1.3s
PAB San Pablo 92.91 46 P P 08 30 38.8 +1.3
ESDC Sonseca Array 93.23 46 P P 08 30 39.4 +0.5
comp=Z,3.0nm,1.0s,baz=248,slow=4.8,SNR=9.2
ESDC LR LR 09 09 46.6
comp=Z,897nm,21.1s,baz=240,slow=34
ESDC Sonseca Array 93.23 46 P P 08 30 39.5 +0.5
ESDC IAmb IAmb 08 30 48.8
comp=Z,28nm,1.4s
YKA Yellowknife Ar 97.73 341 P Pdif 08 30 59.2 +0.4
comp=Z,1.7nm,0.9s,baz=138,slow=4.6,SNR=27
YKA PKKPbc PKKPbc 08 47 33.3 -3.1
comp=Z,0.4nm,0.7s,baz=332,slow=3.2,SNR=8.2
YKA LR LR 09 16 00.3
comp=Z,151nm,19.6s,baz=0.0,slow=36
KEST Kesra 100.06 55 LR LR 09 19 08.6
comp=Z,1μm,18.8s,baz=186,slow=37
DZM Mont Dzumac 104.10 234 *e*SS SS 08 50 34.7 +1.5
comp=Z,146nm,26.4s
DZM Mont Dzumac 104.10 234 *e*LR LR 09 05 47.7
comp=Z,407nm,22.6s
INK Inuvik 107.39 340 PKKPbc PKKPbc 08 47 05.8 -1.8
comp=Z,1.2nm,0.8s,baz=342,slow=5.3,SNR=4.5
KHC Kasperske Hory 108.78 44 *e*PP PP 08 36 17.0 -3.4
ILAR Eielson Array 110.13 334 PKiKP PKiKP 08 35 55.6 +0.3
comp=Z,1.1nm,0.9s,baz=186,slow=1.7,SNR=8.4
ILAR PKKPbc PKKPbc 08 46 56.4 -2.5
comp=Z,0.6nm,1.1s,baz=304,slow=3.5,SNR=4.7
ILAR Eielson Array 110.13 334 *i* PKiKP PKiKP 08 35 55.4 +0.1
ILAR Eielson Array 110.13 334 PKiKP 08 35 55.4 +0.1
TRF Thorofare Moun 110.93 332 P 08 35 57.3
baz=114
BPAW Bear Paw Mtn. 111.47 332 P 08 35 58.5
baz=113
TOLK Toolik Lake Re 112.70 337 P 08 36 01.2
baz=112
BURAR Bucovina Array 115.57 48 PKiKP 08 36 06.8 +0.5
RDOG Red Dog Mine 117.27 335 P 08 36 09.5
baz=101
TNA Tin City 118.82 332 PKiKP 08 36 12.8 +0.9
TNA Tin City 118.82 332 P 08 36 12.9
baz=98
MNK Minsk 118.82 41 *i* PKP PKPdf 08 36 10.6 -1.6
comp=E,3.0nm,0.9s
MNK *i* PKP PKPdf 08 36 10.6 -1.6
comp=N,20nm,0.7s
MNK *i* PKP PKPdf 08 36 10.6 -1.6
comp=Z,20nm,1.0s
MNK *i* PP PP 08 37 29.7 -1.7
MNK *i* PPP PPP 08 40 00.6
MNK *i* SKS SKSdf 08 43 20.9 -1.9
MNK *i* SS SS 08 53 44.5 -5.0
MNK *i* SSS SSS 08 58 09.4
MNK *i* LQ LQ 09 20 21.6
MNK *i* LR LR 09 25 45.4
MNK *i* LRM MLR 09 29 27.1
comp=Z,224nm,16.4s
MNK *i* LRM MLR 09 29 29.7
comp=N,594nm,25.6s
MNK *i* LRM MLR 09 29 40.2
comp=E,34nm,19.0s
AKASG Malin Array Be 118.87 45 PKP PKPdf 08 36 11.9 -0.5
comp=E,3.6nm,0.7s,baz=261,slow=2.9,SNR=6.2
AKASG Malin Array Be 118.87 45 PKiKP PKPdf 08 36 12.0 -0.5
AKBB Malin Array Si 118.87 45 PKiKP PKPdf 08 36 11.0 -1.4
AKBB Malin Array Si 118.87 45 PKPdf PKPdf 08 36 11.0 -1.4
VSU Vasula 118.90 36 *i* PKiKP PKPdf 08 36 12.2 0.0
FINES FINESS Array B 119.04 33 PKP PKPdf 08 36 12.3 -0.2
comp=E,2.4nm,0.8s,baz=318,slow=1.9,SNR=5.0
BR131 Keskin Array S 119.34 59 *i* PKiKP PKPdf 08 36 13.8 -0.1
BR131 Keskin Array S 119.34 59 PKPdf PKPdf 08 36 12.8 -1.2
BRTR Keskin Array B 119.34 59 PKP PKPdf 08 36 13.9 -0.1
comp=E,4.1nm,0.8s,baz=181,slow=2.7,SNR=17

BRTR	Keskin Array B	119.34	59	PKPdf	PKPdf	08 36 13.5	-0.4		
ARCES	ARCESS Array B	119.72	24	PKP	PKiKP	08 36 14.0	+0.3		
	comp=E,3.3nm,0.9s,baz=288,slow=1.2,SNR=4.1								
ARCES	ARCESS Array B	119.72	24	PKiKP	PKiKP	08 36 14.0	+0.3		
GAMB	Gambell	120.23	330	P		08 36 15.4			
	baz=96								
GAMB	Gambell	120.23	330	PKPdf	PKiKP	08 36 14.9	+0.2		
ASAR	Alice Springs	121.76	208	PKP	PKPdf	08 36 18.3	-0.7		
	comp=E,5.6nm,0.9s,baz=142,slow=2.0,SNR=32								
ASAR				PKKPbc	PKKPbc	08 46 17.3	0.0		
	comp=E,2.3nm,0.8s,baz=344,slow=3.6,SNR=16								
APA	Apatity	122.58	26	⇓ iPKIKP	PKiKP	08 36 19.3	0.0		
ANN	Anapa	123.20	53	*i* PKIKP	PKPdf	08 36 12.5	-8.4		
ANN				*e*		08 36 17.4			
ANN				pmax	pmax				
	comp=Z,71nm,1.2s								
OBN	Obninsk	123.88	41	⇓ *e*PKIKP	PKiKP	08 36 22.2	0.0		
OBN				*e*PPP	PPP	08 40 46.9			
OBN				*e*		08 43 27.8			
OBN				pmax	pmax				
	comp=Z,67nm,1.6s								
OBN				MLR	MLR				
	comp=Z,483nm,19.0s								
RAYN	Ar Rayn	124.16	80	PKIKP	PKPdf	08 36 22.3	-1.2		
RAYN	Ar Rayn	124.16	80	PKPdf	PKPdf	08 36 22.3	-1.2		
MOS	Moscow	124.52	40	*i* PKIKP	PKPdf	08 36 22.7	-0.4		
MOS				pmax	pmax				
	comp=Z,59nm,0.8s								
MOS				MLR	MLR				
	comp=Z,1μm,25.0s								
SOC	Sochi	124.61	55	*i* PKIKP	PKPdf	08 36 23.0	-0.7		
SOC				*e*		08 38 10.9			
SOC				*e*		08 43 24.8			
SOC				*e*PS	PS	08 48 11.0	+0.3		
SOC				*e*SS	SS	08 55 02.6	-1.4		
SOC				pmax	pmax				
	comp=Z,15nm,0.7s								
WR0	Warramunga Arr	124.77	211	PKPdf	PKPdf	08 36 22.9	-1.9		
WB2	Warramunga Arr	124.87	210	PKPdf	PKPdf	08 36 23.4	-1.6		
WRA	Warramunga Arr	124.87	210	PKP	PKPdf	08 36 24.6	-0.4		
	comp=Z,13nm,0.9s,baz=159,slow=1.6,SNR=63								
WRA				PKKPbc	PKKPbc	08 46 04.8	-0.3		
	comp=Z,1.6nm,0.9s,baz=337,slow=2.9,SNR=8.2								
WRA	Warramunga Arr	124.87	210		PKPdf	08 36 24.5	-0.5		
WRAB	Tennant Creek	124.88	210	*i* PKIKP	PKPdf	08 36 25.0	-0.1		
WRAB	Tennant Creek	124.88	210		PKPdf	08 36 25.7	-1.4		
LPSR	Galich'ya Gora	125.11	44	*e*PKIKP	PKPdf	08 36 23.8	-0.6		
LPSR				pmax	pmax				
	comp=Z,20nm,0.9s								
VSR	Storozhevoye	125.16	46	*e*PKIKP	PKPdf	08 36 24.0	-0.5		
VSR				pmax	pmax				
	comp=Z,30nm,1.3s								
KLMR	Klimovskoe	125.51	34	*e*PKIKP	PKPdf	08 36 22.9	-1.9		
KLMR				pmax	pmax				
	comp=Z,80nm,1.4s								
KLMR	Klimovskoe	125.51	34	*e*PKPdf	PKPdf	08 36 23.0	-1.9		
KLMR				AMP		08 36 27.2			
	comp=Z,80nm,1.4s								
H11S2	WAKE ISLAND Hyd	125.89	272	T	T	10 55 44.0			
	baz=115,slow=75,SNR=377								
H11S1	WAKE ISLAND Hyd	125.90	272	T	T	10 55 27.5			
	baz=115,slow=75,SNR=285								
H11S3	WAKE ISLAND Hyd	125.91	272	T	T	10 55 26.4			
	baz=115,slow=75,SNR=252								
PMG	Port Moresby	126.18	230	PKP	PKiKP	08 36 28.6	+0.5		
	comp=Z,14nm,0.8s,baz=277,slow=8.1,SNR=3.0								
PMG	Port Moresby	126.18	230	*i* PKIKP	PKPdf	08 36 27.6	-0.1		
NEY	Neytrino	126.73	56	*i* PKIKP	PKiKP	08 36 29.3	+0.8		
SHA1	Shidzhatmaz	126.75	55	*i* PKIKP	PKPdf	08 36 27.7	-0.4		
KIV	Kislovodsk	126.80	55	*i* PKIKP	PKiKP	08 36 28.6	+0.1		
KIV				pmax	pmax				
	comp=Z,68nm,1.1s								
KIV				MLR	MLR				
	comp=Z,390nm,23.0s								
KIV	Kislovodsk	126.80	55		PKiKP	08 36 28.4	-0.1		
KBZ	Khabaz	126.92	55	PKP	PKiKP	08 36 28.7	+0.1		
	comp=Z,11nm,0.9s,baz=257,slow=3.7,SNR=19								
KBZ	Khabaz	126.92	55	*i* PKIKP	PKPdf	08 36 28.2	+0.1		
ZEI	Tsey	127.53	57	*e*PKIKP	PKPdf	08 36 28.6	-1.0		
ZEI				pmax	pmax				
	comp=Z,12nm,1.3s								
GNI	Garni	127.78	60	*i* PKIKP	PKiKP	08 36 31.0	+0.3		
PRGR	Permogore	128.37	33	*e*PKIKP	PKiKP	08 36 30.8	-0.1		
PRGR				pmax	pmax				
	comp=Z,39nm,0.9s								
BILL	Bilibino	128.71	336	PKIKP	PKPdf	08 36 31.1	+0.3		
BILL	Bilibino	128.71	336		PKPdf	08 36 31.1	+0.3		
FITZ	Fitzroy Crossi	129.90	202	PKPdf	PKPdf	08 36 34.1	-0.5		
BELG	Belogornoye	130.43	45	PKP	PKPdf	08 36 34.9	+0.4		
	comp=Z,28nm,1.1s,baz=223,slow=1.0,SNR=11								
BELG	Belogornoye	130.43	45	*i* PKIKP	PKPdf	08 36 34.5	0.0		
KIRV	Kirov	130.74	36	PKP	PKiKP	08 36 35.5	-0.2		
	comp=Z,8.3nm,0.6s,baz=236,slow=7.2,SNR=6.9								
ARU	Arti	136.04	38	*i* PKIKP	PKiKP	08 36 46.0	-0.6		
ARU						08 39 24.9			
ARU				SS	SS	08 57 21.6	-1.6		
ARU	Arti	136.04	38	PKPdf	PKPdf	08 36 44.8	-0.2		
SEY	Seymchan	136.05	333	PKP	PKiKP	08 36 46.5	0.0		
	comp=Z,16nm,0.8s,baz=107,slow=2.3,SNR=41								
SEY	Seymchan	136.05	333	*i* PKIKP	PKPdf	08 36 44.3	-0.5		
TIXI	Tiksi	136.16	351	PKP	PKPdf	08 36 45.3	+0.6		
	comp=Z,5.2nm,0.8s,baz=11,slow=4.3,SNR=10								
TIXI	Tiksi	136.16	351	*i* PKIKP	PKPdf	08 36 45.1	+0.4		
TIXI	Tiksi	136.16	351	PKPdf	PKPdf	08 36 44.7	0.0		
PETK	Petropavlovsk-	136.95	318	PKP	PKiKP	08 36 48.4	-0.2		
	comp=Z,18nm,0.9s,baz=90,slow=4.4,SNR=9.5								
PETK	Petropavlovsk-	136.95	318	PKIKP	PKiKP	08 36 48.2	-0.4		
PETK	Petropavlovsk-	136.95	318	PKPdf	PKiKP	08 36 48.2	-0.4		
SVE	Sverdlovsk	137.01	36	*e*PKIKP	PKiKP	08 36 48.1	-0.5		
SVE				pmax	pmax				
	comp=Z,24nm,1.3s								
AKTO	Aktyubinsk	137.11	46	PKIKP	PKPdf	08 36 47.7	+0.5		
GEYT	Alibeck	137.88	65	PKP	PKPdf	08 36 48.5	-0.6		
	comp=Z,5.2nm,0.8s,baz=184,slow=4.3,SNR=6.8								
GEYT	Alibeck	137.88	65	PKPdf	PKPdf	08 36 48.6	-0.5		
SOEI	Soe	138.13	204	PKP	PKPdf	08 36 51.2	+0.9		
NRIK	Noril'sk	138.24	11	PKP	PKiKP	08 36 50.1	-0.6		
	comp=Z,4.9nm,0.9s,baz=11,slow=0.8,SNR=9.1								
NRIK	Noril'sk	138.24	11	PKPdf	PKPdf	08 36 48.8	+0.1		
MA2	Magadan	138.32	329	*i* PKIKP	PKPdf	08 36 48.6	-0.5		
AB31	Akbulak array	138.55	48	*i* PKHKP	PKPpre	08 36 42.0			
ABKAR	Akbulak array	138.55	48		PKPpre	08 36 41.0			
EDFI	Ende, Flores	139.94	201	PKP	PKPdf	08 36 53.3	-0.3		
BRVK	Borovoye	143.58	39	*i* PKIKP	PKPbc	08 36 57.1	+0.9		
BRVK	Borovoye	143.58	39	PKPdf	PKPbc	08 36 57.2	+1.1		
BVAR	Borovoye Array	143.66	39	PKP	PKPbc	08 36 57.2	+0.8		
	comp=Z,3.4nm,0.7s,baz=199,slow=2.7,SNR=24								
LEM	Lembang	144.02	179	PKP	PKPbc	08 36 59.8	+0.9		
	comp=Z,165nm,0.7s,baz=135,slow=3.8,SNR=26								
LEM	Lembang	144.02	179	PKP	PKPbc	08 36 59.5	+0.7		
KAPI	Kappang	144.06	200	PKP	PKPbc	08 36 59.5	+0.8		
	comp=Z,37nm,0.8s,baz=223,slow=4.3,SNR=13								
KAPI	Kappang	144.06	200	PKPdf	PKPbc	08 36 58.8	+0.1		
DBJI	Dramaga	144.27	178	PKP	PKPbc	08 36 59.5	+0.1		
YAK	Yakutsk	144.39	343	PKP	PKPdf	08 36 59.2	-0.6		
	comp=Z,81nm,0.9s,baz=52,slow=0.8,SNR=23								
YAK	Yakutsk	144.39	343	*c i* PKIKP	PKPbc	08 36 58.5	+0.2		
YAK	Yakutsk	144.39	343	PKPdf	PKPbc	08 36 58.8	+0.4		
SANI	Sanana	144.42	212	PKP	PKPab	08 36 59.6	0.0		
BNSI	Bone	144.53	201	PKP	PKPdf	08 37 01.1	-0.6		
TNG	Tangerang	144.65	177	PKP	PKPdf	08 37 01.4	-0.5		
SPSI	Sidrap Palu	145.05	200	PKP	PKPab	08 37 02.0	+0.1		
KASI	Kota Agung	145.14	174	PKP	PKPdf	08 37 02.7	0.0		
BLSI	Bandar Lampung	145.36	175	PKP	PKPbc	08 37 02.8	-0.1		
LWLI	Liwa	145.60	173	PKP	PKPab	08 37 04.1	+0.1		
TTSI	Tana Toraja	145.90	201	PKP	PKPdf	08 37 04.3	+0.3		
KLSI		145.99	174	PKP	PKPdf	08 37 04.4	+0.2		
PALK	Pallekele	146.07	125	PKPbc	PKPbc	08 37 05.4	+0.2		
	comp=Z,16nm,0.8s,baz=357,slow=1.9,SNR=10								
PALK	Pallekele	146.07	125	*i* PKIKP	PKPdf	08 37 03.2	-1.2		
PALK	Pallekele	146.07	125		PKPab	08 37 05.6	-0.2		
BRZS	Berezniki	146.24	42	*e*PKP	PKPbc	08 37 04.2	-0.4		
	baz=42								
BRZS	Berezniki	146.24	42	*e*PKP2	PKPbc	08 37 04.2	-0.4		
TYV	Tymovskoe	146.44	320	*e*PKP2	PKPab	08 37 06.0	0.0		
TYV				pmax	pmax				
	comp=Z,300nm,2.5s								
TYV				pmax	pmax				
	comp=Z,54nm,1.0s								
BRLS	Borolday	146.49	55	*e*PKP	PKPbc	08 37 05.6	0.0		
	baz=56								
BRLS	Borolday	146.49	55	*e*PKP2	PKPbc	08 37 05.6	0.0		
KBL	Kabul	146.55	71	PKP2	PKPbc	08 37 06.1	-0.2		
KBL	Kabul	146.55	71		PKPbc	08 37 06.0	-0.2		
KBKI	Kotabaru	146.64	195	PKP	PKPdf	08 37 05.8	+0.5		
LHSI	Lahat	146.71	172	PKP	PKPdf	08 37 05.1	-0.3		
BBKI	Banjar Baru	146.75	192	PKP	PKPbc	08 37 06.8	-0.3		
KSI	Kapahiang	146.75	170	PKP	PKPbc	08 37 07.5	+0.3		
IUG	Iuzhnay	146.79	57	*e*PKP	PKPdf	08 37 05.8	+0.9		
	baz=57								
IUG	Iuzhnay	146.79	57	*e*PKP2	PKPdf	08 37 05.7	+0.9		
POO	Poona	146.94	101	*e*P	PKPdf	08 37 04.0	-1.7		
KK31	Karatay Array	146.96	55	*i* PKP2	PKPdf	08 37 05.8	+0.9		
KK31	Karatay Array	146.96	55	PKPdf	PKPdf	08 37 05.9	+1.0		
KKAR	Karatay Array	146.96	55	PKP2	PKPdf	08 37 05.8	+0.9		
KKAR	Karatay Array	146.96	55	PKPdf	PKPdf	08 37 05.8	+0.9		
APSI	Ampana	147.26	206	PKP	PKPbc	08 37 08.1	-0.5		
DZA	Taraz	147.59	55	*e*PKP	PKPdf	08 37 07.1	+1.0		
	baz=55								
DZA	Taraz	147.59	55	*e*PKP2	PKPdf	08 37 07.0	+1.0		
YSS	Yuzh-Sakhalins	147.96	313	*e*PKIKP	PKPdf	08 37 06.6	+0.2		
YSS				*e*		08 37 17.7			
YSS				pmax	pmax				
	comp=Z,40nm,0.8s								
YSS	Yuzh-Sakhalins	147.96	313		PKPbc	08 37 09.6	+0.1		
TPI	Tanjungpandan	148.07	179	PKP	PKPdf	08 37 07.9	+0.2		
KRJI	Kerinci	148.08	167	PKP	PKPbc	08 37 11.2	+0.3		
SISI	Saibi	148.28	163	PKP	PKiKP	08 37 12.4	-0.7		
MRSI	Marisa	148.42	207	PKP	PKPdf	08 37 09.3	+1.1		
BTLS	Baital	148.91	50	*e*PKP	PKPdf	08 37 09.4	+1.3		
	baz=50								
BTLS	Baital	148.91	50	*e*PKIKP	PKPdf	08 37 09.3	+1.3		
JKA	Kamikawa-asahi	148.98	308		PKPbc	08 37 11.7	-0.6		
ASAJ	Asahikawa	148.98	308	PKP	PKPdf	08 37 09.2	+1.0		
	comp=Z,28nm,0.8s,baz=247,slow=3.1,SNR=8.2								
ASAJ				PKPbc	PKPbc	08 37 11.7	-0.6		
	comp=Z,28nm,0.8s,baz=229,slow=5.1,SNR=14								
MTKI	Muara Teweh, K	149.19	193	PKP	PKPbc	08 37 12.5	-1.2		
KURK	Kurchatov	149.24	38	PKIKP	PKPdf	08 37 09.3	+0.9		
KURK	Kurchatov	149.24	38		PKiKP	08 37 13.5	-0.3		
KURBB	Kurchatov Arra	149.24	38	PKP	PKPdf	08 37 09.3	+0.9		
	comp=Z,30nm,0.8s,baz=304,slow=3.1,SNR=76								
KURBB				PKPbc	PKiKP	08 37 13.5	-0.3		
	comp=Z,24nm,0.5s,baz=306,slow=2.9,SNR=76								
KURBB	Kurchatov Arra	149.24	38	PKIKP	PKPdf	08 37 09.1	+0.7		
EKS2	Erkin-Say	149.39	55	P	PKPdf	08 37 10.7	+1.6		
	SNR=29								
TOLI2	Tolitoli	149.45	205		PKPbc	08 37 13.5	-0.9		
AML	Almayashu	149.46	56	P	PKPdf	08 37 11.0	+1.4		
	SNR=24								
USP	Ospenovka	149.75	53	P	PKPdf	08 37 10.9	+1.3		
	SNR=22								
GRNR	Gornyy	149.89	323	⇑ *i* PKP2	PKiKP	08 37 15.4	+0.2		
GRNR				pmax	pmax				
	comp=Z,20nm,1.1s								
AAK	Ala-Archa	149.91	55	PKP	PKPdf	08 37 10.8	+0.9		
	comp=Z,56nm,1.1s,baz=196,slow=2.2,SNR=23								
AAK				PKPbc	PKiKP	08 37 15.9	+0.2		
	comp=Z,72nm,1.0s,baz=230,slow=2.4,SNR=60								
AAK	Ala-Archa	149.91	55	P	PKPdf	08 37 11.9	+2.0		
	SNR=10								
AAK	Ala-Archa	149.91	55	PKPdf	PKPdf	08 37 11.5	+1.5		
CHMS	Chumysh	150.00	54	P	PKiKP	08 37 16.3	+0.5		
	SNR=18								
NIL	Nilore	150.01	73	PKHKP	PKPpre	08 37 10.7			
NIL	Nilore	150.01	73		PKPdf	08 37 10.7	+0.4		
UCH	Uchtor	150.03	55	P	PKPdf	08 37 12.2	+1.7		
	SNR=25								
ZALV	Zalesovo Beam	150.13	28	PKP	PKPdf	08 37 10.7	+1.0		
	comp=Z,165nm,0.8s,baz=318,slow=2.0,SNR=41								
ZALV				PKPbc	PKiKP	08 37 15.6	0.0		
	comp=Z,164nm,0.8s,baz=314,slow=3.0,SNR=106								
KBK	Karagaybulak	150.23	54	P	PKiKP	08 37 17.1	+0.7		
	SNR=21								
SEM	Semipalatinsk	150.27	37	*e*PKIKP	PKPdf	08 37 10.7	+0.3		
	baz=37								
SEM	Semipalatinsk	150.27	37	*e*PKIKP	PKPdf	08 37 10.6	+0.2		
GSI	Gunungsitoli	150.33	158		PKPbc	08 37 16.0	-0.5		
BKNI	Bangkinang	150.34	165	PKP	PKPdf	08 37 10.8	-0.5		
HYB	Hyderabad	150.42	107	*i* PKP	PKPdf	08 37 11.0	-0.3		
HYB				*ep*PKP	sPKPdf	08 37 21.0	+1.2		
MNSI	Mandailing Nat	150.44	162	PKP	PKPdf	08 37 11.0	-0.5		
TKM2	Tokmak 2	150.62	54	P	PKPdf	08 37 12.1	+1.0		
	SNR=13								
TKM2	Tokmak 2	150.62	54	PKIKP	PKPdf	08 37 11.3	+0.2		
STKI	Sintang	150.70	187	PKP	PKPdf	08 37 13.3	+1.4		
KUU	Kurty	150.83	51	*e*PKP	PKPdf	08 37 11.8	+0.6		
	baz=51								
KUU	Kurty	150.83	51	*e*PKIKP	PKPdf	08 37 11.7	+0.6		
SBSI	Sibolga	150.97	161	PKP	PKPdf	08 37 11.9	-0.4		
BOD	Bodaibo	151.26	354	*e*PKIKP	PKPdf	08 37 11.5	+0.2		
BOD				pmax	pmax				
	comp=Z,67nm,1.4s								
ULHL	Ulahol	151.26	55	P	PKPdf	08 37 13.5	+1.3		
	SNR=8.6								
CHKK	Chushkaly	151.29	51	*e*PKP	PKPdf	08 37 12.1	+0.2		
	baz=51								
CHKK	Chushkaly	151.29	51	*e*PKIKP	PKPdf	08 37 12.1	+0.2		
AAA	Alma-Ata	151.45	53	*e*PKP	PKPdf	08 37 13.5	+1.2		
	baz=52								
AAA	Alma-Ata	151.45	53	*e*PKIKP	PKPdf	08 37 13.4	+1.2		
MDOK	Medeo	151.56	53	*e*PKP	PKPdf	08 37 13.5	+1.0		
	baz=52								
MDOK	Medeo	151.56	53	*e*PKIKP	PKPdf	08 37 13.5	+1.0		
KSH	Kashi	151.71	60	PKPbc	PKPdf	08 37 12.8	0.0		
KSH				pPKP	pPKPdf	08 37 19.4	+0.2		
KSH				PP	PP	08 40 57.6	-2.1		
KSH				AMB	AMB				
	comp=Z,300nm,3.8s								
TDK	Taldyqorghan	151.81	48	*e*PKP	PKPdf	08 37 13.7	+1.1		
	baz=48								
TDK	Taldyqorghan	151.81	48	*e*PKIKP	PKPdf	08 37 13.7	+1.1		
ZEA	Zeya	151.94	336	*e*PKIKP	PKPdf	08 37 13.5	+1.0		
ZEA				pmax	pmax				
	comp=Z,30nm,1.1s								
RPSI	Rantau Prapat	152.07	160		PKPbc	08 37 19.6	-1.0		
PSI	Prapat	152.17	160	PKP	PKPdf	08 37 13.8	-0.4		
	comp=Z,5.8nm,0.8s,baz=179,slow=4.3,SNR=3.6								
PSI				PKPbc	pPKPdf	08 37 20.2	-0.4		
	comp=Z,20nm,0.8s,baz=180,slow=5.9,SNR=17								
SATY	Saty	152.53	52	*e*PKP	PKPdf	08 37 14.0	0.0		
	baz=52								
SATY	Saty	152.53	52	*e*PKIKP	PKPdf	08 37 13.9	0.0		
KPKS	Kokpek	152.57	51	*e*PKP	PKPdf	08 37 14.6	+0.6		
	baz=51								
KPKS	Kokpek	152.57	51	*e*PKIKP	PKPdf	08 37 14.5	+0.6		
BHK	Bhakra	152.58	78	*ex*	x	08 37 22.0			
TEY	Ternei	152.65	313	⇑ *e*PKIKP	PKiKP	08 37 21.4	+0.3		
TEY				pmax	pmax				
	comp=E,20nm,1.0s								
TEY				pmax	pmax				
	comp=Z,50nm,0.9s								
UZB	Uzunbulak	152.92	52	*e*PKP	PKPdf	08 37 14.9	+0.4		
	baz=51								
UZB	Uzunbulak	152.92	52	*e*PKIKP	PKPdf	08 37 14.9	+0.4		
MAKZ	Makanchi	153.19	42	PKIKP	PKPdf	08 37 14.8	+0.2		
MAKZ	Makanchi	153.19	42	PKPdf	PKPdf	08 37 14.8	+0.2		
SHLS	Shalkode	153.22	51	*e*PKP	PKPdf	08 37 16.3	+1.3		
	baz=51								
SHLS	Shalkode	153.22	51	*e*PKIKP	PKPdf	08 37 16.2	+1.3		
KLR	Kul'dur	153.23	324	PKP	PKPdf	08 37 14.9	+0.4		
	comp=Z,3.8nm,0.8s,baz=12,slow=3.3,SNR=10								
KLR				PKPbc	PKiKP	08 37 22.5	+0.3		
	comp=Z,12nm,0.8s,baz=52,slow=2.5,SNR=28								
MK31	Makanchi Array	153.38	42	PKIKP	PKPdf	08 37 14.6	-0.3		
MK31	Makanchi Array	153.38	42	PKPdf	PKPdf	08 37 14.6	-0.3		
MKAR	Makanchi Array	153.38	42	PKP	PKPdf	08 37 15.0	+0.1		
	comp=Z,5.5nm,0.9s,baz=302,slow=2.3,SNR=33								
MKAR				PKPbc	PKiKP	08 37 22.7	+0.1		
	comp=Z,19nm,0.8s,baz=321,slow=2.3,SNR=61								
MKAR				PKPab	PKPab	08 37 34.9	+0.2		
	comp=Z,16nm,0.8s,baz=319,slow=2.2,SNR=12								
MKAR	Makanchi Array	153.38	42	PKPdf	PKPdf	08 37 14.9	+0.1		
MJAR	Matsushiro Arr	153.87	294	PKP	PKPdf	08 37 16.3	+0.4		
	comp=Z,2.4nm,0.8s,baz=256,slow=1.6,SNR=5.3								
MJAR				PKPbc	sPKPdf	08 37 24.3	+0.3		
	comp=Z,6.1nm,1.1s,baz=134,slow=0.7,SNR=6.1								
MAT	Matsushiro	153.87	294	PKP	PKPdf	08 37 15.9	0.0		
IPM	Ipoh	154.35	163	PKPdf	PKPdf	08 37 16.3	-1.0		
IPM					PKPbc	08 37 25.2	-0.3		
ZSN	Zaisan	154.47	39	*e*PKP	PKPdf	08 37 16.9	+0.4		
	baz=38								
ZSN	Zaisan	154.47	39	*e*PKIKP	PKPdf	08 37 16.8	+0.4		
KULM	Kulim	155.03	162	PKPdf	PKPdf	08 37 16.6	-1.6		
USRK	Ussuriysk Ar.	155.96	315	PKP	PKPdf	08 37 18.5	+0.1		
	comp=Z,2.4nm,1.0s,baz=79,slow=1.0,SNR=6.8								
MOY	Mondy	157.08	12	*e*PKIKP	PKPdf	08 37 21.4	+1.5		
MOY				pmax	pmax				
	comp=Z,75nm,2.4s								
MDJ	Mudanjiang	157.19	318	PKP	PKPdf	08 37 20.0	-0.1		
MDJ	Mudanjiang	157.19	318		PKPdf	08 37 18.6	-1.4		
TLY	Talaya	157.44	7	PKP	PKPdf	08 37 21.6	+1.4		
	comp=Z,4.5nm,0.8s,baz=178,slow=3.1,SNR=12								
TLY				PKPab	PKPab	08 37 53.1	+1.4		
	comp=Z,7.3nm,0.7s,baz=316,slow=3.9,SNR=6.6								
TLY	Talaya	157.44	7	*i* PKIKP	PKPdf	08 37 21.7	+1.5		
TLY				pmax	pmax				
	comp=Z,80nm,1.6s								
TLY	Talaya	157.44	7	PKPdf	PKPdf	08 37 20.6	+0.4		
WMQ	Urumqi	158.20	43	*e*PKP	PKPdf	08 37 21.2	-0.3		
WMQ				LR	LR				
	comp=Z,720nm,19.1s								
WMQ				LR	LR				
	comp=Z,760nm,19.1s								
KOLN	Koldanda	158.37	88	*e*P	PKPab	08 37 55.7	-1.2		
	comp=Z,78nm,1.1s								
DANN	Dangsing	158.60	87	*e*P	PKPab	08 37 56.8	-1.2		
	comp=Z,90nm,1.0s								
ZAK	Zakamensk	158.68	9	*e*PKIKP	PKPdf	08 37 22.5	+0.6		
ZAK				pmax	pmax				
	comp=Z,12nm,1.6s								
GKN	Gorkha	159.31	88	*e*P	PKPab	08 37 59.8	-1.1		
	comp=Z,132nm,1.2s								
DMN	Daman	159.66	89	*e*P	PKPab	08 38 01.7	-0.8		
	comp=Z,109nm,1.0s								
KKN	Kakani	159.84	89	*e*P	PKPab	08 38 02.5	-0.8		
PKIN	Phulchoki	159.90	90	*e*P	PKPab	08 38 02.6	-1.0		
	comp=Z,90nm,1.1s								
PKI	Pulchoki	159.91	90	*e*P	PKPab	08 38 02.6	-1.2		
	comp=Z,115nm,1.1s								
GUN	Gumba	160.38	89	*e*P	PKPab	08 38 05.1	-0.7		
	comp=Z,131nm,1.2s								
JIRN	Jiri	160.61	90	*e*P	PKPab	08 38 06.2	-0.7		
	comp=Z,101nm,1.1s								
SONM	Songino Array	161.50	4	PKP	PKPdf	08 37 25.7	+0.5		
	comp=Z,5.5nm,1.1s,baz=275,slow=0.1,SNR=25								
SONM				PKPab	PKPab	08 38 10.8	+1.2		
	comp=Z,5.1nm,0.9s,baz=336,slow=4.2,SNR=9.5								
SONM				PP	PP	08 41 52.7	+0.4		
	comp=Z,0.3nm,0.4s,baz=339,slow=6.3,SNR=4.0								
SONM	Songino Array	161.50

0.1nm,0.3s,baz=57,slow=13,SNR=5.1
MKAR Makanchi Array 7.47 204 Pn Pn 08 44 23.0 +1.2
0.1nm,0.3s,baz=23,slow=13,SNR=2.1

DJA ***01*** *09:25:28.9±0.9, 10°S±5°×12°0E±°, h39km±21km, M4.3/11, mb4.6/3, mB5.2/1, MLv4.2/11, Mw(mB)4.6/1*
IDC ***01*** *09:25:51.1±5.1, 8.20S×122.74E, h243km±52km, mb3.1/1, mb1 3.0/3, mb1mx2.8/27, mbtmp3.5/3, Error ellipse: s-maj=142.2km s-min=15.0km az=57.0*
ISC 01 09:25:28.5±1.1, 10.2S±0.1×119.49E±0.04, h35km, n17, σ1ᵗ04/20, Sumba region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
WSI	**Waingapu**	**0.94**	**58**	P		**Pn**	**09 25 45.0**	**-0.2**
BASI	**Baing, Sumba**	**1.07**	**93**	P		**Pn**	**09 25 47.8**	**+0.7**
BASI				S		**Sn**	**09 26 01.9**	**+1.2**
PLAI	**Plampang**	**2.15**	**308**	P		**Pn**	**09 26 02.2**	**+0.2**
PLAI				S		**Sn**	**09 26 27.5**	**0.0**
EDFI	**Ende, Flores**	**2.59**	**57**	P		**Pn**	**09 26 08.1**	**0.0**
TWSI	**Taliwang, Sumb**	**2.94**	**299**	P		**Pn**	**09 26 13.5**	**+0.7**
TWSI				S		**Sn**	**09 26 48.3**	**+1.4**
MMRI	**Maumere**	**3.11**	**61**	P		**Pn**	**09 26 14.6**	**-0.5**
MMRI				S		**Sn**	**09 26 50.4**	**-0.7**
BATI	**Baumata**	**4.11**	**91**	P		**Pn**	**09 26 30.1**	**+1.2**
BATI				S		**Sn**	**09 27 16.8**	**+1.0**
SRBI	**Singaraja**	**4.71**	**296**	P		**Pn**	**09 26 36.1**	**-1.0**
SOEI	**Soe**	**4.72**	**85**	P		**Pn**	**09 26 38.5**	**+1.1**
BKSI	**Bulukumba**	**4.86**	**7**	P		**Pn**	**09 26 40.6**	**+1.4**
JAGI	**Jajag, Banyuwa**	**5.53**	**287**	P		**Pn**	**09 26 48.3**	**-0.2**
	0.4nm2µm86nm,0.6s							
BNSI	**Bone**	**5.77**	**6**	P		**Pn**	**09 26 52.6**	**+0.9**
SPSI	**Sidrap Palu**	**6.17**	**3**	P		Pn	09 27 06.4	+9.1
TTSI	**Tana Toraja**	**7.09**	**3**	P		Pn	09 27 15.2	+5.4
WRA	**Warramunga Arr**	**17.30**	**126**	P		**Pn**	**09 29 25.6**	**-1.9**
	0.3nm,0.3s,baz=308,slow=13,SNR=16							
WRA				S		Sn	09 32 23.2	-16
	0.1nm,0.3s,baz=321,slow=24,SNR=3.1							
ASAR	**Alice Springs**	**19.22**	**136**	P		**Pn**	**09 29 51.9**	**+1.0**
	0.2nm,0.3s,baz=322,slow=13,SNR=14							
ASAR				S		Sn	09 33 13.3	-12
	0.1nm,0.3s,baz=316,slow=25,SNR=4.1							
MKAR	**Makanchi Array**	**65.71**	**333**	P		**P**	**09 36 08.6**	**-1.1**
	0.5nm,0.6s,baz=146,slow=6.7,SNR=6.4							

IDC 01 09:30:35.9±3.9, 5.37S×152.98E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/32, mbtmp3.6/3, Error ellipse: s-maj=135.4km s-min=37.0km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.21**	**230**	P		P	09 35 45.0	+0.2
	1.9nm,0.9s,baz=55,slow=10,SNR=8.4							
ASAR	**Alice Springs**	**25.86**	**223**	P		P	09 36 09.4	-0.1
	0.8nm,0.7s,baz=54,slow=9.6,SNR=6.7							
MKAR	**Makanchi Array**	**80.87**	**319**	P		P	09 42 52.5	+0.5
	0.4nm,0.9s,baz=121,slow=4.5,SNR=3.0							
TORD	**Torodi Ar. Bea**	**150.65**	**287**	PKPbc		PKPbc	09 50 30.1	-1.0
	0.5nm,0.8s,baz=64,slow=3.4,SNR=1.7							

ISU ***01*** *09:34:56, 40.93N×69.76E, h10km*
KRNET ***01*** *09:34:56.1±0.1, 41.12N×69.68E, mb3.0*
NNC ***01*** *09:34:58.0±4.0, 40.85N×69.83E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=37.3km s-min=16.9km az=11.0*
ISC 01 09:34:57.4±1.3, 41.10N±0.04×69.74E±0.04, h9km±10km, n17, σ2ᵗ25/31, 16C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
TAS	**Tashkent**	**0.40**	**304**	*ex*		**Pg**	**09 35 06.0**	**+0.7**
TAS				*eS*		**Sb**	**09 35 10.0**	**-3.1**
CHMG	**Chimgan**	**0.49**	**24**	*ex*		**Pg**	**09 35 09.0**	**+1.9**
CHRV	**Charvak**	**0.56**	**17**	*eP*		**Pn**	**09 35 10.0**	**-1.8**
CHRV				*eS*		**Sn**	**09 35 22.0**	**+0.7**
TRKS	**Terek-Say**	**1.14**	**67**	⇑*iP*		**Pb**	**09 35 18.6**	**-0.9**
	baz=73							
TRKS				⇑*iS*		**Sn**	**09 35 34.8**	**-0.9**
	baz=73							
BTK	**Batken**	**1.33**	**141**	⇑*iP*		**Pg**	**09 35 22.3**	**-0.6**
	baz=41							
BTK				⇑*iS*		**Sg**	**09 35 41.6**	**+1.5**
	baz=41							
KK31	**Karatay Array**	**2.08**	**16**	Pn		**Pg**	**09 35 37.2**	**-0.2**
	3.6nm,0.3s,baz=200,slow=14,SNR=120							
KK31				⇓Sn		**Sg**	**09 36 07.8**	**+3.5**
	16nm,0.4s,baz=193,slow=27,SNR=5.1							
DRK	**Karamyk**	**2.26**	**135**	⇓*iP*		**Pb**	**09 35 37.4**	**-1.2**
	baz=35							
DRK				⇓*iS*		**Sb**	**09 36 07.6**	**+0.8**
	baz=35							
OHH	**Osh**	**2.38**	**103**	*eP*		**Pn**	**09 35 37.0**	**+0.2**
OHH				*eS*		**Sb**	**09 36 09.0**	**-1.1**
ARSB	**Arslanbob**	**2.46**	**84**	⇑*iP*		**Pb**	**09 35 40.3**	**-1.6**
	baz=84							
ARSB				⇑*iS*		**Sb**	**09 36 12.5**	**+0.1**
	baz=84							
ARSB	**Arslanbob**	**2.46**	**84**	*eP*		**Pb**	**09 35 41.0**	**-0.9**
ARSB				*eS*		**Sg**	**09 36 16.0**	**-0.4**
MNAS	**Manas**	**2.49**	**55**	⇑*iP*		**Pb**	**09 35 40.5**	**-1.9**
	baz=56							
MNAS				⇑*iS*		**Sb**	**09 36 12.8**	**-0.5**
	baz=56							
AML	**Almayashu**	**3.14**	**70**	⇑*iP*		**Pb**	**09 35 49.8**	**-3.9**
	baz=70							
AML				⇑*iS*		**Sb**	**09 36 29.1**	**-3.1**
	baz=70							
EKS2	**Erkin-Say**	**3.40**	**61**	⇓*iP*		**Pn**	**09 35 53.0**	**+2.2**
	baz=62							
EKS2				⇓*iS*		**Sn**	**09 36 34.4**	**+3.2**
	baz=62							
ARLS	**Aral**	**3.53**	**76**	⇑*iP*		**Pn**	**09 35 55.2**	**+2.6**
	baz=77							
ARLS				⇑*iS*		**Sn**	**09 36 38.1**	**+3.6**
	baz=77							
UCH	**Uchtor**	**3.75**	**71**	⇑*iP*		**Pn**	**09 35 58.3**	**+2.4**
	baz=71							
UCH				⇑*iS*		**Sn**	**09 36 43.7**	**+3.2**
	baz=71							
AAK	**Ala-Archa**	**3.87**	**65**	⇑Pg		**Pg**	**09 36 10.5**	**-1.1**
	1.9nm,0.3s							
AAK				⇓Lg		Lg	09 37 03.1	
	3.6nm,0.6s							
TKM2	**Tokmak 2**	**4.73**	**65**	⇑Pg		**Pg**	**09 36 24.0**	**-4.0**
	2.5nm,0.7s							
TKM2				⇓Lg		Lg	09 37 27.8	
	3.6nm,0.5s							

BJI ***01*** *09:35:54.3±0.0, 7.16S×132.88E, h25km, mB5.5/50, mb5.4/78, Ms4.9/75, Ms7 4.7/69*
MOS ***01*** *09:35:55.7±1.1, 6.83S×132.51E, h14km, mb5.8/83, MS5.0/20, Error ellipse: s-maj=6.7km s-min=4.1km az=115.8*
IDC ***01*** *09:35:55.1±0.3, 6.88S×132.49E, h0km, mb5.5/34, mb1 5.5/39, mb1mx5.5/42, mbtmp5.5/39, ML5.4/4, MS4.8/30, Ms1 4.8/30, ms1mx4.6/44, Error ellipse: s-maj=10.8km s-min=7.1km az=57.0*
NEIC ***01*** *09:35:56.0±1.4, 6.90S±0.05×132.54E±0.06, h9km±1km, mb5.7/232, Ms_20 5.2/330, Mwb5.5/26, Mww5.4, Mwc5.5(GCMT), Error ellipse: s-maj=9.7km s-min=9.0km az=271.0*
DJA ***01*** *09:35:57.2±0.7, 7°S±1°×13°2E±°, h14km±5km, M5.6/110, mB6.0/93, mb5.8/110, MLv6.2/13, Mw(mB)5.7/93, MwMwp5.2/35, Mwp5.5/35*
NEIC ***01*** *09:35:57.5, 6.94S×132.52E, h9km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=2.17; Mθθ=0.28; Mφφ=1.89; Mrθ=0.73; Mθφ=0.39; Mφr=0.24; Fault plane solution: Mo2.22000×10¹⁷ NP1:φs359.86000°, δ41.14000°, λ-111.64000°. NP2:φs207.64000°, δ52.30000°, λ-72.14000°. Principal axes: T 2.0227, Plg6.0000°, Azm285.0000°; N 0.3496, Plg14.0000°, Azm16.0000°; P -2.3722, Plg75.0000°, Azm173.0000°;*
NEIC ***01*** *09:35:59, 6.94S×132.39E, h36km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.59; Mθθ=0.12; Mφφ=1.47; Mrθ=0.36; Mθφ=0.56; Mφr=0.11; Fault plane solution: Mo1.67000×10¹⁷ NP1:φs9.00000°, δ42.00000°, λ-106.00000°. NP2:φs210.00000°, δ50.00000°, λ-75.00000°. Principal axes: T 1.6828, Plg4.0000°, Azm291.0000°; N -0.0188, Plg11.0000°, Azm21.0000°; P -1.6640, Plg79.0000°, Azm181.0000°;*
GCMT ***01*** *09:36:01.0±0.1, 6.82S±0.01×132.44E±0.01, h29km, MW5.5/147, Moment Tensor Solution. s138,c240; s147,c277; Duration: 1ŝ3 Moment tensor: Scale 10¹⁷ Nm; Mrr=1.37±.03; Mθθ=0.04±.02; Mφφ=1.42±.02; Mrθ=0.62±.04; Mθφ=0.78±.02; Mφr=0.91±.04; Best double couple: Mo1.91700×10¹⁷ NP1:φs13.00000°, δ28.00000°, λ-106.00000°. NP2:φs211.00000°, δ63.00000°, λ-82.00000°. Principal axes: T 2.0980, Plg17.0000°, Azm295.0000°; N -0.3550, Plg8.0000°, Azm27.0000°; P -1.7360, Plg71.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***01*** *09:36:01.6, 6.88S×132.45E, h29km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.48; Mθθ=0.00; Mφφ 1.48; Mrθ=0.55; Mθφ=0.78; Mφr=0.95; Fault plane solution: Mo2.00000×10¹⁷ NP1:φs18.00000°, δ28.00000°, λ-99.00000°. NP2:φs208.00000°, δ62.00000°, λ-85.00000°. Principal axes: T 2.1438, Plg17.0000°, Azm294.0000°; N -0.3267, Plg4.0000°, Azm25.0000°; P -1.8172, Plg73.0000°, Azm129.0000°;*
ISC 01 09:35:58.9±0.4, 6.95S±0.03×132.52E±0.03, h29km±2km, h29km:pP-P, n1199, σ1ᵗ55/1271, mb5.7/255, MS5.2/226, 76C-131D, Fault plane solution: NP1:φs206.13730°, δ67.95720°, λ-56.80125°. NP2:φs325.97348°, δ39.13953°, λ-143.51802°. Principal axes: T Plg16.4431°, Azm272.3287°; N Plg30.4989°, Azm12.3398°; P Plg54.4705°, Azm157.9156°; Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.59**	**229**	Pn		**Pb**	**09 36 28.3**	**+0.6**
SAUI	**Saumlaki**	**1.59**	**229**	P		**Pb**	**09 36 27.3**	**-0.4**
SAUI				S		**Sn**	**09 36 43.6**	**-1.1**
KMPI	**Kaimana, Papua**	**3.47**	**20**	P		**Pn**	**09 36 51.3**	**+0.4**
BNDI	**Bandanaira**	**3.54**	**313**	P		**Pn**	**09 36 53.5**	**+1.5**
BNDI				S		**Sn**	**09 37 33.7**	**+0.7**
FAKI	**Fak Fak**	**4.01**	**356**	Pn		**Pn**	**09 36 58.2**	**-0.2**
FAKI				Sn		**Sn**	**09 37 41.0**	**-3.5**
FAKI	**Fak Fak**	**4.01**	**356**	P		**Pn**	**09 36 57.8**	**-0.6**
FAKI				S		**Sn**	**09 37 40.9**	**-3.5**
KDU	**Kakadu**	**5.71**	**180**	P		**Pn**	**09 37 22.3**	**+0.6**
	baz=5.8,SNR=1000							
MTN	**Manton Dam**	**6.02**	**193**	P		**Pn**	**09 37 26.1**	**+0.1**
	baz=6.1,SNR=1000							
MTN				S		**Sn**	**09 38 32.7**	**-1.3**
	baz=6.1							
MTN	**Manton Dam**	**6.02**	**193**	Pn		**Pn**	**09 37 26.5**	**+0.5**
SIJI	**Sorong**	**6.16**	**348**	Pn		**Pn**	**09 37 26.9**	**-1.1**
	98nm,0.3s,baz=189,slow=8.6,SNR=130							
SIJI				Sn		**Sn**	**09 38 31.4**	**-6.2**
	296nm,0.3s,baz=10,slow=23,SNR=21							
SWI	**Sorong**	**6.17**	**348**	P		**Pn**	**09 37 27.3**	**-0.8**
SWI				pmax		pmax		
	comp=Z,1µm,0.7s							
SWI	**Sorong**	**6.17**	**348**	P		**Pn**	**09 37 27.0**	**-1.1**
	comp=Z,23nmcomp=Z,9µmcomp=Z,18µmcomp=Z,1µm,0.7s							
SRPI	**Seru, Papua**	**6.26**	**37**	P		**Pn**	**09 37 28.7**	**-0.6**
	comp=Z,6.1nmcomp=Z,7µmcomp=Z,14µmcomp=Z,1µm,1.0s							
NLAI	**Namlea**	**6.53**	**304**	P		**Pn**	**09 37 34.5**	**+1.4**
	comp=Z,6.9nmcomp=Z,21µmcomp=Z,2µm,1.1s							
BAKI	**Biak**	**6.74**	**32**	P		**Pn**	**09 37 37.3**	**+1.3**
	comp=Z,4.4nmcomp=Z,13µmcomp=Z,2µm,0.7s							
MMPI	**Merauke**	**7.94**	**101**	P		**Pn**	**09 37 53.1**	**+0.7**
	comp=Z,66nmcomp=Z,17µmcomp=Z,42µmcomp=Z,2µm,0.6s							
SANI	**Sanana**	**8.13**	**306**	P		**Pn**	**09 37 54.0**	**-1.0**
	comp=Z,11µmcomp=Z,28µmcomp=Z,4µm,0.7s							
SOEI	**Soe**	**8.63**	**251**	Pn		**Pn**	**09 38 02.2**	**+0.2**
SOEI	**Soe**	**8.63**	**251**	P		**Pn**	**09 38 02.2**	**+0.2**
	comp=Z,13µmcomp=Z,23µmcomp=Z,2µm,0.7s							
GENI	**Genyem**	**8.76**	**61**	P		**Pn**	**09 38 05.0**	**+1.3**
	comp=Z,12µmcomp=Z,19µmcomp=Z,1µm,0.7s							
TNTI	**Ternate**	**9.23**	**326**	Pn		**Pn**	**09 38 09.2**	**-0.9**
TNTI	**Ternate**	**9.23**	**326**	P		**Pn**	**09 38 10.7**	**+0.6**
	comp=Z,6µmcomp=Z,7µmcomp=Z,621nm,0.9s							
JAY	**Jayapura**	**9.27**	**62**	Pn		**Pn**	**09 38 11.0**	**+0.3**
	comp=Z,11nm,0.3s,baz=279,slow=7.4,SNR=35							
JAY				Sn		**Sn**	**09 39 52.1**	**-1.9**
	comp=Z,23nm,0.3s,baz=137,slow=21,SNR=6.8							
JAY	**Jayapura**	**9.27**	**62**	P		**Pn**	**09 38 10.9**	**+0.3**
	comp=Z,6µmcomp=Z,4µmcomp=Z,310nm,0.9s							
BATI	**Baumata**	**9.34**	**249**	Pn		**Pn**	**09 38 12.7**	**+1.0**
	comp=Z,61nm,0.3s,baz=129,slow=2.9,SNR=25							
BATI				Sn		**Sn**	**09 39 53.2**	**-2.6**
	comp=Z,249nm,0.3s,baz=307,slow=20,SNR=6.2							
BATI	**Baumata**	**9.34**	**249**	P		**Pn**	**09 38 12.2**	**+0.5**
	comp=Z,6µmcomp=Z,11µmcomp=Z,1µm,0.8s							
KDI	**Kendari**	**10.29**	**286**	P		**Pn**	**09 38 27.8**	**+3.1**
MMRI	**Maumere**	**10.33**	**260**	Pn		**Pn**	**09 38 24.7**	**-0.5**
MMRI	**Maumere**	**10.33**	**260**	P		**Pn**	**09 38 25.0**	**-0.2**
	comp=Z,7µmcomp=Z,10µmcomp=Z,607nm,0.8s							
EDFI	**Ende, Flores**	**10.88**	**260**	P		**Pn**	**09 38 32.7**	**-0.1**
	comp=Z,4µmcomp=Z,3µmcomp=Z,228nm,0.8s							
MNI	**Manado**	**11.32**	**317**	P		**Pn**	**09 38 37.8**	**-1.0**
MNI				pmax		pmax		
	comp=Z,783nm,0.8s							
KMSI	**Cibinong**	**11.33**	**311**	P		**Pn**	**09 38 37.9**	**-1.0**
	comp=Z,8µmcomp=Z,993nm,0.7s							
LUWI	**Luwuk**	**11.35**	**301**	Pn		**Pn**	**09 38 39.5**	**+0.2**
LUWI	**Luwuk**	**11.35**	**301**	P		**Pn**	**09 38 39.8**	**+0.6**
	comp=Z,7µmcomp=Z,11µmcomp=Z,1µm,1.2s							
BASI	**Baing, Sumba**	**12.25**	**254**	P		**Pn**	**09 38 48.2**	**-3.3**
	comp=Z,5µmcomp=Z,10µmcomp=Z,856nm,0.8s							
APSI	**Ampana**	**12.39**	**298**	P		**Pn**	**09 38 54.7**	**+1.3**
	comp=Z,5µmcomp=Z,5µmcomp=Z,602nm,1.1s							
BKSI	**Bulukumba**	**12.43**	**277**	P		**Pn**	**09 38 54.8**	**+0.8**
	comp=Z,7µmcomp=Z,3µmcomp=Z,268nm,1.0s							
COEN	**Coen**	**12.58**	**124**	Pn		**Pn**	**09 38 53.9**	**-2.2**
BNSI	**Bone**	**12.61**	**281**	P		**Pn**	**09 38 56.5**	**+0.1**
	comp=Z,3µmcomp=Z,338nm,0.9s							
SGSI	**Sangihe**	**12.66**	**326**	P		**Pn**	**09 38 55.5**	**-1.6**
	comp=Z,582nm,0.8s							
KAPI	**Kappang**	**12.84**	**278**	Pn		**Pn**	**09 39 01.1**	**+1.5**
	comp=Z,8.0nm,0.3s,baz=120,slow=8.0,SNR=12							
KAPI				LR		LR	09 45 03.0	
	comp=Z,3µm,18.0s,baz=90,slow=4							
KAPI	**Kappang**	**12.84**	**278**	P		**Pn**	**09 39 00.4**	**+0.7**
KAPI	**Kappang**	**12.84**	**278**	Pn		**Pn**	**09 39 00.4**	**+0.7**
WB0	**Warramunga Arr**	**12.88**	**172**	Pn		**Pn**	**09 38 56.2**	**-3.9**
MRSI	**Marisa**	**12.88**	**305**	P		**Pn**	**09 38 59.6**	**-0.5**
	comp=Z,7µmcomp=Z,9µmcomp=Z,1µm,0.9s							
FITZ	**Fitzroy Crossi**	**12.96**	**211**	Pn		**Pn**	**09 38 57.5**	**-3.7**
	comp=Z,21nm,0.3s,baz=38,slow=11,SNR=277							
FITZ				Sn		Sn	09 41 10.9	-13
	comp=Z,120nm,0.3s,baz=161,slow=14,SNR=14							
FITZ				LR		LR	09 44 41.4	
	comp=Z,9µm,20.4s,baz=36,slow=40							
FITZ	**Fitzroy Crossi**	**12.96**	**211**	P		**Pn**	**09 38 59.2**	**-2.0**
	baz=13,SNR=234							
FITZ				S		Sn	09 41 11.7	-13
	baz=13							
FITZ	**Fitzroy Crossi**	**12.96**	**211**			**Pn**	**09 38 57.7**	**-3.5**
I07AU	**WARRAMUNGA INI**	**13.03**	**172**	Sn		Sn	09 41 16.2	-10
	baz=346,slow=26,SNR=4.9							
SPSI	**Sidrap Palu**	**13.03**	**282**	P		**Pn**	**09 39 03.3**	**+1.1**
	comp=Z,7µmcomp=Z,5µmcomp=Z,375nm,1.1s							
WRAB	**Tennant Creek**	**13.03**	**172**	*ce*P		**Pn**	**09 38 58.2**	**-4.0**
WRAB				pmax		pmax		
	comp=Z,316nm,0.6s							
WRAB	**Tennant Creek**	**13.03**	**172**			**Pn**	**09 38 58.1**	**-4.1**
WRA	**Warramunga Arr**	**13.04**	**172**	Pn		**Pn**	**09 38 59.3**	**-3.0**
	comp=Z,30nm,0.3s,baz=354,slow=13,SNR=296							
WRA				Sn		**Sn**	**09 41 19.1**	**-7.5**
	comp=Z,69nm,0.3s,baz=1.9,slow=22,SNR=7.1							
WRA				LR		LR	09 44 42.9	
	comp=Z,23µm,18.3s,baz=345,slow=40							
WRA	**Warramunga Arr**	**13.04**	**172**	P		**Pn**	**09 38 57.7**	**-4.6**
WRA	**Warramunga Arr**	**13.04**	**172**			**Pn**	**09 38 57.7**	**-4.6**
WB2	**Warramunga Arr**	**13.04**	**172**			**Pn**	**09 38 58.4**	**-4.0**
WR0	**Warramunga Arr**	**13.09**	**172**			**Pn**	**09 38 59.0**	**-4.0**
TTSI	**Tana Toraja**	**13.23**	**286**	P		**Pn**	**09 39 07.1**	**+2.2**
	comp=Z,7µmcomp=Z,5µmcomp=Z,440nm,1.1s							
TOLI2	**Tolitoli**	**14.19**	**304**	Pn		**Pn**	**09 39 16.9**	**-1.1**
PMG	**Port Moresby**	**14.70**	**101**	Pn		**Pn**	**09 39 25.8**	**+0.9**
	comp=Z,7.8nm,0.3s,baz=294,slow=9.1,SNR=27							
PMG				Sn		**Sn**	**09 42 00.8**	**-6.1**
	comp=Z,3.4nm,0.3s,baz=352,slow=19,SNR=1.5							
PMG				LR		LR	09 45 59.9	
	comp=Z,13µm,19.4s,baz=278,slow=41							
PMG	**Port Moresby**	**14.70**	**101**	*ce*P		**Pn**	**09 39 25.7**	**+0.8**
PMG				pmax		pmax		
	comp=Z,237nm,1.0s							
PMG	**Port Moresby**	**14.70**	**101**	Pn		**Pn**	**09 39 25.5**	**+0.6**
PLAI	**Plampang**	**14.72**	**262**	P		**Pn**	**09 39 21.1**	**-4.2**
	comp=Z,5µmcomp=Z,6µmcomp=Z,715nm,0.8s							
MANU	**Manus Island**	**15.58**	**72**			**Pn**	**09 39 36.1**	**-0.5**
TWSI	**Taliwang, Sumb**	**15.60**	**262**	P		**Pn**	**09 39 32.2**	**-4.6**
	comp=Z,2µmcomp=Z,181nm,1.0s							
BKB	**Balikpapan**	**16.57**	**289**			**Pn**	**09 39 48.1**	**-1.2**
BKB	**Balikpapan**	**16.57**	**289**	P		**P**	**09 39 51.4**	**-0.2**
	comp=Z,7µmcomp=Z,7µmcomp=Z,426nm,1.0s							
AS31	**Alice Springs**	**16.68**	**176**			**Pn**	**09 39 46.9**	**-3.7**
ASAR	**Alice Springs**	**16.68**	**176**	Pn		**Pn**	**09 39 47.0**	**-3.7**
	comp=Z,34nm,0.3s,baz=342,slow=8.8,SNR=667							
ASAR				Sn		**Sn**	**09 42 46.9**	**-8.3**
	comp=Z,16nm,0.3s,baz=350,slow=22,SNR=5.5							
ASAR				LR		LR	09 46 47.1	
	comp=Z,17µm,18.9s,baz=352,slow=39							
ASAR	**Alice Springs**	**16.68**	**176**			**Pn**	**09 39 47.0**	**-3.7**
KBKI	**Kotabaru**	**16.68**	**282**	P		**Pn**	**09 39 50.7**	**0.0**
	comp=Z,5µmcomp=Z,402nm,0.9s							
BBKI	**Singaraja**	**17.20**	**265**	P		**Pn**	**09 39 57.0**	**-0.2**
	comp=Z,2µmcomp=Z,125nm,0.6s							
BBKI	**Banjar Baru**	**17.94**	**280**	P		**P**	**09 40 07.0**	**+0.2**
	comp=Z,6µmcomp=Z,469nm,1.2s							
ABJI	**Asem Bagus**	**18.16**	**266**	P		**Pn**	**09 40 08.2**	**-0.8**
	comp=Z,3µmcomp=Z,250nm,0.9s							
JAGI	**Jajag, Banyuwa**	**18.27**	**264**			**P**	**09 40 07.5**	**-2.8**
JAGI	**Jajag, Banyuwa**	**18.27**	**264**	P		**P**	**09 40 06.4**	**-4.0**
	comp=Z,2µmcomp=Z,158nm,1.1s							
KMMI	**Kalianget**	**18.42**	**269**	P		**Pn**	**09 40 13.9**	**+1.7**
	comp=Z,4µmcomp=Z,267nm,0.9s							
MYLDM	**Lahad Datu**	**18.46**	**310**	P		**Pn**	**09 40 12.9**	**+0.1**
MYLDM				lAmb		lAmb	09 40 39.6	
	comp=Z,803nm,1.2s							
MTKI	**Muara Teweh, K**	**18.56**	**288**	P		**P**	**09 40 13.2**	**-0.4**
	comp=Z,16µmcomp=Z,84nm,1.0s							
CTA	**Charters Tower**	**18.66**	**136**	P		**Pn**	**09 40 15.9**	**+0.8**
	comp=Z,9.9nm,0.3s,baz=307,slow=15,SNR=139							
CTA				S		**S**	**09 43 46.4**	**+0.6**
	comp=Z,3.3nm,0.3s,baz=52,slow=20,SNR=2.3							
CTA				LR		LR	09 48 14.2	
	comp=Z,14µm,18.0s,baz=320,slow=40							
CTAO	**Charters Tower**	**18.66**	**136**	P		**Pn**	**09 40 15.1**	**-0.1**
CTAO				pmax		pmax		
	comp=Z,844nm,1.1s							
CTAO	**Charters Tower**	**18.66**	**136**	P		**Pn**	**09 40 15.1**	**-0.1**
CTAO				lAmb		lAmb	09 40 26.3	
	comp=Z,844nm,1.1s							
PSA00	**Pilbara Seismi**	**19.01**	**219**	P		**P**	**09 40 16.1**	**-2.4**
PSA00				lAmb		lAmb	09 40 21.5	
	comp=Z,422nm,1.1s							
PSA00	**Pilbara Seismi**	**19.01**	**219**	P		**P**	**09 40 15.8**	**-2.7**
PSA00				lAmb		lAmb	09 40 21.1	
	comp=Z,231nm,1.1s							
RABL	**Rabaul**	**19.74**	**83**	P		**P**	**09 40 26.1**	**-0.4**
RABL				lAmb		lAmb	09 40 43.0	
	comp=Z,466nm,1.0s							
SPMM	**Sapulut**	**19.77**	**305**	P		**Pn**	**09 40 29.0**	**+0.5**
KKM	**Kota Kinabalu**	**20.77**	**308**	P		**P**	**09 40 37.7**	**-0.1**
PBKI	**Pangkalan Bun**	**21.20**	**280**	P		**P**	**09 40 39.3**	**-3.0**
	comp=Z,11µmcomp=Z,528nm,0.9s							
UGM	**Wanagama**	**21.83**	**266**	P		**P**	**09 40 49.7**	**+0.5**
	comp=Z,179nm,1.1s							
STKI	**Sintang**	**22.12**	**288**	P		**P**	**09 40 51.7**	**-0.6**
SBUM	**Sibu**	**22.31**	**294**	P		**P**	**09 40 53.3**	**-1.0**
SBUM	**Sibu**	**22.31**	**294**	P		**P**	**09 40 54.0**	**-0.3**
QLP	**Quilpie**	**22.49**	**152**	P		**P**	**09 40 57.3**	**+1.2**
	baz=23,SNR=390							
GIRL	**Giralia**	**23.54**	**227**	P		**P**	**09 41 08.5**	**+1.6**
	baz=24,SNR=21							
GIRL	**Giralia**	**23.54**	**227**	P		**P**	**09 41 07.5**	**+0.7**
KSM	**Kuching**	**23.69**	**290**	P		**P**	**09 41 06.3**	**-2.2**
KSM	**Kuching**	**23.69**	**290**	P		**P**	**09 41 08.0**	**-0.4**
GUMO	**Guam**	**23.80**	**31**	P		**P**	**09 41 07.9**	**-1.5**
GUMO				pmax		pmax		
	comp=Z,269nm,1.1s							
GUMO	**Guam**	**23.80**	**31**	P		**P**	**

NWAO S **S** **09 46 58.4 +4.9**
comp=Z,46nm,0.7s,baz=0.0,slow=12,SNR=2.3
NWAO LR LR 09 55 07.9
comp=Z,6µm,18.0s,baz=35,slow=39
NWAO Narrogin (SRO) 29.50 207 P **P** **09 42 01.4 +0.7**
baz=30,SNR=39
NWAO Narrogin (SRO) 29.50 207 P **P** **09 42 00.7 0.0**
NWAO IAmb IAmb 09 42 03.4
comp=Z,84nm,0.8s
NWAO Narrogin (SRO) 29.50 207 P **P** **09 42 00.6 0.0**
NWAO IAmb IAmb 09 42 03.4
comp=Z,106nm,0.8s
MYKOM Kota Tinggi 29.90 286 P **P** **09 42 05.4 +0.9**
MYKOM Kota Tinggi 29.90 286 P **P** **09 42 06.0 +1.6**
DLV T Lat 30.39 308 P **P** **09 42 08.7 -0.3**
ARPS Mount Arapiles 30.88 165 P **P** **09 42 14.1 +1.3**
baz=31,SNR=25
YNG Young 30.92 154 P **P** **09 42 14.4 +1.2**
baz=31,SNR=26
MGCD Mangrove Creek 31.31 149 P **P** **09 42 18.9 +2.2**
baz=31,SNR=23
RIV Riverview 31.83 150 P **P** **09 42 23.3 +2.1**
baz=32,SNR=8.1
JRMM Jerantut 31.86 289 P **P** **09 42 23.0 +1.2**
CAN Canberra 32.05 154 P **P** **09 42 23.9 +0.7**
CAN pmax pmax
comp=Z,203nm,1.2s
CAN MLR MLR
comp=Z,12µm,22.0s
CAN Canberra 32.05 154 P **P** **09 42 23.9 +0.7**
CAN IAmb IAmb 09 42 36.7
comp=Z,203nm,1.2s
YULB Yu-li 32.09 340 P **P** **09 42 23.2 -0.3**
CNB Canberra Magne 32.20 154 P **P** **09 42 25.8 +1.3**
baz=32,SNR=22
BKNI Bangkinang 32.23 282 P **P** **09 42 24.1 -0.9**
BKNI Bangkinang 32.23 282 P **P** **09 42 24.6 -0.4**
comp=Z,2µmcomp=Z,216nm,1.3s
SSLB Suanglung 32.57 340 P **P** **09 42 26.7 -1.1**
SSLB IAmb IAmb 09 42 53.8
comp=Z,101nm,1.2s
TOO Toolangi 32.69 161 P **P** **09 42 30.8 +2.0**
baz=33,SNR=96
TOO Toolangi 32.69 161 P **P** **09 42 29.6 +0.8**
TOO pmax pmax
comp=Z,242nm,1.2s
TOO MLR MLR
comp=Z,9µm,19.0s
TOO Toolangi 32.69 161 P **P** **09 42 29.6 +0.8**
NACB Ninganchiao 32.72 341 P **P** **09 42 27.9 -1.2**
YHNB Yeheng 33.25 341 P **P** **09 42 33.9 +0.1**
IPM Ipoh 33.42 289 P **P** **09 42 35.2 -0.3**
IPM Ipoh 33.42 289 P **P** **09 42 36.0 +0.5**
MNSI Mandailing Nat 33.76 282 P **P** **09 42 38.3 0.0**
comp=Z,9µmcomp=Z,62nm,0.4s
JOW Kunigami 33.83 353 LR LR 09 56 45.6
comp=Z,2µm,20.1s,baz=154,slow=37
JOW Kunigami 33.83 353 P **P** **09 42 38.1 -0.6**
JOW IAmb IAmb 09 42 58.7
comp=Z,181nm,1.0s
KULM Kulim 34.05 290 P **P** **09 42 39.6 -1.3**
KULM IAmb IAmb 09 42 52.5
comp=Z,91nm,1.1s
KULM Kulim 34.05 290 P **P** **09 42 41.0 +0.1**
QIZ Qiongzhong 34.14 319 P **P** **09 42 40.9 -0.7**
QIZ pP **pP** **09 42 48.6 -1.3**
QIZ S **S** **09 48 03.5 -2.7**
QIZ pmax pmax
comp=Z,24nm,1.9s
QIZ pmax pmax
comp=Z,350nm,8.2s
QIZ LR LR
comp=Z,640nm,18.6s
QIZ LR LR
comp=Z,480nm,26.0s
QIZ LR LR
comp=Z,950nm,22.6s
QIZ Qiongzhong 34.14 319 P **P** **09 42 41.6 0.0**
QZH Quanzhou 34.48 337 P **P** **09 42 46.1 +1.7**
QZH S **S** **09 48 08.0 -3.2**
QZH pmax pmax
comp=Z,36nm,1.1s
QZH LR LR
comp=Z,640nm,19.6s
QZH LR LR
comp=Z,420nm,13.7s
QZH LR LR
comp=Z,990nm,18.7s
UBPT Khong Chiam 34.73 310 P **P** **09 42 47.0 +0.3**
comp=Z,90nm,1.0s
UBPT Khong Chiam 34.73 310 P **P** **09 42 47.2 +0.5**
UBPT IAmb IAmb 09 42 52.5
comp=Z,148nm,1.0s
LHI Lord Howe Isla 34.82 138 P **P** **09 42 47.8 +0.5**
LHI IAmb IAmb 09 42 59.7
comp=Z,277nm,1.4s
LHI IAMs_20 IAMs_20 09 57 19.1
comp=Z,5µm,18.0s
RPSI Rantau Prapat 34.87 285 P **P** **09 42 47.7 -0.4**
RPSI IAmb IAmb 09 42 50.7
comp=Z,104nm,1.0s
RPSI IAMs_20 IAMs_20 09 57 09.7
comp=Z,3µm,21.0s
RPSI Rantau Prapat 34.87 285 P **P** **09 42 47.8 -0.2**
PSI Prapat 34.90 285 P **P** **09 42 47.8 -0.6**
comp=Z,66nm,0.9s,baz=180,slow=3.8,SNR=22
SANVU Saraoutou 35.01 107 P **P** **09 42 49.0 -0.2**
SANVU IAMs_20 IAMs_20 09 56 30.7
comp=Z,3µm,19.0s
JCJ Chichijima 35.11 15 P **P** **09 42 49.4 -0.4**
comp=Z,36nm,0.6s,baz=269,slow=15,SNR=5.1
JCJ Chichijima 35.11 15 P **P** **09 42 48.5 -1.4**
JCJ IAmb IAmb 09 43 16.2
comp=Z,132nm,0.9s
GSI Gunungsitoli 35.82 282 P **P** **09 42 54.8 -1.4**
GSI IAmb IAmb 09 43 20.4
comp=Z,76nm,0.8s
GSI Gunungsitoli 35.82 282 P **P** **09 42 54.7 -1.5**
comp=Z,109nm,0.9s
DZM Mont Dzumac 36.00 118 *e*P **P** **09 42 58.3 +0.5**
comp=Z,266nm,1.4s
DZM *e*S **S** **09 48 35.6 +0.6**
comp=Z,1µm,34.5s
DZM *e*LR LR 09 52 45.7
comp=Z,2µm,28.1s
DZM Mont Dzumac 36.00 118 P **P** **09 42 58.1 +0.3**
comp=Z,53nm,1.1s,baz=261,slow=9.9,SNR=11
DZM Mont Dzumac 36.00 118 P **P** **09 42 58.0 +0.2**
DZM IAmb IAmb 09 43 11.4
comp=Z,116nm,1.2s
TPTI 36.70 285 P **P** **09 43 02.1 -1.6**
comp=Z,586nmcomp=Z,37nm,0.9s
SRAK Srakaew 36.72 305 P **P** **09 42 59.8 -4.0**
comp=Z,5µmcomp=Z,648nm,0.7s
PATY Pattaya 37.13 302 P **P** **09 43 08.9 +1.5**
comp=Z,41nm,0.6s
PKDT Phuket 37.14 293 P **P** **09 43 08.0 +0.6**
comp=Z,58nm,0.8s
SURT Suratani 37.14 295 P P 09 43 14.0 +6.6
comp=Z,1.5nm,1.1s
KHON Khomkaen 37.40 308 P **P** **09 43 10.0 +0.4**
comp=Z,5µmcomp=Z,624nm,1.0s
LHMI Lhok Sumawe 37.51 288 P **P** **09 43 10.9 +0.3**
LHMI Lhok Sumawe 37.51 288 P **P** **09 43 10.3 -0.2**
comp=Z,4µmcomp=Z,426nm,0.9s
MLSI Meulaboh, Aceh 37.73 286 P **P** **09 43 11.4 -1.1**
comp=Z,4µmcomp=Z,409nm,0.8s
CHAI Chaiyaphum 37.81 307 P **P** **09 43 13.2 +0.2**
comp=Z,2µmcomp=Z,287nm,0.8s
TAU Tasmania Unive 38.12 162 P **P** **09 43 15.8 +0.4**
TAU pmax pmax
comp=Z,186nm,1.3s
TAU MLR MLR
comp=Z,11µm,21.0s
TAU Tasmania Unive 38.12 162 P **P** **09 43 15.8 +0.4**
TAU IAmb IAmb 09 43 28.5
comp=Z,186nm,1.3s
PHET Kaeng Krachan 38.17 301 P **P** **09 43 16.8 +0.7**
comp=Z,2µmcomp=Z,201nm,0.7s
NONG Nongkai 38.19 311 P **P** **09 43 16.8 +0.5**
comp=Z,187nm,0.9s
JSU Suzuyama 38.28 357 P **P** **09 43 17.2 +0.3**
JSU IAmb IAmb 09 43 44.0
comp=Z,180nm,1.5s
SRDT SRDT 39.31 303 P **P** **09 43 25.8 +0.1**
comp=Z,88nm,0.8s

SSE Sheshan 39.35 345 P **P** **09 43 27.1 +1.3**
SSE pP **pP** **09 43 32.8 -1.4**
SSE sP **sP** **09 43 38.8 +1.2**
SSE S **S** **09 49 24.5 -0.8**
SSE pmax pmax
comp=Z,47nm,0.9s
SSE pmax pmax
comp=Z,110nm,3.5s
SSE LR LR
comp=Z,310nm,23.0s
UTHA Uthaitani 39.67 305 P **P** **09 43 29.2 +0.5**
comp=Z,3µmcomp=Z,362nm,0.7s
SLVN Son La 39.73 316 P **P** **09 43 29.0 -0.2**
PHIT Phitsanulok 39.77 307 P **P** **09 43 30.8 +1.3**
comp=Z,8µmcomp=Z,903nm,0.8s
JNU Nakatsue 39.88 358 LR LR 09 59 46.1
comp=Z,969nm,21.0s,baz=156,slow=36
JNU Nakatsue 39.88 358 P **P** **09 43 30.4 +0.3**
JNU IAmb IAmb 09 43 57.7
comp=Z,201nm,1.1s
UTTA Uttaradit 39.98 308 P **P** **09 43 32.0 +0.8**
comp=Z,1µmcomp=Z,192nm,0.8s
JMN Monobe 40.47 2 P **P** **09 43 35.3 +0.2**
JMN IAmb IAmb 09 43 52.4
comp=Z,345nm,1.5s
UMPA Umpang Tak 40.48 305 P **P** **09 43 35.6 +0.1**
comp=Z,7µmcomp=Z,193nm,1.1s
SUKH Sukhothai 40.56 307 P **P** **09 43 37.3 +1.3**
comp=Z,2µmcomp=Z,213nm,0.9s
NJ2 Nanjing 40.91 342 ⇑P **P** **09 43 40.6 +1.9**
NJ2 pP **pP** **09 43 46.8 -0.3**
NJ2 sP **sP** **09 43 49.8 -0.8**
NJ2 S **S** **09 49 48.4 -0.2**
NJ2 sS **sS** **09 50 02.1 -0.4**
NJ2 pmax pmax
comp=Z,38nm,0.8s
NJ2 LR LR
comp=Z,910nm,17.1s
NJ2 LR LR
comp=Z,870nm,18.5s
NJ2 LR LR
comp=Z,1µm,24.5s
LAMP Lampang 41.14 308 P **P** **09 43 42.8 +2.0**
comp=Z,1µmcomp=Z,154nm,0.8s
WHN Wuhan 41.15 336 ⇓P **P** **09 43 41.9 +1.2**
WHN S **S** **09 49 49.5 -2.6**
WHN LR LR
comp=Z,1µm,18.8s
WHN LR LR
comp=Z,4µm,24.0s
CM36 Chiang Mai Arr 41.56 308 P **P** **09 43 45.0 +0.7**
CM04 Chiang Mai Arr 41.58 308 P **P** **09 43 45.0 +0.5**
comp=Z,681nmcomp=Z,73nm,0.8s
CM09 Chiang Mai Arr 41.60 308 P **P** **09 43 46.0 +1.4**
comp=Z,815nmcomp=Z,88nm,1.2s
CM35 Chiang Mai Arr 41.60 308 P **P** **09 43 45.0 +0.4**
CM01 Chiang Mai Arr 41.61 308 P **P** **09 43 46.1 +1.4**
comp=Z,1µmcomp=Z,81nm,0.9s
CM05 Chiang Mai Arr 41.61 308 P **P** **09 43 46.0 +1.3**
comp=Z,597nmcomp=Z,80nm,1.0s
GYA Guiyang 41.61 324 ⇓P **P** **09 43 45.6 +0.8**
GYA PP **PnPn** **09 45 29.0 +2.7**
GYA PcP **PcP** **09 45 42.3 +0.7**
GYA S **S** **09 49 54.1 -5.4**
GYA sS sS 09 50 18.1 +4.8
GYA pmax pmax
comp=Z,54nm,0.7s
GYA LR LR
comp=Z,780nm,27.0s
CM02 Chiang Mai Arr 41.63 308 P **P** **09 43 46.2 +1.3**
comp=Z,782nmcomp=Z,108nm,1.1s
CMAR Chiang Mai Arr 41.64 308 P **P** **09 43 46.0 +1.0**
comp=Z,28nm,0.7s,baz=138,slow=6.9,SNR=108
CMAR S **S** **09 49 54.5 -5.5**
comp=Z,0.8nm,0.3s,baz=138,slow=12,SNR=4.6
CMAR LR LR 10 04 24.1
comp=Z,336nm,18.9s,baz=184,slow=41
CMAR Chiang Mai Arr 41.64 308 P **P** **09 43 46.0 +1.0**
CMAR Chiang Mai Arr 41.64 308 P **P** **09 43 44.8 -0.2**
CM13 Chiang Mai Arr 41.65 308 P **P** **09 43 46.3 +1.3**
comp=Z,647nmcomp=Z,88nm,1.0s
CM15 Chiang Mai Arr 41.66 308 P **P** **09 43 46.0 +0.9**
comp=Z,785nmcomp=Z,121nm,1.0s
CM34 Chiang Mai Arr 41.70 308 P **P** **09 43 46.0 +0.5**
JHS Saijyo 41.72 1 P **P** **09 43 45.7 +0.3**
JHS IAmb IAmb 09 44 13.6
comp=Z,152nm,1.0s
CM32 Chiang Mai Arr 41.83 308 P **P** **09 43 47.0 +0.5**
CMMT Chiang Mai 41.84 308 P **P** **09 43 46.4 -0.2**
comp=Z,801nmcomp=Z,76nm,1.2s
CHTO Chiang Mai 41.84 308 P **P** **09 43 47.4 +0.8**
CHTO pmax pmax
comp=Z,52nm,1.1s
CHTO Chiang Mai 41.84 308 P **P** **09 43 47.3 +0.7**
CHTO IAmb IAmb 09 43 59.1
comp=Z,152nm,1.1s
CHTO Chiang Mai 41.84 308 **P** **09 43 47.5 +0.9**
CHTO IAMs_20 IAMs_20 09 59 31.8
comp=Z,768nm,20.0s
CM33 Chiang Mai Arr 41.84 308 P **P** **09 43 47.0 +0.4**
JWT Wachi 42.09 4 P **P** **09 43 48.1 -0.2**
JWT IAmb IAmb 09 44 01.3
comp=Z,141nm,0.8s
MHMT Maesarieng 42.29 307 P **P** **09 43 50.0 -0.2**
JGF Kuroka 42.56 6 P **P** **09 43 51.8 -0.4**
KMI Kunming 43.08 319 ⇓P **P** **09 43 58.2 +1.3**
KMI pP pP 09 44 05.0 -0.3
KMI sP sP 09 44 08.2 -0.5
KMI PP **PP** **09 45 38.5 +1.2**
KMI PcP **PcP** **09 45 50.6 +4.0**
KMI S **S** **09 50 20.3 -1.1**
KMI SS **SS** **09 53 33.0 -1.6**
KMI pmax pmax
comp=Z,37nm,0.7s
KMI LR LR
comp=Z,310nm,20.5s
KMI LR LR
comp=Z,440nm,28.4s
KMI LR LR
comp=Z,760nm,17.9s
KMI Kunming 43.08 319 P **P** **09 43 56.8 -0.1**
KMI pmax pmax
comp=Z,92nm,1.2s
KMI Kunming 43.08 319 P **P** **09 43 56.8 -0.1**
ENH Enshi 43.10 330 P **P** **09 43 56.1 -0.6**
TJN Taejon 43.36 354*ce*P **P** **09 43 59.0 +0.4**
JYT Yasato 43.54 9 P **P** **09 43 58.9 -1.1**
MAJO Matsushiro 43.59 7*d*iP **P** **09 43 59.0 -1.5**
MAJO pmax pmax
comp=Z,47nm,1.1s
MAJO Matsushiro 43.59 7 P **P** **09 43 59.9 -0.5**
MJAR Matsushiro Arr 43.59 7 P **P** **09 43 59.9 -0.6**
comp=Z,21nm,1.0s,baz=184,slow=8.4,SNR=20
MJAR LR LR 10 02 45.9
comp=Z,706nm,18.2s,baz=185,slow=37
MJB9 Matsu-Tunnel 43.59 7 P **P** **09 43 59.9 -0.6**
MJB9 IAmb IAmb 09 44 21.4
comp=Z,81nm,0.8s
DGPR DIGLIPUR 44.11 297⇑*e*P **P** **09 44 03.8 -1.2**
KSAR Wonju Array Be 44.37 355 P **P** **09 44 07.7 +1.0**
KSAR Wonju Array Be 44.37 355 P **P** **09 44 07.7 +1.0**
KSRS Korea Array 44.38 355 P **P** **09 44 08.0 +1.2**
comp=Z,35nm,0.9s,baz=175,slow=9.7,SNR=77
KSRS LR LR 10 03 59.7
comp=Z,888nm,19.2s,baz=168,slow=38
KSRS Korea Array 44.38 355 P **P** **09 44 08.0 +1.2**
KS19 Wonju Array Si 44.43 355 P **P** **09 44 07.0 -0.2**
INCN Inchon 44.54 353 P **P** **09 44 07.3 -0.8**
INCN pmax pmax
comp=Z,44nm,0.9s
INCN MLR MLR
comp=Z,1µm,19.0s
INCN Inchon 44.54 353 P **P** **09 44 07.3 -0.8**
JMM Marumori 45.24 9 P **P** **09 44 13.1 -0.5**
JMM IAmb IAmb 09 44 39.1
comp=Z,198nm,1.2s
TIA Tai'an 45.30 342 P **P** **09 44 14.6 +0.4**
TIA S **S** **09 50 49.6 -3.3**
TIA ScS **ScS** **09 54 08.8 -0.3**
TIA pmax pmax
comp=Z,23nm,1.6s
TIA LR LR
comp=Z,770nm,19.8s
TIA LR LR
comp=Z,270nm,17.5s

TIA LR LR
comp=Z,760nm,19.1s
MSVF Nonsavu 45.64 108*d*iP **P** **09 44 18.3 +1.0**
MSVF pmax pmax
comp=Z,167nm,0.9s
MSVF Nonsavu 45.64 108 P **P** **09 44 18.1 +0.8**
MSVF IAmb IAmb 09 44 19.7
comp=Z,142nm,0.8s
FUNA Funafuti 46.26 95 P **P** **09 44 21.5 -0.6**
XAN Xi'an 46.49 333 P **P** **09 44 23.8 +0.1**
XAN pP pP 09 44 31.3 -0.9
XAN S **S** **09 51 06.3 -3.9**
XAN SS **SS** **09 54 29.7 -6.9**
XAN pmax pmax
comp=Z,23nm,1.0s
XAN pmax pmax
comp=Z,150nm,3.7s
XAN LR LR
comp=Z,500nm,17.8s
XAN LR LR
comp=Z,730nm,20.0s
XAN LR LR
comp=Z,1µm,25.0s
XAN Xi'an 46.49 333 P **P** **09 44 23.4 -0.2**
XAN S **S** **09 51 13.5 +3.3**
XAN pmax pmax
comp=Z,56nm,0.9s
XAN Xi'an 46.49 333 P **P** **09 44 23.4 -0.2**
XAN IAmb IAmb 09 44 31.8
comp=Z,56nm,0.9s
XAN **S** **09 51 13.5 +3.3**
CD2 Chengdu 46.64 325⇑*i*P **P** **09 44 25.6 +0.7**
CD2 pP pP 09 44 34.6 +1.2
CD2 sP sP 09 44 38.4 +1.6
CD2 S **S** **09 51 15.6 +3.1**
CD2 sS sS 09 51 27.0 +0.5
CD2 SS **SS** **09 54 34.4 -4.7**
CD2 pmax pmax
comp=Z,70nm,1.2s
CD2 pmax pmax
comp=Z,770nm,9.4s
CD2 LR LR
comp=Z,1µm,21.3s
CD2 LR LR
comp=Z,940nm,22.5s
CD2 LR LR
comp=Z,2µm,21.7s
DL2 Dalian 46.73 348 P **P** **09 44 25.8 +0.5**
DL2 sP **sP** **09 44 38.3 +1.1**
DL2 PP **PP** **09 46 20.0 +4.3**
DL2 S **S** **09 51 12.5 -0.8**
DL2 SS **SS** **09 54 33.5 -6.6**
DL2 pmax pmax
comp=Z,42nm,1.0s
DL2 pmax pmax
comp=Z,570nm,4.7s
DL2 LR LR
comp=Z,830nm,22.1s
DL2 LR LR
comp=Z,490nm,16.2s
DL2 LR LR
comp=Z,1µm,23.3s
OUZ Omahuta 47.02 133 P **P** **09 44 28.7 +0.9**
OUZ IAmb IAmb 09 44 32.1
comp=Z,103nm,1.3s
JTM Tenmabayashi 48.14 9 P **P** **09 44 34.4 -1.9**
JTM IAmb IAmb 09 45 00.7
comp=Z,63nm,0.9s
TIY Taiyuan 48.22 339 *e*P **P** **09 44 37.8 +0.7**
TIY sP **sP** **09 44 49.1 0.0**
TIY S **S** **09 51 33.2 -1.6**
TIY sS **sS** **09 51 50.8 +2.0**
TIY pmax pmax
comp=Z,41nm,0.8s
DCZ Deep Cove 48.69 148 P **P** **09 44 40.7 +0.2**
FOZ Fox Glacier 48.94 144 P **P** **09 44 40.9 -1.7**
FOZ IAmb IAmb 09 44 44.8
comp=Z,110nm,1.0s
QRZ Quartz Range 49.06 140 P **P** **09 44 43.8 +0.3**
IMP Imphal 49.08 311⇑*e*P **P** **09 44 44.4 +0.5**
BJT Baijiatuan 49.11 343 P **P** **09 44 43.7 -0.1**
BJT pmax pmax
comp=Z,60nm,1.1s
BJT Baijiatuan 49.11 343 P **P** **09 44 43.7 -0.1**
BJI Beijing 49.13 343 P **P** **09 44 44.3 +0.4**
BJI S **S** **09 51 45.0 -2.3**
BJI pmax pmax
comp=Z,45nm,1.1s
BJI LR LR
comp=Z,220nm,15.2s
BJI LR LR
comp=Z,330nm,23.0s
MLZ Mavora Lakes 49.14 147 P **P** **09 44 44.4 +0.3**
MLZ IAmb IAmb 09 44 46.1
comp=Z,69nm,0.8s
LKP Lekhapani 49.20 315 *e*P **P** **09 44 44.4 -0.3**
SNY Shenyang 49.22 351 ⇓P **P** **09 44 46.8 +2.2**
SNY S **S** **09 51 51.6 +3.0**
SNY pmax pmax
comp=Z,42nm,1.0s
SNY pmax pmax
comp=Z,220nm,3.3s
SNY LR LR
comp=Z,840nm,23.3s
SNY LR LR
comp=Z,570nm,21.4s
SNY LR LR
comp=Z,2µm,23.3s
WKZ Wanaka 49.28 146 P **P** **09 44 46.2 +1.0**
MSHR Mys Shultsa 49.30 359 *i*P **P** **09 44 45.1 -0.1**
MSHR pmax pmax
comp=Z,61nm,1.1s
WHZ Wether Hill Ro 49.39 148 P **P** **09 44 46.3 +0.4**
HIZ Hauiti 49.44 136 P **P** **09 44 47.5 +1.0**
HIZ IAMs_20 IAMs_20 10 05 41.4
comp=Z,3µm,19.0s
KOHI KOHIMA 49.47 312⇑*e*P **P** **09 44 46.8 -0.2**
MOKO MOKOCHONG 49.53 313⇑*e*P **P** **09 44 47.5 0.0**
LBZ Lake Benmore 49.67 145 P **P** **09 44 48.7 +0.6**
ERM Erimo 49.68 10 *i*P **P** **09 44 50.5 +2.4**
ERM pmax pmax
comp=Z,36nm,1.1s
RPZ Rata Peaks 49.77 144 LR LR 10 05 00.8
comp=Z,3µm,21.5s,baz=310,slow=35
RPZ Rata Peaks 49.77 144 P **P** **09 44 49.7 +0.7**
THZ Tophouse 49.80 141 P **P** **09 44 49.5 +0.3**
NNZ Nelson 49.81 140 P **P** **09 44 48.9 -0.3**
NNZ IAmb IAmb 09 44 52.6
comp=Z,56nm,0.8s
LTZ Lake Taylor 49.97 142 P **P** **09 44 50.5 0.0**
LTZ IAmb IAmb 09 44 56.8
comp=Z,102nm,1.1s
OXZ Oxford 50.13 143 P **P** **09 44 51.7 +0.1**
OXZ IAmb IAmb 09 44 55.0
comp=Z,100nm,0.7s
JEW Eniwo 50.21 9 P **P** **09 44 51.4 -0.8**
JEW IAmb IAmb 09 45 08.2
comp=Z,130nm,1.0s
TUWZ Tuamarina 50.28 140 P **P** **09 44 52.9 +0.1**
ODZ Otahua Downs 50.33 145 P **P** **09 44 53.5 +0.4**
ODZ IAmb IAmb 09 44 54.9
comp=Z,131nm,1.2s
BSWZ Blackbirch Sta 50.39 140 P **P** **09 44 53.4 -0.2**
KHZ Kahutara 50.55 141 P **P** **09 44 54.9 +0.1**
LZH Lanzhou 50.58 330 ⇑P **P** **09 44 56.6 +1.4**
LZH pP pP 09 45 04.8 +1.0
LZH sP sP 09 45 07.9 +0.7
LZH PP **PP** **09 46 51.7 +0.3**
LZH S **S** **09 52 07.9 -0.2**
LZH sS sS 09 52 21.5 -0.7
LZH SS **SS** **09 55 38.7 -4.0**
LZH pmax pmax
comp=Z,81nm,1.3s
LZH pmax pmax
comp=Z,810nm,6.2s
LZH LR LR
comp=Z,540nm,15.0s
LZH LR LR
comp=Z,620nm,14.5s
LZH LR LR
comp=Z,600nm,16.8s
CMWZ Cape Campbell 50.62 140 P **P** **09 44 55.3 -0.1**
SNZO South Karori 50.72 139 P **P** **09 44 55.6 -0.4**
MQZ McQueen's Vall 50.72 143 P **P** **09 44 56.3 +0.3**

MQZ IAmb IAmb 09 44 58.0
comp=Z,199nm,1.3s
ZIRO ZIRO 50.72 314⇑ *e*P **P 09 44 57.9 +1.4**
BHW Baring Head 50.87 139 P **P 09 44 56.7 -0.6**
BKZ Black Stump Fm 50.88 136 P **P 09 44 57.5 +0.1**
BKZ IAMs_20 IAMs_20 10 07 56.9
comp=Z,3μm,20.0s
URZ Urewera 50.90 135 P **P 09 44 57.4 -0.1**
USA0B Ussuriysk Arra 50.91 360 *d* iP **P 09 44 57.5 +0.1**
USA0B Ussuriysk Arra 50.91 360 P **P 09 44 57.7 +0.4**
USRK Ussuriysk Ar. 50.91 360 P **P 09 44 58.1 +0.8**
comp=Z,16nm,0.7s,baz=181,slow=7.6,SNR=57
USRK LR LR 10 05 43.3
comp=Z,526nm,20.4s,baz=181,slow=35
USRK Ussuriysk Ar. 50.91 360 P **P 09 44 57.3 -0.1**
MSWZ Moikau Station 51.12 139 P **P 09 44 58.6 -0.5**
PLWZ Palliser 51.20 139 P **P 09 44 58.6 -1.2**
HHC Hu-ho-hao-te 51.31 340 *e*P **P 09 45 01.7 +1.0**
HHC sP sP 09 45 12.3 -0.4
HHC PcP **PcP 09 46 19.3 +4.0**
HHC ScP **ScP 09 50 11.8 +1.8**
HHC S **S 09 52 19.3 +1.3**
HHC pmax pmax
comp=Z,46nm,1.2s
HHC pmax pmax
comp=Z,220nm,4.6s
HHC LR LR
comp=Z,440nm,17.3s
HHC LR LR
comp=Z,400nm,16.1s
HHC LR LR
comp=Z,800nm,16.9s
MDJ Mudanjiang 51.39 357 P **P 09 45 01.8 +0.8**
MDJ pP pP 09 45 09.2 -0.4
MDJ sP sP 09 45 12.4 -0.3
MDJ S **S 09 52 22.1 +3.4**
MDJ sS sS 09 52 35.3 +2.7
MDJ pmax pmax
comp=Z,60nm,1.2s
MDJ LR LR
comp=Z,390nm,21.3s
MDJ LR LR
comp=Z,380nm,19.5s
MDJ LR LR
comp=Z,470nm,18.2s
MDJ Mudanjiang 51.39 357 P **P 09 45 01.8 +0.8**
BFZ Birch Farm 51.42 138 P **P 09 45 00.9 -0.5**
MXZ Matakaoa Point 51.46 133 P **P 09 45 01.6 -0.1**
MXZ IAmb IAmb 09 45 03.4
comp=Z,100nm,0.9s
ASAJ Asahikawa 51.63 9 LR LR 10 06 44.8
comp=Z,449nm,21.2s,baz=205,slow=36
ASAJ Asahikawa 51.63 9 P **P 09 45 03.3 +0.5**
ASAJ pmax pmax
comp=Z,90nm,1.4s
ASAJ MLR MLR
comp=Z,700nm,21.0s
JKA Kamikawa-asahi 51.63 9 P **P 09 45 03.3 +0.5**
TEY Ternei 51.87 4⇓ *e*P P 09 44 59.7 -4.9
TEY *e* 09 45 05.4
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=Z,10.0nm,1.1s
MCQ Macquarie Isla 51.97 161 P **P 09 45 07.1 +1.9**
baz=52,SNR=3.3
MCQ Macquarie Isla 51.97 161 P **P 09 45 05.7 +0.5**
MCQ pmax pmax
comp=Z,239nm,0.9s
MCQ Macquarie Isla 51.97 161 P **P 09 45 05.7 +0.5**
PALK Pallekele 53.58 284 LR LR 10 08 22.4
comp=Z,495nm,21.5s,baz=209,slow=36
PALK Pallekele 53.58 284 *c* iP **P 09 45 18.7 +0.8**
PALK pmax pmax
comp=Z,202nm,1.5s
PALK Pallekele 53.58 284 P **P 09 45 17.8 -0.1**
PALK IAmb IAmb 09 45 27.4
comp=Z,205nm,1.4s
PALK Pallekele 53.58 284 P **P 09 45 19.0 +1.1**
PALK P **P 09 45 19.0 +1.1**
KUR Kuril'sk 53.74 13 *i* P **P 09 45 18.1 -0.2**
KUR pmax pmax
comp=Z,145nm,1.1s
YSS Yuzh-Sakhalins 54.43 9⇓ *e*P **P 09 45 23.5 +0.2**
YSS *e* 09 46 26.6
YSS *e* 09 47 20.8
YSS *e*PPP PPP 09 48 32.7
YSS *e*S **S 09 53 00.0 0.0**
YSS pmax pmax
comp=Z,30nm,0.6s
YSS pmax pmax
comp=Z,400nm,8.5s
YSS pmax pmax
comp=E,300nm,5.4s
YSS smax smax
comp=N,200nm,5.2s
YSS smax smax
comp=E,200nm,6.4s
YSS MLR MLR
comp=Z,800nm,16.0s
YSS Yuzh-Sakhalins 54.43 9 P **P 09 45 23.2 -0.1**
AFI Afiamalu 55.12 102 P **P 09 45 28.6 -0.5**
AFI pmax pmax
comp=Z,158nm,1.2s
AFI Afiamalu 55.12 102 P **P 09 45 28.6 -0.5**
AFI IAmb IAmb 09 45 44.8
comp=Z,158nm,1.1s
GTA Gaotai 55.17 329⇓ P **P 09 45 30.5 +1.4**
GTA pP pP 09 45 35.8 -1.9
GTA sP sP 09 45 39.3 -1.8
GTA S **S 09 53 09.6 -0.9**
GTA pmax pmax
comp=Z,51nm,1.2s
GTA pmax pmax
comp=Z,210nm,5.8s
GTA LR LR
comp=Z,380nm,21.1s
GTA LR LR
comp=Z,350nm,22.5s
GTA LR LR
comp=Z,510nm,20.7s
MDRS Chennai 55.60 291 *e*P **P 09 45 33.3 +0.9**
MDRS IAmb IAmb 09 45 41.6
comp=Z,54nm,0.5s
KLR Kul'dur 55.94 359 *ce*P **P 09 45 34.8 +0.5**
KLR pmax pmax
comp=Z,33nm,1.1s
UGL Uglegorsk 56.41 8 *e*P **P 09 45 39.0 +1.4**
UGL pmax pmax
comp=Z,140nm,1.2s
HIA Hailar 57.08 350 P **P 09 45 43.0 +0.6**
HIA pmax pmax
comp=Z,29nm,1.2s
HIA MLR MLR
comp=Z,1μm,20.0s
HIA Hailar 57.08 350 P **P 09 45 43.0 +0.6**
TYV Tymovskoe 58.24 8 *e*P **P 09 45 52.1 +1.7**
TYV *e* 09 53 57.6
TYV pmax pmax
comp=Z,300nm,2.9s
TYV pmax pmax
comp=Z,40nm,1.5s
HYB Hyderabad 58.55 295 *i* P **P 09 45 52.0 -1.3**
HYB *e*PcP **PcP 09 46 41.0 -2.6**
HYB *e*PP **PP 09 48 03.0 -0.2**
HYB *e*S **S 09 53 53.0 -2.7**
HYB Hyderabad 58.55 295 *e*P **P 09 45 52.2 -1.1**
HYB IAmb IAmb 09 46 00.9
comp=Z,149nm,1.3s
ULN Ulaanbaatar 59.02 340 *ce*P **P 09 45 57.5 +1.3**
ULN pmax pmax
comp=Z,99nm,1.0s
ULN Ulaanbaatar 59.02 340 P **P 09 45 57.3 +1.1**
ULN IAmb IAmb 09 46 10.1
comp=Z,109nm,1.1s
ULN Ulaanbaatar 59.02 340 P **P 09 45 57.8 +1.6**
ULN P **P 09 45 57.8 +1.6**
SONM Songino Array 59.22 340 P **P 09 45 58.7 +1.1**
comp=Z,56nm,1.1s,baz=152,slow=6.8,SNR=150
SONM PKP2bc 10 15 40.2
comp=Z,10.0nm,1.1s,baz=335,slow=1.3,SNR=16
SONM LR LR 10 15 59.7
comp=Z,280nm,18.1s,baz=157,slow=41
SONM Songino Array 59.22 340 P **P 09 45 58.0 +0.5**
SONM IAmb IAmb 09 46 00.7
comp=Z,57nm,1.1s
DGAR Diego Garcia 59.56 265 *ce*P **P 09 46 01.6 +1.2**
DGAR pmax pmax
comp=Z,551nm,1.7s
DGAR Diego Garcia 59.56 265 P **P 09 45 59.8 -0.6**
NKL Nikolayevsk 60.26 6 *e*P P 09 46 17.5 +13
NKL *e*S **S 09 54 16.6 +0.1**
NKL pmax pmax
comp=E,86nm,1.0s
NKL pmax pmax
comp=N,1.0nm,0.9s
NKL pmax pmax
comp=Z,81nm,1.6s
NKL smax smax
comp=E,182nm,5.7s
NKL smax smax
comp=N,1.0nm,2.9s
ZEA Zeya 60.62 356 *e*P **P 09 46 08.4 +1.6**
ZEA *e*S **S 09 54 27.8 +6.7**
ZEA *e* 09 55 55.5
ZEA *e*SS **SS 09 58 25.1 +5.0**
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.1s
ZEA pmax pmax
comp=Z,300nm,2.9s
ZEA smax smax
comp=N,200nm,10.4s
ZEA MLR MLR
comp=E,200nm,15.0s
CIT Chita 60.94 347 *e*P **P 09 46 10.2 +1.0**
CIT *e* 09 46 18.6
CIT *e* 09 46 53.4
CIT pmax pmax
comp=Z,95nm,2.6s
CASY Casey 61.17 190 P **P 09 46 11.3 +0.9**
MNCI Minicoy 61.18 283 P **P 09 46 11.0 -0.4**
BHPL Bhopal 61.62 301 *e*P **P 09 46 12.9 -1.4**
BHPL IAmb IAmb 09 46 21.9
comp=Z,41nm,0.7s
ZAK Zakamensk 62.46 339 *e*P **P 09 46 20.2 +0.7**
ZAK pmax pmax
comp=Z,39nm,1.1s
POO Poona 63.14 295⇑ *i*P **P 09 46 22.0 -2.6**
comp=Z,60nm,1.0s
POO *e*P pP 09 46 24.9 -8.4
POO IAmb IAmb 09 46 33.2
comp=Z,60nm,0.7s
TLY Talaya 63.43 340 *d* iP **P 09 46 27.1 +1.2**
TLY *e* 09 47 02.7
TLY *e*S **S 09 54 57.4 +0.6**
TLY pmax pmax
comp=Z,77nm,1.0s
TLY MLR MLR
comp=Z,893nm,19.0s
TLY Talaya 63.43 340 P **P 09 46 27.0 +1.2**
TLY Talaya 63.43 340 P **P 09 46 27.1 +1.2**
TLY P **P 09 46 27.1 +1.2**
PEA0B Petropavlovsk- 63.52 17 *d* iP **P 09 46 26.5 +0.1**
PEA0B Petropavlovsk- 63.52 17 P **P 09 46 27.7 +1.4**
PETK Petropavlovsk- 63.52 17 P **P 09 46 27.5 +1.1**
comp=Z,61nm,0.9s,baz=184,slow=4.5,SNR=44
PETK LR LR 10 13 21.0
comp=Z,228nm,20.6s,baz=201,slow=35
PET Petropavlovsk 63.73 17⇑ *i*P **P 09 46 28.9 +1.2**
PET 09 47 04.1
PET *e* 09 48 49.9
PET *e*S **S 09 55 00.9 +0.6**
PET *e* 09 56 17.6
PET *e*SS **SS 09 59 11.4 +2.7**
PET pmax pmax
comp=Z,106nm,1.1s
PET pmax pmax
comp=Z,400nm,13.5s
PET pmax pmax
comp=Z,200nm,17.8s
PET Petropavlovsk 63.73 17 P **P 09 46 28.3 +0.7**
PET IAmb IAmb 09 46 29.8
comp=Z,70nm,1.0s
NDI New Delhi 63.95 306 *e*P **P 09 46 30.0 +0.3**
NDI *e*S **S 09 55 00.0 -4.0**
DDI Dehra Dun 63.99 308 *e*P **P 09 46 29.8 -0.2**
MOY Mondy 64.34 339 *e*P **P 09 46 33.3 +1.4**
MOY pmax pmax
comp=Z,131nm,2.0s
WMQ Urumqi 64.74 326 P **P 09 46 36.6 +2.0**
WMQ pP pP 09 46 42.0 -1.4
WMQ sP sP 09 46 48.2 +1.4
WMQ S **S 09 55 14.4 +1.0**
WMQ sS sS 09 55 27.0 -1.0
WMQ pmax pmax
comp=Z,220nm,1.1s
WMQ LR LR
comp=Z,1μm,21.9s
WMQ LR LR
comp=Z,1μm,21.3s
WMQ Urumqi 64.74 326 P **P 09 46 36.1 +1.5**
WMQ pmax pmax
comp=Z,206nm,0.9s
WMQ Urumqi 64.74 326 P **P 09 46 36.1 +1.5**
SMLA Simla 65.03 309 *e*P **P 09 46 37.9 +1.2**
SMLA IAmb IAmb 09 46 46.8
comp=Z,186nm,0.9s
SMLA Simla 65.03 309 *e*P **P 09 46 37.9 +1.2**
BOD Bodaibo 66.28 349 *e*P **P 09 46 44.6 +0.4**
BOD pmax pmax
comp=Z,127nm,2.0s
RAR Rarotonga 66.76 110 LR LR 10 12 52.2
comp=Z,404nm,20.6s,baz=276,slow=33
MA2 Magadan 67.89 10 *c* iP **P 09 46 54.6 +0.2**
MA2 pmax pmax
comp=Z,58nm,1.0s
MA2 Magadan 67.89 10 P **P 09 46 55.1 +0.7**
MA2 IAmb IAmb 09 47 08.1
comp=Z,100nm,1.1s
ZSN Zaisan 68.55 327⇓ *i*P **P 09 46 58.5 -0.4**
comp=Z,40nm,1.1s,baz=327
ZSN *i* S **S 09 56 01.9 +2.5**
baz=327
ZSN Zaisan 68.55 327 *d* iP **P 09 46 58.4 -0.4**
ZSN *i* S **S 09 56 01.8 +2.5**
ZSN pmax pmax
comp=Z,40nm,1.1s
DGZ Jazzator, Alta 68.67 330 *d* iP **P 09 47 00.8 +1.1**
DGZ pmax pmax
comp=Z,113nm,1.1s
YAK Yakutsk 68.81 359 *e*P **P 09 47 00.7 +0.6**
YAK *e**PP **pP 09 47 07.1 -1.6**
YAK *e* 09 47 25.3
YAK *e* 09 49 32.6
YAK *e*S **S 09 56 05.8 +4.2**
YAK *e*SS **SS 10 00 33.2 +5.9**
YAK pmax pmax
comp=Z,105nm,0.7s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=N,44nm,1.0s
YAK pmax pmax
comp=Z,38nm,1.3s
YAK pmax pmax
comp=N,56nm,1.4s
YAK smax smax
comp=E,79nm,2.1s
YAK smax smax
comp=N,34nm,1.6s
YAK MLR MLR
comp=Z,497nm,19.0s
YAK MLR MLR
comp=N,622nm,20.0s
YAK Yakutsk 68.81 359 P **P 09 47 00.9 +0.8**
NIL Nilore 69.09 310 P **P 09 47 03.9 +1.4**
NIL pmax pmax
comp=Z,176nm,0.8s
NIL Nilore 69.09 310 P **P 09 47 03.9 +1.4**
NIL Nilore 69.09 310 P **P 09 47 03.9 +1.4**
SMY Shemya 69.13 26 P **P 09 47 02.8 +0.6**
SMY pmax pmax
comp=Z,175nm,1.0s
SMY Shemya 69.13 26 P **P 09 47 02.8 +0.6**
SHLS Shalkode 69.22 321⇓ *i*P **P 09 47 01.1 -2.1**
comp=Z,79nm,1.3s,baz=321
SHLS *i* S **S 09 56 06.5 -1.2**
baz=321
SHLS Shalkode 69.22 321 *d* iP **P 09 47 01.1 -2.1**
SHLS *i* S **S 09 56 06.5 -1.2**
SHLS pmax pmax
comp=Z,79nm,1.3s
UZB Uzynbulak 69.49 321⇓ *i*P **P 09 47 04.1 -0.9**
comp=Z,82nm,1.5s,baz=321
UZB *i* S **S 09 56 12.6 +1.6**
comp=Z,104nm,2.9s,baz=321
UZB Uzynbulak 69.49 321 *d* iP **P 09 47 04.1 -0.9**
UZB *i* S **S 09 56 12.5 +1.6**
UZB pmax pmax
comp=Z,82nm,1.5s
UZB smax smax
comp=N,104nm,2.9s
MK31 Makanchi Array 69.57 326 P **P 09 47 06.5 +1.3**
MK31 pmax pmax
comp=Z,111nm,1.1s
MK31 Makanchi Array 69.57 326 P **P 09 47 06.5 +1.3**
MK31 IAmb IAmb 09 47 07.7
comp=Z,110nm,1.1s
MKAR Makanchi Array 69.57 326 P **P 09 47 06.5 +1.3**
comp=Z,78nm,0.9s,baz=116,slow=8.2,SNR=398
MKAR S **S 09 56 12.6 +1.1**
comp=Z,7.3nm,1.2s,baz=140,slow=9.2,SNR=6.0
MKAR PKP2bc 10 15 01.9
comp=Z,0.6nm,1.0s,baz=347,slow=1.9,SNR=2.9
MKAR LR LR 10 21 45.6
comp=Z,112nm,19.1s,baz=118,slow=40
MKAR Makanchi Array 69.57 326 P **P 09 47 06.3 +1.1**
MKAR S **S 09 56 12.4 +0.9**
KSH Kashi 69.68 317 P **P 09 47 08.0 +1.8**
KSH pP pP 09 47 14.0 -1.1
KSH S **S 09 56 15.6 +2.3**
KSH SS **SS 10 00 49.5 +7.5**
KSH pmax pmax
comp=Z,54nm,0.7s
KSH LR LR
comp=Z,1μm,14.2s
KSH LR LR
comp=Z,540nm,7.2s
KSH LR LR
comp=Z,150nm,4.9s
MAKZ Makanchi 69.75 326 P **P 09 47 07.6 +1.3**
MAKZ pmax pmax
comp=Z,104nm,0.9s
MAKZ Makanchi 69.75 326 P **P 09 47 07.6 +1.3**
SATY Saty 69.83 321⇓ *i*P **P 09 47 06.4 -0.7**
comp=Z,52nm,1.0s,baz=321
SATY *i* S **S 09 56 16.8 +2.0**
baz=321
SATY Saty 69.83 321 *d* iP **P 09 47 06.3 -0.7**
SATY *i* S **S 09 56 16.8 +2.0**
SATY pmax pmax
comp=Z,52nm,1.0s
KPKS Kokpek 69.87 321⇓ *i*P **P 09 47 06.3 -1.0**
comp=Z,109nm,1.3s,baz=321
KPKS *i* S **S 09 56 17.0 +1.8**
comp=Z,163nm,2.9s,baz=321
KPKS Kokpek 69.87 321 *d* iP **P 09 47 06.2 -1.0**
KPKS *i* S **S 09 56 17.0 +1.8**
KPKS pmax pmax
comp=Z,109nm,1.3s
KPKS smax smax
comp=N,163nm,2.9s
AMKA Amchitka 70.58 29 P **P 09 47 11.5 +0.3**
MDOK Medeo 70.74 320 *i* P **P 09 47 12.3 -0.3**
baz=320
MDOK *e*S **S 09 56 27.8 +2.2**
baz=320
MDOK Medeo 70.74 320 *i* P **P 09 47 12.3 -0.3**
MDOK *e*S **S 09 56 27.7 +2.2**
TNSS Tian-Shan 70.74 320⇓ *i*P **P 09 47 12.6 -0.4**
baz=320
TNSS Tian-Shan 70.74 320⇓ *i*P **P 09 47 12.5 -0.4**
ULHL Ulahol 70.81 319 P **P 09 47 14.8 +1.6**
SNR=8.0
TDK Taldyqorghan 70.84 323 *i* P **P 09 47 12.5 -0.5**
comp=N,88nm,1.3s,baz=322
TDK *e*S **S 09 56 27.9 +1.6**
baz=322
TDK Taldyqorghan 70.84 323 *i* P **P 09 47 12.5 -0.5**
TDK *e*S **S 09 56 27.9 +1.6**
TDK pmax pmax
comp=Z,88nm,1.3s
AAA Alma-Ata 70.85 320⇓ *i*P **P 09 47 13.3 +0.1**
comp=Z,23nm,0.8s,baz=320
AAA *e*S **S 09 56 29.3 +2.7**
baz=320
AAA Alma-Ata 70.85 320 *d* iP **P 09 47 13.3 +0.1**
AAA *e*S **S 09 56 29.3 +2.7**
AAA pmax pmax
comp=Z,23nm,0.8s
CHKK Chushkaly 71.12 321 *e*P **P 09 47 14.6 -0.2**
baz=321
CHKK Chushkaly 71.12 321 *e*P **P 09 47 14.6 -0.2**
SEY Seymchan 71.32 9 *i* P **P 09 47 16.1 +0.6**
TKM2 Tokmak 2 71.55 320 P **P 09 47 19.1 +1.5**
SNR=42
TKM2 Tokmak 2 71.55 320 P **P 09 47 18.7 +1.1**
KUU Kurty 71.55 321⇓ *i*P **P 09 47 16.5 -0.8**
comp=Z,158nm,1.1s,baz=321
KUU *e*S **S 09 56 35.9 +1.3**
comp=Z,177nm,2.6s,baz=321
KUU Kurty 71.55 321 *d* iP **P 09 47 16.5 -0.8**
KUU *e*S **S 09 56 35.9 +1.3**
KUU pmax pmax
comp=Z,158nm,1.1s
KUU smax smax
comp=N,177nm,2.6s
KBK Karagaybulak 71.84 319 P **P 09 47 21.1 +1.7**
SNR=15
UCH Uchtor 71.93 319 P **P 09 47 22.1 +1.9**
SNR=70
AAK Ala-Archa 72.13 319 P **P 09 47 22.7 +1.6**
comp=N,43nm,1.0s,baz=121,slow=5.1,SNR=84
AAK S **S 09 56 44.2 +2.6**
comp=N,1.2nm,0.5s,baz=357,slow=21,SNR=9.8
AAK Ala-Archa 72.13 319 P **P 09 47 22.8 +1.8**
SNR=41
AAK Ala-Archa 72.13 319 *i* P **P 09 47 22.6 +1.6**
SNR=45
AAK Ala-Archa 72.13 319 *d* iP **P 09 47 22.6 +1.6**
AAK pmax pmax
comp=Z,231nm,1.1s
AAK Ala-Archa 72.13 319 P **P 09 47 22.7 +1.6**
AAK IAmb IAmb 09 47 36.5
comp=Z,111nm,1.2s
AAK Ala-Archa 72.13 319 P **P 09 47 22.5 +1.4**
CHMS Chumysh 72.13 319 P **P 09 47 21.8 +0.9**
SNR=12
VNDA Vanda 72.21 174 P **P 09 47 21.6 +0.9**
comp=Z,50nm,0.8s,baz=322,slow=6.4,SNR=245
VNDA LR LR 10 17 19.0
comp=Z,1μm,20.0s,baz=342,slow=34
VNDA Vanda 72.21 174 P **P 09 47 21.5 +0.8**
VNDA IAmb IAmb 09 47 22.8
comp=Z,69nm,0.9s
USP Ospenovka 72.42 319 P **P 09 47 24.1 +1.5**
SNR=75
AML Almayashu 72.42 318 P **P 09 47 25.0 +1.9**
SNR=100
SGDS Sogindy 72.42 320⇓ *i*P **P 09 47 21.9 -0.8**
comp=Z,22nm,1.1s,baz=320
SGDS *e*S **S 09 56 46.6 +1.8**
baz=320
SGDS Sogindy 72.42 320 *d* iP **P 09 47 21.9 -0.8**
SGDS *e*S **S 09 56 46.6 +1.8**
SGDS pmax pmax
comp=Z,22nm,1.1s
EKS2 Erkin-Say 72.61 319 P **P 09 47 25.7 +1.8**
SNR=52
KBL Kabul 72.65 309 P **P 09 47 24.9 +0.5**
KBL pmax pmax
comp=Z,67nm,0.9s
KBL Kabul 72.65 309 P **P 09 47 24.9 +0.5**
KBL IAmb IAmb 09 47 46.0
comp=Z,67nm,0.9s
ZAA0 Zalesovo Array 72.66 333 P **P 09 47 23.9 +0.2**
ZAA0 IAmb IAmb 09 47 24.9
comp=Z,98nm,0.9s
ZALV Zalesovo Beam 72.66 333 P **P 09 47 24.1 +0.3**
comp=Z,76nm,0.8s,baz=112,slow=5.0,SNR=152
ZALV PKP2bc 10 15 03.0
comp=Z,1.5nm,0.6s,baz=321,slow=2.1,SNR=5.1
ZALV LR LR 10 22 23.5
comp=Z,198nm,20.7s,baz=136,slow=38

ZALV	**Zalesovo Beam**	**72.66**	**333**	*i* P		**P**	**09 47 23.7**	**0.0**
ZALV				pmax		pmax		
	comp=Z,77nm,0.8s							
ZALV	**Zalesovo Beam**	**72.66**	**333**	P		**P**	**09 47 22.5**	**-1.2**
ZALV						**P'P'df**	**10 15 03.4**	**-2.3**
SEM	**Semipalatinsk**	**72.76**	**328**	*e*P		**P**	**09 47 23.1**	**-1.6**
	comp=Z,51nm,1.2s,baz=328							
SEM	**Semipalatinsk**	**72.76**	**328**	*e*P		**P**	**09 47 23.0**	**-1.6**
SEM				pmax		pmax		
	comp=Z,51nm,1.2s							
ADK	**Adak**	**72.86**	**30**	P		**P**	**09 47 25.2**	**+0.3**
ADK				pmax		pmax		
	comp=Z,46nm,0.9s							
ADK	**Adak**	**72.86**	**30**	P		**P**	**09 47 25.2**	**+0.3**
ADK				IAmb		IAmb	09 47 26.2	
	comp=Z,46nm,0.9s							
SBA	**Scott Base**	**73.07**	**173**	P		**P**	**09 47 26.1**	**+0.3**
SBA				pmax		pmax		
	comp=Z,78nm,0.9s							
SBA	**Scott Base**	**73.07**	**173**	P		**P**	**09 47 26.1**	**+0.3**
SBA				IAmb		IAmb	09 47 28.5	
	comp=Z,78nm,0.9s							
BTLS	**Baital**	**73.54**	**321**	*ij i* P		**P**	**09 47 28.3**	**-0.8**
	comp=Z,41nm,1.4s,baz=321							
BTLS	**Baital**	**73.54**	**321**	*d i* P		**P**	**09 47 28.3**	**-0.8**
BTLS				pmax		pmax		
	comp=Z,41nm,1.4s							
HON	**Honolulu**	**73.68**	**65**	P		**P**	**09 47 29.8**	**-0.6**
HON				pmax		pmax		
	comp=Z,207nm,0.9s							
HON	**Honolulu**	**73.68**	**65**	P		**P**	**09 47 29.8**	**-0.6**
KIP	**Kipapa**	**73.69**	**65**	P		**P**	**09 47 30.0**	**-0.5**
KIP				pmax		pmax		
	comp=Z,171nm,1.5s							
KIP	**Kipapa**	**73.69**	**65**	P		**P**	**09 47 30.0**	**-0.5**
KIP				IAmb		IAmb	09 47 39.3	
	comp=Z,171nm,1.5s							
KURBB	**Kurchatov Arra**	**73.79**	**328**	P		**P**	**09 47 31.5**	**+1.0**
	comp=Z,69nm,0.9s,baz=126,slow=4.6,SNR=477							
KURBB	**Kurchatov Arra**	**73.79**	**328**	P		**P**	**09 47 30.8**	**+0.3**
KURK	**Kurchatov**	**73.79**	**328**	P		**P**	**09 47 31.5**	**+1.0**
KURK	**Kurchatov**	**73.79**	**328**	P		**P**	**09 47 31.5**	**+1.0**
ATKA	**Atka Island**	**74.30**	**31**	P		**P**	**09 47 33.3**	**-0.1**
ATKA				IAmb		IAmb	09 47 34.3	
	comp=Z,64nm,0.9s							
DZA	**Taraz**	**74.33**	**318**	*ij i* P		**P**	**09 47 33.4**	**-0.4**
	comp=Z,21nm,0.7s,baz=318							
DZA				*e*S		**S**	**09 57 08.5**	**+2.1**
	baz=318							
DZA	**Taraz**	**74.33**	**318**	*d i* P		**P**	**09 47 33.4**	**-0.4**
DZA				*e*S		**S**	**09 57 08.4**	**+2.1**
DZA				pmax		pmax		
	comp=Z,21nm,0.7s							
IUG	**Iuzhnay**	**74.89**	**317**	*ij i* P		**P**	**09 47 36.5**	**-0.8**
	comp=Z,43nm,1.2s,baz=317							
IUG				*e*S		**S**	**09 57 14.5**	**+1.7**
	baz=317							
IUG	**Iuzhnay**	**74.89**	**317**	*d i* P		**P**	**09 47 36.4**	**-0.8**
IUG				*e*S		**S**	**09 57 14.4**	**+1.7**
IUG				pmax		pmax		
	comp=Z,43nm,1.2s							
KK31	**Karatay Array**	**74.96**	**318**	P		**P**	**09 47 38.5**	**+1.0**
KK31				pmax		pmax		
	comp=Z,98nm,1.0s							
KK31	**Karatay Array**	**74.96**	**318**	P		**P**	**09 47 38.5**	**+1.0**
KK31				IAmb		IAmb	09 47 48.0	
	comp=Z,98nm,1.0s							
KKAR	**Karatay Array**	**74.96**	**318**	P		**P**	**09 47 38.5**	**+1.0**
KKAR				pmax		pmax		
	comp=Z,98nm,1.0s							
KKAR	**Karatay Array**	**74.96**	**318**	P		**P**	**09 47 37.5**	**0.0**
KKAR	**Karatay Array**	**74.96**	**318**	P		**P**	**09 47 38.5**	**+1.0**
KKAR				IAmb		IAmb	09 47 48.0	
	comp=Z,98nm,1.0s							
KHLU	**Kahalu`u**	**75.19**	**68**	P		**P**	**09 47 40.7**	**+1.3**
RER	**Riviere de l'E**	**75.22**	**250**	P		**P**	**09 47 40.8**	**+1.3**
CHM	**Chimkent**	**75.25**	**317**	*e*P		**P**	**09 47 40.2**	**+1.0**
	comp=Z,18nm,1.0s,baz=317							
CHM	**Chimkent**	**75.25**	**317**	*e*P		**P**	**09 47 40.2**	**+1.0**
CHM				pmax		pmax		
	comp=Z,18nm,1.0s							
BRLS	**Boroldaу**	**75.38**	**318**	*ij i* P		**P**	**09 47 40.2**	**+0.2**
	comp=Z,41nm,1.1s,baz=317							
BRLS				*e*S		**S**	**09 57 20.9**	**+2.9**
	baz=317							
BRLS	**Boroldaу**	**75.38**	**318**	*d i* P		**P**	**09 47 40.1**	**+0.2**
BRLS				*e*S		**S**	**09 57 20.9**	**+2.9**
BRLS				pmax		pmax		
	comp=Z,41nm,1.1s							
POHA	**Pohakuloa**	**75.56**	**68**	P		**P**	**09 47 43.5**	**+1.8**
HMH	**Humu'ula Sheep**	**75.57**	**68**	P		**P**	**09 47 41.9**	**+0.1**
MAW	**Mawson**	**75.92**	**202**	P		**P**	**09 47 44.5**	**+2.0**
	comp=Z,249nm,0.9s,baz=75,slow=6.5,SNR=151							
MAW				LR		LR	10 18 00.7	
	comp=Z,1μm,21.8s,baz=68,slow=33							
MAW	**Mawson**	**75.92**	**202**	P		**P**	**09 47 44.5**	**+2.0**
	baz=76,SNR=93							
MAW	**Mawson**	**75.92**	**202**	P		**P**	**09 47 43.8**	**+1.3**
MAW				IAmb		IAmb	09 47 45.6	
	comp=Z,48nm,0.8s							
TBI	**Tubuai**	**76.31**	**112**	*e*S		**S**	**09 57 28.4**	**-0.5**
	comp=Z,460nm,26.0s							
TBI	**Tubuai**	**76.31**	**112**	*e*LR		LR	10 11 28.2	
	comp=Z,826nm,27.2s							
PAE	**Paea**	**76.43**	**106**	*e*P		**P**	**09 47 47.9**	**+1.5**
	comp=Z,21nm,0.9s							
PPT2	**Papeete2**	**76.44**	**106**	*e*P		**P**	**09 47 48.2**	**+1.7**
	comp=Z,117nm,0.9s							
PPT2				*e*S		**S**	**09 57 29.9**	**-0.8**
	comp=Z,243nm,25.8s							
PPT2				*e*SS		**SS**	**10 02 25.6**	**-0.1**
	comp=Z,540nm,31.2s							
PPT2				*e*LQ		LQ	10 08 12.2	
	comp=Z,657nm,28.5s							
PPT2				*e*LR		LR	10 11 31.7	
	comp=Z,1μm,25.0s,baz=282							
PPT	**Papeete**	**76.44**	**106**	P		**P**	**09 47 48.1**	**+1.7**
	comp=Z,161nm,0.8s,baz=92,slow=1.1,SNR=12							
PPT				LR		LR	10 18 45.3	
	comp=Z,491nm,19.8s,baz=258,slow=34							
PPTF	**Pamatai, Papee**	**76.45**	**106**	P		**P**	**09 47 47.3**	**+0.7**
BRZS	**Berezniki**	**76.69**	**325**	*ij i* P		**P**	**09 47 46.6**	**-0.6**
	comp=Z,37nm,1.1s,baz=325							
BRZS	**Berezniki**	**76.69**	**325**	*d i* P		**P**	**09 47 46.6**	**-0.6**
BRZS				pmax		pmax		
	comp=Z,37nm,1.1s							
JLN	**Jalan Bani Buh**	**77.15**	**295**	P		**P**	**09 47 51.0**	**+0.7**
	SNR=7.0							
WBK	**Wadi Bani Khal**	**77.65**	**295**	P		**P**	**09 47 54.4**	**+1.1**
	SNR=10.0							
MEH	**Mehetia**	**77.86**	**107**	*e*P		**P**	**09 47 55.6**	**+1.1**
	comp=Z,28nm,1.2s							
HRA	**Herat**	**77.90**	**307**	P		**P**	**09 47 54.9**	**+0.3**
WSAR	**Wadi Sarin**	**78.10**	**295**	P		**P**	**09 47 56.9**	**+1.3**
	comp=Z,48nm,0.9s,baz=120,slow=7.5,SNR=28							
MHTO	**MHTO**	**78.21**	**293**	P		**P**	**09 47 56.8**	**+0.5**
	SNR=12							
MHTO				P		**P**	**09 47 56.8**	**+0.5**
	SNR=12							
JMDO	**Jabal Madar**	**78.38**	**294**	P		**P**	**09 47 58.0**	**+0.7**
	SNR=8.6							
VAH	**Vaihoa**	**78.45**	**104**	*e*P		**P**	**09 47 58.9**	**+1.2**
	comp=Z,78nm,1.0s							
TIXI	**Tiksi**	**78.47**	**359**	*d i* P		**P**	**09 47 56.1**	**-0.5**
TIXI	**Tiksi**	**78.47**	**359**	P		**P**	**09 47 56.2**	**-0.4**
BILL	**Bilibino**	**78.51**	**12**	*e i* P		**P**	**09 47 57.2**	**+0.2**
BILL				*e*			09 48 06.5	
BILL				*e*			09 51 00.0	
BILL				pmax		pmax		
	comp=Z,18nm,1.1s							
BILL				MLR		MLR		
	comp=Z,236nm,20.0s							
BILL	**Bilibino**	**78.51**	**12**	P		**P**	**09 47 57.4**	**+0.4**
SMDO	**Samad**	**78.58**	**295**	P		**P**	**09 47 59.4**	**+0.9**
	SNR=11							
BIDO	**Bidbid**	**78.61**	**296**	P		**P**	**09 47 59.8**	**+1.3**
	SNR=38							
SPIA	**Saint Paul Isl**	**78.94**	**28**	P			09 48 01.1	
	baz=238							
BSY	**Bisya**	**79.28**	**295**	P		**P**	**09 48 02.9**	**+0.7**
	SNR=7.9							
HOQ	**Hoqain**	**79.35**	**295**	P		**P**	**09 48 03.5**	**+0.9**
	SNR=22							
BVAR	**Borovoye Array**	**79.36**	**327**	P		**P**	**09 48 02.3**	**+0.3**
	comp=Z,43nm,0.9s,baz=97,slow=8.1,SNR=147							
BRVK	**Borovoye**	**79.44**	**327**	P		**P**	**09 48 02.7**	**+0.3**
BRVK				pmax		pmax		
	comp=Z,102nm,1.1s							
BRVK	**Borovoye**	**79.44**	**327**	P		**P**	**09 48 02.7**	**+0.3**
BRVK				IAmb		IAmb	09 48 04.1	
	comp=Z,102nm,1.1s							
BRVK	**Borovoye**	**79.44**	**327**	P		**P**	**09 48 02.9**	**+0.6**
SHAO	**Shalim**	**79.79**	**290**	P		**P**	**09 48 06.1**	**+1.1**
SHAO	**Shalim**	**79.79**	**290**	P		**P**	**09 48 06.2**	**+1.2**
	SNR=6.6							
ARQ	**Aragi**	**80.01**	**295**	P		**P**	**09 48 06.9**	**+0.7**
	SNR=13							
SOHO	**SOHO**	**80.17**	**296**	*i* P		**P**	**09 48 07.6**	**+0.6**
	SNR=13							
SOCY	**Socotra**	**80.34**	**284**	P		**P**	**09 48 08.6**	**+0.4**
UOSS	**Minazif**	**80.63**	**297**	*i* P		**P**	**09 48 09.7**	**+0.3**
	SNR=6.9							
UOSS	**Minazif**	**80.63**	**297**	P		**P**	**09 48 09.3**	**-0.2**
UOSS				IAmb		IAmb	09 48 11.0	
	comp=Z,67nm,1.1s							
HATD	**Hatta, Dubai**	**80.67**	**296**	*i* P		**P**	**09 48 10.3**	**+0.6**
	SNR=8.1							
HATD	**Hatta, Dubai**	**80.67**	**296**	P		**P**	**09 48 10.3**	**+0.6**
	SNR=10							
ASHO	**Ashiyiah**	**80.70**	**296**	*i* P		**P**	**09 48 10.6**	**+0.7**
	SNR=13							
ASHO	**Ashiyiah**	**80.70**	**296**	P		**P**	**09 48 10.7**	**+0.8**
	SNR=10							
BANOM	**Banah**	**80.75**	**298**	*i* P		**P**	**09 48 11.5**	**+1.3**
	SNR=32							
BANOM	**Banah**	**80.75**	**298**	P		**P**	**09 48 11.3**	**+1.2**
	SNR=11							
MSFE	**Esma-Masafi**	**80.76**	**297**	*i* P		**P**	**09 48 11.4**	**+1.3**
	SNR=19							
MASF	**Masafi**	**80.76**	**297**	P		**P**	**09 48 11.5**	**+1.3**
	SNR=14							
ALNE	**Al Ain**	**80.85**	**296**	*i* P		**P**	**09 48 11.5**	**+0.9**
	SNR=9.0							
ALNE	**Al Ain**	**80.85**	**296**	P		**P**	**09 48 11.4**	**+0.7**
	SNR=15							
SHME	**Shamm**	**80.92**	**298**	*i* P		**P**	**09 48 12.1**	**+1.2**
	SNR=15							
SHME	**Shamm**	**80.92**	**298**	P		**P**	**09 48 12.1**	**+1.2**
	SNR=10.0							
RBK	**Rabkut**	**81.03**	**289**	P		**P**	**09 48 11.9**	**+0.1**
	SNR=8.8							
RBK				P		**P**	**09 48 11.9**	**+0.1**
	SNR=8.8							
NAZ	**Nazwa, Dubai**	**81.12**	**297**	*i* P		**P**	**09 48 12.7**	**+0.6**
	SNR=7.9							
NAZ	**Nazwa, Dubai**	**81.12**	**297**	P		**P**	**09 48 12.5**	**+0.4**
	SNR=12							
FAQ	**Al Faqa, Dubai**	**81.13**	**296**	*i* P		**P**	**09 48 12.7**	**+0.6**
	SNR=12							
FAQ	**Al Faqa, Dubai**	**81.13**	**296**	P		**P**	**09 48 13.1**	**+0.9**
	SNR=16							
FALS	**False Pass**	**81.19**	**32**	P		**P**	**09 48 12.2**	**+0.4**
FALS	**False Pass**	**81.19**	**32**	P			09 48 12.9	
	baz=245							
SBV	**Sambava**	**81.25**	**257**	P		**P**	**09 48 13.8**	**+0.9**
	SNR=5.0							
DOK	**Doka**	**81.30**	**290**	P		**P**	**09 48 13.6**	**+0.5**
	SNR=12							
ASUD	**Al Ashush, Dub**	**81.34**	**296**	*i* P		**P**	**09 48 14.5**	**+1.2**
	SNR=14							
ASUD	**Al Ashush, Dub**	**81.34**	**296**	P		**P**	**09 48 14.4**	**+1.2**
	SNR=9.9							
WHFO	**Wadi Hawf**	**81.51**	**289**	P		**P**	**09 48 14.6**	**+0.3**
	SNR=12							
WHFO				P		**P**	**09 48 14.6**	**+0.3**
	SNR=12							
AJN	**Ajban**	**81.64**	**296**	*i* P		**P**	**09 48 15.4**	**+0.6**
	SNR=8.2							
AJN	**Ajban**	**81.64**	**296**	P		**P**	**09 48 15.2**	**+0.4**
	SNR=8.8							
ABTO	**Aybut**	**81.86**	**289**	P		**P**	**09 48 17.0**	**+0.9**
	SNR=15							
ABTO				P		**P**	**09 48 17.0**	**+0.9**
	SNR=15							
GAMB	**Gambell**	**81.92**	**22**	P			09 48 16.7	
	baz=236,SNR=66							
GAMB	**Gambell**	**81.93**	**22**	P		**P**	**09 48 16.1**	**+0.7**
GAMB				IAmb		IAmb	09 48 17.8	
	comp=Z,88nm,1.3s							
GEYT	**Alibeck**	**82.09**	**310**	P		**P**	**09 48 17.9**	**+0.9**
	comp=Z,31nm,0.8s,baz=151,slow=3.4,SNR=30							
GEYT				LR		LR	10 30 54.8	
	comp=Z,153nm,21.2s,baz=185,slow=40							
GEYT	**Alibeck**	**82.09**	**310**	P		**P**	**09 48 17.6**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**82.09**	**310**	P		**P**	**09 48 18.0**	**+1.0**
GYA0B				IAmb		IAmb	09 48 35.9	
	comp=Z,46nm,0.8s							
NRIK	**Noril'sk**	**82.13**	**345**	P		**P**	**09 48 17.4**	**+1.0**
	comp=Z,33nm,1.0s,baz=128,slow=5.3,SNR=53							
NRIK				LR		LR	10 28 41.8	
	comp=Z,817nm,19.1s,baz=144,slow=39							
NRIK	**Noril'sk**	**82.13**	**345**	*d i* P		**P**	**09 48 17.0**	**+0.6**
NRIK				pmax		pmax		
	comp=Z,88nm,1.3s							
NRIK	**Noril'sk**	**82.13**	**345**	P		**P**	**09 48 17.1**	**+0.6**
NRIK				IAmb		IAmb	09 48 25.5	
	comp=Z,80nm,1.1s							
NRIK				IAMs_20		IAMs_20	10 28 30.3	
	comp=Z,1μm,19.0s							
SDPT	**Sand Point**	**82.94**	**32**	P			09 48 21.3	
	baz=247							
SDPT	**Sand Point**	**82.94**	**32**	P		**P**	**09 48 21.4**	**+0.6**
QSPA	**South Pole Qui**	**83.03**	**180**	P		**P**	**09 48 21.9**	**+0.5**
ABPO	**Ambohimpanom**	**83.34**	**252**	P		**P**	**09 48 24.8**	**+0.7**
ABPO				pmax		pmax		
	comp=Z,33nm,0.8s							
ABPO	**Ambohimpanom**	**83.34**	**252**	P		**P**	**09 48 24.8**	**+0.7**
ABPO				IAmb		IAmb	09 48 25.8	
	comp=Z,33nm,0.8s							
VOI	**Vohitsoka**	**83.50**	**249**	P		**P**	**09 48 25.9**	**+1.2**
	SNR=6.2							
AB31	**Akbulak array**	**84.03**	**321**	P		**P**	**09 48 26.3**	**-0.4**
ABKAR	**Akbulak array**	**84.03**	**321**	P		**P**	**09 48 26.8**	**+0.1**
ABKAR				IAmb		IAmb	09 48 39.8	
	comp=Z,46nm,1.2s							
ABKAR	**Akbulak array**	**84.03**	**321**	P		**P**	**09 48 26.6**	**0.0**
TNA	**Tin City**	**84.26**	**21**	P			09 48 28.4	
	baz=239,SNR=60							
TNA	**Tin City**	**84.26**	**21**	P		**P**	**09 48 28.3**	**+0.8**
TNA				IAmb		IAmb	09 48 29.6	
	comp=Z,60nm,1.0s							
CHGN	**Chignik**	**84.38**	**32**	P		**P**	**09 48 28.4**	**+0.2**
CHGN				IAmb		IAmb	09 48 29.5	
	comp=Z,79nm,0.9s							
CHGN	**Chignik**	**84.38**	**32**	P			09 48 28.7	
	baz=249							
SYO	**Syowa Base**	**84.62**	**201**	*ij i* P		**P**	**09 48 30.8**	**+1.5**
SYO	**Syowa Base**	**84.62**	**201**	*ij e* P		**P**	**09 48 32.8**	**+3.5**
ANM	**Nome**	**84.71**	**23**	P			09 48 31.1	
	baz=242,SNR=48							
ANM	**Nome**	**84.71**	**23**	P		**P**	**09 48 30.2**	**+0.4**
ANM				pmax		pmax		
	comp=Z,54nm,1.0s							
ANM	**Nome**	**84.71**	**23**	P		**P**	**09 48 30.2**	**+0.4**
ANM				IAmb		IAmb	09 48 32.3	
	comp=Z,54nm,1.0s							
AKTO	**Aktyubinsk**	**85.57**	**322**	P		**P**	**09 48 34.8**	**+0.3**
	comp=Z,29nm,0.9s,baz=103,slow=5.9,SNR=50							
SVE	**Sverdlovsk**	**86.02**	**328**	*ij e* P		**P**	**09 48 36.6**	**+0.1**
SVE				pmax		pmax		
	comp=Z,76nm,1.3s							
TAOE	**Nuku Hiva Isla**	**86.33**	**98**	*e*LR		LR	10 16 03.8	
	comp=Z,832nm,24.1s							
SII	**Sitkinak Islan**	**86.68**	**32**	P		**P**	**09 48 40.0**	**+0.3**
SII	**Sitkinak Islan**	**86.68**	**32**	P			09 48 40.9	
	baz=252,SNR=7.2							
ARU	**Arti**	**86.99**	**328**	P		**P**	**09 48 40.3**	**-0.9**
	comp=Z,8.5nm,0.8s,baz=110,slow=1.6,SNR=30							
ARU	**Arti**	**86.99**	**328**	*d i* P		**P**	**09 48 39.8**	**-1.4**
ARU							09 52 02.2	
ARU				S		S	09 59 06.2	-12
ARU				pmax		pmax		
	comp=Z,50nm,1.2s							
ARU	**Arti**	**86.99**	**328**	P		**P**	**09 48 40.0**	**-1.2**
ARU				IAmb		IAmb	09 48 48.7	
	comp=Z,39nm,1.0s							
RDOG	**Red Dog Mine**	**87.19**	**20**	P		**P**	**09 48 42.5**	**+0.5**
RDOG				IAmb		IAmb	09 48 43.6	
	comp=Z,31nm,0.9s							
RDOG	**Red Dog Mine**	**87.19**	**20**	P			09 48 42.8	
	baz=244							
OHAK	**Old Harbor**	**87.34**	**32**	P		**P**	**09 48 43.3**	**+0.3**
OHAK	**Old Harbor**	**87.34**	**32**	P			09 48 43.7	
	baz=253,SNR=17							
SVW2	**Sparrevohn**	**87.43**	**28**	P		**P**	**09 48 44.0**	**+0.7**
SVW2				IAmb		IAmb	09 48 45.9	
	comp=Z,76nm,1.2s							
KDAK	**Kodiak Island**	**87.87**	**31**	P			09 48 46.3	
	baz=254							
KDAK	**Kodiak Island**	**87.87**	**31**	P		**P**	**09 48 45.8**	**+0.4**
KDAK				pmax		pmax		
	comp=Z,116nm,1.1s							
KDAK	**Kodiak Island**	**87.87**	**31**	P		**P**	**09 48 45.8**	**+0.4**
RSO	**Redoubt South**	**88.55**	**29**	P		**P**	**09 48 48.5**	**-0.4**
QRN	**Al-Qurain**	**88.59**	**299**	*e*P			09 48 49.3	
HOM	**Homer**	**88.86**	**29**	P		**P**	**09 48 50.2**	**+0.1**
HOM	**Homer**	**88.86**	**29**	P			09 48 50.5	
	baz=254,SNR=17							
UMR	**Umm Al-Rimmam**	**88.89**	**300**	*e*P			09 48 51.0	
RDF	**Al-Radifah**	**88.94**	**299**	*e*P			09 48 51.0	
SPCR	**Spurr Chakacha**	**89.02**	**28**	P			09 48 50.9	
	baz=254,SNR=10.0							
CNPM	**China Poot**	**89.03**	**30**	P		**P**	**09 48 51.2**	**+0.3**
MIB	**Mutribah**	**89.25**	**300**	*e*P			09 48 52.5	
BRLK	**Bradley Lake**	**89.26**	**29**	P		**P**	**09 48 52.2**	**+0.1**
BRSE	**Bradley Lake S**	**89.33**	**30**	P			09 48 52.6	
	baz=255							
CAPN	**Captain Cook N**	**89.39**	**28**	P			09 48 53.9	
	baz=255,SNR=9.4							
CAPN	**Captain Cook N**	**89.40**	**28**	P		**P**	**09 48 53.0**	**+0.4**
PPLA	**Purkeypile**	**89.50**	**26**	P		**P**	**09 48 53.5**	**+0.2**
PPLA	**Purkeypile**	**89.50**	**26**	P			09 48 54.0	
	baz=254,SNR=7.5							
SKT	**Skwentna**	**89.54**	**27**	P		**P**	**09 48 52.7**	**-0.6**
SKT				IAmb		IAmb	09 48 54.0	
	comp=Z,29nm,0.8s							
SKT	**Skwentna**	**89.54**	**27**	P			09 48 52.7	
	baz=254,SNR=22							
RKT	**Rikitea**	**89.60**	**113**	*e*S		**S**	**09 59 42.3**	**-1.9**
	comp=Z,279nm,29.8s							
RKT	**Rikitea**	**89.60**	**113**	*e*LR		LR	10 17 36.7	
	comp=Z,631nm,23.8s							
CHUM	**Lake Minchumin**	**89.72**	**25**	P			09 48 54.8	
	baz=254,SNR=38							
IMAR	**Indian Mountai**	**89.76**	**23**	P		**P**	**09 48 54.1**	**-0.1**
SUA	**Susitna One**	**89.77**	**28**	P		**P**	**09 48 54.2**	**-0.3**
SUA				IAmb		IAmb	09 48 55.5	
	comp=Z,44nm,0.9s							
SUA	**Susitna One**	**89.77**	**28**	P			09 48 55.1	
	baz=255,SNR=37							
FIS	**Fire Island**	**89.93**	**28**	P		**P**	**09 48 56.3**	**+1.2**
O22K	**Cooper Landing**	**90.00**	**29**	P			09 48 55.8	
	baz=256,SNR=23							
O22K	**Cooper Landing**	**90.00**	**29**	P		**P**	**09 48 55.9**	**+0.4**
RAYN	**Ar Rayn**	**90.01**	**294**	*i* P		**P**	**09 48 57.2**	**+0.7**
	SNR=7.4							
RAYN	**Ar Rayn**	**90.01**	**294**	P		**P**	**09 48 57.0**	**+0.6**
RAYN				pmax		pmax		
	comp=Z,80nm,0.9s							
RAYN				MLR		MLR		
	comp=Z,600nm,21.0s							
RAYN	**Ar Rayn**	**90.01**	**294**	P		**P**	**09 48 57.0**	**+0.6**
RAYN				IAmb		IAmb	09 48 58.2	
	comp=Z,80nm,0.9s							
RC01	**Rabbit Creek A**	**90.15**	**28**	P			09 48 56.2	
	baz=256,SNR=51							
RC01	**Rabbit Creek A**	**90.15**	**28**	P		**P**	**09 48 55.8**	**-0.3**
CUT	**Chulitna**	**90.23**	**27**	P			09 48 56.6	
	baz=256,SNR=9.3							
CUT	**Chulitna**	**90.23**	**27**	P		**P**	**09 48 56.2**	**-0.2**
CUT				IAmb		IAmb	09 48 58.2	
	comp=Z,38nm,1.0s							
KTH	**Kantishna Hill**	**90.23**	**26**	P		**P**	**09 48 56.4**	**-0.2**
KTH				IAMs_20		IAMs_20	10 23 59.6	
	comp=Z,720nm,22.0s							
BPAW	**Bear Paw Mtn.**	**90.35**	**25**	P			09 48 56.9	
	baz=255,SNR=12							
BPAW	**Bear Paw Mtn.**	**90.35**	**25**	P		**P**	**09 48 57.0**	**-0.1**
TRF	**Thorofare Moun**	**90.48**	**26**	P			09 48 57.3	
	baz=256,SNR=10							
TRF	**Thorofare Moun**	**90.48**	**26**	P		**P**	**09 48 58.0**	**+0.2**
PMR	**Palmer**	**90.55**	**28**	P		**P**	**09 48 58.0**	**+0.1**
PMR				pmax		pmax		
	comp=Z,35nm,0.8s							
PMR	**Palmer**	**90.55**	**28**	P		**P**	**09 48 58.0**	**+0.1**
PMR				IAmb		IAmb	09 48 59.4	
	comp=Z,35nm,0.8s							
PMR				IAMs_20		IAMs_20	10 24 05.1	
	comp=Z,626nm,22.0s							
PMR	**Palmer**	**90.55**	**28**	P			09 48 58.0	
	baz=256,SNR=26							
GHO	**Glory Hole Cre**	**90.69**	**28**	P		**P**	**09 48 59.0**	**+0.3**
GHO				IAmb		IAmb	09 49 00.3	
	comp=Z,25nm,0.7s							
GHO				IAMs_20		IAMs_20	10 23 14.6	
	comp=Z,658nm,19.0s							
MLY	**Manley**	**90.69**	**24**	P		**P**	**09 48 58.7**	**0.0**
MLY	**Manley**	**90.69**	**24**	P			09 48 58.8	
	baz=255,SNR=35							
PWL	**Port Wells**	**90.76**	**29**	IAMs_20		IAMs_20	10 32 00.5	
	comp=Z,598nm,20.0s							
KNK	**Knik Glacier**	**90.82**	**28**	IAMs_20		IAMs_20	10 31 23.2	
	comp=Z,558nm,19.0s							
KNK	**Knik Glacier**	**90.82**	**28**	P			09 48 59.7	
	baz=257							
SML	**Sawmill**	**90.97**	**28**	P

COLD Coldfoot 91.46 22 P 09 49 02.7
baz=256,SNR=28

FID Port Fidalgo 91.62 29 P **P** **09 49 02.5 -0.5**
FID IAmb IAmb 09 49 04.9
comp=Z,37nm,0.8s

WRH Wood River Hil 91.66 25 P **P** **09 49 02.1 -1.0**
MDM Murphy Dome 91.71 25 P **P** **09 49 02.7 -0.7**
LGD Lagodekhi 91.81 312 P **P** **09 49 06.9 +2.6**
CCB Clear Creek Bu 91.82 25 P **P** **09 49 02.8 -1.0**
CCB IAmb IAmb 09 49 03.8
comp=Z,28nm,0.8s

TCOL CIGO, UAF Yank 91.85 25 P 09 49 02.9
baz=258,SNR=8.0

TCOL CIGO, UAF Yank 91.85 25 P **P** **09 49 02.9 -1.1**
TCOL IAMs_20 IAMs_20 10 25 34.2
comp=Z,594nm,21.0s

COLA College 91.85 25*d i* P **P** **09 49 03.0 -0.9**
COLA pmax pmax
comp=Z,11nm,0.7s

COLA College 91.85 25 P **P** **09 49 02.8 -1.2**
COLA College 91.85 25 P 09 49 02.8
baz=258

DDFL Dedoflistskaro 91.86 311 P **P** **09 49 08.8 +4.2**
EYAK Cordova Ski Ar 91.94 29 P 09 49 05.2
baz=259

EYAK Cordova Ski Ar 91.94 29 P **P** **09 49 05.2 +0.8**
EYAK IAmb IAmb 09 49 08.1
comp=Z,24nm,0.9s

M24K Tolsona, Glenn 92.03 28 P 09 49 05.7
baz=259,SNR=14

M24K Tolsona, Glenn 92.03 28 P **P** **09 49 05.4 +0.4**
M24K IAmb IAmb 09 49 07.7
comp=Z,42nm,0.8s

M24K IAMs_20 IAMs_20 10 31 44.2
comp=Z,718nm,20.0s

KLU Klutina 92.03 28 P **P** **09 49 05.1 +0.1**
KLU IAmb IAmb 09 49 19.3
comp=Z,31nm,1.0s

KLU IAMs_20 IAMs_20 10 32 51.3
comp=Z,563nm,18.0s

KLU Klutina 92.03 28 P 09 49 05.6
baz=259,SNR=16

TOLK Toolik Lake Re 92.04 21 P **P** **09 49 05.1 +0.3**
TOLK IAmb IAmb 09 49 06.2
comp=Z,21nm,0.8s

TOLK Toolik Lake Re 92.04 21 P 09 49 05.3
baz=256,SNR=32

HDA Harding Lake 92.14 25 P 09 49 04.3
baz=258,SNR=16

HDA P 09 49 04.3
baz=258,SNR=16

IL31 92.23 25 P **P** **09 49 04.5 -1.2**
ILAR Eielson Array 92.23 25 P **P** **09 49 04.5 -1.2**
comp=Z,11nm,0.7s,baz=272,slow=4.3,SNR=115

ILAR PP **PP** **09 52 43.6 -2.7**
comp=Z,7.4nm,1.1s,baz=249,slow=6.8,SNR=8.2

ILAR PKKPbc **PKKPdf** **10 06 21.8 +0.5**
comp=Z,1.9nm,0.8s,baz=61,slow=0.6,SNR=14

ILAR LR LR 10 30 09.8
comp=Z,143nm,18.3s,baz=268,slow=35

KIRV Kirov 92.29 329 P **P** **09 49 05.5 -0.5**
comp=Z,16nm,0.7s,baz=106,slow=4.4,SNR=6.5

KIRV LR LR 10 34 47.6
comp=Z,188nm,18.1s,baz=99,slow=38

BELG Belogornoye 92.34 322 P **P** **09 49 05.5 -1.0**
comp=Z,38nm,0.9s,baz=121,slow=3.9,SNR=20

BELG Belogornoye 92.34 322 *i* P **P** **09 49 05.2 -1.2**
BELG pmax pmax
comp=Z,8.0nm,0.9s

RAGM Ragged Mountai 92.44 30 P **P** **09 49 07.2 +0.4**
RAGM IAmb IAmb 09 49 23.1
comp=Z,44nm,1.1s

RAGM IAMs_20 IAMs_20 10 25 02.9
comp=Z,776nm,21.0s

KAIM Kayak Island 92.48 30 P **P** **09 49 07.6 +0.6**
KAIM Kayak Island 92.48 30 P 09 49 08.0
baz=261

PAX Paxson 92.51 27 P **P** **09 49 07.1 -0.1**
PAX pmax pmax
comp=Z,24nm,1.1s

PAX MLR MLR
comp=Z,400nm,18.0s

PAX Paxson 92.51 27 P **P** **09 49 07.1 -0.1**
PAX Paxson 92.51 27 P 09 49 07.4
baz=260,SNR=17

BMRM Bremner River 92.57 29 P 09 49 07.9
baz=260,SNR=16

BMRM Bremner River 92.57 29 P **P** **09 49 07.0 -0.4**
BMRM IAmb IAmb 09 49 21.9
comp=Z,40nm,1.1s

HMT Hamilton 92.63 30 P **P** **09 49 08.2 +0.5**
HMT IAmb IAmb 09 49 10.8
comp=Z,43nm,1.1s

N25K Chitina, Valde 92.68 28 P **P** **09 49 08.5 +0.5**
N25K Chitina, Valde 92.68 28 P 09 49 08.4
baz=260,SNR=12

GNI Garni 92.73 310 P **P** **09 49 10.2 +1.4**
comp=Z,5.7nm,0.6s,baz=348,slow=3.4,SNR=4.4

GNI Garni 92.73 310 *eP* **P** **09 49 10.0 +1.2**
GNI pmax pmax
comp=Z,33nm,1.7s

PRP Porcupine Dome 92.94 24 P 09 49 07.5
baz=260,SNR=5.2

PRP Porcupine Dome 92.94 24 P **P** **09 49 07.7 -1.4**
GLB Gilahina Butte 93.02 29 P **P** **09 49 10.2 +0.7**
GLB IAmb IAmb 09 49 24.0
comp=Z,41nm,1.1s

NVL N'lazarevskaya 93.13 197 *eP* **P** **09 49 10.9 +1.1**
NVL *i* 09 49 17.1
NVL *i* 09 52 58.6
NVL pmax pmax
comp=Z,86nm,0.8s

KZRT Kazreti 93.13 311 P **P** **09 49 11.5 +1.0**
VRDI Verde Repeater 93.16 29 P **P** **09 49 09.9 -0.4**
VRDI IAmb IAmb 09 49 12.7
comp=Z,43nm,1.4s

FYU Fort Yukon 93.24 23 P **P** **09 49 10.7 +0.4**
FYU IAmb IAmb 09 49 24.6
comp=Z,82nm,1.4s

CRQM Cirque 93.24 29 P **P** **09 49 10.9 +0.2**
CRQM IAmb IAmb 09 49 25.4
comp=Z,58nm,1.0s

DOT Dot Lake 93.25 26 P **P** **09 49 10.5 0.0**
CRQE Cirque 93.26 29 P 09 49 11.5
baz=262

MENT Mentasta 93.29 27 P **P** **09 49 11.1 +0.3**
SCRK Sand Creek 93.33 26 P **P** **09 49 10.0 -1.0**
SCRK Sand Creek 93.33 26 P 09 49 11.2
baz=261,SNR=10

MCARA McCarthy VSAT 93.39 29 P **P** **09 49 11.2 +0.1**
MCARA IAmb IAmb 09 49 27.8
comp=Z,25nm,1.0s

MCARA McCarthy VSAT 93.39 29 P 09 49 11.7
baz=262,SNR=8.7

BMAR Burnt Mountain 93.64 23 P **P** **09 49 12.4 +0.2**
ZEI Tsey 93.65 312 *eP* **P** **09 49 12.1 -1.0**
ZEI pmax pmax
comp=Z,27nm,1.3s

AKH Akhalkalaki 93.81 311 P **P** **09 49 15.2 +1.4**
YAH Yahtse 93.87 30 P **P** **09 49 13.9 +0.2**
YAH IAmb IAmb 09 49 36.6
comp=Z,30nm,1.1s

GRNC Granite Creek 93.91 29 P **P** **09 49 13.9 +0.1**
GRNC IAmb IAmb 09 49 28.7
comp=Z,38nm,1.0s

ONI Oni 93.96 312 P **P** **09 49 16.8 +2.5**
BARN Barnard Glacie 94.00 29 P **P** **09 49 14.6 +0.4**
BARN IAmb IAmb 09 49 17.4
comp=Z,48nm,1.1s

CTG Chitna Glacier 94.14 29 P 09 49 15.9
baz=263

CTGM Chitina Glacie 94.15 29 P **P** **09 49 15.9 +1.1**
CTGM IAmb IAmb 09 49 18.6
comp=Z,49nm,1.0s

KIBK Kibwezi 94.16 267 P **P** **09 49 17.2 +1.3**
SNR=17

L27K Beaver Creek, 94.17 27 P **P** **09 49 15.1 +0.3**
L27K Beaver Creek, 94.17 27 P 09 49 15.2
baz=263

K27K Chicken 94.17 26 P 09 49 15.9
baz=263

K27K Chicken 94.18 26 P **P** **09 49 15.8 +1.1**
K27K IAmb IAmb 09 49 29.1
comp=Z,39nm,1.1s

K27K IAMs_20 IAMs_20 10 27 08.7
comp=Z,668nm,22.0s

TABL Table Mountain 94.18 30 P **P** **09 49 14.7 -0.3**
TABL IAmb IAmb 09 49 18.4
comp=Z,27nm,0.9s

BCAR Beaver Creek A 94.19 27 P **P** **09 49 14.9 +0.1**
LOGN Logan Glacier 94.29 29 P **P** **09 49 16.3 +0.8**
LOGN IAmb IAmb 09 49 30.5
comp=Z,32nm,1.0s

KBZ Khabaz 94.47 313 P **P** **09 49 16.1 -0.4**
comp=Z,6.0nm,0.9s,baz=117,slow=5.3,SNR=8.0

KBZ Khabaz 94.47 313*d i* P **P** **09 49 15.8 -0.7**
KBZ pmax pmax
comp=Z,8.0nm,0.9s

GOF Gofitskoye 94.49 315⇑ *eP* **P** **09 49 16.8 +0.2**
NEY Neytrino 94.56 313 *i* P **P** **09 49 19.1 +1.9**
NEY pmax pmax
comp=Z,2.0nm,0.9s

PRGR Permogore 94.58 331 *eP* **P** **09 49 14.4 -2.2**
PRGR *e**SP **PcP** **09 49 19.4 +2.5**
PRGR pmax pmax
comp=Z,31nm,0.8s

PCA Pinnacle 94.58 30 P **P** **09 49 17.0 +0.2**
PCA IAmb IAmb 09 49 30.9
comp=Z,24nm,1.0s

PINM Pinnacle 94.58 30 P 09 49 17.5
baz=264

KIV Kislovodsk 94.65 314 *eP* **P** **09 49 16.1 -1.4**
KIV pmax pmax
comp=Z,23nm,1.1s

KIV MLR MLR
comp=Z,301nm,20.0s

SHA1 Shidzhatmaz 94.65 313 *i* P **P** **09 49 17.6 0.0**
EGAK Eagle 94.66 25 P 09 49 16.9
baz=264,SNR=25

EGAK Eagle 94.66 25 P **P** **09 49 16.9 0.0**
BELA Belgrano 2 95.00 183 P **P** **09 49 18.7 +0.3**
KMBO Kilima Mbogo 95.09 268 P **P** **09 49 21.8 +1.4**
comp=Z,11nm,0.7s,baz=71,slow=5.5,SNR=38

DAWY Dawson 95.35 26 P **P** **09 49 20.6 +0.4**
DAWY IAmb IAmb 09 49 21.7
comp=Z,30nm,1.1s

MARD Mardin 95.54 307 P **P** **09 49 21.0 -0.8**
VRH Novokhopyorsk 95.86 321 *eP* **P** **09 49 19.9 -2.7**
VRH pmax pmax
comp=Z,20nm,0.8s

KOPT Kop Dagi 95.96 309 P **P** **09 49 26.0 +2.2**
KOPT IAmb IAmb 09 49 46.3
comp=Z,24nm,1.0s

HYT Haines Junctio 96.00 30 P **P** **09 49 24.0 +0.7**
SNAA Sanae 96.29 193 P **P** **09 49 25.5 +1.1**
SNAA Sanae 96.29 193*d i* P **P** **09 49 25.2 +0.8**
SNAA pmax pmax
comp=Z,39nm,0.9s

SNAA Sanae 96.29 193 P **P** **09 49 24.2 -0.2**
SOC Sochi 96.77 313 *eP* **P** **09 49 26.3 -0.7**
SOC *eS **SKSac** **10 00 03.2 +1.2**
SOC *eSSS SSS 10 11 04.4
SOC MLR MLR
comp=Z,145nm,20.0s

SKAG Skagway 97.02 31 P Pdif 09 49 28.0 +0.1
SKAG Skagway 97.02 31 P 09 49 28.8
baz=268

BESE Bessie Mountai 97.25 32 P Pdif 09 49 29.0 0.0
BESE IAmb IAmb 09 49 30.9
comp=Z,38nm,1.1s

WHY Whitehorse 97.28 30 P **P** **09 49 28.5 -0.6**
MALT Malatya 97.46 308 P Pdif 09 49 32.0 +1.5
VSR Storozhevoye 97.47 321 *eP* **P** **09 49 27.8 -2.1**
VSR pmax pmax
comp=Z,10.0nm,0.7s

KLMR Klimovskoe 97.48 330 *eP* **P** **09 49 27.3 -2.5**
KLMR *e* 09 53 25.6
KLMR pmax pmax
comp=Z,78nm,1.3s

KLMR Klimovskoe 97.48 330 *eP* **P** **09 49 27.3 -2.5**
KLMR AMP 09 49 38.0
comp=Z,78nm,1.3s

KLMR *ePP **PP** **09 53 25.7 -1.4**
JIS Juneau Island 97.49 32 P **P** **09 49 29.4 -0.4**
JIS IAmb IAmb 09 49 31.8
comp=Z,27nm,1.3s

LPSR Galich'ya Gora 97.65 322 *eP* **P** **09 49 29.6 -1.1**
LPSR pmax pmax
comp=Z,30nm,1.1s

VNA2 Neumayer--Watz 97.83 192 P Pdif 09 49 32.3 +0.9
baz=131,slow=4.6

INK Inuvik 97.87 22 PKKPbc PKKPbc 10 06 06.6 -2.1
comp=Z,6.6nm,0.8s,baz=66,slow=2.7,SNR=18

INK Inuvik 97.87 22 P **P** **09 49 31.0 -0.4**
INK pmax pmax
comp=Z,19nm,1.1s

INK Inuvik 97.87 22 P **P** **09 49 31.0 -0.4**
INK IAmb IAmb 09 49 45.0
comp=Z,19nm,1.1s

INK **PKKPbc** **10 06 06.8 -1.9**
VNA3 Neumayer Olymp 98.05 192 P Pdif 09 49 33.0 +0.7
VNA1 Neumayer--Stat 98.23 192 P Pdif 09 49 34.2 +1.2
MOS Moscow 98.45 325 *eP* **P** **09 49 31.6 -2.7**
MOS *e* 09 49 42.5
OBN Obninsk 99.06 325⇑ *eP* **Pdif** **09 49 35.9 -1.1**
OBN *e* 09 53 41.9
OBN *eS **S** **10 00 57.0 -8.9**
OBN pmax pmax
comp=Z,71nm,1.6s

KVT Kavak 99.39 310 P **Pdif** **09 49 40.6 +1.7**
EIL Elat 99.96 299 P **Pdif** **09 49 41.8 +0.1**
comp=Z,4.7nm,0.7s,baz=251,slow=7.0,SNR=3.8

C36M Paulatuk 101.19 21 P 09 49 45.7
baz=280,SNR=19

BRTR Keskin Array B 101.22 309 P **Pdif** **09 49 46.8 -0.5**
comp=Z,2.0nm,0.9s,baz=77,slow=7.7,SNR=7.0

BRTR PP **PP** **09 53 56.6 0.0**
comp=Z,2.3nm,0.9s,baz=116,slow=6.2,SNR=2.9

BRTR Keskin Array B 101.22 309 Pdif **Pdif** **09 49 46.1 -1.2**
BOSA Boshof 101.64 239 P **Pdif** **09 49 49.8 +0.5**
comp=Z,6.0nm,1.1s,baz=114,slow=4.7,SNR=5.3

ARCES ARCESS Array B 102.39 340 P **Pdif** **09 49 51.4 -0.2**
comp=Z,9.4nm,0.8s,baz=74,slow=5.2,SNR=12

ARCES ARCESS Array B 102.39 340 P **Pdif** **09 49 51.5 -0.1**
ARCES ARCESS Array B 102.39 340 Pdif **Pdif** **09 49 51.5 -0.1**
AKASG Malin Array Be 103.76 320 Pdiff **Pdif** **09 49 56.9 -1.1**
comp=Z,0.6nm,0.4s,baz=65,slow=4.2,SNR=4.7

AKASG PP **PKiKP** **09 54 16.1 +0.1**
comp=Z,1.7nm,0.5s,baz=80,slow=6.8,SNR=8.0

AKASG PKKPbc **PKKPbc** **10 05 50.3 -0.8**
comp=Z,0.6nm,0.4s,baz=232,slow=4.1,SNR=4.9

FINES FINESS Array B 103.91 332 Pdiff **Pdif** **09 49 57.6 -0.8**
comp=Z,3.1nm,0.7s,baz=44,slow=5.8,SNR=6.7

FINES PKKPbc **PKKPbc** **10 05 49.5 -1.5**
comp=Z,3.6nm,0.9s,baz=298,slow=4.1,SNR=6.5

FINES FINESS Array B 103.91 332 P **Pdif** **09 49 59.4 +1.0**
FINES FINESS Array B 103.91 332 Pdif **Pdif** **09 49 59.4 +1.0**
MNK Minsk 104.12 324 *i* P **Pdif** **09 49 54.0 -5.5**
comp=E,2.0nm,0.8s

MNK *i* P **Pdif** **09 49 54.0 -5.5**
comp=N,14nm,1.0s

MNK *i* P **Pdif** **09 49 54.0 -5.5**
comp=Z,7.0nm,0.7s

MNK *i* PP **PKiKP** **09 54 10.0 -6.5**
MNK *i* PPP PPP 09 56 21.6
MNK *i* SKS **SKKSac** **10 01 21.0 +0.4**
MNK *i* PS PS 10 03 22.6 -7.0
MNK *i* SS **SS** **10 08 58.8 -5.3**
MNK *i* SSS SSS 10 12 56.7
MNK *i* SKKS **SKKSdf** **10 12 59.9 -10**
MNK *i* LQ LQ 10 30 50.3
MNK *i* LR LR 10 35 21.3
MNK *i* LRM MLR 10 37 10.8
comp=N,263nm,12.8s

MNK *i* LRM MLR 10 37 14.4
comp=Z,79nm,12.5s

MNK *i* LRM MLR 10 37 27.2
comp=E,17nm,11.8s

J04D Umpqua Nationa 105.92 47 P 09 54 21.9
baz=276

MLR Muntele Rosu 106.53 315 PP **PP** **09 54 31.2 -4.6**
comp=E,6.3nm,0.8s,baz=77,slow=6.5,SNR=3.5

J05D Fort Rock, OR 106.55 47 P 09 54 23.3
baz=276

YKA Yellowknife Ar 106.59 27 Pdiff **Pdif** **09 50 10.2 -0.1**
comp=E,5.4nm,1.1s,baz=292,slow=4.6,SNR=30

YKA PKiKP **PKiKP** **09 54 21.1 +0.2**
comp=E,2.6nm,0.8s,baz=298,slow=1.4,SNR=19

YKA PKKPbc **PKKPbc** **10 05 40.7 -2.2**
comp=E,1.5nm,0.7s,baz=108,slow=3.1,SNR=18

YKA PKKPab **PKKPdf** **10 05 54.5 -0.4**
comp=E,1.0nm,0.8s,baz=109,slow=3.3,SNR=8.1

BURAR Bucovina Array 106.75 318 Pdif **Pdif** **09 50 11.9 +0.3**
BUR08 Bucovina Ar. S 106.76 318 Pdif **Pdif** **09 50 12.0 +0.4**
RES Resolute Bay 107.12 12 PKKPbc PKKPbc 10 05 39.0 -2.4
comp=E,4.8nm,1.0s,baz=125,slow=4.9,SNR=9.8

BEKR Beckworth 107.55 50 IAMs_20 IAMs_20 10 30 52.7
comp=Z,559nm,20.0s

D08A Wollman Farm, 107.68 43 IAMs_20 IAMs_20 10 30 31.2
comp=Z,603nm,22.0s

VCNR Virginia City 108.16 51 IAMs_20 IAMs_20 10 30 53.7
comp=Z,575nm,19.0s

YERR Yerington 108.51 51 IAMs_20 IAMs_20 10 30 15.9
comp=Z,544nm,20.0s

BMO Blue Mountains 109.14 45 IAMs_20 IAMs_20 10 30 48.0
comp=Z,553nm,21.0s

NVAR Mina Array Bea 109.30 52 Pdiff **Pdif** **09 50 25.1 +1.8**
comp=Z,2.2nm,0.9s,baz=260,slow=5.1,SNR=6.4

NVAR PKKPab **PKKPab** **10 05 45.4 +0.6**
comp=Z,4.0nm,0.8s,baz=105,slow=5.5,SNR=18

NEEM North Greenlan 109.51 1 *i* P **PKiKP** **09 54 27.4 +1.0**
NEEM IVmB_BB 09 54 28.9
comp=Z,206nm,1.0s

NEEM IAmb IAmb 09 54 30.6
comp=Z,13nm,0.9s

CWC Cottonwood Cre 109.69 54 P 09 54 29.2
baz=276

MPMC Manual Prospec 110.21 54 P 09 54 30.7
baz=276,SNR=5.3

NOA NORSAR Array B 110.85 334 Pdiff **Pdif** **09 50 28.7 -0.7**
comp=Z,2.0nm,0.8s,baz=68,slow=4.6,SNR=4.9

NOA PKKPbc **PKKPbc** **10 05 28.2 -1.1**
comp=Z,2.0nm,0.8s,baz=244,slow=2.3,SNR=3.8

MSO Missoula 111.07 42 P 09 54 30.5
baz=283

HLID Hailey 111.42 46 P 09 54 32.7
baz=281

BELC Belle Mtn. Jos 111.65 56 P 09 54 33.5
baz=276,SNR=7.1

GMRC Granite Mounta 111.83 55 P 09 54 33.7
baz=277,SNR=7.2

ESJX Sierra Juarez 111.89 58 IAMs_20 IAMs_20 10 31 29.3
comp=Z,808nm,21.0s

DPC Dobruska-Polom 111.90 322 *e*PKIKP **PKiKP** **09 54 38.0 +6.7**
DPC Dobruska-Polom 111.90 322 *e*PKP **PKiKP** **09 54 38.0 +6.7**
OSTC Ostas 111.91 322 *e*PKP **PKiKP** **09 54 32.8 +1.5**
BC3 Big Chuckawall 112.14 57 P 09 54 34.1
baz=277

BOZ Bozeman (W) 112.92 43 P 09 54 34.8
baz=284

BRG Berggiesshubel 113.19 323 *e*PKP **PKiKP** **09 54 33.1 -0.6**
BRG Amp 09 54 36.3
comp=Z,9.7nm,1.1s

BRG *ex* x 09 54 47.0
BRG Amp 09 54 47.9
comp=Z,12nm,1.2s

DUG Dugway, Tooele 113.24 49 IAMs_20 IAMs_20 10 37 12.7
comp=Z,421nm,19.0s

DUG Dugway, Tooele 113.24 49 P 09 54 35.8
baz=281

EGMT Eagleton 113.52 40 IAMs_20 IAMs_20 10 32 34.3
comp=Z,425nm,21.0s

EGMT Eagleton 113.52 40 P 09 54 35.7
baz=287

CLL Collm 113.61 323 *e*PKiKP **PKiKP** **09 54 36.0 +1.6**
CLL *e*PP **PP** **09 55 25.0 -1.5**
CLL *e*PS **PS** **10 05 00.0 -3.4**
CLL *e*PPS PPS 10 06 06.0
CLL Collm 113.61 323 *e*PKiKP **PKiKP** **09 54 36.0 +1.6**
SOKA Soboth 113.74 318 *eP* **PKiKP** **09 54 34.7 -0.3**
comp=Z,9.7nm,1.5s

H17A Grant Village 113.94 44 IAMs_20 IAMs_20 10 35 57.0
comp=Z,612nm,20.0s

KHC Kasperske Hory 113.96 321 *e*PKiKP **PKiKP** **09 54 36.2 +0.9**
KHC Kasperske Hory 113.96 321 *e*PKP **PKiKP** **09 54 36.2 +0.9**
GERES GERESS Array B 113.97 321 PKiKP **PKiKP** **09 54 36.0 +0.6**
comp=Z,1.0nm,0.4s,baz=10,slow=6.0,SNR=5.2

GERES GERESS Array B 113.97 321 **PKiKP** **09 54 37.2 +1.8**
LOHW Long Hollow 114.11 45 IAMs_20 IAMs_20 10 34 41.4
comp=Z,570nm,21.0s

SUMG Summit 114.20 357 *i* P PKPdf 09 54 36.1 +0.6
SCO Scoresbysund 114.47 351 *i* P PKPdf 09 54 36.9 +1.4
214A Organ Pipe Nat 114.55 58 IAMs_20 IAMs_20 10 34 07.6
comp=Z,731nm,21.0s

KBA Koelnbreinsper 114.74 319 *eP* **PKiKP** **09 54 36.1 -0.8**
comp=Z,4.7nm,1.0s

BW06 Boulder Array 115.06 46 P 09 54 38.5
baz=284

PDAR Pinedale Array 115.06 46 PKP **PKPdf** **09 54 38.8 +0.9**
comp=Z,4.0nm,0.9s,baz=219,slow=1.4,SNR=23

PDAR PKKPbc **PKKPbc** **10 05 14.5 -0.4**
comp=Z,1.3nm,0.8s,baz=107,slow=7.9,SNR=7.8

PDAR Pinedale Array 115.06 46 PKKPbc PKKPbc 10 05 14.1 -0.7
WUAZ Wupatki 115.20 54 IAMs_20 IAMs_20 10 42 00.2
comp=Z,443nm,20.0s

WUAZ Wupatki 115.20 54 P 09 54 40.0
baz=280

ABTA Abfaltersbach 115.38 319 *eP* **PKiKP** **09 54 37.1 -1.0**
comp=Z,5.3nm,0.8s

RDMU Red Mountain 115.58 48 **PKPdf** **09 54 38.9 0.0**
FFC Flin Flon 115.61 32 PKIKP **PKPdf** **09 54 38.5 +0.3**
FFC Flin Flon 115.61 32 **PKPdf** **09 54 38.5 +0.3**
WTTA Wattenberg 115.79 320 *eP* **PKPdf** **09 54 39.2 +0.2**
comp=Z,13nm,0.6s

SQTA Sankt Quirin 116.08 320 *eP* **PKiKP** **09 54 40.1 +0.6**
comp=Z,18nm,1.4s

MOTA Moosalm 116.10 320 *eP* **PKPdf** **09 54 38.0 -1.5**
TUC Tucson 116.20 57 PKIKP **PKiKP** **09 54 41.1 +1.0**
TUC Tucson 116.20 57 **PKiKP** **09 54 41.1 +1.0**
TUC Tucson 116.20 57 IAMs_20 IAMs_20 10 34 27.3
comp=Z,803nm,22.0s

TUC Tucson 116.20 57 P 09 54 41.4
baz=279

LAO LASA Array 116.21 41 **PKiKP** **09 54 40.1 +0.4**
LAO LASA Array 116.21 41 P 09 54 41.9
baz=289

TEOL Teolo 116.37 318 IAMs_20 IAMs_20 10 28 09.7
comp=Z,677nm,20.0s

FETA Feichten 116.45 319 *eP* **PKiKP** **09 54 40.4 +0.1**
comp=Z,6.4nm,1.0s

PV10 Paradox Valley 116.48 51 **PKiKP** **09 54 42.3 +1.6**
PV14 Lion Creek, Pa 116.49 51 PKPdf **PKiKP** **09 54 42.0 +1.3**
PV05 Paradox Valley 116.50 51 **PKiKP** **09 54 41.0 +0.2**
HSIG 116.51 61 IAMs_20 IAMs_20 10 37 10.8
comp=Z,658nm,22.0s

PV19 Morning Glory 116.54 51 **PKPdf** **09 54 40.5 -0.3**
PV20 West Nyswonger 116.54 51 **PKiKP** **09 54 41.2 +0.4**
PV17 East Wray Mesa 116.56 51 **PKPdf** **09 54 40.5 -0.3**
PV04 Paradox Valley 116.58 50 **PKiKP** **09 54 41.9 +1.1**
PV16 Nyswonger Mesa 116.59 51 **PKiKP** **09 54 41.5 +0.6**
PV18 Skein Mesa, Pa 116.61 51 PKPdf **PKiKP** **09 54 42.0 +1.1**
PV11 David Mesa, Pa 116.62 51 **PKiKP** **09 54 41.9 +0.9**
PV22 Blue Mesa, Par 116.64 50 **PKiKP** **09 54 42.6 +1.7**
PV03 Paradox Valley 116.65 51 **PKiKP** **09 54 41.8 +0.8**
PV03 IAMs_20 IAMs_20 10 35 09.5
comp=Z,484nm,21.0s

O20A White River Ci 116.67 48 PKPdf **PKiKP** **09 54 42.3 +1.3**
O20A White River Ci 116.67 48 P 09 54 42.5
baz=284,SNR=17

PV12 Saucer Basin, 116.67 51 **PKiKP** **09 54 41.7 +0.6**
PV13 Radium Mtn., P 116.69 51 **PKiKP** **09 54 42.0 +0.9**
PV02 Paradox Valley 116.75 51 PKPdf **PKiKP** **09 54 42.6 +1.4**
PV07 Paradox Valley 116.77 50 **PKiKP** **09 54 42.1 +0.9**
DGMT Dagmar 116.89 39 PKPdf **PKiKP** **09 54 41.3 +0.4**
DGMT Dagmar 116.89 39 P 09 54 42.2
baz=292

PV01 Paradox Valley 116.89 51 **PKiKP** **09 54 42.7 +1.2**
DAVA Damuels 116.91 320 *eP* **PKiKP** **09 54 41.6 +0.4**
comp=Z,14nm,1.1s

PV15 Paradox Valley 116.91 50 **PKiKP** **09 54 42.9 +1.3**
PV15 IAMs_20 IAMs_20 10 41 15.4
comp=Z,429nm,21.0s

RWWY Rawlins 117.03 47 **PKiKP** **09 54 42.0 +0.3**
MVCO Mesa Verde 117.15 52 PKPdf **PKiKP** **09 54 43.6 +1.6**
MVCO Mesa Verde 117.15 52 P 09 54 43.5
baz=283,SNR=14

K22A Casper 117.25 45 PKPdf **PKiKP** **09 54 42.1 +0.1**
K22A IAMs_20 IAMs_20 10 36 03.6
comp=Z,544nm,22.0s

K22A Casper 117.25 45 P 09 54 42.6
baz=287

FCC Fort Churchill 117.25 25 PKIKP **PKPdf** **09 54 40.8 -0.4**
FCC Fort Churchill 117.25 25 PKPdf **PKPdf** **09 54 40.8 -0.4**
SMCO Snowmass 117.86 49 PKPdf **PKiKP** **09 54 44.8 +1.2**
N23A Red Feather La 118.16 47 P 09 54 44.7
baz=286

S22A 4UR Ranch, Cre 118.32 51 P 09 54 46.3
baz=284,SNR=21
PHWY Pilot Hill 118.40 47 **PKPdf PKiKP 09 54 43.9 -0.5**
RSSD Black Hills 118.51 43 PKIKP **PKPdf 09 54 44.3 -0.1**
RSSD Black Hills 118.51 43 PKPdf **PKPdf 09 54 44.3 -0.1**
RSSD Black Hills 118.51 43 P 09 54 44.7
baz=290
121A Cookes Peak, D 118.67 57 PKPdf **PKiKP 09 54 45.8 +0.8**
121A Cookes Peak, D 118.67 57 P 09 54 46.7
baz=281
ISCO Idaho Springs 118.71 48 PKIKP **PKPdf 09 54 44.8 -0.3**
ISCO Idaho Springs 118.71 48 PKPdf **PKPdf 09 54 44.8 -0.3**
ISCO Idaho Springs 118.71 48 P 09 54 46.4
baz=286,SNR=6.7
Y22D IRIS PASSCAL I 119.07 55 IAMs_20 IAMs_20 10 37 15.1
comp=Z,705nm,21.0s
ANMO Albuquerque 119.26 54 PKKPbc PKKPbc 10 05 00.0 +0.4
comp=Z,1.5nm,0.7s,baz=97,slow=5.8,SNR=7.1
ANMO Albuquerque 119.26 54 PKiKP **PKiKP 09 54 47.6 +1.4**
ANMO MLR MLR
comp=Z,600nm,19.0s
ANMO Albuquerque 119.26 54 PKPdf **PKiKP 09 54 47.6 +1.4**
ANMO PKKPab **PKKPab 10 05 02.6 +1.7**
ANMO Albuquerque 119.26 54 IAMs_20 IAMs_20 10 44 29.9
comp=Z,599nm,19.0s
ANMO Albuquerque 119.26 54 P 09 54 47.6
baz=283
BNM Barren Site 119.30 55 PKPdf **PKiKP 09 54 47.7 +1.4**
E28A Huff 119.81 40 **PKiKP 09 54 47.1 +0.5**
SFJD Kangerlussuaq 120.00 1 *i* P **PKPdf 09 54 46.0 -0.2**
SFJD IAmb IAmb 09 54 47.7
comp=Z,11nm,1.1s
SFJD Kangerlussuaq 120.00 1 PKIKP **PKPdf 09 54 46.2 -0.1**
SFJD Kangerlussuaq 120.00 1 PKPdf **PKPdf 09 54 46.2 -0.1**
T25A Trinidad 120.34 51 PKPdf **PKiKP 09 54 48.5 +0.3**
T25A IAMs_20 IAMs_20 10 38 56.1
comp=Z,377nm,18.0s
T25A Trinidad 120.34 51 P 09 54 49.7
baz=286,SNR=10
MNTX Cornudas Mount 120.83 57 PKPdf **PKiKP 09 54 50.3 +1.2**
MNTX IAMs_20 IAMs_20 10 37 24.4
comp=Z,648nm,21.0s
MNTX Cornudas Mount 120.83 57 P 09 54 50.4
baz=282,SNR=56
OGNE Ogallala 120.97 46 PKPdf **PKiKP 09 54 49.6 +0.4**
ULM Lac du Bonnet 121.02 34 PKP **PKPdf 09 54 48.6 -0.1**
comp=Z,11nm,0.9s,baz=292,slow=2.1,SNR=23
ULM PKKPbc **PKKPab 10 04 52.3 -0.3**
comp=Z,3.8nm,0.7s,baz=104,slow=2.8,SNR=9.1
KSCO Kaye Shedlock' 121.15 48 PKPdf **PKiKP 09 54 50.1 +0.4**
KSCO IAMs_20 IAMs_20 10 38 50.3
comp=Z,615nm,22.0s
KSCO Kaye Shedlock' 121.15 48 P 09 54 50.4
baz=288
HPIG 121.42 63 PKPdf **PKiKP 09 54 51.5 +0.9**
HPIG IAMs_20 IAMs_20 10 42 44.1
comp=Z,621nm,20.0s
SUSD Miller 121.78 41 PKPdf **PKiKP 09 54 50.6 0.0**
D32A Dogwood Acres, 121.84 38 **PKPdf 09 54 50.4 0.0**
D32A IAMs_20 IAMs_20 10 44 52.5
comp=Z,555nm,20.0s
AGMN Agassiz Nation 121.98 36 PKPdf **PKPdf 09 54 50.4 -0.2**
AGMN IAMs_20 IAMs_20 10 43 07.8
comp=Z,435nm,20.0s
AGMN Agassiz Nation 121.98 36 P 09 54 50.6
baz=299
MSTX Muleshoe 122.45 54 PKPdf **PKiKP 09 54 53.1 +0.7**
MSTX Muleshoe 122.45 54 P 09 54 53.1
baz=285,SNR=12
K31A O'Neill 122.64 43 PKPdf **PKPdf 09 54 51.8 -0.4**
K31A IAMs_20 IAMs_20 10 50 32.3
comp=Z,462nm,20.0s
TX31 Lajitas Ar. Si 122.75 60 **PKiKP 09 54 53.8 +0.8**
TX32 Lajitas Array 122.75 60 PKPdf **PKiKP 09 54 53.8 +0.8**
TXAR Lajitas Array 122.75 60 PKP **PKiKP 09 54 53.5 +0.5**
comp=Z,10nm,0.9s,baz=269,slow=0.9,SNR=57
TXAR Lajitas Array 122.75 60 PKPdf **PKiKP 09 54 53.7 +0.6**
NUUK Nuuk 122.79 2 *i* P **PKiKP 09 54 52.4 +0.5**
NUUK IAmb IAmb 09 54 54.0
comp=Z,33nm,0.9s
F33A 5 Mile Ranch, 122.88 39 PKPdf **PKiKP 09 54 52.9 +0.2**
AMTX Amarillo 123.08 53 PKPdf **PKPdf 09 54 53.2 -0.1**
AMTX IAMs_20 IAMs_20 10 47 22.5
comp=Z,591nm,19.0s
AMTX Amarillo 123.08 53 P 09 54 54.4
baz=286
B35A Bob, Littlefor 123.19 35 **PKPdf 09 54 52.4 -0.5**
CBKS Cedar Bluff 123.35 48 IAMs_20 IAMs_20 10 50 41.1
comp=Z,476nm,19.0s
CBKS Cedar Bluff 123.35 48 P 09 54 54.8
baz=290
BGNE Belgrade 123.53 44 **PKiKP 09 54 54.5 +0.3**
BGNE Belgrade 123.53 44 P 09 54 54.6
baz=293
ECSD EROS Data Cent 123.61 41 PKPdf **PKiKP 09 54 54.2 0.0**
ECSD EROS Data Cent 123.61 41 IAMs_20 IAMs_20 10 50 36.4
comp=Z,454nm,19.0s
ECSD EROS Data Cent 123.61 41 P 09 54 54.2
baz=296,SNR=31
R32A Long Quarter, 124.24 48 **PKiKP 09 54 55.9 +0.3**
R32A IAMs_20 IAMs_20 10 48 02.9
comp=Z,422nm,20.0s
F36A Milaca 124.57 38 PKPdf **PKiKP 09 54 56.3 +0.3**
F36A IAMs_20 IAMs_20 10 41 11.6
comp=Z,517nm,21.0s
EYMN Ely 124.67 35 **PKiKP 09 54 56.6 +0.4**
EYMN Ely 124.67 35 IAMs_20 IAMs_20 10 42 02.8
comp=Z,440nm,22.0s
EYMN Ely 124.67 35 P 09 54 56.6
baz=303
U32A Winter Ranch, 124.71 50 **PKiKP 09 54 57.8 +1.1**
U32A IAMs_20 IAMs_20 10 41 33.7
comp=Z,475nm,20.0s
ZAIG Zacatecas 124.80 67 PKPdf **PKiKP 09 54 59.1 +1.6**
KAN10 Anthony SW Sta 125.15 49 **PKiKP 09 54 58.6 +1.2**
OK032 Salt Plains WL 125.17 49 **PKiKP 09 54 57.7 +0.2**
OK032 IAMs_20 IAMs_20 10 50 48.8
comp=Z,385nm,20.0s
KAN08 Anthony NE Sta 125.20 49 PKPdf **PKiKP 09 54 57.9 +0.4**
KAN05 Bluff City Nor 125.32 49 **PKiKP 09 54 58.4 +0.6**
SPMN Marine on St. 125.33 38 **PKiKP 09 54 57.6 +0.1**
SPMN IAMs_20 IAMs_20 10 41 11.7
comp=Z,484nm,21.0s
SPMN Marine on St. 125.33 38 P 09 54 58.0
baz=300,SNR=9.1
ABTX Abilene, Hawle 125.33 55 PKPdf **PKiKP 09 54 58.3 +0.3**
ABTX IAMs_20 IAMs_20 10 49 41.8
comp=Z,576nm,20.0s
ABTX Abilene, Hawle 125.33 55 P 09 54 58.8
baz=286,SNR=8.3
E38A The Farm, Brul 125.36 36 PKPdf **PKiKP 09 54 57.5 0.0**
WMOK Wichita Mounta 125.40 52 PKIKP **PKiKP 09 54 58.5 +0.5**
WMOK MLR MLR
comp=Z,500nm,20.0s
WMOK Wichita Mounta 125.40 52 PKPdf **PKiKP 09 54 58.5 +0.5**
WMOK Wichita Mounta 125.40 52 IAMs_20 IAMs_20 10 50 03.0
comp=Z,473nm,20.0s
WMOK Wichita Mounta 125.40 52 P 09 54 58.6
baz=288,SNR=14
N35A Tabor 125.49 44 PKPdf **PKiKP 09 54 58.3 +0.3**
N35A IAMs_20 IAMs_20 10 48 02.6
comp=Z,472nm,20.0s
KAN09 Caldwell North 125.50 49 **PKiKP 09 54 58.4 +0.2**
KSU1 Kansas State U 125.52 46 PKPdf **PKiKP 09 54 58.4 +0.3**
KSU1 Kansas State U 125.52 46 IAMs_20 IAMs_20 10 50 30.3
comp=Z,387nm,19.0s
KSU1 Kansas State U 125.52 46 P 09 54 58.8
baz=293,SNR=8.4
I37A Lemond, Waseca 125.55 40 PKPdf **PKiKP 09 54 58.6 +0.6**
KAN13 South Haven SW 125.65 49 **PKiKP 09 54 58.6 +0.2**
JCT Junction City 125.77 57 PKIKP **PKiKP 09 54 59.3 +0.4**
JCT Junction City 125.77 57 PKPdf **PKiKP 09 54 59.3 +0.4**
JCT IAMs_20 IAMs_20 10 42 21.1
comp=Z,454nm,22.0s
JCT Junction City 125.77 57 P 09 54 59.7
baz=285
NRS Narsarsuaq 125.88 359 *i* P **PKiKP 09 54 58.8 +0.7**
NRS IAmb IAmb 09 54 59.4
comp=Z,73nm,0.9s
NRS Narsarsuaq 125.88 359 PKIKP **PKiKP 09 54 58.1 0.0**
NRS Narsarsuaq 125.88 359 **PKiKP 09 54 58.1 0.0**
BCOK Bluff Creek, N 126.01 51 **PKiKP 09 54 59.9 +0.7**
OK029 Liberty Lake 126.08 50 **PKiKP 09 54 59.9 +0.5**
OK025 Westminster Rd 126.25 51 **PKiKP 09 55 00.2 +0.5**
FNO Franklin 126.31 51 **PKiKP 09 55 01.2 +1.4**

T35A Sooner Cattle 126.41 49 PKPdf **PKiKP 09 55 00.2 +0.3**
T35A IAMs_20 IAMs_20 10 43 51.4
comp=Z,358nm,20.0s
OK031 S. Brethren Rd 126.50 50 **PKiKP 09 55 01.2 +1.1**
QUOK Quay 126.52 50 PKPdf **PKiKP 09 55 00.9 +0.7**
OK030 Cody Creek RV 126.55 50 **PKiKP 09 55 00.9 +0.7**
OK030 IAMs_20 IAMs_20 10 49 50.5
comp=Z,564nm,21.0s
K38A Parkersburg 126.61 41 **PKPdf 09 54 59.7 0.0**
833A Chaparral WMA, 126.62 60 P 09 55 02.2
baz=283
SCIA State Center 126.67 42 PKPdf **PKPdf 09 54 60.0 +0.1**
SCIA IAMs_20 IAMs_20 10 42 28.3
comp=Z,534nm,21.0s
TAM Tamanrasset 126.70 293 PKIKP **PKiKP 09 55 01.7 +0.6**
TAM Tamanrasset 126.70 293 PKPdf **PKiKP 09 55 01.7 +0.6**
D41A Chassel 126.81 34 PKPdf **PKiKP 09 55 00.9 +0.5**
G40A Rib Lake 126.88 37 PKPdf **PKPdf 09 55 00.3 +0.1**
COWI Conover 127.04 35 **PKiKP 09 55 01.2 +0.3**
COWI IAMs_20 IAMs_20 10 47 55.5
comp=Z,493nm,20.0s
Z35A Perchaven, San 127.05 53 **PKPdf 09 55 00.5 -0.3**
Z35A IAMs_20 IAMs_20 10 43 26.9
comp=Z,653nm,21.0s
N38A Joes South For 127.16 43 PKPdf **PKiKP 09 55 01.3 -0.1**
WHTX Lake Whitney, 127.29 55 **PKiKP 09 55 02.8 +1.0**
WHTX IAMs_20 IAMs_20 10 41 46.6
comp=Z,528nm,22.0s
WHTX Lake Whitney, 127.29 55 P 09 55 02.8
baz=287
TUL1 Leonard 127.31 50 P 09 55 02.8
baz=291,SNR=9.5
P38A Dawn 127.47 44 PKPdf **PKiKP 09 55 01.7 -0.3**
P38A IAMs_20 IAMs_20 10 53 57.2
comp=Z,548nm,19.0s
435B Jarrell 127.53 56 PKPdf **PKiKP 09 55 02.6 +0.3**
435B IAMs_20 IAMs_20 10 44 24.1
comp=Z,572nm,22.0s
435B Jarrell 127.53 56 P 09 55 03.6
baz=286
F42A Maple Grove Fa 127.81 35 IAMs_20 IAMs_20 10 44 38.0
comp=Z,517nm,21.0s
735A Kenedy 127.85 59 IAMs_20 IAMs_20 10 45 10.9
comp=Z,622nm,20.0s
L40A Anamosa 127.90 41 PKPdf **PKPdf 09 55 02.3 +0.1**
L40A IAMs_20 IAMs_20 10 53 02.0
comp=Z,380nm,20.0s
PLCA Paso Flores 128.03 158 PKP **PKiKP 09 55 03.9 +0.6**
comp=Z,38nm,1.0s,baz=235,slow=2.8,SNR=35
PLCA Paso Flores 128.03 158 PKIKP **PKiKP 09 55 03.0 -0.2**
PLCA Paso Flores 128.03 158 **PKiKP 09 55 03.0 -0.2**
PLCA Paso Flores 128.03 158 *eP* **PKPdf 09 55 01.5 -1.1**
JFWS Jewell Farm 128.09 39 PKIKP **PKPdf 09 55 02.7 +0.2**
JFWS Jewell Farm 128.09 39 PKPdf **PKPdf 09 55 02.7 +0.2**
JFWS Jewell Farm 128.09 39 IAMs_20 IAMs_20 10 44 55.7
comp=Z,587nm,22.0s
JFWS Jewell Farm 128.09 39 P 09 55 03.2
baz=301,SNR=12
E43A Lone Tree Farm 128.09 34 PKPdf **PKiKP 09 55 03.2 +0.2**
X37A Clayton 128.10 51 **PKPdf 09 55 02.9 +0.1**
U38A Gravette 128.17 49 **PKiKP 09 55 03.5 0.0**
U38A IAMs_20 IAMs_20 10 52 20.1
comp=Z,494nm,18.0s
I42A Draeger Farm, 128.40 38 PKPdf **PKPdf 09 55 03.2 +0.1**
I42A IAMs_20 IAMs_20 10 43 51.8
comp=Z,499nm,22.0s
S39A Bolivar 128.44 47 PKPdf **PKPdf 09 55 03.7 +0.3**
S39A IAMs_20 IAMs_20 10 48 44.2
comp=Z,495nm,20.0s
P40A Paris 128.54 44 **PKPdf 09 55 03.6 +0.1**
P40A IAMs_20 IAMs_20 10 53 15.5
comp=Z,506nm,19.0s
HHAR Hobbs 128.56 49 **PKPdf 09 55 03.5 -0.1**
237A Washetta, Mont 128.62 54 PKPdf **PKiKP 09 55 05.1 +0.7**
H43A Windswept, Lux 128.76 36 **PKPdf 09 55 03.2 -0.5**
N41A Harden Midland 128.80 42 PKPdf **PKPdf 09 55 03.8 -0.1**
N41A IAMs_20 IAMs_20 10 53 02.0
comp=Z,548nm,20.0s
L42A Oliver, Polo 128.93 40 **PKPdf 09 55 04.2 +0.1**
L42A IAMs_20 IAMs_20 10 54 42.1
comp=Z,412nm,19.0s
R40A Maddies Statio 128.94 45 **PKPdf 09 55 04.2 0.0**
R40A IAMs_20 IAMs_20 10 43 45.2
comp=Z,473nm,21.0s
W39A Magazine 129.09 50 **PKPdf 09 55 04.3 -0.4**
W39A Magazine 129.09 50 P 09 55 05.8
baz=292,SNR=6.7
TLIG Tlapa 129.12 73 PKPdf **PKiKP 09 55 07.8 +1.7**
TLIG IAMs_20 IAMs_20 10 40 52.8
comp=Z,529nm,21.0s
ESDC Sonseca Array 129.20 317 PKP **PKiKP 09 55 05.8 +0.3**
comp=Z,2.7nm,1.0s,baz=35,slow=1.8,SNR=11
ESDC PP **PP 09 57 13.5 +0.5**
comp=Z,1.2nm,0.3s,baz=51,slow=5.8,SNR=4.8
ESDC Sonseca Array 129.20 317 PKPdf **PKiKP 09 55 06.0 +0.5**
HKT Hockley 129.22 57 PKIKP **PKiKP 09 55 06.3 +0.6**
HKT MLR MLR
comp=Z,500nm,20.0s
HKT Hockley 129.22 57 PKPdf **PKiKP 09 55 06.3 +0.6**
HKT Hockley 129.22 57 IAMs_20 IAMs_20 10 52 24.6
comp=Z,535nm,20.0s
U40A Yellville 129.34 48 PKPdf **PKPdf 09 55 05.1 0.0**
U40A IAMs_20 IAMs_20 10 43 39.9
comp=Z,494nm,22.0s
U40A Yellville 129.34 48 P 09 55 06.3
baz=294,SNR=13
K43A Burlington 129.40 39 IAMs_20 IAMs_20 10 54 51.4
comp=Z,445nm,21.0s
MGMO Mountain Grove 129.43 47 **PKPdf 09 55 05.4 +0.1**
MGMO IAMs_20 IAMs_20 10 54 00.3
comp=Z,502nm,21.0s
MIAR Mount Ida 129.50 50 PKIKP **PKiKP 09 55 06.3 +0.1**
MIAR Mount Ida 129.50 50 PKPdf **PKiKP 09 55 06.3 +0.1**
MIAR Mount Ida 129.50 50 P 09 55 07.1
baz=292,SNR=10.0
E46A Sault Ste Mari 129.56 33 PKPdf **PKPdf 09 55 05.2 -0.1**
NATX Nacogdoches 129.62 54 IAMs_20 IAMs_20 10 43 12.9
comp=Z,621nm,22.0s
NATX Nacogdoches 129.62 54 P 09 55 07.9
baz=289
G45A Suttons Bay 129.64 35 PKPdf **PKPdf 09 55 05.2 -0.2**
CCM Cathedral Cave 129.77 45 PKIKP **PKPdf 09 55 05.8 -0.1**
CCM MLR MLR
comp=Z,400nm,19.0s
CCM Cathedral Cave 129.77 45 PKPdf **PKPdf 09 55 05.8 -0.1**
CCM Cathedral Cave 129.77 45 IAMs_20 IAMs_20 10 51 44.1
comp=Z,360nm,19.0s
CCM Cathedral Cave 129.77 45 P 09 55 06.5
baz=297
HDIL Hopedale 129.91 41 **PKPdf 09 55 05.0 -1.1**
HDIL Hopedale 129.91 41 P 09 55 06.3
baz=300
L44A Lake County Fo 129.94 39 IAMs_20 IAMs_20 10 54 08.9
comp=Z,475nm,20.0s
L44A Lake County Fo 129.94 39 P 09 55 07.3
baz=303
PBRG Braganca 129.95 320 *e*PKPdf **PKiKP 09 55 07.4 +0.4**
FCAR Ozark Folk Cen 130.06 48 PKPdf **PKPdf 09 55 06.8 +0.3**
FCAR IAMs_20 IAMs_20 10 52 27.3
comp=Z,485nm,20.0s
WLAR White Oak Lake 130.18 51 PKPdf **PKiKP 09 55 07.5 0.0**
WHAR Wooly Hollow 130.19 49 IAMs_20 IAMs_20 10 51 27.5
comp=Z,554nm,21.0s
P43A Skaggs, Pawnee 130.21 43 **PKiKP 09 55 07.1 -0.4**
P43A IAMs_20 IAMs_20 10 56 29.5
comp=Z,442nm,20.0s
W41B Gary Mavity, V 130.26 49 P 09 55 07.6
baz=294
M44A Midewin, Midew 130.28 40 **PKPdf 09 55 07.1 +0.3**
GLMI Grayling 130.36 34 **PKPdf 09 55 06.9 +0.1**
GLMI Grayling 130.36 34 P 09 55 08.0
baz=308
FVM French Village 130.38 45 PKIKP **PKPdf 09 55 07.4 +0.4**
FVM French Village 130.38 45 **PKPdf 09 55 07.4 +0.4**
MATQ Matagami 130.40 25 P 09 55 07.5
baz=319,SNR=7.6
O44A Mansfield 130.66 42 IAMs_20 IAMs_20 10 54 11.1
comp=Z,462nm,20.0s
LCAR Lake Charles 130.70 48 PKPdf **PKPdf 09 55 07.9 +0.2**
LCAR IAMs_20 IAMs_20 10 52 32.1
comp=Z,504nm,20.0s
Q44A Meyer Farm, Va 130.91 43 PKPdf **PKPdf 09 55 08.0 0.0**
PBMO Poplar Bluff 130.92 46 PKPdf **PKPdf 09 55 08.3 +0.2**
L46A Eue Claire 131.04 38 **PKiKP 09 55 09.0 -0.1**
L46A IAMs_20 IAMs_20 10 44 25.8
comp=Z,527nm,21.0s
J47A Sunmer 131.21 36 **PKPdf 09 55 08.6 +0.2**
BI02 San Fabin de 131.22 154 PKPdf **PKiKP 09 55 09.5 -0.2**
TOA0 Torodi Ar. Sit 131.25 281 PKPdf **PKPdf 09 55 09.3 +0.1**
TORD Torodi Ar. Bea 131.25 281 PKP **PKiKP 09 55 09.8 -0.4**
comp=Z,14nm,0.8s,baz=54,slow=1.9,SNR=38
TORD SKPbc **SKPbc 09 58 32.3 0.0**
comp=Z,16nm,1.0s,baz=70,slow=4.0,SNR=13
TORD Torodi Ar. Bea 131.25 281 **PKPdf 09 55 08.2 -1.1**
S44A Carbondale 131.33 45 **PKPdf 09 55 08.3 -0.5**
S44A IAMs_20 IAMs_20 10 50 05.4
comp=Z,405nm,21.0s
SIUC Southern Illin 131.35 45 **PKPdf 09 55 08.8 0.0**
SIUC IAMs_20 IAMs_20 10 50 05.5
comp=Z,383nm,21.0s
SFIN Lafayette 131.43 41 PKPdf **PKPdf 09 55 09.2 +0.2**
SFIN IAMs_20 IAMs_20 10 58 23.5
comp=Z,393nm,19.0s
SFIN Lafayette 131.43 41 P 09 55 10.1
baz=302
PARMO Parma 131.46 46 **PKiKP 09 55 09.9 -0.2**
PARMO IAMs_20 IAMs_20 10 52 47.9
comp=Z,549nm,20.0s
PCBR Castelo Branco 131.47 319 *e*PKPdf **PKiKP 09 55 11.7 +1.7**
LPAR Lepanto 131.53 48 IAMs_20 IAMs_20 10 44 45.0
comp=Z,648nm,22.0s
PVMO Portageville 131.61 46 IAMs_20 IAMs_20 10 55 03.9
comp=Z,528nm,20.0s
OLIL Olney 131.62 43 **PKPdf 09 55 09.8 +0.4**
PEBM Pemiscott Bayo 131.63 47 IAMs_20 IAMs_20 10 45 10.4
comp=Z,571nm,22.0s
PENMO Penman 131.64 46 IAMs_20 IAMs_20 10 55 05.8
comp=Z,553nm,20.0s
VLDQ Val d'Or 131.72 27 PKPdf **PKPdf 09 55 08.9 -0.3**
P46A Rosedale 131.76 41 **PKPdf 09 55 09.4 -0.2**
P46A IAMs_20 IAMs_20 10 57 51.4
comp=Z,469nm,20.0s
143A Socs Landing, 131.87 52 **PKPdf 09 55 08.9 -1.1**
GLAT Glass 131.97 46 IAMs_20 IAMs_20 10 54 28.5
comp=Z,498nm,20.0s
N47A Urbana 132.05 39 PKPdf **PKPdf 09 55 09.8 -0.3**
N47A IAMs_20 IAMs_20 10 51 13.6
comp=Z,404nm,20.0s
T45A Paducah 132.08 45 **PKiKP 09 55 11.2 -0.1**
T45A IAMs_20 IAMs_20 10 45 50.3
comp=Z,389nm,21.0s
HALT Halls 132.10 47 IAMs_20 IAMs_20 10 45 13.8
comp=Z,557nm,22.0s
L48A N Adams 132.21 37 PKPdf **PKPdf 09 55 10.6 +0.2**
L48A IAMs_20 IAMs_20 10 44 21.7
comp=Z,507nm,21.0s
USIN University of 132.30 44 **PKiKP 09 55 11.2 -0.5**
PMTG Montargil 132.36 318 *e*PKPdf **PKiKP 09 55 14.4 +2.6**
BLO Bloomington 132.45 42 PKIKP **PKPdf 09 55 11.4 +0.5**
BLO MLR MLR
comp=Z,400nm,19.0s
BLO Bloomington 132.45 42 **PKPdf 09 55 11.3 +0.5**
BLO IAMs_20 IAMs_20 10 54 56.5
comp=Z,446nm,19.0s
AAM Ann Arbor 132.46 36 PKIKP **PKPdf 09 55 11.1 +0.3**
AAM Ann Arbor 132.46 36 **PKPdf 09 55 11.1 +0.3**
AAM IAMs_20 IAMs_20 10 56 38.9
comp=Z,526nm,19.0s
MDT Midelt 132.65 309 PKP **PKiKP 09 55 12.5 -0.2**
comp=Z,2.1nm,0.8s,baz=0.0,slow=4.0,SNR=5.7
MDT PP **PP 09 57 38.1 +2.4**
comp=Z,2.5nm,0.8s,baz=77,slow=4.9,SNR=3.9
OXF Oxford 132.66 49 IAMs_20 IAMs_20 10 46 53.8
comp=Z,425nm,20.0s
CMIG Matias Romero 132.66 73 PKP **PKiKP 09 55 12.7 -0.3**
comp=Z,9.6nm,0.8s,baz=329,slow=3.1,SNR=13
VBMS Vicksburg 132.75 52 **PKPdf 09 55 11.6 0.0**
K50A Casco 132.76 35 IAMs_20 IAMs_20 10 50 01.2
comp=Z,477nm,20.0s
Y45A Yeager Farm, C 132.83 49 PKPdf **PKiKP 09 55 12.5 -0.4**
Y45A IAMs_20 IAMs_20 10 52 18.8
comp=Z,516nm,20.0s
344A Westbrook Farm 132.87 53 PKPdf **PKiKP 09 55 12.8 -0.2**
N49A Columbus Grove 132.96 38 **PKiKP 09 55 12.7 -0.2**
N49A IAMs_20 IAMs_20 10 58 08.7
comp=Z,458nm,19.0s
I51A Listowel 133.00 33 P 09 55 12.4
baz=312,SNR=7.4
P48A Milroy 133.01 41 **PKPdf 09 55 11.4 -0.5**
P48A IAMs_20 IAMs_20 10 56 47.2
comp=Z,339nm,21.0s
ALGO Algonquin Park 133.03 29 P 09 55 13.2
baz=316,SNR=6.4
WVT Waverly 133.08 46 PKIKP **PKPdf 09 55 12.5 +0.3**
WVT MLR MLR
comp=Z,500nm,20.0s
WVT Waverly 133.08 46 PKPdf **PKPdf 09 55 12.5 +0.3**
WVT Waverly 133.08 46 IAMs_20 IAMs_20 10 52 41.8
comp=Z,508nm,20.0s
WVT Waverly 133.08 46 P 09 55 12.1
baz=298
WCI Wyandotte Cave 133.10 43 PKIKP **PKiKP 09 55 12.9 -0.5**
WCI Wyandotte Cave 133.10 43 PKPdf **PKiKP 09 55 12.8 -0.5**
WCI Wyandotte Cave 133.10 43 P 09 55 12.8
baz=302
T47A Sharon Grove 133.17 44 PKPdf **PKPdf 09 55 12.7 +0.4**
T47A IAMs_20 IAMs_20 10 54 51.1
comp=Z,525nm,21.0s
O49A Covington 133.29 39 **PKPdf 09 55 12.5 +0.1**
O49A IAMs_20 IAMs_20 10 54 06.6
comp=Z,547nm,21.0s
SADO Sadowa 133.33 31 PKPdf **PKPdf 09 55 11.7 -0.7**
SADO IAMs_20 IAMs_20 10 56 28.6
comp=Z,542nm,20.0s
M50A Fremont 133.37 37 **PKiKP 09 55 13.2 -0.6**
G54A Lake Saint Pet 133.41 30 P 09 55 13.0
baz=316
D55A Sainte-Anne-du 133.42 26 P 09 55 13.9
baz=320,SNR=5.7
P49A Miami Univ. Ec 133.42 40 PKPdf **PKPdf 09 55 12.6 -0.1**
P49A Miami Univ. Ec 133.42 40 P 09 55 13.6
baz=304,SNR=11
PLAL Pickwick Lake 133.44 47 **PKPdf 09 55 12.4 -0.5**
PLAL IAMs_20 IAMs_20 10 56 14.1
comp=Z,559nm,20.0s
MORF Marmelete 133.56 316 *e*PKPdf **PKiKP 09 55 14.3 -0.1**
D56A ZEC Mazanza, M 133.71 26 P 09 55 13.6
baz=321,SNR=7.4
146A Union 133.72 51 **PKPdf 09 55 12.6 -0.8**
H53A Bobcaygeon 133.75 31 P 09 55 13.9
baz=315
R49A Shelbyville 133.81 42 **PKPdf 09 55 14.1 +0.6**
M51A Elyria 133.92 37 P 09 55 15.2
baz=308
E56A St. Veronique 133.98 26 P 09 55 13.7
baz=320
V48A Smith Brothers 133.98 46 **PKPdf 09 55 13.3 -0.6**
V48A IAMs_20 IAMs_20 10 54 39.7
comp=Z,439nm,20.0s
N51A Ashland 134.06 37 PKPdf **PKPdf 09 55 14.5 +0.6**
N51A IAMs_20 IAMs_20 10 51 09.7
comp=Z,444nm,22.0s
ACSO Alum Creek Sta 134.11 38 **PKiKP 09 55 14.7 -0.6**
ACSO IAMs_20 IAMs_20 10 47 40.8
comp=Z,336nm,20.0s
ACSO Alum Creek Sta 134.11 38 P 09 55 14.7
baz=307,SNR=7.7
Z47A Carrollton 134.23 50 IAMs_20 IAMs_20 10 55 50.7
comp=Z,485nm,20.0s
LATQ La Tuque 134.27 24 **PKPdf 09 55 14.0 -0.1**
LATQ La Tuque 134.27 24 P 09 55 15.3
baz=324,SNR=6.4
M52A Chesterland 134.27 36 PKPdf **PKPdf 09 55 14.8 +0.5**
M52A IAMs_20 IAMs_20 10 57 36.1
comp=Z,437nm,19.0s
U49A Red Boiling Sp 134.33 44 PKPdf **PKPdf 09 55 14.6 +0.1**
U49A IAMs_20 IAMs_20 10 54 18.7
comp=Z,386nm,18.0s
R50A Paris 134.37 41 **PKPdf 09 55 14.7 +0.1**
R50A IAMs_20 IAMs_20 10 57 08.4
comp=Z,490nm,19.0s
X48A Hartselle 134.43 47 PKPdf **PKPdf 09 55 14.1 -0.6**
X48A IAMs_20 IAMs_20 10 56 43.8
comp=Z,513nm,19.0s
PEL Peldehue 134.44 152 PKIKP **PKPdf 09 55 14.8 -0.2**
PEL Peldehue 134.44 152 **PKPdf 09 55 14.8 -0.2**
TRQ Mont Tremblant 134.44 26 PKPdf **PKPdf 09 55 14.3 -0.2**
D58A Chemin du LacG 134.46 24 P 09 55 15.7
baz=324
P51A Williamsport 134.50 39 **PKPdf 09 55 15.0 +0.3**

P51A IAMs_20 IAMs_20 10 46 18.6
comp=Z,533nm,20.0s
Q51A Peebles 134.59 40 PKPdf **PKPdf 09 55 15.0 0.0**
J54A Appleton 134.63 32 IAMs_20 IAMs_20 10 54 18.2
comp=Z,505nm,20.0s
L53A Girard 134.63 35 P 09 55 15.3
baz=311
ERPA Erie 134.68 34 PKPdf 09 55 15.6 +0.5
ERPA IAMs_20 IAMs_20 10 59 40.5
comp=Z,478nm,18.0s
ERPA Erie 134.68 34 P 09 55 15.9
baz=312
T50A Nancy 134.71 43 PKPdf 09 55 15.7 +0.5
T50A IAMs_20 IAMs_20 10 58 08.7
comp=Z,499nm,19.0s
M53A WI Miller and 134.73 35 PKPdf 09 55 15.8 +0.6
M53A WI Miller and 134.73 35 P 09 55 16.3
baz=310,SNR=5.6
MEDO Medina 134.80 32 IAMs_20 IAMs_20 10 50 22.7
comp=Z,462nm,20.0s
SWET Sewanee 134.87 46 PKPdf 09 55 15.5 -0.1
SWET IAMs_20 IAMs_20 10 47 23.3
comp=Z,510nm,22.0s
E58A La Victoria 134.87 25 P 09 55 15.8
baz=323
O52A Adamsville 134.88 38 PKiKP 09 55 16.3 -0.6
D59A Saint-Raymond 134.95 24 P 09 55 16.1
baz=325
P52A Corning 134.99 38 PKPdf 09 55 16.3 +0.6
P52A IAMs_20 IAMs_20 10 46 34.4
comp=Z,612nm,22.0s
P52A Corning 134.99 38 P 09 55 17.4
baz=307,SNR=5.3
PECO Prince Edward 135.01 30 PKPdf 09 55 15.6 +0.1
N53A Lisbon 135.04 36 PKiKP 09 55 16.5 -0.7
G57A Newington 135.10 28 P 09 55 16.4
baz=320
LRAL Lakeview Retre 135.11 49 P 09 55 16.6
baz=297
O53A New Philadelph 135.17 37 PKPdf 09 55 15.7 -0.3
O53A IAMs_20 IAMs_20 10 50 40.0
comp=Z,489nm,22.0s
O53A New Philadelph 135.17 37 P 09 55 17.4
baz=309
Y49A Blount Mountai 135.17 48 PKPdf 09 55 15.9 -0.3
Y49A IAMs_20 IAMs_20 10 56 26.5
comp=Z,482nm,19.0s
S51A Beattyville 135.21 42 PKPdf 09 55 16.3 +0.1
WVNY West Valley, N 135.25 33 PKPdf **PKPdf 09 55 16.5 +0.4**
M54A Oil Creek Stat 135.26 35 P 09 55 16.6
baz=311,SNR=6.3
Q52A Bidwell 135.31 39 PKPdf 09 55 16.7 +0.4
Q52A IAMs_20 IAMs_20 10 53 13.9
comp=Z,337nm,21.0s
W50A Signal Mountai 135.32 46 IAMs_20 IAMs_20 10 56 20.1
comp=Z,422nm,19.0s
CCIG Comitan 135.37 74 PKPdf 09 55 17.1 -0.1
CCIG IAMs_20 IAMs_20 10 47 56.6
comp=Z,492nm,20.0s
D60A Saint Jean D'O 135.38 23 P 09 55 16.9
baz=326
MMNY Mt. Morris Dam 135.39 32 PKPdf 09 55 16.2 -0.1
H57A Richville 135.40 29 P 09 55 17.5
baz=319
D61A St Aubert, Com 135.42 22 P 09 55 17.3
baz=327
FPAL Fort Paine 135.43 47 IAMs_20 IAMs_20 10 52 35.2
comp=Z,472nm,19.0s
N54A Moraine State 135.44 35 PKPdf 09 55 16.1 -0.3
N54A Moraine State 135.44 35 P 09 55 17.5
baz=311
G58A Ormstown 135.49 27 P 09 55 18.0
baz=321
P53A Whipple 135.53 38 PKPdf **PKPdf 09 55 16.3 -0.4**
J56A Wolcott 135.55 31 P 09 55 18.4
baz=316
E60A Ste Agathe de 135.63 24 P 09 55 17.5
baz=325
LONY Lake Ozonia 135.66 28 PKPdf 09 55 17.4 +0.6
LONY Lake Ozonia 135.66 28 P 09 55 18.0
baz=320
I57A Carthage 135.66 29 P 09 55 17.5
baz=318
V51A Loudon 135.69 44 PKPdf 09 55 16.6 -0.5
V51A IAMs_20 IAMs_20 10 52 51.6
comp=Z,533nm,21.0s
O54A Avella 135.71 37 PKPdf 09 55 16.6 -0.4
F60A Warwick 135.75 24 P 09 55 18.4
baz=324
CPCT Cooper Cave 135.75 45 PKPdf 09 55 16.4 -0.8
CPCT IAMs_20 IAMs_20 10 55 11.4
comp=Z,514nm,18.0s
M55A Ridgway 135.79 34 PKPdf 09 55 16.7 -0.5
Q53A Leroy 135.83 39 P 09 55 19.4
baz=307
BRAL Brewton 135.88 52 PKPdf 09 55 17.2 -0.3
BRAL Brewton 135.88 52 P 09 55 18.6
baz=295
J57A Williamstown 135.89 30 PKPdf **PKPdf 09 55 17.5 +0.3**
J57A Williamstown 135.89 30 P 09 55 18.0
baz=317
D62A Allapoint, All 135.94 21 PKPdf 09 55 17.2 0.0
D62A Allapoint, All 135.94 21 P 09 55 19.2
baz=328
FRNY Flat Rock 135.94 27 PKPdf **PKPdf 09 55 18.1 +0.8**
E61A Lac Etchemin 135.95 23 P 09 55 18.7
baz=326,SNR=11
L56A Greenwood 135.99 32 PKPdf 09 55 17.3 -0.2
L56A Greenwood 135.99 32 P 09 55 18.1
baz=314,SNR=6.6
H58A Gabriels 136.00 28 P 09 55 18.2
baz=320,SNR=8.4
H59A Cadyville 136.05 27 P 09 55 18.6
baz=321
M56A Emporium 136.10 34 PKPdf 09 55 18.2 +0.5
M56A Emporium 136.10 34 P 09 55 18.5
baz=313
K57A Scipio Center 136.12 31 P 09 55 18.2
baz=316
250A Grady 136.13 50 PKPdf 09 55 17.4 -0.6
F61A St Evariste 136.13 24 P 09 55 18.6
baz=325,SNR=8.1
TKL Tuckaleechee C 136.16 44 PKiKP **PKPdf 09 55 18.5 +0.5**
TKL MLR MLR
comp=Z,500nm,20.0s
TKL Tuckaleechee C 136.16 44 PKPdf **PKPdf 09 55 18.4 +0.5**
TKL IAMs_20 IAMs_20 10 53 17.2
comp=Z,544nm,20.0s
I58A Old Forge 136.18 29 P 09 55 17.8
baz=319
V52A Sevierville 136.19 44 PKPdf 09 55 17.5 -0.5
NCB Newcomb 136.32 28 PKPdf 09 55 18.6 +0.6
Z51A Franklin 136.34 48 PKPdf 09 55 17.5 -0.8
Z51A IAMs_20 IAMs_20 10 50 51.3
comp=Z,480nm,22.0s
W52A Murphy 136.35 45 PKPdf 09 55 18.7 +0.3
W52A IAMs_20 IAMs_20 10 56 07.3
comp=Z,495nm,20.0s
MCWV Mont Chateau 136.36 37 PKiKP 09 55 19.4 -0.6
MCWV Mont Chateau 136.36 37 P 09 55 19.6
baz=310
L57A Andrews Acres 136.46 32 P 09 55 19.0
baz=315,SNR=5.3
G61A St-Isidore-de- 136.48 25 P 09 55 20.5
baz=324
K58A Earlville 136.53 30 PKPdf **PKPdf 09 55 16.4 -2.1**
K58A IAMs_20 IAMs_20 10 51 33.3
comp=Z,500nm,20.0s
K58A Earlville 136.53 30 P 09 55 20.8
baz=317
H60A Morristown 136.56 26 P 09 55 21.0
baz=322
J59A Piesco 136.57 29 PKPdf **PKPdf 09 55 18.1 -0.4**
J59A Piesco 136.57 29 P 09 55 19.4
baz=319,SNR=11
R54A Victor 136.57 39 P 09 55 19.2
baz=307
S54A Dingess, Beckl 136.60 40 PKPdf 09 55 18.4 -0.3
S54A Dingess, Beckl 136.60 40 P 09 55 19.2
baz=307
I59A Olmsteadville 136.62 28 P 09 55 20.0
baz=320,SNR=9.2
PQI Presque Isle 136.66 21 PKPdf **PKPdf 09 55 18.6 0.0**
ZON Zonda 136.69 153 PKIKP **PKPdf 09 55 19.5 +0.3**
ZON Zonda 136.69 153 PKPdf **PKPdf 09 55 19.5 +0.3**
KOWA Kowa 136.70 284 PKhKP PKPpre 09 55 09.6
comp=Z,2.6nm,0.6s,baz=126,slow=2.9,SNR=7.4
KOWA PKP **PKPdf 09 55 19.7 +0.2**
comp=Z,10.0nm,0.8s,baz=299,slow=2.7,SNR=8.4
KOWA Kowa 136.70 284 PKPdf **PKPdf 09 55 19.6 +0.1**
O56A Blue Knob Stat 136.71 35 PKPdf 09 55 18.8 -0.1
O56A Blue Knob Stat 136.71 35 P 09 55 19.9
baz=312
E63A Oxbow 136.73 21 PKPdf **PKiKP 09 55 19.7 -0.7**
E63A Oxbow 136.73 21 P 09 55 19.6
baz=329
BINY Binghamton 136.77 31 PKiKP 09 55 19.9 -0.9
BINY Binghamton 136.77 31 P 09 55 19.9
baz=316
V53A Saluda 136.82 43 PKPdf **PKPdf 09 55 19.5 +0.3**
V53A IAMs_20 IAMs_20 10 56 42.5
comp=Z,444nm,20.0s
GO04 Tololo Observa 136.84 150 PKPdf **PKPdf 09 55 20.2 +0.4**
SSPA Standing Stone 136.84 34 PKPdf 09 55 19.7 +0.6
SSPA Standing Stone 136.84 34 P 09 55 21.5
baz=313
I60A Shoreham 136.85 27 P 09 55 20.6
baz=321,SNR=12
Y52A Lilburn 136.88 47 PKPdf 09 55 20.2 +0.8
H61A Lyndonville 136.91 26 P 09 55 19.9
baz=323
K59A Cooperstown 136.92 30 P 09 55 20.2
baz=318
G62A West of Eustis 136.94 24 PKiKP 09 55 20.6 -0.3
G62A West of Eustis 136.94 24 P 09 55 20.4
baz=326,SNR=5.8
E64A Bridgewater 136.94 21 P 09 55 19.6
baz=330
N57A Milroy 136.95 34 P 09 55 19.8
baz=313
L58A Harry Jones Me 136.95 31 P 09 55 20.2
baz=316
152A Waverly Hall 136.98 48 PKiKP 09 55 20.5 -0.9
ACCN Adirondack Com 137.03 28 PKPdf 09 55 20.1 +0.7
P56A Dayton Farm, R 137.05 36 P 09 55 20.1
baz=311
R55A Marlinton 137.06 39 PKPdf 09 55 20.0 +0.3
R55A Marlinton 137.06 39 P 09 55 20.8
baz=308
F63A Nahmakanta, Br 137.09 22 PKPdf 09 55 17.0 -2.4
F63A Nahmakanta, Br 137.09 22 P 09 55 20.6
baz=328
APG El Apazote 137.11 75 PKhKP PKPpre 09 55 12.8
comp=Z,8.5nm,0.9s,baz=291,slow=11,SNR=9.8
APG PKP **PKPdf 09 55 20.9 +0.4**
comp=Z,26nm,1.0s,baz=54,slow=2.9,SNR=15
H62A Milan 137.21 25 P 09 55 22.7
baz=324
F64A Sherman 137.23 22 PKPdf 09 55 20.0 +0.4
F64A Sherman 137.23 22 P 09 55 21.8
baz=329
J60A Lant Hill Farm 137.25 28 P 09 55 20.8
baz=320
N58A Sunbury 137.35 33 P 09 55 20.7
baz=314
G63A Kingsbury 137.39 23 P 09 55 21.4
baz=327,SNR=5.5
R56A Bull Pasture M 137.42 38 P 09 55 23.0
baz=309
PETF Flores 137.45 73 PKPdf 09 55 20.8 0.0
BLA Blacksburg 137.52 40 PKIKP **PKPdf 09 55 21.2 +0.7**
BLA Blacksburg 137.52 40 PKPdf 09 55 21.2 +0.7
BLA Blacksburg 137.52 40 P 09 55 20.7
baz=307
TRY Troy 137.53 29 PKiKP 09 55 21.9 -0.2
M59A Waymart 137.53 31 P 09 55 22.6
baz=317,SNR=5.6
GOGA Godfrey 137.54 47 PKIKP **PKPdf 09 55 20.0 -0.6**
GOGA MLR MLR
comp=Z,500nm,20.0s
GOGA Godfrey 137.54 47 PKPdf **PKPdf 09 55 20.0 -0.6**
GOGA Godfrey 137.54 47 IAMs_20 IAMs_20 10 56 26.7
comp=Z,484nm,20.0s
GOGA Godfrey 137.54 47 P 09 55 23.4
baz=300
P57A Homestead Farm 137.55 36 PKPdf 09 55 19.0 -1.4
P57A Homestead Farm 137.55 36 P 09 55 19.2
baz=312
KIC Kosan Boka 137.56 272 *e*PKP1 **PKPdf 09 55 15.4 -5.8**
comp=Z,56nm,1.1s
H63A New Sharon 137.60 24 P 09 55 21.5
baz=326
G64A Maxfield 137.60 22 P 09 55 23.0
baz=328
Q57A Strasburg 137.61 36 P 09 55 21.1
baz=311
DBIC Dimbokro 137.69 272 PKhKP PKPpre 09 55 17.0
comp=Z,4.9nm,0.7s,baz=108,slow=4.5,SNR=5.0
DBIC PKP **PKiKP 09 55 22.6 -0.8**
comp=Z,18nm,0.9s,baz=76,slow=3.2,SNR=10
DBIC Dimbokro 137.69 272 PKIKP **PKPdf 09 55 21.8 +0.4**
DBIC Dimbokro 137.69 272 PKPdf **PKPdf 09 55 21.8 +0.4**
O58A Lewisberry 137.73 34 P 09 55 21.6
baz=314
K61A Williamstown 137.76 29 P 09 55 22.3
baz=320,SNR=6.7
WVL Waterville 137.83 24 PKPdf **PKPdf 09 55 21.5 +0.8**
LIC Lanto 137.83 272 *e*PKP1 **PKPdf 09 55 16.1 -5.6**
comp=Z,102nm,1.1s
TIC Toumodi 137.85 272 *e*PKP1 **PKPdf 09 55 16.7 -5.0**
I63A Otisfield 137.87 25 P 09 55 23.7
baz=325
T56A Rocky Mt 137.88 40 P 09 55 23.6
baz=307
J62A Henniker 138.00 27 P 09 55 24.6
baz=322
O59A Robesonia 138.01 33 P 09 55 23.7
baz=315
G65A Princeton 138.09 21 P 09 55 23.9
baz=329
Q58A Fox Den Farm, 138.10 36 P 09 55 22.9
baz=312
KMSC Kings Mountain 138.12 43 PKPdf **PKPdf 09 55 22.1 +0.5**
KMSC IAMs_20 IAMs_20 11 00 09.8
comp=Z,507nm,20.0s
KMSC Kings Mountain 138.12 43 P 09 55 22.6
baz=321
MVL Millersville 138.14 34 PKPdf 09 55 21.3 -0.2
L61B Northampton 138.21 28 P 09 55 22.6
baz=321
MTO3 Montecristo 138.24 76 PKPdf 09 55 20.2 -2.4
MTO3 IAMs_20 IAMs_20 10 46 20.7
comp=Z,456nm,22.0s
ESQI Esquipulas 138.24 76 IAMs_20 IAMs_20 10 49 40.8
comp=Z,556nm,21.0s
K62A Royalston 138.25 28 P 09 55 23.3
baz=322
ODNJ Ogdensburg 138.29 31 PKPdf 09 55 21.7 0.0
V56A Mocksville 138.30 42 P 09 55 22.7
baz=306
TEIG Tepich 138.34 67 PKP **PKPdf 09 55 23.2 +0.8**
comp=Z,32nm,0.9s,baz=307,slow=4.3,SNR=9.0
TEIG Tepich 138.34 67 PKPdf 09 55 21.2 -1.1
TEIG IAMs_20 IAMs_20 10 51 02.6
comp=Z,365nm,19.0s
TIGA Tifton 138.41 49 PKPdf 09 55 22.5 +0.2
TIGA Tifton 138.41 49 P 09 55 23.0
baz=298
O60A Telford 138.43 33 P 09 55 22.4
baz=316
LMN Caledonia Moun 138.44 18 PKPdf 09 55 22.5 +0.7
H66A Whiting 138.53 21 P 09 55 24.7
baz=330
EMMW East Machias 138.55 22 IAMs_20 IAMs_20 10 52 41.8
comp=Z,408nm,20.0s
M61A Granite Spring 138.55 30 P 09 55 22.8
baz=318
R58B Mineral 138.62 37 P 09 55 24.4
baz=311
P60A Greenville 138.66 33 PKPdf **PKPdf 09 55 22.9 +0.5**
PAL Palisades 138.71 31 P 09 55 25.3
baz=318
V57A Coltrane Farms 138.72 41 P 09 55 25.3
baz=307
T58A Grand View Acr 138.87 39 P 09 55 25.4
baz=309
W57A Gilead 139.01 42 IAMs_20 IAMs_20 10 57 19.4
comp=Z,548nm,20.0s
L63A North Scituate 139.17 28 P 09 55 26.4
baz=322
U58A Oxford 139.21 40 P 09 55 24.1
baz=308
V58A Windy Hill, Pi 139.21 41 IAMs_20 IAMs_20 10 57 08.4
comp=Z,543nm,21.0s
HAL Halifax 139.91 18 IAMs_20 IAMs_20 10 51 59.5
comp=Z,534nm,22.0s
TGUH Tegucigalpa,Un 140.28 76 IAMs_20 IAMs_20 10 51 24.4
comp=Z,449nm,19.0s
V60A Jim Taylor Roa 140.41 39 IAMs_20 IAMs_20 11 00 59.0
comp=Z,562nm,21.0s
PB10 IPOC Station P 142.25 144 PKPdf **PKPdf 09 55 27.6 -1.9**
ORTG Ortega, Santa 142.32 82 PKPdf 09 55 27.9 -2.0
SOR Soroa 142.36 61 IAMs_20 IAMs_20 10 52 56.5
comp=Z,461nm,21.0s
CPSB Cacapava Do Su 142.43 172 *eP* **PKPdf 09 55 30.4 +0.8**
ITQB Itaqui 142.55 167 *eP* **PKPdf 09 55 26.8 -3.0**
COVE Coope Vega, Sa 143.34 81 IAMs_20 IAMs_20 10 49 05.3
comp=Z,484nm,21.0s
HDC Heredia 143.65 83 PKPdf 09 55 31.5 -0.8
LVC Limon Verde 143.90 145 PKP **PKPdf 09 55 32.8 -0.1**
comp=Z,40nm,0.9s,baz=242,slow=2.3,SNR=31
LVC Limon Verde 143.90 145 PKPdf **PKPdf 09 55 32.1 -0.7**
LVC Limon Verde 143.90 145 *eP* **PKPdf 09 55 33.2 +0.3**
PB07 IPOC Station P 144.02 143 PKPdf 09 55 32.2 -0.7
PEZE Perez Zeledon, 144.10 84 PKPdf 09 55 32.5 -0.5
RIOS Rincon, Osa 144.27 85 PKPdf 09 55 33.0 -0.2
PB09 IPOC Station P 144.34 144 PKPdf 09 55 33.6 +0.2
BATAN Batan 144.37 82 PKPdf 09 55 33.2 -0.2
TA01 Diego Aracena 144.71 141 PKPdf **PKPdf 09 55 33.2 -0.6**
PB01 IPOC Station P 144.78 143 PKPdf 09 55 34.3 +0.2
FSCY Frank Sound, G 145.03 66 PKPdf 09 55 34.4 +0.1
NNA Nana 145.27 123 PKIKP **PKPdf 09 55 35.9 +0.9**
NNA Nana 145.27 123 PKPdf 09 55 35.9 +0.9
PSGCX Pisagua 145.46 140 PKPab 09 55 36.3 +0.8
CPUP Villa Florida 145.57 164 PKPbc **PKPab 09 55 36.5 +0.9**
comp=Z,307nm,0.9s,baz=204,slow=2.3,SNR=463
CPUP Villa Florida 145.57 164 PKPab 09 55 36.8 +1.3
PB08 IPOC Station P 145.66 142 PKPab 09 55 37.8 +1.2
LCCY Blossom Villag 145.93 65 PKPab 09 55 37.6 +0.5
MNMC Minye Minye 146.14 140 PKPab 09 55 39.1 +0.9
CBCY The Bluff, Cay 146.20 65 PKPdf 09 55 35.3 -1.0
CBCY PKPbc **PKPab 09 55 38.0 -0.1**
OTAV Otavalo 148.40 101 PKIKP **PKPbc 09 55 42.7 -1.6**
OTAV Otavalo 148.40 101 PKPbc 09 55 42.7 -1.6
TUMC Tumaco 148.44 98 *eP* **PKPdf 09 55 39.7 -0.6**
MTDJ Mount Denham 148.65 66 PKiKP 09 55 45.7 -0.1
MBO M'Bour 149.13 286 PKiKP 09 55 47.7 +0.9
LPAZ La Paz 149.17 139 PKP **PKPdf 09 55 43.3 +1.1**
comp=Z,156nm,1.0s,baz=215,slow=0.5,SNR=45
LPAZ PKPbc **PKiKP 09 55 48.1 +0.5**
comp=Z,166nm,1.0s,baz=180,slow=0.8,SNR=98
LPAZ La Paz 149.17 139 PKPdf **PKPdf 09 55 43.8 +1.7**
LPAZ PKPbc **PKiKP 09 55 48.4 +0.8**
SPB Sao Paulo 149.65 180 PKPdf **PKPdf 09 55 43.3 +1.4**
SPB PKPbc **PKiKP 09 55 48.2 +0.6**
SPB Sao Paulo 149.65 180 *eP* **PKPdf 09 55 43.4 +1.4**
GCUF Volcan Galeras 149.69 99 *eP* **PKPdf 09 55 39.7 -3.2**
BBAC Balboa, Cauca 149.93 98 *eP* PKPdf 09 55 29.5 -14
BBSR BB Station 150.05 30 PKiKP 09 55 48.8 +0.6
GTBY Guantanamo Bay 150.25 62 PKPbc 09 55 48.4 +0.3
SOLC Bahia Solano 150.26 90 *eP* **PKPdf 09 55 39.7 -3.5**
SOTA Rioblanco 150.58 98 *eP* **PKPbc 09 55 50.0 +0.2**
POPC Popayan, Colom 150.58 97 *eP* PKPdf 09 55 34.6 -9.4
YOTC Yotoco, Valle 151.12 94 *eP* **PKPdf 09 55 44.1 -0.6**
MARP Paez Belalcaza 151.34 97 *eP* PKPdf 09 55 34.6 -11
DBBC Dabeiba 151.48 88 *eP* **PKPdf 09 55 39.7 -5.5**
CBOC Ciudad Bolivar 151.63 91 *eP* PKPdf 09 55 34.6 -11
GARC Garzon, Huila 151.69 98 *eP* **PKPdf 09 55 39.7 -6.0**
PTLC Puerto Leguiza 151.93 103 *eP* **PKPdf 09 55 39.7 -6.1**
HELC Santa Helena 152.13 90 *eP* **PKPdf 09 55 44.9 -1.7**
ORTC Ortega, Tolima 152.20 95 *eP* **PKPdf 09 55 39.7 -6.5**
GUY2C Guyana, Caldas 152.22 92 *eP* **PKPdf 09 55 39.7 -7.1**
ZARC Zaragoza, Cauc 152.83 87 *eP* **PKPdf 09 55 43.0 -4.1**
ROSC El Rosal 153.22 93 PKP **PKPdf 09 55 49.5 +1.3**
comp=Z,15nm,0.6s,baz=167,slow=0.8,SNR=13
ROSC PKPbc **pPKPdf 09 55 57.0 -0.4**
comp=Z,63nm,0.6s,baz=134,slow=3.4,SNR=19
SIV San Ignacio 153.53 150 PKP **PKPdf 09 55 49.2 +1.1**
comp=Z,4.8nm,0.7s,baz=176,slow=0.6,SNR=26
SIV PKPbc **pPKPdf 09 55 57.0 -0.3**
comp=Z,30nm,0.9s,baz=220,slow=1.9,SNR=40
SIV PKPab **sPKPbc 09 56 08.7 +0.6**
comp=Z,51nm,0.9s,baz=212,slow=3.9,SNR=22
SDDR Presa de Saban 153.94 60 PKPdf **PKPdf 09 55 49.2 +0.6**
SDDR **pPKPdf 09 55 57.5 -0.4**
SC01 Santiago de lo 154.23 59 PKPdf 09 55 48.9 -0.1
OCAC Ocana 154.36 85 *eP* PKPdf 09 55 34.6 -15
BARC Barichara 154.47 89 *eP* PKPdf 09 55 34.6 -15
GUVC San Jose del G 154.57 99 *eP* PKPdf 09 55 39.7 -10
BANI BANI 154.98 61 PKPdf 09 55 50.2 +0.1
DR12 Loma Pena Alta 155.66 59 PKPab 09 56 18.4 +1.2
SDV Santo Domingo 156.99 84 PKPdf **PKPdf 09 55 53.2 +0.2**
SDV Santo Domingo 156.99 84 *eP* **PKPdf 09 55 53.9 +0.8**
BDFB Brasilia 157.55 179 PKP **PKPdf 09 55 54.3 +0.7**
comp=Z,22nm,0.8s,baz=100,slow=0.6,SNR=25
BDFB PKPab **PKPab 09 56 25.7 +0.5**
comp=Z,22nm,1.0s,baz=127,slow=5.2,SNR=6.5
BDFB PP **PP 10 00 04.7 +2.1**
comp=Z,12nm,0.9s,baz=191,slow=8.0,SNR=4.2
BDFB Brasilia 157.55 179 PKIKP **PKPdf 09 55 54.2 +0.6**
BDFB Brasilia 157.55 179 PKPdf **PKPdf 09 55 54.2 +0.6**
BDFB PKPab **PKPab 09 56 26.3 +1.1**
SAML Samuel 157.77 135 IAMs_20 IAMs_20 10 57 10.6
comp=Z,320nm,20.0s
GDU01 Guandu, BA 158.02 201 *eP* **PKPdf 09 55 55.1 +1.0**
OBIP Obispado Ponce 158.34 58 PKPdf **PKPdf 09 55 52.8 -1.5**
OBIP PKPab **PKPab 09 56 28.1 -0.5**
ICMP Isla Caja de M 158.48 58 PKPab **PKPab 09 56 29.5 +0.3**
GCPR Guaynabo City 158.65 56 PKPdf **PKPdf 09 55 54.7 0.0**
GCPR **PKPab 09 56 30.0 0.0**
SJG San Juan 158.69 57 PKP **PKPdf 09 55 55.1 +0.4**
comp=Z,10nm,0.5s,baz=42,slow=5.9,SNR=5.7
SJG PKPab **PKPab 09 56 30.1 0.0**
comp=Z,21nm,0.6s,baz=318,slow=9.1,SNR=4.7
SJG San Juan 158.69 57 PKIKP **PKPdf 09 55 54.6 -0.1**
SJG 09 56 30.2
SJG San Juan 158.69 57 PKPdf **PKPdf 09 55 54.6 -0.1**
SJG PKPab **PKPab 09 56 30.2 0.0**
PDPR Patillas Dam, 158.84 57 PKPdf **PKPdf 09 55 54.6 -0.4**
PDPR PKPab **PKPab 09 56 31.2 +0.4**
NBLA Lagarto - SE 159.74 209 *eP* **PKPdf 09 55 57.0 +0.9**
NBAN Anadia - AL 160.08 214 *eP* **PKPdf 09 55 57.2 +0.6**
NBRF Rio Formoso - 160.19 219 *eP* **PKPdf 09 55 57.3 +0.7**
CLDB Colider 160.46 155 *eP* **PKPdf 09 55 57.9 +1.0**
SDBA SAO DESIDERIO 160.60 188 *eP* **PKPdf 09 55 57.9 +0.8**
SNDB Serra Nova Dou 160.83 169 *eP* **PKPdf 09 55 58.2 +0.9**
PEXB Peixe 161.06 178 *eP* **PKPdf 09 55 58.7 +1.1**
NBTA Tacaratu-PE 161.49 211 *eP* **PKPdf 09 55 58.8 +0.8**
NBPV Pedro Velho 162.00 223 *eP* **PKPdf 09 55 59.9 +1.3**
NBLI Livramento-PB 162.33 217 *eP* **PKPdf 09 56 00.3 +1.4**
RCBR Riachuelo 162.84 223 PKP **PKPdf 09 56 00.6 +1.2**
comp=Z,14nm,1.0s,baz=131,slow=0.3
RCBR PKPab **PKPab 09 56 49.0 +0.7**
comp=Z,19nm,1.0s,baz=127,slow=5.1,SNR=2.8
RCBR Riachuelo 162.84 223 *eP* **PKPdf 09 56 00.7 +1.2**
NBMA Muriti-CE 163.34 212 *eP* **PKPdf 09 56 00.9 +1.0**
MACA Manacapuru-AM 163.43 127 *eP* **PKPdf 09 56 00.7 +0.6**
NBPA Parau_RN 163.69 220 *eP* **PKPdf 09 56 01.2 +1.0**
NPGB Novo Progresso 164.03 150 *eP* **PKPdf 09 56 01.6 +1.0**
SMTB Santa Maria do 164.30 180 *eP* **PKPdf 09 56 02.2 +1.4**
NBPB Pedra_Branca-C 165.30 213 *eP* **PKPdf 09 56 02.3 +0.6**
PTGA Pitinga 165.39 121 PKP **PKPdf 09 56 02.3 +0.5**
comp=Z,13nm,1.0s,baz=294,slow=2.3,SNR=11
PTGA PKPab **PKPab 09 57 00.2 +0.5**
comp=Z,15nm,1.0s,baz=247,slow=2.7,SNR=7.8
PTGA Pitinga 165.39 121 PKPdf 09 56 01.5 -0.3
PTGA **PKPab 09 57 00.0 +0.4**
PTGA Pitinga 165.39 121 *eP* **PKPdf 09 56 02.5 +0.7**
ITTB Itaituba 166.07 144 *eP* **PKPdf 09 56 03.4 +1.1**
BOAV Boa Vista 166.24 109 *eP* **PKPdf 09 56 02.9 +0.5**
PRPB Parauapebas 166.76 170 *eP* **PKPdf 09 56 03.4 +0.5**
NBPS Pedro II - PI 167.23 208 *eP* **PKPdf 09 56 03.1 -0.2**
MALB Monte Alegre 168.94 142 *eP* **PKPdf 09 56 04.7 +0.4**
ROSB Rosrio 169.67 199 *eP* **PKPdf 09 56 05.0 +0.2**
TMAB Tom-Au,PA,Br 170.73 176 *eP* **PKPdf 09 56 06.1 +0.7**
MCPB Macapa, AP 171.43 148 *eP* **PKPdf 09 56 06.2 +0.5**

*IDC **01** 09:43:31.3±1.1,25°55N×90°22E,h0km,mb4.3/9,*
mb1 4.4/9,mb1mx4.0/68,mbtmp4.3/9 Error ellipse:
s-maj=40.0km s-min=23.6km az=58.0
*NDI **01** 09:43:35.3±3.6,25°87N×90°60E,h10km,ML4.0*
ISC 01 09:43:33.5±0.7,25°94N±0°04×90°59E±0°05,h10km,n18,
σ1s73/26,mb4.3/9,1C,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUWA	**GUWAHATI**	**1.02**	**76**	*eP*	**Pn**	**09 43 54.1**	**+0.3**
GUWA				*eS*	**Sn**	**09 44 09.3**	**+1.0**
SHL	**Shillong**	**1.23**	**108**	*eP*	**Pn**	**09 43 56.4**	**-0.5**
SHL				*eS*	**Sn**	**09 44 13.5**	**-0.1**
SHL				IAML		09 44 15.3	
	comp=N,1μm,0.3s						
SHL				IAML		09 44 15.6	
	comp=E,2μm,0.3s						
AGT	**Agartala**	**2.14**	**164**	*eP*	**Pn**	**09 44 09.6**	**+0.4**
AGT				*eS*	**Sb**	**09 44 37.3**	**-1.6**
GTK	**Tadong**	**2.25**	**308**	*eP*	**Pb**	**09 44 12.6**	**-1.6**
GTK				*eS*	**Sb**	**09 44 41.6**	**-0.5**
GTK				IAML		09 44 46.3	
	comp=E,1μm,0.3s						
GTK				IAML		09 44 46.6	
	comp=N,886nm,0.3s						
GTK				⇑*ex*	x	09 50 30.8	
KOHI	**KOHIMA**	**3.18**	**93**	*eP*	**Pb**	**09 44 27.2**	**-3.0**
ZIRO	**ZIRO**	**3.32**	**61**	*eP*	**Pb**	**09 44 32.4**	**-0.1**
ZIRO				IAML		09 45 21.0	
	comp=N,2μm,0.3s						
ZIRO				IAML		09 45 25.4	
	comp=E,2μm,0.5s						
MOKO	**MOKOCHONG**	**3.55**	**83**	*eP*	**Pn**	**09 44 29.1**	**+0.3**
MOKO				*eS*	**Sn**	**09 45 10.9**	**0.0**
LSA	**Lhasa**	**3.78**	**7**	Pn	**Pb**	**09 44 37.6**	**-2.9**
LSA				Pg	**Pg**	**09 44 46.3**	**+0.4**
LSA				Sn	**Sb**	**09 45 25.1**	**-1.4**
LSA				Sg	**Sg**	**09 45 32.1**	**-2.7**
LSA				smax	smax		
	comp=N,190nm,0.9s						
LSA				smax	smax		
	comp=E,260nm,1.1s						
SAIH	**SAIHA**	**4.08**	**147**	*eP*	**Pn**	**09 44 36.5**	**+0.5**
SONM	**Songino Array**	**25.15**	**26**	P	**P**	**09 49 02.4**	**+3.5**
	comp=E,1.3nm,0.5s,baz=212,slow=10,SNR=4.9						
TIXI	**Tiksi**	**50.46**	**15**	P	**P**	**09 52 33.1**	**+2.1**
	comp=E,2.7nm,0.4s,baz=244,slow=2.0,SNR=2.5						
FINES	**FINESS Array B**	**55.41**	**328**	P	**P**	**09 53 08.6**	**+0.9**
	comp=E,2.5nm,0.8s,baz=115,slow=8.6,SNR=4.2						
ARCES	**ARCESS Array B**	**57.27**	**338**	P	**P**	**09 53 22.6**	**+1.8**
	comp=E,1.3nm,0.5s,baz=107,slow=7.3,SNR=15						
WRA	**Warramunga Arr**	**62.33**	**133**	P	**P**	**09 53 56.0**	**-0.4**
	comp=E,8.4nm,1.1s,baz=321,slow=7.3,SNR=1.9						
NOA	**NORSAR Array B**	**62.55**	**327**	P	**P**	**09 53 58.0**	**+0.6**
	comp=E,1.0nm,0.7s,baz=85,slow=6.6,SNR=3.9						
ASAR	**Alice Springs**	**64.72**	**136**	P	**P**	**09 54 11.4**	**-0.7**
	comp=E,4.6nm,0.9s,baz=314,slow=6.6,SNR=2.6						
INK	**Inuvik**	**80.58**	**15**	P	**P**	**09 55 47.8**	**+2.0**
	comp=E,1.8nm,0.7s,baz=279,slow=3.3,SNR=4.3						
TORD	**Torodi Ar. Bea**	**83.38**	**281**	P	**P**	**09 55 58.5**	**-3.0**
	comp=E,3.1nm,0.6s,baz=96,slow=1.5,SNR=1.3						

*IDC **01** 09:48:47.6±4.0, 8°.40S×121°.98E, h114km±45km, mb3.2/2, mb1 3.9/6, mb1mx3.4/60, mbtmp4.1/6, Error ellipse: s-maj=106.0km s-min=34.1km az=63.0*
*DJA **01** 09:48:57.0±0.7, 9°.5S×12°.2E±°, h97km±6km, M3.5/7, MLv3.5/7*
ISC 01 09:48:50.5±0.9, 8°.65S±0°.09×122°.43E±0°.07, h149km±7km, n13, σ3s39/21, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.19**	**275**	P	**Pn**	**09 49 12.3**	**+1.6**
MMRI				S	**Sn**	**09 49 24.5**	**-1.5**
EDFI	**Ende, Flores**	**0.74**	**263**	P	**Pn**	**09 49 14.7**	**+1.4**
EDFI				S	**Sn**	**09 49 28.6**	**-2.0**
BATI	**Baumata**	**1.97**	**142**	P	**Pn**	**09 49 27.2**	**+2.0**
	6.0nm,0.3s,baz=309,slow=6.5,SNR=2.1						
BATI				S	**Sn**	**09 49 53.5**	**+1.6**
	48nm,0.3s,baz=83,slow=20,SNR=14						
BATI	**Baumata**	**1.97**	**142**	P	**Pn**	**09 49 27.2**	**+2.0**
BATI				S	**Sn**	**09 49 53.0**	**+1.0**
SOEI	**Soe**	**2.12**	**121**	P	**Pn**	**09 49 28.3**	**+1.2**
BASI	**Baing, Sumba**	**2.40**	**229**	P	**Pn**	**09 49 31.2**	**+0.8**
BASI				S	**Sn**	**09 49 57.3**	**-3.8**
PLAI	**Plampang**	**4.60**	**268**	P	**Pn**	**09 50 02.8**	**+4.1**
PLAI				S	**Sn**	**09 50 51.2**	**-0.6**
TWSI	**Taliwang, Sumb**	**5.48**	**269**	P	**Pn**	**09 50 14.7**	**+4.3**
FITZ	**Fitzroy Crossi**	**9.89**	**162**	P	**Pn**	**09 51 10.7**	**+1.5**
	0.6nm,0.3s,baz=348,slow=9.7,SNR=9.3						
FITZ				S	Sn	09 52 50.5	-8.2
	1.5nm,0.3s,baz=318,slow=14,SNR=9.8						
WRA	**Warramunga Arr**	**16.09**	**136**	P	**P**	**09 52 31.6**	**+2.6**
	0.3nm,0.3s,baz=312,slow=15,SNR=10						
WRA				S	**S**	**09 55 19.0**	**-8.6**
	0.8nm,0.3s,baz=316,slow=23,SNR=7.9						
ASAR	**Alice Springs**	**18.54**	**145**	P	**Pn**	**09 53 01.9**	**+4.1**
	0.3nm,0.3s,baz=322,slow=13,SNR=1.8						
ASAR				S	**S**	**09 56 15.8**	**-3.8**
	0.2nm,0.3s,baz=308,slow=22,SNR=1.5						
SONM	**Songino Array**	**58.01**	**347**	P	**P**	**09 58 25.7**	**-2.0**
	0.4nm,0.8s,baz=165,slow=6.0,SNR=1.8						
MKAR	**Makanchi Array**	**65.75**	**331**	P	**P**	**09 59 17.7**	**-1.6**
	0.5nm,0.8s,baz=163,slow=6.0,SNR=1.4						

IDC 01 09:50:43.6±993.0, 49°.51N×52°.93E, h0km, Error ellipse: s-maj=457.5km s-min=75.0km az=72.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**3.42**	**73**	*i*		10 10 20.0	
	baz=257,slow=323,SNR=2.8						
I46RU	**ZALESOVO INFRA**	**20.14**	**65**	*i*		11 56 50.0	
	baz=271,slow=338,SNR=1.3						
I34MN	**SONGINO INFRAS**	**34.75**	**72**	*i*		13 26 20.0	
	baz=290,slow=330,SNR=0.7						

IDC 01 09:51:12.1±3.7, 53°.80N×88°.16E, h0km, mb1 3.2/2, mb1mx3.0/73, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=33.5km s-min=18.3km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**276**	*i*		10 02 27.8	
	baz=92,slow=318,SNR=1.9						
ZALV	**Zalesovo Beam**	**1.98**	**276**	Pg	Pn	09 51 47.5	+0.7
	2.8nm,0.3s,baz=91,slow=17,SNR=17						
ZALV				Lg	Lg	09 52 15.0	
	8.2nm,0.3s,baz=100,slow=32,SNR=12						
KURBB	**Kurchatov Arra**	**6.72**	**246**	Pn	Pn	09 52 52.7	+0.9
	0.2nm,0.3s,baz=60,slow=14,SNR=20						
MKAR	**Makanchi Array**	**7.95**	**210**	Pn	Pn	09 53 09.7	+0.8
	0.2nm,0.3s,baz=31,slow=12,SNR=1.1						
MKAR				Sn	Sn	09 54 38.6	-1.0
	0.2nm,0.3s,baz=28,slow=30,SNR=2.2						

*GCG **01** 10:00:26.9±0.3, 16°.69N×91°.24W, h161km±228km, MD4.3*
*NEIC **01** 10:00:38.2±2.6, 15°.88N±0°.06×91°.40W±0°.07, h23km±5km, mb4.5/69, Md4.6(MEX), Error ellipse: s-maj=11.3km s-min=7.8km az=51.0*
*IDC **01** 10:00:38.2±1.8, 15°.81N×91°.28W, h26km±15km, mb3.9/13, mb1 4.2/15, mb1mx3.9/52, mbtmp4.1/15, ML3.8/2, MS4.0/4, Ms1 4.0/4, ms1mx3.2/48, Error ellipse: s-maj=28.7km s-min=12.3km az=37.0*
*MEX **01** 10:00:39.9±1.8, 15°.86N×91°.13W, h15km±51km, MD4.6*
ISC 01 10:00:39.3±1.1, 15°.88N±0°.03×91°.25W±0°.03, h31km±9km, n128, σ1s52/144, mb4.4/38, MS4.5/3, 1D, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUEH	**Huehuetenango**	**0.61**	**204**		**Pb**	**10 00 49.6**	**-2.1**
CCIG	**Comitan**	**0.94**	**295**	*eP*	**Pb**	**10 00 55.7**	**-1.5**
CCIG				*eS*	**Sn**	**10 01 09.2**	**+0.2**
CCIG	**Comitan**	**0.94**	**295**		**Pb**	**10 00 55.9**	**-1.3**
CCIG					**Sn**	**10 01 13.3**	**+4.3**
APG	**El Apazote**	**1.15**	**139**	Pg	**Pn**	**10 00 59.5**	**0.0**
	189nm,0.3s,baz=312,slow=13,SNR=376						
APG				Lg	Lg	10 01 14.3	
	1μm,0.3s,baz=197,slow=14,SNR=34						
THIG		**1.38**	**226**	*i* P	**Pb**	**10 01 03.9**	**-0.5**
THIG				*i* S	**Sb**	**10 01 22.2**	**+0.6**
RTAL	**Retalhuleu**	**1.41**	**198**		**Pn**	**10 01 03.9**	**+1.0**
ERG	**Entre ros, C**	**1.47**	**192**	⇓*eP*	**Pb**	**10 01 06.2**	**+0.3**
FUG	**Fuego 3**	**1.48**	**164**	*eP*	**Pb**	**10 01 06.8**	**+0.6**
NBG	**Las Nubes**	**1.55**	**146**	*eP*	**Pb**	**10 01 07.2**	**-0.4**
PCG	**Pacaya**	**1.60**	**157**	*eP*	**Pb**	**10 01 08.4**	**0.0**
PETF	**Flores**	**1.68**	**52**		**Pn**	**10 01 06.9**	**+0.4**
MRL	**Marmol**	**1.71**	**118**	*eP*	**Pn**	**10 01 08.4**	**+1.3**
PCIG		**1.90**	**265**	*eP*	**Pn**	**10 01 10.1**	**+0.5**
PCIG				*eS*	**Sn**	**10 01 34.6**	**+2.1**
TGBT	**Tuxtla Gutierr**	**1.98**	**297**	*i* P	**Pn**	**10 01 11.4**	**+0.8**
TGBT				*eS*	**Sb**	**10 01 38.3**	**-0.7**
TGIG		**2.01**	**297**	*eP*	**Pn**	**10 01 12.1**	**+1.0**
TGIG				*eS*	**Sb**	**10 01 38.6**	**-1.2**
ESQI	**Esquipulas**	**2.26**	**125**		**Pn**	**10 01 15.5**	**+0.8**
MTO3	**Montecristo**	**2.34**	**129**		**Pn**	**10 01 16.3**	**+0.4**
SNET	**Serv Nac Est T**	**2.93**	**138**	Pn	**Pn**	**10 01 27.7**	**+3.9**
SCIG	**Sabancuy**	**3.07**	**1**	*eP*	**Pn**	**10 01 25.6**	**-0.1**
SCIG				*i* S	**Sn**	**10 02 02.3**	**+1.0**
SCIG				*i* S	**Sb**	**10 02 14.2**	**+3.9**
CMIG	**Matias Romero**	**3.69**	**290**	Pn	**Pn**	**10 01 33.8**	**-0.4**
	3.7nm,0.3s,baz=112,slow=7.3,SNR=60						
CMIG				Pg	**Pb**	**10 01 44.5**	**+0.7**
	44nm,0.3s,baz=106,slow=16,SNR=24						
CMIG				Sn	**Sn**	**10 02 15.4**	**-1.2**
	27nm,0.3s,baz=283,slow=21,SNR=9.3						
CMIG				Lg	Lg	10 02 30.4	
	57nm,0.3s,baz=350,slow=16,SNR=14						
CMIG	**Matias Romero**	**3.69**	**290**	*eP*	**Pn**	**10 01 34.0**	**-0.2**
CMIG				*eS*	**Sn**	**10 02 16.8**	**+0.2**
TGUH	**Tegucigalpa,Un**	**4.25**	**115**	*i* P	**Pn**	**10 01 42.6**	**+0.6**
TGUH				*i* S	**Sn**	**10 02 26.1**	**-4.6**
TGUH	**Tegucigalpa,Un**	**4.25**	**115**	Pn	**Pn**	**10 01 43.9**	**+1.9**
CRIN	**San Cristobal**	**5.15**	**127**		**Pn**	**10 01 57.7**	**+3.3**
TEIG	**Tepich**	**5.17**	**33**	Pn	**Pn**	**10 01 54.7**	**+0.2**
	153nm,0.3s,baz=260,slow=1.4,SNR=692						
TEIG				Sn	**Sn**	**10 02 52.2**	**-0.9**
	156nm,0.3s,baz=169,slow=21,SNR=18						
TEIG				LR	LR	10 04 30.3	
	comp=Z,210nm,19.9s,baz=234,slow=44						
TEIG	**Tepich**	**5.17**	**33**	*i* P	**Pn**	**10 01 54.7**	**+0.2**
TEIG				*eS*	**Sn**	**10 02 51.8**	**-1.3**
TEIG	**Tepich**	**5.17**	**33**	Pn	**Pn**	**10 01 54.8**	**+0.3**
MYIG	**Mrida**	**5.25**	**16**	*i* P	**Pn**	**10 01 56.1**	**+0.5**
MYIG				*i* S	**Sn**	**10 02 54.9**	**-0.2**
VHO	**Vista Hermosa**	**5.39**	**283**	*eP*	**Pn**	**10 01 59.9**	**+2.1**
VHO				*i* S	**Sn**	**10 03 02.9**	**+3.9**
PEIG	**Puerto Escondi**	**5.67**	**272**	*eP*	**Pn**	**10 02 00.7**	**-0.8**
PEIG				*eS*	**Sb**	**10 03 21.5**	**-3.7**
MATN	**Matagalpa**	**5.93**	**119**	Pn	**Pn**	**10 02 08.2**	**+3.0**
BOAB	**BOACO BROADBAN**	**6.40**	**121**	Pn	**Pn**	**10 02 12.7**	**+1.2**
ACON	**Acoyapa**	**7.07**	**123**	Pn	**Pn**	**10 02 23.9**	**+3.2**
TLIG	**Tlapa**	**7.21**	**284**	Pn	**Pn**	**10 02 23.5**	**+0.8**
FSCY	**Frank Sound, G**	**10.19**	**69**	Pn	**Pn**	**10 03 05.6**	**+2.2**
MOIG	**Morelia**	**10.19**	**293**	Pn	**Pn**	**10 03 01.0**	**-2.8**
SOR	**Soroa**	**10.38**	**47**	Pn	**Pn**	**10 03 07.6**	**+1.5**
LCCY	**Blossom Villag**	**11.29**	**69**	Pn	**Pn**	**10 03 18.7**	**+0.3**
342A	**Flagon Creek P**	**15.46**	**357**		**Pn**	**10 04 17.4**	**+2.4**
344A	**Westbrook Farm**	**15.51**	**2**		**Pn**	**10 04 16.8**	**+1.0**
344A				IAmb	IAmb	10 04 32.0	
	comp=E,15nm,0.8s						
346A	**Big Creek Wild**	**15.52**	**6**		**Pn**	**10 04 17.1**	**+1.1**
346A				IAmb	IAmb	10 04 23.4	
	comp=Z,27nm,1.0s						
553A	**Crawfordville**	**15.56**	**23**	Pn	**Pn**	**10 04 15.0**	**-1.4**
656A	**Willston**	**15.64**	**29**	Pn	**Pn**	**10 04 16.9**	**-0.6**
352A	**Blakely**	**16.57**	**19**	Pn	**Pn**	**10 04 30.4**	**+1.1**
352A				IAmb	IAmb	10 04 31.1	
	comp=Z,32nm,1.3s						
143A	**Socs Landing,**	**16.75**	**360**		**Pn**	**10 04 31.4**	**-0.2**
WHTX	**Lake Whitney,**	**17.00**	**342**		**Pn**	**10 04 32.2**	**-2.6**
TXAR	**Lajitas Array**	**17.61**	**322**	P	**P**	**10 04 43.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=133,slow=9.1,SNR=26						
TXAR	**Lajitas Array**	**17.61**	**322**		**P**	**10 04 46.0**	**+2.8**
TX31	**Lajitas Ar. Si**	**17.61**	**322**	P	**Pn**	**10 04 41.1**	**-1.4**
TX32	**Lajitas Array**	**17.61**	**322**		**Pn**	**10 04 41.0**	**-1.4**
WLAR	**White Oak Lake**	**17.81**	**355**	P	**Pn**	**10 04 45.0**	**+0.2**
OXF	**Oxford**	**18.63**	**5**	P	**P**	**10 04 55.1**	**+0.8**
OXF				IAmb	IAmb	10 05 08.7	
	comp=Z,28nm,1.3s						
MIAR	**Mount Ida**	**18.70**	**354**		**Pn**	**10 04 56.7**	**+1.0**
X37A	**Clayton**	**19.00**	**350**	P	**P**	**10 04 57.7**	**-0.6**
LPAR	**Lepanto**	**19.66**	**2**	P	**P**	**10 05 04.0**	**-1.6**
LPAR				IAmb	IAmb	10 05 16.4	
	comp=Z,42nm,1.0s						
WMOK	**Wichita Mounta**	**19.96**	**342**	P	**P**	**10 05 07.9**	**-1.0**
OKCFA	**Oklahoma City**	**20.23**	**345**	P	**P**	**10 05 09.9**	**-2.0**
HHAR	**Hobbs**	**20.46**	**354**	P	**P**	**10 05 12.3**	**-2.0**
BCOK	**Bluff Creek, N**	**20.50**	**345**	P	**P**	**10 05 13.8**	**-1.0**
OK030	**Cody Creek RV**	**20.57**	**347**	P	**P**	**10 05 15.0**	**-0.5**
OK031	**S. Brethren Rd**	**20.61**	**347**	P	**P**	**10 05 15.9**	**0.0**
TKL	**Tuckaleechee C**	**20.80**	**17**	P	**P**	**10 05 19.0**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=190,slow=14,SNR=2.7						
TKL				S	**S**	**10 09 02.4**	**-6.2**
	comp=Z,2.5nm,0.7s,baz=105,slow=19,SNR=2.0						
PBMO	**Poplar Bluff**	**20.83**	**2**	P	**P**	**10 05 18.6**	**+0.3**
PBMO				IAmb	IAmb	10 05 33.5	
	comp=Z,16nm,1.2s						
V53A	**Saluda**	**21.10**	**19**	P	**P**	**10 05 22.4**	**+1.1**
AMTX	**Amarillo**	**21.11**	**336**	P	**P**	**10 05 22.3**	**+0.8**
AMTX				IAmb	IAmb	10 05 33.6	
	comp=Z,18nm,0.9s						
T45A	**Paducah**	**21.18**	**6**	P	**P**	**10 05 23.1**	**+1.0**
SDV	**Santo Domingo**	**21.29**	**107**	P	**P**	**10 05 25.4**	**+1.7**
SDV				IAmb	IAmb	10 05 37.3	
	comp=Z,9.9nm,0.7s						
T47A	**Sharon Grove**	**21.34**	**9**	P	**P**	**10 05 24.3**	**+0.4**
T47A				IAmb	IAmb	10 05 44.3	
	comp=Z,11nm,0.7s						
S44A	**Carbondale**	**21.80**	**4**	P	**P**	**10 05 26.5**	**-2.2**
S39A	**Bolivar**	**21.80**	**356**	P	**P**	**10 05 28.8**	**0.0**
SIUC	**Southern Illin**	**21.82**	**4**	P	**P**	**10 05 28.2**	**-0.8**
SIUC				IAmb	IAmb	10 05 33.0	
	comp=Z,24nm,0.8s						
CCM	**Cathedral Cave**	**22.09**	**0**	P	**P**	**10 05 31.4**	**-0.5**
CCM				IAmb	IAmb	10 05 47.6	
	comp=Z,11nm,1.0s						
USIN	**University of**	**22.23**	**8**	P	**P**	**10 05 32.4**	**-0.9**
BNM	**Barren Site**	**22.86**	**326**	P	**P**	**10 05 40.6**	**+0.2**
OLIL	**Olney**	**22.93**	**6**	P	**P**	**10 05 41.2**	**+0.4**
OLIL				IAmb	IAmb	10 05 43.7	
	comp=Z,19nm,0.9s						
R50A	**Paris**	**23.14**	**14**	P	**P**	**10 05 43.9**	**+1.0**
R50A				IAmb	IAmb	10 05 45.3	
	comp=Z,23nm,1.4s						
R32A	**Long Quarter,**	**23.40**	**345**	P	**P**	**10 05 46.1**	**+0.6**
R32A				IAmb	IAmb	10 05 46.6	
	comp=Z,9.4nm,0.8s						
P40A	**Paris**	**23.57**	**358**	P	**P**	**10 05 46.3**	**-0.9**
P40A				IAmb	IAmb	10 05 48.7	
	comp=Z,14nm,1.2s						
P43A	**Skaggs, Pawnee**	**23.72**	**3**	P	**P**	**10 05 49.4**	**+0.8**
P43A				IAmb	IAmb	10 05 50.7	
	comp=Z,26nm,1.2s						
Q51A	**Peebles**	**24.08**	**15**	P	**P**	**10 05 52.2**	**+0.2**
Q51A				IAmb	IAmb	10 05 54.9	
	comp=Z,12nm,0.8s						
T25A	**Trinidad**	**24.18**	**334**	P	**P**	**10 05 51.5**	**-1.7**
T25A				IAmb	IAmb	10 06 01.9	
	comp=Z,22nm,1.0s						
P51A	**Williamsport**	**24.58**	**15**	P	**P**	**10 05 57.7**	**+1.1**
P51A				IAmb	IAmb	10 06 04.4	
	comp=Z,11nm,0.8s						
SFIN	**Lafayette**	**24.68**	**8**	P	**P**	**10 05 57.2**	**-0.2**
SFIN				IAmb	IAmb	10 06 03.7	
	comp=Z,15nm,1.1s						
N38A	**Joes South For**	**24.88**	**356**	P	**P**	**10 06 00.2**	**+1.0**
O49A	**Covington**	**24.96**	**13**	P	**P**	**10 05 59.3**	**-0.7**
O49A				IAmb	IAmb	10 06 08.6	
	comp=Z,18nm,1.2s						
KSCO	**Kaye Shedlock'**	**25.11**	**339**	P	**P**	**10 06 00.2**	**-1.4**
KSCO				IAmb	IAmb	10 06 16.6	
	comp=Z,7.7nm,0.9s						
N35A	**Tabor**	**25.18**	**352**	P	**P**	**10 06 01.8**	**-0.2**
ACSO	**Alum Creek Sta**	**25.31**	**15**	P	**P**	**10 06 02.4**	**-0.7**
ACSO				IAmb	IAmb	10 06 09.8	
	comp=Z,12nm,0.8s						
N47A	**Urbana**	**25.37**	**10**	P	**P**	**10 06 04.4**	**+0.7**
O54A	**Avella**	**26.00**	**19**	P	**P**	**10 06 09.8**	**+0.4**
O54A				IAmb	IAmb	10 06 15.9	
	comp=Z,26nm,1.4s						
L42A	**Oliver, Polo**	**26.07**	**3**	P	**P**	**10 06 10.1**	**+0.1**
L40A	**Anamosa**	**26.09**	**0**	P	**P**	**10 06 08.8**	**-1.3**
L40A				IAmb	IAmb	10 06 25.9	
	comp=Z,8.9nm,0.8s						
L44A	**Lake County Fo**	**26.36**	**6**	P	**P**	**10 06 11.9**	**-0.8**
PDAR	**Pinedale Array**	**31.05**	**333**	P	**P**	**10 06 55.0**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=130,slow=8.4,SNR=1.9						
ECR	**Eagle Creek**	**32.08**	**332**	P	**P**	**10 07 02.6**	**-1.1**
SNOW	**Snow King Moun**	**32.13**	**333**	P	**P**	**10 07 03.3**	**-0.9**
NVAR	**Mina Array Bea**	**32.71**	**319**	P	**P**	**10 07 10.2**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=130,slow=10,SNR=5.8						
ULM	**Lac du Bonnet**	**34.49**	**355**	P	**P**	**10 07 23.3**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=154,slow=9.4,SNR=3.6						
ULM	**Lac du Bonnet**	**34.49**	**355**	P	**P**	**10 07 23.0**	**-1.3**
FFC	**Flin Flon**	**39.65**	**350**	P	**P**	**10 08 07.0**	**-1.1**
SIV	**San Ignacio**	**43.48**	**135**	P	**P**	**10 08 39.4**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=305,slow=9.8,SNR=9.0						
YKA	**Yellowknife Ar**	**49.38**	**346**	P	**P**	**10 09 25.5**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=144,slow=8.3,SNR=20						
YKA				PcP	**PcP**	**10 10 47.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=146,slow=3.9,SNR=4.0						
CRQM	**Cirque**	**58.09**	**333**	P	**P**	**10 10 26.5**	**-3.3**
L27K	**Beaver Creek,**	**58.64**	**336**	P	**P**	**10 10 34.2**	**+0.9**
RES	**Resolute Bay**	**58.84**	**359**	P	**P**	**10 10 34.5**	**0.0**
	comp=Z,1.7nm,0.8s,baz=235,slow=6.9,SNR=5.0						
RES	**Resolute Bay**	**58.84**	**359**	P	**P**	**10 10 33.7**	**-0.8**
RES				IAmb	IAmb	10 10 35.6	
	comp=Z,3.1nm,1.0s						
INK	**Inuvik**	**58.86**	**343**	P	**P**	**10 10 34.9**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=117,slow=6.3,SNR=12						
INK	**Inuvik**	**58.86**	**343**	P	**P**	**10 10 35.3**	**+0.6**
INK				IAmb	IAmb	10 10 35.6	
	comp=Z,3.0nm,0.7s						
EGAK	**Eagle**	**59.25**	**338**	P	**P**	**10 10 37.5**	**0.0**
EGAK				IAmb	IAmb	10 10 54.7	
	comp=Z,3.5nm,1.2s						
M24K	**Tolsona, Glenn**	**60.00**	**334**	P	**P**	**10 10 41.9**	**-0.9**
ILAR	**Eielson Array**	**61.41**	**336**	P	**P**	**10 10 52.5**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=156,slow=4.9,SNR=9.4						
RND	**Reindeer**	**61.65**	**334**	P	**P**	**10 10 55.2**	**+1.2**
RND				IAmb	IAmb	10 11 03.2	
	comp=Z,4.7nm,1.2s						
BMAR	**Burnt Mountain**	**61.79**	**339**	P	**P**	**10 10 56.1**	**+1.3**
TRF	**Thorofare Moun**	**62.26**	**334**	P	**P**	**10 10 58.9**	**+0.7**
TRF				IAmb	IAmb	10 11 04.2	
	comp=Z,4.6nm,1.0s						
I23K	**Minto, Yukon-K**	**62.53**	**336**	P	**P**	**10 11 00.7**	**+1.0**
I23K				IAmb	IAmb	10 11 01.1	
	comp=Z,2.6nm,0.8s						
BPAW	**Bear Paw Mtn.**	**62.79**	**335**	P	**P**	**10 11 01.5**	**-0.1**
BPAW				IAmb	IAmb	10 11 11.8	
	comp=Z,4.4nm,1.4s						
PPLA	**Purkeypile**	**62.88**	**333**	P	**P**	**10 11 01.7**	**-0.7**
MLY	**Manley**	**63.03**	**336**	P	**P**	**10 11 03.6**	**+0.5**
MLY				IAmb	IAmb	10 11 04.3	
	comp=Z,2.5nm,0.7s						
TOLK	**Toolik Lake Re**	**64.01**	**340**	P	**P**	**10 11 10.1**	**+0.5**
TOLK				IAmb	IAmb	10 11 11.2	
	comp=Z,7.4nm,1.3s						
SUMG	**Summit**	**64.24**	**15**	P	**P**	**10 11 11.6**	**+0.2**
EKA	**Eskdalemuir Ar**	**76.03**	**36**	P	**P**	**10 12 23.0**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=272,slow=4.2,SNR=6.0						
ESDC	**Sonseca Array**	**77.99**	**52**	P	**P**	**10 12 36.5**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=286,slow=6.0,SNR=3.6						
HFS	**Hagfors**	**83.61**	**29**	LR	LR	10 50 25.4	
	comp=Z,227nm,18.4s,baz=51,slow=36						
ARCES	**ARCESS Array B**	**84.14**	**18**	P	**P**	**10 13 06.7**	**-0.3**
	comp=Z,5.2nm,1.0s,baz=348,slow=5.2,SNR=6.0						
FINES	**FINESS Array B**	**88.50**	**25**	P	**P**	**10 13 28.4**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=306,slow=6.6,SNR=4.8						
TORD	**Torodi Ar. Bea**	**89.24**	**77**	LR	LR	10 52 54.5	
	comp=Z,66nm,20.4s,baz=50,slow=35						
VRAC	**Vranov**	**89.28**	**39**	LR	LR	10 49 30.2	
	comp=Z,179nm,21.6s,baz=32,slow=33						
CMAR	**Chiang Mai Arr**	**144.43**	**343**	PKP	**PKPab**	**10 20 11.5**	**0.0**
	comp=Z,1.2nm,0.7s,baz=334,slow=3.5,SNR=8.1						

**WEL 01 10:09:34.3±1.2, 33°S±23°×18°0E±4°6, h303km±29km, M3.9/11, mB4.3/3, ML3.9/6, MLv4.0/11, Mw(mB)3.4/3,

SHLS	**Shalkode**	**2.48**	**231**	*e*P		**Pn**	**10 22 47.2**	**0.0**
	8.1nm,0.2s							
SHLS				*e*S		**Sn**	**10 23 17.5**	**-0.8**
	27nm,0.4s							
SHLS	**Shalkode**	**2.48**	**231**	Pg		**Pn**	**10 22 47.2**	**0.0**
	8.1nm,0.2s							
SHLS				Lg		Lg	10 23 17.5	
	27nm,0.4s							
TDK	**Taldyqorghan**	**2.65**	**277**	*e*P		**Pg**	**10 22 55.1**	**-1.1**
	43nm,0.3s							
TDK				*e*S		**Sg**	**10 23 31.0**	**+0.5**
	55nm,0.3s							
TDK	**Taldyqorghan**	**2.65**	**277**	Pg		**Pg**	**10 22 55.1**	**-1.1**
	43nm,0.3s							
TDK				Lg		Lg	10 23 31.0	
	55nm,0.3s							
MNBS	**Baschi**	**2.74**	**257**	*e*P		**Pb**	**10 22 55.8**	**+0.5**
	4.5nm,0.2s							
MNBS				*e*S		**Sg**	**10 23 32.5**	**-1.0**
	19nm,0.4s							
MNBS	**Baschi**	**2.74**	**257**	Pg		**Pb**	**10 22 56.2**	**+0.8**
	4.5nm,0.2s							
MNBS				Lg		Lg	10 23 32.9	
	19nm,0.4s							
KPKS	**Kokpek**	**2.78**	**244**	*e*P		**Pb**	**10 22 56.1**	**+0.1**
	8.6nm,0.1s							
KPKS				*e*S		**Sg**	**10 23 33.0**	**-1.6**
	36nm,0.4s							
ARXS	**Arharly**	**3.11**	**262**	*e*P		**Pb**	**10 23 02.9**	**+1.2**
	4.2nm,0.2s							
ARXS				*e*S		**Sg**	**10 23 44.7**	**-0.7**
	15nm,0.3s							
ARXS	**Arharly**	**3.11**	**262**	Pg		**Pb**	**10 23 02.9**	**+1.2**
	4.2nm,0.2s							
ARXS				Lg		Lg	10 23 44.7	
	15nm,0.3s							
SATY	**Saty**	**3.16**	**239**	*e*P		**Pb**	**10 23 03.1**	**+0.5**
	1.9nm,0.2s							
SATY				*e*S		**Sg**	**10 23 44.7**	**-2.3**
	5.8nm,0.1s							
SATY	**Saty**	**3.16**	**239**	Pg		**Pb**	**10 23 03.1**	**+0.5**
	1.9nm,0.2s							
SATY				Lg		Lg	10 23 44.7	
	5.8nm,0.1s							
KURBB	**Kurchatov Arra**	**6.37**	**339**	⇓Lg		Lg	10 25 28.6	
	3.2nm,0.5s							

IDC 01 10:26:41.6±2.8, 5°51'S×153°27'E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/43, mbtmp3.5/4, ML1.9/1, Error ellipse: s-maj=95.3km s-min=31.3km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.19**	**237**	Pn		Pn	10 28 29.0	+0.9
	1.2nm,0.3s,baz=50,slow=7.9,SNR=2.9							
PMG				Sn		Sn	10 29 51.2	+0.6
	2.5nm,0.3s,baz=293,slow=23,SNR=5.9							
WRA	**Warramunga Arr**	**23.34**	**230**	P		P	10 31 51.6	-0.2
	0.8nm,0.7s,baz=54,slow=10.0,SNR=8.2							
ASAR	**Alice Springs**	**25.96**	**224**	P		P	10 32 16.0	-0.1
	0.2nm,0.4s,baz=57,slow=9.1,SNR=4.5							
MKAR	**Makanchi Array**	**81.16**	**319**	P		P	10 38 59.5	+0.3
	0.3nm,0.7s,baz=90,slow=5.6,SNR=3.1							
TORD	**Torodi Ar. Bea**	**150.97**	**287**	PKPbc		PKPbc	10 46 37.2	-0.4
	0.8nm,0.7s,baz=107,slow=2.6,SNR=4.5							

*VAO **01** 10:26:47.5±1.0, 24°.36S×67°.34W, h202km, mb4.1*
*SJA **01** 10:26:47.3±0.7, 24°.27S×67°.27W, h184km±7km, ML4.1, MW3.9*
*NEIC **01** 10:26:47.0±2.4, 24°.29S±0°.04×67°.27W±0°.09, h192km±13km, Error ellipse: s-maj=12.6km s-min=5.4km az=74.0*
*IDC **01** 10:26:48.0±1.4, 24°.19S×67°.05W, h167km±15km, mb3.7/4, mb1 3.7/10, mb1mx3.5/31, mbtmp4.1/10, Error ellipse: s-maj=20.9km s-min=16.8km az=159.0*
*GUC **01** 10:26:48.9±0.5, 24°.23S×67°.60W, h214km±6km, ML4.5*
ISC 01 10:26:47.3±0.6, 24°26S±0°.04×67°29W±0°.04, h182km±7km, n89, σ1s23/116, mb4.0/4, 5C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.69**	**106**	*e*P		**Pn**	**10 27 22.3**	**+0.8**
SLA				*e*S		**Sn**	**10 27 47.9**	**0.0**
FSA	**Cafayete**	**2.19**	**147**	*e*P		**Pn**	**10 27 27.1**	**+0.3**
FSA				*e*S		**Sn**	**10 27 56.3**	**-1.3**
LVC	**Limon Verde**	**2.21**	**317**	P		**Pn**	**10 27 28.7**	**+1.4**
	29nm,0.3s,baz=133,slow=10.0,SNR=561							
LVC				S		**Sn**	**10 27 59.4**	**+1.1**
	59nm,0.3s,baz=2.7,slow=21,SNR=59							
LVC	**Limon Verde**	**2.21**	**317**	⇑*e*P		**Pn**	**10 27 28.7**	**+1.4**
LVC				*i* S		**Sn**	**10 27 59.0**	**+0.7**
LVC	**Limon Verde**	**2.21**	**317**			**Pn**	**10 27 27.9**	**+0.6**
LVC				Sn		**Sn**	**10 27 58.8**	**+0.5**
LVC	**Limon Verde**	**2.21**	**317**	*e*P		**Pn**	**10 27 28.8**	**+1.4**
LVC	**Limon Verde**	**2.21**	**317**	*e*P		**Pn**	**10 27 28.7**	**+1.4**
LVC				*e*S		**Sn**	**10 27 59.7**	**+1.4**
LVC				IAML			10 28 02.2	
	comp=Z,180nm,0.1s							
PB15	**IPOC Station P**	**2.26**	**297**	*e*P		**Pn**	**10 27 28.6**	**+1.0**
PB15				*i* S		**Sn**	**10 27 59.0**	**+0.2**
PB15	**IPOC Station P**	**2.26**	**297**			**Pn**	**10 27 29.2**	**+1.6**
PB15	**IPOC Station P**	**2.26**	**297**	*e*P		**Pn**	**10 27 29.0**	**+1.4**
PB15				*e*S		**Sn**	**10 27 59.4**	**+0.6**
GO02	**Mina Guanaco**	**2.28**	**246**	⇑*i*P		**Pn**	**10 27 29.2**	**+1.4**
GO02				*i* S		**Sn**	**10 28 00.2**	**+0.8**
GO02				IAML			10 28 01.6	
	comp=N,1μm,0.4s							
GO02	**Mina Guanaco**	**2.28**	**246**	Pn		**Pn**	**10 27 29.3**	**+1.4**
PB06	**IPOC Station P**	**2.60**	**306**	*e*P		**Pn**	**10 27 31.9**	**+0.3**
PB06				*i* S		**Sn**	**10 28 05.4**	**-0.5**
PB06				IAML			10 28 07.6	
	comp=N,1μm,0.5s							
PB06	**IPOC Station P**	**2.60**	**306**			**Pn**	**10 27 32.5**	**+1.0**
PB06	**IPOC Station P**	**2.60**	**306**	*e*P		**Pn**	**10 27 32.7**	**+1.2**
PB06				*e*S		**Sn**	**10 28 06.0**	**+0.1**
PB06				IAML			10 28 08.3	
	comp=Z,590nm,0.1s							
YJA	**Yavi**	**2.64**	**39**	*e*P		**Pn**	**10 27 33.4**	**+1.2**
YJA				*e*S		**Sn**	**10 28 07.7**	**+0.6**
PB14	**IPOC Station P**	**2.86**	**262**	⇑*i*P		**Pn**	**10 27 35.5**	**+0.8**
PB14				*i* S		**Sn**	**10 28 10.4**	**-1.1**
PB14	**IPOC Station P**	**2.86**	**262**	Pn		**Pn**	**10 27 35.5**	**+0.8**
PB14	**IPOC Station P**	**2.86**	**262**	*e*P		**Pn**	**10 27 35.8**	**+1.1**
PB14				*e*S		**Sn**	**10 28 11.2**	**-0.4**
PB14				IAML			10 28 19.2	
	comp=Z,233nm,0.4s							
PB05	**IPOC Station P**	**3.02**	**297**	*e*P		**Pn**	**10 27 37.0**	**+0.6**
PB05				*i* S		**Sn**	**10 28 12.9**	**-1.8**
PB05				IAML			10 28 16.1	
	comp=E,389nm,0.3s							
PB05	**IPOC Station P**	**3.02**	**297**	*e*P		**Pn**	**10 27 37.5**	**+1.1**
PB05				*e*S		**Sn**	**10 28 13.9**	**-0.7**
PB05				IAML			10 28 16.8	
	comp=Z,297nm,0.5s							
PB09	**IPOC Station P**	**3.04**	**323**			**Pn**	**10 27 38.3**	**+1.5**
AC02	**Maricunga**	**3.06**	**213**	⇑*i*P		**Pn**	**10 27 38.5**	**+1.3**
AC02	**Maricunga**	**3.06**	**213**			**Pn**	**10 27 38.5**	**+1.3**
AHML	**Horco Molle**	**3.07**	**145**	*e*P		**Pn**	**10 27 37.4**	**+0.4**
AHML				*e*S		**Sn**	**10 28 15.1**	**-0.7**
PB10	**IPOC Station P**	**3.08**	**283**			**Pn**	**10 27 38.3**	**+1.3**
PB03	**IPOC Station P**	**3.16**	**314**	*e*P		**Pn**	**10 27 39.2**	**+1.0**
PB03				*i* S		**Sn**	**10 28 16.7**	**-1.2**
PB03				IAML			10 28 17.9	
	comp=E,886nm,0.3s							
PB03	**IPOC Station P**	**3.16**	**314**	*e*P		**Pn**	**10 27 39.1**	**+0.9**
PB03				*e*S		**Sn**	**10 28 17.4**	**-0.4**
PB03				IAML			10 28 20.4	
	comp=Z,646nm,0.1s							
PB04	**IPOC Station P**	**3.25**	**306**	*e*P		**Pn**	**10 27 40.0**	**+0.6**
PB04				*i* S		**Sn**	**10 28 18.5**	**-1.4**
PB04				IAML			10 28 20.9	
	comp=N,751nm,0.1s							
PB04	**IPOC Station P**	**3.25**	**306**			**Pn**	**10 27 40.3**	**+0.9**
PB04	**IPOC Station P**	**3.25**	**306**	*e*P		**Pn**	**10 27 40.5**	**+1.2**
PB04				*e*S		**Sn**	**10 28 19.4**	**-0.5**
PB04				IAML			10 28 21.0	
	comp=Z,525nm,0.1s							
PB07	**IPOC Station P**	**3.48**	**316**	⇓*i*P		**Pn**	**10 27 42.9**	**+0.8**
PB07				*e*S		**Sn**	**10 28 22.8**	**-2.0**
PB07	**IPOC Station P**	**3.48**	**316**			**Pn**	**10 27 42.8**	**+0.7**
PB07	**IPOC Station P**	**3.48**	**316**	*e*P		**Pn**	**10 27 43.0**	**+0.9**
PB07				*e*S		**Sn**	**10 28 23.5**	**-1.4**
PB07				IAML			10 28 27.8	
	comp=Z,493nm,0.6s							
AC01	**Pan de Azucar**	**3.54**	**237**	⇑*i*P		**Pn**	**10 27 42.6**	**0.0**
AC01				*i* S		**Sn**	**10 28 24.5**	**-1.5**
AC01	**Pan de Azucar**	**3.54**	**237**	Pn		**Pn**	**10 27 42.7**	**0.0**
PB01	**IPOC Station P**	**3.79**	**327**	⇓*i*P		**Pn**	**10 27 46.3**	**+0.3**
PB01	**IPOC Station P**	**3.79**	**327**			**Pn**	**10 27 46.1**	**+0.1**
GO03	**Copiap**	**4.25**	**218**	⇓*i*P		**Pn**	**10 27 51.1**	**-0.5**
GO03	**Copiap**	**4.25**	**218**	Pn		**Pn**	**10 27 51.2**	**-0.5**
GO03				Sn		**Sn**	**10 28 41.6**	**-0.6**
PB08	**IPOC Station P**	**4.45**	**337**	⇓*i*P		**Pn**	**10 27 55.5**	**+0.9**
PB08	**IPOC Station P**	**4.45**	**337**			**Pn**	**10 27 55.4**	**+0.7**
TA01	**Diego Aracena**	**4.55**	**323**	Pn		**Pn**	**10 27 55.2**	**-0.3**
AC04	**Llanos de Chal**	**5.19**	**220**	*i* P		**Pn**	**10 28 02.4**	**-1.5**
AC04	**Llanos de Chal**	**5.19**	**220**	Pn		**Pn**	**10 28 02.5**	**-1.3**
PSGCX	**Pisagua**	**5.33**	**330**	Pn		**Pn**	**10 28 04.7**	**-1.1**
MNMC	**Minye Minye**	**5.54**	**337**	Pn		**Pn**	**10 28 08.7**	**+0.1**
LCO	**Las Campanas**	**5.63**	**212**			**Pn**	**10 28 08.3**	**-1.4**
GO04	**Tololo Observa**	**6.67**	**207**	Pn		**Pn**	**10 28 21.5**	**-1.8**
CO03	**El Pedregal**	**7.21**	**204**	Pn		**Pn**	**10 28 28.6**	**-1.7**
LPAZ	**La Paz**	**7.97**	**354**	P		**Pn**	**10 28 41.9**	**+1.0**
	comp=Z,2.9nm,0.3s,baz=179,slow=8.2,SNR=90							
LPAZ				S		**Sn**	**10 30 06.5**	**-4.3**
	comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=1.9							
LPAZ	**La Paz**		**7.97**	**354**		**Pn**	**10 28 41.8**	**+0.9**
LPAZ	**La Paz**		**7.97**	**354**	*e*P	**Pn**	**10 28 42.0**	**+1.2**
CPUP	**Villa Florida**		**9.25**	**105**	P	**Pn**	**10 28 55.3**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=285,slow=13,SNR=2.9							
CPUP	**Villa Florida**		**9.25**	**105**		**Pn**	**10 28 56.1**	**-0.8**
MT02	**Curacav**		**9.58**	**200**	Pn	**Pn**	**10 28 58.6**	**-2.6**
SIV	**San Ignacio**		**10.09**	**37**	P	**Pn**	**10 29 06.0**	**-2.1**
	comp=Z,2.8nm,0.3s,baz=224,slow=13,SNR=40							
SIV					S	Sn	10 30 47.2	-13
	comp=Z,0.1nm,0.3s,baz=299,slow=19,SNR=2.9							
RFA	**San Rafael**		**10.53**	**185**	*e*P	**Pn**	**10 29 13.7**	**0.0**
RFA					*e*S	**Sn**	**10 31 07.2**	**-3.6**
AQDB	**Aquidauana**		**11.37**	**73**	*e*P	**Pn**	**10 29 25.5**	**+0.9**
BI02	**San Fabin de**		**12.83**	**195**	Pn	**Pn**	**10 29 43.9**	**+0.6**
VILB	**Vilhena**		**13.10**	**32**	*e*P	**Pn**	**10 29 47.3**	**+0.5**
PTGB	**Pitanga**		**13.87**	**95**	*e*P	**Pn**	**10 29 56.5**	**0.0**
ETMB	**Extrema**		**14.40**	**4**	*e*P	**P**	**10 30 04.3**	**-0.5**
SAML	**Samuel**		**15.72**	**15**		**Pn**	**10 30 18.8**	**-0.4**
SAML					IAmb	IAmb	10 30 20.0	
	comp=Z,18nm,1.5s							
ITRB	**Iturama**		**16.34**	**77**	*e*P	**P**	**10 30 26.3**	**0.0**
PLCA	**Paso Flores**		**16.65**	**189**	P	**Pn**	**10 30 31.5**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=9.4,slow=12,SNR=6.7							
PLCA	**Paso Flores**		**16.65**	**189**		**Pn**	**10 30 31.4**	**+1.1**
PLCA					IAmb	IAmb	10 30 39.9	
	comp=Z,8.8nm,0.7s							
VAO	**Valinhos**		**18.67**	**90**	*e*P	**P**	**10 30 51.5**	**-0.3**
IPMB	**Ipameri, GO**		**18.85**	**74**	*e*P	**P**	**10 30 54.0**	**+0.2**
SNDB	**Serra Nova Dou**		**19.48**	**54**	*e*P	**P**	**10 30 59.6**	**-0.9**
BDFB	**Brasilia**		**20.03**	**68**	P	**P**	**10 31 06.0**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=241,slow=11,SNR=24							
BDFB	**Brasilia**		**20.03**	**68**	P	**P**	**10 31 06.4**	**-0.1**
PEXB	**Peixe**		**21.68**	**59**	*e*P	**P**	**10 31 22.8**	**-1.2**
ITTB	**Itaituba**		**22.70**	**31**	*e*P	**P**	**10 31 32.8**	**-0.8**
JANB	**Januaria**		**23.47**	**71**	*e*P	**P**	**10 31 40.1**	**-0.6**
SDBA	**SAO DESIDERIO**		**24.26**	**65**	*e*P	**P**	**10 31 47.0**	**-0.9**
SMTB	**Santa Maria do**		**24.26**	**54**	*e*P	**P**	**10 31 47.2**	**-0.7**
PTGA	**Pitinga**		**24.44**	**18**	P	**P**	**10 31 49.8**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=315,slow=19,SNR=2.3							
MALB	**Monte Alegre**		**25.59**	**31**	*e*P	**P**	**10 31 59.2**	**-0.7**
NAN01	**Guarapari, ES**		**26.11**	**81**	*e*P	**P**	**10 32 03.6**	**-1.0**
GDU01	**Guandu, BA**		**28.17**	**73**	*e*P	**P**	**10 32 21.9**	**-1.1**
NBLA	**Lagarto - SE**		**30.97**	**70**	*e*P	**P**	**10 32 46.1**	**-1.6**
VNDA	**Vanda**		**74.40**	**190**	P	**P**	**10 38 08.1**	**+3.4**
	comp=Z,0.7nm,0.9s,baz=79,slow=6.1,SNR=3.5							
VNDA	**Vanda**		**74.40**	**190**	P	**P**	**10 38 03.1**	**-1.6**
TORD	**Torodi Ar. Bea**		**76.91**	**69**	P	**P**	**10 38 20.8**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=268,slow=6.3,SNR=7.6							
MAW	**Mawson**		**81.27**	**163**	P	**P**	**10 38 45.3**	**+2.6**
	comp=Z,3.4nm,0.8s,baz=278,slow=3.0,SNR=2.4							
ASAR	**Alice Springs**		**128.11**	**205**	PKP	**PKiKP**	**10 45 34.5**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=144,slow=1.9,SNR=9.5							
WRA	**Warramunga Arr**		**131.28**	**207**	PKP	**PKiKP**	**10 45 40.8**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=161,slow=1.8,SNR=16							
MKAR	**Makanchi Array**		**146.89**	**40**	PKPbc	**PKPab**	**10 46 10.0**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=5.7,slow=2.4,SNR=5.2							

*PDG **01** 10:42:17.7±0.4, 38°.47N×20°.39E, h10km±3km, ML3.9/13, Error ellipse: s-maj=3.4km s-min=1.4km az=90.0*
*ATH **01** 10:42:17.9, 38°.32N×20°.49E, h14km±1km, ML3.5/15, Error ellipse: s-maj=1.7km s-min=0.6km az=268.0*
*NEIC **01** 10:42:17.8±3.0, 38°.30N±0°.04×20°.42E±0°.06, h10km±2km, Error ellipse: s-maj=10.3km s-min=3.1km az=228.0*
*THE **01** 10:42:17.6, 38°.32N×20°.47E, h15km, ML4.0/13, Error ellipse: s-maj=0.9km s-min=0.3km az=273.0*
*IDC **01** 10:42:18.9±2.3, 38°.75N×20°.43E, h0km, mb3.5/8, mb1 3.7/11, mb1mx3.5/44, mbtmp3.6/11, ML3.4/3, Error ellipse: s-maj=50.4km s-min=17.8km az=43.0*
ISC 01 10:42:17.5±0.8, 38°31N±0°.02×20°50E±0°.03, h20km±2km, n114, σ1s29/155, mb3.7/8, 8C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	**0.04**	**222**	P		**Pg**	**10 42 20.3**	**-0.7**
KEF5				S		**Sg**	**10 42 22.0**	**-1.3**
KEF5	**Kardakata, Kep**	**0.04**	**222**	P		**Pg**	**10 42 20.3**	**-0.7**
KEF5				S		**Sg**	**10 42 22.0**	**-1.3**
	345μm,0.4s							
KEF4	**Livadi, Kephal**	**0.08**	**231**	P		**Pg**	**10 42 20.7**	**-0.5**
KEF4				S		**Sg**	**10 42 23.0**	**-0.6**
KEF4	**Livadi, Kephal**	**0.08**	**231**	P		**Pg**	**10 42 20.7**	**-0.5**
DMLN	**Damoulianata-K**	**0.12**	**236**	P		**Pg**	**10 42 21.3**	**-0.3**
DMLN				S		**Sg**	**10 42 23.9**	**-0.5**
DMLN	**Damoulianata-K**	**0.12**	**236**	P		**Pg**	**10 42 21.3**	**-0.3**
DMLN				S		**Sg**	**10 42 24.0**	**-0.5**
	120μm,0.3s							
ARG2	**Argostoli**	**0.13**	**184**	P		**Pg**	**10 42 21.5**	**-0.2**
ARG2				S		**Sg**	**10 42 24.2**	**-0.3**
	77μm,0.2s							
VLS	**Valsamata**	**0.15**	**151**	P		**Pg**	**10 42 21.7**	**-0.2**
VLS				S		**Sg**	**10 42 24.9**	**0.0**
VLS				AML		AML	10 42 25.1	
	comp=E,67185μm,0.3s							
VLS				AML		AML	10 42 25.4	
	comp=N,90417μm,0.4s							
VLS	**Valsamata**	**0.15**	**151**	P		**Pg**	**10 42 21.7**	**-0.2**
VLS				S		**Sg**	**10 42 24.5**	**-0.4**
	comp=N,41μm,0.4s							
KEF3	**Kipouria, Keph**	**0.16**	**229**	P		**Pg**	**10 42 21.4**	**-0.6**
KEF3				S		**Sg**	**10 42 24.1**	**-1.0**
KEF3	**Kipouria, Keph**	**0.16**	**229**	P		**Pg**	**10 42 21.4**	**-0.6**
KEF3				S		**Sg**	**10 42 24.0**	**-1.0**
	comp=N,239μm,0.2s							
FSK	**Fiskardo**	**0.16**	**18**	P		**Pg**	**10 42 21.6**	**-0.5**
FSK				S		**Sg**	**10 42 24.3**	**-0.8**
FSK				AML		AML	10 42 25.0	
FSK				AML		AML	10 42 25.0	
FSK	**Fiskardo**	**0.16**	**18**	P		**Pg**	**10 42 21.6**	**-0.5**
FSK				S		**Sg**	**10 42 24.4**	**-0.8**
	comp=N,143μm,0.3s							
PSDA	**Pessada-Kefalo**	**0.20**	**161**	P		**Pg**	**10 42 22.7**	**0.0**
PSDA				S		**Sg**	**10 42 25.9**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.20**	**161**	P		**Pg**	**10 42 22.6**	**0.0**
PSDA				S		**Sg**	**10 42 26.4**	**+0.3**
	comp=N,3μm,0.3s							
EVGI	**Lefkada island**	**0.34**	**21**	P		**Pg**	**10 42 24.5**	**-0.3**
EVGI				S		**Sb**	**10 42 29.9**	**0.0**
EVGI	**Lefkada island**	**0.34**	**21**	P		**Pg**	**10 42 24.5**	**-0.3**
EVGI				S		**Sb**	**10 42 29.8**	**-0.2**
	comp=N,15μm,0.4s							
DRAG	**Dragano-Lefkad**	**0.38**	**9**	P		**Pg**	**10 42 25.0**	**-0.6**
DRAG				S		**Sg**	**10 42 30.8**	**-0.2**
DRAG	**Dragano-Lefkad**	**0.38**	**9**	P		**Pg**	**10 42 25.0**	**-0.6**
DRAG				S		**Sg**	**10 42 30.9**	**-0.2**
	comp=N,49μm,0.4s							
NYDR	**Nydri-Lefkada**	**0.44**	**21**	P		**Pg**	**10 42 26.0**	**-0.5**
NYDR				S		**Sb**	**10 42 33.0**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.44**	**21**	P		**Pg**	**10 42 26.0**	**-0.5**
NYDR				S		**Sb**	**10 42 32.8**	**0.0**
	comp=N,11μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.45**	**163**	P		**Pb**	**10 42 26.8**	**-0.1**
VLMS				S		**Sn**	**10 42 34.3**	**-2.1**
VLMS				AML		AML	10 42 35.2	
	comp=N,25974μm,0.3s							
VLMS				AML		AML	10 42 35.4	
	comp=E,15656μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.45**	**163**	P		**Pb**	**10 42 26.7**	**-0.1**
VLMS				S		**Sn**	**10 42 34.1**	**-2.3**
LKD2	**Lefkada island**	**0.50**	**14**	P		**Pg**	**10 42 27.0**	**-0.7**
LKD2				S		**Sg**	**10 42 33.6**	**-0.9**
LKD2				AML		AML	10 42 40.9	
	comp=E,12491μm,0.6s							
LKD2				AML		AML	10 42 45.8	
	comp=N,16591μm,0.5s							
LKD2	**Lefkada island**	**0.50**	**14**	P		**Pg**	**10 42 27.0**	**-0.7**
AST1	**Astakos**	**0.52**	**63**	P		**Pb**	**10 42 27.9**	**-0.1**
AST1				S		**Sn**	**10 42 36.5**	**-1.6**
	comp=N,14μm,0.6s							
TSLK	**Tsoukalades, L**	**0.53**	**13**	P		**Pg**	**10 42 27.6**	**-0.7**
TSLK				S		**Sg**	**10 42 34.4**	**-1.1**
TSLK	**Tsoukalades, L**	**0.53**	**13**	P		**Pg**	**10 42 27.7**	**-0.6**
PDO	**Prodromos**	**0.61**	**61**	P		**Pg**	**10 42 29.7**	**-0.1**
PDO				AML		AML	10 42 44.9	
	comp=E,14960μm,0.4s							
PDO				AML		AML	10 42 47.1	
	comp=N,14049μm,0.6s							
PDO	**Prodromos**	**0.61**	**61**	P		**Pg**	**10 42 29.4**	**-0.3**
PDO				S		**Sn**	**10 42 39.5**	**-0.9**
	comp=N,10μm,0.4s							
LTHK	**Lithakia**	**0.65**	**156**	P		**Pg**	**10 42 30.2**	**-0.2**
LTHK				AML		AML	10 42 47.1	
	comp=E,5311μm,0.5s							
LTHK				AML		AML	10 42 51.3	
	comp=N,7941μm,0.3s							
LTHK	**Lithakia**	**0.65**	**156**	P		**Pg**	**10 42 30.1**	**-0.4**
LTHK				S		**Sn**	**10 42 41.2**	**-0.2**
	comp=N,3μm,0.5s							
VTN	**Vitineika**	**0.67**	**126**	P		**Pn**	**10 42 31.1**	**-0.8**
RLS	**Riolos of Patr**	**0.80**	**108**	P		**Pg**	**10 42 32.6**	**-0.6**
RLS				AML		AML	10 42 59.6	
	comp=N,2668μm,0.7s							
RLS				AML		AML	10 43 01.6	
	comp=E,2060μm,0.6s							
RLS	**Riolos of Patr**	**0.80**	**108**	P		**Pg**	**10 42 32.6**	**-0.6**
PVO	**Paravola**	**0.86**	**69**	P		**Pn**	**10 42 34.3**	**-0.2**
PVO				AML		AML	10 43 00.2	
	comp=E,8870μm,0.5s							
PVO				AML		AML	10 43 01.7	
	comp=N,4590μm,0.3s							
PVO	**Paravola**	**0.86**	**69**	P		**Pn**	**10 42 34.4**	**-0.2**
DRO	**Drossia**	**1.02**	**110**	P		**Pg**	**10 42 36.9**	**-0.4**
LAKA	**Lakka**	**1.17**	**93**	P		**Pg**	**10 42 39.2**	**-0.9**
LAKA	**Lakka**	**1.17**	**93**	P		**Pg**	**10 42 39.1**	**-1.0**
EVR	**Evrytania**	**1.19**	**59**	P		**Pb**	**10 42 39.3**	**-0.3**
EVR				AML		AML	10 43 03.1	
	comp=E,2789μm,0.7s							
EVR				AML		AML	10 43 05.8	
	comp=N,2788μm,1.1s							
IGT	**Igoumenitsa**	**1.23**	**354**	P		**Pg**	**10 42 40.9**	**-0.5**
IGT				AML		AML	10 43 01.9	
	comp=N,5044μm,0.3s							
IGT				AML		AML	10 43 07.8	
	comp=E,4787μm,0.6s							
TRIZ	**Trizonia**	**1.24**	**87**	P		**Pb**	**10 42 40.2**	**-0.1**
TRIZ	**Trizonia**	**1.24**	**87**	P		**Pb**	**10 42 40.0**	**-0.2**
KALE	**Kalithea**	**1.29**	**86**	P		**Pb**	**10 42 40.9**	**-0.3**
KLV	**Kalavryta, Ach**	**1.33**	**101**	P		**Pb**	**10 42 41.8**	**0.0**
KLV				AML		AML	10 43 10.1	
	comp=N,1253μm,0.8s							
KLV				AML		AML	10 43 14.8	
	comp=E,1038μm,0.7s							
JAN	**Janina**	**1.38**	**11**	P		**Pg**	**10 42 43.4**	**-0.8**
JAN				AML		AML	10 43 06.7	
	comp=N,4541μm,0.3s							
JAN				AML		AML	10 43 07.2	
	comp=E,4562μm,0.5s							
MAKR	**Makrakomi, Fth**	**1.46**	**61**	P		**Pg**	**10 42 44.9**	**-0.8**
KEK	**Kerkira**	**1.51**	**339**	P		**Pb**	**10 42 44.4**	**-0.4**
KEK			

TUE	**Stuetta**	**11.59 318**	Pn	**Pn**	**10 45 03.0**	**+0.9**
GERES	**GERESS Array B**	**11.62 337**	Pn	**Pn**	**10 45 01.2**	**-1.2**
	comp=E,0.2nm,0.3s,baz=162,slow=18,SNR=4.4					
GERES			Sn	**Sn**	**10 47 04.8**	**-6.8**
	comp=E,0.3nm,0.3s,baz=144,slow=25,SNR=2.9					
SENIN	**Lac Senin/Sane**	**12.64 314**	Pn	**Pn**	**10 45 18.3**	**+1.9**
GRA1	**Grafenberg Arr**	**13.18 333**		**Pn**	**10 45 22.6**	**-0.9**
HFS	**Hagfors**	**22.27 351**	P	**P**	**10 47 12.8**	**-0.3**
	comp=E,2.3nm,0.7s,baz=154,slow=11,SNR=2.0					
EKA	**Eskdalemuir Ar**	**23.31 325**	P	**P**	**10 47 24.6**	**+0.5**
	comp=E,2.3nm,0.8s,baz=122,slow=12,SNR=2.7					
FINES	**FINESS Array B**	**23.42 7**	P	**P**	**10 47 24.9**	**-0.2**
	comp=E,0.8nm,0.5s,baz=170,slow=11,SNR=1.9					
NC405	**NORSAR Array S**	**23.48 349**	P	**P**	**10 47 26.5**	**+0.7**
NOA	**NORSAR Array B**	**23.49 349**	P	**P**	**10 47 25.7**	**-0.1**
	comp=E,0.7nm,0.8s,baz=161,slow=9.8,SNR=3.3					
ARCES	**ARCESS Array B**	**31.41 3**	P	**P**	**10 48 37.4**	**+0.5**
	comp=E,1.0nm,0.7s,baz=196,slow=12,SNR=1.2					
MKAR	**Makanchi Array**	**45.25 58**	P	**P**	**10 50 36.5**	**+3.0**
	comp=E,0.3nm,0.4s,baz=274,slow=7.7,SNR=9.1					
ZALV	**Zalesovo Beam**	**45.62 48**	P	**P**	**10 50 38.5**	**+2.2**
	comp=E,0.8nm,0.5s,baz=270,slow=8.5,SNR=3.9					
YKA	**Yellowknife Ar**	**73.26 340**	P	**P**	**10 53 49.0**	**+2.0**
	comp=E,0.2nm,0.8s,baz=38,slow=5.7,SNR=3.4					

*JMA **01** 10:54:47.1±0.1, 24.39N×121.90E, h17km±4km, M2.5*
*TAP **01** 10:54:47.3, 24.41N×121.89E, h17km, ML3.0, B*
ISC 01 10:54:47.1±0.8, 24.40N±0.02×121.90E±0.02, h16km±5km, n84, σ0.39/133, 3C-13D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.12**	**291**	⇓*i*	P	**Pb**	**10 54 51.0**	**-0.1**
	baz=289							
EWUT				*e*	S	**Sg**	**10 54 53.2**	**-0.1**
	baz=289							
ENA	**Nanau**	**0.15**	**281**	⇓*i*	P	**Pb**	**10 54 51.4**	**-0.2**
	baz=277							
ENA					S	**Sg**	**10 54 54.0**	**0.0**
	baz=277							
TWC	**Suao**	**0.21**	**347**	⇑*i*	P	**Pg**	**10 54 52.3**	**+0.1**
	baz=357							
TWC				*e*	S	**Sg**	**10 54 55.2**	**-0.3**
	baz=357							
NDS	**Dongshan**	**0.29**	**324**	⇓*i*	P	**Pg**	**10 54 53.6**	**+0.2**
	baz=324							
NDS				*e*	S	**Sg**	**10 54 57.2**	**-0.4**
	baz=324							
NACB	**Ninganchiao**	**0.36**	**231**	⇓	P	**Pg**	**10 54 54.6**	**-0.1**
NACB					S	**Sg**	**10 55 00.0**	**+0.3**
	baz=231							
TWE	**Neicheng**	**0.39**	**326**	⇑	P	**Pb**	**10 54 55.4**	**-0.2**
	baz=328							
TWE					S	**Sg**	**10 55 00.4**	**0.0**
	baz=328							
ENTT	**Nioudou**	**0.39**	**308**	⇓*i*	P	**Pb**	**10 54 55.4**	**-0.3**
	baz=309							
ENTT				*e*	S	**Sg**	**10 55 00.4**	**-0.2**
	baz=309							
ILA	**Ilan**	**0.39**	**339**	*e*	P	**Pb**	**10 54 55.7**	**0.0**
	baz=333							
ILA				*e*	S	**Sb**	**10 55 01.5**	**+0.1**
	baz=333							
NDT	**Datong Townshi**	**0.41**	**300**		P	**Pb**	**10 54 55.9**	**-0.1**
	baz=301							
NDT					S	**Sg**	**10 55 01.1**	**-0.1**
	baz=301							
TWD	**Chiawan**	**0.42**	**221**	*i*	P	**Pg**	**10 54 55.9**	**+0.1**
	baz=225							
TWD					S	**Sb**	**10 55 02.2**	**-0.2**
	baz=225							
ETLH	**Xiulin Townshi**	**0.43**	**243**	⇓	P	**Pg**	**10 54 55.8**	**-0.1**
	baz=244							
ETLH				*e*	S	**Sg**	**10 55 01.9**	**0.0**
	baz=244							
NTC	**Toucheng**	**0.46**	**352**		P	**Pg**	**10 54 56.5**	**+0.2**
	baz=351							
NTC				*e*	S	**Sg**	**10 55 02.7**	**+0.1**
	baz=351							
NNSH	**Datong**	**0.47**	**273**	⇓	P	**Pg**	**10 54 56.9**	**+0.1**
	baz=281							
NNSH				*e*	S	**Sg**	**10 55 03.3**	**0.0**
	baz=281							
NNSB	**Datong**	**0.48**	**273**	⇓	P	**Pg**	**10 54 56.9**	**+0.1**
	baz=281							
NNSB					S	**Sg**	**10 55 03.2**	**0.0**
	baz=281							
NNS	**Nan Shan**	**0.48**	**275**	⇓*i*	P	**Pg**	**10 54 57.0**	**+0.1**
	baz=276							
NNS					S	**Sg**	**10 55 03.4**	**-0.1**
	baz=276							
NWLT	**Wulai**	**0.52**	**316**	*e*	P	**Pb**	**10 54 58.0**	**0.0**
	baz=312							
NWLT					S	**Sg**	**10 55 04.4**	**-0.2**
	baz=312							
YHNB	**Yeheng**	**0.55**	**299**	⇓	P	**Pb**	**10 54 58.4**	**-0.1**
	baz=301							
YHNB				*e*	S	**Sg**	**10 55 05.4**	**-0.1**
	baz=301							
NSK	**Sanguang**	**0.57**	**299**	⇓	P	**Pg**	**10 54 58.5**	**0.0**
	baz=301							
NSK					S	**Sg**	**10 55 05.9**	**-0.2**
	baz=301							
TIPB	**Shuangxi**	**0.57**	**353**	⇑*i*	P	**Pb**	**10 54 58.7**	**-0.1**
	baz=360							
TIPB				*e*	S	**Sb**	**10 55 06.5**	**-0.3**
	baz=360							
TWB1	**Santiao Chiao**	**0.61**	**7**	*i*	P	**Pb**	**10 54 59.4**	**0.0**
	baz=1.0							
FUSS	**Fushou**	**0.62**	**256**	⇓*i*	P	**Pg**	**10 54 59.4**	**-0.1**
	baz=257							
FUSS					S	**Sb**	**10 55 08.0**	**-0.3**
	baz=257							
WHF	**Hehuan Shan**	**0.64**	**247**	⇓*i*	P	**Pg**	**10 54 59.7**	**-0.1**
	baz=254							
WHF				*e*	S	**Sb**	**10 55 08.8**	**-0.1**
	baz=254							
TWA	**Mucha**	**0.65**	**333**	*e*	P	**Pn**	**10 55 01.2**	**-0.5**
	baz=323							
TWA					S	**Sb**	**10 55 08.7**	**-0.1**
	baz=323							
NHDH	**Xindian Distri**	**0.66**	**328**	*e*	P	**Pb**	**10 55 00.6**	**+0.4**
	baz=320							
NHDH					S	**Sg**	**10 55 08.7**	**-0.1**
	baz=320							
NWF	**Wu-fen Shan**	**0.68**	**351**		P	**Pb**	**10 55 01.0**	**+0.4**
	baz=342							
NWF					S	**Sg**	**10 55 09.6**	**+0.1**
	baz=342							
WFSB	**Wu-fen Shan**	**0.68**	**351**	*e*	P	**Pb**	**10 55 01.0**	**+0.4**
	baz=342							
WFSB				*e*	S	**Sb**	**10 55 09.6**	**-0.1**
	baz=342							
TWT	**Tachien**	**0.68**	**258**	*e*	P	**Pb**	**10 55 00.9**	**+0.2**
	baz=258							
TWT				*e*	S	**Sb**	**10 55 10.2**	**+0.3**
	baz=258							
TATO	**Taipei**	**0.69**	**327**		P	**Pb**	**10 55 00.8**	**0.0**
	baz=327							
TATO					S	**Sb**	**10 55 09.8**	**-0.2**
	baz=327							
TDCB	**Techi**	**0.70**	**258**	*e*	P	**Pb**	**10 55 01.1**	**+0.1**
	baz=259							
TDCB				*e*	S	**Sb**	**10 55 10.3**	**0.0**
	baz=259							
ESL	**Shilin**	**0.72**	**216**		P	**Pb**	**10 55 01.3**	**-0.1**
	baz=224							
CHGB	**Renai**	**0.75**	**243**	*e*	P	**Pg**	**10 55 01.8**	**0.0**
	baz=252							
CHGB				*e*	S	**Sb**	**10 55 12.0**	**+0.1**
	baz=252							
TNOU	**National Taiwa**	**0.76**	**351**	*e*	P	**Pg**	**10 55 02.3**	**+0.4**
	baz=345							
TNOU				*e*	S	**Sg**	**10 55 12.3**	**+0.4**
	baz=345							
YM01	**YM01**	**0.80**	**338**	*e*	P	**Pg**	**10 55 02.9**	**0.0**
	baz=338							
YM10	**YM10**	**0.81**	**338**	*e*	P	**Pn**	**10 55 03.6**	**-0.4**
	baz=330							
YM10				*e*	S	**Sg**	**10 55 14.1**	**+0.3**
	baz=330							
YM11	**YM11**	**0.82**	**339**	*e*	P	**Pn**	**10 55 04.0**	**-0.1**
	baz=331							
YM11					S	**Sg**	**10 55 14.4**	**+0.4**
	baz=331							
YM05	**YM05**	**0.82**	**338**		P	**Pn**	**10 55 03.7**	**-0.4**
	baz=331							
YM05				*e*	S	**Sg**	**10 55 14.4**	**+0.4**
	baz=331							
YM04	**YM04**	**0.82**	**336**	*e*	P	**Pn**	**10 55 03.7**	**-0.4**
	baz=329							
YM04				*e*	S	**Sg**	**10 55 14.4**	**+0.4**
	baz=329							
TWS1	**Kuangyinshan**	**0.82**	**328**	*e*	P	**Pn**	**10 55 04.5**	**+0.4**
	baz=321							
TWS1				*e*	S	**Sn**	**10 55 15.2**	**-0.7**
	baz=321							
YM08	**YM08**	**0.83**	**340**		P	**Pg**	**10 55 03.8**	**+0.3**
	baz=340							
LIOB	**Emei**	**0.84**	**287**	*e*	P	**Pn**	**10 55 04.2**	**-0.2**
	baz=287							
EGFH	**Guangfu**	**0.85**	**211**		P	**Pg**	**10 55 03.9**	**+0.3**
	baz=226							
NSTT	**Nanjuang**	**0.85**	**286**		P	**Pn**	**10 55 04.1**	**-0.4**
	baz=278							
NSTT				*e*	S	**Sg**	**10 55 15.2**	**+0.2**
	baz=278							
ANP	**Anpu**	**0.86**	**336**	*e*	P	**Pn**	**10 55 04.5**	**-0.1**
	baz=336							
WHP	**Taichung City**	**0.88**	**262**	*e*	P	**Pg**	**10 55 04.5**	**+0.1**
	baz=264							
WHP					S	**Sg**	**10 55 16.0**	**0.0**
	baz=264							
TWY	**Chenhua**	**0.91**	**342**		P	**Pn**	**10 55 05.4**	**+0.1**
	baz=342							
TWY				*e*	S	**Sg**	**10 55 16.9**	**-0.1**
	baz=342							
WPL	**Puli Township**	**0.95**	**246**	*e*	P	**Pn**	**10 55 05.6**	**-0.1**
	baz=248							
WPL					S	**Sg**	**10 55 18.0**	**0.0**
	baz=248							
VWDT	**VWDT**	**0.95**	**227**	*e*	P	**Pn**	**10 55 05.7**	**-0.1**
	baz=229							
VWDT				*e*	S	**Sn**	**10 55 18.7**	**-0.3**
	baz=229							
JYNG	**Yonagunijimaku**	**0.95**	**87**		P	**Pb**	**10 55 05.1**	**-0.1**
JYNG				*e*	S	**Sb**	**10 55 17.9**	**+0.3**
DPDB	**Guoxing**	**0.96**	**248**	*e*	P	**Pn**	**10 55 06.1**	**+0.1**
	baz=248							
HGSD	**Ruisui**	**1.00**	**206**	*e*	P	**Pg**	**10 55 07.5**	**+0.8**
	baz=196							
YOJ	**Yonaguni jima**	**1.01**	**86**		P	**Pb**	**10 55 06.1**	**-0.2**
YOJ				*e*	S	**Sb**	**10 55 19.7**	**+0.4**
YOJ	**Yonaguni jima**	**1.01**	**86**		P	**Pb**	**10 55 06.1**	**-0.2**
	baz=77							
TWQ1	**Liyutan**	**1.03**	**267**	*e*	P	**Pg**	**10 55 08.6**	**+1.5**
	baz=276							
EHY	**Hungye**	**1.04**	**211**		P	**Pn**	**10 55 07.0**	**0.0**
	baz=211							
SMLT	**Sun Moon Lake**	**1.05**	**241**	*e*	P	**Pg**	**10 55 08.0**	**+0.5**
	baz=241							
SSLB	**Suanglung**	**1.06**	**235**	*e*	P	**Pg**	**10 55 07.5**	**-0.2**
	baz=243							
SSLB				*e*	S	**Sg**	**10 55 21.3**	**-0.3**
	baz=243							
TYC	**Yuchr**	**1.08**	**243**	*e*	P	**Pg**	**10 55 08.3**	**+0.3**
	baz=243							
YULB	**Yu-li**	**1.15**	**209**	*e*	P	**Pn**	**10 55 08.4**	**-0.1**
	baz=210							
TWF1	**Yuli**	**1.18**	**208**	*e*	P	**Pb**	**10 55 09.5**	**+0.3**
	baz=211							
TWF1				*e*	S	**Sg**	**10 55 25.4**	**-0.1**
	baz=211							
WJS	**Zhushan**	**1.22**	**242**	*e*	P	**Pg**	**10 55 11.7**	**+1.0**
	baz=234							
PCYT	**Pengchaiyu**	**1.23**	**7**	*e*	P	**Pn**	**10 55 09.3**	**-0.4**
	baz=6.0							
YUS	**Yu-Shan**	**1.26**	**224**	*e*	P	**Pg**	**10 55 11.4**	**-0.2**
	baz=225							
FULB	**Fuli**	**1.32**	**205**	*e*	P	**Pb**	**10 55 11.6**	**+0.1**
	baz=222							
ALS	**Alishan**	**1.34**	**229**	*e*	P	**Pg**	**10 55 12.9**	**-0.1**
	baz=217							
CHN5	**Tsauling**	**1.38**	**235**	*e*	P	**Pg**	**10 55 13.9**	**+0.2**
	baz=236							
ELDTW	**Lidau**	**1.45**	**214**	*e*	P	**Pn**	**10 55 13.0**	**+0.1**
	baz=202							
EDH	**Donghe**	**1.52**	**201**	*e*	P	**Pb**	**10 55 14.4**	**-0.6**
	baz=188							
CHN4	**Tsaushan**	**1.59**	**229**	*e*	P	**Pg**	**10 55 17.4**	**-0.4**
	baz=231							
STYH	**Taoyuan**	**1.60**	**220**	*e*	P	**Pb**	**10 55 16.9**	**+0.6**
	baz=222							
STYT	**Tauyuan**	**1.62**	**221**	*e*	P	**Pb**	**10 55 16.8**	**+0.1**
	baz=222							
LONT	**Longtian**	**1.65**	**206**	*e*	P	**Pn**	**10 55 15.8**	**+0.4**
	baz=207							
WTP	**Ta-pu**	**1.65**	**226**	*e*	P	**Pg**	**10 55 18.0**	**-0.9**
	baz=228							
IRIF	**Iriomote-Funau**	**1.67**	**92**		P	**Pn**	**10 55 15.4**	**-0.2**
IRIF				*e*	S	**Sn**	**10 55 36.4**	**-0.3**
TWK	**Hsinying**	**1.72**	**229**	*e*	P	**Pg**	**10 55 19.3**	**-0.9**
	baz=231							
SLGT	**Liugui**	**1.81**	**220**	*e*	P	**Pb**	**10 55 20.5**	**+0.5**
	baz=222							
JKRS	**Kuro-shima**	**1.93**	**94**		P	**Pn**	**10 55 19.6**	**+0.4**
JKRS				*e*	S	**Sn**	**10 55 42.7**	**-0.4**
JIJ	**Ishigaki jima**	**2.04**	**91**		P	**Pn**	**10 55 20.8**	**0.0**
MASBT	**Mashibuluo**	**2.13**	**213**	*e*	P	**Pb**	**10 55 24.4**	**-0.9**
	baz=216							
JISG	**Ishigakijimahi**	**2.20**	**85**		P	**Pn**	**10 55 22.7**	**-0.3**
JISG					S	**Sn**	**10 55 49.0**	**-0.9**
VWUC	**VWUC**	**2.31**	**285**	*e*	P	**Pn**	**10 55 25.0**	**+0.5**
	baz=289							
VWUC				*e*	S	**Sn**	**10 55 52.3**	**-0.2**
	baz=289							
WDGT	**Dungji**	**2.35**	**242**	*e*	P	**Pn**	**10 55 26.7**	**+1.7**
	baz=244							
LAY	**Lan-yu**	**2.37**	**188**	*e*	P	**Pn**	**10 55 25.9**	**+0.5**
	baz=189							
JTJ	**Tarama**	**2.56**	**84**		P	**Pn**	**10 55 29.0**	**+1.1**
JTJ				*e*	S	**Sn**	**10 55 58.5**	**-0.2**
PTMZ	**Houxiangcun**	**2.61**	**285**	*e*	P	**Pn**	**10 55 29.2**	**+0.5**
	baz=287							

*NEIC **01** 11:02:20.5±1.3, 19.3S±0.1×177.3W±0.1, h566km±10km, mb4.4/28, Error ellipse: s-maj=20.5km s-min=15.2km az=157.0*
*IDC **01** 11:02:21.7±2.1, 19.33S×177.34W, h574km±23km, mb3.3/7, mb1 3.5/10, mb1mx3.1/49, mbtmp4.2/10, Error ellipse: s-maj=23.6km s-min=22.4km az=160.0*
ISC 01 11:02:20.0±0.6, 19.4S±0.1×177.32W±0.08, h550km, n42, σ1§14/44, mb4.4/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.68**	**290**		P	**P**	**11 03 51.1**	**+3.7**
	1.0nm,0.3s,baz=137,slow=22,SNR=4.9							
MSVF	**Nonsavu**	**4.68**	**290**		P	**P**	**11 03 49.2**	**+1.9**
AFI	**Afiamalu**	**7.60**	**45**		P	**P**	**11 04 16.0**	**+2.0**
AFI					S	**S**	**11 05 48.4**	**+1.0**
SANVU	**Saraoutou**	**15.27**	**282**		P	**P**	**11 05 33.2**	**+0.8**
DZM	**Mont Dzumac**	**15.42**	**257**		P	**P**	**11 05 34.1**	**+0.2**
	0.9nm,0.3s,baz=306,slow=23,SNR=7.1							
DZM	**Mont Dzumac**	**15.42**	**257**		P	**P**	**11 05 34.4**	**+0.5**
URZ	**Urewera**	**19.43**	**193**		P	**P**	**11 06 10.5**	**-0.2**
	baz=107,slow=20							
URZ	**Urewera**	**19.43**	**193**		P	**P**	**11 06 10.7**	**0.0**
URZ					IAmb	IAmb	11 06 12.5	
	comp=Z,13nm,0.8s							
ARMA	**Armidale**	**30.14**	**243**		P	**P**	**11 07 45.4**	**-0.4**
ARMA					IAmb	IAmb	11 07 48.1	
	comp=Z,17nm,1.5s							
CTAO	**Charters Tower**	**34.25**	**263**		P	**P**	**11 08 20.6**	**-0.1**
CTAO					IAmb	IAmb	11 08 21.6	
	comp=Z,9.8nm,1.1s							
TOO	**Toolangi**	**37.07**	**233**		P	**P**	**11 08 43.2**	**-0.7**
TOO					IAmb	IAmb	11 09 06.2	
	comp=Z,20nm,1.5s							
TAOE	**Nuku Hiva Isla**	**37.46**	**79**		P	**P**	**11 08 45.8**	**-1.7**
COEN	**Coen**	**38.16**	**272**		P	**P**	**11 08 51.6**	**-1.5**
COEN					IAmb	IAmb	11 08 53.9	
	comp=Z,5.6nm,0.7s							
MANU	**Manus Island**	**38.59**	**292**		P	**P**	**11 08 55.8**	**-0.8**
MANU					IAmb	IAmb	11 09 05.4	
	comp=Z,13nm,1.2s							
STKA	**Stephens Creek**	**38.85**	**243**		P	**P**	**11 08 59.1**	**+0.7**
	comp=Z,4.8nm,0.4s,baz=91,slow=10,SNR=27							
STKA	**Stephens Creek**	**38.85**	**243**		P	**P**	**11 08 58.9**	**+0.4**
BBOO	**Buckleboo**	**43.62**	**243**		P	**P**	**11 09 36.6**	**+0.4**
WR0	**Warramunga Arr**	**45.20**	**261**		P	**P**	**11 09 47.8**	**-0.8**
WR0					IAmb	IAmb	11 09 49.0	
	comp=Z,12nm,1.4s							
WB0	**Warramunga Arr**	**45.37**	**261**		P	**P**	**11 09 49.1**	**-0.7**
WB0					IAmb	IAmb	11 09 49.5	
	comp=Z,10.0nm,0.5s							
WB2	**Warramunga Arr**	**45.38**	**261**		P	**P**	**11 09 49.0**	**-1.0**
WB2					IAmb	IAmb	11 09 49.4	
	comp=Z,7.0nm,0.6s							
WRAB	**Tennant Creek**	**45.39**	**261**		P	**P**	**11 09 49.0**	**-1.0**
WRAB					IAmb	IAmb	11 09 49.3	
	comp=Z,5.5nm,0.6s							
WRA	**Warramunga Arr**	**45.40**	**261**		P	**P**	**11 09 49.1**	**-0.9**
	comp=Z,5.1nm,0.4s,baz=98,slow=7.6,SNR=23							
WRA	**Warramunga Arr**	**45.40**	**261**		P	**P**	**11 09 49.3**	**-0.8**
AS31	**Alice Springs**	**45.40**	**256**		P	**P**	**11 09 49.3**	**-0.8**
AS31					IAmb	IAmb	11 09 51.3	
	comp=Z,5.8nm,0.3s							
ASAR	**Alice Springs**	**45.40**	**256**		P	**P**	**11 09 50.0**	**-0.1**
	comp=Z,8.9nm,0.4s,baz=87,slow=8.2,SNR=274							
ASAR					PcP	**PcP**	**11 11 17.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=95,slow=5.8,SNR=1.9							
ASAR	**Alice Springs**	**45.40**	**256**		P	**P**	**11 09 49.1**	**-0.9**
MTN	**Manton Dam**	**49.80**	**269**		P	**P**	**11 10 21.9**	**-1.2**
FORT	**Forrest**	**50.33**	**246**		P	**P**	**11 10 26.2**	**-0.5**
FAKI	**Fak Fak**	**51.88**	**282**		P	**P**	**11 10 37.4**	**-0.8**
FAKI					IAmb	IAmb	11 11 00.9	
	comp=Z,15nm,1.2s							
FITZ	**Fitzroy Crossi**	**53.81**	**261**		P	**P**	**11 10 51.7**	**-0.2**
	comp=Z,3.9nm,0.4s,baz=129,slow=3.3,SNR=40							
FITZ	**Fitzroy Crossi**	**53.81**	**261**		P	**P**	**11 10 51.7**	**-0.2**
SOEI	**Soe**	**57.11**	**271**		P	**P**	**11 11 16.1**	**+1.1**
SOEI					IAmb	IAmb	11 11 16.5	
	comp=Z,19nm,0.7s							
PSA00	**Pilbara Seismi**	**58.55**	**256**		P	**P**	**11 11 23.9**	**-0.6**
VNDA	**Vanda**	**59.08**	**185**		P	**P**	**11 11 28.2**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=246,slow=18,SNR=1.9							
QSPA	**South Pole Qui**	**70.69**	**180**		P	**P**	**11 12 42.2**	**+1.8**
SUA	**Susitna One**	**83.33**	**12**		P	**P**	**11 13 47.6**	**-1.5**
KAIM	**Kayak Island**	**83.44**	**16**		P	**P**	**11 13 49.3**	**-0.2**
GLI	**Glacier Island**	**83.61**	**14**		P	**P**	**11 13 50.7**	**+0.4**
GLI					IAmb	IAmb	11 13 55.5	
	comp=Z,21nm,1.1s							
MTPU	**Mount Pierson**	**83.63**	**46**		P	**P**	**11 13 50.0**	**-1.5**
PMR	**Palmer**	**83.78**	**13**		P	**P**	**11 13 50.5**	**-0.7**
TXAR	**Lajitas Array**	**85.92**	**57**		P	**P**	**11 14 02.1**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=207,slow=7.7,SNR=4.0							
ILAR	**Eielson Array**	**87.08**	**13**		P	**P**	**11 14 05.3**	**-1.7**
	comp=Z,0.3nm,0.8s,baz=216,slow=4.5,SNR=2.2							

*IDC **01** 11:06:34.4±0.4, 15.93S×172.77W, h0km, mb4.7/35, mb1 4.8/36, mb1mx4.7/52, mbtmp4.6/36, ML5.0/1, MS4.8/27, Ms1 4.8/27, ms1mx4.7/35, Error ellipse: s-maj=16.5km s-min=10.9km az=134.0*
*NEIC **01** 11:06:35.8±1.4, 16.02S±0.03×172.84W±0.10, h10km±1km, mb5.2/283, Ms_20 5.1/202, Mwc5.5(GCMT), Error ellipse: s-maj=15.8km s-min=5.2km az=101.0*
*MOS **01** 11:06:37.4±1.2, 15.96S×172.89W, h25km, mb5.4/67, Error ellipse: s-maj=8.5km s-min=6.5km az=56.6*
*BGR **01** 11:06:38.7±0.0, 15.87S×173.07W, h10km, Ms5.0*
*GCMT **01** 11:06:41.8±0.1, 15.94S±0.01×172.45W, h14km, MW5.4/139, Moment Tensor Solution. s124,c226; s139,c279; Duration: 1§3 Moment tensor: Scale 10^17 Nm; Mrr1.53±.02; Mθθ0.14±.02; Mϕϕ-1.67±.02; Mrθ0.23±.04; Mθϕ0.01±.01; Mrϕ0.48±.03; Best double couple: M0 1.68900×10^17 NP1:ϕ171.00000°, δ37.00000°, λ76.00000°. NP2:ϕ8.00000°, δ54.00000°, λ100.00000°. Principal axes: T 1.6360, Plg78.0000°, Azm316.0000°; N 0.1060, Plg8.0000°, Azm182.0000°; P -1.7420, Plg8.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NOU **01** 11:06:41.8, 15.29S×172.16W, h115km, mb5.1, Samoa Islands Region*
*NEIC **01** 11:06:43, 15.88S×172.42W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr1.63; Mθθ0.23; Mϕϕ-1.86; Mrθ0.04; Mθϕ-0.02; Mrϕ0.76; Fault plane solution: M0 1.91000×10^17 NP1:ϕ179.00000°, δ33.00000°, λ88.00000°. NP2:ϕ92.00000°, δ57.00000°, λ92.00000°. Principal axes: T 1.7881, Plg78.0000°, Azm277.0000°; N 0.2294, Plg1.0000°, Azm181.0000°; P -2.0175, Plg12.0000°, Azm91.0000°;*
ISC 01 11:06:37.8±0.2, 16.12S±0.05×172.71W±0.05, h24km, n792, σ1§26/730, mb5.2/217, MS5.0/143, 55C-11D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.37**	**22**		P	Pn	11 07 07.8	-7.6
AFI	**Afiamalu**	**2.37**	**22**		P	Pn	11 07 07.6	-7.8
MSVF	**Nonsavu**	**8.99**	**258**		P	**Pn**	**11 08 45.5**	**-0.8**
	0.5nm,0.3s,baz=51,slow=14,SNR=1.7							
MSVF					LR	LR	11 11 41.8	
	comp=Z,17µm,19.1s,baz=96,slow=34							
MSVF	**Nonsavu**	**8.99**	**258**		P	**Pn**	**11 08 43.9**	**-2.4**
FUNA	**Funafuti**	**10.93**	**313**		P	**Pn**	**11 09 09.6**	**-3.2**
RAR	**Rarotonga**	**13.26**	**114**		P	**Pn**	**11 09 40.9**	**-3.8**
	6.2nm,0.3s,baz=261,slow=7.9,SNR=13							
RAR					Sn	Sn	11 11 54.2	-17
	0.2nm,0.3s,baz=122,slow=15,SNR=1.4							
RAR	**Rarotonga**	**13.26**	**114**		P	**Pn**	**11 09 41.0**	**-3.8**
KNTN	**Kanton**	**13.30**	**4**		P	**Pn**	**11 09 41.8**	**-3.4**
SANVU	**Saraoutou**	**19.34**	**269**		P	**P**	**11 11 00.3**	**-1.4**
PINNC	**Pines Island,**	**19.79**	**248**		P	**Pn**	**11 11 12.2**	**+4.0**
DZM	**Mont Dzumac**	**20.56**	**250**	*e*	P	Pn	11 11 17.5	+0.1
	303nm,1.4s							
DZM				*e*	S	**S**	**11 15 01.8**	**-2.3**
	1µm,27.0s							
DZM				*e*	LQ	LQ	11 15 15.1	
	8µm,30.4s							
DZM				*e*	LR	LR	11 16 07.7	
	comp=Z,9µm,23.9s							
DZM	**Mont Dzumac**	**20.56**	**250**		P	**P**	**11 11 14.6**	**-0.4**
	8.8nm,0.7s,baz=70,slow=23,SNR=2.7							
DZM	

comp=Z,3µm,20.0s
TAOE Nuku Hiva Isla 32.57 81 *e*T T 11 47 18.4
comp=Z,40nm,0.2s
EIDS Eidsvold 35.00 249 P **P** **11 13 27.0 -1.6**
baz=35,SNR=3.6
EIDS Eidsvold 35.00 249 P **P** **11 13 25.9 -2.6**
ARMA Armidale 35.55 240 P **P** **11 13 32.9 -0.6**
baz=36,SNR=10.0
ARMA Armidale 35.55 240 P **P** **11 13 32.6 -0.8**
RKT Rikitea 36.15 107 *e*LQ LQ 11 21 53.3
comp=Z,709nm,28.8s
RKT *e*LR LR 11 23 10.7
comp=Z,4µm,28.5s
RMQ Roma 37.23 247 P **P** **11 13 46.8 -0.9**
baz=38,SNR=7.2
CAN Canberra 39.13 233 P **P** **11 14 03.1 -0.6**
CAN pmax pmax
comp=Z,35nm,1.3s
CAN Canberra 39.13 233 P **P** **11 14 03.1 -0.6**
CTAO Charters Tower 39.13 258 P **P** **11 14 02.4 -1.5**
CTAO pmax pmax
comp=Z,21nm,1.3s
CTAO Charters Tower 39.13 258 P **P** **11 14 02.4 -1.5**
PMG Port Moresby 39.65 275 LR LR 11 29 04.2
comp=Z,1µm,18.0s,baz=122,slow=34
PMG Port Moresby 39.65 275 *i* P **P** **11 14 06.4 -1.8**
PMG pmax pmax
comp=Z,64nm,2.4s
H11S2 WAKE ISLAND Hy 39.92 329 T T 11 56 45.3
baz=148,slow=75,SNR=10
H11S3 WAKE ISLAND Hy 39.93 329 T T 11 56 20.6
baz=148,slow=75,SNR=8.6
H11S1 WAKE ISLAND Hy 39.94 329 T T 11 56 19.5
baz=148,slow=75,SNR=7.1
CMSA Cobar Meteorol 40.77 240 P **P** **11 14 16.2 -1.0**
baz=41,SNR=37
H11N3 WAKE ISLAND Hy 40.86 330 T T 11 57 22.7
baz=149,slow=76,SNR=2.6
H11N1 WAKE ISLAND Hy 40.87 330 T T 11 57 27.9
baz=149,slow=76,SNR=7.2
H11N2 WAKE ISLAND Hy 40.88 330 T T 11 57 18.9
baz=149,slow=76,SNR=6.3
MTSU Mount Surprise 41.05 261 P **P** **11 14 18.9 -0.9**
baz=41,SNR=8.0
QLP Quilpie 41.26 248 P **P** **11 14 21.3 -0.1**
baz=42,SNR=5.0
TOO Toolangi 42.53 232 P **P** **11 14 31.3 -0.3**
baz=43,SNR=8.2
TOO Toolangi 42.53 232 P **P** **11 14 31.4 -0.3**
TOO pmax pmax
comp=Z,14nm,0.8s
TOO Toolangi 42.53 232 P **P** **11 14 31.4 -0.3**
COEN Coen 42.60 267 P **P** **11 14 32.3 -0.2**
TAU Tasmania Unive 43.25 224 P **P** **11 14 38.5 +1.1**
TAU pmax pmax
comp=Z,39nm,1.4s
TAU MLR MLR
comp=Z,3µm,18.0s
TAU Tasmania Unive 43.25 224 P **P** **11 14 38.5 +1.1**
STKA Stephens Creek 44.26 241 P **P** **11 14 45.0 -0.7**
comp=Z,20nm,0.8s,baz=90,slow=10,SNR=30
STKA LR LR 11 31 20.9
comp=Z,1µm,18.4s,baz=80,slow=34
STKA Stephens Creek 44.26 241 P **P** **11 14 45.3 -0.4**
baz=44,SNR=21
STKA Stephens Creek 44.26 241 P **P** **11 14 45.3 -0.4**
STKA pmax pmax
comp=Z,8.0nm,1.1s
STKA Stephens Creek 44.26 241 P **P** **11 14 45.3 -0.4**
HTT Hallett 46.74 239 P **P** **11 15 04.8 -0.6**
baz=47,SNR=7.2
JAY Jayapura 47.78 281 LR LR 11 33 11.8
comp=Z,793nm,18.9s,baz=104,slow=34
GENI Genyem 48.26 281 P **P** **11 15 17.0 -0.3**
BBOO Buckleboo 49.03 240 P **P** **11 15 22.5 -0.5**
baz=49,SNR=8.9
BBOO Buckleboo 49.03 240 P **P** **11 15 22.4 -0.6**
WR0 Warramunga Arr 50.14 257 P **P** **11 15 30.1 -1.6**
WB0 Warramunga Arr 50.29 258 P **P** **11 15 31.2 -1.7**
WB0 IAmb IAmb 11 15 41.9
comp=Z,33nm,0.9s
WB2 Warramunga Arr 50.32 257 P **P** **11 15 31.5 -1.6**
WB2 IAmb IAmb 11 15 42.2
comp=Z,29nm,0.9s
WRAB Tennant Creek 50.32 257*c i* P **P** **11 15 31.0 -2.1**
WRAB pmax pmax
comp=Z,77nm,2.3s
WRAB Tennant Creek 50.32 257 P **P** **11 15 31.4 -1.6**
WRAB IAmb IAmb 11 15 42.2
comp=Z,31nm,1.0s
WRA Warramunga Ar 50.33 257 P **P** **11 15 31.7 -1.5**
comp=Z,6.9nm,0.7s,baz=90,slow=6.8,SNR=60
WRA PcP **PcP** **11 16 53.0 +1.2**
comp=Z,3.9nm,1.0s,baz=86,slow=4.6,SNR=1.5
WRA LR LR 11 35 31.4
comp=Z,2µm,18.9s,baz=100,slow=34
WRA Warramunga Arr 50.33 257*ce* P **P** **11 15 32.0 -1.2**
WRA pmax pmax
comp=Z,7.0nm,0.7s
AS31 Alice Springs 50.52 252 P **P** **11 15 33.7 -1.0**
ASAR Alice Springs 50.52 252 P **P** **11 15 33.0 -1.6**
comp=Z,26nm,0.8s,baz=90,slow=6.8,SNR=102
ASAR LR LR 11 36 24.2
comp=Z,3µm,18.0s,baz=96,slow=35
ASAR Alice Springs 50.52 252 P **P** **11 15 33.2 -1.4**
ASAR Alice Springs 50.52 252 P **P** **11 15 33.2 -1.4**
KDU Kakadu 53.08 266 P **P** **11 15 53.1 -0.6**
baz=53,SNR=9.5
MTN Manton Dam 54.34 266 P **P** **11 16 01.8 -1.1**
baz=54,SNR=6.7
MTN Manton Dam 54.34 266 P **P** **11 16 02.4 -0.6**
MTN IAmb IAmb 11 16 03.4
comp=Z,20nm,0.8s
WRKA Warakurna 55.58 250 P **P** **11 16 10.9 -0.9**
baz=56,SNR=34
FORT Forrest 55.69 244 P **P** **11 16 11.2 -1.4**
SWI Sorong 57.24 280 P **P** **11 16 22.2 -1.6**
SWI pmax pmax
comp=Z,34nm,0.9s
SWI Sorong 57.24 280 P **P** **11 16 22.7 -1.1**
comp=Z,34nm,1.2s
FITZ Fitzroy Crossi 58.71 258 P **P** **11 16 33.8 -0.3**
baz=59,SNR=11
FITZ Fitzroy Crossi 58.71 258 P **P** **11 16 33.8 -0.3**
FITZ IAmb IAmb 11 16 35.3
comp=Z,35nm,1.4s
SOEI Soe 61.56 267 P **P** **11 16 53.8 0.0**
SBA Scott Base 62.59 185 P **P** **11 17 02.8 +3.3**
SBA pmax pmax
comp=Z,9.0nm,1.9s
SBA Scott Base 62.59 185 IAMs_20 IAMs_20 11 42 19.3
comp=Z,1µm,18.0s
VNDA Vanda 62.73 186 P **P** **11 17 03.1 +2.6**
comp=Z,6.2nm,0.9s,baz=12,slow=6.2,SNR=20
VNDA LR LR 11 42 09.0
comp=Z,389nm,18.1s,baz=18,slow=34
VNDA Vanda 62.73 186 P **P** **11 17 02.8 +2.3**
VNDA IAmb IAmb 11 17 05.4
comp=Z,14nm,1.1s
PSA00 Pilbara Seismi 63.64 254 P **P** **11 17 06.7 -0.8**
PSA00 Pilbara Seismi 63.64 254 P **P** **11 17 05.3 -2.2**
KLBR Kellerberrin 64.49 242 P **P** **11 17 12.9 -0.1**
baz=65,SNR=17
NWAO Narrogin (SRO) 64.85 241 P **P** **11 17 14.9 -0.3**
NWAO pmax pmax
comp=Z,51nm,1.4s
NWAO MLR MLR
comp=Z,1µm,18.0s
NWAO Narrogin (SRO) 64.85 241 P **P** **11 17 14.9 -0.3**
NWAO Narrogin (SRO) 64.85 241 IAMs_20 IAMs_20 11 47 47.6
comp=Z,1µm,18.0s
BLDU Ballidu 65.46 243 P **P** **11 17 19.6 +0.3**
baz=66,SNR=7.5
MUN Mundaring 65.78 242 P **P** **11 17 21.8 +0.5**
baz=66,SNR=6.5
MORW Morawa 66.18 245 P **P** **11 17 23.9 0.0**
GIRL Giralia 68.63 252 P **P** **11 17 40.5 +1.0**
MJAR Matsushiro Arr 69.91 320 P **P** **11 17 45.6 -1.5**
comp=Z,3.3nm,0.8s,baz=154,slow=5.0,SNR=5.2
MJAR LR LR 11 42 47.5
comp=Z,551nm,21.8s,baz=130,slow=31
MAT Matsushiro 69.92 320 P **P** **11 17 46.0 -1.1**
H06E1 SOCORRO T-PHAS 69.99 63 T T 12 34 23.6
SNR=7.9
ERM Erimo 70.72 327 IAMs_20 IAMs_20 11 44 39.3
comp=Z,830nm,20.0s

YUK Yuzh-Kuril'sk 70.81 330 *e*P **P** **11 17 52.2 -0.2**
YUK *e* 11 18 13.2
YUK *e* 11 20 28.4
YUK *e*PPP PPP 11 22 11.3
YUK *e*S **S** **11 27 07.0 +1.1**
YUK *e*SS **SS** **11 31 39.9 +0.9**
YUK pmax pmax
comp=Z,22nm,1.2s
YUK pmax pmax
comp=N,14nm,0.6s
YUK pmax pmax
comp=E,19nm,0.7s
YUK pmax pmax
comp=Z,223nm,1.8s
JTM Tenmabayashi 71.01 325 P **P** **11 17 54.9 +1.3**
MYLDM Lahad Datu 71.24 281 P **P** **11 17 54.5 -1.1**
HOPS Hopland Field 71.81 39 IAMs_20 IAMs_20 11 43 54.4
comp=Z,1µm,20.0s
PASC Pasadena Art C 72.05 45 P **P** **11 18 00.7 +0.5**
PASC IAmb IAmb 11 18 05.7
comp=Z,19nm,1.1s
MWC Mount Wilson 72.16 45 P **P** **11 18 01.5 +0.5**
MWC pmax pmax
comp=Z,31nm,1.5s
MWC Mount Wilson 72.16 45 P **P** **11 18 01.5 +0.5**
MWC IAmb IAmb 11 18 02.7
comp=Z,31nm,1.4s
TKX Tecate 72.25 47 P **P** **11 18 02.3 +0.9**
VES Vestal, Richgr 72.40 43 P 11 18 02.5
baz=234
JKA Kamikawa-asahi 72.50 328 P **P** **11 18 02.4 -0.1**
JKA IAmb IAmb 11 18 05.2
comp=Z,34nm,1.2s
ASAJ Asahikawa 72.50 328 P **P** **11 18 01.5 -1.0**
comp=Z,8.3nm,0.8s,baz=204,slow=9.7,SNR=6.6
ASAJ Asahikawa 72.50 328 P **P** **11 18 02.4 -0.1**
ASAJ pmax pmax
comp=Z,34nm,1.2s
EDW2 Edwards Air Fo 72.58 45 P 11 18 04.6
baz=235
ISA Isabella, Lake 72.70 44 P **P** **11 18 04.4 +0.3**
ISA pmax pmax
comp=Z,44nm,1.5s
ISA Isabella, Lake 72.70 44 P **P** **11 18 04.4 +0.3**
ISA IAmb IAmb 11 18 17.0
comp=Z,44nm,1.4s
ISA Isabella, Lake 72.70 44 P 11 18 05.3
baz=235
O02D Mt. Diablo Mer 72.73 38 P 11 18 05.5
baz=230,SNR=5.5
CMB Columbia Colle 72.87 41 P **P** **11 18 04.5 -0.5**
CMB pmax pmax
comp=Z,31nm,1.3s
CMB Columbia Colle 72.87 41 P **P** **11 18 04.5 -0.5**
CMB IAmb IAmb 11 18 17.6
comp=Z,31nm,1.2s
CMB IAMs_20 IAMs_20 11 42 25.6
comp=Z,772nm,21.0s
PFO Pinyon Flats O 72.93 47 P **P** **11 18 05.3 -0.2**
comp=Z,2.7nm,0.8s,baz=216,slow=11,SNR=4.3
PFO Pinyon Flats O 72.93 47*c i* P **P** **11 18 05.8 +0.3**
PFO pmax pmax
comp=Z,30nm,1.6s
PFO Pinyon Flats O 72.93 47 P **P** **11 18 05.5 0.0**
AFDM Forest Hills D 73.06 40 IAmb IAmb 11 18 18.6
comp=Z,22nm,1.4s
ORV Oroville 73.11 39 P **P** **11 18 06.2 -0.1**
ORV pmax pmax
comp=Z,17nm,1.3s
ORV Oroville 73.11 39 P **P** **11 18 06.2 -0.1**
WDC Whiskeytown Da 73.13 38 P **P** **11 18 07.0 +0.6**
WDC pmax pmax
comp=Z,35nm,1.4s
WDC Whiskeytown Da 73.13 38 P **P** **11 18 07.0 +0.6**
WDC IAmb IAmb 11 18 19.5
comp=Z,35nm,1.4s
WDC IAMs_20 IAMs_20 11 44 54.4
comp=Z,1µm,20.0s
PET Petropavlovsk 73.16 342*d i* P **P** **11 18 08.8 +2.6**
PET *e* 11 20 46.0
PET *e*S **SKiKP** **11 27 35.1 -1.9**
PET *e*PPS PPS 11 28 19.1
PET *e*SS **SS** **11 32 19.5 +4.9**
PET pmax pmax
comp=Z,500nm,12.6s
N02D Trinity Center 73.29 37 P 11 18 08.9
baz=230
O03E Paynes Creek 73.39 38 P 11 18 08.8
baz=231,SNR=5.7
CWC Cottonwood Cre 73.41 43 P 11 18 09.1
baz=235
BELC Belle Mtn. Jos 73.46 46 P 11 18 09.8
baz=237
PETK Petropavlovsk- 73.51 342 P **P** **11 18 08.1 -0.3**
comp=Z,13nm,0.9s,baz=120,slow=10,SNR=8.0
PETK LR LR 11 48 46.1
comp=Z,181nm,18.5s,baz=151,slow=34
PETK Petropavlovsk- 73.51 342 P **P** **11 18 09.2 +0.8**
PETK Petropavlovsk- 73.51 342 P **P** **11 18 09.2 +0.8**
MPMC Manual Prospec 73.58 44 P 11 18 10.2
baz=235
GSC Goldstone, Bar 73.62 45 P 11 18 10.0
baz=236
GSC Goldstone, Bar 73.62 45 P **P** **11 18 09.9 +0.3**
GSC pmax pmax
comp=Z,28nm,1.3s
GSC Goldstone, Bar 73.62 45 P **P** **11 18 09.8 +0.3**
GSC IAmb IAmb 11 18 22.2
comp=Z,28nm,1.3s
BC3 Big Chuckawall 73.65 47 P 11 18 10.8
baz=237
HEC Hector,Ludlow 73.68 46 P 11 18 10.7
baz=236
WAKR Walker 73.75 41 P **P** **11 18 10.5 +0.2**
WAKR IAmb IAmb 11 18 23.3
comp=Z,25nm,1.2s
YBH Yreka Blue Hor 73.77 37 P **P** **11 18 10.8 +0.5**
comp=Z,9.2nm,1.1s,baz=224,slow=4.8,SNR=8.9
YBH Yreka Blue Hor 73.77 37 P **P** **11 18 10.9 +0.6**
YBH pmax pmax
comp=Z,24nm,1.3s
YBH Yreka Blue Hor 73.77 37 P **P** **11 18 10.9 +0.6**
YBH IAmb IAmb 11 18 23.5
comp=Z,24nm,1.2s
QSPA South Pole Qui 73.93 180 P **P** **11 18 10.5 -0.4**
QSPA IAmb IAmb 11 18 24.4
comp=Z,25nm,1.0s
PNTR Pine Nut 73.99 40 P **P** **11 18 11.8 0.0**
PNTR IAmb IAmb 11 18 24.7
comp=Z,32nm,1.2s
BEKR Beckworth 74.00 39 P **P** **11 18 12.1 +0.4**
GMRC Granite Mounta 74.12 46 P 11 18 13.3
baz=237
YERR Yerington 74.16 41 P **P** **11 18 12.9 +0.2**
YERR IAmb IAmb 11 18 25.4
comp=Z,23nm,1.1s
LHV Little Huntoon 74.19 42 P **P** **11 18 13.4 +0.8**
LHV IAmb IAmb 11 18 25.9
comp=Z,23nm,1.1s
GRAC Grapevine Rang 74.20 43 P 11 18 14.3
baz=235
M04C Macdoel 74.31 37 P 11 18 14.7
baz=231,SNR=5.7
SHOC Shoshone, Teco 74.31 45 P 11 18 14.4
baz=236
L04D Klamath Falls 74.31 36 P 11 18 14.8
baz=230
RYN Ryan 74.40 41 P **P** **11 18 14.1 0.0**
RYN IAmb IAmb 11 18 26.9
comp=Z,29nm,1.3s
NVAR Mina Array Bea 74.42 42 P **P** **11 18 14.6 +0.3**
comp=Z,8.0nm,1.1s,baz=226,slow=8.5,SNR=26
NVAR LR LR 11 45 41.4
comp=Z,728nm,18.5s,baz=248,slow=32
YSS Yuzh-Sakhalins 74.43 330*ji e*P **P** **11 18 13.9 0.0**
YSS *e* 11 18 28.4
YSS *e* 11 20 59.4
YSS *e*PPP PPP 11 22 41.0
YSS *e*S **SKiKP** **11 27 40.4 +1.3**
YSS *e* 11 28 16.1
YSS *e*SS **SS** **11 32 29.8 -4.5**
YSS pmax pmax
comp=Z,40nm,1.2s
YSS pmax pmax
comp=Z,600nm,6.9s
YSS Yuzh-Sakhalins 74.43 330 P **P** **11 18 13.0 -0.8**

PAHR Pah Rah Range 74.50 40 P **P** **11 18 14.9 +0.3**
NV11 Mina Array Sit 74.52 42 P **P** **11 18 15.0 +0.3**
HSIG 74.62 53 P **P** **11 18 16.3 +0.9**
214A Organ Pipe Nat 74.67 50 P 11 18 16.6
baz=240
214A Organ Pipe Nat 74.67 50 P **P** **11 18 15.9 +0.2**
214A IAmb IAmb 11 18 28.7
comp=Z,35nm,1.4s
TPH Tonopah 74.91 42 P **P** **11 18 17.7 +0.6**
TPH pmax pmax
comp=Z,160nm,1.1s
TPH Tonopah 74.91 42 P **P** **11 18 17.7 +0.6**
KVN Kaiserville 74.91 41 P **P** **11 18 17.8 +0.7**
KVN pmax pmax
comp=Z,23nm,1.2s
KVN Kaiserville 74.91 41 P **P** **11 18 17.8 +0.7**
KVN IAmb IAmb 11 18 29.8
comp=Z,23nm,1.2s
TPNV Topopah Spring 74.91 44 P 11 18 18.2
baz=236
TPNV Topopah Spring 74.91 44 P **P** **11 18 17.1 0.0**
TPNV pmax pmax
comp=Z,23nm,1.3s
TPNV Topopah Spring 74.91 44 P **P** **11 18 17.1 0.0**
TPNV IAmb IAmb 11 18 30.0
comp=Z,23nm,1.3s
TPNV IAMs_20 IAMs_20 11 46 09.1
comp=Z,1µm,19.0s
PDMCI Parker Dam,Lak 74.92 47 P 11 18 18.2
baz=238
J04D Umpqua Nationa 75.08 36 P 11 18 19.8
baz=230
I04A Tendick Farm, 75.27 35 P 11 18 19.9
baz=230
MOD Modoc Plateau 75.28 38 P **P** **11 18 19.4 +0.3**
MOD IAmb IAmb 11 18 31.9
comp=Z,29nm,1.1s
MOD IAMs_20 IAMs_20 11 45 00.1
comp=Z,831nm,19.0s
SHPR Sheep Range 75.40 45 P **P** **11 18 21.1 +1.1**
SHPR IAmb IAmb 11 18 33.0
comp=Z,34nm,1.3s
K05A Summer Lake 75.44 37 P **P** **11 18 21.2 +1.1**
KDAK Kodiak Island 75.49 11 P 11 18 19.1
baz=200
KDAK Kodiak Island 75.49 11 P **P** **11 18 18.9 -0.8**
comp=Z,15nm,0.9s,baz=156,slow=5.8,SNR=5.8
KDAK Kodiak Island 75.49 11*c i* P **P** **11 18 20.0 +0.3**
KDAK pmax pmax
comp=Z,79nm,1.5s
KDAK Kodiak Island 75.49 11 P **P** **11 18 20.3 +0.6**
J05D Fort Rock, OR 75.60 36 P 11 18 22.3
baz=231,SNR=12
G03D McMinnville, O 75.72 34 P 11 18 22.4
baz=229
H04A Detroit Lake 75.96 35 P **P** **11 18 23.0 +0.2**
H04A IAmb IAmb 11 18 35.2
comp=Z,26nm,1.1s
PRN Pahroc Range 75.96 44 P **P** **11 18 24.2 +1.1**
PINE Pine Mountain 76.09 36 P **P** **11 18 25.1 +1.3**
R11A Troy Canyon, C 76.13 43 P 11 18 25.0
baz=236
R11A Troy Canyon, C 76.13 43 P **P** **11 18 25.1 +1.0**
R11A IAmb IAmb 11 18 36.8
comp=Z,28nm,1.5s
I05D Terrebonne, OR 76.21 35 P 11 18 25.1
baz=231
TUC Tucson 76.33 50 P 11 18 26.4
baz=241
TUC Tucson 76.33 50 P **P** **11 18 26.0 +0.7**
TUC pmax pmax
comp=Z,29nm,1.3s
TUC MLR MLR
comp=Z,700nm,18.0s
TUC Tucson 76.33 50 P **P** **11 18 26.0 +0.7**
TUC IAmb IAmb 11 18 38.5
comp=Z,29nm,1.2s
TUC Tucson 76.33 50 IAMs_20 IAMs_20 11 52 34.4
comp=Z,698nm,18.0s
SBUM Sibu 76.37 277 P **P** **11 18 25.2 -0.5**
SBUM Sibu 76.37 277 P **P** **11 18 28.0 +2.2**
WVOR Wild Horse Val 76.58 38 P **P** **11 18 27.1 +0.6**
WVOR pmax pmax
comp=Z,25nm,1.3s
WVOR Wild Horse Val 76.58 38 P **P** **11 18 27.1 +0.6**
WVOR IAmb IAmb 11 18 39.3
comp=Z,25nm,1.2s
WVOR IAMs_20 IAMs_20 11 47 37.7
comp=Z,954nm,21.0s
G05D Wamic, OR 76.79 35 P 11 18 29.1
baz=230
LCMT Little Creek M 76.97 45 P **P** **11 18 29.8 +1.0**
LCMT IAmb IAmb 11 18 41.9
comp=Z,22nm,1.2s
E04D Cinebar 76.97 33 P 11 18 30.1
baz=229
I07A Izee 77.08 36 P **P** **11 18 29.6 +0.4**
I07A IAmb IAmb 11 18 42.2
comp=Z,21nm,1.2s
F05D White Salmon 77.13 34 P 11 18 30.7
baz=230
KSRS Korea Array 77.13 315 P **P** **11 18 29.1 -0.4**
comp=Z,3.4nm,0.8s,baz=128,slow=5.2,SNR=11
KSRS LR LR 11 46 23.3
comp=Z,236nm,21.7s,baz=106,slow=31
KSAR Wonju Array Be 77.15 315 P **P** **11 18 30.6 +0.9**
KSAR Wonju Array Be 77.15 315 P **P** **11 18 30.6 +0.9**
CCUT Cedar City 77.17 45 P **P** **11 18 30.4 +0.3**
J08A Circle Bar Ran 77.23 37 P **P** **11 18 30.8 +0.6**
J08A IAmb IAmb 11 18 32.3
comp=Z,31nm,1.3s
KNB Kanab 77.26 45 P **P** **11 18 31.6 +1.1**
KNB pmax pmax
comp=Z,35nm,1.4s
KNB Kanab 77.26 45 P **P** **11 18 31.6 +1.1**
KNB IAmb IAmb 11 18 59.3
comp=Z,35nm,1.4s
TYV Tymovskoe 77.29 333 *e*P **P** **11 18 30.4 +0.3**
TYV pmax pmax
comp=Z,400nm,2.9s
TYV pmax pmax
comp=Z,26nm,1.8s
D03D Eldon 77.35 32 P 11 18 31.5
baz=229
PSUT Pine Spring 77.37 43 P **P** **11 18 31.7 +0.6**
CNPM China Poot 77.38 11 P **P** **11 18 30.5 0.0**
CNPM IAmb IAmb 11 18 50.6
comp=Z,27nm,1.1s
CNPM IAMs_20 IAMs_20 11 47 14.0
comp=Z,876nm,19.0s
SZCU Shurtz Canyon 77.38 45 P **P** **11 18 32.2 +1.0**
WUAZ Wupatki 77.49 47 P **P** **11 18 31.7 -0.2**
WUAZ IAmb IAmb 11 18 45.2
comp=Z,21nm,1.2s
LON Longmire 77.50 33 P **P** **11 18 31.8 +0.3**
LON pmax pmax
comp=Z,27nm,1.4s
LON Longmire 77.50 33 P **P** **11 18 31.8 +0.3**
LON IAmb IAmb 11 18 51.0
comp=Z,27nm,1.4s
BRLK Bradley Lake 77.67 11 P **P** **11 18 32.1 0.0**
BRLK IAMs_20 IAMs_20 11 47 01.2
comp=Z,767nm,20.0s
BRSE Bradley Lake S 77.67 11 P 11 18 32.6
baz=202
ELK Elko 77.68 41 P **P** **11 18 33.1 +0.2**
comp=Z,4.5nm,1.0s,baz=224,slow=6.3,SNR=16
ELK Elko 77.68 41 P **P** **11 18 33.3 +0.4**
ELK pmax pmax
comp=Z,19nm,1.2s
ELK Elko 77.68 41 P **P** **11 18 33.3 +0.4**
ELK IAmb IAmb 11 18 45.6
comp=Z,18nm,1.2s
ELK IAMs_20 IAMs_20 11 47 14.1
comp=Z,906nm,19.0s
D05A Enumclaw 77.69 33 P **P** **11 18 33.8 +1.4**
PKCU Pink Cliffs 77.83 45 P **P** **11 18 35.3 +1.4**
HPIG 77.86 57 P **P** **11 18 35.2 +1.1**
HPIG IAmb IAmb 11 18 47.0
comp=Z,30nm,1.2s
PGC Sidney 77.91 31 P **P** **11 18 34.5 +0.9**
KSM Kuching 77.91 275 P **P** **11 18 33.8 -0.7**
KSM Kuching 77.91 275 P **P** **11 18 36.0 +1.5**
RSO Redoubt South 77.99 10 P **P** **11 18 33.4 -0.7**
G08A Pilot Rock 78.13 36 P **P** **11 18 36.3 +1.2**

G08A IAmb IAmb 11 18 37.2
comp=Z,31nm,1.2s
SVW2 Sparrevohn 78.17 8 P P 11 18 34.9 +0.1
MTPU Mount Pierson 78.22 45 P P 11 18 38.0 +1.9
LEM Lembang 78.25 266 P P 11 18 36.6 +0.1
LEM pmax pmax
comp=Z,39nm,0.8s
Q23K Middleton Isla 78.28 13 P P 11 18 25.0 -10
MID Middleton Isla 78.28 13 P P 11 18 24.8 -11
B05A Bryant 78.33 32 P 11 18 36.8
baz=229,SNR=5.2
TCRU Three Creeks R 78.34 44 P P 11 18 37.6 +1.0
TCRU IAmb IAmb 11 18 50.1
comp=Z,38nm,1.3s
USA0B Ussuriysk Arra 78.35 323*c i*P **P 11 18 36.6 +0.4**
USA0B Ussuriysk Arra 78.35 323 P **P 11 18 36.4 +0.2**
USA0B IAmb IAmb 11 18 52.6
comp=Z,23nm,1.3s
USRK Ussuriysk Ar. 78.35 323 P **P 11 18 34.9 -1.3**
comp=Z,3.5nm,0.8s,baz=94,slow=5.7,SNR=17
USRK LR LR 11 46 37.6
comp=Z,714nm,22.0s,baz=117,slow=31
USRK Ussuriysk Ar. 78.35 323 P **P 11 18 36.7 +0.5**
USRK Ussuriysk Ar. 78.35 323 P **P 11 18 36.6 +0.5**
QZH Quanzhou 78.39 300⇑*i*P **P 11 18 36.8 0.0**
QZH pmax pmax
comp=Z,270nm,8.1s
QZH LR LR
comp=Z,270nm,15.3s
QZH LR LR
comp=Z,270nm,18.6s
E07A Sunnyside 78.42 34 P **P 11 18 37.1 +0.5**
E07A IAmb IAmb 11 18 38.7
comp=Z,29nm,1.1s
LTY Liberty 78.42 33 P **P 11 18 37.4 +0.8**
W18A Petrified Fore 78.46 48 P **P 11 18 37.7 +0.5**
MSU Marysvale 78.47 44 P **P 11 18 34.7 -2.6**
MSU Marysvale 78.47 44 P **P 11 18 34.7 -2.6**
HAWA Hanford 78.49 34 P **P 11 18 37.2 +0.3**
HAWA IAMs_20 IAMs_20 11 48 27.7
comp=Z,997nm,19.0s
O22K Cooper Landing 78.55 11 P **P 11 18 35.2 -1.6**
O22K IAMs_20 IAMs_20 11 44 57.1
comp=Z,622nm,19.0s
121A Cookes Peak, D 78.67 51 P 11 18 40.3
baz=243
121A Cookes Peak, D 78.67 51 P **P 11 18 39.1 +0.6**
121A IAmb IAmb 11 18 52.0
comp=Z,24nm,1.2s
BMO Blue Mountains 78.80 37 P **P 11 18 39.3 +0.5**
BMO pmax pmax
comp=Z,11nm,1.1s
BMO Blue Mountains 78.80 37 P **P 11 18 39.2 +0.5**
BMO IAMs_20 IAMs_20 11 47 43.2
comp=Z,669nm,21.0s
B06A Marblemount 78.81 32 P **P 11 18 38.4 -0.2**
B06A IAmb IAmb 11 19 07.3
comp=Z,31nm,1.4s
E08A Dider Farm, El 78.81 35 P **P 11 18 39.2 +0.6**
A05A Maple Falls 78.82 31 P **P 11 18 39.4 +0.8**
A05A IAmb IAmb 11 18 40.3
comp=Z,29nm,1.3s
MFID Camas Ranch 78.83 38 P **P 11 18 39.7 +0.7**
DUG Dugway, Tooele 78.94 42 P 11 18 40.9
baz=238
DUG Dugway, Tooele 78.94 42 P **P 11 18 40.4 +0.7**
DUG pmax pmax
comp=Z,22nm,1.3s
DUG Dugway, Tooele 78.94 42 P **P 11 18 40.4 +0.7**
DUG IAmb IAmb 11 19 02.5
comp=Z,22nm,1.2s
RC01 Rabbit Creek A 79.11 11 P 11 18 40.0
baz=203,SNR=5.4
RC01 Rabbit Creek A 79.11 11 P **P 11 18 40.4 +0.4**
RC01 IAmb IAmb 11 18 40.5
comp=Z,19nm,1.0s
PWL Port Wells 79.17 12 P **P 11 18 40.3 -0.1**
PWL IAmb IAmb 11 18 41.3
comp=Z,33nm,1.1s
PWL IAMs_20 IAMs_20 11 48 48.4
comp=Z,760nm,20.0s
D08A Wollman Farm, 79.23 34 P **P 11 18 41.7 +0.7**
D08A IAmb IAmb 11 18 43.0
comp=Z,32nm,1.2s
SUA Susitna One 79.28 11 P 11 18 40.3
baz=202,SNR=8.4
SUA Susitna One 79.28 11 P **P 11 18 40.5 -0.6**
SUA IAMs_20 IAMs_20 11 48 28.2
comp=Z,829nm,19.0s
NLU North Lily Min 79.29 43 P **P 11 18 42.2 +0.5**
Q16A Castle Valley 79.36 44 P **P 11 18 43.1 +1.0**
Q16A IAmb IAmb 11 18 55.6
comp=Z,25nm,1.2s
EYAK Cordova Ski Ar 79.42 13 P 11 18 41.6
baz=206
EYAK Cordova Ski Ar 79.42 13 P **P 11 18 41.5 -0.1**
EYAK IAmb IAmb 11 18 42.9
comp=Z,32nm,1.3s
GLI Glacier Island 79.44 12 P **P 11 18 41.5 -0.3**
GLI IAMs_20 IAMs_20 11 48 14.6
comp=Z,740nm,19.0s
FID Port Fidalgo 79.45 13 P **P 11 18 40.9 -1.0**
FID IAMs_20 IAMs_20 11 48 23.7
comp=Z,882nm,19.0s
F10A Beach Ranch, E 79.51 36 P **P 11 18 42.7 0.0**
F10A IAmb IAmb 11 18 54.7
comp=Z,18nm,0.9s
RAGM Ragged Mountai 79.52 14 P **P 11 18 42.1 -0.2**
RAGM IAmb IAmb 11 18 43.7
comp=Z,40nm,1.2s
TMUT Trail Mountain 79.52 44 P **P 11 18 44.1 +0.9**
TMUT IAmb IAmb 11 18 57.3
comp=Z,23nm,1.0s
MPU Maple Canyon 79.61 43 P **P 11 18 43.9 +0.4**
SKT Skwentna 79.63 10 P 11 18 42.1
baz=201,SNR=8.0
SKT Skwentna 79.63 10 P **P 11 18 42.2 -0.6**
SKT IAMs_20 IAMs_20 11 48 31.4
comp=Z,970nm,20.0s
GAMB Gambell 79.64 0 P 11 18 43.3
baz=181,SNR=14
GAMB Gambell 79.64 0 P **P 11 18 43.4 +0.7**
GAMB IAmb IAmb 11 18 45.0
comp=Z,25nm,1.2s
KNK Knik Glacier 79.65 12 P 11 18 42.5
baz=204
KNK Knik Glacier 79.65 12 P **P 11 18 42.2 -0.7**
KNK IAmb IAmb 11 19 05.4
comp=Z,32nm,1.3s
PMR Palmer 79.69 11 P 11 18 43.4
baz=203,SNR=8.5
PMR Palmer 79.69 11 P **P 11 18 42.8 -0.3**
PMR pmax pmax
comp=Z,41nm,1.4s
PMR Palmer 79.69 11 P **P 11 18 42.8 -0.3**
PMR IAmb IAmb 11 18 44.2
comp=Z,41nm,1.4s
HLID Hailey 79.76 39 P 11 18 45.1
baz=236
HLID Hailey 79.76 39 P **P 11 18 45.3 +1.1**
NKL Nikolayevsk 79.78 334*e*P **P 11 18 44.6 +0.9**
NKL eS **S 11 28 52.6 +7.6**
NKL pmax pmax
comp=Z,35nm,1.7s
HVU Hansel Valley 79.80 41 P **P 11 18 45.0 +0.6**
HVU pmax pmax
comp=Z,25nm,1.4s
HVU Hansel Valley 79.80 41 P **P 11 18 45.0 +0.6**
B08A Colville Reser 79.81 33 P **P 11 18 44.0 -0.2**
B08A IAmb IAmb 11 18 45.4
comp=Z,28nm,1.2s
CTU Camp Tracy 79.89 42 P **P 11 18 45.1 +0.1**
GHO Glory Hole Cre 79.89 11 P **P 11 18 43.7 -0.7**
GHO IAmb IAmb 11 18 56.0
comp=Z,20nm,0.9s
GHO IAMs_20 IAMs_20 11 49 13.6
comp=Z,613nm,19.0s
P17A Butcher Ranch, 79.93 44 P **P 11 18 45.4 +0.3**
P17A IAmb IAmb 11 18 59.1
comp=Z,28nm,1.2s
MDJ Mudanjiang 80.00 322 P **P 11 18 45.8 +0.6**
MDJ pP pP 11 18 49.3 -2.3
MDJ sP PcP 11 18 50.5 -2.1
MDJ sS sS 11 29 03.2 +4.5
MDJ pmax pmax
comp=Z,30nm,1.7s
MDJ pmax pmax
comp=Z,540nm,7.7s
MDJ LR LR
comp=Z,400nm,20.1s
MDJ LR LR
comp=Z,430nm,22.1s
MDJ LR LR
comp=Z,900nm,21.2s
MDJ Mudanjiang 80.00 322 P **P 11 18 45.4 +0.2**
MDJ IAmb IAmb 11 18 47.9
comp=Z,51nm,1.4s
MDJ IAMs_20 IAMs_20 11 47 37.7
comp=Z,664nm,20.0s
C09A Chrisman Ranch 80.03 34 P **P 11 18 44.8 -0.5**
SML Sawmill 80.04 11 P 11 18 45.6
baz=204
SML Sawmill 80.04 11 P **P 11 18 45.8 +0.7**
SML pmax pmax
comp=Z,30nm,1.4s
BMRM Bremner River 80.05 13 P 11 18 45.0
baz=208,SNR=15
BMRM Bremner River 80.05 13 P **P 11 18 44.8 -0.4**
BMRM IAMs_20 IAMs_20 11 48 41.0
comp=Z,857nm,19.0s
GRNR Gornyy 80.09 330⇓*i*P **P 11 18 46.5 +0.9**
GRNR pmax pmax
comp=Z,20nm,1.1s
MNTX Cornudas Mount 80.12 53 P 11 18 47.1
baz=244,SNR=19
MNTX Cornudas Mount 80.12 53 P **P 11 18 47.0 +0.8**
MNTX IAmb IAmb 11 18 59.4
comp=Z,30nm,1.3s
YAH Yahtse 80.20 15 P **P 11 18 46.6 +0.4**
YAH IAmb IAmb 11 18 47.9
comp=Z,28nm,1.0s
CRQM Cirque 80.20 14 P **P 11 18 46.2 +0.1**
CRQE Cirque 80.21 14 P 11 18 46.3
baz=209
KLU Klutina 80.24 13 P 11 18 46.3
baz=206,SNR=6.6
CUT Chulitna 80.24 10 P 11 18 45.5
baz=202,SNR=8.4
KLU Klutina 80.24 13 P **P 11 18 46.2 0.0**
KLU IAMs_20 IAMs_20 11 48 48.8
comp=Z,762nm,18.0s
CUT Chulitna 80.24 10 P **P 11 18 45.5 -0.5**
CUT IAMs_20 IAMs_20 11 48 39.7
comp=Z,776nm,20.0s
SCM Sheep Creek Mo 80.26 12 P **P 11 18 45.6 -0.7**
SCM pmax pmax
comp=Z,30nm,1.0s
SCM Sheep Creek Mo 80.26 12 P **P 11 18 45.6 -0.7**
SCM IAmb IAmb 11 18 47.4
comp=Z,30nm,1.0s
SCM IAMs_20 IAMs_20 11 49 03.3
comp=Z,648nm,20.0s
BNM Barren Site 80.27 50 P **P 11 18 47.2 0.0**
TCUT Toone Canyon 80.33 42 P **P 11 18 48.0 +0.6**
TLIG Tilapa 80.34 69 P **P 11 18 47.6 -0.2**
MVCO Mesa Verde 80.35 47 P **P 11 18 48.0 +0.4**
PV05 Paradox Valley 80.35 46 P **P 11 18 48.8 +1.2**
PV05 IAmb IAmb 11 19 01.1
comp=Z,42nm,1.2s
BCPM Bancas Point 80.39 16 IAMs_20 IAMs_20 11 53 15.2
comp=Z,857nm,19.0s
TABL Table Mountain 80.42 15 P **P 11 18 47.4 0.0**
TABL IAmb IAmb 11 18 48.8
comp=Z,30nm,1.1s
TX31 Lajitas Ar. Si 80.46 56 P **P 11 18 49.9 +1.7**
TX32 Lajitas Array 80.46 56 P **P 11 18 48.4 +0.3**
TX32 IAmb IAmb 11 19 02.4
comp=Z,40nm,1.4s
TXAR Lajitas Array 80.46 56 P **P 11 18 48.8 +0.7**
comp=Z,6.4nm,1.1s,baz=224,slow=5.2,SNR=36
TXAR LR LR 11 48 20.4
comp=Z,420nm,19.3s,baz=0.0,slow=31
TXAR Lajitas Array 80.46 56 P **P 11 18 49.3 +1.1**
TXAR Lajitas Array 80.46 56 P **P 11 18 49.3 +1.1**
HWUT Hardware Ranch 80.48 42 P **P 11 18 49.0 +0.9**
HWUT IAMs_20 IAMs_20 11 49 12.3
comp=Z,833nm,18.0s
GRNC Granite Creek 80.52 15 P **P 11 18 48.0 +0.1**
GRNC IAmb IAmb 11 19 02.9
comp=Z,41nm,1.2s
PV10 Paradox Valley 80.53 46 P **P 11 18 48.5 -0.1**
PV10 IAmb IAmb 11 19 01.2
comp=Z,25nm,1.1s
PV19 Morning Glory 80.54 46 P **P 11 18 49.3 +0.7**
PV19 IAmb IAmb 11 19 01.5
comp=Z,28nm,1.2s
PV17 East Wray Mesa 80.54 46 P **P 11 18 49.0 +0.5**
PV17 IAmb IAmb 11 19 01.5
comp=Z,44nm,1.3s
PV14 Lion Creek, Pa 80.54 46 P **P 11 18 49.6 +1.0**
PV14 IAmb IAmb 11 19 01.6
comp=Z,28nm,1.1s
VRDI Verde Repeater 80.55 14 P **P 11 18 48.3 +0.3**
VRDI IAmb IAmb 11 18 49.3
comp=Z,41nm,1.2s
VRDI IAMs_20 IAMs_20 11 48 54.0
comp=Z,752nm,20.0s
PV18 Skein Mesa, Pa 80.56 46 P **P 11 18 47.7 -0.9**
PV18 IAmb IAmb 11 19 01.5
comp=Z,29nm,1.3s
PV20 West Nyswonger 80.56 46 P **P 11 18 49.4 +0.7**
PV13 Radium Mtn., P 80.58 46 P **P 11 18 48.6 -0.1**
PV13 IAmb IAmb 11 19 01.7
comp=Z,37nm,1.3s
PV16 Nyswonger Mesa 80.59 46 P **P 11 18 49.2 +0.4**
PV16 IAmb IAmb 11 19 01.8
comp=Z,37nm,1.4s
PV03 Paradox Valley 80.61 46 P **P 11 18 49.5 +0.6**
PV03 IAmb IAmb 11 19 01.8
comp=Z,28nm,1.3s
PV11 David Mesa, Pa 80.61 46 P **P 11 18 49.6 +0.7**
PV11 IAmb IAmb 11 19 01.9
comp=Z,34nm,1.2s
N25K Chitina, Valde 80.62 13 P 11 18 48.1
baz=207,SNR=11
N25K Chitina, Valde 80.62 13 P **P 11 18 48.2 -0.1**
N25K IAmb IAmb 11 18 49.6
comp=Z,26nm,1.0s
N25K IAMs_20 IAMs_20 11 49 10.1
comp=Z,696nm,20.0s
ANM Nome 80.63 3 P 11 18 49.1
baz=187,SNR=7.7
ANM Nome 80.63 3 P **P 11 18 49.5 +1.4**
ANM pmax pmax
comp=Z,15nm,1.3s
ANM Nome 80.63 3 P **P 11 18 49.5 +1.4**
PV04 Paradox Valley 80.63 46 P **P 11 18 49.9 +0.9**
PV04 IAmb IAmb 11 19 02.2
comp=Z,24nm,1.1s
BESE Bessie Mountai 80.64 19 P **P 11 18 47.8 -0.6**
BESE IAmb IAmb 11 18 50.3
comp=Z,24nm,1.2s
GLB Gilahina Butte 80.65 14 P **P 11 18 47.8 -0.6**
GLB IAmb IAmb 11 18 49.7
comp=Z,32nm,1.2s
PV02 Paradox Valley 80.66 46 P **P 11 18 50.0 +0.8**
PV02 IAmb IAmb 11 19 02.2
comp=Z,46nm,1.4s
PV12 Saucer Basin, 80.67 46 P **P 11 18 49.5 +0.3**
M24K Tolsona, Glenn 80.74 12 P 11 18 49.2
baz=206,SNR=11
PV01 Paradox Valley 80.74 46 P **P 11 18 49.9 +0.3**
PV01 IAmb IAmb 11 19 02.5
comp=Z,29nm,1.2s
M24K Tolsona, Glenn 80.74 12 P **P 11 18 49.1 +0.2**
ANMO Albuquerque 80.75 50 P 11 18 50.7
baz=243
ANMO Albuquerque 80.76 50 P **P 11 18 50.5 +0.7**
comp=Z,4.3nm,1.0s,baz=213,slow=2.8,SNR=12
ANMO Albuquerque 80.76 50*c i*P **P 11 18 50.7 +0.9**
ANMO pmax pmax
comp=Z,15nm,1.4s
ANMO Albuquerque 80.76 50 P **P 11 18 50.1 +0.3**
ANMO Albuquerque 80.76 50 IAMs_20 IAMs_20 11 51 36.4
comp=Z,760nm,19.0s
MCARA McCarthy VSAT 80.78 14 P 11 18 49.2
baz=209,SNR=6.2
BCYI Bear Canyon 80.78 39 P **P 11 18 49.9 +0.2**
MCARA McCarthy VSAT 80.78 14 P **P 11 18 48.9 -0.1**
MCARA IAmb IAmb 11 18 50.5
comp=Z,30nm,1.2s
MCARA IAMs_20 IAMs_20 11 49 21.3
comp=Z,731nm,20.0s
PV22 Blue Mesa, Par 80.78 46 P **P 11 18 50.3 +0.5**
LOGN Logan Glacier 80.78 15 P **P 11 18 48.5 -0.7**
LOGN IAmb IAmb 11 18 50.7
comp=Z,41nm,1.3s
LOGN IAMs_20 IAMs_20 11 48 51.4
comp=Z,844nm,20.0s
CTG Chitna Glacier 80.82 15 P 11 18 49.7
baz=211
CTGM Chitina Glacie 80.82 15 P **P 11 18 49.1 -0.3**
CTGM IAmb IAmb 11 18 50.8
comp=Z,29nm,1.0s
CTGM IAMs_20 IAMs_20 11 47 53.4
comp=Z,730nm,19.0s
BARN Barnard Glacier 80.83 15 P **P 11 18 49.5 0.0**
BARN IAMs_20 IAMs_20 11 52 48.5
comp=Z,869nm,19.0s
PV07 Paradox Valley 80.83 46 P **P 11 18 50.6 +0.5**
WAT6 Susitna Watana 80.86 11 P 11 18 49.2
baz=204,SNR=13
PV15 Paradox Valley 80.90 46 P **P 11 18 50.6 +0.1**
NEW Newport 80.93 34 P 11 18 50.4
baz=234
NEW Newport 80.93 34 P **P 11 18 49.8 -0.3**
comp=Z,3.8nm,0.9s,baz=245,slow=7.4,SNR=6.6
NEW Newport 80.93 34 P **P 11 18 50.0 -0.1**
NEW pmax pmax
comp=Z,18nm,1.5s
NEW Newport 80.93 34 P **P 11 18 50.0 -0.1**
NEW Newport 80.93 34 IAMs_20 IAMs_20 11 49 16.2
comp=Z,670nm,20.0s
MA2 Magadan 81.05 342 P **P 11 18 49.5 -1.0**
comp=Z,1.6nm,0.3s,baz=126,slow=5.2,SNR=5.8
MA2 Magadan 81.05 342*c i*P **P 11 18 49.4 -1.0**
MA2 pmax pmax
comp=Z,35nm,1.6s
MA2 Magadan 81.05 342 P **P 11 18 49.5 -1.0**
WAT2 Susitna Watana 81.05 11 P 11 18 49.9
baz=204,SNR=9.0
NJ2 Nanjing 81.12 307*e*P **P 11 18 52.1 +0.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KTH Kantishna Hill 81.20 10 P **P 11 18 50.1 -1.2**
KTH IAmb IAmb 11 19 11.8
comp=Z,29nm,1.0s
SKAG Skagway 81.21 18 P 11 18 52.9
baz=216,SNR=6.0
TRF Thorofare Moun 81.21 10 P 11 18 50.7
baz=202,SNR=14
SKAG Skagway 81.21 18 P **P 11 18 51.9 +0.6**
SKAG IAmb IAmb 11 18 53.7
comp=Z,26nm,1.2s
TRF Thorofare Moun 81.21 10 P **P 11 18 50.7 -0.8**
RDMU Red Mountain 81.25 43 P **P 11 18 52.6 +0.3**
CHUM Lake Minchumin 81.30 9 P 11 18 51.0
baz=200,SNR=12
AHID Auburn Hatcher 81.38 41 P **P 11 18 53.2 +0.3**
AHID IAmb IAmb 11 19 05.5
comp=Z,23nm,1.3s
AHID IAMs_20 IAMs_20 11 49 49.9
comp=Z,661nm,20.0s
MCMT McKenzie Canyo 81.40 38 P **P 11 18 52.6 -0.4**
RND Reindeer 81.42 11 P **P 11 18 51.8 -0.6**
RND pmax pmax
comp=Z,37nm,1.1s
RND Reindeer 81.42 11 P **P 11 18 51.8 -0.6**
KLR Kul'dur 81.48 327 P **P 11 18 52.1 -0.9**
comp=Z,5.4nm,1.1s,baz=149,slow=5.5,SNR=11
KLR Kul'dur 81.48 327*c i*P **P 11 18 53.4 +0.4**
KLR pmax pmax
comp=Z,31nm,1.8s
TNA Tin City 81.51 2 P 11 18 53.3
baz=185,SNR=16
TNA Tin City 81.51 2 P **P 11 18 53.0 +0.2**
TNA IAmb IAmb 11 18 54.9
comp=Z,32nm,1.2s
PAX Paxson 81.66 12 P 11 18 53.2
baz=206,SNR=9.0
PAX Paxson 81.66 12 P **P 11 18 52.7 -1.1**
PAX pmax pmax
comp=Z,30nm,1.5s
PAX Paxson 81.66 12 P **P 11 18 52.7 -1.1**
PAX IAmb IAmb 11 19 02.6
comp=Z,30nm,1.5s
MCK McKinley 81.70 10 P 11 18 53.3
baz=203,SNR=22
BPAW Bear Paw Mtn. 81.70 9 P 11 18 52.9
baz=201,SNR=5.9
MCK McKinley 81.70 10 P **P 11 18 53.3 -0.6**
MCK pmax pmax
comp=Z,48nm,1.0s
MCK McKinley 81.70 10 P **P 11 18 53.3 -0.6**
MCK IAMs_20 IAMs_20 11 49 14.3
comp=Z,642nm,20.0s
BPAW Bear Paw Mtn. 81.70 9 P **P 11 18 52.9 -1.0**
BPAW IAMs_20 IAMs_20 11 49 04.3
comp=Z,707nm,20.0s
HYT Haines Junctio 81.70 17 P **P 11 18 53.9 -0.2**
S22A 4UR Ranch, Cre 81.77 47 P 11 18 56.6
baz=242,SNR=14
DLMT Dillon 81.84 38 P **P 11 18 55.3 +0.1**
DLMT IAMs_20 IAMs_20 11 50 29.7
comp=Z,690nm,22.0s
REDW Red Top Meadow 81.84 41 P **P 11 18 56.1 +0.7**
REDW IAmb IAmb 11 19 19.9
comp=Z,30nm,1.4s
MSO Missoula 81.86 36 P 11 18 55.6
baz=236,SNR=10
MSO Missoula 81.86 36 P **P 11 18 54.8 -0.5**
MSO IAmb IAmb 11 18 56.6
comp=Z,35nm,1.4s
MSO IAMs_20 IAMs_20 11 47 36.1
comp=Z,908nm,20.0s
O20A White River Ci 81.92 44 P 11 18 57.0
baz=241,SNR=6.2
O20A White River Ci 81.93 44 P **P 11 18 57.2 +1.3**
SNOW Snow King Moun 81.96 40 P **P 11 18 56.3 +0.3**
SNOW IAmb IAmb 11 19 08.9
comp=Z,36nm,1.4s
MENT Mentasta 82.00 13 P **P 11 18 54.9 -0.6**
MENT IAmb IAmb 11 18 57.2
comp=Z,37nm,1.4s
BWN Browne 82.02 10 P **P 11 18 55.3 -0.2**
DLBC Dease Lake 82.13 21 P **P 11 18 55.6 -0.7**
comp=Z,4.9nm,0.9s,baz=222,slow=4.6,SNR=7.7
DLBC Dease Lake 82.13 21 P **P 11 18 56.6 +0.3**
LOHW Long Hollow 82.13 40 P **P 11 18 56.6 -0.2**
DL2 Dalian 82.16 314 P **P 11 18 58.1 +1.3**
DL2 S **S 11 29 16.6 +6.1**
DL2 pmax pmax
comp=Z,37nm,1.3s
DL2 pmax pmax
comp=Z,600nm,4.6s
DL2 LR LR
comp=Z,350nm,15.5s
DL2 LR LR
comp=Z,230nm,14.5s
DL2 LR LR
comp=Z,420nm,23.8s
LRM Limekiln Ridge 82.17 38 P **P 11 18 57.4 +0.3**
JTMT Jette 82.18 35 P **P 11 18 57.1 +0.2**
JTMT IAmb IAmb 11 18 59.0
comp=Z,22nm,1.4s
SNY Shenyang 82.25 317⇓P **P 11 19 00.6 +3.4**
SNY pmax pmax
comp=Z,29nm,1.6s
SNY pmax pmax
comp=Z,390nm,3.3s
SNY LR LR
comp=Z,250nm,10.4s
SNY LR LR
comp=Z,190nm,6.5s
SNY LR LR
comp=Z,370nm,14.9s
QLMT Earthquake Lak 82.25 39 P **P 11 18 58.9 +1.4**
FLWY Flagg Ranch 82.31 40 P **P 11 18 58.7 +0.9**
WHY Whitehorse 82.31 18 P **P 11 18 57.5 +0.2**
WHY IAmb IAmb 11 19 12.1
comp=Z,23nm,1.4s
SMCO Snowmass 82.33 46 P **P 11 18 58.9 +0.6**
SMCO IAmb IAmb 11 19 00.7
comp=Z,38nm,1.4s
YPP Pitchstone Pla 82.34 40 P **P 11 18 55.4 -2.7**
YHB Horse Butte 82.35 39 P **P 11 18 57.8 -0.2**
YHB IAmb IAmb 11 19 00.8

comp=Z,30nm,1.2s
BW06 Boulder Array 82.36 42 P 11 18 58.5
baz=240,SNR=9.7
BW06 Boulder Array 82.36 42 P **P** **11 18 58.5 +0.4**
BW06 IAMs_20 IAMs_20 11 49 42.9
comp=Z,898nm,20.0s
PD31 Pinedale Array 82.36 42 P **P** **11 18 58.0 -0.1**
PDAR Pinedale Array 82.36 42 P **P** **11 18 58.1 0.0**
comp=Z,5.1nm,0.9s,baz=220,slow=3.5,SNR=38
PDAR LR LR 11 50 34.3
comp=Z,627nm,19.0s,baz=248,slow=32
YHL Hebgen Lake 82.41 39 P **P** **11 18 59.9 +1.4**
YMR Madison River 82.45 39 P **P** **11 18 60.0 +1.4**
NEA2 Nenana 82.47 10 P 11 18 57.9
baz=203,SNR=8.2
NEA2 Nenana 82.48 10 P **P** **11 18 57.2 -0.7**
NEA2 IAmb IAmb 11 18 59.9
comp=Z,17nm,0.9s
L27K Beaver Creek, 82.53 14 P 11 18 58.3
baz=210
L27K Beaver Creek, 82.53 14 P **P** **11 18 58.4 +0.1**
L27K IAMs_20 IAMs_20 11 54 07.4
comp=Z,754nm,19.0s
WRH Wood River Hil 82.53 10 P **P** **11 18 57.4 -0.8**
BOZ Bozeman (W) 82.54 38 P 11 19 00.1
baz=238,SNR=21
BOZ Bozeman (W) 82.54 38 P **P** **11 18 58.7 -0.1**
BOZ pmax pmax
comp=Z,32nm,1.5s
BOZ Bozeman (W) 82.54 38 P **P** **11 18 58.7 -0.1**
BOZ IAmb IAmb 11 19 11.7
comp=Z,32nm,1.5s
BOZ IAMs_20 IAMs_20 11 50 22.3
comp=Z,658nm,19.0s
BCAR Beaver Creek A 82.54 14 P **P** **11 18 58.2 -0.1**
H17A Grant Village 82.55 40 P 11 19 01.6
baz=239
H17A Grant Village 82.55 40 P **P** **11 19 00.6 +1.5**
DOT Dot Lake 82.56 12 P **P** **11 18 57.9 -0.5**
YHH Holmes Hill 82.58 39 P **P** **11 19 00.1 +0.8**
YHH IAmb IAmb 11 19 03.0
comp=Z,37nm,1.4s
MLY Manley 82.61 9 P 11 18 57.8
baz=201,SNR=34
MLY Manley 82.61 9 P **P** **11 18 57.5 -1.1**
MLY IAmb IAmb 11 18 59.3
comp=Z,21nm,0.9s
YNR Norris Junctio 82.65 39 P **P** **11 19 00.0 +0.4**
YNR IAmb IAmb 11 19 03.7
comp=Z,36nm,1.5s
HDA Harding Lake 82.68 11 P 11 18 58.4
baz=205,SNR=21
HDA P 11 18 58.4
baz=205,SNR=21
HDA Harding Lake 82.68 11 IAMs_20 IAMs_20 11 50 55.2
comp=Z,562nm,19.0s
CCB Clear Creek Bu 82.74 11 P **P** **11 18 58.4 -0.9**
SCRK Sand Creek 82.86 12 P 11 18 59.9
baz=208,SNR=21
SCRK Sand Creek 82.86 12 P **P** **11 18 59.2 -0.9**
SCRK IAmb IAmb 11 19 01.6
comp=Z,21nm,1.1s
SCRK IAMs_20 IAMs_20 11 50 35.2
comp=Z,617nm,20.0s
TCOL CIGO, UAF Yank 82.94 10 P 11 18 59.8
baz=204,SNR=27
I23K Minto, Yukon-K 82.94 10 P 11 18 59.6
baz=203,SNR=14
TCOL CIGO, UAF Yank 82.94 10 P **P** **11 18 59.1 -1.1**
TCOL IAMs_20 IAMs_20 11 49 44.0
comp=Z,718nm,20.0s
COLA College 82.94 10 P 11 18 59.8
baz=204
I23K Minto, Yukon-K 82.94 10 P **P** **11 18 59.7 -0.6**
COLA College 82.94 10*c i*P **P** **11 18 59.4 -0.9**
COLA pmax pmax
comp=Z,49nm,0.9s
COLA College 82.94 10 P **P** **11 18 59.5 -0.8**
COLA College 82.94 10 IAMs_20 IAMs_20 11 49 44.0
comp=Z,682nm,20.0s
MDM Murphy Dome 82.95 10 P **P** **11 18 59.9 -0.5**
MDM IAMs_20 IAMs_20 11 50 03.4
comp=Z,861nm,20.0s
HRY Holter Researc 83.01 37 P **P** **11 19 01.1 -0.2**
IL31 83.02 11 P **P** **11 19 00.1 -0.5**
IL31 IAmb IAmb 11 19 01.0
comp=Z,14nm,0.9s
ILAR Eielson Array 83.02 11 P **P** **11 18 59.8 -0.9**
comp=Z,6.1nm,0.8s,baz=215,slow=5.7,SNR=57
ILAR LR LR 11 51 44.7
comp=Z,417nm,19.2s,baz=181,slow=33
ILAR Eielson Array 83.02 11 P **P** **11 18 58.5 -2.2**
MSTX Muleshoe 83.07 52 P 11 19 02.9
baz=245,SNR=6.7
MSTX Muleshoe 83.08 52 P **P** **11 19 02.0 +0.2**
IMAR Indian Mountai 83.09 8 P **P** **11 19 00.6 -0.5**
WALA Waterton Lakes 83.12 35 P **P** **11 19 01.7 -0.1**
WALA IAmb IAmb 11 19 22.8
comp=Z,17nm,1.2s
BELA Belgrano 2 83.20 172 P **P** **11 19 01.8 +0.2**
BELA IAmb IAmb 11 19 23.8
comp=Z,30nm,1.5s
YNE Yellowstone No 83.21 39 P **P** **11 19 01.8 -0.7**
T25A Trinidad 83.21 48 P 11 19 03.7
baz=244
T25A Trinidad 83.22 48 P **P** **11 19 02.6 -0.1**
POKR Poker Plat Res 83.24 10 P 11 19 01.4
baz=204,SNR=21
POKR Poker Plat Res 83.24 10 P **P** **11 19 00.9 -0.9**
POKR IAMs_20 IAMs_20 11 50 22.9
comp=Z,577nm,20.0s
K27K Chicken 83.31 13 P 11 19 03.0
baz=210
K27K Chicken 83.31 13 P **P** **11 19 03.4 +1.2**
K27K IAMs_20 IAMs_20 11 51 34.2
comp=Z,749nm,19.0s
RWWY Rawlins 83.35 43 P **P** **11 19 02.2 -1.1**
SEY Seymchan 83.38 345 P **P** **11 19 02.7 +0.1**
comp=Z,9.3nm,1.0s,baz=136,slow=5.2,SNR=17
SEY Seymchan 83.38 345⇑*i*P **P** **11 19 03.6 +1.0**
Q24A Divide 83.50 46 P 11 19 05.7
baz=243,SNR=5.6
ISCO Idaho Springs 83.55 46 P 11 19 05.5
baz=243
ISCO Idaho Springs 83.55 46 P **P** **11 19 05.1 +0.6**
ISCO pmax pmax
comp=Z,22nm,1.5s
ISCO Idaho Springs 83.55 46 P **P** **11 19 05.1 +0.6**
ISCO IAmb IAmb 11 19 21.6
comp=Z,22nm,1.5s
RLMT Red Lodge 83.72 40 P 11 19 06.2
baz=240,SNR=14
RLMT Red Lodge 83.72 40 P **P** **11 19 06.2 +1.1**
RLMT IAmb IAmb 11 19 07.4
comp=Z,21nm,1.1s
QIZ Qiongzhong 83.79 292 P **P** **11 19 07.3 +1.6**
QIZ S **S** **11 29 34.0 +6.1**
QIZ pmax pmax
comp=Z,260nm,7.8s
QIZ LR LR
comp=Z,220nm,26.0s
QIZ LR LR
comp=Z,230nm,24.5s
QIZ LR LR
comp=Z,310nm,23.5s
N23A Red Feather La 83.83 44 P 11 19 06.7
baz=243,SNR=8.2
PRP Porcupine Dome 83.94 11 P 11 19 05.1
baz=206,SNR=36
PRP Porcupine Dome 83.94 11 P **P** **11 19 05.4 -0.2**
PRP IAMs_20 IAMs_20 11 51 21.6
comp=Z,588nm,20.0s
DAWY Dawson 83.95 14 P **P** **11 19 05.6 0.0**
WHN Wuhan 84.04 304⇑P **P** **11 19 07.2 +0.4**
EGAK Eagle 84.16 13 P 11 19 06.6
baz=210,SNR=10
EGAK Eagle 84.17 13 P **P** **11 19 06.7 +0.1**
EGAK IAmb IAmb 11 19 08.3
comp=Z,27nm,1.2s
EGAK IAMs_20 IAMs_20 11 52 10.6
comp=Z,734nm,20.0s
TIA Tai'an 84.18 310 P **P** **11 19 07.1 -0.2**
TIA S **S** **11 29 30.9 -0.3**
TIA pmax pmax
comp=Z,13nm,2.4s
TIA pmax pmax
comp=Z,460nm,7.8s
TIA LR LR
comp=Z,320nm,22.1s
TIA LR LR
comp=Z,290nm,24.0s
TIA LR LR
comp=Z,410nm,22.6s
MYKOM Kota Tinggi 84.19 274 P **P** **11 19 09.0 +1.1**
RDOG Red Dog Mine 84.24 4 P 11 19 08.5
baz=190
RDOG Red Dog Mine 84.24 4 P **P** **11 19 07.2 +0.3**
RDOG IAmb IAmb 11 19 09.1
comp=Z,28nm,1.3s
RDOG IAMs_20 IAMs_20 11 50 28.9
comp=Z,583nm,20.0s
K22A Casper 84.26 43 P 11 19 08.4
baz=242,SNR=5.9
K22A Casper 84.26 43 P **P** **11 19 07.7 -0.1**
K22A IAmb IAmb 11 19 09.5
comp=Z,30nm,1.4s
AMTX Amarillo 84.27 51 P **P** **11 19 08.0 +0.1**
AMTX Amarillo 84.27 51 P 11 19 08.8
baz=246
PHWY Pilot Hill 84.34 44 P **P** **11 19 08.3 -0.2**
COLD Coldfoot 84.75 9 P 11 19 10.1
baz=202,SNR=20
COLD Coldfoot 84.75 9 P **P** **11 19 10.3 +0.8**
EGMT Eagleton 84.90 37 P 11 19 11.6
baz=239,SNR=5.3
EGMT Eagleton 84.90 37 P **P** **11 19 10.7 -0.1**
EGMT IAmb IAmb 11 19 24.0
comp=Z,24nm,1.5s
EGMT IAMs_20 IAMs_20 11 49 30.6
comp=Z,650nm,20.0s
ABTX Abilene, Hawle 84.94 54 P **P** **11 19 11.6 +0.3**
ABTX Abilene, Hawle 84.94 54 P 11 19 12.3
baz=247
KSCO Kaye Shedlock' 85.29 47 P **P** **11 19 13.2 +0.2**
KSCO IAmb IAmb 11 19 30.9
comp=Z,30nm,1.4s
BILL Bilibino 85.31 352 P **P** **11 19 12.3 0.0**
BILL pmax pmax
comp=Z,27nm,1.2s
BILL Bilibino 85.31 352 P **P** **11 19 12.3 0.0**
BILL IAMs_20 IAMs_20 11 51 33.4
comp=Z,695nm,20.0s
435B Jarrell 85.88 57 IAMs_20 IAMs_20 11 50 29.8
comp=Z,563nm,20.0s
JRMM Jerantut 86.09 275 P **P** **11 19 19.0 +1.6**
TOLK Toolik Lake Re 86.15 8 P 11 19 17.3
baz=202
TOLK Toolik Lake Re 86.15 8 P **P** **11 19 16.2 -0.4**
TOLK IAmb IAmb 11 19 37.6
comp=Z,26nm,1.2s
LAO LASA Array 86.34 39 P **P** **11 19 17.5 -0.5**
LAO IAmb IAmb 11 19 20.4
comp=Z,25nm,1.2s
ZEA Zeya 86.38 329*eP* **P** **11 19 18.2 +0.3**
ZEA *eS* **S** **11 29 55.4 +3.3**
ZEA pmax pmax
comp=N,10.0nm,1.6s
ZEA pmax pmax
comp=Z,20nm,1.6s
ZEA pmax pmax
comp=E,100nm,5.8s
ZEA pmax pmax
comp=N,100nm,3.3s
ZEA pmax pmax
comp=Z,200nm,6.7s
ZEA smax smax
comp=N,100nm,7.0s
ZEA MLR MLR
comp=Z,200nm,15.0s
WMOK Wichita Mounta 86.41 52 P 11 19 18.7
baz=248
WMOK Wichita Mounta 86.41 52 P **P** **11 19 18.5 -0.1**
WMOK pmax pmax
comp=Z,5.0nm,1.0s
WMOK MLR MLR
comp=Z,500nm,18.0s
WMOK Wichita Mounta 86.41 52 P **P** **11 19 18.4 -0.1**
WMOK Wichita Mounta 86.41 52 IAMs_20 IAMs_20 11 58 56.4
comp=Z,503nm,18.0s
WHTX Lake Whitney, 86.42 55 P **P** **11 19 18.6 -0.1**
WHTX IAmb IAmb 11 19 44.4
comp=Z,34nm,1.5s
WHTX Lake Whitney, 86.42 55 P 11 19 20.0
baz=249
BJT Baijiatuan 86.44 313 P **P** **11 19 17.0 -1.6**
BJT pmax pmax
comp=Z,28nm,1.3s
BJT Baijiatuan 86.44 313 P **P** **11 19 17.0 -1.6**
BJT IAmb IAmb 11 19 34.7
comp=Z,28nm,1.3s
BJI Beijing 86.44 313 P **P** **11 19 20.0 +1.5**
BJI S **S** **11 29 55.7 +2.4**
BJI pmax pmax
comp=Z,25nm,1.7s
BJI LR LR
comp=Z,180nm,11.4s
BJI LR LR
comp=Z,210nm,13.9s
RSSD Black Hills 86.54 42 P 11 19 18.8
baz=244
RSSD Black Hills 86.54 42 P **P** **11 19 19.4 +0.1**
RSSD pmax pmax
comp=Z,6.0nm,0.9s
RSSD MLR MLR
comp=Z,700nm,18.0s
RSSD Black Hills 86.54 42 P **P** **11 19 19.4 +0.1**
RSSD Black Hills 86.54 42 IAMs_20 IAMs_20 11 57 50.7
comp=Z,706nm,18.0s
U32A Winter Ranch, 86.87 51 IAMs_20 IAMs_20 11 56 14.3
comp=Z,770nm,18.0s
APG El Apazote 86.89 74 P **P** **11 19 21.6 0.0**
comp=Z,8.7nm,1.0s,baz=284,slow=5.9,SNR=6.9
CBKS Cedar Bluff 87.27 48 IAMs_20 IAMs_20 11 57 32.7
comp=Z,519nm,19.0s
MAW Mawson 87.33 198 P **P** **11 19 23.9 +1.5**
comp=Z,9.1nm,1.0s,baz=83,slow=3.5,SNR=5.5
MAW LR LR 11 56 25.2
comp=Z,993nm,19.4s,baz=100,slow=34
MAW Mawson 87.33 198 P **P** **11 19 23.1 +0.7**
IPM Ipoh 87.65 275 P **P** **11 19 24.1 -1.0**
IPM IAmb IAmb 11 19 46.5
comp=Z,22nm,1.2s
IPM Ipoh 87.65 275 P **P** **11 19 25.0 -0.1**
ENH Enshi 87.86 302 P **P** **11 19 24.8 -0.9**
A21K Barrow 87.92 5 IAMs_20 IAMs_20 11 53 00.1
comp=Z,607nm,20.0s
HIA Hailar 88.17 323*c i*P **P** **11 19 26.7 0.0**
HIA pmax pmax
comp=Z,15nm,1.6s
HIA Hailar 88.17 323 P **P** **11 19 26.5 -0.2**
HIA Hailar 88.17 323 IAMs_20 IAMs_20 11 52 54.9
comp=Z,605nm,22.0s
KULM Kulim 88.23 276 P **P** **11 19 28.0 +0.2**
OK031 S. Brethren Rd 88.33 52 IAMs_20 IAMs_20 11 56 17.3
comp=Z,645nm,19.0s
OK030 Cody Creek RV 88.37 52 IAMs_20 IAMs_20 11 56 43.1
comp=Z,693nm,18.0s
DGMT Dagmar 88.38 38 P **P** **11 19 27.1 -0.6**
DGMT IAmb IAmb 11 19 29.5
comp=Z,17nm,1.1s
PLCA Paso Flores 88.54 132 LR LR 11 50 54.3
comp=Z,655nm,20.0s,baz=274,slow=30
NATX Nacogdoches 88.57 56 IAMs_20 IAMs_20 11 53 14.0
comp=Z,498nm,19.0s
INK Inuvik 88.81 14 P **P** **11 19 28.3 -0.9**
comp=Z,11nm,1.1s,baz=206,slow=5.7,SNR=17
INK Inuvik 88.81 14 P **P** **11 19 29.1 -0.1**
INK pmax pmax
comp=Z,25nm,1.3s
INK Inuvik 88.81 14 P **P** **11 19 29.1 -0.1**
INK IAmb IAmb 11 19 30.5
comp=Z,25nm,1.3s
GYA Guiyang 88.96 298 P **P** **11 19 33.0 +1.9**
GYA S **S** **11 30 14.1 -4.2**
GYA SS **SS** **11 36 13.1 +1.3**
GYA pmax pmax
comp=Z,10.0nm,1.6s
GYA pmax pmax
comp=Z,310nm,7.0s
X37A Clayton 88.97 54 IAMs_20 IAMs_20 11 52 41.5
comp=Z,513nm,20.0s
RPSI Rantau Prapat 89.17 273 P **P** **11 19 32.3 +0.1**
RPSI Rantau Prapat 89.17 273 P **P** **11 19 31.1 -1.2**
RPSI IAmb IAmb 11 19 51.8
comp=Z,37nm,1.3s
PSI Prapat 89.20 273 P **P** **11 19 32.3 -0.3**
comp=Z,1.7nm,0.4s,baz=180,slow=4.4,SNR=7.6
XAN Xi'an 89.59 306 P **P** **11 19 34.3 +0.5**
XAN pP sP 11 19 42.2 -0.4
XAN S **S** **11 30 15.5 -8.2**
XAN pmax pmax
comp=Z,13nm,1.9s
XAN pmax pmax
comp=Z,300nm,6.7s
XAN LR LR
comp=Z,450nm,15.3s
XAN LR LR
comp=Z,260nm,14.9s
XAN LR LR
comp=Z,410nm,23.3s
XAN Xi'an 89.59 306 P **P** **11 19 32.9 -0.9**
XAN pmax pmax
comp=Z,16nm,1.3s
XAN Xi'an 89.59 306 P **P** **11 19 32.9 -0.9**
XAN IAmb IAmb 11 19 50.0
comp=Z,16nm,1.3s
KSU1 Kansas State U 89.64 49 IAMs_20 IAMs_20 11 55 50.4
comp=Z,549nm,18.0s
HHC Hu-ho-hao-te 90.00 313*eP* **P** **11 19 36.8 +1.2**
HHC SKS **SKSac** **11 30 03.6 -1.6**
HHC pmax pmax
comp=Z,28nm,1.4s
HHC pmax pmax
comp=Z,510nm,6.9s
HHC LR LR
comp=Z,250nm,14.7s
HHC LR LR
comp=Z,240nm,16.1s
HHC LR LR
comp=Z,250nm,18.1s
YAK Yakutsk 90.03 337*c i*P **P** **11 19 33.9 -1.2**
YAK pmax pmax
comp=Z,32nm,1.5s
YAK Yakutsk 90.03 337 P **P** **11 19 34.0 -1.2**
GSI Gunungsitoli 90.08 271 P **P** **11 19 35.5 -1.0**
W39A Magazine 90.41 53 IAMs_20 IAMs_20 11 54 57.4
comp=Z,660nm,20.0s
YKA Yellowknife Ar 90.49 23 P **P** **11 19 36.5 -0.8**
comp=Z,2.4nm,0.8s,baz=232,slow=4.3,SNR=44
YKA LR LR 11 53 43.7
comp=Z,285nm,20.5s,baz=0.0,slow=31
JTS Las Juntas de 90.69 80*c i*P **P** **11 19 41.5 +2.2**
JTS pmax pmax
comp=Z,33nm,1.2s
JTS Las Juntas de 90.69 80 P **P** **11 19 39.9 +0.6**
JTS Las Juntas de 90.69 80 IAMs_20 IAMs_20 11 56 06.1
comp=Z,472nm,18.0s
ECSD EROS Data Cent 91.30 45 P 11 19 41.7
baz=249
C36M Paulatuk 91.87 15 P 11 19 43.7
baz=226
C36M Paulatuk 91.87 15 P **P** **11 19 43.3 -0.1**
C36M IAmb IAmb 11 19 45.6
comp=Z,19nm,1.4s
C36M IAMs_20 IAMs_20 12 07 16.5
comp=Z,623nm,18.0s
FCAR Ozark Folk Cen 91.91 53 P **P** **11 19 44.0 -0.5**
KMI Kunming 91.93 295⇓P **P** **11 19 47.8 +2.7**
KMI pP pP 11 19 49.6 -2.3
KMI PP **PP** **11 23 20.2 -4.7**
KMI SKS **SKSac** **11 30 18.0 +0.7**
KMI S **S** **11 30 41.5 -4.4**
KMI pmax pmax
comp=Z,23nm,1.4s
KMI pmax pmax
comp=Z,230nm,10.5s
KMI LR LR
comp=Z,230nm,20.7s
KMI LR LR
comp=Z,250nm,17.5s
KMI LR LR
comp=Z,380nm,19.0s
SYO Syowa Base 92.03 191⇑*eX* P 11 19 53.2 +8.8
VNA3 Neumayer Olymp 92.08 175 P **P** **11 19 46.7 +1.9**
SNAA Sanae 92.16 177 P **P** **11 19 47.3 +2.2**
SNAA Sanae 92.16 177*d i*P **P** **11 19 45.5 +0.4**
SNAA pmax pmax
comp=Z,12nm,1.3s
SNAA Sanae 92.16 177 IAMs_20 IAMs_20 11 56 11.8
comp=Z,726nm,20.0s
MGMO Mountain Grove 92.20 52 P **P** **11 19 45.2 -0.6**
MGMO IAmb IAmb 11 19 58.6
comp=Z,17nm,1.1s
NNA Nana 92.25 103 *i* P **P** **11 19 46.1 -0.5**
NNA pmax pmax
comp=Z,16nm,1.1s
FFC Flin Flon 92.34 33 P **P** **11 19 46.0 0.0**
FFC pmax pmax
comp=Z,11nm,1.4s
FFC Flin Flon 92.34 33 P **P** **11 19 46.0 0.0**
FFC IAmb IAmb 11 19 47.0
comp=Z,11nm,1.4s
R40A Maddies Statio 92.56 51 P **P** **11 19 48.3 +0.9**
R40A IAmb IAmb 11 19 48.5
comp=Z,12nm,1.3s
VNA2 Neumayer--Watz 92.59 175 P **P** **11 19 49.3 +2.3**
baz=177,slow=3.8
CD2 Chengdu 92.75 301 P **P** **11 19 49.4 +0.8**
CD2 pmax pmax
comp=Z,20nm,0.5s
VNA1 Neumayer--Stat 92.78 175 P **P** **11 19 50.4 +2.5**
LAMP Lampang 92.86 288 P P 11 20 01.5 +12
comp=Z,686nmcomp=Z,24nm,0.5s
CIT Chita 92.90 324*eP* **P** **11 19 50.2 +1.4**
CIT *e* 11 19 57.6
CIT *e* 11 20 04.0
CIT pmax pmax
comp=Z,116nm,2.0s
CCM Cathedral Cave 93.25 51 IAMs_20 IAMs_20 11 59 53.5
comp=Z,696nm,18.0s
AGMN Agassiz Nation 93.40 41 P **P** **11 19 50.8 -0.2**
AGMN IAmb IAmb 11 19 52.1
comp=Z,12nm,1.3s
CM04 Chiang Mai Arr 93.42 288 P **P** **11 19 56.0 +4.1**
comp=Z,76nmcomp=Z,9.2nm,1.0s
CM09 Chiang Mai Arr 93.42 288 P P 11 20 00.7 +8.8
comp=Z,6.5nm,0.9s
CM01 Chiang Mai Arr 93.44 288 P P 11 20 00.3 +8.3
comp=Z,114nmcomp=Z,7.1nm,1.1s
CM05 Chiang Mai Arr 93.45 288 P P 11 19 59.0 +7.0
comp=Z,54nmcomp=Z,6.4nm,1.1s
CM02 Chiang Mai Arr 93.46 288 P P 11 20 02.5 +10
comp=Z,67nmcomp=Z,8.1nm,1.2s
CMAR Chiang Mai Arr 93.47 288 P **P** **11 19 53.1 +1.0**
comp=Z,1.0nm,0.4s,baz=86,slow=2.7,SNR=11
CMAR LR LR 12 00 08.9
comp=Z,161nm,18.9s,baz=176,slow=34
CM13 Chiang Mai Arr 93.49 288 P P 11 20 00.5 +8.3
comp=Z,6.7nm,1.2s
CMMT Chiang Mai 93.56 288 P **P** **11 19 55.0 +2.5**
comp=Z,3.8nm,1.3s
CHTO Chiang Mai 93.56 288 P **P** **11 19 51.6 -0.9**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 93.56 288 P **P** **11 19 51.6 -0.9**
OXF Oxford 93.61 55 IAMs_20 IAMs_20 11 57 21.5
comp=Z,511nm,20.0s
ULM Lac du Bonnet 94.07 39 P **P** **11 19 53.4 -0.8**
comp=Z,3.5nm,0.9s,baz=235,slow=8.9,SNR=5.7
ULM LR LR 11 55 11.9
comp=Z,798nm,21.9s,baz=254,slow=31
ULM Lac du Bonnet 94.07 39⇑*i*P **P** **11 19 53.9 -0.2**
ULM Lac du Bonnet 94.07 39 P **P** **11 19 53.6 -0.5**
ULM IAmb IAmb 11 19 54.4
comp=Z,20nm,1.4s
LZH Lanzhou 94.18 306*eP* **P** **11 19 55.0 -0.2**
LZH sP pP 11 20 00.0 -1.9
LZH SKS **SKSac** **11 30 31.1 +2.0**
LZH S **S** **11 31 03.1 -2.2**
LZH pmax pmax
comp=Z,25nm,1.4s
LZH pmax pmax
comp=Z,140nm,6.5s
LZH LR LR
comp=Z,250nm,17.0s
LZH LR LR
comp=Z,310nm,16.8s
LZH LR LR

comp=Z,340nm,19.1s
PB10 IPOC Station P 94.38 116 IAMs_20 IAMs_20 11 50 44.0
comp=Z,760nm,21.0s
L40A Anamosa 94.49 48 P **P** **11 19 55.5 -0.7**
L40A IAmb IAmb 11 20 08.3
comp=Z,15nm,1.0s
B35A Bob, Littlefor 94.77 41 P **P** **11 19 56.7 -0.7**
B35A IAmb IAmb 11 19 57.6
comp=Z,17nm,1.4s
PLAL Pickwick Lake 94.80 55 IAMs_20 IAMs_20 12 00 42.9
comp=Z,578nm,18.0s
BOD Bodaibo 94.88 329 *eP* **P** **11 19 56.9 -0.7**
BOD pmax pmax
comp=Z,8.0nm,2.0s
WVT Waverly 95.31 54 IAMs_20 IAMs_20 11 56 07.2
comp=Z,550nm,21.0s
ULN Ulaanbaatar 95.41 318*c i*P **P** **11 20 00.5 0.0**
ULN pmax pmax
comp=Z,17nm,1.8s
ULN Ulaanbaatar 95.41 318 P **P** **11 19 59.9 -0.6**
JFWS Jewell Farm 95.43 47 P **P** **11 20 00.2 -0.3**
JFWS pmax pmax
comp=Z,17nm,1.1s
JFWS Jewell Farm 95.43 47 P **P** **11 20 00.2 -0.3**
JFWS Jewell Farm 95.43 47 IAMs_20 IAMs_20 12 00 37.4
comp=Z,502nm,19.0s
HDIL Hopedale 95.44 49 IAMs_20 IAMs_20 12 03 10.0
comp=Z,658nm,18.0s
L42A Oliver, Polo 95.58 48 P **P** **11 20 01.6 +0.4**
L42A IAmb IAmb 11 20 12.4
comp=Z,13nm,1.1s
SONM Songino Array 95.82 318 P **P** **11 20 02.4 +0.1**
comp=Z,1.4nm,1.0s,baz=116,slow=3.1,SNR=8.1
SONM LR LR 11 57 31.0
comp=Z,329nm,21.7s,baz=102,slow=32
SONM Songino Array 95.82 318 P **P** **11 20 03.3 +0.9**
SONM pmax pmax
comp=Z,4.0nm,1.4s
SONM Songino Array 95.82 318 P **P** **11 20 03.3 +0.9**
TIXI Tiksi 95.87 344 P **P** **11 20 00.7 -1.2**
comp=Z,0.5nm,0.4s,baz=138,slow=6.5,SNR=4.7
TIXI Tiksi 95.87 344‖ *i*P **P** **11 20 02.0 +0.2**
TIXI Tiksi 95.87 344 P **P** **11 20 00.9 -1.0**
TIXI IAMs_20 IAMs_20 11 57 55.1
comp=Z,510nm,21.0s
EYMN Ely 96.06 42 IAMs_20 IAMs_20 11 58 27.5
comp=Z,511nm,20.0s
G40A Rib Lake 96.14 45 P **P** **11 20 03.4 -0.3**
G40A IAmb IAmb 11 20 15.8
comp=Z,8.7nm,1.2s
HQIL Hanson Quary C 96.82 49 IAMs_20 IAMs_20 12 00 43.6
comp=Z,522nm,18.0s
COWI Conover 97.08 44 P **P** **11 20 07.8 -0.2**
COWI IAMs_20 IAMs_20 12 05 08.9
comp=Z,594nm,18.0s
GTA Gaotai 98.14 309 P Pdif 11 20 14.3 +1.2
GTA pP pP 11 20 17.8 -1.8
GTA sP sP 11 20 20.1 -1.8
GTA pmax pmax
comp=Z,5.0nm,1.1s
GTA pmax pmax
comp=Z,47nm,5.3s
GTA LR LR
comp=Z,120nm,18.5s
GTA LR LR
comp=Z,320nm,21.1s
GTA LR LR
comp=Z,350nm,20.7s
TLY Talaya 98.61 321 P **P** **11 20 13.7 -1.0**
TLY Talaya 98.61 321 P **P** **11 20 13.7 -1.0**
TLY IAmb IAmb 11 20 18.7
comp=Z,4.7nm,0.7s
LPAZ La Paz 98.94 110 LR LR 11 55 38.7
comp=Z,365nm,21.9s,baz=262,slow=30
ROSC El Rosal 99.37 88 LR LR 11 55 55.7
comp=Z,280nm,20.5s,baz=250,slow=30
AAM Ann Arbor 99.98 49 IAMs_20 IAMs_20 12 00 51.1
comp=Z,582nm,20.0s
U54A Nelsons Funny 100.11 55 IAMs_20 IAMs_20 11 58 00.4
comp=Z,520nm,20.0s
P52A Corning 100.53 52 IAMs_20 IAMs_20 12 05 01.2
comp=Z,537nm,18.0s
O53A New Philadelph 101.35 51 IAMs_20 IAMs_20 12 05 18.7
comp=Z,606nm,18.0s
RES Resolute Bay 102.24 15 P **Pdif** **11 20 30.4 +0.1**
comp=Z,1.4nm,0.8s,baz=216,slow=9.3,SNR=6.6
MCWV Mont Chateau 102.27 52 IAMs_20 IAMs_20 12 04 41.1
comp=Z,378nm,18.0s
O56A Blue Knob Stat 103.34 52 IAMs_20 IAMs_20 12 05 49.6
comp=Z,545nm,18.0s
SDDR Presa de Saban 105.62 74 IAMs_20 IAMs_20 11 59 14.7
comp=Z,580nm,21.0s
SAML Samuel 105.95 104 IAMs_20 IAMs_20 11 59 49.1
comp=Z,370nm,18.0s
M63A Gales Ferry 108.40 51 IAMs_20 IAMs_20 12 08 03.2
comp=Z,556nm,18.0s
HNH Hanover 108.43 49 IAMs_20 IAMs_20 12 07 29.7
comp=Z,548nm,21.0s
MKAR Makanchi Array 111.80 314 PKiKP **PKiKP** **11 25 09.7 -1.0**
comp=Z,0.3nm,0.5s,baz=68,slow=3.9,SNR=4.5
MKAR Makanchi Array 111.80 314*c i*PKIKP **PKiKP** **11 25 11.8 +1.0**
G65A Princeton 111.88 47 IAMs_20 IAMs_20 12 07 04.9
comp=Z,565nm,20.0s
EMMW East Machias 111.95 48 IAMs_20 IAMs_20 12 07 55.7
comp=Z,583nm,21.0s
KURK Kurchatov 114.12 319 *i* PKIKP PKPdf 11 25 14.1 -0.9
KURK Kurchatov 114.12 319 PKPdf 11 25 14.1 -0.9
KURBB Kurchatov Arra 114.18 319 PKP PKPdf 11 25 14.1 -1.0
comp=Z,0.7nm,0.8s,baz=88,slow=1.7,SNR=4.8
BVAR Borovoye Array 118.85 322 PKP **PKPdf** **11 25 23.8 -0.3**
comp=Z,0.5nm,0.6s,baz=266,slow=40,SNR=3.7
ARU Arti 124.30 328 *i* PKIKP **PKiKP** **11 25 35.8 +1.1**
ARU 11 27 24.6
ARU 11 32 47.2
ARCES ARCESS Array B 125.41 352 PKP **PKiKP** **11 25 36.7 +0.1**
comp=Z,2.8nm,0.8s,baz=40,slow=1.5,SNR=4.1
APA Apatity 125.87 348‖ *i*PKHKP PKPpre 11 25 13.9
APA pmax pmax
comp=Z,11nm,1.0s
ABKAR Akbulak array 126.19 320 PKPdf **PKPdf** **11 25 38.2 -0.1**
AKTO Aktyubinsk 126.96 322 PKP **PKiKP** **11 25 40.1 -0.1**
comp=Z,1.3nm,0.9s,baz=177,slow=1.9,SNR=4.5
KLMR Klimovskoe 129.69 340 *e*PKIKP **PKPdf** **11 25 43.3 -1.3**
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 129.69 340 *e*PKPdf **PKPdf** **11 25 43.4 -1.2**
KLMR AMP 11 25 48.8
comp=Z,22nm,1.5s
BOSA Boshof 132.25 201 PKP **PKiKP** **11 25 51.6 -0.2**
comp=Z,2.9nm,1.0s,baz=109,slow=6.9,SNR=2.8
BOSA Boshof 132.25 201 **PKPdf** **11 25 51.0 +0.3**
FINES FINESS Array B 132.78 348 PKP **PKPdf** **11 25 50.1 -0.3**
comp=Z,1.9nm,0.7s,baz=72,slow=6.2,SNR=4.0
FINES FINESS Array B 132.78 348*c i*PKIKP **PKiKP** **11 25 52.2 +0.6**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 132.78 348 **PKPdf** **11 25 50.6 +0.2**
OBN Obninsk 135.03 337‖ *i*PKIKP **PKiKP** **11 25 56.3 0.0**
OBN *e* 11 28 32.3
OBN pmax pmax
comp=Z,42nm,2.1s
OBN MLR MLR
comp=Z,332nm,19.0s
NACGM Naroch 138.46 343 *i* PKP **PKiKP** **11 26 08.3 +5.0**
NACGM *i* PKP **PKiKP** **11 26 08.3 +5.0**
NACGM *i* PKP **PKiKP** **11 26 08.3 +5.0**
NACGM *i* pPKP sPKPdf 11 26 33.8 +24
NACGM *i* PP **PP** **11 28 57.5 +6.8**
NACGM *i* PPP PPP 11 31 58.2
NACGM *i* SKS **SKSdf** **11 33 03.0 -7.2**
NACGM *i* SKKS 11 34 35.6
NACGM *i* SPP SPP 11 40 49.6
NACGM *i* SS **SS** **11 47 06.0 +3.9**
NACGM *i* SSS SSS 11 52 16.5
KIV Kislovodsk 139.17 320 *i* PKIKP **PKiKP** **11 26 04.1 -1.2**
KIV pmax pmax
comp=Z,15nm,1.0s
AKASG Malin Array Be 141.25 338 PKhKP PKPpre 11 26 00.6
comp=Z,0.3nm,0.3s,baz=41,slow=3.7,SNR=1.6
AKBB Malin Array Si 141.25 338‖ *i*PKIKP **PKPdf** **11 26 07.6 +1.2**
BSEG Bad Segeberg 142.19 357 *e*L L 12 34 59.4
comp=Z,327nm,18.8s
BNGB Bingl 142.97 315 *eP* **PKPdf** **11 26 07.6 -2.4**
RAYN Ar Rayn 143.39 288 PKIKP PKPbc 11 26 08.8 +0.5
RAYN Ar Rayn 143.39 288 PKPdf PKPbc 11 26 08.8 +0.5
LVV L'vov 143.75 342 *e*PKIKP PKPbc 11 26 09.4 +1.0

RSDY Resadiye-TOKAT 144.45 319 *eP* **PKPdf** **11 26 11.8 -0.7**
OJC Ojcow 144.51 346 *e*PKP **PKPdf** **11 26 13.8 +1.6**
CLL Collm 144.60 354 *e*PKPdf PKPbc 11 26 11.0 0.0
CLL *e* 11 26 25.0
CLL *e*PP **PP** **11 29 25.0 -2.9**
CLL Collm 144.60 354 *e*PKIKP PKPbc 11 26 11.0 0.0
CLL Collm 144.60 354 *e*L L 12 27 46.3
comp=Z,268nm,19.7s
KSP Ksiaz 144.61 350 *e*PKP **PKiKP** **11 26 14.6 -1.4**
SNOP Sinop 144.77 323 *eP* **PKPdf** **11 26 12.6 -0.3**
MALT Malatya 144.84 315 *eP* **PKPdf** **11 26 14.2 +0.9**
KVT Kavak 144.85 321 *eP* **PKPdf** **11 26 13.4 +0.3**
CHVC Chvalec 144.90 350 *e*PKP **PKPdf** **11 26 12.9 0.0**
OSTC Ostas 144.90 350 *e*PKP **PKPdf** **11 26 13.2 +0.3**
BRG Berggiesshubel 144.92 353 *e*PKP **PKiKP** **11 26 15.6 -1.1**
BRG Amp 11 26 19.0
comp=Z,93nm,2.4s
SVSK Karacayir 144.93 318 *eP* **PKPdf** **11 26 14.4 +1.2**
DIKM Dikmen 144.97 322‖ *eP* **PKPdf** **11 26 14.4 +1.1**
TOKT Tokat 144.98 319 *eP* **PKPdf** **11 26 13.4 0.0**
URFA Urfa 145.00 313 *eP* **PKPab** **11 26 12.9 0.0**
KOLS Kolonicke sedl 145.06 343 *e*PKIKP **PKPdf** **11 26 13.6 +0.4**
KOLS Kolonicke sedl 145.06 343 *e*PKP **PKPdf** **11 26 13.6 +0.4**
DPC Dobruska-Polom 145.08 350 *e*PKIKP **PKPdf** **11 26 13.2 -0.1**
DPC *e* 11 26 22.7
DPC Dobruska-Polom 145.08 350 *e*PKP **PKPdf** **11 26 13.2 -0.1**
DPC *ex* x 11 26 22.7
NIE Niedzica 145.14 345 *e*PKP **PKPdf** **11 26 14.4 +1.0**
ATD Arta Tunnel 145.20 267 IAMs_20 IAMs_20 12 38 37.6
comp=Z,245nm,19.0s
BUR08 Bucovina Ar. S 145.26 339 **PKPdf** **11 26 14.7 +1.0**
BURAR Bucovina Array 145.28 339‖ *eP* **PKPdf** **11 26 15.1 +1.3**
BURAR Bucovina Array 145.28 339‖ *e*PKIKP **PKPdf** **11 26 15.1 +1.3**
BURAR Bucovina Array 145.28 339 **PKPdf** **11 26 13.7 0.0**
CRVS Cervenica-Dubn 145.31 344 *e*PKIKP **PKPdf** **11 26 14.9 +1.2**
CRVS Cervenica-Dubn 145.31 344 *e*PKP **PKPdf** **11 26 14.9 +1.2**
DARE Darende-Malaty 145.34 316 *eP* **PKPdf** **11 26 15.9 +1.7**
MOX Moxa 145.38 355 *e*PKPbc **PKPab** **11 26 14.0 +0.2**
baz=7.4,slow=3.1
MOX *e*L L 12 37 45.7
comp=Z,245nm,21.2s
MORC Moravsky Berou 145.41 348 *e*PKP **PKPab** **11 26 14.6 +0.7**
MORC Moravsky Berou 145.41 348 PKIKP **PKPab** **11 26 14.3 +0.4**
MORC Moravsky Berou 145.41 348 **PKPab** **11 26 14.3 +0.4**
PLN Plauen 145.50 355 *e*PKPbc **PKPbc** **11 26 13.8 -0.1**
baz=7.4,slow=3.1
BZK Bozkurt 145.50 324 *eP* **PKPab** **11 26 14.7 +0.2**
BIZ Bicaz 145.53 337‖ *eP* **PKPab** **11 26 15.4 +1.0**
TANN Tannenbergstha 145.54 354 *e*PKPbc **PKPab** **11 26 14.4 0.0**
baz=7.4,slow=3.1
LANS Liptovska Anna 145.59 346 *e*PKIKP **PKPab** **11 26 15.6 +1.0**
LANS Liptovska Anna 145.59 346 *e*PKP **PKPab** **11 26 15.6 +1.0**
BSTI Sart Tilman 145.59 2 *d*PKP **PKPab** **11 26 14.8 +0.3**
GUNZ Gunzen 145.60 354 *e*PKPbc **PKPab** **11 26 15.2 +0.6**
baz=7.4,slow=3.1
BTNL Ternell 145.61 1 *d*PKP **PKPdf** **11 26 14.1 0.0**
WERN Wernitzgruen 145.67 354 *e*PKPbc **PKPab** **11 26 15.3 +0.5**
baz=7.4,slow=3.1
TESR Tescani 145.67 336‖ *eP* **PKPab** **11 26 15.2 +0.2**
PRU Pruhonice 145.71 352 *e*PKIKP **PKPab** **11 26 15.3 +0.3**
PRU Pruhonice 145.71 352 *e*PKP **PKPab** **11 26 15.3 +0.3**
NKC Novy Kostel 145.72 354 *e*PKIKP **PKPab** **11 26 15.2 +0.2**
NKC Novy Kostel 145.72 354 *e*PKP **PKPab** **11 26 15.2 +0.2**
KMBO Kilima Mbogo 145.81 243 PKPbc **PKPab** **11 26 17.1 +0.3**
comp=Z,2.4nm,0.3s,baz=88,slow=2.8,SNR=54
BMRD Maredsous 145.84 1 *d*PKP **PKPab** **11 26 15.7 +0.2**
KECS Kecovo 145.96 344 *e*PKP2 **PKPab** **11 26 16.0 +0.1**
KECS Kecovo 145.96 344 *e*PKP **PKPab** **11 26 16.0 +0.1**
TNS Taunus Mts 145.97 359 *e*PKPbc **PKPab** **11 26 16.4 +0.4**
baz=7.4,slow=3.1
TNS *e*L L 12 31 10.6
comp=Z,263nm,21.4s
MANZ Manzenberg 145.99 354 *e*PKPbc **PKPab** **11 26 16.1 0.0**
baz=7.4,slow=3.1
VRAC Vranov 146.04 349 PKPbc **PKPdf** **11 26 15.0 +0.2**
comp=Z,9.9nm,0.9s,baz=25,slow=3.0,SNR=18
VRAC Vranov 146.04 349‖ *eP* **PKPab** **11 26 17.2 +0.9**
VRAC Vranov 146.04 349 *e*PKP **PKPab** **11 26 16.8 +0.5**
SARI SarD1z-Kayseri 146.13 317 *eP* **PKPab** **11 26 17.2 0.0**
CFR Carcaliu 146.14 333‖ *eP* **PKPbc** **11 26 16.2 +0.1**
CFR Carcaliu 146.14 333‖ *e*PKP2 **PKPbc** **11 26 16.2 +0.1**
VRI Vrincioaia 146.17 335‖ *eP* **PKPab** **11 26 16.9 0.0**
VRI Vrincioaia 146.17 335‖ *e*PKP2 **PKPab** **11 26 16.9 0.0**
ROTZ Rotzenmuhle 146.20 354 *e*PKPbc **PKPab** **11 26 16.9 +0.1**
baz=7.4,slow=3.1
PLOR Plostina 146.22 335‖ *eP* **PKPab** **11 26 17.9 +0.8**
PLOR Plostina 146.22 335‖ *e*PKP2 **PKPab** **11 26 17.9 +0.8**
GAZ Gaziantep 146.25 314 *eP* **PKPab** **11 26 17.8 +0.3**
GAZ Gaziantep 146.25 314 **PKPdf** **11 26 15.4 -0.3**
CORM Corum 146.25 321 *eP* **PKPab** **11 26 17.9 +0.4**
JAVC Velka Javorina 146.26 348 *e*PKP **PKiKP** **11 26 18.6 -1.0**
BNY Bunyan 146.26 318 *eP* **PKPab** **11 26 17.5 -0.1**
TPGR Topolog 146.26 333‖ *eP* **PKPab** **11 26 17.1 -0.1**
KURC Kurucaisle-Bar 146.29 325 *eP* **PKPdf** **11 26 14.7 -0.8**
KMRS Kahramanmaras 146.29 315 *eP* **PKPab** **11 26 17.8 +0.2**
KRUC Moravsky 146.31 349 *e*PKP **PKPab** **11 26 17.5 +0.2**
VYHS Vyhne 146.35 346 *e*PKP2 **PKPab** **11 26 17.1 -0.4**
VYHS Vyhne 146.35 346 *e*PKP **PKPab** **11 26 17.1 -0.4**
GRF Grafenberg Arr 146.36 355 *e*PKPbc **PKPab** **11 26 18.0 +0.5**
baz=7.4,slow=3.1
GRF *e*L L 12 31 38.7
comp=Z,305nm,19.1s
CANT Cankiri 146.59 322 *eP* **PKPab** **11 26 18.4 -0.3**
DOPR Dopca 146.61 337‖ *eP* **PKiKP** **11 26 19.8 -0.6**
KHC Kasperske Hory 146.68 352 PKIKP **PKPdf** **11 26 15.3 -0.7**
KHC Kasperske Hory 146.68 352 *e*PKP **PKPab** **11 26 18.1 -0.6**
KHC *ex* x 11 26 35.0
KHC Kasperske Hory 146.68 352 PKPdf **PKPdf** **11 26 15.3 -0.7**
WET Wettzell 146.75 353 *e*PKPbc **PKPab** **11 26 18.5 -0.5**
baz=7.4,slow=3.1
WET *e*L L 12 29 29.7
comp=Z,296nm,21.2s
MLR Muntele Rosu 146.79 336 PKPbc **PKPab** **11 26 19.4 0.0**
comp=Z,9.4nm,1.0s,baz=40,slow=2.9,SNR=13
MLR Muntele Rosu 146.79 336‖ *eP* **PKPab** **11 26 19.6 +0.2**
MLR Muntele Rosu 146.79 336 PKP2 **PKPbc** **11 26 18.5 +0.3**
MLR Muntele Rosu 146.79 336 **PKPbc** **11 26 18.5 +0.3**
MODS Modra-Piesok 146.80 348 *e*PKP2 **PKPab** **11 26 18.5 -0.7**
MODS Modra-Piesok 146.80 348 *e*PKP **PKPab** **11 26 18.5 -0.7**
DRGR 146.84 340‖ *eP* **PKPab** **11 26 19.4 -0.1**
DRGR 146.84 340‖ *e*PKP2 **PKPab** **11 26 19.4 -0.1**
ISR Istrita 146.86 335‖ *eP* **PKPab** **11 26 20.1 +0.5**
ISR Istrita 146.86 335‖ *e*PKP2 **PKPab** **11 26 20.1 +0.5**
CKRC Cesky Krumlov 146.88 351 *e*PKP **PKPbc** **11 26 17.8 -0.4**
GEC2 GERESS Array S 146.94 352 **PKPdf** **11 26 15.6 -1.0**
GEC2 GERESS Array S 146.94 352 *e*L L 12 33 18.5
comp=Z,296nm,21.2s
GERES GERESS Array B 146.94 352 PKPbc **PKPbc** **11 26 17.5 -1.0**
comp=Z,2.4nm,0.8s,baz=18,slow=0.3,SNR=7.7
KOZT Kozan 147.03 316 *eP* **PKPab** **11 26 19.9 -0.6**
BR131 Keskin Array S 147.13 321 PKP2 **PKPab** **11 26 20.3 -0.7**
BR131 Keskin Array S 147.13 321 **PKPab** **11 26 20.3 -0.7**
BRTR Keskin Array B 147.13 321 PKPbc **PKPbc** **11 26 19.7 +0.3**
comp=Z,17nm,0.9s,baz=123,slow=2.0,SNR=53
BRTR Keskin Array B 147.13 321 *eP* **PKPab** **11 26 20.1 -0.9**
BRTR Keskin Array B 147.13 321 PKPdf **PKPbc** **11 26 18.3 -1.1**
VOIR 147.19 337‖ *eP* **PKPbc** **11 26 19.9 +0.7**
VOIR 147.19 337‖ *e*PKP2 **PKPbc** **11 26 19.9 +0.7**
KAMT Kaman 147.30 320 *eP* **PKPbc** **11 26 19.9 +0.1**
CEYT Ceyhan 147.33 315 *eP* **PKPab** **11 26 20.7 -0.9**
TAHT Tahtakopru-Hat 147.36 314 *eP* **PKPbc** **11 26 20.7 +0.8**
ARR Arges 147.40 337‖ *eP* **PKiKP** **11 26 22.5 +0.4**
CMRD Camardi-Nigde 147.49 317 *eP* **PKPab** **11 26 21.7 -0.7**
CONA Conrad Observa 147.50 349 *eP* **PKPab** **11 26 21.6 -0.5**
comp=Z,34nm,1.5s,SNR=13
LOD Lodumlu 147.55 322 *eP* **PKPbc** **11 26 20.1 -0.3**
SERE Serefiikochisa 147.65 320 *eP* **PKPbc** **11 26 21.3 +0.5**
KARA Karaisali 147.66 316 *eP* **PKPbc** **11 26 20.3 -0.4**
KRTS Karatas 147.81 315 *eP* **PKPbc** **11 26 21.7 +0.6**
MOA Molln 147.84 351 *eP* **PKiKP** **11 26 22.1 -0.7**
comp=Z,16nm,1.2s,SNR=7.3
YUVA Yuva-Kibriscik 147.85 324 *eP* **PKiKP** **11 26 22.4 -0.8**
BFO Black Forest 147.87 359 PKIKP **PKPdf** **11 26 17.1 -0.9**
BFO 11 26 21.8
BFO Black Forest 147.87 359 PKPdf **PKPdf** **11 26 17.1 -0.9**
BFO **PKPbc** **11 26 21.8 +0.8**
BFO Black Forest 147.87 359 *e*PKPbc **PKPbc** **11 26 21.7 +0.8**
baz=7.4,slow=3.1
BFO *e*L L 12 30 31.6
comp=Z,276nm,21.4s
FUR Furstenfeldbru 147.87 355 *e*L L 12 30 21.7
comp=Z,331nm,20.0s

CLF Chambon-Foret 147.91 6 **PKiKP** **11 26 22.9 -0.1**
KULU Kulu 147.94 320 *eP* **PKPbc** **11 26 21.5 -0.1**
GZR Gura Zlata 148.04 339‖ *eP* **PKiKP** **11 26 22.9 -0.5**
GZR Gura Zlata 148.04 339‖ *e*PKP2 **PKiKP** **11 26 22.9 -0.5**
MDUB Mudurnu 148.07 324 *eP* **PKPbc** **11 26 20.7 -1.2**
MDUB Mudurnu 148.07 324 **PKPbc** **11 26 22.2 +0.3**
ARSA Arzberg 148.22 349 *eP* **PKPbc** **11 26 22.6 +0.7**
comp=Z,24nm,1.6s,SNR=7.1
BZS Buzias 148.23 341‖ *eP* **PKPbc** **11 26 22.6 +0.7**
BZS Buzias 148.23 341‖ *e*PKP2 **PKPbc** **11 26 22.6 +0.7**
MERS Mersin 148.23 316 *eP* **PKPbc** **11 26 22.6 +0.2**
SAUV Serdivan-Sakar 148.37 325 *eP* **PKPbc** **11 26 22.2 -0.3**
SILT Sile 148.45 327 *eP* **PKPbc** **11 26 23.0 +0.3**
GULT Gulveren 148.48 325 *eP* **PKPbc** **11 26 23.8 -0.7**
MORH Mrgy, Hungar 148.53 345‖ *eP* **PKPbc** **11 26 23.2 +0.5**
FURI Furi 148.56 261 IAMs_20 IAMs_20 12 32 13.6
comp=Z,338nm,20.0s
SVRH Sivrihisar-ESK 148.57 322 *eP* **PKPbc** **11 26 23.6 +0.4**
RETA Reutte 148.59 355 *eP* **PKiKP** **11 26 24.0 -0.5**
comp=Z,17nm,1.3s
HERR Herculane 148.62 339‖ *eP* **PKiKP** **11 26 24.5 0.0**
WATA Walderalm 148.67 354 *eP* **PKiKP** **11 26 24.1 -0.6**
comp=Z,13nm,1.0s
KLYT Kilyos 148.69 327 *eP* **PKPbc** **11 26 23.6 +0.3**
KIZK Mersin 148.70 316 *eP* **PKPbc** **11 26 24.2 -0.7**
MOTA Moosalm 148.70 355 *eP* **PKiKP** **11 26 24.3 -0.5**
comp=Z,16nm,1.1s,SNR=6.2
WTTA Wattenberg 148.74 354 *eP* **PKiKP** **11 26 24.6 -0.3**
comp=Z,15nm,1.0s,SNR=7.1
WTTA Wattenberg 148.74 354 PKP2 **PKiKP** **11 26 24.6 -0.3**
SQTA Sankt Quirin 148.82 355 *eP* **PKiKP** **11 26 24.9 -0.1**
comp=Z,18nm,1.4s
DAVA Damuels 148.85 357 *eP* **PKiKP** **11 26 24.8 -0.4**
comp=Z,15nm,1.0s
LADK Ladik-KONYA 148.85 320 *eP* **PKPbc** **11 26 22.8 -1.2**
SOKA Soboth 148.85 350 *eP* **PKiKP** **11 26 24.5 -0.5**
comp=Z,9.6nm,1.0s
BGKT Bogazkoy 148.88 328 *eP* **PKPbc** **11 26 24.4 -0.7**
CTYL Yalikoy Yolu 148.91 329 *eP* **PKPbc** **11 26 24.2 +0.4**
SILI Silifke-Mersin 148.91 316 *eP* **PKPbc** **11 26 23.8 -0.2**
MDVR Moldovita 148.94 340‖ *eP* **PKiKP** **11 26 25.4 +0.2**
CTKS Kestanelik-??a 148.98 328 *eP* **PKPbc** **11 26 23.2 -0.8**
YLV Yalova 149.01 326 *eP* **PKPbc** **11 26 24.4 +0.2**
KONT Konya--Tatoy 149.01 319 *eP* **PKPbc** **11 26 23.9 -0.4**
FETA Feichten 149.06 355 *eP* **PKiKP** **11 26 25.6 +0.1**
comp=Z,18nm,1.4s
PLVB Pleven 149.07 335‖ *eP* **PKiKP** **11 26 26.1 +0.7**
MYKA Terra Mystica 149.12 351 *eP* **PKPbc** **11 26 24.6 +0.2**
comp=Z,24nm,2.0s
SLVT Silivri 149.13 328 *eP* **PKPbc** **11 26 24.9 +0.5**
IKL Isikli 149.14 316 *eP* **PKPbc** **11 26 24.8 +0.2**
ABTA Abfaltersbach 149.15 353 *eP* **PKiKP** **11 26 25.1 -0.6**
comp=Z,12nm,0.9s,SNR=5.2
FRGS Fruska Gora 149.19 343‖ *eP* **PKiKP** **11 26 25.9 +0.2**
EREN Erenkoy 149.19 314 *eP* **PKPbc** **11 26 25.3 -0.7**
TEVE Tevekalti-Mers 149.19 316 *eP* **PKPbc** **11 26 24.6 -0.2**
GEMT Gemlik 149.20 326 *eP* **PKPbc** **11 26 24.6 0.0**
AKKU Akkuyu-Mersin 149.28 316 *eP* **PKPbc** **11 26 25.1 +0.2**
ZOU Zoufplan 149.28 352 **PKPdf** **11 26 17.9 -2.7**
DAVOX Davos/Dischmat 149.35 357 PKPbc **PKPbc** **11 26 23.9 -1.1**
comp=Z,6.4nm,0.8s,baz=5.9,slow=9.9,SNR=8.6
EDRB Edirne 149.38 331 *eP* **PKiKP** **11 26 25.5 -0.7**
BERE Bereket-Mersin 149.39 316 *eP* **PKPbc** **11 26 25.5 +0.1**
MMAI Mount Meron Ar 149.53 309 PKPbc **PKPbc** **11 26 25.3 -0.5**
comp=Z,12nm,0.8s,baz=56,slow=6.1,SNR=12
TUE Stuetta 149.69 357 PKPdf **PKPdf** **11 26 19.8 -1.4**
SHUT Suhut-Afyon 149.73 322 *eP* **PKPbc** **11 26 26.5 +0.4**
TVSB Tavsanli 149.75 325 *eP* **PKPbc** **11 26 25.4 -0.7**
KCTX Karacabey (Bur 149.76 327 *eP* **PKPbc** **11 26 25.7 -0.4**
MRMT Marmara Adasi 149.91 328 *eP* **PKPbc** **11 26 26.1 -0.4**
GZKV Gazikoy-Tekird 149.94 329 *eP* **PKPbc** **11 26 25.5 -0.9**
CTI Castel Tesino 149.94 354 PKHKP PKPpre 11 26 20.9
CTI 11 26 27.0
CTI Castel Tesino 149.94 354 PKPdf **PKPdf** **11 26 20.9 -0.6**
CTI **PKiKP** **11 26 27.0 -0.3**
EDC Edincik 149.96 328 *eP* **PKPbc** **11 26 26.7 +0.2**
RKY Sarkoy-Tekirda 150.06 329 *eP* **PKPbc** **11 26 25.9 -0.9**
GAZI Gazipasa 150.06 317 *eP* **PKPbc** **11 26 26.3 -0.6**
PLD Plovdiv 150.09 333 *eP* **PKPbc** **11 26 26.3 -0.4**
DIVS Divibare 150.10 341 **PKiKP** **11 26 28.2 +0.5**
VTS Vitosha 150.27 336‖ *eP* **PKiKP** **11 26 28.6 +0.4**
VTS Vitosha 150.27 336 PKIKP **PKiKP** **11 26 28.6 +0.4**
VTS Vitosha 150.27 336 **PKiKP** **11 26 28.6 +0.4**
SIMA Simav-Kutahya 150.27 325 *eP* **PKPbc** **11 26 25.1 -2.3**
LEF Lefka 150.30 314‖ *eP* **PKiKP** **11 26 28.5 +0.2**
LEF Lefka 150.30 314 *eP* **PKPbc** **11 26 27.3 -0.2**
ERIK Erikli-Kesan 150.40 330 *eP* **PKPbc** **11 26 27.3 -0.2**
RDO Rodhopi 150.49 331 *eP* **PKiKP** **11 26 28.1 -0.3**
TEOL Teolo 150.62 354 **PKiKP** **11 26 29.1 +0.4**
SSB Saint Sauveur 150.84 4 PKIKP **PKiKP** **11 26 30.1 +1.0**
SSB Saint Sauveur 150.84 4 **PKiKP** **11 26 30.1 +1.0**
KULA Kula-Manisa 150.84 324 *eP* **PKPbc** **11 26 28.0 -0.8**
KORT Korkueli 150.85 320 *eP* **PKPbc** **11 26 28.6 -0.3**
HRFI Mount Harif 151.05 303 *eP* **PKiKP** **11 26 29.8 -0.2**
EIL Elat 151.26 303 PKPbc **PKPbc** **11 26 29.1 -0.8**
comp=Z,13nm,0.9s,baz=333,slow=0.7,SNR=11
ELL Elmali 151.28 320 PKIKP **PKiKP** **11 26 31.4 +1.0**
ELL Elmali 151.28 320 **PKiKP** **11 26 31.4 +1.0**
MBAR Mbarara 151.51 237 PKPbc **PKiKP** **11 26 32.2 +0.6**
comp=Z,12nm,0.3s,baz=61,slow=5.3,SNR=9.7
MBAR Mbarara 151.51 237 **PKiKP** **11 26 32.7 +1.1**
AKAS Kas 151.80 319 PKPab **PKPab** **11 26 40.2 +0.2**
FNA Florina 152.56 336 PKIKP **PKiKP** **11 26 32.9 +0.1**
FNA Florina 152.56 336 **PKiKP** **11 26 32.9 +0.1**
ESDC Sonseca Array 154.56 21 PKPbc **PKiKP** **11 26 37.4 +0.4**
comp=Z,0.7nm,0.9s,baz=318,slow=1.7,SNR=2.5
ESDC PKPab **PKPab** **11 26 50.0 -1.4**
comp=Z,1.0nm,0.6s,baz=321,slow=3.9,SNR=5.4
DBIC Dimbokro 164.85 127 PKPab **PKPab** **11 27 37.3 +0.5**
comp=Z,3.4nm,1.0s,baz=219,slow=8.5,SNR=2.0
TOA0 Torodi Ar. Sit 173.83 118 **PKPdf** **11 26 45.1 -1.3**
TOA0 PKPab **PKPab** **11 28 16.4 -0.2**
TORD Torodi Ar. Bea 173.83 118 PKP **PKPdf** **11 26 46.0 -0.4**
comp=Z,2.2nm,1.0s,baz=311,slow=2.7,SNR=8.0
TORD PKPab **PKPab** **11 28 16.5 -0.2**
comp=Z,3.1nm,1.0s,baz=268,slow=4.7,SNR=5.5
TORD PP PP 11 32 16.3 +7.8
comp=Z,0.7nm,0.8s,baz=238,slow=2.9,SNR=4.5
TORD Torodi Ar. Bea 173.83 118 **PKPdf** **11 26 45.9 -0.4**
TORD **PKPab** **11 28 17.5 +0.9**

IDC 01 11:11:56.9±3.0, 17.19S×171.86W, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/47, mbtmp3.7/6, Error ellipse: s-maj=165.4km s-min=25.4km az=144.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**44.47**	**242**	P	P		11 20 10.1	0.0
	1.7nm,0.8s,baz=90,slow=13,SNR=1.9							
WRA	**Warramunga Arr**	**50.90**	**258**	P	P		11 20 59.5	-0.7
	0.6nm,0.5s,baz=96,slow=6.6,SNR=8.8							
ASAR	**Alice Springs**	**50.99**	**253**	P	P		11 21 01.2	+0.3
	1.5nm,0.6s,baz=89,slow=7.9,SNR=9.8							
PDAR	**Pinedale Array**	**82.61**	**41**	P	P		11 24 22.3

KUR pmax pmax
comp=E,11nm,0.4s
KUR pmax pmax
comp=N,14nm,0.2s
KUR pmax pmax
comp=Z,80nm,1.2s
KUR smax smax
comp=N,10.0nm,0.2s
KUR smax smax
comp=E,64nm,0.4s
KUR smax smax
comp=N,468nm,1.6s
KUR smax smax
comp=E,204nm,2.4s
KUR Kuril'sk 5.80 257 *eP* **Pn 11 13 36.7 +1.4**
KUR AMB AMB 11 13 40.1
comp=E,10.0nm,0.3s
KUR AMB AMB 11 13 40.1
comp=E,10.0nm,0.3s
KUR AMB AMB 11 13 40.2
comp=E,30nm,0.5s
KUR *eS* **Sn 11 14 40.7 +0.2**
KUR A A 11 14 42.0
comp=E,20nm,0.4s
KUR A A 11 14 42.0
comp=E,70nm,0.4s
KUR A A 11 14 44.0
comp=E,500nm,2.4s
KUR A A 11 14 44.0
comp=E,200nm,2.4s
PETK Petropavlovsk- 6.41 10 Pn **Pn 11 13 40.7 -3.0**
comp=E,0.4nm,0.3s,baz=193,slow=13,SNR=12
PETK Sn **Sn 11 14 54.4 -1.2**
baz=329,slow=10,SNR=1.7
YUK Yuzh-Kuril'sk 7.57 252 *eP* **Pn 11 14 01.1 +1.4**
YUK *eS* **Sn 11 15 22.7 -1.6**
YUK pmax pmax
comp=Z,24nm,0.2s
YUK pmax pmax
comp=Z,109nm,1.4s
YUK smax smax
comp=N,221nm,1.7s
YUK smax smax
comp=E,310nm,1.8s
YUK Yuzh-Kuril'sk 7.57 252 *eP* **Pn 11 14 00.5 +0.8**
YUK AMB AMB 11 14 01.0
comp=E,20nm,0.4s
YUK AMB AMB 11 14 03.1
comp=E,100nm,1.4s
YUK *eS* **Sn 11 15 22.7 -1.6**
YUK A A 11 15 23.0
comp=E,200nm,2.0s
YUK A A 11 15 23.0
comp=E,300nm,2.0s
GRPR Tuman 7.65 252 *eP* **Pn 11 14 01.7 +0.9**
GRPR *eS* **Sn 11 15 23.2 -2.9**
GRPR Tuman 7.65 252 *eP* **Pn 11 14 01.9 +1.1**
GRPR *eS* **Sn 11 15 24.0 -2.1**
RUSJ Misakicho 7.95 254 *eP* **Pn 11 14 06.8 +1.9**
RUSJ *eS* **Sn 11 15 33.0 -0.5**
NMR Nemuro--Hokkai 7.96 248 *iP* **Pn 11 14 03.7 -1.3**
NMR *i* S **Sn 11 15 27.9 -5.9**
NMR Nemuro--Hokkai 7.96 248 *iP* **Pn 11 14 03.9 -1.1**
NMR *i* S **Sn 11 15 27.9 -5.9**
JKA Kamikawa-asahi 9.71 259 *eP* **Pn 11 14 30.6 +1.6**
ASAJ Asahikawa 9.71 259 Pn **Pn 11 14 30.6 +1.6**
comp=E,0.2nm,0.3s,baz=63,slow=11,SNR=4.2
ASAJ LR LR 11 17 50.0
comp=E,63nm,20.5s,baz=41,slow=35
MA2 Magadan 13.14 349 LR LR 11 20 15.7
comp=E,88nm,19.5s,baz=224,slow=37
KLR Kul'dur 16.31 287 Pn **Pn 11 15 59.7 +1.7**
comp=E,0.0nm,0.3s,baz=76,slow=16,SNR=2.3
KLR Kul'dur 16.31 287 *eP* **Pn 11 15 58.6 +0.6**
YAK Yakutsk 21.33 325 LR LR 11 24 52.9
comp=E,83nm,20.1s,baz=98,slow=36
KSRS Korea Array 22.64 256 P **P 11 17 10.8 +1.1**
comp=E,1.7nm,0.9s,baz=57,slow=9.8,SNR=2.2
H11S1 WAKE ISLAND Hy 29.60 159 T T 11 49 33.8
baz=346,slow=76,SNR=8.7
H11S3 WAKE ISLAND Hy 29.61 159 T T 11 49 32.6
baz=346,slow=76,SNR=14
H11S2 WAKE ISLAND Hy 29.62 159 T T 11 49 31.9
baz=346,slow=76,SNR=10.0
KDAK Kodiak Island 32.59 51 LR LR 11 31 05.9
comp=E,52nm,20.4s,baz=274,slow=35
SONM Songino Array 33.10 290 P **P 11 18 44.8 +0.4**
comp=E,0.2nm,0.3s,baz=85,slow=7.7,SNR=2.0
ZALV Zalesovo Beam 44.11 307 P **P 11 20 17.2 +0.8**
comp=E,0.6nm,0.3s,baz=67,slow=8.1,SNR=1.4
MKAR Makanchi Array 48.59 299 P **P 11 20 52.8 +1.0**
comp=E,0.6nm,0.7s,baz=59,slow=8.8,SNR=7.9
KURK Kurchatov 48.90 305 P **P 11 20 56.3 +2.3**
KURK Kurchatov 48.90 305 *eP* **P 11 20 56.3 +2.3**
KURBB Kurchatov Arra 48.99 305 P **P 11 20 56.3 +1.6**
comp=E,1.6nm,0.5s,baz=67,slow=8.3,SNR=15
YKA Yellowknife Ar 49.73 37 P **P 11 20 59.8 -0.3**
comp=E,0.5nm,0.8s,baz=295,slow=7.5,SNR=1.9
BVAR Borovoye Array 52.27 310 P **P 11 21 20.1 +0.7**
comp=E,1.4nm,0.9s,baz=173,slow=13,SNR=1.9
WRA Warramunga Arr 69.23 202 P **P 11 23 14.8 -0.3**
comp=E,0.9nm,0.9s,baz=17,slow=6.3,SNR=3.7
ASAR Alice Springs 72.91 201 P **P 11 23 38.1 +0.7**
comp=E,0.4nm,0.8s,baz=15,slow=4.4,SNR=2.5
TXAR Lajitas Array 75.79 62 P **P 11 23 55.2 +0.8**
comp=E,0.4nm,0.6s,baz=302,slow=5.4,SNR=6.1
H03N2 Juan Fernandez 136.85 92 T T 14 03 31.0
baz=308,slow=77,SNR=4.3
H03N1 Juan Fernandez 136.87 92 T T 14 03 30.3
baz=308,slow=77,SNR=4.9
H03N3 Juan Fernandez 136.87 92 T T 14 03 30.3
baz=308,slow=77,SNR=5.1

*BER **01** 11:30:06.1±2.6,79.°15N×2.°92E,h10km,ML2.3,*
ML2.5(DNK),Confirmed Earthquake
*DNK **01** 11:30:09.6±2.7,79.°18N×2.°84E,h31km±66km,ML2.5*
ISC 01 11:30:02.2±0.9,78.°92N±0.°10×2.°55E±0.°04,h10km,n18,
σ1§76/26,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.81**	**85**	*iP*	**Pb**	**11 30 35.2**	**-0.2**
KBS				IAML		11 30 55.7	
comp=Z,253nm,0.2s							
KBS	**Kingsbay**	**1.81**	**85**	*eP*	**Pb**	**11 30 35.0**	**-0.4**
KBS				*eS*	**Sn**	**11 30 54.7**	**-1.7**
KBS				IAML		11 30 56.5	
comp=Z,98nm,0.1s							
BRBB	**Barentsburg B**	**2.48**	**104**	*eP*	**Pb**	**11 30 45.0**	**-1.7**
BRBB				*eS*	**Sn**	**11 31 12.1**	**-0.6**
BRBA	**Barentsburg A**	**2.49**	**105**	*eP*	**Pb**	**11 30 46.0**	**-1.0**
BRBA				*eS*	**Sn**	**11 31 12.7**	**-0.4**
BRBA				IAML		11 31 17.4	
comp=Z,48nm,0.8s							
SPA0	**Spitsbergen Ar**	**2.85**	**98**	*eP*	**Pb**	**11 30 51.1**	**-2.0**
SPA0				*eS*	**Sn**	**11 31 21.9**	**-0.2**
SPA0				IAML		11 31 28.6	
comp=Z,36nm,0.7s							
HSPB	**Hornsund (broa**	**3.33**	**119**	*eP*	**Pb**	**11 30 58.5**	**-2.7**
HSPB				*eS*	**Sn**	**11 31 34.0**	**+0.3**
HSPB				IAML		11 31 38.3	
comp=Z,8.3nm,0.5s							
NOR	**Nord**	**4.21**	**319**	*iP*	**Pn**	**11 31 07.0**	**+0.8**
NOR	**Nord**	**4.21**	**319**	*iP*	**Pn**	**11 31 07.3**	**+1.1**
NOR	**Nord**	**4.21**	**319**	*iP*	**Pn**	**11 31 07.3**	**+1.1**
DAG	**Danmarks Havn**	**4.95**	**255**	*e*	**Pn**	**11 31 18.7**	**+2.3**
baz=51,slow=14							
DAG				*iP*	Pb	11 31 20.3	-8.5
DAG				*iS*	**Sn**	**11 32 12.4**	**-1.2**
DAG				IAML		11 32 15.4	
comp=Z,6.6nm,0.3s							
DAG	**Danmarks Havn**	**4.95**	**255**	*e*	**Pn**	**11 31 18.7**	**+2.3**
baz=51,slow=14							
DAG				*iP*	Pb	11 31 20.3	-8.5
DAG				*iS*	**Sn**	**11 32 12.4**	**-1.2**
DAG				IAML		11 32 15.4	
comp=Z,6.6nm,0.3s							
HOPEN	**Hopen**	**5.34**	**106**	*eP*	**Pn**	**11 31 24.3**	**+2.5**
HOPEN				*eS*	**Sn**	**11 32 20.4**	**-2.8**
HOPEN				IAML		11 32 23.6	
comp=Z,12nm,0.3s							
DBG	**Daneborg**	**6.97**	**240**	*iP*	Pn	11 31 49.2	+5.1
DBG				*iS*	**Sn**	**11 33 01.9**	**-1.4**
DBG				IAML		11 33 08.6	
comp=Z,4.3nm,0.3s							
NEEM	**North Greenlan**	**10.75**	**289**	*iP*	**Pn**	**11 32 35.0**	**-1.1**
NEEM	**North Greenlan**	**10.75**	**289**	*iP*	**Pn**	**11 32 35.1**	**-1.1**
SUMG	**Summit**	**11.62**	**259**	*eP*	**Pn**	**11 32 50.9**	**+2.7**
SUMG	**Summit**	**11.62**	**259**	*eP*	**Pn**	**11 32 50.9**	**+2.7**

*EST **01** 11:33:49.9±0.1,59.°24N×27.°72E,h0km,ML1.8(HEL),*
Explosion
*HEL **01** 11:33:50.3±0.2,59.°25N×27.°65E,h0km,ML1.9,Explosion*
*IDC **01** 11:33:55.5±2.4,59.°60N×27.°35E,h0km,mb1 3.2/3,*
mb1mx2.9/36,mbtmp3.1/3,Error ellipse: s-maj=21.2km
s-min=12.1km az=120.0
ISC 01 11:33:48.5±1.2,59.°30N±0.°03×27.°64E±0.°06,h0km,n17,
σ1§68/30,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARBE	**Arbavere**	**0.86**	**280**	*eP*	**Pb**	**11 34 06.2**	**-0.1**
ARBE				*eS*	**Sg**	**11 34 17.8**	**+1.7**
VSU	**Vasula**	**0.96**	**210**	*eP*	**Pg**	**11 34 07.1**	**+0.2**
VSU				*eSB*	**Sg**	**11 34 19.4**	**+0.1**
VJF	**Virojoki**	**1.24**	**358**	*eP*	**Pg**	**11 34 13.1**	**+0.7**
VJF				MSG		11 34 29.4	
comp=Z,7.1nm,0.2s							
VJF				*eSB*	**Sb**	**11 34 30.6**	**+1.2**
PVF	**Pernaja**	**1.54**	**325**	*ePG*	**Pg**	**11 34 18.7**	**+0.8**
PVF				MSG		11 34 37.7	
comp=Z,5.6nm,0.2s							
PVF				*eSG*	**Sg**	**11 34 39.7**	**+1.8**
MEF	**Metsahovi**	**1.88**	**301**	*ePG*	**Pg**	**11 34 24.8**	**+0.2**
MEF				*eSG*	**Sg**	**11 34 49.9**	**+1.0**
MEF				MSG		11 34 52.5	
comp=Z,6.3nm,0.2s							
NUR	**Nurmijrvi**	**1.93**	**310**	*ePG*	**Pg**	**11 34 25.8**	**+0.2**
NUR				*eSG*	**Sg**	**11 34 51.6**	**+1.0**
MTSE	**Matsula**	**2.06**	**255**	*ePG*	**Pb**	**11 34 27.0**	**+0.2**
MTSE				*eSG*	**Sb**	**11 34 54.2**	**+1.2**
FIA0	**FINESS Array S**	**2.29**	**341**	*eP*	**Pn**	**11 34 29.0**	**+1.5**
FIA0				*eS*	**Sb**	**11 34 59.5**	**+0.1**
FIA0				MSG		11 35 04.5	
comp=Z,3.5nm,0.2s							
FIA1	**FINESS Array S**	**2.29**	**341**	*eP*	**Pn**	**11 34 29.5**	**+2.0**
FIA1				*ePB*	**Pb**	**11 34 31.1**	**+0.4**
FIA1				*eSG*	**Sg**	**11 35 02.7**	**+0.7**
FINES	**FINESS Array B**	**2.29**	**341**	Pg	**Pn**	**11 34 29.4**	**+1.9**
comp=Z,0.5nm,0.3s,baz=162,slow=16,SNR=15							
FINES				Lg	Lg	11 34 58.1	
comp=Z,0.8nm,0.3s,baz=164,slow=27,SNR=3.8							
KAF	**Kangasniemi**	**2.90**	**348**	*ePB*	**Pb**	**11 34 41.2**	**+0.1**
KAF				*eSG*	**Sg**	**11 35 20.8**	**-0.8**
KEF	**Keuruu**	**3.18**	**336**	*ePB*	**Pb**	**11 34 45.1**	**-0.8**
KEF				MSG		11 35 25.1	
comp=Z,2.5nm,0.2s							
RAF	**Rauma**	**3.41**	**303**	*eP*	**Pn**	**11 34 45.4**	**+2.5**
JOF	**Joensuu**	**4.04**	**25**	*eP*	**Pn**	**11 34 54.4**	**+2.8**
HFS	**Hagfors**	**7.10**	**283**	Pn	**Pn**	**11 35 35.6**	**+2.0**
baz=105,slow=13							
HFS				Sn	**Sn**	**11 36 51.9**	**-3.0**
comp=Z,0.1nm,0.3s,baz=93,slow=29,SNR=1.1							
HFS				Lg	Lg	11 37 30.5	
comp=Z,0.5nm,0.3s,baz=93,slow=29,SNR=7.6							
NOA	**NORSAR Array B**	**9.37**	**289**	Pn	**Pn**	**11 35 51.4**	**+0.3**
baz=90,slow=14,SNR=1.0							
ARCES	**ARCESS Array B**	**10.32**	**356**	Pn	**Pn**	**11 36 17.2**	**-0.4**
baz=175,slow=12,SNR=1.2							
ARCES				Sn	**Sn**	**11 38 08.8**	**-5.0**
baz=205,slow=37,SNR=2.1							

*RSPR **01** 11:36:09.6,19.°14N×67.°79W,h10km±24km,MD3.0/8*
*NEIC **01** 11:36:09.5±1.7,19.°02N±0.°09×67.°7W±0.°1,h14km±17km,*
Error ellipse: s-maj=17.5km s-min=10.0km az=130.0
ISC 01 11:36:07.6±2.8,19.°0N±0.°1×67.°8W±0.°1,h10km,n32,
σ0§51/33,6C-3D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.83**	**131**	*eP*	**Pb**	**11 36 24.6**	**+0.4**
AGPR	**Aguadilla, PR**	**0.83**	**131**		**Pb**	**11 36 24.4**	**+0.2**
AGPR				IAML		11 36 34.9	
comp=N,928nm,0.4s							
AGPR				IAML		11 36 35.1	
comp=E,1µm,0.2s							
MPR	**Mayaguez**	**1.00**	**143**		**Pn**	**11 36 27.4**	**-0.3**
MPR				IAML		11 36 45.3	
comp=N,491nm,0.1s							
AOPR	**Arecibo Observ**	**1.17**	**124**	*eP*	**Pb**	**11 36 29.7**	**-0.3**
AOPR	**Arecibo Observ**	**1.17**	**124**	*eS*	**Sn**	**11 36 45.9**	**-0.3**
AOPR	**Arecibo Observ**	**1.17**	**124**		**Pb**	**11 36 29.6**	**-0.4**
AOPR				IAML		11 36 50.4	
comp=N,491nm,0.2s							
MLPR	**Magueyes Islan**	**1.25**	**146**	*eP*	**Pg**	**11 36 31.5**	**-0.1**
MLPR	**Magueyes Islan**	**1.25**	**146**	*eS*	**Sn**	**11 36 48.9**	**+0.9**
MLPR	**Magueyes Islan**	**1.25**	**146**		**Pb**	**11 36 31.3**	**0.0**
MLPR					**Sn**	**11 36 49.2**	**+1.1**
MLPR				IAML		11 36 49.8	
comp=E,431nm,0.4s							
MLPR				IAML		11 36 50.0	
comp=N,521nm,0.5s							
EMPR	**Esperanza - Ma**	**1.29**	**114**	*eP*	**Pb**	**11 36 31.8**	**-0.2**
EMPR	**Esperanza - Ma**	**1.29**	**114**	*eS*	**Sb**	**11 36 48.7**	**0.0**
EMPR	**Esperanza - Ma**	**1.29**	**114**		**Pn**	**11 36 31.6**	**-0.2**
EMPR				IAML		11 36 53.6	
comp=N,457nm,0.4s							
GBPR	**Guanica, Bosqu**	**1.34**	**141**	*eP*	**Pg**	**11 36 33.1**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.34**	**141**	*eS*	**Sg**	**11 36 51.0**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.34**	**141**		**Pg**	**11 36 33.1**	**-0.2**
GBPR					**Sg**	**11 36 51.0**	**+0.3**
CELP	**Cerrillos**	**1.47**	**129**	*eP*	**Pb**	**11 36 34.8**	**-0.2**
CELP	**Cerrillos**	**1.47**	**129**	*eS*	**Sb**	**11 36 53.9**	**+0.1**
CELP	**Cerrillos**	**1.47**	**129**		**Pb**	**11 36 34.8**	**-0.2**
CELP					**Sb**	**11 36 53.9**	**+0.1**
OBIP	**Obispado Ponce**	**1.47**	**131**	*eP*	**Pn**	**11 36 33.4**	**-0.8**
OBIP	**Obispado Ponce**	**1.47**	**131**	*eS*	**Sn**	**11 36 52.4**	**-1.1**
OBIP	**Obispado Ponce**	**1.47**	**131**		**Pn**	**11 36 33.4**	**-0.8**
OBIP				IAML		11 36 56.0	
comp=E,249nm,0.4s							
OBIP				IAML		11 36 56.4	
comp=N,288nm,0.6s							
ICMP	**Isla Caja de M**	**1.63**	**133**	Pn	**Pb**	**11 36 38.1**	**+0.3**
ICMP				IAML		11 37 04.9	
comp=E,222nm,0.8s							
GCPR	**Guaynabo City**	**1.75**	**113**	*eP*	**Pn**	**11 36 38.5**	**+0.5**
GCPR	**Guaynabo City**	**1.75**	**113**	*eS*	**Sn**	**11 37 00.1**	**-0.3**
GCPR	**Guaynabo City**	**1.75**	**113**		**Pn**	**11 36 38.5**	**+0.5**
SJG	**San Juan**	**1.78**	**120**		**Pn**	**11 36 37.9**	**-0.6**
SJG				IAML		11 37 03.4	
comp=E,229nm,0.3s							
SJG				IAML		11 37 04.1	
comp=E,215nm,0.3s							
PDPR	**Patillas Dam,**	**1.93**	**121**		**Pn**	**11 36 41.1**	**+0.6**
PDPR				IAML		11 37 09.7	
comp=E,114nm,0.5s							
CBYP	**Canovanas**	**1.96**	**112**		**Pn**	**11 36 41.4**	**+0.4**
CUPR	**Culebra, Puert**	**2.46**	**106**	*eP*	**Pn**	**11 36 48.1**	**+0.2**
CUPR	**Culebra, Puert**	**2.46**	**106**		**Pn**	**11 36 48.5**	**+0.6**
BANI	**BANI**	**2.53**	**256**		Lg	11 37 36.0	
SDDR	**Presa de Saban**	**3.33**	**270**		Lg	11 37 57.5	

*IDC **01** 11:59:04.5±2.5,0.°75S×98.°96E,h0km,mb3.8/4,mb1 4.0/4,*
mb1mx3.4/52,mbtmp3.8/4,ML2.3/1,Error ellipse:
s-maj=99.1km s-min=23.8km az=60.0
*NEIC **01** 11:59:14.2±1.9,0.°4S±0.°1×99.°25E±0.°08,h88km±11km,*
mb4.4/8,Error ellipse: s-maj=15.1km s-min=11.3km
az=205.0
*DJA **01** 11:59:15.0±0.6,1.°S±4.°×9.°9E±.°,h55km±45km,M3.7/10,*
mb3.8/3,MLv3.7/10
ISC 01 11:59:15.6±0.7,0.°40S±0.°09×99.°38E±0.°07,h100km,n29,
σ1§65/26,mb4.3/8,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSI	**Mandailing Nat**	**1.21**	**10**	P	**Pn**	**11 59 39.0**	**+0.6**
BKNI	**Bangkinang**	**1.81**	**66**		**Pn**	**11 59 45.6**	**-0.2**
BKNI	**Bangkinang**	**1.81**	**66**	P	**Pn**	**11 59 45.4**	**-0.4**
BKNI				S	Sn	12 00 00.6	-8.2
GSI	**Gunungsitoli**	**2.47**	**313**		**Pn**	**11 59 52.3**	**-2.1**
GSI	**Gunungsitoli**	**2.47**	**313**	P	**Pn**	**11 59 54.1**	**-0.3**
RGRI	**Rengat**	**2.96**	**89**	P	**Pn**	**11 59 58.0**	**-2.8**
RPSI	**Rantau Prapat**	**3.11**	**352**		**Pn**	**12 00 01.5**	**-1.4**
RPSI	**Rantau Prapat**	**3.11**	**352**	Pn	**Pn**	**12 00 00.8**	**-2.1**
PSI	**Prapat**	**3.21**	**352**	Pn	**Pn**	**12 00 01.5**	**-2.9**
0.3nm,0.3s,baz=180,slow=21,SNR=1.5							
MYKOM	**Kota Tinggi**	**4.97**	**64**	Pn	**Pn**	**12 00 26.6**	**-1.4**
IPM	**Ipoh**	**5.12**	**19**		**Pn**	**12 00 29.3**	**-0.7**
KULM	**Kulim**	**5.80**	**13**	Pn	**Pn**	**12 00 36.2**	**-3.0**
CISI	**Cisompet, Garu**	**11.01**	**130**	Pn	**Pn**	**12 01 48.5**	**-1.7**
H08S2	**Diego Garcia H**	**27.75**	**254**	T	T	12 32 52.5	
baz=77,slow=76,SNR=8.9							
H08S3	**Diego Garcia H**	**27.75**	**254**	T	T	12 32 55.2	
baz=77,slow=76,SNR=24							
H08S1	**Diego Carcia H**	**27.77**	**254**	T	T	12 33 01.9	
baz=77,slow=76,SNR=3.9							
TWG	**Pinlang**	**31.29**	**41**	P	**P**	**12 05 27.1**	**+0.8**
TWG				IAmb	IAmb	12 05 43.3	
comp=Z,8.9nm,1.0s							
XAN	**Xi'an**	**35.41**	**14**	P	**P**	**12 06 02.0**	**-0.1**
NWAO	**Narrogin (SRO)**	**36.46**	**154**	P	**P**	**12 06 09.8**	**-1.2**
WB0	**Warramunga Arr**	**39.32**	**121**	P	**P**	**12 06 36.4**	**+1.1**
WRA	**Warramunga Arr**	**39.35**	**122**	P	**P**	**12 06 36.9**	**+1.4**
comp=Z,0.9nm,0.6s,baz=303,slow=9.1,SNR=13							
WRAB	**Tennant Creek**	**39.35**	**122**	P	**P**	**12 06 36.8**	**+1.2**
WRAB				IAmb	IAmb	12 06 58.6	
comp=Z,8.5nm,1.5s							
WB2	**Warramunga Arr**	**39.36**	**122**	P	**P**	**12 06 36.8**	**+1.2**
WB2				IAmb	IAmb	12 06 47.2	
comp=Z,10nm,1.4s							
WR0	**Warramunga Arr**	**39.52**	**122**	P	**P**	**12 06 38.1**	**+1.2**
WR0				IAmb	IAmb	12 07 06.2	
comp=Z,7.2nm,1.4s							
ASAR	**Alice Springs**	**40.70**	**127**	P	**P**	**12 06 48.6**	**+2.0**
comp=Z,0.9nm,0.6s,baz=300,slow=7.7,SNR=15							
MKAR	**Makanchi Array**	**49.33**	**345**	P	**P**	**12 07 56.4**	**+1.8**
comp=Z,0.2nm,0.5s,baz=145,slow=8.1,SNR=2.3							
STKA	**Stephens Creek**	**50.67**	**132**	P	**P**	**12 08 06.8**	**+1.7**
comp=Z,2.8nm,0.9s,baz=310,slow=7.9,SNR=2.4							
QSPA	**South Pole Qui**	**89.55**	**180**	P	**P**	**12 12 01.5**	**-0.2**
TXAR	**Lajitas Array**	**143.79**	**35**	PKP	**PKiKP**	**12 18 42.3**	**-1.1**
comp=Z,0.2nm,0.7s,baz=5.2,slow=1.0,SNR=2.5							

IDC 01 12:08:00.3±3.5,11.°04S×112.°61E,h0km,mb2.9/3,
mb1 3.2/4,mb1mx3.0/43,mbtmp3.0/4,ML2.8/1,Error
ellipse: s-maj=170.8km s-min=28.7km az=44.0,South
of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.42**	**121**	Pn	Pn	12 11 24.5	-1.4
0.0nm,0.3s,baz=299,slow=10,SNR=1.0							
FITZ				Sn	Sn	12 13 55.6	-11
0.0nm,0.3s,baz=3.2,slow=12,SNR=1.0							
WRA	**Warramunga Arr**	**22.71**	**116**	P	P	12 13 04.6	+0.7
0.2nm,0.8s,baz=290,slow=11,SNR=1.3							
ASAR	**Alice Springs**	**23.84**	**125**	P	P	12 13 14.9	-0.6
0.3nm,0.9s,baz=299,slow=9.1,SNR=1.5							
MKAR	**Makanchi Array**	**63.64**	**337**	P	P	12 18 33.5	+0.2
0.1nm,0.4s,baz=142,slow=7.2,SNR=2.6							

*IDC **01** 12:44:46.2±3.3,5.°05S×153.°35E,h0km,mb3.6/8,*
mb1 3.8/8,mb1mx3.6/43,mbtmp3.7/8,MS3.1/1,Ms1 3.1/1,
ms1mx2.5/46,Error ellipse: s-maj=101.2km s-min=26.7km
az=111.0
ISC 01 12:44:53.7±3.1,5.°1S±0.°3×153.°3E±0.°6,h56km,n10,
σ0§74/9,mb3.6/8,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**21.07**	**144**	LR	LR	12 56 01.0	
comp=Z,51nm,18.4s,baz=209,slow=32							
WRA	**Warramunga Arr**	**23.63**	**230**	P	**P**	**12 49 59.6**	**-0.4**
0.4nm,0.6s,baz=54,slow=10,SNR=7.5							
ASAR	**Alice Springs**	**26.27**	**224**	P	**P**	**12 50 24.4**	**+0.5**
0.3nm,0.5s,baz=51,slow=8.9,SNR=2.1							
FITZ	**Fitzroy Crossi**	**29.97**	**242**	P	**P**	**12 50 56.6**	**-0.4**
0.8nm,0.6s,baz=47,slow=7.3,SNR=1.8							
CMAR	**Chiang Mai Arr**	**58.51**	**295**	P	**P**	**12 54 45.2**	**+0.5**
0.4nm,0.4s,baz=127,slow=6.9,SNR=1.1							
SONM	**Songino Array**	**66.90**	**328**	P	**P**	**12 55 40.4**	**+0.2**
0.2nm,0.5s,baz=137,slow=6.5,SNR=2.4							
MKAR	**Makanchi Array**	**80.94**	**319**	P	**P**	**12 57 02.5**	**+0.4**
0.5nm,0.6s,baz=93,slow=7.1,SNR=6.9							
ZALV	**Zalesovo Beam**	**81.73**	**326**	P	**P**	**12 57 06.0**	**-0.2**
1.2nm,0.6s,baz=116,slow=6.9,SNR=5.4							
BVAR	**Borovoye Array**	**89.84**	**323**	P	**P**	**12 57 45.0**	**-1.3**
0.6nm,0.6s,baz=96,slow=7.2,SNR=4.4							
TORD	**Torodi Ar. Bea**	**150.92**	**288**	PKPbc	**PKiKP**	**13 04 42.5**	**+0.7**
0.4nm,0.5s,baz=88,slow=2.7,SNR=5.0							

*IDC **01** 12:57:38.3±1.6,5.°44S×153.°33E,h0km,mb3.9/10,*
mb1 4.1/11,mb1mx3.9/45,mbtmp4.0/11,ML1.6/1,MS3.3/4,
Ms1 3.3/4,ms1mx2.9/30,Error ellipse: s-maj=50.3km
s-min=19.9km az=113.0
ISC 01 12:57:44.6±1.3,5.°4S±0.°1×153.°2E±0.°2,h37km,n16,
σ0§85/13,mb3.9/10,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.54**	**320**	P	**Pn**	**12 58 09.0**	**-0.6**
PMG	**Port Moresby**	**7.18**	**236**	Pn	**Pn**	**12 59 27.4**	**+0.4**
0.5nm,0.3s,baz=138,slow=20,SNR=1.3							
PMG				LR	LR	13 02 02.6	
comp=Z,136nm,21.2s,baz=14,slow=36							
HNR	**Honiara**	**7.84**	**121**	LR	LR	13 02 43.8	
comp=Z,119nm,21.5s,baz=252,slow=40							
DZM	**Mont Dzumac**	**20.99**	**144**	LR	LR	13 09 49.8	
comp=Z,125nm,18.4s,baz=340,slow=35							
SIJI	**Sorong**	**22.32**	**281**	LR	LR	13 13 09.7	
comp=Z,122nm,18.9s,baz=50,slow=41							
WRA	**Warramunga Arr**	**23.35**	**230**	P	**P**	**13 02 49.6**	**-0.2**
7.7nm,0.8s,baz=54,slow=9.8,SNR=31							
ASAR	**Alice Springs**	**25.98**	**224**	P	**P**	**13 03 13.7**	**-0.3**
3.3nm,0.9s,baz=55,slow=8.7,SNR=15							
STKA	**Stephens Creek**	**28.50**	**201**	P	**P**	**13 03 35.9**	**-0.6**
2.3nm,0.7s,baz=356,slow=15,SNR=3.6							
FITZ	**Fitzroy Crossi**	**29.71**	**242**	P	**P**	**13 03 47.1**	**-0.2**
2.7nm,0.6s,baz=84,slow=6.4,SNR=17							
CMAR	**Chiang Mai Arr**	**58.45**	**295**	P	**P**	**13 07 37.7**	**+0.5**
0.7nm,0.8s,baz=108,slow=5.0,SNR=5.3							
SONM	**Songino Array**	**67.00**	**328**	P	**P**	**13 08 34.4**	**+0.5**
0.3nm,0.6s,baz=132,slow=4.2,SNR=2.4							
MKAR	**Makanchi Array**	**81.00**	**319**	P	**P**	**13 09 56.0**	**+0.5**
0.3nm,0.5s,baz=100,slow=5.6,SNR=3.7							
ZALV	**Zalesovo Beam**	**81.83**	**326**	P	**P**	**13 09 60.0**	**+0.2**
0.9nm,0.5s,ba

MKAR Makanchi Array 64.67 326 P **P** **13 08 45.5 +2.5**
0.3nm,0.7s,baz=126,slow=7.3,SNR=4.0

IDC 01 13:15:18.7±5.0, 9°42.S×114°08.E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/42, mbtmp3.2/3, Error ellipse: s-maj=200.3km s-min=29.8km az=55.0, South of Bali

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.19**	**120**	P	P	13 20 16.0	-0.7
	0.4nm,1.0s,baz=294,slow=12,SNR=1.7						
ASAR	**Alice Springs**	**23.66**	**129**	P	P	13 20 32.4	+0.4
	0.4nm,0.8s,baz=307,slow=9.1,SNR=6.5						
SONM	**Songino Array**	**57.41**	**354**	P	P	13 25 09.1	0.0
	0.4nm,0.6s,baz=156,slow=7.4,SNR=3.9						

*CNRM **01** 13:32:06.2, 39°.50N×3°.87W, h7km, ml3.4, Hypocentre not reviewed by the ISC*
*SFS **01** 13:32:08.0, 39°.40N×3°.80W, ML3.7, URDA(TOLEDO)*
*STR **01** 13:32:08.9±1.1, 40°.N±8°×°±1°.2, h7km, mb4.0/6, MLv3.9/4, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary*
*IGIL **01** 13:32:08.5, 39°.40N×3°.84W, h7km, ML3.5*
*MDD **01** 13:32:08.6±0.2, 39°.40N×3°.85W, h8km±1km, mbLg3.8/47, Error ellipse: s-maj=1.6km s-min=1.4km az=178.0, PRXIMO*
MDD EMS: IV INTENSIDAD MAXIMA.
*LDG **01** 13:32:09.0±0.1, 39°.41N×3°.85W, h8km, Md3.5/2, Ml3.6/22, Error ellipse: s-maj=2.2km s-min=1.7km az=133.0*
*INMG **01** 13:32:09.3±1.6, 39°.42N×3°.87W, h15km±2km, MD3.5, ML3.8, Error ellipse: s-maj=1.2km s-min=1.1km az=87.0*

ISC 01 13:32:06.1±0.6, 39°45N±0°02×3°83W±0°02, h13km±4km, n165, σ2°01/339, 4C-11D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**0.25**	**336**	Pg	**Pb**	**13 32 14.1**	**+1.7**
	143nm,0.1s,baz=161,slow=17,SNR=1628						
ESDC				Lg	Lg	13 32 17.9	
	baz=162,slow=28,SNR=7.9						
PAB	**San Pablo**	**0.41**	**284**	⇓Pg	**Pb**	**13 32 16.6**	**+1.3**
	30nm,0.1s,SNR=18						
PAB				Lg	Lg	13 32 21.9	
	3μm,0.2s,SNR=7.9						
UCM	**Universidad Co**	**0.97**	**27**	⇑*i*P	**Pn**	**13 32 27.9**	**+2.5**
UCM				*e*S	**Sn**	**13 32 41.8**	**+2.8**
GUD	**Guadarrama**	**1.22**	**348**	⇓Pn	**Pn**	**13 32 31.2**	**+2.3**
	9.3nm,0.1s,SNR=18						
GUD				Pg	**Pb**	**13 32 32.4**	**+3.3**
	169nm,0.1s,SNR=7.9						
GUD				Lg	Lg	13 32 48.3	
	1μm,0.2s						
EADA	**Adamuz**	**1.41**	**205**	Pn	**Pg**	**13 32 32.4**	**-0.7**
	7.9nm,0.1s,SNR=1294						
EADA				Pg	**Pb**	**13 32 33.9**	**+1.8**
	328nm,0.1s,SNR=7.9						
EADA				Sn	**Sg**	**13 32 50.4**	**-1.0**
	222nm,0.1s,SNR=7.9						
EADA				Lg	Lg	13 32 52.1	
	1μm,0.1s						
EQES	**Quesada**	**1.75**	**160**	Pn	**Pn**	**13 32 37.3**	**+1.2**
	2.7nm,0.2s,SNR=13						
EQES				Pg	**Pg**	**13 32 39.9**	**+0.3**
	7.6nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**13 32 58.7**	**+0.5**
	14nm,0.1s,SNR=7.9						
EQES				Lg	Lg	13 33 02.5	
	498nm,0.2s,SNR=14						
EPLA	**Plasencia**	**1.84**	**290**	⇓Pn	**Pn**	**13 32 39.4**	**+2.1**
	19nm,0.1s,SNR=18						
EPLA				Pg	**Pg**	**13 32 42.3**	**+0.9**
	207nm,0.2s,SNR=18						
EPLA				Sn	**Sn**	**13 33 01.7**	**+1.2**
	34nm,0.1s,SNR=37						
EPLA				Lg	Lg	13 33 05.2	
	646nm,0.3s						
ECAB	**El Cabril**	**1.85**	**223**	Pn	**Pn**	**13 32 38.6**	**+1.2**
	1.4nm,0.2s,SNR=124						
ECAB				Pg	**Pg**	**13 32 41.9**	**+0.3**
	15nm,0.1s,SNR=7.9						
ECAB				Sn	**Sn**	**13 33 01.4**	**+0.7**
	9.4nm,0.1s,SNR=9.5						
ECAB				Lg	Lg	13 33 04.6	
	320nm,0.2s,SNR=7.9						
ETOR	**Torete**	**1.93**	**44**	⇑Pn	**Pb**	**13 32 41.4**	**+0.3**
	32nm,0.2s,SNR=18						
ETOR				Pg	**Pg**	**13 32 45.1**	**+2.0**
	107nm,0.1s,SNR=7.9						
ETOR				Sn	**Sn**	**13 33 05.5**	**+2.7**
	253nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	13 33 11.2	
	1μm,0.2s,SNR=7.8						
ETOB	**Tobarra**	**1.95**	**114**	Pn	**Pn**	**13 32 40.8**	**+2.0**
	5.4nm,0.2s,SNR=71						
ETOB				Pg	**Pg**	**13 32 44.0**	**+0.6**
	8.9nm,0.1s,SNR=7.9						
ETOB				Sn	**Sn**	**13 33 03.1**	**-0.1**
	33nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	13 33 09.6	
	408nm,0.2s,SNR=112						
HORN	**Hornachuelos**	**1.95**	**215**	P		13 32 40.2	
GORA	**Gorafe**	**2.06**	**162**	Pg	**Pg**	**13 32 45.7**	**+0.1**
	14nm,0.1s,SNR=7.9						
GORA				Sn	**Sn**	**13 33 06.3**	**+0.4**
	25nm,0.1s,SNR=7.9						
GORA				Lg	Lg	13 33 13.4	
	1μm,0.3s,SNR=7.9						
ECHE	**Chera**	**2.22**	**85**	⇑Pn	**Pn**	**13 32 45.3**	**+2.8**
	2.2nm,0.1s,SNR=18						
ECHE				Pg	**Pg**	**13 32 49.9**	**+1.3**
	14nm,0.1s,SNR=7.9						
ECHE				Sn	**Sn**	**13 33 11.6**	**+1.8**
	13nm,0.1s,SNR=7.9						
ECHE				Lg	Lg	13 33 19.1	
	308nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.26**	**172**	Pn	**Pn**	**13 32 44.7**	**+1.6**
	0.6nm,0.1s,SNR=7.9						
EQUE				Pg	**Pg**	**13 32 49.1**	**-0.3**
	3.0nm,0.2s,SNR=7.9						
EQUE				Sn	**Sn**	**13 33 10.9**	**0.0**
	7.7nm,0.1s,SNR=7.9						
EQUE				Lg	Lg	13 33 19.0	
	167nm,0.2s,SNR=10						
EGOR	**Sierra Gorda,**	**2.34**	**185**	Pn	**Pn**	**13 32 45.5**	**+1.2**
	0.1nm,0.1s,SNR=7.9						
EGOR				Pg	**Pg**	**13 32 50.9**	**-0.2**
	1.0nm,0.1s,SNR=7.9						
EGOR				Sn	**Sn**	**13 33 12.0**	**-1.1**
	2.3nm,0.1s,SNR=7.9						
EGOR				Lg	Lg	13 33 19.3	
	145nm,0.3s,SNR=7.9						
TLOR	**Lorca, Murcia**	**2.45**	**136**	Pn	**Pn**	**13 32 47.8**	**+2.1**
	6.2nm,0.0s,SNR=7.9						
TLOR				Pg	**Pg**	**13 32 53.2**	**+0.1**
	6.7nm,0.0s,SNR=7.9						
TLOR				Sn	**Sn**	**13 33 16.8**	**+1.3**
	32nm,0.1s,SNR=7.9						
TLOR				Lg	Lg	13 33 25.7	
	708nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**2.58**	**176**	Pn	**Pn**	**13 32 50.5**	**+2.9**
	1.8nm,0.1s,SNR=7.9						
ELGU				Pg	**Pg**	**13 32 55.0**	**-0.5**
	2.2nm,0.1s,SNR=7.9						
ELGU				Sn	**Sn**	**13 33 18.7**	**-0.1**
	15nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	13 33 28.7	
	214nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.58**	**128**	Pn	**Pn**	**13 32 49.3**	**+1.7**
	1.0nm,0.1s,SNR=13						
EMUR				Pg	**Pg**	**13 32 55.7**	**+0.1**
	1.5nm,0.1s,SNR=37						
EMUR				Sn	**Sn**	**13 33 19.9**	**+1.1**
	5.5nm,0.1s,SNR=4.5						
EMUR				Lg	Lg	13 33 29.9	
	320nm,0.5s						
EBER	**Berja**	**2.65**	**163**	Pn	**Pn**	**13 32 49.7**	**+1.1**
	0.0nm,0.0s,SNR=7.9						
EBER				Pg	**Pg**	**13 32 56.5**	**-0.4**
	4.4nm,0.2s,SNR=31						
EBER				Sn	**Sn**	**13 33 21.4**	**+0.8**
	14nm,0.2s,SNR=5.0						
EBER				Lg	Lg	13 33 31.3	
	397nm,0.4s,SNR=14						
AFON	**Font Roja**	**2.68**	**106**	Pn	**Pn**	**13 32 51.1**	**+2.2**
	0.4nm,0.1s,SNR=13						
AFON				Pg	**Pg**	**13 32 57.3**	**-0.1**
	18nm,0.1s,SNR=5.9						
AFON				Sn	**Sn**	**13 33 23.0**	**+1.8**
	7.9nm,0.1s,SNR=7.6						
AFON				Lg	Lg	13 33 34.0	
	380nm,0.4s,SNR=12						
EMAL	**Malaga-Limoner**	**2.72**	**190**	*e*P	**Pg**	**13 32 56.8**	**-1.4**
EMAL				*e*S	**Sg**	**13 33 31.6**	**-1.9**
EMOS	**Mosqueruela**	**2.74**	**69**	Pn	**Pn**	**13 32 53.3**	**+3.5**
	32nm,0.3s,SNR=89						
EMOS				Pg	**Pg**	**13 33 01.0**	**+2.4**
	9.1nm,0.1s,SNR=20						
EMOS				Sn	**Sn**	**13 33 24.6**	**+1.7**
	10nm,0.1s,SNR=7.6						
EMOS				Lg	Lg	13 33 35.8	
	155nm,0.3s,SNR=5.0						
PMRV	**Marv??o**	**2.76**	**271**	Pn	**Pn**	**13 32 51.4**	**+1.5**
PMRV				Lg	Lg	13 33 31.0	
	444nm,0.5s						
PMRV	**Marv??o**	**2.76**	**271**	⇓*e*Pn	**Pn**	**13 32 51.4**	**+1.5**
PMRV				*e*Sg	**Sb**	**13 33 31.0**	**+2.1**
PMRV				A	A	13 33 36.1	
	444nm,0.5s						
ENIJ	**Nijar**	**2.78**	**152**	Pg	**Pg**	**13 32 59.0**	**-0.4**
	1.3nm,0.1s,SNR=7.9						
ENIJ				Sn	**Sn**	**13 33 24.5**	**+0.8**
	19nm,0.3s,SNR=7.9						
ENIJ				Lg	Lg	13 33 35.7	
	286nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.79**	**234**	Pn	**Pn**	**13 32 51.9**	**+1.5**
	0.7nm,0.1s,SNR=56						
EMIN				Pg	**Pg**	**13 32 59.3**	**-0.1**
	3.2nm,0.1s,SNR=21						
EMIN				Sn	**Sn**	**13 33 23.7**	**-0.1**
	15nm,0.1s,SNR=5.7						
EMIN				Lg	Lg	13 33 34.6	
	188nm,0.2s						
ETRV	**Los Montesinos**	**2.79**	**120**	Pn	**Pn**	**13 32 52.7**	**+2.4**
	13nm,0.1s,SNR=4.0						
ETRV				Pg	**Pg**	**13 32 59.6**	**+0.1**
	12nm,0.1s,SNR=7.9						
ETRV				Sn	**Sn**	**13 33 24.2**	**+0.4**
	19nm,0.1s,SNR=7.9						
ETRV				Lg	Lg	13 33 36.7	
	507nm,0.3s,SNR=7.9						
PBAR	**Barrancos**	**2.81**	**244**	Pn	**Pn**	**13 32 52.3**	**+1.7**
PBAR				Lg	Lg	13 33 34.2	
	372nm,0.4s						
PBAR	**Barrancos**	**2.81**	**244**	*e*Pn	**Pn**	**13 32 52.3**	**+1.7**
PBAR				*e*Sg	**Sg**	**13 33 34.2**	**-2.1**
PBAR				A	A	13 33 38.5	
	372nm,0.4s						
PCBR	**Castelo Branco**	**2.84**	**279**	Pn	**Pn**	**13 32 52.9**	**+1.8**
PCBR				Lg	Lg	13 33 35.0	
	168nm,0.4s						
PCBR	**Castelo Branco**	**2.84**	**279**	⇑*e*Pn	**Pn**	**13 32 52.9**	**+1.8**
PCBR				*e*Sg	**Sg**	**13 33 35.0**	**-2.4**
PCBR				A	A	13 33 40.2	
	336nm,0.4s						
CART	**Cartagena**	**2.89**	**129**	*e*P	**Pg**	**13 32 59.9**	**-1.6**
CART				*e*S	**Sg**	**13 33 38.5**	**-0.4**
EBEN2	**Beniarda presa**	**2.94**	**104**	Pn	**Pn**	**13 32 53.9**	**+1.5**
	2.7nm,0.1s,SNR=7.9						
EBEN2				Sn	**Sn**	**13 33 28.3**	**+0.9**
	13nm,0.1s,SNR=7.9						
EBEN2				Lg	Lg	13 33 42.2	
	562nm,0.4s,SNR=7.9						
PESTR	**Estremoz**	**2.98**	**260**	*e*Pn	**Pn**	**13 32 54.3**	**+1.3**
PESTR				*e*Sg	**Sb**	**13 33 37.7**	**+2.4**
PESTR				A	A	13 33 44.0	
	369nm,0.3s						
PESTR	**Estremoz**	**2.98**	**260**	P		13 32 54.2	
MVO	**Moncorvo**	**2.99**	**306**	⇓Pn	**Pn**	**13 32 55.5**	**+2.3**
	37nm,0.1s,SNR=18						
MVO				Pg	**Pg**	**13 33 04.0**	**+0.7**
	2.6nm,0.1s,SNR=4.0						
MVO				Sn	**Sn**	**13 33 29.4**	**+0.6**
	8.0nm,0.1s,SNR=7.9						
MVO				Lg	Lg	13 33 42.4	
	168nm,0.2s,SNR=16						
MVO	**Moncorvo**	**2.99**	**306**	⇓*i*Pn	**Pn**	**13 32 55.5**	**+2.3**
MVO				*e*Sg	**Sg**	**13 33 39.6**	**-2.4**
MVO				A	A	13 33 49.1	
	296nm,0.5s						
MTE	**Manteigas**	**3.01**	**290**	Pn	**Pn**	**13 32 55.2**	**+1.7**
MTE				Lg	Lg	13 33 41.3	
	187nm,0.4s						
MTE	**Manteigas**	**3.01**	**290**	*e*Pn	**Pn**	**13 32 55.2**	**+1.7**
MTE				*e*Sg	**Sg**	**13 33 41.3**	**-1.5**
MTE				A	A	13 33 45.0	
	374nm,0.4s						
ESPR	**Espera**	**3.03**	**212**	Pn	**Pn**	**13 32 54.5**	**+0.9**
	0.1nm,0.0s,SNR=7.9						
ESPR				Pg	**Pb**	**13 33 01.4**	**+1.6**
	1.5nm,0.1s,SNR=11						
ESPR				Sn	**Sn**	**13 33 29.4**	**-0.3**
	11nm,0.1s,SNR=7.9						
ESPR				Lg	Lg	13 33 44.7	
	138nm,0.2s,SNR=5.0						
PBRG	**Braganca**	**3.23**	**318**	Pn	**Pn**	**13 32 58.7**	**+2.2**
PBRG				Lg	Lg	13 33 48.1	
	96nm,0.5s						
PBRG	**Braganca**	**3.23**	**318**	*e*Pn	**Pn**	**13 32 58.7**	**+2.2**
PBRG				*e*Sg	**Sg**	**13 33 48.1**	**-1.8**
PBRG				A	A	13 33 54.9	
	193nm,0.5s						
ECAL	**Calabor**	**3.33**	**319**	Pn	**Pn**	**13 33 00.0**	**+2.2**
	2.7nm,0.1s,SNR=79						
ECAL				Pg	**Pg**	**13 33 10.7**	**+0.8**
	5.4nm,0.1s,SNR=17						
ECAL				Sn	**Sn**	**13 33 39.4**	**+2.1**
	17nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	13 33 53.8	
	140nm,0.3s						
PVIS	**Viseu**	**3.37**	**293**	Pn	**Pn**	**13 33 00.1**	**+1.8**
PVIS				Lg	Lg	13 33 54.4	
	120nm,0.3s						
PVIS	**Viseu**	**3.37**	**293**	*e*Pn	**Pn**	**13 33 00.1**	**+1.8**
PVIS				*e*Sg	**Sg**	**13 33 54.4**	**+0.2**
PVIS				A	A	13 33 55.4	
	240nm,0.3s						
EVO	**Evora**	**3.39**	**256**	Pn	**Pn**	**13 32 59.5**	**+0.9**
EVO				Lg	Lg	13 33 51.3	
	367nm,0.5s						
EVO	**Evora**	**3.39**	**256**	*e*P	**Pn**	**13 32 59.5**	**+0.9**
EVO				*e*S	**Sn**	**13 33 38.5**	**-0.1**
EVO	**Evora**	**3.39**	**256**	*e*Pn	**Pn**	**13 32 59.5**	**+0.9**
EVO				*e*Sg	**Sg**	**13 33 51.3**	**-3.5**
EVO				A	A	13 33 58.7	
	367nm,0.5s						
PMTG	**Montargil**	**3.43**	**265**	Pn	**Pn**	**13 33 00.1**	**+0.9**
PMTG				Sn	**Sn**	**13 33 39.5**	**-0.2**
PMTG				Lg	Lg	13 33 51.3	
	278nm,0.6s						
PMTG	**Montargil**	**3.43**	**265**	*e*Pn	**Pn**	**13 33 00.1**	**+0.9**
PMTG				*e*Sn	**Sn**	**13 33 39.5**	**-0.2**
PMTG				*e*Sg	**Sb**	**13 33 51.3**	**+3.0**
PMTG				A	A	13 33 59.5	
	278nm,0.6s						
EGRO	**El Granado**	**3.44**	**237**	Pn	**Pn**	**13 33 00.5**	**+1.1**
	3.6nm,0.1s,SNR=86						
EGRO				Pg	**Pg**	**13 33 11.0**	**-1.0**
	1.9nm,0.1s,SNR=9.3						
EGRO				Sn	**Sn**	**13 33 38.9**	**-1.1**
	12nm,0.1s,SNR=5.3						
EGRO				Lg	Lg	13 33 54.7	
	243nm,0.3s,SNR=14						
PBEJ	**Beja**	**3.46**	**247**	Pn	**Pn**	**13 33 01.4**	**+1.8**
PBEJ				Lg	Lg	13 33 53.6	
	48nm,0.3s						
PBEJ	**Beja**	**3.46**	**247**	*e*Pn	**Pn**	**13 33 01.4**	**+1.8**
PBEJ				*e*Sg	**Sg**	**13 33 53.6**	**-3.6**
PBEJ				A	A	13 34 02.7	
	97nm,0.3s						
PVRL	**Vila Real**	**3.49**	**303**	Pn	**Pn**	**13 33 02.0**	**+2.0**
PVRL				Lg	Lg	13 33 56.8	
	54nm,0.5s						
PVRL	**Vila Real**	**3.49**	**303**	⇓*i*Pn	**Pn**	**13 33 02.0**	**+2.0**
PVRL				*e*Sg	**Sg**	**13 33 56.8**	**-1.2**
PVRL				A	A	13 34 05.1	
	109nm,0.5s						
ERTA	**Horta de San J**	**3.53**	**63**	Pn	**Pn**	**13 33 03.2**	**+2.7**
	1.8nm,0.1s,SNR=11						
ERTA				Pg	**Pg**	**13 33 14.1**	**+0.5**
	2.0nm,0.1s,SNR=22						
ERTA				Sn	**Sn**	**13 33 42.8**	**+0.7**
	4.9nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	13 34 01.7	
	102nm,0.3s,SNR=6.0						
POLO	**Lamas de Olo**	**3.59**	**304**	Pn	**Pn**	**13 33 03.6**	**+2.2**
POLO				Lg	Lg	13 33 59.4	
	51nm,0.5s						
POLO	**Lamas de Olo**	**3.59**	**304**	⇓*i*Pn	**Pn**	**13 33 03.6**	**+2.2**
POLO				*e*Sg	**Sg**	**13 33 59.4**	**-1.9**
POLO				A	A	13 34 11.3	
	51nm,0.5s						
COI	**Coimbra**	**3.61**	**284**	Pn	**Pn**	**13 33 04.0**	**+2.4**
COI				Sn	**Sn**	**13 33 43.1**	**-0.9**
COI				Lg	Lg	13 33 59.5	
	153nm,0.5s						
COI	**Coimbra**	**3.61**	**284**	*e*Pn	**Pn**	**13 33 04.0**	**+2.4**
COI				*e*Sn	**Sn**	**13 33 43.1**	**-0.9**
COI				*e*Sg	**Sg**	**13 33 59.5**	**-2.5**
COI				A	A	13 34 12.0	
	306nm,0.5s						
PCAS	**Casmilo, Conde**	**3.65**	**281**	Pn	**Pn**	**13 33 04.1**	**+1.9**
PCAS				Sn	**Sn**	**13 33 45.3**	**+0.2**
PCAS				Lg	Lg	13 33 59.5	
	180nm,0.3s						
PCAS	**Casmilo, Conde**	**3.65**	**281**	*e*Pn	**Pn**	**13 33 04.1**	**+1.9**
PCAS				*e*Sn	**Sn**	**13 33 45.3**	**+0.2**
PCAS				*e*Sg	**Sg**	**13 33 59.5**	**-3.8**
PCAS				A	A	13 34 13.1	
	180nm,0.3s						
PVAQ	**Vaqueiros**	**3.67**	**237**	Pn	**Pn**	**13 33 03.4**	**+0.9**
PVAQ				Sn	**Sn**	**13 33 44.8**	**-0.8**
PVAQ				Lg	Lg	13 34 00.7	
	211nm,0.5s						
PVAQ	**Vaqueiros**	**3.67**	**237**	*e*Pn	**Pn**	**13 33 03.4**	**+0.9**
PVAQ				*e*Sn	**Sn**	**13 33 44.8**	**-0.8**
PVAQ				*e*Sg	**Sg**	**13 34 00.7**	**-3.3**
PVAQ				A	A	13 34 13.8	
	211nm,0.5s						
PVAQ	**Vaqueiros**	**3.67**	**237**	P		13 33 03.2	
EARA	**Aranguren**	**3.73**	**26**	Pn	**Pn**	**13 33 06.0**	**+2.6**
	0.5nm,0.0s,SNR=7.9						
EARA				Pg	**Pg**	**13 33 18.0**	**+0.5**
	0.4nm,0.0s,SNR=11						
EARA				Sn	**Sn**	**13 33 49.1**	**+2.0**
	5.5nm,0.1s,SNR=7.9						
EARA				Lg	Lg	13 34 09.5	
	115nm,0.2s,SNR=7.9						
EARA	**Aranguren**	**3.73**	**26**	Pn	**Pg**	**13 33 19.7**	**+2.1**
CEU	**Ceuta**	**3.75**	**200**	*e*P	**Pb**	**13 33 09.7**	**-2.3**
CEU				*e*S	**Sn**	**13 33 51.2**	**+3.8**
PCVE	**Castro Verde**	**3.77**	**243**	Pn	**Pn**	**13 33 04.8**	**+1.0**
PCVE				Sn	**Sn**	**13 33 46.8**	**-1.1**
PCVE				Lg	Lg	13 34 01.8	
	171nm,0.6s						
PCVE	**Castro Verde**	**3.77**	**243**	*e*Pn	**Pn**	**13 33 04.8**	**+1.0**
PCVE				*e*Sn	**Sn**	**13 33 46.8**	**-1.1**
PCVE				*e*Sg	**Sb**	**13 34 01.8**	**+4.0**
PCVE				A	A	13 34 10.5	
	171nm,0.6s						
ELAN	**Lanestosa**	**3.79**	**4**	Pn	**Pn**	**13 33 07.2**	**+3.0**
	0.3nm,0.1s,SNR=226						
ELAN				Pg	**Pg**	**13 33 18.2**	**-0.5**
	2.9nm,0.1s,SNR=22						
ELAN				Sn	**Sn**	**13 33 49.1**	**+0.4**
	3.2nm,0.1s,SNR=7.9						
ELAN				Lg	Lg	13 34 09.8	
	93nm,0.3s						
MESJ	**Messejana**	**3.79**	**246**	*e*P	**Pn**	**13 33 05.7**	**+1.5**
MESJ				*e*S	**Sn**	**13 33 46.5**	**-2.1**
MESJ				IAML		13 33 48.4	
	comp=E,34nm,0.2s						
MESJ				*e*Sg	**Sg**	**13 34 05.1**	**-2.8**
MESJ	**Messejana**	**3.79**	**246**	Pn	**Pn**	**13 33 05.8**	**+1.7**
MESJ				Sn	**Sn**	**13 33 48.0**	**-0.6**
MESJ				Lg	Lg	13 34 03.3	
	comp=E,194nm,0.7s						
MESJ	**Messejana**	**3.79**	**246**	*e*Pn	**Pn**	**13 33 05.8**	**+1.7**
MESJ				*e*Sn	**Sn**	**13 33 48.0**	**-0.6**
MESJ				*e*Sg	**Sb**	**13 34 03.3**	**+4.7**
MESJ				A	A	13 34 10.3	
	comp=E,194nm,0.7s						
PSBE	**So Bento**	**3.84**	**273**	*e*Pn	**Pn**	**13 33 07.1**	**+2.2**
PSBE				*e*Sn	**Sn**	**13 33 49.5**	**-0.4**
PSBE				*e*Sg	**Sg**	**13 34 06.2**	**-3.3**
PSBE				A	A	13 34 15.1	
	comp=E,293nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.90**	**237**	Pn	**Pn**	**13 33 07.3**	**+1.6**
PBDV				Sn	**Sn**	**13 33 51.4**	**0.0**
PBDV				Lg	Lg	13 34 07.5	
	comp=E,143nm,0.6s						
PBDV	**Barranco-do-Ve**	**3.90**	**237**	*e*Pn	**Pn**	**13 33 07.3**	**+1.6**
PBDV				*e*Sn	**Sn**	**13 33 51.4**	**0.0**
PBDV				*e*Sg	**Sg**	**13 34 07.5**	**-3.9**
PBDV				A	A	13 34 17.5	
	comp=E,143nm,0.6s						
PNCL	**Nicolau / Gran**	**3.91**	**252**	Pn	**Pn**	**13 33 07.3**	**+1.6**
PNCL				Sn	**Sn**	**13 33 50.2**	**-1.2**
PNCL				Lg	Lg	13 34 08.3	
	comp=E,141nm,0.4s						
PNCL	**Nicolau / Gran**	**3.91**	**252**	*e*Pn	**Pn**	**13 33 07.3**	**+1.6**
PNCL				*e*Sn	**Sn**	**13 33 50.2**	**-1.2**
PNCL				*e*Sg	**Sg**	**13 34 08.3**	**-3.2**
PNCL				A	A	13 34 19.1	
	comp=E,141nm,0.4s						
PCAB	**Cabril**	**3.92**	**307**	Pn	**Pn**	**13 33 08.1**	**+2.2**
PCAB				Sn	**Sn**	**13 33 52.9**	**+1.3**
PCAB				Lg	Lg	13 34 09.8	
	comp=E,44nm,0.5s						
PCAB	**Cabril**	**3.92**	**307**	⇓*e*Pn	**Pn**	**13 33 08.1**	**+2.2**
PCAB				*e*Sn	**Sn**	**13 33 52.9**	**+1.3**
PCAB				*e*Sg	**Sg**	**13 34 09.8**	**-2.0**
PCAB				A	A	13 34 15.3	
	comp=E,89nm,0.5s						
EORO	**Oroz-Betelu**	**3.93**	**28**	Pn	**Pn**	**13 33 08.3**	**+2.1**
	comp=E,0.4nm,0.0s,SNR=11						
EORO				Pg	**Pg**	**13 33 21.3**	**-0.1**
	comp=E,0.9nm,0.1s,SNR=17						
EORO				Sn	**Sn**	**13 33 53.8**	**+1.7**
	comp=E,7.1nm,0.2s,SNR=7.9						
EORO				Lg	Lg	13 34 15.6	
	comp=E,138nm,0.4s						
SMIR	**Smir Dam**	**3.96**	**199**	P		13 33 09.3	
EARI	**Arriondas**	**3.99**	**345**	Pn	**Pn**	**13 33 08.8**	**+1.9**
	comp=E,0.9nm,0.1s,SNR=51						
EARI				Pg	**Pg**	**13 33 22.6**	**+0.2**
	comp=E,0.7nm,0.1s,SNR=12						
EARI				Sn	**Sn**	**13 33 54.1**	**+0.7**
	comp=E,7.4nm,0.2s,SNR=7.9						
EARI				Lg	Lg	13 34 14.8	
	comp=E,162nm,0.6

EPOB				Sn	**Sn**	**13 33 59.6**	**+0.8**	
	comp=E,1.5nm,0.1s,SNR=7.9							
EPOB				Lg	Lg	13 34 20.3		
	comp=E,44nm,0.4s,SNR=7.9							
LIS	**Lisbon**	**4.20**	**262**	*e*S	**Sn**	**13 33 56.5**	**-2.2**	
LIS				IAML		13 34 00.8		
	comp=N,249nm,0.3s							
LIS	**Lisbon**	**4.20**	**262**	Sn	**Sn**	**13 33 58.6**	**-0.1**	
LIS				Lg	Lg	13 34 23.0		
	comp=N,204nm,0.4s							
LIS	**Lisbon**	**4.20**	**262**	*e*Sn	**Sn**	**13 33 58.6**	**-0.1**	
LIS				*e*Sg	**Sg**	**13 34 23.0**	**+2.0**	
LIS				A	A	13 34 31.3		
	comp=N,204nm,0.4s							
PGAV	**Gavieira, Arco**	**4.21**	**308**	Pn	**Pn**	**13 33 12.2**	**+2.2**	
PGAV				Sn	**Sn**	**13 34 00.0**	**+1.0**	
PGAV				Lg	Lg	13 34 19.5		
	comp=N,90nm,0.5s							
PGAV	**Gavieira, Arco**	**4.21**	**308**	*e*Pn	**Pn**	**13 33 12.2**	**+2.2**	
PGAV				*e*Sn	**Sn**	**13 34 00.0**	**+1.0**	
PGAV				*e*Sg	**Sg**	**13 34 19.5**	**-1.7**	
PGAV				A	A	13 34 35.8		
	comp=N,90nm,0.5s							
PALE	**Palemas**	**4.22**	**181**	P		13 33 11.6		
PMST	**Lisbon--Monsan**	**4.23**	**262**	*e*Pn	**Pn**	**13 33 12.1**	**+2.0**	
PMST				*e*Sn	**Sn**	**13 33 58.7**	**-0.5**	
PMST				*e*Sg	**Sg**	**13 34 17.3**	**-4.4**	
PMST				A	A	13 34 29.5		
	comp=N,315nm,0.7s							
ETSF	**Etsaut**	**4.24**	**35**	Pn	**Pn**	**13 33 13.4**	**+3.0**	
ETSF				Sn	**Sn**	**13 34 00.7**	**+1.0**	
ETSF				Lg	Lg	13 34 22.2		
	comp=N,15nm,0.3s							
ETSF	**Etsaut**	**4.24**	**35**	*e*Pn	**Pn**	**13 33 13.4**	**+3.0**	
ETSF	**Etsaut**	**4.24**	**35**	*e*P	Pn	13 33 16.4	+6.0	
ETSF				*e*Sn	**Sn**	**13 34 00.7**	**+1.0**	
ETSF				*e*Sg	**Sg**	**13 34 22.2**	**0.0**	
	comp=N,30nm,0.3s							
PMAFR	**Mafra**	**4.26**	**265**	Pn	**Pn**	**13 33 12.3**	**+1.7**	
	comp=N,27nm,0.1s,SNR=35							
PMAFR				Sn	**Sn**	**13 33 58.9**	**-1.3**	
	comp=N,37nm,0.2s,SNR=11							
PMAFR				Lg	Lg	13 34 21.8		
	comp=N,355nm,0.3s,SNR=5.7							
PMAFR	**Mafra**	**4.26**	**265**	*e*Pn	**Pn**	**13 33 12.4**	**+1.8**	
PMAFR				*e*Sn	**Sn**	**13 33 58.2**	**-2.0**	
PMAFR				A	A	13 34 27.8		
	comp=N,223nm,0.3s							
GOG	**Mont Gurugu**	**4.27**	**171**	P		13 33 16.0		
PVLZ	**Peæn de**	**4.28**	**185**	*e*P	Pn	13 33 16.4	+5.6	
PVLZ				*e*S	**Sn**	**13 34 03.2**	**+2.6**	
PTEO	**Sao Teotonio**	**4.28**	**245**	Pn	**Pn**	**13 33 12.2**	**+1.3**	
PTEO				Sn	**Sn**	**13 33 59.4**	**-1.3**	
PTEO				Lg	Lg	13 34 19.6		
	comp=N,78nm,0.5s							
PTEO	**Sao Teotonio**	**4.28**	**245**	*e*Pn	**Pn**	**13 33 12.2**	**+1.3**	
PTEO				*e*Sn	**Sn**	**13 33 59.4**	**-1.3**	
PTEO				*e*Sg	**Sg**	**13 34 19.6**	**-4.0**	
PTEO				A	A	13 34 34.9		
	comp=N,157nm,0.5s							
ATE	**Arette**	**4.33**	**32**	Pn	**Pn**	**13 33 13.9**	**+2.3**	
	comp=N,1.0nm,0.0s,SNR=7.9							
ATE				Pg	**Pg**	**13 33 29.6**	**+0.6**	
	comp=N,2.8nm,0.1s,SNR=7.9							
ATE				Sn	**Sn**	**13 34 03.3**	**+1.3**	
	comp=N,8.5nm,0.2s,SNR=7.9							
ATE				Lg	Lg	13 34 27.6		
	comp=N,21nm,0.3s,SNR=7.9							
ATE	**Arette**	**4.33**	**32**	Pn	**Pn**	**13 33 14.6**	**+3.0**	
ATE				Sn	**Sn**	**13 34 03.2**	**+1.3**	
MORF	**Marmelete**	**4.35**	**242**	*e*P	**Pn**	**13 33 12.9**	**+1.1**	
MORF				*e*S	**Sn**	**13 33 59.6**	**-2.7**	
MORF				IAML		13 34 06.5		
	comp=E,155nm,0.7s							
MORF	**Marmelete**	**4.35**	**242**	Pn	**Pn**	**13 33 12.9**	**+1.1**	
MORF				Sn	**Sn**	**13 34 01.6**	**-0.8**	
	comp=E,73nm,0.7s							
MORF	**Marmelete**	**4.35**	**242**	*e*Pn	**Pn**	**13 33 12.9**	**+1.1**	
MORF				*e*Sn	**Sn**	**13 34 01.6**	**-0.8**	
MORF				A	A	13 34 36.4		
	comp=E,73nm,0.7s							
ECHI	**Chisagues Biel**	**4.43**	**42**	Pn	**Pn**	**13 33 16.1**	**+3.1**	
	comp=E,0.6nm,0.1s,SNR=7.9							
ECHI				Pg	**Pg**	**13 33 31.2**	**+0.4**	
	comp=E,4.9nm,0.1s,SNR=7.9							
ECHI				Sn	**Sn**	**13 34 05.8**	**+1.4**	
	comp=E,2.0nm,0.0s,SNR=7.9							
ECHI				Lg	Lg	13 34 30.9		
	comp=E,20nm,0.3s,SNR=7.9							
ECHI	**Chisagues Biel**	**4.43**	**42**	Pn	**Pn**	**13 33 16.3**	**+3.3**	
ECHI	**Chisagues Biel**	**4.43**	**42**	Sn	**Sn**	**13 34 06.9**	**+2.5**	
CHEFC	**Chefchaouen**	**4.50**	**196**	P		13 33 17.2		
PFVI	**Vila Bisbo**	**4.56**	**241**	Pn	**Pn**	**13 33 15.4**	**+0.7**	
PFVI	comp=E,0.8nm,0.1s,SNR=11			Pg	**Pg**	**13 33 30.9**	**-2.4**	
	comp=E,2.1nm,0.1s,SNR=7.9							
PFVI				Sn	**Sn**	**13 34 05.4**	**-2.1**	
	comp=E,3.0nm,0.1s,SNR=6.0							
PFVI				Lg	Lg	13 34 32.8		
	comp=E,75nm,0.3s,SNR=7.9							
PFVI	**Vila Bisbo**	**4.56**	**241**	*e*Pn	**Pn**	**13 33 15.9**	**+1.2**	
PFVI				*e*Sn	**Sn**	**13 34 05.9**	**-1.6**	
PFVI				A	A	13 34 45.3		
	comp=E,101nm,0.7s							
PFVI	**Vila Bisbo**	**4.56**	**241**	P		13 33 15.9		
EZAM	**Zamans**	**4.57**	**308**	Pn	**Pn**	**13 33 17.2**	**+2.3**	
	comp=E,3.4nm,0.1s,SNR=7.9							
EZAM				Pg	**Pg**	**13 33 32.6**	**-1.0**	
	comp=E,0.4nm,0.0s,SNR=7.9							
EZAM				Sn	**Sn**	**13 34 09.0**	**+1.1**	
	comp=E,1.7nm,0.1s,SNR=7.9							
EZAM				Lg	Lg	13 34 34.4		
	comp=E,38nm,0.3s,SNR=7.9							
EPON	**Pontenova**	**4.61**	**328**	Pn	**Pn**	**13 33 17.6**	**+2.2**	
	comp=E,4.2nm,0.2s,SNR=16							
EPON				Pg	**Pg**	**13 33 35.0**	**+0.7**	
	comp=E,1.1nm,0.1s,SNR=5.4							
EPON				Sn	**Sn**	**13 34 08.5**	**-0.3**	
	comp=E,2.6nm,0.2s,SNR=7.9							
EPON				Lg	Lg	13 34 36.0		
	comp=E,87nm,0.5s,SNR=7.9							
EAGO	**Agolada(Pontev**	**4.65**	**318**	Pn	**Pn**	**13 33 17.7**	**+1.9**	
	comp=E,2.5nm,0.1s,SNR=7.9							
EAGO				Pg	**Pg**	**13 33 34.2**	**-0.8**	
	comp=E,3.1nm,0.1s,SNR=7.9							
EAGO				Sn	**Sn**	**13 34 09.1**	**-0.6**	
	comp=E,17nm,0.3s,SNR=7.9							
EAGO				Lg	Lg	13 34 36.1		
	comp=E,71nm,0.3s,SNR=7.9							
URDF	**Urds**	**4.67**	**30**	Pn	**Pn**	**13 33 19.0**	**+2.8**	
TERF	**Tercis-les-Bai**	**4.69**	**25**	Pn	**Pn**	**13 33 19.9**	**+3.4**	
TERF				Sn	**Sn**	**13 34 12.8**	**+2.1**	
TAF	**Taforalt**	**4.76**	**166**	P		13 33 23.0		
CSOR	**Sort**	**4.76**	**51**	Pn	**Pn**	**13 33 20.0**	**+2.4**	
	comp=E,0.1nm,0.1s,SNR=22							
CSOR				Pg	**Pg**	**13 33 37.0**	**-0.3**	
	comp=E,0.9nm,0.1s,SNR=7.0							
CSOR				Sn	**Sn**	**13 34 13.6**	**+0.9**	
	comp=E,1.3nm,0.1s,SNR=7.9							
CSOR				Lg	Lg	13 34 41.3		
	comp=E,47nm,0.3s,SNR=7.9							
EPF	**Esparros**	**4.76**	**40**	Pn	**Pn**	**13 33 21.2**	**+3.7**	
EPF				Pg	**Pg**	**13 33 37.1**	**-0.2**	
EPF				Sn	**Sn**	**13 34 13.7**	**+1.1**	
EPF				Lg	Lg	13 34 38.1		
	comp=E,31nm,0.4s							
EPF	**Esparros**	**4.76**	**40**	*e*Pn	**Pn**	**13 33 21.2**	**+3.7**	
EPF	**Esparros**	**4.76**	**40**	*e*P	Pn	13 33 23.7	+6.2	
EPF	**Esparros**	**4.76**	**40**	*e*Pg	**Pg**	**13 33 37.1**	**-0.2**	
EPF				*e*Sn	**Sn**	**13 34 13.7**	**+1.1**	
EPF				*e*Sg	**Sg**	**13 34 38.1**	**-0.9**	
	comp=E,62nm,0.4s							
RSA	**Sarsar**	**4.82**	**200**	P		13 33 22.6		
OKGL	**Djebel Kef Gue**	**4.91**	**132**	Pn	**Pn**	**13 33 22.5**	**+2.9**	
	comp=E,1.4nm,0.1s,SNR=7.9							
OKGL				Sn	**Sn**	**13 34 16.0**	**-0.3**	
	comp=E,2.4nm,0.1s,SNR=7.9							
MLS	**Moulis**	**5.11**	**45**	Pn	**Pn**	**13 33 25.9**	**+3.6**	
ETOS	**Mallorca**	**5.14**	**84**	Pn	**Pn**	**13 33 25.5**	**+2.8**	
	comp=E,0.3nm,0.2s,SNR=7.9							
ETOS				Sn	**Sn**	**13 34 19.8**	**-2.0**	
	comp=E,0.2nm,0.1s,SNR=7.9							
JBK	**JBK**	**5.20**	**168**	P		13 33 26.2		
EMAZ	**Mazaricos**	**5.23**	**314**	Pn	**Pn**	**13 33 26.2**	**+2.4**	
	comp=E,7.8nm,0.1s,SNR=7.9							
EMAZ				Sn	**Sn**	**13 34 23.0**	**-0.9**	
	comp=E,1.9nm,0.1s,SNR=7.9							
EMAZ				Lg	Lg	13 34 54.4		
	comp=E,65nm,0.4s,SNR=7.9							
CLLI	**Llivia**	**5.34**	**54**	Pn	**Pn**	**13 33 28.6**	**+3.1**	
	comp=E,0.6nm,0.1s,SNR=12							
CLLI				Pg	**Pg**	**13 33 48.0**	**-0.2**	
	comp=E,1.1nm,0.1s,SNR=6.0							
CLLI				Sn	**Sn**	**13 34 25.9**	**-1.0**	
	comp=E,1.3nm,0.2s,SNR=7.9							
CLLI				Lg	Lg	13 34 59.5		
	comp=E,19nm,0.5s,SNR=7.9							
FNEB	**Nbias**	**5.66**	**50**	Pg	**Pn**	**13 33 32.1**	**+2.3**	
FNEB				Pn	Pb	13 33 33.3	-11	
EJON	**La Jonquera**	**5.90**	**57**	Pn	**Pn**	**13 33 35.6**	**+2.4**	
	comp=E,0.2nm,0.1s,SNR=7.9							
EJON				Pg	**Pg**	**13 33 57.5**	**-1.6**	
	comp=E,0.5nm,0.1s,SNR=7.9							
EJON				Sn	**Sn**	**13 34 39.2**	**-1.5**	
	comp=E,0.1nm,0.0s,SNR=7.9							
EJON				Lg	Lg	13 35 16.9		
	comp=E,39nm,0.5s,SNR=7.9							
SJAF	**Saint Jean de**	**5.92**	**57**	Pn	**Pn**	**13 33 36.3**	**+3.0**	
	comp=E,0.3nm,0.1s,SNR=7.9							
SJAF				Pg	**Pg**	**13 33 58.6**	**-0.8**	
	comp=E,0.5nm,0.1s,SNR=7.9							
SJAF				Sn	**Sn**	**13 34 39.0**	**-2.0**	
	comp=E,1.7nm,0.2s,SNR=7.9							
SJAF				Lg	Lg	13 35 17.2		
	comp=E,6.5nm,0.3s,SNR=7.9							
MTLF	**Montolieu**	**5.98**	**47**	Pn	**Pn**	**13 33 37.4**	**+3.2**	
MTLF				Pg	**Pg**	**13 33 59.2**	**-1.4**	
MTLF				Sn	**Sn**	**13 34 41.3**	**-1.3**	
MTLF				Lg	Lg	13 35 17.7		
	comp=E,10nm,0.4s							
MTLF	**Montolieu**	**5.98**	**47**	*e*Pn	**Pn**	**13 33 37.4**	**+3.2**	
MTLF	**Montolieu**	**5.98**	**47**	*e*P	Pn	13 33 41.1	+6.9	
MTLF	**Montolieu**	**5.98**	**47**	*e*Pg	**Pg**	**13 33 59.2**	**-1.4**	
MTLF				*e*Sn	**Sn**	**13 34 41.3**	**-1.3**	
MTLF				*e*Sg	**Sg**	**13 35 17.7**	**-0.3**	
	comp=E,20nm,0.4s							
MTLF	**Montolieu**	**5.98**	**47**	Pn	**Pn**	**13 33 37.7**	**+3.4**	
IFR	**Ifrane**	**6.01**	**190**	*e*P	**Pn**	**13 33 37.3**	**+2.5**	
IFR				*e*S	**Sn**	**13 34 39.3**	**-4.2**	
LRVF	**chteau la Riv**	**6.09**	**24**	Pn	**Pn**	**13 33 38.6**	**+3.0**	
MONQ	**Montcuq**	**6.18**	**36**	Pn	**Pn**	**13 33 39.8**	**+2.9**	
ZHG	**ZHG**	**6.40**	**202**	P		13 33 42.0		
LFF	**La Frestale**	**6.45**	**30**	Pn	**Pn**	**13 33 43.3**	**+2.7**	
LFF				Sn	**Sn**	**13 34 51.0**	**-3.1**	
	comp=E,10nm,0.3s							
LFF	**La Frestale**	**6.45**	**30**	*e*Pn	**Pn**	**13 33 43.3**	**+2.7**	
LFF	**La Frestale**	**6.45**	**30**	*e*P	Pn	13 33 46.8	+6.2	
LFF				*e*Sn	**Sn**	**13 34 51.0**	**-3.1**	
	comp=E,20nm,0.3s							
MD31	**MD31**	**6.61**	**187**	P		13 33 44.0		
MDT	**Midelt**	**6.65**	**186**	P		13 33 46.0		
CAF	**Calviac**	**7.01**	**37**	Pn	**Pn**	**13 33 50.2**	**+1.9**	
CAF				Sn	**Sn**	**13 35 04.4**	**-3.4**	
	comp=E,3.1nm,0.3s							
CAF	**Calviac**	**7.01**	**37**	*e*Pn	**Pn**	**13 33 50.2**	**+1.9**	
CAF	**Calviac**	**7.01**	**37**	*e*P	Pn	13 33 54.4	+6.1	
CAF				*e*Sn	**Sn**	**13 35 04.4**	**-3.4**	
	comp=E,6.2nm,0.3s							
RJF	**Les Rejaudoux**	**7.06**	**32**	*e*Pn	**Pn**	**13 33 50.4**	**+1.3**	
RJF	**Les Rejaudoux**	**7.06**	**32**	*e*P	Pn	13 33 55.9	+6.8	
RJF				*e*Sn	**Sn**	**13 35 05.2**	**-4.0**	
	comp=E,15nm,0.5s							
LASF	**Ste Croix**	**7.37**	**49**	*e*Pn	**Pn**	**13 33 55.9**	**+2.6**	
LASF	**Ste Croix**	**7.37**	**49**	*e*P	Pn	13 34 00.3	+7.0	
LASF	**Ste Croix**	**7.37**	**49**	*e*Pg	**Pg**	**13 34 26.8**	**-0.4**	
LASF				*e*Sg	**Sg**	**13 35 59.9**	**-2.7**	
	comp=E,17nm,0.6s							
MFF	**Saint Martin d**	**7.64**	**19**	*e*Sn	**Sn**	**13 35 20.4**	**-3.0**	
	comp=E,4.2nm,0.3s							
TCF	**Toulx Ste Croi**	**8.15**	**31**	*e*Pn	**Pn**	**13 34 05.6**	**+1.7**	
TCF				*e*Sn	**Sn**	**13 35 33.2**	**-2.6**	
	comp=E,3.6nm,0.3s							
VIVF	**Saint-Julien-l**	**8.31**	**47**	*e*Pn	**Pn**	**13 34 09.2**	**+3.0**	
VIVF	**Saint-Julien-l**	**8.31**	**47**	*e*P	Pn	13 34 13.7	+7.5	
VIVF	**Saint-Julien-l**	**8.31**	**47**	*e*Pg	Pg	13 34 43.4	-1.7	
QUIF	**Quistinic**	**8.48**	**3**	*e*Pn	**Pn**	**13 34 09.7**	**+1.2**	
QUIF				*e*Sn	**Sn**	**13 35 40.6**	**-3.3**	
	comp=E,3.9nm,0.3s							
OUZM	**OUZ**	**8.85**	**197**	P		13 34 15.0		
SGMF	**Saint Gilles**	**8.85**	**6**	*e*Pn	**Pn**	**13 34 14.8**	**+1.2**	
SGMF				*e*Sn	**Sn**	**13 35 49.5**	**-3.6**	
	comp=E,6.0nm,0.4s							
OUK	**Oukaimeden**	**8.86**	**203**	P		13 34 15.6		
ROSF	**Rostrenen**	**8.90**	**2**	*e*Pn	**Pn**	**13 34 15.3**	**+1.1**	
ROSF				*e*Sn	**Sn**	**13 35 50.2**	**-4.0**	
	comp=E,8.4nm,0.3s							
AVF	**Avril sur Loir**	**9.02**	**33**	*e*Pn	**Pn**	**13 34 16.9**	**+1.0**	
AVF				*e*Sn	**Sn**	**13 35 53.7**	**-3.5**	
	comp=E,2.2nm,0.4s							
SMF	**Signal de Mont**	**9.12**	**35**	*e*Pn	**Pn**	**13 34 18.7**	**+1.4**	
SMF				*e*Sn	**Sn**	**13 35 55.9**	**-3.9**	
	comp=E,1.1nm,0.3s							
GRR	**Gorron**	**9.19**	**12**	*e*Pn	**Pn**	**13 34 19.8**	**+1.6**	
GRR				*e*Sn	**Sn**	**13 35 57.3**	**-4.1**	
	comp=E,4.4nm,0.3s							
SSF	**Saint Saulge**	**9.30**	**33**	*e*Pn	**Pn**	**13 34 21.2**	**+1.5**	
SSF				*e*Sn	**Sn**	**13 36 00.1**	**-4.0**	
	comp=E,1.9nm,0.3s							
LDF	**La Druitiere**	**9.52**	**15**	*e*Pn	**Pn**	**13 34 24.2**	**+1.4**	
LDF				*e*Sn	**Sn**	**13 36 05.7**	**-3.9**	
	comp=E,1.3nm,0.2s							
FLN	**La Foliniere**	**9.62**	**13**	*e*Pn	**Pn**	**13 34 25.5**	**+1.4**	
	baz=185							
FLN				*e*Sn	**Sn**	**13 36 07.8**	**-4.1**	
	comp=E,2.7nm,0.4s							
TTIG	**Tnine Tigouga,**	**9.65**	**204**	P		13 34 23.3		
CABF	**La Chapelle**	**10.19**	**42**	*e*Pn	**Pn**	**13 34 34.5**	**+2.5**	
CABF				*e*Sn	**Sn**	**13 36 21.5**	**-4.6**	
	comp=E,0.8nm,0.2s							

*IDC **01** 13:50:56.2±1.4,5°.30S×152°.44E, h0km, mb4.0/8, mb1 4.2/9, mb1mx3.9/32, mbtmp4.0/9, ML1.4/1, MS3.5/13, Ms1 3.5/13, ms1mx3.3/36, Error ellipse: s-maj=51.9km s-min=19.5km az=125.0*

ISC 01 13:51:01.8±1.3,5°.4S±0°.1×152°.5E±0°.2, h40km, n26, σ1s 19/13, mb3.9/8, MS3.5/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.27**	**346**	P	**Pn**	**13 51 24.5**	**+1.3**
PMG	**Port Moresby**	**6.59**	**233**	Pn	**Pn**	**13 52 36.0**	**-0.2**
	0.5nm,0.3s,baz=285,slow=22,SNR=3.2						
PMG				Sn	**Sn**	**13 53 49.3**	**-0.9**
	4.1nm,0.3s,baz=148,slow=22,SNR=3.7						
PMG	**Port Moresby**	**6.59**	**233**	P	**Pn**	**13 52 39.2**	**+3.0**
	31nm,0.9s						
HNR	**Honiara**	**8.40**	**119**	LR	LR	13 56 06.3	
	comp=Z,250nm,20.5s,baz=280,slow=36						
DZM	**Mont Dzumac**	**21.36**	**142**	eLR	LR	14 00 48.3	
	comp=Z,365nm,26.0s						
DZM	**Mont Dzumac**	**21.36**	**142**	LR	LR	14 03 34.9	
	comp=Z,113nm,18.3s,baz=270,slow=35						
WRA	**Warramunga Arr**	**22.79**	**229**	P	**P**	**13 56 01.1**	**-0.1**
	1.7nm,0.6s,baz=54,slow=10.0,SNR=22						
WRA				LR	LR	14 06 18.0	
	comp=Z,145nm,18.4s,baz=70,slow=40						
ASAR	**Alice Springs**	**25.47**	**223**	P	**P**	**13 56 26.4**	**-0.1**
	1.0nm,0.5s,baz=57,slow=9.4,SNR=5						
STKA	**Stephens Creek**	**28.21**	**200**	LR	LR	14 08 51.3	
	comp=Z,117nm,18.8s,baz=20,slow=38						
FITZ	**Fitzroy Crossi**	**29.08**	**242**	P	**P**	**13 56 58.8**	**0.0**
	3.1nm,0.6s,baz=56,slow=8.7,SNR=14						
JCJ	**Chichijima**	**33.84**	**343**	LR	LR	14 10 52.3	
	comp=Z,50nm,19.4s,baz=155,slow=36						
RPZ	**Rata Peaks**	**41.49**	**160**	LR	LR	14 15 33.8	
	comp=Z,167nm,18.1s,baz=2.0,slow=36						
NWAO	**Narrogin (SRO)**	**42.72**	**226**	LR	LR	14 17 09.1	
	comp=Z,121nm,19.8s,baz=40,slow=37						
MJAR	**Matsushiro Arr**	**43.84**	**343**	LR	LR	14 15 10.8	
	comp=Z,35nm,21.1s,baz=105,slow=33						
KSRS	**Korea Array**	**48.42**	**334**	LR	LR	14 19 35.9	
	comp=Z,36nm,18.7s,baz=160,slow=36						
PPT2	**Papeete2**	**57.84**	**107**	eLR	LR	14 17 48.9	
	comp=Z,54nm,21.8s						
CMAR	**Chiang Mai Arr**	**57.86**	**296**	P	**P**	**14 00 50.1**	**0.0**
	0.5nm,0.3s,baz=119,slow=5.2,SNR=4.9						
CMAR				LR	LR	14 28 34.7	
	comp=Z,20nm,18.1s,baz=85,slow=39						
PETK	**Petropavlovsk-**	**58.49**	**4**	LR	LR	14 20 41.9	
	comp=Z,41nm,21.5s,baz=169,slow=31						
TBI	**Tubuai**	**58.59**	**114**	*e*LR	LR	14 18 12.9	
	comp=Z,62nm,32.0s						
SONM	**Songino Array**	**66.69**	**328**	P	**P**	**14 01 47.8**	**-1.0**
	0.5nm,0.7s,baz=145,slow=5.5,SNR=2.7						
MKAR	**Makanchi Array**	**80.59**	**319**	P	**P**	**14 03 09.7**	**-0.6**
	0.8nm,0.8s,baz=112,slow=6.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**81.50**	**326**	LR	LR	14 38 39.5	
	comp=Z,41nm,20.7s,baz=87,slow=35						
ILAR	**Eielson Array**	**82.86**	**22**	P	**P**	**14 03 21.1**	**-0.7**
	1.3nm,0.7s,baz=245,slow=5.7,SNR=11						
YKA	**Yellowknife Ar**	**96.13**	**28**	P	**P**	**14 04 26.0**	**+0.9**
	0.5nm,0.8s,baz=268,slow=4.5,SNR=9.1						
PDAR	**Pinedale Array**	**99.51**	**48**	LR	LR	14 43 14.1	
	comp=Z,32nm,18.9s,baz=314,slow=32						
TORD	**Torodi Ar. Bea**	**150.20**	**287**	PKPbc	**PKiKP**	**14 10 50.4**	**0.0**
	1.7nm,0.8s,baz=50,slow=2.3,SNR=4.4						

IDC 01 13:57:45.9±4.5, 12°.76N×146°.39E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/45, mbtmp3.6/6, Error ellipse: s-maj=126.6km s-min=37.0km az=168.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**45.94**	**283**	P	P	14 06 10.8	-0.3
	0.8nm,0.6s,baz=84,slow=6.2,SNR=6.2						
SONM	**Songino Array**	**48.26**	**325**	P	P	14 06 28.1	-0.7
	0.3nm,0.7s,baz=132,slow=6.8,SNR=1.4						
MKAR	**Makanchi Array**	**63.11**	**316**	P	P	14 08 15.9	+0.5
	0.6nm,0.5s,baz=89,slow=8.3,SNR=13						
ILAR	**Eielson Array**	**68.69**	**25**	P	P	14 08 51.2	+0.1
	0.2nm,0.6s,baz=248,slow=7.0,SNR=4.2						
YKA	**Yellowknife Ar**	**82.91**	**28**	P	P	14 10 12.3	-0.1
	0.1nm,0.5s,baz=285,slow=4.3,SNR=3.1						
FINES	**FINESS Array B**	**92.53**	**335**	P	P	14 10 58.6	-0.3
	0.9nm,0.6s,baz=72,slow=4.5,SNR=3.5						

*IDC **01** 14:04:45.9±2.9, 5°.16S×152°.48E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/40, mbtmp3.6/6, ML1.3/1, Error ellipse: s-maj=94.6km s-min=25.8km az=119.0*

ISC 01 14:04:48.5±2.4, 5°.5S±0°.4×153°.0E±0°.4, h35km, n7, σ1s 45/8, mb3.4/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.97**	**236**	Pn	**Pn**	**14 06 26.2**	**-2.0**
	0.4nm,0.3s,baz=355,slow=11,SNR=1.7						
PMG				Sn	**Sn**	**14 07 48.1**	**+1.7**
	0.3nm,0.3s,baz=331,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**23.14**	**230**	P	**P**	**14 09 52.7**	**+0.8**
	0.9nm,0.8s,baz=54,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**25.78**	**224**	P	**P**	**14 10 17.8**	**+1.4**
	0.3nm,0.7s,baz=54,slow=9.4,SNR=3.0						
FITZ	**Fitzroy Crossi**	**29.50**	**243**	P	**P**	**14 10 49.0**	**-0.8**
	1.3nm,0.8s,baz=50,slow=7.9,SNR=3.3						
MKAR	**Makanchi Array**	**80.96**	**319**	P	**P**	**14 17 00.1**	**+0.6**
	0.2nm,0.5s,baz=90,slow=7.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**81.82**	**326**	P	**P**	**14 17 04.0**	**+0.1**
	0.2nm,0.3s,baz=125,slow=6.3,SNR=1.7						
TORD	**Torodi Ar. Bea**	**150.69**	**287**	PKPbc	**PKPbc**	**14 24 38.4**	**+0.4**
	0.7nm,0.6s,baz=84,slow=1.1,SNR=4.0						

*MEX **01** 14:09:24.3±0.6, 15°.52N×93°.71W, h75km±8km, MD4.0*
*IDC **01** 14:09:24.5±1.4, 15°.73N×93°.59W, h78km±12km, mb3.4/4, mb1 3.7/7, mb1mx3.3/42, mbtmp3.7/7, Error ellipse: s-maj=23.8km s-min=6.5km az=29.0*

ISC 01 14:09:23.7±1.0, 15°.59N±0°.07×93°.66W±0°.06, h74km±9km, n13, σ0s 88/21, mb3.8/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.44**	**75**	*e*P	**Pn**	**14 09 35.8**	**-0.5**
PCIG				*e*S	**Sn**	**14

PB10	**IPOC Station P**	**3.45 278**	⇑ *iP*		**Pn**	**14 16 29.6**	**+0.8**
PB10	**IPOC Station P**	**3.45 278**			**Pn**	**14 16 29.4**	**+0.5**
PB04	**IPOC Station P**	**3.49 298**	*eP*		**Pn**	**14 16 30.1**	**+0.6**
PB04	**IPOC Station P**	**3.49 298**			**Pn**	**14 16 29.8**	**+0.3**
AC02	**Maricunga**	**3.49 216**			**Pn**	**14 16 30.6**	**+0.8**
PB07	**IPOC Station P**	**3.63 308**	⇑ *iP*		**Pn**	**14 16 31.8**	**+0.5**
PB07	**IPOC Station P**	**3.63 308**			**Pn**	**14 16 31.2**	**-0.1**
PB01	**IPOC Station P**	**3.85 320**	*eP*		**Pn**	**14 16 34.3**	**+0.3**
PB01	**IPOC Station P**	**3.85 320**			**Pn**	**14 16 34.0**	**+0.1**
AC01	**Pan de Azucar**	**4.03 237**	*eP*		**Pn**	**14 16 35.5**	**-0.5**
AC01	**Pan de Azucar**	**4.03 237**	Pn		**Pn**	**14 16 35.4**	**-0.5**
PB08	**IPOC Station P**	**4.42 330**	*eP*		**Pn**	**14 16 42.5**	**+1.1**
PB08	**IPOC Station P**	**4.42 330**			**Pn**	**14 16 42.2**	**+0.8**
TA01	**Diego Aracena**	**4.63 317**	Pn		**Pn**	**14 16 42.8**	**-0.9**
GO03	**Copiap**	**4.70 220**	Pn		**Pn**	**14 16 43.6**	**-0.9**
PSGCX	**Pisagua**	**5.36 325**	Pn		**Pn**	**14 16 51.3**	**-1.9**
MNMC	**Minye Minye**	**5.51 332**	*eP*		**Pn**	**14 16 55.0**	**-0.2**
MNMC	**Minye Minye**	**5.51 332**	Pn		**Pn**	**14 16 54.6**	**-0.6**
AC04	**Llanos de Chal**	**5.65 222**	Pn		**Pn**	**14 16 55.2**	**-1.5**
LCO	**Las Campanas**	**6.06 214**			**Pn**	**14 17 00.8**	**-1.5**
PB16	**IPOC Station P**	**6.18 336**	Pn		**Pn**	**14 17 03.7**	**-0.6**
GO04	**Tololo Observa**	**7.08 209**	Pn		**Pn**	**14 17 13.4**	**-2.1**
CO03	**El Pedregal**	**7.61 206**	Pn		**Pn**	**14 17 20.9**	**-1.4**
ZON	**Zonda**	**7.67 192**	Pn		**Pn**	**14 17 23.7**	**+0.6**
LPAZ	**La Paz**	**7.79 351**	P		**Pn**	**14 17 26.1**	**+0.8**
	comp=N,1.3nm,0.3s,baz=167,slow=3.8,SNR=63						
LPAZ			S		**Sn**	**14 18 51.3**	**-2.1**
	comp=N,0.1nm,0.3s,baz=48,slow=22,SNR=2.1						
LPAZ	**La Paz**	**7.79 351**	Pn		**Pn**	**14 17 25.5**	**+0.3**
CPUP	**Villa Florida**	**8.90 107**	P		**Pn**	**14 17 39.0**	**-0.1**
	comp=N,0.1nm,0.3s,baz=291,slow=11,SNR=3.6						
SIV	**San Ignacio**	**9.64 35**	P		**Pn**	**14 17 47.4**	**-1.5**
	comp=N,0.2nm,0.3s,baz=252,slow=7.3,SNR=3.3						
PEL	**Peldehue**	**9.70 200**	Pn		**Pn**	**14 17 49.2**	**-0.3**
MT02	**Curacav**	**9.95 201**	Pn		**Pn**	**14 17 51.4**	**-1.3**
BDFB	**Brasilia**	**19.54 68**	P		**P**	**14 19 47.4**	**+0.2**
	comp=N,1.3nm,0.3s,baz=236,slow=11,SNR=15						
BDFB	**Brasilia**	**19.54 68**	P		**P**	**14 19 47.6**	**+0.4**
PTGA	**Pitinga**	**24.09 17**	P		**P**	**14 20 31.3**	**-0.6**
	comp=N,1.4nm,0.3s,baz=154,slow=22,SNR=6.2						
PTGA	**Pitinga**	**24.09 17**	P		**P**	**14 20 29.8**	**-2.1**
PTGA			IAmb		IAmb	14 20 36.7	
	comp=Z,8.1nm,1.4s						
TXAR	**Lajitas Array**	**63.79 324**	P		**P**	**14 25 46.8**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=145,slow=7.3,SNR=3.5						
TOA0	**Torodi Ar. Sit**	**76.43 69**	P		**P**	**14 27 02.2**	**-0.4**
TOA0			IAmb		IAmb	14 27 03.6	
	comp=Z,1.9nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.43 69**	P		**P**	**14 27 02.4**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=261,slow=5.3,SNR=13						
TORD	**Torodi Ar. Bea**	**76.43 69**	P		**P**	**14 27 02.0**	**-0.7**
PDAR	**Pinedale Array**	**77.25 329**	P		**P**	**14 27 08.2**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=113,slow=6.5,SNR=4.6						
ULM	**Lac du Bonnet**	**78.30 341**	P		**P**	**14 27 12.6**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=144,slow=5.7,SNR=5.4						
ULM	**Lac du Bonnet**	**78.30 341**	IAmb		IAmb	14 27 13.3	
	comp=Z,2.3nm,0.7s						
YKA	**Yellowknife Ar**	**94.20 340**	P		**P**	**14 28 30.6**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=132,slow=4.9,SNR=15						
ASAR	**Alice Springs**	**128.50 204**	PKP		**PKiKP**	**14 34 18.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=128,slow=1.6,SNR=10						
WRA	**Warramunga Arr**	**131.68 207**	PKP		**PKiKP**	**14 34 25.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=154,slow=2.0,SNR=20						
ZALV	**Zalesovo Beam**	**143.34 28**	PKP		PKPbc	14 34 42.8	+0.2
	comp=Z,1.4nm,0.6s,baz=293,slow=5.4,SNR=7.7						
ZALV	**Zalesovo Beam**	**143.34 28**			PKPbc	14 34 43.1	+0.5
MKAR	**Makanchi Array**	**146.44 40**	PKPbc		**PKPbc**	**14 34 52.0**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=323,slow=2.6,SNR=28						
MKAR	**Makanchi Array**	**146.44 40**			**PKPbc**	**14 34 51.7**	**-0.5**
SONM	**Songino Array**	**155.63 11**	PKPab		**PKPab**	**14 35 33.1**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=350,slow=1.8,SNR=2.2						

*IPEC **01** 14:30:18.5±0.3,51.57N×16.20E,h0km,ML3.0/3, Error ellipse: s-maj=3.2km s-min=1.7km az=66.0*
*IDC **01** 14:30:19.8±0.6,51.51N×16.10E,h0km,mb3.3/2, mb1 3.5/9,mb1mx3.3/43,mbtmp3.4/9,ML2.9/6,MS3.5/1, Ms1 3.5/1,ms1mx2.3/41,Error ellipse: s-maj=13.9km s-min=6.7km az=108.0*
*BGR **01** 14:30:20.3±0.4,51.50N×16.13E,h1km,ML3.1/12, Error ellipse: s-maj=4.4km s-min=2.2km az=33.0*
*PRU **01** 14:30:20.2±0.0,51.51N×16.09E,h0km*
ISC 01 14:30:18.0±0.6,51.60N±0.03×16.17E±0.02,h0km,n79, σ1s51/149,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.76**	**174**	*i* Pg	**Pg**	**14 30 32.9**	**+0.4**
KSP				*i* Sg	**Sg**	**14 30 41.8**	**-0.5**
KSP	**Ksiaz**	**0.76**	**174**	*e*Pg	**Pg**	**14 30 32.9**	**+0.4**
	SNR=18						
KSP				*e*Sg	**Sg**	**14 30 41.9**	**-0.5**
	SNR=3.8						
CHVC	**Chvalec**	**1.01**	**184**	*e*PG	**Pg**	**14 30 37.7**	**+0.3**
CHVC				*e*SG	**Sg**	**14 30 49.4**	**-1.1**
OSTC	**Ostas**	**1.04**	**178**	*e*PG	**Pg**	**14 30 38.2**	**+0.3**
OSTC				*e*SG	**Sg**	**14 30 51.1**	**-0.4**
	comp=Z,137nm,0.4s						
UPC	**Upice**	**1.10**	**185**	*e*PG	**Pg**	**14 30 39.0**	**0.0**
UPC				*e*SG	**Sg**	**14 30 52.5**	**-0.7**
	comp=Z,134nm,0.3s						
DPC	**Dobruska-Polom**	**1.25**	**175**	*e*PG	**Pg**	**14 30 41.8**	**-0.2**
DPC				*e*SG	**Sg**	**14 30 56.6**	**-1.6**
	comp=Z,108nm,0.5s						
DPC	**Dobruska-Polom**	**1.25**	**175**	*e*Pg	**Pg**	**14 30 41.8**	**-0.2**
	SNR=84						
DPC				*e*Sg	**Sg**	**14 30 56.9**	**-1.3**
	SNR=4.3						
PVCC	**Panska Ves**	**1.47**	**224**	*e*PG	**Pn**	**14 30 45.6**	**-0.1**
PVCC				*e*SG	**Sg**	**14 31 05.0**	**-0.2**
	comp=Z,152nm,0.3s						
PVCC	**Panska Ves**	**1.47**	**224**	*e*Pg	**Pb**	**14 30 46.4**	**+0.2**
	SNR=58						
PVCC				*e*Sg	**Sb**	**14 31 05.6**	**+0.2**
	SNR=4.7						
KRLC	**Kraliky**	**1.57**	**165**	*e*PG	**Pn**	**14 30 47.4**	**+0.2**
KRLC				*e*SG	**Sn**	**14 31 07.1**	**-1.2**
	comp=Z,170nm,0.6s						
BRG	**Berggiesshubel**	**1.57**	**243**	Pn	**Pn**	**14 30 46.8**	**-0.4**
BRG				Pg	**Pb**	**14 30 48.1**	**+0.1**
BRG				Sg	**Sb**	**14 31 08.3**	**-0.1**
BRG				Amp		14 31 11.6	
	comp=Z,118nm,0.8s						
RUE	**Ruedersdorf**	**1.72**	**302**	*e*Pn	**Pb**	**14 30 49.9**	**-0.5**
	SNR=2.6						
RUE				*e*Sg	**Sg**	**14 31 16.4**	**+3.3**
	SNR=3.0						
FBE	**Freiberg**	**1.89**	**250**	*e*Pg	**Pg**	**14 30 54.0**	**-0.2**
	SNR=16						
FBE				*e*Sg	**Sg**	**14 31 18.3**	**-0.4**
	SNR=2.7						
PRU	**Pruhonice**	**1.91**	**213**	*e*PN	**Pn**	**14 30 51.3**	**-0.5**
PRU				*e*PG	**Pb**	**14 30 53.1**	**-0.6**
PRU				*e*SG	**Sn**	**14 31 17.2**	**+0.6**
	comp=Z,82nm,0.6s						
PRU	**Pruhonice**	**1.91**	**213**	*e*Pn	**Pn**	**14 30 51.3**	**-0.5**
	SNR=2.2						
CLL	**Collm**	**2.00**	**263**	*e*Pn	**Pn**	**14 30 53.0**	**0.0**
CLL				*e*Pg	**Pg**	**14 30 56.0**	**-0.3**
CLL				*i*		14 30 58.9	
CLL				*i* Sg	**Sg**	**14 31 21.9**	**-0.3**
	comp=Z,79nm,1.0s						
CLL	**Collm**	**2.00**	**263**	*e*Pg	**Pg**	**14 30 56.4**	**+0.1**
	SNR=4.8						
CLL				*e*Sg	**Sg**	**14 31 22.4**	**+0.2**
	SNR=2.6						
MORC	**Moravsky Berou**	**2.02**	**154**	*e*PN	**Pn**	**14 30 53.3**	**-0.1**
MORC				*e*SG	**Sb**	**14 31 21.0**	**-0.4**
MORC	**Moravsky Berou**	**2.02**	**154**	*e*Pn	**Pn**	**14 30 53.3**	**-0.1**
	baz=335						
MORC				*e*Sg	**Sb**	**14 31 20.9**	**-0.4**
	comp=Z,76nm,0.4s,baz=335						
MORC	**Moravsky Berou**	**2.02**	**154**	*e*Pn	**Pn**	**14 30 53.5**	**+0.2**
	SNR=7.0						
MORC				*e*Sg	**Sb**	**14 31 21.6**	**+0.3**
	SNR=3.9						
OKC	**Ostrava-Krasne**	**2.17**	**144**	*e*PG	**Pb**	**14 30 58.9**	**+0.9**
OKC				*e*SG	**Sb**	**14 31 25.8**	**+0.4**
	comp=Z,140nm,0.7s						
VRAC	**Vranov**	**2.31**	**173**	Pn	**Pn**	**14 30 57.9**	**+0.6**
	comp=Z,3.9nm,0.3s,baz=359,slow=15,SNR=12						
VRAC				Lg	Lg	14 31 30.1	
	comp=Z,8.0nm,0.3s,baz=261,slow=21,SNR=5.9						
VRAC	**Vranov**	**2.31**	**173**	*e*PN	**Pn**	**14 30 57.4**	**+0.1**
VRAC				*e*SG	**Sb**	**14 31 29.8**	**+0.3**
VRAC	**Vranov**	**2.31**	**173**	*e*Pn	**Pn**	**14 30 57.3**	**0.0**
	baz=354						
VRAC				*e*Sg	**Sb**	**14 31 29.8**	**+0.3**
	comp=Z,88nm,0.9s,baz=354						
VRAC	**Vranov**	**2.31**	**173**	*e*Sg	**Sb**	**14 31 30.1**	**+0.6**
	SNR=2.4						
TREC	**Trest**	**2.35**	**191**	*e*Pn	**Pn**	**14 30 59.0**	**+1.2**
	SNR=2.5						
KRUC	**Moravsky**	**2.54**	**177**	*e*PN	**Pn**	**14 31 00.7**	**+0.2**
KRUC				*e*SG	**Sb**	**14 31 37.3**	**+1.0**
KRUC	**Moravsky**	**2.54**	**177**	*e*Pn	**Pn**	**14 31 00.7**	**+0.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**14 31 37.2**	**+1.0**
	comp=Z,52nm,0.6s,baz=357						
KRUC	**Moravsky**	**2.54**	**177**	*e*Pg	**Pb**	**14 31 05.1**	**+0.6**
	SNR=4.8						
KRUC				*e*Sg	**Sg**	**14 31 38.6**	**-1.0**
	SNR=3.7						
TANN	**Tannenbergstha**	**2.62**	**245**	*e*Pn	**Pn**	**14 31 02.2**	**+0.6**
	SNR=3.7						
TANN				*e*Pg	**Pg**	**14 31 08.8**	**+0.6**
	SNR=5.4						
OJC	**Ojcow**	**2.68**	**120**	*e*Pg	**Pg**	**14 31 10.3**	**+1.0**
OJC				*e*Sg	**Sg**	**14 31 45.6**	**+1.5**
OJC	**Ojcow**	**2.68**	**120**	*e*Pg	**Pg**	**14 31 10.3**	**+1.0**
	SNR=6.9						
GUNZ	**Gunzen**	**2.72**	**244**	*e*Pn	**Pn**	**14 31 03.3**	**+0.3**
	SNR=3.1						
NKC	**Novy Kostel**	**2.72**	**241**	*e*Pn	**Pn**	**14 31 03.3**	**+0.4**
NKC				*e*PG	**Pg**	**14 31 09.7**	**-0.4**
NKC				*e*SG	**Sg**	**14 31 45.9**	**+0.6**
NKC	**Novy Kostel**	**2.72**	**241**	*e*Pn	**Pn**	**14 31 03.3**	**+0.4**
	SNR=6.1						
NKC				*e*Pg	**Pg**	**14 31 11.0**	**+0.9**
	SNR=4.1						
WERN	**Wernitzgruen**	**2.73**	**243**	*e*Pn	**Pn**	**14 31 04.0**	**+0.9**
	SNR=5.2						
WERN				*e*Pg	**Pg**	**14 31 10.5**	**+0.2**
	SNR=4.9						
PLN	**Plauen**	**2.77**	**248**	*e*Pg	**Pg**	**14 31 11.2**	**+0.2**
	SNR=4.3						
NEUB	**Neuenburg**	**2.78**	**264**	*e*Pg	**Pg**	**14 31 11.4**	**+0.3**
	SNR=2.6						
JAVC	**Velka Javorina**	**2.91**	**160**	*e*PN	**Pn**	**14 31 06.6**	**+1.1**
KHC	**Kasperske Hory**	**2.97**	**215**	*e*PN	**Pn**	**14 31 06.0**	**-0.4**
KHC				*e*PG	**Pb**	**14 31 12.5**	**+0.7**
KHC				*e*SN	**Sn**	**14 31 40.8**	**-2.0**
KHC				*e*SG	**Sb**	**14 31 50.2**	**+1.5**
	comp=Z,35nm,0.6s						
MOX	**Moxa**	**3.02**	**253**	*e*Pg	**Pg**	**14 31 15.8**	**-0.1**
	SNR=7.2						
MOX				*e*Sg	**Sg**	**14 31 55.5**	**+0.5**
	SNR=6.5						
CKRC	**Cesky Krumlov**	**3.03**	**204**	*e*PN	**Pn**	**14 31 07.6**	**+0.5**
CKRC				*e*PG	**Pb**	**14 31 13.5**	**+0.8**
CKRC				*e*SG	**Sb**	**14 31 52.4**	**+2.2**
	comp=Z,44nm,0.7s						
MANZ	**Manzenberg**	**3.04**	**239**	*e*Pn	**Pn**	**14 31 08.2**	**+0.9**
	SNR=2.6						
MANZ				*e*Pg	**Pg**	**14 31 16.3**	**+0.1**
	SNR=2.0						
ROTZ	**Rotzenmuhle**	**3.11**	**235**	*e*Pn	**Pn**	**14 31 08.7**	**+0.4**
	SNR=2.6						
ROTZ				*e*Pg	**Pg**	**14 31 17.4**	**-0.2**
	SNR=2.0						
ROTZ				*e*Sg	**Sg**	**14 31 55.5**	**-2.5**
	SNR=3.5						
GEC2	**GERESS Array S**	**3.18**	**211**	*e*Pn	**Pn**	**14 31 10.1**	**+0.9**
	SNR=6.8						
GEC2				*e*Pg	**Pb**	**14 31 17.2**	**+1.8**
	SNR=2.1						
GERES	**GERESS Array B**	**3.18**	**211**	Pn	**Pn**	**14 31 10.0**	**+0.7**
	comp=Z,2.6nm,0.3s,baz=33,slow=12,SNR=35						
GERES				Pg	**Pb**	**14 31 16.1**	**+0.7**
	comp=Z,5.8nm,0.3s,baz=30,slow=16,SNR=31						
GERES				Lg	Lg	14 31 56.7	
	comp=Z,4.5nm,0.3s,baz=31,slow=27,SNR=7.7						
SMOL	**Smolenice**	**3.19**	**165**	*e*SG	**Sg**	**14 32 00.8**	**+0.3**
WET	**Wettzell**	**3.23**	**222**	*e*Pn	**Pn**	**14 31 10.4**	**+0.4**
	SNR=6.5						
WET				*e*Pg	**Pg**	**14 31 18.4**	**-1.5**
	SNR=1.1						
WET				*e*Sg	**Sg**	**14 31 59.7**	**-2.2**
	SNR=1.3						
LANS	**Liptovska Anna**	**3.24**	**138**	*e*PN	**Pn**	**14 31 11.0**	**+1.0**
LANS				*e*PG	**Pg**	**14 31 20.1**	**+0.1**
LANS				*e*SG	**Sg**	**14 32 01.8**	**-0.1**
MODS	**Modra-Piesok**	**3.31**	**167**	*e*PN	**Pn**	**14 31 12.6**	**+1.6**
MODS				*e*PG	**Pg**	**14 31 21.1**	**-0.2**
MODS				*e*SG	**Sg**	**14 32 05.0**	**+0.8**
VYHS	**Vyhne**	**3.55**	**150**	*e*PN	**Pn**	**14 31 15.0**	**+0.7**
VYHS				*e*PG	**Pg**	**14 31 26.1**	**+0.1**
VYHS				*e*SG	**Sg**	**14 32 14.4**	**+2.4**
BSD	**Bornholm Skovb**	**3.60**	**348**	*i* P	**Pn**	**14 31 16.6**	**+1.6**
BSD				IAML		14 32 02.8	
	comp=Z,1.5nm,0.2s						
CONA	**Conrad Observa**	**3.68**	**183**	Pn	**Pn**	**14 31 16.9**	**+0.7**
	comp=Z,2.9nm,0.3s,SNR=5.8						
CONA				*e*Sg	**Sb**	**14 32 12.4**	**+3.4**
	comp=Z,27nm,0.6s						
MOA	**Molln**	**3.95**	**199**	Pn	**Pn**	**14 31 20.3**	**+0.5**
	comp=Z,5.8nm,0.3s,SNR=12						
MOA				*e*Sg	**Sg**	**14 32 24.6**	**-0.2**
	comp=Z,9.4nm,0.3s						
LUNU	**Lund**	**4.35**	**339**	*e*P	**Pn**	**14 31 26.2**	**+0.9**
ARSA	**Arzberg**	**4.37**	**186**	*e*Pn	**Pn**	**14 31 25.8**	**+0.2**
	comp=Z,2.6nm,0.3s						
ARSA				*e*Sg	**Sg**	**14 32 39.4**	**+1.0**
	comp=Z,26nm,0.7s						
BLEU	**Blekinge**	**4.72**	**358**	*e*	**Pn**	**14 31 31.3**	**+1.0**
	baz=189,slow=12						
BLEU				*i* P	Pb	14 31 32.1	-9.4
KOLS	**Kolonicke sedl**	**4.74**	**122**	*e*PN	**Pn**	**14 31 31.8**	**+1.2**
KOLS				*e*PG	**Pg**	**14 31 49.4**	**+0.7**
KOLS				*e*SG	**Sg**	**14 32 47.7**	**-2.4**
KBA	**Koelnbreinsper**	**4.88**	**203**	Pn	**Pn**	**14 31 33.5**	**+0.7**
	comp=Z,5.7nm,0.4s,SNR=7.4						
KBA				*e*Sg	**Sg**	**14 32 50.8**	**-4.0**
	comp=Z,12nm,0.8s						
SOKA	**Soboth**	**4.98**	**189**	*e*Pn	**Pn**	**14 31 34.2**	**+0.2**
	comp=Z,1.6nm,0.4s						
SOKA				*e*Sg	**Sg**	**14 32 57.4**	**-0.5**
	comp=Z,4.9nm,0.5s						
DEL	**Delary**	**5.07**	**345**	*i* P	**Pn**	**14 31 35.9**	**+0.8**
DEL				*i* S	**Sn**	**14 32 32.7**	**-1.5**
OBKA	**Obir**	**5.20**	**192**	*e*Pn	**Pn**	**14 31 37.3**	**+0.2**
	comp=Z,1.9nm,0.4s						
OBKA				*e*Sg	**Sg**	**14 33 04.3**	**-0.8**
	comp=Z,7.1nm,0.5s						
WATA	**Walderalm**	**5.21**	**217**	*e*Pn	**Pn**	**14 31 34.3**	**-3.0**
	comp=Z,1.4nm,0.3s						
WATA				*e*Sg	**Sg**	**14 33 09.6**	**+4.3**
	comp=Z,3.6nm,0.3s						
MYKA	**Terra Mystica**	**5.24**	**199**	*e*Pn	**Pn**	**14 31 40.9**	**+3.3**
	comp=Z,2.3nm,0.5s						
MYKA				*e*Sg	**Sg**	**14 33 04.8**	**-1.5**
	comp=Z,4.8nm,0.4s						
WTTA	**Wattenberg**	**5.25**	**216**	*e*Pn	**Pn**	**14 31 35.4**	**-2.4**
	comp=Z,0.4nm,0.2s						
WTTA				*e*Sg	**Sg**	**14 33 12.7**	**+6.2**
	comp=Z,7.7nm,0.6s						
MOTA	**Moosalm**	**5.38**	**220**	*e*Pn	**Pn**	**14 31 38.5**	**-1.2**
	comp=Z,3.9nm,0.4s						
MOTA				*e*Sg	**Sg**	**14 33 06.1**	**-4.8**
RETA	**Reutte**	**5.41**	**223**	*e*Pn	**Pn**	**14 31 38.2**	**-1.7**
RETA				*e*Sg	**Sg**	**14 33 16.5**	**+4.7**
	comp=Z,11nm,0.5s						
ABTA	**Abfaltersbach**	**5.41**	**208**	*e*Pn	**Pn**	**14 31 39.1**	**-0.9**
	comp=Z,0.4nm,0.2s						
ABTA				*e*Sg	**Sg**	**14 33 08.1**	**-3.7**
	comp=Z,4.8nm,0.5s						
SQTA	**Sankt Quirin**	**5.45**	**218**	*e*Pn	**Pn**	**14 31 39.5**	**-0.9**
	comp=Z,1.3nm,0.2s						
SQTA				*e*Sg	**Sg**	**14 33 13.3**	**+0.5**
	comp=Z,6.6nm,0.6s						
FETA	**Feichten**	**5.80**	**220**	*e*Pn	**Pn**	**14 31 42.8**	**-2.5**
	comp=Z,1.8nm,0.5s						
FETA				*e*Sg	**Sg**	**14 33 23.5**	**-0.6**
	comp=Z,6.1nm,0.7s						
DAVA	**Damuels**	**5.95**	**226**	*e*Sg	**Sg**	**14 33 31.5**	**+2.5**
	comp=Z,4.8nm,0.5s						
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**14 32 17.2**	**-1.8**
	comp=Z,2.3nm,0.3s,baz=281,slow=12,SNR=10						
HFS	**Hagfors**	**8.67**	**352**	Pn	**Pn**	**14 32 24.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=185,slow=16,SNR=1.6						
NOA	**NORSAR Array B**	**9.85**	**346**	Pn	**Pn**	**14 32 40.3**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=174,slow=13,SNR=1.4						
FINES	**FINESS Array B**	**11.27**	**25**	Pn	**Pn**	**14 32 59.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=208,slow=10,SNR=7.5						
FINES				Sn	**Sn**	**14 35 01.1**	**-5.5**
	comp=Z,0.2nm,0.3s,baz=209,slow=22,SNR=2.3						
ARCES	**ARCESS Array B**	**18.53**	**10**	Pn	**P**	**14 34 33.5**	**-2.2**
	baz=196,slow=11,SNR=6.5						
TORD	**Torodi Ar. Bea**	**40.09**	**202**	P	**P**	**14 37 55.7**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=3.8,slow=8.7,SNR=2.1						
WSAR	**Wadi Sarin**	**43.12**	**115**	LR	LR	14 59 44.1	
	comp=Z,61nm,18.6s,baz=128,slow=41						
YKA	**Yellowknife Ar**	**59.79**	**336**	P	**P**	**14 40 26.2**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=33,slow=6.7,SNR=6.4						

*IASPEI **01** 14:45:14.3±0.9,38.32N±0.02×20.49E±0.03,h15km±5km, Error ellipse: s-maj=5.0km s-min=2.7km az=91.0,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*ATH **01** 14:45:14.7,38.32N×20.50E,h12km±1km,ML3.1/14,Error ellipse: s-maj=1.8km s-min=0.7km az=261.0*
*THE **01** 14:45:14.6,38.32N×20.49E,h13km,ML3.5/11,Error ellipse: s-maj=0.8km s-min=0.3km az=270.0*
ISC 01 14:45:14.6±0.8,38.32N±0.02×20.50E±0.03,h14km±5km, n70,σ0s67/95,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF5	**Kardakata, Kep**	**0.05**	**216**	P	**Pg**	**14 45 16.9**	**-0.2**
KEF5				S	**Sg**	**14 45 18.5**	**-0.4**
KEF5	**Kardakata, Kep**	**0.05**	**216**	P	**Pg**	**14 45 16.9**	**-0.2**
KEF5				S	**Sg**	**14 45 18.8**	**-0.1**
	66μm,0.2s						
KEF4	**Livadi, Kephal**	**0.09**	**227**	P	**Pg**	**14 45 17.4**	**-0.1**
KEF4				S	**Sg**	**14 45 19.5**	**+0.1**
KEF4	**Livadi, Kephal**	**0.09**	**227**	P	**Pg**	**14 45 17.3**	**-0.1**
KEF4				S	**Sg**	**14 45 19.6**	**+0.1**
	419μm,0.3s						
LXRA	**Lixouri, Kepha**	**0.13**	**204**	P	**Pg**	**14 45 18.1**	**+0.1**
LXRA				S	**Sg**	**14 45 20.7**	**+0.5**
DMLN	**Damoulianata-K**	**0.13**	**233**	P	**Pg**	**14 45 17.8**	**-0.2**
DMLN	**Damoulianata-K**	**0.13**	**233**	P	**Pg**	**14 45 17.9**	**-0.1**
DMLN				S	**Sg**	**14 45 20.6**	**+0.2**
	86μm,0.3s						
ARG2	**Argostoli**	**0.14**	**185**	P	**Pg**	**14 45 18.1**	**0.0**
ARGA	**Argostoli. Kep**	**0.14**	**188**	P	**Pg**	**14 45 18.1**	**-0.1**
ARGA				S	**Sg**	**14 45 20.9**	**+0.3**
FSK	**Fiskardo**	**0.15**	**18**	P	**Pg**	**14 45 18.1**	**-0.2**
FSK				S	**Sg**	**14 45 21.0**	**+0.1**
FSK				AML	AML	14 45 21.1	
	comp=N,48648μm,0.2s						
FSK				AML	AML	14 45 23.2	
FSK	**Fiskardo**	**0.15**	**18**	P	**Pg**	**14 45 18.2**	**-0.2**
FSK				S	**Sg**	**14 45 21.0**	**+0.1**
	comp=N,38μm,0.1s						
VLS	**Valsamata**	**0.15**	**154**	P	**Pg**	**14 45 18.3**	**-0.1**
VLS				S	**Sg**	**14 45 20.6**	**-0.4**
VLS	**Valsamata**	**0.15**	**154**	P	**Pg**	**14 45 18.3**	**-0.1**
VLS				S	**Sg**	**14 45 21.4**	**+0.4**
	comp=N,28μm,0.1s						
KEF3	**Kipouria, Keph**	**0.17**	**227**	P	**Pg**	**14 45 17.9**	**-0.6**
KEF3				S	**Sg**	**14 45 20.4**	**-0.8**
KEF3	**Kipouria, Keph**	**0.17**	**227**	P	**Pg**	**14 45 18.0**	**-0.5**
KEF3				S	**Sg**	**14 45 20.9**	**-0.3**
	comp=N,175μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.21**	**162**	P	**Pg**	**14 45 19.2**	**0.0**
PSDA				S	**Sg**	**14 45 23.1**	**+0.6**
PSDA	**Pessada-Kefalo**	**0.21**	**162**	P	**Pg**	**14 45 19.3**	**0.0**
PSDA				S	**Sg**	**14

KLV	Kalavryta, Ach	1.33	101	P	Pn	14 45 38.7	-0.1
JAN	Janina	1.37	11	P	Pg	14 45 41.3	+0.5
JAN				AML	AML	14 46 04.6	
	comp=E,989µm,0.5s						
JAN				AML	AML	14 46 08.2	
	comp=N,1215µm,0.3s						
MAKR	Makrakomi, Fth	1.45	61	P	Pn	14 45 41.6	+1.2
KASA	Kassiopi	1.50	343	P	Pn	14 45 42.8	+1.8
KEK	Kerkira	1.50	339	P	Pn	14 45 41.2	+0.1
AGG	Agios Georgios	1.59	63	P	Pn	14 45 44.0	+1.6
ITM	Ithomi	1.60	135	P	Pn	14 45 44.0	+1.5
PYL	PYLOS	1.73	145	P	Pn	14 45 45.1	+0.9
AXAR	Agios Charalam	1.75	74	P	Pb	14 45 47.9	+1.4
AXAR				AML	AML	14 46 20.5	
	comp=E,1333µm,0.7s						
AXAR				AML	AML	14 46 25.6	
	comp=N,1573µm,0.8s						
KPRO	Kipourio	1.77	22	P	Pb	14 45 47.4	+0.5
LKR	Lokris	1.99	80	P	Pb	14 45 50.3	-0.2
ATAL	Atalanti	2.01	78	P	Pb	14 45 50.6	-0.3
ATAL				AML	AML	14 46 26.1	
	comp=N,366µm,1.5s						
ATAL				AML	AML	14 46 30.6	
	comp=E,263µm,1.0s						
VIL2	Platees	2.18	92	P	Pb	14 45 53.2	-0.6
FNA	Florina	2.56	15	P	Pn	14 45 57.6	+1.9
SOKA	Soboth	9.28	336	*e*Pn	Pn	14 47 26.8	-1.1
	comp=E,3.2nm,0.6s						
OBKA	Obir	9.29	334	*e*Pn	Pn	14 47 28.6	+0.4
	comp=E,0.6nm,0.2s						
KBA	Koelnbreinsper	10.21	331	*e*Pn	Pn	14 47 39.0	-1.9
	comp=E,1.2nm,0.5s						
MOA	Molln	10.56	336	*e*Pn	Pn	14 47 44.1	-1.3
	comp=E,0.7nm,0.2s						

IDC ***01*** *15:05:41.7±1.0,30˚.28S×178˚.82W,h0km,mb3.9/5, mb1 4.0/6,mb1mx3.8/23,mbtmp3.9/6,ML3.4/1,MS3.3/2, Ms1 3.3/2,ms1mx2.8/31,Error ellipse: s-maj=30.2km s-min=17.1km az=133.0*

NEIC ***01*** *15:05:47.3±2.9,30˚.2S±0˚.1×178˚.7W±0˚.1,h41km±9km, mb4.2/9,Error ellipse: s-maj=19.5km s-min=10.9km az=127.0*

ISC 01 15:05:47.4±0.7,30˚.31S±0˚.09×178˚.7W±0˚.1,h35km,n36, σ1§51/25,mb4.0/8,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.25**	**33**	Pn	**Pn**	**15 06 06.4**	**-2.0**
	39nm,0.3s,baz=80,slow=18,SNR=2.9						
RAO				Sn	**Sn**	**15 06 26.7**	**+2.7**
	82nm,0.3s,baz=303,slow=21,SNR=3.0						
RAO	**Raoul Island**	**1.25**	**33**		**Pn**	**15 06 06.5**	**-1.9**
OUZ	**Omahuta**	**8.13**	**231**	Pn	**Pn**	**15 07 42.9**	**0.0**
URZ	**Urewera**	**8.65**	**202**	Pn	**Pn**	**15 07 47.7**	**-2.4**
	0.4nm,0.3s,baz=123,slow=24,SNR=1.2						
URZ				Sn	**Sn**	**15 09 27.0**	**+0.6**
	0.2nm,0.3s,baz=130,slow=23,SNR=1.6						
URZ	**Urewera**	**8.65**	**202**	Pn	**Pn**	**15 07 48.9**	**-1.2**
BKZ	**Black Stump Fm**	**9.68**	**203**	Pn	**Pn**	**15 08 06.2**	**+2.0**
MSVF	**Nonsavu**	**12.87**	**346**	LR	LR	15 12 32.7	
	comp=Z,161nm,18.6s,baz=135,slow=32						
DZM	**Mont Dzumac**	**15.65**	**298**	LR	LR	15 13 33.2	
	comp=Z,110nm,20.1s,baz=356,slow=30						
CTAO	**Charters Tower**	**33.19**	**280**	P	**P**	**15 12 22.8**	**+1.8**
STKA	**Stephens Creek**	**33.91**	**257**	P	**P**	**15 12 27.4**	**+0.3**
	3.3nm,0.9s,baz=98,slow=13,SNR=3.0						
STKA	**Stephens Creek**	**33.91**	**257**	P	**P**	**15 12 27.2**	**0.0**
STKA				IAmb	IAmb	15 12 33.3	
	comp=Z,1.6nm,1.1s						
AS31	**Alice Springs**	**42.51**	**267**	P	**P**	**15 13 40.2**	**+0.5**
ASAR	**Alice Springs**	**42.51**	**267**	P	**P**	**15 13 38.1**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=105,slow=7.2,SNR=14						
WR0	**Warramunga Arr**	**43.31**	**273**	P	**P**	**15 13 45.5**	**-0.7**
WB2	**Warramunga Arr**	**43.48**	**272**	P	**P**	**15 13 46.0**	**-1.5**
WB2				IAmb	IAmb	15 14 01.7	
	comp=Z,3.9nm,1.2s						
WRAB	**Tennant Creek**	**43.49**	**272**	P	**P**	**15 13 47.8**	**+0.3**
WRAB				IAmb	IAmb	15 14 06.0	
	comp=Z,5.6nm,1.2s						
WRA	**Warramunga Arr**	**43.49**	**272**	P	**P**	**15 13 45.5**	**-2.1**
	comp=Z,0.9nm,0.5s,baz=112,slow=7.6,SNR=13						
WB0	**Warramunga Arr**	**43.52**	**273**	P	**P**	**15 13 48.0**	**+0.2**
WB0				IAmb	IAmb	15 13 48.1	
	comp=Z,4.7nm,1.1s						
SOEI	**Soe**	**56.75**	**279**	P	**P**	**15 15 27.7**	**-0.6**
QSPA	**South Pole Qui**	**59.80**	**180**	P	**P**	**15 15 49.1**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=38,slow=2.0,SNR=6.2						
QSPA	**South Pole Qui**	**59.80**	**180**	P	**P**	**15 15 50.4**	**+1.5**
QSPA				IAmb	IAmb	15 15 53.0	
	comp=Z,6.3nm,1.2s						
H03S2	**Juan Fernandez**	**81.02**	**124**	T	T	16 47 03.2	
	baz=238,slow=74,SNR=12						
H03S1	**Juan Fernandez**	**81.03**	**124**	T	T	16 47 05.1	
	baz=238,slow=74,SNR=11						
H03S3	**Juan Fernandez**	**81.03**	**124**	T	T	16 47 04.0	
	baz=238,slow=74,SNR=11						
H03N3	**Juan Fernandez**	**81.21**	**124**	T	T	16 47 14.0	
	baz=241,slow=73,SNR=8.9						
H03N2	**Juan Fernandez**	**81.21**	**124**	T	T	16 47 12.7	
	baz=241,slow=73,SNR=8.3						
H03N1	**Juan Fernandez**	**81.22**	**124**	T	T	16 47 13.6	
	baz=241,slow=73,SNR=14						
NVAR	**Mina Array Bea**	**88.58**	**43**	P	**P**	**15 18 38.4**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=224,slow=7.6,SNR=1.9						
H10S3	**ASCENSION HYDR**	**138.06**	**156**	T	T	17 59 32.4	
	baz=204,slow=74,SNR=7.0						
H10S2	**ASCENSION HYDR**	**138.06**	**156**	T	T	17 59 33.5	
	baz=16,slow=74,SNR=3.9						
H10N3	**ASCENSION HYDR**	**139.14**	**156**	T	T	18 00 54.5	
	baz=203,slow=75,SNR=25						
H10N1	**ASCENSION HYDR**	**139.15**	**156**	T	T	18 00 54.0	
	baz=203,slow=75,SNR=51						
H10N2	**ASCENSION HYDR**	**139.16**	**156**	T	T	18 00 55.0	
	baz=203,slow=75,SNR=33						
FINES	**FINESS Array B**	**144.85**	**340**	PKP	**PKPab**	**15 25 17.4**	**-1.6**
	comp=Z,3.0nm,0.8s,baz=48,slow=2.8,SNR=9.6						
FINES	**FINESS Array B**	**144.85**	**340**		**PKPab**	**15 25 17.9**	**-1.2**
TORD	**Torodi Ar. Bea**	**162.92**	**181**	PKPab	**PKPab**	**15 26 34.5**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=204,slow=5.4,SNR=2.9						

IDC 01 15:19:46.0±2.1,1˚.80N×126˚.41E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/42,mbtmp3.4/3,Error ellipse: s-maj=182.7km s-min=24.7km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.97**	**161**	P	P	15 24 50.6	-1.7
	1.0nm,0.6s,baz=338,slow=10,SNR=14						
ASAR	**Alice Springs**	**26.35**	**164**	P	P	15 25 25.2	+1.2
	0.3nm,0.3s,baz=346,slow=12,SNR=14						
MKAR	**Makanchi Array**	**58.95**	**326**	P	P	15 29 47.3	0.0
	0.2nm,0.4s,baz=121,slow=7.7,SNR=6.8						

IDC ***01*** *15:30:29.8±0.9,29˚.41N×42˚.99W,h0km,mb3.9/18, mb1 4.1/18,mb1mx4.0/55,mbtmp3.9/18,MS3.6/14, Ms1 3.6/14,ms1mx3.4/37,Error ellipse: s-maj=28.5km s-min=15.7km az=180.0*

NEIC ***01*** *15:30:32.1±1.2,29˚.49N±0˚.09×42˚.91W±0˚.09,h10km±1km, mb4.5/30,Error ellipse: s-maj=17.5km s-min=10.8km az=211.0*

ISC 01 15:30:32.6±0.6,29˚.5N±0˚.1×42˚.93W±0˚.08,h14km,n68, σ0§78/57,mb4.4/32,MS3.6/14,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosais**	**15.26**	**49**	Pn	**Pn**	**15 34 09.3**	**+1.6**
SDV	**Santo Domingo**	**33.06**	**237**	P	**P**	**15 37 09.7**	**+1.5**
SDV				IAmb	IAmb	15 37 10.9	
	comp=Z,13nm,1.3s						
ESDC	**Sonseca Array**	**33.44**	**62**	P	**P**	**15 37 10.6**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=267,slow=9.0,SNR=2.7						
ESDC				LR	LR	15 46 43.1	
	comp=Z,69nm,21.9s,baz=340,slow=29						
Q51A	**Peebles**	**34.51**	**297**	P	**P**	**15 37 20.2**	**-0.1**
TZTN	**Tazewell**	**34.60**	**293**	P	**P**	**15 37 21.5**	**+0.3**
TZTN				IAmb	IAmb	15 37 27.3	
	comp=Z,4.9nm,0.9s						
ROSC	**El Rosal**	**38.48**	**237**	LR	LR	15 54 44.8	
	comp=Z,54nm,18.7s,baz=264,slow=38						

CLF	**Chambon-Foret**	**39.17**	**49**	P	**P**	**15 37 59.0**	**-0.9**
CLF				IAmb	IAmb	15 38 09.9	
	comp=Z,18nm,1.4s						
DBIC	**Dimbokro**	**42.40**	**115**	LR	LR	15 53 40.2	
	comp=Z,123nm,19.8s,baz=281,slow=33						
SUMG	**Summit**	**43.24**	**2**	P	**P**	**15 38 33.6**	**+0.1**
SUMG				IAmb	IAmb	15 38 46.7	
	comp=Z,8.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**44.34**	**102**	P	**P**	**15 38 41.5**	**-1.0**
	comp=Z,1.9nm,1.0s,baz=302,slow=6.4,SNR=9.4						
TORD				LR	LR	15 56 32.6	
	comp=Z,44nm,19.1s,baz=175,slow=35						
TORD	**Torodi Ar. Bea**	**44.34**	**102**	P	**P**	**15 38 42.1**	**-0.5**
ULM	**Lac du Bonnet**	**44.56**	**313**	P	**P**	**15 38 42.3**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=83,slow=6.2,SNR=3.1						
ULM				LR	LR	15 55 31.4	
	comp=Z,43nm,21.9s,baz=67,slow=34						
OTAV	**Otavalo**	**44.62**	**236**	P	**P**	**15 38 45.5**	**+0.2**
BDFB	**Brasilia**	**45.10**	**187**	LR	LR	15 56 01.2	
	comp=Z,65nm,20.7s,baz=316,slow=34						
FCC	**Fort Churchill**	**45.36**	**325**	P	**P**	**15 38 50.0**	**-0.2**
FCC				IAmb	IAmb	15 38 51.2	
	comp=Z,9.8nm,1.5s						
H10N2	**ASCENSION HYDR**	**146.08**	**139**	T	T	16 28 02.2	
	baz=325,slow=75,SNR=183						
H10N3	**ASCENSION HYDR**	**146.09**	**139**	T	T	16 28 02.4	
	baz=325,slow=75,SNR=168						
H10N1	**ASCENSION HYDR**	**146.10**	**139**	T	T	16 28 03.6	
	baz=325,slow=75,SNR=212						
H10S3	**ASCENSION HYDR**	**146.90**	**140**	T	T	16 29 02.4	
	baz=324,slow=74,SNR=32						
H10S2	**ASCENSION HYDR**	**146.92**	**140**	T	T	16 29 03.7	
	baz=256,slow=74,SNR=17						
ABTX	**Abilene, Hawle**	**48.21**	**289**	P	**P**	**15 39 13.7**	**+0.8**
TULEG	**Thule**	**48.74**	**352**	P	**P**	**15 39 16.7**	**+0.4**
TULEG				IAmb	IAmb	15 39 17.6	
	comp=Z,7.5nm,1.2s						
FFC	**Flin Flon**	**48.80**	**319**	P	**P**	**15 39 17.1**	**0.0**
JCT	**Junction City**	**48.82**	**286**	P	**P**	**15 39 18.3**	**+0.6**
LPAZ	**La Paz**	**51.58**	**211**	P	**P**	**15 39 38.4**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=35,slow=8.9,SNR=4.2						
LPAZ				LR	LR	16 00 24.9	
	comp=Z,36nm,18.6s,baz=64,slow=35						
LPAZ	**La Paz**	**51.58**	**211**	P	**P**	**15 39 39.0**	**-0.3**
TX32	**Lajitas Array**	**52.36**	**286**	P	**P**	**15 39 44.4**	**-0.1**
TXAR	**Lajitas Array**	**52.36**	**286**	P	**P**	**15 39 44.0**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=99,slow=8.2,SNR=7.1						
TXAR				LR	LR	16 00 51.7	
	comp=Z,20nm,20.1s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**52.36**	**286**	P	**P**	**15 39 44.4**	**-0.1**
ANMO	**Albuquerque**	**53.25**	**293**	P	**P**	**15 39 49.3**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=79,slow=3.7,SNR=4.4						
ANMO	**Albuquerque**	**53.25**	**293**	P	**P**	**15 39 51.3**	**+0.1**
BNM	**Barren Site**	**53.57**	**292**	P	**P**	**15 39 54.4**	**+0.9**
PDAR	**Pinedale Array**	**54.14**	**303**	LR	LR	16 01 48.3	
	comp=Z,128nm,19.1s,baz=125,slow=35						
BURAR	**Bucovina Array**	**54.55**	**50**	P	**P**	**15 40 01.1**	**+0.8**
FINES	**FINESS Array B**	**54.60**	**33**	P	**P**	**15 40 00.2**	**-0.1**
	comp=Z,4.1nm,1.1s,baz=212,slow=6.8,SNR=3.4						
YKA	**Yellowknife Ar**	**55.90**	**328**	P	**P**	**15 40 08.1**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=83,slow=7.7,SNR=6.3						
YKA				LR	LR	16 03 22.4	
	comp=Z,98nm,19.6s,baz=0.0,slow=35						
AKASG	**Malin Array Be**	**56.80**	**46**	P	**P**	**15 40 15.2**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=273,slow=5.6,SNR=6.3						
MTPU	**Mount Pierson**	**57.03**	**298**	P	**P**	**15 40 17.4**	**-1.2**
CCUT	**Cedar City**	**58.06**	**298**	P	**P**	**15 40 27.3**	**+1.6**
CCUT				IAmb	IAmb	15 40 27.9	
	comp=Z,4.2nm,1.0s						
NEW	**Newport**	**58.48**	**311**	P	**P**	**15 40 27.1**	**-1.2**
	comp=Z,1.9nm,0.7s,baz=96,slow=6.3,SNR=3.3						
NEW				LR	LR	16 04 00.4	
	comp=Z,54nm,20.4s,baz=80,slow=34						
NEW	**Newport**	**58.48**	**311**	P	**P**	**15 40 27.9**	**-0.4**
NEW				IAmb	IAmb	15 40 28.4	
	comp=Z,7.0nm,1.2s						
ELK	**Elko**	**58.70**	**302**	P	**P**	**15 40 29.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=44,slow=7.6,SNR=4.1						
ELK	**Elko**	**58.70**	**302**	P	**P**	**15 40 30.1**	**0.0**
R11A	**Troy Canyon, C**	**59.55**	**299**	P	**P**	**15 40 36.0**	**0.0**
J08A	**Circle Bar Ran**	**60.43**	**306**	P	**P**	**15 40 42.0**	**+0.2**
J08A				IAmb	IAmb	15 40 44.0	
	comp=Z,7.9nm,1.2s						
KVN	**Kaiserville**	**61.26**	**301**	P	**P**	**15 40 47.5**	**-0.1**
KVN				IAmb	IAmb	15 40 49.2	
	comp=Z,5.2nm,1.1s						
NVAR	**Mina Array Bea**	**61.59**	**300**	P	**P**	**15 40 49.8**	**-0.1**
	comp=Z,2.3nm,1.1s,baz=80,slow=7.9,SNR=7.7						
NVAR				LR	LR	16 05 28.8	
	comp=Z,59nm,21.1s,baz=24,slow=34						
NVAR	**Mina Array Bea**	**61.59**	**300**	P	**P**	**15 40 50.1**	**+0.2**
PAHR	**Pah Rah Range**	**62.04**	**302**	P	**P**	**15 40 52.6**	**-0.2**
BRTR	**Keskin Array B**	**62.12**	**58**	P	**P**	**15 40 53.3**	**-0.1**
	comp=Z,1.6nm,1.0s,baz=262,slow=9.5,SNR=4.9						
BRTR	**Keskin Array B**	**62.12**	**58**	P	**P**	**15 40 52.9**	**-0.5**
KBZ	**Khabaz**	**67.48**	**52**	P	**P**	**15 41 28.9**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=302,slow=16,SNR=2.1						
ILAR	**Eielson Array**	**69.40**	**334**	P	**P**	**15 41 39.5**	**-0.2**
	comp=Z,0.8nm,1.1s,baz=81,slow=5.3,SNR=5.4						
CCB	**Clear Creek Bu**	**69.81**	**334**	P	**P**	**15 41 42.1**	**-0.1**
CCB				IAmb	IAmb	15 41 44.0	
	comp=Z,6.5nm,1.5s						
GNI	**Garni**	**70.04**	**55**	P	**P**	**15 41 45.0**	**+0.7**
NRIK	**Noril'sk**	**75.14**	**16**	P	**P**	**15 42 15.8**	**+1.8**
	comp=Z,1.0nm,0.3s,baz=328,slow=7.3,SNR=5.6						
NRIK	**Noril'sk**	**75.14**	**16**	P	**P**	**15 42 14.8**	**+0.9**
NRIK				IAmb	IAmb	15 42 17.2	
	comp=Z,9.6nm,1.4s						
TIXI	**Tiksi**	**79.01**	**3**	P	**P**	**15 42 36.0**	**+0.4**
TIXI				IAmb	IAmb	15 42 37.4	
	comp=Z,7.7nm,1.2s						
BILL	**Bilibino**	**80.39**	**349**	P	**P**	**15 42 43.4**	**+0.2**
BILL				IAmb	IAmb	15 42 45.1	
	comp=Z,7.4nm,1.3s						
KMBO	**Kilima Mbogo**	**82.00**	**96**	LR	LR	16 17 28.8	
	comp=Z,71nm,20.4s,baz=92,slow=34						
ZALV	**Zalesovo Beam**	**85.47**	**28**	P	**P**	**15 43 09.8**	**0.0**
	comp=Z,0.4nm,0.2s,baz=316,slow=6.2,SNR=6.0						
ZALV	**Zalesovo Beam**	**85.47**	**28**	P	**P**	**15 43 10.2**	**+0.5**
KKAR	**Karatay Array**	**85.47**	**42**	P	**P**	**15 43 10.4**	**+0.4**
BOSA	**Boshof**	**87.03**	**125**	LR	LR	16 18 32.3	
	comp=Z,30nm,18.0s,baz=14,slow=33						
MAKZ	**Makanchi**	**89.27**	**34**	P	**P**	**15 43 27.8**	**-0.5**
MAKZ				IAmb	IAmb	15 43 29.3	
	comp=Z,3.9nm,1.2s						
MK31	**Makanchi Array**	**89.43**	**34**	P	**P**	**15 43 29.0**	**-0.1**
MK31				IAmb	IAmb	15 43 30.7	
	comp=Z,3.0nm,1.3s						
MKAR	**Makanchi Array**	**89.43**	**34**	P	**P**	**15 43 29.0**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=316,slow=5.1,SNR=10						
MKAR	**Makanchi Array**	**89.43**	**34**	P	**P**	**15 43 29.3**	**+0.2**

IDC 01 15:33:29.3±2.1,5˚.09S×152˚.30E,h0km,mb3.3/4, mb1 3.6/5,mb1mx3.4/32,mbtmp3.4/5,ML1.4/1,Error ellipse: s-maj=88.2km s-min=25.9km az=123.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.66**	**230**	Pn	Pn	15 35 10.0	+1.5
	0.5nm,0.3s,baz=67,slow=7.7,SNR=2.4						
PMG				Sn	Sn	15 36 22.5	-2.7
	1.8nm,0.3s,baz=160,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**22.88**	**228**	P	P	15 38 34.2	-0.5
	0.8nm,0.5s,baz=54,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**25.60**	**222**	P	P	15 39 00.5	-0.1
	0.4nm,0.6s,baz=58,slow=9.6,SNR=8.6						
MKAR	**Makanchi Array**	**80.21**	**319**	P	P	15 45 42.1	+0.3
	0.1nm,0.7s,baz=96,slow=6.4,SNR=1.5						
ILAR	**Eielson Array**	**82.61**	**22**	P	P	15 45 54.0	-0.2
	0.3nm,0.8s,baz=244,slow=6.1,SNR=4.6						

NEIC ***01*** *15:37:50.6±2.4,43˚.52N±0˚.06×105˚.21W±0˚.09,h0km±2km, ML3.4/32,Error ellipse: s-maj=11.2km s-min=10.1km az=47.0*

IDC ***01*** *15:37:51.1±2.1,43˚.40N×105˚.43W,h0km,mb1 3.4/3, mb1mx3.2/37,mbtmp3.2/3,ML3.1/3,Error ellipse: s-maj=43.0km s-min=9.8km az=152.0*

ISC 01 15:37:50.3±1.0,43˚.47N±0˚.05×105˚.26W±0˚.05,h0km,n26, σ1§40/26,Wyoming

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

RSSD	**Black Hills**	**1.10**	**53**		**Pg**	**15 38 10.1**	**-1.2**
K22A	**Casper**	**1.24**	**229**		**Pg**	**15 38 12.0**	**-2.1**
PHWY	**Pilot Hill**	**2.18**	**184**		**Pn**	**15 38 28.5**	**+0.4**
RWWY	**Rawlins**	**2.29**	**220**	Pn	**Pn**	**15 38 30.6**	**+1.0**
RWWY				IAML		15 39 07.9	
	255nm,1.6s						
RWWY				IAML		15 39 09.9	
	239nm,0.8s						
BW06	**Boulder Array**	**3.23**	**259**	Pn	**Pn**	**15 38 43.4**	**+0.9**
BW06				IAML		15 39 33.2	
	65nm,0.8s						
PD31	**Pinedale Array**	**3.23**	**259**	Pn	**Pn**	**15 38 43.6**	**+1.2**
PDAR	**Pinedale Array**	**3.23**	**259**	Pn	**Pn**	**15 38 44.4**	**+1.9**
	1.6nm,0.3s,baz=83,slow=18,SNR=32						
PDAR				Lg	Lg	15 39 27.8	
	16nm,0.3s,baz=76,slow=37,SNR=3.3						
RLMT	**Red Lodge**	**3.32**	**301**	Pn	**Pn**	**15 38 43.1**	**-0.6**
RLMT				IAML		15 39 47.2	
	70nm,1.9s						
RLMT				IAML		15 39 47.6	
	71nm,1.1s						
OGNE	**Ogallala**	**3.48**	**135**	Pn	**Pn**	**15 38 47.0**	**+1.1**
OGNE				IAML		15 39 55.5	
	113nm,1.7s						
YNE	**Yellowstone No**	**3.74**	**296**	Pn	**Pn**	**15 38 48.0**	**-1.6**
YNE				IAML		15 39 55.3	
	comp=E,86nm,0.8s						
YMP	**Mirror Lake Pl**	**3.75**	**291**	Pn	**Pn**	**15 38 49.6**	**0.0**
YMP				IAML		15 40 03.7	
	comp=E,94nm,0.8s						
H17A	**Grant Village**	**3.95**	**285**	Pn	**Pn**	**15 38 52.7**	**+0.3**
H17A				IAML		15 40 00.9	
	comp=E,51nm,2.0s						
H17A				IAML		15 40 01.7	
	comp=N,78nm,1.8s						
YPP	**Pitchstone Pla**	**4.09**	**283**	Pn	**Pn**	**15 38 57.4**	**+3.0**
YHH	**Holmes Hill**	**4.24**	**290**	Pn	**Pn**	**15 38 57.6**	**+1.2**
YHH				IAML		15 40 18.7	
	comp=N,35nm,1.0s						
RDMU	**Red Mountain**	**4.33**	**229**	Pn	**Pn**	**15 38 58.2**	**+0.6**
RDMU				IAML		15 40 16.0	
	comp=N,39nm,0.8s						
RDMU				IAML		15 40 18.7	
	comp=E,45nm,1.0s						
YHL	**Hebgen Lake**	**4.48**	**290**	Pn	**Pn**	**15 39 01.5**	**+1.8**
YHL				IAML		15 40 23.8	
	comp=E,48nm,1.3s						
KSCO	**Kaye Shedlock'**	**4.88**	**155**	Pn	**Pn**	**15 39 03.5**	**-1.6**
BOZ	**Bozeman (W)**	**5.03**	**297**	Pn	**Pn**	**15 39 06.3**	**-0.8**
BOZ				IAML		15 40 38.4	
	comp=E,22nm,1.0s						
BOZ				IAML		15 42 06.6	
	comp=E,20nm,3.5s						
DGMT	**Dagmar**	**5.05**	**8**	Pn	**Pn**	**15 39 07.7**	**+0.4**
EGMT	**Eagleton**	**5.53**	**327**	Pn	**Pn**	**15 39 15.8**	**+1.8**
PV22	**Blue Mesa, Par**	**5.61**	**210**	Pn	**Pn**	**15 39 16.4**	**+1.2**
LRM	**Limekiln Ridge**	**5.64**	**297**	Pn	**Pn**	**15 39 15.9**	**+0.3**
PV03	**Paradox Valley**	**5.88**	**209**	Pn	**Pn**	**15 39 20.9**	**+2.0**
ULM	**Lac du Bonnet**	**9.34**	**40**	Pn	**Pn**	**15 40 06.2**	**+0.1**
	comp=E,0.8nm,0.3s,baz=224,slow=12,SNR=7.6						
ULM				Lg	Lg	15 42 42.9	
	comp=E,0.3nm,0.3s,baz=258,slow=7.0,SNR=2.3						
ULM	**Lac du Bonnet**	**9.34**	**40**	Pn	**Pn**	**15 40 06.5**	**+0.5**
YKA	**Yellowknife Ar**	**19.83**	**347**	P	**Pn**	**15 42 24.9**	**+1.2**
	comp=E,0.1nm,0.3s,baz=152,slow=12,SNR=3.5						

IDC 01 15:38:34.5±1.5,29˚.30S×179˚.04W,h0km,mb3.3/2, mb1 3.6/2,mb1mx3.4/26,mbtmp3.3/2,MS2.8/2,Ms1 2.8/2, ms1mx2.6/12,Error ellipse: s-maj=95.9km s-min=23.7km az=179.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.98**	**87**	Pn	Pn	15 38 55.6	0.0
	42nm,0.3s,baz=13,slow=20,SNR=2.4						
MSVF	**Nonsavu**	**11.82**	**346**	LR	LR	15 45 24.3	
	comp=Z,69nm,18.1s,baz=162,slow=35						
DZM	**Mont Dzumac**	**14.93**	**296**	LR	LR	15 45 28.1	
	comp=Z,20nm,21.0s,baz=212,slow=28						
ASAR	**Alice Springs**	**42.27**	**266**	P	P	15 46 29.1	-0.9
	0.3nm,0.9s,baz=106,slow=9.1,SNR=1.6						
WRA	**Warramunga Arr**	**43.16**	**272**	P	P	15 46 37.9	+0.7
	0.5nm,0.9s,baz=112,slow=7.5,SNR=2.4						
H03S2	**Juan Fernandez**	**81.83**	**124**	T	T	17 19 53.7	
	baz=238,slow=74,SNR=7.1						
H03S1	**Juan Fernandez**	**81.84**	**124**	T	T	17 19 54.7	
	baz=238,slow=74,SNR=5.6						
H03S3	**Juan Fernandez**	**81.84**	**124**	T	T	17 19 47.8	
	baz=238,slow=74,SNR=7.7						
H10S2	**ASCENSION HYDR**	**139.10**	**156**	T	T	18 32 22.7	
	baz=204						
H10S3	**ASCENSION HYDR**	**139.10**	**156**	T	T	18 32 23.2	
	baz=16,SNR=6.0						
H10N3	**ASCENSION HYDR**	**140.19**	**156**	T	T	18 33 44.6	
	baz=204,slow=74,SNR=20						
H10N1	**ASCENSION HYDR**	**140.19**	**156**	T	T	18 33 46.3	
	baz=204,slow=74,SNR=27			

comp=Z,1.5nm,0.8s,baz=135,slow=8.6,SNR=3.2

BI03	**Tigo**	**71.20**	**235**	P	**P**	**15 56 04.7**	**-0.9**
MBWA	**Marble Bar**	**73.61**	**103**	P	**P**	**15 56 21.7**	**+1.5**
PSI	**Prapat**	**77.92**	**71**	LR	LR	16 24 56.5	

comp=Z,494nm,18.6s,baz=92,slow=31

ASAR	**Alice Springs**	**80.56**	**115**	P	**P**	**15 56 58.5**	**-0.8**

comp=Z,0.5nm,0.8s,baz=216,slow=4.2,SNR=4.8

*GUC **01** 15:54:14.3±0.7, 33.˚74S×71.˚02W, h66km±3km, ML4.0*
*NEIC **01** 15:54:15.1±0.7, 33.˚73S±0.˚04×71.˚05W±0.˚05, h71km±7km, Error ellipse: s-maj=5.9km s-min=4.7km az=127.0*

ISC 01 15:54:15.1±1.0, **33.˚72S**±0.˚04×**71.˚07W**±0.˚07, **h71**km±7km, **n31**, σ0**962**/40, **4D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MT09	**Talagante**	**0.09**	**130**	⇓ *i* P	**Pn**	**15 54 25.2**	**-0.4**
MT09				*eS*	**Sn**	**15 54 32.9**	**-0.4**
MT09				IAML		15 54 35.4	
	comp=N,11μm,0.1s						
MT05	**Renca**	**0.43**	**41**	⇓ *i* P	**Pn**	**15 54 27.3**	**-0.1**
MT05				*eS*	**Sn**	**15 54 36.7**	**+0.2**
MT05				IAML		15 54 38.4	
	comp=E,19μm,0.2s						
MT05	**Renca**	**0.43**	**41**		**Pn**	**15 54 27.2**	**-0.1**
MT05				Sn	**Sn**	**15 54 37.0**	**+0.5**
MT02	**Curacav**	**0.46**	**353**	⇓ *i* P	**Pn**	**15 54 27.7**	**+0.1**
MT02				*eS*	**Sn**	**15 54 37.5**	**+0.6**
MT02				IAML		15 54 38.3	
	comp=E,10μm,0.2s						
MT02	**Curacav**	**0.46**	**353**		**Pn**	**15 54 27.8**	**+0.1**
MT02				Sn	**Sn**	**15 54 37.4**	**+0.6**
FSR	**Penalolen**	**0.51**	**62**	*eP*	**Pn**	**15 54 28.7**	**+0.6**
MT03	**Universidad Ad**	**0.52**	**65**	⇓ *i* P	**Pn**	**15 54 27.7**	**-0.6**
MT03				*eS*	**Sn**	**15 54 37.6**	**-0.4**
PEL	**Peldehue**	**0.66**	**29**	*eP*	**Pn**	**15 54 29.2**	**-0.4**
PEL				IAML		15 54 41.0	
	comp=N,10μm,0.4s						
PEL				IAML		15 54 41.3	
	comp=E,10μm,0.4s						
PEL	**Peldehue**	**0.66**	**29**		**Pn**	**15 54 29.6**	**-0.1**
PEL				Sn	**Sn**	**15 54 40.6**	**+0.2**
LMEL	**Las Melosas**	**0.73**	**100**	*eP*	**Pn**	**15 54 30.4**	**-0.2**
VA03	**San Esteban**	**1.05**	**25**	*eP*	**Pn**	**15 54 34.2**	**-0.1**
VA03				IAML		15 54 52.1	
	comp=E,6μm,0.2s						
VA03	**San Esteban**	**1.05**	**25**		**Pn**	**15 54 34.1**	**-0.1**
VA03				Sn	**Sn**	**15 54 48.9**	**+0.3**
BO03	**Pichilemu**	**1.07**	**223**	*eP*	**Pn**	**15 54 34.4**	**-0.1**
BO03				IAML		15 54 53.6	
	comp=E,3μm,0.4s						
BO02	**Sierra Bellavi**	**1.10**	**167**	*i* P	**Pn**	**15 54 34.6**	**-0.3**
BO02				IAML		15 54 52.8	
	comp=E,5μm,0.3s						
BO02	**Sierra Bellavi**	**1.10**	**167**		**Pn**	**15 54 34.8**	**-0.1**
BO02				Sn	**Sn**	**15 54 49.5**	**-0.3**
CO02	**Combarbal**	**2.51**	**1**	Pn	**Pn**	**15 54 53.7**	**-0.1**
CO03	**El Pedregal**	**2.89**	**7**	*eP*	**Pn**	**15 54 59.6**	**+0.7**
CO03				IAML		15 55 35.7	
	comp=E,441nm,0.4s						
CO03	**El Pedregal**	**2.89**	**7**	Pn	**Pn**	**15 54 59.6**	**+0.7**
BI02	**San Fabin de**	**2.94**	**183**	*eP*	**Pn**	**15 55 00.2**	**+0.6**
BI02	**San Fabin de**	**2.94**	**183**	Pn	**Pn**	**15 55 00.1**	**+0.5**
ZON	**Zonda**	**2.96**	**44**	Pn	**Pn**	**15 55 01.1**	**+1.2**
BI03	**Tigo**	**3.50**	**207**	Pn	**Pn**	**15 55 08.2**	**+1.1**
GO04	**Tololo Observa**	**3.54**	**4**	*eP*	**Pn**	**15 55 07.9**	**0.0**
GO04	**Tololo Observa**	**3.54**	**4**	Pn	**Pn**	**15 55 08.0**	**0.0**
LCO	**Las Campanas**	**4.70**	**4**	Pn	**Pn**	**15 55 23.1**	**-0.7**
AC04	**Llanos de Chal**	**5.50**	**360**	Pn	**Pn**	**15 55 33.4**	**-1.0**
GO03	**Copiap**	**6.15**	**7**	Pn	**Pn**	**15 55 41.8**	**-1.5**
PLCA	**Paso Flores**	**7.01**	**177**	Pn	**Pn**	**15 55 55.3**	**+0.1**
AC02	**Maricunga**	**7.06**	**14**	Pn	**Pn**	**15 55 54.7**	**-1.6**
OTAV	**Otavalo**	**34.48**	**347**	P	**P**	**16 00 57.0**	**+0.2**
OTAV				IAmb	IAmb	16 01 07.9	
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**56.52**	**180**	P	**P**	**16 03 49.9**	**+0.1**
QSPA				IAmb	IAmb	16 04 05.7	
	comp=Z,2.6nm,1.1s						

*AEIC **01** 15:56:54±3.7, 51.˚49N±0.˚05×176.˚53E±0.˚06, h26km±3km, Error ellipse: s-maj=7.9km s-min=5.6km az=172.0*
*MOS **01** 15:56:56.6±1.1, 51.˚90N×176.˚63E, h54km, mb4.8/39, Error ellipse: s-maj=8.3km s-min=5.9km az=103.8*
*BJI **01** 15:56:56.2±0.0, 52.˚33N×176.˚12E, h33km, mB4.8/27, mb4.9/48, Ms4.3/7, Ms7 4.1/7*
*IDC **01** 15:56:57.8±2.4, 51.˚88N×176.˚73E, h53km±20km, mb4.1/36, mb1 4.2/40, mb1mx4.1/51, mbtmp4.4/40, ML4.3/4, MS3.4/14, Ms1 3.4/14, ms1mx3.2/56, Error ellipse: s-maj=14.7km s-min=9.4km az=161.0*
*NEIC **01** 15:56:58.3±1.9, 51.˚82N±0.˚08×176.˚65E±0.˚07, h56km±5km, mb4.6/148, ML4.4(AEIC), Error ellipse: s-maj=12.1km s-min=5.9km az=189.0*

ISC 01 15:56:57.3±0.6, **51.˚86N**±0.˚05×**176.˚67E**±0.˚03, **h45**km±5km, **n398**, σ1**§31**/406, **mb4.6**/154, **MS3.6**/21, **29C-2D**, **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSSA	**Little Sitkin**	**1.15**	**85**		**Pn**	**15 57 17.1**	**+0.1**
LSSE	**Little Sitkin**	**1.18**	**85**		**Pn**	**15 57 17.6**	**+0.2**
LSPA	**Little Sitkin**	**1.19**	**84**		**Pn**	**15 57 17.7**	**+0.3**
AMKA	**Amchitka**	**1.71**	**105**	Pn	**Pn**	**15 57 23.7**	**-0.9**
AMKA					**Sn**	**15 57 45.3**	**+0.1**
CESW	**Semis' Southwe**	**1.80**	**87**		**Pn**	**15 57 26.1**	**+0.3**
SMY	**Shemya**	**1.80**	**300**	P	**Pn**	**15 57 26.4**	**+0.6**
SMY						15 57 49.7	
SMY	**Shemya**	**1.80**	**300**		**Pn**	**15 57 26.4**	**+0.6**
SMY				Sn	**Sn**	**15 57 49.7**	**+2.2**
CEAP	**Semis' Anvil P**	**1.81**	**84**		**Pn**	**15 57 26.8**	**+0.8**
CERAA	**Semis' Rag'd T**	**1.87**	**87**		**Pn**	**15 57 27.4**	**+0.6**
GALAA	**Gareloi Lava P**	**2.83**	**90**		**Pn**	**15 57 41.0**	**+1.0**
GAEA	**Gareloi East**	**2.85**	**90**		**Pn**	**15 57 41.2**	**+1.0**
TASE	**Tanaga Southea**	**3.29**	**88**		**Pn**	**15 57 47.4**	**+1.1**
TAFP	**Tanaga Falls P**	**3.32**	**87**		**Pn**	**15 57 47.2**	**+0.6**
KIMD	**Kanaga Island**	**3.79**	**89**		**Pn**	**15 57 54.2**	**+1.1**
KICM	**Kanaga Island**	**3.80**	**87**		**Pn**	**15 57 54.5**	**+1.2**
KIKV	**Kanaga Island**	**3.82**	**87**		**Pn**	**15 57 54.4**	**+0.8**
ADK	**Adak**	**4.12**	**87**	P	**Pn**	**15 57 58.8**	**+1.1**
ADK						15 58 45.2	
ADK	**Adak**	**4.12**	**87**		**Pn**	**15 57 58.8**	**+1.1**
ADK	**Adak**	**4.12**	**87**	Sn	**Sn**	**15 58 45.2**	**+0.7**
GSTD	**Great Sitkin T**	**4.45**	**85**		**Pn**	**15 58 02.8**	**+0.5**
GSTD					**Sn**	**15 58 57.1**	**+4.3**
GSTR	**Great Sitkin T**	**4.50**	**84**	Pn	**Pn**	**15 58 05.3**	**+2.3**
GSMY	**Great Sitkin M**	**4.51**	**85**		**Pn**	**15 58 03.7**	**+0.8**
ATKA	**Atka Island**	**5.65**	**83**	Pn	**Pn**	**15 58 20.3**	**+1.6**
KOFP	**Korovin Flat P**	**5.71**	**82**		**Pn**	**15 58 21.3**	**+1.7**
SPIA	**Saint Paul Isl**	**9.28**	**50**	Pn	**Pn**	**15 59 10.7**	**+2.4**
AKUT	**Akutan**	**10.83**	**71**	Pn	**Pn**	**15 59 32.4**	**+2.9**
PET	**Petropavlovsk**	**11.06**	**283**	*eP*	Pn	15 59 27.4	-5.3
PET				*eS*	**Sn**	**16 01 30.3**	**-4.5**
PET				pmax	pmax		
	comp=Z,13nm,0.9s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
PEA0B	**Petropavlovsk-**	**11.63**	**284**	P	**Pn**	**15 59 42.8**	**+2.2**
PEA0B	**Petropavlovsk-**	**11.63**	**284**	Pn	**Pn**	**15 59 42.8**	**+2.2**
PETK	**Petropavlovsk-**	**11.63**	**284**	P	**Pn**	**15 59 42.5**	**+2.0**
	comp=Z,1.2nm,0.3s,baz=100,slow=18,SNR=14						
PETK				S	**Sn**	**16 01 43.5**	**-5.4**
	comp=Z,1.3nm,0.3s,baz=112,slow=27,SNR=2.9						
PETK				LR	LR	16 04 17.5	
	comp=Z,107nm,21.3s,baz=99,slow=38						
PETK	**Petropavlovsk-**	**11.63**	**284**	Pn	**Pn**	**15 59 42.3**	**+1.8**
GAMB	**Gambell**	**13.43**	**23**	Pn	**Pn**	**16 00 07.2**	**+2.2**
GAMB	**Gambell**	**13.43**	**23**	P		16 00 07.1	
	baz=212,SNR=12						
SDPT	**Sand Point**	**13.99**	**67**	Pn	**P**	**16 00 15.8**	**-3.7**
CHGN	**Chignik**	**15.25**	**63**	Pn	**P**	**16 00 31.4**	**-2.0**
CHGN				IAmb	IAmb	16 00 33.9	
	comp=Z,73nm,1.4s						
ANM	**Nome**	**15.78**	**29**	P	**P**	**16 00 40.7**	**+1.4**
ANM				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ANM	**Nome**	**15.78**	**29**	P	**P**	**16 00 40.7**	**+1.4**
TNA	**Tin City**	**15.83**	**24**		**P**	**16 00 39.6**	**-0.2**
TNA	**Tin City**	**15.83**	**24**	P		16 00 39.6	
	baz=217,SNR=12						
MA2	**Magadan**	**16.43**	**308**	P	**P**	**16 00 46.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=80,slow=13,SNR=4.5						
MA2				LR	LR	16 06 57.2	
	comp=Z,152nm,18.6s,baz=145,slow=36						
MA2	**Magadan**	**16.43**	**308**	*i* P	**Pn**	**16 00 43.4**	**-0.9**
MA2				pmax	pmax		
	comp=Z,12nm,1.1s						
BILL	**Bilibino**	**17.00**	**347**	*d i* P	**P**	**16 00 53.4**	**+0.6**
BILL				*eS*	**Sn**	**16 03 57.0**	**-2.2**
BILL				pmax	pmax		
	comp=Z,18nm,1.6s						
BILL				MLR	MLR		
	comp=Z,165nm,18.0s						
BILL	**Bilibino**	**17.00**	**347**	P	**P**	**16 00 53.9**	**+1.1**
SEY	**Seymchan**	**17.03**	**320**	P	**P**	**16 00 53.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=123,slow=15,SNR=7.0						
SEY	**Seymchan**	**17.03**	**320**	*i* P	**Pn**	**16 00 47.9**	**-3.9**
SVW2	**Sparrevohn**	**17.77**	**48**	P	**P**	**16 01 04.1**	**+2.8**
OHAK	**Old Harbor**	**18.15**	**61**		**P**	**16 01 04.0**	**-1.4**
OHAK				IAmb	IAmb	16 01 10.7	
	comp=Z,45nm,1.4s						
KDAK	**Kodiak Island**	**18.57**	**59**	P	**P**	**16 01 09.2**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=309,slow=3.3,SNR=33						
KDAK	**Kodiak Island**	**18.57**	**59**	P	**P**	**16 01 08.7**	**-1.5**
KDAK				IAmb	IAmb	16 01 22.3	
	comp=Z,34nm,1.5s						
RSO	**Redoubt South**	**18.93**	**51**	P	**Pn**	**16 01 16.8**	**+1.6**
RDOG	**Red Dog Mine**	**19.02**	**24**	P	**Pn**	**16 01 17.6**	**+1.5**
RDOG				IAmb	IAmb	16 01 18.2	
	comp=Z,25nm,0.7s						
HOM	**Homer**	**19.31**	**54**	P	**Pn**	**16 01 19.5**	**-0.1**
SPCR	**Spurr Chakacha**	**19.36**	**49**	P		16 01 21.3	
	baz=254,SNR=12						
CNPM	**China Poot**	**19.49**	**54**	P	**Pn**	**16 01 20.6**	**-1.2**
CNPM				IAmb	IAmb	16 01 22.0	
	comp=Z,21nm,1.0s						
BRLK	**Bradley Lake**	**19.70**	**54**	P	**Pn**	**16 01 22.9**	**-1.4**
BRLK				IAmb	IAmb	16 01 23.6	
	comp=Z,17nm,0.6s						
PPLA	**Purkeypile**	**19.87**	**44**		**Pn**	**16 01 27.4**	**+1.0**
PPLA				IAmb	IAmb	16 01 40.4	
	comp=Z,12nm,0.6s						
SKT	**Skwentna**	**19.89**	**47**	P	**Pn**	**16 01 27.1**	**+0.7**
SKT				IAmb	IAmb	16 01 28.4	
	comp=Z,26nm,1.1s						
SKT	**Skwentna**	**19.89**	**47**	P		16 01 27.1	
	baz=253,SNR=17						
SUA	**Susitna One**	**20.11**	**49**	P	Pn	16 01 28.6	-0.7
SUA				IAmb	IAmb	16 01 33.5	
	comp=Z,19nm,0.6s						
SUA	**Susitna One**	**20.11**	**49**	P		16 01 28.5	
	baz=256,SNR=21						
CHUM	**Lake Minchumin**	**20.17**	**41**	P		16 01 29.9	
	baz=247,SNR=12						
RC01	**Rabbit Creek A**	**20.51**	**50**	P	Pn	16 01 33.8	0.0
RC01				IAmb	IAmb	16 01 36.8	
	comp=Z,23nm,0.6s						
RC01	**Rabbit Creek A**	**20.51**	**50**	P		16 01 33.5	
	baz=258,SNR=9.1						
IMAR	**Indian Mountai**	**20.53**	**35**	P	Pn	16 01 33.2	-0.8
KTH	**Kantishna Hill**	**20.63**	**43**	P	Pn	16 01 34.6	-0.7
BPAW	**Bear Paw Mtn.**	**20.80**	**41**	P	Pn	16 01 36.6	-0.6
BPAW	**Bear Paw Mtn.**	**20.80**	**41**	P		16 01 36.0	
	baz=249,SNR=11						
TRF	**Thorofare Moun**	**20.87**	**43**	P	Pn	16 01 36.7	-1.5
TRF	**Thorofare Moun**	**20.87**	**43**	P		16 01 36.6	
	baz=251,SNR=9.0						
GHO	**Glory Hole Cre**	**21.03**	**48**	P	**P**	**16 01 36.4**	**-0.5**
GHO				IAmb	IAmb	16 01 41.5	
	comp=Z,13nm,0.7s						
PWL	**Port Wells**	**21.14**	**51**	P	**P**	**16 01 38.9**	**+0.8**
TYV	**Tymovskoe**	**21.15**	**281**	*eP*	**P**	**16 01 40.6**	**+2.3**
TYV				*eS*	Sn	16 05 39.0	-0.4
TYV				pmax	pmax		
	comp=Z,16nm,0.7s						
TYV				pmax	pmax		
	comp=Z,200nm,2.1s						
KNK	**Knik Glacier**	**21.18**	**50**	P	**P**	**16 01 39.0**	**+0.6**
MLY	**Manley**	**21.24**	**39**	P	**P**	**16 01 40.3**	**+1.1**
MLY	**Manley**	**21.24**	**39**	P		16 01 40.8	
	baz=247,SNR=14						
SML	**Sawmill**	**21.31**	**49**	P	**P**	**16 01 40.9**	**+0.9**
SML				pmax	pmax		
	comp=Z,28nm,0.7s						
SML	**Sawmill**	**21.31**	**49**	P	**P**	**16 01 40.9**	**+0.9**
SML				IAmb	IAmb	16 01 45.1	
	comp=Z,28nm,0.7s						
SML	**Sawmill**	**21.31**	**49**	P		16 01 40.7	
	baz=258,SNR=9.7						
BWN	**Browne**	**21.45**	**42**	P	**P**	**16 01 44.4**	**+3.1**
BWN				IAmb	IAmb	16 02 01.4	
	comp=Z,34nm,1.2s						
WAT2	**Susitna Watana**	**21.47**	**45**	P		16 01 41.7	
	baz=254,SNR=17						
RND	**Reindeer**	**21.47**	**44**	P	**P**	**16 01 42.5**	**+0.8**
RND				pmax	pmax		
	comp=Z,4.0nm,0.5s						
RND	**Reindeer**	**21.47**	**44**	P	**P**	**16 01 42.5**	**+0.8**
MCK	**McKinley**	**21.53**	**43**	P	**P**	**16 01 42.8**	**+0.6**
MCK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MCK	**McKinley**	**21.53**	**43**	P	**P**	**16 01 42.8**	**+0.6**
MCK	**McKinley**	**21.53**	**43**	P		16 01 42.8	
	baz=252,SNR=6.4						
GLI	**Glacier Island**	**21.74**	**51**	P	**P**	**16 01 44.6**	**+0.2**
NEA2	**Nenana**	**21.75**	**41**	P	**P**	**16 01 45.8**	**+1.2**
NEA2	**Nenana**	**21.75**	**41**	P		16 01 45.9	
	baz=250,SNR=25						
WAT6	**Susitna Watana**	**21.75**	**47**	P		16 01 45.4	
	baz=256,SNR=22						
SCM	**Sheep Creek Mo**	**21.79**	**49**	P	**P**	**16 01 45.7**	**+0.7**
SCM				pmax	pmax		
	comp=Z,39nm,0.5s						
SCM	**Sheep Creek Mo**	**21.79**	**49**	P	**P**	**16 01 45.7**	**+0.7**
I23K	**Minto, Yukon-K**	**21.83**	**39**	P	**P**	**16 01 46.3**	**+1.0**
I23K	**Minto, Yukon-K**	**21.83**	**39**	P		16 01 46.3	
	baz=248,SNR=16						
FID	**Port Fidalgo**	**22.02**	**52**	P	**P**	**16 01 47.4**	**-0.1**
FID				IAmb	IAmb	16 01 50.0	
	comp=Z,30nm,1.2s						
WRH	**Wood River Hil**	**22.11**	**42**	P	**P**	**16 01 48.2**	**-0.2**
MDM	**Murphy Dome**	**22.21**	**40**	P	**P**	**16 01 50.3**	**+0.8**
MDM				IAmb	IAmb	16 01 52.0	
	comp=Z,14nm,0.6s						
CCB	**Clear Creek Bu**	**22.28**	**41**	P	**P**	**16 01 50.0**	**-0.3**
COLA	**College**	**22.34**	**41**	*i* P	**P**	**16 01 50.8**	**0.0**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
EYAK	**Cordova Ski Ar**	**22.36**	**52**	P	**P**	**16 01 51.3**	**+0.3**
EYAK				IAmb	IAmb	16 02 05.6	
	comp=Z,31nm,1.4s						
COLD	**Coldfoot**	**22.37**	**34**	P	**P**	**16 01 51.3**	**+0.1**
M24K	**Tolsona, Glenn**	**22.37**	**48**	P	**P**	**16 01 52.5**	**+1.2**
M24K	**Tolsona, Glenn**	**22.37**	**48**	P		16 01 52.2	
	baz=259,SNR=10						
KLU	**Klutina**	**22.39**	**50**	P	**P**	**16 01 51.7**	**+0.1**
KLU				IAmb	IAmb	16 01 57.5	
	comp=Z,15nm,0.6s						
KLU	**Klutina**	**22.39**	**50**	P		16 01 51.9	
	baz=261,SNR=12						
YSS	**Yuzh-Sakhalins**	**22.47**	**271**	*eP*	**P**	**16 01 53.3**	**+0.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS	**Yuzh-Sakhalins**	**22.47**	**271**	P	**P**	**16 01 55.3**	**+2.9**
YSS				IAmb	IAmb	16 01 58.5	
	comp=Z,21nm,1.1s						
HDA	**Harding Lake**	**22.57**	**42**	P		16 01 53.8	
	baz=253,SNR=7.4						
HDA				P		16 01 53.8	
	baz=253,SNR=7.4						
IL31		**22.70**	**41**	P	**P**	**16 01 54.4**	**-0.2**
ILAR	**Eielson Array**	**22.70**	**41**	P	**P**	**16 01 53.1**	**-1.6**
	comp=Z,3.7nm,0.6s,baz=249,slow=8.2,SNR=48						
ILAR	**Eielson Array**	**22.70**	**41**	P	**P**	**16 01 54.8**	**+0.1**
ILAR	**Eielson Array**	**22.70**	**41**	P	**P**	**16 01 54.8**	**+0.1**
PAX	**Paxson**	**22.86**	**46**	P	**P**	**16 01 56.6**	**+0.1**
PAX				pmax	pmax		
	comp=Z,15nm,0.8s						
PAX	**Paxson**	**22.86**	**46**	P	**P**	**16 01 56.6**	**+0.1**
PAX				IAmb	IAmb	16 01 57.3	
	comp=Z,15nm,0.8s						
PAX	**Paxson**	**22.86**	**46**	P		16 01 56.6	
	baz=258,SNR=15						
RAGM	**Ragged Mountai**	**22.87**	**53**	P	**P**	**16 01 58.4**	**+1.8**
RAGM				IAmb	IAmb	16 02 17.3	
	comp=Z,38nm,1.2s						
A21K	**Barrow**	**22.91**	**22**	P	**P**	**16 01 56.8**	**-0.1**
A21K				IAmb	IAmb	16 01 57.7	
	comp=Z,22nm,0.8s						
BMRM	**Bremner River**	**22.96**	**51**	P	**P**	**16 01 57.1**	**-0.4**
BMRM				IAmb	IAmb	16 02 10.6	
	comp=Z,19nm,1.2s						
N25K	**Chitina, Valde**	**23.03**	**50**	P	**P**	**16 01 58.7**	**+0.4**
N25K				IAmb	IAmb	16 02 01.2	
	comp=Z,13nm,0.6s						
N25K	**Chitina, Valde**	**23.04**	**50**	P		16 01 58.6	
	baz=262,SNR=12						
HMT	**Hamilton**	**23.07**	**53**	P	**P**	**16 02 00.1**	**+1.5**
HMT				IAmb	IAmb	16 02 02.3	
	comp=Z,40nm,1.4s						
TOLK	**Toolik Lake Re**	**23.25**	**31**		**P**	**16 02 01.1**	**+0.8**
TOLK	**Toolik Lake Re**	**23.25**	**31**	P	**P**	**16 02 00.7**	**+0.4**
TOLK				IAmb	IAmb	16 02 01.6	
	comp=Z,8.9nm,0.7s						
TOLK	**Toolik Lake Re**	**23.25**	**31**	P		16 02 00.8	
	baz=240,SNR=11						
GLB	**Gilahina Butte**	**23.39**	**50**	P	**P**	**16 02 02.1**	**+0.4**
GLB				IAmb	IAmb	16 02 03.8	
	comp=Z,18nm,1.1s						
PRP	**Porcupine Dome**	**23.47**	**40**	P	**P**	**16 02 02.3**	**-0.3**
PRP				IAmb	IAmb	16 02 04.2	
	comp=Z,8.1nm,0.6s						
PRP	**Porcupine Dome**	**23.47**	**40**	P		16 02 02.2	
	baz=252,SNR=13						
VRDI	**Verde Repeater**	**23.54**	**51**	P	**P**	**16 02 03.7**	**+0.4**
VRDI				IAmb	IAmb	16 02 06.6	
	comp=Z,16nm,0.7s						
DOT	**Dot Lake**	**23.61**	**45**	P	**P**	**16 02 03.6**	**-0.2**
MENT	**Mentasta**	**23.64**	**47**	P	**P**	**16 02 05.5**	**+1.5**
MENT				IAmb	IAmb	16 02 10.3	
	comp=Z,12nm,0.6s						
CRQM	**Cirque**	**23.65**	**52**	P	**P**	**16 02 05.8**	**+1.4**
CRQM				IAmb	IAmb	16 02 07.9	
	comp=Z,17nm,0.6s						
SCRK	**Sand Creek**	**23.71**	**44**	P	**P**	**16 02 04.3**	**-0.5**
SCRK				IAmb	IAmb	16 02 06.4	
	comp=Z,11nm,0.9s						
SCRK	**Sand Creek**	**23.71**	**44**	P		16 02 04.2	
	baz=257,SNR=13						
MCARA	**McCarthy VSAT**	**23.76**	**51**	P	**P**	**16 02 06.3**	**+1.2**
MCARA				IAmb	IAmb	16 02 07.9	
	comp=Z,21nm,0.8s						
MCARA	**McCarthy VSAT**	**23.76**	**51**	P		16 02 06.0	
	baz=264,SNR=12						
TGL	**Tana Glacier**	**23.81**	**52**	P	**P**	**16 02 06.3**	**+0.6**
TGL				IAmb	IAmb	16 02 21.4	
	comp=Z,11nm,0.8s						
ASAJ	**Asahikawa**	**23.91**	**265**	P	**P**	**16 02 07.1**	**+0.4**
	comp=Z,26nm,0.9s,baz=69,slow=9.0,SNR=27						
FYU	**Fort Yukon**	**23.91**	**38**	P	**P**	**16 02 07.7**	**+1.2**
FYU				IAmb	IAmb	16 02 10.6	
	comp=Z,34nm,1.4s						
YAH	**Yahtse**	**24.32**	**53**	P	**P**	**16 02 13.0**	**+2.4**
YAH				IAmb	IAmb	16 02 17.0	
	comp=Z,16nm,0.7s						
GRNC	**Granite Creek**	**24.33**	**52**	P	**P**	**16 02 11.9**	**+1.2**
GRNC				IAmb	IAmb	16 02 14.5	
	comp=Z,17nm,0.6s						
BARN	**Barnard Glacie**	**24.39**	**52**	P	**P**	**16 02 12.2**	**+1.0**
BMAR	**Burnt Mountain**	**24.45**	**36**	P	**P**	**16 02 11.7**	**+0.3**
L27K	**Beaver Creek,**	**24.51**	**47**	P	**P**	**16 02 12.6**	**+0.5**
L27K				IAmb	IAmb	16 02 15.1	
	comp=Z,25nm,0.8s						
L27K	**Beaver Creek,**	**24.51**	**47**	P		16 02 13.0	
	baz=262,SNR=51						
BCAR	**Beaver Creek A**	**24.53**	**47**	P	**P**	**16 02 12.5**	**+0.2**
CTGM	**Chitina Glacie**	**24.55**	**52**	P	**P**	**16 02 13.9**	**+1.3**
CTGM				IAmb	IAmb	16 02 15.2	
	comp=Z,22nm,1.0s						
K27K	**Chicken**	**24.55**	**44**	P	**P**	**16 02 13.1**	**+0.7**
K27K				IAmb	IAmb	16 02 15.3	
	comp=Z,12nm,0.6s						
TABL	**Table Mountain**	**24.62**	**53**	P	**P**	**16 02 15.1**	**+1.8**
TABL				IAmb	IAmb	16 02 17.0	
	comp=Z,18nm,0.8s						
LOGN	**Logan Glacier**	**24.70**	**52**	P	**P**	**16 02 15.4**	**+1.4**
LOGN				IAmb	IAmb	16 02 17.1	
	comp=Z,27nm,1.1s						
ERM	**Erimo**	**24.71**	**260**	P	**P**	**16 02 14.8**	**+0.8**
ERM				pmax	pmax		
	comp=Z,22nm,0.8s						
ERM	**Erimo**	**24.71**	**260**	P	**P**	**16 02 14.8**	**+0.8**
ERM				IAmb	IAmb	16 02 17.0	
	comp=Z,22nm,0.8s						
GRNR	**Gornyy**	**24.96**	**284**	⇑ *i* P	**P**	**16 02 16.4**	**+0.2**
GRNR				*eS*	**S**	**16 06 41.4**	**+4.8**
GRNR				pmax	pmax		
	comp=E,6.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,3.0nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRNR				smax	smax		
	comp=E,1.0nm,0.8s						
GRNR

baz=10,slow=76,SNR=817
H11S3 WAKE ISLAND Hy 34.21 197 T T 16 40 17.4
baz=10,slow=76,SNR=660
H11S2 WAKE ISLAND Hy 34.21 197 T T 16 40 16.8
baz=10,slow=76,SNR=378
BOD Bodaibo 35.41 305 *e*P **P** **16 03 47.5 -0.9**
BOD pmax pmax
comp=Z,20nm,0.7s
HIA Hailar 35.47 289 P **P** **16 03 48.4 -0.7**
HIA pmax pmax
comp=Z,11nm,1.2s
HIA Hailar 35.47 289 P **P** **16 03 48.4 -0.7**
HIA IAmb IAmb 16 03 48.9
comp=Z,11nm,1.2s
KSRS Korea Array 36.82 267 P **P** **16 04 01.6 +0.9**
comp=Z,3.7nm,0.6s,baz=52,slow=8.1,SNR=20
KSRS LR LR 16 18 15.0
comp=Z,58nm,19.0s,baz=248,slow=35
KS19 Wonju Array Si 36.83 267 P **P** **16 04 02.0 +1.2**
KS19 IAmb IAmb 16 04 07.4
comp=Z,5.4nm,0.9s
KSAR Wonju Array Be 36.85 267 P **P** **16 04 01.5 +0.5**
KSAR Wonju Array Be 36.85 267 P **P** **16 04 01.5 +0.5**
YKA Yellowknife Ar 36.94 46 P **P** **16 04 01.6 +0.2**
comp=Z,2.9nm,0.4s,baz=285,slow=7.9,SNR=47
YKA PcP **PcP** **16 06 21.3 -0.5**
comp=Z,0.6nm,0.5s,baz=292,slow=2.6,SNR=5.6
JNU Nakatsue 37.86 259 P **P** **16 04 10.4 +0.8**
comp=Z,22nm,1.1s,baz=56,slow=3.8,SNR=3.6
JNU Nakatsue 37.86 259 P **P** **16 04 11.2 +1.6**
RES Resolute Bay 40.47 24 P **P** **16 04 30.9 0.0**
comp=Z,0.9nm,0.6s,baz=300,slow=5.8,SNR=4.8
RES PcP **PcP** **16 06 31.9 -0.7**
comp=Z,2.0nm,0.6s,baz=240,slow=2.7,SNR=8.3
RES LR LR 16 22 33.7
comp=Z,36nm,19.4s,baz=43,slow=38
RES Resolute Bay 40.47 24 P **P** **16 04 31.9 +1.1**
RES pmax pmax
comp=Z,8.0nm,1.5s
RES Resolute Bay 40.47 24 P **P** **16 04 31.9 +1.1**
EUNU Eureka 40.58 15 P **P** **16 04 32.3 +0.5**
KRMB Red Mountain 40.98 80 P **P** **16 04 38.0 +2.3**
KRMB IAmb IAmb 16 04 47.6
comp=Z,22nm,1.4s
K05A Summer Lake 42.12 77 P **P** **16 04 46.9 +1.8**
NRIK Noril'sk 42.54 328 P **P** **16 04 47.5 -0.4**
comp=Z,2.0nm,0.4s,baz=70,slow=8.9,SNR=7.5
NRIK PcP **PcP** **16 06 39.6 +0.1**
comp=Z,1.6nm,0.6s,baz=116,slow=5.5,SNR=2.6
NRIK Noril'sk 42.54 328 *i* P **P** **16 04 46.8 -1.1**
NRIK pmax pmax
comp=Z,7.0nm,1.3s
NRIK Noril'sk 42.54 328 P **P** **16 04 47.6 -0.3**
TLY Talaya 43.40 300 *e*P **P** **16 04 55.1 0.0**
TLY pmax pmax
comp=Z,15nm,1.0s
TLY MLR MLR
comp=Z,255nm,13.0s
ULN Ulaanbaatar 43.50 294*c i*P **P** **16 04 56.1 0.0**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 43.50 294 P **P** **16 04 56.4 +0.3**
ULN IAmb IAmb 16 04 57.1
comp=Z,11nm,1.0s
SONM Songino Array 43.89 294 P **P** **16 04 59.5 +0.3**
comp=Z,10nm,0.5s,baz=65,slow=7.4,SNR=147
SONM PcP **PcP** **16 06 44.1 -0.5**
comp=Z,1.1nm,0.8s,baz=64,slow=3.4,SNR=4.3
ZAK Zakamensk 44.26 298 *e*P **P** **16 04 58.9 -3.2**
ZAK pmax pmax
comp=Z,6.0nm,1.5s
HHC Hu-ho-hao-te 44.83 283 *e*P **P** **16 05 07.7 +0.9**
HHC PP **PP** **16 06 54.6 +2.7**
HHC S **S** **16 11 46.9 +5.9**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,69nm,5.2s
HHC LR LR
comp=Z,130nm,15.2s
HHC LR LR
comp=Z,86nm,14.6s
PNTR Pine Nut 45.07 80 P **P** **16 05 09.7 +0.8**
PNTR IAmb IAmb 16 05 21.1
comp=Z,6.4nm,0.7s
NJ2 Nanjing 45.99 268 *e*P **P** **16 05 15.0 -0.9**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
KVN Kaiserville 46.01 79 P **P** **16 05 17.6 +1.3**
KVN pmax pmax
comp=Z,1.0nm,0.5s
KVN Kaiserville 46.01 79 P **P** **16 05 17.6 +1.3**
NVAR Mina Array Bea 46.28 80 P **P** **16 05 18.6 +0.2**
comp=Z,0.8nm,0.6s,baz=292,slow=7.2,SNR=7.8
NVAR Mina Array Bea 46.28 80 P **P** **16 05 21.0 +2.6**
ELK Elko 46.70 76 P **P** **16 05 22.9 +1.2**
ELK pmax pmax
comp=Z,2.0nm,1.2s
ELK Elko 46.70 76 P **P** **16 05 22.9 +1.2**
YHH Holmes Hill 46.87 69 P **P** **16 05 23.6 +0.6**
GCMT Greycliff 46.96 67 P **P** **16 05 25.1 +1.5**
FCC Fort Churchill 47.64 45 P **P** **16 05 28.4 0.0**
FCC pmax pmax
comp=Z,3.0nm,0.9s
FCC Fort Churchill 47.64 45 P **P** **16 05 28.4 0.0**
TPNV Topopah Spring 48.47 80 P **P** **16 05 35.3 -0.1**
TPNV pmax pmax
comp=Z,4.0nm,0.9s
TPNV Topopah Spring 48.47 80 P **P** **16 05 35.3 -0.1**
TPNV IAmb IAmb 16 05 49.3
comp=Z,3.8nm,0.8s
PD31 Pinedale Array 48.83 70 P **P** **16 05 37.1 -1.1**
PDAR Pinedale Array 48.83 70 P **P** **16 05 36.1 -2.0**
comp=Z,0.4nm,0.5s,baz=321,slow=3.3,SNR=5.4
PDAR LR LR 16 24 23.6
comp=Z,17nm,18.7s,baz=313,slow=34
PDAR Pinedale Array 48.83 70 P **P** **16 05 36.4 -1.8**
SPA0 Spitsbergen Ar 49.67 355 P **P** **16 05 43.1 -0.7**
SPITS Spitsbergen Ar 49.67 355 P **P** **16 05 42.8 -1.0**
comp=Z,1.3nm,0.3s,baz=113,slow=5.7,SNR=26
WHN Wuhan 49.82 270 ⇓P **P** **16 05 45.5 0.0**
XAN Xi'an 50.79 277 P **P** **16 05 52.6 -0.3**
XAN pP pP 16 06 00.5 -4.6
XAN pmax pmax
comp=Z,7.0nm,0.8s
ZALV Zalesovo Beam 51.62 311 P **P** **16 05 57.5 -1.3**
comp=Z,1.1nm,0.5s,baz=49,slow=5.5,SNR=6.8
ZALV PcP **PcP** **16 07 12.1 +0.1**
comp=Z,3.9nm,0.6s,baz=42,slow=3.8,SNR=12
ZALV LR LR 16 28 51.8
comp=Z,39nm,20.4s,baz=74,slow=37
ZALV Zalesovo Beam 51.62 311 P **P** **16 05 57.8 -1.0**
ZALV Zalesovo Beam 51.62 311 P **P** **16 05 57.8 -1.0**
ULM Lac du Bonnet 51.75 55 P **P** **16 05 58.6 -1.2**
comp=Z,2.1nm,0.5s,baz=296,slow=7.0,SNR=6.0
ULM LR LR 16 29 50.7
comp=Z,42nm,18.0s,baz=350,slow=38
ULM Lac du Bonnet 51.75 55 P **P** **16 05 58.7 -1.1**
ULM pmax pmax
comp=Z,6.0nm,1.3s
ULM Lac du Bonnet 51.75 55 P **P** **16 05 58.7 -1.1**
ULM IAmb IAmb 16 06 14.9
comp=Z,5.8nm,1.3s
LZH Lanzhou 52.53 283 *e*P **P** **16 06 06.4 +0.4**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH LR LR
comp=Z,260nm,14.1s
LZH LR LR
comp=Z,190nm,15.2s
LZH LR LR
comp=Z,160nm,16.7s
GTA Gaotai 52.75 289 ⇑P **P** **16 06 07.8 +0.2**
GTA pP pP 16 06 20.0 +0.1
GTA sP sP 16 06 25.1 +0.1
GTA pmax pmax
comp=Z,16nm,0.7s
GTA pmax pmax
comp=Z,49nm,5.2s
GTA LR LR
comp=Z,59nm,16.7s
GTA LR LR
comp=Z,130nm,17.1s
GTA LR LR
comp=Z,82nm,15.3s
SPX San Pedro Mart 52.91 85 P **P** **16 06 09.7 +0.6**

DGZ Jazzator, Alta 52.99 306*c i*P **P** **16 06 09.0 -0.2**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 53.48 12 P **P** **16 06 12.8 0.0**
SUMG pmax pmax
comp=Z,9.0nm,1.3s
SUMG Summit 53.48 12 P **P** **16 06 12.8 0.0**
SUMG IAmb IAmb 16 06 13.4
comp=Z,8.7nm,1.3s
ILULI Ilulissat 54.27 19 P **P** **16 06 17.6 -0.5**
ILULI pmax pmax
comp=Z,8.0nm,0.6s
ILULI Ilulissat 54.27 19 P **P** **16 06 17.6 -0.5**
SFJD Kangerlussuaq 56.22 20 P **P** **16 06 30.7 -1.4**
comp=Z,2.5nm,0.4s,baz=313,slow=7.1,SNR=5.2
SFJD Kangerlussuaq 56.22 20 P **P** **16 06 31.5 -0.7**
SFJD pmax pmax
comp=Z,6.0nm,1.1s
SFJD Kangerlussuaq 56.22 20 P **P** **16 06 31.5 -0.7**
SFJD IAmb IAmb 16 06 33.2
comp=Z,5.9nm,1.1s
WMQ Urumqi 56.68 300 *e*P **P** **16 06 36.3 +0.4**
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,91nm,4.9s
ARCES ARCESS Array B 57.09 348 P **P** **16 06 37.5 -0.8**
comp=Z,1.7nm,0.5s,baz=27,slow=8.3,SNR=20
ARCES LR LR 16 33 12.1
comp=Z,77nm,18.4s,baz=295,slow=38
ARCES ARCESS Array B 57.09 348 P **P** **16 06 37.5 -0.8**
ARCES pmax pmax
comp=Z,7.0nm,1.0s
ARCES ARCESS Array B 57.09 348 P **P** **16 06 37.5 -0.8**
ARCES IAmb IAmb 16 06 53.2
comp=Z,6.5nm,1.0s
LVZ Lovozero 57.24 344 P **P** **16 06 38.9 -0.6**
LVZ pmax pmax
comp=Z,31nm,1.0s
LVZ Lovozero 57.24 344 P **P** **16 06 38.9 -0.6**
GYA Guiyang 57.47 272 *e*P **P** **16 06 46.1 +4.4**
GYA pmax pmax
comp=Z,14nm,0.5s
MK31 Makanchi Array 57.49 306*c i*P **P** **16 06 40.2 -1.3**
MK31 Makanchi Array 57.49 306 P **P** **16 06 40.6 -0.9**
MKAR Makanchi Array 57.49 306 P **P** **16 06 40.5 -1.0**
comp=Z,5.8nm,0.4s,baz=53,slow=5.9,SNR=210
MKAR Makanchi Array 57.49 306 P **P** **16 06 40.7 -0.8**
MKAR Makanchi Array 57.49 306 P **P** **16 06 40.7 -0.8**
MAKZ Makanchi 57.64 306 P **P** **16 06 41.4 -1.1**
MAKZ pmax pmax
comp=Z,9.0nm,0.6s
MAKZ Makanchi 57.64 306 P **P** **16 06 41.4 -1.1**
COWI Conover 57.87 55 P **P** **16 06 45.4 +1.2**
COWI IAmb IAmb 16 07 01.7
comp=Z,7.9nm,1.4s
BRVK Borovoye 58.68 317*ce*P **P** **16 06 49.2 -0.5**
BRVK pmax pmax
comp=Z,15nm,0.6s
BRVK Borovoye 58.68 317 P **P** **16 06 49.7 +0.1**
E43A Lone Tree Farm 58.76 54 P **P** **16 06 50.1 -0.3**
E43A IAmb IAmb 16 07 08.9
comp=Z,4.1nm,0.8s
E46A Sault Ste Mari 60.10 52 P **P** **16 06 59.2 -0.4**
PRGR Permogore 60.35 336 *e*P **P** **16 07 00.6 -0.4**
PRGR pmax pmax
comp=Z,11nm,0.7s
ARU Arti 60.66 326 P **P** **16 07 03.0 -0.2**
comp=Z,2.7nm,0.6s,baz=14,slow=4.0,SNR=12
ARU PcP **PcP** **16 07 46.9 -0.1**
comp=Z,1.2nm,0.5s,baz=147,slow=6.4,SNR=4.0
ARU Arti 60.66 326*c i*P **P** **16 07 03.3 +0.1**
ARU 16 07 46.4
ARU 16 09 15.3
ARU S **S** **16 15 20.5 +4.5**
ARU SS **SS** **16 19 16.6 +2.5**
ARU pmax pmax
comp=Z,11nm,0.9s
ARU Arti 60.66 326 P **P** **16 07 03.6 +0.4**
TX31 Lajitas Ar. Si 61.35 78 P **P** **16 07 08.0 -0.4**
TX31 IAmb IAmb 16 07 23.7
comp=Z,6.2nm,0.9s
TX32 Lajitas Array 61.35 78 P **P** **16 07 09.3 +0.9**
TXAR Lajitas Array 61.35 78 P **P** **16 07 07.6 -0.9**
comp=Z,0.6nm,0.6s,baz=299,slow=5.6,SNR=11
TXAR Lajitas Array 61.35 78 P **P** **16 07 08.0 -0.4**
TXAR Lajitas Array 61.35 78 P **P** **16 07 08.0 -0.4**
KIRV Kirov 61.86 332 P **P** **16 07 11.4 +0.1**
comp=Z,10nm,0.6s,baz=66,slow=3.5,SNR=5.8
KIRV Kirov 61.86 332*ce*P **P** **16 07 10.8 -0.5**
TKM2 Tokmak 2 63.59 306 P **P** **16 07 23.5 +0.2**
SNR=11
USP Ospenovka 63.88 307 P **P** **16 07 25.3 +0.2**
SNR=17
CHMS Chumysh 63.95 307 P **P** **16 07 25.7 +0.2**
SNR=6.0
KBK Karagaybulak 64.11 307 P **P** **16 07 26.6 -0.1**
SNR=12
AAK Ala-Archa 64.35 307 P **P** **16 07 28.4 +0.2**
SNR=19
AAK Ala-Archa 64.35 307*ce*P **P** **16 07 28.2 -0.1**
AAK pmax pmax
comp=Z,31nm,0.7s
AAK Ala-Archa 64.35 307 P **P** **16 07 28.4 +0.2**
LSA Lhasa 64.60 286 P **P** **16 07 31.6 +1.1**
LSA pmax pmax
comp=Z,12nm,0.5s
LSA Lhasa 64.60 286 P **P** **16 07 31.6 +1.1**
FIA1 FINESS Array S 64.64 345 P **P** **16 07 29.0 -0.6**
FINES FINESS Array B 64.64 345 P **P** **16 07 28.5 -1.1**
comp=Z,5.2nm,0.7s,baz=22,slow=7.7,SNR=8.2
FINES LR LR 16 39 53.2
comp=Z,47nm,18.1s,baz=1.5,slow=40
FINES FINESS Array B 64.64 345 P **P** **16 07 29.0 -0.6**
FINES FINESS Array B 64.64 345 P **P** **16 07 28.9 -0.6**
UCH Uchtor 64.64 307 P **P** **16 07 30.8 +0.3**
SNR=6.4
EKS2 Erkin-Say 64.68 307 P **P** **16 07 30.9 +0.5**
SNR=12
AML Almayashu 65.12 307 P **P** **16 07 34.3 +0.7**
SNR=24
WVNY West Valley, N 65.78 52 P **P** **16 07 36.7 -0.7**
ABKAR Akbulak array 65.80 320 P **P** **16 07 37.7 +0.3**
ABKAR IAmb IAmb 16 07 38.0
comp=Z,4.0nm,0.7s
KSH Kashi 65.91 304 P **P** **16 07 42.0 +3.6**
KSH S **S** **16 16 24.7 +2.4**
KSH pmax pmax
comp=Z,16nm,0.3s
KK31 Karatay Array 65.94 310 P **P** **16 07 38.5 +0.1**
KK31 Karatay Array 65.94 310 P **P** **16 07 38.5 +0.1**
KKAR Karatay Array 65.94 310 P **P** **16 07 38.5 +0.1**
KKAR pmax pmax
comp=Z,15nm,0.7s
KKAR Karatay Array 65.94 310 P **P** **16 07 38.5 +0.1**
KKAR Karatay Array 65.94 310 P **P** **16 07 38.4 +0.1**
FAKI Fak Fak 66.25 230 P **P** **16 07 40.2 -0.5**
FAKI IAmb IAmb 16 07 57.4
comp=Z,6.3nm,0.9s
M55A Ridgway 66.41 53 P **P** **16 07 40.9 -0.6**
M55A IAmb IAmb 16 07 42.9
comp=Z,8.9nm,1.1s
L56A Greenwood 66.49 51 P **P** **16 07 41.3 -0.6**
NC204 NORSAR Array S 66.66 353 P **P** **16 07 42.3 -0.4**
M56A Emporium 66.68 52 P **P** **16 07 42.4 -0.8**
NC405 NORSAR Array S 66.74 352 P **P** **16 07 42.7 -0.5**
NC405 IAmb IAmb 16 07 47.6
comp=Z,4.5nm,0.8s
NB201 NORSAR Array S 66.84 352 P **P** **16 07 43.6 -0.2**
NOA NORSAR Array B 66.85 352 P **P** **16 07 43.5 -0.4**
comp=Z,1.2nm,0.5s,baz=4.8,slow=3.0,SNR=16
NOA LR LR 16 37 02.3
comp=Z,21nm,20.1s,baz=270,slow=36
NC602 NORSAR Array S 67.13 352 P **P** **16 07 45.2 -0.5**
SSPA Standing Stone 67.47 53 P **P** **16 07 47.3 -0.9**
HFS Hagfors 67.52 351 P **P** **16 07 47.6 -0.5**
comp=Z,1.4nm,0.4s,baz=24,slow=4.0,SNR=11
BELG Belogornoye 67.64 329 *i* P **P** **16 07 49.0 0.0**
BELG pmax pmax
comp=Z,4.0nm,0.9s
UTTA Uttaradit 67.70 271 P **P** **16 07 50.0 +0.1**
CM34 Chiang Mai Arr 67.73 272 P **P** **16 07 50.0 -0.1**
F64A Sherman 67.78 43 P **P** **16 07 49.3 -0.7**
F64A IAmb IAmb 16 07 49.8
comp=Z,9.6nm,1.1s

CM35 Chiang Mai Arr 67.86 272 P **P** **16 07 51.0 +0.1**
CM33 Chiang Mai Arr 67.89 273 P **P** **16 07 51.0 -0.1**
CMMT Chiang Mai 67.89 273 P **P** **16 07 50.0 -1.1**
CHTO Chiang Mai 67.89 273 P **P** **16 07 50.8 -0.3**
CHTO pmax pmax
comp=Z,6.0nm,0.8s
CHTO Chiang Mai 67.89 273 P **P** **16 07 50.8 -0.3**
CHTO IAmb IAmb 16 07 51.6
comp=Z,5.5nm,0.8s
CM36 Chiang Mai Arr 68.02 272 P **P** **16 07 52.0 +0.1**
CM09 Chiang Mai Arr 68.14 272 P **P** **16 07 53.0 +0.3**
CM31 Chiang Mai Arr 68.16 272 P **P** **16 07 53.1 +0.3**
CM31 Chiang Mai Arr 68.16 272 P **P** **16 07 52.9 +0.1**
CM31 IAmb IAmb 16 07 53.5
comp=Z,5.2nm,0.6s
CMAR Chiang Mai Arr 68.16 272 P **P** **16 07 52.6 -0.1**
comp=Z,6.2nm,0.8s,baz=27,slow=7.0,SNR=39
CMAR Chiang Mai Arr 68.16 272 P **P** **16 07 52.9 +0.1**
CMAR Chiang Mai Arr 68.16 272 P **P** **16 07 52.9 +0.1**
CM02 Chiang Mai Arr 68.17 272 P **P** **16 07 53.2 +0.3**
CM15 Chiang Mai Arr 68.17 272 P **P** **16 07 52.0 -0.9**
CM01 Chiang Mai Arr 68.18 272 P **P** **16 07 53.0 +0.1**
CM04 Chiang Mai Arr 68.18 272 P **P** **16 07 53.0 +0.1**
CM05 Chiang Mai Arr 68.20 272 P **P** **16 07 53.2 +0.1**
CM13 Chiang Mai Arr 68.21 272 P **P** **16 07 53.0 -0.1**
OBN Obninsk 68.36 337⇑*e*P **P** **16 07 52.0 -1.5**
OBN *e* 16 10 26.8
OBN *e*S **S** **16 16 44.2 -6.7**
OBN pmax pmax
comp=Z,8.0nm,0.6s
TAPN Taplejung 68.38 287 *e*P **P** **16 07 54.1 -0.3**
comp=Z,42nm,0.9s
TOLI2 Tolitoli 68.72 243 P **P** **16 07 55.4 -0.9**
TOLI2 IAmb IAmb 16 07 56.1
comp=Z,9.7nm,1.0s
GUN Gumba 69.04 289 *e*P **P** **16 07 58.6 0.0**
comp=Z,38nm,0.6s
JIRN Jiri 69.04 288 *e*P **P** **16 07 58.9 +0.2**
comp=Z,50nm,0.7s
RAMN Ramite 69.33 287 *e*P **P** **16 08 00.2 -0.1**
comp=Z,56nm,0.7s
KKN Kakani 69.48 289 *e*P **P** **16 08 01.0 -0.2**
comp=Z,19nm,0.5s
PKI Pulchoki 69.57 289 *e*P **P** **16 08 01.2 -0.7**
comp=Z,15nm,0.5s
PKIN Phulchoki 69.57 289 *e*P **P** **16 08 01.2 -0.6**
comp=Z,15nm,0.5s
GKN Gorkha 69.70 290 *e*P **P** **16 08 02.1 -0.3**
comp=Z,20nm,0.8s
DMN Daman 69.72 289 *e*P **P** **16 08 02.7 0.0**
comp=Z,23nm,0.8s
UMPA Umpang Tak 69.91 271 P **P** **16 08 05.7 +2.0**
DANN Dangsing 69.95 290 *e*P **P** **16 08 04.2 0.0**
comp=Z,49nm,0.8s
KOLN Koldanda 70.48 290 *e*P **P** **16 08 07.0 -0.3**
comp=Z,24nm,0.9s
PYUN Piuthan 70.58 291 *e*P **P** **16 08 07.3 -0.6**
comp=Z,44nm,0.9s
MNK Minsk 70.86 341 *i* P **P** **16 08 06.2 -2.8**
comp=E,2.0nm,1.0s
MNK *i* P **P** **16 08 06.2 -2.8**
comp=N,14nm,1.0s
MNK *i* P **P** **16 08 06.2 -2.8**
comp=Z,4.0nm,0.7s
MNK *i* PcP **sP** **16 08 26.5 -0.7**
MNK *i* PP **PP** **16 10 43.3 -2.3**
MNK *i* PPP PPP 16 12 25.8
MNK *i* S **S** **16 17 17.9 -2.4**
MNK *i* ScS **ScS** **16 18 08.0 -0.6**
MNK *i* SS **SS** **16 21 53.8 +1.7**
MNK *i* SSS SSS 16 25 12.2
MNK *i* LQ LQ 16 34 21.8
MNK *i* LR LR 16 39 45.3
MNK *i* LRM MLR 16 42 47.1
comp=Z,71nm,12.4s
MNK *i* LRM MLR 16 42 50.0
comp=E,13nm,13.7s
MNK *i* LRM MLR 16 42 57.6
comp=N,155nm,15.9s
NIL Nilore 71.78 301 P **P** **16 08 15.7 +0.8**
NIL pmax pmax
comp=Z,44nm,1.2s
NIL Nilore 71.78 301 P **P** **16 08 15.7 +0.8**
KBL Kabul 73.28 305 P **P** **16 08 23.5 -0.5**
KBL pmax pmax
comp=Z,23nm,0.7s
KBL Kabul 73.28 305 P **P** **16 08 23.4 -0.5**
DZM Mont Dzumac 74.15 190 *e*LR LR 16 31 16.2
comp=Z,88nm,24.8s
AKASG Malin Array Be 74.16 339 P **P** **16 08 28.1 -0.5**
comp=Z,3.7nm,0.4s,baz=23,slow=6.1,SNR=27
AKASG Malin Array Be 74.16 339 P **P** **16 08 28.4 -0.2**
AKASG Malin Array Be 74.16 339 P **P** **16 08 28.4 -0.2**
AKBB Malin Array Si 74.16 339*ce*P **P** **16 08 27.5 -1.1**
AKBB Malin Array Si 74.16 339 P **P** **16 08 28.2 -0.4**
AKBB IAmb IAmb 16 08 28.8
comp=Z,13nm,1.2s
PPT2 Papeete2 75.15 147 *e*LR LR 16 31 35.8
comp=Z,100nm,30.0s
MTN Manton Dam 75.50 226 P **P** **16 08 36.2 -0.5**
GOF Gofitskoye 75.52 328⇑*e*P **P** **16 08 36.8 +0.3**
GOF pmax pmax
comp=Z,20nm,0.7s
GEYT Alibeck 75.77 314 P **P** **16 08 39.0 +0.9**
comp=Z,5.0nm,0.7s,baz=331,slow=5.4,SNR=7.8
CTAO Charters Tower 76.42 209 P **P** **16 08 41.7 -0.1**
CTAO pmax pmax
comp=Z,14nm,1.3s
CTAO Charters Tower 76.42 209 P **P** **16 08 41.7 -0.1**
KIV Kislovodsk 76.61 328 *e*P **P** **16 08 43.7 +0.8**
KIV pmax pmax
comp=Z,15nm,1.0s
KBZ Khabaz 76.74 327 P **P** **16 08 44.0 +0.5**
comp=Z,3.2nm,0.9s,baz=348,slow=0.9,SNR=5.5
KBZ Khabaz 76.74 327*ce*P **P** **16 08 43.8 +0.3**
KBZ pmax pmax
comp=Z,4.0nm,1.1s
SORM Soroca 76.77 339⇑P **P** **16 08 43.1 -0.4**
SORM Soroca 76.77 339⇑P **P** **16 08 43.1 -0.4**
SHA1 Shidzhatmaz 76.81 328 *i* P **P** **16 08 43.5 -0.7**
ZEI Tsey 77.24 326 *e*P **P** **16 08 45.1 -1.5**
ZEI pmax pmax
comp=Z,6.0nm,1.0s
BUR08 Bucovina Ar. S 77.91 341 P **P** **16 08 50.8 +0.7**
BUR08 IAmb IAmb 16 08 51.4
comp=Z,6.1nm,0.8s
BURAR Bucovina Array 77.93 341⇑P **P** **16 08 50.5 +0.2**
BURAR Bucovina Array 77.93 341⇑P **P** **16 08 50.5 +0.2**
BURAR Bucovina Array 77.93 341 P **P** **16 08 50.9 +0.6**
BMR Baia Mare 78.22 342⇑P P 16 08 37.6 -14
GERES GERESS Array B 78.63 349 P **P** **16 08 54.0 -0.1**
comp=Z,0.5nm,0.6s,baz=18,slow=8.9,SNR=3.5
GERES LR LR 16 45 47.8
comp=Z,32nm,21.0s,baz=291,slow=37
DRGR 79.22 342⇑P **P** **16 08 57.5 +0.2**
DRGR 79.22 342⇑P **P** **16 08 57.5 +0.2**
CONA Conrad Observa 79.25 347 *e*P **P** **16 08 57.0 -0.4**
comp=Z,3.0nm,1.0s
ARSA Arzberg 79.96 347 *e*P **P** **16 08 58.9 -2.3**
comp=Z,8.2nm,1.6s
VOIR 80.05 340⇑P **P** **16 09 02.7 +0.9**
VOIR 80.05 340⇑P Pn 16 09 02.7 +2.6
WB0 Warramunga Arr 80.30 220 P **P** **16 09 02.3 -1.0**
WB0 IAmb IAmb 16 09 03.2
comp=Z,4.0nm,0.8s
WATA Walderalm 80.36 350 *e*P **P** **16 09 02.7 -0.9**
comp=Z,4.4nm,0.7s
MOTA Moosalm 80.41 350 *e*P **P** **16 09 02.1 -1.7**
comp=Z,5.1nm,1.0s
KBA Koelnbreinsper 80.41 349 *e*P **P** **16 09 04.4 +0.5**
comp=Z,8.9nm,0.7s
WR0 Warramunga Arr 80.42 220 P **P** **16 09 02.9 -1.0**
WR0 IAmb IAmb 16 09 03.2
comp=Z,4.5nm,0.6s
WTTA Wattenberg 80.43 350 *e*P **P** **16 09 02.8 -1.1**
comp=Z,7.7nm,0.9s
WRAB Tennant Creek 80.47 220*ce*P **P** **16 09 02.2 -2.0**
WRAB pmax pmax
comp=Z,11nm,2.5s
WRAB Tennant Creek 80.47 220 P **P** **16 09 03.5 -0.7**
WRAB IAmb IAmb 16 09 04.1
comp=Z,5.1nm,0.9s
WB2 Warramunga Arr 80.47 220 P **P** **16 09 03.2 -1.0**
WB2 IAmb IAmb 16 09 04.1
comp=Z,5.0nm,0.8s

WRA	**Warramunga Arr**	**80.48**	**220**	P		**P**	**16 09 03.3**	**-1.0**
	comp=Z,3.4nm,0.7s,baz=35,slow=5.4,SNR=47							
WRA	**Warramunga Arr**	**80.48**	**220**	*i* P		**P**	**16 09 03.2**	**-1.0**
WRA				pmax	pmax			
	comp=Z,4.0nm,0.6s							
SQTA	**Sankt Quirin**	**80.52**	**350**	*e*P		**P**	**16 09 04.1**	**-0.3**
	comp=Z,3.5nm,0.8s							
GZR	**Gura Zlata**	**80.55**	**342**	⇑P		**P**	**16 09 04.8**	**+0.3**
GZR	**Gura Zlata**	**80.55**	**342**	⇑P		Pn	16 09 04.8	+2.6
TBI	**Tubuai**	**80.55**	**149**	*e*LR		LR	16 34 12.0	
	comp=Z,68nm,30.0s							
BZS	**Buzias**	**80.56**	**343**	⇑P		**P**	**16 09 04.9**	**+0.4**
BZS	**Buzias**	**80.56**	**343**	⇑P		**P**	**16 09 04.9**	**+0.4**
SOKA	**Soboth**	**80.58**	**347**	*e*P		**P**	**16 09 05.0**	**+0.3**
	comp=Z,2.8nm,0.4s							
FETA	**Feichten**	**80.77**	**350**	*e*P		**P**	**16 09 03.4**	**-2.3**
	comp=Z,5.6nm,1.1s							
OBKA	**Obir**	**80.81**	**348**	*e*P		**P**	**16 09 06.1**	**+0.2**
	comp=Z,4.7nm,0.7s							
GSI	**Gunungsitoli**	**82.24**	**262**	P		**P**	**16 09 13.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**82.60**	**228**	P		**P**	**16 09 15.7**	**+0.2**
BRTR	**Keskin Array B**	**83.27**	**332**	P		**P**	**16 09 18.6**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=74,slow=1.3,SNR=5.1							
BRTR	**Keskin Array B**	**83.27**	**332**	*ce*P		**P**	**16 09 17.7**	**-1.3**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BRTR	**Keskin Array B**	**83.27**	**332**	P		**P**	**16 09 19.6**	**+0.6**
AS31	**Alice Springs**	**84.01**	**219**	P		**P**	**16 09 22.4**	**-0.3**
ASAR	**Alice Springs**	**84.01**	**219**	P		**P**	**16 09 22.4**	**-0.3**
	comp=Z,3.9nm,0.6s,baz=24,slow=5.5,SNR=111							
ASAR	**Alice Springs**	**84.01**	**219**	P		**P**	**16 09 22.2**	**-0.4**
ARMA	**Armidale**	**84.82**	**202**	P		**P**	**16 09 27.7**	**+1.0**
STKA	**Stephens Creek**	**88.88**	**209**	P		**P**	**16 09 46.0**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=353,slow=6.9,SNR=4.7							
STKA	**Stephens Creek**	**88.88**	**209**	P		**P**	**16 09 46.5**	**+0.3**
STKA				pmax	pmax			
	comp=Z,1.0nm,1.1s							
STKA	**Stephens Creek**	**88.88**	**209**	P		**P**	**16 09 46.5**	**+0.3**
TORD	**Torodi Ar. Bea**	**115.12**	**355**	PKP		**PKiKP**	**16 15 31.3**	**-2.3**
	comp=Z,0.8nm,0.5s,baz=3.3,slow=2.1,SNR=8.6							
DBIC	**Dimbokro**	**121.69**	**2**	PKP		**PKPdf**	**16 15 45.0**	**-1.2**
	comp=Z,1.8nm,0.3s,baz=315,slow=2.3,SNR=8.8							
DBIC	**Dimbokro**	**121.69**	**2**			**PKPdf**	**16 15 44.8**	**-1.4**
BI02	**San Fabin de**	**130.82**	**100**	PKPdf		**PKPdf**	**16 16 03.0**	**-0.1**
MAW	**Mawson**	**145.13**	**218**	PKPbc		**PKPbc**	**16 16 27.1**	**-0.7**
	comp=Z,4.7nm,0.5s,baz=96,slow=3.3,SNR=13							
MAW	**Mawson**	**145.13**	**218**			**PKPbc**	**16 16 27.4**	**-0.3**
LBTB	**Lobatse**	**145.32**	**310**	PKIKP		**PKPdf**	**16 16 30.1**	**+0.1**
LBTB	**Lobatse**	**145.32**	**310**			**PKPdf**	**16 16 30.1**	**+0.1**
BOSA	**Boshof**	**148.49**	**306**	PKPbc		**PKPbc**	**16 16 38.1**	**-0.8**
	comp=Z,3.2nm,0.6s,baz=34,slow=3.0,SNR=9.7							
BOSA	**Boshof**	**148.49**	**306**	PKPbc		**PKPbc**	**16 16 38.5**	**-0.3**
BELA	**Belgrano 2**	**151.49**	**167**	PKPbc		**PKPbc**	**16 16 43.5**	**-1.0**

*THE **01** 16:07:54.0,41˚.09N×24˚.64E,h6km±4km,ML1.5/4,Error ellipse: s-maj=4.0km s-min=0.6km az=221.0*
ATH 01 16:07:53.9,41˚.10N×24˚.63E,h10km±4km,ML1.4/1,Error ellipse: s-maj=4.3km s-min=1.1km az=224.0,
Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAVA	**Kavala**	**0.13**	**222**	P	Pg	16 07 56.7	-0.2
KAVA				S	Sg	16 07 59.0	0.0
KAVA				AML	AML	16 07 59.3	
	comp=E,592μm,0.2s						
KAVA				AML	AML	16 08 00.5	
	comp=N,404μm,0.4s						
KAVA	**Kavala**	**0.13**	**222**	P	Pg	16 07 56.7	-0.2
KAVA				S	Sg	16 07 59.0	0.0
	comp=N,255nm,0.3s						
KVLA	**Kavala**	**0.24**	**230**	P	Pg	16 07 58.7	-0.1
KVLA				S	Sg	16 08 02.6	+0.4
THAS	**Thassos island**	**0.49**	**172**	P	Pg	16 08 03.3	-0.2
THAS				S	Sg	16 08 09.7	-0.2
THAS	**Thassos island**	**0.49**	**172**	P	Pg	16 08 03.2	-0.3
THAS				S	Sg	16 08 09.8	-0.1
	comp=N,70nm,0.2s						
RDO	**Rodhopi**	**0.69**	**85**	P	Pg	16 08 07.0	-0.1
RDO	**Rodhopi**	**0.69**	**85**	P	Pg	16 08 06.8	-0.3
SRS	**Serrai**	**0.79**	**272**	P	Pg	16 08 08.8	-0.2
SRS	**Serrai**	**0.79**	**272**	P	Pg	16 08 09.0	0.0
SRS				S	Sb	16 08 20.1	-0.3
	comp=N,48nm,0.2s						
OUR	**Ouranopolis**	**0.91**	**213**	P	Pg	16 08 11.5	+0.2
OUR	**Ouranopolis**	**0.91**	**213**	P	Pg	16 08 11.4	+0.1
OUR				S	Sb	16 08 24.4	+0.6
	comp=N,68nm,0.2s						
SMTH	**Samothraki Isl**	**0.93**	**132**	P	Pg	16 08 11.2	-0.5
SMTH				S	Sb	16 08 24.4	0.0
SMTH	**Samothraki Isl**	**0.93**	**132**	P	Pg	16 08 11.2	-0.4
ALN	**Alexandroupoli**	**1.09**	**100**	P	Pg	16 08 13.8	-0.9
LIA	**Limnos Island**	**1.27**	**160**	P	Pn	16 08 17.0	-0.6

*IDC **01** 16:14:55.1±1.3,30˚.21S×178˚.72W,h0km,mb3.9/3, mb1 4.0/4,mb1mx3.8/30,mbtmp3.9/4,ML3.6/1,MS3.6/2, Ms1 3.6/2,ms1mx2.9/40,Error ellipse: s-maj=40.0km s-min=21.6km az=133.0*
*NEIC **01** 16:15:00.8±2.0,30˚.3S±0˚.1×178˚.6W±0˚.2,h41km±10km, mb4.2/3,Error ellipse: s-maj=28.2km s-min=9.0km az=117.0*
ISC 01 16:15:00.3±1.0,30˚.2S±0˚.1×178˚.6W±0˚.2,h35km,n27,
σ1§57/15,mb4.2/6,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.11**	**31**	Pn	**Pn**	**16 15 18.9**	**-0.4**
	72nm,0.3s,baz=201,slow=10.0,SNR=3.5						
RAO	**Raoul Island**	**1.11**	**31**		**Pn**	**16 15 21.0**	**+1.7**
OUZ	**Omahuta**	**8.28**	**231**	Pn	**Pn**	**16 16 57.4**	**-0.5**
URZ	**Urewera**	**8.79**	**203**	Pn	**Pn**	**16 17 02.9**	**-2.0**
	0.7nm,0.3s,baz=303,slow=23,SNR=2.3						
URZ				Sn	**Sn**	**16 18 45.9**	**+3.3**
	0.3nm,0.3s,baz=122,slow=23,SNR=2.6						
URZ	**Urewera**	**8.79**	**203**	Pn	**Pn**	**16 17 03.8**	**-1.1**
BKZ	**Black Stump Fm**	**9.82**	**203**	Pn	**Pn**	**16 17 17.3**	**-1.7**
MSVF	**Nonsavu**	**12.79**	**345**	LR	LR	16 21 57.5	
	comp=Z,218nm,18.8s,baz=137,slow=33						
STKA	**Stephens Creek**	**34.04**	**257**	P	**P**	**16 21 41.1**	**-0.1**
	4.3nm,1.0s,baz=96,slow=8.5,SNR=3.5						
ASAR	**Alice Springs**	**42.63**	**267**	P	**P**	**16 22 51.8**	**-1.8**
	0.4nm,0.6s,baz=104,slow=7.4,SNR=9.2						
WR0	**Warramunga Arr**	**43.42**	**272**	P	**P**	**16 23 00.7**	**+0.8**
WR0				IAmb	IAmb	16 23 06.1	
	comp=Z,4.2nm,1.0s						
WB2	**Warramunga Arr**	**43.59**	**272**	P	**P**	**16 23 02.4**	**+1.1**
WB2				IAmb	IAmb	16 23 06.0	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**43.60**	**272**	P	**P**	**16 22 59.7**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=117,slow=8.1,SNR=10						
WB0	**Warramunga Arr**	**43.62**	**273**	P	**P**	**16 23 01.9**	**+0.3**
WB0				IAmb	IAmb	16 23 16.2	
	comp=Z,6.2nm,1.2s						
QSPA	**South Pole Qui**	**59.90**	**180**	LR	LR	16 45 54.5	
	comp=Z,52nm,19.7s,baz=2.0,slow=31						
H03S2	**Juan Fernandez**	**80.98**	**124**	T	T	17 56 16.4	
	baz=238,slow=74,SNR=15						
H03S1	**Juan Fernandez**	**80.99**	**124**	T	T	17 56 11.1	
	baz=238,slow=74,SNR=14						
H03S3	**Juan Fernandez**	**81.00**	**124**	T	T	17 56 09.9	
	baz=238,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**81.17**	**123**	T	T	17 56 28.3	
	baz=241,slow=72,SNR=22						
H03N2	**Juan Fernandez**	**81.17**	**123**	T	T	17 56 26.7	
	baz=241,slow=72,SNR=16						
H03N1	**Juan Fernandez**	**81.19**	**123**	T	T	17 56 27.8	
	baz=241,slow=72,SNR=17						
H10S2	**ASCENSION HYDR**	**38.10**	**156**	T	T	19 08 44.3	
	baz=16,slow=74,SNR=8.6						
H10S3	**ASCENSION HYDR**	**38.10**	**156**	T	T	19 08 44.2	
	baz=204,slow=74,SNR=22						
H10N3	**ASCENSION HYDR**	**39.19**	**155**	T	T	19 10 10.1	
	baz=204,slow=75,SNR=90						
H10N1	**ASCENSION HYDR**	**39.19**	**155**	T	T	19 10 05.8	
	baz=204,slow=75,SNR=98						
H10N2	**ASCENSION HYDR**	**39.21**	**155**	T	T	19 10 07.2	
	baz=204,slow=75,SNR=87						
AKASG	**Malin Array Be**	**150.85**	**323**	PKPbc	**PKPbc**	**16 34 48.9**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=60,slow=2.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**163.02**	**181**	PKPab	**PKPab**	**16 35 49.0**	**0.0**
	comp=Z,0.8nm,0.7s,baz=183,slow=4.9,SNR=4.2						

*IDC **01** 16:21:17.8±0.6,1˚.68S×99˚.74E,h0km,mb4.3/22, mb1 4.4/23,mb1mx4.2/52,mbtmp4.3/23,ML3.6/1,MS3.4/1, Ms1 3.6/1,ms1mx2.8/49,Error ellipse: s-maj=21.8km s-min=12.9km az=67.0*
*NEIC **01** 16:21:18.8±1.0,1˚.83S±0˚.08×99˚.67E±0˚.08,h11km±4km, mb4.5/29,Error ellipse: s-maj=13.8km s-min=8.1km az=224.0*
*DJA **01** 16:21:19.8±0.5,2˚S±4˚×10˚0E±˚,h10km,M4.5/15,mb4.6/6, mB4.7/6,MLv4.7/15,Mw(mB)4.0/6*
ISC 01 16:21:22.4±0.5,1.78S±0˚.07×99˚.65E±0˚.07,h30km,n107,
σ1§22/92,mb4.5/39,MS3.9/4,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKNI	**Bangkinang**	**2.51**	**34**	Pn	**Pn**	**16 22 00.6**	**-0.6**
BKNI	**Bangkinang**	**2.51**	**34**	P	**Pn**	**16 22 00.6**	**-0.6**
MNSI	**Mandailing Nat**	**2.56**	**358**	P	**Pn**	**16 22 00.5**	**-1.3**
MASI	**Maura Aman, Be**	**2.92**	**118**	P	**Pn**	**16 22 07.7**	**+0.9**
KSI	**Kapahiang**	**3.48**	**122**	P	**Pn**	**16 22 15.3**	**+0.8**
GSI	**Gunungsitoli**	**3.70**	**326**		**Pn**	**16 22 16.5**	**-1.1**
GSI	**Gunungsitoli**	**3.70**	**326**	P	**Pn**	**16 22 16.0**	**-1.5**
JMBI	**JAMBI**	**3.99**	**88**	P	Pb	16 22 43.5	+11
LHSI	**Lahat**	**4.37**	**118**	P	**Pn**	**16 22 27.9**	**+1.2**
RPSI	**Rantau Prapat**	**4.50**	**351**		**Pn**	**16 22 27.7**	**-0.9**
RPSI	**Rantau Prapat**	**4.50**	**351**		**Pn**	**16 22 28.1**	**-0.4**
PSI	**Prapat**	**4.61**	**351**	Pn	**Pn**	**16 22 28.1**	**-2.0**
	2.8nm,0.3s,baz=180,slow=10,SNR=17						
TSI	**Tuntungan**	**5.36**	**348**	P	**Pn**	**16 22 44.3**	**+4.0**
LWLI	**Liwa**	**5.45**	**126**	P	**Pn**	**16 22 43.0**	**+1.3**
	1.1nm4μm301nm,0.6s						
MYKOM	**Kota Tinggi**	**5.50**	**50**	Pn	**Pn**	**16 22 40.9**	**-1.4**
TPTI		**5.58**	**334**	P	**Pn**	**16 22 42.0**	**-1.4**
	0.1nm452nm30nm,0.9s						
KLSI		**5.84**	**120**	P	**Pn**	**16 22 48.6**	**+1.7**
	308nm29nm,0.6s						
KASI	**Kota Agung**	**6.10**	**128**	P	**Pn**	**16 22 50.2**	**-0.3**
	0.4nm1μm96nm,0.6s						
IPM	**Ipoh**	**6.37**	**12**	Pn	**Pn**	**16 22 54.5**	**+0.3**
KULM	**Kulim**	**7.09**	**8**	Pn	**Pn**	**16 23 03.3**	**-0.9**
TRTT	**Trang**	**9.55**	**0**	P	Pn	16 23 43.2	+5.3
	1μm29nm,1.0s						
CISI	**Cisompet, Garu**	**9.96**	**125**	Pn	**Pn**	**16 23 41.3**	**-2.3**
JAGI	**Jajag, Banyuwa**	**15.89**	**115**	Pn	**Pn**	**16 25 01.8**	**-2.3**
JAGI				IAmb	IAmb	16 25 15.2	
	comp=Z,57nm,1.4s						
UBPT	**Khong Chiam**	**17.90**	**19**	P	**P**	**16 25 32.4**	**+2.7**
	comp=Z,3.3nm,0.7s						
KKM	**Kota Kinabalu**	**18.27**	**65**	P	**Pn**	**16 25 34.0**	**0.0**
MHMT	**Maesarieng**	**19.90**	**355**	P	**Pn**	**16 25 57.1**	**+3.7**
	comp=Z,20nm,1.0s						
CM04	**Chiang Mai Arr**	**20.06**	**358**	P	Pn	16 25 54.8	-0.6
	comp=Z,68nmcomp=Z,9.2nm,0.9s						
CM01	**Chiang Mai Arr**	**20.09**	**358**	P	**P**	**16 25 53.0**	**-0.6**
	comp=Z,56nmcomp=Z,7.7nm,0.7s						
CM13	**Chiang Mai Arr**	**20.09**	**358**	P	**P**	**16 25 53.5**	**-0.1**
	comp=Z,54nmcomp=Z,7.2nm,0.7s						
CM02	**Chiang Mai Arr**	**20.10**	**358**	P	Pn	16 25 58.1	+2.4
	comp=Z,62nmcomp=Z,8.4nm,0.8s						
CM15	**Chiang Mai Arr**	**20.12**	**358**	P	Pn	16 25 55.0	-0.9
	comp=Z,8.2nm,0.8s						
CM31	**Chiang Mai Arr**	**20.12**	**358**	P	Pn	16 25 55.1	-0.9
	comp=Z,163nm,0.8s						
CM31	**Chiang Mai Arr**	**20.12**	**358**	P	**P**	**16 25 53.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**20.12**	**358**	P	**P**	**16 25 51.5**	**-2.5**
	comp=Z,2.5nm,0.6s,baz=187,slow=9.9,SNR=25						
CMAR				LR	LR	16 33 19.5	
	comp=Z,100nm,18.2s,baz=219,slow=36						
CMAR	**Chiang Mai Arr**	**20.12**	**358**	P	**P**	**16 25 54.1**	**+0.1**
CMMT	**Chiang Mai**	**20.48**	**358**	P	Pn	16 26 00.6	+0.4
	comp=Z,166nmcomp=Z,3.8nm,0.9s						
CHTO	**Chiang Mai**	**20.48**	**358**	P	**P**	**16 25 57.9**	**0.0**
TOLI2	**Tolitoli**	**21.32**	**82**	P	**P**	**16 26 07.1**	**0.0**
TOLI2				IAmb	IAmb	16 26 21.6	
	comp=Z,11nm,0.7s						
QIZ	**Qiongzhong**	**22.98**	**25**	P	P	16 26 33.5	+8.8
QIZ				S	Sn	16 30 47.4	-2.9
QIZ				LR	LR		
	comp=N,240nm,14.5s						
QIZ				LR	LR		
	comp=E,250nm,11.6s						
QIZ				LR	LR		
	comp=Z,200nm,13.2s						
H08S2	**Diego Garcia H**	**27.67**	**257**	T	T	16 55 42.6	
	baz=80,slow=76,SNR=54						
H08S3	**Diego Garcia H**	**27.68**	**257**	T	T	16 55 44.1	
	baz=80,slow=76,SNR=106						
H08S1	**Diego Carcia H**	**27.69**	**257**	T	T	16 55 46.2	
	baz=80,slow=76,SNR=25						
FITZ	**Fitzroy Crossi**	**30.22**	**124**	P	**P**	**16 27 29.7**	**-0.9**
FITZ				IAmb	IAmb	16 27 39.4	
	comp=Z,6.6nm,0.9s						
LSA	**Lhasa**	**32.34**	**346**	P	**P**	**16 27 51.0**	**+1.4**
H01W3	**Cape Leeuwin H**	**35.59**	**159**	T	T	17 06 08.9	
	baz=332,slow=74,SNR=2.9						
H01W2	**Cape Leeuwin H**	**35.61**	**159**	T	T	17 06 20.0	
	baz=332						
H01W1	**Cape Leeuwin H**	**35.61**	**159**	T	T	17 06 14.9	
	baz=332,slow=74,SNR=3.9						
XAN	**Xi'an**	**36.68**	**13**	P	**P**	**16 28 24.3**	**-2.4**
XAN				pP	pP	16 28 33.0	-2.0
XAN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	**37.87**	**6**	*e*P	**P**	**16 28 39.3**	**+2.4**
LZH				pP	pP	16 28 43.5	-1.8
LZH				sP	pwP	16 28 45.0	-2.4
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
NJ2	**Nanjing**	**38.26**	**27**	*e*P	**P**	**16 28 41.4**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WB0	**Warramunga Arr**	**38.38**	**120**	P	**P**	**16 28 40.0**	**-1.3**
WB0				IAmb	IAmb	16 28 41.1	
	comp=Z,6.8nm,0.7s						
WRA	**Warramunga Arr**	**38.41**	**120**	P	**P**	**16 28 40.3**	**-1.2**
	comp=Z,3.6nm,0.4s,baz=305,slow=9.3,SNR=79						
WRA				PcP	**PcP**	**16 30 54.9**	**+0.2**
	comp=Z,1.0nm,1.0s,baz=313,slow=2.5,SNR=5.8						
WRA	**Warramunga Arr**	**38.41**	**120**	P	**P**	**16 28 40.2**	**-1.3**
WRAB	**Tennant Creek**	**38.41**	**120**	P	**P**	**16 28 40.2**	**-1.3**
WRAB				IAmb	IAmb	16 28 51.0	
	comp=Z,8.1nm,0.8s						
WB2	**Warramunga Arr**	**38.42**	**120**	P	**P**	**16 28 40.3**	**-1.3**
WB2				IAmb	IAmb	16 28 51.0	
	comp=Z,7.1nm,0.8s						
WR0	**Warramunga Arr**	**38.59**	**120**	P	**P**	**16 28 41.9**	**-1.1**
WR0				IAmb	IAmb	16 28 42.7	
	comp=Z,9.2nm,1.1s						
AS31	**Alice Springs**	**39.66**	**126**	P	**P**	**16 28 51.5**	**-0.5**
ASAR	**Alice Springs**	**39.66**	**126**	P	**P**	**16 28 51.4**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=294,slow=8.1,SNR=68						
ASAR				PcP	**PcP**	**16 30 59.2**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=315,slow=3.3,SNR=8.2						
ASAR	**Alice Springs**	**39.66**	**126**	P	**P**	**16 28 50.6**	**-1.4**
GTA	**Gaotai**	**40.99**	**0**	P	**P**	**16 29 02.0**	**-0.8**
GTA				pP	pP	16 29 07.5	-3.7
GTA				sP	pwP	16 29 10.1	-3.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,45nm,4.9s						
GTA				LR	LR		
	comp=N,85nm,14.2s						
GTA				LR	LR		
	comp=E,70nm,13.5s						
GTA				LR	LR		
	comp=Z,120nm,13.8s						
HHC	**Hu-ho-hao-te**	**43.80**	**13**	*e*P	**P**	**16 29 26.8**	**+1.2**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,61nm,5.2s						
HHC				LR	LR		
	comp=N,240nm,14.8s						
HHC				LR	LR		
	comp=E,190nm,14.8s						
HHC				LR	LR		
	comp=Z,220nm,14.9s						
WMQ	**Urumqi**	**46.65**	**348**	*e*P	**P**	**16 29 49.2**	**+1.1**
WMQ				pP	pP	16 29 52.0	-4.7
WMQ				sP	pwP	16 29 57.9	-1.0
WMQ				pmax	pmax		
	comp=Z,21nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.3s						

KSRS	**Korea Array**	**47.01**	**31**	P		**P**	**16 29 49.9**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=224,slow=7.7,SNR=13							
STKA	**Stephens Creek**	**49.56**	**132**	P		**P**	**16 30 10.8**	**0.0**
	comp=Z,3.2nm,0.7s,baz=326,slow=11,SNR=6.3							
STKA	**Stephens Creek**	**49.56**	**132**	P		**P**	**16 30 11.6**	**+0.7**
SONM	**Songino Array**	**49.76**	**6**	P		**P**	**16 30 11.8**	**-0.4**
	comp=Z,1.3nm,0.4s,baz=184,slow=9.9,SNR=16							
SONM	**Songino Array**	**49.76**	**6**	P		**P**	**16 30 12.2**	**0.0**
ULN	**Ulaanbaatar**	**49.86**	**7**	P		**P**	**16 30 12.7**	**-0.4**
MK31	**Makanchi Array**	**50.73**	**345**	P		**P**	**16 30 19.5**	**+0.1**
MK31				IAmb	IAmb	16 30 33.1		
	comp=Z,4.6nm,0.8s							
MKAR	**Makanchi Array**	**50.73**	**345**	P		**P**	**16 30 19.2**	**-0.2**
	comp=Z,4.2nm,0.5s,baz=158,slow=6.9,SNR=49							
MKAR	**Makanchi Array**	**50.73**	**345**	P		**P**	**16 30 19.4**	**0.0**
MAKZ	**Makanchi**	**50.82**	**344**	P		**P**	**16 30 20.3**	**+0.2**
MAKZ				IAmb	IAmb	16 30 33.8		
	comp=Z,4.0nm,0.8s							
KKAR	**Karatay Array**	**51.80**	**333**	P		**P**	**16 30 28.5**	**+1.0**
USA0B	**Ussuriysk Arra**	**54.13**	**28**	P		**P**	**16 30 44.2**	**-0.5**
USRK	**Ussuriysk Ar.**	**54.13**	**28**	P		**P**	**16 30 43.9**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=229,slow=6.9,SNR=20							
USRK	**Ussuriysk Ar.**	**54.13**	**28**	P		**P**	**16 30 44.0**	**-0.6**
GEYT	**Alibeck**	**55.05**	**320**	P		**P**	**16 30 51.3**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=160,slow=4.6,SNR=2.1							
ARMA	**Armidale**	**56.81**	**126**	P		**P**	**16 31 05.7**	**+1.3**
ZAA0	**Zalesovo Array**	**56.89**	**350**	P		**P**	**16 31 04.1**	**-0.2**
ZALV	**Zalesovo Beam**	**56.89**	**350**	P		**P**	**16 31 03.9**	**-0.4**
	comp=Z,12nm,0.8s,baz=177,slow=6.2,SNR=26							
KLR	**Kul'dur**	**57.88**	**24**	P		**P**	**16 31 10.3**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=252,slow=6.0,SNR=11							
BRVK	**Borovoye**	**59.92**	**340**	P		**P**	**16 31 25.0**	**-0.5**
BRVK				IAmb	IAmb	16 31 39.3		
	comp=Z,3.4nm,0.6s							
ABKAR	**Akbulak array**	**61.28**	**331**	P		**P**	**16 31 34.3**	**-0.6**
ABKAR				IAmb	IAmb	16 31 43.5		
	comp=Z,5.2nm,0.8s							
KMBO	**Kilima Mbogo**	**62.38**	**270**	P		**P**	**16 31 44.4**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=4.1							
ARU	**Arti**	**66.87**	**337**	P		**P**	**16 32 10.2**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=80,slow=11,SNR=2.7							
ARU	**Arti**	**66.87**	**337**	P		**P**	**16 32 10.8**	**-0.6**
KBZ	**Khabaz**	**67.91**	**319**	P		**P**	**16 32 17.8**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=127,slow=5.4,SNR=5.0							
MAW	**Mawson**	**70.41**	**194**	P		**P**	**16 32 34.4**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=352,slow=6.8,SNR=2.3							
NRIK	**Noril'sk**	**71.46**	**356**	P		**P**	**16 32 38.3**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=175,slow=11,SNR=2.7							
MA2	**Magadan**	**72.98**	**24**	P		**P**	**16 32 48.3**	**-0.6**
	comp=Z,3.2nm,0.6s,baz=197,slow=6.5,SNR=5.5							
MA2	**Magadan**	**72.98**	**24**	P		**P**	**16 32 48.7**	**-0.2**
SEY	**Seymchan**	**75.56**	**22**	P		**P**	**16 33 03.9**	**0.0**
	comp=Z,2.9nm,0.6s,baz=251,slow=6.6,SNR=32							
TIXI	**Tiksi**	**75.70**	**9**	P		**P**	**16 33 03.0**	**-1.5**
	comp=Z,2.0nm,0.4s,baz=184,slow=4.7,SNR=6.9							
TIXI	**Tiksi**	**75.70**	**9**	P		**P**	**16 33 03.3**	**-1.2**
TIXI				IAmb	IAmb	16 33 12.5		
	comp=Z,5.2nm,1.1s							
BKZ	**Black Stump Fm**	**78.68**	**129**	P		**P**	**16 33 22.4**	**+0.4**
BURAR	**Bucovina Array**	**80.86**	**319**	P		**P**	**16 33 34.7**	**+0.9**
BUR08	**Bucovina Ar. S**	**80.88**	**319**	P		**P**	**16 33 35.0**	**+1.2**
BUR08				IAmb	IAmb	16 33 47.0		
	comp=Z,5.6nm,1.1s							
VNDA	**Vanda**	**82.44**	**169**	P		**P**	**16 33 42.6**	**+1.3**
	comp=Z,2.0nm,1.0s,baz=303,slow=5.9,SNR=5.4							
VNDA	**Vanda**	**82.44**	**169**	P		**P**	**16 33 41.8**	**+0.4**
KOLS	**Kolonicke sedl**	**83.06**	**320**	*e*		P	16 33 54.5	+9.4
FIA1	**FINESS Array S**	**83.75**	**332**	P		**P**	**16 33 47.3**	**-1.1**
FIA1				IAmb	IAmb	16 33 49.1		
	comp=Z,4.5nm,0.9s							
FINES	**FINESS Array B**	**83.76**	**332**	P		**P**	**16 33 48.0**

	baz=278							
NHDH				*e*S		**Sn**	**16 30 39.8**	**-0.9**
	baz=278							
YM01	**YM01**	**1.37**	**298**	*e*P		**Pn**	**16 30 22.6**	**-0.3**
	baz=295							
YM01				S		**Sn**	**16 30 41.0**	**-0.5**
	baz=295							
YM05	**YM05**	**1.38**	**299**	*e*S		**Sn**	**16 30 41.9**	**0.0**
	baz=289							
YM10	**YM10**	**1.38**	**298**	*e*P		**Pn**	**16 30 23.4**	**+0.3**
	baz=288							
NNSB	**Datong**	**1.39**	**267**	P		**Pn**	**16 30 23.5**	**+0.3**
	baz=258							
NNSB				S		**Sn**	**16 30 41.3**	**-0.8**
	baz=258							
NNSH	**Datong**	**1.39**	**267**	*i* P		**Pn**	**16 30 23.0**	**-0.2**
	baz=258							
NNSH				*i* S		**Sn**	**16 30 41.5**	**-0.6**
	baz=258							
NNS	**Nan Shan**	**1.40**	**268**	*i* P		**Pn**	**16 30 23.1**	**-0.2**
	baz=258							
NNS				*i* S		**Sn**	**16 30 42.0**	**-0.3**
	baz=258							
YM04	**YM04**	**1.40**	**298**	*e*P		**Pn**	**16 30 24.4**	**+1.1**
	baz=286							
YHNB	**Yeheng**	**1.40**	**277**	P		**Pn**	**16 30 23.7**	**+0.4**
	baz=274							
YHNB				S		**Sn**	**16 30 42.1**	**-0.2**
	baz=274							
NSK	**Sanguang**	**1.42**	**277**	*i* P		**Pn**	**16 30 23.9**	**+0.4**
	baz=274							
NSK				*i* S		**Sn**	**16 30 41.9**	**-0.7**
	baz=274							
TWS1	**Kuangyinshan**	**1.48**	**294**	P		**Pn**	**16 30 24.5**	**+0.3**
	baz=284							
TWS1				*e*S		**Sn**	**16 30 43.8**	**+0.1**
	baz=284							
ESL	**Shilin**	**1.51**	**243**	*i* P		**Pn**	**16 30 24.3**	**-0.3**
	baz=246							
ESL				*i* S		**Sn**	**16 30 43.9**	**-0.6**
	baz=246							
FUSS	**Fushou**	**1.54**	**261**	*i* P		**Pn**	**16 30 25.6**	**+0.5**
	baz=258							
FUSS				S		**Sn**	**16 30 44.6**	**-0.9**
	baz=258							
WHF	**Hehuan Shan**	**1.54**	**257**	*i* P		**Pn**	**16 30 25.6**	**+0.3**
	baz=260							
WHF				S		**Sn**	**16 30 45.0**	**-0.8**
	baz=260							
EGFH	**Guangfu**	**1.59**	**239**	*i* P		**Pn**	**16 30 25.2**	**-0.3**
	baz=233							
EGFH				S		**Sn**	**16 30 45.5**	**-0.7**
	baz=233							
TWT	**Tachien**	**1.60**	**261**	*i* P		**Pn**	**16 30 27.0**	**+1.2**
	baz=259							
TWT				*i* S		**Sn**	**16 30 46.6**	**-0.1**
	baz=259							
TDCB	**Techi**	**1.61**	**261**	P		**Pn**	**16 30 26.9**	**+0.9**
	baz=259							
TDCB				S		**Sn**	**16 30 46.0**	**-1.1**
	baz=259							
JTJ	**Tarama**	**1.64**	**85**	P		**Pn**	**16 30 26.3**	**+0.2**
JTJ				S		**Sn**	**16 30 46.8**	**-0.5**
CHGB	**Renai**	**1.64**	**255**	P		**Pn**	**16 30 26.9**	**+0.5**
	baz=246							
CHGB				S		**Sn**	**16 30 47.1**	**-0.7**
	baz=246							
HGSD	**Ruisui**	**1.69**	**234**	P		**Pn**	**16 30 26.7**	**-0.2**
	baz=229							
HGSD				S		**Sn**	**16 30 47.9**	**-0.6**
	baz=229							
LIOB	**Emei**	**1.73**	**275**	*i* P		**Pn**	**16 30 27.7**	**+0.4**
	baz=272							
LIOB				*i* S		**Sn**	**16 30 49.1**	**-0.3**
	baz=272							
NSTT	**Nanjuang**	**1.74**	**274**	P		**Pn**	**16 30 27.6**	**+0.2**
	baz=272							
NSTT				*i* S		**Sn**	**16 30 49.0**	**-0.6**
	baz=272							
EHY	**Hungye**	**1.76**	**236**	*i* P		**Pn**	**16 30 27.5**	**-0.2**
	baz=234							
EHY				S		**Sn**	**16 30 48.8**	**-1.2**
	baz=234							
VWDT	**VWDT**	**1.78**	**245**	P		**Pn**	**16 30 28.6**	**+0.7**
	baz=238							
VWDT				S		**Sn**	**16 30 49.6**	**-0.9**
	baz=238							
WHP	**Taichung City**	**1.80**	**263**	*i* P		**Pn**	**16 30 29.5**	**+1.2**
	baz=258							
WHP				*i* S		**Sn**	**16 30 51.0**	**-0.2**
	baz=258							
YULB	**Yu-li**	**1.84**	**233**	P		**Pn**	**16 30 28.6**	**-0.2**
	baz=240							
YULB				S		**Sn**	**16 30 50.7**	**-1.3**
	baz=240							
WPL	**Puli Township**	**1.85**	**255**	P		**Pn**	**16 30 29.8**	**+1.0**
	baz=249							
WPL				S		**Sn**	**16 30 52.2**	**+0.2**
	baz=249							
EYUL	**Yuli**	**1.86**	**232**	P		**Pn**	**16 30 29.7**	**+0.7**
	baz=227							
EYUL				*i* S		**Sn**	**16 30 52.5**	**+0.2**
	baz=227							
DPDB	**Guoxing**	**1.87**	**256**	*i* P		**Pn**	**16 30 30.6**	**+1.4**
	baz=251							
DPDB				*i* S		**Sn**	**16 30 53.0**	**+0.4**
	baz=251							
TWF1	**Yuli**	**1.87**	**232**	*i* P		**Pn**	**16 30 29.1**	**0.0**
	baz=228							
TWF1				S		**Sn**	**16 30 51.8**	**-0.8**
	baz=228							
SSLB	**Suanglung**	**1.92**	**249**	P		**Pn**	**16 30 30.5**	**+0.7**
	baz=246							
SSLB				S		**Sn**	**16 30 52.9**	**-1.0**
	baz=246							
NMLH	**Miaoli**	**1.93**	**271**	*e*S		**Sn**	**16 30 54.0**	**0.0**
	baz=261							
SMLT	**Sun Moon Lake**	**1.94**	**252**	*i* P		**Pn**	**16 30 31.5**	**+1.5**
	baz=246							
SMLT				*i* S		**Sn**	**16 30 55.0**	**+0.7**
	baz=246							
TWQ1	**Liyutan**	**1.95**	**266**	S		**Sn**	**16 30 53.9**	**-0.6**
	baz=263							
TYC	**Yuchr**	**1.97**	**253**	*i* P		**Pn**	**16 30 31.7**	**+1.4**
	baz=247							
TYC				*i* S		**Sn**	**16 30 55.4**	**+0.7**
	baz=247							
FULB	**Fuli**	**1.97**	**229**	*i* P		**Pn**	**16 30 30.4**	**-0.1**
	baz=222							
FULB				S		**Sn**	**16 30 54.3**	**-0.7**
	baz=222							
CHKT	**Chengkung**	**1.99**	**226**	P		**Pn**	**16 30 29.6**	**-1.0**
	baz=221							
CHKT				*i* S		**Sn**	**16 30 53.7**	**-1.6**
	baz=221							
WHYT	**Xinyi Township**	**2.04**	**247**	*i* P		**Pn**	**16 30 33.0**	**+1.6**
	baz=247							
WHYT				*i* S		**Sn**	**16 30 58.2**	**+1.6**
	baz=247							
TCU	**Taichung**	**2.07**	**260**	*e*S		**Sn**	**16 30 57.9**	**+0.8**
	baz=267							
JIRB	**Irabujima**	**2.09**	**81**	P		**Pn**	**16 30 31.6**	**-0.3**
JIRB				S		**Sn**	**16 30 56.3**	**-1.3**
WJS	**Zhushan**	**2.10**	**252**	*i* P		**Pn**	**16 30 33.9**	**+1.8**
	baz=249							
WJS				*i* S		**Sn**	**16 30 59.8**	**+1.8**
	baz=249							
EDH	**Donghe**	**2.12**	**224**	*i* P		**Pn**	**16 30 31.8**	**-0.6**
	baz=220							
EDH				*i* S		**Sn**	**16 30 56.4**	**-1.9**
	baz=220							
WNT	**Mingjian**	**2.12**	**253**	P		**Pn**	**16 30 34.1**	**+1.7**
	baz=251							
WNT				*i* S		**Sn**	**16 31 00.0**	**+1.5**
	baz=251							
ALS	**Alishan**	**2.16**	**243**	*i* P		**Pn**	**16 30 34.3**	**+1.1**
	baz=235							
ALS				*i* S		**Sn**	**16 31 00.1**	**+0.2**
	baz=235							
JIKM	**Ikemajima**	**2.17**	**78**	P		**Pn**	**16 30 33.3**	**+0.4**
JIKM				*e*S		**Sn**	**16 31 00.3**	**+0.8**
ELDTW	**Lidau**	**2.17**	**233**	*i* P		**Pn**	**16 30 33.0**	**-0.1**
	baz=228							
ELDTW				*i* S		**Sn**	**16 30 59.0**	**-0.8**
	baz=228							
JMJ	**Miyako jima 2**	**2.19**	**81**	P		**Pn**	**16 30 33.9**	**+0.6**
	baz=83							
JMJ				S		**Sn**	**16 31 00.1**	**0.0**
	baz=83							
JMJ2	**Miyako jima3**	**2.21**	**83**	P		**Pn**	**16 30 33.9**	**+0.3**
JMJ2				S		**Sn**	**16 31 00.3**	**-0.3**
CHN5	**Tsauling**	**2.23**	**246**	*i* P		**Pn**	**16 30 35.5**	**+1.6**
	baz=238							
CHN5				*i* S		**Sn**	**16 31 03.0**	**+2.0**
	baz=238							
LDUT	**Ludao**	**2.25**	**216**	*i* P		**Pn**	**16 30 33.8**	**-0.3**
	baz=212							
LDUT				S		**Sn**	**16 30 59.4**	**-2.0**
	baz=212							
LONT	**Longtian**	**2.28**	**226**	*i* P		**Pn**	**16 30 33.7**	**-0.7**
	baz=233							
LONT				*i* S		**Sn**	**16 31 00.7**	**-1.4**
	baz=233							
JOGS	**Gusukube**	**2.29**	**83**	P		**Pn**	**16 30 35.0**	**+0.5**
JOGS				*e*S		**Sn**	**16 31 02.4**	**+0.1**
WGK	**Gukeng**	**2.29**	**250**	*e*P		**Pn**	**16 30 35.9**	**+1.3**
	baz=248							
WGK				S		**Sn**	**16 31 05.0**	**+2.6**
	baz=248							
WDLH	**Douliu**	**2.31**	**250**	P		**Pn**	**16 30 36.4**	**+1.5**
	baz=248							
WDLH				S		**Sn**	**16 31 04.5**	**+1.6**
	baz=248							
STYH	**Taoyuan**	**2.36**	**236**	*i* P		**Pn**	**16 30 37.4**	**+1.9**
	baz=231							
STYH				*i* S		**Sn**	**16 31 04.7**	**+0.7**
	baz=231							
TWGBT	**Beinan**	**2.37**	**225**	P		**Pn**	**16 30 35.4**	**-0.3**
	baz=231							
TWGBT				S		**Sn**	**16 31 02.8**	**-1.6**
	baz=231							
TWG	**Pinlang**	**2.38**	**225**	P		**Pn**	**16 30 35.9**	**+0.2**
	baz=231							
TWG				S		**Sn**	**16 31 03.0**	**-1.4**
	baz=231							
STYT	**Tauyuan**	**2.38**	**236**	*i* P		**Pn**	**16 30 37.3**	**+1.5**
	baz=231							
STYT				*i* S		**Sn**	**16 31 04.8**	**+0.2**
	baz=231							
WRL	**Guolierlin Hig**	**2.39**	**256**	S		**Sn**	**16 31 04.5**	**-0.1**
	baz=254							
TPUB	**Ta-pu**	**2.41**	**241**	P		**Pn**	**16 30 36.5**	**+0.4**
	baz=232							
TPUB				S		**Sn**	**16 31 06.8**	**+1.7**
	baz=232							
CHN4	**Tsaushan**	**2.41**	**242**	*i* P		**Pn**	**16 30 37.9**	**+1.7**
	baz=234							
CHN4				*i* S		**Sn**	**16 31 06.9**	**+1.7**
	baz=234							
WTK	**Tuku**	**2.44**	**251**	P		**Pn**	**16 30 37.3**	**+0.8**
	baz=259							
WTK				S		**Sn**	**16 31 06.2**	**+0.3**
	baz=259							
WTP	**Ta-pu**	**2.45**	**240**	*i* P		**Pn**	**16 30 37.7**	**+1.0**
	baz=238							
WTP				*i* S		**Sn**	**16 31 08.9**	**+2.8**
	baz=238							
CHY	**Chiayi**	**2.48**	**247**	*e*S		**Sn**	**16 31 09.2**	**+2.4**
	baz=236							
TWK	**Hsinying**	**2.54**	**241**	*i* P		**Pn**	**16 30 39.3**	**+1.5**
	baz=240							
TWK				*i* S		**Sn**	**16 31 10.9**	**+2.7**
	baz=240							
CHN1	**Nanshi**	**2.54**	**239**	P		**Pn**	**16 30 40.5**	**+2.5**
	baz=238							
CHN1				*i* S		**Sn**	**16 31 09.6**	**+1.2**
	baz=238							
SNST	**Tainan City**	**2.55**	**240**	*e*S		**Sn**	**16 31 10.8**	**+2.2**
	baz=239							
SGST	**Jiashian**	**2.56**	**237**	P		**Pn**	**16 30 39.5**	**+1.4**
	baz=235							
SGST				*i* S		**Sn**	**16 31 09.5**	**+0.7**
	baz=235							
SLGT	**Liugui**	**2.56**	**234**	S		**Sn**	**16 31 11.5**	**+2.7**
	baz=226							
WSF	**Szhu**	**2.60**	**251**	*e*S		**Sn**	**16 31 10.3**	**+0.6**
	baz=258							
ECL	**Taimali**	**2.61**	**224**	S		**Sn**	**16 31 08.0**	**-2.0**
	baz=229							
SSD	**Sandimen**	**2.73**	**230**	P		**Pn**	**16 30 41.7**	**+1.4**
	baz=228							
SSD				S		**Sn**	**16 31 13.9**	**+1.2**
	baz=228							
SCST	**Cishan**	**2.74**	**234**	*e*P		**Pn**	**16 30 41.6**	**+1.1**
	baz=241							
SCST				S		**Sn**	**16 31 16.2**	**+3.2**
	baz=241							
TSMG	**Majia**	**2.74**	**230**	S		**Sn**	**16 31 15.4**	**+2.3**
	baz=226							
LAY	**Lan-yu**	**2.75**	**207**	P		**Pn**	**16 30 39.6**	**-1.1**
	baz=203							
LAY				S		**Sn**	**16 31 10.2**	**-3.2**
	baz=203							
MASBT	**Mashibuluo**	**2.81**	**228**	P		**Pn**	**16 30 42.0**	**+0.5**
	baz=224							
MASBT				S		**Sn**	**16 31 15.2**	**+0.4**
	baz=224							
SCZT	**Fangliau**	**2.99**	**225**	P		**Pn**	**16 30 45.6**	**+1.8**
	baz=225							
SLIU	**Shizi**	**2.99**	**221**	*e*P		**Pn**	**16 30 44.8**	**+0.9**
	baz=212							
VWUC	**VWUC**	**3.18**	**279**	*e*P		**Pn**	**16 30 46.0**	**-0.4**
	baz=276							
VWUC				*e*S		**Sn**	**16 31 20.9**	**-2.6**
	baz=276							
PHUB	**P'eng-hu**	**3.21**	**253**	*e*P		**Pn**	**16 30 46.2**	**-0.5**
	baz=251							
PHUB				S		**Sn**	**16 31 21.6**	**-2.6**
	baz=251							
WDGT	**Dungji**	**3.22**	**248**	P		**Pn**	**16 30 46.1**	**-0.9**
	baz=246							
WDGT				S		**Sn**	**16 31 24.1**	**-0.4**
	baz=246							
VCHM	**Qimei**	**3.44**	**249**	*e*P		**Pn**	**16 30 49.5**	**-0.3**
	baz=247							
VCHM				S		**Sn**	**16 31 28.7**	**-1.0**
	baz=247							
PTMZ	**Houxiangcun**	**3.48**	**280**	*e*P		**Pn**	**16 30 50.3**	**-0.1**
	baz=276							
PTMZ				*e*S		**Sn**	**16 31 28.2**	**-2.6**
	baz=276							

JMA ***01*** *16:31:54.8±0.8, 45.˚15N×151.˚07E, h30km, M4.6*

NIED ***01*** *16:31:54.9, 45.˚15N×151.˚07E, h30km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr 0.28; Mθθ -0.19; Mφφ -0.08; Mrθ -0.08; Mθφ -0.71; Mφr 0.84; Fault plane solution: M0 1.13000×10^15 NP1: φs 7.00000°, δ 80.00000°, λ 50.00000°. NP2: φs 265.00000°, δ 41.00000°, λ 165.00000°.*

SKHL ***01*** *16:31:55.2±0.3, 44.˚86N×151.˚10E, h34km±4km, mb4.8/10, msh4.9/2*

BJI ***01*** *16:31:56.4±0.0, 44.˚86N×151.˚02E, h47km, mB4.8/26, mb4.7/40, Ms4.2/8, Ms7 3.9/6*

MOS ***01*** *16:31:57.7±0.9, 45.˚01N×150.˚76E, h34km, mb4.4/12, Error ellipse: s-maj=7.4km s-min=6.6km az=103.1*

NEIC ***01*** *16:32:00.5±1.5, 45.˚06N±0.˚10×150.˚8E±0.˚1, h41km±7km, mb4.5/37, Error ellipse: s-maj=16.2km s-min=10.6km az=138.0*

IDC ***01*** *16:32:00.8±0.6, 45.˚13N×150.˚65E, h45km±5km, mb3.8/19, mb1 3.9/26, mb1mx3.8/54, mbtmp4.0/26, ML3.3/6, MS3.2/6, Ms1 3.2/6, ms1mx2.9/55, Error ellipse: s-maj=16.3km s-min=11.5km az=126.0*

ISC 01 16:31:58.7±0.5, 44.˚90N±0.˚06×150.˚87E±0.˚06, h35km, n231, σ1§25/243, mb4.5/71, MS4.1/7, 37C-3D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.15**	**280**	*c* iPN	**Pn**	**16 32 31.1**	**-1.0**
KUR				*e*S	**Sn**	**16 32 58.0**	**+0.4**
KUR				pmax	pmax		
	comp=N,311nm,0.3s						
KUR				pmax	pmax		
	comp=Z,734nm,0.3s						
KUR				pmax	pmax		
	comp=E,65nm,0.2s						
KUR				smax	smax		
	comp=N,867nm,0.3s						
KUR				smax	smax		
	comp=E,380nm,0.3s						
KUR	**Kuril'sk**	**2.15**	**280**	*i* P	**Pn**	**16 32 31.3**	**-0.8**
KUR				AMB	AMB	16 32 33.0	
	comp=E,890nm,0.5s						
KUR				*i* S	**Sn**	**16 32 58.6**	**+1.0**
KUR				A	A	16 33 02.0	
	comp=E,1μm,0.5s						
KUR				A	A	16 33 02.0	
	comp=E,760nm,0.5s						
KUR				A	A	16 33 03.5	
	comp=E,2μm,3.0s						
KUR				A	A	16 33 03.5	
	comp=E,2μm,3.0s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**258**	*c* iPN	**Pn**	**16 32 53.1**	**-0.1**
YUK				*i* S	**Sn**	**16 33 38.6**	**+3.1**
YUK				pmax	pmax		
	comp=E,66nm,0.2s						
YUK				pmax	pmax		
	comp=Z,211nm,0.2s						
YUK				pmax	pmax		
	comp=N,64nm,0.5s						
YUK				smax	smax		
	comp=N,507nm,1.0s						
YUK				smax	smax		
	comp=E,649nm,0.6s						
YUK				smax	smax		
	comp=N,201nm,0.4s						
YUK				smax	smax		
	comp=E,679nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**258**	*i* P	**Pn**	**16 32 52.5**	**-0.7**
YUK				AMB	AMB	16 33 01.0	
	comp=E,210nm,0.2s						
YUK				*i* S	**Sn**	**16 33 35.2**	**-0.3**
YUK				A	A	16 33 40.0	
	comp=E,900nm,2.0s						
YUK				A	A	16 33 40.0	
	comp=E,1μm,2.0s						
YUK				A	A	16 33 51.0	
	comp=E,200nm,0.5s						
YUK				A	A	16 33 51.0	
	comp=E,680nm,0.5s						
GRPR	**Tuman**	**3.76**	**258**	⇑*i* PN	**Pn**	**16 32 54.4**	**+0.1**
GRPR				*i* S	**Sn**	**16 33 39.1**	**+1.8**
GRPR				pmax	pmax		
	comp=E,77nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,198nm,0.4s						
GRPR				pmax	pmax		
	comp=N,166nm,0.3s						
GRPR				smax	smax		
	comp=E,250nm,0.3s						
GRPR				smax	smax		
	comp=N,454nm,0.5s						
GRPR	**Tuman**	**3.76**	**258**	*i* P	**Pn**	**16 32 54.0**	**-0.3**
GRPR				AMB	AMB	16 33 08.0	
	comp=N,200nm,0.4s						
GRPR				*i* S	**Sn**	**16 33 38.1**	**+0.8**
GRPR				A	A	16 33 52.0	
	comp=N,450nm,0.5s						
GRPR				A	A	16 33 52.0	
	comp=N,250nm,0.5s						
NEM2	**Nemuro 2**	**4.00**	**249**	P	**Pn**	**16 32 56.3**	**-1.2**
NEM2				*e*S	**Sn**	**16 33 41.9**	**-1.2**
NMR	**Nemuro--Hokkai**	**4.01**	**249**	⇑*i* PN	**Pn**	**16 32 56.1**	**-1.5**
NMR				*i* S	**Sn**	**16 33 44.4**	**+1.1**
NMR	**Nemuro--Hokkai**	**4.01**	**249**	*i* P	**Pn**	**16 32 56.1**	**-1.5**
NMR				*i* S	**Sn**	**16 33 44.0**	**+0.7**
RUSJ	**Misakicho**	**4.10**	**261**	‖*i* PN	**Pn**	**16 32 59.9**	**+1.0**
RUSJ				*i* S	**Sn**	**16 33 47.6**	**+2.0**
JRA	**Rausu**	**4.23**	**259**	P	**Pn**	**16 33 01.6**	**+0.9**
JNK	**Nakash**	**4.61**	**256**	P	**Pn**	**16 33 05.4**	**-0.5**
JAK	**Akkeshi**	**4.85**	**249**	P	**Pn**	**16 33 08.1**	**-1.1**
JAK				*e*S	**Sn**	**16 34 02.5**	**-1.5**
JTKR	**Abashiri--Toko**	**5.07**	**262**	P	**Pn**	**16 33 13.0**	**+0.8**
JAR	**Ashorobuto**	**5.36**	**255**	P	**Pn**	**16 33 16.9**	**+0.7**
JMP	**Maruseppu**	**5.45**	**263**	P	**Pn**	**16 33 18.6**	**+1.1**
JOB	**Onbets**	**5.46**	**251**	P	**Pn**	**16 33 17.1**	**-0.5**
JCH	**Churui**	**5.90**	**250**	P	**Pn**	**16 33 22.9**	**-0.7**
JCH				*e*S	**Sn**	**16 34 28.8**	**-1.2**
JKK2	**Kamakawa 2**	**5.91**	**263**	P	**Pn**	**16 33 24.5**	**+0.7**
JKA	**Kamikawa-asahi**	**5.97**	**265**	Pn	**Pn**	**16 33 26.5**	**+2.0**
JKA	**Kamikawa-asahi**	**5.97**	**265**	*e*P	**Pn**	**16 33 26.5**	**+2.0**
ASAJ	**Asahikawa**	**5.97**	**265**	P	**Pn**	**16 33 26.2**	**+1.6**
	comp=N,3.0nm,0.3s,baz=89,slow=17,SNR=20						
ASAJ				LR	LR	16 35 58.8	
	comp=N,224nm,18.4s,baz=111,slow=41						
ASAJ	**Asahikawa**	**5.97**	**265**	P	**Pn**	**16 33 26.1**	**+1.6**
ASAJ	**Asahikawa**	**5.97**	**265**	PN	**Pn**	**16 33 26.5**	**+1.9**
YSS	**Yuzh-Sakhalins**	**6.02**	**293**	*e*PN	**Pn**	**16 33 25.9**	**+0.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS	**Yuzh-Sakhalins**	**6.02**	**293**	Pn	**Pn**	**16 33 26.0**	**+0.8**
YSS	**Yuzh-Sakhalins**	**6.02**	**293**	⇑*i* P	**Pn**	**16 33 26.3**	**+1.1**
YSS				AMB	AMB	16 33 27.8	
	comp=Z,20nm,0.6s						
YSS				*e*S	**Sn**	**16 34 33.4**	**+0.5**
YSS				A	A	16 34 34.0	
	comp=Z,10.0nm,0.4s						
YSS				A	A	16 34 34.0	
	comp=Z,20nm,0.4s						
JFR	**Furan**	**6.22**	**257**	P	**Pn**	**16 33 28.8**	**+0.8**
ERM	**Erimo**	**6.31**	**245**	*c*PN	**Pn**	**16 33 30.8**	**+1.5**
ERM				pmax	pmax		
	comp=Z,26nm,0.7s						
ERM	**Erimo**	**6.31**	**245**	Pn	**Pn**	**16 33 30.6**	**+1.3**
JWK2	**Keihoku**	**6.37**	**277**	P	**Pn**	**16 33 32.7**	**+2.7**
JNBK	**Urakawa-nobuka**	**6.45**	**249**	P	**Pn**	**16 33 29.8**	**-1.4**
JNBK				*e*S	**Sn**	**16 34 41.5**	**-2.0**
JBT2	**Biratori 2**	**6.51**	**254**	P	**Pn**	**16 33 31.1**	**-0.9**
SKR	**Severo-Kuril's**	**6.77**	**30**	*e*P	**Pn**	**16 33 34.9**	**-0.6**
SKR				AMB	AMB	16 33 35.7	
	comp=Z,20nm,0.8s						
SKR				AMB	AMB	16 33 35.7	
	comp=Z,50nm,0.8s						
SKR				AMB	AMB	16 33 35.7	
	comp=Z,70nm,0.8s						
SKR				*e*S	**Sn**	**16 34 48.9**	**-2.5**
SKR				A	A	16 35 00.9	
	comp=Z,110nm,0.7s						
SKR				A	A	16 35 00.9	
	comp=Z,60nm,0.7s						
JEW	**Eniwo**	**7.12**	**256**	Pn	**Pn**	**16 33 41.5**	**+1.2**
JNB	**Noboribetsu**	**7.53**	**255**	P	**Pn**	**16 33 46.2**	**+0.2**
JKB	**Kayabe**	**7.77**	**251**	P	**Pn**	**16 33 48.0**	**-1.3**
JKB				*e*S	**Sn**	**16 35 11.2**	**-4.8**
TYV	**Tymovskoe**	**8.12**	**320**	*e*PN	Pn	16 34 02.3	+8.2
TYV				pmax	pmax		
	comp=Z,200nm,2.9s						
TYV				pmax	pmax		
	comp=Z,22nm,1.1s						
TYV	**Tymovskoe**	**8.12**	**320**	*i* P	**Pn**	**16 33 55.8**	**+1.7**
TYV				AMB	AMB	16 34 00.7	
	comp=Z,10.0nm,0.5s						
TYV				AMB	AMB	16 34 00.7	
	comp=Z,20nm,0.5s						
TYV				AMB	AMB	16 34 03.9	
	comp=Z,200nm,3.0s						
TYV				*e*S	**Sn**	**16 35 26.1**	**+1.5**
TYV				A	A	16 35 31.2	
	comp=Z,10.0nm,0.6s						
TYV				A	A	16 35 31.2	
	comp=Z,10.0nm,0.6s						
JYM2	**Yakumo 2**	**8.13**	**254**	P	**Pn**	**16 33 53.8**	**-0.3**
JANG	**Nango**	**8.25**	**240**	P	**Pn**	**16 33 53.1**	**-2.8**
JOSM	**Okushiri--Mats**	**8.75**	**255**	P	**Pn**	**16 34 01.8**	**-0.9**
PEA0B	**Petropavlovsk-**	**9.35**	**26**	PN	**Pn**	**16 34 11.8**	**+0.9**
PEA0B	**Petropavlovsk-**	**9.35**	**26**	Pn	**Pn**	**16 34 11.8**	**+0.9**
PETK	**Petropavlovsk-**	**9.35**	**26**	P	**Pn**	**16 34 11.1**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=166,slow=9.6,SNR=17						
OKH	**Okha**	**10.09**	**332**	*e*P	**Pn**	**16 34 24.5**	**+3.6**
OKH				AMB	AMB	16 34 25.9	
	comp=Z,20nm,0.6s						
OKH				AMB	AMB	16 34 25.9	
	comp=Z,70nm,0.6s						
OKH				AMB	AMB	16 34 25.9	
	comp=Z,30nm,0.6s						
MJAR	**Matsushiro Arr**	**12.72**	**233**	LR	LR	16 40 23.1	
	comp=Z,52nm,20.1s,baz=30,slow=40						
USA0B	**Ussuriysk

KLR Kul'dur 13.73 295 *i* P **Pn** **16 35 11.3 +0.6**
KLR pmax pmax
comp=Z,6.0nm,1.4s
KLR Kul'dur 13.73 295 *i* P **Pn** **16 35 11.3 +0.6**
EKMR Ekimchan 14.30 311 *eP* **Pn** **16 35 17.5 -1.0**
MA2 Magadan 14.70 360 P **Pn** **16 35 22.8 -1.0**
comp=Z,0.7nm,0.3s,baz=169,slow=13,SNR=5.6
MDJ Mudanjiang 15.12 276 P **P** **16 35 32.3 -2.1**
JWT Wachi 15.23 236 P **P** **16 35 36.5 +1.0**
JWT IAmb IAmb 16 35 37.7
comp=Z,43nm,1.1s
BMKR Bomnak 17.21 313 *eP* **Pn** **16 35 55.0 -1.1**
SEY Seymchan 18.09 2 P **Pn** **16 36 05.6 -1.3**
comp=Z,0.1nm,0.3s,baz=114,slow=12,SNR=2.0
KROS Kirovskiy 18.09 310 *eP* **P** **16 36 07.0 -0.2**
KROS AMB AMB 16 36 07.8
comp=Z,10.0nm,0.7s
KSRS Korea Array 18.77 255 P **P** **16 36 13.7 -1.1**
comp=Z,0.2nm,0.3s,baz=58,slow=12,SNR=4.3
KSRS LR LR 16 43 50.0
comp=Z,51nm,18.1s,baz=50,slow=38
YAK Yakutsk 21.12 332 P **P** **16 36 38.7 -1.3**
comp=Z,4.8nm,0.4s,baz=63,slow=0.6,SNR=8.1
YAK LR LR 16 44 54.3
comp=Z,36nm,19.6s,baz=89,slow=37
YAK Yakutsk 21.12 332 *eP* **P** **16 36 38.8 -1.3**
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK Yakutsk 21.12 332 P **P** **16 36 39.5 -0.6**
BILL Bilibino 24.55 14⇑ *eP* **P** **16 37 15.7 +0.9**
BILL pmax pmax
comp=Z,4.0nm,1.9s
BILL MLR MLR
comp=Z,87nm,16.0s
BILL Bilibino 24.55 14 *eP* **P** **16 37 15.7 +0.9**
H11N2 WAKE ISLAND Hy 28.41 147 T T 17 08 40.6
baz=337,slow=74,SNR=122
H11N1 WAKE ISLAND Hy 28.43 147 T T 17 08 38.8
baz=337
H11N3 WAKE ISLAND Hy 28.43 147 T T 17 08 44.2
baz=337,slow=74,SNR=135
TIXI Tiksi 28.84 346 P **P** **16 37 50.1 -3.1**
comp=Z,0.9nm,0.3s,baz=140,slow=8.8,SNR=4.7
TIXI Tiksi 28.84 346 P **P** **16 37 50.3 -2.9**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
TIXI Tiksi 28.84 346 P **P** **16 37 50.3 -2.9**
HHC Hu-ho-hao-te 28.89 276 *eP* **P** **16 37 54.7 +0.5**
HHC PP **PnPn** **16 38 50.7 +4.5**
HHC PcS **PcS** **16 44 43.2 -2.3**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,76nm,4.1s
HHC LR LR
comp=Z,240nm,11.3s
HHC LR LR
comp=Z,190nm,10.3s
HHC LR LR
comp=Z,220nm,11.7s
H11S1 WAKE ISLAND Hy 29.45 148 T T 17 09 59.7
baz=337,slow=76,SNR=209
H11S3 WAKE ISLAND Hy 29.46 148 T T 17 10 00.1
baz=337,slow=76,SNR=143
H11S2 WAKE ISLAND Hy 29.47 148 T T 17 09 43.4
baz=337,slow=76,SNR=154
ULN Ulaanbaatar 30.07 291 *i* P **P** **16 38 02.7 -2.0**
ULN pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 30.51 292 P **P** **16 38 08.8 -1.7**
comp=Z,1.2nm,0.7s,baz=77,slow=7.8,SNR=14
SONM Songino Array 30.51 292 P **P** **16 38 08.4 -0.1**
SONM Songino Array 30.51 292 P **P** **16 38 08.4 -0.1**
LZH Lanzhou 36.40 273 *eP* **P** **16 39 01.1 +1.2**
LZH pP pP 16 39 10.6 +2.1
LZH sP pwP 16 39 15.3 +0.2
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,65nm,5.2s
LZH LR LR
comp=Z,260nm,13.1s
LZH LR LR
comp=Z,190nm,12.7s
LZH LR LR
comp=Z,170nm,15.2s
MLY Manley 37.33 37 P **P** **16 39 09.9 +2.5**
GTA Gaotai 37.73 280 ⇓P **P** **16 39 11.5 +0.4**
GTA pP sP 16 39 23.6 0.0
GTA sP pwP 16 39 28.5 +2.6
GTA pmax pmax
comp=Z,7.0nm,0.7s
GTA pmax pmax
comp=Z,84nm,5.2s
GTA LR LR
comp=Z,110nm,14.5s
GTA LR LR
comp=Z,110nm,15.3s
GTA LR LR
comp=Z,90nm,13.5s
TOLK Toolik Lake Re 38.14 31 P **P** **16 39 15.2 +1.1**
TOLK IAmb IAmb 16 39 33.8
comp=Z,8.0nm,1.5s
SML Sawmill 38.39 42 P **P** **16 39 17.3 +1.0**
SML pmax pmax
comp=Z,7.0nm,0.8s
SML Sawmill 38.39 42 P **P** **16 39 17.3 +1.0**
SML IAmb IAmb 16 39 30.8
comp=Z,7.1nm,0.8s
WRH Wood River Hil 38.45 38 P **P** **16 39 18.2 +1.5**
COLA College 38.55 37 *i* P **P** **16 39 17.2 -0.4**
COLA pmax pmax
comp=Z,3.0nm,0.8s
ILAR Eielson Array 38.97 37 P **P** **16 39 20.5 -0.5**
comp=Z,0.8nm,0.9s,baz=261,slow=7.5,SNR=5.2
CD2 Chengdu 39.17 266 ⇓*i* P **P** **16 39 23.0 -0.2**
CD2 pmax pmax
comp=Z,20nm,0.7s
M24K Tolsona, Glenn 39.39 41 P **P** **16 39 25.9 +1.2**
M24K IAmb IAmb 16 39 36.9
comp=Z,13nm,1.2s
GYA Guiyang 39.79 258 *eP* **P** **16 39 28.7 +0.2**
GYA pmax pmax
comp=Z,9.0nm,0.6s
BMRM Bremner River 40.25 43 P **P** **16 39 34.3 +2.5**
BMRM IAmb IAmb 16 39 51.9
comp=Z,16nm,1.4s
MENT Mentasta 40.46 40 P **P** **16 39 36.4 +2.9**
L27K Beaver Creek, 41.30 40 P **P** **16 39 42.1 +1.7**
L27K IAmb IAmb 16 39 56.1
comp=Z,7.0nm,0.7s
EGAK Eagle 41.42 37 P **P** **16 39 41.4 +0.1**
BARN Barnard Glacie 41.65 43 P **P** **16 39 45.7 +2.2**
BARN IAmb IAmb 16 39 58.7
comp=Z,5.6nm,0.6s
YAH Yahtse 41.73 44 P **P** **16 39 46.5 +2.3**
YAH IAmb IAmb 16 39 47.2
comp=Z,8.2nm,1.0s
CTGM Chitina Glacie 41.83 43 P **P** **16 39 46.8 +1.9**
CTGM IAmb IAmb 16 40 00.2
comp=Z,7.9nm,0.7s
TABL Table Mountain 42.01 43 P **P** **16 39 48.0 +1.5**
TABL IAmb IAmb 16 40 01.2
comp=Z,5.9nm,0.8s
DGZ Jazzator, Alta 42.15 300 *i* P **P** **16 39 46.2 -1.5**
DGZ pmax pmax
comp=Z,4.0nm,1.9s
ZALV Zalesovo Beam 42.44 307 P **P** **16 39 48.6 -1.2**
comp=Z,0.8nm,0.5s,baz=60,slow=8.5,SNR=4.3
ZALV PcP **PcP** **16 41 42.6 +0.4**
comp=Z,1.4nm,0.6s,baz=112,slow=3.7,SNR=6.0
ZALV Zalesovo Beam 42.44 307 *i* P **P** **16 39 50.5 +0.7**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
KMI Kunming 43.36 259 ⇑P **P** **16 39 58.8 +0.9**
KMI pmax pmax
comp=Z,8.0nm,0.7s
HYT Haines Junctio 43.69 42 P **P** **16 40 02.2 +2.2**
INK Inuvik 44.04 31 P **P** **16 40 04.4 +1.9**
comp=Z,0.8nm,0.5s,baz=303,slow=8.0,SNR=4.8
INK Inuvik 44.04 31 P **P** **16 40 03.9 +1.4**
INK pmax pmax
comp=Z,5.0nm,1.3s
INK Inuvik 44.04 31 P **P** **16 40 03.9 +1.4**
WMQ Urumqi 44.15 292 *eP* **P** **16 40 05.9 +2.1**
MK31 Makanchi Array 46.41 298 *i* P **P** **16 40 20.0 -1.7**
MK31 Makanchi Array 46.41 298 P **P** **16 40 20.3 -1.4**
MK31 IAmb IAmb 16 40 22.0
comp=Z,3.6nm,0.8s
MKAR Makanchi Array 46.41 298 P **P** **16 40 20.4 -1.2**
comp=Z,3.7nm,0.7s,baz=71,slow=7.7,SNR=44
MKAR PcP **PcP** **16 41 55.2 -0.8**
comp=Z,0.5nm,0.6s,baz=75,slow=3.3,SNR=3.6
MKAR Makanchi Array 46.41 298 *i* P **P** **16 40 21.2 -0.5**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 46.41 298 P **P** **16 40 21.7 0.0**
MKAR Makanchi Array 46.41 298 *i* P **P** **16 40 21.2 -0.5**
MAKZ Makanchi 46.60 298 P **P** **16 40 22.9 -0.3**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 46.60 298 P **P** **16 40 22.9 -0.3**
MAKZ IAmb IAmb 16 40 23.4
comp=Z,3.7nm,0.8s
CMAR Chiang Mai Arr 50.41 256 P **P** **16 40 53.2 +0.5**
comp=Z,0.7nm,0.5s,baz=42,slow=7.7,SNR=7.2
CMAR Chiang Mai Arr 50.41 256 *ceP* **P** **16 40 52.5 -0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 50.87 310 *ceP* **P** **16 40 55.5 -0.3**
BRVK pmax pmax
comp=Z,4.0nm,1.7s
BRVK Borovoye 50.87 310 *eP* **P** **16 40 55.5 -0.3**
TAPN Taplejung 52.64 273 *eP* **P** **16 41 09.9 +0.2**
comp=Z,12nm,0.8s
USP Ospenovka 52.93 297 P **P** **16 41 11.5 +0.1**
SNR=11
KBK Karagaybulak 52.95 296 P **P** **16 41 11.4 -0.3**
SNR=6.7
RES Resolute Bay 53.08 18 P **P** **16 41 12.2 +0.3**
comp=Z,1.1nm,0.5s,baz=334,slow=8.8,SNR=8.6
RES Resolute Bay 53.08 18 P **P** **16 41 12.6 +0.7**
AAK Ala-Archa 53.25 296 P **P** **16 41 14.1 +0.2**
SNR=5.3
AAK Ala-Archa 53.25 296 *ceP* **P** **16 41 13.9 0.0**
AAK pmax pmax
comp=Z,11nm,0.7s
AAK Ala-Archa 53.25 296 **P** **16 41 13.3 -0.6**
AAK IAmb IAmb 16 41 15.0
comp=Z,4.1nm,0.7s
AAK Ala-Archa 53.25 296 *eP* **P** **16 41 13.9 0.0**
YKA Yellowknife Ar 53.34 35 P **P** **16 41 14.8 +0.9**
comp=Z,0.5nm,0.6s,baz=296,slow=6.6,SNR=7.4
YKA pP **sP** **16 41 27.6 +1.0**
comp=Z,1.2nm,0.8s,baz=298,slow=6.5,SNR=11
JIRN Jiri 53.53 274 *eP* **P** **16 41 16.5 +0.2**
comp=Z,11nm,0.6s
GUN Gumba 53.60 275 *eP* **P** **16 41 16.6 -0.2**
comp=Z,14nm,0.6s
RAMN Ramite 53.66 273 *eP* **P** **16 41 16.8 -0.4**
comp=Z,22nm,0.6s
EKS2 Erkin-Say 53.69 297 P **P** **16 41 17.3 +0.2**
SNR=12
AML Almayashu 54.02 296 P **P** **16 41 20.5 +0.7**
SNR=7.0
PKI Pulchoki 54.13 275 *eP* **P** **16 41 20.4 -0.3**
comp=Z,6.1nm,0.6s
PKIN Phulchoki 54.14 275 *eP* **P** **16 41 20.3 -0.4**
comp=Z,5.3nm,0.6s
GKN Gorkha 54.42 276 *eP* **P** **16 41 22.4 -0.2**
comp=Z,19nm,1.0s
DANN Dangsing 54.83 277 *eP* **P** **16 41 26.2 +0.4**
comp=Z,19nm,0.6s
KOLN Koldanda 55.29 276 *eP* **P** **16 41 28.9 -0.1**
comp=Z,20nm,0.9s
KK31 Karatay Array 55.52 299 P **P** **16 41 30.1 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 55.52 299 **P** **16 41 30.1 -0.1**
KK31 IAmb IAmb 16 41 30.4
comp=Z,4.5nm,0.7s
KKAR Karatay Array 55.52 299 P **P** **16 41 29.9 -0.2**
KKAR Karatay Array 55.52 299 P **P** **16 41 29.9 -0.2**
PYUN Piuthan 55.53 277 *eP* **P** **16 41 29.8 -0.9**
comp=Z,9.2nm,0.4s
ABKAR Akbulak array 58.40 310 P **P** **16 41 49.7 -0.8**
KULM Kulim 58.85 243 P **P** **16 41 55.9 +1.9**
NVAR Mina Array Bea 64.69 60 pP pP 16 42 47.8 +5.4
comp=Z,0.6nm,0.6s,baz=299,slow=6.7,SNR=4.6
FIA1 FINESS Array S 65.03 334 P **P** **16 42 32.8 -2.0**
FINES FINESS Array B 65.03 334 P **P** **16 42 33.1 -1.7**
comp=Z,2.5nm,0.5s,baz=35,slow=7.6,SNR=20
WB0 Warramunga Arr 66.09 197 P **P** **16 42 42.5 +0.4**
WB0 IAmb IAmb 16 42 57.6
comp=Z,4.8nm,0.9s
GEYT Alibeck 66.19 300 P **P** **16 42 41.7 -1.1**
comp=Z,2.1nm,0.5s,baz=211,slow=2.6,SNR=4.8
WR0 Warramunga Arr 66.25 197 P **P** **16 42 44.4 +1.3**
WB2 Warramunga Arr 66.27 197 P **P** **16 42 44.8 +1.5**
WB2 IAmb IAmb 16 42 59.3
comp=Z,7.4nm,1.2s
WRA Warramunga Arr 66.27 197 P **P** **16 42 44.9 +1.5**
comp=Z,1.1nm,0.6s,baz=13,slow=6.8,SNR=8.4
WRA pP **sP** **16 42 58.1 +2.4**
comp=Z,2.5nm,0.8s,baz=14,slow=6.6,SNR=9.0
PDAR Pinedale Array 67.11 52 pP pP 16 43 02.5 +4.7
comp=Z,1.5nm,0.7s,baz=291,slow=0.7,SNR=13
NC405 NCAR Array S 69.27 340 P **P** **16 43 01.4 -0.4**
NOA NORSAR Array B 69.45 340 P **P** **16 43 02.0 -0.9**
comp=Z,1.2nm,0.5s,baz=27,slow=6.4,SNR=12
ASAR Alice Springs 69.98 197 P **P** **16 43 08.9 +2.4**
comp=Z,1.2nm,0.8s,baz=9.8,slow=5.5,SNR=13
ASAR pP **pwP** **16 43 22.3 -0.6**
comp=Z,2.7nm,0.8s,baz=11,slow=5.1,SNR=15
ASAR Alice Springs 69.98 197 P **P** **16 43 08.4 +1.9**
ASAR Alice Springs 69.98 197 P **P** **16 43 08.4 +1.9**
GOF Gofitskoye 70.00 314 *eP* **P** **16 43 06.9 +0.4**
KIV Kislovodsk 70.95 313 ⇑P **P** **16 43 13.5 +1.1**
KIV Kislovodsk 70.95 313 *eP* **P** **16 43 13.0 +0.5**
KIV pmax pmax
comp=Z,36nm,1.0s
KIV MLR MLR
comp=Z,278nm,18.0s
KIV Kislovodsk 70.95 313 P **P** **16 43 13.6 +1.1**
KIV Kislovodsk 70.95 313 *eP* **P** **16 43 13.0 +0.5**
KBZ Khabaz 71.00 313 P **P** **16 43 13.2 +0.5**
comp=Z,9.0nm,0.8s,baz=73,slow=4.2,SNR=25
KBZ LR LR 17 16 08.4
comp=Z,119nm,18.4s,baz=147,slow=37
KBZ Khabaz 71.00 313 *ceP* **P** **16 43 13.1 +0.5**
KBZ pmax pmax
comp=Z,10.0nm,0.9s
SHA1 Shidzhatmaz 71.11 313 *i* P **P** **16 43 13.6 -0.1**
AKASG Malin Array Be 72.19 325 P **P** **16 43 18.8 -0.9**
comp=Z,1.5nm,0.4s,baz=36,slow=6.1,SNR=9.4
AKASG Malin Array Be 72.19 325 *ceP* **P** **16 43 18.7 -1.0**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKBB Malin Array Si 72.19 325 P **P** **16 43 19.3 -0.4**
AKBB pmax pmax
comp=Z,2.0nm,0.6s
AKBB Malin Array Si 72.19 325 P **P** **16 43 19.3 -0.4**
AKBB IAmb IAmb 16 43 19.6
comp=Z,2.3nm,0.6s
AKH Akhalkalaki 72.31 311 ⇑P **P** **16 43 22.7 +1.9**
GNI Garni 72.51 309 *ceP* **P** **16 43 22.9 +0.9**
GNI pmax pmax
comp=Z,9.0nm,1.3s
SORM Soroca 74.55 324 ⇑P **P** **16 43 32.7 -0.9**
SORM Soroca 74.55 324 ⇑P **P** **16 43 32.7 -0.9**
BUR08 Bucovina Ar. S 76.23 326 P **P** **16 43 43.6 +0.2**
BURAR Bucovina Array 76.24 326 ⇑P **P** **16 43 43.2 -0.3**
BURAR Bucovina Array 76.24 326 ⇑P **P** **16 43 43.2 -0.3**
BURAR Bucovina Array 76.24 326 P **P** **16 43 43.2 +0.1**
KOLS Kolonicke sedl 76.32 328 *eP* **P** **16 43 43.7 -0.1**
KOLS Kolonicke sedl 76.32 328 *eP* **P** **16 43 43.7 -0.1**
TESR Tescani 76.54 324 ⇑P **P** **16 43 45.5 +0.4**
CFR Carcaliu 76.97 322 ⇑P **P** **16 43 47.7 +0.2**
CFR Carcaliu 76.97 322 ⇑P **P** **16 43 47.7 +0.2**
TPGR Topolog 77.10 322 ⇑P **P** **16 43 48.8 +0.5**
LANS Liptovska Anna 77.17 330 *eP* **P** **16 43 49.9 +1.2**
LANS pmax pmax
comp=Z,5.0nm,0.7s
LANS Liptovska Anna 77.17 330 *eP* **P** **16 43 49.9 +1.2**
DPC Dobruska-Polom 77.24 332 *eP* **P** **16 43 49.3 +0.3**
DPC Dobruska-Polom 77.24 332 *eP* **P** **16 43 49.3 +0.3**
CLL Collm 77.48 334 *i* P **P** **16 43 49.8 -0.4**
comp=Z,11nm,1.0s
CLL Collm 77.48 334 P **P** **16 43 50.2 -0.1**
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL Collm 77.48 334 P **P** **16 43 50.2 -0.1**
MLR Muntele Rosu 77.65 324 ⇑P **P** **16 43 52.2 +0.7**
MLR Muntele Rosu 77.65 324 ⇑P **P** **16 43 52.2 +0.7**
DRGR 77.91 326 ⇑P **P** **16 43 53.1 +0.3**
DRGR 77.91 326 ⇑P **P** **16 43 53.1 +0.3**
VYHS Vyhne 77.95 330 *eP* **P** **16 43 53.7 +0.7**
VYHS Vyhne 77.95 330 *eP* **P** **16 43 53.7 +0.7**
VRAC Vranov 78.04 331 ⇑P **P** **16 43 54.3 +0.8**
VRAC Vranov 78.04 331 ⇑P **P** **16 43 54.3 +0.8**
VOIR 78.07 324 ⇑P **P** **16 43 54.7 +0.9**
VOIR 78.07 324 ⇑P **P** **16 43 54.7 +0.9**
PRU Pruhonice 78.14 333 *eP* **P** **16 43 54.3 +0.3**
PRU Pruhonice 78.14 333 *eP* **P** **16 43 54.3 +0.3**
BRTR Keskin Array B 78.64 316 P **P** **16 43 57.5 +0.3**
comp=Z,1.2nm,0.7s,baz=77,slow=5.6,SNR=5.1
GZR Gura Zlata 79.03 326 ⇑P **P** **16 43 58.6 -0.5**
GZR Gura Zlata 79.03 326 ⇑P **P** **16 43 58.6 -0.5**
KHC Kasperske Hory 79.19 333 *eP* **P** **16 44 00.1 +0.2**
KHC Kasperske Hory 79.19 333 *eP* **P** **16 44 00.1 +0.2**
KHC *ex* x 16 45 26.0
GERES GERESS Array B 79.41 333 P **P** **16 44 00.7 -0.4**
comp=Z,1.3nm,0.6s,baz=34,slow=5.9,SNR=7.0
GERES GERESS Array B 79.41 333 P **P** **16 44 01.3 +0.2**
GERES GERESS Array B 79.41 333 P **P** **16 44 01.3 +0.2**
CONA Conrad Observa 79.48 331 *eP* **P** **16 44 01.9 +0.5**
comp=Z,2.0nm,0.5s
TXAR Lajitas Array 79.78 59 P **P** **16 44 03.6 +0.2**
comp=Z,0.1nm,0.5s,baz=291,slow=3.5,SNR=2.2
TXAR pP **sP** **16 44 16.6 +0.5**
comp=Z,0.9nm,0.6s,baz=292,slow=4.6,SNR=8.8
TXAR Lajitas Array 79.78 59 P **P** **16 44 04.1 +0.7**
ARSA Arzberg 80.18 331 *eP* **P** **16 44 08.6 +3.4**
comp=Z,4.5nm,1.2s
SOKA Soboth 80.84 331 *eP* **P** **16 44 08.8 -0.1**
comp=Z,2.3nm,0.7s
KBA Koelnbreinsper 81.06 332 *eP* **P** **16 44 10.0 -0.2**
comp=Z,1.5nm,0.4s
VTS Vitosha 81.12 324 ⇑P **P** **16 44 10.0 -0.5**
VTS Vitosha 81.12 324 ⇑P **P** **16 44 10.0 -0.5**
VTS Vitosha 81.12 324 P **P** **16 44 10.9 +0.4**
VTS IAmb IAmb 16 44 12.4
comp=Z,4.5nm,0.8s
MYKA Terra Mystica 81.36 332 *eP* **P** **16 44 11.7 +0.1**
comp=Z,3.8nm,0.5s
WATA Walderalm 81.41 333 *eP* **P** **16 44 12.0 0.0**
comp=Z,2.6nm,0.5s
WTTA Wattenberg 81.46 333 *eP* **P** **16 44 12.5 +0.2**
comp=Z,4.7nm,0.5s
MOTA Moosalm 81.56 334 *eP* **P** **16 44 13.1 +0.4**
comp=Z,4.5nm,0.8s
H03N2 Juan Fernandez 140.30 91 T T 19 28 15.8
baz=306,slow=77,SNR=3.0
H03N3 Juan Fernandez 140.31 91 T T 19 28 17.0
baz=306,slow=77,SNR=3.7
H03N1 Juan Fernandez 140.31 91 T T 19 28 20.5
baz=306,slow=77,SNR=3.0

*IDC **01** 16:32:41.9±1.0,30°30S×178°.89W,h0km,mb4.1/5,*
mb1 4.2/6,mb1mx3.9/35,mbtmp4.0/6,ML3.8/1,MS3.5/9,
Ms1 3.5/9,ms1mx3.4/29,Error ellipse: s-maj=36.3km
s-min=16.3km az=138.0
*NEIC **01** 16:32:47.0±2.5,30°.2S±0°.1×178°.9W±0°.2,h35km±2km,*
mb4.5/7,Error ellipse: s-maj=31.5km s-min=11.4km
az=123.0
ISC 01 16:32:47.1±0.6,30°.2S±0°.1×178°.9W±0°.1,h35km,n50,
σ1§41/29,mb4.3/10,MS3.4/8,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.32**	**43**	Pn	**Pn**	**16 33 06.6**	**-2.5**
	153nm,0.3s,baz=258,slow=23,SNR=7.7						
RAO				Sn	**Sn**	**16 33 28.7**	**+3.2**
	234nm,0.3s,baz=277,slow=23,SNR=6.3						
RAO	**Raoul Island**	**1.32**	**43**		**Pn**	**16 33 06.8**	**-2.3**
URZ	**Urewera**	**8.64**	**201**	Pn	**Pn**	**16 34 48.0**	**-1.7**
	1.1nm,0.3s,baz=302,slow=24,SNR=6.4						
URZ				Sn	**Sn**	**16 36 27.7**	**+1.9**
	0.3nm,0.3s,baz=118,slow=24,SNR=2.0						
URZ	**Urewera**	**8.64**	**201**		**Pn**	**16 34 48.2**	**-1.5**
BKZ	**Black Stump Fm**	**9.67**	**202**	Pn	**Pn**	**16 35 03.4**	**-0.4**
MSVF	**Nonsavu**	**12.74**	**347**	LR	LR	16 39 47.9	
	comp=Z,314nm,21.7s,baz=134,slow=33						
DZM	**Mont Dzumac**	**15.43**	**298**	eLR	LR	16 40 07.5	
	comp=Z,588nm,27.4s						
DZM	**Mont Dzumac**	**15.43**	**298**	LR	LR	16 41 20.8	
	comp=Z,250nm,18.0s,baz=67,slow=34						
RAR	**Rarotonga**	**19.45**	**67**	LR	LR	16 44 02.6	
	comp=Z,35nm,19.7s,baz=244,slow=35						
TBI	**Tubuai**	**27.15**	**82**	eLR	LR	16 45 14.4	
	comp=Z,142nm,30.8s						
PAE	**Paea**	**29.52**	**72**	eT	T	17 09 09.6	
	9.0nm,0.3s						
PPT2	**Papeete2**	**29.55**	**71**	eLR	LR	16 46 23.7	
	comp=Z,114nm,27.8s						
PPT	**Papeete**	**29.57**	**71**	LR	LR	16 47 29.7	
	comp=Z,37nm,21.3s,baz=231,slow=30						
VAH	**Vaihoa**	**32.38**	**70**	eT	T	17 12 45.5	
	22nm,0.3s						
STKA	**Stephens Creek**	**33.72**	**257**	P	**P**	**16 39 24.6**	**-0.6**
	3.2nm,1.0s,baz=111,slow=14,SNR=2.0						
STKA				LR	LR	16 53 04.8	
	comp=Z,86nm,18.3s,baz=19,slow=36						
PMG	**Port Moresby**	**37.80**	**296**	LR	LR	16 52 50.6	
	comp=Z,58nm,21.9s,baz=86,slow=32						
AS31	**Alice Springs**	**42.30**	**267**	P	**P**	**16 40 38.1**	**+0.4**
ASAR	**Alice Springs**	**42.30**	**267**	P	**P**	**16 40 38.2**	**+0.6**
	1.1nm,0.6s,baz=105,slow=7.3,SNR=23						
ASAR				LR	LR	16 57 30.0	
	comp=Z,86nm,18.8s,baz=336,slow=35						
WR0	**Warramunga Arr**	**43.09**	**273**	P	**P**	**16 40 44.6**	**+0.5**
WR0				IAmb	IAmb	16 40 57.6	
	comp=Z,6.7nm,1.1s						
WB2	**Warramunga Arr**	**43.27**	**272**	P	**P**	**16 40 46.5**	**+1.0**
WB2				IAmb	IAmb	16 40 56.1	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**43.28**	**272**	P	**P**	**16 40 45.5**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=112,slow=7.6,SNR=28						
WRA	**Warramunga Arr**	**43.28**	**272**	P	**P**	**16 40 47.3**	**+1.7**
WB0	**Warramunga Arr**	**43.30**	**273**	P	**P**	**16 40 46.1**	**+0.4**
WB0				IAmb	IAmb	16 40 56.3	
	comp=Z,8.8nm,1.1s						
MTN	**Manton Dam**	**49.15**	**279**	P	**P**	**16 41 31.8**	**0.0**
MTN				IAmb	IAmb	16 41 45.3	
	comp=Z,4.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**51.54**	**270**	LR	LR	17 02 19.2	
	comp=Z,59nm,19.3s,baz=133,slow=34						
FITZ	**Fitzroy Crossi**	**51.54**	**270**	P	**P**	**16 41 51.1**	**+1.2**
FITZ				IAmb	IAmb	16 41 58.4	
	comp=Z,4.9nm,0.9s						
QSPA	**South Pole Qui**	**59.87**	**180**	P	**P**	**16 42 50.4**	**+1.3**
H03S2	**Juan Fernandez**	**81.23**	**124**	T	T	18 14 01.9	
	baz=238,slow=74,SNR=36						
H03S1	**Juan Fernandez**	**81.25**	**124**	T	T	18 14 03.2	
	baz=238,slow=74,SNR=47						
H03S3	**Juan Fernandez**	**81.25**	**124**	T	T	18 14 02.0	
	baz=238,slow=74,SNR=56						
H03N3	**Juan Fernandez**	**81.43**	**124**	T	T	18 14 13.9	
	baz=245,slow=78,SNR=30						
H03N2	**Juan Fernandez**	**81.43**	**124**	T	T	18 14 12.4	
	baz=245,slow=78,SNR=26						
H03N1	**Juan Fernandez**	**81.44**	**124**	T	T	18 14 13.1	
	baz=245,slow=78,SNR=41						
USRK	**Usuriysk Ar.**	**86.58**	**327**	P	**P**	**16 45 27.9**	**+1.4**
	comp=Z,1.7nm,0.9s,baz=101,slow=13,SNR=2.5						
NVAR	**Mina Array Bea**	**88.67**	**43**	P	**P**	**16 45 38.6**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=222,slow=9.8,SNR=5.4						
LPAZ	**La Paz**	**98.95**	**115**	LR	LR	17 21 11.4	
	comp=Z,106nm,20.9s,baz=18,slow=29						
H10S2	**ASCENSION HYDR**	**38.21**	**156**	T	T	19 26 36.0	
	baz=16,slow=74,SNR=13						
H10S3	**ASCENSION HYDR**	**38.21**	**156**	T	T	19 26 28.2	
	baz=204,slow=74,SNR=34						
H10N3	**ASCENSION HYDR**	**39.30**	**156**	T	T	19 27 58.2	
	baz=204,slow=75,SNR=84						
H10N1	**ASCENSION HYDR**	**39.30**	**156**	T	T	19 28 00.0	
	baz=204,slow=75,SNR=108						
H10N2	**ASCENSION HYDR**	**39.32**	**156**	T	T	19 27 55.5	
	baz=204,slow=75,SNR=84						
FIA1	**FINESS Array S**	**144.71**	**339**	PKPdf	**PKPdf**	**16 52 18.5**	**-0.9**
FINES	**FINESS Array B**	**144.71**	**339**	PKP	**PKPdf**	**16 52 18.2**	**-1.2**
	comp=Z,4.5nm,0.8s,baz=61,slow=3.8,SNR=13						
FINES	**FINESS Array B**	**144.71**	**339**		**PKPdf**	**16 52 18.4**	**-1.0**
NC303	**NORSAR Array S**	**148.26**	**351**	PKPbc	**PKiKP**	**16 52 29.5**	**-1.0**
NOA	**NORSAR Array B**	**148.46**	**351**	PKPbc	**PKiKP**	**16 52 29.3**	**-1.7**

comp=Z,1.1nm,0.8s,baz=4.5,slow=4.0,SNR=3.3
AKASG Malin Array Be 150.67 322 PKPbc **PKiKP 16 52 35.0 -0.7**
comp=Z,1.5nm,0.6s,baz=54,slow=2.5,SNR=6.3
AKASG Malin Array Be 150.67 322 PKiKP 16 52 35.8 0.0
TORD Torodi Ar. Bea 162.99 182 PKPab **PKPab 16 53 35.0 -0.7**
comp=Z,1.0nm,0.7s,baz=189,slow=3.4,SNR=5.1
TORD Torodi Ar. Bea 162.99 182 PKPab 16 53 35.2 -0.5

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*NOU **01** 16:40:11.9, 38°.41S × 179°.10E, h0km, MLv3.7, Off E. Coast of N. Island, N.Z.*
WEL 01 16:40:24.6, 38°.55S ± 0°.9 × 17°.8E ± °, h26km ± 2km, M3.4/31, ML3.8/31, MLv3.4/31, Error ellipse: s-maj=0.0km s-min=0.0km az=78.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
CNGZ	**Carnagh Statio**	**0.05**	**75**	P	P		16 40 30.2	+1.0
CNGZ				S	S		16 40 36.3	+4.0
TKGZ	**Te Karaka**	**0.24**	**284**	P	P		16 40 30.9	0.0
TKGZ				S	S		16 40 36.2	+1.0
TWGZ	**Tauwhareparae**	**0.34**	**338**	P	P		16 40 32.7	+0.3
TWGZ				S	S		16 40 39.3	-0.7
RIGZ	**Rimuhau**	**0.36**	**235**	P	P		16 40 33.5	-0.7
RIGZ				S	S		16 40 41.0	+0.5
PUZ	**Puketiti**	**0.43**	**12**	P	P		16 40 34.2	+0.3
PUZ				S	S		16 40 41.9	-0.3
PRGZ	**Paritu Road**	**0.47**	**206**	P	P		16 40 35.3	-0.4
PRGZ				S	S		16 40 45.0	+1.8
MWZ	**Matawai**	**0.51**	**288**	P	P		16 40 34.9	-0.2
MWZ				S	S		16 40 42.7	+0.5
RAGZ	**Rawiri**	**0.57**	**270**	P	P		16 40 36.3	+0.1
RAGZ				S	S		16 40 45.4	-0.3
PKGZ	**Pakihiroa**	**0.61**	**355**	P	P		16 40 37.0	+0.3
PKGZ				S	S		16 40 46.4	-0.2
KNZ	**Kokohu**	**0.64**	**215**	P	P		16 40 37.2	0.0
KNZ				S	S		16 40 48.1	+0.8
RUGZ	**Raukumara Rang**	**0.65**	**325**	P	P		16 40 36.9	-0.5
RUGZ				S	S		16 40 46.0	-0.1
MHGZ	**Mahia Peninsul**	**0.68**	**196**	P	P		16 40 38.4	-0.2
SNGZ	**Shannon Statio**	**0.69**	**245**	P	P		16 40 38.1	0.0
SNGZ				S	S		16 40 49.1	+0.5
WMGZ	**Waiomatatini S**	**0.71**	**18**	P	P		16 40 38.7	-0.2
WMGZ				S	S		16 40 50.5	+1.5
HAZ	**Te Kaha**	**0.79**	**339**	P	P		16 40 39.1	-0.7
HAZ				S	S		16 40 50.6	-0.4
URZ	**Urewera**	**0.85**	**286**	P	P		16 40 40.2	-0.5
URZ				S	S		16 40 51.8	+0.2
WHHZ	**Waihua**	**0.92**	**231**	P	P		16 40 41.6	-0.2
RTZ	**Ruatahuna**	**0.92**	**262**	P	P		16 40 41.5	-0.4
RAHZ	**Arahi**	**0.93**	**243**	P	P		16 40 41.4	-0.5
MXZ	**Matakaoa Point**	**0.94**	**8**	P	P		16 40 42.0	-0.2
MXZ				S	S		16 40 56.3	+1.6
MUGZ	**Murupara**	**1.08**	**271**	P	P		16 40 44.0	0.0
MUGZ				S	S		16 40 58.9	+0.6
MTHZ	**Maungataniwha**	**1.08**	**250**	P	P		16 40 43.7	-0.4
WHRZ	**Whale Island**	**1.12**	**304**	P	P		16 40 44.8	+0.1
EDGZ	**Edgecumbe**	**1.17**	**293**	P	P		16 40 45.2	-0.1
ARHZ	**Aropaoanui**	**1.18**	**229**	P	P		16 40 45.2	-0.2
NMHZ	**Naumai**	**1.20**	**240**	P	P		16 40 47.7	+0.9
WIZ	**White Island**	**1.23**	**322**	P	P		16 40 47.2	+0.1
MARZ	**Manawahe**	**1.27**	**293**	P	P		16 40 46.2	-0.4
RRRZ	**Republican Roa**	**1.29**	**277**	P	P		16 40 46.9	-0.1
TARZ	**Mount Tarawera**	**1.31**	**281**	P	P		16 40 47.5	+0.2
MKRZ	**Makatiti**	**1.37**	**285**	P	P		16 40 49.8	+0.2
PRRZ	**Plateau Road**	**1.37**	**269**	P	P		16 40 48.2	+0.2
MRHZ	**Matea Rd**	**1.39**	**256**	P	P		16 40 48.8	+0.4
OPRZ	**Ohinepanea**	**1.41**	**297**	P	P		16 40 47.7	-0.9
ALRZ	**Allen Road**	**1.41**	**267**	P	P		16 40 49.1	+0.5
CKHZ	**Cape Kidnapper**	**1.43**	**215**	P	P		16 40 48.0	-0.8
HLRZ	**Highlands Stat**	**1.43**	**279**	P	P		16 40 49.2	+0.3
OMRZ	**Omania**	**1.45**	**285**	P	P		16 40 49.1	0.0
BKZ	**Black Stump Fm**	**1.45**	**242**	P	P		16 40 48.7	-0.5
HRRZ	**Handcock Road**	**1.46**	**274**	P	P		16 40 49.5	+0.2
MCHZ	**McNeill Hill**	**1.47**	**230**	P	P		16 40 48.8	-0.6
HSRZ	**Hossack Road**	**1.50**	**277**	P	P		16 40 50.2	+0.4
KARZ	**Kaharoa**	**1.57**	**287**	P	P		16 40 50.2	-0.6
NGRZ	**Ngongotaha**	**1.59**	**284**	P	P		16 40 51.4	+0.3
GRRZ	**Galatos Road**	**1.60**	**275**	P	P		16 40 51.7	+0.4
KAHZ	**Kahuranaki**	**1.63**	**217**	P	P		16 40 50.4	-1.2
KWHZ	**Kaweka Forest**	**1.63**	**235**	P	P		16 40 51.0	-0.7
TGRZ	**Tauranga**	**1.67**	**297**	P	P		16 40 51.8	-0.4
WHTZ	**Whakaora**	**1.72**	**264**	P	P		16 40 53.7	+0.8
KRHZ	**Kereru**	**1.79**	**230**	P	P		16 40 52.8	-1.1
KUTZ	**Kaahu Road**	**1.82**	**270**	P	P		16 40 54.5	+0.3
PXZ	**Pawanui**	**1.83**	**213**	P	P		16 40 52.8	-1.5
RITZ	**Rihia Road**	**1.85**	**254**	P	P		16 40 56.0	+1.3
KMRZ	**Kaimai**	**1.85**	**290**	P	P		16 40 58.5	+0.6
RATZ	**Rangitukua**	**1.89**	**258**	P	P		16 40 56.0	+0.8
BHHZ	**Black Hill Sta**	**1.90**	**238**	P	P		16 40 54.6	-0.8
WATZ	**Wairara**	**1.90**	**263**	P	P		16 40 55.8	+0.4
KATZ	**Kakaramea**	**1.97**	**255**	P	P		16 41 01.5	+1.5
TMTZ	**Te Maari**	**2.00**	**251**	P	P		16 40 57.4	+0.6
ETVZ	**East Tongariro**	**2.00**	**221**	P	P		16 40 57.8	+0.9
KRVZ	**Karewarewa**	**2.04**	**252**	P	P		16 40 58.4	+1.0
OTVZ	**Oturere**	**2.05**	**250**	P	P		16 40 58.5	+1.0
WPHZ	**Waipukurau**	**2.05**	**220**	P	P		16 40 55.9	-1.5
TLZ	**Tolley Road**	**2.05**	**274**	P	P		16 40 57.1	-0.4
PNHZ	**Pukenui**	**2.07**	**226**	P	P		16 40 56.2	-1.5
MOVZ	**Moawhango**	**2.07**	**243**	P	P		16 40 57.5	-0.3
WTVZ	**West Tongariro**	**2.09**	**252**	P	P		16 41 00.5	-1.4
NGZ	**Ngauruhoe**	**2.10**	**250**	P	P		16 40 59.4	+1.2
PRHZ	**Porangahau**	**2.12**	**213**	P	P		16 40 56.4	-2.0
WNVZ	**Wahianoa**	**2.15**	**247**	P	P		16 40 58.9	0.0
FWVZ	**Far West T-bar**	**2.16**	**249**	P	P		16 41 02.3	-0.8
TOZ	**Tahuroa Road**	**2.22**	**289**	P	P		16 40 58.9	-0.8
TSZ	**Takapari Road**	**2.30**	**227**	P	P		16 40 58.7	-2.1
DVHZ	**Dannevirke**	**2.36**	**220**	P	P		16 40 59.7	-2.0
HIZ	**Hauiti**	**2.58**	**269**	P	P		16 41 05.4	+0.8
KUZ	**Kuaotunu**	**2.60**	**312**	P	P		16 41 03.6	-1.3
POWZ	**Post Office Ro**	**2.64**	**229**	P	P		16 41 04.7	-0.8
PRWZ	**Pori Road**	**2.65**	**219**	P	P		16 41 04.4	-1.3
VRZ	**Vera Road**	**2.72**	**256**	P	P		16 41 07.5	+1.0
MKAZ	**Moumakai**	**2.74**	**300**	P	P		16 41 06.7	-0.1
WAZ	**Wanganui**	**2.76**	**242**	P	P		16 41 07.5	+0.4
MRZ	**Mangatainoka R**	**2.93**	**222**	P	P		16 41 06.8	-2.7
WIAZ	**Waiheke Island**	**2.93**	**305**	P	P		16 41 09.2	-0.3
GRZ	**Great Barrier**	**3.10**	**316**	P	P		16 41 10.9	-0.9
MBAZ	**Motutapu North**	**3.10**	**303**	P	P		16 41 11.8	0.0
HOWZ	**Holdsworth Sta**	**3.14**	**219**	P	P		16 41 09.8	-2.5
NEZ	**North Egmont**	**3.25**	**255**	P	P		16 41 15.4	+1.4
KHEZ	**Kahui Hut**	**3.32**	**255**	P	P		16 41 16.2	+1.3
PKE	**Pukeiti**	**3.32**	**257**	P	P		16 41 16.0	+1.1
MTW	**Mount Morrison**	**3.35**	**217**	P	P		16 41 12.5	-2.7
TCW	**Tory Channel**	**4.02**	**226**	P	P		16 41 25.1	+0.6
CTZ	**Chatham Island**	**6.56**	**145**	P	P		16 41 59.6	+0.3

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*DJA **01** 16:45:04.8 ± 0.6, 1°N ± 6° × 12°.2E ± °, h95km ± 5km, M3.9/10, mb4.0/2, MLv3.9/10*
*IDC **01** 16:45:05.2 ± 9.3, 0°.72N × 122°.82E, h116km ± 83km, mb3.1/3, mb1 3.4/4, mb1mx3.1/49, mbtmp3.6/4, ML4.4/1, Error ellipse: s-maj=135.9km s-min=23.1km az=61.0*
ISC 01 16:45:04.4 ± 1.0, 0°.63N ± 0°.10 × 122°.38E ± 0°.07, h114km, n12, σ0 99/16, mb3.2/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
MRSI	**Marisa**	**0.46**	**250**	P	**Pn**		16 45 20.5	**-1.0**
MRSI				S	**Sn**		16 45 31.9	**-2.4**
GTOI	**Gorontalo**	**0.64**	**90**	P	**Pn**		16 45 22.7	**+0.1**
GTOI				S	**Sn**		16 45 35.7	**-0.7**
KMSI	**Cibinong**	**1.61**	**92**	P	**Pn**		16 45 32.8	**+0.1**
APSI	**Ampana**	**1.70**	**205**	P	**Pn**		16 45 33.3	**-0.6**
LUWI	**Luwuk**	**1.71**	**167**	P	**Pn**		16 45 34.3	**+0.3**
TTSI	**Tana Toraja**	**4.46**	**215**	P	**Pn**		16 46 18.4	**+0.6**
SANI	**Sanana**	**4.49**	**126**	P	**Pn**		16 46 09.6	**-0.8**
BNSI	**Bone**	**5.49**	**204**	P	**Pn**		16 46 24.6	**+0.6**
	0.2nm27nm,0.8s							
FITZ	**Fitzroy Crossi**	**18.89**	**170**	P	**P**		16 49 16.6	**+0.4**
	0.9nm,0.3s,baz=3.8,slow=10,SNR=31							
WRA	**Warramunga Arr**	**23.57**	**151**	P	**P**		16 50 03.9	**-1.0**
	0.3nm,0.3s,baz=329,slow=11,SNR=25							
WRA				PcP	**PcP**		16 53 46.7	**-0.4**
	0.4nm,0.9s,baz=318,slow=2.5,SNR=4.7							
ASAR	**Alice Springs**	**26.62**	**156**	P	**P**		16 50 32.6	**+0.1**
	0.3nm,0.5s,baz=339,slow=12,SNR=9.8							
ASAR				PcP	**PcP**		16 53 53.9	**0.0**
	0.3nm,0.3s,baz=345,slow=2.1,SNR=13							
MKAR	**Makanchi Array**	**57.75**	**328**	P	**P**		16 54 45.1	**+1.6**

0.2nm,0.4s,baz=124,slow=8.5,SNR=8.1

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*ARE **01** 16:45:18 ± 3.4, 10°.77S ± 0°.07 × 78°.5W ± 0°.1, h46km ± 4km, Error ellipse: s-maj=0.0km s-min=0.0km az=155.0*
*MOS **01** 16:45:20.4 ± 1.1, 10°.47S × 78°.11W, h56km, mb5.3/6, Error ellipse: s-maj=13.1km s-min=6.1km az=116.7*
*NEIC **01** 16:45:21.2 ± 1.8, 10°.54S ± 0°.05 × 78°.1W ± 0°.1, h48km ± 1km, mb5.2/381, Mwb5.3/29, ML5.2(ARE), Error ellipse: s-maj=19.5km s-min=4.4km az=246.0*
*NEIC **01** 16:45:21.8, 10°.51S × 78°.07W, h48km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=0.18; Mθθ=0.39; Mφφ=0.57; Mrθ=-0.75; Mrφ=-0.19; Mθφ=0.84; Fault plane solution: M0 1.25000×10^17 NP1:φs132.74000°, δ22.75000°, λ-14.56000°. NP2:φs136.21000°, δ84.42000°, λ-112.09000°. Principal axes: T 1.3197, Plg36.0000°, Azm245.0000°; N -0.1610, Plg22.0000°, Azm138.0000°; P -1.1587, Plg46.0000°, Azm24.0000°;*
*IDC **01** 16:45:21.7 ± 0.4, 10°.51S × 78°.08W, h51km ± 4km, mb4.6/32, mb1 4.7/35, mb1mx4.6/53, mbtmp4.8/35, MS4.4/18, Ms1 4.4/18, ms1mx4.3/22 Error ellipse: s-maj=11.0km s-min=5.2km az=52.0*
*BJI **01** 16:45:24.0 ± 0.0, 10°.60S × 78°.20W, h54km, mB5.3/12, Ms5.3/13, Ms7 5.0/15*
*VAO **01** 16:45:25.5 ± 0.5, 10°.48S × 77°.94W, h77km, mb5.1*
*GCMT **01** 16:45:25.2 ± 0.1, 10°.54S ± 0°.01 × 78°.03W ± 0°.01, h26km, MW5.5/133, Moment Tensor Solution. s111,c173; s133,c220; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr=0.30 ± .02; Mθθ=0.23 ± .01; Mφφ=0.06 ± .02; Mrθ=1.40 ± .04; Mrφ=-0.04 ± .01; Mθφ=1.84 ± .05; Best double couple: M0 2.32600×10^17 NP1:φs284.00000°, δ4.00000°, λ-128.00000°. NP2:φs142.00000°, δ87.00000°, λ-88.00000°. Principal axes: T 2.2600, Plg42.0000°, Azm230.0000°; N 0.1300, Plg2.0000°, Azm322.0000°; P -2.3910, Plg48.0000°, Azm55.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 16:45:21.6 ± 0.4, 10°.55S ± 0°.04 × 78°.02W ± 0°.05, h48km ± 3km, h48km: pP-P, n542, σ1 9 34/398, mb5.2/230, MS4.4/87, 57C-100D, Fault plane solution: NP1:φs123.45764°, δ73.98767°, λ-144.06934°. NP2:φs22.15306°, δ55.66441°, λ-19.51501°. Principal axes: T Plg11.7584°, Azm249.2491°; N Plg51.1063°, Azm144.2962°; P Plg36.4333°, Azm348.0876°; Fault plane solution: NP1:φs129.72607°, δ71.12808°, λ-89.86999°. NP2:φs309.32413°, δ18.87235°, λ-90.38034°. Principal axes: T Plg26.1280°, Azm219.6237°; N Plg0.1230°, Azm309.6840°; P Plg63.8717°, Azm39.9348°; Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
NNA	**Nana**	**1.83**	**141**	P	**Pn**		**16 45 51.7**	**+1.0**
	385nm,0.3s,baz=316,slow=13,SNR=221							
NNA				S	**Sn**		**16 46 14.4**	**+1.6**
	4μm,0.3s,baz=274,slow=11,SNR=19							
NNA				LR	LR		16 46 45.2	
	comp=Z,6μm,18.9s,baz=351,slow=44							
NNA	**Nana**	**1.83**	**141**	*i* P	**Pn**		**16 45 51.4**	**+0.6**
NNA	**Nana**	**1.83**	**141**	Pn	**Pn**		**16 45 51.8**	**+1.0**
NNA				Sn	**Sn**		**16 46 14.8**	**+1.9**
ATAH	**Atahualpa**	**3.42**	**354**	P	**Pn**		**16 46 16.1**	**+3.2**
	355nm,0.3s,baz=138,slow=4.1,SNR=930							
ATAH				S	**Sn**		**16 46 57.0**	**+4.7**
	523nm,0.3s,baz=300,slow=11,SNR=5.5							
CZSB	**Cruzeiro do Su**	**5.95**	**62**	*e*P	**Pn**		**16 46 49.6**	**+2.4**
OTAV	**Otavalo**	**10.73**	**358**	P	**Pn**		**16 47 55.2**	**+2.0**
OTAV	**Otavalo**	**10.73**	**358**		**Pn**		**16 47 55.1**	**+2.0**
PTLC	**Puerto Leguiza**	**11.13**	**17**	*e*P	Pn		16 47 51.6	-6.6
LPAZ	**La Paz**	**11.18**	**122**	P	**Pn**		**16 48 00.7**	**+1.3**
	1.6nm,0.3s,baz=305,slow=14,SNR=26							
LPAZ	**La Paz**	**11.18**	**122**		**Pn**		**16 47 58.9**	**-0.6**
LPAZ	**La Paz**	**11.18**	**122**	*e*P	**Pn**		**16 48 01.5**	**+2.0**
PB16	**IPOC Station P**	**11.30**	**134**	Pn	**Pn**		**16 48 01.7**	**+0.7**
CPAS1	**Pasto**	**11.69**	**3**	*e*P	**Pn**		**16 48 08.7**	**+2.4**
GCUF	**Volcan Galeras**	**11.72**	**3**	*e*P	**Pn**		**16 48 08.0**	**+1.2**
CCUFI	**Cufio, Nario**	**11.72**	**3**	*e*P	**Pn**		**16 48 08.7**	**+1.8**
PSGCX	**Pisagua**	**11.78**	**141**	Pn	**Pn**		**16 48 08.3**	**+1.0**
MNMC	**Minye Minye**	**11.79**	**137**	Pn	**Pn**		**16 48 07.8**	**+0.4**
PB11	**IPOC Station P**	**12.20**	**140**		**Pn**		**16 48 12.8**	**-0.2**
TUMC	**Tumaco**	**12.32**	**357**	*e*P	**Pn**		**16 48 14.1**	**-0.3**
BBAC	**Balboa, Cauca**	**12.52**	**4**	*e*P	**Pn**		**16 48 18.7**	**+1.4**
SOTA	**Rioblanco**	**12.68**	**6**	*e*P	**Pn**		**16 48 21.1**	**+1.2**
PB08	**IPOC Station P**	**12.80**	**139**		**Pn**		**16 48 21.6**	**+0.3**
PCON	**Cinco Dias**	**12.90**	**7**	*e*P	**Pn**		**16 48 25.1**	**+2.2**
GARC	**Garzon, Huila**	**12.90**	**11**	*e*P	**Pn**		**16 48 21.9**	**-0.8**
POPC	**Popayan, Colom**	**13.08**	**6**	*e*P	**Pn**		**16 48 26.0**	**+0.9**
PB01	**IPOC Station P**	**13.27**	**143**		**Pn**		**16 48 27.9**	**+0.4**
MACC	**Macarena, Meta**	**13.28**	**18**	*e*P	**Pn**		**16 48 25.9**	**-1.8**
BETC	**Betania**	**13.40**	**11**	*e*P	**Pn**		**16 48 31.0**	**+1.7**
PB07	**IPOC Station P**	**13.52**	**146**		**Pn**		**16 48 32.9**	**+1.1**
PB09	**IPOC Station P**	**13.99**	**144**		**Pn**		**16 48 38.5**	**+1.3**
MALC	**Bahia Malaga**	**14.49**	**3**	*e*P	**Pn**		**16 48 46.6**	**+2.6**
PB06	**IPOC Station P**	**14.54**	**147**	Pn	**Pn**		**16 48 44.5**	**-0.2**
YOTC	**Yotoco, Valle**	**14.54**	**7**	*e*P	**Pn**		**16 48 41.5**	**-3.2**
ORTC	**Ortega, Tolima**	**14.63**	**11**	*e*P	**Pn**		**16 48 47.4**	**+1.5**
SAML	**Samuel**	**14.71**	**85**	P	**Pn**		**16 48 46.3**	**-0.6**
SAML	**Samuel**	**14.71**	**85**	Pn	**Pn**		**16 48 46.3**	**-0.6**
PB10	**IPOC Station P**	**14.72**	**152**	Pn	**Pn**		**16 48 48.4**	**+1.3**
LVC	**Limon Verde**	**14.82**	**145**	P	**P**		**16 48 51.3**	**-2.3**
	0.6nm,0.3s,baz=296,slow=8.9,SNR=3.2							
LVC				S	**S**		**16 51 43.7**	**-4.5**
	1.6nm,0.3s,baz=85,slow=16,SNR=2.0							
LVC	**Limon Verde**	**14.82**	**145**	P	**Pn**		**16 48 50.3**	**+1.7**
LVC	**Limon Verde**	**14.82**	**145**	Pn	**Pn**		**16 48 50.5**	**+1.7**
LVC	**Limon Verde**	**14.82**	**145**	*e*P	**P**		**16 48 52.0**	**-1.6**
PB15	**IPOC Station P**	**15.00**	**148**	P	**P**		**16 48 56.0**	**+0.5**
VILC	**Villavicencio,**	**15.19**	**17**	*e*P	**Pn**		**16 48 53.2**	**-0.1**
PIZC	**Pizarro, Choco**	**15.43**	**2**	*e*P	**P**		**16 49 00.9**	**+0.8**
RREF	**El Recreo**	**15.58**	**10**	*e*P	**P**		**16 49 03.2**	**+0.8**
ROSC	**El Rosal**	**15.73**	**14**	P	**P**		**16 49 02.5**	**-1.3**
	2.6nm,0.3s,baz=225,slow=6.9,SNR=6.3							
ROSC				LR	LR		16 56 07.3	
	comp=Z,7μm,21.3s,baz=213,slow=41							
ROSC	**El Rosal**	**15.73**	**14**	P	**P**		**16 49 03.0**	**-0.8**
ROSC				pmax	pmax			
	comp=Z,151nm,0.9s							
ROSC	**El Rosal**	**15.73**	**14**		**P**		**16 49 03.0**	**-0.8**
ROSC				lAmb	lAmb		16 49 29.3	
	comp=Z,151nm,0.8s							
ROSC	**El Rosal**	**15.73**	**14**	*e*P	**P**		**16 49 03.2**	**-0.6**
PB14	**IPOC Station P**	**15.76**	**154**		**P**		**16 49 03.5**	**-0.4**
PTGC	**Puerto Gaitan,**	**15.78**	**22**	*e*P	**Pn**		**16 48 58.9**	**-1.9**
GUY2C	**Guyana, Caldas**	**15.89**	**10**	*e*P	**P**		**16 49 05.2**	**-0.4**
NORC	**Norcasia**	**16.32**	**11**	*e*P	**Pn**		**16 49 06.4**	**-1.2**
CBOC	**Ciudad Bolivar**	**16.43**	**7**	*e*P	**Pn**		**16 49 09.9**	**+0.7**
SPBC	**San Pablo de B**	**16.57**	**14**	*e*P	**P**		**16 49 12.4**	**-0.4**
GO02	**Mina Guanaco**	**16.59**	**152**		**P**		**16 49 12.3**	**-0.9**
HELC	**Santa Helena**	**16.82**	**9**	*e*P	**P**		**16 49 16.0**	**+0.2**
AC01	**Pan de Azucar**	**17.02**	**157**	P	**P**		**16 49 18.2**	**+0.5**
RUSC	**La Rusia**	**17.06**	**17**	*e*P	**P**		**16 49 19.4**	**+0.8**
PTBC	**PUERTO BERRIO,**	**17.35**	**12**	*e*P	**Pn**		**16 49 19.0**	**-1.5**
SIV	**San Ignacio**	**17.35**	**110**	P	**P**		**16 49 22.4**	**+1.0**
	comp=Z,2.0nm,0.3s,baz=301,slow=9.6,SNR=91							
SIV				S	**Sn**		**16 52 33.1**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=257,slow=22,SNR=1.7							
DBBC	**Dabeiba**	**17.55**	**6**	*e*P	**Pn**		**16 49 23.1**	**+0.1**
VILB	**Vilhena**	**17.61**	**100**	*e*P	**P**		**16 49 25.0**	**+0.8**
BARC	**Barichara**	**17.70**	**16**	*e*P	**P**		**16 49 26.5**	**+1.1**
TAMC	**Tame, Arauca**	**17.98**	**20**	*e*P	**P**		**16 49 30.6**	**+2.3**
BRRC	**Barranca, Sant**	**18.06**	**14**	*e*P	**P**		**16 49 28.7**	**-0.5**
ZARC	**Zaragoza, Cauc**	**18.20**	**10**	*e*P	**P**		**16 49 30.2**	**-0.5**
AC02	**Maricunga**	**18.24**	**154**	P	**Pn**		**16 49 31.9**	**+0.1**
UREC	**San Jos de Ur**	**18.35**	**8**	*e*P	**P**		**16 49 31.5**	**-0.9**
GO03	**Copiap**	**18.46**	**158**	P	**Pn**		**16 49 33.9**	**-0.2**
PAMC	**Pamplona, Colo**	**18.55**	**17**	*e*P	**Pn**		**16 49 35.5**	**-0.1**
MACA	**Manacapuru-AM**	**18.70**	**87**	*e*P	**P**		**16 49 36.1**	**-0.1**
PTLB	**Pontes e Lacer**	**19.02**	**107**	*e*P	**Pn**		**16 49 40.9**	**0.0**
CAPC	**Capurgana**	**19.07**	**2**	*e*P	**P**		**16 49 38.1**	**-2.2**
OCAC	**Ocana**	**19.25**	**14**	*e*P	**P**		**16 49 41.4**	**-0.9**
LCO	**Las Campanas**	**19.60**	**161**	P	**Pn**		**16 49 47.5**	**-0.4**
LCO				pmax	pmax			
	comp=Z,41nm,0.9s							
LCO	**Las Campanas**	**19.60**	**161**	P	**Pn**		**16 49 47.5**	**-0.4**
SMLC	**San Martn de**	**19.62**	**12**	*e*P	**P**		**16 49 46.2**	**-0.1**
RIOS	**Rincon, Osa**	**19.89**	**344**	P	**P**		**16 49 49.6**	**+0.4**
PTGA	**Pitinga**	**20.42**	**63**	P	**P**		**16 49 55.9**	**+0.9**
	comp=Z,53nm,0.6s,baz=254,slow=14,SNR=39							
PTGA				S	**S**		**16 53 40.8**	**-0.6**
	comp=Z,97nm,0.8s,baz=344,slow=15,SNR=6.4							
PTGA	**Pitinga**	**20.42**	**63**	P	**P**		**16 49 55.3**	**+0.2**
PTGA				lAmb	lAmb		16 50 03.3	
	comp=Z,104nm,1.1s							
PTGA	**Pitinga**	**20.42**	**63**	*e*P	**P**		**16 49 56.0**	**+0.9**
SJCC	**San Jacinto, C**	**20.51**	**8**	*e*P	**P**		**16 49 56.2**	**+0.2**
PEZE	**Perez Zeledon,**	**20.59**	**344**	P	**P**		**16 49 57.9**	**+1.0**
ARGC	**Ariguani, Magd**	**20.62**	**11**	*e*P	**P**		**16 49 57.6**	**+0.4**
GO04	**Tololo Observa**	**20.65**	**162**	P	**P**		**16 49 58.2**	**+0.7**
GO04				lAmb	lAmb		16 50 23.9	
	comp=Z,70nm,0.8s							
SDV	**Santo Domingo**	**20.66**	**21**	P	**P**		**16 49 57.5**	**-0.3**
	comp=Z,53nm,0.8s,baz=208,slow=11,SNR=58							
SDV				S	**S**		**16 53 49.3**	**+3.0**
	comp=Z,33nm,0.8s,baz=318,slow=8.2,SNR=3.4							
SDV	**Santo Domingo**	**20.66**	**21**	P	**P**		**16 49 57.6**	**-0.3**
SDV				lAmb	lAmb		16 50 12.2	
	comp=Z,65nm,0.8s							
SDV	**Santo Domingo**	**20.66**	**21**	*e*P	**P**		**16 49 57.6**	**-0.2**
SDV	**Santo Domingo**	**20.66**	**21**	*e*P	**P**		**16 49 58.3**	**+0.5**
CO03	**El Pedregal**	**21.30**	**162**	P	**P**		**16 50 05.0**	**+0.5**
HDC	**Heredia**	**21.30**	**343**	P	**P**		**16 50 05.4**	**+0.8**
HDC				lAmb	lAmb		16 50 07.5	
	comp=Z,96nm,0.8s							
CAO2	**Cobano, Puntar**	**21.31**	**340**	P	**P**		**16 50 05.1**	**+0.6**
CO02	**Combarbal**	**21.55**	**163**	P	**P**		**16 50 08.4**	**+1.2**
BOAV	**Boa Vista**	**21.65**	**55**	*e*P	**P**		**16 50 08.8**	**+0.5**
JTS	**Las Juntas de**	**21.83**	**341**	P	**P**		**16 50 10.2**	**+0.1**
	comp=Z,5.2nm,0.6s,baz=197,slow=7.4,SNR=7.2							
JTS				LR	LR		16 57 42.5	
	comp=Z,349nm,20.2s,baz=236,slow=34							
JTS	**Las Juntas de**	**21.83**	**341**	*d* P	**P**		**16 50 11.0**	**+0.9**
JTS				pmax	pmax			
	comp=Z,36nm,1.1s							
JTS	**Las Juntas de**	**21.83**	**341**	P	**P**		**16 50 10.4**	**+0.3**
CLDB	**Colider**	**21.84**	**93**	*e*P	**P**		**16 50 11.1**	**+0.9**
SMRC	**Santa Marta, M**	**21.90**	**10**	*e*P	**P**		**16 50 09.1**	**-1.8**
ORTG	**Ortega, Santa**	**22.06**	**340**	P	**P**		**16 50 12.9**	**+0.3**
ZON	**Zonda**	**22.61**	**159**	P	**P**		**16 50 19.1**	**+0.7**
ZON				pmax	pmax			
	comp=Z,36nm,1.0s							
ZON	**Zonda**	**22.61**	**159**	P	**P**		**16 50 19.1**	**+0.7**
NPGB	**Nuovo Progresso**	**22.66**	**83**	*e*P	**P**		**16 50 18.6**	**-0.5**
H03N2	**Juan Fernandez**	**22.79

HKT Hockley 43.77 337 *c i* P P 16 53 22.5 -0.1
HKT pmax pmax
comp=Z,30nm,1.1s
HKT Hockley 43.77 337 P P 16 53 22.8 +0.3
833A Chaparral WMA, 43.83 332 P 16 53 23.2
baz=149
GOGA Godfrey 44.03 353 P 16 53 23.1
baz=172
LRAL Lakeview Retre 44.18 349 P 16 53 24.8
baz=167,SNR=11
LRAL Lakeview Retre 44.18 349 IAmb IAmb 16 53 25.9
comp=Z,25nm,0.8s
NATX Nacogdoches 44.99 340 P 16 53 33.0
baz=157,SNR=5.9
NATX Nacogdoches 44.99 340 P P 16 53 32.5 +0.2
FPAL Fort Paine 45.42 351 IAmb IAmb 16 53 35.2
comp=Z,26nm,0.7s
W57A Gilead 45.50 358 IAmb IAmb 16 53 56.4
comp=Z,24nm,1.1s
W56A Indian Trail 45.50 357 P 16 53 35.3
baz=177
Y45A Yeager Farm, C 45.51 347 P P 16 53 35.6 -0.8
KMSC Kings Mountain 45.55 356 P 16 53 35.9
baz=176,SNR=6.2
KMSC Kings Mountain 45.55 356 IAmb IAmb 16 53 36.8
comp=Z,41nm,1.0s
X48A Hartselle 45.57 350 IAmb IAmb 16 53 36.0
comp=Z,30nm,1.1s
JCT Junction City 45.86 333 P 16 53 39.3
baz=150
JCT Junction City 45.86 333 P P 16 53 38.9 -0.5
JCT pmax pmax
comp=Z,17nm,0.9s
JCT Junction City 45.86 333 P P 16 53 38.9 -0.5
JCT IAmb IAmb 16 53 41.6
comp=Z,17nm,0.8s
W50A Signal Mountai 46.02 352 IAmb IAmb 16 53 39.6
comp=Z,24nm,0.9s
V59A Middlesex 46.07 360 P 16 53 40.1
baz=180
CCAR Cane Creek 46.12 344 P P 16 53 41.8 +0.6
SWET Sewanee 46.13 351 IAmb IAmb 16 53 40.3
comp=Z,20nm,0.7s
V56A Mocksville 46.17 357 P 16 53 40.9
baz=177
WHTX Lake Whitney, 46.21 337 IAmb IAmb 16 53 42.8
comp=Z,18nm,0.8s
WHTX Lake Whitney, 46.21 337 P 16 53 41.7
baz=153
V57A Coltrane Farms 46.22 358 P 16 53 40.9
baz=178
PLAL Pickwick Lake 46.28 349 IAmb IAmb 16 53 41.7
comp=Z,30nm,1.0s
TKL Tuckaleechee C 46.28 354 P P 16 53 41.4 -1.1
comp=Z,8.8nm,0.8s,baz=163,slow=11,SNR=6.6
TKL Tuckaleechee C 46.28 354 IAmb IAmb 16 53 56.8
comp=Z,22nm,1.1s
WLAR White Oak Lake 46.28 343 P P 16 53 43.2 +0.7
V52A Sevierville 46.44 354 P P 16 53 42.4 -1.4
V52A IAmb IAmb 16 53 43.4
comp=Z,39nm,0.9s
V51A Loudon 46.49 353 IAmb IAmb 16 53 43.7
comp=Z,15nm,0.8s
U56A King 46.70 357 P 16 53 45.2
baz=177
U56A King 46.70 357 IAmb IAmb 16 53 46.1
comp=Z,29nm,0.8s
TXAR Lajitas Array 46.74 329 P P 16 53 45.9 -0.5
comp=Z,8.5nm,0.8s,baz=149,slow=9.0,SNR=102
TXAR pP pP 16 54 00.2 +0.8
comp=Z,6.4nm,0.8s,baz=147,slow=6.4,SNR=11
TXAR LR LR 17 12 04.3
comp=Z,81nm,19.0s,baz=0.0,slow=34
TXAR Lajitas Array 46.74 329 P P 16 53 45.5 -0.8
TX31 Lajitas Ar. Si 46.74 329 P P 16 53 45.6 -0.8
TX31 IAmb IAmb 16 54 01.5
comp=Z,33nm,0.9s
V48A Smith Brothers 46.79 350 IAmb IAmb 16 53 45.5
comp=Z,33nm,0.7s
X40A Basin Creek Fa 46.95 343 P 16 53 47.8
baz=160
X40A Basin Creek Fa 46.95 343 P P 16 53 47.1 -0.7
U54A Nelsons Funny 46.96 356 P 16 53 46.5
baz=175
U54A Nelsons Funny 46.96 356 IAmb IAmb 16 53 47.3
comp=Z,30nm,1.0s
MIAR Mount Ida 47.22 342 P 16 53 49.6
baz=159,SNR=13
MIAR Mount Ida 47.22 342 IAmb IAmb 16 54 12.9
comp=Z,23nm,0.8s
T58A Grand View Acr 47.25 359 P 16 53 49.3
baz=179,SNR=6.2
WVT Waverly 47.34 349 P 16 53 48.6
baz=167
WVT Waverly 47.35 349 P P 16 53 48.6 -2.2
T56A Rocky Mt 47.37 358 P 16 53 50.1
baz=177
W41B Gary Mavity, V 47.43 344 P 16 53 50.7
baz=161,SNR=14
WHAR Wooly Hollow 47.55 344 IAmb IAmb 16 53 53.0
comp=Z,47nm,1.0s
BLA Blacksburg 47.56 357 P 16 53 51.9
baz=177
BLA Blacksburg 47.56 357 IAmb IAmb 16 53 52.9
comp=Z,19nm,0.8s
ABTX Abilene, Hawle 47.64 335 P P 16 53 52.6 -0.6
ABTX Abilene, Hawle 47.64 335 P 16 53 53.1
baz=151,SNR=11
W39A Magazine 47.88 343 P 16 53 55.1
baz=159,SNR=8.6
W39A Magazine 47.89 343 IAmb IAmb 16 54 18.6
comp=Z,34nm,1.1s
S58A Poland Farm, P 47.91 360 P 16 53 54.6
baz=180
S58A Poland Farm, P 47.91 360 IAmb IAmb 16 53 55.4
comp=Z,21nm,0.8s
S56A Natural Bridge 48.00 358 P 16 53 55.0
baz=178
LCAR Lake Charles 48.00 346 P P 16 53 54.1 -1.8
LCAR IAmb IAmb 16 53 56.8
comp=Z,30nm,0.8s
T47A Sharon Grove 48.05 350 IAmb IAmb 16 53 55.2
comp=Z,21nm,0.8s
S59A Mechanicsville 48.06 1 P 16 53 55.9
baz=181
S57A Dark Hollow, R 48.07 359 P 16 53 55.5
baz=179
S57A Dark Hollow, R 48.07 359 IAmb IAmb 16 53 56.1
comp=Z,27nm,0.9s
FCAR Ozark Folk Cen 48.08 345 P P 16 53 55.4 -1.1
FCAR IAmb IAmb 16 53 56.7
comp=Z,30nm,1.0s
S54A Dingess, Beckl 48.20 356 P 16 53 56.4
baz=176,SNR=5.5
S54A Dingess, Beckl 48.20 356 IAmb IAmb 16 53 56.7
comp=Z,36nm,0.9s
PARMO Parma 48.25 347 P P 16 53 56.9 -0.9
R58B Mineral 48.26 0 P 16 53 57.6
baz=180,SNR=9.2
R59A King George, V 48.51 1 P 16 53 60.0
baz=181
R54A Victor 48.56 357 P 16 53 59.1
baz=176,SNR=5.3
R57A Stanardsville 48.60 359 P 16 53 59.8
baz=179,SNR=5.6
R58A Rapidan 48.60 0 P 16 53 60.0
baz=180,SNR=9.9
R55A Marlinton 48.62 358 P 16 54 00.1
baz=177
R55A Marlinton 48.62 358 IAmb IAmb 16 54 01.1
comp=Z,17nm,0.7s
U40A Yellville 48.71 344 P 16 54 00.9
baz=161,SNR=30
U40A Yellville 48.71 344 P P 16 54 00.8 -0.5
R56A Bull Pasture M 48.72 359 P 16 54 01.1
baz=178
R50A Paris 48.94 353 IAmb IAmb 16 54 02.0
comp=Z,25nm,1.1s
HHAR Hobbs 48.94 343 IAmb IAmb 16 54 04.6
comp=Z,42nm,1.2s
R49A Shelbyville 49.05 353 IAmb IAmb 16 54 03.2
comp=Z,19nm,0.9s
WCI Wyandotte Cave 49.14 351 P 16 54 02.6
baz=169
WCI Wyandotte Cave 49.14 351 P P 16 54 02.5 -2.1
WCI pmax pmax
comp=Z,17nm,0.7s
WCI Wyandotte Cave 49.14 351 P P 16 54 02.5 -2.1
WCI IAmb IAmb 16 54 08.8
comp=Z,17nm,0.7s
SIUC Southern Illin 49.15 348 P P 16 54 02.9 -1.8
WMOK Wichita Mounta 49.16 337 P 16 54 03.8
baz=153,SNR=8.6
U38A Gravette 49.22 343 P P 16 54 03.5 -1.8
U38A IAmb IAmb 16 54 28.5
comp=Z,30nm,1.1s
Q58A Fox Den Farm, 49.24 0 P 16 54 04.8
baz=180,SNR=6.0
Q53A Leroy 49.26 356 P 16 54 04.4
baz=176,SNR=8.4
Q57A Strasburg 49.33 360 P 16 54 05.8
baz=180,SNR=8.6
OK025 Westminster Rd 49.38 339 P P 16 54 05.2 -1.4
OK025 IAmb IAmb 16 54 07.2
comp=Z,38nm,0.9s
MNTX Cornudas Mount 49.52 329 IAmb IAmb 16 54 22.5
comp=Z,17nm,1.0s
MNTX Cornudas Mount 49.52 329 P 16 54 06.6
baz=144,SNR=23
Q51A Peebles 49.57 355 IAmb IAmb 16 54 07.4
comp=Z,19nm,0.8s
QUOK Quay 49.70 340 IAmb IAmb 16 54 37.9
comp=Z,16nm,0.9s
SDMD Soldier's Deli 49.72 1 P P 16 54 08.4 -0.6
SDMD IAmb IAmb 16 54 09.5
comp=Z,13nm,0.7s
P56A Dayton Farm, R 49.81 359 P 16 54 09.4
baz=179,SNR=7.1
CPRX Cap Rock 49.86 331 P P 16 54 10.5 +0.1
CCM Cathedral Cave 49.91 346 P 16 54 09.4
baz=163
CCM Cathedral Cave 49.91 346 P P 16 54 09.2 -1.3
CCM pmax pmax
comp=Z,26nm,0.6s
CCM Cathedral Cave 49.91 346 P P 16 54 09.2 -1.3
P59A Jarrettsville 49.93 2 P 16 54 10.5
baz=182
P52A Corning 50.08 356 P 16 54 10.1
baz=175
P52A Corning 50.08 356 IAmb IAmb 16 54 11.0
comp=Z,39nm,1.0s
BLO Bloomington 50.10 351 P P 16 54 09.8 -2.1
BLO pmax pmax
comp=Z,32nm,0.6s
BLO Bloomington 50.10 351 P P 16 54 09.8 -2.1
MSTX Muleshoe 50.14 333 P 16 54 11.3
baz=148
MSTX Muleshoe 50.14 333 IAmb IAmb 16 54 13.9
comp=Z,24nm,0.8s
P49A Miami Univ. Ec 50.22 353 P 16 54 10.5
baz=172,SNR=6.7
P49A Miami Univ. Ec 50.22 353 IAmb IAmb 16 54 11.7
comp=Z,26nm,0.7s
P48A Milroy 50.23 353 IAmb IAmb 16 54 11.8
comp=Z,22nm,0.9s
T35A Sonner Cattle 50.32 341 IAmb IAmb 16 54 40.3
comp=Z,29nm,1.1s
MVL Millersville 50.32 2 IAmb IAmb 16 54 14.7
comp=Z,46nm,1.3s
O58A Lewisberry 50.43 1 P 16 54 14.3
baz=182,SNR=8.1
AMTX Amarillo 50.45 335 P 16 54 13.8
baz=149
AMTX Amarillo 50.45 335 P P 16 54 13.3 -1.4
AMTX pP 16 54 27.7 -0.3
O57A Amberson 50.51 0 P 16 54 14.8
baz=181,SNR=11
O52A Adamsville 50.54 356 IAmb IAmb 16 54 14.5
comp=Z,26nm,0.7s
O56A Blue Knob Stat 50.56 359 P 16 54 14.9
baz=179,SNR=8.6
O56A Blue Knob Stat 50.57 359 IAmb IAmb 16 54 15.6
comp=Z,32nm,0.8s
O59A Robesonia 50.63 2 P 16 54 15.9
baz=182,SNR=6.9
O60A Telford 50.67 3 P 16 54 16.5
baz=183
ACSO Alum Creek Sta 50.74 355 P 16 54 15.4
baz=174,SNR=8.9
OK032 Salt Plains WL 50.79 339 IAmb IAmb 16 54 18.0
comp=Z,22nm,0.7s
O49A Covington 50.82 354 IAmb IAmb 16 54 16.6
comp=Z,31nm,0.8s
SSPA Standing Stone 50.93 0 P 16 54 17.6
baz=180
SSPA Standing Stone 50.93 0 P P 16 54 17.4 -0.7
SSPA IAmb IAmb 16 54 18.1
comp=Z,23nm,0.8s
N57A Milroy 51.05 0 P 16 54 18.6
baz=181,SNR=6.6
N58A Sunbury 51.15 1 P 16 54 19.4
baz=182,SNR=15
N58A Sunbury 51.15 1 P P 16 54 19.1 -0.7
N56A West Decatur 51.21 360 P 16 54 19.5
baz=180,SNR=7.8
N59A State Game Lan 51.25 2 P 16 54 20.8
baz=183,SNR=13
N54A Moraine State 51.29 358 IAmb IAmb 16 54 20.8
comp=Z,28nm,1.1s
SFIN Lafayette 51.37 351 P 16 54 19.4
baz=169,SNR=9.8
O44A Mansfield 51.37 350 P P 16 54 18.8 -2.7
121A Cookes Peak, D 51.42 328 IAmb IAmb 16 54 39.4
comp=Z,23nm,0.9s
121A Cookes Peak, D 51.42 328 P 16 54 22.6
baz=142,SNR=9.6
P40A Paris 51.51 346 IAmb IAmb 16 54 23.2
comp=Z,25nm,0.8s
M57A Sunshine Farm, 51.64 1 P 16 54 23.2
baz=181,SNR=13
M58A Price's Panora 51.69 1 P 16 54 23.9
baz=182
M55A Ridgway 51.77 359 IAmb IAmb 16 54 23.9
comp=Z,25nm,0.7s
M51A Elyria 51.77 356 P 16 54 23.0
baz=175
M56A Emporium 51.78 360 P 16 54 23.5
baz=180,SNR=7.9
M56A Emporium 51.78 360 P P 16 54 23.7 -0.8
M56A IAmb IAmb 16 54 24.5
comp=Z,31nm,0.8s
M53A WI Miller and 51.79 357 P 16 54 22.9
baz=177
M53A WI Miller and 51.79 357 IAmb IAmb 16 54 25.4
comp=Z,15nm,0.8s
M54A Oil Creek Stat 51.82 358 P 16 54 23.8
baz=178,SNR=13
M59A Waymart 51.89 2 P 16 54 25.3
baz=183,SNR=6.2
KSPA Keystone Colle 51.89 2 IAmb IAmb 16 54 26.2
comp=Z,39nm,1.0s
HDIL Hopedale 51.91 349 P 16 54 23.8
baz=166,SNR=12
M52A Chesterland 51.93 357 P P 16 54 23.8 -1.8
M52A IAmb IAmb 16 54 24.7
comp=Z,28nm,0.7s
ALLY Alegheny Colle 51.98 358 IAmb IAmb 16 54 26.4
comp=Z,25nm,0.6s
L53A Girard 52.29 358 P 16 54 26.8
baz=177,SNR=5.7
LENM Lemitar 52.29 330 P P 16 54 28.9 +0.2
L57A Andrews Acres 52.30 1 P 16 54 27.9
baz=182,SNR=9.7
L58A Harry Jones Me 52.38 2 P 16 54 28.9
baz=183,SNR=10
L60A Shokan 52.40 4 P 16 54 29.0
baz=185
L56A Greenwood 52.43 0 P 16 54 28.6
baz=181,SNR=12
ERPA Erie 52.44 358 P 16 54 27.8
baz=178
ERPA Erie 52.44 358 P P 16 54 27.2 -2.2
ERPA IAmb IAmb 16 54 28.8
comp=Z,27nm,0.8s
BINY Binghamton 52.52 2 P 16 54 29.8
baz=183,SNR=13
L59A Walton 52.55 3 P 16 54 30.2
baz=184,SNR=5.9
L48A N Adams 52.57 354 IAmb IAmb 16 54 28.9
comp=Z,21nm,0.8s
L61A Hillsdale 1, H 52.65 4 P 16 54 30.6
baz=186
ANMO Albuquerque 52.66 331 P 16 54 31.1
baz=144
ANMO Albuquerque 52.66 331 P 16 54 31.2 -0.2
comp=Z,10.0nm,0.9s,baz=149,slow=8.8,SNR=19
ANMO Albuquerque 52.66 331 *c i* P P 16 54 29.1 -2.3
ANMO pmax pmax
comp=Z,29nm,1.5s
ANMO Albuquerque 52.66 331 P P 16 54 30.9 -0.5
ANMO IAmb IAmb 16 54 46.5
comp=Z,17nm,0.8s
WVNY West Valley, N 52.70 359 P P 16 54 30.1 -1.3
TUC Tucson 52.89 325 P 16 54 32.9
baz=138
TUC Tucson 52.89 325 P P 16 54 32.5 -0.5
TUC pmax pmax
comp=Z,11nm,0.9s
TUC Tucson 52.89 325 P P 16 54 32.5 -0.5
N38A Joes South For 52.99 346 P P 16 54 31.8 -1.7
K56A Middlesex 52.99 1 P 16 54 32.4
baz=181,SNR=6.0
K57A Scipio Center 53.04 1 P 16 54 33.0
baz=182,SNR=17
K58A Earlville 53.10 2 P 16 54 34.0
baz=183,SNR=8.4
K58A Earlville 53.10 2 IAmb IAmb 16 54 56.0
comp=Z,39nm,1.0s
CBKS Cedar Bluff 53.12 339 P 16 54 34.1
baz=153
CBKS Cedar Bluff 53.13 339 IAmb IAmb 16 54 34.7
comp=Z,27nm,0.8s
K59A Cooperstown 53.15 3 P 16 54 34.5
baz=184
TRY Troy 53.17 4 IAmb IAmb 16 54 35.5
comp=Z,32nm,0.9s
K50A Casco 53.24 356 P P 16 54 32.7 -2.5
K63A Dunstable 53.31 6 P 16 54 36.1
baz=188
L42A Oliver, Polo 53.38 349 IAmb IAmb 16 54 34.7
comp=Z,14nm,0.8s
MEDO Medina 53.46 360 IAmb IAmb 16 54 35.9
comp=Z,26nm,0.7s
T25A Trinidad 53.52 334 P 16 54 37.7
baz=147
T25A Trinidad 53.52 334 P P 16 54 37.3 -0.5
T25A IAmb IAmb 16 54 52.7
comp=Z,19nm,1.1s
J55A Hilton 53.56 0 IAmb IAmb 16 54 37.2
comp=Z,31nm,0.8s
J56A Wolcott 53.58 1 P 16 54 36.9
baz=182,SNR=12
J60A Lant Hill Farm 53.70 4 P 16 54 39.0
baz=186
J57A Williamstown 53.73 2 P 16 54 38.0
baz=182,SNR=7.9
J57A Williamstown 53.73 2 P P 16 54 37.5 -1.3
J57A IAmb IAmb 16 54 39.0
comp=Z,29nm,0.9s
214A Organ Pipe Nat 53.80 323 P 16 54 39.6
baz=136,SNR=5.3
214A Organ Pipe Nat 53.80 323 P P 16 54 38.7 -1.0
214A pP 16 54 53.5 +0.5
214A IAmb IAmb 16 54 56.7
comp=Z,16nm,1.0s
ACCN Adirondack Com 53.82 4 IAmb IAmb 16 55 00.2
comp=Z,28nm,1.1s
K43A Burlington 53.83 351 IAmb IAmb 16 54 38.5
comp=Z,39nm,0.9s
J59A Piesco 53.85 3 P 16 54 39.2
baz=184
J59A Piesco 53.85 3 IAmb IAmb 16 55 00.9
comp=Z,26nm,1.1s
I58A Old Forge 54.05 3 P 16 54 40.5
baz=184
I51A Listowel 54.16 357 P 16 54 40.2
baz=176,SNR=13
I59A Olmsteadville 54.22 4 P 16 54 41.9
baz=185
PECO Prince Edward 54.23 1 P P 16 54 40.9 -1.6
PECO IAmb IAmb 16 54 42.1
comp=Z,32nm,0.8s
I57A Carthage 54.27 2 P 16 54 43.3
baz=183
I60A Shoreham 54.31 4 P 16 54 43.1
baz=186
JFWS Jewell Farm 54.37 349 P 16 54 41.6
baz=165,SNR=10
JFWS Jewell Farm 54.37 349 IAmb IAmb 16 54 42.0
comp=Z,20nm,0.6s
NCB Newcomb 54.37 3 IAmb IAmb 16 55 04.5
comp=Z,14nm,0.9s
W18A Petrified Fore 54.44 328 P 16 54 44.6
baz=141,SNR=12
W18A Petrified Fore 54.45 328 P P 16 54 44.1 -0.4
W18A pP 16 54 58.5 +0.7
K38A Parkersburg 54.64 347 P P 16 54 43.3 -2.2
K38A IAmb IAmb 16 54 44.1
comp=Z,28nm,0.8s
I63A Otisfield 54.76 7 P 16 54 46.4
baz=189
I63A Otisfield 54.76 7 IAmb IAmb 16 54 49.0
comp=Z,17nm,0.8s
H57A Richville 54.81 2 P 16 54 45.8
baz=183,SNR=9.8
DELO Deloro Mine 54.81 0 IAmb IAmb 16 54 45.7
comp=Z,28nm,0.6s
LBNH Lisbon 54.81 5 P 16 54 46.6
baz=187
LBNH Lisbon 54.81 5 IAmb IAmb 16 54 49.0
comp=Z,18nm,0.9s
H58A Gabriels 54.82 3 P 16 54 45.6
baz=185
H53A Bobcaygeon 54.87 360 P 16 54 45.5
baz=179,SNR=8.3
LONY Lake Ozonia 55.00 3 P 16 54 47.3
baz=184
LONY Lake Ozonia 55.00 3 P P 16 54 47.2 -0.9
LONY IAmb IAmb 16 55 09.7
comp=Z,26nm,1.0s
H60A Morristown 55.06 5 P 16 54 48.5
baz=186
SADO Sadowa 55.07 359 P P 16 54 46.4 -2.2
comp=Z,25nm,0.8s,baz=201,slow=5.5,SNR=24
SADO Sadowa 55.07 359 P P 16 54 46.3 -2.2
SADO IAmb IAmb 16 54 47.5
comp=Z,30nm,0.9s
H59A Cadyville 55.08 4 P 16 54 47.9
baz=185
I42A Daeger Farm, 55.08 350 P P 16 54 47.0 -1.7
S22A 4UR Ranch, Cre 55.11 332 P 16 54 49.0
baz=145
H62A Milan 55.22 6 P 16 54 50.2
baz=188
H62A Milan 55.22 6 IAmb IAmb 16 55 05.8
comp=Z,24nm,1.1s
FRNY Flat Rock 55.27 4 P P 16 54 49.0 -1.1
FRNY IAmb IAmb 16 55 11.9
comp=Z,44nm,1.1s
PLVO Plevna 55.34 1 IAmb IAmb 16 54 49.7
comp=Z,16nm,0.7s
H63A New Sharon 55.43 7 P 16 54 51.8
baz=190,SNR=8.3
G57A Newington 55.46 3 P 16 54 50.6
baz=184,SNR=7.1
H64A Troy 55.51 8 P 16 54 52.0
baz=191,SNR=5.3
G58A Ormstown 55.56 3 P 16 54 51.4
baz=185
WUAZ Wupatki 55.61 327 P 16 54 53.3
baz=139,SNR=9.8
WUAZ Wupatki 55.61 327 IAmb IAmb 16 55 09.0
comp=Z,25nm,0.8s
RKT Rikitea 55.62 249 *e* S S 17 02 39.6 +3.8
comp=Z,632nm,29.5s
RKT *e* LR LR 17 11 10.0
comp=Z,1μm,31.8s
G54A Lake Saint Pet 55.69 360 P 16 54 51.5
baz=180,SNR=11
H65A Eastbrook 55.70 8 P 16 54 53.8
baz=192
G45A Suttons Bay 55.76 353 IAmb IAmb 16 54 54.4
comp=Z,26nm,0.7s
G61A St-Isidore-de- 55.88 6 P 16 54 54.8
baz=188
G62A West of Eustis 55.92 6 P 16 54 55.4
baz=189,SNR=9.4
G63A Kingsbury 55.92 7 P 16 54 55.4
baz=190,SNR=8.9
I37A Lemond, Waseca 56.08 347 IAmb IAmb 16 54 55.0
comp=Z,28nm,0.8s

PKME **Peaks-Kenny Pk** **56.11 7** P 16 54 56.4
baz=190,SNR=9.2
G64A **Maxfield** **56.17 8** P 16 54 56.4
baz=191
K31A **O'Neill** **56.22 342** P **P** **16 54 55.9 -1.0**
ALGO **Algonquin Park** **56.25 360** P 16 54 55.3
baz=180,SNR=9.3
PDMCI **Parker Dam,Lak** **56.26 324** P 16 54 57.3
baz=136
ISCO **Idaho Springs** **56.27 335** P 16 54 56.9
baz=147,SNR=6.3
IKP **In-Ko-Pah, Jac** **56.28 321** P 16 54 57.4
baz=133
G65A **Princeton** **56.29 9** P 16 54 57.7
baz=192,SNR=6.7
PV02 **Paradox Valley** **56.37 331** IAmb IAmb 16 55 13.9
comp=Z,26nm,0.9s
PV13 **Radium Mtn., P** **56.37 331** IAmb IAmb 16 55 13.8
comp=Z,35nm,0.9s
PV03 **Paradox Valley** **56.46 331** IAmb IAmb 16 55 14.3
comp=Z,14nm,0.9s
PV18 **Skein Mesa, Pa** **56.48 331** IAmb IAmb 16 55 14.4
comp=Z,18nm,0.9s
PV12 **Saucer Basin,** **56.49 331** P **P** **16 54 58.7 -0.5**
PV12 **pP** **16 55 12.4 -0.2**
PV12 IAmb IAmb 16 55 14.2
comp=Z,24nm,1.1s
PV11 **David Mesa, Pa** **56.51 331** P **P** **16 54 58.0 -1.3**
PV11 IAmb IAmb 16 55 15.3
comp=Z,29nm,1.3s
F60A **Warwick** **56.52 5** P 16 54 58.7
baz=187
F63A **Nahmakanta, Br** **56.57 7** P 16 54 59.4
baz=191
BC3 **Big Chuckawall** **56.57 323** P 16 54 59.7
baz=134,SNR=5.1
PV20 **West Nyswonger** **56.59 331** P **P** **16 54 58.8 -1.0**
ECSD **EROS Data Cent** **56.62 344** P 16 54 57.9
baz=158,SNR=8.2
ECSD **EROS Data Cent** **56.62 344** IAmb IAmb 16 54 58.5
comp=Z,11nm,0.8s
PV22 **Blue Mesa, Par** **56.65 331** P **P** **16 54 59.3 -1.1**
IRM **Iron Mountain** **56.74 323** P 16 55 00.9
baz=135,SNR=6.3
F42A **Maple Grove Fa** **56.79 352** IAmb IAmb 16 55 00.3
comp=Z,28nm,0.8s
F64A **Sherman** **56.83 8** P 16 55 01.3
baz=191,SNR=7.7
F64A **Sherman** **56.83 8** P **P** **16 55 00.9 -0.2**
F64A IAmb IAmb 16 55 02.5
comp=Z,30nm,0.8s
E56A **St. Veronique** **56.90 2** P 16 55 00.7
baz=184,SNR=9.5
E46A **Sault Ste Mari** **56.94 355** IAmb IAmb 16 55 00.7
comp=Z,25nm,0.8s
SPMN **Marine on St.** **57.10 348** P 16 55 01.4
baz=163,SNR=5.5
E61A **Lac Etchemin** **57.12 6** P 16 55 03.6
baz=189
TPFO **Pinon Flats** **57.14 322** P 16 55 03.4
baz=134
PFO **Pinyon Flats O** **57.15 322** P **P** **16 55 03.6 -0.2**
comp=Z,3.4nm,0.8s,baz=121,slow=5.0,SNR=4.8
PFO **Pinyon Flats O** **57.15 322** *ce*P **P** **16 55 03.0 -0.8**
PFO **Pinyon Flats O** **57.15 322** P **P** **16 55 03.3 -0.5**
E43A **Lone Tree Farm** **57.24 353** IAmb IAmb 16 55 02.6
comp=Z,14nm,0.7s
D55A **Sainte-Anne-du** **57.36 2** P 16 55 03.6
baz=183,SNR=6.8
E63A **Oxbow** **57.36 8** P 16 55 05.2
baz=191,SNR=5.6
E63A **Oxbow** **57.37 8** IAmb IAmb 16 55 05.7
comp=Z,19nm,0.7s
LMN **Caledonia Moun** **57.39 11** IAmb IAmb 16 55 06.0
comp=Z,38nm,1.0s
D56A **ZEC Mazanza, M** **57.41 3** P 16 55 04.3
baz=184
E64A **Bridgewater** **57.44 8** P 16 55 05.8
baz=192,SNR=5.6
GMRC **Granite Mounta** **57.48 323** P 16 55 06.1
baz=135,SNR=6.2
KNB **Kanab** **57.51 327** IAmb IAmb 16 55 08.9
comp=Z,26nm,1.1s
D60A **Saint Jean D'O** **57.56 6** P 16 55 06.7
baz=188
PKCU **Pink Cliffs** **57.56 328** IAmb IAmb 16 55 23.8
comp=Z,32nm,1.0s
D58A **Chemin du LacG** **57.57 4** P 16 55 05.9
baz=186,SNR=8.0
PQI **Presque Isle** **57.66 8** P **P** **16 55 07.0 0.0**
O20A **White River Ci** **57.69 333** P 16 55 07.2
baz=144,SNR=5.9
LATQ **La Tuque** **57.87 4** P 16 55 07.8
baz=186
HEC **Hector Ludlow** **57.91 323** P 16 55 09.5
baz=134,SNR=5.9
D61A **St Aubert, Com** **57.92 6** P 16 55 09.2
baz=189,SNR=5.3
SUSD **Miller** **57.94 342** P 16 55 07.7
baz=156
D63A **Stockholm** **58.01 8** P 16 55 09.7
baz=192,SNR=6.9
SZCU **Shurtz Canyon** **58.08 327** IAmb IAmb 16 55 12.8
comp=Z,12nm,1.0s
Q16A **Castle Valley** **58.11 330** IAmb IAmb 16 55 11.7
comp=Z,20nm,1.2s
D41A **Chassel** **58.12 352** IAmb IAmb 16 55 25.6
comp=Z,31nm,0.9s
CCUT **Cedar City** **58.20 327** P **P** **16 55 12.0 +0.7**
P17A **Butcher Ranch,** **58.33 331** IAmb IAmb 16 55 26.9
comp=Z,15nm,1.0s
VLDQ **Val d'Or** **58.41 0** IAmb IAmb 16 55 32.6
comp=Z,20nm,1.3s
SHPR **Sheep Range** **58.42 325** P **P** **16 55 12.4 -0.3**
SHPR IAmb IAmb 16 55 28.4
comp=Z,13nm,1.0s
F33A **5 Mile Ranch,** **58.49 345** IAmb IAmb 16 55 11.6
comp=Z,20nm,0.8s
RWWY **Rawlins** **58.51 335** P **P** **16 55 13.1 -0.3**
RWWY **pP** **16 55 24.9 -2.0**
TCRU **Three Creeks R** **58.51 329** IAmb IAmb 16 55 15.6
comp=Z,11nm,0.7s
BATG **Bathurst New B** **58.55 10** IAmb IAmb 16 55 13.9
comp=Z,23nm,0.8s
RDMU **Red Mountain** **58.64 332** IAmb IAmb 16 55 14.4
comp=Z,11nm,0.8s
EDW2 **Edwards Air Fo** **58.94 322** P 16 55 16.3
baz=133,SNR=5.4
K22A **Casper** **59.02 336** P 16 55 16.1
baz=147
K22A **Casper** **59.03 336** IAmb IAmb 16 55 31.2
comp=Z,11nm,0.9s
LRMC **Laurel Mtn Rad** **59.16 323** P 16 55 17.9
baz=133
RSSD **Black Hills** **59.33 338** P 16 55 18.4
baz=150
RSSD **Black Hills** **59.33 338** P **P** **16 55 18.1 -0.8**
RSSD pmax pmax
comp=Z,11nm,1.0s
RSSD **Black Hills** **59.33 338** P **P** **16 55 18.1 -0.8**
RSSD IAmb IAmb 16 55 34.0
comp=Z,11nm,0.9s
TPNV **Topopah Spring** **59.34 325** P 16 55 19.4
baz=135,SNR=5.4
FURC **Furnace Creek,** **59.36 324** P 16 55 19.4
baz=134
MPMC **Manual Prospec** **59.44 323** P 16 55 19.0
baz=134
EYMN **Ely** **59.46 350** P 16 55 17.6
baz=165
ISA **Isabella, Lake** **59.76 322** P 16 55 22.7
baz=133
ISA **Isabella, Lake** **59.76 322** IAmb IAmb 16 55 24.2
comp=Z,16nm,1.2s
DUG **Dugway, Tooele** **59.90 330** P 16 55 22.8
baz=140,SNR=14
DUG **Dugway, Tooele** **59.90 330** IAmb IAmb 16 55 23.9
comp=Z,14nm,0.8s
TCUT **Toone Canyon** **59.93 331** P **P** **16 55 22.7 -0.5**
TCUT IAmb IAmb 16 55 24.9
comp=Z,24nm,1.1s
R11A **Troy Canyon, C** **59.97 326** P 16 55 23.7
baz=136,SNR=12
CWC **Cottonwood Cre** **60.05 323** P 16 55 24.0
baz=133
MATQ **Matagami** **60.05 0** P 16 55 21.7
baz=180,SNR=9.6

PKM **Mcpherson Peak** **60.06 321** P 16 55 25.3
baz=131
B35A **Bob, Littlefor** **60.28 348** IAmb IAmb 16 55 24.1
comp=Z,16nm,0.6s
HWUT **Hardware Ranch** **60.38 332** IAmb IAmb 16 55 26.4
comp=Z,21nm,0.9s
BW06 **Boulder Array** **60.40 334** P 16 55 25.0
baz=144
PDAR **Pinedale Array** **60.40 334** P **P** **16 55 24.8 -1.5**
comp=Z,3.6nm,0.8s,baz=130,slow=7.6,SNR=27
PDAR **Pinedale Array** **60.40 334** P **P** **16 55 24.3 -2.0**
SPUT **South Promonto** **60.57 331** P **P** **16 55 26.3 -1.2**
AGMN **Agassiz Nation** **60.69 346** P 16 55 26.9
baz=160,SNR=23
TAOE **Nuku Hiva Isla** **61.18 266** *e*S **S** **17 03 53.0 +4.3**
comp=Z,215nm,32.1s
TAOE *e*LR LR 17 13 42.0
comp=Z,3μm,32.1s
MDND **Maddock** **61.22 344** P 16 55 31.1
baz=156
MDND **Maddock** **61.23 344** P **P** **16 55 31.1 -0.5**
REDW **Red Top Meadow** **61.44 333** IAmb IAmb 16 55 36.6
comp=Z,12nm,1.0s
ELK **Elko** **61.54 328** P **P** **16 55 33.7 -0.4**
comp=Z,5.1nm,0.8s,baz=127,slow=2.8,SNR=21
LHV **Little Huntoon** **61.54 324** IAmb IAmb 16 55 34.9
comp=Z,11nm,0.7s
NVAR **Mina Array Bea** **61.54 325** P **P** **16 55 33.8 -0.4**
comp=Z,5.6nm,0.8s,baz=135,slow=6.7,SNR=37
NVAR **Mina Array Bea** **61.54 325** P **P** **16 55 34.0 -0.2**
KVN **Kaiserville** **61.86 325** P **P** **16 55 35.7 -0.6**
KVN pmax pmax
comp=Z,8.0nm,1.2s
KVN **Kaiserville** **61.86 325** P **P** **16 55 35.7 -0.6**
RLMT **Red Lodge** **62.18 335** P 16 55 37.2
baz=145,SNR=5.6
DRLN **Deer Lake** **62.23 15** P **P** **16 55 37.9 -0.4**
YERR **Yerington** **62.46 325** P **P** **16 55 40.0 -0.3**
YERR IAmb IAmb 16 55 42.5
comp=Z,32nm,1.4s
ULM **Lac du Bonnet** **62.53 347** *d* iP **P** **16 55 38.8 -1.4**
comp=Z,43nm,0.7s,baz=162,slow=6.9,SNR=72
ULM **Lac du Bonnet** **62.53 347** *d* iP **P** **16 55 38.5 -1.8**
PNTR **Pine Nut** **62.73 324** P **P** **16 55 42.0 -0.2**
YHL **Hebgen Lake** **62.77 334** P **P** **16 55 42.4 0.0**
YHL IAmb IAmb 16 55 44.7
comp=Z,18nm,0.7s
VCNR **Virginia City** **62.90 325** P **P** **16 55 43.5 +0.3**
PAHR **Pah Rah Range** **63.03 325** IAmb IAmb 16 55 46.5
comp=Z,19nm,1.0s
HLID **Hailey** **63.23 331** P 16 55 45.1
baz=139,SNR=7.4
BCYI **Bear Canyon** **63.33 332** P **P** **16 55 45.3 -0.8**
BOZ **Bozeman (W)** **63.55 334** P 16 55 46.7
baz=143,SNR=5.7
BEKR **Beckworth** **63.69 325** P **P** **16 55 47.7 -0.8**
MFID **Camas Ranch** **63.80 330** P **P** **16 55 47.7 -1.3**
MFID IAmb IAmb 16 55 50.0
comp=Z,17nm,1.0s
ORV **Oroville** **64.14 324** P **P** **16 55 50.9 -0.3**
ORV pmax pmax
comp=Z,36nm,1.0s
ORV **Oroville** **64.14 324** P **P** **16 55 50.9 -0.3**
ORV IAmb IAmb 16 55 53.7
comp=Z,36nm,1.0s
O03E **Paynes Creek** **64.80 324** P 16 55 54.5
baz=131
MOD **Modoc Plateau** **65.04 326** IAmb IAmb 16 55 59.1
comp=Z,18nm,0.9s
O02D **Mt. Diablo Mer** **65.30 324** P 16 55 57.8
baz=130
KCPM **Cahto Peak** **65.45 323** IAmb IAmb 16 56 03.3
comp=Z,50nm,1.2s
MSO **Missoula** **65.52 334** P 16 56 00.1
baz=141,SNR=6.1
MSO **Missoula** **65.52 334** P **P** **16 55 59.5 -0.6**
MSO IAmb IAmb 16 56 02.0
comp=Z,17nm,1.0s
N02D **Trinity Center** **65.77 324** P 16 56 00.5
baz=131
M04C **Macdoel** **65.81 325** P 16 56 01.8
baz=132,SNR=8.8
KMRM **Mail Ridge** **65.87 323** IAmb IAmb 16 56 05.5
comp=Z,36nm,1.1s
K05A **Summer Lake** **65.92 327** IAmb IAmb 16 56 25.6
comp=Z,32nm,1.1s
M02C **Callahan** **66.12 325** P 16 56 03.0
baz=131
I07A **Izee** **66.13 329** IAmb IAmb 16 56 06.3
comp=Z,14nm,0.9s
YBH **Yreka Blue Hor** **66.26 325** P **P** **16 56 03.8 -1.2**
comp=Z,7.3nm,0.8s,baz=98,slow=3.2,SNR=20
KHMM **Horse Mountain** **66.30 324** IAmb IAmb 16 56 33.7
comp=Z,31nm,1.1s
L04D **Klamath Falls** **66.36 326** P 16 56 04.9
baz=132,SNR=6.6
F10A **Beach Ranch, E** **66.36 331** P **P** **16 56 05.4 -0.2**
F10A IAmb IAmb 16 56 26.9
comp=Z,13nm,0.8s
J05D **Fort Rock, OR** **66.48 327** P 16 56 06.3
baz=133,SNR=7.0
PINE **Pine Mountain** **66.67 328** IAmb IAmb 16 56 29.1
comp=Z,20nm,0.9s
J04D **Umpqua Nationa** **66.93 326** P 16 56 08.9
baz=132,SNR=5.9
L02E **Cave Junction** **67.05 325** P 16 56 09.9
baz=130
I05D **Terrebonne, OR** **67.26 328** P 16 56 11.1
baz=133
K02D **Willamette Mer** **67.43 325** P 16 56 12.1
baz=131
I04A **Tendick Farm,** **67.46 327** P 16 56 11.5
baz=132
G05D **Wamic, OR** **67.86 328** P 16 56 15.1
baz=133
NEW **Newport** **68.01 333** P **P** **16 56 14.5 -1.4**
comp=Z,6.5nm,0.7s,baz=127,slow=8.8,SNR=8.6
NEW **Newport** **68.01 333** P 16 56 15.4
baz=138
E07A **Sunnyside** **68.05 330** IAmb IAmb 16 56 18.3
comp=Z,19nm,0.8s
FFC **Flin Flon** **68.10 345** P **P** **16 56 14.4 -1.8**
FFC pmax pmax
comp=Z,13nm,1.0s
FFC **Flin Flon** **68.10 345** P **P** **16 56 14.4 -1.8**
TBI **Tubuai** **68.94 249** *e*S **S** **17 05 25.2 +1.6**
comp=Z,171nm,23.5s
TBI **Tubuai** **68.94 249** *e*LR LR 17 17 14.1
comp=Z,1μm,31.5s,baz=93
TBI **Tubuai** **68.94 249** *e*T T 18 10 31.7
comp=Z,12nm,0.3s
B08A **Colville Reser** **69.08 332** P **P** **16 56 21.8 -0.8**
LON **Longmire** **69.15 329** P **P** **16 56 22.0 -1.1**
LON pmax pmax
comp=Z,6.0nm,0.9s
LON **Longmire** **69.15 329** P **P** **16 56 22.0 -1.1**
PPT2 **Papeete2** **69.43 255** *e*S **S** **17 05 33.7 +4.0**
comp=Z,165nm,24.2s
PPT2 **Papeete2** **69.43 255** *e*LR LR 17 17 26.7
comp=Z,2μm,26.0s,baz=97
PPT **Papeete** **69.43 255** LR LR 17 18 52.0
comp=Z,581nm,18.9s,baz=88,slow=29
D05A **Enumclaw** **69.54 330** IAmb IAmb 16 56 28.1
comp=Z,50nm,1.4s
B06A **Marblemount** **70.21 331** IAmb IAmb 16 56 30.7
comp=Z,17nm,0.8s
FCC **Fort Churchill** **70.30 351** IAmb IAmb 16 56 29.3
comp=Z,28nm,0.8s
D03D **Eldon** **70.32 329** P 16 56 29.0
baz=132
B05A **Bryant** **70.33 330** P 16 56 29.2
baz=134
A05A **Maple Falls** **70.83 331** IAmb IAmb 16 56 34.8
comp=Z,22nm,0.9s
VNA3 **Neumayer Olymp** **73.17 162** P **P** **16 56 47.8 +0.8**
VNA3 **Neumayer Olymp** **73.17 162** pP pP 16 57 02.6 +1.8
VNA1 **Neumayer--Stat** **73.44 161** P **P** **16 56 49.9 +1.4**
VNA1 **Neumayer--Stat** **73.44 161** pP pP 16 57 05.2 +2.8
VNA2 **Neumayer--Watz** **73.79 161** P **P** **16 56 51.2 +0.6**
VNA2 **Neumayer--Watz** **73.79 161** pP pP 16 57 07.1 +2.6
LIC **Lamto** **74.55 81** *e*P **P** **16 56 56.5 +0.4**
comp=Z,42nm,1.1s
TIC **Toumodi** **74.65 80** *e*P **P** **16 56 57.0 +0.3**
DBIC **Dimbokro** **74.81 80** P **P** **16 56 58.3 +0.7**
comp=Z,13nm,0.6s,baz=226,slow=5.2,SNR=18
DBIC LR LR 17 27 42.0
comp=Z,654nm,20.7s,baz=226,slow=34
DBIC **Dimbokro** **74.81 80** P **P** **16 56 57.6 0.0**
DBIC IAmb IAmb 16 56 59.0
comp=Z,21nm,0.8s
KIC **Kosan Boka** **74.86 80** *e*P **P** **16 56 58.5 +0.6**
comp=Z,38nm,0.8s
SNAA **Sanae** **75.39 162** P **P** **16 57 00.5 +0.5**
SNAA **Sanae** **75.39 162** pP pP 16 57 16.6 +2.8
SNAA **Sanae** **75.39 162** *d* iP **P** **16 56 59.8 -0.2**
SNAA pmax pmax
comp=Z,27nm,1.0s
SNAA **Sanae** **75.39 162** P **P** **16 57 00.1 +0.2**
SNAA IAmb IAmb 16 57 01.9
comp=Z,28nm,1.0s
KOWA **Kowa** **77.45 73** P **P** **16 57 13.4 +0.8**
comp=Z,36nm,0.6s,baz=257,slow=5.9,SNR=93
KOWA **Kowa** **77.45 73** P **P** **16 57 12.8 +0.3**
YKA **Yellowknife Ar** **78.15 344** P **P** **16 57 14.2 -1.2**
comp=Z,8.0nm,0.6s,baz=139,slow=6.3,SNR=166
NVL **N'lazarevskaya** **80.06 160** *e*P P 16 57 41.6 +16
NVL pmax pmax
comp=Z,21nm,1.0s
MORF **Marmelete** **80.42 49** *e*P **P** **16 57 30.2 +1.7**
comp=Z,49nm,1.3s
DLBC **Dease Lake** **80.58 335** P **P** **16 57 27.9 -0.9**
DLBC pP **pP** **16 57 43.8 +0.8**
PNCL **Nicolau / Gran** **80.80 48** *e*P **P** **16 57 31.9 +1.5**
MESJ **Messejana** **80.93 49** *e*P **P** **16 57 32.7 +1.6**
PCVE **Castro Verde** **80.99 49** *e*P **P** **16 57 33.2 +1.8**
comp=Z,26nm,2.0s
PBEJ **Beja** **81.26 49** *e*P **P** **16 57 35.7 +2.8**
comp=Z,8.4nm,1.6s
PMTG **Montargil** **81.36 48** *e*P **P** **16 57 34.4 +1.0**
comp=Z,24nm,2.1s
PCAS **Casmilo, Conde** **81.52 47** *e*P **P** **16 57 38.3 +4.1**
PBAR **Barrancos** **81.92 49** *e*P **P** **16 57 38.3 +2.0**
comp=Z,31nm,1.7s
PMRV **Marv??o** **82.09 48** *e*P **P** **16 57 39.0 +1.7**
PCBR **Castelo Branco** **82.18 47** *e*P **P** **16 57 39.7 +2.0**
PVIS **Viseu** **82.19 46** *e*P **P** **16 57 38.4 +0.6**
MTE **Manteigas** **82.33 47** *e*P **P** **16 57 40.4 +1.9**
comp=Z,38nm,1.9s
TOA0 **Torodi Ar. Sit** **82.53 75** IAmb IAmb 16 58 01.5
comp=Z,15nm,0.8s
TORD **Torodi Ar. Bea** **82.53 75** P **P** **16 57 40.2 +0.2**
comp=Z,10nm,0.7s,baz=289,slow=5.9,SNR=40
TORD **Torodi Ar. Bea** **82.53 75** P **P** **16 57 40.0 0.0**
BESE **Bessie Mountai** **82.72 334** IAmb IAmb 16 57 42.1
comp=Z,29nm,1.2s
PBRG **Braganca** **83.39 45** *e*P **P** **16 57 44.6 +0.6**
PAB **San Pablo** **84.35 48** P **P** **16 57 49.0 0.0**
PAB pmax pmax
comp=Z,9.0nm,0.9s
PAB **San Pablo** **84.35 48** P **P** **16 57 49.0 0.0**
ESDC **Sonseca Array** **84.68 48** P **P** **16 57 51.3 +0.7**
comp=Z,2.6nm,0.7s,baz=267,slow=5.6,SNR=13
ESDC **Sonseca Array** **84.68 48** P **P** **16 57 50.1 -0.5**
RES **Resolute Bay** **85.72 356** P **P** **16 57 53.1 -1.8**
comp=Z,2.5nm,0.6s,baz=179,slow=7.5,SNR=14
RES pP **pP** **16 58 08.7 -0.4**
comp=Z,9.7nm,1.1s,baz=182,slow=8.2,SNR=9.6
VNDA **Vanda** **85.97 191** P **P** **16 57 57.4 +1.1**
comp=Z,4.7nm,1.0s,baz=143,slow=3.7,SNR=17
VNDA LR LR 17 28 34.1
comp=Z,193nm,21.9s,baz=132,slow=30
VNDA **Vanda** **85.97 191** P **P** **16 57 57.1 +0.7**
TABL **Table Mountain** **86.42 334** IAmb IAmb 16 58 02.2
comp=Z,12nm,0.9s
CTGM **Chitina Glacie** **86.76 334** IAmb IAmb 16 58 02.1
comp=Z,13nm,1.0s
CTG **Chitna Glacier** **86.76 334** P 16 58 00.1
baz=118
SUMG **Summit** **86.86 11** ⇓ *i* P **P** **16 58 00.9 -0.2**
SUMG IAmb IAmb 16 58 01.8
comp=Z,273nm,2.1s
SUMG **Summit** **86.86 11** P **P** **16 58 00.4 -0.7**
SUMG pP **pP** **16 58 15.0 -0.3**
BARN **Barnard Glacie** **86.94 334** P **P** **16 58 00.5 -1.0**
BARN IAmb IAmb 16 58 03.0
comp=Z,30nm,1.4s
BARN pP **pP** **16 58 15.3 -0.4**
TULEG **Thule** **87.11 2** IAmb IAmb 16 58 04.2
comp=Z,24nm,1.2s
CRQE **Cirque** **87.42 334** P 16 58 03.0
baz=117
DAWY **Dawson** **87.50 337** IAmb IAmb 16 58 04.9
comp=Z,12nm,0.8s
MCARA **McCarthy VSAT** **87.68 334** P 16 58 04.3
baz=117
VRDI **Verde Repeater** **87.79 334** IAmb IAmb 16 58 20.8
comp=Z,17nm,0.9s
INK **Inuvik** **87.82 342** P **P** **16 58 04.3 -1.0**
comp=Z,19nm,1.0s,baz=116,slow=6.1,SNR=21
INK pP **pP** **16 58 19.6 +0.1**
comp=Z,20nm,1.0s,baz=71,slow=11,SNR=8.5
INK **Inuvik** **87.82 342** IAmb IAmb 16 58 07.0
comp=Z,26nm,1.1s
L27K **Beaver Creek,** **87.96 336** P **P** **16 58 05.0 -1.2**
L27K IAmb IAmb 16 58 08.1
comp=Z,25nm,1.1s
L27K **Beaver Creek,** **87.96 336** P 16 58 05.5
baz=118
GLB **Gilahina Butte** **88.04 334** IAmb IAmb 16 58 07.7
comp=Z,12nm,0.8s
TAM **Tamanrasset** **88.17 67** P **P** **16 58 09.4 +1.2**
BMRM **Bremner River** **88.18 333** P 16 58 06.7
baz=116
N25K **Chitina, Valde** **88.45 334** P 16 58 08.4
baz=116
K27K **Chicken** **88.51 337** P 16 58 08.4
baz=118
EGAK **Eagle** **88.51 338** P **P** **16 58 07.4 -1.2**
EGAK **Eagle** **88.51 338** P 16 58 07.5
baz=119
MENT **Mentasta** **88.67 335** IAmb IAmb 16 58 31.3
comp=Z,10nm,1.0s
KLU **Klutina** **88.98 334** P 16 58 09.7
baz=114,SNR=12
DOT **Dot Lake** **89.12 336** IAmb IAmb 16 58 27.6
comp=Z,17nm,0.9s
NEEM **North Greenlan** **89.19 6** ⇓ *i* P **P** **16 58 12.1 +0.1**
NEEM IAmb IAmb 16 58 14.0
comp=Z,64nm,0.8s
SCRK **Sand Creek** **89.24 336** P 16 58 11.1
baz=116
SCRK **Sand Creek** **89.24 336** IAmb IAmb 16 58 13.7
comp=Z,18nm,1.1s
SCO **Scoresbysund** **89.25 16** *i* P **P** **16 58 11.5 -0.5**
SCO IAmb IAmb 16 58 13.0
comp=Z,7.1nm,0.8s
M24K **Tolsona, Glenn** **89.34 334** P 16 58 12.2
baz=114,SNR=8.1
M24K **Tolsona, Glenn** **89.34 334** P **P** **16 58 11.5 -1.2**
PAX **Paxson** **89.40 335** P 16 58 11.5
baz=115,SNR=16
SYO **Syowa Base** **89.68 161** ⇑ *e*X **P** **16 58 16.7 +2.5**
SYO **Syowa Base** **89.68 161** ⇑ *e*X P 16 58 21.4 +7.2
SCM **Sheep Creek Mo** **89.73 334** IAmb IAmb 16 58 30.1
comp=Z,17nm,1.0s
SML **Sawmill** **90.16 333** P 16 58 15.2
baz=112,SNR=6.0
SML **Sawmill** **90.16 333** IAmb IAmb 16 58 31.8
comp=Z,13nm,0.8s
WAT6 **Susitna Watana** **90.20 334** P 16 58 15.6
baz=113,SNR=14
PRP **Porcupine Dome** **90.50 337** P 16 58 17.1
baz=115,SNR=9.2
BRSE **Bradley Lake S** **90.52 331** P 16 58 17.1
baz=110
RC01 **Rabbit Creek A** **90.53 333** P 16 58 16.6
baz=111
HDA **Harding Lake** **90.59 336** P 16 58 17.1
baz=114,SNR=6.9
HDA P 16 58 17.1
baz=114,SNR=6.9
WAT2 **Susitna Watana** **90.71 334** P 16 58 17.9
baz=112,SNR=12
IL31 **90.72 336** IAmb IAmb 16 58 22.3
comp=Z,8.3nm,1.1s
ILAR **Eielson Array** **90.72 336** P **P** **16 58 17.7 -1.3**
comp=Z,3.6nm,0.7s,baz=157,slow=2.1,SNR=20
ILAR pP **pP** **16 58 32.6 -0.6**
comp=Z,5.2nm,0.9s,baz=153,slow=3.4,SNR=11
ILAR LR LR 17 43 21.8
comp=Z,61nm,18.3s,baz=122,slow=38
ILAR **Eielson Array** **90.72 336** P **P** **16 58 17.3 -1.7**

ILAR					pP	**pP**	**16 58 32.3**	**-0.9**	
CCB	**Clear Creek Bu**	**91.03**	**336**		IAmb	IAmb	16 58 21.7		
	comp=Z,8.7nm,0.9s								
POKR	**Poker Plat Res**	**91.07**	**337**		P		16 58 20.4		
	baz=113								
WRH	**Wood River Hil**	**91.08**	**336**		P	**P**	**16 58 19.0**	**-1.6**	
WRH					IAmb	IAmb	16 58 36.5		
	comp=Z,11nm,0.8s								
SUA	**Susitna One**	**91.11**	**333**		P		16 58 20.2		
	baz=110								
SUA	**Susitna One**	**91.11**	**333**		IAmb	IAmb	16 58 21.6		
	comp=Z,7.3nm,0.8s								
COLA	**College**	**91.14**	**336**	*c i*	P	**P**	**16 58 18.7**	**-2.2**	
COLA					pmax	pmax			
	comp=Z,17nm,1.0s								
MCK	**McKinley**	**91.14**	**335**		P		16 58 19.7		
	baz=112								
MCK	**McKinley**	**91.14**	**335**		IAmb	IAmb	16 58 21.9		
	comp=Z,7.4nm,0.9s								
CUT	**Chulitna**	**91.23**	**334**		P		16 58 20.0		
	baz=111								
NEA2	**Nenana**	**91.51**	**336**		P		16 58 21.4		
	baz=112,SNR=11								
BWN	**Browne**	**91.52**	**335**		P	**P**	**16 58 21.7**	**-1.0**	
BWN					pP	**pP**	**16 58 35.6**	**-1.4**	
TRF	**Thorofare Moun**	**91.61**	**335**		IAmb	IAmb	16 58 23.9		
	comp=Z,11nm,0.8s								
TRF	**Thorofare Moun**	**91.61**	**335**		P		16 58 21.8		
	baz=110,SNR=6.6								
SKT	**Skwentna**	**91.64**	**333**		P		16 58 22.1		
	baz=110,SNR=8.9								
SKT	**Skwentna**	**91.64**	**333**		IAmb	IAmb	16 58 24.1		
	comp=Z,13nm,0.8s								
I23K	**Minto, Yukon-K**	**91.83**	**336**		IAmb	IAmb	16 58 25.7		
	comp=Z,11nm,1.1s								
I23K	**Minto, Yukon-K**	**91.83**	**336**		P		16 58 22.9		
	baz=111,SNR=8.8								
KTH	**Kantishna Hill**	**91.91**	**335**		IAmb	IAmb	16 58 26.1		
	comp=Z,12nm,0.8s								
BPAW	**Bear Paw Mtn.**	**92.12**	**335**		P	**P**	**16 58 24.1**	**-1.4**	
BPAW					IAmb	IAmb	16 58 26.1		
	comp=Z,11nm,0.8s								
BPAW	**Bear Paw Mtn.**	**92.12**	**335**		P		16 58 23.9		
	baz=110,SNR=12								
PPLA	**Purkeypile**	**92.23**	**334**		P		16 58 24.8		
	baz=109								
MLY	**Manley**	**92.34**	**336**		P		16 58 24.9		
	baz=110,SNR=15								
MLY	**Manley**	**92.34**	**336**		IAmb	IAmb	16 58 27.0		
	comp=Z,8.1nm,0.8s								
CHUM	**Lake Minchumin**	**92.60**	**335**		P		16 58 26.1		
	baz=109								
COLD	**Coldfoot**	**92.89**	**338**		P		16 58 28.7		
	baz=110								
TOLK	**Toolik Lake Re**	**93.17**	**340**		P		16 58 29.2		
	baz=111								
DAG	**Danmarks Havn**	**93.54**	**11**	*i*	P	**P**	**16 58 30.2**	**-1.6**	
DAG					IAmb	IAmb	16 58 31.4		
	comp=Z,4.9nm,0.9s								
KEST	**Kesra**	**93.96**	**55**		LR	LR	17 39 43.3		
	comp=Z,392nm,21.0s,baz=246,slow=35								
NOR	**Nord**	**96.35**	**7**	*e*		**P**	**16 58 48.2**	**+3.5**	
	baz=278,slow=6.9								
NOR				*eP*		**pP**	**16 58 54.4**	**-4.5**	
NOR					IAML		16 59 22.3		
	comp=Z,1.3nm,0.4s								
MAW	**Mawson**	**97.14**	**166**		LR	LR	17 41 41.7		
	comp=Z,93nm,19.3s,baz=229,slow=35								
RDOG	**Red Dog Mine**	**97.80**	**338**		IAmb	IAmb	16 58 54.8		
	comp=Z,5.4nm,0.6s								
NOA	**NORSAR Array B**	**98.78**	**30**		LR	LR	17 40 21.5		
	comp=Z,177nm,21.8s,baz=265,slow=33								
GERES	**GERESS Array B**	**98.98**	**42**		LR	LR	17 36 39.6		
	comp=Z,111nm,21.7s,baz=280,slow=31								
MSVF	**Nonsavu**	**99.82**	**250**		LR	LR	17 34 03.3		
	comp=Z,328nm,22.0s,baz=116,slow=29								
DZM	**Mont Dzumac**	**108.98**	**242**	*e*	SP	SP	17 13 28.6	-7.2	
	comp=Z,153nm,26.0s								
DZM	**Mont Dzumac**	**108.98**	**242**	*e*	LR	LR	17 35 51.4		
	comp=Z,566nm,24.4s								
H11N3	**WAKE ISLAND Hyl**	**16.97**	**287**		T	T	19 10 54.4		
	baz=92,slow=75,SNR=85								
H11N2	**WAKE ISLAND Hyl**	**16.99**	**287**		T	T	19 10 55.2		
	baz=92,slow=75,SNR=99								
H11N1	**WAKE ISLAND Hyl**	**16.99**	**287**		T	T	19 11 18.9		
	baz=92,slow=75,SNR=128								
H11S2	**WAKE ISLAND Hyl**	**17.12**	**285**		T	T	19 12 14.5		
	baz=92,slow=74,SNR=447								
H11S1	**WAKE ISLAND Hyl**	**17.12**	**285**		T	T	19 12 16.7		
	baz=92,slow=74,SNR=114								
H11S3	**WAKE ISLAND Hyl**	**17.14**	**285**		T	T	19 11 33.4		
	baz=92,SNR=100								
KIV	**Kislovodsk**	**119.24**	**45**	*i*	PKIKP	**PKiKP**	**17 04 07.0**	**+1.1**	
KIV					pmax	pmax			
	comp=Z,82nm,1.1s								
KIV					MLR	MLR			
	comp=Z,310nm,22.0s								
YAK	**Yakutsk**	**124.82**	**345**	*c i*	PKIKP	**PKiKP**	**17 04 17.0**	**+0.9**	
YAK					pmax	pmax			
	comp=Z,4.0nm,0.4s								
BRVK	**Borovoye**	**130.55**	**25**		pmax	pmax			
	comp=Z,25nm,1.2s								
ASAJ	**Asahikawa**	**131.59**	**321**		pPKP	pPKPdf	17 04 44.4	+0.4	
	comp=Z,14nm,1.0s,baz=298,slow=4.2,SNR=5.3								
ASAR	**Alice Springs**	**133.84**	**222**		PKP	**PKPdf**	**17 04 32.6**	**-1.6**	
	comp=Z,1.9nm,0.8s,baz=125,slow=2.0,SNR=14								
ASAR					pPKP	**pPKPdf**	**17 04 49.1**	**+0.2**	
	comp=Z,4.4nm,0.8s,baz=120,slow=2.2,SNR=12								
KLR	**Kul'dur**	**134.18**	**333**		PKP	**PKPdf**	**17 04 32.9**	**-1.1**	
	comp=Z,1.1nm,0.6s,baz=338,slow=3.3,SNR=3.7								
ZAA0	**Zalesovo Array**	**134.60**	**14**		PKPdf	**PKPdf**	**17 04 34.3**	**-0.4**	
ZALV	**Zalesovo Beam**	**134.60**	**14**		PKhKP	PKPpre	17 04 26.4		
	comp=Z,1.5nm,0.6s,baz=317,slow=4.5,SNR=5.4								
ZALV					PKP	**PKPdf**	**17 04 33.8**	**-0.9**	
	comp=Z,1.9nm,0.4s,baz=336,slow=1.6,SNR=12								
ZALV					pPKP	pPKPdf	17 04 49.2	-0.1	
	comp=Z,7.4nm,0.7s,baz=318,slow=2.0,SNR=8.1								
WRAB	**Tennant Creek**	**136.03**	**227**	*c i*	PKIKP	**PKiKP**	**17 04 39.6**	**-0.5**	
WRAB					pmax	pmax			
	comp=Z,14nm,2.5s								
WRAB	**Tennant Creek**	**136.03**	**227**			**PKPdf**	**17 04 38.4**	**0.0**	
WRA	**Warramunga Arr**	**136.03**	**226**		PKP	**PKPdf**	**17 04 38.1**	**-0.3**	
	comp=Z,4.5nm,0.8s,baz=133,slow=1.4,SNR=17								
WRA					pPKP	**pPKPdf**	**17 04 55.0**	**+1.9**	
	comp=Z,16nm,0.9s,baz=128,slow=1.7,SNR=24								
WRA	**Warramunga Arr**	**136.03**	**226**			**PKPdf**	**17 04 37.7**	**-0.7**	
WRA					pPKPdf	**pPKPdf**	**17 04 54.5**	**+1.4**	
USRK	**Ussuriysk Ar.**	**137.64**	**328**		PKP	**PKPdf**	**17 04 39.1**	**-1.5**	
	comp=Z,1.0nm,0.7s,baz=355,slow=3.1,SNR=4.6								
TLY	**Talaya**	**138.97**	**358**	*e*	PKIKP	**PKiKP**	**17 04 45.9**	**+0.8**	
TLY				*i*			17 04 54.7		
TLY					pmax	pmax			
	comp=Z,11nm,1.3s								
ZAK	**Zakamensk**	**140.28**	**359**	*e*	PKIKP	**PKPdf**	**17 04 44.8**	**-0.6**	
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.6s								
ULN	**Ulaanbaatar**	**142.57**	**354**		PKHKP	PKPpre	17 04 45.7		
ULN	**Ulaanbaatar**	**142.57**	**354**		PKPdf	**PKPdf**	**17 04 45.7**	**-4.0**	
SONM	**Songino Array**	**142.66**	**355**		PKhKP	PKPpre	17 04 44.9		
	comp=Z,2.1nm,0.5s,baz=323,slow=2.6,SNR=25								
SONM	**Songino Array**	**142.66**	**355**		PKHKP	PKPpre	17 04 44.3		
SONM	**Songino Array**	**142.66**	**355**			PKPpre	17 04 44.3		
FITZ	**Fitzroy Crossi**	**143.18**	**220**		PKhKP	PKPpre	17 04 48.1		
	comp=Z,5.9nm,0.9s,baz=178,slow=5.2,SNR=11								
FITZ	**Fitzroy Crossi**	**143.18**	**220**		PKPdf	PKPbc	17 04 47.9	-0.4	
KSRS	**Korea Array**	**144.48**	**323**		PKP	**PKPab**	**17 04 50.6**	**-0.8**	
	comp=Z,8.0nm,0.8s,baz=57,slow=3.3,SNR=24								
KSRS					pPKP	**pPKPdf**	**17 05 06.6**	**-1.2**	
	comp=Z,26nm,0.9s,baz=55,slow=3.4,SNR=17								
KS19	**Wonju Array Si**	**144.48**	**323**			**PKPab**	**17 04 49.8**	**-1.7**	
KSAR	**Wonju Array Be**	**144.51**	**323**		PKHKP	PKPpre	17 04 49.8		
KSAR	**Wonju Array Be**	**144.51**	**323**			**PKPab**	**17 04 49.8**	**-1.8**	
WMQ	**Urumqi**	**144.62**	**18**	*e*	PKP	PKPbc	17 04 52.1	0.0	
WMQ					LR	LR			
	comp=Z,410nm,20.1s								
WMQ					LR	LR			
	comp=Z,290nm,24.5s								
WMQ	**Urumqi**	**144.62**	**18**		sP	PKPdf	17 04 52.0	-1.3	
DL2	**Dalian**	**146.76**	**331**		PKPbc	**PKPdf**	**17 04 56.8**	**-0.2**	
DL2					pPKP	**pPKPdf**	**17 05 12.0**	**+0.3**	
DL2					sPKP		17 05 18.4		
FAKI	**Fak Fak**	**147.03**	**248**			**PKPdf**	**17 04 58.9**	**+0.7**	
BJI	**Beijing**	**148.04**	**339**		PKPbc	**PKPbc**	**17 05 00.8**	**-1.4**	
BJT	**Baijiatuau**	**148.07**	**339**		PKIKP	**PKPdf**	**17 05 00.1**	**+1.0**	
BJT	**Baijiatuau**	**148.07**	**339**		PKPbc	**PKPdf**	**17 05 00.1**	**+1.0**	
HHC	**Hu-ho-hao-te**	**148.66**	**346**	*e*	PKPbc	**PKPdf**	**17 05 01.2**	**+1.0**	
HHC					sPKP		17 05 18.6		
HHC					SKS	**SKSdf**	**17 11 59.4**	**-5.5**	
HHC					AMB	AMB			
	comp=Z,120nm,9.5s								
HHC					LR	LR			
	comp=Z,170nm,21.3s								
HHC					LR	LR			
	comp=Z,170nm,21.4s								
HHC					LR	LR			
	comp=Z,170nm,20.8s								
SIJI	**Sorong**	**148.74**	**250**		PKPbc	**PKPbc**	**17 05 04.5**	**-0.3**	
	comp=Z,7.2nm,0.8s,baz=28,slow=9.9,SNR=4.5								
SOEI	**Soe**	**150.02**	**228**			**PKPbc**	**17 05 07.8**	**-0.3**	
BATI	**Baumata**	**150.16**	**227**		PKPbc	**PKPbc**	**17 05 08.3**	**-0.1**	
	comp=Z,6.5nm,0.4s,baz=184,slow=4.6,SNR=3.9								
TIA	**Tai'an**	**151.00**	**334**		PKPbc	**PKPdf**	**17 05 03.9**	**0.0**	
GTA	**Gaotai**	**151.20**	**3**		PKPbc	**PKPdf**	**17 05 04.6**	**+0.3**	
GTA					PKPab	**pPKPbc**	**17 05 24.9**	**0.0**	
GTA					LR	LR			
	comp=Z,97nm,20.7s								
GTA					LR	LR			
	comp=Z,160nm,21.4s								
GTA					LR	LR			
	comp=Z,150nm,17.8s								
NJ2	**Nanjing**	**153.53**	**326**	*e*	PKPbc	**PKPdf**	**17 05 05.6**	**-2.2**	
LZH	**Lanzhou**	**154.53**	**356**	*e*	PKPbc	**PKPdf**	**17 05 08.0**	**-1.3**	
LZH					pPKP	pPKPdf	17 05 26.4	+2.3	
LZH					sPKP		17 05 31.8		
LZH					SKKS		17 15 52.6		
LZH					AMB	AMB			
	comp=Z,200nm,9.3s								
LZH					LR	LR			
	comp=Z,220nm,19.5s								
LZH					LR	LR			
	comp=Z,220nm,17.9s								
LZH					LR	LR			
	comp=Z,270nm,19.5s								
XAN	**Xi'an**	**155.78**	**346**		PKP	**PKPdf**	**17 05 10.4**	**-0.5**	
CD2	**Chengdu**	**159.68**	**356**		PKP	**PKPdf**	**17 05 14.3**	**-1.6**	
GYA	**Guiyang**	**163.57**	**345**	*e*	PKP	**PKPdf**	**17 05 23.9**	**+3.8**	
CHTO	**Chiang Mai**	**171.28**	**19**		PKIKP	**PKPdf**	**17 05 24.6**	**-1.1**	
CHTO	**Chiang Mai**	**171.28**	**19**			**PKPdf**	**17 05 24.6**	**-1.1**	
CMAR	**Chiang Mai Arr**	**171.61**	**20**		PKP	**PKPdf**	**17 05 25.2**	**-0.7**	
	comp=Z,0.9nm,0.3s,baz=48,slow=0.5,SNR=7.5								
CMAR					pPKP	**pPKPdf**	**17 05 41.5**	**+0.9**	
	comp=Z,0.9nm,0.4s,baz=301,slow=2.1,SNR=4.2								
CMAR					PKPab	**PKPab**	**17 06 45.1**	**-1.9**	
	comp=Z,2.7nm,0.6s,baz=329,slow=5.1,SNR=7.9								
CMAR					pPKPab	**pPKPab**	**17 07 00.7**	**-0.7**	
	comp=Z,2.3nm,0.8s,baz=331,slow=5.8,SNR=3.3								

NEIC ***01*** *16:45:58.7±1.8,29°.2N±0°.2×43°.1W±0°.1,h10km±1km, mb4.6/25 Error ellipse: s-maj=28.3km s-min=19.8km az=189.0*

IDC ***01*** *16:45:58.0±0.8,29°.36N×42°.94W,h0km,mb4.1/24, mb1 4.2/24,mb1mx4.1/64,mbtmp4.1/24,MS3.8/2, Ms1 3.8/2,ms1mx3.2/33,Error ellipse: s-maj=23.7km s-min=14.9km az=6.0*

ISC 01 16:46:00.3±0.7,29.4N±0°.1×42.98W±0°.08,h14km,n75, σ0s78/66,mb4.5/44,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SADO	**Sadowa**	**32.38**	**308**	LR		LR	17 03 48.4	
	comp=Z,259nm,20.4s,baz=112,slow=33							
R53A	**Hurricane**	**33.37**	**296**	P		**P**	**16 52 37.1**	**-1.1**
ESDC	**Sonseca Array**	**33.51**	**62**	P		**P**	**16 52 38.9**	**-0.6**
	0.6nm,0.6s,baz=270,slow=7.4,SNR=2.5							
SFJD	**Kangerlussuaq**	**37.93**	**355**	LR		LR	17 05 19.5	
	comp=Z,79nm,20.9s,baz=164,slow=31							
KOWA	**Kowa**	**38.85**	**104**	P		**P**	**16 53 24.5**	**-0.7**
	0.5nm,0.3s,baz=323,slow=5.1,SNR=2.2							
146A	**Union**	**39.40**	**287**	P		P	16 53 25.8	-3.9
SUMG	**Summit**	**43.32**	**2**	P		**P**	**16 54 01.5**	**-0.4**
SUMG				IAmb		IAmb	16 54 07.4	
	comp=Z,8.0nm,0.9s							
KEST	**Kesra**	**44.12**	**68**	P		**P**	**16 54 09.8**	**+1.3**
	comp=Z,9.1nm,0.9s,baz=331,slow=13,SNR=4.2							
KEST	**Kesra**	**44.12**	**68**	P		**P**	**16 54 10.2**	**+1.7**
DAVA	**Damuels**	**44.25**	**51**	*eP*		**P**	**16 54 08.5**	**-0.9**
	comp=Z,15nm,1.4s							
TOA0	**Torodi Ar. Sit**	**44.36**	**102**	P		**P**	**16 54 10.2**	**-0.3**
TOA0				IAmb		IAmb	16 54 22.5	
	comp=Z,17nm,1.5s							
TORD	**Torodi Ar. Bea**	**44.36**	**102**	P		**P**	**16 54 09.4**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=303,slow=6.8,SNR=6.4							
TORD	**Torodi Ar. Bea**	**44.36**	**102**	P		**P**	**16 54 10.2**	**-0.2**
ULM	**Lac du Bonnet**	**44.58**	**313**	P		**P**	**16 54 11.4**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=104,slow=6.8,SNR=5.2							
ULM	**Lac du Bonnet**	**44.58**	**313**	P		**P**	**16 54 11.2**	**-0.6**
ULM				IAmb		IAmb	16 54 17.0	
	comp=Z,12nm,1.4s							
FETA	**Feichten**	**44.81**	**51**	*eP*		**P**	**16 54 14.0**	**+0.2**
	comp=Z,10nm,1.4s							
MOTA	**Moosalm**	**45.08**	**51**	*eP*		**P**	**16 54 16.6**	**+0.6**
	comp=Z,12nm,1.4s							
SQTA	**Sankt Quirin**	**45.15**	**51**	*eP*		**P**	**16 54 16.9**	**+0.3**
	comp=Z,8.7nm,1.6s							
FCC	**Fort Churchill**	**45.40**	**325**	P		**P**	**16 54 18.2**	**+0.1**
WATA	**Walderalm**	**45.41**	**51**	*eP*		**P**	**16 54 18.5**	**-0.1**
	comp=Z,8.0nm,1.4s							
WTTA	**Wattenberg**	**45.44**	**51**	*eP*		**P**	**16 54 19.3**	**+0.4**
	comp=Z,5.0nm,0.9s							
H10N2	**ASCENSION HYDR**	**46.05**	**139**	T		T	17 43 29.3	
	baz=325,slow=75,SNR=285							
H10N3	**ASCENSION HYDR**	**46.05**	**139**	T		T	17 43 29.5	
	baz=325,slow=75,SNR=369							
H10N1	**ASCENSION HYDR**	**46.07**	**139**	T		T	17 43 30.7	
	baz=325,slow=75,SNR=366							
MYKA	**Terra Mystica**	**46.79**	**52**	*eP*		**P**	**16 54 28.8**	**-0.6**
	comp=Z,7.0nm,1.1s							
KHC	**Kasperske Hory**	**46.84**	**49**	*eP*		**P**	**16 54 29.5**	**-0.2**
H10S3	**ASCENSION HYDR**	**46.87**	**140**	T		T	17 44 30.9	
	baz=324,slow=74,SNR=70							
H10S2	**ASCENSION HYDR**	**46.88**	**140**	T		T	17 44 32.1	
	baz=256,slow=74,SNR=43							
GERES	**GERESS Array B**	**46.91**	**49**	P		**P**	**16 54 29.6**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=290,slow=2.8,SNR=2.5							
OBKA	**Obir**	**47.42**	**52**	*eP*		**P**	**16 54 34.1**	**-0.3**
	comp=Z,16nm,1.4s							
NOA	**NORSAR Array B**	**47.55**	**32**	P		**P**	**16 54 35.5**	**+0.4**
	comp=Z,2.5nm,1.0s,baz=257,slow=7.7,SNR=3.3							
ARSA	**Arzberg**	**48.09**	**51**	*eP*		**P**	**16 54 39.8**	**+0.3**
	comp=Z,3.9nm,0.9s							
CONA	**Conrad Observa**	**48.32**	**50**	*eP*		**P**	**16 54 40.4**	**-0.9**
	comp=Z,4.8nm,1.4s							
CMIG	**Matias Romero**	**48.89**	**267**	P		**P**	**16 54 47.0**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=31,slow=18,SNR=2.5							
RES	**Resolute Bay**	**52.15**	**345**	P		**P**	**16 55 10.7**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=110,slow=19,SNR=3.3							
RES	**Resolute Bay**	**52.15**	**345**	IAmb		IAmb	16 55 11.9	
	comp=Z,5.6nm,1.5s							
TXAR	**Lajitas Array**	**52.34**	**286**	P		**P**	**16 55 12.4**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=104,slow=7.0,SNR=1.5							
YNE	**Yellowstone No**	**54.15**	**306**	P		**P**	**16 55 25.3**	**0.0**
BURAR	**Bucovina Array**	**54.63**	**50**	P		**P**	**16 55 29.1**	**+0.5**
FINES	**FINESS Array B**	**54.69**	**33**	P		**P**	**16 55 28.4**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=223,slow=7.6,SNR=3.6							
YHH	**Holmes Hill**	**54.78**	**306**	P		**P**	**16 55 30.9**	**+1.0**
YHH				IAmb		IAmb	16 55 43.8	
	comp=Z,6.9nm,0.8s							
YHB	**Horse Butte**	**55.02**	**306**	P		**P**	**16 55 32.5**	**+0.8**
YHB				IAmb		IAmb	16 55 43.9	
	comp=Z,8.7nm,1.0s							
YKA	**Yellowknife Ar**	**55.94**	**328**	P		**P**	**16 55 36.6**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=88,slow=7.6,SNR=13							
YKA				PcP		**PcP**	**16 56 35.9**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=92,slow=5.4,SNR=7.0							
AKASG	**Malin Array Be**	**56.88**	**46**	P		**P**	**16 55 43.5**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=274,slow=6.6,SNR=9.7							
AKBB	**Malin Array Si**	**56.88**	**46**	P		**P**	**16 55 43.2**	**-1.3**
AKBB				IAmb		IAmb	16 55 43.8	
	comp=Z,6.1nm,1.1s							
NEW	**Newport**	**58.50**	**311**	P		**P**	**16 55 55.9**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=75,slow=7.9,SNR=4.1							
NEW	**Newport**	**58.50**	**311**	P		**P**	**16 55 56.2**	**+0.1**
BMO	**Blue Mountains**	**59.29**	**307**	P		**P**	**16 55 58.9**	**-2.8**
BMO				IAmb		IAmb	16 56 01.6	
	comp=Z,6.3nm,1.1s							
BRTR	**Keskin Array B**	**62.19**	**58**	P		**P**	**16 56 21.2**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=356,slow=7.4,SNR=5.5							
INK	**Inuvik**	**63.26**	**335**	P		**P**	**16 56 28.2**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=51,slow=10,SNR=5.4							
BMAR	**Burnt Mountain**	**67.51**	**336**	P		**P**	**16 56 53.7**	**-1.9**
KBZ	**Khabaz**	**67.56**	**51**	P		**P**	**16 56 56.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=60,slow=0.6,SNR=3.0							
ILAR	**Eielson Array**	**69.45**	**334**	P		**P**	**16 57 08.1**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=72,slow=4.6,SNR=7.5							
CCB	**Clear Creek Bu**	**69.86**	**334**	P		**P**	**16 57 10.8**	**+0.6**
CCB				IAmb		IAmb	16 57 12.3	
	comp=Z,5.5nm,1.1s							
WRH	**Wood River Hil**	**70.05**	**334**	P		**P**	**16 57 12.5**	**+1.1**
WRH				IAmb		IAmb	16 57 13.5	
	comp=Z,4.4nm,1.1s							
I23K	**Minto, Yukon-K**	**70.22**	**334**	P		**P**	**16 57 12.9**	**+0.5**
IMAR	**Indian Mountai**	**71.42**	**336**	P		**P**	**16 57 19.6**	**-0.1**
H09W1	**TRISTAN DA CUN**	**72.11**	**155**	T		T	18 16 13.8	
PLCA	**Paso Flores**	**74.30**	**201**	P		**P**	**16 57 37.1**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=30,slow=4.9,SNR=4.3							
NRIK	**Noril'sk**	**75.22**	**16**	P		**P**	**16 57 42.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=3.4,slow=0.8,SNR=5.8							
NRIK	**Noril'sk**	**75.22**	**16**	P		**P**	**16 57 42.9**	**+0.7**
NRIK				IAmb		IAmb	16 57 50.3	
	comp=Z,11nm,1.4s							
TIXI	**Tiksi**	**79.09**	**3**	P		**P**	**16 58 04.8**	**+1.1**
	comp=Z,3.4nm,0.7s,baz=2.5,slow=4.6,SNR=12							
TIXI	**Tiksi**	**79.09**	**3**	P		**P**	**16 58 04.5**	**+0.7**
TIXI				IAmb		IAmb	16 58 05.5	
	comp=Z,7.5nm,1.1s							
BRVK	**Borovoye**	**79.56**	**34**	P		**P**	**16 58 06.8**	**+0.1**
BILL	**Bilibino**	**80.46**	**349**	P		**P**	**16 58 11.5**	**+0.3**
BILL				IAmb		IAmb	16 58 13.4	
	comp=Z,6.8nm,1.2s							
KKAR	**Karatay Array**	**85.55**	**42**	P		**P**	**16 58 38.1**	**0.0**
ZALV	**Zalesovo Beam**	**85.55**	**28**	P		**P**	**16 58 37.8**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=297,slow=8.0,SNR=8.7							
ZALV	**Zalesovo Beam**	**85.55**	**28**			**P**	**16 58 37.0**	**-0.9**
AAK	**Ala-Archa**	**88.15**	**41**	P		**P**	**16 58 51.3**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=291,slow=7.3,SNR=4.7							
AAK	**Ala-Archa**	**88.15**	**41**	P		**P**	**16 58 51.3**	**+0.3**
MAKZ	**Makanchi**	**89.35**	**34**	P		**P**	**16 58 56.0**	**-0.4**
MAKZ				IAmb		IAmb	16 58 57.4	
	comp=Z,4.0nm,0.9s							
MK31	**Makanchi Array**	**89.52**	**34**	P		**P**	**16 58 56.8**	**-0.4**
MKAR	**Makanchi Array**	**89.52**	**34**	P		**P**	**16 58 57.3**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=316,slow=5.1,SNR=16							
MKAR	**Makanchi Array**	**89.52**	**34**	P		**P**	**16 58 57.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**119.90**	**42**	PKP		**PKPdf**	**17 04 50.5**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=314,slow=3.5,SNR=5.1							

IDC ***01*** *16:52:58.0±0.9,42°.64N×141°.24E,h144km±7km,mb3.7/24, mb1 3.7/29,mb1mx3.6/73,mbtmp4.1/29,MS3.2/2. Ms1 3.2/2,ms1mx2.5/38,Error ellipse: s-maj=12.5km s-min=10.4km az=138.0*

MOS ***01*** *16:52:57.3±0.8,42°.64N×141°.26E,h153km,mb4.2/8,Error ellipse: s-maj=8.4km s-min=6.4km az=88.1*

NEIC ***01*** *16:52:58.2±1.8,42°.64N±0°.05×141°.27E±0°.09, h140km±4km,mb4.2/37,Error ellipse: s-maj=9.5km s-min=7.7km az=109.0*

SKHL ***01*** *16:52:58.1±0.5,42°.70N×141°.30E,h142km±5km,mb4.8/6, msha5.4/5*

JMA ***01*** *16:52:58.2±0.1,42°.63N×141°.25E,h141km±1km,M3.9 Broadband fault plane solution: P waves. NP1: ϕs118.00000°,δ

YUK					A	A	16 54 44.0		
	comp=N,130nm,0.4s								
TEY	**Ternei**	**4.15**	**307**		*e*PN	**Pn**	**16 53 59.6**	**-0.2**
TEY					*e*		16 54 47.7		
TEY					pmax	pmax			
	comp=Z,20nm,0.8s								
TEY					pmax	pmax			
	comp=N,20nm,0.6s								
TEY	**Ternei**	**4.15**	**307**		*e*P	**Pn**	**16 53 59.6**	**-0.2**
TEY					AMB	AMB	16 54 00.1		
	comp=N,20nm,0.7s								
TEY					AMB	AMB	16 54 00.1		
	comp=N,20nm,0.7s								
YSS	**Yuzh-Sakhalins**	**4.45**	**13**		PN	**Pn**	**16 54 04.3**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.45**	**13**		Pn	**Pn**	**16 54 04.3**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.45**	**13**		*e*P	**Pn**	**16 54 04.0**	**+0.2**
YSS					AMB	AMB	16 54 05.0		
	comp=N,50nm,0.4s								
YSS					*e*S	**Sn**	**16 54 55.0**	**-0.2**
YSS					A	A	16 54 56.0		
	comp=N,30nm,0.9s								
JMM	**Marumori**	**4.77**	**185**			**Pn**	**16 54 07.2**	**-0.9**
JSD	**Sado**	**5.13**	**208**		Pn	**Pn**	**16 54 13.4**	**+0.6**
KUR	**Kuril'sk**	**5.42**	**59**		*e*PN	**Pn**	**16 54 17.3**	**+0.6**
KUR					*e*S	**Sn**	**16 55 18.4**	**+0.1**
KUR					pmax	pmax			
	comp=Z,33nm,0.5s								
KUR					pmax	pmax			
	comp=N,13nm,0.6s								
KUR					pmax	pmax			
	comp=E,9.0nm,0.2s								
KUR					smax	smax			
	comp=E,50nm,0.5s								
KUR					smax	smax			
	comp=N,28nm,0.2s								
KUR	**Kuril'sk**	**5.42**	**59**		*e*P	**Pn**	**16 54 18.0**	**+1.3**
KUR					AMB	AMB	16 54 19.0		
	comp=N,10.0nm,0.5s								
KUR					AMB	AMB	16 54 19.0		
	comp=N,10.0nm,0.5s								
KUR					AMB	AMB	16 54 19.0		
	comp=N,30nm,0.5s								
KUR					*e*S	**Sn**	**16 55 18.0**	**-0.3**
KUR					A	A	16 55 27.0		
	comp=N,80nm,0.5s								
KUR					A	A	16 55 27.0		
	comp=N,110nm,0.5s								
JYT	**Yasato**	**6.44**	**188**		Pn	**Pn**	**16 54 26.5**	**-3.9**
MAJO	**Matsushiro**	**6.52**	**202**		PN	**Pn**	**16 54 32.3**	**+0.8**
MAJO	**Matsushiro**	**6.52**	**202**			**Pn**	**16 54 32.3**	**+0.8**
MJAR	**Matsushiro Arr**	**6.52**	**202**		P	**Pn**	**16 54 32.3**	**+0.8**
	comp=N,0.2nm,0.3s,baz=168,slow=1.1,SNR=8.8								
MJAR	**Matsushiro Arr**	**6.52**	**202**		Pn	**Pn**	**16 54 31.7**	**+0.2**
USA0B	**Ussuriysk Arra**	**6.95**	**286**		PN	**Pn**	**16 54 38.4**	**+1.3**
USA0B	**Ussuriysk Arra**	**6.95**	**286**		Pn	**Pn**	**16 54 38.4**	**+1.3**
USRK	**Ussuriysk Ar.**	**6.95**	**286**		P	**Pn**	**16 54 36.9**	**-0.1**
	baz=92,slow=14,SNR=8.2								
USRK	**Ussuriysk Ar.**	**6.95**	**286**		PN	**Pn**	**16 54 37.6**	**+0.5**
USRK	**Ussuriysk Ar.**	**6.95**	**286**		Pn	**Pn**	**16 54 37.5**	**+0.5**
JGF	**Kuroka**	**7.65**	**205**		Pn	**Pn**	**16 54 47.7**	**+1.1**
INU	**Inuyama**	**7.99**	**206**		Pn	**Pn**	**16 54 52.3**	**+1.3**
TYV	**Tymovskoe**	**8.29**	**6**		*e*P	**Pn**	**16 54 55.4**	**+0.4**
JWT	**Wachi**	**8.64**	**214**		Pn	**Pn**	**16 55 01.4**	**+1.6**
KLR	**Kul'dur**	**9.36**	**318**		P	**Pn**	**16 55 08.6**	**-0.7**
	comp=N,0.1nm,0.3s,baz=124,slow=14,SNR=14								
JHJ	**Hachijo jima 2**	**9.56**	**188**		P	**Pn**	**16 55 09.1**	**-3.0**
	comp=N,12nm,0.3s,baz=57,slow=21,SNR=5.3								
ZEA	**Zeya**	**14.50**	**325**		*e*P	**Pn**	**16 56 14.9**	**-1.1**
ZEA					pmax	pmax			
	comp=E,10.0nm,1.2s								
ZEA					pmax	pmax			
	comp=N,10.0nm,1.1s								
ZEA					pmax	pmax			
	comp=Z,20nm,0.6s								
ZEA	**Zeya**	**14.50**	**325**		*e*P	**Pn**	**16 56 14.9**	**-1.1**
ZEA					AMB	AMB	16 56 18.7		
	comp=Z,10.0nm,0.6s								
ZEA					AMB	AMB	16 56 18.7		
	comp=Z,10.0nm,0.6s								
ZEA					AMB	AMB	16 56 18.7		
	comp=Z,20nm,0.6s								
BMKR	**Bomnak**	**14.59**	**330**		*e*P	**Pn**	**16 56 16.8**	**-0.4**
BMKR					AMB	AMB	16 56 19.8		
	comp=Z,30nm,0.4s								
KROS	**Kirovskiy**	**15.11**	**326**		*e*P	**Pn**	**16 56 22.7**	**-1.0**
KROS					AMB	AMB	16 56 24.0		
	comp=Z,10.0nm,0.4s								
PEA0B	**Petropavlovsk-**	**15.17**	**41**		P	**P**	**16 56 25.7**	**-0.4**
PEA0B					pmax	pmax			
	comp=Z,69nm,1.5s								
PEA0B	**Petropavlovsk-**	**15.17**	**41**			**P**	**16 56 25.7**	**-0.4**
PETK	**Petropavlovsk-**	**15.17**	**41**		P	**Pn**	**16 56 24.6**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=220,slow=10,SNR=6.3								
MA2	**Magadan**	**17.95**	**16**		P	**P**	**16 56 55.9**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=200,slow=10,SNR=12								
MA2	**Magadan**	**17.95**	**16**		P	**P**	**16 56 56.6**	**-0.1**
MA2					pmax	pmax			
	comp=Z,24nm,1.5s								
MA2	**Magadan**	**17.95**	**16**		P	**P**	**16 56 56.6**	**-0.1**
MA2					IAmb	IAmb	16 56 58.6		
	comp=Z,24nm,1.5s								
MA2	**Magadan**	**17.95**	**16**		*e*P	**P**	**16 56 56.6**	**-0.1**
YAK	**Yakutsk**	**20.62**	**344**		*e*P	**P**	**16 57 21.8**	**-3.7**
YAK					pmax	pmax			
	comp=Z,17nm,0.8s								
YAK					pmax	pmax			
	comp=N,4.0nm,0.9s								
YAK					pmax	pmax			
	comp=E,2.0nm,0.9s								
SEY	**Seymchan**	**21.36**	**14**		P	**P**	**16 57 31.9**	**-1.5**
	comp=E,11nm,0.5s,baz=193,slow=7.2,SNR=91								
HHC	**Hu-ho-hao-te**	**22.20**	**276**		*e*P	**P**	**16 57 41.9**	**-0.6**
HHC					pmax	pmax			
	comp=Z,10.0nm,0.8s								
HHC					pmax	pmax			
	comp=Z,96nm,4.1s								
SONM	**Songino Array**	**24.97**	**294**		P	**P**	**16 58 08.6**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=83,slow=9.0,SNR=14								
SONM	**Songino Array**	**24.97**	**294**		P	**P**	**16 58 08.8**	**+0.8**
SONM	**Songino Array**	**24.97**	**294**		P	**P**	**16 58 08.8**	**+0.8**
TLY	**Talaya**	**26.89**	**303**		P	**P**	**16 58 25.2**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=97,slow=7.2,SNR=4.4								
TLY					LR	LR	17 09 17.0		
	comp=Z,32nm,20.1s,baz=141,slow=36								
TLY	**Talaya**	**26.89**	**303**		P	**P**	**16 58 25.6**	**+0.5**
TLY					pmax	pmax			
	comp=Z,2.0nm,0.8s								
TLY	**Talaya**	**26.89**	**303**		P	**P**	**16 58 25.6**	**+0.5**
TLY	**Talaya**	**26.89**	**303**		*e*P	**P**	**16 58 25.6**	**+0.5**
GTA	**Gaotai**	**31.23**	**278**		*e*P	**P**	**16 59 01.7**	**-2.0**
GTA					pmax	pmax			
	comp=Z,3.0nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**31.42**	**129**		T	T	17 31 07.8		
	baz=327,slow=76,SNR=6.7								
H11N1	**WAKE ISLAND Hy**	**31.43**	**129**		T	T	17 31 11.4		
	baz=327,slow=76,SNR=7.9								
H11N3	**WAKE ISLAND Hy**	**31.44**	**129**		T	T	17 31 15.2		
	baz=327,slow=76,SNR=5.7								
H11S1	**WAKE ISLAND Hy**	**32.28**	**130**		T	T	17 32 16.1		
	baz=326,SNR=12								
H11S3	**WAKE ISLAND Hy**	**32.28**	**130**		T	T	17 32 21.1		
	baz=326,SNR=8.5								
H11S2	**WAKE ISLAND Hy**	**32.30**	**130**		T	T	17 32 19.7		
	baz=326,SNR=7.9								
ZAA0	**Zalesovo Array**	**38.25**	**307**		P	**P**	**17 00 04.9**	**+1.3**
ZALV	**Zalesovo Beam**	**38.25**	**307**		P	**P**	**17 00 03.6**	**0.0**
	comp=Z,8.7nm,0.5s,baz=93,slow=9.0,SNR=35								
ZALV	**Zalesovo Beam**	**38.25**	**307**		P	**P**	**17 00 04.8**	**+1.2**
ZALV	**Zalesovo Beam**	**38.25**	**307**		P	**P**	**17 00 04.8**	**+1.2**
WMQ	**Urumqi**	**38.49**	**291**		*e*P	**P**	**17 00 07.6**	**+1.7**
MK31	**Makanchi Array**	**41.28**	**297**		P	**P**	**17 00 28.8**	**0.0**
MK31					pmax	pmax			
	comp=Z,2.0nm,0.9s								
MK31	**Makanchi Array**	**41.28**	**297**		P	**P**	**17 00 28.8**	**0.0**
MKAR	**Makanchi Array**	**41.28**	**297**		P	**P**	**17 00 28.2**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=83,slow=9.7,SNR=16								
MKAR	**Makanchi Array**	**41.28**	**297**		P	**P**	**17 00 28.8**	**0.0**
MKAR	**Makanchi Array**	**41.28**	**297**		P	**P**	**17 00 28.8**	**0.0**
MKAR	**Makanchi Array**	**41.28**	**297**		*e*P	**P**	**17 00 28.8**	**0.0**
MAKZ	**Makanchi**	**41.48**	**297**		P	**P**	**17 00 30.6**	**+0.2**
MAKZ					pmax	pmax			
	comp=Z,3.0nm,0.9s								
MAKZ	**Makanchi**	**41.48**	**297**		P	**P**	**17 00 30.6**	**+0.2**
KURK	**Kurchatov**	**42.58**	**303**		P	**P**	**17 00 39.5**	**+0.3**
KURK	**Kurchatov**	**42.58**	**303**		*e*P	**P**	**17 00 39.5**	**+0.3**
KURBB	**Kurchatov Arra**	**42.66**	**303**		P	**P**	**17 00 39.5**	**-0.3**
	comp=Z,12nm,0.4s,baz=76,slow=9.1,SNR=61								
RSO	**Redoubt South**	**42.69**	**42**		P	**P**	**17 00 39.6**	**-0.6**
TRF	**Thorofare Moun**	**43.56**	**37**		P	**P**	**17 00 49.3**	**+2.2**
TRF					IAmb	IAmb	17 01 08.0		
	comp=Z,5.5nm,1.3s								
CNPM	**China Poot**	**43.57**	**43**		P	**P**	**17 00 48.3**	**+1.2**
TOLK	**Toolik Lake Re**	**43.61**	**30**		P	**P**	**17 00 47.6**	**+0.2**
TOLK					IAmb	IAmb	17 00 50.3		
	comp=Z,7.3nm,1.4s								
RND	**Reindeer**	**44.20**	**37**		P	**P**	**17 00 53.1**	**+0.9**
RND					pmax	pmax			
	comp=Z,4.0nm,1.0s								
RND	**Reindeer**	**44.20**	**37**		P	**P**	**17 00 53.0**	**+0.9**
RND					IAmb	IAmb	17 00 55.0		
	comp=Z,3.5nm,1.0s								
GHO	**Glory Hole Cre**	**44.38**	**40**		P	**P**	**17 00 54.6**	**+1.0**
GHO					IAmb	IAmb	17 00 55.6		
	comp=Z,8.7nm,1.1s								
WRH	**Wood River Hil**	**44.43**	**36**		P	**P**	**17 00 55.6**	**+1.8**
SML	**Sawmill**	**44.65**	**40**		P	**P**	**17 00 57.3**	**+1.6**
SML					pmax	pmax			
	comp=Z,12nm,1.4s								
SML	**Sawmill**	**44.65**	**40**		P	**P**	**17 00 57.3**	**+1.6**
SML					IAmb	IAmb	17 01 10.6		
	comp=Z,12nm,1.4s								
IL31		**44.91**	**35**		P	**P**	**17 00 58.7**	**+1.2**
ILAR	**Eielson Array**	**44.91**	**35**		P	**P**	**17 00 57.9**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=278,slow=7.7,SNR=7.0								
FYU	**Fort Yukon**	**45.39**	**33**		P	**P**	**17 01 03.5**	**+2.1**
FYU					IAmb	IAmb	17 01 13.2		
	comp=Z,9.1nm,1.2s								
PRP	**Porcupine Dome**	**45.39**	**34**		P	**P**	**17 01 02.5**	**+0.9**
PRP					IAmb	IAmb	17 01 03.9		
	comp=Z,2.7nm,0.6s								
FAKI	**Fak Fak**	**46.06**	**193**		P	**P**	**17 01 08.2**	**+0.9**
SCRK	**Sand Creek**	**46.27**	**36**		P	**P**	**17 01 08.6**	**+0.1**
BVAR	**Borovoye Array**	**46.87**	**309**		P	**P**	**17 01 12.8**	**-0.3**
	comp=Z,4.1nm,0.3s,baz=61,slow=18,SNR=32								
BRVK	**Borovoye**	**46.92**	**309**		P	**P**	**17 01 14.2**	**+0.7**
BRVK					pmax	pmax			
	comp=Z,7.0nm,0.5s								
BRVK	**Borovoye**	**46.92**	**309**			**P**	**17 01 14.2**	**+0.7**
BRVK	**Borovoye**	**46.92**	**309**		*e*P	**P**	**17 01 14.2**	**+0.7**
K27K	**Chicken**	**47.09**	**36**		P	**P**	**17 01 15.6**	**+0.9**
K27K					IAmb	IAmb	17 01 20.6		
	comp=Z,7.2nm,1.3s								
EGAK	**Eagle**	**47.33**	**35**		P	**P**	**17 01 18.3**	**+1.7**
L27K	**Beaver Creek,**	**47.40**	**37**		P	**P**	**17 01 19.0**	**+1.8**
L27K					IAmb	IAmb	17 01 19.8		
	comp=Z,5.9nm,1.2s								
AAK	**Ala-Archa**	**47.93**	**294**		P	**P**	**17 01 21.4**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=133,slow=3.7,SNR=7.9								
AAK	**Ala-Archa**	**47.93**	**294**		P	**P**	**17 01 22.0**	**+0.3**
AAK					pmax	pmax			
	comp=Z,2.0nm,0.4s								
AAK	**Ala-Archa**	**47.93**	**294**		P	**P**	**17 01 22.0**	**+0.3**
AAK					IAmb	IAmb	17 01 22.1		
	comp=Z,1.6nm,0.4s								
AAK	**Ala-Archa**	**47.93**	**294**		*e*P	**P**	**17 01 22.0**	**+0.3**
INK	**Inuvik**	**49.51**	**29**		P	**P**	**17 01 33.2**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=276,slow=8.6,SNR=5.3								
INK	**Inuvik**	**49.51**	**29**		P	**P**	**17 01 33.8**	**+0.7**
INK					pmax	pmax			
	comp=Z,3.0nm,0.9s								
INK	**Inuvik**	**49.51**	**29**		P	**P**	**17 01 33.8**	**+0.7**
ARU	**Arti**	**52.19**	**316**		P	**P**	**17 01 53.3**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=26,slow=10,SNR=4.3								
ABKAR	**Akbulak array**	**54.37**	**307**			**P**	**17 02 09.8**	**+0.4**
ABKAR					IAmb	IAmb	17 02 17.0		
	comp=Z,3.6nm,0.8s								
EUNU	**Eureka**	**54.68**	**9**		P	**P**	**17 02 11.5**	**+0.2**
EUNU					IAmb	IAmb	17 02 14.0		
	comp=Z,11nm,1.5s								
AKTO	**Aktyubinsk**	**54.96**	**309**		P	**P**	**17 02 14.2**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=79,slow=12,SNR=3.7								
MTN	**Manton Dam**	**55.98**	**192**		P	**P**	**17 02 22.0**	**+0.8**
RES	**Resolute Bay**	**57.23**	**15**		P	**P**	**17 02 29.1**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=316,slow=4.1,SNR=8.4								
RES	**Resolute Bay**	**57.23**	**15**		P	**P**	**17 02 29.1**	**-0.3**
RES					pmax	pmax			
	comp=Z,3.0nm,0.9s								
RES	**Resolute Bay**	**57.23**	**15**		P	**P**	**17 02 29.1**	**-0.3**
RES					IAmb	IAmb	17 02 30.3		
	comp=Z,2.9nm,0.9s								
ARCES	**ARCESS Array B**	**58.75**	**338**		P	**P**	**17 02 39.9**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=44,slow=7.1,SNR=7.2								
YKA	**Yellowknife Ar**	**59.07**	**32**		P	**P**	**17 02 43.4**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=301,slow=6.4,SNR=2.3								
BELG	**Belogornoye**	**59.71**	**315**		P	**P**	**17 02 47.1**	**+0.2**
	comp=Z,5.9nm,0.6s,baz=108,slow=3.2,SNR=4.2								
FITZ	**Fitzroy Crossi**	**62.12**	**197**		P	**P**	**17 03 03.9**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=56,slow=7.3,SNR=2.6								
WB0	**Warramunga Arr**	**62.40**	**187**		P	**P**	**17 03 04.9**	**-0.5**
WB0					IAmb	IAmb	17 03 21.2		
	comp=Z,5.4nm,1.2s								
WR0	**Warramunga Arr**	**62.58**	**187**		P	**P**	**17 03 06.4**	**-0.1**
WR0					IAmb	IAmb	17 03 21.7		
	comp=Z,7.0nm,1.4s								
WB2	**Warramunga Arr**	**62.58**	**187**		P	**P**	**17 03 06.7**	**+0.2**
WB2					IAmb	IAmb	17 03 12.7		
	comp=Z,7.6nm,1.4s								
WRA	**Warramunga Arr**	**62.58**	**187**		P	**P**	**17 03 05.7**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=7.9,slow=7.1,SNR=8.3								
FIA1	**FINESS Array S**	**63.85**	**331**		P	**P**	**17 03 14.0**	**-0.4**
FINES	**FINESS Array B**	**63.85**	**331**		P	**P**	**17 03 13.9**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=49,slow=7.5,SNR=31								
FINES	**FINESS Array B**	**63.85**	**331**		P	**P**	**17 03 14.1**	**-0.3**
FINES	**FINESS Array B**	**63.85**	**331**		P	**P**	**17 03 14.1**	**-0.3**
SUMG	**Summit**	**65.10**	**360**		P	**P**	**17 03 23.9**	**+1.0**
SUMG					pmax	pmax			
	comp=Z,3.0nm,0.9s								
SUMG	**Summit**	**65.10**	**360**		P	**P**	**17 03 23.9**	**+1.0**
SUMG					IAmb	IAmb	17 03 31.7		
	comp=Z,3.2nm,0.9s								
AS31	**Alice Springs**	**66.31**	**187**		P	**P**	**17 03 30.9**	**+0.1**
ASAR	**Alice Springs**	**66.31**	**187**		P	**P**	**17 03 30.6**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=11,slow=5.3,SNR=7.0								
ASAR	**Alice Springs**	**66.31**	**187**		P	**P**	**17 03 31.8**	**+1.1**
ASAR	**Alice Springs**	**66.31**	**187**		P	**P**	**17 03 31.8**	**+1.1**
NC405	**NORSAR Array S**	**68.80**	**336**		P	**P**	**17 03 46.0**	**0.0**
NB201	**NORSAR Array S**	**68.98**	**336**		P	**P**	**17 03 47.0**	**-0.1**
NOA	**NORSAR Array B**	**69.01**	**336**		P	**P**	**17 03 47.0**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=30,slow=5.1,SNR=6.8								
NOA	**NORSAR Array B**	**69.01**	**336**		P	**P**	**17 03 47.0**	**-0.3**
AKASG	**Malin Array Be**	**69.85**	**321**		P	**P**	**17 03 52.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=43,slow=5.6,SNR=2.5								
NVAR	**Mina Array Bea**	**71.77**	**54**		P	**P**	**17 04 06.3**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=278,slow=6.3,SNR=3.1								
PDAR	**Pinedale Array**	**73.86**	**46**		P	**P**	**17 04 17.8**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=347,slow=4.6,SNR=2.4								
BURAR	**Bucovina Array**	**73.89**	**321**		P	**P**	**17 04 17.2**	**+0.4**
BURAR	**Bucovina Array**	**73.89**	**321**		P	**P**	**17 04 17.2**	**+0.4**
KHC	**Kasperske Hory**	**77.74**	**328**		*e*P	P	17 04 45.0	+6.4
KHC	**Kasperske Hory**	**77.74**	**328**		*e*P	P	17 04 45.0	+6.4
RAR	**Rarotonga**	**83.54**	**126**		LR	LR	17 44 39.5		
	comp=Z,20nm,18.8s,baz=233,slow=37								
VNA2	**Neumayer--Watz**	**147.62**	**199**		PKPdf	**PKPbc**	**17 12 24.7**	**+0.8**
VNA1	**Neumayer--Stat**	**148.02**	**199**		PKPdf	**PKPbc**	**17 12 23.6**	**-1.4**

*IDC **01** 16:54:44.3±6.8, 4.°51S×144.°12E, h76km±57km, mb3.6/5, mb1 3.8/7, mb1mx3.5/48, mbtmp3.9/7, ML4.3/1, Error ellipse: s-maj=68.6km s-min=21.5km az=98.0*

ISC 01 16:54:48.3±1.4, 4.°5S±0.°1×143.°8E±0.°2, h110km, n7, σ1§06/7, mb3.6/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.69**	**302**	P	**Pn**	**16 55 42.9**	**-0.7**
	0.6nm,0.3s,baz=6.1,slow=12,SNR=1.3						
WRA	**Warramunga Arr**	**17.94**	**210**	P	**Pn**	**16 58 50.8**	**-0.1**
	1.0nm,0.3s,baz=33,slow=12,SNR=54						
ASAR	**Alice Springs**	**21.35**	**206**	P	**P**	**16 59 27.0**	**+0.1**
	2.5nm,0.8s,baz=29,slow=12,SNR=19						
FITZ	**Fitzroy Crossi**	**22.36**	**231**	P	**P**	**16 59 37.3**	**-0.2**
	3.7nm,0.7s,baz=69,slow=5.9,SNR=8.9						
KSRS	**Korea Array**	**44.27**	**342**	P	**P**	**17 02 47.2**	**+0.2**
	0.7nm,0.6s,baz=164,slow=8.7,SNR=4.5						
MKAR	**Makanchi Array**	**74.34**	**321**	P	**P**	**17 06 15.6**	**+1.7**
	2.0nm,0.9s,baz=113,slow=3.7,SNR=1.8						
ILAR	**Eielson Array**	**85.35**	**24**	P	**P**	**17 07 11.8**	**-1.1**
	0.7nm,0.9s,baz=267,slow=4.5,SNR=4.2						

*DSN **01** 16:58:56.0±2.4, 29.°81N×59.°83E, h24km, ML5.0/11, Error ellipse: s-maj=44.0km s-min=23.3km az=122.0*

*BJI **01** 16:58:57.1±0.0, 29.°02N×59.°23E, h10km, mB4.9/18, mb4.5/28, Ms4.5/18, Ms7 4.3/16*

*IDC **01** 16:59:00.8±0.6, 29.°23N×59.°66E, h0km, mb4.3/24, mb1 4.4/30, mb1mx4.3/55, mbtmp4.3/30, ML3.7/4, MS3.9/20, Ms1 3.9/20, ms1mx3.7/49, Error ellipse: s-maj=13.8km s-min=12.0km az=115.0*

*MOS **01** 16:59:01.7±1.1, 29.°26N×59.°68E, h16km, mb4.9/29, Error ellipse: s-maj=5.4km s-min=3.5km az=99.3*

*NEIC **01** 16:59:02.6±2.1, 29.°20N±0.°05×59.°69E±0.°05, h10km±1km, mb4.7/62, mb_Lg4.8(TEH), ML4.9(THR), Error ellipse: s-maj=8.7km s-min=6.2km az=145.0*

*TEH **01** 16:59:02.3, 29.°25N×59.°68E, h19km, ML4.8*

*THR **01** 16:59:02.9±0.4, 29.°26N×59.°68E, h33km±5km, ML5.0*

*GCMT **01** 16:59:05.6±0.4, 29.°22N±0.°03×59.°68E±0.°02, h34km±1km, MW4.9/81, Moment Tensor Solution. s14,c15; s81,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.55±.20; $M_{\theta\theta}$1.64±.14; $M_{\phi\phi}$-1.09±.13; $M_{r\theta}$0.34±.15; $M_{\theta\phi}$2.19±.11; $M_{\phi r}$0.87±.14; Best double couple: $M_0$2.75000×10^{16} NP1:ϕ_s106.00000°, δ89.00000°, λ-5.00000°. NP2: ϕ_s197.00000°, δ86.00000°, λ-159.00000°. Principal axes: T 3.0020, Plg12.0000°, Azm330.0000°; N -0.5030, Plg69.0000°, Azm208.0000°; P -2.4970, Plg18.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*OMAN **01** 16:59:06.7, 28.°94N×59.°78E, h24km, mb5.7/15, ml4.9/7, ms3.5/1*

ISC 01 16:59:02.3±0.3, 29.°21N±0.°04×59.°68E±0.°03, h10km, n496, σ1§38/500, mb4.7/113, MS3.9/29, 31C-7D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHSF	**Zahedan**	**1.03**	**67**	*e*Pg	**Pg**	**16 59 22.0**	**-0.2**
ZHSF				*e*Sg	**Sb**	**16 59 36.1**	**0.0**
ZHSF	**Zahedan**	**1.03**	**67**		**Pb**	**16 59 22.2**	**-0.2**
ZHSF	**Zahedan**	**1.03**	**67**	*e*Pn	**Pg**	**16 59 22.0**	**-0.2**
KBAM	**BAM**	**1.08**	**267**	*e*Pg	**Pg**	**16 59 22.5**	**-0.6**
CHMN	**Cheshme madani**	**1.98**	**290**	Pn	**Pn**	**16 59 36.4**	**+0.2**
CHMN	**Cheshme madani**	**1.98**	**290**	*e*Pn	**Pn**	**16 59 35.8**	**-0.4**
KHNJ	**Kahnooj**	**2.14**	**235**	Pn	**Pn**	**16 59 39.4**	**+1.2**
KHNJ	**Kahnooj**	**2.14**	**235**	*e*Pn	**Pn**	**16 59 39.3**	**+1.2**
NHDN	**Nehbandan**	**2.20**	**8**	Pn	**Pn**	**16 59 39.4**	**+0.2**
NHDN	**Nehbandan**	**2.20**	**8**	*e*Pn	**Pn**	**16 59 39.3**	**+0.2**
NHDN				*e*		17 00 20.2	
	comp=Z,99nm,0.6s						
NGRK	**Negar Kerman**	**2.61**	**280**	Pn	**Pn**	**16 59 46.5**	**+1.5**
NGRK	**Negar Kerman**	**2.61**	**280**	*e*Pn	**Pn**	**16 59 45.7**	**+0.8**
KRBR	**Kerman**	**2.66**	**288**	*e*Pn	**Pn**	**16 59 45.9**	**+0.3**
KRBR	**Kerman**	**2.66**	**288**	Pn	**Pn**	**16 59 46.5**	**+0.9**
KRBR	**Kerman**	**2.66**	**288**	*e*Pn	**Pn**	**16 59 45.9**	**+0.3**
TVBK	**TV Kerman**	**2.66**	**288**	*e*Pn	**Pn**	**16 59 46.2**	**+0.6**
TVBK	**TV Kerman**	**2.66**	**288**	*e*Pn	**Pn**	**16 59 46.2**	**+0.6**
BSRN	**Basiran**	**2.79**	**350**	*e*Pn	**Pn**	**16 59 46.8**	**-0.4**
BSRN				IAML		17 00 35.2	
	comp=N,3μm,0.5s						
BSRN				IAML		17 00 35.6	
	comp=E,6μm,0.8s						
BSRN	**Basiran**	**2.79**	**350**	Pn	**Pn**	**16 59 47.5**	**+0.3**
BSRN	**Basiran**	**2.79**	**350**	*e*Pn	**Pn**	**16 59 46.8**	**-0.4**
KHGB	**Koh Gabri**	**3.02**	**293**	Pn

FAQ Al Faqa, Dubai 5.75 220 P Pn 17 00 29.2 +1.4
SNR=8.3
SOHO SOHO 5.78 210 P Pn 17 00 27.0 -1.2
SOHO SOHO 5.78 210 eP Pn 17 00 26.8 -1.4
SOHO SOHO 5.78 210 P Pn 17 00 27.5 -0.7
BIDO Bidbid 5.83 194 Pn Pn 17 00 28.3 -0.6
BIDO Bidbid 5.83 194 eP Pn 17 00 27.8 -1.0
BIDO Bidbid 5.83 194 P Pn 17 00 27.8 -1.0
SNR=7.8
QIR1 Qir 5.87 264 eP Pn 17 00 30.9 +1.5
HOQ Hoqain 5.99 201 P Pn 17 00 29.8 -1.2
SNR=50
HOQ S Sn 17 01 36.9 -2.8
ASUD Al Ashush, Dub 5.99 221 i P Pn 17 00 32.7 +1.7
SNR=26
ASUD Al Ashush, Dub 5.99 221 Pn Pn 17 00 33.3 +2.3
ASUD Al Ashush, Dub 5.99 221 eP Pn 17 00 33.0 +2.0
ASUD Al Ashush, Dub 5.99 221 P Pn 17 00 33.1 +2.0
SNR=26
WSAR Wadi Sarin 6.02 189 Pn Pn 17 00 31.2 -0.2
comp=Z,23nm,0.3s,baz=66,slow=8.5,SNR=197
WSAR Sn Sn 17 01 38.1 -2.3
comp=Z,37nm,0.3s,baz=191,slow=22,SNR=8.6
LMD1 Lamerd 6.04 254 Pn Pn 17 00 33.3 +1.6
LMD1 Lamerd 6.04 254 eP Pn 17 00 32.9 +1.1
ALNE Al Ain 6.22 215 i P Pn 17 00 35.7 +1.5
SNR=32
ALNE Al Ain 6.22 215 Pn Pn 17 00 36.4 +2.2
ALNE Al Ain 6.22 215 eP Pn 17 00 36.1 +1.9
ALNE Al Ain 6.22 215 P Pn 17 00 36.2 +2.0
SNR=32
AJN Ajban 6.24 223 P Pn 17 00 36.7 +2.2
SHI Shiraz 6.27 276 eP Pn 17 00 36.4 +1.4
SMDO Samad 6.29 194 P Pn 17 00 35.0 -0.3
SNR=12
SMDO S Sn 17 01 45.5 -1.8
ANAR Anarak 6.46 309 Pn Pn 17 00 38.4 +0.7
ANAR Anarak 6.46 309 eP Pn 17 00 37.7 0.0
ARQ Araqi 6.50 207 P Pn 17 00 39.6 +1.5
SNR=52
WBK Wadi Bani Khal 6.60 186 P Pn 17 00 38.9 -0.5
SNR=44
WBK S Sn 17 01 51.3 -3.5
SNR=6.9
BSY Bisya 6.81 200 P Pn 17 00 43.8 +1.4
SNR=12
BSY S Sn 17 01 58.6 -1.4
IRAM Ramesheh 6.81 294 Pn Pn 17 00 44.4 +1.9
IRAM Ramesheh 6.81 294 eP Pn 17 00 44.2 +1.6
JMDO Jabal Madar 6.95 192 P Pn 17 00 45.4 +1.1
SNR=10
JLN Jalan Bani Buh 7.03 182 P Pn 17 00 44.1 -1.2
SNR=8.6
JLN S Sn 17 02 01.8 -3.5
SNR=6.1
KLNJ Kolanjah 7.24 286 Pn Pn 17 00 51.5 +3.0
KLNJ Kolanjah 7.24 286 eP Pn 17 00 51.0 +2.5
IPAY Payeh 7.25 356 Pn Pn 17 00 49.5 +1.0
IPAY Payeh 7.25 356 eP Pn 17 00 49.5 +1.0
IZEF Zefreh 7.30 302 Pn Pn 17 00 50.5 +1.2
IZEF Zefreh 7.30 302 eP Pn 17 00 50.1 +0.8
AHBU AHRAM 7.35 269 eP Pn 17 00 50.1 +0.4
SBZV Sabzevar 7.37 347 Pn Pn 17 00 51.5 +1.3
SBZV Sabzevar 7.37 347 eP Pn 17 00 50.6 +0.4
IAKL Akhelmad 7.42 354 Pn Pn 17 00 52.5 +1.6
IAKL Akhelmad 7.42 354 eP Pn 17 00 51.9 +1.0
MZWR Madinat Zayed 7.51 225 P Pn 17 00 51.8 -0.1
IKRD Kardeh 7.55 359 Pn Pn 17 00 54.5 +1.9
IKRD Kardeh 7.55 359 eP Pn 17 00 54.1 +1.4
UMZA Um Al Zommool 7.64 213 eP Pn 17 00 53.4 -0.3
UMZA Um Al Zommool 7.64 213 P Pn 17 00 53.7 0.0
IANJ Anjilo 7.92 323 Pn Pn 17 00 58.6 +0.8
IANJ Anjilo 7.92 323 eP Pn 17 00 58.2 +0.4
ISFR Sfrayin 7.95 350 Pn Pn 17 00 59.6 +1.4
ISFR Sfrayin 7.95 350 eP Pn 17 00 59.0 +0.8
KRSH Karshahi 8.00 308 Pn Pn 17 00 59.6 +0.8
KRSH Karshahi 8.00 308 eP Pn 17 00 58.7 -0.1
ISFB Sefidab 8.15 311 Pn Pn 17 01 01.0 +0.2
ISFB Sefidab 8.15 311 eP Pn 17 01 01.4 +0.6
SHK1 Shahrekord 8.19 295 eP Pn 17 01 02.2 +0.8
MHTO MHTO 8.33 191 P Pn 17 01 03.8 +0.6
MHTO P Pn 17 01 03.8 +0.6
ILAS Lasjerd 8.38 319 Pn Pn 17 01 05.0 +0.9
ILAS Lasjerd 8.38 319 eP Pn 17 01 04.7 +0.6
BJRD Bojnurd 8.68 348 eP Pn 17 01 08.2 +0.1
BJRD Bojnurd 8.68 348 Pn Pn 17 01 08.1 +0.1
BJRD Bojnurd 8.68 348 eP Pn 17 01 08.2 +0.1
IGLO Ghaloghah 8.78 327 Pn Pn 17 01 11.1 +1.5
IGLO Ghaloghah 8.78 327 eP Pn 17 01 10.9 +1.3
IMND Minoodasht 8.79 337 Pn Pn 17 01 10.1 +0.6
IMND Minoodasht 8.79 337 eP Pn 17 01 10.0 +0.6
GEYT Alibeck 8.80 352 Pn Pn 17 01 10.9 +1.3
comp=Z,1.2nm,0.3s,baz=174,slow=16,SNR=10
GEYT Lg Lg 17 03 32.1
comp=Z,0.2nm,0.3s,baz=219,slow=16,SNR=1.6
GEYT Alibeck 8.80 352 Pn Pn 17 01 10.3 +0.7
GYA0 ALIBECK ARRAY 8.80 352 P Pn 17 01 10.2 +0.6
GYA0B ALIBECK ARRAY 8.80 352 Pn Pn 17 01 11.0 +1.4
IVRN Varamin 8.88 313 Pn Pn 17 01 11.1 +0.4
IVRN Varamin 8.88 313 eP Pn 17 01 11.0 +0.3
SLWS 9.18 244 P Pn 17 01 14.4 -0.4
IQOM Qom 9.22 310 Pn Pn 17 01 16.2 +0.6
IQOM Qom 9.22 310 eP Pn 17 01 15.9 +0.3
IPRN Peran 9.35 320 Pn Pn 17 01 18.2 +0.9
IPRN Peran 9.35 320 eP Pn 17 01 17.9 +0.6
IRAZ Razeghan 10.31 309 Pn Pn 17 01 31.3 +0.8
IRAZ Razeghan 10.31 309 eP Pn 17 01 31.3 +0.8
QALM Alamut, Qazvin 10.47 316 Pn Pn 17 01 33.3 +0.6
QALM Alamut, Qazvin 10.47 316 eP Pn 17 01 33.5 +0.8
HSAM Samen 10.67 301 Pn Pn 17 01 36.4 +0.8
HSAM Samen 10.67 301 eP Pn 17 01 36.6 +1.1
QABG Abgarm-Qazvin 10.71 310 Pn Pn 17 01 36.4 +0.3
QABG Abgarm-Qazvin 10.71 310 eP Pn 17 01 36.0 0.0
THW Thamme Wali 10.95 68 P Pn 17 01 40.0 +0.9
CEP Cherat 11.40 63 P Pn 17 01 48.5 +3.1
DOK Doka 11.70 207 P Pn 17 01 48.7 -0.6
SNR=6.5
NIL Nilore 12.40 66 P Pn 17 02 02.5 +3.5
NIL Nilore 12.40 66 Pn 17 02 02.5 +3.5
LKRN Lenkeran, Azer 13.10 319 P Pn 17 02 08.6 +0.2
IHRS Heris 13.89 314 Pn Pn 17 02 21.2 +1.8
IHRS Heris 13.89 314 eP Pn 17 02 20.8 +1.4
RAYN Ar Rayn 13.91 249 i P Pn 17 02 14.4 -5.2
SNR=12
RAYN Ar Rayn 13.91 249 P Pn 17 02 14.6 -5.0
RAYN Ar Rayn 13.91 249 Pn 17 02 14.6 -5.0
IMRD Marand 14.97 313 Pn Pn 17 02 36.4 +2.3
IMRD Marand 14.97 313 eP Pn 17 02 35.7 +1.6
CHM Chimkent 15.35 29 eP Pn 17 02 40.5 +1.5
baz=28
CHM Chimkent 15.35 29 eP Pn 17 02 40.5 +1.5
NDI New Delhi 15.36 88 eP Pn 17 02 40.0 +0.8
IUG Iuzhnay 15.39 30 eP Pn 17 02 40.0 +0.3
baz=30
IUG Iuzhnay 15.39 30 eP Pn 17 02 39.9 +0.3
GANJ Ganja 15.80 320 P Pn 17 02 44.7 -0.2
ZKTA Zakatala 16.32 323 P Pn 17 02 51.1 -0.5
KK31 Karatay Array 16.37 29 i P P 17 02 55.4 +0.3
KK31 Karatay Array 16.37 29 P P 17 02 56.7 +1.6
KKAR Karatay Array 16.37 29 P Pn 17 02 53.5 +1.3
KKAR Karatay Array 16.37 29 Pn Pn 17 02 53.5 +1.3
KKAR Karatay Array 16.37 29 P P 17 02 56.4 +1.3
KKAR IAmb IAmb 17 03 03.0
comp=Z,36nm,0.9s
GNI Garni 16.42 316 Pn Pn 17 02 53.1 +0.1
comp=Z,0.5nm,0.3s,baz=126,slow=4.2,SNR=4.9
GNI LR LR 17 09 08.8
comp=Z,318nm,18.7s,baz=123,slow=37
GNI Garni 16.42 316 ceP Pn 17 02 54.3 +1.4
GNI pmax pmax
comp=Z,124nm,2.5s
GNI Garni 16.42 316 P 17 02 55.2 -0.6
GNI IAmb IAmb 17 03 00.7
comp=Z,40nm,0.9s
DDFL Dedoflistskaro 16.46 322 P Pn 17 02 53.4 0.0
GEVA Gevas 16.52 308 P P 17 02 55.8 -1.2
DZA Taraz 16.57 31 eP P 17 02 56.5 -0.7
baz=31
DZA Taraz 16.57 31 eP P 17 02 56.5 -0.7
LGD Lagodekhi 16.66 323 P Pn 17 02 56.0 +0.1
MAK Makhachkala 16.86 328 eP Pn 17 02 56.2 -2.2
MAK eS Sn 17 06 03.0 -2.8
MAK pmax pmax
comp=Z,353nm,1.5s
MAK MLR MLR
comp=Z,146nm,12.0s
KSH Kashi 16.91 48 P Pn 17 02 53.4 -5.7
KSH pP P 17 02 58.7 -2.4
KSH S Sn 17 05 59.4 -7.7
KSH pmax pmax
comp=Z,30nm,1.3s
KSH LR LR
comp=Z,1µm,8.0s
KSH LR LR
comp=Z,850nm,7.2s
KSH LR LR
comp=Z,520nm,5.8s
AML Almayashu 17.17 38 P P 17 03 06.2 +1.8
SNR=15
BTNK Botanikuri 17.35 320 P Pn 17 03 04.7 +0.1
EKS2 Erkin-Say 17.59 36 P P 17 03 11.2 +2.5
SNR=47
UCH Uchtor 17.68 39 P P 17 03 12.1 +2.1
SNR=9.0
KARS Kars 17.72 314 P P 17 03 12.2 +2.0
MARD Mardin 17.74 302 P Pn 17 03 09.9 +0.3
SOCY Socotra 17.75 199 P Pn 17 03 06.3 -3.3
SOCY Socotra 17.75 199 P Pn 17 03 05.2 -4.4
SNR=5.6
GROC Groznyy 17.87 325 eP Pn 17 03 11.1 +0.1
GROC eS Sn 17 06 30.2 0.0
GROC pmax pmax
comp=Z,59nm,1.2s
AKH Akhalkalaki 17.93 317 P P 17 03 14.6 +2.1
AAK Ala-Archa 17.95 38 P P 17 03 12.5 -0.2
comp=Z,0.2nm,0.3s,baz=230,slow=9.6,SNR=29
AAK LR LR 17 10 51.4
comp=Z,1µm,18.1s,baz=240,slow=40
AAK Ala-Archa 17.95 38 P P 17 03 15.2 +2.5
SNR=11
AAK Ala-Archa 17.95 38 i P P 17 03 12.9 +0.2
AAK pmax pmax
comp=Z,36nm,1.1s
AAK Ala-Archa 17.95 38 P P 17 03 15.0 +2.3
GUDG Gudauri 18.05 321 P P 17 03 16.6 +2.8
KBK Karagaybulak 18.21 38 P P 17 03 19.6 +4.0
SNR=5.5
CHMS Chumysh 18.34 37 P P 17 03 19.7 +2.9
SNR=5.4
USP Ospenovka 18.39 36 P P 17 03 19.3 +1.9
SNR=5.7
ZEI Tsey 18.58 321 eP Pn 17 03 20.1 +0.2
ZEI pmax pmax
comp=Z,29nm,1.6s
SGDS Sogindy 18.59 36 eP Pn 17 03 20.2 +0.3
baz=36
SGDS Sogindy 18.59 36 eP Pn 17 03 20.1 +0.3
ONI Oni 18.70 320 P Pn 17 03 24.2 +3.0
TKM2 Tokmak 2 18.74 39 P Pn 17 03 22.7 +0.9
SNR=12
TKM2 Tokmak 2 18.74 39 P Pn 17 03 22.3 +0.5
KOPT Kop Dagi 19.09 309 P Pn 17 03 27.4 +1.3
NCK Nalchik 19.22 322 di P Pn 17 03 28.5 +1.1
NCK pmax pmax
comp=Z,43nm,1.2s
BTLS Baital 19.47 32 eP Pn 17 03 29.9 -0.5
baz=32
BTLS Baital 19.47 32 eP Pn 17 03 29.9 -0.5
NEY Neytrino 19.53 320 di P P 17 03 30.2 +0.1
NEY pmax pmax
comp=Z,13nm,0.8s
TNSS Tian-Shan 19.57 41 eP Pn 17 03 31.3 -0.8
baz=40
TNSS Tian-Shan 19.57 41 eP Pn 17 03 31.2 -0.8
AAA Alma-Ata 19.66 40 eP P 17 03 31.4 0.0
baz=40
AAA LR LR 17 10 59.4
comp=Z,436nm,14.5s,baz=40
AAA Alma-Ata 19.66 40 eP P 17 03 31.3 0.0
AAA MLR MLR
comp=Z,436nm,14.0s
MDOK Medeo 19.70 40 eP P 17 03 32.0 0.0
baz=40
MDOK LR LR 17 10 54.7
comp=Z,498nm,12.4s,baz=40
MDOK Medeo 19.70 40 eP P 17 03 32.0 0.0
MDOK MLR MLR
comp=Z,498nm,12.0s
KBZ Khabaz 19.75 322 P Pn 17 03 33.7 -0.1
comp=Z,0.1nm,0.3s,baz=152,slow=9.5,SNR=9.2
KBZ Khabaz 19.75 322 ceP Pn 17 03 33.3 -0.4
KBZ pmax pmax
comp=Z,14nm,1.4s
KUU Kurty 19.79 38 eP P 17 03 32.6 -0.1
baz=37
KUU Kurty 19.79 38 eP P 17 03 32.6 -0.1
SHA1 Shidzhatmaz 19.89 321 ci P Pn 17 03 35.6 -0.1
KVAR Kislovodsk Arr 20.01 322 P Pn 17 03 36.5 -0.5
baz=288,slow=19,SNR=2.1
KIV Kislovodsk 20.02 322 eP Pn 17 03 36.7 -0.3
KIV pmax pmax
comp=Z,95nm,1.1s
KIV MLR MLR
comp=Z,184nm,14.0s
KIV Kislovodsk 20.02 322 P Pn 17 03 37.2 +0.2
KIV IAmb IAmb 17 03 40.4
comp=Z,31nm,1.1s
AB31 Akbulak array 20.02 0⇑ eP P 17 03 35.0 -0.2
AB31 pmax pmax
comp=Z,29nm,1.1s
ABKAR Akbulak array 20.02 0 P P 17 03 35.2 0.0
ABKAR Akbulak array 20.02 0 P P 17 03 35.2 0.0
ABKAR IAmb IAmb 17 03 39.2
comp=Z,37nm,1.2s
CHKK Chushkaly 20.12 39 eP P 17 03 36.5 +0.2
baz=38
CHKK Chushkaly 20.12 39 eP P 17 03 36.5 +0.2
GAZ Gaziantep 20.39 299 P Pn 17 03 40.4 -1.0
SATY Saty 20.43 42 eP P 17 03 39.7 -0.1
baz=42
SATY Saty 20.43 42 eP P 17 03 39.7 -0.1
PYUN Piuthan 20.48 87 eP Pn 17 03 42.9 +0.2
comp=Z,86nm,0.9s
GOF Gofitskoye 20.59 325⇑ eP Pn 17 03 43.6 0.0
GOF pmax pmax
comp=Z,58nm,1.0s
KPKS Kokpek 20.83 42 eP P 17 03 44.1 -0.1
baz=42
KPKS Kokpek 20.83 42 eP P 17 03 44.0 -0.1
UZB Uzunbulak 20.84 43 eP P 17 03 43.9 -0.5
baz=43
UZB Uzunbulak 20.84 43 eP P 17 03 43.8 -0.5
HYB Hyderabad 20.89 120 i P Pn 17 03 50.0 +2.6
KOLN Koldanda 21.07 88 eP P 17 03 49.2 +2.3
comp=Z,123nm,1.0s
SHLS Shalkode 21.11 43 eP P 17 03 49.7 +2.4
baz=44
SHLS Shalkode 21.11 43 eP P 17 03 49.6 +2.4
DANN Dangsing 21.12 86 eP P 17 03 50.4 +2.9
comp=Z,263nm,1.0s
MMAI Mount Meron Ar 21.12 286 P P 17 03 48.6 +1.3
comp=Z,0.5nm,0.4s,baz=75,slow=14,SNR=1.4
MMAI LR LR 17 13 05.9
comp=Z,264nm,18.1s,baz=85,slow=40
AKTO Aktyubinsk 21.24 357 P P 17 03 47.8 -0.6
comp=Z,12nm,0.9s,baz=183,slow=12,SNR=20
AKTO LR LR 17 13 28.2
comp=Z,641nm,18.1s,baz=163,slow=41
SOC Sochi 21.47 317 eP P 17 03 50.5 -0.4
SOC e 17 04 11.3
SOC eS S 17 07 49.5 +0.5
SOC eSS SnSn 17 08 11.8 -0.3
SOC pmax pmax
comp=Z,17nm,0.9s
SOC MLR MLR
comp=Z,229nm,11.0s
EIL Elat 21.54 277 P P 17 03 52.8 +1.0
comp=Z,5.0nm,0.7s,baz=41,slow=6.9,SNR=3.9
EIL LR LR 17 12 37.7
comp=Z,149nm,20.9s,baz=100,slow=38
TDK Taldyqorghan 21.64 38 eP P 17 03 52.8 +0.1
baz=38
TDK LR LR 17 12 24.4
comp=Z,325nm,12.5s,baz=38
TDK Taldyqorghan 21.64 38 eP P 17 03 52.8 +0.1
TDK MLR MLR
comp=Z,325nm,12.0s
GKN Gorkha 21.93 87 eP P 17 04 00.4 +4.2
comp=Z,42nm,1.1s
PKIN Phulchoki 22.67 88 eP P 17 04 06.6 +2.4
comp=Z,45nm,1.1s
PKI Pulchoki 22.68 88 eP P 17 04 05.9 +1.5
comp=Z,122nm,1.6s
BRZS Berezniki 22.98 22 eP P 17 04 07.3 +0.4
baz=22
BRZS Berezniki 22.98 22 eP P 17 04 07.3 +0.4
GUN Gumba 23.03 87 eP P 17 04 10.3 +2.2
comp=Z,71nm,1.0s
JIRN Jiri 23.35 87 eP P 17 04 13.9 +2.6
comp=Z,48nm,0.9s
ANN Anapa 23.51 317 eP P 17 04 09.0 -3.4
ANN e*PP pP 17 04 13.5 -2.0
ANN eS S 17 08 23.0 -3.1
ANN pmax pmax
comp=Z,41nm,1.0s
ATD Arta Tunnel 23.58 225 LR LR 17 15 01.9
comp=Z,166nm,19.4s,baz=357,slow=41
ATD Arta Tunnel 23.58 225 P P 17 04 14.0 +0.7
ATD IAmb IAmb 17 04 32.7
comp=Z,35nm,1.2s
BR131 Keskin Array S 23.82 303 P P 17 04 16.0 +0.4
BR131 pmax pmax
comp=Z,18nm,1.1s
BR131 Keskin Array S 23.82 303 P P 17 04 16.0 +0.4
BR131 IAmb IAmb 17 04 16.8
comp=Z,18nm,1.1s
BRTR Keskin Array B 23.82 303 P P 17 04 16.1 +0.4
comp=Z,6.0nm,1.0s,baz=128,slow=10.0,SNR=20
BRTR LR LR 17 14 47.4
comp=Z,362nm,18.9s,baz=106,slow=40
BRTR Keskin Array B 23.82 303 P P 17 04 15.7 +0.1
RAMN Ramite 23.84 89 eP P 17 04 16.9 +0.9
comp=Z,34nm,0.7s
ODAN Odare 24.55 89 eP P 17 04 24.6 +2.0
comp=Z,102nm,1.1s
MAKZ Makanchi 24.71 39 P P 17 04 24.0 +0.4
MAKZ pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 24.71 39 P P 17 04 24.0 +0.4
MAKZ IAmb IAmb 17 04 25.4
comp=Z,12nm,0.9s
TAPN Taplejung 24.73 87 eP P 17 04 27.9 +3.6
comp=Z,25nm,1.1s
BELG Belogornoye 24.83 342 P P 17 04 24.2 -0.3
comp=Z,88nm,1.0s,baz=68,slow=1.1,SNR=24
BELG LR LR 17 17 01.1
comp=Z,196nm,18.5s,baz=144,slow=44
BELG Belogornoye 24.83 342 i P P 17 04 22.8 -1.8
BELG pmax pmax
comp=Z,22nm,1.1s
MK31 Makanchi Array 24.87 39 i P P 17 04 25.5 +0.4
MK31 Makanchi Array 24.87 39 P P 17 04 25.7 +0.6
MK31 IAmb IAmb 17 04 27.6
comp=Z,9.8nm,0.8s
MKAR Makanchi Array 24.87 39 P P 17 04 25.9 +0.9
comp=Z,15nm,0.9s,baz=224,slow=6.8,SNR=84
MKAR LR LR 17 15 14.8
comp=Z,407nm,20.5s,baz=236,slow=39
MKAR Makanchi Array 24.87 39 P P 17 04 25.4 +0.3
MKAR Makanchi Array 24.87 39 P P 17 04 25.4 +0.3
BVAR Borovoye Array 25.07 15 P P 17 04 26.7 -0.1
comp=Z,12nm,0.8s,baz=186,slow=8.8,SNR=49
BRVK Borovoye 25.08 15 P 17 04 27.1 +0.3
BRVK IAmb IAmb 17 04 36.0
comp=Z,20nm,1.1s
BRVK Borovoye 25.08 15⇑ ePKIKP P 17 04 27.1 +0.3
KURBB Kurchatov Arra 25.68 28 P P 17 04 32.9 +0.6
comp=Z,11nm,0.9s,baz=225,slow=8.7,SNR=70
ISP Isparta 25.71 297 P P 17 04 33.9 +1.0
ISP pmax pmax
comp=Z,39nm,0.8s
ISP Isparta 25.71 297 P P 17 04 33.9 +1.0
VRH Novokhopyorsk 25.77 333 eP P 17 04 32.8 -0.3
VRH pmax pmax
comp=Z,60nm,1.2s
KURK Kurchatov 25.79 28 P P 17 04 32.9 -0.4
KURK Kurchatov 25.79 28 P P 17 04 32.9 -0.4
ELL Elmali 26.01 295 P P 17 04 36.2 +0.5
ELL pmax pmax
comp=Z,56nm,1.0s
ELL Elmali 26.01 295 P P 17 04 36.2 +0.5
WMQ Urumqi 26.67 49 eP P 17 04 43.0 +1.6
WMQ pP sP 17 04 48.5 +2.6
WMQ pmax pmax
comp=Z,39nm,1.1s
WMQ pmax pmax
comp=Z,200nm,4.1s
WMQ LR LR
comp=Z,470nm,18.7s
WMQ LR LR
comp=Z,730nm,17.5s
ZSN Zaisan 26.68 40 eP P 17 04 41.7 +0.1
baz=40
ZSN Zaisan 26.68 40 eP P 17 04 41.6 +0.1
VSR Storozhevoye 26.82 331 eP P 17 04 40.2 -2.4
VSR pmax pmax
comp=Z,20nm,1.1s
ARU Arti 27.22 359 LR LR 17 16 15.4
comp=Z,218nm,20.2s,baz=175,slow=38
ARU Arti 27.22 359 P P 17 05 04.1 +18
ARU MLR MLR
comp=Z,383nm,16.0s
LPSR Galich'ya Gora 27.95 333 eP P 17 04 54.2 +1.5
LPSR pmax pmax
comp=Z,10.0nm,1.2s
TLBR Topalu 29.36 310 ⇑P P 17 05 20.0 +15
PALK Pallekele 29.46 134 LR LR 17 17 28.4
comp=Z,215nm,19.6s,baz=65,slow=38
GIUM Giurgiulesti 29.59 312 ⇑P P 17 05 20.0 +13
GISR Galati 29.68 312 ⇑P P 17 05 19.9 +12
IDI Anoyia 29.94 291 P P 17 05 10.4 -0.4
comp=Z,3.8nm,0.4s,baz=253,slow=17,SNR=5.9
IDI Anoyia 29.94 291 P P 17 05 11.6 +0.9
KIRV Kirov 30.22 349 i P P 17 05 13.4 +0.6
ODBI Odobesti 30.45 312 ⇑P P 17 05 20.0 +5.0
SORM Soroca 30.61 317 ⇑P P 17 05 15.5 -0.9
SORM Soroca 30.61 317 ⇑P P 17 05 15.5 -0.9
VRI Vrincioaia 30.70 312 P P 17 05 18.0 +0.7
VRI pmax pmax
comp=Z,12nm,1.1s
PLOR Plostina 30.75 312 ⇑P P 17 05 18.9 +1.2
PLOR Plostina 30.75 312 P P 17 05 18.8 +1.2
ZALV Zalesovo Beam 30.75 29 P P 17 05 17.9 +0.3
comp=Z,6.2nm,0.7s,baz=236,slow=11,SNR=6.3
ZALV LR LR 17 19 17.2
comp=Z,230nm,19.6s,baz=228,slow=40
OBN Obninsk 30.76 334⇓ eP P 17 05 18.0 +0.4
OBN e 17 06 16.7
OBN pmax pmax
comp=Z,57nm,1.7s
OBN MLR MLR
comp=Z,117nm,18.0s
OBN Obninsk 30.76 334 P P 17 05 17.4 -0.2
MOS Moscow 30.84 336 eP P 17 05 17.3 -1.0
MOS pmax pmax
comp=Z,58nm,1.4s
ZIMR 30.91 307 ⇑P P 17 05 20.2 +1.2
ZIMR 30.91 307 P P 17 05 20.2 +1.2
TESR Tescani 30.99 313 ⇑P P 17 05 20.2 +0.4
MLR Muntele Rosu 31.08 311 ⇓P P 17 05 23.6 +2.8
MLR Muntele Rosu 31.08 311 ⇓P P 17 05 23.6 +2.8
MLR Muntele Rosu 31.08 311 P P 17 05 22.0 +1.2
MLR IAmb IAmb 17 05 24.3
comp=Z,17nm,1.1s
AKASG Malin Array Be 31.36 322 P P 17 05 22.2 -0.8
comp=Z,1.2nm,0.5s,baz=124,slow=8.6,SNR=8.0
AKASG LR LR 17 19 17.8
comp=Z,76nm,19.8s,baz=315,slow=39
AKASG Malin Array Be 31.36 322 IAmb IAmb 17 05 24.1
comp=Z,1.2nm,1.1s
AKBB Malin Array Si 31.36 322 ceP P 17 05 21.8 -1.2
AKBB Malin Array Si 31.36 322 P P 17 05 22.2 -0.8
AKBB IAmb IAmb 17 05 23.4
comp=Z,13nm,1.4s
BIZ Bicaz 31.50 313 ⇑P P 17 05 24.4 +0.2
DOPR Dopca 31.61 311 ⇑P P 17 05 26.0 +0.7
VOIR 31.66 310 ⇑P P 17 05 26.2 +0.4
VOIR 31.66 310 ⇑P P 17 05 26.2 +0.4
ARR Arges 31.91 310 ⇑P P 17 05 28.7 +0.7
RMVG GOVORA 32.05 309 ⇑P P 17 05 20.0 -9.1
BURAR Bucovina Array 32.31 314 ⇓P P 17 05 32.3 +0.7
BURAR Bucovina Array 32.31 314 ⇓P P 17 05 32.3 +0.7
BURAR Bucovina Array 32.31 314 P P 17 05 31.8 +0.2

BUR08	**Bucovina Ar. S**	**32.34**	**314**	P	**P**	**17 05 32.1**	**+0.3**
BUR08				IAmb	IAmb	17 05 33.0	
	comp=Z,12nm,1.1s						
LOT	**Lotru**	**32.52**	**310**	⇑P	P	17 05 20.0	-13
DRGR		**33.63**	**312**	⇑P	**P**	**17 05 43.5**	**+0.5**
DRGR		**33.63**	**312**	⇑P	**P**	**17 05 43.6**	**+0.5**
BZS	**Buzias**	**34.02**	**309**	P	**P**	**17 05 46.4**	**+0.1**
BZS				pmax	pmax		
	comp=Z,6.0nm,2.3s						
MNK	**Minsk**	**34.14**	**327**	*i* P	**P**	**17 05 47.9**	**+0.7**
	comp=E,1.0nm,0.6s						
MNK				*i* P	**P**	**17 05 47.9**	**+0.7**
	comp=N,19nm,0.9s						
MNK				*i* P	**P**	**17 05 47.9**	**+0.7**
	comp=Z,12nm,0.9s						
MNK				*i* PP	**PnPn**	**17 07 01.3**	**+0.5**
MNK				*i* PPP	PPP	17 07 12.7	
MNK				*i* PcP	**PcP**	**17 08 25.2**	**+1.0**
MNK				*i* S	**S**	**17 11 14.5**	**+1.3**
MNK				*i* SS	**SnSn**	**17 13 22.6**	**+1.9**
MNK				*i* SSS	SSS	17 13 38.0	
MNK				*i* ScS	**ScS**	**17 16 12.3**	**+1.1**
MNK				*i* LQ	LQ	17 17 05.5	
MNK				*i* LR	LR	17 19 41.1	
MNK				*i* LRM	MLR	17 21 44.6	
	comp=N,102nm,11.2s						
MNK				*i* LRM	MLR	17 21 47.2	
	comp=Z,80nm,10.9s						
MNK				*i* LRM	MLR	17 21 52.3	
	comp=E,11nm,13.7s						
KLMR	**Klimovskoe**	**34.41**	**343**	*e*P	**P**	**17 05 45.9**	**-3.6**
KLMR				*e*		17 06 59.4	
KLMR				pmax	pmax		
	comp=Z,57nm,1.2s						
KLMR	**Klimovskoe**	**34.41**	**343**	*e*P	**P**	**17 05 45.9**	**-3.6**
KLMR				AMP		17 05 49.9	
	comp=Z,57nm,1.2s						
KLMR				*e*PP	**PnPn**	**17 06 59.5**	**-4.6**
KLMR				LQ	LQ	17 18 10.6	
KLMR				LQ	LQ	17 18 10.6	
KLMR				LR	LR	17 19 48.5	
LODK	**Lodwar**	**34.51**	**227**	P	**P**	**17 05 52.9**	**+2.0**
	SNR=7.8						
KOLS	**Kolonicke sedl**	**34.63**	**315**	*e*P	**P**	**17 05 52.6**	**+1.0**
KOLS				pmax	pmax		
	comp=Z,12nm,1.2s						
KOLS	**Kolonicke sedl**	**34.63**	**315**	*e*P	**P**	**17 05 52.6**	**+1.0**
CRVS	**Cervenica-Dubn**	**35.12**	**315**	*e*P	**P**	**17 05 55.2**	**-0.6**
CRVS				pmax	pmax		
	comp=Z,60nm,2.2s						
CRVS	**Cervenica-Dubn**	**35.12**	**315**	*e*P	**P**	**17 05 55.2**	**-0.6**
PSZ	**Piszkesteto**	**35.80**	**313**	P	**P**	**17 06 00.9**	**-0.8**
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PSZ	**Piszkesteto**	**35.80**	**313**	P	**P**	**17 06 00.9**	**-0.8**
PSZ				IAmb	IAmb	17 06 03.0	
	comp=Z,10.0nm,1.0s						
MORH	**Mrgy, Hungar**	**36.18**	**309**	⇑P	**P**	**17 06 04.8**	**-0.1**
VYHS	**Vyhne**	**36.64**	**313**	*e*P	**P**	**17 06 09.1**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VYHS	**Vyhne**	**36.64**	**313**	*e*P	**P**	**17 06 09.1**	**+0.2**
KMBO	**Kilima Mbogo**	**37.02**	**219**	P	**P**	**17 06 14.1**	**+1.5**
	comp=Z,2.7nm,0.8s,baz=21,slow=9.3,SNR=7.9						
KMBO	**Kilima Mbogo**	**37.02**	**219**	*i* P	**P**	**17 06 14.8**	**+2.2**
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.31**	**98**	LR	LR	17 26 12.0	
	comp=Z,86nm,18.1s,baz=295,slow=44						
MODS	**Modra-Piesok**	**37.61**	**313**	*e*P	**P**	**17 06 17.7**	**+0.6**
MODS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MODS	**Modra-Piesok**	**37.61**	**313**	*e*P	**P**	**17 06 17.7**	**+0.6**
MOY	**Mondy**	**37.93**	**42**	*e*P	**P**	**17 06 21.4**	**+1.5**
MOY				pmax	pmax		
	comp=Z,17nm,1.4s						
JOF	**Joensuu**	**38.40**	**340**	P	**P**	**17 06 23.5**	**0.0**
JOF				pmax	pmax		
	comp=Z,35nm,1.9s						
CONA	**Conrad Observa**	**38.42**	**311**	*e*P	**P**	**17 06 23.8**	**-0.3**
	comp=Z,6.6nm,1.0s						
ARSA	**Arzberg**	**38.50**	**310**	*e*P	**P**	**17 06 24.3**	**-0.3**
	comp=Z,10nm,1.2s						
KSP	**Ksiaz**	**38.90**	**316**	P	**P**	**17 06 28.3**	**+0.3**
KSP				pmax	pmax		
	comp=Z,11nm,1.2s						
FIA1	**FINESS Array S**	**39.14**	**335**	P	**P**	**17 06 29.6**	**-0.2**
FIA1				IAmb	IAmb	17 06 29.9	
	comp=Z,16nm,1.1s						
FINES	**FINESS Array B**	**39.14**	**335**	P	**P**	**17 06 29.4**	**-0.3**
	comp=Z,3.1nm,0.4s,baz=132,slow=8.1,SNR=27						
FINES				LR	LR	17 25 56.3	
	comp=Z,164nm,18.5s,baz=147,slow=41						
FINES	**FINESS Array B**	**39.14**	**335**	P	**P**	**17 06 28.8**	**-1.0**
MOA	**Molln**	**39.45**	**311**	*e*P	**P**	**17 06 31.5**	**-1.1**
	comp=Z,13nm,1.0s						
TLY	**Talaya**	**39.49**	**43**	*e*P	**P**	**17 06 35.3**	**+2.4**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,768nm,15.0s						
CKRC	**Cesky Krumlov**	**39.63**	**312**	*e*P	**P**	**17 06 33.8**	**-0.3**
MYKA	**Terra Mystica**	**39.65**	**309**	*e*P	**P**	**17 06 32.1**	**-2.3**
	comp=Z,5.9nm,1.1s						
KBA	**Koelnbreinsper**	**39.92**	**310**	*e*P	**P**	**17 06 37.1**	**+0.4**
	comp=Z,11nm,1.4s						
SUF	**Sumiainen**	**39.95**	**337**	P	**P**	**17 06 36.6**	**+0.1**
SUF				pmax	pmax		
	comp=Z,24nm,1.1s						
GEC2	**GERESS Array S**	**40.02**	**312**	P	**P**	**17 06 36.9**	**-0.6**
GEC2				IAmb	IAmb	17 06 38.1	
	comp=Z,18nm,0.9s						
GERES	**GERESS Array B**	**40.02**	**312**	P	**P**	**17 06 37.4**	**-0.1**
	comp=Z,10nm,0.8s,baz=106,slow=8.9,SNR=31						
GERES	**GERESS Array B**	**40.02**	**312**	P	**P**	**17 06 37.0**	**-0.6**
KHC	**Kasperske Hory**	**40.17**	**313**	*e*P	**P**	**17 06 38.1**	**-0.5**
KHC	**Kasperske Hory**	**40.17**	**313**	*e*P	**P**	**17 06 38.1**	**-0.5**
KHC	**Kasperske Hory**	**40.17**	**313**	P	**P**	**17 06 37.8**	**-0.8**
SONM	**Songino Array**	**40.30**	**49**	LR	LR	17 25 28.2	
	comp=Z,295nm,18.4s,baz=271,slow=39						
ABTA	**Abfaltersbach**	**40.44**	**309**	*e*P	**P**	**17 06 38.6**	**-2.3**
	comp=Z,7.7nm,1.1s						
ULN	**Ulaanbaatar**	**40.75**	**49**	*i* P	**P**	**17 06 43.1**	**-0.4**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLL	**Collm**	**41.03**	**316**	*i* P	**P**	**17 06 44.4**	**-1.2**
	comp=Z,17nm,1.1s						
CLL				*i*		17 07 00.1	
CLL	**Collm**	**41.03**	**316**	*i* P	**P**	**17 06 44.4**	**-1.2**
CLL				pmax	pmax		
	comp=Z,17nm,1.1s						
CLL	**Collm**	**41.03**	**316**	P	**P**	**17 06 45.2**	**-0.4**
CLL				IAmb	IAmb	17 06 47.0	
	comp=Z,20nm,1.2s						
WTTA	**Wattenberg**	**41.10**	**310**	*e*P	**P**	**17 06 45.0**	**-1.5**
	comp=Z,16nm,1.2s						
WTTA	**Wattenberg**	**41.10**	**310**	P	**P**	**17 06 45.9**	**-0.6**
WTTA				pmax	pmax		
	comp=Z,14nm,0.9s						
WATA	**Walderalm**	**41.16**	**310**	*e*P	**P**	**17 06 45.4**	**-1.5**
	comp=Z,17nm,1.5s						
MSF	**Maaselka**	**41.29**	**342**	P	**P**	**17 06 47.1**	**-0.4**
MSF				pmax	pmax		
	comp=Z,26nm,2.8s						
SQTA	**Sankt Quirin**	**41.39**	**309**	*e*P	**P**	**17 06 47.0**	**-1.8**
	comp=Z,5.4nm,0.8s						
MOTA	**Moosalm**	**41.48**	**310**	*e*P	**P**	**17 06 47.3**	**-2.2**
	comp=Z,6.4nm,0.8s						
FETA	**Feichten**	**41.68**	**309**	*e*P	**P**	**17 06 50.1**	**-1.1**
	comp=Z,10.0nm,1.0s						
RETA	**Reutte**	**41.73**	**310**	*e*P	**P**	**17 06 49.7**	**-1.8**
	comp=Z,9.4nm,1.3s						
DAVA	**Damuels**	**42.29**	**309**	*e*P	**P**	**17 06 54.7**	**-1.6**
	comp=Z,15nm,1.0s						
NRIK	**Noril'sk**	**43.27**	**14**	P	**P**	**17 07 04.0**	**+0.4**
	comp=Z,6.7nm,0.9s,baz=203,slow=5.3,SNR=12						
NRIK				LR	LR	17 28 02.2	
	comp=Z,476nm,18.1s,baz=212,slow=40						
NRIK	**Noril'sk**	**43.27**	**14**	*ce*P	**P**	**17 07 03.1**	**-0.5**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NRIK	**Noril'sk**	**43.27**	**14**	P	**P**	**17 07 04.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**43.47**	**60**	*e*P	**P**	**17 07 07.2**	**+1.4**
HHC				S	S	17 13 45.6	+11
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,4.6s						
HHC				LR	LR		
	comp=Z,190nm,14.0s						
HHC				LR	LR		
	comp=Z,220nm,13.2s						
HHC				LR	LR		
	comp=Z,230nm,14.9s						
KEV	**Kevo**	**44.66**	**344**	P	**P**	**17 07 14.8**	**0.0**
KEV				pmax	pmax		
	comp=Z,53nm,1.5s						
KEV	**Kevo**	**44.66**	**344**	P	**P**	**17 07 14.8**	**0.0**
ARCES	**ARCESS Array B**	**44.86**	**344**	P	**P**	**17 07 16.1**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=142,slow=8.2,SNR=12						
ARCES	**ARCESS Array B**	**44.86**	**344**	P	**P**	**17 07 16.3**	**-0.1**
ARCES				pmax	pmax		
	comp=Z,14nm,1.3s						
ARCES	**ARCESS Array B**	**44.86**	**344**	P	**P**	**17 07 16.3**	**-0.1**
ARCES				IAmb	IAmb	17 07 24.0	
	comp=Z,14nm,1.2s						
NOA	**NORSAR Array B**	**45.08**	**329**	P	**P**	**17 07 16.4**	**-1.9**
	comp=Z,2.1nm,0.9s,baz=115,slow=7.9,SNR=5.1						
QIZ	**Qiongzhong**	**46.59**	**91**	P	**P**	**17 07 30.0**	**-0.8**
QIZ				S	S	**17 14 21.1**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,16nm,1.3s						
QIZ				LR	LR		
	comp=Z,200nm,16.7s						
QIZ				LR	LR		
	comp=Z,220nm,21.1s						
QIZ				LR	LR		
	comp=Z,200nm,18.6s						
BOD	**Bodaibo**	**46.92**	**37**	*e*P	**P**	**17 07 32.9**	**+0.1**
BOD				pmax	pmax		
	comp=Z,19nm,1.8s						
OPO	**Ambohidratompo**	**49.01**	**196**	P	**P**	**17 07 51.4**	**+1.9**
	comp=Z,4.6nm,0.9s,baz=359,slow=9.5,SNR=3.8						
ESDC	**Sonseca Array**	**52.54**	**299**	P	**P**	**17 08 14.9**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=54,slow=7.6,SNR=5.7						
ESDC	**Sonseca Array**	**52.54**	**299**	P	**P**	**17 08 14.2**	**-1.8**
POLO	**Lamas de Olo**	**55.13**	**302**	*e*P	**P**	**17 08 34.8**	**-0.2**
PBAR	**Barrancos**	**55.17**	**298**	*e*P	**P**	**17 08 34.9**	**-0.3**
	comp=Z,22nm,1.6s						
PCBR	**Castelo Branco**	**55.18**	**300**	*e*P	**P**	**17 08 35.0**	**-0.2**
	comp=Z,22nm,1.5s						
YAK	**Yakutsk**	**55.31**	**33**	*e*P	**P**	**17 08 34.1**	**-1.7**
YAK				*e**PP	**sP**	**17 08 40.8**	**+0.4**
YAK				*e*S	**S**	**17 16 14.2**	**-5.3**
YAK				*e**SS	sS	17 16 37.5	+12
YAK				*e*		17 18 16.8	
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK				smax	smax		
	comp=N,51nm,4.0s						
YAK				smax	smax		
	comp=E,46nm,3.5s						
YAK	**Yakutsk**	**55.31**	**33**	P	**P**	**17 08 34.3**	**-1.5**
YAK				IAmb	IAmb	17 08 43.1	
	comp=Z,13nm,0.9s						
TOA0	**Torodi Ar. Sit**	**55.86**	**266**	P	**P**	**17 08 39.3**	**-1.2**
TOA0				IAmb	IAmb	17 08 51.5	
	comp=Z,6.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**55.86**	**266**	P	**P**	**17 08 38.9**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=60,slow=6.8,SNR=16						
TORD	**Torodi Ar. Bea**	**55.86**	**266**	P	**P**	**17 08 39.0**	**-1.5**
TORD				IAmb	IAmb	17 08 51.4	
	comp=Z,4.5nm,0.8s						
TIXI	**Tiksi**	**56.02**	**21**	*ce*P	**P**	**17 08 39.4**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,16nm,1.7s						
TIXI	**Tiksi**	**56.02**	**21**	P	**P**	**17 08 39.8**	**-0.9**
KSRS	**Korea Array**	**56.50**	**62**	P	**P**	**17 08 42.9**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=284,slow=4.3,SNR=3.7						
KSRS				LR	LR	17 35 13.7	
	comp=Z,86nm,18.9s,baz=280,slow=38						
KLR	**Kul'dur**	**57.11**	**48**	*ce*P	**P**	**17 08 47.8**	**-1.0**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	**Danmarks Havn**	**59.13**	**345**	*i* P	**P**	**17 09 01.8**	**-0.7**
DAG				IAmb	IAmb	17 09 02.6	
	comp=Z,8.1nm,1.0s						
DAG	**Danmarks Havn**	**59.13**	**345**	P	**P**	**17 09 02.2**	**-0.4**
NOR	**Nord**	**59.30**	**350**	*i* P	**P**	**17 09 02.6**	**-1.1**
LBTB	**Lobatse**	**63.08**	**215**	P	**P**	**17 09 30.9**	**+0.8**
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LBTB	**Lobatse**	**63.08**	**215**	P	**P**	**17 09 30.9**	**+0.8**
LBTB				IAmb	IAmb	17 09 37.8	
	comp=Z,8.3nm,1.1s						
YSS	**Yuzh-Sakhalins**	**64.79**	**49**	*e*P	**P**	**17 09 40.9**	**-0.2**
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
SUMG	**Summit**	**64.81**	**341**	*i* P	**P**	**17 09 41.4**	**+0.1**
SUMG	**Summit**	**64.81**	**341**	P	**P**	**17 09 41.0**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,14nm,1.2s						
SUMG	**Summit**	**64.81**	**341**	P	**P**	**17 09 41.0**	**-0.3**
SEY	**Seymchan**	**65.62**	**30**	*i* P	**P**	**17 09 44.2**	**-2.0**
NEEM	**North Greenlan**	**66.05**	**347**	*i* P	**P**	**17 09 48.8**	**-0.3**
NEEM				IAmb	IAmb	17 09 49.0	
	comp=Z,9.6nm,1.0s						
BOSA	**Boshof**	**66.25**	**213**	P	**P**	**17 09 49.8**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=34,slow=8.5,SNR=5.5						
BOSA	**Boshof**	**66.25**	**213**	P	**P**	**17 09 50.9**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BOSA	**Boshof**	**66.25**	**213**	P	**P**	**17 09 50.9**	**+0.1**
BOSA				IAmb	IAmb	17 10 03.8	
	comp=Z,5.4nm,0.9s						
BILL	**Bilibino**	**69.15**	**23**	⇑*i*P	**P**	**17 10 08.4**	**-0.1**
BILL				*e*		17 12 38.3	
BILL				*i* S	S	17 19 31.9	+18
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,127nm,16.0s						
EUNU	**Eureka**	**69.40**	**354**	P	**P**	**17 10 10.8**	**+0.8**
TULEG	**Thule**	**69.86**	**349**	P	**P**	**17 10 11.6**	**-1.1**
TULEG				IAmb	IAmb	17 10 12.8	
	comp=Z,11nm,1.0s						
TOLK	**Toolik Lake Re**	**80.08**	**10**	P	**P**	**17 11 11.8**	**-0.2**
TOLK				IAmb	IAmb	17 11 13.1	
	comp=Z,8.2nm,0.8s						
ANM	**Nome**	**80.15**	**18**	P	**P**	**17 11 12.2**	**-0.1**
ANM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ANM	**Nome**	**80.15**	**18**	P	**P**	**17 11 12.2**	**-0.1**
C36M	**Paulatuk**	**81.70**	**1**	P	**P**	**17 11 18.8**	**-1.6**
C36M				IAmb	IAmb	17 11 21.1	
	comp=Z,3.9nm,0.8s						
IMAR	**Indian Mountai**	**81.70**	**13**	P	**P**	**17 11 19.1**	**-1.5**
BMAR	**Burnt Mountain**	**81.94**	**9**	P	**P**	**17 11 21.1**	**-0.9**
INK	**Inuvik**	**82.29**	**5**	P	**P**	**17 11 22.9**	**-0.7**
INK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
INK	**Inuvik**	**82.29**	**5**	P	**P**	**17 11 22.9**	**-0.7**
INK				IAmb	IAmb	17 11 24.1	
	comp=Z,6.2nm,1.1s						
I23K	**Minto, Yukon-K**	**83.28**	**12**	P	**P**	**17 11 28.4**	**-0.4**
I23K				IAmb	IAmb	17 11 30.0	
	comp=Z,12nm,1.4s						
MDM	**Murphy Dome**	**83.66**	**12**	P	**P**	**17 11 30.3**	**-0.5**
NEA2	**Nenana**	**83.84**	**12**	P	**P**	**17 11 30.3**	**-1.4**
NEA2				IAmb	IAmb	17 11 31.6	
	comp=Z,8.4nm,1.1s						
BPAW	**Bear Paw Mtn.**	**83.92**	**13**	P	**P**	**17 11 31.3**	**-0.9**
ILAR	**Eielson Array**	**84.06**	**11**	P	**P**	**17 11 31.6**	**-1.3**
	comp=Z,1.1nm,0.9s,baz=344,slow=3.4,SNR=8.9						
ILAR	**Eielson Array**	**84.06**	**11**	P	**P**	**17 11 31.0**	**-1.9**
MCK	**McKinley**	**84.65**	**12**	P	**P**	**17 11 35.7**	**-0.2**
MCK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MCK	**McKinley**	**84.65**	**12**	P	**P**	**17 11 35.7**	**-0.2**
MCK				IAmb	IAmb	17 11 36.1	
	comp=Z,9.0nm,1.2s						
EGAK	**Eagle**	**84.92**	**9**	P	**P**	**17 11 37.0**	**-0.2**
EGAK				IAmb	IAmb	17 11 37.9	
	comp=Z,9.3nm,1.1s						
RND	**Reindeer**	**84.96**	**12**	P	**P**	**17 11 36.5**	**-1.1**
RND				pmax	pmax		
	comp=Z,20nm,1.4s						
RND	**Reindeer**	**84.96**	**12**	P	**P**	**17 11 36.5**	**-1.1**
SCRK	**Sand Creek**	**85.27**	**10**	P	**P**	**17 11 39.6**	**+0.5**
SCRK				IAmb	IAmb	17 11 40.1	
	comp=Z,9.7nm,1.0s						
K27K	**Chicken**	**85.51**	**9**	P	**P**	**17 11 40.4**	**+0.2**
DOT	**Dot Lake**	**85.57**	**10**	P	**P**	**17 11 40.2**	**-0.3**
DOT				IAmb	IAmb	17 11 41.0	
	comp=Z,7.6nm,1.0s						
DAWY	**Dawson**	**85.83**	**8**	P	**P**	**17 11 41.7**	**-0.2**
GHO	**Glory Hole Cre**	**86.44**	**13**	P	**P**	**17 11 44.1**	**-0.9**
BCAR	**Beaver Creek A**	**86.46**	**10**	P	**P**	**17 11 44.1**	**-0.9**
SML	**Sawmill**	**86.52**	**13**	P	**P**	**17 11 44.8**	**-0.5**
SML				pmax	pmax		
	comp=Z,17nm,1.1s						
SML	**Sawmill**	**86.52**	**13**	P	**P**	**17 11 44.8**	**-0.5**
M24K	**Tolsona, Glenn**	**86.65**	**12**	P	**P**	**17 11 46.7**	**+0.7**
WB0	**Warramunga Arr**	**86.91**	**115**	P	**P**	**17 11 48.4**	**+0.6**
WB0				IAmb	IAmb	17 11 49.2	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**86.96**	**115**	P	**P**	**17 11 48.8**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=318,slow=4.0,SNR=15						
WRA	**Warramunga Arr**	**86.96**	**115**	*i* P	**P**	**17 11 48.8**	**+0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**86.96**	**115**	P	**P**	**17 11 49.0**	**+1.0**
WRAB	**Tennant Creek**	**86.96**	**115**	*ce*P	**P**	**17 11 48.0**	**0.0**
WRAB				pmax	pmax		
	comp=Z,14nm,1.7s						
YKA	**Yellowknife Ar**	**88.51**	**357**	P	**P**	**17 11 54.3**	**-0.5**
	comp=Z,4.2nm,0.8s,baz=360,slow=4.7,SNR=78						
YKA				LR	LR	17 54 13.6	
	comp=Z,61nm,21.6s,baz=0.0,slow=37						
ASAR	**Alice Springs**	**88.61**	**118**	P	**P**	**17 11 56.5**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=304,slow=4.9,SNR=23						
ASAR	**Alice Springs**	**88.61**	**118**	P	**P**	**17 11 56.9**	**+1.0**
ASAR	**Alice Springs**	**88.61**	**118**	P	**P**	**17 11 56.9**	**+1.0**
ULM	**Lac du Bonnet**	**97.98**	**344**	LR	LR	18 01 56.5	
	comp=Z,77nm,18.7s,baz=80,slow=38						

SOME 01 17:01:46.8, 42.57N × 81.20E, h10km, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.41**	**295**	*e*P	Pn	17 02 08.6	-4.0
	4.0nm,0.2s						
SHLS				*e*S	Sb	17 02 24.5	-6.8
	2.0nm,0.2s						
KPKS	**Kokpek**	**2.05**	**297**	*e*P	Pb	17 02 24.8	+0.6
	4.7nm,0.3s						
KPKS				*e*S	Sg	17 02 52.1	-0.7
	2.5nm,0.2s						
SATY	**Saty**	**2.11**	**284**	*e*P	Pb	17 02 26.3	+1.0
	1.1nm,0.2s						
SATY				*e*S	Sg	17 02 54.7	0.0
	2.8nm,0.2s						
MNBS	**Baschi**	**2.54**	**307**	*e*P	Pb	17 02 33.5	+0.9
	0.8nm,0.3s						
MNBS				*e*S	Sg	17 03 06.8	-1.6
	3.2nm,0.3s						

UPP ***01*** *17:03:38.5±0.1, 67.08N×20.90E, h0km, ML2.5, Explosion*
HEL ***01*** *17:03:39.3±0.1, 67.08N×20.89E, h0km, ML2.1, ML2.5(UPP), Explosion*
NAO ***01*** *17:03:39.5±0.8, 67.08N×21.21E, ML2.3*
IDC ***01*** *17:03:39.3±1.0, 67.07N×20.97E, h0km, mb1 2.9/3, mb1mx2.8/46, mbtmp2.8/3, ML1.9/3, Error ellipse: s-maj=12.2km s-min=5.2km az=148.0*
BER ***01*** *17:03:41.2±4.8, 67.06N×21.02E, h0km, ML1.6, ML2.3(NAO), Suspected explosion*

ISC 01 17:03:38.2±0.7, 67.08N±0.02×20.86E±0.03, h0km, n48, σ0s91/73, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.58**	**49**	P	**Pg**	**17 03 49.5**	**0.0**
MASU	**Masugnsbyn**	**0.58**	**49**	*i* P	**Pg**	**17 03 49.5**	**0.0**
PAJU	**Pajala**	**0.89**	**92**	P	**Pg**	**17 03 54.6**	**-0.6**
PAJU	**Pajala**	**0.89**	**92**	*e*P	**Pg**	**17 03 54.6**	**-0.6**
PAJU				*e*S	**Sg**	**17 04 06.3**	**-0.2**
RATU	**Laukkuluspa**	**0.90**	**328**	P	**Pg**	**17 03 55.4**	**+0.1**
RATU				S	**Sb**	**17 04 08.2**	**-0.9**
RATU	**Laukkuluspa**	**0.90**	**328**	*e*P	**Pg**	**17 03 55.4**	**+0.1**
RATU				*e*S	**Sb**	**17 04 08.2**	**-0.9**
KUA	**Kurravaara**	**0.91**	**347**	P	**Pg**	**17 03 55.3**	**-0.2**
KUA				S	**Sg**	**17 04 08.0**	**+0.8**
KUA	**Kurravaara**	**0.91**	**347**	*e*P	**Pg**	**17 03 55.3**	**-0.2**
KUA				*e*S	**Sg**	**17 04 08.0**	**+0.8**
HARU	**Harads**	**0.92**	**177**	P	**Pg**	**17 03 55.8**	**0.0**
HARU	**Harads**	**0.92**	**177**	*e*P	**Pg**	**17 03 55.8**	**0.0**
NIKU	**Nikkaluokta**	**1.06**	**319**	P	**Pg**	**17 03 58.6**	**+0.1**
NIKU	**Nikkaluokta**	**1.06**	**319**	*e*P	**Pg**	**17 03 58.6**	**+0.1**
LANU	**Lannavaara**	**1.07**	**23**	P	**Pg**	**17 03 58.0**	**-0.7**
LANU	**Lannavaara**	**1.07**	**23**	*e*P	**Pg**	**17 03 57.9**	**-0.7**
LANU				*e*S	**Sg**	**17 04 13.3**	**+0.8**
KOVU	**Salmi**	**1.18**	**347**	P	**Pg**	**17 04 00.6**	**-0.3**
KOVU	**Salmi**	**1.18**	**347**	*e*P	**Pg**	**17 04 00.6**	**-0.3**
KALU	**Kalix**	**1.58**	**139**	P	**Pn**	**17 04 07.2**	**-0.2**
KALU	**Kalix**	**1.58**	**139**	*e*P	**Pn**	**17 04 07.2**	**-0.2**
SJUU	**Sjulsmark**	**1.60**	**169**	P	**Pn**	**17 04 07.9**	**+0.2**
SJUU	**Sjulsmark**	**1.60**	**169**	*e*P	**Pn**	**17 04 07.9**	**+0.2**
TOF	**Tornio**	**1.71**	**124**	*e*P	**Pn**	**17 04 09.5**	**+0.4**
TOF				*e*S	**Sg**	**17 04 33.0**	**0.0**
HEF	**Hetta**	**1.71**	**37**	*e*P	**Pn**	**17 04 09.2**	**0.0**
HEF				*e*S	**Sn**	**17 04 31.8**	**0.0**
KIF	**Kilpisjarvi**	**1.94**	**359**	Pn	**Pb**	**17 04 14.1**	**-0.2**
KIF				Sn	**Sg**	**17 04 41.3**	**+0.9**

comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=5.1
FINES Sn **Sn** **17 06 19.1 -0.6**
comp=Z,0.4nm,0.3s,baz=346,slow=22,SNR=7.8
NB2 NORSAR Subarra 7.38 219 Pn **Pn** **17 05 26.8 -0.3**
baz=24,slow=14
NB2 NORSAR Subarra 7.38 219 Pn **Pn** **17 05 26.8 -0.3**
baz=24,slow=14
NOA NORSAR Array B 7.38 219 Pn **Pn** **17 05 27.2 +0.1**
comp=Z,0.0nm,0.3s,baz=135,slow=5.7,SNR=2.0
NOA Sn **Sn** **17 06 49.6 -1.8**
comp=Z,0.0nm,0.3s,baz=150,slow=18,SNR=2.0
HFS Hagfors 7.66 208 Pn **Pn** **17 05 31.2 +0.3**
baz=23,slow=14
HFS Hagfors 7.66 208 Pn **Pn** **17 05 31.2 +0.3**
baz=23,slow=14
SPA0 Spitsbergen Ar 11.24 355 Pn **Pn** **17 06 19.1 -0.7**
SPA0 Spitsbergen Ar 11.24 355 Pn **Pn** **17 06 19.1 -0.7**

IDC 01 17:33:21.2±26.0, 23°89S×179°67W, h640km±341km, mb2.7/4, mb1 3.0/4, mb1mx2.7/30, mbtmp3.8/4, Error ellipse: s-maj=230.5km s-min=87.8km az=145.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.78**	**270**	P	P	17 38 57.0	+0.8
	1.3nm,0.5s,baz=93,slow=7.6,SNR=1.3						
ASAR	**Alice Springs**	**42.34**	**261**	P	P	17 40 21.4	-0.4
	0.4nm,0.4s,baz=90,slow=7.7,SNR=50						
WRA	**Warramunga Arr**	**42.71**	**266**	P	P	17 40 24.9	+0.2
	0.9nm,0.5s,baz=104,slow=7.9,SNR=15						
TXAR	**Lajitas Array**	**90.17**	**58**	P	P	17 45 15.4	0.0
	0.1nm,0.4s,baz=238,slow=5.0,SNR=1.7						

IDC 01 17:37:27.9±2.8, 6°26S×130°24E, h128km±38km, mb3.3/1, mb1 3.2/5, mb1mx3.0/35, mbtmp3.6/5, Error ellipse: s-maj=81.5km s-min=20.8km az=87.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.45**	**11**	P	Pn	17 38 47.3	+0.3
	1.7nm,0.3s,baz=248,slow=23,SNR=14						
SIJI				S	Sn	17 39 44.2	-4.6
	2.6nm,0.3s,baz=220,slow=23,SNR=9.9						
FITZ	**Fitzroy Crossi**	**12.60**	**200**	P	Pn	17 40 22.4	-0.3
	0.1nm,0.3s,baz=30,slow=11,SNR=1.1						
FITZ				S	Sn	17 42 35.5	-6.1
	0.2nm,0.3s,baz=239,slow=19,SNR=6.4						
WRA	**Warramunga Arr**	**14.18**	**164**	P	Pn	17 40 41.7	-1.3
	0.3nm,0.3s,baz=348,slow=11,SNR=17						
WRA				S	Sn	17 43 08.2	-12
	0.1nm,0.3s,baz=336,slow=22,SNR=2.3						
ASAR	**Alice Springs**	**17.67**	**169**	P	Pn	17 41 26.2	+0.1
	0.2nm,0.3s,baz=345,slow=9.4,SNR=21						
ASAR				S	S	17 44 36.8	-5.6
	0.0nm,0.3s,baz=354,slow=27,SNR=2.3						
MKAR	**Makanchi Array**	**67.74**	**327**	P	P	17 48 11.7	0.0
	0.4nm,0.4s,baz=117,slow=7.4,SNR=11						

*IDC **01** 18:18:30.3±1.1, 1°93N×127°28E, h0km, mb3.3/6, mb1 3.5/6, mb1mx3.3/48, mbtmp3.3/6, Error ellipse: s-maj=79.3km s-min=19.8km az=71.0*

ISC 01 18:18:43.3±1.1, 1°8N±0°2×127°4E±0°5, h112km, n6, σ1§20/6, mb3.2/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.68**	**163**	P	**P**	**18 23 35.2**	**-0.3**
	0.5nm,0.4s,baz=339,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.11**	**166**	P	**P**	**18 24 07.5**	**+0.5**
	0.2nm,0.4s,baz=344,slow=7.7,SNR=13						
SONM	**Songino Array**	**49.30**	**341**	P	**P**	**18 27 21.9**	**+0.8**
	0.3nm,0.8s,baz=124,slow=2.6,SNR=3.8						
MKAR	**Makanchi Array**	**59.49**	**326**	P	**P**	**18 28 33.1**	**-1.6**
	0.2nm,0.5s,baz=121,slow=7.3,SNR=5.2						
KURBB	**Kurchatov Arra**	**63.69**	**328**	P	**P**	**18 29 03.5**	**+0.8**
	0.2nm,0.6s,baz=110,slow=4.2,SNR=2.1						
ILAR	**Eielson Array**	**86.54**	**25**	P	**P**	**18 31 13.2**	**-0.4**
	0.5nm,1.0s,baz=286,slow=6.4,SNR=2.5						

IDC 01 18:31:34.2±2.0, 9°71S×125°74E, h0km, mb3.3/1, mb1 3.3/5, mb1mx3.2/30, mbtmp3.1/5, ML2.9/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/20, Error ellipse: s-maj=42.6km s-min=28.8km az=54.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.10**	**256**	Pn	Pn	18 32 10.2	-0.5
	4.6nm,0.3s,baz=127,slow=6.0,SNR=8.6						
BATI				S	Sn	18 32 34.2	-3.4
	6.7nm,0.3s,baz=184,slow=21,SNR=8.3						
FITZ	**Fitzroy Crossi**	**8.34**	**181**	Pn	Pn	18 33 37.2	+0.8
	0.1nm,0.3s,baz=12,slow=13,SNR=2.0						
FITZ				S	Sn	18 35 02.8	-8.6
	0.2nm,0.3s,baz=305,slow=24,SNR=2.0						
WRA	**Warramunga Arr**	**13.13**	**142**	Pn	Pn	18 34 42.8	+0.6
	0.1nm,0.3s,baz=320,slow=13,SNR=5.0						
WRA				S	Sn	18 37 00.1	-8.9
	0.1nm,0.3s,baz=322,slow=21,SNR=1.8						
ASAR	**Alice Springs**	**15.92**	**152**	Pn	Pn	18 35 18.1	-1.7
	0.1nm,0.3s,baz=320,slow=11,SNR=7.6						
ASAR				Sn	Sn	18 38 06.7	-10
	0.0nm,0.3s,baz=341,slow=25,SNR=1.9						
ASAR				LR	LR	18 42 17.0	
	comp=Z,91nm,20.3s,baz=297,slow=40						
MKAR	**Makanchi Array**	**68.28**	**329**	P	P	18 42 37.3	+0.3
	0.2nm,0.6s,baz=130,slow=7.9,SNR=2.1						

*IDC **01** 18:44:15.4±0.6, 40°18N×143°43E, h0km, mb3.9/19, mb1 4.1/23, mb1mx4.0/46, mbtmp3.9/23, ML3.1/3, MS3.4/14, Ms1 3.5/14, ms1mx3.1/56, Error ellipse: s-maj=17.8km s-min=13.4km az=109.0*

*JMA **01** 18:44:16.6±0.2, 40°24N×143°43E, h5km±3km, M4.3*

*NIED **01** 18:44:16.6, 40°24N×143°43E, h5km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.25; Mθθ=0.61; Mφφ=-0.35; Mrθ=2.53; Mθφ=0.11; Mrφ=2.85; Fault plane solution: M0=3.84000×10¹⁵ NP1: φs=222.00000°, δ=88.00000°, λ=-97.00000°. NP2: φs=119.00000°, δ=7.00000°, λ=-13.00000°.*

*NEIC **01** 18:44:20.4±1.7, 40°25N±0°03×143°06E±0°09, h37km±6km, mb4.4/33 Error ellipse: s-maj=10.5km s-min=4.7km az=86.0*

ISC 01 18:44:17.0±1.9, 40°24N±0°04×143°39E±0°05, h10km±11km, n114, σ1§28/113, mb4.3/37, MS3.5/11, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.21**	**256**	P	**Pg**	**18 44 39.8**	**-0.5**
JTH				S	**Sb**	**18 44 56.9**	**+1.2**
JKEN	**Kujiedanarisaw**	**1.29**	**269**	P	**Pn**	**18 44 41.5**	**+0.5**
JKEN				S	**Sg**	**18 44 58.5**	**0.0**
MIYJ	**Miyakonagasawa**	**1.38**	**242**	P	**Pn**	**18 44 42.7**	**+0.4**
JANG	**Nango**	**1.44**	**276**	P	**Pn**	**18 44 43.3**	**+0.1**
JANG				S	**Sn**	**18 45 02.8**	**+0.7**
ERM	**Erimo**	**1.78**	**354**	Pn	**Pn**	**18 44 48.1**	**+0.2**
JEM	**Erimo**	**1.79**	**354**	P	**Pn**	**18 44 47.9**	**+0.1**
JOM	**Ohasama**	**1.79**	**245**	P	**Pn**	**18 44 49.1**	**+1.2**
JOM				eS	**Sb**	**18 45 12.8**	**+0.5**
JTM	**Tenmabayashi**	**1.86**	**288**	P	**Pn**	**18 44 50.1**	**+1.3**
JTM				S	**Sb**	**18 45 14.8**	**+0.6**
JTM	**Tenmabayashi**	**1.86**	**288**		**Pn**	**18 44 49.6**	**+0.7**
JNBK	**Urakawa-nobuka**	**2.10**	**347**	P	**Pn**	**18 44 53.4**	**+1.3**
JNBK				S	**Sb**	**18 45 20.5**	**-0.7**
JAH	**Hinai**	**2.11**	**270**	P	**Pn**	**18 44 53.9**	**+1.5**
JAH				eS	**Sn**	**18 45 21.2**	**+2.6**
JMK	**Ichinoseki**	**2.12**	**233**	P	**Pn**	**18 44 53.2**	**+0.8**
JOT	**Ohata**	**2.12**	**303**	P	**Pn**	**18 44 53.5**	**+1.1**
JOT				S	**Sn**	**18 45 20.3**	**+1.6**
JCH	**Churui**	**2.37**	**359**	P	**Pn**	**18 44 55.7**	**-0.3**
JCH				S	**Sn**	**18 45 23.9**	**-1.2**
JKB	**Kayabe**	**2.43**	**313**	P	**Pn**	**18 44 58.8**	**+2.1**
JYK	**Kaneyama**	**2.69**	**242**	P	**Pn**	**18 45 02.3**	**+2.0**
JEW	**Eniwo**	**2.98**	**331**		**Pn**	**18 45 03.0**	**-1.3**
JMM	**Marumori**	**3.12**	**221**		**Pn**	**18 45 05.6**	**-0.5**
ASAJ	**Asahikawa**	**3.92**	**352**	Pn	**Pn**	**18 45 18.8**	**+1.6**
	1.5nm,0.3s,baz=199,slow=18,SNR=20						
ASAJ				Sn	**Sn**	**18 46 04.3**	**+1.1**
	3.9nm,0.3s,baz=220,slow=20,SNR=5.0						
ASAJ				LR	LR	18 47 10.2	
	comp=Z,156nm,22.0s,baz=180,slow=44						
JKA	**Kamikawa-asahi**	**3.92**	**352**		**Pn**	**18 45 18.1**	**+0.9**
JSD	**Sado**	**4.56**	**243**		**Pn**	**18 45 24.3**	**-1.6**
JYT	**Yasato**	**4.73**	**213**	Pn	**Pn**	**18 45 27.6**	**-0.7**
MAJO	**Matsushiro**	**5.50**	**229**	Pn	**Pn**	**18 45 38.5**	**-0.4**
MAT	**Matsushiro**	**5.50**	**229**	P	**Pn**	**18 45 40.8**	**+1.9**
MAT				eS	**Sn**	**18 46 43.7**	**+1.6**
MJAR	**Matsushiro Arr**	**5.50**	**229**	Pn	**Pn**	**18 45 40.8**	**+1.9**
	0.2nm,0.3s,baz=38,slow=12,SNR=27						
MJAR				Sn	**Sn**	**18 46 43.1**	**+1.0**
	baz=26,slow=23,SNR=1.4						
MJAR	**Matsushiro Arr**	**5.50**	**229**		**Pn**	**18 45 39.4**	**+0.5**
MJB9	**Matsu-Tunnel**	**5.50**	**230**	Pn	**Pn**	**18 45 35.8**	**-3.1**
JGF	**Kuroka**	**6.65**	**228**	Pn	**Pn**	**18 45 57.4**	**+2.6**
YSS	**Yuzh-Sakhalins**	**6.73**	**356**	Pn	**Pn**	**18 45 57.7**	**+1.9**
INU	**Inuyama**	**7.02**	**228**	Pn	**Pn**	**18 45 59.6**	**-0.2**
JHJ	**Hachijo jima 2**	**7.67**	**203**	Pn	**Pn**	**18 46 07.3**	**-1.5**
	3.5nm,0.3s,baz=330,slow=4.5,SNR=1.5						
USA0B	**Ussuriysk Arra**	**9.34**	**299**	Pn	**Pn**	**18 46 28.5**	**-3.1**
USRK	**Ussuriysk Ar.**	**9.34**	**299**	Pn	**Pn**	**18 46 30.5**	**-1.1**
	baz=82,slow=12,SNR=3.4						
USRK				LR	LR	18 50 14.6	
	comp=Z,280nm,19.1s,baz=85,slow=38						
USRK	**Ussuriysk Ar.**	**9.34**	**299**	Pn	**Pn**	**18 46 29.5**	**-2.1**
MDJ	**Mudanjiang**	**11.10**	**298**	Pn	**Pn**	**18 46 55.2**	**-0.4**
KLR	**Kul'dur**	**12.21**	**321**	Pn	**Pn**	**18 47 14.7**	**+3.8**
	0.1nm,0.3s,baz=280,slow=18,SNR=2.4						
KLR				LR	LR	18 52 21.0	
	comp=Z,150nm,18.7s,baz=182,slow=40						
JNU	**Nakatsue**	**12.30**	**239**	LR	LR	18 52 25.3	
	comp=Z,261nm,18.6s,baz=68,slow=40						
KSRS	**Korea Array**	**12.38**	**262**	Pn	Pn	18 47 20.6	+7.4
	0.1nm,0.3s,baz=94,slow=10,SNR=1.9						
KSRS				LR	LR	18 52 02.9	
	comp=Z,141nm,19.8s,baz=144,slow=38						
MA2	**Magadan**	**19.91**	**11**	P	**P**	**18 48 48.6**	**+0.1**
	0.2nm,0.3s,baz=184,slow=11,SNR=5.6						
MA2	**Magadan**	**19.91**	**11**	P	**P**	**18 48 48.6**	**+0.1**
SEY	**Seymchan**	**23.36**	**10**	P	**P**	**18 49 24.7**	**-0.6**
	2.5nm,0.6s,baz=186,slow=9.2,SNR=4.0						
YAK	**Yakutsk**	**23.36**	**344**	P	**P**	**18 49 24.0**	**-1.2**
	1.9nm,0.3s,baz=81,slow=0.6,SNR=7.8						
YAK	**Yakutsk**	**23.36**	**344**	P	**P**	**18 49 23.9**	**-1.4**
YAK				IAmb	IAmb	18 49 33.9	
	comp=Z,12nm,0.6s						
HHC	**Hu-ho-hao-te**	**24.13**	**282**	eP	**P**	**18 49 31.8**	**-1.3**
HHC				S	S	18 53 39.8	-11
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,59nm,4.5s						
HHC				LR	LR		
	comp=N,110nm,11.8s						
HHC				LR	LR		
	comp=E,150nm,11.4s						
HHC				LR	LR		
	comp=Z,160nm,13.4s						
ULN	**Ulaanbaatar**	**27.01**	**299**	P	**P**	**18 49 56.0**	**-3.2**
SONM	**Songino Array**	**27.45**	**298**	P	**P**	**18 50 04.0**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=103,slow=7.6,SNR=6.3						
SONM				LR	LR	19 01 20.9	
	comp=Z,114nm,18.4s,baz=98,slow=37						
SONM	**Songino Array**	**27.45**	**298**	P	**P**	**18 50 02.5**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**28.69**	**129**	T	T	19 20 19.3	
	baz=321,slow=75,SNR=53						
H11N1	**WAKE ISLAND Hy**	**28.70**	**129**	T	T	19 20 15.3	
	baz=321,slow=75,SNR=43						
H11N3	**WAKE ISLAND Hy**	**28.71**	**129**	T	T	19 20 14.7	
	baz=321,slow=75,SNR=40						
H11S1	**WAKE ISLAND Hy**	**29.52**	**130**	T	T	19 21 18.6	
	baz=322,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**29.53**	**130**	T	T	19 21 20.8	
	baz=322,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**29.54**	**130**	T	T	19 21 21.7	
	baz=322,slow=76,SNR=22						
TLY	**Talaya**	**29.55**	**306**	LR	LR	19 03 07.6	
	comp=Z,76nm,18.1s,baz=106,slow=38						
TIXI	**Tiksi**	**32.33**	**351**	P	**P**	**18 50 45.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=162,slow=4.4,SNR=1.2						
TIXI				LR	LR	19 04 59.5	
	comp=Z,50nm,18.9s,baz=178,slow=38						
GTA	**Gaotai**	**33.23**	**283**	eP	**P**	**18 50 55.9**	**+1.6**
GTA				pP	sP	18 50 59.4	+1.2
GTA				sP	pP	18 51 02.0	+4.9
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,32nm,4.4s						
GTA				LR	LR		
	comp=N,82nm,14.2s						
GTA				LR	LR		
	comp=E,190nm,15.6s						
GTA				LR	LR		
	comp=Z,130nm,14.5s						
WMQ	**Urumqi**	**40.87**	**294**	eP	**P**	**18 51 57.8**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.7s						
ZALV	**Zalesovo Beam**	**40.98**	**310**	P	**P**	**18 52 00.9**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=101,slow=8.0,SNR=3.9						
ZALV	**Zalesovo Beam**	**40.98**	**310**	P	**P**	**18 51 58.8**	**-1.0**
MK31	**Makanchi Array**	**43.81**	**300**	P	**P**	**18 52 21.4**	**-1.5**
MKAR	**Makanchi Array**	**43.81**	**300**	P	**P**	**18 52 23.1**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=84,slow=9.0,SNR=9.1						
MKAR	**Makanchi Array**	**43.81**	**300**	P	**P**	**18 52 22.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**43.85**	**254**	P	**P**	**18 52 24.4**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=47,slow=6.6,SNR=2.2						
CMAR				LR	LR	19 09 22.1	
	comp=Z,25nm,20.2s,baz=245,slow=34						
MAKZ	**Makanchi**	**44.01**	**300**	P	**P**	**18 52 24.4**	**-0.1**
MDM	**Murphy Dome**	**45.39**	**34**	P	**P**	**18 52 36.5**	**+1.3**
MDM				IAmb	IAmb	18 52 37.3	
	comp=Z,6.9nm,1.2s						
IL31		**45.97**	**34**	P	**P**	**18 52 39.6**	**-0.1**
IL31				IAmb	IAmb	18 52 47.2	
	comp=Z,4.2nm,1.2s						
ILAR	**Eielson Array**	**45.97**	**34**	P	**P**	**18 52 40.2**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=264,slow=6.1,SNR=20						
ILAR	**Eielson Array**	**45.97**	**34**	P	**P**	**18 52 38.0**	**-1.8**
PAX	**Paxson**	**46.73**	**36**	P	**P**	**18 52 46.4**	**+0.4**
PAX				IAmb	IAmb	18 52 50.1	
	comp=Z,7.5nm,1.4s						
MID	**Middleton Isla**	**46.75**	**41**	P	**P**	**18 52 47.6**	**+1.7**
JOHN	**Johnston Islan**	**46.87**	**106**	P	**P**	**18 52 48.5**	**+1.1**
DOT	**Dot Lake**	**47.29**	**35**	P	**P**	**18 52 50.5**	**+0.3**
DOT				IAmb	IAmb	18 53 09.9	
	comp=Z,6.0nm,1.4s						
MENT	**Mentasta**	**47.53**	**36**	P	**P**	**18 52 51.2**	**-0.9**
MENT				IAmb	IAmb	18 53 13.2	
	comp=Z,5.6nm,1.1s						
EGAK	**Eagle**	**48.41**	**34**	P	**P**	**18 52 60.0**	**+1.2**
EGAK				IAmb	IAmb	18 53 23.3	
	comp=Z,5.0nm,1.3s						
HYT	**Haines Junctio**	**50.82**	**38**	P	**P**	**18 53 19.3**	**+1.9**
INK	**Inuvik**	**50.83**	**28**	P	**P**	**18 53 18.1**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=297,slow=5.4,SNR=12						
INK	**Inuvik**	**50.83**	**28**	P	**P**	**18 53 17.6**	**+0.4**
INK				IAmb	IAmb	18 53 18.9	
	comp=Z,2.7nm,0.8s						
KK31	**Karatay Array**	**52.91**	**299**	P	**P**	**18 53 30.8**	**-2.3**
KKAR	**Karatay Array**	**52.91**	**299**	P	**P**	**18 53 31.3**	**-1.8**
C36M	**Paulatuk**	**53.87**	**26**	P	**P**	**18 53 40.3**	**+0.5**
C36M				IAmb	IAmb	18 53 40.9	
	comp=Z,2.7nm,0.7s						
ABKAR	**Akbulak array**	**57.09**	**309**	P	**P**	**18 54 02.6**	**-0.6**
ABKAR				IAmb	IAmb	18 54 23.8	
	comp=Z,2.7nm,0.9s						
ABKAR	**Akbulak array**	**57.09**	**309**	P	**P**	**18 54 01.3**	**-1.9**
KBS	**Kingsbay**	**57.77**	**350**	P	**P**	**18 54 07.1**	**-0.5**
BBB	**Bella Bella**	**58.71**	**46**	LR	LR	19 19 42.6	
	comp=Z,38nm,18.8s,baz=97,slow=36						
RES	**Resolute Bay**	**59.11**	**15**	LR	LR	19 25 02.8	
	comp=Z,29nm,18.3s,baz=92,slow=41						
YKA	**Yellowknife Ar**	**60.27**	**32**	P	**P**	**18 54 25.4**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=297,slow=6.6,SNR=7.1						
YKA				PcP	**PcP**	**18 55 10.2**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=300,slow=5.6,SNR=3.5						
WB0	**Warramunga Arr**	**60.28**	**190**	P	**P**	**18 54 25.1**	**-0.6**
WB0				IAmb	IAmb	18 54 33.9	
	comp=Z,3.1nm,0.7s						
FITZ	**Fitzroy Crossi**	**60.35**	**199**	P	**P**	**18 54 26.4**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=0.0,slow=8.1,SNR=2.6						
WR0	**Warramunga Arr**	**60.45**	**190**	P	**P**	**18 54 25.9**	**-0.9**
WB2	**Warramunga Arr**	**60.46**	**190**	P	**P**	**18 54 25.9**	**-1.0**
WRA	**Warramunga Arr**	**60.46**	**190**	P	**P**	**18 54 25.9**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=8.6,slow=6.9,SNR=11						
WRA	**Warramunga Arr**	**60.46**	**190**	P	**P**	**18 54 27.9**	**+1.0**
ARCES	**ARCESS Array B**	**61.55**	**339**	LR	LR	19 24 14.3	
	comp=Z,61nm,18.4s,baz=175,slow=39						
BELG	**Belogornoye**	**62.53**	**317**	LR	LR	19 24 42.1	
	comp=Z,95nm,19.4s,baz=189,slow=39						
ASAR	**Alice Springs**	**64.19**	**190**	P	**P**	**18 54 51.3**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=2.4,slow=5.0,SNR=9.3						
ASAR	**Alice Springs**	**64.19**	**190**	P	**P**	**18 54 51.5**	**-0.3**
PALK	**Pallekele**	**64.58**	**257**	P	**P**	**18 54 52.0**	**-2.7**
C09A	**Chrisman Ranch**	**66.39**	**47**	P	**P**	**18 55 05.1**	**-0.9**
FINES	**FINESS Array B**	**66.70**	**332**	P	**P**	**18 55 07.7**	**0.0**
	comp=Z,2.2nm,0.9s,baz=80,slow=12,SNR=4.6						
PINE	**Pine Mountain**	**67.11**	**51**	P	**P**	**18 55 11.3**	**+0.5**
PINE				IAmb	IAmb	18 55 22.4	
	comp=Z,5.7nm,1.1s						
KBZ	**Khabaz**	**69.99**	**311**	P	**P**	**18 55 29.7**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=13,slow=6.1,SNR=5.4						
HLID	**Hailey**	**71.08**	**49**	P	**P**	**18 55 35.7**	**+0.2**
HLID				IAmb	IAmb	18 55 45.5	
	comp=Z,3.1nm,1.4s						
BOZ	**Bozeman (W)**	**71.38**	**46**	P	**P**	**18 55 37.8**	**+0.5**
BOZ				IAmb	IAmb	18 55 38.3	
	comp=Z,2.0nm,0.7s						
KVN	**Kaiserville**	**71.61**	**54**	P	**P**	**18 55 38.9**	**+0.1**
NOA	**NORSAR Array B**	**71.82**	**338**	LR	LR	19 31 08.6	
	comp=Z,22nm,18.7s,baz=330,slow=39						
NVAR	**Mina Array Bea**	**71.85**	**55**	P	**P**	**18 55 41.1**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=303,slow=5.7,SNR=5.8						
NVAR	**Mina Array Bea**	**71.85**	**55**	P	**P**	**18 55 40.2**	**0.0**
AKASG	**Malin Array Be**	**72.71**	**323**	P	**P**	**18 55 45.2**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=42,slow=5.4,SNR=2.4						
TPNV	**Topopah Spring**	**74.05**	**55**	P	**P**	**18 55 52.8**	**-0.4**
TPNV				IAmb	IAmb	18 55 54.6	
	comp=Z,3.0nm,0.9s						
DUG	**Dugway, Tooele**	**74.11**	**51**	P	**P**	**18 55 53.9**	**+0.4**
DUG				IAmb	IAmb	18 55 55.4	
	comp=Z,2.4nm,0.9s						
PDAR	**Pinedale Array**	**74.33**	**47**	P	**P**	**18 55 55.2**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=254,slow=2.0,SNR=7.1						
PDAR	**Pinedale Array**	**74.33**	**47**	P	**P**	**18 55 55.1**	**+0.2**
SRU	**San Rafael Swe**	**76.16**	**50**	P	**P**	**18 56 05.7**	**+0.3**
SRU				IAmb	IAmb	18 56 06.2	
	comp=Z,4.5nm,1.3s						
TXAR	**Lajitas Array**	**86.96**	**54**	P	**P**	**18 57 01.6**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=300,slow=4.0,SNR=5.4						

KRSC 01 18:45:58.6±1.9, 50°59N×156°67E, h109km±18km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**0.77**	**292**	eP	Pn	18 46 17.1	-0.5
KDTR	**Khodutka, Kamc**	**1.51**	**35**	eP	Pn	18 46 26.8	+1.5
KDTR				eS	Sn	18 46 48.3	+2.6
MTVR	**Mutnovka**	**2.12**	**26**	eP	Pn	18 46 35.1	+2.0
MTVR				eS	Sn	18 47 01.9	+2.4
GRL	**Gorelyy**	**2.15**	**23**	eP	Pn	18 46 35.7	+2.2
RUS	**Russkaya**	**2.17**	**31**	eP	Pn	18 46 34.9	+1.2
RUS				eS	Sn	18 47 01.3	+0.8
KRMR	**Karymshinskiy**	**2.42**	**21**	eP	Pn	18 46 40.1	+3.2
DALK	**Dalny**	**2.76**	**27**	eP	Pn	18 46 43.2	+1.8
DALK				eS	Sn	18 47 15.6	+1.3
UGLR	**Uglovaya**	**2.94**	**26**	eP	Pn	18 46 46.2	+2.4
KOK	**Koryaka**	**2.97**	**23**	eP	Pn	18 46 46.8	+2.7
AVH	**Avacha**	**2.97**	**25**	eP	Pn	18 46 46.9	+2.8
SMAR	**Somma**	**2.98**	**25**	eP	Pn	18 46 46.4	+1.9
KRER	**Koryakskii**	**3.01**	**25**	eP	Pn	18 46 47.1	+2.3
KRER				eS	Sn	18 47 22.5	+2.2
SDLR	**Sedlovina**	**3.02**	**26**	eP	Pn	18 46 46.8	+1.9
KRX	**Arik**	**3.03**	**23**	eP	Pn	18 46 47.2	+2.2
GNL	**Ganaly**	**3.21**	**14**	eP	Pn	18 46 48.4	+1.1
SPN	**Mys Shipunski**	**3.26**	**38**	eP	Pn	18 46 49.4	+1.5
SPN				eS	Sn	18 47 26.5	+0.5
KZV	**Kizimen**	**5.03**	**24**	eP	Pn	18 47 15.4	+3.5
KBTR	**Krutoberegovo**	**6.72**	**31**	eP	Pn	18 47 35.1	+0.6

*SOME **01** 18:53:30.0, 40°13N×77°07E, h5km*

*KRNET **01** 18:53:32.0±0.1, 40°07N×77°30E, mb3.0*

*NNC **01** 18:53:34.5±1.3, 40°27N×77°28E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.8km s-min=7.5km az=165.0*

ISC 01 18:53:33.8±2.2, 40°1N±0°1×77°27E±0°04, h10km, n63, σ1§88/92, 21C-11D, Kyrgyzstan-Xinjiang border region

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

baz=36
TKM2 Tokmak 2 3.13 337 P Sb 18 55 08.0 0.0
SNR=11
TKM2 Tokmak 2 3.13 337 ⇓Pn Pn 18 54 25.0 +1.6
comp=E,3.2nm,0.6s
TKM2 ⇓Lg Lg 18 55 07.1
comp=E,30nm,0.6s
KBK Karagaybulak 3.14 327⇑*e*P Pn 18 54 24.6 +1.2
baz=26
KBK ⇑*i*S Sn 18 55 02.2 +1.2
baz=26
KBK Karagaybulak 3.14 327 P Pn 18 54 24.3 +0.9
SNR=7.5
MTBS Maitube 3.14 349 *e*P Pb 18 54 27.7 -2.0
comp=E,3.5nm,0.2s
MTBS *e*S Sb 18 55 08.6 +0.5
comp=E,15nm,0.4s
MTBS Maitube 3.14 349 Pg Pb 18 54 27.7 -2.0
comp=E,3.5nm,0.2s
MTBS Lg Lg 18 55 08.6
comp=E,15nm,0.4s
KST Kastek 3.15 342 *e*P Pb 18 54 27.9 -2.0
comp=E,4.9nm,0.4s
KST *e*S Sb 18 55 09.3 +1.0
comp=E,26nm,0.5s
KST Kastek 3.15 342 Pg Pb 18 54 27.9 -2.0
comp=E,4.9nm,0.4s
KST Lg Lg 18 55 09.3
comp=E,26nm,0.5s
KNDC Almaty 3.17 356 ⇓Pg Pg 18 54 32.6 -1.9
comp=E,9.6nm,0.3s
KNDC ⇑Lg Lg 18 55 09.4
comp=E,240nm,0.7s
ZHN Zhinishke 3.23 15 *e*P Pb 18 54 28.2 -3.2
comp=E,264nm,0.5s
ZHN *e*S Sb 18 55 10.2 -0.6
comp=E,4.6nm,0.3s
ZHN Zhinishke 3.23 15 Pg Pb 18 54 28.2 -3.2
comp=E,264nm,0.5s
ZHN Lg Lg 18 55 10.2
comp=E,4.6nm,0.3s
AAK Ala-Archa 3.32 322⇑*e*P Pn 18 54 26.9 +0.9
baz=21
AAK ⇑*i*S Sn 18 55 06.8 +1.2
baz=21
AAK Ala-Archa 3.32 322 ⇓Pn Pn 18 54 27.2 +1.2
comp=E,2.5nm,0.5s
AAK Lg Lg 18 55 13.9
comp=E,18nm,0.7s
UZB Uzynbulak 3.36 22 *e*P Pb 18 54 31.9 -1.6
comp=E,3.8nm,0.2s
UZB *e*S Sb 18 55 16.0 +1.5
comp=E,9.8nm,0.5s
UZB Uzynbulak 3.36 22 Pg Pb 18 54 31.9 -1.6
comp=E,3.8nm,0.2s
UZB Lg Lg 18 55 16.0
comp=E,9.8nm,0.5s
AML Almayashu 3.41 309⇓*e*P Pn 18 54 28.4 +1.0
baz=8.0
AML ⇓*i*S Sn 18 55 09.1 +1.0
baz=8.0
AML Almayashu 3.41 309 P Pn 18 54 28.3 +1.0
SNR=7.1
CHMS Chumysh 3.50 328 P Pn 18 54 29.4 +1.1
SNR=8.2
SHLS Shalkode 3.51 27 *e*P Pg 18 54 38.4 -2.7
comp=E,6.6nm,0.4s
SHLS *e*S Sg 18 55 27.5 +1.0
comp=E,27nm,0.7s
SHLS Shalkode 3.51 27 Pg Pg 18 54 38.4 -2.7
comp=E,6.6nm,0.4s
SHLS Lg Lg 18 55 27.5
comp=E,27nm,0.7s
KPKS Kokpek 3.57 17 *e*P Pb 18 54 35.0 -2.1
comp=E,1.1nm,0.1s
KPKS *e*S Sb 18 55 21.9 +1.4
comp=E,30nm,0.5s
CHKK Chushkaly 3.81 357 *e*P Pb 18 54 39.2 -1.8
comp=E,2.8nm,0.3s
CHKK *e*S Sb 18 55 29.0 +1.9
comp=E,19nm,0.4s
CHKK Chushkaly 3.81 357 Pg Pb 18 54 39.2 -1.8
comp=E,2.8nm,0.3s
CHKK Lg Lg 18 55 29.4
comp=E,19nm,0.4s
USP Ospenovka 3.83 328⇑*e*P Pn 18 54 34.1 +1.3
baz=28
USP ⇑*i*S Sn 18 55 18.4 +0.6
baz=28
USP Ospenovka 3.83 328 P Sb 18 55 28.6 +0.8
SNR=12
KRBS Karabastau 3.83 342 *e*P Pb 18 54 40.3 -1.2
comp=E,2.4nm,0.6s
KRBS *e*S Sb 18 55 30.9 +2.9
comp=E,8.2nm,0.4s
KRBS Karabastau 3.83 342 Pg Pb 18 54 40.3 -1.2
comp=E,2.4nm,0.6s
KRBS Lg Lg 18 55 30.9
comp=E,8.2nm,0.4s
KUU Kurty 3.90 350 *e*P Pb 18 54 40.2 -2.5
comp=E,1.6nm,0.4s
KUU *e*S Sb 18 55 30.5 +0.5
comp=E,22nm,0.6s
KUU Kurty 3.90 350 Pg Pb 18 54 40.2 -2.5
comp=E,1.6nm,0.4s
KUU Lg Lg 18 55 30.5
comp=E,22nm,0.6s
SGDS Sogindy 3.93 331 Pg Pb 18 54 41.2 -2.0
comp=E,2.7nm,0.5s
SGDS Lg Lg 18 55 32.1
comp=E,9.4nm,0.6s
KTMS Ketmen 4.10 33 *e*P Pb 18 54 45.6 -0.5
comp=E,1.4nm,0.3s
KTMS *e*S Sb 18 55 40.2 +4.4
comp=E,7.9nm,0.6s
KTMS Ketmen 4.10 33 Pg Pb 18 54 45.6 -0.5
comp=E,1.4nm,0.3s
KTMS Lg Lg 18 55 40.2
comp=E,7.9nm,0.6s
MNBS Baschi 4.11 11 *e*P Pb 18 54 44.8 -1.5
comp=E,3.6nm,0.4s
MNBS *e*S Sb 18 55 38.5 +2.4
comp=E,14nm,0.2s
MNBS Baschi 4.11 11 Pg Pb 18 54 44.8 -1.5
comp=E,3.6nm,0.4s
MNBS Lg Lg 18 55 38.5
comp=E,14nm,0.2s
ARXS Arharly 4.18 5 *e*P Pb 18 54 45.9 -1.6
comp=E,5.6nm,0.6s
ARXS *e*S Sb 18 55 40.3 +2.3
comp=E,16nm,0.6s
ARXS Arharly 4.18 5 Pg Pb 18 54 46.2 -1.2
comp=E,5.6nm,0.6s
ARXS Lg Lg 18 55 40.3
comp=E,16nm,0.6s
DJR Jarkent 4.67 23 *e*P Pb 18 54 54.9 -0.9
comp=E,0.9nm,0.2s
DJR *e*S Sb 18 55 56.2 +4.2
comp=E,7.4nm,0.5s
DJR Jarkent 4.67 23 Pg Pb 18 54 54.9 -0.9
comp=E,0.9nm,0.2s
DJR Lg Lg 18 55 56.2
comp=E,7.4nm,0.5s
TDK Taldyqorghan 5.02 9 *e*P Pb 18 55 01.2 -0.5
comp=E,9.2nm,0.4s
TDK *e*S Sb 18 56 06.6 +4.5
comp=E,11nm,0.5s
TDK Taldyqorghan 5.02 9 Pg Pb 18 55 01.2 -0.5
comp=E,9.2nm,0.4s
TDK Lg Lg 18 56 06.6
comp=E,11nm,0.5s
BTLS Baital 5.53 336 *e*P Pb 18 55 09.6 -0.7
comp=E,0.5nm,0.4s
BTLS *e*S Sb 18 56 21.5 +4.9
comp=E,4.8nm,0.5s
BTLS Baital 5.53 336 Pg Pb 18 55 09.6 -0.7
comp=E,0.5nm,0.4s
BTLS Lg Lg 18 56 21.7
comp=E,4.8nm,0.5s
KK31 Karatay Array 5.92 303 ⇓Pg Pg 18 55 21.1 -5.9
comp=E,0.3nm,0.5s,baz=130,slow=16,SNR=5.0
KK31 ⇑Lg Lg 18 56 38.0
comp=E,0.5nm,0.5s,baz=121,slow=23,SNR=4.6

*TRN **01** 18:59:05.7, 10′.27N×63′.01W, h38km, MD3.6*
*FUNV **01** 18:59:05.2, 10′.41N×63′.00W, h21km, MW3.2*
ISC 01 18:59:03.6±1.5, 10′.35N±0′.06×63′.06W±0′.04, h18km±9km,

2015 APR

n11, σ1§54/20, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.37**	**332**	*e*P	**Pg**	**18 59 11.2**	**-0.1**
CRUV				*e*S	**Sg**	**18 59 15.7**	**-0.8**
PCRV	**Puerto La Cruz**	**1.56**	**264**	*e*P	**Pb**	**18 59 32.0**	**+0.1**
TRN	**Trinidad (W)**	**1.66**	**79**	*e*P	**Pn**	**18 59 31.8**	**0.0**
TRN				*e*S	**Sn**	**18 59 51.3**	**-1.4**
GRGR	**Grenville**	**2.25**	**38**	*e*P	**Pn**	**18 59 42.0**	**+2.0**
GRGR				*e*S	**Sn**	**19 00 08.1**	**+0.8**
RIOV	**Rio Grande**	**2.58**	**151**	*e*P	**Pn**	**18 59 45.5**	**+1.0**
RIOV				*e*S	**Sn**	**19 00 15.0**	**-0.4**
TOSP	**Speyside**	**2.66**	**69**	*e*P	**Pn**	**18 59 45.7**	**+0.2**
TOSP				*e*S	**Sn**	**19 00 16.7**	**-0.6**
GCMP	**Grenada, Carri**	**2.66**	**37**	*e*P	**Pn**	**18 59 46.2**	**+0.6**
GCMP				*e*S	**Sn**	**19 00 16.6**	**-0.9**
BIRV	**Birongo**	**3.16**	**273**	*e*P	**Pn**	**18 59 53.9**	**+1.5**
BIRV				*e*S	**Sn**	**19 00 29.2**	**-0.6**
TURV	**Turiamo**	**4.70**	**272**	*e*P	**Pn**	**19 00 14.9**	**+1.2**
TURV				*e*S	**Sn**	**19 01 04.9**	**-2.9**
BAUV	**El Baul**	**5.10**	**255**	*e*P	**Pn**	**19 00 21.8**	**+2.6**
BAUV	**El Baul**	**5.10**	**255**	*e*P	**Pn**	**19 00 20.5**	**+1.3**
BAUV				*e*S	**Sn**	**19 01 15.2**	**-2.6**

*IPEC **01** 19:16:29.2±0.3, 51′.51N×16′.33E, h0km, ML2.9/2, Error ellipse: s-maj=2.9km s-min=1.7km az=63.0*
*PRU **01** 19:16:30.8±0.0, 51′.45N×16′.19E, h0km*
*IDC **01** 19:16:30.7±0.6, 51′.42N×16′.13E, h0km, mb3.3/3, mb1 3.5/10, mb1mx3.3/57, mbtmp3.4/10, ML3.1/7, Error ellipse: s-maj=10.6km s-min=5.8km az=107.0*
*DNK **01** 19:16:30.7±2.7, 51′.46N×16′.22E, h0km±217km, ML1.8*
*VIE **01** 19:16:31.3, 51′.49N×15′.85E, h0km, mb3.6/1, ML3.5/3 92 km WNW of Wroclaw Suspected Mining induced.*
*BGR **01** 19:16:31.3±0.4, 51′.44N×16′.23E, h1km, ML3.1/10, Error ellipse: s-maj=4.4km s-min=3.3km az=37.0*
ISC 01 19:16:29.0±0.6, 51′.51N±0′.02×16′.22E±0′.02, h0km, n83, σ1§89/158, mb3.3/3, 12D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**176**	*i* Pg	**Pg**	**19 16 42.3**	**+0.5**
KSP				*e*Sg	**Sg**	**19 16 49.7**	**-0.8**
KSP	**Ksiaz**	**0.67**	**176**	*e*Pg	**Pg**	**19 16 42.2**	**+0.5**
	SNR=29						
KSP				*e*Sg	**Sg**	**19 16 49.7**	**-0.8**
	SNR=4.7						
CHVC	**Chvalec**	**0.93**	**187**	⇓*i*PG	**Pg**	**19 16 47.3**	**+0.5**
CHVC				*e*SG	**Sg**	**19 16 58.5**	**-0.3**
OSTC	**Ostas**	**0.96**	**180**	⇓*i*PG	**Pg**	**19 16 47.6**	**+0.3**
OSTC				*e*SG	**Sg**	**19 16 59.3**	**-0.3**
UPC	**Upice**	**1.01**	**188**	⇓*i*PG	**Pg**	**19 16 48.4**	**0.0**
UPC				*e*SG	**Sg**	**19 17 01.2**	**-0.3**
	comp=Z,348nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**177**	⇓*i*PG	**Pg**	**19 16 51.1**	**-0.1**
DPC				*e*SG	**Sg**	**19 17 05.7**	**-0.6**
	comp=Z,139nm,0.5s						
DPC	**Dobruska-Polom**	**1.16**	**177**	*e*Pg	**Pg**	**19 16 51.2**	**-0.1**
	SNR=135						
DPC				*e*Sg	**Sg**	**19 17 06.2**	**-0.1**
	SNR=5.1						
PVCC	**Panska Ves**	**1.44**	**227**	⇓*i*PG	**Pb**	**19 16 56.7**	**+0.1**
PVCC				*e*SG	**Sn**	**19 17 15.8**	**0.0**
	comp=Z,432nm,0.4s						
PVCC	**Panska Ves**	**1.44**	**227**	*e*Pg	**Pb**	**19 16 57.1**	**+0.5**
	SNR=56						
PVCC				*e*Sg	**Sn**	**19 17 16.6**	**+0.9**
	SNR=3.2						
KRLC	**Kraliky**	**1.48**	**166**	⇓*i*PG	**Pn**	**19 16 56.6**	**-0.3**
KRLC				*e*SG	**Sg**	**19 17 15.6**	**-0.9**
	comp=Z,76nm,0.5s						
BRG	**Berggiesshubel**	**1.57**	**247**	Pn	**Pn**	**19 16 57.8**	**-0.3**
BRG				Pg	**Pg**	**19 16 59.6**	**+0.6**
BRG				Sg	**Sg**	**19 17 20.0**	**+0.6**
BRG				Amp		19 17 23.2	
	comp=Z,113nm,0.5s						
RUE	**Ruedersdorf**	**1.79**	**304**	*e*Pn	**Pn**	**19 17 01.9**	**+0.7**
	SNR=3.5						
RUE				*e*Sg	**Sg**	**19 17 29.4**	**+2.8**
	SNR=4.2						
PRA	**Prague**	**1.84**	**219**	⇓*e*SG	**Sb**	**19 17 26.9**	**0.0**
PRU	**Pruhonice**	**1.86**	**216**	⇓*e*PN	**Pn**	**19 17 01.4**	**-0.7**
PRU				*i* PG	**Pb**	**19 17 03.8**	**0.0**
PRU				*e*SG	**Sb**	**19 17 27.7**	**+0.1**
	comp=Z,85nm,0.5s						
FBE	**Freiberg**	**1.90**	**253**	*e*Sg	**Sg**	**19 17 30.5**	**+0.6**
	SNR=4.2						
MORC	**Moravsky Berou**	**1.93**	**154**	*e*PN	**Pn**	**19 17 02.8**	**-0.3**
MORC				*e*SG	**Sn**	**19 17 28.6**	**+0.5**
MORC	**Moravsky Berou**	**1.93**	**154**	*e*Pn	**Pn**	**19 17 02.8**	**-0.3**
	baz=336						
MORC				*e*Sg	**Sn**	**19 17 28.5**	**+0.5**
	comp=Z,68nm,0.5s,baz=336						
MORC	**Moravsky Berou**	**1.93**	**154**	*e*Pn	**Pn**	**19 17 03.0**	**0.0**
	SNR=15						
CLL	**Collm**	**2.03**	**265**	*e*Pn	**Pn**	**19 17 04.0**	**-0.4**
CLL				*e*Pg	**Pb**	**19 17 07.0**	**+0.4**
CLL				*e*		19 17 23.0	
CLL				*e*Sg	**Sg**	**19 17 34.0**	**0.0**
	comp=Z,65nm,0.6s						
CLL	**Collm**	**2.03**	**265**	*e*Pn	**Pn**	**19 17 04.6**	**+0.2**
	SNR=3.7						
CLL				*e*Sg	**Sg**	**19 17 35.8**	**+1.7**
	SNR=4.0						
OKC	**Ostrava-Krasne**	**2.08**	**143**	⇓*i*PG	**Pb**	**19 17 08.1**	**+0.6**
OKC				*e*SG	**Sb**	**19 17 33.5**	**-0.3**
	comp=Z,95nm,0.6s						
OKC	**Ostrava-Krasne**	**2.08**	**143**	*e*Pn	**Pb**	**19 17 08.1**	**+0.6**
	SNR=1.3						
OKC				*e*Sg	**Sb**	**19 17 34.1**	**+0.3**
	SNR=3.9						
VRAC	**Vranov**	**2.22**	**174**	Pn	**Pn**	**19 17 07.7**	**+0.6**
	comp=Z,6.7nm,0.3s,baz=345,slow=12,SNR=38						
VRAC				Lg	Lg	19 17 37.8	
	comp=Z,6.6nm,0.3s,baz=250,slow=20,SNR=10						
VRAC	**Vranov**	**2.22**	**174**	*e*PN	**Pn**	**19 17 07.2**	**+0.2**
VRAC				*e*SG	**Sb**	**19 17 38.3**	**+0.4**
VRAC	**Vranov**	**2.22**	**174**	*e*Pn	**Pn**	**19 17 07.1**	**+0.1**
	baz=356						
VRAC				*e*Sg	**Sb**	**19 17 38.3**	**+0.4**
	comp=Z,61nm,0.9s,baz=356						
VRAC	**Vranov**	**2.22**	**174**	*e*Pn	**Pn**	**19 17 07.6**	**+0.6**
	SNR=6.0						
VRAC				*e*Sg	**Sb**	**19 17 38.6**	**+0.7**
	SNR=2.8						
TREC	**Trest**	**2.27**	**192**	*e*Sg	**Sg**	**19 17 40.7**	**-1.1**
	SNR=2.2						
KRUC	**Moravsky**	**2.45**	**177**	*e*PN	**Pn**	**19 17 10.5**	**+0.3**
KRUC				*e*SG	**Sb**	**19 17 45.9**	**+1.2**
KRUC	**Moravsky**	**2.45**	**177**	*e*Pn	**Pn**	**19 17 10.5**	**+0.3**
	baz=359						
KRUC				*e*Sg	**Sb**	**19 17 45.9**	**+1.2**
	baz=359						
KRUC	**Moravsky**	**2.45**	**177**	*e*Pn	**Pn**	**19 17 11.2**	**+0.9**
	SNR=4.4						
KRUC				*e*Sg	**Sg**	**19 17 47.0**	**-0.8**
	SNR=3.6						
OJC	**Ojcow**	**2.61**	**118**	*e*Pn	**Pn**	**19 17 11.5**	**-0.9**
OJC				*e*Pg	**Pg**	**19 17 19.7**	**+0.8**
OJC				*e*Sg	**Sg**	**19 17 54.8**	**+2.1**
OJC	**Ojcow**	**2.61**	**118**	*e*Pg	**Pg**	**19 17 20.0**	**+1.1**
	SNR=10						
TANN	**Tannenbergstha**	**2.62**	**247**	*e*Pn	**Pn**	**19 17 13.2**	**+0.6**
	SNR=6.0						
NKC	**Novy Kostel**	**2.71**	**243**	⇓*e*PN	**Pn**	**19 17 14.4**	**+0.6**
NKC				*i* PG	**Pg**	**19 17 20.5**	**-0.4**
NKC				*e*SG	**Sg**	**19 17 57.7**	**+1.7**
	comp=Z,66nm,0.3s						
NKC	**Novy Kostel**	**2.71**	**243**	*e*Pn	**Pn**	**19 17 14.5**	**+0.7**
	SNR=15						
NKC				*e*Pg	**Pg**	**19 17 21.7**	**+0.7**
	SNR=1.6						
NKC				*e*Sg	**Sg**	**19 17 58.8**	**+2.8**
	SNR=2.8						
GUNZ	**Gunzen**	**2.72**	**246**	*e*Pn	**Pn**	**19 17 14.9**	**+1.0**
	SNR=4.3						
GUNZ				*e*Sg	**Sg**	**19 17 57.3**	**+1.1**
	SNR=4.1						
WERN	**Wernitzgruen**	**2.73**	**245**	*e*Pn	**Pn**	**19 17 14.6**	**+0.6**
	SNR=6.9						
NEUB	**Neuenburg**	**2.80**	**266**	*e*Pg	**Pg**	**19 17 23.4**	**+0.7**
	SNR=6.0						
JAVC	**Velka Javorina**	**2.81**	**160**	*e*PN	**Pn**	**19 17 16.4**	**+1.2**
JAVC	**Velka Javorina**	**2.81**	**160**	*e*Pn	**Pn**	**19 17 17.6**	**+2.3**
	SNR=9.7						
KHC	**Kasperske Hory**	**2.92**	**216**	⇓*e*PN	**Pn**	**19 17 16.6**	**-0.1**
KHC				*i* PG	**Pb**	**19 17 23.1**	**+1.1**
KHC				*e*SG	**Sg**	**19 18 01.9**	**-0.9**
	comp=Z,32nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**216**	*e*Pn	**Pn**	**19 17 16.8**	**+0.1**
	SNR=8.2						
CKRC	**Cesky Krumlov**	**2.96**	**205**	⇓*e*PN	**Pn**	**19 17 18.0**	**+0.8**
CKRC				*e*SG	**Sg**	**19 18 02.1**	**-2.0**
	comp=Z,91nm,0.5s						
MANZ	**Manzenberg**	**3.03**	**241**	*e*Pn	**Pn**	**19 17 18.8**	**+0.7**
	SNR=9.3						
MOX	**Moxa**	**3.03**	**255**	*e*Pn	**Pn**	**19 17 18.6**	**+0.4**
	SNR=2.8						
ROTZ	**Rotzenmuhle**	**3.10**	**237**	*e*Pn	**Pn**	**19 17 19.9**	**+0.8**
	SNR=13						
SMOL	**Smolenice**	**3.10**	**165**	*e*PG	**Pg**	**19 17 29.1**	**+0.8**
SMOL				*e*SG	**Sg**	**19 18 08.4**	**-0.1**
SMOL				*e*LG	Lg	19 18 13.4	
GEC2	**GERESS Array S**	**3.12**	**212**	*e*Pn	**Pn**	**19 17 20.5**	**+0.9**
	SNR=6.7						
GEC2				*e*Pg	**Pb**	**19 17 26.7**	**+1.3**
	SNR=7.5						
GERES	**GERESS Array B**	**3.12**	**212**	Pn	**Pn**	**19 17 20.4**	**+0.8**
	comp=Z,2.2nm,0.3s,baz=35,slow=13,SNR=32						
GERES				Pg	**Pb**	**19 17 25.5**	**+0.1**
	comp=Z,20nm,0.3s,baz=37,slow=18,SNR=62						
GERES				Sn	**Sn**	**19 17 56.4**	**-1.1**
	comp=Z,4.9nm,0.3s,baz=31,slow=33,SNR=3.1						
GERES				Lg	Lg	19 18 06.2	
	comp=Z,10nm,0.3s,baz=30,slow=25,SNR=7.6						
LANS	**Liptovska Anna**	**3.15**	**137**	*e*PN	**Pn**	**19 17 20.3**	**+0.5**
LANS				*e*PG	**Pg**	**19 17 29.8**	**+0.5**
LANS				*e*SG	**Sg**	**19 18 10.6**	**+0.6**
LANS				*e*LG	Lg	19 18 25.8	
WET	**Wettzell**	**3.19**	**223**	*e*Pn	**Pn**	**19 17 20.9**	**+0.4**
	SNR=10						
WET				*e*Pg	**Pb**	**19 17 27.2**	**+0.6**
	SNR=1.2						
MODS	**Modra-Piesok**	**3.21**	**167**	*e*PG	**Pg**	**19 17 30.6**	**+0.1**
MODS				*e*SG	**Sg**	**19 18 12.5**	**+0.3**
MODS				*e*LG	Lg	19 18 23.6	
VYHS	**Vyhne**	**3.46**	**150**	*e*PN	**Pn**	**19 17 24.2**	**+0.1**
VYHS				*e*PG	**Pg**	**19 17 35.8**	**+0.6**
VYHS				*e*SG	**Sg**	**19 18 22.7**	**+2.7**
CONA	**Conrad Observa**	**3.59**	**184**	*e*Pn	**Pn**	**19 17 26.9**	**+0.9**
	comp=Z,2.6nm,0.5s						
CONA				*e*Sg	**Sg**	**19 18 22.7**	**-1.7**
	comp=Z,21nm,0.4s						
BSD	**Bornholm Skovb**	**3.69**	**348**	*e*P	**Pn**	**19 17 26.9**	**-0.3**
BSD				*e*S	**Sn**	**19 18 07.9**	**-3.5**
BSD				*i* S	**Sn**	**19 18 08.8**	**-2.6**
BSD				IAML		19 18 12.2	
	comp=Z,5.3nm,0.4s						
MOA	**Molln**	**3.88**	**200**	*e*Pn	**Pn**	**19 17 30.4**	**+0.6**
	comp=Z,3.7nm,0.3s						
MOA				*e*Sg	**Sg**	**19 18 34.0**	**+0.5**
	comp=Z,19nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.26**	**126**	*e*PG	**Pg**	**19 17 51.1**	**+0.6**
CRVS				*e*SG	**Sg**	**19 18 51.9**	**+6.2**
ARSA	**Arzberg**	**4.29**	**186**	*e*Pn	**Pn**	**19 17 31.3**	**-4.2**
	comp=Z,0.7nm,0.3s						
ARSA				*e*Sg	**Sg**	**19 18 46.7**	**0.0**
	comp=Z,18nm,0.6s						
LUNU	**Lund**	**4.45**	**339**	*i* P	**Pn**	**19 17 37.9**	**+0.3**
LUNU				*i* S	**Sn**	**19 18 29.0**	**-1.0**
KOLS	**Kolonicke sedl**	**4.66**	**121**	*e*PN	**Pn**	**19 17 40.5**	**-0.1**
KOLS				*e*PG	**Pg**	**19 18 01.7**	**+3.4**
KOLS				*e*SG	**Sg**	**19 19 05.8**	**+7.1**
BLEU	**Blekinge**	**4.81**	**357**	*i* P	**Pn**	**19 17 43.4**	**+0.9**
BLEU				*i* S	**Sn**	**19 18 36.8**	**-2.1**
KBA	**Koelnbreinsper**	**4.82**	**204**	*e*Pn	**Pn**	**19 17 44.1**	**+1.2**
	comp=Z,5.2nm,0.4s						
KBA				*e*Sg	**Sg**	**19 19 01.7**	**-2.0**
	comp=Z,10nm,0.4s						
SOKA	**Soboth**	**4.90**	**190**	*e*Pn	**Pn**	**19 17 45.4**	**+1.5**
	comp=Z,1.7nm,0.6s						
SOKA				*e*Sg	**Sg**	**19 19 12.6**	**+6.3**
	comp=Z,4.3nm,0.5s						
OBKA	**Obir**	**5.13**	**193**	*e*Pn	**Pn**	**19 17 49.5**	**+2.5**
	comp=Z,2.5nm,0.5s						
OBKA				*e*Sg	**Sg**	**19 19 12.6**	**-0.9**
	comp=Z,11nm,0.6s						
DEL	**Delary**	**5.16**	**345**	*e*	**Pn**	**19 17 47.2**	**-0.1**
	baz=169,slow=14						
DEL				*i* P	**Pn**	**19 17 48.0**	**+0.6**
DEL				*i* S	**Sn**	**19 18 45.3**	**-2.3**
WATA	**Walderalm**	**5.16**	**218**	*e*Pn	**Pn**	**19 17 49.1**	**+1.5**
	comp=Z,3.8nm,0.4s						
WATA				*e*Sg	**Sg**	**19 19 13.5**	**-1.2**
	comp=Z,9.9nm,0.3s						
MYKA	**Terra Mystica**	**5.17**	**200**	*e*Pn	**Pb**	**19 17 58.2**	**-2.1**
	comp=Z,3.9nm,0.4s						
MYKA				*e*Sg	**Sg**	**19 19 16.2**	**+1.2**
	comp=Z,4.3nm,0.4s						
WTTA	**Wattenberg**	**5.20**	**217**	*e*Pn	**Pn**	**19 17 49.6**	**+1.5**
	comp=Z,2.5nm,0.3s						
WTTA				*e*Sg	**Sg**	**19 19 21.3**	**+5.4**
	comp=Z,17nm,0.5s						
MOTA	**Moosalm**	**5.34**	**221**	*e*Pn	**Pn**	**19 17 50.6**	**+0.5**
	comp=Z,1.6nm,0.3s						
MOTA				*e*Sg	**Sg**	**19 19 26.5**	**+6.0**
	comp=Z,15nm,0.6s						
ABTA	**Abfaltersbach**	**5.35**	**208**	*e*Pn	**Pn**	**19 17 51.2**	**+1.1**
	comp=Z,0.8nm,0.3s						
ABTA				*e*Sg	**Sg**	**19 19 21.8**	**+0.9**
	comp=Z,17nm,0.7s						
RETA	**Reutte**	**5.37**	**224**	*e*Pn	**Pn**	**19 17 50.6**	**+0.1**
	comp=Z,4.0nm,0.5s						
RETA				*e*Sg	**Sg**	**19 19 24.2**	**+2.7**
	comp=Z,7.5nm,0.4s						
SQTA	**Sankt Quirin**	**5.40**	**219**	*e*Pn	**Pn**	**19 17 52.6**	**+1.8**
	comp=Z,3.2nm,0.4s						
SQTA				*e*Sg	**Sg**	**19 19 22.8**	**+0.5**
	comp=Z,5.1nm,0.4s						
FETA	**Feichten**	**5.75**	**221**	*e*Pn	**Pn**	**19 17 55.4**	**-0.4**
	comp=Z,2.0nm,0.5s						
FETA				*e*Sg	**Sg**	**19 19 39.2**	**+5.5**
	comp=Z,9.9nm,1.1s						
DAVA	**Damuels**	**5.92**	**227**	*e*Pn	**Pn**	**19 17 57.8**	**-0.1**
	comp=Z,1.8nm,0.3s						
DAVA				*e*Sg	**Sg**	**19 19 47.8**	**+8.9**
	comp=Z,11nm,0.7s						
AKASG	**Malin Array Be**	**8.23**	**91**	Pn	**Pn**	**19 18 28.4**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=280,slow=12,SNR=6.4						
AKASG				Sn	**Sn**	**19 19 58.5**	**-4.5**
	comp=Z,0.8nm,0.3s,baz=266,slow=25,SNR=2.2						
AKASG				Lg	Lg	19 20 53.5	
	comp=Z,0.2nm,0.3s,baz=268,slow=25,SNR=1.4						
HFS	**Hagfors**	**8.76**	**352**	Pn	**Pn**	**19 18 37.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=177,slow=13,SNR=7.8						
HFS				Sn	**Sn**	**19 20 14.3**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=170,slow=27,SNR=5.4						
NOA	**NORSAR Array B**	**9.95**	**346**	Pn	**Pn**	**19 18 52.1**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=162,slow=11,SNR=5.5						
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**	**19 19 10.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=14						
FINES				Sn	**Sn**	**19 21 14.5**	**-4.7**
	comp=Z,0.4nm,0.3s,baz=210,slow=19,SNR=5.6						
FINES				Lg	Lg	19 22 34.4	
	comp=Z,0.1nm,0.3s,baz=187,slow=22,SNR=2.6						
EKA	**Eskdalemuir Ar**	**12.17**	**296**	Pn	**Pn**	**19 19 21.2**	**-2.2**
	baz=102,slow=14,SNR=1.7						
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn	**P**	**19 20 44.9**	**-2.6**
	baz=193,slow=12,SNR=18						
TORD	**Torodi Ar. Bea**	**40.03**	**202**	P	**P**	**19 24 06.0**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=12,slow=8.7,SNR=3.7						
MKAR	**Makanchi Array**	**42.15**	**69**	P	**P**	**19 24 24.3**	**+1.5**
	comp=Z,0.1nm,0.4s,baz=308,slow=7.1,SNR=2.5					

OK029	**Liberty Lake**	**0.37**	**165**			**Pg**	**19 19 38.5**	**-0.4**
CROK	**Carrier**	**0.48**	**316**			**Pg**	**19 19 41.4**	**+0.4**
BCOK	**Bluff Creek, N**	**0.50**	**184**			**Pg**	**19 19 40.8**	**-0.5**
OK009	**Oakdale Elemen**	**0.58**	**168**			**Pg**	**19 19 42.7**	**-0.3**
OK025	**Westminster Rd**	**0.60**	**162**			**Pg**	**19 19 42.8**	**-0.5**
OK031	**S. Brethren Rd**	**0.62**	**109**			**Pg**	**19 19 43.2**	**-0.5**
OK030	**Cody Creek RV**	**0.68**	**109**			**Pg**	**19 19 44.7**	**0.0**
QUOK	**Quay**	**0.70**	**88**	Pg		**Pg**	**19 19 45.2**	**+0.1**
GC02	**Grant County #**	**0.73**	**342**			**Pg**	**19 19 46.1**	**+0.3**
OKCFA	**Oklahoma City**	**0.74**	**173**			**Pg**	**19 19 45.2**	**-0.8**
OKCFA				IAmb_Lg			19 19 53.9	
	comp=Z,250nm,1.0s							
OKCFA	**Oklahoma City**	**0.74**	**173**	P		**Pg**	**19 19 45.3**	**-0.7**
	baz=353,SNR=13							
OKCFA	**Oklahoma City**	**0.74**	**173**	P			19 19 45.3	
	baz=353,SNR=13							
OKCSW	**OKLAHOMA CITY**	**0.76**	**172**			**Pg**	**19 19 45.4**	**-0.8**
OK032	**Salt Plains WL**	**0.83**	**322**			**Pg**	**19 19 47.7**	**+0.1**
KAN13	**South Haven SW**	**0.86**	**5**			**Pg**	**19 19 48.5**	**+0.3**
FNO	**Franklin**	**0.91**	**171**			**Pg**	**19 19 48.7**	**-0.4**
FNO				IAmb_Lg			19 19 58.4	
	comp=Z,211nm,1.0s							
KAN09	**Caldwell North**	**0.98**	**358**			**Pg**	**19 19 50.7**	**+0.1**
KAN01	**Argonia South**	**1.01**	**351**			**Pg**	**19 19 51.3**	**+0.2**
KAN10	**Anthony SW Sta**	**1.05**	**337**			**Pg**	**19 19 51.9**	**0.0**
KAN08	**Anthony NE Sta**	**1.12**	**343**			**Pg**	**19 19 53.1**	**-0.1**
T35A	**Sooner Cattle**	**1.14**	**48**	Pg		**Pg**	**19 19 53.4**	**-0.2**
T35B	**Sooner Cattle**	**1.14**	**48**	P		**Pg**	**19 19 53.5**	**-0.1**
	baz=227,SNR=257							
T35B				S		**Sg**	**19 20 08.8**	**+0.4**
	baz=227							
T35B	**Sooner Cattle**	**1.14**	**48**	P			19 19 53.5	
	baz=227,SNR=257							
T35B				S			19 20 08.8	
	baz=227							
U32A	**Winter Ranch,**	**1.18**	**281**			**Pg**	**19 19 53.5**	**-0.8**
U32A	**Winter Ranch,**	**1.18**	**281**	P		**Pg**	**19 19 53.7**	**-0.7**
	baz=102,SNR=6.8							
U32A				S		**Sb**	**19 20 10.1**	**0.0**
	baz=102							
U32A	**Winter Ranch,**	**1.18**	**281**	P			19 19 53.7	
	baz=102,SNR=6.8							
U32A				S			19 20 10.1	
	baz=102							
KAN12	**Harper NE Stat**	**1.19**	**343**			**Pg**	**19 19 54.0**	**-0.6**
TUL1	**Leonard**	**1.46**	**99**	P		**Pn**	**19 19 58.0**	**-0.7**
	baz=279,SNR=76							
TUL1				S		**Sb**	**19 20 18.0**	**-0.2**
	baz=279							
TUL1	**Leonard**	**1.46**	**99**	P			19 19 58.0	
	baz=279,SNR=76							
TUL1				S			19 20 18.0	
	baz=279							
WMOK	**Wichita Mounta**	**1.73**	**215**	Pn		**Pn**	**19 20 01.9**	**-0.4**
WMOK				IAmb_Lg			19 20 26.4	
	comp=Z,103nm,0.7s							
WMOK	**Wichita Mounta**	**1.73**	**215**	P		**Pn**	**19 20 02.0**	**-0.4**
	baz=35,SNR=103							
WMOK				S		**Sb**	**19 20 24.9**	**-1.0**
	baz=35							
WMOK	**Wichita Mounta**	**1.73**	**215**	P			19 20 02.0	
	baz=35,SNR=103							
WMOK				S			19 20 24.9	
	baz=35							
X37A	**Clayton**	**2.38**	**130**			**Pn**	**19 20 10.6**	**-0.8**
X37A	**Clayton**	**2.38**	**130**	P		**Pn**	**19 20 11.8**	**+0.4**
	baz=311,SNR=24							
X37A	**Clayton**	**2.38**	**130**	P			19 20 11.8	
	baz=311,SNR=24							
R32A	**Long Quarter,**	**2.44**	**338**			**Pn**	**19 20 11.3**	**-0.9**
R32A				Sn		**Sn**	**19 20 42.8**	**+0.4**
R32A				IAmb_Lg			19 20 55.1	
	comp=Z,62nm,0.7s							
R32A	**Long Quarter,**	**2.44**	**338**	P		**Pb**	**19 20 14.9**	**-1.2**
	baz=158							
R32A				S		**Sn**	**19 20 43.8**	**+1.4**
	baz=158							
R32A	**Long Quarter,**	**2.44**	**338**	P			19 20 14.9	
	baz=158							
R32A				S			19 20 43.8	
	baz=158							
U38A	**Gravette**	**2.59**	**83**			**Pn**	**19 20 14.2**	**0.0**
Z35A	**Perchaven, San**	**2.83**	**175**	Pn		**Pn**	**19 20 17.7**	**+0.2**
Z35A				Sn		**Sn**	**19 20 50.7**	**-1.2**
Z35A	**Perchaven, San**	**2.83**	**175**	P		**Pn**	**19 20 18.2**	**+0.6**
	baz=355							
Z35A				S		**Sn**	**19 20 53.1**	**+1.1**
	baz=355							
Z35A	**Perchaven, San**	**2.83**	**175**	P			19 20 18.2	
	baz=355							
Z35A				S			19 20 53.1	
	baz=355							
HHAR	**Hobbs**	**2.94**	**86**			**Pn**	**19 20 18.7**	**-0.3**
KSU1	**Kansas State U**	**3.04**	**14**			**Pn**	**19 20 21.0**	**+0.6**
CBKS	**Cedar Bluff**	**3.17**	**328**			**Pn**	**19 20 21.1**	**-1.1**
W39A	**Magazine**	**3.23**	**106**			**Pn**	**19 20 21.1**	**-1.5**
W39A				Sn		**Sn**	**19 21 02.2**	**+0.4**
W39A	**Magazine**	**3.23**	**106**	P		**Pn**	**19 20 23.4**	**+0.4**
	baz=288,SNR=24							
W39A				S		**Sn**	**19 21 02.3**	**+0.4**
	baz=288							
W39A	**Magazine**	**3.23**	**106**	P			19 20 23.4	
	baz=288,SNR=24							
W39A				S			19 21 02.3	
	baz=288							
AMTX	**Amarillo**	**3.58**	**250**	Pn		**Pn**	**19 20 28.6**	**+0.6**
AMTX				IAmb_Lg			19 21 26.3	
	comp=Z,47nm,0.8s							
AMTX	**Amarillo**	**3.58**	**250**	P		**Pn**	**19 20 28.8**	**+0.8**
	baz=68,SNR=9.0							
AMTX	**Amarillo**	**3.58**	**250**	P			19 20 28.8	
	baz=68,SNR=9.0							
Z38A	**Mt. Pleasant**	**3.59**	**143**	Pn		**Pn**	**19 20 27.6**	**-0.4**
Z38A				IAmb_Lg			19 21 27.2	
	comp=Z,68nm,0.7s							
Z38A	**Mt. Pleasant**	**3.59**	**143**	S		**Sn**	**19 21 10.9**	**+0.2**
	baz=324							
Z38A	**Mt. Pleasant**	**3.59**	**143**	S			19 21 10.9	
	baz=324							
MIAR	**Mount Ida**	**3.64**	**115**	Pn		**Pn**	**19 20 29.1**	**+0.5**
MIAR				Sn		**Sn**	**19 21 13.0**	**+1.1**
MIAR				IAmb_Lg			19 21 34.4	
	comp=Z,47nm,0.8s							
MIAR	**Mount Ida**	**3.64**	**115**	P		**Pn**	**19 20 29.5**	**+0.9**
	baz=297							
MIAR				S		**Sn**	**19 21 13.1**	**+1.2**
	baz=297							
MIAR	**Mount Ida**	**3.64**	**115**	P			19 20 29.5	
	baz=297							
MIAR				S			19 21 13.1	
	baz=297							
S39A	**Bolivar**	**3.73**	**64**	Pn		**Pn**	**19 20 30.4**	**+0.5**
S39A				IAmb_Lg			19 21 37.3	
	comp=Z,50nm,0.7s							
S39A	**Bolivar**	**3.73**	**64**	P		**Pn**	**19 20 30.6**	**+0.6**
	baz=246,SNR=28							
S39A	**Bolivar**	**3.73**	**64**	P			19 20 30.6	
	baz=246,SNR=28							
U40A	**Yellville**	**3.82**	**86**	Pn		**Pn**	**19 20 30.9**	**-0.2**
U40A				IAmb_Lg			19 21 33.7	
	comp=Z,56nm,0.7s							
U40A	**Yellville**	**3.82**	**86**	P		**Pn**	**19 20 30.9**	**-0.2**
	baz=268,SNR=8.6							
U40A	**Yellville**	**3.82**	**86**	P			19 20 30.9	
	baz=268,SNR=8.6							
U40A				P			19 20 30.9	
	baz=268,SNR=8.6							
ABTX	**Abilene, Hawle**	**3.92**	**207**			**Pn**	**19 20 32.6**	**+0.1**
ABTX				IAmb_Lg			19 21 35.7	
	comp=Z,40nm,0.7s							
WHTX	**Lake Whitney,**	**4.16**	**179**	Pn		**Pn**	**19 20 35.6**	**-0.2**
WHTX				IAmb_Lg			19 21 46.7	
	comp=Z,37nm,1.2s							
WHTX	**Lake Whitney,**	**4.16**	**179**	S		**Sn**	**19 21 23.8**	**-0.9**
	baz=359							
WHTX	**Lake Whitney,**	**4.16**	**179**	S			19 21 23.8	
	baz=359							
X40A	**Basin Creek Fa**	**4.21**	**112**	Pn		**Pn**	**19 20 36.2**	**-0.3**
X40A				IAmb_Lg			19 21 49.1	
	comp=Z,48nm,0.8s							
MGMO	**Mountain Grove**	**4.38**	**75**	IAmb_Lg			19 21 49.5	
	comp=Z,37nm,0.8s							
WHAR	**Wooly Hollow**	**4.38**	**100**			**Pn**	**19 20 39.1**	**+0.3**
WHAR				IAmb_Lg			19 21 54.7	
	comp=Z,38nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.42**	**92**	Pn		**Pn**	**19 20 38.9**	**-0.5**
FCAR				IAmb_Lg			19 22 03.4	
	comp=Z,31nm,0.8s							
W41B	**Gary Mavity, V**	**4.44**	**101**	P		**Pn**	**19 20 39.6**	**-0.1**
	baz=284,SNR=9.7							
W41B	**Gary Mavity, V**	**4.44**	**101**	P			19 20 39.6	
	baz=284,SNR=9.7							
P38A	**Dawn**	**4.71**	**41**	Pn		**Pn**	**19 20 42.9**	**-0.5**
P38A				IAmb_Lg			19 22 07.5	
	comp=Z,32nm,0.7s							
MSTX	**Muleshoe**	**4.79**	**244**	Pn		**Pn**	**19 20 42.9**	**-1.8**
LCAR	**Lake Charles**	**5.20**	**89**			**Pn**	**19 20 50.6**	**+0.5**
BGNE	**Belgrade**	**5.26**	**355**	IAmb_Lg			19 22 26.5	
	comp=Z,59nm,0.9s							
435B	**Jarrell**	**5.36**	**180**	IAmb_Lg			19 22 25.2	
	comp=Z,35nm,0.8s							
CCM	**Cathedral Cave**	**5.40**	**68**	Pn		**Pn**	**19 20 51.4**	**-1.4**
CCM				IAmb_Lg			19 22 30.1	
	comp=Z,29nm,0.7s							
P40A	**Paris**	**5.52**	**51**	Pn		**Pn**	**19 20 53.5**	**-0.9**
P40A				IAmb_Lg			19 22 29.8	
	comp=Z,44nm,0.7s							
T25A	**Trinidad**	**5.59**	**282**	Pn		**Pn**	**19 20 54.7**	**-1.0**
N38A	**Joes South For**	**5.74**	**35**	Pn		**Pn**	**19 20 55.0**	**-2.6**
N38A				IAmb_Lg			19 22 43.0	
	comp=Z,54nm,0.8s							
PBMO	**Poplar Bluff**	**5.79**	**82**	Pn		**Pn**	**19 20 57.6**	**-0.6**
OGNE	**Ogallala**	**5.92**	**325**			**Pb**	**19 21 16.6**	**+1.1**
OGNE				IAmb_Lg			19 22 43.4	
	comp=Z,37nm,0.8s							
JCT	**Junction City**	**5.96**	**199**			**Pb**	**19 21 18.1**	**+2.0**
JCT				IAmb_Lg			19 22 49.6	
	comp=Z,53nm,0.8s							
FVM	**French Village**	**6.00**	**70**	Pn		**Pn**	**19 20 59.5**	**-1.6**
FVM				IAmb_Lg			19 22 51.5	
	comp=Z,28nm,1.0s							
SCIA	**State Center**	**6.67**	**29**	Pg		**Pg**	**19 21 36.5**	**-3.0**
SCIA				IAmb_Lg			19 23 16.3	
	comp=Z,38nm,0.7s							
S44A	**Carbondale**	**6.83**	**75**	IAmb_Lg			19 23 15.8	
	comp=Z,38nm,0.8s							
SIUC	**Southern Illin**	**6.87**	**74**	IAmb_Lg			19 23 27.5	
	comp=Z,36nm,0.8s							
N41A	**Harden Midland**	**6.96**	**47**			**Pn**	**19 21 10.0**	**-4.3**
L40A	**Anamosa**	**7.69**	**38**	IAmb_Lg			19 23 48.4	
	comp=Z,20nm,0.7s							
PHWY	**Pilot Hill**	**8.02**	**312**	IAmb_Lg			19 23 59.0	
	comp=Z,21nm,1.1s							
O44A	**Mansfield**	**8.21**	**58**	IAmb_Lg			19 23 58.0	
	comp=Z,30nm,0.8s							
L42A	**Oliver, Polo**	**8.47**	**44**	IAmb_Lg			19 24 07.8	
	comp=Z,19nm,0.8s							
JFWS	**Jewell Farm**	**8.80**	**38**	IAmb_Lg			19 24 26.8	
	comp=Z,20nm,0.7s							
M44A	**Midewin, Midew**	**9.09**	**52**	IAmb_Lg			19 24 28.1	
	comp=Z,20nm,0.9s							
CLTN	**Cedars of Leba**	**9.09**	**87**	IAmb_Lg			19 24 26.9	
	comp=Z,14nm,1.1s							
RWWY	**Rawlins**	**9.32**	**309**	IAmb_Lg			19 24 55.2	
	comp=Z,14nm,0.8s							
K43A	**Burlington**	**9.68**	**45**	IAmb_Lg			19 24 42.5	
	comp=Z,26nm,1.0s							

*SOF **01** 19:39:58.0,40˚.94N×22˚.43E,h5km,MD2.7*
*IASPEI **01** 19:39:59.6±0.8,40˚.93N±0˚.02×22˚.46E±0˚.02,h10km±5km, Error ellipse: s-maj=3.5km s-min=2.8km az=173.0,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*ATH **01** 19:39:59.8,40˚.91N×22˚.47E,h10km±1km,ML2.3/16,Error ellipse: s-maj=1.8km s-min=0.7km az=333.0*
*ISK **01** 19:39:59.5,40˚.92N×22˚.49E,h5km,ML2.5/2*
*THE **01** 19:39:59.9,40˚.91N×22˚.48E,h6km±1km,ML2.3/12,Error ellipse: s-maj=1.1km s-min=0.4km az=344.0*
*BEO **01** 19:40:01.7±0.8,41˚.06N×22˚.43E,h14km±3km,ML1.9/6*

ISC 01 19:39:59.7±0.8,40˚.93N±0˚.02×22˚.46E±0˚.02,h9km±5km, n57,σ0°61/91,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.05**	**308**	P		**Pg**		**19 40 01.6**	**-0.1**
GRG				S		**Sg**		**19 40 03.1**	**0.0**
GRG				AML		AML		19 40 03.1	
	comp=E,33871μm,0.2s								
GRG				AML		AML		19 40 03.2	
	comp=N,33247μm,0.1s								
GRG	**Griva**	**0.05**	**308**	P		**Pg**		**19 40 01.5**	**-0.1**
GRG				S		**Sg**		**19 40 03.0**	**0.0**
	comp=N,17μm,0.1s								
GRG	**Griva**	**0.05**	**308**	PG		**Pg**		**19 40 01.6**	**-0.1**
GRG				SG		**Sg**		**19 40 03.1**	**0.0**
VAY	**Valandovo**	**0.41**	**12**	*e*Pg		**Pg**		**19 40 07.4**	**-0.2**
VAY				*e*Sg		**Sg**		**19 40 13.6**	**+0.6**
KNT	**Kendrikon**	**0.41**	**55**	P		**Pg**		**19 40 07.8**	**+0.1**
KNT				S		**Sg**		**19 40 13.7**	**+0.5**
KNT				AML		AML		19 40 15.0	
	comp=N,2763μm,0.2s								
KNT				AML		AML		19 40 16.3	
	comp=E,1475μm,0.1s								
KNT	**Kendrikon**	**0.41**	**55**	P		**Pg**		**19 40 07.9**	**+0.1**
KNT				S		**Sg**		**19 40 13.7**	**+0.5**
	comp=E,1μm,0.1s								
KNT	**Kendrikon**	**0.41**	**55**	PG		**Pg**		**19 40 07.9**	**+0.1**
KNT				SG		**Sg**		**19 40 13.9**	**+0.8**
THE	**Thessaloniki**	**0.48**	**127**	P		**Pg**		**19 40 08.8**	**-0.3**
THE				S		**Sg**		**19 40 15.1**	**-0.4**
THE				AML		AML		19 40 15.6	
	comp=E,543μm,0.2s								
THE				AML		AML		19 40 19.2	
	comp=N,675μm,0.5s								
THE	**Thessaloniki**	**0.48**	**127**	P		**Pg**		**19 40 08.7**	**-0.4**
THE				S		**Sg**		**19 40 15.2**	**-0.3**
	comp=N,225nm,0.3s								
HORT	**Hortiatis**	**0.59**	**124**	P		**Pg**		**19 40 10.5**	**-0.5**
HORT				AML		AML		19 40 24.3	
	comp=N,649μm,0.4s								
HORT				AML		AML		19 40 25.5	
	comp=E,378μm,0.2s								
HORT	**Hortiatis**	**0.59**	**124**	P		**Pg**		**19 40 10.6**	**-0.5**
HORT				S		**Sg**		**19 40 18.8**	**0.0**
	comp=E,260nm,0.3s								
HORT	**Hortiatis**	**0.59**	**124**	PG		**Pg**		**19 40 11.0**	**-0.1**
SOH	**Sokhos**	**0.69**	**98**	P		**Pg**		**19 40 13.0**	**+0.1**
SOH				S		**Sg**		**19 40 22.4**	**+0.4**
SOH				AML		AML		19 40 24.4	
	comp=E,1488μm,0.4s								
SOH				AML		AML		19 40 28.9	
	comp=N,909μm,0.3s								
SOH	**Sokhos**	**0.69**	**98**	P		**Pg**		**19 40 12.9**	**-0.1**
SOH				S		**Sg**		**19 40 22.1**	**+0.1**
	comp=N,482nm,0.3s								
KZN	**Kozani**	**0.81**	**220**	P		**Pg**		**19 40 14.7**	**-0.5**
KZN				S		**Sg**		**19 40 25.8**	**0.0**
KZN				AML		AML		19 40 32.0	
	comp=N,269μm,0.5s								
KZN				AML		AML		19 40 32.2	
	comp=E,542μm,0.3s								
LIT	**Litokhoron**	**0.82**	**178**	P		**Pg**		**19 40 15.6**	**+0.1**
LIT				AML		AML		19 40 29.5	
	comp=N,185μm,0.3s								
LIT				AML		AML		19 40 32.3	
	comp=E,347μm,0.2s								
LIT	**Litokhoron**	**0.82**	**178**	P		**Pg**		**19 40 15.7**	**+0.1**
FNA	**Florina**	**0.83**	**261**	P		**Pg**		**19 40 15.6**	**-0.1**
FNA				S		**Sg**		**19 40 27.5**	**+0.9**
FNA				AML		AML		19 40 34.6	
	comp=N,610μm,0.6s								
FNA				AML		AML		19 40 34.7	
	comp=E,420μm,0.4s								
FNA	**Florina**	**0.83**	**261**	P		**Pg**		**19 40 15.6**	**-0.1**
FNA				S		**Sg**		**19 40 27.4**	**+0.9**
	comp=E,265nm,0.5s								
FNA	**Florina**	**0.83**	**261**	PG		**Pg**		**19 40 15.9**	**+0.2**
FNA				SG		**Sb**		**19 40 28.4**	**+0.8**
SRS	**Serrai**	**0.88**	**77**	P		**Pg**		**19 40 16.0**	**-0.6**
SRS				S		**Sg**		**19 40 28.4**	**+0.2**
SRS				AML		AML		19 40 32.5	
	comp=N,213μm,0.5s								
SRS				AML		AML		19 40 33.8	
	comp=E,191μm,0.3s								
SRS	**Serrai**	**0.88**	**77**	P		**Pg**		**19 40 16.1**	**-0.6**
SRS				S		**Sg**		**19 40 28.3**	**+0.2**
	comp=E,105nm,0.5s								
PLG	**Polygyros**	**0.93**	**126**	P		**Pg**		**19 40 17.2**	**-0.5**
PLG				S		**Sb**		**19 40 30.6**	**0.0**
PLG				AML		AML		19 40 35.3	
	comp=N,330μm,0.2s								
PLG				AML		AML		19 40 35.9	
	comp=E,351μm,0.3s								
PLG	**Polygyros**	**0.93**	**126**	P		**Pg**		**19 40 17.1**	**-0.5**
PLG				S		**Sb**		**19 40 30.4**	**-0.1**
	comp=E,170nm,0.2s								
KKB	**Krupnik**	**1.05**	**26**	*i* P		**Pg**		**19 40 18.8**	**-1.1**
NVR	**Nevrokopi**	**1.14**	**68**	P		**Pg**		**19 40 21.0**	**-0.7**
NVR				S		**Sb**		**19 40 37.0**	**+0.4**
NVR				AML		AML		19 40 40.4	
	comp=E,172μm,0.4s								
NVR				AML		AML		19 40 42.5	
	comp=N,162μm,0.3s								
NVR	**Nevrokopi**	**1.14**	**68**	P		**Pg**		**19 40 21.0**	**-0.7**
NVR				S		**Sb**		**19 40 37.0**	**+0.4**
	comp=N,88nm,0.4s								
MMB	**Musomiste**	**1.17**	**55**	*i* P		**Pg**		**19 40 21.4**	**-0.7**
NEST	**Nestorio**	**1.19**	**245**	P		**Pg**		**19 40 22.3**	**-0.2**
SKO	**Skopje**	**1.29**	**324**	*e*Pg		**Pn**		**19 40 23.7**	**-0.3**
SKO				*e*Sg		**Sb**		**19 40 39.0**	**-2.0**
OUR	**Ouranopolis**	**1.30**	**116**	P		**Pb**		**19 40 24.5**	**+0.2**
OUR				S		**Sb**		**19 40 40.3**	**-0.8**
OUR				AML		AML		19 40 50.7	
	comp=N,299μm,0.4s								
OUR				AML		AML		19 40 51.3	
	comp=E,234μm,0.3s								
OUR	**Ouranopolis**	**1.30**	**116**	P		**Pn**		**19 40 24.0**	**0.0**
OUR	**Ouranopolis**	**1.30**	**116**	PN		**Pn**		**19 40 24.3**	**+0.3**
PAIG	**Paliouri**	**1.37**	**136**	P		**Pn**		**19 40 24.9**	**0.0**
PAIG				S		**Sb**		**19 40 41.7**	**-1.2**
PAIG				AML		AML		19 40 46.5	
	comp=N,217μm,0.6s								
PAIG				AML		AML		19 40 48.2	
	comp=E,234μm,0.7s								
PAIG	**Paliouri**	**1.37**	**136**	P		**Pn**		**19 40 24.4**	**-0.5**
PAIG				S		**Sb**		**19 40 42.8**	**-0.2**
	comp=E,118nm,0.7s								
THL	**Klokotos Trika**	**1.40**	**194**	P		**Pn**		**19 40 24.8**	**-0.5**
THL				AML		AML		19 40 49.6	
	comp=E,223μm,0.7s								
THL				AML		AML		19 40 51.4	
	comp=N,62μm,0.7s								
KAVA	**Kavala**	**1.56**	**87**	P		**Pn**		**19 40 27.9**	**+0.3**
KAVA				S		**Sn**		**19 40 47.7**	**-0.2**
KAVA				AML		AML		19 40 54.2	
	comp=N,263μm,0.5s								
KAVA				AML		AML		19 40 54.3	
	comp=E,175μm,0.4s								
KAVA	**Kavala**	**1.56**	**87**	P		**Pn**		**19 40 27.7**	**+0.1**
KAVA				S		**Sn**		**19 40 48.2**	**+0.3**
	comp=E,88nm,0.5s								
BOSS	**Bosilegrad**	**1.57**	**1**	*e*Pg		**Pn**		**19 40 27.6**	**-0.2**
BOSS				*e*Sg		**Sn**		**19 40 47.1**	**-1.1**
XOR	**Xorichti**	**1.66**	**160**	P		**Pn**		**19 40 28.5**	**-0.4**
XOR				S		**Sn**		**19 40 50.2**	**-0.1**
XOR				AML		AML		19 40 50.5	
	comp=E,476μm,0.4s								
XOR				AML		AML		19 40 50.5	
	comp=N,309μm,0.3s								
XOR	**Xorichti**	**1.66**	**160**	P		**Pn**		**19 40 28.6**	**-0.4**
XOR				S		**Sn**		**19 40 50.2**	**-0.1**
	comp=N,198nm,0.4s								
THAS	**Thassos island**	**1.75**	**100**	P		**Pn**		**19 40 30.8**	**+0.6**
THAS				S		**Sn**		**19 40 53.4**	**+0.8**
VTS	**Vitosha**	**1.79**	**19**	*e*Pg		**Pn**		**19 40 31.1**	**+0.2**
VTS				*e*Sg		**Sn**		**19 40 54.4**	**+0.6**
VTS	**Vitosha**	**1.79**	**19**	*i* P		**Pn**		**19 40 31.2**	**+0.3**
RZN	**Rozhen**	**1.87**	**65**	*i* P		**Pg**		**19 40 35.8**	**+0.3**
AGG	**Agios Georgios**	**1.90**	**183**	P		**Pn**		**19 40 33.3**	**+1.0**
AGG	**Agios Georgios**	**1.90**	**183**	P		**Pn**		**19 40 32.8**	**+0.5**
AGG	**Agios Georgios**	**1.90**	**183**	PN		**Pn**		**19 40 33.5**	**+1.2**
MAKR	**Makrakomi, Fth**	**1.93**	**188**	P		**Pn**		**19 40 33.8**	**+1.2**
BARS	**Barje**	**1.95**	**346**	*e*Pn		**Pn**		**19 40 31.9**	**-1.1**
BARS				*e*Sg		**Sn**		**19 40 59.5**	**+1.9**
PLD	**Plovdiv**	**2.06**	**54**	PN		**Pn**		**19 40 35.9**	**+1.5**
IGT	**Igoumenitsa**	**2.14**	**230**	P		**Pb**		**19 40 38.2**	**-0.4**
ZAPS	**Zavoj**	**2.35**	**3**	*e*Pn		**Pn**		**19 40 38.0**	**-0.5**
SELS	**Selova**	**2.50**	**337**	*e*Pn		**Pn**		**19 40 40.7**	**+0.2**
ZAGS	**Zajecar**	**2.89**	**357**	*e*Pn		**Pn**		**19 40 46.0**	**+0.1**
SJES	**Sjenica**	**2.98**	**322**	*e*Pn		**Pn**		**19 40 46.4**	**-0.8**
IVAS	**Ivanjica**	**3.15**	**328**	*e*Pn		**Pn**		**19 40 49.7**	**+0.1**

IDC 01 19:44:37.7±1.6,17˚.00S×176˚.75E,h0km,mb3.5/3, mb1 3.9/3,mb1mx3.5/24,mbtmp3.5/3,MS3.3/5,Ms1 3.3/5, ms1mx3.0/21,Error ellipse: s-maj=58.6km s-min=19.3km az=13.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.44**	**121**	LR		LR	LR	19 45 03.4	
	comp=Z,60nm,21.6s,baz=309,slow=18								
MSVF				Pn		Pn	Pn	19 45 05.2	0.0
	42nm,0.3s,baz=222,slow=13,SNR=69								
MSVF				Sn		Sn	Sn	19 45 26.3	+1.4
	92nm,0.3s,baz=100,slow=24,SNR=7.0								
DZM	**Mont Dzumac**	**10.94**	**241**	*e*LR		LR	LR	19 49 32.1	
	comp=Z,88nm,23.8s								
DZM	**Mont Dzumac**	**10.94**	**241**	LR		LR	LR	19 50 51.8	
	comp=Z,99nm,20.2s,baz=209,slow=34								
RAR	**Rarotonga**

WR0				IAmb	IAmb	20 16 26.6	
	comp=Z,8.1nm,1.4s						
WB2	**Warramunga Arr**	**44.30**	**272**		**P**	**20 16 21.8**	**-0.7**
WB2				IAmb	IAmb	20 16 22.6	
	comp=Z,5.0nm,0.5s						
WRAB	**Tennant Creek**	**44.30**	**272**	P	**P**	**20 16 21.0**	**-1.5**
WRAB				IAmb	IAmb	20 16 22.9	
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**44.31**	**272**	P	**P**	**20 16 22.2**	**-0.3**
	comp=Z,2.7nm,0.3s,baz=111,slow=8.0,SNR=87						
WB0	**Warramunga Arr**	**44.33**	**273**		**P**	**20 16 22.1**	**-0.7**
WB0				IAmb	IAmb	20 16 23.1	
	comp=Z,4.7nm,0.6s						
FITZ	**Fitzroy Crossi**	**52.56**	**270**	P	**P**	**20 17 25.9**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=146,slow=3.6,SNR=1.2						
CASY	**Casey**	**54.98**	**208**	P	**P**	**20 17 46.3**	**+3.2**
H03S2	**Juan Fernandez**	**80.14**	**123**	T	T	21 49 30.2	
	baz=238,slow=74,SNR=7.1						
H03S1	**Juan Fernandez**	**80.15**	**123**	T	T	21 49 34.6	
	baz=238,slow=74,SNR=7.0						
H03S3	**Juan Fernandez**	**80.16**	**123**	T	T	21 49 31.2	
	baz=238,slow=74,SNR=8.0						
FINES	**FINESS Array B**	**145.49**	**340**	PKPbc	**PKPab**	**20 27 49.3**	**-0.3**
	comp=Z,2.1nm,0.4s,baz=44,slow=4.2,SNR=30						
NOA	**NORSAR Array B**	**149.07**	**351**	PKPbc	**PKiKP**	**20 28 00.1**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=12,slow=4.5,SNR=1.9						
AKASG	**Malin Array Be**	**151.65**	**323**	PKPbc	**PKPbc**	**20 28 04.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=46,slow=2.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**162.53**	**178**	PKPab	**PKPab**	**20 29 05.0**	**+2.8**
	comp=Z,0.6nm,0.8s,baz=170,slow=7.4,SNR=3.3						

*IDC **01** 20:23:29.6±1.4, 39.°36N×110.°32E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/36, mbtmp3.6/7, ML2.6/1, Error ellipse: s-maj=28.7km s-min=22.4km az=88.0*

ISC 01 20:23:34.4±1.3, 39.°4N±0.°1×110.°3E±0.°2, h35km, n7, σ0s97/8, mb3.3/6, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**8.93**	**343**	Pn	**Pn**	**20 25 39.9**	**-1.2**
	0.1nm,0.3s,baz=160,slow=14,SNR=5.1						
SONM				Sn	**Sn**	**20 27 20.7**	**+0.2**
	0.1nm,0.3s,baz=163,slow=18,SNR=5.8						
SONM				Lg	Lg	20 28 11.5	
	0.2nm,0.3s,baz=155,slow=27,SNR=7.7						
MKAR	**Makanchi Array**	**21.68**	**299**	P	**P**	**20 28 22.1**	**+0.2**
	1.3nm,0.9s,baz=96,slow=11,SNR=14						
ZALV	**Zalesovo Beam**	**22.60**	**310**	P	**P**	**20 28 32.6**	**+0.8**
	0.3nm,0.3s,baz=125,slow=12,SNR=2.1						
CMAR	**Chiang Mai Arr**	**23.02**	**208**	P	**P**	**20 28 36.0**	**-0.5**
	1.1nm,0.8s,baz=12,slow=9.7,SNR=8.2						
KURBB	**Kurchatov Arra**	**24.93**	**307**	P	**P**	**20 28 54.7**	**+0.6**
	0.3nm,0.3s,baz=106,slow=9.8,SNR=4.8						
PETK	**Petropavlovsk-**	**34.90**	**51**	P	**P**	**20 30 21.8**	**-0.6**
	3.8nm,0.9s,baz=254,slow=10,SNR=2.4						
YKA	**Yellowknife Ar**	**72.29**	**20**	P	**P**	**20 34 57.2**	**+1.3**
	0.1nm,0.7s,baz=326,slow=5.1,SNR=2.8						

*IDC **01** 20:49:55.3±0.8, 17.°33N×46.°60W, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/41, mbtmp3.9/13, ML4.0/1, MS3.4/18, Ms1 3.3/18, ms1mx3.2/52, Error ellipse: s-maj=24.4km s-min=17.4km az=114.0*

*NEIC **01** 20:49:56.7±2.5, 17.°3N±0.°1×46.°7W±0.°2, h10km±1km, mb4.4/17, Error ellipse: s-maj=25.5km s-min=20.1km az=108.0*

ISC 01 20:49:57.2±0.7, 17.°30N±0.°10×46.°7W±0.°1, h12km, n49, σ1s05/31, mb4.3/19, MS3.4/16, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**13.44**	**206**	Pn	**Pn**	**20 53 08.6**	**+0.7**
	0.7nm,0.3s,baz=17,slow=11,SNR=4.9						
MDP				LR	LR	20 57 30.3	
	comp=Z,43nm,20.6s,baz=34,slow=34						
H05S1	**Guadeloupe/Mar**	**13.88**	**260**	T	T	21 07 30.5	
	SNR=19						
SJG	**San Juan**	**18.54**	**275**	LR	LR	21 00 12.1	
	comp=Z,115nm,18.9s,baz=95,slow=33						
PTGA	**Pitinga**	**22.17**	**217**	P	**P**	**20 54 53.7**	**+0.4**
	1.4nm,0.6s,baz=0.0,slow=14						
SDV	**Santo Domingo**	**24.73**	**253**	LR	LR	21 05 05.7	
	comp=Z,34nm,21.8s,baz=80,slow=37						
SDV	**Santo Domingo**	**24.73**	**253**	P	**P**	**20 55 16.4**	**-2.5**
SDV				IAmb	IAmb	20 55 45.1	
	comp=Z,9.1nm,1.2s						
RCBR	**Riachuelo**	**25.34**	**154**	LR	LR	21 02 56.8	
	comp=Z,87nm,18.2s,baz=332,slow=31						
GTBY	**Guantanamo Bay**	**27.03**	**280**	P	**P**	**20 55 38.5**	**-1.0**
ROSC	**El Rosal**	**29.73**	**249**	LR	LR	21 08 47.4	
	comp=Z,41nm,20.2s,baz=42,slow=38						
SAML	**Samuel**	**30.74**	**213**	P	**P**	**20 56 13.3**	**+0.8**
BDFB	**Brasilia**	**32.75**	**182**	LR	LR	21 07 29.9	
	comp=Z,40nm,21.1s,baz=87,slow=32						
SIV	**San Ignacio**	**35.98**	**204**	P	**P**	**20 56 57.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=220,SNR=2.0						
LPAZ	**La Paz**	**39.49**	**213**	P	**P**	**20 57 29.7**	**+1.2**
	comp=Z,4.1nm,0.7s,baz=32,slow=8.5,SNR=16						
LPAZ				LR	LR	21 12 46.5	
	comp=Z,36nm,19.4s,baz=16,slow=35						
LPAZ	**La Paz**	**39.49**	**213**	P	**P**	**20 57 29.2**	**+0.7**
H10N3	**ASCENSION HYDR**	**40.47**	**126**	T	T	21 40 22.3	
	baz=308,slow=75,SNR=314						
H10N2	**ASCENSION HYDR**	**40.47**	**126**	T	T	21 40 22.5	
	baz=308,slow=75,SNR=271						
H10N1	**ASCENSION HYDR**	**40.48**	**126**	T	T	21 40 24.8	
	baz=308,slow=75,SNR=323						
H10S3	**ASCENSION HYDR**	**41.03**	**127**	T	T	21 41 05.5	
	baz=307,slow=74,SNR=86						
H10S2	**ASCENSION HYDR**	**41.05**	**127**	T	T	21 41 06.8	
	baz=273,slow=74,SNR=32						
DBIC	**Dimbokro**	**42.19**	**99**	LR	LR	21 12 28.8	
	comp=Z,63nm,18.8s,baz=266,slow=32						
PB11	**IPOC Station P**	**43.17**	**212**	P	**P**	**20 57 57.6**	**-0.7**
CPUP	**Villa Florida**	**44.58**	**194**	LR	LR	21 15 33.4	
	comp=Z,30nm,20.2s,baz=95,slow=34						
CMIG	**Matias Romero**	**45.92**	**277**	LR	LR	21 14 36.6	
	comp=Z,20nm,20.0s,baz=98,slow=32						
TORD	**Torodi Ar. Bea**	**46.80**	**88**	P	**P**	**20 58 27.2**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=289,slow=6.4,SNR=2.7						
TORD				LR	LR	21 15 41.2	
	comp=Z,81nm,19.4s,baz=295,slow=33						
ULM	**Lac du Bonnet**	**51.12**	**321**	P	**P**	**20 58 59.6**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=89,slow=8.8,SNR=3.8						
ULM				LR	LR	21 18 34.1	
	comp=Z,41nm,19.6s,baz=112,slow=34						
ULM	**Lac du Bonnet**	**51.12**	**321**	P	**P**	**20 58 58.9**	**-0.9**
TXAR	**Lajitas Array**	**53.21**	**294**	P	**P**	**20 59 16.5**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=97,slow=7.4,SNR=3.1						
TXAR				PcP	**PcP**	**21 00 25.3**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=113,slow=5.7,SNR=3.8						
TXAR				LR	LR	21 23 30.7	
	comp=Z,28nm,18.9s,baz=0.0,slow=38						
FCC	**Fort Churchill**	**53.89**	**332**	P	**P**	**20 59 21.0**	**+0.9**
FCC				IAmb	IAmb	20 59 28.5	
	comp=Z,4.7nm,0.9s						
ISCO	**Idaho Springs**	**55.35**	**307**	P	**P**	**20 59 31.6**	**+0.1**
ISCO				IAmb	IAmb	20 59 42.7	
	comp=Z,5.1nm,1.2s						
PDAR	**Pinedale Array**	**58.60**	**310**	LR	LR	21 23 50.4	
	comp=Z,32nm,19.9s,baz=134,slow=35						
BGU	**Big Grassy Mou**	**61.08**	**308**	P	**P**	**21 00 12.2**	**+0.8**
CCUT	**Cedar City**	**61.30**	**304**	P	**P**	**21 00 12.3**	**-0.7**
CCUT				IAmb	IAmb	21 00 23.1	
	comp=Z,2.8nm,0.9s						
PSUT	**Pine Spring**	**61.68**	**305**	P	**P**	**21 00 13.7**	**-1.9**
ELK	**Elko**	**62.75**	**307**	LR	LR	21 24 06.1	
	comp=Z,43nm,21.3s,baz=70,slow=33						
H09W1	**TRISTAN DA CUN**	**63.07**	**150**	T	T	22 08 47.6	
	SNR=17						
NEW	**Newport**	**64.29**	**316**	LR	LR	21 27 05.6	
	comp=Z,59nm,20.1s,baz=94,slow=35						
NEW	**Newport**	**64.29**	**316**	P	**P**	**21 00 32.2**	**-0.3**
BMO	**Blue Mountains**	**64.31**	**312**	P	**P**	**21 00 33.1**	**+0.3**
YKA	**Yellowknife Ar**	**64.62**	**332**	P	**P**	**21 00 34.1**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=104,slow=7.6,SNR=8.5						
YKA				LR	LR	21 25 57.9	
	comp=Z,40nm,19.7s,baz=0.0,slow=34						
NVAR	**Mina Array Bea**	**65.17**	**305**	P	**P**	**21 00 39.9**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=63,slow=6.4,SNR=2.2						
EUNU	**Eureka**	**65.24**	**353**	P	**P**	**21 00 39.3**	**+1.1**
EUNU				IAmb	IAmb	21 00 40.0	
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**66.74**	**30**	P	**P**	**21 00 47.6**	**-0.5**
	comp=Z,2.5nm,1.1s,baz=255,slow=9.6,SNR=1.8						
ARCES	**ARCESS Array B**	**67.71**	**21**	P	**P**	**21 00 53.8**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=258,slow=5.9,SNR=5.5						
YBH	**Yreka Blue Hor**	**68.35**	**309**	LR	LR	21 27 40.7	
	comp=Z,48nm,22.0s,baz=85,slow=33						
INK	**Inuvik**	**72.90**	**337**	P	**P**	**21 01 26.1**	**+0.3**
INK				IAmb	IAmb	21 01 26.6	
	comp=Z,2.4nm,0.8s						
ILAR	**Eielson Array**	**78.78**	**335**	P	**P**	**21 01 60.0**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=70,slow=4.3,SNR=21						
I23K	**Minto, Yukon-K**	**79.66**	**335**	P	**P**	**21 02 04.5**	**+0.2**
I23K				IAmb	IAmb	21 02 06.3	
	comp=Z,3.2nm,0.9s						
KMBO	**Kilima Mbogo**	**84.57**	**93**	P	**P**	**21 02 30.7**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=242,slow=4.6,SNR=4.1						
MKAR	**Makanchi Array**	**101.44**	**33**	P	**Pdif**	**21 03 46.4**	**-2.5**
	comp=Z,0.2nm,0.9s,baz=331,slow=1.8,SNR=1.9						

*NEIC **01** 20:58:29.4±0.8, 25.°2S±0.°2×179.°8W±0.°2, h553km±9km, mb4.3/16, Error ellipse: s-maj=33.0km s-min=26.7km az=125.0*

*IDC **01** 20:58:30.1±2.0, 25.°10S×179.°97E, h538km±24km, mb3.5/6, mb1 3.7/7, mb1mx3.2/41, mbtmp4.6/7, Error ellipse: s-maj=43.3km s-min=23.3km az=3.0*

ISC 01 20:58:30.1±1.1, 25.°2S±0.°2×180.°0W±0.°1, h550km, n30, σ0s87/30, mb4.2/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.40**	**156**	P	**P**	**20 59 54.6**	**-0.3**
	71nm,0.3s,baz=88,slow=5.1,SNR=7.4						
RAO	**Raoul Island**	**4.40**	**156**	P	**P**	**20 59 54.4**	**-0.5**
MXZ	**Matakaoa Point**	**12.39**	**186**	P	**P**	**21 01 12.0**	**-0.4**
QRZ	**Quartz Range**	**16.77**	**200**	P	**P**	**21 01 56.8**	**+0.2**
NNZ	**Nelson**	**16.89**	**198**	P	**P**	**21 01 57.4**	**-0.2**
THZ	**Tophouse**	**17.52**	**198**	P	**P**	**21 02 03.4**	**-0.1**
KHZ	**Kahutara**	**17.97**	**196**	P	**P**	**21 02 08.0**	**+0.5**
LTZ	**Lake Taylor**	**18.64**	**198**	P	**P**	**21 02 11.9**	**-1.8**
CTA	**Charters Tower**	**31.55**	**272**	P	**P**	**21 04 08.6**	**+0.5**
	11nm,0.5s,baz=93,slow=11,SNR=24						
CTAO	**Charters Tower**	**31.55**	**272**	P	**P**	**21 04 08.8**	**+0.7**
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**21 04 31.4**	**+0.4**
	2.4nm,0.8s,baz=98,slow=11,SNR=6.2						
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**21 04 31.5**	**+0.4**
COEN	**Coen**	**36.39**	**281**	P	**P**	**21 04 48.7**	**0.0**
COEN				IAmb	IAmb	21 05 53.5	
	comp=Z,20nm,1.6s						
BBOO	**Buckleboo**	**38.98**	**248**	P	**P**	**21 05 09.2**	**-0.4**
AS31	**Alice Springs**	**41.88**	**262**	P	**P**	**21 05 33.1**	**+0.2**
ASAR	**Alice Springs**	**41.88**	**262**	P	**P**	**21 05 33.1**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=90,slow=7.2,SNR=20						
WR0	**Warramunga Arr**	**42.19**	**268**	P	**P**	**21 05 35.2**	**-0.1**
WR0				IAmb	IAmb	21 06 08.1	
	comp=Z,22nm,1.9s						
WB2	**Warramunga Arr**	**42.37**	**268**	P	**P**	**21 05 36.6**	**-0.1**
WB2				IAmb	IAmb	21 05 36.8	
	comp=Z,10nm,1.2s						
WRAB	**Tennant Creek**	**42.37**	**268**	P	**P**	**21 05 36.4**	**-0.4**
WRAB				IAmb	IAmb	21 05 37.3	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**42.38**	**268**	P	**P**	**21 05 36.7**	**-0.1**
WB0				IAmb	IAmb	21 05 37.2	
	comp=Z,5.2nm,0.7s						
WRA	**Warramunga Arr**	**42.38**	**268**	P	**P**	**21 05 36.5**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=104,slow=7.8,SNR=36						
WRA				S	**S**	**21 11 18.6**	**-0.3**
	comp=Z,0.8nm,1.0s,baz=99,slow=14,SNR=4.0						
FITZ	**Fitzroy Crossi**	**50.79**	**267**	P	**P**	**21 06 41.1**	**+0.8**
	comp=Z,2.4nm,0.6s,baz=104,slow=7.6,SNR=16						
FITZ	**Fitzroy Crossi**	**50.79**	**267**	P	**P**	**21 06 40.8**	**+0.5**
FITZ				IAmb	IAmb	21 08 03.0	
	comp=Z,19nm,1.9s						
SIJI	**Sorong**	**52.91**	**289**	P	**P**	**21 06 54.5**	**-1.2**
	comp=Z,10nm,0.6s,baz=57,slow=9.5,SNR=5.2						
MORW	**Morawa**	**56.47**	**251**	P	**P**	**21 07 20.9**	**+0.5**
ARCES	**ARCESS Array B**	**133.19**	**348**	PKP	**PKiKP**	**21 16 46.9**	**+2.8**
	comp=Z,3.0nm,1.0s,baz=60,slow=5.8,SNR=3.7						
FINES	**FINESS Array B**	**139.71**	**341**	PKiKP	PKPpre	21 16 52.1	
	comp=Z,0.7nm,0.7s,baz=66,slow=4.7,SNR=4.5						
NOA	**NORSAR Array B**	**143.39**	**351**	PKP	**PKPdf**	**21 17 00.5**	**-1.2**
	comp=Z,1.9nm,1.0s,baz=40,slow=1.2,SNR=4.0						
AKASG	**Malin Array Be**	**146.10**	**326**	PKPbc	**PKiKP**	**21 17 09.8**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=44,slow=3.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**167.88**	**188**	PKPab	**PKPab**	**21 18 46.3**	**+1.2**
	comp=Z,0.8nm,1.0s,baz=165,slow=2.8,SNR=3.1						

*IDC **01** 21:00:50.0±1.2, 58.°44S×25.°58W, h0km, mb3.6/2, mb1 3.6/2, mb1mx3.5/26, mbtmp3.6/2, Error ellipse: s-maj=93.4km s-min=33.8km az=98.0*

ISC 01 21:00:55.8±1.2, 58.°5S±0.°2×25.°4W±0.°4, h38km, n11, σ0s64/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**14.13**	**156**	P	**Pn**	**21 04 13.0**	**0.0**
VNA3	**Neumayer Olymp**	**14.33**	**159**	P	**Pn**	**21 04 15.5**	**-0.2**
VNA2	**Neumayer--Watz**	**14.53**	**156**	P	**Pn**	**21 04 18.3**	**-0.1**
	baz=321,slow=14						
QSPA	**South Pole Qui**	**31.73**	**180**	P	**P**	**21 07 16.3**	**+0.6**
	0.6nm,0.6s,baz=207,slow=9.0						
H10N1	**ASCENSION HYDR**	**51.24**	**14**	T	T	22 05 31.5	
	baz=187						
H10N3	**ASCENSION HYDR**	**51.24**	**14**	T	T	22 05 40.3	
	baz=187						
H10N2	**ASCENSION HYDR**	**51.25**	**14**	T	T	22 05 42.5	
	baz=187						
TORD	**Torodi Ar. Bea**	**74.75**	**27**	P	**P**	**21 12 32.2**	**+0.6**
	0.3nm,0.5s,baz=202,slow=6.1,SNR=4.6						
YKA	**Yellowknife Ar**	**138.65**	**315**	PKP	**PKPdf**	**21 20 15.7**	**-0.2**
	0.2nm,0.6s,baz=123,slow=3.1,SNR=5.4						
SONM	**Songino Array**	**149.82**	**89**	PKPbc	**PKPbc**	**21 20 39.7**	**-1.0**
	0.2nm,0.5s,baz=253,slow=2.4,SNR=2.1						
ILAR	**Eielson Array**	**152.46**	**308**	PKPbc	**PKPbc**	**21 20 45.8**	**-0.4**
	0.4nm,0.6s,baz=122,slow=1.2,SNR=6.5						

IDC 01 21:06:07.8±9.9, 62.°02S×153.°64E, h0km, mb4.0/2, mb1 4.3/3, mb1mx4.0/26, mbtmp4.0/3, ML3.9/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/24, Error ellipse: s-maj=767.4km s-min=40.1km az=75.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**15.80**	**173**	Pn	Pn	21 09 51.3	+0.1
	0.4nm,0.3s,baz=351,slow=13,SNR=18						
VNDA				LR	LR	21 15 36.5	
	comp=Z,204nm,18.2s,baz=342,slow=36						
MAW	**Mawson**	**35.70**	**221**	LR	LR	21 28 28.0	
	comp=Z,115nm,18.3s,baz=101,slow=38						
H01W1	**Cape Leeuwin H**	**36.74**	**299**	T	T	21 52 40.7	
	baz=148,slow=75,SNR=39						
H01W2	**Cape Leeuwin H**	**36.74**	**299**	T	T	21 52 41.9	
	baz=148,slow=75,SNR=27						
H01W3	**Cape Leeuwin H**	**36.75**	**299**	T	T	21 52 38.1	
	baz=148,slow=75,SNR=36						
ASAR	**Alice Springs**	**40.62**	**332**	P	P	21 13 49.4	+0.1
	2.0nm,0.8s,baz=165,slow=8.4,SNR=14						
DZM	**Mont Dzumac**	**40.88**	**18**	LR	LR	21 26 42.0	
	comp=Z,69nm,20.1s,baz=124,slow=30						
WRA	**Warramunga Arr**	**44.13**	**333**	P	P	21 14 17.5	-0.4
	1.6nm,0.8s,baz=165,slow=8.1,SNR=10						
HNR	**Honiara**	**52.69**	**8**	LR	LR	21 33 12.7	
	comp=Z,56nm,18.8s,baz=188,slow=31						
PMG	**Port Moresby**	**52.73**	**352**	LR	LR	21 36 01.3	
	comp=Z,76nm,18.7s,baz=86,slow=34						

*IDC **01** 21:15:16.9±1.0, 58.°35S×25.°80W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.6/24, mbtmp3.8/2, Error ellipse: s-maj=73.9km s-min=32.9km az=99.0*

ISC 01 21:15:29.6±1.1, 58.°7S±0.°2×24.°2W±0.°4, h100km, n10, σ1s26/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**13.71**	**157**	P	**Pn**	**21 18 39.3**	**-0.1**
VNA1				S	**S**	**21 21 24.6**	**-1.2**
VNA3	**Neumayer Olymp**	**13.94**	**160**	P	**Pn**	**21 18 42.0**	**-0.4**
VNA2	**Neumayer--Watz**	**14.11**	**157**	P	**Pn**	**21 18 44.5**	**-0.1**
	baz=320,slow=14						
SNAA	**Sanae**	**15.64**	**155**	P	**P**	**21 19 06.3**	**+0.1**
VNDA	**Vanda**	**43.97**	**182**	P	**P**	**21 23 28.1**	**+2.0**
	0.7nm,0.8s,baz=193,slow=7.6,SNR=6.9						
TORD	**Torodi Ar. Bea**	**74.67**	**26**	P	**P**	**21 26 58.8**	**+0.9**
	0.8nm,0.5s,baz=196,slow=6.4,SNR=8.6						
YKA	**Yellowknife Ar**	**139.21**	**315**	PKP	**PKPdf**	**21 34 42.1**	**-1.0**
	0.8nm,0.6s,baz=124,slow=2.7,SNR=17						
INK	**Inuvik**	**148.87**	**317**	PKPbc	**PKPbc**	**21 35 02.0**	**-1.8**
	1.7nm,0.6s,baz=124,slow=3.6,SNR=8.4						
SONM	**Songino Array**	**149.23**	**89**	PKPbc	**PKiKP**	**21 35 07.0**	**+0.3**
	0.4nm,0.6s,baz=223,slow=2.5,SNR=1.8						
ILAR	**Eielson Array**	**153.06**	**307**	PKPbc	**PKPbc**	**21 35 12.3**	**-1.4**
	0.8nm,0.6s,baz=109,slow=3.2,SNR=12						

IDC 01 21:19:13.7±3.4, 5.°37S×152.°93E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/52, mbtmp3.6/3, ML1.8/1, Error ellipse: s-maj=141.5km s-min=47.5km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.99**	**235**	Pn	Pn	21 20 57.8	+0.4
	1.0nm,0.3s,baz=177,slow=24,SNR=2.1						
PMG				Sn	Sn	21 22 08.4	-9.3
	1.1nm,0.3s,baz=222,slow=15,SNR=2.1						
WRA	**Warramunga Arr**	**23.17**	**230**	P	P	21 24 21.7	-0.4
	0.7nm,0.5s,baz=54,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**25.82**	**223**	P	P	21 24 46.9	0.0
	0.4nm,0.6s,baz=57,slow=9.1,SNR=6.9						
TORD	**Torodi Ar. Bea**	**150.60**	**287**	PKPbc	PKPbc	21 39 08.7	0.0
	0.5nm,0.9s,baz=57,slow=2.2,SNR=1.4						

*IDC **01** 21:23:53.0±0.4, 30.°32N×79.°47E, h0km, mb4.6/48, mb1 4.6/52, mb1mx4.6/67, mbtmp4.6/52, ML4.2/4, MS3.9/25, Ms1 3.9/25, ms1mx3.7/51, Error ellipse: s-maj=10.8km s-min=8.4km az=37.0*

*NEIC **01** 21:23:54.4±1.1, 30.°35N±0.°07×79.°51E±0.°07, h10km±1km, mb4.9/124, Error ellipse: s-maj=11.7km s-min=9.3km az=342.0*

*NDI **01** 21:23:54.2±3.9, 30.°27N×79.°49E, h5km, ML4.9*

*MOS **01** 21:23:54.4±1.1, 30.°52N×79.°54E, h18km, mb5.0/56, Error ellipse: s-maj=5.4km s-min=3.0km az=116.8*

*DMN **01** 21:23:55.1±0.2, 30.°59N×79.°36E, h10km, Ml5.4/12, Error ellipse: s-maj=13.3km s-min=4.0km az=28.0*

*BJI **01** 21:23:55.5±0.0, 30.°62N×79.°76E, h10km, mB4.8/39, mb4.8/60, Ms4.3/42, Ms7 4.1/42*

ISC 01 21:23:55.3±0.2, 30.°38N±0.°03×79.°48E±0.°03, h17km, n564, σ1s57/606, mb4.8/215, MS3.9/34, 41C-9D, Western Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**1.23**	**268**	*i* Pg	**Pg**	**21 24 19.0**	**-0.2**
DDI				*i* Sg	**Sb**	**21 24 33.6**	**-0.3**
DDI				AMP		21 24 38.9	
	comp=N,263μm,0.4s						
DDI				IAML		21 24 40.2	
	comp=E,16μm,0.3s						
SMLA	**Simla**	**2.13**	**291**	*e*P	**Pb**	**21 24 33.2**	**-0.2**
SMLA				*i* Pg	**Pg**	**21 24 34.3**	**-1.9**
SMLA				*i* Sg	**Sg**	**21 25 03.5**	**-0.4**
SMLA				IAML		21 25 04.1	
	comp=E,17μm,0.4s						
SMLA				AMP		21 25 04.5	
	comp=N,91μm,0.4s						
NDI	**New Delhi**	**2.60**	**230**	*e*P	**Pn**	**21 24 39.0**	**+2.4**
NDI				*ex*	x	21 25 13.0	
BHK	**Bhakra**	**2.83**	**292**	*e*P	**Pn**	**21 24 40.2**	**+0.4**
BHK				*ex*	x	21 25 25.4	
DHRM	**DHARAMSHALA**	**3.30**	**305**	*e*P	**Pn**	**21 24 48.6**	**+2.1**
DHRM				*e*S	**Sn**	**21 25 28.7**	**+3.2**
DHRM				IAML		21 25 31.8	
	comp=E,5μm,0.4s						
DHRM				AMP		21 25 32.1	
	comp=N,34μm,0.3s						
PYUN	**Piuthan**	**3.81**	**126**	*e*Pn	**Pn**	**21 24 55.0**	**+1.5**
PYUN				*e*Sn	**Sn**	**21 25 39.3**	**+1.2**
	comp=N,6μm,0.4s						
THN	**Thein Dam**	**3.82**	**303**	*e*P	**Pn**	**21 24 55.8**	**+2.5**
THN				*e*S	**Sn**	**21 25 40.5**	**+2.7**
DANN	**Dangsing**	**4.24**	**117**	*e*Pn	**Pn**	**21 25 01.6**	**+2.1**
DANN				*e*Sn	**Sn**	**21 25 49.7**	**+0.9**
	comp=N,1μm,0.3s						
KOLN	**Koldanda**	**4.44**	**125**	*e*Pn	**Pn**	**21 25 03.8**	**+1.7**
KOLN				*e*Sn	**Sn**	**21 25 54.9**	**+1.3**
	comp=N,528nm,0.3s						
GKN	**Gorkha**	**5.09**	**116**	*e*Pn	**P

SHL **Shillong** 11.96 111 *e*P Pn 21 26 43.0 -2.3
SHL **Shillong** 11.96 111 Pn Pn 21 26 43.0 -2.3
ULHL **Ulahol** 12.13 348 P Pn 21 26 49.6 +2.0
SNR=7.9
UCH **Uchtor** 12.48 343 P Pn 21 26 52.2 -0.5
SNR=62
AML **Almayashu** 12.62 340 P Pn 21 26 54.6 +0.2
SNR=12
SATY **Saty** 12.69 356 *e*P Pn 21 26 53.7 -1.4
baz=357
SATY **Saty** 12.69 356 *e*P Pn 21 26 53.7 -1.4
UZB **Uzynbulak** 12.75 358 *e*P Pn 21 26 54.2 -1.8
comp=N,33nm,0.7s,baz=359
UZB **Uzynbulak** 12.75 358 *e*P Pn 21 26 54.2 -1.8
UZB pmax pmax
comp=Z,33nm,0.7s
SHLS **Shalkode** 12.76 360 *e*P Pn 21 26 54.4 -1.7
comp=Z,18nm,0.6s,baz=1.5
SHLS **Shalkode** 12.76 360 *e*P Pn 21 26 54.4 -1.7
SHLS pmax pmax
comp=Z,18nm,0.6s
KBK **Karagaybulak** 12.79 345 P Pn 21 26 56.5 0.0
SNR=45
BELO **BELONIA** 12.82 121 *e*P Pn 21 26 54.8 -2.0
POO **Poona** 12.86 205 *e*P Pn 21 26 54.3 -3.1
POO *e*S Sn 21 29 09.0 -11
POO *e*S 21 29 09.3
AAK **Ala-Archa** 12.88 343 Pn Pn 21 26 57.7 0.0
comp=Z,2.8nm,0.3s,baz=160,slow=8.5,SNR=38
AAK Sn **Sn** 21 29 12.7 -8.0
comp=Z,0.7nm,0.3s,baz=194,slow=22,SNR=1.2
AAK LR LR 21 32 43.8
comp=Z,780nm,19.9s,baz=162,slow=41
AAK **Ala-Archa** 12.88 343 P Pn 21 26 57.6 0.0
SNR=18
AAK **Ala-Archa** 12.88 343 *ce*P Pn 21 26 57.5 -0.2
AAK pmax pmax
comp=Z,45nm,1.3s
AAK **Ala-Archa** 12.88 343 Pn Pn 21 26 57.2 -0.5
TKM2 **Tokmak 2** 12.90 347 P Pn 21 27 00.8 +2.7
SNR=12
MDOK **Medeo** 12.91 352 *e*P Pn 21 26 57.2 -1.0
baz=352
MDOK LR LR 21 31 43.5
comp=Z,689nm,9.6s
MDOK **Medeo** 12.91 352 *e*P Pn 21 26 57.2 -1.0
MDOK MLR MLR
comp=Z,689nm,10.0s
HYB **Hyderabad** 12.93 184 *i* P Pn 21 26 54.0 -4.4
comp=Z,200nm,1.2s
HYB *e*S **Sn** 21 29 22.0 0.0
HYB **Hyderabad** 12.93 184 *e*P Pn 21 26 53.4 -5.1
HYB *e*S Sn 21 29 07.1 -15
AAA **Alma-Ata** 12.97 352 *e*P Pn 21 26 58.6 -0.4
baz=352
AAA LR LR 21 31 59.9
comp=Z,533nm,11.8s,baz=352
AAA **Alma-Ata** 12.97 352 *e*P Pn 21 26 58.5 -0.4
AAA MLR MLR
comp=Z,533nm,12.0s
KPKS **Kokpek** 13.08 357 *e*P Pn 21 26 58.5 -1.9
comp=Z,48nm,0.9s,baz=358
KPKS **Kokpek** 13.08 357 *e*P Pn 21 26 58.5 -1.9
KPKS pmax pmax
comp=Z,48nm,0.9s
EKS2 **Erkin-Say** 13.09 341 P Pn 21 27 01.7 +1.2
SNR=14
CHMS **Chumysh** 13.15 345 P Pn 21 27 01.0 -0.4
SNR=14
USP **Ospenovka** 13.47 344 P Pn 21 27 07.2 +1.6
SNR=24
KOHI **KOHIMA** 13.72 106 *e*P Pn 21 27 06.8 -2.5
KUU **Kurty** 13.72 350 *e*P Pn 21 27 07.3 -1.9
comp=Z,9.0nm,1.0s,baz=350
KUU LR LR 21 32 19.9
comp=Z,546nm,11.9s,baz=350
KUU **Kurty** 13.72 350 *e*P Pn 21 27 07.2 -1.9
KUU pmax pmax
comp=Z,9.0nm,1.0s
KUU MLR MLR
comp=Z,546nm,12.0s
IUG **Iuzhnay** 13.99 330 *e*P Pn 21 27 11.3 -1.7
comp=Z,10nm,0.5s,baz=330
IUG **Iuzhnay** 13.99 330 *e*P Pn 21 27 11.2 -1.7
IUG pmax pmax
comp=Z,10.0nm,0.5s
DZA **Taraz** 14.09 335 *e*P Pn 21 27 12.3 -1.9
comp=Z,10nm,0.5s,baz=334
DZA **Taraz** 14.09 335 *e*P Pn 21 27 12.3 -1.9
DZA pmax pmax
comp=Z,10.0nm,0.5s
CHM **Chimkent** 14.32 329 *e*P Pn 21 27 15.9 -1.4
comp=Z,10nm,1.1s,baz=329
CHM **Chimkent** 14.32 329 *e*P Pn 21 27 15.9 -1.4
CHM pmax pmax
comp=Z,10.0nm,1.1s
SAIH **SAIHA** 14.41 120 *e*P Pn 21 27 17.9 -0.9
KK31 **Karatay Array** 14.59 333 P Pn 21 27 18.2 -2.7
KK31 **Karatay Array** 14.59 333 Pn Pn 21 27 18.2 -2.7
KKAR **Karatay Array** 14.59 333 P Pn 21 27 18.1 -2.8
KKAR **Karatay Array** 14.59 333 Pn 21 27 18.1 -2.8
TDK **Taldyqorghan** 14.63 357 *e*P Pn 21 27 19.6 -1.9
comp=Z,14nm,0.9s,baz=357
TDK LR LR 21 32 36.0
comp=Z,274nm,12.0s,baz=357
TDK **Taldyqorghan** 14.63 357 *e*P Pn 21 27 19.6 -1.9
TDK pmax pmax
comp=Z,14nm,0.9s
TDK MLR MLR
comp=Z,273nm,12.0s
BRLS **Borolday** 14.80 331 *e*P Pn 21 27 19.9 -3.9
baz=330
BRLS **Borolday** 14.80 331 *e*P Pn 21 27 19.9 -3.9
WMQ **Urumqi** 14.92 24 *e*P Pn 21 27 25.6 +0.1
WMQ pP P 21 27 29.6 -1.5
WMQ sP 21 27 33.7
WMQ pmax pmax
comp=Z,100nm,1.1s
WMQ pmax pmax
comp=Z,340nm,4.9s
WMQ LR LR
comp=Z,2μm,14.7s
WMQ LR LR
comp=Z,680nm,16.1s
WMQ LR LR
comp=Z,2μm,16.1s
WMQ **Urumqi** 14.92 24 P Pn 21 27 25.2 -0.4
WMQ **Urumqi** 14.92 24 Pn Pn 21 27 25.2 -0.4
HRA **Herat** 15.10 290 Pn Pn 21 27 28.1 0.0
BTLS **Baital** 15.25 345 *e*P Pn 21 27 28.3 -1.5
baz=345
BTLS **Baital** 15.25 345 *e*P Pn 21 27 28.3 -1.5
MAKZ **Makanchi** 16.52 6 P Pn 21 27 43.3 -2.9
MAKZ pmax pmax
comp=Z,51nm,1.1s
MAKZ **Makanchi** 16.52 6 Pn Pn 21 27 43.3 -2.9
MK31 **Makanchi Array** 16.54 7 *i* P Pn 21 27 44.3 -2.1
MK31 **Makanchi Array** 16.54 7 Pn Pn 21 27 44.1 -2.4
MK31 IAmb IAmb 21 27 51.6
comp=Z,64nm,1.0s
MKAR **Makanchi Array** 16.54 7 Pn Pn 21 27 43.8 -2.6
comp=Z,1.5nm,0.3s,baz=187,slow=13,SNR=79
MKAR Sn **Sn** 21 30 43.6 -6.1
comp=Z,0.8nm,0.3s,baz=190,slow=24,SNR=3.6
MKAR LR LR 21 35 04.2
comp=Z,628nm,18.2s,baz=186,slow=40
MKAR **Makanchi Array** 16.54 7 *i* P Pn 21 27 43.7 -2.7
MKAR pmax pmax
comp=Z,6.0nm,0.5s
ZSN **Zaisan** 17.55 12 *e*P Pn 21 27 58.1 -1.0
baz=12
ZSN **Zaisan** 17.55 12 *e*P Pn 21 27 58.1 -1.0
GTA **Gaotai** 18.93 56 P P 21 28 14.9 -0.6
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,110nm,5.4s
GTA LR LR
comp=Z,480nm,9.8s
GTA LR LR
comp=Z,620nm,12.4s
GTA LR LR
comp=Z,650nm,13.1s
GEYT **Alibeck** 19.20 299 P P 21 28 18.2 -0.1
comp=Z,0.6nm,0.3s,baz=110,slow=18,SNR=14
GEYT LR LR 21 36 55.2
comp=Z,181nm,19.6s,baz=30,slow=41
GYA0B **ALIBECK ARRAY** 19.20 299 P P 21 28 18.0 -0.3
WSAR **Wadi Sarin** 19.91 254 P P 21 28 26.9 +0.7
comp=Z,0.3nm,0.3s,baz=60,slow=6.1,SNR=4.3
WSAR S S 21 31 55.6 -14
comp=Z,0.2nm,0.3s,baz=137,slow=5.5,SNR=2.1
WSAR LR LR 21 38 07.3
comp=Z,266nm,18.3s,baz=91,slow=43
SEM **Semipalatinsk** 20.02 1 *e*P P 21 28 25.9 -1.5
baz=1.6
SEM **Semipalatinsk** 20.02 1 *e*P P 21 28 25.9 -1.5
DGZ **Jazzator, Alta** 20.22 15 *c*/P Pn 21 28 30.9 -0.6
DGZ pmax pmax
comp=Z,118nm,2.9s
KURBB **Kurchatov Arra** 20.24 358 P P 21 28 29.6 0.0
comp=Z,23nm,0.8s,baz=182,slow=10,SNR=135
BRZS **Berezniki** 20.25 347 *e*P P 21 28 29.0 -0.7
comp=Z,20nm,0.6s,baz=347
BRZS **Berezniki** 20.25 347 *e*P P 21 28 28.9 -0.7
BRZS pmax pmax
comp=Z,20nm,0.6s
KURK **Kurchatov** 20.33 358 P P 21 28 29.6 -1.0
KURK **Kurchatov** 20.33 358 P P 21 28 29.6 -1.0
MHMT **Maesarieng** 20.71 122 P P 21 28 34.0 -0.9
comp=Z,55nm,0.7s
CD2 **Chengdu** 20.89 82 ||/*i*P P 21 28 37.4 +0.5
CD2 pmax pmax
comp=Z,70nm,0.7s
CHTO **Chiang Mai** 21.07 119 P P 21 28 38.3 -0.6
CHTO pmax pmax
comp=Z,20nm,0.7s
CHTO **Chiang Mai** 21.07 119 P P 21 28 38.3 -0.6
CM33 **Chiang Mai Arr** 21.07 119 P P 21 28 38.0 -0.9
CMMT **Chiang Mai** 21.08 119 P P 21 28 38.0 -0.9
comp=Z,16nm,1.1s
CM32 **Chiang Mai Arr** 21.10 119 P P 21 28 39.0 -0.1
LZH **Lanzhou** 21.14 68 ⇑P P 21 28 40.9 +1.3
LZH sP pP 21 28 45.1 -0.4
LZH PP **PnPn** 21 29 00.9 +2.1
LZH *e*S **S** 21 32 31.7 -2.6
LZH sS Sn 21 32 41.0 0.0
LZH SS **SnSn** 21 33 01.9 +5.9
LZH pmax pmax
comp=Z,92nm,1.3s
LZH pmax pmax
comp=Z,280nm,4.6s
LZH LR LR
comp=Z,970nm,11.0s
LZH LR LR
comp=Z,390nm,11.4s
LZH LR LR
comp=Z,520nm,12.5s
CM34 **Chiang Mai Arr** 21.21 118 P P 21 28 40.0 -0.3
KMI **Kunming** 21.22 99 ⇑P P 21 28 41.1 +0.4
KMI pP pP 21 28 44.3 -2.3
KMI sP sP 21 28 45.8 -3.1
KMI S **S** 21 32 34.1 -2.2
KMI pmax pmax
comp=Z,33nm,0.8s
KMI LR LR
comp=Z,170nm,7.8s
KMI LR LR
comp=Z,220nm,10.9s
KMI LR LR
comp=Z,130nm,8.1s
KMI **Kunming** 21.22 99 P P 21 28 40.2 -0.5
KMI pmax pmax
comp=Z,30nm,0.8s
KMI **Kunming** 21.22 99 P P 21 28 40.2 -0.5
KMI IAmb IAmb 21 28 45.9
comp=Z,30nm,0.8s
CM15 **Chiang Mai Arr** 21.28 119 P P 21 28 43.0 +1.9
comp=Z,235nmcomp=Z,29nm,1.0s
CM13 **Chiang Mai Arr** 21.28 120 P P 21 28 42.6 +1.5
comp=Z,234nmcomp=Z,33nm,0.9s
CM31 **Chiang Mai Arr** 21.29 119 P P 21 28 42.9 +1.7
comp=Z,6μmcomp=Z,653nm,0.5s
CM31 **Chiang Mai Arr** 21.29 119 P P 21 28 41.0 -0.2
CM31 IAmb IAmb 21 28 56.6
comp=Z,49nm,1.2s
CMAR **Chiang Mai Arr** 21.29 119 P P 21 28 42.2 +1.1
comp=Z,7.1nm,0.6s,baz=328,slow=11,SNR=42
CMAR ScP **ScP** 21 36 21.6 -0.2
comp=Z,1.1nm,0.9s,baz=298,slow=1.9,SNR=5.3
CMAR LR LR 21 38 17.9
comp=Z,115nm,18.7s,baz=322,slow=41
CMAR **Chiang Mai Arr** 21.29 119 *i* P P 21 28 42.2 +1.1
CMAR pmax pmax
comp=Z,10.0nm,0.8s
UOSS **Minazif** 21.30 261 P P 21 28 42.1 +0.8
CM02 **Chiang Mai Arr** 21.30 119 P P 21 28 43.1 +1.8
comp=Z,220nmcomp=Z,31nm,0.8s
CM35 **Chiang Mai Arr** 21.32 119 P P 21 28 41.0 -0.5
CM01 **Chiang Mai Arr** 21.32 119 P P 21 28 43.4 +1.9
comp=Z,239nmcomp=Z,31nm,0.9s
CM05 **Chiang Mai Arr** 21.32 120 P P 21 28 43.0 +1.4
comp=Z,165nmcomp=Z,19nm,0.9s
CM09 **Chiang Mai Arr** 21.33 119 P P 21 28 43.0 +1.3
comp=Z,219nmcomp=Z,28nm,0.7s
CM04 **Chiang Mai Arr** 21.35 119 P P 21 28 43.0 +1.2
comp=Z,216nmcomp=Z,29nm,0.8s
CM36 **Chiang Mai Arr** 21.37 119 P P 21 28 42.0 0.0
LAMP **Lampang** 21.77 118 P P 21 28 47.7 +1.3
comp=Z,393nmcomp=Z,43nm,0.7s
PBA **Port Blair** 22.32 144 P 21 28 52.4 +0.1
PBA IAmb IAmb 21 29 07.3
comp=Z,46nm,1.0s
SUKH **Sukhothai** 22.40 120 P P 21 28 54.0 +0.9
comp=Z,40nm,0.8s
NANT **Nan** 22.43 116 P P 21 28 54.0 +0.5
comp=Z,12μmcomp=Z,373nm,0.7s
UMPA **Umpang Tak** 22.66 124 P P 21 29 00.7 +4.8
comp=Z,374nmcomp=Z,35nm,0.8s
MNCI **Minicoy** 22.79 197 P P 21 28 58.1 +0.9
UTTA **Uttaradit** 22.94 118 P P 21 29 00.0 +1.2
comp=Z,645nmcomp=Z,75nm,0.7s
PALK **Pallekele** 23.01 177 P P 21 29 00.7 +1.1
comp=Z,8.2nm,0.8s,baz=95,slow=10,SNR=6.3
PALK S **S** 21 33 05.2 -4.4
comp=Z,3.9nm,0.6s,baz=28,slow=5.4,SNR=2.2
PALK LR LR 21 38 40.2
comp=Z,360nm,20.4s,baz=110,slow=39
PALK **Pallekele** 23.01 177 P P 21 28 59.4 -0.2
PALK pmax pmax
comp=Z,38nm,1.5s
PALK **Pallekele** 23.01 177 P P 21 28 59.4 -0.2
PALK IAmb IAmb 21 29 15.7
comp=Z,38nm,1.4s
PHIT **Phitsanulok** 23.17 120 P P 21 29 03.0 +1.8
comp=Z,171nm,0.9s
UTHA **Uthaitani** 23.51 124 P P 21 29 06.6 +2.0
comp=Z,499nmcomp=Z,66nm,0.8s
BVAR **Borovoye Array** 23.59 346 P P 21 29 05.9 +0.8
comp=Z,20nm,0.7s,baz=202,slow=19,SNR=123
BRVK **Borovoye** 23.64 346 *ce*P P 21 29 05.9 +0.3
BRVK pmax pmax
comp=Z,73nm,1.3s
BRVK **Borovoye** 23.64 346 P P 21 29 05.7 +0.2
SLVN **Son La** 23.71 107 P P 21 29 06.5 -0.1
SLVN IAmb IAmb 21 29 15.6
comp=Z,21nm,0.9s
ZAA0 **Zalesovo Array** 23.87 8 P P 21 29 07.2 -0.5
ZAA0 IAmb IAmb 21 29 09.4
comp=Z,64nm,1.4s
ZALV **Zalesovo Beam** 23.87 8 P P 21 29 08.2 +0.5
comp=Z,16nm,0.6s,baz=203,slow=9.4,SNR=80
ZALV LR LR 21 39 28.5
comp=Z,337nm,18.0s,baz=214,slow=39
ABKAR **Akbulak array** 23.98 327 P P 21 29 09.0 +0.3
ABKAR IAmb IAmb 21 29 12.2
comp=Z,41nm,0.9s
SRDT **SRDT** 24.11 127 P P 21 29 11.5 +1.2
comp=Z,26nm,0.8s
GYA **Guiyang** 24.20 93 ||/P P 21 29 12.0 +0.7
GYA PP **PnPn** 21 29 43.1 +2.3
GYA S **S** 21 33 27.8 -1.2
GYA pmax pmax
comp=Z,30nm,1.1s
GYA LR LR
comp=Z,150nm,11.2s
NONG **Nongkai** 24.76 114 P P 21 29 16.9 +0.7
comp=Z,27nm,0.9s
XAN **Xi'an** 25.14 74 P P 21 29 20.0 +0.3
XAN pP sP 21 29 29.0 +0.9
XAN pmax pmax
comp=Z,26nm,1.1s
XAN pmax pmax
comp=Z,73nm,3.5s
XAN LR LR
comp=Z,300nm,11.2s
XAN LR LR
comp=Z,350nm,11.8s
XAN LR LR
comp=Z,390nm,12.9s
XAN **Xi'an** 25.14 74 P P 21 29 19.9 +0.3
XAN pmax pmax
comp=Z,26nm,0.7s
XAN **Xi'an** 25.14 74 P P 21 29 19.9 +0.3
XAN IAmb IAmb 21 29 22.6
comp=Z,26nm,0.7s
CHAI **Chaiyaphum** 25.15 120 P P 21 29 20.9 +1.1
comp=Z,666nmcomp=Z,88nm,0.8s
PHET **Kaeng Krachan** 25.48 129 P P 21 29 26.2 +3.5
comp=Z,374nmcomp=Z,48nm,0.9s
KHON **Khomkaen** 25.51 118 P P 21 29 25.0 +2.0
comp=Z,2μmcomp=Z,143nm,0.9s
AKTO **Aktyubinsk** 25.69 327 P P 21 29 25.6 +1.2
comp=Z,18nm,0.8s,baz=125,slow=8.4,SNR=56
AKTO LR LR 21 40 31.5
comp=Z,278nm,18.4s,baz=130,slow=39
LKRN **Lenkeran, Azer** 26.53 297 P P 21 29 33.0 +0.9
MOY **Mondy** 26.57 31 *e*P P 21 29 36.6 +4.1
ZAK **Zakamensk** 26.78 35 *e*P P 21 29 35.1 +0.7
ZAK pmax pmax
comp=Z,7.0nm,0.9s
SONM **Songino Array** 27.00 42 P P 21 29 38.8 +2.4
comp=Z,13nm,0.7s,baz=231,slow=9.6,SNR=122
ULN **Ulaanbaatar** 27.40 43 *ce*P P 21 29 41.1 +1.0
ULN pmax pmax
comp=Z,16nm,1.0s
ULN **Ulaanbaatar** 27.40 43 P P 21 29 40.9 +0.8
ULN IAmb IAmb 21 29 43.2
comp=Z,19nm,1.1s
TLY **Talaya** 27.79 33 LR LR 21 41 39.3
comp=Z,166nm,19.8s,baz=248,slow=38
TLY **Talaya** 27.79 33 *i* P P 21 29 43.1 -0.3
TLY pmax pmax
comp=Z,4.0nm,0.7s
HHC **Hu-ho-hao-te** 27.96 59 *e*P P 21 29 46.5 +1.4
HHC PcP **PcP** 21 33 04.8 +4.7
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,120nm,4.4s
HHC LR LR
comp=Z,540nm,15.3s
HHC LR LR
comp=Z,640nm,12.4s
HHC LR LR
comp=Z,830nm,13.5s
UBPT **Khong Chiam** 28.18 116 P P 21 29 56.0 +8.9
UBPT **Khong Chiam** 28.18 116 P P 21 29 46.4 -0.7
SEKA **Sheki** 28.18 301 P P 21 29 47.4 +0.4
MAK **Makhachkala** 28.38 305 *e*P P 21 29 44.3 -4.4
MAK *e*S **S** 21 34 27.7 -7.1
MAK pmax pmax
comp=Z,226nm,1.2s
MAK MLR MLR
comp=Z,145nm,16.0s
ZKTA **Zakatala** 28.70 302 P P 21 29 52.3 +0.8
GANJ **Ganja** 28.72 300 P P 21 29 52.6 +0.8
LGD **Lagodekhi** 29.02 302 P P 21 29 55.3 +0.9
DDFL **Dedoflistskaro** 29.03 302 P P 21 29 55.3 +0.8
NAX **Nakhchivan** 29.13 297 P P 21 29 56.1 +0.6
SVE **Sverdlovsk** 29.55 339 ||*e*P P 21 30 00.1 +1.2
SVE pmax pmax
comp=Z,21nm,1.3s
GROC **Groznyy** 29.65 305 *e*P P 21 29 59.8 -0.2
GROC *e* 21 30 53.8
GROC *e*PPP PPP 21 31 03.5
GROC *e*S **S** 21 35 01.6 +6.8
GROC pmax pmax
comp=Z,13nm,0.7s
GROC MLR MLR
comp=Z,88nm,7.0s
QIZ **Qiongzhong** 29.71 105 P P 21 29 59.0 -1.7
QIZ S **S** 21 34 57.2 +1.0
QIZ LR LR
comp=Z,180nm,18.6s
QIZ LR LR
comp=Z,170nm,15.2s
QIZ LR LR
comp=Z,130nm,17.2s
SOCY **Socotra** 29.75 238 P P 21 29 59.6 -1.5
GNI **Garni** 29.83 299 P P 21 30 03.3 +1.5
comp=Z,10nm,0.9s,baz=173,slow=4.9,SNR=10
GNI **Garni** 29.83 299 *ce*P P 21 30 01.1 -0.7
GNI pmax pmax
comp=Z,22nm,1.3s
GNI **Garni** 29.83 299 P P 21 30 03.3 +1.5
GNI IAmb IAmb 21 30 16.6
comp=Z,18nm,0.9s
ARU **Arti** 29.91 337 P P 21 30 03.4 +1.3
comp=Z,3.0nm,0.5s,baz=138,slow=6.5,SNR=19
ARU LR LR 21 43 36.8
comp=Z,114nm,20.5s,baz=142,slow=40
ARU **Arti** 29.91 337 *c*/P P 21 30 03.3 +1.3
ARU 21 30 57.2
ARU S **S** 21 35 01.4 +2.9
ARU SS **SnSn** 21 36 28.6 -1.2
ARU pmax pmax
comp=Z,12nm,0.7s
ARU **Arti** 29.91 337 P P 21 30 03.0 +0.9
ARU IAmb IAmb 21 30 03.9
comp=Z,12nm,0.6s
WHN **Wuhan** 29.99 81 ||P P 21 30 04.4 +1.4
BTNK **Botanikuri** 30.04 302 P P 21 30 04.3 +0.8
KZRT **Kazreti** 30.29 301 P P 21 30 07.3 +1.6
ZEI **Tsey** 30.91 304 *e*P P 21 30 12.4 +1.0
ZEI pmax pmax
comp=Z,11nm,1.0s
GEVA **Gevas** 30.95 295 P P 21 30 12.1 +0.5
AKH **Akhalkalaki** 30.96 301 P P 21 30 14.2 +2.4
RAYN **Ar Rayn** 30.97 266 P P 21 30 12.4 +0.5
RAYN pmax pmax
comp=Z,8.0nm,1.2s
RAYN **Ar Rayn** 30.97 266 P P 21 30 12.4 +0.5
KARS **Kars** 31.16 299 P P 21 30 14.9 +1.4
ONI **Oni** 31.20 303 P P 21 30 16.5 +2.8
NCK **Nalchik** 31.28 305 *i* P P 21 30 13.2 -1.2
NCK pmax pmax
comp=Z,9.0nm,1.0s
BJT **Baijiatuau** 31.30 62 P P 21 30 15.1 +0.5
BJT pmax pmax
comp=Z,17nm,1.5s
BJT **Baijiatuau** 31.30 62 P P 21 30 15.1 +0.5
BJT IAmb IAmb 21 30 17.6
comp=Z,17nm,1.5s
KBZ **Khabaz** 31.83 305 P P 21 30 19.7 +0.6
comp=Z,3.6nm,0.9s,baz=106,slow=7.8,SNR=12
KBZ **Khabaz** 31.83 305 *ce*P P 21 30 18.8 -0.3
KBZ pmax pmax
comp=Z,5.0nm,1.0s
NEY **Neytrino** 31.85 304 *i* P P 21 30 20.4 +0.8
NEY pmax pmax
comp=Z,3.0nm,1.0s
KULM **Kulim** 31.94 137 P P 21 30 20.5 +0.1
KULM IAmb IAmb 21 30 38.7
comp=Z,23nm,1.5s
SHA1 **Shidzhatmaz** 32.00 305 *i* P P 21 30 21.3 +0.3
KVAR **Kislovodsk Arr** 32.02 305 P P 21 30 21.9 +0.9
comp=Z,0.9nm,0.4s,baz=67,slow=7.7,SNR=2.0
KIV **Kislovodsk** 32.03 305 *e*P P 21 30 20.5 -0.5
KIV pmax pmax
comp=Z,18nm,1.0s
KIV MLR MLR
comp=Z,211nm,15.0s
KIV **Kislovodsk** 32.03 305 P P 21 30 21.2 +0.1
BELG **Belogornoye** 32.07 322 P P 21 30 22.4 +1.3
comp=Z,20nm,0.8s,baz=186,slow=1.9,SNR=7.2
BELG **Belogornoye** 32.07 322 *i* P P 21 30 20.1 -1.0
BELG pmax pmax
comp=Z,8.0nm,1.4s
DLV **T Lat** 32.53 118 P P 21 30 26.0 +0.2
DLV IAmb IAmb 21 30 40.6
comp=Z,12nm,1.1s
MARD **Mardin** 32.71 293 P P 21 30 27.9 +0.7
IPM **Ipoh** 32.81 137 P P 21 30 27.8 -0.3
IPM IAmb IAmb 21 30 45.3
comp=Z,8.4nm,0.7s
PSI **Prapat** 33.03 142 P P 21 30 31.9 +1.8

comp=Z,6.0nm,0.6s,baz=180,slow=3.0,SNR=6.7
KOPT Kop Dagi 33.06 298 P **P** **21 30 29.8 -0.6**
RPSI Rantau Prapat 33.12 143 P **P** **21 30 30.6 -0.1**
RPSI IAmb IAmb 21 30 34.7
comp=Z,9.1nm,0.7s
NJ2 Nanjing 33.59 77 *e*P **P** **21 30 34.1 -0.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
GSI Gunungsitoli 33.63 146 P **P** **21 30 34.9 -0.3**
MALT Malatya 34.59 294 P **P** **21 30 45.8 +2.4**
VRH Novokhopyorsk 34.82 318 *e*P **P** **21 30 45.4 +0.2**
VRH pmax pmax
comp=Z,20nm,0.6s
KIRV Kirov 34.88 333 P **P** **21 30 47.2 +1.7**
comp=Z,13nm,0.6s,baz=128,slow=22,SNR=9.6
KIRV LR LR 21 46 01.2
comp=Z,545nm,18.7s,baz=135,slow=38
KIRV Kirov 34.88 333*ce*P **P** **21 30 46.5 +1.0**
MNSI Mandailing Nat 35.07 143 P **P** **21 30 47.0 -0.6**
comp=Z,23nm,0.7s
GAZ Gaziantep 35.56 292 P **P** **21 30 52.5 +0.7**
GAZ IAmb IAmb 21 30 54.2
comp=Z,17nm,0.9s
HIA Hailar 35.69 47 P **P** **21 30 53.3 +0.6**
HIA pmax pmax
comp=Z,14nm,1.1s
HIA Hailar 35.69 47 P **P** **21 30 53.3 +0.6**
HIA IAmb IAmb 21 30 56.3
comp=Z,14nm,1.1s
ANN Anapa 35.88 306 *e*P **P** **21 30 51.3 -3.1**
ANN *e*PP **pP** **21 30 55.4 -5.1**
ANN *e*PPP PPP 21 32 22.9
ANN *e*S **S** **21 36 28.3 -3.2**
ANN pmax pmax
comp=Z,52nm,1.2s
TOKA Tokat 36.15 298 P **P** **21 30 57.7 +0.9**
BOD Bodaibo 36.29 31 *e*P **P** **21 30 56.9 -0.8**
BOD pmax pmax
comp=Z,6.0nm,1.7s
VSR Storozhevoye 36.33 317 *e*P **P** **21 30 58.0 -0.1**
VSR pmax pmax
comp=Z,10.0nm,1.1s
LPSR Galich'ya Gora 36.95 319 *e*P **P** **21 31 03.9 +0.6**
LPSR pmax pmax
comp=Z,30nm,0.9s
TPUB Ta-pu 37.23 91 P **P** **21 31 06.7 +0.6**
TPUB IAmb IAmb 21 31 08.8
comp=Z,28nm,1.2s
YULB Yu-li 37.78 90 P **P** **21 31 11.1 +0.4**
ILGA Ilgaz 38.27 299 P **P** **21 31 15.4 +0.4**
PRGR Permogore 38.30 335 *e*P **P** **21 31 15.1 +0.5**
PRGR pmax pmax
comp=Z,18nm,1.1s
BR131 Keskin Array S 38.32 297 P **P** **21 31 15.4 +0.1**
BR131 pmax pmax
comp=Z,12nm,1.0s
BR131 Keskin Array S 38.32 297 P **P** **21 31 15.4 +0.1**
BRTR Keskin Array B 38.32 297 P **P** **21 31 16.2 +0.9**
comp=Z,4.3nm,0.8s,baz=106,slow=7.9,SNR=19
MOS Moscow 38.83 323 *e*P **P** **21 31 18.5 -0.7**
MOS *e* 21 32 48.4
MOS *e*S **S** **21 37 18.3 +2.2**
MOS pmax pmax
comp=Z,30nm,0.6s
MOS MLR MLR
comp=Z,500nm,18.0s
OBN Obninsk 39.16 322 P **P** **21 31 23.2 +1.3**
comp=Z,5.5nm,0.6s,baz=60,slow=5.2,SNR=7.7
OBN Obninsk 39.16 322*c i*P **P** **21 31 22.4 +0.5**
OBN *e* 21 32 50.3
OBN pmax pmax
comp=Z,21nm,0.6s
OBN MLR MLR
comp=Z,191nm,16.0s
OBN Obninsk 39.16 322 P **P** **21 31 22.6 +0.7**
OBN IAmb IAmb 21 31 23.8
comp=Z,28nm,0.7s
NRIK Noril'sk 39.28 5 P **P** **21 31 24.1 +1.3**
comp=Z,26nm,0.9s,baz=189,slow=5.8,SNR=26
NRIK LR LR 21 50 21.3
comp=Z,153nm,18.6s,baz=204,slow=40
NRIK Noril'sk 39.28 5*ce*P **P** **21 31 24.0 +1.2**
NRIK pmax pmax
comp=Z,32nm,1.0s
NRIK Noril'sk 39.28 5 P **P** **21 31 23.7 +0.9**
KLMR Klimovskoe 40.27 331 *e*P **P** **21 31 30.7 -0.4**
KLMR *e* 21 33 04.4
KLMR pmax pmax
comp=Z,32nm,1.4s
KLMR Klimovskoe 40.27 331 *e*P **P** **21 31 30.7 -0.4**
KLMR AMP 21 31 33.1
comp=Z,32nm,1.4s
KLMR *e*PP **PP** **21 33 04.4 +0.6**
KSRS Korea Array 40.45 67 P **P** **21 31 33.3 +0.3**
comp=Z,1.8nm,0.6s,baz=270,slow=8.3,SNR=6.7
KSRS LR LR 21 50 30.3
comp=Z,132nm,18.3s,baz=273,slow=40
ELL Elmali 41.42 292 P **P** **21 31 41.7 +0.5**
ELL pmax pmax
comp=Z,129nm,0.9s
ELL Elmali 41.42 292 P **P** **21 31 41.7 +0.5**
ZEA Zeya 41.43 42 *e*P **P** **21 31 42.7 +1.9**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=E,100nm,11.0s
ZEA MLR MLR
comp=Z,200nm,13.0s
SBUM Sibu 41.61 126 P **P** **21 31 42.9 +0.1**
MILM Milestii Mici 42.12 308 ⇑P **P** **21 31 46.9 +0.4**
KKM Kota Kinabalu 42.15 118 P **P** **21 31 47.5 +0.3**
KKM IAmb IAmb 21 31 48.9
comp=Z,23nm,1.2s
TPGR Topolog 42.27 305 ⇑P **P** **21 31 48.4 +0.6**
AKASG Malin Array Be 42.30 313 P **P** **21 31 48.2 +0.3**
comp=Z,8.6nm,0.7s,baz=82,slow=6.3,SNR=31
AKASG PP **PP** **21 33 22.7 -3.2**
comp=Z,0.8nm,0.4s,baz=87,slow=11,SNR=4.7
AKASG LR LR 21 52 41.5
comp=Z,45nm,18.1s,baz=335,slow=41
AKBB Malin Array Si 42.30 313*ce*P **P** **21 31 47.6 -0.3**
AKBB Malin Array Si 42.30 313 P **P** **21 31 48.1 +0.2**
CFR Carcaliu 42.48 305 ⇑P **P** **21 31 50.3 +0.7**
CFR Carcaliu 42.48 305 P **P** **21 31 50.6 +1.1**
CFR pmax pmax
comp=Z,11nm,1.3s
SORM Soroca 42.54 310 ⇑P **P** **21 31 50.1 +0.1**
SORM Soroca 42.54 310 P **P** **21 31 50.0 +0.1**
JOW Kunigami 42.73 82 P **P** **21 31 51.5 -0.2**
JOW IAmb IAmb 21 31 52.6
comp=Z,24nm,0.8s
USA0B Ussuriysk Arra 43.29 56 *i* P **P** **21 31 56.7 +0.6**
USA0B Ussuriysk Arra 43.29 56 P **P** **21 31 56.4 +0.3**
USRK Ussuriysk Ar. 43.29 56 P **P** **21 31 57.4 +1.3**
comp=Z,7.1nm,0.9s,baz=276,slow=6.5,SNR=12
KLR Kul'dur 43.40 49 P **P** **21 31 57.9 +1.1**
comp=Z,5.5nm,0.7s,baz=277,slow=8.9,SNR=22
KLR Kul'dur 43.40 49*ce*P **P** **21 31 56.3 -0.6**
KLR pmax pmax
comp=Z,9.0nm,1.0s
JNU Nakatsue 43.44 73 P **P** **21 31 57.4 -0.1**
comp=Z,9.5nm,0.9s,baz=36,slow=23,SNR=2.1
VRI Vrincioaia 43.50 306 ⇑P **P** **21 31 59.8 +2.0**
VRI Vrincioaia 43.50 306 P **P** **21 31 59.8 +2.0**
VRI pmax pmax
comp=Z,14nm,1.2s
PLOR Plostina 43.55 306 ⇓P **P** **21 31 58.3 0.0**
PLOR Plostina 43.55 306 P **P** **21 31 58.2 0.0**
TESR Tescani 43.58 307 ⇑P **P** **21 31 59.1 +0.7**
MNK Minsk 43.80 319 *i* P **P** **21 31 59.0 -1.0**
comp=E,3.0nm,1.1s
MNK *i* P **P** **21 31 59.0 -1.0**
comp=N,8.0nm,1.0s
MNK *i* P **P** **21 31 59.0 -1.0**
comp=Z,23nm,0.8s
MNK *i* PP **PP** **21 33 40.8 -1.1**
MNK *i* PcP **PcP** **21 33 45.8 -0.5**
MNK *i* PPP PPP 21 34 14.8
MNK *i* S **S** **21 38 28.9 -0.9**
MNK *i* SS **SS** **21 41 46.6 +1.0**
MNK *i* ScS **ScS** **21 41 58.6 +0.3**
MNK *i* SSS SSS 21 42 24.3
MNK *i* LQ LQ 21 47 02.1
MNK *i* LR LR 21 50 05.6
MNK *i* LRM MLR 21 51 36.7
comp=Z,170nm,14.1s
MNK *i* LRM MLR 21 51 38.3
comp=E,29nm,13.1s
MNK *i* LRM MLR 21 51 38.9
comp=N,25nm,6.7s
BIZ Bicaz 43.97 308 ⇑P **P** **21 32 02.6 +1.1**
MLR Muntele Rosu 44.04 306 ⇑P **P** **21 32 04.2 +1.9**
MLR Muntele Rosu 44.04 306 P **P** **21 32 03.8 +1.5**
MLR pmax pmax
comp=Z,43nm,0.9s
MLR Muntele Rosu 44.04 306 P **P** **21 32 03.8 +1.5**
DOPR Dopca 44.44 306 ⇑P **P** **21 32 06.7 +1.4**
NACGM Naroch 44.50 319 *i* P **P** **21 32 06.9 +1.2**
NACGM *i* P **P** **21 32 06.9 +1.2**
NACGM *i* P **P** **21 32 06.9 +1.2**
NACGM *i* PP **PP** **21 33 55.6 +6.1**
NACGM *i* PPP PPP 21 34 37.7
NACGM *i* SS SS 21 42 28.0 +29
NACGM *i* SSS SSS 21 43 36.8
NACGM *i* LR LR 21 53 04.3
BURAR Bucovina Array 44.60 309 ⇑P **P** **21 32 07.5 +0.8**
BURAR Bucovina Array 44.60 309 P **P** **21 32 07.5 +0.8**
IDID Didziasalis 44.61 320 *e*P **P** **21 32 05.7 -0.8**
BUR08 Bucovina Ar. S 44.62 309 P **P** **21 32 07.2 +0.4**
VOIR 44.67 305 ⇑P **P** **21 32 07.7 +0.5**
VOIR 44.67 305 P **P** **21 32 09.0 +1.8**
VOIR pmax pmax
comp=Z,6.0nm,1.6s
IIGN Ignalina 44.91 320 *e*P **P** **21 32 09.2 +0.3**
ARR Arges 44.96 305 ⇑P **P** **21 32 10.8 +1.2**
ISAL Salakas 45.00 320 *e*P **P** **21 32 09.7 0.0**
YAK Yakutsk 45.21 31 P **P** **21 32 11.7 +0.5**
comp=Z,6.7nm,0.5s,baz=122,slow=2.0,SNR=6.0
YAK Yakutsk 45.21 31⇓*e*P **P** **21 32 11.4 +0.2**
YAK pmax pmax
comp=Z,18nm,0.8s
YAK Yakutsk 45.21 31 P **P** **21 32 11.3 +0.1**
YAK IAmb IAmb 21 32 13.7
comp=Z,19nm,0.9s
LVV L'vov 45.51 312 *e*P **P** **21 32 10.7 -3.1**
MORS Morshin 45.56 311 P **P** **21 32 15.8 +1.6**
IDI Anoyia 45.66 291 ⇓P **P** **21 32 15.7 +0.5**
CJR Cluj-Napoca 45.68 307 ⇑P **P** **21 32 16.9 +1.6**
CJR Cluj-Napoca 45.68 307 P **P** **21 32 16.8 +1.6**
LVZ Lovozero 45.76 338 P **P** **21 32 16.2 +0.6**
LVZ pmax pmax
comp=Z,62nm,1.6s
LVZ Lovozero 45.76 338 P **P** **21 32 16.1 +0.6**
JMN Monobe 45.78 71 P **P** **21 32 16.9 +0.7**
VTS Vitosha 46.06 302 ⇑P **P** **21 32 19.3 +0.8**
VTS Vitosha 46.06 302 P **P** **21 32 19.4 +1.0**
VTS pmax pmax
comp=Z,13nm,0.9s
VTS Vitosha 46.06 302 P **P** **21 32 19.4 +1.0**
VTS IAmb IAmb 21 32 20.5
comp=Z,13nm,0.9s
TRSU Trosnyk 46.14 309 P **P** **21 32 21.0 +2.2**
PABE Paberze 46.20 319 *e*P **P** **21 32 19.6 +0.5**
DRGR 46.29 307 ⇑P **P** **21 32 21.6 +1.5**
DRGR 46.29 307 P **P** **21 32 21.9 +1.8**
DRGR pmax pmax
comp=Z,27nm,1.2s
KWP Kalwaria Pacla 46.36 311 *e*P **P** **21 32 22.1 +1.6**
KWP Kalwaria Pacla 46.36 311 P **P** **21 32 21.3 +0.8**
KWP pmax pmax
comp=Z,44nm,1.2s
KWP Kalwaria Pacla 46.36 311 P **P** **21 32 21.3 +0.8**
SUW Suwalki 46.44 317 *e*P **P** **21 32 21.1 +0.1**
SUW Suwalki 46.44 317 *e*P **P** **21 32 21.4 +0.3**
SUW Suwalki 46.44 317 P **P** **21 32 21.3 +0.3**
SUW pmax pmax
comp=Z,39nm,1.0s
SUW Suwalki 46.44 317 P **P** **21 32 21.3 +0.3**
FIA1 FINESS Array S 46.46 328 P **P** **21 32 21.8 +0.7**
FIA1 IAmb IAmb 21 32 22.9
comp=Z,15nm,0.9s
FINES FINESS Array B 46.47 328 P **P** **21 32 22.0 +0.9**
comp=Z,5.2nm,0.6s,baz=113,slow=8.6,SNR=25
FINES LR LR 21 52 55.6
comp=Z,192nm,21.0s,baz=44,slow=38
FINES FINESS Array B 46.47 328 *i* P **P** **21 32 22.0 +0.9**
FINES pmax pmax
comp=Z,5.0nm,0.6s
KOLS Kolonicke sedl 46.62 310 *e*P **P** **21 32 23.9 +1.4**
KOLS Kolonicke sedl 46.62 310 *e*P **P** **21 32 23.9 +1.4**
JWT Wachi 46.73 69 P **P** **21 32 24.6 +1.0**
MTSE Matsula 46.88 324 *e*P **P** **21 32 23.1 -1.2**
MDVR Moldovita 47.04 305 ⇑P **P** **21 32 26.9 +1.0**
BZS Buzias 47.08 306 ⇑P **P** **21 32 28.1 +1.9**
BZS Buzias 47.08 306 P **P** **21 32 28.0 +1.9**
BZS pmax pmax
comp=Z,17nm,1.3s
AGG Agios Georgios 47.11 297 P **P** **21 32 26.3 -0.2**
AGG pmax pmax
comp=Z,19nm,0.9s
AGG Agios Georgios 47.11 297 P **P** **21 32 26.3 -0.2**
CRVS Cervenica-Dubn 47.15 310 *e*P **P** **21 32 28.8 +2.1**
CRVS pmax pmax
comp=Z,21nm,1.2s
CRVS Cervenica-Dubn 47.15 310 *e*P **P** **21 32 28.8 +2.1**
BEL Belsk 47.69 314 *e*P **P** **21 32 31.4 +0.6**
NIE Niedzica 47.92 311 *e*P **P** **21 32 35.2 +2.5**
NIE Niedzica 47.92 311 P **P** **21 32 36.3 +3.6**
NIE pmax pmax
comp=Z,6.0nm,1.3s
PSZ Piszkesteto 48.20 309 P **P** **21 32 35.5 +0.6**
PSZ pmax pmax
comp=Z,13nm,1.0s
PSZ Piszkesteto 48.20 309 P **P** **21 32 35.5 +0.6**
PSZ IAmb IAmb 21 32 37.3
comp=Z,13nm,1.0s
JGF Kuroka 48.23 68 P **P** **21 32 34.7 -0.6**
JGF IAmb IAmb 21 32 42.8
comp=Z,9.2nm,0.8s
OJC Ojcow 48.26 312 *e*P **P** **21 32 36.9 +1.6**
OJC Ojcow 48.26 312 P **P** **21 32 35.9 +0.6**
OJC pmax pmax
comp=Z,5.0nm,0.8s
OJC Ojcow 48.26 312 P **P** **21 32 35.9 +0.6**
FRGS Fruska Gora 48.37 305 ⇑P **P** **21 32 36.9 +0.6**
MJAR Matsushiro Arr 48.73 66 LR LR 21 55 12.1
comp=Z,84nm,19.4s,baz=220,slow=38
PLE Pljevlja 48.82 303 P **P** **21 32 43.1 +3.3**
VYHS Vyhne 48.89 310 *e*P **P** **21 32 41.1 +0.9**
VYHS pmax pmax
comp=Z,12nm,1.4s
VYHS Vyhne 48.89 310 *e*P **P** **21 32 41.1 +0.9**
TIXI Tiksi 49.05 19 P **P** **21 32 41.1 +0.1**
comp=Z,5.0nm,0.6s,baz=242,slow=2.6,SNR=25
TIXI Tiksi 49.05 19*ce*P **P** **21 32 39.8 -1.2**
TIXI pmax pmax
comp=Z,41nm,1.0s
TIXI Tiksi 49.05 19 P **P** **21 32 40.8 -0.2**
TIXI IAmb IAmb 21 32 42.5
comp=Z,8.7nm,0.9s
AAL Aland 49.07 325 *e*P **P** **21 32 41.9 +0.6**
KEV Kevo 49.09 339 P **P** **21 32 42.0 +0.7**
KEV pmax pmax
comp=Z,138nm,1.8s
KEV Kevo 49.09 339 P **P** **21 32 42.0 +0.7**
MORH Mrgy, Hungar 49.12 307 ⇓P **P** **21 32 42.8 +0.9**
SRO Srobarova 49.26 309 *e*P **P** **21 32 45.0 +2.0**
SRO Srobarova 49.26 309 *e*P **P** **21 32 45.0 +2.0**
ARA0 ARCESS Array S 49.48 338 *e*P **P** **21 32 45.8 +1.4**
ARCES ARCESS Array B 49.48 338 P **P** **21 32 44.9 +0.5**
comp=Z,8.9nm,0.6s,baz=116,slow=8.2,SNR=47
ARCES LR LR 21 55 51.3
comp=Z,60nm,18.6s,baz=260,slow=39
JAVC Velka Javorina 49.65 310 *e*P **P** **21 32 47.4 +1.3**
MORC Moravsky Berou 49.71 311 *e*P **P** **21 32 47.6 +1.1**
MORC Moravsky Berou 49.71 311 P **P** **21 32 47.0 +0.5**
MORC pmax pmax
comp=Z,8.0nm,0.8s
MORC Moravsky Berou 49.71 311 P **P** **21 32 47.0 +0.5**
MORC IAmb IAmb 21 32 48.2
comp=Z,8.4nm,0.8s
MODS Modra-Piesok 49.93 310 *e*P **P** **21 32 49.9 +1.7**
MODS pmax pmax
comp=Z,6.0nm,1.0s
MODS Modra-Piesok 49.93 310 *e*P **P** **21 32 49.9 +1.7**
KTK1 Kautokeino 50.03 337 *e*P **P** **21 32 49.6 +1.0**
MRSI Marisa 50.08 118 P **P** **21 32 54.5 +4.9**
KRLC Kraliky 50.20 312 *e*P **P** **21 32 51.4 +1.2**
KRLC Kraliky 50.20 312 *e*P **P** **21 32 51.4 +1.2**
UPP Uppsala 50.20 325 *e*P **P** **21 32 50.0 0.0**
JEW Eniwo 50.24 58 P **P** **21 32 51.1 +0.6**
VRAC Vranov 50.34 311 ⇑P **P** **21 32 52.4 +1.1**
VRAC Vranov 50.34 311 *e*P **P** **21 32 52.5 +1.2**
VRAC Vranov 50.34 311 P **P** **21 32 53.3 +2.0**
VRAC pmax pmax
comp=Z,13nm,1.2s
HAMF Hammerfest 50.48 339 *e*P **P** **21 32 53.6 +1.7**
DPC Dobruska-Polom 50.48 312 *e*P **P** **21 32 53.6 +1.3**
DPC Dobruska-Polom 50.48 312 *e*P **P** **21 32 53.6 +1.3**
KRUC Moravsky 50.48 311 *e*P **P** **21 32 53.2 +0.9**
KRUC Moravsky 50.48 311 P **P** **21 32 55.1 +2.8**
KRUC pmax pmax
comp=Z,10.0nm,0.6s
KSP Ksiaz 50.49 313 P **P** **21 32 54.9 +2.6**
KSP pmax pmax
comp=Z,8.0nm,1.4s
OSTC Ostas 50.55 312 *e*P **P** **21 32 54.1 +1.3**
OSTC *e*P **P** **21 32 54.1 +1.3**
CHVC Chvalec 50.65 313 *e*P **P** **21 32 53.9 +0.4**
YSS Yuzh-Sakhalins 50.74 52 *i* P **P** **21 32 54.8 +0.6**
YSS pmax pmax
comp=Z,17nm,1.1s
CONA Conrad Observa 50.91 309 *i* P **P** **21 32 56.7 +1.1**
comp=Z,22nm,1.2s,SNR=10
KMBO Kilima Mbogo 50.95 240 P **P** **21 32 57.5 +0.9**
comp=Z,6.1nm,0.8s,baz=39,slow=11,SNR=9.6
KMBO LR LR 21 54 07.5
comp=Z,131nm,18.8s,baz=92,slow=36
JETT Jettan, Norway 51.16 337 *e*P **P** **21 32 59.0 +1.8**
ARSA Arzberg 51.19 308 *e*P **P** **21 32 58.7 +1.1**
comp=Z,16nm,1.5s
GROS Grobnik 51.27 307 *i* P **P** **21 32 59.2 +0.8**
SOKA Soboth 51.57 308 *i* P **P** **21 33 01.7 +1.0**
comp=Z,16nm,1.0s,SNR=11
PRU Pruhonice 51.64 312 *e*P **P** **21 33 02.0 +1.0**
PRU Pruhonice 51.64 312 *e*P **P** **21 33 02.0 +1.0**
TRO Tromso 51.68 337 *e*P **P** **21 33 02.0 +1.1**
SGRT San Giovanni R 51.69 301 P **P** **21 33 01.5 -0.1**
OBKA Obir 51.92 307 *i* P **P** **21 33 04.7 +1.5**
comp=Z,17nm,1.1s,SNR=6.0
BRG Berggiesshubel 51.98 313 *i* P **P** **21 33 04.5 +1.0**
BRG Amp 21 33 06.5
comp=Z,13nm,1.1s
BRG *ex* x 21 33 09.9
BRG Amp 21 33 10.6
comp=Z,9.8nm,0.8s
MOA Molln 51.98 309 *i* P **P** **21 33 04.2 +0.6**
comp=Z,13nm,1.3s,SNR=7.8
PBCC Pribram 52.02 311 *e*P **P** **21 33 05.1 +1.3**
GEC2 GERESS Array S 52.27 310 P **P** **21 33 06.3 +0.4**
GEC2 IAmb IAmb 21 33 08.3
comp=Z,16nm,1.7s
GERES GERESS Array B 52.27 310 P **P** **21 33 06.3 +0.4**
comp=Z,1.9nm,0.6s,baz=87,slow=8.1,SNR=8.1
KHC Kasperske Hory 52.33 311 *i* P **P** **21 33 06.0 -0.2**
KHC pmax pmax
comp=Z,18nm,1.6s
KHC Kasperske Hory 52.33 311 *e*P **P** **21 33 06.7 +0.5**
FBE Freiberg 52.35 313 *e*P **P** **21 33 07.8 +1.6**
comp=Z,19nm,1.1s,baz=84,slow=7.2
FAUS Fauske 52.45 334 *e*P **P** **21 33 07.2 +0.6**
CADS Cadrg 52.51 307 *i* P **P** **21 33 08.2 +0.6**
MYKA Terra Mystica 52.53 308 *e*P **P** **21 33 09.1 +1.4**
comp=Z,3.1nm,0.5s
CLL Collm 52.54 314 *i* P **P** **21 33 08.1 +0.5**
comp=Z,8.0nm,1.0s
CLL Collm 52.54 314 *i* P **P** **21 33 08.1 +0.5**
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 52.54 314 *e*L L 21 58 09.0
comp=Z,92nm,21.2s
MOR8 Moi Rana 52.56 332 *e*P **P** **21 33 06.8 -0.8**
STEI Steigen 52.57 335 *e*P **P** **21 33 08.6 +1.0**
ROBS Robic 52.67 307 *i* P **P** **21 33 09.1 +0.4**
KBA Koelnbreinsper 52.68 308 *e*P **P** **21 33 07.9 -1.1**
comp=Z,4.7nm,0.8s
WET Wettzell 52.79 311 *e*L L 21 59 24.3
comp=Z,94nm,18.2s
GUNZ Gunzen 53.03 312 *e*P **P** **21 33 12.8 +1.4**
comp=Z,19nm,1.5s,baz=84,slow=7.2
ROTZ Rotzenmuhle 53.17 312 *e*P **P** **21 33 13.7 +1.4**
comp=Z,13nm,1.2s,baz=84,slow=7.2
MANZ Manzenberg 53.21 312 *e*P **P** **21 33 14.0 +1.4**
comp=Z,19nm,1.3s,baz=84,slow=7.2
LOF Lofoten 53.24 335 *e*P **P** **21 33 12.8 +0.3**
ABTA Abfaltersbach 53.29 308 *e*P **P** **21 33 13.9 +0.6**
comp=Z,7.1nm,1.2s
NC602 NORSAR Array S 53.30 325 *e*P **P** **21 33 13.0 0.0**
NSS Namsos 53.38 330 *e*P **P** **21 33 14.1 +0.6**
NRCA Norcia 53.44 303 P **P** **21 33 14.9 +0.4**
MOX Moxa 53.47 313 *e*P **P** **21 33 15.5 +1.0**
comp=Z,9.4nm,1.0s,baz=84,slow=7.2
MOX *e*L L 22 00 52.9
comp=Z,75nm,19.3s
NB2 NORSAR Subarra 53.47 326 P **P** **21 33 14.3 -0.1**
baz=94,slow=7.4
NOA NORSAR Array B 53.47 326 P **P** **21 33 14.2 -0.1**
comp=Z,4.6nm,0.9s,baz=94,slow=7.2,SNR=7.8
NOA LR LR 21 57 13.0
comp=Z,201nm,18.9s,baz=100,slow=37
MURB Monte Urbino 53.79 304 P **P** **21 33 18.1 +1.1**
GRF Grafenberg Arr 53.81 312 *e*L L 22 00 32.6
comp=Z,84nm,19.2s
WTTA Wattenberg 53.82 309 *e*P **P** **21 33 17.3 -0.1**
comp=Z,16nm,1.1s
WATA Walderalm 53.85 309 *e*P **P** **21 33 17.5 0.0**
comp=Z,8.5nm,1.0s
SQTA Sankt Quirin 54.11 309 *e*P **P** **21 33 19.1 -0.3**
comp=Z,14nm,1.2s
CLZ Clausthal 54.14 314 *e*P **P** **21 33 20.7 +1.3**
comp=Z,17nm,0.9s,baz=84,slow=7.2
MOTA Moosalm 54.17 309 *i* P **P** **21 33 19.4 -0.5**
comp=Z,12nm,1.0s,SNR=9.1
KONO Kongsberg 54.24 324 *e*P **P** **21 33 20.6 +0.6**
RETA Reutte 54.38 309 *i* P **P** **21 33 21.3 0.0**
comp=Z,16nm,1.5s,SNR=4.6
FETA Feichten 54.46 308 *i* P **P** **21 33 22.1 0.0**
comp=Z,13nm,1.3s,SNR=6.1
DOMB Dombas 54.53 327 *e*P **P** **21 33 22.8 +0.7**
SANI Sanana 54.79 117 P **P** **21 33 27.9 +3.3**
HSPB Hornsund (broa 54.83 346 *e*P **P** **21 33 24.3 +0.3**
SKAR Skarslia 54.89 325 *e*P **P** **21 33 25.1 +0.4**
MA2 Magadan 54.96 36 P **P** **21 33 26.0 +0.8**
comp=Z,12nm,0.7s,baz=281,slow=7.4,SNR=13
MA2 Magadan 54.96 36⇑*e*P **P** **21 33 26.3 +1.1**
MA2 pmax pmax
comp=Z,27nm,1.7s
MA2 Magadan 54.96 36 P **P** **21 33 26.2 +1.1**
DAVA Damuels 55.00 309 *i* P **P** **21 33 26.1 +0.2**
comp=Z,27nm,1.1s,SNR=11
SPA0 Spitsbergen Ar 55.05 347 P **P** **21 33 26.6 +1.0**
SPA0 Spitsbergen Ar 55.05 347 *e*P **P** **21 33 26.7 +1.1**
SPITS Spitsbergen Ar 55.05 347 P **P** **21 33 26.6 +1.0**
comp=Z,10nm,0.7s,baz=134,slow=14,SNR=8.7
TUE Stuetta 55.49 308 P **P** **21 33 30.6 +1.1**
TUE IAmb IAmb 21 33 43.6
comp=Z,11nm,1.1s
TNS Taunus Mts 55.53 313 *e*L L 22 00 01.3
comp=Z,109nm,20.2s
MBAR Mbarara 55.62 246 P **P** **21 33 31.6 +0.8**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
MBAR Mbarara 55.62 246 P **P** **21 33 31.6 +0.8**
MBAR IAmb IAmb 21 33 36.3
comp=Z,7.7nm,1.1s
SEY Seymchan 55.69 32 P **P** **21 33 31.2 +0.8**
comp=Z,6.3nm,0.6s,baz=250,slow=6.5,SNR=20
SEY Seymchan 55.69 32 *i* P **P** **21 33 30.7 +0.3**
BFO Black Forest 55.87 310 *e*L L 22 00 45.3
comp=Z,55nm,21.5s
PGF Pioggiola 56.47 303 *e*P **P** **21 33 39.4 +2.9**
PGF pmax pmax
comp=Z,70nm,1.4s
SENIN Lac Senin/Sane 56.90 308 P **P** **21 33 40.3 +0.7**
SENIN IAmb IAmb 21 33 46.5
comp=Z,13nm,0.8s
HINF Hinteralfeld 56.94 310 *e*P **P** **21 33 39.0 -0.6**
HINF pmax pmax
comp=Z,9.0nm,1.0s
HAU Haudompre 57.24 310 *e*P **P** **21 33 41.2 -0.5**
HAU pmax pmax

comp=Z,13nm,0.9s
SBF Sospel 57.31 305 *e*P P 21 33 42.0 -0.4
SBF pmax pmax
comp=Z,13nm,0.7s
LPG La Plagne 57.45 307 *e*P P 21 33 43.5 -0.1
LPG pmax pmax
comp=Z,12nm,0.7s
LPL La Plagne 57.45 307 *e*P P 21 33 43.5 -0.1
LPL pmax pmax
comp=Z,22nm,0.8s
MBDF Montbardon 57.59 306 *e*P P 21 33 45.1 +0.7
MBDF pmax pmax
comp=Z,9.0nm,0.9s
KEST Kesra 57.90 295 P P 21 33 46.4 -0.2
comp=Z,12nm,0.9s,baz=312,slow=1.3,SNR=4.6
FRF La Foret Royal 57.93 305 *e*P P 21 33 45.9 -0.8
FRF pmax pmax
comp=Z,58nm,1.5s
SIJI Sorong 58.20 112 P P 21 33 48.9 0.0
comp=Z,5.6nm,0.5s,baz=158,slow=23,SNR=4.4
AVF Avril sur Loir 59.48 309 *e*P P 21 33 57.5 +0.2
AVF pmax pmax
comp=Z,6.0nm,0.9s
PETK Petropavlovsk- 59.48 43 LR LR 22 01 38.3
comp=Z,89nm,18.3s,baz=261,slow=38
FAKI Fak Fak 60.21 114 P P 21 34 02.8 0.0
FAKI Fak Fak 60.21 114 P P 21 34 03.9 +1.1
TCF Toulx Ste Croi 60.36 309 *e*P P 21 34 03.3 -0.2
TCF pmax pmax
comp=Z,85nm,2.2s
BILL Bilibino 61.03 25 *d*iP P 21 34 08.3 +0.7
BILL *e*S S 21 42 20.6 -4.6
BILL pmax pmax
comp=Z,12nm,1.1s
BILL MLR MLR
comp=Z,162nm,16.0s
BILL Bilibino 61.03 25 P P 21 34 08.6 +1.0
NOR Nord 61.05 350⇑ *i*P P 21 34 08.7 +1.1
NOR IAmb IAmb 21 34 08.9
comp=Z,14nm,0.6s
DAG Danmarks Havn 62.52 345 *i*P P 21 34 18.0 +0.5
DAG IAmb IAmb 21 34 18.8
comp=Z,10.0nm,0.9s
DAG Danmarks Havn 62.52 345 P P 21 34 18.3 +0.8
DAG pmax pmax
comp=Z,14nm,1.3s
DBG Daneborg 63.61 343 *i*P P 21 34 25.6 +0.9
SCO Scoresbysund 65.40 339 P P 21 34 38.1 +1.6
SCO pmax pmax
comp=Z,5.0nm,1.4s
SCO Scoresbysund 65.40 339 P P 21 34 38.1 +1.6
TAM Tamanrasset 65.53 283 P P 21 34 38.4 0.0
TAM pmax pmax
comp=Z,3.0nm,0.9s
TAM Tamanrasset 65.53 283 P P 21 34 38.4 0.0
FITZ Fitzroy Crossi 65.54 131 P P 21 34 38.3 +0.2
comp=Z,1.6nm,0.9s,baz=328,slow=11,SNR=2.1
FITZ Fitzroy Crossi 65.54 131 P P 21 34 38.5 +0.3
MTN Manton Dam 65.68 123 P P 21 34 38.9 -0.2
MTN IAmb IAmb 21 34 39.1
comp=Z,7.1nm,0.8s
ESDC Sonseca Array 66.67 303 P P 21 34 45.6 +0.3
comp=Z,4.7nm,0.9s,baz=57,slow=7.1,SNR=25
PAB San Pablo 66.99 303 P P 21 34 47.6 +0.2
PAB pmax pmax
comp=Z,9.0nm,1.1s
PAB San Pablo 66.99 303 P P 21 34 47.6 +0.2
PAB IAmb IAmb 21 34 48.9
comp=Z,8.6nm,1.1s
LSZ Lusaka 67.06 235 P P 21 34 48.9 +0.8
LSZ pmax pmax
comp=Z,16nm,1.7s
LSZ Lusaka 67.06 235 P P 21 34 48.9 +0.8
LSZ IAmb IAmb 21 34 49.2
comp=Z,16nm,1.6s
NEEM North Greenlan 68.41 350⇑ *i*P P 21 34 57.0 +1.1
NEEM IAmb IAmb 21 34 57.6
comp=Z,37nm,1.0s
MORW Morawa 68.62 146 P P 21 34 56.4 -1.1
SUMG Summit 69.04 343 *i*P P 21 35 01.3 +1.2
SUMG IAmb IAmb 21 35 01.5
comp=Z,27nm,1.3s
SUMG Summit 69.04 343 P P 21 35 00.7 +0.6
SUMG pmax pmax
comp=Z,16nm,1.1s
SUMG Summit 69.04 343 P P 21 35 00.7 +0.6
PBAR Barrancos 69.45 303 *e*P P 21 35 03.3 +0.5
comp=Z,19nm,1.3s
MDT Midelt 69.74 297 P P 21 35 05.0 +0.2
comp=Z,3.0nm,0.8s,baz=87,slow=5.7,SNR=5.8
PVAQ Vaqueiros 70.25 302 *e*P P 21 35 08.7 +1.0
comp=Z,33nm,1.5s
MESJ Messejana 70.44 303 *e*P P 21 35 09.7 +0.9
comp=Z,32nm,1.8s
GAMB Gambell 70.92 26 P P 21 35 11.3 +0.1
GAMB IAmb IAmb 21 35 13.2
comp=Z,10nm,1.2s
TNA Tin City 71.37 24 P P 21 35 14.2 +0.3
TNA IAmb IAmb 21 35 16.2
comp=Z,11nm,1.2s
TULEG Thule 71.53 353⇑ *i*P P 21 35 14.8 +0.1
TULEG IAmb IAmb 21 35 15.5
comp=Z,19nm,1.1s
TULEG Thule 71.53 353 P P 21 35 14.0 -0.7
RDOG Red Dog Mine 71.60 21 P P 21 35 14.6 -0.7
RDOG IAmb IAmb 21 35 16.4
comp=Z,5.1nm,0.6s
WB0 Warramunga Arr 72.62 126 P P 21 35 22.1 -0.1
WRA Warramunga Arr 72.70 126 P P 21 35 22.6 0.0
comp=Z,14nm,0.7s,baz=320,slow=6.0,SNR=162
WRAB Tennant Creek 72.70 126 *ce*P P 21 35 22.6 0.0
WRAB pmax pmax
comp=Z,13nm,0.8s
WB2 Warramunga Arr 72.71 126 P P 21 35 22.7 0.0
UPNV Upernavik 72.76 347 *i*P P 21 35 22.7 +0.5
UPNV IAmb IAmb 21 35 23.1
comp=Z,7.9nm,0.8s
ANM Nome 72.83 24 P P 21 35 22.5 -0.2
ANM pmax pmax
comp=Z,19nm,1.2s
ANM Nome 72.83 24 P P 21 35 22.5 -0.2
ANM IAmb IAmb 21 35 25.5
comp=Z,19nm,1.2s
TOA0 Torodi Ar. Sit 73.03 275 P P 21 35 24.5 -0.3
TOA0 IAmb IAmb 21 35 25.6
comp=Z,8.2nm,1.1s
TORD Torodi Ar. Bea 73.03 275 P P 21 35 24.6 -0.1
comp=Z,5.4nm,0.9s,baz=52,slow=5.0,SNR=22
TOLK Toolik Lake Re 74.89 17 P P 21 35 35.4 +0.5
AS31 Alice Springs 74.92 129 P P 21 35 35.3 -0.3
ASAR Alice Springs 74.92 129 P P 21 35 35.4 -0.2
comp=Z,5.4nm,0.4s,baz=316,slow=6.2,SNR=77
COEN Coen 75.45 116 P P 21 35 38.0 -0.8
COEN IAmb IAmb 21 35 56.8
comp=Z,9.4nm,1.2s
LBTB Lobatse 75.49 229 P P 21 35 39.1 +0.2
LBTB pmax pmax
comp=Z,13nm,1.3s
LBTB Lobatse 75.49 229 P P 21 35 39.0 +0.2
LBTB IAmb IAmb 21 35 54.0
comp=Z,13nm,1.3s
COLD Coldfoot 75.77 18 P P 21 35 40.1 +0.3
COLD IAmb IAmb 21 35 50.0
comp=Z,9.0nm,0.9s
PMG Port Moresby 75.98 110 P P 21 35 42.0 +0.2
comp=Z,16nm,0.8s,baz=328,slow=2.7,SNR=4.1
PMG Port Moresby 75.98 110 *ce*P P 21 35 43.0 +1.1
PMG pmax pmax
comp=Z,13nm,0.8s
MLY Manley 77.24 20 P P 21 35 48.7 +0.4
MLY IAmb IAmb 21 35 57.9
comp=Z,13nm,1.0s
KOWA Kowa 77.30 279 P P 21 35 49.0 -0.4
KOWA IAmb IAmb 21 35 55.4
comp=Z,6.7nm,0.8s
I23K Minto, Yukon-K 77.55 19 P P 21 35 50.0 +0.2
I23K IAmb IAmb 21 35 52.6
comp=Z,22nm,1.5s
BPAW Bear Paw Mtn. 77.85 20 P P 21 35 51.8 +0.1
MDM Murphy Dome 78.01 19 P P 21 35 52.7 +0.2
MDM IAmb IAmb 21 35 54.1
comp=Z,12nm,1.1s
NEA2 Nenana 78.05 19 P P 21 35 53.0 +0.3
NEA2 IAmb IAmb 21 35 54.1
comp=Z,17nm,1.1s
POKR Poker Plat Res 78.11 18 P P 21 35 53.5 +0.5
POKR IAmb IAmb 21 35 54.9
comp=Z,10.0nm,0.9s
TCOL CIGO, UAF Yank 78.17 19 P P 21 35 53.8 +0.5
TCOL IAmb IAmb 21 35 54.9
comp=Z,17nm,1.2s
COLA College 78.18 19 *i*P P 21 35 54.0 +0.6
COLA pmax pmax
comp=Z,10.0nm,1.1s
BOSA Boshof 78.20 227 P P 21 35 53.8 -0.4
comp=Z,4.2nm,0.8s,baz=41,slow=7.4,SNR=6.2
BOSA LR LR 22 08 43.6
comp=Z,62nm,19.3s,baz=38,slow=34
BOSA Boshof 78.20 227 P P 21 35 53.8 -0.4
BOSA pmax pmax
comp=Z,11nm,1.1s
BOSA Boshof 78.20 227 P P 21 35 53.8 -0.4
BOSA IAmb IAmb 21 35 58.5
comp=Z,10nm,1.1s
KTH Kantishna Hill 78.27 21 P P 21 35 54.4 +0.3
KTH IAmb IAmb 21 35 58.3
comp=Z,11nm,1.2s
PRP Porcupine Dome 78.30 18 P P 21 35 54.8 +0.5
PRP IAmb IAmb 21 35 56.5
comp=Z,13nm,1.4s
CCB Clear Creek Bu 78.36 19 P P 21 35 54.1 -0.3
IL31 78.52 18 P P 21 35 55.3 +0.1
IL31 IAmb IAmb 21 35 56.0
comp=Z,11nm,1.2s
ILAR Eielson Array 78.52 18 P P 21 35 55.1 -0.2
comp=Z,3.8nm,0.9s,baz=304,slow=4.8,SNR=28
ILAR PP PP 21 38 48.4 -3.9
comp=Z,1.6nm,0.9s,baz=308,slow=7.6,SNR=5.8
ILAR LR LR 22 15 53.3
comp=Z,119nm,18.3s,baz=310,slow=40
INK Inuvik 78.60 12 P P 21 35 55.8 +0.1
comp=Z,2.6nm,0.9s,baz=342,slow=7.6,SNR=7.0
INK Inuvik 78.60 12 P P 21 35 55.9 +0.2
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 78.60 12 P P 21 35 55.9 +0.2
C36M Paulatuk 79.09 8 P P 21 35 58.0 -0.3
C36M IAmb IAmb 21 35 58.8
comp=Z,11nm,1.1s
SKT Skwentna 79.24 22 P P 21 35 59.4 +0.1
SKT IAmb IAmb 21 36 05.0
comp=Z,15nm,1.0s
SUA Susitna One 79.87 22 P P 21 36 03.1 +0.2
SUA IAmb IAmb 21 36 09.2
comp=Z,20nm,1.2s
SCRK Sand Creek 79.93 18 P P 21 36 03.5 +0.2
SCRK IAmb IAmb 21 36 04.7
comp=Z,11nm,1.2s
EGAK Eagle 80.00 16 P P 21 36 03.6 +0.2
PAX Paxson 80.32 19 P P 21 36 05.2 -0.1
PAX pmax pmax
comp=Z,9.0nm,1.1s
PAX Paxson 80.32 19 P P 21 36 05.2 -0.1
DAWY Dawson 81.02 16 P P 21 36 08.8 -0.2
CTA Charters Tower 81.46 119 P P 21 36 12.9 +1.0
comp=Z,12nm,0.9s,baz=286,slow=8.2,SNR=9.6
CTAO Charters Tower 81.46 119 P P 21 36 12.4 +0.5
CTAO pmax pmax
comp=Z,21nm,1.1s
CTAO Charters Tower 81.46 119 P P 21 36 12.4 +0.5
N25K Chitina, Valde 81.65 20 P P 21 36 13.1 +0.7
N25K IAmb IAmb 21 36 21.4
comp=Z,9.3nm,0.9s
DBIC Dimbokro 81.79 273 P P 21 36 14.4 +0.5
comp=Z,8.3nm,0.7s,baz=48,slow=6.6,SNR=9.7
DBIC Dimbokro 81.79 273 P P 21 36 14.3 +0.5
DBIC IAmb IAmb 21 36 15.3
comp=Z,13nm,0.9s
KIC Kosan Boka 81.85 273 *e*P P 21 36 14.4 +0.3
comp=Z,24nm,0.9s
TIC Toumodi 81.95 273 *e*P P 21 36 15.0 +0.3
LIC Lamto 82.16 273 *e*P P 21 36 16.1 +0.3
comp=Z,45nm,1.1s
BBOO Buckleboo 82.56 135 P P 21 36 16.8 -0.6
STKA Stephens Creek 85.44 131 P P 21 36 32.1 0.0
comp=Z,3.0nm,0.7s,baz=339,slow=7.9,SNR=5.8
STKA LR LR 22 21 19.5
comp=Z,42nm,18.3s,baz=19,slow=40
STKA Stephens Creek 85.44 131 P P 21 36 31.9 -0.2
YKA Yellowknife Ar 86.77 6 P P 21 36 37.7 -0.6
comp=Z,1.4nm,0.9s,baz=344,slow=4.5,SNR=12
MAW Mawson 98.47 186 LR LR 22 16 17.6
comp=Z,139nm,18.1s,baz=52,slow=32
ULM Lac du Bonnet 99.63 357 LR LR 22 27 16.2
comp=Z,80nm,18.3s,baz=74,slow=38
CPUP Villa Florida 141.95 265 PKP **PKPdf** 21 43 27.5 +0.8
comp=Z,1.4nm,0.3s,baz=85,slow=2.0,SNR=4.0
LPAZ La Paz 147.26 288 PKPbc **PKPdf** 21 43 37.4 +0.5
comp=Z,3.7nm,1.0s,baz=45,slow=4.3,SNR=7.7
PLCA Paso Flores 153.63 239 PKPbc **PKiKP** 21 43 54.5 +1.1
comp=Z,3.2nm,0.9s,baz=163,slow=3.2,SNR=4.4

IDC 01 21:25:38.0±4.4, 5.41°S×152.66°E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/52, mbtmp3.2/2, Error ellipse: s-maj=201.1km s-min=54.6km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.94**	**229**	P	P	21 30 44.8	+0.6
	0.5nm,0.8s,baz=53,slow=9.8,SNR=3.8						
ASAR	**Alice Springs**	**25.61**	**223**	P	P	21 31 08.4	-1.0
	0.4nm,0.8s,baz=53,slow=8.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.36**	**287**	PKPbc	PKPbc	21 45 32.6	+0.1
	0.8nm,1.0s,baz=70,slow=2.1,SNR=2.3						

IDC 01 21:27:11.0±10.0, 14.76°S×174.32°W, h0km, mb4.2/3, mb1 4.5/3, mb1mx3.7/42, mbtmp4.2/3, Error ellipse: s-maj=472.4km s-min=35.4km az=139.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.13**	**256**	P	P	21 36 00.7	-0.2
	2.8nm,0.7s,baz=90,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**49.47**	**251**	P	P	21 36 03.3	-0.1
	1.1nm,0.8s,baz=84,slow=8.3,SNR=50						
ILAR	**Eielson Array**	**82.00**	**12**	P	P	21 39 32.3	-0.2
	0.3nm,0.6s,baz=222,slow=6.1,SNR=4.8						
BRTR	**Keskin Array B**	**145.11**	**321**	PKPbc	PKPbc	21 46 49.8	-0.6
	2.0nm,0.7s,baz=80,slow=3.2,SNR=9.6						

*IDC **01** 21:55:01.9±1.0, 46.92N×156.03E, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.5/42, mbtmp3.6/8, ML2.9/2, Error ellipse: s-maj=35.4km s-min=22.4km az=135.0*
ISC 01 21:55:04.9±1.0, 47.0N±0.2×156.0E±0.2, h18km, n11, σ1§01/8, mb3.6/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.19**	**10**	Pn	**Pn**	**21 56 34.6**	**-0.8**
	0.3nm,0.3s,baz=173,slow=9.7,SNR=5.9						
ASAJ	**Asahikawa**	**9.83**	**258**	Pn	**Pn**	**21 57 25.4**	**+0.1**
	0.2nm,0.3s,baz=58,slow=13,SNR=1.9						
H11S1	**WAKE ISLAND Hy**	**29.77**	**159**	T	T	22 32 21.9	
	baz=345,slow=76,SNR=9.7						
H11S3	**WAKE ISLAND Hy**	**29.78**	**159**	T	T	22 32 22.5	
	baz=345,slow=76,SNR=9.3						
H11S2	**WAKE ISLAND Hy**	**29.79**	**159**	T	T	22 32 24.2	
	baz=345,slow=76,SNR=7.7						
MKAR	**Makanchi Array**	**48.55**	**298**	P	P	22 03 46.5	-0.3
	0.3nm,0.7s,baz=61,slow=9.9,SNR=4.6						
YKA	**Yellowknife Ar**	**49.52**	**38**	P	P	22 03 54.6	+0.7
	0.2nm,0.8s,baz=292,slow=6.8,SNR=5.6						
CMAR	**Chiang Mai Ar**	**54.35**	**259**	P	P	22 04 31.7	+1.1
	0.8nm,0.3s,baz=43,slow=6.7,SNR=2.2						
WRA	**Warramunga Arr**	**69.45**	**202**	P	P	22 06 10.7	-1.3
	0.7nm,0.8s,baz=27,slow=7.1,SNR=3.7						
ASAR	**Alice Springs**	**73.13**	**201**	P	P	22 06 33.3	-0.8
	0.5nm,0.8s,baz=30,slow=5.8,SNR=1.6						
TXAR	**Lajitas Array**	**75.63**	**62**	P	P	22 06 49.5	+0.6
	0.4nm,0.8s,baz=316,slow=5.2,SNR=3.8						

*DJA **01** 22:06:10.8±1.3, 4.5°S×12.8°E±*, *h10km, M3.9/6, MLv3.9/6*
*IDC **01** 22:06:13.7±2.0, 4.06S×127.76E, h53km±21km, mb3.9/11, mb1 4.1/14, mb1mx3.9/31, mbtmp4.2/14, ML4.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/42, Error ellipse: s-maj=25.2km s-min=14.1km az=133.0*
*NEIC **01** 22:06:13.4±2.3, 4.16S±0.08×127.68E±0.05, h58km±9km, mb4.3/18, Error ellipse: s-maj=11.7km s-min=6.7km az=165.0*
ISC 01 22:06:08.5±0.5, 4.04S±0.05×127.63E±0.06, h10km, n64, σ1§43/67, mb4.5/30, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.96**	**326**	P	**Pg**	**22 06 26.7**	**-0.3**
NLAI				S	**Sg**	**22 06 38.9**	**-0.6**
NLAI	**Namlea**	**0.96**	**326**	P	**Pg**	**22 06 26.8**	**-0.3**
NLAI				S	**Sg**	**22 06 39.1**	**-0.4**
BNDI	**Bandanaira**	**2.31**	**102**	P	**Pn**	**22 06 47.0**	**+0.3**
SANI	**Sanana**	**2.57**	**320**	P	**Pn**	**22 06 50.2**	**-0.1**
SANI				S	**Sn**	**22 07 21.6**	**-0.1**
SANI	**Sanana**	**2.57**	**320**	P	**Pn**	**22 06 50.1**	**-0.2**
FAKI	**Fak Fak**	**4.74**	**77**	Pn	**Pn**	**22 07 22.0**	**+2.0**
FAKI	**Fak Fak**	**4.74**	**77**	P	**Pn**	**22 07 22.1**	**+2.0**
SIJI	**Sorong**	**4.81**	**49**	P	**Pn**	**22 07 23.0**	**+1.9**
	14nm,0.3s,baz=228,slow=14,SNR=15						
SIJI				S	**Sn**	**22 08 16.2**	**-0.6**
	13nm,0.3s,baz=6.6,slow=21,SNR=15						
SWI	**Sorong**	**4.81**	**49**	P	**Pn**	**22 07 22.5**	**+1.4**
SWI	**Sorong**	**4.81**	**49**	P	**Pn**	**22 07 22.4**	**+1.4**
LUWI	**Luwuk**	**5.70**	**301**	Pn	**Pn**	**22 07 34.8**	**+1.6**
LUWI	**Luwuk**	**5.70**	**301**	P	**Pn**	**22 07 34.9**	**+1.6**
	0.2nm3µm34nm,0.6s						
APSI	**Ampana**	**6.74**	**297**	P	**Pn**	**22 07 49.4**	**+1.8**
	0.1nm22nm,0.6s						
BATI	**Baumata**	**7.28**	**213**	P	**Pn**	**22 07 57.6**	**+2.6**
	2.9nm,0.3s,baz=7.3,slow=0.6,SNR=7.1						
BATI	**Baumata**	**7.28**	**213**	P	**Pn**	**22 07 56.8**	**+1.8**
	0.1nm16nm,0.7s						
EDFI	**Ende, Flores**	**7.53**	**231**	P	**Pn**	**22 08 00.3**	**+1.7**
KAPI	**Kappang**	**7.92**	**263**	P	**Pn**	**22 08 07.6**	**+3.9**
	3.0nm,0.3s,baz=305,slow=19,SNR=2.8						
TOLI2	**Tolitoli**	**8.55**	**307**	Pn	Pn	22 08 18.2	+5.7
MTN	**Manton Dam**	**9.40**	**159**	Pn	**Pn**	**22 08 23.9**	**-0.2**
BKB	**Balikpapan**	**11.08**	**284**	Pn	**Pn**	**22 08 49.9**	**+2.8**
FITZ	**Fitzroy Crossi**	**14.10**	**188**	LR	LR	22 15 58.8	
	comp=Z,43nm,18.8s,baz=338,slow=42						
FITZ	**Fitzroy Crossi**	**14.10**	**188**	Pn	**Pn**	**22 09 27.0**	**-1.5**
WB0	**Warramunga Arr**	**16.96**	**158**		**Pn**	**22 10 01.8**	**-4.3**
WRA	**Warramunga Arr**	**17.10**	**158**	P	**Pn**	**22 10 03.8**	**-4.1**
	0.2nm,0.3s,baz=335,slow=13,SNR=14						
COEN	**Coen**	**18.22**	**124**	P	**P**	**22 10 22.5**	**+0.5**
PSA00	**Pilbara Seismi**	**19.00**	**203**	P	**P**	**22 10 30.4**	**0.0**
PSA00				IAmb	IAmb	22 10 45.3	
	comp=Z,32nm,1.5s						
AS31	**Alice Springs**	**20.43**	**163**	P	**P**	**22 10 45.0**	**-1.1**
ASAR	**Alice Springs**	**20.43**	**163**	P	**P**	**22 10 46.8**	**+0.7**
	comp=Z,3.5nm,0.9s,baz=347,slow=12,SNR=20						
JOW	**Kunigami**	**30.70**	**1**	P	**P**	**22 12 23.3**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=132,slow=9.9,SNR=3.9						
HNR	**Honiara**	**32.52**	**101**	P	**P**	**22 12 43.0**	**+3.1**
CMAR	**Chiang Mai Arr**	**36.04**	**309**	P	**P**	**22 13 11.8**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=136,slow=6.9,SNR=11						
CHTO	**Chiang Mai**	**36.25**	**310**	P	**P**	**22 13 13.1**	**+0.9**
CHTO				IAmb	IAmb	22 13 14.1	
	comp=Z,3.3nm,0.7s						
KSRS	**Korea Array**	**41.29**	**0**	P	**P**	**22 13 55.1**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=176,slow=9.2,SNR=8.2						
XAN	**Xi'an**	**41.80**	**336**	P	**P**	**22 13 58.3**	**-0.2**
XAN				IAmb	IAmb	22 13 59.0	
	comp=Z,4.9nm,0.6s						
USRK	**Ussuriysk Ar.**	**48.18**	**4**	P	**P**	**22 14 49.7**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=189,slow=8.1,SNR=6.4						
LSA	**Lhasa**	**48.45**	**316**	P	**P**	**22 14 51.5**	**-0.5**
ODAN	**Odare**	**49.55**	**311**	*e*P	**P**	**22 15 00.3**	**+0.1**
	comp=Z,14nm,0.7s						
TAPN	**Taplejung**	**49.58**	**311**	*e*P	**P**	**22 15 00.3**	**-0.2**
	comp=Z,6.9nm,0.6s						
JKA	**Kamikawa-asahi**	**49.80**	**14**	P	**P**	**22 15 02.1**	**+0.7**
RAMN	**Ramite**	**50.20**	**310**	*e*P	**P**	**22 15 05.5**	**+0.3**
	comp=Z,21nm,0.6s						
JIRN	**Jiri**	**50.88**	**311**	*e*P	**P**	**22 15 10.3**	**-0.2**
	comp=Z,5.8nm,0.6s						
GUN	**Gumba**	**51.25**	**311**	*e*P	**P**	**22 15 13.1**	**-0.1**
	comp=Z,17nm,0.7s						
PKI	**Pulchoki**	**51.43**	**310**	*e*P	**P**	**22 15 14.0**	**-0.5**
	comp=Z,5.9nm,0.7s						
KKN	**Kakani**	**51.64**	**310**	*e*P	**P**	**22 15 15.2**	**-0.8**
	comp=Z,7.9nm,0.6s						
DMN	**Daman**	**51.68**	**310**	*e*P	**P**	**22 15 16.2**	**-0.1**
	comp=Z,6.6nm,0.6s						
GKN	**Gorkha**	**52.24**	**310**	*e*P	**P**	**22 15 20.1**	**-0.2**
	comp=Z,22nm,1.0s						
KOLN	**Koldanda**	**52.91**	**309**	*e*P	**P**	**22 15 24.9**	**-0.5**
	comp=Z,20nm,0.9s						
DANN	**Dangsing**	**53.08**	**310**	*e*P	**P**	**22 15 26.4**	**-0.3**
	comp=Z,24nm,0.7s						
PYUN	**Piuthan**	**53.55**	**309**	*e*P	**P**	**22 15 29.8**	**-0.3**
ULN	**Ulaanbaatar**	**54.76**	**343**	P	**P**	**22 15 38.6**	**+0.2**
ULN				IAmb	IAmb	22 15 39.7	
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**54.92**	**343**	P	**P**	**22 15 39.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=155,slow=7.9,SNR=8.9						
PETK	**Petropavlovsk-**	**62.32**	**20**	P	**P**	**22 16 29.8**	**-1.1**
	comp=Z,8.1nm,1.1s,baz=188,slow=5.4,SNR=2.1						
NIL	**Nilore**	**63.52**	**311**	P	**P**	**22 16 38.7**	**-0.6**
NIL				IAmb	IAmb	22 16 38.8	
	comp=Z,2.2nm,0.7s						
MK31	**Makanchi Array**	**64.48**	**327**	P	**P**	**22 16 44.9**	**-0.5**
MK31				IAmb	IAmb	22 16 45.4	
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**64.48**	**327**	P	**P**	**22 16 45.0**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=122,slow=8.1,SNR=32						
MKAR				PcP	**PcP**	**22 17 19.1**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=128,slow=4.5,SNR=5.1						
MAKZ	**Makanchi**	**64.66**	**327**	P	**P**	**22 16 46.0**	**-0.6**
MAKZ				IAmb	IAmb	22 16 46.4	
	comp=Z,2.0nm,0.6s						
YAK	**Yakutsk**	**65.91**	**1**	P	**P**	**22 16 54.4**	**+0.1**
AAK	**Ala-Archa**	**66.78**	**320**	P	**P**	**22 16 59.8**	**-0.7**
AAK				IAmb	IAmb	22 17 01.4	
	comp=Z,2.9nm,1.1s						
ZAA0	**Zalesovo Array**	**67.91**	**334**	P	**P**	**22 17 06.1**	**-1.1**
ZAA0				IAmb	IAmb	22 17 06.8	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**67.91**	**334**	P	**P**	**22 17 05.8**	**-1.4**
	comp=Z,2.2nm,0.7s,baz=107,slow=5.0,SNR=12						
TIXI	**Tiksi**	**75.56**	**0**	P	**P**	**22 17 52.6**	**-0.3**
TIXI				IAmb	IAmb	22 17 53.4	
	comp=Z,2.6nm,0.8s						
QSPA	**South Pole Qui**	**85.91**	**180**	P	**P**	**22 18 46.4**	**-2.3**
KBZ	**Khabaz**	**88.96**	**314**	P	**P**	**22 19 03.4**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=108,slow=3.2,SNR=3.7						
ILAR	**Eielson Array**	**91.70**	**25**	P	**P**	**22 19 14.4**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=257,slow=4.9,SNR=2.1						

*BGR **01** 22:12:03.9±1.1, 44.30N×6.23E, h10km, ML3.4/3, Error ellipse: s-maj=31.1km s-min=12.2km az=109.0*
*STR **01** 22:12:05.8±0.1, 44.5N±0.9×±*, h8km±1km, mb3.9/1, MLv3.0/20, MLv2.8/4, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*ROM **01** 22:12:05.4±0.1, 44.515N±0.003×6.701E±0.004, h11km, ML2.7/16, Error ellipse: s-maj=0.3km s-min=0.2km az=141.0*
*GEN **01** 22:12:05.6, 44.52N×6.71E, h7km±2km, Ml2.7*
*LDG **01** 22:12:05.8±0.1, 44.52N×6.70E, h5km, Md3.1/2, Ml3.1/44, Error ellipse: s-maj=1.2km s-min=0.9km az=62.0*
*IASPEI **01** 22:12:05.5±0.8, 44.52N±0.01×6.72E±0.02, h11km±6km, Error ellipse: s-maj=2.5km s-min=2.0km az=69.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*PRU **01** 22:12:38.0±0.0, 45.39N×10.11E, h0km*
ISC 01 22:12:05.9±0.8, 44.52N±0.01×6.70E±0.01, h14km±5km, n152, σ1§79/262, 3C-4D, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SURF	**Saint Ours**	**0.09**	**115**	Pg	**Pg**	**22 12 08.1**	**-1.2**
SURF				Sg	**Sg**	**22 12 09.7**	**-1.7**
OGAG	**Argentiere**	**0.13**	**241**	Pg	**Pb**	**22 12 11.5**	**+1.3**
OGAG				Sg	**Sb**	**22 12 15.8**	**+2.7**

MBDF	**Montbardon**	**0.21**	**14**	*e*Pg	**Pg**	**22 12 10.2**	**-0.7**
MBDF				*e*Sg	**Sg**	**22 12 13.9**	**-0.3**
	890nm,0.3s						
PZZ	**Stroppo**	**0.30**	**92**	P	**Pg**	**22 12 11.7**	**-0.6**
PZZ				S	**Sg**	**22 12 16.1**	**-0.5**
PZZ	**Stroppo**	**0.30**	**92**	⇑P	**Pg**	**22 12 11.7**	**-0.6**
PZZ				S	**Sg**	**22 12 16.2**	**-0.3**
PZZ				AML	AML		
	comp=E,4005µm,0.4s						
PZZ				AML	AML		
	comp=N,4165µm,1.4s						
RRL	**Rocca Remolon**	**0.41**	**9**	P	**Pg**	**22 12 13.7**	**-0.5**
RRL				S	**Sg**	**22 12 20.0**	**+0.1**
RRL	**Rocca Remolon**	**0.41**	**9**	P	**Pg**	**22 12 13.8**	**-0.5**
RRL				S	**Sg**	**22 12 20.0**	**+0.1**
RRL				AML	AML		
	comp=E,1185µm,0.3s						
RRL				AML	AML		
	comp=N,1290µm,0.4s						
RRL				AML	AML		
	comp=E,1180µm,0.3s						
ISO	**Isola**	**0.42**	**143**	Pg	**Pg**	**22 12 13.5**	**-0.8**
ISO				Sg	**Sg**	**22 12 18.9**	**-1.2**
OGDI	**Digne**	**0.50**	**215**	Pg	**Pg**	**22 12 16.6**	**+0.8**
OGDI				Sg	**Sb**	**22 12 24.2**	**+0.6**
BHB	**Bricherasio**	**0.52**	**51**	P	**Pg**	**22 12 15.6**	**-0.5**
BHB				S	**Sg**	**22 12 22.5**	**-0.6**
BHB	**Bricherasio**	**0.52**	**51**	⇑P	**Pg**	**22 12 15.6**	**-0.5**
BHB				S	**Sg**	**22 12 22.5**	**-0.6**
BHB				AML	AML		
	comp=E,997µm,0.5s						
BHB				AML	AML		
	comp=N,1295µm,1.4s						
STV	**Sant Anna di V**	**0.53**	**121**	P	**Pg**	**22 12 15.7**	**-0.7**
STV				S	**Sg**	**22 12 22.6**	**-0.7**
STV	**Sant Anna di V**	**0.53**	**121**	P	**Pg**	**22 12 15.6**	**-0.7**
STV				S	**Sg**	**22 12 22.6**	**-0.7**
STV				AML	AML		
	comp=E,1030µm,0.4s						
STV				AML	AML		
	comp=N,982µm,0.2s						
STV				AML	AML		
	comp=E,1025µm,0.4s						
BNI	**Bardonecchia**	**0.53**	**358**	P	**Pg**	**22 12 16.0**	**-0.5**
BNI				S	**Sg**	**22 12 23.5**	**-0.2**
BNI				AML	AML		
	comp=N,258µm,0.3s						
BNI				AML	AML		
	comp=N,258µm,0.3s						
BNI				AML	AML		
	comp=E,254µm,0.6s						
ENR	**Entracque**	**0.59**	**119**	P	**Pg**	**22 12 16.8**	**-0.9**
ENR				S	**Sg**	**22 12 25.0**	**-0.5**
ENR	**Entracque**	**0.59**	**119**	P	**Pg**	**22 12 16.9**	**-0.7**
ENR				S	**Sg**	**22 12 24.9**	**-0.6**
ENR				AML	AML		
	comp=N,1280µm,0.4s						
ENR				AML	AML		
	comp=E,1107µm,1.0s						
OGMO	**Fort Saint-Gob**	**0.69**	**359**	Pg	**Pg**	**22 12 18.9**	**-0.6**
OGMO				Sg	**Sg**	**22 12 28.5**	**-0.1**
ORIF	**Oris-en-Rattie**	**0.71**	**305**	*e*Pg	**Pg**	**22 12 18.5**	**-1.3**
ORIF				*e*Sg	**Sg**	**22 12 27.9**	**-1.2**
	comp=E,234nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.71**	**305**	Pg	**Pg**	**22 12 18.8**	**-0.9**
ORIF				Sg	**Sg**	**22 12 28.8**	**-0.3**
ORIF	**Oris-en-Rattie**	**0.71**	**305**	P	**Pg**	**22 12 18.8**	**-0.9**
ORIF				S	**Sg**	**22 12 28.1**	**-1.1**
ORIF				AML	AML		
	comp=E,858µm,0.3s						
ORIF				AML	AML		
	comp=N,750µm,0.4s						
ORIF				AML	AML		
	comp=E,858µm,0.3s						
BLAF	**les Blancs**	**0.74**	**220**	Pg	**Pg**	**22 12 20.3**	**0.0**
BLAF				Sg	**Sb**	**22 12 31.0**	**+0.6**
TURF	**col de Turini**	**0.74**	**137**	Pg	**Pg**	**22 12 19.6**	**-0.7**
TURF				Sg	**Sg**	**22 12 30.1**	**0.0**
RSP	**Reno Superiore**	**0.75**	**32**	P	**Pg**	**22 12 20.1**	**-0.4**
RSP				S	**Sg**	**22 12 30.1**	**-0.3**
RSP	**Reno Superiore**	**0.75**	**32**	P	**Pg**	**22 12 20.1**	**-0.4**
RSP				S	**Sg**	**22 12 30.5**	**+0.1**
RSP				AML	AML		
	comp=E,818µm,0.2s						
RSP				AML	AML		
	comp=N,730µm,1.5s						
RSP				AML	AML		
	comp=E,850µm,0.3s						
RSP				AML	AML		
	comp=N,692µm,1.5s						
CALF	**Calern**	**0.78**	**168**	Pg	**Pg**	**22 12 20.8**	**-0.4**
CALF				Sg	**Sg**	**22 12 31.5**	**+0.1**
GDM	**Grand'Maison**	**0.80**	**329**	Pg	**Pg**	**22 12 20.8**	**-0.8**
GDM				Sg	**Sg**	**22 12 31.4**	**-0.7**
SAOF	**Saorge**	**0.81**	**131**	Pg	**Pg**	**22 12 21.1**	**-0.6**
SAOF				Sg	**Sg**	**22 12 32.0**	**-0.4**
SAOF	**Saorge**	**0.81**	**131**	⇑P	**Pg**	**22 12 21.1**	**-0.6**
SAOF				S	**Sg**	**22 12 32.0**	**-0.4**
SAOF				AML	AML		
	comp=N,536µm,1.5s						
SAOF				AML	AML		
	comp=E,434µm,0.2s						
ESCA	**l'Escarene**	**0.84**	**145**	Pg	**Pg**	**22 12 21.6**	**-0.6**
ESCA				Sg	**Sg**	**22 12 33.0**	**-0.3**
SBF	**Sospel**	**0.84**	**141**	*e*Pg	**Pg**	**22 12 21.4**	**-0.9**
SBF				*e*Sg	**Sg**	**22 12 32.2**	**-1.1**
	comp=E,216nm,0.2s						
GBOS	**Grotte di Boss**	**0.86**	**108**	P	**Pg**	**22 12 21.9**	**-0.8**
GBOS				S	**Sg**	**22 12 33.1**	**-0.9**
GBOS	**Grotte di Boss**	**0.86**	**108**	P	**Pg**	**22 12 21.8**	**-0.8**
GBOS				S	**Sg**	**22 12 33.1**	**-0.9**
GBOS				AML	AML		
	comp=E,553µm,0.4s						
GBOS				AML	AML		
	comp=N,604µm,1.4s						
MON	**Monaco**	**0.94**	**146**	Pg	**Pb**	**22 12 23.3**	**-0.8**
MON				Sg	**Sg**	**22 12 37.1**	**+0.6**
FRF	**La Foret Royal**	**0.96**	**182**	*e*Pg	**Pb**	**22 12 23.8**	**-0.5**
FRF				*e*Sg	**Sb**	**22 12 35.8**	**-1.0**
	comp=N,291nm,0.3s						
SMRF	**Simiane la Rot**	**0.97**	**237**	*e*Pg	**Pb**	**22 12 24.6**	**0.0**
SMRF				*e*Sg	**Sb**	**22 12 36.4**	**-0.9**
	comp=N,159nm,0.3s						
LPG	**La Plagne**	**0.98**	**2**	*e*Pg	**Pb**	**22 12 24.1**	**-0.7**
LPG				*e*Sg	**Sb**	**22 12 37.6**	**-0.1**
	comp=N,179nm,0.4s						
LSD	**Lago del Serru**	**0.99**	**18**	P	**Pn**	**22 12 25.8**	**+0.2**
LSD				S	**Sb**	**22 12 38.0**	**0.0**
BSTF	**la Bastide-des**	**0.99**	**230**	Pg	**Pn**	**22 12 26.3**	**+0.9**
BSTF				Sg	**Sn**	**22 12 40.4**	**+1.3**
GRN	**Grenoble**	**0.99**	**317**	Pg	**Pb**	**22 12 24.6**	**-0.3**
GRN				Sg	**Sb**	**22 12 38.2**	**+0.3**
LPL	**La Plagne**	**1.00**	**1**	*e*Pg	**Pb**	**22 12 24.4**	**-0.7**
LPL				*e*Sg	**Sg**	**22 12 39.1**	**+0.7**
	comp=N,64nm,0.3s						
EILF	**Villa Eilenroc**	**1.02**	**162**	Pg	**Pb**	**22 12 25.5**	**+0.2**
EILF				Sg	**Sn**	**22 12 39.8**	**+0.1**
MONC	**Moncucco Torin**	**1.03**	**57**	P	**Pb**	**22 12 24.8**	**-0.8**
MONC				AML	AML		
	comp=E,730µm,0.3s						
MONC				AML	AML		
	comp=N,650µm,1.5s						
MONC				AML	AML		
	comp=E,730µm,0.3s						
RUSF	**Rustrel**	**1.05**	**237**	Pg	**Pb**	**22 12 26.5**	**+0.7**
RUSF				Sg	**Sn**	**22 12 41.3**	**+0.8**
IMI	**Imperia**	**1.05**	**125**	P	**Pb**	**22 12 25.3**	**-0.6**
IMI	**Imperia**	**1.05**	**125**	P	**Pb**	**22 12 25.3**	**-0.6**
IMI				S	**Sb**	**22 12 39.2**	**-0.3**
IMI				AML	AML		
	comp=N,1450µm,0.8s						
IMI				AML	AML		
	comp=E,912µm,0.7s						
RORO	**Rocca Rossa**	**1.06**	**112**	P	**Pb**	**22 12 25.2**	**-0.9**
RORO	**Rocca Rossa**	**1.06**	**112**	P	**Pb**	**22 12 25.1**	**-0.9**
RORO				S	**Sb**	**22 12 39.2**	**-0.5**
RORO				AML	AML		
	comp=E,417µm,0.5s						
RORO				AML	AML		
	comp=N,438µm,0.7s						
ARTF	**Artigues**	**1.13**	**215**	Pg	**Pb**	**22 12 27.7**	**+0.4**
ARTF				Sg	**Sg**	**22 12 43.7**	**+1.2**
RSL	**Roselend**	**1.17**	**357**	Pn	**Pn**	**22 12 28.5**	**+0.5**
LMR	**La Mourre**	**1.19**	**187**	*e*Pg	**Pn**	**22 12 27.8**	**-0.3**
LMR				*e*Sg	**Sb**	**22 12 42.8**	**-0.7**
	comp=N,50nm,0.1s						
QLNO	**Quiliano**	**1.20**	**99**	P	**Pn**	**22 12 27.7**	**-0.5**
QLNO				AML	AML		
	comp=E,264µm,0.3s						
QLNO				AML	AML		
	comp=N,200µm,1.1s						
FINB	**Finale Ligure**	**1.22**	**106**	P	**Pn**	**22 12 27.8**	**-0.6**
FINB				AML	AML		
	comp=E,365µm,0.3s						
FINB				AML	AML		
	comp=N,432µm,0.3s						
FINB				AML	AML		
	comp=E,366µm,0.3s						
ROTM	**Rocchetta Tana**	**1.23**	**74**	P	**Pn**	**22 12 28.0**	**-0.5**
ROTM				AML	AML		
	comp=E,909µm,0.3s						
ROTM				AML	AML		
	comp=N,1310µm,0.4s						
ROTM				AML	AML		
	comp=E,913µm,0.3s						
TRAV	**Traversella**	**1.24**	**36**	P	**Pn**	**22 12 28.3**	**-0.6**
TRAV				S	**Sb**	**22 12 44.8**	**-0.2**
TRAV				AML	AML		
	comp=E,272µm,0.3s						
TRAV				AML	AML		
	comp=N,312µm,1.5s						
TRAV				AML	AML		
	comp=E,272µm,0.3s						
CIRO	**Champorcher**	**1.25**	**29**	P	**Pn**	**22 12 28.6**	**-0.6**
CIRO				S	**Sb**	**22 12 45.1**	**-0.2**
CIRO				AML	AML		
	comp=E,211µm,0.5s						
CIRO				AML	AML		
	comp=N,204µm,0.4s						
OGSM	**Saint Maurice**	**1.30**	**327**	Pn	**Pn**	**22 12 30.4**	**+0.7**
OGSM				Sn	**Sn**	**22 12 47.7**	**+0.8**
PCP	**Piancastagn**	**1.32**	**88**	P	**Pn**	**22 12 29.6**	**-0.3**
PCP				AML	AML		
	comp=E,176µm,1.2s						
PCP				AML	AML		
	comp=N,204µm,0.2s						
PCP				AML	AML		
	comp=E,176µm,1.2s						
VIVF	**Saint-Julien-l**	**1.48**	**284**	*e*P	**Pn**	**22 12 32.8**	**+0.6**
VIVF	**Saint-Julien-l**	**1.48**	**284**	*e*Pg	**Pb**	**22 12 33.9**	**+0.6**
VIVF				*e*Sg	**Sn**	**22 12 52.5**	**+1.1**
	comp=E,114nm,0.3s						
OG35	**Corcelles**	**1.72**	**333**	Pn	**Pn**	**22 12 37.0**	**+1.5**
OG35				Pg	**Pb**	**22 12 38.7**	**+1.3**
EMBD	**Embd, Matterta**	**1.88**	**25**	Pn	**Pn**	**22 12 38.2**	**+0.5**
EMBD				Pg	**Pb**	**22 12 40.9**	**+0.9**
LASF	**Ste Croix**	**2.09**	**259**	*e*Pn	**Pn**	**22 12 40.3**	**-0.2**
LASF	**Ste Croix**	**2.09**	**259**	*e*Pg	**Pb**	**22 12 44.7**	**+1.1**
LASF				*e*Sn	**Sn**	**22 13 04.3**	**-2.0**
	comp=E,20nm,0.2s						
CABF	**La Chapelle**	**2.14**	**349**	*e*P	**Pn**	**22 12 43.1**	**+1.9**
CABF	**La Chapelle**	**2.14**	**349**	*e*Pg	**Pb**	**22 12 46.2**	**+1.8**
CABF				*e*Sg	**Sg**	**22 13 13.7**	**-0.9**
	comp=E,25nm,0.4s						
BRANT	**Les Verrieres**	**2.42**	**356**	Pn	**Pn**	**22 12 45.7**	**+0.6**
EQUI	**Equi**	**2.50**	**97**	⇓P	**Pb**	**22 12 49.6**	**-1.0**
PGF	**Pioggiola**	**2.58**	**139**	*e*Pn	**Pn**	**22 12 47.2**	**-0.2**
PGF				*e*Sn	**Sn**	**22 13 17.7**	**-0.9**
	comp=E,25nm,0.2s						
PGF	**Pioggiola**	**2.58**	**139**	Pn	**Pn**	**22 12 47.6**	**+0.2**
MAIM	**Mastiano**	**2.79**	**101**	⇓P	**Pn**	**22 12 50.8**	**+0.6**
PYM	**Petit Puy Mans**	**2.89**	**297**	Pn	**Pn**	**22 12 52.4**	**+0.8**
SMF	**Signal de Mont**	**2.92**	**318**	*e*P	**Pn**	**22 12 53.3**	**+1.3**
SMF	**Signal de Mont**	**2.92**	**318**	*e*Pg	**Pb**	**22 13 00.5**	**+2.7**
SMF				*e*Sn	**Sn**	**22 13 24.4**	**-2.5**
SMF				*e*Sg	**Sg**	**22 13 37.8**	**-2.0**
	comp=E,21nm,0.3s						
AGO	**Saint Agoulin**	**2.95**	**303**	Pn	**Pn**	**22 12 53.4**	**+1.1**
AJAC	**Base Areonaval**	**3.00**	**149**	Pn	**Pn**	**22 12 53.6**	**+0.7**
AJAC				Sn	**Sn**	**22 13 28.6**	**+0.1**
SULZ	**Cheisacher**	**3.17**	**18**	*e*Pn	**Pn**	**22 12 57.0**	**+1.7**
	SNR=4.4						
SULZ				*e*Sn	**Sn**	**22 13 34.9**	**+2.1**
	SNR=1.7						
AVF	**Avril sur Loir**	**3.27**	**315**	*e*P	**Pn**	**22 12 58.1**	**+1.5**
AVF	**Avril sur Loir**	**3.27**	**315**	*e*Pg	**Pb**	**22 13 06.5**	**+2.9**
AVF				*e*Sg	**Sb**	**22 13 47.5**	**+4.3**
	comp=E,17nm,0.3s						
WILA	**Wila**	**3.28**	**27**	*e*Pn	**Pn**	**22 12 59.4**	**+2.5**
	SNR=1.7						
HINF	**Hinteralfeld**	**3.30**	**2**	*e*P	**Pn**	**22 12 57.9**	**+0.7**
HINF				*e*Sn	**Sn**	**22 13 33.9**	**-2.3**
	comp=E,4.6nm,0.3s						
CAF	**Calviac**	**3.33**	**279**	*e*P	**Pn**	**22 12 58.5**	**+1.0**
CAF	**Calviac**	**3.33**	**279**	*e*Pg	**Pg**	**22 13 08.3**	**-1.4**
CAF				*e*Sn	**Sn**	**22 13 34.3**	**-2.6**
CAF				*e*Sg	**Sb**	**22 13 50.1**	**+5.0**
	comp=E,17nm,0.4s						
SSF	**Saint Saulge**	**3.38**	**320**	*e*P	**Pn**	**22 12 59.9**	**+1.6**
SSF	**Saint Saulge**	**3.38**	**320**	*e*Pg	**Pg**	**22 13 09.1**	**-1.7**
SSF				*e*Sg	**Sg**	**22 13 52.4**	**-2.2**
	comp=E,33nm,0.4s						
BGF	**Bois d'Agland**	**3.39**	**308**	*e*P	**Pn**	**22 12 59.9**	**+1.6**
BGF	**Bois d'Agland**	**3.39**	**308**	*e*Pg	**Pg**	**22 13 09.4**	**-1.4**
BGF				*e*Sg	**Sg**	**22 13 53.4**	**-1.4**
	comp=E,44nm,0.5s						
LOR	**Lormes**	**3.39**	**325**	*e*P	**Pn**	**22 12 59.9**	**+1.5**
	baz=145						
LOR	**Lormes**	**3.39**	**325**	*e*Pg	**Pg**	**22 13 09.1**	**-1.8**
	baz=145						
LOR				*e*Sn	**Sn**	**22 13 36.0**	**-2.4**
LOR				*e*Sg	**Sg**	**22 13 52.4**	**-2.4**
	comp=E,20nm,0.4s,baz=145						
LOR	**Lormes**	**3.39**	**325**	Pn	**Pn**	**22 12 59.5**	**+1.1**
SJAF	**Saint Jean de**	**3.44**	**235**	Pn	**Pn**	**22 12 59.8**	**+0.7**
MTLF	**Montolieu**	**3.44**	**252**	*e*P	**Pn**	**22 12 59.8**	**+0.7**
MTLF	**Montolieu**	**3.44**	**252**	*e*Pg	**Pb**	**22 13 10.0**	**+3.3**
MTLF				*e*Sn	**Sn**	**22 13 36.5**	**-3.2**
	comp=E,14nm,0.2s						
MTLF				*e*Sg	**Sg**	**22 13 54.3**	**-2.2**
	comp=E,7.6nm,0.3s						
MTLF	**Montolieu**	**3.44**	**252**	Pn	**Pn**	**22 12 59.9**	**+0.7**
MTLF	**Montolieu**	**3.44**	**252**	Sn	**Sn**	**22 13 38.8**	**-0.9**
SLE	**Schleitheim**	**3.48**	**20**	Pn	**Pn**	**22 13 00.2**	**+0.6**
SLE	**Schleitheim**	**3.48**	**20**	*e*Pn	**Pn**	**22 13 00.7**	**+1.1**
	SNR=6.0						
SLE				*e*Sn	**Sn**	**22 13 43.1**	**+2.6**
	SNR=3.8						
CASP	**Castiglione de**	**3.48**	**118**	⇓P	**Pn**	**22 13 01.5**	**+1.9**
HAU	**Haudompre**	**3.50**	**356**	*e*P	**Pn**	**22 13 00.9**	**+1.1**
HAU	**Haudompre**	**3.50**	**356**	*e*Pg	**Pb**	**22 13 10.5**	**+2.9**
HAU				*e*Sn	**Sn**	**22 13 38.5**	**-2.5**
	comp=E,16nm,0.3s						
BERGE	**Lenzkirch (DE)**	**3.51**	**16**	*e*Pn	**Pn**	**22 13 00.9**	**+0.9**
	SNR=3.7						
KIZ	**Kirchzarten**	**3.54**	**13**	Pn	**Pn**	**22 13 01.0**	**+0.6**
DAVA	**Damuels**	**3.55**	**38**	*e*Pn	**Pn**	**22 13 01.7**	**+1.1**
	comp=E,2.6nm,0.5s						
DAVA				*e*Sn	**Sn**	**22 13 46.6**	**+4.1**
	comp=E,4.9nm,0.3s						
TCF	**Toulx Ste Croi**	**3.62**	**301**	*e*P	**Pn**	**22 13 03.2**	**+1.6**
TCF				*e*Sn	**Sn**	**22 13 41.5**	**-2.6**
	comp=E,19nm,0.8s						
TCF				*e*Sg	**Sg**	**22 13 59.7**	**-2.6**
EMING	**Emmingen-Lipti**	**3.69**	**23**	*e*Sn	**Sn**	**22 13 47.5**	**+1.8**
	SNR=4.2						
FNEB	**Nbias**	**3.70**	**246**	Pn	**Pn**	**22 13 03.8**	**+1.2**
ECH	**Echery**	**3.71**	**5**	Pn	**Pn**	**22 13 03.6**	**+0.8**
ECH				Sn	**Sn**	**22 13 44.2**	**-2.1**
ECH	**Echery**	**3.71**	**5**	*e*Pn	**Pn**	**22 13 03.9**	**+1.1**
	SNR=3.3						
ECH				*e*Sn	**Sn**	**22 13 46.4**	**+0.1**
	SNR=2.1						
RJF	**Les Rejaudoux**	**3.77**	**284**	*e*P	**Pn**	**22 13 04.7**	**+1.2**
RJF	**Les Rejaudoux**	**3.77**	**284**	*e*Pg	**Pg**	**22 13 16.3**	**-1.7**
RJF				*e*Sn	**Sn**	**22 13 44.7**	**-2.9**
	comp=E,21nm,0.6s						
RJF				*e*Sg	**Sg**	**22 14 03.7**	**-3.1**
	comp=E,5.9nm,0.3s						
FETA	**Feichten**	**3.77**	**47**	*e*Pn	**Pn**	**22 13 05.4**	**+1.7**
	comp=E,0.7nm,0.3s						
FETA				*e*Sn	**Sn**	**22 13 52.2**	**+4.3**
	comp=E,0.7nm,0.3s						
SFTF	**Sexfontaines**	**3.86**	**343**	*e*P	**Pn**	**22 13 06.6**	**+1.8**
SFTF				*e*Sn	**Sn**	**22 13 47.6**	**-2.4**
	comp=E,9.2nm,0.3s						
SFTF				*e*Sg	**Sg**	**22 14 07.1**	**-2.8**
	comp=E,14nm,0.4s						
CDF	**Champ du Feu**	**3.92**	**6**	*e*P	**Pn**	**22 13 06.4**	**+0.8**
CDF				*e*Sn	**Sn**	**22 13 49.5**	**-1.9**
	comp=E,8.9nm,0.5s						
GUT	**Gutenstein**	**3.93**	**24**	Pn	**Pn**	**22 13 06.4**	**+0.6**
MONQ	**Montcuq**	**3.94**	**270**	Pn	**Pn**	**22 13 07.1**	**+1.2**
MONQ				Sn	**Sn**	**22 13 51.0**	**-1.0**
HYF	**Humbligny**	**3.95**	**316**	*e*P	**Pn**	**22 13 07.5**	**+1.5**
HYF				*e*Sn	**Sn**	**22 13 49.7**	**-2.4**
HYF				*e*Sg	**Sg**	**22 14 11.6**	**-1.1**
BFO	**Black Forest**	**3.98**	**16**	*e*Pn	**Pn**	**22 13 07.3**	**+0.8**
	SNR=2.2						
BFO				*e*Sn	**Sn**	**22 13 53.6**	**+0.8**
	SNR=3.3						
PAGF	**Fort de Pagny**	**4.09**	**351**	*e*P	**Pn**	**22 13 09.9**	**+1.9**
PAGF				*e*Sn	**Sn**	**22 13 53.2**	**-2.5**
	comp=E,5.2nm,0.2s,baz=170						
RETA	**Reutte**	**4.10**	**42**	*e*Pn	**Pn**	**22 13 09.6**	**+1.4**
	comp=E,0.8nm,0.3s						
RETA				*e*Sn	**Sn**	**22 13 59.1**	**+3.1**
	comp=E,2.8nm,0.4s						
MEZF	**Maizieres J'vi**	**4.14**	**345**	*e*P	**Pn**	**22 13 11.0**	**+2.3**
	baz=165						
MEZF				*e*Sn	**Sn**	**22 13 54.5**	**-2.4**
	comp=E,8.5nm,0.3s						
MEZF				*e*Sg	**Sg**	**22 14 16.4**	**-2.5**
	comp=E,14nm,0.4s						
SQTA	**Sankt Quirin**	**4.15**	**48**	*e*Pn	**Pn**	**22 13 10.8**	**+1.9**
	comp=E,0.9nm,0.1s						
SQTA				*e*Sn	**Sn**	**22 14 00.2**	**+3.0**
	comp=E,2.5nm,0.4s						
MOTA	**Moosalm**	**4.17**	**46**	*e*Pn	**Pn**	**22 13 10.5**	**+1.2**
	comp=E,0.6nm,0.1s						
MOTA				*e*Sn	**Sn**	**22 14 00.7**	**+2.9**
	comp=E,2.4nm,0.3s						
SAVF	**Savonnieres en**	**4.24**	**346**	*e*P	**Pn**	**22 13 12.3**	**+2.3**
	baz=166						
SAVF				*e*Sn	**Sn**	**22 13 56.5**	**-2.7**
	comp=E,6.8nm,0.3s						
LFF	**La Frestale**	**4.27**	**278**	*e*P	**Pn**	**22 13 11.7**	**+1.3**
LFF	**La Frestale**	**4.27**	**278**	*e*Pg	**Pb**	**22 13 24.6**	**+3.9**
LFF				*e*Sn	**Sn**	**22 13 59.8**	**-0.1**
LFF				*e*Sg	**Sg**	**22 14 20.4**	**-2.5**
	comp=E,8.9nm,0.3s						
WTTA	**Wattenberg**	**4.41**	**50**	*e*Pn	**Pn**	**22 13 13.6**	**+1.1**
	comp=E,0.8nm,0.2s						
WTTA				*e*Sn	**Sn**	**22 14 07.2**	**+3.6**
	comp=E,2.2nm,0.3s						
WATA	**Walderalm**	**4.42**	**49**	*e*Pn	**Pn**	**22 13 13.5**	**+0.9**
	comp=E,0.6nm,0.2s						
WATA				*e*Sn	**Sn**	**22 14 07.3**	**+3.4**
	comp=E,1.7nm,0.3s						
TOLF	**Tolfa**	**4.58**	**121**	⇓P	**Pn**	**22 13 15.5**	**+0.8**
ABTA	**Abfaltersbach**	**4.65**	**59**	*e*Pn	**Pn**	**22 13 17.0**	**+1.3**
	comp=E,0.3nm,0.2s						
ABTA				*e*Sn	**Sn**	**22 14 11.3**	**+1.9**
	comp=E,2.3nm,0.5s						
EPF	**Esparros**	**4.84**	**254**	*e*P	**Pn**	**22 13 18.5**	**+0.2**
EPF	**Esparros**	**4.84**	**254**	*e*Pg	**Pb**	**22 13 35.2**	**+4.7**
EPF				*e*Sg	**Sg**	**22 14 37.5**	**-3.7**
	comp=E,3.8nm,0.3s						
MFF	**Saint Martin d**	**5.24**	**296**	*e*P	**Pn**	**22 13 25.3**	**+1.6**
MFF	**Saint Martin d**	**5.24**	**296**	*e*Pg	**Pg**	**22 13 42.9**	**-3.3**
MFF				*e*Sn	**Sn**	**22 14 20.3**	**-3.6**
MFF				*e*Sg	**Sg**	**22 14 50.5**	**-3.5**
	comp=E,4.5nm,0.5s						
KBA	**Koelnbreinsper**	**5.30**	**59**	*e*Pn	**Pn**	**22 13 26.0**	**+1.2**
	comp=E,1.2nm,0.3s						
ETSF	**Etsaut**	**5.50**	**255**	*e*P	**Pn**	**22 13 30.6**	**+3.1**
ETSF				*e*Sn	**Sn**	**22 14 26.7**	**-3.9**
	comp=E,2.1nm,0.3s						
GIVF	**Givet**	**5.73**	**348**	*e*P	**Pn**	**22 13 33.1**	**+2.6**
DOU	**Dourbes**	**5.76**	**346**	Pn	**Pn**	**22 13 32.7**	**+1.8**
BAIF	**Baives**	**5.80**	**344**	*e*P	**Pn**	**22 13 33.1**	**+1.7**
BAIF	**Baives**	**5.80**	**344**	*e*Pg	Pg	22 13 52.5	-4.3
BAIF				*e*Sn	**Sn**	**22 14 33.6**	**-4.0**
	comp=E,2.3nm,0.3s						
BAIF				*e*Sg	**Sg**	**22 15 07.5**	**-4.4**
	comp=E,0.7nm,0.3s						
OBKA	**Obir**	**5.86**	**67**	*e*Pn	**Pn**	**22 13 33.3**	**+0.9**
	comp=E,0.4nm,0.3s						
OBKA				*e*Sn	**Sn**	**22 14 42.4**	**+3.0**
	comp=E,1.9nm,0.6s						
SJPF	**Ste Jean**	**5.90**	**259**	*e*P	**Pn**	**22 13 33.5**	**+0.6**
SJPF				*e*Sn	**Sn**	**22 14 35.4**	**-4.9**
	comp=E,0.7nm,0.3s						
MOA	**Molln**	**6.22**	**55**	*e*Pn	**Pn**	**22 13 37.7**	**+0.5**
	comp=E,0.1nm,0.1s						
MOA				*e*Sn	**Sn**	**22 14 51.3**	**+3.3**
	comp=E,0.1nm,0.1s						
LDF	**La Druitiere**	**6.22**	**313**	*e*P	**Pn**	**22 13 39.0**	**+1.8**
LDF				*e*Sn	**Sn**	**22 14 43.7**	**-4.4**
	comp=E,1.3nm,0.3s						
SOKA	**Soboth**	**6.23**	**67**	*e*Pn	**Pn**	**22 13 38.0**	**+0.5**
	comp=E,0.1nm,0.2s						
SOKA				*e*Sn	**Sn**	**22 14 50.9**	**+2.4**
	comp=E,0.9nm,0.5s						
GRR	**Gorron**	**6.50**	**309**	*e*P	**Pn**	**22 13 42.4**	**+1.4**
GRR				*e*Sn	**Sn**	**22 14 50.8**	**-4.1**
	comp=E,0.9nm,0.3s						
FLN	**La Foliniere**	**6.51**	**313**	*e*P	**Pn**	**22 13 43.2**	**+2.0**
	baz=133						
FLN				*e*Sn	**Sn**	**22 14 50.4**	**-4.9**
	comp=E,1.4nm,0.3s						
KHC	**Kasperske Hory**	**6.60**	**43**	*e*PN	**Pn**	**22 13 46.2**	**+3.

n88,σ0ᵍ72/150, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.40**	**120**	P	**Pn**	**22 26 01.4**	**+0.2**
JYNG				S	**Sn**	**22 26 13.8**	**+0.7**
YOJ	**Yonaguni jima**	**0.45**	**115**	P	**Pn**	**22 26 01.6**	**+0.2**
YOJ				*e*S	**Sn**	**22 26 14.1**	**+0.5**
YOJ	**Yonaguni jima**	**0.45**	**115**	*i* P	**Pn**	**22 26 01.5**	**0.0**
	baz=127						
YOJ				S	**Sn**	**22 26 14.7**	**+1.1**
	baz=127						
TWB1	**Santiao Chiao**	**0.63**	**304**	P	**Pn**	**22 26 02.8**	**0.0**
	baz=300						
TWB1				*e*S	**Sn**	**22 26 16.5**	**+0.6**
	baz=300						
TWC	**Suao**	**0.65**	**266**	P	**Pn**	**22 26 02.5**	**-0.4**
	baz=257						
TWC				*e*S	**Sn**	**22 26 15.8**	**-0.4**
	baz=257						
NTC	**Toucheng**	**0.70**	**287**	*e*P	**Pn**	**22 26 03.1**	**-0.2**
	baz=280						
NTC				*e*S	**Sn**	**22 26 17.1**	**+0.2**
	baz=280						
TIPB	**Shuangxi**	**0.74**	**295**	P	**Pn**	**22 26 03.6**	**-0.1**
	baz=287						
TIPB				*e*S	**Sn**	**22 26 17.2**	**-0.5**
	baz=287						
EWUT	**Wuta**	**0.75**	**254**	*e*P	**Pn**	**22 26 04.1**	**+0.4**
	baz=250						
EWUT				*e*S	**Sn**	**22 26 18.6**	**+0.9**
	baz=250						
ILA	**Ilan**	**0.75**	**279**	*e*S	**Sn**	**22 26 18.2**	**+0.4**
	baz=272						
NDS	**Dongshan**	**0.77**	**269**	*e*P	**Pn**	**22 26 04.0**	**0.0**
	baz=265						
NDS				*e*S	**Sn**	**22 26 18.3**	**+0.2**
	baz=265						
ENA	**Nanau**	**0.78**	**254**	P	**Pn**	**22 26 04.1**	**+0.1**
	baz=249						
ENA				*e*S	**Sn**	**22 26 18.6**	**+0.3**
	baz=249						
TWE	**Neicheng**	**0.82**	**275**	P	**Pn**	**22 26 04.4**	**+0.1**
	baz=269						
TWE				*e*S	**Sn**	**22 26 19.1**	**+0.2**
	baz=269						
NWF	**Wu-fen Shan**	**0.82**	**300**	*e*P	**Pn**	**22 26 04.5**	**-0.1**
	baz=292						
NWF				*e*S	**Sn**	**22 26 19.3**	**+0.1**
	baz=292						
WFSB	**Wu-fen Shan**	**0.82**	**300**	*e*P	**Pn**	**22 26 04.5**	**+0.1**
	baz=292						
WFSB				*e*S	**Sn**	**22 26 19.2**	**+0.3**
	baz=292						
ENTT	**Nioudou**	**0.91**	**269**	*e*P	**Pn**	**22 26 05.7**	**+0.4**
	baz=269						
ENTT				*e*S	**Sn**	**22 26 20.5**	**0.0**
	baz=269						
TWA	**Mucha**	**0.95**	**290**	*e*P	**Pn**	**22 26 05.5**	**-0.2**
	baz=280						
TWA				*e*S	**Sn**	**22 26 20.5**	**-0.7**
	baz=280						
NDT	**Datong Townshi**	**0.96**	**267**	*e*P	**Pn**	**22 26 06.2**	**+0.4**
	baz=264						
NDT				*e*S	**Sn**	**22 26 21.7**	**+0.4**
	baz=264						
NWLT	**Wulai**	**0.97**	**278**	*e*P	**Pn**	**22 26 05.6**	**-0.4**
	baz=280						
NWLT				*e*S	**Sn**	**22 26 21.4**	**-0.3**
	baz=280						
NHDH	**Xindian Distri**	**0.99**	**288**	*e*S	**Sn**	**22 26 20.9**	**-1.0**
	baz=285						
NACB	**Ninganchiao**	**1.00**	**242**	P	**Pn**	**22 26 05.9**	**-0.3**
	baz=239						
NACB				*e*S	**Sn**	**22 26 22.2**	**+0.1**
	baz=239						
YM01	**YM01**	**1.03**	**299**	*e*P	**Pn**	**22 26 05.4**	**-1.1**
	baz=288						
YM01				*e*S	**Sn**	**22 26 21.0**	**-1.7**
	baz=288						
TATO	**Taipei**	**1.03**	**288**	*e*P	**Pn**	**22 26 05.9**	**-0.6**
	baz=285						
TATO				*e*S	**Sn**	**22 26 21.1**	**-1.4**
	baz=285						
YM08	**YM08**	**1.03**	**301**	*e*P	**Pn**	**22 26 06.2**	**-0.3**
	baz=291						
YM08				*e*S	**Sn**	**22 26 21.8**	**-1.0**
	baz=291						
YM11	**YM11**	**1.03**	**300**	*e*P	**Pn**	**22 26 06.4**	**-0.2**
	baz=289						
YM11				*e*S	**Sn**	**22 26 21.8**	**-1.1**
	baz=289						
YM05	**YM05**	**1.04**	**299**	*e*P	**Pn**	**22 26 06.5**	**-0.2**
	baz=289						
YM05				*e*S	**Sn**	**22 26 22.3**	**-0.6**
	baz=289						
YM10	**YM10**	**1.04**	**299**	*e*P	**Pn**	**22 26 06.4**	**-0.3**
	baz=288						
YM10				*e*S	**Sn**	**22 26 22.2**	**-0.7**
	baz=288						
TWD	**Chiawan**	**1.05**	**237**	*e*P	**Pn**	**22 26 06.5**	**-0.2**
	baz=232						
TWD				*e*S	**Sn**	**22 26 23.4**	**+0.4**
	baz=232						
YM04	**YM04**	**1.06**	**298**	*e*P	**Pn**	**22 26 06.4**	**-0.4**
	baz=288						
YM04				*e*S	**Sn**	**22 26 22.2**	**-1.0**
	baz=288						
PCYT	**Pengchaiyu**	**1.07**	**335**	*e*P	**Pn**	**22 26 07.0**	**+0.1**
	baz=335						
TWY	**Chenhua**	**1.07**	**305**	*e*P	**Pn**	**22 26 06.9**	**0.0**
	baz=295						
TWY				*e*S	**Sn**	**22 26 23.4**	**0.0**
	baz=295						
YHNB	**Yeheng**	**1.08**	**271**	*e*P	**Pn**	**22 26 07.2**	**+0.1**
	baz=273						
YHNB				*e*S	**Sn**	**22 26 23.8**	**0.0**
	baz=273						
ETLH	**Xiulin Townshi**	**1.08**	**246**	*e*P	**Pn**	**22 26 07.0**	**-0.2**
	baz=240						
ETLH				*e*S	**Sn**	**22 26 23.6**	**-0.1**
	baz=240						
NSK	**Sanguang**	**1.10**	**271**	*e*P	**Pn**	**22 26 07.5**	**+0.2**
	baz=273						
NSK				*e*S	**Sn**	**22 26 23.9**	**-0.1**
	baz=273						
NNSH	**Datong**	**1.10**	**259**	*e*P	**Pn**	**22 26 07.5**	**+0.1**
	baz=252						
NNSH				*e*S	**Sn**	**22 26 24.2**	**0.0**
	baz=252						
NNSB	**Datong**	**1.10**	**259**	*e*P	**Pn**	**22 26 07.5**	**+0.1**
	baz=252						
NNSB				*e*S	**Sn**	**22 26 24.4**	**+0.3**
	baz=252						
HWA	**Hwalien**	**1.10**	**233**	*e*P	**Pn**	**22 26 04.7**	**-2.6**
	baz=230						
NNS	**Nan Shan**	**1.11**	**259**	*e*P	**Pn**	**22 26 07.6**	**+0.2**
	baz=252						
NNS				*e*S	**Sn**	**22 26 24.4**	**+0.1**
	baz=252						
IRIF	**Iriomote-Funau**	**1.11**	**106**	P	**Pn**	**22 26 07.3**	**0.0**
IRIF				S	**Sn**	**22 26 24.1**	**0.0**
TWS1	**Kuangyinshan**	**1.13**	**293**	*e*S	**Sn**	**22 26 24.2**	**-0.4**
	baz=285						
NTST	**Danshui**	**1.13**	**297**	*e*S	**Sn**	**22 26 24.5**	**-0.1**
	baz=288						
FUSS	**Fushou**	**1.27**	**252**	*e*P	**Pn**	**22 26 09.7**	**+0.3**
	baz=247						
HATJ	**Hateruma jima**	**1.28**	**117**	*e*S	**Sn**	**22 26 28.1**	**+0.7**
WHF	**Hehuan Shan**	**1.29**	**247**	*e*P	**Pn**	**22 26 09.8**	**0.0**
	baz=245						
WHF				*e*S	**Sn**	**22 26 27.9**	**-0.5**
	baz=245						
TWT	**Tachien**	**1.33**	**253**	*e*P	**Pn**	**22 26 10.8**	**+0.8**
	baz=245						
TWT				*e*S	**Sn**	**22 26 29.5**	**+0.7**
	baz=245						
ESL	**Shilin**	**1.33**	**231**	*e*P	**Pn**	**22 26 09.3**	**-0.6**
	baz=225						
ESL				*e*S	**Sn**	**22 26 27.9**	**-0.6**
	baz=225						
TDCB	**Techi**	**1.34**	**253**	*e*P	**Pn**	**22 26 10.8**	**+0.6**
	baz=245						
TDCB				*e*S	**Sn**	**22 26 29.2**	**+0.2**
	baz=245						
JKRS	**Kuro-shima**	**1.38**	**107**	P	**Pn**	**22 26 10.8**	**+0.4**
JKRS				S	**Sn**	**22 26 30.3**	**+0.8**
CHGB	**Renai**	**1.40**	**245**	*e*P	**Pn**	**22 26 11.2**	**+0.3**
	baz=239						
CHGB				*e*S	**Sn**	**22 26 31.1**	**+0.7**
	baz=239						
LIOB	**Emei**	**1.41**	**270**	*e*P	**Pn**	**22 26 10.9**	**+0.1**
	baz=268						
LIOB				*e*S	**Sn**	**22 26 30.1**	**-0.2**
	baz=268						
HSN1	**Hsinchu**	**1.41**	**275**	*e*S	**Sn**	**22 26 30.6**	**+0.3**
	baz=273						
NSTT	**Nanjuang**	**1.42**	**269**	*e*S	**Sn**	**22 26 29.7**	**-0.8**
	baz=267						
EGFH	**Guangfu**	**1.43**	**227**	*e*P	**Pn**	**22 26 10.6**	**-0.4**
	baz=222						
EGFH				*e*S	**Sn**	**22 26 30.0**	**-0.6**
	baz=222						
JIJ	**Ishigaki jima**	**1.47**	**101**	P	**Pn**	**22 26 11.3**	**-0.1**
JIJ				S	**Sn**	**22 26 30.6**	**-0.8**
WHP	**Taichung City**	**1.52**	**256**	*e*P	**Pn**	**22 26 13.0**	**+0.8**
	baz=254						
WHP				*e*S	**Sn**	**22 26 33.2**	**+0.4**
	baz=254						
HGSD	**Ruisui**	**1.56**	**222**	*e*P	**Pn**	**22 26 12.3**	**-0.3**
	baz=221						
VWDT	**VWDT**	**1.58**	**236**	*e*P	**Pn**	**22 26 13.2**	**+0.4**
	baz=231						
VWDT				*e*S	**Sn**	**22 26 33.9**	**+0.1**
	baz=231						
JISG	**Ishigakijimahi**	**1.59**	**92**	P	**Pn**	**22 26 12.9**	**0.0**
JISG				S	**Sn**	**22 26 33.0**	**-1.0**
EHY	**Hungye**	**1.61**	**225**	*e*P	**Pn**	**22 26 12.8**	**-0.5**
	baz=224						
EHY				*e*S	**Sn**	**22 26 33.7**	**-0.9**
	baz=224						
DPDB	**Guoxing**	**1.62**	**248**	*e*P	**Pn**	**22 26 14.3**	**+1.0**
	baz=246						
NMLH	**Miaoli**	**1.62**	**266**	*e*S	**Sn**	**22 26 34.6**	**-0.1**
	baz=264						
NSY	**Sanyi**	**1.66**	**262**	*e*S	**Sn**	**22 26 36.2**	**+0.6**
	baz=260						
TWQ1	**Liyutan**	**1.66**	**260**	*e*P	**Pn**	**22 26 13.8**	**0.0**
	baz=258						
TWQ1				*e*S	**Sn**	**22 26 35.5**	**-0.1**
	baz=258						
SMLT	**Sun Moon Lake**	**1.70**	**244**	*e*P	**Pn**	**22 26 15.3**	**+0.9**
	baz=238						
SMLT				*e*S	**Sn**	**22 26 38.5**	**+1.7**
	baz=238						
SSLB	**Suanglung**	**1.71**	**240**	*e*P	**Pn**	**22 26 14.7**	**+0.3**
	baz=234						
YULB	**Yu-li**	**1.71**	**223**	*e*P	**Pn**	**22 26 13.7**	**-0.8**
	baz=228						
YULB				*e*S	**Sn**	**22 26 35.6**	**-1.1**
	baz=228						
EYUL	**Yuli**	**1.73**	**221**	*e*P	**Pn**	**22 26 14.5**	**-0.2**
	baz=229						
EYUL				*e*S	**Sn**	**22 26 36.9**	**-0.2**
	baz=229						
TYC	**Yuchr**	**1.73**	**245**	*e*P	**Pn**	**22 26 15.6**	**+1.0**
	baz=239						
TWF1	**Yuli**	**1.74**	**222**	*e*P	**Pn**	**22 26 14.4**	**-0.4**
	baz=229						
TWF1				*e*S	**Sn**	**22 26 36.5**	**-0.9**
	baz=229						
FULB	**Fuli**	**1.86**	**219**	*e*P	**Pn**	**22 26 16.1**	**-0.2**
	baz=214						
FULB				*e*S	**Sn**	**22 26 39.6**	**-0.5**
	baz=214						
WJS	**Zhushan**	**1.87**	**244**	*e*S	**Sn**	**22 26 42.6**	**+2.3**
	baz=253						
YUS	**Yu-Shan**	**1.88**	**232**	*e*P	**Pn**	**22 26 17.6**	**+0.6**
	baz=226						
YUS				*e*S	**Sn**	**22 26 41.6**	**+0.5**
	baz=226						
CHKT	**Chengkung**	**1.90**	**216**	*e*P	**Pn**	**22 26 16.1**	**-0.6**
	baz=210						
CHKT				*e*S	**Sn**	**22 26 39.6**	**-1.2**
	baz=210						
JTJ	**Tarama**	**1.94**	**90**	S	**Sn**	**22 26 42.6**	**+0.7**
ALS	**Alishan**	**1.97**	**235**	*e*P	**Pn**	**22 26 19.0**	**+1.0**
	baz=229						
ALS				*e*S	**Sn**	**22 26 44.7**	**+1.7**
	baz=229						
CHN5	**Tsauling**	**2.02**	**239**	*e*P	**Pn**	**22 26 19.5**	**+1.0**
	baz=247						
CHN5				*e*S	**Sn**	**22 26 45.5**	**+1.7**
	baz=247						
ELDTW	**Lidau**	**2.03**	**225**	*e*P	**Pn**	**22 26 18.1**	**-0.6**
	baz=224						
ELDTW				*e*S	**Sn**	**22 26 43.5**	**-0.7**
	baz=224						
EDH	**Donghe**	**2.03**	**215**	*e*P	**Pn**	**22 26 18.0**	**-0.5**
	baz=210						
EDH				*e*S	**Sn**	**22 26 42.9**	**-1.1**
	baz=210						
WRL	**Guolierlin Hig**	**2.13**	**250**	*e*S	**Sn**	**22 26 45.7**	**-0.5**
	baz=256						
LONT	**Longtian**	**2.18**	**217**	*e*P	**Pn**	**22 26 19.7**	**-0.7**
	baz=221						
STYH	**Taoyuan**	**2.20**	**228**	*e*P	**Pn**	**22 26 21.8**	**+1.1**
	baz=227						
STYH				*e*S	**Sn**	**22 26 48.8**	**+1.0**
	baz=227						
LDUT	**Ludao**	**2.21**	**207**	*e*P	**Pn**	**22 26 20.2**	**-0.6**
	baz=210						
LDUT				*e*S	**Sn**	**22 26 46.8**	**-1.3**
	baz=210						
CHN4	**Tsaushan**	**2.22**	**235**	*e*P	**Pn**	**22 26 22.2**	**+1.3**
	baz=234						
CHN4				*e*S	**Sn**	**22 26 50.1**	**+1.8**
	baz=234						
STYT	**Tauyuan**	**2.22**	**228**	*e*P	**Pn**	**22 26 21.7**	**+0.7**
	baz=227						
TWGBT	**Beinan**	**2.28**	**217**	*e*P	**Pn**	**22 26 21.2**	**-0.5**
	baz=216						
TWG	**Pinlang**	**2.28**	**217**	*e*P	**Pn**	**22 26 21.7**	**0.0**
	baz=216						
TWK	**Hsinying**	**2.35**	**234**	*e*P	**Pn**	**22 26 23.4**	**+0.8**
	baz=233						
SLGT	**Liugui**	**2.41**	**227**	*e*P	**Pn**	**22 26 22.9**	**-0.5**
	baz=227						
ECL	**Taimali**	**2.52**	**216**	*e*S	**Sn**	**22 26 53.9**	**-1.4**
	baz=210						

*IDC **01** 22:36:54.9±3.0, 34°.65S×179°.89W, h0ᵏᵐ, mb3.9/3, mb1 4.0/5, mb1mx3.8/24, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=63.0km s-min=37.8km az=111.0*
*WEL **01** 22:37:03.2±0.9, 35°.5S×17°.9W±1°.6, h140ᵏᵐ±25ᵏᵐ, M3.9/25, mB4.4/7, ML4.4/25, MLv4.2/25, Mw(mB)3.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=131.6*

ISC 01 22:37:01.8±1.9, 35°.3S±0°.1×179°.2W±0°.2, h100ᵏᵐ, n40, σ1ᵍ30/51, mb3.7/3, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.99**	**221**	P	**Pn**	**22 37 45.6**	**-1.7**
MXZ				S	**Sn**	**22 38 23.0**	**+0.5**
PKGZ	**Pakihiroa**	**3.36**	**219**	P	**Pn**	**22 37 51.6**	**-0.7**
PUZ	**Puketiti**	**3.41**	**215**	P	**Pn**	**22 37 54.2**	**+1.3**
PUZ				S	**Sn**	**22 38 33.6**	**+1.0**
HAZ	**Te Kaha**	**3.42**	**224**	P	**Pn**	**22 37 51.7**	**-1.4**
HAZ				S	**Sn**	**22 38 36.3**	**+3.5**
RUGZ	**Raukumara Rang**	**3.63**	**222**	P	**Pn**	**22 37 55.7**	**-0.3**
CNGZ	**Carnagh Statio**	**3.77**	**212**	P	**Pn**	**22 37 58.7**	**+1.0**
TKGZ	**Te Karaka**	**3.90**	**216**	P	**Pn**	**22 37 60.0**	**+0.5**
TKGZ				S	**Sn**	**22 38 45.6**	**+1.4**
WHRZ	**Whale Island**	**3.96**	**229**	P	**Pn**	**22 38 01.8**	**+1.4**
MWZ	**Matawai**	**3.98**	**220**	P	**Pn**	**22 37 59.9**	**-0.7**
MWZ				S	**Sn**	**22 38 46.5**	**+0.2**
RIGZ	**Rimuhau**	**4.15**	**214**	P	**Pn**	**22 38 03.5**	**+0.5**
RIGZ				S	**Sn**	**22 38 50.8**	**+0.4**
URZ	**Urewera**	**4.15**	**224**	Pn	**Pn**	**22 38 02.1**	**-0.8**
	6.1nm,0.3s,baz=121,slow=23,SNR=36						
URZ				Sn	**Sn**	**22 38 48.4**	**-2.0**
	11nm,0.3s,baz=184,slow=16,SNR=7.4						
URZ	**Urewera**	**4.15**	**224**	P	**Pn**	**22 38 02.1**	**-0.8**
URZ				S	**Sn**	**22 38 50.8**	**+0.4**
RAGZ	**Rawiri**	**4.16**	**219**	P	**Pn**	**22 38 03.1**	**0.0**
MARZ	**Manawahe**	**4.23**	**230**	P	**Pn**	**22 38 04.1**	**0.0**
PRGZ	**Paritu Road**	**4.27**	**212**	P	**Pn**	**22 38 04.5**	**-0.2**
SNGZ	**Shannon Statio**	**4.41**	**217**	P	**Pn**	**22 38 06.8**	**+0.3**
MHGZ	**Mahia Peninsul**	**4.46**	**210**	P	**Pn**	**22 38 06.8**	**-0.3**
RTZ	**Ruatahuna**	**4.47**	**221**	P	**Pn**	**22 38 07.3**	**0.0**
TARZ	**Mount Tarawera**	**4.49**	**228**	P	**Pn**	**22 38 09.0**	**+1.3**
MUGZ	**Murupara**	**4.49**	**224**	P	**Pn**	**22 38 07.7**	**+0.1**
MUGZ				S	**Sn**	**22 38 56.6**	**-2.1**
RAHZ	**Arahi**	**4.64**	**218**	P	**Pn**	**22 38 10.4**	**+0.8**
RAHZ				S	**Sn**	**22 39 03.4**	**+1.1**
WHHZ	**Waihua**	**4.69**	**216**	P	**Pn**	**22 38 11.4**	**+1.1**
MTHZ	**Maungataniwha**	**4.72**	**220**	P	**Pn**	**22 38 11.1**	**+0.4**
ARHZ	**Aropaoanui**	**4.95**	**216**	P	**Pn**	**22 38 13.5**	**-0.3**
KWHZ	**Kaweka Forest**	**5.36**	**219**	P	**Pn**	**22 38 18.6**	**-0.8**
TMVZ	**Te Maari**	**5.54**	**225**	P	**Pn**	**22 38 21.5**	**-0.4**
KRVZ	**Karewarewa**	**5.56**	**226**	P	**Pn**	**22 38 22.8**	**+0.7**
OTVZ	**Oturere**	**5.59**	**225**	P	**Pn**	**22 38 22.0**	**-0.6**
BHHZ	**Black Hill Sta**	**5.60**	**220**	P	**Pn**	**22 38 22.7**	**+0.1**
WTVZ	**West Tongariro**	**5.61**	**226**	P	**Pn**	**22 38 25.2**	**+2.5**
NGZ	**Ngauruhoe**	**5.64**	**225**	P	Pn	22 38 28.7	+5.5
TWVZ	**Taurewa**	**5.67**	**227**	P	**Pn**	**22 38 26.1**	**+2.5**
HIZ	**Hauiti**	**5.71**	**234**	P	**Pn**	**22 38 23.5**	**-0.5**
MOVZ	**Moawhango**	**5.71**	**223**	P	**Pn**	**22 38 26.2**	**+2.1**
MOVZ				S	**Sn**	**22 39 25.1**	**-3.3**
PNHZ	**Pukenui**	**5.85**	**217**	P	**Pn**	**22 38 25.4**	**-0.5**
PNHZ				S	**Sn**	**22 39 28.8**	**-2.8**
RPZ	**Rata Peaks**	**11.24**	**219**	Pn	**Pn**	**22 39 39.4**	**+0.2**
	0.4nm,0.3s,baz=31,slow=19,SNR=1.3						
RPZ				Sn	Sn	22 41 31.8	-11
	0.5nm,0.3s,baz=341,slow=21,SNR=1.6						
STKA	**Stephens Creek**	**32.66**	**265**	P	**P**	**22 43 25.2**	**+0.9**
	3.8nm,1.0s,baz=90,slow=8.1,SNR=2.9						
ASAR	**Alice Springs**	**42.06**	**273**	P	**P**	**22 44 43.6**	**-0.1**
	0.6nm,0.5s,baz=116,slow=6.0,SNR=9.2						
WRA	**Warramunga Arr**	**43.49**	**278**	P	**P**	**22 44 55.0**	**-0.3**
	0.5nm,0.5s,baz=119,slow=7.6,SNR=10						
FINES	**FINESS Array B**	**149.30**	**336**	PKPbc	**PKPab**	**22 56 42.1**	**-0.8**
	4.3nm,1.1s,baz=91,slow=6.3,SNR=5.4						

*IGIL **01** 22:47:31.9, 37°.32N×13°.13W, h2ᵏᵐ, ML2.4*
*MDD **01** 22:47:31.6±1.7, 37°.20N×13°.10W, h0ᵏᵐ, mb3.5/9, Error ellipse: s-maj=16.0km s-min=13.0km az=33.0, PRXIMO*
*INMG **01** 22:47:32.9±1.4, 36°.96N×13°.47W, h10ᵏᵐ, ML2.5, Error ellipse: s-maj=7.3km s-min=5.7km az=99.0*
*CNRM **01** 22:47:35.3, 36°.60N×12°.87W, h78ᵏᵐ, Hypocentre not reviewed by the ISC*

ISC 01 22:47:28.6±3.4, 37°.23N±0°.09×13°.2W±0°.2, h10ᵏᵐ, n60, σ2ᵍ16/98, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.51**	**90**	P	**Pn**	**22 48 23.9**	**+0.7**
	0.8nm,0.1s,SNR=9.6						
PFVI				S	**Sn**	**22 49 02.7**	**-2.1**
	19nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.51**	**90**	*e*Pn	**Pn**	**22 48 24.0**	**+0.7**
PFVI				*e*Sn	**Sn**	**22 49 02.9**	**-1.9**
PFVI				A	A	22 49 09.1	
	8.9nm,0.4s						
PFVI	**Vila Bisbo**	**3.51**	**90**	P		22 48 24.4	
PFVI				S		22 49 02.6	
PMAFR	**Mafra**	**3.55**	**60**	P	**Pn**	**22 48 26.3**	**+2.4**
	1.7nm,0.2s,SNR=4.0						
PMAFR				S	**Sn**	**22 49 06.3**	**+0.4**
	9.1nm,0.2s,SNR=5.8						
PMAFR	**Mafra**	**3.55**	**60**	*e*Sn	**Sn**	**22 49 06.5**	**+0.6**
PMAFR				A	A	22 49 11.1	
	15nm,0.7s						
PTEO	**Sao Teotonio**	**3.59**	**84**	P	**Pn**	**22 48 25.9**	**+1.5**
PTEO				S	**Sn**	**22 49 05.3**	**-1.6**
	4.7nm,0.5s						
PTEO	**Sao Teotonio**	**3.59**	**84**	*e*Pn	**Pn**	**22 48 25.9**	**+1.5**
PTEO				*e*Sn	**Sn**	**22 49 05.3**	**-1.6**
PTEO				A	A	22 49 08.3	
	9.4nm,0.5s						
MORF	**Marmelete**	**3.65**	**87**	*e*P	**Pn**	**22 48 26.7**	**+1.5**
MORF				*e*S	**Sn**	**22 49 06.3**	**-1.9**
MORF				IAML		22 49 10.3	
	comp=N,12nm,0.3s						
MORF	**Marmelete**	**3.65**	**87**	P	**Pn**	**22 48 27.6**	**+2.4**
MORF				S	**Sn**	**22 49 06.3**	**-1.9**
	comp=N,6.9nm,0.2s						
MORF	**Marmelete**	**3.65**	**87**	*e*Pn	**Pn**	**22 48 27.6**	**+2.4**
MORF				*e*Sn	**Sn**	**22 49 06.3**	**-1.9**
MORF				A	A	22 49 12.8	
	comp=N,6.9nm,0.2s						
PNCL	**Nicolau / Gran**	**3.82**	**75**	P	**Pn**	**22 48 30.0**	**+2.4**
PNCL				S	**Sn**	**22 49 11.7**	**-0.9**
	comp=N,6.1nm,0.4s						
PNCL	**Nicolau / Gran**	**3.82**	**75**	*e*Pn	**Pn**	**22 48 30.0**	**+2.4**
PNCL				*e*Sn	**Sn**	**22 49 11.7**	**-0.9**
PNCL				A	A	22 49 12.4	
	comp=N,6.1nm,0.4s						
MESJ	**Messejana**	**4.02**	**80**	*e*P	**Pn**	**22 48 31.5**	**+1.2**
MESJ				*e*S	**Sn**	**22 49 15.1**	**-2.3**
MESJ				IAML		22 49 19.5	
	comp=N,6.9nm,0.3s						
MESJ	**Messejana**	**4.02**	**80**	P	**Pn**	**22 48 31.5**	**+1.2**
MESJ				S	**Sn**	**22 49 15.1**	**-2.3**
MESJ	**Messejana**	**4.02**	**80**	*e*Sn	**Sn**	**22 49 17.2**	**-0.2**
MESJ				A	A	22 49 19.8	
	comp=N,4.9nm,0.6s						
PCVE	**Castro Verde**	**4.14**	**83**	P	**Pn**	**22 48 33.4**	**+1.5**
PCVE				S	**Sn**	**22 49 18.6**	**-1.8**
	comp=N,3.3nm,0.4s						
PCVE	**Castro Verde**	**4.14**	**83**	*e*Pn	**Pn**	**22 48 33.4**	**+1.5**
PCVE				*e*Sn	**Sn**	**22 49 18.6**	**-1.8**
PCVE				A	A	22 49 26.3	
	comp=N,3.3nm,0.4s						
PSBE	**So Bento**	**4.16**	**55**	*e*Pn	**Pn**	**22 48 34.8**	**+2.6**
PSBE				*e*Sn	**Sn**	**22 49 21.6**	**+0.7**
PSBE				A	A	22 49 25.1	
	comp=N,9.3nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.22**	**88**	P	**Pn**	**22 48 34.5**	**+1.5**
PBDV				S	**Sn**	**22 49 21.2**	**-1.2**
	comp=N,4.3nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.22**	**88**	*e*Pn	**Pn**	**22 48 34.5**	**+1.5**
PBDV				*e*Sn	**Sn**	**22 49 21.2**	**-1.2**
PBDV				A	A	22 49 26.2	
	comp=N,4.3nm,0.3s						
EVO	**Evora**	**4.32**	**71**	S	**Sn**	**22 49 23.3**	**-1.5**
EVO	**Evora**	**4.32**	**71**	*e*Sn	**Sn**	**22 49 23.3**	**-1.5**
PBEJ	**Beja**	**4.32**	**78**	S	**Sn**	**22 49 23.6**	**-1.3**
	comp=N,1.5nm,0.4s						
PBEJ	**Beja**	**4.32**	**78**	*e*Sn	**Sn**	**22 49 23.6**	**-1.3**
PBEJ				A	A	22 49 31.8	
	comp=N,3.0nm,0.4s						
PMTG	**Montargil**	**4.34**	**63**	P	**Pn**	**22 48 38.4**	**+3.7**
PMTG				S	**Sn**	**22 49 24.9**	**-0.5**
	comp=N,2.3nm,0.4s						
PMTG	**Montargil**	**4.34**	**63**	*e*Pn	**Pn**	**22 48 38.4**	**

PCBR	**Castelo Branco**	**5.20**	**58**	S		**Sn**	**22 49 46.2**	**-0.4**
	comp=N,0.9nm,0.4s							
PCBR	**Castelo Branco**	**5.20**	**58**	*e*Sn		**Sn**	**22 49 46.2**	**-0.4**
PCBR				A		A	22 49 50.0	
	comp=N,1.9nm,0.4s							
EMIN	**Mina Concepcio**	**5.23**	**82**	P		**Pn**	**22 48 49.8**	**+2.9**
	comp=N,0.2nm,0.1s,SNR=4.0							
EMIN				S		**Sn**	**22 49 44.4**	**-3.0**
	comp=N,2.3nm,0.2s,SNR=71							
PVIS	**Viseu**	**5.42**	**48**	S		**Sn**	**22 49 51.5**	**-0.4**
PVIS	**Viseu**	**5.42**	**48**	*e*Sn		**Sn**	**22 49 51.5**	**-0.4**
ESPR	**Espera**	**5.90**	**91**	S		**Sn**	**22 50 01.9**	**-1.9**
	comp=N,9.9nm,0.3s,SNR=7.9							
POLO	**Lamas de Olo**	**5.90**	**44**	S		**Sn**	**22 50 04.1**	**+0.2**
	comp=N,0.9nm,0.7s							
POLO	**Lamas de Olo**	**5.90**	**44**	*e*Sn		**Sn**	**22 50 04.1**	**+0.2**
POLO				A		A	22 50 04.7	
	comp=N,0.9nm,0.7s							
EZAM	**Zamans**	**6.03**	**34**	S		**Sn**	**22 50 01.6**	**-5.3**
	comp=N,2.2nm,0.3s,SNR=4.0							
PGAV	**Gavieira, Arco**	**6.08**	**37**	P		**Pn**	**22 49 01.5**	**+2.8**
PGAV				S		**Sn**	**22 50 06.5**	**-1.9**
	comp=N,4.4nm,0.6s							
PGAV	**Gavieira, Arco**	**6.08**	**37**	*e*Pn		**Pn**	**22 49 01.5**	**+2.8**
PGAV				*e*Sn		**Sn**	**22 50 06.5**	**-1.9**
PGAV				A		A	22 50 16.5	
	comp=N,4.4nm,0.6s							
ELOB	**Lobios**	**6.11**	**39**	P		**Pn**	**22 49 00.6**	**+1.6**
	comp=N,0.6nm,0.3s,SNR=4.0							
ELOB				S		**Sn**	**22 50 06.2**	**-2.9**
	comp=N,0.9nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**6.21**	**49**	P		**Pn**	**22 49 00.9**	**+0.5**
	comp=N,0.6nm,0.1s,SNR=7.9							
MVO				S		**Sn**	**22 50 09.4**	**-2.1**
	comp=N,1.7nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**6.21**	**49**	*e*Pn		**Pn**	**22 49 02.1**	**+1.7**
MVO				*e*Sn		**Sn**	**22 50 10.0**	**-1.5**
MVO				A		A	22 50 16.8	
	comp=N,2.8nm,0.7s							
ECAB	**El Cabril**	**6.25**	**80**	P		**Pn**	**22 49 02.1**	**+1.2**
	comp=N,0.1nm,0.2s,SNR=7.9							
ECAB				S		**Sn**	**22 50 09.9**	**-2.5**
	comp=N,0.8nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**6.26**	**61**	S		**Sn**	**22 50 09.5**	**-3.3**
	comp=N,1.4nm,0.2s,SNR=7.9							
HORN	**Hornachuelos**	**6.36**	**82**	P			22 49 03.5	
HORN				S			22 50 12.1	
SRHM	**Skhour des Reh**	**6.45**	**136**	P			22 49 00.9	
SRHM				S			22 50 08.3	
ZHG	**ZHG**	**6.57**	**123**	P			22 49 00.3	
ZHG				S			22 50 11.1	
EMAZ	**Mazaricos**	**6.58**	**28**	P		**Pn**	**22 49 06.8**	**+1.5**
	comp=N,1.0nm,0.1s,SNR=7.9							
EMAZ				S		**Sn**	**22 50 14.5**	**-5.9**
	comp=N,1.5nm,0.1s,SNR=7.9							
PBRG	**Braganca**	**6.78**	**46**	P		**Pn**	**22 49 10.7**	**+2.5**
PBRG	**Braganca**	**6.78**	**46**	*e*Pn		**Pn**	**22 49 10.7**	**+2.5**
EAGO	**Agolada(Pontev**	**6.82**	**34**	P		**Pn**	**22 49 09.4**	**+0.7**
	comp=N,0.7nm,0.1s,SNR=7.9							
EAGO				S		**Sn**	**22 50 20.5**	**-5.9**
	comp=N,0.8nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.92**	**80**	P		**Pn**	**22 49 13.3**	**+3.2**
	comp=N,0.3nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**22 50 25.8**	**-3.0**
	comp=N,2.0nm,0.2s,SNR=7.9							
EGOR	**Sierra Gorda,**	**7.28**	**88**	S		**Sn**	**22 50 36.6**	**-1.2**
	comp=N,1.5nm,0.4s,SNR=7.9							
PAB	**San Pablo**	**7.34**	**69**	S		**Sn**	**22 50 35.3**	**-4.1**
	comp=N,0.4nm,0.2s,SNR=7.9							
OUK	**Oukaimeden**	**7.46**	**142**	P			22 49 15.4	
OUK				S			22 50 31.6	
ESDC	**Sonseca Array**	**7.66**	**69**	S		**Sn**	**22 50 44.3**	**-2.9**
	comp=N,0.5nm,0.3s,baz=162,slow=31,SNR=3.9							
TTIG	**Tnine Tigouga,**	**7.75**	**148**	P			22 49 14.9	
TTIG				S			22 50 29.6	
EQES	**Quesada**	**8.09**	**83**	S		**Sn**	**22 50 54.8**	**-2.9**
	comp=N,0.8nm,0.3s,SNR=7.9							
MD31	**MD31**	**8.19**	**120**	P			22 49 24.9	
MD31				S			22 50 50.0	
MDT	**Midelt**	**8.32**	**119**	P			22 49 27.2	
MDT				S			22 50 54.4	

*NEIC **01** 23:00:12.3±0.9, 36.°45S×0.°06×71.°48W×0.°08, h97km±5km, Error ellipse: s-maj=10.2km s-min=7.8km az=136.0*
*GUC **01** 23:00:12.4±0.5, 36.°50S×71.°49W, h100km±3km, ML4.0*
*IDC **01** 23:00:14.0±2.7, 36.°54S×71.°48W, h122km±25km, mb3.6/6, mb1 3.7/8, mb1mx3.5/22, mbtmp4.0/8, MS3.1/1, Ms1 3.2/1, ms1mx2.5/21, Error ellipse: s-maj=39.3km s-min=22.0km az=92.0*

ISC 01 23:00:12.0±0.8, 36°44S±0.°05×71°51W±0.°07, h101km±6km, n40, σ0§89/51, mb3.9/7, 6C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI02	**San Fabin de**	**0.29**	**139**	*e*P	**Pn**	**23 00 26.7**	**-0.1**
BI02				*e*S	**Sn**	**23 00 37.3**	**-0.5**
BI02	**San Fabin de**	**0.29**	**139**	Pn	**Pn**	**23 00 26.6**	**-0.1**
BI02				Sn	**Sn**	**23 00 37.4**	**-0.4**
BI03	**Tigo**	**1.28**	**251**	⇑*e*P	**Pn**	**23 00 36.0**	**+0.3**
BI03				*e*S	**Sn**	**23 00 53.4**	**-0.2**
BI03	**Tigo**	**1.28**	**251**		**Pn**	**23 00 36.3**	**+0.6**
BI03				Sn	**Sn**	**23 00 53.7**	**+0.1**
BO02	**Sierra Bellavi**	**1.75**	**20**	⇑*e*P	**Pn**	**23 00 42.7**	**+1.1**
BO02				*e*S	**Sn**	**23 01 05.2**	**+1.2**
BO02				IAML		23 01 09.5	
	comp=E,1µm,0.2s						
BO02	**Sierra Bellavi**	**1.75**	**20**	Pn	**Pn**	**23 00 43.0**	**+1.5**
BO03	**Pichilemu**	**1.98**	**349**	*e*P	**Pn**	**23 00 45.0**	**+0.7**
BO03				*e*S	**Sn**	**23 01 10.2**	**+1.2**
BO03				IAML		23 01 11.1	
	comp=N,708nm,0.1s						
MT09	**Talagante**	**2.70**	**9**	⇑*e*P	**Pn**	**23 00 54.4**	**+0.5**
MT09				*e*S	**Sn**	**23 01 25.5**	**-0.6**
MT09				IAML		23 01 29.3	
	comp=N,602nm,0.1s						
LMEL	**Las Melosas**	**2.80**	**23**	⇑*e*P	**Pn**	**23 00 56.5**	**+1.2**
LMEL				*e*S	**Sn**	**23 01 29.3**	**+0.7**
LMEL				IAML		23 01 35.6	
	comp=N,364nm,0.3s						
MT03	**Universidad Ad**	**3.06**	**16**	*e*P	**Pn**	**23 00 59.2**	**+0.5**
MT03				*e*S	**Sn**	**23 01 35.5**	**+0.9**
MT03				IAML		23 01 40.4	
	comp=N,414nm,0.4s						
MT05	**Renca**	**3.11**	**12**	⇑*e*P	**Pn**	**23 01 00.2**	**+0.9**
MT05				*e*S	**Sn**	**23 01 36.3**	**+0.5**
MT05				IAML		23 01 40.4	
	comp=E,434nm,0.4s						
MT05				IAML		23 01 40.7	
	comp=N,438nm,0.2s						
MT05	**Renca**	**3.11**	**12**		**Pn**	**23 01 00.1**	**+0.7**
MT02	**Curacav**	**3.19**	**6**	⇓*e*P	**Pn**	**23 01 00.6**	**+0.3**
MT02				*e*S	**Sn**	**23 01 37.9**	**+0.2**
MT02				IAML		23 01 38.9	
	comp=N,167nm,0.2s						
MT02	**Curacav**	**3.19**	**6**	Pn	**Pn**	**23 01 00.7**	**+0.3**
PEL	**Peldehue**	**3.36**	**12**	⇑*e*P	**Pn**	**23 01 02.9**	**+0.2**
PEL				*e*S	**Sn**	**23 01 41.6**	**-0.2**
PEL				IAML		23 01 44.7	
	comp=N,309nm,0.1s						
PEL	**Peldehue**	**3.36**	**12**	Pn	**Pn**	**23 01 03.1**	**+0.4**
VA03	**San Esteban**	**3.76**	**12**		**Pn**	**23 01 08.2**	**+0.2**
PLCA	**Paso Flores**	**4.35**	**170**	P	**Pn**	**23 01 17.1**	**+1.1**
	comp=N,1.0nm,0.3s,baz=329,slow=11,SNR=11						
PLCA	**Paso Flores**	**4.35**	**170**		**Pn**	**23 01 16.5**	**+0.5**
CO02	**Combarbal**	**5.24**	**5**		**Pn**	**23 01 28.1**	**-0.1**
CO03	**El Pedregal**	**5.63**	**7**		**Pn**	**23 01 33.5**	**0.0**
GO04	**Tololo Observa**	**6.28**	**6**		**Pn**	**23 01 41.8**	**-0.7**
GO03	**Copiap**	**8.89**	**7**		**Pn**	**23 02 16.1**	**-1.6**
AC02	**Maricunga**	**9.79**	**13**	Pn	**Pn**	**23 02 28.6**	**-1.8**
LVC	**Limon Verde**	**13.97**	**10**	P	**P**	**23 03 29.3**	**-1.4**
	comp=N,0.6nm,0.3s,baz=196,slow=15,SNR=6.1						
PB01	**IPOC Station P**	**15.45**	**7**	Pn	**Pn**	**23 03 43.6**	**-0.8**
PB01				IAmb	IAmb	23 03 49.1	
	comp=Z,5.9nm,0.8s						
CPUP	**Villa Florida**	**15.74**	**54**	LR	LR	23 10 14.7	
	comp=Z,83nm,21.5s,baz=202,slow=38						
LPAZ	**La Paz**	**20.30**	**9**	P	**P**	**23 04 41.3**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=173,slow=8.6,SNR=8.1						
LPAZ	**La Paz**	**20.30**	**9**	P	**P**	**23 04 41.0**	**+0.5**
SIV	**San Ignacio**	**22.39**	**27**	P	**P**	**23 05 02.3**	**+0.1**
	comp=Z,4.0nm,0.6s,baz=227,slow=7.7,SNR=20						
QSPA	**South Pole Qui**	**53.80**	**180**	P	**P**	**23 09 25.1**	**+1.1**
QSPA				IAmb	IAmb	23 09 36.5	
	comp=Z,3.1nm,1.2s						
TXAR	**Lajitas Array**	**72.07**	**331**	P	**P**	**23 11 27.1**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=139,slow=6.3,SNR=3.8						
DBIC	**Dimbokro**	**75.57**	**70**	P	**P**	**23 11 46.0**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=152,slow=8.8,SNR=3.8						
DBIC	**Dimbokro**	**75.57**	**70**	P	**P**	**23 11 46.3**	**+0.3**
DBIC				IAmb	IAmb	23 11 47.0	
	comp=Z,4.0nm,0.8s						
KOWA	**Kowa**	**81.27**	**65**	P	**P**	**23 12 18.1**	**+0.7**
KOWA				IAmb	IAmb	23 12 18.4	
	comp=Z,1.8nm,0.7s						
TOA0	**Torodi Ar. Sit**	**84.65**	**69**	P	**P**	**23 12 35.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**84.65**	**69**	P	**P**	**23 12 34.8**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=251,slow=4.4,SNR=2.6						
ULM	**Lac du Bonnet**	**88.97**	**345**	P	**P**	**23 12 53.7**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=140,slow=7.9,SNR=3.1						
WRA	**Warramunga Arr**	**118.83**	**208**	PKP	**PKPdf**	**23 18 46.5**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=182,slow=4.0,SNR=4.9						
MKAR	**Makanchi Array**	**157.95**	**54**	PKPab	**PKPab**	**23 20 30.5**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=280,slow=3.4,SNR=5.3						

*DJA **01** 23:24:03.8±6.7, 3.°N±55.°×12.°7E±2.°7, h10km, M4.3/6, mb4.3/2, mB5.2/1, MLv4.3/6, Mw(mB)4.6/1*
*IDC **01** 23:24:17.3±1.9, 1.°98N×126.°69E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/38, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=117.0km s-min=23.0km az=69.0*

ISC 01 23:24:21.9±1.6, 2.°1N±0.°2×126.°8E±0.°1, h35km, n9, σ1§35/8, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**156**	P	**Pn**	**23 24 44.3**	**-0.5**
KMSI	**Cibinong**	**3.19**	**243**	P	**Pn**	23 25 03.3	-6.2
GTOI	**Gorontalo**	**4.05**	**250**	P	**Pn**	**23 25 20.4**	**-1.0**
	0.1nm14nm,0.6s						
LUWI	**Luwuk**	**5.08**	**233**	P	**Pn**	**23 25 37.3**	**+1.8**
APSI	**Ampana**	**5.94**	**240**	P	**Pn**	**23 25 45.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**20.06**	**183**	P	**P**	**23 28 52.3**	**+0.1**
	0.1nm,0.3s,baz=4.0,slow=11,SNR=1.5						
WRA	**Warramunga Arr**	**23.08**	**162**	P	**P**	**23 29 23.5**	**-1.1**
	1.2nm,0.4s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.48**	**165**	P	**P**	**23 29 56.7**	**+0.6**
	0.2nm,0.4s,baz=331,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**23 34 18.5**	**+0.5**
	0.2nm,0.4s,baz=120,slow=7.6,SNR=10						

*NEIC **01** 23:50:24.0±1.9, 20.°9S±0.°2×179.°0W±0.°2, h561km±18km, mb4.5/25, Error ellipse: s-maj=33.5km s-min=21.2km az=46.0*
*IDC **01** 23:50:24.1±2.1, 20.°72S×178.°80W, h582km±19km, mb3.5/9, mb1 3.6/11, mb1mx3.4/30, mbtmp4.4/11, Error ellipse: s-maj=40.0km s-min=15.3km az=154.0*

ISC 01 23:50:25.3±0.7, 20.°7S±0.°1×178.°9W±0.°1, h600km, n40, σ1§08/42, mb4.5/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.13**	**315**	P	**P**	**23 51 49.2**	**-2.7**
	7.8nm,0.3s,baz=134,slow=5.3,SNR=17						
MSVF	**Nonsavu**	**4.13**	**315**	P	**P**	**23 51 49.1**	**-2.8**
DZM	**Mont Dzumac**	**13.76**	**262**	P	**P**	**23 53 20.7**	**-1.3**
	0.9nm,0.3s,baz=80,slow=19,SNR=3.1						
DZM	**Mont Dzumac**	**13.76**	**262**	P	**P**	**23 53 20.0**	**-2.0**
OUZ	**Omahuta**	**15.94**	**203**	P	**P**	**23 53 41.5**	**-0.4**
OUZ				IAmb	IAmb	23 53 51.6	
	comp=Z,20nm,1.4s						
QRZ	**Quartz Range**	**21.38**	**198**	P	**P**	**23 54 29.0**	**-2.3**
RPZ	**Rata Peaks**	**24.47**	**198**	P	**P**	**23 54 58.0**	**-0.7**
RPZ				IAmb	IAmb	23 55 12.9	
	comp=Z,12nm,1.1s						
WHZ	**Wether Hill Ro**	**27.39**	**200**	P	**P**	**23 55 22.9**	**-1.3**
EIDS	**Eidsvold**	**28.02**	**255**		**P**	**23 55 30.1**	**0.0**
EIDS				IAmb	IAmb	23 55 38.4	
	comp=Z,8.4nm,1.1s						
ARMA	**Armidale**	**28.27**	**244**	P	**P**	**23 55 32.4**	**+0.1**
ARMA				IAmb	IAmb	23 55 33.6	
	comp=Z,7.5nm,0.8s						
CTAO	**Charters Tower**	**32.67**	**265**		**P**	**23 56 10.2**	**+0.3**
PMG	**Port Moresby**	**34.60**	**284**	P	**P**	**23 56 26.7**	**+0.6**
	comp=Z,10nm,0.6s,baz=207,slow=2.3,SNR=2.0						
TOO	**Toolangi**	**35.14**	**234**	P	**P**	**23 56 29.9**	**-0.4**
TOO				IAmb	IAmb	23 56 39.1	
	comp=Z,20nm,1.1s						
COEN	**Coen**	**36.79**	**274**		**P**	**23 56 45.1**	**+1.0**
COEN				IAmb	IAmb	23 56 46.5	
	comp=Z,20nm,1.4s						
STKA	**Stephens Creek**	**36.99**	**244**	P	**P**	**23 56 45.8**	**+0.2**
	comp=Z,3.4nm,0.5s,baz=100,slow=11,SNR=12						
STKA	**Stephens Creek**	**36.99**	**244**	P	**P**	**23 56 45.5**	**-0.1**
BBOO	**Buckleboo**	**41.75**	**244**		**P**	**23 57 23.1**	**-0.6**
JAY	**Jayapura**	**43.34**	**289**	P	**P**	**23 57 37.5**	**+1.1**
	comp=Z,4.9nm,0.3s,baz=184,slow=9.0,SNR=4.9						
WR0	**Warramunga Arr**	**43.59**	**262**		**P**	**23 57 37.7**	**-0.5**
AS31	**Alice Springs**	**43.69**	**257**		**P**	**23 57 38.9**	**-0.1**
ASAR	**Alice Springs**	**43.69**	**257**	P	**P**	**23 57 39.0**	**+0.1**
	comp=Z,13nm,0.8s,baz=96,slow=7.9,SNR=110						
ASAR				PcP	**PcP**	**23 59 12.8**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=99,slow=3.9,SNR=4.1						
ASAR				S	**S**	**00 03 27.5**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=90,slow=17,SNR=2.9						
WB0	**Warramunga Arr**	**43.76**	**263**		**P**	**23 57 39.2**	**-0.3**
WB0				IAmb	IAmb	23 57 39.9	
	comp=Z,11nm,0.6s						
WB2	**Warramunga Arr**	**43.77**	**262**	P	**P**	**23 57 38.9**	**-0.6**
WB2				IAmb	IAmb	23 57 40.1	
	comp=Z,17nm,1.1s						
WRA	**Warramunga Arr**	**43.78**	**262**	P	**P**	**23 57 39.3**	**-0.4**
	comp=Z,3.8nm,0.3s,baz=96,slow=7.4,SNR=170						
MTN	**Manton Dam**	**48.36**	**271**		**P**	**23 58 14.3**	**+0.1**
MTN				IAmb	IAmb	23 58 14.8	
	comp=Z,9.3nm,0.7s						
FORT	**Forrest**	**48.48**	**247**	P	**P**	**23 58 14.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.20**	**263**	P	**P**	**23 58 42.5**	**+0.3**
	baz=107,slow=6.4						
FITZ	**Fitzroy Crossi**	**52.20**	**263**		**P**	**23 58 42.4**	**+0.3**
SIJI	**Sorong**	**52.51**	**286**	P	**P**	**23 58 44.9**	**+0.5**
	comp=Z,27nm,0.7s,baz=66,slow=7.7,SNR=12						
SOEI	**Soe**	**55.70**	**272**	P	**P**	**23 59 08.7**	**+1.8**
SOEI				IAmb	IAmb	23 59 09.8	
	comp=Z,23nm,0.7s						
PSA00	**Pilbara Seismi**	**56.84**	**257**	P	**P**	**23 59 14.3**	**-0.2**
PSA00				IAmb	IAmb	23 59 32.2	
	comp=Z,48nm,1.5s						
VNDA	**Vanda**	**57.67**	**185**	P	**P**	**23 59 20.8**	**+1.6**
MORW	**Morawa**	**59.02**	**248**	P	**P**	**23 59 28.7**	**-0.4**
MORW				IAmb	IAmb	23 59 35.6	
	comp=Z,21nm,1.4s						
GIRL	**Giralia**	**61.73**	**255**	P	**P**	**23 59 47.6**	**+0.6**
TOLI2	**Tolitoli**	**62.85**	**282**	P	**P**	**23 59 56.5**	**+2.1**
TOLI2				IAmb	IAmb	00 00 08.5	
	comp=Z,16nm,1.4s						
QSPA	**South Pole Qui**	**69.39**	**180**	P	**P**	**00 00 34.0**	**-0.1**
TXAR	**Lajitas Array**	**87.83**	**58**	P	**P**	**00 02 12.7**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=197,slow=3.9,SNR=5.9						
ILAR	**Eielson Array**	**88.66**	**13**	P	**P**	**00 02 14.5**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=216,slow=6.1,SNR=5.0						
PDAR	**Pinedale Array**	**89.64**	**44**	P	**P**	**00 02 20.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=203,slow=2.3,SNR=3.8						
GERES	**GERESS Array B**	**150.14**	**343**	PKPbc	**PKiKP**	**00 09 10.0**	**0.0**
	comp=Z,0.7nm,0.7s,baz=91,slow=4.3,SNR=2.6						

*NOU **01** 23:58:04.6, 21.°47S×170.°23E, h69km, MLv4.8, Southeast of Loyalty Islands*
*IDC **01** 23:58:04.9±6.2, 21.°03S×170.°02E, h93km±41km, mb3.8/4, mb1 3.9/5, mb1mx3.5/37, mbtmp4.1/5, MS3.5/1, Ms1 3.5/1, ms1mx2.6/32, Error ellipse: s-maj=119.3km s-min=44.3km az=158.0*

ISC 01 23:58:04.0±1.1, 21.°4S±0.°2×170.°2E±0.°1, h100km, n35, σ0§85/32, mb4.0/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**2.05**	**268**	P	**Pn**	**23 58 37.0**	**-0.2**
PINNC	**Pines Island,**	**2.84**	**245**	P	**Pn**	**23 58 47.4**	**-0.2**
LIFNC	**LIFOU**	**2.86**	**282**	P	**Pn**	**23 58 47.8**	**-0.1**
YATNC	**Mamie plateau,**	**3.17**	**258**	P	**Pn**	**23 58 51.5**	**-0.5**
OUENC	**Ouen Island, N**	**3.30**	**252**	P	**Pn**	**23 58 54.2**	**+0.5**
DZM	**Mont Dzumac**	**3.58**	**259**	P	**Pn**	**23 58 58.2**	**+0.6**
	4.6nm,0.3s,baz=56,slow=14,SNR=204						
DZM				S	**Sn**	**23 59 37.5**	**-1.5**
	112nm,0.3s,baz=288,slow=23,SNR=22						
DZM	**Mont Dzumac**	**3.58**	**259**	P	**Pn**	**23 58 57.5**	**-0.1**
ONTNC	**Ouen Toro**	**3.62**	**255**	P	**Pn**	**23 58 57.6**	**-0.4**
DVP	**Devils Point**	**4.15**	**332**	P	Pn	23 59 06.6	+1.4
KOUNC	**Koumac, New Ca**	**5.62**	**278**	P	**Pn**	**23 59 26.1**	**+1.0**
SANVU	**Saraoutou**	**6.60**	**334**	P	Pn	23 59 39.1	+0.7
WRA	**Warramunga Arr**	**33.57**	**266**	P	**P**	**00 04 35.0**	**+0.3**
	0.4nm,0.3s,baz=97,slow=7.8,SNR=6.6						
ASAR	**Alice Springs**	**33.57**	**259**	P	**P**	**00 04 35.5**	**+0.8**
	1.3nm,0.6s,baz=82,slow=8.8,SNR=16						
JAY	**Jayapura**	**34.33**	**299**	LR	LR	00 18 19.0	
	comp=Z,66nm,18.6s,baz=218,slow=36						
FITZ	**Fitzroy Crossi**	**41.99**	**266**	P	**P**	**00 05 46.7**	**+1.1**
	1.7nm,0.7s,baz=100,slow=6.1,SNR=2.8						
NWAO	**Narrogin (SRO)**	**48.08**	**245**	P	**P**	**00 06 34.2**	**+0.6**
	5.7nm,0.6s,baz=101,slow=5.2,SNR=2.2						
ARCES	**ARCESS Array B**	**127.40**	**345**	PKP	**PKPdf**	**00 16 56.4**	**0.0**
	1.8nm,0.8s,baz=63,slow=2.0,SNR=17						
OSTC	**Ostas**	**144.47**	**331**	*e*P	**PKPab**	**00 17 24.3**	**-2.7**
DPC	**Dobruska-Polom**	**144.57**	**331**	*e*P	PKPbc	00 17 27.9	+0.3
CONA	**Conrad Observa**	**146.48**	**328**	*e*P	**PKPbc**	**00 17 33.1**	**-0.5**
	5.3nm,1.5s						
CKRC	**Cesky Krumlov**	**146.58**	**331**	*e*P	**PKPab**	**00 17 35.0**	**0.0**
KHC	**Kasperske Hory**	**146.68**	**332**	*e*P	**PKPab**	**00 17 35.0**	**-0.5**
ARSA	**Arzberg**	**147.11**	**328**	*e*P	**PKiKP**	**00 17 38.4**	**+0.7**
	4.6nm,1.2s						
MOA	**Molln**	**147.30**	**329**	*e*P	**PKPab**	**00 17 37.2**	**-0.7**
	3.4nm,1.2s						
SOKA	**Soboth**	**147.74**	**327**	*e*P	**PKPab**	**00 17 38.1**	**-1.7**
	5.1nm,1.4s						
OBKA	**Obir**	**148.10**	**327**	*e*P	**PKiKP**	**00 17 39.8**	**0.0**
	5.9nm,1.2s						
MYKA	**Terra Mystica**	**148.47**	**328**	*e*P	**PKPbc**	**00 17 38.4**	**-0.7**
	2.1nm,0.6s						
WATA	**Walderalm**	**148.91**	**331**	*e*P	**PKPbc**	**00 17 40.7**	**+0.3**
	1.9nm,0.7s						
ABTA	**Abfaltersbach**	**148.92**	**330**	*e*P	**PKPbc**	**00 17 40.2**	**-0.1**
	4.4nm,1.1s						
WTTA	**Wattenberg**	**148.94**	**331**	*e*P	**PKPbc**	**00 17 40.5**	**+0.1**
	1.9nm,0.6s						
MOTA	**Moosalm**	**149.12**	**332**	*e*P	**PKPbc**	**00 17 39.5**	**-1.3**
	1.5nm,0.5s						
RETA	**Reutte**	**149.16**	**332**	*e*P	**PKiKP**	**00 17 42.0**	**0.0**
	3.8nm,1.0s						
SQTA	**Sankt Quirin**	**149.17**	**332**	*e*P	**PKPbc**	**00 17 40.9**	**0.0**
	1.7nm,0.5s						
FETA	**Feichten**	**149.53**	**332**	*e*P	**PKiKP**	**00 17 42.7**	**-0.2**
	4.8nm,1.1s						
DAVA	**Damuels**	**149.69**	**333**	*e*P	**PKiKP**	**00 17 43.7**	**+0.5**
	2.7nm,0.8s						

*IDC **01** 23:58:33.6±1.9, 5.°30S×153.°14E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/43, mbtmp3.7/8, MS3.2/1, Ms1 3.1/1, ms1mx2.5/35, Error ellipse: s-maj=71.8km s-min=23.2km az=119.0*

ISC 01 23:58:38.7±1.9, 5.°4S±0.°3×153.°2E±0.°4, h37km, n11, σ0§48/10, mb3.5/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.36**	**230**	P	**P**	**00 03 43.9**	**-0.2**
	1.7nm,0.4s,baz=54,slow=9.9,SNR=5.5						
ASAR	**Alice Springs**	**25.99**	**224**	P	**P**	**00 04 08.7**	**+0.5**
	0.7nm,0.5s,baz=57,slow=9.3,SNR=11						
STKA	**Stephens Creek**	**28.50**	**201**	LR	LR	00 14 59.0	
	comp=Z,43nm,18.4s,baz=22,slow=34						
FITZ	**Fitzroy Crossi**	**29.73**	**243**	P	**P**	**00 04 41.2**	**-0.4**
	1.2nm,0.5s,baz=34,slow=10,SNR=7.4						
SONM	**Songino Array**	**67.03**	**328**	P	**P**	**00 09 28.5**	**+0.3**
	0.3nm,0.7s,baz=160,slow=4.6,SNR=2.4						
MKAR	**Makanchi Array**	**81.02**	**319**	P	**P**	**00 10 49.4**	**-0.4**
	0.1nm,0.5s,baz=107,slow=4.8,SNR=2.8	

9.0nm,0.6s
TNSS Tian-Shan 5.58 268 *e*P **Pg 00 15 46.6 -2.4**
1.3nm,0.3s
TNSS *e*S **Sg 00 17 01.1 -0.2**
3.5nm,0.4s
TKM2 Tokmak 2 6.58 268 ⇑Pg Pb 00 16 01.9 +5.2
0.9nm,0.6s
TKM2 ⇑Lg Lg 00 17 34.8
2.5nm,0.5s
AAK Ala-Archa 7.43 267 ⇑Pg **Pg 00 16 21.4 -2.8**
1.7nm,0.8s
AAK ⇑Lg Lg 00 17 53.8
2.0nm,0.7s
KURBB Kurchatov Arra 8.28 332 ⇓Lg Lg 00 18 27.2
14nm,0.8s

MOS **02** *00:17:16.7±0.0, 43°.16N×40°.67E, h12km, MPVA2.9*
DDA **02** *00:17:21.1, 42°.83N×40°.77E, h7km±4km, ML1.6*
ISC 02 00:17:16.3±1.2, 43°.12N±0°.03×40°.70E±0°.03, h8km±10km, n18, σ1§08/35, Western Caucasus

Code	Station Name	Δ° AZ°	Phase	ID	ISC	Time h m s	Res ISC
VSLR	**Vesyoloye**	**0.59 306**	*i* Pg		**Pg**	**00 17 27.8**	**0.0**
VSLR			*i* Sg		**Sg**	**00 17 36.4**	**+0.8**
ARXR	**Arkhyz**	**0.62 43**	*i* Pg		**Pb**	**00 17 28.8**	**-0.6**
ARXR			*i* Sg		**Sb**	**00 17 37.5**	**-0.8**
RPOR	**Krasnaya Polya**	**0.66 332**	*i* Pg		**Pg**	**00 17 28.9**	**-0.2**
RPOR			*i* Sg		**Sg**	**00 17 37.8**	**0.0**
SOC	**Sochi**	**0.85 304**	*e*Pg		**Pg**	**00 17 32.0**	**-0.7**
SOC			*e*Sg		**Sg**	**00 17 42.6**	**-1.2**
GUZR	**Guzeripl'**	**0.98 335**	*i* Pg		**Pg**	**00 17 34.5**	**-0.5**
GUZR			*e*Sg		**Sg**	**00 17 47.5**	**-0.3**
AHMR	**Akhmetovskaya**	**1.07 14**	*e*Pg		**Pn**	**00 17 37.6**	**0.0**
AHMR			*e*Sg		**Sn**	**00 17 52.1**	**-0.6**
LZRR	**Lazarevskoye**	**1.26 311**	*e*Pg		**Pn**	**00 17 40.5**	**+0.4**
LZRR			*i* Sg		**Sn**	**00 17 57.7**	**+0.4**
NEY	**Neytrino**	**1.49 84**	*e*Pg		**Pb**	**00 17 44.3**	**0.0**
NEY			*e*Sg		**Sg**	**00 18 06.2**	**+2.0**
TPSR	**Tuapse**	**1.51 310**	*e*Pg		**Pb**	**00 17 45.0**	**+0.5**
TPSR			*e*Sg		**Sb**	**00 18 04.6**	**+0.9**
SHA1	**Shidzhatmaz**	**1.56 66**	*i* Pg		**Pg**	**00 17 45.9**	**-0.3**
SHA1			*e*Sg		**Sg**	**00 18 07.0**	**+0.6**
KBZ	**Khabaz**	**1.72 68**	*i* Pg		**Pb**	**00 17 48.4**	**+0.3**
KBZ			*e*Sg		**Sg**	**00 18 11.7**	**+0.2**
DBOC	**Borcka**	**1.91 157**	*i* P		**Pn**	**00 17 48.6**	**-0.6**
DBOC			*i* S		**Sn**	**00 18 11.8**	**-1.5**
DBOC			IAML			00 18 17.0	
	comp=E,5.9nm,0.3s						
ONI	**Oni**	**2.10 104**	*e*Pg		**Pb**	**00 17 53.6**	**-0.9**
ONI			*e*Sg		**Sb**	**00 18 21.1**	**+0.4**
EPOS	**Posof**	**2.21 136**	*i* P		**Pb**	**00 17 56.1**	**-0.4**
EPOS			*i* S		**Sn**	**00 18 23.2**	**+2.4**
DBAD	**Bademkaya**	**2.22 160**	*i* P		**Pn**	**00 17 53.4**	**-0.1**
DBAD			*i* S		**Sn**	**00 18 19.2**	**-1.9**
DBAD			IAML			00 18 24.0	
	comp=N,5.1nm,0.4s						
DBAD			IAML			00 18 26.0	
	comp=E,4.5nm,0.5s						
KRIK	**Erzurum-spir**	**2.78 176**	*i* P		**Pn**	**00 18 02.6**	**+1.3**
KRIK			*i* S		**Sn**	**00 18 35.4**	**+0.4**
ALUC	**Giresun/Alucra**	**3.12 208**	*i* P		**Pn**	**00 18 08.4**	**+2.6**
ALUC			IAML			00 18 44.0	
	comp=N,6.3nm,0.7s						
ALUC			IAML			00 18 46.0	
	comp=E,5.1nm,0.4s						
KELT	**Kelkit**	**3.15 200**	*i* P		**Pn**	**00 18 04.6**	**-1.7**
KELT			*i* S		**Sn**	**00 18 43.2**	**-1.0**

AUST 02 00:27:04.7±0.7, 26°.91S×115°.20E, h10km, Error ellipse: s-maj=71.4km s-min=5.4km az=73.0, Western Australia

Code	Station Name	Δ° AZ°	Phase	ID	ISC	Time h m s	Res ISC
MORW	**Morawa**	**2.27 161**	P		Pn	00 27 42.9	+0.6
	baz=2.3						
MORW			S		Sn	00 28 10.8	+0.3
	baz=2.3						
MORW	**Morawa**	**2.27 161**	P		Pn	00 27 42.9	+0.5
	baz=2.3						
MORW			S		Sn	00 28 10.2	-0.3
	baz=2.3						
BLDU	**Ballidu**	**3.92 161**	P		Pn	00 28 06.6	+1.6
	baz=4.0						
BLDU			S		Sn	00 28 49.8	-1.3
	baz=4.0						
BLDU	**Ballidu**	**3.92 161**	S		Sn	00 28 52.4	+1.2
	baz=3.9						
GIRL	**Giralia**	**4.34 348**	P		Pn	00 28 10.2	-0.6
	baz=4.3						
GIRL			S		Sn	00 28 57.5	-3.9
	baz=4.3						
GIRL	**Giralia**	**4.34 348**	P		Pn	00 28 10.4	-0.4
	baz=4.4						
GIRL			S		Sn	00 28 56.9	-4.6
	baz=4.4						
MUN	**Mundaring**	**5.13 170**	P		Pn	00 28 21.5	-0.1
	baz=5.1						

UCR **02** *00:44:51.8±1.4, 14°.81N×91°.50W, h159km±4km, ML4.4, mb4.8(NEIC)*
SNET **02** *00:44:52.9±1.0, 14°.84N×91°.46W, h151km±4km, ML4.5*
MEX **02** *00:44:53.1±1.0, 14°.78N×91°.41W, h160km±10km, MD4.8*
GCG **02** *00:44:54.4±0.4, 14°.69N×91°.43W, h153km±77km, MD4.4*
IDC **02** *00:44:54.7±0.5, 14°.97N×91°.17W, h160km±3km, mb3.9/18, mb1 4.1/22, mb1mx4.0/40, mbtmp4.4/22, MS3.1/5, Ms1 3.1/5, ms1mx2.8/41, Error ellipse: s-maj=15.1km s-min=7.6km az=61.0*
NEIC **02** *00:44:54.1±1.9, 14°.84N±0°.06×91°.47W±0°.06, h155km±4km, mb4.8/142, Md4.8/55(MEX), Error ellipse: s-maj=10.3km s-min=7.2km az=213.0*
ISC 02 00:44:53.4±0.5, 14°.84N±0°.04×91°.47W±0°.04, h157km±4km, n351, σ1§33/412, mb4.7/73, 12C-8D, Guatemala

Code	Station Name	Δ° AZ°	Phase	ID	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.38 215**	⇑*i*P		**Pn**	**00 45 14.2**	**-0.9**
RTAL			*e*S		**Sn**	**00 45 30.3**	**-1.2**
RTAL	**Retalhuleu**	**0.38 215**			**Pn**	**00 45 14.2**	**-0.9**
RTAL					**Sn**	**00 45 30.4**	**-1.2**
ERG	**Entre ros, C**	**0.41 194**	⇑*i*P		**Pn**	**00 45 15.3**	**+0.1**
HUEH	**Huehuetenango**	**0.48 356**	⇓*e*P		**Pn**	**00 45 15.6**	**-0.2**
HUEH			*e*S		**Sn**	**00 45 32.1**	**-0.8**
HUEH			IAML			00 45 43.0	
	comp=Z,14μm,0.5s						
HUEH	**Huehuetenango**	**0.48 356**			**Pn**	**00 45 15.6**	**-0.2**
HUEH					**Sn**	**00 45 32.1**	**-0.8**
FUG	**Fuego 3**	**0.72 123**	⇓*i*P		**Pn**	**00 45 17.3**	**+0.3**
THIG		**0.78 275**	*i* P		**Pn**	**00 45 16.5**	**-0.6**
THIG			*i* S		**Sn**	**00 45 34.8**	**-0.4**
THIG		**0.78 275**			**Pn**	**00 45 16.5**	**-0.6**
THIG					**Sn**	**00 45 35.0**	**-0.2**
PCG	**Pacaya**	**0.94 118**	⇓*i*P		**Pn**	**00 45 19.3**	**+0.6**
APG	**El Apazote**	**0.98 80**	P		**Pn**	**00 45 19.2**	**+0.2**
	comp=Z,3μm,0.3s,baz=268,slow=5.5						
APG			S		**Sn**	**00 45 37.5**	**-0.9**
	comp=Z,285nm,0.3s,baz=149,slow=16,SNR=15						
NBG	**Las Nubes**	**1.11 103**	⇓*i*P		**Pn**	**00 45 21.2**	**+1.1**
CCIG	**Comitan**	**1.57 336**	*i* P		**Pn**	**00 45 25.0**	**+0.5**
CCIG			*i* S		**Sn**	**00 45 48.2**	**-0.2**
CCIG	**Comitan**	**1.57 336**			**Pn**	**00 45 24.9**	**+0.5**
CCIG					**Sn**	**00 45 48.7**	**+0.3**
MRL	**Marmol**	**1.74 82**	⇑*i*P		**Pn**	**00 45 27.7**	**+1.4**
PCIG		**1.90 297**	*i* P		**Pn**	**00 45 27.2**	**-0.6**
PCIG			*i* S		**Sn**	**00 45 53.9**	**-0.3**
PCIG		**1.90 297**			**Pn**	**00 45 27.2**	**-0.6**
PCIG					**Sn**	**00 45 53.9**	**-0.3**
RTR	**El Retiro**	**2.00 118**	*e*P		**Pn**	**00 45 29.1**	**-0.1**
RTR			*e*S		**Sn**	**00 45 57.3**	**+0.7**
RTR	**El Retiro**	**2.00 118**	*e*P		**Pn**	**00 45 29.1**	**-0.1**
RTR			*e*S		**Sn**	**00 45 57.3**	**+0.7**
SBLS	**San Blas**	**2.04 119**	*e*P		**Pn**	**00 45 29.6**	**-0.2**
SBLS			*e*S		**Sn**	**00 45 59.0**	**+1.4**
SBLS	**San Blas**	**2.04 119**	*e*P		**Pn**	**00 45 29.6**	**-0.2**
SBLS			*e*S		**Sn**	**00 45 59.0**	**+1.4**
SNJE	**San Jose**	**2.04 118**	*e*P		**Pn**	**00 45 29.6**	**-0.1**
SNJE	**San Jose**	**2.04 118**	*e*P		**Pn**	**00 45 29.6**	**-0.1**
CEVE	**Cerro Verde**	**2.05 119**	*e*P		**Pn**	**00 45 29.3**	**-0.5**
CEVE			*e*S		**Sn**	**00 45 58.5**	**+0.8**
CEVE			IAML			00 46 03.7	
	comp=Z,3μm,0.5s						
CEVE	**Cerro Verde**	**2.05 119**	*e*P		**Pn**	**00 45 29.3**	**-0.5**
CEVE			*e*S		**Sn**	**00 45 58.5**	**+0.8**
CEVE			IAML			00 46 03.7	
	comp=Z,3μm,0.5s						
ESQI	**Esquipulas**	**2.07 97**			**Pn**	**00 45 30.6**	**+0.7**
MTO3	**Montecristo**	**2.08 102**	⇓*i*P		**Pn**	**00 45 30.5**	**+0.3**
MTO3			*e*S		**Sn**	**00 45 59.5**	**+1.0**
MTO3	**Montecristo**	**2.08 102**	⇓*i*P		**Pn**	**00 45 30.5**	**+0.3**
MTO3			*e*S		**Sn**	**00 45 59.5**	**+1.0**
MTO3	**Montecristo**	**2.08 102**			**Pn**	**00 45 30.5**	**+0.3**
TACO	**Tacachico**	**2.22 113**	⇓*e*P		**Pn**	**00 45 31.6**	**0.0**
TACO			*e*S		**Sn**	**00 46 01.6**	**+0.6**
TACO	**Tacachico**	**2.22 113**	⇓*e*P		**Pn**	**00 45 31.6**	**0.0**
TACO			*e*S		**Sn**	**00 46 01.6**	**+0.6**
CEDA	**San Andres**	**2.26 117**	*e*P		**Pn**	**00 45 31.7**	**-0.3**
CEDA	**San Andres**	**2.26 117**	*e*P		**Pn**	**00 45 31.7**	**-0.3**
JAYA	**Jayaque - finc**	**2.28 121**	*e*P		**Pn**	**00 45 32.3**	**-0.2**
JAYA			IAML			00 45 33.4	
	comp=Z,1μm,0.5s						
JAYA			*e*S		**Sn**	**00 46 01.9**	**-0.6**
JAYA	**Jayaque - finc**	**2.28 121**	*e*P		**Pn**	**00 45 32.3**	**-0.2**
JAYA			IAML			00 45 33.4	
	comp=Z,1μm,0.5s						
JAYA			*e*S		**Sn**	**00 46 01.9**	**-0.6**
PMON	**Piamonte**	**2.37 118**	⇑*e*P		**Pn**	**00 45 33.6**	**+0.2**
PMON	**Piamonte**	**2.37 118**	⇑*e*P		**Pn**	**00 45 33.6**	**+0.2**
BOQS	**Boqueron**	**2.39 117**	*e*P		**Pn**	**00 45 33.9**	**+0.2**
BOQS	**Boqueron**	**2.39 117**	*e*P		**Pn**	**00 45 33.9**	**+0.2**
SNET	**Serv Nac Est T**	**2.45 118**	*e*P		**Pn**	**00 45 33.9**	**-0.5**
SNET			*e*S		**Sn**	**00 46 05.8**	**-0.2**
SNET	**Serv Nac Est T**	**2.45 118**	*e*P		**Pn**	**00 45 33.9**	**-0.5**
SNET			*e*S		**Sn**	**00 46 05.8**	**-0.2**
SNET	**Serv Nac Est T**	**2.45 118**			**Pn**	**00 45 34.5**	**+0.1**
LALI	**Alcalda de L**	**2.48 123**	*e*P		**Pn**	**00 45 34.6**	**0.0**
LALI			*e*S		**Sn**	**00 46 05.7**	**-0.6**
LALI	**Alcalda de L**	**2.48 123**	*e*P		**Pn**	**00 45 34.6**	**0.0**
LALI			*e*S		**Sn**	**00 46 05.7**	**-0.6**
TGIG		**2.50 321**	*e*P		**Pn**	**00 45 34.3**	**-0.7**
TGIG			*i* S		**Sn**	**00 46 05.1**	**-2.0**
TGIG		**2.50 321**			**Pn**	**00 45 34.3**	**-0.7**
TGIG					**Sn**	**00 46 06.0**	**-1.1**
LFU	**La Fuente**	**2.52 115**	*e*P		**Pn**	**00 45 34.5**	**-0.7**
LFU	**La Fuente**	**2.52 115**	*e*P		**Pn**	**00 45 34.5**	**-0.7**
LLGN	**La Laguna**	**2.53 105**	*e*P		**Pn**	**00 45 34.9**	**-0.5**
LLGN	**La Laguna**	**2.53 105**	*e*P		**Pn**	**00 45 34.9**	**-0.5**
PETF	**Flores**	**2.58 36**			**Pn**	**00 45 35.8**	**0.0**
LBRS	**Las Brisas**	**2.59 115**	*e*P		**Pn**	**00 45 35.5**	**-0.5**
LBRS	**Las Brisas**	**2.59 115**	*e*P		**Pn**	**00 45 35.5**	**-0.5**
LFRS	**El Faro**	**2.63 117**	*e*P		**Pn**	**00 45 36.6**	**0.0**
LFRS			*e*S		**Sn**	**00 46 11.0**	**+1.2**
LFRS	**El Faro**	**2.63 117**	*e*P		**Pn**	**00 45 36.6**	**0.0**
LFRS			*e*S		**Sn**	**00 46 11.0**	**+1.2**
PAVA	**Las Pavas**	**2.69 114**	*e*P		**Pn**	**00 45 37.4**	**0.0**
PAVA	**Las Pavas**	**2.69 114**	*e*P		**Pn**	**00 45 37.4**	**0.0**
CMIG	**Matias Romero**	**3.98 305**	P		**Pn**	**00 45 52.6**	**-1.0**
	comp=Z,39nm,0.3s,baz=160,slow=9.9,SNR=287						
CMIG			S		**Sn**	**00 46 36.5**	**-3.9**
	comp=Z,167nm,0.3s,baz=128,slow=15,SNR=18						
CMIG	**Matias Romero**	**3.98 305**	*e*P		**Pn**	**00 45 53.0**	**-0.5**
CMIG			*i* S		**Sn**	**00 46 39.6**	**-0.8**
CMIG	**Matias Romero**	**3.98 305**			**Pn**	**00 45 53.0**	**-0.5**
TGUH	**Tegucigalpa,Un**	**4.13 100**	*e*P		**Pn**	**00 45 55.2**	**-0.5**
TGUH	**Tegucigalpa,Un**	**4.13 100**	*e*P		**Pn**	**00 45 55.2**	**-0.5**
TGUH	**Tegucigalpa,Un**	**4.13 100**	Pn		**Pn**	**00 45 56.1**	**+0.4**
CRIN	**San Cristobal**	**4.79 116**			**Pn**	**00 46 05.3**	**+1.0**
PANG	**Puerto Angel**	**4.90 280**	*i* P		**Pn**	**00 46 04.7**	**-1.0**
PANG			*e*S		**Sn**	**00 46 60.0**	**-2.1**
PANG	**Puerto Angel**	**4.90 280**			**Pn**	**00 46 04.7**	**-1.0**
VHO	**Vista Hermosa**	**5.53 294**	*e*P		**Pn**	**00 46 13.8**	**-0.4**
VHO			*e*S		**Sn**	**00 47 11.4**	**-5.9**
PEIG	**Puerto Escondi**	**5.60 283**	*i* P		**Pn**	**00 46 13.4**	**-1.5**
PEIG			*i* S		**Sn**	**00 47 16.9**	**-1.8**
MATN	**Matagalpa**	**5.71 109**	Pn		**Pn**	**00 46 17.4**	**+1.0**
BOAB	**BOACO BROADBAN**	**6.12 112**	Pn		**Pn**	**00 46 22.3**	**+0.5**
TEIG	**Tepich**	**6.16 29**	P		**Pn**	**00 46 22.1**	**-0.2**
	comp=Z,51nm,0.3s,baz=212,slow=1.4,SNR=135						
TEIG			S		**Sn**	**00 47 27.9**	**-4.1**
	comp=Z,11nm,0.3s,baz=315,slow=22,SNR=10						
TEIG	**Tepich**	**6.16 29**	*e*P		**Pn**	**00 46 22.0**	**-0.3**
TEIG			*i* S		**Sn**	**00 47 31.2**	**-0.8**
TEIG	**Tepich**	**6.16 29**	Pn		**Pn**	**00 46 22.5**	**+0.2**
YOIG	**Yosondua**	**6.18 290**	*e*P		**Pn**	**00 46 23.0**	**+0.1**
YOIG			*e*S		**Sn**	**00 47 31.1**	**-2.0**
TOIG	**Toxpalan**	**6.27 302**	*e*P		**Pn**	**00 46 24.0**	**0.0**
TOIG			*e*S		**Sn**	**00 47 32.8**	**-2.0**
TXIG	**Tlaxiaco**	**6.52 292**	*i* P		**Pn**	**00 46 27.9**	**+0.6**
TXIG			*i* S		**Sn**	**00 47 37.4**	**-3.6**
PNIG	**Pinotepa**	**6.60 284**	*i* P		**Pn**	**00 46 27.5**	**-0.7**
PNIG			*i* S		**Sn**	**00 47 40.0**	**-2.6**
PNIG	**Pinotepa**	**6.60 284**			**Pn**	**00 46 27.5**	**-0.7**
ACON	**Acoyapa**	**6.75 114**			**Pn**	**00 46 31.3**	**+1.1**
HLIG	**Huajuapan de L**	**6.77 297**	*e*P		**Pn**	**00 46 31.6**	**+0.9**
HLIG			*e*S		**Sn**	**00 47 39.7**	**-7.2**
TLIG	**Tlapa**	**7.34 293**	Pn		**Pn**	**00 46 39.0**	**+0.9**
SAJU	**San Juanillo,**	**7.35 130**	⇑*i*P		**Pn**	**00 46 39.4**	**+1.1**
ORTG	**Ortega, Santa**	**7.36 127**			**Pn**	**00 46 39.6**	**+1.2**
ESPN	**Las Esperanzas**	**7.45 110**			**Pn**	**00 46 40.2**	**+0.7**
PLVR	**Palo Verde**	**7.45 126**	⇑*e*P		**Pn**	**00 46 39.7**	**0.0**
INDI	**Punta indio, G**	**7.64 130**	⇑*e*P		**Pn**	**00 46 43.1**	**+1.1**
JTS	**Las Juntas de**	**7.80 125**	P		**Pn**	**00 46 45.0**	**+0.7**
	comp=Z,20nm,0.3s,baz=29,slow=7.5,SNR=44						
JTS			S		**Sn**	**00 48 04.4**	**-7.1**
	comp=Z,3.1nm,0.3s,baz=8.1,slow=24,SNR=1.7						
JTS			LR		LR	00 50 05.6	
	comp=Z,30nm,20.0s,baz=334,slow=41						
JTS	**Las Juntas de**	**7.80 125**	⇑*e*P		**Pn**	**00 46 45.0**	**+0.7**
JTS	**Las Juntas de**	**7.80 125**	*i* P		**Pn**	**00 46 44.6**	**+0.4**
JTS			*i* S		**Sn**	**00 48 09.4**	**-2.0**
JTS	**Las Juntas de**	**7.80 125**	Pn		**Pn**	**00 46 44.7**	**+0.5**
ARE1	**Arenal 1**	**7.89 123**	*e*P		**Pn**	**00 46 46.2**	**+0.7**
COVE	**Coope Vega, Sa**	**8.01 120**			**Pn**	**00 46 47.2**	**+0.2**
PPM	**Popocatepetl**	**8.04 303**	*i* P		**Pn**	**00 46 50.2**	**+2.4**
CAO2	**Cobano, Puntar**	**8.05 129**			**Pn**	**00 46 48.1**	**+0.5**
LAFE	**Finca La Fe, P**	**8.12 127**	⇑*e*P		**Pn**	**00 46 49.0**	**+0.5**
YAIG	**Yautepec**	**8.30 300**	*i* P		**Pn**	**00 46 52.8**	**+1.7**
YAIG	**Yautepec**	**8.30 300**			**Pn**	**00 46 52.8**	**+1.7**
JACO	**JACO, Garabito**	**8.41 127**	*e*P		**Pn**	**00 46 53.5**	**+1.2**
PLIG	**Platanillo**	**8.47 296**	*i* P		**Pn**	**00 46 54.9**	**+1.7**
PLIG	**Platanillo**	**8.47 296**			**Pn**	**00 46 54.9**	**+1.7**
HDC	**Heredia**	**8.64 123**			**Pn**	**00 46 55.9**	**+0.4**
MAVM	**Malinalco, Edo**	**8.71 299**	*e*P		**Pn**	**00 46 58.6**	**+2.2**
MAVM	**Malinalco, Edo**	**8.71 299**			**Pn**	**00 46 58.6**	**+2.2**
CAIG	**El Cayaco**	**8.75 286**	*e*P		**Pn**	**00 46 57.4**	**+0.6**
CAIG			*i* S		**Sn**	**00 48 33.1**	**-0.9**
CAIG	**El Cayaco**	**8.75 286**			**Pn**	**00 46 57.4**	**+0.6**
CAIG					**Sn**	**00 48 33.1**	**-0.9**
OCM	**Ochomogo**	**8.82 123**	*e*P		**Pn**	**00 46 58.4**	**+0.4**
LCR2	**La Lucha 2**	**8.88 124**	*e*P		**Pn**	**00 46 59.1**	**+0.3**
ARIG	**Puente Sto Nin**	**9.18 293**	*i* P		**Pn**	**00 47 04.7**	**+2.2**
ARIG	**Puente Sto Nin**	**9.18 293**			**Pn**	**00 47 04.7**	**+2.2**
CDM	**Cerro de Muert**	**9.18 124**	⇑*e*P		**Pn**	**00 47 03.8**	**+0.8**
BATAN	**Batan**	**9.20 120**			**Pn**	**00 47 03.5**	**+0.7**
PEZE	**Perez Zeledon,**	**9.35 125**	⇑*e*P		**Pn**	**00 47 05.7**	**+0.8**
PEZE	**Perez Zeledon,**	**9.35 125**			**Pn**	**00 47 05.6**	**+0.8**
EDBA	**Buenos Aires**	**9.80 124**	*e*P		**Pn**	**00 47 11.5**	**+0.8**
RIOS	**Rincon, Osa**	**9.89 127**			**Pn**	**00 47 12.0**	**0.0**
ZIIG	**Zihuatanejo**	**9.99 287**	*i* P		**Pn**	**00 47 15.2**	**+2.0**
ZIIG	**Zihuatanejo**	**9.99 287**			**Pn**	**00 47 15.2**	**+2.0**
MOIG	**Morelia**	**10.46 299**	Pn		**Pn**	**00 47 21.3**	**+1.6**
SOR	**Soroa**	**11.25 44**	Pn		**Pn**	**00 47 30.9**	**+1.1**
CBCY	**The Bluff, Cay**	**12.19 65**	Pn		**Pn**	**00 47 42.8**	**+0.7**
ZAIG	**Zacatecas**	**13.13 309**	Pn		**Pn**	**00 47 56.1**	**+1.7**
MTDJ	**Mount Denham**	**13.78 74**			**P**	**00 48 07.4**	**+1.6**
HKT	**Hockley**	**15.57 346**			**P**	**00 48 26.6**	**+1.2**
DWPF	**Disney Wildern**	**16.16 34**	P		**P**	**00 48 32.1**	**+0.1**
DWPF			IAML		IAML	00 48 33.8	
	comp=Z,51nm,0.8s						
DWPF	**Disney Wildern**	**16.16 34**	P			00 48 32.9	
	baz=217						
GTBY	**Guantanamo Bay**	**16.41 70**	P		**Pn**	**00 48 36.6**	**+1.7**
342A	**Flagon Creek P**	**16.48 357**	P		**Pn**	**00 48 37.5**	**+1.9**
342A			IAML		IAML	00 48 41.9	
	comp=Z,29nm,0.8s						
553A	**Crawfordville**	**16.59 22**	P		**Pn**	**00 48 39.3**	**+2.3**
BRAL	**Brewton**	**16.75 13**	P			00 48 41.6	
	baz=195,SNR=6.2						
DBBC	**Dabeiba**	**16.87 116**	*e*P		**Pn**	**00 48 41.2**	**+0.6**
NATX	**Nacogdoches**	**17.09 351**	P		**Pn**	**00 48 43.3**	**+0.3**
NATX			IAML		IAML	00 48 44.7	
	comp=Z,26nm,0.8s						
NATX	**Nacogdoches**	**17.09 351**	P			00 48 44.1	
	baz=170						
VBMS	**Vicksburg**	**17.32 3**	P		**Pn**	**00 48 46.8**	**+1.0**
VBMS			IAML		IAML	00 48 48.7	
	comp=Z,50nm,0.8s						
352A	**Blakely**	**17.61 19**	P		**Pn**	**00 48 50.4**	**+1.1**
250A	**Grady**	**17.71 15**	P		**Pn**	**00 48 51.2**	**+0.8**
ZARC	**Zaragoza, Cauc**	**17.84 112**	*e*P		**P**	**00 48 49.1**	**-1.5**
HELC	**Santa Helena**	**17.86 117**	*e*P		**P**	**00 48 50.5**	**-0.7**
HPIG		**17.89 315**	P		**Pn**	**00 48 53.7**	**+0.9**
HPIG			IAML		IAML	00 49 12.7	
	comp=Z,12nm,0.4s						
TIGA	**Tifton**	**18.03 22**	P		**Pn**	**00 48 55.0**	**+0.9**
TIGA	**Tifton**	**18.03 22**	P			00 48 55.3	
	baz=205,SNR=24						
SMLC	**San Martn de**	**18.05 107**	*e*P		**P**	**00 48 51.8**	**-1.0**
TXAR	**Lajitas Array**	**18.30 324**	P		**Pn**	**00 48 57.8**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=36,slow=16,SNR=6.2						
TXAR			PcP		**PcP**	**00 53 21.6**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=152,slow=2.7,SNR=3.7						
TXAR			ScP		**ScP**	**00 56 42.7**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=145,slow=4.6,SNR=8.5						
TX32	**Lajitas Array**	**18.31 324**	P		**Pn**	**00 48 57.0**	**-0.5**
YOTC	**Yotoco, Valle**	**18.39 124**	*e*P		**P**	**00 48 56.9**	**+0.1**
GUY2C	**Guyana, Caldas**	**18.50 119**	*e*P		**P**	**00 48 58.8**	**+0.5**
LRAL	**Lakeview Retre**	**18.56 12**	P			00 49 01.2	
	baz=194,SNR=13						
LRAL	**Lakeview Retre**	**18.57 12**	P		**Pn**	**00 48 59.8**	**-0.6**
LRAL			IAML		IAML	00 49 04.5	
	comp=Z,27nm,0.8s						
PTBC	**PUERTO BERRIO,**	**18.63 114**	*e*P		**P**	**00 48 56.7**	**-2.5**
NORC	**Norcasia**	**18.74 118**	*e*P		**P**	**00 48 59.9**	**-0.6**
152A	**Waverly Hall**	**18.78 18**	P		**Pn**	**00 49 02.8**	**-0.2**
OCAC	**Ocana**	**18.94 108**	*e*P		**P**	**00 49 01.7**	**-1.1**
CCAR	**Cane Creek**	**19.00 359**	P		**Pn**	**00 49 04.3**	**-1.2**
CCAR			IAML		IAML	00 49 09.5	
	comp=Z,49nm,0.8s						
POPC	**Popayan, Colom**	**19.03 129**	*e*P		**P**	**00 49 04.9**	**+1.1**
ABTX	**Abilene, Hawle**	**19.21 339**	P		**P**	**00 49 06.6**	**+1.2**
ABTX			IAML		IAML	00 49 08.0	
	comp=Z,23nm,0.6s						
ABTX	**Abilene, Hawle**	**19.21 339**	P			00 49 07.6	
	baz=155						
154A	**Montrose**	**19.26 22**	P		**Pn**	**00 49 07.7**	**-0.9**
ORTC	**Ortega, Tolima**	**19.32 123**	*e*P		**P**	**00 49 07.0**	**+0.2**
SOTA	**Rioblanco**	**19.35 129**	*e*P		**P**	**00 49 08.7**	**+1.2**
PCON	**Cinco Dias**	**19.38 128**	*e*P		**Pn**	**00 49 10.0**	**-0.7**
SPBC	**San Pablo de B**	**19.38 116**	*e*P		**P**	**00 49 06.8**	**-0.6**
OTAV	**Otavalo**	**19.39 137**	P		**Pn**	**00 49 09.5**	**-1.3**
OTAV	**Otavalo**	**19.39 137**	*e*P		**Pn**	**00 49 10.3**	**-0.4**
MARP	**Paez Belalcaza**	**19.39 126**	*e*P		**P**	**00 49 09.1**	**+1.3**
GCUF	**Volcan Galeras**	**19.43 133**	*e*P		**Pn**	**00 49 10.0**	**-1.3**
ROSC	**El Rosal**	**19.58 119**	P		**P**	**00 49 10.7**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=137,slow=3.3,SNR=11						
ROSC	**El Rosal**	**19.58 119**	P		**P**		
ROSC			IAML		IAML	00 49 09.8	**-0.1**
	comp=Z,24nm,0.6s					00 49 18.5	
OXF	**Oxford**	**19.68 5**	P		**P**	**00 49 11.0**	**+0.7**
OXF	**Oxford**

OBIP **Obispado Ponce** **24.05** **79** P **P** **00 49 54.5 +0.2**
OBIP IAmb IAmb 00 49 54.8
comp=Z,29nm,1.1s

ANMO **Albuquerque** **24.14** **329** P **P** **00 49 56.9 +1.7**
comp=Z,1.0nm,0.4s,baz=92,slow=5.6,SNR=2.3

T56A **Rocky Mt** **24.33** **23** P 00 49 58.1
baz=208

BLA **Blacksburg** **24.35** **22** P **P** **00 49 57.9 +1.0**
BLA IAmb IAmb 00 50 01.8
comp=Z,27nm,0.8s

BLA **Blacksburg** **24.35** **22** P 00 49 58.2
baz=207

V60A **Jim Taylor Roa** **24.42** **29** P 00 49 58.6
baz=215

S54A **Dingess, Beckl** **24.58** **20** P **P** **00 49 59.7 +0.8**
S54A IAmb IAmb 00 50 00.6
comp=Z,30nm,0.8s

S54A **Dingess, Beckl** **24.58** **20** P 00 49 60.0
baz=204,SNR=6.8

T57A **Hurt** **24.60** **24** P **P** **00 50 00.3 +1.1**
T57A IAmb IAmb 00 50 01.1
comp=Z,20nm,0.6s

T58A **Grand View Acr** **24.85** **25** P 00 50 02.5
baz=211

R54A **Victor** **25.03** **20** P 00 50 03.5
baz=204

U60A **Pendleton** **25.05** **28** P 00 50 04.2
baz=214

S56A **Natural Bridge** **25.08** **23** P 00 50 04.6
baz=208,SNR=5.5

Q51A **Peebles** **25.13** **15** P **P** **00 50 04.6 +0.7**
Q51A IAmb IAmb 00 50 05.6
comp=Z,38nm,0.9s

P49A **Miami Univ. Ec** **25.30** **12** P 00 50 05.2
baz=195

CUPR **Culebra, Puert** **25.32** **79** P **P** **00 50 06.0 +0.2**
CUPR IAmb IAmb 00 50 22.2
comp=Z,62nm,1.3s

S57A **Dark Hollow, R** **25.38** **24** P 00 50 07.2
baz=209

ATAH **Atahualpa** **25.39** **148** P **P** **00 50 09.0 +2.1**
comp=Z,4.0nm,0.6s,baz=190,slow=6.0,SNR=3.7

ATAH PcP **PcP** **00 53 37.0 +1.6**
comp=Z,3.1nm,0.5s,baz=53,slow=4.4,SNR=3.0

R55A **Marlinton** **25.41** **21** P 00 50 08.0
baz=206,SNR=7.6

R55A **Marlinton** **25.42** **21** P **P** **00 50 08.0 +1.4**
R55A IAmb IAmb 00 50 08.7
comp=Z,32nm,0.8s

Q53A **Leroy** **25.48** **18** P 00 50 08.2
baz=203

S58A **Poland Farm, P** **25.62** **25** P 00 50 09.3
baz=211

R56A **Bull Pasture M** **25.78** **22** P 00 50 11.1
baz=208

Q54A **Coxs Mills** **25.81** **19** P **P** **00 50 11.3 +1.3**
R57A **Stanardsville** **26.02** **24** P 00 50 12.8
baz=209

R58A **Rapidan** **26.22** **24** P 00 50 14.7
baz=210

ACSO **Alum Creek Sta** **26.36** **15** P 00 50 15.5
baz=199

Q56A **Snyder Ridge,** **26.42** **22** P 00 50 16.9
baz=207

Q56A **Snyder Ridge,** **26.42** **22** P **P** **00 50 17.0 +1.5**
Q56A IAmb IAmb 00 50 17.5
comp=Z,17nm,0.6s

R59A **King George, V** **26.50** **26** P 00 50 18.0
baz=212

Q57A **Strasburg** **26.70** **23** P 00 50 19.0
baz=209

MCWV **Mont Chateau** **26.74** **20** P 00 50 19.5
baz=206

R60A **Leonardtown, M** **26.79** **27** P 00 50 21.4
baz=213

O53A **New Philadelph** **26.86** **18** P 00 50 19.8
baz=202

Q58A **Fox Den Farm,** **26.90** **24** P 00 50 20.9
baz=210

P56A **Dayton Farm, R** **26.96** **22** P 00 50 21.8
baz=208,SNR=7.2

O54A **Avella** **27.05** **19** P **P** **00 50 21.8 +0.7**
O54A IAmb IAmb 00 50 22.6
comp=Z,24nm,0.7s

L42A **Oliver, Polo** **27.11** **3** P **P** **00 50 21.8 +0.2**
L42A IAmb IAmb 00 50 33.5
comp=Z,26nm,0.7s

P57A **Homestead Farm** **27.24** **23** P 00 50 24.4
baz=209,SNR=12

SDMD **Soldier's Deli** **27.64** **25** P **P** **00 50 27.3 +0.9**
SDMD IAmb IAmb 00 50 28.1
comp=Z,9.6nm,0.6s

L48A **N Adams** **27.68** **11** P **P** **00 50 26.4 -0.4**
L48A IAmb IAmb 00 50 27.0
comp=Z,22nm,0.6s

O56A **Blue Knob Stat** **27.73** **22** P 00 50 28.2
baz=208,SNR=8.4

N54A **Moraine State** **27.88** **19** P 00 50 29.3
baz=204,SNR=8.9

P59A **Jarrettsville** **27.98** **25** P 00 50 30.4
baz=212

O57A **Amberson** **28.02** **23** P 00 50 30.8
baz=209,SNR=8.5

M53A **WI Miller and** **28.11** **17** P **P** **00 50 30.8 +0.3**
M53A IAmb IAmb 00 50 31.9
comp=Z,14nm,0.7s

M53A **WI Miller and** **28.11** **17** P 00 50 30.8
baz=202

O58A **Lewisberry** **28.22** **24** P 00 50 32.4
baz=211

SSPA **Standing Stone** **28.30** **22** P 00 50 33.2
baz=208

SSPA **Standing Stone** **28.30** **22** P **P** **00 50 32.9 +0.7**
MVL **Millersville** **28.34** **25** P **P** **00 50 33.6 +1.1**
MVL IAmb IAmb 00 50 34.5
comp=Z,16nm,0.7s

N56A **West Decatur** **28.40** **21** P 00 50 34.2
baz=208,SNR=8.0

M54A **Oil Creek Stat** **28.48** **19** P 00 50 34.7
baz=204

N57A **Milroy** **28.53** **22** P 00 50 35.2
baz=209,SNR=5.3

O59A **Robesonia** **28.67** **25** P 00 50 36.6
baz=212

L53A **Girard** **28.70** **18** P 00 50 36.1
baz=203

N58A **Sunbury** **28.91** **24** P 00 50 38.3
baz=210

ERPA **Erie** **28.93** **18** P 00 50 38.4
baz=203

M56A **Emporium** **28.94** **21** P 00 50 38.6
baz=207,SNR=5.1

O60A **Telford** **29.00** **26** P 00 50 39.5
baz=213

I42A **Draeger Farm,** **29.04** **4** P **P** **00 50 39.4 +0.7**
I42A IAmb IAmb 00 50 40.0
comp=Z,7.7nm,0.6s

CZSB **Cruzeiro do Su** **29.14** **139** *e*P **P** **00 50 39.9 0.0**
KNB **Kanab** **29.14** **323** P **P** **00 50 42.9 +3.0**
M57A **Sunshine Farm,** **29.19** **22** P **P** **00 50 41.1 +1.0**
M57A **Sunshine Farm,** **29.19** **22** P 00 50 41.2
baz=209,SNR=15

LUPA **Lehigh Univers** **29.25** **26** P **P** **00 50 41.8 +1.1**
N59A **State Game Lan** **29.35** **25** P 00 50 42.7
baz=212,SNR=5.7

MTPU **Mount Pierson** **29.50** **325** P **P** **00 50 45.8 +2.5**
N60A **Cedar Hill Far** **29.59** **26** P 00 50 44.5
baz=213

L56A **Greenwood** **29.73** **21** P 00 50 45.4
baz=208,SNR=5.4

L57A **Andrews Acres** **29.87** **22** P 00 50 46.7
baz=209,SNR=7.3

BBSR **BB Station** **29.97** **50** P **P** **00 50 47.8 +0.7**
M59A **Waymart** **30.02** **24** P 00 50 48.3
baz=212,SNR=5.4

M60A **Port Jervis** **30.17** **26** P 00 50 49.6
baz=214

I51A **Listowel** **30.21** **15** P 00 50 49.2
baz=200,SNR=5.9

L58A **Harry Jones Me** **30.28** **23** P 00 50 50.5
baz=211,SNR=6.8

SPMN **Marine on St.** **30.31** **358** P **P** **00 50 50.0 +0.1**
SPMN **Marine on St.** **30.31** **358** P 00 50 50.1
baz=177,SNR=6.6

K56A **Middlesex** **30.31** **21** P 00 50 50.7
baz=208,SNR=14

BINY **Binghamton** **30.36** **23** P 00 50 51.3
baz=211,SNR=10

M61A **Granite Spring** **30.52** **27** P 00 50 52.7
baz=215

K57A **Scipio Center** **30.63** **22** P 00 50 53.3
baz=209,SNR=11

L59A **Walton** **30.72** **24** P 00 50 54.5
baz=212,SNR=6.3

L60A **Shokan** **30.89** **25** P 00 50 55.9
baz=214,SNR=5.4

K58A **Earlville** **30.98** **23** P 00 50 56.6
baz=211,SNR=18

J56A **Wolcott** **30.98** **21** P 00 50 56.5
baz=208,SNR=24

KSCT **Kent School, K** **30.98** **27** P **P** **00 50 56.7 +0.8**
KSCT IAmb IAmb 00 50 57.5
comp=Z,22nm,0.8s

K59A **Cooperstown** **31.29** **24** P 00 50 59.3
baz=212

M63A **Gales Ferry** **31.37** **29** P 00 51 00.7
baz=218

M63A **Gales Ferry** **31.37** **29** P **P** **00 51 00.7 +1.4**
J57A **Williamstown** **31.41** **22** P 00 50 59.9
baz=210,SNR=13

H53A **Bobcaygeon** **31.59** **18** P 00 51 01.4
baz=204,SNR=9.0

UCCT **U. Connecticut** **31.60** **28** P **P** **00 51 02.1 +0.8**
SADO **Sadowa** **31.61** **17** P **P** **00 51 01.1 -0.3**
comp=Z,12nm,0.7s,baz=221,slow=9.3,SNR=18

R11A **Troy Canyon, C** **31.65** **322** P **P** **00 51 04.8 +2.8**
R11A **Troy Canyon, C** **31.65** **322** P 00 51 05.2
baz=131

E38A **The Farm, Brul** **31.67** **360** P **P** **00 51 01.7 -0.2**
DELO **Deloro Mine** **31.84** **19** P **P** **00 51 03.7 +0.3**
DELO IAmb IAmb 00 51 05.1
comp=Z,18nm,0.7s

K61A **Williamstown** **31.85** **26** P 00 51 04.3
baz=215

PDAR **Pinedale Array** **31.88** **334** P **P** **00 51 05.9 +1.9**
comp=Z,0.4nm,0.5s,baz=131,slow=9.7,SNR=2.6

PDAR PcP **PcP** **00 53 50.8 -0.2**
comp=Z,0.4nm,0.5s,baz=157,slow=4.9,SNR=3.1

PDAR ScP **ScP** **00 57 20.6 +0.8**
comp=Z,0.5nm,0.7s,baz=155,slow=3.8,SNR=4.1

L63A **North Scituate** **31.94** **29** P 00 51 05.1
baz=218

I57A **Carthage** **31.98** **22** P 00 51 04.9
baz=210

J59A **Piesco** **32.01** **24** P 00 51 05.3
baz=212,SNR=6.8

J59A **Piesco** **32.01** **24** P **P** **00 51 05.0 +0.1**
J59A IAmb IAmb 00 51 06.0
comp=Z,18nm,0.8s

I58A **Old Forge** **32.02** **23** P 00 51 05.6
baz=211,SNR=24

J60A **Lant Hill Farm** **32.26** **25** P 00 51 07.9
baz=214

L64A **Milleborough** **32.35** **29** P 00 51 09.2
baz=219

HRV **Adam Dziewonsk** **32.47** **28** P 00 51 09.4
baz=218

PLVO **Plevna** **32.48** **19** P **P** **00 51 08.9 0.0**
PLVO IAmb IAmb 00 51 25.4
comp=Z,16nm,1.3s

G54A **Lake Saint Pet** **32.49** **18** P 00 51 08.8
baz=204

H57A **Richville** **32.53** **22** P 00 51 09.8
baz=210,SNR=6.2

I59A **Olmsteadville** **32.53** **24** P 00 51 09.4
baz=213

NCB **Newcomb** **32.55** **23** P **P** **00 51 10.1 +0.5**
NCB IAmb IAmb 00 51 10.7
comp=Z,18nm,0.8s

I60A **Shoreham** **32.81** **25** P 00 51 12.4
baz=214,SNR=8.3

REDW **Red Top Meadow** **32.92** **334** P **P** **00 51 13.9 +0.8**
H58A **Gabriels** **32.94** **23** P 00 51 13.2
baz=212,SNR=7.8

LONY **Lake Ozonia** **32.96** **22** P 00 51 13.6
baz=211,SNR=13

ALGO **Algonquin Park** **33.01** **17** P 00 51 13.4
baz=204,SNR=7.2

EYMN **Ely** **33.01** **360** P **P** **00 51 12.6 -0.9**
EYMN IAmb IAmb 00 51 22.7
comp=Z,34nm,1.4s

G57A **Newington** **33.23** **22** P 00 51 15.8
baz=210,SNR=6.8

J63A **Strafford** **33.29** **28** P 00 51 17.0
baz=218

H59A **Cadyville** **33.32** **23** P 00 51 16.6
baz=212

NVAR **Mina Array Bea** **33.36** **320** P **P** **00 51 20.6 +3.6**
comp=Z,4.8nm,0.6s,baz=134,slow=8.1,SNR=33

NVAR pP **pP** **00 51 51.8 +1.3**
comp=Z,5.1nm,1.0s,baz=135,slow=9.0,SNR=4.8

NVAR PcP **PcP** **00 53 56.2 +1.1**
comp=Z,1.3nm,0.7s,baz=116,slow=4.6,SNR=5.0

NVAR ScP **ScP** **00 57 25.3 +0.3**
comp=Z,0.4nm,0.5s,baz=144,slow=4.8,SNR=4.6

NVAR LR LR 01 08 30.8
comp=Z,35nm,18.3s,baz=231,slow=42

LHV **Little Huntoon** **33.38** **319** P **P** **00 51 20.4 +3.6**
LHV IAmb IAmb 00 51 21.6
comp=Z,6.4nm,0.6s

B35A **Bob, Littlefor** **33.48** **357** P **P** **00 51 17.1 -0.5**
B35A IAmb IAmb 00 51 17.7
comp=Z,7.3nm,0.6s

KVN **Kaiserville** **33.61** **321** P **P** **00 51 22.0 +2.9**
H60A **Morristown** **33.64** **25** P 00 51 19.4
baz=214

I62A **Tamworth** **33.65** **27** P 00 51 19.7
baz=217

F57A **Harrington** **33.95** **21** P 00 51 22.8
baz=210,SNR=5.9

WAKR **Walker** **34.12** **319** P **P** **00 51 26.6 +3.1**
I63A **Otisfield** **34.12** **27** P 00 51 24.7
baz=218

G60A **Masonville** **34.23** **24** P 00 51 24.4
baz=214

YERR **Yerington** **34.28** **320** P **P** **00 51 27.6 +2.7**
MOQ **Mont Orford** **34.44** **24** P **P** **00 51 26.7 +0.7**
E56A **St. Veronique** **34.47** **20** P 00 51 26.6
baz=209,SNR=5.7

D55A **Sainte-Anne-du** **34.75** **19** P 00 51 28.8
baz=208,SNR=11

PTGA **Pitinga** **34.79** **114** LR LR 01 05 31.9
comp=Z,25nm,22.0s,baz=186,slow=36

PTGA **Pitinga** **34.79** **114** P **P** **00 51 27.4 -1.9**
PTGA IAmb IAmb 00 51 28.0
comp=Z,7.9nm,0.8s

PTGA **Pitinga** **34.79** **114** *e*P **P** **00 51 27.4 -1.9**
E58A **La Victoria** **34.94** **22** P 00 51 30.5
baz=212

D56A **ZEC Mazanza, M** **35.01** **20** P 00 51 31.0
baz=209

ETMB **Extrema** **35.02** **133** *e*P **P** **00 51 31.2 -0.1**
G62A **West of Eustis** **35.07** **26** P **P** **00 51 32.0 +0.7**
G62A IAmb IAmb 00 51 32.8
comp=Z,17nm,0.9s

G62A **West of Eustis** **35.07** **26** P 00 51 32.1
baz=217

F60A **Warwick** **35.10** **24** P 00 51 31.9
baz=214,SNR=9.4

H64A **Troy** **35.19** **28** P 00 51 33.4
baz=219

G63A **Kingsbury** **35.38** **27** P 00 51 34.8
baz=218

ULM **Lac du Bonnet** **35.50** **355** P **P** **00 51 34.4 -0.6**
comp=Z,6.4nm,0.6s,baz=169,slow=8.8,SNR=15

ULM ScP **ScP** **00 57 31.6 -0.5**
comp=Z,0.8nm,0.5s,baz=190,slow=2.4,SNR=5.8

ULM **Lac du Bonnet** **35.50** **355** P **P** **00 51 34.5 -0.5**
LRM **Limekiln Ridge** **35.58** **335** P **P** **00 51 37.5 +1.6**
E60A **Ste Agathe de** **35.63** **24** P 00 51 36.4
baz=214,SNR=5.6

PKME **Peaks-Kenny Pk** **35.65** **27** P 00 51 37.0
baz=219

D58A **Chemin du LacG** **35.70** **22** P 00 51 37.1
baz=212,SNR=5.4

G64A **Maxfield** **35.88** **28** P 00 51 38.9
baz=219,SNR=5.8

LATQ **La Tuque** **35.98** **22** P **P** **00 51 39.3 +0.3**
LATQ IAmb IAmb 00 51 39.9
comp=Z,7.6nm,0.6s

LATQ **La Tuque** **35.98** **22** P 00 51 39.4
baz=212

D59A **Saint-Raymond** **36.01** **23** P 00 51 40.2
baz=213

F63A **Nahmakanta, Br** **36.07** **27** P 00 51 40.2
baz=218

H66A **Whiting** **36.19** **30** P 00 51 42.0
baz=222

D60A **Saint Jean D'O** **36.28** **24** P 00 51 42.1
baz=215,SNR=5.2

G65A **Princeton** **36.38** **29** P **P** **00 51 43.4 +0.9**
G65A **Princeton** **36.38** **29** P 00 51 43.7
baz=221,SNR=7.6

F64A **Sherman** **36.53** **27** P 00 51 44.3
baz=220

MATQ **Matagami** **36.61** **15** P 00 51 43.7
baz=203,SNR=8.8

J08A **Circle Bar Ran** **36.63** **326** P **P** **00 51 47.2 +2.4**
SAML **Samuel** **36.67** **128** P **P** **00 51 43.6 -1.8**
SAML IAmb IAmb 00 51 44.6
comp=Z,20nm,0.8s

D61A **St Aubert, Com** **36.81** **24** P 00 51 46.9
baz=216,SNR=5.2

E63A **Oxbow** **36.93** **27** P 00 51 47.4
baz=219

E64A **Bridgewater** **37.19** **27** P 00 51 50.0
baz=220

D63A **Stockholm** **37.54** **26** P 00 51 52.8
baz=219,SNR=5.7

HAL **Halifax** **37.95** **33** P **P** **00 51 55.8 +0.1**
LPAZ **La Paz** **38.57** **142** P **P** **00 52 02.5 +0.5**
comp=Z,3.9nm,0.6s,baz=332,slow=6.7,SNR=18

LPAZ PcP **PcP** **00 54 12.5 +1.1**
comp=Z,2.1nm,0.5s,baz=350,slow=1.8,SNR=9.1

LPAZ **La Paz** **38.57** **142** P **P** **00 52 02.4 +0.5**
PB16 **IPOC Station P** **39.43** **146** P **P** **00 52 10.4 +1.4**
MNMC **Minye Minye** **40.04** **147** P **P** **00 52 15.7 +2.0**
MNMC IAmb IAmb 00 52 16.6
comp=Z,18nm,0.9s

PSGCX **Pisagua** **40.15** **148** P **P** **00 52 15.3 +0.9**
PSGCX IAmb IAmb 00 52 32.1
comp=Z,21nm,1.2s

ITTB **Itaituba** **40.22** **116** *e*P **P** **00 52 12.4 -2.7**
PB11 **IPOC Station P** **40.53** **147** P **P** **00 52 18.6 +1.0**
PB11 IAmb IAmb 00 52 19.9
comp=Z,18nm,1.0s

FFC **Flin Flon** **40.63** **351** P **P** **00 52 19.3 +1.4**
VILB **Vilhena** **41.48** **130** *e*P **P** **00 52 24.7 -0.6**
PB01 **IPOC Station P** **41.68** **148** P **P** **00 52 28.3 +1.4**
PB07 **IPOC Station P** **42.05** **149** P **P** **00 52 32.1 +2.0**
PB07 IAmb IAmb 00 52 37.6
comp=Z,26nm,1.3s

SIV **San Ignacio** **42.89** **134** ScP **ScP** **00 58 01.7 +0.5**
comp=Z,0.5nm,0.5s,baz=4.5,slow=9.1,SNR=3.5

LVC **Limon Verde** **43.28** **149** PcP **PcP**
comp=Z,3.9nm,0.6s,baz=286,slow=6.7,SNR=3.3

CLDB **Colider** **43.61** **124** *e*P **P** **00 52 40.4 -2.1**
FCC **Fort Churchill** **43.89** **358** P **P** **00 52 44.0 -0.1**
FCC IAmb IAmb 00 52 44.8
comp=Z,14nm,0.7s

PTLB **Pontes e Lacer** **43.89** **132** *e*P **P** **00 52 44.0 -0.7**
DRLN **Deer Lake** **44.13** **32** P **P** **00 52 45.9 -0.3**
DRLN IAmb IAmb 00 52 46.6
comp=Z,16nm,0.7s

PB14 **IPOC Station P** **44.28** **152** P **P** **00 52 49.0 +0.9**
AC02 **Maricunga** **46.77** **152** P **P** **00 53 09.8 +2.0**
SNDB **Serra Nova Dou** **47.88** **122** *e*P **P** **00 53 14.4 -1.7**
PP1B **Ponte de Pedra** **48.38** **131** *e*P **P** **00 53 19.4 -0.4**
ARAG **Araguaina, MT** **49.56** **126** *e*P **P** **00 53 27.6 -1.2**
CO03 **El Pedregal** **49.62** **156** P **P** **00 53 30.1 +1.1**
CO03 IAmb IAmb 00 53 37.4
comp=Z,21nm,1.4s

CO02 **Combarbal** **49.82** **157** P **P** **00 53 31.8 +1.2**
CO02 IAmb IAmb 00 53 32.9
comp=Z,19nm,1.0s

YKA **Yellowknife Ar** **50.34** **346** P **P** **00 53 34.2 +0.2**
comp=Z,3.5nm,0.7s,baz=146,slow=8.1,SNR=68

YKA pP **pP** **00 54 09.5 -0.5**
comp=Z,1.6nm,0.7s,baz=145,slow=7.9,SNR=4.2

YKA PcP **PcP** **00 54 49.8 -0.5**
comp=Z,0.5nm,0.8s,baz=147,slow=4.1,SNR=4.2

FRB **Frobisher Bay** **51.38** **13** LR LR 01 17 51.9
comp=Z,27nm,19.4s,baz=164,slow=39

VA03 **San Esteban** **51.39** **157** P **P** **00 53 43.5 +1.2**
VA03 IAmb IAmb 00 53 57.6
comp=Z,16nm,1.1s

DLBC **Dease Lake** **52.11** **335** P **P** **00 53 49.5 +2.2**
BDFB **Brasilia** **52.54** **123** P **P** **00 53 49.9 -1.3**
comp=Z,4.6nm,0.5s,baz=295,slow=8.9,SNR=11

BDFB **Brasilia** **52.54** **123** P **P** **00 53 50.6 -0.5**
BDFB IAmb IAmb 00 53 51.6
comp=Z,5.1nm,0.5s

CPUP **Villa Florida** **52.69** **141** P **P** **00 53 51.0 -0.9**
comp=Z,3.7nm,0.7s,baz=319,slow=8.4,SNR=12

CPUP PcP **PcP** **00 54 59.6 -0.1**
comp=Z,0.9nm,0.3s,baz=292,slow=3.3,SNR=4.5

CPUP **Villa Florida** **52.69** **141** P **P** **00 53 50.9 -1.0**
ITRB **Iturama** **53.04** **129** *e*P **P** **00 53 54.0 -0.7**
PCMB **Pacaembu** **53.55** **132** *e*P **P** **00 53 57.2 -1.1**
IPMB **Ipameri, GO** **53.68** **126** *e*P **P** **00 53 57.9 -1.6**
BI02 **San Fabin de** **54.66** **160** P **P** **00 54 07.5 +1.4**
BI02 IAmb IAmb 00 54 08.6
comp=Z,20nm,1.4s

PTGB **Pitanga** **54.98** **135** *e*P **P** **00 54 07.5 -1.2**
BB19B **Bebedouro** **55.23** **129** *e*P **P** **00 54 10.0 -0.6**
ITQB **Itaqui** **55.57** **143** *e*P **P** **00 54 12.6 -0.1**
FRTB **Fartura** **55.86** **132** *e*P **P** **00 54 14.3 -0.7**
ITAB **Concordia** **56.62** **137** *e*P **P** **00 54 19.8 -0.5**
VAO **Valinhos** **57.54** **130** *e*P **P** **00 54 26.4 -0.5**
BSCB **Bom Sucesso** **58.05** **127** *e*P **P** **00 54 30.1 -0.4**
PET01 **Itanhaem-SP** **58.09** **131** *e*P **P** **00 54 30.2 -0.4**
SFJD **Kangerlussuaq** **58.56** **18** LR LR 01 21 04.4
comp=Z,42nm,19.2s,baz=179,slow=37

PLCA **Paso Flores** **58.60** **161** P **P** **00 54 35.4 +1.5**
comp=Z,4.5nm,0.8s,baz=328,slow=11,SNR=6.3

PLCA **Paso Flores** **58.60** **161** P **P** **00 54 35.5 +1.5**
GDU01 **Guandu, BA** **58.66** **116** *e*P **P** **00 54 33.2 -1.6**
RCBR **Riachuelo** **58.77** **106** P **P** **00 54 34.1 -1.5**
RCBR IAmb IAmb 00 54 34.9
comp=Z,23nm,1.4s

PLTB **Pedras Altas** **58.87** **142** *e*P **P** **00 54 35.6 -0.3**
NBIT **Itapeh - BA** **59.34** **118** *e*P **P** **00 54 38.7 -0.7**
ESAR **Angra dos Reis** **59.44** **128** *e*P **P** **00 54 39.4 -0.5**
L27K **Beaver Creek,** **59.50** **336** P 00 54 40.8
baz=120

BMRM **Bremner River** **59.66** **333** P **P** **00 54 42.2 +1.2**
BMRM IAmb IAmb 00 54 49.9
comp=Z,28nm,1.5s

SJMB **Sao Joao De Ma** **59.69** **122** *e*P **P** **00 54 41.5 -0.3**
INK **Inuvik** **59.79** **343** P **P** **00 54 41.9 +0.3**
RES **Resolute Bay** **59.88** **359** P **P** **00 54 41.3 -0.8**
N25K **Chitina, Valde** **59.94** **334** P 00 54 44.8
baz=117

EGAK **Eagle** **60.13** **338** P **P** **00 54 44.1 +0.1**
EGAK **Eagle** **60.13** **338** P 00 54 44.3
baz=122

KLU **Klutina** **60.46** **333** P 00 54 47.9
baz=115

RIB01 **Linhares ES** **60.65** **123** *e*P **P** **00 54 47.6 -0.6**
SCRK **Sand Creek** **60.79** **336** P 00 54 50.5
baz=118

PAX **Paxson** **60.92** **335** P 00 54 50.3
baz=116

HDA **Harding Lake** **62.14** **336** P 00 54 57.7
baz=116

HDA P 00 54 57.7
baz=116

IL31 **62.28** **337** P **P** **00 54 58.6 +0.2**
ILAR **Eielson Array** **62.28** **337** P **P** **00 54 58.5 0.0**
comp=Z,1.1nm,0.4s,baz=107,slow=5.4,SNR=28

ILAR pP **PcP** **00 55 36.9 +0.1**
comp=Z,1.5nm,1.0s,baz=119,slow=4.1,SNR=3.4

RND **Reindeer** **62.49** **335** P **P** **00 55 01.3 +1.2**
RND IAmb IAmb 00 55 01.7
comp=Z,4.5nm,0.6s

TRF **Thorofare Moun** **63.11** **334** P 00 55 04.8
baz=112

SKT **Skwentna** **63.11** **333** P 00 55 04.7
baz=110

I23K **Minto, Yukon-K** **63.39** **336** P **P** **00 55 06.1 +0.3**
I23K IAmb IAmb 00 55 07.2
comp=Z,4.8nm,0.8s

I23K **Minto, Yukon-K** **63.39** **336** P 00 55 06.3
baz=114

BPAW **Bear Paw Mtn.** **63.64** **335** P 00 55 07.7
baz=112

PPLA **Purkeypile** **63.71** **334** P 00 55 08.4
baz=110

MLY **Manley** **63.88** **336** P **P** **00 55 09.6 +0.5**

MLY					IAmb	IAmb	00 55 10.2	
	comp=Z,8.0nm,0.5s							
MLY	**Manley**	**63.88**	**336**		P		00 55 09.6	
	baz=112,SNR=11							
COLD	**Coldfoot**	**64.55**	**338**		P		00 55 14.8	
	baz=114							
TOLK	**Toolik Lake Re**	**64.91**	**340**		P	**P**	**00 55 16.2**	**+0.4**
TOLK	**Toolik Lake Re**	**64.91**	**340**		P		00 55 16.4	
	baz=115							
SUMG	**Summit**	**65.29**	**15**		P	**P**	**00 55 18.2**	**-0.4**
SUMG					IAmb	IAmb	00 55 28.5	
	comp=Z,11nm,1.4s							
TNA	**Tin City**	**71.00**	**335**		P		00 55 54.6	
	baz=96							
NOR	**Nord**	**73.20**	**9**		IAML		00 56 18.7	
	comp=Z,6.5nm,0.4s							
ESK	**Eskdalemuir**	**76.96**	**36**		P	**P**	**00 56 27.1**	**-1.4**
ESK					IAmb	IAmb	00 56 40.0	
	comp=Z,33nm,1.4s							
ESDC	**Sonseca Array**	**78.79**	**52**		P	**P**	**00 56 37.6**	**-1.5**
	comp=Z,1.9nm,0.8s,baz=288,slow=5.8,SNR=12							
ESDC					pP	**pP**	**00 57 16.3**	**-1.9**
	comp=Z,1.7nm,0.9s,baz=283,slow=5.8,SNR=5.6							
ESBB	**Sonseca Array**	**78.79**	**52**		P	**P**	**00 56 38.0**	**-1.1**
CLF	**Chambon-Foret**	**81.58**	**43**		P	**P**	**00 56 52.8**	**-1.0**
CLF					IAmb	IAmb	00 56 53.5	
	comp=Z,9.9nm,0.7s							
NOA	**NORSAR Array B**	**83.17**	**29**		P	**P**	**00 57 01.7**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=290,slow=5.2,SNR=4.0							
KOWA	**Kowa**	**83.97**	**77**		P	**P**	**00 57 04.8**	**-1.9**
ARCES	**ARCESS Array B**	**85.18**	**18**		P	**P**	**00 57 10.9**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=283,slow=3.8,SNR=11							
BNI	**Bardonecchia**	**85.27**	**45**		P	**P**	**00 57 12.0**	**-0.9**
SENIN	**Lac Senin/Sane**	**85.32**	**43**		P	**P**	**00 57 12.4**	**-0.8**
TUE	**Stuetta**	**86.64**	**43**		P	**P**	**00 57 19.0**	**-0.7**
TUE					IAmb	IAmb	00 57 19.4	
	comp=Z,12nm,1.2s							
ZCCA	**Zocca**	**88.41**	**44**		P	**P**	**00 57 26.9**	**-1.0**
FINES	**FINESS Array B**	**89.52**	**25**		P	**P**	**00 57 32.0**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=225,slow=2.4,SNR=5.3							
TIXI	**Tiksi**	**89.55**	**348**		P	**P**	**00 57 31.9**	**-0.8**
KURK	**Kurchatov**	**114.15**	**7**			**PKiKP**	**01 03 13.2**	**-0.9**
KURBB	**Kurchatov Arra**	**114.23**	**7**		PKP	**PKiKP**	**01 03 13.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=344,slow=1.8,SNR=4.2							
HHC	**Hu-ho-hao-te**	**120.62**	**340**	*e*PKP		**PKPdf**	**01 03 22.9**	**-4.2**
HHC				PP		**PP**	**01 04 52.5**	**-2.8**
HHC				SKS		**SKSac**	**01 10 07.5**	**-3.2**
HHC	**Hu-ho-hao-te**	**120.62**	**340**	SS		SS	01 21 14.5	+2.3
HHC				AMB		AMB		
	comp=Z,78nm,8.2s							
MAW	**Mawson**	**124.69**	**168**	PKP		**PKiKP**	**01 03 34.1**	**0.0**
	comp=Z,1.2nm,0.4s,baz=35,slow=1.6,SNR=1.9							
MAW	**Mawson**	**124.69**	**168**			**PKiKP**	**01 03 34.3**	**+0.2**
CTA	**Charters Tower**	**124.91**	**256**	PKP		**PKiKP**	**01 03 37.0**	**+1.0**
	comp=Z,2.7nm,0.8s,baz=63,slow=6.8,SNR=1.6							
WRA	**Warramunga Arr**	**136.10**	**257**	PKP		**PKiKP**	**01 03 57.9**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=86,slow=2.5,SNR=19							
WRA				SKPbc		**SKPbc**	**01 07 16.9**	**+2.6**
	comp=Z,0.5nm,0.6s,baz=89,slow=3.4,SNR=3.0							
ASAR	**Alice Springs**	**136.43**	**251**	PKP		**PKiKP**	**01 03 59.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=100,slow=1.8,SNR=11							
ASAR				SKPbc		**SKPbc**	**01 07 16.1**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=98,slow=3.0,SNR=4.4							
CMAR	**Chiang Mai Arr**	**145.36**	**342**	PKPbc		**PKPdf**	**01 04 13.2**	**-0.3**
	comp=Z,2.3nm,0.5s,baz=336,slow=3.5,SNR=7.1							

*IDC **02** 00:46:11.1±3.5,36°.36N×96°.92W,h0km,mb3.5/1, mb1 3.4/4,mb1mx3.2/46,mbtmp3.0/4,ML3.5/3,Error ellipse: s-maj=55.1km s-min=18.5km az=102.0*
*ANF **02** 00:46:14.3±0.2,36°.57N×97°.60W,h5km,ML3.6/15,Error ellipse: s-maj=2.2km s-min=1.7km az=174.0*
*TUL **02** 00:46:14.2±1.1,36°.60N±0°.02×97°.61W±0°.06,h6km±7km, ML3.1,mb_Lg3.0/77(NEIC),Error ellipse: s-maj=6.6km s-min=2.4km az=74.0*
*NEIC **02** 00:46:14.4±0.8,36°.58N±0°.02×97°.61W±0°.07,h5km±2km, Error ellipse: s-maj=9.1km s-min=3.0km az=255.0*

ISC 02 00:46:14.3±1.2,36°.58N±0°.02×97°.59W±0.02,h1km±10km, n92,σ0°68/74,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CROK	**Carrier**	**0.32**	**257**	Pg		**Pg**	**00 46 20.7**	**+0.2**
CROK				Sg		**Sg**	**00 46 25.2**	**+0.6**
GC02	**Grant County #**	**0.34**	**322**	Pg		**Pg**	**00 46 20.9**	**0.0**
GC02				Sg		**Sg**	**00 46 25.8**	**+0.4**
KAN13	**South Haven SW**	**0.44**	**12**	Pg		**Pg**	**00 46 22.8**	**0.0**
KAN14	**Manchester OK**	**0.48**	**322**	Pg		**Pg**	**00 46 23.4**	**-0.1**
OK032	**Salt Plains WL**	**0.54**	**295**	Pg		**Pg**	**00 46 24.6**	**-0.1**
OK032				Sg		**Sg**	**00 46 31.9**	**+0.2**
KAN09	**Caldwell North**	**0.56**	**358**	Pg		**Pg**	**00 46 24.8**	**-0.1**
KAN05	**Bluff City Nor**	**0.57**	**337**	Pg		**Pg**	**00 46 25.1**	**-0.1**
KAN01	**Argonia South**	**0.59**	**347**			**Pg**	**00 46 25.4**	**-0.2**
KAN01				Sg		**Sg**	**00 46 33.4**	**+0.2**
KAN10	**Anthony SW Sta**	**0.68**	**324**			**Pg**	**00 46 27.0**	**-0.3**
KAN10				Sg		**Sg**	**00 46 36.1**	**+0.1**
KAN08	**Anthony NE Sta**	**0.71**	**335**	Pg		**Pg**	**00 46 27.7**	**-0.3**
KAN12	**Harper NE Stat**	**0.79**	**336**			**Pg**	**00 46 29.0**	**-0.4**
OK029	**Liberty Lake**	**0.79**	**172**			**Pg**	**00 46 29.6**	**+0.2**
QUOK	**Quay**	**0.82**	**119**	Pg		**Pg**	**00 46 30.3**	**+0.2**
OK031	**S. Brethren Rd**	**0.87**	**135**	IAmb_Lg			00 46 43.5	
	comp=Z,166nm,0.8s							
BCOK	**Bluff Creek, N**	**0.92**	**181**			**Pg**	**00 46 32.0**	**+0.1**
OK030	**Cody Creek RV**	**0.92**	**135**			**Pg**	**00 46 32.1**	**+0.1**
T35A	**Sooner Cattle**	**0.93**	**69**	Pg		**Pg**	**00 46 32.0**	**-0.2**
T35B	**Sooner Cattle**	**0.93**	**69**	P		**Pg**	**00 46 32.0**	**-0.1**
	baz=250,SNR=79							
T35B				S		**Sg**	**00 46 44.5**	**+0.2**
	baz=250							
T35B	**Sooner Cattle**	**0.93**	**69**	P			00 46 32.0	
	baz=250,SNR=79							
T35B				S			00 46 44.5	
	baz=250							
OK025	**Westminster Rd**	**1.02**	**168**			**Pg**	**00 46 33.7**	**0.0**
U32A	**Winter Ranch,**	**1.15**	**260**			**Pg**	**00 46 35.6**	**-0.8**
U32A	**Winter Ranch,**	**1.15**	**260**	P		**Pg**	**00 46 35.5**	**-0.8**
	baz=79,SNR=19							
U32A				S		**Sg**	**00 46 51.4**	**+0.1**
	baz=79							
U32A	**Winter Ranch,**	**1.15**	**260**	P			00 46 35.5	
	baz=79,SNR=19							
U32A				S			00 46 51.4	
	baz=79							
OKCFA	**Oklahoma City**	**1.17**	**174**			**Pg**	**00 46 36.4**	**-0.3**
OKCFA	**Oklahoma City**	**1.17**	**174**	P		**Pg**	**00 46 36.4**	**-0.3**
	baz=354,SNR=11							
OKCFA				S		**Sb**	**00 46 52.6**	**-0.3**
	baz=354							
OKCFA	**Oklahoma City**	**1.17**	**174**	P			00 46 36.4	
	baz=354,SNR=11							
OKCFA				S			00 46 52.6	
	baz=354							
OKCSW	**OKLAHOMA CITY**	**1.18**	**174**			**Pg**	**00 46 36.6**	**-0.2**
FNO	**Franklin**	**1.33**	**173**	Pn		**Pb**	**00 46 39.7**	**-0.3**
TUL1	**Leonard**	**1.60**	**114**	P		**Pn**	**00 46 43.7**	**-0.1**
	baz=295,SNR=7.5							
TUL1				S		**Sb**	**00 47 05.1**	**-0.3**
	baz=295							
TUL1	**Leonard**	**1.60**	**114**	P			00 46 43.7	
	baz=295,SNR=7.5							
TUL1				S			00 47 05.1	
	baz=295							
R32A	**Long Quarter,**	**2.04**	**335**			**Pn**	**00 46 50.1**	**+0.3**
R32A				IAmb_Lg			00 47 22.2	
	comp=Z,82nm,0.7s							
R32A	**Long Quarter,**	**2.04**	**335**	P		**Pn**	**00 46 50.4**	**+0.5**
	baz=154,SNR=37							
R32A				S		**Sn**	**00 47 16.2**	**+0.2**
	baz=154							
R32A	**Long Quarter,**	**2.04**	**335**	P			00 46 50.4	
	baz=154,SNR=37							
R32A				S			00 47 16.2	
	baz=154							
WMOK	**Wichita Mounta**	**2.08**	**208**	Pn		**Pn**	**00 46 50.5**	**+0.2**
WMOK				IAmb_Lg			00 47 21.3	
	comp=Z,47nm,0.8s							
WMOK	**Wichita Mounta**	**2.08**	**208**	P		**Pn**	**00 46 50.5**	**+0.2**
	baz=27,SNR=66							
WMOK	**Wichita Mounta**	**2.08**	**208**	P			00 46 50.5	
	baz=27,SNR=66							
U38A	**Gravette**	**2.59**	**92**	Pn		**Pn**	**00 46 57.1**	**-0.3**
KSU1	**Kansas State U**	**2.63**	**17**			**Pn**	**00 46 58.2**	**+0.3**
KSU1	**Kansas State U**	**2.63**	**17**	P		**Pn**	**00 46 58.0**	**+0.1**
	baz=198,SNR=5.5							
KSU1	**Kansas State U**	**2.63**	**17**	P			00 46 58.0	
	baz=198,SNR=5.5							
X37A	**Clayton**	**2.69**	**137**			**Pn**	**00 46 59.0**	**+0.3**
X37A				IAmb_Lg			00 47 47.3	
	comp=Z,38nm,0.8s							
X37A	**Clayton**	**2.69**	**137**	P		**Pn**	**00 46 58.9**	**+0.3**
	baz=318,SNR=18							
X37A	**Clayton**	**2.69**	**137**	P			00 46 58.9	
	baz=318,SNR=18							
CBKS	**Cedar Bluff**	**2.81**	**323**			**Pn**	**00 46 59.8**	**-0.5**
CBKS	**Cedar Bluff**	**2.81**	**323**	P		**Pn**	**00 47 00.2**	**-0.1**
	baz=142							
CBKS	**Cedar Bluff**	**2.81**	**323**	P			00 47 00.2	
	baz=142							
HHAR	**Hobbs**	**2.96**	**95**			**Pn**	**00 47 02.3**	**-0.2**
Z35A	**Perchaven, San**	**3.25**	**175**	Pn		**Pn**	**00 47 07.3**	**+0.9**
W39A	**Magazine**	**3.39**	**113**			**Pn**	**00 47 08.2**	**-0.1**
W39A				IAmb_Lg			00 48 08.4	
	comp=Z,37nm,0.7s							
W39A	**Magazine**	**3.39**	**113**	S		**Sn**	**00 47 49.6**	**+0.5**
	baz=295							
W39A	**Magazine**	**3.39**	**113**	S			00 47 49.6	
	baz=295							
S39A	**Bolivar**	**3.59**	**71**			**Pn**	**00 47 11.7**	**+0.6**
S39A				IAmb_Lg			00 48 17.2	
	comp=Z,23nm,0.8s							
S39A	**Bolivar**	**3.59**	**71**	P		**Pn**	**00 47 11.0**	**-0.1**
	baz=253,SNR=17							
S39A				S		**Sn**	**00 47 53.7**	**-0.4**
	baz=253							
S39A	**Bolivar**	**3.59**	**71**	P			00 47 11.0	
	baz=253,SNR=17							
S39A				S			00 47 53.7	
	baz=253							
AMTX	**Amarillo**	**3.73**	**244**	IAmb_Lg			00 48 12.0	
	comp=Z,24nm,0.7s							
AMTX	**Amarillo**	**3.73**	**244**	S		**Sn**	**00 47 57.8**	**+0.1**
	baz=62							
AMTX	**Amarillo**	**3.73**	**244**	S			00 47 57.8	
	baz=62							
U40A	**Yellville**	**3.83**	**92**	S		**Sn**	**00 47 59.3**	**-0.7**
	baz=275							
U40A	**Yellville**	**3.83**	**92**	S			00 47 59.3	
	baz=275							
U40A				S			00 47 59.3	
	baz=275							
MIAR	**Mount Ida**	**3.85**	**121**			**Pn**	**00 47 15.4**	**+0.7**
MIAR				IAmb_Lg			00 48 18.3	
	comp=Z,30nm,0.9s							
MIAR	**Mount Ida**	**3.85**	**121**	S		**Sn**	**00 48 00.4**	**-0.2**
	baz=303							
MIAR	**Mount Ida**	**3.85**	**121**	S			00 48 00.4	
	baz=303							
ABTX	**Abilene, Hawle**	**4.29**	**204**	IAmb_Lg			00 48 33.2	
	comp=Z,22nm,0.8s							
MGMO	**Mountain Grove**	**4.31**	**81**			**Pn**	**00 47 21.1**	**+0.1**
MGMO				IAmb_Lg			00 48 40.2	
	comp=Z,20nm,0.7s							
P38A	**Dawn**	**4.42**	**45**	IAmb_Lg			00 48 35.4	
	comp=Z,31nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.47**	**97**			**Pn**	**00 47 22.7**	**-0.5**
WHAR	**Wooly Hollow**	**4.49**	**105**			**Pn**	**00 47 23.5**	**0.0**
WHAR				IAmb_Lg			00 48 35.0	
	comp=Z,43nm,1.1s							
R40A	**Maddies Statio**	**4.57**	**66**	P		**Pn**	**00 47 24.3**	**-0.3**
	baz=250,SNR=25							
R40A	**Maddies Statio**	**4.57**	**66**	P			00 47 24.3	
	baz=250,SNR=25							
WHTX	**Lake Whitney,**	**4.58**	**179**			**Pn**	**00 47 24.2**	**-0.4**
WHTX	**Lake Whitney,**	**4.58**	**179**	P		**Pn**	**00 47 24.5**	**-0.1**
	baz=358							
WHTX	**Lake Whitney,**	**4.58**	**179**	P			00 47 24.5	
	baz=358							
KSCO	**Kaye Shedlock'**	**4.67**	**303**			**Pn**	**00 47 25.3**	**-0.7**
KSCO				IAmb_Lg			00 48 46.8	
	comp=Z,28nm,0.9s							
BGNE	**Belgrade**	**4.84**	**355**	IAmb_Lg			00 48 49.8	
	comp=Z,35nm,0.7s							
MSTX	**Muleshoe**	**4.97**	**240**	Pn		**Pn**	**00 47 31.0**	**+0.8**
LCAR	**Lake Charles**	**5.22**	**94**	Pn		**Pn**	**00 47 34.1**	**+0.5**
LCAR				IAmb_Lg			00 49 01.3	
	comp=Z,17nm,0.8s							
CCM	**Cathedral Cave**	**5.27**	**72**	IAmb_Lg			00 49 02.7	
	comp=Z,18nm,0.8s							
P40A	**Paris**	**5.28**	**54**	IAmb_Lg			00 49 02.1	
	comp=Z,32nm,0.8s							
N38A	**Joes South For**	**5.42**	**38**	IAmb_Lg			00 49 12.2	
	comp=Z,35nm,0.7s							
CCAR	**Cane Creek**	**5.45**	**117**	IAmb_Lg			00 49 05.4	
	comp=Z,43nm,0.8s							
L34A	**Svendsen Farm,**	**5.46**	**10**	IAmb_Lg			00 49 16.9	
	comp=Z,37nm,0.8s							
T25A	**Trinidad**	**5.49**	**278**			**Pn**	**00 47 37.7**	**+0.3**
T25A				IAmb_Lg			00 49 15.9	
	comp=Z,28nm,1.0s							
OGNE	**Ogallala**	**5.57**	**323**	Pn		**Pn**	**00 47 38.7**	**+0.4**
OGNE				IAmb_Lg			00 49 20.8	
	comp=Z,28nm,0.7s							
PBMO	**Poplar Bluff**	**5.76**	**86**	Pn		**Pn**	**00 47 40.6**	**-0.3**
PBMO				IAmb_Lg			00 49 24.6	
	comp=Z,27nm,0.8s							
435B	**Jarrell**	**5.78**	**180**	IAmb_Lg			00 49 28.1	
	comp=Z,22nm,0.8s							
FVM	**French Village**	**5.88**	**74**	Pn		**Pn**	**00 47 42.0**	**-0.7**
FVM				IAmb_Lg			00 49 25.5	
	comp=Z,20nm,0.8s							
SCIA	**State Center**	**6.31**	**31**	IAmb_Lg			00 49 34.0	
	comp=Z,22nm,0.7s							
JCT	**Junction City**	**6.36**	**197**	IAmb_Lg			00 49 49.4	
	comp=Z,24nm,0.9s							
N41A	**Harden Midland**	**6.69**	**50**	IAmb_Lg			00 49 49.2	
	comp=Z,30nm,0.8s							
S44A	**Carbondale**	**6.75**	**78**	IAmb_Lg			00 49 46.4	
	comp=Z,63nm,0.8s							
SIUC	**Southern Illin**	**6.79**	**78**	IAmb_Lg			00 49 48.0	
	comp=Z,44nm,0.8s							
W45A	**Hickory Valley**	**6.97**	**99**	IAmb_Lg			00 49 53.9	
	comp=Z,55nm,0.8s							
Y45A	**Yeager Farm, C**	**7.12**	**110**	IAmb_Lg			00 50 01.0	
	comp=Z,27nm,1.1s							
ECSD	**EROS Data Cent**	**7.18**	**6**	IAmb_Lg			00 50 15.1	
	comp=Z,11nm,1.1s							
L40A	**Anamosa**	**7.37**	**40**	IAmb_Lg			00 50 26.6	
	comp=Z,16nm,0.7s							
ANMO	**Albuquerque**	**7.39**	**260**	Pn		**Pn**	**00 48 07.5**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=42,slow=12,SNR=1.8							
PHWY	**Pilot Hill**	**7.73**	**310**	IAmb_Lg			00 50 37.5	
	comp=Z,13nm,1.0s							
O44A	**Mansfield**	**8.01**	**61**	IAmb_Lg			00 50 27.1	
	comp=Z,21nm,0.7s							
USIN	**University of**	**8.04**	**77**	IAmb_Lg			00 50 28.8	
	comp=Z,21nm,0.8s							
JFWS	**Jewell Farm**	**8.48**	**40**	IAmb_Lg			00 50 41.9	
	comp=Z,16nm,0.8s							
TX32	**Lajitas Array**	**8.84**	**217**	Pn		**Pn**	**00 48 22.7**	**-0.7**
TXAR	**Lajitas Array**	**8.84**	**217**	Pn		**Pn**	**00 48 20.9**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=41,slow=11,SNR=5.7							
TXAR				Lg		Lg	00 50 49.0	
	comp=Z,0.5nm,0.3s,baz=39,slow=32,SNR=3.0							
RSSD	**Black Hills**	**8.99**	**329**	IAmb_Lg			00 51 07.9	
	comp=Z,9.0nm,0.8s							
RWWY	**Rawlins**	**9.04**	**307**	IAmb_Lg			00 51 18.1	
	comp=Z,12nm,0.8s							
BLO	**Bloomington**	**9.13**	**70**	IAmb_Lg			00 51 02.3	
	comp=Z,19nm,0.7s							
K22A	**Casper**	**9.18**	**314**	IAmb_Lg			00 51 20.9	
	comp=Z,12nm,0.9s							
PDAR	**Pinedale Array**	**11.09**	**308**	Pn		Pn	00 49 00.4	+6.1
	comp=Z,0.1nm,0.3s,baz=103,slow=16,SNR=2.3							
PDAR				Lg		Lg	00 52 02.7	
	comp=Z,0.2nm,0.3s,baz=108,slow=32,SNR=4.1							
ILAR	**Eielson Array**	**40.44**	**330**	P		**P**	**00 53 54.2**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=106,slow=6.3,SNR=6.6							

*BJI **02** 00:56:33.6±0.0,28°.71N×86°.38E,h9km,mB4.6/18, mb4.5/37,Ms3.9/10,Ms7 3.6/8*
*NEIC **02** 00:56:39.0±1.1,28°.70N±0°.09×86°.33E±0°.08,h57km±6km, mb4.6/77,Error ellipse: s-maj=12.8km s-min=9.9km az=204.0*
*MOS **02** 00:56:38.2±1.1,28°.77N×86°.38E,h65km,mb4.7/26,Error ellipse: s-maj=7.6km s-min=5.0km az=122.1*
*NDI **02** 00:56:40.8±3.9,28°.71N×86°.44E,h35km±28km,ML4.8, mb4.6(NEIC)*
*DMN **02** 00:56:41.2±0.0,28°.89N×86°.42E,h60km,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*IDC **02** 00:56:43.1±0.7,28°.75N×86°.38E,h95km±6km,mb4.0/31, mb1 4.2/34,mb1mx4.0/62,mbtmp4.4/34,MS3.1/8, Ms1 3.1/8,ms1mx2.9/46,Error ellipse: s-maj=12.7km s-min=9.0km az=55.0*

ISC 02 00:56:41.2±0.5,28.76N±0°.04×86°.39E±0°.03,h80km±4km, h81km;pP-P,n280,σ1§43/299,mb4.5/96,31C-3D,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUN	**Gumba**	**0.95**	**208**	*e*Pg		**Pn**	**00 57 01.9**	**+1.7**
GUN				*e*Sg		**Sn**	**00 57 16.8**	**+2.6**
	21μm,0.3s							
JIRN	**Jiri**	**1.11**	**189**	*e*Pg		**Pn**	**00 57 04.0**	**+2.0**
JIRN				*e*Sg		**Sn**	**00 57 19.8**	**+2.3**
	23μm,0.2s							
KKN	**Kakani**	**1.37**	**226**	*e*Pg		**Pn**	**00 57 06.9**	**+1.7**
KKN				*e*Sg		**Sn**	**00 57 25.0**	**+1.9**
	4μm,0.2s							
PKI	**Pulchoki**	**1.46**	**216**	*e*Pg		**Pn**	**00 57 08.4**	**+2.0**
PKIN	**Phulchoki**	**1.47**	**217**	*e*Pg		**Pn**	**00 57 08.3**	**+1.9**
PKIN				*e*Sg		**Sn**	**00 57 27.8**	**+2.5**
	8μm,0.3s							
DMN	**Daman**	**1.61**	**225**	*e*Pg		**Pn**	**00 57 10.1**	**+1.9**
DMN				*e*Sg		**Sn**	**00 57 31.3**	**+2.7**
	3μm,0.3s							
GKN	**Gorkha**	**1.71**	**244**	*e*Pg		**Pn**	**00 57 10.7**	**+1.2**
GKN				*e*Sg		**Sn**	**00 57 31.9**	**+0.9**
	14μm,0.3s							
RAMN	**Ramite**	**1.81**	**174**	*e*Pg		**Pn**	**00 57 12.1**	**+1.2**
TAPN	**Taplejung**	**1.82**	**140**	*e*Pg		**Pn**	**00 57 12.4**	**+1.3**
TAPN				*e*Sn		**Sn**	**00 57 34.5**	**+0.7**
	2μm,0.3s							
ODAN	**Odare**	**2.09**	**155**	*e*Pg		**Pn**	**00 57 16.2**	**+1.6**
ODAN				*e*Sn		**Sn**	**00 57 40.7**	**+0.8**
	4μm,0.3s							
DANN	**Dangsing**	**2.35**	**261**	*e*Pg		**Pn**	**00 57 18.7**	**+0.6**
DANN				*e*Sg		**Sn**	**00 57 46.6**	**+0.4**
	7μm,0.4s							
GTK	**Tadong**	**2.42**	**126**	*ex*		x	00 51 11.0	
KOLN	**Koldanda**	**2.65**	**249**	*e*Pn		**Pn**	**00 57 22.1**	**+0.1**
KOLN				*e*Sn		**Sn**	**00 57 53.4**	**+0.1**
	1μm,0.3s							
PYUN	**Piuthan**	**3.06**	**258**	*e*Pn		**Pn**	**00 57 27.7**	**+0.1**
PYUN				*e*Sn		**Sn**	**00 58 03.2**	**-0.2**
	2μm,0.4s							
LSA	**Lhasa**	**4.27**	**76**	Pg		Pn	00 57 52.4	+8.2
LSA				Sn		**Sn**	**00 58 32.7**	**-0.4**
LSA	**Lhasa**	**4.27**	**76**	P		**Pn**	**00 57 45.1**	**+0.9**
LSA	**Lhasa**	**4.27**	**76**	Pn		**Pn**	**00 57 45.1**	**+0.9**
BOK	**Bokaro**	**4.96**	**185**	*e*P		**Pn**	**00 57 53.7**	**+0.4**
BOK				*e*S		**Sn**	**00 58 45.7**	**-3.7**
BOK				IAML			00 58 48.1	
	comp=E,605nm,0.1s							
BOK				AMP			00 58 48.2	
	comp=N,5μm,0.3s							
GUWA	**GUWAHATI**	**5.36**	**117**	*e*P		**Pn**	**00 57 58.2**	**-0.5**
GUWA				*e*S		**Sn**	**00 58 52.6**	**-6.4**
SHL	**Shillong**	**5.84**	**122**	P		**Pn**	**00 58 03.7**	**-1.7**
SHL	**Shillong**	**5.84**	**122**	*e*P		**Pn**	**00 58 03.7**	**-1.7**
SHL				*e*S		Sn	00 59 03.0	-8.1
SHL	**Shillong**	**5.84**	**122**	Pn		**Pn**	**00 58 03.7**	**-1.7**
DDI	**Dehra Dun**	**7.42**	**284**	*e*P		**Pn**	**00 58 27.8**	**+0.9**
DDI				*e*S		**Sn**	**00 59 47.0**	**-2.7**
DDI				IAML			00 59 50.3	
	comp=E,2μm,0.3s							
KOHI	**KOHIMA**	**7.51**	**112**	*e*P		**Pn**	**00 58 26.0**	**-2.2**
KOHI				*e*S		Sn	00 59 43.1	-8.7
MOKO	**MOKOCHONG**	**7.61**	**107**	*e*P		**Pn**	**00 58 27.7**	**-1.9**
NDI	**New Delhi**	**8.05**	**272**	*e*P		**Pn**	**00 58 35.0**	**-0.5**
NDI				*e*S		**Sn**	**00 59 59.0**	**-6.0**
SMLA	**Simla**	**8.34**	**289**	*e*P		**Pn**	**00 58 38.6**	**-0.7**
SMLA				*e*S		**Sn**	**01 00 06.4**	**-5.6**
SMLA				AMP			01 00 11.0	
	comp=N,2μm,0.3s							
SAIH	**SAIHA**	**8.62**	**135**	i*e*P		**Pn**	**00 58 44.1**	**+0.6**
DHRM	**DHARAMSHALA**	**9.37**	**294**	*e*P		**Pn**	**00 58 52.6**	**-1.1**
BHPL	**Bhopal**	**9.75**	**238**	*e*P		Pn	00 58 54.9	-3.8
BHPL				*e*S		Sn	01 00 35.7	-11
BHPL				IAML			01 00 39.9	
	comp=E,141nm,0.2s							
BHPL				IAML			01 00 40.2	
	comp=N,176nm,0.2s							
AJM	**Ajmer**	**10.66**	**260**	*e*P		**Pn**	**00 59 08.0**	**-3.1**
NIL	**Nilore**	**12.26**	**297**	P		**Pn**	**00 59 29.5**	**-3.2**
NIL	**Nilore**	**12.26**	**297**			**Pn**	**00 59 29.5**	**-3.2**
SARP	**S

KBL Kabul 15.85 296 Pn **Pn** **01 00 16.8 -3.0**
LZH Lanzhou 16.44 59 ⇑P **Pn** **01 00 24.4 -2.7**
LZH pP P 01 00 35.7 +7.2
LZH pmax pmax
comp=Z,34nm,1.0s
LZH pmax pmax
comp=Z,94nm,5.2s
LZH LR LR
comp=Z,170nm,10.2s
LZH LR LR
comp=Z,210nm,11.6s
LZH LR LR
comp=Z,160nm,12.7s
SUKH Sukhothai 16.55 130 P **P** **01 00 30.0 +0.4**
comp=Z,15nm,0.8s
AAK Ala-Archa 16.86 328 P **P** **01 00 35.2 +2.2**
comp=Z,0.5nm,0.3s,baz=149,slow=8.3,SNR=11
AAK Ala-Archa 16.86 328*ce*P **P** **01 00 34.9 +1.8**
AAK pmax pmax
comp=Z,30nm,1.3s
AAK Ala-Archa 16.86 328 P **Pn** **01 00 32.5 +0.2**
UTTA Uttaradit 17.00 127 P **P** **01 00 35.1 +0.5**
comp=Z,13nm,0.6s
PHIT Phitsanulok 17.28 129 P **P** **01 00 39.7 +2.0**
comp=Z,75nm,0.7s
UTHA Uthaitani 17.83 135 P **Pn** **01 00 45.0 +0.9**
comp=Z,20nm,0.8s
GYA Guiyang 18.12 92 ⇓P **P** **01 00 47.2 +0.2**
GYA S **S** **01 04 05.4 -4.2**
GYA pmax pmax
comp=Z,18nm,0.8s
MK31 Makanchi Array 18.29 351*c i*P **P** **01 00 49.0 +0.4**
MK31 Makanchi Array 18.29 351 P **P** **01 00 48.4 -0.3**
MKAR Makanchi Array 18.29 351 P **P** **01 00 49.2 +0.5**
comp=Z,1.3nm,0.3s,baz=179,slow=10,SNR=44
MKAR LR LR 01 08 26.0
comp=Z,15nm,20.7s,baz=158,slow=38
MKAR Makanchi Array 18.29 351*ce*P **P** **01 00 49.0 +0.4**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MAKZ Makanchi 18.35 350 P **P** **01 00 49.9 +0.6**
MAKZ pmax pmax
comp=Z,7.0nm,0.7s
MAKZ Makanchi 18.35 350 P **P** **01 00 49.9 +0.6**
NONG Nongkai 18.68 121 P **Pn** **01 00 55.0 +0.7**
comp=Z,17nm,0.8s
KK31 Karatay Array 19.19 322 P **P** **01 00 58.0 -0.6**
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KK31 Karatay Array 19.19 322 P **P** **01 00 58.0 -0.6**
KKAR Karatay Array 19.19 322 P **P** **01 00 57.9 -0.6**
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 19.19 322 P **P** **01 00 57.9 -0.6**
CHAI Chaiyaphum 19.26 128 P **Pn** **01 01 01.5 +0.3**
comp=Z,624nmcomp=Z,59nm,0.6s
KHON Khomkaen 19.55 126 P **Pn** **01 01 04.8 +0.3**
XAN Xi'an 19.93 69 P **P** **01 01 05.8 -0.9**
XAN pP Pn 01 01 10.0 +1.0
XAN pmax pmax
comp=Z,12nm,0.8s
XAN Xi'an 19.93 69 P **P** **01 01 05.4 -1.3**
XAN pmax pmax
comp=Z,11nm,0.9s
XAN Xi'an 19.93 69 P **P** **01 01 05.4 -1.3**
PHET Kaeng Krachan 20.01 139 P **Pn** **01 01 09.7 -0.3**
comp=Z,33nm,0.7s
SRAK Srakaew 20.65 132 P Pn 01 01 20.1 +2.6
comp=Z,3μmcomp=Z,414nm,0.8s
DGZ Jazzator, Alta 20.93 2 *i*P **P** **01 01 17.4 0.0**
DGZ pmax pmax
comp=Z,13nm,0.8s
HRA Herat 21.30 291 P **P** **01 01 21.5 -0.1**
PALK Pallekele 22.03 195 P **P** **01 01 31.4 +2.0**
comp=Z,1.2nm,0.5s,baz=246,slow=13,SNR=1.6
PALK LR LR 01 11 26.8
comp=Z,69nm,18.8s,baz=166,slow=40
UBPT Khong Chiam 22.16 123 P **P** **01 01 30.6 -0.1**
UBPT Khong Chiam 22.16 123 P **P** **01 01 29.9 -0.7**
KURBB Kurchatov Arra 22.63 347 P **P** **01 01 36.8 +1.4**
comp=Z,9.7nm,0.7s,baz=165,slow=9.5,SNR=73
KURBB PcP **PcP** **01 05 25.9 +0.6**
comp=Z,0.4nm,0.7s,baz=139,slow=1.8,SNR=3.1
KURK Kurchatov 22.70 347 P **P** **01 01 36.8 +0.7**
KURK 01 05 25.9
KURK Kurchatov 22.70 347 P **P** **01 01 36.8 +0.7**
QIZ Qiongzhong 23.49 109 P P 01 01 51.6 +7.5
QIZ S Sn 01 06 05.0 -13
QIZ LR LR
comp=N,230nm,21.6s
QIZ LR LR
comp=E,170nm,18.6s
QIZ LR LR
comp=Z,150nm,15.7s
QIZ Qiongzhong 23.49 109 P **P** **01 01 44.4 +0.3**
QIZ IAmb IAmb 01 02 02.4
comp=Z,32nm,1.3s
HHC Hu-ho-hao-te 23.85 53 *e*P **P** **01 01 47.3 +0.1**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,120nm,4.7s
HHC LR LR
comp=Z,160nm,12.4s
HHC LR LR
comp=Z,180nm,10.8s
HHC LR LR
comp=Z,120nm,11.1s
WHN Wuhan 24.34 79 ⇓P **P** **01 01 55.7 +4.1**
SONM Songino Array 24.56 34 P **P** **01 01 55.0 +1.4**
comp=Z,3.7nm,0.5s,baz=222,slow=9.7,SNR=30
SONM PcP **PcP** **01 05 30.0 +0.4**
comp=Z,0.8nm,0.5s,baz=224,slow=3.4,SNR=5.3
SONM LR LR 01 13 03.2
comp=Z,45nm,19.1s,baz=188,slow=40
ULN Ulaanbaatar 24.90 34*ce*P **P** **01 01 57.8 +1.1**
ULN pmax pmax
comp=Z,11nm,1.0s
ULN Ulaanbaatar 24.90 34 P **P** **01 01 57.1 +0.4**
ZAK Zakamensk 25.11 26 *e*P **P** **01 01 55.8 -2.7**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
ZAA0 Zalesovo Array 25.20 358 P **P** **01 01 58.8 -0.3**
ZALV Zalesovo Beam 25.20 358 P **P** **01 01 59.6 +0.5**
comp=Z,8.5nm,0.7s,baz=180,slow=8.8,SNR=31
GEYT Alibeck 25.25 299 P **P** **01 02 00.2 +0.4**
comp=Z,1.1nm,0.5s,baz=88,slow=7.6,SNR=4.3
GEYT LR LR 01 14 00.8
comp=Z,41nm,19.8s,baz=50,slow=41
GYA0B ALIBECK ARRAY 25.25 299 P **P** **01 01 58.9 -0.9**
WSAR Wadi Sarin 25.52 264 LR LR 01 13 36.6
comp=Z,43nm,20.7s,baz=88,slow=40
BVAR Borovoye Array 26.97 338 P **P** **01 02 15.6 +0.4**
comp=Z,0.9nm,0.7s,baz=163,slow=15,SNR=2.1
NJ2 Nanjing 28.14 75 *e*P **P** **01 02 26.1 +0.3**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
ABKAR Akbulak array 28.76 323 P **P** **01 02 31.7 +0.6**
GSI Gunungsitoli 29.32 157 P **P** **01 02 36.1 -0.2**
MNSI Mandailing Nat 30.53 153 P **P** **01 02 47.1 0.0**
comp=Z,4μmcomp=Z,37nm,0.5s
BKNI Bangkinang 31.55 151 P **P** **01 02 55.5 -0.6**
SVE Sverdlovsk 33.43 334 *e*P **P** **01 03 13.9 +1.8**
SVE pmax pmax
comp=Z,9.0nm,0.9s
ARU Arti 33.97 332*d i*P **P** **01 03 17.7 +0.9**
ARU 01 04 28.3
ARU S **S** **01 08 40.5 +4.7**
ARU SS **SnSn** **01 10 48.0 -1.9**
ARU pmax pmax
comp=Z,7.0nm,0.7s
ARU Arti 33.97 332 P **P** **01 03 17.2 +0.4**
ARU IAmb IAmb 01 03 18.6
comp=Z,6.6nm,0.7s
SOCY Socotra 34.39 248 P **P** **01 03 18.8 -2.1**
SOCY IAmb IAmb 01 03 36.1
comp=Z,5.1nm,1.1s
BOD Bodaibo 34.85 26 *e*P **P** **01 03 25.4 +1.0**
BOD pmax pmax
comp=Z,9.0nm,0.8s
KSRS Korea Array 35.62 65 P **P** **01 03 30.5 -0.8**
comp=Z,3.0nm,0.6s,baz=260,slow=8.6,SNR=8.6
KSRS LR LR 01 17 48.8
comp=Z,37nm,20.1s,baz=205,slow=36
GNI Garni 35.88 300*ce*P **P** **01 03 34.8 +1.2**
GNI pmax pmax
comp=Z,6.0nm,1.3s
BELG Belogornoye 37.08 320 *i*P **P** **01 03 42.9 -0.6**
BELG pmax pmax
comp=Z,2.0nm,1.0s
NCK Nalchik 37.14 305 *i*P **P** **01 03 45.4 +1.2**
NCK pmax pmax
comp=Z,7.0nm,0.5s
MDJ Mudanjiang 37.62 53 P **P** **01 03 44.6 -3.6**
MDJ pmax pmax
comp=Z,10.0nm,0.9s
MDJ pmax pmax
comp=Z,160nm,3.7s
KBZ Khabaz 37.68 305 P **P** **01 03 49.8 +1.2**
comp=Z,1.8nm,0.8s,baz=122,slow=8.4,SNR=4.7
KBZ Khabaz 37.68 305 *i*P **P** **01 03 49.9 +1.3**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
SHA1 Shidzhatmaz 37.85 305 *i*P **P** **01 03 49.7 -0.7**
KIV Kislovodsk 37.86 306 *e*P **P** **01 03 52.3 +1.9**
KIV pmax pmax
comp=Z,11nm,1.0s
KIV Kislovodsk 37.86 306 P **P** **01 03 50.2 -0.1**
USRK Ussuriysk Ar. 39.25 54 P **P** **01 04 01.8 -0.1**
comp=Z,2.8nm,0.7s,baz=265,slow=8.1,SNR=8.5
KLR Kul'dur 40.02 47*ce*P **P** **01 04 07.3 -0.8**
KLR pmax pmax
comp=Z,4.0nm,1.1s
NRIK Noril'sk 40.62 1 P **P** **01 04 14.1 +1.2**
comp=Z,2.7nm,0.4s,baz=173,slow=7.2,SNR=12
NRIK Noril'sk 40.62 1*ce*P **P** **01 04 13.4 +0.6**
NRIK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 40.62 1 P **P** **01 04 13.4 +0.6**
NRIK IAmb IAmb 01 04 14.7
comp=Z,4.9nm,0.7s
JWT Wachi 41.72 68 P **P** **01 04 22.0 -0.4**
TOLI2 Tolitoli 42.81 124 P **P** **01 04 31.4 0.0**
TOLI2 IAmb IAmb 01 04 33.0
comp=Z,12nm,0.9s
JSD Sado 43.80 64 P **P** **01 04 38.9 -0.2**
JSD IAmb IAmb 01 04 39.7
comp=Z,9.5nm,1.1s
MJAR Matsushiro Arr 43.88 66 P **P** **01 04 39.3 -0.5**
comp=Z,1.9nm,0.6s,baz=277,slow=10,SNR=2.3
MJAR LR LR 01 23 57.2
comp=Z,38nm,18.7s,baz=245,slow=37
ATD Arta Tunnel 44.04 256 P **P** **01 04 40.8 -0.6**
ATD IAmb IAmb 01 04 42.0
comp=Z,6.7nm,1.1s
OBN Obninsk 44.18 321 *e*P **P** **01 04 41.4 -0.4**
OBN *e* 01 06 21.8
OBN *e* 01 06 27.1
OBN pmax pmax
comp=Z,6.0nm,0.9s
ELL Elmali 47.58 295 P **P** **01 05 08.8 -0.3**
ELL pmax pmax
comp=Z,22nm,0.8s
ELL Elmali 47.58 295 P **P** **01 05 08.8 -0.3**
AKASG Malin Array Be 47.77 314 P **P** **01 05 10.0 -0.1**
comp=Z,5.8nm,0.5s,baz=82,slow=6.7,SNR=21
AKASG PcP **PcP** **01 06 37.5 -0.5**
comp=Z,2.5nm,0.9s,baz=79,slow=3.4,SNR=4.2
AKBB Malin Array Si 47.77 314*ce*P **P** **01 05 09.4 -0.8**
AKBB Malin Array Si 47.77 314 P **P** **01 05 10.1 0.0**
AKBB IAmb IAmb 01 05 10.7
comp=Z,6.9nm,0.7s
SORM Soroca 48.19 310 ⇑P **P** **01 05 13.6 +0.2**
SORM Soroca 48.19 310 ⇑P **P** **01 05 13.6 +0.2**
TIXI Tiksi 48.77 17 P **P** **01 05 17.6 0.0**
comp=Z,6.1nm,0.5s,baz=206,slow=4.4,SNR=17
TIXI Tiksi 48.77 17*ce*P **P** **01 05 17.5 0.0**
TIXI pmax pmax
comp=Z,33nm,0.8s
TIXI Tiksi 48.77 17 P **P** **01 05 17.5 0.0**
VRI Vrincioaia 49.29 307 ⇑P **P** **01 05 23.7 +1.8**
VRI Vrincioaia 49.29 307 ⇑P **P** **01 05 23.7 +1.8**
PLOR Plostina 49.34 307 ⇑P **P** **01 05 24.4 +2.0**
PLOR Plostina 49.34 307 ⇑P **P** **01 05 24.4 +2.0**
BIZ Bicaz 49.70 309 ⇑P **P** **01 05 26.1 +1.1**
MLR Muntele Rosu 49.84 307 ⇑P **P** **01 05 28.4 +2.1**
MLR Muntele Rosu 49.84 307 ⇑P **P** **01 05 28.4 +2.1**
MLR Muntele Rosu 49.84 307 P **P** **01 05 26.9 +0.6**
IIGN Ignalina 50.03 320 *e*P **P** **01 05 26.9 -0.5**
ALN Alexandroupoli 50.10 301 P **P** **01 05 28.9 +0.8**
ALN pmax pmax
comp=Z,38nm,1.4s
ALN Alexandroupoli 50.10 301 P **P** **01 05 28.9 +0.8**
ISAL Salakas 50.11 320 *e*P **P** **01 05 28.1 +0.1**
BURAR Bucovina Array 50.29 310 ⇑P **P** **01 05 30.6 +1.0**
BURAR Bucovina Array 50.29 310 ⇑P **P** **01 05 30.6 +1.0**
BUR08 Bucovina Ar. S 50.30 310 P **P** **01 05 30.2 +0.5**
BUR08 IAmb IAmb 01 05 31.1
comp=Z,2.5nm,0.7s
VOIR 50.48 307 ⇑P **P** **01 05 28.8 -2.3**
VOIR 50.48 307 ⇑P **P** **01 05 28.8 -2.3**
FIA1 FINESS Array S 51.05 328 P **P** **01 05 34.8 -0.1**
FIA1 IAmb IAmb 01 05 35.9
comp=Z,11nm,1.1s
FINES FINESS Array B 51.05 328 P **P** **01 05 35.2 +0.3**
comp=Z,2.5nm,0.5s,baz=110,slow=8.2,SNR=28
FINES pP **pP** **01 05 58.4 +1.9**
comp=Z,2.9nm,0.7s,baz=97,slow=7.9,SNR=3.4
PABE Paberze 51.33 320 *e*P **P** **01 05 37.4 +0.3**
MTSE Matsula 51.73 324 *e*P **P** **01 05 37.9 -2.2**
VTS Vitosha 52.01 303 ⇑P **P** **01 05 43.9 +1.3**
VTS Vitosha 52.01 303 ⇑P **P** **01 05 43.9 +1.3**
DRGR 52.03 309 ⇑P **P** **01 05 44.0 +1.4**
DRGR 52.03 309 ⇑P **P** **01 05 44.0 +1.4**
KOLS Kolonicke sedl 52.22 311 *e*P **P** **01 05 44.3 +0.3**
KOLS Kolonicke sedl 52.22 311 *e*P **P** **01 05 44.3 +0.3**
MA2 Magadan 52.76 35 *i*P **P** **01 05 48.1 +0.4**
MA2 pmax pmax
comp=Z,13nm,2.1s
KEV Kevo 52.82 338 P **P** **01 05 48.4 +0.4**
KEV pmax pmax
comp=Z,34nm,1.4s
KEV Kevo 52.82 338 P **P** **01 05 48.4 +0.4**
AGG Agios Georgios 53.18 299 P **P** **01 05 50.1 -1.1**
AGG pmax pmax
comp=Z,21nm,1.4s
AGG Agios Georgios 53.18 299 P **P** **01 05 50.1 -1.1**
ARCES ARCESS Array B 53.25 337 P **P** **01 05 51.6 +0.4**
comp=Z,9.7nm,0.9s,baz=94,slow=5.4,SNR=17
OJC Ojcow 53.78 313 P **P** **01 05 55.4 0.0**
OJC pmax pmax
comp=Z,5.0nm,0.6s
OJC Ojcow 53.78 313 P **P** **01 05 55.4 0.0**
OJC IAmb IAmb 01 05 56.9
comp=Z,4.7nm,0.6s
SEY Seymchan 53.91 31 *i*P **P** **01 05 55.9 -0.2**
FAKI Fak Fak 54.09 118 P **P** **01 05 57.7 -0.4**
MORH Mrgy, Hungar 54.88 308 ⇑P **P** **01 06 04.0 +0.7**
OSTC Ostas 56.04 314 *e*P **P** **01 06 12.3 +0.6**
OSTC *ex* x 01 06 18.8
CHVC Chvalec 56.14 314 *e*P **P** **01 06 12.3 -0.1**
CONA Conrad Observa 56.56 311 *e*P **P** **01 06 16.1 +0.6**
comp=Z,4.1nm,0.9s
ARSA Arzberg 56.88 310 *e*P P 01 06 32.6 +15
comp=Z,0.8nm,0.6s
SOKA Soboth 57.29 309 *e*P **P** **01 06 21.1 +0.4**
comp=Z,1.6nm,0.7s
SOKA *e*P **pP** **01 06 43.3 +0.5**
comp=Z,5.7nm,1.0s
MOA Molln 57.63 311 *e*P **P** **01 06 22.9 -0.2**
comp=Z,7.0nm,1.4s
MOA *e*P **pP** **01 06 45.0 +0.1**
comp=Z,3.8nm,1.0s
GIRL Giralia 57.72 149 P **P** **01 06 25.0 +1.2**
GEC2 GERESS Array S 57.86 312 P **P** **01 06 24.9 +0.2**
GERES GERESS Array B 57.86 312 P **P** **01 06 24.9 +0.2**
comp=Z,1.6nm,0.8s,baz=74,slow=5.7,SNR=7.5
GERES pP **pP** **01 06 48.6 +1.9**
comp=Z,2.2nm,0.9s,baz=91,slow=8.0,SNR=4.3
KHC Kasperske Hory 57.90 312 *e*P **P** **01 06 24.5 -0.4**
KHC *e* 01 06 48.0
KHC Kasperske Hory 57.90 312 *e*P **P** **01 06 24.5 -0.4**
KHC *es*P **pP** **01 06 48.0 +1.1**
KHC Kasperske Hory 57.90 312 P **P** **01 06 25.4 +0.5**
KHC IAmb IAmb 01 06 26.6
comp=Z,1.6nm,0.6s
NC405 NORSAR Array S 57.92 326 P **P** **01 06 24.8 0.0**
CLL Collm 57.98 315 *e*P **P** **01 06 26.0 +0.7**
CLL Collm 57.98 315 *e*P **P** **01 06 26.0 +0.7**
NOA NORSAR Array B 58.17 326 P **P** **01 06 25.9 -0.6**
comp=Z,1.6nm,0.7s,baz=87,slow=7.0,SNR=5.3
ABTA Abfaltersbach 58.99 310 *e*P **P** **01 06 33.5 +0.9**
comp=Z,2.1nm,1.0s
WTTA Wattenberg 59.49 310 *e*P **P** **01 06 35.5 -0.6**
comp=Z,3.3nm,0.7s
WTTA *e*P **pP** **01 06 55.0 -3.3**
comp=Z,5.6nm,1.1s
WATA Walderalm 59.52 310 *e*P **P** **01 06 37.1 +0.9**
comp=Z,1.6nm,0.5s
WATA *e*P **pP** **01 06 56.5 -1.9**
comp=Z,3.1nm,0.9s
SQTA Sankt Quirin 59.78 310 *e*P **P** **01 06 36.8 -1.2**
comp=Z,3.0nm,0.5s
MOTA Moosalm 59.83 310 *e*P **P** **01 06 37.8 -0.6**
comp=Z,3.3nm,0.7s
MOTA *e*P **pP** **01 06 58.3 -2.3**
comp=Z,7.7nm,1.1s
BILL Bilibino 59.90 25 *e*P **P** **01 06 39.1 +0.8**
BILL *e* 01 07 24.5
BILL *e* 01 08 52.0
BILL pmax pmax
comp=Z,4.0nm,1.0s
RETA Reutte 60.03 311 *e*P **P** **01 06 39.6 -0.1**
comp=Z,3.2nm,0.6s
RETA *e*P **pP** **01 07 01.2 -0.7**
comp=Z,5.0nm,1.3s
FITZ Fitzroy Crossi 60.07 136 P **P** **01 06 40.5 +0.4**
comp=Z,2.1nm,0.6s,baz=332,slow=6.1,SNR=11
FITZ Fitzroy Crossi 60.07 136 P **P** **01 06 40.5 +0.4**
FITZ IAmb IAmb 01 06 41.6
comp=Z,9.9nm,1.3s
FETA Feichten 60.14 310 *e*P **P** **01 06 39.4 -1.1**
comp=Z,8.6nm,2.0s
FETA *e*P **pP** **01 06 59.5 -3.3**
comp=Z,3.0nm,1.0s
DAVA Damuels 60.66 311 *e*P P 01 07 04.0 +20
comp=Z,9.9nm,1.0s
TUE Stuetta 61.18 310 P **P** **01 06 47.5 -0.2**
TUE IAmb IAmb 01 06 58.4
comp=Z,7.4nm,1.1s
SENIN Lac Senin/Sane 62.59 310 P **P** **01 06 58.0 +0.9**
SENIN IAmb IAmb 01 07 15.3
comp=Z,7.5nm,1.4s
MORW Morawa 64.11 151 P **P** **01 07 07.0 0.0**
WB0 Warramunga Arr 66.90 130 P **P** **01 07 25.7 +0.6**
WRA Warramunga Arr 66.99 131 P **P** **01 07 26.3 +0.6**
comp=Z,13nm,0.5s,baz=324,slow=6.5,SNR=39
WRAB Tennant Creek 66.99 131 *i*P **P** **01 07 26.1 +0.4**
WRAB pmax pmax
comp=Z,12nm,0.9s
WR0 Warramunga Arr 67.13 130 P **P** **01 07 27.3 +0.6**
WR0 IAmb IAmb 01 07 28.0
comp=Z,7.3nm,0.7s
NWAO Narrogin (SRO) 67.97 152 P **P** **01 07 31.6 -0.1**
comp=Z,6.0nm,0.7s,baz=351,slow=23,SNR=1.8
NWAO Narrogin (SRO) 67.97 152 P **P** **01 07 31.5 -0.1**
NWAO Narrogin (SRO) 67.97 152 P **P** **01 07 31.3 -0.4**
NWAO IAmb IAmb 01 07 48.6
comp=Z,52nm,1.4s
AS31 Alice Springs 69.35 134 P **P** **01 07 40.6 +0.1**
ASAR Alice Springs 69.35 134 P **P** **01 07 41.2 +0.7**
comp=Z,4.7nm,0.6s,baz=318,slow=6.5,SNR=51
LSZ Lusaka 71.26 240 P **P** **01 07 52.6 +0.2**
LSZ pmax pmax
comp=Z,4.0nm,0.5s
LSZ Lusaka 71.26 240 P **P** **01 07 52.6 +0.2**
LSZ IAmb IAmb 01 07 53.2
comp=Z,4.0nm,0.5s
EUNU Eureka 71.34 359 P **P** **01 07 52.9 +1.0**
EUNU IAmb IAmb 01 07 53.8
comp=Z,5.3nm,0.8s
SUMG Summit 72.23 345 P **P** **01 07 58.8 +1.1**
SUMG pmax pmax
comp=Z,9.0nm,1.0s
SUMG Summit 72.23 345 P **P** **01 07 58.8 +1.1**
SUMG IAmb IAmb 01 07 59.5
comp=Z,9.4nm,1.0s
ESDC Sonseca Array 72.53 306 P **P** **01 07 60.0 +0.3**
comp=Z,1.2nm,0.7s,baz=66,slow=6.2,SNR=8.3
TOLK Toolik Lake Re 74.62 18 P **P** **01 08 12.2 +0.8**
TOLK IAmb IAmb 01 08 13.1
comp=Z,9.0nm,0.8s
COLD Coldfoot 75.37 20 P **P** **01 08 16.5 +0.9**
COLD IAmb IAmb 01 08 18.0
comp=Z,4.9nm,1.0s
CTA Charters Tower 75.47 123 P **P** **01 08 17.7 +0.7**
comp=Z,6.0nm,0.9s,baz=337,slow=6.4,SNR=4.8
PVAQ Vaqueiros 76.15 305 P **P** **01 08 20.9 +0.2**
PVAQ IAmb IAmb 01 08 33.9
comp=Z,18nm,1.4s
MLY Manley 76.64 21 IAmb IAmb 01 08 24.9
comp=Z,7.0nm,1.3s
BBOO Buckleboo 77.27 139 P **P** **01 08 27.1 +0.3**
NEA2 Nenana 77.47 21 IAmb IAmb 01 08 29.5
comp=Z,10nm,1.2s
COLA College 77.66 21 *i*P **P** **01 08 27.9 -0.7**
COLA pmax pmax
comp=Z,10.0nm,2.4s
PRP Porcupine Dome 77.92 20 IAmb IAmb 01 08 32.3
comp=Z,3.8nm,0.8s
ILAR Eielson Array 78.03 21 P **P** **01 08 30.3 -0.4**
comp=Z,1.4nm,0.6s,baz=307,slow=4.4,SNR=16
ILAR PP **PP** **01 11 25.4 -1.8**
comp=Z,0.3nm,0.7s,baz=335,slow=4.0,SNR=4.0
RND Reindeer 78.34 22 P **P** **01 08 32.7 +0.2**
RND pmax pmax
comp=Z,6.0nm,1.1s
RND Reindeer 78.34 22 P **P** **01 08 32.6 +0.2**
RND IAmb IAmb 01 08 33.4
comp=Z,5.5nm,1.1s
SKT Skwentna 78.37 24 IAmb IAmb 01 08 33.8
comp=Z,13nm,1.2s
INK Inuvik 78.82 14 P **P** **01 08 35.5 +0.6**
comp=Z,4.1nm,0.6s,baz=348,slow=6.9,SNR=30
INK Inuvik 78.82 14 P **P** **01 08 35.6 +0.6**
INK pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 78.82 14 P **P** **01 08 35.6 +0.6**
INK IAmb IAmb 01 08 36.4
comp=Z,5.6nm,0.9s
LBTB Lobatse 79.19 234 P **P** **01 08 37.8 0.0**
LBTB pmax pmax
comp=Z,17nm,1.5s
LBTB Lobatse 79.19 234 P **P** **01 08 37.8 0.0**
LBTB IAmb IAmb 01 08 56.2
comp=Z,17nm,1.5s
TORD Torodi Ar. Bea 79.21 279 P **P** **01 08 38.0 0.0**
comp=Z,1.0nm,0.5s,baz=56,slow=4.5,SNR=10
TORD pP **pP** **01 09 02.9 +1.8**
comp=Z,1.4nm,0.9s,baz=49,slow=4.6,SNR=3.7
SCRK Sand Creek 79.48 20 IAmb IAmb 01 08 40.2
comp=Z,6.2nm,1.0s
C36M Paulatuk 79.69 11 IAmb IAmb 01 08 40.9
comp=Z,15nm,1.1s
DOT Dot Lake 79.70 20 P **P** **01 08 40.2 +0.3**
DOT IAmb IAmb 01 08 40.4
comp=Z,4.8nm,1.2s
EGAK Eagle 79.72 19 P **P** **01 08 40.3 +0.4**
STKA Stephens Creek 79.94 135 P **P** **01 08 41.6 +0.1**
comp=Z,3.2nm,0.5s,baz=316,slow=5.8,SNR=9.8
STKA Stephens Creek 79.94 135 P **P** **01 08 41.4 -0.1**
K27K Chicken 80.02 20 P **P** **01 08 42.4 +0.8**
K27K IAmb IAmb 01 08 43.6
comp=Z,4.7nm,1.1s
KDAK Kodiak Island 80.69 28 P **P** **01 08 45.9 +0.7**
comp=Z,5.8nm,0.7s,baz=319,slow=8.5,SNR=4.9
DAWY Dawson 80.76 19 IAmb IAmb 01 08 47.5
comp=Z,8.7nm,1.3s
EYAK Cordova Ski Ar 81.39 23 P **P** **01 08 49.8 +0.9**
BOSA Boshof 81.68 231 P **P** **01 08 50.6 -0.4**
comp=Z,2.3nm,0.8s,baz=34,slow=7.3,SNR=4.3
BOSA Boshof 81.68 231 P **P** **01 08 50.8 -0.2**
BOSA pmax pmax
comp=Z,8.0nm,1.5s
BOSA Boshof 81.68 231 P **P** **01 08 50.8 -0.2**
BOSA IAmb IAmb 01 09 05.9
comp=Z,8.1nm,1.5s
EIDS Eidsvold 82.21 124 P **P** **01 08 54.2 +0.5**
EIDS IAmb IAmb 01 08 56.3
comp=Z,14nm,1.4s
KOWA Kowa 83.51 283 P **P** **01 09 01.4 +0.6**
ARMA Armidale 85.61 128 P **P** **01 09 11.9 +0.9**
YKA Yellowknife Ar 87.52 10 P **P** **01 09 19.7 -0.1**
comp=Z,2.5nm,0.7s,baz=336,slow=4.7,SNR=45
YKA Yellowknife Ar 87.52 10⇑*e*P **P** **01 09 19.7 -0.1**

YKA					pmax		pmax		
	comp=Z,2.0nm,0.7s								
DBIC	**Dimbokro**	**87.92**	**276**		P		**P**	**01 09 23.5**	**+0.8**
	comp=Z,3.2nm,0.7s,baz=59,slow=8.0,SNR=5.5								
DBIC	**Dimbokro**	**87.92**	**276**		P		**P**	**01 09 23.4**	**+0.8**
DBIC					IAmb		IAmb	01 09 24.0	
	comp=Z,7.1nm,0.9s								
TXAR	**Lajitas Array**	**121.44**	**10**		PKP		**PKiKP**	**01 15 26.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=220,slow=0.4,SNR=9.6								
CPUP	**Villa Florida**	**147.81**	**266**		PKPbc		**PKPdf**	**01 16 14.6**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=100,slow=4.7,SNR=5.5								
CPUP					pPKPbc		**pPKPdf**	**01 16 42.2**	**+3.6**
	comp=Z,2.8nm,1.0s,baz=112,slow=0.7,SNR=2.8								

GUC ***02*** *00:59:04.1±0.6,21.17S×70.02W,h53km±3km, ML3.7*
IDC ***02*** *00:59:04.4±2.6,21.09S×69.94W,h67km±25km, mb3.1/4, mb1 3.4/6, mb1mx3.3/36, mbtmp3.4/6, MS2.9/1, Ms1 2.9/1, ms1mx2.5/10, Error ellipse: s-maj=36.5km s-min=17.3km az=79.0*

ISC 02 00:59:03.0±0.9, 21°16S±0'03×70°10W±0'06, h56km±8km, n35, σ0892/39, mb3.5/4, 7C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB01	**IPOC Station P**	**0.58**	**79**	↑*iP*		**Pn**	**00 59 15.4**	**-0.3**
PB01				*i* S		**Sn**	**00 59 23.7**	**-1.3**
PB01				IAML			00 59 24.9	
	comp=E,10μm,0.5s							
TA01	**Diego Aracena**	**0.59**	**353**	↑*iP*		**Pn**	**00 59 16.1**	**+0.4**
TA01				*i* S		**Sn**	**00 59 25.5**	**+0.6**
TA01				IAML			00 59 26.6	
	comp=E,4μm,0.4s							
PB07	**IPOC Station P**	**0.60**	**161**	↑*iP*		**Pn**	**00 59 16.3**	**+0.3**
PB07				*i* S		**Sn**	**00 59 25.3**	**-0.2**
PB07				IAML			00 59 26.3	
	comp=E,9μm,0.3s							
PB03	**IPOC Station P**	**0.95**	**160**	↓*iP*		**Pn**	**00 59 20.8**	**+0.4**
PB03				*i* S		**Sn**	**00 59 32.9**	**-0.2**
PB03				IAML			00 59 34.6	
	comp=E,4μm,0.5s							
PB09	**IPOC Station P**	**1.02**	**129**	↓*iP*		**Pn**	**00 59 21.9**	**+0.6**
PB09				*i* S		**Sn**	**00 59 34.9**	**0.0**
PB09				IAML			00 59 36.1	
	comp=E,5μm,0.2s							
PB04	**IPOC Station P**	**1.17**	**182**	↑*iP*		**Pn**	**00 59 23.8**	**+0.4**
PB04				*i* S		**Sn**	**00 59 39.1**	**+0.6**
PB04				IAML			00 59 41.2	
	comp=N,5μm,0.4s							
PB08	**IPOC Station P**	**1.34**	**41**	↑*iP*		**Pn**	**00 59 26.5**	**+0.7**
PB08				*i* S		**Sn**	**00 59 43.4**	**+0.5**
PB08				IAML			00 59 45.6	
	comp=N,2μm,0.6s							
PSGC	**Pisagua**	**1.55**	**359**	↓*iP*		**Pn**	**00 59 28.7**	**+0.3**
PSGC				*i* S		**Sn**	**00 59 48.0**	**+0.5**
PSGC				IAML			00 59 52.0	
	comp=E,814nm,0.3s							
PB06	**IPOC Station P**	**1.62**	**162**	↓*iP*		**Pn**	**00 59 29.7**	**+0.3**
PB06				*i* S		**Sn**	**00 59 49.9**	**+0.6**
PB06				IAML			00 59 54.8	
	comp=N,2μm,0.8s							
PB05	**IPOC Station P**	**1.69**	**183**	↑*iP*		**Pn**	**00 59 30.2**	**-0.1**
PB05				IAML			00 59 56.4	
	comp=N,1μm,0.5s							
LVC	**Limon Verde**	**1.82**	**143**	P		**Pn**	**00 59 33.8**	**+1.5**
	comp=N,98nm,0.3s,baz=8.9,slow=6.9,SNR=911							
LVC				S		**Sn**	**00 59 55.7**	**+1.2**
	comp=N,125nm,0.3s,baz=86,slow=19,SNR=19							
LVC				LR		LR	01 00 22.7	
	comp=N,64nm,21.5s,baz=340,slow=44							
LVC	**Limon Verde**	**1.82**	**143**	*eP*		**Pn**	**00 59 33.8**	**+1.5**
LVC				*eS*		**Sn**	**00 59 55.7**	**+1.2**
MNMC	**Minye Minye**	**2.07**	**13**	↓*eP*		**Pn**	**00 59 36.6**	**+1.0**
PB15	**IPOC Station P**	**2.12**	**164**	*eP*		**Pn**	**00 59 36.9**	**+0.6**
PB15				*i* S		**Sn**	**01 00 02.9**	**+1.2**
PB10	**IPOC Station P**	**2.38**	**190**	*eP*		**Pn**	**00 59 39.3**	**-0.4**
PB16	**IPOC Station P**	**2.86**	**11**	*eP*		**Pn**	**00 59 48.0**	**+1.4**
GO02	**Mina Guanaco**	**4.02**	**173**	↑*iP*		**Pn**	**01 00 01.9**	**-0.3**
GO02				*eS*		**Sn**	**01 00 49.6**	**+1.4**
AC01	**Pan de Azucar**	**4.99**	**185**	*eP*		**Pn**	**01 00 13.2**	**-2.2**
LPAZ	**La Paz**	**5.19**	**21**	P		**Pn**	**01 00 19.2**	**+0.6**
	comp=N,0.2nm,0.3s,baz=191,slow=7.7,SNR=3.0							
SIV	**San Ignacio**	**9.98**	**61**	P		**Pn**	**01 01 22.1**	**-1.7**
	comp=N,0.6nm,0.3s,baz=245,slow=12,SNR=13							
CPUP	**Villa Florida**	**12.78**	**116**	LR		LR	01 07 06.5	
	comp=N,55nm,22.0s,baz=269,slow=38							
H03N1	**Juan Fernandez**	**14.52**	**211**	T		T	01 17 15.6	
	baz=34,slow=72,SNR=68							
H03N2	**Juan Fernandez**	**14.53**	**211**	T		T	01 17 20.7	
	baz=34,slow=72,SNR=49							
H03N3	**Juan Fernandez**	**14.54**	**211**	T		T	01 17 21.3	
	baz=34,slow=72,SNR=51							
BDFB	**Brasilia**	**21.65**	**79**	P		**P**	**01 03 48.2**	**-0.8**
	comp=N,0.9nm,0.4s,baz=246,slow=18,SNR=1.6							
TXAR	**Lajitas Array**	**59.72**	**326**	P		**P**	**01 09 01.9**	**-0.1**
	comp=N,0.1nm,0.3s,baz=162,slow=3.6,SNR=1.4							
TORD	**Torodi Ar. Bea**	**78.29**	**71**	P		**P**	**01 10 56.7**	**-0.7**
	comp=N,0.3nm,0.5s,baz=258,slow=6.5,SNR=2.1							
YKA	**Yellowknife Ar**	**90.50**	**341**	P		**P**	**01 11 58.5**	**+0.3**
	comp=N,0.3nm,0.9s,baz=135,slow=5.3,SNR=5.1							
H11S2	**WAKE ISLAND Hy**	**126.73**	**278**	T		T	03 37 19.1	
	baz=102,slow=74,SNR=233							
H11S1	**WAKE ISLAND Hy**	**126.74**	**278**	T		T	03 37 19.5	
	baz=102,slow=74,SNR=120							
H11S3	**WAKE ISLAND Hy**	**126.75**	**278**	T		T	03 37 20.4	
	baz=102,slow=74,SNR=112							
H11N3	**WAKE ISLAND Hy**	**126.81**	**279**	T		T	03 37 24.6	
	baz=102,slow=75,SNR=64							
H11N2	**WAKE ISLAND Hy**	**126.82**	**279**	T		T	03 37 25.7	
	baz=102,slow=75,SNR=62							
H11N1	**WAKE ISLAND Hy**	**126.82**	**279**	T		T	03 37 26.0	
	baz=102,slow=75,SNR=46							
MKAR	**Makanchi Array**	**146.00**	**35**	PKPbc		**PKPdf**	**01 18 35.7**	**+0.1**
	comp=N,0.3nm,0.6s,baz=332,slow=3.0,SNR=4.3							
MKAR				pPKPbc		**pPKPdf**	**01 18 53.2**	**+0.6**
	comp=N,0.5nm,0.8s,baz=336,slow=2.7,SNR=4.1							

IDC ***02*** *01:15:18.6±0.5,29.45N×43.00W,h0km,mb4.1/25, mb1 4.3/25, mb1mx4.1/54, mbtmp4.1/25, MS3.6/13, Ms1 3.6/13, ms1mx3.4/33, Error ellipse: s-maj=17.3km s-min=13.3km az=165.0*
NEIC ***02*** *01:15:19.5±1.3, 29.3N±0.1×42.9W±0.1, h10km±1km, mb4.6/23, Error ellipse: s-maj=20.7km s-min=19.1km az=153.0*

ISC 02 01:15:20.6±0.5, 29°36N±0'10×42°91W±0'08, h14km, n90, σ0869/84, mb4.4/46, MS3.6/13, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H05S1	**Guadeloupe/Mar**	**22.26**	**232**	T		T	01 43 00.7	
SJG	**San Juan**	**23.99**	**247**	LR		LR	01 27 48.9	
	comp=Z,44nm,21.0s,baz=84,slow=31							
MDP	**Montagnes des**	**25.83**	**203**	LR		LR	01 28 57.3	
	comp=Z,22nm,19.7s,baz=158,slow=32							
ESDC	**Sonseca Array**	**33.47**	**62**	P		**P**	**01 21 59.4**	**0.0**
	1.4nm,0.8s,baz=268,slow=8.7,SNR=9.1							
ESDC				PcP		**PcP**	**01 24 40.1**	**-0.3**
	0.6nm,1.0s,baz=229,slow=1.6,SNR=4.5							
ESDC				LR		LR	01 32 29.6	
	comp=Z,58nm,19.8s,baz=260,slow=31							
ESBB	**Sonseca Array**	**33.47**	**62**	P		**P**	**01 21 58.6**	**-0.8**
ESBB				IAmb		IAmb	01 22 04.5	
	comp=Z,25nm,1.9s							
ROSC	**El Rosal**	**38.44**	**237**	LR		LR	01 38 42.7	
	comp=Z,53nm,19.4s,baz=69,slow=36							
KOWA	**Kowa**	**38.79**	**104**	P		**P**	**01 22 45.7**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=326,slow=4.8,SNR=4.6							
KOWA	**Kowa**	**38.79**	**104**	P		**P**	**01 22 44.9**	**-0.2**
KOWA				IAmb		IAmb	01 22 46.3	
	comp=Z,20nm,2.0s							
DBIC	**Dimbokro**	**42.35**	**115**	LR		LR	01 38 48.9	
	comp=Z,147nm,19.0s,baz=280,slow=33							
SUMG	**Summit**	**43.34**	**2**	*iP*		**P**	**01 23 21.4**	**-0.8**
SUMG	**Summit**	**43.34**	**2**	P		**P**	**01 23 22.3**	**0.0**
SUMG				IAmb		IAmb	01 23 22.9	
	comp=Z,7.2nm,0.9s							
TAM	**Tamanrasset**	**43.75**	**87**	P		**P**	**01 23 25.2**	**-0.7**
DAVA	**Damuels**	**44.22**	**51**	*eP*		**P**	**01 23 29.4**	**-0.1**
	comp=Z,7.6nm,1.1s							
TOA0	**Torodi Ar. Sit**	**44.30**	**102**	P		**P**	**01 23 29.5**	**-0.7**
TOA0				IAmb		IAmb	01 23 37.4	
	comp=Z,15nm,1.4s							
TORD	**Torodi Ar. Bea**	**44.30**	**102**	P		**P**	**01 23 30.2**	**0.0**
	comp=Z,2.1nm,0.9s,baz=293,slow=4.1,SNR=8.7							
TORD				LR		LR	01 41 22.0	
	comp=Z,60nm,18.2s,baz=345,slow=35							
L34A	**Svendsen Farm,**	**44.56**	**301**	P		**P**	**01 23 33.9**	**+1.9**
ULM	**Lac du Bonnet**	**44.64**	**313**	P		**P**	**01 23 30.7**	**-1.9**
	comp=Z,1.5nm,0.6s,baz=70,slow=11,SNR=3.7							
ULM				LR		LR	01 41 26.3	
	comp=Z,74nm,18.7s,baz=78,slow=35							
ULM	**Lac du Bonnet**	**44.64**	**313**	P		**P**	**01 23 31.7**	**-0.8**
FETA	**Feichten**	**44.78**	**51**	*eP*		**P**	**01 23 34.6**	**+0.7**
	comp=Z,7.3nm,1.4s							
RETA	**Reutte**	**44.83**	**51**	*eP*		**P**	**01 23 34.7**	**+0.4**
	comp=Z,4.3nm,1.0s							
BDFB	**Brasilia**	**45.01**	**187**	P		**P**	**01 23 36.3**	**+0.4**
	comp=Z,2.6nm,0.9s,baz=37,slow=2.5,SNR=3.9							
BDFB				LR		LR	01 40 57.3	
	comp=Z,73nm,18.7s,baz=116,slow=34							
BDFB	**Brasilia**	**45.01**	**187**	P		**P**	**01 23 34.8**	**-1.1**
BDFB				IAmb		IAmb	01 23 43.7	
	comp=Z,6.7nm,1.1s							
MOTA	**Moosalm**	**45.05**	**51**	*eP*		**P**	**01 23 36.8**	**+0.7**
	comp=Z,9.4nm,1.6s							
SQTA	**Sankt Quirin**	**45.12**	**51**	*eP*		**P**	**01 23 36.8**	**+0.3**
	comp=Z,3.9nm,0.7s							
WATA	**Walderalm**	**45.37**	**51**	*eP*		**P**	**01 23 38.9**	**+0.3**
	comp=Z,3.2nm,0.6s							
WTTA	**Wattenberg**	**45.41**	**51**	*eP*		**P**	**01 23 39.5**	**+0.6**
	comp=Z,5.8nm,0.9s							
FCC	**Fort Churchill**	**45.45**	**325**	P		**P**	**01 23 39.1**	**+0.3**
ABTA	**Abfaltersbach**	**45.99**	**52**	*eP*		**P**	**01 23 43.5**	**+0.1**
	comp=Z,10nm,1.4s							
H10N2	**ASCENSION HYDR**	**46.00**	**139**	T		T	02 12 41.1	
	baz=325,slow=75,SNR=508							
H10N3	**ASCENSION HYDR**	**46.00**	**139**	T		T	02 12 41.2	
	baz=325,slow=75,SNR=431							
H10N1	**ASCENSION HYDR**	**46.02**	**139**	T		T	02 12 42.4	
	baz=325,slow=75,SNR=408							
KBA	**Koelnbreinsper**	**46.57**	**52**	*eP*		**P**	**01 23 48.6**	**+0.6**
	comp=Z,3.5nm,0.9s							
KHC	**Kasperske Hory**	**46.81**	**49**	*eP*		**P**	**01 23 49.2**	**-0.6**
H10S3	**ASCENSION HYDR**	**46.82**	**140**	T		T	02 13 41.5	
	baz=256,slow=74,SNR=104							
H10S2	**ASCENSION HYDR**	**46.83**	**140**	T		T	02 13 37.1	
	baz=324,slow=74,SNR=56							
CKRC	**Cesky Krumlov**	**47.28**	**49**	*eP*		**P**	**01 23 52.9**	**-0.5**
OBKA	**Obir**	**47.38**	**52**	*eP*		**P**	**01 23 54.2**	**-0.2**
	comp=Z,5.8nm,0.8s							
NOA	**NORSAR Array B**	**47.54**	**32**	P		**P**	**01 23 55.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=254,slow=7.9,SNR=3.4							
ARSA	**Arzberg**	**48.05**	**51**	*eP*		**P**	**01 23 59.0**	**-0.5**
	comp=Z,3.8nm,0.9s							
CONA	**Conrad Observa**	**48.29**	**50**	*eP*		**P**	**01 24 00.8**	**-0.6**
	comp=Z,8.2nm,1.7s							
CHVC	**Chvalec**	**48.49**	**47**	*eP*		**P**	**01 24 03.2**	**+0.4**
DPC	**Dobruska-Polom**	**48.65**	**47**	*eP*		**P**	**01 24 04.0**	**-0.1**
LPAZ	**La Paz**	**51.50**	**212**	P		**P**	**01 24 26.6**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=30,slow=8.1,SNR=3.9							
LPAZ	**La Paz**	**51.50**	**212**	P		**P**	**01 24 25.7**	**-1.0**
TX31	**Lajitas Ar. Si**	**52.40**	**286**	P		**P**	**01 24 31.9**	**-0.9**
TX32	**Lajitas Array**	**52.40**	**286**	P		**P**	**01 24 31.9**	**-0.8**
TXAR	**Lajitas Array**	**52.40**	**286**	P		**P**	**01 24 32.0**	**-0.7**
	comp=Z,1.9nm,1.1s,baz=101,slow=6.5,SNR=9.9							
TXAR				PcP		**PcP**	**01 25 43.6**	**0.0**
	comp=Z,0.3nm,0.7s,baz=93,slow=5.8,SNR=1.8							
TXAR				LR		LR	01 44 41.0	
	comp=Z,26nm,21.3s,baz=0.0,slow=34							
FNA	**Florina**	**52.77**	**59**	P		**P**	**01 24 34.5**	**-0.8**
BNM	**Barren Site**	**53.62**	**293**	P		**P**	**01 24 41.4**	**-0.5**
BW06	**Boulder Array**	**54.21**	**304**	P		**P**	**01 24 45.8**	**-0.2**
PD31	**Pinedale Array**	**54.21**	**304**	P		**P**	**01 24 45.5**	**-0.5**
PD31				IAmb		IAmb	01 24 46.7	
	comp=Z,11nm,1.2s							
PDAR	**Pinedale Array**	**54.21**	**304**	P		**P**	**01 24 45.5**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=79,slow=7.7,SNR=21							
PDAR				PcP		**PcP**	**01 25 50.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=91,slow=3.8,SNR=1.2							
PDAR				LR		LR	01 46 27.2	
	comp=Z,157nm,19.6s,baz=112,slow=34							
YNE	**Yellowstone No**	**54.21**	**306**	P		**P**	**01 24 46.6**	**+0.5**
YMP	**Mirror Lake Pl**	**54.35**	**306**	P		**P**	**01 24 48.3**	**+1.1**
BUR08	**Bucovina Ar. S**	**54.59**	**50**	P		**P**	**01 24 47.0**	**-1.5**
FINES	**FINESS Array B**	**54.67**	**33**	P		**P**	**01 24 48.6**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=250,slow=5.5,SNR=6.5							
ARCES	**ARCESS Array B**	**55.28**	**23**	P		**P**	**01 24 52.5**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=324,slow=6.0,SNR=3.8							
YKA	**Yellowknife Ar**	**55.99**	**328**	P		**P**	**01 24 56.9**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=91,slow=7.7,SNR=12							
YKA				PcP		**PcP**	**01 25 56.2**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=98,slow=5.6,SNR=6.7							
SPUT	**South Promonto**	**56.59**	**302**	P		**P**	**01 25 03.8**	**+0.7**
AKASG	**Malin Array Be**	**56.85**	**46**	P		**P**	**01 25 04.0**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=276,slow=6.4,SNR=17							
MFID	**Camas Ranch**	**58.60**	**305**	P		**P**	**01 25 16.9**	**-0.4**
MFID				IAmb		IAmb	01 25 18.4	
	comp=Z,4.5nm,0.9s							
ELK	**Elko**	**58.77**	**302**	P		**P**	**01 25 19.3**	**+0.8**
R11A	**Troy Canyon, C**	**59.62**	**300**	P		**P**	**01 25 23.9**	**-0.5**
R11A				IAmb		IAmb	01 25 35.2	
	comp=Z,6.1nm,1.6s							
J08A	**Circle Bar Ran**	**60.50**	**306**	P		**P**	**01 25 30.3**	**0.0**
J08A				IAmb		IAmb	01 25 31.7	
	comp=Z,12nm,1.3s							
OBN	**Obninsk**	**60.60**	**40**	P		**P**	**01 25 30.5**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=192,slow=5.4,SNR=4.3							
KVN	**Kaiserville**	**61.33**	**301**	P		**P**	**01 25 36.7**	**+0.6**
NVAR	**Mina Array Bea**	**61.65**	**300**	P		**P**	**01 25 37.8**	**-0.6**
	comp=Z,1.9nm,1.0s,baz=81,slow=5.6,SNR=5.9							
NVAR				LR		LR	01 50 17.9	
	comp=Z,68nm,21.3s,baz=90,slow=34							
PAHR	**Pah Rah Range**	**62.10**	**302**	P		**P**	**01 25 41.9**	**+0.7**
BRTR	**Keskin Array B**	**62.15**	**58**	P		**P**	**01 25 41.6**	**0.0**
	comp=Z,1.5nm,0.9s,baz=256,slow=4.3,SNR=3.8							
KBZ	**Khabaz**	**67.53**	**51**	P		**P**	**01 26 17.6**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=328,slow=4.4,SNR=6.3							
ILAR	**Eielson Array**	**69.49**	**334**	P		**P**	**01 26 27.9**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=56,slow=4.3,SNR=6.5							
ILAR				LR		LR	01 56 23.2	
	comp=Z,79nm,19.8s,baz=116,slow=36							
GNI	**Garni**	**70.08**	**55**	P		**P**	**01 26 33.1**	**+0.6**
	comp=Z,4.1nm,1.0s,baz=168,slow=4.1,SNR=6.1							
GNI	**Garni**	**70.08**	**55**	P		**P**	**01 26 32.4**	**-0.1**
PLCA	**Paso Flores**	**74.30**	**201**	P		**P**	**01 26 58.8**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=301,slow=17,SNR=4.0							
AKTO	**Aktyubinsk**	**74.38**	**41**	P		**P**	**01 26 58.2**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=299,slow=5.1,SNR=8.7							
NRIK	**Noril'sk**	**75.23**	**16**	P		**P**	**01 27 03.9**	**+1.5**
	comp=Z,2.3nm,0.7s,baz=323,slow=6.0,SNR=5.3							
NRIK	**Noril'sk**	**75.23**	**16**	P		**P**	**01 27 02.9**	**+0.5**
BRVK	**Borovoye**	**79.55**	**34**	P		**P**	**01 27 27.1**	**+0.2**
GEYT	**Alibeck**	**80.41**	**52**	P		**P**	**01 27 33.1**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=80,slow=2.6,SNR=4.3							
KMBO	**Kilima Mbogo**	**81.98**	**96**	LR		LR	02 04 21.5	
	comp=Z,101nm,18.0s,baz=78,slow=36							
ZAA0	**Zalesovo Array**	**85.54**	**28**	P		**P**	**01 27 58.5**	**+0.4**
ZAA0				IAmb		IAmb	01 27 59.6	
	comp=Z,7.8nm,1.3s							
ZALV	**Zalesovo Beam**	**85.54**	**28**	P		**P**	**01 27 58.8**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=289,slow=5.8,SNR=11							
AAK	**Ala-Archa**	**88.12**	**41**	P		**P**	**01 28 10.7**	**-0.5**
AAK				IAmb		IAmb	01 28 13.6	
	comp=Z,3.2nm,0.9s							
MAKZ	**Makanchi**	**89.34**	**34**	P		**P**	**01 28 17.1**	**+0.5**
MK31	**Makanchi Array**	**89.50**	**34**	P		**P**	**01 28 17.0**	**-0.4**
MK31				IAmb		IAmb	01 28 18.6	
	comp=Z,3.1nm,1.1s							
MKAR	**Makanchi Array**	**89.50**	**34**	P		**P**	**01 28 17.3**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=328,slow=4.3,SNR=21							
VNDA	**Vanda**	**130.43**	**187**	PKP		**PKiKP**	**01 34 30.4**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=252,slow=6.2,SNR=4.5							
URZ	**Urewera**	**145.80**	**244**	PKPbc		**PKPab**	**01 34 59.9**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=300,slow=24,SNR=2.2							
WRA	**Warramunga Arr**	**170.30**	**16**	PKPab		**PKPab**	**01 36 44.8**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=348,slow=4.7,SNR=3.4							
ASAR	**Alice Springs**	**173.65**	**27**	PKP		**PKPdf**	**01 35 29.8**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=238,slow=1.7,SNR=3.4							
ASAR				PKPab		**PKPab**	**01 36 60.0**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=328,slow=4.4,SNR=4.8							

IDC 02 01:26:45.4±1.3, 23°16S×114°94W, h0km, mb3.5/5, mb1 3.9/5, mb1mx3.7/31, mbtmp3.5/5, MS3.6/8, Ms1 3.6/8, ms1mx3.4/20, Error ellipse: s-maj=46.5km s-min=40.6km az=38.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RPN	**Rapa Nui**	**6.43**	**129**	LR		LR	01 30 09.2	
	comp=Z,350nm,19.2s,baz=294,slow=32							
H03N2	**Juan Fernandez**	**33.17**	**116**	T		T	02 08 19.2	
	baz=283,slow=75,SNR=28							
H03N3	**Juan Fernandez**	**33.18**	**116**	T		T	02 08 21.7	
	baz=283,slow=75,SNR=34							
H03N1	**Juan Fernandez**	**33.19**	**116**	T		T	02 08 23.1	
	baz=283,slow=75,SNR=26							
PLCA	**Paso Flores**	**41.06**	**126**	LR		LR	01 46 56.3	
	comp=Z,143nm,18.4s,baz=302,slow=30							
LPAZ	**La Paz**	**44.44**	**90**	P		P	01 34 59.4	+0.2
	1.3nm,0.9s,baz=238,slow=3.1,SNR=3.6							
LPAZ				LR		LR	01 49 28.1	
	comp=Z,48nm,18.6s,baz=300,slow=31							
SIV	**San Ignacio**	**51.02**	**92**	LR		LR	01 53 01.8	
	comp=Z,40nm,19.0s,baz=256,slow=31							
CPUP	**Villa Florida**	**52.05**	**106**	LR		LR	01 53 47.3	
	comp=Z,49nm,19.3s,baz=268,slow=31							
TXAR	**Lajitas Array**	**53.31**	**12**	P		P	01 36 07.2	+0.8
	0.2nm,0.7s,baz=184,slow=12,SNR=2.5							
PTGA	**Pitinga**	**57.78**	**75**	LR		LR	01 58 34.4	
	comp=Z,44nm,18.1s,baz=224,slow=33							
NVAR	**Mina Array Bea**	**61.35**	**357**	P		P	01 37 05.0	+1.7
	0.5nm,0.6s,baz=180,slow=8.8,SNR=3.8							
PDAR	**Pinedale Array**	**65.79**	**4**	P		P	01 37 31.9	-0.6
	0.3nm,0.7s,baz=169,slow=7.3,SNR=2.3							
MDP	**Montagnes des**	**66.94**	**73**	LR		LR	02 03 56.6	
	comp=Z,30nm,18.2s,baz=236,slow=33							
RCBR	**Riachuelo**	**77.67**	**91**	LR		LR	02 10 50.1	
	comp=Z,45nm,20.1s,baz=249,slow=34							
YKA	**Yellowknife Ar**	**85.36**	**0**	P		P	01 39 22.0	-2.0
	0.5nm,1.0s,baz=171,slow=5.6,SNR=4.5							
H11S2	**WAKE ISLAND Hy**	**86.97**	**291**	T		T	03 15 32.3	
	baz=116,slow=75,SNR=52							
H11S1	**WAKE ISLAND Hy**	**86.98**	**291**	T		T	03 15 33.2	
	baz=116,slow=75,SNR=34							
H11S3	**WAKE ISLAND Hy**	**86.98**	**291**	T		T	03 15 35.7	
	baz=116,slow=75,SNR=40							
H11N3	**WAKE ISLAND Hy**	**87.32**	**293**	T		T	03 16 05.6	
	baz=112,slow=74							
H11N1	**WAKE ISLAND Hy**	**87.33**	**293**	T		T	03 16 04.4	
	baz=112							
H11N2	**WAKE ISLAND Hy**	**87.33**	**293**	T		T	03 16 04.8	
	baz=112,slow=74							
ZALV	**Zalesovo Beam**	**145.84**	**339**	PKPbc		PKPdf	01 46 25.1	-0.8
	0.5nm,0.5s,baz=20,slow=4.6,SNR=2.5							
CMAR	**Chiang Mai Arr**	**148.03**	**268**	PKPbc		PKPbc	01 46 34.2	+0.5
	1.0nm,0.3s,baz=92,slow=0.8,SNR=9.7							
BRTR	**Keskin Array B**	**148.72**	**51**	PKPbc		PKPbc	01 46 34.5	-0.6
	1.0nm,0.8s,baz=320,slow=3.8,SNR=4.1							
KBZ	**Khabaz**	**152.54**	**36**	PKPbc		PKPbc	01 46 43.6	-0.2
	1.3nm,0.8s,baz=313,slow=7.1,SNR=4.0							
MKAR	**Makanchi Array**	**152.64**	**334**	PKPbc		PKPbc	01 46 43.1	-0.9
	0.4nm,0.5s,baz=11,slow=1.1,SNR=12							

**IDC 02

THE	**Thessaloniki**	**0.50**	**126**	P	**Pg**	**01 51 25.3**	**+0.1**
THE				S	**Sg**	**01 51 31.7**	**-0.1**
THE				AML	AML	01 51 33.0	
	comp=E,390µm,0.1s						
THE				AML	AML	01 51 34.0	
	comp=N,505µm,0.3s						
THE	**Thessaloniki**	**0.50**	**126**	P	**Pg**	**01 51 25.3**	**+0.1**
THE				S	**Sg**	**01 51 32.0**	**+0.2**
KTI	**Kastanea**	**0.58**	**205**	P	**Pb**	**01 51 27.7**	**+0.2**
HORT	**Hortiatis**	**0.60**	**122**	P	**Pg**	**01 51 27.4**	**+0.2**
HORT				S	**Sg**	**01 51 35.5**	**+0.4**
HORT	**Hortiatis**	**0.60**	**122**	P	**Pg**	**01 51 27.5**	**+0.3**
SOH	**Sokhos**	**0.70**	**98**	P	**Pb**	**01 51 29.6**	**0.0**
SOH				S	**Sg**	**01 51 38.3**	**-0.1**
SOH				AML	AML	01 51 40.7	
	comp=E,959µm,0.5s						
SOH				AML	AML	01 51 45.5	
	comp=N,703µm,0.4s						
SOH	**Sokhos**	**0.70**	**98**	P	**Pb**	**01 51 29.4**	**-0.2**
SOH				S	**Sb**	**01 51 39.0**	**-0.2**
	comp=N,338nm,0.4s						
KZN	**Kozani**	**0.80**	**220**	P	**Pn**	**01 51 31.6**	**-0.9**
KZN				S	**Sn**	**01 51 42.9**	**-1.2**
KZN				AML	AML	01 51 48.6	
	comp=N,318µm,0.4s						
KZN				AML	AML	01 51 48.8	
	comp=E,584µm,0.6s						
KZN	**Kozani**	**0.80**	**220**	P	**Pn**	**01 51 31.5**	**-0.9**
KZN				S	**Sn**	**01 51 43.7**	**-0.5**
	comp=E,228nm,0.5s						
FNA	**Florina**	**0.81**	**261**	P	**Pn**	**01 51 32.3**	**-0.4**
FNA				S	**Sn**	**01 51 43.8**	**-0.8**
FNA				AML	AML	01 51 51.2	
	comp=N,964µm,0.8s						
FNA				AML	AML	01 51 51.3	
	comp=E,759µm,0.6s						
FNA	**Florina**	**0.81**	**261**	P	**Pn**	**01 51 32.2**	**-0.4**
FNA				S	**Sn**	**01 51 44.4**	**-0.2**
	comp=E,445nm,0.7s						
LIT	**Litokhoron**	**0.82**	**177**	P	**Pn**	**01 51 32.4**	**-0.4**
LIT	**Litokhoron**	**0.82**	**177**	P	**Pn**	**01 51 31.9**	**-0.8**
SRS	**Serrai**	**0.90**	**77**	P	**Pg**	**01 51 32.7**	**0.0**
SRS				S	**Sb**	**01 51 44.5**	**-0.2**
SRS	**Serrai**	**0.90**	**77**	P	**Pb**	**01 51 32.5**	**-0.3**
SRS	**Serrai**	**0.90**	**77**	*e*Pg	**Pb**	**01 51 32.6**	**-0.3**
SRS				*e*Sg	**Sg**	**01 51 45.1**	**+0.6**
PLG	**Polygyros**	**0.94**	**125**	P	**Pb**	**01 51 33.0**	**-0.3**
PLG				S	**Sg**	**01 51 46.7**	**+0.6**
KKB	**Krupnik**	**1.06**	**27**	*i* P	**Pg**	**01 51 35.7**	**-0.2**
NVR	**Nevrokopi**	**1.16**	**68**	P	**Pg**	**01 51 37.5**	**-0.2**
NVR				S	**Sg**	**01 51 53.4**	**+0.5**
NVR				AML	AML	01 51 55.3	
	comp=E,135µm,0.4s						
NVR				AML	AML	01 51 59.3	
	comp=N,197µm,0.6s						
NVR	**Nevrokopi**	**1.16**	**68**	P	**Pg**	**01 51 37.5**	**-0.2**
NEST	**Nestorio**	**1.17**	**245**	P	**Pg**	**01 51 38.9**	**+1.0**
NEST	**Nestorio**	**1.17**	**245**	P	**Pg**	**01 51 39.1**	**+1.2**
MMB	**Musomiste**	**1.18**	**55**	*i* P	**Pg**	**01 51 38.0**	**-0.1**
KPRO	**Kipourio**	**1.27**	**221**	P	**Pg**	**01 51 40.2**	**+0.4**
SKO	**Skopje**	**1.29**	**325**	*e*Pg	**Pg**	**01 51 40.1**	**-0.1**
SKO				*e*Sg	**Sg**	**01 51 57.6**	**+0.7**
OUR	**Ouranopolis**	**1.32**	**116**	P	**Pg**	**01 51 41.0**	**+0.3**
PAIG	**Paliouri**	**1.38**	**136**	P	**Pg**	**01 51 41.7**	**-0.1**
THL	**Klokotos Trika**	**1.39**	**193**	P	**Pg**	**01 51 42.2**	**0.0**
BOSS	**Bosilegrad**	**1.57**	**1**	*e*Pg	**Pb**	**01 51 44.4**	**0.0**
BOSS				*e*Sg	**Sg**	**01 52 04.8**	**-1.2**
KAVA	**Kavala**	**1.58**	**87**	P	**Pb**	**01 51 44.8**	**+0.4**
XOR	**Xorichti**	**1.66**	**159**	P	**Pb**	**01 51 45.6**	**-0.3**
THAS	**Thassos island**	**1.77**	**100**	P	**Pb**	**01 51 47.5**	**-0.1**
VTS	**Vitosha**	**1.80**	**19**	*e*Pg	**Pb**	**01 51 47.2**	**-1.1**
VTS				*e*Sg	**Sb**	**01 52 10.6**	**-0.1**
VTS	**Vitosha**	**1.80**	**19**	*i* P	**Pb**	**01 51 47.8**	**-0.5**
RZN	**Rozhen**	**1.88**	**65**	*e*P	**Pg**	**01 51 52.5**	**+1.0**
AGG	**Agios Georgios**	**1.90**	**182**	P	**Pb**	**01 51 49.9**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.92**	**187**	P	**Pb**	**01 51 50.6**	**+0.3**
BARS	**Barje**	**1.95**	**346**	*e*Pn	**Pn**	**01 51 48.8**	**+0.6**
EVR	**Evrytania**	**2.06**	**194**	P	**Pb**	**01 51 53.3**	**+0.6**
PLD	**Plovdiv**	**2.07**	**55**	*e*Pn	**Pb**	**01 51 52.0**	**-0.9**
PLD				*e*Sg	**Sg**	**01 52 21.8**	**-0.3**
IGT	**Igoumenitsa**	**2.12**	**230**	P	**Pg**	**01 51 54.7**	**-1.5**
ZAPS	**Zavoj**	**2.35**	**4**	*e*Pn	**Pb**	**01 51 55.6**	**-2.1**
ZAPS				*e*Sn	**Sn**	**01 52 22.1**	**-0.5**
PVO	**Paravola**	**2.41**	**197**	P	**Pb**	**01 51 59.4**	**+0.8**
SELS	**Selova**	**2.50**	**337**	*e*Pn	**Pn**	**01 51 56.7**	**+1.0**
PDO	**Prodromos**	**2.51**	**203**	P	**Pb**	**01 52 00.6**	**+0.2**
MPEP	**Malo Peshtene**	**2.62**	**21**	*e*P	**Pg**	**01 52 05.8**	**+0.2**
BLKB	**Belogradchik**	**2.70**	**4**	*e*Pn	**Pn**	**01 52 00.5**	**+1.9**
ZAGS	**Zajecar**	**2.89**	**357**	*e*Pn	**Pn**	**01 52 02.2**	**+1.1**
SJES	**Sjenica**	**2.97**	**323**	*e*Pn	**Pn**	**01 52 03.9**	**+1.6**
SJES				*e*Sn	**Sn**	**01 52 39.8**	**+2.0**
DIVS	**Divibare**	**3.65**	**331**	*e*Pn	**Pn**	**01 52 13.0**	**+1.3**

IDC 02 01:54:12.6±9.3, 27°.67S×67°.19W, h125km±68km, mb3.2/1, mb1 3.0/3, mb1mx2.9/26, mbtmp3.4/3, Error ellipse: s-maj=123.8km s-min=68.7km az=55.0, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**5.27**	**342**	P	Pn	01 55 29.2	-0.4
	0.6nm,0.3s,baz=128,slow=7.2,SNR=9.1						
LVC				S	Sn	01 56 29.2	-0.3
	0.3nm,0.3s,baz=334,slow=1.9,SNR=1.8						
LPAZ	**La Paz**	**11.36**	**355**	P	Pn	01 56 53.5	+1.7
	0.1nm,0.3s,baz=127,slow=15,SNR=12						
TORD	**Torodi Ar. Bea**	**78.06**	**68**	P	P	02 05 57.5	-0.3
	0.3nm,0.5s,baz=255,slow=5.5,SNR=2.1						
ZALV	**Zalesovo Beam**	**146.67**	**30**	PKPbc	PKPbc	02 13 38.8	-0.4
	0.6nm,0.4s,baz=304,slow=5.1,SNR=3.1						
MKAR	**Makanchi Array**	**149.38**	**43**	PKPbc	PKPbc	02 13 46.0	-0.6
	0.2nm,0.6s,baz=288,slow=1.4,SNR=3.1						

*IDC **02** 01:58:05.8±2.1, 18°.07S×178°.27W, h596km±21km, mb3.1/9, mb1 3.4/10, mb1mx3.1/42, mbtmp4.0/10, Error ellipse: s-maj=58.9km s-min=16.8km az=146.0*

ISC 02 01:58:06.0±1.3, 18°.1S±0°.4×178°.3W±0°.2, h600km, n11, σ0s56/11, mb3.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.50**	**275**	P	**P**	**01 59 27.9**	**-0.4**
	3.8nm,0.3s,baz=119,slow=6.2,SNR=21						
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**02 04 39.9**	**+0.2**
	4.2nm,0.8s,baz=63,slow=7.7,SNR=7.0						
WRA	**Warramunga Arr**	**44.71**	**260**	P	**P**	**02 05 27.4**	**-0.1**
	0.9nm,0.4s,baz=98,slow=6.7,SNR=22						
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**02 05 28.6**	**0.0**
	3.5nm,0.5s,baz=91,slow=8.2,SNR=41						
PETK	**Petropavlovsk-**	**73.88**	**345**	P	**P**	**02 08 41.5**	**+0.9**
	4.3nm,0.9s,baz=106,slow=5.1,SNR=2.7						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**02 09 11.9**	**+0.3**
	0.6nm,0.8s,baz=232,slow=6.7,SNR=2.0						
TXAR	**Lajitas Array**	**85.99**	**58**	P	**P**	**02 09 44.9**	**+0.6**
	0.4nm,0.7s,baz=213,slow=5.8,SNR=5.9						
ILAR	**Eielson Array**	**86.03**	**13**	P	**P**	**02 09 42.8**	**-0.7**
	0.3nm,0.4s,baz=210,slow=5.7,SNR=7.6						
PDAR	**Pinedale Array**	**87.40**	**43**	P	**P**	**02 09 50.2**	**-0.6**
	0.4nm,0.7s,baz=256,slow=6.4,SNR=2.8						
YKA	**Yellowknife Ar**	**94.44**	**25**	P	**P**	**02 10 22.0**	**-0.5**
	0.2nm,0.7s,baz=239,slow=4.5,SNR=3.4						
GERES	**GERESS Array B**	**147.81**	**345**	PKPbc	**PKPbc**	**02 16 44.6**	**+0.1**
	0.5nm,0.5s,baz=45,slow=2.9,SNR=2.1						

*IDC **02** 02:05:31.8±1.8, 40°.61S×175°.89E, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.6/28, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=48.5km s-min=24.0km az=130.0*
*NOU **02** 02:05:35.0, 40°.81S×176°.20E, h66km, MLv3.7, North Island, New Zealand*
*WEL **02** 02:05:37.5, 40°.6S±0°.7×177°.6E±°, h35km±1km, M3.8/20, ML4.2/20, MLv3.8/20, Error ellipse: s-maj=0.0km s-min=0.0km az=95.2*

ISC 02 02:05:37.2±0.9, 40°.68S±0°.03×175°.94E±0°.03, h46km±5km, n125, σ1s34/136, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIWZ	**Tintock**	**0.10**	**202**	P	**Pn**	**02 05 44.4**	**-0.3**
TIWZ				S	**Sn**	**02 05 49.1**	**-0.8**
PRWZ	**Pori Road**	**0.13**	**12**	P	**Pn**	**02 05 44.0**	**-0.7**
PRWZ				S	**Sn**	**02 05 48.5**	**-1.6**
BFZ	**Birch Farm**	**0.24**	**90**	P	**Pn**	**02 05 45.8**	**+0.4**
BFZ				S	**Sn**	**02 05 51.9**	**+0.6**
MRZ	**Mangatainoka R**	**0.27**	**275**	P	**Pn**	**02 05 44.8**	**-1.0**
MRZ				S	**Sn**	**02 05 49.7**	**-2.1**
CPWZ	**Castlepoint**	**0.30**	**138**	P	**Pn**	**02 05 47.6**	**+1.6**
CPWZ				S	**Sn**	**02 05 56.2**	**+3.9**
POWZ	**Post Office Ro**	**0.32**	**336**	P	**Pn**	**02 05 44.9**	**-1.3**
HOWZ	**Holdsworth Sta**	**0.38**	**236**	P	**Pn**	**02 05 47.0**	**+0.1**
HOWZ				S	**Sn**	**02 05 53.8**	**0.0**
DVHZ	**Dannevirke**	**0.42**	**25**	P	**Pn**	**02 05 46.6**	**-0.7**
DVHZ				S	**Sn**	**02 05 53.4**	**-1.2**
TMWZ	**Te Maipa**	**0.42**	**185**	P	**Pn**	**02 05 48.5**	**+1.1**
TMWZ				S	**Sn**	**02 05 57.6**	**+3.0**
ANWZ	**Angora Road**	**0.47**	**62**	P	**Pn**	**02 05 48.3**	**+0.5**
ANWZ				S	**Sn**	**02 05 56.9**	**+1.6**
MTW	**Mount Morrison**	**0.58**	**215**	P	**Pn**	**02 05 49.8**	**+0.6**
MTW				S	**Sn**	**02 05 60.0**	**+2.1**
OGWZ	**Otaki Gorge**	**0.60**	**257**	P	**Pn**	**02 05 49.6**	**+0.1**
TSZ	**Takapari Road**	**0.62**	**2**	P	**Pn**	**02 05 49.3**	**-0.5**
OHWZ	**Ohakea**	**0.67**	**315**	P	**Pn**	**02 05 50.6**	**+0.2**
PRHZ	**Porangahau**	**0.68**	**52**	P	**Pn**	**02 05 50.9**	**+0.4**
WPHZ	**Waipukurau**	**0.73**	**32**	P	**Pn**	**02 05 51.7**	**+0.5**
TRWZ	**Traveller**	**0.74**	**195**	P	**Pn**	**02 05 52.4**	**+1.0**
CAW	**Cannon Point**	**0.78**	**237**	P	**Pn**	**02 05 52.5**	**+0.6**
PNHZ	**Pukenui**	**0.80**	**15**	P	**Pn**	**02 05 52.1**	**0.0**
PAWZ	**Paruwai Farm**	**0.80**	**209**	P	**Pn**	**02 05 52.8**	**+0.7**
KIW	**Kapiti Island**	**0.80**	**257**	P	**Pn**	**02 05 52.5**	**+0.4**
MSWZ	**Moikau Station**	**0.90**	**215**	P	**Pn**	**02 05 53.8**	**+0.3**
PXZ	**Pawanui**	**0.96**	**48**	P	**Pn**	**02 05 54.5**	**+0.3**
PLWZ	**Palliser**	**1.02**	**210**	P	**Pn**	**02 05 55.5**	**+0.3**
WEL	**Wellington**	**1.07**	**235**	P	**Pn**	**02 05 56.2**	**+0.4**
BHW	**Blatong Head**	**1.08**	**228**	P	**Pn**	**02 05 56.2**	**+0.3**
KRHZ	**Kereru**	**1.09**	**18**	P	**Pn**	**02 05 56.0**	**0.0**
KAHZ	**Kahuranaki**	**1.14**	**39**	P	**Pn**	**02 05 57.0**	**+0.2**
WAZ	**Wanganui**	**1.18**	**322**	P	**Pn**	**02 05 58.6**	**+1.3**
BHHZ	**Black Hill Sta**	**1.20**	**5**	P	**Pn**	**02 05 57.7**	**+0.2**
MOVZ	**Moawhango**	**1.28**	**354**	P	**Pn**	**02 05 59.0**	**+0.2**
KWHZ	**Kaweka Forest**	**1.31**	**17**	P	**Pn**	**02 05 59.3**	**+0.1**
MTVZ	**Mangateitei**	**1.34**	**344**	P	**Pn**	**02 06 00.9**	**+1.3**
CKHZ	**Cape Kidnapper**	**1.35**	**41**	P	**Pn**	**02 05 59.2**	**-0.3**
TCW	**Tory Channel**	**1.36**	**247**	P	**Pn**	**02 05 59.9**	**+0.1**
MCHZ	**McNeill Hill**	**1.37**	**26**	P	**Pn**	**02 06 00.1**	**+0.2**
WNVZ	**Wahianoa**	**1.38**	**349**	P	**Pn**	**02 06 00.6**	**+0.5**
TRVZ	**Turoa**	**1.41**	**348**	P	**Pn**	**02 06 01.6**	**+0.9**
WHVZ	**Whangaehu Hut**	**1.42**	**349**	P	**Pn**	**02 06 01.8**	**+1.0**
TUVZ	**Tukino**	**1.43**	**351**	P	**Pn**	**02 06 02.0**	**+1.2**
DRZ	**Dome Shelter**	**1.43**	**348**	P	**Pn**	**02 06 02.3**	**+1.2**
FWVZ	**Far West T-bar**	**1.46**	**348**	P	**Pn**	**02 06 02.1**	**+0.9**
PKVZ	**Pokaka**	**1.46**	**342**	P	**Pn**	**02 06 00.9**	**-0.3**
NGZ	**Ngauruhoe**	**1.53**	**350**	P	**Pn**	**02 06 03.0**	**+0.9**
OTVZ	**Oturere**	**1.53**	**352**	P	**Pn**	**02 06 03.1**	**+0.8**
DUWZ	**D'Urville Isla**	**1.53**	**265**	P	**Pn**	**02 06 02.5**	**+0.4**
ETVZ	**East Tongariro**	**1.56**	**354**	P	**Pn**	**02 06 03.2**	**+0.7**
BKZ	**Black Stump Fm**	**1.57**	**16**	P	**Pn**	**02 06 02.6**	**-0.1**
TMVZ	**Te Maari**	**1.57**	**353**	P	**Pn**	**02 06 03.4**	**+0.7**
WTVZ	**West Tongariro**	**1.59**	**350**	P	**Pn**	**02 06 03.7**	**+0.8**
KRVZ	**Karewarewa**	**1.60**	**352**	P	**Pn**	**02 06 04.0**	**+0.9**
ARHZ	**Aropaoanui**	**1.64**	**30**	P	**Pn**	**02 06 03.4**	**-0.1**
TWVZ	**Taurewa**	**1.66**	**346**	P	**Pn**	**02 06 04.4**	**+0.5**
TUWZ	**Tuamarina**	**1.68**	**243**	P	**Pn**	**02 06 03.7**	**-0.4**
LREZ	**Lake Rotokare**	**1.69**	**316**	P	**Pn**	**02 06 06.8**	**+2.5**
RITZ	**Rihia Road**	**1.70**	**358**	P	**Pn**	**02 06 05.3**	**+0.8**
KATZ	**Kakaramea**	**1.72**	**354**	P	**Pn**	**02 06 05.6**	**+0.9**
NMHZ	**Naumai**	**1.72**	**23**	P	**Pn**	**02 06 04.8**	**+0.1**
HATZ	**Hinemaiaia**	**1.79**	**4**	P	**Pn**	**02 06 05.8**	**+0.1**
RATZ	**Rangitukua**	**1.82**	**356**	P	**Pn**	**02 06 06.4**	**+0.5**
BSWZ	**Blackbirch Sta**	**1.86**	**236**	P	**Pn**	**02 06 06.4**	**-0.2**
MRHZ	**Matea Rd**	**1.88**	**12**	P	**Pn**	**02 06 06.8**	**-0.1**
WHHZ	**Waihua**	**1.89**	**32**	P	**Pn**	**02 06 06.6**	**-0.4**
PREZ	**Palmer Road**	**1.91**	**314**	P	**Pn**	**02 06 10.2**	**+2.9**
MTHZ	**Maungataniwha**	**1.96**	**21**	P	**Pn**	**02 06 07.8**	**-0.1**
RAHZ	**Arahi**	**1.98**	**27**	P	**Pn**	**02 06 07.8**	**-0.4**
WATZ	**Wairara**	**1.98**	**355**	P	**Pn**	**02 06 08.3**	**+0.1**
NEZ	**North Egmont**	**2.00**	**314**	P	**Pn**	**02 06 11.4**	**+2.8**
NNZ	**Nelson**	**2.01**	**254**	P	**Pn**	**02 06 08.7**	**+0.1**
KHEZ	**Kahui Hut**	**2.02**	**313**	P	**Pn**	**02 06 11.7**	**+2.8**
NMEZ	**Namu Road**	**2.02**	**308**	P	**Pn**	**02 06 12.1**	**+3.2**
PKE	**Pukeiti**	**2.11**	**314**	P	**Pn**	**02 06 11.9**	**+1.9**
NBEZ	**Newall Road No**	**2.13**	**311**	P	**Pn**	**02 06 13.7**	**+3.5**
ALRZ	**Allen Road**	**2.14**	**9**	P	**Pn**	**02 06 10.0**	**-0.4**
MHGZ	**Mahia Peninsul**	**2.15**	**45**	P	**Pn**	**02 06 09.9**	**-0.7**
WPRZ	**Whakapapatarin**	**2.17**	**5**	P	**Pn**	**02 06 10.5**	**-0.3**
SNGZ	**Shannon Statio**	**2.19**	**30**	P	**Pn**	**02 06 10.5**	**-0.6**
KUTZ	**Kaahu Road**	**2.19**	**358**	P	**Pn**	**02 06 11.4**	**+0.3**
PRRZ	**Plateau Road**	**2.21**	**9**	P	**Pn**	**02 06 15.8**	**+5.4**
RTZ	**Ruatahuna**	**2.22**	**22**	P	**Pn**	**02 06 10.9**	**-0.6**
MUGZ	**Murupara**	**2.29**	**17**	P	**Pn**	**02 06 11.8**	**-0.7**
HRRZ	**Handcock Road**	**2.31**	**7**	P	**Pn**	**02 06 12.7**	**-0.1**
PRGZ	**Paritu Road**	**2.31**	**41**	P	**Pn**	**02 06 11.8**	**-1.0**
HIZ	**Hauiti**	**2.32**	**339**	P	**Pn**	**02 06 15.8**	**+2.9**
TLZ	**Tolley Road**	**2.37**	**352**	P	**Pn**	**02 06 14.2**	**+0.6**
RIGZ	**Rimuhau**	**2.43**	**36**	P	**Pn**	**02 06 13.3**	**-1.0**
RAGZ	**Rawiri**	**2.47**	**28**	P	**Pn**	**02 06 13.9**	**-1.1**
TARZ	**Mount Tarawera**	**2.48**	**10**	P	**Pn**	**02 06 14.7**	**-0.5**
KHZ	**Kahutara**	**2.50**	**225**	P	**Pn**	**02 06 14.3**	**-0.9**
THZ	**Tophouse**	**2.53**	**244**	P	**Pn**	**02 06 15.0**	**-0.8**
URZ	**Urewera**	**2.59**	**21**	Pn	**Pn**	**02 06 14.9**	**-1.6**
	2.6nm,0.3s,baz=121,slow=23,SNR=22						
URZ				Sn	**Sn**	**02 06 44.8**	**-1.9**
	9.1nm,0.3s,baz=5.2,slow=14,SNR=7.4						
URZ	**Urewera**	**2.59**	**21**	P	**Pn**	**02 06 15.0**	**-1.6**
QRZ	**Quartz Range**	**2.59**	**266**	P	**Pn**	**02 06 17.2**	**+0.6**
MWZ	**Matawai**	**2.65**	**28**	P	**Pn**	**02 06 16.0**	**-1.5**
TKGZ	**Te Karaka**	**2.69**	**34**	P	**Pn**	**02 06 16.5**	**-1.3**
CNGZ	**Carnagh Statio**	**2.81**	**39**	P	**Pn**	**02 06 18.7**	**-0.9**
TWGZ	**Tauwhareparae**	**2.96**	**33**	P	**Pn**	**02 06 20.4**	**-1.3**
TOZ	**Tahuroa Road**	**2.97**	**353**	P	**Pn**	**02 06 22.1**	**+0.3**
RUGZ	**Raukumara Rang**	**3.03**	**27**	P	**Pn**	**02 06 21.3**	**-1.5**
GVZ	**Greta Valley S**	**3.15**	**223**	P	**Pn**	**02 06 23.0**	**-1.3**
PKGZ	**Pakihiroa**	**3.25**	**31**	P	**Pn**	**02 06 24.3**	**-1.3**
HAZ	**Te Kaha**	**3.26**	**27**	P	**Pn**	**02 06 24.1**	**-1.6**
WMGZ	**Waiomatatini S**	**3.45**	**35**	P	**Pn**	**02 06 26.5**	**-1.9**
LTZ	**Lake Taylor**	**3.45**	**231**	P	**Pn**	**02 06 27.1**	**-1.4**
MXZ	**Matakaoa Point**	**3.62**	**31**	P	**Pn**	**02 06 29.3**	**-1.4**
OKZ	**Okains Bay**	**3.71**	**214**	P	**Pn**	**02 06 30.1**	**-1.6**
MQZ	**McQueen's Vall**	**3.88**	**218**	P	**Pn**	**02 06 31.9**	**-2.4**
AKCZ	**Akaroa Harbour**	**3.90**	**214**	P	**Pn**	**02 06 33.1**	**-1.4**
INZ	**Inchbonnie**	**3.93**	**237**	P	**Pn**	**02 06 33.6**	**-1.4**
RACZ	**Rakaia**	**4.15**	**222**	P	**Pn**	**02 06 35.9**	**-2.0**
WACZ	**Wakanui South**	**4.45**	**222**	P	**Pn**	**02 06 40.2**	**-1.9**
RPZ	**Rata Peaks**	**4.72**	**229**	Pn	**Pn**	**02 06 44.6**	**-1.3**
	1.8nm,0.3s,baz=45,slow=4.7,SNR=6.2						
RPZ				Sn	**Sn**	**02 07 34.7**	**-4.7**
	2.7nm,0.3s,baz=146,slow=21,SNR=15						
ARCZ	**Arundel**	**4.80**	**226**	P	**Pn**	**02 06 45.2**	**-1.7**
GCSZ	**Gaunt Creek Bo**	**4.94**	**236**	P	**Pn**	**02 06 48.2**	**-0.6**
TMZ	**Timaru**	**5.19**	**223**	P	**Pn**	**02 06 50.4**	**-1.9**
FOZ	**Fox Glacier**	**5.37**	**236**	P	**Pn**	**02 06 54.1**	**-0.6**
LBZ	**Lake Benmore**	**5.63**	**227**	P	**Pn**	**02 06 57.2**	**-1.2**
ODZ	**Otaha Downs**	**5.84**	**220**	P	**Pn**	**02 06 59.2**	**-1.9**
JCZ	**Jackson Bay**	**6.29**	**235**	P	**Pn**	**02 07 05.3**	**-2.1**
CTZ	**Chatham Island**	**6.32**	**121**	P	**Pn**	**02 07 08.7**	**+1.0**
EAZ	**Earnscleugh**	**6.65**	**225**	P	**Pn**	**02 07 10.5**	**-1.8**
ASAR	**Alice Springs**	**39.00**	**283**	P	**P**	**02 12 59.5**	**+0.3**
	0.3nm,0.3s,baz=127,slow=7.0,SNR=5.4						
WRA	**Warramunga Arr**	**40.96**	**288**	P	**P**	**02 13 15.8**	**+0.3**
	0.6nm,0.4s,baz=126,slow=8.0,SNR=9.7						
ARCES	**ARCESS Array B**	**147.19**	**341**	PKPbc	**PKPbc**	**02 25 14.8**	**+0.7**
	1.2nm,0.8s,baz=11,slow=3.2,SNR=5.6						
TORD	**Torodi Ar. Bea**	**152.11**	**192**	PKPbc	**PKiKP**	**02 25 29.4**	**+1.2**
	0.1nm,0.3s,baz=175,slow=2.1,SNR=1.0						

IDC 02 02:07:04.9±1.3, 21°.48N×144°.57E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/51, mbtmp3.6/5, Error ellipse: s-maj=59.8km s-min=24.0km az=90.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.37**	**194**	P	P	02 15 01.8	+0.6
	0.7nm,0.4s,baz=16,slow=8.8,SNR=13						
ASAR	**Alice Springs**	**46.06**	**194**	P	P	02 15 29.7	-1.0
	0.3nm,0.3s,baz=15,slow=7.7,SNR=6.1						
MKAR	**Makanchi Array**	**55.79**	**313**	P	P	02 16 44.7	+0.8
	0.4nm,0.6s,baz=91,slow=8.1,SNR=6.9						
YKA	**Yellowknife Ar**	**76.04**	**28**	P	P	02 18 54.7	+0.8
	0.1nm,0.5s,baz=291,slow=5.7,SNR=2.5						
FINES	**FINESS Array B**	**83.92**	**335**	P	P	02 19 35.0	-1.6
	1.0nm,0.6s,baz=63,slow=3.4,SNR=5.2						

*IDC **02** 02:10:47.1±1.0, 36°.86N×98°.08W, h0km, mb3.4/1, mb1 3.7/5, mb1mx3.4/43, mbtmp3.3/5, ML3.9/3, Error ellipse: s-maj=14.8km s-min=12.6km az=0.0*
*TUL **02** 02:10:47.9±1.3, 36°.78N±0°.02×98°.03W±0°.01, h5km±6km, ML3.5, mb_Lg3.3/105(NEIC), Error ellipse: s-maj=2.2km s-min=1.1km az=170.0*
*ANF **02** 02:10:48.2±0.2, 36°.75N×98°.03W, h5km, ML4.0/18, Error ellipse: s-maj=1.9km s-min=1.6km az=49.0*
*NEIC **02** 02:10:48.2±0.8, 36°.76N±0°.03×98°.02W±0°.04, h12km±6km, Error ellipse: s-maj=6.2km s-min=2.2km az=129.0*

ISC 02 02:10:48.4±0.9, 36°.76N±0°.02×98°.01W±0°.02, h8km±7km, n118, σ0s84/98, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.15**	**51**		**Pg**	**02 10 51.6**	**0.0**
GC02				Sg	**Sg**	**02 10 54.2**	**+0.4**
OK032	**Salt Plains WL**	**0.17**	**286**	Pg	**Pg**	**02 10 51.2**	**-0.7**
OK032				Sg	**Sg**	**02 10 53.6**	**-0.6**
KAN14	**Manchester OK**	**0.20**	**10**		**Pg**	**02 10 52.2**	**-0.3**
KAN14				Sg	**Sg**	**02 10 55.2**	**-0.1**
CROK	**Carrier**	**0.25**	**175**		**Pg**	**02 10 53.5**	**+0.1**
CROK				Sg	**Sg**	**02 10 57.4**	**+0.7**
KAN05	**Bluff City Nor**	**0.37**	**17**		**Pg**	**02 10 55.3**	**-0.4**
KAN05				Sg	**Sg**	**02 11 00.3**	**-0.2**
KAN10	**Anthony SW Sta**	**0.37**	**349**		**Pg**	**02 10 55.2**	**-0.5**
KAN10				Sg	**Sg**	**02 11 00.3**	**-0.4**
KAN01	**Argonia South**	**0.44**	**27**		**Pg**	**02 10 56.7**	**-0.3**
KAN01				Sg	**Sg**	**02 11 03.0**	**+0.1**
KAN08	**Anthony NE Sta**	**0.47**	**4**		**Pg**	**02 10 57.1**	**-0.4**
KAN09	**Caldwell North**	**0.49**	**39**		**Pg**	**02 10 57.7**	**-0.3**
KAN09				Sg	**Sg**	**02 11 04.4**	**+0.1**
KAN13	**South Haven SW**	**0.50**	**59**		**Pg**	**02 10 57.9**	**-0.1**
KAN13				Sg	**Sg**	**02 11 04.8**	**+0.3**
KAN12	**Harper NE Stat**	**0.54**	**1**		**Pg**	**02 10 58.4**	**-0.5**
KAN12				Sg	**Sg**	**02 11 05.9**	**0.0**
U32A	**Winter Ranch

2015 APR

baz=258,SNR=31
S39A Bolivar 3.85 75 P 02 11 48.0
baz=258,SNR=31
N33A J Bar K, Exete 4.00 6 IAmb_Lg 02 13 05.1
comp=Z,56nm,0.8s
U40A Yellville 4.17 94 Pn **Pn** **02 11 52.6 +0.2**
U40A Yellville 4.17 94 P **Pn** **02 11 52.5 +0.2**
baz=277,SNR=12
U40A Yellville 4.17 94 P 02 11 52.5
baz=277,SNR=12
U40A P 02 11 52.5
baz=277,SNR=12
MIAR Mount Ida 4.23 120 Pn **Pn** **02 11 53.1 -0.1**
MIAR Mount Ida 4.23 120 P **Pn** **02 11 53.9 +0.7**
baz=303,SNR=24
MIAR Mount Ida 4.23 120 P 02 11 53.9
baz=303,SNR=24
Z38A Mt. Pleasant 4.28 144 **Sg** **02 13 03.2 -2.6**
Z38A IAmb_Lg 02 13 07.1
comp=Z,90nm,0.8s
KSCO Kaye Shedlock' **4.29 303** Pn **Pn** **02 11 53.2 -0.9**
KSCO IAmb_Lg 02 13 03.9
comp=Z,49nm,0.8s
ABTX Abilene, Hawle 4.34 199 Pn **Pn** **02 11 54.4 -0.3**
P38A Dawn 4.54 50 IAmb_Lg 02 13 20.3
comp=Z,60nm,0.7s
P38A Dawn 4.54 50 P **Pn** **02 11 58.0 +0.5**
baz=232,SNR=14
P38A Dawn 4.54 50 P 02 11 58.0
baz=232,SNR=14
MGMO Mountain Grove 4.62 83 **Pn** **02 11 58.3 -0.2**
BGNE Belgrade 4.65 359 Pn **Pn** **02 11 58.3 -0.7**
WHTX Lake Whitney, 4.78 174 **Pn** **02 12 00.6 -0.1**
WHTX Lake Whitney, 4.78 174 P **Pn** **02 12 00.7 0.0**
baz=354,SNR=30
WHTX Lake Whitney, 4.78 174 P 02 12 00.7
baz=354,SNR=30
MSTX Muleshoe 4.78 236 Pn **Pn** **02 12 00.2 -0.7**
X40A Basin Creek Fa 4.78 117 **Pn** **02 12 01.4 +0.6**
X40A IAmb_Lg 02 13 20.7
comp=Z,52nm,0.8s
R40A Maddies Statio 4.81 70 **Pn** **02 12 01.1 -0.1**
FCAR Ozark Folk Cen 4.83 99 Pn **Pn** **02 12 01.5 +0.1**
FCAR IAmb_Lg 02 13 22.3
comp=Z,65nm,0.9s
WHAR Wooly Hollow 4.86 106 Pn **Pn** **02 12 01.8 -0.1**
WLAR White Oak Lake 5.04 126 IAmb_Lg 02 13 29.9
comp=Z,48nm,0.8s
237A Washetta, Mont 5.08 158 IAmb_Lg 02 13 39.1
comp=Z,62nm,1.1s
T25A Trinidad 5.14 276 Pn **Pn** **02 12 06.8 +0.8**
OGNE Ogallala 5.23 324 **Pn** **02 12 06.1 -0.9**
OGNE Ogallala 5.23 324 P **Pn** **02 12 08.0 +0.9**
baz=142,SNR=10
OGNE Ogallala 5.23 324 P 02 12 08.0
baz=142,SNR=10
P40A Paris 5.45 58 IAmb_Lg 02 13 45.1
comp=Z,70nm,0.7s
N38A Joes South For 5.49 41 IAmb_Lg 02 13 45.4
comp=Z,60nm,0.7s
CCM Cathedral Cave 5.54 74 IAmb_Lg 02 13 59.8
comp=Z,38nm,0.7s
LCAR Lake Charles 5.57 95 Pn **Pn** **02 12 12.2 +0.6**
LCAR IAmb_Lg 02 13 42.6
comp=Z,37nm,0.9s
CCAR Cane Creek 5.83 117 IAmb_Lg 02 14 09.9
comp=Z,38nm,0.8s
435B Jarrell 5.97 176 IAmb_Lg 02 14 03.0
comp=Z,49nm,0.7s
PBMO Poplar Bluff 6.08 88 IAmb_Lg 02 14 02.9
comp=Z,34nm,0.7s
FVM French Village 6.16 76 Pn **Pn** **02 12 19.2 -0.6**
SLM Saint Louis 6.44 71 IAmb_Lg 02 14 12.3
comp=Z,44nm,0.7s
143A Socs Landing, 6.78 125 IAmb_Lg 02 14 34.9
comp=Z,37nm,0.7s
S44A Carbondale 7.05 80 IAmb_Lg 02 14 48.6
comp=Z,31nm,0.8s
HALT Halls 7.05 94 IAmb_Lg 02 14 43.9
comp=Z,50nm,0.8s
ECSD EROS Data Cent 7.05 8 **Pn** **02 12 31.8 -0.1**
ECSD **Sn** **02 13 50.7 -1.6**
SIUC Southern Illin 7.08 80 IAmb_Lg 02 14 43.1
comp=Z,31nm,0.8s
ANMO Albuquerque 7.09 258 Pn **Pn** **02 12 30.7 -2.0**
comp=Z,0.1nm,0.3s,baz=14,slow=17,SNR=1.6
ANMO Pg **Pb** **02 12 54.1 +2.1**
comp=Z,0.4nm,0.3s,baz=57,slow=16,SNR=6.5
ANMO Lg Lg 02 14 21.8
comp=Z,0.9nm,0.3s,baz=79,slow=11,SNR=3.5
ANMO Albuquerque 7.09 258 **Pn** **02 12 31.9 -0.8**
OXF Oxford 7.35 105 Pn **Pn** **02 12 35.8 -0.2**
OXF IAmb_Lg 02 14 47.0
comp=Z,47nm,1.1s
PHWY Pilot Hill 7.36 310 IAmb_Lg 02 14 42.0
comp=Z,29nm,0.8s
Q44A Meyer Farm, Va 7.43 71 IAmb_Lg 02 14 58.0
comp=Z,40nm,0.9s
L40A Anamosa 7.46 43 IAmb_Lg 02 14 46.4
comp=Z,28nm,0.8s
Y45A Yeager Farm, C 7.50 110 IAmb_Lg 02 14 58.0
comp=Z,33nm,0.9s
SUSD Miller 7.71 355 IAmb_Lg 02 15 01.8
comp=Z,30nm,0.8s
MNTX Cornudas Mount 7.92 233 IAmb_Lg 02 15 08.6
comp=Z,29nm,1.2s
I37A Lemond, Waseca 8.06 24 IAmb_Lg 02 15 14.0
comp=Z,32nm,0.9s
O44A Mansfield 8.22 63 IAmb_Lg 02 15 09.7
comp=Z,40nm,0.8s
JFWS Jewell Farm 8.57 42 IAmb_Lg 02 15 23.4
comp=Z,28nm,0.8s
RSSD Black Hills 8.67 330 IAmb_Lg 02 15 43.8
comp=Z,18nm,0.7s
RWWY Rawlins 8.67 307 IAmb_Lg 02 15 28.3
comp=Z,33nm,1.1s
T47A Sharon Grove 8.74 85 IAmb_Lg 02 15 27.6
comp=Z,19nm,0.7s
TXAR Lajitas Array 8.79 214 Pn **Pn** **02 12 55.1 -0.9**
comp=Z,0.2nm,0.3s,baz=32,slow=11,SNR=15
TXAR Lg Lg 02 15 18.1
comp=Z,0.5nm,0.3s,baz=36,slow=28,SNR=3.4
P46A Rosedale 8.97 68 IAmb_Lg 02 15 34.9
comp=Z,37nm,0.8s
M44A Midewin, Midew 9.02 56 IAmb_Lg 02 15 47.7
comp=Z,32nm,1.1s
X48A Hartselle 9.22 101 IAmb_Lg 02 15 42.7
comp=Z,16nm,1.0s
SFIN Lafayette 9.28 64 IAmb_Lg 02 15 51.8
comp=Z,18nm,0.7s
SPMN Marine on St. 9.33 23 IAmb_Lg 02 15 45.5
comp=Z,19nm,1.0s
HQIL Hanson Quary C 9.34 54 IAmb_Lg 02 16 05.4
comp=Z,26nm,0.8s
BLO Bloomington 9.39 72 IAmb_Lg 02 16 07.9
comp=Z,24nm,0.9s
WCI Wyandotte Cave 9.43 78 IAmb_Lg 02 16 01.4
comp=Z,19nm,0.7s
K43A Burlington 9.53 48 IAmb_Lg 02 16 17.6
comp=Z,34nm,0.8s
I42A Draeger Farm, 9.95 41 IAmb_Lg 02 16 10.8
comp=Z,18nm,0.8s
E28A Huff 10.01 349 IAmb_Lg 02 16 28.2
comp=Z,23nm,0.9s
PDAR Pinedale Array 10.72 308 Pn **Pn** **02 13 21.2 -1.3**
comp=Z,0.2nm,0.3s,baz=116,slow=15,SNR=4.9
PDAR Pg 02 14 03.2
comp=Z,0.1nm,0.3s,baz=100,slow=10,SNR=2.4
PDAR Lg Lg 02 16 18.2
comp=Z,0.5nm,0.3s,baz=108,slow=19,SNR=1.8
TKL Tuckaleechee C 11.55 91 Pn **Pn** **02 13 33.2 -0.5**
comp=Z,0.4nm,0.3s,baz=228,slow=10,SNR=5.7
TKL Lg Lg 02 16 43.7
comp=Z,0.3nm,0.3s,baz=37,slow=18,SNR=3.0
TKL Tuckaleechee C 11.55 91 **Pn** **02 13 33.5 -0.2**
ULM Lac du Bonnet 13.58 6 Lg Lg 02 17 45.4
comp=Z,0.2nm,0.3s,baz=111,slow=17,SNR=1.4
ILAR Eielson Array 40.12 330 P **P** **02 18 24.4 +0.1**
comp=Z,0.4nm,0.6s,baz=110,slow=6.9,SNR=5.1

*SOF **02** 02:24:10.4, 42°.25N×26°.23E, h11km, MD3.2*
*ISK **02** 02:24:10.2, 42°.32N×26°.19E, h27km, ML3.4/21*
*CFUSG **02** 02:24:10.1, 42°.10N×26°.30E, h5km, mb3.1/1, MD3.3/1, Bulgaria Magtype MSH 2.6 from 1 stations*
*BEO **02** 02:24:11.1±0.7, 42°.34N×26°.16E, h0km, ML3.1/9*

*DDA **02** 02:24:11.9, 42°.10N×26°.43E, h24km±2km, ML3.3*
*THE **02** 02:24:12.9, 42°.06N×26°.31E, h0km±3km, ML3.1/5, Error ellipse: s-maj=3.2km s-min=1.2km az=17.0*
ISC 02 02:24:09.7±1.1, **42°.21N**±0°.01×**26°.24E**±0°.02, **h4**km±9km, **n119**, σ1§45/175, **42C-14D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
JMB	**Yambol**	**0.36**	**44**	PG	**Pg**	**02 24 17.2**	**+0.5**
JMB	**Yambol**	**0.36**	**44**	*i* P	**Pg**	**02 24 17.0**	**+0.3**
EDRB	**Edirne**	**0.52**	**134**	P	**Pg**	**02 24 19.8**	**+0.2**
EDRB				S	**Sg**	**02 24 26.6**	**+0.3**
DIM	**Dimitrovgrad**	**0.55**	**254**	*i* P	**Pg**	**02 24 21.0**	**+0.8**
KIRK	**Kırklareli**	**0.77**	**123**	*i* P	**Pg**	**02 24 24.2**	**-0.1**
KIRK				*i* S	**Sg**	**02 24 33.4**	**-0.9**
KDZ	**Kurdzhali**	**0.83**	**228**	PG	**Pn**	**02 24 28.1**	**-0.1**
KDZ	**Kurdzhali**	**0.83**	**228**	*i* P	**Pn**	**02 24 29.2**	**+1.0**
ARMN	**Kirklareli, Me**	**0.95**	**111**	*i* P	**Pg**	**02 24 27.0**	**-0.9**
ARMN				*i* S	**Sg**	**02 24 36.5**	**-3.6**
SZH	**Strazhica**	**1.08**	**348**	*i* P	**Pn**	**02 24 31.4**	**-0.3**
PHSR	**Pinarhisar**	**1.11**	**121**	PN	**Pg**	**02 24 31.7**	**+0.7**
PLD	**Plovdiv**	**1.15**	**265**	*e*Pg	**Pg**	**02 24 31.0**	**-0.7**
PLD				*e*Sg	**Sg**	**02 24 45.5**	**-1.1**
PLD	**Plovdiv**	**1.15**	**265**	PN	**Pg**	**02 24 30.7**	**-1.0**
PLD				SN	**Sg**	**02 24 45.7**	**-0.9**
PLD	**Plovdiv**	**1.15**	**265**	*i* P	**Pg**	**02 24 31.5**	**-0.2**
RDO	**Rodhopi**	**1.18**	**207**	P	**Pb**	**02 24 32.8**	**+0.1**
RDO				S	**Sb**	**02 24 48.6**	**+0.2**
	2µm,0.5s						
RDO	**Rodhopi**	**1.18**	**207**	PN	**Pb**	**02 24 32.7**	**+0.1**
RDO				SN	**Sb**	**02 24 48.9**	**+0.6**
PVL	**Pavlikeni**	**1.21**	**327**	*i* P	**Pn**	**02 24 33.7**	**+0.3**
ROIA	**ROIAK**	**1.22**	**43**	*i* P	**Pg**	**02 24 34.0**	**+0.9**
RZN	**Rozhen**	**1.25**	**246**	*i* P	**Pn**	**02 24 34.1**	**0.0**
PRD	**Provadia**	**1.31**	**40**	*i* P	**Pn**	**02 24 34.2**	**-0.6**
ALN	**Alexandroupoli**	**1.32**	**187**	P	**Pn**	**02 24 35.0**	**+0.2**
ALN				S	**Sb**	**02 24 52.6**	**+0.4**
	500nm,0.6s						
ALN	**Alexandroupoli**	**1.32**	**187**	PN	**Pn**	**02 24 35.2**	**+0.4**
ALN				SN	**Sg**	**02 24 52.9**	**+1.0**
VIZE	**Kirklareli, Vi**	**1.35**	**117**	*i* P	**Pn**	**02 24 34.4**	**-0.9**
VIZE				*i* S	**Sb**	**02 24 51.4**	**-1.7**
KESN	**Edirne-Kesan**	**1.42**	**166**	*i* P	**Pn**	**02 24 36.1**	**-0.5**
KESN				*i* S	**Sb**	**02 24 55.0**	**-0.4**
KESN				IAML		02 24 58.0	
	comp=E,396nm,0.5s						
KESN				IAML		02 24 58.0	
	comp=N,585nm,0.4s						
ENEZ	**Enez**	**1.47**	**183**	P	**Pb**	**02 24 38.1**	**+0.5**
ENEZ				S	**Sg**	**02 24 57.7**	**+0.8**
	comp=N,698nm,0.5s						
ENEZ	**Enez**	**1.47**	**183**	PN	**Pn**	**02 24 37.2**	**+0.2**
ENEZ				SN	**Sb**	**02 24 56.9**	**+0.3**
CAVK	**Edirne/Enez-Ca**	**1.51**	**182**	*i* P	**Pb**	**02 24 39.0**	**+0.7**
CAVK				*i* S	**Sn**	**02 24 57.8**	**+0.1**
CAVK				IAML		02 25 03.0	
	comp=E,462nm,0.6s						
CAVK				IAML		02 25 06.0	
	comp=N,442nm,0.8s						
ERIK	**Erikli-Kesan**	**1.55**	**172**	PN	**Pn**	**02 24 38.2**	**+0.2**
ERIK				SN	**Sn**	**02 24 58.8**	**+0.3**
TKR	**Tekirdag**	**1.55**	**141**	PN	**Pn**	**02 24 38.4**	**+0.3**
PGB	**Panagyurishte**	**1.58**	**283**	*i* P	**Pb**	**02 24 39.5**	**+0.1**
ZIMR		**1.59**	**336**	⇑P	**Pg**	**02 24 40.9**	**+0.8**
ZIMR				⇑S	**Sg**	**02 25 02.1**	**+2.4**
MAR4	**Marsite Statio**	**1.62**	**150**	PN	**Pn**	**02 24 39.5**	**+0.3**
MAR3	**Marsite Statio**	**1.66**	**151**	PN	**Pn**	**02 24 39.9**	**+0.3**
MAR3				SN	**Sn**	**02 25 01.6**	**+0.2**
GZKV	**Gazikoy-Tekird**	**1.67**	**150**	PN	**Pn**	**02 24 40.2**	**+0.5**
GZKV				SN	**Sn**	**02 25 01.8**	**+0.3**
SART	**Tekirdag**	**1.67**	**155**	*i* P	Pn	02 24 35.2	-4.6
SART				*i* S	**Sn**	**02 24 56.4**	**-5.4**
RKY	**Sarkoy-Tekirda**	**1.67**	**155**	PN	**Pn**	**02 24 40.2**	**+0.4**
PLVB	**Pleven**	**1.68**	**315**	⇑P	**Pg**	**02 24 42.2**	**+0.4**
PLVB				⇓S	**Sg**	**02 25 06.3**	**+2.6**
MAR6	**Marsite Statio**	**1.69**	**153**	PN	**Pn**	**02 24 40.3**	**+0.4**
MAR6				SN	**Sn**	**02 25 02.5**	**+0.5**
MAR2	**Marsite Statio**	**1.69**	**151**	PN	**Pn**	**02 24 40.4**	**+0.4**
MAR2				SN	**Sn**	**02 25 02.2**	**+0.1**
CTYL	**Yalikoy Yolu**	**1.69**	**115**	PN	**Pn**	**02 24 40.1**	**+0.1**
CTYL				SN	**Sn**	**02 25 01.5**	**-0.7**
SLVT	**Silivri**	**1.77**	**123**	PN	**Pn**	**02 24 41.2**	**+0.2**
SLVT				SN	**Sn**	**02 25 03.7**	**-0.2**
KAVA	**Kavala**	**1.77**	**228**	P	**Pb**	**02 24 42.3**	**-0.4**
KAVA				S	**Sg**	**02 25 07.5**	**+0.9**
	comp=N,818nm,0.6s						
LPK	**Lapseki**	**1.87**	**168**	PN	**Pn**	**02 24 43.1**	**+0.6**
MRMT	**Marmara Adasi**	**1.90**	**147**	PN	**Pn**	**02 24 43.2**	**+0.3**
MAR9	**Marsite Statio**	**1.93**	**145**	PN	**Pn**	**02 24 43.7**	**+0.5**
MAR9				SN	**Sn**	**02 25 07.9**	**0.0**
ELBA	**Catalca**	**1.95**	**122**	*i* P	**Pn**	**02 24 43.2**	**-0.4**
ELBA				*i* S	**Sn**	**02 25 07.7**	**-0.8**
CTKS	**Kestanelik-??a**	**1.95**	**119**	PN	**Pn**	**02 24 43.7**	**+0.1**
CTKS				SN	**Sn**	**02 25 08.3**	**-0.2**
NVR	**Nevrokopi**	**1.98**	**245**	P	**Pg**	**02 24 47.7**	**+0.2**
NVR				S	**Sg**	**02 25 12.7**	**-0.4**
	comp=N,220nm,0.6s						
MMB	**Musomiste**	**1.98**	**253**	*i* P	**Pg**	**02 24 47.3**	**-0.2**
KRBG	**Karabiga-Canak**	**1.98**	**156**	PN	**Pn**	**02 24 44.7**	**+0.8**
KALB	**Balgarevo**	**2.00**	**52**	⇓P	**Pb**	**02 24 46.7**	**+0.1**
KALB				⇓S	**Sg**	**02 25 14.0**	**+0.1**
GOKA	**anakkale-Gk**	**2.03**	**187**	*i* P	**Pb**	**02 24 48.3**	**+1.2**
GOKA				*i* S	**Sn**	**02 25 11.5**	**+1.0**
GOKA				IAML		02 25 24.0	
	comp=E,597nm,0.6s						
GADA	**Gvkgeada**	**2.03**	**187**	PN	**Pn**	**02 24 45.1**	**+0.4**
COPA	**Copaceanca**	**2.07**	**339**	⇑P	**Pb**	**02 24 47.4**	**-0.4**
COPA				⇑S	**Sg**	**02 25 17.0**	**+0.9**
RASA	**Rasa**	**2.11**	**18**	⇑P	**Pb**	**02 24 49.2**	**+0.7**
BUC1	**Bucharest**	**2.15**	**356**	⇑P	**Pb**	**02 24 49.1**	**0.0**
BUC1				⇑S	**Sg**	**02 25 19.0**	**+0.3**
BGKT	**Bogazkoy**	**2.15**	**118**	PN	**Pn**	**02 24 46.4**	**+0.1**
ECEA	**Canakkale, Ece**	**2.16**	**181**	*i* P	**Pg**	**02 24 51.3**	**+0.2**
ECEA				*i* S	**Sn**	**02 25 14.6**	**+0.9**
ECEA				IAML		02 25 24.0	
	comp=N,248nm,0.8s						
ECEA				IAML		02 25 27.0	
	comp=E,320nm,0.9s						
EDC	**Edincik**	**2.22**	**146**	PN	**Pn**	**02 24 48.1**	**+0.8**
VLAD	**Vladila**	**2.24**	**324**	⇑S	**Sg**	**02 25 20.5**	**-1.2**
VTS	**Vitosha**	**2.27**	**281**	*e*Pn	**Pn**	**02 24 49.1**	**+1.0**
VTS				*e*Sn	**Sn**	**02 25 16.8**	**+0.3**
VTS	**Vitosha**	**2.27**	**281**	⇑P	**Pn**	**02 24 48.0**	**-0.1**
VTS				⇑S	**Sn**	**02 25 17.3**	**+0.7**
VTS	**Vitosha**	**2.27**	**281**	*i* P	**Pn**	**02 24 49.0**	**+1.0**
KLYT	**Kilyos**	**2.30**	**114**	PN	**Pn**	**02 24 48.9**	**+0.5**
LEHL	**Lehliu**	**2.31**	**10**	⇑P	**Pb**	**02 24 51.5**	**-0.4**
LEHL				⇑S	**Sg**	**02 25 24.5**	**+0.8**
BOZC	**Bozcaada**	**2.37**	**184**	PN	**Pn**	**02 24 50.3**	**+1.0**
EZN	**Ezine**	**2.38**	**178**	PN	**Pn**	**02 24 50.3**	**+0.9**
ISK	**Istanbul-Kandi**	**2.40**	**117**	PN	**Pn**	**02 24 50.0**	**+0.3**
KAVV	**Kandilli-Istan**	**2.40**	**117**	PN	**Pn**	**02 24 50.0**	**+0.3**
SULR		**2.47**	**0**	⇓P	**Pb**	**02 24 53.9**	**-0.8**
SULR				⇑S	**Sg**	**02 25 27.5**	**-1.5**
HUMR	**Humele**	**2.50**	**339**	⇓P	**Pn**	**02 24 52.6**	**+1.4**
HUMR				⇑S	**Sb**	**02 25 27.7**	**+1.5**
CVDA	**Cernavoda**	**2.50**	**31**	⇓S	**Sb**	**02 25 27.8**	**+1.6**
KCTX	**Karacabey (Bur**	**2.51**	**140**	PN	**Pn**	**02 24 52.0**	**+0.7**
AMRR	**Amara**	**2.53**	**18**	⇑S	**Sg**	**02 25 29.8**	**-1.2**
MFTR	**Murfatlar**	**2.53**	**38**	⇑P	**Pb**	**02 24 53.9**	**-1.8**
MFTR				⇑S	**Sb**	**02 25 28.4**	**+1.1**
EFOR	**EFORIE**	**2.56**	**42**	⇓S	**Sg**	**02 25 30.6**	**-1.4**
BALY	**Balya**	**2.67**	**157**	*i* P	**Pn**	**02 24 49.2**	**-4.4**
BALY				*i* S	**Sn**	**02 25 28.8**	**+2.0**
TLBR	**Topalu**	**2.68**	**29**	⇑S	**Sb**	**02 25 33.7**	**+2.2**
TRML	**Termal-Yalova**	**2.72**	**125**	PN	**Pn**	**02 24 54.9**	**+0.7**
PGOR	**Pogoanele**	**2.75**	**11**	⇓S	**Sb**	**02 25 34.6**	**+1.0**
HARR	**Harsova**	**2.77**	**26**	⇑P	**Pb**	**02 24 57.7**	**-2.0**
BUHA	**Balikesir, Bur**	**2.77**	**167**	*i* P	**Pn**	**02 24 55.6**	**+0.7**
BUHA				*i* S	**Sn**	**02 25 29.5**	**+0.7**
BOSS	**Bosilegrad**	**2.81**	**277**	*e*Pn	**Pn**	**02 24 56.4**	**+1.1**
ZAPS	**Zavoj**	**2.87**	**293**	*e*Pn	**Pn**	**02 24 57.7**	**+1.5**
ZAPS				*e*Sn	**Sn**	**02 25 30.9**	**-0.3**
VAY	**Valandovo**	**2.89**	**253**	*e*Pn	**Pn**	**02 24 57.7**	**+1.3**
VAY				*e*Sn	**Sn**	**02 25 33.9**	**+2.3**
AYVA	**Ayvalik**	**2.92**	**173**	*i* P	**Pn**	**02 24 57.7**	**+0.9**
ISR	**Istrita**	**2.92**	**4**	⇑P	**Pb**	**02 25 00.8**	**-1.6**
ISR				⇑S	**Sb**	**02 25 39.4**	**+0.9**
STEP	**BALIKESIR_Sava**	**3.04**	**158**	*i* P	**Pn**	**02 24 56.8**	**-1.8**
TPGR	**Topolog**	**3.09**	**30**	⇑P	**Pn**	**02 25 02.1**	**+2.9**
TPGR				⇑S	**Sb**	**02 25 43.6**	**+0.4**
KAND	**Kocaeli-Kandir**	**3.16**	**109**	*i* P	**Pn**	**02 25 02.6**	**+2.5**
GRER		**3.22**	**9**	⇑P	**Pb**	**02 25 04.3**	**-3.1**
NEHR	**Nehoiu**	**3.22**	**1**	⇑P	**Pb**	**02 25 04.4**	**-3.1**
CFR	**Carcaliu**	**3.27**	**24**	⇑P	**Pn**	**02 25 05.0**	**+3.2**
CFR				⇑S	**Sb**	**02 25 48.1**	**-0.4**
MLR	**Muntele Rosu**	**3.29**	**356**	⇑P	**Pb**	**02 25 05.4**	**-3.3**
MLR				⇑S	**Sb**	**02 25 47.1**	**-2.1**
SRE	**Strehaia**	**3.31**	**319**	⇑S	**Sb**	**02 25 46.9**	**-2.6**
KAYN	**Sakarya, Kayna**	**3.31**	**111**	*i* P	**Pn**	**02 25 04.6**	**+2.3**
BARS	**Barje**	**3.33**	**282**	*e*Pn	**Pn**	**02 25 02.1**	**-0.5**
BARS	**Barje**	**3.33**	**282**	*e*Pn	**Pn**	**02 25 05.5**	**+2.9**
BARS				*e*Sn	**Sn**	**02 25 42.1**	**-0.5**
BARS				*e*Sn	**Sb**	**02 25 47.2**	**-3.0**
VOIR		**3.34**	**345**	⇓P	**Pb**	**02 25 06.3**	**-3.3**
VOIR				⇑S	**Sb**	**02 25 50.0**	**-0.6**
ZAGS	**Zajecar**	**3.35**	**300**	*e*Pn	**Pn**	**02 25 01.9**	**-0.9**
ZAGS				*e*Sn	**Sn**	**02 25 43.2**	**+0.1**
BISRR	**Bisoca**	**3.36**	**6**	⇑P	**Pn**	**02 25 05.6**	**+2.6**
ARR	**Arges**	**3.37**	**340**	⇑P	**Pn**	**02 25 05.9**	**+2.7**
ARR				⇑S	**Sb**	**02 25 50.0**	**-1.4**
PETR	**Petresti**	**3.59**	**11**	⇑S	**Sb**	**02 25 56.0**	**-1.5**
ODBI	**Odobesti**	**3.60**	**9**	⇓P	**Pn**	**02 25 09.9**	**+3.6**
PLOR	**Plostina**	**3.66**	**4**	⇓P	**Pn**	**02 25 09.4**	**+2.3**
VRI	**Vrincioaia**	**3.68**	**5**	⇓P	**Pn**	**02 25 10.7**	**+3.4**
DOPR	**Dopca**	**3.81**	**351**	⇑P	**Pn**	**02 25 10.1**	**+0.9**
SELS	**Selova**	**3.91**	**287**	*e*Pn	**Pn**	**02 25 10.8**	**+0.3**
GZR	**Gura Zlata**	**4.06**	**323**	⇓P	**Pn**	**02 25 14.2**	**+1.6**
MDVR	**Moldovita**	**4.18**	**310**	⇑P	**Pn**	**02 25 15.1**	**+0.8**
TESR	**Tescani**	**4.32**	**4**	⇑P	**Pn**	**02 25 19.7**	**+3.6**
GRUS	**Gruza**	**4.39**	**294**	*e*Pn	**Pn**	**02 25 17.9**	**+0.8**
IVAS	**Ivanjica**	**4.68**	**289**	*e*Pn	**Pn**	**02 25 20.9**	**-0.3**
IVAS				*e*Sn	**Sn**	**02 26 13.5**	**-2.5**
TRUS	**Trudelj**	**4.72**	**297**	*e*Pn	**Pn**	**02 25 21.7**	**+0.1**
TRUS				*e*Sn	**Sn**	**02 26 14.0**	**-2.8**
BIZ	**Bicaz**	**4.73**	**359**	⇑P	**Pn**	**02 25 23.9**	**+2.0**
BZS	**Buzias**	**4.77**	**317**	⇑P	**Pn**	**02 25 23.1**	**+0.7**
DIVS	**Divibare**	**4.95**	**295**	*e*Pn	**Pn**	**02 25 25.4**	**+0.5**
DIVS				*e*Sn	**Sn**	**02 26 20.1**	**-2.5**
BURAR	**Bucovina Array**	**5.46**	**353**	⇑P	**Pn**	**02 25 34.7**	**+2.8**
MORH	**Mrgy, Hungar**	**6.77**	**309**	⇓P	**Pn**	**02 25 50.3**	**+0.5**
SUDU	**Sudak**	**6.90**	**64**	*e*P	**Pn**	**02 25 52.2**	**+0.6**
SUDU				Pm		02 25 53.4	
	comp=Z,5.0nm,0.6s						
SUDU				*e*S	**Sn**	**02 27 10.4**	**-0.2**
SUDU				Sm		02 27 11.5	
	comp=N,3.0nm,0.8s						
SUDU				Sm		02 27 11.5	
	comp=E,4.0nm,0.6s						

IDC 02 02:26:36.8±2.3, **5°.28S×152°.95E, h0km, mb3.6**/4, **mb1 3.8**/4, **mb1mx3.5**/36, **mbtmp3.6**/4, **Error ellipse: s-maj=51.0km s-min=38.8km az=5.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
DZM	**Mont Dzumac**	**21.19**	**143**	P	P	02 31 24.5	+0.3
	4.3nm,0.8s,baz=84,slow=17,SNR=1.4						
WRA	**Warramunga Arr**	**23.24**	**230**	P	P	02 31 46.0	0.0
	2.0nm,1.1s,baz=54,slow=9.7,SNR=5.9						
ASAR	**Alice Springs**	**25.90**	**223**	P	P	02 32 09.8	-0.9
	0.3nm,0.4s,baz=58,slow=8.9,SNR=1.8						
FITZ	**Fitzroy Crossi**	**29.56**	**242**	P	P	02 32 44.0	+0.5
	1.5nm,0.9s,baz=62,slow=8.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**150.59**	**287**	PKPbc	PKPbc	02 46 31.6	-0.2
	1.2nm,0.8s,baz=68,slow=2.4,SNR=6.6						

*NNC **02** 02:27:11.8±3.1, 41°.15N×82°.26E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=23.3km s-min=15.1km az=163.0*
*SOME **02** 02:27:12.4, 41°.48N×82°.48E, h0km*
ISC 02 02:27:04.7±3.0, **41°.4N**±0°.1×**82°.86E**±0°.10, **h10**km, **n27**, σ1§64/40, **6C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
KTMS	**Ketmen**	**2.76**	**319**	*e*P	**Pg**	**02 27 59.7**	**+2.1**
	15nm,0.2s						
KTMS				*e*S	**Sg**	**02 28 34.1**	**+0.7**
	63nm,0.4s						
KTMS	**Ketmen**	**2.76**	**319**	Pg	**Pg**	**02 27 59.7**	**+2.1**
	15nm,0.2s						
KTMS				Lg	Lg	02 28 34.1	
	63nm,0.4s						
SHLS	**Shalkode**	**3.07**	**306**	*e*P	**Pb**	**02 28 00.8**	**+1.3**
	12nm,0.2s						
SHLS				*e*S	**Sb**	**02 28 35.8**	**-1.2**
	78nm,0.4s						
SHLS	**Shalkode**	**3.07**	**306**	Pg	**Pb**	**02 28 00.8**	**+1.3**
	12nm,0.2s						
SHLS				Lg	Lg	02 28 35.8	
	78nm,0.4s						
UZB	**Uzynbulak**	**3.34**	**303**	*e*P	**Pg**	**02 28 09.3**	**+0.7**
	4.4nm,0.3s						
UZB				*e*S	**Sg**	**02 28 50.5**	**-1.5**
	26nm,0.4s						
UZB	**Uzynbulak**	**3.34**	**303**	Pg	**Pg**	**02 28 09.4**	**+0.7**
	4.4nm,0.3s						
UZB				Lg	Lg	02 28 50.5	
	26nm,0.4s						
DJR	**Jarkent**	**3.70**	**323**	*e*P	**Pg**	**02 28 18.5**	**+3.0**
	1.5nm,0.2s						
DJR				*e*S	**Sg**	**02 29 06.5**	**+3.1**
	11nm,0.4s						
SATY	**Saty**	**3.70**	**298**	*e*P	**Pg**	**02 28 16.5**	**+0.9**
	1.9nm,

IZV				Lg	Lg	02 29 43.3		
	13nm,0.6s							
KST	**Kastek**	**5.38**	**290**	Pg	**Pb**	**02 28 39.8**	**+1.0**	
	1.3nm,0.1s							
KST				Lg	Lg	02 29 57.5		
	11nm,0.7s							
MK31	**Makanchi Array**	**5.41**	**356**	Pn	**Pb**	**02 28 38.8**	**-0.4**	
	0.1nm,0.2s,baz=189,slow=13,SNR=10							
MK31				⇑Pg	Pg	02 28 58.1	+10	
	0.7nm,0.5s,baz=174,slow=15,SNR=4.9							
MK31				⇓Lg	Lg	02 30 11.9		
	1.9nm,0.6s,baz=175,slow=27,SNR=3.8							
KUU	**Kurty**	**5.41**	**300**	Pg	**Pb**	**02 28 40.7**	**+1.3**	
	0.6nm,0.2s							
KUU				Lg	Lg	02 29 58.2		
	5.8nm,0.5s							
MAKZ	**Makanchi**	**5.44**	**354**	⇑Pn	**Pb**	**02 28 37.8**	**-2.1**	
	0.5nm,0.5s							
MAKZ				⇑Pg	Pg	02 28 58.4	+9.5	
	1.0nm,0.4s							
MAKZ				⇑Sn	**Sb**	**02 29 43.5**	**-1.7**	
	1.9nm,0.5s							
MAKZ				⇓Lg	Lg	02 30 13.5		
	3.9nm,1.1s							
DGS	**Degeres**	**5.56**	**292**	Pg	**Pb**	**02 28 44.0**	**+2.0**	
	1.1nm,0.6s							
DGS				Lg	Lg	02 30 03.8		
	6.4nm,0.6s							
TKM2	**Tokmak 2**	**5.61**	**288**	⇑Pg	**Pg**	**02 28 51.7**	**-0.3**	
	2.3nm,1.1s							
TKM2				⇓Lg	Lg	02 30 01.4		
	6.9nm,0.7s							
AAK	**Ala-Archa**	**6.35**	**284**	⇓Pg	Pb	02 29 01.5	+6.1	
	2.3nm,1.1s							
AAK				⇑Lg	Lg	02 30 27.5		
	4.7nm,0.8s							

IDC ***02*** *02:27:07.8±1.6,42°.13N×26°.33E,h0km,mb3.7/3, mb1 3.6/4,mb1mx3.3/34,mbtmp3.6/4,ML2.9/1,Error ellipse: s-maj=31.2km s-min=19.7km az=10.0*
ISK ***02*** *02:27:07.1,42°.22N×26°.26E,h6km,ML3.8/20*
SOF ***02*** *02:27:07.7,42°.23N×26°.24E,h11km,MD3.4*
BEO ***02*** *02:27:08.7±0.8,42°.38N×26°.18E,h0km,ML3.1/9*
THE ***02*** *02:27:09.1,42°.13N×26°.31E,h2km,ML3.5/6,Error ellipse: s-maj=1.2km s-min=0.6km az=158.0*
DDA ***02*** *02:27:09.2,42°.12N×26°.42E,h23km±1km,MW3.7*
NEIC ***02*** *02:27:11.1±2.9,42°.15N±0°.03×26°.26E±0°.03,h27km±7km, Error ellipse: s-maj=4.4km s-min=3.2km az=180.0*

ISC 02 02:27:07.9±1.0,**42°.18N**±0°.01×**26°.30E**±0°.01,**h8**km±7km,
n218,σ1$**38**/291,**mb3.7**/6,**52C-15D,Bulgaria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
JMB	**Yambol**	**0.36**	**36**	PG	**Pg**	**02**	**27**	**14.6**	**-0.4**
JMB				SG	**Sg**	**02**	**27**	**19.7**	**0.0**
JMB	**Yambol**	**0.36**	**36**	*i* P	**Pg**	**02**	**27**	**14.5**	**-0.4**
EDRB	**Edirne**	**0.47**	**134**	P	**Pg**	**02**	**27**	**17.3**	**+0.4**
EDRB				S	**Sg**	**02**	**27**	**23.6**	**+0.5**
	5μm,0.3s								
EDRB	**Edirne**	**0.47**	**134**	PG	**Pg**	**02**	**27**	**17.3**	**+0.4**
DIM	**Dimitrovgrad**	**0.58**	**258**	*i* P	**Pg**	**02**	**27**	**18.5**	**-0.6**
KIRK	**Kırklareli**	**0.72**	**123**	*i* P	**Pg**	**02**	**27**	**21.5**	**-0.2**
KIRK				*i* S	**Sg**	**02**	**27**	**30.5**	**-0.4**
KIRK				IAML		02	27	33.0	
	comp=N,873nm,0.4s								
KIRK				IAML		02	27	33.0	
	comp=E,1μm,0.4s								
KDZ	**Kurdzhali**	**0.84**	**232**	PG	**Pn**	**02**	**27**	**25.5**	**-0.6**
KDZ				SG	**Sn**	**02**	**27**	**38.1**	**-0.5**
KDZ	**Kurdzhali**	**0.84**	**232**	*i* P	**Pn**	**02**	**27**	**26.1**	**0.0**
ARMN	**Kirklareli, Me**	**0.90**	**110**	*i* P	**Pg**	**02**	**27**	**24.4**	**-0.8**
ARMN				*i* S	**Sg**	**02**	**27**	**36.2**	**-0.6**
ARMN				IAML		02	27	43.0	
	comp=N,694nm,0.7s								
ARMN				IAML		02	27	44.0	
	comp=E,594nm,0.4s								
PHSR	**Pinarhisar**	**1.07**	**120**	PN	**Pg**	**02**	**27**	**28.7**	**+0.4**
SZH	**Strazhica**	**1.12**	**346**	*i* P	**Pg**	**02**	**27**	**28.9**	**-0.5**
RDO	**Rodhopi**	**1.18**	**209**	P	**Pb**	**02**	**27**	**30.6**	**+0.2**
RDO				S	**Sn**	**02**	**27**	**46.8**	**0.0**
	comp=E,4μm,0.4s								
RDO	**Rodhopi**	**1.18**	**209**	PN	**Pn**	**02**	**27**	**30.7**	**+0.1**
RDO				SN	**Sn**	**02**	**27**	**46.9**	**+0.1**
PLD	**Plovdiv**	**1.19**	**267**	*e*Pg	**Pg**	**02**	**27**	**29.7**	**-0.9**
PLD				*e*Sg	**Sg**	**02**	**27**	**44.1**	**-1.9**
PLD	**Plovdiv**	**1.19**	**267**	PN	**Pg**	**02**	**27**	**30.1**	**-0.5**
PLD				SN	**Sb**	**02**	**27**	**46.2**	**0.0**
PLD	**Plovdiv**	**1.19**	**267**	*i* P	**Pg**	**02**	**27**	**29.5**	**-1.1**
ROIA	**ROIAK**	**1.22**	**41**	*i* P	**Pb**	**02**	**27**	**31.4**	**+0.3**
PVL	**Pavlikeni**	**1.26**	**326**	*i* P	**Pn**	**02**	**27**	**31.0**	**-0.8**
RZN	**Rozhen**	**1.28**	**248**	*i* P	**Pn**	**02**	**27**	**31.7**	**-0.5**
ALN	**Alexandroupoli**	**1.29**	**188**	P	**Pg**	**02**	**27**	**32.8**	**+0.2**
ALN				S	**Sn**	**02**	**27**	**50.8**	**+1.1**
	comp=E,1μm,0.7s								
ALN	**Alexandroupoli**	**1.29**	**188**	PN	**Pg**	**02**	**27**	**32.8**	**+0.2**
ALN				SN	**Sn**	**02**	**27**	**51.1**	**+1.4**
ALN	**Alexandroupoli**	**1.29**	**188**		**Pg**	**02**	**27**	**32.6**	**0.0**
ALN				Sg	**Sn**	**02**	**27**	**50.5**	**+0.8**
VIZE	**Kirklareli, Vi**	**1.30**	**117**	*i* P	**Pn**	**02**	**27**	**32.4**	**0.0**
VIZE				*i* S	**Sb**	**02**	**27**	**48.8**	**-0.6**
VIZE				IAML		02	27	52.0	
	comp=N,525nm,0.5s								
VIZE				IAML		02	27	53.0	
	comp=E,863nm,0.6s								
PRD	**Provadia**	**1.31**	**38**	*i* P	**Pn**	**02**	**27**	**31.8**	**-0.6**
KESN	**Edirne-Kesan**	**1.38**	**168**	*i* P	**Pn**	**02**	**27**	**34.1**	**+0.3**
KESN				*i* S	**Sn**	**02**	**27**	**52.6**	**+0.1**
KESN				IAML		02	27	54.0	
	comp=E,3μm,0.4s								
KESN				IAML		02	27	55.0	
	comp=N,2μm,0.4s								
ENEZ	**Enez**	**1.44**	**184**	P	**Pb**	**02**	**27**	**35.0**	**0.0**
ENEZ				S	**Sg**	**02**	**27**	**54.6**	**+0.4**
	comp=N,2μm,0.7s								
ENEZ	**Enez**	**1.44**	**184**	PN	**Pb**	**02**	**27**	**35.0**	**0.0**
ENEZ				SN	**Sg**	**02**	**27**	**55.0**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**1.49**	**184**	*i* P	**Pb**	**02**	**27**	**36.0**	**+0.3**
CAVK				*i* S	**Sn**	**02**	**27**	**54.2**	**-0.2**
CAVK				IAML		02	28	01.0	
	comp=E,1μm,0.7s								
CAVK				IAML		02	28	02.0	
	comp=N,1μm,0.8s								
ERIK	**Erikli-Kesan**	**1.51**	**174**	PN	**Pn**	**02**	**27**	**35.9**	**+0.6**
MAR4	**Marsite Statio**	**1.58**	**151**	PN	**Pb**	**02**	**27**	**37.3**	**-0.1**
MAR3	**Marsite Statio**	**1.62**	**152**	PN	**Pb**	**02**	**27**	**38.1**	**+0.1**
MAR3				SN	**Sg**	**02**	**28**	**00.2**	**+0.4**
PGB	**Panagyurishte**	**1.62**	**284**	*i* P	**Pn**	**02**	**27**	**37.1**	**+0.3**
GZKV	**Gazikoy-Tekird**	**1.62**	**151**	PN	**Pb**	**02**	**27**	**37.9**	**-0.2**
GZKV				SN	**Sg**	**02**	**27**	**59.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.63**	**156**	PN	**Pb**	**02**	**27**	**38.1**	**-0.1**
RKY				SN	**Sg**	**02**	**27**	**59.9**	**-0.3**
SART	**Tekirdag**	**1.63**	**156**	*i* P	**Pn**	**02**	**27**	**36.9**	**-0.1**
SART				*i* S	**Sn**	**02**	**27**	**58.4**	**+0.3**
SART				IAML		02	28	01.0	
	comp=N,394nm,0.6s								
SART				IAML		02	28	04.0	
	comp=E,408nm,0.8s								
ZIMR		**1.63**	**336**	⇑P	**Pb**	**02**	**27**	**38.5**	**+0.3**
ZIMR				⇑S	**Sg**	**02**	**28**	**02.0**	**+1.8**
ZIMR		**1.63**	**336**		**Pb**	**02**	**27**	**38.5**	**+0.3**
ZIMR					**Sg**	**02**	**28**	**02.0**	**+1.8**
MAR6	**Marsite Statio**	**1.64**	**153**	PN	**Pb**	**02**	**27**	**38.1**	**-0.3**
MAR6				SN	**Sg**	**02**	**28**	**01.0**	**+0.4**
CTYL	**Yalikoy Yolu**	**1.65**	**115**	PN	**Pn**	**02**	**27**	**38.1**	**+1.0**
CTYL				SN	**Sg**	**02**	**28**	**00.5**	**-0.3**
MAR2	**Marsite Statio**	**1.65**	**152**	PN	**Pb**	**02**	**27**	**38.3**	**-0.1**
MAR2				SN	**Sg**	**02**	**28**	**00.5**	**-0.2**
SLVT	**Silivri**	**1.72**	**123**	PN	**Pn**	**02**	**27**	**39.1**	**+1.0**
SLVT				SN	**Sb**	**02**	**28**	**01.8**	**+0.4**
PLVB	**Pleven**	**1.73**	**315**	⇑P	**Pn**	**02**	**27**	**38.7**	**+0.5**
PLVB				⇑S	**Sg**	**02**	**28**	**03.5**	**+0.1**
PLVB	**Pleven**	**1.73**	**315**		**Pn**	**02**	**27**	**38.7**	**+0.5**
PLVB					**Sg**	**02**	**28**	**03.5**	**+0.1**
KAVA	**Kavala**	**1.78**	**229**	P	**Pn**	**02**	**27**	**39.3**	**+0.3**
KAVA				S	**Sb**	**02**	**28**	**03.2**	**-0.1**
	comp=E,1μm,0.6s								
SMTH	**Samothraki Isl**	**1.80**	**199**	P	**Pn**	**02**	**27**	**40.0**	**+0.8**
LPK	**Lapseki**	**1.83**	**169**	PN	**Pn**	**02**	**27**	**40.6**	**+0.9**
LPK				SN	**Sb**	**02**	**28**	**05.4**	**+0.6**
MRMT	**Marmara Adasi**	**1.85**	**148**	PN	**Pn**	**02**	**27**	**40.8**	**+0.8**
MRMT				SN	**Sb**	**02**	**28**	**05.9**	**+0.6**
MAR9	**Marsite Statio**	**1.88**	**145**	PN	**Pn**	**02**	**27**	**41.5**	**+1.2**
MAR9				SN	**Sb**	**02**	**28**	**06.3**	**+0.2**
ELBA	**Catalca**	**1.90**	**122**	*i* P	**Pn**	**02**	**27**	**41.9**	**+1.2**
ELBA				IAML		02	28	12.0	
	comp=N,204nm,0.5s								
ELBA				IAML		02	28	15.0	
	comp=E,129nm,0.5s								
CTKS	**Kestanelik-??a**	**1.90**	**119**	PN	**Pn**	**02**	**27**	**41.8**	**+1.2**
CTKS				SN	**Sb**	**02**	**28**	**06.9**	**+0.2**
KRBG	**Karabiga-Canak**	**1.94**	**157**	PN	**Pn**	**02**	**27**	**42.4**	**+1.3**
KRBG				SN	**Sb**	**02**	**28**	**07.5**	**-0.2**
THAS	**Thassos island**	**1.97**	**218**	P	**Pn**	**02**	**27**	**42.0**	**+0.5**
KALB	**Balgarevo**	**1.99**	**51**	⇑P	**Pb**	**02**	**27**	**43.9**	**-0.4**
KALB				⇓S	**Sg**	**02**	**28**	**12.4**	**+0.7**
KALB	**Balgarevo**	**1.99**	**51**		**Pb**	**02**	**27**	**43.9**	**-0.4**
KALB					**Sg**	**02**	**28**	**12.4**	**+0.7**
NVR	**Nevrokopi**	**2.00**	**246**	P	**Pn**	**02**	**27**	**42.4**	**+0.4**
GOKA	**anakkale-Gk**	**2.00**	**189**	*i* P	**Pb**	**02**	**27**	**45.0**	**+0.4**
GOKA				IAML		02	28	23.0	
	comp=E,966nm,0.8s								
GOKA				IAML		02	28	59.0	
	comp=N,0.2nm,0.7s								
MMB	**Musomiste**	**2.00**	**254**	*i* P	**Pb**	**02**	**27**	**43.8**	**-0.8**
GADA	**Gvkgeada**	**2.01**	**189**	P	**Pn**	**02**	**27**	**43.0**	**+1.0**
GADA				S	**Sn**	**02**	**28**	**08.5**	**+1.2**
	comp=N,1μm,0.8s								
GADA	**Gvkgeada**	**2.01**	**189**	PN	**Pn**	**02**	**27**	**43.1**	**+1.0**
SGRR	**Singureni**	**2.06**	**354**	⇑P	**Pb**	**02**	**27**	**45.6**	**+0.1**
SGRR				⇑S	**Sg**	**02**	**28**	**15.0**	**+1.0**
SGRR	**Singureni**	**2.06**	**354**		**Pb**	**02**	**27**	**45.6**	**+0.1**
SGRR					Lg	02	28	15.0	
BGKT	**Bogazkoy**	**2.10**	**117**	PN	**Pn**	**02**	**27**	**44.6**	**+1.2**
BGKT				SN	**Sb**	**02**	**28**	**11.9**	**-0.7**
COPA	**Copaceanca**	**2.11**	**338**	⇑P	**Pb**	**02**	**27**	**45.9**	**-0.5**
COPA				⇑S	**Sg**	**02**	**28**	**14.9**	**-0.8**
COPA	**Copaceanca**	**2.11**	**338**		**Pb**	**02**	**27**	**45.9**	**-0.5**
COPA					LR	02	28	14.9	
ECEA	**Canakkale, Ece**	**2.13**	**183**	*i* P	**Pb**	**02**	**27**	**47.8**	**+1.1**
ECEA				*i* S	**Sg**	**02**	**28**	**15.0**	**-1.4**
ECEA				IAML		02	28	17.0	
	comp=N,380nm,1.0s								
ECEA				IAML		02	28	24.0	
	comp=E,836nm,1.0s								
EDC	**Edincik**	**2.18**	**147**	PN	**Pn**	**02**	**27**	**45.7**	**+1.3**
BUC1	**Bucharest**	**2.18**	**355**	⇑P	**Pn**	**02**	**27**	**46.1**	**+1.6**
BUC1				⇑S	**Sg**	**02**	**28**	**18.3**	**+0.4**
BUC1	**Bucharest**	**2.18**	**355**		**Pn**	**02**	**27**	**46.1**	**+1.6**
BUC1					Lg	02	28	18.3	
KLYT	**Kilyos**	**2.25**	**113**	PN	**Pn**	**02**	**27**	**46.4**	**+1.0**
KLYT				SN	**Sb**	**02**	**28**	**15.7**	**-1.1**
VLAD	**Vladila**	**2.29**	**323**	⇑P	**Pn**	**02**	**27**	**45.2**	**-0.8**
VLAD				⇑S	**Sb**	**02**	**28**	**19.0**	**+1.1**
VLAD	**Vladila**	**2.29**	**323**		**Pn**	**02**	**27**	**45.2**	**-0.8**
VLAD					LR	02	28	19.0	
VTS	**Vitosha**	**2.31**	**282**	*e*Pn	**Pn**	**02**	**27**	**46.6**	**+0.2**
VTS				*e*Sn	**Sn**	**02**	**28**	**14.6**	**-0.5**
VTS	**Vitosha**	**2.31**	**282**	⇓P	**Pn**	**02**	**27**	**45.8**	**-0.6**
VTS				⇑S	**Sn**	**02**	**28**	**15.0**	**-0.1**
VTS	**Vitosha**	**2.31**	**282**		**Pn**	**02**	**27**	**45.8**	**-0.6**
VTS					**Sn**	**02**	**28**	**15.0**	**-0.1**
VTS	**Vitosha**	**2.31**	**282**	*i* P	**Pn**	**02**	**27**	**46.8**	**+0.4**
LEHL	**Lehliu**	**2.33**	**9**	⇑P	**Pb**	**02**	**27**	**49.6**	**-0.5**
LEHL				⇓S	**Sg**	**02**	**28**	**22.1**	**-0.6**
LEHL	**Lehliu**	**2.33**	**9**		**Pb**	**02**	**27**	**49.6**	**-0.5**
LEHL					Lg	02	28	22.1	
BOZC	**Bozcaada**	**2.34**	**185**	*i* P	**Pn**	**02**	**27**	**47.1**	**+0.5**
BOZC				*i* S	**Sb**	**02**	**28**	**18.0**	**-1.3**
BOZC				IAML		02	28	29.0	
	comp=N,146nm,0.4s								
BOZC				IAML		02	28	29.0	
	comp=E,205nm,0.6s								
TSMN	**Mangalia Port-**	**2.34**	**45**	⇑S	**Sg**	**02**	**28**	**22.0**	**-1.0**
TSMN	**Mangalia Port-**	**2.34**	**45**		Lg	02	28	22.0	
EZN	**Ezine**	**2.35**	**179**	P	**Pn**	**02**	**27**	**47.6**	**+0.9**
EZN	**Ezine**	**2.35**	**179**	PN	**Pn**	**02**	**27**	**47.9**	**+1.2**
ISK	**Istanbul-Kandi**	**2.35**	**117**	P	**Pn**	**02**	**27**	**47.1**	**+0.3**
ISK	**Istanbul-Kandi**	**2.35**	**117**	PN	**Pn**	**02**	**27**	**47.7**	**+0.9**
KAVV	**Kandilli-Istan**	**2.35**	**117**	PN	**Pn**	**02**	**27**	**47.7**	**+0.9**
LIA	**Limnos Island**	**2.43**	**201**	P	**Pn**	**02**	**27**	**48.4**	**+0.6**
KCTX	**Karacabey (Bur**	**2.46**	**140**	PN	**Pn**	**02**	**27**	**50.4**	**+2.0**
SULR		**2.50**	**359**	⇓P	**Pb**	**02**	**27**	**51.3**	**-1.7**
SULR				⇑S	**Sb**	**02**	**28**	**26.0**	**+2.0**
SULR		**2.50**	**359**		**Pb**	**02**	**27**	**51.3**	**-1.7**
SULR					LR	02	28	26.0	
CVDA	**Cernavoda**	**2.50**	**30**	⇑P	**Pb**	**02**	**27**	**51.5**	**-1.6**
CVDA				⇓S	**Sb**	**02**	**28**	**32.3**	**+2.2**
CVDA	**Cernavoda**	**2.50**	**30**		**Pb**	**02**	**27**	**51.5**	**-1.6**
CVDA					LR	02	28	26.3	
MFTR	**Murfatlar**	**2.53**	**37**	⇑P	**Pn**	**02**	**27**	**50.8**	**+1.4**
MFTR				⇑S	**Sb**	**02**	**28**	**26.0**	**+1.1**
MFTR	**Murfatlar**	**2.53**	**37**		**Pn**	**02**	**27**	**50.8**	**+1.4**
MFTR					LR	02	28	26.0	
HUMR	**Humele**	**2.54**	**338**	⇑P	**Pn**	**02**	**27**	**51.7**	**+2.3**
HUMR				⇑S	**Sb**	**02**	**28**	**26.2**	**+1.1**
HUMR	**Humele**	**2.54**	**338**		**Pn**	**02**	**27**	**51.7**	**+2.3**
HUMR					LR	02	28	26.2	
AMRR	**Amara**	**2.55**	**17**	⇑P	**Pn**	**02**	**27**	**51.2**	**+1.7**
AMRR				⇑S	**Sg**	**02**	**28**	**27.9**	**-1.8**
AMRR	**Amara**	**2.55**	**17**		**Pn**	**02**	**27**	**51.2**	**+1.7**
AMRR					LR	02	28	27.9	
EFOR	**EFORIE**	**2.56**	**41**	⇓P	**Pn**	**02**	**27**	**48.1**	**-1.5**
EFOR				⇑S	**Sb**	**02**	**28**	**26.2**	**+0.6**
EFOR	**EFORIE**	**2.56**	**41**		**Pn**	**02**	**27**	**48.1**	**-1.5**
EFOR					LR	02	28	26.2	
BALY	**Balya**	**2.63**	**157**	*i* P	**Pn**	**02**	**27**	**50.6**	**-0.1**
BALY				IAML		02	28	33.0	
	comp=E,250nm,0.5s								
BALY				IAML		02	28	35.0	
	comp=N,217nm,0.6s								
KOCA	**Canakkale, Ayv**	**2.67**	**183**	*i* P	**Pb**	**02**	**27**	**56.0**	**0.0**
KOCA				IAML		02	28	40.0	
	comp=E,280nm,0.9s								
KOCA				IAML		02	28	43.0	
	comp=N,207nm,1.0s								
TLBR	**Topalu**	**2.69**	**28**	⇑P	**Pn**	**02**	**27**	**53.5**	**+2.1**
TLBR				⇑S	**Sb**	**02**	**28**	**31.8**	**+2.4**
TLBR	**Topalu**	**2.69**	**28**		**Pn**	**02**	**27**	**53.5**	**+2.1**
TLBR					LR	02	28	31.8	
BUHA	**Balikesir, Bur**	**2.74**	**167**	*i* P	**Pn**	**02**	**27**	**53.0**	**+0.9**
BUHA				IAML		02	28	40.0	
	comp=E,271nm,0.8s								
BUHA				IAML		02	28	45.0	
	comp=N,240nm,0.5s								
TIRR	**Tirgusor**	**2.75**	**33**	Pn	**Pn**	**02**	**27**	**52.5**	**+0.2**
TIRR				Sn	**Sn**	**02**	**28**	**25.5**	**-0.3**
PGOR	**Pogoanele**	**2.78**	**10**	⇑S	**Sb**	**02**	**28**	**34.8**	**+2.9**
PGOR	**Pogoanele**	**2.78**	**10**		**Sb**	**02**	**28**	**34.8**	**+2.9**
HARR	**Harsova**	**2.78**	**25**	⇑P	**Pn**	**02**	**27**	**55.1**	**+2.4**
HARR	**Harsova**	**2.78**	**25**		**Pn**	**02**	**27**	**55.1**	**+2.4**
BOSS	**Bosilegrad**	**2.85**	**278**	*e*Pn	**Pn**	**02**	**27**	**54.0**	**+0.3**
AYVA	**Ayvalik**	**2.88**	**174**	*i* P	**Pn**	**02**	**27**	**54.0**	**-0.1**
AYVA				IAML		02	28	45.0	
	comp=E,209nm,0.7s								
AYVA				IAML		02	28	48.0	
	comp=N,356nm,0.8s								
ZAPS	**Zavoj**	**2.91**	**293**	*e*Pn	**Pn**	**02**	**27**	**55.3**	**+0.7**
ZAPS				*e*Sn	**Sn**	**02**	**28**	**28.8**	**-1.0**
VAY	**Valandovo**	**2.92**	**254**	*e*Pn	**Pn**	**02**	**27**	**55.8**	**+1.2**
VAY				*e*Sn	**Sn**	**02**	**28**	**31.8**	**+2.0**
ISR	**Istrita**	**2.95**	**3**	⇑P	**Pn**	**02**	**27**	**57.4**	**+2.3**
ISR				⇑S	**Sb**	**02**	**28**	**37.9**	**+1.0**
ISR	**Istrita**	**2.95**	**3**		**Pn**	**02**	**27**	**57.4**	**+2.3**
ISR					**Sb**	**02**	**28**	**37.9**	**+1.0**
ULDT	**Uludag**	**2.95**	**133**	*i* P	**Pn**	**02**	**27**	**55.8**	**+0.5**
ULDT				IAML		02	28	55.0	
	comp=E,66nm,0.8s								
ULDT				IAML		02	28	57.0	
	comp=N,58nm,1.0s								
STEP	**BALIKESIR_Sava**	**3.00**	**158**	*i* P	**Pn**	**02**	**27**	**56.9**	**+1.1**
STEP				IAML		02	28	49.0	
	comp=E,202nm,1.2s								
STEP				IAML		02	29	02.0	
	comp=N,262nm,1.5s								
BLKB	**Belogradchik**	**3.03**	**300**	⇑S	**Sn**	**02**	**28**	**34.3**	**+1.7**
DURS	**Dursunbey**	**3.06**	**147**	*i* P	**Pg**	**02**	**28**	**06.2**	**-0.2**
TPGR	**Topolog**	**3.09**	**29**	⇓P	**Pn**	**02**	**27**	**59.2**	**+2.2**
TPGR				⇑S	**Sb**	**02**	**28**	**40.8**	**-0.3**
TPGR	**Topolog**	**3.09**	**29**		**Pn**	**02**	**27**	**59.2**	**+2.2**
TPGR					**Sb**	**02**	**28**	**40.8**	**-0.3**
KAND	**Kocaeli-Kandir**	**3.11**	**109**	*i* P	**Pn**	**02**	**27**	**57.6**	**+0.4**
KAND				IAML		02	28	49.0	
	comp=N,142nm,1.0s								
KAND				IAML		02	28	53.0	
	comp=E,133nm,0.9s								
GRER		**3.24**	**8**	⇑P	**Pn**	**02**	**28**	**02.1**	**+3.0**
GRER		**3.24**	**8**		**Pn**	**02**	**28**	**02.1**	**+3.0**
NEHR	**Nehoiu**	**3.25**	**360**	⇑P	**Pn**	**02**	**28**	**02.6**	**+3.4**
NEHR	**Nehoiu**	**3.25**	**360**		**Pn**	**02**	**28**	**02.6**	**+3.4**
ZEDA	**zmir-Bergama**	**3.26**	**169**	*i* P	**Pn**	**02**	**28**	**01.4**	**+2.0**
ZEDA				IAML		02	28	56.0	
	comp=N,89nm,0.8s								
ZEDA				IAML		02	28	59.0	
	comp=E,67nm,0.6s								
KAYN	**Sakarya, Kayna**	**3.27**	**110**	*i* P	**Pn**	**02**	**28**	**01.1**	**+1.7**
KAYN				IAML		02	28	58.0	
	comp=N,106nm,0.7s								
KAYN				IAML		02	29	01.0	
	comp=E,52nm,0.7s								
CFR	**Carcaliu**	**3.28**	**23**	⇓P	**Pn**	**02**	**28**	**01.3**	**+1.7**
CFR				⇓S	**Sb**	**02**	**28**	**45.2**	**-1.3**
CFR	**Carcaliu**	**3.28**	**23**		**Pn**	**02**	**28**	**01.3**	**+1.7**
CFR					**Sb**	**02**	**28**	**45.2**	**-1.3**
MLR	**Muntele Rosu**	**3.32**	**356**	⇑P	**Pn**	**02**	**28**	**03.2**	**+2.9**
MLR				⇑S	**Sb**	**02**	**28**	**47.8**	**0.0**
MLR	**Muntele Rosu**	**3.32**	**356**		**Pn**	**02**	**28**	**03.2**	**+2.9**
MLR					**Sb**	**02**	**28**	**47.8**	**0.0**
BILE	**Bilecik/Merkez**	**3.37**	**126**	*i* P	**Pn**	**02**	**28**	**02.7**	**+1.8**
BILE				IAML		02	29	04.0	
	comp=E,40nm,0.8s								
BILE				IAML		02	29	16.0	
	comp=N,79nm,1.1s								
BARS	**Barje**	**3.38**	**282**	*e*Pn	**Pn**	**02**	**27**	**59.9**	**-1.0**
BARS	**Barje**	**3.38**	**282**	*e*Pn	**Pn**	**02**	**28**	**03.6**	**+2.7**
VOIR		**3.38**	**345**	⇑P	**Pn**	**02**	**28**	**02.2**	**+1.1**
VOIR				⇑S	**Sb**	**02**	**28**	**47.8**	**-1.6**
VOIR		**3.38**	**345**		**Pn**	**02**	**28**	**02.2**	**+1.1**
VOIR					**Sb**	**02**	**28**	**47.8**	**-1.6**
BISRR	**Bisoca**	**3.38**	**5**	⇑P	**Pn**	**02**	**28**	**03.7**	**+2.6**
BISRR	**Bisoca**	**3.38**	**5**		**Pn**	**02**	**28**	**03.7**	**+2.6**
ZAGS	**Zajecar**	**3.40**	**300**	*e*Pn	**Pn**	**02**	**28**	**00.1**	**-1.1**
ZAGS				*e*Sn	**Sn**	**02**	**28**	**38.9**	**-2.8**
ARR	**Arges**	**3.41**	**340**	⇑P	**Pn**	**02**	**28**	**02.6**	**+1.2**
ARR				⇑S	**Sb**	**02**	**28**	**49.0**	**-1.2**
ARR	**Arges**	**3.41**	**340**		**Pn**	**02**	**28**	**02.6**	**+1.2**
ARR					**Sb**	**02**	**28**	**49.0**	**-1.2**
GEYV	**SAKARYA_Geyve**	**3.45**	**118**	*i* P	**Pn**	**02**	**28**	**03.8**	**+1.8**
GEYV				IAML		02	29	04.0	
	comp=N,223nm,0.6s								
GEYV				IAML		02	29	08.0	
	comp=E,157nm,0.7s								
TLCR		**

DDA ***02*** *02:28:47.0, 42°.08N×26°.44E, h6km±4km, ML2.6*

ISC 02 02:28:44.7±1.1, 42°.18N±0°.03×26°.30E±0°.02, h14km±9km, n41, σ0.68/68, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.36**	**36**	*i* P	**Pg**	**02 28 51.9**	**-0.1**
EDRB	**Edirne**	**0.47**	**134**	PG	**Pg**	**02 28 54.4**	**+0.5**
DIM	**Dimitrovgrad**	**0.58**	**258**	*i* P	**Pb**	**02 28 56.0**	**-0.6**
KIRK	**Kırklareli**	**0.72**	**123**	*i* P	**Pg**	**02 28 58.9**	**+0.3**
KIRK				*i* S	**Sg**	**02 29 07.5**	**-0.6**
KIRK				IAML		02 29 10.0	
	comp=E,236nm,0.5s						
KDZ	**Kurdzhali**	**0.84**	**232**	PG	**Pn**	**02 29 01.9**	**-0.2**
KDZ				SG	**Sn**	**02 29 14.1**	**-0.1**
KDZ	**Kurdzhali**	**0.84**	**232**	*i* P	**Pn**	**02 29 03.2**	**+1.1**
ARMN	**Kirklareli, Me**	**0.90**	**110**	*i* P	**Pg**	**02 29 01.2**	**-0.9**
ARMN				*i* S	**Sg**	**02 29 12.7**	**-1.2**
PHSR	**Pinarhisar**	**1.07**	**120**	PN	**Pg**	**02 29 06.9**	**+1.7**
SZH	**Strazhica**	**1.12**	**346**	*i* P	**Pg**	**02 29 06.2**	**-0.1**
RDO	**Rodhopi**	**1.18**	**209**	PN	**Pg**	**02 29 07.6**	**+0.3**
RDO				SN	**Sn**	**02 29 23.4**	**+1.0**
PLD	**Plovdiv**	**1.19**	**267**	PN	**Pg**	**02 29 07.1**	**-0.4**
ROIA	**ROIAK**	**1.22**	**41**	*i* P	**Pg**	**02 29 08.7**	**+0.6**
PVL	**Pavlikeni**	**1.26**	**326**	*i* P	**Pg**	**02 29 08.7**	**-0.2**
RZN	**Rozhen**	**1.27**	**248**	*i* P	**Pg**	**02 29 09.3**	**+0.1**
ALN	**Alexandroupoli**	**1.29**	**188**	PN	**Pg**	**02 29 09.9**	**+0.4**
ALN				SN	**Sg**	**02 29 27.7**	**+1.4**
VIZE	**Kirklareli, Vi**	**1.30**	**117**	*i* P	**Pb**	**02 29 09.3**	**+0.4**
VIZE				*i* S	**Sb**	**02 29 25.5**	**+0.1**
VIZE				IAML		02 29 30.0	
	comp=E,207nm,0.5s						
VIZE				IAML		02 29 31.0	
	comp=N,101nm,0.3s						
PRD	**Provadia**	**1.31**	**38**	*i* P	**Pn**	**02 29 09.0**	**+0.5**
KESN	**Edirne-Kesan**	**1.38**	**168**	*i* P	**Pg**	**02 29 11.5**	**+0.2**
KESN				*i* S	**Sg**	**02 29 28.8**	**-0.4**
ENEZ	**Enez**	**1.44**	**184**	PN	**Pg**	**02 29 12.4**	**0.0**
ENEZ				SN	**Sg**	**02 29 31.9**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**1.48**	**184**	*i* P	**Pg**	**02 29 13.8**	**+0.6**
CAVK				*i* S	**Sg**	**02 29 32.3**	**-0.2**
ERIK	**Erikli-Kesan**	**1.51**	**174**	PN	**Pg**	**02 29 13.4**	**-0.3**
ERIK				SN	**Sg**	**02 29 33.3**	**-0.1**
MAR3	**Marsite Statio**	**1.62**	**152**	PN	**Pg**	**02 29 15.4**	**-0.3**
GZKV	**Gazikoy-Tekird**	**1.62**	**151**	PN	**Pg**	**02 29 15.4**	**-0.4**
GZKV				SN	**Sg**	**02 29 37.4**	**+0.5**
SART	**Tekirdag**	**1.63**	**156**	*i* P	**Pn**	**02 29 10.5**	**-2.4**
SART				*i* S	**Sn**	**02 29 34.0**	**+0.3**
SART				IAML		02 29 38.0	
	comp=E,110nm,0.9s						
SART				IAML		02 29 39.0	
	comp=N,137nm,0.4s						
RKY	**Sarkoy-Tekirda**	**1.63**	**156**	PN	**Pg**	**02 29 15.4**	**-0.5**
MAR6	**Marsite Statio**	**1.64**	**153**	PN	**Pg**	**02 29 15.5**	**-0.7**
MAR6				SN	**Sg**	**02 29 37.7**	**+0.2**
MAR2	**Marsite Statio**	**1.65**	**152**	PN	**Pg**	**02 29 15.8**	**-0.5**
MAR2				SN	**Sg**	**02 29 37.8**	**+0.2**
CTYL	**Yalikoy Yolu**	**1.65**	**114**	PN	**Pg**	**02 29 16.1**	**-0.2**
CTYL				SN	**Sg**	**02 29 38.5**	**+0.9**
SLVT	**Silivri**	**1.72**	**123**	PN	**Pb**	**02 29 16.9**	**+0.9**
LPK	**Lapseki**	**1.83**	**169**	PN	**Pb**	**02 29 18.3**	**+0.3**
MRMT	**Marmara Adasi**	**1.85**	**148**	PN	**Pb**	**02 29 18.6**	**+0.3**
MAR9	**Marsite Statio**	**1.88**	**145**	PN	**Pb**	**02 29 19.1**	**+0.3**
ELBA	**Catalca**	**1.90**	**122**	*i* P	**Pb**	**02 29 19.3**	**+0.1**
CTKS	**Kestanelik-??a**	**1.90**	**119**	PN	**Pb**	**02 29 19.5**	**+0.4**
KRBG	**Karabiga-Canak**	**1.93**	**157**	PN	**Pb**	**02 29 19.9**	**+0.2**
GADA	**Gvkgeada**	**2.00**	**189**	PN	**Pb**	**02 29 20.2**	**-0.7**
BGKT	**Bogazkoy**	**2.10**	**117**	PN	**Pb**	**02 29 22.5**	**-0.1**
EDC	**Edincik**	**2.18**	**147**	PN	**Pb**	**02 29 23.2**	**-0.6**
KLYT	**Kilyos**	**2.25**	**113**	PN	**Pb**	**02 29 24.7**	**-0.4**
ISK	**Istanbul-Kandi**	**2.35**	**117**	PN	**Pb**	**02 29 26.3**	**-0.5**
KAVV	**Kandilli-Istan**	**2.35**	**117**	PN	**Pb**	**02 29 26.3**	**-0.5**

ISK ***02*** *02:29:34.6, 42°.22N×26°.24E, h5km, ML3.3/11*
SOF ***02*** *02:29:35.6, 42°.24N×26°.24E, h8km, MD3.1*
DDA ***02*** *02:29:37.3, 42°.08N×26°.42E, h7km±2km, ML2.7*

ISC 02 02:29:34.6±1.3, 42°.20N±0°.03×26°.25E±0°.03, h4km±12km, n34, σ0.72/42, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.37**	**42**	PG	**Pg**	**02 29 41.9**	**+0.2**
JMB	**Yambol**	**0.37**	**42**	*i* P	**Pg**	**02 29 42.2**	**+0.5**
EDRB	**Edirne**	**0.51**	**133**	PG	**Pg**	**02 29 45.2**	**+0.9**
DIM	**Dimitrovgrad**	**0.55**	**255**	*i* P	**Pb**	**02 29 46.2**	**-0.6**
KIRK	**Kırklareli**	**0.75**	**123**	*i* P	**Pg**	**02 29 49.4**	**+0.4**
KIRK				*i* S	**Sg**	**02 29 57.2**	**-1.5**
KIRK				IAML		02 30 00.0	
	comp=N,358nm,0.1s						
KIRK				IAML		02 30 01.0	
	comp=E,453nm,0.3s						
KDZ	**Kurdzhali**	**0.83**	**229**	PG	**Pn**	**02 29 52.4**	**-0.6**
KDZ				SG	**Sn**	**02 30 04.9**	**-0.7**
KDZ	**Kurdzhali**	**0.83**	**229**	*i* P	**Pn**	**02 29 54.2**	**+1.2**
ARMN	**Kirklareli, Me**	**0.94**	**110**	*i* P	**Pg**	**02 29 52.3**	**-0.3**
ARMN				*i* S	**Sg**	**02 30 03.4**	**-1.3**
SZH	**Strazhica**	**1.10**	**348**	*i* P	**Pn**	**02 29 56.5**	**-0.2**
PHSR	**Pinarhisar**	**1.10**	**120**	PN	**Pb**	**02 29 56.6**	**+0.4**
PLD	**Plovdiv**	**1.16**	**266**	PN	**Pn**	**02 29 57.3**	**-0.2**
RDO	**Rodhopi**	**1.18**	**207**	PN	**Pn**	**02 29 57.9**	**+0.1**
RDO				SN	**Sn**	**02 30 14.4**	**+0.2**
ROIA	**ROIAK**	**1.22**	**42**	*i* P	**Pn**	**02 29 59.5**	**+1.1**
PVL	**Pavlikeni**	**1.23**	**327**	*i* P	**Pn**	**02 29 59.8**	**+1.4**
RZN	**Rozhen**	**1.25**	**247**	*i* P	**Pn**	**02 29 59.4**	**+0.4**
PRD	**Provadia**	**1.31**	**40**	*i* P	**Pg**	**02 29 59.9**	**+0.1**
VIZE	**Kirklareli, Vi**	**1.34**	**117**	*i* P	**Pn**	**02 29 59.8**	**-0.2**
VIZE				*i* S	**Sb**	**02 30 16.3**	**-1.3**
VIZE				IAML		02 30 19.0	
	comp=E,187nm,0.4s						
VIZE				IAML		02 30 21.0	
	comp=N,127nm,0.2s						
KESN	**Edirne-Kesan**	**1.41**	**167**	*i* P	**Pn**	**02 30 00.8**	**-0.5**
KESN				*i* S	**Sb**	**02 30 20.0**	**+0.1**
ENEZ	**Enez**	**1.46**	**183**	PN	**Pb**	**02 30 02.8**	**+0.5**
CAVK	**Edirne/Enez-Ca**	**1.50**	**182**	*i* P	**Pb**	**02 30 03.4**	**+0.3**
CAVK				*i* S	**Sg**	**02 30 23.6**	**+0.8**
CAVK				IAML		02 30 27.0	
	comp=N,193nm,0.6s						
CAVK				IAML		02 30 28.0	
	comp=E,181nm,0.5s						
ERIK	**Erikli-Kesan**	**1.54**	**173**	PN	**Pb**	**02 30 03.7**	**+0.2**
TKR	**Tekirdag**	**1.54**	**141**	PN	**Pb**	**02 30 03.9**	**+0.2**
MAR4	**Marsite Statio**	**1.61**	**150**	PN	**Pb**	**02 30 04.9**	**0.0**
MAR3	**Marsite Statio**	**1.65**	**151**	PN	**Pb**	**02 30 05.3**	**-0.2**
GZKV	**Gazikoy-Tekird**	**1.66**	**150**	PN	**Pb**	**02 30 05.5**	**-0.1**
SART	**Tekirdag**	**1.66**	**155**	*i* P	**Pn**	**02 30 04.2**	**-0.2**
SART				IAML		02 30 30.0	
	comp=E,97nm,0.4s						
SART				IAML		02 30 31.0	
	comp=N,62nm,0.5s						
RKY	**Sarkoy-Tekirda**	**1.66**	**155**	PN	**Pn**	**02 30 05.4**	**+0.9**
MAR6	**Marsite Statio**	**1.67**	**153**	PN	**Pb**	**02 30 05.7**	**-0.2**
MAR2	**Marsite Statio**	**1.68**	**151**	PN	**Pb**	**02 30 05.5**	**+0.9**
CTYL	**Yalikoy Yolu**	**1.68**	**115**	PN	**Pb**	**02 30 05.7**	**-0.4**
SLVT	**Silivri**	**1.75**	**123**	PN	**Pn**	**02 30 06.7**	**+1.0**
ELBA	**Catalca**	**1.94**	**122**	*i* P	**Pn**	**02 30 08.2**	**-0.1**
ELBA				*i* S	**Sb**	**02 30 35.0**	**+0.1**
ELBA				IAML		02 30 40.0	
	comp=N,52nm,0.5s						
BGKT	**Bogazkoy**	**2.14**	**117**	PN	**Pn**	**02 30 12.3**	**+1.3**
KLYT	**Kilyos**	**2.29**	**113**	PN	**Pn**	**02 30 14.0**	**+0.9**

IDC ***02*** *02:39:35.9±1.2, 27°.88N×56°.14E, h0km, mb3.7/8, mb1 3.7/9, mb1mx3.5/43, mbtmp3.7/9, ML3.1/1, Error ellipse: s-maj=25.1km s-min=23.5km az=127.0*
TEH ***02*** *02:39:37.8, 27°.89N×56°.15E, h8km, ML3.2*
OMAN ***02*** *02:39:45.2, 27°.37N×55°.59E, h10km, mb5.6/2, ml2.8/6*

ISC 02 02:39:38.5±0.7, 27°.86N±0°.05×56°.15E±0°.06, h16km, n51, σ1.95/54, mb3.5/8, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.45**	**178**	*e*Pg	**Pg**	**02 39 48.0**	**+0.2**
KHNJ	**Kahnooj**	**1.38**	**86**	*e*Pg	**Pn**	**02 40 04.4**	**+1.2**
SHME	**Shamm**	**1.80**	**180**	*e*Pn	**Pn**	**02 40 11.9**	**+3.0**
SHME	**Shamm**	**1.80**	**180**	P	**Pn**	**02 40 10.0**	**+1.1**
NGRK	**Negar Kerman**	**1.85**	**16**	*e*Pn	**Pn**	**02 40 10.5**	**+0.5**
NGRK				*e*		02 40 45.8	
	comp=Z,99nm,0.4s						
BANOM	**Banah**	**1.93**	**176**	*e*Pn	**Pn**	**02 40 13.7**	**+2.9**
	SNR=6.9						
BANOM				S	**Sn**	**02 40 35.6**	**+0.9**
TVBK	**TV Kerman**	**2.19**	**14**	*e*Pn	**Pn**	**02 40 16.1**	**+1.5**
TVBK				*e*		02 40 50.6	
	comp=Z,99nm,0.6s						
CHMN	**Cheshme madani**	**2.34**	**31**	*e*Pn	**Pn**	**02 40 17.7**	**+1.0**
CHMN				*e*		02 40 54.7	
	comp=Z,99nm,0.6s						
JHRM	**Jahrom**	**2.36**	**286**	*e*Pn	**Pn**	**02 40 18.6**	**+1.8**
KBAM	**BAM**	**2.39**	**57**	*e*Pn	**Pn**	**02 40 19.7**	**+2.5**
KBAM				*e*		02 41 02.1	
	comp=Z,99nm,0.6s						
MASF	**Masafi**	**2.48**	**180**	P	**Pn**	**02 40 19.3**	**+1.0**
MSFE	**Esma-Masafi**	**2.49**	**180**	*e*Pn	**Pn**	**02 40 21.8**	**+3.4**
KHGB	**Koh Gabri**	**2.53**	**6**	*e*Pn	**Pn**	**02 40 21.1**	**+1.9**
MDH	**Madha**	**2.55**	**177**	*e*Pn	**Pn**	**02 40 21.7**	**+2.4**
QIR1	**Qir**	**2.81**	**283**	*e*Pn	**Pn**	**02 40 25.2**	**+2.2**
UOSS	**Minazif**	**2.90**	**179**	*e*Pn	**Pn**	**02 40 26.1**	**+2.0**
HATD	**Hatta, Dubai**	**3.02**	**180**	*e*Pn	**Pn**	**02 40 28.6**	**+2.9**
ASHO	**Ashiyiah**	**3.16**	**182**	*e*Pn	**Pn**	**02 40 30.8**	**+3.1**
ASHO	**Ashiyiah**	**3.16**	**182**	P	**Pn**	**02 40 30.4**	**+2.7**
	SNR=5.2						
ASUD	**Al Ashush, Dub**	**3.30**	**193**	*e*Pn	**Pn**	**02 40 31.0**	**+1.4**
IMEH	**Mehriz**	**3.77**	**340**	*e*Pn	**Pn**	**02 40 38.5**	**+2.2**
KAZ1	**Kazerun**	**4.34**	**295**	*e*Pn	**Pn**	**02 40 44.6**	**+0.7**
HOQ	**Hoqain**	**4.38**	**166**	P	**Pn**	**02 40 48.2**	**+3.7**
ARQ	**Araqi**	**4.51**	**176**	P	**Pn**	**02 40 48.1**	**+1.8**
	SNR=7.4						
ICHK	**Chekchek**	**4.63**	**341**	*e*Pn	**Pn**	**02 40 49.9**	**+1.8**
KLNJ	**Kolanjah**	**5.07**	**309**	*e*Pn	**Pn**	**02 40 55.8**	**+1.6**
SMDO	**Samad**	**5.07**	**160**	P	**Pn**	**02 40 57.2**	**+3.1**
WSAR	**Wadi Sarin**	**5.11**	**154**	Pn	**Pn**	**02 40 55.7**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=332,slow=6.2,SNR=9.2						
WSAR				Sn	**Sn**	**02 41 52.8**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=55,slow=23,SNR=6.7						
IRAM	**Ramesheh**	**5.12**	**321**	*e*Pn	**Pn**	**02 40 57.0**	**+2.1**
IKOO	**Kooshah**	**5.18**	**28**	*e*Pn	**Pn**	**02 40 56.6**	**+0.9**
ITEG	**Tejag**	**5.50**	**23**	*e*Pn	**Pn**	**02 41 02.2**	**+2.2**
ANAR	**Anarak**	**5.71**	**339**	*e*Pn	**Pn**	**02 41 04.3**	**+1.4**
TKDS	**Koohdasht(Taba**	**5.80**	**8**	*e*Pn	**Pn**	**02 41 06.1**	**+2.1**
IZEF	**Zefreh**	**6.01**	**328**	*e*Pn	**Pn**	**02 41 08.3**	**+1.2**
TNSJ	**Nastanj**	**6.10**	**4**	*e*Pn	**Pn**	**02 41 09.5**	**+1.3**
IPIR	**Pirpir**	**6.62**	**318**	*e*Pn	**Pn**	**02 41 16.3**	**+0.8**
KRSH	**Karshahi**	**7.00**	**331**	*e*Pn	**Pn**	**02 41 22.6**	**+2.0**
ISFB	**Sefidab**	**7.29**	**334**	*e*Pn	**Pn**	**02 41 26.2**	**+1.7**
IDOB	**Doab**	**9.05**	**313**	*e*Pn	**Pn**	**02 41 50.0**	**+1.2**
HSAM	**Samen**	**9.06**	**316**	*e*Pn	**Pn**	**02 41 49.2**	**+0.3**
WHFO	**Wadi Hawf**	**10.13**	**193**	P	**Pn**	**02 42 03.9**	**+0.4**
	SNR=7.0						
WHFO				S	**Sn**	**02 43 52.3**	**-4.6**
ABTO	**Aybut**	**10.78**	**195**	P	**Pn**	**02 42 11.8**	**-0.6**
BRTR	**Keskin Array B**	**22.08**	**308**	P	**P**	**02 44 33.9**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=126,slow=13,SNR=6.6						
BVAR	**Borovoye Array**	**27.27**	**19**	P	**P**	**02 45 22.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=82,slow=2.1,SNR=3.7						
MKAR	**Makanchi Array**	**27.89**	**40**	P	**P**	**02 45 27.2**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=218,slow=8.3,SNR=5.7						
KURBB	**Kurchatov Arra**	**28.38**	**31**	P	**P**	**02 45 32.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=233,slow=9.0,SNR=2.2						
ZALV	**Zalesovo Beam**	**33.48**	**31**	P	**P**	**02 46 16.0**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=224,slow=8.1,SNR=2.1						
FINES	**FINESS Array B**	**39.12**	**338**	P	**P**	**02 47 03.4**	**-1.6**
	comp=Z,4.8nm,1.1s,baz=129,slow=5.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**52.67**	**265**	P	**P**	**02 48 51.8**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=62,slow=7.8,SNR=11						
YKA	**Yellowknife Ar**	**89.66**	**356**	P	**P**	**02 52 35.2**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=4.5,slow=4.6,SNR=5.9						

TRN 02 02:43:11.2, 15°.04N×60°.42W, h31km, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAM	**Ilet Lapin Mar**	**0.52**	**239**	*e*P	Pn	02 43 23.7	+1.2
ILAM				*e*S	Sn	02 43 32.6	+2.4
MVM	**Montagne Vaucl**	**0.67**	**224**	*e*P	Pn	02 43 25.7	+1.0
MPOM	**Morne Pois Mar**	**0.73**	**216**	*i* P	Pb	02 43 26.3	+0.7
MPOM				*e*S	Sn	02 43 37.3	+1.7
BAMF	**Morne Balai**	**0.74**	**253**	*e*P	Pb	02 43 27.3	+1.5
ZAM	**Aeronautique**	**0.75**	**232**	*e*P	Pb	02 43 26.6	+0.7
FDF	**Fort de France**	**0.77**	**247**	*e*P	Pb	02 43 27.5	+1.2
FDF				*e*S	Sn	02 43 39.0	+2.3
TRMF	**Trois Ilets**	**0.79**	**231**	*e*P	Pb	02 43 27.3	+0.7
PCM	**Pelee Case Pet**	**0.80**	**254**	*e*P	Pb	02 43 28.0	+1.3
BIM	**Bigot**	**0.82**	**231**	*e*P	Pb	02 43 27.9	+0.9
BIM				*e*S	Sb	02 43 40.9	+3.1
DLPL	**La Plaine**	**0.85**	**290**	*e*P	Pb	02 43 29.0	+1.4
DLPL				*e*S	Sb	02 43 41.5	+2.8
DSLB	**Salisbury**	**1.05**	**292**	*e*P	Pb	02 43 31.6	+0.8
DSLB				*e*S	Sb	02 43 46.2	+1.9
SLBI	**Saint Lucia, B**	**1.15**	**208**	*e*P	Pb	02 43 32.0	-0.5
SLBI				*e*S	Sb	02 43 47.3	+0.2
MAGL	**Barre de l'ile**	**1.23**	**317**	*e*P	Pb	02 43 33.3	-0.7
MAGL				*e*S	Sb	02 43 49.7	+0.3
SLB	**Belfond**	**1.35**	**207**	*e*P	Pb	02 43 36.1	+0.2
SLB				*e*S	Sb	02 43 53.8	+0.9
MCLT	**Moule a Chique**	**1.42**	**201**	*e*P	Pb	02 43 36.7	-0.4
MCLT				*e*S	Sb	02 43 55.5	+0.7
TDBA	**Terre de Bas,**	**1.42**	**305**	*e*P	Pb	02 43 37.4	+0.2
TDBA				*e*S	Sb	02 43 55.0	-0.1
TBG	**Guadaloupe-3**	**1.43**	**304**	*e*P	Pb	02 43 36.6	-0.7
TBG				*e*S	Sb	02 43 55.5	+0.3
ABD	**La Joyeuse, An**	**1.76**	**324**	*e*P	Pn	02 43 41.1	+1.5
ABD				*e*S	Sb	02 44 04.0	-0.6
SVB	**Belmont**	**1.94**	**205**	*e*P	Pb	02 43 45.5	-0.5
SVB				*e*S	Sb	02 44 08.0	-1.7
ANBD	**Bethesda, Anti**	**2.38**	**327**	*e*P	Pn	02 43 49.8	+1.6
ANBD				*e*S	Sn	02 44 17.7	+1.4
MLYT	**Lee's Yard**	**2.39**	**315**	*e*S	Sn	02 44 18.4	+1.9
BPA	**Boggy Peak**	**2.43**	**325**	*e*P	Pn	02 43 51.3	+2.4
BPA				*e*S	Sn	02 44 19.5	+2.0
GCMP	**Grenada, Carri**	**2.72**	**201**	*e*P	Pn	02 43 54.4	+1.6
GCMP				*e*S	Sn	02 44 26.3	+1.5

KLM ***02*** *02:56:09, 4°.72S×102°.44E, h82km, mb5.1*
NEIC ***02*** *02:56:09.5±1.1, 4°.46S±0°.06×102°.66E±0°.06, h62km±4km, mb5.1/78, Error ellipse: s-maj=9.4km s-min=8.1km az=185.0*
BJI ***02*** *02:56:09.0±0.0, 4°.50S×102°.60E, h67km, mB5.1/40, mb5.1/58, Ms4.4/28, Ms7 4.3/30*
DJA ***02*** *02:56:10.4±0.2, 5°.S±2°.×10°.3E±°, h61km±2km, M4.9/58, mb5.0/58, mB5.4/30, MLv5.2/20, Mw(mB)4.8/30, MwMwp5.9/1, Mwp6.0/1*
IDC ***02*** *02:56:11.0±1.5, 4°.37S×102°.79E, h67km±12km, mb4.5/32, mb1 4.6/35, mb1mx4.5/42, mbtmp4.8/35, MS3.9/27, Ms1 3.9/27, ms1mx3.7/37, Error ellipse: s-maj=11.7km s-min=9.2km az=47.0*
GCMT ***02*** *02:56:13.5±0.2, 4°.62S±0°.02×102°.57E±0°.02, h54km±1km, MW5.0/83, Moment Tensor Solution. s55,c68; s83,c119; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.17±.14; Mθθ-1.18±.10; Mφφ-1.99±.12; Mr0.93±.08; Mθφ1.78±.08; Mθr-1.31±.10; Best double couple: M≈3.66100×10¹⁶ NP1:ϕs320.00000°, δ32.00000°, λ87.00000°. NP2: ϕs143.00000°, δ58.00000°, λ92.00000°. Principal axes: T 3.5420, Plg77.0000°, Azm58.0000°; N 0.2380, Plg1.0000°, Azm322.0000°; P -3.7800, Plg13.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 02:56:10.5±0.5, 4°.51S±0°.04×102°.68E±0°.05, h70km±4km, n355, σ1.43/369, mb5.0/119, 87C-12D, Fault plane solution: NP1:ϕs336.24008°, δ47.62186°, λ128.61923°. **NP2:**ϕs106.39608°, δ54.74866°, λ55.62605°. **Principal axes:** T Plg62.2172°, Azm317.4715°; N Plg27.4556°, Azm127.9405°; P Plg3.9271°, Azm219.9847°; **Fault plane solution: NP1:**ϕs281.54855°, δ22.98386°, λ60.31530°. **NP2:**ϕs133.31395°, δ70.17017°, λ101.86234°. **Principal axes:** T Plg62.9794°, Azm61.9734°; N Plg11.1496°, Azm309.2383°; P Plg24.2741°, Azm214.1389°; **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.31**	**61**		**Pn**	**02 56 20.3**	**-1.5**
MNAI					**Sn**	**02 56 27.3**	**-2.8**
MNAI	**Manna**	**0.31**	**61**	P	**Pn**	**02 56 20.7**	**-1.1**
MNAI				S	**Sn**	**02 56 28.0**	**-2.1**
KSI	**Kapahiang**	**0.86**	**354**	P	**Pn**	**02 56 27.1**	**-0.3**
LHSI	**Lahat**	**1.08**	**51**	P	**Pn**	**02 56 30.8**	**+0.7**
MASI	**Maura Aman, Be**	**1.43**	**342**	P	**Pn**	**02 56 35.1**	**+0.4**
LWLI	**Liwa**	**1.46**	**110**	P	**Pn**	**02 56 35.0**	**-0.1**
KLSI		**2.05**	**95**	P	**Pn**	**02 56 43.6**	**+0.7**
KASI	**Kota Agung**	**2.07**	**119**	P	**Pn**	**02 56 42.8**	**-0.3**
PMBI	**Palembang**	**2.62**	**53**		**Pn**	**02 56 50.9**	**+0.4**
PMBI	**Palembang**	**2.62**	**53**	P	**Pn**	**02 56 50.6**	**+0.1**
BLSI	**Bandar Lampung**	**2.69**	**108**	P	**Pn**	**02 56 51.9**	**+0.3**
JMBI	**JAMBI**	**3.02**	**19**	P	**Pn**	**02 56 57.4**	**+1.4**
RGRI	**Rengat**	**4.15**	**355**	P	**Pn**	**02 57 12.9**	**+1.4**
PPBI	**Pangkal Pinang**	**4.17**	**56**	P	**Pn**	**02 57 12.2**	**+0.5**
DSRI	**Dabo**	**4.43**	**25**	P	**Pn**	**02 57 16.1**	**+0.8**
DBJI	**Dramaga**	**4.53**	**117**	P	**Pn**	**02 57 20.3**	**+3.6**
SISI	**Saibi**	**4.78**	**311**	P	**Pn**	**02 57 20.1**	**0.0**
BKNI	**Bangkinang**	**5.08**	**341**	Pn	**Pn**	**02 57 22.5**	**-1.7**
BKNI	**Bangkinang**	**5.08**	**341**	P	**Pn**	**02 57 24.9**	**+0.7**
	3.9nm7µm438nm,0.8s						
TPI	**Tanjungpandan**	**5.26**	**71**	P	**Pn**	**02 57 27.3**	**+0.7**
	1.4nm1µm74nm,0.5s						
LEM	**Lembang**	**5.42**	**115**	P	**Pn**	**02 57 31.0**	**+2.0**
	15nm,0.3s,baz=225,slow=4.6,SNR=27						
LEM				LR	LR	03 00 00.1	
	comp=Z,2µm,20.0s,baz=242,slow=42						
LEM	**Lembang**	**5.42**	**115**	P	**Pn**	**02 57 31.8**	**+2.8**
	1.2nm4µm190nm,0.9s						
MNSI	**Mandailing Nat**	**6.12**	**329**	P	**Pn**	**02 57 37.8**	**-0.6**
	118nm,0.7s						
MYKOM	**Kota Tinggi**	**6.37**	**11**	Pn	**Pn**	**02 57 41.1**	**-0.7**
MYKOM	**Kota Tinggi**	**6.37**	**11**	P	**Pn**	**02 57 44.0**	**+2.2**
XMI	**Christmas Isla**	**6.61**	**153**	P	**Pn**	**02 57 49.6**	**+4.5**
	184nm,0.6s						
GSI	**Gunungsitoli**	**7.71**	**318**	Pn	**Pn**	**02 57 58.8**	**-1.3**
GSI	**Gunungsitoli**	**7.71**	**318**	P	**Pn**	**02 57 58.3**	**-1.8**
	0.8nm4µm148nm,0.5s						
RPSI	**Rantau Prapat**	**8.09**	**332**		**Pn**	**02 58 03.6**	**-1.7**
RPSI	**Rantau Prapat**	**8.09**	**332**		**Pn**	**02 58 04.6**	**-0.7**
SMRI	**Semarang**	**8.12**	**108**	Pn	**Pn**	**02 58 05.6**	**-0.2**
SMRI	**Semarang**	**8.12**	**108**	P	**Pn**	**02 58 09.0**	**+3.2**
	145nm,0.9s						
PSI	**Prapat**	**8.18**	**333**	P	**Pn**	**02 58 04.6**	**-2.1**
	2.9nm,0.3s,baz=180,slow=9.8,SNR=8.1						
PSI				LR	LR	03 01 36.1	
	comp=Z,989nm,21.2s,baz=91,slow=41						
JRMM	**Jerantut**	**8.35**	**359**	P	**Pn**	**02 58 11.0**	**+2.1**
UGM	**Wanagama**	**8.49**	**114**	Pn	**Pn**	**02 58 10.6**	**-0.3**
UGM	**Wanagama**	**8.49**	**114**	P	**Pn**	**02 58 11.6**	**+0.7**
	196nm,0.7s						
IPM	**Ipoh**	**9.09**	**349**	Pn	**Pn**	**02 58 18.0**	**-1.0**
IPM	**Ipoh**	**9.09**	**349**	P	**Pn**	**02 58 21.0**	**+2.0**
SNSI	**Sinabang, Aceh**	**9.36**	**317**	P	**Pn**	**02 58 22.2**	**-0.5**
	5µm220nm,0.8s						
TPTI		**9.48**	**324**	P	**Pn**	**02 58 22.9**	**-1.4**
	596nm22nm,0.5s						
COCO	**West Island**	**9.57**	**217**		**Pn**	**02 58 23.6**	**-

PSA00 Pilbara Seismi 23.77 137 P **P** **03 01 17.2 +0.4**
QIZ Qiongzhong 24.43 17 P **P** **03 01 22.8 0.0**
QIZ S **S** **03 05 43.2 +5.2**
QIZ pmax pmax
comp=Z,210nm,10.8s
QIZ LR LR
comp=Z,300nm,27.9s
QIZ LR LR
comp=Z,270nm,23.5s
QIZ LR LR
comp=Z,310nm,37.3s
PALK Pallekele 24.86 298 P **P** **03 01 29.8 +3.0**
comp=Z,5.7nm,0.6s,baz=211,slow=9.9,SNR=5.9
PALK LR LR 03 09 45.4
comp=Z,229nm,19.7s,baz=218,slow=33
PALK Pallekele 24.86 298 P **P** **03 01 26.2 -0.7**
SLVN Son La 25.71 3 P **P** **03 01 33.4 -1.1**
FITZ Fitzroy Crossi 26.20 123 P **P** **03 01 39.2 +0.3**
comp=Z,25nm,0.8s,baz=322,slow=7.4,SNR=85
FITZ Fitzroy Crossi 26.20 123 P **P** **03 01 39.3 +0.3**
baz=26,SNR=58
FITZ Fitzroy Crossi 26.20 123 P **P** **03 01 39.2 +0.3**
FITZ IAmb IAmb 03 01 56.5
comp=Z,35nm,0.9s
MTN Manton Dam 29.29 108 P **P** **03 02 05.4 -1.2**
KMI Kunming 29.46 0 ⇑P **P** **03 02 08.1 0.0**
KMI pP pP 03 02 20.4 -4.7
KMI sP sP 03 02 36.3 +2.9
KMI pmax pmax
comp=Z,13nm,1.0s
KMI LR LR
comp=Z,390nm,16.8s
KMI LR LR
comp=Z,160nm,11.2s
KMI LR LR
comp=Z,390nm,15.6s
FAKI Fak Fak 29.55 88 P **P** **03 02 08.1 -0.8**
FAKI Fak Fak 29.55 88 P **P** **03 02 08.4 -0.5**
comp=Z,16nm,1.0s
H08S2 Diego Garcia H 30.17 263 T T 03 33 37.3
baz=87,slow=76,SNR=68
H08S3 Diego Garcia H 30.18 263 T T 03 33 38.1
baz=87,slow=76,SNR=107
H08S1 Diego Carcia H 30.19 263 T T 03 33 38.9
baz=87,slow=76,SNR=19
GYA Guiyang 31.03 7 ⇓P **P** **03 02 22.7 +0.8**
GYA pP pP 03 02 42.3 +3.5
GYA pmax pmax
comp=Z,12nm,0.8s
GYA LR LR
comp=Z,310nm,14.1s
NWAO Narrogin (SRO) 31.37 156 P **P** **03 02 24.8 +0.1**
NWAO IAmb IAmb 03 02 51.9
comp=Z,29nm,1.4s
SHL Shillong 31.68 341 P **P** **03 02 26.9 -0.9**
SHL IAmb IAmb 03 02 27.4
comp=Z,29nm,0.5s
WRKA Warakurna 31.97 132 P **P** **03 02 31.1 +0.9**
baz=32,SNR=20
H01W3 Cape Leeuwin H 32.03 162 T T 03 36 24.6
baz=339,slow=76,SNR=135
H01W2 Cape Leeuwin H 32.04 162 T T 03 36 24.9
baz=339,slow=76,SNR=138
H01W1 Cape Leeuwin H 32.04 162 T T 03 36 25.8
baz=339,slow=76,SNR=188
KMBL Kambalda 32.24 148 P **P** **03 02 33.5 +1.2**
baz=32,SNR=5.3
WB0 Warramunga Arr 34.41 119 P **P** **03 02 51.7 +0.3**
WRA Warramunga Arr 34.43 119 P **P** **03 02 51.6 0.0**
comp=Z,9.9nm,0.4s,baz=300,slow=11,SNR=154
WRA LR LR 03 16 29.5
comp=Z,132nm,21.8s,baz=290,slow=35
WRA P3KPbc 03 33 52.2
comp=Z,0.4nm,0.4s,baz=106,slow=4.1,SNR=12
WRAB Tennant Creek 34.44 119 P **P** **03 02 51.2 -0.5**
WRAB IAmb IAmb 03 02 52.9
comp=Z,32nm,0.9s
WB2 Warramunga Arr 34.44 119 P **P** **03 02 51.7 0.0**
baz=34
WB2 Warramunga Arr 34.44 119 P **P** **03 02 51.9 +0.2**
WB2 IAmb IAmb 03 02 52.9
comp=Z,35nm,1.0s
ODAN Odare 34.52 335 *e*P **P** **03 02 52.6 +0.1**
comp=Z,65nm,0.4s
WR0 Warramunga Arr 34.61 119 P **P** **03 02 53.6 +0.4**
TAPN Taplejung 34.82 336 *e*P **P** **03 02 55.7 +0.5**
comp=Z,109nm,0.8s
RAMN Ramite 34.93 334 *e*P **P** **03 02 56.8 +0.7**
comp=Z,31nm,0.3s
CD2 Chengdu 35.24 2 ⇑*i*P **P** **03 02 57.8 -0.6**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,670nm,14.3s
CD2 LR LR
comp=Z,740nm,24.5s
CD2 LR LR
comp=Z,960nm,14.9s
FORT Forrest 35.41 140 P **P** **03 03 01.4 +1.5**
FORT IAmb IAmb 03 03 28.8
comp=Z,30nm,0.8s
ASPA Alice Springs 35.62 125 P **P** **03 03 02.5 +0.6**
baz=36
AS31 Alice Springs 35.62 125 P **P** **03 03 02.2 +0.3**
ASAR Alice Springs 35.62 125 P **P** **03 03 02.6 +0.7**
comp=Z,10nm,0.4s,baz=303,slow=8.1,SNR=117
ASAR PcP **PcP** **03 05 30.4 +1.1**
comp=Z,3.5nm,0.4s,baz=308,slow=2.8,SNR=7.0
ASAR S **S** **03 08 31.9 -1.5**
comp=Z,1.3nm,0.6s,baz=299,slow=15,SNR=2.2
ASAR ScP **ScP** **03 09 10.3 +0.9**
comp=Z,1.2nm,0.6s,baz=292,slow=3.4,SNR=4.4
ASAR LR LR 03 18 46.2
comp=Z,102nm,18.1s,baz=310,slow=38
JIRN Jiri 35.73 334 *e*P **P** **03 03 03.5 +0.4**
PKI Pulchoki 35.99 333 *e*P **P** **03 03 05.4 +0.1**
PKIN Phulchoki 36.00 333 *e*P **P** **03 03 05.3 0.0**
comp=Z,34nm,0.4s
GUN Gumba 36.08 334 *e*P **P** **03 03 06.5 +0.5**
comp=Z,183nm,0.5s
DMN Daman 36.16 333 *e*P **P** **03 03 07.0 +0.4**
comp=Z,28nm,0.2s
KKN Kakani 36.24 333 *e*P **P** **03 03 07.5 +0.2**
comp=Z,80nm,0.5s
GKN Gorkha 36.71 333 *e*P **P** **03 03 11.6 +0.4**
KOLN Koldanda 37.00 331 *e*P **P** **03 03 14.3 +0.6**
DANN Dangsing 37.41 332 *e*P **P** **03 03 17.8 +0.5**
comp=Z,270nm,0.4s
PYUN Piuthan 37.57 331 *e*P **P** **03 03 19.2 +0.6**
XAN Xi'an 38.80 8 P **P** **03 03 28.3 -0.3**
XAN pmax pmax
comp=Z,49nm,0.5s
XAN pmax pmax
comp=Z,120nm,3.5s
XAN LR LR
comp=Z,400nm,18.2s
XAN LR LR
comp=Z,200nm,21.0s
XAN LR LR
comp=Z,560nm,19.3s
XAN Xi'an 38.80 8 P **P** **03 03 27.9 -0.6**
QIS Mount Isa 39.27 117 P **P** **03 03 33.2 +0.4**
baz=39,SNR=30
NJ2 Nanjing 39.49 22 *e*P **P** **03 03 37.8 +3.5**
NJ2 pmax pmax
comp=Z,11nm,0.5s
LZH Lanzhou 40.40 1 *e*P **P** **03 03 42.3 +0.3**
LZH sP sP 03 04 09.2 +1.7
LZH PcP **PcP** **03 05 45.0 +1.0**
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.0s
LZH LR LR
comp=Z,320nm,13.2s
LZH LR LR
comp=Z,280nm,13.5s
LZH LR LR
comp=Z,320nm,15.7s
COEN Coen 40.99 106 P **P** **03 03 45.9 -1.1**
NDI New Delhi 41.10 325 *e*P **P** **03 03 48.5 +0.8**
BBOO Buckleboo 41.99 136 P **P** **03 03 55.7 +0.7**
baz=42,SNR=10
BBOO Buckleboo 41.99 136 P **P** **03 03 55.3 +0.2**
BBOO IAmb IAmb 03 04 13.6
comp=Z,32nm,1.1s

MTSU Mount Surprise 42.88 112 P **P** **03 04 03.0 +0.5**
baz=43,SNR=53
GTA Gaotai 43.78 357 ⇑P **P** **03 04 09.8 +0.3**
GTA pP pP 03 04 28.8 +1.8
GTA sP sP 03 04 37.5 +2.5
GTA PcP **PcP** **03 05 54.9 -0.2**
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax
comp=Z,90nm,4.5s
GTA LR LR
comp=Z,210nm,18.9s
GTA LR LR
comp=Z,180nm,15.3s
GTA LR LR
comp=Z,320nm,17.8s
HTT Hallett 44.34 135 P **P** **03 04 15.3 +1.4**
baz=44,SNR=9.6
PMG Port Moresby 44.39 99 LR LR 03 25 16.9
comp=Z,129nm,21.8s,baz=257,slow=39
CTA Charters Tower 45.12 114 P **P** **03 04 20.9 +0.5**
baz=45
CTAO Charters Tower 45.12 114 P **P** **03 04 21.1 +0.7**
QLP Quilpie 45.34 123 P **P** **03 04 23.1 +1.0**
baz=45,SNR=10
STKA Stephens Creek 45.49 131 P **P** **03 04 24.4 +1.3**
comp=Z,21nm,0.6s,baz=310,slow=7.5,SNR=71
STKA PcP **PcP** **03 06 02.2 +1.2**
comp=Z,3.9nm,0.4s,baz=326,slow=11,SNR=1.8
STKA LR LR 03 26 09.0
comp=Z,76nm,20.3s,baz=295,slow=40
STKA Stephens Creek 45.49 131 P **P** **03 04 24.4 +1.3**
baz=46,SNR=62
STKA Stephens Creek 45.49 131 P **P** **03 04 23.4 +0.3**
STKA **PcP** **03 06 01.2 +0.2**
HHC Hu-ho-hao-te 45.87 9 *e*P **P** **03 04 26.8 +0.8**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,95nm,5.1s
HHC LR LR
comp=Z,350nm,17.6s
HHC LR LR
comp=Z,160nm,14.7s
HHC LR LR
comp=Z,300nm,15.5s
BJT Baijiatuan 46.02 14 P **P** **03 04 26.1 -0.9**
BJT IAmb IAmb 03 04 28.3
comp=Z,12nm,0.5s
BJI Beijing 46.04 14 P **P** **03 04 26.8 -0.4**
BJI S **S** **03 11 12.0 +4.6**
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI LR LR
comp=Z,260nm,19.0s
BJI LR LR
comp=Z,130nm,9.4s
BJI LR LR
comp=Z,270nm,20.9s
NIL Nilore 47.06 326 P **P** **03 04 34.8 -0.6**
KSRS Korea Array 47.91 27 P **P** **03 04 42.0 +0.2**
comp=Z,5.4nm,0.6s,baz=222,slow=7.2,SNR=15
CMSA Cobar Meteorol 48.46 129 P **P** **03 04 47.5 +1.3**
baz=48,SNR=14
WMQ Urumqi 49.97 346 P **P** **03 04 59.1 +1.5**
WMQ pP pP 03 05 15.3 -0.2
WMQ sP sP 03 05 22.0 -1.5
WMQ pmax pmax
comp=Z,83nm,1.3s
WMQ pmax pmax
comp=Z,240nm,4.7s
WMQ Urumqi 49.97 346 P **P** **03 04 56.7 -1.0**
KBL Kabul 50.13 323 P **P** **03 04 58.5 -0.6**
KBL IAmb IAmb 03 05 01.9
comp=Z,18nm,1.1s
KSH Kashi 50.26 333 P **P** **03 04 58.6 -1.3**
KSH pmax pmax
comp=Z,21nm,0.4s
WSAR Wadi Sarin 51.07 305 LR LR 03 23 59.8
comp=Z,101nm,21.4s,baz=140,slow=33
SHLS Shalkode 51.89 338 *e*P **P** **03 05 10.4 -1.7**
comp=Z,14nm,0.5s,baz=339
UZB Uzynbulak 52.04 338 *e*P **P** **03 05 12.7 -0.6**
UZB comp=Z,11nm,0.6s,baz=338 *e*S **S** **03 12 32.1 +0.2**
baz=338
SONM Songino Array 52.23 3 P **P** **03 05 15.3 +0.7**
comp=Z,38nm,0.7s,baz=185,slow=9.4,SNR=308
SONM PcP **PcP** **03 06 25.4 +0.2**
comp=Z,9.4nm,0.5s,baz=189,slow=4.0,SNR=14
SONM LR LR 03 29 17.1
comp=Z,143nm,19.4s,baz=186,slow=38
ULN Ulaanbaatar 52.30 4 P **P** **03 05 15.7 +0.6**
ULN IAmb IAmb 03 05 16.2
comp=Z,13nm,0.7s
KPKS Kokpek 52.44 338 *e*P **P** **03 05 15.1 -1.1**
comp=Z,10nm,0.6s,baz=338
MAT Matsushiro 52.62 36 P **P** **03 05 16.0 -1.5**
MJAR Matsushiro Arr 52.62 36 P **P** **03 05 16.5 -1.0**
comp=Z,6.6nm,0.6s,baz=215,slow=6.8,SNR=15
MJAR LR LR 03 28 16.0
comp=Z,48nm,20.2s,baz=240,slow=37
TNSS Tian-Shan 52.75 336 *e*P **P** **03 05 17.6 -1.3**
baz=336
ARMA Armidale 52.77 125 P **P** **03 05 20.6 +1.6**
baz=53,SNR=3.9
ARMA Armidale 52.77 125 P **P** **03 05 18.5 -0.4**
ARMA IAmb IAmb 03 05 39.4
comp=Z,34nm,1.4s
MDOK Medeo 52.81 337 *e*P **P** **03 05 17.7 -1.3**
baz=337
MDOK *e*S **S** **03 12 41.9 -0.5**
baz=337
UCH Uchtor 53.10 334 P **P** **03 05 21.7 +0.3**
SNR=13
TKM2 Tokmak 2 53.20 335 P **P** **03 05 22.4 +0.4**
SNR=16
KBK Karagaybulak 53.26 335 P **P** **03 05 23.0 +0.6**
SNR=27
AML Almayashu 53.38 333 P **P** **03 05 23.8 +0.3**
SNR=30
AAK Ala-Archa 53.44 334 P **P** **03 05 24.0 +0.4**
SNR=9.2
AAK Ala-Archa 53.44 334 P **P** **03 05 23.1 -0.6**
KUU Kurty 53.71 337 *e*P **P** **03 05 23.6 -1.8**
comp=Z,22nm,0.6s,baz=336
EKS2 Erkin-Say 53.77 334 P **P** **03 05 26.5 +0.5**
SNR=36
TDK Taldyorghan 53.87 339 *e*P **P** **03 05 25.6 -0.9**
comp=Z,14nm,0.5s,baz=339
USP Ospenovka 53.95 335 P **P** **03 05 27.8 +0.6**
SNR=9.6
ZSN Zaisan 54.07 345 *e*P **P** **03 05 27.3 -0.7**
comp=Z,11nm,0.6s,baz=345
MK31 Makanchi Array 54.18 343 P **P** **03 05 28.1 -0.7**
MK31 IAmb IAmb 03 05 29.4
comp=Z,17nm,0.7s
MKAR Makanchi Array 54.18 343 P **P** **03 05 28.7 0.0**
comp=Z,20nm,0.5s,baz=150,slow=8.1,SNR=344
MKAR S **S** **03 13 00.0 -0.6**
comp=Z,0.1nm,0.4s,baz=178,slow=18,SNR=2.0
MKAR LR LR 03 32 39.4
comp=Z,63nm,20.1s,baz=148,slow=40
MAKZ Makanchi 54.28 343 P **P** **03 05 29.0 -0.5**
MAKZ IAmb IAmb 03 05 31.3
comp=Z,16nm,1.1s
MDJ Mudanjiang 54.54 23 P **P** **03 05 31.2 -0.1**
MDJ pmax pmax
comp=Z,12nm,0.9s
MDJ pmax pmax
comp=Z,120nm,3.5s
JMM Marumori 55.04 37 P **P** **03 05 34.3 -0.8**
IUG Iuzhnay 55.11 331 *e*P **P** **03 05 34.9 -0.8**
baz=331
USA0B Ussuriysk Arra 55.18 25 P **P** **03 05 35.6 -0.4**
USRK Ussuriysk Ar. 55.18 25 P **P** **03 05 36.0 0.0**
comp=Z,24nm,0.6s,baz=211,slow=4.9,SNR=113
USRK LR LR 03 31 23.4
comp=Z,70nm,19.4s,baz=219,slow=38
KK31 Karatay Array 55.61 332 P **P** **03 05 38.1 -1.0**
KKAR Karatay Array 55.61 332 P **P** **03 05 38.1 -1.0**
TLY Talaya 55.98 1 P **P** **03 05 41.1 -0.5**
TLY IAmb IAmb 03 05 43.7
comp=Z,15nm,0.6s
SEM Semipalatinsk 58.02 343 *e*P **P** **03 05 55.1 -1.2**
comp=Z,9.8nm,0.5s,baz=343
KURBB Kurchatov Arra 58.72 342 S **S** **03 13 57.9 -2.6**

comp=Z,0.4nm,0.8s,baz=153,slow=12,SNR=1.9
GEYT Alibeck 59.08 320 P **P** **03 06 04.0 +0.3**
comp=Z,12nm,0.5s,baz=137,slow=7.7,SNR=20
GEYT LR LR 03 33 02.5
comp=Z,80nm,20.8s,baz=210,slow=38
GYA0B ALIBECK ARRAY 59.08 320 P **P** **03 06 03.0 -0.7**
ZAA0 Zalesovo Array 60.14 348 P **P** **03 06 10.6 0.0**
ZALV Zalesovo Beam 60.14 348 P **P** **03 06 10.2 -0.4**
comp=Z,71nm,0.5s,baz=167,slow=5.8,SNR=214
ZALV LR LR 03 34 46.4
comp=Z,198nm,20.8s,baz=148,slow=39
BRZS Berezniki 60.16 338 *e*P **P** **03 06 09.6 -1.3**
baz=338
ATD Arta Tunnel 61.61 286 LR LR 03 29 04.7
comp=Z,77nm,18.4s,baz=268,slow=32
RAYN Ar Rayn 62.29 299 P **P** **03 06 24.9 -0.9**
RAYN IAmb IAmb 03 06 43.4
comp=Z,16nm,1.1s
BRVK Borovoye 63.53 339 P **P** **03 06 32.8 -0.6**
ABKAR Akbulak array 65.12 331 P **P** **03 06 43.7 -0.1**
KMBO Kilima Mbogo 65.42 271 P **P** **03 06 48.7 +1.8**
comp=Z,0.8nm,0.6s,baz=66,slow=12,SNR=4.0
KMBO LR LR 03 30 41.3
comp=Z,59nm,20.8s,baz=94,slow=32
MAW Mawson 68.55 195 P **P** **03 07 07.9 +2.5**
comp=Z,7.6nm,1.0s,baz=33,slow=6.0,SNR=3.6
MAW LR LR 03 32 23.1
comp=Z,276nm,21.4s,baz=56,slow=32
MAW Mawson 68.55 195 P **P** **03 07 06.2 +0.9**
GEVA Gevas 69.61 314 P **P** **03 07 11.7 -1.0**
AKH Akhalkalaki 70.57 317 ⇑P **P** **03 07 19.8 +1.2**
ARU Arti 70.57 336 P **P** **03 07 17.7 -0.3**
ARU IAmb IAmb 03 07 18.8
comp=Z,15nm,0.7s
MARD Mardin 70.90 312 P **P** **03 07 20.2 -0.4**
MARD IAmb IAmb 03 07 22.4
comp=Z,24nm,0.7s
RPZ Rata Peaks 71.32 135 P **P** **03 07 22.8 -0.1**
QRZ Quartz Range 71.85 131 P **P** **03 07 26.3 +0.2**
KBZ Khabaz 71.95 319 P **P** **03 07 27.2 +0.7**
comp=Z,10nm,0.8s,baz=118,slow=4.9,SNR=32
MBAR Mbarara 71.95 271 P **P** **03 07 29.4 +2.0**
comp=Z,1.9nm,0.2s,baz=94,slow=3.5,SNR=5.6
MBAR LR LR 03 34 40.5
comp=Z,63nm,19.7s,baz=76,slow=32
MBAR Mbarara 71.95 271 P **P** **03 07 25.5 -1.9**
KIV Kislovodsk 72.18 319 ⇑P **P** **03 07 28.4 +0.3**
KIV Kislovodsk 72.18 319 P **P** **03 07 27.0 -1.1**
THZ Topohouse 72.29 132 P **P** **03 07 28.8 0.0**
THZ IAmb IAmb 03 07 31.6
comp=Z,23nm,0.9s
GAZ Gaziantep 73.53 311 P **P** **03 07 35.3 -0.9**
GAZ IAmb IAmb 03 07 38.2
comp=Z,13nm,0.9s
PETK Petropavlovsk- 73.61 31 P **P** **03 07 35.6 -0.6**
comp=Z,2.8nm,0.6s,baz=168,slow=0.4,SNR=8.9
PETK LR LR 03 39 59.1
comp=Z,43nm,20.9s,baz=198,slow=36
MATP Matopo 73.62 250 P **P** **03 07 39.0 +1.8**
comp=Z,3.4nm,0.4s,baz=99,slow=5.2,SNR=23
LSZ Lusaka 73.88 255 P **P** **03 07 40.5 +1.8**
comp=Z,1.2nm,0.5s,baz=75,slow=6.8,SNR=3.9
MA2 Magadan 74.24 23 P **P** **03 07 39.7 -0.1**
MA2 IAmb IAmb 03 07 40.9
comp=Z,26nm,1.5s
NRIK Noril'sk 74.43 354 P **P** **03 07 39.9 -0.8**
comp=Z,10nm,0.3s,baz=132,slow=3.9,SNR=21
NRIK LR LR 03 42 40.2
comp=Z,83nm,19.9s,baz=162,slow=38
NRIK Noril'sk 74.43 354 P **P** **03 07 39.8 -0.8**
NRIK IAmb IAmb 03 07 40.9
comp=Z,28nm,1.1s
BKZ Black Stump Fm 74.62 129 P **P** **03 07 42.9 +0.3**
URZ Urewera 75.00 128 P **P** **03 07 43.9 -0.8**
URZ IAmb IAmb 03 07 47.4
comp=Z,9.8nm,0.6s
TOKA Tokat 75.10 314 P **P** **03 07 43.9 -1.3**
TOKA IAmb IAmb 03 07 46.5
comp=Z,9.4nm,0.6s
CSS Mathiatis 75.87 308 P **P** **03 07 50.0 +0.2**
CSS IAmb IAmb 03 07 51.9
comp=Z,43nm,1.3s
LBTB Lobatse 76.41 245 P **P** **03 07 54.2 +1.1**
comp=Z,1.7nm,0.5s,baz=109,slow=5.6,SNR=5.1
BOSA Boshof 76.82 242 P **P** **03 07 57.0 +1.6**
comp=Z,4.7nm,0.9s,baz=114,slow=4.4,SNR=9.7
BOSA LR LR 03 36 27.6
comp=Z,176nm,18.3s,baz=162,slow=31
BR131 Keskin Array S 76.98 312 P **P** **03 07 55.7 -0.4**
BR131 IAmb IAmb 03 07 56.8
comp=Z,31nm,1.3s
BRTR Keskin Array B 76.98 312 P **P** **03 07 56.1 0.0**
comp=Z,7.3nm,0.6s,baz=131,slow=6.6,SNR=27
BRTR LR LR 03 43 13.8
comp=Z,51nm,21.3s,baz=127,slow=37
TIXI Tiksi 77.92 8 P **P** **03 07 58.9 -1.6**
TIXI IAmb IAmb 03 08 00.1
comp=Z,6.9nm,0.6s
MDUB Mudurnu 78.99 313 P **P** **03 08 06.1 -1.1**
ELL Elmali 79.01 309 P **P** **03 08 06.8 -0.6**
ELL IAmb IAmb 03 08 25.7
comp=Z,49nm,1.2s
VNDA Vanda 79.20 169 P **P** **03 08 08.9 +1.4**
comp=Z,4.9nm,1.0s,baz=322,slow=6.3,SNR=13
VNDA LR LR 03 39 28.1
comp=Z,59nm,21.3s,baz=276,slow=33
VNDA Vanda 79.20 169 P **P** **03 08 08.4 +1.0**
OBN Obninsk 80.33 328 P **P** **03 08 13.7 -0.2**
OBN IAmb IAmb 03 08 14.6
comp=Z,18nm,0.6s
SUR Sutherland 80.74 238 P **P** **03 08 18.1 +1.2**
comp=Z,1.9nm,0.4s,baz=115,slow=6.7,SNR=8.3
SUR Sutherland 80.74 238 P **P** **03 08 16.5 -0.4**
SUR IAmb IAmb 03 08 28.1
comp=Z,36nm,1.4s
KLMR Klimovskoe 81.25 334 *e*P **P** **03 08 16.6 -2.1**
KLMR AMP 03 08 20.7
comp=Z,18nm,1.0s
KLMR *e*pP **pP** **03 08 34.6 -3.2**
MILM Milestii Mici 82.36 318 ⇑P **P** **03 08 24.8 -0.1**
IDI Anoyia 82.67 306 ⇑P **P** **03 08 28.5 +1.6**
SORM Soroca 82.97 319 ⇑P **P** **03 08 28.4 +0.4**
AKASG Malin Array Be 83.10 322 P **P** **03 08 28.3 -0.3**
comp=Z,3.0nm,0.4s,baz=86,slow=4.7,SNR=20
VRI Vrincioaia 83.50 317 ⇑P **P** **03 08 32.1 +1.3**
PLOR Plostina 83.55 317 ⇑P **P** **03 08 32.5 +1.4**
TESR Tescani 83.70 318 ⇑P **P** **03 08 32.8 +0.9**
MLR Muntele Rosu 83.95 316 ⇑P **P** **03 08 34.5 +1.2**
MLR Muntele Rosu 83.95 316 IAmb IAmb 03 08 36.1
comp=Z,40nm,1.3s
BIZ Bicaz 84.17 318 ⇑P **P** **03 08 35.3 +1.1**
PRAR RASCA 84.18 318 ⇑P **P** **03 08 35.0 +0.7**
DOPR Dopca 84.44 317 ⇑P **P** **03 08 36.4 +0.8**
VOIR 84.56 316 ⇑P **P** **03 08 36.4 +0.2**
BUR08 Bucovina Ar. S 84.92 318 P **P** **03 08 38.2 +0.1**
BUR08 IAmb IAmb 03 08 40.6
comp=Z,22nm,1.3s
VTS Vitosha 85.29 313 ⇑P **P** **03 08 40.7 +0.6**
VTS Vitosha 85.29 313 P **P** **03 08 38.9 -1.2**
VTS IAmb IAmb 03 08 41.8
comp=Z,9.8nm,1.0s
NACGM Naroch 85.61 326 *i* P **P** **03 08 37.9 -3.3**
NACGM *i* P **P** **03 08 37.9 -3.3**
NACGM *i* P **P** **03 08 37.9 -3.3**
NACGM *i* pP **pP** **03 09 00.2 -0.3**
NACGM *i* sP **sP** **03 09 14.0 +5.9**
NACGM *i* PP PP 03 11 27.1 -34
NACGM *i* PPP PPP 03 13 32.9
NACGM *i* SKS S 03 18 40.8 -27
NACGM *i* PS **PnS** **03 20 00.3 -12**
NACGM *i* SS SS 03 24 25.8 -19
NACGM *i* SSS SSS 03 27 05.7
IDID Didziasalis 85.74 326 *e*P **P** **03 08 42.8 +1.0**
IIGN Ignalina 86.03 326 *e*P **P** **03 08 44.2 +0.9**
GZR Gura Zlata 86.12 316 ⇑P **P** **03 08 45.2 +1.1**
ISAL Salakas 86.14 326 *e*P **P** **03 08 44.8 +1.0**
DRGR 86.42 317 ⇑P **P** **03 08 46.6 +1.1**
VSU Vasula 86.52 329 *e*P **P** **03 08 46.1 +0.6**
MDVR Moldovita 86.76 315 ⇑P **P** **03 08 48.3 +1.1**
BZS Buzias 86.96 316 ⇑P **P** **03 08 49.1 +1.0**
KOLS Kolonicke sedl 87.09 319 *e*P **P** **03 08 50.1 +1.4**
PABE Paberze 87.32 326 *e*P **P** **03 08 50.0 +0.5**
SUW Suwalki 87.47 324 *e*P **P** **03 08 50.4 +0.1**
FINES FINESS Array B 87.57 332 P **P** **03 08 51.0 +0.4**
comp=Z,5.7nm,0.4s,baz=117,slow=5.6,SNR=101

FINES PKiKP **PKiKP** **03 13 53.7 -0.1**
comp=Z,1.2nm,0.9s,baz=104,slow=3.9,SNR=4.9
FINES LR LR 03 51 40.1
comp=Z,67nm,19.7s,baz=22,slow=38
CRVS Cervenica-Dubn 87.61 319 *eP* **P** **03 08 52.7 +1.5**
MTSE Matsula 88.06 329 *eP* **P** **03 08 52.7 -0.3**
PSZ Piszkesteto 88.49 318 IAmb IAmb 03 08 56.9
comp=Z,9.6nm,0.9s
PBUR Paburge 88.55 326 *eP* **P** **03 08 55.3 -0.1**
SLIT Slitere, Latvi 88.65 328 *eP* **P** **03 08 56.2 +0.4**
MORH Mrgy, Hungar 89.10 316 *i* P **P** **03 08 59.4 +1.2**
VYHS Vyhne 89.27 319 *eP* **P** **03 09 00.9 +1.9**
SRO2 Moca 89.47 318 *eP* **P** **03 09 00.6 +0.7**
SRO Srobarova 89.53 318 *eP* **P** **03 09 01.9 +1.7**
ARCES ARCESS Array B 89.73 340 P **P** **03 09 00.9 +0.2**
comp=Z,2.1nm,0.5s,baz=103,slow=5.8,SNR=56
ARCES LR LR 03 55 21.1
comp=Z,83nm,18.2s,baz=245,slow=40
MORC Moravsky Berou 90.27 320 IAmb IAmb 03 09 06.0
comp=Z,22nm,1.4s
MODS Modra-Piesok 90.29 318 *eP* **P** **03 09 05.4 +1.6**
KOGS Kog 90.78 316 *i* P **P** **03 09 07.0 +1.0**
DPC Dobruska-Polom 91.11 320 *eP* **P** **03 09 08.7 +1.1**
CONA Conrad Observa 91.18 318 *eP* **P** **03 09 08.5 +0.5**
comp=Z,3.8nm,1.1s
OSTC Ostas 91.20 320 *eP* **P** **03 09 08.1 +0.1**
DOBS Dobrina 91.29 316 *i* P **P** **03 09 09.6 +1.1**
CHVC Chvalec 91.31 320 *eP* **P** **03 09 08.9 +0.4**
ARSA Arzberg 91.35 317 *eP* **P** **03 09 08.9 +0.2**
comp=Z,5.9nm,1.1s
UPP Uppsala 91.38 330 *eP* **P** **03 09 09.0 +0.5**
SOKA Soboth 91.63 317 *eP* **P** **03 09 10.3 +0.2**
comp=Z,13nm,1.2s
LJU Ljubljana 91.93 316 *i* P **P** **03 09 12.8 +1.3**
OBKA Obir 91.95 316 *eP* **P** **03 09 12.0 +0.3**
comp=Z,5.3nm,1.4s
MOA Molln 92.25 318 *eP* **P** **03 09 13.2 +0.4**
comp=Z,2.6nm,1.0s
CKRC Cesky Krumlov 92.29 319 *eP* **P** **03 09 14.0 +0.9**
MYKA Terra Mystica 92.59 316 *eP* **P** **03 09 14.9 +0.4**
comp=Z,5.6nm,1.1s
BRG Berggiesshubel 92.67 321 *eP* **P** **03 09 15.7 +1.0**
BRG Amp 03 09 16.4
comp=Z,4.7nm,0.7s
GEC2 GERESS Array S 92.69 319 IAmb IAmb 03 09 17.1
comp=Z,18nm,1.5s
GERES GERESS Array B 92.69 319 P **P** **03 09 15.9 +0.9**
comp=Z,1.6nm,0.5s,baz=113,slow=4.1,SNR=9.4
KHC Kasperske Hory 92.79 319 *eP* **P** **03 09 15.4 0.0**
KBA Koelnbreinsper 92.82 317 *eP* **P** **03 09 16.2 +0.4**
comp=Z,6.1nm,1.4s
ABTA Abfaltersbach 93.37 316 *eP* **P** **03 09 18.2 0.0**
comp=Z,7.5nm,1.8s
WTTA Wattenberg 93.99 317 *eP* **P** **03 09 20.4 -0.8**
comp=Z,8.6nm,1.2s
WATA Walderalm 94.03 317 *eP* **P** **03 09 20.6 -0.7**
comp=Z,6.0nm,1.0s
SQTA Sankt Quirin 94.28 317 *eP* **P** **03 09 21.5 -0.9**
comp=Z,1.4nm,0.5s
MOTA Moosalm 94.36 317 *eP* **P** **03 09 22.5 -0.3**
comp=Z,7.2nm,1.3s
FETA Feichten 94.60 317 *eP* **P** **03 09 22.9 -1.0**
comp=Z,5.2nm,1.4s
NOA NORSAR Array B 94.63 331 P **P** **03 09 23.7 +0.2**
comp=Z,0.5nm,0.5s,baz=116,slow=3.9,SNR=4.5
NOA LR LR 03 56 13.4
comp=Z,40nm,19.0s,baz=80,slow=38
DAVA Damuels 95.19 317 *eP* **P** **03 09 27.2 +0.6**
comp=Z,6.8nm,1.2s
KEST Kesra 95.31 305 P **P** **03 09 29.2 +1.9**
comp=Z,4.7nm,0.7s,baz=55,slow=16,SNR=2.5
TOLK Toolik Lake Re 100.61 21 P 03 09 50.5
baz=285
TORD Torodi Ar. Bea 101.70 282 P **Pdif** **03 09 57.7 +1.4**
comp=Z,0.3nm,0.8s,baz=102,slow=3.3,SNR=1.8
TORD PKiKP **PKiKP** **03 14 19.1 -0.5**
comp=Z,0.1nm,0.4s,baz=74,slow=1.8,SNR=1.3
ILAR Eielson Array 102.70 24 PKiKP **PKiKP** **03 14 19.3 -0.8**
comp=Z,0.1nm,0.6s,baz=269,slow=3.0,SNR=1.4
ILAR PKKPbc **PKKPbc** **03 25 60.0 -1.4**
comp=Z,0.2nm,0.5s,baz=131,slow=1.3,SNR=6.7
YKA Yellowknife Ar 115.94 18 PKP **PKiKP** **03 14 44.2 -0.8**
comp=Z,0.2nm,0.4s,baz=324,slow=2.2,SNR=11
YKA PKKPbc **PKKPab** **03 25 21.1 -0.5**
comp=Z,0.3nm,0.9s,baz=132,slow=5.1,SNR=5.3
B05A Bryant 122.08 34 P 03 14 58.2
baz=304
H04D Lebanon 123.72 38 P 03 15 02.2
baz=302
K02D Willamette Mer 124.07 40 P 03 15 02.6
baz=300
J04D Umpqua Nationa 124.78 39 P 03 15 04.1
baz=301
L04D Klamath Falls 125.18 40 P 03 15 04.7
baz=301
J05D Fort Rock, OR 125.30 38 P 03 15 05.2
baz=302
O03E Paynes Creek 126.47 42 P 03 15 06.9
baz=300
MSO Missoula 127.32 31 P 03 15 08.1
baz=312
EGMT Eagleton 128.52 27 P **PKPdf** **03 15 10.3 -0.5**
baz=317
DLMT Dillon 128.99 32 **PKPdf** **03 15 10.3 -0.5**
HLID Hailey 129.18 34 P 03 15 12.9
baz=309
BOZ Bozeman (W) 129.33 31 P 03 15 12.6
baz=314
NVAR Mina Array Bea 129.75 42 PKhKP PKPpre 03 15 03.0
comp=Z,0.1nm,0.3s,baz=192,slow=1.4,SNR=3.7
NVAR PKP **PKiKP** **03 15 14.3 +1.0**
comp=Z,1.1nm,0.5s,baz=283,slow=2.5,SNR=9.9
ELK Elko 130.42 38 PKP **PKiKP** **03 15 15.6 +1.0**
comp=Z,0.9nm,0.4s,baz=275,slow=1.4,SNR=9.1
MPMC Manual Prospec 131.54 44 P 03 15 17.8
baz=301
R11A Troy Canyon, C 131.59 41 **PKPdf** **03 15 15.2 -0.8**
R11A Troy Canyon, C 131.59 41 P 03 15 18.1
baz=304
ULM Lac du Bonnet 131.81 16 PKP **PKPdf** **03 15 15.6 -0.2**
comp=Z,1.7nm,0.4s,baz=44,slow=3.0,SNR=4.2
PDAR Pinedale Array 132.36 32 PKP **PKPdf** **03 15 17.2 -0.2**
comp=Z,0.4nm,0.5s,baz=117,slow=2.2,SNR=6.2
PDAR SKPbc **SKPbc** **03 18 38.5 +0.4**
comp=Z,1.0nm,0.8s,baz=255,slow=2.9,SNR=6.3
PDAR PKKPbc **SKKSac** **03 24 26.4 -4.6**
comp=Z,0.4nm,0.8s,baz=97,slow=4.9,SNR=3.7
GMRC Granite Mounta 133.47 45 P 03 15 21.2
baz=302
RSSD Black Hills 134.07 27 P 03 15 21.1
baz=322
PLCA Paso Flores 134.55 187 PKP **PKiKP** **03 15 23.6 +0.8**
comp=Z,2.7nm,1.0s,baz=177,slow=2.1,SNR=8.3
O20A White River Ci 134.90 34 P 03 15 23.7
baz=314
W18A Petrified Fore 137.28 40 P 03 15 29.4
baz=308
S22A 4UR Ranch, Cre 137.34 35 P 03 15 28.3
baz=314
ECSD EROS Data Cent 137.38 21 P 03 15 28.0
baz=331
MNTX Cornudas Mount 142.26 41 PKPdf **PKiKP** **03 15 37.5 -1.2**
MNTX Cornudas Mount 142.26 41 P 03 15 37.7
baz=310
SFIN Lafayette 143.22 13 P 03 15 34.0
baz=344
CPUP Villa Florida 143.74 211 PKP **PKPdf** **03 15 37.6 -0.8**
comp=Z,2.8nm,0.5s,baz=112,slow=2.2,SNR=12
CPUP Villa Florida 143.74 211 PKPdf **PKPdf** **03 15 37.8 -0.6**
N57A Milroy 143.92 0 P 03 15 35.6
baz=360
WMOK Wichita Mounta 143.94 31 P 03 15 35.1
baz=322
ACSO Alum Creek Sta 144.08 7 P 03 15 36.4
baz=350
O53A New Philadelph 144.25 5 P 03 15 37.0
baz=353
CCM Cathedral Cave 144.28 19 P 03 15 36.8
baz=336
CO03 El Pedregal 144.28 190 PKPdf **PKPdf** **03 15 39.1 -0.3**
O59A Robesonia 144.35 359 P 03 15 37.0
baz=2.0
O56A Blue Knob Stat 144.39 2 P 03 15 37.4
baz=358
TUL1 Leonard 144.42 26 P 03 15 37.7
baz=327
O57A Amberson 144.46 0 P 03 15 37.5
baz=360
P49A Miami Univ. Ec 144.50 10 P 03 15 37.6
baz=347
O58A Lewisberry 144.55 359 P 03 15 37.4
baz=0.7
MVL Millersville 144.66 359 PKPbc 03 15 38.6 +0.1
BDFB Brasilia 144.75 235 PKP **PKPdf** **03 15 41.3 +0.8**
comp=Z,8.9nm,0.4s,baz=132,slow=3.6,SNR=20
BDFB Brasilia 144.75 235 PKPdf PKPbc 03 15 39.6 0.0
P52A Corning 144.77 6 P 03 15 38.1
baz=352
P60A Greenville 144.83 358 P 03 15 38.7
baz=2.9
TX31 Lajitas Ar. Si 144.90 42 PKPbc 03 15 39.8 0.0
TXAR Lajitas Array 144.90 42 PKP **PKPdf** **03 15 40.6 +0.1**
comp=Z,9.0nm,0.5s,baz=250,slow=1.1,SNR=143
TXAR SKPbc **SKPbc** **03 19 14.0 +0.1**
comp=Z,0.4nm,0.7s,baz=270,slow=1.8,SNR=2.7
MCWV Mont Chateau 144.94 3 P 03 15 39.6
baz=356
GO04 Tololo Observa 144.95 190 **PKPab** **03 15 39.0 -1.1**
P59A Jarrettsville 145.05 359 P 03 15 39.6
baz=1.6,SNR=9.5
ABTX Abilene, Hawle 145.10 34 **PKPab** **03 15 40.4 +0.2**
ABTX Abilene, Hawle 145.10 34 P 03 15 40.3
baz=319
P56A Dayton Farm, R 145.14 2 P 03 15 40.0
baz=357,SNR=14
P57A Homestead Farm 145.18 1 P 03 15 40.0
baz=359,SNR=18
U40A Yellville 145.24 22 P 03 15 40.0
baz=332
SDMD Soldier's Deli 145.26 359 **PKPbc** **03 15 40.3 -0.1**
WCI Wyandotte Cave 145.46 13 PKPdf **PKPdf** **03 15 40.7 -0.4**
WCI Wyandotte Cave 145.46 13 P 03 15 40.9
baz=344
Q56A Snyder Ridge, 145.59 3 P 03 15 41.1
baz=357
Q53A Leroy 145.60 6 P 03 15 41.3
baz=353
Q57A Strasburg 145.62 2 P 03 15 41.6
baz=358,SNR=19
Q58A Fox Den Farm, 145.73 1 P 03 15 41.7
baz=359,SNR=6.3
Q59A Harwood 145.80 359 P 03 15 42.3
baz=1.2,SNR=6.7
W39A Magazine 145.88 24 P 03 15 42.8
baz=330
R56A Bull Pasture M 146.21 3 P 03 15 43.4
baz=356
R55A Marlinton 146.29 4 P 03 15 43.3
baz=355
R54A Victor 146.32 5 P 03 15 43.2
baz=354
R57A Stanardsville 146.36 2 P 03 15 43.6
baz=358
R58A Rapidan 146.37 1 P 03 15 43.7
baz=359,SNR=7.8
R60A Leonardtown, M 146.40 359 P 03 15 44.2
baz=1.4
CBN Corbin Frederi 146.47 0 P 03 15 44.1
baz=360,SNR=5.2
W41B Gary Mavity, V 146.51 22 P 03 15 43.8
baz=332
MIAR Mount Ida 146.53 25 P 03 15 44.6
baz=330
JCT Junction City 146.58 37 P 03 15 45.1
baz=316,SNR=17
S54A Dingess, Beckl 146.67 6 P 03 15 44.0
baz=353
R58B Mineral 146.70 1 P 03 15 44.8
baz=359,SNR=7.3
S57A Dark Hollow, R 146.88 2 P 03 15 45.4
baz=357,SNR=11
X40A Basin Creek Fa 146.88 24 P 03 15 45.9
baz=331
S59A Mechanicsville 146.91 360 P 03 15 45.2
baz=0.1,SNR=9.2
S56A Natural Bridge 146.93 3 P 03 15 45.3
baz=356,SNR=9.1
S60A Water View 146.96 359 P 03 15 46.6
baz=1.2
S58A Poland Farm, P 147.05 1 P 03 15 45.6
baz=359,SNR=8.7
WVT Waverly 147.08 16 PKPdf **PKPdf** **03 15 43.3 -0.5**
WVT Waverly 147.08 16 P 03 15 45.6
baz=341
T56A Rocky Mt 147.54 4 P 03 15 47.0
baz=355,SNR=8.3
435B Jarrell 147.64 34 P 03 15 48.2
baz=320
T58A Grand View Acr 147.70 2 P 03 15 47.7
baz=358,SNR=7.7
AC02 Maricunga 147.84 194 **PKPbc** **03 15 48.2 -0.8**
U54A Nelsons Funny 147.88 7 P 03 15 48.0
baz=352
Z41A Richland Creek 147.96 25 P 03 15 49.0
baz=330
OXF Oxford 148.11 19 P 03 15 48.6
baz=337
U56A King 148.19 5 P 03 15 48.8
baz=354,SNR=6.4
U60A Pendleton 148.20 360 P 03 15 49.4
baz=0.3
833A Chaparral WMA, 148.36 39 P 03 15 50.8
baz=315
TKL Tuckaleechee C 148.44 10 PKPbc **PKPbc** **03 15 49.5 -0.2**
comp=Z,9.3nm,0.6s,baz=134,slow=5.3,SNR=17
V57A Coltrane Farms 148.70 4 P 03 15 50.3
baz=355
V56A Mocksville 148.72 5 P 03 15 50.2
baz=354
V60A Jim Taylor Roa 148.90 360 **PKPbc** **03 15 50.1 -0.7**
V60A Jim Taylor Roa 148.90 360 P 03 15 51.2
baz=0.1
KMSC Kings Mountain 149.30 6 P 03 15 51.7
baz=352,SNR=5.9
W56A Indian Trail 149.38 5 P 03 15 51.8
baz=354
CNNC Cliffs of the 149.42 1 P 03 15 52.5
baz=359
ZAIG Zacatecas 149.58 51 **PKPbc** **03 15 51.9 -1.4**
X60A Albert Glenn T 150.08 1 P 03 15 54.2
baz=359
LRAL Lakeview Retre 150.22 17 P 03 15 53.8
baz=340,SNR=5.1
TIGA Tifton 152.57 12 P 03 16 00.4
baz=346
LPAZ La Paz 157.42 204 PKP **PKPdf** **03 16 01.5 +1.0**
comp=Z,2.7nm,1.0s,baz=134,slow=1.7,SNR=4.5

TUL ***02*** *03:05:17.7±1.4,36.12N±0.01×97.56W±0.05,h5km±1km, ML3.3,mb_Lg3.4/133(NEIC) Error ellipse: s-maj=5.2km s-min=1.7km az=79.0*
ANF ***02*** *03:05:18.0±0.2,36.13N×97.55W,h5km,ML4.3/20, Error ellipse: s-maj=2.3km s-min=1.8km az=110.0*
NEIC ***02*** *03:05:17.7±1.1,36.13N±0.01×97.58W±0.03,h4km±6km, Error ellipse: s-maj=4.1km s-min=1.7km az=86.0*
IDC ***02*** *03:05:18.6±2.1,36.20N×97.88W,h0km,mb3.4/2, mb1 3.7/5,mb1mx3.4/47,mbtmp3.3/5,ML2.7/2,Error ellipse: s-maj=41.6km s-min=12.3km az=107.0*
ISC 02 03:05:17.5±1.1,36.14N±0.02×97.56W±0.03,h7km±8km, n131,σ1s01/111,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.35**	**166**		**Pg**	**03 05 24.6**	**+0.2**
OK029				Sg	**Sg**	**03 05 29.3**	**+0.2**
BCOK	**Bluff Creek, N**	**0.48**	**185**		**Pg**	**03 05 26.9**	**+0.1**
BCOK					**Sg**	**03 05 33.4**	**+0.2**
CROK	**Carrier**	**0.50**	**317**		**Pg**	**03 05 27.8**	**+0.6**
CROK				Sg	**Sg**	**03 05 34.9**	**+1.2**
OK009	**Oakdale Elemen**	**0.57**	**169**		**Pg**	**03 05 28.6**	**+0.1**
OK005	**Luther M Schoo**	**0.57**	**148**		**Pg**	**03 05 29.0**	**+0.5**
OK025	**Westminster Rd**	**0.59**	**162**		**Pg**	**03 05 29.0**	**+0.1**
OK025				IAmb_Lg		03 05 36.2	
	comp=Z,864nm,0.9s						
OK025				Sg	**Sg**	**03 05 36.9**	**+0.4**
OK031	**S. Brethren Rd**	**0.61**	**107**		**Pg**	**03 05 29.7**	**+0.4**
OK031				Sg	**Sg**	**03 05 37.9**	**+0.5**
OK001	**Jones High Sch**	**0.62**	**159**		**Pg**	**03 05 29.5**	**0.0**
OK030	**Cody Creek RV**	**0.67**	**108**		**Pg**	**03 05 30.7**	**+0.4**
OK030				Sg	**Sg**	**03 05 39.4**	**+0.4**
OK030				IAmb_Lg		03 05 39.4	

comp=Z,311nm,0.8s
QUOK Quay 0.69 87 Pg **Pg** **03 05 31.2 +0.3**
OKCFA Oklahoma City 0.73 173 **Pg** **03 05 31.4 -0.1**
OKCFA IAmb_Lg 03 05 40.4
comp=Z,742nm,0.9s
OKCFA Sg **Sg** **03 05 41.2 +0.2**
OKCFA Oklahoma City 0.73 173 P **Pg** **03 05 31.4 -0.1**
baz=353,SNR=31
OKCFA S **Sg** **03 05 41.3 +0.3**
baz=353
OKCFA Oklahoma City 0.73 173 P 03 05 31.4
baz=353,SNR=31
OKCFA S 03 05 41.3
baz=353
OKCSW OKLAHOMA CITY 0.74 172 **Pg** **03 05 31.4 -0.3**
GC02 Grant County # 0.75 341 **Pg** **03 05 32.4 +0.4**
OK032 Salt Plains WL 0.84 322 **Pg** **03 05 34.0 +0.2**
KAN13 South Haven SW 0.88 4 IAmb_Lg 03 05 46.0
comp=Z,446nm,0.8s
KAN14 Manchester OK 0.88 338 **Pg** **03 05 34.7 +0.3**
FNO Franklin 0.89 172 Pg **Pg** **03 05 34.8 +0.2**
FNO IAmb_Lg 03 05 47.1
comp=Z,505nm,1.0s
KAN09 Caldwell North 1.00 357 Pg **Pg** **03 05 36.9 +0.2**
KAN08 Anthony NE Sta 1.13 343 **Pg** **03 05 39.5 +0.1**
T35A Sooner Cattle 1.15 47 Pg **Pg** **03 05 39.6 +0.1**
T35B Sooner Cattle 1.15 47 P **Pg** **03 05 39.7 +0.2**
baz=227
T35B S **Sg** **03 05 54.9 +0.4**
baz=227
T35B Sooner Cattle 1.15 47 P 03 05 39.7
baz=227
T35B S 03 05 54.9
baz=227
U32A Winter Ranch, 1.19 282 **Pg** **03 05 39.9 -0.4**
U32A Winter Ranch, 1.19 282 P **Pg** **03 05 40.0 -0.4**
baz=102
U32A Winter Ranch, 1.19 282 P 03 05 40.0
baz=102
KAN12 Harper NE Stat 1.21 343 Pg **Pg** **03 05 40.6 -0.1**
TUL1 Leonard 1.45 99 P **Pn** **03 05 44.0 -0.2**
baz=279,SNR=156
TUL1 S **Sg** **03 06 04.5 +0.3**
baz=279
TUL1 Leonard 1.45 99 P 03 05 44.0
baz=279,SNR=52
TUL1 S 03 06 04.5
baz=279
TUL1 Leonard 1.45 99 P 03 05 44.0
baz=279,SNR=156
TUL1 S 03 06 04.5
baz=279
WMOK Wichita Mounta 1.72 216 P **Pn** **03 05 48.2 +0.3**
baz=35,SNR=109
WMOK S **Sb** **03 06 11.4 +0.2**
baz=35
WMOK Wichita Mounta 1.72 216 P 03 05 48.1
baz=35,SNR=44
WMOK S 03 06 11.0
baz=35
WMOK Wichita Mounta 1.72 216 P 03 05 48.2
baz=35,SNR=109
WMOK S 03 06 11.4
baz=35
X37A Clayton 2.37 130 **Pn** **03 05 57.1 +0.3**
X37A IAmb_Lg 03 06 32.8
comp=Z,98nm,0.7s
X37A Clayton 2.37 130 P **Pn** **03 05 57.8 +1.0**
baz=311,SNR=47
X37A S **Sb** **03 06 28.7 -1.1**
baz=311
X37A Clayton 2.37 130 P 03 05 57.8
baz=311,SNR=47
X37A S 03 06 28.7
baz=311
R32A Long Quarter, 2.46 338 IAmb_Lg 03 06 40.8
comp=Z,97nm,0.9s
U38A Gravette 2.58 82 **Pn** **03 06 00.8 +1.0**
Z35A Perchaven, San 2.81 175 P **Pn** **03 06 04.3 +1.3**
baz=355,SNR=30
Z35A S **Sn** **03 06 39.2 +2.1**
baz=355
Z35A Perchaven, San 2.81 175 P 03 06 04.3
baz=355,SNR=30
Z35A S 03 06 39.2
baz=355
HHAR Hobbs 2.93 86 **Pn** **03 06 05.5 +0.8**
HHAR IAmb_Lg 03 06 56.8
comp=Z,69nm,0.7s
KSU1 Kansas State U 3.05 14 **Pn** **03 06 07.9 +1.7**
KSU1 IAmb_Lg 03 06 59.2
comp=Z,88nm,0.7s
KSU1 Kansas State U 3.05 14 P **Pn** **03 06 08.0 +1.7**
baz=194
KSU1 Sb **Sg** **03 06 53.5 -2.1**
baz=194
KSU1 Kansas State U 3.05 14 Pn 03 06 07.9
baz=194,SNR=26
KSU1 Pb 03 06 14.5
baz=194
KSU1 Kansas State U 3.05 14 P 03 06 08.0
baz=194
KSU1 Sb 03 06 53.5
baz=194
CBKS Cedar Bluff 3.18 328 Pn **Pn** **03 06 10.4 +2.3**
CBKS Cedar Bluff 3.18 328 P **Pn** **03 06 09.5 +1.4**
baz=147,SNR=5.7
CBKS Cedar Bluff 3.18 328 Pn 03 06 10.6
baz=147
CBKS Pb 03 06 16.5
baz=147,SNR=18
CBKS Sb 03 06 57.6
baz=147
CBKS Cedar Bluff 3.18 328 P 03 06 09.5
baz=147,SNR=5.7
W39A Magazine 3.22 106 **Pn** **03 06 08.8 +0.4**
W39A IAmb_Lg 03 07 05.3
comp=Z,108nm,0.9s
W39A Magazine 3.22 106 P **Pn** **03 06 09.2 +0.7**
baz=288,SNR=16
W39A Magazine 3.22 106 P 03 06 09.3
baz=288,SNR=7.0
W39A Magazine 3.22 106 P 03 06 09.2
baz=288,SNR=16
Z38A Mt. Pleasant 3.57 143 Pn **Pn** **03 06 14.5 +1.1**
Z38A Mt. Pleasant 3.57 143 S **Sn** **03 06 56.8 +1.0**
baz=324
Z38A Mt. Pleasant 3.57 143 S 03 06 56.8
baz=324
AMTX Amarillo 3.59 251 Pn **Pn** **03 06 14.7 +1.0**
AMTX IAmb_Lg 03 07 16.3
comp=Z,101nm,0.8s
AMTX Amarillo 3.59 251 P **Pn** **03 06 14.9 +1.3**
baz=69,SNR=7.0
AMTX Amarillo 3.59 251 P 03 06 14.9
baz=69
AMTX Sb 03 07 08.1
baz=69
AMTX Amarillo 3.59 251 P 03 06 14.9
baz=69,SNR=7.0
MIAR Mount Ida 3.62 115 Pn **Pn** **03 06 15.1 +1.0**
MIAR IAmb_Lg 03 07 18.7
comp=Z,113nm,0.8s
MIAR Mount Ida 3.62 115 P **Pn** **03 06 15.2 +1.1**
baz=297,SNR=32
MIAR S **Sn** **03 06 59.1 +1.9**
baz=297
MIAR Mount Ida 3.62 115 P 03 06 15.2
baz=297,SNR=14
MIAR S 03 06 59.1
baz=297
MIAR Mount Ida 3.62 115 P 03 06 15.2
baz=297,SNR=32
MIAR S 03 06 59.1
baz=297
S39A Bolivar 3.73 64 Pn **Pn** **03 06 16.7 +1.1**
S39A IAmb_Lg 03 07 17.1
comp=Z,89nm,0.9s
S39A Bolivar 3.73 64 P **Pn** **03 06 16.7 +1.1**
baz=246,SNR=21
S39A Bolivar 3.73 64 P 03 06 16.7
baz=246,SNR=21
U40A Yellville 3.81 85 Pn **Pn** **03 06 17.3 +0.6**
U40A IAmb_Lg 03 07 27.3
comp=Z,138nm,0.7s
U40A Yellville 3.81 85 P **Pn** **03 06 17.2 +0.5**
baz=268,SNR=13

U40A	**Yellville**	**3.81**	**85**	P			03 06 17.1	
	baz=268,SNR=7.8							
U40A	**Yellville**	**3.81**	**85**	P			03 06 17.2	
U40A	baz=268,SNR=13			P			03 06 17.2	
	baz=268,SNR=13							
ABTX	**Abilene, Hawle**	**3.91**	**207**	Pn	**Pn**		**03 06 18.4**	**+0.3**
ABTX				lAmb_Lg			03 07 23.4	
	comp=Z,71nm,0.8s							
ABTX	**Abilene, Hawle**	**3.91**	**207**	P			03 06 18.9	
	baz=26,SNR=17							
WHTX	**Lake Whitney,**	**4.14**	**179**		**Pn**		**03 06 21.7**	**+0.5**
WHTX	**Lake Whitney,**	**4.14**	**179**	P	**Pn**		**03 06 21.6**	**+0.5**
	baz=359,SNR=20							
WHTX	**Lake Whitney,**	**4.14**	**179**	P			03 06 21.9	
	baz=359,SNR=9.3							
WHTX				Sb			03 07 23.1	
	baz=359							
WHTX	**Lake Whitney,**	**4.14**	**179**	P			03 06 21.6	
	baz=359,SNR=20							
X40A	**Basin Creek Fa**	**4.20**	**112**		**Pn**		**03 06 23.3**	**+1.3**
X40A	**Basin Creek Fa**	**4.20**	**112**	P			03 06 23.5	
	baz=294							
WHAR	**Wooly Hollow**	**4.37**	**100**		**Pn**		**03 06 24.6**	**+0.2**
WHAR				lAmb_Lg			03 07 42.1	
	comp=Z,97nm,0.7s							
MGMO	**Mountain Grove**	**4.38**	**75**		**Pn**		**03 06 24.6**	**+0.2**
MGMO				lAmb_Lg			03 07 39.1	
	comp=Z,68nm,0.8s							
237A	**Washetta, Mont**	**4.38**	**160**	Pn	**Pn**		**03 06 24.2**	**-0.2**
237A				lAmb_Lg			03 07 45.3	
	comp=Z,97nm,0.9s							
237A	**Washetta, Mont**	**4.38**	**160**	P	**Pn**		**03 06 24.5**	**+0.1**
	baz=341,SNR=12							
237A	**Washetta, Mont**	**4.38**	**160**	P			03 06 24.5	
	baz=341,SNR=12							
WLAR	**White Oak Lake**	**4.40**	**122**	Pn	**Pn**		**03 06 25.8**	**+1.0**
WLAR				lAmb_Lg			03 07 43.3	
	comp=Z,75nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.41**	**92**	Pn	**Pn**		**03 06 25.4**	**+0.5**
FCAR				lAmb_Lg			03 07 47.0	
	comp=Z,55nm,0.8s							
W41B	**Gary Mavity, V**	**4.43**	**101**	P	**Pn**		**03 06 25.5**	**+0.3**
	baz=284,SNR=24							
W41B	**Gary Mavity, V**	**4.43**	**101**	P			03 06 25.5	
	baz=284,SNR=6.1							
W41B				S			03 07 18.6	
	baz=284							
W41B	**Gary Mavity, V**	**4.43**	**101**	P			03 06 25.5	
	baz=284,SNR=24							
N33A	**J Bar K, Exete**	**4.59**	**1**	lAmb_Lg			03 07 56.8	
	comp=Z,90nm,0.8s							
P38A	**Dawn**	**4.72**	**41**	Pn	**Pn**		**03 06 31.0**	**+1.8**
P38A				lAmb_Lg			03 07 49.4	
	comp=Z,74nm,0.8s							
R40A	**Maddies Statio**	**4.74**	**61**		**Pn**		**03 06 30.4**	**+1.0**
R40A				lAmb_Lg			03 07 46.1	
	comp=Z,89nm,0.8s							
R40A	**Maddies Statio**	**4.74**	**61**	P	**Pn**		**03 06 30.3**	**+0.9**
	baz=244,SNR=29							
R40A	**Maddies Statio**	**4.74**	**61**	P			03 06 30.3	
	baz=244,SNR=29							
MSTX	**Muleshoe**	**4.79**	**245**	Pn	**Pn**		**03 06 30.0**	**-0.2**
MSTX	**Muleshoe**	**4.79**	**245**	P	**Pn**		**03 06 30.9**	**+0.7**
	baz=62,SNR=14							
MSTX	**Muleshoe**	**4.79**	**245**	P			03 06 30.9	
	baz=62							
MSTX	**Muleshoe**	**4.79**	**245**	P			03 06 30.9	
	baz=62,SNR=14							
Z41A	**Richland Creek**	**4.86**	**125**	P			03 06 31.8	
	baz=308							
Z41A				S			03 07 27.1	
	baz=308							
KSCO	**Kaye Shedlock'**	**4.94**	**307**	lAmb_Lg			03 08 07.5	
	comp=Z,75nm,0.8s							
NATX	**Nacogdoches**	**4.99**	**150**	lAmb_Lg			03 08 05.9	
	comp=Z,48nm,1.0s							
LCAR	**Lake Charles**	**5.19**	**89**	lAmb_Lg			03 08 07.1	
	comp=Z,52nm,0.8s							
BGNE	**Belgrade**	**5.28**	**355**	Pn	**Pn**		**03 06 36.3**	**-0.6**
BGNE				lAmb_Lg			03 08 14.6	
	comp=Z,98nm,0.8s							
BGNE	**Belgrade**	**5.28**	**355**	P	**Pn**		**03 06 37.4**	**+0.5**
	baz=175							
BGNE	**Belgrade**	**5.28**	**355**	P			03 06 37.4	
	baz=175							
435B	**Jarrell**	**5.34**	**180**	Pn	**Pn**		**03 06 37.7**	**0.0**
435B				lAmb_Lg			03 08 09.0	
	comp=Z,85nm,0.8s							
435B	**Jarrell**	**5.34**	**180**	P			03 06 38.2	
	baz=0.2							
CCM	**Cathedral Cave**	**5.40**	**67**	Pn	**Pn**		**03 06 41.0**	**+2.5**
CCM				lAmb_Lg			03 08 22.5	
	comp=Z,38nm,0.8s							
CCM	**Cathedral Cave**	**5.40**	**67**	P			03 06 40.4	
	baz=251							
P40A	**Paris**	**5.52**	**51**		**Pn**		**03 06 42.3**	**+2.2**
P40A				lAmb_Lg			03 08 17.9	
	comp=Z,102nm,0.7s							
T25A	**Trinidad**	**5.60**	**282**		**Pn**		**03 06 43.8**	**+2.3**
T25A				lAmb_Lg			03 08 21.8	
	comp=Z,70nm,1.0s							
N38A	**Joes South For**	**5.75**	**35**	Pn	**Pn**		**03 06 44.3**	**+1.0**
OGNE	**Ogallala**	**5.94**	**325**	Pn	**Pn**		**03 06 48.2**	**+2.2**
OGNE				lAmb_Lg			03 08 37.2	
	comp=Z,78nm,0.8s							
OGNE	**Ogallala**	**5.94**	**325**	P			03 06 48.6	
	baz=143							
FVM	**French Village**	**6.00**	**70**	Pn	**Pn**		**03 06 47.0**	**+0.3**
FVM				lAmb_Lg			03 08 43.0	
	comp=Z,37nm,0.8s							
143A	**Socs Landing,**	**6.13**	**122**	lAmb_Lg			03 08 39.5	
	comp=Z,61nm,0.7s							
PARMO	**Parma**	**6.32**	**83**	lAmb_Lg			03 08 55.8	
	comp=Z,86nm,0.9s							
SLM	**Saint Louis**	**6.34**	**65**	lAmb_Lg			03 08 48.0	
	comp=Z,44nm,0.8s							
Q24A	**Divide**	**6.66**	**297**	S			03 08 13.8	
	baz=113							
HALT	**Halls**	**6.67**	**90**	lAmb_Lg			03 08 57.6	
	comp=Z,73nm,0.9s							
OXF	**Oxford**	**6.86**	**101**	Pn	**Pn**		**03 06 57.7**	**-0.8**
OXF				lAmb_Lg			03 09 09.0	
	comp=Z,74nm,1.2s							
OXF	**Oxford**	**6.86**	**101**	P			03 06 58.2	
	baz=286							
SIUC	**Southern Illin**	**6.87**	**74**	lAmb_Lg			03 08 54.7	
	comp=Z,58nm,0.8s							
W45A	**Hickory Valley**	**6.89**	**96**	lAmb_Lg			03 08 58.0	
	comp=Z,48nm,0.8s							
Y45A	**Yeager Farm, C**	**6.96**	**107**	lAmb_Lg			03 09 11.3	
	comp=Z,42nm,1.0s							
P43A	**Skaggs, Pawnee**	**7.25**	**59**		**Pn**		**03 07 04.5**	**+0.6**
735A	**Kenedy**	**7.27**	**182**	lAmb_Lg			03 09 27.5	
	comp=Z,66nm,1.1s							
ISCO	**Idaho Springs**	**7.33**	**302**	Pn	**Pn**		**03 07 06.6**	**+1.2**
ISCO				lAmb_Lg			03 09 10.4	
	comp=Z,34nm,1.1s							
ANMO	**Albuquerque**	**7.35**	**263**	Pg	Pg		03 07 32.6	-5.6
	comp=Z,0.5nm,0.3s,baz=77,slow=16,SNR=8.9							
ANMO				Lg	Lg		03 09 05.7	
	comp=Z,1.2nm,0.3s,baz=86,slow=7.7,SNR=3.4							
ECSD	**EROS Data Cent**	**7.62**	**5**	Pn	**Pn**		**03 07 09.0**	**0.0**
ECSD				lAmb_Lg			03 09 28.7	
	comp=Z,29nm,0.8s							
L40A	**Anamosa**	**7.70**	**38**	lAmb_Lg			03 09 30.9	
	comp=Z,57nm,0.8s							
PLAL	**Pickwick Lake**	**7.82**	**96**	lAmb_Lg			03 09 32.0	
	comp=Z,24nm,0.9s							
HDIL	**Hopedale**	**7.85**	**53**		**Pn**		**03 07 12.7**	**+0.6**
MNTX	**Cornudas Mount**	**7.86**	**238**	Pn	**Pn**		**03 07 12.7**	**+0.3**
MNTX	**Cornudas Mount**	**7.86**	**238**	P			03 07 13.4	
	baz=54							
PHWY	**Pilot Hill**	**8.04**	**312**	lAmb_Lg			03 09 40.8	
	comp=Z,33nm,0.9s							
N23A	**Red Feather La**	**8.11**	**308**	P			03 07 18.1	
	baz=123,SNR=5.8							
USIN	**University of**	**8.12**	**74**	lAmb_Lg			03 09 34.2	
	comp=Z,52nm,0.9s							
O44A	**Mansfield**	**8.21**	**58**	lAmb_Lg			03 09 47.1	
	comp=Z,55nm,0.9s							
SUSD	**Miller**	**8.36**	**353**	lAmb_Lg			03 09 56.5	
	comp=Z,38nm,0.8s							
L42A	**Oliver, Polo**	**8.48**	**44**	lAmb_Lg			03 09 54.0	
	comp=Z,38nm,0.7s							
I37A	**Lemond, Waseca**	**8.49**	**21**	lAmb_Lg			03 10 09.7	
	comp=Z,43nm,0.8s							

TX31	**Lajitas Ar. Si**	**8.51**	**219**		**Pn**		**03 07 21.0**	**-0.4**
TXAR	**Lajitas Array**	**8.51**	**219**	Pn	**Pn**		**03 07 19.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=44,slow=12,SNR=6.9							
TXAR				Pg	Pg		03 07 52.3	-8.2
	comp=Z,1.4nm,0.3s,baz=39,slow=15,SNR=8.3							
TXAR				Lg	Lg		03 09 42.0	
	comp=Z,1.2nm,0.3s,baz=41,slow=23,SNR=4.5							
JFWS	**Jewell Farm**	**8.81**	**38**	Pn	**Pn**		**03 07 25.3**	**0.0**
JFWS				lAmb_Lg			03 10 06.5	
	comp=Z,47nm,0.8s							
P46A	**Rosedale**	**8.89**	**64**	lAmb_Lg			03 10 12.7	
	comp=Z,53nm,0.9s							
CLTN	**Cedars of Leba**	**9.09**	**87**	lAmb_Lg			03 10 17.2	
	comp=Z,22nm,1.0s							
M44A	**Midewin, Midew**	**9.09**	**52**	Pn	**Pn**		**03 07 31.3**	**+2.2**
M44A				lAmb_Lg			03 10 14.7	
	comp=Z,40nm,0.9s							
121A	**Cookes Peak, D**	**9.19**	**250**	lAmb_Lg			03 10 19.5	
	comp=Z,28nm,1.2s							
WCI	**Wyandotte Cave**	**9.23**	**74**	Pn	**Pn**		**03 07 31.2**	**+0.1**
WCI				lAmb_Lg			03 10 29.2	
	comp=Z,30nm,0.8s							
SFIN	**Lafayette**	**9.25**	**60**	lAmb_Lg			03 10 10.3	
	comp=Z,34nm,0.8s							
BLO	**Bloomington**	**9.26**	**68**	Pn	**Pn**		**03 07 31.9**	**+0.4**
PV11	**David Mesa, Pa**	**9.28**	**287**	lAmb_Lg			03 10 15.7	
	comp=Z,23nm,1.3s							
RWWY	**Rawlins**	**9.34**	**309**	lAmb_Lg			03 10 28.3	
	comp=Z,18nm,0.8s							
RSSD	**Black Hills**	**9.38**	**330**	Pn	**Pn**		**03 07 33.5**	**+0.1**
RSSD				lAmb_Lg			03 10 27.5	
	comp=Z,18nm,0.8s							
HQIL	**Hanson Quary C**	**9.44**	**50**	lAmb_Lg			03 10 19.8	
	comp=Z,36nm,0.9s							
K22A	**Casper**	**9.50**	**316**	lAmb_Lg			03 10 40.7	
	comp=Z,46nm,1.1s							
U49A	**Red Boiling Sp**	**9.52**	**84**	lAmb_Lg			03 10 47.7	
	comp=Z,18nm,1.1s							
SPMN	**Marine on St.**	**9.77**	**20**	lAmb_Lg			03 10 51.9	
	comp=Z,22nm,1.0s							
P48A	**Milroy**	**10.16**	**67**	Pn	**Pn**		**03 07 45.4**	**+1.6**
G40A	**Rib Lake**	**10.69**	**29**	Pn	**Pn**		**03 07 51.4**	**+0.3**
TKL	**Tuckaleechee C**	**11.20**	**88**	Lg	Lg		03 11 01.9	
	comp=Z,0.3nm,0.3s,baz=185,slow=22,SNR=3.8							
PD31	**Pinedale Array**	**11.39**	**309**	Pn	**Pn**		**03 08 00.8**	**-0.1**
PDAR	**Pinedale Array**	**11.39**	**309**	Pn	**Pn**		**03 08 00.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=116,slow=14,SNR=6.8							
PDAR				Pg			03 08 47.2	
	comp=Z,0.2nm,0.3s,baz=106,slow=16,SNR=7.0							
PDAR				Lg	Lg		03 11 12.9	
	comp=Z,0.3nm,0.3s,baz=105,slow=34,SNR=1.9							
COWI	**Conover**	**11.80**	**30**	Pn	**Pn**		**03 08 06.3**	**+0.1**
D41A	**Chassel**	**12.81**	**29**	Pn	**Pn**		**03 08 18.6**	**-1.5**
N51A	**Ashland**	**12.81**	**64**	Pn	**Pn**		**03 08 20.0**	**0.0**
E43A	**Lone Tree Farm**	**12.94**	**35**	Pn	**Pn**		**03 08 20.0**	**-1.8**
ULM	**Lac du Bonnet**	**14.16**	**4**	Pn	**Pn**		**03 08 35.4**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=185,slow=11,SNR=1.5							
ULM				Sn	Sn		03 11 04.9	-11
	comp=Z,0.3nm,0.3s,baz=167,slow=11,SNR=3.0							
ULM				Lg	Lg		03 12 33.9	
	comp=Z,0.2nm,0.3s,baz=104,slow=20,SNR=2.5							
SADO	**Sadowa**	**16.43**	**53**	Lg	Lg		03 13 44.3	
	comp=Z,0.4nm,0.3s,baz=52,slow=5.2,SNR=2.1							
YKA	**Yellowknife Ar**	**28.43**	**343**	P	**P**		**03 11 11.8**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=142,slow=9.1,SNR=6.0							
ILAR	**Eielson Array**	**40.83**	**330**	P	**P**		**03 13 01.0**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=110,slow=7.3,SNR=9.0							

JMA 02 03:17:27.8, 35.10N×135.69E, h6km±1km, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.30**	**308**	P	Pg	03 17 33.8	+0.2
JWT				S	Sg	03 17 37.7	+0.1
JHE	**Heguri**	**0.45**	**181**	P	Pg	03 17 36.5	+0.1
JHE				S	Sg	03 17 42.2	0.0
JKS	**Kasai**	**0.70**	**261**	P	Pg	03 17 41.2	-0.1
JKS				S	Sg	03 17 50.4	-0.1
JKY	**Yasaka**	**0.71**	**318**	P	Pg	03 17 41.5	0.0
TSUJ	**Tsu 2**	**0.71**	**123**	P	Pg	03 17 41.3	-0.2
TSUJ				S	Sg	03 17 50.5	-0.3
JWY	**Kouya**	**0.88**	**185**	P	Pg	03 17 44.4	-0.4
JWY				S	Sg	03 17 55.8	-0.4
JAWN	**Awajishima-nag**	**0.89**	**227**	P	Pg	03 17 44.8	-0.1
JAWN				S	Sg	03 17 56.4	-0.1
JKSM	**Kasumi**	**0.97**	**300**	P	Pg	03 17 46.0	-0.4
JKSM				S	Sg	03 17 58.8	-0.2
JKN2	**Miekihoku**	**0.98**	**151**	S	Sg	03 17 58.5	-1.0
JYTA	**Yamagatataniai**	**0.99**	**60**	P	Pg	03 17 46.5	-0.2
JYTA				S	Sg	03 17 59.3	-0.2
MAT	**Matsushiro**	**2.50**	**54**	P	Pb	03 18 11.1	-2.0
MAT				*eS*	Sb	03 18 42.4	-1.8

IDC 02 03:17:59.5±2.7, 55.39N×82.94E, h0km, mb1 2.8/3, mb1mx2.7/46, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=30.3km s-min=13.5km az=26.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.81**	**142**	*i*		03 28 57.8	
	baz=320,slow=332,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.81**	**142**	Pg	Pn	03 18 32.4	+0.5
	1.4nm,0.3s,baz=327,slow=17,SNR=10						
ZALV				Lg	Lg	03 18 56.4	
	3.2nm,0.3s,baz=325,slow=24,SNR=13						
KURBB	**Kurchatov Arra**	**5.46**	**211**	Pn	Pn	03 19 22.6	+0.5
	0.1nm,0.3s,baz=31,slow=13,SNR=4.5						
KURBB				Pg	Pb	03 19 39.8	+4.1
	0.1nm,0.3s,baz=320,slow=29,SNR=4.8						
KURBB				Lg	Lg	03 20 47.8	
	0.1nm,0.3s,baz=25,slow=26,SNR=2.3						
BVAR	**Borovoye Array**	**7.73**	**257**	Pn	Pn	03 19 51.8	-1.4
	0.2nm,0.3s,baz=82,slow=12,SNR=4.5						
BVAR				Sn	Sn	03 21 15.2	-6.2
	0.2nm,0.3s,baz=7.9,slow=23,SNR=2.0						
MKAR	**Makanchi Array**	**8.62**	**183**	Pn	Pn	03 20 04.8	-0.5
	0.1nm,0.3s,baz=2.9,slow=13,SNR=3.9						

*IDC **02** 03:23:13.9±1.0, 5.54S×152.27E, h0km, mb4.0/10, mb1 4.2/10, mb1mx4.0/32, mbtmp4.0/10, MS3.0/1, Ms1 3.0/1, ms1mx2.6/33, Error ellipse: s-maj=30.8km s-min=20.5km az=117.0*

*NEIC **02** 03:23:18.8±1.4, 5.64S±0.06×152.4E±0.1, h35km±2km, mb4.1/10, Error ellipse: s-maj=19.8km s-min=9.0km az=100.0*

ISC 02 03:23:19.6±0.7, 5.62S±0.06×152.37E±0.10, h40km, n26, σ0§98/28, mb4.0/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.44**	**352**	Pn	**Pn**	**03 23 43.5**	**+0.2**
RABL				Sn	**Sn**	**03 24 01.9**	**+1.0**
MANU	**Manus Island**	**6.13**	**305**	Pn	**Pn**	**03 24 48.4**	**+0.6**
PMG	**Port Moresby**	**6.39**	**234**	Pn	**Pn**	**03 24 53.2**	**+2.0**
	2.4nm,0.3s,baz=3.8,slow=7.7,SNR=5.7						
PMG				Sn	**Sn**	**03 26 04.6**	**+1.6**
	1.5nm,0.3s,baz=81,slow=17,SNR=2.7						
PMG	**Port Moresby**	**6.39**	**234**		**Pn**	**03 24 52.1**	**+0.8**
PMG					**Sn**	**03 26 01.6**	**-1.5**
JAY	**Jayapura**	**12.04**	**284**	LR	LR	03 30 10.8	
	comp=Z,71nm,19.1s,baz=307,slow=35						
EIDS	**Eidsvold**	**19.68**	**183**	P	**P**	**03 27 44.5**	**-0.8**
DZM	**Mont Dzumac**	**21.28**	**142**	P	**P**	**03 28 03.5**	**+0.7**
	3.9nm,0.6s,baz=309,slow=6.5,SNR=1.5						
DZM	**Mont Dzumac**	**21.28**	**142**	P	**P**	**03 28 03.1**	**+0.2**
DZM				lAmb	lAmb	03 28 10.5	
	comp=Z,10nm,1.0s						
MTN	**Manton Dam**	**22.14**	**250**	P	**P**	**03 28 12.8**	**+0.6**
MTN				lAmb	lAmb	03 28 30.9	
	comp=Z,5.4nm,0.7s						
WB0	**Warramunga Arr**	**22.44**	**230**	P	**P**	**03 28 14.7**	**-0.7**
WB0				lAmb	lAmb	03 28 27.1	
	comp=Z,7.2nm,0.9s						
WR0	**Warramunga Arr**	**22.44**	**229**	P	**P**	**03 28 14.4**	**-1.0**
WR0				lAmb	lAmb	03 28 33.4	
	comp=Z,6.1nm,1.1s						
WB2	**Warramunga Arr**	**22.58**	**229**	P	**P**	**03 28 15.9**	**-0.8**
WB2				lAmb	lAmb	03 28 32.2	
	comp=Z,5.1nm,0.9s						
WRA	**Warramunga Arr**	**22.59**	**229**	P	**P**	**03 28 15.9**	**-1.0**
	comp=Z,2.9nm,0.6s,baz=54,slow=10.0,SNR=42						
ASAR	**Alice Springs**	**25.26**	**223**	P	**P**	**03 28 42.6**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=60,slow=9.0,SNR=27						
FITZ	**Fitzroy Crossi**	**28.89**	**242**	P	**P**	**03 29 14.1**	**-0.9**
	comp=Z,3.0nm,0.8s,baz=57,slow=9.1,SNR=12						
FITZ	**Fitzroy Crossi**	**28.89**	**242**	P	**P**	**03 29 13.3**	**-1.6**
FITZ				lAmb	lAmb	03 29 20.0	
	comp=Z,4.5nm,0.8s						
CMAR	**Chiang Mai Arr**	**57.84**	**296**	P	**P**	**03 33 06.8**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=123,slow=4.4,SNR=1.5						
SONM	**Songino Array**	**66.79**	**328**	P	**P**	**03 34 08.0**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=134,slow=5.2,SNR=6.8						
GAMB	**Gambell**	**74.28**	**16**	P	**P**	**03 34 52.4**	**+0.1**
TNA	**Tin City**	**76.70**	**16**	P	**P**	**03 35 06.2**	**0.0**
MKAR	**Makanchi Array**	**80.66**	**319**	P	**P**	**03 35 27.1**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=99,slow=4.5,SNR=4.2						
ZALV	**Zalesovo Beam**	**81.60**	**326**	P	**P**	**03 35 32.7**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=127,slow=4.4,SNR=2.2						
IL31		**83.08**	**22**	P	**P**	**03 35 40.7**	**0.0**
ILAR	**Eielson Array**	**83.08**	**22**	P	**P**	**03 35 40.5**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=249,slow=5.6,SNR=12						
YKA	**Yellowknife Ar**	**96.35**	**28**	P	**P**	**03 36 45.1**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=280,slow=4.8,SNR=3.4						
TORD	**Torodi Ar. Bea**	**150.14**	**287**	PKPbc	**PKPbc**	**03 43 06.7**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=56,slow=1.4,SNR=4.7						

IDC 02 03:25:54.4±4.4, 22.53N×143.62E, h114km±39km, mb3.1/3, mb1 3.3/4, mb1mx3.0/37, mbtmp3.5/4, Error ellipse: s-maj=48.6km s-min=29.6km az=97.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.73**	**344**	P	Pn	03 27 03.6	0.0
	2.4nm,0.3s,baz=139,slow=19,SNR=1.4						
JCJ				S	Sn	03 27 54.0	-3.5
	7.5nm,0.3s,baz=131,slow=19,SNR=12						
WRA	**Warramunga Arr**	**43.17**	**193**	P	P	03 33 43.9	-0.1
	0.2nm,0.4s,baz=16,slow=8.9,SNR=2.0						
MKAR	**Makanchi Array**	**54.44**	**312**	P	P	03 35 09.8	-0.2
	0.4nm,0.5s,baz=88,slow=7.8,SNR=6.7						
YKA	**Yellowknife Ar**	**75.54**	**28**	P	P	03 37 26.1	+0.1
	0.2nm,0.4s,baz=294,slow=5.4,SNR=7.1						

*IDC **02** 03:44:11.9±1.4, 2.96S×134.10E, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.7/32, mbtmp4.0/5, ML4.0/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/49, Error ellipse: s-maj=45.6km s-min=21.5km az=49.0*

*DJA **02** 03:44:14.2±0.4, 3.3S±3.3×13.4E±.°, h10km, M3.9/6, MLv3.9/6*

ISC 02 03:44:14.0±0.9, 3.12S±0.06×133.99E±0.09, h24km, n12, σ1§85/13, mb3.9/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMPI	**Kaimana, Papua**	**0.61**	**208**	P	**Pb**	**03 44 25.8**	**-0.3**
KMPI				S	**Sb**	**03 44 33.2**	**-1.1**
FAKI	**Fak Fak**	**1.75**	**277**	P	**Pn**	**03 44 42.0**	**-1.0**
BAKI	**Biak**	**2.85**	**48**	P	**Pb**	**03 45 02.7**	**-1.6**
SIJI	**Sorong**	**3.53**	**309**	Pn	**Pn**	**03 45 07.3**	**0.0**
	13nm,0.3s,baz=55,slow=12,SNR=21						
SIJI				Sn	**Sn**	**03 45 47.2**	**-1.1**
	3.4nm,0.3s,baz=88,slow=21,SNR=3.8						
SIJI				Lg	Lg	03 46 02.8	
	2.5nm,0.3s,baz=143,slow=20,SNR=3.9						
SWI	**Sorong**	**3.54**	**309**	P	**Pn**	**03 45 06.8**	**-0.7**
WRA	**Warramunga Arr**	**16.72**	**179**	Pn	**Pn**	**03 48 05.8**	**-1.1**
	0.2nm,0.3s,baz=359,slow=12,SNR=7.2						
WRA				Sn	Sn	03 51 04.0	-8.1
	0.1nm,0.3s,baz=356,slow=23,SNR=2.0						
FITZ	**Fitzroy Crossi**	**16.99**	**208**	P	**Pn**	**03 48 06.5**	**-3.6**
	0.3nm,0.3s,baz=39,slow=11,SNR=11						
FITZ				S	Sn	03 51 04.3	-14
	0.1nm,0.3s,baz=205,slow=19,SNR=2.3						
ASAR	**Alice Springs**	**20.43**	**180**	P	**P**	**03 48 52.4**	**+2.7**
	6.8nm,0.9s,baz=7.0,slow=11,SNR=45						
ASAR				LR	LR	03 56 15.2	
	comp=Z,85nm,19.0s,baz=322,slow=35						
CMAR	**Chiang Mai Arr**	**40.63**	**303**	P	**P**	**03 51 54.2**	**+1.7**
	1.0nm,0.3s,baz=124,slow=7.4,SNR=8.0						
MKAR	**Makanchi Array**	**67.30**	**324**	P	**P**	**03 55 08.7**	**+1.7**
	0.5nm,0.5s,baz=110,slow=7.8,SNR=11						
ILAR	**Eielson Array**	**88.17**	**25**	P	**P**	**03 57 03.1**	**+0.4**
	0.3nm,0.6s,baz=262,slow=4.6,SNR=2.6						
ATD	**Arta Tunnel**	**91.74**	**281**	LR	LR	04 41 48.3	
	comp=Z,38nm,18.1s,baz=30,slow=38						

*IDC **02** 03:51:41.5±0.9, 36.11N×89.80W, h0km, mb3.1/1, mb1 3.9/8, mb1mx3.5/54, mbtmp3.7/8, ML3.7/7, Error ellipse: s-maj=13.6km s-min=8.5km az=8.0*

*IAS

RELT Roellen 0.42 92 Pg 03 51 52.0 +0.2
PENMO Penman 0.43 22 Pg 03 51 52.0 +0.1
PENMO Sg Sg 03 51 57.8 0.0
TOPM Tallapoosa 0.48 354 Pg 03 51 52.7 0.0
GLAT Glass 0.48 63 Pg 03 51 53.1 +0.1
GLAT Sg Sb 03 52 00.7 +0.5
GLST Glass 0.48 63 Pg 03 51 53.1 +0.2
MARMO Marston 0.49 15 Pg 03 51 53.1 0.0
WALK Watson Lake 0.54 25 Pg 03 51 53.9 0.0
FLPT Flippin 0.54 49 Pg 03 51 54.0 0.0
NMEM New Madrid Sch 0.56 20 Pg 03 51 54.3 +0.1
MLDM Malden 0.58 352 Pg 03 51 54.5 -0.2
CATM Catron 0.58 14 Pg 03 51 54.6 0.0
NMMO New Madrid 0.58 22 Pg 03 51 54.6 0.0
BETM Bethany 0.59 341 Pg 03 51 54.9 0.0
LPAR Lepanto 0.59 221 Pg 03 51 54.6 -0.3
LPAR Sg Sg 03 52 03.1 +0.3
PARMO Parma 0.61 5 Pg Pg 03 51 55.2 -0.1
PARMO Sg Sg 03 52 03.5 0.0
SJMO Saint John's B 0.64 26 Pg 03 51 55.8 0.0
V43A Jonesboro 0.64 246 Pg 03 51 55.8 -0.1
COKM Charter Oak 0.66 7 Pg 03 51 56.1 -0.1
KEWM Kewanee 0.67 16 Pg 03 51 56.0 -0.4
BRNM Bernie 0.69 348 Pg 03 51 56.5 -0.1
HICK Hickman 0.69 44 Pg 03 51 56.4 -0.3
HICK Sg Sg 03 52 06.2 +0.4
SFTN Shelby Forest 0.71 193 Pg 03 51 56.8 -0.3
HENM Henderson Moun 0.72 23 Pg 03 51 57.1 -0.2
HENM Sg Sg 03 52 06.8 -0.1
UTMT University of 0.83 69 Pg 03 51 59.2 -0.1
HBAR Harrisburg 0.84 234 Pg 03 51 59.2 -0.4
HBAR Sg Sb 03 52 10.9 +0.4
HBAR Harrisburg 0.84 234 P Pg 03 51 59.3 -0.2
baz=53,SNR=202
HBAR S Sb 03 52 10.9 +0.4
baz=53
HBAR Harrisburg 0.84 234 P 03 51 59.3
baz=53,SNR=202
HBAR S 03 52 10.9
baz=53
PBMO Poplar Bluff 0.88 326 Pg 03 51 59.5 -0.7
PBMO Sg Sg 03 52 11.5 -0.2
PBMO Poplar Bluff 0.88 326 P Pg 03 51 59.5 -0.7
baz=146,SNR=449
PBMO S Sg 03 52 11.7 -0.1
baz=146
PBMO Poplar Bluff 0.88 326 P 03 51 59.5
baz=146,SNR=449
PBMO S 03 52 11.7
baz=146
HDBT Hernando Brdge 0.92 192 Pg Pg 03 52 00.3 -0.7
HDBT Sg Sg 03 52 12.9 -0.1
MET Memphis--Engin 0.93 186 Pg Pg 03 52 00.3 -1.0
W45A Hickory Valley 1.03 150 Pg Pg 03 52 01.9 -1.3
W45A Hickory Valley 1.03 150 P Pg 03 52 02.0 -1.2
baz=330,SNR=686
W45A S Sg 03 52 16.2 -0.6
baz=330
W45A Hickory Valley 1.03 150 P 03 52 02.0
baz=330,SNR=686
W45A S 03 52 16.2
baz=330
LCAR Lake Charles 1.08 271 Pb 03 52 03.1 -0.4
LCAR Lake Charles 1.08 271 P Pb 03 52 03.1 -0.4
baz=91
LCAR Lake Charles 1.08 271 P 03 52 03.1
baz=91
T45B Paducah 1.35 44 P Pn 03 52 07.8 +0.4
baz=225
T45B S Sg 03 52 26.6 -0.2
baz=225
T45B Paducah 1.35 44 P 03 52 07.8
baz=225
T45B S 03 52 26.6
baz=225
T45A Paducah 1.35 44 Pn 03 52 07.8 +0.3
OXF Oxford 1.57 167 Pn Pn 03 52 10.8 +0.3
OXF Oxford 1.57 167 P Pn 03 52 11.1 +0.6
baz=348,SNR=278
OXF S Sb 03 52 32.4 +0.8
baz=348
OXF Oxford 1.57 167 P 03 52 11.1
baz=348,SNR=278
OXF S 03 52 32.4
baz=348
WVT Waverly 1.62 87 Pn Pn 03 52 11.5 +0.4
WVT Waverly 1.62 87 P Pn 03 52 11.7 +0.7
baz=268,SNR=219
WVT S Sb 03 52 33.6 +0.8
baz=268
WVT Waverly 1.62 87 P 03 52 11.7
baz=268,SNR=219
WVT S 03 52 33.6
baz=268
S44A Carbondale 1.70 15 Pn 03 52 13.3 +1.0
S44A Carbondale 1.70 15 P Pn 03 52 13.4 +1.2
baz=196,SNR=587
S44A S Sb 03 52 35.6 +0.4
baz=196
S44A Carbondale 1.70 15 P 03 52 13.4
baz=196,SNR=587
S44A S 03 52 35.6
baz=196
SIUC Southern Illin 1.73 16 Pn 03 52 13.2 +0.6
X43A Marvell 1.76 210 P Pn 03 52 13.7 +0.7
baz=29,SNR=70
X43A Sb Sg 03 52 39.0 -0.9
baz=29
X43A Marvell 1.76 210 P 03 52 13.7
baz=29,SNR=70
X43A Sb 03 52 39.0
baz=29
PLAL Pickwick Lake 1.78 126 Pn 03 52 13.6 +0.2
PWLA Pickwick Lake 1.79 126 Pn 03 52 13.7 +0.2
FCAR Ozark Folk Cen 1.87 266 Pn 03 52 15.1 +0.5
FVM French Village 1.99 346 Pn 03 52 16.9 +0.7
FVM French Village 1.99 346 P Pn 03 52 17.2 +1.0
baz=166,SNR=1000
FVM French Village 1.99 346 P 03 52 17.2
baz=166,SNR=1000
WHAR Wooly Hollow 2.15 250 Pn Pn 03 52 19.1 +0.8
WHAR IAmb_Lg 03 52 56.0
comp=Z,507nm,1.0s
W41B Gary Mavity, V 2.16 247 P Pn 03 52 19.4 +0.9
baz=65,SNR=1000
W41B S Sn 03 52 46.5 +1.5
baz=65
W41B Gary Mavity, V 2.16 247 P 03 52 19.4
baz=65,SNR=1000
W41B S 03 52 46.5
baz=65
Y45A Yeager Farm, C 2.19 174 P 03 52 20.0
baz=354,SNR=90
Y45A Sb 03 52 51.8
baz=354
Y45A Yeager Farm, C 2.19 174 Pn Pn 03 52 20.0 +1.0
Y45A Yeager Farm, C 2.19 174 P Pn 03 52 20.0 +1.0
baz=354,SNR=90
Y45A Sb Sb 03 52 51.8 +2.4
baz=354
MGMO Mountain Grove 2.25 300 Pn 03 52 21.4 +1.5
MGMO IAmb_Lg 03 52 56.7
comp=Z,490nm,0.8s
CCM Cathedral Cave 2.30 331 Pn Pn 03 52 21.6 +1.2
CCM Cathedral Cave 2.30 331 P Pn 03 52 21.5 +1.0
baz=150,SNR=682
CCM Cathedral Cave 2.30 331 P 03 52 21.5
baz=150,SNR=682
T47A Sharon Grove 2.38 66 Pn Pn 03 52 22.5 +0.9
T47A Sharon Grove 2.38 66 P Pn 03 52 22.7 +1.2
baz=248,SNR=658
T47A Sharon Grove 2.38 66 P 03 52 22.7
baz=248,SNR=658
V48A Smith Brothers 2.46 96 Pn 03 52 23.2 +0.6
V48A IAmb_Lg 03 53 06.8
comp=Z,373nm,0.8s
V48A Smith Brothers 2.46 96 P Pn 03 52 23.3 +0.6
baz=278,SNR=168
V48A Smith Brothers 2.46 96 P 03 52 23.3
baz=278,SNR=168
U40A Yellville 2.47 278 Pn 03 52 23.8 +0.9
U40A Yellville 2.47 278 P Pn 03 52 24.0 +1.2
baz=96,SNR=590
U40A Yellville 2.47 278 P 03 52 24.0
baz=96,SNR=590
U40A P 03 52 24.0
baz=96,SNR=590
NHIN New Harmony 2.56 35 Pn 03 52 26.0 +1.9
USIN University of 2.57 41 IAmb_Lg 03 53 10.2
comp=Z,366nm,0.8s
SLM Saint Louis 2.60 353 Pn 03 52 25.4 +0.8
SLM IAmb_Lg 03 53 08.6
comp=Z,452nm,0.9s
SLM Saint Louis 2.60 353 P Pn 03 52 26.2 +1.6
baz=173,SNR=15
SLM Saint Louis 2.60 353 P 03 52 26.2
baz=173,SNR=15
CCAR Cane Creek 2.66 217 Pn 03 52 26.6 +1.2
CCAR Cane Creek 2.66 217 P Pn 03 52 26.6 +1.2
baz=36,SNR=57
CCAR Sb Sb 03 53 05.9 +2.9
baz=36
CCAR Cane Creek 2.66 217 P 03 52 26.6
baz=36,SNR=57
CCAR Sb 03 53 05.9
baz=36
X48A Hartselle 2.78 124 Pn Pn 03 52 27.8 +0.7
X48A Hartselle 2.78 124 P Pn 03 52 27.6 +0.6
baz=306,SNR=110
X48A Hartselle 2.78 124 P 03 52 27.6
baz=306,SNR=110
CLTN Cedars of Leba 2.83 88 Pn Pn 03 52 28.6 +0.8
X40A Basin Creek Fa 2.92 239 Pn 03 52 29.5 +0.6
X40A IAmb_Lg 03 53 20.5
comp=Z,371nm,0.7s
X40A Basin Creek Fa 2.92 239 P Pn 03 52 29.6 +0.7
baz=57,SNR=55
X40A Basin Creek Fa 2.92 239 P 03 52 29.6
baz=57,SNR=55
X40A P 03 52 29.6
baz=57,SNR=55
Q44A Meyer Farm, Va 2.92 12 P 03 52 30.5
baz=193,SNR=83
Q44A Meyer Farm, Va 2.92 12 Pn Pn 03 52 30.4 +1.5
Q44A IAmb_Lg 03 53 21.2
comp=Z,355nm,0.7s
Q44A Meyer Farm, Va 2.92 12 P Pn 03 52 30.5 +1.5
baz=193,SNR=83
R40A Maddies Statio 2.97 320 Pn 03 52 30.8 +1.2
R40A IAmb_Lg 03 53 22.8
comp=Z,304nm,0.8s
R40A Maddies Statio 2.97 320 P Pn 03 52 30.9 +1.3
baz=138,SNR=261
R40A Maddies Statio 2.97 320 P 03 52 30.9
baz=138,SNR=261
OLIL Olney 3.01 27 Pn 03 52 30.8 +0.6
OLIL IAmb_Lg 03 53 21.8
comp=Z,573nm,0.8s
Z47A Carrollton 3.19 153 P 03 52 33.9
baz=334,SNR=66
Z47A Carrollton 3.19 153 Pn Pn 03 52 33.9 +1.2
Z47A Carrollton 3.19 153 P Pn 03 52 33.9 +1.2
baz=334,SNR=66
S39A Bolivar 3.25 301 Pn 03 52 34.8 +1.3
S39A IAmb_Lg 03 53 29.3
comp=Z,351nm,0.8s
S39A Bolivar 3.25 301 P Pn 03 52 34.8 +1.3
baz=119,SNR=78
S39A Bolivar 3.25 301 P 03 52 34.8
baz=119,SNR=78
SWET Sewanee 3.28 104 Pn Pn 03 52 34.8 +0.8
SWET IAmb_Lg 03 53 24.9
comp=Z,338nm,0.7s
U49A Red Boiling Sp 3.30 81 Pn 03 52 35.3 +1.1
U49A Red Boiling Sp 3.30 81 P Pn 03 52 35.0 +0.8
baz=263,SNR=44
U49A Red Boiling Sp 3.30 81 P 03 52 35.0
baz=263,SNR=44
W39A Magazine 3.34 256 Pn 03 52 35.8 +1.1
W39A Magazine 3.34 256 P Pn 03 52 35.9 +1.2
baz=74,SNR=127
W39A Magazine 3.34 256 P 03 52 35.9
baz=74,SNR=127
HHAR Hobbs 3.34 275 Pn 03 52 35.6 +0.8
HHAR Hobbs 3.34 275 P Pn 03 52 35.6 +0.8
baz=93,SNR=17
HHAR Hobbs 3.34 275 P 03 52 35.6
baz=93,SNR=17
MIAR Mount Ida 3.42 245 Pn Pn 03 52 36.5 +0.7
MIAR IAmb_Lg 03 53 39.6
comp=Z,270nm,0.8s
MIAR Mount Ida 3.42 245 P Pn 03 52 36.9 +1.1
baz=63,SNR=213
MIAR Mount Ida 3.42 245 P 03 52 36.9
baz=63,SNR=213
146A Union 3.46 169 Pn 03 52 37.8 +1.3
146A IAmb_Lg 03 53 41.9
comp=Z,468nm,0.8s
146A Union 3.46 169 P Pn 03 52 37.8 +1.3
baz=350,SNR=24
146A Union 3.46 169 P 03 52 37.8
baz=350,SNR=24
Y49A Blount Mountai 3.56 127 Pn Pn 03 52 38.4 +0.7
Y49A IAmb_Lg 03 53 37.2
comp=Z,369nm,0.9s
Y49A Blount Mountai 3.56 127 P Pn 03 52 38.5 +0.7
baz=309,SNR=136
Y49A Blount Mountai 3.56 127 P 03 52 38.5
baz=309,SNR=136
WCI Wyandotte Cave 3.56 51 Pn Pn 03 52 38.7 +0.9
WCI IAmb_Lg 03 53 42.1
comp=Z,267nm,0.8s
WCI Wyandotte Cave 3.56 51 P Pn 03 52 38.9 +1.1
baz=233,SNR=48
WCI Wyandotte Cave 3.56 51 P 03 52 38.9
baz=233,SNR=48
143A Socs Landing, 3.59 202 Pb 03 52 46.7 +0.4
WLAR White Oak Lake 3.59 230 Pn Pn 03 52 39.0 +0.9
P43A Skaggs, Pawnee 3.59 4 P Pn 03 52 40.2 +2.0
baz=184,SNR=43
P43A Skaggs, Pawnee 3.59 4 P 03 52 40.2
baz=184,SNR=43
U38A Gravette 3.71 277 Pn 03 52 40.6 +0.8
U38A Gravette 3.71 277 P Pn 03 52 40.6 +0.8
baz=95,SNR=68
U38A Gravette 3.71 277 P 03 52 40.6
baz=95,SNR=68
Z41A Richland Creek 3.71 222 P Pn 03 52 41.1 +1.2
baz=40,SNR=8.8
Z41A Richland Creek 3.71 222 P 03 52 41.1
baz=40,SNR=8.8
Z41A P 03 52 41.1
baz=40,SNR=8.8
FPAL Fort Paine 3.76 112 Pn 03 52 41.7 +1.1
W50A Signal Mountai 3.77 102 P Pn 03 52 42.3 +1.6
baz=284,SNR=105
W50A Signal Mountai 3.77 102 P 03 52 42.3
baz=284,SNR=105
RCG Rock City 3.81 105 Pn 03 52 43.0 +1.8
LRAL Lakeview Retre 3.81 141 Pn Pn 03 52 41.7 +0.5
LRAL IAmb_Lg 03 53 52.3
comp=Z,345nm,1.1s
LRAL Lakeview Retre 3.81 141 P Pn 03 52 41.5 +0.3
baz=323,SNR=14
LRAL Lakeview Retre 3.81 141 P 03 52 41.5
baz=323,SNR=14
DYTN Dayton 3.89 97 Pn 03 52 42.7 +0.4
P40A Paris 3.89 334 Pn 03 52 43.2 +0.8
P40A IAmb_Lg 03 53 50.5
comp=Z,317nm,0.8s
P40A Paris 3.89 334 P Pn 03 52 43.3 +0.9
baz=152,SNR=39
P40A Paris 3.89 334 P 03 52 43.3
baz=152,SNR=39
P46A Rosedale 4.12 29 Pn 03 52 46.4 +0.9
P46A Rosedale 4.12 29 P Pn 03 52 46.7 +1.2
baz=211,SNR=9.0
P46A Rosedale 4.12 29 P 03 52 46.7
baz=211,SNR=9.0
T50A Nancy 4.13 75 Pn 03 52 46.7 +1.1
T50A IAmb_Lg 03 54 01.5
comp=Z,245nm,0.7s
CMGA Chestnut Mount 4.17 109 Pn 03 52 47.5 +1.4
O44A Mansfield 4.23 14 Pn 03 52 48.5 +1.4
BCRT Bacon Ridge 4.27 92 Pn 03 52 49.1 +1.5
X51A Calhoun 4.32 109 Pn 03 52 49.8 +1.5
CPCT Cooper Cave 4.35 96 Pn 03 52 50.0 +1.3
GMG Grassy Mountai 4.37 104 Pn 03 52 45.9 -3.1
V51A Loudon 4.45 92 Pn 03 52 51.6 +1.5
V51A IAmb_Lg 03 54 13.0
comp=Z,311nm,0.8s
V51A Loudon 4.45 92 P Pn 03 52 51.5 +1.5
baz=275,SNR=32
V51A Loudon 4.45 92 P 03 52 51.5
baz=275,SNR=32
HDIL Hopedale 4.52 5 Pn 03 52 51.6 +0.7
GRBT Greenback 4.58 93 Pn 03 52 53.9 +2.0
P38A Dawn 4.62 322 Pn Pn 03 52 53.0 +0.6
P38A Dawn 4.62 322 P Pn 03 52 52.9 +0.6
baz=140,SNR=240
P38A Dawn 4.62 322 P 03 52 52.9
baz=140,SNR=240
Z51A Franklin 4.70 124 Pn 03 52 53.8 +0.3
Z51A Franklin 4.70 124 P Pn 03 52 53.7 +0.2
baz=307,SNR=28
Z51A Franklin 4.70 124 P 03 52 53.7
baz=307,SNR=28
N41A Harden Midland 4.72 350 Pn Pn 03 52 54.5 +0.8
N41A IAmb_Lg 03 54 09.7
comp=Z,350nm,0.7s
N41A Harden Midland 4.72 350 P Pn 03 52 54.5 +0.8
baz=170,SNR=28
N41A Harden Midland 4.72 350 P 03 52 54.5
baz=170,SNR=28
CCRT Cow Camps Rge 4.73 95 Pn 03 52 54.9 +1.0
X37A Clayton 4.76 254 Pn 03 52 55.4 +1.0
X37A IAmb_Lg 03 54 19.8
comp=Z,272nm,0.9s
X37A Clayton 4.76 254 P Pn 03 52 55.3 +1.0
baz=70,SNR=41
X37A Clayton 4.76 254 P 03 52 55.3
baz=70,SNR=41
CPRT Copper Ridge 4.81 87 Pn 03 52 56.9 +1.7
SFIN Lafayette 4.82 26 Pn Pn 03 52 55.8 +0.6
SFIN IAmb_Lg 03 54 16.8
comp=Z,219nm,0.8s
SFIN Lafayette 4.82 26 P Pn 03 52 55.8 +0.6
baz=207,SNR=24
SFIN Lafayette 4.82 26 P 03 52 55.8
baz=207,SNR=24
TUL1 Leonard 4.84 270 P Pn 03 52 55.7 +0.3
baz=87,SNR=44
TUL1 Leonard 4.84 270 P 03 52 55.7
baz=87,SNR=44
P48A Milroy 4.87 44 Pn 03 52 56.4 +0.6
W52A Murphy 4.90 100 Pn 03 52 57.1 +0.9
W52A Murphy 4.90 100 P Pn 03 52 57.0 +0.7
baz=283,SNR=14
W52A Murphy 4.90 100 P 03 52 57.0
baz=283,SNR=14
R50A Paris 4.92 61 Pn 03 52 57.3 +0.8
R50A Paris 4.92 61 P Pn 03 52 57.3 +0.8
baz=245,SNR=14
R50A Paris 4.92 61 P 03 52 57.3
baz=245,SNR=14
R50A P 03 52 57.3
baz=245,SNR=14
TKL Tuckaleechee C 4.93 93 Pn Pn 03 52 57.8 +1.2
comp=Z,1.0nm,0.3s,baz=260,slow=11,SNR=20
TKL Pg Pb 03 53 06.7 -2.5
comp=Z,4.2nm,0.3s,baz=263,slow=14,SNR=10.0
TKL Sn Sn 03 53 54.6 +1.3
comp=Z,11nm,0.3s,baz=250,slow=18,SNR=5.7
TKL Lg Lg 03 54 14.0
comp=Z,24nm,0.3s,baz=0.0,slow=20,SNR=8.2
TKL Tuckaleechee C 4.93 93 Pn Pn 03 52 57.8 +1.2
TKL IAmb_Lg 03 54 24.1
comp=Z,228nm,0.7s
TKL Tuckaleechee C 4.93 93 P Pn 03 52 57.7 +1.0
baz=276,SNR=29
TKL Tuckaleechee C 4.93 93 P 03 52 57.7
baz=276,SNR=29
250A Grady 5.02 143 Pn 03 52 58.5 +0.6
250A IAmb_Lg 03 54 25.7
comp=Z,216nm,0.7s
250A Grady 5.02 143 P Pn 03 52 58.3 +0.4
baz=325,SNR=18
250A Grady 5.02 143 P 03 52 58.3
baz=325,SNR=18
V52A Sevierville 5.06 91 Pn 03 52 59.6 +1.2
V52A IAmb_Lg 03 54 31.8
comp=Z,229nm,0.8s
V52A Sevierville 5.06 91 P Pn 03 52 59.3 +0.9
baz=274,SNR=18
V52A Sevierville 5.06 91 P 03 52 59.3
baz=274,SNR=18
Z38A Mt. Pleasant 5.08 238 Pn 03 52 59.4 +0.6
Z38A Mt. Pleasant 5.08 238 P Pn 03 52 59.3 +0.6
baz=55,SNR=8.8
Z38A Mt. Pleasant 5.08 238 P 03 52 59.3
baz=55,SNR=8.8
Y52A Lilburn 5.21 113 Pn 03 53 01.4 +0.8
Y52A IAmb_Lg 03 54 30.1
comp=Z,327nm,0.8s
Y52A Lilburn 5.21 113 P Pn 03 53 01.3 +0.8
baz=296,SNR=13
Y52A Lilburn 5.21 113 P 03 53 01.3
baz=296,SNR=13
Y52A P 03 53 01.3
baz=296,SNR=13
S51A Beattyville 5.24 71 Pn 03 53 02.0 +1.1
S51A IAmb_Lg 03 54 37.8
comp=Z,252nm,0.8s
S51A Beattyville 5.24 71 P Pn 03 53 02.0 +1.1
baz=254,SNR=26
S51A Beattyville 5.24 71 P 03 53 02.0
baz=254,SNR=26
S51A P 03 53 02.0
baz=254,SNR=26
P49A Miami Univ. Ec 5.33 48 Pn Pn 03 53 02.2 0.0
P49A IAmb_Lg 03 54 39.8
comp=Z,240nm,0.9s
P49A Miami Univ. Ec 5.33 48 P Pn 03 53 02.2 0.0
baz=231,SNR=16
P49A Miami Univ. Ec 5.33 48 P 03 53 02.2
baz=231,SNR=16
BRAL Brewton 5.39 154 IAmb_Lg 03 54 39.6
comp=Z,336nm,1.2s
152A Waverly Hall 5.41 127 Pn 03 53 03.2 +0.1
152A IAmb_Lg 03 54 33.2
comp=Z,182nm,0.8s
152A Waverly Hall 5.41 127 P Pn 03 53 03.5 +0.3
baz=310,SNR=7.2
152A Waverly Hall 5.41 127 P 03 53 03.5
baz=310,SNR=7.2
N38A Joes South For 5.44 332 Pn Pn 03 53 04.0 +0.3
N38A Joes South For 5.44 332 P Pn 03 53 03.9 +0.3
baz=150,SNR=23
N38A Joes South For 5.44 332 P 03 53 03.9
baz=150,SNR=23
T35A Sooner Cattle 5.46 281 Pn Pn 03 53 03.8 -0.1
T35A IAmb_Lg 03 54 33.6
comp=Z,291nm,0.8s
T35B Sooner Cattle 5.46 281 P Pn 03 53 03.8 -0.1
baz=97,SNR=19
T35B Sooner Cattle 5.46 281 P 03 53 03.8
baz=97,SNR=19
M44A Midewin, Midew 5.51 14 IAmb_Lg 03 54 38.5
comp=Z,232nm,0.9s
V53A Saluda 5.71 92 IAmb_Lg 03 54 46.1
comp=Z,324nm,0.7s
BG3 Lake Jocassee 5.72 99 Pn 03 53 08.1 +0.7
CASEE Lake Jocassee 5.72 99 P 03 53 08.5
baz=283,SNR=5.5
N47A Urbana 5.81 33 IAmb_Lg 03 54 48.6
comp=Z,310nm,0.8s
GOGA Godfrey 5.86 115 Pn Pn 03 53 09.7 +0.3
GOGA IAmb_Lg 03 54 44.9
comp=Z,293nm,1.0s
GOGA Godfrey 5.86 115 P Pn 03 53 09.4 0.0
baz=299,SNR=19
GOGA Godfrey 5.86 115 P 03 53 09.4
baz=299,SNR=19
HQIL Hanson Quary C 5.94 14 IAmb_Lg 03 54 51.6
comp=Z,191nm,0.9s
Q51A Peebles 5.94 58 IAmb_Lg 03 54 58.8
comp=Z,177nm,0.7s
L42A Oliver, Polo 5.95 1 IAmb_Lg 03 54 55.1
comp=Z,282nm,0.8s
O49A Covington 5.98 45 IAmb_Lg 03 54 54.2
comp=Z,183nm,0.8s
L40A Anamosa 6.10 350 IAmb_Lg 03 54 57.6
comp=Z,306nm,0.8s
L40A Anamosa 6.10 350 P Pn 03 53 13.6 +0.9
baz=169,SNR=6.5
L40A Anamosa 6.10 350 P 03 53 13.6
baz=169,SNR=6.5
352A Blakely 6.12 137 IAmb_Lg 03 55 08.2

comp=Z,182nm,0.8s
KSU1 Kansas State U 6.19 301 Pn Pn 03 53 14.5 +0.6
KSU1 Kansas State U 6.19 301 P Pn 03 53 14.7 +0.7
baz=118,SNR=17
KSU1 Kansas State U 6.19 301 P 03 53 14.7
baz=118,SNR=17
OKCFA Oklahoma City 6.24 266 IAmb_Lg 03 55 18.1
comp=Z,165nm,1.0s
BCOK Bluff Creek, N 6.33 269 IAmb_Lg 03 55 15.5
comp=Z,182nm,0.7s
P51A Williamsport 6.36 55 IAmb_Lg 03 55 10.9
comp=Z,186nm,0.7s
237A Washetta, Mont 6.40 233 Pn Pn 03 53 17.1 +0.3
237A Washetta, Mont 6.40 233 P Pn 03 53 17.1 +0.3
baz=49,SNR=14
237A Washetta, Mont 6.40 233 P 03 53 17.1
baz=49,SNR=14
SCIA State Center 6.42 337 IAmb_Lg 03 55 07.4
comp=Z,164nm,0.7s
U54A Nelsons Funny 6.48 84 Pn 03 53 18.3 +0.3
U54A IAmb_Lg 03 55 13.9
comp=Z,263nm,0.8s
U54A Nelsons Funny 6.48 84 P Pn 03 53 18.2 +0.2
baz=268,SNR=23
U54A Nelsons Funny 6.48 84 P 03 53 18.2
baz=268,SNR=23
U54A P 03 53 18.2
baz=268,SNR=23
L46A Eue Claire 6.55 24 IAmb_Lg 03 55 20.4
comp=Z,260nm,1.0s
N49A Columbus Grove 6.57 41 IAmb_Lg 03 55 17.9
comp=Z,232nm,1.0s
N35A Tabor 6.62 318 Pn Pn 03 53 20.3 +0.4
N35A Tabor 6.62 318 P Pn 03 53 20.5 +0.6
baz=135,SNR=20
N35A Tabor 6.62 318 P 03 53 20.5
baz=135,SNR=20
PAULI Pauline 6.65 98 IAmb_Lg 03 55 19.3
comp=Z,149nm,0.7s
Q52A Bidwell 6.67 62 Pn 03 53 21.4 +0.9
Q52A IAmb_Lg 03 55 19.6
comp=Z,173nm,1.0s
Q52A Bidwell 6.67 62 P Pn 03 53 21.5 +0.9
baz=246,SNR=18
Q52A Bidwell 6.67 62 P 03 53 21.5
baz=246,SNR=18
Q52A P 03 53 21.5
baz=246,SNR=18
R53A Hurricane 6.68 68 IAmb_Lg 03 55 24.4
comp=Z,159nm,0.8s
OK032 Salt Plains WL 6.80 279 IAmb_Lg 03 55 33.0
comp=Z,195nm,0.9s
ACSO Alum Creek Sta 6.82 50 Pn 03 53 22.7 +0.1
ACSO IAmb_Lg 03 55 19.8
comp=Z,151nm,0.7s
JFWS Jewell Farm 6.86 357 Pn Pn 03 53 24.0 +0.8
TIGA Tifton 6.94 130 IAmb_Lg 03 55 34.7
comp=Z,145nm,0.8s
K38A Parkersburg 6.97 342 Pn 03 53 24.2 -0.4
K38A IAmb_Lg 03 55 30.2
comp=Z,118nm,0.7s
KMSC Kings Mountain 6.98 95 IAmb_Lg 03 55 30.4
comp=Z,262nm,0.9s
V55A Taylorsville 6.99 89 IAmb_Lg 03 55 27.1
comp=Z,192nm,0.8s
S54A Dingess, Beckl 7.04 73 IAmb_Lg 03 55 24.4
comp=Z,144nm,0.9s
255A Hazlehurst 7.36 122 Pn 03 53 29.2 -0.8
255A IAmb_Lg 03 55 37.2
comp=Z,227nm,0.8s
U32A Winter Ranch, 7.43 275 IAmb_Lg 03 55 44.9
comp=Z,148nm,0.8s
O52A Adamsville 7.49 55 IAmb_Lg 03 56 01.9
comp=Z,110nm,0.8s
P53A Whipple 7.51 60 Pn Pn 03 53 32.2 +0.2
P53A IAmb_Lg 03 55 43.0
comp=Z,206nm,1.1s
P53A Whipple 7.51 60 P Pn 03 53 32.4 +0.4
baz=245,SNR=8.9
P53A Whipple 7.51 60 P 03 53 32.4
baz=245,SNR=8.9
P53A P 03 53 32.4
baz=245,SNR=8.9
WHTX Lake Whitney, 7.52 240 Pn 03 53 32.0 -0.2
M50A Fremont 7.52 43 IAmb_Lg 03 55 43.1
comp=Z,114nm,0.9s
N51A Ashland 7.60 48 IAmb_Lg 03 55 46.1
comp=Z,105nm,0.8s
N33A J Bar K, Exete 7.60 310 IAmb_Lg 03 56 04.9
comp=Z,213nm,0.9s
U56A King 7.64 85 IAmb_Lg 03 55 52.4
comp=Z,111nm,0.7s
BLA Blacksburg 7.65 79 IAmb_Lg 03 55 51.9
comp=Z,227nm,1.1s
AAM Ann Arbor 7.86 36 IAmb_Lg 03 55 52.4
comp=Z,136nm,0.7s
O53A New Philadelph 7.97 56 IAmb_Lg 03 56 13.0
comp=Z,95nm,0.8s
W57A Gilead 8.06 94 IAmb_Lg 03 56 04.0
comp=Z,103nm,0.8s
R55A Marlinton 8.06 71 IAmb_Lg 03 56 20.3
comp=Z,105nm,0.8s
456A Hilliard 8.41 127 IAmb_Lg 03 56 16.9
comp=Z,198nm,0.8s
I45A Fountain 8.44 18 IAmb_Lg 03 56 10.0
comp=Z,199nm,0.7s
N53A Lisbon 8.50 53 IAmb_Lg 03 56 12.6
comp=Z,124nm,0.9s
H43A Windswept, Lux 8.55 10 IAmb_Lg 03 56 22.0
comp=Z,119nm,0.8s
M52A Chesterland 8.58 48 Pn 03 53 47.0 +0.2
V58A Windy Hill, Pi 8.69 89 IAmb_Lg 03 56 22.6
comp=Z,174nm,1.1s
X58A Rowland 8.70 97 IAmb_Lg 03 56 31.4
comp=Z,179nm,0.8s
K50A Casco 8.72 37 IAmb_Lg 03 56 21.0
comp=Z,103nm,0.8s
S57A Dark Hollow, R 8.87 76 Pn 03 53 50.5 -0.2
M53A WI Miller and 8.94 50 IAmb_Lg 03 56 28.5
comp=Z,128nm,1.1s
Q56A Snyder Ridge, 8.96 67 IAmb_Lg 03 56 29.3
comp=Z,110nm,0.9s
656A Willston 9.06 135 IAmb_Lg 03 56 36.1
comp=Z,97nm,1.1s
N54A Moraine State 9.13 55 IAmb_Lg 03 56 30.7
comp=Z,84nm,0.9s
G40A Rib Lake 9.21 358 IAmb_Lg 03 56 44.1
comp=Z,83nm,1.1s
ECSD EROS Data Cent 9.28 328 P Pn 03 53 55.0 -1.3
baz=144,SNR=63
ECSD EROS Data Cent 9.28 328 P 03 53 55.0
baz=144,SNR=63
ALLY Alegheny Colle 9.39 51 IAmb_Lg 03 56 35.5
comp=Z,116nm,0.9s
SPMN Marine on St. 9.44 347 IAmb_Lg 03 56 42.7
comp=Z,96nm,1.0s
K31A O'Neill 9.53 316 IAmb_Lg 03 56 48.2
comp=Z,155nm,0.7s
M54A Oil Creek Stat 9.62 52 IAmb_Lg 03 56 45.6
comp=Z,104nm,0.9s
U59A Littleton 9.73 85 IAmb_Lg 03 56 54.6
comp=Z,70nm,0.8s
AMTX Amarillo 9.74 267 IAmb_Lg 03 56 55.8
comp=Z,92nm,0.8s
CNNC Cliffs of the 9.75 91 IAmb_Lg 03 56 56.7
comp=Z,124nm,0.8s
F42A Maple Grove Fa 9.78 7 IAmb_Lg 03 56 57.4
comp=Z,73nm,0.9s
P57A Homestead Farm 9.96 66 IAmb_Lg 03 57 11.5
comp=Z,78nm,1.2s
SADO Sadowa 11.91 40 Pn Pn 03 54 29.7 -2.6
comp=Z,0.5nm,0.3s,baz=243,slow=14,SNR=3.1
SADO Sn Sn 03 56 36.7 -8.1
comp=Z,1.5nm,0.3s,baz=280,slow=17,SNR=2.6
SADO Lg Lg 03 57 48.2
comp=Z,3.1nm,0.3s,baz=148,slow=23,SNR=10
TXAR Lajitas Array 13.44 244 Pn Pn 03 54 51.0 -2.4
comp=Z,0.4nm,0.3s,baz=67,slow=12,SNR=24
TXAR Lg Lg 03 58 43.6
comp=Z,0.2nm,0.3s,baz=55,slow=29,SNR=1.5
ANMO Albuquerque 13.60 270 Pn Pn 03 54 57.5 +1.8
comp=Z,0.1nm,0.3s,baz=108,slow=13,SNR=1.6
ANMO Lg Lg 03 58 46.8
comp=Z,0.5nm,0.3s,baz=31,slow=18,SNR=3.8
ANMO Albuquerque 13.60 270 Pn 03 54 56.1 +0.5
ULM Lac du Bonnet 14.85 345 Pn Pn 03 55 07.5 -4.9
comp=Z,1.2nm,0.3s,baz=167,slow=12,SNR=19
ULM Sn Sn 03 57 45.7 -11
comp=Z,0.6nm,0.3s,baz=127,slow=20,SNR=1.9
ULM Lg Lg 03 59 21.5
comp=Z,0.7nm,0.3s,baz=90,slow=20,SNR=1.6
TEIG Tepich 15.83 175 Pn Pn 03 55 26.7 +1.3
comp=Z,1.4nm,0.3s,baz=54,slow=7.9,SNR=1.8
TEIG Sn Sn 03 58 08.6 -12
comp=Z,0.2nm,0.3s,baz=41,slow=19,SNR=1.8
TEIG Tepich 15.83 175 Pn 03 55 26.0 +0.6
LAO LASA Array 16.23 316 Pn Pn 03 55 29.5 -1.0
LAO IAmb IAmb 03 55 46.6
comp=Z,5.8nm,0.9s
PD31 Pinedale Array 16.64 300 Pn Pn 03 55 37.2 +1.2
PDAR Pinedale Array 16.64 300 Pn Pn 03 55 34.3 -1.7
comp=Z,0.1nm,0.3s,baz=109,slow=16,SNR=2.5
PDAR Lg Lg 04 00 15.7
comp=Z,0.2nm,0.3s,baz=102,slow=33,SNR=2.2
ZAIG Zacatecas 17.25 223 Pn Pn 03 55 42.3 -1.5
ZAIG IAmb IAmb 03 55 45.0
comp=Z,2.1nm,0.5s
RLMT Red Lodge 17.29 308 Pn Pn 03 55 44.6 +0.5
RLMT IAmb IAmb 03 55 49.4
comp=Z,2.9nm,1.1s
YKA Yellowknife Ar 30.62 338 P P 03 57 55.7 -0.6
comp=Z,0.1nm,0.5s,baz=131,slow=9.3,SNR=7.2

*IDC **02** 03:56:36.8±0.7, 18.˚98N×121.˚54E, h0km, mb3.8/9, mb1 4.1/9, mb1mx3.8/50, mbtmp3.8/9, MS3.1/4, Ms1 3.2/4, ms1mx2.8/60, Error ellipse: s-maj=35.9km s-min=17.3km az=70.0*
*MAN **02** 03:56:43.0, 19.˚05N×121.˚18E, h60km, MS3.6*
*NEIC **02** 03:56:43.6±1.5, 18.˚93N±0.˚06×121.˚4E±0.˚1, h58km±7km, mb4.3/6, Error ellipse: s-maj=15.1km s-min=9.3km az=99.0*
ISC 02 03:56:45.5±0.9, 19.˚00N±0.˚04×121.˚37E±0.˚07, h69km±9km, n41, σ1˚82/38, mb4.0/12, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**0.99**	**139**	*eP*	**Pn**	**03 57 03.2**	**-0.6**
SGCP				*eS*	**Sn**	**03 57 20.2**	**+2.9**
APYP	**Conner**	**1.13**	**186**	*eP*	**Pn**	**03 57 04.0**	**-1.7**
APYP				*eS*	**Sn**	**03 57 21.0**	**+0.3**
SIPP	**Brgy, Tapao**	**1.37**	**219**	*iP*	**Pn**	**03 57 06.3**	**-2.4**
SIPP				*eS*	**Sn**	**03 57 32.0**	**+5.8**
BBP	**Basco**	**1.54**	**21**	*eP*	**Pn**	**03 57 09.4**	**-1.7**
BBP				*eS*	**Sn**	**03 57 30.0**	**-0.3**
SZP	**Santa**	**1.68**	**211**	Pn	**Pn**	**03 57 10.2**	**-2.6**
BOLP	**Bolinao**	**2.95**	**208**	*eP*	**Pn**	**03 57 28.7**	**-1.3**
BOLP				*eS*	**Sn**	**03 58 06.0**	**+1.7**
TWG	**Pinlang**	**3.82**	**356**	Pn	**Pn**	**03 57 40.6**	**-1.3**
YULB	**Yu-li**	**4.38**	**359**	Pn	**Pn**	**03 57 48.4**	**-1.2**
SSLB	**Suanglung**	**4.79**	**355**		**Pn**	**03 57 54.7**	**-0.5**
NACB	**Ninganchiao**	**5.16**	**2**	Pn	**Pn**	**03 57 57.7**	**-2.5**
YHNB	**Yeheng**	**5.65**	**0**		**Pn**	**03 58 06.3**	**-0.6**
YOJ	**Yonaguni jima**	**5.65**	**15**	Pn	**Pn**	**03 58 06.1**	**-0.8**
KSM	**Kuching**	**20.51**	**213**	P	**P**	**04 01 15.1**	**-3.0**
KSM				IAmb	IAmb	04 01 15.6	
	comp=Z,9.6nm,0.3s						
JCJ	**Chichijima**	**20.76**	**63**	LR	LR	04 08 02.0	
	comp=Z,48nm,21.4s,baz=88,slow=33						
CM31	**Chiang Mai Arr**	**21.25**	**272**	P	**P**	**04 01 25.4**	**-0.7**
CM31				IAmb	IAmb	04 01 43.1	
	comp=Z,6.2nm,0.3s						
CMAR	**Chiang Mai Arr**	**21.25**	**272**	P	**P**	**04 01 26.4**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=69,slow=8.1,SNR=4.2						
CMAR				LR	LR	04 08 30.4	
	comp=Z,34nm,20.8s,baz=85,slow=33						
MJAR	**Matsushiro Arr**	**22.91**	**37**	LR	LR	04 09 39.6	
	comp=Z,41nm,19.8s,baz=175,slow=34						
SONM	**Songino Array**	**31.25**	**340**	P	**P**	**04 03 00.0**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=155,slow=10,SNR=4.4						
FITZ	**Fitzroy Crossi**	**37.10**	**173**	P	**P**	**04 03 48.0**	**-1.4**
WB0	**Warramunga Ar**	**40.58**	**161**	P	**P**	**04 04 16.7**	**-1.9**
WB0				IAmb	IAmb	04 04 29.5	
	comp=Z,3.2nm,1.0s						
WRA	**Warramunga Ar**	**40.73**	**161**	P	**P**	**04 04 18.3**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=342,slow=9.0,SNR=9.4						
WRA				PcP	**PcP**	**04 06 21.7**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=344,slow=3.1,SNR=11						
WB2	**Warramunga Arr**	**40.74**	**161**	P	**P**	**04 04 18.3**	**-1.5**
WR0	**Warramunga Ar**	**40.81**	**161**	P	**P**	**04 04 18.3**	**-2.1**
WR0				IAmb	IAmb	04 04 37.8	
	comp=Z,2.9nm,1.1s						
MKAR	**Makanchi Array**	**42.29**	**320**	P	**P**	**04 04 33.0**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=113,slow=8.0,SNR=5.7						
MKAR				PcP	**PcP**	**04 06 25.5**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=131,slow=3.0,SNR=4.6						
MKAR	**Makanchi Array**	**42.29**	**320**	P	**P**	**04 04 33.0**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**42.83**	**83**	T	T	04 50 28.9	
	baz=275,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**42.84**	**83**	T	T	04 50 21.9	
	baz=275,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**42.84**	**83**	T	T	04 50 22.3	
	baz=275,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**42.86**	**81**	T	T	04 50 39.4	
	baz=277,slow=75,SNR=94						
H11N2	**WAKE ISLAND Hy**	**42.86**	**81**	T	T	04 50 39.6	
	baz=277,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy**	**42.87**	**81**	T	T	04 50 40.5	
	baz=277,slow=75,SNR=56						
ASAR	**Alice Springs**	**44.13**	**163**	P	**P**	**04 04 46.6**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=344,slow=7.4,SNR=14						
ASAR				PcP	**PcP**	**04 06 32.7**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=351,slow=3.0,SNR=1.0						
MA2	**Magadan**	**45.73**	**20**	LR	LR	04 25 39.4	
	comp=Z,61nm,18.9s,baz=117,slow=38						
STKA	**Stephens Creek**	**54.17**	**159**	LR	LR	04 30 44.4	
	comp=Z,799nm,18.2s,baz=164,slow=38						
NRIK	**Noril'sk**	**54.45**	**346**	P	**P**	**04 06 05.6**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=142,slow=7.4,SNR=5.2						
ILAR	**Eielson Array**	**73.74**	**27**	P	**P**	**04 08 11.4**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=290,slow=5.4,SNR=3.4						
ARCES	**ARCESS Array B**	**74.40**	**339**	P	**P**	**04 08 15.9**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=57,slow=7.4,SNR=5.2						
YKA	**Yellowknife Ar**	**87.67**	**23**	P	**P**	**04 09 27.2**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=310,slow=4.3,SNR=13						
MAW	**Mawson**	**96.28**	**199**	LR	LR	04 53 41.6	
	comp=Z,267nm,19.2s,baz=249,slow=36						
TXAR	**Lajitas Array**	**115.22**	**43**	PKP	**PKPdf**	**04 15 20.9**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=208,slow=1.7,SNR=4.0						
SDV	**Santo Domingo**	**149.87**	**24**		**PKPbc**	**04 16 28.0**	**-1.1**

*ANF **02** 03:58:11.1±0.5, 36.˚11N×97.˚53W, h5km±3km, ML4.1/16, Error ellipse: s-maj=3.4km s-min=2.7km az=96.0*
*TUL **02** 03:58:11±0.9, 36.˚12N±0.˚01×97.˚56W±0.˚02, h5km±7km, ML3.4, mb_Lg3.5/104(NEIC), Error ellipse: s-maj=2.6km s-min=1.4km az=68.0*
*NEIC **02** 03:58:11.3±0.7, 36.˚131N±0.˚006×97.˚56W±0.˚02, h4km±7km, Error ellipse: s-maj=2.5km s-min=0.9km az=78.0*
*IDC **02** 03:58:12.2±2.1, 36.˚19N×97.˚80W, h0km, mb3.4/2, mb1 4.0/5, mb1mx3.6/43, mbtmp3.7/5, ML2.2/1, Error ellipse: s-maj=34.4km s-min=13.1km az=114.0*
ISC 02 03:58:11.2±1.0, 36.˚14N±0.˚02×97.˚54W±0.˚03, h7km±8km, n100, σ0˚90/63, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.35**	**168**		**Pg**	**03 58 17.8**	**-0.1**
OK029				Sg	**Sg**	**03 58 22.4**	**-0.1**
BCOK	**Bluff Creek, N**	**0.48**	**186**		**Pg**	**03 58 20.1**	**-0.3**
CROK	**Carrier**	**0.51**	**316**		**Pg**	**03 58 21.2**	**+0.2**
OK005	**Luther M Schoo**	**0.56**	**149**	Pg	**Pg**	**03 58 22.0**	**+0.1**
OK005				Sg	**Sg**	**03 58 29.9**	**+0.6**
OK025	**Westminster Rd**	**0.58**	**163**		**Pg**	**03 58 22.2**	**-0.1**
OK025				Sg	**Sg**	**03 58 30.2**	**+0.3**
OK031	**S. Brethren Rd**	**0.60**	**108**		**Pg**	**03 58 23.0**	**+0.3**
OK031				Sg	**Sg**	**03 58 31.1**	**+0.5**
OK030	**Cody Creek RV**	**0.65**	**109**		**Pg**	**03 58 23.9**	**+0.2**
OK030				IAmb_Lg		03 58 32.3	
	comp=Z,338nm,0.8s						
OK030				Sg	**Sg**	**03 58 32.6**	**+0.5**
OKCFA	**Oklahoma City**	**0.72**	**174**		**Pg**	**03 58 24.6**	**-0.5**
OKCFA				IAmb_Lg		03 58 33.0	
	comp=Z,706nm,1.0s						
OKCFA	**Oklahoma City**	**0.72**	**174**	P	**Pg**	**03 58 24.6**	**-0.5**
	baz=353,SNR=18						
OKCFA				S	**Sg**	**03 58 34.5**	**0.0**
	baz=353						
OKCFA	**Oklahoma City**	**0.72**	**174**	P		03 58 24.6	
	baz=353,SNR=18						
OKCFA				S		03 58 34.5	
	baz=353						
OKCSW	**OKLAHOMA CITY**	**0.74**	**173**		**Pg**	**03 58 24.8**	**-0.5**
GC02	**Grant County #**	**0.76**	**340**		**Pg**	**03 58 25.7**	**0.0**
OK032	**Salt Plains WL**	**0.85**	**321**		**Pg**	**03 58 27.3**	**-0.3**
OK032				Sg	**Sg**	**03 58 39.0**	**+0.3**
KAN13	**South Haven SW**	**0.88**	**3**		**Pg**	**03 58 28.1**	**+0.1**
KAN13				Sg	**Sg**	**03 58 39.7**	**+0.4**
KAN14	**Manchester OK**	**0.89**	**338**		**Pg**	**03 58 28.0**	**-0.2**
KAN14				Sg	**Sg**	**03 58 39.8**	**+0.1**
FNO	**Franklin**	**0.89**	**172**		**Pg**	**03 58 28.2**	**0.0**
FNO				IAmb_Lg		03 58 39.3	
	comp=Z,632nm,1.0s						
KAN09	**Caldwell North**	**1.00**	**357**		**Pg**	**03 58 30.3**	**-0.1**
KAN05	**Bluff City Nor**	**1.00**	**345**		**Pg**	**03 58 30.3**	**-0.2**
KAN01	**Argonia South**	**1.03**	**350**		**Pg**	**03 58 30.8**	**-0.2**
KAN10	**Anthony SW Sta**	**1.08**	**336**		**Pg**	**03 58 31.4**	**-0.5**
T35B	**Sooner Cattle**	**1.14**	**47**	P	**Pg**	**03 58 32.8**	**-0.2**
	baz=227						
T35B				S	**Sg**	**03 58 48.0**	**+0.3**
	baz=227						
T35B	**Sooner Cattle**	**1.14**	**47**	P		03 58 32.8	
	baz=227						
T35B				S		03 58 48.0	
	baz=227						
KAN08	**Anthony NE Sta**	**1.14**	**343**		**Pg**	**03 58 32.6**	**-0.5**
U32A	**Winter Ranch,**	**1.20**	**282**		**Pg**	**03 58 33.1**	**-1.2**
U32A	**Winter Ranch,**	**1.20**	**282**	P	**Pg**	**03 58 33.2**	**-1.0**
	baz=102						
U32A	**Winter Ranch,**	**1.20**	**282**	P		03 58 33.2	
	baz=102						
KAN12	**Harper NE Stat**	**1.21**	**343**		**Pg**	**03 58 33.9**	**-0.5**
TUL1	**Leonard**	**1.44**	**99**	P	**Pn**	**03 58 37.2**	**-0.5**
	baz=279,SNR=163						
TUL1				S	**Sb**	**03 58 57.1**	**+0.3**
	baz=279						
TUL1	**Leonard**	**1.44**	**99**	P		03 58 37.2	
	baz=279,SNR=163						
TUL1				S		03 58 57.1	
	baz=279						
WMOK	**Wichita Mounta**	**1.72**	**216**	IAmb_Lg		03 59 06.3	
	comp=Z,298nm,0.8s						
WMOK	**Wichita Mounta**	**1.72**	**216**	P	**Pn**	**03 58 41.5**	**-0.1**
	baz=35,SNR=73						
WMOK				S	**Sn**	**03 59 04.2**	**+0.2**
	baz=35						
WMOK	**Wichita Mounta**	**1.72**	**216**	P		03 58 41.5	
	baz=35,SNR=73						
WMOK				S		03 59 04.2	
	baz=35						
X37A	**Clayton**	**2.35**	**130**	P	**Pn**	**03 58 50.9**	**+0.6**
	baz=311,SNR=26						
X37A	**Clayton**	**2.35**	**130**	P		03 58 50.9	
	baz=311,SNR=26						
R32A	**Long Quarter,**	**2.46**	**338**	P	**Pb**	**03 58 54.2**	**-1.6**
	baz=158,SNR=5.4						
R32A				S	**Sn**	**03 59 23.5**	**+1.2**
	baz=158						
R32A	**Long Quarter,**	**2.46**	**338**	P		03 58 54.2	
	baz=158,SNR=5.4						
R32A				S		03 59 23.5	
	baz=158						
U38A	**Gravette**	**2.57**	**82**	P	**Pn**	**03 58 54.0**	**+0.7**
	baz=264,SNR=36						
U38A	**Gravette**	**2.57**	**82**	P		03 58 54.0	
	baz=264,SNR=36						
Z35A	**Perchaven, San**	**2.81**	**175**		**Pb**	**03 59 01.1**	**-0.7**
Z35A	**Perchaven, San**	**2.81**	**175**	P	**Pn**	**03 58 57.3**	**+0.7**
	baz=355						
Z35A	**Perchaven, San**	**2.81**	**175**	P		03 58 57.3	
	baz=355						
KSU1	**Kansas State U**	**3.05**	**14**	IAmb_Lg		03 59 52.8	
	comp=Z,111nm,0.8s						
KSU1	**Kansas State U**	**3.05**	**14**	P	**Pn**	**03 59 01.1**	**+1.3**
	baz=194						
KSU1	**Kansas State U**	**3.05**	**14**	P		03 59 01.1	
	baz=194						
CBKS	**Cedar Bluff**	**3.19**	**327**	Pn	**Pn**	**03 59 02.1**	**+0.2**
W39A	**Magazine**	**3.20**	**106**	IAmb_Lg		03 59 54.7	
	comp=Z,93nm,0.8s						
W39A	**Magazine**	**3.20**	**106**	P	**Pn**	**03 59 01.4**	**-0.5**
	baz=288,SNR=9.0						
W39A	**Magazine**	**3.20**	**106**	P		03 59 01.4	
	baz=288,SNR=9.0						
Z38A	**Mt. Pleasant**	**3.56**	**143**	S	**Sn**	**03 59 50.0**	**+0.8**
	baz=324						
Z38A	**Mt. Pleasant**	**3.56**	**143**	S		03 59 50.0	
	baz=324						
AMTX	**Amarillo**	**3.60**	**251**	IAmb_Lg		04 00 11.4	
	comp=Z,96nm,0.8s						
MIAR	**Mount Ida**	**3.61**	**115**	IAmb_Lg		04 00 11.5	
	comp=Z,125nm,0.8s						
MIAR	**Mount Ida**	**3.61**	**115**	P	**Pn**	**03 59 08.5**	**+1.0**
	baz=297,SNR=22						
MIAR	**Mount Ida**	**3.61**	**115**	P		03 59 08.5	
	baz=297,SNR=22						
S39A	**Bolivar**	**3.72**	**64**	IAmb_Lg		04 00 12.8	
	comp=Z,85nm,0.7s						
U40A	**Yellville**	**3.80**	**85**	IAmb_Lg		04 00 20.0	
	comp=Z,147nm,0.8s						
ABTX	**Abilene, Hawle**	**3.91**	**207**	IAmb_Lg		04 00 15.3	
	comp=Z,64nm,0.8s						
WHTX	**Lake Whitney,**	**4.14**	**179**	Pn	**Pn**	**03 59 15.4**	**+0.6**
WHTX	**Lake Whitney,**	**4.14**	**179**	P	**Pn**	**03 59 14.9**	**+0.1**
	baz=359,SNR=9.5						
WHTX	**Lake Whitney,**	**4.14**	**179**	P		03 59 14.9	
	baz=359,SNR=9.5						
X40A	**Basin Creek Fa**	**4.19**	**112**	IAmb_Lg		04 00 24.4	
	comp=Z,152nm,0.8s						
WHAR	**Wooly Hollow**	**4.36**	**100**	IAmb_Lg		04 00 33.9	
	comp=Z,117nm,0.8s						
MGMO	**Mountain Grove**	**4.36**	**75**	IAmb_Lg		04 00 34.0	
	comp=Z,73nm,0.9s						
237A	**Washetta, Mont**	**4.37**	**160**		**Pn**	**03 59 18.4**	**+0.4**
237A				IAmb_Lg		04 00 38.5	
	comp=Z,76nm,0.7s						
237A	**Washetta, Mont**	**4.37**	**160**	S	**Sn**	**04 00 09.2**	**+0.1**
	baz=341						
237A	**Washetta, Mont**	**4.37**	**160**	S		04 00 09.2	
	baz=341						
WLAR	**White Oak Lake**	**4.38**	**123**	IAmb_Lg		04 00 37.2	
	comp=Z,63nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.40**	**92**	IAmb_Lg		04 00 42.2	
	comp=Z,85nm,1.0s						
W41B	**Gary Mavity, V**	**4.42**	**101**	P	**Pn**	**03 59 18.8**	**+0.1**
	baz=284,SNR=8.5						
W41B	**Gary Mavity, V**	**4.42**	**101**	P		03 59 18.8	
	baz=284,SNR=8.5						
N33A	**J Bar K, Exete**	**4.59**	**1**	IAmb_Lg		04 00 48.5	
	comp=Z,140nm,1.2s						
P38A	**Dawn**	**4.71**	**41**	IAmb_Lg		04 00 51.5	
	comp=Z,65nm,0.7s						
R40A	**Maddies Statio**	**4.73**	**61**	P	**Pn**	**03 59 23.5**	**+0.6**
	baz=244,SNR=14						
R40A	**Maddies Statio**	**4.73**	**61**	P		03 59 23.5	
	baz=244,SNR=14						
Z41A	**Richland Creek**	**4.85**	**125**	S	**Sn**	**04 00 20.3**	**-0.7**
	baz=308						
Z41A	**Richland Creek**	**4.85**	**125**	S		04 00 20.3	
	baz=308						
Z41A				S		04 00 20.3	
	baz=308						
NATX	**Nacogdoches**	**4.98**	**150**	IAmb_Lg		04 00 60.0	
	comp=Z,53nm,0.8s						
CCAR	**Cane Creek**	**5.23**	**113**	IAmb_Lg		04 01 08.5	
	comp=Z,104nm,0.8s						
BGNE	**Belgrade**	**5.28**	**355**	IAmb_Lg		04 01 14.2	
	comp=Z,102nm,0.8s						
435B	**Jarrell**	**5.34**	**180**	IAmb_Lg		04 01 07.4	
	comp=Z,75nm,0.7s						
CCM	**Cathedral Cave**	**5.39**	**67**	IAmb_Lg		04 01 15.7	
	comp=Z,50nm,0.8s						
T25A	**Trinidad**	**5.61**	**282**	IAmb_Lg		04 01 14.2	
	comp=Z,53nm,0.8s						
JCT	**Junction City**	**5.95**	**199**	IAmb_Lg		04 01 23.5	
	comp=Z,102nm,0.8s						
OGNE	**Ogallala**	**5.95**	**325**	Pn	**Pn**	**03 59 40.6**	**+0.8**
OGNE				IAmb_Lg

	comp=Z,78nm,0.7s								
OXF	**Oxford**	**6.84**	**101**	IAmb_Lg			04 02 02.6		
	comp=Z,43nm,0.8s								
SIUC	**Southern Illin**	**6.85**	**74**	IAmb_Lg			04 01 47.9		
	comp=Z,66nm,0.8s								
W45A	**Hickory Valley**	**6.87**	**96**	IAmb_Lg			04 01 55.5		
	comp=Z,58nm,0.7s								
Y45A	**Yeager Farm, C**	**6.95**	**107**	IAmb_Lg			04 01 58.9		
	comp=Z,35nm,0.8s								
UTMT	**University of**	**7.02**	**86**	IAmb_Lg			04 01 58.0		
	comp=Z,91nm,0.8s								
735A	**Kenedy**	**7.26**	**182**	IAmb_Lg			04 02 11.6		
	comp=Z,52nm,1.1s								
ANMO	**Albuquerque**	**7.36**	**263**	Pg		**Pb**	**04 00 23.2**	**+3.8**	
	comp=Z,0.2nm,0.3s,baz=73,slow=17,SNR=1.5								
ANMO				Lg		Lg	04 01 59.4		
	comp=Z,0.9nm,0.3s,baz=29,slow=18,SNR=2.8								
ECSD	**EROS Data Cent**	**7.62**	**5**	IAmb_Lg			04 02 21.9		
	comp=Z,26nm,0.8s								
L40A	**Anamosa**	**7.69**	**38**	IAmb_Lg			04 02 25.2		
	comp=Z,54nm,0.7s								
PHWY	**Pilot Hill**	**8.05**	**312**	IAmb_Lg			04 02 34.1		
	comp=Z,31nm,0.8s								
O44A	**Mansfield**	**8.20**	**58**	IAmb_Lg			04 02 42.4		
	comp=Z,58nm,0.7s								
SUSD	**Miller**	**8.37**	**353**	IAmb_Lg			04 02 53.4		
	comp=Z,41nm,0.7s								
T47A	**Sharon Grove**	**8.44**	**81**	IAmb_Lg			04 02 57.4		
	comp=Z,62nm,1.0s								
L42A	**Oliver, Polo**	**8.47**	**44**	IAmb_Lg			04 02 40.7		
	comp=Z,44nm,0.8s								
I37A	**Lemond, Waseca**	**8.48**	**21**	IAmb_Lg			04 02 53.1		
	comp=Z,52nm,0.8s								
TXAR	**Lajitas Array**	**8.52**	**219**	Pn		**Pn**	**04 00 13.8**	**-1.3**	
	baz=38,slow=11,SNR=1.7								
TXAR				Pg		Pg	04 00 46.2	-8.1	
	comp=Z,1.1nm,0.3s,baz=45,slow=15,SNR=5.5								
TXAR				Lg		Lg	04 02 33.7		
	comp=Z,0.9nm,0.3s,baz=25,slow=34,SNR=3.6								
JFWS	**Jewell Farm**	**8.80**	**38**	IAmb_Lg			04 02 56.5		
	comp=Z,56nm,0.7s								
P46A	**Rosedale**	**8.88**	**64**	IAmb_Lg			04 02 52.4		
	comp=Z,63nm,0.9s								
M44A	**Midewin, Midew**	**9.08**	**52**	IAmb_Lg			04 03 02.1		
	comp=Z,47nm,1.0s								
WCI	**Wyandotte Cave**	**9.22**	**74**	IAmb_Lg			04 03 02.3		
	comp=Z,29nm,0.8s								
SFIN	**Lafayette**	**9.24**	**60**	IAmb_Lg			04 03 01.3		
	comp=Z,40nm,0.8s								
K43A	**Burlington**	**9.68**	**45**	IAmb_Lg			04 03 32.1		
	comp=Z,52nm,0.9s								
F33A	**5 Mile Ranch,**	**9.74**	**5**	IAmb_Lg			04 03 30.9		
	comp=Z,24nm,1.0s								
TKL	**Tuckaleechee C**	**11.18**	**88**	Lg		Lg	04 03 56.7		
	comp=Z,0.5nm,0.3s,baz=196,slow=20,SNR=3.9								
PDAR	**Pinedale Array**	**11.40**	**309**	Pn		**Pn**	**04 00 55.6**	**+0.9**	
	comp=Z,0.3nm,0.3s,baz=128,slow=16,SNR=2.7								
PDAR				Lg		Lg	04 04 09.8		
	comp=Z,0.4nm,0.3s,baz=112,slow=36,SNR=3.0								
ULM	**Lac du Bonnet**	**14.16**	**4**	Pn		**Pn**	**04 01 28.6**	**-3.5**	
	comp=Z,0.2nm,0.3s,baz=184,slow=14,SNR=1.1								
ULM				Sn		Sn	04 03 56.8	-13	
	comp=Z,0.2nm,0.3s,baz=274,slow=19,SNR=1.2								
ULM				Lg		Lg	04 05 30.0		
	comp=Z,0.2nm,0.3s,baz=100,slow=20,SNR=3.7								
SADO	**Sadowa**	**16.42**	**53**	Lg		Lg	04 06 39.6		
	comp=Z,0.5nm,0.3s,baz=254,slow=18,SNR=2.1								
YKA	**Yellowknife Ar**	**28.44**	**343**	P		**P**	**04 04 06.3**	**0.0**	
	comp=Z,0.2nm,0.6s,baz=147,slow=8.3,SNR=3.9								
ILAR	**Eielson Array**	**40.84**	**330**	P		**P**	**04 05 54.5**	**+1.3**	
	comp=Z,0.5nm,0.8s,baz=110,slow=7.6,SNR=5.3								

*IDC **02** 04:02:30.9±2.4,20°.91S×178°.55W,h576km±26km,mb2.7/4, mb1 3.0/6,mb1mx2.8/32,mbtmp3.7/6,Error ellipse: s-maj=39.4km s-min=25.2km az=139.0*

ISC 02 04:02:28.7±1.2,21°.0S±0°.2×178°.3W±0°.2,h550km,n7, σ2⁰14/7,mb3.3/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.74**	**313**	P	**P**	**04 03 58.3**	**+1.8**
	0.9nm,0.3s,baz=94,slow=22,SNR=1.5						
URZ	**Urewera**	**17.61**	**192**	P	**P**	**04 06 04.1**	**+1.3**
	0.3nm,0.3s,baz=303,slow=24,SNR=2.0						
ASAR	**Alice Springs**	**44.09**	**257**	P	**P**	**04 09 48.3**	**-0.4**
	0.1nm,0.3s,baz=95,slow=7.3,SNR=5.0						
WRA	**Warramunga Arr**	**44.22**	**263**	P	**P**	**04 09 48.6**	**-1.1**
	0.3nm,0.3s,baz=96,slow=7.5,SNR=18						
ILAR	**Eielson Array**	**88.90**	**13**	P	**P**	**04 14 23.5**	**-0.7**
	0.6nm,1.1s,baz=221,slow=4.8,SNR=1.5						
PDAR	**Pinedale Array**	**89.57**	**43**	P	**P**	**04 14 29.2**	**+1.1**
	0.2nm,0.6s,baz=235,slow=3.2,SNR=2.5						
AKASG	**Malin Array Be**	**143.32**	**330**	PKP	**PKPdf**	**04 20 57.2**	**-3.2**
	0.2nm,0.3s,baz=45,slow=4.0,SNR=3.6						

IDC 02 04:02:35.1±3.8,6°.90S×155°.48E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.5/30,mbtmp3.5/3,Error ellipse: s-maj=100.3km s-min=46.1km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.27**	**236**	P	P	04 07 54.0	-0.3
	0.5nm,0.6s,baz=59,slow=9.5,SNR=7.1						
ASAR	**Alice Springs**	**26.59**	**229**	P	P	04 08 15.8	+0.4
	0.2nm,0.3s,baz=59,slow=8.0,SNR=4.6						
CMAR	**Chiang Mai Arr**	**61.17**	**295**	P	P	04 12 52.8	+0.6
	0.5nm,0.4s,baz=125,slow=5.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**153.46**	**286**	PKPbc	PKPbc	04 22 35.8	-0.9
	0.5nm,0.9s,baz=91,slow=1.1,SNR=2.6						

*IDC **02** 04:05:49.8±2.2,5°.15S×153°.16E,h0km,mb3.7/7, mb1 3.8/7,mb1mx3.7/34,mbtmp3.7/7,Error ellipse: s-maj=83.1km s-min=25.7km az=117.0*

ISC 02 04:05:55.0±1.8,5°.2S±0°.3×153°.3E±0°.3,h35km,n9, σ1⁹05/10,mb3.6/7,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.37**	**235**	Pn	**Pn**	**04 07 41.7**	**+1.5**
	1.9nm,0.3s,baz=239,slow=17,SNR=2.2						
PMG				Sn	**Sn**	**04 09 01.9**	**-0.8**
	2.0nm,0.3s,baz=215,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**23.55**	**230**	P	**P**	**04 11 01.0**	**-1.4**
	0.9nm,0.7s,baz=54,slow=10,SNR=4.5						
ASAR	**Alice Springs**	**26.19**	**224**	P	**P**	**04 11 26.6**	**0.0**
	0.3nm,0.7s,baz=63,slow=9.8,SNR=2.1						
PETK	**Petropavlovsk-**	**58.20**	**3**	P	**P**	**04 15 46.3**	**+0.8**
	1.3nm,0.5s,baz=164,slow=7.2,SNR=1.4						
SONM	**Songino Array**	**66.90**	**328**	P	**P**	**04 16 44.4**	**+0.5**
	0.3nm,0.5s,baz=148,slow=5.4,SNR=3.4						
MKAR	**Makanchi Array**	**80.92**	**319**	P	**P**	**04 18 04.7**	**-1.2**
	0.4nm,0.5s,baz=104,slow=6.8,SNR=5.5						
ZALV	**Zalesovo Beam**	**81.73**	**326**	P	**P**	**04 18 09.2**	**-0.7**
	0.7nm,0.4s,baz=122,slow=4.8,SNR=4.1						
ILAR	**Eielson Array**	**82.34**	**22**	P	**P**	**04 18 12.6**	**-0.3**
	0.3nm,0.8s,baz=238,slow=5.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**150.87**	**288**	PKPbc	**PKPbc**	**04 25 45.0**	**0.0**
	1.1nm,0.7s,baz=62,slow=2.7,SNR=9.0						

*BJI **02** 04:10:07.1±0.0,17°.58S×178°.23W,h532km,mB5.5/60, mb5.6/79*
*BGR **02** 04:10:08.9±0.0,18°.99S×177°.00W,h564km±2km*
*NOU **02** 04:10:09.7,17°.81S×178°.61W,h539km,ML5.8,Fiji Islands Region*
*MOS **02** 04:10:09.9±0.8,17°.79S×178°.68W,h557km,mb5.9/46, Error ellipse: s-maj=7.6km s-min=6.8km az=110.7*
*NEIC **02** 04:10:10.8,17°.85S×178°.67W,h564km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.76; Mθθ0.00; Mθφ-0.77; Mrθ0.61; Mθφ0.10; Mφr-0.43; Fault plane solution: M₀1.08000×10¹⁸ NP1:φs144.64000°, δ67.35000°,λ67.92000°. NP2:φs11.14000°,δ31.22000°, λ132.02000°. Principal axes: T 1.1604, Plg61.0000°, Azm21.0000°; N -0.1976, Plg20.0000°, Azm154.0000°; P -0.9628, Plg19.0000°, Azm251.0000°;*
*NEIC **02** 04:10:10±1.4,17°.86S±0°.08×178°.58W±0°.02,h560km±1km, mb5.9/519,Mwb6.0/44,Mwc6.0/11,Mww5.9, Mwc5.9(GCMT) Error ellipse: s-maj=13.0km s-min=3.2km az=173.0*
*IDC **02** 04:10:12.1±0.4,17°.86S×178°.70W,h569km±3km,mb5.3/34, mb1 5.3/37,mb1mx5.3/37,mbtmp6.1/37,Error ellipse: s-maj=7.6km s-min=5.8km az=170.0*
*GCMT **02** 04:10:14.0±0.1,17°.68S±0°.01×178°.57W±0°.01, h564km,MW5.9/166,Moment Tensor Solution. s166,c340; s120,c133; Duration: 2⁵2 Moment tensor: Scale 10¹⁸Nm; Mrr0.69±.01; Mθθ0.10±.01; Mφφ-0.78±.01; Mrθ0.44±.01; Mθφ0.16±.01; Mφr-0.33±.01; Best double couple: M₀0.94100×10¹⁸ NP1:φs13.00000°,δ35.00000°, λ130.00000°. NP2:φs147.00000°,δ64.00000°,λ65.00000°. Principal axes: T 0.9550, Plg63.0000°, Azm16.0000°; N -0.0280, Plg22.0000°, Azm158.0000°; P -0.9270, Plg15.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*
*NEIC **02** 04:10:15,17°.80S×178°.67W,h570km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr6.11; Mθθ0.61; Mθφ-6.72; Mrθ4.62; Mφφ3.32; Mφr-3.19; Fault plane solution: M₀9.16000×10¹⁷ NP1:φs3.00000°, δ33.00000°,λ131.00000°. NP2:φs137.00000°,δ66.00000°, λ67.00000°. Principal axes: T 8.8231, Plg62.0000°, Azm10.0000°; N 0.6362, Plg21.0000°, Azm147.0000°; P -9.4593, Plg17.0000°, Azm244.0000°;*
*NEIC **02** 04:10:15,17°.64S×178°.53W,h570km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr7.06; Mθθ1.22; Mθφ-8.29; Mrθ4.39; Mφφ1.32; Mφr-3.39; Fault plane solution: M₀9.62000×10¹⁷ NP1:φs15.00000°, δ36.00000°,λ130.00000°. NP2:φs149.00000°,δ63.00000°, λ65.00000°. Principal axes: T 9.7385, Plg63.0000°, Azm17.0000°; N -0.2427, Plg23.0000°, Azm161.0000°; P -9.4959, Plg15.0000°, Azm257.0000°;*
*NEIC **02** 04:10:27.9,18°.23S×179°.13W,h565km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.96; Mθθ0.07; Mθφ-1.04; Mrθ0.22; Mφφ0.45; Mφr-0.09; Fault plane solution: M₀1.11000×10¹⁸ NP1:φs148.29000°, δ50.34000°,λ73.62000°. NP2:φs353.01000°,δ42.39000°, λ108.79000°. Principal axes: T 1.0144, Plg77.0000°, Azm357.0000°; N 0.1939, Plg13.0000°, Azm159.0000°; P -1.2083, Plg4.0000°, Azm250.0000°;*

ISC 02 04:10:10.3±0.2,17°.88S±0°.03×178°.53W±0°.03, h562km±2km,h562km:pP-P,n1660,σ1⁹55/1712,mb5.8/387, 338C-110D,Fault plane solution: NP1:φs303.02472°, δ33.04395°,λ62.33126°. **NP2:φs155.05016°,δ61.12322°,** λ106.80772°. **Principal axes:** T Plg69.1018°, Azm100.0242°; N Plg14.6673°, Azm326.7506°; P Plg14.5517°, Azm232.8549°; **Fault plane solution: NP1:φs31.62005°,δ48.61667°,λ153.01503°. NP2: φs140.22459°,δ70.09539°,λ44.67593°. Principal axes:** T Plg45.0888°, Azm4.8104°; N Plg41.9602°, Azm159.2246°; P Plg13.1044°, Azm261.3066°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.26**	**272**	P	**P**	**04 11 29.0**	**+1.0**
	291nm,0.3s,baz=126,slow=7.3,SNR=1863						
MSVF				S	**S**	**04 12 33.5**	**+2.2**
	baz=129,slow=23,SNR=14						
MSVF	**Nonsavu**	**3.26**	**272**	*c iP*	**P**	**04 11 28.7**	**+0.6**
AFI	**Afiamalu**	**7.60**	**60**	P	**P**	**04 12 02.4**	**-2.3**
AFI				S	**S**	**04 13 35.6**	**-2.7**
AFI	**Afiamalu**	**7.60**	**60**	P	**P**	**04 12 02.4**	**-2.3**
AFI				S	**S**	**04 13 35.6**	**-2.7**
AFI	**Afiamalu**	**7.60**	**60**	P	**P**	**04 12 02.8**	**-1.9**
FUNA	**Funafuti**	**9.56**	**346**	P	**P**	**04 12 22.2**	**-1.9**
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**04 12 41.3**	**-0.7**
	320nm,0.3s,baz=73,slow=8.1,SNR=16						
RAO				S	**S**	**04 14 45.7**	**-0.9**
	234nm,0.3s,baz=84,slow=21,SNR=16						
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**04 12 41.2**	**-0.7**
RAO				S	**S**	**04 14 45.2**	**-1.4**
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**04 12 41.2**	**-0.7**
RAO				S	**S**	**04 14 45.1**	**-1.4**
RAO	**Raoul Island**	**11.33**	**177**	P	**P**	**04 12 42.1**	**+0.2**
DVP	**Devils Point**	**12.65**	**269**	P	**P**	**04 12 55.9**	**+0.2**
	694µm,0.9s						
MARNC	**Mare, Loyalty**	**13.15**	**252**	P	**P**	**04 12 59.3**	**-1.5**
LIFNC	**LIFOU**	**13.74**	**256**	P	**P**	**04 13 05.1**	**-1.7**
SANVU	**Saraoutou**	**13.88**	**278**	P	**P**	**04 13 05.8**	**-2.6**
SANVU	**Saraoutou**	**13.88**	**278**	P	**P**	**04 13 06.6**	**-1.8**
PINNC	**Pines Island,**	**13.98**	**248**	P	**P**	**04 13 08.6**	**-0.6**
YATNC	**Mamie plateau,**	**14.32**	**251**	P	**P**	**04 13 11.3**	**-1.5**
OUENC	**Ouen Island, N**	**14.46**	**249**	P	**P**	**04 13 13.5**	**-0.6**
DZM	**Mont Dzumac**	**14.73**	**251**	*eP*	**P**	**04 13 15.7**	**-1.3**
	3µm,1.3s						
DZM	**Mont Dzumac**	**14.73**	**251**	P	**P**	**04 13 15.4**	**-1.5**
	41nm,0.3s,baz=80,slow=9.9,SNR=138						
DZM	**Mont Dzumac**	**14.73**	**251**	P	**P**	**04 13 14.0**	**-2.9**
DZM	**Mont Dzumac**	**14.73**	**251**	P	**P**	**04 13 16.0**	**-1.0**
ONTNC	**Ouen Toro**	**14.78**	**250**	P	**P**	**04 13 16.5**	**-0.8**
KNTN	**Kanton**	**16.43**	**25**	P	**P**	**04 13 32.0**	**-1.6**
KNTN	**Kanton**	**16.43**	**25**	P	**P**	**04 13 32.9**	**-0.7**
KOUNC	**Koumac, New Ca**	**16.45**	**258**	P	**P**	**04 13 33.9**	**+0.3**
NFK	**Norfolk Island**	**16.64**	**226**	P	**P**	**04 13 37.6**	**+2.3**
	baz=17,SNR=32						
NFK	**Norfolk Island**	**16.64**	**226**	P	**P**	**04 13 36.9**	**+1.6**
RAR	**Rarotonga**	**17.98**	**104**	P	**P**	**04 13 49.7**	**+2.2**
	16nm,0.3s,baz=252,slow=6.0,SNR=40						
RAR	**Rarotonga**	**17.98**	**104**	P	**P**	**04 13 47.9**	**+0.3**
RAR				pmax	pmax		
	comp=Z,748nm,1.1s						
RAR	**Rarotonga**	**17.98**	**104**	P	**P**	**04 13 47.9**	**+0.3**
RAR	**Rarotonga**	**17.98**	**104**	P	**P**	**04 13 49.9**	**+2.3**
	comp=Z,744nm,1.2s						
OUZ	**Omahuta**	**18.64**	**201**	P	**P**	**04 13 54.1**	**+0.8**
MXZ	**Matakaoa Point**	**19.80**	**187**	P	**P**	**04 14 03.0**	**-0.8**
WMGZ	**Waiomatatini S**	**20.04**	**187**	P	**P**	**04 14 05.8**	**-0.2**
WMGZ				S	**S**	**04 17 14.9**	**-2.1**
HAZ	**Te Kaha**	**20.06**	**189**	P	**P**	**04 14 05.2**	**-1.0**
HAZ				S	**S**	**04 17 14.0**	**-3.3**
PKGZ	**Pakihiroa**	**20.15**	**188**	P	**P**	**04 14 06.8**	**-0.3**
RUGZ	**Raukumara Rang**	**20.28**	**189**	P	**P**	**04 14 06.8**	**-1.6**
RUGZ				S	**S**	**04 17 24.1**	**+3.1**
WHRZ	**Whale Island**	**20.29**	**190**	P	**P**	**04 14 10.0**	**+1.7**
TGRZ	**Tauranga**	**20.30**	**192**	P	**P**	**04 14 11.0**	**+2.7**
PUZ	**Puketiti**	**20.31**	**187**	P	**P**	**04 14 08.6**	**+0.1**
PUZ				S	**S**	**04 17 23.4**	**+2.1**
OPRZ	**Ohinepanea**	**20.35**	**191**	P	**P**	**04 14 10.7**	**+1.8**
TWGZ	**Tauwhareparae**	**20.45**	**188**	P	**P**	**04 14 09.8**	**0.0**
TWGZ				S	**S**	**04 17 25.0**	**+1.5**
TOZ	**Tahuroa Road**	**20.46**	**194**	P	**P**	**04 14 12.7**	**+2.9**
MARZ	**Manawahe**	**20.46**	**191**	P	**P**	**04 14 11.3**	**+1.4**
KMRZ	**Kaimai**	**20.47**	**193**	P	**P**	**04 14 12.4**	**+2.4**
EDRZ	**Edgecumbe**	**20.57**	**191**	P	**P**	**04 14 12.4**	**+1.5**
KARZ	**Kaharoa**	**20.58**	**192**	P	**P**	**04 14 13.5**	**+2.5**
OMRZ	**Omania**	**20.64**	**191**	P	**P**	**04 14 12.6**	**+1.1**
URZ	**Urewera**	**20.66**	**190**	P	**P**	**04 14 09.7**	**-1.9**
	comp=Z,492nm,0.8s,baz=121,slow=23,SNR=178						
URZ				S	**S**	**04 17 25.3**	**-1.4**
	comp=Z,171nm,0.9s,baz=80,slow=10.0,SNR=3.1						
URZ	**Urewera**	**20.66**	**190**	P	**P**	**04 14 09.7**	**-1.9**
URZ				IAmb	IAmb	04 14 12.5	
	comp=Z,383nm,0.8s						
URZ					**S**	**04 17 26.5**	**-0.2**
URZ	**Urewera**	**20.66**	**190**	P	**P**	**04 14 09.7**	**-1.9**
URZ				S	**S**	**04 17 22.0**	**-4.7**
MWZ	**Matawai**	**20.67**	**189**	P	**P**	**04 14 10.5**	**-1.3**
MWZ				S	**S**	**04 17 23.2**	**-3.8**
CNGZ	**Carnagh Statio**	**20.72**	**187**	P	**P**	**04 14 12.4**	**+0.1**
TKGZ	**Te Karaka**	**20.73**	**188**	P	**P**	**04 14 12.4**	**+0.1**
TARZ	**Mount Tarawera**	**20.74**	**191**	P	**P**	**04 14 14.6**	**+2.1**
HLRZ	**Highlands Stat**	**20.78**	**191**	P	**P**	**04 14 15.4**	**+2.6**
RRRZ	**Republican Roa**	**20.84**	**191**	P	**P**	**04 14 13.9**	**+0.6**
GRRZ	**Galatos Road**	**20.93**	**192**	P	**P**	**04 14 16.6**	**+2.5**
MUGZ	**Murupara**	**20.93**	**190**	P	**P**	**04 14 14.0**	**0.0**
HRRZ	**Handcock Road**	**20.93**	**191**	P	**P**	**04 14 15.3**	**+1.2**
RIGZ	**Rimuhau**	**21.00**	**188**	P	**P**	**04 14 14.6**	**-0.1**
PRRZ	**Plateau Road**	**21.02**	**191**	P	**P**	**04 14 15.4**	**+0.6**
TLZ	**Tolley Road**	**21.02**	**193**	P	**P**	**04 14 18.1**	**+3.1**
RTZ	**Ruatahuna**	**21.03**	**190**	P	**P**	**04 14 14.8**	**-0.2**
WPRZ	**Whakapapatarin**	**21.08**	**192**	P	**P**	**04 14 17.2**	**+1.8**
ALRZ	**Allen Road**	**21.09**	**191**	P	**P**	**04 14 16.6**	**+1.1**
SNGZ	**Shannon Statio**	**21.13**	**189**	P	**P**	**04 14 15.2**	**-0.8**
PRGZ	**Paritu Road**	**21.20**	**188**	P	**P**	**04 14 17.5**	**+1.0**
MTHZ	**Maungataniwha**	**21.28**	**190**	P	**P**	**04 14 16.9**	**-0.3**
RAHZ	**Arahi**	**21.30**	**189**	P	**P**	**04 14 17.9**	**+0.4**
KNZ	**Kokohu**	**21.32**	**188**	P	**P**	**04 14 17.5**	**0.0**
MHGZ	**Mahia Peninsul**	**21.42**	**188**	P	**P**	**04 14 19.8**	**+1.3**
RATZ	**Rangitukua**	**21.49**	**192**	P	**P**	**04 14 20.4**	**+1.2**
NMHZ	**Naumai**	**21.53**	**190**	P	**P**	**04 14 20.1**	**+0.6**
KATZ	**Kakaramea**	**21.61**	**192**	P	**P**	**04 14 22.2**	**+1.9**
ARHZ	**Aropaoanui**	**21.66**	**189**	P	**P**	**04 14 20.6**	**0.0**
KRVZ	**Karewarewa**	**21.74**	**192**	P	**P**	**04 14 23.0**	**+1.6**
TMVZ	**Te Maari**	**21.75**	**192**	P	**P**	**04 14 21.2**	**-0.3**
OTVZ	**Oturere**	**21.80**	**192**	P	**P**	**04 14 21.6**	**-0.5**
BHHZ	**Black Hill Sta**	**22.04**	**191**	P	**P**	**04 14 23.1**	**-1.0**
BHHZ				S	**S**	**04 17 49.8**	**+1.2**
HNR	**Honiara**	**22.52**	**289**	P	**P**	**04 14 28.4**	**-0.3**
	comp=Z,527nm,0.8s,baz=170,slow=4.1,SNR=7.1						
HNR	**Honiara**	**22.52**	**289**	P	**P**	**04 14 28.0**	**-0.7**
HNR	**Honiara**	**22.52**	**289**	P	**P**	**04 14 28.2**	**-0.5**
	comp=Z,870nm,1.2s						
BFZ	**Birch Farm**	**23.16**	**190**	P	**P**	**04 14 33.1**	**-0.9**
BFZ				IAmb	IAmb	04 14 35.1	
	comp=Z,165nm,0.9s						
MSWZ	**Moikau Station**	**24.06**	**192**	P	**P**	**04 14 41.4**	**-0.6**
SNZO	**South Karori**	**24.06**	**193**	P	**P**	**04 14 41.8**	**-0.1**
SNZO				IAmb	IAmb	04 14 42.8	
	comp=Z,376nm,0.9s						
BHW	**Baring Head**	**24.12**	**192**	P	**P**	**04 14 41.8**	**-0.7**
QRZ	**Quartz Range**	**24.13**	**197**	P	**P**	**04 14 43.3**	**+0.7**
QRZ				IAmb	IAmb	04 14 44.5	
	comp=Z,409nm,1.0s						
PLWZ	**Palliser**	**24.20**	**191**	P	**P**	**04 14 42.4**	**-0.9**
NNZ	**Nelson**	**24.27**	**195**	P	**P**	**04 14 43.8**	**-0.1**
NNZ				IAmb	IAmb	04 14 45.2	
	comp=Z,371nm,1.0s						
NNZ					**S**	**04 18 24.3**	**+0.7**
TUWZ	**Tuamarina**	**24.34**	**194**	P	**P**	**04 14 44.2**	**-0.2**
LHI	**Lord Howe Isla**	**24.41**	**232**	P	**P**	**04 14 46.6**	**+1.4**
	baz=24,SNR=9.2						
LHI	**Lord Howe Isla**	**24.41**	**232**	P	**P**	**04 14 44.9**	**-0.3**
LHI	**Lord Howe Isla**	**24.41**	**232**	P	**P**	**04 14 47.0**	**+1.8**
BSWZ	**Blackbird Sta**	**24.63**	**194**	P	**P**	**04 14 47.1**	**+0.1**
THZ	**Tophouse**	**24.91**	**195**	P	**P**	**04 14 49.4**	**-0.1**
THZ				IAmb	IAmb	04 14 51.6	
	comp=Z,188nm,0.9s						
KHZ	**Kahutara**	**25.37**	**194**	P	**P**	**04 14 52.9**	**-0.7**
KHZ				IAmb	IAmb	04 14 55.2	
	comp=Z,311nm,0.9s						
KHZ					**S**	**04 18 41.2**	**+0.4**
LTZ	**Lake Taylor**	**26.02**	**196**	P	**P**	**04 14 58.6**	**-0.7**
LTZ				IAmb	IAmb	04 15 02.5	
	comp=Z,391nm,0.8s						
OXZ	**Oxford**	**26.59**	**195**	P	**P**	**04 15 03.6**	**-0.7**
MQZ	**McQueen's Vall**	**26.80**	**194**	P	**P**	**04 15 05.5**	**-0.6**
MQZ				IAmb	IAmb	04 15 06.8	
	comp=Z,252nm,1.0s						
RPZ	**Rata Peaks**	**27.21**	**197**	P	**P**	**04 15 08.8**	**-1.0**
	comp=Z,107nm,0.8s,baz=250,slow=1.1,SNR=42						
RPZ				S	**S**	**04 19 10.1**	**+0.4**
	comp=Z,30nm,0.8s,baz=270,slow=11,SNR=2.9						
RPZ				ScP	**ScP**	**04 21 00.8**	**+2.0**
	comp=Z,24nm,1.0s,baz=64,slow=4.8,SNR=3.7						
RPZ	**Rata Peaks**	**27.21**	**197**	P	**P**	**04 15 08.9**	**-0.8**
FOZ	**Fox Glacier**	**27.41**	**199**	P	**P**	**04 15 11.3**	**0.0**
PAE	**Paea**	**27.56**	**94**	*eP*	**P**	**04 15 15.0**	**+1.9**
	comp=Z,48nm,1.2s						
PAE				*e*ScP	**ScP**	**04 20 58.7**	**-1.5**
	comp=Z,19nm,1.3s						
PPT2	**Papeete2**	**27.57**	**94**	*eP*	**P**	**04 15 15.4**	**+2.1**
	comp=Z,107nm,0.8s						
PPT2				*e*ScP	**ScP**	**04 20 59.2**	**-1.2**
	comp=Z,53nm,1.1s						
PPT	**Papeete**	**27.57**	**94**	P	**P**	**04 15 15.6**	**+2.3**
	comp=Z,124nm,0.5s,baz=62,slow=3.1,SNR=42						
PPT				ScP	**ScP**	**04 21 06.7**	**+6.4**
	comp=Z,63nm,1.0s,baz=0.2,slow=4.5,SNR=3.9						
PPTF	**Pamatai, Papee**	**27.58**	**94**	P	**P**	**04 15 13.9**	**+0.6**
PPTF				IAmb	IAmb	04 15 17.5	
	comp=Z,236nm,1.1s						
PPTF					**pP**	**04 16 44.0**	**+1.7**
TBI	**Tubuai**	**27.72**	**106**	*eP*	**P**	**04 15 16.7**	**+2.3**
	comp=Z,127nm,0.7s						
LBZ	**Lake Benmore**	**28.08**	**197**	P	**P**	**04 15 16.4**	**-0.9**
LBZ				IAmb	IAmb	04 15 21.3	
	comp=Z,355nm,1.0s						
ODZ	**Otahua Downs**	**28.56**	**196**	P	**P**	**04 15 21.0**	**-0.5**
ODZ				pP	**pP**	**04 16 52.9**	**

TAOE Nuku Hiva Isla 38.34 82 P P 04 16 46.1 +1.9
STKA Stephens Creek 38.54 241 P P 04 16 46.5 +1.0
comp=Z,877nm,0.9s,baz=87,slow=9.5,SNR=692
STKA ScP ScP 04 21 42.2 +3.6
comp=Z,53nm,1.1s,baz=20,slow=4.1,SNR=4.8
STKA S S 04 21 59.5 -2.2
comp=Z,18nm,0.9s,baz=0.0,slow=20,SNR=1.8
STKA Stephens Creek 38.54 241 P P 04 16 46.5 +1.0
baz=38,SNR=479
STKA Stephens Creek 38.54 241 P P 04 16 45.3 -0.2
STKA pmax pmax
comp=Z,364nm,1.1s
STKA Stephens Creek 38.54 241 P P 04 16 45.3 -0.2
STKA IAmb IAmb 04 16 47.9
comp=Z,364nm,1.1s
STKA ScP ScP 04 21 36.3 -2.4
QIS Mount Isa 39.55 259 P P 04 16 53.1 -0.7
baz=40,SNR=83
ARPS Mount Arapiles 39.57 234 P P 04 16 54.4 +0.7
baz=40,SNR=21
WAKE Wake Island 39.70 338 P P 04 16 54.4 -0.5
H11N3 WAKE ISLAND Hy 40.01 338 P P 04 16 56.7 -0.4
baz=177,slow=10,SNR=32
H11N1 WAKE ISLAND Hy 40.01 338 P P 04 16 56.7 -0.4
baz=177,slow=10,SNR=20
H11N2 WAKE ISLAND Hy 40.02 338 P P 04 16 57.0 -0.3
baz=177,slow=10,SNR=15
MCQ Macquarie Isla 40.45 200 P P 04 17 02.5 +2.2
baz=41,SNR=4.0
MCQ Macquarie Isla 40.45 200 P P 04 17 01.2 +0.8
MCQ pmax pmax
comp=Z,117nm,0.9s
MCQ Macquarie Isla 40.45 200 P P 04 17 01.1 +0.8
MMPI Merauke 41.00 278 P P 04 17 05.9 +0.5
comp=Z,2μm,1.1s
HTT Hallett 41.06 239 P P 04 17 06.4 +0.7
baz=41,SNR=396
JAY Jayapura 42.79 286 P P 04 17 19.9 +0.4
comp=Z,452nm,0.9s,baz=123,slow=2.5,SNR=187
JAY ScP ScP 04 21 58.8 +2.9
comp=Z,34nm,1.0s,baz=25,slow=3.6,SNR=4.8
JAY S S 04 23 03.2 -0.5
comp=Z,22nm,0.9s,baz=137,slow=21,SNR=7.3
JAY Jayapura 42.79 286 P P 04 17 19.8 +0.2
comp=Z,4μmcomp=Z,440nm,1.2s
KHU Kahuku 43.22 32 P P 04 17 23.5 +0.5
KHU pmax pmax
comp=Z,545nm,0.9s
KHU Kahuku 43.22 32 P P 04 17 23.5 +0.5
KHU IAmb IAmb 04 17 24.5
comp=Z,545nm,0.9s
GENI Genyem 43.25 286 P P 04 17 23.8 +0.7
comp=Z,19μmcomp=Z,1μm,1.3s
BBOO Buckleboo 43.32 241 P P 04 17 23.9 +0.5
baz=43,SNR=920
BBOO Buckleboo 43.32 241 P P 04 17 23.8 +0.4
KHLU Kahalu`u 43.37 32 P P 04 17 24.7 +0.7
AIN Ainahou 43.41 33 P P 04 17 24.8 +0.4
AIN IAmb IAmb 04 17 27.8
comp=Z,488nm,0.9s
AIN pP pP 04 19 02.4 -0.9
HLP Hilina Pali 43.42 33 P P 04 17 24.9 +0.6
HLP IAmb IAmb 04 17 26.8
comp=Z,477nm,0.8s
MWH Moku'aweowe 43.43 32 P P 04 17 24.7 -0.2
HUH Hualalai 43.48 32 P P 04 17 25.3 +0.3
MLOA Mauna Loa Obse 43.48 32 P P 04 17 25.3 +0.1
SDHHI Sand Hill 43.51 33 P P 04 17 25.6 +0.5
WRMHI West Rim 43.52 33 P P 04 17 25.6 +0.4
RIM Rim 43.52 33 P P 04 17 25.8 +0.6
KKO Keanakako`i 43.53 33 P P 04 17 25.1 -0.1
NPH North Pit 43.53 33 P P 04 17 25.4 +0.2
NPH IAmb IAmb 04 17 26.8
comp=Z,303nm,1.0s
UWE Uwekahuna 43.53 33 P P 04 17 25.5 +0.2
PUH Pauahi 43.53 33 P P 04 17 26.0 +0.8
OBL Observatory Le 43.53 33 P P 04 17 25.1 -0.2
BYL Byron's Ledge 43.54 33 P P 04 17 25.7 +0.4
BYL IAmb IAmb 04 17 26.9
comp=Z,638nm,1.1s
UWB Uwekahuna B 43.54 33 P P 04 17 25.2 -0.1
UWB IAmb IAmb 04 17 27.4
comp=Z,746nm,1.2s
MLH Mauna Loa 43.54 33 P P 04 17 25.8 +0.2
HATHI Halema'uma'u T 43.55 33 P P 04 17 25.7 +0.3
HATHI IAmb IAmb 04 17 26.9
comp=Z,689nm,1.2s
SBLHI Steaming Bluff 43.55 33 P P 04 17 25.0 -0.4
SBLHI IAmb IAmb 04 17 26.9
comp=Z,417nm,1.0s
RSD Rainshed 43.57 33 P P 04 17 25.7 +0.1
HMH Humu'ula Sheep 43.59 32 P P 04 17 25.7 -0.2
STCH Steam Cracks 43.59 33 P P 04 17 25.9 +0.3
JCUZ Jacuzzi 43.60 33 P P 04 17 26.2 +0.4
POHA Pohakuloa 43.69 32 P P 04 17 26.6 -0.1
HON Honolulu 43.85 28 P P 04 17 28.0 +0.5
HON pmax pmax
comp=Z,1μm,1.2s
HON Honolulu 43.85 28 P P 04 17 28.0 +0.5
KIP Kipapa 43.93 28ceP P 04 17 29.1 +0.9
KIP pmax pmax
comp=Z,1μm,1.7s
KIP Kipapa 43.93 28 P P 04 17 28.5 +0.3
HLK Haleakala 44.18 31 P P 04 17 30.1 -0.3
WR0 Warramunga Arr 44.33 260 P P 04 17 30.7 -0.8
WB0 Warramunga Arr 44.49 260 P P 04 17 31.9 -0.7
WC3 Warramunga Arr 44.49 260 P P 04 17 31.4 -1.3
baz=44
WB2 Warramunga Arr 44.51 260 P P 04 17 32.1 -0.7
WB2 IAmb IAmb 04 17 33.4
comp=Z,606nm,0.9s
WRAB Tennant Creek 44.52 260ceP P 04 17 31.8 -1.0
WRAB pmax pmax
comp=Z,769nm,1.3s
WRAB Tennant Creek 44.52 260 P P 04 17 32.1 -0.7
WRAB IAmb IAmb 04 17 33.3
comp=Z,523nm,0.9s
WRA Warramunga Arr 44.52 260 P P 04 17 31.7 -1.2
comp=Z,302nm,0.8s,baz=94,slow=7.3,SNR=486
WRA PcP PcP 04 19 04.1 +0.2
comp=Z,20nm,0.6s,baz=101,slow=2.8,SNR=3.1
WRA ScP ScP 04 22 06.3 +3.4
comp=Z,46nm,1.1s,baz=89,slow=4.5,SNR=11
WRA S S 04 23 23.0 -5.1
comp=Z,29nm,1.0s,baz=92,slow=13,SNR=7.3
WRA ScS ScS 04 26 31.5 +2.6
comp=Z,14nm,1.1s,baz=101,slow=4.0,SNR=6.7
WRA PKPPKP P'P'df 04 49 02.8 -0.6
comp=Z,1.0nm,0.8s,baz=284,slow=2.2,SNR=4.5
AS31 Alice Springs 44.69 254 P P 04 17 33.6 -0.5
ASAR Alice Springs 44.69 254 P P 04 17 34.1 0.0
comp=Z,2μm,0.8s,baz=85,slow=8.4,SNR=7882
ASAR PcP PcP 04 19 05.0 +0.6
comp=Z,31nm,0.5s,baz=104,slow=3.9,SNR=2.0
ASAR ScP ScP 04 22 07.1 +3.5
comp=Z,49nm,0.8s,baz=98,slow=4.1,SNR=10
ASAR S S 04 23 27.7 -2.7
comp=Z,65nm,1.0s,baz=86,slow=15,SNR=21
ASAR ScS ScS 04 26 32.0 +2.1
comp=Z,9.3nm,0.9s,baz=94,slow=7.5,SNR=5.1
ASAR PKP2ab 04 50 12.6
comp=Z,1.1nm,0.9s,baz=275,slow=3.4,SNR=4.6
ASPA Alice Springs 44.69 254 P P 04 17 33.9 -0.2
baz=45
MIDW Midway 45.84 1 P P 04 17 42.6 -0.1
MIDW IAmb IAmb 04 17 43.4
comp=Z,469nm,1.1s
SRPI Serui, Papua 47.14 285 P P 04 17 53.6 +0.8
comp=Z,389nm,1.0s
KDU Kakadu 47.44 269 P P 04 17 54.6 -0.5
baz=47,SNR=206
BAKI Biak 47.53 285 P P 04 17 56.3 +0.6
comp=Z,7μmcomp=Z,746nm,1.0s
GUMO Guam 47.77 308 P P 04 17 58.2 +0.8
GUMO pmax pmax
comp=Z,538nm,0.9s
GUMO Guam 47.77 308 P P 04 17 58.2 +0.8
GUMO IAmb IAmb 04 17 58.8
comp=Z,538nm,0.8s
GUMO Guam 47.77 308 P P 04 17 57.7 +0.3
MTN Manton Dam 48.69 268 P P 04 18 04.2 -0.1
baz=49,SNR=4.1
KMPI Kaimana, Papua 48.84 281 P P 04 18 06.2 +0.7
comp=Z,7μmcomp=Z,814nm,1.0s
SAUI Saumlaki 49.74 275 P P 04 18 12.9 +0.8
comp=Z,13μmcomp=Z,1μm,1.2s

WRKA Warakurna 49.74 252 P P 04 18 11.9 -0.2
baz=50,SNR=1000
FORT Forrest 49.91 245 P P 04 18 12.9 -0.3
baz=50,SNR=274
FORT Forrest 49.91 245 P P 04 18 12.8 -0.3
FAKI Fak Fak 50.46 281 P P 04 18 16.7 -0.7
FAKI Fak Fak 50.46 281 P P 04 18 16.9 -0.5
comp=Z,3μmcomp=Z,205nm,1.2s
BNDI Bandanaira 52.12 278 P P 04 18 29.4 0.0
comp=Z,746nm,0.9s
SIJI Sorong 52.12 283 P P 04 18 29.8 +0.4
comp=Z,842nm,0.9s,baz=87,slow=6.1,SNR=236
SIJI ScP ScP 04 22 37.9 +2.5
comp=Z,30nm,0.9s,baz=71,slow=6.1,SNR=5.0
SIJI S S 04 25 12.2 -0.2
comp=Z,7.5nm,0.6s,baz=269,slow=20,SNR=12
SWI Sorong 52.13 283 P P 04 18 29.7 +0.3
comp=Z,10μmcomp=Z,1μm,0.9s
FITZ Fitzroy Crossi 52.92 261 S S 04 25 22.3 -0.5
comp=Z,10nm,0.9s,baz=286,slow=21,SNR=8.0
FITZ Fitzroy Crossi 52.92 261 P P 04 18 35.1 +0.1
baz=53,SNR=267
FITZ Fitzroy Crossi 52.92 261 P P 04 18 34.5 -0.5
NLAI Namlea 55.18 279 P P 04 18 51.1 +0.1
comp=Z,3μmcomp=Z,318nm,1.3s
KMBL Kambalda 55.22 244 P P 04 18 50.7 -0.3
baz=55,SNR=33
SOEI Soe 55.96 270 P P 04 18 55.6 -0.9
SOEI Soe 55.96 270 P P 04 18 57.8 +1.3
comp=Z,10μmcomp=Z,1μm,1.2s
TNTI Ternate 56.34 283 P P 04 18 58.3 -0.7
TNTI Ternate 56.34 283 P P 04 18 59.3 +0.3
comp=Z,6μmcomp=Z,368nm,1.1s
BATI Baumata 56.42 269 S S 04 26 13.1 +4.5
comp=Z,14nm,0.5s,baz=157,slow=22,SNR=11
BATI Baumata 56.42 269 P P 04 19 01.0 +1.4
comp=Z,3μmcomp=Z,215nm,0.9s
SANI Sanana 56.62 280 P P 04 19 00.6 -0.4
comp=Z,4μmcomp=Z,484nm,1.1s
PSA00 Pilbara Seismi 57.80 255 P P 04 19 08.3 -0.7
PSA00 IAmb IAmb 04 19 10.0
comp=Z,443nm,0.8s
PSA00 S S 04 26 24.7 -1.4
MMRI Maumere 58.18 271 P P 04 19 10.8 -0.8
MMRI Maumere 58.18 271 P P 04 19 11.5 -0.1
comp=Z,5μmcomp=Z,436nm,0.9s
EDFI Ende, Flores 58.67 271 P P 04 19 14.4 -0.6
comp=Z,2μmcomp=Z,233nm,1.2s
KLBR Kellerberrin 58.74 244 P P 04 19 14.9 -0.2
baz=59,SNR=28
JCJ Chichijima 58.75 319 P P 04 19 14.7 -0.3
NWAO Narrogin (SRO) 59.12 242 P P 04 19 17.9 +0.3
baz=59,SNR=24
NWAO Narrogin (SRO) 59.12 242 P P 04 19 17.3 -0.3
NWAO pmax pmax
comp=Z,164nm,1.0s
NWAO Narrogin (SRO) 59.12 242 P P 04 19 17.3 -0.3
KDI Kendari 59.18 276 P P 04 19 18.1 -0.2
comp=Z,154nm,1.2s
BASI Baing, Sumba 59.35 269 P P 04 19 19.8 +0.4
comp=Z,4μmcomp=Z,349nm,1.3s
KMSI Cibinong 59.42 282 P P 04 19 19.5 -0.4
comp=Z,5μmcomp=Z,327nm,0.8s
BLDU Ballidu 59.69 245 P P 04 19 21.1 -0.3
baz=60,SNR=82
MATI Mati 59.82 289 eP P 04 19 20.0 -2.5
LUWI Luwuk 59.99 279 P P 04 19 22.9 -0.7
LUWI IAmb IAmb 04 19 25.7
comp=Z,654nm,1.1s
LUWI Luwuk 59.99 279 P P 04 19 24.3 +0.6
comp=Z,6μmcomp=Z,599nm,1.3s
MUN Mundaring 60.03 243 P P 04 19 23.9 +0.2
baz=60,SNR=41
GTOI Gorontalo 60.35 281 P P 04 19 26.8 +0.8
comp=Z,2μmcomp=Z,120nm,0.9s
MORW Morawa 60.39 246 P P 04 19 26.0 -0.1
baz=60,SNR=46
MORW Morawa 60.39 246 P P 04 19 25.6 -0.5
SBA Scott Base 60.44 184 P P 04 19 29.4 +3.9
SBA pmax pmax
comp=Z,48nm,0.8s
VNDA Vanda 60.46 185 P P 04 19 28.3 +2.6
comp=Z,20nm,0.8s,baz=356,slow=7.4,SNR=120
VNDA PKP2bc 04 48 46.2
comp=Z,15nm,1.3s,baz=244,slow=3.8,SNR=7.5
VNDA Vanda 60.46 185 P P 04 19 26.6 +0.9
KCP Kidapawan 60.90 289 iP P 04 19 30.0 +0.3
KCP Kidapawan 60.90 289 ieP S 04 27 05.9 +0.7
APSI Ampana 61.09 279 P P 04 19 32.2 +1.3
comp=Z,5μmcomp=Z,482nm,1.1s
BKSI Bukumba 61.13 274 P P 04 19 30.1 -1.1
comp=Z,7μmcomp=Z,100nm,1.7s
SKMP Bagumbayan, Su 61.19 288 eP P 04 19 31.6 +0.1
BUKP Musuan 61.29 290 eP P 04 19 33.1 +0.9
MRSI Marisa 61.29 281 P P 04 19 31.7 -0.5
comp=Z,2μmcomp=Z,192nm,1.1s
BNSI Bone 61.42 275 P P 04 19 33.7 +0.6
comp=Z,3μmcomp=Z,334nm,1.1s
KAPI Kappang 61.58 274 S S 04 27 12.2 -1.3
comp=Z,28nm,0.3s,baz=53,slow=20,SNR=0.9
KAPI Kappang 61.58 274 P P 04 19 33.2 -0.9
KAPI S 04 27 11.8 -1.7
H01W1 Cape Leeuwin H 61.60 240 P P 04 19 35.5 +1.9
baz=110,slow=8.5,SNR=24
H01W3 Cape Leeuwin H 61.61 240 P P 04 19 35.9 +2.1
baz=110,slow=8.5,SNR=10
H01W2 Cape Leeuwin H 61.61 240 P P 04 19 35.7 +2.0
baz=110,slow=8.5,SNR=17
SPSI Sidrap Palu 61.88 275 P P 04 19 35.5 -0.6
comp=Z,2μmcomp=Z,206nm,1.0s
TTSI Tana Toraja 62.12 276 P P 04 19 37.4 -0.2
comp=Z,2μmcomp=Z,112nm,1.0s
PLAI Plampang 62.38 269 P P 04 19 39.3 0.0
comp=Z,6μmcomp=Z,650nm,1.0s
MSLP Maasin 62.44 292 eP P 04 19 40.0 +0.3
TOLI2 Tolitoli 62.60 281 P P 04 19 39.9 -0.8
PAGZ Pagadian 62.78 289 eP P 04 19 42.5 +0.7
GIRL Giralia 62.79 253 P P 04 19 43.1 +1.2
baz=63,SNR=60
GIRL Giralia 62.79 253 P P 04 19 41.3 -0.5
GIRL IAmb IAmb 04 19 44.3
comp=Z,671nm,0.9s
TWSI Taliwang, Sumb 63.26 269 P P 04 19 44.8 -0.1
comp=Z,3μmcomp=Z,424nm,1.0s
RPN Rapa Nui 63.91 112 P P 04 19 51.9 +3.0
comp=Z,126nm,0.8s,baz=292,slow=4.2,SNR=12
RPN Rapa Nui 63.91 112 P P 04 19 49.2 +0.3
CNOP Candoni, Negro 64.28 291 eP P 04 19 48.6 -2.8
DNP Denpasar 64.86 269 P P 04 19 54.9 -0.2
comp=Z,330nm,0.5s
SRBI Singaraja 65.02 269 P P 04 19 56.0 -0.1
comp=Z,4μmcomp=Z,317nm,1.1s
JMZ Minamidaito 2 65.38 310 P P 04 19 57.4 -0.7
BKB Balikpapan 65.45 277 P P 04 19 58.3 -0.5
BKB Balikpapan 65.45 277 P P 04 20 01.2 +2.3
comp=Z,2μmcomp=Z,208nm,1.3s
KBKI Kotabaru 65.50 275 P P 04 19 59.9 +0.7
comp=Z,2μmcomp=Z,146nm,1.2s
JAGI Jajag, Banyuwa 65.93 269 P P 04 20 01.0 -0.8
JAGI IAmb IAmb 04 20 01.9
comp=Z,428nm,0.9s
JAGI Jajag, Banyuwa 65.93 269 P P 04 20 00.6 -1.2
comp=Z,4μmcomp=Z,536nm,0.9s
CASY Casey 66.11 205 P P 04 20 01.9 -0.1
CASY pP 04 21 54.9 +0.8
JCNP Jose Panganiba 66.19 295 eP P 04 20 02.1 -1.2
MYLDM Lahad Datu 66.19 184 P P 04 20 03.1 -0.3
JYT Yasato 66.48 324 P P 04 20 04.5 -0.2
KMMI Kalianget 66.49 270 P P 04 20 06.0 +0.7
comp=Z,3μmcomp=Z,278nm,1.1s
JSG Sagara 66.52 322 P P 04 20 05.0 0.0
BBKI Banjar Baru 66.71 274 P P 04 20 07.9 +1.2
comp=Z,3μmcomp=Z,191nm,1.8s
LQP Lukban 67.11 294 iP P 04 20 09.3 0.0
JMM Marumori 67.35 326 eP P 04 20 09.9 -0.2
BUSP Coron 67.37 292 eP P 04 20 11.1 +0.5
MTKI Muara Teweh, K 67.45 277 P P 04 20 11.7 +0.5
comp=Z,5μmcomp=Z,87nm,1.0s
JGF Kuroka 67.65 322 P P 04 20 11.6 -0.4
INU Inuyama 67.67 322 P P 04 20 11.7 -0.3
QVP Quezon City--P 67.80 295 eP P 04 20 00.5 -13
MJAR Matsushiro Arr 67.82 323 P P 04 20 12.9 -0.1
comp=Z,178nm,0.8s,baz=158,slow=6.0,SNR=298
MJAR PKPPKP P'P'df 04 48 27.6 +1.8
comp=Z,2.8nm,0.9s,baz=300,slow=3.9,SNR=7.2
MAJO Matsushiro 67.82 323c iP P 04 20 13.0 0.0

MAJO pmax pmax
comp=Z,236nm,0.8s
MAJO Matsushiro 67.82 323 P P 04 20 13.0 0.0
MAJO IAmb IAmb 04 20 14.1
comp=Z,235nm,0.9s
MAT Matsushiro 67.82 323 P P 04 20 12.8 -0.2
MAT S S 04 28 27.6 +0.3
MJB9 Matsu-Tunnel 67.82 323 P P 04 20 12.8 -0.2
MJB9 IAmb IAmb 04 20 14.1
comp=Z,264nm,0.8s
MACP Maragondon, Ca 67.89 294 eP P 04 20 12.6 -1.2
SPMM Sapulut 67.91 283 P P 04 20 15.0 +1.0
LUBP Lubang 68.07 293 eP P 04 20 12.8 -2.1
JOW Kunigami 68.11 310 P P 04 20 14.4 -0.6
JMN Monobe 68.50 319 P P 04 20 16.8 -0.4
JMN IAmb IAmb 04 20 19.6
comp=Z,398nm,1.1s
SGCP Mt. Cagua 68.57 298 eP P 04 20 19.1 +1.3
JWT Wachi 68.59 321 P P 04 20 17.2 -0.4
KKM Kota Kinabalu 68.62 284 P P 04 20 17.6 -0.9
JSD Sado 68.85 325 P P 04 20 18.9 -0.2
JSD IAmb IAmb 04 20 20.8
comp=Z,287nm,0.8s
AMKA Amchitka 68.99 359 P P 04 20 19.8 +0.2
APYP Conner 69.06 298 eP P 04 20 21.0 +0.2
ERM Erimo 69.31 330c iP P 04 20 22.2 +0.4
ERM pmax pmax
comp=Z,125nm,1.0s
ERM Erimo 69.31 330 P P 04 20 21.7 -0.1
JSU Suzuyama 69.33 315 P P 04 20 21.7 -0.5
JTM Tenmabayashi 69.39 328 IAmb IAmb 04 20 24.5
comp=Z,252nm,1.0s
ADK Adak 69.48 1 P P 04 20 22.6 0.0
ADK pmax pmax
comp=Z,564nm,0.9s
ADK Adak 69.48 1 P P 04 20 22.6 0.0
ADK IAmb IAmb 04 20 23.1
comp=Z,564nm,0.8s
BOLP Bolinao 69.52 296 eP P 04 20 22.8 -0.8
UGM Wanagama 69.53 268 P P 04 20 22.9 -0.9
UGM IAmb IAmb 04 20 25.1
comp=Z,361nm,0.6s
UGM Wanagama 69.53 268 P P 04 20 23.9 +0.1
comp=Z,5μmcomp=Z,628nm,0.8s
BBP Basco 69.68 300 eP P 04 20 22.5 -2.0
YUK Yuzh-Kuril'sk 69.70 333c iP P 04 20 24.5 +0.5
YUK e 04 23 10.4
YUK i S S 04 28 52.6 +4.1
YUK eSS SS 04 33 35.3 +2.9
YUK pmax pmax
comp=Z,727nm,1.7s
YUK pmax pmax
comp=Z,528nm,1.3s
YUK pmax pmax
comp=N,355nm,1.4s
YUK pmax pmax
comp=E,287nm,1.1s
JHS Saijyo 69.80 319 IAmb IAmb 04 20 27.1
comp=Z,475nm,0.9s
KUR Kuril'sk 69.85 335c iP P 04 20 25.6 +0.7
KUR e 04 23 22.1
KUR i S S 04 28 53.5 +3.3
KUR pmax pmax
comp=Z,3μm,1.8s
KUR pmax pmax
comp=Z,1μm,1.6s
KUR pmax pmax
comp=E,204nm,1.2s
KUR pmax pmax
comp=N,228nm,1.5s
SMRI Semarang 69.85 269 IAmb IAmb 04 20 27.7
comp=Z,270nm,0.8s
SMRI Semarang 69.85 269 P P 04 20 26.2 +0.5
comp=Z,405nm,0.9s
ATKA Atka Island 69.89 3 P P 04 20 24.7 -0.3
PBKI Pangkalan Bun 69.95 274 P P 04 20 27.7 +1.4
YOJ Yonaguni jima 70.84 305 IAmb IAmb 04 20 32.6
comp=Z,402nm,1.0s
STKI Sintang 71.01 276 P P 04 20 34.3 +1.8
NIKH Nikolski High 71.05 6 P 04 20 31.6
baz=190
NIKH Nikolski High 71.05 6 P P 04 20 31.7 -0.1
SBUM Sibu 71.09 279 P P 04 20 32.0 -0.9
SBUM pP 04 22 26.6 -1.9
SBUM Sibu 71.09 279 P P 04 20 34.0 +1.0
JKA Kamikawa-asahi 71.20 331 P P 04 20 32.7 -0.3
JKA IAmb IAmb 04 20 35.4
comp=Z,239nm,0.8s
ASAJ Asahikawa 71.20 331 P P 04 20 34.4 +1.5
comp=Z,197nm,0.8s,baz=204,slow=4.4
YULB Yu-li 71.66 303 P P 04 20 34.8 -1.3
NACB Ninganchiao 71.81 304 IAmb IAmb 04 20 38.5
comp=Z,230nm,1.0s
SKR Severo-Kuril's 71.82 343c iP P 04 20 36.6 +0.2
SKR eS S 04 29 08.1 -4.0
SKR pmax pmax
comp=Z,1μm,2.8s
SKR pmax pmax
comp=Z,470nm,1.2s
JCJI Jatiwangi 72.08 269 P P 04 20 39.2 +0.5
comp=Z,7μmcomp=Z,593nm,0.9s
TPUB Ta-pu 72.15 302 IAmb IAmb 04 20 39.1
comp=Z,258nm,0.7s
QSPA South Pole Qui 72.17 180 P P 04 20 40.4 +1.9
CISI Cisompet, Garu 72.21 268 IAmb IAmb 04 20 40.1
comp=Z,252nm,0.7s
CISI Cisompet, Garu 72.21 268 P P 04 20 38.6 -1.0
comp=Z,4μmcomp=Z,452nm,0.7s
TATO Taipei 72.29 304 P P 04 20 38.9 -0.8
AKUT Akutan 72.55 8 IAmb IAmb 04 20 41.8
comp=Z,401nm,0.9s
KSM Kuching 72.57 277 IAmb IAmb 04 20 43.9
comp=Z,287nm,1.0s
KSM Kuching 72.57 277 P P 04 20 43.0 +1.4
LEM Lembang 72.60 268 P P 04 20 42.7 +0.7
comp=Z,3μmcomp=Z,416nm,0.8s
PET Petropavlovsk 73.32 346α iP P 04 20 45.0 +0.1
PET e 04 21 00.7
PET e 04 23 45.2
PET i S S 04 29 29.6 +0.9
PET eSP SKSac 04 29 52.2 -5.1
PET eSPP SPP 04 30 21.1
PET pmax pmax
comp=Z,448nm,2.2s
PET pmax pmax
comp=Z,2μm,4.6s
PET pmax pmax
comp=Z,1μm,15.3s
PET pmax pmax
comp=Z,500nm,18.6s
PET MLR MLR
comp=Z,300nm,21.0s
PET Petropavlovsk 73.32 346 P P 04 20 44.8 -0.1
PET IAmb IAmb 04 20 45.5
comp=Z,198nm,0.7s
YSS Yuzh-Sakhalins 73.34 333α iP P 04 20 46.5 +1.3
YSS e 04 21 02.0
YSS e*SP sP 04 23 38.4 -0.2
YSS e 04 23 43.5
YSS eS S 04 29 28.9 -0.3
YSS pmax pmax
comp=Z,3μm,3.2s
YSS pmax pmax
comp=N,900nm,4.3s
YSS pmax pmax
comp=Z,360nm,1.0s
YSS smax smax
comp=N,1μm,8.6s
YSS Yuzh-Sakhalins 73.34 333 P P 04 20 45.5 +0.3
YSS IAmb IAmb 04 20 47.7
comp=Z,462nm,1.1s
XMI Christmas Isla 73.44 264 P P 04 20 47.7 +1.1
comp=Z,236nm,1.0s
CBJI Citeko 73.45 268 P P 04 20 46.0 -0.6
comp=Z,8μmcomp=Z,516nm,0.8s
XMIS Christmas Isla 73.46 264 P P 04 20 47.7 +1.0
comp=Z,179nm,1.0s
DBJI Dramaga 73.50 268 P P 04 20 47.5 +0.5
comp=Z,16μmcomp=Z,315nm,0.9s
FALS False Pass 73.58 9 P 04 20 45.7
baz=195
FALS False Pass 73.58 9 IAmb IAmb 04 20 47.0
comp=Z,249nm,0.8s
PEA0B Petropavlovsk- 73.62 345ceP P 04 20 47.0 +0.3
PEA0B Petropavlovsk- 73.62 345 IAmb IAmb 04 20 47.9

comp=Z,519nm,0.9s
PETK Petropavlovsk- 73.62 345 P P 04 20 47.0 +0.3
comp=Z,344nm,0.8s,baz=132,slow=8.6,SNR=282
PETK PKiKP **PKiKP 04 26 36.8 +0.5**
comp=Z,6.9nm,0.7s,baz=106,slow=3.6,SNR=5.4
TNG Tangerang 73.71 269 P P 04 20 48.5 +0.4
TPI Tanjungpandan 73.76 272 P P 04 20 47.6 -0.8
TJN Taejon 74.31 317 *i* **P P 04 20 50.3 -0.7**
SDPT Sand Point 74.53 11 P 04 20 51.4
baz=198
QZH Quanzhou 74.57 303⇑ *i* P **P 04 20 53.7 +1.0**
QZH pP **pP 04 22 45.7 -3.7**
QZH S **S 04 29 44.6 +1.1**
QZH pmax pmax
comp=Z,150nm,0.9s
QZH pmax pmax
comp=Z,690nm,2.8s
KSRS Korea Array 74.61 318 P P 04 20 53.9 +1.3
comp=Z,30nm,0.7s,baz=130,slow=6.2,SNR=67
TEY Ternei 74.73 329⇑ *e* P **P 04 20 53.0 -0.1**
TEY *e* 04 21 08.9
TEY pmax pmax
comp=Z,90nm,0.7s
TEY pmax pmax
comp=E,30nm,0.7s
TEY pmax pmax
comp=N,30nm,0.9s
TEY pmax pmax
comp=Z,300nm,4.4s
SPIA Saint Paul Isl 75.09 5 P 04 20 55.1
baz=188,SNR=29
BLSI Bandar Lampung 75.28 269 P P 04 20 56.0 -0.9
comp=Z,263nm,0.8s
UGL Uglegorsk 75.29 334 *i* P P **04 20 56.0 -0.1**
UGL pmax pmax
comp=Z,310nm,1.0s
PPBI Pangkal Pinang 75.38 272 P P 04 20 58.3 +0.8
INCN Inchon 75.44 318 P P 04 20 56.9 -0.4
INCN pmax pmax
comp=Z,112nm,1.0s
INCN Inchon 75.44 318 P P 04 20 56.9 -0.4
SSE Sheshan 75.64 310 P P 04 20 58.9 +0.4
SSE S **S 04 29 56.7 +2.0**
SSE pmax pmax
comp=Z,51nm,0.9s
SSE pmax pmax
comp=Z,310nm,3.6s
CHGN Chignik 75.81 11 P 04 20 58.6
baz=200,SNR=11
CHGN Chignik 75.81 11 IAmb IAmb 04 20 59.8
comp=Z,681nm,1.1s
SNCC San Nicolas Is 75.85 48 P 04 21 01.9
baz=237
MSHR Mys Shultsa 75.91 324 *ce* P **P 04 21 01.3 +1.6**
MSHR pmax pmax
comp=Z,648nm,1.3s
KASI Kota Agung 75.95 269 P P 04 21 00.2 -0.4
comp=Z,4μmcomp=Z,467nm,0.8s
KLSI 75.97 270 P **P 04 20 59.5 -1.2**
comp=Z,12nm,1.3s
SCZ2 Santa Cruz Isl 76.18 47 P 04 21 03.7
baz=237,SNR=10.0
MCCM Marconi Confer 76.35 42 IAmb IAmb 04 21 04.8
comp=Z,267nm,0.9s
SBC Santa Barbara 76.37 47 P 04 21 04.9
baz=237
SCI2 San Clemente I 76.40 48 P 04 21 04.8
baz=238,SNR=8.7
PMBI Palembang 76.45 271 P P 04 21 04.9 +1.5
TYV Tymovskoe 76.46 336 *eP* **P 04 21 03.6 +1.1**
TYV pmax pmax
comp=Z,2μm,2.5s
TYV pmax pmax
comp=Z,581nm,1.1s
SAO San Andreas Ge 76.48 44 IAmb IAmb 04 21 06.4
comp=Z,609nm,0.9s
LWLI Liwa 76.51 269 P P 04 21 03.5 -0.4
comp=Z,193nm,0.8s
USA0B Ussuriysk Arra 76.53 326 *c i* P **P 04 21 03.9 +0.8**
USRK Ussuriysk Ar. 76.53 326 P P 04 21 04.2 +1.1
comp=Z,56nm,0.8s,baz=127,slow=3.7,SNR=113
PKM Mcpherson Peak 76.54 46 P 04 21 05.9
baz=237,SNR=41
PMPB Monarch Peak 76.61 45 IAmb IAmb 04 21 06.9
comp=Z,397nm,0.8s
SMMC Simmler 76.65 46 P 04 21 06.5
baz=236,SNR=51
CIS Catalina Islan 76.72 48 P 04 21 06.2
baz=238,SNR=9.5
HOPS Hopland Field 76.73 41 P **P 04 21 04.7 +0.3**
HOPS IAmb IAmb 04 21 07.1
comp=Z,311nm,1.0s
SII Sitkinak Islan 76.92 14 P 04 21 05.7
baz=204,SNR=24
FMP Fort Macarthur 76.97 48 P 04 21 07.8
baz=238,SNR=8.9
HKC Hong Kong Obse 76.98 299⇑ P **P 04 21 08.0 +1.9**
OSI Osito Audit: C 77.15 47 P 04 21 08.9
baz=238
CCX Cicese 77.19 50 IAmb IAmb 04 21 10.5
comp=Z,502nm,1.2s
DECC Green Verdugo 77.23 47 P 04 21 08.9
baz=238,SNR=18
JCC Jacoby Creek, 77.23 39 IAmb IAmb 04 21 09.9
comp=Z,336nm,1.1s
PASC Pasadena Art C 77.29 48 IAmb IAmb 04 21 10.4
comp=Z,361nm,0.9s
ARVC Arvin 77.35 46 P 04 21 09.8
baz=237,SNR=86
LHSI Lahat 77.37 270 P **P 04 21 08.3 -0.1**
comp=Z,3μmcomp=Z,71nm,1.0s
109C Camp Elliot, M 77.39 49 P 04 21 10.0
baz=239,SNR=39
MWC Mount Wilson 77.41 48 IAmb IAmb 04 21 11.3
comp=Z,580nm,1.1s
KHMM Horse Mountain 77.45 39 IAmb IAmb 04 21 12.1
comp=Z,538nm,1.1s
VES Vestal, Richgr 77.56 46 P 04 21 10.6
baz=237,SNR=158
O02D Mt. Diablo Mer 77.61 40 P 04 21 11.7
baz=234,SNR=91
VOG Valley Oaks Go 77.62 45 P 04 21 10.9
baz=237,SNR=18
MURC Murrieta 77.69 49 P 04 21 11.7
baz=239,SNR=71
BFSC Mount Baldy Ra 77.69 48 P 04 21 11.5
baz=238,SNR=66
KRMB Red Mountain 77.73 39 IAmb IAmb 04 21 13.0
comp=Z,321nm,1.0s
OHAK Old Harbor 77.73 14 P 04 21 10.0
baz=205,SNR=28
OHAK Old Harbor 77.73 14 IAmb IAmb 04 21 11.2
comp=Z,872nm,1.1s
MNAI Manna 77.75 269 IAmb IAmb 04 21 11.5
comp=Z,358nm,0.8s
EDW2 Edwards Air Fo 77.80 47 P 04 21 12.3
baz=238,SNR=190
NJ2 Nanjing 77.83 310⇑ *i* P **P 04 21 11.8 +1.3**
NJ2 S **S 04 30 22.5 +4.5**
NJ2 SKS **SKKSac 04 30 35.4 +2.7**
NJ2 pmax pmax
comp=Z,150nm,0.8s
NJ2 pmax pmax
comp=Z,870nm,3.5s
ISA Isabella, Lake 77.88 46 P 04 21 12.8
baz=238,SNR=278
ISA Isabella, Lake 77.88 46 IAmb IAmb 04 21 14.2
comp=Z,682nm,1.1s
MONP2 Monument Peak 77.88 50 P 04 21 13.2
baz=239,SNR=228
CMB Columbia Colle 77.90 43 IAmb IAmb 04 21 13.8
comp=Z,481nm,1.1s
RMX La Rumorosa 77.99 50 IAmb IAmb 04 21 15.1
comp=Z,567nm,1.0s
IKP In-Ko-Pah, Jac 77.99 50 P 04 21 13.8
baz=240,SNR=109
WDC Whiskeytown Da 78.00 40 P **P 04 21 11.5 +0.3**
WDC pmax pmax
comp=Z,294nm,1.2s
WDC Whiskeytown Da 78.00 40 P **P 04 21 11.5 +0.3**
AFDM Forest Hills D 78.04 42 IAmb IAmb 04 21 14.4
comp=Z,441nm,1.1s
ORV Oroville 78.05 42 IAmb IAmb 04 21 14.5
comp=Z,381nm,1.1s
MDJ Mudanjiang 78.10 325 P **P 04 21 13.0 +1.4**
MDJ pP pwP 04 23 11.5 -1.3
MDJ S **S 04 30 26.1 +5.8**
MDJ ScS **ScS 04 30 43.3 +3.4**
MDJ SS **SS 04 35 44.2 +5.4**
MDJ pmax pmax
comp=Z,520nm,0.9s
MDJ pmax pmax
comp=Z,2μm,3.5s
MDJ Mudanjiang 78.10 325 IAmb IAmb 04 21 14.4
comp=Z,411nm,0.9s
SFX San Felipe 78.12 52 IAmb IAmb 04 21 15.4
comp=Z,300nm,1.0s
N02D Trinity Center 78.13 40 P 04 21 14.3
baz=234,SNR=82
PFO Pinyon Flats O 78.22 49 P 04 21 14.6
baz=239,SNR=63
PFO Pinyon Flats O 78.22 49 *c i* P **P 04 21 14.4 +1.7**
PFO pmax pmax
comp=Z,464nm,1.4s
PFO Pinyon Flats O 78.22 49 P **P 04 21 12.8 +0.1**
TPFO Pinon Flats 78.22 49 P 04 21 14.6
baz=239,SNR=66
BBRC Big Bear Solar 78.23 48 P 04 21 14.7
baz=239,SNR=7.1
O03E Paynes Creek 78.29 41 P 04 21 14.3
baz=234,SNR=124
M02C Callahan 78.29 39 P 04 21 15.2
baz=233,SNR=132
L02E Cave Junction 78.30 38 P 04 21 14.9
baz=233,SNR=38
KSI Kapahiang 78.31 270 P P 04 21 13.0 -0.5
LRMC Laurel Mtn Rad 78.33 47 P 04 21 15.3
baz=238,SNR=85
SWSC Sam W. Stewart 78.36 50 P 04 21 15.6
baz=240,SNR=119
SRIG Santa Rosalia 78.38 56 IAmb IAmb 04 21 16.6
comp=Z,301nm,1.0s
KDAK Kodiak Island 78.40 14 P 04 21 13.7
baz=205
KDAK Kodiak Island 78.40 14 P **P 04 21 13.7 +0.8**
comp=Z,915nm,1.1s,baz=261,slow=2.9,SNR=69
KDAK Kodiak Island 78.40 14 *c i* P **P 04 21 13.5 +0.6**
KDAK pmax pmax
comp=Z,1μm,1.1s
KDAK Kodiak Island 78.40 14 P **P 04 21 13.4 +0.6**
KDAK IAmb IAmb 04 21 15.7
comp=Z,626nm,1.0s
CPBX Cerro Prieto 78.46 50 IAmb IAmb 04 21 17.7
comp=Z,350nm,1.0s
RRX Edison Barstow 78.49 48 P 04 21 15.9
baz=239
CWC Cottonwood Cre 78.56 46 P 04 21 16.5
baz=238
YBH Yreka Blue Hor 78.58 39 P **P 04 21 16.5 +2.1**
comp=Z,291nm,0.9s,baz=190,slow=2.4,SNR=365
YBH Yreka Blue Hor 78.58 39 IAmb IAmb 04 21 17.8
comp=Z,388nm,1.0s
K02D Willamette Mer 78.59 38 P 04 21 16.4
baz=233,SNR=71
SLBS Sierra La Lagu 78.65 61 P **P 04 21 15.0 -0.1**
SLBS IAmb IAmb 04 21 18.8
comp=Z,296nm,0.9s
MLAC Mammoth, Mammo 78.70 44 P 04 21 17.6
baz=237,SNR=77
J01E Myrtle Point 78.72 37 P 04 21 16.9
baz=232,SNR=26
BELC Belle Mtn. Jos 78.75 49 P 04 21 17.7
baz=239,SNR=152
MPMC Manual Prospec 78.77 46 P 04 21 17.7
baz=238,SNR=244
MYKOM Kota Tinggi 78.78 276 P P 04 21 16.0 0.0
WAKR Walker 78.78 43 IAmb IAmb 04 21 19.2
comp=Z,776nm,1.1s
TIN Tinemaha, Big 78.79 45 P 04 21 17.9
baz=237,SNR=76
HEC Hector,Ludlow 78.93 48 P 04 21 18.3
baz=239,SNR=61
BEKR Beckworth 78.95 42 IAmb IAmb 04 21 19.0
comp=Z,266nm,0.7s
HUMO Hull Mountain 78.95 38 P **P 04 21 18.3 +2.0**
HUMO IAmb IAmb 04 21 19.9
comp=Z,528nm,1.1s
GRNR Gornyy 78.96 333⇑ *i* P **P 04 21 17.6 +1.5**
GRNR *e* S **S 04 30 24.9 -4.1**
GRNR pmax pmax
comp=E,50nm,1.1s
GRNR pmax pmax
comp=N,110nm,1.2s
GRNR pmax pmax
comp=Z,300nm,1.2s
GRNR smax smax
comp=E,4.0nm,0.9s
GRNR MLR MLR
comp=N,90nm,15.0s
BC3 Big Chuckawall 78.97 49 P 04 21 19.0
baz=240,SNR=92
VCNR Virginia City 79.08 43 IAmb IAmb 04 21 20.5
comp=Z,295nm,0.9s
L04D Klamath Falls 79.11 39 P 04 21 19.1
baz=234,SNR=116
GLA Glamis 79.12 50 P 04 21 20.0
baz=240,SNR=88
GLA Glamis 79.12 50 P **P 04 21 19.9 +2.5**
GLA *PP **pP 04 23 15.7 +0.1**
GLA pmax pmax
comp=Z,538nm,1.1s
GLA Glamis 79.12 50 P **P 04 21 19.9 +2.5**
GLA IAmb IAmb 04 21 21.4
comp=Z,538nm,1.1s
GLA **pP 04 23 15.7 +0.1**
M04C Macdoel 79.13 40 P 04 21 19.4
baz=234,SNR=55
YERR Yerington 79.17 43 IAmb IAmb 04 21 20.4
comp=Z,444nm,0.7s
LHV Little Huntoon 79.25 44 IAmb IAmb 04 21 21.6
comp=Z,805nm,1.1s
QIZ Qiongzhong 79.34 294 P **P 04 21 19.6 +0.8**
QIZ pP **pP 04 23 13.7 -4.2**
QIZ S **S 04 30 36.2 +2.0**
QIZ sS **sS 04 34 04.8 -1.0**
QIZ pmax pmax
comp=Z,380nm,5.4s
QIZ Qiongzhong 79.34 294 P **P 04 21 17.8 -1.0**
I02D Swisshome 79.34 37 P 04 21 20.4
baz=232,SNR=13
GRAC Grapevine Rang 79.35 46 P 04 21 20.8
baz=238,SNR=289
I03D Drain, OR 79.38 37 P 04 21 20.3
baz=233,SNR=63
GMRC Granite Mounta 79.39 48 P 04 21 20.7
baz=240,SNR=146
FURC Furnace Creek, 79.41 46 P 04 21 20.7
baz=238,SNR=129
PIX Pinacate 79.41 52 P **P 04 21 18.2 -0.7**
IRM Iron Mountain 79.44 49 P 04 21 21.3
baz=240,SNR=197
RYN Ryan 79.45 44 IAmb IAmb 04 21 21.8
comp=Z,290nm,1.0s
PAHR Pah Rah Range 79.48 42 IAmb IAmb 04 21 22.5
comp=Z,549nm,1.2s
NVAR Mina Array Bea 79.48 44 P **P 04 21 21.2 +1.8**
comp=Z,277nm,0.8s,baz=225,slow=9.0,SNR=886
NVAR pP **pwP 04 23 20.9 +0.1**
comp=Z,25nm,1.0s,baz=229,slow=9.2,SNR=6.8
NVAR PKKPbc **PKKPbc 04 40 05.0 +0.5**
comp=Z,0.9nm,0.8s,baz=80,slow=4.2,SNR=5.5
NVAR PKPPKP **P'P'df 04 48 03.8 -2.3**
comp=Z,0.8nm,0.9s,baz=98,slow=6.3,SNR=3.8
DL2 Dalian 79.49 317⇑ P **P 04 21 19.8 +0.7**
DL2 pP **pP 04 23 17.5 -0.1**
DL2 S **S 04 30 38.1 +3.2**
DL2 pmax pmax
comp=Z,180nm,0.9s
DL2 pmax pmax
comp=Z,1μm,4.7s
SHOC Shoshone, Teco 79.53 47 P 04 21 21.3
baz=239,SNR=32
NV11 Mina Array Sit 79.58 44 P **P 04 21 19.3 -0.6**
NV11 IAmb IAmb 04 21 22.5
comp=Z,385nm,1.0s
K04D Chiloquin, OR 79.68 39 P 04 21 22.1
baz=234,SNR=35
J04D Umppqua Nationa 79.83 38 P 04 21 23.2
baz=234,SNR=156
SNY Shenyang 79.89 320⇑ P **P 04 21 23.4 +2.3**
SNY pP **pwP 04 23 21.6 -0.6**
SNY S **S 04 30 41.7 +2.8**
SNY pmax pmax
comp=Z,96nm,2.1s
SNY pmax pmax
comp=Z,1μm,6.5s
CN2 Changchun 79.93 322⇑ *i* P **P 04 21 22.2 +0.9**
CN2 *e* pP pwP 04 23 22.0 -0.7
CN2 pmax pmax
comp=Z,400nm,1.2s
CN2 pmax pmax
comp=Z,2μm,4.0s
COR Corvallis 79.94 37 P **P 04 21 23.6 +2.2**
COR pmax pmax
comp=Z,246nm,0.9s
KVN Kaiserville 79.95 43 IAmb IAmb 04 21 24.3
comp=Z,286nm,0.8s
I04A Tendick Farm, 79.98 38 P 04 21 23.1
baz=233,SNR=111
KLR Kul'dur 80.03 329 P **P 04 21 22.9 +1.2**
comp=Z,95nm,1.1s,baz=110,slow=4.4,SNR=124
KLR Kul'dur 80.03 329 *ce* P **P 04 21 22.6 +0.9**
KLR pmax pmax
comp=Z,203nm,1.4s
TPNV Topopah Spring 80.08 46 P 04 21 24.5
baz=239,SNR=230
TPNV Topopah Spring 80.08 46 P **P 04 21 22.1 -0.4**
TPNV pmax pmax
comp=Z,253nm,1.0s
TPNV Topopah Spring 80.08 46 P **P 04 21 22.1 -0.4**
214A Organ Pipe Nat 80.09 52 P **P 04 21 21.8 -0.7**
214A Organ Pipe Nat 80.09 52 P 04 21 25.1
baz=242,SNR=194
NEE2 Needles Airpor 80.12 49 P 04 21 24.9
baz=240,SNR=15
MOD Modoc Plateau 80.14 40 P **P 04 21 23.3 +0.6**
MOD IAmb IAmb 04 21 25.8
comp=Z,644nm,1.1s
HSIG 80.17 55 P **P 04 21 23.5 +0.6**
H04D Lebanon 80.23 37 P 04 21 24.7
baz=233,SNR=52
PDMCI Parker Dam,Lak 80.24 49 P 04 21 25.5
baz=240,SNR=181
K05A Summer Lake 80.25 39 P **P 04 21 24.3 +1.0**
CNPM China Poot 80.28 14 IAmb IAmb 04 21 24.6
comp=Z,622nm,1.1s
HOM Homer 80.31 13 P 04 21 23.7
baz=206,SNR=19
G03D McMinnville, O 80.35 36 P 04 21 25.4
baz=232,SNR=30
J05D Fort Rock, OR 80.37 39 P 04 21 26.1
baz=234,SNR=528
WHN Wuhan 80.50 306⇑ *i* P **P 04 21 25.8 +1.2**
WHN S **S 04 30 48.2 +2.6**
WHN pmax pmax
comp=Z,240nm,1.0s
WHN pmax pmax
comp=Z,1μm,4.0s
BRLK Bradley Lake 80.58 14 IAmb IAmb 04 21 25.9
comp=Z,658nm,1.0s
BRSE Bradley Lake S 80.59 14 P 04 21 25.1
baz=207
H04A Detroit Lake 80.64 37 P **P 04 21 25.3 +0.2**
H04A IAmb IAmb 04 21 27.1
comp=Z,291nm,0.7s
JRMM Jerantut 80.74 277 P **P 04 21 27.0 +0.7**
I05D Terrebonne, OR 80.92 38 P 04 21 28.4
baz=234,SNR=115
BKNI Bangkinang 80.99 273 P **P 04 21 28.9 +1.3**
comp=Z,159nm,1.0s
F04D Rainier, OR 81.02 36 P 04 21 29.1
baz=233,SNR=25
MA2 Magadan 81.14 345 P **P 04 21 27.0 -0.2**
comp=Z,223nm,0.9s,baz=143,slow=5.0,SNR=122
MA2 Magadan 81.14 345 *ce* P **P 04 21 26.8 -0.4**
MA2 pmax pmax
comp=Z,514nm,1.7s
TIA Tai'an 81.15 312 P **P 04 21 28.5 +0.7**
TIA S **S 04 30 55.2 +3.2**
TIA pmax pmax
comp=Z,71nm,1.0s
TIA pmax pmax
comp=Z,640nm,3.3s
DIB Dawson Inlet, 81.15 26 IAmb IAmb 04 21 29.8
comp=Z,317nm,1.0s
R11A Troy Canyon, C 81.26 45 P 04 21 30.1
baz=239,SNR=180
NLWA Neilton Lookou 81.35 34 IAmb IAmb 04 21 31.9
comp=Z,436nm,1.1s
Q23K Middleton Isla 81.39 16 P 04 21 29.4
baz=211
Q23K Middleton Isla 81.39 16 IAmb IAmb 04 21 29.8
comp=Z,438nm,1.0s
MID Middleton Isla 81.39 16 IAmb IAmb 04 21 29.8
comp=Z,389nm,1.0s
CAPN Captain Cook N 81.42 13 P 04 21 30.0
baz=206
G05D Wamic, OR 81.47 37 P 04 21 30.9
baz=234,SNR=70
O22K Cooper Landing 81.48 14 P 04 21 29.3
baz=208,SNR=56
E04D Cinebar 81.55 35 P 04 21 31.5
baz=233,SNR=111
GAMB Gambell 81.56 3 P 04 21 30.4
baz=187,SNR=280
GAMB Gambell 81.57 3 IAmb IAmb 04 21 31.1
comp=Z,264nm,0.7s
SPCR Spurr Chakacha 81.59 13 P 04 21 29.1
baz=205,SNR=107
F05D White Salmon 81.77 36 P 04 21 32.3
baz=234,SNR=102
TUC Tucson 81.77 52 P 04 21 34.0
baz=243
D04E Lakebay 81.81 35 P 04 21 33.4
baz=233,SNR=33
UBPT Khong Chiam 81.81 289 P **P 04 21 30.6 -1.1**
I07A Izee 81.86 39 P **P 04 21 30.9 -0.6**
I07A IAmb IAmb 04 21 34.7
comp=Z,585nm,1.0s
D03D Eldon 81.86 34 P 04 21 33.0
baz=232,SNR=81
RC01 Rabbit Creek A 82.02 14 P 04 21 31.9
baz=208,SNR=76
RC01 Rabbit Creek A 82.02 14 IAmb IAmb 04 21 33.3
comp=Z,660nm,1.1s
J08A Circle Bar Ran 82.07 40 P **P 04 21 31.9 -0.6**
LON Longmire 82.08 35 P **P 04 21 31.9 -0.5**
LON pmax pmax
comp=Z,127nm,0.9s
LON Longmire 82.08 35 P **P 04 21 31.9 -0.5**
SUA Susitna One 82.13 13 P 04 21 32.4
baz=207,SNR=155
SUA Susitna One 82.13 13 IAmb IAmb 04 21 33.6
comp=Z,602nm,0.9s
LCMT Little Creek M 82.20 47 IAmb IAmb 04 21 36.8
comp=Z,432nm,1.0s
BELA Belgrano 2 82.20 173 P **P 04 21 32.8 +0.2**
D05A Enumclaw 82.25 35 P **P 04 21 32.8 -0.4**
D05A IAmb IAmb 04 21 36.0
comp=Z,587nm,1.1s
IPM Ipoh 82.30 277 P **P 04 21 33.0 -1.3**
IPM pP **pP 04 23 33.5 -0.8**
IPM Ipoh 82.30 277 P **P 04 21 35.0 +0.7**
KAIM Kayak Island 82.33 17 P 04 21 34.2
baz=213
BBB Bella Bella 82.35 29 IAmb IAmb 04 21 35.6
comp=Z,273nm,0.9s
PGC Sidney 82.35 33 IAmb IAmb 04 21 35.8
comp=Z,278nm,0.9s
CCUT Cedar City 82.38 47 IAmb IAmb 04 21 38.1
comp=Z,555nm,1.2s
SKT Skwentna 82.43 12 P 04 21 32.8
baz=206,SNR=59
SKT Skwentna 82.43 12 IAmb IAmb 04 21 34.3
comp=Z,250nm,1.1s
GLI Glacier Island 82.46 15 P 04 21 34.1
baz=210,SNR=128
KNB Kanab 82.49 47 IAmb IAmb 04 21 38.0
comp=Z,320nm,0.9s
FID Port Fidalgo 82.50 15 IAmb IAmb 04 21 35.4
comp=Z,456nm,1.2s
EYAK Cordova Ski Ar 82.51 16 P 04 21 34.4
baz=211
EYAK Cordova Ski Ar 82.51 16 IAmb IAmb 04 21 35.2
comp=Z,221nm,0.8s
PSUT Pine Spring 82.52 46 IAmb IAmb 04 21 38.2
comp=Z,297nm,1.0s
MNSI Mandailing Nat 82.53 273 P **P 04 21 34.8 -0.6**
CRAG Craig 82.54 24 P 04 21 36.0
baz=223,SNR=17
CRAG Craig 82.54 24 IAmb IAmb 04 21 37.4

comp=Z,361nm,1.1s
SZCU Shurtz Canyon 82.59 47 IAmb IAmb 04 21 38.5
comp=Z,304nm,1.1s
KNK Knik Glacier 82.60 14 P 04 21 35.0
baz=209
KNK Knik Glacier 82.60 14 IAmb IAmb 04 21 36.2
comp=Z,373nm,0.8s
PMR Palmer 82.60 14 P 04 21 34.8
baz=208,SNR=116
PMR Palmer 82.60 14 IAmb IAmb 04 21 35.5
comp=Z,259nm,0.8s
F07A Phinny Hill Vi 82.64 37 IAmb IAmb 04 21 38.0
comp=Z,315nm,1.0s
ELK Elko 82.72 43 IAmb IAmb 04 21 39.1
comp=Z,416nm,1.1s
HMT Hamilton 82.72 16 IAmb IAmb 04 21 37.1
comp=Z,292nm,0.9s
A04D Lummi Island 82.78 34 P 04 21 37.7
baz=232,SNR=74
BGLC Bering Glacier 82.81 17 P 04 21 37.2
baz=214
ANM Nome 82.81 6 P 04 21 36.6
baz=193,SNR=108
WUAZ Wupatki 82.81 49 IAmb IAmb 04 21 40.3
comp=Z,592nm,1.1s
WUAZ Wupatki 82.81 49 P 04 21 38.9
baz=242,SNR=234
B05A Bryant 82.83 34 P 04 21 37.7
baz=233,SNR=116
G08A Pilot Rock 82.86 38 IAmb IAmb 04 21 38.9
comp=Z,307nm,0.9s
SIT Sitka 82.90 22 P 04 21 37.3
baz=221,SNR=11
SIT Sitka 82.90 22 IAmb IAmb 04 21 38.8
comp=Z,282nm,1.2s
KULM Kulim 82.92 278 P **P** **04 21 36.0 -1.3**
KULM pP **pP** **04 23 36.0 -1.7**
KULM Kulim 82.92 278 P **P** **04 21 39.0 +1.7**
SML Sawmill 82.97 14 P 04 21 36.7
baz=209,SNR=51
LTY Liberty 83.01 36 IAmb IAmb 04 21 39.6
comp=Z,362nm,1.1s
PKCU Pink Cliffs 83.06 47 IAmb IAmb 04 21 41.7
comp=Z,627nm,1.1s
E07A Sunnyside 83.06 36 IAmb IAmb 04 21 39.8
comp=Z,348nm,0.8s
CUT Chulitna 83.08 13 P 04 21 37.1
baz=207,SNR=138
PPLA Purkeypile 83.13 12 P 04 21 36.1
baz=205,SNR=43
HAWA Hanford 83.15 37 IAmb IAmb 04 21 40.2
comp=Z,373nm,0.8s
BMRM Bremner River 83.16 16 P 04 21 38.0
baz=212,SNR=105
BMRM Bremner River 83.16 16 IAmb IAmb 04 21 38.7
comp=Z,404nm,0.7s
KLU Klutina 83.28 15 P 04 21 38.5
baz=211,SNR=30
KLU Klutina 83.28 15 IAmb IAmb 04 21 39.1
comp=Z,243nm,1.0s
C06D Leavenworth 83.28 35 P 04 21 39.5
baz=234,SNR=20
B06A Marblemount 83.31 34 IAmb IAmb 04 21 40.7
comp=Z,218nm,1.0s
MTPU Mount Pierson 83.43 47 IAmb IAmb 04 21 44.0
comp=Z,613nm,1.2s
E08A Dider Farm, El 83.48 37 IAmb IAmb 04 21 41.7
comp=Z,308nm,0.8s
TCRU Three Creeks R 83.52 46 IAmb IAmb 04 21 44.0
comp=Z,486nm,1.2s
WRAK Wrangell Islan 83.53 24 P 04 21 40.8
baz=224,SNR=53
WRAK Wrangell Islan 83.53 24 IAmb IAmb 04 21 42.1
comp=Z,444nm,1.1s
TNA Tin City 83.57 4 P 04 21 40.1
baz=190,SNR=508
TNA Tin City 83.58 4 IAmb IAmb 04 21 41.6
comp=Z,605nm,1.1s
BMO Blue Mountains 83.59 39 IAmb IAmb 04 21 42.2
comp=Z,199nm,1.0s
PCA Pinnacle 83.66 18 IAmb IAmb 04 21 41.9
comp=Z,417nm,1.1s
PINM Pinnacle 83.66 18 P 04 21 40.5
baz=216,SNR=29
BJI Beijing 83.69 315 P **P** **04 21 41.5 +1.0**
BJI pP **pP** **04 23 40.4 -0.5**
BJI SKS **SKSac** **04 31 11.0 +1.1**
BJI S **S** **04 31 18.6 +1.7**
BJI pmax pmax
comp=Z,160nm,1.3s
BJI pmax pmax
comp=Z,1μm,3.5s
VRDI Verde Repeater 83.69 16 IAmb IAmb 04 21 41.5
comp=Z,294nm,0.8s
N25K Chitina, Valde 83.70 16 P 04 21 40.8
baz=212,SNR=271
SEY Seymchan 83.72 347 P **P** **04 21 40.5 +0.3**
comp=Z,334nm,0.5s,baz=147,slow=5.7,SNR=1367
SEY Seymchan 83.72 347 *i* P **P** **04 21 40.6 +0.4**
BCPM Bancas Point 83.73 19 IAmb IAmb 04 21 41.7
comp=Z,264nm,1.0s
MFID Camas Ranch 83.73 41 IAmb IAmb 04 21 44.6
comp=Z,494nm,1.1s
RPSI Rantau Prapat 83.73 275 P **P** **04 21 40.8 -0.6**
RPSI **pP** **04 23 40.2 -1.8**
GRNC Granite Creek 83.74 17 IAmb IAmb 04 21 42.0
comp=Z,314nm,0.8s
M24K Tolsona, Glenn 83.74 15 P 04 21 41.3
baz=211,SNR=46
PSI Prapat 83.77 275 P **P** **04 21 40.8 -0.9**
PSI *PP **pP** **04 23 40.3 -2.1**
PSI pmax pmax
comp=Z,67nm,0.9s
GLB Gilahina Butte 83.77 16 IAmb IAmb 04 21 41.7
comp=Z,391nm,0.7s
WAT6 Susitna Watana 83.79 14 P 04 21 41.0
baz=209,SNR=267
W18A Petrified Fore 83.82 50 P 04 21 43.6
baz=243,SNR=41
W18A Petrified Fore 83.82 50 IAmb IAmb 04 21 44.5
comp=Z,243nm,1.1s
MAW Mawson 83.85 200 P **P** **04 21 42.6 +1.7**
comp=Z,51nm,0.6s,baz=141,slow=5.0,SNR=76
MAW pP **pwP** **04 23 42.9 -0.8**
comp=Z,35nm,0.8s,baz=100,slow=3.9,SNR=9.0
MAW Mawson 83.85 200 P **P** **04 21 42.6 +1.7**
baz=84,SNR=72
MAW Mawson 83.85 200 P **P** **04 21 41.2 +0.4**
MAW pP **pP** **04 23 40.9 +0.1**
D08A Wollman Farm, 83.88 36 IAmb IAmb 04 21 44.3
comp=Z,443nm,1.0s
MCARA McCarthy VSAT 83.93 16 P 04 21 41.8
baz=214
MCARA McCarthy VSAT 83.93 16 IAmb IAmb 04 21 42.6
comp=Z,265nm,1.0s
WAT2 Susitna Watana 83.93 13 P 04 21 41.4
baz=209,SNR=215
KTH Kantishna Hill 83.97 12 IAmb IAmb 04 21 42.0
comp=Z,390nm,0.9s
CHUM Lake Minchumin 84.00 11 P 04 21 41.1
baz=205,SNR=204
TRF Thorofare Moun 84.01 12 P 04 21 41.5
baz=207,SNR=400
LOGN Logan Glacier 84.03 17 IAmb IAmb 04 21 43.4
comp=Z,306nm,0.8s
BARN Barnard Glacie 84.04 17 IAmb IAmb 04 21 44.7
comp=Z,521nm,1.0s
DUG Dugway, Tooele 84.04 45 P 04 21 43.9
baz=241,SNR=114
CTG Chitna Glacier 84.05 17 P 04 21 42.6
baz=215
121A Cookes Peak, D 84.15 53 IAmb IAmb 04 21 47.2
comp=Z,185nm,0.9s
121A Cookes Peak, D 84.15 53 P 04 21 45.8
baz=245
JIS Juneau Island 84.15 22 IAmb IAmb 04 21 44.9
comp=Z,328nm,1.2s
BESE Bessie Mountai 84.21 21 IAmb IAmb 04 21 45.5
comp=Z,654nm,1.2s
B08A Colville Reser 84.38 35 IAmb IAmb 04 21 45.9
comp=Z,380nm,1.1s
BPAW Bear Paw Mtn. 84.45 12 P 04 21 42.7
baz=206,SNR=82
ZAIG Zacatecas 84.50 64 IAmb IAmb 04 21 49.3
comp=Z,197nm,1.0s
MCK McKinley 84.54 13 P 04 21 44.2
baz=208,SNR=239
Q16A Castle Valley 84.55 46 IAmb IAmb 04 21 49.0
comp=Z,325nm,1.2s
MOIG Morelia 84.58 67 IAmb IAmb 04 21 49.3
comp=Z,403nm,1.1s
GSI Gunungsitoli 84.59 273 P **P** **04 21 47.1 +1.5**
comp=Z,22μmcomp=Z,173nm,0.8s
PAX Paxson 84.65 14 P 04 21 44.7
baz=212,SNR=133
PAX Paxson 84.65 14 IAmb IAmb 04 21 46.0
comp=Z,196nm,0.9s
C09A Chrisman Ranch 84.66 36 IAmb IAmb 04 21 47.2
comp=Z,234nm,0.8s
HLID Hailey 84.68 41 P 04 21 47.6
baz=239,SNR=516
HLID Hailey 84.69 41 IAmb IAmb 04 21 49.0
comp=Z,325nm,1.0s
TMUT Trail Mountain 84.70 46 IAmb IAmb 04 21 49.0
comp=Z,225nm,0.9s
SKAG Skagway 84.71 21 P 04 21 46.8
baz=221,SNR=54
SKAG Skagway 84.72 21 IAmb IAmb 04 21 47.6
comp=Z,209nm,1.0s
HVU Hansel Valley 84.84 43 IAmb IAmb 04 21 48.9
comp=Z,183nm,1.0s
GYA Guiyang 84.92 300 ⇑P **P** **04 21 48.3 +1.2**
GYA pP pP 04 23 48.6 +0.3
GYA SKS **SKSac** **04 31 19.9 +1.3**
GYA S **S** **04 31 31.6 +1.8**
GYA SS **SS** **04 37 22.1 +2.2**
GYA pmax pmax
comp=Z,70nm,1.0s
MENT Mentasta 85.05 15 IAmb IAmb 04 21 48.2
comp=Z,207nm,0.8s
HYT Haines Junctio 85.07 19 IAmb IAmb 04 21 49.4
comp=Z,313nm,1.1s
SRU San Rafael Swe 85.08 46 IAmb IAmb 04 21 50.1
comp=Z,195nm,0.8s
ZEA Zeya 85.11 331 ⇑*e*P **P** **04 21 48.5 +1.3**
ZEA *e**SP **sP** **04 24 45.9 +1.4**
ZEA eS **S** **04 31 31.9 +1.8**
ZEA *e*SS **SS** **04 37 21.9 +0.6**
ZEA pmax pmax
comp=Z,320nm,1.0s
ZEA pmax pmax
comp=N,170nm,0.9s
ZEA pmax pmax
comp=E,50nm,0.9s
ZEA pmax pmax
comp=Z,400nm,5.5s
ZEA smax smax
comp=E,500nm,7.8s
ZEA smax smax
comp=N,1μm,6.4s
TIY Taiyuan 85.16 312 *e*P **P** **04 21 49.3 +1.4**
TIY pP **pP** **04 23 49.7 +0.5**
TIY SKS **SKSac** **04 31 21.5 +2.0**
TIY S **ScS** **04 31 35.9 -2.7**
TIY pmax pmax
comp=N,300nm,0.9s
TIY pmax pmax
comp=N,560nm,7.8s
NEA2 Nenana 85.27 12 P 04 21 47.0
baz=208,SNR=80
MLY Manley 85.34 11 P 04 21 47.5
baz=206,SNR=193
MLY Manley 85.34 11 IAmb IAmb 04 21 49.0
comp=Z,304nm,1.2s
SLVN Son La 85.37 294 P **P** **04 21 47.7 -1.6**
SLVN pP **pP** **04 23 48.0 -2.3**
TCUT Toone Canyon 85.42 44 IAmb IAmb 04 21 51.9
comp=Z,282nm,0.9s
Y22D IRIS PASSCAL I 85.46 52 IAmb IAmb 04 21 56.2
comp=Z,357nm,1.1s
Y22D IRIS PASSCAL I 85.46 52 P 04 21 51.9
baz=245
NEW Newport 85.56 36 P 04 21 50.5
baz=237,SNR=159
NEW Newport 85.56 36 IAmb IAmb 04 21 51.7
comp=Z,288nm,1.1s
HDA Harding Lake 85.56 13 P 04 21 49.0
baz=210,SNR=210
HDA P 04 21 49.0
baz=210,SNR=210
TPTI 85.56 275 P **P** **04 21 50.8 +0.5**
comp=Z,49nm,0.7s
DOT Dot Lake 85.57 15 IAmb IAmb 04 21 50.8
comp=Z,321nm,0.8s
CCB Clear Creek Bu 85.58 13 IAmb IAmb 04 21 50.9
comp=Z,356nm,1.0s
L27K Beaver Creek, 85.64 16 P 04 21 50.1
baz=215
MVCO Mesa Verde 85.65 49 P 04 21 52.0
baz=244
MNTX Cornudas Mount 85.66 55 IAmb IAmb 04 21 53.5
comp=Z,160nm,0.9s
MNTX Cornudas Mount 85.66 55 P 04 21 52.7
baz=246
I23K Minto, Yukon-K 85.71 12 P 04 21 49.2
baz=208,SNR=143
I23K Minto, Yukon-K 85.71 12 IAmb IAmb 04 21 51.7
comp=Z,217nm,1.1s
MDM Murphy Dome 85.77 12 IAmb IAmb 04 21 51.8
comp=Z,449nm,1.2s
TCOL CIGO, UAF Yank 85.77 13 P 04 21 49.8
baz=209,SNR=117
TCOL CIGO, UAF Yank 85.77 13 P **P** **04 21 49.9 -0.2**
TCOL IAmb IAmb 04 21 51.8
comp=Z,347nm,0.8s
TCOL pP **pP** **04 23 51.1 +0.1**
WHY Whitehorse 85.77 20 IAmb IAmb 04 21 52.2
comp=Z,247nm,1.0s
COLA College 85.77 13 P 04 21 49.9
baz=209
COLA College 85.77 13 *c i* P **P** **04 21 49.8 -0.3**
COLA pmax pmax
comp=Z,859nm,1.5s
COLA College 85.77 13 P **P** **04 21 49.6 -0.4**
COLA IAmb IAmb 04 21 51.8
comp=Z,365nm,0.9s
PV10 Paradox Valley 85.78 48 IAmb IAmb 04 21 55.5
comp=Z,216nm,0.9s
PV14 Lion Creek, Pa 85.79 48 IAmb IAmb 04 21 55.8
comp=Z,284nm,1.1s
PV19 Morning Glory 85.79 48 IAmb IAmb 04 21 55.8
comp=Z,174nm,1.0s
PV17 East Wray Mesa 85.79 48 IAmb IAmb 04 21 55.7
comp=Z,224nm,1.2s
PV18 Stein Mesa, Pa 85.81 48 IAmb IAmb 04 21 55.8
comp=Z,195nm,1.2s
PV20 West Nyswonger 85.82 48 IAmb IAmb 04 21 55.8
comp=Z,246nm,1.1s
DLBC Dease Lake 85.85 23 IAmb IAmb 04 21 52.9
comp=Z,234nm,1.0s
SCRK Sand Creek 85.86 15 P 04 21 51.1
baz=213,SNR=179
SCRK Sand Creek 85.86 15 IAmb IAmb 04 21 53.7
comp=Z,185nm,1.0s
PV04 Paradox Valley 85.88 48 IAmb IAmb 04 21 54.0
comp=Z,156nm,0.9s
IL31 85.89 13 IAmb IAmb 04 21 51.1
comp=Z,276nm,1.1s
ILAR Eielson Array 85.89 13 P **P** **04 21 50.1 -0.5**
comp=Z,124nm,0.8s,baz=230,slow=5.4,SNR=688
ILAR pP **pwP** **04 23 55.0 +0.8**
comp=Z,16nm,0.9s,baz=229,slow=5.3,SNR=4.8
ILAR PKKP **PKiKP** **04 26 55.0 +0.1**
comp=Z,3.8nm,0.9s,baz=282,slow=2.9,SNR=5.6
ILAR PKKP **PKKPbc** **04 39 47.5 -3.1**
comp=Z,1.1nm,0.6s,baz=335,slow=2.6,SNR=10
ILAR PKPPKP 04 47 55.8
comp=Z,0.9nm,1.0s,baz=343,slow=2.2,SNR=4.2
PV12 Saucer Basin, 85.92 48 IAmb IAmb 04 21 55.5
comp=Z,147nm,0.8s
PV22 Blue Mesa, Par 86.03 48 IAmb IAmb 04 21 56.9
comp=Z,201nm,1.1s
POKR Poker Plat Res 86.07 13 P 04 21 51.1
baz=210,SNR=100
POKR Poker Plat Res 86.07 13 IAmb IAmb 04 21 51.9
comp=Z,179nm,0.7s
TXAR Lajitas Array 86.08 58 P **P** **04 21 55.4 +2.8**
comp=Z,272nm,0.8s,baz=222,slow=6.0,SNR=1990
TXAR pP **pwP** **04 23 56.8 -0.3**
comp=Z,17nm,1.1s,baz=243,slow=4.0,SNR=4.8
TXAR PKKPbc **PKKPbc** **04 39 49.5 +0.9**
comp=Z,0.5nm,0.5s,baz=148,slow=2.9,SNR=6.0
TXAR PKPPKP 04 47 53.7
comp=Z,0.2nm,0.6s,baz=45,slow=12,SNR=4.3
XAN Xi'an 86.15 307 P **P** **04 21 54.0 +1.3**
XAN pmax pmax
comp=Z,330nm,1.4s
XAN pmax pmax
comp=Z,1μm,3.6s
XAN Xi'an 86.15 307 IAmb IAmb 04 21 55.4
comp=Z,414nm,1.0s
ANMO Albuquerque 86.17 52 *cei* P **P** **04 21 54.7 +1.7**
ANMO pmax pmax
comp=Z,296nm,1.3s
ANMO Albuquerque 86.17 52 P **P** **04 21 51.8 -1.2**
ANMO IAmb IAmb 04 21 56.8
comp=Z,200nm,1.1s
ANMO Albuquerque 86.17 52 P 04 21 54.7
baz=245
UNM Universidad Na 86.23 68 IAmb IAmb 04 21 57.9
comp=Z,393nm,1.1s
HIA Hailar 86.28 325 *c i* P **P** **04 21 53.8 +0.9**
HIA pmax pmax
comp=Z,219nm,1.4s
MCMT McKenzie Canyo 86.29 41 P **P** **04 21 52.8 -0.6**
K27K Chicken 86.37 15 P 04 21 54.0
baz=215
K27K Chicken 86.37 15 IAmb IAmb 04 21 54.8
comp=Z,194nm,1.1s
BILL Bilibino 86.39 354 *d i* P **P** **04 21 53.1 +0.1**
BILL *e**PP **pP** **04 23 53.4 -0.6**
BILL *e**SP **sP** **04 24 51.8 +1.6**
BILL *e* 04 25 22.2
BILL *e*PPP PPP 04 27 29.5
BILL *e*S **SKSac** **04 31 25.2 -0.3**
BILL *i* 04 31 40.1
BILL *e*SS **SS** **04 37 40.0 +0.7**
BILL pmax pmax
comp=Z,293nm,1.0s
BILL Bilibino 86.39 354 P **P** **04 21 53.0 0.0**
BILL IAmb IAmb 04 21 54.8
comp=Z,353nm,1.0s
LHMI Lhok Sumawe 86.39 277 IAmb IAmb 04 21 56.2
comp=Z,102nm,0.6s
LHMI Lhok Sumawe 86.39 277 P **P** **04 21 55.5 +1.3**
comp=Z,186nm,0.8s
AHID Auburn Hatcher 86.41 43 IAmb IAmb 04 21 57.8
comp=Z,188nm,1.1s
RDOG Red Dog Mine 86.45 6 P 04 21 53.7
baz=195
MSO Missoula 86.63 38 P 04 21 55.5
baz=240,SNR=138
DLMT Dillon 86.71 40 IAmb IAmb 04 21 58.4
comp=Z,438nm,1.1s
PRP Porcupine Dome 86.82 13 P 04 21 55.1
baz=211
PRP Porcupine Dome 86.83 13 IAmb IAmb 04 21 56.6
comp=Z,198nm,1.2s
JTMT Jette 86.90 37 IAmb IAmb 04 21 57.9
comp=Z,132nm,0.9s
S22A 4UR Ranch, Cre 87.08 49 P 04 21 59.4
baz=245
DAWY Dawson 87.09 16 IAmb IAmb 04 21 57.9
comp=Z,160nm,1.1s
O20A White River Ci 87.11 46 P 04 21 59.0
baz=244
O20A White River Ci 87.12 46 IAmb IAmb 04 22 00.5
comp=Z,322nm,1.1s
LOHW Long Hollow 87.12 42 IAmb IAmb 04 21 59.9
comp=Z,178nm,0.8s
HHC Hu-ho-hao-te 87.17 314 *e*P **P** **04 21 58.8 +1.4**
HHC SKS **SKSac** **04 31 32.2 +0.6**
HHC S **ScS** **04 31 56.4 +1.2**
HHC SS **SS** **04 37 52.4 +0.5**
HHC pmax pmax
comp=Z,170nm,1.1s
HHC pmax pmax
comp=Z,1μm,4.8s
EGAK Eagle 87.22 15 P 04 21 57.5
baz=215,SNR=164
EGAK Eagle 87.22 15 IAmb IAmb 04 21 58.2
comp=Z,167nm,0.8s
YMR Madison River 87.39 41 IAmb IAmb 04 22 01.8
comp=Z,311nm,0.9s
COLD Coldfoot 87.41 11 P 04 21 58.7
baz=207,SNR=286
COLD Coldfoot 87.41 11 IAmb IAmb 04 21 59.9
comp=Z,292nm,1.0s
BW06 Boulder Array 87.41 43 P 04 21 60.0
baz=243
BW06 Boulder Array 87.41 43 IAmb IAmb 04 22 00.7
comp=Z,188nm,0.8s
PD31 Pinedale Array 87.41 43 IAmb IAmb 04 22 00.7
comp=Z,169nm,0.8s
PDAR Pinedale Array 87.41 43 P **P** **04 21 59.8 +1.1**
comp=Z,131nm,0.7s,baz=213,slow=2.9,SNR=1008
PDAR pP **pwP** **04 24 02.8 -0.1**
comp=Z,12nm,0.9s,baz=224,slow=4.1,SNR=7.0
PDAR PP **PP** **04 25 32.5 -1.5**
comp=Z,37nm,1.1s,baz=243,slow=6.2,SNR=12
PDAR PKKP **PKKPdf** **04 39 42.4 +2.2**
comp=Z,2.0nm,0.9s,baz=87,slow=4.2,SNR=7.4
PDAR SKKPbc SKKPbc 04 42 33.1 0.0
comp=Z,1.4nm,0.9s,baz=90,slow=4.4,SNR=5.7
PDAR PKPPKP 04 47 52.1
comp=Z,0.1nm,0.5s,baz=80,slow=35,SNR=2.7
BOZ Bozeman (W) 87.42 40 IAmb IAmb 04 22 01.1
comp=Z,251nm,1.1s
BOZ Bozeman (W) 87.42 40 P 04 22 00.3
baz=241,SNR=330
H17A Grant Village 87.51 42 P 04 22 02.0
baz=242,SNR=338
YHH Holmes Hill 87.52 41 IAmb IAmb 04 22 02.3
comp=Z,171nm,1.2s
SMCO Snowmass 87.58 48 IAmb IAmb 04 22 04.8
comp=Z,150nm,1.0s
YNR Norris Junctio 87.59 41 IAmb IAmb 04 22 08.0
comp=Z,152nm,1.1s
YUF Upper Falls 87.70 41 IAmb IAmb 04 22 03.3
comp=Z,124nm,1.0s
LKWY Lake 87.70 42 IAmb IAmb 04 22 04.0
comp=Z,219nm,0.9s
KMI Kunming 87.72 297 ⇑P **P** **04 22 02.5 +2.0**
KMI pP pP 04 24 03.2 +0.6
KMI SKS **SKSac** **04 31 37.0 +1.2**
KMI S **S** **04 31 58.4 +2.0**
KMI SS **SS** **04 38 03.7 +3.2**
KMI pmax pmax
comp=Z,91nm,0.9s
KMI pmax pmax
comp=Z,450nm,3.9s
WALA Waterton Lakes 87.78 36 IAmb IAmb 04 22 02.2
comp=Z,189nm,0.9s
BTO Baotou 88.12 314 P **P** **04 22 03.6 +1.7**
PAYG Puerto Ayora 88.12 90 P **P** **04 22 01.7 -0.7**
PAYG IAmb IAmb 04 22 06.6
comp=Z,203nm,1.1s
YNE Yellowstone No 88.15 41 IAmb IAmb 04 22 05.1
comp=Z,231nm,0.9s
RWWY Rawlins 88.50 45 P **P** **04 22 03.3 -0.5**
RWWY IAmb IAmb 04 22 06.0
comp=Z,312nm,1.1s
RWWY pP **pP** **04 24 04.5 -0.8**
MSTX Muleshoe 88.57 54 P 04 22 05.7
baz=247
T25A Trinidad 88.58 50 P 04 22 05.6
baz=246
T25A Trinidad 88.58 50 IAmb IAmb 04 22 08.2
comp=Z,125nm,1.1s
RLMT Red Lodge 88.67 41 P 04 22 06.5
baz=243,SNR=236
CMAR Chiang Mai Arr 88.77 290 P **P** **04 22 06.7 +1.5**
comp=Z,43nm,0.9s,baz=108,slow=2.9,SNR=110
CMAR pP **pP** **04 24 08.7 +1.4**
comp=Z,10.0nm,1.1s,baz=107,slow=3.0,SNR=4.7
CMAR PKKPbc **PKKPbc** **04 39 43.9 +2.2**
comp=Z,4.9nm,0.6s,baz=287,slow=4.4,SNR=18
CMAR Chiang Mai Arr 88.77 290 *i* P **P** **04 22 07.0 +1.8**
CMAR pmax pmax
comp=Z,44nm,0.9s
TOLK Toolik Lake Re 88.78 10 P 04 22 04.8
baz=208,SNR=129
TOLK Toolik Lake Re 88.78 10 IAmb IAmb 04 22 05.5
comp=Z,123nm,0.9s
Q24A Divide 88.78 48 P 04 22 07.1
baz=246
ISCO Idaho Springs 88.80 47 P 04 22 07.2
baz=246
CHTO Chiang Mai 88.88 290 P **P** **04 22 07.2 +1.4**
CHTO pmax pmax
comp=Z,65nm,1.0s
CD2 Chengdu 88.96 303 ⇑*i* P **P** **04 22 07.5 +1.6**

CD2 SKS **SKSac** **04 31 42.7 +0.3**
CD2 S **S** **04 32 06.7 -0.5**
CD2 SS **SS** **04 38 20.2 +2.4**
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,520nm,4.9s
N23A Red Feather La **89.02 46** P 04 22 08.3
baz=245
SYO Syowa Base **89.16 193**‖ *i* PcP **PcP** **04 22 06.8 -0.2**
SYO Syowa Base **89.16 193**‖ *e* pP pP 04 24 07.6 -0.4
833A Chaparral WMA, **89.19 60** P 04 22 09.3
baz=249
K22A Casper **89.37 45** IAmb IAmb 04 22 09.9
comp=Z,194nm,1.1s
K22A Casper **89.37 45** P 04 22 09.2
baz=245
YAK Yakutsk **89.51 338** P **P** **04 22 07.6 0.0**
comp=Z,34nm,0.5s,baz=116,slow=0.7,SNR=17
YAK Yakutsk **89.51 338** *c i* P **P** **04 22 07.2 -0.4**
YAK *e* *s* PP **pP** **04 24 11.0 +1.0**
YAK *e* PPP PPP 04 27 55.1
YAK *e* S **SKSac** **04 31 42.6 -1.4**
YAK *e* 04 32 06.0
YAK *e* SS **SS** **04 38 32.8 +8.6**
YAK pmax pmax
comp=Z,169nm,1.0s
YAK pmax pmax
comp=N,15nm,0.9s
YAK pmax pmax
comp=E,57nm,1.4s
YAK smax smax
comp=N,139nm,3.4s
YAK smax smax
comp=E,74nm,3.2s
YAK Yakutsk **89.51 338** P **P** **04 22 07.4 -0.3**
YAK IAmb IAmb 04 22 07.9
comp=Z,140nm,0.8s
PHWY Pilot Hill **89.53 46** IAmb IAmb 04 22 11.4
comp=Z,234nm,1.1s
JCT Junction City **89.62 58** IAmb IAmb 04 22 11.8
comp=Z,185nm,0.8s
JCT Junction City **89.62 58** P 04 22 10.6
baz=249
EGMT Eagleton **89.70 39** P 04 22 10.4
baz=243
EGMT Eagleton **89.70 39** IAmb IAmb 04 22 11.1
comp=Z,163nm,1.1s
AMTX Amarillo **89.75 53** P 04 22 11.0
baz=248
CMBY CAMPBELL BAY **89.80 277**⇑ *e* P **P** **04 22 10.0 -0.2**
CMBY IAmb IAmb 04 22 16.4
comp=Z,91nm,0.9s
A21K Barrow **90.24 7** P 04 22 11.0
baz=201
A21K Barrow **90.24 7** IAmb IAmb 04 22 11.8
comp=Z,111nm,0.8s
ABTX Abilene, Hawle **90.51 56** P 04 22 14.8
baz=249
KSCO Kaye Shedlock' **90.61 49** P 04 22 15.2
baz=247
SNAA Sanae **90.63 179** P **P** **04 22 13.5 +0.6**
SNAA Sanae **90.63 179** PKKP **PKKPdf** **04 39 36.4 +3.7**
SNAA Sanae **90.63 179** pP pP 04 24 16.4 +1.0
SNAA Sanae **90.63 179** *c e* P **P** **04 22 13.7 +0.8**
SNAA pmax pmax
comp=Z,78nm,1.4s
SNAA Sanae **90.63 179** P **P** **04 22 12.4 -0.5**
SNAA pP **pP** **04 24 15.3 -0.1**
VNA3 Neumayer Olymp **90.77 176** P **P** **04 22 14.5 +0.9**
VNA3 Neumayer Olymp **90.77 176** PKKP **PKKPdf** **04 39 35.3**
VNA3 S **S** **04 32 22.0 -0.1**
VNA3 Neumayer Olymp **90.77 176** pP pP 04 24 19.3 +3.2
LZH Lanzhou **90.78 308** ⇑ P **P** **04 22 16.2 +1.8**
LZH PP **PP** **04 26 03.0 +2.4**
LZH SKS **SKSac** **04 31 52.7 -0.2**
LZH S **S** **04 32 24.1 +0.5**
LZH SS **SS** **04 38 43.5 -0.4**
LZH pmax pmax
comp=Z,260nm,1.3s
LZH pmax pmax
comp=Z,570nm,7.5s
CIT Chita **91.07 325** *e* P **P** **04 22 15.8 +0.6**
CIT *e* 04 24 22.8
CIT *e* 04 25 59.0
CIT pmax pmax
comp=Z,441nm,1.9s
VNA2 Neumayer--Watz **91.21 177** P **P** **04 22 16.5 +1.0**
baz=172,slow=3.3
VNA2 Neumayer--Watz **91.21 177** PKKP **PKKPdf** **04 39 34.6 +3.0**
VNA2 S **S** **04 32 24.8 -1.2**
VNA2 Neumayer--Watz **91.21 177** pP pP 04 24 19.8 +1.7
LAO LASA Array **91.27 41** P 04 22 18.7
baz=245
PLCA Paso Flores **91.43 134** P **P** **04 22 19.9 +2.6**
comp=Z,30nm,1.0s,baz=246,slow=5.1,SNR=33
PLCA pP **pwP** **04 24 22.3 -0.3**
comp=Z,18nm,1.3s,baz=217,slow=7.1,SNR=5.2
PLCA PKKP **PKKPbc** **04 39 36.0 +0.1**
comp=Z,7.5nm,0.9s,baz=169,slow=3.5,SNR=9.5
PLCA Paso Flores **91.43 134** P **P** **04 22 17.0 -0.3**
PLCA pP **pP** **04 24 19.0 -0.4**
VNA1 Neumayer--Stat **91.44 177** P **P** **04 22 17.3 +0.8**
VNA1 Neumayer--Stat **91.44 177** PKKP **PKKPdf** **04 39 34.3 +3.2**
VNA1 Neumayer--Stat **91.44 177** pP pP 04 24 20.9 +1.6
435B Jarrell **91.51 58** P 04 22 19.8
baz=250
435B Jarrell **91.51 58** IAmb IAmb 04 22 20.4
comp=Z,128nm,0.8s
CCIG Comitan **91.58 74** IAmb IAmb 04 22 21.8
comp=Z,75nm,1.0s
RSSD Black Hills **91.62 44** P **P** **04 22 17.7 -0.5**
RSSD pmax pmax
comp=Z,275nm,1.1s
RSSD Black Hills **91.62 44** P **P** **04 22 17.7 -0.5**
RSSD Black Hills **91.62 44** P 04 22 19.3
baz=247
OGNE Ogallala **91.76 47** P 04 22 20.1
baz=248
WMOK Wichita Mounta **91.92 54** P 04 22 20.3
baz=250
WHTX Lake Whitney, **92.03 57** IAmb IAmb 04 22 22.3
comp=Z,108nm,0.8s
WHTX Lake Whitney, **92.03 57** P 04 22 21.7
baz=250
DGPR DIGLIPUR **92.61 283** *e* P **P** **04 22 23.6 +0.6**
DGPR IAmb IAmb 04 22 24.1
comp=Z,54nm,1.0s
BI02 San Fabin de **92.62 130** P **P** **04 22 22.3 -0.5**
BI02 pP **pP** **04 24 24.0 -1.1**
CBKS Cedar Bluff **92.63 50** P 04 22 24.2
baz=249
Z35A Perchaven, San **92.64 56** IAmb IAmb 04 22 25.0
comp=Z,136nm,0.8s
HKT Hockley **92.67 60** *c i* P **P** **04 22 25.1 +2.2**
HKT pmax pmax
comp=Z,185nm,1.7s
ULN Ulaanbaatar **93.06 319** *c e* P **P** **04 22 24.8 +0.3**
ULN pmax pmax
comp=Z,119nm,1.2s
ULN Ulaanbaatar **93.06 319** P **P** **04 22 24.9 +0.3**
ULN IAmb IAmb 04 22 26.3
comp=Z,100nm,1.1s
BCOK Bluff Creek, N **93.14 54** IAmb IAmb 04 22 27.0
comp=Z,159nm,0.9s
OKCFA Oklahoma City **93.18 54** IAmb IAmb 04 22 27.4
comp=Z,119nm,0.9s
DGMT Dagmar **93.25 40** P 04 22 27.0
baz=247
KAN14 Manchester OK **93.31 52** IAmb IAmb 04 22 27.8
comp=Z,91nm,0.8s
OK025 Westminster Rd **93.32 54** IAmb IAmb 04 22 28.4
comp=Z,100nm,1.1s
SONM Songino Array **93.46 319** P **P** **04 22 26.4 0.0**
comp=Z,22nm,1.0s,baz=116,slow=3.8,SNR=111
SONM pP **pP** **04 24 30.9 +1.4**
comp=Z,9.8nm,1.3s,baz=98,slow=2.0,SNR=3.1
SONM PP **PP** **04 26 21.3 +0.4**
comp=Z,6.1nm,0.8s,baz=134,slow=4.3,SNR=4.7
SONM PKiKP **PKiKP** **04 27 09.6 +1.2**
comp=Z,3.2nm,0.7s,baz=62,slow=1.4,SNR=6.7
SONM PKKP **PKKPbc** **04 39 31.3 +0.1**
comp=Z,3.7nm,1.0s,baz=231,slow=3.5,SNR=8.0
SONM PKPPKP **P'P'df** **04 47 36.3 -3.5**
comp=Z,1.3nm,1.0s,baz=246,slow=3.6,SNR=6.6
BOD Bodaibo **93.58 330** *e* P **P** **04 22 26.3 -0.2**
BOD pmax pmax
comp=Z,83nm,1.8s
KAN13 South Haven SW **93.69 52** IAmb IAmb 04 22 36.1
comp=Z,94nm,1.0s
BO02 Sierra Bellavi **93.76 128** P **P** **04 22 27.2 -0.9**
BO02 pP **pP** **04 24 29.8 -0.6**
OK031 S. Brethren Rd **93.83 54** IAmb IAmb 04 22 31.4
comp=Z,50nm,0.8s
OK030 Cody Creek RV **93.86 54** IAmb IAmb 04 22 30.3
comp=Z,87nm,1.1s
QUOK Quay **94.00 53** IAmb IAmb 04 22 31.6
comp=Z,70nm,1.0s
NATX Nacogdoches **94.20 58** IAmb IAmb 04 22 34.9
comp=Z,60nm,1.1s
NATX Nacogdoches **94.20 58** P 04 22 32.0
baz=252
YKA Yellowknife Ar **94.36 25** P **P** **04 22 30.4 +0.6**
comp=Z,75nm,0.8s,baz=240,slow=4.3,SNR=852
YKA PP **PP** **04 26 23.2 -4.0**
comp=Z,20nm,1.1s,baz=234,slow=7.1,SNR=5.1
YKA PKiKP **PKiKP** **04 27 09.2 -0.2**
comp=Z,1.5nm,0.8s,baz=225,slow=2.1,SNR=7.7
YKA SKKP **SKKPdf** **04 42 07.8 -2.5**
comp=Z,1.7nm,1.0s,baz=60,slow=4.7,SNR=7.8
YKA PKPPKP **P'P'df** **04 47 36.7 -0.2**
comp=Z,1.1nm,0.9s,baz=59,slow=2.8,SNR=3.6
T35A Sooner Cattle **94.39 53** IAmb IAmb 04 22 33.7
comp=Z,111nm,0.8s
Z38A Mt. Pleasant **94.41 57** IAmb IAmb 04 22 35.8
comp=Z,82nm,1.0s
X37A Clayton **94.52 55** P **P** **04 22 30.8 -0.5**
TUL1 Leonard **94.61 54** P 04 22 33.1
baz=251
BGNE Belgrade **94.67 48** P 04 22 33.8
baz=250
E28A Huff **94.73 43** IAmb IAmb 04 22 33.6
comp=Z,86nm,0.8s
GTA Gaotai **94.93 310** ⇑ P **P** **04 22 33.9 +0.6**
GTA SKS **SKSac** **04 32 12.9 -2.3**
GTA S **ScS** **04 33 01.6 +1.7**
GTA pmax pmax
comp=Z,48nm,1.2s
GTA pmax pmax
comp=Z,250nm,8.1s
KSU1 Kansas State U **95.02 51** P 04 22 35.3
baz=251
C36M Paulatuk **95.10 17** P 04 22 33.0
baz=231
MOKO MOKOCHONG **95.12 296** *e* P **P** **04 22 34.9 +0.4**
MOKO IAmb IAmb 04 22 35.7
comp=Z,95nm,1.3s
SUSD Miller **95.14 45** IAmb IAmb 04 22 35.9
comp=Z,146nm,1.1s
SUSD Miller **95.14 45** P 04 22 34.9
baz=250
IMP Imphal **95.17 294**⇑ *e* P **P** **04 22 34.9 +0.3**
SAIH SAIHA **95.32 292** *e* P **P** **04 22 35.6 +0.2**
TGUH Tegucigalpa,Un **95.39 77** IAmb IAmb 04 22 54.3
comp=Z,27nm,0.6s
JORH JORHAT **95.47 296** *e* P **P** **04 22 31.7 -4.1**
MDND Maddock **95.88 42** P 04 22 38.0
baz=250
MIAR Mount Ida **95.92 56** P 04 22 39.0
baz=252
W39A Magazine **95.95 55** P 04 22 39.4
baz=252
WLAR White Oak Lake **96.03 57** IAmb IAmb 04 22 44.9
comp=Z,79nm,1.1s
TIXI Tiksi **96.10 345** P **P** **04 22 37.1 -0.5**
comp=Z,41nm,0.8s,baz=137,slow=5.7,SNR=123
TIXI Tiksi **96.10 345** *c e* P **P** **04 22 36.8 -0.8**
TIXI pmax pmax
comp=Z,352nm,1.3s
TIXI Tiksi **96.10 345** P **P** **04 22 36.4 -1.2**
TIXI IAmb IAmb 04 22 38.2
comp=Z,66nm,1.0s
L34A Svendsen Farm, **96.11 48** IAmb IAmb 04 22 40.4
comp=Z,103nm,1.0s
Z41A Richland Creek **96.15 57** P 04 22 40.5
baz=253
N35A Tabor **96.28 49** IAmb IAmb 04 22 41.8
comp=Z,147nm,1.1s
ZAK Zakamensk **96.30 321** *e* P **P** **04 22 38.3 -0.8**
ZAK *e* 04 26 39.7
ZAK pmax pmax
comp=Z,26nm,1.2s
ZAK pmax pmax
comp=Z,19nm,1.4s
IRK Irkutsk **96.37 323** *e* P **P** **04 22 38.2 -1.1**
IRK pmax pmax
comp=Z,36nm,1.6s
JTS Las Juntas de **96.47 81** *c i* P **P** **04 22 42.6 +2.0**
JTS pmax pmax
comp=Z,40nm,1.3s
JTS Las Juntas de **96.47 81** P **P** **04 22 41.5 +0.9**
X40A Basin Creek Fa **96.49 56** P 04 22 41.3
baz=253
ECSD EROS Data Cent **96.50 46** P 04 22 40.8
baz=252
ECSD EROS Data Cent **96.50 46** IAmb IAmb 04 22 42.1
comp=Z,72nm,0.9s
TLY Talaya **96.53 322** P **P** **04 22 39.7 -0.3**
comp=Z,11nm,0.8s,baz=171,slow=3.4,SNR=21
TLY Talaya **96.53 322** *c i* P **P** **04 22 39.9 -0.1**
TLY *e* S **S** **04 33 15.5 +3.1**
TLY *e* 04 34 47.8
TLY pmax pmax
comp=Z,52nm,0.9s
TLY Talaya **96.53 322** P **P** **04 22 39.4 -0.7**
FFC Flin Flon **96.90 35** P **P** **04 22 41.6 0.0**
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon **96.90 35** P **P** **04 22 41.6 0.0**
U40A Yellville **97.02 54** P 04 22 43.5
baz=253
U40A Yellville **97.02 54** IAmb IAmb 04 22 46.7
comp=Z,50nm,1.1s
S39A Bolivar **97.05 53** IAmb IAmb 04 22 45.8
comp=Z,52nm,0.9s
143A Socs Landing, **97.11 58** IAmb IAmb 04 22 49.4
comp=Z,45nm,1.1s
W41B Gary Mavity, V **97.15 55** P 04 22 44.7
baz=253
WHAR Wooly Hollow **97.15 55** IAmb IAmb 04 22 45.4
comp=Z,49nm,1.1s
CCAR Cane Creek **97.16 57** IAmb IAmb 04 22 49.8
comp=Z,47nm,1.1s
SHL Shillong **97.17 294** *e* P **P** **04 22 41.4 -2.3**
344A Westbrook Farm **97.31 59** IAmb IAmb 04 22 49.8
comp=Z,79nm,0.9s
F33A 5 Mile Ranch, **97.37 44** IAmb IAmb 04 22 47.7
comp=Z,71nm,1.1s
P38A Dawn **97.45 51** IAmb IAmb 04 22 47.0
comp=Z,101nm,0.9s
VBMS Vicksburg **97.70 59** P 04 22 48.3
baz=254
X43A Marvell **98.04 56** P 04 22 49.7
baz=254
MOY Moody **98.09 322** *e* P Pdif 04 22 46.8 -0.3
SCIA State Center **98.34 49** P 04 22 50.1
baz=254
AGMN Agassiz Nation **98.40 42** P 04 22 48.6
baz=253
CCM Cathedral Cave **98.73 53** P 04 22 50.4
baz=254
ULM Lac du Bonnet **98.97 40** P **P** **04 22 50.9 0.0**
comp=Z,36nm,1.1s,baz=256,slow=4.7,SNR=21
SPMN Marine on St. **99.54 46** P 04 22 54.8
baz=254
JFWS Jewell Farm **100.72 48** P 04 23 00.8
baz=256
HDIL Hopedale **100.83 51** P 04 23 00.7
baz=256
WVT Waverly **100.87 56** P 04 23 02.6
baz=256
WVT Waverly **100.87 56** P **Pdif** **04 23 02.5 +2.8**
TAPN Taplejung **101.25 295** *e* P **PKiKP** **04 27 24.1 +1.0**
ODAN Odare **101.40 295** *e* P **PKiKP** **04 27 24.3 +1.0**
RAMN Ramite **102.11 295** *e* P **PKiKP** **04 27 24.7 +0.1**
comp=Z,22nm,0.6s
SFIN Lafayette **102.42 51** P 04 23 08.6
baz=257
JIRN Jiri **102.63 295** *e* P **PKiKP** **04 27 25.4 -0.3**
comp=Z,24nm,0.4s
GUN Gumba **102.96 295** *e* P **PKiKP** **04 27 26.1 -0.1**
PKI Pulchoki **103.28 295** *e* P **PKiKP** **04 27 26.6 -0.2**
comp=Z,12nm,0.3s
PKIN Phulchoki **103.30 295** *e* P **PKiKP** **04 27 26.6 -0.2**
KKN Kakani **103.45 295** *e* P **PKiKP** **04 27 27.2 +0.2**
LPAZ La Paz **103.52 112** Pdiff **Pdif** **04 23 15.5 +2.8**
comp=Z,8.2nm,0.8s,baz=256,slow=3.3,SNR=23
LPAZ PKKPbc **PKKPbc** **04 39 03.4 +0.2**
comp=Z,3.0nm,0.7s,baz=26,slow=2.7,SNR=12
DMN Daman **103.56 295** *e* P **PKiKP** **04 27 27.3 +0.1**
P49A Miami Univ. Ec **104.03 53** P 04 23 18.2
baz=258
GKN Gorkha **104.05 295** *e* P **PKiKP** **04 27 27.7 -0.3**
DANN Dangsing **104.88 295** *e* P **PKiKP** **04 27 29.4 -0.3**
comp=Z,21nm,0.3s
KOLN Koldanda **104.89 295** *e* P **PKiKP** **04 27 29.4 -0.2**
RES Resolute Bay **105.43 16** P **Pdif** **04 23 18.3 -0.8**
PYUN Piuthan **105.49 295** *e* P **PKiKP** **04 27 29.9 -0.8**
V57A Coltrane Farms **107.20 57** P 04 27 34.0
baz=260
R55A Marlinton **107.33 55** P 04 27 34.2
baz=261
ZSN Zaisan **107.37 315** *e* PP **PP** **04 28 03.0 -1.2**
baz=315
M53A WI Miller and **107.40 51** P 04 27 33.9
baz=261
L53A Girard **107.78 51** P 04 27 34.6
baz=262
N54A Moraine State **107.84 52** P 04 27 34.7
baz=262
CPUP Villa Florida **107.94 126** PKiKP **PKiKP** **04 27 35.4 +0.2**
comp=Z,3.9nm,1.0s,baz=250,slow=4.7,SNR=5.3
CPUP PKKPbc **PKKPbc** **04 38 48.7 -0.8**
comp=Z,3.1nm,1.0s,baz=178,slow=2.1,SNR=4.5
CPUP PKKPab **PKKPab** **04 39 06.0 -0.6**
comp=Z,4.3nm,1.0s,baz=71,slow=4.7,SNR=5.0
NRIK Noril'sk **107.96 338** Pdiff **Pdif** **04 23 30.0 -0.4**
comp=Z,5.6nm,0.8s,baz=114,slow=6.1,SNR=11
NRIK PKiKP **PKiKP** **04 27 33.9 +0.1**
comp=Z,12nm,0.8s,baz=59,slow=6.9,SNR=3.6
ERPA Erie **108.01 51** P 04 27 35.0
baz=262
ZALV Zalesovo Beam **108.14 322** Pdiff **Pdif** **04 23 31.0 -0.6**
comp=Z,5.5nm,0.9s,baz=99,slow=3.8,SNR=17
ZALV PKiKP **PKiKP** **04 27 34.2 -0.4**
comp=Z,18nm,0.6s,baz=122,slow=0.7,SNR=57
ZALV PKKPbc **PKKPbc** **04 38 48.2 -1.1**
comp=Z,1.9nm,0.6s,baz=251,slow=3.3,SNR=6.1
M54A Oil Creek Stat **108.16 51** P 04 27 35.0
baz=262
P56A Dayton Farm, R **108.50 54** P 04 27 35.7
baz=262
Q57A Strasburg **108.77 54** P 04 27 36.5
baz=262
O56A Blue Knob Stat **108.82 53** P 04 27 36.7
baz=262
S58A Poland Farm, P **108.84 56** P 04 27 36.9
baz=262
R58A Rapidan **108.98 55** P 04 27 36.7
baz=262
MKAR Makanchi Array **109.03 314** Pdiff **Pdif** **04 23 36.2 +0.5**
comp=Z,3.1nm,0.9s,baz=86,slow=6.8,SNR=22
MKAR PKiKP **PKiKP** **04 27 36.3 -0.3**
comp=Z,18nm,0.5s,baz=188,slow=0.5,SNR=200
MKAR SKiKP **SKiKP** **04 30 20.7 +1.7**
comp=Z,1.4nm,0.5s,baz=4.4,slow=0.3,SNR=4.1
MKAR PKKPbc **PKKPbc** **04 38 46.7 +0.3**
comp=Z,5.7nm,0.8s,baz=274,slow=3.5,SNR=18
MKAR PKPab **PKKPdf** **04 39 01.4 +0.8**
comp=Z,1.3nm,0.8s,baz=285,slow=4.8,SNR=4.2
MKAR Makanchi Array **109.03 314** P **Pdif** **04 23 36.4 +0.6**
N56A West Decatur **109.11 52** P 04 27 37.1
baz=263
M56A Emporium **109.26 52** P 04 27 37.5
baz=263
Q58A Fox Den Farm, **109.32 54** P 04 27 37.7
baz=262
H53A Bobcaygeon **109.33 48** P 04 27 37.3
baz=264
SSPA Standing Stone **109.38 52** P 04 27 37.7
baz=263
U60A Pendleton **109.39 57** P 04 27 37.5
baz=262
O57A Amberson **109.52 53** P 04 27 37.6
baz=263
N57A Milroy **109.65 52** P 04 27 37.9
baz=263
G54A Lake Saint Pet **109.76 47** P 04 27 37.9
baz=264
L56A Greenwood **109.80 51** P 04 27 38.3
baz=264
ALGO Algonquin Park **109.84 47** P 04 27 38.0
baz=265
M57A Sunshine Farm, **110.03 52** P 04 27 39.2
baz=264
K56A Middlesex **110.04 50** P 04 27 37.9
baz=264
O58A Lewisberry **110.05 53** P 04 27 38.9
baz=263
N58A Sunbury **110.29 52** P 04 27 39.2
baz=264
L57A Andrews Acres **110.31 51** P 04 27 39.4
baz=264,SNR=5.1
P59A Jarrettsville **110.36 54** P 04 27 39.4
baz=263
MATQ Matagami **110.43 43** P 04 27 38.3
baz=266
J56A Wolcott **110.44 50** P 04 27 39.3
baz=264,SNR=5.5
O59A Robesonia **110.63 53** P 04 27 39.9
baz=264
K57A Scipio Center **110.63 50** P 04 27 39.8
baz=264,SNR=7.3
SHLS Shalkode **110.67 310** *e* PKiKP **PKiKP** **04 27 38.8 -1.2**
baz=310
SHLS Shalkode **110.67 310** *i* PKiKP **PKiKP** **04 27 38.7 -1.2**
BINY Binghamton **110.97 51** P 04 27 40.8
baz=265
UZB Uzynbulak **110.99 310** *e* PKiKP **PKiKP** **04 27 40.0 -0.5**
baz=310
UZB Uzynbulak **110.99 310** *i* PKiKP **PKiKP** **04 27 40.0 -0.5**
P60A Greenville **111.00 54** P 04 27 40.9
baz=264
N59A State Game Lan **111.01 52** P 04 27 41.0
baz=264
L58A Harry Jones Me **111.06 51** P 04 27 41.2
baz=265,SNR=6.6
J57A Williamstown **111.07 50** P 04 27 40.8
baz=265
O60A Telford **111.22 53** P 04 27 41.8
baz=264
KPKS Kokpek **111.26 310** *e* PKiKP **PKiKP** **04 27 40.5 -0.4**
baz=310
KPKS Kokpek **111.26 310** *i* PKiKP **PKiKP** **04 27 40.5 -0.4**
E55A Montcerf-Lytto **111.27 46** P 04 27 40.7
baz=266
K58A Earlville **111.27 50** P 04 27 41.4
baz=265
M59A Waymart **111.32 52** P 04 27 41.7
baz=265
I57A Carthage **111.36 49** P 04 27 41.3
baz=266,SNR=6.7
N60A Cedar Hill Far **111.51 52** P 04 27 41.8
baz=265
TDK Taldyqorghan **111.58 312** *e* PKiKP **PKiKP** **04 27 40.9 -0.5**
baz=312
TDK *e* PP **PP** **04 28 32.1 -2.1**
baz=312
TDK Taldyqorghan **111.58 312** *i* PKiKP **PKiKP** **04 27 40.9 -0.5**
TDK *e* 04 28 32.1
H57A Richville **111.59 49** P 04 27 41.6
baz=266
L59A Walton **111.67 51** P 04 27 42.2
baz=265
D55A Sainte-Anne-du **111.70 46** P 04 27 41.6
baz=267
POO Poona **111.71 283** *e* P **PKiKP** **04 27 39.0 -3.4**
KURK Kurchatov **111.73 318** *i* PKiKP **PKiKP** **04 27 41.3 -0.1**
KURBB Kurchatov Arra **111.78 318** Pdiff **Pdif** **04 23 48.4 +0.5**
comp=Z,0.4nm,0.3s,baz=99,slow=4.8,SNR=2.0
KURBB PKiKP **PKiKP** **04 27 41.3 -0.3**
comp=Z,27nm,0.7s,baz=94,slow=1.8,SNR=129
KURBB PKKPbc **PKKPbc** **04 38 38.1 +0.6**
comp=Z,8.1nm,0.9s,baz=272,slow=4.0,SNR=27
KURBB PKKPab **PKKPab** **04 38 49.0 +2.2**
comp=Z,3.2nm,1.0s,baz=279,slow=5.2,SNR=5.9
KURBB Kurchatov Arra **111.78 318** PKiKP **PKiKP** **04 27 40.7 -0.9**
TULEG Thule **111.83 14**⇑ *i* P **PKiKP** **04 27 41.1 +0.1**
TULEG IAmb IAmb 04 27 41.9
comp=Z,96nm,1.7s

TULEG *i* 04 28 29.6
I58A Old Forge 111.84 49 P 04 27 42.4
baz=266
K59A Cooperstown 111.86 50 P 04 27 42.2
baz=266
M60A Port Jervis 111.91 52 P 04 27 42.5
baz=265
G57A Newington 111.92 48 P 04 27 42.2
baz=266
E56A St. Veronique 111.98 46 P 04 27 41.9
baz=267
N61A South Mountain 112.11 53 P 04 27 43.2
baz=265
J59A Piesco 112.16 50 P 04 27 42.7
baz=266,SNR=5.2
LONY Lake Ozonia 112.18 48 P 04 27 42.7
baz=266
D56A ZEC Mazanza, M 112.19 46 P 04 27 42.5
baz=267
L60A Shokan 112.26 51 P 04 27 43.0
baz=266
PAL Palisades 112.42 52 P 04 27 43.8
baz=265
MDOK Medeo 112.43 310 *e*PKiKP **PKiKP** **04 27 42.7 -0.6**
baz=310
MDOK Medeo 112.43 310 *i* PKIKP **PKiKP** **04 27 42.6 -0.6**
H58A Gabriels 112.46 49 P 04 27 43.3
baz=267,SNR=5.4
TNSS Tian-Shan 112.50 310 *e*PKiKP **PKiKP** **04 27 43.2 -0.5**
baz=310
TNSS Tian-Shan 112.50 310 *i* PKIKP **PKiKP** **04 27 43.2 -0.5**
AAA Alma-Ata 112.53 310 *e*PKiKP **PKiKP** **04 27 43.4 +0.1**
baz=310
AAA Alma-Ata 112.53 310 *i* PKIKP **PKiKP** **04 27 43.4 +0.1**
M61A Granite Spring 112.55 52 P 04 27 43.8
baz=266
G58A Ormstown 112.59 48 P 04 27 43.3
baz=267,SNR=6.0
I59A Olmsteadville 112.64 49 P 04 27 43.7
baz=267
N62A Caumsett State 112.75 52 P 04 27 44.1
baz=266
L61A Hillsdale 1, H 112.77 51 P 04 27 44.4
baz=266
J60A Lant Hill Farm 112.94 50 P 04 27 44.6
baz=267
ULHL Ulahoi 112.96 309 P **PKiKP** **04 27 45.3 +0.9**
SNR=5.3
KSH Kashi 112.97 306 PKP **PKiKP** **04 27 45.3 +0.9**
K61A Williamstown 113.02 51 P 04 27 45.1
baz=267
I60A Shoreham 113.06 49 P 04 27 45.0
baz=267,SNR=6.7
E58A La Victoria 113.18 47 P 04 27 44.7
baz=268
M62A Hamden 113.22 52 P 04 27 44.7
baz=266
L61B Northampton 113.44 51 P 04 27 45.5
baz=267
D58A Chemin du LacG 113.47 46 P 04 27 44.9
baz=269
TKM2 Tokmak 2 113.48 310 P **PKiKP** **04 27 45.1 -0.3**
SNR=31
TKM2 Tokmak 2 113.48 310 PKIKP **PKiKP** **04 27 44.7 -0.7**
F59A Saint Guilaume 113.51 47 P 04 27 45.5
baz=268
H60A Morristown 113.52 49 P 04 27 45.6
baz=268,SNR=5.1
LATQ La Tuque 113.55 46 P 04 27 44.9
baz=269
J61A Chester 113.57 50 P 04 27 46.1
baz=267
E59A St. Maurice 113.71 47 P 04 27 45.9
baz=269
K62A Royalston 113.78 51 P 04 27 46.4
baz=267
KBK Karagaybulak 113.94 309 P **PKiKP** **04 27 46.5 +0.3**
SNR=16
LBNH Lisbon 114.06 49 P 04 27 47.1
baz=268,SNR=5.3
H61A Lyndonville 114.07 49 P 04 27 46.7
baz=268
F60A Warwick 114.09 47 P 04 27 46.5
baz=269
CHMS Chumysh 114.10 310 P **PKiKP** **04 27 46.5 +0.1**
SNR=17
J62A Henniker 114.11 50 P 04 27 47.3
baz=268
D59A Saint-Raymond 114.19 46 P 04 27 46.6
baz=269
L63A North Scituate 114.20 52 P 04 27 46.9
baz=267
SGDS Sogindy 114.21 310 *e*PKiKP PKPdf 04 27 46.0 -0.6
baz=310
SGDS Sogindy 114.21 310 *i* PKIKP PKPdf 04 27 45.9 -0.7
UCH Uchtor 114.25 309 P **PKiKP** **04 27 47.9 +0.8**
SNR=32
HRV Adam Dziewonsk 114.27 51 P 04 27 47.2
baz=268
AAK Ala-Archa 114.28 309 PKiKP **PKiKP** **04 27 46.9 +0.2**
comp=Z,14nm,0.9s,baz=151,slow=2.9,SNR=28
AAK PKKPbc **PKKPbc** **04 38 29.0 -0.3**
comp=Z,8.5nm,1.0s,baz=200,slow=3.4,SNR=7.8
AAK PKKPab **PKKPab** **04 38 39.0 +2.8**
comp=Z,14nm,0.8s,baz=196,slow=7.6,SNR=3.8
AAK Ala-Archa 114.28 309 P **PKiKP** **04 27 47.0 +0.2**
SNR=15
AAK Ala-Archa 114.28 309 PKPdf PKPdf 04 27 46.3 -0.5
K63A Dunstable 114.30 51 P 04 27 47.4
baz=268
USP Ospenovka 114.30 310 P PKPdf 04 27 46.6 -0.1
SNR=18
G61A St-Isidore-de- 114.38 48 P 04 27 47.3
baz=269
E60A Ste Agathe de 114.45 47 P 04 27 47.0
baz=269
I62A Tamworth 114.48 49 P 04 27 47.7
baz=268
M64A Tiverton 114.48 52 P 04 27 47.6
baz=267
H62A Milan 114.62 49 P 04 27 48.0
baz=269
NIL Nilore 114.62 299 PKiKP PKPdf 04 27 47.2 -0.4
NIL Nilore 114.62 299 PKPdf 04 27 47.2 -0.5
J63A Strafford 114.65 50 P 04 27 47.7
baz=268
BTLS Baital 114.67 312 *e*PKP PKPdf 04 27 46.9 -0.4
baz=312
BTLS Baital 114.67 312 *e*PKIKP PKPdf 04 27 46.9 -0.4
F61A St Evariste 114.76 47 P 04 27 48.3
baz=270
L64A Middleborough 114.78 52 P 04 27 48.1
baz=268
EKS2 Erkin-Say 114.81 309 P **PKiKP** **04 27 48.1 +0.3**
SNR=18
D60A Saint Jean D'O 114.81 46 P 04 27 47.4
baz=270
AML Almayashu 114.85 309 P **PKiKP** **04 27 48.6 +0.3**
SNR=6.0
M65A Busby, Falmout 114.91 52 P 04 27 48.6
baz=268
I63A Otisfield 115.03 49 P 04 27 49.0
baz=269,SNR=5.1
G62A West of Eustis 115.08 48 P 04 27 48.6
baz=270,SNR=5.2
E61A Lac Etchemin 115.11 47 P 04 27 49.1
baz=270
NEEM North Greenlan 115.12 11⇑ *i*P **PKiKP** **04 27 48.0 +0.4**
NEEM IAmb IAmb 04 27 48.6
comp=Z,53nm,0.6s
NEEM *i* 04 28 53.3
KULLO Kullorsuaq 115.24 15⇑ *i*P **PKPdf** **04 27 47.5 0.0**
KULLO IAmb IAmb 04 27 48.1
comp=Z,96nm,1.4s
D61A St Aubert, Com 115.31 46 P 04 27 48.8
baz=271
I64A Boothbay 115.71 49 P 04 27 50.1
baz=270
G63A Kingsbury 115.72 48 P 04 27 49.9
baz=270,SNR=5.2
NOR Nord 115.78 3 *i* **PKiKP** **04 27 48.6 +0.2**
PKME Peaks-Kenny Pk 115.95 48 P 04 27 50.5
baz=270,SNR=6.4
H64A Troy 116.01 49 P 04 27 50.3
baz=270,SNR=5.1
SJG San Juan 116.05 78 PKIKP **PKiKP** **04 27 51.1 +0.4**
SJG San Juan 116.05 78 **PKiKP** **04 27 51.1 +0.4**

F63A Nahmakanta, Br 116.08 47 P 04 27 50.5
baz=271,SNR=8.1
UPNV Upernavik 116.31 16⇑ *i*P **PKiKP** **04 27 49.9 +0.3**
UPNV IAmb IAmb 04 27 50.4
comp=Z,52nm,0.6s
G64A Maxfield 116.33 48 P 04 27 51.2
baz=271,SNR=10
E63A Oxbow 116.54 47 P 04 27 50.6
baz=272
F64A Sherman 116.61 47 P 04 27 51.4
baz=271,SNR=5.2
DZA Taraz 116.61 309 *e*PKP **PKPdf** **04 27 51.0 -0.2**
baz=309
DZA Taraz 116.61 309 *e*PKIKP **PKPdf** **04 27 50.9 -0.2**
D63A Stockholm 116.74 46 P 04 27 51.2
baz=272,SNR=5.4
BVAR Borovoye Array 116.75 321 PKP **PKPdf** **04 27 50.4 -0.7**
comp=Z,34nm,0.5s,baz=177,slow=7.4,SNR=141
BVAR PP **PP** **04 29 13.5 +3.6**
comp=Z,8.4nm,0.9s,baz=127,slow=9.3,SNR=4.7
BVAR PKKPbc **PKKPbc** **04 38 21.1 +0.1**
comp=Z,0.9nm,0.6s,baz=200,slow=16,SNR=5.1
BVAR PKKPab **PKKPab** **04 38 26.0 +1.2**
comp=Z,1.3nm,0.6s,baz=206,slow=9.9,SNR=6.5
BRVK Borovoye 116.81 321 *c i*PKIKP **PKPdf** **04 27 50.8 -0.4**
BRVK Borovoye 116.81 321 PKPdf **PKPdf** **04 27 50.5 -0.7**
PTGA Pitinga 116.83 100 PKKPbc PKKPbc 04 38 21.4 +1.5
comp=Z,4.2nm,0.5s,baz=60,slow=2.6,SNR=9.5
PTGA Pitinga 116.83 100 PKPdf **PKPdf** **04 27 51.9 -0.5**
E64A Bridgewater 116.95 47 P 04 27 51.8
baz=272,SNR=6.7
G65A Princeton 117.18 48 P 04 27 52.7
baz=272,SNR=6.4
KK31 Karatay Array 117.21 310 *i* PKIKP **PKPdf** **04 27 51.8 -0.5**
H66A Whiting 117.37 48 P 04 27 52.8
baz=272
IUG Iuzhnay 117.57 309 *e*PKP **PKiKP** **04 27 53.2 0.0**
baz=309
IUG Iuzhnay 117.57 309 *e*PKIKP **PKiKP** **04 27 53.1 0.0**
NUUG Nuugaatsiaq 117.69 17⇑ *i*P **PKiKP** **04 27 52.5 +0.1**
NUUG IAmb IAmb 04 27 53.0
comp=Z,42nm,0.7s
CHM Chimkent 117.89 309 *e*PKP **PKiKP** **04 27 53.8 +0.1**
baz=309
CHM Chimkent 117.89 309 *e*PKIKP **PKiKP** **04 27 53.7 +0.1**
KBL Kabul 118.17 300 PKIKP **PKPdf** **04 27 54.2 -0.5**
KBL Kabul 118.17 300 PKPdf **PKPdf** **04 27 54.1 -0.5**
KBS Kingsbay 118.72 358 *e*PKPdf **PKiKP** **04 27 55.0 +0.8**
SPA0 Spitsbergen Ar 119.23 357 *e*PKPdf **PKiKP** **04 27 55.8 +0.5**
SPITS Spitsbergen Ar 119.23 357 PKP **PKiKP** **04 27 55.6 +0.3**
comp=Z,97nm,0.8s,baz=156,slow=8.2,SNR=58
SPITS PP **PP** **04 29 23.4 -2.6**
comp=Z,65nm,1.1s,baz=108,slow=2.7,SNR=5.6
ILULI Ilulissat 119.45 19⇑ *i*P **PKiKP** **04 27 55.9 0.0**
ILULI IAmb IAmb 04 27 56.1
comp=Z,70nm,0.6s
MAN01 Angra dos Reis 119.90 131 *e*P **PKPdf** **04 27 51.6 -6.6**
HOPEN Hopen 120.11 354 *e*PKPdf **PKiKP** **04 27 57.2 +0.2**
HOPEN *e*PP **PP** **04 29 30.6 -1.1**
DAG Danmarks Havn 120.19 5⇑ *i*P **PKPdf** **04 27 56.5 -0.5**
DAG IAmb IAmb 04 27 57.2
comp=Z,79nm,1.2s
DAG *i* 04 29 23.9
HSPB Hornsund (broa 120.42 356 *e*PKPdf **PKiKP** **04 27 57.9 +0.4**
SFJD Kangerlussuaq 120.70 21⇑ *i*P **PKPdf** **04 27 58.0 -0.2**
SFJD IAmb IAmb 04 27 58.7
comp=Z,82nm,1.4s
SFJD *e* 04 29 22.1
SFJD Kangerlussuaq 120.70 21 PKIKP **PKPdf** **04 27 57.4 -0.8**
SFJD Kangerlussuaq 120.70 21 PKPdf **PKPdf** **04 27 57.4 -0.8**
SUMG Summit 120.73 13⇑ *i*P **PKiKP** **04 27 59.5 +0.6**
SUMG IAmb IAmb 04 28 00.4
comp=Z,57nm,0.9s
BDFB Brasilia 120.95 121 PKP **PKiKP** **04 28 00.9 +0.4**
comp=Z,19nm,1.0s,baz=198,slow=1.1,SNR=20
BDFB PKKPbc **PKKPbc** **04 38 07.0 +1.2**
comp=Z,9.1nm,0.8s,baz=119,slow=2.7,SNR=13
BDFB Brasilia 120.95 121 PKIKP **PKPdf** **04 27 59.5 -0.9**
BDFB Brasilia 120.95 121 PKPdf **PKPdf** **04 27 59.5 -0.9**
DUB01 Friburgo-RJ 121.53 131 *e*P **PKiKP** **04 28 02.1 +0.6**
SVE Sverdlovsk 121.55 326 *e*PKIKP **PKiKP** **04 28 00.6 +0.3**
SVE pmax pmax
comp=Z,148nm,0.9s
NUUK Nuuk 121.61 24 *i* P **PKiKP** **04 28 00.9 +0.7**
NUUK IAmb IAmb 04 28 01.4
comp=Z,67nm,0.8s
ABPO Ambohimpanom 121.99 233 PKIKP **PKPdf** **04 28 00.5 -1.9**
ABPO Ambohimpanom 121.99 233 PKPdf **PKPdf** **04 28 00.5 -1.9**
CAM01 Campos-RJ 122.21 131 *e*P **PKiKP** **04 28 03.7 +1.0**
OPO Ambohidratompo 122.28 233 PKKPbc PKKPbc 04 38 01.9 +0.9
comp=Z,8.3nm,0.9s,baz=43,slow=1.2,SNR=6.2
DBG Daneborg 122.31 7⇑ *i*P **PKiKP** **04 28 01.3 -0.1**
DBG IAmb IAmb 04 28 02.0
comp=Z,50nm,0.7s
DBG *i* 04 29 35.3
BJO1 Bjornoya 122.56 354 *e*PKPdf **PKPdf** **04 28 00.9 -0.7**
ARU Arti 122.77 326 PKP **PKiKP** **04 28 02.9 +0.1**
comp=Z,32nm,0.5s,baz=96,slow=1.2,SNR=139
ARU PKKPbc **PKKPbc** **04 37 59.6 +0.3**
comp=Z,3.8nm,0.2s,baz=310,slow=3.8,SNR=5.8
ARU Arti 122.77 326 *i* PKIKP **PKiKP** **04 28 02.7 0.0**
ARU 04 29 52.1
ARU 04 34 20.1
ARU Arti 122.77 326 PKPdf **PKPdf** **04 28 02.2 -0.3**
ALF01 Guarapari-ES 123.64 131 *e*P **PKiKP** **04 28 06.6 +1.0**
HRA Herat 123.79 300 PKPdf **PKPdf** **04 28 04.2 -1.2**
AB31 Akbulak array 123.84 318 *i* PKIKP **PKPdf** **04 28 04.3 -0.5**
ABKAR Akbulak array 123.84 318 PKPdf **PKPdf** **04 28 04.4 -0.3**
RIB01 Linhares ES 124.71 130 *e*P **PKiKP** **04 28 08.0 +0.2**
AKTO Aktyubinsk 124.77 319 PKP **PKiKP** **04 28 06.8 -0.2**
comp=Z,55nm,0.8s,baz=76,slow=2.8,SNR=102
AKTO PKKPbc **PKKPbc** **04 37 51.8 +0.3**
comp=Z,2.3nm,0.7s,baz=288,slow=5.3,SNR=4.0
ISOG Isortoq, Green 125.39 19⇑ *i*P **PKPdf** **04 28 07.2 0.0**
ISOG IAmb IAmb 04 28 07.9
comp=Z,111nm,0.7s
SCO Scoresbysund 125.53 9⇑ *i*P **PKiKP** **04 28 08.4 +0.6**
SCO IAmb IAmb 04 28 09.2
comp=Z,98nm,1.0s
SCO Scoresbysund 125.53 9 PKIKP **PKPdf** **04 28 07.6 +0.2**
SCO Scoresbysund 125.53 9 PKPdf **PKPdf** **04 28 07.6 +0.2**
HAMF Hammerfest 125.57 351 *e*PKPdf **PKiKP** **04 28 08.1 +0.1**
NRS Narsarsuaq 125.62 26 *i* P **PKPdf** **04 28 07.5 -0.3**
NRS IAmb IAmb 04 28 08.5
comp=Z,170nm,1.0s
NRS Narsarsuaq 125.62 26 PKIKP **PKPdf** **04 28 07.4 -0.4**
NRS Narsarsuaq 125.62 26 **PKPdf** **04 28 07.4 -0.4**
LVZ Lovozero 125.74 345 *i* PKIKP **PKPdf** **04 28 08.1 +0.2**
LVZ Lovozero 125.74 345 PKPdf **PKPdf** **04 28 07.3 -0.7**
ANGG Ammassalik, Gr 125.76 19 *i* P **PKPdf** **04 28 08.1 +0.2**
ANGG IAmb IAmb 04 28 08.2
comp=Z,90nm,1.1s
NAN01 Guarapari, ES 125.83 129 *e*P **PKiKP** **04 28 10.4 +0.4**
ARA0 ARCESS Array S 126.27 350 *e*PKPdf **PKiKP** **04 28 09.4 0.0**
ARCES ARCESS Array B 126.27 350 PKhKP PKPpre 04 27 57.7
comp=Z,1.9nm,0.5s,baz=220,slow=0.4,SNR=9.4
ARCES PKP **PKPdf** **04 28 08.8 -0.1**
comp=Z,100nm,0.8s,baz=0.0,slow=1.2,SNR=74
ARCES PKKP **PKKPdf** **04 38 26.1 -2.0**
comp=Z,1.9nm,0.7s,baz=208,slow=2.6,SNR=7.9
APA Apatity 126.30 345 ⇓ *i*PKIKP **PKPdf** **04 28 07.5 -1.4**
APA *i* 04 30 08.3
APA *i* 04 30 17.2
APA pmax pmax
comp=Z,7.0nm,0.8s
KIRV Kirov 126.45 331 PKP **PKiKP** **04 28 10.0 +0.1**
comp=Z,163nm,0.8s,baz=51,slow=1.0,SNR=61
KIRV Kirov 126.45 331 *c i*PKIKP **PKiKP** **04 28 09.8 -0.2**
PRGR Permogore 126.47 336 *e*PKIKP **PKPdf** **04 28 08.7 -0.7**
PRGR *e* 04 30 08.8
PRGR pmax pmax
comp=Z,105nm,0.9s
WSAR Wadi Sarin 126.50 286 PKP **PKPdf** **04 28 10.3 -0.4**
comp=Z,33nm,1.1s,baz=358,slow=0.5,SNR=8.1
SUR Sutherland 126.70 200 PP PP 04 30 23.1 +7.6
comp=Z,24nm,0.9s,baz=192,slow=3.0,SNR=6.5
SUR Sutherland 126.70 200 PKPdf **PKPdf** **04 28 09.3 -1.9**
GEYT Alibeck 126.93 304 PKIKP PKPpre 04 27 58.3
comp=Z,5.2nm,0.6s,baz=228,slow=3.8,SNR=7.5
GEYT PKP **PKiKP** **04 28 11.8 +0.1**
comp=Z,62nm,0.9s,baz=238,slow=2.8,SNR=56
GEYT PP **PP** **04 30 16.1 -2.3**
comp=Z,4.2nm,0.7s,baz=186,slow=1.4,SNR=3.8
GYA0 ALIBECK ARRAY 126.93 304 PKIKP **PKPdf** **04 28 11.0 -0.1**
JETT Jettan, Norway 127.03 352 *e*PKPdf **PKiKP** **04 28 10.9 0.0**

KTK1 Kautokeino 127.11 350 *e*PKPdf **PKiKP** **04 28 11.3 +0.3**
TRO Tromso 127.15 352 *e*PKPdf **PKPdf** **04 28 10.3 -0.2**
NBIT Itapeh - BA 128.14 126 *e*P **PKiKP** **04 28 14.9 +0.2**
BOSA Boshof 128.37 207 PKP **PKiKP** **04 28 15.3 +0.2**
comp=Z,24nm,0.9s,baz=142,slow=2.1,SNR=22
BOSA PP **PP** **04 30 26.8 +0.3**
comp=Z,16nm,0.9s,baz=162,slow=4.4,SNR=6.9
BOSA PKKPab PKKPab 04 37 37.4
comp=Z,4.5nm,0.8s,baz=67,slow=5.6,SNR=4.8
SOHO SOHO 128.49 287 *i* PKPdf **PKPdf** **04 28 14.6 +0.2**
SNR=32
SOHO SOHO 128.49 287 P **PKPdf** **04 28 14.1 -0.3**
GDU01 Guandu, BA 128.76 125 *e*P **PKPdf** **04 28 12.6 -2.6**
MDH Madha 128.77 288 PKPdf **PKPdf** **04 28 14.9 0.0**
MDH Madha 128.77 288 P **PKiKP** **04 28 15.3 -0.4**
BANOM Banah 128.81 289 PKPdf **PKPdf** **04 28 14.4 -0.6**
BANOM Banah 128.81 289 P **PKiKP** **04 28 15.5 -0.3**
UOSS Minazif 128.84 288 *i* PKPdf **PKPdf** **04 28 14.9 -0.2**
SNR=6.5
UOSS Minazif 128.84 288 **PKPdf** **04 28 13.5 -1.6**
UOSS Minazif 128.84 288 P **PKPdf** **04 28 14.4 -0.6**
HATD Hatta, Dubai 128.90 288 *i* PKiKP **PKiKP** **04 28 16.0 0.0**
SNR=12
HATD Hatta, Dubai 128.90 288 P **PKPdf** **04 28 15.0 -0.2**
SNR=6.9
MSFE Esma-Masafi 128.90 288 *i* PKiKP **PKiKP** **04 28 16.7 +0.7**
SNR=9.0
MASF Masafi 128.90 288 P **PKPdf** **04 28 15.4 +0.1**
SHME Shamm 128.95 289 PKPdf **PKiKP** **04 28 15.8 -0.2**
SHME Shamm 128.95 289 P **PKPdf** **04 28 15.1 -0.1**
ASHO Ashiyiah 128.96 288 *i* PKiKP **PKiKP** **04 28 16.3 +0.1**
SNR=13
ASHO Ashiyiah 128.96 288 P **PKPdf** **04 28 15.4 0.0**
SNR=6.3
N2IH Innhavet 129.09 353 *e* PKPpre 04 28 06.1
N2IH *e*PKPdf **PKiKP** **04 28 14.9 -0.1**
SOCY Socotra 129.10 271 PKPdf **PKPdf** **04 28 15.3 -0.6**
LOF Lofoten 129.19 354 *e* **PKPdf** **04 28 07.0 -7.4**
LOF *e*PKPdf **PKiKP** **04 28 15.5 +0.3**
ALNE Al Ain 129.19 287 *i* PKiKP **PKiKP** **04 28 16.9 +0.3**
SNR=5.2
ALNE Al Ain 129.19 287 P **PKPdf** **04 28 15.9 +0.1**
SNR=8.0
STEI Steigen 129.20 353 *e*PKPdf **PKiKP** **04 28 15.4 +0.2**
DMTO DMTO 129.24 279 P **PKiKP** **04 28 16.5 -0.2**
KLMR Klimovskoe 129.29 337 *e*PKIKP **PKPdf** **04 28 12.5 -2.3**
KLMR pmax pmax
comp=Z,267nm,1.4s
KLMR Klimovskoe 129.29 337 *e*PKPdf **PKPdf** **04 28 12.6 -2.3**
KLMR AMP 04 28 16.8
comp=Z,267nm,1.4s
KLMR *e*PP **pPKPdf** **04 30 26.5 +0.7**
KLMR *e*PPP PPP 04 33 22.9
KLMR *e*SKKPbc SKKPbc 04 40 25.4 -8.5
NAZ Nazwa, Dubai 129.33 288 *i* PKPdf **PKPdf** **04 28 16.0 0.0**
SNR=5.3
NAZ Nazwa, Dubai 129.33 288 P **PKPdf** **04 28 16.1 +0.1**
SNR=6.2
FAQ Al Faqa, Dubai 129.38 288 *i* PKPdf **PKPdf** **04 28 16.4 +0.2**
SNR=7.6
FAQ Al Faqa, Dubai 129.38 288 P **PKPdf** **04 28 15.9 -0.2**
N2SV S_rvŸgen 129.47 354 *e* **PKPdf** **04 28 07.4 -7.5**
N2SV *e*PKPdf **PKiKP** **04 28 15.6 -0.2**
N2TV TŸrnvik 129.57 353 *e*PKPdf **PKiKP** **04 28 15.7 -0.3**
ASUD Al Ashush, Dub 129.62 287 *i* PKPdf **PKiKP** **04 28 17.2 -0.2**
SNR=6.4
ASUD Al Ashush, Dub 129.62 287 P **PKiKP** **04 28 17.9 +0.5**
N2ST Straumen 129.72 353 *e*PKPdf **PKiKP** **04 28 16.0 -0.3**
FAUS Fauske 129.73 353 *e* PKPprre 04 28 02.7
FAUS *e*PKPdf **PKiKP** **04 28 16.1 -0.2**
NBB08 Skaug oppvekst 129.79 353 *e*PKPdf **PKiKP** **04 28 16.3 -0.1**
RBK Rabkut 129.90 278 P **PKiKP** **04 28 18.1 -0.1**
SNR=5.5
N2RO R_st 129.92 355 *e*PKPdf **PKiKP** **04 28 16.5 -0.2**
NBB29 Rokland skole 130.09 353 *e*Pdif **Pdif** **04 25 10.8 +1.9**
DOK Doka 130.14 280 P **PKPdf** **04 28 17.8 +0.1**
SNR=5.1
BELG Belogornoye 130.20 325 PKP **PKiKP** **04 28 17.4 -0.3**
comp=Z,281nm,0.9s,baz=84,slow=0.1,SNR=52
BELG Belogornoye 130.20 325 *c i*PKIKP **PKPdf** **04 28 16.7 -0.1**
NBB95 Inndyr 130.20 354 *e*PKPdf **PKiKP** **04 28 17.0 -0.3**
NBB30 Finnes 130.29 354 *e*PKPdf **PKiKP** **04 28 17.8 +0.3**
WHFO Wadi Hawf 130.38 279 P **PKPdf** **04 28 18.3 +0.1**
NBB17 Glomfjord BŸr 130.42 354 *e*PKPdf **PKPdf** **04 28 17.1 +0.4**
BORG Borgarnes 130.71 13 SKPbc **SKPab** **04 30 53.4 +3.4**
comp=Z,41nm,0.9s,baz=326,slow=2.2,SNR=7.3
ABTO Aybut 130.74 278 P **PKiKP** **04 28 19.4 -0.5**
SNR=11
STOK Stokkvaagen 130.99 354 *e*PKPdf **PKiKP** **04 28 18.7 -0.1**
MOR8 Moi Rana 130.99 353 *e*Pdif **Pdif** **04 25 11.4 -1.6**
MOR8 *e* 04 27 58.5
MOR8 *e*PKPdf **PKPdf** **04 28 17.6 -0.4**
LBTB Lobatse 131.31 210 SKPbc **SKPab** **04 30 56.9 +2.9**
comp=Z,47nm,1.1s,baz=141,slow=4.9,SNR=22
NBTA Tacaratu-PE 132.63 121 *e*P **PKiKP** **04 28 23.5 -0.3**
NSS Namsos 132.85 354 *e* PKPprre 04 28 09.1
NSS *e*PKPdf **PKPdf** **04 28 21.3 -0.1**
FINES FINESS Array B 133.13 344 PKhKP PKPpre 04 28 07.0
comp=Z,5.6nm,0.7s,baz=45,slow=3.7,SNR=13
FINES PKP **PKPdf** **04 28 22.1 0.0**
comp=Z,38nm,0.6s,baz=72,slow=4.5,SNR=26
FINES SKPbc **SKPab** **04 30 60.0 -0.6**
comp=Z,46nm,1.0s,baz=59,slow=5.1,SNR=16
NBPB Pedra_Branca-C 133.28 116 *e*P PKPpre 04 28 19.7
MOS Moscow 133.36 333 *i* PKIKP **PKPdf** **04 28 21.0 -1.6**
MOS *e* 04 34 40.9
MOS pmax pmax
comp=Z,137nm,1.1s
MATP Matopo 133.61 216 PKhKP PKPpre 04 28 10.0
comp=Z,1.6nm,0.5s,baz=163,slow=5.6,SNR=7.6
MATP PKP **PKPdf** **04 28 24.9 +0.5**
comp=Z,28nm,0.8s,baz=169,slow=2.1,SNR=27
MATP SKPbc **SKPab** **04 31 04.6 +0.5**
comp=Z,81nm,1.0s,baz=143,slow=4.0,SNR=20
MAK Makhachkala 133.83 313 *e*P **Pdif** **04 25 20.7 -5.4**
MAK *i* 04 25 25.1
MAK *e* 04 30 33.6
MAK *e* 04 31 04.2
MAK *e*PPP PPP 04 34 02.0
MAK *e*SS SS 04 48 04.0 -1.6
MAK pmax pmax
comp=Z,233nm,1.1s
NBMO Morrinhos-CE 133.98 113 *e*P PKPpre 04 28 17.1
VRH Novokhopyorsk 133.99 326 *e*PKIKP **PKPdf** **04 28 23.9 -0.1**
VRH pmax pmax
comp=Z,100nm,0.6s
VRH pmax pmax
comp=N,270nm,1.1s
OBN Obninsk 134.22 333 PKP **PKPdf** **04 28 24.8 +0.5**
comp=N,20nm,0.5s,baz=179,slow=2.4,SNR=17
OBN SKPbc **SKPab** **04 31 04.2 -1.3**
comp=N,3.9nm,0.4s,baz=44,slow=2.9,SNR=4.0
OBN Obninsk 134.22 333 ⇑P **PKPdf** **04 28 23.5 -0.7**
OBN Obninsk 134.22 333 ⇓ *i*PKIKP **PKPdf** **04 28 24.6 +0.3**
OBN *e* 04 31 03.7
OBN *e*PPP PPP 04 34 05.8
OBN *e* 04 34 41.8
OBN *e*SS SS 04 48 09.6 +0.6
OBN pmax pmax
comp=Z,202nm,1.4s
OBN Obninsk 134.22 333 PKPdf **PKPdf** **04 28 24.1 -0.2**
TBLU Trondheim 134.27 354 *e*PKPdf **PKPdf** **04 28 24.4 +0.2**
LPSR Galich'ya Gora 134.66 329 *e*PKIKP **PKPdf** **04 28 25.5 +0.3**
LPSR pmax pmax
comp=Z,140nm,1.3s
LPSR pmax pmax
comp=N,200nm,1.5s
GROC Groznyy 134.94 314 *e*PKIKP **PKPdf** **04 28 26.1 +0.1**
GROC *e* 04 31 09.1
GROC *e* 04 31 29.8
GROC pmax pmax
comp=Z,64nm,0.7s
NBCL Cascavel-CE 135.05 115 *e*P **PKPdf** **04 28 27.8 +0.7**
MOL Molde 135.16 356 *e*PKPdf **PKPdf** **04 28 26.2 +0.4**
VSR Storozhevoye 135.33 327 *e*PKIKP **PKPdf** **04 28 26.3 -0.2**
VSR pmax pmax
comp=Z,190nm,1.1s
VSR pmax pmax
comp=N,190nm,1.2s
VSU Vasula 135.42 341 *e*P PKPprre 04 28 17.4
VSU Vasula 135.42 341 *i* PKIKP **PKPdf** **04 28 26.9 +0.5**
DOMB Dombas 135.56 355 *e*Pdif **Pdif** **04 25 33.2 -0.2**
DOMB *e* 04 28 13.7
DOMB *e*PKPdf **PKiKP** **04 28 28.5 +0.1**

AKN **Aaknes** **135.58 356** *e* PKPprre 04 28 16.6
AKN *e*PKPdf **PKPdf** **04 28 27.5 +0.8**
MTSE Matsula **136.05 343** *e*P PKPpre 04 28 16.9
GOF Gofitskoye **136.07 317**⇑ *e*PKIKP **PKPdf** **04 28 28.4 +0.3**
GOF pmax pmax
comp=Z,159nm,1.3s
RCBR Riachuelo **136.23 119** SKPbc **SKiKP** **04 31 12.1 -2.2**
comp=Z,11nm,0.8s,baz=218,slow=7.0,SNR=5.0
RCBR Riachuelo **136.23 119** PKHKP PKPpre 04 28 17.9
RCBR 04 28 30.3
RCBR Riachuelo **136.23 119** PKPpre 04 28 17.9
RCBR PKPdf **PKPdf** **04 28 30.3 +0.9**
FOO Floro **136.26 358** *e* PKPpre 04 28 16.9
FOO *e*PKPdf **PKPdf** **04 28 28.7 +0.8**
NCK Nalchik **136.33 315** *i* PKIKP **PKPdf** **04 28 29.2 +0.6**
NOA NORSAR Array B **136.34 353** PKhKP PKPpre 04 28 16.6
comp=Z,7.3nm,0.8s,baz=25,slow=2.4,SNR=25
NOA PKP **PKPdf** **04 28 28.7 +0.6**
comp=Z,23nm,0.7s,baz=14,slow=4.0,SNR=18
NOA SKPbc **SKiKP** **04 31 10.7 -2.4**
comp=Z,19nm,1.0s,baz=6.3,slow=4.0,SNR=14
ZEI Tsey **136.38 314** *i* PKHKP PKPpre 04 28 18.5
ZEI pmax pmax
comp=Z,49nm,1.2s
UPP Uppsala **136.47 348** *e*P PKPpre 04 28 16.4
NC602 NORSAR Array S **136.59 353** *e* PKPpre 04 28 17.5
NC602 *e*PKPdf **PKPdf** **04 28 28.7 +0.2**
HYA Hoyanger **136.64 357** *e* PKPpre 04 28 19.0
HYA *e*PKPdf **PKiKP** **04 28 30.2 -0.3**
GNI Garni **136.68 310** PKP **PKiKP** **04 28 30.7 -0.8**
comp=Z,38nm,0.8s,baz=160,slow=5.4,SNR=16
GNI Garni **136.68 310** *i* PKIKP **PKPdf** **04 28 29.4 -0.2**
GNI Garni **136.68 310** PKPdf **PKPdf** **04 28 29.3 -0.3**
KBZ Khabaz **136.71 316** PKhKP PKPpre 04 28 19.3
comp=Z,3.3nm,0.8s,baz=148,slow=2.2,SNR=6.8
KBZ PKP **PKiKP** **04 28 30.8 -0.3**
comp=Z,17nm,0.8s,baz=113,slow=2.2,SNR=20
KBZ SKPbc **SKiKP** **04 31 12.3 -2.0**
comp=Z,6.0nm,1.0s,baz=135,slow=4.3,SNR=2.5
KBZ Khabaz **136.71 316** *i* PKIKP **PKPdf** **04 28 29.5 +0.3**
KVAR Kislovodsk Arr **136.75 316** PKP **PKiKP** **04 28 31.1 -0.4**
comp=Z,13nm,0.9s,baz=121,slow=5.9,SNR=5.0
KIV Kislovodsk **136.76 316**⇑P **PKPdf** **04 28 28.2 -1.3**
KIV Kislovodsk **136.76 316** PKPdf **PKPdf** **04 28 30.2 +0.7**
KIV Kislovodsk **136.76 316** *i* PKIKP **PKPdf** **04 28 29.9 +0.4**
KIV *e* 04 31 17.7
KIV *e*SS SS 04 48 36.2 -4.0
KIV pmax pmax
comp=Z,162nm,1.1s
KIV Kislovodsk **136.76 316** PKPdf **PKPdf** **04 28 29.1 -0.5**
SUE Sulen **136.81 358** *e* PKPpre 04 28 21.3
SUE *e*PKPdf **PKPdf** **04 28 29.9 +1.0**
SHA1 Shidzhatmaz **136.86 316** *i* PKIKP **PKPdf** **04 28 29.4 -0.5**
HFS Hagfors **136.89 351** PKhKP PKPpre 04 28 16.9
comp=Z,13nm,0.5s,baz=69,slow=2.3,SNR=30
HFS PKP **PKiKP** **04 28 30.6 -0.4**
comp=Z,32nm,0.7s,baz=128,slow=2.4,SNR=7.0
HFS SKPbc **SKiKP** **04 31 12.4 -1.8**
comp=Z,31nm,0.9s,baz=33,slow=3.5,SNR=11
SKAR Skarslia **136.97 355** *e* PKPpre 04 28 19.4
SKAR *e*PKPdf **PKiKP** **04 28 31.9 +0.6**
NEY Neytrino **137.01 315** *i* PKIKP **PKiKP** **04 28 31.6 -0.5**
TASB TASBURUN-IGDIR **137.09 310** *e*P PKPpre 04 28 21.2
AKH Akhalkalaki **137.16 312**⇑P **PKiKP** **04 28 31.5 -1.0**
ASK Askoy **137.37 357** *e* PKPpre 04 28 18.9
ASK *e*PKPdf **PKiKP** **04 28 32.4 +0.4**
BER Bergen **137.46 357** *e* PKPpre 04 28 22.3
BER *e*PKPdf **PKPdf** **04 28 30.9 +0.8**
OSL Oslo **137.47 353** *e* PKPpre 04 28 21.1
CLDR Caldiran **137.59 309** *e*P PKPpre 04 28 21.8
KARS Kars **137.72 311** *e*P **PKPdf** **04 28 32.0 +0.5**
ODD1 Odda **137.86 356** *e* PKPpre 04 28 21.1
ODD1 *e*PKPdf **PKPdf** **04 28 31.8 +0.9**
KONO Kongsberg **137.87 354** *e* PKPpre 04 28 22.0
KONO *e*PKPdf **PKiKP** **04 28 32.8 -0.2**
IDID Didziasalis **137.96 339** *e*P PKPpre 04 28 23.6
ISAL Salakas **137.97 339** *e*P PKPpre 04 28 24.6
IIGN Ignalina **138.11 339** *e*P PKPpre 04 28 24.1
AGRB Hanur-Agry **138.13 310** *e*P **PKiKP** **04 28 33.7 -0.8**
VANB Van **138.15 308** *e*P **PKiKP** **04 28 33.5 -1.0**
MNK Minsk **138.19 337**⇓ *e*PKIKP **PKPdf** **04 28 32.0 +0.3**
MNK pmax pmax
comp=Z,300nm,1.0s
MNK Minsk **138.19 337** *i* PKP PKPpre 04 28 24.8
comp=E,5.0nm,0.9s
MNK *i* PKP PKPpre 04 28 24.8
comp=N,47nm,0.9s
MNK *i* PKP PKPpre 04 28 24.8
comp=Z,111nm,0.8s
MNK *i* pPKP pPKPdf 04 30 37.4 -5.4
MNK *i* SKP **SKPbc** **04 31 05.6 -7.8**
MNK *i* PP **PP** **04 31 20.9 -7.2**
MNK *i* PKS **PKSdf** **04 32 00.8 -6.6**
MNK *i* PPP PPP 04 34 27.7
MNK *i* SKS **SKSdf** **04 34 41.4 -7.7**
MNK *i* SKKS **SKKSdf** **04 44 15.9 -9.0**
MNK *i* SS **SS** **04 48 46.9 -8.5**
MNK *i* SSS SSS 04 54 05.9
MNK *i* LRM MLR 05 29 49.6
comp=E,18nm,16.9s
MNK *i* LRM MLR 05 29 59.1
comp=N,307nm,23.8s
MNK *i* LRM MLR 05 30 02.5
comp=Z,87nm,14.2s
SENK Senkaya-Erzuru **138.26 311** *e*P PKPpre 04 28 24.6
NACGM Naroch **138.27 338** *i* PKP **PKPdf** **04 28 25.2 -6.5**
NACGM *i* PKP **PKPdf** **04 28 25.2 -6.5**
NACGM *i* PKP **PKPdf** **04 28 25.2 -6.5**
NACGM *i* sP **PKiKP** **04 28 31.0 -3.0**
NACGM *i* PP **pPKPdf** **04 30 48.4 +5.5**
NACGM *i* sPKP 04 31 34.3
NACGM *i* PPP PPP 04 33 22.7
NACGM *i* SKS SKSdf 04 33 54.1 -55
NACGM *i* SS SS 04 47 29.9 -86
NACGM *i* SSS SSS 04 53 44.7
BLS5 Blasjo **138.36 356** *e* PKPpre 04 28 21.8
BLS5 *e*PKPdf PKPpre 04 28 29.8
CUKT Cukurca **138.37 306** *e*P PKPpre 04 28 22.8
AKDM Akdamar-Van **138.53 308** *e*P PKPpre 04 28 24.6
RAYN Ar Rayn **138.55 285** *i* PKPdf **PKPdf** **04 28 26.6 -6.8**
SNR=8.0
RAYN Ar Rayn **138.55 285** PKHKP PKPpre 04 28 25.9
RAYN 04 28 33.9
RAYN Ar Rayn **138.55 285** PKPpre PKPpre 04 28 25.9
RAYN PKPdf **PKPdf** **04 28 33.9 +0.6**
MLAZ Malazgirt-MUS **138.60 309** *e*P **PKPdf** **04 28 33.6 +0.5**
KMY Karmoy **138.63 357** *e* PKPpre 04 28 15.7
KMY *e*PKPdf **PKPdf** **04 28 33.3 +1.0**
PABE Paberze **138.72 341** *e*P **PKPdf** **04 28 24.9 -7.7**
KOPR Koprukoy-ERZUR **138.82 311** *e*P **PKPdf** **04 28 34.5 +1.0**
SOC Sochi **138.86 317** *c* PKIKP **PKPdf** **04 28 32.9 -0.3**
SOC *e* 04 31 33.8
SOC *e*PPP PPP 04 34 50.6
PBUR Paburge **138.89 343** *e*P **PKPdf** **04 28 26.7 -6.2**
CHOM Cayeli-Rize **139.19 313** *e*P PKPpre 04 28 26.3
HOMB Homborsund **139.34 354** *i* P PKPpre 04 28 27.0
HOMB Homborsund **139.34 354** *e* PKPpre 04 28 26.3
HOMB *e*PKPdf **PKPdf** **04 28 34.8 +1.2**
SNART Snartemo **139.38 355** *i* P PKPpre 04 28 26.4
SNART Snartemo **139.38 355** *e* PKPpre 04 28 25.7
SNART *e*PKPdf **PKPdf** **04 28 33.9 +0.2**
VRTB Varto-Mus **139.40 310** *e*P PKPpre 04 28 28.6
ANN Anapa **139.74 320** *i* PKIKP **PKiKP** **04 28 37.1 -0.2**
ANN pmax pmax
comp=Z,104nm,1.2s
ONAU Onsala **139.78 351** *i* P PKPpre 04 28 27.2
ONAU *i* P PKPpre 04 28 27.2
SVAN Silvan-Diyarba **139.92 308** *e*P **PKPdf** **04 28 36.1 +0.7**
KTUT Trabzon **139.92 313** *e*P **PKPdf** **04 28 35.4 +0.2**
YEDI Yedisu-Bingol **139.96 311** *e*P **PKPdf** **04 28 29.9 -5.7**
BNGB Bingl **140.02 310** *e*P **PKPdf** **04 28 30.1 -5.6**
KMBO Kilima Mbogo **140.03 246** PKhKP PKPpre 04 28 31.8
comp=Z,2.7nm,0.6s,baz=94,slow=2.4,SNR=10
KMBO PKP **PKiKP** **04 28 38.0 -1.2**
comp=Z,27nm,1.0s,baz=52,slow=4.8,SNR=18
KMBO SKPbc **SKiKP** **04 31 23.7 +1.3**
comp=Z,42nm,1.1s,baz=56,slow=3.5,SNR=22
KAC Achnashellach **140.12 6** *e*P **PKPdf** **04 28 28.9 -6.2**
BLEU Blekinge **140.14 348** *i* P **PKPdf** **04 28 27.6 -7.5**
MCD Coleburn Disti **140.21 4** *e*P **PKPdf** **04 28 28.6 -6.7**
SUW Suwalki **140.22 340** *e*PKP **PKPdf** **04 28 29.4 -6.0**
SUW Suwalki **140.22 340** *e*P **PKPdf** **04 28 29.8 -5.6**

KPL Plockton **140.25 6** *e*P **PKPdf** **04 28 28.3 -7.0**
DEL Delary **140.36 349** *i* P **PKPdf** **04 28 29.5 -6.0**
AKASG Malin Array Be **140.48 332** PKhKP PKPpre 04 28 29.2
comp=Z,17nm,0.4s,baz=40,slow=4.0,SNR=12
AKASG PKP **PKiKP** **04 28 37.9 -0.8**
comp=Z,35nm,0.5s,baz=43,slow=2.7,SNR=16
AKASG SKPbc **SKiKP** **04 31 21.7 -0.1**
comp=Z,6.7nm,0.6s,baz=42,slow=3.7,SNR=4.7
DYBB Diyarbakir **140.78 309** *e*P **PKPdf** **04 28 31.3 -5.7**
DRUM Mains of Drumt **140.92 3**⇑ *e*P **PKPdf** **04 28 31.0 -5.5**
MUD Monsted U'grnd **141.06 353** *i* P **PKPdf** **04 28 30.9 -5.8**
LUNU Lund **141.23 349** *i* P **PKPdf** **04 28 32.3 -4.8**
INVG Invergeldie, C **141.29 5** *e*P **PKPdf** **04 28 32.3 -4.9**
LAWE Loch Awe, Argy **141.34 6** *e*P **PKPdf** **04 28 32.7 -4.6**
COP Copenhagen **141.35 350** *e*P **PKPdf** **04 28 33.1 -4.2**
COP IAmb IAmb 04 28 39.3
comp=Z,78nm,0.9s
ILIC ilic-Erzincan **141.37 312** *e*P **PKPdf** **04 28 34.3 -3.8**
BSD Bornholm Skovb **141.44 348** *e*P **PKPdf** **04 28 32.6 -4.9**
BSD Bornholm Skovb **141.44 348** *i* P **PKPdf** **04 28 32.8 -4.7**
BSD IAmb IAmb 04 28 33.5
comp=Z,66nm,0.7s
SIM Simferopol' **141.65 322** *d* PKHKP PKPpre 04 28 34.3
SIM pmax pmax
comp=Z,114nm,0.9s
LLD Lille Linde **141.72 350** *i* P **PKPdf** **04 28 35.5 -2.5**
RSDY Resadiye-TOKAT **141.86 314** *e*P **PKPdf** **04 28 33.9 -4.9**
PGBU Glenifferbraes **141.87 5** *e*P **PKPdf** **04 28 34.6 -3.7**
ESY Stoneypath **141.90 4**⇑ *e*P **PKPdf** **04 28 33.8 -4.5**
MALT Malatya **141.91 310** *e*P **PKPdf** **04 28 36.5 -2.6**
URFA Urfa **141.93 308** *e*P **PKPdf** **04 28 35.2 -3.9**
EBL Broad Law **142.02 4**⇑ *e*P **PKPdf** **04 28 34.9 -3.6**
SVSK Karacayir **142.29 313** *e*P **PKPdf** **04 28 37.7 -1.8**
CLGH Cloghs, Cushen **142.41 7** *e*P **PKPdf** **04 28 36.0 -3.3**
KVT Kavak **142.42 315** *e*P **PKPdf** **04 28 38.4 -1.4**
TOKT Tokat **142.43 314** *e*P **PKPdf** **04 28 37.9 -1.9**
EKA Eskdalemuir Ar **142.45 4** PKhKP PKPpre 04 28 36.2
comp=Z,43nm,0.6s,baz=343,slow=2.9,SNR=114
EKA PP **PP** **04 31 56.4 +3.0**
comp=Z,29nm,1.1s,baz=352,slow=5.5,SNR=6.3
EKA SKKPbc SKKPbc 04 39 44.5 +0.1
comp=Z,9.9nm,1.0s,baz=175,slow=4.2,SNR=7.1
ESK Eskdalemuir **142.46 4** *e*P **PKPdf** **04 28 35.6 -3.7**
DARE Darende-Malatya **142.50 311** *e*P **PKPdf** **04 28 38.6 -1.5**
SNOP Sinop **142.53 317** *e*P **PKPdf** **04 28 37.7 -2.2**
NEWG New Galloway **142.58 5** *e*P **PKPdf** **04 28 36.6 -2.9**
GKP Gorka Klasztor **142.60 344** *e*PKP **PKPdf** **04 28 37.5 -2.1**
GKP Gorka Klasztor **142.60 344** *e*P **PKPdf** **04 28 37.8 -1.8**
DIKM Dikmen **142.68 317**⇑P **PKPdf** **04 28 38.2 -1.9**
DIKM Dikmen **142.68 317** *e*P **PKPdf** **04 28 38.1 -2.0**
SORM Soroca **142.71 330**⇑P **PKPdf** **04 28 36.5 -3.5**
SORM Soroca **142.71 330**⇑PKHKP PKPpre 04 28 36.5
SKMB Sankelmark Bun **142.73 352** *e*PKPbc **PKPdf** **04 28 38.4 -1.3**
baz=14,slow=2.9
GAL1 Galloway **142.78 6**⇑ *e*P **PKPdf** **04 28 37.1 -2.7**
BEL Belsk **142.84 340** *e*PKP **PKPdf** **04 28 38.8 -1.3**
EDMD Edmundbyers **143.03 3** *e*P PKPbc 04 28 38.3 -0.1
KESW Keswick, Cumbr **143.19 4**⇑ *e*P PKPab 04 28 38.1 -0.5
GAZ Gaziantep **143.23 309** *e*P **PKPdf** **04 28 40.8 -0.6**
GMM Mts of Mourne **143.26 7**⇑ *e*P PKPab 04 28 38.9 0.0
KIS Kishinev **143.27 328**⇓ *i* PKP PKPab 04 28 35.0 -4.1
comp=Z,780nm,6.7s
KIS *e*pPKP pPKPdf 04 30 40.0 -12
KIS Kishinev **143.27 328** *e*PP PP 04 31 54.0 -4.8
MILM Milestii Mici **143.33 328**⇑P PKPab 04 28 37.6 -1.7
BZK Bozkurt **143.33 318**⇑P **PKPdf** **04 28 40.7 -0.6**
BZK Bozkurt **143.33 318** *e*P **PKPdf** **04 28 41.0 -0.3**
KMRS Kahramanmaras **143.33 309** *e*P PKPbc 04 28 40.7 +0.7
LVV L'vov **143.34 335** *e*PKIKP PKPbc 04 28 40.0 +0.4
LVV *e* 04 35 00.5
LVV *e*SS SS 04 49 54.4 -0.3
BSEG Bad Segeberg **143.37 351** *e*PKPbc **PKPdf** **04 28 40.4 -0.5**
baz=14,slow=2.9
IOMK Kirk Michael **143.39 6**⇑ *e*P PKPab 04 28 39.3 -0.1
ILTH Belurgan, Co L **143.42 8**⇑ *e*P PKPab 04 28 39.5 +0.1
HLG Helgoland **143.43 354** *e*PKPbc **PKPdf** **04 28 40.9 -0.1**
baz=14,slow=2.9
GDLE Glaisdale, N Y **143.49 2** *e*P PKPab 04 28 39.6 -0.1
WIM Isle of Man **143.49 6**⇑ *e*P PKPbc 04 28 40.1 +0.2
IGLA Glengowla, Co **143.54 11**⇑ *e*P PKPab 04 28 39.9 0.0
BNN Bunyan **143.55 312** *e*P PKPab 04 28 40.7 0.0
IAS Iasi **143.75 330**⇑P PKPbc 04 28 39.7 -1.2
IAS Iasi **143.75 330**⇑PKHKP PKPpre 04 28 39.7
CORM Corum **143.80 315** *e*P **PKPdf** **04 28 42.1 -0.2**
HPK Haverah Park **143.91 3**⇑ *e*P PKPab 04 28 41.6 +0.2
KWP Kalwaria Pacla **144.00 336** *e*PKP **PKPdf** **04 28 42.7 +0.4**
VASR Vaslui **144.03 329**⇑P PKPbc 04 28 41.4 -0.4
KOZT Kozan **144.13 310** *e*P **PKPdf** **04 28 43.2 +0.4**
RUE Ruedersdorf **144.14 347** *e*PKPbc **PKPdf** **04 28 43.2 +0.8**
baz=14,slow=2.9
KURC Kurucasile-Bar **144.19 318** *e*P PKPbc 04 28 41.1 -1.4
WPS Cemaes, Angles **144.25 6**⇑ *e*P **PKPdf** **04 28 42.5 0.0**
CANT Cankiri **144.26 316** *e*P **PKPab** **04 28 43.8 +0.6**
WMM Mynydd Eilian **144.27** *e*P PKPbc 04 28 42.4 +0.1
TAHT Tahtakopru-Hat **144.29 308** *e*P **PKPab** **04 28 43.9 +0.5**
WLF1 Llynfaes **144.37 6**⇑ *e*P **PKPdf** **04 28 42.8 +0.1**
CEYT Ceyhan **144.37 309** *e*P **PKPab** **04 28 44.3 +0.6**
YRC Rhoscolyn **144.39 6**⇑ *e*P PKPbc 04 28 42.7 0.0
H07N1 FLORES T-PHASB **144.41 46** *e*PKP **PKPab** **04 28 43.6 -0.2**
LBWR Ladybower, Pea **144.47 3**⇑ *e*P **PKPab** **04 28 43.2 -0.2**
LMK Market Rasen **144.47 2**⇑ *e*P PKPbc 04 28 43.1 +0.2
TLCR **144.49 326**⇑P **PKPab** **04 28 44.2 +0.4**
TLCR **144.49 326**⇑PKIKP **PKPab** **04 28 44.2 +0.4**
H07S1 FLORES T-PHASB **144.50 46** PKP **PKPab** **04 28 44.2 +0.1**
SNR=23
H07S1 FLORES T-PHASB **144.50 46** *e*PKP **PKPab** **04 28 44.2 +0.1**
VARL Varlezi **144.51 328**⇑P **PKPab** **04 28 44.1 +0.2**
BURAR Bucovina Array **144.54 332**⇑P **PKPab** **04 28 44.9 +0.8**
BURAR Bucovina Array **144.54 332**⇑PKIKP **PKPab** **04 28 44.9 +0.8**
YLL Llanberis **144.54 6**⇑ *e*P **PKPab** **04 28 43.6 -0.2**
OJC Ojcow **144.55 340** *e*PKPab **PKPab** **04 28 44.0 +0.1**
OJC *e*PKPdf PKPbc 04 28 44.4 +1.0
GIUM Giurgiulesti **144.61 327**⇑P **PKPab** **04 28 45.0 +0.8**
GHRR **144.62 328**⇑P **PKPab** **04 28 44.1 -0.2**
BIZ Bicaz **144.63 330**⇑P **PKPab** **04 28 45.2 +0.9**
TESR Tescani **144.68 329**⇑P **PKPdf** **04 28 43.6 +0.1**
BRTR Keskin Array B **144.68 315** PKP **PKPab** **04 28 44.6 -0.3**
comp=Z,208nm,0.9s,baz=134,slow=3.6,SNR=370
BRTR SKKPbc SKKPbc 04 39 37.0 +2.3
comp=Z,5.3nm,1.0s,baz=198,slow=3.6,SNR=7.8
KOLS Kolonicke sedl **144.73 336** *e*PKIKP **PKPab** **04 28 45.0 +0.3**
KOLS Kolonicke sedl **144.73 336** *e*PKP **PKPab** **04 28 45.0 +0.3**
STNC Stoke **144.75 4**⇑ *e*P **PKPab** **04 28 44.8 +0.3**
FLTG Flechtingen **144.78 350** *e*PKPbc **PKPab** **04 28 44.9 +0.2**
baz=14,slow=2.9
SCHL Schela **144.79 327**⇑P **PKPdf** **04 28 43.7 0.0**
NRDL Niedersach Rie **144.80 351** *e*PKPbc **PKPab** **04 28 45.3 +0.6**
baz=14,slow=2.9
KAMT Kaman **144.80 314** *e*P PKPbc 04 28 44.4 -0.2
KRTS Karatas **144.82 309** *e*P **PKPab** **04 28 46.1 +0.7**
CFR Carcaliu **144.85 327**⇑P PKPbc 04 28 44.2 -0.2
CFR Carcaliu **144.85 327**⇑PKIKP PKPbc 04 28 44.2 -0.2
FOEL Foel Wylfa **144.87 5**⇑ *e*P PKPbc 04 28 44.0 -0.3
LLW Llanuwychllyn **144.87 5**⇑ *e*P **PKPab** **04 28 44.7 -0.4**
TPGR Topolog **144.91 326**⇑P **PKPab** **04 28 45.2 -0.3**
PETR Petresti **144.94 328**⇑P **PKPdf** **04 28 43.9 0.0**
IWEX Carrickbyrne, I **144.97 9**⇑ *e*P **PKPab** **04 28 45.0 -0.4**
ODBI Odobesti **145.00 328**⇑P **PKPab** **04 28 46.6 +0.8**
KSP Ksiaz **145.05 344** *e*PKPdf **PKPbc** **04 28 45.1 +0.3**
KSP *e*PKPab **PKPab** **04 28 46.4 +0.6**
NIE Niedzica **145.06 338** *e*PKP **PKPab** **04 28 46.6 +0.7**
ASSE Asse, Remlinge **145.06 350** *e*PKPbc **PKPab** **04 28 46.2 +0.5**
baz=14,slow=2.9
CRVS Cervenica-Dubn **145.07 337** *e*PKIKP **PKPbc** **04 28 45.3 +0.3**
CRVS Cervenica-Dubn **145.07 337** *e*PKP **PKPbc** **04 28 45.3 +0.3**
VRI Vrincioaia **145.10 329**⇑P **PKPdf** **04 28 44.0 -0.2**
VRI Vrincioaia **145.10 329**⇑PKIKP **PKPdf** **04 28 44.0 -0.2**
SERE Sereflikochisa **145.10 314** *e*P **PKPbc** **04 28 45.5 0.0**
PLOR Plostina **145.15 329**⇑P **PKPbc** **04 28 44.9 -0.4**
PLOR Plostina **145.15 329**⇑PKIKP **PKPbc** **04 28 44.9 -0.4**
CWF Charnwood Fore **145.15 3**⇑ *e*P **PKPbc** **04 28 44.6 -0.5**
LOD Lodumlu **145.19 316** *e*P **PKPdf** **04 28 44.5 -0.2**
AFSR Afar-Bala (An **145.20 315** *e*P **PKPdf** **04 28 44.7 -0.4**
HWQ Hawqa **145.20 305** *e*P **PKPbc** **04 28 45.6 -0.4**
WACR West Acre **145.22 1**⇑ *e*P **PKPbc** **04 28 45.4 +0.2**
BMR Baia Mare **145.24 334**⇑P **PKPbc** **04 28 45.8 +0.3**
BMR Baia Mare **145.24 334**⇑PKIKP **PKPbc** **04 28 45.8 +0.3**
HARR Harsova **145.28 326**⇑P **PKPbc** **04 28 45.9 +0.2**
HARR Harsova **145.28 326**⇑PKIKP **PKPbc** **04 28 45.9 +0.2**
GRER **145.31 328**⇑P **PKPab** **04 28 47.6 +0.6**
ARCR ARCALIA **145.32 332**⇑P **PKPbc** **04 28 46.2 +0.5**

MERS Mersin **145.33 310** *e*P **PKPdf** **04 28 45.3 +0.3**
OSTC Ostas **145.33 343** *e*PKP **PKPbc** **04 28 45.7 0.0**
OSTC *ex* x 04 28 47.7
CHVC Chvalec **145.35 344** *e*PKP **PKPbc** **04 28 45.2 -0.5**
CHVC *ex* x 04 28 46.9
CLZ Clausthal **145.39 350** *e*PKPdf **PKPbc** **04 28 46.1 +0.3**
baz=17,slow=1.6
CLZ *e*PKPbc **PKPab** **04 28 47.4 +0.3**
baz=14,slow=2.9
OKC Ostrava-Krasne **145.41 341** *e*PKIKP **PKPbc** **04 28 46.5 +0.6**
OKC Ostrava-Krasne **145.41 341** *e*PKP **PKPbc** **04 28 46.5 +0.6**
CLL Collm **145.41 347** *e*PKPdf **PKPbc** **04 28 46.0 +0.2**
CLL ⇑ *i*PKPbc **PKPab** **04 28 46.8 -0.4**
comp=Z,819nm,0.8s
CLL *i* PKPab **PKiKP** **04 28 48.3 -0.5**
CLL *e*PKPlp 04 28 49.0
comp=Z,600nm,19.9s
CLL *e*pPKPdf **pPKPdf** **04 30 58.0 +2.2**
CLL *e* 04 31 57.0
CLL *e*SKSdf **SKSdf** **04 35 00.0 -0.6**
CLL *e*PSKS 04 42 21.0
CLL *e*PPS PPS 04 45 12.0
CLL *e*SS **SS** **04 50 18.0 +0.4**
CLL *e*sSSS 04 59 00.0
CLL Collm **145.41 347**⇑ *e*PKIKP **PKPab** **04 28 46.8 -0.4**
CLL *e* 04 28 49.0
CLL *e* 04 30 58.0
CLL pmax pmax
comp=Z,819nm,0.8s
CLL Collm **145.41 347** *e*PKPdf **PKPbc** **04 28 45.8 0.0**
baz=17,slow=1.6
CLL *e*PKPbc **PKPab** **04 28 47.2 0.0**
baz=14,slow=2.9
UPC Upice **145.43 344** *e*PKIKP **PKPbc** **04 28 46.6 +0.6**
UPC *e* 04 28 49.0
UPC Upice **145.43 344** *e*PKP **PKPbc** **04 28 46.6 +0.6**
UPC *ex* x 04 28 48.0
KULU Kulu **145.44 314** *e*P **PKPbc** **04 28 46.3 -0.2**
DPC Dobruska-Polom **145.49 343** *e*PKIKP **PKPbc** **04 28 45.9 -0.3**
DPC Dobruska-Polom **145.49 343** *e*PKP **PKPbc** **04 28 45.9 -0.3**
DPC *ex* x 04 28 47.5
YESY Yesilyurt **145.50 312** *e*P **PKPbc** **04 28 46.6 -0.1**
RCY Rachaya **145.54 304** *e*P **PKPbc** **04 28 46.9 -0.1**
BHL Bhannes **145.55 304** *e*P **PKPab** **04 28 48.1 -0.4**
LANS Liptovska Anna **145.57 339** *e*PKP2 **PKPab** **04 28 48.4 +0.4**
LANS Liptovska Anna **145.57 339** *e*PKP **PKPab** **04 28 48.4 +0.4**
KRLC Kraliky **145.61 342** *e*PKIKP **PKPbc** **04 28 45.9 -0.6**
KRLC Kraliky **145.61 342** *e*PKP **PKPbc** **04 28 45.9 -0.6**
KRLC *ex* x 04 28 47.8
BRG Berggiesshubel **145.61 346**⇓ *i*PKPf 04 28 45.9
BRG ⇑ *i*PKP **PKPab** **04 28 48.0 0.0**
BRG Amp 04 28 49.4
comp=Z,683nm,1.1s
BRG *ex* x 04 28 55.2
BRG Amp 04 28 55.8
comp=Z,104nm,0.7s
BRG *ex* x 04 29 06.8
BRG Amp 04 29 09.2
comp=Z,84nm,1.0s
BRG pPKP pPKPdf 04 30 57.6 +1.4
BRG Amp 04 31 02.3
comp=Z,161nm,1.6s
BRG Berggiesshubel **145.61 346** *e*PKPdf **PKPbc** **04 28 46.4 -0.1**
baz=17,slow=1.6
BRG *e*PKPbc **PKPab** **04 28 48.0 0.0**
baz=14,slow=2.9
NEHR Nehoiu **145.62 328**⇑P **PKPdf** **04 28 45.5 +0.3**
SHEL Horse Pasture **145.63 168** PKHKP PKPpre 04 28 44.1
SHEL Horse Pasture **145.63 168** **PKPdf** **04 28 44.1 -1.9**
MORC Moravsky Berou **145.65 341** *e*PKP **PKPdf** **04 28 45.8 +0.7**
RSBS Rosebush, Pembs **145.65 7**⇑ *e*P **PKPbc** **04 28 46.7 +0.1**
AMRR Amara **145.65 326**⇑P **PKPab** **04 28 48.1 -0.2**
AMRR Amara **145.65 326**⇑PKP2 **PKPab** **04 28 48.1 -0.2**
DOPR Dopca **145.68 330**⇑P **PKPbc** **04 28 47.2 +0.4**
FBE Freiberg **145.70 347** *e*PKPdf **PKPbc** **04 28 46.8 +0.1**
baz=17,slow=1.6
FBE *e*PKPbc **PKPab** **04 28 48.5 +0.2**
baz=14,slow=2.9
ISR Istrita **145.71 328**⇑P **PKPbc** **04 28 46.8 -0.2**
ISR Istrita **145.71 328**⇑PKIKP **PKPbc** **04 28 46.8 -0.2**
GTTG Gottingen **145.74 351** *e*PKPdf **PKPbc** **04 28 46.5 -0.3**
baz=17,slow=1.6
GTTG *e*PKPbc **PKPab** **04 28 48.4 -0.1**
baz=14,slow=2.9
MLR Muntele Rosu **145.75 329** PKPbc **PKPbc** **04 28 47.5 +0.3**
comp=Z,275nm,1.0s,baz=6.9,slow=3.6,SNR=59
MLR pPKPbc **pPKPdf** **04 30 57.7 +0.9**
comp=Z,61nm,1.1s,baz=51,slow=5.6,SNR=3.3
MLR SKKPbc SKKPbc 04 39 30.5 -0.1
comp=Z,13nm,0.9s,baz=133,slow=10,SNR=7.5
MLR Muntele Rosu **145.75 329**⇑P **PKPdf** **04 28 44.2 -1.3**
NEUB Neuenburg **145.75 348** *e*PKPdf **PKPbc** **04 28 46.6 -0.2**
baz=17,slow=1.6
NEUB *e*PKPbc **PKPab** **04 28 48.2 -0.3**
baz=14,slow=2.9
KIZK Mersin **145.76 309** *e*P **PKPdf** **04 28 46.3 +0.7**
MCH1 Michaelchurch **145.78 5**⇑ *e*P **PKPbc** **04 28 47.0 +0.1**
KECS Kecovo **145.78 337** *e*PKP2 **PKPab** **04 28 48.3 -0.4**
KECS Kecovo **145.78 337** *e*PKP **PKPab** **04 28 48.3 -0.4**
PVCC Panska Ves **145.78 345** *e*PKIKP **PKPbc** **04 28 46.4 -0.5**
PVCC Panska Ves **145.78 345** *e*PKP **PKPbc** **04 28 46.4 -0.5**
PVCC *ex* x 04 28 48.3
MBAR Mbarara **145.84 241** PKHKP PKPbc **PKPbc** **04 28 47.9 -0.5**
comp=Z,66nm,0.8s,baz=102,slow=2.0,SNR=93
MBAR Mbarara **145.84 241** PKHKP PKPpre 04 28 44.3
MBAR Mbarara **145.84 241** **PKPdf** **04 28 44.3 -2.4**
KALB Balgarevo **145.86 324**⇑P **PKPbc** **04 28 46.6 -0.8**
MDUB Mudurnu **145.91 318** *e*P **PKPdf** **04 28 45.3 -0.6**
CJR Cluj-Napoca **145.94 332**⇑P **PKPbc** **04 28 47.5 -0.1**
CJR Cluj-Napoca **145.94 332**⇑PKIKP **PKPbc** **04 28 47.5 -0.1**
MONM Monmouth **145.95 5**⇑ *e*P **PKPbc** **04 28 47.8 +0.4**
SILI Silifke-Mersin **145.97 309** *e*P **PKPbc** **04 28 48.7 +0.8**
LEHL Lehliu **146.02 327**⇑P **PKPbc** **04 28 47.6 -0.2**
MMAI Mount Meron Ar **146.03 303** PKPbc **PKPbc** **04 28 49.1 +0.8**
comp=Z,288nm,0.8s,baz=68,slow=4.6,SNR=170
MMAI pPKPbc **pPKPdf** **04 30 57.9 +0.4**
comp=Z,63nm,0.9s,baz=56,slow=4.4,SNR=8.7
STRD Stroud **146.06 4**⇑ *e*P **PKPbc** **04 28 47.9 +0.2**
PLAR PLOIESTI **146.12 328**⇑P **PKPbc** **04 28 49.0 +1.0**
EREN Erenkoy **146.12 308** *e*P **PKPbc** **04 28 48.9 +0.5**
LTVH Ltavrtes, Hu **146.13 335**⇑P **PKPbc** **04 28 48.1 +0.1**
OLDB Oldbury-Upon-S **146.15 4**⇑ *e*P **PKPbc** **04 28 48.1 +0.2**
SULR **146.17 328**⇑P **PKPdf** **04

VYHS e 04 28 50.1
PLN Plauen 146.37 348 ePKPdf **PKPbc 04 28 47.6 -1.0**
baz=17,slow=1.6
PLN ePKPbc **PKiKP 04 28 50.0 -0.8**
baz=14,slow=2.9
TANN Tannenbergstha 146.37 347 ePKPdf **PKPbc 04 28 47.7 -1.0**
baz=17,slow=1.6
TANN ePKPbc **PKiKP 04 28 50.2 -0.7**
baz=14,slow=2.9
GULT Gulveren 146.37 318 eP **PKPdf 04 28 47.2 +0.5**
MTUR Matau 146.37 329 ⇑P **PKPbc 04 28 48.7 -0.2**
MTUR Matau 146.37 329 ⇑PKIKP **PKPbc 04 28 48.7 -0.2**
KONT Konya--Tatoy 146.40 313 eP **PKPbc 04 28 49.5 +0.4**
JAVC Velka Javorina 146.42 341 ePKP **PKPbc 04 28 48.2 -0.7**
UBBA Unterbreizbach 146.44 350 ePKPdf **PKPbc 04 28 47.5 -1.1**
baz=17,slow=1.6
UBBA ePKPbc **PKiKP 04 28 49.9 -0.9**
baz=14,slow=2.9
GUNZ Gunzen 146.44 347 ePKPdf **PKPbc 04 28 47.9 -1.0**
baz=17,slow=1.6
GUNZ ePKPbc **PKiKP 04 28 50.4 -0.6**
baz=14,slow=2.9
PSZ Piszkesteto 146.47 337 ⇑P **PKPbc 04 28 47.8 -1.2**
PSZ Piszkesteto 146.47 337 ⇑PKIKP **PKPbc 04 28 47.8 -1.2**
ARR Arges 146.48 330 ⇑P **PKPbc 04 28 48.7 -0.5**
BERE Bereket-Mersin 146.50 310 eP **PKPbc 04 28 50.4 +0.8**
WERN Wernitzgruen 146.51 347 ePKPdf **PKPbc 04 28 48.1 -1.0**
baz=17,slow=1.6
WERN ePKPbc **PKiKP 04 28 50.7 -0.5**
baz=14,slow=2.9
SILT Sile 146.51 320 eP **PKPbc 04 28 50.2 +1.0**
NKC Novy Kostel 146.54 347 ePKIKP **PKPdf 04 28 47.0 +0.4**
NKC Novy Kostel 146.54 347 ePKP **PKPdf 04 28 47.0 +0.4**
NKC ex x 04 28 50.1
PCED Cedros 146.57 46 ePKP **PKPdf 04 28 48.0 +1.1**
WOL Wolverton 146.58 3⇑ eP **PKPbc 04 28 49.9 +0.8**
CIFT Cifteler, Eski 146.59 316 eP **PKPdf 04 28 47.6 +0.5**
HTL Hartland 146.62 7⇑ eP **PKPbc 04 28 49.0 -0.2**
KRUC Moravsky 146.63 342 ePKP **PKPdf 04 28 47.4 +0.7**
TREC Trest 146.68 343 ePKIKP **PKPdf 04 28 47.7 +0.9**
TREC Trest 146.68 343 ePKP **PKPdf 04 28 47.7 +0.9**
TREC ex x 04 28 50.4
HRT Hereke 146.69 319 eP **PKPdf 04 28 47.3 +0.2**
PBCC Pribram 146.70 345 ePKP **PKPdf 04 28 47.6 +0.8**
PBCC ex x 04 28 50.4
PBCC ex x 04 28 53.6
PCAN Candelaria 146.80 46 ePKP **PKPdf 04 28 48.7 +1.4**
SMOL Smolenice 146.80 340 ePKIKP **PKPdf 04 28 48.1 +1.1**
SMOL Smolenice 146.80 340 ePKP **PKPdf 04 28 48.1 +1.1**
SMOL e 04 28 51.6
ELSH Elham, Standar 146.81 0⇑ eP **PKiKP 04 28 50.8 -0.8**
SRBC Serra Branca 146.81 44 ePKP **PKPdf 04 28 48.0 +0.7**
KLYT Kilyos 146.82 320 eP **PKPdf 04 28 48.2 +1.0**
PICO Pico 146.82 46 ePKP **PKPdf 04 28 47.6 +0.2**
ROSA Rosais 146.84 45 ePKP **PKPbc 04 28 49.9 -0.3**
ROSA Rosais 146.84 45 PKPdf **PKPdf 04 28 45.6 -1.8**
BSZH Besenyszg 146.84 336 ⇑P **PKPbc 04 28 48.8 -1.2**
MANZ Manzenberg 146.85 347 ePKPdf **PKPdf 04 28 48.4 +1.4**
baz=17,slow=1.6
MANZ ePKPbc **PKiKP 04 28 51.5 -0.4**
baz=14,slow=2.9
PGRA Graciosa 146.85 44 ePKP **PKPdf 04 28 47.4 0.0**
ADVT Abdulvahap 146.86 319 eP **PKPdf 04 28 47.6 +0.2**
DEV Deva 146.89 332 ⇑P **PKPdf 04 28 48.6 +1.4**
DEV Deva 146.89 332 ⇑PKIKP **PKPdf 04 28 48.6 +1.4**
HUMR Humele 146.92 328 ⇑P **PKPdf 04 28 48.2 +0.9**
ISK Istanbul-Kandi 146.92 320 P **PKPdf 04 28 47.4 0.0**
ISK Istanbul-Kandi 146.92 320 eP **PKPdf 04 28 47.5 0.0**
KAVV Kandilli-Istan 146.92 320 eP **PKPdf 04 28 47.5 +0.1**
CAVI Cavuskoy 146.93 318 eP **PKPdf 04 28 47.9 +0.4**
MODS Modra-Piesok 146.97 341 ePKIKP **PKPdf 04 28 48.4 +1.1**
MODS Modra-Piesok 146.97 341 ePKP **PKPdf 04 28 48.4 +1.1**
MODS e 04 28 52.1
CSS Mathiatis 146.97 307 PKPdf **PKPdf 04 28 46.6 -1.2**
PMAN Manadas 146.98 45 ePKP **PKPbc 04 28 49.6 -1.0**
BEBN Eben Emael 146.99 355 dPKPdf **PKPdf 04 28 47.9 +0.7**
BEBN dPKPbc **PKPbc 04 28 51.0 +0.8**
BEBN dPKPab **PKPab 04 28 53.8 +0.4**
YLV Yalova 147.02 319 eP **PKPdf 04 28 48.4 +0.7**
BGKT Bogazkoy 147.03 320 eP **PKPdf 04 28 48.9 +1.3**
ROTZ Rotzenmuhle 147.04 347 ePKPdf **PKPdf 04 28 48.5 +1.1**
baz=17,slow=1.6
ROTZ ePKPbc **PKiKP 04 28 52.1 -0.1**
baz=14,slow=2.9
ROTZ ePKPab **PKPab 04 28 54.7 +1.0**
baz=15,slow=4.1
ROTZ epPKPbc **pPKPbc 04 31 01.8 +2.7**
PID Ribeirinha 147.06 45 ePKP **PKPdf 04 28 48.7 +0.9**
COPA Copaceanca 147.08 328 ⇑P **PKPdf 04 28 48.6 +1.0**
HMNX Herstmonceux 147.08 1⇑ eP **PKPbc 04 28 50.5 +0.1**
UCC Uccle 147.08 357 dPKPdf **PKPdf 04 28 48.2 +0.9**
UCC dPKPbc **PKPbc 04 28 51.2 +0.8**
UCC dPKPab **PKPab 04 28 54.1 +0.3**
AHRW Bad Neuenahr-A 147.11 353 ePKPdf **PKPdf 04 28 48.8 +1.3**
baz=17,slow=1.6
AHRW ePKPbc **PKiKP 04 28 51.9 -0.4**
baz=14,slow=2.9
AHRW ePKPab **PKPab 04 28 54.7 +0.7**
baz=15,slow=4.1
AHRW epPKPbc **pPKPbc 04 31 01.8 +2.5**
SRO Srobarova 147.12 339 ePKIKP **PKPdf 04 28 48.6 +1.1**
SRO Srobarova 147.12 339 ePKP **PKPdf 04 28 48.6 +1.1**
SRO e 04 28 52.0
SIRR Siria 147.12 334 ⇑P **PKPdf 04 28 49.1 +1.4**
SRO2 Moca 147.13 339 ePKIKP **PKPbc 04 28 50.8 +0.1**
SRO2 Moca 147.13 339 ePKP **PKPbc 04 28 50.8 +0.1**
CTYL Yalikoy Yolu 147.14 321 eP **PKPdf 04 28 47.9 +0.1**
MEM Membach 147.15 355 dPKPdf **PKPdf 04 28 48.1 +0.6**
MEM dPKPbc **PKiKP 04 28 51.5 -0.9**
MEM dPKPab **PKPab 04 28 53.9 -0.3**
CTKS Kestanelik-??a 147.15 321 eP **PKPdf 04 28 46.9 -0.9**
BTNL Ternell 147.16 355 dPKPdf **PKPdf 04 28 48.2 +0.6**
BTNL dPKPbc **PKPbc 04 28 51.3 +0.6**
GAZI Gazipasa 147.21 310 eP **PKPdf 04 28 47.7 -0.4**
GEMT Gemlik 147.21 319 eP **PKPdf 04 28 48.3 +0.4**
BSTI Sart Tilman 147.21 355 dPKPdf **PKPdf 04 28 48.5 +0.9**
BSTI dPKPbc **PKiKP 04 28 51.7 -0.8**
BSTI dPKiKP **PKPab 04 28 53.3 -1.1**
DYA Yadsworthy 147.24 6⇑ eP **PKPbc 04 28 51.2 +0.3**
LEF Lefka 147.24 308 ⇑P **PKPdf 04 28 49.2 +1.0**
LEF Lefka 147.24 308 eP **PKPdf 04 28 48.5 +0.4**
TNS Taunus Mts 147.25 352 ePKPdf **PKPdf 04 28 49.2 +1.4**
baz=17,slow=1.6
TNS ePKPbc **PKiKP 04 28 52.5 -0.2**
baz=14,slow=2.9
TNS ePKPab **PKPab 04 28 55.3 +0.6**
baz=15,slow=4.1
TNS epPKPbc **pPKPbc 04 31 02.2 +2.3**
EIL Elat 147.31 297 PKPbc **PKPdf 04 28 49.0 +0.5**
comp=Z,201nm,1.1s,baz=240,slow=0.9,SNR=25
EIL pPKPbc **pPKPab 04 31 01.9 +1.3**
comp=Z,104nm,1.3s,baz=166,slow=1.5,SNR=5.0
GRF Grafenberg Arr 147.31 348 ePKPdf **PKPdf 04 28 49.2 +1.4**
baz=17,slow=1.6
GRF ePKPbc **PKiKP 04 28 52.9 +0.1**
baz=14,slow=2.9
GRF ePKPab **PKPab 04 28 56.0 +1.1**
baz=15,slow=4.1
GRF epPKPbc **pPKPab 04 31 02.8 +2.6**
GRFO Grafenberg 147.31 348 PKHKP PKPpre 04 28 47.6
GRFO Grafenberg 147.31 348 PKPdf **PKPdf 04 28 47.6 -0.2**
GZR Gura Zlata 147.32 332 ⇑P **PKPdf 04 28 48.9 +0.9**
GZR Gura Zlata 147.32 332 ⇑PKIKP **PKPdf 04 28 48.9 +0.9**
KHC Kasperske Hory 147.32 345 ePKIKP **PKPdf 04 28 48.6 +0.7**
KHC e 04 28 56.2
KHC Kasperske Hory 147.32 345 ePKP **PKPdf 04 28 48.6 +0.7**
KHC ex x 04 28 52.4
KHC ex x 04 28 56.2
KHC ex x 04 29 49.5
KHC ex x 04 31 03.5
KHC eSKKP 04 39 22.0
CCA1 Carnmenellis 147.33 8⇑ eP **PKPbc 04 28 51.4 +0.3**
SLVT Silivri 147.34 321 eP **PKPdf 04 28 49.1 +1.0**
SHUT Suhut-Afyon 147.35 315 eP **PKPdf 04 28 49.0 +0.6**
SNF Seneffe 147.37 357 dPKPdf **PKPdf 04 28 48.8 +0.9**
SNF dPKPbc **PKiKP 04 28 52.2 -0.6**
SNF dPKPab **PKPab 04 28 55.4 +0.4**
BCLA Clavier 147.39 355 dPKPdf **PKPdf 04 28 48.4 +0.5**
BCLA dPKPbc **PKPbc 04 28 51.9 +0.6**
BCLA dPKPkP **PKiKP 04 28 53.6 +0.7**
BHOU Houvegnez 147.40 355 dPKPdf **PKPdf 04 28 49.2 +1.2**
BHOU dPKPbc **PKiKP 04 28 52.6 -0.4**
BHOU dPKPab **PKPab 04 28 55.7 +0.5**
CKRC Cesky Krumlov 147.43 344 ePKP **PKPdf 04 28 48.8 +0.7**
CKRC ex x 04 28 52.8
MDNY Mudanya-Bursa 147.44 319 eP **PKPdf 04 28 48.7 +0.4**
AMBH Ambrzfalva 147.44 335 ⇑P **PKiKP 04 28 53.3 +0.2**
BGES Gesves 147.44 356 dPKPdf **PKPdf 04 28 48.7 +0.7**
BGES dPKPbc **PKPbc 04 28 52.1 +0.7**
BGES dPKiKP **PKiKP 04 28 53.6 +0.6**
BGES dPKPab **PKPab 04 28 54.9 -0.5**
WET Wettzell 147.47 346 ePKPdf **PKPdf 04 28 49.4 +1.3**
baz=17,slow=1.6
WET ePKPbc **PKiKP 04 28 53.2 0.0**
baz=14,slow=2.9
WET ePKPab **PKPab 04 28 56.6 +1.0**
baz=15,slow=4.1
WET epPKPbc **pPKPab 04 31 03.5 +2.5**
PHSR Pinarhisar 147.49 322 eP **PKPdf 04 28 49.3 +0.9**
PAGU Agualva, Azore 147.52 44 ePKP **PKPdf 04 28 49.4 +0.9**
ADH Angra Heroismo 147.55 44 ePKP **PKPdf 04 28 49.3 +0.8**
BMRD Maredsous 147.55 356 dPKPdf **PKPdf 04 28 48.8 +0.7**
BMRD dPKPbc **PKiKP 04 28 52.7 -0.6**
BMRD dPKPab **PKPab 04 28 55.9 +0.2**
GEC2 GERESS Array S 147.56 345 ePKPdf **PKPdf 04 28 49.4 +1.0**
baz=17,slow=1.6
GEC2 ePKPbc **PKiKP 04 28 53.3 -0.2**
baz=14,slow=2.9
GEC2 ePKPab **PKPab 04 28 56.8 +0.8**
baz=15,slow=4.1
GEC2 epPKPbc **pPKPab 04 31 03.7 +2.3**
GERES GERESS Array B 147.56 345 PKPbc **PKPbc 04 28 51.5 -0.4**
comp=Z,203nm,0.6s,baz=31,slow=2.3,SNR=447
GERES pPKPbc **pPKPab 04 31 02.6 +1.2**
comp=Z,25nm,1.1s,baz=83,slow=4.4,SNR=3.5
VLAD Vladila 147.59 328 ⇑P **PKPbc 04 28 52.1 +0.1**
TVSB Tavsanli 147.59 317 eP **PKPdf 04 28 48.1 -0.6**
PSCM Serra do Cume 147.60 44 ePKP **PKPdf 04 28 50.2 +1.5**
BZS Buzias 147.66 333 ⇑P **PKPdf 04 28 48.1 -0.4**
BZS Buzias 147.66 333 ⇑PKIKP **PKPdf 04 28 48.1 -0.4**
RCHB Rochefort 147.66 355 dPKPdf **PKPdf 04 28 49.0 +0.7**
RCHB dPKPbc **PKiKP 04 28 52.8 -0.7**
SRE Strehaia 147.68 330 ⇑P **PKPbc 04 28 51.3 -1.0**
SRE Strehaia 147.68 330 ⇑PKHKP PKPpre 04 28 51.3
TIM Timisoara 147.73 334 ⇑P **PKPbc 04 28 52.7 +0.4**
TIM Timisoara 147.73 334 ⇑PKHKP PKPpre 04 28 52.7
ISP Isparta 147.74 314 PKHKP PKPpre 04 28 52.5
GIVF Givet 147.74 356 ePKIKP **PKPdf 04 28 48.1 -0.4**
GIVF pmax pmax
comp=Z,545nm,0.8s
DOU Dourbes 147.76 356 dPKPdf **PKPdf 04 28 49.3 +0.8**
DOU dPKPbc **PKiKP 04 28 53.0 -0.7**
CONA Conrad Observa 147.80 342 *i* P **PKPdf 04 28 49.0 +0.2**
comp=Z,238nm,0.7s,SNR=245
CONA eP **pPKPab 04 31 04.5 +2.1**
comp=Z,136nm,1.6s
EDRB Edirne 147.81 323 P **PKPdf 04 28 49.1 +0.2**
EDRB Edirne 147.81 323 eP **PKPdf 04 28 49.1 +0.2**
KCTX Karacabey (Bur 147.82 319 eP **PKPdf 04 28 49.1 +0.1**
BAIF Baives 147.82 357 ePKIKP **PKPdf 04 28 49.0 +0.4**
BAIF pmax pmax
comp=Z,644nm,1.0s
GEDZ Gediz 147.84 317 eP **PKPdf 04 28 49.9 +0.8**
BCK Bucak 147.87 313 eP **PKPdf 04 28 50.3 +1.1**
HERR Herculane 147.88 331 ⇑P **PKPbc 04 28 51.1 -1.6**
PLVB Pleven 147.91 327 ⇑P **PKPdf 04 28 50.6 +1.7**
BANR Banloc 148.05 333 ⇑P **PKiKP 04 28 53.9 -0.5**
WLF Walferdange 148.07 354 dPKPdf **PKPdf 04 28 50.3 +1.3**
WLF dPKPbc **PKiKP 04 28 54.4 0.0**
WLF Walferdange 148.07 354 ePKPdf **PKPdf 04 28 51.0 +1.9**
baz=17,slow=1.6
WLF ePKPbc **PKiKP 04 28 55.2 +0.8**
baz=14,slow=2.9
WLF ePKPab **PKPab 04 28 58.8 +0.9**
baz=15,slow=4.1
WLF epPKPbc **pPKPab 04 31 05.1 +2.5**
EDC Edincik 148.08 320 eP **PKPbc 04 28 53.9 +0.5**
ANTB Antalya 148.09 312 eP **PKPbc 04 28 52.1 -1.4**
SIMA Simav-Kutahya 148.10 317 eP **PKPdf 04 28 49.1 -0.5**
KORT Korkueli 148.26 313 eP **PKPdf 04 28 49.3 -0.6**
MDVR Moldovita 148.27 332 ⇑P **PKPdf 04 28 50.6 +1.0**
RKY Sarkoy-Tekirda 148.28 321 eP **PKPdf 04 28 49.8 0.0**
MOA Molln 148.33 343 *i* P **PKPdf 04 28 49.8 +0.2**
comp=Z,346nm,1.4s,SNR=87
MOA eP **pPKPab 04 31 05.6 +1.3**
comp=Z,52nm,1.1s
MOA eP **PP 04 32 28.7 +0.8**
comp=Z,41nm,1.7s
MOA eS **SKKPdf 04 40 26.5 -1.2**
comp=Z,10nm,1.2s
MORH Mrgy, Hungar 148.36 337 ⇑P **PKPdf 04 28 50.0 +0.4**
MORH Mrgy, Hungar 148.36 337 ⇑*i*P **PKPdf 04 28 49.8 +0.2**
KRBG Karabiga-Canak 148.39 321 eP **PKPdf 04 28 49.8 0.0**
BALB Balikesir 148.49 319 eP **PKPdf 04 28 50.5 +0.5**
ARSA Arzberg 148.51 342 *i* P **PKPdf 04 28 50.2 +0.3**
comp=Z,120nm,0.9s,SNR=88
ARSA eP **pPKPab 04 31 06.1 +1.0**
comp=Z,51nm,1.7s
ARSA eS **SKKPdf 04 40 22.4 -4.9**
comp=Z,2.3nm,0.6s
STU Stuttgart 148.56 350 ePKPdf **PKPdf 04 28 51.3 +1.4**
baz=17,slow=1.6
STU ePKPbc **PKiKP 04 28 55.9 +0.5**
baz=14,slow=2.9
STU ePKPab **PKPab 04 29 00.7 +0.7**
baz=15,slow=4.1
STU epPKPbc **pPKPab 04 31 06.1 +1.2**
JLP Les Platons 148.58 4 eP **PKPdf 04 28 50.5 +0.6**
KULA Kula-Manisa 148.62 316 P **PKiKP 04 28 55.9 -0.1**
KULA Kula-Manisa 148.62 316 eP **PKPdf 04 28 50.8 +0.4**
JSA Saint-Kubin 148.63 5 eP **PKPdf 04 28 48.7 -1.3**
ERIK Erikli-Kesan 148.69 322 eP **PKPdf 04 28 50.7 +0.4**
FUR Furstenfeldbru 148.75 347 ePKPdf **PKPdf 04 28 51.3 +1.0**
baz=17,slow=1.6
FUR ePKPbc **PKiKP 04 28 56.4 +0.5**
baz=14,slow=2.9
FUR ePKPab **PKPab 04 29 01.8 +1.0**
baz=15,slow=4.1
FRGS Fruska Gora 148.78 335 ⇑P **PKPdf 04 28 51.8 +1.4**
FRGS Fruska Gora 148.78 335 ⇑*i*P **PKiKP 04 28 55.8 -0.2**
BEHE Becsehely 148.80 339 ⇑*i*P **PKiKP 04 28 58.4 +2.4**
ALN Alexandroupoli 148.82 322 P **PKPdf 04 28 50.2 -0.3**
ENEZ Enez 148.86 322 P **PKPbc 04 28 53.5 -1.8**
ENEZ Enez 148.86 322 eP **PKPbc 04 28 55.7 +0.4**
RDO Rodhopi 148.95 323 P **PKPdf 04 28 51.1 +0.4**
PSET Sete Cidades 149.00 45 ePKP **PKPdf 04 28 52.1 +1.1**
BFO Black Forest 149.12 351 PKIKP **PKPdf 04 28 50.8 0.0**
BFO Black Forest 149.12 351 PKPdf **PKPdf 04 28 50.8 0.0**
BFO Black Forest 149.12 351 ePKPdf **PKPdf 04 28 51.8 +1.0**
baz=17,slow=1.6
BFO ePKPbc **PKiKP 04 28 57.1 +0.5**
baz=14,slow=2.9
BFO ePKPab **PKPab 04 29 02.9 +0.6**
baz=15,slow=4.1
AKAS Kas 149.16 312 eP **PKPbc 04 28 55.2 -1.1**
FLN La Foliniere 149.16 3 ePKIKP **PKPdf 04 28 51.2 +0.4**
FLN pmax pmax
comp=Z,1μm,1.2s
BOVS Bovan 149.16 331 ⇑P **PKPdf 04 28 51.6 +0.7**
CMLA Cha da Macela 149.16 45 ePKP **PKPdf 04 28 53.2 +2.0**
CMLA Cha da Macela 149.16 45 PKIKP **PKPdf 04 28 50.7 -0.5**
CMLA Cha da Macela 149.16 45 **PKPdf 04 28 50.7 -0.5**
VTS Vitosha 149.17 328 ⇑P **PKiKP 04 28 56.8 -0.3**
VTS Vitosha 149.17 328 ⇑PKHKP PKPpre 04 28 56.8
SOKA Soboth 149.17 342 *i* P **PKPdf 04 28 50.9 -0.1**
comp=Z,394nm,1.2s,SNR=145
SOKA eP **pPKPab 04 31 09.0 +1.1**
comp=Z,73nm,1.7s
SOKA eP **PP 04 32 31.7 -1.1**
comp=Z,26nm,1.2s
KSL Kastellorizon 149.21 312 P **PKPbc 04 28 55.3 -1.0**
KBA Koelnbreinsper 149.28 344 *i* P **PKPdf 04 28 51.4 +0.1**
comp=Z,191nm,0.6s,SNR=118
KBA eP **pPKPab 04 31 08.3 +0.2**
comp=Z,59nm,1.5s
KBA eP **PP 04 32 34.4 +0.8**
comp=Z,74nm,1.3s
KBA Koelnbreinsper 149.28 344 PKIKP **PKPdf 04 28 51.5 +0.1**
FETY Fethiye 149.32 313 P **PKPbc 04 28 54.4 -2.2**
FETY Fethiye 149.32 313 eP **PKPbc 04 28 55.7 -0.9**
EZN Ezine 149.33 321 P **PKPdf 04 28 52.0 +0.7**
EZN Ezine 149.33 321 eP **PKiKP 04 28 57.1 -0.1**
GADA Gvkgeada 149.36 322 P **PKPbc 04 28 54.5 -2.0**
GADA Gvkgeada 149.36 322 eP **PKPdf 04 28 50.9 -0.5**
ROSF Rostrenen 149.38 6 ePKIKP **PKPdf 04 28 51.3 +0.1**
ROSF pmax pmax
comp=Z,606nm,1.2s
BART Pico Bartolome 149.39 44 ePKP **PKPdf 04 28 51.7 0.0**
SMTH Samothraki Isl 149.39 322 P **PKPbc 04 28 55.5 -1.1**
TEKS Tekeris 149.40 334⇑ *i*P **PKiKP 04 28 57.6 +0.3**
AYDB Zeytinkoy-Aydi 149.44 316 eP **PKPdf 04 28 51.2 -0.6**
UBR Ueberruh 149.45 348 ePKPdf **PKPdf 04 28 52.4 +1.0**
baz=17,slow=1.6
UBR ePKPbc **PKiKP 04 28 57.9 +0.5**
baz=14,slow=2.9
UBR ePKPab **PKPab 04 29 04.3 +0.5**
baz=15,slow=4.1
OBKA Obir 149.47 342 *i* P **PKPdf 04 28 51.7 +0.2**
comp=Z,166nm,1.1s,SNR=55
OBKA eP **pPKPbc 04 31 04.9 -1.5**
comp=Z,27nm,1.0s
OBKA eP **PP 04 32 30.5 -4.1**
comp=Z,36nm,1.2s
OBKA eS SKKPdf 04 40 14.3 -11
comp=Z,175nm,3.4s
WATA Walderalm 149.47 346 *i* P **PKPdf 04 28 51.8 +0.2**
comp=Z,549nm,1.1s,SNR=83
WATA eP **pPKPab 04 31 08.9 +0.2**
comp=Z,72nm,1.3s
WATA eP **PP 04 32 30.9 -3.6**
comp=Z,47nm,1.3s
BOZC Bozcaada 149.49 321 eP **PKiKP 04 28 57.2 -0.4**
RETA Reutte 149.50 348 *i* P **PKPdf 04 28 52.0 +0.4**
comp=Z,415nm,1.3s,SNR=55
RETA eP **pPKPab 04 31 07.9 -0.9**
comp=Z,52nm,1.3s
GRR Gorron 149.51 3 ePKIKP **PKPdf 04 28 51.9 +0.5**
GRR pmax pmax
comp=Z,841nm,1.1s
WTTA Wattenberg 149.53 346 *i* P **PKPdf 04 28 52.1 +0.4**
comp=Z,416nm,0.6s,SNR=170
WTTA eP **pPKPab 04 31 09.4 +0.4**
comp=Z,78nm,1.5s
WTTA eP **PP 04 32 32.2 -2.7**
comp=Z,54nm,1.4s
WTTA Wattenberg 149.53 346 PKIKP **PKPdf 04 28 52.1 +0.4**
SGMF Saint Gilles 149.53 5 ePKIKP **PKPdf 04 28 51.7 +0.3**
SGMF pmax pmax
comp=Z,731nm,1.1s
DALY Dalyan (Mula) 149.53 314 eP **PKPdf 04 28 53.3 +1.5**
DIVS Divibare 149.57 333⇑ *i*P **PKiKP 04 28 57.9 +0.2**
MOTA Moosalm 149.57 347 *i* P **PKPdf 04 28 51.9 +0.2**
comp=Z,414nm,0.9s,SNR=89
MOTA eP **pPKPab 04 31 09.2 0.0**
comp=Z,44nm,1.3s
MOTA eP **PP 04 32 30.5 -4.6**
comp=Z,44nm,1.4s
MOTA eS **SKKPdf 04 40 24.8 -0.6**
comp=Z,9.0nm,1.4s
MYKA Terra Mystica 149.62 343 *i* P **PKPdf 04 28 51.4 -0.3**
comp=Z,226nm,0.6s,SNR=90
MYKA eP **pPKPab 04 31 10.3 +1.1**
comp=Z,67nm,1.4s
YER Yerkesik 149.62 315 P **PKPbc 04 28 56.5 -0.8**
YER Yerkesik 149.62 315 eP **PKiKP 04 28 57.9 -0.1**
KAVA Kavala 149.63 324 P **PKPbc 04 28 55.5 -1.6**
SQTA Sankt Quirin 149.66 347 *i* P **PKPdf 04 28 52.1 +0.3**
comp=Z,363nm,0.6s,SNR=136
SQTA eP **pPKPab 04 31 09.4 -0.1**
comp=Z,58nm,1.1s
SQTA eP **PP 04 32 31.3 -4.3**
comp=Z,33nm,1.3s
HAU Haudompre 149.69 354 ePKIKP **PKPdf 04 28 52.1 +0.4**
HAU pmax pmax
comp=Z,627nm,1.2s
PRK Paraskevi 149.72 320 P **PKPbc 04 28 57.1 -0.3**
NVR Nevrokopi 149.74 325 P **PKPbc 04 28 56.0 -1.4**
ABTA Abfaltersbach 149.80 345 *i* P **PKPdf 04 28 51.9 -0.1**
comp=Z,486nm,0.7s,SNR=142
ABTA eP **pPKPab 04 31 09.2 -0.8**
comp=Z,88nm,1.3s
QUIF Quistinic 149.80 6 ePKIKP **PKPbc 04 28 57.5 +0.2**
QUIF pmax pmax
comp=Z,614nm,1.3s
CRES Cresnjev 149.81 340⇑ *i*P **PKiKP 04 28 58.1 0.0**
HINF Hinteralfeld 149.82 353 ePKIKP **PKPdf 04 28 52.2 +0.2**
HINF pmax pmax
comp=Z,224nm,1.0s
TURN Turunc 149.83 314 eP **PKPdf 04 28 52.7 +0.5**
PSMA Santa Maria 149.84 46 ePKP **PKPdf 04 28 53.0 +0.8**
DAVA Damuels 149.87 349 *i* P **PKPdf 04 28 52.7 +0.5**
comp=Z,378nm,0.9s,SNR=48
DAVA eP **pPKPab 04 31 09.5 -0.5**
comp=Z,67nm,1.4s
PSMN Pico do Norte, 149.87 45 ePKP **PKPdf 04 28 52.6 +0.3**
LJU Ljubljana 149.90 342 *i* PKPdf **PKPdf 04 28 52.5 +0.4**
LJU *i* PKPbc **PKiKP 04 28 58.5 +0.2**
FETA Feichten 149.95 347 *i* P **PKPdf 04 28 52.6 +0.2**
comp=Z,452nm,1.0s,SNR=72
FETA eP **pPKPab 04 31 09.5 -1.2**
comp=Z,53nm,1.3s
FETA eP **PP 04 32 38.1 +0.8**
comp=Z,28nm,1.3s
ASCN Ascension 149.96 147 PKPdf **PKPdf 04 28 51.5 -1.7**
H10N3 ASCENSION HYDR 149.97 147 PKPbc **PKiKP 04 29 00.5 +1.5**
baz=200,slow=4.8,SNR=11
LIA Limnos Island 149.97 322 P **PKPdf 04 28 53.9 +1.6**
H10N1 ASCENSION HYDR 149.97 147 PKPbc **PKiKP 04 29 00.3 +1.3**
baz=200,slow=4.8,SNR=15
H10N2 ASCENSION HYDR 149.98 147 PKPbc **PKiKP 04 29 00.5 +1.5**
baz=200,slow=4.8,SNR=12
SIGR SIGRI 150.00 320 P **PKPbc 04 28 56.5 -1.5**
BBLS Lazići 150.00 334⇑ *i*P **PKiKP 04 28 59.1 +0.5**
ROBS Robic 150.01 343 *i* PKPdf **PKPdf 04 28 52.1 -0.1**
ROBS *i* PKPbc **PKPbc 04 28 57.8 0.0**
GCAM G?zelcaml? 150.01 316 eP **PKPdf 04 28 53.4 +0.9**
HAPS Han Pijesak,Bl 150.01 334⇑ *i*P **PKPbc 04 28 58.1 0.0**
GBAS Gorenja Brezov 150.02 342 ePKPdf **PKPdf 04 28 52.5 +0.2**
GBAS *i* PKPbc **PKiKP 04 28 58.5 0.0**
GBAS *i* PKPab **PKPab 04 29 06.1 -0.1**
MRAK Mrakovica 150.03 338 eP **PKiKP 04 29 01.7 +3.1**
URLA Izmir 150.05 318 eP **PKPdf 04 28 51.7 -0.9**
SRS Serrai 150.05 325 P **PKPdf 04 28 54.6 +2.1**
PRIJ Prijedor 150.12 338 eP **PKiKP 04 28 59.9 +1.2**
BLY Banja Luka 150.15 337⇑ *i*P **PKiKP 04 28 59.2 +0.4**
BOJS Bojanci 150.16 340 *i* PKPbc **PKiKP 04 28 59.4 +0.6**
ARG Arkhangelos 150.20 313 P **PKPdf 04 28 53.6 +0.8**
CEY Cerknica 150.20 342⇑ *i*P **PKiKP 04 28 59.0 +0.1**
RUDO Rudo 150.22 333 eP **PKPbc 04 28 58.7 +0.2**
SMG Samos 150.27 317 P **PKPbc 04 28 56.9 -1.9**
BODT Bodrum 150.31 315 P **PKPdf 04 28 52.4 -0.6**
BODT Bodrum 150.31 315 eP **PKPbc 04 28 58.0 -0.9**
DAVOX Davos/Dischmat 150.35 348 PKP **PKPdf 04 28 53.9 +0.9**
comp=Z,78nm,0.9s,baz=274,slow=0.4,SNR=106
DAVOX PKPbc **PKiKP 04 29 00.1 +0.6**
comp=Z,518nm,0.6s,baz=280,slow=1.3,SNR=138
OUR Ouranopolis 150.37 324 P **PKPbc 04 28 56.7 -2.2**
CHOS Chios island 150.37 319 P **PKPdf 04 28 54.6 +1.4**
SOH Sokhos 150.38 325 P **PKPbc 04 28 57.3 -1.7**
KNT Kendrikon 150.39 326 P **PKPbc 04 28 56.0 -2.9**
PLE Pljevlja 150.44 333 ePKP **PKiKP 04 28 59.4 -0.2**
MGRS Mrkonjic Grad 150.47 337⇑ *i*P **PKiKP 04 29 00.0 +0.5**
SKDS Skadanscina 150.50 342 *i* PKPdf **PKPdf 04 28 53.1 0.0**
SKDS *i* PKPbc **PKiKP 04 28 59.5 0.0**
IVA Berane 150.59 332 ePKP **PKiKP 04 28 59.8 -0.1**
LOR Lormes 150.63 357 ePKIKP **PKPdf 04 28 53.8 +0.6**
LOR pmax pmax
comp=Z,327nm,0.6s
PLG Polygyros 150.64 324 P **PKPbc 04 28 57.5 -2.1**
HORT Hortiatis 150.68 325 P **PKPbc 04 28 57.0 -2.7**
UPM Unac-Piva 150.75 333⇑ *i*P **PKPbc 04 29 00.0 +0.1**
UPM Unac-Piva 150.75 333 ePKP **PKPbc 04 28 59.7 -0.2**
KOME Kolasin 150.77 332 ePKP **PKPbc 04 28 59.9 0.0**
PVY Plav 150.77 331 ePKP **PKiKP 04 29 00.2 -0.1**
GRG Griva 150.80 326 P **PKPdf 04 28 56.3 +2.6**
NKY Niksic 151.03 333⇑ *i*PKP **PKPbc 04 29 00.6 +0.1**
NKME Niksic 151.09 333⇑ *i*PKP **PKPbc 04 29 00.6 +0.1**
AVF Avril sur Loir 151.13 357 ePKIKP **PKPdf 04 28 54.3 +0.4**
AVF pmax pmax
comp=Z,335nm,1.3s
BRY Bratogost 151.16 333⇑ *i*P **PKiKP 04 29 01.0 -0.1**
BRY Bratogost 151.16 333⇑ *i*PKP **PKPbc 04 29 00.8 0.0**
KARP Karpathos 151.22 313 P **PKPbc 04 29 01.1 +0.1**
PDG Podgorica 151.22 332⇑ P **PKPbc 04 28 58.8 -2.0**
PDG Podgorica 151.22 332⇑ *i*P **PKiKP 04 29 01.2 +0.1**
TTG Podgorica 151.22 332 ePKP **PKiKP 04 29 01.1 0.0**
PHP Peshkopia 151.25 330 P **PKPdf 04 28 55.3 +0.9**
CEME Cevo 151.28 333 ePKP **PKPbc 04 29 01.1 +0.1**
LIT Litokhoron 151.36 325 P **PKPdf 04 28 54.6 +0.1**

TREB	Trebinje	151.39	333	⇑	*iP*	**PKPbc**	**04 29 01.0**	**-0.1**
DRME	Dracevica, Mon	151.45	332	⇑	*iP*	**PKiKP**	**04 29 01.9**	**+0.3**
DRME	Dracevica, Mon	151.45	332		*e*PKP	**PKiKP**	**04 29 01.5**	**-0.1**
FNA	Florina	151.46	327		P	**PKPbc**	**04 29 01.2**	**-0.2**
APE	Apeiranthos	151.49	317	⇑	P	**PKPbc**	**04 29 00.2**	**-1.4**
APE	Apeiranthos	151.49	317	⇑	PKiKP	**PKPbc**	**04 29 00.2**	**-1.4**
BUM	Brajici-Budva	151.49	332		*e*PKP	**PKPbc**	**04 29 01.5**	**0.0**
HCY	Herceg Novi	151.54	333	⇑	*iP*	**PKPbc**	**04 29 01.6**	**+0.1**
HCY	Herceg Novi	151.54	333		*e*PKP	**PKPbc**	**04 29 01.5**	**+0.1**
ULC	Ulcinj	151.60	331		*e*PKP	**PKPbc**	**04 29 01.6**	**-0.1**
KZN	Kozani	151.60	326		P	**PKPbc**	**04 29 00.6**	**-1.2**
TIR	Tirane	151.79	330		P	**PKPbc**	**04 29 01.2**	**-0.9**
TIR	Tirane	151.79	330	⇑	P	**PKPbc**	**04 29 00.8**	**-1.3**
TIR	Tirane	151.79	330	⇑	PKiKP	**PKPbc**	**04 29 00.8**	**-1.3**
SMIA	Simia	151.79	322		P	**PKPdf**	**04 28 55.6**	**+0.4**
DION	Dionisos Attik	151.88	320		P	**PKPbc**	**04 29 00.1**	**-2.3**
KBN	Korca	151.88	328		P	**PKPdf**	**04 28 57.1**	**+1.7**
NEST	Nestorio	151.90	327		P	**PKPdf**	**04 28 56.7**	**+1.3**
SANT	Santorini	151.93	316	⇑	P	**PKPbc**	**04 29 00.1**	**-2.5**
PTL	Penteli	151.94	320		P	**PKPbc**	**04 28 59.4**	**-3.2**
THR3	Thira Island,	151.95	316		P	**PKPdf**	**04 28 58.3**	**+2.8**
THL	Klokotos Trika	152.00	325		P	**PKPdf**	**04 28 54.3**	**-1.1**
PENT	Pentalofos	152.01	327		P	**PKPdf**	**04 28 56.4**	**+0.8**
ATAL	Atalanti	152.02	322		P	**PKPdf**	**04 28 55.6**	**+0.1**
ATHU	Athens Univers	152.04	320		P	**PKPbc**	**04 29 00.6**	**-2.1**
LKR	Lokris	152.06	322		P	**PKPdf**	**04 28 57.0**	**+1.4**
KPRO	Kipourio	152.07	326		P	**PKPdf**	**04 28 56.6**	**+0.9**
LPL	La Plagne	152.10	352		*e*PKiKP	**PKPdf**	**04 28 56.7**	**+1.0**
LPL	comp=Z,161nm,1.0s				pmax	pmax		
LPG	La Plagne	152.11	352		*e*PKiKP	**PKPdf**	**04 28 56.9**	**+1.1**
LPG	comp=Z,180nm,1.0s				pmax	pmax		
AGG	Agios Georgios	152.20	324		P	**PKPdf**	**04 28 57.0**	**+1.2**
MAKR	Makrakomi, Fth	152.31	324		P	**PKPdf**	**04 28 57.1**	**+1.1**
LSK	Leskovik	152.33	327		P	**PKPdf**	**04 28 57.6**	**+1.6**
LTK	Loutraki	152.50	321		P	**PKPdf**	**04 28 59.0**	**+2.7**
JAN	Janina	152.56	326		P	**PKPdf**	**04 28 57.4**	**+1.1**
EVR	Evrytania	152.56	324		P	**PKPdf**	**04 28 57.3**	**+0.9**
KALE	Kalithea	152.74	323		P	**PKPdf**	**04 28 57.1**	**+0.4**
KRND	KRANIDI	152.80	320		P	**PKPdf**	**04 28 56.8**	**+0.1**
SRN	Sarande	152.84	328		P	**PKPbc**	**04 29 02.6**	**-1.8**
IDI	Anoyia	152.92	314		PKP	**PKPdf**	**04 28 57.9**	**+0.9**
IDI	comp=Z,26nm,0.9s,baz=138,slow=3.0,SNR=7.1				PKPbc	**PKiKP**	**04 29 05.3**	**+0.4**
	comp=Z,64nm,0.6s,baz=46,slow=13,SNR=14							
IDI	Anoyia	152.92	314		P	**PKPdf**	**04 28 58.2**	**+1.2**
IGT	Igoumenitsa	152.92	327		P	**PKPdf**	**04 28 56.8**	**0.0**
PVO	Paravola	152.93	324		P	**PKPdf**	**04 28 58.4**	**+1.6**
LAKA	Lakka	152.93	323		P	**PKPdf**	**04 28 58.1**	**+1.2**
KLV	Kalavryta, Ach	152.96	322		P	**PKPdf**	**04 28 57.8**	**+0.8**
CAF	Calviac	153.03	359		*e*PKiKP	**PKPdf**	**04 28 57.6**	**+0.8**
CAF	comp=Z,107nm,0.8s				pmax	pmax		
KEK	Kerkira	153.06	328		P	**PKPdf**	**04 28 57.9**	**+0.9**
PDO	Prodromos	153.13	324		P	**PKPdf**	**04 28 57.4**	**+0.3**
DRO	Drossia	153.28	323		P	**PKPbc**	**04 29 03.6**	**-1.9**
LKD2	Lefkada island	153.29	325		P	**PKPdf**	**04 28 58.4**	**+1.0**
NYDR	Nydri-Lefkada	153.32	325		P	**PKPdf**	**04 28 58.3**	**+0.9**
VAM	Vamos	153.32	315		P	**PKPbc**	**04 29 05.2**	**-0.4**
RLS	Riolos of Patr	153.35	323		P	**PKiKP**	**04 29 06.4**	**+0.8**
VLI	Veliai	153.35	319		P	**PKPdf**	**04 28 59.2**	**+1.7**
AQU	L'Aquila	153.57	340	⇑	*iP*	**PKiKP**	**04 29 07.1**	**+1.1**
ITM	Ithomi	153.67	321		P	**PKPbc**	**04 29 04.4**	**-1.9**
PGAV	Gavieira, Arco	154.59	17		*e*PKPdf	**PKPdf**	**04 29 00.3**	**+1.1**
PGAV	Gavieira, Arco	154.59	17		*e*PKPab	**PKPab**	**04 29 26.6**	**+0.8**
MTLF	Montolieu	154.61	359		*e*PKiKP	**PKPdf**	**04 28 59.7**	**+0.6**
MTLF	comp=Z,88nm,1.4s				pmax	pmax		
PCAB	Cabril	154.90	17		*e*PKPdf	**PKPdf**	**04 29 00.7**	**+1.2**
PCAB	Cabril	154.90	17		*e*PKPab	**PKPab**	**04 29 28.0**	**+1.0**
TIP	Timpagrande	154.96	331	⇑	P	**PKPdf**	**04 28 59.0**	**-0.7**
ETSF	Etsaut	155.00	4		*e*PKiKP	**PKPdf**	**04 29 00.8**	**+1.1**
ETSF	comp=Z,65nm,1.2s				pmax	pmax		
PBRG	Braganca	155.14	15		*e*PKPdf	**PKPdf**	**04 29 00.9**	**+1.0**
PBRG	Braganca	155.14	15		*e*PKPab	**PKPab**	**04 29 28.9**	**+0.8**
PTO	Porto	155.26	18		*e*PKPdf	**PKPdf**	**04 29 01.4**	**+1.4**
PTO	Porto	155.26	18		*e*PKPab	**PKPab**	**04 29 29.4**	**+0.9**
POLO	Lamas de Olo	155.27	17		*e*PKPdf	**PKPdf**	**04 29 01.2**	**+1.1**
POLO	Lamas de Olo	155.27	17		*e*PKPab	**PKPab**	**04 29 29.6**	**+0.9**
PVRL	Vila Real	155.39	17		*e*PKPdf	**PKPdf**	**04 29 01.2**	**+1.0**
PVRL	Vila Real	155.39	17		*e*PKPab	**PKPab**	**04 29 30.0**	**+0.9**
MVO	Moncorvo	155.67	16		*e*PKPdf	**PKPdf**	**04 29 01.9**	**+1.3**
MVO	Moncorvo	155.67	16		*e*PKPab	**PKPab**	**04 29 31.3**	**+0.9**
SACV	Santiago Islan	155.78	93		PKPdf	**PKPdf**	**04 28 59.3**	**-2.1**
SACV						**PKPab**	**04 29 30.3**	**-1.4**
PVIS	Viseu	155.85	18		*e*PKPdf	**PKPdf**	**04 29 01.8**	**+0.9**
PVIS	Viseu	155.85	18		*e*PKPab	**PKPab**	**04 29 32.2**	**+1.0**
PVIS	Viseu	155.85	18		*e*PP	PP	04 33 10.4	+0.3
COI	Coimbra	156.17	19		*e*PKPdf	**PKPdf**	**04 29 02.5**	**+1.3**
COI	Coimbra	156.17	19		*e*PKPab	**PKPab**	**04 29 33.3**	**+0.9**
MTE	Manteigas	156.25	17		*e*PKPdf	**PKPdf**	**04 29 02.5**	**+1.1**
MTE	Manteigas	156.25	17		*e*PKPab	**PKPab**	**04 29 33.8**	**+0.9**
PCAS	Casmilo, Conde	156.28	19		*e*PKPdf	**PKPdf**	**04 29 02.5**	**+1.1**
PCAS	Casmilo, Conde	156.28	19		*e*PKPab	**PKPab**	**04 29 33.7**	**+0.7**
PSBE	So Bento	156.67	20		*e*PKPdf	**PKPdf**	**04 29 02.9**	**+1.0**
PSBE	So Bento	156.67	20		*e*PKPab	**PKPab**	**04 29 35.6**	**+0.9**
PCBR	Castelo Branco	156.78	18		*e*PKPdf	**PKPdf**	**04 29 03.2**	**+1.2**
PCBR	Castelo Branco	156.78	18		*e*PKPab	**PKPab**	**04 29 35.9**	**+0.8**
PMAFR	Mafra	157.01	22		*e*PKPdf	**PKPdf**	**04 29 03.7**	**+1.4**
PMAFR	Mafra	157.01	22		*e*PKPab	**PKPab**	**04 29 37.0**	**+0.8**
PMRV	Marv??o	157.19	18		*e*PKPdf	**PKPdf**	**04 29 03.8**	**+1.2**
PMRV	Marv??o	157.19	18		*e*PKPab	**PKPab**	**04 29 37.9**	**+0.9**
PMST	Lisbon--Monsan	157.24	22		*e*PKPab	**PKPab**	**04 29 38.0**	**+0.9**
PMTG	Montargil	157.26	20		*e*PKPdf	**PKPdf**	**04 29 03.5**	**+0.9**
PMTG	Montargil	157.26	20		*e*PKPab	**PKPab**	**04 29 37.9**	**+0.7**
LIS	Lisbon	157.27	22		*e*PKPdf	**PKPdf**	**04 29 02.4**	**+1.2**
LIS	Lisbon	157.27	22		*e*PKPdf	**PKPdf**	**04 29 03.9**	**+1.3**
LIS	Lisbon	157.27	22		*e*PKPab	**PKPab**	**04 29 38.3**	**+1.0**
UCM	Universidad Co	157.28	9		PKP1	**PKPdf**	**04 29 04.5**	**+1.8**
UCM	Universidad Co	157.28	9		PKP2	**PKPab**	**04 29 39.0**	**+1.7**
PMOZ	Porto Moniz, M	157.56	45		*e*PKPdf	**PKPdf**	**04 29 05.2**	**+1.9**
PMOZ	Porto Moniz, M	157.56	45		*e*PKPab	**PKPab**	**04 29 40.5**	**+1.5**
PESTR	Estremoz	157.65	19		PKPdf	**PKPdf**	**04 29 02.8**	**-0.4**
ESBB	Sonseca Array	157.78	11			**PKPdf**	**04 29 01.2**	**-2.1**
ESBB					PKPab	**PKPab**	**04 29 38.7**	**-0.8**
ESDC	Sonseca Array	157.78	11		PKP	**PKPdf**	**04 29 04.3**	**+0.9**
ESDC	comp=Z,17nm,1.0s,baz=349,slow=2.9,SNR=70				PKPab	**PKPab**	**04 29 40.0**	**+0.4**
ESDC	comp=Z,54nm,0.9s,baz=343,slow=4.3,SNR=36				PP	**PP**	**04 33 18.9**	**-1.6**
	comp=Z,17nm,1.2s,baz=350,slow=5.3,SNR=7.7							
EVO	Evora	157.82	20		PKP1	**PKPdf**	**04 29 04.8**	**+1.4**
EVO	Evora	157.82	20		PKP2	**PKPab**	**04 29 40.1**	**+0.4**
EVO	Evora	157.82	20		*e*PKPdf	**PKPdf**	**04 29 04.5**	**+1.2**
EVO	Evora	157.82	20		*e*PKPab	**PKPab**	**04 29 40.3**	**+0.6**
PAB	San Pablo	157.83	12		PKiKP	**PKPdf**	**04 29 04.6**	**+1.2**
FUL	Funchal	157.87	45		*e*PKPab	**PKPab**	**04 29 41.7**	**+1.5**
PMPST	Porto Santo, M	157.98	43		*e*PKPdf	**PKPdf**	**04 29 05.9**	**+2.2**
PMPST	Porto Santo, M	157.98	43		*e*PKPab	**PKPab**	**04 29 41.9**	**+1.3**
PMPS	Porto Santo	157.99	43		*e*PKPdf	**PKPdf**	**04 29 05.7**	**+2.0**
PMPS	Porto Santo	157.99	43		*e*PKPab	**PKPab**	**04 29 41.7**	**+1.0**
PNCL	Nicolau / Gran	158.03	21		*e*PKPdf	**PKPdf**	**04 29 05.2**	**+1.6**
PNCL	Nicolau / Gran	158.03	21		*e*PKPab	**PKPab**	**04 29 41.5**	**+0.9**
PBEJ	Beja	158.33	20		*e*PKPdf	**PKPdf**	**04 29 05.4**	**+1.4**
PBEJ	Beja	158.33	20		*e*PKPab	**PKPab**	**04 29 42.7**	**+0.8**
PBEJ	Beja	158.33	20		*e*PP	PP	04 33 27.4	+3.9
MESJ	Messejana	158.38	21		*e*PKPdf	**PKPdf**	**04 29 03.8**	**-0.2**
MESJ					*e*PP	**PP**	**04 33 25.3**	**+1.5**
MESJ	Messejana	158.38	21		*e*PKPdf	**PKPdf**	**04 29 05.7**	**+1.7**
MESJ	Messejana	158.38	21		*e*PKPab	**PKPab**	**04 29 42.7**	**+0.6**
PBAR	Barrancos	158.45	19		*e*PKPdf	**PKPdf**	**04 29 05.3**	**+1.2**
PBAR	Barrancos	158.45	19		*e*PKPab	**PKPab**	**04 29 43.3**	**+0.9**
PBAR	Barrancos	158.45	19		*e*PP	PP	04 33 26.2	+2.1
PTEO	Sao Teotonio	158.46	23		*e*PKPdf	**PKPdf**	**04 29 05.9**	**+1.8**
PTEO	Sao Teotonio	158.46	23		*e*PKPab	**PKPab**	**04 29 43.4**	**+0.9**
PCVE	Castro Verde	158.62	21		*e*PKPdf	**PKPdf**	**04 29 06.0**	**+1.7**
PCVE	Castro Verde	158.62	21		*e*PKPab	**PKPab**	**04 29 44.1**	**+0.9**
MORF	Marmelete	158.70	23		*e*PKPdf	**PKPdf**	**04 29 04.1**	**-0.4**
MORF	Marmelete	158.70	23		*e*PKPdf	**PKPdf**	**04 29 05.7**	**+1.2**
MORF	Marmelete	158.70	23		*e*PKPab	**PKPab**	**04 29 44.4**	**+0.8**
PFVI	Vila Bisbo	158.79	23		*e*PKPdf	**PKPdf**	**04 29 06.4**	**+1.9**
PFVI	Vila Bisbo	158.79	23		*e*PKPab	**PKPab**	**04 29 44.9**	**+1.0**
PFVI	Vila Bisbo	158.79	23		*e*PP	PP	04 33 29.5	+3.5
PVAQ	Vaqueiros	158.94	21		*e*PKPdf	**PKPdf**	**04 29 06.2**	**+1.5**
PVAQ	Vaqueiros	158.94	21		*e*PKPab	**PKPab**	**04 29 45.8**	**+1.2**
PVAQ	Vaqueiros	158.94	21		*e*PP	PP	04 33 30.7	+3.9
PBDV	Barranco-do-Ve	159.01	21		*e*PKPdf	**PKPdf**	**04 29 06.6**	**+1.8**
PBDV	Barranco-do-Ve	159.01	21		*e*PKPab	**PKPab**	**04 29 46.3**	**+1.3**
PBDV	Barranco-do-Ve	159.01	21		*e*PP	PP	04 33 31.0	+3.8
EMAL	Malaga-Limoner	160.48	14		PKP1	**PKPdf**	**04 29 07.0**	**+0.6**
EMAL	Malaga-Limoner	160.48	14		PKP2	**PKPab**	**04 29 52.5**	**+1.2**
CMAH	Djebel Manchou	160.60	345		P	**PKPab**	**04 29 51.4**	**-0.6**
KEST	Kesra	160.90	340		PKP	**PKPdf**	**04 29 08.3**	**+1.3**
KEST	comp=Z,19nm,0.9s,baz=345,slow=1.8,SNR=8.4				PKPab	**PKPab**	**04 29 53.5**	**+0.2**
	comp=Z,54nm,0.8s,baz=322,slow=1.0,SNR=17							
CKFL	Kef-Lekhel	160.98	347		P	**PKPab**	**04 29 53.9**	**+0.2**
DFRA	Djebel Bou Aff	161.00	349		P	**PKPab**	**04 29 54.5**	**+0.7**
CASM	Ain Smara	161.16	347		P	**PKPab**	**04 29 54.5**	**+0.1**
AVE	Averroes	162.70	26		PKP1	**PKPdf**	**04 29 10.4**	**+1.6**
AVE	Averroes	162.70	26		PKP2	**PKPab**	**04 30 01.9**	**+0.7**
IFR	Ifrane	163.34	20		PKP1	**PKPdf**	**04 29 12.0**	**+2.4**
IFR	Ifrane	163.34	20		PKP2	**PKPab**	**04 30 05.6**	**+1.4**
MDT	Midelt	164.16	19		PKP	**PKPdf**	**04 29 12.1**	**+1.8**
MDT	comp=Z,66nm,0.9s,baz=349,slow=0.7,SNR=119				PKPab	**PKPab**	**04 30 08.8**	**+1.1**
	comp=Z,148nm,0.9s,baz=352,slow=5.1,SNR=39							
LIC	Lamto	166.79	151		*e*PKiKP	**PKPdf**	**04 29 12.3**	**-0.5**
	comp=Z,274nm,1.2s							
LIC	Lamto	166.79	151		*e*P	**PKPab**	**04 30 21.1**	**+1.4**
	comp=Z,128nm,1.4s							
KIC	Kosan Boka	167.04	151		*e*PKiKP	**PKPdf**	**04 29 12.5**	**-0.5**
	comp=Z,204nm,1.3s							
KIC	Kosan Boka	167.04	151		*e*P	**PKPab**	**04 30 23.5**	**+2.7**
	comp=Z,107nm,1.1s							
TIC	Toumodi	167.16	150		*e*PKiKP	**PKPdf**	**04 29 12.6**	**-0.5**
TIC	Toumodi	167.16	150		*e*P	**PKPab**	**04 30 22.7**	**+1.4**
DBIC	Dimbokro	167.26	150		PKP	**PKPdf**	**04 29 13.2**	**+0.1**
	comp=Z,53nm,1.1s,baz=104,slow=0.8,SNR=29				PKPab	**PKPab**	**04 30 23.4**	**+1.7**
DBIC								
	comp=Z,12nm,1.0s,baz=188,slow=6.4,SNR=4.2							
KOWA	Kowa	173.75	122		PKP	**PKPdf**	**04 29 16.6**	**+0.1**
	comp=Z,69nm,1.0s,baz=261,slow=0.2,SNR=102				PKPab	**PKPab**	**04 30 52.1**	**+1.3**
KOWA								
	comp=Z,37nm,1.0s,baz=231,slow=4.2,SNR=12							
KOWA	Kowa	173.75	122			**PKPdf**	**04 29 16.0**	**-0.6**
KOWA					PKPab	**PKPab**	**04 30 50.5**	**-0.3**
TORD	Torodi Ar. Bea	175.29	183		PKP	**PKPdf**	**04 29 16.9**	**-0.2**
TORD	comp=Z,45nm,1.0s,baz=333,slow=1.4,SNR=150				PKPab	**PKPab**	**04 30 58.3**	**+1.1**
	comp=Z,7.6nm,0.6s,baz=186,slow=4.0,SNR=17							
TORD					pPKPab	**pPKPab**	**04 33 01.5**	**+1.0**
	comp=Z,21nm,1.1s,baz=178,slow=3.0,SNR=10							

*IDC **02** 04:15:14.7±2.6, 17°.58S×178°.50W, h572km±22km, mb3.7/6, mb1 4.0/8, mb1mx3.5/48, mbtmp4.6/8 Error ellipse: s-maj=126.3km s-min=23.2km az=153.0*

ISC 02 04:15:12.9±1.5, 17°.8S±0°.7×178°.3W±0°.3, h550km, n8, σ1s78/8, mb4.3/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.49**	**270**	P	**P**		**04 16 33.4**	**+2.2**
	4.9nm,0.3s,baz=104,slow=4.4,SNR=6.6							
DZM	**Mont Dzumac**	**14.98**	**251**	P	**P**		**04 18 22.5**	**+0.2**
	1.3nm,0.3s,baz=79,slow=16,SNR=1.5							
STKA	**Stephens Creek**	**38.80**	**241**	P	**P**		**04 21 50.5**	**-0.5**
	16nm,0.7s,baz=79,slow=8.8,SNR=3.0							
WRA	**Warramunga Arr**	**44.77**	**259**	P	**P**		**04 22 36.5**	**-1.7**
	5.4nm,0.6s,baz=98,slow=6.8,SNR=1.3							
ASAR	**Alice Springs**	**44.94**	**254**	P	**P**		**04 22 38.4**	**-1.1**
	36nm,0.5s,baz=89,slow=7.9,SNR=25							
FITZ	**Fitzroy Crossi**	**53.17**	**260**	P	**P**		**04 23 39.8**	**-0.4**
	17nm,1.1s,baz=89,slow=7.8,SNR=1.4							
TXAR	**Lajitas Array**	**85.82**	**58**	P	**P**		**04 26 56.6**	**+1.7**
	1.8nm,0.9s,baz=212,slow=4.9,SNR=2.5							
PDAR	**Pinedale Array**	**87.17**	**43**	P	**P**		**04 26 59.2**	**-2.0**
	0.8nm,0.7s,baz=212,slow=3.2,SNR=1.5							

*NEIC **02** 04:37:14.6±0.9, 17°.6S±0°.3×178°.7W±0°.2, h554km±7km, mb4.3/13, Error ellipse: s-maj=44.2km s-min=16.4km az=148.0*

*IDC **02** 04:37:16.5±2.0, 17°.45S×178°.92W, h564km±19km, mb3.4/10, mb1 3.6/12, mb1mx3.3/42, mbtmp4.2/12, Error ellipse: s-maj=59.8km s-min=16.0km az=147.0*

ISC 02 04:37:14.6±0.9, 17°.6S±0°.3×178°.7W±0°.2, h550km, n29, σ0s83/29, mb4.1/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.09**	**268**	P	**P**		**04 38 32.4**	**+2.1**
	1.7nm,0.3s,baz=276,slow=21,SNR=7.0							
MSVF	**Nonsavu**	**3.09**	**268**	P	**P**		**04 38 32.1**	**+1.8**
AFI	**Afiamalu**	**7.64**	**62**	P	**P**		**04 39 08.5**	**-0.4**
DZM	**Mont Dzumac**	**14.64**	**250**	P	**P**		**04 40 19.8**	**-0.7**
	1.1nm,0.3s,baz=116,slow=21,SNR=8.5							
DZM	**Mont Dzumac**	**14.64**	**250**	P	**P**		**04 40 20.1**	**-0.5**
KNTN	**Kanton**	**16.29**	**26**	P	**P**		**04 40 36.6**	**-0.4**
ARMA	**Armidale**	**29.82**	**239**	P	**P**		**04 42 37.8**	**+0.1**
ARMA				IAmb	IAmb		04 42 38.6	
	comp=Z,8.8nm,0.7s							
CTA	**Charters Tower**	**33.20**	**260**	P	**P**		**04 43 06.3**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=91,slow=11							
COEN	**Coen**	**36.81**	**270**	P	**P**		**04 43 37.2**	**+0.5**
COEN				IAmb	IAmb		04 43 55.2	
	comp=Z,5.9nm,1.1s							
TOO	**Toolangi**	**37.12**	**230**	P	**P**		**04 43 39.1**	**+0.2**
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**		**04 43 50.6**	**+0.4**
	comp=Z,4.4nm,0.5s,baz=87,slow=9.6,SNR=15							
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**		**04 43 50.1**	**-0.2**
BBOO	**Buckleboo**	**43.28**	**241**	P	**P**		**04 44 27.9**	**-0.3**
BBOO				IAmb	IAmb		04 44 28.7	
	comp=Z,17nm,0.8s							
WR0	**Warramunga Arr**	**44.20**	**259**	P	**P**		**04 44 34.9**	**-0.6**
WB0	**Warramunga Arr**	**44.36**	**260**	P	**P**		**04 44 35.7**	**-1.0**
WB0				IAmb	IAmb		04 44 36.6	
	comp=Z,4.3nm,0.8s							
WB2	**Warramunga Arr**	**44.38**	**259**	P	**P**		**04 44 35.8**	**-1.1**
WB2				IAmb	IAmb		04 44 36.5	
	comp=Z,8.0nm,1.1s							
WRA	**Warramunga Arr**	**44.40**	**259**	P	**P**		**04 44 36.1**	**-0.8**
	comp=Z,2.3nm,0.5s,baz=98,slow=6.9,SNR=57							
AS31	**Alice Springs**	**44.58**	**254**	P	**P**		**04 44 38.0**	**-0.4**
AS31				IAmb	IAmb		04 44 38.8	
	comp=Z,7.9nm,0.6s							
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**		**04 44 38.2**	**-0.2**
	comp=Z,28nm,0.6s,baz=89,slow=8.2,SNR=313							
FORT	**Forrest**	**49.86**	**244**	P	**P**		**04 45 17.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**52.78**	**260**	P	**P**		**04 45 38.8**	**-0.4**
	comp=Z,1.9nm,1.0s,baz=130,slow=7.5,SNR=2.5							
FITZ	**Fitzroy Crossi**	**52.78**	**260**	P	**P**		**04 45 38.4**	**-0.8**
PSA00	**Pilbara Seismi**	**57.70**	**255**	P	**P**		**04 46 13.2**	**-0.2**
PSA00				IAmb	IAmb		04 46 25.0	
	comp=Z,9.1nm,1.1s							
SEY	**Seymchan**	**83.45**	**347**	P	**P**		**04 48 44.4**	**+0.3**
	comp=Z,1.7nm,0.2s,baz=121,slow=3.0,SNR=7.2							
ILAR	**Eielson Array**	**85.69**	**13**	P	**P**		**04 48 54.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=220,slow=4.9,SNR=6.1							
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**		**04 48 59.6**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=220,slow=5.7,SNR=4.9							
PDAR	**Pinedale Array**	**87.36**	**44**	P	**P**		**04 49 03.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=208,slow=5.0,SNR=4.2							
YKA	**Yellowknife Ar**	**94.21**	**25**	P	**P**		**04 49 34.1**	**-0.5**
	comp=Z,0.3nm,0.9s,baz=232,slow=4.0,SNR=4.1							
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	**PKPbc**		**04 55 56.3**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=355,slow=4.3,SNR=2.0							

*ARE **02** 04:39:54±2.7, 11°.3S±0°.2×77°.0W±0°.2, h114km±9km, ML4.2, Error ellipse: s-maj=26.4km s-min=24.1km az=80.0*

NEIC 02 04:39:54.9±0.8, 11°.2S±0°.2×76°.7W±0°.2, h95km±22km, Error ellipse: s-maj=28.5km s-min=25.8km az=61.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.83**	**191**	Pn	Pn		04 40 13.4	+0.1
NNA				Sn	Sn		04 40 26.4	-0.7
LPAZ	**La Paz**	**9.74**	**122**	Pn	Pn		04 42 12.8	0.0
PB16	**IPOC Station P**	**9.95**	**137**	Pn	Pn		04 42 15.7	+0.2
MNMC	**Minye Minye**	**10.46**	**140**	Pn	Pn		04 42 23.2	+0.9
PB11	**IPOC Station P**	**10.90**	**142**	Pn	Pn		04 42 27.4	-0.7
SAML	**Samuel**	**13.47**	**82**	Pn	Pn		04 43 02.3	0.0

*IDC **02** 04:46:05.5±0.8, 30°.16S×178°.77W, h0km, mb4.2/6, mb1 4.3/7, mb1mx4.0/34, mbtmp4.2/7, ML4.0/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/22, Error ellipse: s-maj=28.2km s-min=18.8km az=142.0*

*NEIC **02** 04:46:10.7±2.0, 30°.2S±0°.1×178°.8W±0°.1, h35km±1km, mb4.2/6, Error ellipse: s-maj=27.7km s-min=6.4km az=130.0*

ISC 02 04:46:11.0±0.7, 30°.1S±0°.1×179°.0W±0°.1, h35km, n33, σ1s91/25, mb4.2/10, MS3.9/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.23**	**47**	Pn	**Pn**		**04 46 28.7**	**-3.0**
	111nm,0.3s,baz=106,slow=20,SNR=4.9							
RAO				Sn	**Sn**		**04 46 52.1**	**+5.0**
	192nm,0.3s,baz=111,slow=24,SNR=5.8							
RAO	**Raoul Island**	**1.23**	**47**	Pn	**Pn**		**04 46 31.2**	**-0.5**
RAO				Sn	**Sn**		**04 46 47.9**	**+0.7**
OUZ	**Omahuta**	**8.09**	**229**	Pn	**Pn**		**04 48 04.9**	**-1.1**
URZ	**Urewera**	**8.77**	**201**	Pn	**Pn**		**04 48 12.8**	**-2.4**
	1.6nm,0.3s,baz=128,slow=23,SNR=11							
URZ				Sn	**Sn**		**04 49 57.5**	**+4.8**
	0.4nm,0.3s,baz=127,slow=20,SNR=2.8							
URZ	**Urewera**	**8.77**	**201**		**Pn**		**04 48 12.9**	**-2.2**
MSVF	**Nonsavu**	**12.62**	**347**	LR	LR		04 53 07.5	
	comp=Z,348nm,21.5s,baz=193,slow=33							
DZM	**Mont Dzumac**	**15.36**	**298**	LR	LR		04 54 31.0	
	comp=Z,439nm,18.1s,baz=175,slow=33							
RAR	**Rarotonga**	**19.40**	**67**	LR	LR		04 57 02.7	
	comp=Z

*DDA **02** 06:12:54.6,35˚.80N×29˚.26E,h30km±2km,ML3.1*
*ISK **02** 06:12:54.9,35˚.87N×29˚.22E,h8km,ML3.3/18*
*NIC **02** 06:12:56.4±0.0,35˚.79N×29˚.33E,h25km±31km,Ml3.2/6*
*THE **02** 06:12:56.5,35˚.95N×29˚.18E,h1km±1km,ML2.9/3,Error ellipse: s-maj=1.5km s-min=0.6km az=151.0*
*ATH **02** 06:12:56.9,35˚.85N×29˚.19E,h12km±5km,ML3.0/3,Error ellipse: s-maj=9.2km s-min=1.6km az=353.0*
*HLW **02** 06:12:59.0,35˚.60N×29˚.35E,h30km±12km,Md3.8,Ml3.8*

ISC 02 06:12:55.4±1.1,**35˚.77N**±0˚.03×**29˚.27E**±0˚.02,**h24**km±11km, **n70**,σ1§**40**/114,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**0.46**	**34**	P	**Pb**	**06 13 05.1**	**+0.3**
KSL				AML	AML	06 13 12.0	
	comp=N,7284μm,0.9s						
KSL				S	**Sb**	**06 13 12.0**	**+0.9**
KSL				AML	AML	06 13 12.7	
	comp=E,16612μm,0.5s						
KSL	**Kastellorizon**	**0.46**	**34**	P	**Pb**	**06 13 05.0**	**+0.3**
KSL				S	**Sb**	**06 13 10.8**	**-0.4**
	comp=E,6μm,0.7s						
KSL	**Kastellorizon**	**0.46**	**34**	P	**Pb**	**06 13 05.1**	**+0.3**
KSL				S	**Sn**	**06 13 12.2**	**-1.6**
AKAS	**Kas**	**0.53**	**31**	*i* P	**Pb**	**06 13 05.6**	**-0.7**
AKAS				*i* S	**Sb**	**06 13 13.5**	**-0.1**
AKAS				IAML		06 13 15.0	
	comp=E,2μm,0.3s						
AKAS	**Kas**	**0.53**	**31**	PG	**Pb**	**06 13 05.3**	**-0.9**
AKAS				SG	**Sb**	**06 13 12.0**	**-1.6**
FETY	**Fethiye**	**0.87**	**350**	P	**Pb**	**06 13 10.0**	**-1.9**
FETY				S	**Sb**	**06 13 21.3**	**-1.9**
FETY	**Fethiye**	**0.87**	**350**	PG	**Pb**	**06 13 09.9**	**-1.9**
FETY				SG	**Sb**	**06 13 21.1**	**-2.1**
ARG	**Arkhangelos**	**1.02**	**296**	P	**Pn**	**06 13 14.3**	**0.0**
ARG				S	**Sn**	**06 13 28.2**	**+0.3**
ARG				AML	AML	06 13 37.3	
	comp=E,2011μm,0.3s						
ARG				AML	AML	06 13 42.7	
	comp=N,1547μm,0.6s						
ARG	**Arkhangelos**	**1.02**	**296**	P	**Pn**	**06 13 14.1**	**-0.3**
ARG				S	**Sn**	**06 13 28.4**	**+0.5**
	comp=N,870nm,0.5s						
ARG	**Arkhangelos**	**1.02**	**296**	PG	**Pn**	**06 13 14.0**	**-0.3**
ARG				SG	**Sb**	**06 13 27.5**	**0.0**
ARG	**Arkhangelos**	**1.02**	**296**	P	**Pn**	**06 13 14.4**	**0.0**
ARG				S	**Sn**	**06 13 30.0**	**+2.1**
AKUM	**Antalya-Kumluc**	**1.03**	**58**	*i* P	**Pn**	**06 13 13.7**	**-0.7**
AKUM				*i* S	**Sn**	**06 13 31.1**	**+3.0**
AKUM				IAML		06 13 37.0	
	comp=N,220nm,0.3s						
AKUM				IAML		06 13 37.0	
	comp=E,367nm,0.4s						
ELL	**Elmali**	**1.10**	**28**	PG	**Pn**	**06 13 15.1**	**-0.4**
ELL				SG	**Sn**	**06 13 30.1**	**+0.1**
DALY	**Dalyan (Mula)**	**1.15**	**335**	*i* P	**Pn**	**06 13 15.8**	**-0.3**
DALY				*i* S	**Sn**	**06 13 30.9**	**-0.1**
DALY				IAML		06 13 34.0	
	comp=E,375nm,0.7s						
DALY				IAML		06 13 39.0	
	comp=N,413nm,0.5s						
DALY	**Dalyan (Mula)**	**1.15**	**335**	PG	**Pn**	**06 13 15.8**	**-0.3**
DALY				SG	**Sn**	**06 13 30.5**	**-0.6**
MRSB	**Marmaris-Mugla**	**1.28**	**318**	PN	**Pn**	**06 13 18.2**	**+0.4**
TURN	**Turunc**	**1.30**	**321**	*i* P	**Pn**	**06 13 18.3**	**+0.3**
TURN				IAML		06 13 35.0	
	comp=E,158nm,0.7s						
TURN				*i* S	**Sb**	**06 13 36.0**	**+0.7**
TURN				IAML		06 13 39.0	
	comp=N,264nm,0.8s						
TURN	**Turunc**	**1.30**	**321**	PN	**Pn**	**06 13 18.1**	**+0.1**
KEMT	**Kemer-ANTALYA**	**1.33**	**51**	PN	**Pb**	**06 13 19.9**	**+0.2**
CAEL	**Denizli, Camel**	**1.35**	**2**	*i* P	**Pn**	**06 13 19.0**	**+0.1**
CAEL				*i* S	**Sb**	**06 13 38.7**	**+1.8**
CAEL				IAML		06 13 45.0	
	comp=N,692nm,0.9s						
CAEL				IAML		06 13 56.0	
	comp=E,768nm,1.0s						
GOLH	**Golhisar**	**1.48**	**9**	*i* P	**Pn**	**06 13 21.1**	**+0.5**
GOLH				*i* S	**Sb**	**06 13 42.0**	**+1.3**
GOLH				IAML		06 13 45.0	
	comp=N,321nm,0.5s						
GOLH				IAML		06 13 47.0	
	comp=E,249nm,0.7s						
KORT	**Korkueli**	**1.50**	**35**	*i* P	**Pn**	**06 13 20.4**	**-0.7**
KORT				*i* S	**Sb**	**06 13 43.2**	**+1.8**
KORT				IAML		06 13 55.0	
	comp=N,283nm,0.7s						
KORT				IAML		06 13 55.0	
	comp=E,591nm,0.7s						
KORT	**Korkueli**	**1.50**	**35**	PN	**Pn**	**06 13 21.3**	**+0.3**
KORT				SN	**Sb**	**06 13 42.1**	**+0.7**
YER	**Yerkesik**	**1.57**	**330**	PN	**Pn**	**06 13 22.3**	**+0.4**
YER				SN	**Sb**	**06 13 42.7**	**-0.6**
ANTB	**Antalya**	**1.59**	**45**	PN	**Pb**	**06 13 23.6**	**-0.4**
MULA	**Mugla, Merkez-**	**1.66**	**333**	*i* P	**Pb**	**06 13 25.6**	**+0.2**
MULA				*i* S	**Sn**	**06 13 42.7**	**-1.2**
MULA				IAML		06 13 50.0	
	comp=E,236nm,0.6s						
MULA				IAML		06 13 54.0	
	comp=N,101nm,0.5s						
KARP	**Karpathos**	**1.73**	**263**	P	**Pn**	**06 13 25.3**	**+1.3**
KARP				AML	AML	06 13 48.9	
	comp=N,363μm,0.4s						
KARP				AML	AML	06 13 49.1	
	comp=E,445μm,0.4s						
KARP	**Karpathos**	**1.73**	**263**	P	**Pn**	**06 13 25.4**	**+1.4**
KARP				S	**Sb**	**06 13 47.8**	**0.0**
	comp=E,202nm,0.4s						
KARP	**Karpathos**	**1.73**	**263**	PN	**Pn**	**06 13 25.7**	**+1.6**
KARP				SN	**Sb**	**06 13 47.9**	**+0.1**
KARP	**Karpathos**	**1.73**	**263**	P	**Pn**	**06 13 25.6**	**+1.6**
KARP				S	**Sb**	**06 13 47.8**	**0.0**
BUCA	**Burdur, Bucak-**	**1.87**	**33**	*i* P	**Pn**	**06 13 27.0**	**+1.1**
BUCA				*i* S	**Sb**	**06 13 54.7**	**+2.9**
BUCA				IAML		06 14 05.0	
	comp=E,179nm,0.6s						
BUCA				IAML		06 14 07.0	
	comp=N,145nm,0.9s						
NIS1	**Nisyros Isl.**	**1.88**	**297**	P	**Pn**	**06 13 26.4**	**+0.3**
NIS1	**Nisyros Isl.**	**1.88**	**297**	PN	**Pn**	**06 13 26.9**	**+0.8**
MLSB	**Milas**	**1.94**	**322**	PN	**Pn**	**06 13 27.6**	**+0.7**
BCK	**Bucak**	**1.99**	**32**	PN	**Pn**	**06 13 28.5**	**+0.8**
BRDR	**BURDUR-Merkez**	**2.02**	**18**	*i* P	**Pb**	**06 13 31.2**	**-0.3**
BRDR				*i* S	**Sb**	**06 13 57.4**	**+1.2**
BRDR				IAML		06 14 09.0	
	comp=E,186nm,0.9s						
BRDR				IAML		06 14 11.0	
	comp=N,113nm,0.8s						
KOSK	**Kos Island**	**2.09**	**298**	PN	**Pn**	**06 13 30.2**	**+1.3**
AYDN	**Tasoluk**	**2.19**	**330**	*i* P	**Pb**	**06 13 33.8**	**-0.5**
AYDN				*i* S	**Sn**	**06 13 53.9**	**-2.9**
AYDN				IAML		06 14 05.0	
	comp=E,73nm,0.4s						
AYDN				IAML		06 14 14.0	
	comp=N,82nm,0.5s						
BASM	**Basmaki-Afyon**	**2.23**	**16**	PN	**Pn**	**06 13 31.9**	**+0.9**
ISP	**Isparta**	**2.28**	**26**	PN	**Pn**	**06 13 32.9**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**2.43**	**333**	PN	**Pn**	**06 13 34.7**	**+0.9**
GAZI	**Gazipasa**	**2.52**	**79**	*i* P	**Pn**	**06 13 34.0**	**-0.8**
GAZI				*i* S	**Sn**	**06 14 02.1**	**-2.6**
GAZI				IAML		06 14 03.0	
	comp=N,82nm,0.6s						
GAZI				IAML		06 14 04.0	
	comp=E,144nm,0.7s						
GCAM	**G?zelcaml?**	**2.52**	**320**	PN	**Pn**	**06 13 36.3**	**+1.4**
ZKR	**Zakros**	**2.58**	**256**	P	**Pn**	**06 13 38.0**	**+2.4**
ZKR	**Zakros**	**2.58**	**256**	P	**Pn**	**06 13 37.8**	**+2.2**
KHAL	**Karahalli**	**2.60**	**4**	*i* P	**Pn**	**06 13 37.5**	**+1.5**
KHAL				*i* S	**Sb**	**06 14 09.3**	**-3.6**
KHAL				IAML		06 14 13.0	
	comp=E,60nm,0.7s						
KHAL				IAML		06 14 14.0	
	comp=N,60nm,0.4s						
SEDI	**Konya, Seydise**	**2.61**	**49**	*i* P	**Pn**	**06 13 37.8**	**+1.6**
SEDI				*i* S	**Sn**	**06 14 09.6**	**+2.4**
SEDI				IAML		06 14 10.0	
	comp=N,123nm,0.6s						
SEDI				IAML		06 14 13.0	
	comp=E,114nm,0.6s						
AKMS	**Akamas**	**2.62**	**106**	P	**Pn**	**06 13 36.4**	**+0.2**
AKMS				S	**Sn**	**06 14 06.5**	**-0.7**
AKMS				AML	AML	06 14 07.2	
	comp=E,2.8nm,0.5s						
AKMS				AML	AML	06 14 07.2	
	comp=E,2.8nm,0.5s						
AKMS				AML	AML	06 14 07.2	
	comp=E,1.1nm,0.6s						
AKMS				AML	AML	06 14 07.2	
	comp=E,1.1nm,0.6s						
KULA	**Kula-Manisa**	**2.78**	**350**	PN	**Pn**	**06 13 39.7**	**+1.2**
ALFC	**Alefka**	**2.79**	**102**	P	**Pn**	**06 13 38.7**	**+0.1**
ALFC				S	**Sn**	**06 14 09.5**	**-2.0**
ALFC				AML	AML	06 14 11.2	
	comp=E,1.4nm,0.5s						
ALFC				AML	AML	06 14 11.2	
	comp=E,1.4nm,0.5s						
ALFC				AML	AML	06 14 12.1	
	comp=E,1.3nm,0.6s						
ALFC				AML	AML	06 14 12.1	
	comp=E,1.3nm,0.6s						
OSC1	**CSNet OBS 1**	**2.81**	**143**	P	**Pn**	**06 13 39.9**	**+1.1**
OSC1				S	**Sn**	**06 14 11.9**	**0.0**
NATA	**Nata**	**2.88**	**109**	P	**Pn**	**06 13 41.3**	**+1.4**
NATA				S	**Sn**	**06 14 12.1**	**-1.7**
NATA				AML	AML	06 14 14.9	
	comp=E,1.9nm,0.6s						
NATA				AML	AML	06 14 14.9	
	comp=E,1.9nm,0.6s						
YVAC	**Isparta, Yalva**	**2.95**	**32**	*i* P	**Pn**	**06 13 43.4**	**+2.5**
YVAC				*i* S	**Sb**	**06 14 19.7**	**-3.3**
SHUT	**Suhut-Afyon**	**2.96**	**20**	PN	**Pn**	**06 13 42.7**	**+1.7**
DOGA	**KONYA_Doganhis**	**3.02**	**39**	*i* P	**Pn**	**06 13 42.9**	**+1.0**
DOGA				*i* S	**Sn**	**06 14 17.7**	**+0.3**
DOGA				IAML		06 14 20.0	
	comp=E,117nm,0.5s						
DOGA				IAML		06 14 21.0	
	comp=N,103nm,0.4s						
SZAC	**Souni**	**3.13**	**108**	P	**Pn**	**06 13 44.0**	**+0.7**
SZAC				S	**Sn**	**06 14 17.6**	**-2.3**
SZAC				AML	AML	06 14 20.9	
	comp=N,1.2nm,0.5s						
SZAC				AML	AML	06 14 20.9	
	comp=N,1.2nm,0.5s						
SZAC				AML	AML	06 14 21.7	
	comp=N,1.2nm,0.3s						
SZAC				AML	AML	06 14 21.7	
	comp=N,1.2nm,0.3s						
KMER	**Konya-Meram**	**3.19**	**50**	*i* P	**Pn**	**06 13 45.1**	**+0.9**
KMER				*i* S	**Sn**	**06 14 22.8**	**+1.3**
KMER				IAML		06 14 24.0	
	comp=N,43nm,0.5s						
KMER				IAML		06 14 26.0	
	comp=E,50nm,0.6s						
KKBE	**Karaman, Kazim**	**3.29**	**63**	*i* P	**Pn**	**06 13 47.1**	**+1.5**
KKBE				*i* S	**Sn**	**06 14 24.1**	**+0.1**
KKBE				IAML		06 14 25.0	
	comp=E,142nm,0.7s						
KKBE				IAML		06 14 25.0	
	comp=N,82nm,0.7s						
KONT	**Konya--Tatoy**	**3.29**	**48**	*i* P	**Pn**	**06 13 47.2**	**+1.6**
KONT				*i* S	**Sn**	**06 14 21.4**	**-2.7**
ASGA	**Asgata**	**3.40**	**106**	P	**Pn**	**06 13 47.4**	**+0.4**
ASGA				S	**Sn**	**06 14 26.1**	**-0.5**
ASGA				AML	AML	06 14 29.6	
	comp=N,0.6nm,0.4s						
ASGA				AML	AML	06 14 29.6	
	comp=N,0.6nm,0.4s						
ASGA				AML	AML	06 14 30.4	
	comp=N,0.6nm,0.5s						
ASGA				AML	AML	06 14 30.4	
	comp=N,0.6nm,0.5s						
CSS	**Mathiatis**	**3.42**	**103**	P	**Pn**	**06 13 48.9**	**+1.6**
CSS				S	**Sn**	**06 14 27.2**	**+0.1**
CSS				AML	AML	06 14 27.5	
	comp=N,0.2nm,0.8s						
CSS				AML	AML	06 14 27.5	
	comp=N,0.2nm,0.8s						
CSS				AML	AML	06 14 27.5	
	comp=N,0.1nm,0.6s						
CSS				AML	AML	06 14 27.5	
	comp=N,0.1nm,0.6s						
OSC2	**CSNet OBS 4**	**3.66**	**136**	P	Pn	06 13 47.1	-3.5
OSC2				S	**Sn**	**06 14 30.1**	**-2.9**
SLUM	**Salum**	**5.45**	**220**	P	**Pn**	**06 14 16.9**	**+1.7**
	baz=222						
SLUM				S	**Sn**	**06 15 14.0**	**-3.0**
	baz=222						
HNAT	**Natroun**	**6.23**	**169**	P	**Pn**	**06 14 26.7**	**+0.9**
	baz=169						
GLL	**Jalalah**	**6.51**	**161**	P	**Pn**	**06 14 31.0**	**+1.2**
	baz=161						
SUZ	**Suez**	**6.63**	**152**	P	**Pn**	**06 14 32.0**	**+0.6**
	baz=152						
SWA2		**7.26**	**207**	P	**Pn**	**06 14 42.3**	**+2.2**
	baz=209						
SWA2				AMP		06 16 00.0	
	baz=209						
TAMRE	**El Minia**	**8.19**	**170**	P	**Pn**	**06 14 53.5**	**+0.7**
	baz=169						
HKAT	**Jabal Katrina**	**8.26**	**150**	P	**Pn**	**06 14 54.0**	**+0.1**
	baz=149						
HFRF	**Wahat Farafira**	**8.64**	**186**	P	**Pn**	**06 14 60.0**	**+1.0**
	baz=187						

WEL 02 06:35:13.8±0.7,**34˚S**±11˚×**17˚9E**±2˚3,**h184**km±22km, **M3.9**/17,**mB4.3**/3,**MLv4.0**/17,**Mw(mB)3.5**/3,**Error ellipse: s-maj=0.0km s-min=0.0km az=113.7,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.87**	**191**	P	Pn	06 36 14.7	+1.4
MXZ				S	Sn	06 37 01.8	+1.9
HAZ	**Te Kaha**	**4.15**	**196**	P	Pn	06 36 19.0	+2.1
HAZ				S	Sn	06 37 07.8	+1.4
PKGZ	**Pakihiroa**	**4.22**	**192**	P	Pn	06 36 20.3	+2.5
PKGZ				S	Sn	06 37 10.9	+2.7
PUZ	**Puketiti**	**4.37**	**190**	P	Pn	06 36 21.2	+1.5
PUZ				S	Sn	06 37 10.5	-1.0
RUGZ	**Raukumara Rang**	**4.38**	**196**	P	Pn	06 36 21.4	+1.5
TWGZ	**Tauwhareparae**	**4.52**	**192**	P	Pn	06 36 23.8	+2.2
TWGZ				S	Sn	06 37 15.2	+0.2
MWZ	**Matawai**	**4.76**	**196**	P	Pn	06 36 25.5	+0.7
MWZ				S	Sn	06 37 19.9	-0.7
CNGZ	**Carnagh Statio**	**4.79**	**189**	P	Pn	06 36 27.0	+2.1
URZ	**Urewera**	**4.80**	**200**	P	Pn	06 36 26.0	+0.8
URZ				S	Sn	06 37 21.7	+0.3
KMRZ	**Kaimai**	**4.86**	**212**	P	Pn	06 36 28.7	+2.7
RIGZ	**Rimuhau**	**5.07**	**193**	P	Pn	06 36 29.2	+0.4
MUGZ	**Murupara**	**5.10**	**202**	P	Pn	06 36 30.0	+0.9
MUGZ				S	Sn	06 37 28.7	+0.2
GLKZ	**Green Lake**	**5.11**	**30**	S	Sn	06 37 26.0	-2.6
KNZ	**Kokohu**	**5.40**	**193**	P	Pn	06 36 32.9	+0.1
KNZ				S	Sn	06 37 32.1	-3.1
MTHZ	**Maungataniwha**	**5.43**	**200**	P	Pn	06 36 33.5	+0.1
MTHZ				S	Sn	06 37 34.7	-1.4
ARHZ	**Aropaoanui**	**5.77**	**197**	P	Pn	06 36 37.5	-0.3
ARHZ				S	Sn	06 37 41.4	-2.7
BKZ	**Black Stump Fm**	**5.82**	**201**	P	Pn	06 36 38.7	+0.2
BKZ				S	Sn	06 37 40.8	-4.5
ETVZ	**East Tongariro**	**6.06**	**207**	P	Pn	06 36 41.6	0.0
OTVZ	**Oturere**	**6.10**	**207**	P	Pn	06 36 41.9	-0.3
KRHZ	**Kereru**	**6.30**	**200**	P	Pn	06 36 42.3	-2.4
KAHZ	**Kahuranaki**	**6.31**	**197**	P	Pn	06 36 42.9	-1.9
PXZ	**Pawanui**	**6.54**	**196**	P	Pn	06 36 45.6	-2.1

*MAN **02** 06:41:14.4,5˚.15N×126˚.51E,h30km,MS3.9*
*IDC **02** 06:41:24.3±4.5,5˚.66N×126˚.24E,h119km±41km,mb3.7/13, mb1 3.9/15,mb1mx3.7/48,mbtmp4.2/15,Error ellipse: s-maj=41.6km s-min=12.5km az=73.0*

ISC 02 06:41:21.5±1.0,**5˚.63N**±0˚.06×**126˚.29E**±0˚.10,**h91**km±8km, **n24**,σ1§**51**/34,**mb4.0**/13,**1D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.74**	**310**	*e*P	**Pn**	**06 41 36.5**	**-2.1**
DDMP				*e*S	**Sn**	**06 41 50.9**	**-0.4**
MATI	**Mati**	**1.31**	**359**	*e*P	**Pn**	**06 41 42.7**	**-2.2**
MATI				*e*S	**Sn**	**06 42 04.8**	**+2.1**
KCP	**Kidapawan**	**1.82**	**319**	*e*P	**Pn**	**06 41 50.9**	**-0.6**
KCP				*i* S	**Sn**	**06 42 13.9**	**-0.3**
SKMP	**Bagumbayan, Su**	**1.95**	**297**	*e*P	**Pn**	**06 41 51.5**	**-1.6**
SKMP				*e*S	**Sn**	**06 42 20.7**	**+3.6**
BUKP	**Musuan**	**2.55**	**332**	*e*P	**Pn**	**06 42 01.3**	**+0.2**
BUKP				*e*S	**Sn**	**06 42 31.0**	**-0.4**
BUTP	**Butuan**	**3.39**	**349**	*e*P	**Pn**	**06 42 14.6**	**+2.3**
BUTP				*e*S	Sn	06 42 58.6	+7.2
PAGZ	**Pagadian**	**3.63**	**308**	*e*P	**Pn**	**06 42 15.3**	**-0.3**
PAGZ				*e*S	Sn	06 42 48.0	-9.5
MSLP	**Maasin**	**4.70**	**343**	*e*P	**Pn**	**06 42 32.3**	**+2.2**
MSLP				*e*S	**Sn**	**06 43 25.9**	**+2.6**
KAPI	**Kappang**	**12.42**	**212**	P	**Pn**	**06 44 17.6**	**+2.6**
	0.8nm,0.3s,baz=18,slow=11,SNR=4.3						
BATI	**Baumata**	**15.94**	**189**	P	**P**	**06 45 03.9**	**+1.4**
	5.6nm,0.3s,baz=18,slow=3.2,SNR=6.5						
FITZ	**Fitzroy Crossi**	**23.58**	**182**	P	**P**	**06 46 25.1**	**+1.0**
	2.6nm,0.8s,baz=11,slow=9.7,SNR=12						
WRA	**Warramunga Arr**	**26.61**	**163**	P	**P**	**06 46 51.0**	**-0.6**
	0.6nm,0.4s,baz=331,slow=11,SNR=15						
WRA				PcP	**PcP**	**06 50 13.4**	**-0.3**
	0.5nm,0.6s,baz=342,slow=2.2,SNR=3.0						
ASAR	**Alice Springs**	**30.05**	**166**	P	**P**	**06 47 22.3**	**+0.2**
	2.0nm,0.6s,baz=345,slow=7.0,SNR=45						
ASAR				PcP	**PcP**	**06 50 22.1**	**0.0**
	1.0nm,0.6s,baz=352,slow=2.4,SNR=10						
USRK	**Ussuriysk Ar.**	**38.74**	**7**	P	**P**	**06 48 37.4**	**+0.6**
	0.6nm,0.4s,baz=176,slow=8.8,SNR=3.0						
STKA	**Stephens Creek**	**40.05**	**160**	P	**P**	**06 48 48.4**	**+0.5**
	2.4nm,0.5s,baz=334,slow=9.3,SNR=9.4						
SONM	**Songino Array**	**45.37**	**341**	P	**P**	**06 49 30.2**	**-0.7**
	0.4nm,0.5s,baz=154,slow=8.0,SNR=1.9						
SONM				PcP	**PcP**	**06 51 08.7**	**-0.2**
	0.3nm,0.3s,baz=134,slow=4.2,SNR=3.7						
MKAR	**Makanchi Array**	**55.76**	**325**	P	**P**	**06 50 47.5**	**-1.4**
	1.2nm,0.4s,baz=115,slow=7.4,SNR=26						
MKAR				PcP	**PcP**	**06 51 45.7**	**-1.4**
	0.6nm,0.6s,baz=137,slow=3.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**58.71**	**333**	P	**P**	**06 51 10.1**	**+0.6**
	1.3nm,0.3s,baz=133,slow=6.3,SNR=4.5						
NRIK	**Noril'sk**	**68.49**	**346**	P	**P**	**06 52 12.8**	**-0.8**
	1.1nm,0.3s,baz=69,slow=4.2,SNR=2.0						
ILAR	**Eielson Array**	**83.59**	**26**	P	**P**	**06 53 38.9**	**-0.6**
	0.4nm,0.8s,baz=235,slow=5.5,SNR=4.9						
VNDA	**Vanda**	**85.35**	**173**	P	**P**	**06 53 48.1**	**+0.1**
	0.6nm,0.7s,baz=301,slow=5.8,SNR=2.5						
ARCES	**ARCESS Array B**	**88.53**	**340**	P	**P**	**06 54 02.4**	**-1.2**
	1.3nm,0.6s,baz=80,slow=5.1,SNR=6.2						
FINES	**FINESS Array B**	**89.96**	**332**	P	**P**	**06 54 09.0**	**-1.4**
	1.7nm,0.8s,baz=42,slow=6.4,SNR=1.6						
TORD	**Torodi Ar. Bea**	**121.90**	**289**	PKP	**PKPdf**	**07 00 05.0**	**-1.2**
	0.5nm,0.4s,baz=69,slow=1.4,SNR=6.6						

*IDC **02** 06:50:17.3±1.5,30˚.78S×179˚.91E,h395km±20km,mb3.2/3, mb1 3.6/5,mb1mx3.2/24,mbtmp4.1/5,Error ellipse: s-maj=32.5km s-min=27.4km az=54.0*

ISC 02 06:50:18.6±1.7,**30˚.95S**±0˚.1×**179˚.7E**±0˚.3,**h400**km,**n22**, σ1§**38**/35,**mb3.4**/3,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.61**	**51**	P	Pn	06 51 15.2	-3.6
GLKZ				S	S	06 52 00.5	-7.0
RAO	**Raoul Island**	**2.62**	**51**	P	Pn	06 51 16.3	-2.6
	34nm,0.3s,baz=167,slow=19,SNR=1.3						
RAO				S	S	06 51 59.2	-8.4
	75nm,0.3s,baz=240,slow=20,SNR=2.2						
MXZ	**Matakaoa Point**	**6.73**	**190**	P	**Pn**	**06 51 59.4**	**+0.2**
MXZ				S	**S**	**06 53 21.4**	**+0.1**
HAZ	**Te Kaha**	**7.01**	**193**	P	**P**	**06 52 03.6**	**+0.8**
HAZ				S	**S**	**06 53 27.2**	**+0.2**
RUGZ	**Raukumara Rang**	**7.23**	**193**	P	**P**	**06 52 07.0**	**+1.5**
RUGZ				S	**S**	**06 53 29.3**	**-2.6**
PUZ	**Puketiti**	**7.24**	**189**	P	**P**	**06 52 06.2**	**+0.8**
PUZ				S	**S**	**06 53 30.2**	**-1.6**
TWGZ	**Tauwhareparae**	**7.39**	**191**	P	**P**	**06 52 08.5**	**+1.4**
TWGZ				S	**S**	**06 53 33.2**	**-1.6**
MWZ	**Matawai**	**7.62**	**193**	P	**P**	**06 52 10.5**	**+0.8**
MWZ				S	**S**	**06 53 39.8**	**+0.1**
URZ	**Urewera**	**7.64**	**196**	P	**Pn**	**06 52 08.6**	**-0.7**
	4.5nm,0.3s,baz=302,slow=23,SNR=88						
URZ				S	**S**	**06 53 38.9**	**-1.0**
	6.1nm,0.3s,baz=305,slow=23,SNR=6.3						
URZ	**Urewera**	**7.64**	**196**	P	**Pn**	**06 52 09.3**	**-0.1**
URZ				S	**S**	**06 53 39.0**	**-1.0**
TKGZ	**Te Karaka**	**7.66**	**191**	P	**P**	**06 52 12.3**	**+2.1**
TKGZ				S	**S**	**06 53 39.2**	**-1.3**
RIGZ	**Rimuhau**	**7.94**	**191**	P	**P**	**06 52 14.3**	**+1.0**
PRGZ	**Paritu Road**	**8.13**	**190**	P	**P**	**06 52 16.8**	**+1.5**
PRGZ				S	**S**	**06 53 49.5**	**-0.9**
KNZ	**Kokohu**	**8.26**	**191**	P	**P**	**06 52 17.8**	**+1.0**
KNZ				S	**S**	**06 53 51.7**	**-1.4**
MTHZ	**Maungataniwha**	**8.27**	**196**	P	**P**	**06 52 18.9**	**+2.0**
MTHZ				S	**S**	**06 53 51.0**	**-2.3**
RAHZ	**Arahi**	**8.27**	**195**	P	**P**	**06 52 18.0**	**+1.1**
RAHZ				S	**S**	**06 53 53.3**	**0.0**
MHGZ	**Mahia Peninsul**	**8.35**	**190**	P	**P**	**06 52 19.5**	**+1.7**
MHGZ				S	**S**	**06 53 53.6**	**-1.4**
WHHZ	**Waihua**	**8.40**	**193**	P	**P**	**06 52 20.5**	**+2.2**
WHHZ				S	**S**	**06 53 56.3**	**+0.4**
ASAR	**Alice Springs**	**41.14**	**269**	P	**P**	**06 57 26.4**	**+0.3**
	0.8nm,0.4s,baz=104,slow=7.2,SNR=23						
WRA	**Warramunga Arr**	**42.18**	**274**	P	**P**	**06 57 34.6**	**+0.2**
	1.4nm,0.3s,baz=111,slow=8.0,SNR=55						
QSPA	**South Pole Qui**	**59.19**	**180**	P	**P**	**06 59 39.8**	**+0.7**
	0.7nm,0.5s,baz=0.0,slow=3.0,SNR=1.4

FITZ	Fitzroy Crossi	52.75	260	P		P	07 03 25.2	-0.8
TNTI	Ternate	56.02	283	P		P	07 03 47.1	-2.0
PETK	Petropavlovsk-	73.19	345	P		P	07 05 37.3	+0.8
	comp=Z,2.2nm,0.7s,baz=151,slow=7.1,SNR=2.4							
YBH	Yreka Blue Hor	78.43	39	P		P	07 06 06.8	+0.9
YBH				IAmb		IAmb	07 06 12.4	
	comp=Z,6.5nm,1.4s							
NVAR	Mina Array Bea	79.37	44	P		P	07 06 11.7	+0.5
	comp=Z,1.7nm,0.7s,baz=225,slow=8.9,SNR=5.6							
WVOR	Wild Horse Val	81.32	41	P		P	07 06 22.1	+1.0
WVOR				IAmb		IAmb	07 06 23.0	
	comp=Z,4.3nm,1.0s							
KTH	Kantishna Hill	83.65	12	P		P	07 06 31.2	-1.1
KTH				IAmb		IAmb	07 06 59.0	
	comp=Z,5.9nm,1.2s							
TRF	Thorofare Moun	83.68	12	P		P	07 06 32.5	-0.1
TRF				IAmb		IAmb	07 06 33.1	
	comp=Z,6.4nm,0.8s							
CTGM	Chitina Glacie	83.75	17	P		P	07 06 33.4	+0.4
CTGM				IAmb		IAmb	07 06 54.0	
	comp=Z,8.7nm,1.2s							
RND	Reindeer	83.95	13	P		P	07 06 34.4	+0.6
RND				IAmb		IAmb	07 06 34.8	
	comp=Z,4.5nm,0.7s							
MLY	Manley	85.01	12	P		P	07 06 38.6	-0.3
WRH	Wood River Hil	85.05	13	P		P	07 06 38.5	-0.5
IL31		85.56	13	P		P	07 06 41.6	+0.1
ILAR	Eielson Array	85.56	13	P		P	07 06 41.0	-0.5
	comp=Z,0.6nm,0.5s,baz=222,slow=5.2,SNR=15							
TX31	Lajitas Ar. Si	86.07	58	P		P	07 06 46.4	+1.5
TX32	Lajitas Array	86.07	58	P		P	07 06 46.5	+1.5
TXAR	Lajitas Array	86.07	58	P		P	07 06 45.9	+1.0
	comp=Z,1.6nm,0.7s,baz=217,slow=6.2,SNR=22							
EGAK	Eagle	86.91	15	P		P	07 06 48.5	+0.6
EGAK				IAmb		IAmb	07 07 14.0	
	comp=Z,2.8nm,1.2s							
BW06	Boulder Array	87.30	44	P		P	07 06 51.0	+0.4
PD31	Pinedale Array	87.30	44	P		P	07 06 51.0	+0.4
PD31				IAmb		IAmb	07 06 51.7	
	comp=Z,7.2nm,1.5s							
PDAR	Pinedale Array	87.30	44	P		P	07 06 50.8	+0.3
	comp=Z,0.8nm,0.5s,baz=218,slow=2.6,SNR=10							
YKA	Yellowknife Ar	94.10	25	P		P	07 07 21.1	-0.1
	comp=Z,0.5nm,0.8s,baz=244,slow=4.3,SNR=8.7							
MKAR	Makanchi Array	108.59	314	PKiKP		PKiKP	07 12 27.1	-1.1
	comp=Z,0.2nm,0.5s,baz=93,slow=2.9,SNR=2.2							
ARCES	ARCESS Array B	125.84	350	PKP		PKPdf	07 13 00.7	+0.1
	comp=Z,1.9nm,1.0s,baz=46,slow=3.5,SNR=4.3							
BRTR	Keskin Array B	144.24	315	PKP		PKPdf	07 13 35.6	-0.1
	comp=Z,1.4nm,0.9s,baz=44,slow=8.5,SNR=4.3							
CLL	Collm	144.98	347	*i* PKPdf		PKPab	07 13 37.3	-0.7
	comp=Z,6.0nm,0.5s							
GERES	GERESS Array B	147.12	345	PKPbc		PKPbc	07 13 43.7	+0.4
	comp=Z,2.7nm,0.8s,baz=42,slow=2.2,SNR=6.3							
TORD	Torodi Ar. Bea	175.66	186	PKP		PKPdf	07 14 08.8	-0.9
	comp=Z,0.8nm,1.0s,baz=232,slow=1.6,SNR=3.6							

IDC ***02*** *07:05:17.7±0.7,8.°17S×156.°99E,h0km,mb4.2/10, mb1 4.4/11,mb1mx4.1/29,mbtmp4.2/11,ML4.6/1,MS3.5/5, Ms1 3.4/5,ms1mx3.0/28,Error ellipse: s-maj=22.4km s-min=19.3km az=132.0*

NEIC ***02*** *07:05:18.6±1.3,8.°1S±0.°1×157.°0E±0.°1,h10km±1km, mb4.4/10,Error ellipse: s-maj=23.7km s-min=15.2km az=28.0*

ISC 02 07:05:19.0±0.6,8.°2S±0.°1×156.°95E±0.°08,h10km,n31, σ0.°94/28,mb4.3/16,MS3.4/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.22	113	Pn	Pn	07 06 09.6	-0.1
	73nm,0.3s,baz=256,slow=8.3,SNR=18						
HNR				Sn	Sn	07 06 48.4	+0.2
	98nm,0.3s,baz=250,slow=22,SNR=9.5						
HNR	Honiara	3.22	113		Pn	07 06 09.0	-0.7
PMG	Port Moresby	9.76	262	LR	LR	07 11 25.1	
	comp=Z,276nm,21.6s,baz=100,slow=38						
DZM	Mont Dzumac	16.58	148	eLR	LR	07 13 37.0	
	comp=Z,158nm,30.6s						
WR0	Warramunga Arr	24.67	239	P	P	07 10 39.3	-1.0
WR0				IAmb	IAmb	07 10 49.0	
	comp=Z,8.6nm,0.8s						
WB0	Warramunga Arr	24.71	240	P	P	07 10 38.8	-1.9
WB0				IAmb	IAmb	07 10 49.4	
	comp=Z,13nm,1.1s						
WRAB	Tennant Creek	24.82	239	P	P	07 10 41.0	-0.6
WRAB				IAmb	IAmb	07 10 43.8	
	comp=Z,9.5nm,0.8s						
WB2	Warramunga Arr	24.82	239	P	P	07 10 41.5	-0.1
WB2				IAmb	IAmb	07 10 43.9	
	comp=Z,6.6nm,0.8s						
WRA	Warramunga Arr	24.83	239	P	P	07 10 41.9	+0.1
	comp=Z,6.1nm,0.8s,baz=66,slow=9.6,SNR=39						
WRA				PcP	PcP	07 14 18.1	0.0
	comp=Z,0.7nm,0.8s,baz=56,slow=2.2,SNR=4.4						
WRA				LR	LR	07 20 12.4	
	comp=Z,135nm,20.0s,baz=95,slow=36						
FAKI	Fak Fak	25.12	281	P	P	07 10 43.2	-1.3
FAKI				IAmb	IAmb	07 11 03.0	
	comp=Z,7.5nm,0.9s						
MTN	Manton Dam	25.80	257	P	P	07 10 50.6	0.0
ASAR	Alice Springs	26.93	232	P	P	07 10 60.0	-0.9
	comp=Z,1.4nm,0.8s,baz=64,slow=8.8,SNR=15						
ASAR				PcP	PcP	07 14 23.4	+0.4
	comp=Z,0.7nm,1.1s,baz=70,slow=4.0,SNR=4.4						
ASAR				LR	LR	07 21 16.4	
	comp=Z,110nm,19.1s,baz=36,slow=36						
STKA	Stephens Creek	27.59	209	P	P	07 11 08.6	+2.0
	comp=Z,4.6nm,0.8s,baz=47,slow=14,SNR=8.2						
STKA				LR	LR	07 21 52.9	
	comp=Z,68nm,18.2s,baz=24,slow=36						
STKA	Stephens Creek	27.59	209	P	P	07 11 08.2	+1.7
BSWZ	Blackbirch Sta	36.63	159	P	P	07 12 25.3	-0.3
JAGI	Jajag, Banyuwa	42.34	266	P	P	07 13 14.1	+0.4
PPT	Papeete	52.81	106	LR	LR	07 33 43.0	
	comp=Z,30nm,19.0s,baz=174,slow=32						
PPT2	Papeete2	52.81	106	eLR	LR	07 30 14.9	
	comp=Z,49nm,25.2s						
TBI	Tubuai	53.44	113	eLR	LR	07 30 34.4	
	comp=Z,144nm,35.8s						
VNDA	Vanda	69.38	179	P	P	07 16 26.5	-0.1
	comp=Z,1.0nm,0.9s,baz=334,slow=3.8,SNR=4.6						
VNDA	Vanda	69.38	179	IAmb	IAmb	07 16 27.0	
	comp=Z,9.1nm,1.5s						
SONM	Songino Array	71.36	327	P	P	07 16 40.1	+0.7
	comp=Z,1.5nm,0.8s,baz=124,slow=7.3,SNR=3.4						
QSPA	South Pole Qui	81.83	180	P	P	07 17 37.8	-0.5
	comp=Z,4.0nm,1.1s,baz=333,slow=2.0,SNR=5.3						
ILAR	Eielson Array	83.75	21	P	P	07 17 47.2	-0.8
	comp=Z,1.0nm,0.9s,baz=253,slow=5.0,SNR=7.8						
MK31	Makanchi Array	85.55	318	P	P	07 17 56.0	-1.6
MK31				IAmb	IAmb	07 18 07.0	
	comp=Z,2.4nm,0.9s						
MKAR	Makanchi Array	85.55	318	P	P	07 17 58.9	+1.2
	comp=Z,2.0nm,0.7s,baz=102,slow=5.7,SNR=24						
NVAR	Mina Array Bea	90.92	51	P	P	07 18 24.8	+1.1
	comp=Z,0.3nm,0.5s,baz=242,slow=7.0,SNR=2.6						
YKA	Yellowknife Ar	96.45	28	P	P	07 18 48.4	+0.2
	comp=Z,0.7nm,0.8s,baz=261,slow=4.5,SNR=11						
ESDC	Sonseca Array	144.26	334	PKP	PKPdf	07 24 55.8	-0.1
	comp=Z,0.6nm,0.8s,baz=17,slow=1.7,SNR=4.0						
BDFB	Brasilia	145.78	134	PKPbc	PKPdf	07 24 58.9	-0.3
	comp=Z,9.1nm,0.8s,baz=211,slow=4.0,SNR=17						
BDFB	Brasilia	145.78	134		PKPdf	07 24 59.1	0.0

NEIC ***02*** *07:06:03.9,37.°79N×121.°98W,h8km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr-0.08; Mθθ-2.71; Mφφ2.80; Mrθ-0.22; Mrφ1.58; Mθφ0.46; Fault plane solution: M₀3.22000×10¹⁴ NP1:φ₁60.00000°, δ81.00000°, λ0.00000°. NP2:φ₂330.00000°, δ90.00000°, λ171.00000°. Principal axes: T 3.2650, Plg7.0000°, Azm285.0000°; N -0.0916, Plg81.0000°, Azm147.0000°; P -3.1734, Plg6.0000°, Azm15.0000°;*

NEIC ***02*** *07:06:04.3±0.7,37.°80N±0.°02×121.°99W±0.°03,h15km±4km Error ellipse: s-maj=4.0km s-min=1.7km az=61.0*

NCEDC 02 07:06:03.9±0.7,37.°79N±0.°01×121.°99W±0.°02,h10km±4km, Mwr3.6/6,ML3.2/52(NEIC),Error ellipse: s-maj=2.6km s-min=1.5km az=68.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCM	Mills College	0.15	266		Pg	07 06 07.9	+0.7
C055	Cottonwood Ave	0.17	216		Pg	07 06 08.2	+0.7
BKS	Berkeley--Byer	0.21	293		Pb	07 06 09.3	-0.6
VAK	Adit at Lawren	0.22	292		Pb	07 06 09.4	-0.6
BL67	Building 67, L	0.23	291		Pg	07 06 09.3	+0.7
BL88	Building 88, L	0.23	292		Pb	07 06 09.5	-0.7
BRK	Berkeley--Havi	0.23	291		Pb	07 06 09.4	-0.7
RFSB	Richmond Field	0.30	294		Pb	07 06 10.7	-0.7
HERB	Hercules	0.31	315		Pb	07 06 10.9	-0.6
J061	Lakeshore Driv	0.41	262		Pb	07 06 12.6	-0.6
JRSC	Jasper Ridge	0.44	207		Pb	07 06 13.1	-0.5
SCCB	Santa Clara Co	0.51	169		Pb	07 06 14.8	-0.2
MHC	Mount Hamilton	0.53	149		Pb	07 06 15.0	-0.2
COSM	Mount Oso	0.56	120		Pb	07 06 15.5	-0.4
CVS	Carmenet Viney	0.67	326		Pb	07 06 17.3	-0.3
MCCM	Marconi Confer	0.79	297		Pg	07 06 19.2	+0.1
FARB	Farallon Islan	0.81	264		Pg	07 06 19.7	+0.2
HFEM	San Felipe	0.93	150		Pg	07 06 21.7	-0.1
PACP	Pacheco Peak	0.96	144		Pg	07 06 22.4	0.0
MOBB	Monterey Bay O	1.11	187		Pb	07 06 24.4	-0.6
SAO	San Andreas Ge	1.11	157		Pb	07 06 24.8	-0.4
GCRM	Castle Rock Sp	1.14	330		Pb	07 06 24.3	-1.3
MNRC	McLaughlin Min	1.14	342		Pb	07 06 24.9	-0.9
FTR	Fort Ross	1.18	309		Pb	07 06 24.8	-1.5
GDXM	Geysers	1.20	328		Pb	07 06 25.5	-1.2
GDXM				IAML		07 06 44.2	
	comp=N,400nm,0.7s						
GDXM				IAML		07 06 44.2	
	comp=E,721nm,0.5s						
GSGM	Seigler Mounta	1.21	332		Pn	07 06 26.8	-0.1
SCZ	Santa Cruz	1.28	158		Pn	07 06 26.4	-1.4
CMB	Columbia Colle	1.29	79		Pn	07 06 26.9	-1.1
BJCM	Johnson Can.	1.33	159		Pn	07 06 27.1	-1.4
AFDM	Forest Hills D	1.40	34		Pn	07 06 28.1	-1.5
AFDM				IAML		07 06 59.0	
	comp=E,311nm,0.7s						
HAST	Hastings Reser	1.44	166		Pn	07 06 28.8	-1.3
HOPS	Hopland Field	1.47	325		Pn	07 06 30.1	-0.3
HOPS	Hopland Field	1.47	325	IAML		07 07 08.4	
	comp=E,372nm,1.4s						
HOPS				IAML		07 07 08.8	
	comp=N,289nm,1.7s						
BSMM	Soledad Missio	1.48	162		Pn	07 06 29.8	-0.8
ORV	Oroville	1.80	12		Pn	07 06 33.0	-2.0
PMPB	Monarch Peak	1.84	149		Pn	07 06 35.2	-0.3
PMPB				IAML		07 07 17.2	
	comp=N,324nm,1.9s						
PMPB				IAML		07 07 18.3	
	comp=E,359nm,1.0s						
GNAM	Navarro Ridge	1.91	318		Pn	07 06 35.6	-0.9
RUBR	Rubicon Trail	1.91	48		Pn	07 06 37.7	+1.0
PAPM	Alder Peak	1.94	165		Pn	07 06 36.3	-0.7
WAKR	Walker	2.13	70		Pb	07 06 41.5	-1.3
WAKR				IAML		07 07 11.9	
	comp=N,151nm,1.3s						
WAKR				IAML		07 07 22.5	
	comp=E,168nm,1.2s						
PKD	Bear Valley Ra	2.18	147		Pn	07 06 39.9	-0.3
PNTR	Pine Nut	2.28	55		Pb	07 06 43.8	-1.4
RAMR	Ramage Ranch	2.33	157		Pn	07 06 42.1	-0.2
MDCM	Deadman Creek	2.34	91		Pn	07 06 43.5	+0.9
VCNR	Virginia City	2.37	50		Pb	07 06 46.2	-0.6
VCNR				IAML		07 07 30.6	
	comp=E,156nm,1.1s						
BEKR	Beckworth	2.43	31		Pn	07 06 45.6	+1.8
BEKR				IAML		07 07 20.6	
	comp=E,134nm,0.9s						
BEKR				IAML		07 07 24.4	
	comp=N,93nm,0.7s						
YERR	Yerington	2.46	60		Pn	07 06 46.2	+1.9
HELL	Mitchell Peak,	2.61	114		Pn	07 06 46.1	-0.1
LHV	Little Huntoon	2.79	79		Pb	07 06 53.4	-0.3
LHV				IAML		07 07 49.4	
	comp=N,153nm,0.9s						
LHV				IAML		07 08 04.5	
	comp=E,139nm,1.3s						
PAHR	Pah Rah Range	2.79	46		Pb	07 06 53.8	-0.2
PAHR				IAML		07 07 39.8	
	comp=N,87nm,1.1s						
WDC	Whiskeytown Da	2.82	351	Pn	Pn	07 06 47.1	-1.8
RYN	Ryan	2.85	72		Pb	07 06 54.6	-0.3
RYN				IAML		07 08 02.0	
	comp=E,68nm,1.0s						
RYN				IAML		07 08 02.0	
	comp=N,57nm,1.3s						
NV11	Mina Array Sit	3.09	77	Pn	Pn	07 06 52.5	-0.3
KVN	Kaiserville	3.30	66		Pb	07 07 02.7	0.0
KVN				IAML		07 07 54.5	
	comp=E,55nm,1.1s						
KVN				IAML		07 08 03.0	
	comp=N,82nm,1.2s						
ISA	Isabella, Lake	3.53	126	Pn	Pn	07 06 58.9	+0.1
TPH	Tonopah	3.78	84		Pg	07 07 13.8	-2.4
TPH	Tonopah	3.78	84	IAML		07 08 26.5	
	comp=N,36nm,1.7s						
OSI	Osito Audit: C	4.12	139		Pn	07 07 08.7	+1.7
OSI				IAML		07 08 25.9	
	comp=E,29nm,1.7s						
OSI				IAML		07 08 43.1	
	comp=N,30nm,3.3s						
WVOR	Wild Horse Val	5.30	28	Pn	Pn	07 07 21.1	-2.0
WVOR				IAML		07 09 29.2	
	comp=N,10nm,3.1s						
WVOR				IAML		07 10 01.8	
	comp=N,8.6nm,4.1s						
PRN	Pahroc Range	5.52	92		Pg	07 07 51.1	+1.5
SHPR	Sheep Range	5.60	101	Pg	Pg	07 07 51.2	+0.1
ELK	Elko	6.01	59		Lg	07 09 13.3	
LRM	Limekiln Ridge	10.72	39		Sn	07 10 36.3	-1.5

NOU ***02*** *07:26:02.0,39.°30S×174.°56E,h229km,MLv3.7,North Island, New Zealand*

WEL 02 07:25:58.2,39.°3S±4.°×17.°5E±.°,h253km±5km,M2.5/31, ML2.2/9,MLv2.5/31,Error ellipse: s-maj=0.0km s-min=0.0km az=130.1,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	Vera Road	0.18	236	P	Pn	07 26 30.1	-0.6
TWVZ	Taurewa	0.38	97	P	Pn	07 26 30.8	-0.4
WTVZ	West Tongariro	0.51	101	P	Pn	07 26 31.4	-0.1
HIZ	Hauiti	0.52	352	P	Pn	07 26 30.8	-0.7
FWVZ	Far West T-bar	0.52	117	P	Pn	07 26 31.5	-0.2
NGZ	Ngauruhoe	0.53	107	P	Pn	07 26 31.5	-0.1
OTVZ	Oturere	0.57	104	P	Pn	07 26 32.0	+0.2
WNVZ	Wahianoa	0.59	121	P	Pn	07 26 31.8	0.0
TMVZ	Te Maari	0.59	99	P	Pn	07 26 32.0	+0.1
TUVZ	Tukino	0.60	114	P	Pn	07 26 31.9	0.0
TUVZ				S	S	07 26 56.3	-2.1
ETVZ	East Tongariro	0.60	101	P	Pn	07 26 30.6	-1.2
PREZ	Palmer Road	0.69	242	P	Pn	07 26 31.9	-0.2
PREZ				S	S	07 26 58.1	-0.6
NEZ	North Egmont	0.71	249	S	S	07 26 57.0	-2.0
MOVZ	Moawhango	0.73	122	P	Pn	07 26 31.9	-0.4
MOVZ				S	S	07 26 55.6	-3.5
WAZ	Wanganui	0.73	178	P	Pn	07 26 32.3	+0.1
WAZ				S	S	07 26 57.2	-1.9
KHEZ	Kahui Hut	0.78	249	P	Pn	07 26 32.6	+0.1
BHHZ	Black Hill Sta	0.98	119	P	Pn	07 26 33.2	-0.2
BHHZ				S	S	07 26 57.4	-3.8
MRHZ	Matea Rd	1.16	81	P	Pn	07 26 33.8	-0.6
MRHZ				S	S	07 26 59.2	-3.9
BKZ	Black Stump Fm	1.21	97	P	Pn	07 26 34.7	-0.1
BKZ				S	S	07 27 00.7	-2.9
OHWZ	Ohakea	1.21	167	P	Pn	07 26 35.1	+0.5
OHWZ				S	S	07 27 02.5	-1.0
KRHZ	Kereru	1.26	120	P	Pn	07 26 35.4	+0.3
KRHZ				S	S	07 27 02.5	-1.6
TSZ	Takapari Road	1.29	143	P	Pn	07 26 35.5	+0.3
TSZ				S	S	07 27 02.2	-2.4
PNHZ	Pukenui	1.31	133	P	Pn	07 26 35.7	+0.2
PNHZ				S	S	07 27 03.2	-1.6
MTHZ	Maungataniwha	1.48	84	P	Pn	07 26 36.5	-0.2
MTHZ				S	S	07 27 04.1	-2.9
WPHZ	Waipukurau	1.55	133	P	Pn	07 26 37.5	+0.4
WPHZ				S	S	07 27 06.0	-1.8
DVHZ	Dannevirke	1.58	144	P	Pn	07 26 37.4	+0.1
DVHZ				S	S	07 27 05.2	-3.1
ARHZ	Aropaoanui	1.61	99	P	Pn	07 26 38.2	+0.7
ARHZ				S	S	07 27 07.7	-0.9
RTZ	Ruatahuna	1.64	76	P	Pn	07 26 37.5	-0.4
RAHZ	Arahi	1.67	87	P	Pn	07 26 38.4	+0.4
RAHZ				S	S	07 27 08.5	-0.9
KAHZ	Kahuranaki	1.68	118	P	Pn	07 26 39.0	+0.8
MRZ	Mangatainoka R	1.71	164	P	Pn	07 26 37.9	-0.4
PRWZ	Pori Road	1.72	153	P	Pn	07 26 38.6	+0.2
PXZ	Pawanui	1.79	125	P	Pn	07 26 39.4	+0.4
OGWZ	Otaki Gorge	1.80	175	P	Pn	07 26 38.8	-0.3
KIW	Kapiti Island	1.83	181	P	Pn	07 26 38.8	-0.6
ANWZ	Angora Road	1.85	141	P	Pn	07 26 39.8	+0.3
URZ	Urewera	1.85	66	P	Pn	07 26 38.7	-0.9
HOWZ	Holdsworth Sta	1.92	167	P	Pn	07 26 39.5	-0.6
BFZ	Birch Farm	1.93	149	P	Pn	07 26 40.1	-0.1
DUWZ	D'Urville Isla	1.94	204	P	Pn	07 26 39.6	-0.8
CAW	Cannon Point	2.08	178	P	Pn	07 26 41.0	-0.6
KNZ	Kokohu	2.12	91	P	Pn	07 26 42.2	+0.3
MWZ	Matawai	2.13	72	P	Pn	07 26 41.6	-0.5
MTW	Mount Morrison	2.17	169	P	Pn	07 26 41.7	-0.7
TMWZ	Te Maipa	2.20	161	P	Pn	07 26 42.3	-0.4
RIGZ	Rimuhau	2.22	83	P	Pn	07 26 43.2	+0.3
TCW	Tory Channel	2.25	193	P	Pn	07 26 42.5	-0.6
WEL	Wellington	2.26	184	P	Pn	07 26 42.6	-0.6
PRGZ	Paritu Road	2.29	88	P	Pn	07 26 44.0	+0.4
MHGZ	Mahia Peninsul	2.30	94	P	Pn	07 26 44.3	+0.6
BHW	Baring Head	2.38	181	P	Pn	07 26 43.5	-0.8
PAWZ	Paruwai Farm	2.38	171	P	Pn	07 26 43.8	-0.6
RUGZ	Raukumara Rang	2.38	65	P	Pn	07 26 43.2	-1.5
MSWZ	Moikau Station	2.40	175	P	Pn	07 26 43.8	-0.8
TRWZ	Traveller	2.44	167	P	Pn	07 26 44.4	-0.5
NNZ	Nelson	2.50	208	P	Pn	07 26 44.4	-1.1
TUWZ	Tuamarina	2.52	198	P	Pn	07 26 45.0	-0.7
PLWZ	Palliser	2.55	175	P	Pn	07 26 45.3	-0.8
HAZ	Te Kaha	2.56	61	P	Pn	07 26 45.0	-1.2
QRZ	Quartz Range	2.59	225	P	Pn	07 26 44.4	-2.0
PKGZ	Pakihiroa	2.70	66	P	Pn	07 26 47.7	0.0
PUZ	Puketiti	2.76	71	P	Pn	07 26 48.2	-0.1
BSWZ	Blackbirch Sta	2.81	197	P	Pn	07 26 47.9	-0.8
MXZ	Matakaoa Point	3.02	62	P	Pn	07 26 50.6	-0.4
THZ	Tophouse	3.15	209	P	Pn	07 26 51.0	-1.4
KHZ	Kahutara	3.56	197	P	Pn	07 26 55.7	-1.2
DSZ	Denniston Nort	3.63	220	P	Pn	07 26 55.6	-2.2
GVZ	Greta Valley S	4.20	200	P	Pn	07 27 02.6	-1.7
LTZ	Lake Taylor	4.27	208	P	Pn	07 27 03.4	-1.8
AMCZ	Amberley	4.50	202	P	Pn	07 27 05.9	-2.0
INZ	Inchbonnie	4.55	215	P	Pn	07 27 06.3	-2.3
OXZ	Oxford	4.83	206	P	Pn	07 27 09.4	-2.4
OKCZ	Okains Bay	4.91	196	P	Pn	07 27 11.0	-1.8
MQZ	McQueen's Vall	4.99	200	P	Pn	07 27 10.9	-2.9
AKCZ	Akaroa Harbour	5.08	197	P	Pn	07 27 12.7	-2.2
WVZ	Waitaha Valley	5.15	217	P	Pn	07 27 13.4	-2.3
RACZ	Rakaia	5.15	203	P	Pn	07 27 13.3	-2.5
WAKZ	Wakanui South	5.44	204	P	Pn	07 27 17.2	-2.1
RPZ	Rata Peaks	5.53	211	P	Pn	07 27 18.1	-2.3
GCSZ	Gaunt Creek Bo	5.53	218	P	Pn	07 27 18.0	-2.4
ARCZ	Arundel	5.68	209	P	Pn	07 27 19.7	-2.6
FOZ	Fox Glacier	5.94	219	P	Pn	07 27 22.1	-3.4
TMZ	Timaru	6.12	208	P	Pn	07 27 25.7	-2.0
LBZ	Lake Benmore	6.44	212	P	Pn	07 27 29.2	-2.5
ODZ	Otahua Downs	6.82	207	P	Pn	07 27 35.1	-1.3
JCZ	Jackson Bay	6.84	221	P	Pn	07 27 33.2	-3.6
WKZ	Wanaka	7.29	215	P	Pn	07 27 39.4	-3.0
MSZ	Milford Sound	7.70	221	P	Pn	07 27 49.0	+1.5

ISK ***02*** *07:26:29.2,39.°39N×26.°31E,h7km,ML3.0/23*

DDA ***02*** *07:26:29.6,39.°37N×26.°30E,h7km±2km,MW3.1*

ATH ***02*** *07:26:30.7,39.°40N×26.°27E,h14km±1km,ML2.7/9, Error ellipse: s-maj=2.2km s-min=1.0km az=253.0*

THE ***02*** *07:26:30.7,39.°40N×26.°23E,h9km±1km,ML2.6/6,Error ellipse: s-maj=1.5km s-min=0.4km az=241.0*

ISC 02 07:26:30.4±0.8,39.°39N±0.°02×26.°30E±0.°02,h16km±5km, n60,σ0.°85/99,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.15	188	P	Pg	07 26 34.4	0.0
PRK				S	Sg	07 26 37.5	+0.4
PRK				AML	AML	07 26 39.6	
	comp=E,5914μm,0.2s						
PRK				AML	AML	07 26 41.2	
	comp=N,6616μm,0.6s						
PRK	Paraskevi	0.15	188	P	Pg	07 26 34.4	0.0
KOCA	Canakkale, Ayv	0.17	312	*i* P	Pg	07 26 34.2	-0.6
KOCA				*i* S	Sg	07 26 37.3	-0.3
KOCA				IAML		07 26 40.0	
	comp=N,1μm,0.4s						
SIGR	SIGRI	0.39	243	P	Pg	07 26 37.8	-0.6
SIGR				S	Sg	07 26 43.3	-0.4
SIGR				AML	AML	07 26 43.5	
	comp=N,6626μm,0.3s						
SIGR				AML	AML	07 26 44.8	
	comp=E,3630μm,0.3s						
SIGR	SIGRI	0.39	243	P	Pg	07 26 37.7	-0.6
SIGR				S	Sg	07 26 42.7	-1.1

ZEYE	**Izmir, Urla-Ze**	**1.16**	**172**	*i* P		**Pb**	**07 26 50.7**	**-1.4**
ZEYE				*i* S		**Sg**	**07 27 08.3**	**+0.3**
ZEYE				IAML			07 27 10.0	
	comp=N,242nm,0.5s							
SMTH	**Samothraki Isl**	**1.23**	**332**	P		**Pn**	**07 26 52.7**	**-0.3**
SMTH				S		**Sb**	**07 27 08.8**	**-0.1**
SMTH				AML	AML		07 27 09.5	
	comp=E,452µm,0.5s							
SMTH				AML	AML		07 27 11.0	
	comp=N,509µm,0.5s							
SMTH	**Samothraki Isl**	**1.23**	**332**	P		**Pn**	**07 26 52.5**	**-0.5**
SMTH				S		**Sb**	**07 27 09.1**	**+0.2**
	comp=N,245nm,0.5s							
BALB	**Balikesir**	**1.25**	**78**	PN		**Pn**	**07 26 53.2**	**0.0**
BALB				SN		**Sg**	**07 27 10.7**	**-0.1**
KRBG	**Karabiga-Canak**	**1.26**	**37**	PN		**Pn**	**07 26 53.3**	**-0.1**
ERIK	**Erikli-Kesan**	**1.29**	**7**	PN		**Pn**	**07 26 53.9**	**+0.2**
ERIK				SN		**Sb**	**07 27 11.4**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**1.30**	**356**	*i* P		**Pn**	**07 26 54.3**	**+0.4**
CAVK				*i* S		**Sb**	**07 27 12.0**	**+1.0**
CAVK				IAML			07 27 18.0	
	comp=N,118nm,0.8s							
ENEZ	**Enez**	**1.35**	**355**	P		**Pn**	**07 26 54.4**	**-0.2**
ENEZ				S		**Sb**	**07 27 12.8**	**+0.5**
	comp=N,372nm,0.4s							
ENEZ	**Enez**	**1.35**	**355**	PN		**Pn**	**07 26 54.8**	**+0.2**
ENEZ				SN		**Sn**	**07 27 13.5**	**+1.4**
RKY	**Sarkoy-Tekirda**	**1.46**	**27**	PN		**Pn**	**07 26 56.4**	**+0.2**
RKY				SN		**Sn**	**07 27 16.4**	**+1.4**
MAR6	**Marsite Statio**	**1.51**	**29**	PN		**Pn**	**07 26 56.9**	**+0.1**
ALN	**Alexandroupoli**	**1.52**	**353**	P		**Pn**	**07 26 57.0**	**+0.1**
ALN				S		**Sb**	**07 27 18.2**	**+1.1**
ALN				AML	AML		07 27 19.5	
	comp=E,305µm,0.3s							
ALN				AML	AML		07 27 20.7	
	comp=N,170µm,0.3s							
ALN	**Alexandroupoli**	**1.52**	**353**	P		**Pn**	**07 26 56.9**	**+0.1**
ALN				S		**Sn**	**07 27 16.9**	**+0.6**
	comp=N,118nm,0.3s							
ALN	**Alexandroupoli**	**1.52**	**353**	PN		**Pn**	**07 26 57.1**	**+0.2**
ALN				SN		**Sn**	**07 27 17.3**	**+1.0**
MAR2	**Marsite Statio**	**1.54**	**30**	PN		**Pn**	**07 26 57.7**	**+0.6**
EDC	**Edincik**	**1.54**	**51**	PN		**Pn**	**07 26 57.3**	**+0.1**
EDC				SN		**Sn**	**07 27 17.8**	**+1.0**
MAR3	**Marsite Statio**	**1.55**	**29**	PN		**Pn**	**07 26 57.9**	**+0.5**
GZKV	**Gazikoy-Tekird**	**1.57**	**30**	PN		**Pn**	**07 26 57.8**	**+0.2**
GZKV				SN		**Sn**	**07 27 19.0**	**+1.5**
MRMT	**Marmara Adasi**	**1.57**	**39**	PN		**Pn**	**07 26 57.8**	**+0.1**
MRMT				SN		**Sn**	**07 27 18.5**	**+0.8**
MAR4	**Marsite Statio**	**1.59**	**29**	PN		**Pn**	**07 26 58.3**	**+0.3**
MAR9	**Marsite Statio**	**1.63**	**41**	PN		**Pn**	**07 26 58.4**	**-0.1**
THAS	**Thassos island**	**1.72**	**316**	P		**Pn**	**07 26 59.0**	**-0.6**
SMG	**Samos**	**1.73**	**166**	P		**Pb**	**07 27 01.9**	**+0.1**
SMG				S		**Sb**	**07 27 25.3**	**+1.9**
SMG				AML	AML		07 27 29.5	
	comp=E,422µm,0.3s							
SMG				AML	AML		07 27 31.3	
	comp=N,435µm,0.4s							
SMG	**Samos**	**1.73**	**166**	P		**Pn**	**07 27 00.5**	**+0.6**
DST	**Dursunbey**	**1.81**	**83**	PN		**Pn**	**07 27 01.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.81**	**61**	PN		**Pn**	**07 27 00.9**	**0.0**
RDO	**Rodhopi**	**1.85**	**342**	P		**Pn**	**07 27 01.9**	**+0.4**
RDO				AML	AML		07 27 24.9	
	comp=E,123µm,0.4s							
RDO				AML	AML		07 27 25.2	
	comp=N,117µm,0.4s							
RDO	**Rodhopi**	**1.85**	**342**	P		**Pn**	**07 27 01.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.91**	**139**	PN		**Pn**	**07 27 02.7**	**+0.3**
KULA	**Kula-Manisa**	**2.04**	**115**	PN		**Pn**	**07 27 04.6**	**+0.4**
MDNY	**Mudanya-Bursa**	**2.22**	**63**	PN		**Pn**	**07 27 07.3**	**+0.8**
TVSB	**Tavsanli**	**2.45**	**88**	PN		**Pn**	**07 27 10.4**	**+0.6**

IDC 02 07:27:43.9±2.3, 6°51S×129°26E, h0km, mb3.3/1, mb1 3.8/3, mb1mx3.5/25, mbtmp3.6/3, ML4.0/2, Error ellipse: s-maj=116.8km s-min=32.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.24**	**160**	Pn	Pn	07 31 06.3	-0.7
	1.0nm,0.3s,baz=339,slow=13,SNR=25						
WRA				Sn	Sn	07 33 31.4	-15
	0.9nm,0.3s,baz=339,slow=22,SNR=9.7						
ASAR	**Alice Springs**	**17.64**	**166**	P	Pn	07 31 51.6	+0.3
	0.3nm,0.3s,baz=344,slow=10,SNR=13						
ASAR				S	Sn	07 34 55.1	-13
	0.2nm,0.3s,baz=350,slow=26,SNR=4.3						
MKAR	**Makanchi Array**	**67.41**	**327**	P	P	07 38 41.4	+0.1
	0.1nm,0.3s,baz=122,slow=7.6,SNR=2.2						

IDC 02 07:38:19.2±9.7, 15°43S×173°23W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/41, mbtmp3.7/3, Error ellipse: s-maj=426.4km s-min=40.8km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**50.00**	**257**	P	P	07 47 15.5	-0.2
	0.1nm,0.3s,baz=93,slow=7.4,SNR=5.3						
ASAR	**Alice Springs**	**50.26**	**252**	P	P	07 47 17.7	0.0
	0.9nm,0.6s,baz=88,slow=7.9,SNR=11						
ILAR	**Eielson Array**	**82.44**	**11**	P	P	07 50 43.0	0.0
	0.4nm,0.6s,baz=214,slow=4.4,SNR=2.3						

*SJA **02** 07:42:00.4±0.9, 28°.55S×71°.11W, h30km, ML5.1, MW4.9*
*GUC **02** 07:42:02.4±0.7, 28°.65S×70°.81W, h45km±9km, ML4.8*
*VAO **02** 07:42:02.7±1.6, 28°.64S×71°.04W, h46km±8km, mb4.7*
*NEIC **02** 07:42:03.2±1.8, 28°.57S±0°.04×71°.05W±0°.06, h50km±3km, Error ellipse: s-maj=9.3km s-min=3.8km az=120.0*
*NEIC **02** 07:42:03.1, 28°.55S×71°.09W, h54km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.98; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-0.97; $M_{r\theta}$0.26; $M_{r\phi}$-0.38; $M_{\theta\phi}$-0.80; Fault plane solution: $M_0$1.34000×10^{16} NP1:ϕ_s177.68000°, δ64.99000°, λ69.22000°. NP2:ϕ_s39.58000°, δ32.08000°, λ127.25000°. Principal axes: T 1.3659, Plg64.0000°, Azm53.0000°; N -0.0492, Plg19.0000°, Azm187.0000°; P -1.3167, Plg17.0000°, Azm283.0000°;*
*IDC **02** 07:42:03.4±0.5, 28°.57S×70°.87W, h45km±3km, mb4.4/13, mb1 4.5/17, mb1mx4.3/32, mbtmp4.5/17, MS3.7/15, Ms1 3.7/15, ms1mx3.6/26 Error ellipse: s-maj=16.7km s-min=11.1km az=89.0*
*NEIC **02** 07:42:04, 28°.61S×70°.93W, h46km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.95; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.85; $M_{r\theta}$0.22; $M_{r\phi}$-0.88; $M_{\theta\phi}$-1.01; Fault plane solution: $M_0$1.63000×10^{16} NP1:ϕ_s63.00000°, δ38.00000°, λ143.00000°. NP2:ϕ_s184.00000°, δ68.00000°, λ58.00000°. Principal axes: T 1.6101, Plg55.0000°, Azm53.0000°; N 0.0424, Plg29.0000°, Azm197.0000°; P -1.6525, Plg17.0000°, Azm297.0000°;*

ISC 02 07:42:02.5±0.4, 28°57S±0°.03×71°14W±0°.05, h45km±3km, h45km:pP-P, n226, σ1°41/236, mb4.8/49, MS3.7/9, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC04	**Llanos de Chal**	**0.36**	**9**	*e*P	**Pn**	**07 42 13.1**	**+1.3**
AC04				*i* S	**Sn**	**07 42 20.3**	**+1.9**
AC04				IAML		07 42 21.8	
	comp=E,176µm,0.1s						
AC04	**Llanos de Chal**	**0.36**	**9**	Pn	**Pn**	**07 42 13.2**	**+1.3**
AC04				Sn	**Sn**	**07 42 20.4**	**+1.9**
LCO	**Las Campanas**	**0.59**	**139**		**Pn**	**07 42 14.7**	**-0.2**
LCO				Sn	**Sn**	**07 42 23.0**	**-0.6**
GO03	**Copiap**	**1.25**	**40**	*e*P	**Pn**	**07 42 23.8**	**+0.2**
GO03				*e*P		07 42 23.9	
GO03				*i* S	**Sn**	**07 42 39.9**	**+0.5**
GO03				*i* S		07 42 40.0	
GO03				IAML		07 42 47.5	
	comp=E,15µm,0.2s						
GO03	**Copiap**	**1.25**	**40**	Pn	**Pn**	**07 42 23.9**	**+0.2**
GO03				Sn	**Sn**	**07 42 39.4**	**0.0**
GO03	**Copiap**	**1.25**	**40**	*e*P	**Pn**	**07 42 23.9**	**+0.2**
GO03				*e*S	**Sn**	**07 42 40.2**	**+0.8**
GO04	**Tololo Observa**	**1.63**	**170**	*e*P	**Pn**	**07 42 29.6**	**+0.6**
GO04				*i* S	**Sn**	**07 42 54.2**	**+1.2**
GO04				IAML		07 42 54.2	
	comp=N,47µm,0.5s						
GO04	**Tololo Observa**	**1.63**	**170**	Pn	**Pn**	**07 42 29.6**	**+0.6**
GO04				*e*S	**Sn**	**07 42 50.5**	**+1.6**
CO03	**El Pedregal**	**2.30**	**170**	⇑*i*P	**Pn**	**07 42 39.1**	**+1.1**
CO03				*i* S	**Sn**	**07 43 06.7**	**+1.5**
CO03				IAML		07 43 22.1	
	comp=N,7µm,0.4s						
CO03	**El Pedregal**	**2.30**	**170**	Pn	**Pn**	**07 42 38.9**	**+0.8**
AC01	**Pan de Azucar**	**2.46**	**11**	*e*P	**Pn**	**07 42 40.3**	**+0.3**
AC01				*e*		07 43 12.1	
AC01				*i* S	**Sn**	**07 43 13.9**	**+5.1**
AC01				IAML		07 43 23.1	
	comp=E,5µm,0.6s						
AC01	**Pan de Azucar**	**2.46**	**11**	Pn	**Pn**	**07 42 40.4**	**+0.3**
AC02	**Maricunga**	**2.48**	**46**	*e*P	**Pn**	**07 42 42.5**	**+1.6**
AC02				*i* S	**Sn**	**07 43 12.7**	**+2.5**
AC02				IAML		07 43 19.5	
	comp=E,7µm,0.5s						
AC02	**Maricunga**	**2.48**	**46**	Pn	**Pn**	**07 42 42.9**	**+2.0**
AGUA	**GUANDACOL**	**2.50**	**112**	*e*P	Pn	07 42 31.4	-9.3
AGUA				IAML		07 43 19.4	
	comp=Z,5µm,0.5s						
RTLS	**Leoncito**	**3.60**	**154**	*e*P	**Pn**	**07 42 59.0**	**+2.9**
RTLS				IAML		07 44 08.1	
	comp=Z,2µm,0.9s						
RTLL	**Cerro Villicun**	**3.60**	**141**	*e*P	**Pn**	**07 42 58.4**	**+2.6**
RTLL				*e*S	**Sn**	**07 43 41.7**	**+4.7**
ZON	**Zonda**	**3.66**	**145**	*e*P	**Pn**	**07 42 58.9**	**+2.3**
GO02	**Mina Guanaco**	**3.66**	**23**	⇑*i*P	**Pn**	**07 42 57.5**	**+0.7**
GO02				*i* S	**Sn**	**07 43 42.8**	**+3.8**
GO02	**Mina Guanaco**	**3.66**	**23**	Pn	**Pn**	**07 42 57.6**	**+0.7**
ACLC	**CERRO LA CRUZ**	**3.77**	**104**	*e*P	**Pn**	**07 43 00.2**	**+2.0**
ACLC				*e*S	**Sn**	**07 43 46.1**	**+4.6**
ACLC				IAML		07 43 52.3	
	comp=Z,2µm,0.4s						
PB14	**IPOC Station P**	**3.98**	**10**	Pn	**Pn**	**07 43 00.3**	**-0.9**
VA03	**San Esteban**	**4.22**	**173**	*i* S	**Sn**	**07 43 53.5**	**+1.2**
VA03	**San Esteban**	**4.22**	**173**	Pn	**Pn**	**07 43 03.6**	**-0.7**
APLL	**PUNTA DE LOS L**	**4.42**	**116**	*e*P	**Pn**	**07 43 08.5**	**+1.4**
APLL				IAML		07 44 07.1	
	comp=Z,6µm,3.2s						
PEL	**Peldehue**	**4.58**	**175**	*i* P	**Pn**	**07 43 10.3**	**+1.0**
PEL				*i* S	**Sn**	**07 44 02.3**	**+1.0**
PEL	**Peldehue**	**4.58**	**175**	Pn	**Pn**	**07 43 10.0**	**+0.7**
PEL	**Peldehue**	**4.58**	**175**	*e*P	**Pn**	**07 43 11.4**	**+2.1**
MT02	**Curacav**	**4.68**	**180**	Pn	**Pn**	**07 43 10.4**	**-0.2**
MT05	**Renca**	**4.82**	**176**	Pn	**Pn**	**07 43 13.7**	**+1.1**
PB10	**IPOC Station P**	**5.06**	**6**	Pn	**Pn**	**07 43 14.6**	**-1.2**
FSA	**Cafayete**	**5.20**	**63**	*e*P	**Pn**	**07 43 21.6**	**+3.6**
PB15	**IPOC Station P**	**5.54**	**16**		**Pn**	**07 43 22.4**	**-0.2**
PB06	**IPOC Station P**	**6.00**	**14**		**Pn**	**07 43 27.8**	**-1.2**
MRA	**San Martin**	**6.05**	**131**	*e*P	**Pn**	**07 43 30.1**	**+0.5**
BO02	**Sierra Bellavi**	**6.22**	**177**	Pn	**Pn**	**07 43 32.8**	**+1.1**
LVC	**Limon Verde**	**6.26**	**19**	P	**Pn**	**07 43 32.1**	**-0.6**
	comp=Z,12nm,0.3s,baz=169,slow=7.1,SNR=140						
LVC				S	**Sn**	**07 44 44.0**	**+0.8**
	comp=Z,21nm,0.3s,baz=184,slow=19,SNR=3.2						
LVC				LR	LR	07 45 53.7	
	comp=Z,807nm,20.2s,baz=207,slow=37						
LVC	**Limon Verde**	**6.26**	**19**		**Pn**	**07 43 32.3**	**-0.3**
LVC	**Limon Verde**	**6.26**	**19**	*e*P	**Pn**	**07 43 32.4**	**-0.3**
PB04	**IPOC Station P**	**6.27**	**8**		**Pn**	**07 43 30.7**	**-1.9**
LAMA	**Las Malvinas**	**6.56**	**166**	*e*P	**Pn**	**07 43 39.7**	**+3.3**
PB07	**IPOC Station P**	**6.90**	**10**		**Pn**	**07 43 39.0**	**-2.3**
PB09	**IPOC Station P**	**6.96**	**15**		**Pn**	**07 43 41.2**	**-0.8**
PB09	**IPOC Station P**	**6.96**	**15**	*e*P	**Pn**	**07 43 41.3**	**-0.8**
PB09				IAML		07 45 46.6	
	comp=Z,919nm,0.8s						
PB01	**IPOC Station P**	**7.64**	**12**		**Pn**	**07 43 48.9**	**-2.4**
BI02	**San Fabin de**	**8.08**	**181**	Pn	**Pn**	**07 43 56.6**	**-0.7**
H03N1	**Juan Fernandez**	**8.25**	**232**	T	T	07 52 05.8	
	baz=54,slow=74						
H03N2	**Juan Fernandez**	**8.27**	**232**	T	T	07 52 01.2	
	baz=54						
H03N3	**Juan Fernandez**	**8.27**	**232**	T	T	07 52 11.9	
	baz=54,slow=74						
PB08	**IPOC Station P**	**8.58**	**13**		**Pn**	**07 44 02.5**	**-2.0**
PB11	**IPOC Station P**	**8.87**	**9**	Pn	**Pn**	**07 44 05.1**	**-3.2**
PSGCX	**Pisagua**	**8.98**	**6**		**Pn**	**07 44 07.0**	**-2.7**
MNMC	**Minye Minye**	**9.50**	**9**		**Pn**	**07 44 16.6**	**-0.4**
PLCA	**Paso Flores**	**12.15**	**178**	P	**Pn**	**07 44 55.1**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=4.4,slow=13,SNR=1.0						
PLCA				LR	LR	07 50 00.7	
	comp=Z,446nm,20.2s,baz=348,slow=39						
PLCA	**Paso Flores**	**12.15**	**178**		**Pn**	**07 44 49.2**	**-3.8**
CPUP	**Villa Florida**	**12.47**	**83**	P	**Pn**	**07 44 54.4**	**-2.9**
	comp=Z,0.8nm,0.3s,baz=251,slow=13,SNR=18						
CPUP				LR	LR	07 50 20.7	
	comp=Z,544nm,19.1s,baz=264,slow=41						
CPUP	**Villa Florida**	**12.47**	**83**		**Pn**	**07 44 55.4**	**-1.8**
LPAZ	**La Paz**	**12.53**	**13**	P	**Pn**	**07 44 57.5**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=198,slow=9.6,SNR=6.6						
LPAZ				LR	LR	07 50 06.2	
	comp=Z,384nm,21.5s,baz=213,slow=39						
ITQB	**Itaqui**	**12.74**	**98**	*e*P	**Pn**	**07 44 59.6**	**-1.4**
PLTB	**Pedras Altas**	**15.50**	**106**	*e*P	**Pn**	**07 45 35.7**	**-2.3**
CPSB	**Cacapava Do Su**	**15.53**	**101**	*e*P	**Pn**	**07 45 37.4**	**-1.0**
SIV	**San Ignacio**	**15.59**	**39**	P	**Pn**	**07 45 34.1**	**-5.2**
	comp=Z,0.4nm,0.3s,baz=258,slow=7.8,SNR=10						
SIV				LR	LR	07 52 35.0	
	comp=Z,443nm,21.5s,baz=240,slow=41						
ITAB	**Concordia**	**16.86**	**90**	*e*P	**P**	**07 45 55.6**	**-1.2**
PTLB	**Pontes e Lacer**	**17.14**	**43**	*e*P	**Pn**	**07 45 58.9**	**+0.1**
NNA	**Nana**	**17.33**	**341**	LR	LR	07 51 29.6	
	comp=Z,117nm,21.2s,baz=160,slow=32						
PTGB	**Pitanga**	**17.48**	**82**	*e*P	**Pn**	**07 46 02.4**	**-0.7**
PP1B	**Ponte de Pedra**	**18.49**	**57**	*e*P	**Pn**	**07 46 15.6**	**+0.2**
VILB	**Vilhena**	**18.58**	**35**	*e*P	**Pn**	**07 46 16.2**	**-0.3**
ETMB	**Extrema**	**19.22**	**15**	*e*P	**Pn**	**07 46 24.5**	**+0.3**
PCMB	**Pacaembu**	**19.28**	**73**	*e*P	**Pn**	**07 46 23.8**	**-1.1**
TIJ01	**Guaruva-PR**	**19.99**	**86**	*e*P	**P**	**07 46 29.3**	**-2.1**
FRTB	**Fartura**	**20.08**	**80**	*e*P	**P**	**07 46 32.2**	**-0.1**
CZSB	**Cruzeiro do Su**	**20.78**	**356**	*e*P	Pn	07 46 41.8	-0.9
ITRB	**Iturama**	**20.89**	**70**	*e*P	**P**	**07 46 41.2**	**+0.1**
PET01	**Itanhaem-SP**	**21.78**	**84**	*e*P	**P**	**07 46 50.4**	**-0.2**
BB19B	**Bebedouro**	**21.82**	**75**	*e*P	**P**	**07 46 50.4**	**-0.7**
SPB	**Sao Paulo**	**21.85**	**82**	P	**P**	**07 46 51.9**	**+0.6**
ARAG	**Araguaiana, MT**	**21.96**	**58**	*e*P	**P**	**07 46 51.3**	**-1.3**
ATAH	**Atahualpa**	**22.39**	**341**	LR	LR	07 55 12.5	
	comp=Z,104nm,20.2s,baz=196,slow=35						
VAO	**Valinhos**	**22.44**	**81**	*e*P	**P**	**07 46 57.5**	**-0.3**
SNDB	**Serra Nova Dou**	**24.82**	**52**	*e*P	**P**	**07 47 19.6**	**-1.0**
BDFB	**Brasilia**	**24.93**	**64**	P	**P**	**07 47 20.5**	**-1.3**
	comp=Z,13nm,0.9s,baz=235,slow=7.3,SNR=14						
BDFB				LR	LR	07 58 13.9	
	comp=Z,117nm,18.8s,baz=253,slow=39						
BDFB	**Brasilia**	**24.93**	**64**	P	**P**	**07 47 20.7**	**-1.1**
NPGB	**Novo Progresso**	**26.09**	**38**	*e*P	**P**	**07 47 31.7**	**-0.4**
PEXB	**Peixe**	**26.88**	**57**	*e*P	**P**	**07 47 39.0**	**-0.3**
ITTB	**Itaituba**	**28.17**	**34**	*e*P	**P**	**07 47 50.2**	**-0.5**
JANB	**Januaria**	**28.22**	**67**	*e*P	**P**	**07 47 50.5**	**-0.9**
SDBA	**SAO DESIDERIO**	**29.27**	**62**	*e*P	**P**	**07 48 00.5**	**-0.2**
SMTB	**Santa Maria do**	**29.58**	**53**	*e*P	**P**	**07 48 03.2**	**-0.2**
PTGA	**Pitinga**	**29.67**	**23**	P	**P**	**07 48 03.4**	**-0.7**
	comp=Z,4.5nm,0.7s,baz=233,slow=8.6,SNR=7.9						
PTGA				LR	LR	08 01 09.4	
	comp=Z,169nm,20.4s,baz=199,slow=39						
PTGA	**Pitinga**	**29.67**	**23**	P	**P**	**07 48 03.6**	**-0.6**
PTGA	**Pitinga**	**29.67**	**23**	*e*P	**P**	**07 48 04.0**	**-0.1**
PRPB	**Parauapebas**	**30.06**	**46**	*e*P	**P**	**07 48 06.7**	**-1.0**
POPC	**Popayan, Colom**	**31.38**	**349**	*e*P	**P**	**07 48 16.7**	**-2.7**
VILC	**Villavicencio,**	**32.58**	**355**	*e*P	**P**	**07 48 29.0**	**-0.9**
GDU01	**Guandu, BA**	**32.81**	**70**	*e*P	**P**	**07 48 30.8**	**-1.0**
ROSC	**El Rosal**	**33.35**	**354**	LR	LR	08 01 40.3	
	comp=Z,99nm,21.1s,baz=296,slow=35						
TMAB	**Tom-Au,PA,Br**	**34.08**	**44**	*e*P	**P**	**07 48 42.2**	**-0.6**
SPBC	**San Pablo de B**	**34.13**	**355**	*e*P	**P**	**07 48 45.3**	**+1.9**
RUSC	**La Rusia**	**34.31**	**357**	*e*P	**P**	**07 48 45.3**	**0.0**
TAMC	**Tame, Arauca**	**34.80**	**359**	*e*P	**P**	**07 48 49.4**	**+0.3**
PTBC	**PUERTO BERRIO,**	**35.05**	**354**	*e*P	P	07 49 01.6	+10
NBLA	**Lagarto - SE**	**35.75**	**68**	*e*P	**P**	**07 48 57.2**	**-0.1**
ZARC	**Zaragoza, Cauc**	**36.03**	**354**	*e*P	**P**	**07 49 01.6**	**+2.1**
NBTA	**Tacaratu-PE**	**36.60**	**65**	*e*P	**P**	**07 49 04.5**	**-0.1**
NBMA	**Muriti-CE**	**37.12**	**62**	*e*P	**P**	**07 49 08.9**	**-0.1**
SDV	**Santo Domingo**	**37.23**	**1**	P	**P**	**07 49 10.2**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=174,slow=10,SNR=5.7						
SDV				pP	**pP**	**07 49 22.7**	**+0.5**
	comp=Z,8.6nm,0.8s,baz=135,slow=3.1,SNR=6.5						
SDV	**Santo Domingo**	**37.23**	**1**	P	**P**	**07 49 09.1**	**-1.0**
SDV				IAmb	IAmb	07 49 28.9	
	comp=Z,16nm,0.9s						
SDV	**Santo Domingo**	**37.23**	**1**	*e*P	**P**	**07 49 10.4**	**+0.4**
SMLC	**San Martn de**	**37.25**	**355**	*e*P	**P**	**07 49 09.8**	**-0.2**
SMLC				*e*P	**pP**	**07 49 18.0**	**-4.3**
SJCC	**San Jacinto, C**	**38.43**	**354**	*e*P	P	07 49 30.2	+10
NBLI	**Livramento-PB**	**38.53**	**63**	*e*P	**P**	**07 49 20.8**	**-0.2**
PLCV	**Puerto La Cruz**	**39.02**	**10**		pP	07 49 37.8	+0.6
PCRV	**Puerto La Cruz**	**39.02**	**10**	pP	pP	07 49 37.8	+0.6
	comp=Z,8.8nm,0.7s,baz=212,slow=4.4,SNR=3.5						
VNA3	**Neumayer Olymp**	**54.13**	**159**	P	**P**	**07 51 23.2**	**+0.6**
VNA3	**Neumayer Olymp**	**54.13**	**159**	pP	pP	07 51 36.0	+0.5
VNA2	**Neumayer--Watz**	**54.75**	**159**	P	**P**	**07 51 27.7**	**+0.6**
	baz=288,slow=8.4						
VNA2	**Neumayer--Watz**	**54.75**	**159**	pP	pP	07 51 40.3	+0.3
VNA2	**Neumayer--Watz**	**54.75**	**159**	sP	sP	07 51 46.4	+1.0
SNAA	**Sanae**	**56.35**	**159**	P	**P**	**07 51 39.1**	**+0.5**
SNAA	**Sanae**	**56.35**	**159**	pP	pP	07 51 51.9	+0.2
SNAA	**Sanae**	**56.35**	**159**	sP	sP	07 51 58.0	+1.1
SNAA	**Sanae**	**56.35**	**159**		**P**	**07 51 38.6**	**-0.1**
H06E1	**SOCORRO T-PHAS**	**60.78**	**316**	T	T	08 57 54.6	
	SNR=28						
QSPA	**South Pole Qui**	**61.66**	**180**	P	**P**	**07 52 16.4**	**+0.8**
	comp=Z,5.8nm,0.7s,baz=153,slow=1.4,SNR=23						
QSPA				pP	**pP**	**07 52 29.8**	**+1.1**
	comp=Z,6.6nm,1.0s,baz=106,slow=3.2,SNR=5.4						
QSPA	**South Pole Qui**	**61.66**	**180**		**P**	**07 52 16.5**	**+1.0**
833A	**Chaparral WMA,**	**62.70**	**332**	P		07 52 25.7	
	baz=152						
LRAL	**Lakeview Retre**	**63.08**	**345**	P		07 52 25.7	
	baz=164						
X48A	**Hartselle**	**64.46**	**345**	P	**P**	**07 52 34.2**	**0.0**
X48A				IAmb	IAmb	07 52 35.7	
	comp=Z,10nm,0.8s						
JCT	**Junction City**	**64.77**	**333**	P		07 52 39.0	
	baz=152,SNR=9.2						
JCT	**Junction City**	**64.77**	**333**	P	**P**	**07 52 38.4**	**+1.9**
JCT				IAmb	IAmb	07 52 39.4	
	comp=Z,10.0nm,0.7s						
SWET	**Sewanee**	**64.96**	**347**	P	**P**	**07 52 37.9**	**+0.3**
SWET				IAmb	IAmb	07 52 38.9	
	comp=Z,9.5nm,0.6s						
U56A	**King**	**65.15**	**352**	P		07 52 40.3	
	baz=171						
TXAR	**Lajitas Array**	**65.43**	**329**	P	**P**	**07 52 42.8**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=151,slow=8.0,SNR=48						
TXAR				pP	**pP**	**07 52 55.6**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=159,slow=7.5,SNR=7.0						
TXAR				sP	**sP**	**07 53 00.9**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=151,slow=11,SNR=3.8						
TX31	**Lajitas Ar. Si**	**65.44**	**329**	P	**P**	**07 52 41.6**	**+0.8**
TX31				IAmb	IAmb	07 52 43.6	
	comp=Z,9.0nm,0.8s						
TX32	**Lajitas Array**	**65.44**	**329**	P	**P**	**07 52 41.6**	**+0.7**
X43A	**Marvell**	**65.46**	**342**	P		07 52 42.7	
	baz=161						
U54A	**Nelsons Funny**	**65.51**	**351**	P		07 52 41.7	
	baz=169						
T58A	**Grand View Acr**	**65.53**	**353**	P		07 52 42.2	
	baz=173						
WVT	**Waverly**	**66.24**	**345**	P		07 52 46.5	
	baz=164						
WVT	**Waverly**	**66.24**	**345**	P	**P**	**07 52 45.1**	**-0.6**
WVT				IAmb	IAmb	07 52 48.3	
	comp=Z,6.6nm,0.8s						
MIAR	**Mount Ida**	**66.26**	**340**	P		07 52 47.6	
	baz=158						
S57A	**Dark Hollow, R**	**66.38**

L59A	**Walton**	**70.49**	**357**	P		07 53 14.3	
	baz=176						
L56A	**Greenwood**	**70.60**	**355**	P		07 53 14.6	
	baz=174						
L61B	**Northampton**	**70.67**	**359**	P		07 53 15.2	
	baz=178						
HDIL	**Hopedale**	**70.81**	**345**	P		07 53 15.0	
	baz=163						
P38A	**Dawn**	**70.97**	**342**	P	**P**	**07 53 15.3**	**0.0**
P38A				IAmb	IAmb	07 53 17.0	
	comp=Z,8.7nm,0.9s						
K59A	**Cooperstown**	**71.07**	**357**	P		07 53 17.4	
	baz=176						
K58A	**Earlville**	**71.09**	**356**	P		07 53 17.7	
	baz=176						
K57A	**Scipio Center**	**71.11**	**356**	P		07 53 17.4	
	baz=175						
K56A	**Middlesex**	**71.14**	**355**	P		07 53 17.6	
	baz=174						
TUC	**Tucson**	**71.31**	**325**	P		07 53 20.3	
	baz=144						
ANMO	**Albuquerque**	**71.43**	**330**	P		07 53 21.3	
	baz=147						
ANMO	**Albuquerque**	**71.44**	**330**	P	**P**	**07 53 19.0**	**+0.7**
J56A	**Wolcott**	**71.68**	**356**	P		07 53 20.7	
	baz=174						
J59A	**Piesco**	**71.74**	**357**	P		07 53 21.2	
	baz=177						
J57A	**Williamstown**	**71.76**	**356**	P		07 53 21.2	
	baz=175						
I58A	**Old Forge**	**71.99**	**357**	P		07 53 22.1	
	baz=176						
214A	**Organ Pipe Nat**	**72.06**	**324**	P		07 53 25.0	
	baz=142						
I60A	**Shoreham**	**72.08**	**358**	P		07 53 23.7	
	baz=178						
CBKS	**Cedar Bluff**	**72.16**	**337**	P		07 53 25.0	
	baz=154						
I57A	**Carthage**	**72.27**	**357**	P		07 53 24.3	
	baz=176						
LIC	**Lamto**	**72.37**	**73**	*e*PKP2	**P**	**07 53 24.6**	**+0.4**
	comp=Z,23nm,0.8s						
T25A	**Trinidad**	**72.44**	**333**	P		07 53 27.3	
	baz=150,SNR=6.3						
T25A	**Trinidad**	**72.44**	**333**	P	**P**	**07 53 24.2**	**-0.2**
T25A				IAmb	IAmb	07 53 27.9	
	comp=Z,7.8nm,0.7s						
I51A	**Listowel**	**72.58**	**353**	P		07 53 25.9	
	baz=171						
TIC	**Toumodi**	**72.60**	**72**	*e*PKP2	**P**	**07 53 26.0**	**+0.4**
H58A	**Gabriels**	**72.68**	**358**	P		07 53 26.5	
	baz=177						
KIC	**Kosan Boka**	**72.68**	**73**	*e*PKP2	**P**	**07 53 25.8**	**-0.3**
	comp=Z,20nm,0.8s						
L40A	**Anamosa**	**72.68**	**344**	P	**P**	**07 53 25.5**	**+0.1**
N35A	**Tabor**	**72.72**	**341**	P	**P**	**07 53 25.9**	**+0.2**
H61A	**Lyndonville**	**72.75**	**359**	P		07 53 28.1	
	baz=179						
DBIC	**Dimbokro**	**72.75**	**72**	P	**P**	**07 53 26.2**	**-0.3**
	comp=Z,5.6nm,0.5s,baz=204,slow=7.2,SNR=13						
DBIC	**Dimbokro**	**72.75**	**72**	P	**P**	**07 53 26.1**	**-0.3**
DBIC				IAmb	IAmb	07 53 27.4	
	comp=Z,9.7nm,0.7s						
H57A	**Richville**	**72.78**	**357**	P		07 53 27.1	
	baz=176						
W18A	**Petrified Fore**	**73.07**	**328**	P		07 53 31.0	
	baz=145,SNR=5.1						
H53A	**Bobcaygeon**	**73.10**	**354**	P		07 53 29.1	
	baz=173						
KSCO	**Kaye Shedlock'**	**73.37**	**335**	P		07 53 32.6	
	baz=151						
G57A	**Newington**	**73.40**	**357**	P		07 53 31.2	
	baz=176						
L34A	**Svendsen Farm,**	**73.95**	**341**	P	**P**	**07 53 33.1**	**+0.2**
S22A	**4UR Ranch, Cre**	**73.96**	**331**	P		07 53 36.3	
	baz=148						
WUAZ	**Wupatki**	**74.17**	**327**	P		07 53 37.7	
	baz=144						
MVCO	**Mesa Verde**	**74.23**	**330**	P		07 53 37.8	
	baz=146,SNR=6.7						
MVCO	**Mesa Verde**	**74.23**	**330**	P	**P**	**07 53 36.0**	**+1.1**
MVCO				IAmb	IAmb	07 53 38.4	
	comp=Z,7.8nm,0.9s						
Q24A	**Divide**	**74.30**	**333**	P		07 53 38.3	
	baz=149						
ALGO	**Algonquin Park**	**74.43**	**355**	P		07 53 36.3	
	baz=173						
BC3	**Big Chuckawall**	**74.78**	**323**	P		07 53 40.8	
	baz=140						
E56A	**St. Veronique**	**74.84**	**357**	P		07 53 38.6	
	baz=176						
IRM	**Iron Mountain**	**75.00**	**323**	P		07 53 41.9	
	baz=141						
PV13	**Radium Mtn., P**	**75.16**	**330**	P	**P**	**07 53 42.4**	**+2.1**
PV13				IAmb	IAmb	07 53 43.7	
	comp=Z,8.2nm,0.7s						
ISCO	**Idaho Springs**	**75.20**	**333**	P		07 53 43.4	
	baz=149						
ISCO	**Idaho Springs**	**75.20**	**333**	P	**P**	**07 53 43.2**	**+2.6**
SMCO	**Snowmass**	**75.23**	**332**	P	**P**	**07 53 43.9**	**+3.0**
SMCO				IAmb	IAmb	07 53 44.7	
	comp=Z,12nm,0.7s						
K31A	**O'Neill**	**75.27**	**339**	P	**P**	**07 53 41.4**	**+0.9**
D58A	**Chemin du LacG**	**75.32**	**359**	P		07 53 42.5	
	baz=178						
D56A	**ZEC Mazanza, M**	**75.33**	**357**	P		07 53 42.0	
	baz=176						
D55A	**Sainte-Anne-du**	**75.33**	**357**	P		07 53 42.0	
	baz=176						
ECSD	**EROS Data Cent**	**75.64**	**341**	P		07 53 44.0	
	baz=157,SNR=15						
ECSD	**EROS Data Cent**	**75.64**	**341**	P	**P**	**07 53 43.3**	**+0.6**
ECSD				IAmb	IAmb	07 53 44.8	
	comp=Z,14nm,0.8s						
GMRC	**Granite Mounta**	**75.75**	**323**	P		07 53 46.9	
	baz=140						
SPMN	**Marine on St.**	**76.04**	**344**	P		07 53 45.4	
	baz=160						
SPMN	**Marine on St.**	**76.04**	**344**	P	**P**	**07 53 44.5**	**-0.4**
N23A	**Red Feather La**	**76.27**	**334**	P		07 53 49.7	
	baz=149						
PHWY	**Pilot Hill**	**76.43**	**334**	P	**P**	**07 53 46.9**	**-0.7**
O20A	**White River Ci**	**76.56**	**332**	P		07 53 51.1	
	baz=147,SNR=10						
O20A	**White River Ci**	**76.56**	**332**	P	**P**	**07 53 50.8**	**+2.6**
O20A				IAmb	IAmb	07 53 51.8	
	comp=Z,12nm,0.8s						
SRU	**San Rafael Swe**	**76.70**	**330**	P	**P**	**07 53 49.9**	**+0.9**
SRU				IAmb	IAmb	07 53 52.1	
	comp=Z,10.0nm,0.7s						
F36A	**Milaca**	**76.81**	**344**	P	**P**	**07 53 49.6**	**+0.3**
F36A				IAmb	IAmb	07 53 50.7	
	comp=Z,6.6nm,0.7s						
P17A	**Butcher Ranch,**	**77.09**	**330**	P	**P**	**07 53 52.9**	**+1.7**
P17A				IAmb	IAmb	07 53 54.5	
	comp=Z,10nm,1.0s						
RWWY	**Rawlins**	**77.45**	**333**	P	**P**	**07 53 54.8**	**+1.5**
RDMU	**Red Mountain**	**77.48**	**331**	P	**P**	**07 53 55.3**	**+1.8**
RDMU				IAmb	IAmb	07 53 56.5	
	comp=Z,10nm,0.8s						
FURC	**Furnace Creek,**	**77.67**	**324**	P		07 53 57.4	
	baz=140						
MPMC	**Manual Prospec**	**77.69**	**323**	P		07 53 57.2	
	baz=139						
KOWA	**Kowa**	**77.71**	**66**	P	**P**	**07 53 55.0**	**0.0**
TPNV	**Topopah Spring**	**77.72**	**324**	P		07 53 57.7	
	baz=140						
PSUT	**Pine Spring**	**77.78**	**327**	P	**P**	**07 53 55.6**	**+0.5**
ISA	**Isabella, Lake**	**77.92**	**322**	P		07 53 59.0	
	baz=138						
MPU	**Maple Canyon**	**77.93**	**329**	P	**P**	**07 53 57.3**	**+1.4**
MPU				IAmb	IAmb	07 53 59.2	
	comp=Z,7.8nm,0.9s						
K22A	**Casper**	**78.00**	**334**	P		07 53 59.1	
	baz=148,SNR=6.2						
MAW	**Mawson**	**78.16**	**164**	P	**P**	**07 53 57.3**	**+0.7**
	comp=Z,7.0nm,0.7s,baz=233,slow=3.9,SNR=5.4						
MAW				pP	**pP**	**07 54 10.3**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=205,slow=8.5,SNR=3.5						
MAW	**Mawson**	**78.16**	**164**	P	**P**	**07 53 54.6**	**-2.0**
MATQ	**Matagami**	**78.19**	**356**	P		07 53 57.5	
	baz=174						
CWC	**Cottonwood Cre**	**78.29**	**323**	P		07 54 00.8	
	baz=139						
JLU	**Jordanelle**	**78.33**	**330**	P	**P**	**07 53 59.5**	**+1.4**
JLU				IAmb	IAmb	07 54 01.4	
	comp=Z,9.0nm,0.7s						

RSSD	**Black Hills**	**78.35**	**336**	P		07 54 00.9	
	baz=151						
VES	**Vestal, Richgr**	**78.38**	**322**	P		07 54 01.1	
	baz=138						
R11A	**Troy Canyon, C**	**78.47**	**326**	P		07 54 01.7	
	baz=141						
SMMC	**Simmler**	**78.49**	**321**	P		07 54 02.0	
	baz=137						
DUG	**Dugway, Tooele**	**78.61**	**329**	P		07 54 02.4	
	baz=143,SNR=8.7						
DUG	**Dugway, Tooele**	**78.61**	**329**	P	**P**	**07 54 00.8**	**+1.2**
DUG				IAmb	IAmb	07 54 03.1	
	comp=Z,7.0nm,0.8s						
TCUT	**Toone Canyon**	**78.73**	**330**	P	**P**	**07 54 01.7**	**+1.4**
TCUT				IAmb	IAmb	07 54 04.4	
	comp=Z,9.5nm,0.7s						
RAR	**Rarotonga**	**79.01**	**252**	LR	LR	08 19 05.9	
	comp=Z,60nm,21.7s,baz=144,slow=28						
HWUT	**Hardware Ranch**	**79.19**	**330**	P	**P**	**07 54 03.6**	**+0.8**
BW06	**Boulder Array**	**79.30**	**332**	P		07 54 05.3	
	baz=146,SNR=6.8						
BW06	**Boulder Array**	**79.30**	**332**	P	**P**	**07 54 04.2**	**+0.8**
PD31	**Pinedale Array**	**79.30**	**332**	P	**P**	**07 54 04.1**	**+0.7**
PDAR	**Pinedale Array**	**79.30**	**332**	P	**P**	**07 54 05.0**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=130,slow=7.2,SNR=23						
PDAR				LR	LR	08 25 13.0	
	comp=Z,22nm,21.8s,baz=173,slow=33						
AGMN	**Agassiz Nation**	**79.66**	**344**	P		07 54 06.3	
	baz=158						
AGMN	**Agassiz Nation**	**79.66**	**344**	P	**P**	**07 54 05.4**	**+0.5**
AGMN				IAmb	IAmb	07 54 06.9	
	comp=Z,6.4nm,0.7s						
NVAR	**Mina Array Bea**	**79.91**	**324**	P	**P**	**07 54 09.3**	**+2.5**
	comp=Z,1.5nm,0.7s,baz=159,slow=5.1,SNR=8.7						
ELK	**Elko**	**80.17**	**328**	P	**P**	**07 54 09.3**	**+1.1**
MDND	**Maddock**	**80.25**	**341**	P		07 54 10.4	
	baz=155						
REDW	**Red Top Meadow**	**80.33**	**332**	P	**P**	**07 54 09.2**	**+0.3**
LOHW	**Long Hollow**	**80.43**	**332**	P	**P**	**07 54 09.9**	**+0.4**
RLMT	**Red Lodge**	**81.14**	**334**	P		07 54 15.5	
	baz=146						
ULM	**Lac du Bonnet**	**81.48**	**344**	P	**P**	**07 54 15.4**	**+0.8**
	comp=Z,6.4nm,0.8s,baz=164,slow=5.4,SNR=13						
ULM	**Lac du Bonnet**	**81.48**	**344**	P	**P**	**07 54 14.8**	**+0.1**
ULM				IAmb	IAmb	07 54 16.3	
	comp=Z,12nm,1.0s						
YHH	**Holmes Hill**	**81.50**	**333**	P	**P**	**07 54 16.9**	**+1.6**
TOA0	**Torodi Ar. Sit**	**81.64**	**70**	P	**P**	**07 54 15.7**	**-0.6**
TOA0				IAmb	IAmb	07 54 17.4	
	comp=Z,11nm,0.7s						
TORD	**Torodi Ar. Bea**	**81.64**	**70**	P	**P**	**07 54 16.1**	**-0.2**
	comp=Z,8.3nm,0.5s,baz=270,slow=4.8,SNR=46						
TORD				pP	**pP**	**07 54 29.1**	**-0.6**
	comp=Z,4.1nm,0.5s,baz=269,slow=4.8,SNR=7.8						
TORD				LR	LR	08 28 47.6	
	comp=Z,62nm,20.9s,baz=230,slow=34						
BOSA	**Boshof**	**81.92**	**118**	P	**P**	**07 54 17.4**	**-0.5**
	comp=Z,7.5nm,0.5s,baz=248,slow=3.3,SNR=23						
BOSA				LR	LR	08 25 20.1	
	comp=Z,62nm,19.5s,baz=169,slow=32						
HLID	**Hailey**	**82.02**	**330**	P		07 54 20.5	
	baz=142,SNR=9.6						
HLID	**Hailey**	**82.02**	**330**	P	**P**	**07 54 19.6**	**+1.7**
DGMT	**Dagmar**	**82.21**	**339**	P		07 54 20.8	
	baz=151						
MCMT	**McKenzie Canyo**	**82.35**	**331**	P	**P**	**07 54 21.3**	**+1.7**
ORV	**Oroville**	**82.41**	**323**	P	**P**	**07 54 21.2**	**+1.4**
BOZ	**Bozeman (W)**	**82.47**	**333**	P		07 54 22.1	
	baz=145						
LBTB	**Lobatse**	**83.89**	**115**	P	**P**	**07 54 27.7**	**-0.4**
M04C	**Macdoel**	**84.21**	**324**	P		07 54 32.0	
	baz=137						
PINE	**Pine Mountain**	**85.23**	**326**	P	**P**	**07 54 35.0**	**+0.6**
PINE				IAmb	IAmb	07 54 37.7	
	comp=Z,8.5nm,0.9s						
J04D	**Umpqua Nationa**	**85.41**	**325**	P		07 54 37.8	
	baz=137						
I05D	**Terrebonne, OR**	**85.83**	**326**	P		07 54 40.0	
	baz=137						
URZ	**Urewera**	**87.89**	**227**	LR	LR	08 26 59.1	
	comp=Z,56nm,19.9s,baz=211,slow=31						
YKA	**Yellowknife Ar**	**97.17**	**341**	P	Pdif	07 55 30.2	+0.6
	comp=Z,0.6nm,0.8s,baz=135,slow=4.8,SNR=11						
AKASG	**Malin Array Be**	**117.89**	**45**	PKP	**PKPdf**	**08 00 42.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=269,slow=2.7,SNR=5.1						
ARCES	**ARCESS Array B**	**118.76**	**23**	PKP	**PKiKP**	**08 00 45.4**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=250,slow=2.7,SNR=1.7						
ASAR	**Alice Springs**	**122.74**	**207**	PKP	**PKPdf**	**08 00 53.8**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=131,slow=1.7,SNR=25						
ASAR				pPKP	**pPKPdf**	**08 01 07.8**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=127,slow=1.6,SNR=6.7						
ASAR				PKKPbc	**PKKPbc**	**08 10 47.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=334,slow=3.2,SNR=7.0						
KLMR	**Klimovskoe**	**124.52**	**34**	*e*PKPdf	**PKPdf**	**08 00 55.9**	**-0.2**
KLMR				AMP		08 00 57.6	
	comp=Z,7.0nm,0.8s						
WRA	**Warramunga Arr**	**125.86**	**210**	PKP	**PKPdf**	**08 01 00.2**	**+0.1**
	comp=Z,3.2nm,0.5s,baz=160,slow=1.7,SNR=82						
WRA				pPKP	**pPKPdf**	**08 01 14.2**	**0.0**
	comp=Z,1.6nm,0.4s,baz=155,slow=1.7,SNR=12						
KBZ	**Khabaz**	**125.97**	**55**	PKP	**PKPdf**	**08 00 58.9**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=312,slow=2.8,SNR=4.1						
ARU	**Arti**	**135.05**	**37**	PKP	**PKiKP**	**08 01 17.1**	**-0.6**
	comp=Z,1.8nm,0.2s,baz=304,slow=11,SNR=5.4						
SEY	**Seymchan**	**135.62**	**333**	PKP	**PKiKP**	**08 01 18.7**	**0.0**
	comp=Z,2.2nm,0.7s,baz=129,slow=3.8,SNR=8.1						
SEY				pPKP	**pPKPdf**	**08 01 32.7**	**+1.5**
	comp=Z,2.7nm,0.8s,baz=136,slow=2.8,SNR=5.0						
KURK	**Kurchatov**	**148.24**	**37**		**PKPdf**	**08 01 40.2**	**+0.3**
KURBB	**Kurchatov Arra**	**148.24**	**38**	PKP	**PKPdf**	**08 01 40.2**	**+0.3**
	comp=Z,4.3nm,0.5s,baz=304,slow=3.0,SNR=35						
KURBB				PKPbc	**PKPbc**	**08 01 43.7**	**+0.3**
	comp=Z,6.3nm,0.5s,baz=304,slow=3.0,SNR=80						
AAK	**Ala-Archa**	**148.96**	**54**	PKPbc	**PKiKP**	**08 01 47.1**	**+0.2**
	comp=Z,7.4nm,0.5s,baz=250,slow=2.6,SNR=3.5						
AAK	**Ala-Archa**	**148.96**	**54**		**PKPbc**	**08 01 43.9**	**-1.8**
ZALV	**Zalesovo Beam**	**149.15**	**28**	PKPbc	**PKiKP**	**08 01 46.5**	**-0.3**
	comp=Z,29nm,0.5s,baz=303,slow=3.5,SNR=26						
ZALV				pPKPbc	**sPKPdf**	**08 02 00.2**	**-0.1**
	comp=Z,7.4nm,0.5s,baz=317,slow=4.0,SNR=3.0						
KSH	**Kashi**	**150.79**	**59**	PKPbc	**PKPbc**	**08 01 50.5**	**+0.3**
MKAR	**Makanchi Array**	**152.39**	**42**	PKP	**PKPdf**	**08 01 47.2**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=252,slow=2.3,SNR=7.7						
MKAR				PKPbc	**PKiKP**	**08 01 53.8**	**+0.1**
	comp=Z,8.3nm,0.6s,baz=303,slow=1.8,SNR=97						
MKAR				PKPab	**sPKPdf**	**08 02 04.9**	**-0.7**
	comp=Z,3.2nm,0.6s,baz=325,slow=2.3,SNR=8.4						
KLR	**Kul'dur**	**152.93**	**326**	PKPbc	**PKiKP**	**08 01 55.2**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=45,slow=2.6,SNR=6.4						
MJAR	**Matsushiro Arr**	**154.09**	**295**	PKPab	**PKPab**	**08 02 13.0**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=126,slow=2.5,SNR=1.4						
LZH	**Lanzhou**	**171.38**	**28**	*e*PKP	**PKPdf**	**08 02 04.6**	**-1.8**
LZH				pPKP	pPKPdf	08 02 15.8	-4.6
LZH				sPKP		08 02 22.1	
LZH				LR	LR		
	comp=N,400nm,17.9s						
LZH				LR	LR		
	comp=E,480nm,19.1s						
LZH				LR	LR		
	comp=Z,140nm,20.3s						

KRSC 02 07:47:09.8±1.4, 50.52N×157.53E, h47km±20km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.91**	**281**	*e*P	Pn	07 47 27.2	+1.0
SKR				*e*S	Sn	07 47 38.9	+0.6
PAU	**Pauzhetka**	**1.05**	**335**	*e*P	Pn	07 47 30.3	+2.2
PAU				*e*S	Sn	07 47 43.8	+2.2
ALID	**Alaid**	**1.30**	**286**	*e*P	Pn	07 47 33.4	+1.7
ALID				*e*S	Sn	07 47 49.7	+1.7
KDTR	**Khodutka, Kamc**	**1.33**	**15**	*e*P	Pn	07 47 33.8	+1.8
KDTR				*e*S	Sn	07 47 49.8	+1.2
MIPR	**Malaya Ipel'ka**	**1.82**	**345**	*e*P	Pn	07 47 41.4	+2.7
ASAK	**Asacha**	**1.88**	**7**	P	Pn	07 47 42.6	+3.1
MTVR	**Mutnovka**	**2.01**	**12**	*e*P	Pn	07 47 43.7	+2.4
MTVR				*e*S	Sn	07 48 08.5	+3.2
RUS	**Russkaya**	**2.01**	**18**	*e*P	Pn	07 47 42.7	+1.5
RUS				*e*S	Sn	07 48 06.6	+1.5
GRL	**Gorelyy**	**2.06**	**9**	*e*P	Pn	07 47 44.5	+2.4
GRL				*e*S	Sn	07 48 09.8	+3.2
KRMR	**Karymshinskiy**	**2.34**	**9**	S	Sn	07 48 16.7	+3.4
APC	**Apacha**	**2.42**	**355**	P	Pn	07 47 49.8	+3.0
DALK	**Dalny**	**2.63**	**16**	*e*P	Pn	07 47 52.0	+2.3
DALK				*e*S	Sn	07 48 23.3	+3.0
UGLR	**Uglovaya**	**2.81**	**16**	*e*P	Pn	07 47 56.1	+3.8
AVH	**Avacha**	**2.85**	**15**	*e*P	Pn	07 47 56.5	+3.7
SMAR	**Somma**	**2.86**	**16**	*e*P	Pn	07 47 56.8	+3.8
KOK	**Koryaka**	**2.86**	**14**	*e*P	Pn	07 47 56.9	+3.9
SDLR	**Sedlovina**	**2.88**	**16**	*e*P	Pn	07 47 55.8	+2.4
KRER	**Koryakskii**	**2.89**	**15**	*e*P	Pn	07 47 56.8	+3.3
KRX	**Arik**	**2.92**	**13**	*e*P	Pn	07 47 57.5	+3.6
MKZ	**Mys Kozlova**	**4.79**	**31**	P	Pn	07 48 21.5	+2.2
KZV	**Kizimen**	**4.89**	**19**	P	Pn	07 48 27.4	+6.5
KBTR	**Krutoberegovo**	**6.52**	**27**	P	Pn	07 48 46.2	+3.2

BYKL ***02*** *07:51:28.6±0.1, 56.06N×113.69E, h6km±2km*
IDC ***02*** *07:51:28.0±1.0, 55.99N×113.73E, h0km, mb3.4/7, mb1 3.6/10, mb1mx3.5/44, mbtmp3.5/10, ML3.5/3, MS3.0/4, Ms1 3.0/4, ms1mx2.6/31, Error ellipse: s-maj=27.6km s-min=18.5km az=156.0*

ISC 02 07:51:29.1±0.5, 56.03N±0.02×113.52E±0.02, h10km, n51, σ2.84/106, mb3.4/6, MS2.8/3, 4C-2D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.09**	**13**	⇑*i*Pg	**Pg**	**07 51 30.6**	**-1.0**
SVKR				Pmax		07 51 30.7	
	6μm,0.1s						
SVKR				*e*Sg	**Sg**	**07 51 33.2**	**-0.2**
SVKR				Smax		07 51 40.5	
	53μm,0.8s						
UKT	**Uakit**	**0.55**	**174**	⇑*i*Pg	**Pg**	**07 51 38.4**	**-1.3**
UKT				Pmax		07 51 38.7	
	155nm,0.7s						
UKT				*e*Sg	**Sg**	**07 51 46.2**	**-0.7**
UKT				Smax		07 51 58.3	
	2μm,1.1s						
YOA	**Uoyan**	**1.01**	**277**	*e*Pg	**Pg**	**07 51 48.1**	**-0.5**
YOA				*e*		07 51 52.9	
YOA				max		07 51 56.3	
	674nm,0.3s						
YOA				*e*Sg	**Sn**	**07 52 03.6**	**-0.1**
YOA				*e*		07 52 09.2	
YOA				max		07 52 12.1	
	4μm,0.4s						
NLYR	**Nelyaty**	**1.30**	**68**	⇑*i*Pg	**Pn**	**07 51 50.5**	**-2.8**
NLYR				*e*		07 51 53.0	
NLYR				max		07 51 54.4	
	582nm,0.3s						
NLYR				*e*Sg	**Sb**	**07 52 06.8**	**-3.6**
NLYR				*e*Sb	**Sg**	**07 52 10.5**	**-0.4**
NLYR				max		07 52 11.7	
	2μm,0.8s						
KMO	**Kumora**	**1.31**	**265**	*e*Pg	**Pb**	**07 51 53.6**	**-0.2**
KMO				*e*		07 51 57.6	
KMO				max		07 52 02.4	
	352nm,0.4s						
KMO				*e*Sg	**Sg**	**07 52 12.9**	**+1.6**
KMO				*e*		07 52 16.0	
KMO				max		07 52 16.8	
	3μm,0.8s						
YLYR	**Ulyunkhan**	**1.77**	**230**	⇓*i*Pn	**Pb**	**07 52 01.8**	**+0.1**
YLYR				*e*Pg	**Pg**	**07 52 02.1**	**-1.0**
YLYR				*e*		07 52 03.6	
YLYR				max		07 52 03.7	
	350nm,0.2s						
YLYR				*e*Sg	**Sg**	**07 52 26.9**	**+0.8**
YLYR				Smax		07 52 31.2	
	1μm,0.5s						
BOD	**Bodaibo**	**1.81**	**8**	⇑*i*Pn	**Pn**	**07 52 00.2**	**-0.1**
BOD				*e*Pg	**Pb**	**07 52 00.4**	**-1.9**
BOD				Pmax		07 52 03.0	
	681nm,0.9s						
BOD				*e*Sg	**Sn**	**07 52 23.7**	**+0.4**
BOD				Smax		07 52 25.7	
	1μm,0.6s						
NIZ	**Nizh Angarsk**	**2.26**	**265**	*e*Pn	**Pb**	**07 52 08.7**	**-1.2**
NIZ				*e*Pg	**Pg**	**07 52 10.9**	**-1.4**
NIZ				Pmax		07 52 14.7	
	59nm,0.5s						
NIZ				*e*Sn	**Sb**	**07 52 36.9**	**-1.0**
NIZ				*e*Sg	**Sg**	**07 52 41.8**	**+0.3**
NIZ				Smax		07 52 43.4	
	1μm,0.9s						
CRS	**Chara**	**2.77**	**70**	*e*Pn	**Pn**	**07 52 13.0**	**-0.6**
CRS				*e*Pg	**Pb**	**07 52 17.5**	**-1.2**
CRS				Pmax		07 52 22.1	
	349nm,0.9s						
CRS				*e*Sn	**Sn**	**07 52 44.9**	**-2.2**
CRS				*e*Sg	**Sb**	**07 52 52.2**	**-0.6**
CRS				Smax		07 52 54.8	
	2μm,1.5s						
SYVR	**Suvo**	**3.13**	**222**	*e*Pn	**Pn**	**07 52 20.1**	**+1.6**
SYVR				*e*Pg	**Pb**	**07 52 26.6**	**+1.8**
SYVR				*e*Pg	**Pg**	**07 52 28.8**	**-0.2**
SYVR				max		07 52 32.2	
	111nm,0.5s						
SYVR				*e*Sn	**Sn**	**07 52 58.1**	**+2.2**
SYVR				*e*Sg	**Sg**	**07 53 08.0**	**-1.6**
SYVR				*e*		07 53 17.3	
SYVR				max		07 53 21.7	
	618nm,1.0s						
VTMR	**Vitim**	**3.46**	**352**	*e*Pn	**Pn**	**07 52 22.6**	**-0.3**
VTMR				*e*Pg	**Pb**	**07 52 30.4**	**0.0**
VTMR				*e*Sn	**Sn**	**07 53 02.6**	**-1.3**
VTMR				*e*Sg	**Sb**	**07 53 14.1**	**+1.7**
KHNR	**Khani**	**3.69**	**73**	*e*Pn	**Pn**	**07 52 24.9**	**-1.3**
KHNR				*e*Pg	**Pb**	**07 52 33.5**	**-0.8**
KHNR				*e*Sn	**Sn**	**07 53 06.8**	**-2.9**
KHNR				*e*Sg	**Sb**	**07 53 20.5**	**+1.4**
MXMB	**Maximikha**	**3.92**	**227**	*e*Pg	**Pg**	**07 52 41.4**	**-2.8**
MXMB				*e*Sn	**

UUDB				*e*Sg	**Sg**	07 54 18.8	**-4.1**		
UUDB				Smax		07 54 26.1			
	459nm,1.6s								
UUDB				*e*		07 54 31.0			
FFNB	**Fofonovo**	**5.64**	**228**	*e*Sg	**Sg**	07 54 26.2	**-3.7**		
KAB	**Kabansk**	**5.68**	**228**	*e*Sg	**Sg**	07 54 27.3	**-4.0**		
KAB				*e*		07 54 40.4			
KAB				max		07 54 58.4			
	634nm,1.1s								
HRMR	**Khuramsha**	**5.88**	**224**	*e*Pn	**Pn**	07 52 57.7	**+1.5**		
HRMR				*e*Pg	Pg	07 53 16.4	-5.2		
HRMR				Pmax		07 53 24.9			
	48nm,0.8s								
HRMR				*e*		07 53 42.5			
HRMR				*e*Sn	**Sn**	07 54 02.7	**-0.9**		
HRMR				*e*Sg	**Sg**	07 54 33.6	**-4.1**		
HRMR				Smax		07 54 47.1			
	473nm,0.7s								
BGT	**Bolshoye Golou**	**6.23**	**234**	*e*Sg	**Sg**	07 54 44.8	**-4.0**		
BGT				Smax		07 54 54.5			
	88nm,1.2s								
IENR	**Iengra**	**6.34**	**84**	*e*Sg	**Sb**	07 54 42.5	**+7.2**		
CLNS	**Chul'man**	**6.36**	**78**	*e*Sg	**Sb**	07 54 42.1	**+6.3**		
KPC	**Khapcheranga**	**6.38**	**187**	*e*Pn	**Pn**	07 53 03.1	**0.0**		
KPC				*e*		07 53 12.0			
KPC				*e*Pg	**Pb**	07 53 23.8	**+3.7**		
KPC				Pmax		07 53 25.1			
	11nm,0.8s								
KPC				*e*Sn	**Sn**	07 54 14.4	**-1.5**		
KPC				*e*Sg	**Sg**	07 54 46.6	**-7.0**		
KPC				*e*		07 55 01.4			
KPC				max		07 55 04.5			
	279nm,1.4s								
LSTR	**Listvyanka**	**6.61**	**234**	*e*Pg	Pb	07 53 29.2	+5.2		
LSTR				Pmax		07 53 35.4			
	8.0nm,0.5s								
LSTR				*e*Sn	**Sn**	07 54 22.3	**+0.8**		
LSTR				*e*Sg	**Sg**	07 54 55.2	**-5.8**		
LSTR				Smax		07 55 04.0			
	94nm,1.4s								
IVK	**Ivanovka**	**6.85**	**236**	*e*Sn	**Sn**	07 54 25.5	**-1.9**		
IVK				*e*Sg	**Sg**	07 55 03.3	**-5.3**		
IVK				*e*		07 55 09.0			
IVK				max		07 55 12.8			
	67nm,1.4s								
TLY	**Talaya**	**7.29**	**237**	Lg	Lg	07 55 14.2			
	0.0nm,0.3s,baz=100,slow=23,SNR=11								
TLY	**Talaya**	**7.29**	**237**	*e*Pg	Pb	07 53 41.7	+6.1		
TLY				Pmax		07 53 53.9			
	9.0nm,0.7s								
TLY				*e*Sn	**Sn**	07 54 37.0	**-1.2**		
TLY				*e*Sg	**Sg**	07 55 16.2	**-6.5**		
TLY				Smax		07 55 22.9			
	51nm,0.9s								
ARS	**Arshan**	**7.73**	**242**	*e*Pg	Pb	07 53 49.7	+6.6		
ARS				Pmax		07 53 55.9			
	12nm,0.5s								
ARS				*e*Sn	**Sn**	07 54 48.2	**-1.0**		
ARS				*e*Sg	**Sg**	07 55 30.2	**-6.7**		
ARS				Smax		07 55 35.8			
	347nm,0.8s								
ZAK	**Zakamensk**	**8.35**	**232**	*e*Sg	**Sg**	07 55 50.8	**-6.0**		
ZAK				Smax		07 56 23.5			
	72nm,1.4s								
MOY	**Mondy**	**8.60**	**245**	*e*Pn	**Pn**	07 53 36.0	**+2.4**		
MOY				*e*		07 53 43.6			
MOY				max		07 54 11.0			
	22nm,1.8s								
MOY				*e*Sn	**Sn**	07 55 10.3	**-0.3**		
MOY				*e*Sg	**Sg**	07 55 56.5	**-8.3**		
MOY				Smax		07 56 34.2			
	112nm,2.2s								
ORL	**Orlik**	**8.75**	**252**	*e*Pn	**Pn**	07 53 37.7	**+2.0**		
ORL				*e*Pg	Pg	07 54 08.3	-8.2		
ORL				*e*		07 54 13.2			
ORL				max		07 54 19.5			
	13nm,1.7s								
ORL				*e*Sn	**Sn**	07 55 13.1	**-1.2**		
ORL				*e*Sg	**Sg**	07 56 02.7	**-6.9**		
ORL				*e*		07 56 16.4			
ORL				max		07 56 17.9			
	64nm,1.7s								
SONM	**Songino Array**	**9.31**	**211**	Pn	**Pn**	**07 53 45.4**	**+2.0**		
	0.2nm,0.3s,baz=21,slow=12,SNR=3.6								
SONM				Sn	**Sn**	**07 55 27.9**	**-0.2**		
	0.4nm,0.3s,baz=30,slow=20,SNR=5.3								
SONM				Lg	Lg	07 56 22.5			
	1.5nm,0.3s,baz=21,slow=28,SNR=6.5								
YAK	**Yakutsk**	**10.25**	**47**	Lg	Lg	07 56 40.8			
	0.4nm,0.3s,baz=154,slow=22,SNR=9.0								
KLR	**Kul'dur**	**12.97**	**114**	Pn	**Pn**	**07 54 33.1**	**-0.2**		
	0.2nm,0.3s,baz=315,slow=17,SNR=4.3								
KLR				Lg	Lg	07 58 17.1			
	0.5nm,0.3s,baz=88,slow=22,SNR=5.4								
USRK	**Ussuriysk Ar.**	**16.68**	**127**	Lg	Lg	08 00 08.7			
	baz=318,slow=30,SNR=4.1								
TIXI	**Tiksi**	**16.97**	**17**	Sn	Sn	07 58 19.8	-15		
	0.6nm,0.3s,baz=326,slow=18,SNR=3.0								
TIXI				Lg	Lg	08 00 25.6			
	baz=332,slow=19,SNR=4.3								
NRIK	**Noril'sk**	**17.67**	**329**	P	**P**	**07 55 36.9**	**+1.0**		
	0.4nm,0.3s,baz=108,slow=10.0,SNR=4.6								
NRIK				S	Sn	07 58 37.9	-14		
	0.2nm,0.3s,baz=2.2,slow=11,SNR=3.7								
NRIK				Lg	Lg	08 00 35.8			
	0.2nm,0.3s,baz=43,slow=19,SNR=1.2								
NRIK				LR	LR	08 02 59.7			
	comp=Z,63nm,20.4s,baz=88,slow=39								
SEY	**Seymchan**	**20.63**	**55**	P	Pn	07 56 09.0	-1.6		
	1.2nm,0.6s,baz=345,slow=20,SNR=5.3								
KSRS	**Korea Array**	**20.96**	**146**	LR	LR	08 04 21.9			
	comp=Z,31nm,21.8s,baz=275,slow=37								
MKAR	**Makanchi Array**	**21.39**	**258**	P	**P**	**07 56 17.9**	**+1.2**		
	0.8nm,0.8s,baz=63,slow=8.2,SNR=8.1								
MKAR				LR	LR	08 04 08.0			
	comp=Z,40nm,19.4s,baz=191,slow=35								
KURBB	**Kurchatov Arra**	**21.43**	**270**	P	**P**	**07 56 18.6**	**+1.6**		
	0.8nm,0.6s,baz=61,slow=11,SNR=8.8								
ASAJ	**Asahikawa**	**21.96**	**111**	LR	LR	08 05 15.0			
	comp=Z,52nm,18.7s,baz=148,slow=38								
BVAR	**Borovoye Array**	**24.91**	**281**	P	**P**	**07 56 54.0**	**+2.1**		
	0.9nm,0.8s,baz=107,slow=7.9,SNR=5.1								
ILAR	**Eielson Array**	**44.96**	**37**	P	**P**	**07 59 44.8**	**+1.0**		
	0.3nm,0.6s,baz=305,slow=11,SNR=4.9								
YKA	**Yellowknife Ar**	**56.01**	**25**	P	**P**	**08 01 06.3**	**-0.9**		
	0.3nm,0.6s,baz=334,slow=6.8,SNR=8.1								
WRA	**Warramunga Arr**	**77.70**	**160**	P	**P**	**08 03 24.8**	**-0.9**		
	0.4nm,0.9s,baz=349,slow=5.0,SNR=1.9								

DJA 02 07:59:59.9±1.2,0°S±7°×12°4E±°,h34km±19km,M3.9/7, mb4.6/1,MLv3.5/7,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.67**	**332**	P	Pb	08 00 13.7	+0.4
GTOI	**Gorontalo**	**1.45**	**297**	P	Pb	08 00 26.6	+0.3
GTOI				S	Sb	08 00 49.7	+5.3
LUWI	**Luwuk**	**1.83**	**236**	P	Pn	08 00 29.7	+0.7
LUWI				S	Sn	08 00 51.5	+0.4
SANI	**Sanana**	**2.63**	**140**	P	Pn	08 00 38.5	-1.5
APSI	**Ampana**	**2.79**	**252**	P	Pn	08 00 42.4	+0.2

IDC 02 08:00:25.6±2.5,54°27N×86°01E,h0km,mb1 3.2/2, mb1mx3.0/44,mbtmp3.2/2,ML2.9/2,Error ellipse: s-maj=18.5km s-min=11.2km az=54.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.77**	**246**	*i*		08 05 06.5	
	baz=65,slow=332,SNR=0.9						
ZALV	**Zalesovo Beam**	**0.77**	**246**	Pg	Pg	08 00 39.3	-1.1
	1.6nm,0.3s,baz=61,slow=17,SNR=8.8						
ZALV				Lg	Lg	08 00 51.5	
	2.9nm,0.3s,baz=66,slow=29,SNR=8.0						
KURBB	**Kurchatov Arra**	**5.85**	**234**	Pn	Pn	08 01 54.2	+0.7
	0.1nm,0.3s,baz=53,slow=14,SNR=7.0						
KURBB				Lg	Lg	08 03 33.5	
	0.1nm,0.3s,baz=51,slow=32,SNR=2.6						
MKAR	**Makanchi Array**	**7.85**	**199**	Pn	Pn	08 02 22.2	+1.2
	0.4nm,0.3s,baz=19,slow=10,SNR=8.0						
MKAR				Lg	Lg	08 04 32.6	
	0.0nm,0.3s,baz=23,slow=30,SNR=1.8						

*JMA **02** 08:08:15.9±0.1,36°.25N×140°.43E,h64km±1km,M3.1*
JMA Felt I J1.
*IDC **02** 08:08:16.4±7.1,36°.38N×140°.50E,h78km±47km,mb3.1/2, mb1 3.1/2,mb1mx2.9/39,mbtmp3.4/2,MS3.3/1,Ms1 3.3/1, ms1mx2.6/11,Error ellipse: s-maj=62.5km s-min=57.4km az=38.0*

ISC 02 08:08:15.4±1.3,36°.24N±0°.06×140°.48E±0°.06,h68km±8km, n21,σ0°.72/25,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.13**	**40**	P	**Pn**	**08 08 25.5**	**0.0**
JHYU				S	**Sn**	**08 08 32.6**	**-0.2**
JYT	**Yasato**	**0.23**	**267**	P	**Pn**	**08 08 25.8**	**-0.1**
JYT				S	**Sn**	**08 08 33.1**	**-0.5**
JIHU	**Itakohorinouch**	**0.28**	**173**	P	**Pn**	**08 08 26.9**	**+0.7**
JIHU				S	**Sn**	**08 08 35.6**	**+1.6**
JHO	**Hitachi**	**0.38**	**10**	P	**Pn**	**08 08 27.0**	**0.0**
JHO				S	**Sn**	**08 08 35.2**	**-0.2**
JAG	**Ashikaga**	**0.85**	**283**	P	**Pn**	**08 08 31.9**	**-0.1**
JKT	**Katashina**	**1.12**	**298**	P	**Pn**	**08 08 35.8**	**+0.3**
JKT				S	**Sn**	**08 08 50.4**	**-0.1**
JFK	**Kawauchi**	**1.17**	**15**	P	**Pn**	**08 08 36.0**	**0.0**
JFK				S	**Sn**	**08 08 51.4**	**+0.1**
JFT	**Otama**	**1.28**	**355**	P	**Pn**	**08 08 38.2**	**+0.7**
JFT				S	**Sn**	**08 08 55.0**	**+1.1**
JRY	**Ryogami san**	**1.30**	**261**	P	**Pn**	**08 08 37.9**	**+0.2**
JRY				S	**Sn**	**08 08 54.4**	**0.0**
JFY	**Yanaizu**	**1.32**	**332**	P	**Pn**	**08 08 38.8**	**+0.8**
JFY				*eS*	**Sn**	**08 08 55.6**	**+0.7**
MJAR	**Matsushiro Arr**	**1.86**	**280**	P	**Pn**	**08 08 45.9**	**+0.7**
	2.2nm,0.3s,baz=96,slow=9.8,SNR=49						
MJAR				S	**Sn**	**08 09 08.7**	**+1.0**
	0.8nm,0.3s,baz=94,slow=20,SNR=3.2						
MAT	**Matsushiro**	**1.86**	**280**	P	**Pn**	**08 08 46.2**	**+1.0**
MAT				S	**Sn**	**08 09 07.2**	**-0.6**
SONM	**Songino Array**	**27.62**	**305**	P	**P**	**08 13 55.3**	**-1.2**
	0.3nm,0.4s,baz=96,slow=8.2,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**28.41**	**118**	T	T	08 44 08.1	
	baz=310						
H11N1	**WAKE ISLAND Hy**	**28.41**	**118**	T	T	08 44 12.0	
	baz=310						
H11N3	**WAKE ISLAND Hy**	**28.43**	**118**	T	T	08 44 10.8	
	baz=310						
H11S1	**WAKE ISLAND Hy**	**29.08**	**120**	T	T	08 45 06.3	
	baz=314,slow=75,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**29.08**	**120**	T	T	08 45 05.9	
	baz=314,slow=75,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**29.10**	**120**	T	T	08 45 06.5	
	baz=314,slow=75,SNR=3.7						
TIXI	**Tiksi**	**35.99**	**354**	LR	LR	08 31 43.3	
	comp=Z,39nm,18.6s,baz=16,slow=39						
MKAR	**Makanchi Array**	**43.91**	**303**	P	**P**	**08 16 15.1**	**-0.2**
	0.3nm,0.7s,baz=94,slow=8.4,SNR=3.0						

*IDC **02** 08:38:06.5±2.0,1°.52N×126°.04E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.4/32,mbtmp3.7/3,Error ellipse: s-maj=177.9km s-min=25.3km az=65.0*
*DJA **02** 08:38:11.4±0.8,2°.N±5°×12°.7E±°,h78km±18km,M3.6/6, MLv3.6/6*

ISC 02 08:38:11.6±1.2,1°.7N±0°.1×126°.7E±0°.1,h35km,n6,σ1°27/7, mb3.6/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.13**	**145**	P	**Pn**	**08 38 31.3**	**+0.4**
TNTI				S	**Sn**	**08 38 46.3**	**+1.0**
SGSI	**Sangihe**	**2.30**	**329**	P	**Pn**	**08 38 48.1**	**+1.1**
GTOI	**Gorontalo**	**3.86**	**254**	P	**Pn**	**08 39 09.0**	**+0.5**
WRA	**Warramunga Arr**	**22.78**	**161**	P	**P**	**08 43 10.2**	**-1.0**
	1.5nm,0.6s,baz=338,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.17**	**165**	P	**P**	**08 43 43.7**	**+0.8**
	0.4nm,0.4s,baz=340,slow=11,SNR=13						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**08 48 07.8**	**-1.5**
	0.2nm,0.4s,baz=121,slow=7.7,SNR=5.4						

*IDC **02** 08:38:37.0±2.9,0°.91N×92°.22E,h0km,mb3.6/4,mb1 3.7/5, mb1mx3.5/40,mbtmp3.6/5,ML3.9/1,Error ellipse: s-maj=96.8km s-min=30.8km az=62.0*

ISC 02 08:38:41.9±2.7,0°.9N±0°.3×92°.2E±0°.5,h35km,n6,σ0°49/6, mb3.7/4,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**18.64**	**20**	P	**P**	**08 42 56.7**	**-0.1**
	0.1nm,0.3s,baz=213,slow=11,SNR=1.0						
WRA	**Warramunga Arr**	**46.17**	**119**	P	**P**	**08 47 03.6**	**0.0**
	0.3nm,0.8s,baz=294,slow=8.7,SNR=4.8						
MKAR	**Makanchi Array**	**46.52**	**351**	P	**P**	**08 47 06.1**	**+0.2**
	0.4nm,0.5s,baz=166,slow=7.9,SNR=4.8						
SONM	**Songino Array**	**48.33**	**13**	P	**P**	**08 47 20.4**	**+0.3**
	0.5nm,0.5s,baz=202,slow=7.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**53.22**	**355**	P	**P**	**08 47 55.9**	**-0.7**
	0.4nm,0.3s,baz=158,slow=6.4,SNR=2.1						
TXAR	**Lajitas Array**	**146.31**	**26**	PKPbc	**PKPab**	**08 58 20.7**	**+0.2**
	0.2nm,0.6s,baz=320,slow=2.4,SNR=3.5						

*ISK **02** 08:49:42.3,35°.17N×27°.46E,h23km,ML3.4/14*
*DDA **02** 08:49:43.0,35°.14N×27°.56E,h51km±999km,MW3.6*
*THE **02** 08:49:44.3,35°.36N×27°.58E,h0km±1km,ML3.4/3,Error ellipse: s-maj=1.9km s-min=0.8km az=154.0*
*ATH **02** 08:49:45.1,35°.43N×27°.54E,h35km±3km,ML3.4/6,Error ellipse: s-maj=4.2km s-min=1.6km az=323.0*

ISC 02 08:49:44.9±1.3,35°.38N±0°.04×27°.57E±0°.03,h7km±10km, n56,σ0°98/75,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**297**	P	**Pg**	**08 49 52.6**	**+0.5**
KARP				S	**Sb**	**08 49 59.4**	**-0.5**
KARP				AML	AML	08 50 00.9	
	comp=E,27657μm,0.3s						
KARP				AML	AML	08 50 01.2	
	comp=N,18925μm,0.4s						
KARP	**Karpathos**	**0.37**	**297**	P	**Pg**	**08 49 52.6**	**+0.5**
KARP				S	**Sb**	**08 49 59.1**	**-0.8**
	comp=N,12μm,0.3s						
KARP	**Karpathos**	**0.37**	**297**	PG	**Pg**	**08 49 52.4**	**+0.3**
KARP				SG	**Sb**	**08 49 59.7**	**-0.2**
ARG	**Arkhangelos**	**0.95**	**28**	P	**Pg**	**08 50 02.9**	**-0.3**
ARG				AML	AML	08 50 27.7	
	comp=E,3085μm,0.9s						
ARG				AML	AML	08 50 32.1	
	comp=N,2631μm,0.8s						
ARG	**Arkhangelos**	**0.95**	**28**	P	**Pg**	**08 50 03.1**	**0.0**
ARG				S	**Sn**	**08 50 17.9**	**-0.6**
	comp=N,1μm,0.8s						
ARG	**Arkhangelos**	**0.95**	**28**	PN	**Pb**	**08 50 03.8**	**+0.1**
ARG				SN	**Sn**	**08 50 19.9**	**+1.4**
ZKR	**Zakros**	**1.14**	**257**	P	**Pg**	**08 50 05.4**	**-1.2**
ZKR				S	**Sg**	**08 50 21.1**	**-0.3**
ZKR				AML	AML	08 50 28.9	
	comp=N,2377μm,0.5s						
ZKR				AML	AML	08 50 29.4	
	comp=E,3855μm,0.9s						
ZKR	**Zakros**	**1.14**	**257**	P	**Pg**	**08 50 05.6**	**-1.1**
ZKR				S	**Sn**	**08 50 23.0**	**0.0**
	comp=E,2μm,0.4s						
NIS1	**Nisyros Isl.**	**1.26**	**346**	P	**Pn**	**08 50 07.6**	**-1.4**
NIS1	**Nisyros Isl.**	**1.26**	**346**	P	**Pn**	**08 50 08.4**	**-0.6**
NIS1	**Nisyros Isl.**	**1.26**	**346**	PN	**Pn**	**08 50 07.9**	**-1.1**
NIS1				SN	**Sn**	**08 50 25.8**	**-0.4**
MRSB	**Marmaris-Mugla**	**1.43**	**21**	PN	**Pn**	**08 50 10.7**	**-0.6**
MRSB				SN	**Sg**	**08 50 31.6**	**+0.8**
KOSK	**Kos Island**	**1.45**	**341**	PN	**Pn**	**08 50 10.6**	**-0.9**
KOSK				SN	**Sg**	**08 50 31.5**	**0.0**
TURN	**Turunc**	**1.50**	**21**	*i* P	**Pg**	**08 50 13.3**	**-0.3**
TURN				*i* S	**Sg**	**08 50 35.3**	**+2.2**
TURN	**Turunc**	**1.50**	**21**	PN	**Pn**	**08 50 11.7**	**-0.5**
TURN				SN	**Sg**	**08 50 33.1**	**+0.1**
NPS	**Neapolis**	**1.60**	**266**	P	**Pn**	**08 50 14.2**	**+0.6**
NPS				AML	AML	08 50 45.3	
	comp=E,2508μm,0.6s						
NPS				AML	AML	08 50 47.8	
	comp=N,1570μm,0.4s						
NPS	**Neapolis**	**1.60**	**266**	P	**Pn**	**08 50 13.9**	**+0.3**
DALY	**Dalyan (Mula)**	**1.68**	**31**	*i* P	**Pn**	**08 50 15.3**	**+0.6**
DALY	**Dalyan (Mula)**	**1.68**	**31**	PN	**Pn**	**08 50 14.5**	**-0.2**
BDRM	**Kayabasi**	**1.69**	**357**	*i* P	**Pn**	**08 50 15.0**	**+0.2**
BDRM				*i* S	**Sg**	**08 50 40.0**	**+0.9**
BDRM				IAML		08 50 47.0	
	comp=N,193nm,0.5s						
BODT	**Bodrum**	**1.69**	**353**	PN	**Pn**	**08 50 13.8**	**-1.1**
BODT				SN	**Sn**	**08 50 36.9**	**+0.1**
FETY	**Fethiye**	**1.76**	**44**	P	**Pn**	**08 50 14.2**	**-1.6**
FETY	**Fethiye**	**1.76**	**44**	PN	**Pn**	**08 50 15.5**	**-0.3**
FETY				SN	**Sb**	**08 50 39.0**	**-0.7**
KSL	**Kastellorizon**	**1.81**	**64**	P	**Pn**	**08 50 16.3**	**-0.2**
YER	**Yerkesik**	**1.85**	**18**	PN	**Pn**	**08 50 16.7**	**-0.3**
AKAS	**Kas**	**1.86**	**62**	*i* P	**Pn**	**08 50 15.4**	**-1.9**
AKAS	**Kas**	**1.86**	**62**	PN	**Pn**	**08 50 16.5**	**-0.8**
AKAS				SN	**Sn**	**08 50 40.8**	**-0.4**
MLSB	**Milas**	**1.92**	**5**	PN	**Pn**	**08 50 17.6**	**-0.4**
MULA	**Mugla, Merkez-**	**1.97**	**18**	*i* P	**Pn**	**08 50 19.8**	**+1.0**
MULA				*i* S	**Sg**	**08 50 48.4**	**+0.1**
THR8	**Santorini-Mono**	**1.98**	**302**	P	**Pn**	**08 50 18.7**	**-0.1**
THR6	**Thira Island,**	**2.02**	**300**	P	**Pn**	**08 50 19.9**	**+0.6**
SNT1	**Gialos, Santor**	**2.02**	**301**	P	**Pn**	**08 50 19.1**	**-0.2**
THR2	**Thira island,**	**2.03**	**302**	P	**Pn**	**08 50 20.4**	**+0.8**
THT2	**Imerovigli**	**2.04**	**302**	P	**Pn**	**08 50 20.4**	**+0.8**
THR3	**Thira Island,**	**2.04**	**301**	P	**Pn**	**08 50 20.2**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.04**	**301**	P	**Pn**	**08 50 20.1**	**+0.5**
THR9	**Santorini-Faro**	**2.04**	**299**	P	**Pn**	**08 50 20.1**	**+0.4**
THR5	**Thira Island,**	**2.08**	**301**	P	**Pn**	**08 50 20.9**	**+0.7**
SAP3	**Santorini-Thir**	**2.09**	**301**	P	**Pn**	**08 50 19.7**	**-0.6**
IDI	**Anoyia**	**2.19**	**268**	P	**Pn**	**08 50 23.1**	**+1.3**
IDI				AML	AML	08 51 02.6	
	comp=E,413μm,0.5s						
IDI				AML	AML	08 51 09.7	
	comp=N,483μm,0.5s						
IDI	**Anoyia**	**2.19**	**268**	P	**Pn**	**08 50 22.8**	**+1.0**
CAEL	**Denizli, Camel**	**2.25**	**39**	*i* P	**Pb**	**08 50 24.2**	**-1.7**
SIVA	**Sivas**	**2.29**	**262**	P	**Pn**	**08 50 24.5**	**+1.5**
SIVA				AML	AML	08 51 05.3	
	comp=N,1311μm,0.6s						
SIVA				AML	AML	08 51 13.6	
	comp=E,1443μm,0.7s						
AYDN	**Tasoluk**	**2.29**	**6**	*i* P	**Pn**	**08 50 23.9**	**+0.7**
ELL	**Elmali**	**2.34**	**54**	PN	**Pn**	**08 50 23.2**	**-0.7**
APE	**Apeiranthos**	**2.36**	**316**	P	**Pn**	**08 50 24.6**	**+0.6**
SMG	**Samos**	**2.40**	**346**	P	**Pn**	**08 50 24.6**	**+0.1**
AKUM	**Antalya-Kumluc**	**2.44**	**67**	*i* S	**Sn**	**08 50 55.2**	**0.0**
GOLH	**Golhisar**	**2.46**	**40**	*i* P	**Pn**	**08 50 26.3**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.58**	**6**	PN	**Pn**	**08 50 26.9**	**-0.2**
KORT	**Korkueli**	**2.77**	**53**	*i* P	**Pn**	**08 50 31.7**	**+1.9**
KORT	**Korkueli**	**2.77**	**53**	PN	**Pn**	**08 50 29.5**	**-0.3**
BASM	**Basmaki-Afyon**	**3.23**	**37**	PN	**Pn**	**08 50 35.9**	**-0.1**
KULA	**Kula-Manisa**	**3.25**	**15**	PN	**Pn**	**08 50 36.6**	**+0.2**
KEPZ	**Antalya-Kepez**	**3.60**	**64**	*i* P	**Pn**	**08 50 41.4**	**+0.2**
KEPZ				*i* S	**Sn**	**08 51 24.6**	**+0.5**
SEDI	**Konya, Seydise**	**3.96**	**57**	*i* P	**Pn**	**08 50 47.5**	**+1.4**
SEDI				*i* S	**Sn**	**08 51 37.5**	**+4.5**
SEDI				IAML		08 51 39.0	
	comp=E,62nm,1.0s						

*NNC **02** 09:00:35.7±1.2,54°.76N×83°.78E,h0km,mb2.8,mpv2.7, Error ellipse: s-maj=10.3km s-min=4.4km az=22.0*
*IDC **02** 09:00:38.0±1.6,54°.68N×83°.79E,h0km,mb1 2.8/3, mb1mx2.7/47,mbtmp2.8/3,ML2.6/3,Error ellipse: s-maj=14.3km s-min=9.0km az=16.0*

ISC 02 09:00:35.8±2.6,54°.9N±0°.2×84°.0E±0°.1,h10km,n9, σ1°61/12,4C-5D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.03**	**152**	*i*		09 06 16.5	
	baz=316,slow=335,SNR=2.2						
ZAA0	**Zalesovo Array**	**1.03**	**152**	⇓P	**Pg**	**09 00 55.2**	**-0.5**
	0.6nm,0.3s						
ZAA0				⇓S	**Sb**	**09 01 09.4**	**0.0**
	3.4nm,0.3s						
ZALV	**Zalesovo Beam**	**1.03**	**152**	Pg	**Pg**	**09 00 55.1**	**-0.5**
	4.4nm,0.3s,baz=327,slow=17,SNR=31						
ZALV				Lg	Lg	09 01 09.9	
	7.2nm,0.3s,baz=322,slow=31,SNR=26						
KURBB	**Kurchatov Arra**	**5.39**	**220**	Pn	**Pn**	**09 01 56.9**	**+0.7**
	0.1nm,0.3s,baz=40,slow=13,SNR=3.6						
KURBB				Lg	Lg	09 03 22.8	
	0.1nm,0.3s,baz=40,slow=33,SNR=6.6						
KURBB	**Kurchatov Arra**	**5.39**	**220**	⇑Pg	**Pb**	**09 02 12.7**	**+2.7**
	2.9nm,0.9s						
KURBB				⇑Sn	**Sn**	**09 02 56.6**	**-1.7**
	2.9nm,0.7s						
KURBB				⇓Lg	Lg	09 03 23.3	
	6.5nm,0.6s						
MK31	**Makanchi Array**	**8.15**	**188**	⇑Pn	**Pn**	**09 02 33.7**	**-0.4**
	0.3nm,0.7s,baz=8.8,slow=11,SNR=4.5						
MK31				⇑Lg	Lg	09 04 51.1	
	0.5nm,0.6s,baz=19,slow=25,SNR=4.0						
MKAR	**Makanchi Array**	**8.15**	**188**	Pn	**Pn**	**09 02 34.4**	**+0.2**
	0.1nm,0.3s,baz=6.4,slow=12,SNR=4.8						
MKAR				Sn	**

comp=Z,42nm,1.1s

WR0 **Warramunga Arr** **22.82 230** P **P** **09 24 40.7 -0.4**
WB0 **Warramunga Arr** **22.82 230** P **P** **09 24 40.7 -0.5**
WB0 IAmb IAmb 09 24 57.7
comp=Z,32nm,1.3s
WRAB **Tennant Creek** **22.95 230** P **P** **09 24 41.7 -0.8**
WB2 **Warramunga Arr** **22.96 230** P **P** **09 24 41.6 -0.9**
WB2 IAmb IAmb 09 24 48.2
comp=Z,11nm,0.8s
WRA **Warramunga Arr** **22.97 230** P **P** **09 24 41.0 -1.7**
comp=Z,5.7nm,0.6s,baz=55,slow=10,SNR=47
WRA LR LR 09 32 48.3
comp=Z,99nm,21.7s,baz=15,slow=35
AS31 **Alice Springs** **25.60 224** P **P** **09 25 07.0 -0.1**
ASAR **Alice Springs** **25.60 224** P **P** **09 25 06.6 -0.6**
comp=Z,13nm,0.9s,baz=54,slow=9.0,SNR=44
ASAR LR LR 09 35 48.1
comp=Z,89nm,18.0s,baz=53,slow=38
STKA **Stephens Creek** **28.15 201** P **P** **09 25 28.2 -1.8**
comp=Z,3.7nm,0.7s,baz=29,slow=12,SNR=8.7
STKA LR LR 09 36 11.3
comp=Z,75nm,21.4s,baz=25,slow=35
STKA **Stephens Creek** **28.15 201** IAmb IAmb 09 25 32.5
comp=Z,1.6nm,1.0s
FITZ **Fitzroy Crossi** **29.35 243** P **P** **09 25 39.7 -1.1**
comp=Z,7.5nm,0.6s,baz=71,slow=7.1,SNR=38
FITZ LR LR 09 38 33.1
comp=Z,98nm,18.0s,baz=62,slow=39
FITZ **Fitzroy Crossi** **29.35 243** P **P** **09 25 39.8 -1.0**
FITZ IAmb IAmb 09 25 55.4
comp=Z,9.5nm,0.7s
BBOO **Buckleboo** **31.25 208** P **P** **09 25 58.0 +0.6**
BBOO IAmb IAmb 09 26 24.9
comp=Z,21nm,1.3s
FORT **Forrest** **34.20 220** P **P** **09 26 22.6 -0.7**
PSA00 **Pilbara Seismi** **35.69 240** P **P** **09 26 35.1 -1.2**
GIRL **Giralia** **40.95 242** P **P** **09 27 21.6 +1.1**
MQZ **McQueen's Vall** **41.70 158** P **P** **09 27 24.7 -1.6**
MORW **Morawa** **41.90 232** P **P** **09 27 25.2 -3.0**
MORW IAmb IAmb 09 27 36.0
comp=Z,29nm,1.4s
MJAR **Matsushiro Arr** **44.17 343** LR LR 09 46 32.5
comp=Z,19nm,18.2s,baz=210,slow=37
JHS **Saijyo** **44.52 337** P **P** **09 27 48.6 -0.7**
KSRS **Korea Array** **48.80 333** P **P** **09 28 22.9 +0.1**
comp=Z,1.6nm,0.8s,baz=150,slow=9.5,SNR=4.1
NJ2 **Nanjing** **49.57 321** *eP* **P** **09 28 29.8 +1.1**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
CN2 **Changchun** **55.11 336** *eP* **P** **09 29 12.4 +2.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
XAN **Xi'an** **57.30 317** P **P** **09 29 26.4 +0.8**
XAN pP pP 09 29 33.5 -1.5
XAN pmax pmax
comp=Z,6.0nm,0.9s
KLR **Kul'dur** **57.69 344** P **P** **09 29 27.4 -0.5**
comp=Z,2.0nm,0.7s,baz=203,slow=3.1,SNR=8.3
CMAR **Chiang Mai Arr** **58.33 296** P **P** **09 29 33.0 0.0**
comp=Z,1.2nm,0.3s,baz=103,slow=5.1,SNR=4.9
PETK **Petropavlovsk-** **58.68 3** P **P** **09 29 35.3 +0.5**
comp=Z,1.1nm,0.5s,baz=190,slow=7.3,SNR=1.5
PETK LR LR 09 55 00.2
comp=Z,18nm,18.2s,baz=155,slow=36
HHC **Hu-ho-hao-te** **59.79 325** *eP* **P** **09 29 41.2 -1.7**
HHC pmax pmax
comp=Z,12nm,1.1s
HHC pmax pmax
comp=Z,90nm,5.7s
HHC LR LR
comp=Z,200nm,17.2s
HHC LR LR
comp=Z,260nm,16.8s
HHC LR LR
comp=Z,240nm,16.9s
GTA **Gaotai** **66.35 317** *eP* **P** **09 30 28.3 +1.8**
GTA pP pP 09 30 36.7 +0.5
GTA sP sP 09 30 40.3 -0.5
GTA pmax pmax
comp=Z,4.0nm,1.0s
SONM **Songino Array** **67.09 328** P **P** **09 30 30.8 -0.2**
comp=Z,1.2nm,0.8s,baz=133,slow=5.6,SNR=6.3
SEY **Seymchan** **68.39 360** P **P** **09 30 38.2 -0.5**
comp=Z,0.6nm,0.4s,baz=119,slow=10,SNR=1.9
VNDA **Vanda** **71.98 178** P **P** **09 31 01.9 +1.4**
comp=Z,0.5nm,0.7s,baz=314,slow=5.3,SNR=3.0
GAMB **Gambell** **74.17 16** P **P** **09 31 13.7 +0.1**
GAMB IAmb IAmb 09 31 25.6
comp=Z,15nm,1.5s
WMQ **Urumqi** **76.43 317** *eP* **P** **09 31 28.3 +1.1**
ANM **Nome** **76.56 17** P **P** **09 31 28.7 +1.3**
ANM IAmb IAmb 09 31 39.7
comp=Z,7.3nm,1.0s
TIXI **Tiksi** **78.75 352** P **P** **09 31 38.8 -0.6**
comp=Z,1.2nm,0.6s,baz=119,slow=1.8,SNR=1.9
RDOG **Red Dog Mine** **79.77 15** P **P** **09 31 45.5 +0.4**
MK31 **Makanchi Array** **81.03 319** P **P** **09 31 51.2 -1.2**
MKAR **Makanchi Array** **81.03 319** P **P** **09 31 52.5 +0.2**
comp=Z,1.3nm,0.7s,baz=104,slow=6.1,SNR=14
MAKZ **Makanchi** **81.24 319** P **P** **09 31 52.3 -1.2**
MLY **Manley** **81.64 21** P **P** **09 31 56.3 +1.1**
MLY IAmb IAmb 09 31 56.9
comp=Z,5.9nm,1.0s
ZALV **Zalesovo Beam** **81.91 326** P **P** **09 31 55.5 -1.3**
comp=Z,1.0nm,0.4s,baz=130,slow=5.8,SNR=6.2
ZALV LR LR 10 11 38.1
comp=Z,19nm,18.0s,baz=98,slow=38
NEA2 **Nenana** **82.01 22** P **P** **09 31 58.0 +0.9**
NEA2 IAmb IAmb 09 31 58.1
comp=Z,6.9nm,1.1s
CCB **Clear Creek Bu** **82.50 22** IAmb IAmb 09 32 09.4
comp=Z,12nm,1.4s
ILAR **Eielson Array** **82.91 22** P **P** **09 32 01.0 -0.8**
comp=Z,2.5nm,0.9s,baz=256,slow=5.2,SNR=17
ILAR LR LR 10 05 30.8
comp=Z,20nm,19.4s,baz=235,slow=33
DOT **Dot Lake** **83.47 24** P **P** **09 32 06.2 +1.5**
DOT IAmb IAmb 09 32 16.2
comp=Z,12nm,1.2s
KURK **Kurchatov** **84.50 322** P **P** **09 32 09.8 -0.4**
KURBB **Kurchatov Arra** **84.53 322** P **P** **09 32 09.8 -0.5**
comp=Z,2.2nm,0.8s,baz=112,slow=4.3,SNR=16
NIL **Nilore** **84.54 304** P **P** **09 32 10.0 -0.9**
UCH **Uchtor** **85.22 313** P **P** **09 32 16.1 +1.5**
SNR=12
AAK **Ala-Archa** **85.32 314** P **P** **09 32 15.4 +0.6**
comp=Z,5.9nm,0.8s,baz=155,slow=3.6,SNR=20
AAK **Ala-Archa** **85.32 314** P **P** **09 32 15.5 +0.7**
SNR=8.9
AAK **Ala-Archa** **85.32 314** P **P** **09 32 14.2 -0.6**
AAK IAmb IAmb 09 32 17.2
comp=Z,5.9nm,0.8s
USP **Ospenovka** **85.45 314** P **P** **09 32 16.1 +0.8**
SNR=11
AML **Almayashu** **85.80 313** P **P** **09 32 18.9 +1.4**
SNR=27
EKS2 **Erkin-Say** **85.84 313** P **P** **09 32 18.3 +1.0**
SNR=8.1
NRIK **Noril'sk** **86.80 341** P **P** **09 32 21.4 +0.1**
comp=Z,1.0nm,0.3s,baz=112,slow=4.6,SNR=4.9
NRIK **Noril'sk** **86.80 341** IAmb IAmb 09 32 32.0
comp=Z,4.5nm,0.8s
KK31 **Karatay Array** **88.28 313** P **P** **09 32 28.8 -0.2**
KK31 IAmb IAmb 09 32 41.2
comp=Z,4.4nm,1.2s
KKAR **Karatay Array** **88.28 313** P **P** **09 32 29.1 +0.1**
KKAR IAmb IAmb 09 32 41.2
comp=Z,4.4nm,1.2s
INK **Inuvik** **89.21 21** P **P** **09 32 33.1 +0.4**
BVAR **Borovoye Array** **89.98 323** P **P** **09 32 35.4 -1.3**
comp=Z,2.7nm,0.8s,baz=120,slow=11,SNR=18
BRVK **Borovoye** **90.05 323** P **P** **09 32 36.5 -0.5**
BRVK IAmb IAmb 09 32 47.6
comp=Z,3.2nm,0.9s
NVAR **Mina Array Bea** **92.53 52** LR LR 10 08 27.2
comp=Z,39nm,18.6s,baz=267,slow=32
C36M **Paulatuk** **92.79 21** P **P** **09 32 48.9 -0.4**
C36M IAmb IAmb 09 33 01.0
comp=Z,5.4nm,1.1s
SYO **Syowa Base** **92.90 199** *es*P sP 09 33 08.0 +4.7
SYO **Syowa Base** **92.90 199** *e*PP PP 09 36 31.0 -1.3
YKA **Yellowknife Ar** **96.13 28** P **P** **09 33 05.8 +1.0**
comp=Z,0.7nm,0.9s,baz=267,slow=4.5,SNR=9.8
PDAR **Pinedale Array** **99.35 48** LR LR 10 11 49.4
comp=Z,19nm,18.9s,baz=310,slow=32
TORD **Torodi Ar. Bea** **150.66 287** PKPbc **PKPbc** **09 39 30.2 -0.2**
comp=Z,1.8nm,0.9s,baz=24,slow=2.8,SNR=9.0

*IDC **02** 09:31:15.5±0.9,24°.11S×69°.61E,h0km,mb4.0/11, mb1 4.1/11,mb1mx3.8/57,mbtmp4.0/11,MS3.6/6, Ms1 3.6/6,ms1mx3.2/37,Error ellipse: s-maj=31.8km s-min=22.1km az=50.0*
ISC 02 09:31:17.3±0.9,24°.1S×0°.2×69°.6E±0°.2,h10km,n21, σ0s53/13,mb4.0/11,MS3.7/6,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**16.62**	**10**	T	T	09 52 08.0	
	baz=191,slow=76,SNR=4.4						
H08S2	**Diego Garcia H**	**16.62**	**10**	T	T	09 52 10.1	
	baz=191,slow=76,SNR=9.4						
H08S3	**Diego Garcia H**	**16.64**	**10**	T	T	09 52 08.1	
	baz=191,slow=76,SNR=9.3						
PALK	**Pallekele**	**33.03**	**21**	LR	LR	09 49 25.5	
	comp=Z,94nm,18.4s,baz=331,slow=33						
BOSA	**Boshof**	**39.82**	**254**	LR	LR	09 52 31.2	
	comp=Z,96nm,18.7s,baz=67,slow=32						
CMAR	**Chiang Mai Arr**	**51.09**	**37**	P	**P**	**09 40 21.1 +0.8**	
	0.5nm,0.3s,baz=231,slow=5.7,SNR=1.3						
ASAR	**Alice Springs**	**58.30**	**104**	P	**P**	**09 41 12.4 -0.2**	
	1.3nm,0.6s,baz=255,slow=6.2,SNR=29						
WRA	**Warramunga Arr**	**59.69**	**100**	P	**P**	**09 41 22.0 -0.4**	
	1.3nm,0.7s,baz=253,slow=7.1,SNR=13						
STKA	**Stephens Creek**	**63.00**	**115**	LR	LR	10 06 02.4	
	comp=Z,59nm,18.3s,baz=344,slow=33						
QSPA	**South Pole Qui**	**66.00**	**180**	P	**P**	**09 42 04.1 +0.3**	
	0.9nm,0.9s,baz=245,slow=3.8,SNR=1.4						
MKAR	**Makanchi Array**	**71.51**	**9**	P	**P**	**09 42 37.8 -0.4**	
	1.6nm,0.8s,baz=195,slow=6.3,SNR=16						
AKTO	**Aktyubinsk**	**74.94**	**352**	P	**P**	**09 42 58.3 +0.1**	
	1.3nm,0.9s,baz=111,slow=8.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**75.95**	**291**	P	**P**	**09 43 05.1 +0.3**	
	0.8nm,0.7s,baz=125,slow=4.7,SNR=4.4						
TORD				LR	LR	10 16 39.3	
	comp=Z,21nm,18.1s,baz=265,slow=36						
BVAR	**Borovoye Array**	**76.83**	**0**	P	**P**	**09 43 08.5 -0.5**	
	0.8nm,0.6s,baz=163,slow=15,SNR=7.0						
ZALV	**Zalesovo Beam**	**78.86**	**9**	P	**P**	**09 43 19.7 -0.6**	
	0.8nm,0.3s,baz=205,slow=5.3,SNR=6.0						
SONM	**Songino Array**	**78.90**	**24**	P	**P**	**09 43 21.1 +0.3**	
	1.3nm,1.0s,baz=214,slow=6.2,SNR=6.5						
KEST	**Kesra**	**82.39**	**315**	LR	LR	10 18 18.1	
	comp=Z,31nm,19.6s,baz=294,slow=34						
AKASG	**Malin Array Be**	**82.59**	**335**	P	**P**	**09 43 40.1 -0.2**	
	0.2nm,0.3s,baz=144,slow=4.1,SNR=5.4						
MJAR	**Matsushiro Arr**	**88.43**	**49**	LR	LR	10 22 42.7	
	comp=Z,26nm,18.9s,baz=170,slow=35						
YKA	**Yellowknife Ar**	**141.54**	**3**	PKP	**PKPdf**	**09 50 48.5 +0.3**	
	0.2nm,0.9s,baz=25,slow=3.4,SNR=3.7						
ULM	**Lac du Bonnet**	**151.58**	**340**	PKPbc	**PKPbc**	**09 51 10.7 -0.9**	
	0.8nm,0.5s,baz=124,slow=3.6,SNR=2.3						

IDC 02 09:36:41.6±2.6,53°.42N×87°.27E,h0km,mb1 3.1/2, mb1mx2.9/52,mbtmp3.1/2,ML2.7/2,Error ellipse: s-maj=23.7km s-min=13.2km az=71.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.55**	**291**	*i*		09 47 21.7	
	baz=108,slow=322,SNR=0.9						
ZALV	**Zalesovo Beam**	**1.55**	**291**	Pg	Pn	09 37 09.1	-1.4
	1.4nm,0.3s,baz=108,slow=17,SNR=10						
ZALV				Lg	Lg	09 37 30.4	
	0.8nm,0.3s,baz=113,slow=27,SNR=10						
KURBB	**Kurchatov Arra**	**6.08**	**246**	Pn	Pn	09 38 13.8	+1.1
	0.1nm,0.3s,baz=63,slow=14,SNR=5.2						
KURBB				Lg	Lg	09 39 54.5	
	0.1nm,0.3s,baz=57,slow=31,SNR=5.5						
MKAR	**Makanchi Array**	**7.36**	**208**	Pn	Pn	09 38 31.3	+1.0
	0.2nm,0.3s,baz=28,slow=15,SNR=10						
MKAR				Sn	Sn	09 39 55.7	+1.2
	0.1nm,0.3s,baz=29,slow=26,SNR=3.3						
MKAR				Lg	Lg	09 40 31.9	
	0.0nm,0.3s,baz=28,slow=31,SNR=2.2						

*TAP **02** 10:06:58.7,25°.57N×122°.69E,h250km±1km,ML3.5,D*
*JMA **02** 10:07:01.6±0.2,25°.46N×122°.53E,h227km±3km,M3.2*
ISC 02 10:07:01.4±2.7,25°.4N±0°.1×122°.56E±0°.04,h234km±15km, n43,σ0s49/80,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu**	**0.49**	**295**	*eP*	**Pn**	**10 07 31.5**	**-0.9**
	baz=276						
PCYT				*eS*	**S**	**10 07 56.6**	**-0.1**
	baz=276						
TIPB	**Shuangxi**	**0.80**	**236**	P	**Pn**	**10 07 33.8**	**0.0**
	baz=234						
TIPB				*eS*	**S**	**10 08 00.1**	**+1.0**
	baz=234						
YOJ	**Yonaguni jima**	**1.04**	**157**	*eP*	**Pn**	**10 07 34.6**	**-0.4**
	baz=170						
NDS	**Dongshan**	**1.10**	**225**	*eP*	**Pn**	**10 07 36.2**	**+0.8**
	baz=218						
NDS				*eS*	**S**	**10 08 02.2**	**+0.3**
	baz=218						
NWLT	**Wulai**	**1.15**	**237**	*eP*	**Pn**	**10 07 35.9**	**+0.1**
	baz=234						
NWLT				*eS*	**S**	**10 08 02.7**	**+0.1**
	baz=234						
ENTT	**Nioudou**	**1.19**	**230**	*eP*	**Pn**	**10 07 36.5**	**+0.5**
	baz=229						
ENTT				*eS*	**S**	**10 08 04.1**	**+1.0**
	baz=229						
EWUT	**Wuta**	**1.20**	**216**	*eP*	**Pn**	**10 07 36.3**	**+0.2**
	baz=217						
EWUT				S	**S**	**10 08 03.4**	**+0.2**
	baz=217						
ENA	**Nanau**	**1.24**	**217**	P	**Pn**	**10 07 36.5**	**+0.2**
	baz=218						
ENA				*eS*	**S**	**10 08 04.0**	**+0.4**
	baz=218						
NDT	**Datong Townshi**	**1.25**	**230**	*eP*	**Pn**	**10 07 36.9**	**+0.5**
	baz=221						
NDT				*eS*	**S**	**10 08 04.6**	**+0.8**
	baz=221						
YHNB	**Yeheng**	**1.31**	**235**	*eP*	**Pn**	**10 07 36.2**	**-0.7**
	baz=234						
YHNB				*eS*	**S**	**10 08 03.9**	**-0.8**
	baz=234						
NSK	**Sanguang**	**1.32**	**236**	*eP*	**Pn**	**10 07 36.3**	**-0.6**
	baz=234						
NSK				S	**S**	**10 08 04.7**	**0.0**
	baz=234						
NNSH	**Datong**	**1.46**	**228**	*eP*	**Pn**	**10 07 38.0**	**-0.1**
	baz=222						
NNSH				*eS*	**S**	**10 08 06.7**	**+0.1**
	baz=222						
NNSB	**Datong**	**1.46**	**228**	*eP*	**Pn**	**10 07 38.1**	**0.0**
	baz=222						
NNSB				*eS*	**S**	**10 08 06.8**	**+0.1**
	baz=222						
IRIF	**Iriomote-Funau**	**1.52**	**135**	P	**Pn**	**10 07 38.1**	**-0.3**
IRIF				*eS*	**S**	**10 08 06.7**	**-0.5**
NACB	**Ninganchiao**	**1.52**	**216**	*eP*	**Pn**	**10 07 38.0**	**-0.4**
	baz=216						
NACB				*eS*	**S**	**10 08 06.5**	**-0.9**
	baz=216						
ETLH	**Xiulin Townshi**	**1.56**	**219**	*eP*	**Pn**	**10 07 38.6**	**-0.2**
	baz=220						
ETLH				*eS*	**S**	**10 08 07.6**	**-0.5**
	baz=220						
TWD	**Chiawan**	**1.60**	**214**	*eS*	**S**	**10 08 08.1**	**-0.4**
	baz=221						
LIOB	**Emei**	**1.60**	**242**	P	**Pn**	**10 07 39.0**	**-0.1**
	baz=234						
LIOB				S	**S**	**10 08 08.9**	**+0.4**
	baz=234						
FUSS	**Fushou**	**1.67**	**226**	*eP*	**Pn**	**10 07 40.1**	**+0.1**
	baz=226						
FUSS				*eS*	**S**	**10 08 09.9**	**-0.1**
	baz=226						
TWT	**Tachien**	**1.71**	**228**	*eP*	**Pn**	**10 07 40.8**	**+0.5**
	baz=225						
TWT				S	**S**	**10 08 11.1**	**+0.5**
	baz=225						
TDCB	**Techi**	**1.72**	**228**	*eP*	**Pn**	**10 07 40.6**	**+0.3**
	baz=225						
TDCB				*eS*	**S**	**10 08 10.5**	**-0.2**
	baz=225						
WHF	**Hehuan Shan**	**1.73**	**223**	*eP*	**Pn**	**10 07 40.7**	**0.0**
	baz=217						
WHF				S	**S**	**10 08 11.3**	**0.0**
	baz=217						
JKRS	**Kuro-shima**	**1.77**	**132**	P	**Pn**	**10 07 40.8**	**+0.3**
JKRS				*eS*	**S**	**10 08 11.3**	**+0.3**
HATJ	**Hateruma jima**	**1.77**	**140**	P	**Pn**	**10 07 41.0**	**+0.5**
HATJ				*eS*	**S**	**10 08 10.9**	**-0.1**
JIJ	**Ishigaki jima**	**1.78**	**126**	P	**Pn**	**10 07 40.4**	**-0.2**
JIJ				S	**S**	**10 08 10.1**	**-1.1**
JISG	**Ishigakijimahi**	**1.79**	**117**	P	**Pn**	**10 07 40.6**	**-0.1**
JISG				S	**S**	**10 08 11.0**	**-0.4**
CHGB	**Renai**	**1.85**	**223**	*eP*	**Pn**	**10 07 41.9**	**+0.4**
	baz=218						
CHGB				*eS*	**S**	**10 08 13.4**	**+0.6**
	baz=218						
WHP	**Taichung City**	**1.86**	**233**	*eP*	**Pn**	**10 07 41.1**	**-0.3**
	baz=232						
WHP				*eS*	**S**	**10 08 12.4**	**-0.2**
	baz=232						
JTJ	**Tarama**	**2.09**	**111**	P	**Pn**	**10 07 43.9**	**+0.5**
JTJ				S	**S**	**10 08 16.4**	**+0.1**
VWDT	**VWDT**	**2.10**	**218**	*eP*	**Pn**	**10 07 44.1**	**+0.5**
	baz=212						
VWDT				*eS*	**S**	**10 08 18.1**	**+1.5**
	baz=212						
SMLT	**Sun Moon Lake**	**2.15**	**225**	P	**Pn**	**10 07 44.1**	**-0.1**
	baz=219						
SMLT				*eS*	**S**	**10 08 18.1**	**+0.5**
	baz=219						
TYC	**Yuchr**	**2.16**	**226**	P	**Pn**	**10 07 43.9**	**-0.3**
	baz=219						
TYC				S	**S**	**10 08 18.1**	**+0.4**
	baz=219						
HGSD	**Ruisui**	**2.18**	**209**	*eP*	**Pn**	**10 07 44.6**	**+0.2**
	baz=216						
SSLB	**Suanglung**	**2.19**	**222**	*eP*	**Pn**	**10 07 44.2**	**-0.2**
	baz=223						
SSLB				*eS*	**S**	**10 08 17.8**	**-0.4**
	baz=223						
YULB	**Yu-li**	**2.32**	**210**	*eP*	**Pn**	**10 07 44.8**	**-1.1**
	baz=214						
YULB				*eS*	**S**	**10 08 20.5**	**-0.1**
	baz=214						
JIRB	**Irabujima**	**2.44**	**103**	P	**Pn**	**10 07 46.9**	**0.0**
JIRB				*eS*	**S**	**10 08 22.1**	**-0.4**
JIKM	**Ikemajima**	**2.48**	**101**	*eS*	**S**	**10 08 23.8**	**+0.4**
ALS	**Alishan**	**2.48**	**220**	*i* P	**Pn**	**10 07 47.6**	**-0.2**
	baz=226						
ALS				S	**S**	**10 08 23.7**	**-0.3**
	baz=226						
FULB	**Fuli**	**2.50**	**208**	*eP*	**Pn**	**10 07 47.1**	**-0.5**
	baz=204						
CHN5	**Tsauling**	**2.50**	**224**	P	**Pn**	**10 07 47.1**	**-0.5**
	baz=224						
CHN5				*eS*	**S**	**10 08 24.1**	**+0.2**
	baz=224						
JMJ2	**Miyako jima3**	**2.60**	**104**	P	**Pn**	**10 07 49.2**	**+0.6**
JMJ2				*eS*	**S**	**10 08 25.8**	**+0.3**
CHN4	**Tsaushan**	**2.73**	**221**	P	**Pn**	**10 07 49.9**	**-0.1**
	baz=216						
CHN4				S	**S**	**10 08 28.5**	**+0.3**
	baz=216						
WTP	**Ta-pu**	**2.80**	**220**	P	**Pn**	**10 07 50.7**	**-0.2**
	baz=225						

*IDC **02** 10:21:25.0±5.4,35°.78N×21°.35E,h73km±45km,mb3.4/5, mb1 3.4/8,mb1mx3.1/48,mbtmp3.6/8,ML3.3/3,MS2.8/1, Ms1 2.8/1,ms1mx2.2/31,Error ellipse: s-maj=74.0km s-min=30.6km az=31.0*
*ATH **02** 10:21:24.6,36°.13N×21°.54E,h5km±2km,ML3.6/5,Error ellipse: s-maj=3.4km s-min=1.5km az=32.0*
*THE **02** 10:21:25.6,36°.18N×21°.58E,h9km±1km,ML3.4/4,Error ellipse: s-maj=1.4km s-min=0.5km az=279.0*
ISC 02 10:21:25.5±1.5,36°.13N±0°.07×21°.50E±0°.08,h47km±15km, n51,σ1s50/61,mb3.5/5,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.79**	**14**	P	**Pn**	**10 21 39.5**	**-0.9**
PYL				S	**Sn**	**10 21 50.7**	**-0.4**
PYL	**PYLOS**	**0.79**	**14**	P	**Pn**	**10 21 39.5**	**-0.9**
PYL				S	**Sn**	**10 21 50.0**	**-1.2**
ITM	**Ithomi**	**1.10**	**18**	P	**Pn**	**10 21 44.6**	**-0.1**
ITM				S	**Sn**	**10 21 59.9**	**+1.1**
ITM				AML	AML	10 22 08.3	
	comp=N,3069μm,0.3s						
ITM				AML	AML	10 22 09.5	
	comp=E,3124μm,0.4s						
ITM	**Ithomi**	**1.10**	**18**	P	**Pn**	**10 21 44.6**	**-0.1**
ITM				S	**Sn**	**10 22 00.0**	**+1.2**
	comp=E,2μm,0.5s						
KTHR	**Kythira**	**1.22**	**83**	P	**Pn**	**10 21 47.0**	**+0.8**
KTHA	**Kythira Island**	**1.27**	**84**	P	**Pn**	**10 21 47.9**	**+1.0**
KTHA				S	**Sn**	**10 22 05.2**	**+2.5**
KTHA				AML	AML	10 22 09.4	
	comp=N,2630μm,0.7s						
KTHA				AML	AML	10 22 12.4	
	comp=E,4272μm,0.4s						
KTHA	**Kythira Island**	**1.27**	**84**	P	**Pn**	**10 21 47.8**	**+1.0**
KTHA				S	**Sn**	**10 22 05.2**	**+2.5**
	comp=E,2μm,0.5s						
VLI	**Veliai**	**1.30**	**63**	P	**Pn**	**10 21 48.2**	**+1.0**
VLI				S	**Sn**	**10 22 05.2**	**+1.8**
VLI				AML	AML	10 22 10.0	
	comp=E,5082μm,0.4s						
VLI				AML	AML	10 22 13.9	
	comp=N,5647μm,0.5s						
VLI	**Veliai**	**1.30**	**63**	P	**Pn**	**10 21 48.2**	**+1.0**
VLI				S	**Sn**	**10 22 05.4**	**+2.0**
	comp=N,2μm,0.4s						
MNVA	**Monemvasia**	**1.36**	**65**	P	**Pn**	**10 21 49.5**	**+1.5**
VLX	**Vlachokerasia**	**1.43**	**29**	P	**Pn**	**10 21 49.6**	**+0.5**
VLX				S	**Sn**	**10 22 08.6**	**+1.9**
VLX				AML	AML	10 22 15.4	
	comp=E,4528μm,0.9s						
VLX				AML	AML	10 22 17.5	
	comp=N,3239μm,0.5s						
VLX	**Vlachokerasia**	**1.43**	**29**	P	**Pn**	**10 21 49.4**	**+0.3**
VLX				S	**Sn**	**10 22 08.5**	**+1.8**
	comp=N,2μm,0.7s						
ANKY	**Antikythira Is**	**1.48**	**100**	P	**Pn**	**10 21 51.1**	**+1.3**
ANKY	**Antikythira Is**	**1.48**	**100**	P	**Pn**	**10 21 51.0**	**+1.3**
DRO	**Drossia**	**1.83**	**5**	P	**Pn**	**10 21 55.7**	**+1.1**
DRO				AML	AML	10 22 38.0	
	comp=N,2748μm,0.5s						
DRO				AML	AML	10 22 41.9	
	comp=E,2554μm,0.5s						
DRO	**Drossia**	**1.83**	**5**	P	**Pn**	**10 21 56.0**	**+1.5**
RLS	**Riolos of Patr**	**1.93**	**359**	P	**Pn**	**10 21 57.7**	**+1.9**
RLS	**Riolos of Patr**	**1.93**	**359**	P	**Pn**	**10 21 57.5**	**+1.6**
KLV	**Kalavryta, Ach**	**1.98**	**15**	P	**Pn**	**10 21 57.8**	**+1.1**
KLV	**Kalavryta, Ach**	**1.98**	**15**	P	**Pn**	**10 21 57.8**	**+1.1**
PSDA	**Pessada-Kefalo**	**2.12**	**340**	P	**Pn**	**10 21 59.9**	**+1.5**
IMMV	**Iera Moni Meta**	**2.12**	**108**	P	**Pn**	**10 21 59.3**	**+0.8**
IMMV	**Iera Moni Meta**	**2.12**	**108**	P	**Pn**	**10 21 59.5**	**+1.0**
LAKA	**Lakka**	**2.14**	**10**	P	**Pn**	**10 22 00.4**	**+1.6**
LAKA	**Lakka**	**2.14**	**10**	P	**Pn**	**10 22 00.4**	**+1.6**
VLS	**Valsamata**	**2.17**	**341**	P	**Pn**	**10 22 00.5**	**+1.2**
LTK	**Loutraki**	**2.23**	**31**	P	**Pn**	**10 22 00.4**	**+0.5**
LTK	**Loutraki**	**2.23**	**31**	P	**Pn**	**10 22 00.6**	**+0.6**
KEF3	**Kipouria, Keph**	**2.27**	**336**	P	**Pn**	**10 22 02.1**	**+1.6**
TRIZ	**Trizonia**	**2.28**	**11**	P	**Pn**	**10 22 02.7**	**+2.1**
TRIZ	**Trizonia**	**2.28**	**11**	P	**Pn**	**10 22 02.2**	**+1.5**
KEF5	**Kardakata, Kep**	**2.30**	**339**	P	**Pn**	**10 22 02.3**	**+1.3**
VAM	**Vamos**	**2.31**	**107**	P	**Pn**	**10 22 02.1**	**+1.0**
KALE	**Kalithea**	**2.32**	**12**	P	**Pn**	**10 22 02.9**	**+1.7**
KALE	**Kalithea**	**2.32**	**12**	P	**Pn**	**10 22 02.8**	**+1.5**
PDO	**Prodromos**	**2.48**	**354**	P	**Pn**	**10 22 05.2**	**+1.8**
PVO	**Paravola**	**2.49**	**0**	P	**Pn**	**10 22 06.3**	**+2.8**
EVGI	**Lefkada island**	**2

AKASG	**Malin Array Be**	**15.60**	**19**	P		**P**	**10 25 03.9**	**-1.6**
	comp=E,0.9nm,0.3s,baz=211,slow=12,SNR=1.2							
HFS	**Hagfors**	**24.55**	**351**	P		**P**	**10 26 39.9**	**-0.7**
	comp=E,1.1nm,0.4s,baz=161,slow=14,SNR=8.0							
FINES	**FINESS Array B**	**25.50**	**5**	P		**P**	**10 26 49.1**	**-0.1**
	comp=E,0.4nm,0.3s,baz=168,slow=11,SNR=5.9							
NOA	**NORSAR Array B**	**25.78**	**348**	P		**P**	**10 26 52.2**	**+0.5**
	comp=E,0.9nm,0.9s,baz=166,slow=9.4,SNR=1.8							
ARU	**Arti**	**32.11**	**39**	LR		LR	10 42 09.4	
	comp=E,18nm,21.9s,baz=360,slow=38							
ARCES	**ARCESS Array B**	**33.54**	**3**	P		**P**	**10 28 00.9**	**+0.5**
	comp=E,1.4nm,0.7s,baz=192,slow=11,SNR=7.4							
MKAR	**Makanchi Array**	**45.73**	**57**	P		**P**	**10 29 40.9**	**-1.2**
	comp=E,0.2nm,0.3s,baz=281,slow=7.1,SNR=4.8							

IDC 02 10:24:30.0±3.8, 5.°19S×152.°71E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/34, mbtmp3.6/3, Error ellipse: s-maj=138.7km s-min=52.2km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.12**	**229**	P		P	10 29 38.0	0.0
	1.2nm,0.8s,baz=54,slow=10.0,SNR=6.9							
ASAR	**Alice Springs**	**25.80**	**223**	P		P	10 30 03.3	+0.2
	0.4nm,0.5s,baz=56,slow=9.1,SNR=11							
FITZ	**Fitzroy Crossi**	**29.39**	**242**	P		P	10 30 34.8	-0.5
	1.1nm,0.6s,baz=71,slow=9.3,SNR=5.7							
TORD	**Torodi Ar. Bea**	**150.34**	**287**	PKPbc		PKPbc	10 44 24.4	-0.1
	0.3nm,0.4s,baz=90,slow=1.4,SNR=2.1							

*IDC **02** 10:27:53.4±1.5, 0.°76N×125.°64E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/38, mbtmp3.7/5, ML3.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/35, Error ellipse: s-maj=106.3km s-min=23.5km az=66.0*

*DJA **02** 10:27:58.8±0.3, 1.°1N±3.°3×12.°5E±.°, h10km, M4.4/14, mb4.5/5, MLv4.3/14*

ISC 02 10:27:55.6±0.9, 0.°7N±0.°1×125.°40E±0.°06, h10km, n16, σ1§74/18, mb3.7/4, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMSI	**Cibinong**	**1.42**	**266**	P		**Pb**	**10 28 22.4**	**+0.2**
KMSI				S		**Sn**	**10 28 39.0**	**-1.3**
TNTI	**Ternate**	**1.97**	**88**	P		**Pg**	**10 28 33.8**	**+0.4**
SANI	**Sanana**	**2.78**	**168**	P		**Pn**	**10 28 40.4**	**+0.2**
LUWI	**Luwuk**	**3.14**	**237**	P		**Pn**	**10 28 46.7**	**+1.6**
MRSI	**Marisa**	**3.46**	**267**	P		**Pn**	**10 28 51.7**	**+2.1**
APSI	**Ampana**	**4.07**	**247**	P		**Pn**	**10 29 00.8**	**+2.8**
NLAI	**Namlea**	**4.25**	**156**	P		**Pn**	**10 29 00.0**	**-0.5**
TTSI	**Tana Toraja**	**6.70**	**236**	P		**Pn**	**10 29 36.2**	**+2.1**
	0.2nm40nm,0.5s							
SPSI	**Sidrap Palu**	**7.28**	**231**	P		**Pn**	**10 29 44.3**	**+2.2**
	0.2nm32nm,0.4s							
BNSI	**Bone**	**7.31**	**226**	P		**Pn**	**10 29 44.1**	**+1.5**
	0.1nm20nm,0.7s							
FAKI	**Fak Fak**	**7.73**	**118**	P		**Pn**	**10 29 51.4**	**+3.1**
FITZ	**Fitzroy Crossi**	**18.67**	**179**	P		**P**	**10 32 12.5**	**-1.4**
	0.2nm,0.3s,baz=7.1,slow=14,SNR=1.9							
WRA	**Warramunga Arr**	**22.30**	**157**	P		**P**	**10 32 51.2**	**-2.1**
	1.2nm,0.4s,baz=338,slow=11,SNR=28							
ASAR	**Alice Springs**	**25.58**	**162**	P		**P**	**10 33 24.3**	**-0.8**
	0.7nm,0.6s,baz=341,slow=7.5,SNR=22							
ASAR				PcP		**PcP**	**10 36 56.0**	**-0.3**
	0.2nm,0.4s,baz=351,slow=2.1,SNR=6.1							
STKA	**Stephens Creek**	**35.84**	**156**	P		**P**	**10 34 55.7**	**+0.1**
	0.8nm,0.5s,baz=352,slow=11,SNR=3.8							
MKAR	**Makanchi Array**	**59.32**	**327**	P		**P**	**10 37 57.4**	**-0.5**
	0.2nm,0.4s,baz=126,slow=8.3,SNR=5.2							
MKAR				LR		LR	11 04 16.5	
	comp=Z,21nm,21.8s,baz=154,slow=37							

*NEIC **02** 10:39:46.8±1.4, 23.°9S±0.°1×179.°7W±0.°2, h536km±18km, mb4.6/28, Error ellipse: s-maj=22.2km s-min=17.7km az=124.0*

*IDC **02** 10:39:46.3±3.2, 23.°73S×179.°48W, h548km±44km, mb3.7/4, mb1 3.8/8, mb1mx3.3/28, mbtmp4.6/8, Error ellipse: s-maj=89.5km s-min=28.3km az=71.0*

ISC 02 10:39:47.8±1.2, 23.°9S±0.°1×179.°8W±0.°1, h550km, n40, σ1§47/42, mb4.5/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**5.54**	**163**	P		**P**	**10 41 21.6**	**-0.5**
	62nm,0.3s,baz=88,slow=23,SNR=2.4							
MSVF	**Nonsavu**	**6.51**	**341**	P		**P**	**10 41 29.3**	**-2.1**
	3.3nm,0.3s,baz=157,slow=21,SNR=12							
MSVF	**Nonsavu**	**6.51**	**341**	P		**P**	**10 41 29.1**	**-2.3**
OUZ	**Omahuta**	**12.64**	**206**	P		**P**	**10 42 35.1**	**+2.3**
DZM	**Mont Dzumac**	**12.85**	**276**	P		**P**	**10 42 34.6**	**-0.7**
	0.5nm,0.3s,baz=144,slow=4.8,SNR=1.7							
URZ	**Urewera**	**14.53**	**190**	P		**P**	**10 42 51.7**	**-0.5**
	0.4nm,0.3s,baz=124,slow=24,SNR=1.5							
URZ				S		**S**	**10 45 19.6**	**-4.6**
	0.4nm,0.3s,baz=121,slow=24,SNR=1.6							
URZ	**Urewera**	**14.53**	**190**	P		**P**	**10 42 50.8**	**-1.4**
BKZ	**Black Stump Fm**	**15.51**	**191**	P		**P**	**10 43 01.0**	**-1.5**
BKZ				IAmb		IAmb	10 43 22.3	
	comp=Z,20nm,1.4s							
BFZ	**Birch Farm**	**17.03**	**190**	P		**P**	**10 43 15.9**	**-0.8**
QRZ	**Quartz Range**	**18.04**	**199**	P		**P**	**10 43 27.5**	**+1.6**
THZ	**Tophouse**	**18.80**	**197**	P		**P**	**10 43 32.2**	**+0.3**
THZ				IAmb		IAmb	10 43 59.6	
	comp=Z,30nm,1.3s							
KHZ	**Kahutara**	**19.25**	**195**	P		**P**	**10 43 37.4**	**+0.5**
LTZ	**Lake Taylor**	**19.92**	**197**	P		**P**	**10 43 42.8**	**-0.2**
LTZ				IAmb		IAmb	10 43 49.1	
	comp=Z,29nm,1.3s							
RPZ	**Rata Peaks**	**21.13**	**199**	P		**P**	**10 43 55.4**	**+1.4**
RPZ				IAmb		IAmb	10 43 58.8	
	comp=Z,20nm,1.4s							
FOZ	**Fox Glacier**	**21.35**	**201**	P		**P**	**10 43 56.3**	**+0.4**
FOZ				IAmb		IAmb	10 44 04.0	
	comp=Z,16nm,1.2s							
MLZ	**Mavora Lakes**	**23.54**	**202**	P		**P**	**10 44 16.1**	**+0.6**
WHZ	**Wether Hill Ro**	**24.06**	**201**	P		**P**	**10 44 20.7**	**+0.7**
ARMA	**Armidale**	**26.23**	**249**	P		**P**	**10 44 41.0**	**+1.5**
ARMA				IAmb		IAmb	10 44 42.4	
	comp=Z,17nm,1.1s							
CAN	**Canberra**	**29.32**	**240**	P		**P**	**10 45 07.4**	**+0.9**
CAN				IAmb		IAmb	10 45 31.5	
	comp=Z,37nm,1.4s							
CTA	**Charters Tower**	**31.71**	**270**	P		**P**	**10 45 28.1**	**+1.0**
	comp=Z,12nm,0.4s,baz=95,slow=11,SNR=50							
CTAO	**Charters Tower**	**31.71**	**270**	P		**P**	**10 45 27.9**	**+0.8**
CTAO				IAmb		IAmb	10 45 28.4	
	comp=Z,13nm,0.5s							
TOO	**Toolangi**	**32.62**	**237**	P		**P**	**10 45 35.8**	**+1.1**
TOO				IAmb		IAmb	10 45 50.7	
	comp=Z,40nm,1.5s							
TAU	**Tasmania Unive**	**33.08**	**227**	P		**P**	**10 45 39.4**	**+1.0**
STKA	**Stephens Creek**	**34.92**	**248**	P		**P**	**10 45 55.3**	**+1.3**
	comp=Z,3.6nm,0.5s,baz=99,slow=11,SNR=11							
STKA	**Stephens Creek**	**34.92**	**248**	P		**P**	**10 45 54.9**	**+0.8**
COEN	**Coen**	**36.35**	**279**	P		**P**	**10 46 07.2**	**+1.2**
BBOO	**Buckleboo**	**39.64**	**247**	P		**P**	**10 46 33.2**	**+0.6**
BBOO				IAmb		IAmb	10 46 47.6	
	comp=Z,39nm,1.4s							
AS31	**Alice Springs**	**42.26**	**261**	P		**P**	**10 46 54.0**	**+0.4**
ASAR	**Alice Springs**	**42.26**	**261**	P		**P**	**10 46 54.0**	**+0.5**
	comp=Z,3.7nm,0.5s,baz=94,slow=7.5,SNR=86							
WR0	**Warramunga Arr**	**42.45**	**266**	P		**P**	**10 46 54.7**	**-0.3**
WB2	**Warramunga Arr**	**42.62**	**266**	P		**P**	**10 46 56.4**	**0.0**
WB2				IAmb		IAmb	10 46 57.1	
	comp=Z,9.3nm,0.8s							
WRAB	**Tennant Creek**	**42.63**	**266**	P		**P**	**10 46 56.4**	**-0.1**
WRAB				IAmb		IAmb	10 46 57.0	
	comp=Z,8.9nm,0.9s							
WB0	**Warramunga Arr**	**42.63**	**266**	P		**P**	**10 46 56.3**	**-0.2**
WB0				IAmb		IAmb	10 46 57.1	
	comp=Z,9.7nm,0.7s							
WRA	**Warramunga Arr**	**42.64**	**266**	P		**P**	**10 46 56.5**	**0.0**
	comp=Z,7.6nm,0.5s,baz=98,slow=8.4,SNR=238							
WRA				S		**S**	**10 52 36.1**	**-4.1**
	comp=Z,0.3nm,0.7s,baz=97,slow=14,SNR=2.0							
FORT	**Forrest**	**46.52**	**250**	P		**P**	**10 47 26.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**51.06**	**266**	P		**P**	**10 48 00.9**	**+0.9**
NWAO	**Narrogin (SRO)**	**55.43**	**246**	P		**P**	**10 48 30.9**	**0.0**
NWAO				IAmb		IAmb	10 48 51.3	
	comp=Z,26nm,1.5s							
MORW	**Morawa**	**57.08**	**250**	P		**P**	**10 48 42.9**	**+0.6**
CASY	**Casey**	**60.18**	**206**	P		**P**	**10 49 02.9**	**+0.5**
QSPA	**South Pole Qui**	**66.14**	**180**	P		**P**	**10 49 43.4**	**+2.5**

*DSN **02** 10:46:17.2±1.2, 26.°78N×54.°80E, h10km, ML3.7/9, Error ellipse: s-maj=14.4km s-min=5.3km az=178.0*

*OMAN **02** 10:46:17.1, 26.°59N×54.°69E, h8km, mb5.5/1, ml3.6/11*

*TEH **02** 10:46:18.2, 26.°63N×54.°82E, h10km, ML3.5*

ISC 02 10:46:19.9±0.9, 26.°44N±0.°05×54.°79E±0.°05, h17km, n55, σ1§27/60, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHME	**Shamm**	**1.28**	**107**	P		**Pn**	**10 46 42.6**	**-0.4**
SHME				S		**Sg**	**10 47 02.2**	**+0.9**
SHME	**Shamm**	**1.28**	**107**	*e*Pn		**Pn**	**10 46 42.7**	**-0.3**
SHME	**Shamm**	**1.28**	**107**	P		**Pn**	**10 46 42.7**	**-0.3**
	SNR=92							
SHME				S		**Sg**	**10 47 02.4**	**+1.1**
BANOM	**Banah**	**1.45**	**110**	P		**Pn**	**10 46 45.6**	**+0.1**
BANOM				S		**Sg**	**10 47 07.2**	**+0.3**
BANOM	**Banah**	**1.45**	**110**	*e*Pn		**Pn**	**10 46 45.4**	**-0.1**
BANOM	**Banah**	**1.45**	**110**	P		**Pn**	**10 46 45.4**	**-0.1**
	SNR=86							
BANOM				S		**Sg**	**10 47 07.2**	**+0.3**
GENO	**Geno**	**1.56**	**52**	*e*Pg		**Pn**	**10 46 46.3**	**-0.8**
GENO				*e*			10 47 13.8	
	comp=Z,99nm,0.4s							
MASF	**Masafi**	**1.63**	**130**	P		**Pb**	**10 46 49.6**	**-0.1**
MSFE	**Esma-Masafi**	**1.64**	**131**	P		**Pb**	**10 46 49.4**	**-0.3**
MSFE	**Esma-Masafi**	**1.64**	**131**	*e*Pn		**Pb**	**10 46 49.5**	**-0.3**
NAZ	**Nazwa, Dubai**	**1.65**	**151**	P		**Pb**	**10 46 50.5**	**+0.6**
NAZ	**Nazwa, Dubai**	**1.65**	**151**	*e*Pn		**Pg**	**10 46 51.2**	**-0.5**
NAZ	**Nazwa, Dubai**	**1.65**	**151**	P		**Pn**	**10 46 48.6**	**+0.4**
LMD1	**Lamerd**	**1.70**	**302**	*e*Pg		**Pb**	**10 46 48.8**	**-2.0**
MDH	**Madha**	**1.77**	**130**	P		**Pb**	**10 46 51.9**	**-0.1**
MDH	**Madha**	**1.77**	**130**	*e*Pn		**Pb**	**10 46 51.7**	**-0.3**
MDH	**Madha**	**1.77**	**130**	P		**Pn**	**10 46 50.8**	**+0.9**
MDH				S		**Sb**	**10 47 15.6**	**+1.5**
FAQ	**Al Faqa, Dubai**	**1.84**	**157**	P		**Pb**	**10 46 53.3**	**+0.1**
FAQ	**Al Faqa, Dubai**	**1.84**	**157**	*e*Pn		**Pb**	**10 46 53.2**	**+0.1**
FAQ	**Al Faqa, Dubai**	**1.84**	**157**	P		**Pb**	**10 46 52.0**	**-1.1**
ASUD	**Al Ashush, Dub**	**1.87**	**165**	P		**Pb**	**10 46 53.7**	**0.0**
ASUD	**Al Ashush, Dub**	**1.87**	**165**	*e*Pn		**Pb**	**10 46 53.4**	**-0.3**
ASUD	**Al Ashush, Dub**	**1.87**	**165**	P		**Pn**	**10 46 54.0**	**+0.3**
AJN	**Ajban**	**1.88**	**174**	*e*Pn		**Pg**	**10 46 56.0**	**-0.1**
AJN	**Ajban**	**1.88**	**174**	P		**Pb**	**10 46 52.5**	**-1.3**
UOSS	**Minazif**	**1.96**	**139**	P		**Pn**	**10 46 53.6**	**+1.1**
UOSS	**Minazif**	**1.96**	**139**	*e*Pn		**Pn**	**10 46 53.7**	**+1.2**
UOSS	**Minazif**	**1.96**	**139**	P		**Pn**	**10 46 53.6**	**+1.1**
HATD	**Hatta, Dubai**	**2.02**	**143**	P		**Pb**	**10 46 55.8**	**-0.4**
HATD	**Hatta, Dubai**	**2.02**	**143**	*e*Pn		**Pb**	**10 46 56.9**	**+0.7**
HATD	**Hatta, Dubai**	**2.02**	**143**	P		**Pb**	**10 46 55.7**	**-0.4**
ASHO	**Ashiyiah**	**2.09**	**146**	P		**Pn**	**10 46 55.6**	**+1.3**
ASHO	**Ashiyiah**	**2.09**	**146**	*e*Pn		**Pb**	**10 46 56.0**	**-1.5**
ASHO	**Ashiyiah**	**2.09**	**146**	P		**Pb**	**10 46 56.2**	**-1.4**
JHRM	**Jahrom**	**2.32**	**333**	*e*		**Sg**	**10 47 40.5**	**+5.9**
	comp=Z,99nm,0.5s							
ALNE	**Al Ain**	**2.53**	**160**	*e*Pn		**Pb**	**10 47 02.7**	**-2.2**
ALNE	**Al Ain**	**2.53**	**160**	P		**Pn**	**10 47 01.0**	**+0.7**
KHNJ	**Kahnooj**	**3.00**	**59**	*e*Pn		**Pn**	**10 47 05.9**	**-0.9**
NGRK	**Negar Kerman**	**3.62**	**28**	*e*Pn		**Pn**	**10 47 14.5**	**-1.1**
NGRK				*e*			10 48 13.0	
	comp=Z,99nm,0.4s							
UMZA	**Um Al Zommool**	**3.73**	**175**	P		**Pn**	**10 47 16.6**	**-0.1**
TVBK	**TV Kerman**	**3.94**	**26**	*e*Pn		**Pn**	**10 47 19.2**	**-0.7**
TVBK				*e*			10 48 18.2	
	comp=Z,99nm,0.5s							
CHMN	**Cheshme madani**	**4.18**	**35**	*e*Pn		**Pn**	**10 47 22.0**	**-1.3**
CHMN				*e*			10 47 25.7	
	comp=Z,99nm,0.3s							
KHGB	**Koh Gabri**	**4.19**	**20**	*e*Pn		**Pn**	**10 47 22.6**	**-0.7**
KHGB				*e*			10 47 24.0	
	comp=Z,99nm,0.4s							
KBAM	**BAM**	**4.21**	**50**	*e*Pn		**Pn**	**10 47 23.0**	**-0.5**
KLNJ	**Kolanjah**	**5.34**	**329**	*e*Pn		**Pn**	**10 47 38.6**	**-0.7**
ISAD	**Sadrabad**	**5.54**	**350**	*e*Pn		**Pn**	**10 47 40.6**	**-1.3**
IRAM	**Ramesheh**	**5.75**	**339**	*e*Pn		**Pn**	**10 47 43.9**	**-0.8**
TPRV	**Parvadeh(Tabas**	**6.77**	**14**	*e*Pn		**Pn**	**10 47 57.3**	**-1.3**
ANAR	**Anarak**	**6.79**	**352**	*e*Pn		**Pn**	**10 47 56.6**	**-2.3**
TKDS	**Koohdasht(Taba**	**7.43**	**15**	*e*Pn		**Pn**	**10 48 05.8**	**-1.9**
KRSH	**Karshahi**	**7.84**	**344**	*e*Pn		**Pn**	**10 48 11.1**	**-2.4**
AFRZ	**Afriz**	**7.87**	**27**	*e*Pn		**Pn**	**10 48 12.4**	**-1.3**
WHFO	**Wadi Hawf**	**8.53**	**187**	P		**Pn**	**10 48 23.1**	**+0.3**
	SNR=19							
ABTO	**Aybut**	**9.15**	**189**	P		**Pn**	**10 48 31.3**	**0.0**
HSAM	**Samen**	**9.41**	**327**	*e*Pn		**Pn**	**10 48 34.2**	**-0.8**

*IDC **02** 11:26:46.2±2.7, 35.°51S×178.°31E, h189km±22km, mb3.9/9, mb1 4.1/10, mb1mx3.8/30, mbtmp4.4/10, MS2.5/1, Ms1 2.5/1, ms1mx2.3/22, Error ellipse: s-maj=27.7km s-min=14.3km az=44.0*

*NEIC **02** 11:26:49.6±2.4, 36.°2S±0.°1×178.°0E±0.°1, h222km±6km, Error ellipse: s-maj=17.7km s-min=14.0km az=225.0*

*WEL **02** 11:26:51.5±0.9, 36.°5S±3.°1×17.°8E±.°, h220km±6km, M4.0/48, MLv4.0/48, Error ellipse: s-maj=0.0km s-min=0.0km az=89.2*

*NOU **02** 11:26:53.7, 36.°79S×178.°38E, h244km, MLv4.5, Off E. Coast of N. Island, N.Z.*

ISC 02 11:26:51.1±0.8, 36.°21S±0.°07×178.°10E±0.°06, h239km±6km, n180, σ1§67/209, mb4.2/13, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.36**	**173**	Pn		**Pn**	**11 27 24.9**	**-2.4**
MXZ	**Matakaoa Point**	**1.36**	**173**	P		**Pn**	**11 27 24.6**	**-2.6**
HAZ	**Te Kaha**	**1.56**	**189**	P		**Pn**	**11 27 26.6**	**-2.2**
HAZ				S		**S**	**11 27 55.3**	**-3.1**
WMGZ	**Waiomatatini S**	**1.62**	**171**	P		**Pn**	**11 27 27.7**	**-1.6**
WMGZ				S		**S**	**11 27 56.4**	**-3.0**
PKGZ	**Pakihiroa**	**1.67**	**181**	P		**Pn**	**11 27 28.1**	**-1.6**
RUGZ	**Raukumara Rang**	**1.78**	**191**	P		**Pn**	**11 27 28.7**	**-2.1**
MYRZ	**Mayor Island**	**1.83**	**234**	P		**Pn**	**11 27 30.0**	**-1.1**
PUZ	**Puketiti**	**1.86**	**176**	P		**Pn**	**11 27 29.6**	**-1.7**
PUZ				S		**S**	**11 28 00.4**	**-2.7**
WHRZ	**Whale Island**	**1.87**	**208**	P		**Pn**	**11 27 31.3**	**-0.1**
TWGZ	**Tauwhareparae**	**1.96**	**183**	P		**Pn**	**11 27 31.5**	**-0.8**
TWGZ				S		**S**	**11 28 04.6**	**-0.2**
OPRZ	**Ohinepanea**	**2.04**	**217**	P		**Pn**	**11 27 33.1**	**+0.1**
MARZ	**Manawahe**	**2.10**	**212**	P		**Pn**	**11 27 33.4**	**-0.2**
TGRZ	**Tauranga**	**2.11**	**224**	P		**Pn**	**11 27 32.8**	**-0.8**
GRZ	**Great Barrier**	**2.13**	**268**	P		**Pn**	**11 27 30.4**	**-3.4**
MWZ	**Matawai**	**2.17**	**192**	P		**Pn**	**11 27 33.1**	**-1.1**
MWZ				S		**S**	**11 28 07.1**	**-1.1**
EDRZ	**Edgecumbe**	**2.18**	**209**	P		**Pn**	**11 27 34.0**	**-0.4**
URZ	**Urewera**	**2.19**	**201**	P		**Pn**	**11 27 33.2**	**-1.1**
	80nm,0.3s,baz=290,slow=3.5,SNR=780							
URZ				S		**S**	**11 28 07.4**	**-1.1**
	72nm,0.3s,baz=235,slow=6.0,SNR=9.3							
URZ				LR		LR	11 28 20.4	
	comp=Z,90nm,21.1s,baz=32,slow=32							
URZ	**Urewera**	**2.19**	**201**	P		**Pn**	**11 27 33.2**	**-1.1**
TKGZ	**Te Karaka**	**2.23**	**185**	P		**Pn**	**11 27 33.7**	**-1.0**
TKGZ				S		**S**	**11 28 08.2**	**-1.1**
CNGZ	**Carnagh Statio**	**2.27**	**178**	P		**Pn**	**11 27 34.4**	**-0.8**
KARZ	**Kaharoa**	**2.33**	**219**	P		**Pn**	**11 27 36.3**	**+0.5**
OMRZ	**Omania**	**2.34**	**216**	P		**Pn**	**11 27 36.1**	**+0.2**
RAGZ	**Rawiri**	**2.34**	**193**	P		**Pn**	**11 27 35.5**	**-0.5**
RAGZ				S		**S**	**11 28 11.1**	**-0.3**
KMRZ	**Kaimai**	**2.37**	**226**	P		**Pn**	**11 27 36.3**	**0.0**
TARZ	**Mount Tarawera**	**2.39**	**212**	P		**Pn**	**11 27 37.2**	**+0.8**
WIAZ	**Waiheke Island**	**2.46**	**255**	P		**Pn**	**11 27 35.5**	**-1.6**
RRRZ	**Republican Roa**	**2.47**	**210**	P		**Pn**	**11 27 37.3**	**+0.1**
UTU	**Utuhina**	**2.48**	**217**	P		**Pn**	**11 27 39.1**	**+1.8**
MUGZ	**Murupara**	**2.50**	**205**	P		**Pn**	**11 27 36.5**	**-1.0**
RIGZ	**Rimuhau**	**2.50**	**186**	P		**Pn**	**11 27 36.5**	**-1.0**
MKAZ	**Moumakai**	**2.52**	**248**	P		**Pn**	**11 27 37.2**	**-0.5**
RTZ	**Ruatahuna**	**2.56**	**200**	P		**Pn**	**11 27 36.9**	**-1.3**
HSRZ	**Hossack Road**	**2.56**	**215**	P		**Pn**	**11 27 37.6**	**-0.6**
TOZ	**Tahuroa Road**	**2.57**	**233**	P		**Pn**	**11 27 38.5**	**+0.3**
HRRZ	**Handcock Road**	**2.61**	**213**	P		**Pn**	**11 27 39.2**	**+0.5**
SNGZ	**Shannon Statio**	**2.63**	**193**	P		**Pn**	**11 27 38.4**	**-0.5**
MBAZ	**Motutapu North**	**2.64**	**257**	P		**Pn**	**11 27 37.6**	**-1.3**
ETAZ	**East Tamaki Re**	**2.66**	**253**	P		**Pn**	**11 27 38.6**	**-0.6**
PRRZ	**Plateau Road**	**2.66**	**210**	P		**Pn**	**11 27 38.8**	**-0.3**
GRRZ	**Galatos Road**	**2.66**	**216**	P		**Pn**	**11 27 40.0**	**+0.8**
ABAZ	**Army Bay**	**2.66**	**261**	P		**Pn**	**11 27 37.7**	**-1.4**
PRGZ	**Paritu Road**	**2.71**	**184**	P		**Pn**	**11 27 38.5**	**-1.3**
ALRZ	**Allen Road**	**2.73**	**210**	P		**Pn**	**11 27 39.8**	**-0.2**
WPRZ	**Whakapapatarin**	**2.77**	**213**	P		**Pn**	**11 27 40.7**	**+0.3**
EPAZ	**Eden Park BICE**	**2.78**	**255**	P		**Pn**	**11 27 39.6**	**-0.9**
HBAZ	**Herne Bay Bore**	**2.79**	**256**	P		**Pn**	**11 27 39.9**	**-0.6**
RAHZ	**Arahi**	**2.82**	**196**	P		**Pn**	**11 27 40.3**	**-0.5**
MTHZ	**Maungataniwha**	**2.82**	**200**	P		**Pn**	**11 27 40.3**	**-0.6**
KNZ	**Kokohu**	**2.83**	**187**	P		**Pn**	**11 27 39.7**	**-1.2**
RVAZ	**Riverhead Bore**	**2.89**	**258**	P		**Pn**	**11 27 40.5**	**-1.1**
AWAZ	**Awhitu Peninsu**	**2.91**	**252**	P		**Pn**	**11 27 41.4**	**-0.4**
KUTZ	**Kaahu Road**	**2.91**	**218**	P		**Pn**	**11 27 42.6**	**+0.8**
WTAZ	**Waiatarua**	**2.93**	**255**	P		**Pn**	**11 27 41.2**	**-0.9**
MRHZ	**Matea Rd**	**2.94**	**207**	P		**Pn**	**11 27 41.6**	**-0.6**
TLZ	**Tolley Road**	**2.94**	**223**	P		**Pn**	**11 27 43.1**	**+0.9**
MHGZ	**Mahia Peninsul**	**2.94**	**183**	P		**Pn**	**11 27 41.4**	**-0.8**
WHHZ	**Waihua**	**2.94**	**193**	P		**Pn**	**11 27 41.6**	**-0.6**
WHTZ	**Whakaora**	**2.98**	**214**	P		**Pn**	**11 27 43.6**	**+0.8**
WCZ	**Waipu Caves**	**3.05**	**274**	P		**Pn**	**11 27 40.5**	**-2.9**
NMHZ	**Naumai**	**3.06**	**199**	P		**Pn**	**11 27 43.5**	**0.0**
HATZ	**Hinemaiaia**	**3.11**	**210**	P		**Pn**	**11 27 43.6**	**-0.5**
WATZ	**Wairara**	**3.12**	**216**	P		**Pn**	**11 27 44.7**	**+0.5**
ARHZ	**Aropaoanui**	**3.17**	**196**	P		**Pn**	**11 27 44.1**	**-0.6**
BKZ	**Black Stump Fm**	**3.21**	**203**	Pn		**Pn**	**11 27 44.5**	**-0.7**
BKZ	**Black Stump Fm**	**3.21**	**203**	P		**Pn**	**11 27 44.2**	**-1.1**
RATZ	**Rangitukua**	**3.23**	**214**	P		**Pn**	**11 27 45.6**	**+0.1**
RITZ	**Rihia Road**	**3.28**	**212**	P		**Pn**	**11 27 46.3**	**+0.2**
MCHZ	**McNeill Hill**	**3.41**	**199**	P		**Pn**	**11 27 47.2**	**-0.3**
HIZ	**Hauiti**	**3.46**	**227**				**11 27 49.0**	**+1.0**
HIZ	**Hauiti**	**3.46**	**227**	P		**Pn**	**11 27 49.7**	**+1.7**
TMVZ	**Te Maari**	**3.46**	**212**	P		**Pn**	**11 27 48.1**	**-0.1**
KWHZ	**Kaweka Forest**	**3.47**	**202**	P		**Pn**	**11 27 47.8**	**-0.4**
KRVZ	**Karewarewa**	**3.48**	**213**	P		**Pn**	**11 27 48.8**	**+0.5**
ETVZ	**East Tongariro**	**3.48**	**212**	P		**Pn**	**11 27 48.1**	**-0.2**
WTVZ	**West Tongariro**	**3.52**	**214**	P		**Pn**	**11 27 48.8**	**0.0**
OTVZ	**Oturere**	**3.52**	**212**	P		**Pn**	**11 27 48.7**	**-0.2**
CKHZ	**Cape Kidnapper**	**3.53**	**193**	P		**Pn**	**11 27 48.0**	**-0.9**
TWVZ	**Taurewa**	**3.55**	**216**	P		**Pn**	**11 27 49.0**	**-0.1**
NGZ	**Ngauruhoe**	**3.56**	**213**	P		**Pn**	**11 27 49.3**	**-0.1**
TUVZ	**Tukino**	**3.61**	**212**	P		**Pn**	**11 27 49.4**	**-0.5**
FWVZ	**Far West T-bar**	**3.

FORT	**Forrest**	**41.71**	**263**	P	**P**	**11 34**	**16.5 -0.3**
VNDA	**Vanda**	**42.01**	**185**	P	P	11 34	25.9 +7.3
	comp=Z,0.9nm,0.6s,baz=222,slow=5.9,SNR=2.4						
FITZ	**Fitzroy Crossi**	**49.43**	**277**	P	**P**	**11 35**	**17.7 +0.5**
QSPA	**South Pole Qui**	**53.91**	**180**	P	**P**	11 35	55.2 +5.3
	comp=Z,7.9nm,0.6s,baz=67,slow=4.1,SNR=59						
QSPA	**South Pole Qui**	**53.91**	**180**	P	**P**	**11 35**	**53.4 +3.6**
QSPA				IAmb	IAmb	11 35	56.1
	comp=Z,8.5nm,0.8s						
PLCA	**Paso Flores**	**80.88**	**134**	P	**P**	**11 38**	**42.5 +3.8**
	comp=Z,2.4nm,0.8s,baz=264,slow=3.5,SNR=6.1						
PLCA	**Paso Flores**	**80.88**	**134**	IAmb	IAmb	11 39	01.2
	comp=Z,4.2nm,1.5s						
KSRS	**Korea Array**	**86.79**	**322**	P	**P**	**11 39**	**06.9 -1.3**
	comp=Z,1.5nm,0.8s,baz=137,slow=5.9,SNR=2.7						
NVAR	**Mina Array Bea**	**94.68**	**45**	P	**P**	**11 39**	**44.1 -1.1**
	comp=Z,0.8nm,0.8s,baz=223,slow=8.7,SNR=4.2						
ARCES	**ARCESS Array B**	**143.43**	**344**	PKhKP	PKPpre	11 45	52.0
	comp=Z,1.8nm,0.7s,baz=5.2,slow=2.7,SNR=5.8						
FINES	**FINESS Array B**	**149.21**	**334**	PKPbc	**PKPbc**	**11 46**	**09.3 -1.1**
	comp=Z,1.6nm,0.5s,baz=56,slow=4.8,SNR=15						
LIC	**Lamto**	**150.02**	**174**	*e*PKP1	**PKiKP**	**11 46**	**14.5 -0.2**
	comp=Z,22nm,0.8s						
KIC	**Kosan Boka**	**150.18**	**174**	*e*PKP1	**PKiKP**	**11 46**	**14.9 -0.1**
	comp=Z,6.5nm,0.6s						
TIC	**Toumodi**	**150.44**	**174**	*e*PKP1	**PKiKP**	**11 46**	**15.5 -0.1**
DBIC	**Dimbokro**	**150.47**	**174**	PKPbc	**PKiKP**	**11 46**	**16.3 +0.7**
	comp=Z,4.8nm,0.5s,baz=144,slow=2.4,SNR=10						
NOA	**NORSAR Array B**	**153.79**	**346**	PKPbc	**PKPbc**	**11 46**	**20.4 -0.6**
	comp=Z,0.7nm,0.9s,baz=42,slow=2.0,SNR=1.5						
NOA				PKPab	**PKPab**	**11 46**	**31.5 -3.6**
	comp=Z,0.5nm,0.7s,baz=26,slow=3.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	**156.81**	**189**	PKP	**PKPdf**	**11 46**	**18.9 +0.5**
	comp=Z,0.8nm,1.0s,baz=163,slow=1.0,SNR=3.6						
TORD				PKPab	**PKPab**	**11 46**	**50.5 +1.5**
	comp=Z,2.5nm,0.6s,baz=169,slow=3.8,SNR=14						

IDC 02 11:37:13.3±3.9, 5°51S×152°84E, h0km, mb3.0/2, mb1 3.4/2, mb1mx3.2/33, mbtmp3.1/2, Error ellipse: s-maj=172.9km s-min=51.9km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**23.02**	**230**	P		P	11 42 20.4	+0.2
	1.1nm,0.8s,baz=53,slow=9.8,SNR=5.8							
ASAR	**Alice Springs**	**25.66**	**229**	P		P	11 42 44.5	-0.6
	0.2nm,0.5s,baz=57,slow=9.5,SNR=6.5							
TORD	**Torodi Ar. Bea**	**150.56**	**287**	PKPbc		PKPbc	11 57 08.3	+0.1
	0.4nm,0.4s,baz=74,slow=2.5,SNR=3.7							

*JMA **02** 11:39:12.6±0.4, 38°.02N×133°.59E, h469km, M3.5*
*IDC **02** 11:39:16.5±1.4, 38°.14N×133°.99E, h447km±26km, mb2.6/4, mb1 2.9/7, mb1mx2.7/44, mbtmp3.5/7, Error ellipse: s-maj=32.8km s-min=16.5km az=57.0*
ISC 02 11:39:16.4±0.9, 38°.0N±0°.1×133°.86E±0°.10, h459km, n21, σ1§70/22, mb3.1/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOI	**OKI**	**1.82**	**196**	P		**P**	**11 40 13.7**	**-3.2**
JKSM	**Kasumi**	**2.54**	**165**	P		**P**	**11 40 18.9**	**-2.1**
JWT	**Wachi**	**3.02**	**155**	P		**P**	**11 40 22.8**	**-1.6**
JHS	**Saijyo**	**3.10**	**191**	P		**P**	**11 40 22.1**	**-2.9**
JSD	**Sado**	**3.47**	**89**	P		**P**	**11 40 26.9**	**-0.8**
JNG	**Nsakai**	**3.76**	**114**	P		**P**	**11 40 30.2**	**0.0**
MJAR	**Matsushiro Arr**	**3.78**	**112**	P		**P**	**11 40 28.9**	**-1.4**
	0.1nm,0.3s,baz=289,slow=10,SNR=9.4							
JOD2	**Odawara 2**	**5.04**	**122**	P		**P**	**11 40 40.8**	**-0.8**
JFT	**Otama**	**5.16**	**94**	P		**P**	**11 40 42.7**	**0.0**
JRG	**Rokugo**	**5.47**	**74**	P		**P**	**11 40 46.2**	**+0.6**
JMM	**Marumori**	**5.48**	**90**	P		**P**	**11 40 45.2**	**-0.6**
JFK	**Kawauchi**	**5.60**	**95**	P		**P**	**11 40 45.9**	**-1.2**
JMK	**Ichinoseki**	**5.84**	**79**	P		**P**	**11 40 49.2**	**-0.2**
USRK	**Ussuriysk Ar.**	**6.31**	**348**	P		**P**	**11 40 53.7**	**-0.3**
	baz=171,slow=10,SNR=16							
BSO1	**Boso 1**	**6.67**	**118**	P		**P**	**11 40 56.4**	**-0.8**
JKB	**Kayabe**	**6.71**	**53**	P		**P**	**11 40 58.8**	**+0.7**
ASAJ	**Asahikawa**	**8.96**	**45**	P		**P**	**11 41 22.2**	**+0.2**
	2.9nm,0.3s,baz=223,slow=14,SNR=31							
ASAJ				S		**S**	**11 43 01.5**	**-3.9**
	0.3nm,0.3s,baz=265,slow=22,SNR=1.4							
SONM	**Songino Array**	**22.26**	**305**	P		**P**	**11 43 38.5**	**+0.8**
	0.3nm,0.5s,baz=104,slow=6.1,SNR=1.7							
MKAR	**Makanchi Array**	**38.46**	**300**	P		**P**	**11 45 58.3**	**+1.0**
	0.3nm,0.5s,baz=67,slow=12,SNR=5.0							
WRA	**Warramunga Arr**	**57.68**	**179**	P		**P**	**11 48 23.3**	**+1.4**
	0.5nm,0.4s,baz=360,slow=7.5,SNR=15							
ASAR	**Alice Springs**	**61.38**	**180**	P		**P**	**11 48 48.8**	**+2.1**
	0.2nm,0.4s,baz=13,slow=12,SNR=9.1							

*IDC **02** 12:20:29.3±9.9, 24°.27S×179°.60W, h524km±92km, mb3.2/6, mb1 3.2/7, mb1mx3.0/42, mbtmp4.1/7, Error ellipse: s-maj=139.3km s-min=41.3km az=61.0*
ISC 02 12:20:30.8±5.6, 24°.4S±0°.3×180°.0E±0°.6, h500km, n7, σ0§70/8, mb3.8/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**14.08**	**189**	P		**P**	**12 23 31.6**	**+0.4**
	0.6nm,0.3s,baz=300,slow=23,SNR=7.5							
URZ				S		**S**	**12 25 59.9**	**-0.1**
	0.5nm,0.3s,baz=122,slow=23,SNR=1.7							
RPZ	**Rata Peaks**	**20.66**	**199**	P		**P**	**12 24 34.0**	**-1.3**
	2.5nm,0.3s,baz=24,slow=3.1,SNR=2.1							
CTA	**Charters Tower**	**31.45**	**271**	P		**P**	**12 26 11.2**	**+0.3**
	2.3nm,0.4s,baz=91,slow=11,SNR=10							
STKA	**Stephens Creek**	**34.53**	**249**	P		**P**	**12 26 37.1**	**+0.2**
	1.8nm,0.6s,baz=95,slow=8.8,SNR=6.8							
ASAR	**Alice Springs**	**41.94**	**261**	P		**P**	**12 27 37.1**	**-0.3**
	0.6nm,0.5s,baz=94,slow=6.7,SNR=18							
WRA	**Warramunga Arr**	**42.35**	**267**	P		**P**	**12 27 40.0**	**-0.6**
	1.5nm,0.5s,baz=102,slow=8.4,SNR=41							
FITZ	**Fitzroy Crossi**	**50.77**	**266**	P		**P**	**12 28 44.5**	**0.0**
	1.2nm,0.6s,baz=113,slow=8.7,SNR=6.6							

*IDC **02** 12:27:34.1±1.3, 34°.76N×137°.84E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.3/63, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=34.4km s-min=17.7km az=74.0*
*JMA **02** 12:27:36.3±0.2, 35°.69N×140°.14E, h66km±2km, M2.9*
ISC 02 12:27:35.3±1.1, 35°.57N±0°.06×140°.19E±0°.07, h81km±7km, n16, σ1§82/24, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCN	**Nagara**	**0.15**	**176**	P		**Pn**	**12 27 47.5**	**+0.5**
JCN				*e*S		**Sn**	**12 27 55.8**	**+0.2**
JSMT	**Sammumatsuo**	**0.22**	**71**	P		**Pn**	**12 27 47.5**	**+0.2**
JSMT				*e*S		**Sn**	**12 27 56.1**	**0.0**
TOK	**Tokyo**	**0.37**	**288**	P		**Pn**	**12 27 47.8**	**-0.2**
BSO3	**Boso 3**	**0.81**	**161**	P		**Pn**	**12 27 53.3**	**+1.4**
JOD2	**Odawara 2**	**0.95**	**251**	P		**Pn**	**12 27 54.0**	**+0.2**
JOD2				*e*S		**Sn**	**12 28 06.6**	**-1.1**
JAG	**Ashikaga**	**1.04**	**325**	P		**Pn**	**12 27 54.1**	**-0.8**
JIM2	**Oshima 3**	**1.05**	**216**	P		**Pn**	**12 27 55.4**	**+0.3**
JIM2				*e*S		**Sn**	**12 28 09.8**	**-0.1**
BSO1	**Boso 1**	**1.12**	**145**	P		**Pn**	**12 27 56.7**	**+1.4**
JRY	**Ryogami san**	**1.14**	**293**	P		**Pn**	**12 27 56.4**	**+0.3**
JKT	**Katashina**	**1.42**	**328**	P		**Pn**	**12 27 59.0**	**-0.6**
MJAR	**Matsushiro Arr**	**1.87**	**302**	Pn		**Pn**	**12 28 05.9**	**+0.3**
	2.8nm,0.3s,baz=69,slow=12,SNR=81							
MJAR				Sn		**Sn**	**12 28 30.2**	**+1.6**
	1.0nm,0.3s,baz=359,slow=7.3,SNR=2.3							
MAT	**Matsushiro**	**1.88**	**302**	P		**Pn**	**12 28 06.3**	**+0.7**
MAT				S		**Sn**	**12 28 29.3**	**+0.7**
JHJ	**Hachijo jima 2**	**2.47**	**188**	Pn		**Pn**	**12 28 15.4**	**+1.9**
	20nm,0.3s,baz=353,slow=17,SNR=8.5							
JHJ				Sn		**Sn**	**12 28 43.3**	**+0.5**
	51nm,0.3s,baz=75,slow=23,SNR=7.0							
JCJ	**Chichijima**	**8.62**	**168**	Pn		**Pn**	**12 29 36.2**	**-1.0**
	3.5nm,0.3s,baz=274,slow=21,SNR=7.3							
JCJ				Sn		**Sn**	**12 31 05.8**	**-7.0**
	1.5nm,0.3s,baz=266,slow=20,SNR=2.1							
MKAR	**Makanchi Array**	**44.07**	**303**	P		**P**	**12 35 35.1**	**-0.1**
	0.4nm,0.8s,baz=95,slow=7.7,SNR=3.0							
WRA	**Warramunga Arr**	**55.49**	**187**	P		**P**	**12 37 03.2**	**+1.4**
	0.3nm,0.4s,baz=1.2,slow=7.6,SNR=13							

*BJI **02** 12:41:17.2±0.0, 6°.24N×126°.89E, h192km, mB4.7/29, mb4.7/54*
*DJA **02** 12:41:18.1±0.6, 7°.N±4°×12°.7E±°, h152km±6km, M4.7/31, mB5.1/13, mb4.8/31, MLv5.1/5, Mw(mB)4.4/13*
*IDC **02** 12:41:21.1±0.6, 6°.47N×126°.79E, h196km±5km, mb4.1/30, mb1 4.1/33, mb1mx4.0/52, mbtmp4.6/33, Error ellipse: s-maj=13.3km s-min=6.6km az=84.0*
*MAN **02** 12:41:21.3, 6°.53N×126°.80E, h172km, MS4.5*
*NEIC **02** 12:41:21.4±1.6, 6°.49N±0°.08×126°.81E±0°.10, h197km±8km, mb4.6/63, Error ellipse: s-maj=13.9km s-min=12.0km az=108.0*
*KLM **02** 12:41:21, 6°.33N×127°.13E, h185km, mb4.7*
ISC 02 12:41:21.5±0.6, 6°.57N±0°.04×126°.76E±0°.06, h198km±4km, n187, σ1§57/195, mb4.6/90, 3C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MATI	**Mati**	**0.63**	**307**	*e*P		**Pn**	**12 41 46.1**	**-2.8**
MATI				*e*S		**Sn**	**12 42 06.7**	**-3.5**
DDMP	**Don Marcelino,**	**1.14**	**246**	*e*P		**Pn**	**12 41 50.2**	**-1.9**
DDMP				*e*S		**Sn**	**12 42 13.4**	**-2.3**
DAV	**Davao City (W)**	**1.28**	**293**	P		**Pn**	**12 41 53.1**	**-0.1**
	67nm,0.3s,baz=113,slow=3.0,SNR=5.0							
DAV				S		**Sn**	**12 42 17.9**	**+0.2**
	125nm,0.3s,baz=250,slow=22,SNR=22							
KCP	**Kidapawan**	**1.72**	**285**	⇑*i*P		**Pn**	**12 41 56.5**	**-0.7**
KCP				*i* S		**Sn**	**12 42 25.6**	**+0.8**
BUKP	**Musuan**	**2.13**	**308**	*e*P		**Pn**	**12 42 00.1**	**-1.2**
BUKP				*e*S		**Sn**	**12 42 31.2**	**-1.2**
SKMP	**Bagumbayan, Su**	**2.21**	**269**	*e*P		**Pn**	**12 42 01.0**	**-1.1**
SKMP				*e*S		**Sn**	**12 42 31.4**	**-2.2**
BUTP	**Butuan**	**2.64**	**335**	*e*P		**Pn**	**12 42 06.4**	**-0.5**
BUTP				*e*S		**Sn**	**12 42 41.0**	**-1.4**
PAGZ	**Pagadian**	**3.59**	**291**	*e*P		**Pn**	**12 42 17.4**	**-0.7**
PAGZ				*e*S		Sn	12 42 48.3	-14
MSLP	**Maasin**	**4.01**	**332**	*e*P		**Pn**	**12 42 25.9**	**+2.4**
MSLP				*e*S		**Sn**	**12 43 03.6**	**-8.5**
TNTI	**Ternate**	**5.79**	**174**	Pn		**Pn**	**12 42 44.5**	**-1.6**
TNTI	**Ternate**	**5.79**	**174**	P		**Pn**	**12 42 44.8**	**-1.3**
	0.5nm1μm99nm,1.0s							
KMSI	**Cibinong**	**6.57**	**205**	P		**Pn**	**12 42 55.6**	**-0.6**
	1.4nm201nm,1.1s							
GTOI	**Gorontalo**	**6.98**	**213**	P		**Pn**	**12 43 00.3**	**-1.3**
	0.4nm59nm,0.8s							
MRSI	**Marisa**	**7.73**	**219**	P		**Pn**	**12 43 11.4**	**+0.1**
	2μm170nm,1.2s							
TOLI2	**Tolitoli**	**8.06**	**228**	Pn		**Pn**	**12 43 14.1**	**-1.6**
MYLDM	**Lahad Datu**	**8.34**	**261**	Pn		**Pn**	**12 43 20.8**	**+1.6**
LUWI	**Luwuk**	**8.54**	**208**	Pn		**Pn**	**12 43 20.1**	**-1.9**
LUWI	**Luwuk**	**8.54**	**208**	P		**Pn**	**12 43 21.8**	**-0.2**
	2μm181nm,0.8s							
SANI	**Sanana**	**8.60**	**185**	P		**Pn**	**12 43 18.8**	**-3.8**
	1μm37nm,0.8s							
SWI	**Sorong**	**8.64**	**149**	P		**Pn**	**12 43 22.3**	**-0.9**
	70nm,0.7s							
SIJI	**Sorong**	**8.65**	**149**	P		**Pn**	**12 43 22.6**	**-0.7**
	15nm,0.3s,baz=329,slow=18,SNR=37							
APSI	**Ampana**	**9.01**	**215**	P		**Pn**	**12 43 28.5**	**+0.4**
	982nm109nm,1.0s							
NLAI	**Namlea**	**9.75**	**178**	P		**Pn**	**12 43 35.7**	**-1.9**
	3μm212nm,0.7s							
BNDI	**Bandanaira**	**11.45**	**164**	P		**P**	**12 44 05.5**	**+0.2**
TTSI	**Tana Toraja**	**11.80**	**216**	P		**Pn**	**12 44 03.3**	**-0.7**
	1μm63nm,0.8s							
SPSI	**Sidrap Palu**	**12.58**	**214**	P		**P**	**12 44 16.5**	**-1.3**
	17nm,0.5s							
BNSI	**Bone**	**12.76**	**212**	P		**Pn**	**12 44 16.3**	**+0.1**
	69nm,1.1s							
KAPI	**Kappang**	**13.47**	**211**	P		**Pn**	**12 44 24.8**	**-0.3**
	1.3nm,0.3s,baz=56,slow=12,SNR=4.1							
BKSI	**Bulukumba**	**13.54**	**209**	P		**P**	**12 44 28.2**	**-0.3**
	13nm,1.3s							
MTKI	**Muara Teweh, K**	**14.00**	**238**	P		P	12 44 39.9	+6.3
SBUM	**Sibu**	**15.06**	**255**			**P**	**12 44 46.1**	**+0.7**
SBUM	**Sibu**	**15.06**	**255**	P		**P**	**12 44 47.0**	**+1.6**
BBKI	**Banjar Baru**	**15.52**	**230**	P		**P**	**12 44 54.1**	**+3.6**
	2μm26nm,1.0s							
MMRI	**Maumere**	**15.76**	**197**	P		**P**	**12 44 52.6**	**-0.6**
MMRI	**Maumere**	**15.76**	**197**	P		Pn	12 45 00.7	+7.5
EDFI	**Ende, Flores**	**16.04**	**198**	P		**Pn**	**12 44 58.6**	**+2.0**
	22nm,0.7s							
SOEI	**Soe**	**16.41**	**189**			**P**	**12 44 59.9**	**-0.4**
SOEI	**Soe**	**16.41**	**189**	P		**Pn**	**12 45 03.7**	**+2.6**
	64nm,0.9s							
BATI	**Baumata**	**16.95**	**191**	P		**P**	**12 45 06.1**	**0.0**
	16nm,0.3s,baz=326,slow=2.2,SNR=12							
BATI	**Baumata**	**16.95**	**191**	P		**Pn**	**12 45 09.4**	**+1.9**
	761nm82nm,0.6s							
KSM	**Kuching**	**17.17**	**254**	P		**Pn**	**12 45 09.6**	**-0.5**
KSM				IAmb	IAmb		12 45 10.9	
	comp=Z,16nm,0.8s							
KSM	**Kuching**	**17.17**	**254**	P		**Pn**	**12 45 10.0**	**-0.1**
YULB	**Yu-li**	**17.54**	**343**	P		**P**	**12 45 11.0**	**-1.5**
TPUB	**Ta-pu**	**17.65**	**341**	P		**P**	**12 45 12.4**	**-1.4**
TPUB				IAmb	IAmb		12 45 21.5	
	comp=Z,41nm,1.2s							
PLAI	**Plampang**	**17.72**	**210**	P		**Pn**	**12 45 17.4**	**+0.8**
	comp=Z,88nm,0.8s							
SSLB	**Suanglung**	**18.01**	**343**	P		**P**	**12 45 17.7**	**0.0**
TWSI	**Taliwang, Sumb**	**18.12**	**213**	P		**Pn**	**12 45 23.8**	**+2.6**
	comp=Z,1μmcomp=Z,33nm,0.8s							
SRBI	**Singaraja**	**18.56**	**219**	P		**Pn**	**12 45 28.6**	**+2.2**
	comp=Z,38nm,0.8s							
YHNB	**Yeheng**	**18.73**	**345**	P		**P**	**12 45 25.3**	**-0.2**
JOW	**Kunigami**	**20.20**	**4**	P		**P**	**12 45 42.2**	**+0.9**
	comp=Z,13nm,0.5s,baz=86,slow=6.2,SNR=4.1							
UBPT	**Khong Chiam**	**22.61**	**294**	P		**P**	**12 46 06.5**	**+0.8**
PANO	**Nakornpanom**	**24.06**	**298**	P		**P**	**12 46 13.8**	**-5.2**
	comp=Z,25μmcomp=Z,929nm,0.7s							
FITZ	**Fitzroy Crossi**	**24.53**	**183**	P		**P**	**12 46 21.7**	**-1.4**
	comp=Z,9.9nm,0.5s,baz=14,slow=5.1,SNR=54							
FITZ	**Fitzroy Crossi**	**24.53**	**183**	P		**P**	**12 46 21.1**	**-2.1**
FITZ				IAmb	IAmb		12 46 26.1	
	comp=Z,9.4nm,0.7s							
JCJ	**Chichijima**	**25.14**	**34**	P		**P**	**12 46 28.1**	**-0.4**
	comp=Z,51nm,0.5s,baz=266,slow=7.9,SNR=8.0							
JCJ	**Chichijima**	**25.14**	**34**	P		**P**	**12 46 27.6**	**-0.9**
KHON	**Khomkaen**	**25.36**	**295**	P		**P**	**12 46 31.8**	**+1.1**
	comp=Z,51nm,0.6s							
NJ2	**Nanjing**	**26.41**	**345**	*e*P		**P**	**12 46 42.8**	**+2.9**
NJ2				pmax	pmax			
	comp=Z,15nm,0.5s							
WHN	**Wuhan**	**26.55**	**335**	⇓P		**P**	**12 46 43.2**	**+2.1**
WHN				sP		**sP**	**12 47 44.7**	**+0.4**
WHN				pmax	pmax			
	comp=Z,48nm,1.1s							
JNU	**Nakatsue**	**26.70**	**8**	P		**P**	**12 46 42.3**	**-0.2**
	comp=Z,13nm,0.8s,baz=329,slow=3.4,SNR=8.4							
WB0	**Warramunga Arr**	**27.23**	**164**	P		**P**	**12 46 46.0**	**-1.3**
WRA	**Warramunga Arr**	**27.38**	**164**	P		**P**	**12 46 47.3**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=344,slow=11,SNR=15							
WRA				S		**S**	**12 51 11.2**	**-3.0**
	comp=Z,0.4nm,0.7s,baz=304,slow=7.1,SNR=1.8							
WRA				ScP		**ScP**	**12 53 24.5**	**0.0**
	comp=Z,1.3nm,0.6s,baz=345,slow=3.1,SNR=16							
WB2	**Warramunga Arr**	**27.38**	**164**	P		**P**	**12 46 47.8**	**-0.9**
WR0	**Warramunga Arr**	**27.45**	**164**	P		**P**	**12 46 49.2**	**-0.1**
SUKH	**Sukhothai**	**28.62**	**295**	P		**P**	**12 47 01.8**	**+2.0**
	comp=Z,14nm,0.7s							
PSA00	**Pilbara Seismi**	**28.78**	**193**	P		**P**	**12 47 01.5**	**+0.4**
PSA00				IAmb	IAmb		12 47 12.6	
	comp=Z,26nm,1.5s							
KMI	**Kunming**	**29.47**	**311**	⇑P		**P**	**12 47 09.0**	**+1.5**
KMI				pmax	pmax			
	comp=Z,19nm,0.9s							
CM04	**Chiang Mai Arr**	**29.51**	**296**	P		**P**	**12 47 09.4**	**+1.7**
	comp=Z,6.4nm,0.8s							
CM01	**Chiang Mai Arr**	**29.54**	**296**	P		**P**	**12 47 10.5**	**+2.6**
	comp=Z,5.6nm,0.7s							
CM31	**Chiang Mai Arr**	**29.57**	**296**	P		**P**	**12 47 10.7**	**+2.6**
	comp=Z,204nm,0.7s							
CMAR	**Chiang Mai Arr**	**29.57**	**296**	P		**P**	**12 47 08.6**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=104,slow=7.3,SNR=22							
GSI	**Gunungsitoli**	**29.57**	**261**	P		**P**	**12 47 07.2**	**-1.1**
GSI				IAmb	IAmb		12 47 08.6	
	comp=Z,14nm,0.7s							
CM15	**Chiang Mai Arr**	**29.58**	**296**	P		**P**	**12 47 09.8**	**+1.6**
	comp=Z,7.2nm,0.7s							
JWT	**Wachi**	**29.66**	**14**	P		**P**	**12 47 09.2**	**+0.5**
CMMT	**Chiang Mai**	**29.68**	**297**	P		**P**	**12 47 08.9**	**-0.3**
CHTO	**Chiang Mai**	**29.69**	**297**	P		**P**	**12 47 09.9**	**+0.7**
CHTO				IAmb	IAmb		12 47 10.5	
	comp=Z,6.4nm,0.7s							
INU	**Inuyama**	**30.16**	**17**	P		**P**	**12 47 13.5**	**+0.4**
KSRS	**Korea Array**	**30.76**	**2**	P		**P**	**12 47 19.1**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=181,slow=9.9,SNR=12							
AS31	**Alice Springs**	**30.85**	**167**	P		**P**	**12 47 18.4**	**-0.9**
ASAR	**Alice Springs**	**30.85**	**167**	P		**P**	**12 47 18.7**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=339,slow=7.2,SNR=32							
ASAR				S		**S**	**12 52 08.2**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=355,slow=17,SNR=4.8							
ASAR				ScP		**ScP**	**12 53 35.4**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=343,slow=3.4,SNR=8.4							
MAT	**Matsushiro**	**31.62**	**18**	P		**P**	**12 47 25.1**	**-0.8**
MJAR	**Matsushiro Arr**	**31.62**	**18**	P		**P**	**12 47 25.3**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=188,slow=8.7,SNR=8.0							
XAN	**Xi'an**	**31.94**	**331**	P		**P**	**12 47 29.3**	**+0.5**
XAN				pmax	pmax			
	comp=Z,24nm,0.8s							
XAN	**Xi'an**	**31.94**	**331**	P		**P**	**12 47 29.1**	**+0.3**
CD2	**Chengdu**	**32.43**	**321**	P		**P**	**12 47 34.5**	**+1.4**
CD2				pmax	pmax			
	comp=Z,20nm,0.8s							
JSD	**Sado**	**33.02**	**17**	P		**P**	**12 47 37.2**	**-0.8**
JSD				IAmb	IAmb		12 47 38.1	
	comp=Z,11nm,0.6s							
JMM	**Marumori**	**33.66**	**20**	P		**P**	**12 47 44.3**	**+0.6**
BJT	**Baijiatuan**	**34.64**	**346**	P		**P**	**12 47 53.8**	**+1.8**
BJI	**Beijing**	**34.66**	**346**	P		**P**	**12 47 53.1**	**+1.0**
BJI				pmax	pmax			
	comp=Z,26nm,1.0s							
LZH	**Lanzhou**	**36.11**	**328**	⇑P		**P**	**12 48 07.2**	**+2.3**
LZH				sP		sP	12 49 10.0	+1.1
LZH				pmax	pmax			
	comp=Z,23nm,1.3s							
LZH				pmax	pmax			
	comp=Z,82nm,5.4s							
HHC	**Hu-ho-hao-te**	**36.74**	**341**	*e*P		**P**	**12 48 11.5**	**+1.5**
HHC				pP		pP	12 48 50.8	-0.8
HHC				sP		sP	12 49 17.8	+3.5
HHC				SS		SS	12 56 18.9	-10
HHC				pmax	pmax			
	comp=Z,21nm,1.0s							
HHC				pmax	pmax			
	comp=Z,150nm,4.7s							
MORW	**Morawa**	**36.90**	**196**	P		**P**	**12 48 11.5**	**+0.1**
MORW				IAmb	IAmb		12 48 12.9	
	comp=Z,18nm,1.1s							
CN2	**Changchun**	**37.10**	**358**	*e*P		**P**	**12 48 15.5**	**+2.6**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
FORT	**Forrest**	**37.16**	**178**	P		**P**	**12 48 13.3**	**-0.2**
FORT				IAmb	IAmb		12 48 23.0	
	comp=Z,15nm,0.9s							
USA0B	**Ussuriysk Arra**	**37.76**	**6**	P		**P**	**12 48 19.6**	**+1.1**
USA0B				IAmb	IAmb		12 48 20.1	
	comp=Z,11nm,0.6s							
USRK	**Ussuriysk Ar.**	**37.76**	**6**	P		**P**	**12 48 19.6**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=183,slow=7.2,SNR=82							
MDJ	**Mudanjiang**	**37.98**	**3**	P		**P**	**12 48 21.8**	**+1.6**
MDJ				pmax	pmax			
	comp=Z,27nm,0.8s							
MDJ				pmax	pmax			
	comp=Z,98nm,4.0s							
MDJ	**Mudanjiang**	**37.98**	**3**	P		**P**	**12 48 21.4**	**+1.2**
MDJ				IAmb	IAmb		12 48 22.7	
	comp=Z,17nm,0.8s							
ERM	**Erimo**	**38.18**	**20**	P		**P**	**12 48 24.2**	**+2.3**
ASAJ	**Asahikawa**	**39.89**	**18**	P		**P**	**12 48 37.4**	**+1.3**
	comp=Z,7

baz=327
SGDS Sogindy 58.53 318 *e*P **P** **12 50 57.8 +0.4**
baz=318
USP Ospenovka 58.55 317 P **P** **12 50 58.3 +0.8**
SNR=7.6
AML Almayashu 58.67 316 P **P** **12 50 59.9 +1.1**
SNR=10
EKS2 Erkin-Say 58.81 316 P **P** **12 51 00.5 +1.1**
SNR=10.0
SEY Seymchan 59.28 13 P **P** **12 51 03.0 +1.0**
comp=Z,2.0nm,0.8s,baz=243,slow=8.1,SNR=8.4
KURK Kurchatov 59.39 327 P **P** **12 51 03.8 +0.7**
KURBB Kurchatov Arra 59.39 326 P **P** **12 51 03.8 +0.7**
comp=Z,21nm,0.8s,baz=125,slow=6.2,SNR=136
BTLS Baital 59.55 319 *e*P **P** **12 51 04.2 -0.1**
baz=319
KK31 Karatay Array 61.21 316 P **P** **12 51 16.0 +0.4**
KK31 IAmb IAmb 12 51 16.8
comp=Z,8.1nm,0.8s
KKAR Karatay Array 61.21 316 P **P** **12 51 15.8 +0.2**
KKAR IAmb IAmb 12 51 16.8
comp=Z,8.1nm,0.8s
IUG luzhnay 61.23 315 *e*P **P** **12 51 16.3 +0.4**
comp=Z,3.5nm,0.6s,baz=315
BRZS Berezniki 62.42 324 *e*P **P** **12 51 23.5 0.0**
baz=324
TIXI Tiksi 65.02 1 P **P** **12 51 40.3 +0.2**
comp=Z,3.4nm,0.4s,baz=152,slow=4.2,SNR=12
TIXI Tiksi 65.02 1 P **P** **12 51 39.8 -0.3**
TIXI IAmb IAmb 12 51 40.7
comp=Z,5.2nm,0.5s
BRVK Borovoye 65.06 326 P **P** **12 51 41.4 +0.7**
NRIK Noril'sk 67.70 346 P **P** **12 51 57.5 +0.4**
comp=Z,13nm,0.7s,baz=121,slow=6.6,SNR=23
NRIK Noril'sk 67.70 346 IAmb IAmb 12 51 58.3
comp=Z,12nm,0.7s
GEYT Alibeck 69.17 308 P **P** **12 52 06.8 -0.1**
comp=Z,4.0nm,0.8s,baz=168,slow=7.6,SNR=5.0
ABKAR Akbulak array 70.00 320 P **P** **12 52 12.1 +0.4**
SOCY Socotra 71.85 281 P **P** **12 52 22.4 -1.2**
SOCY IAmb IAmb 12 52 42.4
comp=Z,14nm,1.3s
ARU Arti 72.58 327 P **P** **12 52 26.9 0.0**
RAYN Ar Rayn 79.42 293 P **P** **12 53 06.6 +0.2**
A21K Barrow 79.53 19 IAmb IAmb 12 53 07.8
comp=Z,8.3nm,0.7s
BPAW Bear Paw Mtn. 80.74 26 IAmb IAmb 12 53 14.8
comp=Z,12nm,1.2s
MLY Manley 80.91 25 P **P** **12 53 14.7 +1.2**
KBZ Khabaz 81.07 313 P **P** **12 53 15.0 +0.3**
comp=Z,1.7nm,0.8s,baz=180,slow=22,SNR=1.6
COLD Coldfoot 81.28 23 P **P** **12 53 16.3 +0.9**
COLD IAmb IAmb 12 53 18.0
comp=Z,12nm,1.2s
I23K Minto, Yukon-K 81.50 25 P **P** **12 53 17.2 +0.6**
I23K IAmb IAmb 12 53 19.6
comp=Z,5.4nm,0.7s
NEA2 Nenana 81.60 26 IAmb IAmb 12 53 19.2
comp=Z,6.7nm,0.9s
TOLK Toolik Lake Re 81.61 22 P **P** **12 53 18.0 +0.9**
TOLK IAmb IAmb 12 53 19.6
comp=Z,5.4nm,0.7s
MCK McKinley 81.62 27 IAmb IAmb 12 53 18.6
comp=Z,11nm,0.8s
ILAR Eielson Array 82.54 26 P **P** **12 53 21.2 -0.8**
comp=Z,1.7nm,0.5s,baz=245,slow=5.2,SNR=42
ARCES ARCESS Array B 87.81 340 P **P** **12 53 47.4 -0.6**
comp=Z,1.6nm,0.3s,baz=86,slow=6.2,SNR=20
FINES FINESS Array B 89.36 332 P **P** **12 53 54.8 -0.6**
comp=Z,0.9nm,0.4s,baz=72,slow=4.9,SNR=13
MNK Minsk 89.84 325 *i* P P 12 53 52.8 -5.0
comp=E,5.0nm,1.0s
MNK *i* P P 12 53 52.8 -5.0
comp=N,8.0nm,0.7s
MNK *i* P P 12 53 52.8 -5.0
comp=Z,15nm,0.7s
MNK *i* pP pP 12 54 44.3 -2.6
MNK *i* PP **PP** **12 57 28.4 -4.5**
MNK *i* PPP PPP 12 59 26.6
MNK *i* S **SKSac** **13 04 02.6 -6.9**
MNK *i* sS pS 13 05 37.6 +2.6
MNK *i* SS **SS** **13 10 29.6 -4.9**
MNK *i* SSS SSS 13 14 09.2
MNK *i* LRM MLR 13 33 36.2
comp=Z,325nm,21.1s
MNK *i* LRM MLR 13 33 47.1
comp=N,2μm,23.6s
MNK *i* LRM MLR 13 33 58.0
comp=E,73nm,18.5s
C36M Paulatuk 90.54 20 P **P** **12 54 00.5 -0.2**
VYHS Vyhne 96.81 320 *e*PDIFF **P** **12 54 30.7 +0.7**
YKA Yellowknife Ar 96.92 24 P **P** **12 54 29.7 -0.4**
comp=E,0.6nm,0.7s,baz=298,slow=4.2,SNR=8.0
TORD Torodi Ar. Bea 122.03 290 PKP **PKPdf** **12 59 53.0 -0.6**
comp=E,0.9nm,0.7s,baz=58,slow=2.3,SNR=5.8

*IDC **02** 12:53:49.8±0.5,30.˚26S×178.˚87W,h0km,mb4.5/15, mb1 4.6/17,mb1mx4.5/26,mbtmp4.5/17,ML4.7/2,MS4.6/26, Ms1 4.6/26,ms1mx4.5/35,Error ellipse: s-maj=17.3km s-min=13.2km az=133.0*
*NEIC **02** 12:53:51.5±1.5,30.˚11S±0.˚08×178.˚8W±0.˚1,h13km±3km, mb4.7/21,Error ellipse: s-maj=16.3km s-min=8.5km az=127.0*
*GCMT **02** 12:53:52.5±0.1,30.˚38S±0.˚01×179.˚01W±0.˚01,h12km, MW5.2/129,Moment Tensor Solution. s88,c135; s129,c216; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.82±.01; Mθθ0.37±.01; Mφφ0.45±.01; Mrθ0.13±.04; Mθφ0.50±.01; Mφr0.27±.04; Best double couple: M0.91600×10^17 NP1:φs49.00000°,δ36.00000°, λ-80.00000°. NP2:φs217.00000°,δ55.00000°, λ-97.00000°. Principal axes: T 0.9550, Plg9.0000°, Azm312.0000°; N -0.0800, Plg6.0000°, Azm221.0000°; P -0.8760, Plg79.0000°, Azm99.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 12:53:51.9±0.4,30.˚24S±0.˚06×178.˚98W±0.˚07,h10km, n100,σ1s74/76,mb4.8/36,MS4.6/27,1C,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.35**	**43**			Pn	**Pn**	**12 54 14.6**	**-2.2**
	438nm,0.3s,baz=277,slow=12,SNR=25								
RAO						Sn	**Sb**	**12 54 32.7**	**-1.9**
	709nm,0.3s,baz=303,slow=23,SNR=9.1								
RAO	**Raoul Island**	**1.35**	**43**				**Pn**	**12 54 13.8**	**-3.0**
MXZ	**Matakaoa Point**	**7.64**	**196**	Pn		Pn	**Pn**	**12 55 44.4**	**+1.1**
OUZ	**Omahuta**	**7.98**	**230**	Pn		Pn	**Pn**	**12 55 48.6**	**+0.6**
URZ	**Urewera**	**8.63**	**201**	Pn		Pn	**Pn**	**12 55 54.5**	**-2.3**
	3.7nm,0.3s,baz=301,slow=24,SNR=30								
URZ						Sn	**Sn**	**12 57 34.5**	**+0.3**
	baz=339,slow=23,SNR=1.0								
URZ	**Urewera**	**8.63**	**201**				**Pn**	**12 55 57.0**	**+0.2**
HIZ	**Hauiti**	**9.69**	**210**				**Pn**	**12 56 15.0**	**+3.6**
MSVF	**Nonsavu**	**12.74**	**347**	Pn			**Pn**	**12 56 54.0**	**+0.7**
	0.2nm,0.3s,baz=213,slow=22,SNR=2.6								
MSVF						LR	LR	13 01 00.8	
	comp=Z,7μm,18.1s,baz=188,slow=34								
DZM	**Mont Dzumac**	**15.40**	**298**	eLR		LR	LR	13 01 12.6	
	comp=Z,12μm,25.8s								
DZM	**Mont Dzumac**	**15.40**	**298**	LR		LR	LR	13 02 24.5	
	comp=Z,7μm,18.4s,baz=110,slow=33								
RPZ	**Rata Peaks**	**15.61**	**208**	Pn		Pn	**Pn**	**12 57 27.9**	**-4.1**
	0.7nm,0.3s,baz=72,slow=18,SNR=2.2								
RPZ						LR	LR	13 04 33.8	
	comp=Z,2μm,18.2s,baz=43,slow=41								
RAR	**Rarotonga**	**19.48**	**67**	LR		LR	LR	13 03 50.9	
	comp=Z,928nm,20.9s,baz=230,slow=31								
TBI	**Tubuai**	**27.18**	**82**	eS			**S**	**13 04 21.4**	**+6.9**
	239nm,30.4s								
TBI					eLQ		LQ	13 05 00.8	
	4μm,26.8s								
TBI					eLR		LR	13 06 21.9	
	comp=Z,3μm,29.2s,baz=250								
TBI	**Tubuai**	**27.18**	**82**	*e*T		T	T	13 27 08.9	
	78nm,0.3s								
PAE	**Paea**	**29.55**	**72**	*e*T		T	T	13 30 10.1	
	33nm,0.3s								
PPT2	**Papeete2**	**29.59**	**72**	eS			**S**	**13 05 00.3**	**+7.7**
	135nm,23.3s								
PPT2					eLQ		LQ	13 05 56.2	
	2μm,25.5s								
PPT2					eLR		LR	13 07 23.9	
	comp=Z,2μm,28.5s,baz=231								
PPT2	**Papeete2**	**29.59**	**72**	*e*T		T	T	13 30 13.8	
	30nm,0.3s								
PPT	**Papeete**	**29.60**	**71**	LR		LR	LR	13 08 32.8	
	comp=Z,494nm,20.1s,baz=247,slow=30								
MEH	**Mehetia**	**30.69**	**73**	*e*T		T	T	13 31 34.6	
	64nm,0.4s								
VAH	**Vaihoa**	**32.41**	**70**	*e*T		T	T	13 33 44.5	
	76nm,0.3s								
CTA	**Charters Tower**	**32.94**	**280**	P		P	**P**	**13 00 28.0**	**+1.2**
	4.1nm,0.4s,baz=109,slow=11,SNR=16								
CTA						LR	LR	13 12 53.8	
	comp=Z,3μm,18.2s,baz=121,slow=35								
CTAO	**Charters Tower**	**32.94**	**280**	P		P	**P**	**13 00 28.1**	**+1.3**
STKA	**Stephens Creek**	**33.69**	**257**	P		P	**P**	**13 00 33.9**	**+0.6**
	15nm,0.8s,baz=99,slow=13,SNR=16								
STKA						LR	LR	13 13 08.7	
	comp=Z,939nm,18.5s,baz=93,slow=34								
STKA	**Stephens Creek**	**33.69**	**257**	P		P	**P**	**13 00 34.9**	**+1.6**
STKA						IAmb	IAmb	13 00 46.4	
	comp=Z,7.4nm,1.0s								
PMG	**Port Moresby**	**37.77**	**296**	LR		LR	LR	13 15 43.3	
	comp=Z,899nm,18.1s,baz=124,slow=35								
BBOO	**Buckleboo**	**38.20**	**254**	P		P	**P**	**13 01 12.2**	**+0.3**
RKT	**Rikitea**	**39.76**	**91**	eLQ		LQ	LQ	13 10 39.7	
	comp=Z,777nm,23.8s								
RKT						eLR	LR	13 12 19.2	
	comp=Z,2μm,27.5s								
TAOE	**Nuku Hiva Isla**	**42.03**	**68**	eLR		LR	LR	13 13 07.3	
	comp=Z,1μm,28.7s								
AS31	**Alice Springs**	**42.27**	**267**				**P**	**13 01 45.9**	**+0.1**
ASAR	**Alice Springs**	**42.27**	**267**	P		P	**P**	**13 01 45.5**	**-0.4**
	comp=Z,4.8nm,0.7s,baz=104,slow=7.3,SNR=47								
ASAR						LR	LR	13 18 51.8	
	comp=Z,2μm,18.3s,baz=114,slow=36								
MANU	**Manus Island**	**42.47**	**305**	P		P	**P**	**13 01 47.2**	**-0.2**
WR0	**Warramunga Arr**	**43.06**	**273**				**P**	**13 01 51.8**	**-0.5**
WR0						IAmb	IAmb	13 01 59.8	
	comp=Z,24nm,1.1s								
WB2	**Warramunga Arr**	**43.23**	**273**				**P**	**13 01 53.6**	**-0.1**
WB2						IAmb	IAmb	13 01 57.9	
	comp=Z,19nm,0.8s								
WRAB	**Tennant Creek**	**43.24**	**273**	P		P	**P**	**13 01 53.4**	**-0.3**
WRAB						IAmb	IAmb	13 01 57.8	
	comp=Z,23nm,1.0s								
WRA	**Warramunga Arr**	**43.24**	**273**	P		P	**P**	**13 01 53.6**	**-0.2**
	comp=Z,8.5nm,0.6s,baz=112,slow=7.4,SNR=52								
WRA						LR	LR	13 18 52.5	
	comp=Z,1μm,18.3s,baz=105,slow=35								
WB0	**Warramunga Arr**	**43.27**	**273**				**P**	**13 01 54.0**	**+0.1**
FORT	**Forrest**	**45.27**	**255**	P		P	**P**	**13 02 10.1**	**+0.3**
JAY	**Jayapura**	**47.07**	**298**	LR		LR	LR	13 20 02.8	
	comp=Z,476nm,21.2s,baz=144,slow=33								
GENI	**Genyem**	**47.44**	**297**	P		P	**P**	**13 02 29.2**	**+2.2**
	comp=Z,6μmcomp=Z,25nm,0.7s								
SBA	**Scott Base**	**48.13**	**184**	P		P	**P**	**13 02 32.9**	**+1.3**
VNDA	**Vanda**	**48.17**	**186**	P		P	**P**	**13 02 31.6**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=9.9,slow=7.5,SNR=5.7								
VNDA						LR	LR	13 18 31.7	
	comp=Z,305nm,21.6s,baz=25,slow=31								
MTN	**Manton Dam**	**49.12**	**279**	P		P	**P**	**13 02 39.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**51.51**	**270**	P		P	**P**	**13 02 58.5**	**+0.4**
	comp=Z,12nm,0.8s,baz=143,slow=7.0,SNR=23								
FITZ						LR	LR	13 23 43.6	
	comp=Z,1μm,19.9s,baz=108,slow=35								
FAKI	**Fak Fak**	**53.49**	**291**	P		P	**P**	**13 03 12.6**	**-0.3**
FAKI	**Fak Fak**	**53.49**	**291**	P		P	**P**	**13 03 12.5**	**-0.3**
	comp=Z,24nm,1.0s								
BNDI	**Banda Naira**	**54.49**	**288**	P		P	**P**	**13 03 21.2**	**+1.1**
	comp=Z,5μmcomp=Z,37nm,1.2s								
SIJI	**Sorong**	**55.49**	**292**	P		P	**P**	**13 03 27.6**	**+0.2**
	comp=Z,19nm,0.9s,baz=313,slow=2.5,SNR=5.7								
SIJI						LR	LR	13 26 52.2	
	comp=Z,536nm,20.6s,baz=124,slow=36								
SOEI	**Soe**	**56.49**	**279**	P		P	**P**	**13 03 35.7**	**+1.0**
	comp=Z,41nm,1.2s								
BATI	**Baumata**	**56.79**	**278**	LR		LR	LR	13 26 58.3	
	comp=Z,1μm,21.1s,baz=152,slow=35								
MMRI	**Maumere**	**58.79**	**279**	P		P	**P**	**13 03 51.3**	**+0.6**
	comp=Z,1μmcomp=Z,59nm,1.1s								
SANI	**Sanana**	**59.11**	**287**	P		P	**P**	**13 03 52.5**	**-0.4**
	comp=Z,16nm,0.8s								
EDFI	**Ende, Flores**	**59.20**	**278**	P		P	**P**	**13 03 53.6**	**-0.1**
	comp=Z,10.0nm,0.7s								
QSPA	**South Pole Qui**	**59.87**	**180**	P		P	**P**	**13 03 57.1**	**-0.4**
	comp=Z,10nm,0.8s,baz=73,slow=1.7,SNR=28								
QSPA	**South Pole Qui**	**59.87**	**180**	P		P	**P**	**13 03 57.2**	**-0.4**
PLAI	**Plampang**	**62.52**	**276**	P		P	**P**	**13 04 16.0**	**-0.2**
	comp=Z,1μmcomp=Z,79nm,0.9s								
GTOI	**Gorontalo**	**63.07**	**288**	P		P	**P**	**13 04 20.2**	**+0.4**
	comp=Z,10nm,0.7s								
TWSI	**Taliwang, Sumb**	**63.33**	**275**	P		P	**P**	**13 04 21.2**	**-0.4**
	comp=Z,2μmcomp=Z,15nm,0.9s								
MAW	**Mawson**	**72.16**	**201**	LR		LR	LR	13 34 45.5	
	comp=Z,396nm,21.4s,baz=105,slow=34								
SBUM	**Sibu**	**73.06**	**283**	P		P	**P**	**13 05 21.9**	**-0.8**
SBUM						IAmb	IAmb	13 05 27.0	
	comp=Z,5.5nm,1.0s								
MJAR	**Matsushiro Arr**	**77.63**	**326**	P		P	**P**	**13 05 47.7**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=156,slow=6.8,SNR=6.9								
MJAR						LR	LR	13 35 04.5	
	comp=Z,233nm,21.8s,baz=135,slow=32								
SNAA	**Sanae**	**78.33**	**179**	P		P	**P**	**13 05 49.8**	**-2.3**
SNAA	**Sanae**	**78.33**	**179**	P		P	**P**	**13 05 50.2**	**-1.8**
SNAA						IAmb	IAmb	13 05 59.2	
	comp=Z,11nm,1.1s								
VNA3	**Neumayer Olymp**	**78.52**	**176**	P		P	**P**	**13 05 51.5**	**-1.5**
VNA2	**Neumayer--Watz**	**78.94**	**177**	P		P	**P**	**13 05 53.9**	**-1.4**
VNA1	**Neumayer--Stat**	**79.18**	**177**	P		P	**P**	**13 05 55.3**	**-1.3**
H03S2	**Juan Fernandez**	**81.26**	**124**	T		T	T	14 35 05.8	
	baz=238,slow=74,SNR=217								
H03S1	**Juan Fernandez**	**81.27**	**124**	T		T	T	14 35 05.3	
	baz=238,slow=74,SNR=255								
H03S3	**Juan Fernandez**	**81.27**	**124**	T		T	T	14 35 04.9	
	baz=238,slow=74,SNR=230								
H03N3	**Juan Fernandez**	**81.45**	**124**	T		T	T	14 35 22.2	
	baz=242,slow=72,SNR=120								
H03N2	**Juan Fernandez**	**81.45**	**124**	T		T	T	14 35 17.5	
	baz=242,slow=72,SNR=169								
H03N1	**Juan Fernandez**	**81.47**	**124**	T		T	T	14 35 18.5	
	baz=242,slow=72,SNR=254								
PLCA	**Paso Flores**	**83.23**	**133**	P		P	**P**	**13 06 18.1**	**-0.7**
	comp=Z,5.0nm,1.0s,baz=257,slow=3.3,SNR=5.3								
PLCA						LR	LR	13 34 13.1	
	comp=Z,339nm,20.8s,baz=216,slow=29								
PLCA	**Paso Flores**	**83.23**	**133**			IAmb	IAmb	13 06 29.7	
	comp=Z,4.3nm,0.9s								
KSRS	**Korea Array**	**83.68**	**320**	LR		LR	LR	13 39 58.6	
	comp=Z,143nm,18.4s,baz=152,slow=33								
PETK	**Petropavlovsk-**	**85.45**	**346**	P		P	**P**	**13 06 29.6**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=122,slow=6.1,SNR=14								
PETK						LR	LR	13 38 19.5	
	comp=Z,380nm,21.7s,baz=172,slow=31								
USRK	**Ussuriysk Ar.**	**86.56**	**327**	P		P	**P**	**13 06 35.3**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=124,slow=5.1,SNR=9.8								
USRK						LR	LR	13 39 34.4	
	comp=Z,242nm,21.6s,baz=135,slow=32								
DL2	**Dalian**	**88.26**	**318**	*e*P		P		13 06 50.9	+7.5
DL2	**Dalian**	**88.26**	**318**	S		S		13 17 40.4	+12
DL2						pmax	pmax		
	comp=Z,72nm,1.8s								
DL2						LR	LR		
	comp=N,840nm,20.4s								
DL2						LR	LR		
	comp=E,660nm,19.2s								
DL2						LR	LR		
	comp=Z,620nm,25.5s								
NVAR	**Mina Array Bea**	**88.70**	**43**	P		P	**P**	**13 06 46.0**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=220,slow=7.8,SNR=9.6								
NVAR						LR	LR	13 41 15.8	
	comp=Z,194nm,18.1s,baz=268,slow=32								
CN2	**Changchun**	**89.51**	**323**	*e*P		P	**P**	**13 06 51.2**	**+2.1**
CN2						pmax	pmax		
	comp=Z,10.0nm,0.8s								
TUC	**Tucson**	**89.68**	**52**	P		P	**P**	**13 06 51.6**	**+1.2**
TUC						IAmb	IAmb	13 06 59.9	
	comp=Z,2.8nm,0.9s								
CMAR	**Chiang Mai Arr**	**92.55**	**290**	P		P	**P**	**13 07 03.4**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=132,slow=3.1,SNR=5.9								
CMAR						LR	LR	13 52 15.2	
	comp=Z,106nm,18.6s,baz=192,slow=38								
KMI	**Kunming**	**93.00**	**297**	⇑P		P	**P**	**13 07 06.8**	**+0.7**
KMI						pP	pwP	13 07 43.5	+32
KMI						pmax	pmax		
	comp=Z,10.0nm,0.6s								
KMI						pmax	pmax		
	comp=Z,160nm,5.9s								
TXAR	**Lajitas Array**	**93.02**	**58**	P		**P**		**13 07 06.0**	**0.0**
	comp=Z,0.1nm,0.6s,baz=56,slow=34,SNR=1.5								
TXAR						LR	LR	13 44 34.8	
	comp=Z,91nm,18.0s,baz=0.0,slow=33								
PDAR	**Pinedale Array**	**96.61**	**44**	P		**P**		**13 07 22.7**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=248,slow=4.8,SNR=2.5								
BOZ	**Bozeman (W)**	**97.06**	**41**	P		P		13 07 18.9	-5.2
BOZ						IAmb	IAmb	13 07 23.4	
	comp=Z,1.9nm,1.0s								
ILAR	**Eielson Array**	**97.96**	**13**	LR		LR	LR	13 45 09.2	
	comp=Z,179nm,20.8s,baz=231,slow=31								
LPAZ	**La Paz**	**98.98**	**115**	LR		LR	LR	13 45 05.0	
	comp=Z,123nm,19.5s,baz=234,slow=31								
MKAR	**Makanchi Array**	**117.02**	**310**	PKP		**PKPdf**		**13 12 34.7**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=239,slow=3.7,SNR=5.7								
ZALV	**Zalesovo Beam**	**117.35**	**319**	PKP		**PKPdf**		**13 12 34.6**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=113,slow=3.3,SNR=1.9								
ARCES	**ARCESS Array B**	**138.25**	**347**	PKhKP		PKPpre		13 13 08.6	
	comp=Z,5.8nm,1.2s,baz=32,slow=4.7,SNR=3.9								
GEVA	**Gevas**	**144.59**	**295**	PKPdf		**PKPab**		**13 13 27.6**	**0.0**
FINES	**FINESS Array B**	**144.70**	**339**	PKP		**PKPab**		**13 13 25.4**	**-1.5**
	comp=Z,9.6nm,0.5s,baz=55,slow=3.4,SNR=91								
MARD	**Mardin**	**146.40**	**293**	PKPbc		**PKPdf**		**13 13 32.2**	**+0.1**
NOA	**NORSAR Array B**	**148.46**	**351**	PKPbc		**PKPbc**		**13 13 37.0**	**-1.2**
	comp=Z,2.6nm,0.6s,baz=15,slow=4.2,SNR=16								
NACGM	**Naroch**	**149.23**	**331**	*i* PKP		**PKiKP**		**13 13 41.2**	**-0.2**
NACGM				*i* PKP		**PKiKP**		**13 13 41.2**	**-0.2**
NACGM				*i* PKP		**pPKPbc**		**13 13 41.7**	**-1.2**
NACGM				*i* PP		PP		13 16 47.1	-25
NACGM				*i* PPP		PPP		13 20 58.9	
NACGM				*i* SKS				13 22 04.6	
NACGM				*i* SKKS				13 25 31.9	
NACGM				*i* PS				13 28 53.3	
NACGM				*i* SS		SS		13 37 02.4	+38
NACGM				*i* SSS		SSS		13 42 18.0	
NACGM				*i* LR		LR		14 02 39.1	
AKASG	**Malin Array Be**	**150.66**	**322**	PKPbc		**PKPbc**		**13 13 43.2**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=52,slow=2.8,SNR=18								
BRTR	**Keskin Array B**	**151.78**	**298**	PKPbc		**PKiKP**		**13 13 47.3**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=90,slow=2.5,SNR=6.6								
TORD	**Torodi Ar. Bea**	**162.98**	**182**	PKP		**PKPdf**		**13 13 55.1**	**-0.1**
	comp=Z,2.6nm,1.1s,baz=201,slow=1.1,SNR=7.0								
TORD				PKPab		**PKPab**		**13 14 42.9**	**-1.5**
	comp=Z,6.4nm,0.8s,baz=178,slow=3.6,SNR=20								
ESDC	**Sonseca Array**	**169.74**	**22**	PKP		**PKPdf**		**13 14 00.3**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=50,slow=2.5,SNR=5.1								

WEL 02 12:55:39.2,40.˚3S±0.˚9×17.˚6E±˚,h29km±2km,M3.3/15, ML3.6/15,MLv3.3/15,Error ellipse: s-maj=0.0km s-min=0.0km az=56.8,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVHZ	**Dannevirke**	**0.16**	**262**			P	Pb	12 55 45.1	+0.2
DVHZ						S	Sb	12 55 49.7	+0.9
ANWZ	**Angora Road**	**0.20**	**157**			P	Pn	12 55 45.8	-0.5
ANWZ						S	Sb	12 55 51.2	+1.9
PRHZ	**Porangahau**	**0.20**	**87**			P	Pb	12 55 45.5	+0.2
PRHZ						S	Sb	12 55 50.8	+1.4
WPHZ	**Waipukurau**	**0.22**	**13**			P	Pb	12 55 45.8	+0.3
WPHZ						S	Sb	12 55 51.1	+1.3
TSZ	**Takapari Road**	**0.39**	**304**			P	Pb	12 55 48.0	+0.2
TSZ						S	Sn	12 55 54.6	-0.7
PNPZ	**Pukenui**	**0.39**	**340**			P	Pb	12 55 48.0	+0.1
PNPZ						S	Sn	12 55 55.0	-0.5
PRWZ	**Pori Road**	**0.41**	**228**			P	Pn	12 55 49.1	-0.2
PRWZ						S	Sn	12 55 57.0	+0.9
BFZ	**Birch Farm**	**0.42**	**194**			P	Pb	12 55 48.7	+0.4
PXZ	**Pawanui**	**0.45**	**57**			P	Pb	12 55 49.1	+0.3
PXZ						S	Sn	12 55 57.2	+0.4
POWZ	**Post Office Ro**	**0.48**	**256**			P	Pn	12 55 49.9	-0.3
KAHZ	**Kahuranaki**	**0.62**	**39**			P	Pb	12 55 51.8	+0.3
TIWZ	**Tintock**	**0.62**	**217**			P	Pn	12 55 52.0	-0.2
TIWZ						S	Sn	12 56 01.9	+0.7
KRHZ	**Kereru**	**0.63**	**360**			P	Pb	12 55 51.7	-0.1
KRHZ						S	Sn	12 56 01.8	+0.3
CPWZ	**Castlepoint**	**0.65**	**192**			P	Pn	12 55 52.7	+0.2
MRZ	**Mangatainoka R**	**0.72**	**238**			P	Pb	12 55 53.2	-0.1
MRZ						S	Sn	12 56 04.2	+0.6
OHWZ	**Ohakea**	**0.81**	**275**			P	Pb	12 55 56.1	+1.3
CKHZ	**Cape Kidnapper**	**0.82**	**41**			P	Pn	12 55 54.0	-0.9
BHHZ	**Black Hill Sta**	**0.82**	**343**			P	Pn	12 55 54.8	-0.2
KWHZ	**Kaweka Forest**	**0.85**	**2**			P	Pn	12 55 55.3	0.0
MCHZ	**McNeill Hill**	**0.87**	**17**			P	Pn	12 55 54.7	-0.8
HOWZ	**Holdsworth Sta**	**0.90**	**226**			P	Pn	12 55 55.4	-0.6
TMWZ	**Te Maipa**	**0.91**	**204**			P	Pn	12 55 55.4	-0.7
MOVZ	**Moawhango**	**0.99**	**331**			P	Pb	12 55 57.7	-0.2
OGWZ	**Otaki Gorge**	**1.06**	**239**			P	Pn	12 55 58.0	-0.2
MTW	**Mount Morrison**	**1.10**	**217**			P	Pn	12 55 57.6	-1.1
BKZ	**Black Stump Fm**	**1.11**	**5**			P	Pn	12 55 58.7	-0.2
ARHZ	**Aropaoanui**	**1.12**	**25**			P	Pn	12 55 58.8	-0.2
WNVZ	**Wahianoa**	**1.12**	**327**			P	Pb	12 55

BARC	**Barichara**	**0.22**	**190**⇑	*iP*	Pn	13 00 46.7	-0.2	
BARC				*eS*	Sn	13 01 01.3	-0.8	
BARC				*i*		13 01 02.5		
	comp=Z,825nm,0.2s							
BRRC	**Barranca, Sant**	**0.64**	**298**⇑	*iP*	Pn	13 00 48.7	+0.2	
BRRC				*eS*	Sn	13 01 05.4	+0.6	
BRRC				*i*		13 01 05.9		
	comp=Z,342nm,0.1s							
PAMC	**Pamplona, Colo**	**0.69**	**40**⇓	*iP*	Pn	13 00 49.7	+0.3	
PAMC				*eS*	Sn	13 01 06.6	+0.2	
PAMC				*i*		13 01 09.0		
	comp=Z,470nm,0.6s							
RUSC	**La Rusia**	**0.91**	**176**⇑	*eP*	Pn	13 00 50.7	-0.4	
RUSC				*eS*	Sn	13 01 08.4	-1.0	
RUSC				*i*		13 01 10.7		
	comp=Z,314nm,0.4s							
PTBC	**PUERTO BERRIO,**	**1.33**	**259**⇑	*iP*	Pn	13 00 53.2	-1.1	
PTBC				*eS*	Sn	13 01 14.2	-1.0	
PTBC				*i*		13 01 17.1		
	comp=Z,317nm,0.2s							
TAMC	**Tame, Arauca**	**1.39**	**105**⇓	*iP*	Pn	13 00 55.1	+0.2	
TAMC				*eS*	Sn	13 01 15.7	-0.7	
OCAC	**Ocana**	**1.43**	**353**	*eP*	Pn	13 00 55.2	-0.4	
OCAC				*eS*	Sn	13 01 16.9	-0.6	
OCAC				*i*		13 01 21.8		
	comp=Z,402nm,0.4s							
SPBC	**San Pablo de B**	**1.47**	**219**⇑	*iP*	Pn	13 00 55.6	-0.3	
SPBC				*eS*	Sn	13 01 17.7	-0.3	
SPBC				*i*		13 01 21.6		
	comp=Z,194nm,0.1s							
ZARC	**Zaragoza, Cauc**	**1.83**	**292**	*eP*	Pn	13 00 59.6	-0.1	
ZARC				*eS*	Sn	13 01 25.2	+0.3	
ZARC				*i*		13 01 28.0		
	comp=Z,201nm,0.5s							
NORC	**Norcasia**	**2.12**	**234**	*eP*	Pn	13 01 02.5	-0.7	
NORC				*eS*	Sn	13 01 30.5	-0.5	
NORC				*i*		13 01 35.0		
	comp=Z,77nm,0.2s							
SMLC	**San Martn de**	**2.18**	**335**	*eP*	Pn	13 01 03.3	-0.6	
SMLC				*eS*	Sn	13 01 31.6	-0.8	
SMLC				*i*		13 01 35.9		
	comp=Z,176nm,0.3s							
ROSC	**El Rosal**	**2.28**	**211**	*eP*	Pn	13 01 06.3	+0.8	
ROSC				*eS*	Sn	13 01 35.0	-0.1	
ROSC				*i*		13 01 42.8		
	comp=Z,126nm,0.6s							
HELC	**Santa Helena**	**2.45**	**256**	*eP*	Pn	13 01 07.2	-0.3	
HELC				*eS*	Sn	13 01 37.5	-1.2	
HELC				*i*		13 01 45.7		
	comp=Z,107nm,0.3s							
UREC	**San Jos de Ur**	**2.55**	**292**	*eP*	Pn	13 01 07.3	-1.1	
UREC				*eS*	Sn	13 01 39.0	-1.3	
UREC				*i*		13 01 42.6		
	comp=Z,168nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*eP*	Pn	13 01 11.4	+0.5	
GUY2C				*eS*	Sn	13 01 45.4	+0.6	
GUY2C				*i*		13 01 51.9		
	comp=Z,92nm,0.3s							
VILC	**Villavicencio,**	**2.73**	**192**	*eP*	Pn	13 01 10.6	-0.3	
VILC				*eS*	Sn	13 01 44.0	-0.8	
VILC				*i*		13 01 50.5		
	comp=Z,80nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.78**	**159**	*eP*	Pn	13 01 11.1	-0.2	
PTGC				*eS*	Sn	13 01 42.9	-2.7	
PTGC				*i*		13 01 45.0		
	comp=Z,74nm,0.4s							
RREF	**El Recreo**	**2.90**	**229**	*eP*	Pn	13 01 13.3	-0.1	
RREF				*eS*	Sn	13 01 49.3	+0.1	
RREF				*i*		13 01 55.7		
	comp=N,111nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.00**	**252**	*eP*	Pn	13 01 14.8	+0.6	
CBOC				*eS*	Sn	13 01 49.9	-1.0	
CBOC				*i*		13 01 54.5		
	comp=Z,38nm,0.2s							
DBBC	**Dabeiba**	**3.05**	**274**	*eP*	Pn	13 01 15.0	+0.2	
DBBC				*eS*	Sn	13 01 50.7	-1.1	
MOTC	**Monteria, Cord**	**3.17**	**308**	*eP*	Pn	13 01 14.7	-1.6	
MOTC				*eS*	Sn	13 01 53.5	-1.0	
MOTC				*i*		13 01 54.5		
	comp=Z,51nm,0.2s							
SDV	**Santo Domingo**	**3.23**	**50**	*eP*	Pn	13 01 16.8	-0.4	
SDV				*eS*	Sn	13 01 54.1	-2.0	
SDV				*i*		13 01 58.8		
	comp=Z,65nm,0.5s							
ORTC	**Ortega, Tolima**	**3.56**	**216**	*eP*	Pn	13 01 21.7	+0.4	
ORTC				*eS*	Sn	13 02 03.2	-0.4	
ORTC				*i*		13 02 08.5		
	comp=Z,42nm,0.6s							
SJCC	**San Jacinto, C**	**3.67**	**327**	*eP*	Pn	13 01 21.7	-1.1	
SJCC				*eS*	Sn	13 02 03.3	-2.9	
SJCC				*i*		13 02 06.7		
	comp=Z,28nm,0.5s							
YOTC	**Yotoco, Valle**	**4.25**	**229**	*eP*	Pn	13 01 29.7	-0.7	
YOTC				*eS*	Sn	13 02 19.2	-0.6	
MACC	**Macarena, Meta**	**4.69**	**189**	*eP*	Pn	13 01 32.5	-3.7	
MACC				*eS*	Sn	13 02 23.5	-6.5	
MARP	**Paez Belalcaza**	**4.83**	**216**	*eP*	Pn	13 01 37.9	-0.5	
GARC	**Garzon, Huila**	**5.15**	**207**	*eP*	Pn	13 02 42.1	-0.5	
GARC				*eS*	Sn	13 02 34.8	-6.7	
GARC				*i*		13 02 46.5		
	comp=Z,14nm,0.2s							
POPC	**Popayan, Colom**	**5.51**	**220**	*eP*	Pn	13 01 46.6	-0.7	
POPC				*eS*	Sn	13 02 48.9	-1.1	
BBAC	**Balboa, Cauca**	**6.27**	**221**	*eP*	Pn	13 01 57.5	+0.1	

IDC 02 13:09:59.5±2.8, 6°38S×130°37E, h98km±38km, mb3.4/1, mb1 3.6/5, mb1mx3.3/44, mbtmp3.8/5, MS4.2/1, Ms1 4.2/1, ms1mx3.0/25, Error ellipse: s-maj=72.9km s-min=21.7km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.55**	**9**	P	Pn	13 11 19.9	+0.1
	4.6nm,0.3s,baz=275,slow=22,SNR=26						
SIJI				S	Sn	13 12 16.9	-5.3
	8.2nm,0.3s,baz=277,slow=23,SNR=20						
FITZ	**Fitzroy Crossi**	**12.53**	**201**	P	Pn	13 12 54.8	+0.4
	0.1nm,0.3s,baz=23,slow=11,SNR=14						
WRA	**Warramunga Arr**	**14.02**	**164**	P	Pn	13 13 12.2	-1.7
	0.5nm,0.3s,baz=347,slow=13,SNR=30						
WRA				S	Sn	13 15 41.5	-6.8
	0.6nm,0.3s,baz=337,slow=23,SNR=8.6						
ASAR	**Alice Springs**	**17.52**	**169**	P	Pn	13 13 58.2	+0.5
	0.3nm,0.3s,baz=346,slow=9.5,SNR=40						
JCJ	**Chichijima**	**35.19**	**18**	LR	LR	13 29 19.1	
	comp=Z,344nm,20.4s,baz=136,slow=33						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	13 20 47.8	0.0
	0.7nm,0.7s,baz=119,slow=8.1,SNR=6.7						

*IDC **02** 13:15:02.8±1.0, 59°.48N×154°.09W, h99km±12km, mb3.8/17, mb1 3.9/20, mb1mx3.7/54, mbtmp4.1/20, MS4.2/1, Ms1 4.2/1, ms1mx2.7/37, Error ellipse: s-maj=11.9km s-min=10.7km az=56.0*

*NEIC **02** 13:15:04.5±1.4, 59°.38N±0°.05×153°.92W±0°.09, h127km±3km, Error ellipse: s-maj=7.0km s-min=6.5km az=139.0*

*AEIC **02** 13:15:05±1.8, 59°.34N±0°.04×153°.86W±0°.10, h124km±3km, ML4.3, mb4.2/3(NEIC), ML4.5/72(NEIC), Error ellipse: s-maj=8.3km s-min=4.0km az=126.0*

ISC 02 13:15:04.9±0.6, 59°.39N±0°.04×153°.88W±0°.04, h126km±5km, n185, σ0.97/201, mb4.2/19, 1D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUW	**Augustine West**	**0.21**	**96**		**Pn**	**13 15 22.5**	**+0.2**
AUW					**Sn**	**13 15 34.9**	**-0.5**
AUCH	**Augustine Cone**	**0.23**	**97**		**Pn**	**13 15 22.5**	**+0.1**
AUCH					**Sn**	**13 15 35.6**	**+0.1**
AUH	**Augustine H**	**0.23**	**97**		**Pn**	**13 15 22.6**	**+0.2**
AUH					**Sn**	**13 15 34.9**	**-0.7**
AUL	**Augustine Lava**	**0.23**	**92**		**Pn**	**13 15 22.5**	**+0.2**
AUL					**Sn**	**13 15 35.7**	**+0.3**
AU22	**Augustine Moun**	**0.27**	**94**		**Pn**	**13 15 22.6**	**+0.2**
AU22					**Sn**	**13 15 35.9**	**+0.4**
OPT	**Oil Point**	**0.42**	**51**		**Pn**	**13 15 23.4**	**+0.3**
OPT					**Sn**	**13 15 36.6**	**-0.2**
ILS	**Iliamna Low So**	**0.70**	**36**		**Pn**	**13 15 25.0**	**+0.1**
IVE	**Iliamna Volcan**	**0.77**	**35**		**Pn**	**13 15 25.5**	**0.0**
IVE					**Sn**	**13 15 41.0**	**-0.1**

KARR	**Katmai Rainbow**	**0.99**	**206**			**Pn**	**13 15 27.0**	**-0.4**
HOM	**Homer**	**1.17**	**76**			**Pn**	**13 15 30.0**	**+0.9**
HOM					Sn	**Sn**	**13 15 48.4**	**+0.9**
HOM	**Homer**	**1.17**	**76**		P		13 15 29.5	
	baz=255,SNR=36							
RED	**Redoubt Volcan**	**1.17**	**28**			**Pn**	**13 15 29.1**	**-0.1**
RED						**Sn**	**13 15 47.7**	**0.0**
RSO	**Redoubt South**	**1.21**	**27**		Pn	**Pn**	**13 15 30.0**	**+0.2**
KVTA	**Katmai Vly 10**	**1.25**	**217**			**Pn**	**13 15 29.5**	**-0.5**
NCT	**North Crescent**	**1.27**	**22**			**Pn**	**13 15 30.3**	**+0.1**
KABU	**Katmai Buttres**	**1.34**	**214**			**Pn**	**13 15 30.6**	**-0.5**
KABU						**Sn**	**13 15 50.2**	**-0.6**
DFR	**Drift River**	**1.34**	**26**			**Pn**	**13 15 31.3**	**+0.7**
DFR						**Sn**	**13 15 51.7**	**+0.7**
CNPM	**China Poot**	**1.36**	**83**			**Pn**	**13 15 31.1**	**0.0**
CNPM	**China Poot**	**1.36**	**83**		Sn	**Sn**	**13 15 51.0**	**0.0**
CNPM					IAML		13 15 51.9	
	comp=E,4μm,0.5s							
CNPM					IAML		13 15 52.0	
	comp=N,6μm,0.6s							
ACHA	**Angle Creek He**	**1.40**	**213**			**Pn**	**13 15 31.2**	**-0.5**
CAHL	**Cahill**	**1.54**	**210**			**Pn**	**13 15 32.8**	**-0.4**
BRLK	**Bradley Lake**	**1.57**	**75**			**Pn**	**13 15 33.2**	**-0.3**
BRLK					Sn	**Sn**	**13 15 54.2**	**-1.1**
BRLK					IAML		13 15 55.2	
	comp=N,5μm,0.6s							
BRLK					IAML		13 15 56.1	
	comp=E,3μm,0.5s							
KJL	**Kejulik**	**1.61**	**214**			**Pn**	**13 15 33.7**	**-0.3**
BRSE	**Bradley Lake S**	**1.64**	**76**			**Pn**	**13 15 34.0**	**-0.3**
KDAK	**Kodiak Island**	**1.75**	**157**		P	**Pn**	**13 15 34.5**	**-1.0**
	comp=E,264nm,0.3s,baz=35,slow=8.3,SNR=1819							
KDAK					S	**Sn**	**13 15 56.4**	**-2.6**
	comp=E,94nm,0.3s,baz=219,slow=20,SNR=4.8							
KDAK					LR	LR	13 16 35.1	
	comp=E,90nm,21.8s,baz=328,slow=49							
KDAK	**Kodiak Island**	**1.75**	**157**		Pn	**Pn**	**13 15 34.6**	**-1.0**
KDAK	**Kodiak Island**	**1.75**	**157**			**Sn**	**13 15 56.8**	**-2.3**
SVW2	**Sparrevohn**	**1.91**	**334**		Pn	**Pn**	**13 15 37.5**	**0.0**
CAPN	**Captain Cook N**	**1.94**	**44**			**Pn**	**13 15 39.6**	**+1.7**
CAPN					IAML		13 16 07.6	
	comp=N,4μm,0.6s							
CAPN					IAML		13 16 08.3	
	comp=E,4μm,0.6s							
SPCR	**Spurr Chakacha**	**2.00**	**24**			**Pn**	**13 15 39.0**	**+0.4**
SPCR						**Sn**	**13 16 04.2**	**-0.3**
SPCR	**Spurr Chakacha**	**2.00**	**24**		P		13 15 39.2	
	baz=204,SNR=373							
SPCP	**Crater Peak Br**	**2.07**	**24**			**Pn**	**13 15 40.2**	**+0.6**
CRP	**Crater Peak**	**2.07**	**24**			**Pn**	**13 15 40.2**	**+0.6**
CRP						**Sn**	**13 16 06.6**	**+0.4**
PLK3	**Peulik 3**	**2.12**	**217**			**Pn**	**13 15 40.0**	**-0.1**
PLK1	**Peulik 1**	**2.14**	**223**			**Pn**	**13 15 40.1**	**-0.2**
SLKM	**Skilak Lake**	**2.15**	**57**			**Pn**	**13 15 40.7**	**+0.2**
SLKM						**Sn**	**13 16 06.9**	**-0.9**
OHAK	**Old Harbor**	**2.20**	**172**		Pn	**Pn**	**13 15 39.5**	**-1.5**
OHAK					IAML		13 16 07.8	
	comp=E,2μm,0.7s							
OHAK					IAML		13 16 08.1	
	comp=N,2μm,0.6s							
OHAK	**Old Harbor**	**2.20**	**172**		P		13 15 39.8	
	baz=352,SNR=25							
STLK	**Strandline Lak**	**2.34**	**25**			**Pn**	**13 15 43.4**	**+0.4**
O22K	**Cooper Landing**	**2.36**	**61**			**Pn**	**13 15 43.7**	**+0.7**
O22K	**Cooper Landing**	**2.36**	**61**		P		13 15 43.5	
	baz=243,SNR=34							
FIS	**Fire Island**	**2.53**	**44**			**Pn**	**13 15 46.4**	**+1.1**
FIS					IAML		13 16 21.8	
	comp=E,2μm,0.3s							
FIS					IAML		13 16 25.2	
	comp=N,3μm,0.4s							
FIS	**Fire Island**	**2.53**	**44**			**Sn**	**13 16 17.0**	**+0.7**
SUA	**Susitna One**	**2.59**	**35**		Pn	**Pn**	**13 15 46.5**	**+0.3**
SUA					IAML		13 16 19.9	
	comp=E,2μm,0.6s							
SUA					IAML		13 16 20.2	
	comp=N,1μm,0.8s							
SUA	**Susitna One**	**2.59**	**35**		P		13 15 46.7	
	baz=217,SNR=370							
RC01	**Rabbit Creek A**	**2.68**	**49**			**Pn**	**13 15 47.0**	**-0.1**
RC01	**Rabbit Creek A**	**2.68**	**49**		P		13 15 47.5	
	baz=231,SNR=93							
SKT	**Skwentna**	**2.84**	**23**			**Pn**	**13 15 49.8**	**+0.5**
SKT	**Skwentna**	**2.84**	**23**		P		13 15 49.9	
	baz=204,SNR=56							
SII	**Sitkinak Islan**	**2.85**	**183**			**Pn**	**13 15 48.0**	**-1.4**
SII					IAML		13 16 21.7	
	comp=E,2μm,0.7s							
SII					IAML		13 16 23.0	
	comp=N,2μm,0.7s							
SII	**Sitkinak Islan**	**2.85**	**183**		P		13 15 48.2	
	baz=3.5,SNR=11							
PWL	**Port Wells**	**3.14**	**60**		Pn	**Pn**	**13 15 52.7**	**-0.5**
PMR	**Palmer**	**3.22**	**45**		Pn	**Pn**	**13 15 53.5**	**-0.7**
PMR					IAML		13 16 30.7	
	comp=E,592nm,0.4s							
PMR					IAML		13 16 33.6	
	comp=N,677nm,0.3s							
PMR	**Palmer**	**3.22**	**45**		P		13 15 53.2	
	baz=228,SNR=76							
KNK	**Knik Glacier**	**3.37**	**51**			**Pn**	**13 15 55.8**	**-0.3**
GHO	**Glory Hole Cre**	**3.42**	**44**			**Pn**	**13 15 56.3**	**-0.6**
GHO					IAML		13 16 37.4	
	comp=N,1μm,0.4s							
GHO					IAML		13 16 38.3	
	comp=E,1μm,0.5s							
CUT	**Chulitna**	**3.50**	**29**			**Pn**	**13 15 57.9**	**+0.1**
CUT					IAML		13 16 40.6	
	comp=N,905nm,0.5s							
CUT					IAML		13 16 41.2	
	comp=E,821nm,0.3s							
CUT	**Chulitna**	**3.50**	**29**		P		13 15 58.2	
	baz=211,SNR=56							
PPLA	**Purkeypile**	**3.61**	**12**		Pn	**Pn**	**13 16 00.8**	**+1.4**
PPLA	**Purkeypile**	**3.61**	**12**		P		13 16 00.6	
	baz=194,SNR=109							
SML	**Sawmill**	**3.65**	**46**		Pn	**Pn**	**13 15 59.2**	**-0.8**
SML					IAML		13 16 42.1	
	comp=E,635nm,0.8s							
SML					IAML		13 16 42.4	
	comp=N,768nm,0.6s							
SML	**Sawmill**	**3.65**	**46**		P		13 15 58.9	
	baz=230,SNR=35							
TT01	**Tatalina**	**3.68**	**345**			**Pn**	**13 16 00.2**	**0.0**
GLI	**Glacier Island**	**3.71**	**63**			**Pn**	**13 16 00.5**	**-0.1**
GLI					IAML		13 16 43.2	
	comp=N,878nm,0.7s							
Q23K	**Middleton Isla**	**3.85**	**86**			**Pn**	**13 16 02.1**	**-0.4**
Q23K	**Middleton Isla**	**3.85**	**86**		IAML		13 16 48.5	
Q23K	comp=N,1μm,0.7s				IAML		13 16 50.0	
	comp=E,691nm,0.4s							
MID	**Middleton Isla**	**3.85**	**86**			**Pn**	**13 16 02.0**	**-0.5**
MID	**Middleton Isla**	**3.85**	**86**		IAML		13 16 48.4	
MID	comp=N,1μm,0.7s				IAML		13 16 49.7	
	comp=E,704nm,0.6s							
CHGN	**Chignik**	**3.93**	**220**			**Pn**	**13 16 03.0**	**-0.6**
CHGN	**Chignik**	**3.93**	**220**		P		13 16 03.1	
	baz=37,SNR=18							
FID	**Port Fidalgo**	**3.95**	**67**		Pn	**Pn**	**13 16 03.1**	**-0.8**
SCM	**Sheep Creek Mo**	**4.05**	**50**			**Pn**	**13 16 04.8**	**-0.5**
SCM					IAML		13 16 57.4	
	comp=N,615nm,0.7s							
VMT	**TAPS Tl Valdez**	**4.11**	**62**			**Pn**	**13 16 05.7**	**-0.3**
HUR	**Hurricane**	**4.14**	**28**			**Pn**	**13 16 05.8**	**-0.6**
WAT7	**Susitna Watana**	**4.23**	**33**			**Pn**	**13 16 07.1**	**-0.5**
EYAK	**Cordova Ski Ar**	**4.25**	**71**			**Pn**	**13 16 08.0**	**+0.3**
WAT1	**Susitna Watana**	**4.31**	**35**			**Pn**	**13 16 08.0**	**-0.6**
WAT6	**Susitna Watana**	**4.38**	**40**			**Pn**	**13 16 08.7**	**-1.0**
WAT6	**Susitna Watana**	**4.38**	**40**		P		13 16 08.8	
	baz=225,SNR=74							
DIV	**Divide**	**4.40**	**63**			**Pn**	**13 16 09.5**	**-0.4**
WAT2	**Susitna Watana**	**4.40**	**33**			**Pn**	**13 16 09.2**	**-0.8**
WAT2	**Susitna Watana**	**4.40**	**33**		P		13 16 09.3	
	baz=217,SNR=102							
KTH	**Kantishna Hill**	**4.41**	**17**			**Pn**	**13 16 10.2**	**+0.2**
TRF	**Thorofare Moun**	**4.42**	**21**			**Pn**	**13 16 10.2**	**0.0**
TRF					IAML		13 17 03.2	
	comp=N,323nm,0.6s							
TRF	**Thorofare Moun**	**4.42**	**21**		P		13 16 10.1	
	baz=204,SNR=60							
KLU	**Klutina**	**4.47**	**58**			**Pn**	**13 16 10.4**	**-0.4**
KLU	**Klutina**	**4.47**	**58**		P		13 16 10.3	
	baz=245,SNR=113							

CHUM	**Lake Minchumin**	**4.57**	**9**		P		13 16 12.7	
	baz=190,SNR=117							
M24K	**Tolsona, Glenn**	**4.66**	**51**			**Pn**	**13 16 13.4**	**+0.1**
M24K					IAML		13 17 09.9	
	comp=E,617nm,0.7s							
M24K	**Tolsona, Glenn**	**4.66**	**51**		P		13 16 13.1	
	baz=237,SNR=59							
RND	**Reindeer**	**4.70**	**29**		Pn	**Pn**	**13 16 13.3**	**-0.5**
RAGM	**Ragged Mountai**	**4.74**	**74**			**Pn**	**13 16 14.6**	**+0.1**
GOAT	**Goat Mountain**	**4.75**	**72**			**Pn**	**13 16 14.1**	**-0.5**
PS12	**TAPS Pump St12**	**4.80**	**60**			**Pn**	**13 16 15.1**	**-0.2**
BMRM	**Bremner River**	**4.89**	**67**			**Pn**	**13 16 16.6**	**+0.2**
BMRM	**Bremner River**	**4.89**	**67**		P		13 16 16.2	
	baz=255,SNR=12							
BPAW	**Bear Paw Mtn.**	**4.92**	**15**		Pn	**Pn**	**13 16 16.5**	**-0.2**
BPAW	**Bear Paw Mtn.**	**4.92**	**15**		P		13 16 16.7	
	baz=197,SNR=114							
PS11	**TAPS Pump St11**	**4.93**	**53**			**Pn**	**13 16 16.5**	**-0.3**
HMT	**Hamilton**	**4.94**	**75**			**Pn**	**13 16 17.2**	**+0.1**
MCK	**McKinley**	**4.95**	**26**			**Pn**	**13 16 17.2**	**0.0**
MCK	**McKinley**	**4.95**	**26**		P		13 16 16.9	
	baz=210,SNR=49							
N25K	**Chitina, Valde**	**5.10**	**60**		Pn	**Pn**	**13 16 19.0**	**-0.2**
N25K					IAML		13 17 17.9	
	comp=N,413nm,0.3s							
N25K	**Chitina, Valde**	**5.10**	**60**		P		13 16 19.0	
	baz=248,SNR=72							
BWN	**Browne**	**5.23**	**22**			**Pn**	**13 16 20.9**	**0.0**
GLB	**Gilahina Butte**	**5.40**	**63**		Pn	**Pn**	**13 16 22.9**	**-0.3**
SDPT	**Sand Point**	**5.40**	**224**			**Pn**	**13 16 21.9**	**-1.3**
GRIN	**Grindle Hills**	**5.40**	**76**			**Pn**	**13 16 22.9**	**-0.3**
PAX	**Paxson**	**5.42**	**45**			**Pn**	**13 16 23.3**	**-0.3**
PAX	**Paxson**	**5.42**	**45**		P		13 16 23.1	
	baz=232,SNR=61							
KHIT	**Khitrov Hills**	**5.45**	**74**			**Pn**	**13 16 23.7**	**-0.3**
VRDI	**Verde Repeater**	**5.50**	**66**			**Pn**	**13 16 24.9**	**+0.1**
CRQM	**Cirque**	**5.55**	**71**			**Pn**	**13 16 25.6**	**+0.2**
SNH	**Sunshine Point**	**5.63**	**77**			**Pn**	**13 16 26.9**	**+0.5**
NEA2	**Nenana**	**5.69**	**21**			**Pn**	**13 16 26.2**	**-0.9**
NEA2	**Nenana**	**5.69**	**21**		P		13 16 26.1	
	baz=205,SNR=53							
KULT	**Kultieth River**	**5.70**	**77**			**Pn**	**13 16 27.5**	**+0.2**
MCARA	**McCarthy VSAT**	**5.74**	**65**			**Pn**	**13 16 28.3**	**+0.5**
WRH	**Wood River Hil**	**5.78**	**26**			**Pn**	**13 16 27.5**	**-0.8**
MLY	**Manley**	**5.85**	**13**		Pn	**Pn**	**13 16 28.5**	**-0.7**
MLY	**Manley**	**5.85**	**13**		P		13 16 28.5	
	baz=196,SNR=72							
PS4A	**Pavlof South-4**	**5.92**	**230**			**Pn**	**13 16 29.7**	**-0.5**
KIAG	**Kiagna River**	**5.96**	**70**			**Pn**	**13 16 31.0**	**+0.2**
PTPK	**Patty Peak**	**5.96**	**68**			**Pn**	**13 16 31.5**	**+0.6**
BALM	**Baldy**	**5.98**	**69**			**Pn**	**13 16 31.2**	**+0.1**
CCB	**Clear Creek Bu**	**6.00**	**26**			**Pn**	**13 16 30.2**	**-1.0**
HDA	**Harding Lake**	**6.00**	**30**			**Pn**	**13 16 30.2**	**-1.1**
HDA	**Harding Lake**	**6.00**	**30**		P		13 16 30.2	
	baz=216,SNR=120							
HDA					P		13 16 30.2	
	baz=216,SNR=120							
MENT	**Mentasta**	**6.07**	**50**			**Pn**	**13 16 31.4**	**-0.8**
PS08	**TAPS Pump Stn8**	**6.14**	**30**			**Pn**	**13 16 31.8**	**-1.4**
I23K	**Minto, Yukon-K**	**6.15**	**18**			**Pn**	**13 16 32.2**	**-0.9**
I23K	**Minto, Yukon-K**	**6.15**	**18**		P		13 16 32.6	
	baz=202,SNR=195							
MDM	**Murphy Dome**	**6.18**	**23**		Pn	**Pn**	**13 16 32.8**	**-0.9**
TCOL	**CIGO, UAF Yank**	**6.18**	**25**			**Pn**	**13 16 32.9**	**-0.7**
TCOL	**CIGO, UAF Yank**	**6.18**	**25**		P		13 16 32.7	
	baz=210,SNR=47							
COLA	**College**	**6.18**	**25**			**Pn**	**13 16 32.9**	**-0.7**
YAH	**Yahtse**	**6.19**	**76**			**Pn**	**13 16 34.9**	**+0.9**
GRNC	**Granite Creek**	**6.22**	**72**			**Pn**	**13 16 34.8**	**+0.4**
DT1	**Dutton Round H**	**6.26**	**230**			**Pn**	**13 16 33.6**	**-1.2**
BARN	**Barnard Glacie**	**6.31**	**69**			**Pn**	**13 16 36.5**	**+0.8**
IL31		**6.32**	**28**			**Pn**	**13 16 34.6**	**-0.8**
ILAR	**Eielson Array**	**6.32**	**28**		P	**Pn**	**13 16 34.0**	**-1.5**
	comp=N,17nm,0.3s,baz=214,slow=14,SNR=600							
ILAR					S	**Sn**	**13 17 42.1**	**-4.1**
	comp=N,10nm,0.3s,baz=224,slow=20,SNR=5.9							
DOT	**Dot Lake**	**6.34**	**44**		Pn	**Pn**	**13 16 35.1**	**-0.7**
CTGM	**Chitina Glacie**	**6.46**	**70**			**Pn**	**13 16 36.9**	**-0.7**
POKR	**Poker Plat Res**	**6.48**	**25**			**Pn**	**13 16 36.1**	**-1.6**
POKR	**Poker Plat Res**	**6.48**	**25**		P		13 16 37.4	
	baz=210,SNR=19							
PS07	**TAPS Pump Stn7**	**6.48**	**21**			**Pn**	**13 16 37.2**	**-0.6**
CHX	**Chaix Hills**	**6.49**	**79**			**Pn**	**13 16 38.5**	**+0.6**
TABL	**Table Mountain**	**6.49**	**75**			**Pn**	**13 16 39.0**	**+0.9**
SCRK	**Sand Creek**	**6.58**	**41

TIXI	**Tiksi**	**31.71**	**324**	IAmb	IAmb	13 21 18.1			
	comp=Z,1.5nm,0.8s								
ASAJ	**Asahikawa**	**40.51**	**277**	P	**P**	**13 22 30.9**	**-0.2**		
	comp=Z,8.5nm,0.9s,baz=191,slow=29,SNR=2.9								
KLR	**Kul'dur**	**42.34**	**290**	P	**P**	**13 22 45.8**	**-0.2**		
	comp=Z,2.4nm,0.4s,baz=54,slow=6.9,SNR=15								
NRIK	**Noril'sk**	**44.24**	**333**	P	**P**	**13 23 00.4**	**-0.6**		
	comp=Z,6.2nm,0.6s,baz=49,slow=5.5,SNR=10.0								
TXAR	**Lajitas Array**	**45.20**	**109**	P	**P**	**13 23 11.2**	**+2.0**		
	comp=Z,0.7nm,0.5s,baz=304,slow=5.9,SNR=12								
USRK	**Ussuriysk Ar.**	**45.77**	**285**	P	**P**	**13 23 12.2**	**-1.2**		
	comp=Z,1.2nm,0.7s,baz=46,slow=9.8,SNR=4.9								
MJAR	**Matsushiro Arr**	**48.37**	**273**	P	**P**	**13 23 33.6**	**-0.2**		
	comp=Z,1.4nm,0.7s,baz=49,slow=15,SNR=5.0								
ARCES	**ARCESS Array B**	**51.37**	**0**	P	**P**	**13 23 56.1**	**+0.2**		
	comp=Z,2.1nm,0.6s,baz=1.1,slow=6.1,SNR=7.0								
KSRS	**Korea Array**	**52.88**	**282**	P	**P**	**13 24 08.2**	**+0.7**		
	comp=Z,3.6nm,0.7s,baz=39,slow=7.1,SNR=11								
SONM	**Songino Array**	**54.78**	**306**	P	**P**	**13 24 21.4**	**0.0**		
	comp=Z,5.8nm,0.8s,baz=43,slow=6.6,SNR=27								
SONM				LR	LR	13 50 02.5			
	comp=Z,249nm,20.6s,baz=93,slow=38								
ZALV	**Zalesovo Beam**	**57.60**	**323**	P	**P**	**13 24 40.4**	**-0.6**		
	comp=Z,2.5nm,0.6s,baz=27,slow=6.9,SNR=9.8								
HHC	**Hu-ho-hao-te**	**58.06**	**297**	*eP*	**P**	**13 24 44.5**	**-0.2**		
HHC				pmax	pmax				
	comp=Z,15nm,0.9s								
HHC				pmax	pmax				
	comp=Z,110nm,5.2s								
FINES	**FINESS Array B**	**59.49**	**0**	P	**P**	**13 24 53.6**	**-0.4**		
	comp=Z,1.5nm,0.5s,baz=15,slow=7.5,SNR=9.7								
MKAR	**Makanchi Array**	**64.62**	**321**	P	**P**	**13 25 27.3**	**-1.3**		
	comp=Z,0.8nm,0.7s,baz=36,slow=6.0,SNR=6.4								
WMQ	**Urumqi**	**65.39**	**316**	*eP*	**P**	**13 25 37.4**	**+3.8**		
KMI	**Kunming**	**75.20**	**294**	⇓P	**P**	**13 26 35.1**	**+1.3**		
KMI				pP	pP	13 27 03.9	-1.2		
KMI				pmax	pmax				
	comp=Z,12nm,0.5s								
KMI				pmax	pmax				
	comp=Z,110nm,4.8s								
KMI				LR	LR				
	comp=N,170nm,8.1s								
KMI				LR	LR				
	comp=E,230nm,8.3s								
KMI				LR	LR				
	comp=Z,170nm,11.2s								
BOSA	**Boshof**	**149.22**	**1**	PKPbc	**PKPbc**	**13 34 37.2**	**-1.1**		
	comp=Z,3.6nm,1.0s,baz=20,slow=6.2,SNR=3.7								

IDC 02 13:16:07.1±8.2, 5°54S×152°19E, h139km±55km, mb3.2/3, mb1 3.4/4, mb1mx3.0/47, mbtmp3.6/4, Error ellipse: s-maj=109.6km s-min=56.7km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.30**	**232**	P	Pn	13 17 38.2	+0.6
	0.4nm,0.3s,baz=6.1,slow=2.1,SNR=2.0						
PMG				S	Sn	13 18 48.8	+0.3
	1.0nm,0.3s,baz=214,slow=19,SNR=1.4						
WRA	**Warramunga Arr**	**22.50**	**229**	P	P	13 20 55.3	0.0
	1.0nm,0.8s,baz=55,slow=10,SNR=7.3						
ASAR	**Alice Springs**	**25.20**	**223**	P	P	13 21 20.1	+0.1
	0.6nm,0.7s,baz=48,slow=10,SNR=7.6						
FITZ	**Fitzroy Crossi**	**28.77**	**242**	P	P	13 21 52.3	+0.3
	1.1nm,0.7s,baz=96,slow=8.8,SNR=5.1						
TORD	**Torodi Ar. Bea**	**149.94**	**287**	PKPbc	PKPbc	13 35 41.1	-1.0
	0.3nm,0.5s,baz=53,slow=1.9,SNR=3.0						

*IDC **02** 13:26:01.3±0.5, 30°24S×178°72W, h0km, mb4.3/15, mb1 4.5/17, mb1mx4.4/26, mbtmp4.3/17, ML3.9/2, MS3.9/8, Ms1 3.8/8, ms1mx3.6/29, Error ellipse: s-maj=19.6km s-min=13.8km az=126.0*

*NEIC **02** 13:26:08.3±1.4, 30°4S±0°1×178°8W±0°2, h50km±8km, mb4.7/9, Error ellipse: s-maj=25.2km s-min=10.6km az=124.0*

ISC 02 13:26:06.6±0.5, 30°24S±0°06×178°72W±0°10, h35km, n80, σ1s86/68, mb4.4/20, MS3.7/9, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.20**	**36**	P	**Pn**	**13 26 25.7**	**-1.2**
RAO	**Raoul Island**	**1.21**	**35**	Pn	**Pn**	**13 26 25.4**	**-1.6**
	111nm,0.3s,baz=74,slow=19,SNR=6.3						
RAO				Sn	**Sn**	**13 26 41.9**	**-0.3**
	174nm,0.3s,baz=311,slow=23,SNR=12						
RAO	**Raoul Island**	**1.21**	**35**	Pn	**Pn**	**13 26 31.6**	**+4.6**
RIZ	**Raoul Island**	**1.21**	**35**	P	**Pn**	**13 26 24.9**	**-2.1**
MXZ	**Matakaoa Point**	**7.71**	**198**	P	Pn	13 27 60.0	+3.7
KUZ	**Kuaotunu**	**7.97**	**214**	P	Pn	13 28 03.9	+4.0
HAZ	**Te Kaha**	**8.04**	**200**	P	**Pn**	**13 27 57.1**	**-3.7**
OUZ	**Omahuta**	**8.15**	**231**		**Pn**	**13 28 01.4**	**-1.0**
RUGZ	**Raukumara Rang**	**8.26**	**200**	P	**Pn**	**13 28 01.2**	**-2.8**
RUGZ				S	**Sn**	**13 29 39.6**	**+3.5**
TWGZ	**Tauwhareparae**	**8.37**	**198**	P	**Pn**	**13 28 06.6**	**+1.1**
TWGZ				S	**Sn**	**13 29 44.5**	**+5.8**
MWZ	**Matawai**	**8.65**	**200**	P	**Pn**	**13 28 07.9**	**-1.3**
MWZ				S	**Sn**	**13 29 49.4**	**+3.9**
URZ	**Urewera**	**8.71**	**202**	Pn	**Pn**	**13 28 09.7**	**-0.3**
	2.6nm,0.3s,baz=124,slow=22,SNR=6.1						
URZ				Sn	**Sn**	**13 29 45.3**	**-1.6**
	0.2nm,0.3s,baz=300,slow=23,SNR=1.1						
URZ	**Urewera**	**8.71**	**202**	S	**Sn**	**13 29 50.2**	**+3.2**
MUGZ	**Murupara**	**9.02**	**203**	P	**Pn**	**13 28 12.5**	**-1.8**
MUGZ				S	**Sn**	**13 29 56.4**	**+1.8**
RTZ	**Ruatahuna**	**9.07**	**202**	P	**Pn**	**13 28 12.5**	**-2.6**
RTZ				S	**Sn**	**13 29 56.8**	**+0.8**
MTHZ	**Maungataniwha**	**9.33**	**202**	P	**Pn**	**13 28 17.5**	**-1.2**
MTHZ				S	**Sn**	**13 30 06.0**	**+3.6**
BKZ	**Black Stump Fm**	**9.73**	**203**	Pn	**Pn**	**13 28 21.3**	**-2.8**
BKZ	**Black Stump Fm**	**9.73**	**203**	P	**Pn**	**13 28 24.8**	**+0.7**
TMVZ	**Te Maari**	**9.97**	**206**	P	**Pn**	**13 28 27.7**	**+0.3**
BFZ	**Birch Farm**	**11.19**	**200**	P	Pn	13 28 37.4	-6.6
BFZ				S	**Sn**	**13 30 43.7**	**-4.2**
MSVF	**Nonsavu**	**12.80**	**346**	LR	LR	13 33 02.1	
	comp=Z,762nm,18.5s,baz=194,slow=33						
DZM	**Mont Dzumac**	**15.60**	**298**	*e*LR	LR	13 33 23.4	
	comp=Z,997nm,26.2s						
DZM	**Mont Dzumac**	**15.60**	**298**	LR	LR	13 34 35.9	
	comp=Z,621nm,18.1s,baz=169,slow=33						
RPZ	**Rata Peaks**	**15.71**	**208**	Pn	**P**	**13 29 45.7**	**-3.2**
	0.2nm,0.3s,baz=23,slow=16,SNR=1.6						
TBI	**Tubuai**	**26.95**	**82**	*e*LQ	LQ	13 37 13.0	
	279nm,26.5s						
TBI				*e*LR	LR	13 38 32.4	
	comp=Z,296nm,29.5s						
TBI	**Tubuai**	**26.95**	**82**	*eT*	T	13 59 28.7	
	32nm,0.3s						
HNR	**Honiara**	**28.73**	**312**	LR	LR	13 41 49.1	
	comp=Z,179nm,19.4s,baz=211,slow=33						
PAE	**Paea**	**29.33**	**71**	*eT*	T	14 02 31.0	
	6.1nm,0.2s						
PPT2	**Papeete2**	**29.37**	**71**	*e*LQ	LQ	13 38 08.6	
	200nm,24.8s						
PPT2				*e*LR	LR	13 39 34.5	
	comp=Z,195nm,28.8s						
PPT2	**Papeete2**	**29.37**	**71**	*eT*	T	14 02 35.0	
	6.1nm,0.3s						
MEH	**Mehetia**	**30.48**	**73**	*eT*	T	14 03 56.0	
	26nm,0.3s						
VAH	**Vaihoa**	**32.20**	**69**	*eT*	T	14 06 06.2	
	26nm,0.3s						
CTA	**Charters Tower**	**33.16**	**279**	P	**P**	**13 32 40.1**	**+0.3**
	2.8nm,0.5s,baz=104,slow=11,SNR=2.4						
STKA	**Stephens Creek**	**33.91**	**257**	P	**P**	**13 32 46.5**	**+0.2**
	6.4nm,0.8s,baz=97,slow=13,SNR=9.9						
STKA	**Stephens Creek**	**33.91**	**257**	P	**P**	**13 32 46.5**	**+0.2**
BBOO	**Buckleboo**	**38.41**	**254**	P	**P**	**13 33 26.0**	**+1.2**
RKT	**Rikitea**	**39.54**	**90**	*e*LR	LR	13 44 26.2	
	comp=Z,247nm,25.5s						
AS31	**Alice Springs**	**42.49**	**267**	P	**P**	**13 33 58.0**	**-0.7**
ASAR	**Alice Springs**	**42.49**	**267**	P	**P**	**13 33 57.9**	**-0.9**
	2.7nm,0.6s,baz=105,slow=7.3,SNR=47						
ASAR				PcP	**PcP**	**13 35 50.5**	**-0.7**
	0.7nm,0.9s,baz=118,slow=3.8,SNR=2.0						
WR0	**Warramunga Arr**	**43.29**	**272**	P	**P**	**13 34 05.0**	**-0.2**
WR0				IAmb	IAmb	13 34 10.9	
	comp=Z,12nm,1.1s						
WB2	**Warramunga Arr**	**43.46**	**272**	P	**P**	**13 34 06.3**	**-0.2**
WB2				IAmb	IAmb	13 34 12.4	
	comp=Z,31nm,1.5s						
WRAB	**Tennant Creek**	**43.46**	**272**	P	**P**	**13 34 06.1**	**-0.4**
WRAB				IAmb	IAmb	13 34 12.3	
	comp=Z,23nm,1.4s						
WRA	**Warramunga Arr**	**43.47**	**272**	P	**P**	**13 34 05.6**	**-1.0**
	comp=Z,3.9nm,0.5s,baz=111,slow=7.5,SNR=36						
WRA				LR	LR	13 50 55.4	
	comp=Z,137nm,18.2s,baz=90,slow=34						
WB0	**Warramunga Arr**	**43.49**	**273**	P	**P**	**13 34 06.5**	**-0.3**
WB0				IAmb	IAmb	13 34 09.2	
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**48.19**	**186**	P	**P**	**13 34 41.8**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=9.4,slow=12,SNR=6.1						
VNDA				LR	LR	13 51 36.1	
	comp=Z,66nm,18.6s,baz=16,slow=32						
FITZ	**Fitzroy Crossi**	**51.74**	**270**	P	**P**	**13 35 08.5**	**-2.2**
FITZ				IAmb	IAmb	13 35 11.5	
	comp=Z,8.4nm,0.9s						
BATI	**Baumata**	**57.01**	**278**	LR	LR	14 00 08.4	
	comp=Z,217nm,18.6s,baz=140,slow=36						
QSPA	**South Pole Qui**	**59.87**	**180**	P	**P**	**13 36 08.9**	**+0.3**
	comp=Z,15nm,1.0s,baz=16,slow=3.9,SNR=12						
QSPA	**South Pole Qui**	**59.87**	**180**	P	**P**	**13 36 09.3**	**+0.8**
MAW	**Mawson**	**72.23**	**201**	P	**P**	**13 37 28.7**	**+1.0**
	comp=Z,4.8nm,0.9s,baz=29,slow=2.5,SNR=1.9						
MJAR	**Matsushiro Arr**	**77.76**	**326**	P	**P**	**13 38 00.2**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=152,slow=5.7,SNR=4.3						
MJAR				LR	LR	14 04 40.7	
	comp=Z,26nm,21.7s,baz=145,slow=30						
SNAA	**Sanae**	**78.33**	**179**	P	**P**	**13 38 02.0**	**-0.8**
VNA3	**Neumayer Olymp**	**78.50**	**176**	P	**P**	**13 38 03.5**	**-0.2**
VNA2	**Neumayer--Watz**	**78.93**	**177**	P	**P**	**13 38 06.3**	**+0.2**
VNA1	**Neumayer--Stat**	**79.16**	**177**	P	**P**	**13 38 07.8**	**+0.5**
H03S2	**Juan Fernandez**	**81.07**	**124**	T	T	15 07 15.6	
	baz=238,slow=74,SNR=47						
H03S1	**Juan Fernandez**	**81.08**	**124**	T	T	15 07 16.8	
	baz=238,slow=74,SNR=40						
H03S3	**Juan Fernandez**	**81.09**	**124**	T	T	15 07 22.0	
	baz=238,slow=74,SNR=49						
H03N3	**Juan Fernandez**	**81.26**	**124**	T	T	15 07 35.4	
	baz=241,slow=72,SNR=27						
H03N2	**Juan Fernandez**	**81.26**	**124**	T	T	15 07 32.9	
	baz=241,slow=72,SNR=32						
H03N1	**Juan Fernandez**	**81.28**	**124**	T	T	15 07 30.4	
	baz=241,slow=72,SNR=42						
PLCA	**Paso Flores**	**83.07**	**133**	P	**P**	**13 38 28.8**	**0.0**
	comp=Z,3.8nm,1.0s,baz=233,slow=1.7,SNR=3.7						
PLCA				LR	LR	14 06 33.5	
	comp=Z,33nm,19.6s,baz=172,slow=29						
KSRS	**Korea Array**	**83.83**	**320**	P	**P**	**13 38 33.9**	**+1.6**
	comp=Z,27nm,1.1s,baz=52,slow=27,SNR=4.2						
PETK	**Petropavlovsk-**	**85.51**	**346**	P	**P**	**13 38 42.2**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=85,slow=25,SNR=2.2						
NVAR	**Mina Array Bea**	**88.55**	**43**	P	**P**	**13 38 56.7**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=224,slow=8.6,SNR=12						
CMAR	**Chiang Mai Arr**	**92.76**	**290**	P	**P**	**13 39 16.2**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=269,slow=25,SNR=2.1						
TXAR	**Lajitas Array**	**92.83**	**58**	P	**P**	**13 39 16.1**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=197,slow=3.9,SNR=4.0						
PDAR	**Pinedale Array**	**96.45**	**44**	P	**P**	**13 39 33.8**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=238,slow=5.2,SNR=1.9						
MKAR	**Makanchi Array**	**117.20**	**310**	PKP	**PKPdf**	**13 44 46.8**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=52,slow=2.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**117.50**	**319**	PKP	**PKPdf**	**13 44 46.9**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=85,slow=3.2,SNR=1.4						
KURK	**Kurchatov**	**120.49**	**314**		**PKPdf**	**13 44 53.0**	**-1.0**
KURBB	**Kurchatov Arra**	**120.53**	**314**	PKP	**PKPdf**	**13 44 53.0**	**-1.0**
	comp=Z,0.7nm,0.2s,baz=73,slow=3.2,SNR=4.3						
BVAR	**Borovoye Array**	**125.86**	**316**	PKP	**PKPdf**	**13 45 03.2**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=79,slow=7.7,SNR=5.0						
ARCES	**ARCESS Array B**	**138.30**	**347**	PKP	**PKiKP**	**13 45 27.9**	**-1.5**
	comp=Z,1.9nm,0.9s,baz=335,slow=1.7,SNR=3.6						
KBZ	**Khabaz**	**144.51**	**304**	PKP	**PKPdf**	**13 45 38.5**	**-0.5**
	comp=Z,3.2nm,1.0s,baz=222,slow=20,SNR=2.7						
FINES	**FINESS Array B**	**144.78**	**340**	PKP	PKPbc	13 45 37.9	-0.2
	comp=Z,13nm,0.9s,baz=62,slow=3.7,SNR=24						
NOA	**NORSAR Array B**	**148.50**	**351**	PKPbc	**PKPbc**	**13 45 48.8**	**-0.2**
	comp=Z,4.4nm,0.9s,baz=16,slow=4.3,SNR=9.1						
AKASG	**Malin Array Be**	**150.80**	**322**	PKPbc	**PKiKP**	**13 45 54.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=40,slow=17,SNR=5.1						
BRTR	**Keskin Array B**	**151.98**	**299**	PKPbc	**PKiKP**	**13 45 59.6**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=306,slow=36,SNR=2.7						
TORD	**Torodi Ar. Bea**	**162.98**	**181**	PKP	**PKPdf**	**13 46 05.9**	**0.0**
	comp=Z,1.4nm,1.0s,baz=146,slow=1.8,SNR=5.3						
TORD				PKPab	**PKPab**	**13 46 54.8**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=178,slow=3.0,SNR=13						

*NAO **02** 13:28:59.7±1.4, 73°56N×7°93E, ML4.0*

*NEIC **02** 13:29:01.1±2.4, 73°56N±0°06×8°1E±0°3, h10km±1km, mb4.2/6, Error ellipse: s-maj=16.3km s-min=8.9km az=63.0*

*IDC **02** 13:29:01.1±0.6, 73°50N×7°74E, h0km, mb3.8/20, mb1 3.9/25, mb1mx3.8/44, mbtmp3.8/25, ML3.0/4, MS3.7/25, Ms1 3.7/25, ms1mx3.6/53, Error ellipse: s-maj=15.4km s-min=9.8km az=49.0*

*BER **02** 13:29:04.3±3.1, 73°65N×8°25E, h18km±21km, ML2.4, ML2.1(DNK), Confirmed Earthquake*

*HEL **02** 13:29:05.1±0.7, 73°67N×9°71E, h10km, ML2.9, Confirmed Earthquake*

*DNK **02** 13:29:06.0±0.4, 73°94N×6°10E, h0km±574km, ML2.1*

ISC 02 13:29:02.1±0.4, 73°60N±0°04×8°19E±0°05, h11km, n128, σ2s68/128, mb3.8/22, MS3.7/19, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**3.12**	**68**	Pn	**Pn**	**13 29 49.5**	**-1.6**
BJO1				Sn	**Sn**	**13 30 20.9**	**-7.4**
BJO1	**Bjornoya**	**3.12**	**68**	*eP*	**Pn**	**13 29 49.2**	**-1.9**
BJO1				IAML		13 30 26.6	
	comp=Z,41nm,0.7s						
HSPB	**Hornsund (broa**	**3.90**	**25**	Pn	**Pn**	**13 30 01.2**	**-0.5**
HSPB	**Hornsund (broa**	**3.90**	**25**	*eP*	**Pn**	**13 30 01.0**	**-0.8**
HSPB				*eS*	**Sn**	**13 30 43.5**	**-3.9**
HSPB				IAML		13 30 51.5	
	comp=Z,4.5nm,0.7s						
BRBA	**Barentsburg A**	**4.72**	**15**	Pn	**Pn**	**13 30 12.4**	**-0.7**
BRBA	**Barentsburg A**	**4.72**	**15**	*eP*	**Pn**	**13 30 12.3**	**-0.7**
BRBA				*eS*	**Sn**	**13 31 02.9**	**-4.7**
BRBB	**Barentsburg B**	**4.75**	**15**	Pn	**Pn**	**13 30 12.6**	**-0.9**
BRBB	**Barentsburg B**	**4.75**	**15**	*eP*	**Pn**	**13 30 12.8**	**-0.7**
BRBB				*eS*	**Sn**	**13 31 03.8**	**-4.7**
SPA0	**Spitsbergen Ar**	**5.01**	**20**	Pn	**Pn**	**13 30 17.1**	**0.0**
	baz=186,slow=28						
SPA0	**Spitsbergen Ar**	**5.01**	**20**		**Pn**	**13 30 17.3**	**+0.2**
SPA0	**Spitsbergen Ar**	**5.01**	**20**	Pn	**Pn**	**13 30 17.1**	**0.0**
	baz=186,slow=28						
SPA0				*eS*	**Sn**	**13 31 08.3**	**-6.6**
SPA0				IAML		13 31 20.1	
	comp=Z,7.6nm,0.7s						
SPA0	**Spitsbergen Ar**	**5.01**	**20**	*eP*	**Pn**	**13 30 17.1**	**0.0**
SPA0				*eS*	**Sn**	**13 31 11.5**	**-3.4**
SPITS	**Spitsbergen Ar**	**5.01**	**20**	Pn	**Pn**	**13 30 17.2**	**0.0**
	baz=182,slow=22,SNR=229						
SPITS				Sn	**Sn**	**13 31 10.8**	**-4.2**
	baz=181,slow=18,SNR=0.8						
SPITS				LR	LR	13 32 04.3	
	comp=Z,498nm,20.2s,baz=215,slow=36						
HOPEN	**Hopen**	**5.23**	**48**	Pn	**Pn**	**13 30 18.9**	**-1.1**
HOPEN				Sn	**Sn**	**13 31 15.3**	**-4.8**
HOPEN	**Hopen**	**5.23**	**48**	*eP*	**Pn**	**13 30 18.8**	**-1.1**
HOPEN				*eS*	**Sn**	**13 31 14.1**	**-6.1**
HOPEN				IAML		13 31 16.3	
	comp=Z,16nm,0.3s						
TRO	**Tromso**	**5.23**	**134**	*eP*	**Pn**	**13 30 20.0**	**0.0**
TRO				*eS*	**Sn**	**13 31 15.7**	**-4.5**
TRO				IAML		13 31 19.1	
	comp=Z,17nm,0.3s						
TRO	**Tromso**	**5.23**	**134**	*eP*	**Pn**	**13 30 19.9**	**-0.1**
TRO				*eS*	**Sn**	**13 31 13.2**	**-7.0**
KBS	**Kingsbay**	**5.43**	**8**	Pn	**Pn**	**13 30 22.1**	**-0.7**
KBS	**Kingsbay**	**5.43**	**8**	Pn	**Pn**	**13 30 22.3**	**-0.5**
KBS	**Kingsbay**	**5.43**	**8**	*eP*	**Pn**	**13 30 22.4**	**-0.4**
KBS				*eS*	**Sn**	**13 31 20.6**	**-4.6**
KBS				IAML		13 31 28.4	
	comp=Z,8.6nm,0.6s						
JETT	**Jettan, Norway**	**5.60**	**130**	*eP*	**Pn**	**13 30 25.4**	**+0.1**
JETT				*eS*	**Sn**	**13 31 25.4**	**-4.1**
HAMF	**Hammerfest**	**5.61**	**114**	Pn	**Pn**	**13 30 23.7**	**-1.6**
HAMF				Sn	Sn	13 31 20.3	-9.3
HAMF	**Hammerfest**	**5.61**	**114**	*eP*	**Pn**	**13 30 24.1**	**-1.2**
HAMF				*e*		13 31 20.4	
HAMF				IAML		13 31 23.3	
	comp=Z,12nm,0.3s						
HAMF	**Hammerfest**	**5.61**	**114**	*eP*	**Pn**	**13 30 23.7**	**-1.6**
HAMF				*eS*	Sn	13 31 20.1	-9.5
JNE	**Jan Mayen East**	**5.66**	**251**	*eP*	**Pn**	**13 30 25.3**	**-0.7**
JNW	**Jan Mayen West**	**5.67**	**251**	*eP*	**Pn**	**13 30 26.0**	**-0.1**
JMIC	**Jan Mayen**	**5.72**	**251**	*eP*	**Pn**	**13 30 26.4**	**-0.4**
LOF	**Lofoten**	**5.77**	**160**	*eP*	**Pn**	**13 30 27.1**	**-0.3**
LOF				*e*		13 31 26.9	
LOF				IAML		13 31 27.4	
	comp=Z,14nm,0.6s						
JMI	**Jan Mayen**	**5.81**	**251**	*eP*	**Pn**	**13 30 27.9**	**-0.1**
KIF	**Kilpisjarvi**	**6.13**	**133**	*eP*	**Pn**	**13 30 32.1**	**-0.2**
KIF				*eS*	**Sn**	**13 31 35.7**	**-6.6**
KIF				MSN		13 31 38.9	
	comp=Z,10nm,0.3s						
KIF	**Kilpisjarvi**	**6.13**	**133**	*eP*	**Pn**	**13 30 32.1**	**-0.2**
KIF				*eS*	**Sn**	**13 31 35.7**	**-6.6**
KIF				MSN		13 31 38.9	
	comp=Z,10nm,0.3s						
STEI	**Steigen**	**6.15**	**154**	*eP*	**Pn**	**13 30 33.0**	**+0.4**
STEI				*e*		13 31 35.6	
STEI				IAML		13 31 40.8	
	comp=Z,6.2nm,0.9s						
STEI	**Steigen**	**6.15**	**154**	*eP*	**Pn**	**13 30 33.2**	**+0.6**
STEI				*eS*	**Sn**	**13 31 37.5**	**-5.4**
KTK1	**Kautokeino**	**6.66**	**126**	*eP*	**Pn**	**13 30 40.4**	**+0.7**
KTK1				*eS*	**Sn**	**13 31 49.0**	**-6.4**
KTK1				IAML		13 32 07.5	
	comp=Z,3.5nm,0.4s						
KTK1	**Kautokeino**	**6.66**	**126**	*eP*	**Pn**	**13 30 40.6**	**+0.9**
KTK1				*eS*	**Sn**	**13 31 49.5**	**-5.9**
FAUS	**Fauske**	**6.68**	**156**	*eP*	**Pn**	**13 30 40.6**	**+0.7**
ARA0	**ARCESS Array S**	**6.82**	**118**	Pn	**Pn**	**13 30 40.9**	**-0.9**
	baz=320,slow=14						
ARA0				Sn	Sn	13 31 51.6	-7.7
ARA0	**ARCESS Array S**	**6.82**	**118**	Pn	**Pn**	**13 30 40.9**	**-0.9**
	baz=320,slow=14						
ARA0				Sn	Sn	13 31 51.6	-7.7
ARA0				IAML		13 31 56.6	
	comp=Z,7.3nm,0.8s						
ARA0	**ARCESS Array S**	**6.82**	**118**	*eP*	**Pn**	**13 30 41.4**	**-0.4**
ARA0				*eS*	Sn	13 31 51.7	-7.7
ARCES	**ARCESS Array B**	**6.82**	**118**	Pn	**Pn**	**13 30 41.5**	**-0.3**
	baz=326,slow=11,SNR=106						
ARCES				Sn	Sn	13 31 50.9	-8.4
	baz=310,slow=19,SNR=7.0						
ARCES				LR	LR	13 33 36.7	
	comp=Z,479nm,20.4s,baz=320,slow=40						
KEV	**Kevo**	**7.05**	**114**	Pn	**Pn**	**13 30 44.1**	**-0.9**
KEV	**Kevo**	**7.05**	**114**	*eP*	**Pn**	**13 30 44.0**	**-1.0**
KEV				*eS*	Sn	13 31 55.4	-10
KEV				MSN		13 32 00.6	
	comp=Z,2.2nm,0.2s						
KEV	**Kevo**	**7.05**	**114**	*eP*	**Pn**	**13 30 44.0**	**-1.0**
KEV				*eS*	Sn	13 31 55.4	-10
KEV				MSN		13 32 00.6	
	comp=Z,2.2nm,0.2s						
SALU	**Saltoluokta**	**7.12**	**146**	*eP*	**Pn**	**13 30 46.8**	**+0.7**
LANU	**Lannavaara**	**7.17**	**134**	*eP*	**Pn**	**13 30 46.3**	**-0.4**
LANU				*eS*	**Sn**	**13 32 01.4**	**-6.6**
LANU	**Lannavaara**	**7.17**	**134**	*eP*	**Pn**	**13 30 46.3**	**-0.4**
LANU				*eS*	**Sn**	**13 32 01.4**	**-6.6**
HEF	**Hetta**	**7.23**	**128**	MSN		13 32 09.0	
	comp=Z,1.2nm,0.2s						
HEF	**Hetta**	**7.23**	**128**	MSN		13 32 09.0	
	comp=Z,1.2nm,0.2s						
STOK	**Stokkvaagen**	**7.48**	**165**	*eP*	**Pn**	**13 30 50.3**	**-0.7**
STOK				*e*		13 32 07.1	
DAG	**Danmarks Havn**	**7.52**	**307**	*i* P	**Pn**	**13 30 48.0**	**-3.4**
DAG				IAML		13 32 08.3	
	comp=Z,2.8nm,0.4s						
DAG	**Danmarks Havn**	**7.52**	**307**	*i* P	**Pn**	**13 30 48.0**	**-3.4**
DAG				*eS*	Sn	13 32 06.

comp=Z,322nm,21.2s,baz=350,slow=36
RES Resolute Bay 24.88 322 P **P 13 34 24.4 +0.2**
comp=Z,1.2nm,0.7s,baz=321,slow=22,SNR=6.5
RES LR LR 13 43 42.7
comp=Z,139nm,19.3s,baz=252,slow=35
RES Resolute Bay 24.88 322 P **P 13 34 20.7 -3.4**
RES IAmb IAmb 13 34 38.4
comp=Z,8.8nm,1.4s
GERES GERESS Array B 24.96 171 P **P 13 34 25.6 +0.5**
comp=Z,0.3nm,0.3s,baz=359,slow=6.9,SNR=1.7
GERES LR LR 13 43 37.9
comp=Z,124nm,18.9s,baz=290,slow=35
ARU Arti 26.12 104 P **P 13 34 38.1 +2.6**
comp=Z,1.6nm,0.2s,baz=330,slow=9.2,SNR=4.3
ARU LR LR 13 45 13.3
comp=Z,104nm,19.8s,baz=336,slow=37
BELG Belogornoye 26.86 120 P **P 13 34 45.0 +2.8**
comp=Z,16nm,0.9s,baz=217,slow=4.1,SNR=4.3
BELG LR LR 13 45 48.0
comp=Z,219nm,18.3s,baz=332,slow=37
DAVOX Davos/Dischmat 26.91 177 LR LR 13 46 02.0
comp=Z,103nm,18.9s,baz=74,slow=38
TUE Stuetta 27.22 178 P **P 13 34 42.2 -3.5**
TUE IAmb IAmb 13 34 46.9
comp=Z,2.0nm,0.7s
FRB Frobisher Bay 27.41 290 LR LR 13 44 47.5
comp=Z,105nm,19.4s,baz=44,slow=35
MLR Muntele Rosu 29.33 154 LR LR 13 47 01.4
comp=Z,180nm,18.5s,baz=304,slow=37
TIXI Tiksi 30.29 33 P **P 13 35 15.2 +2.6**
comp=Z,0.4nm,0.2s,baz=351,slow=0.8,SNR=1.4
AKTO Aktyubinsk 31.32 110 P **P 13 35 24.4 +2.6**
comp=Z,0.8nm,0.6s,baz=222,slow=4.5,SNR=1.9
BVAR Borovoye Array 32.42 95 P **P 13 35 33.3 +1.8**
comp=Z,1.1nm,0.7s,baz=188,slow=6.0,SNR=8.1
KBZ Khabaz 33.93 132 LR LR 13 49 40.7
comp=Z,152nm,21.4s,baz=350,slow=36
ZALV Zalesovo Beam 35.69 80 P **P 13 36 01.7 +1.9**
comp=Z,0.3nm,0.3s,baz=86,slow=22,SNR=2.1
BRTR Keskin Array B 36.08 146 P **P 13 36 05.0 +1.5**
comp=Z,0.7nm,0.5s,baz=322,slow=9.1,SNR=2.2
BRTR LR LR 13 51 46.9
comp=Z,132nm,20.0s,baz=13,slow=38
INK Inuvik 36.18 337 P **P 13 36 03.1 -0.7**
KURBB Kurchatov Arra 36.87 89 P **P 13 36 11.2 +1.2**
comp=Z,0.7nm,0.4s,baz=154,slow=7.4,SNR=2.7
YKA Yellowknife Ar 38.95 327 P **P 13 36 27.4 +0.1**
comp=Z,1.1nm,0.8s,baz=18,slow=8.3,SNR=11
YKA PcP **PcP 13 38 38.8 +1.4**
comp=Z,0.4nm,0.7s,baz=18,slow=2.9,SNR=5.5
ILAR Eielson Array 40.90 344 P **P 13 36 44.8 +1.2**
comp=Z,0.9nm,0.8s,baz=358,slow=6.6,SNR=7.6
MKAR Makanchi Array 41.40 88 P **P 13 36 49.5 +1.6**
MKAR PP **PnPn 13 38 26.9 -1.0**
comp=Z,0.9nm,1.0s,baz=343,slow=11,SNR=3.6
MKAR LR LR 13 58 12.0
comp=Z,178nm,19.6s,baz=55,slow=42
GEYT Alibeck 42.98 117 LR LR 13 56 58.7
comp=Z,214nm,19.7s,baz=220,slow=39
ULM Lac du Bonnet 46.31 301 P **P 13 37 26.4 -0.8**
comp=Z,1.5nm,0.8s,baz=357,slow=6.8,SNR=3.2
ULM Lac du Bonnet 46.31 301 IAmb IAmb 13 37 36.0
comp=Z,2.2nm,1.0s
SONM Songino Array 47.06 66 P **P 13 37 35.9 +2.5**
comp=Z,0.2nm,0.4s,baz=131,slow=32,SNR=3.0
USRK Ussuriysk Ar. 56.47 46 P **P 13 38 45.0 +1.7**
comp=Z,4.4nm,1.1s,baz=112,slow=2.1,SNR=5.7
PDAR Pinedale Array 56.55 309 P **P 13 38 44.1 -0.2**
comp=Z,0.1nm,0.4s,baz=22,slow=9.6,SNR=3.9
PDAR LR LR 14 02 30.5
comp=Z,80nm,18.5s,baz=348,slow=36
TORD Torodi Ar. Bea 60.55 187 P **P 13 39 13.8 +1.7**
comp=Z,0.6nm,0.7s,baz=14,slow=41,SNR=2.5
NVAR Mina Array Bea 62.56 315 LR LR 14 07 10.0
comp=Z,97nm,18.1s,baz=42,slow=37
TXAR Lajitas Array 67.98 299 P **P 13 40 01.7 +0.8**
comp=Z,0.2nm,0.6s,baz=39,slow=7.4,SNR=2.0
TXAR LR LR 14 09 24.2
comp=Z,73nm,20.1s,baz=0.0,slow=36
CMAR Chiang Mai Arr 72.65 84 PP PP 13 43 08.8 -1.8
comp=Z,0.7nm,0.6s,baz=350,slow=7.4,SNR=6.6
ASAR Alice Springs 122.33 62 PKP **PKPdf 13 47 56.4 -0.1**
comp=Z,0.6nm,1.1s,baz=284,slow=1.6,SNR=2.3

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*IDC **02** 13:49:31.3±1.2,2˚.54N×96˚.27E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.7/54, mbtmp3.8/8, ML3.0/1, MS3.9/2, Ms1 3.9/2, ms1mx3.0/54, Error ellipse: s-maj=41.9km s-min=19.7km az=55.0*

*DJA **02** 13:49:38.2±0.3,3˚N±3˚×9˚7E±˚, h10km, M3.8/10, MLv3.8/10*

*NEIC **02** 13:49:39.0±0.9,2˚.68N±0˚.06×96˚.5E±0˚.1, h53km±11km, mb4.1/5, Error ellipse: s-maj=16.9km s-min=8.1km az=81.0*

ISC 02 13:49:36.7±0.7,2˚.70N±0˚.05×96˚.58E±0˚.06, h30km, n30, σ1§74/28, mb4.0/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.38**	**221**	P	**Pn**	**13 49 48.1**	**+2.0**
SNSI				S	**Sn**	**13 49 54.7**	**+2.3**
TPTI		**0.82**	**47**	P	**Pb**	**13 49 52.8**	**+0.3**
TPTI				S	**Sb**	**13 50 03.3**	**+0.1**
GSI	**Gunungsitoli**	**1.71**	**144**		**Pb**	**13 50 06.3**	**-1.1**
GSI	**Gunungsitoli**	**1.71**	**144**	P	**Pb**	**13 50 06.4**	**-1.0**
TSI	**Tuntungan**	**2.14**	**68**	P	**Pb**	**13 50 13.2**	**-1.6**
RPSI	**Rantau Prapat**	**2.34**	**90**		**Pb**	**13 50 16.3**	**-2.0**
PSI	**Prapat**	**2.35**	**87**	Pn	**Pb**	**13 50 16.2**	**-2.2**
	2.9nm,0.3s,baz=358,slow=2.4,SNR=4.3						
LHMI	**Lhok Sumawe**	**2.54**	**8**	Pn	**Pn**	**13 50 18.0**	**+2.1**
LHMI	**Lhok Sumawe**	**2.54**	**8**	P	**Pn**	**13 50 18.4**	**+2.5**
MNSI	**Mandailing Nat**	**3.54**	**122**	P	**Pn**	**13 50 32.6**	**+2.9**
IPM	**Ipoh**	**4.78**	**68**		**Pn**	**13 50 50.1**	**+3.4**
KULM	**Kulim**	**4.81**	**57**		**Pn**	**13 50 49.9**	**+2.8**
CMAR	**Chiang Mai Arr**	**15.84**	**8**	Pn	**P**	**13 53 20.3**	**-0.8**
	baz=195,slow=13,SNR=4.1						
H08S2	**Diego Garcia H**	**26.13**	**247**	T	T	14 21 41.4	
	baz=73						
H08S3	**Diego Garcia H**	**26.14**	**247**	T	T	14 21 39.5	
	baz=73						
H08S1	**Diego Carcia H**	**26.15**	**247**	T	T	14 21 42.3	
	baz=73						
WRA	**Warramunga Arr**	**43.36**	**123**	P	**P**	**13 57 37.0**	**+0.4**
	0.7nm,0.3s,baz=303,slow=9.0,SNR=13						
WRAB	**Tennant Creek**	**43.36**	**123**	P	**P**	**13 57 36.5**	**-0.1**
WB2	**Warramunga Arr**	**43.37**	**123**	P	**P**	**13 57 36.4**	**-0.3**
WB2				IAmb	IAmb	13 57 37.4	
	comp=Z,6.2nm,1.3s						
WR0	**Warramunga Arr**	**43.53**	**123**	P	**P**	**13 57 38.4**	**+0.4**
WR0				IAmb	IAmb	13 57 50.8	
	comp=Z,4.2nm,1.1s						
ASAR	**Alice Springs**	**44.79**	**128**	P	**P**	**13 57 48.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=296,slow=7.7,SNR=5.6						
MK31	**Makanchi Array**	**45.65**	**346**	P	**P**	**13 57 53.6**	**-1.0**
MKAR	**Makanchi Array**	**45.65**	**346**	P	**P**	**13 57 54.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=160,slow=8.5,SNR=15						
MAKZ	**Makanchi**	**45.74**	**346**	P	**P**	**13 57 52.0**	**-3.2**
MAKZ				IAmb	IAmb	13 57 55.7	
	comp=Z,1.2nm,0.6s						
SONM	**Songino Array**	**45.76**	**9**	P	**P**	**13 57 55.2**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=189,slow=9.5,SNR=5.5						
SONM				PcP	**PcP**	**13 59 32.6**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=197,slow=2.7,SNR=2.8						
PMG	**Port Moresby**	**51.81**	**104**	LR	LR	14 23 57.3	
	comp=Z,102nm,19.6s,baz=283,slow=40						
ZALV	**Zalesovo Beam**	**51.99**	**351**	P	**P**	**13 58 42.9**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=176,slow=9.7,SNR=4.0						
BELG	**Belogorsk**	**63.97**	**329**	LR	LR	14 32 06.9	
	comp=Z,104nm,18.1s,baz=105,slow=40						
ARCES	**ARCESS Array B**	**80.93**	**340**	P	**P**	**14 01 47.5**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=103,slow=3.9,SNR=5.5						
CPUP	**Villa Florida**	**145.66**	**224**	PKPbc	**PKPdf**	**14 09 11.4**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=200,slow=6.0,SNR=2.9						

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*BJI **02** 13:54:23.2±0.0,24˚.64N×146˚.35E, h31km, mB5.0/33, mb4.9/61, Ms4.4/17, Ms7 4.1/17*

*IDC **02** 13:54:23.8±0.4,24˚.98N×145˚.99E, h0km, mb4.4/30, mb1 4.6/34, mb1mx4.5/48, mbtmp4.5/34, ML4.3/4, MS3.6/12, Ms1 3.7/12, ms1mx3.4/48, Error ellipse: s-maj=14.6km s-min=11.0km az=88.0*

*NEIC **02** 13:54:28.8±1.9,24˚.98N±0˚.09×145˚.98E±0˚.07, h34km±4km, mb4.8/30, Error ellipse: s-maj=14.9km s-min=7.5km az=152.0*

*JMA **02** 13:54:31.6±0.4,25˚.79N×145˚.80E, h0km, M5.8*

ISC 02 13:54:28.4±1.2,25˚.07N±0˚.05×145˚.95E±0˚.07, h27km±8km, n171, σ1§62/187, mb4.7/90, MS3.9/14, 2C-1D, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**3.74**	**295**	P	**Pn**	**13 55 27.3**	**+3.0**
CBIJ	**Chichi jima**	**3.94**	**302**	P	**Pn**	**13 55 28.7**	**+1.7**
JCJ	**Chichijima**	**3.94**	**302**	Pn	**Pn**	**13 55 27.9**	**+0.9**
	60nm,0.3s,baz=98,slow=19,SNR=56						
JCJ				Sn	**Sn**	**13 56 11.8**	**-0.6**
	599nm,0.3s,baz=264,slow=23,SNR=15						
JCJ				LR	LR	13 56 17.6	
	comp=Z,129nm,19.6s,baz=90,slow=28						
JCJ	**Chichijima**	**3.94**	**302**	Pn	**Pn**	**13 55 27.6**	**+0.6**
JHCJ	**Hachijojimakas**	**9.62**	**327**	*e*S	**Sn**	**13 58 25.9**	**-6.2**
JHJ	**Hachijo jima 2**	**9.66**	**328**	Pn	**Pn**	**13 56 45.1**	**-0.5**
	12nm,0.3s,baz=145,slow=21,SNR=1.4						
JHJ				Sn	Sn	13 58 25.6	-7.6
	72nm,0.3s,baz=83,slow=18,SNR=9.6						
JMKN	**Mikurajimanish**	**10.39**	**329**	P	**Pn**	**13 56 56.4**	**+0.9**
BSO1	**Boso 1**	**10.48**	**337**	P	**Pn**	**13 56 56.6**	**+0.3**
BSO1				*e*S	**Sn**	**13 58 48.3**	**-4.2**
BSO3	**Boso 3**	**10.78**	**335**	P	**Pn**	**13 57 01.1**	**+0.4**
BSO4	**Boso 4**	**11.01**	**335**	P	**Pn**	**13 57 05.1**	**+1.1**
JOD2	**Odawara 2**	**11.76**	**331**	P	**Pn**	**13 57 14.7**	**+0.4**
JYT	**Yasato**	**12.17**	**337**	P	**Pn**	**13 57 20.5**	**+0.6**
JYT	**Yasato**	**12.17**	**337**	Pn	**Pn**	**13 57 20.3**	**+0.4**
JHU	**Hanno**	**12.18**	**333**	P	**Pn**	**13 57 20.6**	**+0.5**
JHO	**Hitachi**	**12.39**	**339**	P	**Pn**	**13 57 22.7**	**-0.3**
JNY	**Yasuok**	**12.40**	**328**	P	**Pn**	**13 57 24.9**	**+1.7**
INU	**Inuyama**	**12.82**	**325**	Pn	**Pn**	**13 57 30.5**	**+1.7**
JGF	**Kuroka**	**12.85**	**327**	Pn	**Pn**	**13 57 31.7**	**+2.5**
JFK	**Kawauchi**	**13.00**	**342**	P	**Pn**	**13 57 30.0**	**-1.3**
MJAR	**Matsushiro Arr**	**13.22**	**332**	Pn	**Pn**	**13 57 34.5**	**+0.3**
	1.4nm,0.3s,baz=153,slow=11,SNR=71						
MJAR				Sn	Sn	13 59 43.8	-17
	0.2nm,0.3s,baz=143,slow=18,SNR=3.2						
MAJO	**Matsushiro**	**13.22**	**332**	Pn	**Pn**	**13 57 35.2**	**+0.9**
MAT	**Matsushiro**	**13.22**	**332**	P	**Pn**	**13 57 34.9**	**+0.6**
MAT				S	**Sn**	**13 59 53.8**	**-6.6**
JMM	**Marumori**	**13.49**	**342**	Pn	**Pn**	**13 57 36.5**	**-1.4**
JSD	**Sado**	**14.48**	**335**	Pn	**Pn**	**13 57 51.7**	**+0.2**
JNU	**Nakatsue**	**15.41**	**305**	Pn	**P**	**13 58 09.6**	**+1.3**
	0.4nm,0.3s,baz=229,slow=20,SNR=1.1						
JOW	**Kunigami**	**16.00**	**280**	Pn	**P**	**13 58 15.8**	**+1.1**
	0.6nm,0.3s,baz=115,slow=18,SNR=4.0						
JTM	**Tenmabayashi**	**16.20**	**347**	Pn	**Pn**	**13 58 13.8**	**-0.1**
JTM				IAmb	IAmb	13 58 29.4	
	comp=Z,69nm,1.2s						
ERM	**Erimo**	**17.06**	**353**	Pn	**Pn**	**13 58 24.4**	**-0.4**
ERM				IAmb	IAmb	13 58 33.3	
	comp=Z,48nm,0.8s						
JEW	**Eniwo**	**18.11**	**349**	P	**Pn**	**13 58 38.3**	**+0.5**
ASAJ	**Asahikawa**	**19.20**	**353**	P	**Pn**	**13 58 53.6**	**+2.5**
	comp=Z,2.7nm,0.3s,baz=200,slow=12,SNR=33						
ASAJ				S	Sn	14 02 13.9	-11
	comp=Z,0.8nm,0.3s,baz=81,slow=17,SNR=2.2						
KSRS	**Korea Array**	**19.70**	**313**	P	**P**	**13 58 57.0**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=127,slow=11,SNR=23						
KSRS				LR	LR	14 05 50.7	
	comp=Z,96nm,21.6s,baz=118,slow=35						
H11N2	**WAKE ISLAND Hy**	**20.08**	**101**	T	T	14 20 38.4	
	baz=291,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**20.08**	**101**	T	T	14 20 47.3	
	baz=291,slow=75,SNR=9.9						
H11N3	**WAKE ISLAND Hy**	**20.09**	**101**	T	T	14 20 50.0	
	baz=291,slow=75,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**20.33**	**105**	T	T	14 21 00.5	
	SNR=3.3						
H11S1	**WAKE ISLAND Hy**	**20.33**	**105**	T	T	14 21 01.2	
H11S2	**WAKE ISLAND Hy**	**20.34**	**105**	T	T	14 21 01.2	
USA0B	**Ussuriysk Arra**	**22.21**	**333**	P	**P**	**13 59 24.8**	**+2.1**
USRK	**Ussuriysk Ar.**	**22.21**	**333**	P	**P**	**13 59 25.7**	**+3.1**
	comp=Z,6.9nm,0.8s,baz=142,slow=10,SNR=16						
YULB	**Yu-li**	**22.54**	**271**	P	**P**	**13 59 27.0**	**+0.7**
YULB				IAmb	IAmb	13 59 29.1	
	comp=Z,50nm,0.7s						
SSLB	**Suanglung**	**22.79**	**272**	P	**P**	**13 59 30.1**	**+1.1**
TPUB	**Ta-pu**	**23.16**	**271**	P	**P**	**13 59 33.6**	**+0.8**
TPUB				IAmb	IAmb	13 59 38.5	
	comp=Z,35nm,0.9s						
MDJ	**Mudanjiang**	**23.59**	**330**	P	**P**	**13 59 38.2**	**+1.4**
MDJ				pP	sP	13 59 47.9	+2.3
MDJ				sP	pwP	13 59 51.7	+1.3
MDJ				S	**S**	**14 03 50.1**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,28nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,200nm,3.5s						
NJ2	**Nanjing**	**24.75**	**293**	*e*P	**P**	**13 59 48.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,19nm,0.5s						
CN2	**Changchun**	**25.08**	**323**	*e*P	**P**	**13 59 54.0**	**+3.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**26.55**	**339**	P	**P**	**14 00 05.8**	**+2.0**
	comp=Z,3.3nm,0.7s,baz=141,slow=9.0,SNR=10.0						
TIA	**Tai'an**	**27.08**	**301**	P	**P**	**14 00 11.5**	**+2.8**
TIA				pmax	pmax		
	comp=Z,96nm,0.7s						
BJI	**Beijing**	**29.03**	**308**	P	**P**	**14 00 29.7**	**+3.6**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PETK	**Petropavlovsk-**	**29.37**	**14**	P	**P**	**14 00 33.1**	**+4.2**
	comp=Z,2.2nm,0.7s,baz=230,slow=11,SNR=1.7						
HHC	**Hu-ho-hao-te**	**32.62**	**307**	*e*P	**P**	**14 00 58.7**	**+0.8**
HHC				sS	sS	14 06 34.0	+11
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,4.7s						
HHC				LR	LR		
	comp=Z,180nm,11.4s						
HHC				LR	LR		
	comp=Z,240nm,13.0s						
HHC				LR	LR		
	comp=Z,120nm,11.8s						
XAN	**Xi'an**	**33.28**	**294**	P	**P**	**14 01 03.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TOLI2	**Tolitoli**	**34.03**	**229**	P	**P**	**14 01 09.8**	**-0.5**
TOLI2				IAmb	IAmb	14 01 24.4	
	comp=Z,9.2nm,1.1s						
APSI	**Ampana**	**34.94**	**226**	P	**P**	**14 01 18.6**	**+0.5**
	comp=Z,19nm,1.0s						
GYA	**Guiyang**	**35.31**	**281**	⇑P	**P**	**14 01 22.0**	**+0.5**
GYA				pmax	pmax		
	comp=Z,14nm,0.8s						
CD2	**Chengdu**	**37.54**	**289**	P	**P**	**14 01 40.5**	**+0.1**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
LZH	**Lanzhou**	**37.62**	**297**	*e*P	**P**	**14 01 41.9**	**+0.8**
LZH				pP	sP	14 01 52.9	+2.8
LZH				sP	pwP	14 01 57.0	+2.0
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,400nm,13.7s						
LZH				LR	LR		
	comp=Z,170nm,16.3s						
SEY	**Seymchan**	**38.10**	**5**	P	**P**	**14 01 46.1**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=331,slow=23,SNR=2.0						
ULN	**Ulaanbaatar**	**38.11**	**317**	P	**P**	**14 01 47.3**	**+2.2**
ULN				IAmb	IAmb	14 01 48.3	
	comp=Z,20nm,1.1s						
SONM	**Songino Array**	**38.51**	**316**	P	**P**	**14 01 49.4**	**+1.0**
	comp=Z,6.6nm,0.9s,baz=118,slow=8.7,SNR=35						
SONM				LR	LR	14 18 31.7	
	comp=Z,90nm,19.2s,baz=134,slow=38						
BNSI	**Bone**	**38.58**	**224**	P	**P**	**14 01 49.3**	**+0.1**
	comp=Z,31nm,1.2s						
KMI	**Kunming**	**39.00**	**280**	⇑P	**P**	**14 01 54.3**	**+1.3**
KMI				pmax	pmax		
	comp=Z,23nm,0.8s						
KMI				LR	LR		
	comp=Z,150nm,9.4s						
KMI				LR	LR		
	comp=Z,99nm,7.8s						
KMI				LR	LR		
	comp=Z,130nm,7.9s						

SBUM	**Sibu**	**39.52**	**241**	P	**P**	**14 01 56.7**	**-0.3**
NONG	**Nongkai**	**40.28**	**269**	P	**P**	**14 02 04.2**	**+0.8**
	comp=Z,35nm,0.9s						
EDFI	**Ende, Flores**	**41.09**	**218**	P	**P**	**14 02 09.2**	**-1.0**
	comp=Z,16nm,0.8s						
GTA	**Gaotai**	**41.12**	**302**	⇓P	**P**	**14 02 11.1**	**+0.8**
GTA				pP	sP	14 02 21.6	+2.3
GTA				sP	pwP	14 02 25.1	+0.9
GTA				PcP	**PcP**	**14 04 10.2**	**+0.8**
GTA				pmax	pmax		
	comp=Z,17nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,4.8s						
GTA				LR	LR		
	comp=Z,96nm,13.5s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
GTA				LR	LR		
	comp=Z,90nm,16.0s						
KHON	**Khomkaen**	**41.12**	**266**	P	**P**	**14 02 11.0**	**+0.7**
	comp=Z,40nm,0.4s						
BATI	**Baumata**	**41.25**	**214**	P	**P**	**14 02 10.8**	**-0.6**
	comp=Z,6.6nm,0.4s,baz=337,slow=13,SNR=1.3						
TLY	**Talaya**	**41.64**	**321**	P	**P**	**14 02 16.0**	**+1.8**
	comp=Z,1.5nm,0.4s,baz=138,slow=5.2,SNR=8.8						
CHAI	**Chaiyaphum**	**42.02**	**266**	P	**P**	**14 02 18.0**	**+0.2**
	comp=Z,312nmcomp=Z,36nm,1.0s						
SRAK	**Srakaew**	**42.64**	**264**	P	**P**	**14 02 19.2**	**-3.6**
	comp=Z,3umcomp=Z,376nm,0.8s						
UTTA	**Uttaradit**	**42.73**	**269**	P	**P**	**14 02 25.5**	**+2.0**
	comp=Z,11nm,1.2s						
PHIT	**Phitsanulok**	**43.03**	**269**	P	**P**	**14 02 27.8**	**+1.9**
	comp=Z,82nm,1.1s						
CMMT	**Chiang Mai**	**43.87**	**272**	P	**P**	**14 02 31.9**	**-0.8**
	comp=Z,3.9nm,2.1s						
CM04	**Chiang Mai Arr**	**43.96**	**271**	P	**P**	**14 02 34.4**	**+0.9**
	comp=Z,61nmcomp=Z,7.1nm,1.1s						
CM01	**Chiang Mai Arr**	**43.97**	**271**	P	**P**	**14 02 35.0**	**+1.5**
	comp=Z,51nmcomp=Z,5.9nm,1.1s						
CMAR	**Chiang Mai Arr**	**43.98**	**271**	P	**P**	**14 02 33.2**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=59,slow=8.0,SNR=18						
CMAR				PcP	**PcP**	**14 04 19.1**	**0.0**
	comp=Z,1.2nm,0.6s,baz=69,slow=2.1,SNR=6.1						
CMAR				LR	LR	14 21 16.2	
	comp=Z,72nm,19.1s,baz=180,slow=37						
CM02	**Chiang Mai Arr**	**43.98**	**271**	P	**P**	**14 02 34.0**	**+0.4**
	comp=Z,50nmcomp=Z,6.8nm,0.9s						
CM05	**Chiang Mai Arr**	**43.99**	**271**	P	**P**	**14 02 36.2**	**+2.6**
	comp=Z,3.2nm,0.7s						
CM15	**Chiang Mai Arr**	**43.99**	**271**	P	**P**	**14 02 36.1**	**+2.4**
	comp=Z,4.5nm,0.8s						
CM13	**Chiang Mai Arr**	**44.02**	**271**	P	**P**	**14 02 34.7**	**+0.8**
	comp=Z,4.8nm,1.1s						
UTHA	**Uthaitani**	**44.44**	**267**	P	**P**	**14 02 38.4**	**+1.1**
	comp=Z,20nm,1.1s						
CTA	**Charters Tower**	**44.89**	**180**	P	**P**	**14 02 39.8**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=31,slow=12,SNR=1.4						
PHET	**Kaeng Krachan**	**45.23**	**263**	P	**P**	**14 02 44.8**	**+1.2**
WB0	**Warramunga Arr**	**45.96**	**195**	P	**P**	**14 02 47.8**	**-1.4**
WR0	**Warramunga Arr**	**46.11**	**195**	P	**P**	**14 02 49.3**	**-1.1**
WRAB	**Tennant Creek**	**46.13**	**195**	P	**P**	**14 02 49.4**	**-1.2**
WRAB				IAmb	IAmb	14 03 07.2	
	comp=Z,10nm,0.9s						
WB2	**Warramunga Arr**	**46.14**	**195**	P	**P**	**14 02 49.4**	**-1.2**
WB2				IAmb	IAmb	14 03 07.2	
	comp=Z,8.6nm,0.9s						
WRA	**Warramunga Arr**	**46.15**	**195**	P	**P**	**14 02 49.6**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=15,slow=8.7,SNR=22						
WRA				LR	LR	14 20 40.6	
	comp=Z,112nm,21.5s,baz=240,slow=34						
FITZ	**Fitzroy Crossi**	**47.25**	**207**	P	**P**	**14 02 58.0**	**-1.2**
	comp=Z,7.1nm,0.7s,baz=28,slow=8.4,SNR=15						
FITZ	**Fitzroy Crossi**	**47.25**	**207**	P	**P**	**14 02 58.2**	**-1.0**
FITZ				IAmb	IAmb	14 02 59.4	
	comp=Z,6.6nm,0.7s						
TIXI	**Tiksi**	**47.60**	**353**	P	**P**	**14 03 01.5**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=132,slow=4.3,SNR=3.9						
KULM	**Kulim**	**47.64**	**253**	P	**P**	**14 03 02.8**	**+0.3**
KULM				IAmb	IAmb	14 03 03.3	
	comp=Z,12nm,0.9s						
LEM	**Lembang**	**48.95**	**235**	P	**P**	**14 03 11.7**	**-1.1**
	comp=Z,13nm,0.5s,baz=117,slow=22,SNR=1.6						
AS31	**Alice Springs**	**49.83**	**194**	P	**P**	**14 03 18.0**	**-1.2**
ASAR	**Alice Springs**	**49.83**	**194**	P	**P**	**14 03 17.8**	**-1.4**
	comp=Z,2.4nm,0.7s,baz=17,slow=7.4,SNR=33						
TNA	**Tin City**	**49.86**	**23**	P	**P**	**14 03 20.4**	**+1.5**
TNA				IAmb	IAmb	14 03 38.7	
	comp=Z,12nm,1.2s						
ANM	**Nome**	**50.31**	**25**	P	**P**	**14 03 24.4**	**+2.1**
ANM				IAmb	IAmb	14 03 43.0	
	comp=Z,12nm,1.1s						
WMQ	**Urumqi**	**50.49**	**307**	P	**P**	**14 03 25.9**	**+1.8**
WMQ				sP	pwP	14 03 38.9	+0.7
WMQ				pmax	pmax		
	comp=Z,29nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.1s						
TAPN	**Taplejung**	**51.89**	**286**	*e*P	**P**	**14 03 35.1**	**0.0**
	comp=Z,24nm,0.9s						
ZSN	**Zaisan**	**52.62**	**312**	*e*P	**P**	**14 03 40.2**	**+0.3**
	comp=Z,6.1nm,1.0s,baz=312						
RAMN	**Ramite**	**52.94**	**286**	*e*P	**P**	**14 03 43.4**	**+0.6**
	comp=Z,27nm,0.8s						
JIRN	**Jiri**	**53.15**	**287**	*e*P	**P**	**14 03 45.3**	**+0.8**
	comp=Z,25nm,0.8s						
ZAA0	**Zalesovo Array**	**53.22**	**320**	P	**P**	**14 03 44.4**	**+0.2**
ZAA0				IAmb	IAmb	14 03 45.5	
	comp=Z,12nm,0.8s						
ZALV	**Zalesovo Beam**	**53.22**	**320**	P	**P**	**14 03 44.5**	**+0.3**

comp=Z,150nm,6.2s
BTLS Baital 60.20 309 *e*P **P 14 04 34.9 +0.9**
comp=Z,5.9nm,1.1s,baz=309
DZA Taraz 62.45 307 *e*P **P 14 04 49.8 +0.6**
baz=307
NIL Nilore 62.78 296 P **P 14 04 52.6 +1.0**
KK31 Karatay Array 63.00 307 P **P 14 04 54.0 +1.1**
KKAR Karatay Array 63.00 307 P **P 14 04 54.1 +1.2**
INK Inuvik 63.47 24 P **P 14 04 55.7 +0.3**
comp=Z,3.3nm,0.8s,baz=282,slow=4.8,SNR=12
IUG Iuzhnay 63.52 306 *e*P **P 14 04 57.2 +0.7**
comp=Z,9.3nm,0.9s,baz=306
ARU Arti 68.08 323 P **P 14 05 25.5 +0.1**
YKA Yellowknife Ar 72.30 29 P **P 14 05 51.0 -0.2**
comp=Z,2.9nm,0.8s,baz=291,slow=5.3,SNR=41
GEYT Alibeck 73.44 304 P **P 14 05 57.8 -0.6**
comp=Z,2.8nm,0.7s,baz=174,slow=4.3,SNR=5.6
KLMR Klimovskoe 76.00 331 *e*P **P 14 06 10.8 -2.0**
KLMR AMP 14 06 14.0
comp=Z,28nm,1.4s
ARCES ARCESS Array B 76.53 342 P **P 14 06 14.9 -0.8**
comp=Z,2.8nm,0.9s,baz=7.1,slow=4.9,SNR=2.1
NEEM North Greenlan 77.20 4 *i* P **P 14 06 20.1 +0.4**
NVAR Mina Array Bea 79.08 53 P **P 14 06 30.1 -0.7**
comp=Z,2.2nm,0.8s,baz=275,slow=6.1,SNR=13
NVAR LR LR 14 34 42.9
comp=Z,76nm,20.3s,baz=246,slow=30
LRM Limekiln Ridge 80.00 44 P **P 14 06 36.3 +0.7**
FINES FINESS Array B 81.23 335 P **P 14 06 41.2 -0.3**
comp=Z,10nm,0.7s,baz=72,slow=6.2,SNR=23
KBZ Khabaz 81.85 314 P **P 14 06 46.0 +0.8**
comp=Z,23nm,0.9s,baz=82,slow=3.1,SNR=28
KBZ LR LR 14 46 01.6
comp=Z,50nm,18.4s,baz=248,slow=38
SUMG Summit 82.56 1 *i* P **P 14 06 50.0 +1.1**
SUMG Summit 82.56 1 P **P 14 06 50.0 +1.1**
SUMG IAmb IAmb 14 06 51.0
comp=Z,9.7nm,0.9s
VSU Vasula 82.77 332 *e*P **P 14 06 49.9 +0.2**
PDAR Pinedale Array 83.23 46 P **P 14 06 52.5 -0.3**
comp=Z,0.8nm,0.7s,baz=270,slow=1.5,SNR=7.8
PDAR LR LR 14 38 38.1
comp=Z,62nm,20.2s,baz=318,slow=32
MTSE Matsula 83.81 334 *e*P **P 14 06 52.5 -2.6**
MNK Minsk 84.64 329 *i* P **P 14 06 58.2 -1.1**
comp=E,2.0nm,0.9s
MNK *i* P **P 14 06 58.2 -1.1**
comp=N,30nm,0.8s
MNK *i* P **P 14 06 58.2 -1.1**
comp=Z,36nm,0.8s
MNK *i* PP **PP 14 10 15.0 +0.3**
MNK *i* PPP PPP 14 12 08.2
MNK *i* S **S 14 17 18.8 -6.0**
MNK *i* SS **SS 14 22 59.5 +4.2**
MNK *i* SSS SSS 14 26 30.6
MNK *i* LQ LQ 14 39 44.9
MNK *i* LR LR 14 44 40.1
MNK *i* LRM MLR 14 45 42.4
comp=Z,80nm,17.4s
MNK *i* LRM MLR 14 46 11.3
comp=E,21nm,20.3s
MNK *i* LRM MLR 14 46 16.4
comp=N,303nm,22.4s
NACGM Naroch 84.91 330 *i* P **P 14 07 00.8 +0.1**
NACGM *i* P **P 14 07 00.8 +0.1**
NACGM *i* P **P 14 07 00.8 +0.1**
NACGM *i* Pb **PcP 14 07 01.8 -2.2**
comp=Z,30nm,0.9s
NACGM *i* PcP **pP 14 07 04.3 -3.3**
NACGM *i* PP **PP 14 10 11.8 -5.0**
NACGM *i* PPP PPP 14 11 57.4
NACGM *i* SKS S 14 17 04.9 -23
NACGM *i* S ScS 14 17 54.0 +16
NACGM *i* SS **SS 14 22 55.0 -4.2**
NACGM *i* SSS SSS 14 26 17.3
NACGM *i* LQ LQ 14 39 09.2
NACGM *i* LR LR 14 45 31.5
PABE Paberze 85.80 331 *e*P **P 14 07 05.3 +0.2**
AKASG Malin Array Be 86.22 325 P **P 14 07 06.1 -1.2**
comp=Z,5.0nm,0.8s,baz=44,slow=5.7,SNR=12
NC405 NORSAR Array S 86.49 340 P **P 14 07 08.2 -0.3**
NOA NORSAR Array B 86.70 340 P **P 14 07 08.9 -0.6**
comp=Z,4.0nm,0.7s,baz=42,slow=4.8,SNR=23
NOA LR LR 14 49 58.2
comp=Z,36nm,21.1s,baz=160,slow=38
ULM Lac du Bonnet 87.24 35 P **P 14 07 11.7 -0.6**
comp=Z,1.5nm,0.7s,baz=309,slow=8.2,SNR=3.3
ULM LR LR 14 45 49.8
comp=Z,50nm,20.2s,baz=22,slow=35
BRTR Keskin Array B 89.84 314 P **P 14 07 24.0 -1.1**
comp=Z,3.6nm,0.7s,baz=79,slow=2.6,SNR=10.0
KOLS Kolonicke sedl 90.85 327 *e*P **P 14 07 29.5 +0.1**
CLL Collm 93.43 333 *e*P **P 14 07 40.0 -1.2**
TXAR Lajitas Array 94.04 55 P **P 14 07 44.9 +0.3**
comp=Z,2.5nm,1.1s,baz=293,slow=2.0,SNR=9.2
TXAR LR LR 14 41 56.7
comp=Z,40nm,21.4s,baz=0.0,slow=30
GERES GERESS Array B 94.96 331 P **P 14 07 48.1 -0.4**
comp=Z,1.2nm,0.5s,baz=13,slow=27,SNR=11
VNDA Vanda 102.80 176 P **Pdif 14 08 21.6 -1.0**
comp=Z,0.3nm,0.5s,baz=11,slow=21,SNR=1.6
TORD Torodi Ar. Bea 128.44 313 PKP **PKPdf 14 13 32.5 -1.0**
comp=Z,0.5nm,0.8s,baz=355,slow=1.0,SNR=4.2
TORD PP **PP 14 15 37.0 -0.6**
comp=Z,2.9nm,1.2s,baz=66,slow=3.6,SNR=7.8
DBIC Dimbokro 137.54 314 PKP **PKPdf 14 13 50.4 -0.2**
comp=Z,1.8nm,0.7s,baz=20,slow=3.3,SNR=3.3
PLCA Paso Flores 145.88 126 PKPbc **PKPab 14 14 05.6 -0.3**
comp=Z,13nm,0.9s,baz=221,slow=2.9,SNR=26
PLCA Paso Flores 145.88 126 PKPab 14 14 06.3 +0.4
LPAZ La Paz 147.02 81 PKP **PKPdf 14 14 08.6 +0.5**
comp=Z,12nm,0.9s,baz=331,slow=4.1,SNR=38
LPAZ PKPbc **PKPab 14 14 10.7 -0.9**
comp=Z,8.9nm,0.7s,baz=244,slow=2.9,SNR=28
LPAZ La Paz 147.02 81 PKPab 14 14 11.0 -0.6
CPUP Villa Florida 158.99 98 PKPab **PKPab 14 15 01.1 +0.3**
comp=Z,1.5nm,0.8s,baz=279,slow=1.0,SNR=4.1

KRSC 02 14:02:43.0±2.1, 50.48N×157.58E, h41km±25km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.96**	**283**	*e*P	Pn	14 03 00.7	+0.8
SKR				*e*S	Sn	14 03 12.4	+0.1
ALID	**Alaid**	**1.35**	**288**	*e*P	Pn	14 03 06.8	+1.3
KDTR	**Khodutka, Kamc**	**1.37**	**13**	*e*P	Pn	14 03 07.1	+1.5
KDTR				*e*S	Sn	14 03 23.4	+0.9
ASAK	**Asacha**	**1.92**	**6**	*e*P	Pn	14 03 16.8	+3.6
MTVR	**Mutnovka**	**2.04**	**10**	*e*P	Pn	14 03 17.7	+2.7
MTVR				*e*S	Sn	14 03 42.0	+2.6
RUS	**Russkaya**	**2.04**	**16**	*e*P	Pn	14 03 16.2	+1.4
RUS				*e*S	Sn	14 03 41.3	+2.2
GRL	**Gorelyy**	**2.10**	**8**	*e*P	Pn	14 03 18.2	+2.4
GRL				*e*S	Sn	14 03 44.3	+3.6
KRMR	**Karymshinskiy**	**2.38**	**8**	*e*P	Pn	14 03 24.5	+5.0
KRMR				*e*S	Sn	14 03 54.5	+7.1
PET	**Petropavlovsk**	**2.64**	**14**	*e*P	Pn	14 03 25.3	+2.3
PET				*e*S	Sn	14 03 57.1	+3.4
DALK	**Dalny**	**2.66**	**15**	*e*P	Pn	14 03 25.6	+2.3
DALK				*e*S	Sn	14 03 56.9	+2.6
UGLR	**Uglovaya**	**2.84**	**15**	*e*P	Pn	14 03 29.6	+3.7
AVH	**Avacha**	**2.88**	**14**	*e*P	Pn	14 03 30.2	+3.7
SMAR	**Somma**	**2.89**	**15**	*e*P	Pn	14 03 30.4	+3.7
KOK	**Koryaka**	**2.90**	**13**	*e*P	Pn	14 03 30.4	+3.8
SDLR	**Sedlovina**	**2.92**	**16**	*e*P	Pn	14 03 29.5	+2.5
SDLR				*e*S	Sn	14 04 03.9	+3.0
KRER	**Koryakskii**	**2.92**	**14**	*e*P	Pn	14 03 30.6	+3.5
KRX	**Arik**	**2.96**	**12**	*e*P	Pn	14 03 31.5	+3.9
SPN	**Mys Shipunski**	**3.03**	**29**	*e*S	Sn	14 04 05.5	+2.1
GNL	**Ganaly**	**3.23**	**4**	*e*P	Pn	14 03 36.0	+4.7
KBTR	**Krutoberegovo**	**6.54**	**27**	*e*P	Pn	14 04 20.0	+3.5

*INMG **02** 14:03:22.6±1.2, 32°.23N×7°.83W, h31km, MD2.8, ML2.4, Error ellipse: s-maj=5.3km s-min=4.5km az=73.0*
ISC 02 14:03:21.8±3.8, 32°.4N±0°.2×7°.7W±0°.1, h10km, n8, σ1°87/11, Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVE	**Averroes**	**0.93**	**16**	*e*S	**Sn**	**14 03 58.8**	**+4.5**
AVE	**Averroes**	**0.93**	**16**	*e*P	**Pn**	**14 03 41.2**	**+0.3**
IFR	**Ifrane**	**2.45**	**62**	*e*P	**Pg**	**14 04 08.6**	**-0.2**
IFR				*e*S	**Sg**	**14 04 39.5**	**-1.1**
PVAQ	**Vaqueiros**	**4.99**	**0**	*e*Pn	**Pn**	**14 04 36.9**	**+0.2**
PVAQ				*e*Sn	**Sn**	**14 05 33.7**	**-0.7**
PVAQ				A	A	14 05 48.1	
	4.2nm,0.6s						
PCVE	**Castro Verde**	**5.22**	**357**	*e*Pn	**Pn**	**14 04 40.5**	**+0.6**
PCVE				*e*Sn	**Sn**	**14 05 39.8**	**-0.3**
PCVE				A	A	14 05 41.6	
	3.0nm,0.6s						
PNCL	**Nicolau / Gran**	**5.73**	**354**	*e*Pn	**Pn**	**14 04 47.1**	**+0.2**
PBAR	**Barrancos**	**5.78**	**5**	*e*Sn	**Sn**	**14 05 53.2**	**-0.8**
PBAR				A	A	14 05 55.6	
	1.7nm,0.4s						
PMRV	**Marv??o**	**7.01**	**2**	*e*Sn	**Sn**	**14 06 22.1**	**-2.2**

*IDC **02** 14:06:47.4±0.6, 2°.56S×140°.61E, h0km, mb4.0/10, mb1 4.2/13, mb1mx4.1/31, mbtmp4.1/13, ML4.2/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/37, Error ellipse: s-maj=16.7km s-min=7.6km az=153.0*
*NEIC **02** 14:06:51.1±2.2, 2°.55S±0°.06×140°.5E±0°.1, h24km±6km, mb4.3/12, Error ellipse: s-maj=16.7km s-min=7.4km az=74.0*
*DJA **02** 14:06:52.2±0.4, 2°S±6°×14°1E±°, h10km, M4.4/6, mb4.4/6, MLv4.3/3*
ISC 02 14:06:51.3±0.8, 2°.66S±0°.06×140°.60E±0°.05, h25km±6km, n46, σ1°92/44, mb4.2/12, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.18**	**36**	Pn	**Pb**	**14 06 56.4**	**-0.3**
	2μm,0.3s,baz=232,slow=7.5,SNR=2243						
JAY				Sn	**Sb**	**14 06 59.2**	**-1.3**
	9μm,0.3s,baz=254,slow=7.3,SNR=164						
JAY	**Jayapura**	**0.18**	**36**	P	**Pb**	**14 06 56.5**	**-0.3**
JAY				S	**Sb**	**14 06 59.2**	**-1.3**
GENI	**Genyem**	**0.43**	**279**	P	**Pb**	**14 07 00.5**	**0.0**
GENI				S	**Sn**	**14 07 08.0**	**-1.2**
SRPI	**Serui, Papua**	**4.42**	**280**	P	**Pn**	**14 07 58.3**	**+1.3**
BAKI	**Biak**	**4.72**	**288**	P	**Pn**	**14 08 01.2**	**+0.2**
FAKI	**Fak Fak**	**8.34**	**268**	Pn	**Pn**	**14 08 52.3**	**+1.5**
FAKI	**Fak Fak**	**8.34**	**268**	P	**Pn**	**14 08 54.2**	**+3.4**
	23nm,0.8s						
PMG	**Port Moresby**	**9.35**	**136**	Pn	**Pn**	**14 09 06.2**	**+1.6**
	0.9nm,0.3s,baz=147,slow=21,SNR=1.4						
PMG				Sn	**Sn**	**14 10 48.2**	**-0.9**
	1.2nm,0.3s,baz=266,slow=6.2,SNR=1.2						
PMG				LR	LR	14 13 40.5	
	comp=Z,266nm,20.7s,baz=275,slow=44						
MTN	**Manton Dam**	**13.79**	**222**	Pn	**Pn**	**14 10 05.0**	**-0.4**
SANI	**Sanana**	**14.61**	**272**	P	**Pn**	**14 10 18.8**	**+2.2**
	18nm,1.0s						
SOEI	**Soe**	**17.69**	**246**	P	**P**	**14 11 00.6**	**+3.5**
	50nm,1.1s						
WB0	**Warramunga Arr**	**18.05**	**199**		**Pn**	**14 11 01.2**	**+0.6**
WR0	**Warramunga Arr**	**18.18**	**199**		**P**	**14 11 02.7**	**+0.3**
WR0				IAmb	IAmb	14 11 17.4	
	comp=Z,24nm,1.2s						
WRAB	**Tennant Creek**	**18.22**	**199**	P	**P**	**14 11 03.5**	**+0.7**
WRAB				IAmb	IAmb	14 11 08.4	
	comp=Z,16nm,0.9s						
WB2	**Warramunga Arr**	**18.23**	**199**		**P**	**14 11 02.7**	**-0.1**
WB2				IAmb	IAmb	14 11 08.5	
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**18.23**	**199**	P	**P**	**14 11 02.5**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=26,slow=12,SNR=32						
WRA				S	**Sn**	**14 14 18.6**	**-7.2**
	baz=9.0,slow=22,SNR=4.8						
BATI	**Baumata**	**18.41**	**245**	P	**Pn**	**14 11 05.8**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=130,slow=17,SNR=2.7						
FITZ	**Fitzroy Crossi**	**21.22**	**223**	P	**P**	**14 11 35.0**	**-0.6**
	comp=Z,9.3nm,1.0s,baz=47,slow=11,SNR=8.1						
FITZ				S	**S**	**14 15 27.0**	**-3.4**
	comp=Z,3.0nm,0.8s,baz=62,slow=20,SNR=3.2						
FITZ	**Fitzroy Crossi**	**21.22**	**223**	P	**P**	**14 11 36.0**	**+0.4**
FITZ				IAmb	IAmb	14 11 45.2	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**21.86**	**197**	P	**P**	**14 11 43.8**	**+1.4**
ASAR	**Alice Springs**	**21.86**	**197**	P	**P**	**14 11 42.5**	**0.0**
	comp=Z,3.5nm,0.7s,baz=31,slow=9.8,SNR=48						
ASAR				S	**S**	**14 15 41.5**	**-1.5**
	comp=Z,1.2nm,1.0s,baz=19,slow=18,SNR=3.2						
EIDS	**Eidsvold**	**24.73**	**157**	P	**P**	**14 12 15.8**	**+4.9**
EIDS				IAmb	IAmb	14 12 23.5	
	comp=Z,9.8nm,0.8s						
STKA	**Stephens Creek**	**29.07**	**178**	P	**P**	**14 12 51.4**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=303,slow=23,SNR=2.7						
SANVU	**Saraoutou**	**29.13**	**117**	P	P	14 12 59.5	+8.9
BBOO	**Buckleboo**	**30.29**	**188**	P	**P**	**14 13 00.2**	**-0.5**
BBOO				IAmb	IAmb	14 13 03.4	
	comp=Z,8.5nm,0.9s						
H11S3	**WAKE ISLAND Hy**	**33.19**	**50**	T	T	14 48 20.1	
	baz=232,slow=75,SNR=126						
H11S2	**WAKE ISLAND Hy**	**33.20**	**50**	T	T	14 48 16.7	
	baz=232,slow=75,SNR=56						
H11S1	**WAKE ISLAND Hy**	**33.21**	**50**	T	T	14 48 20.0	
	baz=232,slow=75,SNR=78						
CAN	**Canberra**	**33.42**	**167**	P	**P**	**14 13 30.4**	**+2.1**
H11N1	**WAKE ISLAND Hy**	**34.08**	**48**	T	T	14 49 29.0	
	baz=229,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy**	**34.09**	**48**	T	T	14 49 31.7	
	baz=229,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**34.10**	**48**	T	T	14 49 33.0	
	baz=229,slow=76,SNR=18						
NWAO	**Narrogin (SRO)**	**37.23**	**213**	P	**P**	**14 14 00.2**	**-0.8**
KSRS	**Korea Array**	**41.61**	**345**	LR	LR	14 30 14.7	
	comp=Z,30nm,19.6s,baz=205,slow=34						
CMAR	**Chiang Mai Arr**	**46.06**	**299**	P	**P**	**14 15 13.2**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=121,slow=6.6,SNR=16						
PETK	**Petropavlovsk-**	**57.40**	**12**	P	**P**	**14 16 37.0**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=236,slow=10,SNR=1.7						
SONM	**Songino Array**	**58.50**	**334**	P	**P**	**14 16 45.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=100,slow=23,SNR=2.2						
MKAR	**Makanchi Array**	**70.91**	**322**	P	**P**	**14 18 06.4**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=116,slow=8.2,SNR=14						
ZALV	**Zalesovo Beam**	**72.85**	**329**	P	**P**	**14 18 17.5**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=102,slow=4.7,SNR=2.1						
VNDA	**Vanda**	**75.67**	**175**	P	**P**	**14 18 34.0**	**0.0**
	comp=Z,0.8nm,0.7s,baz=315,slow=7.8,SNR=6.7						
VNDA	**Vanda**	**75.67**	**175**	P	**P**	**14 18 33.5**	**-0.5**
ILAR	**Eielson Array**	**85.01**	**24**	P	**P**	**14 19 22.8**	**-1.7**
	comp=Z,1.2nm,0.8s,baz=257,slow=4.6,SNR=7.8						
AKTO	**Aktyubinsk**	**87.31**	**321**	LR	LR	15 01 06.9	
	comp=Z,38nm,18.9s,baz=295,slow=37						
DBIC	**Dimbokro**	**145.35**	**278**	PKPbc	**PKPdf**	**14 26 27.7**	**-0.6**
	comp=Z,3.6nm,0.9s,baz=47,slow=3.5,SNR=6.1						
LPAZ	**La Paz**	**145.93**	**125**	PKPbc	**PKPab**	**14 26 30.9**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=268,slow=3.2,SNR=6.1						
CPUP	**Villa Florida**	**146.37**	**150**	PKPbc	**PKPab**	**14 26 31.5**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=275,slow=18,SNR=2.6						

*IDC **02** 14:21:34.6±2.1, 26°.50N×128°.50E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/58, mbtmp3.5/5, Error ellipse: s-maj=137.1km s-min=13.1km az=66.0*
*JMA **02** 14:21:36.4±0.3, 26°.38N×128°.74E, h18km±4km, M3.7*
ISC 02 14:21:35.6±1.4, 26°.43N±0°.05×128°.78E±0°.04, h13km±9km, n17, σ0°86/26, mb3.3/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**0.60**	**312**	Pn	**Pb**	**14 21 47.9**	**0.0**
	638nm,0.3s,baz=133,slow=22,SNR=2382						
JOW				Sn	**Sg**	**14 21 54.9**	**-0.4**
	753nm,0.3s,baz=141,slow=26,SNR=16						
JOW	**Kunigami**	**0.60**	**312**	P	**Pb**	**14 21 48.2**	**+0.3**
JOW				S	**Sb**	**14 21 56.9**	**+0.6**
JYRO	**Yoronjima**	**0.66**	**334**	P	**Pn**	**14 21 49.7**	**-0.8**
JYRO				*e*S	**Sb**	**14 21 58.8**	**+0.9**
JNTH	**Nagotoyohara**	**0.68**	**277**	P	**Pg**	**14 21 48.8**	**0.0**
JNTH				S	**Sg**	**14 21 57.9**	**+0.1**
JJT3	**Tamagusuku3**	**0.94**	**252**	P	**Pb**	**14 21 53.5**	**-0.1**
JJT3				*e*S	**Sb**	**14 22 05.2**	**-0.7**
JIH	**Iheya**	**0.94**	**310**	P	**Pg**	**14 21 54.0**	**+0.3**
JIH				*e*S	**Sg**	**14 22 06.6**	**+0.6**
JOKE	**Okinoerabujima**	**0.94**	**349**	P	**Pn**	**14 21 55.0**	**+0.5**
JTK	**Tokunoshima**	**1.36**	**7**	P	**Pg**	**14 22 01.1**	**-0.6**
JTK				*e*S	**Sg**	**14 22 18.7**	**-0.6**
JAGN	**Aguni-jima**	**1.38**	**277**	P	**Pn**	**14 22 00.3**	**-0.2**
JAGN				*e*S	**Sn**	**14 22 17.3**	**-1.3**
JMZ	**Minamidaito 2**	**2.28**	**105**	P	**Pn**	**14 22 12.9**	**0.0**
JMZ				S	**Sn**	**14 22 39.1**	**-1.8**
JKDJ	**Kitadaitoujima**	**2.32**	**101**	P	**Pn**	**14 22 13.7**	**+0.3**
JKDJ				S	**Sn**	**14 22 41.4**	**-0.3**
SONM	**Songino Array**	**27.65**	**326**	P	**P**	**14 27 24.3**	**+1.2**
	0.3nm,0.3s,baz=149,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	**41.76**	**312**	P	**P**	**14 29 23.6**	**-0.9**
	0.1nm,0.3s,baz=92,slow=7.9,SNR=7.2						
WRA	**Warramunga Arr**	**46.41**	**173**	P	**P**	**14 30 02.1**	**+0.1**
	0.3nm,0.9s,baz=352,slow=8.4,SNR=1.8						
ASAR	**Alice Springs**	**50.05**	**174**	P	**P**	**14 30 32.3**	**+2.2**
	0.3nm,0.8s,baz=11,slow=11,SNR=4.1						
FINES	**FINESS Array B**	**72.93**	**331**	P	**P**	**14 33 03.9**	**-0.3**
	2.8nm,0.9s,baz=83,slow=6.0,SNR=4.9						
H06E1	**SOCORRO T-PHASE**	**86.67**	**59**	T	T	16 34 32.2	
	SNR=20						

*IDC **02** 14:37:33.5±1.4, 5°.56S×153°.22E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.7/40, mbtmp3.8/11, ML1.8/1, Error ellipse: s-maj=48.1km s-min=18.4km az=116.0*
ISC 02 14:37:39.2±1.1, 5°.6S±0°.2×153°.2E±0°.2, h37km, n12, σ0°72/14, mb3.7/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.07**	**237**	Pn	**Pn**	**14 39 20.6**	**+0.5**
	0.9nm,0.3s,baz=353,slow=20,SNR=1.7						
PMG				Sn	**Sn**	**14 40 38.8**	**-0.5**
	1.2nm,0.3s,baz=225,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	**23.22**	**230**	P	**P**	**14 42 42.9**	**-0.3**
	2.7nm,0.8s,baz=54,slow=9.7,SNR=23						
ASAR	**Alice Springs**	**25.83**	**224**	P	**P**	**14 43 07.0**	**-0.4**
	0.8nm,0.7s,baz=57,slow=9.0,SNR=12						
ASAR				PcP	**PcP**	**14 46 36.8**	**+0.5**
	0.3nm,0.7s,baz=49,slow=2.1,SNR=4.8						
STKA	**Stephens Creek**	**28.32**	**201**	P	**P**	**14 43 30.1**	**+0.5**
	0.9nm,0.6s,baz=345,slow=11,SNR=3.4						
FITZ	**Fitzroy Crossi**	**29.62**	**243**	P	**P**	**14 43 40.6**	**-0.6**
	2.1nm,0.8s,baz=74,slow=10,SNR=6.7						
CMAR	**Chiang Mai Arr**	**58.54**	**295**	P	**P**	**14 47 32.4**	**-0.1**
	0.4nm,0.6s,baz=129,slow=7.6,SNR=2.5						
PETK	**Petropavlovsk-**	**58.59**	**3**	P	**P**	**14 47 32.4**	**+0.2**
	2.7nm,0.8s,baz=166,slow=5.4,SNR=6.3						
SONM	**Songino Array**	**67.18**	**328**	P	**P**	**14 48 31.1**	**+1.5**
	0.2nm,0.4s,baz=147,slow=6.9,SNR=2.0						
MKAR	**Makanchi Array**	**81.15**	**319**	P	**P**	**14 49 50.8**	**-0.3**
	0.2nm,0.5s,baz=96,slow=4.9,SNR=2.3						
ZALV	**Zalesovo Beam**	**82.00**	**326**	P	**P**	**14 49 54.5**	**-0.8**
	0.5nm,0.4s,baz=125,slow=9.0,SNR=1.8						
ILAR	**Eielson Array**	**82.74**	**22**	P	**P**	**14 49 57.9**	**-1.0**
	0.4nm,0.8s,baz=218,slow=5.7,SNR=2.3						
TORD	**Torodi Ar. Bea**	**150.89**	**287**	PKPbc	**PKPbc**	**14 57 29.1**	**0.0**
	0.9nm,0.7s,baz=42,slow=2.4,SNR=4.2						

IDC 02 14:54:41.9±275.0, 68.06N×40.71E, h0km, Error ellipse: s-maj=123.3km s-min=20.3km az=107.0, Barents Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**8.14**	**287**	*i*		15 44 40.0	
	baz=87,slow=332,SNR=3.1						
I31KZ	**AKTYUBINSK INF**	**19.66**	**146**	*i*		16 57 50.0	
	baz=339,slow=342,SNR=1.0						
I46RU	**ZALESOVO INFRA**	**24.91**	**102**	*i*		17 27 29.7	
	baz=321,slow=348,SNR=1.2						
I18DK	**QAANAAQ INFRAS**	**28.80**	**335**	*i*		17 52 00.0	
	baz=46,slow=342,SNR=1.0						

*IDC **02** 14:57:32.9±3.2, 30°.53S×177°.56W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.7/34, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=66.2km s-min=21.4km az=101.0*
ISC 02 14:57:33.5±2.7, 30°.6S±0°.1×177°.0W±0°.4, h35km, n6, σ1°47/7, mb3.8/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.55**	**329**	Pn	**Pn**	**14 57 58.3**	**-0.3**
	249nm,0.3s,baz=99,slow=8.0,SNR=24						
RAO				Sn	**Sn**	**14 58 16.5**	**-0.9**
	319nm,0.3s,baz=101,slow=23,SNR=11						
URZ	**Urewera**	**9.06**	**211**	Pn	**Pn**	**14 59 40.3**	**-1.4**
	0.1nm,0.3s,baz=301,slow=20,SNR=2.1						
STKA	**Stephens Creek**	**35.27**	**257**	P	**P**	**15 04 27.2**	**+2.3**
	1.5nm,0.7s,baz=102,slow=12,SNR=3.7						
ASAR	**Alice Springs**	**43.95**	**267**	P	**P**	**15 05 36.8**	**-0.7**
	0.5nm,0.9s,baz=106,slow=7.7,SNR=2.9						
WRA	**Warramunga Arr**	**44.96**	**272**	P	**P**	**15 05 46.0**	**+0.5**
	0.6nm,0.4s,baz=110,slow=8.0,SNR=16						
FINES	**FINESS Array B**	**145.61**	**341**	PKPbc	**PKiKP**	**15 17 11.4**	**0.0**
	0.9nm,0.5s,baz=31,slow=5.1,SNR=3.6						

*IDC **02** 15:01:50.8±0.5, 5°.03S×152°.97E, h0km, mb4.2/24, mb1 4.3/26, mb1mx4.2/46, mbtmp4.2/26, ML2.8/2, MS3.7/22, Ms1 3.7/22, ms1mx3.5/41, Error ellipse: s-maj=17.0km s-min=12.6km az=103.0*
*NEIC **02** 15:01:54.1±1.9, 5°.06S±0°.08×153°.0E±0°.1, h21km±3km, mb4.6/17, Error ellipse: s-maj=16.1km s-min=10.8km az=112.0*
*DJA **02** 15:02:00.2±0.5, 5°S±5°×15°3E±°, h58km±5km, M4.7/12, mB4.6/3, mb4.3/12, MLv4.9/3, Mw(mB)3.8/3*
ISC 02 15:01:57.0±0.5, 5°.06S±0°.08×152°.96E±0°.09, h43km, n62, σ1°12/51, mb4.3/30, MS3.6/21, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.20**	**233**	Pn	**Pn**	**15 03 39.3**	**-0.4**
	1.6nm,0.3s,baz=301,slow=12,SNR=4.4						
PMG				Sn	**Sn**	**15 05 00.4**	**+0.2**
	4.6nm,0.3s,baz=28,slow=8.8,SNR=3.4						

comp=Z,60nm,18.2s,baz=285,slow=35
ASAJ Asahikawa 49.83 350 LR LR 15 29 00.5
comp=Z,92nm,21.6s,baz=164,slow=33
USRK Ussuriysk Ar. 52.54 341 P **P** **15 11 06.7 +0.7**
comp=Z,2.2nm,0.8s,baz=166,slow=7.7,SNR=5.0
PSI Prapat 54.54 277 LR LR 15 40 46.8
comp=Z,84nm,20.0s,baz=95,slow=43
PETK Petropavlovsk- 58.09 3 P **P** **15 11 45.9 +0.1**
comp=Z,1.5nm,0.4s,baz=156,slow=6.9,SNR=18
CMAR Chiang Mai Arr 58.13 295 LR LR 15 35 23.7
comp=Z,46nm,20.0s,baz=176,slow=35
MA2 Magadan 64.45 359 P **P** **15 12 30.4 +1.7**
comp=Z,2.4nm,0.5s,baz=164,slow=10,SNR=4.5
MA2 LR LR 15 37 04.9
comp=Z,23nm,20.6s,baz=190,slow=33
MA2 Magadan 64.45 359 P **P** **15 12 29.6 +0.8**
SONM Songino Array 66.62 328 P **P** **15 12 43.9 +0.7**
comp=Z,0.8nm,0.5s,baz=138,slow=6.4,SNR=7.8
SONM LR LR 15 39 52.7
comp=Z,27nm,21.8s,baz=100,slow=34
SEY Seymchan 67.80 360 P **P** **15 12 50.6 +0.4**
comp=Z,3.4nm,1.1s,baz=172,slow=7.5,SNR=5.7
VNDA Vanda 72.57 178 P **P** **15 13 19.1 -0.1**
comp=Z,1.1nm,0.8s,baz=97,slow=21,SNR=6.7
BILL Bilibino 73.53 5 P **P** **15 13 25.4 +0.5**
TIXI Tiksi 78.17 352 P **P** **15 13 51.9 +0.5**
comp=Z,1.0nm,0.4s,baz=144,slow=6.8,SNR=5.6
TIXI Tiksi 78.17 352 P **P** **15 13 51.4 +0.1**
TIXI IAmb IAmb 15 13 54.2
comp=Z,8.5nm,1.5s
MK31 Makanchi Array 80.62 319 P **P** **15 14 05.6 +0.3**
MKAR Makanchi Array 80.62 319 P **P** **15 14 06.2 +0.9**
comp=Z,1.4nm,0.7s,baz=95,slow=7.3,SNR=18
MAKZ Makanchi 80.83 319 P **P** **15 14 06.6 +0.2**
MAKZ IAmb IAmb 15 14 08.8
comp=Z,7.0nm,1.2s
ZAA0 Zalesovo Array 81.45 326 P **P** **15 14 09.2 -0.3**
ZAA0 IAmb IAmb 15 14 26.5
comp=Z,7.3nm,1.3s
ZALV Zalesovo Beam 81.45 326 P **P** **15 14 08.3 -1.2**
comp=Z,3.6nm,0.8s,baz=123,slow=5.5,SNR=13
ZALV LR LR 15 49 26.4
comp=Z,27nm,21.3s,baz=119,slow=35
ILAR Eielson Array 82.34 22 P **P** **15 14 12.7 -1.3**
comp=Z,1.3nm,0.9s,baz=248,slow=5.1,SNR=12
ILAR LR LR 15 45 36.4
comp=Z,26nm,21.2s,baz=254,slow=32
KURK Kurchatov 84.07 322 P **P** **15 14 22.6 -0.5**
KURBB Kurchatov Arra 84.10 322 P **P** **15 14 22.6 -0.6**
comp=Z,2.2nm,0.8s,baz=107,slow=4.2,SNR=12
AAK Ala-Archa 84.96 313 P **P** **15 14 28.4 +0.3**
comp=Z,0.6nm,0.4s,baz=187,slow=5.5,SNR=4.3
AAK Ala-Archa 84.96 313 IAmb IAmb 15 15 45.7
comp=Z,3.6nm,0.9s
NRIK Noril'sk 86.26 341 P **P** **15 14 33.9 +0.2**
comp=Z,3.6nm,0.6s,baz=124,slow=4.4,SNR=7.1
NRIK Noril'sk 86.26 341 P **P** **15 14 34.3 +0.6**
BVAR Borovoye Array 89.54 323 P **P** **15 14 48.3 -1.5**
comp=Z,1.4nm,0.7s,baz=97,slow=11,SNR=10.0
BRVK Borovoye 89.61 323 P **P** **15 14 49.8 -0.3**
BRVK IAmb IAmb 15 15 02.0
comp=Z,3.9nm,0.9s
NVAR Mina Array Bea 92.12 52 P **P** **15 15 02.5 +0.1**
comp=Z,0.2nm,0.4s,baz=209,slow=46,SNR=2.2
YKA Yellowknife Ar 95.58 28 P **P** **15 15 17.0 -0.4**
comp=Z,0.6nm,1.0s,baz=265,slow=4.4,SNR=4.5
YKA LR LR 15 52 38.6
comp=Z,60nm,21.7s,baz=0.0,slow=32
GEYT Alibeck 96.90 307 LR LR 16 02 41.9
comp=Z,20nm,18.0s,baz=40,slow=38
PDAR Pinedale Array 98.90 48 LR LR 15 56 58.4
comp=Z,61nm,18.2s,baz=305,slow=34
GERES GERESS Array B 124.36 329 PKP **PKiKP** **15 20 51.8 0.0**
comp=Z,1.2nm,0.7s,baz=9.5,slow=4.1,SNR=4.8
LPAZ La Paz 134.16 118 PKP **PKiKP** **15 21 13.3 +0.3**
comp=Z,1.5nm,0.8s,baz=50,slow=1.9,SNR=5.8
LPAZ La Paz 134.16 118 PKPdf **15 21 08.8 -2.9**
MDT Midelt 145.35 326 PKPbc **PKPab** **15 21 31.1 +0.1**
comp=Z,4.9nm,1.0s,baz=62,slow=3.0,SNR=5.7
TORD Torodi Ar. Bea 150.54 288 PKPbc **PKPbc** **15 21 45.2 0.0**
comp=Z,5.0nm,0.9s,baz=63,slow=2.4,SNR=16
BDFB Brasilia 150.77 135 PKPbc **PKiKP** **15 21 46.8 +0.3**
comp=Z,3.2nm,0.6s,baz=175,slow=1.6,SNR=7.0
BDFB Brasilia 150.77 135 **PKiKP** **15 21 46.3 -0.2**

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*ISK **02** 15:13:25.8, 35°.51N×29°.58E, h29km, ML3.4/14*
*DDA **02** 15:13:26.9, 35°.55N×29°.67E, h37km±7km, MW3.5*
*IDC **02** 15:13:26.6±2.1, 35°.57N×29°.71E, h39km±23km, mb3.6/7, mb1 3.9/12, mb1mx3.5/62, mbtmp3.9/12, ML4.0/5, Error ellipse: s-maj=21.0km s-min=14.7km az=163.0*
*NIC **02** 15:13:27.1±0.0, 35°.53N×29°.67E, h35km±31km, Ml3.5/6*
*HLW **02** 15:13:35.0, 34°.78N×29°.46E, h24km±16km, Md4.0, Ml4.1*
ISC 02 15:13:26.4±1.1, 35°.49N±0°.03×29°.64E±0°.03, h40km±13km, n81, σ1°11/117, mb3.7/7, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KSL	**Kastellorizon**	**0.66**	**356**	P	**Pn**		**15 13 39.5**	**+0.2**
KSL				S	**Sn**		**15 13 48.9**	**+0.3**
AKAS	**Kas**	**0.74**	**358**	*i* P	**Pn**		**15 13 39.8**	**-0.7**
AKAS				IAML			15 13 51.0	
	comp=N,357nm,0.8s							
AKAS				IAML			15 13 51.0	
	comp=E,266nm,0.3s							
AKAS				*i* S	**Sn**		**15 13 51.1**	**+0.3**
AKAS	**Kas**	**0.74**	**358**	PG	**Pn**		**15 13 39.6**	**-1.0**
AKAS				SG	**Sn**		**15 13 50.7**	**-0.1**
AKUM	**Antalya-Kumluc**	**1.01**	**34**	*i* P	**Pn**		**15 13 44.1**	**+0.1**
AKUM				*i* S	**Sn**		**15 13 55.2**	**-1.9**
AKUM				IAML			15 13 57.0	
	comp=Z,353nm,0.2s							
AKUM				IAML			15 13 57.0	
	comp=E,698nm,0.3s							
AKUM				IAML			15 13 58.0	
	comp=N,635nm,0.4s							
FETY	**Fethiye**	**1.23**	**339**	*i* P	**Pn**		**15 13 46.2**	**-0.9**
FETY				*i* S	**Sn**		**15 14 00.8**	**-1.7**
FETY				IAML			15 14 01.0	
	comp=Z,184nm,0.2s							
FETY				IAML			15 14 01.0	
	comp=E,517nm,0.4s							
FETY				IAML			15 14 09.0	
	comp=N,159nm,0.4s							
FETY	**Fethiye**	**1.23**	**339**	PN	**Pn**		**15 13 46.2**	**-0.9**
ELL	**Elmali**	**1.28**	**10**	PN	**Pn**		**15 13 48.0**	**+0.1**
ELL				SN	**Sn**		**15 14 04.4**	**+0.6**
ELL	**Elmali**	**1.28**	**10**	P	**Pn**		**15 13 48.6**	**+0.7**
ARG	**Arkhangelos**	**1.43**	**301**	P	**Pn**		**15 13 49.5**	**-0.3**
ARG				SN	**Sn**		**15 14 06.9**	**-0.4**
ARG	**Arkhangelos**	**1.43**	**301**	P	**Pn**		**15 13 50.4**	**+0.6**
ARG				S	**Sn**		**15 14 07.7**	**+0.4**
DALY	**Dalyan (Mula)**	**1.55**	**329**	*i* P	**Pn**		**15 13 51.2**	**-0.2**
DALY				IAML			15 14 13.0	
	comp=E,171nm,0.4s							
DALY				IAML			15 14 17.0	
	comp=N,129nm,0.2s							
DALY				IAML			15 14 20.0	
	comp=Z,62nm,0.4s							
DALY	**Dalyan (Mula)**	**1.55**	**329**	PN	**Pn**		**15 13 51.4**	**0.0**
KORT	**Korkueli**	**1.62**	**21**	*i* P	**Pn**		**15 13 52.7**	**+0.2**
KORT				*i* S	**Sn**		**15 14 13.8**	**+1.6**
KORT				IAML			15 14 16.0	
	comp=N,233nm,0.4s							
KORT				IAML			15 14 16.0	
	comp=E,230nm,0.3s							
KORT				IAML			15 14 18.0	
	comp=Z,88nm,0.4s							
KORT	**Korkueli**	**1.62**	**21**	PN	**Pn**		**15 13 52.8**	**+0.3**
KORT				SN	**Sn**		**15 14 12.8**	**+0.6**
ANTB	**Antalya**	**1.63**	**30**	PN	**Pn**		**15 13 53.4**	**+0.8**
ANTB				SN	**Sn**		**15 14 13.1**	**+0.7**
TURN	**Turunc**	**1.71**	**319**	*i* P	**Pn**		**15 13 54.6**	**+1.0**
TURN				*i* S	**Sn**		**15 14 14.7**	**+0.4**
TURN				IAML			15 14 18.0	
	comp=Z,112nm,0.2s							
TURN				IAML			15 14 19.0	
	comp=E,144nm,0.3s							
TURN				IAML			15 14 22.0	
	comp=N,151nm,0.2s							
TURN	**Turunc**	**1.71**	**319**	PN	**Pn**		**15 13 53.8**	**+0.2**
TURN				SN	**Sn**		**15 14 13.7**	**-0.6**
GOLH	**Golhisar**	**1.75**	**358**	*i* P	**Pn**		**15 13 56.0**	**+1.7**
GOLH				*i* S	**Sn**		**15 14 16.4**	**+1.0**
GOLH				IAML			15 14 24.0	
	comp=Z,67nm,0.4s							
GOLH				IAML			15 14 25.0	
	comp=N,127nm,0.5s							
GOLH				IAML			15 14 42.0	
	comp=E,58nm,0.6s							
YER	**Yerkesik**	**1.97**	**327**	PN	**Pn**		**15 13 57.5**	**+0.1**
YER				SN	**Sn**		**15 14 20.9**	**0.0**
BUCA	**Burdur, Bucak-**	**1.98**	**22**	*i* P	**Pn**		**15 13 59.8**	**+2.3**
BUCA				*i* S	**Sn**		**15 14 24.5**	**+3.4**
BUCA				IAML			15 14 27.0	
	comp=Z,86nm,0.6s							
BUCA				IAML			15 14 31.0	
	comp=N,65nm,0.4s							
BUCA				IAML			15 14 36.0	
	comp=E,95nm,0.4s							
KARP	**Karpathos**	**2.02**	**272**	PN	**Pn**		**15 13 57.9**	**-0.1**
KARP				SN	**Sn**		**15 14 21.7**	**-0.3**
KARP	**Karpathos**	**2.02**	**272**	P	**Pn**		**15 14 00.0**	**+2.1**
KARP				S	**Sn**		**15 14 24.3**	**+2.3**
TAVA	**DENIZLI_Tavas**	**2.06**	**344**	*i* P	**Pn**		**15 13 59.5**	**+0.9**
TAVA				*i* S	**Sn**		**15 14 21.7**	**-1.3**
TAVA				IAML			15 14 25.0	
	comp=N,118nm,0.3s							
TAVA				IAML			15 14 25.0	
	comp=E,146nm,0.4s							
TAVA				IAML			15 14 26.0	
	comp=Z,96nm,0.3s							
MULA	**Mugla, Merkez-**	**2.06**	**329**	*i* P	**Pn**		**15 14 00.1**	**+1.6**
MULA				*i* S	**Sn**		**15 14 21.7**	**-1.4**
MULA				IAML			15 14 25.0	
	comp=N,124nm,0.2s							
MULA				IAML			15 14 26.0	
	comp=Z,136nm,0.3s							
MULA				IAML			15 14 26.0	
	comp=E,287nm,0.7s							
BCK	**Bucak**	**2.11**	**21**	PN	**Pn**		**15 14 00.1**	**+0.8**
KEPZ	**Antalya-Kepez**	**2.13**	**48**	*i* P	**Pn**		**15 14 00.3**	**+0.9**
KEPZ				*i* S	**Sn**		**15 14 24.5**	**-0.1**
KEPZ				IAML			15 14 25.0	
	comp=N,144nm,0.3s							
KEPZ				IAML			15 14 25.0	
	comp=E,108nm,0.3s							
KEPZ				IAML			15 14 32.0	
	comp=Z,65nm,0.5s							
ALAN	**Alanya-ANTALYA**	**2.22**	**61**	PN	**Pn**		**15 14 02.1**	**+1.5**
AKMS	**Akamas**	**2.26**	**101**	P	**Pn**		**15 14 01.9**	**+0.7**
AKMS				S	**Sn**		**15 14 28.4**	**+0.6**
AKMS				AML	AML		15 14 30.9	
	comp=Z,4.0nm,0.2s							
AKMS				AML	AML		15 14 30.9	
	comp=Z,4.0nm,0.2s							
NIS1	**Nisyros Isl.**	**2.28**	**300**	PN	**Pn**		**15 14 01.8**	**+0.3**
NIS1				SN	**Sn**		**15 14 28.0**	**-0.4**
GAZI	**Gazipasa**	**2.30**	**70**	*i* P	**Pn**		**15 14 01.6**	**-0.2**
GAZI				IAML			15 14 28.0	
	comp=E,323nm,0.3s							
GAZI				IAML			15 14 29.0	
	comp=Z,228nm,0.2s							
GAZI				IAML			15 14 29.0	
	comp=N,348nm,0.3s							
OSC1	**CSNet OBS 1**	**2.40**	**145**	P	**Pn**		**15 14 04.0**	**+0.9**
OSC1				S	**Sn**		**15 14 30.6**	**-0.7**
ISP	**Isparta**	**2.44**	**17**	PN	**Pn**		**15 14 04.5**	**+0.7**
ISP				SN	**Sn**		**15 14 32.8**	**+0.4**
ALFC	**Alefka**	**2.44**	**97**	P	**Pn**		**15 14 04.1**	**+0.3**
ALFC				S	**Sn**		**15 14 32.3**	**-0.1**
ALFC				AML	AML		15 14 33.5	
	comp=N,3.2nm,0.1s							
ALFC				AML	AML		15 14 33.5	
	comp=N,3.2nm,0.1s							
ALFC				AML	AML		15 14 34.8	
	comp=N,2.9nm,0.1s							
ALFC				AML	AML		15 14 34.8	
	comp=N,2.9nm,0.1s							
BODT	**Bodrum**	**2.45**	**311**	PN	**Pn**		**15 14 03.7**	**-0.1**
NATA	**Nata**	**2.51**	**106**	P	**Pn**		**15 14 05.6**	**+1.0**
NATA				S	**Sn**		**15 14 35.3**	**+1.3**
NATA				AML	AML		15 14 37.0	
	comp=N,5.2nm,0.2s							
NATA				AML	AML		15 14 37.0	
	comp=N,5.2nm,0.2s							
YKAV	**Yalikavak-Bodr**	**2.51**	**311**	PN	**Pn**		**15 14 04.9**	**+0.3**
SEDI	**Konya, Seydise**	**2.60**	**40**	*i* P	**Pn**		**15 14 08.0**	**+2.0**
SEDI				IAML			15 14 40.0	
	comp=N,192nm,0.8s							
SEDI				IAML			15 14 40.0	
	comp=E,157nm,0.4s							
SEDI				IAML			15 14 41.0	
	comp=Z,135nm,0.4s							
LEF	**Lefka**	**2.69**	**97**	*i* P	**Pn**		**15 14 06.8**	**-0.2**
LEF				IAML			15 14 41.0	
	comp=Z,166nm,0.4s							
LEF				IAML			15 14 41.0	
	comp=E,250nm,0.7s							
LEF				IAML			15 14 44.0	
	comp=N,215nm,0.6s							
DDIM	**Aydin, Didim**	**2.75**	**316**	*i* P	**Pn**		**15 14 08.9**	**+0.9**
DDIM				IAML			15 14 42.0	
	comp=Z,201nm,1.1s							
DDIM				IAML			15 14 42.0	
	comp=N,140nm,1.0s							
SZAC	**Souni**	**2.76**	**104**	P	**Pn**		**15 14 08.8**	**+0.7**
SZAC				S	**Sn**		**15 14 41.6**	**+1.4**
SZAC				AML	AML		15 14 42.9	
	comp=N,4.7nm,0.2s							
SZAC				AML	AML		15 14 42.9	
	comp=N,4.7nm,0.2s							
SZAC				AML	AML		15 14 43.2	
	comp=N,4.5nm,0.4s							
SZAC				AML	AML		15 14 43.2	
	comp=N,4.5nm,0.4s							
AYDB	**Zeytinkoy-Aydi**	**2.83**	**331**	PN	**Pn**		**15 14 09.6**	**+0.5**
GCAM	**G?zelcaml?**	**2.94**	**320**	*i* P	**Pn**		**15 14 11.4**	**+0.9**
GCAM				IAML			15 14 45.0	
	comp=Z,162nm,0.5s							
GCAM	**G?zelcaml?**	**2.94**	**320**	PN	**Pn**		**15 14 11.1**	**+0.6**
ASGA	**Asgata**	**3.04**	**102**	P	**Pn**		**15 14 12.5**	**+0.5**
ASGA				S	**Sn**		**15 14 47.8**	**+0.7**
ASGA				AML	AML		15 14 48.3	
	comp=Z,1.9nm,0.3s							
ASGA				AML	AML		15 14 48.3	
	comp=Z,1.9nm,0.3s							
ASGA				AML	AML		15 14 48.9	
	comp=Z,2.3nm,0.2s							
ASGA				AML	AML		15 14 48.9	
	comp=Z,2.3nm,0.2s							
CSS	**Mathiatis**	**3.07**	**99**	P	**Pn**		**15 14 12.8**	**+0.5**
CSS				S	**Sn**		**15 14 47.3**	**-0.5**
CSS				AML	AML		15 14 49.8	
	comp=Z,0.3nm,0.3s							
CSS				AML	AML		15 14 49.8	
	comp=Z,0.3nm,0.3s							
DOGA	**KONYA_Doganhis**	**3.08**	**31**	*i* P	**Pn**		**15 14 14.8**	**+2.2**
DOGA				IAML			15 14 51.0	
	comp=N,153nm,0.7s							
DOGA				IAML			15 14 51.0	
	comp=E,95nm,0.4s							
DOGA				IAML			15 14 52.0	
	comp=Z,84nm,0.4s							
KULA	**Kula-Manisa**	**3.12**	**346**	PN	**Pn**		**15 14 13.9**	**+0.8**
SHUT	**Suhut-Afyon**	**3.15**	**13**	PN	**Pn**		**15 14 14.6**	**+1.1**
OSC2	**CSNet OBS 4**	**3.25**	**137**	P	**Pn**		**15 14 14.6**	**-0.2**
OSC2				S	**Sn**		**15 14 50.3**	**-1.8**
DGB	**zmir**	**3.38**	**320**	*i* P	**Pn**		**15 14 17.0**	**+0.4**
DGB				IAML			15 14 54.0	
	comp=Z,39nm,0.5s							
DGB				IAML			15 14 54.0	
	comp=N,58nm,0.6s							
DGB				IAML			15 14 55.0	
	comp=E,89nm,0.2s							
ZEYE	**Izmir, Urla-Ze**	**3.72**	**318**	*i* P	**Pn**		**15 14 21.6**	**+0.3**
URLA	**Izmir**	**3.76**	**321**	*i* P	**Pn**		**15 14 21.0**	**-0.9**
IDI	**Anoyia**	**3.88**	**268**	Pn	**Pn**		**15 14 25.2**	**+1.6**
	comp=E,11nm,0.3s,baz=32,slow=5.1,SNR=53							
IDI				Sn	**Sn**		**15 15 08.3**	**+0.4**
	comp=E,14nm,0.3s,baz=99,slow=21,SNR=10							
BHL	**Bhannes**	**5.20**	**106**	*eP*	**Pn**		**15 14 40.6**	**-1.2**
DQRL	**Deir Qamar**	**5.21**	**108**	*eP*	**Pn**		**15 14 41.1**	**-0.7**
BRTR	**Keskin Array B**	**5.29**	**36**	Pn	**Pn**		**15 14 43.3**	**+0.3**
	comp=E,1.2nm,0.3s,baz=218,slow=15,SNR=29							
BRTR				Sn	**Sn**		**15 15 41.2**	**-1.6**
	comp=E,1.9nm,0.3s,baz=211,slow=26,SNR=16							
HWQ	**Hawqa**	**5.33**	**101**	*eP*	**Pn**		**15 14 43.8**	**+0.4**
QRWL	**Qaraoun**	**5.35**	**109**	*eP*	**Pn**		**15 14 43.8**	**0.0**
MMAI	**Mount Meron Ar**	**5.37**	**116**	Pn	**Pn**		**15 14 44.7**	**+0.6**
	comp=E,18nm,0.3s,baz=316,slow=13,SNR=19							
MMAI				Sn	**Sn**		**15 15 42.4**	**-2.3**
	comp=E,33nm,0.3s,baz=308,slow=22,SNR=10							
SLUM	**Salum**	**5.43**	**224**	P	**Pn**		**15 14 46.5**	**+1.7**
	baz=229							
SLUM				AMP			15 15 00.0	
	baz=229							
SLUM				S	Sn		15 15 38.4	-7.7
	baz=229							
SHBL	**Chebaa**	**5.48**	**111**	*eP*	**Pn**		**15 14 45.7**	**+0.1**
RCY	**Rachaya**	**5.49**	**109**	*eP*	**Pn**		**15 14 45.7**	**0.0**
KOT	**Kottamia**	**5.84**	**161**	P	**Pn**		**15 14 51.8**	**+1.2**
	baz=156							
HHAG	**Hagoal**	**5.90**	**159**	P	**Pn**		**15 14 52.6**	**+1.4**
	baz=154							
HNAT	**Natroun**	**5.90**	**172**	P	**Pn**		**15 14 52.8**	**+1.6**
	baz=168							
HSAF	**As Saff**	**6.07**	**164**	P	**Pn**		**15 14 55.0**	**+1.4**
	baz=160							
GLL	**Jalalah**	**6.15**	**163**	P	**Pn**		**15 14 55.5**	**+0.8**
	baz=159							
SUZ	**Suez**	**6.24**	**154**	P	**Pn**		**15 14 57.1**	**+1.2**
	baz=149							
ZAF	**Zafarana**	**6.66**	**157**	P	**Pn**		**15 15 02.7**	**+1.1**
	baz=153							
ZAF				AMP			15 16 00.0	
	baz=153							
EIL	**Elat**	**7.33**	**141**	Pn	**Pn**		**15 15 11.7**	**+0.8**
	comp=E,4.0nm,0.3s,baz=324,slow=5.1,SNR=42							
EIL				Sn	**Sn**		**15 16 28.5**	**-4.3**
	comp=E,4.9nm,0.3s,baz=87,slow=20,SNR=11							
HKAT	**Jabal Katrina**	**7.87**	**151**	P	**Pn**		**15 15 18.1**	**-0.4**
	baz=147							
HDHB	**Dhahab**	**7.96**	**147**	P	**Pn**		**15 15 20.2**	**+0.8**
	baz=142							
KEST	**Kesra**	**16.51**	**277**	Pn	**P**		**15 17 18.3**	**+1.1**
	comp=E,0.6nm,0.3s,baz=39,slow=5.2,SNR=6.4							
GERES	**GERESS Array B**	**17.77**	**324**	P	**P**		**15 17 31.0**	**-0.1**
	comp=E,0.2nm,0.3s,baz=133,slow=12,SNR=7.8							
BELG	**Belogornoye**	**21.19**	**32**	P	**P**		**15 18 07.1**	**-1.1**
	comp=E,6.9nm,0.6s,baz=288,slow=1.3,SNR=4.7							
AKTO	**Aktyubinsk**	**25.38**	**45**	P	**P**		**15 18 50.2**	**+0.5**
	comp=E,1.0nm,0.5s,baz=105,slow=3.5,SNR=4.8							
ESDC	**Sonseca Array**	**26.86**	**289**	P	**P**		**15 19 04.0**	**+0.7**
	comp=E,1.5nm,0.8s,baz=76,slow=9.7,SNR=7.9							
TORD	**Torodi Ar. Bea**	**33.60**	**236**	P	**P**		**15 20 03.6**	**+0.6**
	comp=E,1.0nm,0.9s,baz=43,slow=9.5,SNR=4.3							
ARCES	**ARCESS Array B**	**34.18**	**357**	P	**P**		**15 20 06.3**	**-1.1**
	comp=E,2.5nm,0.9s,baz=165,slow=5.0,SNR=5.6							
KURBB	**Kurchatov Arra**	**38.07**	**51**	P	**P**		**15 20 39.7**	**-1.2**
	comp=E,0.3nm,0.3s,baz=83,slow=8.8,SNR=2.0							
MKAR	**Makanchi Array**	**40.53**	**57**	P	**P**		**15 21 00.6**	**-0.9**
	comp=E,0.5nm,0.6s,baz=272,slow=7.6,SNR=7.6							
MKAR				PcP	**PcP**		**15 23 03.7**	**+0.4**
	comp=E,0.2nm,0.4s,baz=151,slow=28,SNR=1.7							

IDC 02 15:18:20.3±3.8, 5°.18S×153°.16E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.3/43, mbtmp3.4/2, Error ellipse: s-maj=165.6km s-min=50.7km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**23.47**	**230**	P	P		15 23 31.8	0.0
	1.0nm,0.7s,baz=55,slow=10.0,SNR=11							
ASAR	**Alice Springs**	**26.12**	**223**	P	P		15 23 56.2	0.0
	0.6nm,0.8s,baz=56,slow=9.4,SNR=7.6							
TORD	**Torodi Ar. Bea**	**150.76**	**288**	PKPbc	PKPbc		15 38 15.5	-0.3
	0.6nm,0.7s,baz=53,slow=2.6,SNR=3.6							

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*IDC **02** 15:18:42.9±1.0, 5°.12S×152°.84E, h0km, mb3.9/10, mb1 4.1/12, mb1mx3.8/45, mbtmp4.0/12, ML2.1/1, Error ellipse: s-maj=30.3km s-min=17.4km az=118.0*
*NEIC **02** 15:18:49.7±1.2, 5°.13S±0°.07×152°.73E±0°.08, h45km±8km, mb4.1/9, Error ellipse: s-maj=14.7km s-min=6.5km az=131.0*
ISC 02 15:18:48.5±0.8, 5°.18S±0°.08×152°.95E±0°.10, h43km, n25, σ0°.94/24, mb3.9/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RABL	**Rabaul**	**1.26**	**322**	Pn	**Pn**		**15 19 08.5**	**-1.1**
PMG	**Port Moresby**	**7.11**	**233**	Pn	**Pn**		**15 20 29.6**	**-0.4**
	1.8nm,0.3s,baz=29,slow=5.7,SNR=3.9							
PMG				Sn	**Sn**		**15 21 49.7**	**+0.1**
	2.4nm,0.3s,baz=120,slow=11,SNR=4.3							
PMG	**Port Moresby**	**7.11**	**233**		**Sn**		**15 21 50.0**	**+0.4**
HNR	**Honiara**	**8.13**	**122**	Pn	**Pn**		**15 20 42.5**	**-1.5**
	20nm,0.3s,baz=211,slow=6.7,SNR=7.1							
CTAO	**Charters Tower**	**16.18**	**203**	Pn	**Pn**		**15 22 33.2**	**+0.1**
CTAO				IAmb	IAmb		15 22 40.6	
	comp=Z,1nm,1.4s							
MTN	**Manton Dam**	**22.83**	**249**	P	**P**		**15 23 46.9**	**-1.3**
MTN				IAmb	IAmb		15 23 54.0	
	comp=Z,9.2nm,1.3s							
WB0	**Warramunga Arr**	**23.16**	**230**	P	**P**		**15 23 49.6**	**-1.8**
WB0				IAmb	IAmb		15 23 52.8	
	comp=Z,8.5nm,1.0s							
WR0	**Warramunga Arr**	**23.16**	**229**	P	**P**		**15 23 51.9**	**+0.4**
WRAB	**Tennant Creek**	**23.29**	**229**	P	**P**		**15 23 52.6**	**-0.1**
WRAB				IAmb	IAmb		15 23 54.0	
	comp=Z,9.9nm,1.0s							
WB2	**Warramunga Arr**	**23.30**	**229**	P	**P**		**15 23 52.2**	**-0.6**
WRA	**Warramunga Arr**	**23.30**	**229**	P	**P**		**15 23 52.2**	**-0.7**
	comp=Z,3.5nm,0.6s,baz=53,slow=9.7,SNR=23							
AS31	**Alice Springs**	**25.97**	**223**	P	**P**		**15 24 17.3**	**0.0**
ASAR	**Alice Springs**	**25.97**	**223**	P	**P**		**15 24 17.4**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=58,slow=9.5,SNR=23							
STKA	**Stephens Creek**	**28.61**	**200**	P	**P**		**15 24 42.0**	**+1.1**
	comp=Z,2.0nm,0.9s,baz=140,slow=8.9,SNR=4.7							
STKA	**Stephens Creek**	**28.61**	**200**	IAmb	IAmb		15 24 44.4	
	comp=Z,2.8nm,1.6s							
FITZ	**Fitzroy Crossi**	**29.61**	**242**	P	**P**		**15 24 48.7**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=49,slow=8.8,SNR=8.9							
FITZ	**Fitzroy Crossi**	**29.61**	**242**	IAmb	IAmb		15 25 16.9	
	comp=Z,7.2nm,1.2s		

FUL					A	A	15 32 09.1		
	1μm,0.2s								
PMOZ	**Porto Moniz, M**	**0.50**	**314**	⇓	P	**Pb**	**15 32 05.6**	**-1.2**	
	313nm,0.2s,SNR=18								
PMOZ					S	**Sb**	**15 32 12.8**	**-1.1**	
	690nm,0.2s,SNR=7.9								
PMOZ	**Porto Moniz, M**	**0.50**	**314**	⇓	*i*P	**Pb**	**15 32 05.6**	**-1.2**	
PMOZ					*e*S	**Sb**	**15 32 12.9**	**-1.1**	
PMOZ					A	A	15 32 17.1		
	816nm,0.5s								
PMPS	**Porto Santo**	**0.69**	**33**		P	**Pn**	**15 32 11.1**	**+1.3**	
PMPS					S	**Sn**	**15 32 21.6**	**+2.1**	
	97nm,0.2s								
PMPS	**Porto Santo**	**0.69**	**33**		*e*P	**Pn**	**15 32 10.8**	**+1.0**	
PMPS					*e*S	**Sn**	**15 32 21.4**	**+1.9**	
PMPS					A	A	15 32 23.5		
	88nm,0.2s								
PMPST	**Porto Santo, M**	**0.71**	**32**		*e*Pn	**Pn**	**15 32 11.1**	**+1.0**	
PMPST					*e*Sn	**Sn**	**15 32 21.6**	**+1.6**	
PMPST					A	A	15 32 23.1		
	194nm,0.2s								
TBT	**Taburiente**	**3.91**	**195**	⇑	P	Pn	15 32 47.4	-6.7	
	1.4nm,0.1s,SNR=18								
TBT					S	Sn	15 33 24.1	-15	
	1.4nm,0.2s,SNR=7.9								
EBAJ	**Bajamar**	**3.94**	**174**		P	Pn	15 32 49.1	-5.5	
	1.3nm,0.1s,SNR=7.9								
EBAJ					S	Sn	15 33 28.5	-11	
	2.0nm,0.1s,SNR=7.9								
EHIG	**Higuera**	**4.01**	**193**		P	Pn	15 32 47.0	-8.5	
	20nm,0.2s,SNR=7.9								
EHIG					S	Sn	15 33 29.0	-12	
	7.9nm,0.1s,SNR=7.9								
CGUI	**Guimar, Teneri**	**4.15**	**176**		P	Pn	15 32 50.8	-6.7	
	4.3nm,0.1s,SNR=7.9								
CGUI					S	Sn	15 33 34.1	-11	
	2.8nm,0.1s,SNR=7.9								
MACI	**Morro de la Ar**	**4.22**	**177**		P	Pn	15 32 50.5	-8.1	
	0.8nm,0.1s,SNR=7.9								
MACI					S	Sn	15 33 35.5	-11	
	1.8nm,0.1s,SNR=7.9								
CCAN	**Las Canadas**	**4.24**	**178**		P	Pn	15 32 52.5	-6.5	
	1.7nm,0.1s,SNR=7.9								
CCAN					S	Sn	15 33 34.9	-13	
	0.6nm,0.1s,SNR=7.9								
EGOM	**La Gomera**	**4.32**	**185**	⇓	P	Pn	15 32 52.6	-7.2	
	12nm,0.1s,SNR=18								
EGOM					S	Sn	15 33 35.8	-13	
	6.3nm,0.1s,SNR=5.8								
GGC	**Guia, Gran Can**	**4.45**	**167**		P	Pn	15 32 56.2	-5.4	
	11nm,0.1s,SNR=7.9								
GGC					S	Sn	15 33 41.0	-11	
	2.1nm,0.2s,SNR=7.9								
EOSO	**Osorio**	**4.51**	**166**		P	Pn	15 32 57.2	-5.4	
	2.9nm,0.1s,SNR=7.9								
EOSO					S	Sn	15 33 42.4	-12	
	0.1nm,0.1s,SNR=7.9								
CFUE	**Fuerteventura**	**4.53**	**147**		P	Pn	15 32 58.0	-4.8	
	3.1nm,0.1s,SNR=7.9								
CFUE					S	Sn	15 33 44.0	-10	
	6.9nm,0.1s,SNR=7.9								
CTIG	**El Hierro**	**4.78**	**192**		P	Pn	15 32 58.1	-7.9	
	1.7nm,0.1s,SNR=7.9								
CTIG					S	Sn	15 33 48.3	-12	
	13nm,0.2s,SNR=7.9								
CTAN	**El Hierro**	**4.83**	**194**		P	Pn	15 32 59.6	-7.3	
	16nm,0.1s,SNR=7.9								
CTAN					S	Sn	15 33 48.9	-13	
	12nm,0.1s,SNR=7.9								
CCUM	**Cumbre, El Hie**	**4.84**	**193**		P	Pn	15 33 00.5	-6.4	
	3.3nm,0.1s,SNR=7.9								
CCUM					S	Sn	15 33 47.7	-14	
	12nm,0.2s,SNR=7.9								
CHIE	**El Hierro**	**4.84**	**193**		P	Pn	15 33 00.0	-6.9	
	0.3nm,0.1s,SNR=7.9								
CHIE					S	Sn	15 33 48.0	-14	
	0.7nm,0.1s,SNR=7.9								
CTAD	**Las Tabladas,**	**4.84**	**194**		P	Pn	15 33 00.8	-6.2	
	9.4nm,0.1s,SNR=7.9								
CTAD					S	Sn	15 33 49.6	-12	
	53nm,0.3s,SNR=7.9								
CGIN	**Giniginamar, F**	**4.85**	**151**		P	Pn	15 33 02.9	-4.2	
	1.4nm,0.1s,SNR=7.9								
CGIN					S	Sn	15 33 50.7	-12	
	2.3nm,0.1s,SNR=7.9								
CJUL	**El Julan, El H**	**4.86**	**194**		P	Pn	15 33 00.7	-6.7	
	16nm,0.2s,SNR=7.9								
CJUL					S	Sn	15 33 49.9	-13	
	15nm,0.1s,SNR=7.9								
CMCL	**Mercadel, El H**	**4.87**	**193**		P	Pn	15 33 00.7	-6.7	
	10nm,0.2s,SNR=7.9								
CMCL					S	Sn	15 33 50.4	-12	
	10nm,0.2s,SNR=7.9								
EAH	**EAH**	**6.16**	**96**		P		15 33 26.6		
EAH					S		15 34 34.6		
ZHG	**ZHG**	**8.57**	**81**		P		15 33 59.5		
ZHG					S		15 35 29.5		
PNCL	**Nicolau / Gran**	**8.78**	**48**		P	**Pn**	**15 34 03.6**	**+2.7**	
PNCL					S	**Sn**	**15 35 34.5**	**-4.2**	
PNCL	**Nicolau / Gran**	**8.78**	**48**		*e*Pn	**Pn**	**15 34 03.6**	**+2.7**	
PNCL					*e*Sn	**Sn**	**15 35 34.5**	**-4.2**	
PVAQ	**Vaqueiros**	**8.91**	**54**		P	**Pn**	**15 34 04.5**	**+1.7**	
PVAQ					S	**Sn**	**15 35 38.0**	**-4.1**	
	1.5nm,0.7s								
PVAQ	**Vaqueiros**	**8.91**	**54**		*e*Pn	**Pn**	**15 34 04.5**	**+1.7**	
PVAQ					*e*Sn	**Sn**	**15 35 38.0**	**-4.1**	
PVAQ					A	A	15 35 50.9		
	1.5nm,0.7s								
EGRO	**El Granado**	**9.14**	**54**		P	**Pn**	**15 34 09.6**	**+3.7**	
	0.4nm,0.1s,SNR=7.9								
EGRO					S	**Sn**	**15 35 42.5**	**-5.1**	
	0.8nm,0.2s,SNR=7.9								
EMIN	**Mina Concepcio**	**9.81**	**55**		P	**Pn**	**15 34 18.2**	**+3.0**	
	0.3nm,0.1s,SNR=7.9								
EMIN					S	**Sn**	**15 36 00.7**	**-3.5**	
	0.2nm,0.2s,SNR=7.9								
MD31	**MD31**	**10.14**	**85**		P		15 34 21.9		
MDT	**Midelt**	**10.27**	**85**		P		15 34 22.5		
MDT					S		15 36 07.4		
ECAB	**El Cabril**	**10.83**	**56**		P	**Pn**	**15 34 30.6**	**+1.5**	
	0.6nm,0.2s,SNR=7.9								
ECAB					S	**Sn**	**15 36 25.6**	**-3.7**	
	0.3nm,0.3s,SNR=7.9								
JBK	**JBK**	**12.02**	**77**		P		15 34 45.6		

*IDC **02** 15:33:39.4±3.0,5.°10S×153.°27E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.6/34,mbtmp3.6/5,ML1.9/1,Error ellipse: s-maj=95.7km s-min=32.5km az=119.0*

ISC 02 15:33:46.3±2.5,5.°1S±0.°4×153.°0E±0.°5,h35km,n6,σ1$28/7, mb3.2/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.22**	**233**	Pn	**Pn**	**15 35 30.6**	**+1.3**
	1.2nm,0.3s,baz=48,slow=7.6,SNR=2.7						
PMG				Sn	**Sn**	**15 36 49.1**	**-1.0**
	1.1nm,0.3s,baz=322,slow=8.2,SNR=2.7						
WRA	**Warramunga Arr**	**23.42**	**229**	P	**P**	**15 38 51.2**	**-1.2**
	0.5nm,0.4s,baz=56,slow=10.0,SNR=15						
ASAR	**Alice Springs**	**26.09**	**223**	P	**P**	**15 39 17.4**	**+0.5**
	0.3nm,0.6s,baz=56,slow=9.4,SNR=7.5						
FITZ	**Fitzroy Crossi**	**29.70**	**242**	P	**P**	**15 39 49.4**	**+0.1**
	1.9nm,0.8s,baz=47,slow=7.3,SNR=8.5						
MKAR	**Makanchi Array**	**80.64**	**319**	P	**P**	**15 45 56.0**	**+0.4**
	0.1nm,0.5s,baz=114,slow=4.7,SNR=1.7						
TORD	**Torodi Ar. Bea**	**150.56**	**288**	PKPbc	**PKPbc**	**15 53 34.1**	**-1.4**
	0.3nm,0.4s,baz=52,slow=3.2,SNR=4.3						

IDC 02 16:14:57.0±5.7,26.°12S×29.°10E,h0km,mb1 2.7/2, mb1mx2.6/35,mbtmp2.6/2,ML1.8/1,Error ellipse: s-maj=44.2km s-min=28.8km az=74.0,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**3.35**	**288**	Pn	Pn	16 15 50.8	0.0
	0.1nm,0.3s,baz=80,slow=6.1,SNR=1.2						
LBTB				Pg	Pb	16 15 58.5	+1.0
	0.3nm,0.3s,baz=97,slow=16,SNR=7.6						
LBTB				Lg	Lg	16 16 43.2	
	0.9nm,0.3s,baz=21,slow=22,SNR=14						
BOSA	**Boshof**	**4.23**	**233**	Pn	Pn	16 16 03.0	+0.1
	baz=42,slow=15,SNR=2.3						
BOSA				Pg	Pb	16 16 14.3	+1.9
	0.1nm,0.3s,baz=49,slow=18,SNR=1.5						
BOSA				Lg	Lg	16 17 11.3	
	0.4nm,0.3s,baz=150,slow=22,SNR=8.2						
I47ZA	**BOSHOF INFRASO**	**4.25**	**233**	*i*		16 43 00.0	
	baz=56,slow=322,SNR=1.2						
I33MG	**ANTANANARIVO I**	**18.23**	**71**	*i*		18 05 10.0	
	baz=244,slow=314,SNR=3.3						

*IDC **02** 16:18:04.0±1.2,35.°68S×101.°73W,h0km,mb4.1/8, mb1 4.4/8,mb1mx4.1/27,mbtmp4.1/8,MS3.8/11, Ms1 3.7/11,ms1mx3.5/24,Error ellipse: s-maj=31.0km s-min=25.8km az=50.0*

*GCMT **02** 16:18:04.5±0.4,35.°95S±0.°03×101.°63W±0.°03,h25km±1km, MW4.9/84,Moment Tensor Solution. s18,c22; s84,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.50±.15; $M_{\theta\theta}$-0.50±.12; $M_{\phi\phi}$0.99±.12; $M_{r\theta}$1.31±.28; $M_{\theta\phi}$-2.10±.10; $M_{\phi r}$-0.46±.22; Best double couple: M_o2.62700×10^{16} NP1:ϕs190.00000°,δ57.00000°,λ-5.00000°. NP2: ϕs283.00000°,δ85.00000°,λ-147.00000°. Principal axes: T 2.8730, Plg19.0000°, Azm52.0000°; N -0.4920, Plg57.0000°, Azm290.0000°; P -2.3820, Plg26.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **02** 16:18:05.5±1.4,35.°68S±0.°08×101.°5W±0.°2,h12km±4km, mb4.8/23 Error ellipse: s-maj=26.8km s-min=9.1km az=105.0*

ISC 02 16:18:05.3±1.0,35.°6S±0.°2×101.°5W±0.°2,h10km,n59, σ1$38/42,mb4.6/19,MS3.8/10,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**10.79**	**320**	LR	LR	16 23 37.4	
	comp=Z,717nm,19.4s,baz=108,slow=31						
H03S2	**Juan Fernandez**	**18.66**	**91**	T	T	16 42 01.9	
	baz=266,slow=75						
H03S1	**Juan Fernandez**	**18.68**	**91**	T	T	16 41 58.3	
	baz=266,slow=75						
H03S3	**Juan Fernandez**	**18.68**	**91**	T	T	16 41 57.0	
	baz=266,slow=75						
BI02	**San Fabin de**	**24.41**	**101**	P	**P**	**16 23 23.6**	**-0.4**
BI02				IAmb	IAmb	16 23 40.7	
	comp=Z,35nm,1.8s						
PLCA	**Paso Flores**	**24.80**	**111**	P	**P**	**16 23 30.7**	**+3.2**
	comp=Z,3.4nm,0.9s,baz=270,slow=15,SNR=4.0						
PLCA				LR	LR	16 30 40.6	
	comp=Z,117nm,18.9s,baz=201,slow=30						
BO02	**Sierra Bellavi**	**25.09**	**97**	P	**P**	**16 23 30.0**	**-0.2**
BO02				IAmb	IAmb	16 23 31.4	
	comp=Z,18nm,1.2s						
AC01	**Pan de Azucar**	**28.08**	**79**	P	**P**	**16 23 56.5**	**-0.7**
AC01				IAmb	IAmb	16 24 32.4	
	comp=Z,26nm,1.2s						
AC02	**Maricunga**	**28.96**	**81**	P	**P**	**16 24 05.6**	**+0.1**
AC02				IAmb	IAmb	16 24 16.9	
	comp=Z,14nm,1.1s						
GO02	**Mina Guanaco**	**29.34**	**78**	P	**P**	**16 24 08.2**	**-0.6**
PB15	**IPOC Station P**	**30.41**	**75**	P	**P**	**16 24 17.8**	**-0.3**
PB15				IAmb	IAmb	16 24 22.1	
	comp=Z,28nm,1.4s						
LVC	**Limon Verde**	**31.16**	**74**	P	**P**	**16 24 24.8**	**-0.1**
LVC				IAmb	IAmb	16 24 26.2	
	comp=Z,18nm,1.4s						
PB09	**IPOC Station P**	**31.34**	**73**	P	**P**	**16 24 27.1**	**+0.9**
PB01	**IPOC Station P**	**31.57**	**71**	P	**P**	**16 24 28.2**	**0.0**
PB01				IAmb	IAmb	16 24 30.1	
	comp=Z,25nm,1.5s						
PSGCX	**Pisagua**	**31.91**	**68**	P	**P**	**16 24 30.9**	**-0.3**
PB11	**IPOC Station P**	**32.17**	**69**	P	**P**	**16 24 33.8**	**+0.3**
PB08	**IPOC Station P**	**32.34**	**70**	P	**P**	**16 24 34.7**	**-0.6**
PB08				IAmb	IAmb	16 24 46.0	
	comp=Z,9.2nm,0.8s						
MNMC	**Minye Minye**	**32.59**	**68**	P	**P**	**16 24 36.7**	**-0.7**
ATAH	**Atahualpa**	**35.42**	**42**	P	**P**	**16 25 04.1**	**+2.0**
	comp=Z,8.2nm,0.8s,baz=256,slow=10,SNR=4.8						
LPAZ	**La Paz**	**35.44**	**66**	P	**P**	**16 25 04.1**	**+1.6**
	comp=Z,15nm,1.2s,baz=225,slow=6.3,SNR=23						
LPAZ				LR	LR	16 36 57.8	
	comp=Z,62nm,19.9s,baz=242,slow=32						
LPAZ	**La Paz**	**35.44**	**66**	P	**P**	**16 25 03.6**	**+1.1**
LPAZ				IAmb	IAmb	16 25 06.7	
	comp=Z,14nm,1.1s						
LPAZ	**La Paz**	**35.44**	**66**	*e*P	**P**	**16 25 02.4**	**-0.1**
CPUP	**Villa Florida**	**38.74**	**89**	LR	LR	16 39 25.3	
	comp=Z,106nm,20.2s,baz=240,slow=33						
SIV	**San Ignacio**	**40.98**	**72**	P	**P**	**16 25 48.2**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=254,slow=7.6,SNR=8.4						
OTAV	**Otavalo**	**41.67**	**36**	P	**P**	**16 25 54.6**	**-0.2**
PTLC	**Puerto Leguiza**	**43.47**	**41**	*e*P	P	16 26 03.1	-5.7
SAML	**Samuel**	**43.88**	**62**	P	**P**	**16 26 11.6**	**-0.5**
MARP	**Paez Belalcaza**	**45.15**	**37**	*e*P	**P**	**16 26 21.5**	**-1.0**
YOTC	**Yotoco, Valle**	**45.95**	**36**	*e*P	**P**	**16 26 26.7**	**-2.0**
ORTC	**Ortega, Tolima**	**46.42**	**38**	*e*P	**P**	**16 26 29.2**	**-3.1**
TOLC	**Tolima**	**46.97**	**37**	*e*P	**P**	**16 26 35.7**	**-1.3**
GUY2C	**Guyana, Caldas**	**47.50**	**37**	*e*P	**P**	**16 26 39.1**	**-2.2**
ROSC	**El Rosal**	**47.68**	**38**	LR	LR	16 44 36.6	
	comp=Z,162nm,19.9s,baz=206,slow=33						
ROSC	**El Rosal**	**47.68**	**38**	P	**P**	**16 26 43.1**	**+0.5**
SPBC	**San Pablo de B**	**48.51**	**38**	*e*P	**P**	**16 26 47.2**	**-1.4**
PTBC	**PUERTO BERRIO,**	**49.08**	**37**	*e*P	**P**	**16 26 50.2**	**-2.7**
RUSC	**La Rusia**	**49.21**	**39**	*e*P	**P**	**16 26 51.5**	**-3.0**
ZARC	**Zaragoza, Cauc**	**49.72**	**36**	*e*P	**P**	**16 26 56.6**	**-1.2**
BDFB	**Brasilia**	**51.53**	**82**	LR	LR	16 46 35.0	
	comp=Z,97nm,21.6s,baz=223,slow=33						
SDV	**Santo Domingo**	**53.01**	**39**	P	**P**	**16 27 20.4**	**-2.4**
QSPA	**South Pole Qui**	**54.57**	**180**	P	**P**	**16 27 32.6**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=151,slow=13,SNR=3.3						
QSPA	**South Pole Qui**	**54.57**	**180**	IAmb	IAmb	16 28 02.4	
	comp=Z,19nm,1.7s						
MDP	**Montagnes des**	**61.17**	**59**	LR	LR	16 52 14.9	
	comp=Z,117nm,18.8s,baz=233,slow=33						
TXAR	**Lajitas Array**	**64.66**	**358**	P	**P**	**16 28 44.5**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=195,slow=9.1,SNR=3.5						
RCBR	**Riachuelo**	**66.86**	**80**	LR	LR	16 58 33.3	
	comp=Z,60nm,18.3s,baz=303,slow=36						
AMTX	**Amarillo**	**70.16**	**360**	P	**P**	**16 29 18.2**	**+0.2**
AMTX				IAmb	IAmb	16 29 26.4	
	comp=Z,10.0nm,1.2s						
TKL	**Tuckaleechee C**	**72.84**	**15**	LR	LR	16 57 53.3	
	comp=Z,32nm,19.1s,baz=142,slow=33						
NV11	**Mina Array Sit**	**75.29**	**347**	P	**P**	**16 29 49.2**	**+0.6**
NV11				IAmb	IAmb	16 29 51.8	
	comp=Z,7.9nm,1.3s						
NVAR	**Mina Array Bea**	**75.32**	**346**	P	**P**	**16 29 49.4**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=177,slow=8.3,SNR=6.6						
PDAR	**Pinedale Array**	**78.38**	**354**	P	**P**	**16 30 05.0**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=152,slow=6.7,SNR=6.4						
HLID	**Hailey**	**79.70**	**351**	P	**P**	**16 30 13.5**	**+0.4**
HLID				IAmb	IAmb	16 30 20.9	
	comp=Z,12nm,1.8s						
STKA	**Stephens Creek**	**90.48**	**229**	LR	LR	17 03 49.8	
	comp=Z,74nm,18.3s,baz=193,slow=30						
BOSA	**Boshof**	**98.77**	**135**	LR	LR	17 13 05.1	
	comp=Z,26nm,18.5s,baz=201,slow=33						
H01W1	**Cape Leeuwin H**	**102.33**	**209**	T	T	18 26 25.6	
	baz=150,slow=76,SNR=7.8						
H01W2	**Cape Leeuwin H**	**102.33**	**209**	T	T	18 26 28.1	
	baz=150,slow=76,SNR=7.9						
H01W3	**Cape Leeuwin H**	**102.34**	**209**	T	T	18 26 26.1	
	baz=150,slow=76,SNR=6.9						
BRTR	**Keskin Array B**	**144.57**	**70**	PKP	**PKPdf**	**16 37 43.5**	**+1.3**
	comp=Z,1.4nm,0.8s,baz=202,slow=5.0,SNR=4.0						
NRIK	**Noril'sk**	**145.87**	**354**	PKPbc	**PKPab**	**16 37 44.6**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=315,slow=2.0,SNR=3.9						
NRIK	**Noril'sk**	**145.87**	**354**		**PKPdf**	**16 37 42.5**	**-0.7**

*IDC **02** 16:40:03.5±1.2,7.°23S×155.°21E,h0km,mb3.9/10, mb1 4.1/11,mb1mx3.8/40,mbtmp3.9/11,ML1.9/1,MS3.2/1, Ms1 3.2/1,ms1mx2.5/35,Error ellipse: s-maj=40.1km s-min=19.2km az=127.0*

ISC 02 16:40:08.7±1.1,7.°3S±0.°2×155.°2E±0.°2,h35km,n12, σ0$97/13,mb3.8/10,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.27**	**255**	Pn	**Pn**	**16 42 05.7**	**-0.5**
	0.8nm,0.3s,baz=358,slow=22,SNR=1.8						
PMG				Sn	**Sn**	**16 43 39.7**	**+1.2**
	0.7nm,0.3s,baz=294,slow=16,SNR=4.3						
WRA	**Warramunga Arr**	**23.86**	**236**	P	**P**	**16 45 18.8**	**-0.2**
	2.6nm,0.8s,baz=61,slow=9.4,SNR=16						
WRA				LR	LR	16 54 10.5	
	comp=Z,55nm,20.1s,baz=245,slow=36						
ASAR	**Alice Springs**	**26.17**	**229**	P	**P**	**16 45 39.5**	**-0.6**
	0.8nm,0.8s,baz=63,slow=8.6,SNR=8.2						
STKA	**Stephens Creek**	**27.58**	**206**	P	**P**	**16 45 54.2**	**+1.6**
	2.9nm,0.8s,baz=6.2,slow=12,SNR=5.4						
FITZ	**Fitzroy Crossi**	**30.76**	**247**	P	**P**	**16 46 19.3**	**-1.8**
	1.2nm,0.7s,baz=90,slow=7.1,SNR=3.2						
CMAR	**Chiang Mai Arr**	**61.13**	**296**	P	**P**	**16 50 20.6**	**+0.6**
	1.1nm,0.8s,baz=110,slow=4.6,SNR=5.7						
SONM	**Songino Array**	**69.72**	**327**	P	**P**	**16 51 15.0**	**-0.2**
	0.5nm,0.6s,baz=144,slow=5.7,SNR=3.5						
ILAR	**Eielson Array**	**83.56**	**21**	P	**P**	**16 52 32.6**	**-0.2**
	1.5nm,0.8s,baz=255,slow=5.6,SNR=11						
MKAR	**Makanchi Array**	**83.79**	**319**	P	**P**	**16 52 34.5**	**0.0**
	0.7nm,0.9s,baz=98,slow=6.2,SNR=4.8						
ZALV	**Zalesovo Beam**	**84.56**	**326**	P	**P**	**16 52 39.1**	**+0.9**
	0.5nm,0.5s,baz=94,slow=9.0,SNR=2.0						
YKA	**Yellowknife Ar**	**96.48**	**28**	P	**P**	**16 53 34.5**	**+0.4**
	0.3nm,0.7s,baz=264,slow=11,SNR=4.5						
TORD	**Torodi Ar. Bea**	**153.34**	**285**	PKPbc	**PKPbc**	**17 00 03.8**	**-0.5**
	0.7nm,0.7s,baz=57,slow=2.6,SNR=3.4						

DJA 02 17:27:29.6±0.4,9.°5S±8.°×10.°9E±.°,h126km±10km,M3.7/9, mb3.5/1,MLv3.8/9,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.44**	**58**	P	Pn	17 28 03.8	+7.1
UGM				S	Sn	17 28 23.5	+6.1
CISI	**Cisompet, Garu**	**1.85**	**307**	P	Pn	17 27 59.8	-1.8
CISI				S	Sn	17 28 16.1	-10
SMRI	**Semarang**	**1.98**	**35**	P	Pn	17 28 10.3	+7.1
LEM	**Lembang**	**2.49**	**318**	P	Pn	17 28 07.7	-2.0
JAGI	**Jajag, Banyuwa**	**4.80**	**88**	P	Pn	17 28 54.5	+14
JAGI				S	Sn	17 29 48.1	+13
PLAI	**Plampang**	**8.38**	**92**	P	Pn	17 29 41.7	+13
PLAI				S	Sn	17 30 10.9	-50

IDC 02 17:31:36.7±3.6,5.°17S×152.°90E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.4/37,mbtmp3.6/4,ML1.6/1,MS3.3/2, Ms1 3.3/2,ms1mx2.6/33,Error ellipse: s-maj=149.1km s-min=48.4km az=128.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.08**	**233**	Pn	Pn	17 33 23.8	+2.2
	0.6nm,0.3s,baz=260,slow=14,SNR=1.4						
PMG				Sn	Sn	17 34 41.7	-1.1
	2.0nm,0.3s,baz=308,slow=22,SNR=6.4						
HNR	**Honiara**	**8.18**	**122**	LR	LR	17 36 12.1	
	comp=Z,47nm,21.2s,baz=108,slow=34						
WRA	**Warramunga Arr**	**23.27**	**229**	P	P	17 36 45.1	-1.0
	1.2nm,1.0s,baz=52,slow=9.7,SNR=3.6						
ASAR	**Alice Springs**	**25.94**	**223**	P	P	17 37 11.0	0.0
	0.7nm,0.8s,baz=62,slow=8.8,SNR=4.1						
FITZ	**Fitzroy Crossi**	**29.57**	**242**	P	P	17 37 43.4	-0.1
	1.4nm,0.9s,baz=67,slow=8.4,SNR=2.1						
PSI	**Prapat**	**54.49**	**277**	LR	LR	18 08 23.2	
	comp=Z,111nm,18.9s,baz=285,slow=40						
TORD	**Torodi Ar. Bea**	**150.51**	**288**	PKPbc	PKPbc	17 51 31.4	-0.2
	0.4nm,0.6s,baz=72,slow=1.8,SNR=2.3						

*JMA **02** 17:32:43.3±0.2,37.°24N×142.°21E,h30km,M3.6*

*IDC **02** 17:32:45.4±2.6,37.°12N×142.°45E,h24km±19km,mb3.3/4, mb1 3.4/5,mb1mx3.1/53,mbtmp3.4/5,ML2.3/1,MS2.5/1, Ms1 2.5/1,ms1mx2.3/35,Error ellipse: s-maj=21.0km s-min=10.2km az=156.0*

ISC 02 17:32:42.8±2.4,37.°31N±0.°05×142.°14E±0.°08,h2km±11km, n20,σ1$30/28,mb3.4/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**1.01**	**274**	P	**Pg**	**17 33 02.5**	**+0.3**
JFK				*e*S	**Sg**	**17 33 16.2**	**+0.9**
JMST	**Minamisoumatoc**	**1.08**	**293**	P	**Pg**	**17 33 03.6**	**0.0**
JMST				S	**Sg**	**17 33 17.9**	**+0.3**
ONAJ	**Iwakimizuishiy**	**1.09**	**260**	P	**Pg**	**17 33 03.5**	**-0.2**
ONAJ				*e*S	**Sg**	**17 33 17.7**	**-0.2**
JIKH	**Ishinomakikobu**	**1.14**	**332**	S	**Sg**	**17 33 19.4**	**0.0**
JMM	**Marumori**	**1.21**	**298**	P	**Pb**	**17 33 05.7**	**-0.7**
JMM				*e*S	**Sg**	**17 33 22.1**	**+0.4**
JIO	**Ouri**	**1.31**	**332**	P	**Pn**	**17 33 07.2**	**-0.9**
JIO				*e*S	**Sb**	**17 33 23.9**	**-1.4**
JFT	**Otama**	**1.45**	**279**	P	**Pn**	**17 33 10.0**	**-0.1**
JFT				*e*S	**Sn**	**17 33 28.9**	**-0.8**
JOU	**Okura**	**1.58**	**313**	P	**Pn**	**17 33 12.1**	**+0.3**

HIZ	**Hauiti**	**15.77 193**	P	**P**	**17 46 06.7**	**-3.5**
HIZ			IAmb	IAmb	17 46 16.8	
	comp=Z,33nm,1.0s					
HIZ	**Hauiti**	**15.77 193**	P	**P**	**17 46 12.8**	**+2.7**
MTHZ	**Maungataniwha**	**15.78 187**	P	**P**	**17 46 08.9**	**-1.4**
MTHZ			S	**S**	**17 48 48.1**	**-3.5**
WATZ	**Wairara**	**15.80 190**	P	**P**	**17 46 10.9**	**+0.5**
RAHZ	**Arahi**	**15.82 186**	P	**P**	**17 46 09.3**	**-1.4**
HATZ	**Hinemaiaia**	**15.92 189**	P	**P**	**17 46 11.8**	**+0.2**
NMHZ	**Naumai**	**16.03 187**	P	**P**	**17 46 12.4**	**-0.4**
NMHZ			S	**S**	**17 48 55.5**	**-0.2**
BKZ	**Black Stump Fm**	**16.13 188**	P	**P**	**17 46 10.8**	**-2.9**
BKZ			IAmb	IAmb	17 46 19.4	
	comp=Z,16nm,0.8s					
BKZ	**Black Stump Fm**	**16.13 188**	P	**P**	**17 46 11.2**	**-2.5**
BKZ			S	**S**	**17 48 51.2**	**-6.1**
TMVZ	**Te Maari**	**16.20 190**	P	**P**	**17 46 13.4**	**-1.0**
TWVZ	**Taurewa**	**16.20 191**	P	**P**	**17 46 15.3**	**+0.9**
ETVZ	**East Tongariro**	**16.22 190**	P	**P**	**17 46 13.7**	**-0.9**
NGZ	**Ngauruhoe**	**16.27 190**	P	**P**	**17 46 15.8**	**+0.6**
TUVZ	**Tukino**	**16.36 190**	P	**P**	**17 46 15.9**	**0.0**
VRZ	**Vera Road**	**16.38 193**	P	**P**	**17 46 18.1**	**+2.2**
MCHZ	**McNeill Hill**	**16.38 187**	P	**P**	**17 46 15.0**	**-1.0**
WNVZ	**Wahianoa**	**16.42 190**	P	**P**	**17 46 16.3**	**-0.3**
MOVZ	**Moawhango**	**16.48 190**	P	**P**	**17 46 17.0**	**+0.1**
BHHZ	**Black Hill Sta**	**16.51 189**	P	**P**	**17 46 14.9**	**-2.3**
BHHZ			S	**S**	**17 49 00.7**	**-2.9**
KRHZ	**Kereru**	**16.62 188**	P	**P**	**17 46 17.1**	**-1.1**
KRHZ			S	**S**	**17 49 03.8**	**-1.5**
KHEZ	**Kahui Hut**	**16.70 194**	P	**P**	**17 46 23.0**	**+4.1**
KAHZ	**Kahuranaki**	**16.71 187**	P	**P**	**17 46 18.3**	**-0.6**
KAHZ			S	**S**	**17 49 04.6**	**-2.2**
PXZ	**Pawanui**	**16.95 187**	P	**P**	**17 46 21.3**	**+0.3**
PXZ			S	**S**	**17 49 08.4**	**-2.1**
WAZ	**Wanganui**	**16.95 192**	P	**P**	**17 46 21.7**	**+0.7**
TSZ	**Takapari Road**	**17.08 189**	P	**P**	**17 46 21.4**	**-1.0**
TSZ			S	**S**	**17 49 08.0**	**-4.8**
ANWZ	**Angora Road**	**17.41 187**	P	**P**	**17 46 26.1**	**+0.9**
BFZ	**Birch Farm**	**17.66 188**	P	**P**	**17 46 25.4**	**-2.2**
BFZ			IAmb	IAmb	17 46 34.6	
	comp=Z,37nm,1.0s					
BFZ	**Birch Farm**	**17.66 188**	P	**P**	**17 46 26.3**	**-1.2**
BFZ			S	**S**	**17 49 18.4**	**-3.8**
MRZ	**Mangatainoka R**	**17.73 189**	P	**P**	**17 46 26.5**	**-1.6**
MRZ			S	**S**	**17 49 19.0**	**-4.3**
HOWZ	**Holdsworth Sta**	**17.97 189**	P	**P**	**17 46 29.1**	**-1.3**
HOWZ			S	**S**	**17 49 21.2**	**-6.1**
KIW	**Kapiti Island**	**18.03 191**	P	**P**	**17 46 30.5**	**-0.4**
TMWZ	**Te Maipa**	**18.12 188**	P	**P**	**17 46 31.2**	**-0.6**
DUWZ	**D'Urville Isla**	**18.17 193**	P	**P**	**17 46 32.2**	**0.0**
MTW	**Mount Morrison**	**18.23 189**	P	**P**	**17 46 31.5**	**-1.3**
CAW	**Cannon Point**	**18.25 190**	P	**P**	**17 46 32.4**	**-0.5**
TRWZ	**Traveller**	**18.44 189**	P	**P**	**17 46 34.3**	**-0.3**
PAWZ	**Paruwai Farm**	**18.46 189**	P	**P**	**17 46 35.2**	**+0.3**
SNZO	**South Karori**	**18.51 191**	P	**P**	**17 46 34.9**	**-0.3**
MSWZ	**Moikau Station**	**18.52 190**	P	**P**	**17 46 34.5**	**-0.9**
MSWZ	**Moikau Station**	**18.52 190**	P	**P**	**17 46 35.3**	**-0.1**
QRZ	**Quartz Range**	**18.52 196**	P	**P**	**17 46 37.0**	**+1.6**
QRZ	**Quartz Range**	**18.52 196**	P	**P**	**17 46 36.7**	**+1.3**
BHW	**Baring Head**	**18.57 191**	P	**P**	**17 46 35.0**	**-0.9**
BHW	**Baring Head**	**18.57 191**	P	**P**	**17 46 35.9**	**0.0**
PLWZ	**Palliser**	**18.67 190**	P	**P**	**17 46 35.2**	**-1.6**
PLWZ	**Palliser**	**18.67 190**	P	**P**	**17 46 36.3**	**-0.5**
NNZ	**Nelson**	**18.68 194**	P	**P**	**17 46 35.0**	**-1.9**
NNZ	**Nelson**	**18.68 194**	P	**P**	**17 46 36.3**	**-0.5**
TUWZ	**Tuamarina**	**18.77 193**	P	**P**	**17 46 35.6**	**-2.1**
TUWZ	**Tuamarina**	**18.77 193**	P	**P**	**17 46 37.6**	**0.0**
CMWZ	**Cape Campbell**	**19.02 192**	P	**P**	**17 46 38.4**	**-1.6**
CMWZ	**Cape Campbell**	**19.02 192**	P	**P**	**17 46 41.5**	**+1.6**
BSWZ	**Blackbirch Sta**	**19.05 193**	P	**P**	**17 46 39.1**	**-1.2**
BSWZ	**Blackbirch Sta**	**19.05 193**	P	**P**	**17 46 42.3**	**+2.0**
THZ	**Tophouse**	**19.31 195**	P	**P**	**17 46 41.7**	**-1.0**
THZ	**Tophouse**	**19.31 195**	P	**P**	**17 46 42.8**	**+0.1**
KHZ	**Kahutara**	**19.80 193**	P	**P**	**17 46 46.2**	**-0.8**
KHZ			IAmb	IAmb	17 46 49.8	
	comp=Z,33nm,0.9s					
LTZ	**Lake Taylor**	**20.43 195**	P	**P**	**17 46 51.5**	**-1.2**
OXZ	**Oxford**	**21.00 195**	P	**P**	**17 46 56.5**	**-1.3**
MQZ	**McQueen's Vall**	**21.22 193**	P	**P**	**17 46 59.0**	**-0.8**
MQZ			IAmb	IAmb	17 47 05.5	
	comp=Z,16nm,0.6s					
RPZ	**Rata Peaks**	**21.61 196**	P	**P**	**17 47 03.9**	**+0.6**
	comp=Z,8.1nm,0.4s,baz=339,slow=2.5,SNR=13					
RPZ	**Rata Peaks**	**21.61 196**	P	**P**	**17 47 03.1**	**-0.2**
RPZ			IAmb	IAmb	17 47 24.9	
	comp=Z,22nm,1.1s					
FOZ	**Fox Glacier**	**21.79 199**	P	**P**	**17 47 04.4**	**-0.5**
FOZ			IAmb	IAmb	17 47 07.2	
	comp=Z,32nm,0.9s					
KNTN	**Kanton**	**22.05 24**	P	**P**	**17 47 06.9**	**-0.8**
LBZ	**Lake Benmore**	**22.46 197**	P	**P**	**17 47 09.9**	**-1.1**
LBZ			IAmb	IAmb	17 47 12.3	
	comp=Z,7.8nm,0.8s					
ODZ	**Otahua Downs**	**22.95 196**	P	**P**	**17 47 14.9**	**-0.4**
WKZ	**Wanaka**	**23.20 199**	P	**P**	**17 47 17.3**	**-0.2**
MLZ	**Mavora Lakes**	**23.96 200**	P	**P**	**17 47 24.9**	**+0.6**
DCZ	**Deep Cove**	**24.36 201**	P	**P**	**17 47 27.5**	**-0.3**
DCZ			IAmb	IAmb	17 47 29.1	
	comp=Z,40nm,1.2s					
WHZ	**Wether Hill Ro**	**24.49 199**	P	**P**	**17 47 29.3**	**+0.4**
ARMA	**Armidale**	**25.72 248**	P	**P**	**17 47 41.7**	**+1.4**
ARMA			IAmb	IAmb	17 47 58.4	
	comp=Z,25nm,1.4s					
EIDS	**Eidsvold**	**25.83 259**	P	**P**	**17 47 40.5**	**-0.7**
EIDS			IAmb	IAmb	17 47 56.4	
	comp=Z,22nm,1.5s					
CAN	**Canberra**	**28.99 238**	P	**P**	**17 48 10.1**	**+1.3**
CAN			IAmb	IAmb	17 48 23.5	
	comp=Z,38nm,1.3s					
CTAO	**Charters Tower**	**30.87 269**	P	**P**	**17 48 25.2**	**+0.2**
CTAO			IAmb	IAmb	17 48 26.8	
	comp=Z,26nm,0.9s					
TOO	**Toolangi**	**32.34 236**	P	**P**	**17 48 38.3**	**+0.9**
TOO			IAmb	IAmb	17 48 42.1	
	comp=Z,26nm,1.4s					
TAU	**Tasmania Unive**	**33.00 226**	P	**P**	**17 48 44.0**	**+1.2**
PMG	**Port Moresby**	**33.68 289**	P	**P**	**17 48 49.1**	**+0.1**
	comp=Z,32nm,0.9s,baz=68,slow=8.2,SNR=6.4					
PMG	**Port Moresby**	**33.68 289**	P	**P**	**17 48 48.7**	**-0.2**
PMG			IAmb	IAmb	17 48 50.0	
	comp=Z,32nm,0.9s					
PMG	**Port Moresby**	**33.68 289**	P	**P**	**17 48 49.9**	**+1.0**
	comp=Z,40nm,1.0s					
STKA	**Stephens Creek**	**34.44 247**	P	**P**	**17 48 55.8**	**+0.7**
	comp=Z,2.2nm,0.3s,baz=96,slow=5.6,SNR=12					
STKA	**Stephens Creek**	**34.44 247**	P	**P**	**17 48 55.7**	**+0.7**
COEN	**Coen**	**35.40 279**	P	**P**	**17 49 03.8**	**+0.5**
BBOO	**Buckleboo**	**39.18 246**	P	**P**	**17 49 33.4**	**-0.6**
BBOO			IAmb	IAmb	17 49 41.3	
	comp=Z,29nm,1.5s					
AS31	**Alice Springs**	**41.55 260**	P	**P**	**17 49 53.0**	**-0.1**
ASAR	**Alice Springs**	**41.56 260**	P	**P**	**17 49 53.0**	**-0.1**
	comp=Z,6.3nm,0.9s,baz=90,slow=8.3,SNR=41					
ASAR			PcP	**PcP**	**17 51 37.8**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=104,slow=3.7,SNR=10					
ASAR			ScP	**ScP**	**17 54 37.5**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=97,slow=4.7,SNR=6.4					
ASAR			S	**S**	**17 55 28.1**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=94,slow=14,SNR=5.7					
WRAB	**Tennant Creek**	**41.84 266**	P	**P**	**17 49 54.1**	**-1.3**
WRA	**Warramunga Arr**	**41.85 266**	P	**P**	**17 49 54.4**	**-1.1**
	comp=Z,3.0nm,0.3s,baz=96,slow=8.3,SNR=194					
WRA			PcP	**PcP**	**17 51 38.7**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=107,slow=3.5,SNR=4.8					
WRA			ScP	**ScP**	**17 54 38.4**	**+2.2**
	comp=Z,1.2nm,0.9s,baz=98,slow=4.2,SNR=5.3					
WRA			S	**S**	**17 55 29.7**	**-4.2**
	comp=Z,0.8nm,0.8s,baz=94,slow=13,SNR=5.7					
WAKE	**Wake Island**	**43.97 343**	P	**P**	**17 50 11.2**	**-0.7**
FORT	**Forrest**	**46.00 249**	P	**P**	**17 50 26.8**	**-0.6**
FORT			IAmb	IAmb	17 50 32.5	
	comp=Z,20nm,0.9s					
FAKI	**Fak Fak**	**49.79 287**	P	**P**	**17 50 55.5**	**-0.4**
FAKI			IAmb	IAmb	17 50 57.7	
	comp=Z,20nm,1.0s					
FITZ	**Fitzroy Crossi**	**50.28 265**	P	**P**	**17 50 59.4**	**0.0**
PSA00	**Pilbara Seismi**	**54.70 259**	P	**P**	**17 51 30.2**	**-0.8**
PSA00			IAmb	IAmb	17 51 47.5	
	comp=Z,45nm,1.4s					
NWAO	**Narrogin (SRO)**	**54.98 245**	P	**P**	**17 51 31.2**	**-1.6**
NWAO			IAmb	IAmb	17 51 48.7	
	comp=Z,22nm,1.2s					
NWAO	**Narrogin (SRO)**	**54.98 245**	P	**P**	**17 51 31.2**	**-1.6**
NWAO			IAmb	IAmb	17 51 48.7	
	comp=Z,19nm,1.2s					
MORW	**Morawa**	**56.55 250**	P	**P**	**17 51 42.6**	**-1.1**
CASY	**Casey**	**60.50 206**	P	**P**	**17 52 09.8**	**+0.2**
QSPA	**South Pole Qui**	**66.92 180**	P	**P**	**17 52 52.3**	**+1.7**
	baz=22,slow=4.2					
QSPA	**South Pole Qui**	**66.92 180**	IAmb	IAmb	17 52 54.7	
	comp=Z,26nm,1.1s					
UGM	**Wanagama**	**67.48 271**	P	**P**	**17 52 53.9**	**-1.0**
JOW	**Kunigami**	**70.05 312**	P	**P**	**17 53 10.1**	**+0.1**
JOW			IAmb	IAmb	17 53 26.0	
	comp=Z,24nm,1.0s					
KSM	**Kuching**	**71.38 280**	P	**P**	**17 53 18.3**	**+0.2**
KSM			IAmb	IAmb	17 53 18.9	
	comp=Z,7.5nm,0.7s					
BELA	**Belgrano 2**	**77.24 173**	P	**P**	**17 53 50.0**	**0.0**
BELA			IAmb	IAmb	17 53 51.7	
	comp=Z,13nm,0.7s					
MAW	**Mawson**	**78.22 201**	P	**P**	**17 53 57.6**	**+2.2**
	comp=Z,8.1nm,1.1s,baz=63,slow=5.4,SNR=4.9					
PETK	**Petropavlovsk-**	**78.25 347**	P	**P**	**17 53 55.8**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=159,slow=9.1,SNR=5.6					
NJ2	**Nanjing**	**79.72 311**	*e*P	**P**	**17 54 05.2**	**+1.2**
NJ2			pmax	pmax		
	comp=Z,9.0nm,0.5s					
USRK	**Ussuriysk Ar.**	**79.82 327**	P	**P**	**17 54 05.1**	**+0.9**
	comp=Z,4.1nm,1.1s,baz=134,slow=11,SNR=5.2					
CN2	**Changchun**	**82.94 324**	*e*P	**P**	**17 54 22.8**	**+2.6**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.5s					
CMB	**Columbia Colle**	**83.09 44**	P	**P**	**17 54 21.7**	**+0.5**
NVAR	**Mina Array Bea**	**84.65 44**	P	**P**	**17 54 30.1**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=227,slow=9.0,SNR=6.7					
SNAA	**Sanae**	**85.41 179**	P	**P**	**17 54 31.7**	**-0.4**
VNA3	**Neumayer Olymp**	**85.64 177**	P	**P**	**17 54 33.1**	**0.0**
VNA2	**Neumayer--Watz**	**86.05 178**	P	**P**	**17 54 35.5**	**+0.4**
	baz=195,slow=3.0					
BJI	**Beijing**	**86.08 317**	P	**P**	**17 54 37.2**	**+1.6**
BJI			pmax	pmax		
	comp=Z,6.0nm,0.4s					
PINE	**Pine Mountain**	**86.20 39**	IAmb	IAmb	17 54 44.5	
	comp=Z,12nm,0.7s					
WVOR	**Wild Horse Val**	**86.75 41**	P	**P**	**17 54 40.0**	**+1.1**
ELK	**Elko**	**87.91 44**	P	**P**	**17 54 45.2**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=235,slow=4.7,SNR=6.0					
ELK	**Elko**	**87.91 44**	P	**P**	**17 54 45.5**	**+1.0**
G08A	**Pilot Rock**	**88.23 38**	P	**P**	**17 54 46.9**	**+1.1**
G08A			IAmb	IAmb	17 55 00.9	
	comp=Z,4.9nm,0.7s					
LTY	**Liberty**	**88.45 36**	IAmb	IAmb	17 54 53.9	
	comp=Z,8.8nm,0.8s					
E07A	**Sunnyside**	**88.47 37**	P	**P**	**17 54 46.3**	**-0.5**
E07A			IAmb	IAmb	17 54 51.2	
	comp=Z,7.8nm,0.8s					
CMAR	**Chiang Mai Arr**	**88.70 291**	P	**P**	**17 54 48.2**	**-0.3**
	comp=Z,1.2nm,0.9s,baz=96,slow=1.5,SNR=7.3					
PLCA	**Paso Flores**	**89.21 134**	P	**P**	**17 54 52.9**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=250,slow=19,SNR=2.7					
HHC	**Hu-ho-hao-te**	**89.47 315**	*e*P	**P**	**17 54 50.7**	**-0.9**
HHC			pmax	pmax		
	comp=Z,17nm,1.2s					
HHC			pmax	pmax		
	comp=Z,93nm,7.1s					
F10A	**Beach Ranch, E**	**89.62 39**	P	**P**	**17 54 52.7**	**+0.5**
F10A			IAmb	IAmb	17 55 15.4	
	comp=Z,8.2nm,0.8s					
TMUT	**Trail Mountain**	**89.78 47**	P	**P**	**17 54 55.0**	**+1.6**
TMUT			IAmb	IAmb	17 54 55.8	
	comp=Z,6.1nm,0.7s					
SRU	**San Rafael Swe**	**90.14 47**	P	**P**	**17 54 56.1**	**+1.2**
SRU			IAmb	IAmb	17 54 56.8	
	comp=Z,6.6nm,0.8s					
MNTX	**Cornudas Mount**	**90.30 56**	P	**P**	**17 54 56.3**	**+0.7**
MNTX			IAmb	IAmb	17 54 57.8	
	comp=Z,3.1nm,0.8s					
TX31	**Lajitas Ar. Si**	**90.56 58**	P	**P**	**17 54 56.6**	**-0.3**
TX31			IAmb	IAmb	17 54 59.4	
	comp=Z,6.4nm,0.9s					
TX32	**Lajitas Array**	**90.56 58**	P	**P**	**17 54 56.7**	**-0.3**
TXAR	**Lajitas Array**	**90.56 58**	P	**P**	**17 54 58.8**	**+1.8**
	comp=Z,1.8nm,0.8s,baz=210,slow=6.3,SNR=16					
BI02	**San Fabin de**	**90.75 131**	P	**P**	**17 54 59.4**	**+1.5**
BI02			IAmb	IAmb	17 55 01.1	
	comp=Z,7.2nm,0.9s					
ILAR	**Eielson Array**	**91.46 14**	P	**P**	**17 54 59.8**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=225,slow=4.7,SNR=4.8					
LRM	**Limekiln Ridge**	**92.33 41**	P	**P**	**17 55 01.4**	**-3.5**
PDAR	**Pinedale Array**	**92.59 44**	P	**P**	**17 55 06.7**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=201,slow=2.6,SNR=7.3					
MKAR	**Makanchi Array**	**111.21 313**	PKiKP	**PKiKP**	**18 00 22.8**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=104,slow=2.0,SNR=5.8					
MKAR			PKKPab	**PKKPab**	**18 11 33.2**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=297,slow=2.7,SNR=5.5					
KURK	**Kurchatov**	**114.25 317**		PKPdf	18 00 28.9	-0.9
KURBB	**Kurchatov Arra**	**114.29 317**	PKP	PKPdf	18 00 28.9	-1.0
	comp=Z,0.7nm,0.5s,baz=90,slow=1.9,SNR=10.0					
BVAR	**Borovoye Array**	**119.49 319**	PKP	**PKPdf**	**18 00 38.9**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=188,slow=8.7,SNR=5.6					
ARCES	**ARCESS Array B**	**131.04 348**	PKP	**PKPdf**	**18 01 01.6**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=99,slow=1.8,SNR=9.0					
FINES	**FINESS Array B**	**137.56 341**	PKhKP	PKPpre	18 01 04.4	
	comp=Z,2.6nm,1.0s,baz=41,slow=6.1,SNR=4.0					
FINES			PKP	**PKiKP**	**18 01 15.2**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=48,slow=0.9,SNR=6.9					
FINES			SKPbc	**SKPbc**	**18 03 55.2**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=338,slow=4.5,SNR=3.4					
NOA	**NORSAR Array B**	**141.26 351**	PKhKP	PKPpre	18 01 15.8	
	comp=Z,0.3nm,0.6s,baz=29,slow=2.7,SNR=4.5					
AKASG	**Malin Array Be**	**144.03 327**	PKP	PKPbc	18 01 24.0	-1.2
	comp=Z,2.4nm,0.4s,baz=43,slow=4.3,SNR=38					
BRTR	**Keskin Array B**	**146.65 308**	PKPbc	**PKPbc**	**18 01 32.8**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=108,slow=4.1,SNR=6.2					
BUR08	**Bucovina Ar. S**	**148.01 326**		**PKPbc**	**18 01 37.0**	**+0.3**
KOLS	**Kolonicke sedl**	**148.53 331**	*e*PKP	**PKPbc**	**18 01 38.3**	**+0.5**
KSP	**Ksiaz**	**149.38 339**	*e*PKP	**PKiKP**	**18 01 40.3**	**-0.3**
LANS	**Liptovska Anna**	**149.58 333**	*e*PKP	**PKiKP**	**18 01 41.6**	**+0.5**
OSTC	**Ostas**	**149.65 338**‖	*e*PKP	**PKiKP**	**18 01 41.0**	**-0.2**
CHVC	**Chvalec**	**149.68 339**‖	*e*PKP	**PKPbc**	**18 01 40.5**	**0.0**
DPC	**Dobruska-Polom**	**149.79 338**‖	*e*PKP	**PKiKP**	**18 01 41.3**	**-0.2**
MORC	**Moravsky Berou**	**149.84 336**		**PKPbc**	**18 01 40.7**	**-0.2**
KRLC	**Kraliky**	**149.86 337**‖	*e*PKP	**PKPbc**	**18 01 41.2**	**+0.2**
CLL	**Collm**	**149.98 343**‖	*i* PKPbc	**PKiKP**	**18 01 41.5**	**-0.3**
	comp=Z,21nm,0.8s					
CLL	**Collm**	**149.98 343**		**PKPbc**	**18 01 41.3**	**+0.1**
BRG	**Berggiesshubel**	**150.10 341**	*i* PKP	**PKiKP**	**18 01 41.9**	**-0.1**
BRG			Amp		18 01 42.6	
	comp=Z,16nm,0.8s					
PVCC	**Panska Ves**	**150.21 340**‖	*e*PKP	**PKPbc**	**18 01 42.0**	**+0.3**
VYHS	**Vyhne**	**150.36 333**	*e*PKP	**PKiKP**	**18 01 42.5**	**-0.2**
PRU	**Pruhonice**	**150.69 340**‖	*e*PKP	**PKPbc**	**18 01 42.6**	**-0.3**
MODS	**Modra-Piesok**	**151.08 335**	*e*PKP	**PKiKP**	**18 01 44.6**	**+0.4**
NKC	**Novy Kostel**	**151.10 342**‖	*e*PKP	**PKiKP**	**18 01 44.6**	**+0.4**
KHC	**Kasperske Hory**	**151.75 340**‖	*e*PKP	**PKPbc**	**18 01 44.7**	**-0.6**
KHC			*e*PKPAB	**PKPab**	**18 01 57.0**	**+0.1**
KHC	**Kasperske Hory**	**151.75 340**		**PKPbc**	**18 01 44.6**	**-0.8**
CKRC	**Cesky Krumlov**	**151.78 339**‖	*e*PKP	**PKPbc**	**18 01 45.1**	**-0.3**
GERES	**GERESS Array B**	**151.96 340**	PKPbc	**PKPbc**	**18 01 45.8**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=48,slow=2.0,SNR=14					
CONA	**Conrad Observa**	**151.99 336**	*e*P	**PKiKP**	**18 01 46.2**	**0.0**
VTS	**Vitosha**	**152.25 320**		**PKPab**	**18 02 00.1**	**+0.7**
DBIC	**Dimbokro**	**163.11 166**	PKP	**PKPdf**	**18 01 53.5**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=90,slow=2.5,SNR=3.9					
DBIC			PKPab	**PKPab**	**18 02 48.7**	**+1.9**
	comp=Z,2.7nm,0.8s,baz=217,slow=5.9,SNR=4.3					
ESDC	**Sonseca Array**	**163.30 9**	PKPab	**PKPab**	**18 02 46.6**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=12,slow=3.3,SNR=5.6					
TORD	**Torodi Ar. Bea**	**169.79 193**	PKP	**PKPdf**	**18 01 58.0**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=4.4,slow=1.5,SNR=5.6					
TORD			PKPab	**PKPab**	**18 03 17.0**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=167,slow=4.5,SNR=12					

NEIC ***02*** *17:53:01.3±1.6, 44.01N±0.10×129.4W±0.2, h10km±2km, mb4.0/2, ML3.4/18, Error ellipse: s-maj=20.7km s-min=16.5km az=261.0*

IDC ***02*** *17:53:05.7±5.7, 44.37N×128.77W, h0km, mb4.0/1, mb1 3.7/6, mb1mx3.4/67, mbtmp3.5/6, ML2.9/4, MS3.5/13, Ms1 3.5/13, ms1mx3.2/58, Error ellipse: s-maj=83.5km s-min=25.2km az=63.0*

ANF ***02*** *17:53:06.2±1.7, 44.05N×128.76W, h5km, ML3.7/3, Error ellipse: s-maj=20.6km s-min=10.9km az=51.0, Hypocentre not reviewed by the ISC*

ISC 02 17:53:04.2±2.8, 44.1N±0.1×129.1W±0.2, h15km, n73,
σ1§60/57, MS3.3/8, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.71**	**108**	Pn	**Pn**	**17 53 58.0**	**-3.0**
KEBM				IAML		17 54 47.3	
	comp=N,64nm,2.2s						
I02D	**Swisshome**	**3.81**	**88**	P		17 54 01.5	
	baz=271,SNR=19						
I02D				S		17 54 45.1	
	baz=271						
J01E	**Myrtle Point**	**3.90**	**102**	P		17 54 02.1	
	baz=286						
J01E				S		17 54 45.9	
	baz=286						
KBO	**Bosley Butte**	**4.06**	**116**	Pn	**Pn**	**17 54 04.0**	**-1.9**
I03D	**Drain, OR**	**4.20**	**94**	P		17 54 07.0	
	baz=277,SNR=30						
COR	**Corvallis**	**4.21**	**82**	Pn	**Pn**	**17 54 07.0**	**-0.8**
COR				IAML		17 54 42.0	
	comp=N,37nm,3.0s						
K02D	**Willamette Mer**	**4.23**	**108**	P		17 54 06.2	
	baz=292,SNR=6.5						
K02D				S		17 54 53.9	
	baz=292						
G03D	**McMinnville, O**	**4.33**	**73**	P		17 54 08.8	
	baz=255,SNR=6.7						
H04D	**Lebanon**	**4.61**	**83**	P		17 54 13.4	
	baz=266,SNR=6.6						
E03A	**Lebam**	**4.62**	**56**		**Pn**	**17 54 12.7**	**-0.7**
E03A				IAML		17 54 56.9	
	comp=E,30nm,2.2s						
E03A				IAML		17 55 16.0	
	comp=N,30nm,3.5s						
KRMB	**Red Mountain**	**4.64**	**122**	Pn	**Pn**	**17 54 10.8**	**-3.1**
KRMB				IAML		17 55 33.8	
	comp=E,28nm,3.7s						
KRMB				IAML		17 56 33.8	
	comp=N,27nm,2.6s						
HUMO	**Hull Mountain**	**4.75**	**106**		**Pn**	**17 54 15.0**	**-0.3**
I04A	**Tendick Farm,**	**4.87**	**91**	P		17 54 16.9	
	baz=275,SNR=13						
NLWA	**Neilton Lookou**	**4.93**	**47**	Pn	**Pn**	**17 54 17.4**	**-0.4**
NLWA				IAML		17 55 22.9	
	comp=N,22nm,3.3s						
NLWA				IAML		17 56 06.5	
	comp=N,27nm,4.2s						
H04A	**Detroit Lake**	**5.01**	**81**		**Pn**	**17 54 18.6**	**-0.3**
H04A				IAML		17 55 25.6	
	comp=E,18nm,0.6s						
J04D	**Umpqua Nationa**	**5.17**	**97**	P		17 54 22.5	
	baz=282,SNR=8.7						
E04D	**Cinebar**	**5.24**	**60**	P		17 54 22.1	
	baz=242						
YBH	**Yreka Blue Hor**	**5.29**	**115**	Pn	**Pn**	**17 54 25.6**	**+2.9**
	comp=E,0.2nm,0.3s,baz=276,slow=8.3,SNR=12						
YBH				LR	LR	17 55 21.0	
	comp=E,38nm,20.5s,baz=300,slow=26						
YBH				Sn	**Sn**	**17 55 23.5**	**+0.1**
	comp=E,0.1nm,0.3s,baz=139,slow=22,SNR=6.0						
YBH	**Yreka Blue Hor**	**5.29**	**115**		**Pn**	**17 54 22.8**	**+0.1**
YBH				IAML		17 55 29.6	
	comp=E,16nm,4.2s						
YBH				IAML		17 56 00.4	
	comp=N,11nm,4.8s						
YBH	**Yreka Blue Hor**	**5.29**	**115**	P	**P**	**17 54 25.1**	**-0.3**
L04D	**Klamath Falls**	**5.34**	**108**	P		17 54 25.1	
	baz=294						
L04D				S		17 55 23.9	
	baz=294						
G05D	**Wamic, OR**	**5.69**	**76**	P		17 54 28.8	
	baz=260,SNR=7.0						
J05D	**Fort Rock, OR**	**5.79**	**95**	P		17 54 29.9	
	baz=281						
LON	**Longmire**	**5.79**	**60**		**P

H11S3	**WAKE ISLAND Hy**	**58.90**	**266**	T	T	19 06 47.0
	baz=48,slow=75,SNR=92					
MKAR	**Makanchi Array**	**85.31**	**339**	LR	LR	18 45 56.4
	comp=Z,15nm,18.4s,baz=356,slow=37					

IDC ***02*** *18:01:46.7±1.0,28°.63N×103°.64E,h0km,mb4.1/6, mb1 4.1/7,mb1mx3.6/75,mbtmp4.0/7,ML3.2/1,Error ellipse: s-maj=38.6km s-min=18.7km az=60.0*
NEIC ***02*** *18:01:48.2±0.5,28°.9N±0°.1×104°.1E±0°.2,h10km±2km, mb4.2/7,Error ellipse: s-maj=28.0km s-min=10.3km az=303.0*

ISC 02 18:01:48.2±1.1,**28°.6N**±0°.2×**103°.7E**±0°.2,**h10**km,**n15,** σ0**s42**/14,**mb4.1**/11,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XAN	**Xi'an**	**7.01**	**38**	Pn	Pn	18 03 24.7	-6.3
SONM	**Songino Array**	**19.28**	**6**	**P**	**P**	**18 06 13.4**	**+0.2**
	0.1nm,0.3s,baz=183,slow=13,SNR=3.7						
KSRS	**Korea Array**	**22.10**	**60**	P	**P**	**18 06 43.6**	**0.0**
	2.3nm,0.4s,baz=250,slow=10,SNR=11						
MK31	**Makanchi Array**	**24.66**	**323**	P	**P**	**18 07 09.0**	**-0.1**
MKAR	**Makanchi Array**	**24.66**	**323**	P	**P**	**18 07 09.8**	**+0.7**
	1.0nm,0.4s,baz=130,slow=11,SNR=28						
MAKZ	**Makanchi**	**24.84**	**323**	P	**P**	**18 07 11.2**	**+0.5**
MAKZ				IAmb	IAmb	18 07 12.8	
	comp=Z,4.6nm,1.3s						
WB0	**Warramunga Arr**	**56.54**	**145**	P	**P**	**18 11 30.8**	**-0.1**
WB0				IAmb	IAmb	18 11 40.1	
	comp=Z,4.0nm,1.1s						
WRAB	**Tennant Creek**	**56.66**	**145**	P	**P**	**18 11 31.6**	**-0.2**
WRAB				IAmb	IAmb	18 11 37.7	
	comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**56.66**	**145**	P	**P**	**18 11 31.7**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=336,slow=8.1,SNR=25						
WB2	**Warramunga Arr**	**56.66**	**145**	P	**P**	**18 11 31.7**	**-0.2**
WR0	**Warramunga Arr**	**56.77**	**145**	P	**P**	**18 11 32.6**	**-0.1**
WR0				IAmb	IAmb	18 11 47.5	
	comp=Z,3.3nm,1.2s						
ARCES	**ARCESS Array B**	**59.35**	**336**	P	**P**	**18 11 49.5**	**-0.7**
	comp=Z,3.2nm,1.0s,baz=99,slow=5.8,SNR=2.3						
FINES	**FINESS Array B**	**59.41**	**327**	P	**P**	**18 11 50.2**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=76,slow=5.9,SNR=4.9						
AS31	**Alice Springs**	**59.60**	**148**	P	**P**	**18 11 52.8**	**+0.4**
AS31				IAmb	IAmb	18 11 58.5	
	comp=Z,0.5nm,0.6s						
ASAR	**Alice Springs**	**59.60**	**148**	P	**P**	**18 11 52.9**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=326,slow=6.9,SNR=31						

IDC ***02*** *18:02:19.0±1.8,43°.84N×105°.50W,h0km,mb4.3/1, mb1 3.7/5,mb1mx3.4/70,mbtmp3.4/5,ML2.8/3,Error ellipse: s-maj=52.9km s-min=8.4km az=148.0*
NEIC ***02*** *18:02:19.1±1.2,43°.81N±0°.05×105°.26W±0°.08,h0km±2km, ML3.1/55,Error ellipse: s-maj=10.1km s-min=8.1km az=113.0*

ISC 02 18:02:18.7±0.9,**43°.84N**±0°.06×**105°.28W**±0°.07,**h0**km,**n61,** σ0**s80**/61,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.94**	**72**		**Pb**	**18 02 38.3**	**+0.3**
K22A	**Casper**	**1.50**	**218**		**Pn**	**18 02 45.0**	**-2.1**
K22A				IAML		18 03 11.8	
	comp=N,364nm,0.3s						
K22A				IAML		18 03 12.3	
	comp=E,272nm,0.3s						
PHWY	**Pilot Hill**	**2.54**	**183**		**Pn**	**18 03 01.0**	**-0.5**
RWWY	**Rawlins**	**2.58**	**214**		**Pn**	**18 03 02.4**	**+0.4**
RWWY				IAML		18 03 37.9	
	comp=E,130nm,0.7s						
LAO	**LASA Array**	**2.92**	**347**		**Pn**	**18 03 06.7**	**+0.1**
RLMT	**Red Lodge**	**3.13**	**295**		**Pn**	**18 03 10.3**	**+0.8**
RLMT				IAML		18 04 01.3	
	comp=E,36nm,0.3s						
RLMT				IAML		18 04 08.3	
	comp=E,39nm,0.7s						
BW06	**Boulder Array**	**3.31**	**252**		**Pn**	**18 03 12.2**	**+0.3**
BW06				IAML		18 04 00.3	
	comp=E,35nm,0.3s						
BW06				IAML		18 04 03.3	
	comp=E,33nm,0.3s						
PD31	**Pinedale Array**	**3.31**	**252**		**Pn**	**18 03 12.3**	**+0.3**
PDAR	**Pinedale Array**	**3.31**	**252**	Pn	**Pn**	**18 03 12.2**	**+0.3**
	comp=E,3.5nm,0.3s,baz=70,slow=16,SNR=76						
PDAR				Lg	Lg	18 03 58.5	
	comp=E,16nm,0.3s,baz=171,slow=27,SNR=15						
YNE	**Yellowstone No**	**3.58**	**291**		**Pn**	**18 03 16.8**	**+1.0**
YNE				IAML		18 04 13.4	
	comp=N,40nm,0.6s						
YNE				IAML		18 04 15.9	
	comp=E,42nm,0.4s						
YMP	**Mirror Lake Pl**	**3.62**	**286**		**Pn**	**18 03 17.5**	**+1.2**
YMP				IAML		18 04 18.4	
	comp=N,52nm,0.5s						
GCMT	**Greyclift**	**3.68**	**303**		**Pn**	**18 03 18.4**	**+1.4**
LKWY	**Lake**	**3.75**	**283**		**Pn**	**18 03 18.7**	**+0.6**
LKWY				IAML		18 04 08.9	
	comp=N,36nm,0.4s						
LKWY				IAML		18 05 45.2	
	comp=N,27nm,0.5s						
OGNE	**Ogallala**	**3.76**	**139**		**Pn**	**18 03 18.4**	**+0.3**
H17A	**Grant Village**	**3.86**	**280**		**Pn**	**18 03 20.1**	**+0.6**
LOHW	**Long Hollow**	**3.87**	**268**		**Pn**	**18 03 19.3**	**-0.4**
FLWY	**Flagg Ranch**	**3.92**	**275**		**Pn**	**18 03 20.6**	**+0.2**
FLWY				IAML		18 04 30.6	
	comp=N,31nm,1.8s						
FLWY				IAML		18 04 35.7	
	comp=N,24nm,1.7s						
YPP	**Pitchstone Pla**	**4.01**	**278**		**Pn**	**18 03 22.3**	**+0.7**
ISCO	**Idaho Springs**	**4.05**	**184**		**Pn**	**18 03 22.3**	**+0.1**
REDW	**Red Top Meadow**	**4.08**	**265**	Pn	**Pn**	**18 03 22.6**	**0.0**
REDW				IAML		18 04 30.3	
	comp=N,35nm,1.1s						
REDW				IAML		18 04 38.8	
	comp=N,28nm,0.7s						
YHH	**Holmes Hill**	**4.11**	**285**		**Pn**	**18 03 24.9**	**+1.8**
E28A	**Huff**	**4.24**	**48**	Pn	**Pn**	**18 03 24.4**	**-0.1**
O20A	**White River Ci**	**4.31**	**212**		**Pn**	**18 03 26.2**	**+0.4**
O20A				IAML		18 04 38.6	
	comp=E,31nm,0.6s						
O20A				IAML		18 04 48.8	
	comp=N,33nm,1.6s						
YHL	**Hebgen Lake**	**4.36**	**285**		**Pn**	**18 03 26.6**	**+0.2**
YHL				IAML		18 04 42.3	
	comp=N,17nm,1.2s						
YHL				IAML		18 04 45.4	
	comp=E,19nm,1.0s						
AHID	**Auburn Hatcher**	**4.38**	**258**		**Pn**	**18 03 27.2**	**+0.4**
AHID				IAML		18 04 40.4	
	comp=N,32nm,2.9s						
AHID				IAML		18 04 43.6	
	comp=E,18nm,0.7s						
ECR	**Eagle Creek**	**4.51**	**262**		**Pn**	**18 03 29.2**	**+0.8**
QLMT	**Earthquake Lak**	**4.52**	**285**		**Pn**	**18 03 29.1**	**+0.4**
DGMT	**Dagmar**	**4.69**	**9**		**Pn**	**18 03 30.7**	**-0.1**
SMCO	**Snowmass**	**4.83**	**196**		**Pb**	**18 03 45.0**	**+0.5**
SMCO				IAML		18 04 58.5	
	comp=E,19nm,0.9s						
SMCO				IAML		18 05 04.1	
	comp=E,17nm,1.0s						
BOZ	**Bozeman (W)**	**4.86**	**293**		**Pn**	**18 03 33.5**	**+0.3**
BOZ				IAML		18 04 55.3	
	comp=E,12nm,0.8s						
BOZ				IAML		18 04 56.0	
	comp=E,11nm,1.0s						
HWUT	**Hardware Ranch**	**5.14**	**246**		**Pn**	**18 03 37.2**	**0.0**
HWUT				IAML		18 05 11.9	
	comp=E,18nm,1.0s						
KSCO	**Kaye Shedlock'**	**5.22**	**157**	Pn	**Pn**	**18 03 38.5**	**+0.4**
TCUT	**Toone Canyon**	**5.29**	**241**	Pn	**Pn**	**18 03 39.3**	**+0.1**
HRY	**Holter Researc**	**5.44**	**304**		**Pn**	**18 03 42.0**	**+0.8**
LRM	**Limekiln Ridge**	**5.47**	**294**	Pn	**Pn**	**18 03 42.6**	**+0.9**
BGNE	**Belgrade**	**5.79**	**112**	Pn	**Pn**	**18 03 45.8**	**-0.1**
SPUT	**South Promonto**	**5.87**	**247**	Pn	**Pn**	**18 03 46.3**	**-0.8**
BCYI	**Bear Canyon**	**5.88**	**277**	Pn	**Pn**	**18 03 46.9**	**-0.3**
HVU	**Hansel Valley**	**5.89**	**252**	Pn	**Pn**	**18 03 47.6**	**+0.3**
PV22	**Blue Mesa, Par**	**5.93**	**208**	Pn	**Pn**	**18 03 47.4**	**-0.5**
PV07	**Paradox Valley**	**5.97**	**206**		**Pn**	**18 03 50.1**	**+1.5**
PV15	**Paradox Valley**	**6.00**	**205**	Pn	**Pn**	**18 03 50.6**	**+1.6**
PV03	**Paradox Valley**	**6.20**	**207**	Pn	**Pn**	**18 03 51.8**	**+0.1**
PV02	**Paradox Valley**	**6.21**	**206**	Pn	**Pn**	**18 03 53.0**	**+1.2**
ECSD	**EROS Data Cent**	**6.27**	**88**	Pn	**Pn**	**18 03 54.2**	**+1.7**
TMUT	**Trail Mountain**	**6.36**	**226**	Pn	**Pn**	**18 03 54.1**	**+0.2**
BGU	**Big Grassy Mou**	**6.44**	**246**	Pn	**Pn**	**18 03 55.6**	**+0.7**
CBKS	**Cedar Bluff**	**6.53**	**138**	Pn	**Pn**	**18 03 56.1**	**0.0**
Q16A	**Castle Valley**	**6.62**	**224**	Pn	**Pn**	**18 03 57.9**	**+0.4**
DUG	**Dugway, Tooele**	**6.69**	**240**	Pn	**Pn**	**18 03 58.5**	**+0.1**
T25A	**Trinidad**	**6.73**	**174**	Pn	**Pn**	**18 03 59.4**	**+0.4**
MSU	**Marysvale**	**7.45**	**227**	Pn	**Pn**	**18 04 07.9**	**-0.9**
MTPU	**Mount Pierson**	**7.80**	**224**	Pn	**Pn**	**18 04 13.2**	**-0.6**
AGMN	**Agassiz Nation**	**7.92**	**52**	Pn	**Pn**	**18 04 14.8**	**-0.3**
WALA	**Waterton Lakes**	**7.92**	**314**	Pn	**Pn**	**18 04 15.8**	**+0.7**
CCUT	**Cedar City**	**8.79**	**227**	Pn	**Pn**	**18 04 28.3**	**+1.1**
ULM	**Lac du Bonnet**	**9.06**	**42**	Pn	**Pn**	**18 04 31.3**	**+0.6**
	comp=E,9.9nm,0.3s,baz=232,slow=13,SNR=9.4						
ULM	**Lac du Bonnet**	**9.06**	**42**		**Pn**	**18 04 30.5**	**-0.3**
NVAR	**Mina Array Bea**	**11.21**	**246**	Pn	**Pn**	**18 05 02.1**	**+1.7**
	comp=E,0.1nm,0.3s,baz=59,slow=11,SNR=1.8						
YKA	**Yellowknife Ar**	**19.46**	**347**	P	**P**	**18 06 45.6**	**-1.1**
	comp=E,0.1nm,0.3s,baz=154,slow=9.9,SNR=2.5						
ARCES	**ARCESS Array B**	**61.32**	**18**	P	**P**	**18 12 34.7**	**-0.8**
	comp=E,3.2nm,0.9s,baz=330,slow=8.7,SNR=3.7						

IDC ***02*** *18:07:03.3±0.8,36°.15S×99°.42W,h0km,mb4.2/11, mb1 4.4/11,mb1mx4.2/44,mbtmp4.1/11,MS3.9/13, Ms1 3.8/13,ms1mx3.7/21,Error ellipse: s-maj=24.3km s-min=21.1km az=82.0*
GCMT ***02*** *18:07:05.0±0.3,36°.23S±0°.02×99°.59W±0°.02,h23km±1km, MW4.9/94,Moment Tensor Solution. s19,c20; s94,c112; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.94±.17; Mθθ0.19±.12; Mϕϕ0.74±.12; Mrθ0.97±.18; Mθϕ-2.35±.09; Mϕr0.02±.15; Best double couple: Mo2.62900×10^16 NP1:ϕs181.00000°,δ62.00000°,λ-15.00000°. NP2: ϕs278.00000°,δ77.00000°,λ-151.00000°. Principal axes: T 2.9420, Plg10.0000°, Azm47.0000°; N -0.6250, Plg59.0000°, Azm301.0000°; P -2.3160, Plg30.0000°, Azm142.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***02*** *18:07:10.0±1.7,35°.5S±0°.2×98°.8W±0°.2,h16km±7km, mb4.6/30 Error ellipse: s-maj=35.3km s-min=21.2km az=200.0*

ISC 02 18:07:05.2±0.7,**36°.2S**±0°.1×**99°.3W**±0°.1,**h10**km,**n81,** σ1**s52**/65,**mb4.5**/24,**MS3.8**/12,**Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**12.47**	**314**	LR	LR	18 13 12.4	
	comp=Z,811nm,20.3s,baz=141,slow=30						
H03S2	**Juan Fernandez**	**16.82**	**88**	T	T	18 28 50.3	
	baz=254,slow=75,SNR=27						
H03S1	**Juan Fernandez**	**16.84**	**88**	T	T	18 28 49.2	
	baz=254,slow=75,SNR=25						
H03S3	**Juan Fernandez**	**16.84**	**88**	T	T	18 28 49.8	
	baz=254,slow=75,SNR=20						
H03N2	**Juan Fernandez**	**16.92**	**87**	T	T	18 28 59.0	
	baz=247,slow=73,SNR=18						
H03N3	**Juan Fernandez**	**16.92**	**87**	T	T	18 28 47.8	
	baz=247,slow=73,SNR=23						
H03N1	**Juan Fernandez**	**16.93**	**87**	T	T	18 28 48.7	
	baz=247,slow=73,SNR=28						
BI03	**Tigo**	**21.07**	**100**	P	**P**	**18 11 50.1**	**+0.6**
BI03				IAmb	IAmb	18 11 54.9	
	comp=Z,32nm,0.8s						
BI02	**San Fabin de**	**22.49**	**99**		**P**	**18 12 06.4**	**+1.5**
BI02				IAmb	IAmb	18 12 10.8	
	comp=Z,28nm,1.3s						
PLCA	**Paso Flores**	**22.88**	**110**	P	**P**	**18 12 10.5**	**+1.6**
	comp=Z,6.8nm,0.9s,baz=250,slow=8.0,SNR=8.6						
PLCA				LR	LR	18 18 57.6	
	comp=Z,163nm,21.6s,baz=276,slow=31						
PLCA	**Paso Flores**	**22.88**	**110**		**P**	**18 12 11.1**	**+2.2**
PLCA	**Paso Flores**	**22.88**	**110**	*eP*	**P**	**18 12 10.5**	**+1.6**
BO02	**Sierra Bellavi**	**23.20**	**95**		**P**	**18 12 13.6**	**+1.3**
BO02				IAmb	IAmb	18 12 20.9	
	comp=Z,16nm,0.9s						
CO03	**El Pedregal**	**24.37**	**86**		**P**	**18 12 22.9**	**-0.7**
CO03				IAmb	IAmb	18 12 26.4	
	comp=Z,32nm,1.3s						
GO04	**Tololo Observa**	**24.52**	**84**	P	**P**	**18 12 25.2**	**0.0**
LCO	**Las Campanas**	**25.05**	**82**		**P**	**18 12 30.1**	**+0.2**
ZON	**Zonda**	**25.75**	**89**	P	**P**	**18 12 36.1**	**0.0**
ZON				IAmb	IAmb	18 12 39.8	
	comp=Z,33nm,1.4s						
AC02	**Maricunga**	**27.24**	**78**	P	**P**	**18 12 50.1**	**0.0**
GO02	**Mina Guanaco**	**27.69**	**75**	P	**P**	**18 12 54.0**	**+0.1**
GO02				IAmb	IAmb	18 12 56.4	
	comp=Z,18nm,1.1s						
LVC	**Limon Verde**	**29.57**	**71**	LR	LR	18 22 04.5	
	comp=Z,212nm,20.2s,baz=234,slow=30						
LVC	**Limon Verde**	**29.57**	**71**	P	**P**	**18 13 08.8**	**-1.9**
LVC				IAmb	IAmb	18 13 19.2	
	comp=Z,19nm,1.4s						
PB09	**IPOC Station P**	**29.78**	**69**	P	**P**	**18 13 12.8**	**+0.5**
PB08	**IPOC Station P**	**30.83**	**67**	P	**P**	**18 13 19.9**	**-2.0**
PB08				IAmb	IAmb	18 13 25.1	
	comp=Z,6.1nm,0.8s						
MNMC	**Minye Minye**	**31.13**	**65**	P	**P**	**18 13 22.9**	**-1.5**
LPAZ	**La Paz**	**34.03**	**63**	P	**P**	**18 13 50.8**	**+0.6**
	comp=Z,11nm,1.1s,baz=221,slow=7.4,SNR=17						
LPAZ				LR	LR	18 24 27.8	
	comp=Z,122nm,21.1s,baz=222,slow=31						
LPAZ	**La Paz**	**34.03**	**63**	P	**P**	**18 13 50.2**	**0.0**
LPAZ	**La Paz**	**34.03**	**63**	*eP*	**P**	**18 13 49.0**	**-1.2**
ATAH	**Atahualpa**	**34.67**	**38**	P	**P**	**18 13 55.7**	**+0.2**
	comp=Z,14nm,0.9s,baz=156,slow=5.6,SNR=7.4						
ITQB	**Itaqui**	**36.15**	**92**	*eP*	**P**	**18 14 08.7**	**+1.0**
CPUP	**Villa Florida**	**36.92**	**87**	P	**P**	**18 14 14.2**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=255,slow=11,SNR=4.3						
CPUP				LR	LR	18 26 55.6	
	comp=Z,89nm,19.1s,baz=249,slow=32						
CPUP	**Villa Florida**	**36.92**	**87**	P	**P**	**18 14 14.5**	**+0.2**
CPUP				IAmb	IAmb	18 14 16.6	
	comp=Z,11nm,1.4s						
CPUP	**Villa Florida**	**36.92**	**87**	*eP*	**P**	**18 14 15.0**	**+0.6**
CZSB	**Cruzeiro do Su**	**37.30**	**47**	*eP*	**P**	**18 14 17.2**	**-0.4**
ETMB	**Extrema**	**39.85**	**57**	*eP*	**P**	**18 14 37.9**	**-1.2**
ITAB	**Concordia**	**40.74**	**91**	*eP*	**P**	**18 14 48.6**	**+2.3**
OTAV	**Otavalo**	**41.10**	**33**	P	**P**	**18 14 48.9**	**-1.0**
OTAV	**Otavalo**	**41.10**	**33**	*eP*	**P**	**18 14 52.5**	**+2.6**
PTLB	**Pontes e Lacer**	**41.23**	**71**	*eP*	**P**	**18 14 49.5**	**-1.0**
VILB	**Vilhena**	**42.00**	**67**	*eP*	**P**	**18 14 57.1**	**+0.3**
SAML	**Samuel**	**42.55**	**59**	*eP*	**P**	**18 15 00.7**	**-0.6**
TER01	**Tubaro-SC**	**42.64**	**94**	*eP*	**P**	**18 15 04.7**	**+2.8**
PP1B	**Ponte de Pedra**	**43.28**	**77**	*eP*	**P**	**18 15 07.2**	**0.0**
PCMB	**Pacaembu**	**44.03**	**84**	*eP*	**P**	**18 15 14.2**	**+1.0**
ITRB	**Iturama**	**45.73**	**83**	*eP*	**P**	**18 15 29.4**	**+2.6**
CLDB	**Colider**	**46.62**	**68**	*eP*	**P**	**18 15 34.8**	**+1.0**
ARAG	**Araguaiana, MT**	**46.77**	**77**	*eP*	**P**	**18 15 35.3**	**+0.3**
ROSC	**El Rosal**	**47.05**	**35**	LR	LR	18 32 21.0	
	comp=Z,182nm,19.1s,baz=238,slow=32						
NPGB	**Novo Progresso**	**49.46**	**65**	*eP*	**P**	**18 15 56.8**	**+1.0**
BDFB	**Brasilia**	**49.81**	**80**	P	**P**	**18 15 58.6**	**0.0**
	comp=Z,1.9nm,0.5s,baz=222,slow=11,SNR=2.8						
BDFB				LR	LR	18 35 30.1	
	comp=Z,140nm,18.4s,baz=258,slow=34						
BDFB	**Brasilia**	**49.81**	**80**	P	**P**	**18 15 56.4**	**-2.2**
BDFB				IAmb	IAmb	18 16 05.8	
	comp=Z,9.2nm,1.0s						
PTGA	**Pitinga**	**50.71**	**55**	P	**P**	**18 16 03.5**	**-1.8**
PTGA				IAmb	IAmb	18 16 11.0	
	comp=Z,6.6nm,0.9s						
ITTB	**Itaituba**	**51.01**	**62**	*eP*	**P**	**18 16 08.0**	**+0.5**
QSPA	**South Pole Qui**	**54.00**	**180**	P	**P**	**18 16 28.3**	**-0.9**
	comp=Z,4.4nm,1.0s,baz=131,slow=4.4,SNR=5.7						
SDBA	**SAO DESIDERIO**	**54.13**	**78**	*eP*	**P**	**18 16 32.7**	**+1.9**
VNA3	**Neumayer Olymp**	**56.05**	**157**	P	**P**	**18 16 41.1**	**-2.7**
VNDA	**Vanda**	**56.84**	**195**	P	**P**	**18 16 50.0**	**+0.6**
	comp=Z,1.3nm,1.1s,baz=80,slow=3.6,SNR=3.6						
VNDA				LR	LR	18 34 40.5	
	comp=Z,81nm,21.4s,baz=140,slow=29						
VNA2	**Neumayer--Watz**	**56.85**	**157**	P	**P**	**18 16 46.4**	**-3.1**
TX31	**Lajitas Ar. Si**	**65.33**	**356**	P	**P**	**18 17 44.2**	**-3.4**
TX31				IAmb	IAmb	18 18 04.4	
	comp=Z,7.1nm,1.4s						
TX32	**Lajitas Array**	**65.33**	**356**	P	**P**	**18 17 44.3**	**-3.3**
TXAR	**Lajitas Array**	**65.33**	**356**	P	**P**	**18 17 47.6**	**0.0**
	comp=Z,0.7nm,0.8s,baz=186,slow=7.5,SNR=5.2						
060A	**Indiantown**	**65.39**	**19**	P	**P**	**18 17 46.5**	**-1.3**
RPZ	**Rata Peaks**	**65.90**	**233**	LR	LR	18 39 44.2	
	comp=Z,76nm,21.4s,baz=118,slow=30						
MAW	**Mawson**	**75.62**	**173**	LR	LR	18 48 39.9	
	comp=Z,151nm,19.8s,baz=238,slow=33						
NVAR	**Mina Array Bea**	**76.33**	**345**	P	**P**	**18 18 53.0**	**-1.5**
	comp=Z,1.5nm,0.8s,baz=174,slow=7.0,SNR=4.1						
NVAR				LR	LR	18 44 09.1	
	comp=Z,42nm,18.5s,baz=124,slow=29						
HMH	**Humu'ula Sheep**	**76.84**	**306**	P	**P**	**18 19 01.6**	**+3.7**
KVN	**Kaiserville**	**76.89**	**345**	P	**P**	**18 18 58.4**	**+0.9**
KVN				IAmb	IAmb	18 19 03.6	
	comp=E,4.9nm,1.1s						
RDMU	**Red Mountain**	**77.00**	**352**	P	**P**	**18 18 57.4**	**-0.8**
RDMU				IAmb	IAmb	18 18 59.5	
	comp=Z,3.9nm,0.6s						
BW06	**Boulder Array**	**79.17**	**352**	P	**P**	**18 19 10.2**	**0.0**
PD31	**Pinedale Array**	**79.17**	**352**	P	**P**	**18 19 10.3**	**+0.2**
PDAR	**Pinedale Array**	**79.17**	**352**	P	**P**	**18 19 08.0**	**-2.2**
	comp=Z,0.8nm,0.8s,baz=157,slow=4.2,SNR=7.4						
ECSD	**EROS Data Cent**	**79.61**	**2**	P	**P**	**18 19 13.1**	**+0.8**
ECSD				IAmb	IAmb	18 19 18.7	
	comp=Z,4.9nm,1.0s						
HLID	**Hailey**	**80.59**	**349**	P	**P**	**18 19 18.8**	**+1.0**
HLID				IAmb	IAmb	18 19 30.1	
	comp=Z,7.2nm,1.4s						
J08A	**Circle Bar Ran**	**81.11**	**346**	P	**P**	**18 19 21.5**	**+1.0**
STKA	**Stephens Creek**	**91.49**	**228**	LR	LR	18 53 12.7	
	comp=Z,80nm,19.7s,baz=180,slow=30						
DBIC	**Dimbokro**	**97.44**	**87**	LR	LR	18 59 54.0	
	comp=Z,36nm,22.0s,baz=218,slow=32						
YKA	**Yellowknife Ar**	**99.14**	**353**	P	**Pdif**	**18 20 46.5**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=165,slow=4.5,SNR=4.3						
H01W1	**Cape Leeuwin H**	**102.70**	**208**	T	T	20 16 20.3	
	baz=151,slow=76,SNR=6.0						
H01W2	**Cape Leeuwin H**	**102.71**	**208**	T	T	20 16 36.4	
	baz=151,slow=76,SNR=6.4						
H01W3	**Cape Leeuwin H**	**102.71**	**208**	T	T	20 16 18.2	
	baz=151,slow=76,SNR=8.2						
FINES	**FINESS Array B**	**137.78**	**36**	PKhKP	PKPpre	18 26 21.6	
	comp=Z,1.4nm,0.8s,baz=352,slow=12,SNR=2.2						
FINES				PKP	pPKPdf	18 26 30.6	-0.3
	comp=Z,6.7nm,1.2s,baz=316,slow=5.8,SNR=3.5						
MKAR	**Makanchi Array**	**169.37**	**354**	PKP	**PKPdf**	**18 27 13.9**	**+1.5**
	comp=Z,0.6nm,1.0s,baz=350,slow=1.4,SNR=4.2						
MKAR				PKPab	**PKPab**	**18 28 24.2**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=356,slow=2.0,SNR=2.0						

IDC ***02*** *18:14:58.1±1.4,34°.54N×25°.63E,h0km,mb3.7/5, mb1 3.8/11,mb1mx3.5/47,mbtmp3.6/11,ML4.0/6,Error ellipse: s-maj=25.8km s-min=11.1km az=39.0*
ISK ***02*** *18:15:02.4,34°.73N×25°.48E,h22km,ML3.1/8*
ATH ***02*** *18:15:02.2,34°.65N×25°.45E,h15km±3km,ML3.1/8,Error ellipse: s-maj=5.6km s-min=1.6km az=356.0*
THE ***02*** *18:15:02.8,34°.73N×25°.45E,h1km±1km,ML3.1/6,Error ellipse: s-maj=2.0km s-min=0.7km az=161.0*
HLW ***02*** *18:15:04.1,34°.30N×25°.91E,h15km±12km,Md3.1,Ml3.4*

ISC 02 18:14:59.8±1.3,**34°.54N**±0°.04×**25°.56E**±0°.03,**h17**km±9km, **n49,**σ1**s27**/65,**mb3.6**/6,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**0.72**	**4**	P	**Pb**	**18 15 14.0**	**+0.1**
NPS				AML	AML	18 15 27.5	
	comp=E,4700μm,0.5s						
NPS				AML	AML	18 15 29.0	
	comp=N,3409μm,0.4s						
NPS	**Neapolis**	**0.72**	**4**	P	**Pb**	**18 15 14.0**	**+0.1**
NPS				S	**Sg**	**18 15 22.0**	**-1.5**
	comp=N,2μm,0.4s						
SIVA	**Sivas**	**0.78**	**308**	P	**Pb**	**18 15 14.7**	**-0.1**
SIVA				S	**Sb**	**18 15 23.0**	**-2.1**
SIVA				AML	AML	18 15 29.5	
	comp=E,14693μm,0.4s						
SIVA				AML	AML	18 15 31.1	
	comp=N,7272μm,0.4s						
ZKR	**Zakros**	**0.79**	**43**	P	**Pn**	**18 15 17.1**	**+0.9**
ZKR				AML	AML	18 15 32.2	
	comp=N,1270μm,0.3s						
ZKR				AML	AML	18 15 34.3	
	comp=E,2928μm,0.9s						
ZKR	**Zakros**	**0.79**	**43**	P	**Pn**	**18 15 17.0**	**+0.9**
ZKR				S	**Sn**	**18 15 28.9**	**+1.4**
	comp=E,1μm,0.8s						
ZKR	**Zakros**	**0.79**	**43**	PG	**Pn**	**18 15 17.2**	**+1.1**
ZKR				SG	**Sn**	**18 15 27.7**	**+0.2**
HRKL	**Herakleio**	**0.85**	**334**	PG	**Pb**	**18 15 16.8**	**+0.6**
HRKL				SG	**Sb**	**18 15 25.9**	**-1.4**

comp=E,1.4nm,0.3s,baz=298,slow=11,SNR=12
MMAI Sn **Sn** **18 18 31.4 -2.2**
comp=E,1.2nm,0.3s,baz=302,slow=27,SNR=5.0
EIL Elat 9.33 119 Pn **Pn** **18 17 14.7 +1.2**
comp=E,0.6nm,0.3s,baz=292,slow=2.6,SNR=6.9
EIL Sn **Sn** **18 18 53.6 -4.4**
comp=E,0.4nm,0.3s,baz=121,slow=21,SNR=2.0
HDK1 Dakhla 9.57 159 P **Pn** **18 17 18.0 +1.2**
baz=160
VRAC Vranov 16.17 339 Pn **P** **18 18 49.2 -0.1**
comp=E,0.6nm,0.3s,baz=68,slow=5.9,SNR=3.8
KBZ Khabaz 16.26 51 Pn **P** **18 18 50.4 +0.2**
comp=E,0.1nm,0.3s,baz=221,slow=10,SNR=5.9
AKASG Malin Array Be 16.37 8 Pn **Pn** **18 18 49.2 +0.6**
comp=E,1.1nm,0.3s,baz=198,slow=11,SNR=4.8
GERES GERESS Array B 16.78 332 Pn **Pn** **18 18 54.5 +0.6**
comp=E,0.1nm,0.3s,baz=142,slow=11,SNR=2.1
HFS Hagfors 26.75 347 P **P** **18 20 38.2 0.0**
comp=E,2.6nm,0.8s,baz=155,slow=14,SNR=2.4
FINES FINESS Array B 26.92 1 P **P** **18 20 36.9 -2.9**
comp=E,2.1nm,1.0s,baz=156,slow=11,SNR=5.9
EKA Eskdalemuir Ar 28.73 325 P **P** **18 20 56.6 +0.6**
comp=E,0.3nm,0.5s,baz=129,slow=7.4,SNR=1.5
TORD Torodi Ar. Bea 30.35 231 P **P** **18 21 12.4 +1.6**
comp=E,0.4nm,0.6s,baz=32,slow=8.5,SNR=2.8
MKAR Makanchi Array 43.84 56 P **P** **18 23 05.4 +0.5**
comp=E,0.4nm,0.7s,baz=271,slow=8.4,SNR=7.2
ZALV Zalesovo Beam 45.20 46 P **P** **18 23 15.8 +0.2**
comp=E,0.6nm,0.4s,baz=265,slow=7.9,SNR=4.7

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*IDC **02** 18:19:35.6±1.7,5.°58S×152.°84E,h0km,mb4.0/7, mb1 4.2/8,mb1mx3.9/36,mbtmp4.0/8,ML1.8/1,MS3.2/3, Ms1 3.2/3,ms1mx2.8/35,Error ellipse: s-maj=71.1km s-min=20.1km az=127.0*

ISC 02 18:19:41.4±1.6,5.°6S±0.°4×152.°8E±0.°4,h37km,n10, σ0s55/10,mb3.9/7,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.70**	**235**	Pn		**Pn**		**18 21 17.8**	**+0.5**
	1.1nm,0.3s,baz=4.9,slow=6.4,SNR=9.5								
PMG				Sn		**Sn**		**18 22 31.8**	**-0.7**
	1.6nm,0.3s,baz=343,slow=9.1,SNR=2.2								
PMG				LR		LR		18 24 22.5	
	comp=Z,92nm,18.3s,baz=98,slow=42								
WRA	**Warramunga Arr**	**22.88**	**230**	P		**P**		**18 24 41.8**	**-0.2**
	1.3nm,0.3s,baz=55,slow=10,SNR=16								
WRA				LR		LR		18 33 20.6	
	comp=Z,58nm,21.9s,baz=210,slow=36								
ASAR	**Alice Springs**	**25.53**	**223**	P		**P**		**18 25 06.5**	**-0.2**
	3.4nm,0.9s,baz=56,slow=8.1,SNR=23								
BATI	**Baumata**	**29.16**	**259**	LR		LR		18 38 12.1	
	comp=Z,128nm,20.3s,baz=232,slow=38								
FITZ	**Fitzroy Crossi**	**29.23**	**243**	P		**P**		**18 25 40.3**	**+0.3**
	2.3nm,0.6s,baz=56,slow=6.5,SNR=10								
MKAR	**Makanchi Array**	**80.90**	**319**	P		**P**		**18 31 52.5**	**+0.7**
	0.5nm,0.7s,baz=114,slow=5.3,SNR=7.1								
ZALV	**Zalesovo Beam**	**81.80**	**326**	P		**P**		**18 31 55.7**	**-0.7**
	0.8nm,0.5s,baz=118,slow=7.2,SNR=5.0								
ILAR	**Eielson Array**	**82.92**	**22**	P		**P**		**18 32 01.6**	**-0.4**
	0.9nm,0.8s,baz=251,slow=5.8,SNR=7.9								
YKA	**Yellowknife Ar**	**96.16**	**28**	P		**P**		**18 33 05.5**	**+0.3**
	0.3nm,0.8s,baz=271,slow=4.7,SNR=5.0								
TORD	**Torodi Ar. Bea**	**150.50**	**287**	PKPbc		**PKPbc**		**18 39 30.1**	**-0.1**
	0.9nm,0.8s,baz=36,slow=3.4,SNR=4.8								

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*SOF **02** 18:22:35.7,40.°86N×22.°22E,h2km,MD2.7*
*ATH **02** 18:22:37.5,40.°95N×22.°18E,h9km±3km,ML2.1/6,Error ellipse: s-maj=3.6km s-min=1.0km az=353.0*

ISC 02 18:22:37.0±1.2,40.°92N±0.°05×22.°19E±0.°05,h11km±8km, n11,σ0s46/16,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.16**	**77**	P		**Pg**		**18 22 40.7**	**0.0**
GRG				S		**Sg**		**18 22 43.4**	**+0.2**
GRG				AML		AML		18 22 44.0	
	comp=E,4724μm,0.2s								
GRG				AML		AML		18 22 45.1	
	comp=N,6330μm,0.3s								
KNT	**Kendrikon**	**0.59**	**65**	P		**Pb**		**18 22 48.7**	**-0.6**
KNT				S		**Sb**		**18 22 56.7**	**-0.9**
KNT				AML		AML		18 22 58.8	
	comp=E,350μm,0.3s								
KNT				AML		AML		18 22 58.9	
	comp=N,537μm,0.3s								
FNA	**Florina**	**0.63**	**258**	P		**Pb**		**18 22 49.7**	**-0.4**
FNA				AML		AML		18 23 03.4	
	comp=E,435μm,0.3s								
FNA				AML		AML		18 23 06.1	
	comp=N,386μm,0.4s								
KZN	**Kozani**	**0.69**	**208**	P		**Pb**		**18 22 50.8**	**-0.3**
KZN				S		**Sb**		**18 23 01.1**	**+0.4**
KZN				AML		AML		18 23 07.1	
	comp=E,544μm,0.4s								
KZN				AML		AML		18 23 08.3	
	comp=N,243μm,0.7s								
HORT	**Hortiatis**	**0.76**	**115**	P		**Pg**		**18 22 51.5**	**-0.2**
HORT				S		**Sb**		**18 23 03.5**	**+0.8**
HORT				AML		AML		18 23 06.5	
	comp=E,164μm,0.2s								
HORT				AML		AML		18 23 07.6	
	comp=N,219μm,0.3s								
NEST	**Nestorio**	**1.00**	**240**	P		**Pb**		**18 22 56.5**	**0.0**
PLG	**Polygyros**	**1.10**	**119**	P		**Pn**		**18 22 58.2**	**-0.1**
PLG				S		**Sn**		**18 23 13.9**	**+0.3**
PLG				AML		AML		18 23 17.0	
	comp=N,264μm,0.6s								
PLG				AML		AML		18 23 18.1	
	comp=E,186μm,0.5s								
KKB	**Krupnik**	**1.16**	**35**	Pg		**Pn**		**18 22 59.5**	**+0.3**
MMB	**Musomiste**	**1.34**	**60**	P		**Pb**		**18 23 02.2**	**+0.1**
THL	**Klokotos Trika**	**1.36**	**186**	P		**Pg**		**18 23 02.9**	**-0.2**
VTS	**Vitosha**	**1.87**	**24**	*eP*		**Pb**		**18 23 11.3**	**+0.1**

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*SKO **02** 18:37:48.1,40.°92N×22.°23E,h15km*
*SOF **02** 18:37:50.2,40.°97N×22.°27E,h2km,MD4.0*
*PDG **02** 18:37:50.7±0.6,40.°90N×22.°22E,h11km,ML4.0/14,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*ATH **02** 18:37:51.0,40.°90N×22.°22E,h7km±2km,ML3.8/22,Error ellipse: s-maj=2.5km s-min=0.7km az=341.0*
*NEIC **02** 18:37:50.8±2.4,40.°90N±0.°03×22.°12E±0.°07,h2km±5km, Error ellipse: s-maj=7.4km s-min=4.0km az=98.0*
*ISK **02** 18:37:50.1,40.°94N×22.°20E,h2km,ML4.3/25*
*TIR **02** 18:37:50.9,40.°84N×22.°15E,h7km,Md4.3,Ml4.2*
*MOS **02** 18:37:50.0±0.9,40.°91N×22.°21E,h5km,mb4.5/10,Error ellipse: s-maj=4.5km s-min=3.1km az=86.3*
*NEIC **02** 18:37:51.1,40.°87N×22.°21E,h4km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=0.74; Mθθ=1.85; Mφφ=1.12; Mrθ=-0.48; Mrφ=0.82; Mθφ=-0.95; Fault plane solution: Mo2.10000×10^15^ NP1:φs37.25000°, δ75.45000°,λ-142.26000°. NP2:φs296.24000°, δ53.66000°,λ-18.17000°. Principal axes: T 2.2369, Plg14.0000°, Azm162.0000°; N -0.3126, Plg50.0000°, Azm55.0000°; P -1.9243, Plg37.0000°, Azm263.0000°;*
*IDC **02** 18:37:51.4±0.7,40.°94N×22.°06E,h0km,mb3.8/12, mb1 3.9/24,mb1mx3.7/55,mbtmp3.8/24,ML3.6/11, MS3.5/17,Ms1 3.5/17,ms1mx3.3/40 Error ellipse: s-maj=1.4km s-min=10.9km az=105.0*
*THE **02** 18:37:51.0,40.°92N×22.°21E,h1km±1km,ML3.7/10,Error ellipse: s-maj=1.6km s-min=0.4km az=305.0*
*BEO **02** 18:37:53.1±0.7,41.°03N×22.°21E,h10km±3km,ML3.8/21*
*PRU **02** 18:38:04.4±0.0,40.°74N×20.°38E,h1km,M4.2*

ISC 02 18:37:51.1±1.0,40.°92N±0.°01×22.°20E±0.°01,h1km±7km, n476,σ1s30/567,mb4.1/25,MS3.6/11,44C-32D,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.15**	**77**	P		**Pg**		**18 37 53.9**	**-0.3**
GRG				S		**Sg**		**18 37 56.4**	**+0.2**
GRG				AML		AML		18 37 57.6	
GRG				AML		AML		18 37 57.6	
GRG	**Griva**	**0.15**	**77**	P		**Pg**		**18 37 54.2**	**+0.1**
GRG				S		**Sg**		**18 37 56.5**	**+0.3**
GRG	**Griva**	**0.15**	**77**	*i* P		**Pg**		**18 37 53.8**	**-0.3**
GRG				*i* S		**Sg**		**18 37 56.9**	**+0.8**
GRG	**Griva**	**0.15**	**77**	PG		**Pg**		**18 37 54.0**	**-0.1**
GRG				SG		**Sg**		**18 37 56.7**	**+0.5**
GRG	**Griva**	**0.15**	**77**	⇓*i* Pg		**Pg**		**18 37 53.9**	**-0.3**
GRG				*i* Sg		**Sg**		**18 37 57.0**	**+0.8**
KNT	**Kendrikon**	**0.58**	**65**	P		**Pg**		**18 38 02.1**	**-0.2**
KNT				S		**Sg**		**18 38 10.2**	**+0.5**
KNT				AML		AML		18 38 11.0	
	comp=E,29174μm,0.3s								
KNT				AML		AML		18 38 11.6	
	comp=N,41339μm,0.4s								
KNT	**Kendrikon**	**0.58**	**65**	P		**Pg**		**18 38 02.2**	**0.0**
KNT				S		**Sg**		**18 38 10.5**	**+0.8**
	comp=N,18μm,0.3s								
KNT	**Kendrikon**	**0.58**	**65**	P		**Pg**		**18 38 01.8**	**-0.4**
KNT				S		**Sg**		**18 38 10.4**	**+0.8**
KNT	**Kendrikon**	**0.58**	**65**	PG		**Pg**		**18 38 02.0**	**-0.2**
KNT				SG		**Sg**		**18 38 10.7**	**+1.0**
KNT	**Kendrikon**	**0.58**	**65**	⇓*i* Pg		**Pg**		**18 38 01.8**	**-0.4**
KNT				*i* Sg		**Sg**		**18 38 10.6**	**+0.8**
FNA	**Florina**	**0.64**	**258**	P		**Pg**		**18 38 03.0**	**-0.4**
FNA				S		**Sg**		**18 38 12.4**	**+0.7**
FNA				AML		AML		18 38 12.9	
	comp=E,15224μm,0.4s								
FNA				AML		AML		18 38 17.0	
	comp=N,15320μm,0.3s								
FNA	**Florina**	**0.64**	**258**	P		**Pg**		**18 38 02.8**	**-0.7**
FNA				S		**Sg**		**18 38 12.3**	**+0.5**
	comp=N,7μm,0.4s								
FNA	**Florina**	**0.64**	**258**	P		**Pg**		**18 38 02.8**	**-0.7**
FNA	**Florina**	**0.64**	**258**			**Pg**		**18 38 02.8**	**-0.7**
FNA	**Florina**	**0.64**	**258**	P		**Pg**		**18 38 02.8**	**-0.7**
	baz=265								
FNA				S		**Sg**		**18 38 12.1**	**+0.4**
	baz=265								
FNA	**Florina**	**0.64**	**258**	⇓*i* Pg		**Pg**		**18 38 02.8**	**-0.7**
FNA				*i* Sg		**Sg**		**18 38 12.6**	**+0.9**
THE	**Thessaloniki**	**0.65**	**116**	P		**Pg**		**18 38 02.8**	**-0.8**
THE				S		**Sg**		**18 38 10.9**	**-1.0**
THE				AML		AML		18 38 13.7	
	comp=N,14193μm,0.6s								
THE				AML		AML		18 38 17.8	
	comp=E,12602μm,0.7s								
THE	**Thessaloniki**	**0.65**	**116**	P		**Pg**		**18 38 02.8**	**-0.8**
THE				S		**Sg**		**18 38 12.7**	**+0.8**
	comp=E,5μm,0.6s								
THE	**Thessaloniki**	**0.65**	**116**	P		**Pg**		**18 38 02.6**	**-0.9**
THE				S		**Sg**		**18 38 11.5**	**-0.4**
THE	**Thessaloniki**	**0.65**	**116**	*i* Pg		**Pg**		**18 38 02.3**	**-1.2**
THE				*i* Sg		**Sg**		**18 38 11.5**	**-0.4**
KZN	**Kozani**	**0.70**	**208**	P		**Pg**		**18 38 03.4**	**-1.1**
KZN				S		**Sg**		**18 38 14.0**	**+0.5**
KZN				AML		AML		18 38 20.3	
	comp=E,21906μm,0.6s								
KZN				AML		AML		18 38 21.0	
	comp=N,9088μm,0.4s								
KZN	**Kozani**	**0.70**	**208**	P		**Pg**		**18 38 03.9**	**-0.6**
KZN				S		**Sg**		**18 38 13.8**	**+0.3**
	comp=N,7μm,0.5s								
KZN	**Kozani**	**0.70**	**208**	P		**Pg**		**18 38 02.8**	**-1.7**
KZN				S		**Sg**		**18 38 13.5**	**0.0**
HORT	**Hortiatis**	**0.75**	**115**	P		**Pg**		**18 38 04.7**	**-0.8**
HORT				S		**Sg**		**18 38 15.0**	**-0.3**
HORT				AML		AML		18 38 21.7	
	comp=N,13227μm,0.5s								
HORT				AML		AML		18 38 23.5	
	comp=E,9499μm,0.4s								
HORT	**Hortiatis**	**0.75**	**115**	P		**Pg**		**18 38 04.8**	**-0.8**
HORT				S		**Sb**		**18 38 16.7**	**-1.2**
	comp=E,6μm,0.5s								
HORT	**Hortiatis**	**0.75**	**115**	PG		**Pg**		**18 38 05.3**	**-0.3**
HORT				SG		**Sb**		**18 38 17.7**	**-0.2**
STIP	**Stip**	**0.77**	**359**	⇑*i* Pg		**Pb**		**18 38 06.4**	**-0.9**
STIP				*i* Sg		**Sb**		**18 38 19.8**	**+0.5**
LIT	**Litokhoron**	**0.85**	**165**	P		**Pg**		**18 38 06.0**	**-1.4**
LIT				AML		AML		18 38 26.2	
	comp=E,6354μm,0.4s								
LIT				AML		AML		18 38 26.7	
	comp=N,5063μm,0.5s								
LIT	**Litokhoron**	**0.85**	**165**	P		**Pg**		**18 38 06.5**	**-0.9**
LIT				S		**Sg**		**18 38 18.7**	**+0.3**
	comp=N,3μm,0.4s								
LIT	**Litokhoron**	**0.85**	**165**	P		**Pg**		**18 38 05.8**	**-1.6**
LIT	**Litokhoron**	**0.85**	**165**			**Pg**		**18 38 05.8**	**-1.6**
NEST	**Nestorio**	**1.01**	**240**	P		**Pg**		**18 38 09.6**	**-0.9**
NEST				AML		AML		18 38 32.0	
	comp=N,10526μm,0.6s								
NEST				AML		AML		18 38 41.0	
	comp=E,6740μm,1.6s								
NEST	**Nestorio**	**1.01**	**240**	P		**Pg**		**18 38 09.8**	**-0.8**
NEST				S		**Sn**		**18 38 30.1**	**+2.6**
	comp=E,4μm,0.4s								
OHR	**Ohrid**	**1.08**	**281**	*eP*		**Pg**		**18 38 10.7**	**-1.1**
OHR				*eS*		**Sb**		**18 38 26.8**	**-0.4**
OHR	**Ohrid**	**1.08**	**281**	⇓*i* Pg		**Pg**		**18 38 10.7**	**-1.1**
OHR				*i* Sg		**Sb**		**18 38 26.7**	**-0.4**
OHR				*e*Lg		Lg		18 38 28.8	
	comp=E,4μm,0.8s								
OHR				*e*Lg		Lg		18 38 29.8	
	comp=N,8μm,0.9s								
PENT	**Pentalofos**	**1.09**	**229**	P		**Pg**		**18 38 11.1**	**-0.9**
PENT				AML		AML		18 38 35.8	
	comp=N,8628μm,0.7s								
PENT				AML		AML		18 38 36.3	
	comp=E,6257μm,0.8s								
PENT	**Pentalofos**	**1.09**	**229**	P		**Pg**		**18 38 11.4**	**-0.6**
PLG	**Polygyros**	**1.09**	**120**	P		**Pg**		**18 38 10.7**	**-1.4**
PLG				S		**Sg**		**18 38 25.8**	**-0.4**
PLG				AML		AML		18 38 29.3	
	comp=E,9979μm,0.8s								
PLG				AML		AML		18 38 30.2	
	comp=N,15471μm,0.5s								
PLG	**Polygyros**	**1.09**	**120**	P		**Pg**		**18 38 11.5**	**-0.6**
PLG				S		**Sb**		**18 38 27.0**	**-0.6**
	comp=N,6μm,0.6s								
PLG	**Polygyros**	**1.09**	**120**	P		**Pg**		**18 38 10.7**	**-1.4**
PLG				S		**Sb**		**18 38 27.0**	**-0.6**
KBN	**Korca**	**1.11**	**255**	P		**Pg**		**18 38 11.9**	**-0.6**
KBN	**Korca**	**1.11**	**255**	P		**Pg**		**18 38 11.5**	**-1.0**
KBN				S		**Sb**		**18 38 27.6**	**-0.6**
KBN	**Korca**	**1.11**	**255**	P		**Pg**		**18 38 11.6**	**-1.0**
	baz=259								
KBN				S		**Sb**		**18 38 27.7**	**-0.6**
	baz=259								
KBN				AMP					
	comp=N,14nm,1.3s,baz=259								
KKB	**Krupnik**	**1.15**	**35**	P		**Pg**		**18 38 11.4**	**-1.9**
KKB				S		**Sb**		**18 38 28.8**	**-0.5**
KKB	**Krupnik**	**1.15**	**35**	P		**Pg**		**18 38 12.0**	**-1.3**
KPRO	**Kipourio**	**1.16**	**214**	P		**Pg**		**18 38 12.8**	**-0.6**
KPRO				S		**Sb**		**18 38 28.8**	**-0.7**
KPRO				AML		AML		18 38 35.9	
	comp=N,11368μm,0.7s								
KPRO				AML		AML		18 38 39.0	
	comp=E,11619μm,0.5s								
KPRO	**Kipourio**	**1.16**	**214**	P		**Pg**		**18 38 12.9**	**-0.5**
SKO	**Skopje**	**1.20**	**332**	*eP*g		**Pg**		**18 38 12.8**	**-1.3**
SKO				*eS*g		**Sg**		**18 38 29.4**	**-0.2**
SKO	**Skopje**	**1.20**	**332**	*i* P		**Pg**		**18 38 12.8**	**-1.3**
SKO				*i* S		**Sg**		**18 38 29.6**	**+0.1**
SKO	**Skopje**	**1.20**	**332**	*i* Pg		**Pg**		**18 38 12.9**	**-1.3**
SKO				*i* Sg		**Sg**		**18 38 29.7**	**+0.1**
NVR	**Nevrokopi**	**1.32**	**71**	P		**Pn**		**18 38 15.3**	**-1.4**
NVR				S		**Sb**		**18 38 33.5**	**-0.8**
NVR				AML		AML		18 38 36.3	
	comp=N,9152μm,0.5s								
NVR				AML		AML		18 38 43.4	
	comp=E,5480μm,0.9s								
NVR	**Nevrokopi**	**1.32**	**71**	P		**Pn**		**18 38 15.4**	**-1.4**
NVR				S		**Sn**		**18 38 34.1**	**-1.0**
	comp=E,3μm,0.4s								
MMB	**Musomiste**	**1.33**	**59**	P		**Pn**		**18 38 14.8**	**-2.0**
MMB				S		**Sg**		**18 38 33.6**	**-0.3**
MMB	**Musomiste**	**1.33**	**59**	*i* P		**Pn**		**18 38 15.2**	**-1.6**
THL	**Klokotos Trika**	**1.36**	**186**	P		**Pn**		**18 38 15.9**	**-1.3**
THL				S		**Sg**		**18 38 34.6**	**-0.3**
THL				AML		AML		18 38 37.2	
	comp=E,9065μm,1.5s								
THL				AML		AML		18 38 46.2	
	comp=N,5961μm,0.9s								
THL	**Klokotos Trika**	**1.36**	**186**	P		**Pn**		**18 38 16.5**	**-0.7**
LSK	**Leskovik**	**1.44**	**238**	P		**Pn**		**18 38 17.5**	**-1.0**
LSK	**Leskovik**	**1.44**	**238**	P		**Pn**		**18 38 17.1**	**-1.4**
	baz=241								
LSK				S		**Sg**		**18 38 37.5**	**-0.1**
	baz=241								
OUR	**Ouranopolis**	**1.48**	**113**	P		**Pn**		**18 38 18.2**	**-0.5**
OUR				S		**Sg**		**18 38 38.2**	**-0.4**
OUR				AML		AML		18 38 42.7	
	comp=N,19722μm,0.8s								
OUR				AML		AML		18 38 44.8	
	comp=E,12842μm,0.7s								
OUR	**Ouranopolis**	**1.48**	**113**	P		**Pn**		**18 38 18.3**	**-0.5**
OUR				S		**Sg**		**18 38 39.4**	**+0.9**
OUR	**Ouranopolis**	**1.48**	**113**	P		**Pn**		**18 38 17.8**	**-1.0**
OUR	**Ouranopolis**	**1.48**	**113**	PN		**Pn**		**18 38 17.9**	**-0.9**
OUR				SN		**Sg**		**18 38 39.5**	**+0.9**
PAIG	**Paliouri**	**1.50**	**131**	P		**Pn**		**18 38 17.5**	**-1.7**
PAIG				S		**Sn**		**18 38 38.0**	**-1.4**
PAIG				AML		AML		18 38 43.5	
	comp=E,7880μm,1.0s								
PAIG				AML		AML		18 38 46.2	
	comp=N,9027μm,0.6s								
PAIG	**Paliouri**	**1.50**	**131**	P		**Pn**		**18 38 17.8**	**-1.4**
PAIG				S		**Sg**		**18 38 39.0**	**-0.4**
	comp=N,4μm,0.6s								
PAIG	**Paliouri**	**1.50**	**131**	P		**Pn**		**18 38 17.5**	**-1.7**
PHP	**Peshkopia**	**1.53**	**300**	P		**Pn**		**18 38 18.5**	**-1.1**
PHP	**Peshkopia**	**1.53**	**300**	P		**Pg**		**18 38 20.6**	**+0.2**
	baz=304								
PHP				S		**Sg**		**18 38 42.5**	**+2.2**
	baz=304								
PHP				AMP					
	comp=N,20nm,1.2s,baz=304								
BOSS	**Bosilegrad**	**1.59**	**7**	*e*Pg		**Pn**		**18 38 20.1**	**-0.3**
BOSS				*e*Sg		**Sn**		**18 38 40.1**	**-1.4**
JAN	**Janina**	**1.63**	**220**	P		**Pb**		**18 38 21.3**	**-0.7**
JAN	**Janina**	**1.63**	**220**	P		**Pn**		**18 38 20.9**	**-0.1**
GJIK	**Gjilan**	**1.64**	**340**	*i* Pn		**Pb**		**18 38 21.3**	**-0.9**
PRZK	**Prizren**	**1.68**	**320**	⇓*i* Pn		**Pb**		**18 38 22.1**	**-0.8**
KAVA	**Kavala**	**1.75**	**87**	P		**Pn**		**18 38 21.6**	**-1.0**
KAVA				AML		AML		18 38 52.6	
	comp=E,8916μm,0.7s								
KAVA				AML		AML		18 38 52.7	
	comp=N,7112μm,0.8s								
KAVA	**Kavala**	**1.75**	**87**	P		**Pn**		**18 38 21.8**	**-0.8**
TIR	**Tirane**	**1.82**	**284**	*e*Pn		**Pb**		**18 38 24.9**	**-0.2**
TIR				*e*Sn		**Sb**		**18 38 47.5**	**-0.9**
TIR	**Tirane**	**1.82**	**284**	P		**Pn**		**18 38 22.4**	**-1.1**
TIR	**Tirane**	**1.82**	**284**			**Pn**		**18 38 22.4**	**-1.1**
TIR	**Tirane**	**1.82**	**284**	P		**Pb**		**18 38 25.2**	**+0.1**
	baz=288								
TIR				S		**Sg**		**18 38 50.7**	**+1.2**
	baz=288								
VTS	**Vitosha**	**1.86**	**24**	*e*Pn		**Pn**		**18 38 24.0**	**-0.3**
VTS				*e*Sn		**Sn**		**18 38 44.8**	**-3.7**
VTS	**Vitosha**	**1.86**	**24**	⇑P		**Pn**		**18 38 23.9**	**-0.3**
VTS				⇓S		**Sb**		**18 38 48.8**	**-1.1**
VTS	**Vitosha**	**1.86**	**24**	P		**Pn**		**18 38 23.6**	**-0.7**
VTS	**Vitosha**	**1.86**	**24**			**Pn**		**18 38 23.6**	**-0.7**
VTS	**Vitosha**	**1.86**	**24**	*i* P		**Pn**		**18 38 23.7**	**-0.6**
VTS	**Vitosha**	**1.86**	**24**	*i* Pn		**Pn**		**18 38 23.9**	**-0.3**
AGG	**Agios Georgios**	**1.90**	**177**	P		**Pn**		**18 38 23.7**	**-1.0**
AGG				AML		AML		18 39 02.4	
	comp=N,2413μm,0.8s								
AGG				AML		AML		18 39 02.8	
	comp=E,4539μm,0.8s								
AGG	**Agios Georgios**	**1.90**	**177**	P		**Pn**		**18 38 24.1**	**-0.6**
AGG	**Agios Georgios**	**1.90**	**177**	P		**Pn**		**18 38 23.2**	**-1.5**
AGG	**Agios Georgios**	**1.90**	**177**	PN		**Pn**		**18 38 23.8**	**-0.9**
AGG	**Agios Georgios**	**1.90**	**177**	Pn		**Pn**		**18 38 23.2**	**-1.5**
MAKR	**Makrakomi, Fth**	**1.91**	**182**	P		**Pn**		**18 38 24.0**	**-0.8**
MAKR				AML		AML		18 39 03.9	
	comp=E,7872μm,1.6s								
MAKR				AML		AML		18 39 05.9	
	comp=N,9174μm,1.5s								
MAKR	**Makrakomi, Fth**	**1.91**	**182**	P		**Pn**		**18 38 24.2**	**-0.6**
BARS	**Barje**	**1.92**	**351**	*e*Pn		**Pn**		**18 38 23.5**	**-1.4**
BARS	**Barje**	**1.92**	**351**	*e*Pn		Pg		18 38 40.3	+12
BARS				*e*Sn		**Sn**		**18 38 48.8**	**-2.8**
BARS				*e*Sn		Sg		18 39 18.5	+26
BARS	**Barje**	**1.92**	**351**	*i* Pn		**Pn**		**18 38 23.4**	**-1.4**
ZATK	**Zatriq**	**1.93**	**323**	*i* Pn		**Pn**		**18 38 25.2**	**+0.1**
THAS	**Thassos island**	**1.94**	**99**	P		**Pn**		**18 38 24.2**	**-0.9**
SRN	**Sarande**	**1.98**	**239**	P		**Pb**		**18 38 26.7**	**-1.2**
	baz=241								
SRN				S		**Sg**		**18 38 54.2**	**-0.5**
	baz=241								
EVR	**Evrytania**	**2.03**	**189**	P		**Pn**		**18 38 26.3**	**-0.2**
EVR				AML		AML		18 39 07.0	
	comp=N,3959μm,1.4s								
EVR				AML		AML		18 39 11.8	
	comp=E,2327μm,0.9s								
EVR	**Evrytania**	**2.03**	**189**	P		**Pn**		**18 38 26.1**	**-0.4**
RZN	**Rozhen**	**2.04**	**67**	P		**Pn**		**18 38 26.6**	**-0.2**
RZN				S		**Sg**		**18 38 56.5**	**-0.3**
RZN	**Rozhen**	**2.04**	**67**	P		**Pn**		**18 38 26.4**	**-0.4**
PUK	**Puka**	**2.06**	**304**	P		**Pg**		**18 38 29.9**	**-0.9**
	baz=306								
PUK				S		**Sg**		**18 38 58.6**	**+1.1**
	baz=306								
BCI	**Bajram Curri**	**2.15**	**313**	P		**Pb**		**18 38 31.2**	**+0.2**
	baz=315								
BCI				S		**Sg**		**18 39 01.5**	**+1.1**
	baz=315

ALN Alexandroupoli 2.91 89 P Pn 18 38 37.5 -1.1
ALN Alexandroupoli 2.91 89 PN Pn 18 38 38.9 +0.3
ALN Alexandroupoli 2.91 89 Pn Pn 18 38 37.5 -1.1
CEME Cevo 2.95 305⇑ *i*Pn Pn 18 38 39.2 +0.1
CEME *i* Sn Sn 18 39 15.1 0.0
SCTE Santa Cesarea 2.97 255 Pn 18 38 38.9 -0.5
ENEZ Enez 3.00 92 PN Pn 18 38 40.0 +0.2
NKME Niksic 3.05 308⇑ *i*Pn Pn 18 38 40.6 +0.1
NKME *i* Sn Sn 18 39 17.7 +0.1
PLVB Pleven 3.05 35 ⇓P Pn 18 38 41.2 +0.8
PLVB Pleven 3.05 35 Pn 18 38 41.2 +0.8
NKY Niksic 3.05 309 P Pn 18 38 42.4 +1.8
NKY S Sb 18 39 21.0 -3.1
NKY Niksic 3.05 309⇓ *i*Pn Pn 18 38 40.7 +0.1
NKY *i* Sn Sn 18 39 17.8 0.0
IVAS Ivanjica 3.06 331 *e*Pn Pn 18 38 40.2 -0.4
BOZC Bozcaada 3.13 109 PN Pn 18 38 41.9 +0.3
GRUS Gruza 3.16 340 *e*Pn Pn 18 38 41.5 -0.5
HCY Herceg Novi 3.17 300 P Pn 18 38 43.5 +1.4
HCY S Sb 18 39 24.0 -3.3
HCY Herceg Novi 3.17 300 *e*Pn Pn 18 38 42.8 +0.7
HCY Herceg Novi 3.17 300⇓ *i*Pn Pn 18 38 42.2 +0.1
HCY *i* Sn Sn 18 39 20.4 -0.1
PLE Pljevlja 3.19 320 P Pn 18 38 43.5 +1.0
PLE S Sb 18 39 24.0 -4.0
PLE Pljevlja 3.19 320⇓ *i*Pn Pn 18 38 42.6 +0.1
PLE *i* Sn Sn 18 39 21.0 -0.2
PVL Pavlikeni 3.27 44 *i* P Pn 18 38 41.5 -2.0
ERIK Erikli-Kesan 3.28 93 PN Pn 18 38 43.8 +0.2
SIGR SIGRI 3.28 120 PN Pn 18 38 43.9 +0.3
GELI Tayfur-Gelibol 3.29 98 PN Pn 18 38 44.6 +0.8
EZN Ezine 3.33 108 P Pn 18 38 43.6 -0.7
EZN Ezine 3.33 108 PN Pn 18 38 44.9 +0.6
UPM Unac-Piva 3.35 314 *e*Pn Pn 18 38 47.1 +2.3
UPM Unac-Piva 3.35 314⇑ *i*Pn Pn 18 38 44.8 0.0
UPM *i* Sn Sn 18 39 24.8 -0.5
BRY Bratogost 3.38 307 P Pn 18 38 46.3 +1.2
BRY S Sb 18 39 29.0 -4.4
BRY Bratogost 3.38 307 *e*Pn Pn 18 38 46.0 +0.9
BRY Bratogost 3.38 307⇑ *i*Pn Pn 18 38 45.1 0.0
BRY *i* Sn Sn 18 39 25.4 -0.4
TREB Trebinje 3.39 303 *e*Pn Pn 18 38 46.4 +1.2
TREB Trebinje 3.39 303 *e*Pn Pn 18 38 47.0 +1.8
PUNG Punghina 3.40 9 ⇑P Pn 18 38 44.2 -1.1
PUNG Punghina 3.40 9 Pn 18 38 44.1 -1.1
RUDO Rudo 3.42 323 *e*Pn Pn 18 38 44.9 -0.6
SVIS Svilajnac 3.42 348 *e*Pn Pn 18 38 44.7 -0.8
VLAD Vladila 3.48 27 ⇑P Pn 18 38 46.6 +0.3
VLAD Vladila 3.48 27 Pn 18 38 46.6 +0.3
KUBS Kucevo 3.51 354 *e*Pn Pn 18 38 44.9 -1.9
EDRB Edirne 3.54 73 P Pn 18 38 46.6 -0.6
EDRB Edirne 3.54 73 PN Pn 18 38 47.9 +0.7
TRUS Trudelj 3.56 339 *e*Pn Pn 18 38 46.7 -0.7
DIVS Divibare 3.57 333 *e*Pn Pn 18 38 47.5 -0.2
DIVS Divibare 3.57 333 *e*Pn Pn 18 38 47.1 -0.6
DIVS Divibare 3.57 333 Pn Pn 18 38 46.9 -0.8
BBLS Lazići 3.60 326 *e*Pn Pn 18 38 48.0 -0.1
BBLS Lazići 3.60 326 *e*Pn Pn 18 38 48.8 +0.7
JMB Yambol 3.62 63 P Pn 18 38 47.5 -0.9
JMB Yambol 3.62 63 P Pn 18 38 47.7 -0.7
SZH Strazhica 3.63 49 P Pn 18 38 48.6 +0.1
ITM Ithomi 3.74 183 PN Pn 18 38 51.5 +1.5
ITM Ithomi 3.74 183 Pn Pn 18 38 50.4 +0.4
DJES Djerdap 3.75 3 ⇓P Pn 18 38 49.6 -0.4
DJES ⇓S Sn 18 39 33.2 -1.7
DJES Djerdap 3.75 3 Pn 18 38 49.6 -0.4
DJES Sn 18 39 33.2 -1.7
SRE Strehaia 3.81 11 ⇑P Pn 18 38 51.3 +0.4
SRE Strehaia 3.81 11 P Pn 18 38 51.3 +0.4
SRE Strehaia 3.81 11 Pn 18 38 51.3 +0.4
MAR6 Marsite Statio 3.85 92 PN Pn 18 38 52.2 +0.8
MAR3 Marsite Statio 3.87 91 PN Pn 18 38 52.8 +1.1
MAR4 Marsite Statio 3.87 90 PN Pn 18 38 52.8 +1.0
MDVR Moldovita 3.87 355 ⇑P Pn 18 38 50.7 -1.2
MDVR ⇓S Sn 18 39 36.2 -1.7
MDVR Moldovita 3.87 355 Pn 18 38 50.7 -1.2
MDVR Sn 18 39 36.2 -1.7
MAR2 Marsite Statio 3.88 91 PN Pn 18 38 52.8 +0.9
GZKV Gazikoy-Tekird 3.89 91 PN Pn 18 38 53.2 +1.2
COPA Copaceanca 3.91 34 ⇑P Pn 18 38 52.5 +0.3
COPA Copaceanca 3.91 34 Pn 18 38 52.5 +0.3
KRBG Karabiga-Canak 3.91 96 PN Pn 18 38 53.2 +0.9
HERR Herculane 3.96 2 ⇑P Pn 18 38 52.4 -0.6
HERR ⇓S Sn 18 39 38.7 -1.3
HER Herculane 3.96 2 Pn 18 38 52.4 -0.6
HERR Sn 18 39 38.7 -1.3
HAPS Han Pijesak,Bl 3.97 324 *e*Pn Pn 18 38 52.7 -0.5
HAPS Han Pijesak,Bl 3.97 324 *e*Pn Pn 18 38 53.0 -0.2
DKL Dikili 4.06 116 PN Pn 18 38 55.2 +0.9
TEKS Tekeris 4.12 332 *e*Pn Pn 18 38 55.2 -0.1
TEKS Tekeris 4.12 332 *e*Pn Pn 18 38 55.1 -0.2
RAZG Razgrad 4.15 49 ⇓P Pn 18 38 56.2 +0.7
RAZG Razgrad 4.15 49 Pn 18 38 56.2 +0.7
MATE Matera 4.18 268 ⇓P Pn 18 38 54.0 -2.0
MATE ⇑S Sn 18 39 42.5 -3.0
MATE Matera 4.18 268 Pn 18 38 54.0 -2.0
MATE Sn 18 39 42.5 -3.0
MAR9 Marsite Statio 4.19 92 PN Pn 18 38 57.1 +1.0
EDC Edincik 4.34 96 PN Pn 18 38 59.8 +1.5
GZR Gura Zlata 4.49 5 ⇑P Pn 18 38 59.8 -0.5
GZR Gura Zlata 4.49 5 P Pn 18 38 59.8 -0.5
GZR Gura Zlata 4.49 5 Pn 18 38 59.8 -0.5
PRD Provadia 4.49 58 P Pn 18 39 00.2 +0.0
BANR Banloc 4.53 350 ⇑P Pn 18 39 00.5 -0.2
BANR Banloc 4.53 350 Pn 18 39 00.5 -0.2
TIP Timpagrande 4.53 249 Pn Pn 18 39 00.8 -0.1
BALB Balikesir 4.53 105 PN Pn 18 39 01.4 +0.7
FRGS Fruska Gora 4.58 338 *e*Pn Pn 18 39 01.3 -0.2
FRGS Fruska Gora 4.58 338 ⇓P Pn 18 39 01.4 -0.1
FRGS Fruska Gora 4.58 338 *e*Pn Pn 18 39 00.6 -0.9
FRGS Fruska Gora 4.58 338 Pn 18 39 01.4 -0.1
CTYL Yalikoy Yolu 4.62 81 PN Pn 18 39 03.7 +1.6
AVR AVREN 4.63 60 P Pn 18 39 01.6 -0.5
APE Apeiranthos 4.64 145⇑ *e*P Pn 18 39 02.0 -0.4
APE Apeiranthos 4.64 145 PN Pn 18 39 04.0 +1.6
LOT Lotru 4.67 14 ⇓P Pn 18 39 03.2 +0.4
LOT ⇑S Sn 18 39 57.0 -0.6
LOT Lotru 4.67 14 Pn 18 39 03.2 +0.4
LOT Sn 18 39 57.0 -0.6
KTHA Kythira Island 4.71 172 PN Pn 18 39 06.0 +2.7
BZS Buzias 4.71 355 ⇑P Pn 18 39 01.8 -1.5
BZS Buzias 4.71 355 P Pn 18 39 01.8 -1.5
BZS Buzias 4.71 355 Pn 18 39 01.8 -1.5
KCTX Karacabey (Bur 4.73 96 PN Pn 18 39 04.4 +0.8
CTKS Kestanelik-??a 4.78 84 PN Pn 18 39 05.7 +1.6
ARR Arges 4.79 21 ⇑P Pn 18 39 04.6 +0.2
ARR Arges 4.79 21 Pn 18 39 04.6 +0.2
SGRT San Giovanni R 4.93 282 Pn Pn 18 39 05.7 -0.7
VOIR 4.97 24 ⇓P Pn 18 39 07.4 +0.5
VOIR 4.97 24 P Pn 18 39 07.4 +0.5
VOIR 4.97 24 Pn 18 39 07.4 +0.5
BGKT Bogazkoy 4.97 85 PN Pn 18 39 08.7 +1.8
DEV Deva 4.99 6 ⇑P Pn 18 39 07.0 0.0
DEV ⇑S Sn 18 40 05.7 +0.4
DEV Deva 4.99 6 P Pn 18 39 08.6 +1.6
DEV S Sn 18 40 05.7 +0.4
DEV Deva 4.99 6 Pn 18 39 07.0 0.0
DEV Sn 18 40 05.7 +0.4
MGRS Mrkonjic Grad 5.14 314 *e*Pn Pn 18 39 10.9 +1.7
KLYT Kilyos 5.18 84 PN Pn 18 39 11.6 +1.9
ISK Istanbul-Kandi 5.19 86 PN Pn 18 39 11.9 +2.0
KAVV Kandilli-Istan 5.19 86 PN Pn 18 39 11.3 +1.4
PSN Preselentsi 5.22 56 P Pn 18 39 09.4 -0.8
PSN Preselentsi 5.22 56 P Pn 18 39 09.5 -0.8
ISR Istrita 5.26 36 ⇓P Pn 18 39 12.6 +1.7
ISR Istrita 5.26 36 P Pn 18 39 12.6 +1.7
ISR Istrita 5.26 36 Pn 18 39 12.6 +1.7
AYDB Zeytinkoy-Aydi 5.31 122 PN Pn 18 39 13.6 +1.9
BLY Banja Luka 5.31 318 *e*Pn Pn 18 39 13.2 +1.6
MLR Muntele Rosu 5.32 30 Pn Pn 18 39 13.1 +1.3
comp=N,3.6nm,0.3s,baz=261,slow=3.5,SNR=37
MLR Sn Sn 18 40 17.5 +3.7
comp=N,3.7nm,0.3s,baz=348,slow=13,SNR=4.2
MLR Lg Lg 18 40 48.9
comp=N,2.1nm,0.3s,baz=282,slow=23,SNR=3.8
MLR Muntele Rosu 5.32 30 ⇓P Pn 18 39 12.5 +0.7
MLR Muntele Rosu 5.32 30 P Pn 18 39 13.1 +1.3
MLR 18 40 17.5
MLR Muntele Rosu 5.32 30 Pn 18 39 12.0 +0.2

NEHR Nehoiu 5.41 32 ⇓P Pn 18 39 14.3 +1.4
NEHR Nehoiu 5.41 32 Pn 18 39 14.3 +1.4
MANT Manisa 5.47 114 Pn Pn 18 39 15.0 +1.0
KULA Kula-Manisa 5.53 114 PN Pn 18 39 16.2 +1.6
DOPR Dopca 5.55 24 ⇑P Pn 18 39 16.2 +1.3
DOPR Dopca 5.55 24 Pn 18 39 16.2 +1.3
TLBR Topalu 5.62 48 ⇑P Pn 18 39 16.2 +0.4
TLBR Topalu 5.62 48 Pn 18 39 16.2 +0.4
HRT Hereke 5.66 89 PN Pn 18 39 18.5 +2.1
PAOL Paolisi 5.78 274 Pn Pn 18 39 17.6 -0.4
TIRR Tirgusor 5.78 50 P Pn 18 39 17.9 -0.1
TIRR Tirgusor 5.78 50 Pn Pn 18 39 17.9 -0.1
DRGR 5.88 3 ⇑P Pn 18 39 19.6 +0.2
DRGR 5.88 3 P Pn 18 39 19.6 +0.2
DRGR 5.88 3 Pn 18 39 19.6 +0.2
MORH Mrgy. Hungar 5.89 335 *e*Pn Pn 18 39 19.3 -0.1
PLOR Plostina 5.90 32 ⇑P Pn 18 39 21.2 +1.6
PLOR Plostina 5.90 32 P Pn 18 39 21.2 +1.6
PLOR Plostina 5.90 32 Pn 18 39 21.2 +1.6
VRI Vrincioaia 5.94 32 ⇑P Pn 18 39 21.8 +1.6
VRI Vrincioaia 5.94 32 P Pn 18 39 21.8 +1.6
VRI Vrincioaia 5.94 32 Pn 18 39 21.8 +1.6
IDI Anoyia 6.01 159 Pn Pn 18 39 22.6 +1.4
comp=N,1.1nm,0.3s,baz=347,slow=11,SNR=7.0
IDI Sn Sn 18 40 32.7 +2.0
baz=28,slow=20,SNR=2.4
IDI LR LR 18 42 06.6
comp=N,433nm,18.8s,baz=330,slow=42
IDI Anoyia 6.01 159 ⇑P Pn 18 39 21.8 +0.6
IDI Anoyia 6.01 159 PN Pn 18 39 23.5 +2.3
IDI Anoyia 6.01 159 Pn 18 39 21.4 +0.2
TPGR Topolog 6.03 47 ⇑P Pn 18 39 21.6 +0.3
TPGR Topolog 6.03 47 Pn 18 39 21.6 +0.3
PETR Petresti 6.04 36 ⇑P Pn 18 39 22.7 +1.2
PETR Petresti 6.04 36 Pn 18 39 22.7 +1.2
CFR Carcaliu 6.08 44 ⇑P Pn 18 39 22.0 -0.1
CFR Carcaliu 6.08 44 P Pn 18 39 22.0 -0.1
CFR Carcaliu 6.08 44 Pn 18 39 22.0 -0.1
GVD Gavdhos 6.25 166 PN Pn 18 39 27.4 +2.9
INTR Introdacqua 6.33 283 Pn 18 39 23.3 -2.3
GULT Gulveren 6.34 92 PN Pn 18 39 28.1 +2.4
BORA Eskisehir 6.38 97 PN Pn 18 39 28.1 +1.7
TLCR 6.45 46 ⇑P Pn 18 39 29.0 +1.9
TLCR 6.45 46 P Pn 18 39 29.0 +1.9
TLCR 6.45 46 Pn 18 39 29.0 +1.9
VARL Varlezi 6.45 38 ⇑P Pn 18 39 28.0 +0.8
VARL Varlezi 6.45 38 Pn 18 39 28.0 +0.8
KARP Karpathos 6.63 142 Pn Pn 18 39 30.0 +0.3
AQU L'Aquila 6.75 285 P Pn 18 39 32.2 +0.9
AQU L'Aquila 6.75 285 Pn Pn 18 39 32.2 +0.9
BASM Basmaki-Afyon 6.77 114 PN Pn 18 39 33.4 +1.7
MDUB Mudurnu 6.85 91 Pn Pn 18 39 31.8 -1.0
CRES Cresnjev 6.94 317 *e*Pn Pn 18 39 35.0 +1.1
CRES Cresnjev 6.94 317 *e*Pn Pn 18 39 33.8 -0.1
BUD Budapest 6.95 342 P Pn 18 39 35.1 +1.2
BUD pmax pmax
comp=Z,45nm,0.7s
VAE Valguarnera 6.96 243 Pn Pn 18 39 34.2 0.0
comp=Z,1.0nm,0.3s,baz=343,slow=6.3,SNR=1.7
VAE Sn Sn 18 40 55.9 +1.9
comp=Z,1.0nm,0.3s,baz=16,slow=4.1,SNR=2.2
VAE Valguarnera 6.96 243 Pn 18 39 34.2 0.0
BURAR Bucovina Array 7.03 17 ⇑P Pn 18 39 36.3 +1.0
BURAR Bucovina Array 7.03 17 P Pn 18 39 36.2 +1.0
BURAR Bucovina Array 7.03 17 Pn 18 39 36.3 +1.0
NRCA Norcia 7.05 289 Pn 18 39 33.2 -2.3
BUR08 Bucovina Ar. S 7.06 17 Pn Pn 18 39 35.5 -0.1
RAFF Raffo Rosso 7.13 241 Pn Pn 18 39 33.8 -2.7
AUMIH MIHALICIK 7.16 95 PN Pn 18 39 38.9 +1.8
PSZ Piszkesteto 7.19 347 ⇑P Pn 18 39 36.1 -1.3
PSZ Piszkesteto 7.19 347 P Pn 18 39 36.1 -1.3
PSZ Piszkesteto 7.19 347 Pn Pn 18 39 35.1 -2.3
PSZ Piszkesteto 7.19 347 Pn 18 39 36.0 -1.3
YUVA Yuva-Kibriscik 7.23 91 PN Pn 18 39 39.6 +1.6
PDKS Podkum 7.33 317 *e*Pn Pn 18 39 40.1 +0.7
SRO2 Moca 7.36 340 *e*SN Sn 18 41 05.0 +1.2
SRO Srobarova 7.43 339 *e*P Pn 18 39 42.7 +2.1
SRO Srobarova 7.43 339 *e*PN Pn 18 39 42.7 +2.1
CEY Cerknica 7.43 313 *e*Pn Pn 18 39 39.8 -0.9
KORT Korkueli 7.46 119 PN Pn 18 39 43.6 +2.5
MURB Monte Urbino 7.57 291 Pn 18 39 42.7 +0.1
KECS Kecovo 7.66 351 *e*P Pn 18 39 44.4 +0.7
KECS Kecovo 7.66 351 *e*PN Pn 18 39 44.4 +0.7
SOKA Soboth 7.74 320 *i* Pn Pn 18 39 46.1 +1.1
comp=Z,4.6nm,0.5s,SNR=10
OBKA Obir 7.87 318 *i* Pn Pn 18 39 50.0 +3.3
comp=Z,3.3nm,0.3s
VYHS Vyhne 7.94 344 *e*P Pn 18 39 48.5 +0.9
VYHS *e* 18 41 16.0
VYHS Vyhne 7.94 344 *e*PN Pn 18 39 48.5 +0.9
VYHS *e*SN Sn 18 41 16.0 -2.1
ARSA Arzberg 7.94 325 *i* Pn Pn 18 39 47.7 0.0
comp=Z,6.6nm,0.5s,SNR=10.0
ARSA *e*Sn Sn 18 41 14.2 -3.9
comp=Z,4.1nm,0.5s
CRVS Cervenica-Dubn 8.00 356 *e*P Pn 18 39 48.9 +0.5
CRVS Cervenica-Dubn 8.00 356 *e*PN Pn 18 39 48.9 +0.5
KOLS Kolonicke sedl 8.01 0 *e*P Pn 18 39 49.1 +0.5
KOLS *e* 18 41 15.8
KOLS Kolonicke sedl 8.01 0 *e*PN Pn 18 39 49.1 +0.5
KOLS *e*SN Sn 18 41 15.8 -4.0
MODS Modra-Piesok 8.23 336 *e*P Pn 18 39 53.0 +1.3
MODS *e* 18 41 20.1
MODS Modra-Piesok 8.23 336 *e*PN Pn 18 39 53.0 +1.3
MODS *e*SN Sn 18 41 20.1 -5.2
CONA Conrad Observa 8.34 329 *i* Pn Pn 18 39 54.4 +1.2
comp=Z,3.2nm,0.5s
MYKA Terra Mystica 8.42 316 *i* Pn Pn 18 39 57.4 +3.1
comp=Z,0.9nm,0.3s
LANS Liptovska Anna 8.45 348 *e*P Pn 18 39 56.6 +1.9
LANS Liptovska Anna 8.45 348 *e*PN Pn 18 39 56.5 +1.9
ZOU Zoufplan 8.73 313 Pn Pn 18 39 59.2 +0.5
BRTR Keskin Array B 8.82 94 Pn Pn 18 40 02.4 +2.6
comp=Z,0.3nm,0.3s,baz=274,slow=14,SNR=3.7
BRTR Keskin Array B 8.82 94 P Pn 18 40 02.4 +2.6
BRTR Keskin Array B 8.82 94 Pn 18 40 02.4 +2.6
KBA Koelnbreinsper 8.86 317 *i* Pn Pn 18 40 02.3 +1.8
comp=Z,6.1nm,0.8s,SNR=5.2
KBA Koelnbreinsper 8.86 317 P Pn 18 40 02.2 +1.8
KBA pmax pmax
comp=Z,14nm,1.0s
TEOL Teolo 8.88 303 Pn Pn 18 40 00.2 -0.3
MOA Molln 8.95 323 *i* Pn Pn 18 40 02.1 +0.5
comp=Z,1.2nm,0.3s
MOA *e*Sn Sn 18 41 44.4 +1.5
comp=Z,2.6nm,0.4s
ABTA Abfaltersbach 9.10 313 *i* Pn Pn 18 40 05.1 +1.4
comp=Z,7.8nm,0.6s,SNR=7.5
ABTA *e*Sn Sn 18 41 51.1 +4.3
comp=Z,6.9nm,0.7s
KRUC Moravsky 9.12 335 P Pn 18 40 07.1 +3.4
KRUC pmax pmax
comp=Z,6.0nm,0.9s
CTI Castel Tesino 9.22 307 P Pn 18 40 05.6 +0.3
CTI Castel Tesino 9.22 307 Pn Pn 18 40 05.6 +0.3
VRAC Vranov 9.27 337 Pn Pn 18 40 04.8 -1.1
baz=160,slow=12,SNR=1.5
VRAC LR LR 18 44 13.8
comp=Z,149nm,20.7s,baz=162,slow=42
VRAC Vranov 9.27 337 P Pn 18 40 04.8 -1.1
VRAC Vranov 9.27 337 Pn 18 40 04.8 -1.1
OJC Ojcow 9.45 351 P Pn 18 40 08.3 0.0
OJC Ojcow 9.45 351 Pn Pn 18 40 08.3 0.0
WTTA Wattenberg 9.89 313 *i* Pn Pn 18 40 17.4 +2.8
comp=Z,3.6nm,0.3s
WTTA *e*Sn Sn 18 42 08.9 +2.6
comp=Z,12nm,0.8s
WTTA Wattenberg 9.89 313 P Pn 18 40 19.6 +5.1
WTTA pmax pmax
comp=Z,17nm,1.1s
GERES GERESS Array B 9.95 326 Pn Pn 18 40 15.9 +0.6
comp=Z,0.2nm,0.3s,baz=170,slow=17,SNR=6.6
GERES LR LR 18 44 36.7
comp=Z,325nm,21.6s,baz=110,slow=41
GERES GERESS Array B 9.95 326 P Pn 18 40 15.9 +0.6
GERES GERESS Array B 9.95 326 Pn 18 40 15.9 +0.6
WATA Walderalm 9.97 314 *e*Pn Pn 18 40 18.5 +3.0
comp=Z,9.3nm,0.6s
SQTA Sankt Quirin 10.11 312 *i* Pn Pn 18 40 20.1 +2.7
comp=Z,3.4nm,0.5s
KHC Kasperske Hory 10.22 326⇑ *e*P Pn 18 40 19.5 +0.6
KHC pmax pmax
comp=Z,17nm,3.2s
KHC Kasperske Hory 10.22 326 *e*PN Pn 18 40 23.0 +4.1
KHC Kasperske Hory 10.22 326 Pn Pn 18 40 15.2 -3.7
MOTA Moosalm 10.23 313 *i* Pn Pn 18 40 21.2 +2.0
comp=Z,5.6nm,0.5s,SNR=6.8
DPC Dobruska-Polom 10.28 338 *e*P Pn 18 40 27.9 +8.1
DPC Dobruska-Polom 10.28 338 *e*PN Pn 18 40 27.9 +8.1
DAVOX Davos/Dischmat 10.65 307 Pn Pn 18 40 24.9 0.0
comp=Z,0.5nm,0.3s,baz=352,slow=21,SNR=3.2
DAVOX LR LR 18 45 24.1
comp=Z,190nm,21.6s,baz=259,slow=43
DAVOX Davos/Dischmat 10.65 307 P Pn 18 40 24.9 0.0
DAVOX Davos/Dischmat 10.65 307 Pn 18 40 24.9 0.0
DAVA Damuels 10.90 310 *i* Pn Pn 18 40 34.5 +6.2
comp=Z,1.3nm,0.3s
AKASG Malin Array Be 10.93 24 Pn Pn 18 40 29.0 +0.4
comp=Z,0.7nm,0.3s,baz=212,slow=12,SNR=4.2
AKASG Malin Array Be 10.93 24 P Pn 18 40 29.0 +0.4
AKASG Malin Array Be 10.93 24 Pn 18 40 29.0 +0.4
KEST Kesra 11.35 247 LR LR 18 44 32.1
comp=Z,90nm,21.0s,baz=358,slow=36
CLL Collm 12.18 332 *e*(P) Pn 18 40 44.0 -1.6
MMAI Mount Meron Ar 13.17 123 Pn Pn 18 40 59.5 +0.2
comp=Z,0.3nm,0.3s,baz=323,slow=14,SNR=5.1
MMAI Mount Meron Ar 13.17 123 Pn 18 40 59.5 +0.2
MNK Minsk 14.11 14 *i* P Pn 18 41 13.5 +1.6
comp=E,2.0nm,0.8s
MNK *i* P Pn 18 41 13.5 +1.6
comp=N,14nm,0.9s
MNK *i* P Pn 18 41 13.5 +1.6
comp=Z,10.0nm,1.2s
MNK *i* PP PnPn 18 41 21.4 +1.6
MNK *i* PPP PPP 18 41 29.1
MNK *i* S Sn 18 43 52.3 +3.3
MNK *i* SS S 18 44 06.0 -4.5
MNK *i* SSS SSS 18 44 18.6
MNK *i* LQ LQ 18 45 23.8
MNK *i* LR LR 18 45 53.5
MNK *i* LRM MLR 18 47 05.5
comp=Z,137nm,16.3s
MNK *i* LRM MLR 18 47 35.3
comp=N,200nm,19.0s
MNK *i* LRM MLR 18 47 36.7
comp=E,8.0nm,12.9s
EIL Elat 15.29 133 Pn P 18 41 31.1 -2.1
comp=E,0.2nm,0.3s,baz=351,slow=10.0,SNR=4.1
EIL Elat 15.29 133 P P 18 41 31.1 -2.1
KIV Kislovodsk 15.42 72 *e*P Pn 18 41 30.0 +0.2
KIV pmax pmax
comp=Z,11nm,0.9s
KBZ Khabaz 15.56 73 LR LR 18 50 23.3
comp=Z,77nm,18.0s,baz=331,slow=48
KBZ Khabaz 15.56 73⇓ *e*P P 18 41 34.9 -1.1
KBZ pmax pmax
comp=Z,7.0nm,1.0s
VSR Storozhevoye 15.60 43 *e*P Pn 18 41 30.7 -1.3
VSR pmax pmax
comp=Z,10.0nm,1.2s
GOF Gofitskoye 15.79 68⇑ *e*P P 18 41 40.4 +1.8
GOF pmax pmax
comp=Z,30nm,1.0s
OBN Obninsk 17.09 29 *e*P P 18 41 51.8 -1.1
OBN pmax pmax
comp=Z,5.0nm,0.3s
OBN MLR MLR
comp=Z,149nm,15.0s
HFS Hagfors 19.95 347 Pn P 18 42 23.9 -0.4
comp=Z,0.2nm,0.3s,baz=159,slow=12,SNR=1.4
HFS Hagfors 19.95 347 P P 18 42 23.9 -0.4
ESDC Sonseca Array 19.98 275 P P 18 42 23.8 -1.1
comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=5.0
ESDC Sonseca Array 19.98 275 P P 18 42 23.8 -1.1
FINES FINESS Array B 20.69 5 P Pn 18 42 33.0 -1.6
comp=Z,1.2nm,0.6s,baz=168,slow=10,SNR=7.0
FINES LR LR 18 50 42.0
comp=Z,139nm,20.6s,baz=190,slow=37
FINES FINESS Array B 20.69 5 *i* P Pn 18 42 34.7 +0.2
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 20.69 5 P Pn 18 42 33.0 -1.6
BELG Belogornoye 20.76 48 P P 18 42 33.6 +0.4
comp=Z,14nm,1.0s,baz=359,slow=0.7,SNR=6.5
BELG Belogornoye 20.76 48 P P 18 42 33.6 +0.4
NC602 NORSAR Array S 20.90 345 P P 18 42 33.3 -1.3
NC602 IAmb IAmb 18 42 45.0
comp=Z,25nm,1.1s
NAO01 NORSAR Array S 21.13 345 P P 18 42 34.9 -2.1
NAO01 IAmb IAmb 18 42 49.9
comp=Z,58nm,1.4s
NB201 NORSAR Array S 21.23 345 P P 18 42 37.1 -1.2
NOA NORSAR Array B 21.24 345 P P 18 42 37.8 -0.5
comp=Z,1.0nm,0.6s,baz=151,slow=11,SNR=10
NOA LR LR 18 51 23.4
comp=Z,85nm,19.1s,baz=165,slow=38
NOA NORSAR Array B 21.24 345 P P 18 42 37.8 -0.5
NOA NORSAR Array B 21.24 345 P P 18 42 37.8 -0.5
NC204 NORSAR Array S 21.55 345 P P 18 42 40.7 -0.9
EKA Eskdalemuir Ar 22.07 319 P P 18 42 48.2 +1.0
comp=Z,1.8nm,0.8s,baz=117,slow=8.5,SNR=3.7
EKA Eskdalemuir Ar 22.07 319 P P 18 42 48.2 +1.0
KLMR Klimovskoe 22.61 22 *e*P P 18 42 52.4 -0.6
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 22.61 22 *e*P P 18 42 52.4 -0.6
KLMR AMP 18 42 54.3
comp=Z,15nm,1.4s
TAM Tamanrasset 22.89 223 P P 18 42 54.4 -2.0
TAM pmax pmax
comp=Z,5.0nm,1.3s
TAM Tamanrasset 22.89 223 P P 18 42 54.4 -2.0
TAM IAmb IAmb 18 43 04.8
comp=Z,4.9nm,1.3s
PRGR Permogore 25.13 27 *e*P P 18 43 16.0 -1.2
PRGR pmax pmax
comp=Z,7.0nm,0.6s
AKTO Aktyubinsk 26.54 57 P P 18 43 32.4 +2.2
comp=Z,0.8nm,0.4s,baz=268,slow=12,SNR=4.2
AKTO Aktyubinsk 26.54 57 P P 18 43 32.4 +2.2
GEYT Ailbeck 27.78 84 LR LR 18 55 59.3
comp=Z,29nm,19.0s,baz=275,slow=39
ARU Arti 28.17 44*c* *i* P P 18 43 49.9 +5.2
ARU 18 44 31.9
ARU SS SS 18 49 59.0 -30
ARU pmax pmax
comp=Z,4.0nm,1.0s
ARCES ARCESS Array B 28.73 2 P P 18 43 49.1 -0.5
comp=Z,2.5nm,0.9s,baz=45,slow=2.6,SNR=4.5
ARCES LR LR 18 56 14.4
comp=Z,150nm,19.8s,baz=160,slow=38
ARCES ARCESS Array B 28.73 2 P P 18 43 49.1 -0.5
ARCES ARCESS Array B 28.73 2 P P 18 43 49.1 -0.5
TORD Torodi Ar. Bea 32.98 219 P P 18 44 27.1 -0.4
comp=Z,0.9nm,0.7s,baz=32,slow=9.3,SNR=6.3
TORD Torodi Ar. Bea 32.98 219 P P 18 44 27.1 -0.4
BRVK Borovoye 34.33 53⇓ *e*P P 18 44 40.8 +1.8
BRVK pmax pmax
comp=Z,10.0nm,2.5s
BRVK Borovoye 34.33 53 P P 18 44 39.7 +0.7
BRVK IAmb IAmb 18 44 42.8
comp=Z,2.1nm,0.8s
KK31 Karatay Array 35.57 70 P P 18 44 49.7 -0.2
KK31 pmax pmax
comp=Z,1.0nm,0.9s
KK31 Karatay Array 35.57 70 P 18 44 49.6 -0.2
KKAR Karatay Array 35.57 70 P P 18 44 49.8 -0.1
MK31 Makanchi Array 42.80 61⇓ *e*P P 18 45 49.8 -0.5
MK31 Makanchi Array 42.80 61 P P 18 45 49.1 -1.2
MK31 IAmb IAmb 18 45 51.5
comp=Z,2.0nm,1.1s
MKAR Makanchi Array 42.80 61 P P 18 45 50.1 -0.1
comp=Z,0.8nm,0.5s,baz=280,slow=7.6,SNR=27
MKAR Makanchi Array 42.80 61 P P 18 45 50.2 -0.1
MKAR Makanchi Array 42.80 61 P P 18 45 50.1 -0.1
ZAA0 Zalesovo Array 42.92 50 P P 18 45 52.0 +1.0
ZAA0 IAmb IAmb 18 45 53.6
comp=Z,5.9nm,1.3s
ZALV Zalesovo Beam 42.92 50 P P 18 45 52.5 +1.4
comp=Z,1.8nm,0.5s,baz=280,slow=8.2,SNR=14
ZALV Zalesovo Beam 42.92 50 P P 18 45 52.5 +1.4
ZALV Zalesovo Beam 42.92 50 P P 18 45 52.5 +1.4
NRIK Noril'sk 43.76 28 LR LR 19 06 32.3
comp=Z,75nm,18.3s,baz=235,slow=39
NRIK Noril'sk 43.76 28⇑ *e*P P 18 45 58.2 +0.5
NRIK pmax pmax
comp=Z,4.0nm,1.2s

DGZ	**Jazzator, Alta**	**45.38**	**56**	⇓*i*P		**P**	**18 46 11.3**	**+0.2**
DGZ				pmax	pmax				
	comp=Z,3.0nm,1.3s								
TLY	**Talaya**	**54.49**	**49**	⇑*e*P		**P**	**18 47 22.6**	**+2.5**
TLY				pmax	pmax				
	comp=Z,6.0nm,1.3s								
SONM	**Songino Array**	**57.73**	**52**	P		**P**	**18 47 45.1**	**+1.6**
	comp=Z,1.4nm,1.0s,baz=291,slow=9.4,SNR=10.0								
SONM	**Songino Array**	**57.73**	**52**	P		**P**	**18 47 45.1**	**+1.6**
ULN	**Ulaanbaatar**	**58.12**	**52**	⇓*e*P		**P**	**18 47 47.9**	**+1.7**
ULN				pmax	pmax				
	comp=Z,2.0nm,0.5s								
MATP	**Matopo**	**61.31**	**173**	P		**P**	**18 48 09.8**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=69,slow=22,SNR=1.6								
YAK	**Yakutsk**	**62.09**	**31**	LR		LR	19 18 14.3		
	comp=Z,64nm,18.7s,baz=275,slow=39								
YAK	**Yakutsk**	**62.09**	**31**	⇓*e*P		**P**	**18 48 14.0**	**+1.0**
YAK				pmax	pmax				
	comp=Z,10.0nm,1.7s								
BILL	**Bilibino**	**68.05**	**14**	*e*P		**P**	**18 48 52.7**	**+1.0**
BILL				pmax	pmax				
	comp=Z,5.0nm,1.3s								
SEY	**Seymchan**	**69.11**	**22**	⇓*e*P		**P**	**18 48 58.0**	**-0.4**
BOSA	**Boshof**	**69.24**	**177**	LR		LR	19 21 34.8		
	comp=Z,112nm,18.1s,baz=346,slow=38								
SADO	**Sadowa**	**69.40**	**312**	LR		LR	19 17 22.5		
	comp=Z,73nm,18.2s,baz=48,slow=34								
INK	**Inuvik**	**69.58**	**351**	LR		LR	19 22 05.3		
	comp=Z,34nm,19.5s,baz=139,slow=38								
YKA	**Yellowknife Ar**	**71.25**	**340**	P		**P**	**18 49 11.8**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=25,slow=5.4,SNR=4.0								
YKA	**Yellowknife Ar**	**71.25**	**340**	P		**P**	**18 49 11.8**	**+0.3**
ULM	**Lac du Bonnet**	**74.26**	**324**	LR		LR	19 24 42.9		
	comp=Z,45nm,18.2s,baz=318,slow=38								
TXAR	**Lajitas Array**	**94.00**	**315**	LR		LR	19 36 44.8		
	comp=Z,24nm,18.5s,baz=0.0,slow=38								

ANF ***02*** *18:50:12.2±0.7, 32°.33N×115°.20W, h8km, ML3.5/12, Error ellipse: s-maj=6.7km s-min=3.7km az=178.0, Hypocentre not reviewed by the ISC*
ECX ***02*** *18:50:13.1±0.5, 32°.37N×115°.18W, h12km±3km, MD3.2, ML3.6, Fault plane solution: NP1:φ=80.00000°, δ16.00000°, λ98.00000°.*
NEIC ***02*** *18:50:14.7±2.2, 32°.40N±0°.02×115°.22W±0°.02, h14km±5km, Error ellipse: s-maj=3.3km s-min=2.2km az=166.0*
SCEDC ***02*** *18:50:15.2, 32°.41N×115°.21W, h8km, Hypocentre not reviewed by the ISC*
PAS ***02*** *18:50:15.2±2.2, 32°.41N±0°.03×115°.21W±0°.04, h8km±5km, Error ellipse: s-maj=4.8km s-min=3.5km az=46.0*
MEX ***02*** *18:50:15.1±0.6, 32°.45N×115°.14W, h3km±743km, MD3.9*

ISC 02 18:50:14.3±0.8, 32°.38N±0°.02×115°.20W±0°.02, h16km±4km, n109, σ1§45/122, 3C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.03**	**3**	*i*P	**Pg**	**18 50 15.9**	**-1.3**
MBIG				*i*S	**Sg**	**18 50 18.1**	**-1.1**
MBIG	**Mexicali**	**0.03**	**3**		**Sg**	**18 50 15.9**	**-1.3**
MBIG					**Sg**	**18 50 18.1**	**-1.1**
CPBX	**Cerro Prieto**	**0.10**	**295**		**Pg**	**18 50 17.4**	**-0.3**
CPBX				IAML		18 50 19.1	
	comp=N,14μm,0.3s						
CPBX				IAML		18 50 19.1	
	comp=E,15μm,0.3s						
CPBX	**Cerro Prieto**	**0.10**	**295**	⇑*e*P	**Pg**	**18 50 17.5**	**-0.3**
CTLX	**Tlaxcala, TLX**	**0.11**	**26**	*e*P	**Pg**	**18 50 17.6**	**-0.2**
CTLX				*e*S	**Sg**	**18 50 20.7**	**+0.5**
GUVIX	**Guadalupe Vict**	**0.13**	**125**		Pg	18 50 20.5	+2.4
UABX	**UABC, Campus M**	**0.33**	**321**		**Pb**	**18 50 21.4**	**-0.3**
UABX	**UABC, Campus M**	**0.33**	**321**	*e*P	**Pb**	**18 50 21.8**	**+0.1**
UABX				*e*S	**Sb**	**18 50 27.7**	**+1.0**
EMSC	**East Mesa**	**0.40**	**27**		**Pb**	**18 50 23.0**	**0.0**
EMSC					**Sb**	**18 50 28.2**	**-0.8**
EMSC	**East Mesa**	**0.40**	**27**	*e*P	**Pb**	**18 50 23.0**	**0.0**
DREC	**Desert Rsrch C**	**0.47**	**334**		**Pb**	**18 50 24.7**	**+0.5**
COA	**Coachella**	**0.49**	**8**		**Pb**	**18 50 24.4**	**0.0**
SGL	**Mount Signal**	**0.52**	**302**		**Pb**	**18 50 24.3**	**-0.7**
SGL					**Sg**	**18 50 31.1**	**-0.6**
SNR	**Schaffner Ranc**	**0.52**	**338**		**Pb**	**18 50 25.1**	**0.0**
YMD	**Yuma Desert**	**0.58**	**72**		**Pb**	**18 50 25.9**	**-0.1**
WESC	**Westside Schoo**	**0.59**	**310**		**Pb**	**18 50 26.0**	**-0.2**
WESC	**Westside Schoo**	**0.59**	**310**	*e*P	**Pb**	**18 50 25.9**	**-0.2**
RUN	**Ruthven**	**0.62**	**18**		**Pb**	**18 50 26.1**	**-0.6**
RUN					**Sb**	**18 50 35.0**	**-0.2**
COK2	**Cook Ranch 2**	**0.65**	**317**		**Pb**	**18 50 26.8**	**-0.4**
COK2					**Sb**	**18 50 36.0**	**0.0**
YUH	**Yuha Desert**	**0.67**	**294**		**Pb**	**18 50 26.9**	**-0.7**
WEMD	**Westmorland, C**	**0.73**	**334**		**Pg**	**18 50 27.9**	**-0.7**
ESJX	**Sierra Juarez**	**0.73**	**240**		**Pb**	**18 50 29.1**	**+0.3**
ESJX				IAML		18 50 40.6	
	comp=N,1μm,0.2s						
ESJX				IAML		18 50 40.7	
	comp=E,1μm,0.3s						
ESJX	**Sierra Juarez**	**0.73**	**240**		**Sb**	**18 50 39.4**	**+0.7**
GLA	**Glamis**	**0.74**	**25**		**Pb**	**18 50 28.0**	**-0.8**
GLA	**Glamis**	**0.74**	**25**	⇓*e*P	**Pb**	**18 50 28.1**	**-0.8**
GLA	**Glamis**	**0.74**	**25**	P		18 50 28.0	
	baz=207,SNR=258						
GLA				S		18 50 38.6	
	baz=207						
SWSC	**Sam W. Stewart**	**0.76**	**318**		**Pg**	**18 50 28.0**	**-1.2**
SWSC	**Sam W. Stewart**	**0.76**	**318**	*e*P	**Pg**	**18 50 27.9**	**-1.2**
SWSC	**Sam W. Stewart**	**0.76**	**318**	P		18 50 27.9	
	baz=137,SNR=123						
SWSC				S		18 50 38.6	
	baz=137						
RMX	**La Rumorosa**	**0.78**	**287**	Pg	**Pg**	**18 50 28.1**	**-1.4**
RMX					**Pb**	**18 50 28.2**	**-1.2**
RMX				IAML		18 50 38.6	
	comp=E,1μm,0.5s						
RMX	**La Rumorosa**	**0.78**	**287**	*e*P	**Pg**	**18 50 28.4**	**-1.1**
RMX				*e*S	**Sg**	**18 50 38.2**	**-1.6**
IKP	**In-Ko-Pah, Jac**	**0.81**	**290**		**Pb**	**18 50 29.6**	**-0.5**
IKP					**Sg**	**18 50 40.5**	**-0.4**
IKP	**In-Ko-Pah, Jac**	**0.81**	**290**	⇓*e*P	**Pb**	**18 50 29.6**	**-0.5**
IKP	**In-Ko-Pah, Jac**	**0.81**	**290**	P		18 50 29.5	
	baz=107,SNR=147						
IKP				S		18 50 40.6	
	baz=107						
CRR	**Carrizo Plain**	**0.82**	**308**		**Pg**	**18 50 29.2**	**-1.1**
SJX	**San Joaquin**	**0.89**	**227**	*e*P	**Pg**	**18 50 29.1**	**-2.5**
SJX				*e*S	**Sg**	**18 50 39.2**	**-4.1**
SJX				⇑*e*		18 50 40.7	
SJX				IAML		18 50 40.7	
	comp=N,2μm,0.2s						
SJX				IAML		18 50 40.8	
	comp=E,2μm,0.3s						
ERRC	**Elmore Ranch**	**0.91**	**325**		**Pg**	**18 50 30.9**	**-1.0**
ECBX	**El Chinero**	**0.91**	**172**	*e*P	**Pg**	**18 50 30.2**	**-1.8**
ECBX				*e*S	**Sb**	**18 50 43.2**	**-0.4**
CBKC	**Canebrake**	**1.03**	**301**		**Pg**	**18 50 32.6**	**-1.6**
FRK	**Frink**	**1.09**	**340**		**Pg**	**18 50 32.7**	**-2.7**
MONP2	**Monument Peak**	**1.15**	**297**	⇓*e*P	**Pg**	**18 50 34.5**	**-2.1**
MONP2	**Monument Peak**	**1.15**	**297**	P		18 50 34.5	
	baz=115,SNR=77						
MONP2				S		18 50 50.8	
	baz=115						
TKX	**Tecate**	**1.21**	**279**		**Sb**	**18 50 52.6**	**+0.5**
TKX	**Tecate**	**1.21**	**279**		**Pb**	**18 50 36.8**	**0.0**
TKX	**Tecate**	**1.21**	**279**	IAML		18 50 52.9	
	comp=N,822nm,0.4s						
TKX				IAML		18 50 53.5	
	comp=E,671nm,0.3s						
CBX	**Cerro Bola**	**1.24**	**267**		**Pg**	**18 50 36.9**	**-1.4**
CBX	**Cerro Bola**	**1.24**	**267**	IAML		18 50 55.9	
	comp=E,507nm,0.6s						
CBX				IAML		18 50 58.7	
	comp=N,482nm,0.7s						
CBX	**Cerro Bola**	**1.24**	**267**	*e*P	**Pg**	**18 50 36.9**	**-1.4**
CBX				*e*S	**Sb**	**18 50 53.7**	**+0.5**
BAR	**Barrett**	**1.28**	**284**		**Sg**	**18 50 54.8**	**-0.9**
BAR	**Barrett**	**1.28**	**284**		**Pg**	**18 50 37.0**	**-2.0**
BAR	**Barrett**	**1.28**	**284**	IAML		18 50 55.8	
	comp=N,542nm,0.2s						
BAR				IAML		18 50 56.2	
	comp=E,516nm,0.3s						
BAR	**Barrett**	**1.28**	**284**	*e*P	**Pg**	**18 50 37.2**	**-1.8**
BC3	**Big Chuckawall**	**1.29**	**351**	P		18 50 36.2	
	baz=171,SNR=85						
CCX	**Cicese**	**1.34**	**248**		**Pb**	**18 50 39.0**	**0.0**
CCX				IAML		18 51 16.7	
	comp=E,428nm,0.7s						
SPIG	**San Pedro Mart**	**1.35**	**190**	*i*P	**Pb**	**18 50 40.8**	**+1.5**
SPIG				*i*S	**Sn**	**18 50 59.1**	**+2.7**
SPIG	**San Pedro Mart**	**1.35**	**190**		**Pb**	**18 50 40.8**	**+1.5**
SPIG					**Sn**	**18 50 59.1**	**+2.7**
SPIG	**San Pedro Mart**	**1.35**	**190**	*e*P	**Pn**	**18 50 38.6**	**-0.1**
SPIG				*e*S	**Sn**	**18 50 58.6**	**+2.2**
SPX	**San Pedro Mart**	**1.36**	**190**		**Sn**	**18 50 58.8**	**+2.2**
SPX	**San Pedro Mart**	**1.36**	**190**		**Pb**	**18 50 39.0**	**-0.4**
SPX	**San Pedro Mart**	**1.36**	**190**	IAML		18 50 59.6	
	comp=E,527nm,0.4s						
SPX				IAML		18 50 60.0	
	comp=N,316nm,0.3s						
SPX	**San Pedro Mart**	**1.36**	**190**	*e*P	**Pn**	**18 50 38.7**	**-0.1**
SPX				⇓*e*		18 50 59.7	
SPX				IAML		18 50 59.7	
	comp=E,771nm,0.5s						
SPX				⇑*e*		18 50 60.0	
SPX				IAML		18 50 60.0	
	comp=N,490nm,0.2s						
SFX	**San Felipe**	**1.37**	**167**		**Pb**	**18 50 40.6**	**+1.1**
SFX				IAML		18 51 13.4	
	comp=E,399nm,0.7s						
SFX	**San Felipe**	**1.37**	**167**	*e*P	**Pb**	**18 50 41.1**	**+1.6**
SFX				*e*S	**Sn**	**18 50 59.7**	**+3.2**
MATG	**Mataguay Scout**	**1.47**	**304**		**Pn**	**18 50 38.9**	**-1.3**
MATG	**Mataguay Scout**	**1.47**	**304**	*e*P	**Pn**	**18 50 38.9**	**-1.3**
EML	**El Monte Cty P**	**1.48**	**291**		**Sn**	**18 51 00.2**	**+0.9**
EML	**El Monte Cty P**	**1.48**	**291**	*e*P	**Pn**	**18 50 39.5**	**-0.7**
OLP	**Otay Lakes Par**	**1.48**	**279**		**Sb**	**18 51 00.8**	**+0.9**
SDRC	**San Diego Road**	**1.51**	**284**		**Pb**	**18 50 41.6**	**-0.4**
TJX	**Tijuana**	**1.57**	**275**		**Pb**	**18 50 42.9**	**-0.1**
DPP	**Dos Picos Cty**	**1.59**	**293**		**Sn**	**18 51 03.3**	**+1.2**
TPFO	**Pinon Flats**	**1.62**	**320**	P		18 50 40.5	
	baz=139,SNR=47						
HWB	**Hans Werner Br**	**1.62**	**294**		**Sn**	**18 51 03.8**	**+1.2**
PFO	**Pinyon Flats O**	**1.62**	**320**		**Pn**	**18 50 40.5**	**-1.8**
PFO	**Pinyon Flats O**	**1.62**	**320**	P		18 50 40.6	
	baz=139,SNR=37						
109C	**Camp Elliot, M**	**1.69**	**288**		**Pn**	**18 50 42.5**	**-0.5**
109C				IAML		18 51 07.4	
	comp=N,531nm,0.4s						
109C				IAML		18 51 08.7	
	comp=E,478nm,0.5s						
109C	**Camp Elliot, M**	**1.69**	**288**	Pb		18 50 44.9	
	baz=106,SNR=14						
109C				Sb		18 51 06.4	
	baz=106						
CPE	**Camp Elliot**	**1.69**	**288**		**Pb**	**18 50 44.4**	**-0.6**
PIX	**Pinacate**	**1.69**	**118**		**Pg**	**18 50 44.6**	**-2.2**
PLM	**Palomar**	**1.70**	**305**		**Pn**	**18 50 42.8**	**-0.7**
BELC	**Belle Mtn. Jos**	**1.75**	**338**	Pb		18 50 47.5	
	baz=157,SNR=28						
IRM	**Iron Mountain**	**1.77**	**1**	Pb		18 50 46.9	
	baz=182,SNR=125						
TPC	**Twentynine Pal**	**1.86**	**338**		**Pn**	**18 50 45.8**	**+0.2**
DQR	**Domenigoni Val**	**1.98**	**310**		**Pn**	**18 50 46.0**	**-1.2**
214A	**Organ Pipe Nat**	**2.07**	**101**	*e*P	**Pn**	**18 50 47.2**	**-1.2**
214A				*e*S	**Sn**	**18 51 10.6**	**-3.2**
214A	**Organ Pipe Nat**	**2.07**	**101**	Pn	**Pn**	**18 50 47.6**	**-0.8**
214A	**Organ Pipe Nat**	**2.07**	**101**		**Sn**	**18 51 11.0**	**-2.8**
214A	**Organ Pipe Nat**	**2.07**	**101**	IAML		18 51 44.6	
	comp=E,240nm,0.8s						
214A				IAML		18 51 51.0	
	comp=N,204nm,0.7s						
214A	**Organ Pipe Nat**	**2.07**	**101**	P		18 50 47.1	
	baz=283,SNR=27						
CIS	**Catalina Islan**	**2.89**	**292**	Sb		18 51 42.4	
	baz=109						
MWC	**Mount Wilson**	**3.02**	**308**		**Pn**	**18 51 02.7**	**+1.1**
HYS	**Haystack Butte**	**3.17**	**322**		**Pn**	**18 51 06.2**	**+2.7**
TUC	**Tucson**	**3.74**	**90**	Pn	**Pn**	**18 51 11.6**	**+0.2**
TUC				IAML		18 52 39.5	
	comp=N,45nm,1.4s						
SHPR	**Sheep Range**	**4.12**	**0**		**Pn**	**18 51 19.5**	**+2.9**
SHPR				IAML		18 52 40.4	
	comp=N,38nm,0.9s						
SHPR				IAML		18 52 55.7	
	comp=E,43nm,0.9s						
ISA	**Isabella, Lake**	**4.26**	**321**		**Pn**	**18 51 20.3**	**+1.8**
WUAZ	**Wupatki**	**4.46**	**44**	Pn	**Pn**	**18 51 22.7**	**+1.3**
TPNV	**Topopah Spring**	**4.64**	**350**		**Pn**	**18 51 21.5**	**-2.4**
TPNV				IAML		18 53 01.7	
	comp=E,45nm,0.9s						
TPNV				IAML		18 53 12.0	
	comp=E,45nm,1.7s						
HSIG		**4.96**	**131**	Pn	**Pn**	**18 51 29.0**	**+0.9**
HSIG				IAML		18 53 47.2	
	comp=E,15nm,1.4s						
PRN	**Pahroc Range**	**5.02**	**1**		**Pb**	**18 51 45.0**	**+3.2**
KNB	**Kanab**	**5.03**	**22**		**Pn**	**18 51 30.0**	**+0.9**
W18A	**Petrified Fore**	**5.31**	**58**		**Pn**	**18 51 34.4**	**+1.3**
CCUT	**Cedar City**	**5.38**	**16**	Pn	**Pn**	**18 51 34.5**	**+0.5**
CCUT				IAML		18 53 32.0	
	comp=N,21nm,1.5s						
CCUT				IAML		18 53 46.6	
	comp=E,23nm,2.9s						
SZCU	**Shurtz Canyon**	**5.49**	**18**		**Pn**	**18 51 36.9**	**+1.4**
PKCU	**Pink Cliffs**	**5.58**	**24**		**Pn**	**18 51 37.8**	**+0.9**
TPH	**Tonopah**	**5.92**	**344**	Pn	**Pn**	**18 51 41.4**	**-0.1**
R11A	**Troy Canyon, C**	**5.97**	**357**	Pg	**Pb**	**18 52 01.3**	**+3.3**
MTPU	**Mount Pierson**	**6.17**	**23**		**Pb**	**18 52 00.9**	**-0.6**
PSUT	**Pine Spring**	**6.24**	**10**	Pn	**Pn**	**18 51 47.3**	**+1.5**
121A	**Cookes Peak, D**	**6.27**	**87**	Pn	**Pn**	**18 51 46.9**	**+0.6**
MSU	**Marysvale**	**6.60**	**21**	Pn	**Pn**	**18 51 50.4**	**-0.4**
LENM	**Lemitar**	**7.12**	**73**	Pn	**Pn**	**18 51 56.9**	**-1.0**
PV03	**Paradox Valley**	**7.83**	**40**		**Pn**	**18 52 11.1**	**+3.4**
PV16	**Nyswonger Mesa**	**7.83**	**39**		**Pn**	**18 52 09.1**	**+1.3**
PV02	**Paradox Valley**	**7.86**	**40**	Pn	**Pn**	**18 52 07.3**	**-0.8**
PV01	**Paradox Valley**	**7.90**	**42**	Pn	**Pn**	**18 52 12.3**	**+3.7**
PV04	**Paradox Valley**	**7.90**	**39**	Pn	**Pn**	**18 52 08.6**	**0.0**
MNTX	**Cornudas Mount**	**8.36**	**92**	Pn	**Pn**	**18 52 15.4**	**+0.5**
O20A	**White River Ci**	**9.56**	**34**	Pn	**Pn**	**18 52 31.2**	**-0.2**
REDW	**Red Top Meadow**	**11.49**	**16**		**Pn**	**18 52 58.4**	**+0.5**
LOHW	**Long Hollow**	**11.78**	**17**	Pn	**Pn**	**18 53 03.3**	**+1.4**
PHWY	**Pilot Hill**	**11.83**	**38**	Pn	**Pn**	**18 53 03.2**	**+0.6**

IDC ***02*** *18:53:11.1±1.3, 21°.60N×144°.09E, h0km, mb3.6/9, mb1 3.7/9, mb1mx3.5/51, mbtmp3.6/9, Error ellipse: s-maj=47.8km s-min=21.5km az=82.0*

ISC 02 18:53:19.7±1.6, 22°.2N±0°.2×144°.1E±0°.3, h35km, n16, σ1§13/9, mb3.5/8, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.19**	**341**	Pn	**Pn**	**18 54 34.0**	**-1.0**
	3.1nm,0.3s,baz=278,slow=18,SNR=2.1						
JCJ				Sn	**Sn**	**18 55 34.2**	**+0.6**
	5.6nm,0.3s,baz=116,slow=24,SNR=1.6						
KSRS	**Korea Array**	**20.66**	**321**	P	**P**	**18 57 57.0**	**+0.5**
	1.3nm,0.9s,baz=151,slow=8.4,SNR=1.5						
H11N1	**WAKE ISLAND Hy 21.40**		**92**	T	T	19 20 46.5	
	baz=279,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy 21.41**		**92**	T	T	19 20 47.1	
	baz=279,slow=75,SNR=6.9						
H11N3	**WAKE ISLAND Hy 21.42**		**92**	T	T	19 20 46.4	
	baz=279,slow=75,SNR=9.1						
H11S3	**WAKE ISLAND Hy 21.47**		**96**	T	T	19 20 45.7	
	baz=282,slow=75,SNR=73						
H11S1	**WAKE ISLAND Hy 21.48**		**96**	T	T	19 20 46.4	
	baz=282,slow=75,SNR=61						
H11S2	**WAKE ISLAND Hy 21.49**		**96**	T	T	19 20 47.0	
	baz=282,slow=75,SNR=70						
KLR	**Kul'dur**	**28.72**	**343**	P	**P**	**18 59 14.6**	**+1.0**
	0.6nm,0.5s,baz=109,slow=22,SNR=2.2						
SONM	**Songino Array**	**39.52**	**320**	P	**P**	**19 00 46.7**	**-0.6**
	0.7nm,0.9s,baz=98,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**42.95**	**194**	P	P	19 01 06.4	-9.0
	0.4nm,0.9s,baz=180,slow=8.4,SNR=2.4						
ASAR	**Alice Springs**	**46.65**	**193**	P	P	19 01 37.2	-7.7
	0.2nm,0.6s,baz=12,slow=9.0,SNR=5.2						
ZALV	**Zalesovo Beam**	**54.37**	**321**	P	**P**	**19 02 41.1**	**-1.7**
	1.4nm,0.7s,baz=123,slow=11,SNR=1.8						
MKAR	**Makanchi Array**	**55.01**	**312**	P	**P**	**19 02 47.9**	**+0.1**
	0.9nm,0.7s,baz=92,slow=9.2,SNR=13						
YKA	**Yellowknife Ar**	**75.61**	**28**	P	**P**	**19 05 00.5**	**-0.3**
	0.3nm,0.8s,baz=286,slow=5.1,SNR=4.5						
FINES	**FINESS Array B**	**83.11**	**335**	P	**P**	**19 05 42.9**	**+1.2**
	1.5nm,0.9s,baz=37,slow=4.8,SNR=5.5						

IDC ***02*** *18:55:03.0±1.8, 1°.74N×128°.44E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.2/44, mbtmp3.3/3, Error ellipse: s-maj=141.7km s-min=10.9km az=67.0*
DJA ***02*** *18:55:12.3±0.4, 1°.N±4°×12°.7E±°, h43km±19km, M2.9/6, MLv2.9/6*

ISC 02 18:55:11.2±1.4, 0°.9N±0°.1×126°.5E±0°.1, h39km, n5, σ1§06/6, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.92**	**98**	P	**Pn**	**18 55 28.2**	**+0.5**
TNTI				S	**Sn**	**18 55 39.3**	**-0.4**
SANI	**Sanana**	**2.97**	**189**	P	**Pn**	**18 55 56.2**	**+0.3**
WRA	**Warramunga Arr**	**22.12**	**160**	P	**P**	**19 00 02.2**	**-1.2**
	1.3nm,0.5s,baz=340,slow=11,SNR=28						
ASAR	**Alice Springs**	**25.48**	**164**	P	**P**	**19 00 37.0**	**+1.1**
	0.3nm,0.4s,baz=344,slow=11,SNR=14						
MKAR	**Makanchi Array**	**59.72**	**326**	P	**P**	**19 05 11.8**	**-0.2**
	0.2nm,0.5s,baz=124,slow=8.6,SNR=5.0						

BJI ***02*** *19:04:39.4±0.0, 38°.52N×142°.21E, h66km, mB4.8/37, mb4.7/65, Ms4.2/13, Ms7 3.9/12*
MOS ***02*** *19:04:40.3±0.9, 38°.67N×142°.07E, h52km, mb4.7/22, Error ellipse: s-maj=6.3km s-min=4.3km az=98.5*
JMA ***02*** *19:04:42.5, 38°.61N×142°.00E, h52km±1km, M4.6*
JMA Felt III J1.
NEIC ***02*** *19:04:42.6±2.6, 38°.621N±0°.010×142°.05E±0°.09, h59km±6km, mb4.5/90, Error ellipse: s-maj=10.7km s-min=0.5km az=97.0*
NIED ***02*** *19:04:42.6, 38°.61N×142°.00E, h52km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr 1.41; Mθθ 1.34; Mφφ -2.75; Mrθ 0.39; Mrφ -3.44; Mθφ -3.11; Fault plane solution: Mo 5.16000×10¹⁵ NP1: φ=171.00000°, δ81.00000°, λ42.00000°. NP2: φ=73.00000°, δ49.00000°, λ168.00000°*
IDC ***02*** *19:04:44.0±1.8, 38°.65N×141°.91E, h61km±16km, mb4.0/30, mb1 4.2/36, mb1mx4.1/55, mbtmp4.4/36, MS3.4/11, Ms1 3.4/11, ms1mx3.1/38 Error ellipse: s-maj=13.4km s-min=10.6km az=116.0*

ISC 02 19:04:41.8±0.5, 38°.59N±0°.03×142°.21E±0°.04, h58km±4km, h58km:pP-P, n307, σ1§79/330, mb4.5/114, MS3.6/9, 18C-27D, Fault plane solution: NP1:φ=78.77708°, δ63.34338°, λ178.14929°. NP2:φ=169.60762°, δ88.34606°, λ26.66861°. Principal axes: T Plg19.7336°, Azm37.4396°; N Plg63.2839°, Azm172.8965°; P Plg17.2673°, Azm301.0377°; Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.61**	**291**	P	**Pn**	**19 04 53.5**	**-1.4**
JKMT				S	**Sn**	**19 05 01.1**	**-3.4**
JIKH	**Ishinomakikobu**	**0.65**	**245**	P	**Pn**	**19 04 54.1**	**-1.2**
JIKH				S	**Sn**	**19 05 02.1**	**-3.0**
OFUJ	**Ofunato**	**0.65**	**320**	P	**Pn**	**19 04 54.4**	**-0.9**
OFUJ				S	**Sn**	**19 05 03.0**	**-2.2**
JIO	**Ouri**	**0.69**	**259**	P	**Pn**	**19 04 54.3**	**-1.5**
JIO				S	**Sn**	**19 05 02.4**	**-3.6**
JMK	**Ichinoseki**	**0.85**	**295**	P	**Pn**	**19 04 56.5**	**-1.4**
JMK				S	**Sn**	**19 05 06.6**	**-3.1**
JOM	**Ohasama**	**1.14**	**321**	P	**Pn**	**19 05 01.0**	**-0.6**
JOM				S	**Sn**	**19 05 14.3**	**-2.0**
JOU	**Okura**	**1.23**	**260**	P	**Pn**	**19 05 01.4**	**-1.5**
JOU				S	**Sn**	**19 05 15.4**	**-3.2**
JMM	**Marumori**	**1.33**	**238**	P	**Pn**	**19 05 02.8**	**-1.3**
JMM				S	**Sn**	**19 05 18.0**	**-2.8**
JMM	**Marumori**	**1.33**	**238**	Pn	**Pn**	**19 05 02.8**	**-1.3**
JRG	**Rokugo**	**1.47**	**304**	P	**Pn**	**19 05 04.9**	**-1.1**
JRG				*e*S	**Sn**	**19 05 21.2**	**-3.0**
JYK	**Kaneyama**	**1.48**	**283**	P	**Pn**	**19 05 04.9**	**-1.3**
JYK				*e*S	**Sn**	**19 05 21.8**	**-2.8**
JFK	**Kawauchi**	**1.61**	**221**	P	**Pn**	**19 05 07.2**	**-0.8**
JFK				*e*S	**Sn**	**19 05 25.6**	**-2.2**
JYS	**Shirataka**	**1.72**	**258**	P	**Pn**	**19 05 08.5**	**-1.0**
JYS				S	**Sn**	**19 05 27.9**	**-2.5**
JTM	**Tenmabayashi**	**2.37**	**339**		**Pn**	**19 05 18.0**	**0.0**
JYT	**Yasato**	**2.85**	**215**	Pn	**Pn**	**19 05 23.7**	**-1.2**
JSD	**Sado**	**3.15**	**261**		**Pn**	**19 05 27.8**	**-1.2**
ERM	**Erimo**	**3.50**	**12**	*ce*P	**Pn**	**19 05 33.5**	**-0.1**
ERM				pmax	pmax		
	comp=Z,58nm,0.5s						
ERM	**Erimo**	**3.50**	**12**		**Pn**	**19 05 33.6**	**-0.1**
MJAR	**Matsushiro Arr**	**3.78**	**238**	P	**Pn**	**19 05 38.5**	**+0.9**
	comp=Z,4.7nm,0.3s,baz=34,slow=13,SNR=187						
MJAR				S	**Sn**	**19 06 28.0**	**+7.3**

YSS pmax pmax
comp=Z,40nm,0.4s
YSS Yuzh-Sakhalins 8.37 3 Pn **Pn 19 06 40.1 -0.3**
MSHR Mys Shultsa 9.30 299 *ce*P **Pn 19 06 52.8 -0.3**
MSHR pmax pmax
comp=Z,48nm,0.8s
USA0B Ussuriysk Arra 9.50 309 *de*P **Pn 19 06 55.8 -0.1**
USA0B Ussuriysk Arra 9.50 309 Pn **Pn 19 06 55.7 -0.2**
USRK Ussuriysk Ar. 9.50 309 P **Pn 19 06 55.9 0.0**
baz=122,slow=13,SNR=51
USRK LR LR 19 10 26.0
comp=Z,207nm,18.6s,baz=119,slow=37
JNU Nakatsue 10.69 243 P **Pn 19 07 12.4 +0.3**
comp=Z,0.7nm,0.3s,baz=78,slow=6.7,SNR=6.9
JNU Nakatsue 10.69 243 Pn 19 07 11.4 -0.7
MDJ Mudanjiang 11.20 307 P **Pn 19 07 20.7 +1.7**
MDJ pmax pmax
comp=Z,28nm,1.6s
MDJ pmax pmax
comp=Z,210nm,3.9s
KSRS Korea Array 11.33 269 P **Pn 19 07 23.6 +2.9**
comp=Z,1.0nm,0.3s,baz=80,slow=14,SNR=16
KSRS LR LR 19 11 19.2
comp=Z,130nm,20.2s,baz=66,slow=36
KS19 Wonju Array Si 11.36 269 Pn 19 07 23.4 +2.1
JCJ Chichijima 11.46 180 P **Pn 19 07 22.4 -0.3**
comp=Z,12nm,0.3s,baz=274,slow=23,SNR=2.7
JCJ S **Sn 19 09 22.9 -6.3**
comp=Z,20nm,0.3s,baz=262,slow=21,SNR=5.7
JCJ Chichijima 11.46 180 Pn **Pn 19 07 20.9 -1.8**
KLR Kul'dur 13.02 328 P **Pn 19 07 42.6 -1.3**
comp=Z,0.1nm,0.3s,baz=148,slow=13,SNR=3.1
KLR LR LR 19 12 11.6
comp=Z,93nm,21.0s,baz=140,slow=35
KLR Kul'dur 13.02 328 ||*e*P **Pn 19 07 44.9 +1.0**
KLR pmax pmax
comp=Z,10.0nm,1.6s
CN2 Changchun 13.65 298 *e*P **Pn 19 07 52.5 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
DL2 Dalian 16.06 278 P **P 19 08 26.7 +0.5**
DL2 pmax pmax
comp=Z,46nm,1.2s
PETK Petropavlovsk- 18.03 31 P **P 19 08 46.9 -1.0**
comp=Z,0.2nm,0.3s,baz=219,slow=11,SNR=5.0
PETK LR LR 19 15 37.8
comp=Z,48nm,20.0s,baz=229,slow=36
ZEA Zeya 18.29 331 *e*P **P 19 08 50.8 0.0**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.8s
HIA Hailar 19.31 311 P **P 19 09 02.6 +0.6**
HIA pmax pmax
comp=Z,7.0nm,0.6s
HIA Hailar 19.31 311 P **P 19 09 02.6 +0.6**
TIA Tai'an 20.05 271 P **P 19 09 08.4 -1.8**
TIA pmax pmax
comp=Z,17nm,0.9s
NJ2 Nanjing 20.11 258 *e*P **P 19 09 10.2 -0.6**
NJ2 pmax pmax
comp=Z,13nm,0.5s
BJI Beijing 20.18 282 P **P 19 09 08.5 -2.9**
BJI pmax pmax
comp=Z,7.0nm,0.5s
BJT Baijiatuau 20.18 282 P **P 19 09 09.0 -2.5**
BJT pmax pmax
comp=Z,11nm,0.6s
BJT Baijiatuau 20.18 282 P **P 19 09 09.0 -2.5**
MA2 Magadan 21.70 12 P **P 19 09 28.9 +1.3**
comp=Z,16nm,0.8s,baz=203,slow=9.1,SNR=14
MA2 LR LR 19 17 17.2
comp=Z,67nm,19.9s,baz=152,slow=35
MA2 Magadan 21.70 12 ||*e*P **P 19 09 29.0 +1.3**
MA2 pmax pmax
comp=Z,12nm,0.7s
MA2 Magadan 21.70 12 P **P 19 09 28.5 +0.9**
MA2 IAmb IAmb 19 09 32.2
comp=Z,15nm,0.7s
HHC Hu-ho-hao-te 23.62 285 *e*P **P 19 09 45.9 -1.8**
HHC PP **PnPn 19 10 25.4 +8.3**
HHC S **S 19 13 59.4 +1.5**
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,94nm,4.4s
HHC LR LR
comp=Z,120nm,13.1s
HHC LR LR
comp=Z,150nm,11.6s
HHC LR LR
comp=Z,130nm,12.4s
TPUB Ta-pu 23.89 237 P **P 19 09 49.8 -0.3**
WHN Wuhan 24.24 259 ⇑P **P 19 09 52.4 -0.8**
WHN pP **pP 19 10 05.3 -2.2**
WHN sP **sP 19 10 15.4 +1.0**
WHN pmax pmax
comp=Z,20nm,0.6s
YAK Yakutsk 24.70 346 P **P 19 09 57.4 +0.3**
comp=Z,4.7nm,0.3s,baz=132,slow=1.1,SNR=8.6
YAK Yakutsk 24.70 346 *e*P **P 19 09 56.7 -0.4**
YAK *e**PP **pP 19 10 10.2 -1.1**
YAK *e* 19 10 31.1
YAK *e*S **S 19 14 14.8 +0.2**
YAK *e**SS **sS 19 14 37.7 -1.0**
YAK *e*SS **SnSn 19 15 09.8 +4.0**
YAK pmax pmax
comp=Z,23nm,1.3s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK pmax pmax
comp=Z,155nm,4.7s
YAK pmax pmax
comp=N,96nm,4.6s
YAK pmax pmax
comp=E,84nm,4.8s
YAK smax smax
comp=E,81nm,1.7s
YAK smax smax
comp=N,39nm,1.8s
YAK Yakutsk 24.70 346 P **P 19 09 55.9 -1.3**
YAK IAmb IAmb 19 10 20.2
comp=Z,18nm,0.8s
SEY Seymchan 25.15 11 P **P 19 10 03.6 +2.5**
comp=Z,13nm,0.8s,baz=203,slow=6.5,SNR=44
SEY Seymchan 25.15 11 ⇑*i*P **P 19 10 03.8 +2.7**
BOD Bodaibo 26.58 326 *e*P **P 19 10 13.6 -0.5**
BOD pmax pmax
comp=Z,8.0nm,1.5s
ULN Ulaanbaatar 27.04 301 ⇑*e*P **P 19 10 18.6 0.0**
ULN pmax pmax
comp=Z,11nm,1.3s
ULN Ulaanbaatar 27.04 301 P **P 19 10 17.9 -0.7**
XAN Xi'an 27.11 271 P **P 19 10 18.3 -1.0**
XAN pmax pmax
comp=Z,6.0nm,0.6s
XAN Xi'an 27.11 271 P **P 19 10 18.3 -1.0**
XAN pmax pmax
comp=Z,14nm,1.1s
XAN Xi'an 27.11 271 P **P 19 10 18.3 -1.0**
XAN IAmb IAmb 19 10 22.1
comp=Z,14nm,1.1s
SONM Songino Array 27.48 301 P **P 19 10 22.6 +0.1**
comp=Z,3.0nm,0.6s,baz=96,slow=8.3,SNR=14
SONM LR LR 19 20 06.8
comp=Z,97nm,21.0s,baz=58,slow=34
SZP Santa 28.29 228 P **P 19 10 28.3 -1.5**
SZP IAmb IAmb 19 10 56.1
comp=Z,12nm,0.7s
H11N2 WAKE ISLAND Hy 28.45 124 T T 19 40 54.8
baz=316,slow=75,SNR=3707
H11N1 WAKE ISLAND Hy 28.46 124 T T 19 40 55.5
baz=316,slow=75,SNR=4770
H11N3 WAKE ISLAND Hy 28.47 124 T T 19 40 56.1
baz=316,slow=75,SNR=4056
H11S1 WAKE ISLAND Hy 29.22 126 T T 19 41 50.0
baz=318,slow=76,SNR=965
H11S3 WAKE ISLAND Hy 29.23 126 T T 19 41 50.1
baz=318,slow=76,SNR=1359
H11S2 WAKE ISLAND Hy 29.24 126 T T 19 41 51.7
baz=318,slow=76,SNR=1366
TLY Talaya 29.82 309 P **P 19 10 43.4 +0.3**
comp=Z,5.3nm,0.8s,baz=130,slow=6.5,SNR=6.5
TLY LR LR 19 23 12.4
comp=Z,76nm,18.8s,baz=104,slow=38
TLY Talaya 29.82 309 *e*P **P 19 10 43.5 +0.3**
TLY pmax pmax
comp=Z,16nm,0.7s
TLY MLR MLR
comp=Z,104nm,7.0s
TLY Talaya 29.82 309 P **P 19 10 40.8 -2.3**
TLY IAmb IAmb 19 10 44.1
comp=Z,6.6nm,0.7s
ZAK Zakamensk 29.83 306 *e*P **P 19 10 42.5 -0.9**
ZAK pmax pmax
comp=Z,11nm,0.9s
LZH Lanzhou 30.46 277 ⇑P **P 19 10 48.1 -1.0**
LZH pmax pmax
comp=Z,21nm,1.0s
MOY Mondy 31.45 308 *e*P **P 19 10 57.4 -0.2**
GYA Guiyang 32.12 259 ||P **P 19 11 03.4 -0.4**
GYA pmax pmax
comp=Z,18nm,0.7s
CD2 Chengdu 32.33 268 P **P 19 11 04.6 -0.9**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 pmax pmax
comp=Z,350nm,7.5s
BILL Bilibino 32.36 17 *e*P **P 19 11 07.0 +1.7**
BILL *e* 19 12 10.9
BILL *e* 19 13 53.0
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 32.36 17 P **P 19 11 05.3 0.0**
BILL IAmb IAmb 19 11 08.3
comp=Z,9.5nm,1.4s
GTA Gaotai 32.74 285 P **P 19 11 08.8 -0.3**
GTA pP pP 19 11 24.9 +1.3
GTA sP sP 19 11 33.1 +2.7
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,52nm,4.9s
GTA LR LR
comp=Z,93nm,17.1s
GTA LR LR
comp=Z,160nm,18.5s
GTA LR LR
comp=Z,200nm,15.3s
TIXI Tiksi 33.83 352 ||*e*P **P 19 11 19.1 +1.1**
TIXI Tiksi 33.83 352 P **P 19 11 15.5 -2.5**
KMI Kunming 35.84 260 ⇑P **P 19 11 37.4 +1.3**
KMI pmax pmax
comp=Z,14nm,0.8s
KMI pmax pmax
comp=Z,110nm,3.5s
SLVN Son La 37.06 254 P **P 19 11 47.3 +0.9**
SLVN IAmb IAmb 19 11 49.0
comp=Z,5.2nm,1.0s
TNA Tin City 39.20 30 P **P 19 12 06.4 +2.7**
TNA IAmb IAmb 19 12 08.1
comp=Z,7.7nm,0.9s
NONG Nongkai 39.62 250 P P 19 12 16.5 +8.7
UBPT Khong Chiam 39.76 245 P **P 19 12 07.0 -1.9**
UBPT IAmb IAmb 19 12 24.6
comp=Z,6.6nm,1.0s
ANM Nome 39.95 32 P **P 19 12 09.9 -0.1**
ANM pmax pmax
comp=Z,4.0nm,0.6s
ANM Nome 39.95 32 P **P 19 12 09.9 -0.1**
ANM IAmb IAmb 19 12 14.2
comp=Z,4.3nm,0.6s
DGZ Jazzator, Alta 40.01 304 *di*P **P 19 12 11.8 +0.8**
DGZ pmax pmax
comp=Z,29nm,0.8s
SIJI Sorong 40.54 197 LR LR 19 27 06.3
comp=Z,71nm,18.3s,baz=78,slow=33
MANU Manus Island 40.71 172 P **P 19 12 17.6 +0.7**
WMQ Urumqi 40.72 295 P **P 19 12 17.5 +0.7**
WMQ pP pP 19 12 32.5 +0.9
WMQ sP sP 19 12 41.3 +2.9
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ pmax pmax
comp=Z,160nm,5.3s
WMQ Urumqi 40.72 295 P **P 19 12 17.0 +0.2**
WMQ pmax pmax
comp=Z,23nm,0.8s
WMQ Urumqi 40.72 295 P **P 19 12 17.0 +0.2**
ZAA0 Zalesovo Array 41.35 311 P **P 19 12 21.1 -0.6**
ZAA0 IAmb IAmb 19 12 23.2
comp=Z,6.2nm,0.8s
ZALV Zalesovo Beam 41.35 311 P **P 19 12 21.8 +0.1**
comp=Z,6.8nm,0.5s,baz=84,slow=7.7,SNR=45
ZALV LR LR 19 30 15.4
comp=Z,69nm,18.9s,baz=34,slow=37
ZALV Zalesovo Beam 41.35 311 *i*P **P 19 12 21.7 0.0**
ZALV pmax pmax
comp=Z,7.0nm,0.5s
UTTA Uttaradit 41.74 252 P P 19 12 35.1 +10
ZSN Zaisan 41.99 301 *e*P **P 19 12 26.4 -0.8**
comp=Z,17nm,1.0s,baz=301
ZSN Zaisan 41.99 301 *e*P **P 19 12 26.3 -0.8**
ZSN pmax pmax
comp=Z,17nm,1.0s
CM34 Chiang Mai Arr 42.12 255 P P 19 12 35.0 +6.6
NRIK Noril'sk 42.13 334 ||*e*P **P 19 12 27.9 0.0**
NRIK pmax pmax
comp=Z,1.0nm,0.6s
NRIK Noril'sk 42.13 334 P **P 19 12 27.3 -0.6**
CM33 Chiang Mai Arr 42.29 255 P P 19 12 35.0 +5.2
CMMT Chiang Mai 42.29 255 P **P 19 12 34.5 +4.6**
CHTO Chiang Mai 42.30 255 P **P 19 12 29.7 -0.2**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 42.30 255 P **P 19 12 29.7 -0.2**
CHTO IAmb IAmb 19 12 40.3
comp=Z,7.7nm,0.8s
CM09 Chiang Mai Arr 42.48 254 P P 19 12 40.1 +8.8
CM31 Chiang Mai Arr 42.51 254 P P 19 12 37.0 +5.4
CM31 Chiang Mai Arr 42.51 254 P **P 19 12 31.3 -0.3**
CMAR Chiang Mai Arr 42.51 254 P **P 19 12 32.0 +0.4**
comp=Z,2.1nm,0.7s,baz=44,slow=8.1,SNR=7.8
CMAR Chiang Mai Arr 42.51 254 *i*P **P 19 12 33.2 +1.6**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
LSA Lhasa 42.71 274 P **P 19 12 34.3 +0.6**
LSA pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 42.71 274 P **P 19 12 34.3 +0.6**
LSA IAmb IAmb 19 12 40.7
comp=Z,4.5nm,0.6s
MK31 Makanchi Array 43.84 301 *di*P **P 19 12 41.9 -0.2**
MK31 Makanchi Array 43.84 301 P **P 19 12 41.9 -0.2**
MK31 IAmb IAmb 19 12 45.8
comp=Z,6.9nm,0.9s
MKAR Makanchi Array 43.84 301 P **P 19 12 42.0 -0.1**
comp=Z,5.9nm,0.7s,baz=86,slow=9.8,SNR=67
MAKZ Makanchi 44.05 301 P **P 19 12 43.3 -0.5**
MAKZ Makanchi 44.05 301 P **P 19 12 43.3 -0.5**
MAKZ IAmb IAmb 19 12 49.0
comp=Z,6.5nm,0.8s
SHL Shillong 44.07 268 P **P 19 12 43.4 -1.0**
SHL pmax pmax
comp=Z,14nm,0.4s
SHL Shillong 44.07 268 P **P 19 12 43.4 -1.0**
SEM Semipalatinsk 44.51 306 *e*P **P 19 12 46.2 -1.4**
baz=306
SEM Semipalatinsk 44.51 306 *e*P **P 19 12 46.2 -1.4**
A21K Barrow 44.78 24 P **P 19 12 50.9 +1.7**
A21K IAmb IAmb 19 12 52.5
comp=Z,8.3nm,0.8s
KDAK Kodiak Island 45.53 43 P **P 19 12 57.4 +2.1**
comp=Z,6.2nm,0.5s,baz=351,slow=22,SNR=1.7
KURBB Kurchatov Arra 45.56 307 P **P 19 12 54.9 -0.7**
MLY Manley 46.20 33 P **P 19 13 03.9 +3.3**
MLY IAmb IAmb 19 13 04.2
comp=Z,3.6nm,0.7s
TAPN Taplejung 46.47 273 *e*P **P 19 13 03.5 0.0**
comp=Z,20nm,0.7s
COLD Coldfoot 46.49 30 P **P 19 13 05.5 +2.8**
SHLS Shalkode 46.69 297 *e*P **P 19 13 01.7 -3.1**
baz=296
SHLS Shalkode 46.69 297 *e*P **P 19 13 01.7 -3.1**
TOLK Toolik Lake Re 46.80 28 P **P 19 13 04.5 -0.7**
TOLK IAmb IAmb 19 13 09.5
comp=Z,4.8nm,0.9s
TDK Taldyqorghan 46.90 299 *e*P **P 19 13 05.7 -0.7**
baz=299
TDK Taldyqorghan 46.90 299 *e*P **P 19 13 05.6 -0.7**
ODAN Odare 46.96 273 *e*P **P 19 13 07.5 +0.3**
comp=Z,21nm,0.5s
MCK McKinley 46.99 35 P **P 19 13 07.2 +0.4**
MCK pmax pmax
comp=Z,4.0nm,1.0s
MCK McKinley 46.99 35 P **P 19 13 07.2 +0.4**
UZB Uzynbulak 47.00 297 *e*P **P 19 13 06.8 -0.5**
baz=296
UZB Uzynbulak 47.00 297 *e*P **P 19 13 06.8 -0.5**
PMR Palmer 47.01 38 P **P 19 13 08.3 +1.5**
PMR pmax pmax
comp=Z,17nm,1.1s
PMR Palmer 47.01 38 P **P 19 13 08.3 +1.5**
KSM Kuching 47.08 226 P **P 19 13 08.6 +0.6**
KSM IAmb IAmb 19 13 10.0
comp=Z,9.0nm,1.0s
GHO Glory Hole Cre 47.09 37 P **P 19 13 08.1 +0.4**
KPKS Kokpek 47.14 297 *e*P **P 19 13 07.8 -0.6**
baz=297
KPKS Kokpek 47.14 297 *e*P **P 19 13 07.7 -0.6**
CCB Clear Creek Bu 47.46 33 P **P 19 13 13.3 +3.0**
CCB IAmb IAmb 19 13 13.5
comp=Z,5.5nm,1.2s
JIRN Jiri 47.52 274 *e*P **P 19 13 11.8 +0.1**
comp=Z,14nm,0.3s
RAMN Ramite 47.53 273 *e*P **P 19 13 11.4 -0.3**
comp=Z,44nm,0.7s
GUN Gumba 47.64 275 *e*P **P 19 13 12.7 0.0**
comp=Z,23nm,0.4s
IL31 47.85 33 P **P 19 13 15.2 +1.9**
IL31 IAmb IAmb 19 13 16.4
comp=Z,5.1nm,0.6s
ILAR Eielson Array 47.85 33 P **P 19 13 15.5 +2.1**
comp=Z,4.0nm,0.6s,baz=264,slow=6.2,SNR=53
PKI Pulchoki 48.17 275 *e*P **P 19 13 16.2 -0.5**
MDOK Medeo 48.37 297 *e*P **P 19 13 17.6 -0.3**
baz=297
MDOK Medeo 48.37 297 *e*P **P 19 13 17.6 -0.3**
PRP Porcupine Dome 48.38 32 P **P 19 13 20.1 +2.5**
PRP IAmb IAmb 19 13 21.1
comp=Z,3.8nm,0.8s
DMN Daman 48.39 275 *e*P **P 19 13 18.2 -0.1**
comp=Z,8.5nm,0.4s
TNSS Tian-Shan 48.48 297 *e*P **P 19 13 18.7 -0.4**
baz=297
TNSS Tian-Shan 48.48 297 *e*P **P 19 13 18.6 -0.4**
GKN Gorkha 48.57 275 *e*P **P 19 13 19.4 -0.2**
comp=Z,12nm,0.4s
KUU Kurty 48.64 298 *e*P **P 19 13 18.9 -1.0**
comp=Z,7.5nm,0.7s,baz=298
KUU Kurty 48.64 298 *e*P **P 19 13 18.8 -1.0**
KUU pmax pmax
comp=Z,7.0nm,0.7s
DANN Dangsing 49.09 276 *e*P **P 19 13 23.8 0.0**
comp=Z,44nm,0.4s
SCRK Sand Creek 49.17 34 P **P 19 13 24.8 +1.1**
BRZS Berezniki 49.36 307 *e*P **P 19 13 24.4 -0.8**
comp=Z,2.7nm,0.5s,baz=307
BRZS Berezniki 49.36 307 *e*P **P 19 13 24.3 -0.8**
BRZS pmax pmax
comp=Z,3.0nm,0.5s
MENT Mentasta 49.40 35 P **P 19 13 25.8 +0.5**
MENT IAmb IAmb 19 13 41.7
comp=Z,6.8nm,1.0s
KOLN Koldanda 49.49 276 *e*P **P 19 13 26.6 -0.1**
comp=Z,9.4nm,0.3s
HMT Hamilton 49.51 39 P **P 19 13 26.9 +0.8**
PYUN Piuthan 49.81 276 *e*P **P 19 13 29.2 +0.1**
BTLS Baital 49.85 301 *e*P **P 19 13 27.8 -1.2**
baz=300
BTLS Baital 49.85 301 *e*P **P 19 13 27.8 -1.2**
BRVK Borovoye 50.06 312 ||*e*P **P 19 13 30.3 -0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 50.06 312 P **P 19 13 30.5 +0.1**
BRVK IAmb IAmb 19 13 31.8
comp=Z,4.0nm,0.7s
KULM Kulim 50.15 239 P **P 19 13 31.8 +0.3**
KULM IAmb IAmb 19 13 57.0
comp=Z,7.0nm,1.0s
AAK Ala-Archa 50.32 297 *de*P **P 19 13 32.5 -0.2**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 50.32 297 P **P 19 13 31.8 -0.9**
IPM Ipoh 50.49 238 P **P 19 13 33.9 -0.3**
DZA Taraz 52.41 299 *e*P **P 19 13 48.0 -0.3**
comp=Z,5.8nm,0.9s,baz=298
DZA Taraz 52.41 299 *e*P **P 19 13 47.9 -0.3**
DZA pmax pmax
comp=Z,6.0nm,0.9s
INK Inuvik 52.72 28 P **P 19 13 52.7 +2.7**
comp=Z,2.3nm,0.5s,baz=307,slow=6.9,SNR=10
INK Inuvik 52.72 28 P **P 19 13 52.2 +2.2**
INK IAmb IAmb 19 13 53.4
comp=Z,5.6nm,1.1s
KK31 Karatay Array 52.90 299 *i*P **P 19 13 51.3 -0.6**
KK31 Karatay Array 52.90 299 P **P 19 13 51.2 -0.6**
KK31 IAmb IAmb 19 13 52.6
comp=Z,5.3nm,0.8s
KKAR Karatay Array 52.90 299 P **P 19 13 51.1 -0.7**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 52.90 299 P **P 19 13 51.1 -0.7**
KKAR IAmb IAmb 19 13 52.6
comp=Z,5.3nm,0.8s
IUG luzhnay 53.58 298 *e*P **P 19 13 56.7 -0.3**
baz=298
IUG luzhnay 53.58 298 *e*P **P 19 13 56.7 -0.3**
SVE Sverdlovsk 54.41 318 *e*P **P 19 14 03.7 +1.1**
NIL Nilore 54.74 288 P **P 19 14 05.7 +0.3**
NIL pmax pmax
comp=Z,24nm,1.3s
NIL Nilore 54.74 288 P **P 19 14 05.7 +0.3**
GSI Gunungsitoli 55.14 239 P **P 19 14 05.1 -3.3**
ARU Arti 55.62 318 *ci*P **P 19 14 11.7 +0.4**
ARU *PP **pP 19 14 29.2 +2.4**
ARU S **S 19 21 54.7 +2.0**
ARU SS **SS 19 25 34.2 -3.7**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU Arti 55.62 318 P **P 19 14 11.6 +0.2**
ARU IAmb IAmb 19 14 18.8
comp=Z,7.0nm,1.0s
C36M Paulatuk 55.76 25 P **P 19 14 13.1 +1.0**
AB31 Akbulak array 57.43 310 *i*P **P 19 14 24.0 -0.3**
ABKAR Akbulak array 57.43 310 P **P 19 14 23.7 -0.6**
KBL Kabul 57.45 290 P **P 19 14 23.3 -1.7**
KBL pmax pmax
comp=Z,8.0nm,1.2s
KBL Kabul 57.45 290 P **P 19 14 23.3 -1.7**
AKTO Aktyubinsk 58.11 311 P **P 19 14 28.1 -1.0**
FUNA Funafuti 58.15 136 P **P 19 14 30.5 +0.8**
FITZ Fitzroy Crossi 58.49 199 P **P 19 14 29.8 -2.2**
EUNU Eureka 58.56 9 P **P 19 14 32.7 +0.8**
EUNU IAmb IAmb 19 14 55.9
comp=Z,6.6nm,1.5s
WRAB Tennant Creek 58.68 189 ||*e*P **P 19 14 34.1 +0.8**
WRAB pmax pmax
comp=Z,15nm,2.4s
WRAB Tennant Creek 58.68 189 P **P 19 14 30.6 -2.6**
WRA Warramunga Arr 58.69 189 P **P 19 14 34.3 +1.0**
comp=Z,1.9nm,0.5s,baz=6.5,slow=7.2,SNR=20
KIRV Kirov 59.39 323 ||*i*P **P 19 14 38.2 +0.4**
RES Resolute Bay 60.94 15 P **P 19 14 49.4 +1.2**
comp=Z,1.1nm,0.4s,baz=325,slow=4.9,SNR=16
RES Resolute Bay 60.94 15 P **P 19 14 49.1 +0.9**
RES IAmb IAmb 19 15 13.7
comp=Z,2.4nm,0.8s
YKA Yellowknife Ar 62.15 31 P **P 19 14 58.7 +2.2**
comp=Z,1.4nm,0.6s,baz=302,slow=6.5,SNR=20
AS31 Alice Springs 62.41 189 P **P 19 15 00.4 +1.7**
ASAR Alice Springs 62.41 189 P **P 19 15 00.2 +1.5**
comp=Z,1.5nm,0.8s,baz=11,slow=5.9,SNR=13
ASAR pP **pP 19 15 14.3 0.0**
comp=Z,3.3nm,0.7s,baz=359,slow=4.6,SNR=13
HRA Herat 62.47 293 P **P 19 14 57.6 -1.8**
HRA IAmb IAmb 19 15 00.8
comp=Z,3.9nm,0.8s
ARCES ARCESS Array B 62.77 339 P **P 19 15 01.8 +1.2**
comp=Z,2.5nm,0.9s,baz=64,slow=8.2,SNR=6.7
BELG Belogornoye 63.10 317 ||*e*P **P 19 15 04.9 +2.0**
BELG pmax pmax

comp=Z,2.0nm,0.9s
TULEG Thule 63.48 8 P **P** **19 15 04.2 -0.9**
TULEG IAmb IAmb 19 15 06.5
comp=Z,4.0nm,0.7s
GEYT Alibeck 63.64 299 P **P** **19 15 06.9 0.0**
comp=Z,2.5nm,0.5s,baz=4.3,slow=5.9,SNR=5.5
PGC Sidney 64.81 47 P **P** **19 15 14.2 -0.1**
OBN Obninsk 67.23 323 *eP* **P** **19 15 28.4 -1.2**
OBN *e* 19 15 56.3
OBN pmax pmax
comp=Z,3.0nm,1.0s
FINES FINESS Array B 67.73 332 P **P** **19 15 33.1 +0.4**
comp=Z,1.8nm,0.6s,baz=38,slow=9.6,SNR=11
C09A Chrisman Ranch 68.20 46 P **P** **19 15 38.2 +2.3**
D08A Wollman Farm, 68.24 47 P **P** **19 15 37.3 +1.1**
D08A IAmb IAmb 19 15 40.0
comp=Z,6.3nm,1.2s
NEW Newport 68.58 45 P **P** **19 15 38.3 -0.1**
NEW pmax pmax
comp=Z,3.0nm,0.8s
NEW Newport 68.58 45 P **P** **19 15 38.3 -0.1**
YBH Yreka Blue Hor 68.90 53 P **P** **19 15 44.5 +4.0**
comp=Z,2.1nm,0.7s,baz=333,slow=8.3,SNR=4.7
WALA Waterton Lakes 69.87 43 P **P** **19 15 48.5 +2.1**
WALA IAmb IAmb 19 15 50.0
comp=Z,6.8nm,1.3s
STKA Stephens Creek 70.11 181 P **P** **19 15 50.9 +3.1**
comp=Z,0.8nm,0.5s,baz=329,slow=14,SNR=2.9
STKA Stephens Creek 70.11 181 P **P** **19 15 49.5 +1.8**
KIV Kislovodsk 70.36 311 *iP* **P** **19 15 51.1 +1.6**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV Kislovodsk 70.36 311 P **P** **19 15 48.8 -0.7**
KBZ Khabaz 70.37 311 P **P** **19 15 50.5 +1.1**
comp=Z,3.9nm,0.9s,baz=0.1,slow=3.3,SNR=5.1
KBZ Khabaz 70.37 311 *iP* **P** **19 15 50.4 +1.1**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
JTMT Jette 70.44 44 P **P** **19 15 52.2 +2.2**
JTMT IAmb IAmb 19 15 53.9
comp=Z,8.0nm,1.3s
MNK Minsk 71.56 326 *i* P P 19 15 51.4 -5.1
comp=E,1.0nm,0.9s
MNK *i* P P 19 15 51.4 -5.1
comp=N,14nm,1.2s
MNK *i* P P 19 15 51.4 -5.1
comp=Z,6.0nm,0.8s
MNK *i* pP pP 19 16 07.8 -4.6
MNK *i* PcP **PcP** **19 16 12.6 -2.9**
MNK *i* PP **PP** **19 18 29.7 -5.5**
MNK *i* PPP PPP 19 20 13.2
MNK *i* S **S** **19 25 03.5 -7.2**
MNK *i* sS pS 19 25 31.9 +1.4
MNK *i* SS **SS** **19 29 40.4 -5.5**
MNK *i* SSS SSS 19 32 55.6
MNK *i* LQ LQ 19 42 21.8
MNK *i* LR LR 19 47 47.2
MNK *i* LRM MLR 19 50 02.8
comp=Z,45nm,13.0s
MNK *i* LRM MLR 19 50 22.4
comp=N,132nm,19.6s
MNK *i* LRM MLR 19 51 05.8
comp=E,11nm,16.3s
FCC Fort Churchill 72.33 27 P **P** **19 16 02.3 +1.4**
FCC pmax pmax
comp=Z,5.0nm,1.2s
FCC Fort Churchill 72.33 27 P **P** **19 16 02.3 +1.4**
LRM Limekiln Ridge 72.60 45 P **P** **19 16 03.8 +0.7**
NOA NORSAR Array B 73.00 337 P **P** **19 16 06.4 +1.5**
comp=Z,0.7nm,0.7s,baz=37,slow=6.1,SNR=4.5
NOA LR LR 19 51 50.7
comp=Z,30nm,19.1s,baz=20,slow=39
BOZ Bozeman (W) 73.19 45 P **P** **19 16 08.6 +2.1**
BOZ pmax pmax
comp=Z,5.0nm,1.1s
BOZ Bozeman (W) 73.19 45 P **P** **19 16 08.6 +2.1**
BOZ IAmb IAmb 19 16 10.2
comp=Z,5.1nm,1.1s
KVN Kaiserville 73.32 53 P **P** **19 16 07.5 0.0**
KVN pmax pmax
comp=Z,5.0nm,1.1s
KVN Kaiserville 73.32 53 P **P** **19 16 07.5 0.0**
AKASG Malin Array Be 73.45 322 P **P** **19 16 08.1 +0.4**
comp=Z,1.7nm,0.4s,baz=45,slow=6.1,SNR=9.7
AKBB Malin Array Si 73.45 322 *eP* **P** **19 16 06.5 -1.2**
AKBB pmax pmax
comp=Z,13nm,2.0s
LHV Little Huntoon 73.54 54 P **P** **19 16 09.4 +1.0**
LHV IAmb IAmb 19 16 13.4
comp=Z,9.0nm,1.2s
NVAR Mina Array Bea 73.56 54 P **P** **19 16 11.7 +2.8**
comp=Z,0.8nm,0.6s,baz=316,slow=5.0,SNR=5.1
YHH Holmes Hill 74.13 45 P **P** **19 16 11.4 -0.8**
TPH Tonopah 74.45 54 P **P** **19 16 14.4 +0.3**
TPH pmax pmax
comp=Z,34nm,1.2s
TPH Tonopah 74.45 54 P **P** **19 16 14.4 +0.3**
H17A Grant Village 74.53 45 P **P** **19 16 12.5 -2.0**
H17A IAmb IAmb 19 16 20.7
comp=Z,5.6nm,1.1s
FRB Frobisher Bay 75.12 14 P **P** **19 16 18.7 +1.6**
comp=Z,3.6nm,0.4s,baz=330,slow=6.6,SNR=15
TPNV Topopah Spring 75.75 54 P **P** **19 16 22.0 +0.4**
TPNV pmax pmax
comp=Z,4.0nm,1.1s
TPNV Topopah Spring 75.75 54 P **P** **19 16 22.0 +0.4**
BW06 Boulder Array 76.13 46 P **P** **19 16 25.2 +1.4**
PD31 Pinedale Array 76.13 46 P **P** **19 16 25.2 +1.4**
PDAR Pinedale Array 76.13 46 P **P** **19 16 26.1 +2.4**
comp=Z,2.2nm,0.5s,baz=251,slow=0.4,SNR=26
BUR08 Bucovina Ar. S 77.47 322 P **P** **19 16 29.0 -2.0**
RDMU Red Mountain 77.54 48 P **P** **19 16 34.5 +2.8**
Q16A Castle Valley 77.66 50 P **P** **19 16 32.3 -0.1**
Q16A IAmb IAmb 19 16 46.8
comp=Z,10nm,1.4s
PFO Pinyon Flats O 77.66 57 P **P** **19 16 32.2 -0.1**
PFO pmax pmax
comp=Z,27nm,1.3s
PFO Pinyon Flats O 77.66 57 P **P** **19 16 32.2 -0.1**
GAZ Gaziantep 77.78 308 P **P** **19 16 31.6 -1.2**
ULM Lac du Bonnet 77.86 34 P **P** **19 16 33.8 +0.8**
ULM pmax pmax
comp=Z,11nm,1.4s
ULM Lac du Bonnet 77.86 34 P **P** **19 16 33.8 +0.8**
ULM IAmb IAmb 19 16 35.4
comp=Z,11nm,1.4s
SRU San Rafael Swe 77.92 49 P **P** **19 16 32.9 -0.9**
SRU pmax pmax
comp=Z,4.0nm,0.6s
SRU San Rafael Swe 77.92 49 P **P** **19 16 32.9 -0.9**
SRU IAmb IAmb 19 16 37.5
comp=Z,3.8nm,0.6s
RSSD Black Hills 78.25 42 P **P** **19 16 36.5 +1.0**
RSSD pmax pmax
comp=Z,2.0nm,0.7s
RSSD Black Hills 78.25 42 P **P** **19 16 36.5 +1.0**
BRTR Keskin Array B 78.29 312 P **P** **19 16 36.0 +0.3**
comp=Z,1.0nm,0.5s,baz=202,slow=32,SNR=4.9
PV22 Blue Mesa, Par 79.33 49 P **P** **19 16 44.0 +2.5**
PV22 IAmb IAmb 19 16 45.4
comp=Z,7.1nm,1.1s
CKRC Cesky Krumlov 81.49 328 *eP* **P** **19 16 53.5 +0.8**
KHC Kasperske Hory 81.55 329 *eP* **P** **19 16 54.5 +1.5**
KHC pmax pmax
comp=Z,26nm,3.0s
KHC Kasperske Hory 81.55 329 *eP* **P** **19 16 54.0 +1.0**
GERES GERESS Array B 81.72 329 P **P** **19 16 54.6 +0.6**
comp=Z,0.6nm,0.4s,baz=54,slow=6.8,SNR=6.5
ANMO Albuquerque 83.11 50 P **P** **19 17 05.0 +3.3**
comp=Z,1.0nm,0.5s,baz=327,slow=4.5,SNR=3.9
ANMO Albuquerque 83.11 50 *deP* **P** **19 17 04.3 +2.7**
ANMO pmax pmax
comp=Z,4.0nm,1.7s
LIT Litokhoron 84.23 318 P **P** **19 17 06.1 -1.0**
LIT pmax pmax
comp=Z,8.0nm,1.1s
LIT Litokhoron 84.23 318 P **P** **19 17 06.1 -1.0**
LIT IAmb IAmb 19 17 08.4
comp=Z,7.5nm,1.1s
TXAR Lajitas Array 88.68 53 P **P** **19 17 31.7 +2.6**
comp=Z,0.6nm,0.6s,baz=289,slow=3.5,SNR=9.8
VNA2 Neumayer--Watz 143.99 196 PKPdf **PKPdf** **19 24 08.9 -0.5**
VNA2 Neumayer--Watz 143.99 196 PKiKP PKiKP 19 24 24.1 +11
VNA3 Neumayer Olymp 144.23 195 PKPdf **PKPdf** **19 24 11.0 +1.1**
VNA3 Neumayer Olymp 144.23 195 PKiKP PKiKP 19 24 24.7 +11
LPAZ La Paz 145.36 59 PKPbc **PKiKP** **19 24 16.8 -1.4**
comp=Z,1.4nm,0.3s,baz=276,slow=2.8,SNR=6.5
LPAZ La Paz 145.36 59 **PKPab** **19 24 15.7 +1.4**

*NEIC **02** 19:06:27.4±1.5, 46.12N±0.02×106.77W±0.05, h0km±2km, ML3.0/16 Error ellipse: s-maj=5.6km s-min=3.7km az=90.0*
*IDC **02** 19:06:27.4±1.5, 46.01N×107.09W, h0km, mb1 3.3/4, mb1mx3.2/45, mbtmp3.0/4, ML2.9/3, Error ellipse: s-maj=38.3km s-min=9.2km az=128.0*
ISC 02 19:06:25.3±0.9, 46.08N±0.05×106.55W±0.06, h0km, n16, σ0s86/16, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**0.65**	**20**		**Pb**	**19 06 40.1**	**+0.4**
RLMT	**Red Lodge**	**2.13**	**244**		**Pn**	**19 07 02.9**	**+0.5**
RLMT				Sn	**Sn**	**19 07 28.0**	**-1.7**
RLMT				IAML		19 07 31.3	
	106nm,0.4s						
GCMT	**Greycliff**	**2.19**	**264**		**Pn**	**19 07 03.7**	**+0.6**
RSSD	**Black Hills**	**2.64**	**137**	Pn	**Pb**	**19 07 13.4**	**-0.3**
RSSD				Sn	**Sb**	**19 07 47.1**	**+0.3**
RSSD				IAML		19 07 51.5	
	52nm,0.6s						
RSSD				IAML		19 07 54.8	
	45nm,0.5s						
YNE	**Yellowstone No**	**2.65**	**248**	Pn	**Pn**	**19 07 10.7**	**+1.1**
YNE				IAML		19 07 47.5	
	comp=E,86nm,0.5s						
YMP	**Mirror Lake Pl**	**2.87**	**244**		**Pn**	**19 07 13.5**	**+0.9**
EGMT	**Eagleton**	**2.93**	**313**		**Pg**	**19 07 20.6**	**-0.9**
EGMT				IAML		19 08 03.5	
	comp=E,74nm,0.5s						
K22A	**Casper**	**3.42**	**180**	Pn	**Pn**	**19 07 20.6**	**+0.5**
K22A				IAML		19 08 03.2	
	comp=E,30nm,0.6s						
K22A				IAML		19 08 18.7	
	comp=N,38nm,0.9s						
BW06	**Boulder Array**	**3.95**	**214**		**Pn**	**19 07 26.4**	**-0.9**
BW06				IAML		19 08 28.4	
	comp=N,21nm,0.6s						
PD31	**Pinedale Array**	**3.95**	**214**		**Pn**	**19 07 27.4**	**0.0**
PDAR	**Pinedale Array**	**3.95**	**214**	Pn	**Pn**	**19 07 28.4**	**+1.0**
	comp=N,0.6nm,0.3s,baz=42,slow=12,SNR=19						
PDAR				Pg	**Pb**	**19 07 36.8**	**+0.9**
	comp=N,2.6nm,0.3s,baz=40,slow=20,SNR=20						
PDAR				Lg	Lg	19 08 22.1	
	comp=N,2.1nm,0.3s,baz=46,slow=31,SNR=8.5						
NEW	**Newport**	**7.53**	**291**	Lg	Lg	19 10 11.5	
	comp=N,0.2nm,0.3s,baz=240,slow=18,SNR=2.5						
I56US	**NEWPORT INFRAS**	**7.53**	**291**	*i*		19 54 10.0	
	baz=107,slow=332,SNR=2.2						
ULM	**Lac du Bonnet**	**8.27**	**56**	Pn	Pn	19 08 32.0	+5.6
	comp=N,0.3nm,0.3s,baz=232,slow=13,SNR=2.2						
ULM				Lg	Lg	19 10 51.7	
	comp=N,0.3nm,0.3s,baz=356,slow=20,SNR=2.9						
TXAR	**Lajitas Array**	**16.87**	**171**	Pn	**P**	**19 10 25.2**	**+0.1**
	comp=N,0.0nm,0.3s,baz=330,slow=10,SNR=1.8						
YKA	**Yellowknife Ar**	**17.09**	**347**	P	**Pn**	**19 10 25.4**	**+0.1**
	baz=162,slow=13,SNR=1.7						

NEIC 02 19:07:30.1±1.8, 44.1N±0.1×130.5W±0.2, h10km±2km, ML3.6/4, Error ellipse: s-maj=23.5km s-min=20.3km az=219.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**4.61**	**103**	Pn	Pn	19 08 39.8	-0.2
KEBM				IAML		19 09 35.3	
	comp=N,54nm,3.2s						
COR	**Corvallis**	**5.15**	**82**	Pn	Pn	19 08 48.3	+1.1
COR				IAML		19 10 14.8	
	comp=N,34nm,2.6s						
E03A	**Lebam**	**5.44**	**61**	Pn	Pn	19 08 50.8	-0.4
HUMO	**Hull Mountain**	**5.66**	**103**	Pn	Pn	19 08 56.2	+1.9
NLWA	**Neilton Lookou**	**5.66**	**52**	Pn	Pn	19 08 54.0	-0.4
H04A	**Detroit Lake**	**5.95**	**81**	Pn	Pn	19 08 59.5	+1.3
LON	**Longmire**	**6.63**	**63**		Pn	19 09 08.2	+0.5
PGC	**Sidney**	**6.65**	**44**	Pn	Pn	19 09 07.8	0.0
D05A	**Enumclaw**	**6.69**	**59**	Pn	Pn	19 09 09.5	+1.2
PINE	**Pine Mountain**	**6.87**	**89**	Pn	Pn	19 09 11.4	+0.4
LTY	**Liberty**	**7.54**	**62**		Pn	19 09 19.0	-1.1
A05A	**Maple Falls**	**7.57**	**47**	Pn	Pn	19 09 20.1	-0.3
B06A	**Marblemount**	**7.62**	**51**	Pn	Pn	19 09 22.1	+1.0
I07A	**Izee**	**7.88**	**86**	Pn	Pn	19 09 25.0	+0.1
HAWA	**Hanford**	**8.04**	**70**	Pn	Pn	19 09 26.3	-0.6
G08A	**Pilot Rock**	**8.28**	**78**	Pn	Pn	19 09 31.2	+1.0
E08A	**Dider Farm, El**	**8.38**	**69**	Pn	Pn	19 09 30.9	-0.6
D08A	**Wollman Farm,**	**8.61**	**66**	Pn	Pn	19 09 35.5	+0.7
B08A	**Colville Reser**	**8.81**	**57**	Pn	Pn	19 09 38.1	+0.7
C09A	**Chrisman Ranch**	**9.26**	**62**	Pn	Pn	19 09 43.4	-0.2
BMO	**Blue Mountains**	**9.43**	**81**	Pn	Pn	19 09 44.1	-1.9
F10A	**Beech Ranch, E**	**9.55**	**74**	Pn	Pn	19 09 45.6	-2.1
NEW	**Newport**	**10.14**	**61**	Pn	Pn	19 09 55.7	0.0
CCUT	**Cedar City**	**14.48**	**111**	P	P	19 11 02.0	-0.1

*IDC **02** 19:14:46.0±1.9, 5.23S×153.37E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.6/31, mbtmp3.6/10, ML1.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/24, Error ellipse: s-maj=63.3km s-min=20.3km az=121.0*
ISC 02 19:14:51.3±1.7, 5.35S±0.3×153.3E±0.3, h35km, n11, σ0s49/12, mb3.6/9, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.39**	**236**	Pn	**Pn**	**19 16 37.1**	**+0.4**
	0.5nm,0.3s,baz=353,slow=16,SNR=1.8						
PMG				Sn	**Sn**	**19 17 59.4**	**-0.1**
	0.7nm,0.3s,baz=339,slow=21,SNR=2.4						
WRA	**Warramunga Arr**	**23.56**	**230**	P	**P**	**19 19 58.1**	**-0.7**
	0.2nm,0.4s,baz=53,slow=9.7,SNR=1.7						
ASAR	**Alice Springs**	**26.19**	**224**	P	**P**	**19 20 23.4**	**+0.6**
	0.1nm,0.4s,baz=57,slow=9.5,SNR=5.0						
ASAR				LR	LR	19 29 35.2	
	comp=Z,37nm,18.6s,baz=340,slow=34						
FITZ	**Fitzroy Crossi**	**29.92**	**242**	P	**P**	**19 20 55.9**	**-0.4**
	0.5nm,0.4s,baz=46,slow=8.6,SNR=7.6						
PETK	**Petropavlovsk-**	**58.27**	**3**	P	**P**	**19 24 42.1**	**-0.1**
	1.7nm,0.7s,baz=147,slow=5.4,SNR=7.1						
CMAR	**Chiang Mai Arr**	**58.56**	**295**	P	**P**	**19 24 44.9**	**-0.2**
	0.4nm,0.7s,baz=232,slow=27,SNR=4.6						
SONM	**Songino Array**	**67.00**	**328**	P	**P**	**19 25 41.1**	**+0.2**
	0.4nm,0.8s,baz=110,slow=7.8,SNR=2.5						
MKAR	**Makanchi Array**	**81.03**	**319**	P	**P**	**19 27 03.6**	**+0.9**
	0.3nm,0.5s,baz=88,slow=8.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**81.83**	**326**	P	**P**	**19 27 06.3**	**-0.5**
	1.3nm,0.5s,baz=120,slow=6.4,SNR=9.4						
ILAR	**Eielson Array**	**82.38**	**22**	P	**P**	**19 27 09.5**	**+0.1**
	0.3nm,0.9s,baz=243,slow=6.0,SNR=1.4						
TORD	**Torodi Ar. Bea**	**150.96**	**288**	PKPbc	**PKPbc**	**19 34 41.4**	**-0.2**
	1.2nm,0.7s,baz=55,slow=2.2,SNR=7.5						

*IDC **02** 19:23:34.4±1.6, 27.51S×73.08E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.8/37, mbtmp4.0/7, MS3.7/4, Ms1 3.6/4, ms1mx3.1/28, Error ellipse: s-maj=49.2km s-min=28.4km az=34.0*
*NEIC **02** 19:23:35.6±1.6, 27.6S×0.1×73.1E±0.2, h10km±2km, mb4.4/10, Error ellipse: s-maj=30.5km s-min=13.8km az=120.0*
ISC 02 19:23:35.8±1.5, 27.6S±0.3×73.2E±0.2, h10km, n26, σ0s74/17, mb4.3/12, MS3.7/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**19.84**	**358**	T	T	19 48 22.5	
	baz=179,slow=76,SNR=35						
H08S1	**Diego Carcia H**	**19.84**	**358**	T	T	19 48 15.7	
	baz=179,slow=76,SNR=16						
H08S3	**Diego Garcia H**	**19.86**	**358**	T	T	19 48 17.2	
	baz=179,slow=76,SNR=34						
H01W2	**Cape Leeuwin H**	**35.59**	**112**	T	T	20 08 05.3	
	baz=271,slow=74,SNR=6.4						
H01W3	**Cape Leeuwin H**	**35.60**	**112**	T	T	20 08 13.5	
	baz=271,slow=74,SNR=6.8						
H01W1	**Cape Leeuwin H**	**35.61**	**112**	T	T	20 08 12.1	
	baz=271,slow=74,SNR=7.2						
MAW	**Mawson**	**40.53**	**186**	LR	LR	19 43 21.9	
	comp=Z,186nm,19.9s,baz=248,slow=29						
BOSA	**Boshof**	**42.05**	**257**	LR	LR	19 45 44.7	
	comp=Z,89nm,18.6s,baz=168,slow=32						
CMAR	**Chiang Mai Arr**	**52.15**	**32**	P	**P**	**19 32 47.3**	**+0.7**
	2.0nm,0.7s,baz=215,slow=8.0,SNR=19						
ASAR	**Alice Springs**	**54.44**	**100**	P	**P**	**19 33 03.9**	**+0.2**
	0.7nm,0.7s,baz=250,slow=6.3,SNR=7.3						
WRA	**Warramunga Arr**	**56.03**	**96**	P	**P**	**19 33 16.2**	**+1.1**
	1.2nm,0.8s,baz=253,slow=7.6,SNR=11						
WRAB	**Tennant Creek**	**56.05**	**96**	P	**P**	**19 33 15.6**	**+0.3**
WRAB				IAmb	IAmb	19 33 37.9	
	comp=Z,9.5nm,1.5s						
WB0	**Warramunga Arr**	**56.14**	**96**	P	**P**	**19 33 15.1**	**-0.9**
WR0	**Warramunga Arr**	**56.21**	**96**	P	**P**	**19 33 15.6**	**-0.8**
KK31	**Karatay Array**	**70.38**	**358**	P	**P**	**19 34 49.5**	**-0.3**
KK31				IAmb	IAmb	19 34 51.4	
	comp=Z,2.7nm,1.0s						
KKAR	**Karatay Array**	**70.38**	**358**	P	**P**	**19 34 49.9**	**+0.1**
KKAR				IAmb	IAmb	19 34 51.4	
	comp=Z,2.7nm,1.0s						
MAKZ	**Makanchi**	**74.47**	**6**	P	**P**	**19 35 12.9**	**-1.2**
MK31	**Makanchi Array**	**74.49**	**6**	P	**P**	**19 35 13.0**	**-1.2**
MK31				IAmb	IAmb	19 35 14.4	
	comp=Z,3.5nm,0.9s						
MKAR	**Makanchi Array**	**74.49**	**6**	P	**P**	**19 35 13.5**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=190,slow=6.6,SNR=46						
ABKAR	**Akbulak array**	**77.40**	**351**	P	**P**	**19 35 30.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**80.17**	**290**	P	**P**	**19 35 47.1**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=132,slow=5.6,SNR=2.7						
SONM	**Songino Array**	**80.80**	**22**	P	**P**	**19 35 50.0**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=189,slow=6.3,SNR=4.5						
ZAA0	**Zalesovo Array**	**81.82**	**7**	P	**P**	**19 35 54.2**	**-0.5**
ZAA0				IAmb	IAmb	19 35 54.8	
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**81.82**	**7**	P	**P**	**19 35 54.2**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=188,slow=4.6,SNR=12						
ZALV				LR	LR	20 10 41.9	
	comp=Z,21nm,19.0s,baz=170,slow=35						
KSRS	**Korea Array**	**82.61**	**41**	LR	LR	20 11 43.1	
	comp=Z,33nm,18.3s,baz=180,slow=35						
YKA	**Yellowknife Ar**	**144.72**	**6**	PKP	**PKPdf**	**19 43 11.6**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=347,slow=3.4,SNR=14						

*DJA **02** 19:28:46.4±0.4, 1.3S×6.3×13.6E±, h10km, M3.1/4, MLv3.1/4*
*IDC **02** 19:28:47.2±3.2, 1.70S×136.37E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/21, mbtmp3.1/3, ML2.8/1, Error ellipse: s-maj=148.3km s-min=17.3km az=81.0*
ISC 02 19:28:45.7±1.6, 1.5S±0.1×135.66E±0.08, h10km, n6, σ0s97/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	**0.52**	**60**	P	**Pn**	**19 28 58.8**	**-0.4**
SRPI	**Serui, Papua**	**0.71**	**125**	P	**Pn**	**19 29 01.0**	**-0.8**
SRPI				S	**Sn**	**19 29 12.7**	**-0.2**
FAKI	**Fak Fak**	**3.71**	**247**	P	**Pn**	**19 29 42.3**	**-0.8**
WRA	**Warramunga Arr**	**18.42**	**184**	P	**Pn**	**19 33 01.9**	**+0.5**
	0.0nm,0.3s,baz=5.0,slow=12,SNR=4.8						
ASAR	**Alice Springs**	**22.14**	**184**	P	**P**	**19 33 42.9**	**+1.0**
	0.3nm,0.5s,baz=8.1,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**66.95**	**323**	P	P	19 39 45.7	+7.1
	0.2nm,0.6s,baz=104,slow=6.1,SNR=2.3						

JMA 02 19:31:45.5, 38.61N×142.01E, h51km±1km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKMT	**Kesennumamotoy**	**0.47**	**296**	P	Pn	19 31 56.4	0.0
JKMT				S	Sn	19 32 04.0	-0.2
JIKH	**Ishinomakikobu**	**0.52**	**235**	P	Pn	19 31 57.0	-0.1
JIKH				S	Sn	19 32 05.0	-0.4
OFUJ	**Ofunato**	**0.54**	**331**	P	Pn	19 31 57.3	0.0
OFUJ				S	Sn	19 32 05.7	-0.1
JIO	**Ouri**	**0.54**	**254**	P	Pn	19 31 57.2	-0.1
JIO				S	Sn	19 32 05.3	-0.5
JMK	**Ichinoseki**	**0.71**	**299**	P	Pn	19 31 59.4	+0.1
JOM	**Ohasama**	**1.03**	**327**	P	Pn	19 32 03.9	+0.3
JOM				S	Sn	19 32 17.8	+0.8
JOU	**Okura**	**1.08**	**257**	P	Pn	19 32 04.5	+0.1
JOU				S	Sn	19 32 18.4	0.0
JMM	**Marumori**	**1.21**	**233**	P	Pn	19 32 05.7	-0.4
JMM				*e*S	Sn	19 32 20.8	-0.6
JYK	**Kaneyama**	**1.33**	**284**	P	Pn	19 32 07.9	+0.2
JRG	**Rokugo**	**1.33**	**307**	P	Pn	19 32 08.0	+0.3
JFK	**Kawauchi**	**1.53**	**216**	P	Pn	19 32 10.4	-0.1
MAT	**Matsushiro**	**3.66**	**237**	P	Pn	19 32 41.6	+2.0
MAT				S	Sn	19 33 25.0	+3.5

*ISK **02** 19:33:26.6, 41.94N×42.17E, h9km, ML3.0/7*
*DDA **02** 19:33:27.8, 41.87N×42.16E, h7km±2km, ML2.4*
*TIF **02** 19:33:27.1, 41.92N×42.17E, h15km±1km*
*MOS **02** 19:33:27.9±0.0, 41.97N×42.16E, h2km, MPVA3.5*
*NORS **02** 19:33:28.3±0.0, 41.96N×42.22E, h1km, MPVA3.6*
ISC 02 19:33:27.4±1.0, 41.91N±0.02×42.21E±0.02, h3km±9km, n49, σ0s82/94, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABS	**Abastumani**	**0.47**	**109**	P	**Pb**	**19 33 38.0**	**-0.5**
ABS				S	**Sb**	**19 33 45.9**	**0.0**
EPOS	**Posof**	**0.56**	**136**	*i* P	**Pg**	**19 33 38.5**	**+0.3**
EPOS				*i* S	**Sb**	**19 33 47.3**	**-1.1**
EPOS				IAML		19 33 51.0	
	comp=N,94nm,0.8s						
DBOC	**Borcka**	**0.70**	**216**	*i* P	**Pg**	**19 33 40.9**	**+0.1**
DBOC				IAML	**S**	**19 33 51.0**	**+1.2**
	comp=E,302nm,0.1s						
DBOC				*i* S	**S**	**19 33 51.0**	**+1.2**
TKB	**Tkibuli**	**0.73**	**53**	P	**Pb**	**19 33 42.1**	**-0.7**
TKB				S	**Sb**	**19 33 52.3**	**-0.9**
HOPA	**Hopa-Artvin**	**0.78**	**228**	PG	**Pg**	**19 33 41.9**	**-0.4**
CHVG	**Ch'k'valeri**	**0.81**	**353**	P	**Pg**	**19 33 43.1**	**+0.1**
CHVG				S	**Sb**	**19 33 55.7**	**+0.1**
DBAD	**Bademkaya**	**0.97**	**204**	*i* P	**Pg**	**19 33 45.8**	**-0.2**
DBAD				*i* S	**Sg**	**19 33 58.7**	**0.0**
DBAD				IAML		19 34 02.0	
	comp=N,166nm,0.3s						
DBAD				IAML		19 34 02.0	
	comp=E,173nm,0.4s						
BKRG	**Bakuriani**	**0.99**	**98**	P	**Pb**	**19 33 47.2**	**-0.1**
BKRG				S	**Sn**	**19 34 02.0**	**-0.9**
AKH	**Akhalkalaki**	**1.08**	**117**	P	**Pb**	**19 33 48.8**	**-0.1**
AKH				S	**Sn**	**19 34 04.4**	**-0.8**
AKH	**Akhalkalaki**	**1.08**	**117**	PN	**Pb**	**19 33 48.7**	**-0.1**
AKH				SN	**Sb**	**19 34 04.1**	**+0.7**
ONI	**Oni**	**1.14**	**53**	P	**Pb**	**19 33 49.4**	**-0.5**
ONI				S	**Sb**	**19 34 05.2**	**+0.1**
ONI	**Oni**	**1.14**	**53**	*i* Pg	**Pb**	**19 33 49.2**	**-0.7**
ONI				*i* Sg	**Sb**	**19 34 05.1**	**-0.1**
BGD	**Bogdanovka**	**1.22**	**121**	P	**Pn**	**19 33 51.3**	**-0.3**
BGD				S	**Sn**	**19 34 08.9**	**+0.2**
SENK	**Senkaya-Erzuru**	**1.35**	**176**	PN	**Pg**	**19 33 52.8**	**-0.5**
SENK				SN	**Sn**	**19 34 11.8**	**-0.1**
CHOM	**Cayeli-Rize**	**1.36**	**234**	PN	**Pg**	**19 33 52.2**	**-1.3**
CHOM				SN	**Sg**	**19 34 10.5**	**-0.6**
CHAY	**Cayeli-Rize**	**1.39**	**234**	PN	**Pn**	**19 33 52.5**	**-1.2**
NEY	**Neytrino**

MTEO	**Meteo**	**1.89**	**65**	P		**Pb**	**19 34 02.4**	**-0.4**
MTEO				S		**Sg**	**19 34 27.6**	**-0.4**
KBZ	**Khabaz**	**1.89**	**15**	*e*Pg		**Pn**	**19 34 01.1**	**+0.6**
KBZ				*e*Sg		**Sb**	**19 34 26.4**	**0.0**
PNSH	**Pansheti**	**1.93**	**67**	P		**Pb**	**19 34 02.8**	**-0.5**
PNSH				S		**Sg**	**19 34 27.9**	**-1.3**
KOPR	**Koprukoy-ERZUR**	**1.94**	**188**	PN		**Pn**	**19 34 01.1**	**-0.3**
BTNK	**Botanikuri**	**1.95**	**96**	P		**Pb**	**19 34 03.3**	**-0.2**
BTNK				S		**Sg**	**19 34 29.4**	**-0.6**
ARNR	**Ardon**	**1.99**	**50**	*e*Pg		**Pg**	**19 34 05.0**	**-0.5**
ARNR				*e*Sg		**Sb**	**19 34 28.9**	**-0.6**
STDR	**Stavd-Durt**	**2.00**	**42**	*e*Pg		**Pg**	**19 34 05.6**	**-0.1**
STDR				*e*Sg		**Sg**	**19 34 32.3**	**+0.7**
KIV	**Kislovodsk**	**2.07**	**9**	*e*Pg		**Pn**	**19 34 02.0**	**-1.2**
KIV				*e*Sg		**Sb**	**19 34 31.0**	**-1.0**
KIV	**Kislovodsk**	**2.07**	**9**	PN		**Pn**	**19 34 02.1**	**-1.1**
KIV0	**Kislovodsk Arr**	**2.08**	**10**	*e*Pg		**Pg**	**19 34 06.4**	**-0.8**
KIV0				*e*Sg		**Sb**	**19 34 32.4**	**+0.4**
BEYR	**Belyy Ugol+**	**2.15**	**12**	*e*Pg		**Pb**	**19 34 06.8**	**-0.2**
BEYR				*e*Sg		**Sb**	**19 34 34.7**	**+0.7**
BAYB	**BAYBURT**	**2.21**	**223**	*i* P		**Pn**	**19 34 06.3**	**+1.1**
BAYB				*i* S		**Sn**	**19 34 35.1**	**+1.9**
BAYB				IAML			19 34 37.0	
	comp=E,36nm,0.4s							
BAYB				IAML			19 34 40.0	
	comp=N,28nm,0.4s							
VSLR	**Vesyoloye**	**2.23**	**315**	*e*Pg		**Pn**	**19 34 06.1**	**+0.8**
VSLR				*e*Sg		**Sn**	**19 34 32.9**	**-0.5**
RPOR	**Krasnaya Polya**	**2.29**	**322**	*e*Pg		**Pn**	**19 34 06.3**	**+0.1**
RPOR				*e*Sg		**Sn**	**19 34 35.6**	**+0.7**
AHMR	**Akhmetovskaya**	**2.41**	**340**	*e*Pn		**Pb**	**19 34 10.0**	**-1.3**
AHMR				*e*Sn		**Sn**	**19 34 38.2**	**+0.5**
TASB	**TASBURUN-IGDIR**	**2.46**	**141**	PN		**Pn**	**19 34 08.9**	**+0.4**
SOC	**Sochi**	**2.49**	**313**	*e*Pn		**Pn**	**19 34 09.5**	**+0.7**
SOC				*e*Sn		**Sn**	**19 34 39.1**	**-0.5**
GUZR	**Guzeripl'**	**2.59**	**324**	*e*Pn		**Pn**	**19 34 10.3**	**0.0**
GUZR				*e*Sn		**Sn**	**19 34 43.6**	**+1.3**
ALER	**Alexandrovskoy**	**2.90**	**10**	*e*Pn		**Pb**	**19 34 18.3**	**-1.4**
ALER				*e*Sn		**Sn**	**19 34 51.5**	**+1.7**
DDFL	**Dedoflistskaro**	**2.96**	**98**	P		**Pb**	**19 34 18.4**	**-2.5**
DDFL				S		**Sg**	**19 35 02.2**	**-0.3**
LGD	**Lagodekhi**	**3.01**	**90**	P		**Pn**	**19 34 18.4**	**+2.4**
LGD				S		**Sb**	**19 34 57.4**	**-1.4**

IDC ***02*** *19:41:42.0±1.4, 10˚.40S×123˚.98E, h0km, mb3.2/1, mb1 3.3/3, mb1mx3.2/21, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=109.7km s-min=14.9km az=52.0*
DJA ***02*** *19:41:47.4±1.1, 10˚.5±.6˚×12˚.4E±˚, h10km, M2.8/4, MLv2.8/4*
ISC 02 19:41:42.6±1.0**, 10˚.64S**±0˚.07×**123˚.81E**±0˚.08**, h10**km**, n7,** σ1ᵍ**71**/13**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.46**	**342**	P	**Pg**	**19 41 50.7**	**-0.9**
BATI				S	**Sg**	**19 41 55.9**	**-1.7**
SOEI	**Soe**	**0.99**	**27**	P	**Pn**	**19 42 04.3**	**+1.6**
SOEI				S	**Sn**	**19 42 17.1**	**+0.2**
MMRI	**Maumere**	**2.52**	**322**	P	**Pn**	**19 42 24.9**	**+1.1**
MMRI				S	**Sn**	**19 42 54.3**	**-0.3**
EDFI	**Ende, Flores**	**2.81**	**312**	P	**Pn**	**19 42 28.8**	**+1.0**
EDFI				S	**Sn**	**19 43 02.0**	**+0.2**
WRA	**Warramunga Arr**	**13.73**	**134**	Pn	**Pn**	**19 44 58.9**	**+1.3**
	0.1nm,0.3s,baz=315,slow=16,SNR=6.0						
WRA				Sn	**Sn**	**19 47 27.2**	**-3.1**
	0.2nm,0.3s,baz=306,slow=18,SNR=6.3						
ASAR	**Alice Springs**	**16.14**	**145**	Pn	**Pn**	**19 45 31.6**	**+1.8**
	0.1nm,0.3s,baz=321,slow=13,SNR=2.6						
ASAR				Sn	**Sn**	**19 48 26.5**	**-2.4**
	0.1nm,0.3s,baz=319,slow=22,SNR=2.1						
MKAR	**Makanchi Array**	**68.14**	**331**	P	**P**	**19 52 43.2**	**+0.3**
	0.1nm,0.5s,baz=143,slow=6.6,SNR=2.7						

NEIC ***02*** *19:51:02.1±0.8, 54˚.49N±0˚.03×162˚.03W±0˚.04, h36km±.55km, Error ellipse: s-maj=5.4km s-min=1.3km az=218.0*
AEIC 02 19:51:02±0.9**, 54˚.56N**±0˚.05×**162˚.2W**±0˚.1**, h42**km±.9km**, ML2.6**/38**, Error ellipse: s-maj=11.5km s-min=2.7km az=131.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.41**	**351**		Pn	19 51 12.8	+1.0
DRIA					Sn	19 51 20.4	+1.8
DT1	**Dutton Round H**	**0.56**	**353**		Pn	19 51 14.1	+0.5
DT1					Sn	19 51 22.9	+1.1
BALA	**Baldy Mountain**	**0.73**	**331**		Pn	19 51 17.1	+1.2
BALA					Sn	19 51 28.6	+2.6
HAG	**Hague Volcano**	**0.78**	**11**		Pn	19 51 17.5	+0.9
HAG					Sn	19 51 28.9	+1.9
FALS	**False Pass**	**0.79**	**293**		Pn	19 51 17.2	+0.5
FALS					Sn	19 51 28.6	+1.3
PS4A	**Pavlof South-4**	**0.81**	**12**		Pn	19 51 17.7	+0.7
PS4A					Sn	19 51 29.5	+1.6
PVV	**Pavlof Volcano**	**0.85**	**14**		Pn	19 51 18.0	+0.6
PVV					Sn	19 51 30.2	+1.5
PS1A	**Pavlof South-1**	**0.90**	**15**		Pn	19 51 19.1	+1.0
PS1A					Sn	19 51 31.1	+1.2
BRPK	**Brown Peak**	**0.93**	**276**		Pn	19 51 19.3	+0.7
BRPK					Sn	19 51 32.2	+1.6
SSLS	**Shishaldin Sou**	**1.08**	**279**		Pn	19 51 21.9	+1.2
SSLN	**Shishaldin Nor**	**1.10**	**284**		Pn	19 51 22.3	+1.4
BLHA	**Black Hill**	**1.15**	**3**		Pn	19 51 22.7	+1.1
BLHA					Sn	19 51 37.6	+1.4
SSLW	**Shishaldin Wes**	**1.16**	**281**		Pn	19 51 22.9	+1.1
SSLW					Sn	19 51 39.0	+2.5
SSBA	**Shishaldin**	**1.16**	**282**		Pn	19 51 22.8	+1.0
SDPT	**Sand Point**	**1.25**	**50**		Pn	19 51 23.7	+0.7
WECS	**Westdahl Cape**	**1.53**	**270**		Pn	19 51 28.3	+1.5
AKSA	**Akutan Strait**	**2.12**	**260**		Pn	19 51 36.3	+1.5
AKSA					Sn	19 52 02.8	+2.9
AKLV	**Akutan Long Va**	**2.26**	**261**		Pn	19 51 37.9	+1.1
ZRO	**Akutan Zero**	**2.29**	**260**		Pn	19 51 38.5	+1.3
MNAT	**Makushin Natee**	**2.74**	**258**		Pn	19 51 44.3	+0.9
MNAT					Sn	19 52 15.8	+0.4
CHGN	**Chignik**	**2.76**	**49**		Pn	19 51 41.7	-1.9
MSW	**Makushin Switc**	**2.79**	**259**		Pn	19 51 45.2	+1.0
MGOD	**Makushin Gods**	**2.88**	**257**		Pn	19 51 46.5	+1.2
MAPS	**Pakushin South**	**2.91**	**257**		Pn	19 51 46.8	+1.0
MAPS					Sn	19 52 21.1	+1.7

NEIC ***02*** *20:05:21.9±1.5, 43˚.78N±0˚.05×105˚.26W±0˚.06, h0km±2km, ML3.3/64, Error ellipse: s-maj=8.8km s-min=6.6km az=145.0*
IDC ***02*** *20:05:21.9±1.0, 43˚.85N×105˚.54W, h0km, mb3.8/2, mb1 3.6/6, mb1mx3.4/50, mbtmp3.5/6, ML3.4/4, Error ellipse: s-maj=22.6km s-min=8.6km az=145.0*
ISC 02 20:05:21.8±0.7**, 43˚.77N**±0˚.04×**105˚.30W**±0˚.05**, h0**km**, n76,** σ1ᵍ**12**/76**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**68**	Pg	**Pg**	**20 05 40.4**	**-0.2**
K22A	**Casper**	**1.43**	**219**	Pn	**Pn**	**20 05 48.0**	**-1.1**
K22A				IAML		20 06 12.7	
	comp=N,471nm,0.3s						
K22A				IAML		20 06 19.2	
	comp=E,322nm,0.3s						
PHWY	**Pilot Hill**	**2.46**	**183**		**Pn**	**20 06 04.0**	**+0.5**
RWWY	**Rawlins**	**2.51**	**215**		**Pn**	**20 06 05.5**	**+1.5**
LAO	**LASA Array**	**3.00**	**348**		**Pn**	**20 06 10.9**	**+0.3**
RLMT	**Red Lodge**	**3.15**	**297**	Pn	**Pn**	**20 06 13.5**	**+0.7**
RLMT				IAML		20 07 06.8	
	comp=E,60nm,0.7s						
RLMT				IAML		20 07 09.6	
	comp=E,65nm,0.6s						
BW06	**Boulder Array**	**3.27**	**254**		**Pn**	**20 06 14.8**	**+0.3**
BW06				IAML		20 07 12.9	
	comp=E,52nm,0.7s						
PD31	**Pinedale Array**	**3.27**	**254**		**Pn**	**20 06 15.2**	**+0.7**
PDAR	**Pinedale Array**	**3.27**	**254**	Pn	**Pn**	**20 06 15.1**	**+0.7**
	comp=E,5.3nm,0.3s,baz=68,slow=16,SNR=89						
PDAR				Lg	Lg	20 07 00.4	
	comp=E,13nm,0.3s,baz=264,slow=14,SNR=5.8						
YNE	**Yellowstone No**	**3.59**	**292**		**Pn**	**20 06 18.8**	**-0.1**
YNE				IAML		20 07 16.7	
	comp=E,64nm,1.7s						
YNE				IAML		20 07 17.3	
	comp=N,67nm,0.7s						
YMP	**Mirror Lake Pl**	**3.62**	**287**		**Pn**	**20 06 19.6**	**+0.2**
YMP				IAML		20 07 18.7	
	comp=E,86nm,0.7s						
GCMT	**Greycliff**	**3.71**	**305**		**Pn**	**20 06 21.0**	**+0.6**
OGNE	**Ogallala**	**3.72**	**138**	Pn	**Pn**	**20 06 20.8**	**+0.3**
LKWY	**Lake**	**3.75**	**284**		**Pn**	**20 06 21.8**	**+0.6**
LKWY				IAML		20 06 48.9	
	comp=E,61nm,0.5s						
LKWY				IAML		20 08 44.5	
	comp=E,60nm,0.5s						
LOHW	**Long Hollow**	**3.85**	**270**		**Pn**	**20 06 23.9**	**+1.5**
H17A	**Grant Village**	**3.85**	**281**		**Pn**	**20 06 24.2**	**+1.7**
FLWY	**Flagg Ranch**	**3.91**	**277**	Pn	**Pn**	**20 06 24.2**	**+0.9**
FLWY				IAML		20 07 36.1	
	comp=E,38nm,1.0s						
FLWY				IAML		20 07 37.9	
	comp=E,33nm,0.8s						
ISCO	**Idaho Springs**	**3.97**	**183**	Pn	**Pn**	**20 06 24.7**	**+0.5**
SNOW	**Snow King Moun**	**3.97**	**268**		**Pn**	**20 06 23.2**	**-1.0**
SNOW				IAML		20 07 40.0	
	comp=E,42nm,0.8s						
SNOW				IAML		20 07 50.8	
	comp=E,39nm,0.8s						
YNR	**Norris Junctio**	**3.98**	**286**		**Pn**	**20 06 24.1**	**-0.2**
YPP	**Pitchstone Pla**	**4.00**	**279**		**Pn**	**20 06 24.9**	**+0.3**
REDW	**Red Top Meadow**	**4.05**	**266**		**Pn**	**20 06 25.9**	**+0.7**
REDW				IAML		20 07 38.0	
	comp=E,50nm,0.8s						
REDW				IAML		20 07 42.9	
	comp=E,34nm,0.8s						
YHH	**Holmes Hill**	**4.11**	**286**		**Pn**	**20 06 27.5**	**+1.4**
YMR	**Madison River**	**4.17**	**284**		**Pn**	**20 06 27.2**	**+0.4**
YMR				IAML		20 07 45.7	
	comp=E,33nm,0.9s						
YMR				IAML		20 07 53.5	
	comp=N,37nm,0.8s						
O20A	**White River Ci**	**4.24**	**212**	Pn	**Pn**	**20 06 27.2**	**-0.6**
O20A				IAML		20 07 40.3	
	comp=E,48nm,0.8s						
O20A				IAML		20 07 40.6	
	comp=N,41nm,0.8s						
YHB	**Horse Butte**	**4.35**	**285**		**Pn**	**20 06 29.4**	**+0.1**
YHB				IAML		20 07 44.2	
	comp=N,20nm,1.1s						
AHID	**Auburn Hatcher**	**4.35**	**259**		**Pn**	**20 06 29.0**	**-0.4**
AHID				IAML		20 07 51.1	
	comp=N,48nm,0.7s						
AHID				IAML		20 07 56.3	
	comp=E,32nm,1.0s						
YHL	**Hebgen Lake**	**4.36**	**286**		**Pn**	**20 06 30.7**	**+1.2**
YHL				IAML		20 07 44.1	
	comp=N,22nm,1.1s						
YHL				IAML		20 07 49.2	
	comp=E,30nm,1.0s						
ECR	**Eagle Creek**	**4.48**	**263**		**Pn**	**20 06 30.1**	**-1.0**
RDMU	**Red Mountain**	**4.50**	**226**		**Pb**	**20 06 44.9**	**+3.2**
RDMU				IAML		20 07 49.3	
	comp=N,24nm,0.9s						
RDMU				IAML		20 08 05.8	
	comp=E,32nm,0.8s						
QLMT	**Earthquake Lak**	**4.53**	**286**		**Pn**	**20 06 34.2**	**+2.5**
SMCO	**Snowmass**	**4.75**	**196**		**Pb**	**20 06 48.6**	**+2.4**
SMCO				IAML		20 07 27.0	
	comp=E,26nm,1.3s						
DGMT	**Dagmar**	**4.77**	**9**		**Pn**	**20 06 33.9**	**-1.0**
BOZ	**Bozeman (W)**	**4.87**	**294**		**Pn**	**20 06 35.7**	**-0.7**
BOZ				IAML		20 07 55.4	
	comp=E,20nm,1.0s						
BOZ				IAML		20 07 55.4	
	comp=E,14nm,1.0s						
K31A	**O'Neill**	**4.92**	**101**		**Pn**	**20 06 36.5**	**-0.4**
HWUT	**Hardware Ranch**	**5.09**	**247**		**Pn**	**20 06 40.4**	**+0.9**
HWUT				IAML		20 08 08.8	
	comp=E,23nm,1.0s						
HWUT				IAML		20 08 20.6	
	comp=E,18nm,0.7s						
KSCO	**Kaye Shedlock˚**	**5.16**	**156**	Pn	**Pn**	**20 06 40.2**	**-0.1**
EGMT	**Eagleton**	**5.27**	**325**	Pn	**Pn**	**20 06 41.5**	**-0.4**
DLMT	**Dillon**	**5.45**	**290**	Pg	**Pb**	**20 07 00.9**	**+3.0**
HRY	**Holter Researc**	**5.47**	**305**		**Pn**	**20 06 44.3**	**-0.4**
LRM	**Limekiln Ridge**	**5.49**	**294**		**Pn**	**20 06 43.1**	**-1.9**
MCMT	**McKenzie Canyo**	**5.52**	**284**		**Pn**	**20 06 44.4**	**-1.1**
JLU	**Jordanelle**	**5.55**	**237**		**Pn**	**20 06 45.4**	**-0.5**
BGNE	**Belgrade**	**5.78**	**112**	Pn	**Pn**	**20 06 48.2**	**-0.5**
HVU	**Hansel Valley**	**5.85**	**253**		**Pn**	**20 06 50.3**	**+0.4**
BCYI	**Bear Canyon**	**5.87**	**278**	Pn	**Pn**	**20 06 49.6**	**-0.6**
PV07	**Paradox Valley**	**5.89**	**207**	Pn	**Pn**	**20 06 51.5**	**+1.1**
P17A	**Butcher Ranch,**	**5.92**	**225**		**Pn**	**20 06 51.9**	**+1.1**
PV15	**Paradox Valley**	**5.93**	**205**		**Pn**	**20 06 51.4**	**+0.4**
PV04	**Paradox Valley**	**6.02**	**208**		**Pn**	**20 06 51.8**	**-0.4**
MPU	**Maple Canyon**	**6.03**	**234**	Pg	**Pg**	**20 07 14.7**	**-2.6**
PV14	**Lion Creek, Pa**	**6.08**	**209**	Pn	**Pn**	**20 06 53.1**	**0.0**
SRU	**San Rafael Swe**	**6.08**	**222**		**Pn**	**20 06 53.8**	**+0.7**
PV20	**West Nyswonger**	**6.08**	**208**	Pn	**Pn**	**20 06 53.5**	**+0.3**
PV11	**David Mesa, Pa**	**6.09**	**208**	Pn	**Pn**	**20 06 52.3**	**-0.9**
PV16	**Nyswonger Mesa**	**6.09**	**208**		**Pn**	**20 06 53.1**	**-0.2**
PV03	**Paradox Valley**	**6.12**	**207**	Pn	**Pn**	**20 06 54.4**	**+0.7**
PV02	**Paradox Valley**	**6.13**	**206**	Pn	**Pn**	**20 06 53.1**	**-0.7**
PV01	**Paradox Valley**	**6.14**	**205**	Pn	**Pn**	**20 06 54.5**	**+0.5**
PV18	**Skein Mesa, Pa**	**6.15**	**208**	Pn	**Pn**	**20 06 54.1**	**0.0**
TMUT	**Trail Mountain**	**6.29**	**227**		**Pn**	**20 06 57.0**	**+1.0**
ECSD	**EROS Data Cent**	**6.29**	**87**		**Pn**	**20 06 56.8**	**+1.0**
NLU	**North Lily Min**	**6.33**	**235**	Pn	**Pn**	**20 06 57.1**	**+0.6**
CBKS	**Cedar Bluff**	**6.48**	**138**	Pn	**Pn**	**20 06 57.5**	**-0.9**
Q16A	**Castle Valley**	**6.55**	**224**		**Pn**	**20 07 00.6**	**+1.0**
HLID	**Hailey**	**6.61**	**271**	Pn	**Pn**	**20 07 01.7**	**+1.3**
DUG	**Dugway, Tooele**	**6.64**	**240**		**Pn**	**20 07 01.6**	**+1.0**
ULM	**Lac du Bonnet**	**9.14**	**41**	Pn	**Pn**	**20 07 34.1**	**-0.6**
	comp=E,1.1nm,0.3s,baz=233,slow=12,SNR=11						
ULM				Pg		20 08 06.5	
	comp=E,1.3nm,0.3s,baz=233,slow=13,SNR=7.5						
ULM				Lg	Lg	20 10 04.5	
	comp=E,0.4nm,0.3s,baz=126,slow=19,SNR=2.8						
ULM	**Lac du Bonnet**	**9.14**	**41**		**Pn**	**20 07 34.3**	**-0.5**
WMOK	**Wichita Mounta**	**10.33**	**149**	Pn	**Pn**	**20 07 49.7**	**-1.5**
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**20 08 04.5**	**+1.8**
	comp=E,0.1nm,0.3s,baz=48,slow=11,SNR=3.4						
FFC	**Flin Flon**	**11.18**	**10**	Pn	**Pn**	**20 08 01.0**	**-1.8**
TXAR	**Lajitas Array**	**14.46**	**174**	Pg	P	20 09 47.7	+53
	comp=E,0.1nm,0.3s,baz=15,slow=12,SNR=2.8						
TXAR				Sn	**Sn**	**20 11 29.3**	**+0.4**
	comp=E,0.1nm,0.3s,baz=0.4,slow=24,SNR=2.6						
YKA	**Yellowknife Ar**	**19.54**	**347**	P	**P**	**20 09 49.9**	**-0.6**
	comp=E,0.1nm,0.3s,baz=152,slow=13,SNR=4.7						
ZALV	**Zalesovo Beam**	**82.28**	**354**	P	**P**	**20 17 42.7**	**-2.0**
	comp=E,0.3nm,0.4s,baz=358,slow=6.5,SNR=2.8						
MKAR	**Makanchi Array**	**89.58**	**355**	P	**P**	**20 18 20.6**	**-0.5**
	comp=E,0.4nm,0.6s,baz=22,slow=5.2,SNR=6.2						

IDC ***02*** *20:14:58.0±0.8, 12˚.45N×141˚.65E, h0km, mb4.1/9, mb1 4.3/9, mb1mx3.9/42, mbtmp4.1/9, Error ellipse: s-maj=30.6km s-min=19.8km az=93.0*
NEIC ***02*** *20:15:04.3±1.1, 12˚.3N±0˚.2×141˚.5E±0˚.2, h44km±10km, mb4.4/21, Error ellipse: s-maj=27.7km s-min=16.2km az=137.0*
ISC 02 20:15:03.3±0.7**, 12˚.4N**±0˚.1×**141˚.4E**±0˚.1**, h33**km**, n32,** σ0ᵍ**75**/32**, mb4.4**/20**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.58**	**70**	Pn	**Pn**	**20 15 57.5**	**+0.9**
WR0	**Warramunga Arr**	**32.83**	**192**	P	**P**	**20 21 34.4**	**+0.4**
WR0				IAmb	IAmb	20 22 03.5	
	comp=Z,12nm,1.5s						
WRAB	**Tennant Creek**	**32.84**	**192**	P	**P**	**20 21 32.7**	**-1.4**
WB2	**Warramunga Arr**	**32.85**	**192**	P	**P**	**20 21 33.4**	**-0.9**
WRA	**Warramunga Arr**	**32.85**	**192**	P	**P**	**20 21 34.1**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=13,slow=9.3,SNR=13						
ASAR	**Alice Springs**	**36.56**	**192**	P	**P**	**20 22 07.3**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=19,slow=11,SNR=8.1						
CMAR	**Chiang Mai Arr**	**41.32**	**284**	P	**P**	**20 22 47.5**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=80,slow=7.0,SNR=6.8						
TIXI	**Tiksi**	**59.74**	**355**	P	**P**	**20 25 04.6**	**0.0**
TIXI				IAmb	IAmb	20 25 06.4	
	comp=Z,2.2nm,0.9s						
MK31	**Makanchi Array**	**60.06**	**317**	P	**P**	**20 25 07.9**	**+0.6**
MKAR	**Makanchi Array**	**60.06**	**317**	P	**P**	**20 25 08.2**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=92,slow=8.4,SNR=16						
MAKZ	**Makanchi**	**60.27**	**317**	P	**P**	**20 25 08.5**	**-0.2**
MAKZ				IAmb	IAmb	20 25 10.2	
	comp=Z,2.4nm,0.9s						
ZAA0	**Zalesovo Array**	**60.69**	**326**	P	**P**	**20 25 11.3**	**-0.1**
ZALV	**Zalesovo Beam**	**60.69**	**326**	P	**P**	**20 25 11.5**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=115,slow=6.7,SNR=6.7						
TNA	**Tin City**	**63.18**	**21**	P	**P**	**20 25 28.0**	**+0.1**
TNA				IAmb	IAmb	20 25 28.6	
	comp=Z,2.9nm,1.2s						
NIL	**Nilore**	**65.13**	**301**	P	**P**	**20 25 41.1**	**-0.3**
BRVK	**Borovoye**	**68.88**	**322**	P	**P**	**20 26 05.1**	**+0.4**
BRVK				IAmb	IAmb	20 26 06.2	
	comp=Z,2.5nm,0.7s						
BPAW	**Bear Paw Mtn.**	**69.22**	**26**		**P**	**20 26 06.4**	**-0.3**
A21K	**Barrow**	**69.55**	**18**	P	**P**	**20 26 08.9**	**+0.4**
MLY	**Manley**	**69.57**	**25**	P	**P**	**20 26 09.4**	**+0.5**
MLY				IAmb	IAmb	20 26 10.1	
	comp=Z,3.2nm,0.8s						
PWL	**Port Wells**	**69.69**	**29**	P	**P**	**20 26 09.4**	**-0.2**
I23K	**Minto, Yukon-K**	**70.17**	**25**	P	**P**	**20 26 12.5**	**0.0**
I23K				IAmb	IAmb	20 26 16.7	
	comp=Z,4.6nm,1.2s						
COLD	**Coldfoot**	**70.36**	**23**	P	**P**	**20 26 14.0**	**+0.3**
COLD				IAmb	IAmb	20 26 15.2	
	comp=Z,3.8nm,1.0s						
IL31		**71.11**	**25**	P	**P**	**20 26 16.8**	**-1.3**
IL31				IAmb	IAmb	20 26 17.6	
	comp=Z,2.7nm,0.7s						
ILAR	**Eielson Array**	**71.11**	**25**	P	**P**	**20 26 16.9**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=255,slow=5.5,SNR=16						
DOT	**Dot Lake**	**72.14**	**27**	P	**P**	**20 26 23.8**	**-0.7**
HRA	**Herat**	**74.25**	**302**	P	**P**	**20 26 38.2**	**+0.4**
ARU	**Arti**	**75.85**	**325**	P	**P**	**20 26 45.5**	**-0.8**
ARU				IAmb	IAmb	20 26 47.9	
	comp=Z,5.9nm,1.2s						
INK	**Inuvik**	**76.77**	**22**	P	**P**	**20 26 50.9**	**-0.3**
INK				IAmb	IAmb	20 26 52.3	
	comp=Z,5.9nm,1.2s						
YKA	**Yellowknife Ar**	**85.48**	**27**	P	**P**	**20 27 37.0**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=289,slow=5.1,SNR=16						
ARCES	**ARCESS Array B**	**87.19**	**342**	P	**P**	**20 27 45.6**	**-0.4**
	comp=Z,3.4nm,1.0s,baz=70,slow=8.4,SNR=9.2						
FINES	**FINESS Array B**	**90.82**	**334**	P	**P**	**20 28 02.0**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=70,slow=5.2,SNR=22						
LPAZ	**La Paz**	**151.12**	**101**	PKPbc	**PKiKP**	**20 34 55.0**	**-0.4**
	comp=Z,2.3nm,0.7s,baz=278,slow=3.8,SNR=5.1						

IDC ***02*** *20:16:57.5±0.9, 5˚.37S×152˚.66E, h0km, mb4.2/14, mb1 4.3/15, mb1mx4.2/36, mbtmp4.2/15, ML2.3/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/43, Error ellipse: s-maj=28.6km s-min=15.4km az=115.0*
NEIC ***02*** *20:17:02.1±1.2, 5˚.32S±0˚.07×152˚.7E±0˚.1, h27km±6km, mb4.5/24, Error ellipse: s-maj=20.2km s-min=9.0km az=99.0*
DJA ***02*** *20:17:04.6±0.8, 5˚S±4˚×15˚3E±˚, h38km±8km, M4.7/14, mB5.6/2, mb4.5/14, MLv4.8/2, Mw(mB)5.1/2*
ISC 02 20:17:03.5±0.7**, 5˚.35S**±0˚.07×**152˚.7E**±0˚.1**, h40**km**, n51,** σ0ᵍ**95**/47**, mb4.4**/25**, MS3.5**/7**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.25**	**337**	Pn	**Pn**	**20 17 23.2**	**-1.4**
MANU	**Manus Island**	**6.21**	**302**	Pn	**Pn**	**20 18 32.5**	**-0.3**
PMG	**Port Moresby**	**6.77**	**233**	Pn	**Pn**	**20 18 40.4**	**0.0**
	3.6nm,0.3s,baz=35,slow=14,SNR=11						
PMG				Sn	**Sn**	**20 19 56.8**	**+0.5**
	3.8nm,0.3s,baz=340,slow=19,SNR=3.7						
PMG	**Port Moresby**	**6.77**	**233**	Pn	**Pn**	**20 18 40.3**	**-0.2**
HNR	**Honiara**	**8.29**	**120**	LR	LR	20 22 21.6	
	comp=Z,206nm,21.2s,baz=264,slow=39						
JAY	**Jayapura**	**12.25**	**283**	P	**Pn**	**20 19 57.5**	**+1.9**
	9.1nm,1.0s						
KMPI	**Kaimana, Papua**	**18.96**	**274**	P	**Pn**	**20 21 23.8**	**+1.2**
	115nm,0.9s						
DZM	**Mont Dzumac**	**21.32**	**143**	LR	LR	20 28 56.6	
	comp=Z,264nm,20.6s,baz=294,slow=34						
SIJI	**Sorong**	**21.81**	**281**	P	**P**	**20 21 52.3**	**-0.2**
	7.5nm,0.7s,baz=139,slow=16,SNR=7.8						
MTN	**

IDC ***02*** *20:23:35.7±0.7,5°.53S×153°.11E, h0km, mb4.3/15, mb1 4.4/17, mb1mx4.2/38, mbtmp4.3/17, ML3.1/2, Error ellipse: s-maj=22.8km s-min=14.5km az=114.0*

NEIC ***02*** *20:23:38.4±1.2,5°.58S±0°.08×153°.1E±0°.1, h19km±5km, mb4.5/23, Error ellipse: s-maj=15.6km s-min=10.8km az=103.0*

DJA ***02*** *20:23:43.2±1.4,5°S±4″×15°3E±1°.4, h47km±9km, M4.9/9, mB5.2/4, mb4.5/9, MLv5.1/3, Mw(mB)4.6/4*

ISC 02 20:23:41.0±0.7,5°.57S±0°.07×153°.1E±0°.1, h37km, n48, σ0°82/48, mb4.4/26, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.68**	**325**	Pn	**Pn**	**20 24 07.0**	**-0.9**
RABL	**Rabaul**	**1.68**	**325**	P	**Pn**	**20 24 07.7**	**-0.2**
MANU	**Manus Island**	**6.74**	**301**	Pn	Pn	20 25 10.8	-6.7
PMG	**Port Moresby**	**7.05**	**237**	Pn	**Pn**	**20 25 22.4**	**+0.7**
	3.5nm,0.3s,baz=55,slow=8.3,SNR=8.5						
PMG				Sn	**Sn**	**20 26 42.4**	**+1.8**
	2.8nm,0.3s,baz=107,slow=22,SNR=6.1						
PMG	**Port Moresby**	**7.05**	**237**		**Pn**	**20 25 21.4**	**-0.3**
PATS	**Pohnpei**	**13.36**	**23**	Pn	**Pn**	**20 26 49.1**	**+0.9**
CTA	**Charters Tower**	**15.91**	**204**	Pn	**Pn**	**20 27 23.0**	**+0.7**
	0.3nm,0.3s,baz=53,slow=8.7,SNR=2.9						
CTAO	**Charters Tower**	**15.91**	**204**	Pn	**Pn**	**20 27 20.6**	**-1.6**
DZM	**Mont Dzumac**	**20.85**	**143**	P	Pn	20 28 21.4	-1.2
	12nm,0.8s,baz=278,slow=11,SNR=3.3						
SIJI	**Sorong**	**22.33**	**281**	P	**P**	**20 28 34.9**	**-0.9**
	3.0nm,0.5s,baz=80,slow=20,SNR=3.0						
MTN	**Manton Dam**	**22.88**	**250**	P	**P**	**20 28 40.8**	**-0.8**
MTN				IAmb	IAmb	20 29 04.6	
	comp=Z,8.4nm,0.7s						
WR0	**Warramunga Arr**	**23.06**	**230**	P	**P**	**20 28 42.2**	**-1.2**
WR0				IAmb	IAmb	20 28 48.7	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	**23.06**	**231**	P	**P**	**20 28 42.8**	**-0.6**
WB0				IAmb	IAmb	20 28 54.7	
	comp=Z,19nm,1.1s						
WRAB	**Tennant Creek**	**23.19**	**230**	P	**P**	**20 28 44.1**	**-0.6**
WRAB				IAmb	IAmb	20 28 54.1	
	comp=Z,13nm,0.9s						
WB2	**Warramunga Arr**	**23.19**	**230**	P	**P**	**20 28 44.9**	**+0.1**
WB2				IAmb	IAmb	20 28 46.8	
	comp=Z,16nm,1.1s						
WRA	**Warramunga Arr**	**23.20**	**230**	P	**P**	**20 28 43.9**	**-0.9**
	comp=Z,7.9nm,0.9s,baz=53,slow=10.0,SNR=26						
AS31	**Alice Springs**	**25.82**	**224**	P	**P**	**20 29 08.5**	**-0.6**
ASAR	**Alice Springs**	**25.82**	**224**	P	**P**	**20 29 08.7**	**-0.4**
	comp=Z,4.9nm,1.1s,baz=59,slow=9.7,SNR=25						
ASAR				PcP	**PcP**	**20 32 39.5**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=67,slow=2.4,SNR=8.2						
STKA	**Stephens Creek**	**28.32**	**201**	P	**P**	**20 29 30.8**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=359,slow=9.4,SNR=5.9						
STKA	**Stephens Creek**	**28.32**	**201**	P	**P**	**20 29 30.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**29.60**	**243**	P	**P**	**20 29 42.3**	**-0.6**
	comp=Z,6.2nm,0.7s,baz=69,slow=7.3,SNR=24						
FITZ	**Fitzroy Crossi**	**29.60**	**243**	P	**P**	**20 29 42.0**	**-0.9**
FITZ				IAmb	IAmb	20 29 43.2	
	comp=Z,8.5nm,0.8s						
USRK	**Ussuriysk Ar.**	**53.08**	**341**	P	**P**	**20 32 55.5**	**+0.8**
	comp=Z,2.4nm,1.0s,baz=175,slow=6.7,SNR=2.2						
CMAR	**Chiang Mai Arr**	**58.51**	**295**	P	**P**	**20 33 34.8**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=135,slow=5.1,SNR=7.4						
PETK	**Petropavlovsk-**	**58.58**	**3**	P	**P**	**20 33 34.8**	**+0.8**
	comp=Z,4.5nm,0.6s,baz=158,slow=6.0,SNR=18						
MA2	**Magadan**	**64.97**	**359**	P	**P**	**20 34 16.4**	**-0.4**
ULN	**Ulaanbaatar**	**66.82**	**328**	P	**P**	**20 34 28.7**	**-0.5**
ULN				IAmb	IAmb	20 34 31.2	
	comp=Z,4.5nm,1.1s						
SHL	**Shillong**	**66.99**	**301**	P	**P**	**20 34 30.4**	**-0.4**
SHL				IAmb	IAmb	20 34 40.4	
	comp=Z,4.5nm,0.9s						
SONM	**Songino Array**	**67.15**	**328**	P	**P**	**20 34 31.6**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=151,slow=7.1,SNR=6.7						
YAK	**Yakutsk**	**69.79**	**348**	P	**P**	**20 34 45.8**	**-1.4**
BILL	**Bilibino**	**74.02**	**5**	P	**P**	**20 35 12.6**	**0.0**
BILL				IAmb	IAmb	20 35 18.1	
	comp=Z,11nm,1.4s						
TIXI	**Tiksi**	**78.70**	**352**		**P**	**20 35 40.5**	**+1.5**
TIXI				IAmb	IAmb	20 35 42.0	
	comp=Z,6.8nm,1.4s						
RDOG	**Red Dog Mine**	**79.63**	**15**	P	**P**	**20 35 44.3**	**+0.1**
RDOG				IAmb	IAmb	20 35 56.8	
	comp=Z,2.9nm,0.8s						
MK31	**Makanchi Array**	**81.12**	**319**	P	**P**	**20 35 52.9**	**+0.1**
MKAR	**Makanchi Array**	**81.12**	**319**	P	**P**	**20 35 53.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=102,slow=6.6,SNR=16						
MAKZ	**Makanchi**	**81.33**	**319**	P	**P**	**20 35 54.0**	**+0.2**
ZAA0	**Zalesovo Array**	**81.98**	**326**	P	**P**	**20 35 55.9**	**-1.0**
ZAA0				IAmb	IAmb	20 36 06.3	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**81.98**	**326**	P	**P**	**20 35 56.3**	**-0.7**
	comp=Z,3.7nm,0.8s,baz=104,slow=5.8,SNR=17						
ILAR	**Eielson Array**	**82.74**	**22**	P	**P**	**20 35 59.5**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=256,slow=5.0,SNR=9.0						
NIL	**Nilore**	**84.69**	**304**	P	**P**	**20 36 11.3**	**-0.2**
AAK	**Ala-Archa**	**85.44**	**313**	P	**P**	**20 36 15.9**	**+0.7**
NRIK	**Noril'sk**	**86.80**	**341**	P	**P**	**20 36 21.7**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=125,slow=4.0,SNR=5.2						
NRIK	**Noril'sk**	**86.80**	**341**	P	**P**	**20 36 22.5**	**+1.4**
BRVK	**Borovoye**	**90.12**	**323**	P	**P**	**20 36 36.4**	**-0.8**
BRVK				IAmb	IAmb	20 36 47.1	
	comp=Z,4.0nm,1.0s						
YKA	**Yellowknife Ar**	**95.95**	**28**	P	**P**	**20 37 03.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=268,slow=4.6,SNR=5.9						
GERES	**GERESS Array B**	**124.88**	**328**	PKP	**PKiKP**	**20 42 38.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=115,slow=1.9,SNR=4.4						
BDFB	**Brasilia**	**150.28**	**135**	PKPbc	**PKiKP**	**20 43 30.2**	**-0.1**
	comp=Z,5.3nm,0.6s,baz=178,slow=3.5,SNR=7.7						
TORD	**Torodi Ar. Bea**	**150.86**	**287**	PKPbc	**PKPbc**	**20 43 30.7**	**0.0**
	comp=Z,5.0nm,0.7s,baz=66,slow=2.5,SNR=26						

IDC 02 20:40:41.1±3.6,5°.06S×152°.78E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/47, mbtmp3.5/3, Error ellipse: s-maj=132.7km s-min=50.7km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.26**	**229**	P	P	20 45 50.4	-0.1
	1.2nm,0.8s,baz=55,slow=10,SNR=6.7						
ASAR	**Alice Springs**	**25.95**	**223**	P	P	20 46 15.5	0.0
	0.2nm,0.6s,baz=56,slow=9.3,SNR=8.4						
FITZ	**Fitzroy Crossi**	**29.52**	**242**	P	P	20 46 47.6	+0.1
	0.4nm,0.5s,baz=58,slow=9.5,SNR=1.5						
TORD	**Torodi Ar. Bea**	**150.37**	**288**	PKPbc	PKPbc	21 00 35.2	-0.4
	0.4nm,0.4s,baz=73,slow=2.8,SNR=3.3						

DJA 02 20:50:55.5±1.9,1°S±15°×13°1E±1°.1, h10km, M2.4/3, MLv2.4/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**0.58**	**81**	P	Pb	20 51 07.3	-0.4
SWI				S	Sb	20 51 16.1	+0.1
FAKI	**Fak Fak**	**2.50**	**141**	P	Pn	20 51 36.4	+0.1
SAUI	**Saumlaki**	**7.01**	**175**	P	Pn	20 52 36.9	-1.4

IDC ***02*** *20:51:04.0±0.3,6°.38S×147°.11E, h0km, mb5.2/32, mb1 5.2/37, mb1mx5.1/46, mbtmp5.1/37, ML4.2/4, MS4.5/31, Ms1 4.5/31, ms1mx4.4/44, Error ellipse: s-maj=14.3km s-min=9.3km az=89.0*

BJI ***02*** *20:51:03.8±0.0,6°.58S×147°.35E, h28km, mB5.3/51, mb5.4/76, Ms4.8/49, Ms7 4.5/51*

MOS ***02*** *20:51:08.3±1.1,6°.32S×146°.86E, h35km, mb5.5/33, Error ellipse: s-maj=7.7km s-min=4.6km az=109.2*

NEIC ***02*** *20:51:09.3±1.9,6°.46S±0°.06×146°.92E±0°.06, h37km±2km, mb5.4/182, Error ellipse: s-maj=9.2km s-min=8.0km az=61.0*

DJA ***02*** *20:51:11.7±0.4,7°S±2″×14°7E±°, h53km±5km, M5.2/30, mb5.4/30, mB5.6/23, MLv5.5/2, Mw(mB)5.1/23, MwMwp5.7/1, Mwp5.8/1*

GCMT ***02*** *20:51:12.3±0.2,6°.61S±0°.01×147°.04E±0°.01, h28km, MW5.2/105, Moment Tensor Solution. s68,c96; s105,c174; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.40±.15; $M_{\theta\theta}$-3.67±.10; $M_{\phi\phi}$1.27±.11; $M_{r\theta}$4.89±.22; $M_{\theta\phi}$-2.24±.07; $M_{r\phi}$-2.58±.21; Best double couple: M_o6.76300×10^{16} NP1:φs216.00000°,δ32.00000°, λ22.00000°. NP2:φs107.00000°,δ78.00000°,λ120.00000°. Principal axes: T 7.0630, Plg48.0000°, Azm49.0000°; N -0.5990, Plg29.0000°, Azm280.0000°; P -6.4630, Plg27.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 02 20:51:08.0±0.5,6°.41S±0°.03×147°.01E±0°.04, h26km±2km, h27km:pP-P,n889,σ1s52/919, mb5.4/202, MS4.6/47, 126C-60D, Fault plane solution: NP1:φs83.64957°, δ56.57981°,λ120.05380°. **NP2:φs217.23808°,δ43.74376°,** λ52.80367°. **Principal axes:** T Plg64.1973°, Azm48.0964°; N Plg24.7087°, Azm245.9735°; P Plg6.9720°, Azm152.7478°; **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.98**	**177**	Pn	**Pn**	**20 51 54.2**	**+0.6**
	128nm,0.3s,baz=21,slow=5.3,SNR=148						
PMG				Sn	**Sn**	**20 52 30.4**	**+1.9**
	165nm,0.3s,baz=275,slow=12,SNR=3.1						
PMG				LR	LR	20 53 23.8	
	comp=Z,19μm,19.0s,baz=13,slow=46						
PMG	**Port Moresby**	**2.98**	**177**	*d* iP	**Pn**	**20 51 54.8**	**+1.2**
PMG	**Port Moresby**	**2.98**	**177**		**Pn**	**20 51 54.9**	**+1.2**
PMG	**Port Moresby**	**2.98**	**177**	P	**Pn**	**20 51 55.4**	**+1.8**
MANU	**Manus Island**	**4.35**	**5**		**Pn**	**20 52 15.8**	**+3.3**
JAY	**Jayapura**	**7.38**	**301**	Pn	**Pn**	**20 52 54.6**	**+0.5**
	0.4nm,0.3s,baz=165,slow=22,SNR=7.4						
JAY				LR	LR	20 56 20.3	
	comp=Z,5μm,19.9s,baz=104,slow=42						
GENI	**Genyem**	**7.80**	**299**	P	Pn	20 53 05.0	+5.1
GENI	**Genyem**	**7.80**	**299**	S	**Pn**	**20 53 04.5**	**+4.6**
COEN	**Coen**	**8.39**	**206**		**Pn**	**20 53 08.1**	**0.0**
SRPI	**Serui, Papua**	**11.65**	**292**	P	Pn	20 54 01.7	+9.0
SRPI	**Serui, Papua**	**11.65**	**292**	P	**Pn**	**20 53 54.5**	**+1.8**
	157nm,0.4s						
MTSU	**Mount Surprise**	**11.95**	**192**	P	**Pn**	**20 53 57.1**	**+0.4**
	baz=12,SNR=36						
BAKI	**Biak**	**12.05**	**295**	P	**P**	**20 54 14.7**	**+3.9**
HNR	**Honiara**	**13.16**	**104**	LR	LR	20 58 50.9	
	comp=Z,728nm,18.6s,baz=272,slow=36						
HNR	**Honiara**	**13.16**	**104**	P	**Pn**	**20 54 16.7**	**+3.4**
HNR	**Honiara**	**13.16**	**104**	Pn	**Pn**	**20 54 16.7**	**+3.4**
CTA	**Charters Tower**	**13.62**	**183**	Pn	**Pn**	**20 54 20.8**	**+1.2**
	1.5nm,0.3s,baz=5.6,slow=14,SNR=35						
CTA				LR	LR	20 59 14.4	
	comp=Z,4μm,21.3s,baz=3.5,slow=36						
CTA	**Charters Tower**	**13.62**	**183**	P	**Pn**	**20 54 22.5**	**+2.9**
CTA				pmax	pmax		
	comp=Z,171nm,1.4s						
CTAO	**Charters Tower**	**13.62**	**183**	P	**Pn**	**20 54 19.3**	**-0.3**
CTAO	**Charters Tower**	**13.62**	**183**		**Pn**	**20 54 19.3**	**-0.3**
FAKI	**Fak Fak**	**15.11**	**283**	P	**P**	**20 54 45.3**	**+0.5**
FAKI	**Fak Fak**	**15.11**	**283**	P	**P**	**20 54 44.6**	**-0.3**
	comp=Z,2μmcomp=Z,118nm,1.1s						
KDU	**Kakadu**	**15.63**	**245**	P	**Pn**	**20 54 46.7**	**+0.1**
	baz=16,SNR=28						
SAUI	**Saumlaki**	**15.66**	**263**		**Pn**	**20 54 46.3**	**-0.8**
SAUI	**Saumlaki**	**15.66**	**263**	P	**Pn**	**20 54 46.6**	**-0.5**
	comp=Z,4μmcomp=Z,599nm,0.9s						
QIS	**Mount Isa**	**15.79**	**206**	P	**Pn**	**20 54 49.1**	**+0.4**
	baz=16,SNR=62						
SIJI	**Sorong**	**16.64**	**289**	Pn	**P**	**20 55 00.7**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=95,slow=9.4,SNR=21						
SIJI				LR	LR	21 03 36.8	
	comp=Z,1μm,18.0s,baz=104,slow=45						
SWI	**Sorong**	**16.65**	**289**	P	**P**	**20 55 01.0**	**-0.9**
SWI				pmax	pmax		
	comp=Z,538nm,1.1s						
SWI	**Sorong**	**16.65**	**289**	P	**Pn**	**20 55 00.2**	**+0.5**
	comp=Z,5μmcomp=Z,538nm,1.1s						
MTN	**Manton Dam**	**16.90**	**247**	P	**Pn**	**20 55 03.6**	**+0.7**
	baz=17,SNR=29						
MTN	**Manton Dam**	**16.90**	**247**	Pn	**Pn**	**20 55 02.1**	**-0.8**
BNDI	**Bandanaira**	**17.13**	**275**	P	**P**	**20 55 12.1**	**+4.8**
	comp=Z,14μmcomp=Z,367nm,1.3s						
BNDI	**Bandanaira**	**17.13**	**275**	P	**P**	**20 55 08.0**	**+0.7**
WB0	**Warramunga Arr**	**18.07**	**222**		**Pn**	**20 55 16.4**	**-1.0**
WR0	**Warramunga Arr**	**18.11**	**221**		**Pn**	**20 55 16.9**	**-1.0**
WRAB	**Tennant Creek**	**18.22**	**221**	*d* iP	**Pn**	**20 55 18.7**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,112nm,1.0s						
WRAB	**Tennant Creek**	**18.22**	**221**	P	**Pn**	**20 55 18.5**	**-0.7**
WB2	**Warramunga Arr**	**18.23**	**221**	P	**Pn**	**20 55 18.1**	**-1.2**
WRA	**Warramunga Arr**	**18.23**	**221**	P	**Pn**	**20 55 19.1**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=39,slow=11,SNR=109						
WRA				S	**Sn**	**20 58 43.0**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=49,slow=22,SNR=6.1						
WRA				PcP	**PcP**	**20 59 53.0**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=34,slow=1.4,SNR=8.8						
WRA				LR	LR	21 03 26.4	
	comp=Z,4μm,19.2s,baz=50,slow=40						
EIDS	**Eidsvold**	**19.25**	**169**	P	**Pn**	**20 55 32.0**	**+0.3**
	baz=19,SNR=22						
EIDS	**Eidsvold**	**19.25**	**169**	P	**Pn**	**20 55 31.4**	**-0.3**
GUMO	**Guam**	**19.98**	**354**	P	**Pn**	**20 55 40.3**	**-0.1**
GUMO				pmax	pmax		
	comp=Z,297nm,0.9s						
GUMO	**Guam**	**19.98**	**354**	P	**Pn**	**20 55 40.3**	**-0.1**
RMQ	**Roma**	**20.03**	**175**	P	Pn	20 55 41.0	0.0
	baz=20,SNR=156						
NLAI	**Namlea**	**20.09**	**278**	P	**P**	**20 55 39.3**	**-0.5**
	comp=Z,148nm,1.1s						
NLAI	**Namlea**	**20.09**	**278**	P	Pn	20 55 41.4	-0.3
QLP	**Quilpie**	**20.23**	**187**	P	Pn	20 55 42.6	-0.7
	baz=20,SNR=59						
TNTI	**Ternate**	**20.86**	**289**	Pn	Pn	20 55 50.6	-0.2
TNTI				IAmb	IAmb	20 56 04.1	
	comp=Z,151nm,1.0s						
TNTI	**Ternate**	**20.86**	**289**	P	Pn	20 55 49.5	-1.3
	comp=Z,3μmcomp=Z,183nm,1.0s						
AS31	**Alice Springs**	**21.29**	**215**	P	**P**	**20 55 52.1**	**-0.7**
ASAR	**Alice Springs**	**21.29**	**215**	P	**P**	**20 55 53.2**	**+0.5**
	comp=Z,22nm,0.7s,baz=45,slow=8.9,SNR=64						
ASAR				S	**S**	**20 59 50.7**	**+2.6**
	comp=Z,21nm,0.8s,baz=35,slow=18,SNR=9.1						
ASAR				ScP	**ScP**	**21 03 35.0**	**+2.6**
	comp=Z,8.8nm,1.1s,baz=36,slow=4.7,SNR=5.4						
ASAR				LR	LR	21 04 57.4	
	comp=Z,2μm,18.3s,baz=40,slow=39						
SANI	**Sanana**	**21.40**	**281**	P	**P**	**20 55 52.0**	**-2.0**
	comp=Z,2μmcomp=Z,94nm,1.1s						
SANI	**Sanana**	**21.40**	**281**	P	**P**	**20 55 53.9**	**-0.1**
SANVU	**Saraoutou**	**21.75**	**116**	P	**P**	**20 55 58.6**	**+0.9**
SANVU				IAmb	IAmb	20 56 08.0	
	comp=Z,104nm,0.9s						
SOEI	**Soe**	**22.76**	**260**	P	**P**	**20 56 06.9**	**-1.8**
SOEI				IAmb	IAmb	20 56 35.4	
	comp=Z,80nm,0.9s						
SOEI	**Soe**	**22.76**	**260**	P	**P**	**20 56 03.3**	**-5.4**
	comp=Z,3μmcomp=Z,104nm,1.0s						
BATI	**Baumata**	**23.40**	**259**	P	**P**	**20 56 15.5**	**+0.4**
	comp=Z,126nm,1.1s,baz=83,slow=5.4,SNR=4.4						
BATI				LR	LR	21 07 56.9	
	comp=Z,3μm,20.5s,baz=92,slow=43						
BATI	**Baumata**	**23.40**	**259**	P	**P**	**20 56 16.8**	**+1.6**
	comp=Z,988nmcomp=Z,71nm,0.6s						
BATI	**Baumata**	**23.40**	**259**	P	**P**	**20 56 14.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**23.86**	**239**	P	**P**	**20 56 19.8**	**+0.3**
	comp=Z,41nm,0.8s,baz=70,slow=8.9,SNR=66						
FITZ				LR	LR	21 07 17.8	
	comp=Z,3μm,18.6s,baz=62,slow=41						
FITZ	**Fitzroy Crossi**	**23.86**	**239**	P	**P**	**20 56 20.0**	**+0.5**
	baz=24,SNR=44						
FITZ	**Fitzroy Crossi**	**23.86**	**239**	P	**P**	**20 56 19.8**	**+0.3**
FITZ				IAmb	IAmb	20 56 28.8	
	comp=Z,72nm,0.8s						
KMSI	**Cibinong**	**24.01**	**286**	P	**P**	**20 56 21.5**	**+0.6**
	comp=Z,5μmcomp=Z,561nm,0.7s						
KMSI	**Cibinong**	**24.01**	**286**	P	**P**	**20 56 22.7**	**+1.8**
ARMA	**Armidale**	**24.27**	**170**	P	**P**	**20 56 23.7**	**+0.3**
	baz=24,SNR=21						
ARMA	**Armidale**	**24.27**	**170**	P	**P**	**20 56 23.5**	**+0.2**
DZM	**Mont Dzumac**	**24.39**	**132**	P	**P**	**20 56 24.7**	**+0.3**
	comp=Z,40nm,0.9s,baz=254,slow=13,SNR=12						
MMRI	**Maumere**	**24.66**	**263**	P	**P**	**20 56 25.4**	**-1.4**
MMRI				IAmb	IAmb	20 56 53.6	
	comp=Z,68nm,0.7s						
MMRI	**Maumere**	**24.66**	**263**	P	**P**	**20 56 27.9**	**+1.0**
	comp=Z,1μmcomp=Z,92nm,0.7s						
LUWI	**Luwuk**	**24.76**	**281**	P	**P**	**20 56 28.6**	**+0.9**
LUWI	**Luwuk**	**24.76**	**281**	P	**P**	**20 56 30.2**	**+2.4**
	comp=Z,4μmcomp=Z,501nm,1.1s						
LUWI	**Luwuk**	**24.76**	**281**	P	**P**	**20 56 30.0**	**+2.2**
GTOI	**Gorontalo**	**24.96**	**285**	P	**P**	**20 56 32.6**	**+3.0**
CMSA	**Cobar Meteorol**	**25.03**	**183**	P	**P**	**20 56 30.2**	**+0.1**
	baz=25,SNR=32						
EDFI	**Ende, Flores**	**25.20**	**263**	P	**P**	**20 56 30.5**	**-1.4**
WRKA	**Warakurna**	**25.77**	**222**	P	**P**	**20 56 36.2**	**-0.7**
	baz=26,SNR=107						
STKA	**Stephens Creek**	**25.84**	**191**	P	**P**	**20 56 37.2**	**-0.1**
	comp=Z,50nm,0.8s,baz=358,slow=8.9,SNR=93						
STKA				LR	LR	21 07 34.0	
	comp=Z,3μm,19.4s,baz=14,slow=38						
STKA	**Stephens Creek**	**25.84**	**191**	P	**P**	**20 56 36.9**	**-0.4**
	baz=26,SNR=99						
STKA	**Stephens Creek**	**25.84**	**191**	*d* iP	**P**	**20 56 37.7**	**+0.3**
STKA	**Stephens Creek**	**25.84**	**191**	P	**P**	**20 56 36.4**	**-1.0**
SKMP	**Bagumbayan, Su**	**25.84**	**299**	*e*P	**P**	**20 56 37.8**	**+0.2**
MRSI	**Marisa**	**25.94**	**284**	P	**P**	**20 56 37.8**	**-0.7**
BUKP	**Musuan**	**26.09**	**303**	*e*P	**P**	**20 56 40.4**	**+0.5**
BUTP	**Butuan**	**26.23**	**305**	*e*P	**P**	**20 56 40.8**	**-0.3**
MGCD	**Mangrove Creek**	**26.94**	**172**	P	**P**	**20 56 48.1**	**+0.8**
	baz=27,SNR=5.7						
KAPI	**Kappang**	**27.16**	**271**	P	**P**	**20 56 51.0**	**+1.5**
	comp=Z,9.0nm,0.7s,baz=74,slow=6.8,SNR=3.5						
KAPI	**Kappang**	**27.16**	**271**		**P**	**20 56 48.3**	**-1.2**
KAPI				pmax	pmax		
	comp=Z,51nm,1.3s						
KAPI	**Kappang**	**27.16**	**271**	P	**P**	**20 56 48.3**	**-1.2**
TOLI2	**Tolitoli**	**27.23**	**285**	P	**P**	**20 56 49.6**	**-0.5**
TOLI2				IAmb	IAmb	20 56 59.9	
	comp=Z,56nm,0.8s						
TOLI2					**PcP**	**21 00 10.1**	**0.0**
PAGZ	**Pagadian**	**27.50**	**301**	*e*P	**P**	**20 56 52.4**	**-0.1**
MSLP	**Maasin**	**27.51**	**307**	*e*P	**P**	**20 56 52.5**	**-0.2**
YNG	**Young**	**27.78**	**178**	P	**P**	**20 56 55.7**	**+0.8**
	baz=28,SNR=18						
HTT	**Hallett**	**27.91**	**195**	P	**P**	**20 56 55.8**	**-0.3**
	baz=28,SNR=17						
BBOO	**Buckleboo**	**28.18**	**200**	P	**P**	**20 56 58.0**	**-0.4**
	baz=28,SNR=14						
BBOO	**Buckleboo**	**28.18**	**200**	P	**P**	**20 56 56.2**	**-2.2**
BBOO				IAmb	IAmb	20 56 58.8	
	comp=Z,69nm,1.0s						
CAN	**Canberra**	**28.83**	**177**	P	**P**	**20 57 04.4**	**+0.2**
CAN				pmax	pmax		
	comp=Z,29nm,0.8s						
CAN	**Canberra**	**28.83**	**177**	P	**P**	**20 57 04.4**	**+0.2**
CNB	**Canberra Magne**	**28.85**	**176**	P	**P**	**20 57 04.8**	**+0.3**
	baz=29,SNR=5.2						
CNOP	**Candoni, Negro**	**29.15**	**303**	*e*P	**P**	**20 57 05.7**	**-1.5**
FORT	**Forrest**	**30.07**	**214**	P	**P**	**20 57 13.7**	**-1.5**
FORT				IAmb	IAmb	20 57 28.3	
	comp=Z,48nm,0.8s						
ARPS	**Mount Arapiles**	**30.59**	**188**	P	**P**	**20 57 20.3**	**+0.6**
	baz=31,SNR=8.1						
MYLDM	**Lahad Datu**	**30.70**	**291**	P	**P**	**20 57 23.9**	**+2.9**
TOO	**Toolangi**	**31.05**	**182**	P	**P**	**20 57 24.8**	**+0.9**
	baz=31,SNR=5.2						
TOO	**Toolangi**	**31.05**	**182**	P	**P**	**20 57 24.5**	**+0.6**
TOO				pmax	pmax		
	comp=Z,114nm,1.5s						
TOO	**Toolangi**	**31.05**	**182**	P	**P**	**20 57 24.5**	**+0.6**
TOO				IAmb	IAmb	20 57 32.7	
	comp=Z,114nm,1.5s						
JCNP	**Jose Panganiba**	**31.70**	**311**	*e*P	**P**	**20 57 27.1**	**-2.7**
SJMP	**San Jose**	**31.84**	**306**	*e*P	**P**	**20 57 31.3**	**+0.3**
FUNA	**Funafuti**	**31.98**	**96**	P	**P**	**20 57 33.0**	**+0.7**
ENPP	**El Nido**	**32.56**	**302**	*e*P	**P**	**20 57 37.4**	**+0.1**
BATP	**Bataraza**	**32.80**	**297**	*e*P	**P**	**20 57 40.4**	**-0.9**
KKM	**Kota Kinabalu**	**33.13**	**291**	P	**P**	**20 57 42.0**	**-0.5**
KKM				IAmb	IAmb	20 57 51.1	
	comp=Z,51nm,1.2s						
QVP	**Quezon City--P**	**33.20**	**309**	*e*P	**P**	**20 57 42.4**	**-0.4**
SGCP	**Mt. Cagua**	**34.74**	**315**	*e*P	**P**	**20 57 55.4**	**-0.9**
APYP	**Conner**	**35.06**	**314**	*e*P	**P**	**20 57 58.2**	**-0.8**
GIRL	**Giralia**	**35.47**	**240**	P	**P**	**20 58 04.1**	**+1.6**
	baz=36,SNR=4.4						
SBUM	**Sibu**	**35.83**	**283**	P	**P**	**20 58 05.

comp=Z,67nm,0.9s
PLWZ Palliser 43.09 149 P P 20 59 06.0 0.0
MQZ McQueen's Vall 43.44 153 P P 20 59 09.8 +1.1
MJAR Matsushiro Arr 43.52 350 P P 20 59 08.3 -1.1
comp=Z,16nm,1.0s,baz=174,slow=8.3,SNR=19
MJAR PcP **PcP 21 00 57.1 0.0**
comp=Z,12nm,0.9s,baz=180,slow=3.8,SNR=8.1
MJAR LR LR 21 16 33.1
comp=Z,419nm,20.0s,baz=200,slow=35
MAJO Matsushiro 43.52 350*c iP* **P 20 59 09.1 -0.3**
MAJO pmax pmax
comp=Z,82nm,1.6s
MAJO Matsushiro 43.52 350 P P 20 59 09.2 -0.2
MAJO IAmb IAmb 20 59 10.5
comp=Z,88nm,1.4s
MAT Matsushiro 43.52 350 P P 20 59 08.9 -0.5
MAT S **S 21 05 36.8 0.0**
MYKOM Kota Tinggi 43.85 279 P P 20 59 13.3 +0.8
MYKOM IAmb IAmb 20 59 16.8
comp=Z,40nm,0.9s
MYKOM Kota Tinggi 43.85 279 P P 20 59 14.0 +1.5
QIZ Qiongzhong 44.50 305 P P 20 59 18.2 +0.6
QIZ S **S 21 05 54.2 +2.6**
QIZ sS **sS 21 06 05.9 -0.1**
QIZ pmax pmax
comp=Z,51nm,1.6s
QIZ LR LR
comp=Z,280nm,15.5s
QIZ LR LR
comp=Z,260nm,17.2s
QIZ LR LR
comp=Z,420nm,16.1s
QIZ Qiongzhong 44.50 305 P P 20 59 18.4 +0.8
QIZ IAmb IAmb 20 59 19.6
comp=Z,78nm,1.2s
SSE Sheshan 44.73 328 P P 20 59 19.7 +0.5
SSE S **S 21 06 01.6 +7.0**
SSE pmax pmax
comp=Z,79nm,0.9s
SSE pmax pmax
comp=Z,240nm,3.5s
SSE LR LR
comp=Z,270nm,19.7s
SSE LR LR
comp=Z,280nm,20.8s
SSE Sheshan 44.73 328 P P 20 59 18.7 -0.5
JRMM Jerantut 45.62 282 P P 20 59 28.0 +1.4
TJN Taejon 46.38 338⇓*e*P **P 20 59 32.1 -0.1**
UBPT Khong Chiam 46.46 298 P P 20 59 34.4 +1.3
comp=Z,428nmcomp=Z,26nm,2.1s
UBPT Khong Chiam 46.46 298 P P 20 59 34.1 +0.9
UBPT IAmb IAmb 20 59 42.3
comp=Z,31nm,0.9s
NJ2 Nanjing 46.73 327⇑*iP* **P 20 59 36.2 +1.2**
NJ2 pP **pP 20 59 39.7 -4.2**
NJ2 pmax pmax
comp=Z,85nm,0.8s
KSRS Korea Array 47.14 339 P P 20 59 38.7 +0.6
comp=Z,74nm,0.9s,baz=158,slow=9.1,SNR=111
KSRS PcP **PcP 21 01 10.1 +0.5**
comp=Z,4.2nm,0.9s,baz=185,slow=3.6,SNR=4.2
KSRS LR LR 21 16 29.1
comp=Z,626nm,21.5s,baz=157,slow=32
IPM Ipoh 47.17 282 P P 20 59 39.0 +0.2
IPM IAmb IAmb 20 59 42.0
comp=Z,42nm,0.8s
IPM **PcP 21 01 11.6 +1.3**
IPM Ipoh 47.17 282 P P 20 59 40.0 +1.2
KS19 Wonju Array Si 47.20 339 P P 20 59 38.6 0.0
JTM Tenmabayashi 47.28 354 P P 20 59 39.4 +0.2
INCN Inchon 47.63 338 P P 20 59 42.6 +0.6
INCN pmax pmax
comp=Z,165nm,0.9s
INCN Inchon 47.63 338 P P 20 59 42.6 +0.6
KULM Kulim 47.71 283 P P 20 59 43.2 +0.1
KULM Kulim 47.71 283 P P 20 59 44.0 +1.0
RPSI Rantau Prapat 48.85 279 P P 20 59 50.0 -1.9
RPSI IAmb IAmb 21 00 00.2
comp=Z,47nm,1.1s
PSI Prapat 48.87 279 P P 20 59 50.0 -2.1
PSI pmax pmax
comp=Z,47nm,1.1s
SRAK Srakaew 49.02 295 P P 20 59 50.6 -2.5
comp=Z,2µmcomp=Z,229nm,1.0s
KHON Khomkaen 49.22 298 P P 20 59 56.5 +1.9
comp=Z,32nm,0.7s
TRTT Trang 49.27 286 P P 20 59 56.3 +1.3
comp=Z,1µmcomp=Z,39nm,1.0s
NONG Nongkai 49.65 300 P P 20 59 58.0 +0.2
comp=Z,99nm,1.1s
CHAI Chaiyaphum 49.78 297 P P 20 59 59.8 +0.9
comp=Z,624nmcomp=Z,67nm,1.1s
KRAB Krabi 49.84 286 P P 21 00 01.0 +1.6
GSI Gunungsitoli 49.94 277 P P 20 59 59.0 -1.2
SURT Suratani 50.42 287 P P 21 00 07.8 +4.0
comp=Z,1.5nm,1.1s
JKA Kamikawa-asahi 50.45 356 P P 21 00 04.8 +1.3
JKA IAmb IAmb 21 00 05.5
comp=Z,41nm,1.0s
ASAJ Asahikawa 50.45 356 P P 21 00 04.7 +1.3
comp=Z,25nm,0.8s,baz=207,slow=8.5,SNR=15
ASAJ Asahikawa 50.45 356 P P 21 00 04.8 +1.3
ASAJ pmax pmax
comp=Z,41nm,1.0s
SLVN Son La 50.48 304 P P 21 00 04.8 +0.7
PKDT Phuket 50.58 286 P P 21 00 06.3 +1.4
comp=Z,852nmcomp=Z,81nm,1.1s
TIA Tai'an 50.83 329 P P 21 00 06.2 -0.3
TIA pmax pmax
comp=Z,51nm,0.8s
TIA pmax pmax
comp=Z,300nm,3.4s
TIA LR LR
comp=Z,450nm,18.4s
TIA LR LR
comp=Z,510nm,14.6s
TIA LR LR
comp=Z,650nm,18.1s
PHET Kaeng Krachan 50.84 292 P P 21 00 09.2 +2.4
comp=Z,811nmcomp=Z,102nm,0.9s
DL2 Dalian 50.86 334 P P 21 00 07.4 +0.8
DL2 pmax pmax
comp=Z,75nm,0.9s
DL2 LR LR
comp=Z,650nm,20.6s
DL2 LR LR
comp=Z,680nm,19.6s
DL2 LR LR
comp=Z,890nm,17.3s
GYA Guiyang 50.96 312 ⇑P **P 21 00 08.8 +1.0**
GYA pmax pmax
comp=Z,14nm,1.2s
GYA LR LR
comp=Z,190nm,16.0s
LHMI Lhok Sumawe 51.29 282 P P 21 00 10.1 -0.3
KUR Kuril'sk 51.41 1*ce*P **P 21 00 12.4 +1.8**
PHIT Phitsanulok 51.67 298 P P 21 00 15.1 +2.0
comp=Z,2µmcomp=Z,216nm,0.9s
UTTA Uttaradit 51.76 298 P P 21 00 15.3 +1.5
comp=Z,832nmcomp=Z,105nm,0.9s
SRDT SRDT 51.79 294 P P 21 00 15.5 +1.5
comp=Z,4µmcomp=Z,41nm,1.4s
UTHA Uthaitani 51.92 295 P P 21 00 16.7 +1.8
comp=Z,749nmcomp=Z,85nm,1.1s
NANT Nan 52.06 300 P P 21 00 18.3 +2.3
comp=Z,12µmcomp=Z,427nm,0.7s
USA0B Ussuriysk Arra 52.17 346⇩*eP* **P 21 00 16.1 -0.2**
USA0B Ussuriysk Arra 52.17 346 P P 21 00 16.8 +0.5
USA0B IAmb IAmb 21 00 18.3
comp=Z,87nm,1.4s
USRK Ussuriysk Ar. 52.17 346 P P 21 00 17.0 +0.7
comp=Z,16nm,0.7s,baz=166,slow=6.6,SNR=38
USRK LR LR 21 21 13.0
comp=Z,278nm,18.2s,baz=146,slow=35
SUKH Sukhothai 52.47 298 P P 21 00 21.2 +2.1
comp=Z,66nm,1.1s
UMPA Umpang Tak 52.68 296 P P 21 00 22.3 +1.7
comp=Z,125nm,1.0s
LAMP Lampang 52.88 299 P P 21 00 24.0 +1.9
comp=Z,582nmcomp=Z,73nm,0.9s
MDJ Mudanjiang 53.16 345 P P 21 00 24.2 +0.5
MDJ pP pP 21 00 30.4 -2.3
MDJ sP sP 21 00 33.2 -2.3
MDJ PP **PP 21 02 27.9 +4.0**
MDJ pmax pmax
comp=Z,55nm,0.9s
MDJ pmax pmax
comp=Z,410nm,3.5s
MDJ LR LR
comp=Z,580nm,10.4s
MDJ Mudanjiang 53.16 345 P P 21 00 22.9 -0.7
MDJ IAmb IAmb 21 00 25.2
comp=Z,41nm,0.9s
KMI Kunming 53.25 308 ⇓P **P 21 00 27.0 +2.0**
KMI PP **PP 21 02 22.4 -3.0**
KMI S **S 21 08 02.5 +7.3**
KMI pmax pmax
comp=Z,23nm,1.3s
KMI pmax pmax
comp=Z,220nm,4.0s
KMI LR LR
comp=Z,260nm,20.0s
KMI LR LR
comp=Z,180nm,16.3s
KMI LR LR
comp=Z,210nm,21.2s
YSS Yuzh-Sakhalins 53.26 356*eP* **P 21 00 25.2 +0.9**
YSS *e* 21 08 10.8
YSS pmax pmax
comp=Z,40nm,1.1s
YSS Yuzh-Sakhalins 53.26 356 P P 21 00 24.0 -0.4
YSS IAmb IAmb 21 00 25.8
comp=Z,38nm,0.8s
CM36 Chiang Mai Arr 53.34 299 P P 21 00 27.0 +1.5
CM35 Chiang Mai Arr 53.35 299 P P 21 00 27.0 +1.4
CM04 Chiang Mai Arr 53.40 298 P P 21 00 28.1 +2.2
comp=Z,413nmcomp=Z,50nm,1.0s
CM09 Chiang Mai Arr 53.41 298 P P 21 00 28.0 +2.0
comp=Z,414nmcomp=Z,48nm,0.9s
CM01 Chiang Mai Arr 53.42 298 P P 21 00 28.3 +2.2
comp=Z,397nmcomp=Z,49nm,1.1s
CM34 Chiang Mai Arr 53.43 299 P P 21 00 27.0 +0.9
CM05 Chiang Mai Arr 53.43 298 P P 21 00 28.0 +1.9
comp=Z,325nmcomp=Z,38nm,1.1s
CM02 Chiang Mai Arr 53.44 298 P P 21 00 28.3 +2.1
comp=Z,369nmcomp=Z,47nm,1.0s
CM31 Chiang Mai Arr 53.45 298 P P 21 00 28.4 +2.1
comp=Z,1.1µmcomp=Z,1µm,1.1s
CM31 Chiang Mai Arr 53.45 298 P P 21 00 27.6 +1.3
CMAR Chiang Mai Arr 53.45 298 P P 21 00 28.0 +1.7
comp=Z,24nm,0.8s,baz=123,slow=5.7,SNR=152
CMAR ScP **ScP 21 05 32.9 +3.3**
comp=Z,2.4nm,0.9s,baz=116,slow=2.8,SNR=7.4
CMAR PKP2bc 21 31 03.5
comp=Z,1.5nm,1.0s,baz=297,slow=3.3,SNR=5.7
CM15 Chiang Mai Arr 53.47 298 P P 21 00 28.0 +1.6
comp=Z,394nmcomp=Z,49nm,0.9s
CM13 Chiang Mai Arr 53.47 298 P P 21 00 28.6 +2.1
comp=Z,335nmcomp=Z,41nm,1.0s
CMMT Chiang Mai 53.59 299 P P 21 00 27.7 +0.4
comp=Z,268nmcomp=Z,21nm,1.2s
CM33 Chiang Mai Arr 53.59 299 P P 21 00 28.0 +0.7
CHTO Chiang Mai 53.59 299 P P 21 00 27.0 -0.3
CHTO pmax pmax
comp=Z,42nm,1.1s
CHTO Chiang Mai 53.59 299 P P 21 00 27.0 -0.3
CHTO IAmb IAmb 21 00 30.0
comp=Z,42nm,1.1s
CM32 Chiang Mai Arr 53.61 299 P P 21 00 29.0 +1.5
CN2 Changchun 53.65 341*eP* **P 21 00 27.3 0.0**
CN2 *es*P sP 21 00 43.0 +3.9
CN2 *eS* **S 21 07 57.0 -2.4**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,400nm,14.0s
CN2 LR LR
comp=Z,400nm,14.0s
CN2 LR LR
comp=Z,500nm,16.0s
XAN Xi'an 54.00 321 P P 21 00 30.0 -0.1
XAN pP pP 21 00 36.2 -3.1
XAN pmax pmax
comp=Z,69nm,1.1s
XAN Xi'an 54.00 321 P P 21 00 29.8 -0.3
XAN pmax pmax
comp=Z,75nm,1.0s
XAN Xi'an 54.00 321 P P 21 00 29.8 -0.3
BJT Baijiatuau 54.25 331 P P 21 00 31.6 -0.1
BJT pmax pmax
comp=Z,74nm,1.2s
BJT Baijiatuau 54.25 331 P P 21 00 31.6 -0.1
BJI Beijing 54.26 331 P P 21 00 31.6 -0.2
BJI S **S 21 08 11.6 +3.8**
BJI pmax pmax
comp=Z,52nm,1.2s
BJI pmax pmax
comp=Z,180nm,3.9s
BJI LR LR
comp=Z,150nm,14.4s
BJI LR LR
comp=Z,420nm,21.4s
BJI LR LR
comp=Z,590nm,27.2s
TIY Taiyuan 54.45 326*eP* **P 21 00 33.5 +0.1**
TIY pmax pmax
comp=Z,15nm,0.6s
CD2 Chengdu 55.57 314⇑*iP* **P 21 00 41.9 +0.4**
CD2 S **S 21 08 26.0 +0.2**
CD2 pmax pmax
comp=Z,70nm,0.6s
CD2 pmax pmax
comp=Z,150nm,9.2s
CD2 LR LR
comp=Z,370nm,18.2s
CD2 LR LR
comp=Z,610nm,19.2s
CD2 LR LR
comp=Z,600nm,15.1s
XMAS Kiritimati 56.08 83 P P 21 00 46.2 +0.7
KLR Kul'dur 56.99 348 P P 21 00 51.8 +0.5
comp=Z,20nm,1.0s,baz=170,slow=4.9,SNR=38
KLR Kul'dur 56.99 348*c iP* **P 21 00 51.5 +0.2**
KLR pmax pmax
comp=Z,90nm,1.6s
TYV Tymovskoe 57.17 357*eP* **P 21 00 53.8 +1.4**
TYV *eS* **S 21 08 49.0 +2.8**
TYV pmax pmax
comp=Z,500nm,3.1s
TYV pmax pmax
comp=Z,65nm,1.4s
TYV smax smax
comp=N,9.0nm,1.2s
HHC Hu-ho-hao-te 57.19 328*eP* **P 21 00 53.1 +0.1**
HHC S **S 21 08 48.8 +1.7**
HHC pmax pmax
comp=N,38nm,0.9s
HHC pmax pmax
comp=N,170nm,5.0s
HHC LR LR
comp=N,320nm,17.0s
HHC LR LR
comp=N,290nm,15.6s
HHC LR LR
comp=N,370nm,16.3s
SKR Severo-Kuril's 57.41 7*eP* **P 21 00 53.2 -0.9**
SKR *eS* **S 21 08 50.4 +1.1**
SKR pmax pmax
comp=Z,200nm,5.6s
SKR MLR MLR
comp=Z,200nm,17.0s
GRNR Gornyy 57.68 352⇑*iP* **P 21 00 56.9 +0.8**
GRNR pmax pmax
comp=Z,20nm,1.1s
BTO Baotou 57.83 327 P P 21 00 58.0 +0.5
LZH Lanzhou 58.53 319 ⇑P **P 21 01 03.5 +1.0**
LZH pP pP 21 01 08.6 -2.7
LZH sP sP 21 01 12.9 -1.7
LZH *eS* **S 21 09 06.8 +1.9**
LZH sS pS 21 09 17.4 +1.5
LZH pmax pmax
comp=Z,53nm,1.3s
LZH pmax pmax
comp=Z,150nm,5.4s
LZH LR LR
comp=Z,330nm,16.0s
LZH LR LR
comp=Z,280nm,16.4s
LZH LR LR
comp=Z,290nm,18.0s
PEA0B Petropavlovsk- 59.98 7*c iP* **P 21 01 12.8 +0.8**
PEA0B Petropavlovsk- 59.98 7 P P 21 01 13.5 +1.4
PETK Petropavlovsk- 59.98 7 P P 21 01 13.2 +1.2
comp=Z,73nm,0.9s,baz=156,slow=6.2,SNR=60
PETK LR LR 21 22 35.8
comp=Z,805nm,21.8s,baz=194,slow=32
PET Petropavlovsk 60.03 8*eP* **P 21 01 13.4 +1.1**
PET *eS* **S 21 09 23.4 +0.1**
PET pmax pmax
comp=Z,94nm,1.0s
PET Petropavlovsk 60.03 8 P P 21 01 12.7 +0.4
HIA Hailar 60.34 340 P P 21 01 14.9 +0.3
HIA pmax pmax
comp=Z,120nm,1.0s
HIA Hailar 60.34 340 P P 21 01 14.9 +0.3
ZEA Zeya 62.20 347*eP* **P 21 01 28.0 +0.9**
ZEA pmax pmax
comp=E,10.0nm,1.1s
ZEA pmax pmax
comp=N,60nm,0.9s
ZEA pmax pmax
comp=Z,110nm,0.9s
SHL Shillong 62.25 303 P P 21 01 28.5 +0.3
SHL pmax pmax
comp=Z,25nm,0.8s
SHL Shillong 62.25 303 P P 21 01 28.5 +0.3
SHL IAmb IAmb 21 01 29.7
comp=Z,25nm,0.8s
PPT Papeete 62.77 106 LR LR 21 24 29.4
comp=Z,105nm,21.8s,baz=308,slow=32
PPT2 Papeete2 62.77 106 *e*LR LR 21 20 15.7
comp=Z,304nm,23.8s
GTA Gaotai 63.06 320 ⇑P **P 21 01 34.0 +0.7**
GTA pP pP 21 01 38.1 -4.0
GTA sS sS 21 10 18.3 +0.8
GTA SS **SS 21 14 10.6 +1.6**
GTA pmax pmax
comp=Z,23nm,0.8s
GTA pmax pmax
comp=Z,160nm,4.3s
GTA LR LR
comp=Z,130nm,15.3s
GTA LR LR
comp=Z,140nm,17.4s
GTA LR LR
comp=Z,110nm,19.6s
TBI Tubuai 63.20 113*e*LR LR 21 20 19.8
comp=Z,211nm,26.5s
ULN Ulaanbaatar 64.47 331*c iP* **P 21 01 43.1 +0.6**
ULN pmax pmax
comp=Z,55nm,1.7s
ULN Ulaanbaatar 64.47 331 P P 21 01 42.9 +0.4
ULN IAmb IAmb 21 01 44.4
comp=Z,64nm,1.4s
LSA Lhasa 64.49 307 P P 21 01 44.2 +0.8
LSA pmax pmax
comp=Z,29nm,0.9s
LSA Lhasa 64.49 307 P P 21 01 44.2 +0.8
LSA IAmb IAmb 21 01 45.6
comp=Z,29nm,0.9s
SONM Songino Array 64.77 331 P P 21 01 44.7 +0.4
comp=Z,24nm,1.1s,baz=148,slow=7.0,SNR=69
SONM PKP2bc 21 30 39.0
comp=Z,1.8nm,0.9s,baz=248,slow=2.6,SNR=5.7
SONM LR LR 21 31 25.1
comp=Z,383nm,18.6s,baz=132,slow=37
CIT Chita 64.84 338*eP* **P 21 01 45.4 +0.8**
CIT *e* 21 01 54.6
CIT *e* 21 02 02.0
CIT *e* 21 02 20.2
CIT pmax pmax
comp=Z,220nm,1.7s
CASY Casey 64.87 195 P P 21 01 43.8 -0.8
CASY IAmb IAmb 21 01 52.7
comp=Z,22nm,0.9s
MA2 Magadan 65.84 2 P P 21 01 51.7 +0.8
comp=Z,87nm,0.8s,baz=169,slow=5.9,SNR=65
MA2 LR LR 21 26 44.6
comp=Z,441nm,21.9s,baz=186,slow=32
MA2 Magadan 65.84 2*c iP* **P 21 01 51.5 +0.6**
MA2 pmax pmax
comp=Z,216nm,1.7s
MA2 Magadan 65.84 2 P P 21 01 51.3 +0.3
TAPN Taplejung 66.38 303*eP* **P 21 01 56.1 +0.7**
comp=Z,58nm,0.8s
ODAN Odare 66.47 303*eP* **P 21 01 56.5 +0.5**
comp=Z,84nm,0.8s
RAMN Ramite 67.17 303*eP* **P 21 02 00.8 +0.4**
comp=Z,27nm,0.7s
PALK Pallekele 67.53 281 P P 21 02 03.7 +1.0
PALK pmax pmax
comp=Z,22nm,0.9s
PALK Pallekele 67.53 281 P P 21 02 03.6 +1.0
PALK IAmb IAmb 21 02 05.8
comp=Z,22nm,0.8s
JIRN Jiri 67.75 303*eP* **P 21 02 04.8 +0.6**
comp=Z,43nm,0.7s
ZAK Zakamensk 68.00 331*eP* **P 21 02 04.7 -0.3**
ZAK pmax pmax
comp=Z,43nm,1.4s
GUN Gumba 68.10 303*eP* **P 21 02 07.0 +0.6**
comp=Z,103nm,0.8s
PKI Pulchoki 68.38 303*eP* **P 21 02 08.2 +0.1**
comp=Z,45nm,0.8s
KKN Kakani 68.56 303*eP* **P 21 02 09.6 +0.5**
comp=Z,96nm,0.8s
DMN Daman 68.64 303*eP* **P 21 02 10.3 +0.6**
comp=Z,114nm,0.8s
TLY Talaya 68.71 333 P P 21 02 10.1 +0.8
comp=Z,8.4nm,0.7s,baz=116,slow=4.0,SNR=9.8
TLY Talaya 68.71 333*eP* **P 21 02 09.5 +0.2**
TLY *eS* **S 21 11 05.6 -5.3**
TLY pmax pmax
comp=Z,54nm,1.0s
TLY MLR MLR
comp=Z,647nm,15.0s
TLY Talaya 68.71 333 P P 21 02 09.3 0.0
IRK Irkutsk 68.82 333*eP* **P 21 02 09.0 -0.9**
IRK pmax pmax
comp=Z,25nm,2.1s
GKN Gorkha 69.16 303*eP* **P 21 02 13.0 +0.2**
comp=Z,102nm,0.8s
SEY Seymchan 69.27 3 P P 21 02 12.7 +0.2
comp=Z,49nm,0.9s,baz=179,slow=4.8,SNR=121
SEY Seymchan 69.27 3⇑*iP* **P 21 02 13.2 +0.7**
BOD Bodaibo 69.37 342*eP* **P 21 02 13.2 0.0**
BOD pmax pmax
comp=Z,76nm,1.2s
YAK Yakutsk 69.55 351 P P 21 02 14.5 +0.3
comp=Z,27nm,0.8s,baz=124,slow=1.0,SNR=36
YAK Yakutsk 69.55 351*c iP* **P 21 02 14.2 0.0**
YAK *e**PP **sP 21 02 26.0 -0.7**
YAK *e* 21 02 36.9
YAK *eS* **S 21 11 20.2 0.0**
YAK *e**SS **sS 21 11 39.3 +4.2**
YAK *e* 21 12 02.1
YAK *eSS* **SS 21 15 47.9 -0.5**
YAK pmax pmax
comp=Z,68nm,0.9s
YAK pmax pmax
comp=N,45nm,1.2s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK smax smax
comp=N,96nm,3.2s
YAK smax smax
comp=E,35nm,1.8s
YAK Yakutsk 69.55 351 P P 21 02 14.2 0.0
MOY Mondy 69.94 332*eP* **P 21 02 17.3 +0.3**
MOY pmax pmax
comp=Z,63nm,1.9s
KOLN Koldanda 69.95 302*eP* **P 21 02 18.2 +0.5**
comp=Z,127nm,0.7s
DANN Dangsing 70.01 303*eP* **P 21 02 18.2 0.0**
comp=Z,89nm,0.7s
PYUN Piuthan 70.57 303*eP* **P 21 02 21.5 0.0**
comp=Z,163nm,0.8s
VNDA Vanda 71.50 177 P P 21 02 26.6 +0.6
comp=Z,24nm,0.9s,baz=324,slow=6.4,SNR=79
VNDA LR LR 21 32 31.1
comp=Z,324nm,18.1s,baz=348,slow=35
VNDA Vanda 71.50 177 P P 21 02 26.3 +0.3
VNDA pmax pmax
comp=Z,25nm,0.8s
VNDA Vanda 71.50 177 P P 21 02 26.3 +0.3
VNDA IAmb IAmb 21 02 28.5

comp=Z,24nm,0.8s
HYB Hyderabad 71.61 291 *i* P **P** **21 02 27.0 -0.8**
HYB *e*pP **sP** **21 02 39.0 -1.1**
HYB *e*PcP **PcP** **21 02 46.0 -1.0**
SBA Scott Base 72.15 176 P **P** **21 02 31.0 +1.1**
SBA pmax pmax
comp=Z,19nm,1.1s
SBA Scott Base 72.15 176 P **P** **21 02 31.0 +1.1**
WMQ Urumqi 73.11 319 P **P** **21 02 36.7 +0.4**
WMQ pP pP 21 02 42.9 -2.3
WMQ sP sP 21 02 47.5 -1.0
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ pmax pmax
comp=Z,250nm,5.7s
WMQ LR LR
comp=Z,450nm,18.5s
WMQ LR LR
comp=Z,450nm,18.5s
WMQ LR LR
comp=Z,290nm,21.3s
WMQ Urumqi 73.11 319 P **P** **21 02 36.2 0.0**
WMQ pmax pmax
comp=Z,27nm,0.8s
WMQ Urumqi 73.11 319 P **P** **21 02 36.2 0.0**
WMQ IAmb IAmb 21 02 39.3
comp=Z,27nm,0.8s
MNCI Minicoy 75.16 280 P **P** **21 02 47.5 -1.3**
BILL Bilibino 75.52 7*d i*P **P** **21 02 50.3 +0.6**
BILL *e* 21 03 02.9
BILL *e* 21 05 38.9
BILL pmax pmax
comp=Z,73nm,1.7s
BILL MLR MLR
comp=Z,152nm,18.0s
BILL Bilibino 75.52 7 P **P** **21 02 49.6 0.0**
BILL IAmb IAmb 21 02 51.6
comp=Z,65nm,1.3s
DGZ Jazzator, Alta 75.97 325*c i*P **P** **21 02 52.5 -0.4**
DGZ pmax pmax
comp=Z,15nm,1.0s
POO Poona 76.22 291 *e*P **P** **21 02 53.0 -1.8**
ZSN Zaisan 76.48 322 *e*P **P** **21 02 54.9 -0.8**
comp=Z,4.8nm,0.8s,baz=322
ZSN Zaisan 76.48 322 *e*P **P** **21 02 54.8 -0.8**
ZSN pmax pmax
comp=Z,5.0nm,0.8s
RKT Rikitea 76.51 112 *e*LR LR 21 26 35.8
comp=Z,351nm,27.5s
GAMB Gambell 76.56 18 P 21 02 56.5
baz=222
GAMB Gambell 76.56 18 P **P** **21 02 56.4 +0.7**
MK31 Makanchi Array 77.82 321*c i*P **P** **21 03 02.9 -0.3**
MK31 Makanchi Array 77.82 321 P **P** **21 03 02.8 -0.4**
MKAR Makanchi Array 77.82 321 P **P** **21 03 03.0 -0.2**
comp=Z,14nm,0.7s,baz=101,slow=6.8,SNR=149
MKAR PKKPbc **PKKPbc** **21 22 09.7 +2.6**
comp=Z,0.4nm,0.9s,baz=282,slow=1.1,SNR=4.9
MKAR PKPPKP 21 30 07.7
comp=Z,0.6nm,1.0s,baz=318,slow=1.6,SNR=4.0
SHLS Shalkode 78.34 316 *e*P **P** **21 03 03.5 -2.8**
comp=Z,14nm,0.9s,baz=316
SHLS Shalkode 78.34 316 *e*P **P** **21 03 03.5 -2.8**
SHLS pmax pmax
comp=Z,14nm,0.9s
UZB Uzynbulak 78.64 316 *e*P **P** **21 03 06.7 -1.2**
baz=316
UZB Uzynbulak 78.64 316 *e*P **P** **21 03 06.7 -1.2**
TIXI Tiksi 78.82 354 P **P** **21 03 07.1 -1.0**
comp=Z,11nm,1.0s,baz=138,slow=5.2,SNR=15
TIXI Tiksi 78.82 354*c i*P **P** **21 03 07.0 -1.1**
TIXI pmax pmax
comp=Z,101nm,1.7s
TIXI Tiksi 78.82 354 P **P** **21 03 06.5 -1.6**
KPKS Kokpek 78.98 316 *e*P **P** **21 03 08.4 -1.4**
comp=Z,11nm,0.7s,baz=316
KPKS Kokpek 78.98 316 *e*P **P** **21 03 08.4 -1.4**
KPKS pmax pmax
comp=Z,11nm,0.7s
TNA Tin City 78.98 17 P 21 03 09.6
baz=226
TNA Tin City 78.98 17 P **P** **21 03 09.4 +0.3**
SATY Saty 79.03 316 *e*P **P** **21 03 08.9 -1.2**
comp=Z,5.8nm,0.7s,baz=316
SATY Saty 79.03 316 *e*P **P** **21 03 08.9 -1.2**
SATY pmax pmax
comp=Z,6.0nm,0.7s
ANM Nome 79.09 19 P 21 03 10.7
baz=228
ANM Nome 79.09 19 P **P** **21 03 09.9 +0.1**
ANM pmax pmax
comp=Z,19nm,0.9s
ANM Nome 79.09 19 P **P** **21 03 09.9 +0.1**
ZAA0 Zalesovo Array 79.36 328 P **P** **21 03 09.8 -1.6**
ZAA0 IAmb IAmb 21 03 11.1
comp=Z,22nm,0.7s
ZALV Zalesovo Beam 79.36 328 P **P** **21 03 10.4 -1.0**
comp=Z,23nm,0.6s,baz=110,slow=5.5,SNR=122
ZALV PKKPbc **PKKPbc** **21 22 02.2 -1.7**
comp=Z,0.6nm,0.5s,baz=316,slow=4.1,SNR=5.0
ZALV PKPPKP **P'P'df** **21 30 08.1 +4.2**
comp=Z,0.3nm,0.2s,baz=263,slow=2.5,SNR=5.5
ZALV LR LR 21 38 46.6
comp=Z,288nm,19.7s,baz=102,slow=36
ZALV Zalesovo Beam 79.36 328 *i* P **P** **21 03 10.1 -1.4**
ZALV pmax pmax
comp=Z,23nm,0.6s
TDK Taldyqorghan 79.69 318 *e*P **P** **21 03 12.2 -1.3**
comp=Z,12nm,0.7s,baz=318
TDK Taldyqorghan 79.69 318 *e*P **P** **21 03 12.2 -1.3**
TDK pmax pmax
comp=Z,12nm,0.7s
MDOK Medeo 80.00 316 *e*P **P** **21 03 14.2 -1.3**
baz=316
MDOK Medeo 80.00 316 *e*P **P** **21 03 14.1 -1.3**
TNSS Tian-Shan 80.03 316 *e*P **P** **21 03 14.8 -1.1**
baz=316
TNSS Tian-Shan 80.03 316 *e*P **P** **21 03 14.8 -1.1**
AAA Alma-Ata 80.11 316 *e*P **P** **21 03 15.5 -0.4**
baz=316
AAA Alma-Ata 80.11 316 *e*P **P** **21 03 15.5 -0.4**
NIL Nilore 80.17 306 P **P** **21 03 15.7 -0.7**
NIL pmax pmax
comp=Z,97nm,0.9s
NIL Nilore 80.17 306 P **P** **21 03 15.7 -0.7**
KDAK Kodiak Island 80.25 28 LR LR 21 32 05.8
comp=Z,324nm,22.0s,baz=247,slow=31
SEM Semipalatinsk 80.46 323 *e*P **P** **21 03 15.2 -2.6**
baz=323
SEM Semipalatinsk 80.46 323 *e*P **P** **21 03 15.2 -2.6**
KUU Kurty 80.72 316 *e*P **P** **21 03 17.3 -1.9**
comp=Z,24nm,0.7s,baz=316
KUU Kurty 80.72 316 *e*P **P** **21 03 17.2 -1.9**
KUU pmax pmax
comp=Z,24nm,0.7s
TKM2 Tokmak 2 80.94 315 P **P** **21 03 20.7 +0.1**
SNR=14
KBK Karagaybulak 81.32 315 P **P** **21 03 22.7 +0.2**
SNR=12
UCH Uchtor 81.50 314 P **P** **21 03 24.4 +0.5**
SNR=29
KURK Kurchatov 81.54 323 P **P** **21 03 22.8 -0.5**
KURK **PP** **21 06 29.5 -0.4**
CHMS Chumysh 81.56 315 P **P** **21 03 23.5 -0.1**
SNR=14
KURBB Kurchatov Arra 81.56 323 P **P** **21 03 22.8 -0.6**
comp=Z,10.0nm,0.9s,baz=113,slow=4.2,SNR=54
KURBB PP **PP** **21 06 29.5 -0.6**
comp=Z,1.2nm,0.9s,baz=104,slow=8.6,SNR=4.7
KURBB PKKPbc **PKKPbc** **21 21 58.1 -0.6**
comp=Z,0.7nm,0.6s,baz=294,slow=2.4,SNR=5.3
AAK Ala-Archa 81.64 315 P **P** **21 03 24.5 +0.3**
SNR=17
AAK Ala-Archa 81.64 315*c i*P **P** **21 03 24.1 -0.1**
AAK pmax pmax
comp=Z,56nm,1.3s
AAK Ala-Archa 81.64 315 P **P** **21 03 23.8 -0.4**
CNPM China Poot 81.70 27 P **P** **21 03 23.9 -0.1**
USP Ospenovka 81.81 315 P **P** **21 03 25.1 +0.1**
SNR=14
MAW Mawson 81.88 203 P **P** **21 03 24.4 -0.3**
comp=Z,12nm,0.9s,baz=63,slow=5.6,SNR=6.5
MAW LR LR 21 39 00.7
comp=Z,259nm,19.0s,baz=63,slow=35
MAW Mawson 81.88 203 P **P** **21 03 23.9 -0.8**
MAW Mawson 81.88 203 P **P** **21 03 23.9 -0.8**

AML Almayashu 82.06 314 P **P** **21 03 27.1 +0.4**
SNR=39
RDOG Red Dog Mine 82.13 17 P 21 03 26.7
baz=230
RDOG Red Dog Mine 82.13 17 P **P** **21 03 26.6 +0.6**
RDOG IAmb IAmb 21 03 27.9
comp=Z,59nm,1.1s
EKS2 Erkin-Say 82.15 315 P **P** **21 03 27.1 +0.2**
SNR=24
BTLS Baital 82.63 317 *e*P **P** **21 03 27.8 -1.3**
comp=Z,7.2nm,0.8s,baz=317
BTLS Baital 82.63 317 *e*P **P** **21 03 27.8 -1.3**
BTLS pmax pmax
comp=Z,7.0nm,0.8s
SKT Skwentna 82.73 25 P 21 03 27.6
baz=242
SUA Susitna One 82.82 25 P 21 03 28.8
baz=242,SNR=6.2
SUA Susitna One 82.82 25 P **P** **21 03 28.5 -1.4**
SUA IAmb IAmb 21 03 32.9
comp=Z,28nm,1.2s
PPLA Purkeypile 82.91 24 P **P** **21 03 29.3 -1.0**
PPLA IAmb IAmb 21 03 33.9
comp=Z,32nm,1.4s
RC01 Rabbit Creek A 83.08 26 P **P** **21 03 30.5 -0.6**
RC01 Rabbit Creek A 83.08 26 P 21 03 30.9
baz=243,SNR=5.8
CHUM Lake Minchumin 83.34 23 P 21 03 32.8
baz=241,SNR=13
CUT Chulitna 83.46 25 P **P** **21 03 32.5 -0.5**
CUT IAmb IAmb 21 03 32.9
comp=Z,39nm,1.0s
CUT Chulitna 83.46 25 P 21 03 32.1
baz=243
PMR Palmer 83.57 26 P 21 03 33.0
baz=244
PMR Palmer 83.57 26 P **P** **21 03 32.9 -0.7**
PMR pmax pmax
comp=Z,17nm,0.9s
PMR Palmer 83.57 26 P **P** **21 03 32.9 -0.7**
PWL Port Wells 83.60 26 P **P** **21 03 33.5 -0.3**
KTH Kantishna Hill 83.73 23 P **P** **21 03 33.3 -1.2**
KTH IAmb IAmb 21 03 34.6
comp=Z,22nm,1.0s
GHO Glory Hole Cre 83.74 25 P **P** **21 03 33.9 -0.7**
GHO IAmb IAmb 21 03 35.1
comp=Z,34nm,1.0s
KBL Kabul 83.78 306 P **P** **21 03 34.1 -1.4**
KBL pmax pmax
comp=Z,18nm,0.8s
KBL Kabul 83.78 306 P **P** **21 03 34.1 -1.4**
KBL IAmb IAmb 21 03 36.4
comp=Z,18nm,0.8s
KNK Knik Glacier 83.78 26 P 21 03 34.8
baz=244
KNK Knik Glacier 83.78 26 P **P** **21 03 34.2 -0.5**
KNK IAmb IAmb 21 03 35.8
comp=Z,32nm,1.0s
TRF Thorofare Moun 83.93 24 P **P** **21 03 34.3 -1.3**
TRF Thorofare Moun 83.93 24 P 21 03 34.6
baz=243
DZA Taraz 83.95 314 *e*P **P** **21 03 35.0 -1.1**
comp=Z,17nm,1.3s,baz=314
DZA Taraz 83.95 314 *e*P **P** **21 03 34.9 -1.1**
DZA pmax pmax
comp=Z,17nm,1.3s
BPAW Bear Paw Mtn. 83.96 23 P **P** **21 03 34.6 -1.0**
BPAW Bear Paw Mtn. 83.96 23 P 21 03 35.0
baz=242,SNR=7.5
SML Sawmill 84.01 26 P 21 03 35.7
baz=245,SNR=9.9
SML Sawmill 84.01 26 P **P** **21 03 35.3 -0.6**
SML pmax pmax
comp=Z,39nm,0.9s
SML Sawmill 84.01 26 P **P** **21 03 35.3 -0.6**
SML IAmb IAmb 21 03 36.8
comp=Z,39nm,0.9s
GLI Glacier Island 84.16 27 P **P** **21 03 36.2 -0.5**
GLI IAmb IAmb 21 03 37.5
comp=Z,40nm,1.0s
GLI Glacier Island 84.16 27 P 21 03 36.4
baz=246,SNR=5.7
FID Port Fidalgo 84.38 27 P **P** **21 03 37.1 -0.6**
FID IAmb IAmb 21 03 39.8
comp=Z,22nm,0.9s
WAT2 Susitna Watana 84.40 24 P 21 03 37.1
baz=244,SNR=9.4
SCM Sheep Creek Mo 84.45 26 P **P** **21 03 37.9 -0.3**
SCM pmax pmax
comp=Z,42nm,1.1s
SCM Sheep Creek Mo 84.45 26 P **P** **21 03 37.9 -0.3**
SCM IAmb IAmb 21 03 38.8
comp=Z,42nm,1.1s
RND Reindeer 84.49 24 P **P** **21 03 37.0 -1.4**
RND pmax pmax
comp=Z,33nm,0.8s
RND Reindeer 84.49 24 P **P** **21 03 37.0 -1.4**
RND IAmb IAmb 21 03 38.4
comp=Z,33nm,0.8s
MLY Manley 84.49 22 P 21 03 38.2
baz=242,SNR=31
MLY Manley 84.49 22 P **P** **21 03 37.7 -0.6**
MLY IAmb IAmb 21 03 39.3
comp=Z,28nm,0.8s
KK31 Karatay Array 84.58 314 P **P** **21 03 38.5 -0.7**
KK31 pmax pmax
comp=Z,42nm,1.4s
KK31 Karatay Array 84.58 314 P **P** **21 03 38.5 -0.7**
KK31 IAmb IAmb 21 03 40.3
comp=Z,42nm,1.4s
KKAR Karatay Array 84.58 314 P **P** **21 03 38.3 -0.9**
KKAR pmax pmax
comp=Z,42nm,1.4s
KKAR Karatay Array 84.58 314 P **P** **21 03 38.3 -0.9**
KKAR IAmb IAmb 21 03 40.2
comp=Z,42nm,1.4s
WAT6 Susitna Watana 84.59 25 P 21 03 38.5
baz=245,SNR=7.0
MCK McKinley 84.60 24 P 21 03 37.8
baz=244,SNR=20
MCK McKinley 84.60 24 P **P** **21 03 37.5 -1.3**
MCK pmax pmax
comp=Z,51nm,1.0s
MCK McKinley 84.60 24 P **P** **21 03 37.5 -1.3**
IUG luzhnay 84.70 313 *e*P **P** **21 03 38.6 -1.3**
comp=Z,7.1nm,1.2s,baz=313
IUG luzhnay 84.70 313 *e*P **P** **21 03 38.6 -1.3**
IUG pmax pmax
comp=Z,7.0nm,1.2s
BRZS Berezniki 84.92 321 *e*P **P** **21 03 38.8 -1.9**
comp=Z,24nm,1.4s,baz=321
BRZS Berezniki 84.92 321 *e*P **P** **21 03 38.8 -1.9**
BRZS pmax pmax
comp=Z,24nm,1.4s
KLU Klutina 84.92 26 P **P** **21 03 40.6 0.0**
KLU IAmb IAmb 21 03 41.9
comp=Z,37nm,1.0s
KLU Klutina 84.92 26 P 21 03 40.8
baz=247,SNR=10
NEA2 Nenana 84.93 23 P 21 03 39.7
baz=244,SNR=13
NEA2 Nenana 84.93 23 P **P** **21 03 39.3 -1.1**
NEA2 IAmb IAmb 21 03 40.6
comp=Z,26nm,1.0s
M24K Tolsona, Glenn 85.06 26 P 21 03 41.5
baz=246
M24K Tolsona, Glenn 85.06 26 P **P** **21 03 41.4 +0.2**
M24K IAmb IAmb 21 03 42.2
comp=Z,33nm,0.9s
I23K Minto, Yukon-K 85.06 22 P 21 03 40.8
baz=243
I23K Minto, Yukon-K 85.06 22 P **P** **21 03 40.2 -0.9**
WRH Wood River Hil 85.25 23 P **P** **21 03 40.6 -1.5**
WRH IAmb IAmb 21 03 44.0
comp=Z,28nm,0.9s
BMRM Bremner River 85.31 27 P 21 03 42.7
baz=248
MDM Murphy Dome 85.41 23 P **P** **21 03 41.5 -1.4**
MDM IAmb IAmb 21 03 44.7
comp=Z,26nm,1.5s
CCB Clear Creek Bu 85.44 23 P **P** **21 03 41.2 -1.8**
CCB IAmb IAmb 21 03 42.8
comp=Z,35nm,1.0s
TCOL CIGO, UAF Yank 85.52 23 P **P** **21 03 41.6 -1.8**
TCOL CIGO, UAF Yank 85.52 23 P 21 03 42.5
baz=245,SNR=6.5

COLA College 85.52 23*c i*P **P** **21 03 42.2 -1.1**
COLA pmax pmax
comp=Z,33nm,0.9s
COLA College 85.52 23 P **P** **21 03 41.7 -1.6**
COLA IAmb IAmb 21 03 43.2
comp=Z,32nm,0.8s
COLA College 85.52 23 P 21 03 42.5
baz=245
N25K Chitina, Valde 85.55 26 P 21 03 43.8
baz=248
NRIK Noril'sk 85.67 342 P **P** **21 03 43.7 -0.3**
comp=Z,24nm,0.8s,baz=119,slow=4.9,SNR=42
NRIK LR LR 21 40 25.0
comp=Z,252nm,21.9s,baz=123,slow=35
NRIK Noril'sk 85.67 342*c i*P **P** **21 03 43.1 -0.9**
NRIK pmax pmax
comp=Z,81nm,1.5s
NRIK Noril'sk 85.67 342 P **P** **21 03 43.1 -0.9**
HDA Harding Lake 85.68 23 P 21 03 43.0
baz=246
HDA P 21 03 43.0
baz=246
PAX Paxson 85.70 25 P **P** **21 03 44.0 -0.4**
PAX pmax pmax
comp=Z,20nm,1.3s
PAX Paxson 85.70 25 P **P** **21 03 44.0 -0.4**
PAX IAmb IAmb 21 03 44.6
comp=Z,20nm,1.3s
COLD Coldfoot 85.71 20 P 21 03 44.7
baz=242,SNR=26
COLD Coldfoot 85.71 20 P **P** **21 03 44.5 +0.2**
COLD IAmb IAmb 21 03 47.4
comp=Z,24nm,0.9s
GLB Gilahina Butte 85.84 27 P **P** **21 03 45.3 +0.1**
GLB IAmb IAmb 21 03 46.3
comp=Z,33nm,1.1s
A21K Barrow 85.85 16 P **P** **21 03 45.0 +0.1**
A21K Barrow 85.85 16 P 21 03 45.2
baz=236,SNR=20
IL31 85.85 23 P **P** **21 03 43.3 -1.7**
IL31 IAmb IAmb 21 03 44.5
comp=Z,30nm,0.8s
ILAR Eielson Array 85.85 23 P **P** **21 03 43.6 -1.5**
comp=Z,22nm,0.8s,baz=254,slow=5.1,SNR=168
ILAR PKiKP **PKiKP** **21 08 54.0 -0.2**
comp=Z,0.5nm,0.6s,baz=298,slow=4.3,SNR=4.9
ILAR LR LR 21 37 41.1
comp=Z,259nm,21.5s,baz=266,slow=33
CRQE Cirque 85.92 28 P 21 03 46.0
baz=249
MCARA McCarthy VSAT 86.17 27 P 21 03 47.5
baz=249
MENT Mentasta 86.43 25 P **P** **21 03 47.5 -0.5**
MENT IAmb IAmb 21 03 50.5
comp=Z,16nm,1.0s
DOT Dot Lake 86.55 25 P **P** **21 03 48.0 -0.5**
DOT IAmb IAmb 21 03 49.5
comp=Z,34nm,1.0s
TOLK Toolik Lake Re 86.58 19 P **P** **21 03 48.9 +0.2**
TOLK IAmb IAmb 21 03 49.8
comp=Z,15nm,0.9s
TOLK Toolik Lake Re 86.58 19 P 21 03 49.1
baz=243,SNR=11
PRP Porcupine Dome 86.68 23 P 21 03 47.1
baz=247
PRP Porcupine Dome 86.68 23 P **P** **21 03 48.0 -1.3**
BARN Barnard Glacie 86.68 27 P **P** **21 03 49.4 0.0**
BARN IAmb IAmb 21 03 51.1
comp=Z,30nm,0.9s
SCRK Sand Creek 86.70 24 P **P** **21 03 49.1 -0.3**
SCRK IAmb IAmb 21 03 51.5
comp=Z,32nm,1.4s
SCRK Sand Creek 86.70 24 P 21 03 48.9
baz=248,SNR=7.6
CTG Chitna Glacier 86.80 28 P 21 03 50.2
baz=251
CTGM Chitina Glacie 86.80 28 P **P** **21 03 50.6 +0.6**
LOGN Logan Glacier 86.91 28 P **P** **21 03 50.7 +0.1**
LOGN IAmb IAmb 21 03 52.5
comp=Z,29nm,1.1s
BRVK Borovoye 87.17 324⇑ *i*P **P** **21 03 50.5 -1.3**
BRVK pmax pmax
comp=Z,9.0nm,1.0s
BRVK Borovoye 87.17 324 P **P** **21 03 50.4 -1.3**
FYU Fort Yukon 87.20 22 P **P** **21 03 51.6 0.0**
K27K Chicken 87.51 25 P 21 03 53.9
baz=250
EGAK Eagle 88.13 24 P 21 03 56.2
baz=251
EGAK Eagle 88.13 24 P **P** **21 03 55.8 -0.3**
HYT Haines Junctio 88.55 28 P **P** **21 03 58.6 +0.3**
DAWY Dawson 88.64 25 P **P** **21 03 58.4 -0.2**
HRA Herat 89.28 305 P **P** **21 04 01.2 -1.3**
HRA IAmb IAmb 21 04 11.0
comp=Z,29nm,1.4s
BESE Bessie Mountai 89.28 31 P **P** **21 04 02.5 +0.8**
WHY Whitehorse 89.75 29 P **P** **21 04 04.0 0.0**
SYO Syowa Base 90.21 200‖ *e*PP PP 21 07 38.0 -1.4
DLBC Dease Lake 91.73 31 LR LR 21 39 35.3
comp=Z,243nm,20.1s,baz=324,slow=32
DLBC Dease Lake 91.73 31 P **P** **21 04 12.0 -1.2**
DLBC IAmb IAmb 21 04 23.2
comp=Z,20nm,1.4s
INK Inuvik 92.03 21 P **P** **21 04 13.2 -1.0**
comp=Z,12nm,1.0s,baz=247,slow=5.5,SNR=28
INK Inuvik 92.03 21 P **P** **21 04 12.9 -1.3**
INK pmax pmax
comp=Z,20nm,1.1s
INK Inuvik 92.03 21 P **P** **21 04 12.9 -1.3**
INK IAmb IAmb 21 04 14.7
comp=Z,20nm,1.1s
ABKAR Akbulak array 92.89 319 P **P** **21 04 16.5 -2.2**
ABKAR IAmb IAmb 21 04 18.0
comp=Z,14nm,1.4s
GEYT Alibeck 93.02 308 P **P** **21 04 19.3 -0.3**
comp=Z,6.5nm,1.0s,baz=132,slow=2.2,SNR=8.6
SVE Sverdlovsk 93.33 327 *e*P **P** **21 04 18.9 -1.6**
SVE pmax pmax
comp=Z,17nm,1.6s
O02D Mt. Diablo Mer 94.24 50 P 21 04 25.9
baz=265
SOCY Socotra 94.27 282 P **P** **21 04 25.5 -0.4**
M02C Callahan 94.29 49 P 21 04 26.5
baz=265
HUMO Hull Mountain 94.31 48 P **P** **21 04 26.3 +0.9**
N02D Trinity Center 94.37 49 P 21 04 27.7
baz=265
YBH Yreka Blue Hor 94.43 49 P **P** **21 04 25.8 -0.2**
comp=Z,4.5nm,1.0s,baz=168,slow=6.2,SNR=5.4
YBH Yreka Blue Hor 94.43 49 P **P** **21 04 27.0 +0.9**
YBH pmax pmax
comp=Z,14nm,1.3s
YBH Yreka Blue Hor 94.43 49 P **P** **21 04 27.0 +0.9**
YBH IAmb IAmb 21 04 27.5
comp=Z,14nm,1.2s
ARU Arti 94.43 326*c i*P **P** **21 04 23.2 -2.4**
ARU 21 08 11.9
ARU S **SKSac** **21 14 55.7 -3.3**
ARU SS **SS** **21 21 55.4 -3.0**
ARU pmax pmax
comp=Z,13nm,1.6s
ARU MLR MLR
comp=Z,178nm,16.0s
ARU Arti 94.43 326 P **P** **21 04 22.9 -2.6**
WDC Whiskeytown Da 94.46 50 P **P** **21 04 26.5 +0.4**
WDC pmax pmax
comp=Z,12nm,1.3s
WDC Whiskeytown Da 94.46 50 P **P** **21 04 26.4 +0.4**
WDC IAmb IAmb 21 04 27.6
comp=Z,12nm,1.2s
O03E Paynes Creek 95.00 50 P 21 04 29.1
baz=266
ORV Oroville 95.18 51 P **P** **21 04 29.5 0.0**
ORV pmax pmax
comp=Z,14nm,1.4s
ORV Oroville 95.18 51 P **P** **21 04 29.5 0.0**
ORV IAmb IAmb 21 04 30.9
comp=Z,14nm,1.4s
AFDM Forest Hills D 95.55 52 P **P** **21 04 31.2 0.0**
AFDM IAmb IAmb 21 04 33.0
comp=Z,11nm,1.2s
C36M Paulatuk 95.57 21 P **P** **21 04 28.9 -1.6**
C36M IAmb IAmb 21 04 29.8
comp=Z,12nm,1.2s
C36M Paulatuk 95.57 21 P 21 04 29.4
baz=267

BELA Belgrano 2 95.83 180 P P 21 04 31.3 -0.3
BELA IAmb IAmb 21 04 34.8
comp=Z,14nm,1.0s
B08A Colville Reser 97.18 42 P P 21 04 37.4 -1.0
OPO Ambohidratompo 97.22 250 LR LR 21 47 24.3
comp=Z,43nm,18.3s,baz=173,slow=35
NVAR Mina Array Bea 97.61 52 LR LR 21 44 09.7
comp=Z,165nm,19.1s,baz=256,slow=33
NEW Newport 98.65 42 P P 21 04 44.7 -0.3
comp=Z,4.2nm,0.9s,baz=0.7,slow=3.9,SNR=4.4
NEW LR LR 21 43 33.7
comp=Z,228nm,19.2s,baz=234,slow=32
NEW Newport 98.65 42 P P 21 04 44.7 -0.3
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 98.65 42 P P 21 04 44.7 -0.3
NEW Newport 98.65 42 P 21 04 45.2
baz=270
MONP2 Monument Peak 98.95 58 P 21 04 48.4
baz=268
TPNV Topopah Spring 99.20 54 P Pdif 21 04 47.5 -0.4
TPNV pmax pmax
comp=Z,6.0nm,0.9s
TPNV Topopah Spring 99.20 54 P Pdif 21 04 47.5 -0.4
YKA Yellowknife Ar 99.53 28 P Pdif 21 04 48.2 -0.3
comp=Z,4.1nm,0.9s,baz=272,slow=4.5,SNR=35
YKA PP PP 21 08 50.1 -2.1
comp=Z,1.1nm,0.9s,baz=269,slow=7.8,SNR=5.8
YKA PKiKP PKiKP 21 09 17.9 +0.3
comp=Z,1.0nm,0.8s,baz=280,slow=1.4,SNR=9.1
YKA PKKPbc PKKPbc 21 21 10.3 -3.1
comp=Z,1.2nm,0.8s,baz=98,slow=3.2,SNR=15
YKA LR LR 21 47 17.3
comp=Z,124nm,20.3s,baz=0.0,slow=34
ELK Elko 100.02 50 LR LR 21 43 26.9
comp=Z,236nm,20.0s,baz=300,slow=32
BELG Belogornoye 100.78 322|| *eP* **Pdif 21 04 52.7 -1.5**
BELG pmax pmax
comp=Z,2.0nm,1.4s
VNA2 Neumayer--Watz 100.95 188 P Pdif 21 04 54.7 -0.1
VNA3 Neumayer Olymp 100.97 187 P Pdif 21 04 55.2 +0.4
PRGR Permogore 101.02 332 *eP* **Pdif 21 04 52.3 -2.8**
PRGR pmax pmax
comp=Z,7.0nm,0.8s
KLMR Klimovskoe 104.06 331 *eP* **Pdif 21 05 05.8 -2.9**
KLMR *e* 21 09 23.5
KLMR pmax pmax
comp=Z,15nm,1.3s
KLMR Klimovskoe 104.06 331 *e*Pdif **Pdif 21 05 05.9 -2.8**
KLMR AMP 21 05 17.2
comp=Z,15nm,1.3s
KLMR *e*PP **PKiKP 21 09 23.6 -2.2**
KLMR *e*PKKPbc **PKKPbc 21 20 54.6 -5.5**
PDAR Pinedale Array 104.18 48 Pdiff **Pdif 21 05 10.5 +0.5**
comp=Z,0.8nm,0.7s,baz=258,slow=1.4,SNR=7.1
PDAR PKiKP **PKiKP 21 09 26.9 0.0**
comp=Z,0.4nm,0.6s,baz=180,slow=2.5,SNR=3.6
APA Apatity 104.78 339|| *iP* **Pdif 21 05 07.2 -4.5**
APA pmax pmax
comp=Z,7.0nm,1.1s
ARCES ARCESS Array B 106.65 342 Pdiff **Pdif 21 05 18.9 -1.1**
comp=Z,4.9nm,0.7s,baz=44,slow=3.9,SNR=8.9
ARCES PKKPbc **PKKPbc 21 20 49.6 -2.8**
comp=Z,0.9nm,0.5s,baz=276,slow=3.4,SNR=11
MNTX Cornudas Mount 108.32 59 P 21 09 35.9
baz=274
TXAR Lajitas Array 109.95 61 PKiKP **PKiKP 21 09 37.7 -0.1**
comp=Z,1.6nm,0.9s,baz=263,slow=2.0,SNR=8.1
FINES FINESS Array B 110.04 334 PKiKP **PKiKP 21 09 36.5 -0.4**
comp=Z,2.7nm,0.7s,baz=48,slow=2.8,SNR=6.4
VSU Vasula 110.96 331|| *i*PKiKP **PKiKP 21 09 38.6 -0.1**
MNK Minsk 111.85 327 *iP* **Pdif 21 05 35.5 -8.0**
MNK *i* P **Pdif 21 05 35.5 -8.0**
comp=N,17nm,1.2s
MNK *i* P **Pdif 21 05 35.5 -8.0**
comp=Z,6.0nm,0.9s
MNK *i* PKP PKiKP 21 09 24.1 -16
MNK *i* PKP PKiKP 21 09 24.1 -16
MNK *i* PKP PKiKP 21 09 24.1 -16
MNK *i* PP **PP 21 10 19.2 -4.2**
MNK *i* PPP PPP 21 12 40.4
MNK *i* SKS **SKSdf 21 16 47.5 -3.3**
MNK *i* PS **PS 21 19 51.8 -4.8**
MNK *i* SS **SS 21 25 52.9 -5.4**
MNK *i* SSS SSS 21 29 54.7
MNK *i* LQ LQ 21 49 36.9
MNK *i* LR LR 21 54 03.0
MNK *i* LRM MLR 21 57 39.6
comp=N,232nm,21.7s
MNK *i* LRM MLR 21 57 46.0
comp=Z,96nm,21.1s
MNK *i* LRM MLR 21 58 16.0
comp=E,12nm,17.2s
BR131 Keskin Array S 112.00 310|| *i*PKiKP **PKiKP 21 09 40.5 -1.0**
BRTR Keskin Array B 112.00 310 PKiKP **PKiKP 21 09 41.2 -0.3**
comp=E,1.6nm,0.9s,baz=29,slow=2.8,SNR=5.4
ULM Lac du Bonnet 112.08 38 PKiKP **PKiKP 21 09 40.0 -1.1**
comp=E,3.2nm,0.7s,baz=292,slow=4.7,SNR=6.6
AKASG Malin Array Be 112.35 323 PKiKP **PKiKP 21 09 41.2 -0.4**
comp=E,2.1nm,0.6s,baz=64,slow=2.3,SNR=12
AKBB Malin Array Si 112.35 323↑ *i*PKiKP **PKiKP 21 09 41.6 0.0**
JCT Junction City 113.19 60 P 21 09 44.3
baz=276
ECSD EROS Data Cent 113.36 45 P 21 09 44.0
baz=284
WMOK Wichita Mounta 113.49 55 P 21 09 44.7
baz=279
SORM Soroca 113.68 320↑P **PKiKP 21 09 43.9 -0.3**
SORM Soroca 113.68 320↑PKiKP **PKiKP 21 09 43.9 -0.3**
MILM Milestii Mici 113.74 319↑P **PKiKP 21 09 44.5 +0.1**
BOSA Boshof 114.02 235 PKiKP **PKiKP 21 09 45.8 +0.1**
comp=E,2.3nm,0.8s,baz=173,slow=3.1,SNR=4.8
TLBR Topalu 114.94 316↑P PKPdf 21 09 47.4 +0.7
ODBI Odobesti 115.25 318||P **PKPdf 21 09 48.3 +1.0**
VRI Vrincioaia 115.44 318↑P **PKiKP 21 09 47.5 -0.2**
VRI Vrincioaia 115.44 318↑PKiKP **PKiKP 21 09 47.5 -0.2**
PLOR Plostina 115.49 318↑P **PKiKP 21 09 47.9 +0.1**
PLOR Plostina 115.49 318↑PKiKP **PKPdf 21 09 47.9 +0.1**
BIZ Bicaz 115.50 319↑P **PKPdf 21 09 48.4 +0.6**
I37A Lemond, Waseca 115.52 44 **PKPdf 21 09 48.2 +0.2**
BISRR Bisoca 115.55 318↑P **PKPdf 21 09 49.1 +1.0**
LSZ Lusaka 115.68 250 PKiKP **PKPdf 21 09 48.5 -0.7**
LSZ Lusaka 115.68 250 **PKPdf 21 09 48.5 -0.7**
BURAR Bucovina Array 115.84 320↑P **PKPdf 21 09 49.7 +1.1**
BURAR Bucovina Array 115.84 320↑PKiKP **PKPdf 21 09 49.7 +1.1**
NEHR Nehoiu 115.86 318↑P **PKiKP 21 09 48.5 0.0**
MLR Muntele Rosu 116.08 318↑P **PKPdf 21 09 48.8 -0.3**
MLR Muntele Rosu 116.08 318 PKiKP **PKPdf 21 09 49.0 -0.1**
MLR Muntele Rosu 116.08 318 **PKPdf 21 09 49.0 -0.1**
X37A Clayton 116.28 55 **PKiKP 21 09 50.3 +0.7**
DOPR Dopca 116.29 319 P **PKiKP 21 09 49.7 +0.3**
NOA NORSAR Array B 116.33 338 PKP **PKPdf 21 09 48.7 -0.3**
comp=E,3.1nm,1.0s,baz=55,slow=1.9,SNR=4.6
NOA PKKPbc **PKKPbc 21 20 18.4 -1.9**
comp=E,2.0nm,0.8s,baz=54,slow=3.3,SNR=6.4
P38A Dawn 116.61 49 PKPdf **PKPdf 21 09 49.7 -0.4**
VOIR 116.69 318↑P **PKiKP 21 09 51.8 +1.6**
VOIR 116.69 318↑PKiKP **PKiKP 21 09 51.8 +1.6**
U38A Gravette 116.70 52 **PKPdf 21 09 49.8 -0.7**
ARR Arges 116.99 318↑P **PKiKP 21 09 51.2 +0.4**
S39A Bolivar 117.24 51 PKPdf **PKPdf 21 09 50.7 -0.8**
W39A Magazine 117.44 54 **PKiKP 21 09 52.3 +0.4**
W39A Magazine 117.44 54 P 21 09 52.2
baz=282,SNR=5.3
L40A Anamosa 117.62 46 PKPdf **PKPdf 21 09 50.4 -1.6**
PLVB Pleven 117.65 316↑P **PKiKP 21 09 52.9 +0.9**
DRGR 117.73 320↑P **PKPdf 21 09 52.1 -0.1**
DRGR 117.73 320↑PKiKP **PKPdf 21 09 52.1 -0.1**
MIAR Mount Ida 117.74 54 PKiKP **PKPdf 21 09 52.1 -0.4**
MIAR Mount Ida 117.74 54 PKPdf **PKPdf 21 09 52.0 -0.4**
MIAR Mount Ida 117.74 54 P 21 09 53.0
baz=282
P40A Paris 117.74 49 **PKPdf 21 09 52.0 -0.3**
R40A Maddies Statio 117.90 50 **PKPdf 21 09 51.4 -1.3**
U40A Yellville 117.92 52 PKPdf **PKPdf 21 09 52.0 -0.8**
U40A Yellville 117.92 52 P 21 09 52.5
baz=284,SNR=10
JFWS Jewell Farm 118.04 44 PKiKP **PKPdf 21 09 51.7 -1.1**
JFWS Jewell Farm 118.04 44 **PKPdf 21 09 51.6 -1.1**
JFWS Jewell Farm 118.04 44 P 21 09 52.3
baz=289
MGMO Mountain Grove 118.19 51 **PKPdf 21 09 52.2 -1.1**
GZR Gura Zlata 118.21 319↑P **PKiKP 21 09 53.3 +0.2**
GZR Gura Zlata 118.21 319↑P **Pdif 21 06 26.1 +14**
FCAR Ozark Folk Cen 118.60 53 **PKPdf 21 09 52.6 -1.5**
WHAR Wooly Hollow 118.61 53 **PKPdf 21 09 53.7 -0.4**
HERR Herculane 118.63 318↑P **PKPdf 21 09 53.8 -0.1**
W41B Gary Mavity, V 118.67 53 P 21 09 54.2
baz=283,SNR=8.0
CMIG Matias Romero 118.70 74 PKP **PKPdf 21 09 54.8 0.0**
comp=E,4.0nm,0.7s,baz=88,slow=1.1,SNR=8.7
CCM Cathedral Cave 118.74 50 PKiKP **PKPdf 21 09 53.7 -0.6**
CCM Cathedral Cave 118.74 50 PKPdf **PKPdf 21 09 53.7 -0.6**
CCM Cathedral Cave 118.74 50 P 21 09 54.0
baz=286
L42A Oliver, Polo 118.74 45 **PKPdf 21 09 53.6 -0.6**
LANS Liptovska Anna 118.77 324 *e*PKiKP **PKiKP 21 09 54.8 +0.7**
LANS Liptovska Anna 118.77 324 *e*PKP **PKiKP 21 09 54.8 +0.7**
VTS Vitosha 118.86 316↑P **PKPdf 21 09 54.6 0.0**
VTS Vitosha 118.86 316↑PKiKP **PKPdf 21 09 54.6 0.0**
VTS Vitosha 118.86 316 PKPdf **PKPdf 21 09 53.8 -0.8**
BZS Buzias 118.88 319↑P **PKPdf 21 09 54.3 0.0**
BZS Buzias 118.88 319↑PKiKP **PKPdf 21 09 54.3 0.0**
PSZ Piszkesteto 119.04 322 PKiKP **PKPdf 21 09 54.7 0.0**
PSZ Piszkesteto 119.04 322 PKPdf **PKPdf 21 09 54.7 0.0**
MDVR Moldovita 119.13 318↑P **PKPdf 21 09 54.8 -0.1**
LCAR Lake Charles 119.32 52 **PKPdf 21 09 55.4 -0.1**
FVM French Village 119.38 50 PKiKP **PKPdf 21 09 55.2 -0.3**
FVM French Village 119.38 50 **PKPdf 21 09 55.2 -0.3**
VYHS Vyhne 119.43 323 *e*PKiKP **PKPdf 21 09 55.0 -0.3**
VYHS Vyhne 119.43 323 *e*PKP **PKPdf 21 09 55.0 -0.3**
HDIL Hopedale 119.47 47 P 21 09 56.3
baz=288
BOVS Bovan 119.56 317||P **PKPdf 21 09 55.6 -0.1**
P43A Skaggs, Pawnee 119.58 48 **PKiKP 21 09 56.0 +0.1**
MORC Moravsky Berou 119.60 325 *e*PKP **PKiKP 21 09 56.3 +0.6**
MORC Moravsky Berou 119.60 325 PKiKP **PKiKP 21 09 56.0 +0.3**
MORC Moravsky Berou 119.60 325 PKPdf **PKiKP 21 09 56.0 +0.3**
KRLC Kraliky 119.89 325 *e*PKiKP **PKiKP 21 09 56.5 +0.2**
KRLC *e* 21 10 03.4
KRLC Kraliky 119.89 325 *e*PKPDF **PKiKP 21 09 56.5 +0.2**
KRLC *ex* x 21 10 03.4
JAVC Velka Javorina 119.96 324 *e*PKP **PKiKP 21 09 57.9 +1.4**
OSTC Ostas 119.97 326 *e*PKPDF **PKiKP 21 09 56.6 +0.2**
DPC Dobruska-Polom 120.02 326 *e*PKiKP **PKiKP 21 09 56.6 +0.1**
DPC Dobruska-Polom 120.02 326 *e*PKPDF **PKiKP 21 09 56.6 +0.1**
M44A Midewin, Midew 120.09 45 **PKPdf 21 09 56.7 -0.1**
SMOL Smolenice 120.26 324 *e*PKiKP **PKiKP 21 09 57.3 +0.3**
SMOL Smolenice 120.26 324 *e*PKP **PKiKP 21 09 57.3 +0.3**
VRAC Vranov 120.37 325 *e*PKP **PKiKP 21 09 57.6 +0.4**
MODS Modra-Piesok 120.41 324 *e*PKiKP **PKiKP 21 09 58.5 +1.2**
MODS Modra-Piesok 120.41 324 *e*PKP **PKiKP 21 09 58.5 +1.2**
DIVS Divibare 120.53 318 **PKPdf 21 09 57.2 -0.4**
MORH Mrgy, Hungar 120.54 321↑P **PKiKP 21 09 57.6 +0.1**
KRUC Moravsky 120.60 325 *e*PKP **PKiKP 21 09 57.9 +0.3**
E46A Sault Ste Mari 120.67 39 PKPdf **PKPdf 21 09 57.0 -0.8**
FNA Florina 120.79 314 PKiKP **PKPdf 21 09 57.7 -0.5**
FNA Florina 120.79 314 PKPdf **PKPdf 21 09 57.7 -0.5**
PVCC Panska Ves 120.89 327 *e*PKiKP **PKiKP 21 09 58.8 +0.6**
PVCC Panska Ves 120.89 327 *e*PKPDF **PKiKP 21 09 58.8 +0.6**
OLIL Olney 120.91 48 **PKPdf 21 09 58.1 -0.3**
BRG Berggiesshubel 121.05 327 *e*PKP **PKiKP 21 09 58.6 +0.3**
BRG Amp 21 09 59.6
comp=Z,14nm,1.1s
BRG *ex* x 21 10 02.5
BRG Amp 21 10 03.1
comp=Z,9.4nm,1.2s
BRG Berggiesshubel 121.05 327 *e*PKPdf **PKiKP 21 09 59.7 +1.2**
baz=58,slow=1.9
PRU Pruhonice 121.19 326 *e*PKiKP **PKPdf 21 09 58.7 +0.1**
PRU *e* 21 10 06.2
PRU Pruhonice 121.19 326 *e*PKPDF **PKPdf 21 09 58.7 +0.1**
PRU *ex* x 21 10 06.2
P46A Rosedale 121.28 47 **PKPdf 21 09 58.0 -1.1**
CLL Collm 121.31 328 *i* PKPdf **PKiKP 21 09 59.0 +0.1**
comp=Z,10.0nm,0.7s
CLL Collm 121.31 328 *i* PKiKP **PKiKP 21 09 59.0 +0.1**
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm 121.31 328 PKPdf **PKPdf 21 09 58.5 -0.3**
CLL Collm 121.31 328 *e*PKPdf **PKiKP 21 09 59.9 +0.9**
baz=58,slow=1.9
FBE Freiberg 121.34 328 *e*PKPdf **PKiKP 21 10 00.5 +1.5**
baz=58,slow=1.9
CONA Conrad Observa 121.46 324 *e*P **PKiKP 21 09 59.6 +0.1**
comp=Z,5.9nm,0.6s
J47A Sunmer 121.64 42 **PKiKP 21 10 00.1 +0.2**
FLTG Flechtingen 121.64 330 *e*PKPdf **PKiKP 21 10 00.6 +1.1**
baz=58,slow=1.9
PBCC Pribram 121.65 326 *e*PKPDF **PKPdf 21 09 59.3 -0.2**
PBCC *ex* x 21 10 06.6
PDG Podgorica 121.67 317↑P **PKiKP 21 10 00.0 +0.1**
PDG Podgorica 121.67 317 PKPdf **PKPdf 21 09 59.7 -0.1**
PLCA Paso Flores 121.78 147 PKP **PKiKP 21 10 00.5 +0.1**
comp=Z,7.1nm,0.8s,baz=251,slow=1.9,SNR=17
PLCA Paso Flores 121.78 147 PKiKP **PKiKP 21 10 00.7 +0.3**
PLCA Paso Flores 121.78 147 PKPdf **PKiKP 21 10 00.7 +0.3**
WVT Waverly 121.90 51 PKiKP **PKPdf 21 09 59.2 -1.2**
WVT Waverly 121.90 51 PKPdf **PKPdf 21 09 59.2 -1.2**
WVT Waverly 121.90 51 P 21 10 00.1
baz=287
CKRC Cesky Krumlov 121.92 325 *e*PKPDF **PKiKP 21 10 00.3 0.0**
N47A Urbana 121.93 45 **PKPdf 21 10 00.4 0.0**
ARSA Arzberg 121.98 323 *e*P **PKiKP 21 10 00.6 +0.1**
comp=Z,3.2nm,0.8s
TANN Tannenbergstha 122.09 327 *e*PKPdf **PKiKP 21 10 01.8 +1.2**
baz=58,slow=1.9
KHC Kasperske Hory 122.17 326↑ *i*PKiKP **PKiKP 21 10 01.0 +0.2**
KHC Kasperske Hory 122.17 326 *e*PKPDF **PKPdf 21 10 00.7 +0.1**
KHC *ex* x 21 10 04.2
KHC *ex* x 21 10 08.3
KHC Kasperske Hory 122.17 326 PKPdf **PKPdf 21 10 00.1 -0.5**
GUNZ Gunzen 122.19 327 *e*PKPdf **PKiKP 21 10 02.1 +1.3**
baz=58,slow=1.9
NKC Novy Kostel 122.20 327 *e*PKiKP **PKPdf 21 10 00.4 -0.2**
NKC *e* 21 10 07.6
NKC Novy Kostel 122.20 327 *e*PKPDF **PKPdf 21 10 00.4 -0.2**
NKC *ex* x 21 10 07.6
T47A Sharon Grove 122.20 50 **PKPdf 21 09 59.9 -1.0**
WERN Wernitzgruen 122.21 327 *e*PKPdf **PKiKP 21 10 02.1 +1.3**
baz=58,slow=1.9
PLN Plauen 122.22 328 *e*PKPdf **PKiKP 21 10 01.8 +1.1**
baz=58,slow=1.9
GEC2 GERESS Array S 122.25 325 PKPdf **PKPdf 21 10 00.4 -0.4**
GEC2 GERESS Array S 122.25 325 *e*PKPdf **PKiKP 21 10 01.9 +0.9**
baz=58,slow=1.9
GERES GERESS Array B 122.25 325 PKP **PKPdf 21 10 00.5 -0.4**
comp=Z,6.0nm,0.7s,baz=68,slow=2.0,SNR=40
GERES PKKPbc **PKKPab 21 19 55.6 -1.4**
comp=Z,0.7nm,0.8s,baz=232,slow=6.6,SNR=4.6
CLZ Clausthal 122.36 330 *e*PKPdf **PKiKP 21 10 02.5 +1.5**
baz=58,slow=1.9
L48A N Adams 122.41 44 **PKPdf 21 10 00.7 -0.5**
MOX Moxa 122.41 328 *e*L L 22 05 13.4
comp=Z,204nm,21.2s
WCI Wyandotte Cave 122.42 48 PKiKP **PKPdf 21 10 00.2 -1.2**
WCI Wyandotte Cave 122.42 48 PKPdf **PKPdf 21 10 00.2 -1.2**
WCI Wyandotte Cave 122.42 48 P 21 10 00.8
baz=289
MOA Molln 122.43 324 *e*P **PKPdf 21 10 01.1 0.0**
comp=Z,3.0nm,0.7s
MANZ Manzenberg 122.52 327 *e*PKPdf **PKiKP 21 10 02.7 +1.3**
baz=58,slow=1.9
PERS Pernice 122.52 323 *e*PKPdf **PKPdf 21 10 01.3 -0.1**
WET Wettzell 122.55 326 *e*PKPdf **PKiKP 21 10 02.8 +1.2**
baz=58,slow=1.9
SOKA Soboth 122.56 323 *e*P **PKPdf 21 10 01.2 -0.3**
comp=Z,6.1nm,0.7s
GCIS Gornji Cirnik 122.58 322 *e*PKPdf **PKiKP 21 10 02.0 +0.4**
P48A Milroy 122.63 47 **PKiKP 21 10 02.0 +0.1**
GTTG Gottingen 122.74 330 *e*PKPdf **PKiKP 21 10 03.2 +1.4**
baz=58,slow=1.9
V48A Smith Brothers 122.80 51 **PKPdf 21 10 00.7 -1.5**
MATQ Matagami 122.89 33 P 21 10 02.6
baz=304
OBKA Obir 122.93 323 *e*P **PKPdf 21 10 02.0 -0.2**
comp=Z,4.4nm,0.8s
N49A Columbus Grove 122.98 45 **PKPdf 21 10 02.0 -0.4**
X48A Hartselle 122.99 53 **PKPdf 21 10 01.9 -0.7**
APG El Apazote 123.02 76 PKP **PKPdf 21 10 03.1 -0.3**
comp=Z,12nm,1.0s,baz=302,slow=4.7,SNR=9.5
CLTN Cedars of Leba 123.07 51 PKPdf **PKPdf 21 10 02.7 0.0**
P49A Miami Univ. Ec 123.12 46 **PKPdf 21 10 01.6 -1.1**
P49A Miami Univ. Ec 123.12 46 P 21 10 02.3
baz=291
O49A Covington 123.15 46 **PKPdf 21 10 02.3 -0.4**
GRF Grafenberg Arr 123.16 327 *e*L L 22 05 19.2
comp=Z,290nm,20.8s
LJU Ljubljana 123.17 322 *e*PKPdf **PKPdf 21 10 02.6 0.0**
U49A Red Boiling Sp 123.36 50 **PKPdf 21 10 02.3 -0.9**
KBA Koelnbreinsper 123.36 324 *eP* **PKPdf 21 10 02.7 -0.4**
comp=Z,6.3nm,0.7s
MYKA Terra Mystica 123.41 323 *eP* **PKPdf 21 10 03.0 -0.1**
comp=Z,5.2nm,0.6s
LRAL Lakeview Retre 123.42 55 **PKPdf 21 10 02.7 -0.7**
LRAL Lakeview Retre 123.42 55 P 21 10 03.6
baz=286
SWET Sewanee 123.64 52 PKPdf **PKPdf 21 10 03.0 -0.9**
KASTN Kahler Asten 123.72 330 *e*PKPdf **PKiKP 21 10 05.0 +1.3**
baz=58,slow=1.9
R50A Paris 123.85 48 **PKPdf 21 10 03.4 -0.7**
VLDQ Val d'Or 123.89 34 PKPdf **PKPdf 21 10 02.2 -1.7**
I51A Listowel 123.89 40 P 21 10 04.5
baz=297
T50A Nancy 123.91 49 **PKPdf 21 10 03.2 -1.1**
FUR Furstenfeldbru 123.97 326 *e*PKPdf **PKiKP 21 10 05.3 +0.9**
baz=58,slow=1.9
ABTA Abfaltersbach 124.02 324 *i* P **PKPdf 21 10 04.0 -0.3**
comp=Z,10nm,0.7s,SNR=6.6
ACSO Alum Creek Sta 124.09 45 **PKPdf 21 10 04.1 -0.4**
ACSO Alum Creek Sta 124.09 45 P 21 10 05.2
baz=293
FPAL Fort Paine 124.10 52 **PKPdf 21 10 04.4 -0.4**
W50A Signal Mountai 124.13 52 **PKPdf 21 10 03.8 -1.0**
BI02 San Fabin de 124.15 143 **PKiKP 21 10 05.7 +0.5**
N51A Ashland 124.24 44 PKPdf **PKPdf 21 10 04.4 -0.4**
WATA Walderalm 124.26 325 *eP* **PKiKP 21 10 05.1 0.0**
comp=Z,6.7nm,0.8s
WTTA Wattenberg 124.26 325 *i* P **PKiKP 21 10 05.0 -0.1**
comp=Z,12nm,0.6s,SNR=9.4
WTTA Wattenberg 124.26 325 PKIKP **PKiKP 21 10 05.2 0.0**
MOTA Moosalm 124.52 325 *i* P **PKPdf 21 10 04.9 -0.4**
comp=Z,13nm,0.7s,SNR=7.0
SQTA Sankt Quirin 124.53 325 *i* P **PKPdf 21 10 05.5 +0.2**
comp=Z,5.1nm,0.5s,SNR=7.7
S51A Beattyville 124.62 48 **PKPdf 21 10 05.1 -0.5**
SADO Sadowa 124.63 39 PKP **PKPdf 21 10 04.5 -0.9**
comp=Z,4.5nm,0.6s,baz=320,slow=2.9,SNR=6.6
SADO Sadowa 124.63 39 **PKPdf 21 10 03.8 -1.6**
RETA Reutte 124.64 325 *eP* **PKiKP 21 10 05.7 0.0**
comp=Z,2.3nm,0.6s
CPCT Cooper Cave 124.67 51 **PKiKP 21 10 06.3 +0.2**
TIP Timpagrande 124.67 314↑P **PKiKP 21 10 06.9 +0.8**
TIP Timpagrande 124.67 314 PKPdf **PKiKP 21 10 06.4 +0.3**
ALGO Algonquin Park 124.69 37 P 21 10 05.0
baz=301
STU Stuttgart 124.78 327 *e*PKPdf **PKiKP 21 10 06.9 +1.0**
baz=58,slow=1.9
AHRW Bad Neuenahr-A 124.80 330 *e*PKPdf **PKiKP 21 10 07.2 +1.3**
baz=58,slow=1.9
Z51A Franklin 124.81 54 **PKPdf 21 10 05.5 -0.6**
CTI Castel Tesino 124.90 323 PKIKP **PKPdf 21 10 05.4 -0.6**
CTI Castel Tesino 124.90 323 PKPdf **PKPdf 21 10 05.4 -0.6**
UBR Ueberruh 124.90 326 *e*PKPdf **PKiKP 21 10 06.9 +0.7**
baz=58,slow=1.9
FETA Feichten 124.91 325 *i* P **PKPdf 21 10 06.2 +0.1**
comp=Z,8.6nm,0.8s,SNR=9.6
P52A Corning 124.93 45 **PKPdf 21 10 06.0 -0.2**
P52A Corning 124.93 45 P 21 10 06.1
baz=294
G54A Lake Saint Pet 124.96 38 P 21 10 05.7
baz=301
H53A Bobcaygeon 125.07 39 P 21 10 06.2
baz=300
Q52A Bidwell 125.10 46 **PKPdf 21 10 05.9 -0.6**
TKL Tuckaleechee C 125.17 51 PKP **PKPdf 21 10 06.6 -0.2**
comp=Z,13nm,0.8s,baz=175,slow=2.8,SNR=10
TKL Tuckaleechee C 125.17 51 PKIKP **PKiKP 21 10 07.3 +0.2**
TKL Tuckaleechee C 125.17 51 PKPdf **PKiKP 21 10 07.3 +0.2**
M53A WI Miller and 125.18 43 **PKPdf 21 10 06.5 -0.1**
M53A WI Miller and 125.18 43 P 21 10 07.0
baz=296
W52A Murphy 125.24 51 **PKPdf 21 10 06.5 -0.5**
DAVA Damuels 125.25 325 *i* P **PKiKP 21 10 07.0 -0.1**
comp=Z,13nm,0.7s,SNR=6.2
V52A Sevierville 125.25 50 **PKPdf 21 10 06.6 -0.3**
MEM Membach 125.28 331 *d*PKP **PKPdf 21 10 06.6 +0.2**
O53A New Philadelph 125.32 44 **PKPdf 21 10 06.6 -0.3**
O53A New Philadelph 125.32 44 P 21 10 07.6
baz=295
N53A Lisbon 125.34 44 **PKPdf 21 10 06.8 -0.1**
152A Waverly Hall 125.36 54 **PKiKP 21 10 07.5 0.0**
BFO Black Forest 125.50 327 PKIKP **PKPdf 21 10 06.7 -0.3**
BFO Black Forest 125.50 327 PKPdf **PKPdf 21 10 06.7 -0.3**
BFO Black Forest 125.50 327 *e*PKPdf **PKiKP 21 10 07.9 +0.5**
baz=58,slow=1.9
P53A Whipple 125.51 45 PKPdf **PKPdf 21 10 07.5 +0.2**
Y52A Lilburn 125.53 53 **PKiKP 21 10 07.8 0.0**
E55A Montcerf-Lytto 125.60 35 P 21 10 07.1
baz=304
D55A Sainte-Anne-du 125.62 35 P 21 10 06.8
baz=304
Q53A Leroy 125.67 46 P 21 10 05.0
baz=294
BO02 Sierra Bellavi 125.69 142 PKPdf **PKPdf 21 10 08.0 +0.1**
PLVO Plevna 125.76 37 **PKPdf 21 10 06.6 -1.0**
WLF Walferdange 125.81 330 *d*PKP **PKiKP 21 10 08.9 +1.0**
WLF Walferdange 125.81 330 *e*PKPdf **PKiKP 21 10 09.7 +1.7**
baz=58,slow=1.9
M54A Oil Creek Stat 125.83 42 **PKiKP 21 10 08.1 -0.1**
M54A Oil Creek Stat 125.83 42 P 21 10 08.3
baz=297,SNR=5.9
N54A Moraine State 125.86 43 **PKiKP 21 10 08.3 0.0**
N54A Moraine State 125.86 43 P 21 10 08.6
baz=296
V53A Saluda 125.91 50 PKPdf **PKiKP 21 10 08.7 +0.1**
O54A Avella 125.93 44 **PKiKP 21 10 08.8 +0.4**
D56A ZEC Mazanza, M 126.00 34 P 21 10 07.6
baz=305
TUE Stuetta 126.01 325 PKPdf **PKiKP 21 10 08.6 -0.1**
BG3 Lake Jocassee 126.05 51 **PKiKP 21 10 09.1 +0.2**
BMRD Maredsous 126.08 331 *d*PKP **PKiKP 21 10 08.4 0.0**
Q54A Coxs Mills 126.11 46 **PKPdf 21 10 07.5 -0.9**
E56A St. Veronique 126.13 35 P 21 10 07.7
baz=305
TGUH Tegucigalpa,Un 126.14 77 PKPdf **PKiKP 21 10 09.6 -0.1**
TGUH Tegucigalpa,Un 126.14 77 *eP* **PKPdf 21 10 09.1 -0.2**
GOGA Godfrey 126.14 53 PKIKP **PKiKP 21 10 09.3 +0.2**
GOGA Godfrey 126.14 53 **PKiKP 21 10 09.3 +0.2**
GOGA Godfrey 126.14 53 P 21 10 09.3
baz=288
ZCCA Zocca 126.19 322 **PKiKP 21 10 09.3 +0.4**
S54A Dingess, Beckl 126.24 47 P 21 10 09.1
baz=293
R54A Victor 126.32 47 P 21 10 08.8
baz=294
TIGA Tifton 126.64 55 P 21 10 10.8
baz=287
J56A Wolcott 126.80 39 P 21 10 10.2
baz=301
HODGE Hodges 126.83 52 **PKiKP 21 10 10.6 +0.2**
M56A Emporium 126.83 42 **PKiKP 21 10 10.3 +0.1**
M56A Emporium 126.83 42 P 21 10 10.5
baz=298
PEL Peldehue 126.83 140 PKIKP **PKPdf 21 10 10.2 +0.1**
PEL Peldehue 126.83 140 **PKPdf 21 10 10.2 +0.1**
R55A Marlinton 126.91 46 **PKPdf 21 10 10.2 +0.1**
R55A Marlinton 126.91 46 P 21 10 10.9
baz=294
L56A Greenwood 126.92 41 P 21 10 10.5
baz=299
PAULI Pauline 126.97 51 **PKiKP 21 10 10.7 0.0**
G57A Newington 126.97 36 P 21 10 10.0
baz=304
D58A Chemin du LacG 127.01 33 P 21 10 10.3
baz=307
N56A West Decatur 127.02 42 P 21 10 10.9
baz=298
V55A Taylorsville 127.05 49 **PKiKP 21 10 10.9 0.0**
H57A Richville 127.08 37 P 21 10 10.9
baz=303
BLA Blacksburg 127.12 48 P 21 10 11.2
baz=294
O56A Blue Knob Stat 127.13 43 **PKiKP 21 10 10.7 -0.2**
O56A Blue Knob Stat 127.13 43 P 21 10 11.2
baz=297
VA03 San Esteban 127.16 140 **PKPdf 21 10 09.3 -1.5**
I57A Carthage 127.20 38 P 21 10 10.6
baz=302
KMSC Kings Mountain 127.22 50 **PKiKP 21 10 11.3 +0.1**

KMSC	Kings Mountain baz=291	127.22	50	P			21 10 11.7	
E58A	La Victoria baz=306	127.22	34	P			21 10 09.8	
SENIN	Lac Senin/Sane	127.23	326	PKPdf		PKPdf	21 10 10.0	-0.6
P56A	Dayton Farm, R baz=296	127.29	44	P			21 10 11.6	
R56A	Bull Pasture M baz=295	127.37	46	P			21 10 11.2	
SSPA	Standing Stone	127.42	43			PKPdf	21 10 09.4	-1.5
SSPA	Standing Stone baz=298	127.42	43	P			21 10 11.7	
L57A	Andrews Acres baz=300,SNR=5.0	127.45	41	P			21 10 11.9	
JSC	Jenkinsville	127.58	51	PKIKP		PKPdf	21 10 11.2	-0.2
JSC	Jenkinsville	127.58	51			PKPdf	21 10 11.2	-0.2
N57A	Milroy baz=298	127.59	42	P			21 10 12.2	
M57A	Sunshine Farm,	127.59	41	PKPdf		PKPdf	21 10 10.5	-0.7
M57A	Sunshine Farm, baz=299	127.59	41	P			21 10 12.4	
V56A	Mocksville baz=292	127.61	49	P			21 10 12.5	
BOAB	BOACO BROADBAND	127.76	79			PKPdf	21 10 11.8	-0.4
O57A	Amberson baz=298	127.79	43	P			21 10 12.7	
Q57A	Strasburg baz=296	127.80	45	P			21 10 12.5	
H58A	Gabriels baz=304,SNR=8.3	127.83	37	P			21 10 11.5	
ORTG	Ortega, Santa	127.99	82			PKPpre	21 10 02.5	
ORTG						PKiKP	21 10 14.0	+0.7
NCB	Newcomb	128.05	37			PKPdf	21 10 11.7	-0.4
L58A	Harry Jones Me baz=301	128.07	40	P			21 10 13.4	
N58A	Sunbury baz=299	128.11	42	P			21 10 13.4	
V57A	Coltrane Farms baz=293	128.12	49	P			21 10 13.3	
J59A	Piesco	128.16	38			PKPdf	21 10 12.5	+0.3
J59A	Piesco baz=303	128.16	38	P			21 10 13.0	
D60A	Saint Jean D'O baz=309	128.18	32	P			21 10 12.6	
W57A	Gilead	128.24	50			PKiKP	21 10 13.1	-0.1
CO03	El Pedregal	128.30	138			PKPdf	21 10 12.8	-0.2
O58A	Lewisberry baz=299	128.32	43	P			21 10 13.8	
Q58A	Fox Den Farm, baz=297	128.34	44	P			21 10 13.7	
BNI	Bardonecchia	128.35	325	PKIKP		PKiKP	21 10 13.1	-0.2
BNI	Bardonecchia	128.35	325	PKPdf		PKiKP	21 10 13.1	-0.2
I59A	Olmsteadville baz=304	128.36	37	P			21 10 14.0	
JTS	Las Juntas de	128.49	82	*c i*PKIKP		PKPdf	21 10 13.9	+0.2
JTS	Las Juntas de	128.49	82	PKPdf		PKiKP	21 10 14.2	-0.1
JTS	Las Juntas de	128.49	82	*e*P		PKPdf	21 10 13.8	+0.2
L59A	Walton baz=302	128.51	40	P			21 10 14.1	
M59A	Waymart baz=301	128.60	40	P			21 10 14.3	
T58A	Grand View Acr baz=295	128.61	47	P			21 10 14.2	
GO04	Tololo Observa	128.64	137	PKPdf		PKPdf	21 10 13.5	-0.4
I60A	Shoreham baz=305,SNR=5.4	128.68	37	P			21 10 14.9	
E61A	Lac Etchemin baz=309	128.72	33	P			21 10 13.6	
CLF	Chambon-Foret	128.83	330	PKPdf		PKiKP	21 10 14.2	+0.2
J60A	Lant Hill Farm baz=304	128.94	38	P			21 10 15.2	
H61A	Lyndonville baz=307	129.08	35	P			21 10 16.2	
ESPN	Las Esperanzas	129.10	80			PKPdf	21 10 15.1	+0.3
ZON	Zonda	129.16	140	PKIKP		PKiKP	21 10 15.4	+0.1
ZON	Zonda	129.16	140	PKPdf		PKiKP	21 10 15.4	+0.1
O60A	Telford baz=300	129.23	42	P			21 10 16.0	
T59A	Double "B" Far	129.31	47	PKPdf		PKiKP	21 10 15.0	-0.3
P60A	Greenville baz=300	129.33	42	P			21 10 16.0	
K61A	Williamstown baz=304	129.35	38	P			21 10 16.4	
J61A	Chester baz=305	129.40	37	P			21 10 16.8	
LCO	Las Campanas	129.43	136	PKIKP		PKiKP	21 10 16.0	-0.2
LCO	Las Campanas	129.43	136			PKiKP	21 10 16.0	-0.2
PEZE	Perez Zeledon,	129.74	83			PKiKP	21 10 17.9	+1.0
M61A	Granite Spring baz=302	129.78	40	P			21 10 16.9	
RIOS	Rincon, Osa	129.89	84			PKiKP	21 10 17.9	+0.8
K62A	Royalston baz=305	129.99	38	P			21 10 15.4	
KEST	Kesra comp=Z,8.8nm,0.8s,baz=351,slow=6.5,SNR=5.3	131.47	313	PKP		PKiKP	21 10 20.2	+0.4
NNA	Nana	132.72	113⇓	*e*PKIKP		PKPdf	21 10 20.4	-1.3
AZU	Azuero	133.08	85	*e*P		PKiKP	21 10 31.8	+8.3
OTAV	Otavalo	134.23	96	PKIKP		PKiKP	21 10 26.6	+0.1
OTAV	Otavalo	134.23	96	PKPdf		PKiKP	21 10 26.6	+0.1
OTAV	Otavalo	134.23	96	*e*P		PKiKP	21 10 26.8	+0.3
PB01	IPOC Station P	134.97	128			PKPdf	21 10 26.3	+0.4
GCUF	Volcan Galeras	135.46	95	*e*P		PKiKP	21 10 29.3	+0.2
PB11	IPOC Station P	135.52	127			PKPpre	21 10 16.5	
BBAC	Balboa, Cauca	135.66	94	*e*P		PKPdf	21 10 27.1	-0.3
PB08	IPOC Station P	135.72	127			PKPdf	21 10 28.2	+0.6
MNMC	Minye Minye	135.90	126			PKPpre	21 10 15.2	
POPC	Popayan, Colom	136.29	93⇑	*e*P		PKPdf	21 10 28.5	-0.2
SOTA	Rioblanco	136.31	94	*e*P		PKiKP	21 10 30.5	-0.2
PCON	Cinco Dias	136.54	93	*e*P		PKiKP	21 10 31.1	-0.3
YOTC	Yotoco, Valle	136.77	91	*e*P		PKiKP	21 10 29.1	-0.3
DBBC	Dabeiba	137.08	87⇓	*e*P		PKiKP	21 10 31.1	-0.7
CBOC	Ciudad Bolivar	137.23	88	*e*P		PKPdf	21 10 31.1	+0.8
MOTC	Monteria, Cord	137.65	84	*e*P		PKPdf	21 10 30.5	-0.3
HELC	Santa Helena	137.73	88⇑	*e*P		PKPdf	21 10 32.1	+0.6
ANIL	Santa Ana	137.74	90	*e*P		PKPdf	21 10 31.1	-0.3
UREC	San Jos de Ur	137.77	86	*e*P		PKPdf	21 10 31.6	+0.5
PTLC	Puerto Leguiza	137.83	97	*e*P		PKPdf	21 10 31.9	+0.6
RREF	El Recreo	137.83	90	*e*P		PKiKP	21 10 35.3	+1.3
ESDC	Sonseca Array comp=Z,1.0nm,1.0s,baz=33,slow=2.1,SNR=7.1	137.83	326	PKhKP		PKPpre	21 10 23.6	
ESDC				PKP		PKPdf	21 10 31.1	+0.5
ESDC	comp=Z,1.4nm,1.0s,baz=7.0,slow=3.3,SNR=6.0			PP		PP	21 13 18.9	+1.7
TOLC	comp=Z,1.3nm,0.9s,baz=40,slow=5.8,SNR=5.3 Tolima	137.83	90	*e*P		PKPdf	21 10 32.0	+0.4
GUY2C	Guyana, Caldas	137.84	89	*e*P		PKPdf	21 10 22.6	-9.2
ORTC	Ortega, Tolima	137.85	91	*e*P		PKPdf	21 10 31.6	+0.3
SJCC	San Jacinto, C	138.11	82	*e*P		PKPdf	21 10 32.4	+0.6
PAB	San Pablo	138.14	326	PKIKP		PKPdf	21 10 32.0	+0.8
PAB	San Pablo	138.14	326	PKPdf		PKPdf	21 10 32.0	+0.8
NORC	Norcasia	138.35	89	*e*P		PKPdf	21 10 22.9	-9.3
MVO	Moncorvo	138.36	330	*e*PKPdf		PKPdf	21 10 32.6	+1.1
ZARC	Zaragoza, Cauc	138.44	86	*e*P		PKPdf	21 10 32.5	+0.2
LPAZ	La Paz comp=Z,8.4nm,0.8s,baz=82,slow=0.5,SNR=14	138.55	123	PKP		PKPdf	21 10 33.1	-0.1
LPAZ	La Paz	138.55	123	PKHKP		PKPpre	21 10 23.6	
LPAZ	La Paz	138.55	123			PKPpre	21 10 23.6	
LPAZ	La Paz	138.55	123	*e*P		PKPdf	21 10 26.9	-6.3
POLO	Lamas de Olo	138.58	331	*e*PKPdf		PKPdf	21 10 32.0	0.0
PTBC	PUERTO BERRIO	138.81	87⇑	*e*P		PKPdf	21 10 32.2	-0.8
ROSC	El Rosal	138.85	90			PKPpre	21 10 22.9	
ROSC	El Rosal	138.85	90	*e*P		PKPdf	21 10 33.4	-0.2
SMRC	Santa Marta, M	139.00	80	*e*P		PKPdf	21 10 33.5	+0.2
SPBC	San Pablo de B	139.15	89	*e*P		PKPdf	21 10 33.9	+0.1
MTE	Manteigas	139.20	330	*e*PKPdf		PKiKP	21 10 36.7	+1.4
VILC	Villavicencio,	139.41	91	*e*P		PKPdf	21 10 30.4	-3.9
TAM	Tamanrasset	139.50	298	PKHKP		PKPpre	21 10 26.0	
TAM	Tamanrasset	139.50	298			PKPpre	21 10 26.0	
BRRC	Barranca, Sant	139.56	87	*e*P		PKPdf	21 10 34.5	+0.1
PCBR	Castelo Branco	139.58	329	*e*PKPdf		PKPdf	21 10 34.6	+0.9
CPUP	Villa Florida comp=Z,13nm,0.9s,baz=253,slow=2.6,SNR=20	139.79	145	PKP		PKPdf	21 10 35.3	+0.8
CPUP	Villa Florida	139.79	145	PKHKP		PKPpre	21 10 27.6	
CPUP	Villa Florida	139.79	145			PKPpre	21 10 27.6	
PMRV	Marv??o	139.85	329	*e*PKPdf		PKPdf	21 10 31.2	-3.0
OCAC	Ocana	139.97	85	*e*P		PKPdf	21 10 35.8	+0.5
BARC	Barichara	140.07	87	*e*P		PKPdf	21 10 28.9	-6.7
RUSC	La Rusia	140.14	88	*e*P		PKPdf	21 10 28.4	-7.7
GUVC	San Jose del G	140.31	94	*e*P		PKPdf	21 10 34.6	-1.2
CRJC	Cerrejon, Guaj	140.33	81⇑	*e*P		PKPdf	21 10 36.6	+0.8
PMTG	Montargil	140.54	329	*e*PKPdf		PKPdf	21 10 32.3	-3.2
PAMC	Pamplona, Colo	140.57	86	*e*P		PKPdf	21 10 29.5	-7.3
PBAR	Barrancos	140.58	327	*e*PKPdf		PKPdf	21 10 33.0	-2.6
EVO	Evora	140.84	328	*e*PKPdf		PKPdf	21 10 37.0	+1.0
URIC	Uribia, Colomb	141.15	79	*e*P		PKPdf	21 10 32.7	-4.6
PNCL	Nicolau / Gran	141.42	328	*e*PKPdf		PKPdf	21 10 36.3	-0.8
TAMC	Tame, Arauca	141.45	88	*e*P		PKPdf	21 10 31.9	-5.9
MESJ	Messejana	141.46	328	*e*PKPdf		PKiKP	21 10 39.3	-0.7
PCVE	Castro Verde	141.52	327	*e*PKPdf		PKPdf	21 10 38.6	+1.3
PFVI	Vila Bisbo	142.31	328	*e*PKPdf		PKPdf	21 10 39.8	+1.1
DABV	Dabajuro	142.53	80	*e*P		PKPdf	21 10 36.2	-3.6
SDV	Santo Domingo	142.62	84	PKPdf		PKPdf	21 10 36.4	-3.7
SDV	Santo Domingo	142.62	84	*e*P		PKPdf	21 10 36.4	-3.7
ELOV	Elorza	143.76	87⇓	*e*P		PKPbc	21 10 40.1	+0.7
SIV	San Ignacio comp=Z,28nm,0.8s,baz=243,slow=2.8,SNR=40	144.39	129	PKP		PKPbc	21 10 41.9	+0.5
TIJ01	Guaruva-PR	144.82	154	*e*P		PKPab	21 10 41.6	-0.9
MLPR	Magueyes Islan	144.86	68			PKPab	21 10 41.3	-1.4
AOPR	Arecibo Observ	145.03	67			PKPbc	21 10 40.9	-2.5
TOA0	Torodi Ar. Sit	145.20	284			PKPbc	21 10 43.9	-0.1
TORD	Torodi Ar. Bea comp=Z,237nm,0.9s,baz=73,slow=3.1,SNR=485	145.20	284	PKPbc		PKPdf	21 10 44.5	+0.1
TORD				SKPbc		SKiKP	21 14 24.2	+1.3
OBIP	comp=Z,4.3nm,0.9s,baz=22,slow=3.0,SNR=3.7 Obispado Ponce	145.24	68			PKPbc	21 10 42.4	-1.6
SJG	San Juan	145.64	67	PKIKP		PKPdf	21 10 44.0	-1.0
SJG	San Juan	145.64	67			PKPdf	21 10 44.0	-1.0
SJG	San Juan	145.64	67	*e*P		PKPdf	21 10 44.5	-0.5
GCPR	Guaynabo City	145.65	67			PKPdf	21 10 44.1	-0.9
PDPR	Patillas Dam,	145.78	67			PKPdf	21 10 45.1	-0.2
CBYP	Canovanas	145.87	67			PKPdf	21 10 44.9	-0.6
PET01	Itanhaem-SP	146.46	156	*e*P		PKPab	21 10 48.2	-0.2
VILB	Vilhena	146.82	125	*e*P		PKPbc	21 10 48.6	-0.4
SPB	Sao Paulo	147.01	155			PKPbc	21 10 49.4	+0.2
SPB	Sao Paulo	147.01	155	*e*P		PKPbc	21 10 49.5	+0.2
VAO	Valinhos	147.73	155	*e*P		PKPbc	21 10 50.3	-1.0
PARB	Paraibuna	147.96	158	*e*P		PKPbc	21 10 50.8	-1.1
ESAR	Angra dos Reis	148.68	159	*e*P		PKPdf	21 10 51.7	+1.7
MAN01	Angra dos Reis	148.99	160	*e*P		PKPdf	21 10 51.7	+1.1
VAS01	Vassouras-RJ	149.70	161	*e*P		PKPdf	21 10 53.7	+2.0
DUB01	Friburgo-RJ	150.23	162	*e*P		PKPbc	21 10 55.4	-2.3
BSCB	Bom Sucesso	150.41	157	*e*P		PKPdf	21 10 54.1	+1.2
KOWA	Kowa	150.43	288			PKiKP	21 10 58.8	-0.2
CAM01	Campos-RJ	150.68	163	*e*P		PKPdf	21 10 55.2	+2.0
FDF	Fort de France	151.14	71	PKIKP		PKiKP	21 11 00.6	+0.1
FDF	Fort de France	151.14	71			PKiKP	21 11 00.6	+0.1
GRGR	Grenville	151.16	77			PKPbc	21 10 58.3	-1.7
SVB	Belmont	151.35	74			PKPbc	21 10 59.4	-1.0
KIC	Kosan Boka comp=Z,93nm,1.1s	151.93	271	*e*PKP1		PKiKP	21 11 02.2	0.0
DBIC	Dimbokro	152.05	272	PKP		PKPdf	21 10 56.0	+0.5
DBIC	comp=Z,7.1nm,0.9s,baz=137,slow=1.5,SNR=5.9 Dimbokro	152.05	272	PKIKP		PKiKP	21 11 02.5	+0.1
DBIC	Dimbokro	152.05	272			PKPdf	21 10 55.1	-0.4
DBIC				PKPbc		PKiKP	21 11 02.5	+0.1
ALF01	Guarapari-ES	152.09	164	*e*P		PKPdf	21 10 57.4	+2.1
PTGA	Pitinga comp=Z,9.8nm,0.9s,baz=296,slow=2.5,SNR=15	152.16	104	PKP		PKPdf	21 10 56.4	+0.7
PTGA				PKPbc		PKiKP	21 11 02.9	+0.2
PTGA	comp=Z,43nm,0.8s,baz=238,slow=3.1,SNR=41			PKPab		sPKPdf	21 11 09.4	+0.5
PTGA	comp=Z,29nm,1.0s,baz=180,slow=1.7,SNR=7.8 Pitinga	152.16	104	PKPdf		PKPdf	21 10 55.9	+0.2
PTGA				PKPbc		PKiKP	21 11 02.9	+0.2
LIC	Lamto comp=Z,162nm,1.1s	152.21	271	*e*PKP1		PKiKP	21 11 02.9	+0.1
TIC	Toumodi	152.21	272	*e*PKP1		PKiKP	21 11 02.8	0.0
TOSP	Speyside	152.36	78			PKPdf	21 10 57.2	+1.3
RIB01	Linhares ES	153.42	164	*e*P		PKPdf	21 10 59.6	+2.2
BDFB	Brasilia comp=Z,16nm,1.0s,baz=132,slow=1.6,SNR=15	153.51	146	PKP		PKPdf	21 10 58.6	+0.9
BDFB				PKPbc		PKiKP	21 11 06.1	+0.6
BDFB	comp=Z,52nm,0.9s,baz=240,slow=0.6,SNR=35 Brasilia	153.51	146	PKIKP		PKPdf	21 10 58.1	+0.4
BDFB							21 11 05.4	
BDFB	Brasilia	153.51	146	PKPdf		PKPdf	21 10 58.1	+0.4
BDFB				PKPbc		PKPbc	21 11 05.4	0.0
SJMB	Sao Joao De Ma	153.77	162	*e*P		PKPdf	21 11 00.7	+2.8
NBIT	Itapeh - BA	157.85	163	*e*P		PKPdf	21 11 05.4	+2.0
NBLA	Lagarto - SE	162.06	165	*e*P		PKPdf	21 11 09.8	+1.7
NBAN	Anadia - AL	163.69	168	*e*P		PKPdf	21 11 10.4	+0.7
NBTA	Tacaratu-PE	163.76	162	*e*P		PKPdf	21 11 12.6	+2.7
RCBR	Riachuelo comp=Z,9.6nm,1.0s,baz=46,slow=4.4,SNR=3.6	167.50	166	PKP		PKPdf	21 11 13.5	+0.5
RCBR				PKPab		PKPab	21 12 18.7	+0.4
	comp=Z,16nm,0.9s,baz=188,slow=6.0,SNR=7.0							

DJA 02 20:52:36.7±0.4, 10°S±5°×11°9E±°, h10km, M3.7/8, MLv3.7/8, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	Plampang	1.28	316	P	Pn	20 52 59.6	-1.1
BASI	Baing, Sumba	1.93	104	P	Pn	20 53 09.0	-0.7
TWSI	Taliwang, Sumb	2.04	300	P	Pn	20 53 10.2	-0.9
EDFI	Ende, Flores	3.15	72	P	Pn	20 53 27.0	+0.5
DNP	Denpasar	3.58	287	P	Pn	20 53 33.6	+1.3
MMRI	Maumere	3.69	73	P	Pn	20 53 33.7	-0.2
SRBI	Singaraja	3.80	296	P	Pn	20 53 35.4	+0.1
JAGI	Jajag, Banyuwa	4.64	286	P	Pn	20 53 44.6	-2.3
ABJI	Asem Bagus	4.80	294	P	Pn	20 53 52.0	+2.9

IDC 02 21:28:41.7±3.9, 4°11S×151°01E, h0km, mb3.0/2, mb1 3.4/2, mb1mx3.1/56, mbtmp3.1/2, Error ellipse: s-maj=150.2km s-min=52.0km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.62	225	P	P	21 33 42.5	-1.8
	0.3nm,0.4s,baz=51,slow=10,SNR=5.7						
ASAR	Alice Springs	25.51	219	P	P	21 34 13.6	+1.5
	0.3nm,0.5s,baz=59,slow=9.2,SNR=4.6						
TORD	Torodi Ar. Bea	148.40	288	PKPbc	PKPbc	21 48 30.5	-0.8
	0.3nm,0.4s,baz=66,slow=3.9,SNR=2.7						

IDC 02 21:33:02.6±0.9, 3°59N×126°67E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/55, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=51.8km s-min=16.5km az=68.0

ISC 02 21:33:07.9±0.8, 3°6N±0°2×126°7E±0°2, h35km, n9, σ0°88/10, mb3.8/8, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.36	134	Pn	Pn	21 34 39.2	-0.1
	1.4nm,0.3s,baz=328,slow=22,SNR=4.4						
SIJI				Sn	Sn	21 35 50.8	+0.1
	0.6nm,0.3s,baz=238,slow=22,SNR=1.9						
FITZ	Fitzroy Crossi	21.58	183	P	P	21 37 54.5	-0.2
	2.0nm,0.8s,baz=133,slow=5.0,SNR=3.2						
WRA	Warramunga Arr	24.56	162	P	P	21 38 22.9	-1.8
	1.4nm,0.8s,baz=344,slow=10,SNR=10						
ASAR	Alice Springs	27.99	166	P	P	21 38 56.8	+1.2
	0.3nm,0.6s,baz=343,slow=11,SNR=6.4						
STKA	Stephens Creek	38.01	159	P	P	21 40 22.6	-0.1
	1.4nm,0.5s,baz=323,slow=11,SNR=3.3						
SONM	Songino Array	47.42	341	P	P	21 41 39.1	0.0
	0.4nm,0.6s,baz=152,slow=8.5,SNR=2.7						
MKAR	Makanchi Array	57.65	325	P	P	21 42 54.7	0.0
	0.7nm,0.6s,baz=121,slow=8.4,SNR=13						
ARCES	ARCESS Array B	90.57	340	P	P	21 46 05.6	-0.5
	3.3nm,0.9s,baz=89,slow=6.4,SNR=1.4						
BBB	Bella Bella	96.43	37	P	P	21 46 34.0	+0.7
	23nm,0.9s,baz=336,slow=7.1,SNR=7.8						

BJI 02 21:48:55.4±0.0, 4°78S×143°78E, h106km, mB5.1/27, mb4.8/42

IDC 02 21:49:02.7±1.4, 4°30S×143°43E, h116km±12km, mb4.2/17, mb1 4.3/21, mb1mx4.2/35, mbtmp4.6/21, MS3.4/7, Ms1 3.4/7, ms1mx2.9/49, Error ellipse: s-maj=15.4km s-min=8.7km az=71.0

NEIC 02 21:49:04.5±1.6, 4°32S±0°07×143°26E±0°07, h127km±6km, mb4.7/56, Error ellipse: s-maj=10.7km s-min=9.4km az=218.0

DJA 02 21:49:05.7±0.5, 5°S±5°×14°3E±°, h82km±10km, M4.9/12, mB5.0/4, mb4.8/12, MLv5.2/3, Mw(mB)4.3/4

ISC 02 21:49:02.3±0.3, 4°32S±0°05×143°28E±0°06, h103km, n150, σ1°9/41/137, mb4.8/62, 2C-3D, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	3.14	305	P	Pn	21 49 52.8	+2.8
	7.2nm,0.3s,baz=183,slow=7.0,SNR=21						
JAY				S	Sn	21 50 30.4	+3.6
	13nm,0.3s,baz=346,slow=7.7,SNR=9.4						
GENI	Genyem	3.55	299	P	Pn	21 50 01.7	+6.2
MANU	Manus Island	4.67	61		Pn	21 50 14.1	+3.5
PMG	Port Moresby	6.35	143	P	Pn	21 50 33.3	-0.1
	0.8nm,0.3s,baz=276,slow=18,SNR=2.1						
PMG				S	Sn	21 51 43.5	-1.0
	2.8nm,0.3s,baz=311,slow=1.0,SNR=3.0						
PMG				LR	LR	21 53 06.8	
	comp=Z,202nm,20.6s,baz=211,slow=39						
PMG	Port Moresby	6.35	143		Pn	21 50 35.7	+2.3
RABL	Rabaul	8.86	89	Pn	Pn	21 51 09.7	+2.1
COEN	Coen	9.57	181		Pn	21 51 18.6	+1.3
FAKI	Fak Fak	11.10	277	Pn	Pn	21 51 37.4	-0.6
SIJI	Sorong	12.48	286	P	Pn	21 51 59.9	+3.4
	1.5nm,0.3s,baz=105,slow=17,SNR=6.5						
MTN	Manton Dam	14.69	234	Pn	Pn	21 52 24.5	-0.6
CTA	Charters Tower	15.94	170	P	P	21 52 42.2	-0.2
	0.4nm,0.3s,baz=4.1,slow=11,SNR=7.3						
CTAO	Charters Tower	15.94	170	Pn	Pn	21 52 41.0	+0.2
NLAI	Namlea	16.18	273	P	P	21 52 55.0	+10
HNR	Honiara	17.30	108	P	Pn	21 52 59.9	+2.3
SANI	Sanana	17.41	277	P	Pn	21 53 03.3	+4.4
	37nm,0.8s						
WB0	Warramunga Arr	17.63	209	P	Pn	21 53 01.3	-0.2
WB0				IAmb	IAmb	21 53 03.6	
	comp=Z,50nm,0.8s						
WR0	Warramunga Arr	17.72	208	P	Pn	21 53 02.4	-0.3
WRAB	Tennant Creek	17.79	209	P	Pn	21 53 03.7	+0.2
WB2	Warramunga Arr	17.80	209	P	Pn	21 53 03.8	+0.2
WRA	Warramunga Arr	17.80	209	P	Pn	21 53 03.4	-0.2
	comp=Z,6.6nm,0.3s,baz=29,slow=12,SNR=174						
PATS	Pohnpei	18.66	54	P	P	21 53 12.5	+0.2
PATS				IAmb	IAmb	21 53 27.7	
	comp=Z,40nm,1.1s						
SOEI	Soe	19.62	253	P	Pn	21 53 24.6	-0.8
SOEI	Soe	19.62	253	P	Pn	21 53 25.5	+0.2
	comp=Z,928nmcomp=Z,114nm,0.7s						
BATI	Baumata	20.31	252	P	Pn	21 53 32.8	-0.5
	comp=Z,102nm,0.5s,baz=118,slow=2.5,SNR=16						
BATI	Baumata	20.31	252	P	Pn	21 53 34.1	+0.8
	comp=Z,89nm,0.8s						
LUWI	Luwuk	20.74	278	P	Pn	21 53 40.2	+1.9
	comp=Z,56nm,0.7s						
AS31	Alice Springs	21.25	204	P	P	21 53 40.9	+0.5
AS31				IAmb	IAmb	21 53 47.6	
	comp=Z,35nm,0.7s						
ASAR	Alice Springs	21.25	204	P	P	21 53 40.1	-0.3
	comp=Z,11nm,0.6s,baz=35,slow=8.9,SNR=94						
MMRI	Maumere	21.34	257	P	P	21 53 41.3	0.0
MMRI				IAmb	IAmb	21 53 47.5	
	comp=Z,38nm,0.7s						
MRSI	Marisa	21.85	282	P	P	21 53 58.7	+12
APSI	Ampana	21.87	278	P	P	21 53 58.8	+12
EDFI	Ende, Flores	21.89	257	P	P	21 53 45.3	-2.0
	comp=Z,16nm,0.7s						
FITZ	Fitzroy Crossi	22.03	230	P	P	21 53 47.6	-1.1
	comp=Z,15nm,0.6s,baz=58,slow=9.1,SNR=62						
FITZ	Fitzroy Crossi	22.03	230	P	P	21 53 48.0	-0.7
FITZ				IAmb	IAmb	21 53 50.6	
	comp=Z,17nm,0.7s						
EIDS	Eidsvold	22.23	161	P	P	21 53 51.8	+1.1
BNSI	Bone	23.11	269	P	P	21 54 07.6	+8.0
TOLI2	Tolitoli	23.12	283	P	P	21 53 59.1	-0.6
TOLI2				IAmb	IAmb	21 54 06.0	
	comp=Z,26nm,0.6s						
KAPI	Kappang	23.46	267	P	P	21 54 02.5	-0.3
	comp=Z,5.0nm,0.4s,baz=80,slow=14,SNR=4.8						
MYLDM	Lahad Datu	26.49	291	P	P	21 54 30.5	+0.2
MYLDM				IAmb	IAmb	21 54 47.7	
	comp=Z,11nm,0.9s						
ARMA	Armidale	27.13	164	P	P	21 54 34.8	-1.1
STKA	Stephens Creek	27.46	183	P	P	21 54 37.5	-1.2
	comp=Z,7.1nm,0.7s,baz=349,slow=9.4,SNR=15						
STKA				LR	LR	22 07 56.8	
	comp=Z,42nm,19.3s,baz=27,slow=41						
STKA	Stephens Creek	27.46	183	P	P	21 54 39.6	+0.9
PSA00	Pilbara Seismi	28.48	231	P

CMAR				LR	LR	22 19 03.2	
	comp=Z,56nm,18.1s,baz=194,slow=36						
CM15	**Chiang Mai Arr**	**49.21 299**		P	**P**	**21 57 41.5**	**+0.9**
CM13	**Chiang Mai Arr**	**49.22 299**		P	**P**	**21 57 41.3**	**+0.7**
CMMT	**Chiang Mai**	**49.33 299**		P	**P**	**21 57 41.1**	**-0.4**
CM33	**Chiang Mai Arr**	**49.34 299**		P	**P**	**21 57 42.0**	**+0.4**
CHTO	**Chiang Mai**	**49.34 299**		P	**P**	**21 57 41.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**49.36 349**		P	**P**	**21 57 40.7**	**-0.5**
	comp=Z,7.2nm,0.8s,baz=160,slow=6.6,SNR=14						
USA0B	**Ussuriysk Arra**	**49.36 349**		P	**P**	**21 57 40.5**	**-0.7**
USA0B				IAmb	IAmb	21 57 41.7	
	comp=Z,17nm,1.1s						
XAN	**Xi'an**	**50.07 322**		P	**P**	**21 57 46.1**	**-0.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CN2	**Changchun**	**50.53 343**	*e*P	P	**P**	**21 57 53.0**	**+2.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuau**	**50.68 333**		P	**P**	**21 57 51.7**	**+0.4**
BJT				IAmb	IAmb	21 57 51.8	
	comp=Z,11nm,0.8s						
BJI	**Beijing**	**50.69 333**		P	**P**	**21 57 50.9**	**-0.5**
BJI				pmax	pmax		
	comp=Z,15nm,0.8s						
CD2	**Chengdu**	**51.47 316**		P	**P**	**21 57 57.2**	**-0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,290nm,6.6s						
MCQ	**Macquarie Isla**	**51.62 168**		P	**P**	**21 57 57.9**	**-0.2**
HHC	**Hu-ho-hao-te**	**53.51 330**	*e*P	P	**P**	**21 58 12.6**	**+0.2**
HHC				S	**S**	**22 05 42.5**	**+4.9**
HHC				ScS	**ScS**	**22 07 49.0**	**-3.1**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
KLR	**Kul'dur**	**54.27 351**		LR	LR	22 17 37.6	
	comp=Z,27nm,21.6s,baz=159,slow=32						
LZH	**Lanzhou**	**54.55 321**	⇑P	P		21 58 30.7	+11
LZH				pP	pP	21 58 50.3	+5.2
LZH				sP	sP	21 59 03.3	+6.7
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
SHL	**Shillong**	**58.01 304**		P	**P**	**21 58 44.5**	**-0.4**
PEA0B	**Petropavlovsk-**	**58.50 10**		P	**P**	**21 58 46.8**	**-0.8**
PETK	**Petropavlovsk-**	**58.50 10**		P	**P**	**21 58 47.0**	**-0.6**
	comp=Z,6.4nm,0.8s,baz=180,slow=7.0,SNR=5.2						
GTA	**Gaotai**	**59.11 322**		P	**P**	**21 58 52.5**	**+0.2**
GTA				pP	sP	21 59 23.9	-5.1
GTA				sP	PcP	21 59 34.9	-5.1
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	**Ulaanbaatar**	**60.90 333**		P	**P**	**21 59 04.6**	**+0.2**
ULN				IAmb	IAmb	21 59 05.0	
	comp=Z,6.1nm,0.6s						
SONM	**Songino Array**	**61.18 333**		P	**P**	**21 59 06.2**	**0.0**
	comp=Z,2.3nm,0.7s,baz=160,slow=7.2,SNR=16						
TAPN	**Taplejung**	**62.14 304**	*e*P	P	**P**	**21 59 13.2**	**-0.1**
	comp=Z,7.4nm,0.4s						
ODAN	**Odare**	**62.23 303**	*e*P	P	**P**	**21 59 13.6**	**-0.3**
	comp=Z,22nm,0.8s						
RAMN	**Ramite**	**62.92 303**	*e*P	P	**P**	**21 59 18.4**	**-0.1**
	comp=Z,9.8nm,0.6s						
JIRN	**Jiri**	**63.51 304**	*e*P	P	**P**	**21 59 22.2**	**-0.3**
	comp=Z,9.9nm,0.7s						
GUN	**Gumba**	**63.86 304**	*e*P	P	**P**	**21 59 24.6**	**-0.2**
	comp=Z,29nm,0.7s						
PKI	**Pulchoki**	**64.13 303**	*e*P	P	**P**	**21 59 25.9**	**-0.6**
	comp=Z,11nm,0.8s						
KKN	**Kakani**	**64.31 304**	*e*P	P	**P**	**21 59 27.3**	**-0.3**
	comp=Z,24nm,0.7s						
DMN	**Daman**	**64.40 303**	*e*P	P	**P**	**21 59 27.9**	**-0.3**
	comp=Z,25nm,0.8s						
GKN	**Gorkha**	**64.92 304**	*e*P	P	**P**	**21 59 30.9**	**-0.6**
	comp=Z,29nm,0.7s						
KOLN	**Koldanda**	**65.71 303**	*e*P	P	**P**	**21 59 36.2**	**-0.4**
	comp=Z,28nm,0.7s						
DANN	**Dangsing**	**65.77 304**	*e*P	P	**P**	**21 59 36.4**	**-0.7**
	comp=Z,32nm,0.6s						
PYUN	**Piuthan**	**66.33 303**	*e*P	P	**P**	**21 59 39.6**	**-1.0**
WMQ	**Urumqi**	**69.13 320**	*e*P	P	**P**	**21 59 58.2**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
VNDA	**Vanda**	**73.82 176**		P	**P**	**22 00 25.2**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=355,slow=15,SNR=2.7						
MK31	**Makanchi Array**	**73.87 321**		P	**P**	**22 00 25.3**	**-0.7**
MKAR	**Makanchi Array**	**73.87 321**		P	**P**	**22 00 25.4**	**-0.6**
	comp=Z,5.0nm,0.8s,baz=107,slow=7.6,SNR=54						
MAKZ	**Makanchi**	**74.07 321**		P	**P**	**22 00 26.0**	**-1.2**
ZALV	**Zalesovo Beam**	**75.64 329**		P	**P**	**22 00 34.4**	**-1.7**
	comp=Z,6.4nm,0.8s,baz=111,slow=5.0,SNR=34						
NIL	**Nilore**	**75.95 306**		P	**P**	**22 00 37.7**	**-0.6**
NIL				IAmb	IAmb	22 00 38.9	
	comp=Z,16nm,0.7s						
TIXI	**Tiksi**	**76.41 355**		P	**P**	**22 00 39.0**	**-1.1**
AAK	**Ala-Archa**	**77.54 315**		P	**P**	**22 00 46.3**	**-0.9**
KK31	**Karatay Array**	**80.48 315**		P	**P**	**22 01 02.0**	**-1.1**
KKAR	**Karatay Array**	**80.48 315**		P	**P**	**22 01 02.3**	**-0.8**
NRIK	**Noril'sk**	**82.57 343**		P	**P**	**22 01 12.3**	**-1.2**
	comp=Z,3.2nm,0.6s,baz=138,slow=5.4,SNR=4.1						
BRVK	**Borovoye**	**83.32 324**		P	**P**	**22 01 17.0**	**-0.7**
BRVK				IAmb	IAmb	22 01 17.3	
	comp=Z,5.4nm,0.8s						
IL31		**85.43 24**		P	**P**	**22 01 25.2**	**-2.8**
ILAR	**Eielson Array**	**85.43 24**		P	**P**	**22 01 25.0**	**-3.1**
	comp=Z,1.9nm,0.7s,baz=255,slow=4.9,SNR=18						
ARU	**Arti**	**90.64 326**		LR	LR	22 41 52.8	
	comp=Z,18nm,19.9s,baz=158,slow=35						
SYO	**Syowa Base**	**90.87 200**	‖*e*X	P		**22 01 51.2**	**-2.8**
SYO	**Syowa Base**	**90.87 200**	‖*e*PcP	**PcP**		**22 01 59.0**	**+4.0**
BELG	**Belogornoye**	**96.86 322**		LR	LR	22 46 00.1	
	comp=Z,26nm,18.3s,baz=212,slow=35						
YKA	**Yellowknife Ar**	**99.41 27**	PKKPbc	PKKPbc		22 18 55.0	-3.7
	comp=Z,0.2nm,0.6s,baz=100,slow=2.8,SNR=5.2						
CLL	**Collm**	**117.58 327**	*e*PKPdf	**PKPdf**		**22 07 36.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**141.08 286**	PKhKP	PKPpre		22 08 12.5	
	comp=Z,0.6nm,0.5s,baz=94,slow=3.2,SNR=4.3						
TORD				PKP	**PKPdf**	**22 08 20.4**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=82,slow=3.0,SNR=6.4						
ROSC	**El Rosal**	**142.52 88**	PKhKP	PKPpre		22 08 19.7	
	comp=Z,7.9nm,0.4s,baz=323,slow=21,SNR=3.6						
LPAZ	**La Paz**	**142.79 124**	PKP	**PKPdf**		**22 08 21.1**	**-4.4**
	comp=Z,3.3nm,0.6s,baz=264,slow=1.9,SNR=17						
CPUP	**Villa Florida**	**143.57 148**	PKP	PKPbc		22 08 24.4	+1.0
	comp=Z,3.1nm,0.8s,baz=207,slow=1.8,SNR=7.3						
CPUP	**Villa Florida**	**143.57 148**		PKPbc		22 08 23.8	+0.4
KIC	**Kosan Boka**	**148.10 275**	*e*PKP1	**PKPbc**		**22 08 36.0**	**-1.2**
	comp=Z,11nm,0.7s						
DBIC	**Dimbokro**	**148.20 276**	PKPbc	**PKPbc**		**22 08 36.5**	**-1.0**
	comp=Z,9.6nm,0.8s,baz=115,slow=2.8,SNR=12						
DBIC	**Dimbokro**	**148.20 276**		**PKPbc**		**22 08 36.8**	**-0.7**
TIC	**Toumodi**	**148.37 276**	*e*PKP1	**PKPbc**		**22 08 36.6**	**-1.3**
LIC	**Lamto**	**148.39 275**	*e*PKP1	**PKPbc**		**22 08 36.7**	**-1.3**
	comp=Z,35nm,0.8s						
BDFB	**Brasilia**	**157.23 151**	PKP	**PKPdf**		**22 08 46.7**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=145,slow=7.5,SNR=5.6						

*IDC **02** 21:54:59.5±4.9, 56°.39S×23°.75W, h0km, mb4.1/2, mb1 4.1/2, mb1mx3.7/22, mbtmp4.1/2, MS3.5/1, Ms1 3.7/1, ms1mx3.1/24, Error ellipse: s-maj=398.7km s-min=34.3km az=102.0*

ISC 02 21:54:56.6±2.0, 55°.8S±0°.2×28°.2W±0°.6, h10km, n7, σ1s 19/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	**17.44 160**		P	**P**	**21 59 01.2**	**+0.3**
VNA2	**Neumayer--Watz**	**17.66 157**		P	**P**	**21 59 03.2**	**0.0**
	baz=313,slow=13						
SNAA	**Sanae**	**19.23 156**		P	**P**	**21 59 20.6**	**+0.1**
VNDA	**Vanda**	**46.82 183**		P	**P**	**22 03 26.1**	**+0.3**
	0.7nm,0.6s,baz=181,slow=6.9,SNR=3.8						
LPAZ	**La Paz**	**49.76 306**		LR	LR	22 26 41.3	
	comp=Z,57nm,21.8s,baz=138,slow=36						
TORD	**Torodi Ar. Bea**	**73.09 30**		P	**P**	**22 06 27.6**	**+0.8**
	1.6nm,0.4s,baz=199,slow=6.4,SNR=23						
SONM	**Songino Array**	**151.27 87**	PKPbc	**PKPbc**		**22 14 47.5**	**-1.9**
	0.3nm,0.5s,baz=227,slow=3.5,SNR=2.3						

*ATH **02** 22:00:15.6, 41°.40N×20°.02E, h28km±3km, ML2.4/3, Error ellipse: s-maj=5.5km s-min=1.3km az=342.0*
*TIR **02** 22:00:16.2, 41°.24N×20°.09E, h0km±1km, Md2.9, Ml2.4*
*BEO **02** 22:00:17.8±0.6, 41°.16N×20°.00E, h0km, ML2.3/7*

ISC 02 22:00:16.9±0.9, 41°.22N±0°.03×20°.00E±0°.04, h17km±7km, n19, σ1s 07/33, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.16**	**323**	P	**Pb**	**22 00 20.6**	**-0.8**
TIR				S	**Sg**	**22 00 24.4**	**+0.3**
TIR				AML	AML	22 00 25.1	
	comp=N,5064μm,0.2s						
TIR				AML	AML	22 00 28.9	
	comp=E,4593μm,0.6s						
TIR	**Tirane**	**0.16**	**323**	*e*Pg	**Pb**	**22 00 20.9**	**-0.6**
TIR				*e*Sg	**Sg**	**22 00 23.9**	**-0.2**
TIR	**Tirane**	**0.16**	**323**	P	**Pb**	**22 00 20.7**	**-0.8**
	baz=305						
TIR				S	**Sg**	**22 00 24.9**	**+0.7**
	baz=305						
TIR				AMP			
	comp=N,baz=305						
PHP	**Peshkopia**	**0.57**	**36**	P	**Pb**	**22 00 27.4**	**-1.1**
	baz=30						
PHP				S	**Sb**	**22 00 36.1**	**-0.2**
	baz=30						
PUK	**Puka**	**0.82**	**355**	P	**Pb**	**22 00 32.8**	**0.0**
	baz=350						
PUK				S	**Sn**	**22 00 45.3**	**-0.4**
	baz=350						
PUK				AMP			
	comp=N,1.4nm,0.3s,baz=350						
KBN	**Korca**	**0.85**	**135**	P	**Pb**	**22 00 32.9**	**-0.2**
	baz=138						
KBN				S	**Sn**	**22 00 45.5**	**-0.7**
	baz=138						
FNA	**Florina**	**1.13**	**112**	P	**Pb**	**22 00 37.3**	**-0.8**
FNA				S	**Sn**	**22 00 53.2**	**+0.1**
FNA				AML	AML	22 00 56.1	
	comp=E,257μm,0.3s						
FNA				AML	AML	22 00 59.9	
	comp=N,268μm,0.5s						
NEST	**Nestorio**	**1.14**	**135**	P	**Pn**	**22 00 37.7**	**-0.3**
NEST				S	**Sn**	**22 00 54.4**	**+1.1**
NEST				AML	AML	22 01 03.6	
	comp=N,152μm,0.9s						
NEST				AML	AML	22 01 06.6	
	comp=E,93μm,0.5s						
BCI	**Bajram Curri**	**1.15**	**3**	P	**Pn**	**22 00 38.7**	**+0.5**
	baz=0.0						
BCI				S	**Sn**	**22 00 56.5**	**+3.0**
	baz=0.0						
SKO	**Skopje**	**1.32**	**55**	*e*Pg	**Pg**	**22 00 43.0**	**+0.7**
SKO				*e*Sg	**Sg**	**22 00 59.5**	**-0.1**
PDG	**Podgorica**	**1.33**	**336**	*e*Pn	**Pg**	**22 00 43.4**	**+0.8**
PDG				*e*Sn	**Sg**	**22 01 02.1**	**+2.2**
KEK	**Kerkira**	**1.51**	**186**	P	**Pg**	**22 00 45.7**	**-0.3**
KEK				S	**Sg**	**22 01 07.0**	**+1.2**
TREB	**Trebinje**	**1.93**	**321**	*e*Pn	**Pb**	**22 00 51.4**	**-0.3**
TREB				*e*Sn	**Sg**	**22 01 18.7**	**-0.5**
SJES	**Sjenica**	**2.04**	**360**	*e*Pn	**Pg**	**22 00 54.9**	**-1.2**
SJES				*e*Sn	**Sg**	**22 01 22.1**	**-0.5**
BOSS	**Bosilegrad**	**2.25**	**55**	*e*Pn	**Pb**	**22 00 57.2**	**+0.1**
IVAS	**Ivanjica**	**2.36**	**3**	*e*Pn	**Pb**	**22 00 58.3**	**-0.6**
BBLS	**Lazići**	**2.68**	**351**	*e*Pn	**Pb**	**22 01 02.4**	**-2.0**
DIVS	**Divibare**	**2.88**	**360**	*e*Pn	**Pb**	**22 01 06.9**	**-0.9**
HAPS	**Han Pijesak,Bl**	**2.97**	**345**	*e*Pn	**Pb**	**22 01 07.5**	**-1.8**

IDC 02 22:01:10.0±2.1, 0°.86N×127°.11E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/39, mbtmp3.3/3, Error ellipse: s-maj=161.0km s-min=26.1km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.85**	**161**	P	P	22 06 03.7	-0.7
	0.2nm,0.3s,baz=340,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.25**	**165**	P	P	22 06 38.6	+0.6
	0.5nm,0.7s,baz=352,slow=15,SNR=6.2						
MKAR	**Makanchi Array**	**60.13**	**326**	P	P	22 11 19.3	-0.1
	0.1nm,0.3s,baz=125,slow=7.2,SNR=5.5						

IDC 02 22:01:59.0±2.3, 3°.18N×126°.02E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/40, mbtmp3.4/3, Error ellipse: s-maj=213.8km s-min=27.1km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.39**	**161**	P	P	22 07 18.4	-0.9
	0.7nm,0.4s,baz=339,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**27.77**	**164**	P	P	22 07 51.1	+1.4
	0.2nm,0.4s,baz=345,slow=8.1,SNR=1.5						
MKAR	**Makanchi Array**	**57.60**	**326**	P	P	22 11 50.5	-0.3
	0.3nm,0.6s,baz=122,slow=7.9,SNR=6.0						

IDC 02 22:05:19.9±4.8, 21°.51N×122°.16E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/44, mbtmp3.5/3, Error ellipse: s-maj=361.3km s-min=28.2km az=61.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.89**	**318**	P	P	22 13 03.7	-0.1
	0.3nm,0.6s,baz=110,slow=9.4,SNR=4.2						
WRA	**Warramunga Arr**	**42.88**	**163**	P	P	22 13 19.4	-0.8
	0.9nm,0.7s,baz=344,slow=8.6,SNR=9.2						
ASAR	**Alice Springs**	**46.34**	**165**	P	P	22 13 48.5	+0.7
	0.5nm,0.7s,baz=339,slow=7.2,SNR=5.4						

TAP 02 22:09:04.8, 22°.49N×120°.94E, h13km±1km, ML0.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECL	**Taimali**	**0.10**	**9**	P	Pb	22 09 08.3	-0.4
	baz=12						
ECL				*e*S	Sb	22 09 11.0	-0.3
	baz=12						
EAST	**Anshuo**	**0.14**	**217**	*e*P	Pg	22 09 08.6	+0.4
	baz=213						
EAST				*e*S	Sb	22 09 11.8	-0.4
	baz=213						
MASBT	**Mashibuluo**	**0.30**	**293**	P	Pb	22 09 11.9	-0.2
	baz=292						
MASBT				S	Sb	22 09 16.8	-0.2
	baz=292						

*ISK **02** 22:21:26.2, 37°.65N×27°.16E, h6km, ML2.4/8*
*ATH **02** 22:21:26.1, 37°.66N×27°.24E, h11km±3km, ML2.6/1, Error ellipse: s-maj=4.4km s-min=2.3km az=292.0*
*DDA **02** 22:21:26.9, 37°.66N×27°.17E, h11km±1km, ML2.2*

ISC 02 22:21:26.5±0.8, 37°.66N±0°.02×27°.16E±0°.03, h14km±5km, n25, σ0s 61/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.07**	**55**	*i* P	**Pg**	**22 21 29.5**	**+0.2**
GCAM				*i* S	**Sg**	**22 21 30.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.07**	**55**	PG	**Pg**	**22 21 29.6**	**+0.2**
GCAM				SG	**Sg**	**22 21 30.8**	**-0.5**
DDIM	**Aydin, Didim**	**0.21**	**163**	*i* P	**Pb**	**22 21 31.9**	**-0.2**
DDIM				IAML		22 21 35.0	
	comp=E,842nm,0.3s						
DDIM				*i* S	**Sg**	**22 21 35.4**	**+0.9**
DDIM				IAML		22 21 36.0	
	comp=N,781nm,0.2s						
SMG	**Samos**	**0.26**	**281**	P	**Pb**	**22 21 32.6**	**-0.5**
SMG				S	**Sb**	**22 21 36.8**	**-0.6**
SMG				AML	AML	22 21 37.3	
	comp=N,2578μm,0.2s						
SMG				AML	AML	22 21 37.4	
	comp=E,3722μm,0.2s						
DGB	**zmir**	**0.45**	**331**	*i* P	**Pb**	**22 21 35.9**	**-0.3**
DGB				IAML		22 21 42.0	
	comp=E,133nm,0.2s						
DGB				*i* S	**Sb**	**22 21 42.2**	**-0.6**
GMLD	**Gumuldur**	**0.46**	**335**	PG	**Pg**	**22 21 35.7**	**0.0**
GMLD				SG	**Sb**	**22 21 42.6**	**-0.5**
AYDN	**Tasoluk**	**0.57**	**90**	*i* P	**Pb**	**22 21 38.2**	**-0.1**
AYDN				IAML		22 21 45.0	
	comp=E,107nm,0.4s						
AYDN				IAML		22 21 45.0	
	comp=N,133nm,0.3s						
AYDN				*i* S	**Sb**	**22 21 45.8**	**-0.5**
BODT	**Bodrum**	**0.61**	**169**	PG	**Pg**	**22 21 37.8**	**-0.7**
BODT				SG	**Sb**	**22 21 47.2**	**-0.2**
BDRM	**Kayabasi**	**0.64**	**159**	*i* P	**Pb**	**22 21 39.0**	**-0.4**
BDRM				*i* S	**Sb**	**22 21 48.4**	**+0.3**
BDRM				IAML		22 21 50.0	
	comp=N,115nm,0.8s						
BDRM				IAML		22 21 51.0	
	comp=E,133nm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**0.64**	**63**	PG	**Pb**	**22 21 39.3**	**-0.3**
AYDB				SG	**Sb**	**22 21 48.5**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**0.78**	**318**	*i* P	**Pb**	**22 21 42.4**	**+0.5**
ZEYE				*i* S	**Sb**	**22 21 53.1**	**+0.9**
ZEYE				IAML		22 21 57.0	
	comp=E,96nm,0.2s						
URLA	**Izmir**	**0.83**	**327**	*i* P	**Pb**	**22 21 42.7**	**0.0**
URLA				*i* S	**Sb**	**22 21 53.9**	**+0.1**
URLA				IAML		22 21 59.0	
	comp=N,77nm,0.5s						
URLA	**Izmir**	**0.83**	**327**	PG	**Pb**	**22 21 42.7**	**0.0**
URLA				SG	**Sb**	**22 21 54.6**	**+0.8**
KOSK	**Kos Island**	**0.92**	**189**	PG	**Pb**	**22 21 44.2**	**0.0**
KOSK				SG	**Sb**	**22 21 57.1**	**+0.8**
YER	**Yerkesik**	**1.03**	**120**	PG	**Pn**	**22 21 46.7**	**0.0**
YER				SG	**Sn**	**22 22 00.5**	**-0.5**
NIS1	**Nisyros Isl.**	**1.06**	**179**	P	**Pg**	**22 21 45.9**	**-1.0**
NIS1	**Nisyros Isl.**	**1.06**	**179**	PG	**Pn**	**22 21 46.8**	**-0.1**
TURN	**Turunc**	**1.23**	**135**	PN	**Pg**	**22 21 50.4**	**+0.1**
TURN				SN	**Sn**	**22 22 07.9**	**+2.1**
DKL	**Dikili**	**1.42**	**352**	PN	**Pg**	**22 21 53.4**	**-0.5**
APE	**Apeiranthos**	**1.43**	**246**	P	**Pn**	**22 21 52.2**	**+0.2**
APE				S	**Sg**	**22 22 13.1**	**+0.5**
KULA	**Kula-Manisa**	**1.46**	**54**	PN	**Pb**	**22 21 53.7**	**+0.2**
ARG	**Arkhangelos**	**1.64**	**152**	PN	**Pb**	**22 21 56.2**	**-0.3**
PRK	**Paraskevi**	**1.73**	**336**	P	**Pb**	**22 21 57.7**	**-0.4**
FETY	**Fethiye**	**1.84**	**123**	PN	**Pb**	**22 21 59.3**	**-0.7**
SIGR	**SIGRI**	**1.86**	**327**	P	**Pb**	**22 21 59.4**	**-0.8**

WEL 02 22:34:02.0, 38°.S±9°×17°.6E±3°.4, h229km±40km, M2.2/14, MLv2.2/14, Error ellipse: s-maj=0.1km s-min=0.0km az=87.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MUGZ	**Murupara**	**0.89**	**141**	P	Pn	22 34 34.4	+0.3
URZ	**Urewera**	**0.95**	**120**	P	Pn	22 34 34.5	0.0
RTZ	**Ruatahuna**	**1.10**	**139**	P	Pn	22 34 35.5	0.0
MTHZ	**Maungataniwha**	**1.23**	**150**	P	Pn	22 34 36.3	0.0
MWZ	**Matawai**	**1.28**	**116**	P	Pn	22 34 36.9	+0.2
RAGZ	**Rawiri**	**1.28**	**124**	P	Pn	22 34 37.2	+0.4
RUGZ	**Raukumara Rang**	**1.29**	**99**	P	Pn	22 34 36.5	-0.4
HAZ	**Te Kaha**	**1.36**	**89**	P	Pn	22 34 36.3	-0.5
ETVZ	**East Tongariro**	**1.38**	**191**	P	S	22 34 59.3	-6.1
RAHZ	**Arahi**	**1.39**	**145**	P	Pn	22 34 37.6	+0.2
SNGZ	**Shannon Statio**	**1.42**	**135**	P	Pn	22 34 37.7	0.0
BKZ	**Black Stump Fm**	**1.42**	**166**	P	Pn	22 34 37.0	-0.7
NMHZ	**Naumai**	**1.44**	**156**	P	Pn	22 34 38.2	+0.3
NMHZ	**Naumai**	**1.44**	**156**	P	S	22 35 11.5	+5.5
PKGZ	**Pakihiroa**	**1.60**	**94**	P	Pn	22 34 38.8	-0.4
RIGZ	**Rimuhau**	**1.62**	**125**	P	Pn	22 34 39.4	0.0
ARHZ	**Aropaoanui**	**1.65**	**154**	P	Pn	22 34 39.0	-0.5
ARHZ	**Aropaoanui**	**1.65**	**154**	P	S	22 35 07.6	-1.3
KWHZ	**Kaweka Forest**	**1.66**	**170**	P	Pn	22 34 39.1	-0.6
CNGZ	**Carnagh Statio**	**1.83**	**113**	P	Pn	22 34 41.2	+0.1
WMGZ	**Waiomatatini S**	**1.86**	**92**	P	Pn	22 34 41.5	+0.1
TSZ	**Takapari Road**	**2.27**	**182**	P	Pn	22 34 49.4	+4.0
OGWZ	**Otaki Gorge**	**3.11**	**193**	P	Pn	22 34 49.9	-4.4
KIW	**Kapiti Island**	**3.20**	**196**	P	Pn	22 34 50.3	-5.1
CAW	**Cannon Point**	**3.41**	**193**	P	Pn	22 34 49.6	-8.1
TUWZ	**Tuamarina**	**3.99**	**204**	P	Pn	22 34 58.2	-6.5
NNZ	**Nelson**	**4.01**	**210**	P	Pn	22 34 57.7	-7.2
QRZ	**Quartz Range**	**4.09**	**221**	P	Pn	22 34 58.1	-7.8
THZ	**Tophouse**	**4.66**	**210**	P	Pn	22 35 05.1	-7.7
KHZ	**Kahutara**	**5.01**	**202**	P	Pn	22 35 10.2	-7.0
GVZ	**Greta Valley S**	**5.67**	**203**	P	Pn	22 35 17.0	-8.4

*ANF **02** 22:36:20.9±0.3, 32°.84N×96°.94W, h7km, ML3.9/17, Error ellipse: s-maj=3.0km s-min=2.5km az=79.0*
*NEIC **02** 22:36:21.0±1.0, 32°.86N±0°.02×96°.94W±0°.02, h8km±1km, mb_Lg3.3/76, Error ellipse: s-maj=2.8km s-min=2.7km az=75.0*

ISC 02 22:36:20.6±1.3, 32°.85N±0°.03×96°.93W±0°.04, h2km±12km, n83, σ0s 66/64, Central Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
Z35A	**Perchaven, San**	**0.55**	**330**		**Pg**	**22 36 31.1**	**-0.2**
Z35A				Sg	**Sg**	**22 36 38.6**	**+0.2**
Z35A	**Perchaven, San**	**0.55**	**330**	P	**Pg**	**22 36 31.4**	**+0.1**
	baz=151,SNR=28						
Z35A				S	**Sg**	**22 36 38.7**	**+0.2**
	baz=151						
Z35A	**Perchaven, San**	**0.55**	**330**	P		22 36 31.4	
	baz=151,SNR=28						
Z35A				S		22 36 38.7	
	baz=151						
WHTX	**Lake Whitney,**	**0.97**	**208**		**Pg**	**22 36 39.2**	**0.0**
WHTX				Sg	**Sg**	**22 36 52.2**	**+0.5**
WHTX	**Lake Whitney,**	**0.97**	**208**	P	**Pg**	**22 36 39.3**	**+0.2**
	baz=27

baz=84
ABTX Sb 22 37 33.1
baz=84
ABTX Abilene, Hawle 2.30 265 Sb 22 37 33.1
baz=84
WMOK Wichita Mounta 2.44 321 Pn **Pn** **22 37 01.9 +0.4**
WMOK lAmb_Lg 22 37 43.7
comp=Z,126nm,0.7s
WMOK Wichita Mounta 2.44 321 P **Pn** **22 37 01.7 +0.2**
baz=140,SNR=304
WMOK Wichita Mounta 2.44 321 P 22 37 01.7
baz=140,SNR=120
WMOK Wichita Mounta 2.44 321 P 22 37 01.7
baz=140,SNR=304
OKCFA Oklahoma City 2.60 350 lAmb_Lg 22 37 49.2
comp=Z,113nm,0.9s
OKCFA Oklahoma City 2.60 350 S **Sb** **22 37 40.2 -0.1**
baz=170
OKCFA Oklahoma City 2.60 350 S 22 37 40.2
baz=170
OK025 Westminster Rd 2.75 353 lAmb_Lg 22 37 53.7
comp=Z,123nm,1.0s
BCOK Bluff Creek, N 2.86 349 **Pn** **22 37 08.0 +0.7**
OK029 Liberty Lake 2.97 352 lAmb_Lg 22 37 54.8
comp=Z,62nm,0.7s
OK030 Cody Creek RV 3.07 2 Pn **Pn** **22 37 10.9 +0.7**
OK031 S. Brethren Rd 3.10 1 **Pn** **22 37 10.8 +0.2**
TUL1 Leonard 3.19 17 P 22 37 13.3
baz=198,SNR=6.1
MIAR Mount Ida 3.26 58 Pn **Pn** **22 37 11.7 -1.2**
MIAR Mount Ida 3.26 58 P **Pn** **22 37 11.6 -1.3**
baz=240,SNR=21
MIAR Mount Ida 3.26 58 P 22 37 11.7
baz=240,SNR=12
MIAR S 22 37 50.2
baz=240
MIAR Mount Ida 3.26 58 P 22 37 11.6
baz=240,SNR=21
WLAR White Oak Lake 3.30 74 **Pn** **22 37 12.8 -0.6**
JCT Junction City 3.41 227 Pn **Pn** **22 37 14.9 0.0**
JCT Junction City 3.41 227 P **Pn** **22 37 14.7 -0.2**
baz=45
JCT Junction City 3.41 227 P 22 37 14.8
baz=45,SNR=7.3
JCT S 22 37 56.7
baz=45
JCT Junction City 3.41 227 P 22 37 14.7
baz=45
Z41A Richland Creek 3.48 82 P **Pn** **22 37 15.1 -0.8**
baz=264
Z41A Richland Creek 3.48 82 P 22 37 15.1
baz=264
Z41A S 22 37 55.4
baz=264
Z41A Richland Creek 3.48 82 P 22 37 15.1
baz=264
Z41A P 22 37 15.1
baz=264
W39A Magazine 3.50 47 **Pn** **22 37 16.4 +0.3**
W39A lAmb_Lg 22 38 18.1
comp=Z,65nm,0.7s
W39A Magazine 3.50 47 P **Pn** **22 37 16.1 -0.1**
baz=229,SNR=20
W39A Magazine 3.50 47 P 22 37 16.6
baz=229,SNR=14
W39A Magazine 3.50 47 P 22 37 16.1
baz=229,SNR=20
CROK Carrier 3.75 347 Pn **Pn** **22 37 19.2 -0.3**
X40A Basin Creek Fa 3.78 63 **Pn** **22 37 18.7 -1.3**
X40A Basin Creek Fa 3.78 63 P 22 37 18.8
baz=246,SNR=5.8
441A DeRidder 3.81 122 Pn **Pn** **22 37 20.4 +0.1**
441A DeRidder 3.81 122 P **Pn** **22 37 20.1 -0.2**
baz=304,SNR=6.0
441A S **Sn** **22 38 06.5 +0.8**
baz=304
441A DeRidder 3.81 122 P 22 37 20.1
baz=304,SNR=6.0
441A S 22 38 06.5
baz=304
U32A Winter Ranch, 3.92 335 **Pn** **22 37 22.0 +0.2**
U32A lAmb_Lg 22 38 30.7
comp=Z,65nm,0.7s
U32A Winter Ranch, 3.92 335 P **Pn** **22 37 22.0 +0.2**
baz=154,SNR=16
U32A Winter Ranch, 3.92 335 P 22 37 22.0
baz=154,SNR=16
735A Kenedy 4.05 191 lAmb_Lg 22 38 36.1
comp=Z,84nm,0.9s
GC02 Grant County # 4.07 349 Pn **Pn** **22 37 23.5 -0.4**
T35A Sooner Cattle 4.07 5 Pn **Pn** **22 37 23.5 -0.5**
T35A lAmb_Lg 22 38 32.5
comp=Z,96nm,1.1s
U38A Gravette 4.15 30 lAmb_Lg 22 38 43.5
comp=Z,48nm,0.8s
342A Flagon Creek P 4.17 109 lAmb_Lg 22 38 34.3
comp=Z,59nm,0.9s
KAN13 South Haven SW 4.18 354 Pn **Pn** **22 37 24.9 -0.5**
KAN14 Manchester OK 4.18 349 lAmb_Lg 22 38 36.9
comp=Z,91nm,1.2s
KAN09 Caldwell North 4.31 353 **Pn** **22 37 26.6 -0.7**
KAN09 lAmb_Lg 22 38 38.0
comp=Z,73nm,0.9s
KAN05 Bluff City Nor 4.32 350 lAmb_Lg 22 38 44.6
comp=Z,65nm,0.8s
KAN01 Argonia South 4.35 351 lAmb_Lg 22 38 42.0
comp=Z,56nm,0.9s
KAN10 Anthony SW Sta 4.37 348 lAmb_Lg 22 38 46.0
comp=Z,39nm,0.7s
CCAR Cane Creek 4.44 75 lAmb_Lg 22 38 44.1
comp=Z,52nm,0.7s
AMTX Amarillo 4.45 298 Pn **Pn** **22 37 29.6 +0.4**
AMTX Amarillo 4.45 298 P 22 37 29.7
baz=116
KAN08 Anthony NE Sta 4.45 349 lAmb_Lg 22 38 42.5
comp=Z,73nm,1.0s
KAN12 Harper NE Stat 4.52 349 lAmb_Lg 22 38 53.6
comp=Z,43nm,0.8s
W41B Gary Mavity, V 4.52 58 P **Pn** **22 37 29.9 -0.3**
baz=240,SNR=9.9
W41B Gary Mavity, V 4.52 58 P 22 37 29.8
baz=240
W41B S 22 38 21.0
baz=240
W41B Gary Mavity, V 4.52 58 P 22 37 29.9
baz=240,SNR=9.9
WHAR Wooly Hollow 4.55 56 Pn **Pn** **22 37 30.5 -0.1**
143A Socs Landing, 4.65 90 Pn **Pn** **22 37 31.1 -0.9**
U40A Yellville 4.85 43 Pn **Pn** **22 37 34.4 -0.2**
U40A Yellville 4.85 43 P **Pn** **22 37 34.2 -0.5**
baz=225,SNR=18
U40A Yellville 4.85 43 P 22 37 34.9
baz=225,SNR=6.5
U40A Yellville 4.85 43 P 22 37 34.2
baz=225,SNR=18
U40A P 22 37 34.2
baz=225,SNR=18
833A Chaparral WMA, 4.99 206 P 22 37 37.3
baz=24
FCAR Ozark Folk Cen 5.00 51 **Pn** **22 37 36.4 -0.3**
MSTX Muleshoe 5.02 284 Pn **Pn** **22 37 36.9 -0.2**
MSTX Muleshoe 5.02 284 P 22 37 37.2
baz=101
S39A Bolivar 5.66 30 lAmb_Lg 22 39 31.0
comp=Z,33nm,0.8s
LCAR Lake Charles 5.75 54 **Pn** **22 37 45.6 -1.3**
MGMO Mountain Grove 5.75 40 lAmb_Lg 22 39 22.8
comp=Z,37nm,0.8s
R32A Long Quarter, 5.75 346 Pn **Pn** **22 37 46.1 -1.0**
R32A lAmb_Lg 22 39 32.5
comp=Z,46nm,0.8s
R32A Long Quarter, 5.75 346 P **Pn** **22 37 45.9 -1.1**
baz=165,SNR=7.1
R32A Long Quarter, 5.75 346 P 22 37 45.9
baz=165,SNR=7.1
CBKS Cedar Bluff 6.37 340 lAmb_Lg 22 40 01.0
comp=Z,34nm,0.8s
CBKS Cedar Bluff 6.37 340 P **Pn** **22 37 54.5 -1.2**
baz=158,SNR=6.1
CBKS Cedar Bluff 6.37 340 P 22 37 54.6
baz=158
CBKS S 22 39 05.6
baz=158
CBKS Cedar Bluff 6.37 340 P 22 37 54.5
baz=158,SNR=6.1
R40A Maddies Statio 6.62 34 **Pn** **22 37 58.6 -0.4**
R40A lAmb_Lg 22 39 59.1
comp=Z,29nm,0.7s
TX31 Lajitas Ar. Si 6.76 241 P **Pn** **22 38 00.3 -0.8**
baz=57,SNR=35
TX31 Lajitas Ar. Si 6.76 241 P 22 38 00.3
baz=57,SNR=35
CCM Cathedral Cave 6.96 40 P 22 38 02.8
baz=223
CCM S 22 39 18.0
baz=223
MNTX Cornudas Mount 7.25 263 **Pn** **22 38 07.5 -0.2**
MNTX lAmb_Lg 22 40 12.2
comp=Z,46nm,0.8s
MNTX Cornudas Mount 7.25 263 P 22 38 07.3
baz=79
P38A Dawn 7.29 21 lAmb_Lg 22 40 21.3
comp=Z,26nm,0.7s
KSCO Kaye Shedlock' 7.69 325 lAmb_Lg 22 40 38.1
comp=Z,33nm,0.7s
P40A Paris 7.74 29 lAmb_Lg 22 40 31.4
comp=Z,40nm,0.8s
SLM Saint Louis 7.93 41 lAmb_Lg 22 40 33.0
comp=Z,23nm,1.1s
ANMO Albuquerque 8.20 287 lAmb_Lg 22 40 39.1
comp=Z,25nm,0.8s
P43A Skaggs, Pawnee 9.03 39 lAmb_Lg 22 41 04.7
comp=Z,27nm,0.9s
T47A Sharon Grove 9.06 60 lAmb_Lg 22 41 33.3
comp=Z,21nm,1.1s
121A Cookes Peak, D 9.16 271 lAmb_Lg 22 41 15.7
comp=Z,34nm,1.0s
N41A Harden Midland 9.23 30 lAmb_Lg 22 41 14.2
comp=Z,25nm,0.7s
SCIA State Center 9.51 17 lAmb_Lg 22 41 30.8
comp=Z,22nm,0.8s
ISCO Idaho Springs 9.86 317 lAmb_Lg 22 42 01.5
comp=Z,15nm,0.8s
ISCO Idaho Springs 9.86 317 P **Pn** **22 38 43.0 -0.6**
baz=132,SNR=7.4
ISCO Idaho Springs 9.86 317 P 22 38 43.6
baz=132
ISCO Idaho Springs 9.86 317 P 22 38 43.0
baz=132,SNR=7.4
O44A Mansfield 9.97 41 lAmb_Lg 22 41 48.4
comp=Z,19nm,0.9s

*SOME **02** 22:38:03.9, 40°.52N×77°.50E, h10km*
*KRNET **02** 22:38:03.3±0.1, 40°.54N×77°.68E, mb2.7*
*NNC **02** 22:38:06.6±1.2, 40°.61N×77°.63E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=8.3km s-min=6.3km az=176.0
ISC 02 22:38:06.2±2.0, 40°.47N±0°.10×77°.63E±0°.04, h10km, n54,
σ1ˢ32/84, 26C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.69**	**349**	⇑*iP*		**Pn**		**22 38 34.2**	**-1.8**
KDJ	baz=47			⇑*iS*		**Sn**		**22 38 56.4**	**-1.5**
ULHL	**Ulahol**	**2.06**	**330**	⇑*iP*		**Pn**		**22 38 40.8**	**-0.3**
ULHL	baz=28			⇑*iS*		**Sn**		**22 39 08.2**	**+1.2**
PRZ	**Przheval'sk**	**2.09**	**16**	⇑*iP*		**Pn**		**22 38 40.9**	**-0.6**
PRZ	baz=15			⇑*iS*		**Sn**		**22 39 08.5**	**+0.8**
ANVS	**Anan'yevo**	**2.31**	**1**	⇑*iP*		**Pn**		**22 38 44.2**	**-0.3**
ANVS	baz=60			⇑*iS*		**Sn**		**22 39 13.8**	**+0.7**
BOOM	**Boomskoye usch**	**2.39**	**328**	⇑*iP*		**Pn**		**22 38 45.2**	**-0.3**
BOOM	baz=27			⇑*iS*		**Sn**		**22 39 15.8**	**+0.9**
TNSS	**Tian-Shan**	**2.62**	**349**	*eP*		**Pb**		**22 38 51.9**	**-1.6**
TNSS	7.0nm,0.5s			*eS*		**Sb**		**22 39 25.9**	**+0.1**
TNSS	**Tian-Shan**	**2.62**	**349**	Pg		**Pb**		**22 38 51.8**	**-1.6**
TNSS	9.1nm,0.3s			Lg		Lg		22 39 26.8	
SATY	**Saty**	**2.65**	**12**	*eP*		**Pb**		**22 38 53.1**	**-0.7**
SATY	10.0nm,0.5s			*eS*		**Sb**		**22 39 28.5**	**+2.0**
SATY	**Saty**	**2.65**	**12**	Pg		**Pb**		**22 38 53.1**	**-0.7**
SATY	20nm,0.8s			Lg		Lg		22 39 28.5	
IZV	**Izvestkoviy**	**2.68**	**344**	*eP*		**Pb**		**22 38 52.5**	**-1.7**
IZV	2.2nm,0.3s			*eS*		**Sb**		**22 39 27.4**	**+0.2**
IZV	**Izvestkoviy**	**2.68**	**344**	Pg		**Pb**		**22 38 52.4**	**-1.9**
IZV	28nm,0.4s			Lg		Lg		22 39 27.8	
MDOK	**Medeo**	**2.73**	**351**	*eP*		**Pb**		**22 38 53.6**	**-1.6**
MDOK	29nm,0.6s			*eS*		**Sb**		**22 39 29.5**	**+0.8**
MDOK	**Medeo**	**2.73**	**351**	Pn		**Pb**		**22 38 53.5**	**-1.6**
MDOK	25nm,0.6s			Lg		Lg		22 39 29.8	
MDOK	**Medeo**	**2.73**	**351**	Pg		**Pb**		**22 38 53.6**	**-1.6**
MDOK	29nm,0.6s			Lg		Lg		22 39 29.5	
ZHN	**Zhinishke**	**2.76**	**12**	*eP*		**Pb**		**22 38 54.5**	**-1.2**
ZHN	8.5nm,0.4s			*eS*		**Sb**		**22 39 31.1**	**+1.4**
ZHN	**Zhinishke**	**2.76**	**12**	Pg		**Pb**		**22 38 54.5**	**-1.2**
ZHN	8.5nm,0.4s			Lg		Lg		22 39 31.1	
KOTS	**Kotyrbulak**	**2.79**	**352**	*eP*		**Pb**		**22 38 55.0**	**-1.2**
KOTS	20nm,0.5s			*eS*		**Sb**		**22 39 31.9**	**+1.4**
KOTS	**Kotyrbulak**	**2.79**	**352**	Pg		**Pb**		**22 38 55.1**	**-1.2**
KOTS	20nm,0.5s			Lg		Lg		22 39 31.9	
KNDC	**Almaty**	**2.79**	**350**	⇑Pn		**Pn**		**22 38 51.3**	**+0.3**
KNDC	18nm,0.4s			⇓Lg		Lg		22 39 32.1	
MTBS	**Maitube**	**2.81**	**342**	*eP*		**Pb**		**22 38 55.2**	**-1.3**
MTBS	8.5nm,0.3s			*eS*		**Sb**		**22 39 32.0**	**+1.1**
MTBS	**Maitube**	**2.81**	**342**	Pg		**Pb**		**22 38 55.2**	**-1.3**
MTBS	8.5nm,0.3s			Lg		Lg		22 39 32.0	
ARLS	**Aral**	**2.86**	**300**	⇓*iP*		**Pn**		**22 38 51.7**	**-0.3**
ARLS	baz=99			⇓*iS*		**Sn**		**22 39 28.5**	**+1.9**
KST	**Kastek**	**2.86**	**335**	*eP*		**Pb**		**22 38 56.4**	**-1.0**
KST	3.1nm,0.3s			*eS*		**Sb**		**22 39 33.9**	**+1.4**
KST	**Kastek**	**2.86**	**335**	Pg		**Pb**		**22 38 56.4**	**-1.0**
KST	3.1nm,0.3s			Lg		Lg		22 39 33.9	
UZB	**Uzunbulak**	**2.87**	**21**	*eP*		**Pb**		**22 38 56.4**	**-1.1**
UZB	5.1nm,0.4s			*eS*		**Sb**		**22 39 34.3**	**+1.5**
UZB	**Uzunbulak**	**2.87**	**21**	Pg		**Pb**		**22 38 56.4**	**-1.1**
UZB	5.1nm,0.4s			Lg		Lg		22 39 34.3	
TKM2	**Tokmak 2**	**2.89**	**329**	⇑*iP*		**Pn**		**22 38 52.2**	**-0.2**
TKM2	baz=27			⇑*iS*		**Sn**		**22 39 28.0**	**+0.7**
TKM2	**Tokmak 2**	**2.89**	**329**	⇑Pg		**Pb**		**22 38 56.6**	**-1.2**
TKM2	2.6nm,0.7s			⇑Lg		Lg		22 39 35.1	
UCH	**Uchtor**	**2.93**	**308**	⇑*iP*		**Pn**		**22 38 53.5**	**+0.2**
UCH	baz=6.0			⇑*iS*		**Sn**		**22 39 30.0**	**+1.2**
KBK	**Karagaybulak**	**2.97**	**318**	⇑*iP*		**Pn**		**22 38 53.7**	**+0.1**
KBK	baz=17			⇑*iS*		**Sn**		**22 39 30.3**	**+0.9**
SHLS	**Shalkode**	**3.01**	**26**	*eP*		**Pg**		**22 39 02.1**	**-1.8**
SHLS	4.6nm,0.4s			*eS*		**Sg**		**22 39 43.9**	**+0.9**
SHLS	**Shalkode**	**3.01**	**26**	Pg		**Pg**		**22 39 02.1**	**-1.8**
SHLS	4.6nm,0.4s			Lg		Lg		22 39 43.9	
KPKS	**Kokpek**	**3.10**	**14**	*eP*		**Pb**		**22 39 00.1**	**-1.2**
KPKS	6.8nm,0.3s			*eS*		**Sb**		**22 39 40.3**	**+1.0**
DGS	**Degeres**	**3.10**	**334**	*eP*		**Pb**		**22 39 00.3**	**-1.2**
DGS	5.3nm,0.7s			*eS*		**Sb**		**22 39 40.5**	**+1.1**
DGS	**Degeres**	**3.10**	**334**	Pg		**Pb**		**22 39 00.3**	**-1.2**
DGS	5.3nm,0.7s			Lg		Lg		22 39 40.5	
PDGK	**Podgornoye**	**3.18**	**25**	Pg		**Pb**		**22 39 01.7**	**-1.1**
PDGK	1.0nm,0.5s			Lg		Lg		22 39 43.1	
PDGK	**Podgornoye**	**3.18**	**25**	⇑Pg		**Pb**		**22 39 00.2**	**-2.5**
PDGK	1.9nm,0.7s			⇑Lg		Lg		22 39 43.2	
AAK	**Ala-Archa**	**3.20**	**314**	⇑*iP*		**Pn**		**22 38 56.8**	**+0.1**
AAK	baz=12			⇑*iS*		**Sn**		**22 39 35.7**	**+0.7**
AAK	**Ala-Archa**	**3.20**	**314**	⇑Pg		**Pb**		**22 39 02.5**	**-0.7**
AAK	2.3nm,0.6s			⇓Lg		Lg		22 39 44.3	
KTBS	**Karatobe**	**3.32**	**348**	*eP*		**Pb**		**22 39 03.6**	**-1.5**
KTBS	2.2nm,0.3s			*eS*		**Sb**		**22 39 46.9**	**+1.3**
KTBS	**Karatobe**	**3.32**	**348**	Pg		**Pb**		**22 39 03.6**	**-1.5**
KTBS	2.2nm,0.3s			Lg		Lg		22 39 46.9	
AML	**Almayashu**	**3.40**	**301**	⇑*iP*		**Pn**		**22 39 00.2**	**+0.6**
AML	baz=99			⇑*iS*		**Sn**		**22 39 41.6**	**+1.4**
KRBS	**Karabastau**	**3.54**	**336**	*eP*		**Pb**		**22 39 07.9**	**-1.1**
KRBS	2.9nm,0.5s			*eS*		**Sb**		**22 39 53.5**	**+1.5**
KRBS	**Karabastau**	**3.54**	**336**	Pg		**Pb**		**22 39 07.9**	**-1.1**
KRBS	2.9nm,0.5s			Lg		Lg		22 39 53.5	
KUU	**Kurty**	**3.56**	**345**	*eP*		**Pb**		**22 39 07.9**	**-1.2**
KUU	1.2nm,0.4s			*eS*		**Sb**		**22 39 53.7**	**+1.3**
KUU	**Kurty**	**3.56**	**345**	Pg		**Pb**		**22 39 07.9**	**-1.2**
KUU	1.2nm,0.4s			Lg		Lg		22 39 53.7	
KTMS	**Ketmen**	**3.60**	**33**	*eP*		**Pb**		**22 39 09.6**	**-0.4**
KTMS	1.0nm,0.2s			*eS*		**Sb**		**22 39 56.5**	**+2.8**
KTMS	**Ketmen**	**3.60**	**33**	Pg		**Pb**		**22 39 09.6**	**-0.4**
KTMS	1.0nm,0.2s			Lg		Lg		22 39 56.5	
MNBS	**Baschi**	**3.65**	**9**	*eP*		**Pb**		**22 39 10.4**	**-0.4**
MNBS	2.3nm,0.4s			*eS*		**Sb**		**22 39 58.0**	**+2.7**
MNBS	**Baschi**	**3.65**	**9**	Pg		**Pb**		**22 39 10.4**	**-0.4**
MNBS	2.3nm,0.4s			Lg		Lg		22 39 58.0	
ARXS	**Arharly**	**3.75**	**2**	*eP*		**Pb**		**22 39 11.5**	**-0.9**
ARXS	2.3nm,0.4s			*eS*		**Sb**		**22 40 00.5**	**+2.6**
ARXS	**Arharly**	**3.75**	**2**	Pg		**Pb**		**22 39 11.5**	**-0.9**
ARXS	2.3nm,0.4s			Lg		Lg		22 40 00.5	
DJR	**Jarkent**	**4.18**	**22**	*eP*		**Pb**		**22 39 19.7**	**-0.1**
DJR	0.8nm,0.3s			*eS*		**Sb**		**22 40 13.8**	**+3.4**
DJR	**Jarkent**	**4.18**	**22**	Pg		**Pb**		**22 39 19.7**	**-0.1**
DJR	0.8nm,0.3s			Lg		Lg		22 40 13.8	

*AEIC **02** 22:56:50±1.2, 58°.41N±0°.03×136°.96W±0°.04, h3km±4km,*
ML2.6/28, ML2.7(OTT), ML2.8/20(NEIC), Error ellipse:
s-maj=4.4km s-min=2.2km az=213.0
*NEIC **02** 22:56:50.9±1.2, 58°.39N±0°.03×136°.94W±0°.05, h8km±4km,*
Error ellipse: s-maj=5.0km s-min=3.1km az=211.0
*PGC **02** 22:56:50.7±0.4, 58°.37N×137°.07W, h1km, ML2.7/6, 134km*
Wsw of Haines, Ak Southeastern Alaska
ISC 02 22:56:50.2±1.5, 58°.39N±0°.04×136°.96W±0°.03, h1km±11km,
n50, σ1ˢ27/73, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**1.11**	**16**	P		**Pg**		**22 57 11.3**	**-0.2**
PLBC				S		**Sg**		**22 57 26.3**	**+0.4**
PLBC	**Pleasant Camp**	**1.11**	**16**			**Pg**		**22 57 11.3**	**-0.2**
PLBC						**Sg**		**22 57 26.2**	**+0.4**
BESE	**Bessie Mountai**	**1.12**	**79**	P		**Pg**		**22 57 11.9**	**+0.2**
BESE				S		**Sb**		**22 57 27.2**	**-0.2**
BESE	**Bessie Mountai**	**1.12**	**79**			**Pg**		**22 57 11.8**	**+0.2**
BESE				Sg		**Sb**		**22 57 27.0**	**-0.4**
BESE	**Bessie Mountai**	**1.12**	**79**			**Sb**		**22 57 27.3**	**-0.2**
JIS	**Juneau Island**	**1.36**	**94**			**Pn**		**22 57 16.2**	**-0.1**
JIS						**Sg**		**22 57 34.5**	**+0.6**
JIS	**Juneau Island**	**1.36**	**94**	IAML				22 57 36.5	
JIS	comp=E,118nm,0.5s			IAML				22 57 38.8	
SKAG	**Skagway**	**1.36**	**38**	Pn		**Pn**		**22 57 15.9**	**-0.4**
SKAG						**Pb**		**22 57 16.1**	**-0.3**
SKAG				Sg		**Sb**		**22 57 34.0**	**-0.4**
SKAG						**Sn**		**22 57 34.4**	**-0.5**
SIT	**Sitka**	**1.60**	**146**			**Pn**		**22 57 19.0**	**-0.4**
SIT						**Sn**		**22 57 40.2**	**-0.5**
SIT	comp=E,96nm,0.9s			IAML				22 57 41.9	
PNL	**Peninsula**	**1.80**	**316**	Pn		**Pn**		**22 57 21.5**	**-0.8**
PNL				Sg		**Sb**		**22 57 46.6**	**-0.2**
PNL	**Peninsula**	**1.80**	**316**			**Pn**		**22 57 22.0**	**-0.2**
PNL						**Sb**		**22 57 46.7**	**-0.1**
YUK7	**Dusty Glacier**	**2.23**	**345**	Pn		**Pn**		**22 57 28.9**	**+0.5**
YUK7				Sg		**Sb**		**22 57 59.3**	**-0.2**
YUK7	**Dusty Glacier**	**2.23**	**345**			**Pn**		**22 57 28.9**	**+0.5**
PCA	**Pinnacle**	**2.41**	**317**	Pn		**Pn**		**22 57 29.9**	**-0.8**
PCA				Sg		**Sb**		**22 58 05.2**	**+0.8**
PCA	**Pinnacle**	**2.41**	**317**			**Pn**		**22 57 30.2**	**-0.5**
HYT	**Haines Junctio**	**2.46**	**354**	Pn		**Pn**		**22 57 32.1**	**+0.7**
HYT				Sg		**Sb**		**22 58 07.2**	**+1.3**
HYT	**Haines Junctio**	**2.46**	**354**			**Pn**		**22 57 32.2**	**+0.7**
WHY	**Whitehorse**	**2.51**	**24**	Pn		**Pn**		**22 57 32.1**	**0.0**
WHY				Pg		**Pb**		**22 57 36.7**	**+0.6**
WHY				Sg		**Sb**		**22 58 09.0**	**+1.6**
WHY	**Whitehorse**	**2.51**	**24**			**Pn**		**22 57 32.2**	**0.0**
WHY						**Sb**		**22 58 05.5**	**-1.9**
SAMH	**Samovar Hills**	**2.63**	**313**	Pn		**Pn**		**22 57 33.5**	**-0.3**
SAMH				Sg		**Sb**		**22 58 10.7**	**-0.1**
SAMH	**Samovar Hills**	**2.63**	**313**			**Pn**		**22 57 33.8**	**+0.1**
YUK6	**Outpost Mounta**	**2.66**	**345**	Pn		**Pn**		**22 57 34.1**	**-0.1**
YUK6				Sg		**Sb**		**22 58 13.6**	**+1.8**
CHX	**Chaix Hills**	**2.72**	**310**			**Pn**		**22 57 36.1**	**+1.1**
YUK5	**Granite Creek**	**2.79**	**351**	Pn		**Pn**		**22 57 37.1**	**+1.1**

YUK5			Sn	**Sb**	**22 58 13.0**	**-2.4**
TABL	**Table Mountain**	**2.97 316**	Pn	**Pn**	**22 57 38.8**	**+0.3**
TABL			Sn	**Sn**	**22 58 16.8**	**+2.0**
TABL	**Table Mountain**	**2.97 316**		**Pn**	**22 57 38.5**	**0.0**
TABL				**Sb**	**22 58 17.7**	**-3.0**
TABL	**Table Mountain**	**2.97 316**	IAML		22 58 26.8	
	comp=N,41nm,2.5s					
TABL			IAML		22 58 37.8	
	comp=E,35nm,0.6s					
YUK4	**Talbot Arm**	**3.08 345**	Pn	**Pn**	**22 57 41.3**	**+1.2**
YUK4			Sn	**Sb**	**22 58 21.6**	**-2.4**
YUK4	**Talbot Arm**	**3.08 345**		**Pn**	**22 57 41.0**	**+0.9**
YAH	**Yahtse**	**3.15 311**		**Pn**	**22 57 41.1**	**+0.1**
LOGN	**Logan Glacier**	**3.19 322**	Pn	**Pn**	**22 57 41.5**	**0.0**
LOGN	**Logan Glacier**	**3.19 322**		**Pb**	**22 57 49.3**	**+1.6**
LOGN	**Logan Glacier**	**3.19 322**		**Pn**	**22 57 41.5**	**0.0**
LOGN			IAML		22 58 34.7	
	comp=N,23nm,1.3s					
LOGN			IAML		22 58 43.2	
	comp=E,23nm,1.6s					
LOGN	**Logan Glacier**	**3.19 322**		**Sn**	**22 58 22.4**	**+2.2**
GRNC	**Granite Creek**	**3.39 316**	Pn	**Pn**	**22 57 43.9**	**-0.3**
GRNC	**Granite Creek**	**3.39 316**		**Pn**	**22 57 43.9**	**-0.3**
GRNC	**Granite Creek**	**3.39 316**	IAML		22 58 34.5	
	comp=E,18nm,2.3s					
CTGM	**Chitina Glacie**	**3.40 321**	Pn	**Pn**	**22 57 44.1**	**-0.3**
CTGM	**Chitina Glacie**	**3.40 321**		**Pn**	**22 57 44.5**	**+0.1**
BARN	**Barnard Glacie**	**3.58 320**		**Pn**	**22 57 47.5**	**+0.5**
BARN	**Barnard Glacie**	**3.58 320**	IAML		22 58 45.2	
	comp=N,20nm,2.2s					
BARN			IAML		22 58 46.7	
	comp=E,28nm,0.6s					
DLBC	**Dease Lake**	**3.65 86**	Pn	**Pn**	**22 57 49.1**	**+1.4**
DLBC			Sg	**Sg**	**22 58 45.8**	**-1.5**
DLBC	**Dease Lake**	**3.65 86**		**Pb**	**22 57 57.7**	**+2.3**
KIAG	**Kiagna River**	**3.74 315**	Pn	**Pn**	**22 57 48.8**	**-0.3**
BALM	**Baldy**	**3.81 316**	Pn	**Pn**	**22 57 49.8**	**-0.2**
BALM	**Baldy**	**3.81 316**		**Pn**	**22 57 49.7**	**-0.2**
YUK3	**Moose Creek**	**3.82 334**	Pn	**Pn**	**22 57 50.4**	**+0.1**
YUK3			Sg	**Sb**	**22 58 48.8**	**+3.6**
YUK2	**White River**	**3.92 332**	Pn	**Pn**	**22 57 50.9**	**-0.6**
RUBB	**Prince Rupert**	**5.52 135**	Sn	**Sn**	**22 59 15.3**	**-2.1**
DAWY	**Dawson**	**5.81 349**	Pn	**Pn**	**22 58 18.6**	**+1.1**
DAWY			Sn	**Sn**	**22 59 23.1**	**-1.5**
DAWY			Sg	**Sg**	**22 59 51.6**	**-5.1**

*IDC **02** 23:07:57.5±1.1, 6˚.31S×147˚.04E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.8/40, mbtmp3.8/10, ML2.8/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/29, Error ellipse: s-maj=42.8km s-min=16.5km az=101.0*

ISC 02 23:08:04.2±0.9, 6˚.35S±0˚.08×147˚.0E±0˚.2, h49km, n13, σ1§49/12, mb3.7/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.04**	**177**	Pn	**Pn**	**23 08 48.0**	**-1.9**
	11nm,0.3s,baz=346,slow=9.1,SNR=9.9						
PMG				Sn	**Sn**	**23 09 27.9**	**+2.8**
	10nm,0.3s,baz=268,slow=23,SNR=3.4						
PMG				LR	LR	23 10 16.7	
	comp=Z,171nm,19.2s,baz=14,slow=45						
WRA	**Warramunga Arr**	**18.26**	**221**	P	**P**	**23 12 12.7**	**-1.1**
	0.1nm,0.3s,baz=46,slow=12,SNR=14						
WRA				LR	LR	23 20 06.6	
	comp=Z,58nm,18.8s,baz=60,slow=40						
ASAR	**Alice Springs**	**21.32**	**215**	P	**P**	**23 12 48.5**	**+1.3**
	2.0nm,0.9s,baz=38,slow=11,SNR=15						
FITZ	**Fitzroy Crossi**	**23.86**	**239**	P	**P**	**23 13 12.3**	**-0.9**
	1.4nm,0.7s,baz=66,slow=18,SNR=2.6						
STKA	**Stephens Creek**	**25.89**	**191**	P	**P**	**23 13 30.6**	**-0.9**
	1.6nm,0.7s,baz=37,slow=3.3,SNR=3.3						
NWAO	**Narrogin (SRO)**	**38.26**	**222**	LR	LR	23 33 08.1	
	comp=Z,91nm,20.2s,baz=110,slow=39						
USRK	**Ussuriysk Ar.**	**52.10**	**346**	P	**P**	**23 17 10.1**	**+0.8**
	0.6nm,0.6s,baz=171,slow=10,SNR=1.0						
PETK	**Petropavlovsk-**	**59.92**	**7**	P	**P**	**23 18 05.8**	**+0.7**
	0.8nm,0.4s,baz=170,slow=4.7,SNR=5.6						
MKAR	**Makanchi Array**	**77.75**	**321**	P	**P**	**23 19 56.6**	**+0.5**
	0.2nm,0.5s,baz=95,slow=8.6,SNR=6.6						
ZALV	**Zalesovo Beam**	**79.29**	**328**	P	**P**	**23 20 03.7**	**-0.6**
	0.8nm,0.5s,baz=123,slow=5.5,SNR=4.2						
ILAR	**Eielson Array**	**85.81**	**23**	P	**P**	**23 20 37.1**	**-1.0**
	0.7nm,0.7s,baz=249,slow=4.9,SNR=7.3						
GEYT	**Alibeck**	**92.96**	**308**	LR	LR	00 10 02.3	
	comp=Z,19nm,18.0s,baz=65,slow=40						
TORD	**Torodi Ar. Bea**	**145.15**	**284**	PKPbc	**PKPdf**	**23 27 38.5**	**+1.1**
	2.9nm,0.7s,baz=80,slow=3.9,SNR=18						

NNC 02 23:40:04.8±6.9, 37˚.53N×71˚.63E, h0km, mb3.5, mpv3.1, 3C-3D, Error ellipse: s-maj=53.1km s-min=47.5km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.56**	**22**	⇓P	Pn	23 41 28.7	-0.2
	2.6nm,0.8s						
AAK				⇑S	Sn	23 42 33.8	+0.3
	3.6nm,0.6s						
KK31	**Karatay Array**	**5.63**	**352**	⇓P	Pn	23 41 31.8	+2.0
	0.4nm,0.3s,baz=170,slow=13,SNR=5.1						
KK31				⇑S	Sn	23 42 35.5	+0.3
	1.4nm,0.3s,baz=158,slow=22,SNR=7.1						
TKM2	**Tokmak 2**	**6.18**	**28**	⇑P	Pn	23 41 35.3	-2.3
	2.0nm,0.8s						
TKM2				⇓S	Sn	23 42 52.4	+3.4
	1.4nm,0.5s						

*IDC **03** 00:24:30.7±0.5, 5˚.69S×153˚.15E, h0km, mb4.6/22, mb1 4.7/26, mb1mx4.6/40, mbtmp4.6/26, ML3.4/4, MS4.4/28, Ms1 4.5/28, ms1mx4.4/36, Error ellipse: s-maj=14.9km s-min=12.3km az=112.0*

*BJI **03** 00:24:33.7±0.0, 5˚.33S×153˚.38E, h25km, mB5.4/45, mb4.8/55, Ms5.0/39, Ms7 4.6/38*

*NEIC **03** 00:24:35.5±1.4, 5˚.64S±0˚.07×152˚.98E±0˚.08, h25km±4km, mb4.9/85, Error ellipse: s-maj=11.5km s-min=8.9km az=59.0*

*DJA **03** 00:24:37.0±3.4, 6˚.5S±6˚×15˚.3E±˚, h26km±30km, M5.3/7, mB5.6/7, mb4.9/7, MLv5.7/2, Mw(mB)5.1/7, MwMwp5.0/5, Mwp5.3/5*

*GCMT **03** 00:24:37.5±0.2, 5˚.93S±0˚.01×153˚.01E±0˚.01, h19km, MW5.2/118, Moment Tensor Solution. s89,c128; s118,c182; Duration: 1§0 Moment tensor: Scale 10¹⁶ Nm; Mrr4.38±.16; Mθθ-4.11±.11; Mφφ-0.26±.10; Mrθ6.10±.34; Mrφ0.12±.07; Mθφ-0.77±.23; Best double couple: M₀7.47200×10¹⁶ NP1:φs268.00000°, δ17.00000°, λ82.00000°. NP2:φs96.00000°, δ73.00000°, λ92.00000°. Principal axes: T 7.6160, Plg62.0000°, Azm10.0000°; N -0.2820, Plg2.0000°, Azm275.0000°; P -7.3270, Plg28.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 00:24:36.8±0.3, 5˚.68S±0˚.04×153˚.06E±0˚.05, h37km, n244, σ1§90/244, mb4.9/89, MS4.5/39, 1C, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.73**	**329**	Pn	**Pn**	**00 25 03.0**	**-1.3**
PMG	**Port Moresby**	**6.93**	**237**	Pn	**Pn**	**00 26 15.7**	**-0.1**
	12nm,0.3s,baz=49,slow=7.1,SNR=14						
PMG				Sn	**Sn**	**00 27 36.2**	**+2.8**
	13nm,0.3s,baz=19,slow=11,SNR=6.6						
PMG				LR	LR	00 28 50.7	
	comp=Z,3µm,21.8s,baz=36,slow=37						
PMG	**Port Moresby**	**6.93**	**237**	Pn	**Pn**	**00 26 15.9**	**+0.2**
HNR	**Honiara**	**7.78**	**119**	Pn	**Pn**	**00 26 25.3**	**-2.1**
	5.9nm,0.3s,baz=220,slow=20,SNR=2.2						
HNR				Sn	**Sn**	**00 27 53.3**	**-0.9**
	6.6nm,0.3s,baz=210,slow=16,SNR=1.3						
HNR	**Honiara**	**7.78**	**119**	Pn	**Pn**	**00 26 28.3**	**+0.9**
JAY	**Jayapura**	**12.72**	**284**	Pn	**Pn**	**00 27 32.6**	**-2.7**
	0.3nm,0.3s,baz=15,slow=15,SNR=2.3						
JAY				LR	LR	00 33 04.8	
	comp=Z,1µm,18.6s,baz=46,slow=40						
COEN	**Coen**	**12.75**	**229**	Pn	**Pn**	**00 27 35.8**	**+0.2**
GENI	**Genyem**	**13.22**	**283**	P	**Pn**	**00 27 42.6**	**+0.5**
	5µm167nm,1.8s						
PATS	**Pohnpei**	**13.49**	**23**	P	**Pn**	**00 27 47.0**	**+1.3**
	baz=14,SNR=3.5						
PATS	**Pohnpei**	**13.49**	**23**	Pn	**Pn**	**00 27 43.5**	**-2.1**
MTSU	**Mount Surprise**	**15.04**	**214**	P	**Pn**	**00 28 08.3**	**+1.5**
	baz=15,SNR=16						
CTA	**Charters Tower**	**15.78**	**204**	Pn	**Pn**	**00 28 13.1**	**-3.2**
	0.1nm,0.3s,baz=127,slow=12,SNR=1.9						
CTA				LR	LR	00 33 31.8	
	comp=Z,2µm,21.6s,baz=26,slow=34						
CTAO	**Charters Tower**	**15.78**	**204**	P	**P**	**00 28 20.3**	**+0.5**
SANVU	**Saraoutou**	**16.94**	**126**	P	**P**	**00 28 33.6**	**+0.9**
SANVU				IAmb	IAmb	00 28 46.4	
	comp=Z,160nm,1.1s						
EIDS	**Eidsvold**	**19.67**	**185**	P	**Pn**	**00 29 04.2**	**-0.1**
	baz=20,SNR=12						
EIDS	**Eidsvold**	**19.67**	**185**		**P**	**00 29 03.3**	**+0.6**
EIDS				IAmb	IAmb	00 29 05.0	
	comp=Z,50nm,1.1s						
QIS	**Mount Isa**	**19.74**	**220**	P	**Pn**	**00 29 04.4**	**-0.8**
	baz=20,SNR=38						
DZM	**Mont Dzumac**	**20.81**	**143**	P	**P**	**00 29 12.5**	**-2.7**
	comp=Z,42nm,1.1s,baz=78,slow=23,SNR=1.1						
DZM				LR	LR	00 36 07.2	
	comp=Z,2µm,21.1s,baz=334,slow=34						
FAKI	**Fak Fak**	**20.93**	**277**	P	**P**	**00 29 15.4**	**-1.1**
RMQ	**Roma**	**21.10**	**191**	P	**P**	**00 29 19.7**	**+1.5**
	baz=21,SNR=24						
KDU	**Kakadu**	**21.48**	**250**	P	**P**	**00 29 21.7**	**-0.6**
	baz=22,SNR=24						
SAUI	**Saumlaki**	**21.73**	**263**	P	**P**	**00 29 24.6**	**-0.5**
SIJI	**Sorong**	**22.27**	**282**	P	**P**	**00 29 30.2**	**-0.7**
	comp=Z,14nm,0.7s,baz=72,slow=7.7,SNR=8.5						
SIJI				LR	LR	00 37 31.3	
	comp=Z,1µm,21.2s,baz=106,slow=35						
QLP	**Quilpie**	**22.43**	**201**	P	**P**	**00 29 33.1**	**+0.6**
	baz=22,SNR=13						
MTN	**Manton Dam**	**22.77**	**250**	P	**P**	**00 29 35.6**	**-0.6**
	baz=23,SNR=22						
MTN	**Manton Dam**	**22.77**	**250**	P	**P**	**00 29 35.7**	**-0.6**
MTN				IAmb	IAmb	00 29 45.1	
	comp=Z,42nm,0.8s						
WR0	**Warramunga Arr**	**22.93**	**230**	P	**P**	**00 29 37.6**	**-0.3**
WB0	**Warramunga Arr**	**22.93**	**231**	P	**P**	**00 29 37.5**	**-0.4**
WRAB	**Tennant Creek**	**23.06**	**230**	P	**P**	**00 29 39.0**	**-0.1**
WRAB				IAmb	IAmb	00 29 41.0	
	comp=Z,65nm,1.0s						
WB2	**Warramunga Arr**	**23.07**	**230**	P	**P**	**00 29 38.4**	**-0.8**
WB2				IAmb	IAmb	00 29 44.9	
	comp=Z,62nm,1.1s						
WRA	**Warramunga Arr**	**23.08**	**230**	P	**P**	**00 29 38.4**	**-1.0**
	comp=Z,52nm,1.0s,baz=54,slow=8.9,SNR=69						
WRA				PcP	**PcP**	**00 33 29.0**	**+1.1**
	comp=Z,5.0nm,0.8s,baz=51,slow=2.4,SNR=4.6						
WRA				S	**S**	**00 33 44.4**	**-3.6**
	comp=Z,1.2nm,1.0s,baz=55,slow=18,SNR=1.3						
WRA				LR	LR	00 39 24.6	
	comp=Z,1µm,18.8s,baz=60,slow=39						
WRA	**Warramunga Arr**	**23.08**	**230**	P	**P**	**00 29 37.7**	**-1.6**
ARMA	**Armidale**	**24.65**	**183**	P	**P**	**00 29 56.0**	**+1.8**
	baz=25,SNR=5.0						
ARMA	**Armidale**	**24.65**	**183**	P	**P**	**00 29 54.0**	**-0.2**
ARMA				IAmb	IAmb	00 29 57.8	
	comp=Z,25nm,1.1s						
AS31	**Alice Springs**	**25.69**	**224**	P	**P**	**00 30 03.4**	**-0.3**
ASAR	**Alice Springs**	**25.69**	**224**	P	**P**	**00 30 03.5**	**-0.1**
	comp=Z,16nm,1.0s,baz=59,slow=8.5,SNR=54						
ASAR				PcP	**PcP**	**00 33 34.9**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=52,slow=2.6,SNR=4.1						
ASAR				S	**S**	**00 34 28.4**	**-1.6**
	comp=Z,0.8nm,1.0s,baz=29,slow=17,SNR=1.2						
ASAR				LR	LR	00 39 56.9	
	comp=Z,943nm,20.1s,baz=46,slow=36						
ASAR	**Alice Springs**	**25.69**	**224**	P	**P**	**00 30 02.4**	**-1.2**
CMSA	**Cobar Meteorol**	**26.64**	**194**	P	**P**	**00 30 12.2**	**+0.1**
	baz=27,SNR=6.9						
MSVF	**Nonsavu**	**27.20**	**118**	LR	LR	00 39 39.3	
	comp=Z,1µm,18.3s,baz=352,slow=34						
H11S3	**WAKE ISLAND Hy**	**27.52**	**29**	T	T	00 58 54.8	
	baz=210						
H11S2	**WAKE ISLAND Hy**	**27.53**	**29**	T	T	00 58 57.6	
	baz=210						
H11S1	**WAKE ISLAND Hy**	**27.54**	**29**	T	T	00 58 54.8	
	baz=210						
STKA	**Stephens Creek**	**28.19**	**201**	P	**P**	**00 30 24.8**	**-1.1**
	comp=Z,19nm,1.0s,baz=21,slow=12,SNR=15						
STKA				LR	LR	00 42 24.5	
	comp=Z,2µm,18.4s,baz=22,slow=38						
STKA	**Stephens Creek**	**28.19**	**201**	P	**P**	**00 30 25.7**	**-0.2**
	baz=28,SNR=12						
SOEI	**Soe**	**28.81**	**260**	P	**P**	**00 30 32.9**	**+1.1**
SOEI				IAmb	IAmb	00 30 52.3	
	comp=Z,32nm,0.9s						
BATI	**Baumata**	**29.45**	**259**	P	**P**	**00 30 38.3**	**+0.8**
	comp=Z,30nm,0.9s,baz=101,slow=5.7,SNR=6.7						
BATI				LR	LR	00 44 26.6	
	comp=Z,2µm,20.2s,baz=102,slow=40						
FITZ	**Fitzroy Crossi**	**29.48**	**243**	P	**P**	**00 30 37.0**	**-0.5**
	comp=Z,25nm,0.7s,baz=77,slow=7.0,SNR=78						
FITZ				LR	LR	00 44 17.3	
	comp=Z,2µm,18.2s,baz=64,slow=40						
FITZ	**Fitzroy Crossi**	**29.48**	**243**	P	**P**	**00 30 37.4**	**-0.2**
	baz=30,SNR=48						
FITZ	**Fitzroy Crossi**	**29.48**	**243**	P	**P**	**00 30 37.8**	**+0.2**
WRKA	**Warakurna**	**30.57**	**228**	P	**P**	**00 30 46.4**	**-0.8**
	baz=31,SNR=27						
HTT	**Hallett**	**30.59**	**204**	P	**P**	**00 30 47.4**	**+0.2**
	baz=31,SNR=8.4						
MMRI	**Maumere**	**30.72**	**263**	P	**P**	**00 30 48.2**	**-0.4**
BBOO	**Buckleboo**	**31.31**	**208**	P	**P**	**00 30 53.1**	**-0.4**
BBOO				IAmb	IAmb	00 31 10.6	
	comp=Z,18nm,1.1s						
JCJ	**Chichijima**	**34.24**	**343**	LR	LR	00 43 36.1	
	comp=Z,239nm,19.7s,baz=142,slow=33						
FORT	**Forrest**	**34.28**	**220**	P	**P**	**00 31 19.6**	**0.0**
	baz=34,SNR=10						
FORT	**Forrest**	**34.28**	**220**	P	**P**	**00 31 19.5**	**-0.2**
OUZ	**Omahuta**	**34.97**	**150**	P	**P**	**00 31 26.0**	**+0.6**
OUZ				IAmb	IAmb	00 31 39.6	
	comp=Z,17nm,1.1s						
PSA00	**Pilbara Seismi**	**35.82**	**241**	P	**P**	**00 31 31.8**	**-1.2**
PSA00	**Pilbara Seismi**	**35.82**	**241**	P	**P**	**00 31 31.6**	**-1.4**
PSA00				IAmb	IAmb	00 31 40.8	
	comp=Z,18nm,0.9s						
JAGI	**Jajag, Banyuwa**	**38.70**	**264**	P	**P**	**00 31 55.9**	**-1.6**
JAGI				IAmb	IAmb	00 31 59.7	
	comp=Z,33nm,0.9s						
KMBL	**Kambalda**	**38.81**	**225**	P	**P**	**00 31 58.8**	**+0.5**
	baz=39,SNR=4.6						
URZ	**Urewera**	**39.10**	**149**	LR	LR	00 45 53.5	
	comp=Z,245nm,22.0s,baz=30,slow=33						
URZ	**Urewera**	**39.10**	**149**	P	**P**	**00 32 01.5**	**+1.0**
URZ				IAmb	IAmb	00 32 18.1	
	comp=Z,31nm,1.0s						
MQZ	**McQueen's Vall**	**41.62**	**159**	P	**P**	**00 32 22.4**	**+1.1**
MQZ				IAmb	IAmb	00 32 37.0	
	comp=Z,24nm,1.0s						
MLZ	**Mavora Lakes**	**41.66**	**164**	P	**P**	**00 32 21.8**	**+0.2**
MLZ				IAmb	IAmb	00 32 33.6	
	comp=Z,34nm,1.1s						
KLBR	**Kellerberrin**	**41.91**	**228**	P	**P**	**00 32 22.9**	**-1.0**
	baz=42,SNR=7.5						
MORW	**Morawa**	**42.01**	**232**	P	**P**	**00 32 24.4**	**-0.3**
	baz=42,SNR=3.8						
BLDU	**Ballidu**	**42.21**	**230**	P	**P**	**00 32 25.4**	**-0.9**
	baz=42,SNR=7.3						
NWAO	**Narrogin (SRO)**	**42.97**	**226**	LR	LR	00 50 46.0	
	comp=Z,1µm,18.6s,baz=60,slow=37						
MJAR	**Matsushiro Arr**	**44.24**	**343**	P	**P**	**00 32 40.2**	**-2.5**
	comp=Z,2.7nm,0.8s,baz=174,slow=8.8,SNR=7.5						
MJAR				PcP	**PP**	**00 34 26.6**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=166,slow=3.3,SNR=3.2						
MJAR				LR	LR	00 47 57.9	
	comp=Z,223nm,21.7s,baz=210,slow=32						
MAT	**Matsushiro**	**44.24**	**343**	P	**P**	**00 32 40.8**	**-1.8**
CISI	**Cisompet, Garu**	**44.97**	**265**	P	**P**	**00 32 47.6**	**-1.3**
XMIS	**Christmas Isla**	**47.15**	**261**	P	**P**	**00 33 04.0**	**-2.0**
DLV	**T Lat**	**47.66**	**292**	P	**P**	**00 33 09.1**	**-1.0**
KSRS	**Korea Array**	**48.90**	**333**	P	**P**	**00 33 19.2**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=139,slow=5.9,SNR=4.1						
QIZ	**Qiongzhong**	**49.14**	**301**	P	**P**	**00 33 20.8**	**-0.5**
QIZ				S	**S**	**00 40 27.2**	**+2.8**
QIZ				LR	LR		
	comp=Z,430nm,18.6s						
QIZ				LR	LR		
	comp=Z,340nm,17.6s						
QIZ				LR	LR		
	comp=Z,340nm,21.6s						
NJ2	**Nanjing**	**49.69**	**321**	*e*P	**P**	**00 33 25.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
JKA	**Kamikawa-asahi**	**50.45**	**350**	P	**P**	**00 33 31.0**	**+0.2**
WHN	**Wuhan**	**51.67**	**317**	P	**P**	**00 33 41.1**	**+0.9**
USRK	**Ussuriysk Ar.**	**53.16**	**341**	P	**P**	**00 33 50.3**	**-0.7**
	comp=Z,4.1nm,0.9s,baz=146,slow=8.7,SNR=4.7						
USRK				LR	LR	00 52 07.0	
	comp=Z,176nm,21.7s,baz=171,slow=31						
USRK	**Ussuriysk Ar.**	**53.16**	**341**	P	**P**	**00 33 50.8**	**-0.2**
YSS	**Yuzh-Sakhalins**	**53.19**	**351**	P	**P**	**00 33 51.2**	**0.0**
YSS				IAmb	IAmb	00 34 07.0	
	comp=Z,23nm,1.0s						
KULM	**Kulim**	**53.46**	**281**	P	**P**	**00 33 53.4**	**-0.3**
KULM				IAmb	IAmb	00 33 57.0	
	comp=Z,13nm,1.0s						
RPSI	**Rantau Prapat**	**54.71**	**277**	P	**P**	**00 34 02.0**	**-0.8**
GYA	**Guiyang**	**55.13**	**308**	*e*P	**P**	**00 34 09.3**	**+3.4**
GYA				S	**S**	**00 41 55.3**	**+8.6**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GYA				LR	LR		
	comp=Z,450nm,18.0s						
CN2	**Changchun**	**55.20**	**336**	*e*P	**P**	**00 34 02.4**	**-3.5**
CN2				S	**S**	**00 41 46.8**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.9s						
CN2				pmax	pmax		
	comp=Z,400nm,4.2s						
CN2				LR	LR		
	comp=Z,490nm,14.0s						
CN2				LR	LR		
	comp=Z,450nm,14.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
GSI	**Gunungsitoli**	**55.84**	**275**		**P**	**00 34 09.8**	**-1.3**
BJI	**Beijing**	**56.77**	**327**	P	**P**	**00 34 18.1**	**+1.0**
BJI				S	**S**	**00 42 11.3**	**+3.7**
BJI				pmax	pmax		
	comp=Z,11nm,1.8s						
BJI				pmax	pmax		
	comp=Z,210nm,4.3s						
BJI				LR	LR		
	comp=Z,470nm,15.6s						
BJI				LR	LR		
	comp=Z,220nm,9.1s						
BJI				LR	LR		
	comp=Z,490nm,20.9s						
UTTA	**Uttaradit**	**56.81**	**295**	P	**P**	**00 34 19.6**	**+1.8**
	comp=Z,312nmcomp=Z,13nm,0.8s						
PPT	**Papeete**	**57.21**	**107**	LR	LR	00 56 32.2	
	comp=Z,157nm,18.5s,baz=289,slow=34						
PPT2	**Papeete2**	**57.22**	**107**	*e*LQ	LQ	00 48 41.5	
	comp=Z,1µm,29.5s						
PPT2				*e*LR	LR	00 51 10.2	
	comp=Z,302nm,23.0s						
PAE	**Paea**	**57.22**	**107**	*e*P	**P**	**00 34 22.5**	**+1.7**
	comp=Z,12nm,1.2s						
XAN	**Xi'an**	**57.44**	**317**	P	**P**	**00 34 22.2**	**+0.1**
XAN				pP	pP	00 34 30.0	-1.9
XAN				S	**S**	**00 42 17.9**	**+1.1**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,390nm,8.1s						
XAN				LR	LR		
	comp=Z,530nm,19.6s						
XAN				LR	LR		
	comp=Z,560nm,17.8s						
XAN				LR	LR		
	comp=Z,390nm,21.9s						
SUKH	**Sukhothai**	**57.55**	**295**	P	P	00 34 28.5	+5.4
	comp=Z,14nm,0.9s						
KMI	**Kunming**	**57.69**	**304**	⇑P	**P**	**00 34 25.9**	**+1.6**
KMI				pP	pP	00 34 32.0	-1.7
KMI				sP	sP	00 34 35.6	-2.8
KMI				S	**S**	**00 42 26.3**	**+5.4**
KMI				SS	**SS**	**00 46 13.6**	**+1.8**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,140nm,6.6s						
KMI				LR	LR		
	comp=Z,480nm,24.8s						
KMI				LR	LR		
	comp=Z,330nm,18.9s						
KMI				LR	LR		
	comp=Z,310nm,28.1s						
TBI	**Tubuai**	**57.96**	**114**	*e*LQ	LQ	00 48 57.6	
	comp=Z,829nm,31.5s						
TBI				*e*LR	LR	00 51 34.0	
	comp=Z,281nm,22.2s						
CM04	**Chiang Mai Arr**	**58.44**	**296**	P	**P**	**00 34 33.5**	**+4.2**
	comp=Z,124nmcomp=Z,8.4nm,0.9s						
CM09	**Chiang Mai Arr**	**58.44**	**296**	P	**P**	**00 34 33.3**	**+3.9**
	comp=Z,130nmcomp=Z,13nm,0.8s						
CM01	**Chiang Mai Arr**	**58.46**	**296**	P	P	00 34 35.0	+5.5
	comp=Z,7.4nm,0.9s						
CM05	**Chiang Mai Arr**	**58.47**	**295**	P	**P**	**00 34 33.0**	**+3.4**
	comp=Z,87nmcomp=Z,8.1nm,1.1s						
CM02	**Chiang Mai Arr**	**58.48**	**296**	P	**P**	**00 34 33.0**	**+3.4**
	comp=Z,92nmcomp=Z,12nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.49**	**296**	P	**P**	**00 34 30.8**	**+1.1**
	comp=Z,5.6nm,0.9s,baz=122,slow=5.2,SNR=17						
CMAR				LR	LR	01 01 18.7	
	comp=Z,194nm,18.3s,baz=142,slow=38						
CMAR	**Chiang Mai Arr**	**58.49**	**296**	P	**P**	**00 34 30.5**	**+0.8**
CM13	**Chiang Mai Arr**	**58.51**	**296**	P	**P**	**00 34 33.0**	**+3.2**
	comp=Z,87nmcomp=Z,6.9nm,0.8s						
CM33	**Chiang Mai Arr**	**58.60**	**296**	P	**P**	**00 34 32.0**	**+1.5**
CHTO	**Chiang Mai

GTA				SS	SS	00 48 32.9	+4.3	
GTA				pmax	pmax			
	comp=Z,8.0nm,1.6s							
GTA				pmax	pmax			
	comp=Z,310nm,7.5s							
GTA				LR	LR			
	comp=Z,250nm,17.4s							
GTA				LR	LR			
	comp=Z,230nm,16.7s							
GTA				LR	LR			
	comp=Z,240nm,16.0s							
ULN	**Ulaanbaatar**	**66.88**	**328**		**P**	00 35 26.4	+1.1	
SONM	**Songino Array**	**67.20**	**328**	P	**P**	00 35 27.8	+0.5	
	comp=Z,6.1nm,0.9s,baz=134,slow=6.7,SNR=27							
SONM				LR	LR	01 04 16.3		
	comp=Z,232nm,20.5s,baz=117,slow=36							
SONM	**Songino Array**	**67.20**	**328**		**P**	00 35 27.6	+0.3	
SONM				IAmb	IAmb	00 35 30.7		
	comp=Z,11nm,1.2s							
LSA	**Lhasa**	**68.95**	**305**	P	**P**	00 35 40.5	+1.4	
LSA				pmax	pmax			
	comp=Z,42nm,1.3s							
TAPN	**Taplejung**	**71.08**	**301**	*e*Pn	**P**	00 35 53.3	+1.3	
	comp=Z,60nm,1.1s							
ODAN	**Odare**	**71.21**	**301**	*e*Pn	**P**	00 35 54.1	+1.4	
	comp=Z,38nm,0.9s							
RAMN	**Ramite**	**71.92**	**301**	*e*Pn	**P**	00 35 58.2	+1.2	
VNDA	**Vanda**	**71.95**	**178**	P	**P**	00 35 54.5	-1.4	
	comp=Z,1.8nm,0.9s,baz=22,slow=7.6,SNR=6.1							
VNDA	**Vanda**	**71.95**	**178**	P	**P**	00 35 56.8	+0.8	
JIRN	**Jiri**	**72.46**	**301**	*e*Pn	**P**	00 36 01.3	+0.9	
	comp=Z,149nm,1.7s							
SBA	**Scott Base**	**72.49**	**177**	P	**P**	00 36 00.3	+1.1	
GUN	**Gumba**	**72.80**	**301**	*e*Pn	**P**	00 36 03.3	+0.9	
	comp=Z,41nm,0.8s							
PKI	**Pulchoki**	**73.11**	**301**	*e*Pn	**P**	00 36 04.9	+0.7	
	comp=Z,120nm,1.6s							
KKN	**Kakani**	**73.28**	**301**	*e*Pn	**P**	00 36 05.8	+0.8	
	comp=Z,20nm,0.6s							
PALK	**Pallekele**	**73.33**	**279**	P	**P**	00 36 05.0	-0.4	
PALK				IAmb	IAmb	00 36 20.8		
	comp=Z,15nm,1.1s							
DMN	**Daman**	**73.38**	**301**	*e*Pn	**P**	00 36 07.0	+1.3	
	comp=Z,32nm,0.8s							
GKN	**Gorkha**	**73.88**	**301**	*e*Pn	**P**	00 36 09.4	+0.9	
BILL	**Bilibino**	**74.14**	**5**		**P**	00 36 09.4	+0.5	
GAMB	**Gambell**	**74.15**	**15**		**P**	00 36 09.9	+0.9	
KOLN	**Koldanda**	**74.70**	**301**	*e*Pn	**P**	00 36 14.2	+0.8	
	comp=Z,49nm,1.1s							
DANN	**Dangsing**	**74.72**	**301**	*e*Pn	**P**	00 36 14.4	+0.8	
ANM	**Nome**	**76.53**	**17**		**P**	00 36 23.2	+0.4	
WMQ	**Urumqi**	**76.56**	**317**	*e*P	**P**	00 36 25.4	+1.9	
WMQ	**Urumqi**	**76.56**	**317**		**P**	00 36 24.4	+0.9	
HYB	**Hyderabad**	**77.03**	**289**	*i* P	**P**	00 36 25.0	-1.6	
TIXI	**Tiksi**	**78.80**	**352**		**P**	00 36 35.2	0.0	
SUA	**Susitna One**	**79.65**	**24**	IAmb	IAmb	00 36 44.5		
	comp=Z,12nm,0.9s							
ZSN	**Zaisan**	**79.71**	**320**	*e*P	**P**	00 36 40.7	-0.1	
	baz=320							
RDOG	**Red Dog Mine**	**79.75**	**15**	IAmb	IAmb	00 36 45.5		
	comp=Z,9.8nm,0.8s							
SML	**Sawmill**	**80.81**	**24**	IAmb	IAmb	00 36 50.7		
	comp=Z,10nm,0.8s							
IMAR	**Indian Mountai**	**81.12**	**19**	P	**P**	00 36 47.6	-0.3	
MK31	**Makanchi Array**	**81.16**	**319**	IAmb	IAmb	00 37 08.7		
	comp=Z,9.2nm,1.1s							
MKAR	**Makanchi Array**	**81.16**	**319**	P	**P**	00 36 48.9	+0.2	
	comp=Z,6.1nm,0.9s,baz=104,slow=4.7,SNR=41							
MKAR				LR	LR	01 12 54.2		
	comp=Z,170nm,19.1s,baz=104,slow=36							
MAKZ	**Makanchi**	**81.36**	**319**	P	**P**	00 36 49.6	-0.1	
MAKZ				IAmb	IAmb	00 36 52.2		
	comp=Z,16nm,1.1s							
RND	**Reindeer**	**81.43**	**23**	IAmb	IAmb	00 36 53.0		
	comp=Z,7.2nm,0.8s							
MCK	**McKinley**	**81.57**	**22**	IAmb	IAmb	00 37 01.9		
	comp=Z,14nm,1.0s							
MLY	**Manley**	**81.60**	**21**	IAmb	IAmb	00 37 00.8		
	comp=Z,12nm,1.2s							
ZAA0	**Zalesovo Array**	**82.02**	**326**	IAmb	IAmb	00 36 54.4		
	comp=Z,11nm,0.8s							
ZALV	**Zalesovo Beam**	**82.02**	**326**	P	**P**	00 36 52.3	-0.7	
	comp=Z,8.9nm,0.8s,baz=111,slow=5.3,SNR=35							
ZALV				LR	LR	01 13 08.6		
	comp=Z,196nm,20.9s,baz=106,slow=36							
ZALV	**Zalesovo Beam**	**82.02**	**326**		**P**	00 36 52.0	-1.0	
SHLS	**Shalkode**	**82.03**	**315**	*e*P	**P**	00 36 51.7	-1.8	
	baz=315							
WRH	**Wood River Hil**	**82.27**	**22**	IAmb	IAmb	00 37 11.1		
	comp=Z,9.1nm,1.1s							
UZB	**Uzynbulak**	**82.34**	**315**	*e*P	**P**	00 36 54.7	-0.4	
	baz=315							
GLB	**Gilahina Butte**	**82.53**	**26**	IAmb	IAmb	00 37 07.7		
	comp=Z,11nm,1.0s							
KPKS	**Kokpek**	**82.66**	**315**	*e*P	**P**	00 36 56.4	-0.3	
	baz=315							
SATY	**Saty**	**82.75**	**315**	*e*P	**P**	00 36 57.6	+0.4	
	baz=315							
ILAR	**Eielson Array**	**82.87**	**22**	P	**P**	00 36 55.8	-1.4	
	comp=Z,2.8nm,0.7s,baz=248,slow=5.5,SNR=23							
ILAR				LR	LR	01 09 36.8		
	comp=Z,252nm,20.6s,baz=244,slow=33							
ILAR	**Eielson Array**	**82.87**	**22**	P	**P**	00 36 56.0	-1.1	
TDK	**Taldygorghan**	**83.25**	**316**	*e*P	**P**	00 36 59.5	-0.1	
	comp=Z,16nm,1.4s,baz=316							
DOT	**Dot Lake**	**83.42**	**24**		**P**	00 37 00.7	+0.6	
DOT				IAmb	IAmb	00 37 04.6		
	comp=Z,14nm,1.1s							
SEM	**Semipalatinsk**	**83.53**	**322**	*e*P	**P**	00 37 01.5	+0.3	
	baz=322							
MDOK	**Medeo**	**83.74**	**314**	*e*P	**P**	00 37 02.5	+0.1	
	baz=314							
AAA	**Alma-Ata**	**83.85**	**314**	*e*P	**P**	00 37 03.0	+0.2	
	baz=314							
TOLK	**Toolik Lake Re**	**83.96**	**18**	IAmb	IAmb	00 37 05.6		
	comp=Z,7.2nm,0.9s							
L27K	**Beaver Creek,**	**84.07**	**25**	P	**P**	00 37 04.3	+0.8	
L27K				IAmb	IAmb	00 37 17.2		
	comp=Z,6.6nm,1.1s							
BCAR	**Beaver Creek A**	**84.09**	**25**	P	**P**	00 37 03.3	-0.2	
K27K	**Chicken**	**84.38**	**24**	IAmb	IAmb	00 37 18.7		
	comp=Z,6.2nm,0.9s							
KUU	**Kurty**	**84.42**	**315**	*e*P	**P**	00 37 04.7	-0.9	
	comp=Z,52nm,1.3s,baz=315							
NIL	**Nilore**	**84.69**	**304**		**P**	00 37 07.3	+0.1	
TKM2	**Tokmak 2**	**84.72**	**314**	P	**P**	00 37 08.4	+0.9	
	SNR=14							
MAW	**Mawson**	**84.87**	**203**	LR	LR	01 12 39.6		
	comp=Z,359nm,18.6s,baz=74,slow=34							
BMAR	**Burnt Mountain**	**84.97**	**20**	P	**P**	00 37 09.1	+1.2	
EGAK	**Eagle**	**85.06**	**23**		**P**	00 37 08.4	+0.1	
EGAK				IAmb	IAmb	00 37 19.2		
	comp=Z,9.6nm,1.1s							
HYT	**Haines Junctio**	**85.09**	**27**		**P**	00 37 09.1	+0.4	
HYT				IAmb	IAmb	00 37 19.9		
	comp=Z,11nm,1.1s							
KBK	**Karagaybulak**	**85.13**	**314**	P	**P**	00 37 10.5	+1.0	
	SNR=14							
CHMS	**Chumysh**	**85.35**	**314**	P	**P**	00 37 11.7	+1.3	
	SNR=13							
UCH	**Uchtor**	**85.36**	**313**	P	**P**	00 37 12.0	+1.1	
	SNR=29							
AAK	**Ala-Archa**	**85.46**	**313**	P	**P**	00 37 12.6	+1.6	
	SNR=13							
AAK	**Ala-Archa**	**85.46**	**313**		**P**	00 37 12.0	+1.0	
DAWY	**Dawson**	**85.47**	**24**	P	**P**	00 37 11.9	+1.4	
USP	**Ospenovka**	**85.58**	**314**	P	**P**	00 37 13.0	+1.5	
	SNR=17							
AML	**Almayashu**	**85.94**	**313**	P	**P**	00 37 16.1	+2.4	
	SNR=37							
EKS2	**Erkin-Say**	**85.98**	**313**	P	**P**	00 37 15.3	+1.7	
	SNR=26							
BTLS	**Baital**	**86.27**	**316**	*e*P	**P**	00 37 14.8	0.0	
	comp=Z,8.6nm,1.3s,baz=316							
NRIK	**Noril'sk**	**86.87**	**341**	P	**P**	00 37 17.4	+0.2	
	comp=Z,6.9nm,0.6s,baz=110,slow=4.5,SNR=15							
NRIK				LR	LR	01 18 09.8		
	comp=Z,131nm,18.4s,baz=119,slow=37							
NRIK	**Noril'sk**	**86.87**	**341**	IAmb	IAmb	00 37 28.8		
	comp=Z,7.7nm,0.7s							
DZA	**Taraz**	**87.79**	**313**	*e*P	**P**	00 37 22.3	0.0	
	baz=313							
BRZS	**Berezniki**	**88.15**	**320**	*e*P	**P**	00 37 23.4	-0.4	
	baz=320							
KBL	**Kabul**	**88.28**	**305**		**P**	00 37 25.2	+0.2	
KBL				IAmb	IAmb	00 37 34.2		
	comp=Z,5.6nm,0.8s							

KK31	**Karatay Array**	**88.42**	**313**	P	**P**	00 37 24.7	-0.5	
KK31				IAmb	IAmb	00 37 34.4		
	comp=Z,5.7nm,1.1s							
KKAR	**Karatay Array**	**88.42**	**313**		**P**	00 37 25.1	-0.2	
IUG	**Iuzhnay**	**88.62**	**312**	*e*P	**P**	00 37 26.1	-0.3	
	baz=312							
INK	**Inuvik**	**89.17**	**21**	P	**P**	00 37 28.0	-0.1	
	comp=Z,3.1nm,1.0s,baz=205,slow=8.1,SNR=8.5							
INK	**Inuvik**	**89.17**	**21**	IAmb	IAmb	00 37 41.8		
	comp=Z,4.8nm,0.9s							
BRVK	**Borovoye**	**90.17**	**323**		**P**	00 37 33.4	+0.2	
NVAR	**Mina Array Bea**	**92.42**	**52**	P	**P**	00 37 45.0	+0.8	
	comp=Z,0.8nm,0.7s,baz=251,slow=6.9,SNR=5.4							
NVAR				LR	LR	01 12 43.0		
	comp=Z,471nm,20.3s,baz=266,slow=31							
NVAR	**Mina Array Bea**	**92.42**	**52**	P	**P**	00 37 45.7	+1.5	
C36M	**Paulatuk**	**92.75**	**21**	IAmb	IAmb	00 37 57.8		
	comp=Z,8.3nm,1.1s							
HRA	**Herat**	**93.84**	**304**	IAmb	IAmb	00 38 01.3		
	comp=Z,5.0nm,0.9s							
YKA	**Yellowknife Ar**	**96.07**	**28**	P	**P**	00 37 60.0	-0.2	
	comp=Z,1.5nm,0.9s,baz=268,slow=4.4,SNR=14							
YKA				PKiKP	**PKiKP**	00 42 39.8	+1.2	
	comp=Z,0.2nm,0.5s,baz=232,slow=0.8,SNR=3.9							
YKA				LR	LR	01 17 00.7		
	comp=Z,250nm,20.5s,baz=0.0,slow=33							
ARU	**Arti**	**97.19**	**326**		**P**	00 38 03.3	-2.1	
PDAR	**Pinedale Array**	**99.24**	**48**	P	**Pdif**	00 38 14.9	-0.3	
	comp=Z,0.1nm,0.3s,baz=253,slow=2.7,SNR=1.8							
PDAR				LR	LR	01 19 30.1		
	comp=Z,760nm,18.7s,baz=266,slow=33							
KLMR	**Klimovskoe**	**106.28**	**332**	*e*Pdif	**Pdif**	00 38 43.9	-1.8	
KLMR				AMP		00 38 49.2		
	comp=Z,15nm,1.5s							
FINES	**FINESS Array B**	**111.95**	**336**	Pdiff	**Pdif**	00 39 09.6	-1.3	
	comp=Z,2.9nm,1.1s,baz=62,slow=6.5,SNR=1.4							
MNK	**Minsk**	**114.47**	**328**	*i* PKP	**PKiKP**	00 43 08.1	-4.6	
	comp=E,2.0nm,1.6s							
MNK				*i* PKP	**PKiKP**	00 43 08.1	-4.6	
	comp=N,7.0nm,1.2s							
MNK				*i* PKP	**PKiKP**	00 43 08.1	-4.6	
	comp=Z,5.0nm,1.2s							
MNK				*i* PP	**PP**	00 44 03.0	-6.2	
MNK				*i* PPP	PPP	00 46 27.4		
MNK				*i* SKS	**SKSdf**	00 50 18.2	-3.7	
MNK				*i* PS	**PKKPbc**	00 53 47.8	-5.9	
MNK				*i* SS	**SS**	00 59 52.0	-7.1	
MNK				*i* SSS	SSS	01 04 06.4		
MNK				*i* LQ	LQ	01 24 41.9		
MNK				*i* LR	LR	01 30 50.6		
MNK				*i* LRM	MLR	01 33 40.7		
	comp=N,93nm,17.4s							
MNK				*i* LRM	MLR	01 33 49.3		
	comp=Z,156nm,20.3s							
MNK				*i* LRM	MLR	01 33 52.2		
	comp=E,21nm,19.5s							
AKASG	**Malin Array Be**	**115.36**	**324**	PKP	**PKiKP**	00 43 14.3	-0.2	
	comp=E,0.5nm,0.3s,baz=58,slow=2.3,SNR=5.8							
AKASG	**Malin Array Be**	**115.36**	**324**		**PKPdf**	00 43 15.0	+0.5	
BRTR	**Keskin Array B**	**116.08**	**312**	PKP	**PKiKP**	00 43 17.7	+1.2	
	comp=E,6.0nm,0.6s,baz=126,slow=2.5,SNR=2.7							
NOA	**NORSAR Array B**	**117.82**	**340**	PKP	**PKPdf**	00 43 18.5	-0.5	
	comp=E,0.6nm,0.8s,baz=48,slow=1.8,SNR=2.0							
BOSA	**Boshof**	**119.31**	**233**	PKP	**PKiKP**	00 43 23.2	+0.2	
	comp=E,3.1nm,1.0s,baz=180,slow=4.0,SNR=2.2							
LANS	**Liptovska Anna**	**121.65**	**326**	*e*PKP	**PKiKP**	00 43 31.1	+4.2	
MODS	**Modra-Piesok**	**123.29**	**326**	*e*PKP	**PKiKP**	00 43 33.7	+3.6	
CLL	**Collm**	**123.74**	**331**	*e*PKPdf	**PKiKP**	00 43 32.0	+1.1	
CLL				*e*PS	**PS**	00 55 18.0	+6.6	
CLL				*e*PPS	PPS	00 56 30.0		
CLL				*e*SS	SS	01 02 00.0	+1.5	
CLL				*e*SSS	SSS	01 06 54.0		
CLL				Lm	MLR	01 39 00.0		
	comp=Z,100nm,20.8s							
CKRC	**Cesky Krumlov**	**124.63**	**328**	*e*PKPDF	**PKiKP**	00 43 33.1	+0.3	
CKRC				*ex*	x	00 43 43.2		
KHC	**Kasperske Hory**	**124.82**	**329**	*e*PKPDF	**PKiKP**	00 43 34.5	+1.3	
GERES	**GERESS Array B**	**124.94**	**328**	PKP	**PKPdf**	00 43 32.9	-0.2	
	comp=Z,2.5nm,0.8s,baz=64,slow=3.1,SNR=12							
WATA	**Walderalm**	**126.99**	**328**	*e*P	**PKiKP**	00 43 38.4	+0.7	
	comp=Z,4.4nm,1.0s							
WTTA	**Wattenberg**	**127.00**	**328**	*e*P	**PKiKP**	00 43 39.0	+1.2	
	comp=Z,13nm,1.2s							
MOTA	**Moosalm**	**127.23**	**328**	*e*P	**PKiKP**	00 43 39.1	+0.9	
	comp=Z,8.6nm,1.2s							
SQTA	**Sankt Quirin**	**127.26**	**328**	*e*P	**PKiKP**	00 43 39.7	+1.5	
	comp=Z,9.5nm,1.1s							
FETA	**Feichten**	**127.64**	**328**	*e*P	**PKiKP**	00 43 40.8	+1.8	
	comp=Z,9.4nm,1.2s							
DAVA	**Damuels**	**127.91**	**329**	*e*P	**PKiKP**	00 43 41.0	+1.5	
	comp=Z,10.0nm,1.0s							
ROSC	**El Rosal**	**132.82**	**89**	PKP	**PKPdf**	00 43 48.4	-1.2	
	comp=Z,3.1nm,0.3s,baz=284,slow=22,SNR=1.0							
LPAZ	**La Paz**	**133.77**	**119**	PKP	**PKiKP**	00 43 52.1	-0.7	
	comp=Z,5.1nm,0.9s,baz=241,slow=1.9,SNR=13							
CPUP	**Villa Florida**	**136.63**	**139**	PKP	**PKPdf**	00 43 55.1	-0.7	
	comp=Z,2.6nm,0.9s,baz=246,slow=3.9,SNR=3.8							
ESDC	**Sonseca Array**	**140.32**	**332**	PKP	**PKPdf**	00 44 02.1	-0.2	
	comp=Z,0.7nm,0.8s,baz=8.1,slow=3.8,SNR=6.3							
ESDC				PP	**PP**	00 46 58.1	-1.5	
	comp=Z,0.4nm,0.7s,baz=22,slow=6.8,SNR=5.0							
ESDC	**Sonseca Array**	**140.32**	**332**		**PKPdf**	00 44 00.1	-2.2	
MVO	**Moncorvo**	**140.43**	**336**	*e*PKPdf	**PKPdf**	00 44 01.8	-0.7	
PCBR	**Castelo Branco**	**141.74**	**336**	*e*PKPdf	**PKPdf**	00 44 04.2	-0.6	
PMRV	**Marv??o**	**142.05**	**335**	*e*PKPdf	**PKPdf**	00 44 03.0	-2.4	
EVO	**Evora**	**143.06**	**335**	*e*PKPdf	PKPbc	00 44 05.1	+1.1	
PNCL	**Nicolau / Gran**	**143.63**	**335**	*e*PKPdf	**PKPdf**	00 44 07.2	-1.0	
MORF	**Marmelete**	**144.37**	**335**	*e*PKPdf	**PKPdf**	00 44 09.7	+0.1	
BDFB	**Brasilia**	**150.26**	**136**	PKPbc	PKPbc	00 44 23.9	-1.3	
	comp=Z,9.7nm,0.6s,baz=213,slow=2.7,SNR=18							
BDFB	**Brasilia**	**150.26**	**136**		**PKiKP**	00 44 25.9	0.0	
TORD	**Torodi Ar. Bea**	**150.82**	**287**	PKPbc	**PKPbc**	00 44 24.2	-2.2	
	comp=Z,15nm,0.9s,baz=56,slow=2.3,SNR=41							
TORD	**Torodi Ar. Bea**	**150.82**	**287**		**PKPbc**	00 44 26.6	+0.2	
DBIC	**Dimbokro**	**158.03**	**274**	PKP	**PKPdf**	00 44 32.1	+1.3	
	comp=Z,4.8nm,1.0s,baz=222,slow=2.8,SNR=3.5							
DBIC				PKPab	**PKPab**	00 45 03.3	-1.0	
	comp=Z,5.1nm,0.8s,baz=42,slow=6.1,SNR=5.1							

KRSC 03 00:26:10.1±1.8, 48.96N×157.25E, h14km±44km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALID	**Alaid**	**2.21**	**331**	*e*P	Pn	00 26 46.0	-0.5
PAU	**Pauzhetka**	**2.53**	**354**	*e*P	Pn	00 26 52.7	+1.9
PAU				*e*S	Sb	00 27 23.9	-2.4
KDTR	**Khodutka, Kamc**	**2.91**	**10**	*e*P	Pb	00 26 59.0	-2.7
KDTR				*e*S	Sb	00 27 34.6	-2.4
RUS	**Russkaya**	**3.57**	**13**	*e*P	Pn	00 27 08.0	+2.9
RUS				*e*S	Sn	00 27 50.1	+3.0
MTVR	**Mutnovka**	**3.58**	**9**	*e*P	Pn	00 27 08.7	+3.3
MTVR				*e*S	Sn	00 27 51.4	+3.9
GRL	**Gorelyy**	**3.64**	**8**	*e*P	Pn	00 27 09.6	+3.5
GRL				S	Sn	00 27 53.3	+4.4
DALK	**Dalny**	**4.19**	**13**	*e*P	Pn	00 27 17.5	+3.9
UGLR	**Uglovaya**	**4.37**	**13**	*e*P	Pn	00 27 20.5	+4.3
AVH	**Avacha**	**4.42**	**12**	*e*P	Pn	00 27 21.7	+4.9
SMAR	**Somya**	**4.42**	**12**	*e*P	Pn	00 27 21.1	+4.1
KOK	**Koryaka**	**4.43**	**11**	*e*P	Pn	00 27 21.7	+4.7
SDLR	**Sedlovina**	**4.45**	**13**	*e*P	Pn	00 27 21.0	+3.7
KRER	**Koryakskii**	**4.46**	**12**	*e*P	Pn	00 27 21.7	+4.3
KRX	**Arik**	**4.50**	**11**	*e*P	Pn	00 27 22.5	+4.6
GNL	**Ganaly**	**4.77**	**5**	P	Pn	00 27 25.6	+4.0
KII	**Karymskiy**	**5.27**	**14**	P	Pn	00 27 33.8	+5.3
MKZ	**Mys Kozlova**	**6.26**	**25**	*e*P	Pn	00 27 45.4	+3.4
KBTR	**Krutoberegovo**	**8.01**	**23**	*e*P	Pn	00 28 09.7	+3.7

*NOU **03** 00:30:50.4, 40.63S×173.52E, h0km, MLv3.3, Cook Strait, New Zealand*
WEL 03 00:30:49.4, 41.5S±4.7°×177.3E±7.5°, h12km, M3.2/24, ML3.5/24, MLv3.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=0.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.36**	**111**	P	Pb	00 30 57.4	-0.4
DUWZ				S	Sb	00 31 02.8	-0.7
NNZ	**Nelson**	**0.55**	**187**	P	Pb	00 31 01.9	+0.9
QRZ	**Quartz Range**	**0.73**	**258**	S	Sn	00 31 15.6	-1.2
TCW	**Tory Channel**	**0.81**	**132**	P	Pb	00 31 05.4	-0.1
TUWZ	**Tuamarina**	**0.84**	**155**	P	Pb	00 31 06.2	+0.4
TUWZ				S	Sb	00 31 17.8	+0.8
BSWZ	**Blackbirch Sta**	**1.09**	**164**	P	Pn	00 31 11.5	+1.0
BSWZ				S	Sn	00 31 26.7	+1.3
KIW	**Kapiti Island**	**1.11**	**100**	P	Pb	00 31 10.3	-0.2
KIW				S	Sb	00 31 24.3	-0.5
WEL	**Wellington**	**1.16**	**122**	P	Pg	00 31 12.6	+0.9
THZ	**Tophouse**	**1.17**	**201**	P	Pg	00 31 12.7	+0.7
THZ				S	Sn	00 31 29.8	+2.2
CMWZ	**Cape Campbell**	**1.21**	**153**	P	Pg	00 31 14.2	+1.5
CAW	**Cannon Point**	**1.28**	**110**	P	Pg	00 31 14.2	+0.1
CAW				S	Sg	00 31 31.0	+0.2
BHW	**Baring Head**	**1.29**	**125**	P	Pg	00 31 14.1	-0.1
NMEZ	**Namu Road**	**1.29**	**14**	P	Pn	00 31 13.2	0.0
NMEZ				S	Sn	00 31 30.5	0.0
OGWZ	**Otaki Gorge**	**1.30**	**97**	P	Pb	00 31 13.7	0.0
OGWZ				S	Sn	00 31 30.6	0.0
LREZ	**Lake Rotokare**	**1.40**	**31**	P	Pb	00 31 15.2	-0.4
PREZ	**Palmer Road**	**1.43**	**22**	P	Pn	00 31 15.4	+0.2
NBEZ	**Newall Road No**	**1.43**	**12**	P	Pn	00 31 14.8	-0.4
KHEZ	**Kahui Hut**	**1.44**	**17**	P	Pn	00 31 14.9	-0.4
WAZ	**Wanganui**	**1.48**	**52**	P	Pn	00 31 15.4	-0.4
NEZ	**North Egmont**	**1.48**	**19**	P	Pn	00 31 16.0	0.0
NEZ				S	Sn	00 31 34.7	-0.5
OHWZ	**Ohakea**	**1.48**	**72**	P	Pb	00 31 16.7	-0.2
OHWZ				S	Sb	00 31 35.9	+0.3
PKE	**Pukeiti**	**1.53**	**15**	P	Pn	00 31 15.9	-0.6
MSWZ	**Moikau Station**	**1.54**	**120**	P	Pb	00 31 18.1	+0.4
MSWZ				S	Sg	00 31 38.1	-0.7
HOWZ	**Holdsworth Sta**	**1.57**	**99**	P	Pb	00 31 18.2	-0.2
HOWZ				S	Sg	00 31 39.1	-0.7
MRZ	**Mangatainoka R**	**1.60**	**90**	P	Pb	00 31 18.6	-0.3
MRZ				S	Sn	00 31 38.2	+0.1
MTW	**Mount Morrison**	**1.61**	**108**	P	Pb	00 31 18.6	-0.5
PLWZ	**Palliser**	**1.62**	**124**	P	Pb	00 31 18.9	-0.3
PLWZ				S	Sb	00 31 40.1	+0.5
PAWZ	**Paruwai Farm**	**1.64**	**116**	P	Pb	00 31 19.4	-0.2
PAWZ				S	Sb	00 31 40.8	+0.6
DSZ	**Denniston Nort**	**1.65**	**229**	P	Pb	00 31 19.6	-0.2
MHEZ	**Mangahewa**	**1.72**	**23**	P	Pn	00 31 19.4	+0.2
KHZ	**Kahutara**	**1.74**	**178**	P	Pg	00 31 22.2	-0.7
KHZ				S	Sg	00 31 46.2	+0.6
POWZ	**Post Office Ro**	**1.77**	**82**	P	Pb	00 31 21.0	-0.8
TRWZ	**Traveller**	**1.82**	**114**	P	Pg	00 31 23.8	-0.6
TIWZ	**Tintock**	**1.84**	**94**	P	Pb	00 31 22.8	-0.2
TIWZ				S	Sb	00 31 46.6	+0.7
TMWZ	**Te Maipa**	**1.88**	**104**	P	Pb	00 31 22.8	-0.9
TMWZ				S	Sg	00 31 48.7	-1.2
PRWZ	**Pori Road**	**1.90**	**87**	P	Pn	00 31 22.4	+0.8
PKVZ	**Pokaka**	**1.99**	**47**	P	Pn	00 31 23.2	+0.2
TSZ	**Takapari Road**	**2.00**	**73**	P	Pn	00 31 24.4	-1.2
MTVZ	**Mangateitei**	**2.00**	**51**	P	Pn	00 31 23.5	+0.5
DVHZ	**Dannevirke**	**2.09**	**81**	P	Pb	00 31 26.4	-0.8
TRVZ	**Turoa**	**2.10**	**50**	P	Pn	00 31 25.0	+0.4
BFZ	**Birch Farm**	**2.11**	**91**	P	Pn	00 31 24.9	+0.4
WNVZ	**Wahianoa**	**2.11**	**51**	P	Pn	00 31 25.2	+0.5
FWVZ	**Far West T-bar**	**2.13**	**49**	P	Pn	00 31 25.5	+0.5
MOVZ	**Moawhango**	**2.16**	**55**	P	Pn	00 31 25.9	+0.7
TUVZ	**Tukino**	**2.18**	**51**	P	Pn	00 31 26.7	+1.

comp=Z,1.2nm,0.8s,baz=76,slow=2.5,SNR=4.8
WRA Warramunga Arr 23.05 230 P P 00 38 33.3 -1.3
AS31 Alice Springs 25.67 224 P P 00 38 58.4 -0.7
ASAR Alice Springs 25.67 224 P P 00 38 59.5 +0.5
comp=Z,2.0nm,0.8s,baz=58,slow=8.9,SNR=12
ASAR PcP **PcP 00 42 30.4 +1.3**
comp=Z,0.4nm,0.6s,baz=47,slow=3.1,SNR=3.0
ASAR Alice Springs 25.67 224 P P 00 38 57.5 -1.6
FITZ Fitzroy Crossi 29.44 243 P P 00 39 32.5 -0.3
comp=Z,5.0nm,0.7s,baz=96,slow=8.2,SNR=3.8
FITZ Fitzroy Crossi 29.44 243 P P 00 39 32.9 0.0
CMAR Chiang Mai Arr 58.42 296 P P 00 43 25.2 +0.3
comp=Z,1.3nm,0.3s,baz=101,slow=4.7,SNR=1.2
PETK Petropavlovsk- 58.67 3 P P 00 43 26.1 +0.2
comp=Z,3.4nm,0.6s,baz=183,slow=5.3,SNR=6.5
SONM Songino Array 67.15 328 P P 00 44 23.0 +0.4
comp=Z,0.7nm,0.8s,baz=144,slow=5.3,SNR=2.1
SEY Seymchan 68.39 360 P P 00 44 30.2 +0.4
comp=Z,0.8nm,0.4s,baz=174,slow=8.0,SNR=3.6
MKAR Makanchi Array 81.09 319 P P 00 45 44.0 +0.1
comp=Z,0.8nm,0.8s,baz=108,slow=5.8,SNR=5.9
ZALV Zalesovo Beam 81.97 326 P P 00 45 48.4 +0.1
comp=Z,1.4nm,0.6s,baz=111,slow=5.2,SNR=7.1
ILAR Eielson Array 82.87 22 P P 00 45 51.9 -0.9
comp=Z,0.4nm,0.6s,baz=242,slow=5.8,SNR=4.6
NRIK Noril'sk 86.83 341 P P 00 46 11.1 -1.5
comp=Z,1.8nm,0.6s,baz=67,slow=4.2,SNR=3.4
GERES GERESS Array B 124.88 328 PKP PKiKP 00 52 29.3 +0.3
comp=Z,0.3nm,0.5s,baz=70,slow=5.6,SNR=3.6
BDFB Brasilia 150.32 136 PKPbc PKiKP 00 53 22.4 +0.7
comp=Z,2.3nm,0.7s,baz=139,slow=4.4,SNR=4.3
TORD Torodi Ar. Bea 150.75 287 PKPbc PKPbc 00 53 22.1 +0.3
comp=Z,2.4nm,0.7s,baz=63,slow=2.5,SNR=12

IDC 03 00:54:22.4±3.9, 5.09S×152.22E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/25, mbtmp3.6/3, Error ellipse: s-maj=146.0km s-min=52.5km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.82**	**228**	P	P	00 59 28.1	+0.8
	1.0nm,0.9s,baz=53,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**25.55**	**222**	P	P	00 59 52.4	-0.8
	0.6nm,0.8s,baz=58,slow=8.0,SNR=7.0						
FITZ	**Fitzroy Crossi**	**29.02**	**241**	P	P	01 00 24.7	+0.3
	1.5nm,0.7s,baz=64,slow=6.2,SNR=7.7						
TORD	**Torodi Ar. Bea**	**149.84**	**287**	PKPbc	PKPbc	01 14 15.2	-0.5
	0.4nm,0.8s,baz=75,slow=1.6,SNR=2.2						

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*IDC **03** 01:17:51.1±13.0, 12.97N×143.40E, h259km±135km, mb3.3/9, mb1 3.5/9, mb1mx3.3/37, mbtmp3.9/9, Error ellipse: s-maj=40.0km s-min=22.1km az=70.0*
ISC 03 01:17:39.9±0.9, 13.1N±0.2×143.5E±0.3, h150km, n9, σ0§99/9, mb3.6/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.01**	**196**	P	P	**01 24 09.9**	**+0.2**
	1.5nm,0.7s,baz=15,slow=9.2,SNR=16						
ASAR	**Alice Springs**	**37.69**	**194**	P	P	01 24 40.8	-0.1
	0.7nm,0.7s,baz=19,slow=12,SNR=10						
SONM	**Songino Array**	**46.40**	**326**	P	P	01 25 52.4	+1.0
	0.6nm,0.5s,baz=151,slow=8.4,SNR=4.3						
MKAR	**Makanchi Array**	**60.94**	**316**	P	P	01 27 37.3	+0.2
	0.5nm,0.5s,baz=96,slow=8.4,SNR=8.3						
ILAR	**Eielson Array**	**69.61**	**22**	P	P	01 28 32.1	-0.4
	0.5nm,0.5s,baz=247,slow=5.3,SNR=7.6						
YKA	**Yellowknife Ar**	**83.94**	**27**	P	P	01 29 53.4	+0.5
	0.4nm,0.6s,baz=286,slow=4.8,SNR=8.5						
ARCES	**ARCESS Array B**	**87.17**	**342**	P	P	01 30 07.9	-0.8
	3.8nm,1.0s,baz=35,slow=4.4,SNR=5.2						
NVAR	**Mina Array Bea**	**88.29**	**51**	P	P	01 30 15.5	+0.5
	0.1nm,0.3s,baz=249,slow=6.7,SNR=2.5						
FINES	**FINESS Array B**	**91.07**	**335**	P	P	01 30 25.3	-1.9
	4.7nm,1.1s,baz=75,slow=4.3,SNR=15						

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*IDC **03** 01:38:19.8±9.5, 19.60S×177.64W, h561km±52km, mb3.0/4, mb1 3.1/5, mb1mx2.9/27, mbtmp3.9/5, Error ellipse: s-maj=238.0km s-min=34.3km az=144.0*
ISC 03 01:38:16.8±2.6, 19.9S±0.5×177.3W±0.3, h550km, n7, σ0§29/7, mb3.5/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.92**	**295**	P	P	**01 39 46.3**	**+0.1**
	3.8nm,0.3s,baz=128,slow=4.4,SNR=10						
CTA	**Charters Tower**	**34.23**	**263**	P	P	**01 44 17.1**	**-0.3**
	1.3nm,0.3s,baz=97,slow=11,SNR=1.8						
ASAR	**Alice Springs**	**45.31**	**256**	P	P	**01 45 46.5**	**+0.2**
	1.2nm,0.6s,baz=93,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**45.35**	**261**	P	P	**01 45 46.3**	**-0.2**
	0.4nm,0.3s,baz=98,slow=7.2,SNR=9.2						
FITZ	**Fitzroy Crossi**	**53.78**	**262**	P	P	**01 46 48.4**	**0.0**
	0.9nm,0.5s,baz=117,slow=4.5,SNR=2.2						
BRTR	**Keskin Array B**	**146.93**	**313**	PKPbc	PKPbc	**01 56 58.5**	**+0.3**
	0.8nm,0.8s,baz=122,slow=1.6,SNR=3.6						
GERES	**GERESS Array B**	**149.81**	**346**	PKPbc	PKiKP	**01 57 05.4**	**-0.3**
	0.2nm,0.3s,baz=26,slow=2.5,SNR=3.7						

IDC 03 01:38:47.9±4.3, 4.83S×150.88E, h0km, mb2.9/2, mb1 3.3/2, mb1mx3.1/27, mbtmp3.0/2, Error ellipse: s-maj=172.6km s-min=55.8km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.02**	**226**	P	P	01 43 45.4	+1.3
	0.2nm,0.3s,baz=49,slow=9.9,SNR=2.8						
ASAR	**Alice Springs**	**24.87**	**220**	P	P	01 44 11.3	-1.2
	0.2nm,0.7s,baz=52,slow=9.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**148.49**	**287**	PKPbc	PKPbc	01 58 37.3	-0.4
	0.6nm,0.8s,baz=68,slow=2.5,SNR=3.5						

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*KRNET **03** 01:43:28.5±0.1, 40.15N×77.54E, mb3.5*
*SOME **03** 01:43:29.6, 40.27N×77.25E, h10km*
*NNC **03** 01:43:32.8±0.7, 40.33N×77.40E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=5.1km s-min=4.3km az=169.0*
ISC 03 01:43:34.6±1.8, 40.25N±0.08×77.43E±0.04, h10km, n78, σ1§89/118, 42C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.89**	**354**	⇑*i*P	**Pn**	**01 44 05.4**	**-1.7**
	baz=53						
KDJ				⇑*i*S	**Sn**	**01 44 32.1**	**+1.1**
	baz=53						
ULHL	**Ulahol**	**2.18**	**336**	⇑*i*P	**Pn**	**01 44 09.9**	**-1.3**
	baz=35						
ULHL				⇑*i*S	**Sn**	**01 44 40.2**	**+1.8**
	baz=35						
ULHL	**Ulahol**	**2.18**	**336**	P	**Pn**	**01 44 10.6**	**-0.7**
	SNR=38						
PRZ	**Przheval'sk**	**2.35**	**18**	⇑*i*P	**Pn**	**01 44 11.4**	**-2.0**
	baz=15						
PRZ				⇑*i*S	**Sn**	**01 44 42.6**	**+0.2**
	baz=15						
BOOM	**Boomskoye usch**	**2.50**	**334**	⇓*i*P	**Pn**	**01 44 14.5**	**-1.0**
	baz=33						
BOOM				⇓*i*S	**Sn**	**01 44 47.6**	**+1.4**
	baz=33						
ANVS	**Anan'yevo**	**2.54**	**4**	⇑*i*P	**Pn**	**01 44 14.5**	**-1.5**
	baz=2.0						
ANVS				⇑*i*S	**Sn**	**01 44 47.6**	**+0.5**
	baz=2.0						
TNSS	**Tian-Shan**	**2.81**	**353**	*e*P	**Pb**	**01 44 22.1**	**-2.9**
	75nm,0.6s						
TNSS				*e*S	**Sb**	**01 45 00.2**	**+0.5**
	66nm,0.6s						
TNSS	**Tian-Shan**	**2.81**	**353**	Pg	**Pb**	**01 44 22.1**	**-2.9**
	75nm,0.6s						
TNSS				Lg	Lg	01 45 00.2	
	66nm,0.6s						
ARLS	**Aral**	**2.84**	**305**	⇑*e*P	**Pn**	**01 44 18.6**	**-1.6**
	baz=6.0						
ARLS				⇑*i*S	**Sn**	**01 44 56.2**	**+1.6**
	baz=6.0						
IZV	**Izvestkoviy**	**2.85**	**348**	*e*P	**Pb**	**01 44 22.7**	**-2.9**
	35nm,0.5s						
IZV				*e*S	**Sb**	**01 45 01.1**	**+0.4**
	192nm,0.6s						
IZV	**Izvestkoviy**	**2.85**	**348**	Pg	**Pb**	**01 44 22.9**	**-2.7**
	35nm,0.5s						
IZV				Lg	Lg	01 45 01.4	
	192nm,0.6s						
SATY	**Saty**	**2.90**	**14**	*e*P	**Pb**	**01 44 24.3**	**-2.2**
	35nm,0.5s						
SATY				*e*S	**Sb**	**01 45 03.4**	**+1.3**
	88nm,0.6s						
SATY	**Saty**	**2.90**	**14**	Pg	**Pb**	**01 44 24.3**	**-2.2**
	35nm,0.8s						
SATY				Lg	Lg	01 45 03.4	
	88nm,0.6s						
MDOK	**Medeo**	**2.92**	**355**	*e*P	**Pb**	**01 44 24.2**	**-2.7**
	37nm,0.4s						
MDOK				*e*S	**Sb**	**01 45 03.9**	**+1.1**
	204nm,0.5s						
MDOK	**Medeo**	**2.92**	**355**	Pn	**Pn**	**01 44 20.4**	**-0.9**
	5.0nm,0.5s						
MDOK				Pg	**Pb**	**01 44 24.2**	**-2.7**
	26nm,0.5s						
MDOK				⇑Lg	Lg	01 45 03.9	
	76nm,0.5s						
MDOK	**Medeo**	**2.92**	**355**	Pg	**Pb**	**01 44 24.2**	**-2.7**
	37nm,0.4s						
MDOK				Lg	Lg	01 45 03.9	
	204nm,0.5s						
UCH	**Uchtor**	**2.95**	**313**	⇓*i*P	**Pn**	**01 44 20.6**	**-1.4**
	baz=13						
UCH				⇓*i*S	**Sn**	**01 44 58.4**	**+0.7**
	baz=13						
UCH	**Uchtor**	**2.95**	**313**	P	**Pn**	**01 44 20.8**	**-1.2**
	SNR=15						
MTBS	**Maitube**	**2.97**	**346**	*e*P	**Pb**	**01 44 25.0**	**-2.7**
	16nm,0.6s						
MTBS				*e*S	**Sb**	**01 45 04.5**	**+0.4**
	39nm,0.3s						
MTBS	**Maitube**	**2.97**	**346**	Pg	**Pb**	**01 44 25.0**	**-2.7**
	16nm,0.6s						
MTBS				Lg	Lg	01 45 04.5	
	39nm,0.3s						
AAA	**Alma-Ata**	**2.98**	**353**	*e*P	**Pb**	**01 44 26.2**	**-1.7**
	48nm,0.3s						
AAA				*e*S	**Sb**	**01 45 07.0**	**+2.7**
	86nm,0.4s						
AAA	**Alma-Ata**	**2.98**	**353**	Pg	**Pb**	**01 44 26.2**	**-1.7**
	48nm,0.3s						
AAA				Lg	Lg	01 45 07.0	
	86nm,0.4s						
KNDC	**Almaty**	**2.98**	**354**	⇑Pg	**Pb**	**01 44 25.7**	**-2.2**
	40nm,0.5s						
KNDC				⇓Lg	Lg	01 45 06.8	
	352nm,0.7s						
KOTS	**Kotyrbulak**	**2.99**	**356**	*e*P	**Pb**	**01 44 25.9**	**-2.2**
	138nm,0.3s						
KOTS				*e*S	**Sb**	**01 45 06.2**	**+1.5**
	121nm,0.5s						
KOTS	**Kotyrbulak**	**2.99**	**356**	Pg	**Pb**	**01 44 25.9**	**-2.2**
	138nm,0.3s						
KOTS				Lg	Lg	01 45 06.2	
	121nm,0.5s						
KST	**Kastek**	**3.00**	**339**	*e*P	**Pb**	**01 44 25.2**	**-3.0**
	19nm,0.7s						
KST				*e*S	**Sb**	**01 45 05.0**	**+0.1**
	80nm,0.8s						
KST	**Kastek**	**3.00**	**339**	Pg	**Pb**	**01 44 25.2**	**-3.0**
	19nm,0.7s						
KST				Lg	Lg	01 45 05.0	
	80nm,0.8s						
TKM2	**Tokmak 2**	**3.00**	**333**	⇑*e*P	**Pn**	**01 44 21.1**	**-1.3**
	baz=33						
TKM2				⇑*i*S	**Sn**	**01 44 59.6**	**+1.1**
	baz=33						
TKM2	**Tokmak 2**	**3.00**	**333**	P	**Pn**	**01 44 21.9**	**-0.5**
	SNR=16						
TKM2	**Tokmak 2**	**3.00**	**333**	⇓Pn	**Pn**	**01 44 21.5**	**-0.9**
	11nm,0.7s						
TKM2				⇓Lg	Lg	01 45 05.4	
	52nm,0.8s						
ZHN	**Zhinishke**	**3.01**	**14**	*e*P	**Pb**	**01 44 27.1**	**-1.3**
	12nm,0.2s						
ZHN				*e*S	**Sb**	**01 45 07.9**	**+2.6**
	69nm,0.8s						
ZHN	**Zhinishke**	**3.01**	**14**	Pg	**Pb**	**01 44 27.1**	**-1.3**
	12nm,0.2s						
ZHN				Lg	Lg	01 45 07.9	
	69nm,0.8s						
KBK	**Karagaybulak**	**3.04**	**323**	⇑*i*P	**Pn**	**01 44 21.5**	**-1.4**
	baz=23						
KBK				⇑*i*S	**Sn**	**01 45 00.5**	**+1.0**
	baz=23						
KBK	**Karagaybulak**	**3.04**	**323**	P	**Pn**	**01 44 22.5**	**-0.5**
	SNR=32						
UZB	**Uzynbulak**	**3.13**	**22**	*e*P	**Pb**	**01 44 28.5**	**-1.9**
	16nm,0.6s						
UZB				*e*S	**Sb**	**01 45 10.4**	**+1.7**
	44nm,0.8s						
UZB	**Uzynbulak**	**3.13**	**22**	Pg	**Pb**	**01 44 28.5**	**-1.9**
	16nm,0.6s						
UZB				Lg	Lg	01 45 10.4	
	44nm,0.8s						
DGS	**Degeres**	**3.23**	**338**	*e*P	**Pb**	**01 44 29.4**	**-2.8**
	17nm,0.6s						
DGS				*e*S	**Sb**	**01 45 12.9**	**+1.2**
	53nm,0.5s						
DGS	**Degeres**	**3.23**	**338**	Pg	**Pb**	**01 44 29.4**	**-2.8**
	17nm,0.6s						
DGS				Lg	Lg	01 45 12.9	
	53nm,0.5s						
AAK	**Ala-Archa**	**3.25**	**318**	⇑*i*P	**Pn**	**01 44 24.6**	**-1.2**
	baz=18						
AAK				⇑*i*S	**Sn**	**01 45 05.1**	**+0.6**
	baz=18						
AAK	**Ala-Archa**	**3.25**	**318**	P	**Pn**	**01 44 24.8**	**-0.9**
	SNR=19						
AAK	**Ala-Archa**	**3.25**	**318**	⇑Pn	**Pn**	**01 44 24.7**	**-1.0**
	13nm,0.6s						
AAK				⇑Lg	Lg	01 45 12.1	
	144nm,0.9s						
SHLS	**Shalkode**	**3.28**	**27**	*e*P	**Pb**	**01 44 33.4**	**+0.5**
	19nm,0.5s						
SHLS				*e*S	**Sg**	**01 45 19.7**	**-0.3**
	83nm,0.5s						
SHLS	**Shalkode**	**3.28**	**27**	Pg	**Pb**	**01 44 33.4**	**+0.5**
	19nm,0.5s						
SHLS				Lg	Lg	01 45 19.7	
	83nm,0.5s						
FRU1	**Bishkek**	**3.31**	**322**	⇑*i*P	**Pn**	**01 44 25.7**	**-0.8**
	baz=22						
FRU1				⇑*i*S	**Sn**	**01 45 07.5**	**+1.6**
	baz=22						
KPKS	**Kokpek**	**3.35**	**16**	*e*P	**Pb**	**01 44 32.4**	**-1.7**
	25nm,0.3s						
KPKS				*e*S	**Sb**	**01 45 17.1**	**+2.2**
	125nm,0.4s						
AML	**Almayashu**	**3.38**	**305**	⇑*e*P	**Pn**	**01 44 26.5**	**-1.3**
	baz=5.0						
AML				⇑*i*S	**Sn**	**01 45 08.4**	**+0.1**
	baz=5.0						
AML	**Almayashu**	**3.38**	**305**	P	**Pn**	**01 44 26.6**	**-1.3**
	SNR=39						
CHMS	**Chumysh**	**3.40**	**325**	⇑*i*P	**Pn**	**01 44 26.6**	**-1.1**
	baz=25						
CHMS				⇑*i*S	**Sn**	**01 45 08.7**	**+0.6**
	baz=25						
CHMS	**Chumysh**	**3.40**	**325**	P	**Pn**	**01 44 26.8**	**-0.9**
	SNR=8.2						
PDGK	**Podgornoye**	**3.44**	**26**	Pg	**Pb**	**01 44 33.6**	**-2.1**
	8.0nm,0.5s						
PDGK				Lg	Lg	01 45 19.3	
	32nm,0.6s						
PDGK	**Podgornoye**	**3.44**	**26**	⇑Pn	**Pn**	**01 44 27.3**	**-1.1**
	3.2nm,0.3s						
PDGK				⇑Pg	**Pb**	**01 44 33.1**	**-2.6**
	13nm,0.7s						
PDGK				⇓Lg	Lg	01 45 20.4	
	52nm,0.7s						
KTBS	**Karatobe**	**3.50**	**351**	*e*P	**Pb**	**01 44 34.1**	**-2.6**
	14nm,0.6s						
KTBS				*e*S	**Sb**	**01 45 20.6**	**+1.2**
	120nm,0.5s						
KTBS	**Karatobe**	**3.50**	**351**	Pg	**Pb**	**01 44 34.1**	**-2.6**
	14nm,0.6s						
KTBS				Lg	Lg	01 45 20.6	
	120nm,0.5s						
ARSB	**Arslanbob**	**3.54**	**289**	⇑*i*P	**Pn**	**01 44 27.8**	**-2.0**
	baz=90						
ARSB				⇑*i*S	**Sn**	**01 45 12.1**	**+0.3**
	baz=90						
EKS2	**Erkin-Say**	**3.65**	**312**	⇑*i*P	**Pn**	**01 44 30.0**	**-1.3**
	baz=13						
EKS2				⇑*i*S	**Sn**	**01 45 15.0**	**+0.6**
	baz=13						
EKS2	**Erkin-Say**	**3.65**	**312**	P	**Pn**	**01 44 30.7**	**-0.6**
	SNR=8.3						
KRBS	**Karabastau**	**3.68**	**340**	*e*P	**Pb**	**01 44 37.0**	**-2.8**
	18nm,0.6s						
KRBS				*e*S	**Sb**	**01 45 25.8**	**+1.3**
	44nm,0.7s						
KRBS	**Karabastau**	**3.68**	**340**	Pg	**Pb**	**01 44 37.0**	**-2.8**
	18nm,0.6s						
KRBS				Lg	Lg	01 45 25.8	
	44nm,0.7s						
USP	**Ospenovka**	**3.72**	**325**	⇑*e*P	**Pn**	**01 44 31.3**	**-0.9**
	baz=25						
USP				⇑*i*S	**Sn**	**01 45 16.7**	**+0.5**
	baz=25						
USP	**Ospenovka**	**3.72**	**325**	P	**Pb**	**01 44 39.6**	**-0.9**
	SNR=8.9						
KUU	**Kurty**	**3.73**	**348**	*e*P	**Pb**	**01 44 37.8**	**-2.8**
	7.9nm,0.7s						
KUU				*e*S	**Sb**	**01 45 26.4**	**+0.6**
	84nm,0.7s						
KUU	**Kurty**	**3.73**	**348**	Pg	**Pb**	**01 44 37.7**	**-2.8**
	7.9nm,0.7s						
KUU				Lg	Lg	01 45 26.4	
	84nm,0.7s						
KTMS	**Ketmen**	**3.87**	**33**	*e*P	**Pb**	**01 44 41.7**	**-1.3**
	4.2nm,0.3s						
KTMS				*e*S	**Sb**	**01 45 33.5**	**+3.5**
	39nm,0.8s						
KTMS	**Ketmen**	**3.87**	**33**	Pg	**Pb**	**01 44 41.7**	**-1.3**
	4.2nm,0.3s						
KTMS				Lg	Lg	01 45 33.5	
	39nm,0.8s						
MNBS	**Baschi**	**3.89**	**10**	*e*P	**Pb**	**01 44 42.4**	**-1.1**
	12nm,0.5s						
MNBS				*e*S	**Sb**	**01 45 34.3**	**+3.6**
	61nm,0.3s						
MNBS	**Baschi**	**3.89**	**10**	Pg	**Pb**	**01 44 42.4**	**-1.1**
	12nm,0.5s						
MNBS				Lg	Lg	01 45 34.3	
	61nm,0.3s						
ARXS	**Arharly**	**3.97**	**4**	*e*P	**Pb**	**01 44 43.1**	**-1.6**
	31nm,0.5s						
ARXS				*e*S	**Sb**	**01 45 35.9**	**+3.1**
	58nm,0.5s						
ARXS	**Arharly**	**3.97**	**4**	Pg	**Pb**	**01 44 43.1**	**-1.6**
	31nm,0.5s						
ARXS				Lg	Lg	01 45 35.9	
	58nm,0.5s						
MNAS	**Manas**	**4.33**	**303**	⇑*e*P	**Pn**	**01 44 39.8**	**-0.8**
	baz=3.0						
MNAS				⇑*i*S	**Sn**	**01 45 32.3**	**+1.2**
	baz=3.0						
DJR	**Jarkent**	**4.44**	**22**	*e*P	**Pb**	**01 44 51.8**	**-0.9**
	6.2nm,0.5s						
DJR				*e*S	**Sb**	**01 45 50.6**	**+4.3**
	26nm,0.5s						
DJR	**Jarkent**	**4.44**	**22**	Pg	**Pb**	**01 44 51.8**	**-0.9**
	6.2nm,0.5s						
DJR				Lg	Lg	01 45 50.6	
	26nm,0.5s						
TRKS	**Terek-Say**	**4.93**	**287**	⇑*e*P	**Pn**	**01 44 47.1**	**-1.8**
	baz=87						
TRKS				⇑*i*S	**Sn**	**01 45 44.7**	**-1.4**
	baz=87						
BTLS	**Baital**	**5.40**	**334**	*e*P	**Pb**	**01 45 08.7**	**-0.3**
	6.4nm,0.7s						
BTLS				*e*S	**Sb**	**01 46 19.6**	**+5.8**
	14nm,0.5s						
BTLS	**Baital**	**5.40**	**334**	Pg	**Pb**	**01 45 08.7**	**-0.3**
	6.4nm,0.7s						
BTLS				Lg	Lg	01 46 19.6	
	14nm,0.5s						
KK31	**Karatay Array**	**5.91**	**301**	⇓Pg	**Pb**	**01 45 20.3**	**+2.6**
	2.7nm,0.9s,baz=118,slow=16,SNR=4.5						
KK31				⇑Lg	Lg	01 46 39.6	
	2.4nm,0.5s,baz=118,slow=28,SNR=6.2						
MAKZ	**Makanchi**	**7.34**	**25**	⇑Lg	Lg	01 47 23.0	
	1.9nm,0.7s						
MK31	**Makanchi Array**	**7.43**	**27**	⇓Pn	**Pn**	**01 45 21.5**	**-1.6**
	0.7nm,0.6s,baz=200,slow=15,SNR=8.8						
MK31				⇑Sn	**Sn**	**01 46 47.0**	**-0.5**
	1.2nm,0.8s,baz=329,slow=11,SNR=3.5						
MK31				⇑Lg	Lg	01 47 26.9	
	0.9nm,0.5s,baz=215,slow=27,SNR=3.6						
KURBB	**Kurchatov Arra**	**10.40**	**4**	⇓Lg	Lg	01 49 01.5	
	5.6nm,0.8s						

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*IDC **03** 01:45:46.1±1.1, 55.34S×27.28W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/26, mbtmp3.8/3, Error ellipse: s-maj=46.9km s-min=34.0km az=79.0*
ISC 03 01:45:47.2±1.1, 55.4S±0.2×27.2W±0.3, h10km, n6, σ1§46/6, mb3.9/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.28**	**183**	P	P	**01 54 19.7**	**-0.3**
	0.9nm,0.8s,baz=157,slow=7.7,SNR=4.9						
LPAZ	**La Paz**	**49.98**	**305**	P	P	**01 54 42.6**	**+0.5**
	1.1nm,0.7s,baz=164,slow=4.8,SNR=5.5						
TORD	**Torodi Ar. Bea**	**72.44**	**30**	P	P	**01 57 13.2**	**-0.4**
	0.5nm,0.6s,baz=205,slow=6.8,SNR=4.3						
INK	**Inuvik**	**145.26**	**321**	PKPbc	**PKPbc**	**02 05 21.4**	**-1.8**
	1.5nm,0.7s,baz=111,slow=4.1,SNR=3.8						
ILAR	**Eielson Array**	**149.65**	**313**	PKPbc	**PKPbc**	**02 05 35.7**	**+0.1**
	0.8nm,0.8s,baz=114,slow=2.2,SNR=6.8						
SONM	**Songino Array**	**150.67**	**85**	PKPbc	**PKiKP**	**02 05 41.0**	**+1.7**
	0.6nm,0.7s,baz=183,slow=1.1,SNR=4.8						

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*IDC **03** 01:52:38.0±3.2, 20.15S×178.17W, h543km±25km, mb2.8/3, mb1 3.0/5, mb1mx2.8/41, mbtmp3.8/5, Error ellipse: s-maj=49.7km s-min=39.1km az=72.0*
ISC 03 01:52:36.1±2.2, 19.8S±0.2×177.8W±0.3, h569km, n7, σ0§85/7, mb3.4/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.45**	**297**	P	P	**01 54 01.7**	**-1.1**
	0.8nm,0.3s,baz=303,slow=21,SNR=2.6						
URZ	**Urewera**	**18.91**	**192**	P	P	**01 56 20.6**	**-0.5**
	0.4nm,0.3s,baz=307,slow=23,SNR=1.9						
CTA	**Charters Tower**	**33.77**	**263**	P	P	**01 58 32.4**	**+0.7**
	1.0nm,0.5s,baz=82,slow=7.1,SNR=1.4						
ASAR	**Alice Springs**	**44.88**	**256**	P	P	**02 00 01.0**	**+0.1**
	1.0nm,0.8s,baz=101,slow=7.3,SNR=10						
WRA	**Warramunga Arr**	**44.90**	**261**	P	P	**02 00 01.1**	**0.0**
	0.4nm,0.4s,baz=97,slow=7.8,SNR=11						
AKASG	**Malin Array Be**	**142.51**	**332**	PKhKP	**PKPdf**	**02 11 04.7**	**+0.2**
	0.7nm,0.4s,baz=44,slow=3.9,SNR=5.6						
BRTR	**Keskin Array B**	**146.52**	**313**	PKPbc	**PKPab**	**02 11 18.1**	**+0.9**
	0.5nm,0.7s,baz=35,slow=6.0,SNR=1.8						

ATH 03 01:56:57.1, 38.32N×20.50E, h16km±2km, ML1.9/1, Error ellipse: s-maj=2.3km s-min=0.8km az=263.0, Greece

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

LKD2	**Lefkada island**	**0.49**	**14**	P	Pg	01 57 06.5	-0.4
TSLK	**Tsoukalades, L**	**0.52**	**13**	P	Pg	01 57 07.4	-0.1
PDO	**Prodromos**	**0.60**	**62**	P	Pg	01 57 08.8	-0.3
PVO	**Paravola**	**0.86**	**69**	P	Pb	01 57 13.6	-0.1

*SKO **03** 01:57:33.3, 41˚.49N×20˚.28E, h15km*
*ATH **03** 01:57:33.7, 41˚.70N×20˚.21E, h36km±9km, ML3.1/8, Error ellipse: s-maj=10.9km s-min=1.8km az=306.0*
*TIR **03** 01:57:35.5, 41˚.53N×20˚.27E, h17km±1km, Md3.2, Ml3.3*
*PDG **03** 01:57:35.9±0.1, 41˚.54N×20˚.28E, h11km, MD3.5/2, ML3.3/14, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*
*PRU **03** 01:57:35.8±0.0, 41˚.44N×20˚.33E, h0km*
*BEO **03** 01:57:36.6±0.3, 41˚.49N×20˚.31E, h11km±2km, ML2.8/14*
*THE **03** 01:57:36.6, 41˚.49N×20˚.30E, h0km±1km, ML2.9/10, Error ellipse: s-maj=1.5km s-min=0.5km az=353.0*

ISC 03 01:57:36.4±0.9, 41˚.52N±0˚.01×20˚.27E±0˚.02, h9km±7km, n123, σ1§10/175, 15C-14D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.21**	**37**	P		**Pg**		**01 57 40.8**	**0.0**
PHP				S		**Sg**		**01 57 44.5**	**+0.7**
PHP	**Peshkopia**	**0.21**	**37**	P		**Pg**		**01 57 40.8**	**0.0**
	baz=39								
PHP				S		**Sg**		**01 57 43.9**	**+0.1**
	baz=39								
PHP				AMP					
	comp=N,32nm,0.1s,baz=39								
TIR	**Tirane**	**0.35**	**241**	P		**Pg**		**01 57 43.2**	**-0.1**
TIR				S		**Sb**		**01 57 50.4**	**-0.1**
TIR				AML	AML			01 57 50.5	
	comp=N,13232μm,0.4s								
TIR				AML	AML			01 57 52.1	
	comp=E,10100μm,0.5s								
TIR	**Tirane**	**0.35**	**241**	P		**Pg**		**01 57 43.1**	**-0.3**
TIR				S		**Sb**		**01 57 48.8**	**-1.7**
	comp=E,2μm,0.5s								
TIR	**Tirane**	**0.35**	**241**	*e*Pg		**Pg**		**01 57 43.2**	**-0.1**
TIR				*e*Sg		**Sb**		**01 57 49.1**	**-1.4**
TIR	**Tirane**	**0.35**	**241**	⇓P		**Pg**		**01 57 43.2**	**-0.1**
TIR	**Tirane**	**0.35**	**241**	P		**Pg**		**01 57 43.3**	**-0.1**
	baz=240								
TIR				S		**Sb**		**01 57 48.9**	**-1.6**
	baz=240								
TIR				AMP					
	comp=N,10.0nm,0.3s,baz=240								
TIR	**Tirane**	**0.35**	**241**	⇓*i*Pg		**Pg**		**01 57 43.1**	**-0.3**
OHR	**Ohrid**	**0.57**	**135**	⇑*i*Pg		**Pg**		**01 57 46.5**	**-0.9**
OHR				*i* Sg		**Sb**		**01 57 55.8**	**-0.9**
OHR				*e*Lg		Lg		01 57 55.9	
	comp=N,764nm,0.7s								
OHR				*e*Lg		Lg		01 57 56.5	
	comp=E,391nm,0.4s								
PUK	**Puka**	**0.60**	**332**	P		**Pg**		**01 57 47.6**	**-0.5**
	baz=331								
PUK				S		**Sb**		**01 57 56.9**	**-0.9**
	baz=331								
PUK				AMP					
	comp=N,7.4nm,0.2s,baz=331								
PRZK	**Prizren**	**0.78**	**27**	⇓*i*Pg		**Pg**		**01 57 50.6**	**-1.0**
PRZK				*i* Sg		**Sb**		**01 58 02.7**	**-0.3**
BCI	**Bajram Curri**	**0.86**	**350**	P		**Pg**		**01 57 52.2**	**-0.9**
	baz=350								
BCI				S		**Sb**		**01 58 04.7**	**-0.7**
	baz=350								
ULC	**Ulcinj**	**0.89**	**300**	⇑*i*Pg		**Pg**		**01 57 52.3**	**-1.3**
ULC				*i* Sg		**Sb**		**01 58 06.3**	**+0.2**
ZATK	**Zatriq**	**0.97**	**16**	⇑*i*Pg		**Pg**		**01 57 53.9**	**-1.2**
ZATK				*i* Sg		**Sg**		**01 58 07.6**	**-0.1**
KBN	**Korca**	**0.97**	**156**	P		**Pg**		**01 57 54.5**	**-0.6**
KBN				S		**Sg**		**01 58 07.8**	**0.0**
	comp=N,752nm,0.6s								
KBN	**Korca**	**0.97**	**156**	P		**Pg**		**01 57 54.9**	**-0.3**
	baz=156								
KBN				S		**Sb**		**01 58 09.4**	**+0.9**
	baz=156								
SKO	**Skopje**	**0.98**	**62**	*e*Pg		**Pg**		**01 57 54.1**	**-1.3**
SKO				*e*Sg		**Sg**		**01 58 07.4**	**-0.8**
SKO	**Skopje**	**0.98**	**62**	*i* Pg		**Pg**		**01 57 53.8**	**-1.6**
SKO				*i* Sg		**Sg**		**01 58 08.2**	**+0.1**
DRME	**Dracevica, Mon**	**1.05**	**310**	*e*Pn		**Pg**		**01 57 55.4**	**-1.3**
DRME	**Dracevica, Mon**	**1.05**	**310**	⇓*i*Pg		**Pg**		**01 57 55.2**	**-1.5**
DRME				*i* Sg		**Sn**		**01 58 11.6**	**-0.6**
PVY	**Plav**	**1.10**	**348**	⇓*i*Pg		**Pg**		**01 57 55.9**	**-1.7**
PVY				*i* Sg		**Sb**		**01 58 12.9**	**+0.6**
FNA	**Florina**	**1.11**	**131**	P		**Pg**		**01 57 56.0**	**-1.7**
FNA				AML	AML			01 58 17.2	
	comp=E,2258μm,0.4s								
FNA				AML	AML			01 58 18.4	
	comp=N,3096μm,0.4s								
FNA	**Florina**	**1.11**	**131**	P		**Pg**		**01 57 56.1**	**-1.6**
FNA				S		**Sb**		**01 58 13.3**	**+0.9**
	comp=N,1μm,0.4s								
FNA	**Florina**	**1.11**	**131**	⇑*i*Pg		**Pg**		**01 57 55.7**	**-2.0**
FNA				*i* Sg		**Sn**		**01 58 13.5**	**-0.2**
PDG	**Podgorica**	**1.19**	**321**	*e*Pg		**Pg**		**01 57 57.7**	**-1.6**
PDG				*e*Sg		**Sn**		**01 58 16.2**	**+0.7**
PDG	**Podgorica**	**1.19**	**321**	*e*Pn		**Pg**		**01 57 57.7**	**-1.6**
PDG	**Podgorica**	**1.19**	**321**	*i* Pg		**Pg**		**01 57 57.7**	**-1.6**
PDG				*i* Sg		**Sn**		**01 58 17.1**	**+1.6**
TTG	**Podgorica**	**1.19**	**321**	⇑*i*Pg		**Pg**		**01 57 57.6**	**-1.6**
TTG				*i* Sg		**Sn**		**01 58 16.0**	**+0.5**
VLO	**Vlora**	**1.20**	**210**	P		**Pn**		**01 57 59.2**	**-0.2**
VLO				S		**Sn**		**01 58 15.9**	**+0.1**
	comp=N,708nm,0.6s								
VLO	**Vlora**	**1.20**	**210**	P		**Pg**		**01 57 58.8**	**-0.7**
	baz=210								
VLO				S		**Sn**		**01 58 16.1**	**+0.3**
	baz=210								
NEST	**Nestorio**	**1.25**	**152**	P		**Pg**		**01 57 59.5**	**-0.9**
NEST				AML	AML			01 58 22.9	
	comp=E,828μm,0.7s								
NEST				AML	AML			01 58 25.7	
	comp=N,956μm,0.5s								
NEST	**Nestorio**	**1.25**	**152**	P		**Pg**		**01 57 59.5**	**-0.9**
GJIK	**Gjilan**	**1.28**	**42**	*i* Pg		**Pg**		**01 57 59.6**	**-1.5**
BUM	**Brajici-Budva**	**1.29**	**308**	⇓*i*Pg		**Pg**		**01 57 59.6**	**-1.7**
BUM				*i* Sg		**Sn**		**01 58 19.7**	**+1.5**
BEY	**Berane**	**1.38**	**348**	*i* Pn		**Pn**		**01 58 01.8**	**-0.2**
IVA	**Berane**	**1.38**	**348**	⇓*i*Pg		**Pn**		**01 58 01.1**	**-0.9**
IVA				*i* Sg		**Sn**		**01 58 22.4**	**+1.9**
LSK	**Leskovik**	**1.39**	**170**	P		**Pb**		**01 58 02.3**	**-0.3**
LSK				S		**Sn**		**01 58 21.9**	**+1.4**
	comp=N,658nm,1.0s								
LSK	**Leskovik**	**1.39**	**170**	P		**Pn**		**01 58 02.1**	**+0.1**
	baz=169								
LSK				S		**Sn**		**01 58 22.2**	**+1.7**
	baz=169								
CEME	**Cevo**	**1.44**	**316**	⇑*i*Pg		**Pn**		**01 58 02.3**	**-0.5**
CEME				*i* Sg		**Sg**		**01 58 24.2**	**+1.4**
SMRK	**Smrekonice**	**1.44**	**20**	*i* Pn		**Pn**		**01 58 03.1**	**+0.3**
STIP	**Stip**	**1.45**	**82**	*i* Pn		**Pg**		**01 58 04.9**	**+0.7**
KOME	**Kolasin**	**1.45**	**337**	⇑*i*Pg		**Pn**		**01 58 02.3**	**-0.6**
KOME				*i* Sg		**Sg**		**01 58 24.2**	**+1.2**
PENT	**Pentalofos**	**1.47**	**153**	P		**Pn**		**01 58 03.1**	**-0.1**
PENT				AML	AML			01 58 30.5	
	comp=E,603μm,0.8s								
PENT				AML	AML			01 58 31.1	
	comp=N,404μm,0.4s								
NKME	**Niksic**	**1.59**	**322**	⇓*i*Pg		**Pn**		**01 58 04.7**	**-0.1**
NKME				*i* Sg		**Sg**		**01 58 27.7**	**+0.1**
NKY	**Niksic**	**1.61**	**324**	*e*Pn		**Pn**		**01 58 05.0**	**-0.1**
NKY				*i* Sn		**Sg**		**01 58 28.2**	**0.0**
HCY	**Herceg Novi**	**1.62**	**306**	*e*Pn		**Pn**		**01 58 05.2**	**0.0**
HCY	**Herceg Novi**	**1.62**	**306**	⇑*i*Pn		**Pn**		**01 58 05.2**	**0.0**
HCY				*i* Sn		**Sg**		**01 58 28.7**	**+0.2**
SRN	**Sarande**	**1.65**	**187**	P		**Pb**		**01 58 06.2**	**-0.7**
SRN				S		**Sg**		**01 58 28.9**	**-0.5**
	comp=N,180nm,0.7s								
SRN	**Sarande**	**1.65**	**187**	P		**Pb**		**01 58 06.7**	**-0.3**
	baz=188								
SRN				S		**Sg**		**01 58 30.3**	**+0.9**
	baz=188								
KZN	**Kozani**	**1.66**	**136**	P		**Pn**		**01 58 06.0**	**+0.2**
KZN				AML	AML			01 58 34.4	
	comp=E,679μm,0.4s								
KZN				AML	AML			01 58 37.2	
	comp=N,499μm,0.5s								
KZN	**Kozani**	**1.66**	**136**	P		**Pn**		**01 58 06.4**	**+0.6**
GRG	**Griva**	**1.70**	**109**	P		**Pn**		**01 58 06.1**	**-0.1**
GRG	**Griva**	**1.70**	**109**	P		**Pn**		**01 58 06.2**	**-0.1**
GRG	**Griva**	**1.70**	**109**	*i* Pn		**Pn**		**01 58 06.2**	**-0.1**
BARS	**Barje**	**1.73**	**41**	*e*Pg		**Pb**		**01 58 08.1**	**-0.3**
BARS				*e*Sg		**Sg**		**01 58 31.6**	**-0.5**
BARS	**Barje**	**1.73**	**41**	*i* Pn		**Pb**		**01 58 07.8**	**-0.6**
SJES	**Sjenica**	**1.76**	**353**	*e*Pg		**Pb**		**01 58 08.6**	**-0.3**
SJES				*e*Sg		**Sg**		**01 58 34.2**	**+1.2**
KPRO	**Kipourio**	**1.77**	**152**	P		**Pn**		**01 58 07.5**	**+0.3**
KPRO				AML	AML			01 58 41.6	
	comp=E,498μm,0.9s								
KPRO				AML	AML			01 58 49.0	
	comp=N,464μm,0.8s								
KPRO	**Kipourio**	**1.77**	**152**	P		**Pn**		**01 58 07.6**	**+0.3**
KPRO				S		**Sb**		**01 58 31.1**	**-0.2**
	comp=N,255nm,0.7s								
SELS	**Selova**	**1.81**	**20**	*e*Pn		**Pn**		**01 58 07.1**	**-0.8**
KEK	**Kerkira**	**1.84**	**192**	P		**Pn**		**01 58 08.9**	**+0.7**
KEK				AML	AML			01 58 43.5	
	comp=E,316μm,0.6s								
KEK				AML	AML			01 58 44.9	
	comp=N,432μm,0.8s								
KEK	**Kerkira**	**1.84**	**192**	P		**Pn**		**01 58 08.9**	**+0.7**
KEK				S		**Sb**		**01 58 33.4**	**+0.1**
	comp=N,182nm,0.7s								
TREB	**Trebinje**	**1.87**	**311**	*e*Pn		**Pn**		**01 58 09.4**	**+0.8**
TREB				*e*Sn		**Sb**		**01 58 33.5**	**-0.7**
TREB	**Trebinje**	**1.87**	**311**	*e*Pn		**Pb**		**01 58 10.0**	**-0.7**
BRY	**Bratogost**	**1.89**	**318**	*e*Pn		**Pn**		**01 58 09.7**	**+0.7**
BRY	**Bratogost**	**1.89**	**318**	*e*Pn		**Pn**		**01 58 08.9**	**-0.1**
BRY				*i* Sn		**Sb**		**01 58 35.0**	**0.0**
JAN	**Janina**	**1.91**	**166**	P		**Pg**		**01 58 12.0**	**-1.0**
JAN				AML	AML			01 58 43.2	
	comp=E,574μm,0.5s								
JAN				AML	AML			01 58 46.0	
	comp=N,331μm,0.4s								
BOSS	**Bosilegrad**	**1.91**	**58**	*e*Pn		**Pn**		**01 58 08.8**	**-0.4**
BOSS				*e*Sn		**Sn**		**01 58 32.1**	**-1.4**
PLE	**Pljevlja**	**1.93**	**340**	⇓*i*Pn		**Pn**		**01 58 09.4**	**-0.1**
PLE				*i* Sn		**Sb**		**01 58 35.8**	**-0.2**
UPM	**Unac-Piva**	**1.97**	**329**	*e*Pn		**Pb**		**01 58 12.8**	**+0.3**
UPM	**Unac-Piva**	**1.97**	**329**	⇓*i*Pn		**Pn**		**01 58 10.0**	**-0.1**
UPM				*i* Sn		**Sb**		**01 58 36.8**	**-0.4**
KNT	**Kendrikon**	**2.01**	**99**	P		**Pn**		**01 58 09.9**	**-0.6**
KNT	**Kendrikon**	**2.01**	**99**	P		**Pn**		**01 58 10.0**	**-0.5**
KNT	**Kendrikon**	**2.01**	**99**	*i* Pn		**Pn**		**01 58 10.2**	**-0.3**
IVAS	**Ivanjica**	**2.06**	**358**	*e*Pn		**Pn**		**01 58 11.4**	**+0.1**
IVAS				*e*Sn		**Sn**		**01 58 36.2**	**-1.0**
RUDO	**Rudo**	**2.20**	**343**	*e*Pn		**Pn**		**01 58 14.7**	**+1.5**
THE	**Thessaloniki**	**2.22**	**113**	*i* Pn		**Pn**		**01 58 13.2**	**-0.2**
STON	**Ston**	**2.34**	**306**	*e*Pn		**Pn**		**01 58 15.7**	**+0.6**
THL	**Klokotos Trika**	**2.36**	**145**	P		**Pn**		**01 58 15.8**	**+0.5**
THL				S		**Sb**		**01 58 46.8**	**-1.5**
	comp=N,100nm,0.8s								
GRUS	**Gruza**	**2.39**	**8**	*e*Pn		**Pn**		**01 58 16.2**	**+0.4**
BBLS	**Lazići**	**2.43**	**345**	*e*Pn		**Pn**		**01 58 18.1**	**+1.7**
BBLS	**Lazići**	**2.43**	**345**	*e*Pn		**Pn**		**01 58 18.3**	**+1.9**
VTS	**Vitosha**	**2.46**	**62**	*e*Pn		**Pn**		**01 58 16.7**	**-0.2**
VTS	**Vitosha**	**2.46**	**62**	⇑P		**Pn**		**01 58 17.1**	**+0.2**
ZAPS	**Zavoj**	**2.48**	**44**	*e*Pn		**Pn**		**01 58 18.3**	**+1.3**
ZAPS				*e*Sn		**Sn**		**01 58 46.6**	**-0.8**
DIVS	**Divibare**	**2.59**	**356**	*e*Pn		**Pn**		**01 58 18.8**	**+0.2**
DIVS	**Divibare**	**2.59**	**356**	*e*Pn		**Pn**		**01 58 19.0**	**+0.4**
PLG	**Polygyros**	**2.66**	**114**	P		**Pn**		**01 58 19.6**	**+0.1**
NVR	**Nevrokopi**	**2.70**	**92**	P		**Pn**		**01 58 20.2**	**+0.1**
NVR				S		**Sn**		**01 58 55.6**	**+2.6**
	comp=N,60nm,1.0s								
ZAGS	**Zajecar**	**2.71**	**32**	*e*Pn		**Pn**		**01 58 21.6**	**+1.4**
LKD2	**Lefkada island**	**2.74**	**174**	P		**Pn**		**01 58 21.2**	**+0.6**
HAPS	**Han Pijesak,Bl**	**2.75**	**340**	*e*Pn		**Pn**		**01 58 21.5**	**+0.7**
HAPS	**Han Pijesak,Bl**	**2.75**	**340**	*e*Pn		**Pn**		**01 58 21.7**	**+0.9**
NYDR	**Nydri-Lefkada**	**2.82**	**173**	P		**Pn**		**01 58 22.2**	**+0.6**
NYDR				S		**Sn**		**01 58 57.8**	**+2.1**
DRAG	**Dragano-Lefkad**	**2.84**	**175**	P		**Pn**		**01 58 22.1**	**+0.2**
MAKR	**Makrakomi, Fth**	**2.88**	**150**	P		**Pn**		**01 58 23.2**	**+0.7**
AGG	**Agios Georgios**	**2.95**	**147**	P		**Pn**		**01 58 23.6**	**+0.2**
HVAR	**Hvar**	**3.29**	**302**	*e*Pn		**Pn**		**01 58 28.4**	**+0.3**
MDVR	**Moldovita**	**3.43**	**17**	⇑P		**Pn**		**01 58 32.5**	**+2.4**
TIP	**Timpagrande**	**3.56**	**230**	⇑P		**Pn**		**01 58 31.1**	**-0.8**
FRGS	**Fruska Gora**	**3.66**	**355**	*e*Pn		**Pn**		**01 58 32.8**	**-0.4**
FRGS	**Fruska Gora**	**3.66**	**355**	*e*Pn		**Pn**		**01 58 33.5**	**+0.3**
HERR	**Herculane**	**3.71**	**24**	⇑P		**Pn**		**01 58 34.6**	**+0.7**
MGRS	**Mrkonjic Grad**	**3.73**	**322**	*e*Pn		**Pn**		**01 58 35.5**	**+1.3**
BLY	**Banja Luka**	**3.94**	**326**	*e*Pn		**Pn**		**01 58 38.0**	**+0.9**
BZS	**Buzias**	**4.21**	**13**	⇓P		**Pn**		**01 58 42.7**	**+1.8**
GZR	**Gura Zlata**	**4.28**	**24**	⇓P		**Pn**		**01 58 43.0**	**+1.1**
MORH	**Mrgy, Hungar**	**4.84**	**346**	⇑P		**Pn**		**01 58 50.7**	**+1.3**
MORH	**Mrgy, Hungar**	**4.84**	**346**	*e*Pn		**Pn**		**01 58 49.7**	**+0.3**
ARR	**Arges**	**4.99**	**38**	⇑P		**Pn**		**01 58 52.4**	**+0.8**
AQU	**L'Aquila**	**5.19**	**282**	*e*Pn		**Pn**		**01 58 52.0**	**-2.3**
VOIR		**5.24**	**40**	⇓P		**Pn**		**01 58 57.1**	**+2.1**
CRES	**Cresnjev**	**5.55**	**323**	*e*Pn		**Pn**		**01 58 59.6**	**+0.5**
DRGR		**5.56**	**18**	⇑P		**Pn**		**01 59 01.6**	**+2.2**
CEY	**Cerknica**	**5.98**	**317**	*e*Pn		**Pn**		**01 59 05.4**	**+0.2**
SOKA	**Soboth**	**6.39**	**326**	*i* Pn		**Pn**		**01 59 12.2**	**+1.4**
	comp=N,2.3nm,0.5s								
SOKA				*e*Sn		**Sn**		**02 00 24.4**	**+0.5**
	comp=N,0.8nm,0.3s								
PSZ	**Piszkesteto**	**6.41**	**358**	⇓P		**Pn**		**01 59 13.0**	**+2.0**
OBKA	**Obir**	**6.47**	**322**	*e*Pn		**Pn**		**01 59 14.1**	**+2.2**
	comp=N,0.6nm,0.2s								
MOA	**Molln**	**7.64**	**328**	*e*Pn		Pn		01 59 36.5	+8.6
	comp=N,1.2nm,0.4s								
MOA				*e*Sn		**Sn**		**02 00 59.6**	**+5.0**
	comp=N,1.9nm,0.4s								
ABTA	**Abfaltersbach**	**7.65**	**316**	*i* Pn		**Pn**		**01 59 29.5**	**+1.4**
	comp=N,0.8nm,0.2s								
ABTA				*e*Sn		**Sn**		**02 00 55.3**	**+0.4**
	comp=N,4.1nm,0.6s								
SQTA	**Sankt Quirin**	**8.64**	**314**	*e*Pn		**Pn**		**01 59 44.2**	**+2.5**
	comp=N,0.7nm,0.2s								
MOTA	**Moosalm**	**8.77**	**315**	*i* Pn		**Pn**		**01 59 46.3**	**+2.8**
	comp=N,2.0nm,0.6s								
KHC	**Kasperske Hory**	**8.95**	**331**	*e*PN		**Pn**		**01 59 44.7**	**-1.2**

*IDC **03** 01:58:58.6±0.7, 20˚.68S×67˚.68W, h144km±6km, mb4.1/15, mb1 4.3/20, mb1mx4.2/36, mbtmp4.6/20, MS3.5/1, Ms1 3.4/1, ms1mx2.8/23, Error ellipse: s-maj=12.5km s-min=8.3km az=120.0*
*SJA **03** 01:58:59.2±0.6, 20˚.78S×68˚.06W, h191km±5km, ML4.7, MW4.3*
*NEIC **03** 01:58:59.2±3.2, 20˚.78S±0˚.05×67˚.73W±0˚.08, h159km±6km, mb4.6/132, Error ellipse: s-maj=11.1km s-min=7.8km az=94.0*
*VAO **03** 01:59:00.5±0.4, 20˚.67S×67˚.66W, h159km±4km, mb4.7*

ISC 03 01:58:59.7±0.5, 20.75S±0˚.03×67.86W±0˚.04, h162km±4km, n272, σ1§50/265, mb4.5/77, 16C, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.36**	**296**	⇑*i*P		**Pn**		**01 59 30.3**	**+1.1**
PB08				*i* S		**Sn**		**01 59 52.8**	**+0.9**
PB08	**IPOC Station P**	**1.36**	**296**			**Pn**		**01 59 30.3**	**+1.1**
PB08					Sn	**Sn**		**01 59 53.6**	**+1.8**
PB08	**IPOC Station P**	**1.36**	**296**	*e*S		**Sn**		**01 59 53.8**	**+2.0**
PB08				IAML				01 59 55.2	
	comp=Z,2μm,0.3s								
PB01	**IPOC Station P**	**1.55**	**259**	⇑*i*P		**Pn**		**01 59 31.0**	**+0.2**
PB01				*i* S		**Sn**		**01 59 54.2**	**-0.6**
PB01				IAML				01 59 56.5	
	comp=N,8μm,0.4s								
PB01	**IPOC Station P**	**1.55**	**259**			**Pn**		**01 59 31.0**	**+0.2**
PB01	**IPOC Station P**	**1.55**	**259**	*e*S		**Sn**		**01 59 54.6**	**-0.2**
PB01				IAML				01 59 56.9	
	comp=Z,3μm,0.2s								
PB09	**IPOC Station P**	**1.66**	**231**	⇑*i*P		**Pn**		**01 59 33.1**	**+1.0**
PB09				*i* S		**Sn**		**01 59 57.4**	**+0.4**
PB09	**IPOC Station P**	**1.66**	**231**			**Pn**		**01 59 33.1**	**+1.0**
PB09	**IPOC Station P**	**1.66**	**231**	*e*P		**Pn**		**01 59 33.0**	**+1.0**
PB09				*e*S		**Sn**		**01 59 57.9**	**+0.9**
PB09				IAML				01 59 59.1	
	comp=Z,4μm,1.0s								
PB11	**IPOC Station P**	**1.95**	**300**	⇑*i*P		**Pn**		**01 59 35.6**	**+0.3**
PB11				*i* S		**Sn**		**02 00 01.9**	**-0.6**
PB11				IAML				02 00 04.5	
	comp=E,15μm,0.3s								
PB11	**IPOC Station P**	**1.95**	**300**			**Pn**		**01 59 35.4**	**+0.1**
PB11	**IPOC Station P**	**1.95**	**300**	*e*P		**Pn**		**01 59 35.5**	**+0.3**
PB11				*e*S		**Sn**		**02 00 02.6**	**0.0**
PB11				IAML				02 00 06.2	
	comp=Z,5μm,0.5s								
LVC	**Limon Verde**	**2.10**	**208**	P		**Pn**		**01 59 37.9**	**+0.8**
	comp=Z,215nm,0.3s,baz=16,slow=8.2,SNR=1317								
LVC				S		**Sn**		**02 00 05.6**	**-0.4**
	comp=Z,174nm,0.3s,baz=222,slow=21,SNR=30								
LVC	**Limon Verde**	**2.10**	**208**	*e*P		**Pn**		**01 59 37.9**	**+0.8**
LVC				*i* S		**Sn**		**02 00 06.2**	**+0.3**
LVC	**Limon Verde**	**2.10**	**208**	*e*P		**Pn**		**01 59 38.0**	**+0.8**
LVC	**Limon Verde**	**2.10**	**208**	*e*P		**Pn**		**01 59 37.9**	**+0.8**
LVC				*e*S		**Sn**		**02 00 06.4**	**+0.4**
PB07	**IPOC Station P**	**2.13**	**242**	⇑*i*P		**Pn**		**01 59 37.2**	**-0.1**
PB07				*i* S		**Sn**		**02 00 04.7**	**-1.5**
PB07				IAML				02 00 06.4	
	comp=N,9μm,0.3s								
PB07	**IPOC Station P**	**2.13**	**242**			**Pn**		**01 59 37.1**	**-0.1**
PB07	**IPOC Station P**	**2.13**	**242**	*e*P		**Pn**		**01 59 37.2**	**-0.1**
PB07				*e*S		**Sn**		**02 00 05.6**	**-0.6**
PB07				IAML				02 00 06.9	
	comp=Z,5μm,0.5s								
TA01	**Diego Aracena**	**2.18**	**274**	⇑*i*P		**Pn**		**01 59 37.3**	**-0.4**
TA01				*i* S		**Sn**		**02 00 04.7**	**-2.2**
TA01				IAML				02 00 06.0	
	comp=E,11μm,0.3s								
TA01	**Diego Aracena**	**2.18**	**274**	Pn		**Pn**		**01 59 37.2**	**-0.4**
PB03	**IPOC Station P**	**2.19**	**233**	⇑*i*P		**Pn**		**01 59 38.0**	**+0.1**
PB03				*i* S		**Sn**		**02 00 06.1**	**-1.4**
PB03				IAML				02 00 07.1	
	comp=E,7μm,0.1s								
PB03	**IPOC Station P**	**2.19**	**233**	*e*P		**Pn**		**01 59 38.0**	**+0.1**
PB03				*e*S		**Sn**		**02 00 06.4**	**-1.1**
PB03				IAML				02 00 08.6	
	comp=Z,4μm,0.3s								
MNMC	**Minye Minye**	**2.29**	**314**	⇑*i*P		**Pn**		**01 59 40.3**	**+1.0**
MNMC				*i* S		**Sn**		**02 00 10.3**	**+0.5**
MNMC	**Minye Minye**	**2.29**	**314**	Pn		**Pn**		**01 59 39.8**	**+0.5**
MNMCX	**Minye Minye**	**2.29**	**314**	*e*P		**Pn**		**01 59 40.2**	**+0.9**
PSGC	**Pisagua**	**2.42**	**298**	⇑*i*P		**Pn**		**01 59 40.2**	**-0.3**
PSGC				*i* S		**Sn**		**02 00 09.9**	**-2.2**
PSGC				IAML				02 00 12.3	
	comp=E,6μm,0.3s								
PSGCX	**Pisagua**	**2.42**	**298**	Pn		**Pn**		**01 59 40.1**	**-0.4**
PSGCX	**Pisagua**	**2.42**	**298**	*e*P		**Pn**		**01 59 40.2**	**-0.4**
PB06	**IPOC Station P**	**2.52**	**219**	⇑*i*P		**Pn**		**01 59 42.1**	**+0.2**
PB06				*i* S		**Sn**		**02 00 13.5**	**-0.9**
PB06				IAML				02 00 14.6	
	comp=E,5μm,0.2s								
PB06	**IPOC Station P**	**2.52**	**219**			**Pn**		**01 59 41.6**	**-0.3**
PB06	**IPOC Station P**	**2.52**	**219**	*e*P		**Pn**		**01 59 42.1**	**+0.2**
PB06				*e*S		**Sn**		**02 00 13.6**	**-0.9**
PB06				IAML				02 00 16.3	
	comp=Z,2μm,0.2s								
YJA	**Yavi**	**2.60**	**124**	*e*P		**Pn**		**01 59 44.7**	**+1.6**
YJA				*e*S		**Sn**		**02 00 19.1**	**+2.4**
PB04	**IPOC Station P**	**2.66**	**233**	⇑*i*P		**Pn**		**01 59 43.1**	**-0.4**
PB04				*i* S		**Sn**		**02 00 15.1**	**-2.3**
PB04				IA

PLCA **Paso Flores** 20.05 186 P **P** 02 03 21.0 **+0.6**
comp=Z,24nm,0.9s,baz=11,slow=11,SNR=30
PLCA **Paso Flores** 20.05 186 P **P** 02 03 17.4 **-3.0**
PLCA IAmb IAmb 02 03 25.3
comp=Z,20nm,0.8s
PLCA **Paso Flores** 20.05 186 *e*P **P** 02 03 22.1 **+1.7**
ITTB **Itaituba** 20.10 38 *e*P **P** 02 03 19.5 **-1.6**
PEXB **Peixe** 20.61 68 *e*P **P** 02 03 25.8 **-0.8**
PARB **Paraibuna** 20.77 101 *e*P **P** 02 03 26.4 **-1.8**
PTGA **Pitinga** 21.34 22 P **P** 02 03 32.4 **-1.8**
comp=Z,21nm,0.4s,baz=193,slow=15,SNR=76
PTGA **Pitinga** 21.34 22 P **P** 02 03 31.7 **-2.6**
PTGA **Pitinga** 21.34 22 *e*P **P** 02 03 32.2 **-2.0**
BSCB **Bom Sucesso** 21.57 95 *e*P **P** 02 03 35.5 **-1.3**
ESAR **Angra dos Reis** 21.84 100 *e*P **P** 02 03 39.0 **-0.5**
LL01 **San Ignacio de** 21.91 189 P **P** 02 03 38.9 **-1.0**
LL01 IAmb IAmb 02 03 42.5
comp=Z,31nm,0.9s
PRPB **Parauapebas** 22.71 53 *e*P **P** 02 03 46.1 **-1.9**
VAS01 **Vassouras-RJ** 22.76 98 *e*P **P** 02 03 47.2 **-1.2**
SMTB **Santa Maria do** 22.85 62 *e*P **P** 02 03 48.2 **-1.1**
DIAM **Diamantina, MG** 22.92 88 *e*P **P** 02 03 48.7 **-1.3**
MALB **Monte Alegre** 22.99 37 *e*P **P** 02 03 48.9 **-1.6**
JANB **Januaria** 23.10 80 *e*P **P** 02 03 50.1 **-1.4**
OTAV **Otavalo** 23.29 332 P **P** 02 03 55.1 **+1.5**
OTAV **Otavalo** 23.29 332 *e*P **P** 02 03 54.3 **+0.6**
SDBA **SAO DESIDERIO** 23.49 73 *e*P **P** 02 03 53.9 **-1.2**
MACC **Macarena, Meta** 23.50 345 *e*P **P** 02 03 58.6 **+3.6**
BOAV **Boa Vista** 24.10 18 *e*P **P** 02 04 00.6 **+0.1**
BBAC **Balboa, Cauca** 24.43 337 *e*P **P** 02 04 05.4 **+1.6**
SJMB **Sao Joao De Ma** 25.18 90 *e*P **P** 02 04 09.8 **-0.6**
MCPB **Macapa, AP** 25.48 39 *e*P **P** 02 04 12.0 **-1.0**
ORTC **Ortega, Tolima** 25.55 343 *e*P **P** 02 04 15.0 **+1.2**
RIB01 **Linhares ES** 25.83 92 *e*P **P** 02 04 15.7 **-0.6**
YOTC **Yotoco, Valle** 25.95 340 *e*P **P** 02 04 17.9 **+0.4**
ROSC **El Rosal** 26.21 345 P **P** 02 04 20.4 **+0.4**
comp=Z,4.1nm,0.4s,baz=267,slow=21,SNR=2.3
ROSC **El Rosal** 26.21 345 P **P** 02 04 20.1 **0.0**
ROSC IAmb IAmb 02 04 40.8
comp=Z,12nm,1.2s
TOLC **Tolima** 26.22 343 *e*P **P** 02 04 17.9 **-2.2**
GUY2C **Guyana, Caldas** 26.84 343 *e*P **P** 02 04 26.5 **+0.7**
SPBC **San Pablo de B** 26.93 346 *e*P **P** 02 04 23.6 **-2.6**
RUSC **La Rusia** 26.97 348 *e*P **P** 02 04 27.5 **+0.6**
NORC **Norcasia** 27.04 344 *e*P **P** 02 04 27.4 **+0.3**
CBOC **Ciudad Bolivar** 27.63 342 *e*P **P** 02 04 31.3 **-1.2**
NBIT **Itapeh - BA** 27.64 83 *e*P **P** 02 04 32.1 **-0.4**
GDU01 **Guandu, BA** 27.87 80 *e*P **P** 02 04 32.6 **-1.9**
PTBC **PUERTO BERRIO,** 27.88 346 *e*P **P** 02 04 31.3 **-3.3**
SDV **Santo Domingo** 29.57 354 P **P** 02 04 49.3 **-0.4**
comp=Z,2.0nm,0.3s,baz=153,slow=11,SNR=5.3
SDV **Santo Domingo** 29.57 354 P **P** 02 04 49.3 **-0.4**
MDP **Montagnes des** 29.71 32 P **P** 02 04 49.8 **-1.0**
comp=Z,15nm,0.9s,baz=175,slow=4.9,SNR=12
NBPS **Pedro II - PI** 30.39 61 *e*P **P** 02 04 55.3 **-1.6**
NBLA **Lagarto - SE** 30.45 76 *e*P **P** 02 04 55.6 **-1.7**
PCRV **Puerto La Cruz** 30.89 6 P **P** 02 05 01.7 **+0.5**
comp=Z,8.3nm,0.4s,baz=9.2,slow=3.5,SNR=14
NBMA **Muriti-CE** 31.12 69 *e*P **P** 02 05 02.4 **-0.9**
NBPB **Pedra_Branca-C** 31.32 65 *e*P **P** 02 05 04.2 **-0.8**
NBMO **Morrinhos-CE** 32.15 61 *e*P **P** 02 05 11.8 **-0.5**
NBAN **Anadia - AL** 32.34 75 *e*P **P** 02 05 12.6 **-1.3**
NBLI **Livramento-PB** 32.72 70 *e*P **P** 02 05 17.1 **-0.2**
RIOS **Rincon, Osa** 33.06 331 P **P** 02 05 21.4 **+1.2**
NBCL **Cascavel-CE** 33.11 64 *e*P **P** 02 05 20.3 **-0.2**
NBPA **Parau_RN** 33.34 68 *e*P **P** 02 05 21.8 **-0.8**
NBRF **Rio Formoso -** 33.77 74 *e*P **P** 02 05 25.4 **-0.9**
NBPV **Pedro Velho** 34.61 70 *e*P **P** 02 05 33.0 **-0.6**
ANWB **Willy Bob** 38.64 9 P **P** 02 06 06.6 **-0.9**
PMSA **Palmer Station** 44.08 178 *e*P **P** 02 06 53.8 **+2.6**
352A **Blakely** 54.45 342 P **P** 02 08 10.2 **-0.2**
ZAIG **Zacatecas** 54.93 320 P **P** 02 08 15.1 **+0.7**
ZAIG IAmb IAmb 02 08 17.5
comp=Z,7.9nm,0.9s
833A **Chaparral WMA,** 57.52 327 P 02 08 33.4
baz=145
X48A **Hartselle** 57.85 341 IAmb IAmb 02 08 35.2
comp=Z,8.5nm,0.8s
SWET **Sewanee** 58.24 343 IAmb IAmb 02 08 37.9
comp=Z,8.5nm,0.8s
OXF **Oxford** 58.65 339 P 02 08 39.6
baz=156
OXF **Oxford** 58.65 339 P **P** 02 08 39.4 **-0.6**
PLAL **Pickwick Lake** 58.66 341 IAmb IAmb 02 08 40.8
comp=Z,9.5nm,1.0s
V48A **Smith Brothers** 58.98 342 IAmb IAmb 02 08 43.1
comp=Z,9.5nm,0.8s
CLTN **Cedars of Leba** 59.17 343 IAmb IAmb 02 08 44.3
comp=Z,8.1nm,0.8s
JCT **Junction City** 59.48 328 P 02 08 47.0
baz=145
JCT **Junction City** 59.48 328 IAmb IAmb 02 08 47.5
comp=Z,9.8nm,1.0s
WVT **Waverly** 59.64 341 P 02 08 46.4
baz=158
WVT **Waverly** 59.64 341 P **P** 02 08 45.7 **-1.1**
R54A **Victor** 59.90 348 P 02 08 49.2
baz=166
MIAR **Mount Ida** 60.18 336 P 02 08 50.9
baz=152,SNR=5.8
MIAR **Mount Ida** 60.18 336 IAmb IAmb 02 08 52.3
comp=Z,10nm,1.1s
W41B **Gary Mavity, V** 60.24 337 P 02 08 50.7
baz=154
VNA3 **Neumayer Olymp** 60.47 162 P **P** 02 08 53.2 **+1.2**
TXAR **Lajitas Array** 60.59 324 P **P** 02 08 54.2 **+0.7**
comp=Z,1.5nm,0.8s,baz=150,slow=7.5,SNR=15
TXAR **Lajitas Array** 60.59 324 P **P** 02 08 53.2 **-0.2**
Z35A **Perchaven, San** 60.65 332 P **P** 02 08 54.2 **+0.5**
LCAR **Lake Charles** 60.66 338 IAmb IAmb 02 08 54.7
comp=Z,9.8nm,1.3s
Q53A **Leroy** 60.66 348 P 02 08 54.1
baz=165
W39A **Magazine** 60.83 336 P 02 08 56.1
baz=152,SNR=5.6
W39A **Magazine** 60.84 336 IAmb IAmb 02 08 56.8
comp=Z,9.6nm,0.9s
FCAR **Ozark Folk Cen** 60.84 338 IAmb IAmb 02 08 55.5
comp=Z,7.0nm,0.9s
VNA2 **Neumayer--Watz** 61.04 161 P **P** 02 08 57.2 **+1.4**
baz=284,slow=8.1
ABTX **Abilene, Hawle** 61.16 330 P 02 08 58.5
baz=146
U40A **Yellville** 61.52 337 P 02 09 00.0
baz=153
U40A **Yellville** 61.52 337 **P** 02 08 59.4 **-0.1**
U40A IAmb IAmb 02 09 00.5
comp=Z,6.8nm,0.9s
P52A **Corning** 61.53 347 P 02 08 59.8
baz=165
HHAR **Hobbs** 61.85 336 IAmb IAmb 02 09 02.4
comp=Z,5.1nm,0.9s
O53A **New Philadelph** 61.94 348 P 02 09 02.7
baz=166
P49A **Miami Univ. Ec** 62.00 345 P 02 09 02.2
baz=162
MGMO **Mountain Grove** 62.02 338 IAmb IAmb 02 09 03.9
comp=Z,7.8nm,0.9s
FVM **French Village** 62.15 340 P **P** 02 09 03.8 **+0.1**
ACSO **Alum Creek Sta** 62.28 347 P 02 09 04.8
baz=164
L63A **North Scituate** 62.39 357 P 02 09 05.7
baz=176
CCM **Cathedral Cave** 62.48 339 P 02 09 06.1
baz=155
CCM **Cathedral Cave** 62.49 339 **P** 02 09 05.8 **-0.1**
M56A **Emporium** 62.65 351 P 02 09 07.5
baz=169
SNAA **Sanae** 62.67 161 P **P** 02 09 07.7 **+0.9**
M54A **Oil Creek Stat** 62.90 350 P 02 09 08.9
baz=168
R40A **Maddies Statio** 63.04 339 IAmb IAmb 02 09 10.4
comp=Z,9.0nm,1.0s
MNTX **Cornudas Mount** 63.35 324 P 02 09 12.1
baz=140
MNTX **Cornudas Mount** 63.35 324 P **P** 02 09 11.7 **-0.1**
MNTX IAmb IAmb 02 09 12.9
comp=Z,7.6nm,1.1s
SFIN **Lafayette** 63.40 344 P 02 09 11.3
baz=160
ERPA **Erie** 63.54 350 P 02 09 13.3
baz=167
MSTX **Muleshoe** 63.77 328 P 02 09 15.2
baz=143
AMTX **Amarillo** 63.98 329 P 02 09 16.9
baz=145
AMTX **Amarillo** 63.98 329 IAmb IAmb 02 09 17.2
comp=Z,7.2nm,0.9s
P40A **Paris** 64.08 339 IAmb IAmb 02 09 17.2
comp=Z,6.8nm,0.8s
J59A **Piesco** 64.18 355 P 02 09 18.1
baz=173
HSIG 64.62 319 P **P** 02 09 21.4 **+1.3**
HSIG IAmb IAmb 02 09 22.8
comp=Z,7.3nm,0.9s
121A **Cookes Peak, D** 65.30 323 P 02 09 26.9
baz=139
121A **Cookes Peak, D** 65.30 323 IAmb IAmb 02 09 27.7
comp=Z,8.7nm,1.0s
BNM **Barren Site** 65.90 325 P **P** 02 09 29.1 **+0.6**
ANMO **Albuquerque** 66.42 326 P 02 09 33.1
baz=140
ANMO **Albuquerque** 66.42 326 **P** 02 09 32.8 **+1.0**
ANMO IAmb IAmb 02 09 34.4
comp=Z,6.1nm,1.0s
TUC **Tucson** 66.86 321 P 02 09 36.3
baz=136
T25A **Trinidad** 67.10 329 P 02 09 37.6
baz=143
LIC **Lamto** 67.23 74 *e*P **P** 02 09 36.1 **-1.0**
comp=Z,15nm,0.4s
TIC **Toumodi** 67.42 73 *e*P **P** 02 09 37.3 **-1.0**
D63A **Stockholm** 67.46 360 P 02 09 38.4
baz=180
D62A **Allapoint, All** 67.52 359 P 02 09 38.7
baz=179
KIC **Kosan Boka** 67.55 74 *e*P **P** 02 09 38.3 **-0.8**
comp=Z,27nm,0.4s
DBIC **Dimbokro** 67.58 73 P **P** 02 09 38.0 **-1.3**
comp=Z,11nm,0.5s,baz=225,slow=5.0,SNR=29
DBIC **Dimbokro** 67.58 73 P **P** 02 09 38.5 **-0.8**
D55A **Sainte-Anne-du** 67.80 354 P 02 09 40.0
baz=172
214A **Organ Pipe Nat** 67.82 320 P 02 09 42.9
baz=134
214A **Organ Pipe Nat** 67.82 320 P **P** 02 09 41.4 **+1.0**
214A IAmb IAmb 02 09 43.8
comp=Z,8.8nm,1.0s
BGNE **Belgrade** 67.92 336 P 02 09 41.7
baz=149
W18A **Petrified Fore** 68.31 324 P 02 09 45.7
baz=138
S22A **4UR Ranch, Cre** 68.77 328 P 02 09 47.9
baz=141
Q24A **Divide** 68.90 330 P 02 09 49.3
baz=143,SNR=8.9
MVCO **Mesa Verde** 69.21 326 P 02 09 51.1
baz=139
MVCO **Mesa Verde** 69.21 326 P **P** 02 09 49.2 **0.0**
MVCO IAmb IAmb 02 09 52.0
comp=Z,12nm,1.1s
WUAZ **Wupatki** 69.51 323 P 02 09 53.4
baz=137
WUAZ **Wupatki** 69.51 323 IAmb IAmb 02 09 54.9
comp=Z,13nm,0.9s
ISCO **Idaho Springs** 69.78 330 P 02 09 54.6
baz=142,SNR=6.7
PV01 **Paradox Valley** 69.95 327 IAmb IAmb 02 09 56.8
comp=Z,8.2nm,1.0s
PV15 **Paradox Valley** 70.06 327 IAmb IAmb 02 09 57.6
comp=Z,12nm,1.1s
BC3 **Big Chuckawall** 70.60 319 P 02 10 00.1
baz=133
N23A **Red Feather La** 70.80 330 P 02 10 00.8
baz=142
O20A **White River Ci** 71.31 328 P 02 10 03.7
baz=140,SNR=8.4
O20A **White River Ci** 71.31 328 IAmb IAmb 02 10 04.7
comp=Z,11nm,0.9s
KNB **Kanab** 71.40 323 P **P** 02 10 04.6 **+2.1**
GMRC **Granite Mounta** 71.49 320 P 02 10 05.5
baz=133,SNR=8.2
SRU **San Rafael Swe** 71.69 326 IAmb IAmb 02 10 06.8
comp=Z,14nm,1.0s
KOWA **Kowa** 71.82 66 P **P** 02 10 04.2 **-1.0**
KOWA IAmb IAmb 02 10 05.4
comp=Z,22nm,1.2s
Q16A **Castle Valley** 71.89 326 IAmb IAmb 02 10 09.1
comp=Z,12nm,1.1s
P17A **Butcher Ranch,** 72.07 326 IAmb IAmb 02 10 09.2
comp=Z,13nm,0.9s
CCUT **Cedar City** 72.08 323 IAmb IAmb 02 10 10.5
comp=Z,12nm,1.0s
K22A **Casper** 72.46 331 P 02 10 10.6
baz=142
RSSD **Black Hills** 72.55 334 P 02 10 11.3
baz=145
RSSD **Black Hills** 72.56 334 P **P** 02 10 10.6 **+1.3**
MPU **Maple Canyon** 72.94 326 IAmb IAmb 02 10 14.5
comp=Z,8.2nm,1.0s
AGMN **Agassiz Nation** 73.16 341 P 02 10 13.3
baz=153
JLU **Jordanelle** 73.27 327 IAmb IAmb 02 10 16.6
comp=Z,9.4nm,1.0s
TPNV **Topopah Spring** 73.31 321 P 02 10 16.5
baz=133,SNR=6.4
FURC **Furnace Creek,** 73.35 321 P 02 10 16.9
baz=132
TCUT **Toone Canyon** 73.63 327 IAmb IAmb 02 10 18.4
comp=Z,7.1nm,0.8s
DUG **Dugway, Tooele** 73.68 326 P 02 10 17.9
baz=136,SNR=6.3
DUG **Dugway, Tooele** 73.68 326 IAmb IAmb 02 10 19.0
comp=Z,8.5nm,1.1s
ISA **Isabella, Lake** 73.79 319 P 02 10 19.5
baz=131
R11A **Troy Canyon, C** 73.89 323 P 02 10 19.6
baz=134,SNR=5.1
BW06 **Boulder Array** 73.96 329 P 02 10 18.3
baz=140
PDAR **Pinedale Array** 73.96 329 P **P** 02 10 18.5 **+1.0**
comp=Z,0.8nm,0.4s,baz=125,slow=8.8,SNR=19
PDAR **Pinedale Array** 73.96 329 P **P** 02 10 18.3 **+0.8**
CWC **Cottonwood Cre** 74.06 320 P 02 10 19.8
baz=132
VES **Vestal, Richgr** 74.28 319 P 02 10 21.9
baz=131
BGU **Big Grassy Mou** 74.33 326 IAmb IAmb 02 10 22.3
comp=Z,9.4nm,1.1s
HVU **Hansel Valley** 74.81 327 IAmb IAmb 02 10 24.9
comp=Z,10nm,1.0s
ULM **Lac du Bonnet** 74.90 342 P **P** 02 10 22.4 **-0.1**
comp=Z,2.2nm,0.4s,baz=141,slow=6.2,SNR=8.0
ULM **Lac du Bonnet** 74.90 342 IAmb IAmb 02 10 23.4
comp=Z,12nm,1.4s
SNOW **Snow King Moun** 75.06 329 IAmb IAmb 02 10 26.6
comp=Z,8.7nm,0.8s
SCHQ **Schaefferville** 75.28 1 P **P** 02 10 22.3 **-2.3**
FLWY **Flagg Ranch** 75.50 330 IAmb IAmb 02 10 29.6
comp=Z,17nm,0.9s
NVAR **Mina Array Bea** 75.52 321 P **P** 02 10 27.9 **+1.3**
comp=Z,1.5nm,0.9s,baz=136,slow=6.2,SNR=8.6
NVAR pP **pP** 02 11 10.3 **+3.0**
comp=Z,1.5nm,0.8s,baz=147,slow=6.6,SNR=5.5
LAO **LASA Array** 75.54 334 P 02 10 27.7
baz=143
LAO **LASA Array** 75.54 334 IAmb IAmb 02 10 29.1
comp=Z,9.7nm,1.1s
RLMT **Red Lodge** 75.62 331 P 02 10 28.7
baz=140
RLMT **Red Lodge** 75.63 331 IAmb IAmb 02 10 29.8
comp=Z,8.7nm,0.8s
H17A **Grant Village** 75.67 330 P 02 10 29.9
baz=139
YMP **Mirror Lake Pl** 75.74 330 IAmb IAmb 02 10 48.7
comp=Z,12nm,1.0s
YMR **Madison River** 76.06 330 IAmb IAmb 02 10 33.8
comp=Z,17nm,1.0s
TOA0 **Torodi Ar. Sit** 76.18 70 P **P** 02 10 29.7 **-0.8**
TORD **Torodi Ar. Bea** 76.18 70 P **P** 02 10 30.0 **-0.5**
comp=Z,34nm,0.5s,baz=254,slow=5.3,SNR=542
TORD **Torodi Ar. Bea** 76.18 70 P **P** 02 10 30.0 **-0.5**
DGMT **Dagmar** 76.18 336 P 02 10 32.1
baz=145
DGMT **Dagmar** 76.18 336 IAmb IAmb 02 10 32.5
comp=Z,18nm,1.1s
YHB **Horse Butte** 76.23 330 IAmb IAmb 02 10 34.3
comp=Z,11nm,0.9s
YHL **Hebgen Lake** 76.30 330 IAmb IAmb 02 10 34.5
comp=Z,8.1nm,0.9s
HLID **Hailey** 76.94 327 P 02 10 37.0
baz=136
HLID **Hailey** 76.94 327 IAmb IAmb 02 10 37.9
comp=Z,11nm,1.0s
BCYI **Bear Canyon** 76.97 328 P **P** 02 10 36.4 **+1.7**
PAHR **Pah Rah Range** 76.99 322 IAmb IAmb 02 10 38.1
comp=Z,9.1nm,0.9s
BOZ **Bozeman (W)** 77.07 330 P 02 10 36.5
baz=138
BOZ **Bozeman (W)** 77.07 330 P **P** 02 10 36.3 **+1.2**
DLMT **Dillon** 77.35 329 IAmb IAmb 02 10 40.3
comp=Z,12nm,1.3s
VNDA **Vanda** 77.76 190 P **P** 02 10 41.1 **+2.8**
comp=Z,1.6nm,0.9s,baz=181,slow=3.2,SNR=7.2
EGMT **Eagleton** 78.07 333 P 02 10 42.0
baz=140
EGMT **Eagleton** 78.07 333 IAmb IAmb 02 10 42.6
comp=Z,11nm,1.1s
ORV **Oroville** 78.14 320 IAmb IAmb 02 10 44.1
comp=Z,13nm,1.2s
MSO **Missoula** 79.06 330 P 02 10 48.5
baz=137
BMO **Blue Mountains** 79.32 327 P **P** 02 10 49.0 **+1.6**
BMO IAmb IAmb 02 10 50.2
comp=Z,9.5nm,1.1s
M04C **Macdoel** 79.75 322 P 02 10 51.5
baz=130
J05D **Fort Rock, OR** 80.38 324 P 02 10 55.2
baz=130
PINE **Pine Mountain** 80.55 324 IAmb IAmb 02 10 57.4
comp=Z,8.9nm,0.9s
I05D **Terrebonne, OR** 81.12 324 P 02 10 59.4
baz=130
HAWA **Hanford** 81.52 327 IAmb IAmb 02 11 01.9
comp=Z,7.3nm,0.8s
D08A **Wollman Farm,** 81.65 327 IAmb IAmb 02 11 02.4
comp=Z,8.5nm,1.1s
G05D **Wamic, OR** 81.69 325 P 02 11 02.6
baz=131
E07A **Sunnyside** 81.79 327 P **P** 02 11 01.5 **+1.0**
C09A **Chrisman Ranch** 81.84 328 IAmb IAmb 02 11 03.2
comp=Z,14nm,0.9s
BOSA **Boshof** 82.93 118 P **P** 02 11 07.4 **+0.3**
comp=Z,8.3nm,0.9s,baz=282,slow=3.3,SNR=13
TAM **Tamanrasset** 83.60 63 P **P** 02 11 10.7 **+0.2**
TAM IAmb IAmb 02 11 12.4
comp=Z,5.8nm,0.8s
B06A **Marblemount** 83.92 327 P **P** 02 11 11.9 **+0.7**
B05A **Bryant** 84.06 327 P 02 11 12.9
baz=130
D03D **Eldon** 84.11 326 P 02 11 14.6
baz=129
LBTB **Lobatse** 84.44 115 P **P** 02 11 15.0 **+0.3**
LBTB IAmb IAmb 02 11 16.4
comp=Z,9.6nm,0.8s
ESDC **Sonseca Array** 84.61 44 P **P** 02 11 14.9 **-0.2**
comp=Z,1.5nm,0.9s,baz=245,slow=5.2,SNR=9.9
ESDC **Sonseca Array** 84.61 44 P **P** 02 11 15.3 **+0.2**
YKA **Yellowknife Ar** 90.81 340 P **P** 02 11 45.0 **+0.9**
comp=Z,4.8nm,0.7s,baz=132,slow=4.8,SNR=87
YKA pP **pP** 02 12 26.7 **+0.7**
comp=Z,2.3nm,0.9s,baz=136,slow=4.9,SNR=5.2
SEY **Seymchan** 129.79 337 PKP **PKiKP** 02 17 50.0 **0.0**
comp=Z,1.7nm,0.5s,baz=98,slow=1.7,SNR=7.9
ASAR **Alice Springs** 131.03 207 PKP **PKPdf** 02 17 53.1 **+0.2**
comp=Z,1.1nm,0.8s,baz=135,slow=1.9,SNR=11
ASAR SKPbc **SKPab** 02 21 03.5 **+0.7**
comp=Z,0.5nm,0.7s,baz=134,slow=3.9,SNR=4.5
WB2 **Warramunga Arr** 134.09 210 PKPdf **PKPdf** 02 17 58.0 **-0.8**
WRA **Warramunga Arr** 134.09 210 PKP **PKiKP** 02 18 00.0 **-0.1**
comp=Z,2.0nm,0.7s,baz=157,slow=1.7,SNR=17
WRA SKPbc **SKPbc** 02 21 14.4 **+1.3**
comp=Z,2.2nm,1.1s,baz=147,slow=3.1,SNR=7.3
ZAA0 **Zalesovo Array** 140.85 25 PKPdf **PKPdf** 02 18 10.8 **+0.7**
ZALV **Zalesovo Beam** 140.85 25 PKhKP PKPpre 02 18 06.5
comp=Z,0.9nm,0.4s,baz=5.7,slow=2.9,SNR=1.2
ZALV PKP **PKPdf** 02 18 11.2 **+1.1**
comp=Z,3.2nm,0.6s,baz=308,slow=2.7,SNR=7.2
ZALV SKPbc **SKiKP** 02 21 34.1 **+0.4**
comp=Z,0.7nm,0.4s,baz=331,slow=2.6,SNR=4.0
ZALV **Zalesovo Beam** 140.85 25 PKPdf **PKPdf** 02 18 10.7 **+0.6**
NIL **Nilore** 143.31 61 PKPdf PKPbc 02 18 13.2 **+0.5**
MAKZ **Makanchi** 144.27 36 PKPdf **PKPdf** 02 18 15.9 **-0.5**
MK31 **Makanchi Array** 144.45 36 PKPdf **PKPdf** 02 18 16.8 **+0.1**
MKAR **Makanchi Array** 144.45 36 PKP **PKPdf** 02 18 16.7 **0.0**
comp=Z,6.0nm,0.7s,baz=319,slow=3.7,SNR=61
MKAR SKPbc **SKiKP** 02 21 43.5 **+2.1**
comp=Z,0.6nm,0.8s,baz=305,slow=1.7,SNR=3.9
MKAR **Makanchi Array** 144.45 36 PKPdf **PKPdf** 02 18 16.4 **-0.3**
ASAJ **Asahikawa** 145.63 320 PKPbc **PKPab** 02 18 21.1 **+1.2**
comp=Z,12nm,0.7s,baz=344,slow=7.9,SNR=3.9
KLR **Kul'dur** 147.56 336 PKPbc **PKiKP** 02 18 25.8 **-0.9**
comp=Z,3.4nm,0.7s,baz=5.6,slow=2.3,SNR=9.1
USRK **Ussuriysk Ar.** 151.38 329 PKPbc **PKiKP** 02 18 36.0 **+1.2**
comp=Z,4.1nm,0.6s,baz=15,slow=1.8,SNR=11
MJAR **Matsushiro Arr** 152.36 310 PKPbc **PKiKP** 02 18 37.8 **+0.7**
comp=Z,1.5nm,0.5s,baz=82,slow=4.5,SNR=4.2
SONM **Songino Array** 152.58 8 PKP **PKPdf** 02 18 31.6 **+1.6**
comp=Z,1.3nm,0.7s,baz=318,slow=1.5,SNR=7.5
SONM PKPbc **PKiKP** 02 18 38.4 **+1.1**
comp=Z,2.7nm,0.7s,baz=319,slow=2.2,SNR=14

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*JMA **03** 02:03:31.0±0.1, 33°.93N×140°.40E, h30km±4km, M2.9*
*IDC **03** 02:03:34.6±2.7, 33°.84N×139°.45E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.1/74, mbtmp3.3/3, ML1.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/38, Error ellipse: s-maj=140.6km s-min=31.3km az=79.0*
ISC 03 02:03:30.7±1.6, **33.91N**±0°.05×**140°.41E**±0°.06, **h27**km±14km, **n21**, σ**0.78/19**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.68**	**269**	P	**Pb**	**02 03 44.0**	**+0.1**
JMKN				S	**Sb**	**02 03 53.1**	**+0.1**
BSO1	**Boso 1**	**0.88**	**32**	P	**Pn**	**02 03 46.7**	**-0.2**
BSO1				X		02 03 59.0	
BSO3	**Boso 3**	**0.90**	**6**	P	**Pb**	**02 03 47.3**	**-0.2**
BSO3				X		02 04 00.2	
JHJ2	**Mitsune**	**0.93**	**212**	P	**Pn**	**02 03 48.0**	**-0.1**
JHJ2				S	**Sn**	**02 04 00.7**	**+0.2**
BSO4	**Boso 4**	**1.08**	**357**	P	**Pb**	**02 03 51.0**	**+0.3**
JKO	**Kozu shima**	**1.09**	**285**	P	**Pn**	**02 03 50.1**	**-0.1**
JKO				*e*S	**Sb**	**02 04 04.6**	**-0.1**
JTHY	**Toshimahigashi**	**1.11**	**304**	P	**Pn**	**02 03 50.6**	**+0.1**
JTHY				S	**Sb**	**02 04 05.3**	**0.0**
JIM2	**Oshima 3**	**1.14**	**315**	P	**Pn**	**02 03 50.5**	**-0.5**
JIM2				*e*S	**Sn**	**02 04 04.9**	**-0.9**
JIZS	**Izushimoda**	**1.50**	**303**	P	**Pn**	**02 03 56.4**	**+0.5**
JIZS				S	**Sb**	**02 04 15.3**	**-1.2**
KTJ3	**Kamata3**	**1.50**	**313**	P	**Pn**	**02 03 56.4**	**+0.5**
KTJ3				*e*S	**Sn**	**02 04 14.1**	**-0.6**
JOD2	**Odawara 2**	**1.73**	**322**	P	**Pn**	**02 03 59.2**	**+0.1**
MJAR	**Matsushiro Arr**	**3.18**	**326**	Pn	**Pn**	**02 04 21.4**	**+2.4**
	0.2nm,0.3s,baz=158,slow=13,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**27.44**	**114**	T	T	02 38 06.3	
	baz=306,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**27.44**	**114**	T	T	02 38 05.7	
	baz=306,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**27.45**	**114**	T	T	02 38 02.7	
	baz=306,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**28.03**	**117**	T	T	02 38 40.0	
	baz=306						
H11S1	**WAKE ISLAND Hy**	**28.03**	**117**	T	T	02 38 45.9	
	baz=306						
H11S2	**WAKE ISLAND Hy**	**28.04**	**117**	T	T	02 38 42.3	
	baz=306						
SIJI	**Sorong**	**35.64**	**196**	LR	LR	02 22 49.3	
	comp=Z,44nm,19.4s,baz=172,slow=33						
WRA	**Warramunga Arr**	**53.86**	**187**	P	P	02 12 58.1	+6.6
	0.4nm,0.5s,baz=2.7,slow=7.7,SNR=5.9						
ASAR	**Alice Springs**	**57.59**	**187**	P	P	02 13 25.5	+7.2
	0.2nm,0.5s,baz=7.8,slow=7.5,SNR=2.4						

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*IDC **03** 02:06:33.3±5.0, 9°.29S×120°.26E, h75km±56km, mb3.8/1, mb1 3.4/3, mb1mx3.0/57, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=170.9km s-min=39.4km az=39.0*
*DJA **03** 02:06:37.6±0.9, 8°.5±6°×12°.1E±°, h170km±12km, M3.3/6, MLv3.3/6*
ISC 03 02:06:35.5±1.7, **8°.4S**±0°.2×**120°.54E**±0°.08, **h200**km, **n7**, σ**2.9/19**/10, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.19**	**108**	P	**Pn**	**02 07 06.1**	**-0.7**
BASI	**Baing, Sumba**	**1.82**	**179**	P	**Pn**	**02 07 11.6**	**-0.6**
BASI				S	**Sn**	**02 07 39.1**	**-1.9**

PLAI	**Plampang**	**2.77**	**261**	P	**Pn**	**02 07 23.7**	**+1.2**
PLAI				S	**Sn**	**02 07 58.2**	**-0.9**
TWSI	**Taliwang, Sumb**	**3.63**	**264**	P	**Pn**	**02 07 32.2**	**-0.6**
WRA	**Warramunga Arr**	**17.62**	**132**	P	**Pn**	**02 10 29.6**	**+0.5**
	0.2nm,0.3s,baz=312,slow=12,SNR=6.5						
WRA				S	**S**	**02 13 40.6**	**+0.7**
	0.1nm,0.3s,baz=304,slow=25,SNR=2.1						
ASAR	**Alice Springs**	**19.87**	**141**	P	**Pn**	**02 10 54.5**	**-1.3**
	0.3nm,0.3s,baz=329,slow=12,SNR=12						
ASAR				S	**S**	**02 14 29.3**	**+4.9**
	0.1nm,0.3s,baz=308,slow=21,SNR=2.1						
STKA	**Stephens Creek**	**30.49**	**143**	P	P	02 12 33.4	+3.6
	1.0nm,0.5s,baz=320,slow=9.7,SNR=3.4						

ATH 03 02:13:58.5, 38°31'N × 20°51'E, h14 km ± 3 km, ML1.3/1, Error ellipse: s-maj=3.3km s-min=1.0km az=234.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF5	**Kardakata, Kep**	**0.05**	**224**	P	Pg	02 14 00.9	-0.3
KEF4	**Livadi, Kephal**	**0.09**	**232**	P	Pg	02 14 01.4	-0.1
KEF4				S	Sg	02 14 03.8	+0.3
DMLN	**Damoulianata-K**	**0.13**	**236**	P	Pg	02 14 01.9	-0.2
DMLN				S	Sg	02 14 04.6	+0.1
VLS	**Valsamata**	**0.15**	**155**	P	Pg	02 14 02.1	-0.2
VLS				S	Sg	02 14 05.0	+0.1
VLS				AML	AML	02 14 05.3	
	comp=N,210μm,0.1s						
VLS				AML	AML	02 14 05.3	
	comp=E,362μm,0.1s						
FSK	**Fiskardo**	**0.15**	**16**	P	Pg	02 14 02.1	-0.3
FSK				S	Sg	02 14 04.9	-0.1
KEF3	**Kipouria, Keph**	**0.17**	**230**	P	Pg	02 14 02.0	-0.6
EVGI	**Lefkada island**	**0.33**	**20**	P	Pg	02 14 05.0	-0.3
EVGI				S	Sg	02 14 09.9	0.0
NYDR	**Nydri-Lefkada**	**0.43**	**20**	P	Pg	02 14 06.8	-0.3
LKD2	**Lefkada island**	**0.49**	**14**	P	Pb	02 14 08.8	-0.2

PRU ***03*** *02:14:13.7±0.0, 41°.01'N × 20°.22'E, h0 km*
SKO ***03*** *02:14:14.4, 41°.49'N × 20°.27'E, h15 km*
MED_RC ***03*** *02:14:15.0±0.4, 41°.51'N × 20°.30'E, h22 km ± 3 km, MW4.1/10, Moment Tensor Solution.Mantle waves: s10,c14; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr~0.57±.39; Mθθ~0.69±.21; Mϕϕ 1.27±.22; Mrθ 1.03±.21; Mθϕ 0.27±.15; Mϕr~0.79±.18; Best double couple: M0 1.71000×10^15 NP1:ϕ 222.00000°, δ 41.00000°, λ -21.00000°. NP2:ϕ 328.00000°, δ 77.00000°, λ -129.00000°. Principal axes: T 1.5700, Plg 22.0000°, Azm 86.0000°; N 0.2800, Plg 38.0000°, Azm 338.0000°; P -1.8400, Plg 44.0000°, Azm 199.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
TIR ***03*** *02:14:15.9, 41°.51'N × 20°.30'E, h19 km, Md3.4, Ml3.8*
ATH ***03*** *02:14:15.6, 41°.63'N × 20°.27'E, h16 km ± 5 km, ML3.6/9, Error ellipse: s-maj=6.5km s-min=1.5km az=309.0*
LDG ***03*** *02:14:15.7±0.2, 41°.58'N × 20°.32'E, h19 km, Ml3.7/11, Error ellipse: s-maj=5.0km s-min=3.0km az=50.0*
PDG ***03*** *02:14:16.9±0.5, 41°.52'N × 20°.29'E, h13 km, MD3.8/8, ML3.7/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
THE ***03*** *02:14:17.3, 41°.48'N × 20°.32'E, h0 km ± 1 km, ML3.7/11, Error ellipse: s-maj=1.5km s-min=0.6km az=327.0*
BEO ***03*** *02:14:17.4±0.3, 41°.50'N × 20°.32'E, h6 km ± 2 km, ML3.5/15*
IDC ***03*** *02:14:19.9±2.5, 41°.56'N × 20°.23'E, h32 km ± 21 km, mb3.4/13, mb1 3.6/21, mb1mx3.4/67, mbtmp3.6/21, ML3.3/7, MS3.0/5, Ms1 3.0/5, ms1mx2.6/40, Error ellipse: s-maj=14.6km s-min=11.2km az=177.0*

ISC 03 02:14:17.3±0.8, 41°50'N±0°.01 × 20°30'E±0°.02, h12 km ± 5 km, n201, σ1°33/272, mb3.6/10, 27C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.21**	**30**	P	**Pg**	**02 14 21.5**	**-0.4**
PHP				S	**Sg**	**02 14 25.3**	**+0.2**
PHP	**Peshkopia**	**0.21**	**30**	P	**Pg**	**02 14 21.6**	**-0.4**
	baz=31						
PHP				S	**Sg**	**02 14 24.8**	**-0.3**
	baz=31						
PHP				AMP			
	comp=N,85nm,0.2s,baz=31						
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**02 14 23.8**	**-0.9**
TIR				S	**Sg**	**02 14 29.7**	**+0.2**
TIR				AML	AML	02 14 31.3	
	comp=N,79448μm,0.4s						
TIR				AML	AML	02 14 33.0	
	comp=E,65039μm,0.4s						
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**02 14 24.1**	**-0.6**
TIR				S	**Sg**	**02 14 29.9**	**+0.4**
	comp=E,14μm,0.4s						
TIR	**Tirane**	**0.36**	**245**	*e*Pg	**Pg**	**02 14 24.0**	**-0.6**
TIR				*e*Sg	**Sg**	**02 14 30.1**	**+0.6**
TIR	**Tirane**	**0.36**	**245**	⇑P	**Pg**	**02 14 23.7**	**-0.9**
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**02 14 23.7**	**-1.0**
	baz=244						
TIR				S	**Sg**	**02 14 30.1**	**+0.6**
	baz=244						
TIR				AMP			
	comp=E,50nm,0.4s,baz=244						
TIR	**Tirane**	**0.36**	**245**	*i* Pg	**Pg**	**02 14 23.6**	**-1.0**
OHR	**Ohrid**	**0.54**	**136**	⇑*i*Pg	**Pg**	**02 14 27.3**	**-0.7**
OHR				*i* Sg	**Sb**	**02 14 36.4**	**-0.1**
OHR				*e*Lg	Lg	02 14 36.6	
	comp=N,8μm,1.0s						
OHR				*e*Lg	Lg	02 14 36.7	
	comp=E,4μm,0.7s						
PUK	**Puka**	**0.62**	**331**	P	**Pg**	**02 14 28.2**	**-1.3**
	baz=330						
PUK				S	**Sg**	**02 14 37.9**	**+0.2**
	baz=330						
PUK				AMP			
	comp=N,20nm,0.1s,baz=330						
PRZK	**Prizren**	**0.79**	**26**	⇓*i*Pg	**Pg**	**02 14 31.4**	**-1.1**
PRZK				*i* Sg	**Sb**	**02 14 44.2**	**+0.7**
BCI	**Bajram Curri**	**0.88**	**349**	P	**Pg**	**02 14 32.5**	**-1.8**
	baz=349						
BCI				S	**Sg**	**02 14 46.0**	**+0.1**
	baz=349						
ULC	**Ulcinj**	**0.92**	**301**	⇑*i*Pg	**Pg**	**02 14 33.1**	**-1.9**
ULC	**Ulcinj**	**0.92**	**301**	⇓*i*Pg	**Pg**	**02 14 33.4**	**-1.6**
ULC				*i* Sg	**Sb**	**02 14 48.1**	**+0.9**
KBN	**Korca**	**0.95**	**157**	P	**Pg**	**02 14 35.2**	**-0.5**
KBN				S	**Sg**	**02 14 48.2**	**+0.1**
	comp=N,5μm,0.6s						
KBN	**Korca**	**0.95**	**157**	P	**Pg**	**02 14 34.9**	**-0.8**
	baz=157						
KBN				S	**Sb**	**02 14 48.6**	**+0.2**
	baz=157						
SKO	**Skopje**	**0.97**	**61**	*e*Pg	**Pg**	**02 14 34.6**	**-1.5**
SKO				*e*Sg	**Sg**	**02 14 48.6**	**-0.2**
SKO	**Skopje**	**0.97**	**61**	*i* Pg	**Pg**	**02 14 34.4**	**-1.7**
SKO				*i* Sg	**Sb**	**02 14 49.1**	**+0.2**
ZATK	**Zatriq**	**0.97**	**14**	*i* Pg	**Pg**	**02 14 34.6**	**-1.5**
DRME	**Dracevica, Mon**	**1.08**	**310**	*e*Pn	**Pb**	**02 14 36.1**	**-1.8**
DRME	**Dracevica, Mon**	**1.08**	**310**	⇑*i*Pg	**Pb**	**02 14 36.3**	**-1.6**
DRME				*i* Sg	**Sn**	**02 14 53.6**	**+0.5**
FNA	**Florina**	**1.08**	**131**	P	**Pb**	**02 14 36.5**	**-1.5**
FNA				S	**Sn**	**02 14 53.0**	**-0.3**
FNA				AML	AML	02 14 56.9	
	comp=N,13407μm,0.7s						
FNA				AML	AML	02 14 59.8	
	comp=E,10462μm,0.6s						
FNA	**Florina**	**1.08**	**131**	P	**Pb**	**02 14 36.7**	**-1.4**
FNA				S	**Sb**	**02 14 52.2**	**+0.1**
	comp=E,6μm,0.6s						
FNA	**Florina**	**1.08**	**131**	P	**Pb**	**02 14 36.6**	**-1.4**
	baz=131						
FNA	**Florina**	**1.08**	**131**	⇑*i*Pg	**Pb**	**02 14 36.6**	**-1.4**
FNA				*i* Sg	**Sn**	**02 14 53.3**	**0.0**
PVY	**Plav**	**1.12**	**347**	*e*Pg	**Pb**	**02 14 37.2**	**-1.5**
PVY				*i* Sg	**Sn**	**02 14 55.0**	**+0.7**
VLO	**Vlora**	**1.20**	**211**	P	**Pn**	**02 14 39.4**	**-0.4**
VLO	**Vlora**	**1.20**	**211**	P	**Pn**	**02 14 39.1**	**-0.7**
	baz=211						
VLO				S	**Sg**	**02 14 56.1**	**+0.1**
	baz=211						
PDG	**Podgorica**	**1.21**	**320**	*e*Pg	**Pn**	**02 14 38.4**	**-1.6**
PDG				*e*Sg	**Sn**	**02 14 56.7**	**+0.4**
PDG	**Podgorica**	**1.21**	**320**	*e*Pn	**Pn**	**02 14 38.5**	**-1.6**
PDG	**Podgorica**	**1.21**	**320**	⇑*i*Pg	**Pn**	**02 14 38.5**	**-1.6**
PDG				*i* Sg	**Sg**	**02 14 57.5**	**+1.2**
TTG	**Podgorica**	**1.21**	**320**	⇓*i*Pg	**Pn**	**02 14 38.8**	**-1.2**
TTG				*i* Sg	**Sg**	**02 14 58.0**	**+1.6**
NEST	**Nestorio**	**1.23**	**152**	P	**Pn**	**02 14 40.2**	**-0.1**
NEST				S	**Sn**	**02 14 57.3**	**+0.4**
NEST				AML	AML	02 15 00.1	
	comp=N,3964μm,0.5s						
NEST				AML	AML	02 15 03.7	
	comp=E,5597μm,0.6s						
NEST	**Nestorio**	**1.23**	**152**	P	**Pn**	**02 14 40.0**	**-0.3**
NEST				S	**Sn**	**02 14 57.6**	**+0.8**
	comp=E,2μm,0.7s						
GJIK	**Gjilan**	**1.28**	**41**	*i* Pg	**Pn**	**02 14 40.6**	**-0.4**
GJIK				*i* Sg	**Sn**	**02 14 58.6**	**+0.5**
BUM	**Brajici-Budva**	**1.32**	**308**	⇑*i*Pg	**Pn**	**02 14 41.1**	**-0.5**
BUM				*i* Sg	**Sg**	**02 15 01.4**	**+1.6**
LSK	**Leskovik**	**1.37**	**170**	P	**Pn**	**02 14 42.0**	**-0.3**
LSK				S	**Sg**	**02 15 02.1**	**+0.6**
	comp=E,4μm,0.9s						
LSK	**Leskovik**	**1.37**	**170**	P	**Pn**	**02 14 41.8**	**-0.5**
	baz=170						
BEY	**Berane**	**1.40**	**348**	*i* Pn	**Pn**	**02 14 42.3**	**-0.4**
IVA	**Berane**	**1.40**	**348**	⇑*i*Pg	**Pn**	**02 14 42.8**	**+0.1**
IVA				*i* Sg	**Sg**	**02 15 03.5**	**+1.0**
STIP	**Stip**	**1.43**	**82**	*i* Pn	**Pg**	**02 14 45.7**	**+1.0**
SMRK	**Smrekonice**	**1.45**	**19**	*i* Pn	**Pn**	**02 14 43.6**	**+0.3**
PENT	**Pentalofos**	**1.45**	**154**	P	**Pb**	**02 14 44.4**	**+0.1**
PENT				AML	AML	02 15 11.2	
	comp=E,3236μm,0.8s						
PENT				AML	AML	02 15 11.9	
	comp=N,3650μm,0.8s						
PENT	**Pentalofos**	**1.45**	**154**	P	**Pn**	**02 14 44.1**	**+0.7**
PENT				S	**Sg**	**02 15 03.8**	**-0.3**
	comp=N,2μm,0.8s						
CEME	**Cevo**	**1.47**	**316**	⇓*i*Pg	**Pn**	**02 14 43.3**	**-0.3**
CEME				*i* Sg	**Sg**	**02 15 04.9**	**+0.4**
KOME	**Kolasin**	**1.47**	**337**	⇑*i*Pg	**Pn**	**02 14 43.8**	**+0.2**
KOME				*i* Sg	**Sg**	**02 15 05.0**	**+0.4**
NKME	**Niksic**	**1.61**	**322**	⇑*i*Pn	**Pn**	**02 14 45.6**	**0.0**
NKME				*i* Sn	**Sb**	**02 15 08.5**	**+1.2**
NKY	**Niksic**	**1.63**	**324**	⇑*i*Pn	**Pn**	**02 14 45.9**	**0.0**
NKY				*i* Sn	**Sb**	**02 15 09.0**	**+1.1**
KZN	**Kozani**	**1.63**	**137**	P	**Pb**	**02 14 47.0**	**-0.4**
KZN				S	**Sb**	**02 15 08.7**	**+0.7**
	comp=N,2μm,0.7s						
SRN	**Sarande**	**1.64**	**188**	P	**Pb**	**02 14 47.2**	**-0.2**
SRN				S	**Sb**	**02 15 09.0**	**+1.0**
	comp=N,1μm,0.9s						
SRN	**Sarande**	**1.64**	**188**	P	**Pb**	**02 14 47.2**	**-0.2**
	baz=189						
SRN				S	**Sg**	**02 15 09.5**	**-0.5**
	baz=189						
HCY	**Herceg Novi**	**1.65**	**306**	*e*Pn	**Pn**	**02 14 46.1**	**+0.1**
HCY	**Herceg Novi**	**1.65**	**306**	⇓*i*Pn	**Pn**	**02 14 46.1**	**+0.1**
HCY				*i* Sn	**Sb**	**02 15 09.2**	**+1.0**
GRG	**Griva**	**1.68**	**108**	P	**Pn**	**02 14 46.9**	**+0.5**
GRG				AML	AML	02 15 15.7	
	comp=N,1911μm,0.6s						
GRG				AML	AML	02 15 18.6	
	comp=E,1636μm,0.7s						
GRG	**Griva**	**1.68**	**108**	P	**Pn**	**02 14 46.8**	**+0.4**
GRG				S	**Sb**	**02 15 09.8**	**+0.7**
	comp=E,872nm,0.8s						
GRG	**Griva**	**1.68**	**108**	*i* Pn	**Pn**	**02 14 47.0**	**+0.5**
VAY	**Valandovo**	**1.72**	**95**	*e*Pn	**Pn**	**02 14 47.2**	**+0.2**
VAY				*e*Sn	**Sb**	**02 15 10.2**	**0.0**
BARS	**Barje**	**1.73**	**40**	*e*Pg	**Pn**	**02 14 48.1**	**+0.9**
BARS				*e*Sn	**Sb**	**02 15 11.0**	**+0.4**
BARS	**Barje**	**1.73**	**40**	*i* Pn	**Pn**	**02 14 47.4**	**+0.2**
KPRO	**Kipourio**	**1.75**	**152**	P	**Pn**	**02 14 48.1**	**+0.7**
KPRO				S	**Sb**	**02 15 11.7**	**+0.6**
	comp=E,2μm,0.9s						
SJES	**Sjenica**	**1.77**	**352**	*e*Pn	**Pb**	**02 14 49.3**	**-0.5**
SJES				*e*Sn	**Sb**	**02 15 11.6**	**-0.4**
KASA	**Kassiopi**	**1.78**	**189**	P	**Pb**	**02 14 49.5**	**-0.3**
KASA				AML	AML	02 15 20.2	
	comp=E,1860μm,0.6s						
KASA				AML	AML	02 15 21.0	
	comp=N,1464μm,0.4s						
SELS	**Selova**	**1.82**	**19**	*e*Pn	**Pn**	**02 14 48.0**	**-0.4**
SELS				*e*Sn	**Sb**	**02 15 13.4**	**+0.1**
KEK	**Kerkira**	**1.83**	**192**	P	**Pn**	**02 14 49.8**	**+1.3**
KEK				AML	AML	02 15 24.0	
	comp=E,1337μm,0.6s						
KEK				AML	AML	02 15 25.6	
	comp=N,2362μm,0.7s						
KEK	**Kerkira**	**1.83**	**192**	P	**Pn**	**02 14 49.2**	**+0.7**
JAN	**Janina**	**1.89**	**167**	P	**Pn**	**02 14 50.5**	**+1.1**
JAN				S	**Sb**	**02 15 14.8**	**-0.5**
	comp=N,1μm,1.0s						
TREB	**Trebinje**	**1.89**	**311**	*e*Pn	**Pn**	**02 14 50.2**	**+0.8**
TREB				*e*Sn	**Sb**	**02 15 16.1**	**+0.8**
TREB	**Trebinje**	**1.89**	**311**	*e*Pn	**Pn**	**02 14 50.4**	**+1.0**
BOSS	**Bosilegrad**	**1.90**	**58**	*e*Pn	**Pn**	**02 14 49.8**	**+0.2**
BOSS				*e*Sn	**Sn**	**02 15 13.0**	**-0.4**
BOSS				*e*Sn	**Sn**	**02 15 13.1**	**-0.4**
BRY	**Bratogost**	**1.92**	**317**	*e*Pn	**Pn**	**02 14 50.7**	**+0.9**
BRY	**Bratogost**	**1.92**	**317**	⇑*i*Pn	**Pn**	**02 14 49.8**	**0.0**
BRY				*i* Sn	**Sb**	**02 15 15.7**	**-0.4**
PLE	**Pljevlja**	**1.95**	**340**	⇓*i*Pn	**Pn**	**02 14 50.3**	**0.0**
PLE				*i* Sn	**Sb**	**02 15 16.6**	**-0.4**
KNT	**Kendrikon**	**1.98**	**99**	P	**Pn**	**02 14 50.9**	**+0.2**
KNT				AML	AML	02 15 25.5	
	comp=N,1196μm,0.7s						
KNT				AML	AML	02 15 29.7	
	comp=E,706μm,0.9s						
KNT	**Kendrikon**	**1.98**	**99**	P	**Pn**	**02 14 50.7**	**0.0**
KNT	**Kendrikon**	**1.98**	**99**	*i* Pn	**Pn**	**02 14 50.8**	**+0.2**
UPM	**Unac-Piva**	**1.99**	**329**	*e*Pn	**Pb**	**02 14 53.3**	**-0.2**
UPM	**Unac-Piva**	**1.99**	**329**	⇓*i*Pn	**Pn**	**02 14 50.9**	**0.0**
UPM				*i* Sn	**Sb**	**02 15 17.6**	**-0.7**
SCTE	**Santa Cesarea**	**2.00**	**225**	P	**Pn**	**02 14 51.8**	**+1.0**
SCTE				AML	AML	02 15 26.6	
	comp=E,704μm,1.0s						
SCTE				AML	AML	02 15 28.1	
	comp=N,660μm,0.5s						
IVAS	**Ivanjica**	**2.08**	**357**	*e*Pn	**Pn**	**02 14 52.2**	**+0.2**
THE	**Thessaloniki**	**2.19**	**112**	P	**Pn**	**02 14 53.9**	**+0.4**
THE	**Thessaloniki**	**2.19**	**112**	*i* Pn	**Pn**	**02 14 53.8**	**+0.2**
RUDO	**Rudo**	**2.22**	**342**	*e*Pn	**Pn**	**02 14 55.9**	**+1.9**
HORT	**Hortiatis**	**2.30**	**112**	P	**Pn**	**02 14 55.4**	**+0.3**
THL	**Klokotos Trika**	**2.34**	**145**	P	**Pn**	**02 14 56.5**	**+1.0**
STON	**Ston**	**2.37**	**306**	*e*Pn	**Pn**	**02 14 56.9**	**+1.0**
BOVS	**Bovan**	**2.37**	**25**	*e*Pn	**Pn**	**02 14 56.7**	**+0.8**
GRUS	**Gruza**	**2.40**	**7**	*e*Pn	**Pn**	**02 14 57.5**	**+1.1**
BBLS	**Lazići**	**2.45**	**345**	*e*Pn	**Pn**	**02 14 58.9**	**+1.8**
BBLS				*e*Sn	**Sb**	**02 15 30.1**	**-1.4**
BBLS	**Lazići**	**2.45**	**345**	*e*Pn	**Pn**	**02 14 59.0**	**+1.8**
VTS	**Vitosha**	**2.45**	**62**	*e*Pn	**Pn**	**02 14 57.8**	**+0.6**
VTS	**Vitosha**	**2.45**	**62**	*i* Pn	**Pn**	**02 14 57.7**	**+0.4**
ZAPS	**Zavoj**	**2.47**	**44**	*e*Pn	**Pn**	**02 14 58.5**	**+1.1**
ZAPS				*e*Sn	**Sn**	**02 15 29.1**	**+1.6**
DIVS	**Divibare**	**2.60**	**355**	*e*Pn	**Pn**	**02 14 59.8**	**+0.5**
DIVS	**Divibare**	**2.60**	**355**	*e*Pn	**Pn**	**02 14 59.7**	**+0.5**
NVR	**Nevrokopi**	**2.68**	**92**	P	**Pn**	**02 15 00.9**	**+0.6**
ZAGS	**Zajecar**	**2.71**	**31**	*e*Pn	**Pn**	**02 15 00.6**	**-0.1**
HAPS	**Han Pijesak,BI**	**2.77**	**339**	*e*Pn	**Pn**	**02 15 02.4**	**+0.9**
HAPS				*e*Sn	**Sn**	**02 15 35.9**	**+1.0**
HAPS	**Han Pijesak,BI**	**2.77**	**339**	*e*Pn	**Pn**	**02 15 02.4**	**+0.9**
SVIS	**Svilajnac**	**2.84**	**13**	*e*Pn	**Pn**	**02 15 04.6**	**+2.2**
MATE	**Matera**	**2.85**	**254**	⇑P	**Pn**	**02 15 02.2**	**-0.3**
MAKR	**Makrakomi, Fth**	**2.85**	**150**	P	**Pn**	**02 15 03.7**	**+1.1**
AGG	**Agios Georgios**	**2.92**	**147**	P	**Pn**	**02 15 04.3**	**+0.7**
RICI	**Ricice**	**3.07**	**311**	*e*Pn	**Pn**	**02 15 06.8**	**+1.2**
KUBS	**Kucevo**	**3.08**	**19**	*e*Pn	**Pn**	**02 15 05.4**	**-0.3**
NEO	**Neokhori**	**3.13**	**134**	P	**Pn**	**02 15 06.6**	**+0.2**
HVAR	**Hvar**	**3.31**	**302**	*e*Pn	**Pn**	**02 15 08.8**	**+0.9**
MDVR	**Moldovita**	**3.44**	**17**	⇑P	**Pn**	**02 15 12.6**	**+1.9**
TIP	**Timpagrande**	**3.57**	**231**	⇓P	**Pn**	**02 15 11.8**	**-0.6**
FRGS	**Fruska Gora**	**3.67**	**355**	*e*Pn	**Pn**	**02 15 13.7**	**-0.2**
FRGS	**Fruska Gora**	**3.67**	**355**	⇑P	**Pn**	**02 15 14.4**	**+0.5**
FRGS	**Fruska Gora**	**3.67**	**355**	*e*Pn	**Pn**	**02 15 14.3**	**+0.4**
PLVB	**Pleven**	**3.71**	**58**	⇑P	**Pn**	**02 15 15.5**	**+1.2**
HERR	**Herculane**	**3.71**	**24**	⇑P	**Pn**	**02 15 15.4**	**+1.0**
MGRS	**Mrkonjic Grad**	**3.75**	**322**	*e*Pn	**Pn**	**02 15 17.0**	**+2.1**
KIJV	**Kijevo**	**3.81**	**312**	*e*Pn	**Pn**	**02 15 17.8**	**+2.1**
KIJV					Sn	**Sn**	**02 16 02.8**	**+2.5**
RDO	**Rodhopi**	**3.96**	**93**	P	**Pn**	**02 15 18.2**	**+0.4**
BLY	**Banja Luka**	**3.97**	**326**	*e*Pn	**Pn**	**02 15 18.7**	**+0.8**
ZIRJ	**Zirje**	**4.05**	**304**	*e*Pn	**Pn**	**02 15 20.5**	**+1.4**
MORI	**Morici**	**4.13**	**306**	*e*Pn	**Pn**	**02 15 21.7**	**+1.6**
BZS	**Buzias**	**4.22**	**13**	⇑P	**Pn**	**02 15 21.4**	**+0.1**
GZR	**Gura Zlata**	**4.29**	**24**	⇑P	**Pn**	**02 15 23.1**	**+0.8**
UDBI	**Udbina**	**4.49**	**314**	*e*Pn	**Pn**	**02 15 27.5**	**+2.3**
UDBI					Sn	**Sn**	**02 16 20.0**	**+2.6**
DUGI	**Dugi Otok**	**4.59**	**305**	*e*Pn	**Pn**	**02 15 27.7**	**+1.2**
MORH	**Mrgy, Hungar**	**4.86**	**346**	⇑P	**Pn**	**02 15 31.1**	**+0.9**
MORH	**Mrgy, Hungar**	**4.86**	**346**	*e*Pn	**Pn**	**02 15 30.9**	**+0.7**
ARR	**Arges**	**4.99**	**38**	⇑P	**Pn**	**02 15 33.1**	**+1.1**
NVLJ	**Novalja**	**5.02**	**309**	*e*Pn	**Pn**	**02 15 33.0**	**+0.6**
NVLJ					Sn	**Sn**	**02 16 31.5**	**+1.3**
AQU	**L'Aquila**	**5.22**	**282**	*e*Pn	**Pn**	**02 15 35.7**	**+0.6**
VOIR		**5.23**	**40**	⇑P	**Pn**	**02 15 36.3**	**+0.9**
DRGR		**5.56**	**17**	⇓P	**Pn**	**02 15 40.3**	**+0.4**
CRES	**Cresnjev**	**5.57**	**323**	*e*Pn	**Pn**	**02 15 40.9**	**+1.0**
BEHE	**Becsehely**	**5.58**	**334**	*e*Pn	**Pn**	**02 15 44.6**	**+4.6**
RIY	**Rijeka**	**5.70**	**314**	*e*Pn	**Pn**	**02 15 43.4**	**+1.6**
MLR	**Muntele Rosu**	**5.72**	**44**	Pn	**Pn**	**02 15 43.6**	**+1.5**
	comp=N,1.7nm,0.3s,baz=179,slow=14,SNR=15						
MLR				Sn	**Sn**	**02 16 46.2**	**-1.5**
	baz=260,slow=18,SNR=1.8						
MLR				Lg	Lg	02 17 23.4	
	comp=N,0.5nm,0.3s,baz=234,slow=19,SNR=4.9						
MLR				LR	LR	02 18 28.7	
	comp=N,144nm,19.7s,baz=340,slow=44						
MLR	**Muntele Rosu**	**5.72**	**44**	⇓P	**Pn**	**02 15 45.0**	**+2.9**
APE	**Apeiranthos**	**6.00**	**136**	⇓P	**Pn**	**02 15 48.9**	**+3.0**
CEY	**Cerknica**	**6.01**	**317**	*e*Pn	**Pn**	**02 15 46.8**	**+0.8**
VAE	**Valguarnera**	**6.07**	**230**	Sn	**Sn**	**02 16 57.4**	**+1.0**
	comp=N,0.4nm,0.3s,baz=72,slow=19,SNR=1.9						
PLOR	**Plostina**	**6.33**	**45**	⇑P	**Pn**	**02 15 53.5**	**+3.1**
VRI	**Vrincioaia**	**6.38**	**45**	⇑P	**Pn**	**02 15 53.4**	**+2.3**
SOKA	**Soboth**	**6.41**	**326**	Pn	**Pn**	**02 15 52.7**	**+1.1**
	comp=N,7.3nm,0.5s,SNR=9.8						
SOKA				*e*Sn	**Sn**	**02 17 05.1**	**+0.4**
	comp=N,3.3nm,0.5s						
PSZ	**Piszkesteto**	**6.42**	**358**	⇑P	**Pn**	**02 15 51.7**	**0.0**
TLBR	**Topalu**	**6.44**	**59**	⇑P	**Pn**	**02 15 53.3**	**+1.5**
OBKA	**Obir**	**6.50**	**322**	*e*Pn	**Pn**	**02 15 54.2**	**+1.4**
	comp=N,5.3nm,0.4s						
OBKA				*e*Sn	**Sn**	**02 17 10.2**	**+3.4**
	comp=N,17nm,0.8s						
ARSA	**Arzberg**	**6.69**	**331**	*e*Pn	**Pn**	**02 15 57.3**	**+2.0**
	comp=N,5.2nm,0.6s						
ARSA				*e*Sn	**Sn**	**02 17 16.8**	**+5.5**
	comp=N,8.9nm,0.6s						
BIZ	**Bicaz**	**6.85**	**36**	⇑P	**Pn**	**02 16 00.1**	**+2.7**
MYKA	**Terra Mystica**	**7.02**	**319**	*e*Pn	**Pn**	**02 16 02.0**	**+2.2**
	comp=N,1.2nm,0.3s						
BURAR	**Bucovina Array**	**7.05**	**28**	⇓P	**Pn**	**02 16 02.4**	**+2.1**
CONA	**Conrad Observa**	**7.16**	**335**	*e*Pn	Pn	02 16 07.9	+6.1
	comp=N,2.1nm,0.5s						
IDI	**Anoyia**	**7.17**	**148**	Pn	**Pn**	**02 16 01.7**	**-0.3**
	comp=N,0.6nm,0.3s,baz=349,slow=15,SNR=2.2						
IDI				Sn	**Sn**	**02 17 20.3**	**-3.2**
	comp=N,1.2nm,0.3s,baz=288,slow=20,SNR=3.8						
KBA	**Koelnbreinsper**	**7.48**	**321**	*i* Pn	**Pn**	**02 16 07.7**	**+1.4**
	comp=N,9.5nm,0.5s						
MOA	**Molln**	**7.66**	**328**	*i* Pn	**Pn**	**02 16 11.0**	**+2.3**
	comp=N,3.0nm,0.8s						
MOA				*e*Sn	**Sn**	**02 17 38.3**	**+2.9**
	comp=N,5.4nm,0.5s						
ABTA	**Abfaltersbach**	**7.67**	**316**	*e*Pn	**Pn**	**02 16 10.0**	**+1.2**
	comp=N,7.8nm,0.5s						
ABTA				*i* Sn	**Sn**	**02 17 35.9**	**+0.2**
	comp=N,25nm,0.7s						
WTTA	**Wattenberg**	**8.46**	**316**

BVAR Borovoye Array 35.19 54 P P 02 21 12.0 +1.1
comp=N,0.6nm,0.7s,baz=217,slow=4.7,SNR=3.7
ZALV Zalesovo Beam 43.66 51 P P 02 22 20.5 -1.0
comp=N,1.5nm,0.3s,baz=262,slow=9.9,SNR=3.5
MKAR Makanchi Array 43.78 61 P P 02 22 22.2 -0.4
comp=N,0.6nm,0.6s,baz=286,slow=6.8,SNR=5.4
TIXI Tiksi 56.60 21 P P 02 23 57.5 -1.8
comp=N,0.9nm,0.3s,baz=277,slow=4.4,SNR=4.4
SONM Songino Array 58.51 52 P P 02 24 13.7 +0.4
comp=N,0.3nm,0.2s,baz=280,slow=8.5,SNR=1.8
YKA Yellowknife Ar 70.22 340 P P 02 25 29.4 -0.2
comp=N,0.3nm,0.7s,baz=38,slow=5.4,SNR=3.9
ILAR Eielson Array 73.59 354 P P 02 25 49.2 -0.5
comp=N,0.2nm,0.8s,baz=10,slow=5.5,SNR=2.2

*ANF **03** 02:16:49.9±0.2,36°.46N×98°.15W,h6km,ML4.3/19,Error ellipse: s-maj=2.5km s-min=2.2km az=39.0*
*NEIC **03** 02:16:49.6,36°.47N×98°.18W,h3km,Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}0.00; $M_{\theta\theta}$7.27; $M_{\phi\phi}$-7.27; $M_{r\theta}$0.49; $M_{\theta\phi}$-1.28; $M_{r\phi}$0.41; Fault plane solution: $M_0$7.41000×10^{13} NP1:$\phi_0$140.00000°, δ85.00000°,λ0.00000°. NP2:$\phi_0$230.00000°,δ90.00000°, λ-175.00000°. Principal axes: T 7.4101, Plg4.0000°, Azm5.0000°; N -0.0001, Plg85.0000°, Azm230.0000°; P -7.4100, Plg4.0000°, Azm95.0000°;*
*TUL **03** 02:16:49.6±1.1,36°.49N±0°.02×98°.16W±0°.05,h6km±7km, ML3.6,mb_Lg3.4/117(NEIC),Mwr3.2/8(SLM) Error ellipse: s-maj=5.6km s-min=2.5km az=90.0*
*NEIC **03** 02:16:49.4±1.0,36°.471N±0°.009×98°.16W±0°.05,h6km±7km, Error ellipse: s-maj=6.0km s-min=1.0km az=81.0*
*IDC **03** 02:16:49.2±1.0,36°.51N×98°.16W,h0km,mb2.8/1, mb1 3.6/7,mb1mx3.4/62,mbtmp3.3/7,ML3.6/5,Error ellipse: s-maj=13.7km s-min=12.0km az=130.0*
ISC 03 02:16:49.2±1.0,**36°.48N**±0°.02×**98°.17W**±0°.03,**h7**km±8km, **n134,**σ0°**81**/123**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.15**	**80**		**Pg**	**02 16 52.8**	**+0.4**
CROK				Sg	**Sg**	**02 16 55.1**	**+0.6**
OK032	**Salt Plains WL**	**0.33**	**354**		**Pg**	**02 16 56.3**	**+0.7**
GC02	**Grant County #**	**0.45**	**34**	Pg	**Pg**	**02 16 57.9**	**0.0**
GC02				Sg	**Sg**	**02 17 04.3**	**+0.5**
KAN14	**Manchester OK**	**0.51**	**19**		**Pg**	**02 16 59.0**	**0.0**
KAN10	**Anthony SW Sta**	**0.65**	**5**		**Pg**	**02 17 01.5**	**-0.2**
KAN05	**Bluff City Nor**	**0.67**	**21**		**Pg**	**02 17 02.2**	**0.0**
U32A	**Winter Ranch,**	**0.68**	**262**		**Pg**	**02 17 02.6**	**+0.4**
U32A	comp=Z,312nm,0.9s			IAmb_Lg		02 17 10.3	
U32A	**Winter Ranch,** baz=81,SNR=78	**0.68**	**262**	P	**Pg**	**02 17 02.9**	**+0.6**
U32A	baz=81			S	**Sb**	**02 17 12.7**	**-0.3**
U32A	**Winter Ranch,** baz=81,SNR=78	**0.68**	**262**	P		02 17 02.9	
U32A	baz=81			S		02 17 12.7	
KAN01	**Argonia South**	**0.75**	**26**		**Pg**	**02 17 03.6**	**-0.1**
KAN08	**Anthony NE Sta**	**0.76**	**12**		**Pg**	**02 17 03.8**	**-0.1**
KAN13	**South Haven SW**	**0.77**	**46**		**Pg**	**02 17 04.4**	**+0.3**
KAN13				Sg	**Sg**	**02 17 14.0**	**-0.1**
KAN09	**Caldwell North**	**0.79**	**34**		**Pg**	**02 17 04.5**	**0.0**
KAN09				Sg	**Sg**	**02 17 14.8**	**0.0**
KAN12	**Harper NE Stat**	**0.83**	**10**		**Pg**	**02 17 05.3**	**+0.1**
OK029	**Liberty Lake**	**0.89**	**139**		**Pg**	**02 17 06.7**	**+0.3**
BCOK	**Bluff Creek, N**	**0.94**	**151**		**Pg**	**02 17 07.3**	**+0.1**
OK025	**Westminster Rd**	**1.12**	**143**		**Pg**	**02 17 10.6**	**-0.1**
OK031	**S. Brethren Rd**	**1.20**	**116**		**Pg**	**02 17 12.2**	**0.0**
OKCFA	**Oklahoma City**	**1.21**	**151**		**Pg**	**02 17 12.1**	**-0.3**
OKCFA	**Oklahoma City** baz=332,SNR=16	**1.21**	**151**	P	**Pg**	**02 17 12.1**	**-0.3**
OKCFA	baz=332			S	**Sb**	**02 17 28.7**	**+0.3**
OKCFA	**Oklahoma City** baz=332,SNR=16	**1.21**	**151**	P		02 17 12.1	
OKCFA	baz=332			S		02 17 28.7	
QUOK	**Quay**	**1.22**	**104**		**Pg**	**02 17 12.4**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**1.22**	**151**		**Pg**	**02 17 11.8**	**-0.9**
OK030	**Cody Creek RV**	**1.25**	**116**		**Pb**	**02 17 12.6**	**-0.6**
FNO	**Franklin**	**1.37**	**153**		**Pn**	**02 17 15.1**	**+0.3**
T35A	**Sooner Cattle**	**1.40**	**71**		**Pn**	**02 17 15.3**	**0.0**
T35B	**Sooner Cattle** baz=253,SNR=418	**1.40**	**71**	P	**Pn**	**02 17 15.3**	**0.0**
T35B	baz=253			S	**Sb**	**02 17 33.7**	**-0.2**
T35B	**Sooner Cattle** baz=253,SNR=418	**1.40**	**71**	P		02 17 15.3	
T35B	baz=253			S		02 17 33.7	
WMOK	**Wichita Mounta**	**1.81**	**196**	Pn	**Pn**	**02 17 21.7**	**+0.9**
WMOK	comp=Z,194nm,1.1s			IAmb_Lg		02 17 51.6	
WMOK	**Wichita Mounta** baz=16,SNR=274	**1.81**	**196**	P	**Pn**	**02 17 21.7**	**+0.9**
WMOK	baz=16			S	**Sb**	**02 17 46.4**	**+0.9**
WMOK	**Wichita Mounta** baz=16,SNR=274	**1.81**	**196**	P		02 17 21.7	
WMOK	baz=16			S		02 17 46.4	
X34A	**Smith Ranch, M**	**1.89**	**172**		**Pb**	**02 17 23.4**	**-0.7**
R32A	**Long Quarter,**	**1.99**	**348**		**Pb**	**02 17 25.2**	**-0.6**
R32A	comp=Z,154nm,0.7s			IAmb_Lg		02 17 54.5	
R32A	**Long Quarter,** baz=167	**1.99**	**348**	P	**Pb**	**02 17 25.5**	**-0.3**
R32A	baz=167			S	**Sb**	**02 17 51.8**	**+1.1**
R32A	**Long Quarter,** baz=167	**1.99**	**348**	P		02 17 25.5	
R32A	baz=167			S		02 17 51.8	
TUL1	**Leonard** baz=288,SNR=170	**2.00**	**106**	P	**Pn**	**02 17 24.3**	**+0.7**
TUL1	baz=288			S	**Sb**	**02 17 52.1**	**+0.9**
TUL1	**Leonard** baz=288,SNR=170	**2.00**	**106**	P		02 17 24.3	
TUL1	baz=288			S		02 17 52.1	
CBKS	**Cedar Bluff**	**2.64**	**332**	Pn	**Pn**	**02 17 33.1**	**+0.8**
CBKS	**Cedar Bluff** baz=151	**2.64**	**332**	S	**Sn**	**02 18 06.7**	**+2.0**
CBKS	**Cedar Bluff** baz=151	**2.64**	**332**	S		02 18 06.7	
KSU1	**Kansas State U**	**2.90**	**25**		**Pn**	**02 17 36.6**	**+0.8**
KSU1	**Kansas State U** baz=206	**2.90**	**25**	P	**Pn**	**02 17 36.9**	**+1.1**
KSU1	**Kansas State U** baz=206	**2.90**	**25**	P		02 17 36.9	
X37A	**Clayton**	**2.96**	**129**		**Pn**	**02 17 37.7**	**+1.1**
X37A	comp=Z,169nm,1.1s			IAmb_Lg		02 18 27.9	
X37A	**Clayton** baz=311,SNR=26	**2.96**	**129**	P	**Pn**	**02 17 37.8**	**+1.1**
X37A	baz=311			Sb	**Sb**	**02 18 21.0**	**+2.3**
X37A	**Clayton** baz=311,SNR=26	**2.96**	**129**	P		02 17 37.8	
X37A	baz=311			Sb		02 18 21.0	
U38A	**Gravette**	**3.05**	**90**		**Pn**	**02 17 38.7**	**+0.8**
U38A	**Gravette** baz=272,SNR=25	**3.05**	**90**	P	**Pn**	**02 17 38.9**	**+1.0**
U38A	**Gravette** baz=272,SNR=25	**3.05**	**90**	P		02 17 38.9	
Z35A	**Perchaven, San**	**3.23**	**166**	Pn	**Pn**	**02 17 40.9**	**+0.5**
Z35A	**Perchaven, San** baz=347	**3.23**	**166**	S	**Sn**	**02 18 20.6**	**+1.5**
Z35A	**Perchaven, San** baz=347	**3.23**	**166**	S		02 18 20.6	
AMTX	**Amarillo**	**3.27**	**242**	Pn	**Pn**	**02 17 42.1**	**+1.0**
AMTX	comp=Z,130nm,0.7s			IAmb_Lg		02 18 37.6	
HHAR	**Hobbs**	**3.42**	**92**		**Pn**	**02 17 43.6**	**+0.6**
W39A	**Magazine**	**3.79**	**108**		**Pn**	**02 17 48.6**	**+0.6**
W39A	comp=Z,110nm,0.7s			IAmb_Lg		02 18 53.8	
W39A	**Magazine** baz=291	**3.79**	**108**	P	**Pn**	**02 17 48.3**	**+0.3**
W39A	**Magazine** baz=291	**3.79**	**108**	P		02 17 48.3	
ABTX	**Abilene, Hawle**	**4.03**	**198**	Pn	**Pn**	**02 17 50.8**	**-0.6**
ABTX	comp=Z,73nm,0.9s			IAmb_Lg		02 19 02.0	
S39A	**Bolivar**	**4.06**	**71**		**Pn**	**02 17 51.5**	**-0.3**
S39A	comp=Z,67nm,0.8s			IAmb_Lg		02 19 08.0	
S39A	**Bolivar** baz=254,SNR=7.4	**4.06**	**71**	P	**Pn**	**02 17 52.3**	**+0.4**
S39A	**Bolivar** baz=254,SNR=7.4	**4.06**	**71**	P		02 17 52.3	
Z38A	**Mt. Pleasant**	**4.14**	**140**	Pn	**Pn**	**02 17 52.4**	**-0.6**
Z38A	**Mt. Pleasant** baz=322	**4.14**	**140**	S	**Sn**	**02 18 42.7**	**+1.0**
Z38A	**Mt. Pleasant** baz=322	**4.14**	**140**	S		02 18 42.7	
MIAR	**Mount Ida**	**4.21**	**116**		**Pn**	**02 17 54.2**	**+0.3**
MIAR	comp=Z,97nm,0.7s			IAmb_Lg		02 19 10.7	
MIAR	**Mount Ida** baz=299,SNR=28	**4.21**	**116**	P	**Pn**	**02 17 54.7**	**+0.8**
MIAR	baz=299			S	**Sn**	**02 18 44.9**	**+1.5**
MIAR	**Mount Ida** baz=299,SNR=28	**4.21**	**116**	P		02 17 54.7	
MIAR	baz=299			S		02 18 44.9	
U40A	**Yellville**	**4.29**	**90**		**Pn**	**02 17 55.1**	**+0.1**
U40A	comp=Z,125nm,0.8s			IAmb_Lg		02 19 06.4	
U40A	**Yellville** baz=273,SNR=51	**4.29**	**90**	P	**Pn**	**02 17 55.7**	**+0.7**
U40A	**Yellville** baz=273,SNR=51	**4.29**	**90**	P		02 17 55.7	
U40A	baz=273,SNR=51			P		02 17 55.7	
N33A	**J Bar K, Exete**	**4.29**	**7**	Pn	**Pn**	**02 17 54.8**	**-0.2**
N33A	comp=Z,69nm,0.8s			IAmb_Lg		02 19 13.7	
KSCO	**Kaye Shedlock'** comp=Z,84nm,0.8s	**4.34**	**307**	IAmb_Lg		02 19 16.8	
WHTX	**Lake Whitney,**	**4.51**	**172**	Pn	**Pn**	**02 17 58.1**	**0.0**
WHTX	**Lake Whitney,** baz=353,SNR=8.8	**4.51**	**172**	P	**Pn**	**02 17 58.8**	**+0.7**
WHTX	**Lake Whitney,** baz=353,SNR=8.8	**4.51**	**172**	P		02 17 58.8	
MSTX	**Muleshoe**	**4.52**	**238**	Pn	**Pn**	**02 17 58.6**	**+0.3**
MGMO	**Mountain Grove**	**4.78**	**80**		**Pn**	**02 18 02.1**	**+0.3**
MGMO	comp=Z,77nm,0.8s			IAmb_Lg		02 19 27.9	
X40A	**Basin Creek Fa**	**4.79**	**113**		**Pn**	**02 18 02.7**	**+0.9**
X40A	comp=Z,79nm,0.7s			IAmb_Lg		02 19 33.7	
N35A	**Tabor**	**4.80**	**24**	Pn	**Pn**	**02 18 03.0**	**+0.9**
P38A	**Dawn**	**4.82**	**48**	Pn	**Pn**	**02 18 03.0**	**+0.7**
P38A	comp=Z,78nm,0.7s			IAmb_Lg		02 19 34.1	
237A	**Washetta, Mont** comp=Z,59nm,0.8s	**4.88**	**156**	IAmb_Lg		02 19 38.1	
WHAR	**Wooly Hollow**	**4.92**	**102**		**Pn**	**02 18 03.6**	**0.0**
WHAR	comp=Z,55nm,0.8s			IAmb_Lg		02 19 32.2	
BGNE	**Belgrade**	**4.92**	**0**		**Pn**	**02 18 04.2**	**+0.5**
BGNE	comp=Z,101nm,0.8s			IAmb_Lg		02 19 30.1	
BGNE	**Belgrade** baz=180,SNR=7.4	**4.92**	**0**	P	**Pn**	**02 18 04.0**	**+0.4**
BGNE	**Belgrade** baz=180,SNR=7.4	**4.92**	**0**	P		02 18 04.0	
FCAR	**Ozark Folk Cen**	**4.92**	**95**		**Pn**	**02 18 04.0**	**+0.3**
FCAR	comp=Z,61nm,0.7s			IAmb_Lg		02 19 28.0	
W41B	**Gary Mavity, V** baz=287	**4.99**	**103**	P	**Pn**	**02 18 04.8**	**+0.3**
W41B	**Gary Mavity, V** baz=287	**4.99**	**103**	P		02 18 04.8	
WLAR	**White Oak Lake**	**5.00**	**122**	Pn	**Pn**	**02 18 04.6**	**-0.1**
WLAR	comp=Z,84nm,0.9s			IAmb_Lg		02 19 35.3	
R40A	**Maddies Statio**	**5.04**	**67**		**Pn**	**02 18 04.8**	**-0.4**
R40A	comp=Z,95nm,1.1s			IAmb_Lg		02 19 35.9	
R40A	**Maddies Statio** baz=251	**5.04**	**67**	P	**Pn**	**02 18 05.5**	**+0.3**
R40A	**Maddies Statio** baz=251	**5.04**	**67**	P		02 18 05.5	
T25A	**Trinidad**	**5.05**	**279**	Pn	**Pn**	**02 18 06.5**	**+0.8**
T25A	comp=Z,71nm,0.9s			IAmb_Lg		02 19 32.0	
OGNE	**Ogallala**	**5.39**	**327**	Pn	**Pn**	**02 18 11.5**	**+1.4**
OGNE	comp=Z,119nm,0.7s			IAmb_Lg		02 19 50.8	
NATX	**Nacogdoches** comp=Z,44nm,0.8s	**5.53**	**147**	IAmb_Lg		02 19 58.8	
L34A	**Svendsen Farm,**	**5.66**	**14**	Pn	**Pn**	**02 18 13.9**	**+0.2**
LCAR	**Lake Charles**	**5.68**	**92**		**Pn**	**02 18 13.3**	**-0.8**
LCAR	comp=Z,37nm,0.9s			IAmb_Lg		02 19 48.8	
435B	**Jarrell**	**5.70**	**175**	Pn	**Pn**	**02 18 15.0**	**+0.7**
435B					Lg	02 19 54.0	
P40A	**Paris**	**5.71**	**56**	Pn	**Pn**	**02 18 14.3**	**-0.2**
P40A	comp=Z,100nm,0.7s			IAmb_Lg		02 19 56.6	
CCM	**Cathedral Cave**	**5.74**	**72**	Pn	**Pn**	**02 18 15.6**	**+0.7**
CCM	comp=Z,92nm,0.7s			IAmb_Lg		02 19 52.2	
N38A	**Joes South For**	**5.79**	**40**	Pn	**Pn**	**02 18 15.8**	**+0.3**
N38A	comp=Z,84nm,0.8s			IAmb_Lg		02 20 07.8	
CCAR	**Cane Creek**	**5.83**	**114**	Pn	**Pn**	**02 18 16.4**	**+0.3**
CCAR					Lg	02 19 58.3	
CCAR	comp=Z,96nm,0.9s			IAmb_Lg		02 20 04.9	
JCT	**Junction City**	**6.14**	**193**	Pn	**Pn**	**02 18 20.2**	**-0.2**
K31A	**O'Neill**	**6.15**	**356**	Pn	**Pn**	**02 18 20.5**	**-0.1**
PBMO	**Poplar Bluff**	**6.23**	**85**	Pn	**Pn**	**02 18 21.6**	**0.0**
PBMO	comp=Z,52nm,0.7s			IAmb_Lg		02 20 17.0	
FVM	**French Village**	**6.36**	**74**	Pn	**Pn**	**02 18 23.7**	**+0.3**
FVM	comp=Z,48nm,0.8s			IAmb_Lg		02 20 14.5	
LPAR	**Lepanto** comp=Z,80nm,0.8s	**6.44**	**95**	IAmb_Lg		02 20 19.7	
SLM	**Saint Louis** comp=Z,69nm,1.0s	**6.66**	**69**	IAmb_Lg		02 20 17.4	
143A	**Socs Landing,** comp=Z,53nm,0.8s	**6.73**	**122**	IAmb_Lg		02 20 32.7	
ISCO	**Idaho Springs**	**6.74**	**302**	Pn	**Pn**	**02 18 29.1**	**+0.2**
ISCO	comp=Z,36nm,0.8s			IAmb_Lg		02 20 28.9	
ANMO	**Albuquerque** comp=Z,0.1nm,0.3s,baz=108,slow=16,SNR=1.9	**6.91**	**260**	Pn	**Pn**	**02 18 32.2**	**+1.0**
ANMO	comp=Z,0.7nm,0.3s,baz=80,slow=18,SNR=11			Pg	Pb	02 18 55.4	+5.6
ANMO	comp=Z,1.5nm,0.3s,baz=74,slow=11,SNR=3.0			Lg	Lg	02 20 21.9	
ANMO	**Albuquerque**	**6.91**	**260**	Pn	**Pn**	**02 18 31.5**	**+0.3**
S44A	**Carbondale**	**7.23**	**78**	Pn	**Pn**	**02 18 35.7**	**+0.4**
S44A	comp=Z,83nm,0.8s			IAmb_Lg		02 20 41.1	
SIUC	**Southern Illin**	**7.26**	**78**	Pn	**Pn**	**02 18 35.9**	**+0.1**
SIUC	comp=Z,63nm,0.8s			IAmb_Lg		02 20 39.9	
BNM	**Barren Site**	**7.29**	**254**	Pn	**Pn**	**02 18 36.6**	**+0.1**
ECSD	**EROS Data Cent**	**7.34**	**9**	Pn	**Pn**	**02 18 37.4**	**+0.5**
OXF	**Oxford**	**7.41**	**103**	Pn	**Pn**	**02 18 37.9**	**+0.1**
OXF	comp=Z,70nm,1.2s			IAmb_Lg		02 20 50.9	
W45A	**Hickory Valley** comp=Z,54nm,0.8s	**7.42**	**98**	IAmb_Lg		02 20 51.3	
PHWY	**Pilot Hill** comp=Z,42nm,1.0s	**7.45**	**312**	IAmb_Lg		02 21 02.7	
SMCO	**Snowmass**	**7.47**	**294**	Pn	**Pn**	**02 18 38.9**	**-0.1**
P43A	**Skaggs, Pawnee**	**7.52**	**63**	Pn	**Pn**	**02 18 40.0**	**+0.7**
Y45A	**Yeager Farm, C** comp=Z,34nm,0.9s	**7.53**	**108**	IAmb_Lg		02 20 59.7	
VBMS	**Vicksburg** comp=Z,25nm,0.9s	**7.62**	**122**	IAmb_Lg		02 21 08.4	
MNTX	**Cornudas Mount**	**7.65**	**234**	Pn	**Pn**	**02 18 41.5**	**+0.4**
MNTX	comp=Z,27nm,0.9s			IAmb_Lg		02 21 02.6	
Q44A	**Meyer Farm, Va**	**7.65**	**69**	Pn	**Pn**	**02 18 42.1**	**+1.0**
L40A	**Anamosa**	**7.75**	**42**	Pn	**Pn**	**02 18 41.9**	**-0.6**
SUSD	**Miller** comp=Z,36nm,0.9s	**7.98**	**356**	IAmb_Lg		02 21 16.1	
HDIL	**Hopedale**	**8.06**	**57**	Pn	**Pn**	**02 18 47.0**	**+0.3**
PLAL	**Pickwick Lake**	**8.34**	**97**	Pn	**Pn**	**02 18 50.9**	**+0.3**
PLAL	comp=Z,24nm,1.0s			IAmb_Lg		02 21 13.3	
WVT	**Waverly**	**8.36**	**89**	Pn	**Pn**	**02 18 51.1**	**+0.3**
I37A	**Lemond, Waseca** comp=Z,34nm,0.8s	**8.36**	**24**	IAmb_Lg		02 21 25.6	
146A	**Union** comp=Z,31nm,0.9s	**8.44**	**114**	IAmb_Lg		02 21 39.8	
TX31	**Lajitas Ar. Si**	**8.49**	**215**		**Pn**	**02 18 52.2**	**-0.5**
TX31	**Lajitas Ar. Si** baz=31,SNR=7.8	**8.49**	**215**	P	**Pn**	**02 18 52.8**	**+0.1**
TX31	**Lajitas Ar. Si** baz=31,SNR=7.8	**8.49**	**215**	P		02 18 52.8	
TX32	**Lajitas Array**	**8.49**	**215**		**Pn**	**02 18 52.6**	**-0.2**
TXAR	**Lajitas Array** comp=Z,0.3nm,0.3s,baz=39,slow=12,SNR=32	**8.49**	**215**	Pn	**Pn**	**02 18 52.4**	**-0.4**
TXAR	comp=Z,0.8nm,0.3s,baz=45,slow=14,SNR=19			Pg	Pb	02 19 22.6	+6.0
TXAR	comp=Z,2.1nm,0.3s,baz=39,slow=32,SNR=6.9			Lg	Lg	02 21 13.9	
USIN	**University of** comp=Z,62nm,1.1s	**8.51**	**77**	IAmb_Lg		02 21 19.2	
L42A	**Oliver, Polo**	**8.60**	**47**	Pn	**Pn**	**02 18 55.0**	**+0.9**
O20A	**White River Ci** comp=Z,31nm,1.2s	**8.72**	**298**	IAmb_Lg		02 21 38.3	
RSSD	**Black Hills** comp=Z,28nm,0.9s	**8.85**	**331**	IAmb_Lg		02 21 55.6	
JFWS	**Jewell Farm**	**8.86**	**41**	Pn	**Pn**	**02 18 58.2**	**+0.4**
JFWS	comp=Z,47nm,0.7s			IAmb_Lg		02 21 31.0	
T47A	**Sharon Grove**	**8.90**	**83**	Pn	**Pn**	**02 18 58.1**	**-0.1**
T47A	comp=Z,27nm,0.8s			IAmb_Lg		02 21 57.2	
K22A	**Casper** comp=Z,34nm,0.8s	**8.92**	**316**	IAmb_Lg		02 21 40.1	
V48A	**Smith Brothers** comp=Z,28nm,1.1s	**9.21**	**91**	IAmb_Lg		02 21 39.3	
I40A	**Norwalk** comp=Z,24nm,0.8s	**9.39**	**36**	IAmb_Lg		02 22 03.6	
BLO	**Bloomington** comp=Z,55nm,0.7s	**9.60**	**70**	IAmb_Lg		02 22 03.3	
WCI	**Wyandotte Cave** comp=Z,28nm,0.7s	**9.62**	**76**	IAmb_Lg		02 22 02.9	
U49A	**Red Boiling Sp** comp=Z,24nm,1.2s	**9.98**	**86**	IAmb_Lg		02 22 06.9	
PDAR	**Pinedale Array** comp=Z,0.1nm,0.3s,baz=118,slow=11,SNR=1.8	**10.79**	**309**	Pn	**Pn**	**02 19 25.9**	**+1.5**
PDAR	comp=Z,0.3nm,0.3s,baz=114,slow=28,SNR=3.6			Lg	Lg	02 22 25.6	
TKL	**Tuckaleechee C** comp=Z,0.3nm,0.3s,baz=225,slow=11,SNR=4.3	**11.68**	**90**	Pn	**Pn**	**02 19 35.8**	**-0.6**
TKL	comp=Z,0.6nm,0.3s,baz=186,slow=20,SNR=2.8			Lg	Lg	02 22 51.3	
ULM	**Lac du Bonnet** comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=1.7	**13.87**	**6**	Pn	**Pn**	**02 20 01.7**	**-4.4**
ULM	comp=Z,0.3nm,0.3s,baz=262,slow=18,SNR=1.1			Lg	Lg	02 23 56.8	
SADO	**Sadowa** comp=Z,0.1nm,0.3s,baz=150,slow=20,SNR=1.9	**16.62**	**54**	Lg	Lg	02 25 22.8	
NEW	**Newport** comp=Z,0.1nm,0.3s,baz=152,slow=18,SNR=3.1	**18.24**	**316**	Pn	**Pn**	**02 21 00.4**	**-2.4**
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.5s,baz=144,slow=8.9,SNR=2.3	**27.97**	**344**	P	**P**	**02 22 41.3**	**+1.2**

*SKO **03** 02:17:59.1,41°.50N×20°.28E,h15km*
*ATH **03** 02:18:01.5,41°.64N×20°.29E,h13km±6km,ML2.8/4, Error ellipse: s-maj=8.1km s-min=1.2km az=316.0*
*TIR **03** 02:18:02.6,41°.55N×20°.22E,h12km±1km,Md3.1,Ml3.1*
*THE **03** 02:18:03.4,41°.50N×20°.30E,h0km±2km,ML2.7/6, Error ellipse: s-maj=2.0km s-min=0.6km az=344.0*
*BEO **03** 02:18:03.5±0.3,41°.50N×20°.32E,h4km±2km,ML2.7/13*
ISC 03 02:18:02.9±0.9,**41°.51N**±0°.02×**20°.28E**±0°.02,**h12**km±7km, **n59,**σ0°**88**/90**, 1C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.21**	**35**	P	**Pg**	**02 18 07.5**	**0.0**
PHP				S	**Sg**	**02 18 11.3**	**+0.6**
PHP	**Peshkopia** baz=49	**0.21**	**35**	P	**Pg**	**02 18 07.6**	**0.0**
PHP	baz=49			S	**Sg**	**02 18 11.1**	**+0.4**
PHP	comp=N,15nm,0.1s,baz=49			AMP			
TIR	**Tirane**	**0.35**	**242**	P	**Pg**	**02 18 10.0**	**0.0**
TIR				S	**Sb**	**02 18 16.1**	**-0.6**
TIR	comp=N,9627μm,0.4s			AML	AML	02 18 17.2	
TIR	comp=E,6881μm,0.3s			AML	AML	02 18 18.9	
TIR	**Tirane**	**0.35**	**242**	P	**Pg**	**02 18 10.0**	**0.0**
TIR	comp=E,2μm,0.3s			S	**Sb**	**02 18 15.7**	**-1.0**
TIR	**Tirane**	**0.35**	**242**	*e*Pg	**Pg**	**02 18 09.8**	**-0.2**
TIR				*e*Sg	**Sb**	**02 18 16.1**	**-0.6**
TIR	**Tirane** baz=234	**0.35**	**242**	P	**Pg**	**02 18 09.9**	**0.0**
TIR	baz=234			S	**Sg**	**02 18 14.7**	**0.0**
TIR	**Tirane**	**0.35**	**242**	‖ *i*Pg	**Pg**	**02 18 09.9**	**0.0**
OHR	**Ohrid**	**0.56**	**135**	‖ *i*Pg	**Pg**	**02 18 13.2**	**-0.8**
OHR				*i* Sg	**Sb**	**02 18 22.3**	**-0.4**
OHR	comp=N,455nm,0.8s			*e*Lg	Lg	02 18 22.5	
OHR	comp=E,316nm,0.6s			*e*Lg	Lg	02 18 22.6	
PUK	**Puka** baz=334	**0.60**	**332**	P	**Pg**	**02 18 14.2**	**-0.5**
PUK	baz=334			S	**Sg**	**02 18 22.4**	**-0.3**
PRZK	**Prizren**	**0.78**	**27**	*i* Pg	**Pg**	**02 18 17.4**	**-0.7**
PRZK				*i* Sg	**Sb**	**02 18 30.0**	**+0.8**
BCI	**Bajram Curri** baz=353	**0.87**	**350**	P	**Pg**	**02 18 18.9**	**-0.8**
BCI	baz=353			S	**Sg**	**02 18 31.0**	**0.0**
ULC	**Ulcinj**	**0.90**	**301**	‖ *i*Pg	**Pg**	**02 18 19.4**	**-0.8**
KBN	**Korca**	**0.97**	**156**	P	**Pn**	**02 18 22.0**	**-0.4**
KBN	comp=E,482nm,0.5s			S	**Sn**	**02 18 35.2**	**-1.0**
KBN	**Korca** baz=154	**0.97**	**156**	P	**Pn**	**02 18 22.6**	**+0.2**
KBN	baz=154			S	**Sn**	**02 18 37.5**	**+1.4**
SKO	**Skopje**	**0.98**	**62**	*e*Pg	**Pg**	**02 18 20.5**	**-1.4**
SKO				*e*Sg	**Sb**	**02 18 35.0**	**+0.1**
SKO	**Skopje**	**0.98**	**62**	*i* Pg	**Pg**	**02 18 20.6**	**-1.3**
SKO				*i* Sg	**Sb**	**02 18 35.1**	**+0.2**
FNA	**Florina**	**1.10**	**131**	P	**Pb**	**02 18 23.2**	**-0.8**
FNA				S	**Sn**	**02 18 39.2**	**-0.3**
FNA	comp=N,1060μm,0.5s			AML	AML	02 18 45.3	
FNA	comp=E,1060μm,0.5s			AML	AML	02 18 45.7	
FNA	**Florina**	**1.10**	**131**	P	**Pb**	**02 18 23.1**	**-0.8**
FNA				S	**Sn**	**02 18 39.4**	**-0.1**
FNA	**Florina**	**1.10**	**131**	*i* Pg	**Pb**	**02 18 23.2**	**-0.8**
FNA				*i* Sg	**Sn**	**02 18 39.5**	**+0.1**
PDG	**Podgorica**	**1.19**	**321**	*e*Pg	**Pn**	**02 18 24.8**	**-0.7**
PDG				*e*Sg	**Sn**	**02 18 42.2**	**+0.6**
PDG	**Podgorica**	**1.19**	**321**	*i* Pg	**Pn**	**02 18 24.8**	**-0.7**
PDG				*i* Sg	**Sn**	**02 18 44.3**	**+2.7**
NEST	**Nestorio**	**1.24**	**152**	P	**Pg**	**02 18 26.5**	**-0.4**
NEST				S	**Sn**	**02 18 43.9**	**+1.0**
NEST	comp=N,399μm,0.6s			AML	AML	02 18 47.3	
NEST	comp=E,362μm,0.8s			AML	AML	02 18 53.4	
NEST	**Nestorio**	**1.24**	**152**	P	**Pg**	**02 18 26.4**	**-0.4**
NEST	comp=E,192nm,0.7s			S	**Sn**

SRN					S		Sg	02 18 55.4	-0.4
	comp=E,112nm,0.9s								
KZN	**Kozani**	**1.65**	**136**		P		**Pb**	02 18 32.7	-0.7
GRG	**Griva**	**1.69**	**108**		P		**Pn**	02 18 32.7	+0.3
GRG	**Griva**	**1.69**	**108**		P		**Pb**	02 18 33.0	-1.1
GRG	**Griva**	**1.69**	**108**		*i* Pn		**Pb**	02 18 33.0	-1.1
BARS	**Barje**	**1.73**	**41**		*e*Pg		**Pb**	02 18 34.4	-0.3
BARS					*e*Sg		**Sg**	02 18 57.7	-1.0
BARS	**Barje**	**1.73**	**41**		*i* Pn		**Pb**	02 18 34.5	-0.3
VAY	**Valandovo**	**1.73**	**96**		*e*Pn		**Pb**	02 18 33.4	-1.3
VAY					*e*Sg		**Sb**	02 18 56.1	-0.4
KPRO	**Kipourio**	**1.76**	**152**		P		**Pb**	02 18 34.7	-0.5
KPRO	**Kipourio**	**1.76**	**152**		P		**Pn**	02 18 34.1	-1.1
SJES	**Sjenica**	**1.76**	**353**		*e*Pn		**Pb**	02 18 35.4	+0.1
SJES					*e*Sn		**Sb**	02 18 57.9	+0.5
SELS	**Selova**	**1.82**	**20**		*e*Pn		**Pb**	02 18 35.3	-0.9
KEK	**Kerkira**	**1.83**	**192**		P		**Pb**	02 18 36.4	0.0
KEK					S		**Sg**	02 19 01.6	-0.3
KEK					AML	AML		02 19 11.4	
	comp=N,230µm,0.7s								
KEK					AML	AML		02 19 15.3	
	comp=E,124µm,0.5s								
KEK	**Kerkira**	**1.83**	**192**		P		**Pb**	02 18 35.8	-0.6
TREB	**Trebinje**	**1.87**	**311**		*e*Pn		**Pb**	02 18 36.6	-0.5
TREB					*e*Sn		**Sg**	02 19 02.2	-1.0
JAN	**Janina**	**1.90**	**167**		P		**Pb**	02 18 37.5	-0.1
BOSS	**Bosilegrad**	**1.91**	**58**		*e*Pn		**Pb**	02 18 35.7	+0.3
BOSS					*e*Sn		**Sb**	02 19 01.0	-0.6
KNT	**Kendrikon**	**2.00**	**99**		P		**Pb**	02 18 37.0	+0.4
KNT	**Kendrikon**	**2.00**	**99**		P		**Pn**	02 18 37.1	+0.4
KNT	**Kendrikon**	**2.00**	**99**		*i* Pn		**Pn**	02 18 37.1	+0.4
IVAS	**Ivanjica**	**2.06**	**357**		*e*Pn		**Pn**	02 18 38.1	+0.6
IVAS					*e*Sn		**Sb**	02 19 05.7	-0.4
THL	**Klokotos Trika**	**2.35**	**145**		P		**Pb**	02 18 44.3	-1.0
BBLS	**Lazići**	**2.44**	**345**		*e*Pn		**Pb**	02 18 44.8	-2.0
VTS	**Vitosha**	**2.46**	**62**		*e*Pn		**Pn**	02 18 44.0	+0.9
ZAPS	**Zavoj**	**2.48**	**44**		*e*Pn		**Pn**	02 18 44.1	+0.9
DIVS	**Divibare**	**2.59**	**355**		*e*Pn		**Pn**	02 18 46.3	+1.5
ZAGS	**Zajecar**	**2.71**	**31**		*e*Pn		**Pn**	02 18 48.0	+1.6
HAPS	**Han Pijesak,BI**	**2.75**	**340**		*e*Pn		**Pn**	02 18 48.4	+1.4
NYDR	**Nydri-Lefkada**	**2.81**	**173**		P		**Pn**	02 18 48.8	+1.1
FRGS	**Fruska Gora**	**3.66**	**355**		*e*Pn		**Pn**	02 19 00.6	+1.2

TIR ***03*** *02:26:55.9, 41°.53N×20°.26E, h4km±1km, Md2.5, Ml2.3*
BEO ***03*** *02:26:56.5±0.4, 41°.47N×20°.29E, h13km±4km, ML2.1/5*
ISC 03 02:26:56.3±0.9, 41°.54N±0°.03×20°.30E±0°.04, h15km±7km, n13, σ0s66/23, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.18**	**35**	P	**Pg**	02 27 00.8	+0.1
	baz=41						
PHP				S	**Sg**	02 27 04.0	+0.4
	baz=41						
PHP				AMP			
	comp=N,3.1nm,0.1s,baz=41						
TIR	**Tirane**	**0.38**	**240**	*e*Pg	**Pg**	02 27 03.3	-0.7
TIR				*e*Sg	**Sg**	02 27 09.6	+0.4
TIR	**Tirane**	**0.38**	**240**	P	**Pg**	02 27 03.5	-0.6
	baz=239						
TIR				S	**Sg**	02 27 08.7	-0.5
	baz=239						
TIR				AMP			
	comp=N,1.3nm,0.4s,baz=239						
PUK	**Puka**	**0.59**	**329**	P	**Pg**	02 27 07.6	-0.3
	baz=333						
PUK				S	**Sb**	02 27 16.8	+0.1
	baz=333						
BCI	**Bajram Curri**	**0.85**	**348**	P	**Pb**	02 27 12.2	-0.6
	baz=351						
BCI				S	**Sn**	02 27 25.8	-0.2
	baz=351						
SKO	**Skopje**	**0.96**	**63**	*e*Sg	**Sn**	02 27 28.2	-0.5
KBN	**Korca**	**0.98**	**158**	P	**Pn**	02 27 15.9	+0.2
	baz=155						
KBN				S	**Sn**	02 27 30.3	+0.9
	baz=155						
PDG	**Podgorica**	**1.19**	**319**	*e*Pg	**Pn**	02 27 18.1	-0.3
PDG				*e*Sg	**Sg**	02 27 36.1	+1.4
SRN	**Sarande**	**1.67**	**188**	P	**Pg**	02 27 28.3	-0.2
	baz=187						
SJES	**Sjenica**	**1.74**	**352**	*e*Pn	**Pb**	02 27 27.2	-0.9
SJES				*e*Sn	**Sb**	02 27 50.8	+1.0
SELS	**Selova**	**1.79**	**20**	*e*Pn	**Pb**	02 27 28.6	-0.2
SELS				*e*Sn	**Sb**	02 27 50.6	-0.5
IVAS	**Ivanjica**	**2.04**	**357**	*e*Pn	**Pn**	02 27 30.2	-0.1
STON	**Ston**	**2.35**	**305**	*e*Pn	**Pb**	02 27 39.1	+0.7
STON				Sn	**Sb**	02 28 07.8	+0.6

SKO ***03*** *02:30:10.7, 41°.50N×20°.28E, h15km*
ATH ***03*** *02:30:12.2, 41°.65N×20°.29E, h13km±6km, ML2.9/5, Error ellipse: s-maj=7.6km s-min=1.0km az=318.0*
PDG ***03*** *02:30:13.3±0.0, 41°.53N×20°.30E, h11km, MD3.4/1, ML3.2/13, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*
TIR ***03*** *02:30:13.1, 41°.53N×20°.29E, h25km±2km, Md3.0, Ml3.2*
BEO ***03*** *02:30:14.2±0.3, 41°.50N×20°.35E, h7km±2km, ML2.8/12*
THE ***03*** *02:30:14.2, 41°.51N×20°.30E, h0km±1km, ML2.8/9, Error ellipse: s-maj=1.8km s-min=0.6km az=349.0*
ISC 03 02:30:14.2±1.0, 41°.53N±0°.02×20°.31E±0°.02, h5km±9km, n110, σ0s97/166, 12C-13D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.18**	**32**	P	**Pg**	02 30 18.4	+0.6
PHP	**Peshkopia**	**0.18**	**32**	P	**Pg**	02 30 18.3	+0.6
	baz=36						
TIR	**Tirane**	**0.38**	**242**	P	**Pg**	02 30 20.8	-0.7
TIR				S	**Sg**	02 30 26.8	+0.2
TIR				AML	AML	02 30 28.1	
	comp=N,12392µm,0.4s						
TIR				AML	AML	02 30 29.8	
	comp=E,10310µm,0.6s						
TIR	**Tirane**	**0.38**	**242**	P	**Pg**	02 30 20.8	-0.7
TIR				S	**Sg**	02 30 26.8	+0.2
	comp=E,2µm,0.5s						
TIR	**Tirane**	**0.38**	**242**	*e*Pg	**Pg**	02 30 20.9	-0.7
TIR				*e*Sg	**Sg**	02 30 26.9	+0.3
TIR	**Tirane**	**0.38**	**242**	⇓P	**Pg**	02 30 20.8	-0.7
TIR	**Tirane**	**0.38**	**242**	P	**Pg**	02 30 20.9	-0.6
	baz=241						
TIR				S	**Sg**	02 30 27.3	+0.8
	baz=241						
TIR				AMP			
	comp=N,9.8nm,0.4s,baz=241						
TIR	**Tirane**	**0.38**	**242**	⇓*i*Pg	**Pg**	02 30 21.0	-0.6
OHR	**Ohrid**	**0.56**	**139**	⇑*i*Pg	**Pg**	02 30 24.0	-0.9
OHR				*i* Sg	**Sg**	02 30 33.0	+0.9
OHR				*e*Lg	Lg	02 30 33.2	
	comp=N,641nm,0.8s						
OHR				*e*Lg	Lg	02 30 33.4	
	comp=E,421nm,0.6s						
PUK	**Puka**	**0.60**	**329**	P	**Pg**	02 30 25.2	-0.5
	baz=331						
PUK				S	**Sg**	02 30 34.6	+1.1
	baz=331						
PUK				AMP			
	comp=N,7.7nm,0.2s,baz=331						
PRZK	**Prizren**	**0.76**	**26**	⇓*i*Pg	**Pg**	02 30 28.3	-0.4
PRZK				*i* Sg	**Sb**	02 30 40.6	0.0
BCI	**Bajram Curri**	**0.85**	**348**	P	**Pg**	02 30 29.6	-1.0
	baz=350						
BCI				S	**Sg**	02 30 42.1	+0.4
	baz=350						
ULC	**Ulcinj**	**0.91**	**299**	⇓*i*Pg	**Pg**	02 30 30.2	-1.4
ULC	**Ulcinj**	**0.91**	**299**	⇑*i*Pg	**Pg**	02 30 30.1	-1.5
ULC				*i* Sg	**Sg**	02 30 44.3	+0.9
SKO	**Skopje**	**0.95**	**62**	*e*Pg	**Pg**	02 30 31.4	-1.1
SKO				*e*Sg	**Sg**	02 30 44.5	-0.3
SKO	**Skopje**	**0.95**	**62**	*i* Pg	**Pg**	02 30 31.5	-0.9
SKO				*i* Sg	**Sb**	02 30 46.0	-0.2
KBN	**Korca**	**0.97**	**158**	P	**Pg**	02 30 32.9	0.0
KBN				S	**Sb**	02 30 47.2	+0.3
	comp=N,590nm,0.7s						
KBN	**Korca**	**0.97**	**158**	P	**Pg**	02 30 32.5	-0.4
	baz=157						
KBN				S	**Sg**	02 30 46.1	+0.6
	baz=157						
DRME	**Dracevica, Mon**	**1.07**	**308**	*e*Pn	**Pg**	02 30 33.2	-1.4
DRME	**Dracevica, Mon**	**1.07**	**308**	⇑*i*Pg	**Pg**	02 30 33.0	-1.6
DRME				*i* Sg	**Sb**	02 30 49.7	+0.2
PVY	**Plav**	**1.09**	**346**	*e*Pg	**Pg**	02 30 33.6	-1.6
PVY				*i* Sg	**Sb**	02 30 50.8	+0.4
FNA	**Florina**	**1.10**	**133**	P	**Pg**	02 30 34.0	-1.1
FNA				S	**Sb**	02 30 50.1	-0.3
FNA				AML	AML	02 30 53.4	
	comp=E,1706µm,0.6s						
FNA				AML	AML	02 30 53.7	
	comp=N,1877µm,0.7s						
FNA	**Florina**	**1.10**	**133**	P	**Pg**	02 30 34.1	-1.1
FNA				S	**Sb**	02 30 50.3	0.0
	comp=N,902nm,0.6s						
FNA	**Florina**	**1.10**	**133**	*i* Pg	**Pg**	02 30 34.2	-1.1
FNA				*i* Sg	**Sb**	02 30 50.3	0.0
PDG	**Podgorica**	**1.20**	**319**	*e*Pg	**Pg**	02 30 35.5	-1.6
PDG				*e*Sg	**Sn**	02 30 54.2	-0.1
PDG	**Podgorica**	**1.20**	**319**	*e*Pn	**Pg**	02 30 35.6	-1.6
PDG	**Podgorica**	**1.20**	**319**	*i* Pg	**Pg**	02 30 35.6	-1.4
PDG				*i* Sg	**Sn**	02 30 54.1	-0.1
TTG	**Podgorica**	**1.20**	**319**	⇓*i*Pg	**Pg**	02 30 35.4	-1.6
TTG				*i* Sg	**Sn**	02 30 54.1	-0.1
NEST	**Nestorio**	**1.25**	**153**	P	**Pg**	02 30 36.9	-1.2
NEST				S	**Sg**	02 30 54.8	+0.6
NEST				AML	AML	02 30 58.2	
	comp=N,480µm,0.6s						
NEST				AML	AML	02 31 00.5	
	comp=E,574µm,0.6s						
NEST	**Nestorio**	**1.25**	**153**	P	**Pg**	02 30 37.2	-0.9
NEST				S	**Sg**	02 30 54.9	+0.6
GJIK	**Gjilan**	**1.25**	**42**	*i* Pg	**Pg**	02 30 37.4	-0.8
GJIK				*i* Sg	**Sn**	02 30 55.5	-0.2
BUM	**Brajici-Budva**	**1.31**	**306**	⇑*i*Pg	**Pn**	02 30 37.4	-1.9
BUM				*i* Sg	**Sn**	02 30 57.9	+0.7
BEY	**Berane**	**1.38**	**347**	*i* Pn	**Pn**	02 30 39.7	-0.5
IVA	**Berane**	**1.38**	**347**	⇓*i*Pg	**Pn**	02 30 38.7	-1.5
IVA				*i* Sg	**Sn**	02 31 00.3	+1.4
LSK	**Leskovik**	**1.40**	**171**	P	**Pn**	02 30 39.5	-1.0
LSK				S	**Sg**	02 30 59.8	+0.8
	comp=E,475nm,0.9s						
LSK	**Leskovik**	**1.40**	**171**	P	**Pn**	02 30 39.4	-1.1
	baz=170						
STIP	**Stip**	**1.42**	**83**	*i* Pn	**Pg**	02 30 42.6	+1.3
SMRK	**Smrekonice**	**1.42**	**19**	*i* Pn	**Pn**	02 30 40.7	-0.1
KOME	**Kolasin**	**1.45**	**336**	⇑*i*Pg	**Pn**	02 30 40.0	-1.2
KOME				*i* Sg	**Sg**	02 31 02.0	+1.3
CEME	**Cevo**	**1.45**	**315**	⇓*i*Pg	**Pn**	02 30 40.0	-1.2
CEME				*i* Sg	**Sg**	02 31 02.2	+1.3
PENT	**Pentalofos**	**1.47**	**155**	P	**Pn**	02 30 40.9	-0.7
PENT				S	**Sn**	02 31 01.3	0.0
PENT				AML	AML	02 31 08.0	
	comp=E,392µm,0.8s						
PENT				AML	AML	02 31 08.7	
	comp=N,470µm,0.8s						
NKME	**Niksic**	**1.60**	**321**	⇓*i*Pn	**Pn**	02 30 42.4	-0.8
NKME				*i* Sn	**Sg**	02 31 05.6	+0.1
NKY	**Niksic**	**1.61**	**323**	⇑*i*Pn	**Pn**	02 30 42.7	-0.8
NKY				*i* Sn	**Sg**	02 31 06.0	0.0
HCY	**Herceg Novi**	**1.64**	**305**	*e*Pn	**Pn**	02 30 42.7	-1.0
HCY	**Herceg Novi**	**1.64**	**305**	⇓*i*Pn	**Pn**	02 30 42.9	-0.8
HCY				*i* Sn	**Sb**	02 31 06.5	+0.7
KZN	**Kozani**	**1.65**	**137**	P	**Pn**	02 30 43.2	-0.7
KZN	**Kozani**	**1.65**	**137**	P	**Pn**	02 30 44.4	+0.5
KZN				S	**Sb**	02 31 06.5	+0.2
	comp=N,272nm,0.6s						
SRN	**Sarande**	**1.67**	**188**	P	**Pn**	02 30 44.2	+0.1
SRN				S	**Sn**	02 31 06.7	+0.9
	comp=N,132nm,1.1s						
SRN	**Sarande**	**1.67**	**188**	P	**Pn**	02 30 43.6	-0.5
	baz=188						
GRG	**Griva**	**1.68**	**109**	P	**Pn**	02 30 43.6	-0.7
GRG				S	**Sn**	02 31 06.2	0.0
GRG	**Griva**	**1.68**	**109**	P	**Pn**	02 30 43.8	-0.5
GRG				S	**Sg**	02 31 07.8	-0.3
	comp=N,122nm,0.9s						
GRG	**Griva**	**1.68**	**109**	*i* Pn	**Pn**	02 30 43.3	-0.9
BARS	**Barje**	**1.70**	**41**	*e*Pg	**Pb**	02 30 45.4	-0.6
BARS				*e*Sg	**Sg**	02 31 08.0	-0.9
BARS	**Barje**	**1.70**	**41**	*i* Pn	**Pb**	02 30 45.4	-0.6
VAY	**Valandovo**	**1.71**	**96**	*e*Pn	**Pn**	02 30 43.2	-1.5
VAY				*e*Sg	**Sn**	02 31 06.8	-0.2
SJES	**Sjenica**	**1.75**	**352**	*e*Pg	**Pb**	02 30 46.8	-0.1
SJES				*e*Sg	**Sg**	02 31 11.6	+1.3
KPRO	**Kipourio**	**1.77**	**153**	P	**Pn**	02 30 45.7	+0.1
KPRO	**Kipourio**	**1.77**	**153**	P	**Pn**	02 30 45.4	-0.1
KPRO				S	**Sn**	02 31 09.3	+0.9
	comp=N,228nm,0.9s						
SELS	**Selova**	**1.79**	**19**	*e*Pg	**Pn**	02 30 45.8	-0.1
SELS				*e*Sg	**Sg**	02 31 11.6	-0.1
KEK	**Kerkira**	**1.86**	**192**	P	**Pn**	02 30 47.3	+0.5
KEK				S	**Sb**	02 31 12.5	+0.3
KEK				AML	AML	02 31 22.3	
	comp=N,210µm,0.6s						
KEK				AML	AML	02 31 24.0	
	comp=E,176µm,0.8s						
KEK	**Kerkira**	**1.86**	**192**	P	**Pn**	02 30 46.6	-0.1
TREB	**Trebinje**	**1.88**	**310**	*e*Pn	**Pn**	02 30 47.6	+0.6
TREB				*e*Sn	**Sn**	02 31 12.0	+0.8
TREB	**Trebinje**	**1.88**	**310**	*e*Pn	**Pn**	02 30 47.8	+0.8
BOSS	**Bosilegrad**	**1.88**	**58**	*e*Pn	**Pn**	02 30 46.6	-0.5
BOSS				*e*Sn	**Sn**	02 31 09.5	-1.8
BRY	**Bratogost**	**1.90**	**317**	*e*Pn	**Pn**	02 30 48.0	+0.5
BRY	**Bratogost**	**1.90**	**317**	⇑*i*Pn	**Pn**	02 30 46.7	-0.8
BRY				*i* Sn	**Sn**	02 31 12.9	+1.0
JAN	**Janina**	**1.92**	**167**	P	**Pn**	02 30 48.3	+0.8
PLE	**Pljevlja**	**1.92**	**340**	⇑*i*Pn	**Pn**	02 30 47.0	-0.8
PLE				*i* Sn	**Sb**	02 31 13.6	-0.6
UPM	**Unac-Piva**	**1.97**	**329**	*e*Pn	**Pn**	02 30 48.7	+0.2
UPM	**Unac-Piva**	**1.97**	**329**	⇓*i*Pn	**Pn**	02 30 47.6	-0.9
UPM				*i* Sn	**Sn**	02 31 14.6	+0.9
KNT	**Kendrikon**	**1.98**	**100**	P	**Pn**	02 30 47.6	-0.8
KNT	**Kendrikon**	**1.98**	**100**	P	**Pn**	02 30 47.9	-0.5
KNT	**Kendrikon**	**1.98**	**100**	*i* Pn	**Pn**	02 30 47.9	-0.5
IVAS	**Ivanjica**	**2.05**	**357**	*e*Pn	**Pn**	02 30 49.3	-0.1
IVAS				*e*Sn	**Sn**	02 31 15.3	-0.1
RUDO	**Rudo**	**2.20**	**342**	*e*Pn	**Pn**	02 30 52.7	+1.3
HORT	**Hortiatis**	**2.31**	**113**	P	**Pn**	02 30 52.4	-0.5
THL	**Klokotos Trika**	**2.35**	**146**	P	**Pn**	02 30 54.9	+1.4
THL	**Klokotos Trika**	**2.35**	**146**	P	**Pn**	02 30 54.5	+1.0
THL				S	**Sn**	02 31 23.9	+1.1
	comp=E,85nm,0.8s						
STON	**Ston**	**2.36**	**305**	*e*Pn	**Pn**	02 30 53.4	-0.2
BBLS	**Lazići**	**2.43**	**344**	*e*Pn	**Pn**	02 30 55.6	+1.0
BBLS				*e*Sn	**Sn**	02 31 26.0	+1.2
BBLS	**Lazići**	**2.43**	**344**	*e*Pn	**Pn**	02 30 56.0	+1.4
VTS	**Vitosha**	**2.43**	**63**	*e*Pn	**Pn**	02 30 54.6	-0.2
VTS				*e*Sn	**Sn**	02 31 23.2	-1.8
VTS	**Vitosha**	**2.43**	**63**	⇑P	**Pn**	02 30 54.5	-0.2
VTS	**Vitosha**	**2.43**	**63**	*i* Pn	**Pn**	02 30 54.7	-0.1
ZAPS	**Zavoj**	**2.45**	**44**	*e*Pn	**Pn**	02 30 55.1	+0.2
ZAPS				*e*Sn	**Sn**	02 31 24.8	-0.5
DIVS	**Divibare**	**2.58**	**355**	*e*Pn	**Pn**	02 30 56.6	-0.1
DIVS	**Divibare**	**2.58**	**355**	*e*Pn	**Pn**	02 30 57.8	+1.1
PLG	**Polygyros**	**2.64**	**115**	P	**Pn**	02 30 57.8	+0.2
NVR	**Nevrokopi**	**2.68**	**93**	P	**Pn**	02 30 57.8	-0.2
ZAGS	**Zajecar**	**2.69**	**31**	*e*Pn	**Pn**	02 30 57.5	-0.6
HAPS	**Han Pijesak,BI**	**2.74**	**339**	*e*Pn	**Pn**	02 30 59.4	+0.4
HAPS	**Han Pijesak,BI**	**2.74**	**339**	*e*Pn	**Pn**	02 30 59.4	+0.4
AGG	**Agios Georgios**	**2.94**	**148**	P	**Pn**	02 31 01.8	+0.1
MDVR	**Moldovita**	**3.41**	**17**	⇓P	**Pn**	02 31 09.8	+1.7
TIP	**Timpagrande**	**3.59**	**230**	⇑P	**Pn**	02 31 09.1	-1.5
FRGS	**Fruska Gora**	**3.64**	**354**	⇓P	**Pn**	02 31 12.4	+1.1
FRGS	**Fruska Gora**	**3.64**	**354**	*e*Pn	**Pn**	02 31 11.1	-0.2
MGRS	**Mrkonjic Grad**	**3.73**	**322**	*e*Pn	**Pn**	02 31 13.9	+1.4
BLY	**Banja Luka**	**3.95**	**326**	*e*Pn	**Pn**	02 31 16.4	+0.9
BZS	**Buzias**	**4.19**	**13**	⇑P	**Pn**	02 31 20.0	+1.1
GZR	**Gura Zlata**	**4.26**	**24**	⇓P	**Pn**	02 31 21.9	+2.1
MORH	**Mrgy, Hungar**	**4.83**	**346**	⇑P	**Pn**	02 31 30.6	+3.0
MORH	**Mrgy, Hungar**	**4.83**	**346**	*e*Pn	**Pn**	02 31 27.2	-0.4
CRES	**Cresnjev**	**5.55**	**322**	*e*Pn	**Pn**	02 31 35.9	-1.6
CEY	**Cerknica**	**5.99**	**317**	*e*Pn	**Pn**	02 31 43.5	-0.1
SOKA	**Soboth**	**6.39**	**325**	*i* Pn	**Pn**	02 31 49.9	+0.7
	comp=E,0.7nm,0.3s						
SOKA				*e*Sn	**Sn**	02 33 02.6	0.0
	comp=E,0.6nm,0.4s						
OBKA	**Obir**	**6.48**	**322**	*e*Pn	**Pn**	02 31 52.3	+1.9
	comp=E,0.7nm,0.2s						
ABTA	**Abfaltersbach**	**7.66**	**316**	*e*Pn	**Pn**	02 32 07.7	+1.2
	comp=E,0.6nm,0.3s						
ABTA				*e*Sn	**Sn**	02 33 32.0	-1.6
	comp=E,4.0nm,0.8s						
WTTA	**Wattenberg**	**8.45**	**316**	*i* Pn	**Pn**	02 32 19.7	+2.2
	comp=E,1.9nm,0.4s						
MOTA	**Moosalm**	**8.78**	**315**	*e*Pn	**Pn**	02 32 24.1	+2.2
	comp=E,1.1nm,0.3s						
MOTA				*e*Sn	**Sn**	02 34 04.0	+2.6
	comp=E,2.4nm,0.6s						

KRSC ***03*** *03:06:13.7±1.2, 54°.43N×164°.30E, h47km±23km, ML3.8*
IDC ***03*** *03:06:13.9±1.6, 54°.56N×164°.19E, h0km, mb3.4/6, mb1 3.7/7, mb1mx3.4/35, mbtmp3.4/7, ML2.6/1, Error ellipse: s-maj=54.8km s-min=20.7km az=166.0*
ISC 03 03:06:13.1±2.7, 54°.46N±0°.04×164°.29E±0°.07, h1km±18km, n41, σ1s60/56, mb3.3/6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.23**	**52**	*e*P	**Pb**	03 06 36.8	-0.2
BKI				*e*S	**Sg**	03 06 51.3	-1.1
MKZ	**Mys Kozlova**	**1.50**	**275**	*e*P	**Pn**	03 06 41.0	-0.1
MKZ				*e*S	**Sn**	03 06 58.6	-2.6
KBTR	**Krutoberegovo**	**1.94**	**335**	*e*P	**Pn**	03 06 46.1	-1.2
KBTR				*e*S	**Sn**	03 07 09.1	-3.2
KBG	**Krutoberegovo**	**2.02**	**334**	*e*P	**Pn**	03 06 47.3	-0.9
KBG				*e*S	**Sn**	03 07 10.9	-3.1
TUMD	**Tumrok D**	**2.37**	**290**	*e*P	**Pn**	03 06 53.8	+0.6
TUMD				*e*S	**Sn**	03 07 21.6	-1.3
KZV	**Kizimen**	**2.41**	**287**	*e*P	**Pn**	03 06 54.4	+0.7
TUMR	**Tumrok**	**2.54**	**291**	*e*P	**Pn**	03 06 56.6	+1.1
SMKR	**Semkarok**	**2.67**	**324**	*e*P	**Pn**	03 06 58.2	+1.0
SMKR				*e*S	**Sn**	03 07 30.2	0.0
KMNR	**Kamenistaya**	**2.67**	**301**	*e*P	**Pn**	03 06 58.2	+0.9
KMNR				*e*S	**Sn**	03 07 29.4	-0.9
BDR	**Baidarnaya**	**2.75**	**322**	*e*P	**Pn**	03 06 59.1	+0.7
BDR				*e*S	**Sn**	03 07 31.7	-0.5
KLY	**Klyuchi**	**2.79**	**313**	*e*P	**Pn**	03 06 58.0	-0.8
KLY				*e*S	**Sn**	03 07 29.8	-3.2
SRKR	**Sorokina**	**2.83**	**322**	*e*P	**Pn**	03 07 00.0	+0.6
SPN	**Mys Shipunski**	**2.88**	**243**	*e*P	**Pn**	03 06 59.7	-0.3
SPN				*e*S	**Sn**	03 07 32.2	-3.1
KOZ	**Kozyrevsk**	**2.99**	**304**	*e*P	**Pn**	03 07 03.1	+1.4
KOZ				*e*S	**Sn**	03 07 39.7	+1.5
NLC	**Nalytchevo**	**3.20**	**248**	*e*P	**Pn**	03 07 04.6	+0.1
NLC				*e*S	**Sn**	03 07 41.1	-2.2
SRDR	**Sredinnyy**	**3.21**	**307**	*e*P	**Pn**	03 07 05.7	+1.1
SMAR	**Somma**	**3.46**	**252**	*e*P	**Pn**	03 07 09.0	+0.7
UGLR	**Uglovaya**	**3.47**	**251**	*e*P	**Pn**	03 07 09.3	+0.9
KRER	**Koryakskii**	**3.48**	**253**	*e*P	**Pn**	03 07 09.5	+1.0
AVH	**Avacha**	**3.50**	**252**	*e*P	**Pn**	03 07 10.2	+1.5
KRX	**Arik**	**3.51**	**254**	*e*P	**Pn**	03 07 09.8	+0.8
ESO	**Esso**	**3.53**	**297**	*e*P	**Pn**	03 07 10.0	+1.0
ESO				*e*S	**Sn**	03 07 50.8	-0.5
KOK	**Koryaka**	**3.55**	**253**	*e*P	**Pn**	03 07 10.4	+1.1
DALK	**Dalny**	**3.59**	**249**	*e*P	**Pn**	03 07 10.8	+1.0
GNL	**Ganaly**	**3.82**	**261**	*e*P	**Pn**	03 07 14.9	+1.8
RUS	**Russkaya**	**4.01**	**242**	*e*P	**Pn**	03 07 15.9	+0.3
RUS				*e*S	**Sn**	03 08 00.5	-2.6
KRMR	**Karymshinskiy**	**4.01**	**249**	*e*P	**Pn**	03 07 17.8	+2.2
KRMR				*e*S	**Sn**	03 08 02.6	-0.7
PETK	**Petropavlovsk-**	**4.14**	**254**	Pn	**Pn**	03 07 19.0	+1.6
	1.7nm,0.3s,baz=81,slow=18,SNR=18						
PETK				Sn	**Sn**	03 08 05.4	-1.0
	1.0nm,0.3s,baz=74,slow=21,SNR=4.9						
MTVR

NNSB				*e*S		Sn	03 23 39.2	+0.2
	baz=265							
NNS	**Nan Shan**	**0.80**	**275**	*e*P		**Pn**	**03 23 28.4**	**0.0**
	baz=265							
NNS				*e*S		**Sn**	**03 23 39.2**	**-0.1**
	baz=265							
NWF	**Wu-fen Shan**	**0.81**	**329**	‖*i*P		**Pn**	**03 23 28.3**	**-0.3**
	baz=340							
NWF				*i* S		**Sn**	**03 23 39.1**	**-0.5**
	baz=340							
WFSB	**Wu-fen Shan**	**0.81**	**329**	‖P		**Pn**	**03 23 28.3**	**-0.2**
	baz=340							
WFSB				S		**Sn**	**03 23 39.2**	**-0.3**
	baz=340							
YHNB	**Yeheng**	**0.84**	**291**	P		**Pn**	**03 23 29.4**	**+0.5**
	baz=279							
YHNB				S		**Sn**	**03 23 40.6**	**+0.3**
	baz=279							
TWA	**Mucha**	**0.85**	**315**	*e*P		**Pn**	**03 23 28.8**	**-0.3**
	baz=320							
TWA				S		**Sn**	**03 23 40.5**	**0.0**
	baz=320							
NSK	**Sanguang**	**0.86**	**291**	P		**Pn**	**03 23 29.6**	**+0.4**
	baz=278							
NSK				S		**Sn**	**03 23 41.2**	**+0.5**
	baz=278							
NHDH	**Xindian Distri**	**0.88**	**312**	*e*P		**Pn**	**03 23 29.3**	**-0.1**
	baz=321							
TNOU	**National Taiwa**	**0.88**	**331**	*e*P		**Pn**	**03 23 28.8**	**-0.7**
	baz=340							
TNOU				*e*S		**Sn**	**03 23 40.2**	**-1.0**
	baz=340							
TATO	**Taipei**	**0.91**	**311**	*e*P		**Pn**	**03 23 29.8**	**0.0**
	baz=326							
FUSS	**Fushou**	**0.92**	**262**	P		**Pn**	**03 23 29.7**	**-0.5**
	baz=262							
WHF	**Hehuan Shan**	**0.92**	**256**	P		**Pn**	**03 23 29.8**	**-0.6**
	baz=255							
ESL	**Shilin**	**0.93**	**233**	*e*P		**Pn**	**03 23 28.7**	**-1.4**
	baz=221							
TAP1	**Taipei**	**0.93**	**315**	*e*P		**Pn**	**03 23 29.8**	**-0.3**
	baz=329							
TWT	**Tachien**	**0.98**	**263**	*e*P		**Pn**	**03 23 31.5**	**+0.5**
	baz=262							
YM01	**YM01**	**0.98**	**322**	*e*P		**Pn**	**03 23 30.2**	**-0.7**
	baz=332							
YM01				*e*S		**Sn**	**03 23 42.8**	**-1.0**
	baz=332							
YM10	**YM10**	**0.99**	**322**	P		**Pn**	**03 23 30.6**	**-0.5**
	baz=322							
YM11	**YM11**	**1.00**	**322**	P		**Pn**	**03 23 30.7**	**-0.4**
	baz=323							
TDCB	**Techi**	**1.00**	**263**	*e*P		**Pn**	**03 23 31.3**	**+0.1**
	baz=263							
YM05	**YM05**	**1.00**	**322**	*e*P		**Pn**	**03 23 30.4**	**-0.8**
	baz=322							
YM08	**YM08**	**1.00**	**324**	P		**Pn**	**03 23 30.2**	**-1.0**
	baz=324							
YM04	**YM04**	**1.01**	**321**	‖P		**Pn**	**03 23 30.7**	**-0.6**
	baz=330							
YM04				S		**Sn**	**03 23 44.1**	**-0.3**
	baz=330							
CHGB	**Renai**	**1.02**	**252**	*e*P		**Pn**	**03 23 31.2**	**-0.4**
	baz=242							
EGFH	**Guangfu**	**1.02**	**227**	*e*P		**Pn**	**03 23 31.1**	**-0.3**
	baz=216							
TWS1	**Kuangyinshan**	**1.04**	**314**	P		**Pn**	**03 23 31.6**	**0.0**
	baz=327							
TWY	**Chenhua**	**1.07**	**327**	*e*P		**Pn**	**03 23 32.0**	**0.0**
	baz=326							
TWY				*e*S		**Sn**	**03 23 46.2**	**+0.3**
	baz=326							
LIOB	**Emei**	**1.15**	**284**	*e*P		**Pn**	**03 23 33.9**	**+0.8**
	baz=283							
HGSD	**Ruisui**	**1.16**	**221**	*e*P		**Pn**	**03 23 32.5**	**-0.7**
	baz=212							
NSTT	**Nanjuang**	**1.16**	**283**	*e*P		**Pb**	**03 23 34.6**	**-0.1**
	baz=282							
VWDT	**VWDT**	**1.18**	**239**	⇑P		**Pn**	**03 23 33.2**	**-0.4**
	baz=227							
VWDT				*e*S		**Sn**	**03 23 47.3**	**-1.2**
	baz=227							
WHP	**Taichung City**	**1.19**	**266**	P		**Pn**	**03 23 34.5**	**+0.8**
	baz=256							
EHY	**Hungye**	**1.21**	**224**	*e*P		**Pn**	**03 23 33.0**	**-1.0**
	baz=223							
DPDB	**Guoxing**	**1.25**	**255**	*e*P		**Pn**	**03 23 34.8**	**+0.3**
	baz=245							
PCYT	**Pengchaiyu**	**1.26**	**353**	*e*P		**Pn**	**03 23 34.0**	**-0.7**
	baz=342							
YULB	**Yu-li**	**1.31**	**222**	*e*P		**Pn**	**03 23 34.0**	**-1.3**
	baz=233							
SSLB	**Suanglung**	**1.31**	**244**	*e*P		**Pn**	**03 23 35.0**	**-0.5**
	baz=232							
SMLT	**Sun Moon Lake**	**1.32**	**249**	*e*P		**Pn**	**03 23 36.4**	**+0.8**
	baz=238							
EYUL	**Yuli**	**1.33**	**220**	*e*P		**Pn**	**03 23 35.2**	**-0.3**
	baz=232							
TWF1	**Yuli**	**1.34**	**221**	*e*P		**Pn**	**03 23 34.5**	**-1.2**
	baz=232							
TWQ1	**Liyutan**	**1.34**	**269**	*e*P		**Pb**	**03 23 37.7**	**-0.1**
	baz=268							
TYC	**Yuchr**	**1.35**	**250**	*e*P		**Pn**	**03 23 37.1**	**+1.2**
	baz=241							
TYC				*e*S		**Sn**	**03 23 54.2**	**+1.5**
	baz=241							
IRIF	**Iriomote-Funau**	**1.36**	**91**	P		**Pn**	**03 23 35.8**	**-0.2**
IRIF				S		**Sn**	**03 23 52.7**	**-0.2**
FULB	**Fuli**	**1.46**	**217**	*e*P		**Pn**	**03 23 36.3**	**-1.1**
	baz=206							
YUS	**Yu-Shan**	**1.47**	**234**	*e*P		**Pn**	**03 23 37.9**	**-0.1**
	baz=232							
ALS	**Alishan**	**1.57**	**237**	*e*P		**Pn**	**03 23 40.1**	**+0.8**
	baz=225							
JKRS	**Kuro-shima**	**1.62**	**94**	P		**Pn**	**03 23 40.0**	**+0.5**
JKRS				S		**Sn**	**03 24 00.1**	**+0.8**
CHN5	**Tsauling**	**1.63**	**242**	*e*P		**Pn**	**03 23 40.8**	**+1.0**
	baz=241							
EDH	**Donghe**	**1.64**	**212**	*e*P		**Pn**	**03 23 38.4**	**-1.4**
	baz=202							
JIJ	**Ishigaki jima**	**1.73**	**90**	P		**Pn**	**03 23 40.8**	**-0.3**
JIJ				S		**Sn**	**03 24 02.2**	**+0.1**
LONT	**Longtian**	**1.78**	**215**	*e*P		**Pn**	**03 23 40.6**	**-1.3**
	baz=214							
TPUB	**Ta-pu**	**1.82**	**234**	*e*P		**Pn**	**03 23 43.5**	**+1.0**
	baz=226							
TPUB				*e*S		**Sn**	**03 24 05.7**	**+1.2**
	baz=226							
LDUT	**Ludao**	**1.84**	**203**	*e*P		**Pn**	**03 23 40.8**	**-1.8**
	baz=202							
WTP	**Ta-pu**	**1.87**	**233**	*e*P		**Pn**	**03 23 44.3**	**+1.2**
	baz=220							
JISG	**Ishigakijimahi**	**1.90**	**83**	P		**Pn**	**03 23 43.1**	**-0.3**
JISG				S		**Sn**	**03 24 05.9**	**-0.3**
TWK	**Hsinying**	**1.95**	**236**	*e*P		**Pn**	**03 23 45.9**	**+1.7**
	baz=234							
SSD	**Sandimen**	**2.19**	**223**	*e*P		**Pn**	**03 23 48.7**	**+1.2**
	baz=221							
JTJ	**Tarama**	**2.25**	**83**	P		**Pn**	**03 23 48.0**	**-0.3**
JTJ				S		**Sn**	**03 24 15.5**	**+0.4**
MASBT	**Mashibuluo**	**2.29**	**220**	*e*P		**Pn**	**03 23 49.8**	**+1.0**
	baz=219							
LAY	**Lan-yu**	**2.41**	**195**	*e*P		**Pn**	**03 23 48.8**	**-1.7**
	baz=194							
SCZT	**Fangliau**	**2.49**	**217**	*e*P		**Pn**	**03 23 52.8**	**+1.3**
	baz=206							
SLIU	**Shizi**	**2.52**	**212**	*e*P		**Pn**	**03 23 51.4**	**-0.7**
	baz=203							
WDGT	**Dungji**	**2.61**	**245**	*e*P		**Pn**	**03 23 53.6**	**+0.3**
	baz=244							
VWUC	**VWUC**	**2.62**	**284**	*e*P		**Pn**	**03 23 52.7**	**-0.5**
	baz=284							
MATB	**Ma-tsu**	**2.73**	**311**	*e*P		**Pn**	**03 23 54.6**	**-0.3**
	baz=320							
PTMZ	**Houxiangcun**	**2.92**	**284**	*e*P		**Pn**	**03 23 57.0**	**-0.4**
	baz=283							

IDC ***03*** *03:50:12.6±1.1, 29°.99N×67°.76E, h0km, mb3.6/12, mb1 3.8/13, mb1mx3.6/47, mbtmp3.6/13, ML3.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=25.3km s-min=22.5km az=78.0*

ISC 03 03:50:13.2±1.0, **29°.9N**±0°.1×**67°.6E**±0°.1, **h10**km, **n14, σ1§59/15, mb3.6/11, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.77**	**351**	‖*i*P	PN	**Pn**	**04 33 54.8**	**+0.5**
SKR				*e*S		**Sn**	**04 34 07.9**	**+0.6**
SKR				pmax	pmax			
	comp=Z,4μm,0.5s							
SKR				smax	smax			
	comp=E,15μm,0.8s							
SKR				smax	smax			
	comp=N,22μm,0.7s							
SKR	**Severo-Kuril's**	**0.77**	**351**	*i* P		**Pn**	**04 33 54.7**	**+0.5**
SKR				*e*S		**Sn**	**04 34 08.1**	**+0.8**
ALID	**Alaid**	**1.07**	**333**	PN		**Pn**	**04 33 59.2**	**+1.5**
WSAR	**Wadi Sarin**	**10.36**	**233**	Pn		**Pn**	**03 52 41.5**	**-0.4**
	0.2nm,0.3s,baz=349,slow=5.2,SNR=1.1							
WSAR				Sn		**Sn**	**03 54 35.2**	**-2.9**
	0.5nm,0.3s,baz=77,slow=14,SNR=1.3							
WSAR				LR	LR		03 57 57.9	
	comp=Z,73nm,18.7s,baz=152,slow=44							
AAK	**Ala-Archa**	**13.93**	**22**	Pn		**Pn**	**03 53 29.3**	**-1.5**
	0.4nm,0.3s,baz=203,slow=9.9,SNR=7.1							
AAK				Sn		Sn	03 55 52.8	-13
	0.1nm,0.3s,baz=53,slow=11,SNR=1.4							
MKAR	**Makanchi Array**	**20.43**	**30**	P		**P**	**03 54 49.4**	**-1.2**
	0.8nm,0.6s,baz=214,slow=9.6,SNR=9.7							
AKTO	**Aktyubinsk**	**21.79**	**343**	P		**P**	**03 55 04.3**	**-0.9**
	1.1nm,0.5s,baz=159,slow=9.9,SNR=2.7							
KURBB	**Kurchatov Arra**	**22.33**	**19**	P		**P**	**03 55 09.9**	**-1.0**
	0.9nm,0.7s,baz=209,slow=11,SNR=9.5							
BVAR	**Borovoye Array**	**23.25**	**4**	P		**P**	**03 55 20.9**	**+0.2**
	0.7nm,0.5s,baz=198,slow=13,SNR=7.8							
KBZ	**Khabaz**	**24.02**	**312**	P		**P**	**03 55 30.1**	**+1.9**
	1.6nm,0.6s,baz=90,slow=5.1,SNR=2.1							
ZALV	**Zalesovo Beam**	**27.14**	**23**	P		**P**	**03 55 54.7**	**-1.7**
	0.5nm,0.4s,baz=195,slow=10,SNR=2.5							
ARCES	**ARCESS Array B**	**46.34**	**341**	P		**P**	**03 58 38.5**	**-0.6**
	2.9nm,1.0s,baz=110,slow=8.0,SNR=2.0							
ESDC	**Sonseca Array**	**58.18**	**301**	P		**P**	**04 00 08.4**	**+0.9**
	0.2nm,0.6s,baz=47,slow=7.5,SNR=1.3							
TORD	**Torodi Ar. Bea**	**62.75**	**270**	P		**P**	**04 00 41.1**	**+2.1**
	0.3nm,0.7s,baz=51,slow=6.4,SNR=2.6							
WRA	**Warramunga Arr**	**81.11**	**119**	P		**P**	**04 02 28.6**	**-0.6**
	0.3nm,0.7s,baz=322,slow=5.1,SNR=4.6							
ASAR	**Alice Springs**	**82.99**	**122**	P		**P**	**04 02 40.6**	**+1.6**
	0.5nm,0.8s,baz=307,slow=5.1,SNR=5.4							
YKA	**Yellowknife Ar**	**87.97**	**1**	P		**P**	**04 03 04.1**	**+1.0**
	0.3nm,0.5s,baz=357,slow=4.7,SNR=9.2							

FUNV ***03*** *04:30:43.9, 10°.61N×62°.95W, h5km, MW3.6*
TRN ***03*** *04:30:45.6, 10°.63N×63°.02W, h58km, MD4.0*

ISC 03 04:30:43.3±1.1, **10°.64N**±0°.04×**63°.01W**±0°.03, **h15**km±8km, **n34, σ1§39/48, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.23**	**279**	*e*P	**Pg**	**04 30 48.0**	**-0.3**
CRUV				*e*S	**Sg**	**04 30 51.3**	**-0.5**
TPP	**Pointe-a-Pierr**	**1.56**	**102**	*e*P	**Pb**	**04 31 12.4**	**+0.5**
TRN	**Trinidad (W)**	**1.58**	**89**	*e*P	**Pn**	**04 31 11.1**	**+0.4**
TRN				*e*S	**Sn**	**04 31 30.7**	**-0.1**
GRGR	**Grenville**	**1.99**	**42**	*e*P	**Pn**	**04 31 16.7**	**+0.3**
GRGR				*e*S	**Sn**	**04 31 41.3**	**+0.2**
GRGR	**Grenville**	**1.99**	**42**	*e*P	**Pn**	**04 31 17.1**	**+0.7**
GRGR				*e*S	**Sn**	**04 31 42.9**	**+1.8**
GCMP	**Grenada, Carri**	**2.40**	**40**	*e*P	**Pn**	**04 31 23.6**	**+1.5**
GCMP				*e*S	**Sn**	**04 31 50.6**	**-0.6**
TOSP	**Speyside**	**2.52**	**75**	*e*P	**Pn**	**04 31 24.1**	**+0.5**
TOSP				*e*S	**Sn**	**04 31 54.0**	**0.0**
RIOV	**Rio Grande**	**2.81**	**155**	*e*P	**Pn**	**04 31 27.9**	**+0.2**
RIOV				*e*S	**Sn**	**04 32 00.9**	**-0.5**
SVOC	**Richmond Hill,**	**3.05**	**35**	*e*S	**Sn**	**04 32 06.4**	**-0.8**
SVB	**Belmont**	**3.13**	**33**	*e*P	**Pn**	**04 31 33.8**	**+1.7**
SVV	**Soufriere Volc**	**3.19**	**33**	*e*P	**Pn**	**04 31 33.7**	**+0.8**
BIRV	**Birongo**	**3.21**	**267**	*e*P	**Pn**	**04 31 35.0**	**+1.9**
BIRV				*e*S	**Sn**	**04 32 12.8**	**+1.6**
MCLT	**Moule a Chique**	**3.66**	**33**	*e*P	**Pn**	**04 31 39.7**	**+0.3**
MCLT				*e*S	**Sn**	**04 32 20.2**	**-2.1**
SLB	**Belfond**	**3.71**	**31**	*e*P	**Pn**	**04 31 40.7**	**+0.6**
SLBI	**Saint Lucia, B**	**3.91**	**30**	*e*P	**Pn**	**04 31 43.3**	**+0.6**
SLBI				*e*S	**Sn**	**04 32 26.8**	**-1.6**
TACV	**Tcata**	**3.98**	**263**	*e*P	**Pn**	**04 31 45.0**	**+1.1**
TACV				*e*S	**Sn**	**04 32 30.5**	**+0.1**
BIM	**Bigot**	**4.29**	**26**	*e*P	**Pn**	**04 31 49.5**	**+1.4**
BIM	**Bigot**	**4.29**	**26**	*e*S	**Sn**	**04 32 35.9**	**-2.1**
TRMF	**Trois Ilets**	**4.32**	**26**	*e*P	**Pn**	**04 31 50.0**	**+1.6**
MPOM	**Morne Pois Mar**	**4.33**	**29**	*e*P	**Pn**	**04 31 49.6**	**+1.1**
MPOM	**Morne Pois Mar**	**4.33**	**29**	*e*S	**Sn**	**04 32 36.1**	**-2.6**
LPMF	**Morne Lapointe**	**4.39**	**27**	*e*P	**Pn**	**04 31 50.9**	**+1.5**
MVM	**Montagne Vaucl**	**4.41**	**28**	*e*P	**Pn**	**04 31 50.5**	**+0.9**
FDF	**Fort de France**	**4.46**	**24**	*e*P	**Pn**	**04 31 51.0**	**+0.6**
FDF	**Fort de France**	**4.46**	**24**	*e*S	**Sn**	**04 32 39.8**	**-2.2**
PML	**Morne Lenard**	**4.49**	**23**	*e*P	**Pn**	**04 31 52.0**	**+1.2**
PCM	**Pelee Case Pet**	**4.51**	**23**	*e*P	**Pn**	**04 31 51.7**	**+0.7**
GBMF	**Grand Be**	**4.51**	**23**	*e*P	**Pn**	**04 31 52.5**	**+1.4**
CXM	**Morne La Croix**	**4.52**	**23**	*e*P	**Pn**	**04 31 53.4**	**+2.0**
BAMF	**Morne Balai**	**4.53**	**23**	*e*P	**Pn**	**04 31 52.7**	**+1.3**
DSLB	**Salisbury**	**5.02**	**18**	*e*P	**Pn**	**04 31 59.7**	**+1.7**
BAUV	**El Baul**	**5.24**	**252**	*e*P	**Pn**	**04 32 01.6**	**+0.5**
BAUV				*e*S	**Sn**	**04 32 59.9**	**-1.4**
MAPV	**Macapo**	**5.42**	**262**	*e*P	**Pn**	**04 32 04.4**	**+0.8**
MAPV				*e*S	**Sn**	**04 33 04.1**	**-1.7**
MONV	**Montecano**	**6.95**	**282**	*e*P	**Pn**	**04 32 25.0**	**+0.3**
MONV				*e*S	**Sn**	**04 33 39.8**	**-3.8**

IDC ***03*** *04:30:56.5±0.9, 2°.84N×128°.97E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/46, mbtmp4.0/7, MS3.5/1, Ms1 3.5/1, ms1mx2.5/28, Error ellipse: s-maj=53.0km s-min=16.8km az=81.0*

ISC 03 04:31:01.2±0.8, **2°.8N**±0°.1×**129°.4E**±0°.3, **h35**km, **n10, σ2§00/10, mb4.2/8, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.07**	**152**	Pn	**Pn**	**04 31 58.1**	**-3.0**
	0.6nm,0.3s,baz=255,slow=23,SNR=1.8						
SIJI				Sn	**Sn**	**04 32 47.8**	**+0.2**
	1.1nm,0.3s,baz=294,slow=22,SNR=1.5						
FITZ	**Fitzroy Crossi**	**21.04**	**190**	P	**P**	**04 35 41.7**	**-0.5**
	0.7nm,0.4s,baz=24,slow=11,SNR=11						
JOW	**Kunigami**	**23.97**	**358**	LR	LR	04 45 00.5	
	comp=Z,105nm,20.1s,baz=259,slow=35						
ASAR	**Alice Springs**	**26.63**	**171**	P	**P**	**04 36 38.2**	**+1.6**
	0.7nm,0.4s,baz=352,slow=8.2,SNR=17						
JHJ	**Hachijo jima 2**	**31.75**	**17**	P	**P**	**04 37 20.9**	**-1.1**
	75nm,0.4s,baz=74,slow=18,SNR=2.4						
STKA	**Stephens Creek**	**36.35**	**162**	P	**P**	**04 38 04.5**	**+2.5**
	1.6nm,0.3s,baz=339,slow=11,SNR=9.8						
SONM	**Songino Array**	**49.09**	**340**	P	**P**	**04 39 45.7**	**+0.5**
	0.8nm,0.6s,baz=152,slow=7.6,SNR=5.9						
MKAR	**Makanchi Array**	**59.86**	**324**	P	**P**	**04 41 01.2**	**-2.2**
	1.4nm,0.4s,baz=117,slow=8.3,SNR=32						
TIXI	**Tiksi**	**68.80**	**360**	P	**P**	**04 42 01.7**	**+0.3**
	2.0nm,0.4s,baz=98,slow=2.3,SNR=2.4						
ILAR	**Eielson Array**	**84.86**	**25**	P	**P**	**04 43 34.1**	**+2.0**
	0.4nm,0.9s,baz=254,slow=5.7,SNR=2.0						

BGR ***03*** *04:33:24.8±0.0, 48°.57N×156°.55E, h33km, mb4.9*
BJI ***03*** *04:33:33.6±0.0, 50°.04N×156°.44E, h91km, mB4.9/34, mb5.0/48*
IDC ***03*** *04:33:36.8±0.4, 49°.95N×156°.01E, h87km±3km, mb4.1/32, mb1 4.3/39, mb1mx4.2/56, mbtmp4.5/39, MS3.2/21, Ms1 3.2/21, ms1mx3.1/36, Error ellipse: s-maj=10.2km s-min=7.2km az=135.0*
KRSC ***03*** *04:33:36.6±2.5, 49°.89N×157°.15E, h50km±28km, ML5.3*
MOS ***03*** *04:33:36.4±1.1, 49°.94N×156°.12E, h99km, mb4.8/71, Error ellipse: s-maj=6.3km s-min=3.1km az=83.7*
MOS Felt (III) at Severo-Kuril'sk.
NEIC ***03*** *04:33:37.7±1.3, 50°.00N±0°.09×156°.2E±0°.1, h94km±5km, mb4.8/234, Error ellipse: s-maj=15.2km s-min=10.5km az=141.0*

ISC 03 04:33:37.0±0.5, **49°.92N**±0°.05×**156°.31E**±0°.04, **h92**km±3km, **n533, σ1§32/481, mb4.8/234, 41C-94D, Fault plane solution: NP1:**ϕs121.55507°, δ12.96676°, λ139.44258°. **NP2:**ϕs251.38292°, δ81.61073°, λ80.07715°. **Principal axes:** T Plg52.3955°, Azm149.8643°; N Plg9.8156°, Azm252.8450°; P Plg35.8673°, Azm350.0309°; **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALID				S	**Sn**	**04 34 15.9**	**+2.7**
ALID	**Alaid**	**1.07**	**333**	*e*P	**Pn**	**04 33 59.2**	**+1.5**
ALID				*e*S	**Sn**	**04 34 15.9**	**+2.7**
PAU	**Pauzhetka**	**1.58**	**11**	PN	**Pn**	**04 34 05.1**	**+1.3**
PAU				S	**Sn**	**04 34 25.8**	**+1.7**
PAU	**Pauzhetka**	**1.58**	**11**	*e*P	**Pn**	**04 34 05.1**	**+1.3**
PAU				*e*S	**Sn**	**04 34 25.8**	**+1.7**
KDTR	**Khodutka, Kamc**	**2.20**	**30**	PN	**Pn**	**04 34 11.5**	**-0.2**
KDTR				S	**Sn**	**04 34 36.6**	**-1.7**
KDTR	**Khodutka, Kamc**	**2.20**	**30**	*i* P	**Pn**	**04 34 11.5**	**-0.2**
KDTR				*e*S	**Sn**	**04 34 36.6**	**-1.7**
ASAK	**Asacha**	**2.66**	**21**	PN	**Pn**	**04 34 18.8**	**+0.8**
ASAK	**Asacha**	**2.66**	**21**	*e*P	**Pn**	**04 34 18.8**	**+0.8**
MTVR	**Mutnovka**	**2.82**	**24**	PN	**Pn**	**04 34 20.8**	**+0.6**
MTVR				S	**Sn**	**04 34 53.1**	**-0.4**
MTVR	**Mutnovka**	**2.82**	**24**	*e*P	**Pn**	**04 34 20.8**	**+0.6**
MTVR				*e*S	**Sn**	**04 34 53.1**	**-0.4**
GRL	**Gorelyy**	**2.86**	**22**	PN	**Pn**	**04 34 21.9**	**+1.2**
GRL				S	**Sn**	**04 34 54.9**	**+0.6**
GRL	**Gorelyy**	**2.86**	**22**	*e*P	**Pn**	**04 34 21.9**	**+1.2**
GRL				*e*S	**Sn**	**04 34 54.9**	**+0.6**
RUS	**Russkaya**	**2.87**	**28**	PN	**Pn**	**04 34 20.5**	**-0.2**
RUS				S	**Sn**	**04 34 53.0**	**-1.4**
RUS	**Russkaya**	**2.87**	**28**	*e*P	**Pn**	**04 34 20.5**	**-0.2**
RUS				*e*S	**Sn**	**04 34 53.0**	**-1.4**
APC	**Apacha**	**3.06**	**10**	PN	**Pn**	**04 34 25.6**	**+2.4**
APC	**Apacha**	**3.06**	**10**	*e*P	**Pn**	**04 34 25.6**	**+2.4**
KRMR	**Karymshinskiy**	**3.13**	**21**	PN	**Pn**	**04 34 26.7**	**+2.5**
KRMR	**Karymshinskiy**	**3.13**	**21**	*e*P	**Pn**	**04 34 26.7**	**+2.5**
PEA0B	**Petropavlovsk-**	**3.31**	**15**	*d i*PN	**Pn**	**04 34 28.1**	**+1.5**
PEA0B	**Petropavlovsk-**	**3.31**	**15**	Pn	**Pn**	**04 34 27.9**	**+1.4**
PETK	**Petropavlovsk-**	**3.31**	**15**	P	**Pn**	**04 34 28.5**	**+1.9**
	comp=N,28nm,0.3s,baz=154,slow=8.5,SNR=7.9						
PETK				S	**Sn**	**04 35 08.0**	**+3.0**
	comp=N,20nm,0.3s,baz=107,slow=19,SNR=4.8						
PETK				LR	LR	04 35 58.0	
	comp=N,73nm,18.4s,baz=134,slow=42						
PETK	**Petropavlovsk-**	**3.31**	**15**	Pn	**Pn**	**04 34 28.1**	**+1.4**
PET	**Petropavlovsk**	**3.44**	**24**	‖*i*PN	**Pn**	**04 34 29.1**	**+0.8**
PET				*e*S	**Sn**	**04 35 08.6**	**+0.7**
PET				pmax	pmax		
	comp=Z,443nm,0.4s						
PET				smax	smax		
	comp=N,2μm,0.6s						
PET				smax	smax		
	comp=E,1μm,0.6s						
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
PET				MLR	MLR		
	comp=Z,700nm,12.0s						
PET	**Petropavlovsk**	**3.44**	**24**	Pn	**Pn**	**04 34 29.0**	**+0.8**
DALK	**Dalny**	**3.47**	**25**	PN	**Pn**	**04 34 29.4**	**+0.7**
DALK				S	**Sn**	**04 35 08.8**	**0.0**
DALK	**Dalny**	**3.47**	**25**	*e*P	**Pn**	**04 34 29.4**	**+0.7**
DALK				*e*S	**Sn**	**04 35 08.8**	**0.0**
UGLR	**Uglovaya**	**3.65**	**24**	PN	**Pn**	**04 34 32.5**	**+1.2**
UGLR	**Uglovaya**	**3.65**	**24**	*e*P	**Pn**	**04 34 32.5**	**+1.2**
KOK	**Koryaka**	**3.67**	**22**	PN	**Pn**	**04 34 33.6**	**+2.0**
KOK	**Koryaka**	**3.67**	**22**	*e*P	**Pn**	**04 34 33.6**	**+2.0**
AVH	**Avacha**	**3.67**	**23**	PN	**Pn**	**04 34 33.2**	**+1.6**
AVH	**Avacha**	**3.67**	**23**	*e*P	**Pn**	**04 34 33.2**	**+1.6**
SMAR	**Somma**	**3.69**	**24**	PN	**Pn**	**04 34 33.3**	**+1.4**
SMAR	**Somma**	**3.69**	**24**	*e*P	**Pn**	**04 34 33.3**	**+1.4**
KRER	**Koryakskii**	**3.71**	**23**	PN	**Pn**	**04 34 33.9**	**+1.7**
KRER	**Koryakskii**	**3.71**	**23**	*e*P	**Pn**	**04 34 33.9**	**+1.7**
KRX	**Arik**	**3.74**	**22**	PN	**Pn**	**04 34 34.4**	**+1.9**
KRX	**Arik**	**3.74**	**22**	*e*P	**Pn**	**04 34 34.4**	**+1.9**
NLC	**Nalytchevo**	**3.77**	**29**	PN	**Pn**	**04 34 31.8**	**-0.9**
NLC				S	**Sn**	**04 35 13.0**	**-2.9**
NLC	**Nalytchevo**	**3.77**	**29**	*e*P	**Pn**	**04 34 31.8**	**-0.9**
NLC				*e*S	**Sn**	**04 35 13.0**	**-2.9**
GNL	**Ganaly**	**3.91**	**14**	PN	**Pn**	**04 34 36.8**	**+1.9**
GNL	**Ganaly**	**3.91**	**14**	*e*P	**Pn**	**04 34 36.8**	**+1.9**
SPN	**Mys Shipunski**	**3.94**	**35**	PN	**Pn**	**04 34 34.7**	**-0.4**
SPN				S	**Sn**	**04 35 17.8**	**-2.3**
SPN	**Mys Shipunski**	**3.94**	**35**	*e*P	**Pn**	**04 34 34.7**	**-0.4**
SPN				*e*S	**Sn**	**04 35 17.8**	**-2.3**
MKZ	**Mys Kozlova**	**5.71**	**34**	PN	**Pn**	**04 34 58.1**	**-1.0**
MKZ	**Mys Kozlova**	**5.71**	**34**	*e*P	**Pn**	**04 34 58.1**	**-1.0**
MKZ				*e*S	**Sn**	**04 35 59.0**	**-4.2**
KZV	**Kizimen**	**5.74**	**24**	PN	**Pn**

ZEA	**Zeya**	**18.30**	**293**	*e*P		**Pn**		**04 37 43.8**	**-0.6**
ZEA				pmax		pmax			
	comp=E,20nm,1.2s								
ZEA				pmax		pmax			
	comp=N,20nm,0.8s								
ZEA				pmax		pmax			
	comp=Z,30nm,1.4s								
MAJO	**Matsushiro**	**18.72**	**231**	*c i*P		**P**		**04 37 48.0**	**-0.2**
MAJO				pmax		pmax			
	comp=Z,24nm,0.7s								
MAJO	**Matsushiro**	**18.72**	**231**	P		**P**		**04 37 47.4**	**-0.8**
MAT	**Matsushiro**	**18.72**	**231**	P		**P**		**04 37 47.7**	**-0.5**
MJAR	**Matsushiro Arr**	**18.72**	**231**	P		**P**		**04 37 47.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=30,slow=9.8,SNR=24								
MJAR				LR		LR		04 44 52.7	
	comp=Z,71nm,19.8s,baz=225,slow=36								
BILL	**Bilibino**	**18.84**	**12**	*c i*P		**Pn**		**04 37 50.6**	**-0.1**
BILL				pmax		pmax			
	comp=Z,6.0nm,1.0s								
BILL				MLR		MLR			
	comp=Z,107nm,18.0s								
BILL	**Bilibino**	**18.84**	**12**	P		**P**		**04 37 49.2**	**0.0**
MDJ	**Mudanjiang**	**18.84**	**264**	P		**Pn**		**04 37 52.2**	**+1.2**
MDJ				pP		pP		04 38 07.0	+0.2
MDJ				pmax		pmax			
	comp=Z,67nm,1.1s								
MDJ				pmax		pmax			
	comp=Z,290nm,4.8s								
MDJ	**Mudanjiang**	**18.84**	**264**	P		**Pn**		**04 37 49.2**	**-1.8**
MDJ				IAmb		IAmb		04 37 53.9	
	comp=Z,50nm,0.9s								
YAK	**Yakutsk**	**19.04**	**320**	P		**Pn**		**04 37 50.3**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=106,slow=4.1,SNR=6.6								
YAK				LR		LR		04 45 16.2	
	comp=Z,66nm,20.5s,baz=87,slow=37								
YAK	**Yakutsk**	**19.04**	**320**	*e*P		**Pn**		**04 37 50.3**	**-2.8**
YAK				*e*S		**Sn**		**04 41 20.4**	**-5.6**
YAK				pmax		pmax			
	comp=Z,79nm,1.3s								
YAK				pmax		pmax			
	comp=N,10.0nm,1.3s								
YAK				pmax		pmax			
	comp=E,34nm,1.5s								
YAK				smax		smax			
	comp=N,47nm,1.6s								
YAK				smax		smax			
	comp=E,33nm,1.8s								
YAK	**Yakutsk**	**19.04**	**320**	P		**Pn**		**04 37 50.5**	**-2.6**
YAK				IAmb		IAmb		04 37 54.1	
	comp=Z,49nm,0.6s								
JGF	**Kuroka**	**19.88**	**231**	P		**P**		**04 38 00.8**	**-0.1**
GAMB	**Gambell**	**22.00**	**39**	P		**P**		**04 38 23.5**	**+0.2**
GAMB	**Gambell**	**22.00**	**39**	P				04 38 23.9	
	baz=246,SNR=14								
HIA	**Hailar**	**23.57**	**283**	P		**P**		**04 38 37.9**	**-1.2**
HIA				pmax		pmax			
	comp=Z,20nm,0.9s								
HIA	**Hailar**	**23.57**	**283**	P		**P**		**04 38 37.9**	**-1.2**
KSRS	**Korea Array**	**23.85**	**249**	P		**P**		**04 38 41.7**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=43,slow=10,SNR=11								
KSRS				LR		LR		04 46 55.3	
	comp=Z,39nm,21.7s,baz=31,slow=34								
KSAR	**Wonju Array Be**	**23.89**	**249**	P		**P**		**04 38 41.0**	**-0.9**
KSAR	**Wonju Array Be**	**23.89**	**249**	P		**P**		**04 38 41.0**	**-0.9**
TNA	**Tin City**	**24.21**	**36**	P		**P**		**04 38 46.2**	**+1.6**
TNA				IAmb		IAmb		04 38 47.8	
	comp=Z,48nm,0.8s								
TNA	**Tin City**	**24.21**	**36**	P				04 38 46.4	
	baz=247,SNR=52								
ANM	**Nome**	**24.88**	**40**	P		**P**		**04 38 52.1**	**+1.4**
ANM				pmax		pmax			
	comp=Z,32nm,1.0s								
ANM	**Nome**	**24.88**	**40**	P		**P**		**04 38 52.0**	**+1.4**
ANM				IAmb		IAmb		04 38 54.7	
	comp=Z,32nm,1.0s								
ANM	**Nome**	**24.88**	**40**	P				04 38 52.4	
	baz=253,SNR=30								
TIXI	**Tiksi**	**25.12**	**340**	P		**P**		**04 38 51.5**	**-1.2**
	comp=Z,28nm,0.6s,baz=131,slow=8.8,SNR=56								
TIXI				LR		LR		04 48 58.7	
	comp=Z,50nm,20.9s,baz=185,slow=37								
TIXI	**Tiksi**	**25.12**	**340**	*c i*P		**P**		**04 38 51.4**	**-1.3**
TIXI				pmax		pmax			
	comp=Z,139nm,0.8s								
TIXI	**Tiksi**	**25.12**	**340**	P		**P**		**04 38 51.6**	**-1.2**
TIXI				IAmb		IAmb		04 38 53.2	
	comp=Z,32nm,0.6s								
JNU	**Nakatsue**	**25.20**	**238**	P		**P**		**04 38 54.1**	**+0.1**
	comp=Z,67nm,1.0s,baz=78,slow=4.3,SNR=11								
JNU				LR		LR		04 47 56.8	
	comp=Z,79nm,21.9s,baz=9.0,slow=34								
JNU	**Nakatsue**	**25.20**	**238**	P		**P**		**04 38 54.0**	**+0.1**
BOD	**Bodaibo**	**25.79**	**304**	*e*P		**P**		**04 38 56.5**	**-2.5**
BOD				pmax		pmax			
	comp=Z,11nm,1.6s								
IMAR	**Indian Mountai**	**29.95**	**39**	P		**P**		**04 39 36.0**	**0.0**
RSO	**Redoubt South**	**30.16**	**50**	P		**P**		**04 39 40.0**	**+1.9**
A21K	**Barrow**	**30.21**	**28**	P				04 39 39.2	
	baz=250								
CHUM	**Lake Minchumin**	**30.37**	**43**	P				04 39 41.2	
	baz=268								
PPLA	**Purkeypile**	**30.39**	**45**	P				04 39 41.7	
	baz=269								
SPCR	**Spurr Chakacha**	**30.40**	**48**	P				04 39 41.9	
	baz=272								
SKT	**Skwentna**	**30.70**	**47**	IAmb		IAmb		04 39 45.7	
	comp=Z,12nm,0.9s								
SKT	**Skwentna**	**30.70**	**47**	P				04 39 44.7	
	baz=272,SNR=6.2								
BPAW	**Bear Paw Mtn.**	**30.96**	**43**	P				04 39 46.2	
	baz=268,SNR=7.2								
KTH	**Kantishna Hill**	**30.98**	**44**	IAmb		IAmb		04 39 48.6	
	comp=Z,23nm,1.2s								
SUA	**Susitna One**	**31.09**	**48**	IAmb		IAmb		04 39 47.6	
	comp=Z,10nm,0.8s								
SUA	**Susitna One**	**31.09**	**48**	P				04 39 46.8	
	baz=273,SNR=5.3								
MLY	**Manley**	**31.11**	**41**	P		**P**		**04 39 47.3**	**+1.0**
MLY	**Manley**	**31.11**	**41**	P				04 39 47.6	
	baz=267,SNR=7.5								
BRSE	**Bradley Lake S**	**31.22**	**51**	P				04 39 48.4	
	baz=276								
TRF	**Thorofare Moun**	**31.26**	**44**	P				04 39 48.8	
	baz=270								
CUT	**Chulitna**	**31.28**	**46**	IAmb		IAmb		04 39 49.2	
	comp=Z,20nm,0.7s								
H11N2	**WAKE ISLAND Hy**	**31.29**	**161**	T		T		05 12 59.8	
	baz=346,slow=74								
H11N1	**WAKE ISLAND Hy**	**31.30**	**161**	T		T		05 13 00.0	
	baz=346,slow=74								
H11N3	**WAKE ISLAND Hy**	**31.30**	**161**	T		T		05 13 00.4	
	baz=346								
COLD	**Coldfoot**	**31.51**	**37**	P				04 39 50.7	
	baz=264,SNR=6.3								
RC01	**Rabbit Creek A**	**31.60**	**49**	P				04 39 51.2	
	baz=274								
I23K	**Minto, Yukon-K**	**31.70**	**41**	P				04 39 52.8	
	baz=268,SNR=7.0								
NEA2	**Nenana**	**31.81**	**42**	IAmb		IAmb		04 39 55.2	
	comp=Z,14nm,0.6s								
NEA2	**Nenana**	**31.81**	**42**	P				04 39 53.5	
	baz=269,SNR=18								
PMR	**Palmer**	**31.86**	**48**	P				04 39 54.2	
	baz=274								
MCK	**McKinley**	**31.86**	**44**	IAmb		IAmb		04 39 54.8	
	comp=Z,17nm,1.0s								
MCK	**McKinley**	**31.86**	**44**	P				04 39 53.8	
	baz=271,SNR=8.6								
RND	**Reindeer**	**31.91**	**44**	IAmb		IAmb		04 39 54.8	
	comp=Z,21nm,0.9s								
TOLK	**Toolik Lake Re**	**31.92**	**34**	P				04 39 54.6	
	baz=262,SNR=6.8								
GHO	**Glory Hole Cre**	**31.94**	**47**	IAmb		IAmb		04 40 04.7	
	comp=Z,14nm,1.0s								
ULN	**Ulaanbaatar**	**31.99**	**286**	*d i*P		**P**		**04 39 53.3**	**-1.0**
ULN				pmax		pmax			
	comp=Z,9.0nm,1.0s								
ULN	**Ulaanbaatar**	**31.99**	**286**	P		**P**		**04 39 53.0**	**-1.3**
WAT2	**Susitna Watana**	**32.04**	**45**	P				04 39 54.8	
	baz=272,SNR=9.3								
MDM	**Murphy Dome**	**32.17**	**41**	P		**P**		**04 39 56.1**	**+0.6**
KNK	**Knik Glacier**	**32.19**	**48**	P				04 39 56.5	
	baz=275								
SML	**Sawmill**	**32.22**	**47**	P				04 39 57.1	
	baz=274,SNR=26								
WRH	**Wood River Hil**	**32.23**	**42**	IAmb		IAmb		04 39 59.0	
	comp=Z,12nm,1.0s								
HHC	**Hu-ho-hao-te**	**32.28**	**271**	*e*P		**P**		**04 39 56.8**	**-0.1**
HHC				pmax		pmax			
	comp=Z,21nm,0.8s								
PWL	**Port Wells**	**32.30**	**49**	IAmb		IAmb		04 39 57.5	
	comp=Z,17nm,0.7s								
TCOL	**CIGO, UAF Yank**	**32.33**	**41**	P				04 39 58.5	
	baz=270,SNR=8.7								
COLA	**College**	**32.33**	**41**	*d i*P		**P**		**04 39 58.2**	**+1.3**
COLA				pmax		pmax			
	comp=Z,22nm,0.7s								
COLA	**College**	**32.33**	**41**	P		**P**		**04 39 57.8**	**+0.9**
COLA	**College**	**32.33**	**41**	P				04 39 58.5	
	baz=270								
SONM	**Songino Array**	**32.41**	**286**	P		**P**		**04 39 56.5**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=64,slow=7.5,SNR=10								
SONM				PcP		**PcP**		**04 42 43.2**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=116,slow=5.1,SNR=3.0								
SONM				LR		LR		04 53 03.5	
	comp=Z,67nm,18.1s,baz=49,slow=36								
SONM	**Songino Array**	**32.41**	**286**	P		**P**		**04 39 56.5**	**-1.5**
H11S1	**WAKE ISLAND Hy**	**32.43**	**161**	T		T		05 14 23.6	
	baz=347,slow=76,SNR=1813								
H11S3	**WAKE ISLAND Hy**	**32.44**	**161**	T		T		05 14 28.8	
	baz=347,slow=76,SNR=2578								
H11S2	**WAKE ISLAND Hy**	**32.45**	**161**	T		T		05 14 27.2	
	baz=347,slow=76,SNR=1736								
WAT6	**Susitna Watana**	**32.45**	**46**	P				04 39 58.7	
	baz=274								
POKR	**Poker Plat Res**	**32.51**	**41**	IAmb		IAmb		04 40 01.1	
	comp=Z,22nm,1.2s								
POKR	**Poker Plat Res**	**32.51**	**41**	P				04 40 00.3	
	baz=270								
HDA	**Harding Lake**	**32.73**	**42**	P				04 40 00.6	
	baz=272,SNR=22								
HDA				P				04 40 00.6	
	baz=272,SNR=22								
TLY	**Talaya**	**32.74**	**294**	*d i*P		**P**		**04 40 00.9**	**+0.2**
TLY				pmax		pmax			
	comp=Z,19nm,0.8s								
TLY				MLR		MLR			
	comp=Z,41nm,16.0s								
TLY	**Talaya**	**32.74**	**294**	P		**P**		**04 40 00.1**	**-0.6**
TLY				IAmb		IAmb		04 40 01.6	
	comp=Z,17nm,0.8s								
IL31		**32.75**	**42**	IAmb		IAmb		04 40 02.2	
	comp=Z,11nm,0.9s								
ILAR	**Eielson Array**	**32.75**	**42**	P		**P**		**04 40 01.1**	**+0.6**
	comp=Z,5.6nm,0.8s,baz=253,slow=6.7,SNR=63								
ILAR	**Eielson Array**	**32.75**	**42**	P		**P**		**04 40 00.6**	**0.0**
GLI	**Glacier Island**	**32.90**	**49**	IAmb		IAmb		04 40 03.2	
	comp=Z,18nm,0.8s								
GLI	**Glacier Island**	**32.90**	**49**	P				04 40 02.4	
	baz=277								
NJ2	**Nanjing**	**33.00**	**251**	*e*P		**P**		**04 40 04.1**	**+1.0**
NJ2				pmax		pmax			
	comp=Z,9.0nm,0.5s								
M24K	**Tolsona, Glenn**	**33.21**	**46**	P				04 40 06.5	
	baz=276								
PRP	**Porcupine Dome**	**33.31**	**40**	P				04 40 07.2	
	baz=271								
ZAK	**Zakamensk**	**33.38**	**292**	*e*P		**P**		**04 40 05.6**	**-0.8**
ZAK				pmax		pmax			
	comp=Z,17nm,1.0s								
KLU	**Klutina**	**33.40**	**47**	IAmb		IAmb		04 40 08.5	
	comp=Z,13nm,0.9s								
KLU	**Klutina**	**33.40**	**47**	P				04 40 07.6	
	baz=277,SNR=6.8								
EYAK	**Cordova Ski Ar**	**33.60**	**49**	IAmb		IAmb		04 40 10.0	
	comp=Z,16nm,0.8s								
EYAK	**Cordova Ski Ar**	**33.60**	**49**	P				04 40 09.2	
	baz=278								
BMAR	**Burnt Mountain**	**33.70**	**37**	P		**P**		**04 40 09.4**	**+0.6**
N25K	**Chitina, Valde**	**34.01**	**47**	P				04 40 13.1	
	baz=278,SNR=9.3								
DOT	**Dot Lake**	**34.04**	**43**	P		**P**		**04 40 12.9**	**+1.1**
DOT				IAmb		IAmb		04 40 32.1	
	comp=Z,12nm,0.9s								
SCRK	**Sand Creek**	**34.04**	**43**	IAmb		IAmb		04 40 13.4	
	comp=Z,12nm,1.0s								
SCRK	**Sand Creek**	**34.04**	**43**	P				04 40 12.2	
	baz=275,SNR=14								
BMRM	**Bremner River**	**34.10**	**48**	P				04 40 13.5	
	baz=279,SNR=7.2								
MENT	**Mentasta**	**34.26**	**45**	IAmb		IAmb		04 40 17.5	
	comp=Z,5.4nm,0.6s								
VRDI	**Verde Repeater**	**34.61**	**48**	IAmb		IAmb		04 40 19.3	
	comp=Z,12nm,0.8s								
MCARA	**McCarthy VSAT**	**34.79**	**47**	P				04 40 20.3	
	baz=279								
CRQE	**Cirque**	**34.86**	**48**	P				04 40 20.5	
	baz=280								
K27K	**Chicken**	**34.88**	**43**	P				04 40 20.3	
	baz=276								
L27K	**Beaver Creek,**	**35.10**	**44**	P				04 40 23.1	
	baz=278								
BCAR	**Beaver Creek A**	**35.12**	**44**	P		**P**		**04 40 21.7**	**+0.6**
EGAK	**Eagle**	**35.20**	**41**	P				04 40 22.4	
	baz=276,SNR=17								
CTG	**Chitna Glacier**	**35.67**	**48**	P				04 40 27.8	
	baz=281								
LOGN	**Logan Glacier**	**35.86**	**48**	P		**P**		**04 40 28.8**	**+1.2**
PINM	**Pinnacle**	**36.38**	**49**	P				04 40 33.5	
	baz=283								
WHN	**Wuhan**	**36.82**	**254**	⇓P		**P**		**04 40 37.1**	**+1.2**
NRIK	**Noril'sk**	**37.21**	**327**	P		**P**		**04 40 37.2**	**-1.5**
	comp=Z,1.8nm,0.3s,baz=101,slow=8.0,SNR=3.9								
NRIK				LR		LR		04 57 33.9	
	comp=Z,67nm,18.5s,baz=76,slow=39								
NRIK	**Noril'sk**	**37.21**	**327**	⇓*e*P		**P**		**04 40 37.7**	**-1.1**
NRIK				pmax		pmax			
	comp=Z,3.0nm,0.6s								
INK	**Inuvik**	**37.83**	**35**	P		**P**		**04 40 45.4**	**+1.4**
	comp=Z,3.8nm,0.7s,baz=287,slow=5.8,SNR=18								
WHY	**Whitehorse**	**38.82**	**47**	IAmb		IAmb		04 40 56.1	
	comp=Z,20nm,1.1s								
SKAG	**Skagway**	**38.95**	**49**	P				04 40 56.9	
	baz=287								
JIS	**Juneau Island**	**39.78**	**51**	IAmb		IAmb		04 41 04.0	
	comp=Z,15nm,0.9s								
LZH	**Lanzhou**	**39.97**	**270**	⇓P		**P**		**04 41 02.6**	**+0.1**
LZH				pP		pP		04 41 24.5	+0.6
LZH				sP		sP		04 41 38.5	+4.1
LZH				pmax		pmax			
	comp=Z,23nm,1.0s								
GTA	**Gaotai**	**40.63**	**277**	⇑P		**P**		**04 41 07.1**	**-0.8**
GTA				pP		pP		04 41 28.4	-1.0
GTA				sP		sP		04 41 41.6	+1.8
GTA				pmax		pmax			
	comp=Z,12nm,1.1s								
GTA				pmax		pmax			
	comp=Z,94nm,4.5s								
GTA				LR		LR			
	comp=Z,80nm,15.6s								
GTA				LR		LR			
	comp=Z,160nm,14.9s								
GTA				LR		LR			
	comp=Z,93nm,18.5s								
C36M	**Paulatuk**	**41.00**	**32**	P		**P**		**04 41 11.0**	**+0.7**
C36M				IAmb		IAmb		04 41 12.8	
	comp=Z,10nm,0.9s								
C36M	**Paulatuk**	**41.00**	**32**	P				04 41 11.8	
	baz=284,SNR=13								
DLBC	**Dease Lake**	**41.88**	**49**	P		**P**		**04 41 19.8**	**+2.0**
	comp=Z,5.9nm,0.9s,baz=292,slow=8.4,SNR=9.4								
DLBC	**Dease Lake**	**41.88**	**49**	IAmb		IAmb		04 41 21.7	
	comp=Z,17nm,1.1s								
ZAA0	**Zalesovo Array**	**42.55**	**304**	P		**P**		**04 41 21.6**	**-1.6**
ZALV	**Zalesovo Beam**	**42.55**	**304**	P		**P**		**04 41 21.4**	**-1.8**
	comp=Z,4.0nm,0.3s,baz=64,slow=6.5,SNR=19								
ZALV				pP		**pP**		**04 41 42.3**	**-2.5**
	comp=Z,3.0nm,0.7s,baz=62,slow=10,SNR=4.1								
ZALV				PcP		**PcP**		**04 43 13.0**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=45,slow=2.2,SNR=4.0								
ZALV				LR		LR		05 02 18.9	
	comp=Z,33nm,18.3s,baz=47,slow=41								
ZALV	**Zalesovo Beam**	**42.55**	**304**	*i* P		**P**		**04 41 21.8**	**-1.3**
ZALV				pmax		pmax			
	comp=Z,4.0nm,0.3s								
ZALV	**Zalesovo Beam**	**42.55**	**304**	P		**P**		**04 41 21.5**	**-1.6**
ZALV						**PcP**		**04 43 14.6**	**+0.7**
DGZ	**Jazzator, Alta**	**42.99**	**297**	*d i*P		**P**		**04 41 27.5**	**+0.5**
DGZ				pmax		pmax			
	comp=Z,24nm,0.8s								
CD2	**Chengdu**	**43.30**	**264**	⇓*i*P		**P**		**04 41 29.1**	**-0.5**
CD2				pmax		pmax			
	comp=Z,20nm,0.9s								
GYA	**Guiyang**	**44.49**	**257**	⇓P		**P**		**04 41 39.1**	**-0.2**
GYA				pP		pP		04 42 04.6	+3.7
GYA				pmax		pmax			
	comp=Z,23nm,0.8s								
GYA				pmax		pmax			
	comp=Z,180nm,5.1s								
ZSN	**Zaisan**	**45.58**	**296**	*e*P		**P**		**04 41 46.4**	**-1.1**
	baz=296								
ZSN	**Zaisan**	**45.58**	**296**	*e*P		**P**		**04 41 46.3**	**-1.1**
EUNU	**Eureka**	**45.58**	**12**	P		**P**		**04 41 48.0**	**+0.8**
WMQ	**Urumqi**	**45.81**	**290**	*e*P		**P**		**04 41 50.8**	**+1.4**
WMQ				pmax		pmax			
	comp=Z,10.0nm,1.9s								
WMQ				pmax		pmax			
	comp=Z,100nm,5.9s								
WMQ				LR		LR			
	comp=Z,960nm,29.2s								
WMQ				LR		LR			
	comp=Z,1μm,29.1s								
WMQ				LR		LR			
	comp=Z,200nm,28.8s								
WMQ	**Urumqi**	**45.81**	**290**	P		**P**		**04 41 49.2**	**-0.2**
WMQ				pmax		pmax			
	comp=Z,24nm,1.3s								
WMQ	**Urumqi**	**45.81**	**290**	P		**P**		**04 41 49.2**	**-0.2**
WMQ				IAmb		IAmb		04 41 51.1	
	comp=Z,24nm,1.3s								
SEM	**Semipalatinsk**	**46.69**	**301**	*e*P		**P**		**04 41 54.1**	**-2.3**
	comp=Z,9.9nm,1.0s,baz=301								
SEM	**Semipalatinsk**	**46.69**	**301**	*e*P		**P**		**04 41 54.1**	**-2.3**
SEM				pmax		pmax			
	comp=Z,10.0nm,1.0s								
YKA	**Yellowknife Ar**	**47.11**	**39**	P		**P**		**04 42 00.4**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=298,slow=7.4,SNR=43								
YKA				pP		**pP**		**04 42 21.8**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=297,slow=7.5,SNR=5.4								
YKA				PP		**PP**		**04 43 54.6**	**+4.2**
	comp=Z,0.6nm,0.8s,baz=306,slow=4.7,SNR=3.9								
YKA	**Yellowknife Ar**	**47.11**	**39**	*i* P		**P**		**04 42 00.8**	**+1.6**
YKA				pmax		pmax			
	comp=Z,4.0nm,0.8s								
RES	**Resolute Bay**	**47.14**	**20**	P		**P**		**04 42 00.0**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=311,slow=9.3,SNR=5.6								
MK31	**Makanchi Array**	**47.42**	**296**	*c i*P		**P**		**04 42 00.8**	**-1.1**
MK31	**Makanchi Array**	**47.42**	**296**	IAmb		IAmb		04 42 02.6	
	comp=Z,16nm,0.9s								
MKAR	**Makanchi Array**	**47.42**	**296**	P		**P**		**04 42 01.0**	**-0.9**
	comp=Z,10.0nm,0.6s,baz=61,slow=7.7,SNR=98								
MKAR				PcP		**PcP**		**04 43 31.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=57,slow=3.9,SNR=1.5								
MKAR				LR		LR		05 02 39.2	
	comp=Z,63nm,19.6s,baz=45,slow=37								
MKAR	**Makanchi Array**	**47.42**	**296**	P		**P**		**04 42 01.2**	**-0.7**
MKAR	**Makanchi Array**	**47.42**	**296**	P		**P**		**04 42 01.1**	**-0.7**
KURBB	**Kurchatov Arra**	**47.52**	**302**	P		**P**		**04 42 01.4**	**-1.1**
MAKZ	**Makanchi**	**47.59**	**296**	P		**P**		**04 42 02.3**	**-0.9**
MAKZ				pmax		pmax			
	comp=Z,9.0nm,0.6s								
MAKZ	**Makanchi**	**47.59**	**296**	P		**P**		**04 42 02.3**	**-0.9**
MAKZ				IAmb		IAmb		04 42 03.9	
	comp=Z,8.6nm,0.6s								
KMI	**Kunming**	**47.92**	**259**	⇓P		**P**		**04 42 06.9**	**+0.6**
KMI				pmax		pmax			
	comp=Z,21nm,1.2s								
KMI	**Kunming**	**47.92**	**259**	P		**P**		**04 42 06.0**	**-0.3**
KMI				pmax		pmax			
	comp=Z,17nm,0.9s								
KMI	**Kunming**	**47.92**	**259**	P		**P**		**04 42 06.0**	**-0.3**
KMI				IAmb		IAmb		04 42 07.5	
	comp=Z,17nm,0.9s								
SLVN	**Son La**	**49.94**	**255**	P		**P**		**04 42 22.1**	**+0.7**
BRVK	**Borovoye**	**50.55**	**309**	*c i*P		**P**		**04 42 24.5**	**-1.2**
BRVK				pmax		pmax			
	comp=Z,22nm,0.8s								
BRVK	**Borovoye**	**50.55**	**309**	P		**P**		**04 42 24.6**	**-1.0**
TDK	**Taldyqorghan**	**50.67**	**296**	*e*P		**P**		**04 42 25.6**	**-1.1**
	baz=296								
TDK	**Taldyqorghan**	**50.67**	**296**	*e*P		**P**		**04 42 25.6**	**-1.1**
D03D	**Eldon**	**50.75**	**60**	P				04 42 29.2	
	baz=305,SNR=5.2								
B05A	**Bryant**	**50.89**	**58**	P				04 42 29.5	
	baz=305								
PDGK	**Podgornoye**	**51.01**	**294**	P		**P**		**04 42 28.2**	**-1.2**
BRZS	**Berezniki**	**51.02**	**304**	*e*P		**P**		**04 42 27.8**	**-1.5**
	comp=Z,6.6nm,0.9s,baz=304								
BRZS	**Berezniki**	**51.02**	**304**	*e*P		**P**		**04 42 27.7**	**-1.5**
BRZS				pmax		pmax			
	comp=Z,7.0nm,0.9s								
SHLS	**Shalkode**	**51.12**	**294**	*e*P		**P**		**04 42 27.2**	**-3.1**
	comp=Z,3.6nm,0.5s,baz=293								
SHLS	**Shalkode**	**51.12**	**294**	*e*P		**P**		**04 42 27.1**	**-3.1**
SHLS				pmax		pmax			
	comp=Z,4.0nm,0.5s								
UZB	**Uzynbulak**	**51.39**	**294**	*e*P		**P**		**04 42 30.9**	**-1.4**
	baz=294								
UZB	**Uzynbulak**	**51.39**	**294**	*e*P		**P**		**04 42 30.8**	**-1.4**
KPKS	**Kokpek**	**51.40**	**294**	*e*P		**P**		**04 42 31.0**	**-1.3**
	comp=Z,4.1nm,0.6s,baz=294								
KPKS	**Kokpek**	**51.40**	**294**	*e*P		**P**		**04 42 31.0**	**-1.3**
KPKS				pmax		pmax			
	comp=Z,4.0nm,0.6s								
E04D	**Cinebar**	**51.61**	**60**	P				04 42 35.6	
	baz=306								
NEEM	**North Greenlan**	**51.76**	**7

J05D	**Fort Rock, OR**	**54.32**	**63**	P			04 42 56.1		
	baz=308,SNR=11								
AAK	**Ala-Archa**	**54.35**	**296**	P		**P**	**04 42 53.9**	**-0.2**
	SNR=8.0								
AAK	**Ala-Archa**	**54.35**	**296**	*c i* P		**P**	**04 42 53.5**	**-0.6**
AAK				pmax		pmax			
	comp=Z,20nm,0.7s								
AAK	**Ala-Archa**	**54.35**	**296**	P		**P**	**04 42 53.5**	**-0.6**
AAK				IAmb		IAmb	04 42 54.2		
	comp=Z,6.6nm,0.8s								
L04D	**Klamath Falls**	**54.36**	**65**	P			04 42 56.1		
	baz=308,SNR=5.7								
KHON	**Khomkaen**	**54.37**	**252**	P		**P**	**04 42 56.7**	**+2.5**
	comp=Z,63nm,0.7s								
YBH	**Yreka Blue Hor**	**54.42**	**65**	P		**P**	**04 42 56.3**	**+1.9**
	comp=Z,6.0nm,0.9s,baz=322,slow=3.5,SNR=9.2								
YBH	**Yreka Blue Hor**	**54.42**	**65**	IAmb		IAmb	04 42 57.7		
	comp=Z,8.6nm,1.1s								
M02C	**Callahan**	**54.55**	**66**	P			04 42 57.7		
	baz=309								
SHL	**Shillong**	**54.59**	**269**	P		**P**	**04 42 55.4**	**-0.6**
SHL				pmax		pmax			
	comp=Z,31nm,0.6s								
SHL	**Shillong**	**54.59**	**269**	P		**P**	**04 42 55.4**	**-0.6**
LAMP	**Lampang**	**54.70**	**256**	P		**P**	**04 42 58.0**	**+1.3**
	comp=Z,62nm,0.9s								
UTTA	**Uttaradit**	**54.71**	**255**	P		**P**	**04 42 58.0**	**+1.3**
	comp=Z,291nmcomp=Z,35nm,0.9s								
EKS2	**Erkin-Say**	**54.75**	**296**	P		**P**	**04 42 57.1**	**+0.2**
	SNR=5.5								
CM34	**Chiang Mai Arr**	**54.76**	**257**	P		**P**	**04 42 58.0**	**+0.9**
WALA	**Waterton Lakes**	**54.80**	**54**	IAmb		IAmb	04 42 59.4		
	comp=Z,7.7nm,0.8s								
CM35	**Chiang Mai Arr**	**54.89**	**257**	P		**P**	**04 42 59.0**	**+1.0**
N02D	**Trinity Center**	**54.89**	**66**	P			04 43 00.2		
	baz=309								
M04C	**Macdoel**	**54.90**	**65**	P			04 43 00.0		
	baz=309								
CM33	**Chiang Mai Arr**	**54.91**	**257**	P		**P**	**04 42 59.0**	**+0.8**
CMMT	**Chiang Mai**	**54.92**	**257**	P		**P**	**04 42 58.4**	**+0.1**
	comp=Z,291nmcomp=Z,35nm,0.9s								
CHTO	**Chiang Mai**	**54.92**	**257**	P		**P**	**04 42 58.6**	**+0.3**
CHTO				pmax		pmax			
	comp=Z,50nm,0.8s								
CHTO	**Chiang Mai**	**54.92**	**257**	P		**P**	**04 42 58.6**	**+0.3**
CM36	**Chiang Mai Arr**	**55.04**	**257**	P		**P**	**04 43 00.0**	**+0.9**
CM32	**Chiang Mai Arr**	**55.10**	**257**	P		**P**	**04 43 01.0**	**+1.5**
AML	**Almayashu**	**55.13**	**296**	P		**P**	**04 43 00.0**	**+0.1**
	SNR=5.4								
CM09	**Chiang Mai Arr**	**55.16**	**257**	P		**P**	**04 43 01.9**	**+1.8**
	comp=Z,272nmcomp=Z,34nm,0.9s								
CM31	**Chiang Mai Arr**	**55.18**	**257**	P		**P**	**04 43 02.2**	**+2.0**
	comp=Z,910nm,0.9s								
CM31	**Chiang Mai Arr**	**55.18**	**257**	P		**P**	**04 43 01.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**55.18**	**257**	P		**P**	**04 43 00.9**	**+0.8**
	comp=Z,20nm,0.8s,baz=30,slow=7.2,SNR=88								
CMAR				LR		LR	05 06 57.5		
	comp=Z,25nm,19.1s,baz=100,slow=36								
CMAR	**Chiang Mai Arr**	**55.18**	**257**	*i* P		**P**	**04 43 01.6**	**+1.4**
CMAR				pmax		pmax			
	comp=Z,21nm,0.8s								
CM02	**Chiang Mai Arr**	**55.20**	**257**	P		**P**	**04 43 02.0**	**+1.7**
	comp=Z,267nmcomp=Z,38nm,0.9s								
CM15	**Chiang Mai Arr**	**55.20**	**257**	P		**P**	**04 43 02.0**	**+1.8**
	comp=Z,32nm,0.9s								
CM01	**Chiang Mai Arr**	**55.20**	**257**	P		**P**	**04 43 02.0**	**+1.7**
	comp=Z,244nmcomp=Z,35nm,0.9s								
CM04	**Chiang Mai Arr**	**55.20**	**257**	P		**P**	**04 43 02.0**	**+1.7**
	comp=Z,283nmcomp=Z,37nm,0.9s								
PHIT	**Phitsanulok**	**55.21**	**255**	P		**P**	**04 43 03.0**	**+2.7**
	comp=Z,81nm,1.1s								
CHAI	**Chaiyaphum**	**55.22**	**252**	P		**P**	**04 43 02.2**	**+1.8**
	comp=Z,458nmcomp=Z,47nm,0.8s								
CM05	**Chiang Mai Arr**	**55.22**	**257**	P		**P**	**04 43 02.0**	**+1.6**
	comp=Z,229nmcomp=Z,28nm,0.9s								
CM13	**Chiang Mai Arr**	**55.23**	**257**	P		**P**	**04 43 02.2**	**+1.7**
	comp=Z,243nmcomp=Z,34nm,0.9s								
JTMT	**Jette**	**55.42**	**55**	IAmb		IAmb	04 43 03.6		
	comp=Z,5.0nm,0.8s								
ARCES	**ARCESS Array B**	**55.55**	**341**	P		**P**	**04 43 00.2**	**-1.9**
	comp=Z,1.8nm,0.5s,baz=41,slow=7.6,SNR=39								
ARCES				LR		LR	05 09 46.2		
	comp=Z,24nm,19.1s,baz=145,slow=39								
BMO	**Blue Mountains**	**55.57**	**59**	IAmb		IAmb	04 43 05.4		
	comp=Z,13nm,1.4s								
MOD	**Modoc Plateau**	**55.72**	**64**	IAmb		IAmb	04 43 06.8		
	comp=Z,12nm,1.1s								
PRGR	**Permogore**	**55.85**	**327**	*e*P		**P**	**04 43 03.2**	**-1.1**
PRGR				pmax		pmax			
	comp=Z,10.0nm,0.6s								
J08A	**Circle Bar Ran**	**55.85**	**61**	IAmb		IAmb	04 43 07.8		
	comp=Z,12nm,1.1s								
O03E	**Paynes Creek**	**55.85**	**66**	P			04 43 05.9		
	baz=310,SNR=7.4								
DBG	**Daneborg**	**56.04**	**359**	*i* P		**P**	**04 43 05.0**	**-0.5**
MSO	**Missoula**	**56.17**	**56**	P		**P**	**04 43 08.6**	**+1.5**
MSO				IAmb		IAmb	04 43 09.3		
	comp=Z,7.5nm,0.9s								
MSO	**Missoula**	**56.17**	**56**	P			04 43 08.5		
	baz=309,SNR=5.9								
WVOR	**Wild Horse Val**	**56.34**	**62**	IAmb		IAmb	04 43 11.2		
	comp=Z,14nm,1.1s								
KK31	**Karatay Array**	**56.34**	**299**	P		**P**	**04 43 07.3**	**-0.9**
KK31	**Karatay Array**	**56.34**	**299**	IAmb		IAmb	04 43 08.3		
	comp=Z,5.3nm,0.7s								
KKAR	**Karatay Array**	**56.34**	**299**	P		**P**	**04 43 07.3**	**-0.9**
KKAR	**Karatay Array**	**56.34**	**299**	P		**P**	**04 43 07.2**	**-0.9**
KIRV	**Kirov**	**56.52**	**323**	⇓*e*P		**P**	**04 43 08.6**	**-0.5**
SRAK	**Srakaew**	**56.64**	**251**	P		**P**	**04 43 10.0**	**-0.5**
	comp=Z,187nm,0.9s								
UMPA	**Umpang Tak**	**56.92**	**255**	P		P	04 43 17.0	+4.4	
	comp=Z,2μmcomp=Z,29nm,1.0s								
FFC	**Flin Flon**	**56.95**	**43**	P		**P**	**04 43 13.3**	**+1.0**
FFC				pmax		pmax			
	comp=Z,4.0nm,0.9s								
FFC	**Flin Flon**	**56.95**	**43**	P		**P**	**04 43 13.3**	**+1.0**
UTHA	**Uthaitani**	**57.05**	**254**	P		**P**	**04 43 16.0**	**+2.5**
	comp=Z,22nm,0.9s								
IUG	**Iuzhnay**	**57.23**	**298**	*e*P		**P**	**04 43 13.6**	**-1.0**
	comp=Z,9.0nm,0.6s,baz=298								
IUG	**Iuzhnay**	**57.23**	**298**	*e*P		**P**	**04 43 13.5**	**-1.0**
IUG				pmax		pmax			
	comp=Z,6.0nm,0.6s								
SUMG	**Summit**	**57.37**	**5**	*i* P		**P**	**04 43 15.9**	**+0.5**
SUMG	**Summit**	**57.37**	**5**	P		**P**	**04 43 15.6**	**+0.2**
SUMG				pmax		pmax			
	comp=Z,18nm,1.2s								
SUMG	**Summit**	**57.37**	**5**	P		**P**	**04 43 15.6**	**+0.2**
FCC	**Fort Churchill**	**57.44**	**36**	P		**P**	**04 43 16.2**	**+0.6**
FCC				pmax		pmax			
	comp=Z,6.0nm,0.8s								
FCC	**Fort Churchill**	**57.44**	**36**	P		**P**	**04 43 16.2**	**+0.6**
FCC				IAmb		IAmb	04 43 17.3		
	comp=Z,5.9nm,0.8s								
EGMT	**Eagleton**	**57.60**	**52**	IAmb		IAmb	04 43 19.2		
	comp=Z,15nm,1.2s								
EGMT	**Eagleton**	**57.60**	**52**	P			04 43 18.1		
	baz=310,SNR=5.2								
VCNR	**Virginia City**	**57.77**	**66**	IAmb		IAmb	04 43 21.1		
	comp=Z,5.6nm,0.8s								
PNTR	**Pine Nut**	**57.93**	**66**	IAmb		IAmb	04 43 24.2		
	comp=Z,8.5nm,0.7s								
HLID	**Hailey**	**58.00**	**59**	IAmb		IAmb	04 43 22.9		
	comp=Z,8.2nm,1.2s								
HLID	**Hailey**	**58.00**	**59**	P			04 43 21.8		
	baz=311,SNR=12								
AB31	**Akbulak array**	**58.03**	**310**	P		**P**	**04 43 19.0**	**-0.9**
ABKAR	**Akbulak array**	**58.03**	**310**	P		**P**	**04 43 18.9**	**-1.1**
BOZ	**Bozeman (W)**	**58.20**	**56**	IAmb		IAmb	04 43 23.6		
	comp=Z,8.9nm,0.8s								
BOZ	**Bozeman (W)**	**58.20**	**56**	P			04 43 23.1		
	baz=311,SNR=18								
YERR	**Yerington**	**58.21**	**66**	P		**P**	**04 43 23.0**	**+1.4**
YERR				IAmb		IAmb	04 43 24.1		
	comp=Z,7.4nm,0.9s								
KLMR	**Klimovskoe**	**58.49**	**329**	*e*P		**P**	**04 43 21.7**	**-1.1**
KLMR				pmax		pmax			
	comp=Z,10.0nm,0.7s								
KLMR	**Klimovskoe**	**58.49**	**329**	*e*P		**P**	**04 43 21.8**	**-1.1**
KLMR				AMP			04 43 23.3		
	comp=Z,10.0nm,0.7s								
KVN	**Kaiserville**	**58.84**	**65**	IAmb		IAmb	04 43 28.6		
	comp=Z,10nm,1.1s								
YHL	**Hebgen Lake**	**58.92**	**56**	IAmb		IAmb	04 43 28.9		
	comp=Z,6.4nm,0.8s								
PHET	**Kaeng Krachan**	**58.96**	**252**	P		**P**	**04 43 30.0**	**+3.2**	
NVAR	**Mina Array Bea**	**59.13**	**66**	P		**P**	**04 43 29.6**	**+1.6**
	comp=Z,3.9nm,0.8s,baz=290,slow=7.5,SNR=29								
NVAR				pP		**pP**	**04 43 51.4**	**+1.1**	
	comp=Z,1.7nm,0.5s,baz=296,slow=7.3,SNR=5.8								
NVAR				PcP		**PcP**	**04 44 16.8**	**+1.1**	
	comp=Z,1.2nm,0.7s,baz=299,slow=5.5,SNR=2.3								
NVAR				LR		LR	05 09 17.0		
	comp=Z,31nm,18.2s,baz=250,slow=36								
NVAR	**Mina Array Bea**	**59.13**	**66**	P		**P**	**04 43 29.0**	**+1.0**
YMR	**Madison River**	**59.16**	**56**	IAmb		IAmb	04 43 31.1		
	comp=Z,9.8nm,0.9s								
NV11	**Mina Array Sit**	**59.21**	**66**	IAmb		IAmb	04 43 31.1		
	comp=Z,5.3nm,1.1s								
YNR	**Norris Junctio**	**59.28**	**56**	IAmb		IAmb	04 43 32.5		
	comp=Z,12nm,1.2s								
YNE	**Yellowstone No**	**59.45**	**55**	P		**P**	**04 43 31.4**	**+1.2**
YNE				IAmb		IAmb	04 43 32.9		
	comp=Z,9.3nm,0.9s								
LKWY	**Lake**	**59.53**	**56**	IAmb		IAmb	04 43 34.8		
	comp=Z,9.8nm,0.8s								
YMP	**Mirror Lake Pl**	**59.54**	**56**	IAmb		IAmb	04 43 34.0		
	comp=Z,8.1nm,0.9s								
H17A	**Grant Village**	**59.55**	**56**	P			04 43 34.2		
	baz=312,SNR=15								
FLWY	**Flagg Ranch**	**59.69**	**56**	IAmb		IAmb	04 43 35.4		
	comp=Z,9.1nm,1.1s								
RLMT	**Red Lodge**	**59.76**	**55**	P			04 43 34.3		
	baz=312,SNR=19								
ECR	**Eagle Creek**	**60.01**	**58**	P		**P**	**04 43 35.8**	**+1.8**
LOHW	**Long Hollow**	**60.05**	**57**	IAmb		IAmb	04 43 37.7		
	comp=Z,11nm,1.1s								
SNOW	**Snow King Moun**	**60.07**	**57**	IAmb		IAmb	04 43 37.5		
	comp=Z,9.3nm,1.0s								
DGMT	**Dagmar**	**60.09**	**49**	P		**P**	**04 43 36.0**	**+1.8**
DGMT	**Dagmar**	**60.10**	**49**	P			04 43 35.9		
	baz=313,SNR=5.3								
LAO	**LASA Array**	**60.29**	**52**	P		**P**	**04 43 36.8**	**+1.1**
LAO	**LASA Array**	**60.29**	**52**	P			04 43 37.7		
	baz=313,SNR=11								
CWC	**Cottonwood Cre**	**60.58**	**67**	P			04 43 39.4		
	baz=312								
R11A	**Troy Canyon, C**	**60.77**	**64**	IAmb		IAmb	04 43 41.5		
	comp=Z,5.9nm,0.9s								
R11A	**Troy Canyon, C**	**60.77**	**64**	P			04 43 40.5		
	baz=312,SNR=12								
NIL	**Nilore**	**60.92**	**289**	P		**P**	**04 43 39.1**	**-1.0**
NIL				pmax		pmax			
	comp=Z,23nm,0.8s								
NIL	**Nilore**	**60.92**	**289**	P		**P**	**04 43 39.1**	**-1.0**
SPR3	**Spring Creek 3**	**61.06**	**63**	P		**P**	**04 43 43.5**	**+2.2**
SPR3				IAmb		IAmb	04 43 44.4		
	comp=Z,7.7nm,0.8s								
DUG	**Dugway, Tooele**	**61.12**	**61**	IAmb		IAmb	04 43 44.3		
	comp=Z,14nm,1.2s								
DUG	**Dugway, Tooele**	**61.12**	**61**	P			04 43 43.2		
	baz=313,SNR=7.0								
BW06	**Boulder Array**	**61.19**	**57**	IAmb		IAmb	04 43 44.5		
	comp=Z,12nm,0.9s								
PD31	**Pinedale Array**	**61.19**	**57**	IAmb		IAmb	04 43 44.5		
	comp=Z,10nm,0.9s								
PDAR	**Pinedale Array**	**61.19**	**57**	P		**P**	**04 43 43.5**	**+1.4**
	comp=Z,8.0nm,0.9s,baz=318,slow=2.5,SNR=54								
PDAR				pP		**pP**	**04 44 06.2**	**+1.8**	
	comp=Z,2.8nm,0.8s,baz=344,slow=2.1,SNR=4.8								
PDAR				PP		**PP**	**04 45 57.4**	**+0.2**	
	comp=Z,0.3nm,0.3s,baz=301,slow=7.0,SNR=3.1								
PDAR				LR		LR	05 09 50.1		
	comp=Z,14nm,20.0s,baz=268,slow=35								
PDAR	**Pinedale Array**	**61.19**	**57**	P		**P**	**04 43 42.8**	**+0.7**
BW06	**Boulder Array**	**61.19**	**57**	P			04 43 43.5		
	baz=313,SNR=17								
MPMC	**Manual Prospec**	**61.19**	**67**	P			04 43 43.4		
	baz=313								
FURC	**Furnace Creek,**	**61.29**	**67**	P			04 43 44.3		
	baz=313,SNR=9.5								
TPNV	**Topopah Spring**	**61.33**	**66**	IAmb		IAmb	04 43 45.3		
	comp=Z,8.4nm,0.9s								
TPNV	**Topopah Spring**	**61.33**	**66**	P			04 43 44.2		
	baz=313,SNR=7.8								
BELG	**Belogornoye**	**61.57**	**319**	⇓*e*P		**P**	**04 43 43.4**	**-0.7**
BELG				pmax		pmax			
	comp=Z,4.0nm,0.9s								
NLU	**North Lily Min**	**61.70**	**61**	IAmb		IAmb	04 43 48.1		
	comp=Z,5.4nm,0.9s								
PRN	**Pahroc Range**	**61.72**	**65**	IAmb		IAmb	04 43 48.1		
	comp=Z,7.4nm,1.1s								
MPU	**Maple Canyon**	**61.91**	**60**	IAmb		IAmb	04 43 49.5		
	comp=Z,5.7nm,0.8s								
FINES	**FINESS Array B**	**62.06**	**335**	P		**P**	**04 43 45.6**	**-1.6**
	comp=Z,1.8nm,0.4s,baz=37,slow=7.4,SNR=20								
FINES				LR		LR	05 12 28.5		
	comp=Z,20nm,20.2s,baz=40,slow=38								
FINES	**FINESS Array B**	**62.06**	**335**	*i* P		**P**	**04 43 45.5**	**-1.7**
FINES				pmax		pmax			
	comp=Z,2.0nm,0.4s								
TMUT	**Trail Mountain**	**62.64**	**61**	IAmb		IAmb	04 43 54.3		
	comp=Z,6.3nm,0.8s								
ULM	**Lac du Bonnet**	**62.74**	**43**	P		**P**	**04 43 51.5**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=312,slow=7.1,SNR=4.2								
ULM				pP		**pP**	**04 44 14.8**	**+0.2**	
	comp=Z,1.2nm,0.4s,baz=328,slow=7.1,SNR=2.7								
P17A	**Butcher Ranch,**	**62.78**	**60**	IAmb		IAmb	04 43 55.4		
	comp=Z,10nm,1.2s								
LCMT	**Little Creek M**	**63.04**	**64**	IAmb		IAmb	04 43 57.1		
	comp=Z,7.9nm,0.9s								
SRU	**San Rafael Swe**	**63.15**	**61**	IAmb		IAmb	04 43 57.5		
	comp=Z,13nm,0.8s								
GMRC	**Granite Mounta**	**63.15**	**67**	P			04 43 56.4		
	baz=314,SNR=5.0								
RSSD	**Black Hills**	**63.17**	**53**	P		**P**	**04 43 55.8**	**+0.6**
RSSD				pmax		pmax			
	comp=Z,14nm,1.0s								
RSSD	**Black Hills**	**63.17**	**53**	P		**P**	**04 43 55.8**	**+0.6**
RSSD				IAmb		IAmb	04 43 57.4		
	comp=Z,14nm,0.9s								
RSSD	**Black Hills**	**63.17**	**53**	P			04 43 56.5		
	baz=315								
RWWY	**Rawlins**	**63.20**	**56**	IAmb		IAmb	04 43 57.6		
	comp=Z,8.3nm,1.1s								
KNB	**Kanab**	**63.28**	**64**	IAmb		IAmb	04 43 59.0		
	comp=Z,11nm,1.0s								
BELC	**Belle Mtn. Jos**	**63.49**	**68**	P			04 43 58.1		
	baz=314								
O20A	**White River Ci**	**63.71**	**58**	P			04 44 00.1		
	baz=314								
IRM	**Iron Mountain**	**63.89**	**67**	P			04 44 01.3		
	baz=314,SNR=6.2								
BC3	**Big Chuckawall**	**64.06**	**68**	P			04 44 02.0		
	baz=314								
KULM	**Kulim**	**64.34**	**246**	P		**P**	**04 44 04.6**	**+1.6**
KULM				IAmb		IAmb	04 44 08.4		
	comp=Z,14nm,1.0s								
PDMCI	**Parker Dam,Lak**	**64.39**	**67**	P			04 44 04.4		
	baz=314								
N23A	**Red Feather La**	**64.43**	**56**	P			04 44 05.5		
	baz=315,SNR=6.0								
PV14	**Lion Creek, Pa**	**64.51**	**60**	IAmb		IAmb	04 44 06.4		
	comp=Z,10.0nm,1.0s								
PV22	**Blue Mesa, Par**	**64.53**	**60**	IAmb		IAmb	04 44 06.5		
	comp=Z,8.6nm,0.8s								
CCX	**Cicese**	**64.57**	**70**	P		**P**	**04 44 05.3**	**+1.1**
VRH	**Novokhopyorsk**	**64.92**	**321**	*e*P		**P**	**04 44 05.1**	**-1.1**
VRH				pmax		pmax			
	comp=Z,20nm,0.9s								
LPSR	**Galich'ya Gora**	**64.95**	**323**	*e*P		**P**	**04 44 05.7**	**-0.7**
LPSR				pmax		pmax			
	comp=Z,10.0nm,0.7s								
SMCO	**Snowmass**	**65.08**	**58**	IAmb		IAmb	04 44 10.3		
	comp=Z,6.3nm,0.8s								
WUAZ	**Wupatki**	**65.17**	**64**	IAmb		IAmb	04 44 11.1		
	comp=Z,11nm,1.1s								
WUAZ	**Wupatki**	**65.17**	**64**	P			04 44 10.3		
	baz=315,SNR=5.2								
ISCO	**Idaho Springs**	**65.38**	**57**	IAmb		IAmb	04 44 12.7		
	comp=Z,8.2nm,0.9s								
ISCO	**Idaho Springs**	**65.39**	**57**	P			04 44 11.6		
	baz=316,SNR=9.5								
MVCO	**Mesa Verde**	**65.62**	**61**	P			04 44 12.8		
	baz=315								
NOA	**NORSAR Array B**	**65.89**	**342**	P		**P**	**04 44 10.8**	**-1.6**
	comp=Z,2.2nm,0.6s,baz=24,slow=6.5,SNR=13								
NOA				LR		LR	05 17 46.4		
	comp=Z,8.1nm,18.1s,baz=20,slow=40								
VSR	**Storozhevoye**	**65.94**	**322**	*e*P		**P**	**04 44 10.9**	**-1.9**
VSR				pmax		pmax			
	comp=Z,10.0nm,1.9s								
S22A	**4UR Ranch, Cre**	**66.18**	**59**	P			04 44 17.1		
	baz=316,SNR=12								
Q24A	**Divide**	**66.23**	**57**	P			04 44 16.9		
	baz=316								
OGNE	**Ogallala**	**66.47**	**54**	P			04 44 17.9		
	baz=317								
GEYT	**Alibeck**	**66.78**	**302**	P		**P**	**04 44 17.9**	**-0.6**
	comp=Z,6.9nm,0.7s,baz=28,slow=6.7,SNR=7.9								
GEYT	**Alibeck**	**66.78**	**302**	P		**P**	**04 44 18.3**	**-0.2**
GEYT				IAmb		IAmb	04 44 20.9		
	comp=Z,6.7nm,0.7s								
214A	**Organ Pipe Nat**	**66.83**	**68**	P			04 44 20.0		
	baz=316								
HRA	**Herat**	**66.98**	**296**	P		**P**	**04 44 19.3**	**-0.7**
HRA				IAmb		IAmb	04 44 22.2		
	comp=Z,8.1nm,0.9s								
ECSD	**EROS Data Cent**	**67.17**	**49**	IAmb		IAmb	04 44 22.3		
	comp=Z,7.7nm,0.8s								
ECSD	**EROS Data Cent**	**67.17**	**49**	P			04 44 21.4		
	baz=318,SNR=8.0								
MLSI	**Meulaboh, Aceh**	**67.69**	**249**	P		**P**	**04 44 25.2**	**+0.8**
	comp=Z,31nm,0.7s								
TUC	**Tucson**	**67.78**	**66**	P		**P**	**04 44 24.2**	**-0.7**
TUC				pmax		pmax			
	comp=Z,5.0nm,1.2s								
TUC	**Tucson**	**67.78**	**66**	P		**P**	**04 44 24.2**	**-0.7**
TUC	**Tucson**	**67.78**	**66**	P			04 44 25.9		
	baz=316								
T25A	**Trinidad**	**67.95**	**58**	IAmb		IAmb	04 44 28.4		
	comp=Z,9.3nm,1.1s								
T25A	**Trinidad**	**67.95**	**58**	P			04 44 27.4		
	baz=317,SNR=5.8								
ANMO	**Albuquerque**	**68.39**	**61**	⇓*e*P		**P**	**04 44 30.3**	**+1.4**
ANMO				pmax		pmax			
	comp=Z,6.0nm,1.3s								
ANMO	**Albuquerque**	**68.39**	**61**	P		**P**	**04 44 29.7**	**+0.9**
ANMO	**Albuquerque**	**68.39**	**61**	P			04 44 30.3		
	baz=317								
BNM	**Barren Site**	**68.87**	**62**	P		**P**	**04 44 32.3**	**+0.4**
HSIG		**70.05**	**69**	P		**P**	**04 44 40.0**	**+1.1**
AKASG	**Malin Array Be**	**70.06**	**327**	P		**P**	**04 44 37.0**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=33,slow=6.5,SNR=9.2								
AKASG				LR		LR	05 17 18.3		
	comp=Z,25nm,18.8s,baz=40,slow=38								
AKASG	**Malin Array Be**	**70.06**	**327**	*i* P		**P**	**04 44 37.2**	**-1.4**
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKASG	**Malin Array Be**	**70.06**	**327**	IAmb		IAmb	04 44 38.8		
	comp=Z,2.4nm,1.4s								
AKBB	**Malin Array Si**	**70.06**	**327**	⇓*e*P		**P**	**04 44 37.0**	**-1.6**
AKBB				pmax		pmax			
	comp=Z,12nm,1.8s								
KIV	**Kislovodsk**	**70.08**	**315**	*e*P		**P**	**04 44 37.2**	**-1.8**
KIV				pmax		pmax			
	comp=Z,24nm,1.0s								
KBZ	**Khabaz**	**70.16**	**315**	P		**P**	**04 44 39.1**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=0.0,slow=3.0,SNR=11								
MSTX	**Muleshoe**	**71.18**	**60**	IAmb		IAmb	04 44 47.8		
	comp=Z,12nm,1.1s								
MSTX	**Muleshoe**	**71.18**	**60**	P			04 44 47.2		
	baz=318								
MNTX	**Cornudas Mount**	**71.38**	**63**	P			04 44 48.2		
	baz=318,SNR=8.6								
U32A	**Winter Ranch,**	**71.44**	**55**	IAmb		IAmb	04 44 48.6		
	comp=Z,11nm,0.9s								
GNI	**Garni**	**72.07**	**311**	⇑*e*P		**P**	**04 44 53.3**	**+2.2**
GNI				pmax		pmax			
	comp=Z,29nm,1.4s								
WRA	**Warramunga Arr**	**72.23**	**202**	P		**P**	**04 44 51.2**	**-0.7**
	comp=Z,1.6nm,1.0s,baz=16,slow=6.4,SNR=5.9								
WRA				pP		**PcP**	**04 45 13.4**	**+3.8**	
	comp=Z,5.7nm,0.9s,baz=20,slow=6.7,SNR=15								
N41A	**Harden Midland**	**72.24**	**47**	IAmb		IAmb	04 44 53.2		
	comp=Z,16nm,1.1s								
SORM	**Soroca**	**72.53**	**326**	⇓P		**P**	**04 44 52.1**	**-1.4**
SORM	**Soroca**	**72.53**	**326**	⇓P		**P**	**04 44 52.1**	**-1.4**
P40A	**Paris**	**72.58**	**49**	IAmb		IAmb	04 44 55.4		
	comp=Z,9.9nm,1.0s								
WMOK	**Wichita Mounta**	**72.79**	**56**	P			04 44 56.3		
	ba

VOIR		**76.01 327**	⇓P	**P**	**04 45 14.1**	**+0.2**		
MARD	**Mardin**	**76.21 312**	P	**P**	**04 45 15.6**	**+0.4**		
ARR	**Arges**	**76.22 327**	⇓P	**P**	**04 45 15.9**	**+0.8**		
KHC	**Kasperske Hory**	**76.26 336**	⇓*i*P	**P**	**04 45 15.4**	**+0.2**		
KHC			pmax	pmax				
comp=Z,22nm,1.1s								
KHC	**Kasperske Hory**	**76.26 336**	*e*P	**P**	**04 45 15.7**	**+0.5**		
KHC			*ex*	x	04 45 21.5			
GRF	**Grafenberg Arr**	**76.35 338**	*e*P	**P**	**04 45 16.5**	**+0.8**		
comp=Z,11nm,1.0s,baz=20,slow=4.8								
ILGA	**Ilgaz**	**76.36 319**	P	**P**	**04 45 16.6**	**+0.5**		
GEC2	**GERESS Array S**	**76.49 336**	P	**P**	**04 45 16.4**	**-0.2**		
GERES	**GERESS Array B**	**76.49 336**	P	**P**	**04 45 16.4**	**-0.2**		
comp=Z,1.7nm,0.5s,baz=40,slow=5.6,SNR=13								
GERES	**GERESS Array B**	**76.49 336**	P	**P**	**04 45 15.6**	**-1.0**		
BTNL	**Ternell**	**76.68 341**	*d*P	**P**	**04 45 17.9**	**+0.4**		
MEM	**Membach**	**76.68 341**	*d*P	**P**	**04 45 18.0**	**+0.5**		
CONA	**Conrad Observa**	**76.73 334**	*e*P	**P**	**04 45 18.8**	**+0.9**		
comp=Z,3.0nm,0.6s								
BSTI	**Sart Tilman**	**76.80 341**	*d*P	**P**	**04 45 19.0**	**+0.9**		
GZR	**Gura Zlata**	**76.84 328**	⇓P	**P**	**04 45 17.8**	**-0.8**		
GZR	**Gura Zlata**	**76.84 328**	⇓P	**P**	**04 45 17.8**	**-0.8**		
BCLA	**Clavier**	**77.01 341**	*d*P	**P**	**04 45 19.4**	**+0.1**		
BGES	**Gesves**	**77.09 342**	*d*P	**P**	**04 45 20.1**	**+0.3**		
BMRD	**Maredsous**	**77.23 342**	*d*P	**P**	**04 45 21.1**	**+0.5**		
NATX	**Nacogdoches**	**77.28 56**	P	**P**	**04 45 21.9**	**+0.7**		
NATX			IAmb	IAmb	04 45 23.6			
comp=Z,21nm,1.0s								
DOU	**Dourbes**	**77.46 342**	*d*P	**P**	**04 45 22.2**	**+0.4**		
UOSS	**Minazif**	**77.46 294**	P	**P**	**04 45 21.9**	**-0.4**		
BR131	**Keskin Array S**	**77.49 318**	*ce*P	**P**	**04 45 22.3**	**-0.2**		
BR131	**Keskin Array S**	**77.49 318**	IAmb	IAmb	04 45 24.4			
comp=Z,11nm,0.9s								
BRTR	**Keskin Array B**	**77.49 318**	P	**P**	**04 45 22.2**	**-0.2**		
comp=Z,6.4nm,0.9s,baz=53,slow=2.8,SNR=19								
BRTR			LR	LR	05 24 25.2			
comp=Z,27nm,18.5s,baz=102,slow=39								
BRTR	**Keskin Array B**	**77.49 318**	*i* P	**P**	**04 45 22.7**	**+0.3**		
BRTR			pmax	pmax				
comp=Z,6.0nm,0.9s								
BRTR	**Keskin Array B**	**77.49 318**	P	**P**	**04 45 21.9**	**-0.5**		
BAIF	**Baives**	**77.57 342**	*e*P	**P**	**04 45 22.4**	**-0.1**		
BAIF			pmax	pmax				
comp=Z,12nm,0.9s								
STU	**Stuttgart**	**77.70 338**	P	**P**	**04 45 24.3**	**+1.1**		
ANTO	**Ankara**	**77.73 319**	P	**P**	**04 45 24.0**	**+0.3**		
ANTO	**Ankara**	**77.73 319**	P	**P**	**04 45 24.0**	**+0.3**		
MDUB	**Mudurnu**	**77.90 320**	P	**P**	**04 45 24.0**	**-0.6**		
PLVB	**Pleven**	**77.94 326**	⇓P	**P**	**04 45 24.8**	**+0.1**		
SOKA	**Soboth**	**78.11 334**	*e*P	**P**	**04 45 26.4**	**+0.8**		
comp=Z,12nm,0.8s								
KBA	**Koelnbreinsper**	**78.21 335**	*i* P	**P**	**04 45 27.5**	**+1.2**		
comp=Z,12nm,0.6s,SNR=8.5								
KBA	**Koelnbreinsper**	**78.21 335**	P	**P**	**04 45 27.7**	**+1.4**		
BFO	**Black Forest**	**78.31 339**	P	**P**	**04 45 26.5**	**-0.2**		
BFO			pmax	pmax				
comp=Z,10.0nm,1.0s								
BFO	**Black Forest**	**78.31 339**	P	**P**	**04 45 26.5**	**-0.2**		
BFO			IAmb	IAmb	04 45 28.2			
comp=Z,9.6nm,1.0s								
OBKA	**Obir**	**78.40 334**	*e*P	**P**	**04 45 28.2**	**+0.9**		
comp=Z,6.5nm,0.6s								
WATA	**Walderalm**	**78.44 336**	*e*P	**P**	**04 45 28.5**	**+1.0**		
comp=Z,3.3nm,0.5s								
CDF	**Champ du Feu**	**78.48 340**	*e*P	**P**	**04 45 27.5**	**-0.2**		
CDF			pmax	pmax				
comp=Z,12nm,0.9s								
WTTA	**Wattenberg**	**78.49 336**	*i* P	**P**	**04 45 29.0**	**+1.1**		
comp=Z,4.4nm,0.4s,SNR=5.1								
WTTA	**Wattenberg**	**78.49 336**	P	**P**	**04 45 29.1**	**+1.2**		
RETA	**Reutte**	**78.51 337**	*e*P	**P**	**04 45 28.7**	**+0.9**		
comp=Z,5.9nm,0.9s								
MYKA	**Terra Mystica**	**78.54 335**	*e*P	**P**	**04 45 28.3**	**+0.3**		
comp=Z,5.5nm,0.7s								
MOTA	**Moosalm**	**78.55 337**	*i* P	**P**	**04 45 28.8**	**+0.6**		
comp=Z,8.9nm,0.9s,SNR=5.5								
SQTA	**Sankt Quirin**	**78.64 337**	*i* P	**P**	**04 45 29.6**	**+0.9**		
comp=Z,9.0nm,0.8s								
ECH	**Echery**	**78.69 340**	IAmb	IAmb	04 45 29.9			
comp=Z,11nm,1.0s								
ABTA	**Abfaltersbach**	**78.74 336**	*e*P	**P**	**04 45 29.2**	**+0.1**		
comp=Z,12nm,1.0s								
DIVS	**Divibare**	**78.91 330**	IAmb	IAmb	04 45 30.6			
comp=Z,13nm,0.9s								
DAVA	**Damuels**	**78.92 337**	*i* P	**P**	**04 45 31.0**	**+0.9**		
comp=Z,13nm,1.1s								
FETA	**Feichten**	**78.95 337**	*i* P	**P**	**04 45 31.5**	**+1.1**		
comp=Z,8.3nm,0.8s,SNR=5.0								
HAU	**Haudompre**	**79.07 340**	*e*P	**P**	**04 45 30.5**	**-0.3**		
HAU			pmax	pmax				
comp=Z,10.0nm,1.0s								
VTS	**Vitosha**	**79.11 327**	⇓P	**P**	**04 45 31.3**	**0.0**		
VTS	**Vitosha**	**79.11 327**	⇓P	**P**	**04 45 31.3**	**0.0**		
VTS	**Vitosha**	**79.11 327**	IAmb	IAmb	04 45 32.3			
comp=Z,15nm,0.8s								
HINF	**Hinteralfeld**	**79.14 340**	*e*P	**P**	**04 45 30.7**	**-0.5**		
HINF			pmax	pmax				
comp=Z,14nm,1.5s								
146A	**Union**	**79.50 51**	P	**P**	**04 45 34.7**	**+1.3**		
146A			IAmb	IAmb	04 45 35.9			
comp=Z,19nm,0.9s								
CTI	**Castel Tesino**	**79.61 336**	P	**P**	**04 45 33.4**	**-0.5**		
CTI			pmax	pmax				
comp=Z,11nm,1.0s								
CTI	**Castel Tesino**	**79.61 336**	P	**P**	**04 45 33.4**	**-0.5**		
CTI			IAmb	IAmb	04 45 34.5			
comp=Z,11nm,1.0s								
FLN	**La Foliniere**	**79.69 345**	*e*P	**P**	**04 45 34.0**	**-0.1**		
FLN			pmax	pmax				
comp=Z,37nm,1.1s								
ZAIG	**Zacatecas**	**79.72 67**	P	**P**	**04 45 35.7**	**+0.7**		
LDF	**La Druitiere**	**79.79 344**	*e*P	**P**	**04 45 34.4**	**-0.3**		
LDF			pmax	pmax				
comp=Z,31nm,1.2s								
GRR	**Gorron**	**80.11 345**	*e*P	**P**	**04 45 36.6**	**+0.2**		
GRR			pmax	pmax				
comp=Z,41nm,1.0s								
LOR	**Lormes**	**80.30 341**	*e*P	**P**	**04 45 37.3**	**-0.2**		
LOR			pmax	pmax				
comp=Z,11nm,0.8s								
CABF	**La Chapelle**	**80.45 340**	*e*P	**P**	**04 45 38.5**	**+0.1**		
CABF			pmax	pmax				
comp=Z,17nm,1.1s								
ROSF	**Rostrenen**	**80.55 346**	*e*P	**P**	**04 45 39.1**	**+0.3**		
ROSF			pmax	pmax				
comp=Z,32nm,1.1s								
SSF	**Saint Saulge**	**80.57 342**	*e*P	**P**	**04 45 38.8**	**-0.1**		
SSF			pmax	pmax				
comp=Z,7.0nm,0.8s								
PDG	**Podgorica**	**80.64 329**	⇓P	**P**	**04 45 39.1**	**-0.2**		
AVF	**Avril sur Loir**	**80.86 342**	*e*P	**P**	**04 45 40.5**	**+0.1**		
AVF			pmax	pmax				
comp=Z,15nm,0.9s								
LPL	**La Plagne**	**81.33 339**	*e*P	**P**	**04 45 43.9**	**+0.6**		
LPL			pmax	pmax				
comp=Z,16nm,0.7s								
LPG	**La Plagne**	**81.35 339**	*e*P	**P**	**04 45 44.1**	**+0.7**		
LPG			pmax	pmax				
comp=Z,15nm,0.7s								
TCF	**Toulx Ste Croi**	**81.57 342**	*e*P	**P**	**04 45 44.6**	**+0.3**		
TCF			pmax	pmax				
comp=Z,8.0nm,0.8s								
MFF	**Saint Martin d**	**81.72 344**	*e*P	**P**	**04 45 45.5**	**+0.5**		
MFF			pmax	pmax				
comp=Z,7.0nm,0.6s								
SSB	**Saint Sauveur**	**82.05 340**	IAmb	IAmb	04 45 48.5			
comp=Z,11nm,0.8s								
MBDF	**Montbardon**	**82.07 339**	*e*P	**P**	**04 45 49.4**	**+2.3**		
MBDF			pmax	pmax				
comp=Z,6.0nm,0.7s								
ORIF	**Oris-en-Rattie**	**82.10 339**	*e*P	**P**	**04 45 47.7**	**+0.6**		
ORIF			pmax	pmax				
comp=Z,21nm,1.3s								
VIVF	**Saint-Julien-l**	**82.43 340**	*e*P	**P**	**04 45 49.3**	**+0.5**		
VIVF			pmax	pmax				
comp=Z,10.0nm,0.9s								
CAF	**Calviac**	**82.91 342**	*e*P	**P**	**04 45 52.0**	**+0.7**		
CAF			pmax	pmax				
comp=Z,22nm,1.2s								
LFF	**La Frestale**	**83.16 343**	*e*P	**P**	**04 45 53.3**	**+0.8**		
LFF			pmax	pmax				
comp=Z,10.0nm,0.8s								
LMR	**La Mourre**	**83.45 338**	*e*P	**P**	**04 45 54.1**	**+0.1**		
LMR			pmax	pmax				
comp=Z,27nm,1.1s								
PGF	**Pioggiola**	**83.56 336**	*e*P	**P**	**04 45 54.5**	**-0.3**		
PGF			pmax	pmax				
comp=Z,30nm,1.0s								
TIP	**Timpagrande**	**84.39 330**	⇓P	**P**	**04 45 59.1**	**+0.1**		
TIP	**Timpagrande**	**84.39 330**	IAmb	IAmb	04 46 00.2			
comp=Z,21nm,1.2s								
RAYN	**Ar Rayn**	**84.72 300**	P	**P**	**04 46 00.6**	**-0.3**		
RAYN	**Ar Rayn**	**84.72 300**	P	**P**	**04 46 00.6**	**-0.3**		
RAYN			IAmb	IAmb	04 46 02.2			
comp=Z,9.4nm,0.8s								
EPF	**Esparros**	**85.07 343**	*e*P	**P**	**04 46 03.3**	**+1.0**		
EPF			pmax	pmax				
comp=Z,4.0nm,0.7s								
SJPF	**Ste Jean**	**85.28 344**	*e*P	**P**	**04 46 05.2**	**+1.9**		
SJPF			pmax	pmax				
comp=Z,24nm,1.6s								
ETSF	**Etsaut**	**85.37 343**	*e*P	**P**	**04 46 05.2**	**+1.4**		
ETSF			pmax	pmax				
comp=Z,4.0nm,0.6s								
ESDC	**Sonseca Array**	**89.11 345**	P	**P**	**04 46 21.4**	**-0.5**		
comp=Z,1.5nm,0.9s,baz=360,slow=4.2,SNR=12								
ESDC			pP	**pP**	**04 46 43.2**	**-3.0**		
comp=Z,1.4nm,0.9s,baz=2.2,slow=3.9,SNR=4.8								
ESDC	**Sonseca Array**	**89.11 345**	P	**P**	**04 46 20.9**	**-1.0**		
ESDC			IAmb	IAmb	04 46 24.4			
comp=Z,9.0nm,1.4s								
KEST	**Kesra**	**89.84 334**	P	**P**	**04 46 25.0**	**-0.4**		
comp=Z,4.3nm,0.7s,baz=312,slow=1.0,SNR=5.4								
H03N2	**Juan Fernandez**	**136.60 89**	T	T	07 25 05.5			
baz=313,slow=77,SNR=289								
H03N1	**Juan Fernandez**	**136.62 89**	T	T	07 25 04.7			
baz=313,slow=77,SNR=338								
H03N3	**Juan Fernandez**	**136.62 89**	T	T	07 25 06.5			
baz=313,slow=77,SNR=308								
BOSA	**Boshof**	**137.46 281**	pPKP	pPKPdf	04 53 15.8	+0.5		
comp=Z,1.1nm,0.6s,baz=45,slow=1.4,SNR=1.7								
CPUP	**Villa Florida**	**145.04 60**	PKPbc	**PKPbc**	**04 53 03.1**	**+0.3**		
comp=Z,4.4nm,0.8s,baz=335,slow=2.5,SNR=11								
CPUP			pPKPbc	pPKPab	04 53 26.4	-0.9		
comp=Z,3.5nm,0.7s,baz=312,slow=1.9,SNR=5.9								
CPUP	**Villa Florida**	**145.04 60**	PKIKP	**PKPbc**	**04 53 03.3**	**+0.5**		
CPUP	**Villa Florida**	**145.04 60**	PKPbc	**PKPbc**	**04 53 03.3**	**+0.5**		
PLCA	**Paso Flores**	**146.29 92**	PKPbc	**PKPdf**	**04 53 06.1**	**+1.0**		
comp=Z,2.3nm,0.9s,baz=283,slow=2.3,SNR=7.1								
PLCA			pPKPbc	**pPKPdf**	**04 53 30.6**	**+0.2**		
comp=Z,1.7nm,0.7s,baz=278,slow=6.8,SNR=2.8								

*IDC **03** 04:35:16.5±2.0,28°.28S×176°.86W,h0km,mb3.6/2, mb1 3.6/2,mb1mx3.5/29,mbtmp3.6/2 Error ellipse: s-maj=53.1km s-min=28.6km az=130.0*
ISC 03 04:35:23.1±1.8,**28°.4S**±0°.3×**176°.9W**±0°.3,**h48**km,**n12**, σ**0**§**61**/6,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.24**	**228**	Pn	**Pn**	**04 35 43.3**	**-0.7**
211nm,0.3s,baz=65,slow=7.9,SNR=28							
RAO				Sn	**Sn**	**04 36 00.2**	**+0.6**
755nm,0.3s,baz=37,slow=20,SNR=29							
STKA	**Stephens Creek**	**35.93**	**254**	P	**P**	**04 42 19.1**	**+0.2**
0.8nm,0.6s,baz=94,slow=14,SNR=1.4							
ASAR	**Alice Springs**	**44.24**	**264**	P	**P**	**04 43 28.1**	**+0.1**
0.2nm,0.4s,baz=92,slow=6.8,SNR=6.5							
H03S2	**Juan Fernandez**	**80.73**	**123**	T	T	06 17 33.0	
baz=245							
H03S1	**Juan Fernandez**	**80.74**	**123**	T	T	06 17 37.2	
baz=245							
H03S3	**Juan Fernandez**	**80.75**	**123**	T	T	06 17 32.0	
baz=245							
H03N3	**Juan Fernandez**	**80.91**	**123**	T	T	06 17 43.1	
baz=237							
H03N2	**Juan Fernandez**	**80.91**	**123**	T	T	06 17 45.5	
baz=237							
H03N1	**Juan Fernandez**	**80.93**	**123**	T	T	06 17 43.1	
baz=237							
FINES	**FINESS Array B**	**143.60**	**342**	PKhKP	PKPab	04 54 48.2	-0.3
1.4nm,0.9s,baz=64,slow=6.5,SNR=1.7							
AKASG	**Malin Array Be**	**150.27**	**326**	PKPbc	**PKPbc**	**04 55 08.4**	**-0.1**
0.4nm,0.4s,baz=44,slow=2.8,SNR=2.2							
TORD	**Torodi Ar. Bea**	**164.75**	**175**	PKPab	**PKPab**	**04 56 18.3**	**+0.4**
0.2nm,0.5s,baz=173,slow=2.9,SNR=2.2							

*SKO **03** 04:54:17.1,41°.54N×20°.27E,h15km TIR **03** 04:54:18.9,41°.54N×20°.33E,h2km±1km,Md3.3,Ml3.2 ATH **03** 04:54:18.5,41°.63N×20°.32E,h10km±31km,ML2.9/11, Error ellipse: s-maj=31.6km s-min=1.6km az=0.0 BEO **03** 04:54:20.9±0.3,41°.51N×20°.33E,h4km±3km,ML2.9/14 PDG **03** 04:54:20.1±0.7,41°.59N×20°.31E,h0km±11km, ML3.2/13, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0 THE **03** 04:54:20.4,41°.53N×20°.32E,h0km±2km,ML3.1/5,Error ellipse: s-maj=2.6km s-min=0.6km az=9.0*
ISC 03 04:54:20.2±1.0,**41°.54N**±0°.01×**20°.31E**±0°.02,**h5**km±9km, **n118**,σ1§**09**/173,**21C-10D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.38**	**240**	P	**Pg**	**04 54 27.5**	**0.0**
TIR				S	**Sg**	**04 54 32.5**	**-0.1**
TIR	**Tirane**	**0.38**	**240**	P	**Pg**	**04 54 27.5**	**0.0**
TIR				S	**Sg**	**04 54 33.4**	**+0.8**
3µm,0.4s							
TIR	**Tirane**	**0.38**	**240**	*e*Pg	**Pg**	**04 54 27.3**	**-0.3**
TIR				*e*Sg	**Sg**	**04 54 33.6**	**+1.0**
TIR	**Tirane**	**0.38**	**240**	⇑P	**Pg**	**04 54 27.2**	**-0.3**
TIR				⇑S	**Sg**	**04 54 33.7**	**+1.2**
TIR	**Tirane**	**0.38**	**240**	P	**Pg**	**04 54 27.6**	**0.0**
baz=242							
TIR				S	**Sg**	**04 54 32.8**	**+0.3**
baz=242							
TIR				AMP			
comp=N,13nm,0.3s,baz=242							
TIR	**Tirane**	**0.38**	**240**	⇓*i*Pg	**Pg**	**04 54 27.5**	**0.0**
LACI	**Lac**	**0.46**	**283**	P	**Pg**	**04 54 28.6**	**-0.4**
baz=283							
LACI				S	**Sg**	**04 54 36.4**	**+1.4**
baz=283							
OHR	**Ohrid**	**0.56**	**139**	⇑*i*Pg	**Pg**	**04 54 30.7**	**-0.4**
OHR				*i* Sg	**Sb**	**04 54 39.9**	**-1.2**
OHR				*e*Lg	Lg	04 54 40.0	
comp=N,708nm,0.4s							
OHR				*e*Lg	Lg	04 54 40.2	
comp=E,724nm,0.4s							
PUK	**Puka**	**0.59**	**329**	P	**Pg**	**04 54 31.6**	**-0.1**
baz=328							
PUK				S	**Sb**	**04 54 40.6**	**-1.2**
baz=328							
PUK				AMP			
comp=N,6.6nm,0.3s,baz=328							
POGR	**Pogradec**	**0.70**	**156**	P	**Pg**	**04 54 32.9**	**-0.7**
baz=157							
POGR				S	**Sb**	**04 54 43.9**	**-0.9**
baz=157							
PRZK	**Prizren**	**0.75**	**27**	⇑*i*Pg	**Pg**	**04 54 34.9**	**+0.2**
PRZK				*i* Sg	**Sb**	**04 54 46.8**	**+0.3**
BCI	**Bajram Curri**	**0.85**	**348**	P	**Pg**	**04 54 36.0**	**-0.5**
baz=347							
BCI				S	**Sb**	**04 54 49.5**	**+0.3**
baz=347							
ULC	**Ulcinj**	**0.90**	**299**	⇓*i*Pg	**Pg**	**04 54 36.7**	**-0.8**
ULC	**Ulcinj**	**0.90**	**299**	⇑*i*Pg	**Pg**	**04 54 36.4**	**-1.1**
ULC				*i* Sg	**Sg**	**04 54 50.1**	**+0.9**
ZATK	**Zatriq**	**0.94**	**14**	*i* Pg	**Pg**	**04 54 37.8**	**-0.5**
SKO	**Skopje**	**0.95**	**63**	*e*Pg	**Pg**	**04 54 38.1**	**-0.4**
SKO				*e*Sg	**Sg**	**04 54 50.8**	**-0.1**
SKO	**Skopje**	**0.95**	**63**	*i* Pg	**Pg**	**04 54 38.0**	**-0.5**
SKO				*i* Sg	**Sb**	**04 54 52.1**	**-0.1**
KBN	**Korca**	**0.98**	**158**	P	**Pg**	**04 54 38.4**	**-0.7**
KBN				S	**Sb**	**04 54 52.7**	**-0.4**
comp=N,1µm,0.7s							
KBN	**Korca**	**0.98**	**158**	P	**Pg**	**04 54 38.4**	**-0.7**
baz=159							
KBN				S	**Sb**	**04 54 53.0**	**-0.1**
baz=159							
DRME	**Dracevica, Mon**	**1.06**	**308**	*e*Pn	**Pg**	**04 54 39.4**	**-1.1**
DRME	**Dracevica, Mon**	**1.06**	**308**	⇑*i*Pg	**Pg**	**04 54 39.1**	**-1.4**
DRME				*i* Sg	**Sb**	**04 54 55.2**	**0.0**
PVY	**Plav**	**1.09**	**346**	*e*Pg	**Pg**	**04 54 39.1**	**-2.0**
PVY				*i* Sg	**Sg**	**04 54 55.2**	**0.0**
FNA	**Florina**	**1.10**	**133**	P	**Pg**	**04 54 40.5**	**-0.9**
FNA				S	**Sb**	**04 54 56.1**	**-0.4**
FNA				AML	AML	04 55 00.0	
comp=E,4253µm,0.4s							
FNA				AML	AML	04 55 01.0	
comp=N,3599µm,0.6s							
FNA	**Florina**	**1.10**	**133**	P	**Pg**	**04 54 40.5**	**-0.9**
FNA				S	**Sb**	**04 54 57.2**	**+0.6**
comp=N,2µm,0.7s							
FNA	**Florina**	**1.10**	**133**	*i* Pg	**Pg**	**04 54 40.4**	**-1.0**
FNA				*i* Sg	**Sb**	**04 54 57.1**	**+0.6**
PDG	**Podgorica**	**1.19**	**319**	*e*Pg	**Pg**	**04 54 42.2**	**-0.8**
PDG				*e*Sg	**Sn**	**04 55 00.1**	**+0.1**
PDG	**Podgorica**	**1.19**	**319**	⇑P	**Pg**	**04 54 41.8**	**-1.1**
PDG				⇑S	**Sn**	**04 55 00.3**	**+0.3**
PDG	**Podgorica**	**1.19**	**319**	*e*Pn	**Pg**	**04 54 42.1**	**-0.9**
PDG	**Podgorica**	**1.19**	**319**	*i* Pg	**Pg**	**04 54 42.1**	**-0.9**
PDG				*i* Sg	**Sn**	**04 55 00.3**	**+0.3**
TTG	**Podgorica**	**1.19**	**319**	⇑*i*Pg	**Pg**	**04 54 41.2**	**-1.8**
TTG				*i* Sg	**Sb**	**04 54 59.2**	**+0.3**
GJIK	**Gjilan**	**1.25**	**42**	*i* Pg	**Pb**	**04 54 44.1**	**-0.2**
GJIK				*i* Sg	**Sn**	**04 55 02.0**	**+0.3**
NEST	**Nestorio**	**1.25**	**153**	P	**Pg**	**04 54 43.9**	**-0.4**
NEST				S	**Sg**	**04 55 00.1**	**-0.4**
NEST				AML	AML	04 55 04.9	
comp=N,1224µm,0.6s							
NEST				AML	AML	04 55 07.2	
comp=E,1341µm,0.5s							
NEST	**Nestorio**	**1.25**	**153**	P	**Pg**	**04 54 43.9**	**-0.4**
NEST				S	**Sn**	**04 55 01.4**	**-0.4**
comp=E,515nm,0.6s							
TPE	**Tepelena**	**1.26**	**190**	P	**Pg**	**04 54 44.4**	**0.0**
baz=192							
TPE				S	**Sn**	**04 55 04.4**	**+2.6**
baz=192							
BUM	**Brajici-Budva**	**1.30**	**306**	⇑*i*Pg	**Pg**	**04 54 43.6**	**-1.5**
BUM				*i* Sg	**Sn**	**04 55 03.4**	**+0.5**
IVA	**Berane**	**1.37**	**347**	⇓*i*Pg	**Pn**	**04 54 44.3**	**-1.8**
IVA				*i* Sg	**Sn**	**04 55 04.8**	**+0.2**
LSK	**Leskovik**	**1.40**	**171**	P	**Pn**	**04 54 46.5**	**0.0**
LSK				S	**Sn**	**04 55 07.0**	**+1.5**
comp=E,720nm,0.8s							
LSK	**Leskovik**	**1.40**	**171**	P	**Pn**	**04 54 46.6**	**0.0**
baz=171							
LSK				S	**Sn**	**04 55 07.1**	**+1.7**
baz=171							
SMRK	**Smrekonice**	**1.42**	**19**	*i* Pn	**Pg**	**04 54 47.1**	**-0.2**
STIP	**Stip**	**1.42**	**83**	*i* Pn	**Pg**	**04 54 49.1**	**+1.7**
KOME	**Kolasin**	**1.44**	**336**	*e*Pg	**Pn**	**04 54 45.7**	**-1.3**
KOME				*i* Sg	**Sn**	**04 55 07.3**	**+1.0**
CEME	**Cevo**	**1.44**	**315**	⇑*i*Pg	**Pn**	**04 54 46.1**	**-1.0**
CEME				*i* Sg	**Sg**	**04 55 08.0**	**+1.4**
PENT	**Pentalofos**	**1.48**	**154**	P	**Pb**	**04 54 48.2**	**-0.1**
PENT				AML	AML	04 55 14.7	
comp=E,643µm,0.8s							
PENT				AML	AML	04 55 15.4	
comp=N,820µm,0.5s							
NKME	**Niksic**	**1.59**	**321**	⇓*i*Pg	**Pn**	**04 54 48.6**	**-0.4**
NKME				*i* Sg	**Sg**	**04 55 12.7**	**+1.5**
HCY	**Herceg Novi**	**1.63**	**305**	*e*Pn	**Pn**	**04 54 49.1**	**-0.4**
HCY	**Herceg Novi**	**1.63**	**305**	⇑*i*Pn	**Pn**	**04 54 49.6**	**+0.1**
HCY				*i* Sn	**Sg**	**04 55 14.6**	**+2.1**
KZN	**Kozani**	**1.66**	**137**	P	**Pb**	**04 54 50.7**	**-0.6**
KZN				AML	AML	04 55 16.3	
comp=N,1044µm,0.5s							
KZN				AML	AML	04 55 19.9	
comp=E,938µm,0.4s							
SRN	**Sarande**	**1.67**	**188**	P	**Pn**	**04 54 50.0**	**-0.1**
SRN	**Sarande**	**1.67**	**188**	P	**Pb**	**04 54 51.5**	**0.0**
baz=189							
SRN				S	**Sg**	**04 55 16.2**	**+2.3**
baz=189							
GRG	**Griva**	**1.68**	**109**	P	**Pn**	**04 54 50.1**	**-0.2**
GRG				AML	AML	04 55 18.7	
comp=E,403µm,0.4s							
GRG				AML	AML	04 55 19.8	
comp=N,569µm,0.8s							
GRG	**Griva**	**1.68**	**109**	P	**Pn**	**04 54 50.5**	**+0.1**
GRG	**Griva**	**1.68**	**109**	*i* Pn	**Pn**	**04 54 50.4**	**+0.1**
BARS	**Barje**	**1.70**	**41**	*e*Pn	**Pn**	**04 54 51.1**	**+0.5**
BARS				*e*Sn	**Sb**	**04 55 13.9**	**+0.2**
BARS	**Barje**	**1.70**	**41**	*i* Pn	**Pb**	**04 54 52.0**	**0.0**
VAY	**Valandovo**	**1.72**	**96**	*e*Pn	**Pn**	**04 54 50.7**	**-0.1**
SJES	**Sjenica**	**1.74**	**352**	*e*Pn	**Pb**	**04 54 52.8**	**+0.1**
SJES				*e*Sn	**Sg**	**04 55 16.0**	**-0.1**
KPRO	**Kipourio**	**1.77**	**153**	P	**Pn**	**04 54 51.2**	**-0.4**
KPRO				AML	AML	04 55 28.9	
comp=E,776µm,0.8s							
KPRO				AML	AML	04 55 32.5	
comp=N,653µm,0.9s							
SELS	**Selova**	**1.79**	**19**	*e*Pn	**Pn**	**04 54 51.4**	**-0.4**
SELS				*e*Sn	**Sg**	**04 55 16.9**	**-0.7**
KASA	**Kassiopi**	**1.81**	**189**	P	**Pb**	**04

FRGS	**Fruska Gora**	**3.64**	**354**	⇑P	**Pn**	**04 55 15.9**	**-1.3**
FRGS				⇑S	**Sn**	**04 56 00.1**	**-0.4**
FRGS	**Fruska Gora**	**3.64**	**354**	*e*Pn	**Pn**	**04 55 17.7**	**+0.5**
ZIRJ	**Zirje**	**4.04**	**303**	*e*Pn	**Pn**	**04 55 23.4**	**+0.7**
MORI	**Morici**	**4.11**	**306**	*e*Pn	**Pn**	**04 55 25.4**	**+1.7**
MORI					Sn	**Sn**	**04 56 14.3**	**+2.3**
BZS	**Buzias**	**4.19**	**13**	⇑P	**Pn**	**04 55 24.5**	**-0.2**
GZR	**Gura Zlata**	**4.25**	**24**	⇑P	**Pn**	**04 55 26.1**	**+0.4**
GZR				⇑S	**Sn**	**04 56 15.6**	**-0.1**
DUGI	**Dugi Otok**	**4.58**	**304**	*e*Pn	**Pn**	**04 55 31.6**	**+1.5**
MORH	**Mrgy, Hungar**	**4.83**	**346**	⇓P	**Pn**	**04 55 33.3**	**-0.2**
MORH	**Mrgy, Hungar**	**4.83**	**346**	*e*Pn	**Pn**	**04 55 33.7**	**+0.2**
VOIR		**5.21**	**40**	⇑P	**Pn**	**04 55 37.8**	**-1.0**
CRES	**Cresnjev**	**5.54**	**322**	*e*Pn	**Pn**	**04 55 40.4**	**-3.0**
CEY	**Cerknica**	**5.99**	**317**	*e*Pn	**Pn**	**04 55 48.5**	**-0.9**
SOKA	**Soboth**	**6.39**	**325**	*i* Pn	**Pn**	**04 55 56.3**	**+1.3**
	comp=N,1.4nm,0.5s						
OBKA	**Obir**	**6.47**	**322**	*e*Pn	**Pn**	**04 55 59.1**	**+2.9**
	comp=N,0.8nm,0.3s						
OBKA				*e*Sn	**Sn**	**04 57 14.2**	**+3.8**
	comp=N,2.2nm,0.4s						
ABTA	**Abfaltersbach**	**7.65**	**316**	*e*Pn	**Pn**	**04 56 14.3**	**+1.9**
	comp=N,0.7nm,0.2s						
ABTA				*e*Sn	**Sn**	**04 57 40.7**	**+1.3**
	comp=N,1.8nm,0.5s						

MEX 03 05:09:40.5±0.7, 14°64'N×92°45'W, h90km±8km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.32**	**34**	*e*P	Pn	05 09 52.9	-1.1
THIG				*i* S	Sn	05 10 01.8	-2.3
THIG		**0.32**	**34**	*i* P	Pn	05 09 53.1	-1.0
THIG				*i* S	Sn	05 10 02.3	-1.8
PCIG		**1.29**	**325**	*e*P	Pn	05 10 02.5	-1.2
PCIG				*i* S	Sn	05 10 19.1	-2.1
PCIG		**1.29**	**325**	*e*P	Pn	05 10 02.4	-1.3
PCIG				*i* S	Sn	05 10 17.9	-3.3
CCIG	**Comitan**	**1.66**	**10**	*e*P	Pn	05 10 08.5	0.0
CCIG				*i* S	Sn	05 10 29.6	-0.1
CCIG	**Comitan**	**1.66**	**10**	*e*P	Pn	05 10 11.4	+2.9
CCIG				*e*S	Sn	05 10 33.5	+3.8
TGIG		**2.22**	**343**	*i* P	Pn	05 10 15.8	+0.1

IDC 03 05:15:01.5±3.2, 30°.09S×138°.80E, h0km, mb1 3.0/3, mb1mx2.9/17, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=111.8km s-min=15.8km az=45.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**2.98**	**127**	Pn	Pn	05 15 50.1	0.0
	0.2nm,0.3s,baz=306,slow=11,SNR=3.3						
STKA				Pg	Pg	05 15 57.1	-1.6
	0.8nm,0.3s,baz=300,slow=16,SNR=9.4						
STKA				Sn	Sn	05 16 27.6	+1.0
	0.7nm,0.3s,baz=317,slow=15,SNR=2.8						
STKA				Lg	Lg	05 16 35.0	
	1.5nm,0.3s,baz=11,slow=17,SNR=7.2						
ASAR	**Alice Springs**	**7.75**	**325**	Pn	Pn	05 16 55.2	-0.5
	0.1nm,0.3s,baz=149,slow=12,SNR=3.0						
ASAR				Sn	Sn	05 18 24.1	-0.2
	0.1nm,0.3s,baz=148,slow=21,SNR=3.4						
WRA	**Warramunga Arr**	**10.89**	**337**	Pn	Pn	05 17 39.2	+0.6
	0.1nm,0.3s,baz=152,slow=12,SNR=1.4						

IDC 03 05:33:55.3±2.0, 7°.01S×128°.48E, h0km, mb3.7/3, mb1 3.6/5, mb1mx3.5/30, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=266.7km s-min=29.0km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.06**	**157**	Pn	Pn	05 37 16.0	0.0
	0.2nm,0.3s,baz=333,slow=13,SNR=6.5						
WRA				Sn	Sn	05 39 37.1	-16
	0.6nm,0.3s,baz=332,slow=22,SNR=6.5						
ASAR	**Alice Springs**	**17.37**	**163**	P	Pn	05 37 59.3	0.0
	0.1nm,0.3s,baz=343,slow=10,SNR=18						
ASAR				S	Sn	05 40 59.1	-14
	0.1nm,0.3s,baz=334,slow=23,SNR=5.6						
MKAR	**Makanchi Array**	**67.41**	**328**	P	P	05 44 53.4	+0.7
	0.3nm,0.5s,baz=118,slow=7.1,SNR=8.4						
ZALV	**Zalesovo Beam**	**70.93**	**334**	P	P	05 45 14.0	-0.2
	0.5nm,0.5s,baz=150,slow=6.0,SNR=1.9						
KURBB	**Kurchatov Arra**	**71.73**	**329**	P	P	05 45 18.7	-0.5
	0.3nm,0.2s,baz=115,slow=4.4,SNR=7.8						

IDC 03 05:52:07.2±1.3, 23°.99N×145°.50E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/45, mbtmp3.7/10, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/45, Error ellipse: s-maj=44.9km s-min=18.4km az=80.0

NEIC 03 05:52:12.7±2.6, 24°.16N±0°.07×145°.4E±0°.1, h35km±2km, mb4.4/9, Error ellipse: s-maj=19.8km s-min=11.7km az=84.0.

ISC 03 05:52:09.6±0.9, 24°.15N±0°.09×145°.4E±0°.1, h10km, n27, σ1ᵖ36/23, mb3.9/11, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.11**	**316**	Pn	**Pn**	**05 53 13.2**	**+0.8**
	10.0nm,0.3s,baz=100,slow=23,SNR=11						
JCJ				Sn	**Sn**	**05 53 58.5**	**-2.1**
	7.6nm,0.3s,baz=298,slow=24,SNR=2.4						
JCJ	**Chichijima**	**4.11**	**316**		**Pn**	**05 53 13.1**	**+0.6**
ANA2	**Anatahan**	**7.78**	**178**	Pn	**Pn**	**05 54 04.4**	**+1.4**
JSG	**Sagara**	**12.21**	**331**	Pn	**Pn**	**05 55 03.1**	**-0.5**
JMZ	**Minamidaito 2**	**12.94**	**280**	Pn	**Pn**	**05 55 13.7**	**0.0**
JSU	**Suzuyama**	**15.09**	**302**	Pn	**Pn**	**05 55 42.9**	**0.0**
JHS	**Saijyo**	**15.17**	**318**	Pn	**Pn**	**05 55 44.1**	**+0.2**
JHS				IAmb	IAmb	05 56 05.6	
	comp=Z,31nm,1.1s						
KSRS	**Korea Array**	**19.97**	**316**	P	**P**	**05 56 41.8**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=126,slow=12,SNR=1.7						
KSRS				LR	LR	06 03 42.3	
	comp=Z,53nm,19.0s,baz=147,slow=34						
H11S3	**WAKE ISLAND Hy**	**20.63**	**102**	T	T	06 18 20.5	
	baz=289						
H11S1	**WAKE ISLAND Hy**	**20.64**	**102**	T	T	06 18 17.4	
	baz=289						
H11S2	**WAKE ISLAND Hy**	**20.65**	**102**	T	T	06 18 20.0	
	baz=289						
JAY	**Jayapura**	**26.89**	**190**	LR	LR	06 07 59.6	
	comp=Z,58nm,19.0s,baz=194,slow=36						
PETK	**Petropavlovsk-**	**30.38**	**15**	LR	LR	06 08 07.7	
	comp=Z,43nm,21.2s,baz=184,slow=32						
TOLI2	**Tolitoli**	**33.04**	**230**	P	**P**	**05 58 46.0**	**+0.5**
TOLI2				IAmb	IAmb	05 59 15.7	
	comp=Z,5.9nm,1.1s						
SONM	**Songino Array**	**38.82**	**317**	P	**P**	**05 59 35.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=134,slow=6.2,SNR=3.0						
MTN	**Manton Dam**	**39.31**	**202**	P	**P**	**05 59 37.2**	**-1.8**
MTN				IAmb	IAmb	05 59 50.0	
	comp=Z,12nm,1.4s						
WB2	**Warramunga Arr**	**45.12**	**195**	P	**P**	**06 00 25.0**	**-1.4**
WB2				IAmb	IAmb	06 00 30.7	
	comp=Z,6.8nm,1.2s						
WRA	**Warramunga Arr**	**45.13**	**195**	P	**P**	**06 00 24.4**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=13,slow=8.7,SNR=18						
FITZ	**Fitzroy Crossi**	**46.20**	**206**	P	**P**	**06 00 32.9**	**-2.0**
	comp=Z,1.4nm,0.7s,baz=17,slow=7.9,SNR=2.7						
FITZ	**Fitzroy Crossi**	**46.20**	**206**	P	**P**	**06 00 33.3**	**-1.5**
FITZ				IAmb	IAmb	06 00 36.5	
	comp=Z,6.9nm,1.4s						
AS31	**Alice Springs**	**48.82**	**194**	P	**P**	**06 00 54.7**	**-0.6**
ASAR	**Alice Springs**	**48.82**	**194**	P	**P**	**06 00 53.5**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=17,slow=11,SNR=11						
ASAR	**Alice Springs**	**48.82**	**194**	P	**P**	**06 00 53.8**	**-1.5**
ZALV	**Zalesovo Beam**	**53.58**	**320**	P	**P**	**06 01 33.0**	**+2.3**
	comp=Z,0.8nm,0.4s,baz=21,slow=22,SNR=1.1						
MKAR	**Makanchi Array**	**54.56**	**311**	P	**P**	**06 01 39.3**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=81,slow=9.1,SNR=3.7						
YKA	**Yellowknife Ar**	**73.35**	**29**	P	**P**	**06 03 41.0**	**-0.4**
	comp=Z,0.2nm,0.8s,baz=285,slow=5.5,SNR=2.8						
FINES	**FINESS Array B**	**81.83**	**335**	P	**P**	**06 04 28.3**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=69,slow=7.6,SNR=4.7						

INET 03 05:58:51.2, 8°.88N×82°.93W, h3km, MW2.9

UPA 03 05:58:52.1±1.1, 8°.73N×82°.98W, h48km±4km, MW3.9,

5C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.19**	**146**	⇓*i*P	Pn	05 58 59.8	-0.4
CDITO				*i* S	Sn	05 59 06.2	+0.3
BRU2	**Volcan**	**0.29**	**77**	⇓*i*P	Pn	05 59 00.9	-0.3
BRU2				*i* S	Sn	05 59 08.4	+0.8
LESP3	**La Esperanza,**	**0.37**	**150**	*i* P	Pn	05 59 01.1	-0.7
LESP3				*e*S	Sn	05 59 08.6	0.0
BC3P	**Paso Ancho**	**0.37**	**77**	*i* P	Pn	05 59 01.6	-0.5
BC3P				*i* S	Sn	05 59 09.9	+0.8
PTJ1	**Puerto Jimnez**	**0.38**	**239**	⇑*e*P	Pn	05 59 01.8	0.0
SBAR3	**San Bartolo, C**	**0.42**	**167**	*i* P	Pn	05 59 02.0	-0.3
SBAR3				*i* S	Sn	05 59 10.3	+0.7
BCO2	**Palmira**	**0.44**	**91**	⇑*i*P	Pn	05 59 02.5	-0.3
BCO2				*i* S	Sn	05 59 11.2	+0.8
PTAR3	**Potrerillos Ar**	**0.48**	**94**	⇓*i*P	Pn	05 59 02.9	-0.2
PTAR3				*e*S	Sn	05 59 12.1	+1.2
BAGA3	**Bagala, Chiriq**	**0.52**	**120**	⇑*i*P	Pn	05 59 03.2	-0.2
BAGA3				*e*S	Sn	05 59 11.6	0.0
LNBQ3	**Los Naranjos,**	**0.53**	**83**	*i* P	Pn	05 59 03.1	-0.7
LNBQ3				*e*S	Sn	05 59 12.4	+0.2
DRK0	**Durika**	**0.59**	**333**	⇑*i*P	Pn	05 59 04.0	-0.6
DRK0				*i* S	Sn	05 59 13.8	+0.3
DVD	**David**	**0.60**	**119**	⇓*i*P	Pn	05 59 04.0	-0.5
DVD				*i* S	Sn	05 59 13.8	+0.4
GUAL3	**Gualaca, Chiri**	**0.70**	**106**	⇑*i*P	Pn	05 59 05.1	-0.6
GUAL3				*e*S	Sn	05 59 15.7	0.0
CHIR3	**Chiriqui UPA,**	**0.72**	**117**	*e*P	Pn	05 59 05.8	-0.3
CHIR3				*e*S	Sn	05 59 16.1	0.0
CHGR2	**Aguacate**	**0.85**	**76**	*e*P	Pn	05 59 07.1	-0.6
CHGR2				*e*S	Sn	05 59 19.4	+0.1
CNI2	**El Empalme, Bo**	**0.85**	**36**	⇓*i*P	Pn	05 59 07.7	-0.1
CNI2				*i* S	Sn	05 59 19.6	+0.4
BATAN	**Batan**	**1.42**	**344**	*e*P	Pn	05 59 16.3	+0.9
BATAN				*e*S	Sn	05 59 35.6	+2.7
HDC	**Heredia**	**1.69**	**318**	*i* P	Pn	05 59 19.8	+0.4
HDC				*e*S	Sn	05 59 41.8	+2.0
GMAL	**Guarumal, Vera**	**1.98**	**119**	*e*P	Pn	05 59 22.3	-0.8
GMAL				*e*S	Sn	05 59 47.9	+1.2
JTS	**Las Juntas de**	**2.49**	**309**	*e*P	Pn	05 59 31.2	+1.0
JTS				*e*S	Sn	06 00 01.7	+2.3
CACAO	**El Cacao, Vera**	**2.51**	**123**	*e*P	Pn	05 59 30.8	+0.4
CACAO				*e*S	Sn	06 00 03.9	+4.1
AZU	**Azuero**	**2.83**	**109**	*e*P	Pn	05 59 35.9	+1.1

BJI 03 06:04:12.1±0.0, 1°.38N×89°.65E, h10km, mB4.9/32, mb4.8/54, Ms4.5/18, Ms7 4.2/20

IDC 03 06:04:13.8±0.6, 1°.75N×89°.56E, h0km, mb4.3/28, mb1 4.3/31, mb1mx4.3/48, mbtmp4.3/31, ML4.2/3, MS3.9/19, Ms1 3.9/19, ms1mx3.7/43, Error ellipse: s-maj=18.5km s-min=12.2km az=44.0

NEIC 03 06:04:16.2±2.2, 1°.75N±0°.08×89°.61E±0°.06, h10km±1km, mb4.8/55, Error ellipse: s-maj=17.3km s-min=5.0km az=215.0

GCMT 03 06:04:20.2±0.4, 1°.81N±0°.02×89°.52E±0°.02, h25km±1km, MW4.9/86, Moment Tensor Solution. s8,c9; s86,c112, Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.40±.16; Mθθ-2.09±.11; Mϕϕ1.68±.11; Mrθ0.14±.21; Mθϕ-1.00±.10; Mϕr-1.43±.31; Best double couple: Mo2.57000×10¹⁶ NP1:ϕs115.60000°, δ65.00000°, λ161.00000°. NP2: ϕs215.00000°, δ73.00000°, λ27.00000°. Principal axes: T 2.7820, Plg31.0000°, Azm77.0000°; N -0.4310, Plg59.0000°, Azm246.0000°; P -2.3570, Plg5.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 03 06:04:16.0±0.4, 1°.74N±0°.07×89°.60E±0°.05, h10km, n206, σ1ᵖ48/174, mb4.7/64, MS4.0/22, 3C-12D, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**7.24**	**70**	P	**Pn**	**06 06 03.0**	**+0.9**
	1.0nm4µm212nm,0.7s						
TPTI		**7.72**	**79**	P	**Pn**	**06 06 08.8**	**+0.2**
	0.2nm840nm37nm,0.8s						
GSI	**Gunungsitoli**	**7.98**	**93**	Pn	**Pn**	**06 06 10.6**	**-1.6**
GSI	**Gunungsitoli**	**7.98**	**93**	P	**Pn**	**06 06 12.7**	**+0.5**
	71nm,0.7s						
LHMI	**Lhok Sumawe**	**8.11**	**64**	Pn	**Pn**	**06 06 12.9**	**-1.1**
LHMI	**Lhok Sumawe**	**8.11**	**64**	P	**Pn**	**06 06 15.4**	**+1.4**
	3µm178nm,1.5s						
PBSI	**Pulau Batu**	**8.86**	**101**	P	**Pn**	**06 06 24.8**	**+0.6**
	171nm,1.0s						
TSI	**Tuntungan**	**9.12**	**79**	P	**Pn**	**06 06 29.0**	**+1.1**
	5µm126nm,0.8s						
RPSI	**Rantau Prapat**	**9.37**	**84**	Pn	**Pn**	**06 06 30.8**	**-0.3**
RPSI	**Rantau Prapat**	**9.37**	**84**		**Pn**	**06 06 31.1**	**0.0**
PSI	**Prapat**	**9.38**	**83**	Pn	**Pn**	**06 06 31.1**	**-0.3**
	1.9nm,0.3s,baz=359,slow=2.5,SNR=10						
PSI				Sn	**Sn**	**06 06 15.1**	**-2.0**
	1.1nm,0.3s,baz=180,slow=11,SNR=1.4						
PSI				LR	LR	06 10 27.6	
	comp=Z,653nm,19.0s,baz=270,slow=40						
MNSI	**Mandailing Nat**	**10.02**	**95**	P	**Pn**	**06 06 40.6**	**+0.4**
PBA	**Port Blair**	**10.34**	**17**	Pn	Pn	06 06 44.4	-0.1
PALK	**Pallekele**	**10.44**	**302**	Pn	**Pn**	**06 06 43.5**	**-2.4**
	1.6nm,0.3s,baz=220,slow=12,SNR=9.5						
PALK				Sn	Sn	06 08 28.1	-15
	14nm,0.3s,baz=128,slow=19,SNR=12						
PALK				LR	LR	06 10 12.8	
	comp=Z,577nm,18.8s,baz=228,slow=35						
PALK	**Pallekele**	**10.44**	**302**	Pn	**Pn**	**06 06 44.0**	**-1.9**
PKDT	**Phuket**	**10.63**	**55**	P	**Pn**	**06 06 49.3**	**+0.7**
	81nm,0.9s						
BKNI	**Bangkinang**	**11.52**	**97**	Pn	**Pn**	**06 06 59.5**	**-1.2**
KULM	**Kulim**	**11.58**	**72**	Pn	**Pn**	**06 07 00.7**	**-0.8**
KULM	**Kulim**	**11.58**	**72**	P	**Pn**	**06 07 02.0**	**+0.5**
IPM	**Ipoh**	**11.73**	**76**	Pn	**Pn**	**06 07 02.0**	**-1.6**
IPM	**Ipoh**	**11.73**	**76**	P	**Pn**	**06 07 03.0**	**-0.6**
JRMM	**Jerantut**	**13.04**	**80**	P	**Pn**	**06 07 21.0**	**-0.5**
MYKOM	**Kota Tinggi**	**14.24**	**90**	Pn	**Pn**	**06 07 37.6**	**-0.4**
TRD	**Trivandrum**	**14.27**	**299**	*e*P	**Pn**	**06 07 41.6**	**+3.2**
TRD				IAmb	IAmb	06 07 42.1	
	comp=Z,52nm,0.1s						
TRD				*e*S	Sn	06 10 00.4	-16
MDRS	**Chennai**	**14.58**	**321**	*e*P	**Pn**	**06 07 39.4**	**-3.2**
MDRS				IAmb	IAmb	06 07 41.7	
	comp=Z,113nm,0.7s						
MDRS				*e*S	Sn	06 10 04.7	-20
MNAI	**Manna**	**14.65**	**114**	Pn	**Pn**	**06 07 45.0**	**+1.3**
KLSI		**16.41**	**113**	P	**P**	**06 08 09.1**	**-0.3**
	comp=Z,12nm,1.1s						
KASI	**Kota Agung**	**16.53**	**116**	P	**P**	**06 08 15.3**	**+4.5**
UTHA	**Uthaitani**	**16.82**	**35**	P	**P**	**06 08 16.0**	**+2.1**
	comp=Z,416nmcomp=Z,47nm,0.8s						
UMPA	**Umpang Tak**	**17.03**	**32**	P	**P**	**06 08 17.5**	**+1.2**
	comp=Z,5µmcomp=Z,41nm,0.9s						
SRAK	**Srakaew**	**17.32**	**45**	P	P	06 08 27.6	+8.1
MNCY	**Minicoy**	**17.73**	**292**	*e*P	P	06 08 34.0	+10
MNCY				*e*S	Sn	06 11 23.6	-17
SUKH	**Sukhothai**	**18.49**	**32**	P	**Pn**	**06 08 35.1**	**+2.6**
	comp=Z,46nm,0.8s						
CHAI	**Chaiyaphum**	**18.63**	**40**	P	**Pn**	**06 08 36.0**	**+1.7**
	comp=Z,38nm,0.9s						
PHIT	**Phitsanulok**	**18.68**	**34**	P	**Pn**	**06 08 37.2**	**+2.3**
	comp=Z,143nm,0.8s						
CM13	**Chiang Mai Arr**	**18.93**	**28**	P	**Pn**	**06 08 40.6**	**+2.7**
	comp=Z,142nmcomp=Z,21nm,0.9s						
CM05	**Chiang Mai Arr**	**18.93**	**28**	P	**Pn**	**06 08 40.1**	**+2.2**
	comp=Z,155nmcomp=Z,23nm,0.9s						
CM04	**Chiang Mai Arr**	**18.95**	**28**	P	**Pn**	**06 08 40.4**	**+2.3**
	comp=Z,229nmcomp=Z,25nm,0.8s						
CM01	**Chiang Mai Arr**	**18.95**	**28**	P	**Pn**	**06 08 40.6**	**+2.4**
	comp=Z,180nmcomp=Z,26nm,0.8s						
CM02	**Chiang Mai Arr**	**18.96**	**28**	P	**Pn**	**06 08 40.6**	**+2.4**
	comp=Z,195nmcomp=Z,25nm,0.9s						
CM15	**Chiang Mai Arr**	**18.96**	**28**	P	**Pn**	**06 08 42.4**	**+4.1**
	comp=Z,221nmcomp=Z,23nm,0.8s						
CM31	**Chiang Mai Arr**	**18.98**	**28**	P	**Pn**	**06 08 42.0**	**+3.5**
	comp=Z,690nm,0.8s						
CM31	**Chiang Mai Arr**	**18.98**	**28**	P	**Pn**	**06 08 38.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**18.98**	**28**	P	**P**	**06 08 37.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=219,slow=12,SNR=25						
CMAR	**Chiang Mai Arr**	**18.98**	**28**	P	**Pn**	**06 08 38.6**	**+0.1**
CM09	**Chiang Mai Arr**	**18.99**	**28**	P	**Pn**	**06 08 41.1**	**+2.5**
	comp=Z,236nmcomp=Z,30nm,0.9s						
HYB	**Hyderabad**	**18.99**	**326**	*i* P	**P**	**06 08 37.0**	**-1.0**
HYB				*e*S	**S**	**06 12 14.0**	**+0.1**
HYB	**Hyderabad**	**18.99**	**326**	*e*P	**P**	**06 08 37.2**	**-0.9**
HYB				IAmb	IAmb	06 08 49.1	
	comp=Z,21nm,0.9s						
HYB				*e*S	Sn	06 11 53.1	-19
CM32	**Chiang Mai Arr**	**19.10**	**28**	P	**Pn**	**06 08 47.0**	**+7.0**
CM36	**Chiang Mai Arr**	**19.10**	**29**	P	**Pn**	**06 08 41.0**	**+1.0**
UTTA	**Uttaradit**	**19.21**	**33**	P	**Pn**	**06 08 42.2**	**+1.0**
	comp=Z,395nmcomp=Z,38nm,1.0s						
CM35	**Chiang Mai Arr**	**19.27**	**28**	P	**Pn**	**06 08 43.0**	**+1.0**
CHTO	**Chiang Mai**	**19.29**	**28**		**Pn**	**06 08 42.6**	**+0.4**
CMMT	**Chiang Mai**	**19.29**	**28**	P	**Pn**	**06 08 42.0**	**-0.2**
	comp=Z,262nmcomp=Z,11nm,1.0s						
CM33	**Chiang Mai Arr**	**19.29**	**28**	P	**Pn**	**06 08 44.0**	**+1.7**
LAMP	**Lampang**	**19.37**	**30**	P	**Pn**	**06 08 44.8**	**+1.6**
	comp=Z,17nm,0.7s						
CM34	**Chiang Mai Arr**	**19.41**	**28**	P	**Pn**	**06 08 44.0**	**+0.3**
H08S2	**Diego Garcia H**	**19.44**	**241**	T	T	06 28 57.6	
	baz=62,slow=75,SNR=35						
H08S3	**Diego Garcia H**	**19.44**	**241**	T	T	06 29 06.5	
	baz=62,slow=75,SNR=140						
H08S1	**Diego Garcia H**	**19.46**	**241**	T	T	06 29 10.0	
	baz=62,slow=75,SNR=23						
KHON	**Khomkaen**	**19.50**	**41**	P	**Pn**	**06 08 46.0**	**+1.2**
	comp=Z,268nm,0.9s						
LEM	**Lembang**	**19.89**	**115**	LR	LR	06 15 50.3	
	comp=Z,328nm,18.2s,baz=289,slow=35						
KSM	**Kuching**	**20.70**	**90**	P	**P**	**06 08 55.5**	**-1.1**
KSM				IAmb	IAmb	06 09 02.8	
	comp=Z,29nm,1.0s						
KSM	**Kuching**	**20.70**	**90**	P	Pn	06 08 59.0	0.0
NONG	**Nongkai**	**20.98**	**38**	P	**P**	**06 09 00.7**	**+1.1**
	comp=Z,166nm,1.0s						
DLV	**T Lat**	**21.30**	**61**	P	**P**	**06 09 01.8**	**-1.5**
SBUM	**Sibu**	**22.61**	**88**	P	**P**	**06 09 18.1**	**+0.8**
SBUM				IAmb	IAmb	06 09 21.1	
	comp=Z,27nm,1.2s						
SBUM	**Sibu**	**22.61**	**88**	P	**P**	**06 09 17.0**	**-0.3**
POO	**Poona**	**22.74**	**318**	*e*P	P	06 09 27.0	+8.4
POO				IAmb	IAmb	06 09 33.2	
	comp=Z,24nm,0.8s						
SHL	**Shillong**	**23.80**	**5**	*e*P	**P**	**06 09 30.0**	**+0.7**
SHL	**Shillong**	**23.80**	**5**	P	**P**	**06 09 29.0**	**-0.3**
SHL				IAmb	IAmb	06 09 48.9	
	comp=Z,24nm,1.1s						
SLVN	**Son La**	**23.95**	**35**	P	**P**	**06 09 31.7**	**+1.0**
SLVN				IAmb	IAmb	06 09 34.5	
	comp=Z,24nm,0.9s						
QIZ	**Qiongzhong**	**26.24**	**48**	P	**P**	**06 09 51.8**	**+0.3**
QIZ				S	**S**	**06 14 23.8**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,21nm,1.0s						
QIZ				LR	LR		
	comp=Z,490nm,18.6s						
QIZ				LR	LR		
	comp=Z,360nm,18.6s						
QIZ				LR	LR		
	comp=Z,330nm,15.3s						
KKM	**Kota Kinabalu**	**26.89**	**80**	P	**P**	**06 09 57.6**	**0.0**
KKM				IAmb	IAmb	06 10 23.9	
	comp=Z,21nm,1.2s						
LSA	**Lhasa**	**27.85**	**3**	P	**P**	**06 10 08.4**	**+2.0**
LSA				pmax	pmax		
	comp=Z,67nm,0.7s						
LSA	**Lhasa**	**27.85**	**3**	P	**P**	**06 10 06.5**	**+0.1**
MYLDM	**Lahad Datu**	**29.04**	**82**	P	**P**	**06 10 14.6**	**-2.1**
MYLDM				IAmb	IAmb	06 10 40.4	
	comp=Z,19nm,0.9s						
GYA	**Guiyang**	**29.55**	**32**	⇑P	**P**	**06 10 22.0**	**+0.8**
GYA				pmax	pmax		
	comp=Z,12nm,0.8s						
GYA				LR	LR		
	comp=Z,420nm,16.2s						
KAPI	**Kappang**	**30.86**	**103**	P	**P**	**06 10 31.5**	**-1.3**
KAPI				IAmb	IAmb	06 10 38.9	
	comp=Z,8.0nm,0.9s						
TOLI2	**Tolitoli**	**31.18**	**91**	P	**P**	**06 10 36.1**	**+0.5**
TOLI2				IAmb	IAmb	06 10 37.2	
	comp=Z,19nm,1.3s						
CD2	**Chengdu**	**31.96**	**23**	⇑*i*P	**P**	**06 10 42.7**	**+0.3**
CD2				pmax	pmax		
	comp=Z,40nm,0.8s						
SZP	**Santa**	**34.14**	**61**	P	**P**	**06 11 01.4**	**-0.2**
NIL	**Nilore**	**35.25**	**336**	P	**P**	**06 11 11.8**	**+0.9**
NIL				IAmb	IAmb	06 11 22.2	
	comp=Z,18nm,1.0s						
LZH	**Lanzhou**	**36.64**	**20**	*e*P	**P**	**06 11 23.1**	**+0.1**
L

HHC pmax pmax
comp=Z,140nm,4.4s
HHC LR LR
comp=Z,250nm,9.4s
HHC LR LR
comp=Z,280nm,9.8s
HHC LR LR
comp=Z,150nm,10.6s
KK31 Karatay Array 44.58 340 P **P** **06 12 28.6 +0.3**
KKAR Karatay Array 44.58 340 P **P** **06 12 30.3 +2.0**
KKAR IAmb IAmb 06 12 39.7
comp=Z,9.1nm,1.1s
KKAR Karatay Array 44.58 340 P **P** **06 12 29.5 +1.2**
JOW Kunigami 44.70 53 LR LR 06 30 45.4
comp=Z,151nm,20.6s,baz=241,slow=36
BJI Beijing 45.12 29 P **P** **06 12 34.0 +1.3**
BJI pmax pmax
comp=Z,17nm,1.1s
MK31 Makanchi Array 45.33 353 P **P** **06 12 34.3 0.0**
MKAR Makanchi Array 45.33 353 P **P** **06 12 33.9 -0.4**
comp=Z,2.5nm,0.7s,baz=168,slow=9.7,SNR=34
MKAR Makanchi Array 45.33 353 P **P** **06 12 33.7 -0.6**
MAKZ Makanchi 45.38 353 P **P** **06 12 34.8 +0.1**
MAKZ IAmb IAmb 06 12 45.6
comp=Z,8.6nm,1.0s
GEYT Alibeck 46.17 325 P **P** **06 12 40.2 -0.9**
comp=Z,1.2nm,0.4s,baz=171,slow=10,SNR=1.5
GEYT Alibeck 46.17 325 P **P** **06 12 43.2 +2.1**
GEYT IAmb IAmb 06 12 52.4
comp=Z,6.7nm,0.8s
GYA0B ALIBECK ARRAY 46.17 325 P **P** **06 12 41.3 +0.1**
GYA0B IAmb IAmb 06 12 52.4
comp=Z,9.7nm,0.8s
SONM Songino Array 48.17 15 P **P** **06 12 57.2 +0.6**
comp=Z,25nm,0.7s,baz=195,slow=9.3,SNR=157
SONM LR LR 06 35 18.9
comp=Z,205nm,21.2s,baz=192,slow=39
SONM Songino Array 48.17 15 P **P** **06 12 57.7 +1.0**
ULN Ulaanbaatar 48.37 16 P **P** **06 12 58.7 +0.4**
ULN IAmb IAmb 06 12 59.1
comp=Z,6.7nm,0.8s
WRA Warramunga Arr 48.87 118 P **P** **06 13 02.6 +0.2**
comp=Z,5.9nm,0.7s,baz=296,slow=8.5,SNR=34
WRAB Tennant Creek 48.88 118 P **P** **06 13 02.6 +0.2**
WRAB IAmb IAmb 06 13 06.1
comp=Z,8.8nm,0.8s
KURBB Kurchatov Arra 49.61 351 P **P** **06 13 07.0 -0.5**
comp=Z,4.2nm,0.7s,baz=181,slow=7.0,SNR=6.1
KURK Kurchatov 49.68 351 P **P** **06 13 07.0 -1.0**
AS31 Alice Springs 49.92 123 P **P** **06 13 11.1 +0.7**
ASAR Alice Springs 49.92 123 P **P** **06 13 10.3 0.0**
comp=Z,1.3nm,0.6s,baz=296,slow=7.5,SNR=21
ASAR LR LR 06 36 19.1
comp=Z,55nm,18.0s,baz=278,slow=38
ASAR Alice Springs 49.92 123 P **P** **06 13 10.8 +0.4**
KSAR Wonju Array Be 50.01 40 P **P** **06 13 10.4 -0.4**
KSRS Korea Array 50.04 40 P **P** **06 13 10.0 -1.0**
KSRS LR LR 06 35 43.1
comp=Z,102nm,18.9s,baz=234,slow=38
TLY Talaya 51.15 11 P **P** **06 13 20.4 +1.2**
ZAA0 Zalesovo Array 52.19 356 P **P** **06 13 26.5 -0.3**
ZAA0 IAmb IAmb 06 13 37.5
comp=Z,25nm,1.3s
ZALV Zalesovo Beam 52.19 356 P **P** **06 13 26.1 -0.8**
comp=Z,3.5nm,0.4s,baz=179,slow=7.8,SNR=18
KMBO Kilima Mbogo 52.42 267 P **P** **06 13 29.1 -0.5**
comp=Z,0.5nm,0.6s,baz=58,slow=14,SNR=1.2
BRVK Borovoye 53.61 346 **P** **06 13 37.5 +0.2**
ABKAR Akbulak array 53.71 336 P **P** **06 13 38.5 +0.3**
HIA Hailar 53.92 24 P **P** **06 13 38.9 -0.9**
HIA IAmb IAmb 06 13 52.2
comp=Z,16nm,1.3s
USRK Ussuriysk Ar. 56.50 36 P **P** **06 13 57.4 -1.1**
comp=Z,3.1nm,0.8s,baz=247,slow=7.4,SNR=5.9
USRK Ussuriysk Ar. 56.50 36 P **P** **06 13 58.8 +0.3**
MAT Matsushiro 56.63 46 P **P** **06 13 59.6 +0.1**
MJAR Matsushiro Arr 56.63 46 P **P** **06 13 59.5 0.0**
comp=Z,1.4nm,0.4s,baz=230,slow=7.5,SNR=2.7
MJAR LR LR 06 38 00.9
comp=Z,96nm,21.5s,baz=240,slow=36
MARD Mardin 57.12 314 P **P** **06 14 04.2 +1.0**
KBZ Khabaz 58.83 322 P **P** **06 14 13.6 -1.2**
comp=Z,2.5nm,0.8s,baz=114,slow=10,SNR=1.4
KIV Kislovodsk 59.08 322 P **P** **06 14 17.3 +0.6**
KLR Kul'dur 59.44 31 P **P** **06 14 17.9 -1.1**
comp=Z,6.2nm,1.0s,baz=273,slow=6.6,SNR=10
KLR LR LR 06 41 33.8
comp=Z,118nm,18.5s,baz=188,slow=38
STKA Stephens Creek 59.48 129 P **P** **06 14 19.0 -0.6**
comp=Z,3.0nm,0.8s,baz=120,slow=20,SNR=5.5
STKA Stephens Creek 59.48 129 P **P** **06 14 18.4 -1.2**
CTAO Charters Tower 59.59 114 P **P** **06 14 21.5 +0.9**
CTAO IAmb IAmb 06 14 22.5
comp=Z,9.1nm,1.0s
ARU Arti 59.95 341 P **P** **06 14 22.9 +0.6**
ARU IAmb IAmb 06 14 32.3
comp=Z,6.3nm,0.6s
ASAJ Asahikawa 62.99 40 P **P** **06 14 43.0 -0.1**
comp=Z,4.2nm,0.4s,baz=270,slow=19,SNR=1.4
BRTR Keskin Array B 63.22 314 P **P** **06 14 44.1 -0.9**
comp=Z,1.0nm,0.6s,baz=137,slow=6.8,SNR=5.5
BRTR LR LR 06 44 01.3
comp=Z,130nm,18.0s,baz=124,slow=38
BRTR Keskin Array B 63.22 314 P **P** **06 14 45.3 +0.3**
BR131 Keskin Array S 63.22 314 P **P** **06 14 45.6 +0.6**
ELL Elmali 64.97 310 P **P** **06 14 58.2 +1.7**
MANT Manisa 66.52 312 P **P** **06 15 05.9 -0.7**
KARP Karpathos 66.76 308 P **P** **06 15 09.9 +1.9**
YAK Yakutsk 67.23 19 P **P** **06 15 09.6 -0.7**
NRIK Noril'sk 67.50 359 P **P** **06 15 10.1 -1.9**
comp=Z,6.0nm,0.8s,baz=191,slow=5.2,SNR=8.6
NRIK LR LR 06 45 52.9
comp=Z,108nm,22.0s,baz=178,slow=37
NRIK Noril'sk 67.50 359 P **P** **06 15 10.3 -1.7**
IDI Anoyia 68.49 307 ||P P 06 15 28.3 +9.3
BOSA Boshof 68.52 236 LR LR 06 42 18.0
comp=Z,88nm,18.9s,baz=166,slow=33
CFR Carcaliu 68.96 318 ||P P 06 15 31.4 +10
SORM Soroca 69.86 321 ||P P 06 15 36.8 +10
VRI Vrincioaia 70.12 319 ||P P 06 15 40.0 +11
PLOR Plostina 70.17 319 ||P P 06 15 40.2 +11
NEHR Nehoiu 70.27 318 ||P **P** **06 15 29.0 -0.7**
AKASG Malin Array Be 70.28 324 P **P** **06 15 28.7 -0.9**
comp=Z,0.7nm,0.5s,baz=94,slow=4.5,SNR=1.8
AKASG LR LR 06 50 28.2
comp=Z,44nm,18.6s,baz=90,slow=40
MLR Muntele Rosu 70.53 318 ||P P 06 15 42.1 +11
MLR Muntele Rosu 70.53 318 P **P** **06 15 31.4 0.0**
BURAR Bucovina Array 71.67 320 ||P P 06 15 49.3 +11
BURAR Bucovina Array 71.67 320 P **P** **06 15 39.0 +0.8**
MAW Mawson 71.68 190 LR LR 06 40 51.0
comp=Z,129nm,18.2s,baz=252,slow=31
BUR08 Bucovina Ar. S 71.69 320 P **P** **06 15 39.0 +0.6**
BUR08 IAmb IAmb 06 15 49.8
comp=Z,7.6nm,1.0s
GZR Gura Zlata 72.63 317 ||P P 06 15 54.3 +10
DRGR 73.06 319 ||P P 06 15 55.1 +8.5
NACGM Naroch 73.25 328 *i*P P 06 15 57.3 +10
NACGM *i*P P 06 15 57.3 +10
NACGM *i*P P 06 15 57.3 +10
NACGM *i* PP PP 06 18 43.9 +13
NACGM *i* PPP PPP 06 20 27.4
NACGM *i* S **SKiKP** **06 25 27.5 +7.9**
NACGM *i* PS 06 26 56.5
NACGM *i* SS SS 06 31 44.6
NACGM *i* SSS SSS 06 34 42.0
NACGM *i* LQ LQ 06 43 13.0
NACGM *i* LR LR 06 49 15.1
BZS Buzias 73.48 317 ||P P 06 15 58.9 +10
MA2 Magadan 74.26 28 P **P** **06 15 52.3 -0.9**
comp=Z,1.4nm,0.3s,baz=186,slow=7.1,SNR=4.1
CRVS Cervenica-Dubn 74.44 321 *e*P P 06 16 05.0 +10
FINES FINESS Array B 76.08 334 P **P** **06 16 02.7 -1.0**
comp=Z,1.0nm,0.7s,baz=119,slow=4.9,SNR=2.4
FINES LR LR 06 52 47.4
comp=Z,59nm,18.4s,baz=120,slow=38
FINES FINESS Array B 76.08 334 P **P** **06 16 04.6 +1.0**
SEY Seymchan 76.36 25 P **P** **06 16 03.5 -1.7**
comp=Z,2.6nm,1.0s,baz=215,slow=3.6,SNR=4.5
MODS Modra-Piesok 77.01 319 *e*P P 06 16 19.1 +10
DPC Dobruska-Polom 78.03 321 *e*P P 06 16 26.2 +11
OSTC Ostas 78.14 321 *e*P P 06 16 26.9 +11
CHVC Chvalec 78.25 321 *e*P P 06 16 27.0 +11
SYO Syowa Base 78.26 196||*e*pP pP 06 16 19.2 +1.1
GEC2 GERESS Array S 79.43 319 P **P** **06 16 23.1 +0.3**
GEC2 IAmb IAmb 06 16 34.0
comp=Z,11nm,1.0s
GERES GERESS Array B 79.43 319 P **P** **06 16 22.4 -0.4**
comp=Z,1.1nm,0.7s,baz=101,slow=6.9,SNR=7.0
GERES LR LR 06 57 17.3
comp=Z,38nm,18.1s,baz=90,slow=40
GERES GERESS Array B 79.43 319 P **P** **06 16 23.3 +0.6**
ARCES ARCESS Array B 79.53 341 P **P** **06 16 22.6 -0.2**
comp=Z,5.5nm,0.9s,baz=46,slow=5.2,SNR=9.1
ARCES LR LR 06 52 58.7
comp=Z,52nm,19.8s,baz=100,slow=37
ARCES ARCESS Array B 79.53 341 P **P** **06 16 23.0 +0.2**
ARCES IAmb IAmb 06 16 34.4
comp=Z,16nm,1.1s
KHC Kasperske Hory 79.56 320 *e*P P 06 16 33.6 +10
BRG Berggiesshubel 79.62 321 *e*P P 06 16 34.6 +11
BRG Amp 06 16 36.0
comp=Z,11nm,1.1s
CLL Collm 80.28 322 *e*P **P** **06 16 28.0 +0.8**
CLL *e* 06 16 32.0
CLL *e*Pmax 06 16 35.0
comp=Z,9.0nm,1.0s
GRF Grafenberg Arr 81.16 320 *e*P P 06 16 42.7 +11
comp=Z,12nm,1.1s,baz=110,slow=5.1
NOA NORSAR Array B 82.86 331 P **P** **06 16 39.8 -0.9**
comp=Z,0.7nm,0.9s,baz=100,slow=5.2,SNR=2.2
NOA LR LR 06 55 45.3
comp=Z,42nm,20.7s,baz=105,slow=37
BFO Black Forest 82.90 318 P **P** **06 16 40.2 -0.9**
BFO IAmb IAmb 06 16 52.7
comp=Z,7.0nm,0.9s
TAM Tamanrasset 83.87 293 P **P** **06 16 47.6 +0.7**
TORD Torodi Ar. Bea 87.57 283 P **P** **06 17 04.6 -0.6**
comp=Z,0.4nm,0.6s,baz=89,slow=5.4,SNR=3.0
VNDA Vanda 87.88 168 LR LR 06 50 55.9
comp=Z,105nm,18.2s,baz=250,slow=32
ESDC Sonseca Array 91.65 310 P **P** **06 17 21.8 -2.2**
comp=Z,0.4nm,0.8s,baz=63,slow=4.2,SNR=2.3
TX31 Lajitas Ar. Si 146.60 21 **PKPbc** **06 23 58.5 -0.3**
TX32 Lajitas Array 146.60 21 **PKPbc** **06 23 58.4 -0.3**
TXAR Lajitas Array 146.60 21 PKPbc **PKPdf** **06 23 57.0 -0.2**
comp=Z,4.9nm,0.8s,baz=274,slow=1.9,SNR=57
TXAR Lajitas Array 146.60 21 **PKPdf** **06 23 57.6 +0.3**
JCT Junction City 146.73 15 **PKPbc** **06 23 58.3 -0.7**
LPAZ La Paz 153.73 235 PKPbc **PKPbc** **06 24 16.6 -0.6**
comp=Z,0.4nm,0.5s,baz=259,slow=5.2,SNR=1.7

*JMA **03** 06:06:20.9±0.1,23.72N×122.02E,h27km±4km,M3.5*
*TAP **03** 06:06:22.0,23.74N×122.02E,h34km,ML4.0,C*
ISC 03 06:06:21.5±1.0,23.72N±0.02×122.03E±0.02,h29km±10km,
n135,σ0°83/242,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.47**	**303**	*i* P		**Pb**	**06 06 31.3**	**-0.1**
HWA	baz=299			*i* S		**Sn**	**06 06 39.3**	**-0.1**
TWD	**Chiawan**	**0.53**	**312**	P		**Pn**	**06 06 32.1**	**-1.0**
TWD	baz=311			S		**Sb**	**06 06 39.4**	**-0.5**
ESL	**Shilin**	**0.56**	**279**	*i* P		**Pn**	**06 06 32.2**	**-1.2**
ESL	baz=272			*e*S		**Sb**	**06 06 39.7**	**-0.9**
EGFH	**Guangfu**	**0.56**	**265**	*i* P		**Pn**	**06 06 32.8**	**-0.7**
NACB	baz=263 **Ningamchiao**	**0.60**	**318**	P		**Pn**	**06 06 32.9**	**-1.1**
NACB	baz=313			S		**Sn**	**06 06 41.0**	**-1.8**
HGSD	**Ruisui**	**0.60**	**248**	P		**Pn**	**06 06 33.2**	**-0.9**
HGSD	baz=246			S		**Sn**	**06 06 41.7**	**-1.1**
EHY	**Hungye**	**0.69**	**252**	*i* P		**Pn**	**06 06 34.8**	**-0.4**
EHY	baz=265			S		**Sn**	**06 06 44.2**	**-0.7**
ETLH	**Xiulin Townshi**	**0.70**	**314**	P		**Pn**	**06 06 34.4**	**-1.0**
ETLH	baz=313			S		**Sn**	**06 06 43.8**	**-1.5**
YULB	**Yu-li**	**0.75**	**244**	P		**Pn**	**06 06 35.7**	**-0.4**
YULB	baz=257			S		**Sn**	**06 06 45.9**	**-0.6**
ENA	**Nanau**	**0.75**	**339**	*i* P		**Pn**	**06 06 35.6**	**-0.5**
ENA	baz=332			*i* S		**Sn**	**06 06 45.9**	**-0.6**
EYUL	**Yuli**	**0.75**	**240**	*i* P		**Pn**	**06 06 35.9**	**-0.2**
EYUL	baz=230			S		**Sn**	**06 06 46.7**	**+0.2**
EWUT	**Wuta**	**0.76**	**342**	P		**Pn**	**06 06 36.1**	**-0.1**
EWUT	baz=335			S		**Sn**	**06 06 46.1**	**-0.5**
TWF1	**Yuli**	**0.77**	**241**	*i* P		**Pn**	**06 06 36.2**	**-0.2**
TWF1	baz=255			*i* S		**Sb**	**06 06 47.2**	**+0.7**
VWDT	**VWDT**	**0.82**	**272**	P		**Pn**	**06 06 37.0**	**0.0**
VWDT	baz=271			S		**Sn**	**06 06 47.6**	**-0.4**
WHF	**Hehuan Shan**	**0.82**	**301**	*i* P		**Pn**	**06 06 36.8**	**-0.6**
WHF	baz=293			*i* S		**Sn**	**06 06 47.5**	**-1.2**
CHGB	**Renai**	**0.85**	**293**	P		**Pn**	**06 06 37.3**	**-0.4**
CHGB	baz=298			S		**Sn**	**06 06 48.9**	**-0.5**
FULB	**Fuli**	**0.85**	**232**	*i* P		**Pn**	**06 06 36.9**	**-0.7**
FULB	baz=220			S		**Sn**	**06 06 48.5**	**-0.6**
CHKT	**Chengkung**	**0.87**	**225**	P		**Pn**	**06 06 36.2**	**-1.5**
CHKT	baz=215			*e*S		**Sn**	**06 06 47.4**	**-2.0**
FUSS	**Fushou**	**0.89**	**306**	*i* P		**Pn**	**06 06 37.8**	**-0.4**
FUSS	baz=305			S		**Sn**	**06 06 49.7**	**-0.6**
TWC	**Suao**	**0.90**	**349**	*i* P		**Pn**	**06 06 38.2**	**+0.1**
TWC	baz=350			S		**Sn**	**06 06 50.0**	**-0.2**
NNSB	**Datong**	**0.92**	**320**	P		**Pn**	**06 06 38.1**	**-0.4**
NNSB	baz=319			S		**Sn**	**06 06 50.0**	**-0.9**
NNSH	**Datong**	**0.92**	**320**	P		**Pn**	**06 06 38.2**	**-0.3**
NNSH	baz=311			S		**Sn**	**06 06 49.9**	**-1.0**
NNS	**Nan Shan**	**0.93**	**320**	*i* P		**Pn**	**06 06 38.4**	**-0.3**
NNS	baz=320			S		**Sn**	**06 06 50.4**	**-0.8**
NDS	**Dongshan**	**0.95**	**342**	*i* P		**Pn**	**06 06 39.2**	**+0.3**
NDS	baz=335			S		**Sn**	**06 06 51.2**	**-0.3**
TDCB	**Techi**	**0.96**	**304**	P		**Pn**	**06 06 39.1**	**0.0**
TDCB	baz=303			S		**Sn**	**06 06 51.1**	**-0.7**
SSLB	**Suanglung**	**0.99**	**274**	P		**Pn**	**06 06 39.0**	**-0.4**
NDT	**Datong Townshi**	**0.99**	**332**	P		**Pn**	**06 06 39.6**	**+0.1**
NDT	baz=331			S		**Sn**	**06 06 52.2**	**-0.4**
EDH	**Donghe**	**1.00**	**222**	P		**Pn**	**06 06 38.8**	**-0.7**
EDH	baz=213			*e*S		**Sn**	**06 06 50.8**	**-1.9**
ENTT	**Nioudou**	**1.01**	**335**	P		**Pn**	**06 06 39.9**	**+0.2**
ENTT	baz=335			S		**Sn**	**06 06 52.8**	**0.0**
YUS	**Yu-Shan**	**1.02**	**257**	*i* P		**Pn**	**06 06 40.2**	**0.0**
YUS	baz=256			*i* S		**Sn**	**06 06 52.9**	**-0.9**
WPL	**Puli Township**	**1.02**	**287**	P		**Pn**	**06 06 40.2**	**+0.3**
SMLT	baz=286 **Sun Moon Lake**	**1.05**	**279**	*i* P		**Pn**	**06 06 40.5**	**+0.1**
DPDB	baz=271 **Guoxing**	**1.06**	**287**	P		**Pn**	**06 06 40.8**	**+0.4**
ELDTW	baz=286 **Lidau**	**1.07**	**240**	P		**Pn**	**06 06 39.6**	**-1.0**
ELDTW	baz=239			S		**Sn**	**06 06 53.6**	**-1.0**
WHYT	**Xinyi Township**	**1.08**	**269**	*i* P		**Pn**	**06 06 41.2**	**+0.5**
JYNG	baz=268 **Yonagunijimaku**	**1.11**	**49**	P		**Pn**	**06 06 41.4**	**+0.4**
JYNG				*e*S		**Sn**	**06 06 55.0**	**-0.3**
YHNB	**Yeheng**	**1.12**	**328**	P		**Pn**	**06 06 41.2**	**0.0**
YHNB	baz=327			S		**Sn**	**06 06 54.8**	**-0.9**
EGS	baz=327	**1.12**	**355**	P		**Pb**	**06 06 42.2**	**-0.1**
EGS	baz=7.0			*e*S		**Sb**	**06 06 56.8**	**+0.3**
NSK	baz=7.0 **Sanguang**	**1.13**	**327**	*i* P		**Pn**	**06 06 41.7**	**+0.3**
NSK	baz=327			*i* S		**Sn**	**06 06 55.5**	**-0.5**
WHP	baz=327 **Taichung City**	**1.14**	**299**	P		**Pn**	**06 06 42.2**	**+0.7**
WHP	baz=306			S		**Sb**	**06 06 56.6**	**-0.4**
NTC	**Toucheng**	**1.14**	**351**	P		**Pb**	**06 06 42.3**	**-0.3**
NTC	baz=2.0			*e*S		**Sn**	**06 06 56.3**	**+0.2**
ALS	baz=2.0 **Alishan**	**1.14**	**260**	*i* P		**Pn**	**06 06 42.6**	**+0.8**
ALS	baz=268			*i* S		**Sn**	**06 06 56.8**	**+0.2**
NWLT	baz=268 **Wulai**	**1.16**	**335**	P		**Pn**	**06 06 42.2**	**+0.5**
NWLT	baz=323			S		**Sn**	**06 06 56.2**	**-0.3**
YOJ	baz=323 **Yonaguni jima**	**1.16**	**50**	P		**Pn**	**06 06 42.1**	**+0.3**
YOJ				*e*S		**Sn**	**06 06 56.7**	**+0.1**
YOJ	**Yonaguni jima**	**1.16**	**50**	P		**Pn**	**06 06 42.0**	**+0.3**
YOJ	baz=51			S		**Sn**	**06 06 56.9**	**+0.3**
LONT	**Longtian**	**1.16**	**226**	*i* P		**Pn**	**06 06 41.5**	**-0.3**
LONT	baz=237			S		**Sn**	**06 06 56.0**	**-0.6**
LDUT	**Ludao**	**1.17**	**206**	P		**Pn**	**06 06 41.2**	**-0.6**
LDUT	baz=206			S		**Sn**	**06 06 54.9**	**-1.8**
WJS	baz=206 **Zhushan**	**1.20**	**275**	*i* P		**Pb**	**06 06 43.7**	**+0.1**
WJS	baz=274			S		**Sb**	**06 07 00.7**	**+2.0**
WNT	baz=274 **Mingjian**	**1.24**	**277**	*i* P		**Pb**	**06 06 44.0**	**-0.4**
WNT	baz=276			S		**Sb**	**06 07 00.5**	**+0.5**
CHN5	baz=276 **Tsauling**	**1.25**	**264**	*i* P		**Pb**	**06 06 44.3**	**-0.2**
CHN5	baz=264			S		**Sb**	**06 07 00.8**	**+0.6**
WNT1	**Nantou City**	**1.25**	**279**	P		**Pb**	**06 06 45.0**	**+0.6**
WNT1	baz=278			*e*S		**Sb**	**06 07 02.9**	**+2.7**
TWGBT	baz=278 **Beinan**	**1.26**	**224**	P		**Pn**	**06 06 42.8**	**-0.3**
TWGBT	baz=235			S		**Sn**	**06 06 58.0**	**-1.0**
TIPB	baz=235 **Shuangxi**	**1.26**	**351**	*i* P		**Pb**	**06 06 44.0**	**-0.7**
TIPB	baz=4.0			*e*S		**Sb**	**06 07 00.1**	**-0.4**
TWG	baz=4.0 **Pinlang**	**1.26**	**225**	*i* P		**Pn**	**06 06 42.5**	**-0.6**
TWG	baz=235			S		**Sn**	**06 06 58.2**	**-0.8**
WWF	**Wufeng**	**1.26**	**285**	P		**Pb**	**06 06 45.0**	**+0.4**
WWF	baz=284			*e*S		**Sb**	**06 07 04.0**	**+3.5**
STYH	baz=284 **Taoyuan**	**1.28**	**245**	*i* P		**Pn**	**06 06 44.0**	**+0.7**
STYH	baz=237			S		**Sn**	**06 06 59.3**	**-0.2**
TWB1	baz=237 **Santiao Chiao**	**1.28**	**358**	*i* P		**Pn**	**06 06 43.6**	**+0.2**
NSTT	baz=359 **Nanjuang**	**1.30**	**314**	*i* P		**Pb**	**06 06 45.2**	**-0.2**
NSTT	baz=314			S		**Sb**	**06 07 01.0**	**-0.8**
LIOB	baz=314 **Emei**	**1.30**	**315**	P		**Pb**	**06 06 45.3**	**-0.1**
LIOB	baz=314			S		**Sb**	**06 07 01.4**	**-0.4**
TWQ1	**Liyutan**	**1.31**	**299**	*i* P		**Pb**	**06 06 45.5**	**0.0**
TWQ1	baz=298			*e*S		**Sb**	**06 07 02.9**	**+1.0**
TCU	baz=298 **Taichung**	**1.31**	**289**	P		**Pb**	**06 06 45.8**	**+0.3**
TCU	baz=288			*e*S		**Sb**	**06 07 03.8**	**+1.9**
TWA	baz=288 **Mucha**	**1.32**	**342**	*i* P		**Pb**	**06 06 45.5**	**-0.1**
TWA	baz=331			S		**Sb**	**06 07 01.8**	**-0.3**
NHDH	**Xindian Distri**	**1.32**	**340**	S		**Sb**	**06 07 01.5**	**-0.6**
NJD	baz=328 **Zhudong**	**1.33**	**320**	P		**Pb**	**06 06 46.1**	**+0.3**
NJD	baz=319			S		**Sb**	**06 07 02.1**	**-0.3**
TATO	baz=319 **Taipei**	**1.34**	**338**	P		**Pb**	**06 06 45.7**	**-0.3**
TATO	baz=338			S		**Sn**	**06 07 01.6**	**+0.5**
WGK	**Gukeng**	**1.35**	**269**	P		**Pb**	**06 06 45.8**	**-0.3**
NSY	baz=268 **Sanyi**	**1.35**	**301**	P		**Pb**	**06 06 46.1**	**-0.1**
TPUB	baz=300 **Ta-pu**	**1.35**	**252**	P		**Pb**	**06 06 46.0**	**-0.3**
TPUB	baz=243			S		**Sb**	**06 07 03.1**	**-0.1**
NWF	baz=243 **Wu-fen Shan**	**1.36**	**350**	*i* P		**Pb**	**06 06 45.7**	**-0.7**
NWF	baz=350			S		**Sb**	**06 07 03.6**	**+0.1**
WFSB	**Wu-fen Shan**	**1.36**	**350**	P		**Pb**	**06 06 45.8**	**-0.5**
WFSB	baz=350			S		**Sb**	**06 07 02.9**	**-0.5**
WDLH	**Douliu**	**1.37**	**269**	*i* P		**Pb**	**06 06 46.3**	**-0.2**
WDLH	baz=268			S		**Sb**	**06 07 04.0**	**+0.4**
CHN4	**Tsaushan**	**1.37**	**255**	*i* P		**Pb**	**06 06 46.3**	**-0.2**
CHN4	baz=254			*e*S		**Sb**	**06 07 05.3**	**+1.7**
WTP	baz=254 **Ta-pu**	**1.39**	**250**	*i* P		**Pb**	**06 06 46.3**	**-0.5**
WTP	baz=241			S		**Sb**	**06 07 04.8**	**+0.6**
NMLH	baz=241 **Miaoli**	**1.39**	**306**	P		**Pb**	**06 06 46.5**	**-0.4**
NMLH	baz=305			S		**Sb**	**06 07 04.6**	**+0.3**
WCHH	baz=305 **Zhanghua**	**1.39**	**285**	*i* P		**Pb**	**06 06 46.7**	**-0.2**
WCHH	baz=284			*e*S		**Sb**	**06 07 05.9**	**+1.6**
WDJ	**Dajia District**	**1.42**	**296**	P		**Pb**	**06 06 46.7**	**-0.5**
WDJ	baz=296			S		**Sb**	**06 07 05.1**	**+0.1**

SBCB	**Hsinchu**	**1.43 318**	P	**Pb**	**06 06 47.9**	**+0.3**
	baz=318					
SBCB			S	**Sb**	**06 07 05.9**	**+0.6**
	baz=318					
NTY	**Taoyuan**	**1.44 332**	P	**Pb**	**06 06 47.9**	**+0.2**
	baz=324					
NTY			S	**Sb**	**06 07 05.5**	**-0.1**
	baz=324					
TNOU	**National Taiwa**	**1.44 351**	*e*P	**Pn**	**06 06 44.6**	**-1.0**
	baz=6.0					
TNOU			S	**Sn**	**06 07 04.2**	**+0.7**
	baz=6.0					
HSN	**Hsinchu**	**1.45 318**	S	**Sb**	**06 07 06.3**	**+0.5**
	baz=320					
NCUH	**Zhongli**	**1.46 328**	P	**Pb**	**06 06 47.5**	**-0.5**
	baz=328					
NCUH			S	**Sb**	**06 07 05.9**	**-0.4**
	baz=328					
NCU	**National Centr**	**1.46 328**	S	**Sb**	**06 07 05.8**	**-0.5**
	baz=328					
SLGT	**Liugui**	**1.47 241**	P	**Pb**	**06 06 47.6**	**-0.5**
	baz=233					
SLGT			S	**Sn**	**06 07 05.3**	**+1.1**
	baz=233					
SGST	**Jiashian**	**1.48 245**	P	**Pn**	**06 06 46.8**	**+0.6**
	baz=235					
SGST			S	**Sb**	**06 07 06.9**	**+0.3**
	baz=235					
YM01	**YM01**	**1.48 344**	P	**Pb**	**06 06 47.4**	**-1.0**
	baz=328					
YM01			S	**Sn**	**06 07 05.3**	**+0.7**
	baz=328					
CHN1	**Nanshi**	**1.48 249**	*i* P	**Pb**	**06 06 48.3**	**-0.1**
	baz=248					
CHN1			S	**Sb**	**06 07 07.2**	**+0.4**
	baz=248					
TWS1	**Kuangyinshan**	**1.48 338**	*e*P	**Pb**	**06 06 48.5**	**+0.1**
	baz=338					
TWS1			S	**Sb**	**06 07 06.2**	**-0.7**
	baz=338					
TWK	**Hsinying**	**1.49 253**	*i* P	**Pb**	**06 06 48.1**	**-0.5**
	baz=251					
TWK			*i* S	**Sb**	**06 07 07.6**	**+0.6**
	baz=251					
YM10	**YM10**	**1.49 343**	P	**Pb**	**06 06 48.1**	**-0.5**
	baz=328					
YM10			*e*S	**Sb**	**06 07 05.9**	**-1.2**
	baz=328					
CHY	**Chiayi**	**1.49 262**	P	**Pb**	**06 06 48.0**	**-0.5**
	baz=261					
CHY			S	**Sb**	**06 07 07.6**	**+0.5**
	baz=261					
YM04	**YM04**	**1.49 343**	P	**Pb**	**06 06 47.9**	**-0.8**
	baz=327					
YM04			S	**Sn**	**06 07 04.8**	**-0.1**
	baz=327					
SNST	**Tainan City**	**1.50 251**	P	**Pb**	**06 06 48.5**	**-0.2**
	baz=250					
SNST			S	**Sb**	**06 07 07.8**	**+0.6**
	baz=250					
YM11	**YM11**	**1.50 344**	*e*P	**Pb**	**06 06 48.5**	**-0.2**
	baz=328					
YM11			S	**Sn**	**06 07 05.7**	**+0.7**
	baz=328					
ECL	**Taimali**	**1.50 222**	*e*P	**Pn**	**06 06 44.8**	**-1.5**
	baz=230					
YM05	**YM05**	**1.50 344**	P	**Pn**	**06 06 47.2**	**+0.7**
	baz=328					
YM05			S	**Sn**	**06 07 05.3**	**+0.2**
	baz=328					
WTK	**Tuku**	**1.51 269**	P	**Pb**	**06 06 49.0**	**+0.2**
	baz=268					
WTK			S	**Sb**	**06 07 08.1**	**+0.6**
	baz=268					
YM08	**YM08**	**1.51 345**	P	**Pn**	**06 06 47.4**	**+0.8**
	baz=329					
YM08			S	**Sn**	**06 07 05.9**	**+0.5**
	baz=329					
WRL	**Guolierlin Hig**	**1.52 277**	P	**Pb**	**06 06 49.2**	**+0.1**
	baz=276					
WRL			*e*S	**Sb**	**06 07 09.4**	**+1.3**
	baz=276					
TWY	**Chenhua**	**1.59 346**	*e*S	**Sn**	**06 07 08.3**	**+0.9**
	baz=346					
WTCT	**Ta-ch'eng**	**1.61 275**	P	**Pb**	**06 06 50.0**	**-0.6**
	baz=274					
WTCT			*e*S	**Sb**	**06 07 11.5**	**+1.0**
	baz=274					
SSD	**Sandimen**	**1.61 233**	*i* P	**Pn**	**06 06 49.6**	**+1.6**
	baz=228					
SSD			S	**Sn**	**06 07 07.8**	**0.0**
	baz=228					
TSMG	**Majia**	**1.63 232**	P	**Pb**	**06 06 50.0**	**-0.9**
	baz=224					
SCST	**Cishan**	**1.64 240**	P	**Pb**	**06 06 51.0**	**-0.1**
	baz=232					
ICHU	**Yijhu**	**1.65 258**	*i* P	**Pn**	**06 06 49.8**	**+1.3**
	baz=257					
ICHU			*i* S	**Sb**	**06 07 11.1**	**-0.5**
	baz=257					
HATJ	**Hateruma jima**	**1.66 78**	P	**Pn**	**06 06 46.4**	**-2.2**
HATJ			*e*S	**Sn**	**06 07 09.0**	**+0.1**
IRIF	**Iriomote-Funau**	**1.67 68**	P	**Pn**	**06 06 49.6**	**+0.9**
IRIF			S	**Sn**	**06 07 09.3**	**+0.1**
MASBT	**Mashibuluo**	**1.70 230**	P	**Pn**	**06 06 50.0**	**+0.9**
	baz=226					
MASBT			*e*S	**Sn**	**06 07 10.2**	**+0.3**
	baz=226					
CHN8	**Yiju**	**1.71 258**	*i* P	**Pn**	**06 06 51.1**	**+1.7**
	baz=257					
CHN8			S	**Sb**	**06 07 13.2**	**-0.2**
	baz=257					
EAST	**Anshuo**	**1.72 219**	*e*P	**Pn**	**06 06 50.2**	**+0.7**
	baz=219					
TWM1	**Shoushan**	**1.73 239**	P	**Pb**	**06 06 51.9**	**-0.7**
	baz=238					
TWM1			*e*S	**Sb**	**06 07 16.4**	**+2.5**
	baz=238					
LAY	**Lan-yu**	**1.73 195**	P	**Pn**	**06 06 48.5**	**-1.2**
	baz=194					
LAY			S	**Sn**	**06 07 08.9**	**-1.9**
	baz=194					
SCLT	**Jiali**	**1.77 252**	S	**Sb**	**06 07 15.4**	**+0.2**
	baz=252					
SNJT	**Kaohsiung City**	**1.83 239**	P	**Pb**	**06 06 54.3**	**-0.1**
	baz=238					
SNJT			*e*S	**Sb**	**06 07 18.4**	**+1.4**
	baz=238					
JKRS	**Kuro-shima**	**1.88 74**	P	**Pn**	**06 06 52.3**	**+0.7**
JKRS			*e*S	**Sn**	**06 07 15.9**	**+1.5**
SLIU	**Shizi**	**1.88 217**	P	**Pn**	**06 06 51.4**	**-0.3**
	baz=217					
JIJ	**Ishigaki jima**	**2.03 71**	P	**Pn**	**06 06 53.7**	**-0.1**
JIJ			S	**Sn**	**06 07 17.5**	**-0.7**
TWKBT	**Hengchun**	**2.10 213**	*e*P	**Pn**	**06 06 56.7**	**+2.0**
	baz=212					
TWKBT			S	**Sn**	**06 07 19.7**	**-0.2**
	baz=212					
TWK1	**Hengchun**	**2.10 213**	*e*P	**Pn**	**06 06 56.5**	**+1.7**
	baz=212					
TWK1			*e*S	**Sn**	**06 07 19.5**	**-0.4**
	baz=212					
WDGT	**Dungji**	**2.23 259**	P	**Pn**	**06 06 57.5**	**+1.1**
	baz=258					
WDGT			*e*S	**Sn**	**06 07 22.2**	**-0.7**
	baz=258					
JISG	**Ishigakijimahi**	**2.25 67**	P	**Pn**	**06 06 56.7**	**-0.1**
JISG			S	**Sn**	**06 07 22.3**	**-1.3**
PHUB	**P'eng-hu**	**2.27 265**	P	**Pn**	**06 06 58.0**	**+1.0**
	baz=253					
PHUB			*e*S	**Sn**	**06 07 23.8**	**-0.1**
	baz=253					
PNG	**Penghu**	**2.28 267**	P	**Pn**	**06 06 58.4**	**+1.3**
	baz=254					
PNG			S	**Sn**	**06 07 24.6**	**+0.5**
	baz=254					
JTJ	**Tarama**	**2.60 69**	P	**Pn**	**06 07 01.9**	**+0.3**
JTJ			S	**Sn**	**06 07 31.6**	**-0.7**
VWUC	**VWUC**	**2.67 299**	*e*P	**Pn**	**06 07 01.8**	**-0.7**
	baz=298					
PTMZ	**Houxiangcun**	**2.96 297**	P	**Pn**	**06 07 06.8**	**+0.3**
	baz=296					
JIRB	**Irabujima**	**3.07 68**	P	**Pn**	**06 07 08.9**	**+0.9**
MATB	**Ma-tsu**	**3.07 322**	*e*P	**Pn**	**06 07 08.1**	**0.0**
	baz=333					
JIKM	**Ikemajima**	**3.17 67**	P	**Pn**	**06 07 09.9**	**+0.5**
JMJ	**Miyako jima 2**	**3.17 69**	*e*P	**Pn**	**06 07 08.7**	**-0.7**
	baz=80					
JMJ			S	**Sn**	**06 07 47.0**	**+0.8**
	baz=80					
JMJ2	**Miyako jima3**	**3.18 71**	P	**Pn**	**06 07 10.4**	**+0.9**
JMJ2			S	**Sn**	**06 07 46.5**	**+0.1**
JOGS	**Gusukube**	**3.25 71**	P	**Pn**	**06 07 11.0**	**+0.5**
KNM	**Kinmen**	**3.36 283**	*e*P	**Pn**	**06 07 13.7**	**+1.6**
	baz=281					
KNMB	**Chin-men Tao**	**3.41 283**	*e*P	**Pn**	**06 07 12.8**	**+0.1**
	baz=282					
LYJJ	**Jianjiangzhen**	**3.49 324**	*e*P	**Pn**	**06 07 13.4**	**-0.3**
	baz=324					
AXDP	**Jialang**	**3.89 288**	*e*P	**Pn**	**06 07 19.2**	**0.0**
	baz=287					
AXDP			*e*S	**Sn**	**06 08 02.2**	**-1.6**
	baz=287					

IDC 03 06:14:28.3±2.8, 54°.13N×86°.49E, h0km, mb1 2.8/2, mb1mx2.8/45, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=21.8km s-min=13.7km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.00**	**260**	*i*		06 20 00.0	
	baz=79,slow=325,SNR=4.2						
ZALV	**Zalesovo Beam**	**1.00**	**260**	Pg	Pg	06 14 46.6	-1.0
	0.7nm,0.3s,baz=76,slow=16,SNR=4.5						
ZALV				Lg	Lg	06 15 01.8	
	1.1nm,0.3s,baz=79,slow=31,SNR=8.3						
ZALV				Rg	Rg	06 15 06.2	
	23nm,1.0s,baz=69,slow=28,SNR=7.0						
KURBB	**Kurchatov Arra**	**6.01**	**237**	Pn	Pn	06 15 59.6	+1.2
	0.1nm,0.3s,baz=54,slow=14,SNR=3.9						
KURBB				Sn	Sn	06 17 07.5	-0.4
	baz=63,slow=12,SNR=1.2						
MKAR	**Makanchi Array**	**7.82**	**202**	Pn	Pn	06 16 24.1	+0.8
	0.1nm,0.3s,baz=24,slow=16,SNR=5.9						

*ASRS **03** 06:16:08.2±0.2, 50°.1×87°.8E±°, h5km, MLh3.2/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **03** 06:16:12.4±2.3, 50°.21N×87°.45E, h0km, mb3.5, mpv3.0, Error ellipse: s-maj=17.1km s-min=11.2km az=82.0*
ISC 03 06:16:10.0±0.8, 50°.19N±0°.03×87°.78E±0°.02, h10km, n30, σ1§84/49, 3C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHBI	**Chibit, Altay**	**0.22**	**306**	Pg	**Pg**	**06 16 13.5**	**-1.1**
CHBI				Sg	**Sg**	**06 16 16.1**	**-1.5**
CUR	**Chagan-Uzun**	**0.38**	**103**	Pg	**Pb**	**06 16 17.6**	**-1.3**
CUR				Sg	**Sb**	**06 16 23.7**	**-1.2**
ULGR	**Ulagan, Altay**	**0.45**	**15**	Pg	**Pg**	**06 16 18.4**	**-0.5**
ULGR				Sg	**Sg**	**06 16 24.9**	**0.0**
DGZ	**Jazzator, Alta**	**0.54**	**205**	Pg	**Pg**	**06 16 19.1**	**-1.3**
DGZ				Sg	**Sg**	**06 16 25.5**	**-2.0**
ARTR	**Artybash**	**1.64**	**349**	Pg	**Pn**	**06 16 39.0**	**0.0**
ARTR				Sg	**Sn**	**06 16 59.7**	**-0.4**
TEL	**Teeli**	**1.75**	**61**	Pg	**Pg**	**06 16 43.2**	**-0.4**
TEL				Sg	**Sg**	**06 17 06.8**	**+0.4**
UKR	**Ust'-Kan**	**2.06**	**293**	Pg	**Pb**	**06 16 46.7**	**-0.7**
UKR				Sg	**Sb**	**06 17 13.0**	**-0.1**
GALT	**Gorno-Altaysk,**	**2.12**	**328**	Pg	**Pb**	**06 16 48.1**	**-0.4**
GALT				Sg	**Sg**	**06 17 18.1**	**+0.1**
TASR	**Tashtagol**	**2.58**	**1**	Pg	**Pb**	**06 16 56.0**	**-0.3**
TASR				Sg	**Sb**	**06 17 29.3**	**+1.3**
ELT	**Eltsovka**	**3.23**	**343**	Pg	**Pn**	**06 17 03.0**	**+2.4**
ELT				Sg	**Sb**	**06 17 48.8**	**+2.2**
TBTR	**Tabat**	**3.30**	**33**	Sg	**Sb**	**06 17 51.0**	**+2.1**
DJO	**Djoy, Khakassi**	**3.37**	**38**	Pg	**Pg**	**06 17 13.2**	**-1.3**
DJO				Sg	**Sg**	**06 17 57.3**	**-0.9**
DJOS	**Djoyskaya Sosn**	**3.46**	**40**	Pg	**Pg**	**06 17 14.7**	**-1.5**
DJOS				Sg	**Sg**	**06 17 59.0**	**-1.9**
CERR	**Cheremushki**	**3.51**	**39**	Pg	**Pg**	**06 17 15.7**	**-1.4**
CERR				Sg	**Sg**	**06 18 02.0**	**-0.5**
BJR3	**Bachatsky-3 (S**	**4.17**	**347**	Sg	**Sg**	**06 18 23.6**	**-0.1**
BJR1	**Bachatsky 1, K**	**4.20**	**346**	Sg	**Sg**	**06 18 24.6**	**0.0**
BJR2	**Bachatsky-2, K**	**4.22**	**347**	Sg	**Sg**	**06 18 24.4**	**-1.2**
ARDR	**Aradan**	**4.28**	**54**	Pg	**Pg**	**06 17 30.5**	**-1.3**
ARDR				Sg	**Sg**	**06 18 29.0**	**+1.8**
SALR	**Pechorkino, Sa**	**4.42**	**344**	Pg	**Pb**	**06 17 28.3**	**+0.5**
SALR				Sg	**Sg**	**06 18 30.5**	**-1.4**
KZLR	**Kyzyl**	**4.49**	**68**	Sg	**Sg**	**06 18 33.9**	**-0.1**
SHRR	**Shira**	**4.55**	**18**	Pg	**Pb**	**06 17 31.1**	**+1.1**
SHRR				Sg	**Sg**	**06 18 31.2**	**-4.9**
MK31	**Makanchi Array**	**4.98**	**229**	⇓Pn	**Pn**	**06 17 27.5**	**+2.6**
	0.7nm,0.4s,baz=45,slow=12,SNR=9.7						
MK31				⇓Sn	**Sn**	**06 18 24.8**	**+2.3**
	0.6nm,0.3s,baz=58,slow=19,SNR=6.1						
MK31				⇓Lg	Lg	06 18 45.2	
	1.3nm,0.3s,baz=55,slow=27,SNR=5.7						
MAKZ	**Makanchi**	**5.13**	**231**	⇓Pn	**Pn**	**06 17 27.6**	**+0.8**
	0.9nm,0.5s						
MAKZ				⇓Sn	**Sn**	**06 18 27.7**	**+1.7**
	1.8nm,0.4s						
MAKZ				⇑Lg	Lg	06 18 49.8	
	4.1nm,0.8s						
BSTK	**Bystrovka, Nov**	**5.39**	**326**	Sg	**Sg**	**06 19 00.1**	**-2.9**
NVS	**Novosibirsk**	**5.42**	**331**	Sg	**Sg**	**06 19 02.6**	**-1.4**
NVSII	**Novosibirsk**	**5.42**	**331**	Sg	**Sg**	**06 19 04.5**	**+0.5**
BRCR	**Berchikul'**	**5.47**	**3**	Sg	**Sg**	**06 18 58.7**	**-6.9**
NHES	**Novosibirsk, N**	**5.52**	**330**	Sg	**Sg**	**06 19 04.7**	**-2.3**
ALXA	**Alekseevka, NS**	**5.71**	**328**	Sg	**Sg**	**06 19 12.6**	**-0.6**
KURBB	**Kurchatov Arra**	**5.93**	**278**	⇑Pn	**Pn**	**06 17 38.2**	**+0.4**
	2.8nm,0.7s						
KURBB				⇑Sn	**Sn**	**06 18 46.3**	**+0.6**
	1.0nm,0.3s						
KURBB				⇓Lg	Lg	06 19 13.4	
	11nm,0.7s						

*ISK **03** 06:17:58.5, 38°.91N×43°.54E, h12km, ML2.7/7*
*DDA **03** 06:17:58.9, 38°.95N×43°.49E, h7km±6km, ML2.3*
ISC 03 06:17:59.0±1.0, 38°.92N±0°.03×43°.53E±0°.03, h12km±8km, n16, σ0§86/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERCV	**ERCIS-VAN**	**0.18**	**303**	Pg	**Pg**	**06 18 03.1**	**-0.1**
ERCV				Sg	**Sg**	**06 18 06.6**	**+0.5**
VANB	**Van**	**0.34**	**199**	Pg	**Pb**	**06 18 07.2**	**+0.1**
VANB				Sg	**Sb**	**06 18 13.7**	**+1.1**
CLDR	**Calderan**	**0.37**	**53**	*i* P	**Pg**	**06 18 05.9**	**-0.6**
CLDR				*i* S	**Sb**	**06 18 12.5**	**-1.0**
CLDR				IAML		06 18 18.0	
	comp=N,286nm,1.3s						
CLDR	**Calderan**	**0.37**	**53**	PG	**Pg**	**06 18 06.2**	**-0.3**
CLDR				SG	**Sg**	**06 18 12.3**	**+0.8**
TVAN	**Van**	**0.41**	**194**	*i* P	**Pg**	**06 18 07.2**	**+0.2**
TVAN				*i* S	**Sb**	**06 18 14.2**	**-0.2**
TVAN				IAML		06 18 17.0	
	comp=N,428nm,0.7s						
TVAN				IAML		06 18 20.0	
	comp=E,461nm,0.6s						
OZAP	**Van, Ozalp-Mer**	**0.44**	**126**	*i* P	**Pb**	**06 18 08.7**	**-0.1**
OZAP				IAML		06 18 17.0	
	comp=N,209nm,1.0s						
OZAP				IAML		06 18 17.0	
	comp=E,162nm,0.6s						
OZAP				*i* S	**Sb**	**06 18 17.1**	**+1.6**
ADCV	**BITLIS_Adilcev**	**0.64**	**260**	*i* P	**Pb**	**06 18 11.7**	**-0.5**
ADCV				*i* S	**Sb**	**06 18 22.0**	**+0.8**
ADCV				IAML		06 18 22.0	
	comp=N,211nm,0.4s						
ADCV				IAML		06 18 24.0	
	comp=E,139nm,0.4s						
AKDM	**Akdamar-Van**	**0.73**	**216**	PG	**Pg**	**06 18 13.1**	**-0.1**
AGRB	**Hanur-Agry**	**0.78**	**327**	PG	**Pb**	**06 18 14.2**	**-0.3**
MLAZ	**Malazgirt-MUS**	**0.80**	**286**	PG	**Pb**	**06 18 14.4**	**-0.5**
BASK	**Baskale_VAN**	**0.94**	**157**	*i* P	**Pg**	**06 18 16.5**	**-0.7**
BASK				*i* S	**Sn**	**06 18 31.9**	**+0.2**
BASK				IAML		06 18 34.0	
	comp=E,68nm,0.3s						
BASK				IAML		06 18 39.0	
	comp=N,63nm,0.9s						
BLIS	**Bitlis-Merkez**	**1.22**	**246**	*i* P	**Pb**	**06 18 20.8**	**-1.3**
BLIS				*i* S	**Sn**	**06 18 38.1**	**-0.4**
BLIS				IAML		06 18 40.0	
	comp=N,74nm,0.3s						
GURO	**Guroymak-BITLI**	**1.23**	**253**	PN	**Pg**	**06 18 22.2**	**-0.4**
EATA	**Eleskirt**	**1.24**	**320**	*i* P	**Pg**	**06 18 22.6**	**-0.2**
EATA				*i* S	**Sn**	**06 18 41.7**	**+2.5**
SRTM	**Siirt_Merkez**	**1.57**	**234**	*i* P	**Pn**	**06 18 26.1**	**-0.6**
SRTM				IAML		06 18 53.0	
	comp=E,43nm,0.9s						
SRTM				IAML		06 18 54.0	
	comp=N,43nm,0.6s						
MUSM	**Mu-Merkez**	**1.59**	**264**	*i* P	**Pb**	**06 18 27.8**	**-0.6**
MUSM				*i* S	**Sb**	**06 18 48.8**	**+0.3**

IDC 03 06:24:03.0±15.0, 39°.48S×91°.77W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.8/21, mbtmp3.6/4, MS3.7/6, Ms1 3.7/6, ms1mx3.6/13, Error ellipse: s-maj=407.2km s-min=58.1km az=176.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**11.75**	**65**	T	T	06 39 50.2	
	baz=230,slow=73,SNR=245						
H03S1	**Juan Fernandez**	**11.76**	**65**	T	T	06 39 48.9	
	baz=230,slow=73,SNR=239						
H03S3	**Juan Fernandez**	**11.77**	**65**	T	T	06 39 46.0	
	baz=230,slow=73,SNR=200						
H03N3	**Juan Fernandez**	**11.96**	**64**	T	T	06 40 05.3	
	baz=231,slow=71,SNR=1025						
H03N2	**Juan Fernandez**	**11.96**	**64**	T	T	06 40 01.3	
	baz=231,slow=71,SNR=823						
H03N1	**Juan Fernandez**	**11.97**	**64**	T	T	06 40 01.1	
	baz=231,slow=71,SNR=704						
PLCA	**Paso Flores**	**16.29**	**101**	LR	LR	06 32 29.5	
	comp=Z,366nm,21.9s,baz=266,slow=31						
RPN	**Rapa Nui**	**19.12**	**305**	LR	LR	06 33 41.1	
	comp=Z,195nm,18.4s,baz=86,slow=30						
LPAZ	**La Paz**	**30.98**	**48**	P	P	06 30 22.7	0.0
	0.9nm,0.9s,baz=196,slow=7.4,SNR=2.8						
LPAZ				LR	LR	06 40 34.1	
	comp=Z,83nm,20.1s,baz=192,slow=32						
CPUP	**Villa Florida**	**31.55**	**76**	LR	LR	06 41 59.6	
	comp=Z,140nm,18.2s,baz=226,slow=34						
BDFB	**Brasilia**	**44.91**	**71**	LR	LR	06 50 32.8	
	comp=Z,206nm,18.1s,baz=246,slow=35						
ROSC	**El Rosal**	**46.95**	**24**	LR	LR	06 51 27.7	
	comp=Z,42nm,18.9s,baz=53,slow=35						
TXAR	**Lajitas Array**	**69.35**	**349**	P	P	06 35 12.3	0.0
	0.4nm,0.9s,baz=173,slow=8.2,SNR=3.0						
NVAR	**Mina Array Bea**	**81.26**	**339**	P	P	06 36 21.0	+0.2
	0.5nm,1.0s,baz=170,slow=5.5,SNR=1.4						
PDAR	**Pinedale Array**	**83.44**	**347**	P	P	06 36 32.2	0.0
	0.9nm,0.8s,baz=161,slow=6.7,SNR=7.3						

*IDC **03** 06:32:53.9±13.0, 56°.19S×27°.74W, h227km±123km, mb3.0/3, mb1 3.1/3, mb1mx3.0/16, mbtmp3.5/3, Error ellipse: s-maj=50.3km s-min=31.1km az=72.0*
ISC 03 06:32:41.3±1.0, 56°.1S±0°.2×27°.5W±0°.3, h112km, n9, σ1§87/9, mb3.5/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.83**	**158**	P	**P**	**06 36 31.3**	**+1.4**
VNA3	**Neumayer Olymp**	**17.01**	**160**	P	**P**	**06 36 30.2**	**-1.9**
VNA2	**Neumayer--Watz**	**17.22**	**158**	P	**Pn**	**06 36 36.5**	**+1.9**
SNAA	**Sanae**	**18.78**	**156**	P	**P**	**06 36 49.2**	**-2.3**
VNDA	**Vanda**	**46.53**	**183**	P	**P**	**06 40 56.8**	**+0.1**
	0.2nm,0.5s,baz=190,slow=8.3,SNR=1.4						
LPAZ	**La Paz**	**50.26**	**306**	P	**P**	**06 41 27.6**	**+0.9**
	0.4nm,0.6s,baz=146,slow=3.6,SNR=1.9						
TORD	**Torodi Ar. Bea**	**73.17**	**30**	P	**P**	**06 44 00.2**	**+0.6**
	0.4nm,0.5s,baz=196,slow=6.5,SNR=2.4						
ILAR	**Eielson Array**	**150.01**	**312**	PKPbc	**PKPbc**	**06 52 14.8**	**-2.3**
	0.4nm,0.7s,baz=108,slow=2.0,SNR=4.2						
SONM	**Sosgino Array**	**150.91**	**87**	PKPbc	**PKPbc**	**06 52 19.5**	**-0.4**
	0.4nm,0.4s,baz=230,slow=2.7,SNR=3.4						

*DDA **03** 06:52:54.8, 36°.36N×29°.22E, h27km±1km, MW3.5*
*ATH **03** 06:52:54.8, 36°.33N×29°.21E, h43km±12km, ML2.8/1, Error ellipse: s-maj=14.0km s-min=2.0km az=146.0*
*ISK **03** 06:52:54.9, 36°.40N×29°.24E, h17km, ML3.4/27*
*THE **03** 06:52:55.7, 36°.39N×29°.19E, h2km±1km, ML2.9/5, Error ellipse: s-maj=1.3km s-min=0.5km az=101.0*
*NIC **03** 06:52:56.1±0.0, 36°.37N×29°.34E, h36km±3km, Ml3.4/2*
*HLW **03** 06:53:03.7, 35°.48N×29°.26E, h10km±12km, Md3.6, Ml3.7*
ISC 03 06:52:55.4±1.0, 36°.37N±0°.02×29°.24E±0°.02, h20km±2km, n83, σ1§27/121, 3C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.29**	**335**	P	**Pb**	**06 53 01.1**	**-1.0**
FETY				S	**Sb**	**06 53 06.2**	**-0.4**
FETY	**Fethiye**	**0.29**	**335**	PG	**Pb**	**06 53 01.1**	**-1.0**
FETY				SG	**Sb**	**06 53 06.3**	**-0.4**
AKAS	**Kas**	**0.33**	**114**	*i* P	**Pb**	**06 53 02.3**	**-0.2**
AKAS				*i* S	**Sb**	**06 53 09.2**	**+1.7**
AKAS	**Kas**	**0.33**	**114**	PG	**Pb**	**06 53 02.6**	**+0.1**
AKAS				SG	**Sb**	**06 53 07.7**	**+0.3**
KSL	**Kastellorizon**	**0.35**	**128**	P	**Pb**	**06 53 03.9**	**+1.0**
KSL				S	**Sn**	**06 53 10.9**	**-0.8**
KSL				AML	AML	06 53 11.9	
	comp=E,2869μm,0.7s						
KSL				AML	AML	06 53 15.2	
	comp=N,2782μm,0.5s						
KSL	**Kastellorizon**	**0.35**	**128**	P	**Pb**	**06 53 03.8**	**+1.0**
KSL				S	**Sn**	**06 53 11.0**	**-0.8**
	comp=N,1μm,0.5s						
KSL	**Kastellorizon**	**0.35**	**128**	⇑P	**Pb**	**06 53 03.8**	**+1.0**
KSL				S	**Sn**	**06 53 10.5**	**-1.2**
DALY	**Dalyan (Mula)**	**0.65**	**314**	*i* P	**Pb**	**06 53 07.8**	**-0.4**
DALY				*i* S	**Sb**	**06 53 17.2**	**+0.5**
DALY	**Dalyan (Mula)**	**0.65**	**314**	PG	**Pb**	**06 53 07.7**	**-0.4**
DALY				SG	**Sb**	**06 53 16.9**	**+0.1**
ELL	**Elmali**	**0.66**	**55**	PG	**Pb**	**06 53 07.6**	**-0.7**
ELL	**Elmali**	**0.66**	**55**	P	**Pb**	**06 53 07.7**	**-0.7**
CAEL	**Denizli, Camel**	**0.76**	**5**	*i* P	**Pb**	**06 53 09.5**	**-0.5**
CAEL				*i* S	**Sn**	**06 53 21.6**	**-0.3**
AKUM	**Antalya-Kumluc**	**0.89**	**93**	*i* P	**Pb**	**06 53 13.0**	**+0.8**
AKUM				*i* S	**Sn**	**06 53 27.1**	**+2.0**
TURN	**Turunc**	**0.90**	**297**	PG	**Pn**	**06 53 12.5**	**-0.3**
TURN				SG	**Sn**	**06 53 25.2**	**0.0**
GOLH	**Golhisar**	**0.91**	**17**	*i* P	**Pn**	**06 53 12.4**	**-0.7**
GOLH				*i* S	**Sn**	**06 53 25.4**	**-0.2**
ARG	**Arkhangelos**	**0.91**	**261**	P	**Pn**	**06 53 12.6**	**-0.4**
ARG	**Arkhangelos**	**0.91**	**261**	P	**Pb**	**06 53 13.2**	**+0.7**
ARG			

KARP S Sn 06 53 50.1 +0.8
comp=N,215nm,0.7s
KARP Karpathos 1.87 245 PN Pn 06 53 27.2 +0.9
DIDI Didim-Aydin 1.89 303 PN Pn 06 53 27.0 +0.5
AYDB Zeytinkoy-Aydi 1.91 326 PN Pn 06 53 27.1 +0.2
DDIM Aydin, Didim 1.94 305 i P Pb 06 53 28.8 -1.1
DDIM i S Sb 06 53 54.0 +0.3
KEPZ Antalya-Kepez 1.98 74 i P Pb 06 53 29.6 -1.1
KEPZ i S Sb 06 53 56.9 +2.0
KHAL Karahalli 2.01 6 i P Pn 06 53 28.4 +0.2
KHAL i S Sb 06 53 54.6 -1.3
KZIL AFYON_Kizioren 2.02 21 i P Pn 06 53 28.6 +0.2
KZIL i S Sb 06 53 55.1 -1.1
GCAM G?zelcaml? 2.08 310 i P Pb 06 53 31.1 -1.4
GCAM i S Sb 06 53 57.5 -0.4
GCAM G?zelcaml? 2.08 310 PN Pn 06 53 29.8 +0.7
KULA Kula-Manisa 2.19 348 P Pn 06 53 30.5 -0.2
KULA S Sb 06 53 59.4 -1.7
KULA Kula-Manisa 2.19 348 PN Pn 06 53 31.1 +0.4
SEDI Konya, Seydise 2.29 61 i P Pn 06 53 34.0 +1.9
SEDI i S Sn 06 54 01.7 +2.0
SMG Samos 2.34 306 P Pn 06 53 33.0 +0.3
SMG S Sn 06 54 02.1 +1.2
comp=N,518nm,0.4s
SHUT Suhut-Afyon 2.42 25 PN Pn 06 53 34.5 +0.6
ZKR Zakros 2.76 244 P Pn 06 53 39.9 +1.5
ZKR S Sn 06 54 11.8 +0.7
comp=N,78nm,0.7s
ZKR Zakros 2.76 244 PN Pn 06 53 39.8 +1.4
STIA Sitia Lasithi 2.81 246 P Pn 06 53 39.9 +0.8
AKMS Akamas 2.86 117 P Pn 06 53 38.9 -0.9
AKMS S Sn 06 54 11.6 -2.0
AKMS AML AML 06 54 14.4
comp=N,0.5nm,0.3s
AKMS AML AML 06 54 14.4
comp=N,0.5nm,0.3s
AKMS AML AML 06 54 15.8
comp=N,0.4nm,0.8s
AKMS AML AML 06 54 15.8
comp=N,0.4nm,0.8s
URLA Izmir 2.90 314 PN Pn 06 53 41.4 +1.1
KONT Konya--Tatoy 2.95 57 PN Pn 06 53 42.2 +1.1
ALFC Alefka 2.99 113 ⇑P Pn 06 53 40.5 -1.2
ALFC S Sn 06 54 15.6 -1.3
ALFC AML AML 06 54 15.7
comp=N,0.3nm,0.3s
ALFC AML AML 06 54 15.7
comp=N,0.3nm,0.3s
ALFC AML AML 06 54 16.9
comp=N,0.3nm,0.2s
ALFC AML AML 06 54 16.9
comp=N,0.3nm,0.2s
SANT Santorini 3.05 271 PN Pn 06 53 43.8 +1.3
APE Apeiranthos 3.06 284 PN Pn 06 53 43.9 +1.3
THR3 Thira Island, 3.10 272 P Pn 06 53 43.6 +0.6
SNT5 Nea Kammeni, S 3.10 272 P Pn 06 53 43.7 +0.6
NATA Nata 3.14 119 P Pn 06 53 43.5 -0.3
BERE Bereket-Mersin 3.22 89 PN Pn 06 53 46.4 +1.5
OSC1 CSNet OBS 1 3.31 149 P Pn 06 53 45.0 -1.0
SZAC Souni 3.38 117 ⇓P Pn 06 53 46.3 -0.7
TEVE Tevekalti-Mers 3.39 88 PN Pn 06 53 48.8 +1.6
ASGA Asgata 3.63 115 P Pn 06 53 49.9 -0.5
ASGA S Sn 06 54 31.2 -1.4
CHBY Cihanbeyli 3.65 52 PN Pn 06 53 52.1 +1.3
IDI Anoyia 3.69 254 P Pn 06 53 51.5 +0.2
OSC2 CSNet OBS 4 4.12 142 S Sn 06 54 43.6 -1.2
SLUM Salum 5.90 216 P Pn 06 54 21.1 -0.6
baz=222
SLUM AMP 06 55 00.0
baz=222
SLUM S Sn 06 55 20.5 -8.1
baz=222
KOT Kottamia 6.78 161 P Pn 06 54 32.4 -1.4
baz=157
GLL Jalalah 7.08 162 P Pn 06 54 37.0 -0.9
baz=160
SUZ Suez 7.17 154 P Pn 06 54 38.0 -1.1
baz=150
SWA2 7.78 205 P Pn 06 54 47.1 -0.3
baz=209
SWA2 AMP 06 56 00.0
baz=209
SWA2 S Sn 06 56 02.5 -12
baz=209

*IDC **03** 06:57:17.7±4.2, 18°.27S×168°.82E, h94km±38km, mb3.9/13, mb1 4.1/14, mb1mx3.9/27, mbtmp4.2/14, Error ellipse: s-maj=26.3km s-min=20.1km az=15.0*
*NOU **03** 06:57:18.6, 18°.48S×169°.16E, h116km, MLv5.3, Vanuatu Islands*
*NEIC **03** 06:57:20.0±1.8, 18°.45S±0°.06×168°.77E±0°.10, h113km±6km, mb4.4/23, Error ellipse: s-maj=13.6km s-min=8.7km az=90.0*

ISC 03 06:57:18.4±0.5, 18°.36S±0°.07×168°.79E±0°.08, h100km, n61, σ0s90/60, mb4.3/22, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DVP	Devils Point	0.85	318	P		Pn	06 57 42.7	+5.4
MARNC	Mare, Loyalty	3.18	193	P		Pn	06 58 06.2	-0.5
SANVU	Saraoutou	3.27	332			Pn	06 58 11.1	+3.3
SANVU	Saraoutou	3.27	332	P		Pn	06 58 12.0	+4.2
YATNC	Mamie plateau,	4.09	206	P		Pn	06 58 19.5	+0.7
DZM	Mont Dzumac	4.30	210	P		Pn	06 58 22.6	+0.8
	42nm,0.3s,baz=47,slow=10.0,SNR=1289							
DZM				S		Sn	06 59 08.9	-2.0
	41nm,0.3s,baz=129,slow=23,SNR=5.9							
PINNC	Pines Island,	4.41	196	P		Pn	06 58 24.7	+1.5
OUENC	Ouen Island, N	4.43	204	P		Pn	06 58 24.7	+1.2
ONTNC	Ouen Toro	4.50	209	P		Pn	06 58 25.8	+1.5
MSVF	Nonsavu	8.83	87	Pn		Pn	06 59 24.9	+1.5
FUNA	Funafuti	14.07	47			P	07 00 36.9	-1.0
OUZ	Omahuta	17.33	167	P		P	07 01 12.2	-1.7
EIDS	Eidsvold	17.84	244	P		P	07 01 19.2	-0.4
ARMA	Armidale	19.67	229	P		P	07 01 39.5	-0.3
ARMA				IAmb		IAmb	07 01 51.0	
	comp=Z,26nm,1.4s							
URZ	Urewera	21.12	162	P		P	07 01 55.4	+0.3
	comp=Z,7.8nm,0.7s,baz=299,slow=23,SNR=7.4							
URZ	Urewera	21.12	162	P		P	07 01 56.4	+1.4
URZ				IAmb		IAmb	07 01 58.9	
	comp=Z,39nm,1.4s							
CTA	Charters Tower	21.34	262	P		P	07 01 57.3	-0.4
	comp=Z,0.7nm,0.3s,baz=76,slow=14,SNR=1.4							
BKZ	Black Stump Fm	21.79	164	P		P	07 02 03.2	+1.0
BKZ				IAmb		IAmb	07 02 06.7	
	comp=Z,8.3nm,0.7s							
BFZ	Birch Farm	23.15	165	P		P	07 02 15.2	-0.9
RPZ	Rata Peaks	25.35	176	P		P	07 02 36.9	+0.9
	comp=Z,5.6nm,0.6s,baz=152,slow=21,SNR=2.3							
RPZ	Rata Peaks	25.35	176	P		P	07 02 37.0	+0.9
STKA	Stephens Creek	27.96	236	P		P	07 03 00.2	+0.5
	comp=Z,2.4nm,0.6s,baz=76,slow=9.3,SNR=7.0							
STKA	Stephens Creek	27.96	236	P		P	07 02 59.3	-0.4
WR0	Warramunga Arr	32.36	262	P		P	07 03 38.4	-0.3
WR0				IAmb		IAmb	07 03 56.2	
	comp=Z,6.4nm,1.4s							
WRA	Warramunga Arr	32.55	262	P		P	07 03 40.3	0.0
	comp=Z,0.4nm,0.3s,baz=81,slow=6.4,SNR=13							
BBOO	Buckleboo	32.68	237	P		P	07 03 42.3	+0.9
AS31	Alice Springs	32.93	255	P		P	07 03 44.1	+0.4
AS31				IAmb		IAmb	07 03 44.8	
	comp=Z,4.2nm,0.4s							
ASAR	Alice Springs	32.93	255	P		P	07 03 44.1	+0.5
	comp=Z,5.3nm,0.4s,baz=83,slow=8.5,SNR=91							
ASAR				PcP		PcP	07 06 25.2	-0.6
	comp=Z,0.3nm,0.7s,baz=90,slow=2.8,SNR=1.8							
ASAR	Alice Springs	32.93	255	P		P	07 03 43.3	-0.3
FAKI	Fak Fak	38.93	289	P		P	07 04 35.9	+1.0
FITZ	Fitzroy Crossi	40.91	263	P		P	07 04 52.7	+1.5
FITZ				IAmb		IAmb	07 04 53.4	
	comp=Z,5.4nm,0.8s							
MJAR	Matsushiro Arr	61.78	332	P		P	07 07 25.8	-0.9
	comp=Z,4.0nm,0.9s,baz=179,slow=5.0,SNR=5.5							
MJAR	Matsushiro Arr	61.78	332	P		P	07 07 27.4	+0.7
MJAR				IAmb		IAmb	07 07 29.2	
	comp=Z,3.3nm,0.9s							
QSPA	South Pole Qui	71.69	180	P		P	07 08 29.5	+0.1
QSPA				IAmb		IAmb	07 08 32.8	
	comp=Z,6.2nm,1.2s							
PETK	Petropavlovsk-	71.81	353	P		P	07 08 31.4	+1.4
CMAR	Chiang Mai Arr	77.75	294	P		P	07 09 05.3	+0.3
	comp=Z,1.1nm,0.4s,baz=128,slow=4.4,SNR=9.9							
CMAR	Chiang Mai Arr	77.75	294	P		P	07 09 04.7	-0.3
CHTO	Chiang Mai	77.90	295	P		P	07 09 04.6	-1.2
CHTO				IAmb		IAmb	07 09 08.7	
	comp=Z,4.3nm,0.9s							
BILL	Bilibino	86.17	359	P		P	07 09 48.2	+0.3
BILL				IAmb		IAmb	07 09 50.6	
	comp=Z,3.6nm,0.9s							
SONM	Songino Array	86.26	323	P		P	07 09 48.7	-0.3
	comp=Z,3.0nm,1.0s,baz=148,slow=4.1,SNR=6.2							
SONM	Songino Array	86.26	323	P		P	07 09 50.0	+0.9
NVAR	Mina Array Bea	88.55	49	P		P	07 09 59.5	-0.8
	comp=Z,0.8nm,0.7s,baz=230,slow=8.1,SNR=6.4							
NVAR	Mina Array Bea	88.55	49	P		P	07 10 00.9	+0.5
PINE	Pine Mountain	89.07	43	P		P	07 10 01.5	-1.2
ILAR	Eielson Array	89.53	17	P		P	07 10 03.9	-0.1
	comp=Z,0.3nm,0.8s,baz=232,slow=4.9,SNR=3.0							
I07A	Izee	90.13	43	P		P	07 10 06.6	-0.9
I07A				IAmb		IAmb	07 10 10.7	
	comp=Z,4.3nm,1.1s							
PRN	Pahroc Range	90.49	51	P		P	07 10 09.1	-0.3
J08A	Circle Bar Ran	90.50	44	P		P	07 10 09.2	0.0
J08A				IAmb		IAmb	07 10 12.2	
	comp=Z,4.6nm,1.0s							
G08A	Pilot Rock	91.00	42	P		P	07 10 12.6	+1.1
G08A				IAmb		IAmb	07 10 14.0	
	comp=Z,3.6nm,0.9s							
TXAR	Lajitas Array	96.72	61	P		P	07 10 37.5	-0.7
	comp=Z,0.3nm,0.9s,baz=239,slow=4.9,SNR=3.8							
YKA	Yellowknife Ar	100.09	27	P		Pdif	07 10 51.7	-0.6
	comp=Z,0.3nm,0.7s,baz=252,slow=4.4,SNR=4.2							
MKAR	Makanchi Array	100.81	316	P		Pdif	07 10 55.7	-0.3
	comp=Z,0.3nm,0.6s,baz=96,slow=6.2,SNR=4.0							
ARCES	ARCESS Array B	124.11	345	PKP		PKiKP	07 16 04.2	-0.7
	comp=Z,1.7nm,0.8s,baz=76,slow=3.8,SNR=1.6							
GERES	GERESS Array B	143.52	332	PKP		PKPdf	07 16 40.9	-0.6
	comp=Z,0.4nm,0.5s,baz=48,slow=5.8,SNR=4.1							
KBA	Koelnbreinsper	144.98	330	*eP*		PKiKP	07 16 47.1	-1.0
	comp=Z,12nm,1.4s							
ABTA	Abfaltersbach	145.61	331	*eP*		PKPab	07 16 45.0	-1.0
	comp=Z,14nm,1.3s							
WTTA	Wattenberg	145.62	332	*eP*		PKPab	07 16 46.7	+0.6
	comp=Z,11nm,1.1s							
MOTA	Moosalm	145.79	333	*eP*		PKPab	07 16 47.1	+0.3
	comp=Z,5.3nm,0.8s							
SQTA	Sankt Quirin	145.84	332	*eP*		PKPab	07 16 46.7	-0.2
	comp=Z,8.5nm,1.7s							
FETA	Feichten	146.21	333	*eP*		PKiKP	07 16 49.0	-1.6
	comp=Z,7.3nm,1.0s							
TORD	Torodi Ar. Bea	166.54	249	PKP		PKPdf	07 17 12.8	-0.2
	comp=Z,0.8nm,0.9s,baz=79,slow=3.1,SNR=2.9							

*NNC **03** 07:01:36.1±1.4, 54°.17N×86°.44E, h0km, mb2.9, mpv2.1, Error ellipse: s-maj=13.9km s-min=6.8km az=4.0, Suspected Mining explosion.*

IDC 03 07:01:36.6±2.5, 54°.15N×86°.42E, h0km, mb1 3.2/2, mb1mx3.0/38, mbtmp3.2/2, ML3.0/2, 6C, Error ellipse: s-maj=19.6km s-min=11.6km az=59.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.96	259	*i*			07 07 10.0	
	baz=80,slow=328,SNR=8.9							
ZAA0	Zalesovo Array	0.96	259	⇑P		Pg	07 01 54.9	0.0
	0.4nm,0.5s							
ZAA0				⇑S		Sb	07 02 08.7	-0.6
	3.6nm,0.7s							
ZALV	Zalesovo Beam	0.96	259	Pg		Pg	07 01 53.8	-1.1
	1.7nm,0.3s,baz=77,slow=16,SNR=18							
ZALV				Lg		Lg	07 02 09.3	
	2.8nm,0.3s,baz=75,slow=30,SNR=11							
ZALV				Rg		Rg	07 02 15.3	
	66nm,1.2s,baz=74,slow=29,SNR=12							
KURBB	Kurchatov Arra	5.98	237	Pn		Pn	07 03 07.0	+0.7
	0.3nm,0.3s,baz=54,slow=13,SNR=3.6							
KURBB				Lg		Lg	07 04 45.5	
	0.1nm,0.3s,baz=51,slow=29,SNR=2.0							
MK31	Makanchi Array	7.81	201	Pn		Pn	07 03 32.7	+1.2
	0.1nm,0.3s,baz=29,slow=13,SNR=22							
MK31				⇑Sn		Sn	07 05 01.9	+1.3
	0.9nm,0.7s,baz=26,slow=28,SNR=2.8							
MK31				⇑Lg		Lg	07 05 45.9	
	3.3nm,1.0s,baz=32,slow=27,SNR=4.2							
MKAR	Makanchi Array	7.81	201	Pn		Pn	07 03 32.7	+1.2
	0.4nm,0.3s,baz=23,slow=13,SNR=16							
MKAR				Sn		Sn	07 05 00.4	-0.2
	0.1nm,0.3s,baz=19,slow=32,SNR=5.7							
MKAR				Lg		Lg	07 05 42.6	
	0.1nm,0.3s,baz=19,slow=33,SNR=2.6							
MAKZ	Makanchi	7.87	203	⇑Sn		Sn	07 05 03.0	+1.1
	2.4nm,1.4s							
MAKZ				⇑Lg		Lg	07 05 48.0	
	2.8nm,1.3s							

*IDC **03** 07:20:57.5±0.8, 26°.55N×108°.87E, h0km, mb4.0/14, mb1 4.1/16, mb1mx3.9/52, mbtmp3.9/16, ML3.7/2, Error ellipse: s-maj=22.6km s-min=18.1km az=59.0*
*NEIC **03** 07:20:59.0±1.6, 26°.58N±0°.07×109°.0E±0°.1, h13km±4km, mb4.3/21, Error ellipse: s-maj=13.6km s-min=10.6km az=84.0*

ISC 03 07:20:58.8±0.5, 26°.59N±0°.06×109°.03E±0°.07, h10km, n45, σ0s98/46, mb4.2/21, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SLVN	Son La	7.02	223	Pn		Pn	07 22 43.4	+1.7
XAN	Xi'an	7.43	359	Pn		Pn	07 22 46.8	-0.5
QIZ	Qiongzhong	7.56	174	Pn		Pn	07 22 51.1	+2.0
CHTO	Chiang Mai	12.10	232	Pn		Pn	07 23 51.3	-0.1
CMAR	Chiang Mai Arr	12.34	231	Pn		Pn	07 23 54.2	-0.3
	0.1nm,0.3s,baz=36,slow=12,SNR=1.4							
LSA	Lhasa	16.07	285			Pn	07 24 43.6	-1.7
LSA				IAmb		IAmb	07 24 53.1	
	comp=Z,13nm,0.8s							
JTU	Tsushima	19.22	61	P		P	07 25 22.3	-0.7
KSAR	Wonju Array Be	19.27	51	P		P	07 25 22.6	-1.0
KSRS	Korea Array	19.30	51	P		Pn	07 25 26.4	+1.5
	comp=Z,0.3nm,0.3s,baz=240,slow=10,SNR=6.6							
ULN	Ulaanbaatar	21.30	356	P		P	07 25 45.1	-0.6
ULN				IAmb		IAmb	07 25 48.1	
	comp=Z,4.4nm,0.7s							
SONM	Songino Array	21.31	355	P		P	07 25 46.6	+0.9
	comp=Z,5.0nm,0.7s,baz=165,slow=11,SNR=30							
SONM	Songino Array	21.31	355	P		P	07 25 45.7	-0.1
KSM	Kuching	25.00	177	P		P	07 26 20.8	-2.1
KSM				IAmb		IAmb	07 26 27.9	
	comp=Z,11nm,1.5s							
USRK	Ussuriysk Ar.	25.54	41	P		P	07 26 28.6	+1.0
	comp=Z,1.8nm,0.7s,baz=248,slow=9.3,SNR=7.1							
USRK	Ussuriysk Ar.	25.54	41	P		P	07 26 25.6	-2.0
MK31	Makanchi Array	29.20	321	P		P	07 26 60.0	-0.5
MKAR	Makanchi Array	29.20	321	P		P	07 27 00.1	-0.4
	comp=Z,0.6nm,0.6s,baz=123,slow=11,SNR=8.5							
MKAR	Makanchi Array	29.20	321	P		P	07 27 00.8	+0.3
MAKZ	Makanchi	29.39	320	P		P	07 27 01.9	-0.3
JCJ	Chichijima	29.54	81	P		P	07 27 02.5	-1.2
CISI	Cisompet, Garu	33.96	182	P		P	07 27 40.8	-1.8
KBL	Kabul	35.15	293	P		P	07 27 52.9	-0.1
KBL				IAmb		IAmb	07 27 54.6	
	comp=Z,6.6nm,1.2s							
KKAR	Karatay Array	35.29	308	P		P	07 27 53.0	-0.9
KKAR	Karatay Array	35.29	308	P		P	07 27 53.5	-0.4
KKAR				IAmb		IAmb	07 27 56.3	
	comp=Z,1.7nm,1.0s							
BRVK	Borovoye	39.06	323	P		P	07 28 25.6	-0.1
ABKAR	Akbulak array	43.90	314	P		P	07 29 05.9	+0.4
GEYT	Alibeck	44.03	298	P		P	07 29 06.1	-0.7
	comp=Z,5.9nm,0.8s,baz=97,slow=4.8,SNR=7.9							
GEYT	Alibeck	44.03	298	P		P	07 29 08.0	+1.2
GEYT				IAmb		IAmb	07 29 09.3	
	comp=Z,5.4nm,0.8s							
GYA0B	ALIBECK ARRAY	44.03	298	P		P	07 29 07.4	+0.7
GYA0B				IAmb		IAmb	07 29 09.3	
	comp=Z,8.6nm,1.1s							
NRIK	Noril'sk	44.61	349	P		P	07 29 11.7	+0.9
	comp=Z,5.6nm,0.7s,baz=144,slow=7.8,SNR=12							
NRIK	Noril'sk	44.61	349	P		P	07 29 11.4	+0.5
NRIK				IAmb		IAmb	07 29 12.6	
	comp=Z,5.5nm,0.7s							
TIXI	Tiksi	46.45	9	P		P	07 29 25.6	+0.2
TIXI				IAmb		IAmb	07 29 26.4	
	comp=Z,3.7nm,0.7s							
ARU	Arti	46.62	324	P		P	07 29 27.2	+0.2
ARU				IAmb		IAmb	07 29 29.1	
	comp=Z,4.6nm,0.6s							
WRA	Warramunga Arr	52.37	149	P		P	07 30 10.9	-0.3
	comp=Z,1.0nm,1.0s,baz=334,slow=8.3,SNR=3.8							
ASAR	Alice Springs	55.45	152	P		P	07 30 34.4	+0.6
	comp=Z,0.3nm,0.5s,baz=329,slow=6.9,SNR=2.9							
ASAR				PcP		PcP	07 31 35.4	+1.4
	comp=Z,0.3nm,0.7s,baz=336,slow=4.4,SNR=2.6							
KEV	Kevo	62.57	337	P		P	07 31 23.6	+1.0
ARCES	ARCESS Array B	63.11	337	P		P	07 31 26.8	+0.6
	comp=Z,1.6nm,0.7s,baz=82,slow=7.5,SNR=10							
ANTO	Ankara	63.37	303	P		P	07 31 29.4	+0.9
AKASG	Malin Array Be	63.62	316	P		P	07 31 29.8	0.0
	comp=Z,1.2nm,0.5s,baz=66,slow=7.0,SNR=5.6							
AKASG	Malin Array Be	63.62	316	P		P	07 31 30.0	+0.1
AKASG				IAmb		IAmb	07 31 30.7	
	comp=Z,0.6nm,0.6s							
FINES	FINESS Array B	63.69	328	P		P	07 31 30.1	0.0
	comp=Z,1.3nm,0.6s,baz=97,slow=7.9,SNR=9.7							
NOA	NORSAR Array B	70.75	329	P		P	07 32 13.9	-1.1
	comp=Z,1.2nm,0.8s,baz=69,slow=6.0,SNR=4.0							
ILAR	Eielson Array	72.01	26	P		P	07 32 22.7	+0.2
	comp=Z,0.2nm,0.6s,baz=61,slow=6.9,SNR=4.7							
GERES	GERESS Array B	73.78	317	P		P	07 32 32.9	-0.5
	comp=Z,0.6nm,0.7s,baz=54,slow=9.9,SNR=2.5							
YKA	Yellowknife Ar	84.64	19	P		P	07 33 33.2	+0.8
	comp=Z,1.0nm,0.5s,baz=325,slow=4.8,SNR=23							

*IDC **03** 07:25:18.3±1.4, 10°.50S×120°.11E, h0km, mb3.8/4, mb1 3.8/9, mb1mx3.6/49, mbtmp3.7/9, ML3.4/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/41, Error ellipse: s-maj=53.3km s-min=19.9km az=51.0*

ISC 03 07:25:22.2±1.1, 10°.58S±0°.09×120°.4E±0°.1, h35km, n9, σ3s90/14, mb3.9/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	Baumata	3.28	84	Pn		Pn	07 26 14.6	+3.4
	9.8nm,0.3s,baz=56,slow=3.1,SNR=6.6							
BATI				Sn		Sn	07 26 50.8	+1.7
	4.9nm,0.3s,baz=261,slow=20,SNR=1.7							
KAPI	Kappang	5.56	354	Pn		Pn	07 26 40.7	-1.8
	1.5nm,0.3s,baz=69,slow=19,SNR=2.2							
KAPI				Sn		Sn	07 27 43.2	-2.0
	baz=151,slow=23,SNR=1.0							
KAPI				LR		LR	07 29 00.6	
	comp=Z,134nm,19.9s,baz=224,slow=41							
FITZ	Fitzroy Crossi	9.07	146	Pn		Pn	07 27 32.9	+2.2
	0.4nm,0.3s,baz=334,slow=11,SNR=11							
FITZ				Sn		Sn	07 29 08.4	-3.2
	0.7nm,0.3s,baz=165,slow=20,SNR=9.8							
WRA	Warramunga Arr	16.39	126	Pn		Pn	07 29 10.9	+1.2
	0.1nm,0.3s,baz=302,slow=14,SNR=3.3							
WRA				Sn		Sn	07 32 01.1	-10
	0.0nm,0.3s,baz=293,slow=21,SNR=1.7							
ASAR	Alice Springs	18.34	137	P		Pn	07 29 37.7	+3.7
	0.1nm,0.3s,baz=315,slow=12,SNR=14							
ASAR				S		Sn	07 32 53.1	-4.9
	0.1nm,0.3s,baz=307,slow=22,SNR=6.3							
SONM	Songino Array	59.46	349	P		P	07 35 22.3	+0.7
	1.6nm,0.6s,baz=167,slow=8.3,SNR=11							
MKAR	Makanchi Array	66.46	332	P		P	07 36 08.5	+0.4
	0.5nm,0.6s,baz=142,slow=7.3,SNR=6.0							
KURBB	Kurchatov Arra	70.96	333	P		P	07 36 36.6	+0.6
	0.2nm,0.3s,baz=137,slow=4.7,SNR=1.7							
ZALV	Zalesovo Beam	70.98	339	P		P	07 36 36.4	+0.4
	0.6nm,0.3s,baz=134,slow=4.2,SNR=5.4							

IDC 03 07:32:26.1±3.1, 53°.47N×87°.31E, h0km, mb1 2.4/2, mb1mx2.4/57, mbtmp2.4/2, ML2.1/2, Error ellipse: s-maj=28.0km s-min=17.1km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.56	289	*i*			07 41 21.7	
	baz=107,slow=319,SNR=3.1							
ZALV	Zalesovo Beam	1.56	289	Pg		Pn	07 32 53.2	-1.8
	0.6nm,0.3s,baz=109,slow=13,SNR=6.4							
ZALV				Lg		Lg	07 33 15.1	
	0.5nm,0.3s,baz=108,slow=26,SNR=4.0							
KURBB	Kurchatov Arra	6.12	246	Pn		Pn	07 33 59.7	+2.0
	0.0nm,0.3s,baz=62,slow=14,SNR=2.3							
KURBB				Lg		Lg	07 35 40.3	
	0.0nm,0.3s,baz=64,slow=33,SNR=4.2							
MKAR	Makanchi Array	7.42	208	Pn		Pn	07 34 16.1	+0.6
	0.1nm,0.3s,baz=30,slow=12,SNR=1.9							

*IDC **03** 07:33:02.2±1.3, 52°.60N×168°.50W, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.0/62, mbtmp4.1/21, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/55, Error ellipse: s-maj=36.0km s-min=15.2km az=176.0*
*AEIC **03** 07:33:04.2±2.4, 52°.28N±0°.10×168°.5W±0°.1, h20km±7km, ML3.2, mb4.1/11(NEIC), Error ellipse: s-maj=15.2km s-min=7.7km az=156.0*
*NEIC **03** 07:33:05.7±2.9, 52°.38N±0°.10×168°.55W±0°.10, h32km±9km, Error ellipse: s-maj=14.3km s-min=7.9km az=161.0*

ISC 03 07:33:05.6±0.8, 52°.4N±0°.1×168°.41W±0°.07, h29km, n61, σ1s95/54, mb4.2/22, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.62	334			Pn	07 33 17.9	-0.4
OKSO	Okmok South	0.95	9			Pb	07 33 23.5	0.0
OKFG	Magazine Ridge	1.03	17			Pb	07 33 24.8	-0.1
MAPS	Pakushin South	1.65	32			Pb	07 33 34.7	-0.5
MGOD	Makushin Gods	1.66	33			Pb	07 33 34.9	-0.5
MSW	Makushin Switc	1.79	32			Pb	07 33 37.2	-0.4
MNAT	Makushin Natee	1.79	35			Pb	07 33 37.1	-0.7
AKBBA	Akutan Broad B	2.24	41			Pb	07 33 43.8	-1.6
AKUT	Akutan	2.33	42			Pn	07 33 42.2	+0.3
KOFP	Korovin Flat P	3.49	270			Pn	07 33 58.3	+0.4
ATKA	Atka Island	3.56	269			Pn	07 33 57.8	-1.0
FALS	False Pass	3.84	49	Pn		Pn	07 34 04.2	+1.6
GSTR	Great Sitkin T	4.71	269	Pn		Pn	07 34 14.6	-0.1
GSMY	Great Sitkin M	4.72	268			Pn	07 34 14.5	-0.3
GSTD	Great

H11S3 WAKE ISLAND Hy 39.07 219 T T 08 22 50.1
baz=23,slow=75
BW06 Boulder Array 39.81 80 P **P** **07 40 36.3 +0.1**
BW06 IAmb IAmb 07 40 40.8
comp=Z,4.6nm,1.2s
PD31 Pinedale Array 39.81 80 P **P** **07 40 36.6 +0.4**
PD31 IAmb IAmb 07 40 40.8
comp=Z,4.0nm,1.2s
PDAR Pinedale Array 39.81 80 P **P** **07 40 37.9 +1.6**
comp=Z,0.9nm,0.5s,baz=296,slow=3.8,SNR=9.8
PDAR Pinedale Array 39.81 80 P **P** **07 40 36.3 +0.1**
O20A White River Ci 42.17 82 P **P** **07 40 55.0 -0.6**
O20A IAmb IAmb 07 40 58.6
comp=Z,4.6nm,1.0s
KSRS Korea Array 45.98 277 P **P** **07 41 26.0 +0.1**
comp=Z,3.4nm,0.9s,baz=51,slow=8.6,SNR=7.9
SPITS Spitsbergen Ar 49.63 359 P **P** **07 41 54.2 +0.5**
comp=Z,4.3nm,0.9s,baz=139,slow=4.4,SNR=5.1
TXAR Lajitas Array 52.16 90 P **P** **07 42 14.8 +1.3**
comp=Z,0.2nm,0.5s,baz=308,slow=5.0,SNR=4.0
ARCES ARCESS Array B 57.93 354 P **P** **07 42 54.2 -0.2**
comp=Z,3.4nm,0.9s,baz=9.6,slow=7.6,SNR=2.9
KURBB Kurchatov Arra 62.83 319 P **P** **07 43 27.6 -0.5**
comp=Z,1.3nm,0.8s,baz=44,slow=7.4,SNR=8.1
MKAR Makanchi Array 64.20 314 P **P** **07 43 37.0 -0.3**
comp=Z,1.3nm,0.7s,baz=47,slow=6.9,SNR=9.4
ARU Arti 64.84 333 P **P** **07 43 41.6 +0.3**
comp=Z,2.5nm,0.2s,baz=145,slow=21,SNR=3.4
FINES FINESS Array B 65.90 352 P **P** **07 43 48.1 +0.1**
comp=Z,2.8nm,0.6s,baz=19,slow=7.3,SNR=15
NOA NORSAR Array B 66.89 0 P **P** **07 43 54.9 +0.4**
comp=Z,1.3nm,0.8s,baz=358,slow=6.2,SNR=4.0
AAK Ala-Archa 70.87 316 P **P** **07 44 19.8 +0.1**
comp=Z,0.7nm,0.4s,baz=180,slow=2.3,SNR=5.9
AKASG Malin Array Be 76.18 349 P **P** **07 44 50.8 +0.3**
comp=Z,1.5nm,0.5s,baz=13,slow=5.8,SNR=5.3
CMAR Chiang Mai Arr 77.18 283 P **P** **07 44 57.5 +0.9**
comp=Z,1.5nm,0.4s,baz=24,slow=6.5,SNR=8.6
GERES GERESS Array B 79.09 359 P **P** **07 45 07.6 +0.7**
comp=Z,0.3nm,0.6s,baz=286,slow=11,SNR=4.2
GEYT Alibeck 81.33 325 P **P** **07 45 19.8 +0.7**
comp=Z,5.8nm,1.0s,baz=0.0,slow=5.9,SNR=4.1
BRTR Keskin Array B 86.25 343 P **P** **07 45 44.4 0.0**
comp=Z,1.2nm,0.8s,baz=14,slow=6.4,SNR=3.3
ESDC Sonseca Array 87.29 12 P **P** **07 45 49.0 -0.4**
comp=Z,0.9nm,0.8s,baz=350,slow=4.9,SNR=5.8

*MOS **03** 07:33:15.9±1.0,56.°04N×113.°75E,h5km,mb4.1/5,Error ellipse: s-maj=8.8km s-min=6.2km az=74.1*
MOS Felt (II-III) at Severomuisk.
*IDC **03** 07:33:16.4±0.7,55.°99N×113.°70E,h0km,mb3.8/16, mb1 3.9/21,mb1mx3.8/58,mbtmp3.8/21,ML3.2/4,Error ellipse: s-maj=19.3km s-min=10.3km az=148.0*
*BYKL **03** 07:33:17.6±0.1,56.°07N×113.°68E,h5km±2km,FELT I=II-III MSK at Severomuisk*
ISC 03 07:33:17.7±0.8,56.°02N±0.°02×113.°58E±0.°02,h9km±5km, n102,σ2ᵗ69/167,mb3.7/17,19C-9D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.10**	**354**	⇑*i*	**Pg**	**07 33 19.8**	**-0.5**
SVKR				Pmax		07 33 20.0	
	24μm,0.6s						
SVKR				*e*Sg	**Sg**	**07 33 21.4**	**-0.7**
SVKR				Smax		07 33 29.1	
	113μm,1.1s						
SVKR	**Severomuysk**	**0.10**	**354**	*i*PG	**Pg**	**07 33 19.8**	**-0.5**
SVKR				eS	**Sg**	**07 33 20.9**	**-1.2**
UKT	**Uakit**	**0.53**	**177**	⇑*i*Pg	**Pg**	**07 33 27.8**	**-0.3**
UKT				Pmax		07 33 30.2	
	466nm,0.6s						
UKT				*e*Sg	**Sg**	**07 33 35.7**	**+0.7**
UKT				Smax		07 33 52.1	
	3μm,0.4s						
UKT	**Uakit**	**0.53**	**177**	⇑*i*PG	**Pg**	**07 33 27.7**	**-0.3**
UKT				*e*		07 33 36.0	
UKT				pmax	pmax		
	comp=Z,409nm,0.2s						
UKT				smax	smax		
	comp=N,2μm,0.4s						
YOA	**Uoyan**	**1.05**	**277**	*e*Pg	**Pg**	**07 33 37.8**	**0.0**
YOA				Pmax		07 33 42.5	
	comp=N,2μm,0.4s						
YOA				*e*Sg	**Sg**	**07 33 52.0**	**+0.6**
YOA				*e*Sb	**Sn**	**07 33 56.3**	**+3.1**
YOA				max		07 34 01.5	
	comp=N,9μm,0.5s						
YOA	**Uoyan**	**1.05**	**277**	⇑*i*PG	**Pg**	**07 33 37.9**	**+0.1**
YOA				*i*		07 33 54.0	
YOA				pmax	pmax		
	comp=Z,1μm,0.2s						
YOA				smax	smax		
	comp=N,9μm,0.3s						
NLYR	**Nelyaty**	**1.28**	**67**	⇑*i*Pg	**Pn**	**07 33 39.4**	**-2.3**
NLYR				*e*Pb	**Pb**	**07 33 41.6**	**-0.3**
NLYR				max		07 33 41.9	
	comp=N,1μm,0.6s						
NLYR				*e*Sg	**Sg**	**07 33 55.5**	**-3.3**
NLYR				*e*		07 33 59.7	
NLYR				max		07 34 00.2	
	comp=N,5μm,0.9s						
NLYR	**Nelyaty**	**1.28**	**67**	⇑*i*PG	**Pn**	**07 33 39.4**	**-2.3**
NLYR				*e*		07 33 55.6	
NLYR				pmax	pmax		
	comp=Z,1μm,0.5s						
NLYR				smax	smax		
	comp=E,5μm,0.9s						
KMO	**Kumora**	**1.34**	**265**	⇑*i*Pg	**Pn**	**07 33 43.1**	**+0.5**
KMO				*e*Pb	**Pg**	**07 33 44.8**	**+1.3**
KMO				max		07 33 46.1	
	comp=E,813nm,0.5s						
KMO				*e*Sg	**Sn**	**07 34 01.3**	**+0.7**
KMO				*e*		07 34 05.6	
KMO				max		07 34 06.4	
	comp=E,10μm,1.1s						
KMO	**Kumora**	**1.34**	**265**	⇑*i*PG	**Pn**	**07 33 43.2**	**+0.6**
KMO				*e*		07 34 01.8	
KMO				pmax	pmax		
	comp=Z,10μm,0.3s						
KMO				smax	smax		
	comp=N,400nm,1.0s						
YLYR	**Ulyunkhan**	**1.79**	**231**	⇓*i*Pn	**Pb**	**07 33 51.1**	**+0.5**
YLYR				*e*Pg	**Pg**	**07 33 51.8**	**-0.2**
YLYR				*e*		07 33 52.9	
YLYR				max		07 33 53.4	
	comp=N,567nm,0.4s						
YLYR				*e*Sg	**Sg**	**07 34 16.1**	**+0.9**
YLYR				Smax		07 34 18.5	
	comp=N,3μm,0.5s						
YLYR	**Ulyunkhan**	**1.79**	**231**	⇓*i*PN	**Pb**	**07 33 51.2**	**+0.6**
YLYR				*e*		07 33 52.5	
YLYR				*e*S	**Sg**	**07 34 15.3**	**+0.1**
YLYR				*e*		07 34 16.4	
YLYR				pmax	pmax		
	comp=Z,572nm,0.3s						
YLYR				smax	smax		
	comp=E,3μm,0.4s						
BOD	**Bodaibo**	**1.82**	**7**	⇑*i*Pg	**Pn**	**07 33 49.3**	**+0.2**
BOD				*e*		07 33 51.1	
BOD				max		07 33 51.6	
	comp=E,1μm,0.9s						
BOD				*e*Sg	**Sn**	**07 34 12.3**	**0.0**
BOD				Smax		07 34 15.3	
	comp=E,3μm,0.9s						
BOD	**Bodaibo**	**1.82**	**7**	⇑*i*PN	**Pn**	**07 33 49.3**	**+0.2**
BOD				*e*		07 34 12.5	
BOD				pmax	pmax		
	comp=Z,1μm,0.5s						
BOD				smax	smax		
	comp=E,3μm,1.0s						
NIZ	**Nizh Angarsk**	**2.29**	**266**	*e*Pn	**Pb**	**07 33 58.1**	**-1.0**
NIZ				*e*Pg	**Pb**	**07 33 59.6**	**+0.5**
NIZ				*e*PgPg	**PnPn**	**07 34 03.8**	**+1.2**
NIZ				max		07 34 07.9	
	comp=E,254nm,0.7s						
NIZ				*e*		07 34 28.3	
NIZ				*e*Sg	**Sg**	**07 34 30.9**	**-0.2**
NIZ				Smax		07 34 33.0	
	comp=E,4μm,1.0s						
NIZ	**Nizh Angarsk**	**2.29**	**266**	*e*PN	**Pb**	**07 33 59.5**	**+0.5**
NIZ				*e*		07 34 30.0	
NIZ				pmax	pmax		
	comp=Z,254nm,0.8s						
NIZ				smax	smax		
	comp=N,4μm,1.0s						
CRS	**Chara**	**2.75**	**69**	*e*Pn	**Pn**	**07 34 02.0**	**+0.1**
CRS				*e*Pg	**Pb**	**07 34 06.5**	**-0.5**
CRS				Pmax		07 34 08.1	
	comp=N,2μm,1.0s						
CRS				*e*Sn	**Sn**	**07 34 33.7**	**-1.6**
CRS				*e*Sg	**Sb**	**07 34 41.7**	**+0.9**
CRS				Smax		07 34 44.7	
	comp=N,3μm,1.7s						
CRS	**Chara**	**2.75**	**69**	⇓*i*PN	**Pn**	**07 34 02.0**	**+0.1**
CRS				*e*		07 34 06.3	
CRS				*e*		07 34 40.9	
CRS				pmax	pmax		
	comp=Z,857nm,0.8s						
CRS				smax	smax		
	comp=E,3μm,1.5s						
SYVR	**Suvo**	**3.14**	**223**	*e*Pn	**Pn**	**07 34 09.3**	**+2.0**
SYVR				*e*Pg	**Pb**	**07 34 14.6**	**+0.9**
SYVR				Pmax		07 34 21.2	
	comp=E,175nm,1.0s						
SYVR				*e*Sg	**Sg**	**07 34 57.3**	**-1.3**
SYVR				Smax		07 35 11.2	
	comp=E,2μm,1.8s						
SYVR	**Suvo**	**3.14**	**223**	*e*PN	**Pn**	**07 34 09.3**	**+2.0**
SYVR				*e*		07 34 15.5	
SYVR				*e*		07 34 57.2	
SYVR				pmax	pmax		
	comp=Z,178nm,0.9s						
SYVR				smax	smax		
	comp=N,2μm,1.0s						
VTMR	**Vitim**	**3.48**	**351**	*e*Pn	**Pn**	**07 34 12.0**	**+0.1**
VTMR				*e*Pg	**Pb**	**07 34 18.9**	**-0.4**
VTMR				*e*PgPg	**PnPn**	**07 34 20.8**	**+1.7**
VTMR				*e*Sn	**Sn**	**07 34 52.4**	**-0.7**
VTMR				*e*Sg	**Sb**	**07 35 03.3**	**+1.7**
KHNR	**Khani**	**3.66**	**73**	*e*Pn	**Pn**	**07 34 14.0**	**-0.5**
KHNR				*e*Pg	**Pb**	**07 34 22.7**	**+0.1**
KHNR				*e*		07 34 44.5	
KHNR				*e*Sn	**Sn**	**07 34 55.8**	**-2.0**
KHNR				*e*Sg	**Sb**	**07 35 09.3**	**+2.2**
MXMB	**Maximikha**	**3.94**	**227**	*e*Pg	**Pb**	**07 34 29.9**	**+2.7**
MXMB				*e*		07 35 00.7	
MXMB				*e*Sg	**Sg**	**07 35 22.0**	**-2.1**
TUP	**Tupik**	**3.98**	**111**	⇓*i*Pn	**Pn**	**07 34 18.9**	**0.0**
TUP				*e*Pg	**Pb**	**07 34 28.4**	**+0.4**
TUP				Pmax		07 34 33.3	
	comp=N,102nm,0.5s						
TUP				*e*Sn	**Sn**	**07 35 04.7**	**-1.0**
TUP				*e*Sg	**Sb**	**07 35 19.8**	**+3.5**
TUP				*e*		07 35 25.2	
TUP				max		07 35 29.7	
	comp=N,948nm,1.1s						
TUP	**Tupik**	**3.98**	**111**	*e*PN	**Pn**	**07 34 18.9**	**0.0**
TUP				*e*		07 34 28.4	
TUP				*e*S	**Sn**	**07 35 04.8**	**-1.0**
TUP				*e*		07 35 19.9	
TUP				pmax	pmax		
	comp=Z,102nm,0.4s						
TUP				smax	smax		
	comp=N,948nm,1.0s						
CIT	**Chita**	**4.01**	**180**	*e*Pg	**Pb**	**07 34 30.9**	**+2.5**
CIT				Pmax		07 34 39.4	
	comp=N,127nm,0.1s						
CIT				*e*Sg	**Sg**	**07 35 23.1**	**-3.1**
CIT				Smax		07 35 33.3	
	comp=N,777nm,0.5s						
CIT	**Chita**	**4.01**	**180**	*e*PN	**Pn**	**07 34 21.4**	**+2.2**
CIT				*e*		07 34 31.1	
CIT				*e*S	**Sn**	**07 35 07.0**	**+0.7**
CIT				*e*		07 35 21.9	
CIT				pmax	pmax		
	comp=Z,171nm,0.7s						
CIT				smax	smax		
	comp=E,961nm,1.4s						
OGRR	**Ongureny**	**4.20**	**238**	*e*Pn	**Pn**	**07 34 24.9**	**+3.1**
OGRR				*e*Pg	**Pb**	**07 34 34.8**	**+3.1**
OGRR				Pmax		07 34 40.4	
	comp=E,75nm,1.2s						
OGRR				*e*		07 34 57.0	
OGRR				*e*Sn	**Sn**	**07 35 12.3**	**+1.3**
OGRR				*e*Sg	**Sg**	**07 35 30.1**	**-2.3**
OGRR				Smax		07 35 40.1	
	comp=E,435nm,1.1s						
OGRR	**Ongureny**	**4.20**	**238**	*e*PN	**Pn**	**07 34 24.9**	**+3.1**
OGRR				*e*		07 34 36.0	
OGRR				*e*		07 35 31.0	
OGRR				pmax	pmax		
	comp=Z,80nm,1.8s						
OGRR				smax	smax		
	comp=N,466nm,2.3s						
YKLR	**Yuktali**	**4.54**	**79**	*e*Pn	**Pn**	**07 34 26.4**	**0.0**
YKLR				*e*Pg	**Pb**	**07 34 37.3**	**-0.1**
YKLR				*e*		07 35 04.7	
YKLR				*e*Sg	**Sb**	**07 35 35.7**	**+3.6**
KELR	**Kotokel**	**4.58**	**227**	*e*Pn	**Pn**	**07 34 29.4**	**+2.3**
KELR				*e*Pg	**Pb**	**07 34 41.3**	**+3.1**
KELR				*e*Sn	**Sn**	**07 35 20.8**	**+0.4**
KELR				*e*Sg	**Sg**	**07 35 41.5**	**-3.2**
ZRHB	**Zarechye**	**5.12**	**230**	*e*Sg	**Sg**	**07 35 58.9**	**-3.1**
ZRHB				Smax		07 36 10.8	
	comp=N,1μm,1.0s						
TRG	**Tyrgan**	**5.34**	**235**	*e*Pn	**Pn**	**07 34 39.7**	**+2.2**
TRG				*e*		07 34 49.7	
TRG				*e*Pg	**Pb**	**07 34 54.8**	**+3.7**
TRG				Pmax		07 35 00.2	
	comp=N,35nm,1.1s						
TRG				*e*Sg	**Sg**	**07 36 03.6**	**-5.4**
TRG				Smax		07 36 21.2	
	comp=N,205nm,1.5s						
UUDB	**Ulan-Yde**	**5.43**	**222**	*e*Pn	**Pn**	**07 34 40.3**	**+1.5**
UUDB				*e*Pg	**Pb**	**07 34 56.5**	**+3.8**
UUDB				Pmax		07 35 15.3	
	comp=N,47nm,1.3s						
UUDB				*e*Sg	**Sg**	**07 36 08.2**	**-3.7**
UUDB				Smax		07 36 15.0	
	comp=N,900nm,1.6s						
FFNB	**Fofonovo**	**5.65**	**228**	*e*Pn	**Pn**	**07 34 44.3**	**+2.5**
FFNB				*e*		07 34 53.5	
FFNB				*e*Pg	**Pg**	**07 35 01.8**	**-4.1**
FFNB				*e*Sn	**Sn**	**07 35 47.9**	**+1.1**
FFNB				*e*Sg	**Sg**	**07 36 15.6**	**-3.4**
KAB	**Kabansk**	**5.70**	**229**	*e*Sg	**Sg**	**07 36 17.3**	**-3.1**
KAB				Smax		07 36 43.3	
	comp=N,1μm,1.8s						
KAB	**Kabansk**	**5.70**	**229**	*e*PN	**Pb**	**07 35 01.2**	**+4.0**
KAB				*e*		07 36 18.5	
KAB				pmax	pmax		
	comp=Z,81nm,0.3s						
KAB				smax	smax		
	comp=E,1μm,1.8s						
STDB	**Stepnoy Dvoret**	**5.73**	**231**	*e*Sg	**Sg**	**07 36 18.3**	**-3.3**
HRMR	**Khuramsha**	**5.89**	**224**	*e*Pn	**Pn**	**07 34 47.5**	**+2.4**
HRMR				*e*		07 34 57.9	
HRMR				*e*Pg	Pb	07 35 05.5	+5.0
HRMR				*e*		07 35 07.9	
HRMR				max		07 35 13.6	
	comp=E,96nm,0.7s						
HRMR				*e*Sg	**Sg**	**07 36 22.9**	**-3.8**
HRMR				Smax		07 36 39.1	
	comp=E,1μm,1.1s						
BGT	**Bolshoye Golou**	**6.25**	**234**	*e*Sn	**Sn**	**07 36 00.8**	**-0.5**
BGT				*e*Sg	**Sg**	**07 36 33.0**	**-5.0**
BGT				Smax		07 36 41.6	
	comp=E,154nm,1.5s						
IENR	**Iengra**	**6.31**	**83**	*e*Sg	**Sb**	**07 36 30.3**	**+7.1**
CLNS	**Chul'man**	**6.33**	**78**	*e*Pn	**Pn**	**07 34 50.7**	**-0.4**
CLNS				*e*Pg	**Pb**	**07 35 09.6**	**+1.6**
CLNS				*e*Sg	**Sb**	**07 36 31.4**	**+7.7**
KPC	**Khapcheranga**	**6.37**	**187**	*e*Pn	**Pn**	**07 34 52.2**	**+0.5**
KPC				*e*Pg	**Pb**	**07 35 12.7**	**+4.1**
KPC				Pmax		07 35 16.6	
	comp=E,10.0nm,0.6s						
KPC				*e*Sn	**Sn**	**07 36 03.8**	**-0.7**
KPC				*e*		07 36 21.7	
KPC				*e*Sg	**Sg**	**07 36 36.4**	**-5.6**
KPC				Smax		07 36 54.1	
	comp=E,620nm,1.3s						
KPC	**Khapcheranga**	**6.37**	**187**	*e*PN	**Pn**	**07 34 52.0**	**+0.3**
KPC				*e*		07 35 12.2	
KPC				*e*		07 36 35.0	
KPC				pmax	pmax		
	comp=Z,11nm,0.5s						
KPC				smax	smax		
	comp=E,620nm,1.3s						
LSTR	**Listvyanka**	**6.63**	**235**	*e*Pn	**Pn**	**07 34 57.9**	**+2.7**
LSTR				*e*		07 35 11.8	
LSTR				*e*Pg	Pb	07 35 18.4	+5.4
LSTR				Pmax		07 35 38.6	
	comp=E,20nm,1.9s						
LSTR				*e*Sg	**Sg**	**07 36 44.9**	**-5.4**
LSTR				Smax		07 36 52.6	
	comp=E,244nm,1.9s						
IRK	**Irkutsk**	**6.65**	**239**	*e*Sg	**Sg**	**07 36 46.0**	**-4.9**
IRK				Smax		07 37 06.2	
	comp=E,331nm,1.4s						
IRK	**Irkutsk**	**6.65**	**239**	*e*PG	Pb	07 35 18.2	+4.8
IRK				*e*		07 36 45.7	
IRK				pmax	pmax		
	comp=Z,149nm,0.2s						
IRK				smax	smax		
	comp=N,291nm,0.5s						
IVK	**Ivanovka**	**6.87**	**236**	*e*Pn	**Pn**	**07 35 00.8**	**+2.4**
IVK				*e*Pg	**Pb**	**07 35 21.4**	**+4.3**
IVK				Pmax		07 35 35.3	
	comp=N,30nm,1.7s						
IVK				*e*Sg	**Sg**	**07 36 51.7**	**-6.2**
IVK				Smax		07 37 05.7	
	comp=N,203nm,2.2s						
TLY	**Talaya**	**7.31**	**238**	Pn	**Pn**	**07 35 04.3**	**-0.2**
	comp=N,0.0nm,0.3s,baz=97,slow=10.0,SNR=1.7						
TLY				Lg	Lg	07 37 01.2	
	comp=N,0.0nm,0.3s,baz=255,slow=20,SNR=2.2						
TLY	**Talaya**	**7.31**	**238**	*e*Pn	**Pn**	**07 35 07.4**	**+2.9**
TLY				*e*Pg	Pb	07 35 30.7	+6.1
TLY				Pmax		07 36 06.8	
	comp=N,15nm,0.8s						
TLY				*e*		07 36 51.4	
TLY				*e*Sg	**Sg**	**07 37 05.8**	**-6.2**
TLY				Smax		07 37 22.3	
	comp=N,114nm,1.8s						
HIA	**Hailar**	**7.73**	**148**	*de*PN	**Pn**	**07 35 10.3**	**0.0**
ARS	**Arshan**	**7.75**	**243**	*e*Pn	**Pn**	**07 35 11.9**	**+1.2**
ARS				*e*Pg	Pb	07 35 38.4	+6.2
ARS				Pmax		07 36 03.7	
	comp=N,25nm,0.7s						
ARS				*e*Sn	**Sn**	**07 36 37.1**	**-1.4**
ARS				*e*Sg	**Sg**	**07 37 19.0**	**-7.3**
ARS				Smax		07 37 26.8	
	comp=N,409nm,0.8s						
ARS	**Arshan**	**7.75**	**243**	*e*PG	Pg	07 35 41.0	-5.0
ARS				*e*		07 37 19.0	
ARS				pmax	pmax		
	comp=Z,25nm,0.6s						
ARS				smax	smax		
	comp=E,410nm,0.7s						
ZEA	**Zeya**	**8.21**	**100**	*e*PN	Pn	07 35 24.1	+7.3
ZEA				*e*S	**Sn**	**07 36 43.3**	**-6.3**
ZEA				*e*		07 37 27.4	
ZEA				smax	smax		
	comp=N,40nm,0.6s						
ZAK	**Zakamensk**	**8.37**	**232**	*e*Sg	**Sg**	**07 37 39.1**	**-6.9**
ZAK				Smax		07 37 52.1	
	comp=N,125nm,2.0s						
ZAK	**Zakamensk**	**8.37**	**232**	*e*PN	**Pn**	**07 35 23.3**	**+4.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MOY	**Mondy**	**8.62**	**245**	*e*Pn	**Pn**	**07 35 25.0**	**+2.4**
MOY				max		07 36 12.7	
	comp=Z,34nm,1.4s						
MOY				*e*Sn	**Sn**	**07 36 58.7**	**-1.2**
MOY				*e*Sg	**Sg**	**07 37 46.8**	**-7.3**
MOY				Smax		07 37 54.8	
	comp=Z,185nm,1.8s						
MOY	**Mondy**	**8.62**	**245**	*e*PN	**Pn**	**07 35 25.7**	**+3.1**
MOY				*e*		07 35 56.3	
MOY				*e*S	**Sn**	**07 37 00.4**	**+0.5**
MOY				*e*		07 37 47.4	
MOY				pmax	pmax		
	comp=Z,17nm,0.7s						
MOY				smax	smax		
	comp=E,240nm,1.7s						
ORL	**Orlik**	**8.78**	**252**	*e*Pn	**Pn**	**07 35 26.3**	**+1.6**
ORL				*e*Pg	Pg	07 35 57.4	-8.2
ORL				Pmax		07 36 16.9	
	comp=E,24nm,1.5s						
ORL				*e*Sn	**Sn**	**07 37 02.0**	**-1.7**
ORL				*e*Sg	**Sg**	**07 37 50.9**	**-8.2**
ORL				Smax		07 38 00.6	
	comp=E,154nm,1.6s						
ORL	**Orlik**	**8.78**	**252**	*e*PN	**Pn**	**07 35 26.7**	**+2.0**
ORL				*e*		07 35 56.8	
ORL				*e*S	**Sn**	**07 37 04.6**	**+0.9**
ORL				*e*		07 37 50.7	
ORL				pmax	pmax		
	comp=Z,23nm,0.7s						
ORL				smax	smax		
	comp=N,154nm,2.0s						
ULN	**Ulaanbaatar**	**9.10**	**209**	*ce*P	**Pn**	**07 35 27.6**	**-1.6**
SONM	**Songino Array**	**9.31**	**211**	Pn	**Pn**	**07 35 33.7**	**+1.5**
	comp=N,0.4nm,0.3s,baz=19,slow=14,SNR=8.8						
SONM				Lg	Lg	07 38 05.0	
	comp=N,1.7nm,0.3s,baz=29,slow=22,SNR=4.1						
YAK	**Yakutsk**	**10.24**	**47**	Pn	**Pn**	**07 35 41.0**	**-3.5**
	baz=101,slow=2.7,SNR=1.2						
YAK				Sn	Sn	07 37 30.4	-8.9
	comp=N,0.3nm,0.3s,baz=112,slow=1.5,SNR=1.3						
YAK				Lg	Lg	07 38 28.6	
	comp=N,0.3nm,0.3s,baz=298,slow=22,SNR=9.3						
YAK	**Yakutsk**	**10.24**	**47**	*ce*P	**Pn**	**07 35 41.4**	**-3.2**
KLR	**Kul'dur**	**12.94**	**114**	Pn	**Pn**	**07 36 20.2**	**-1.4**
	comp=N,0.5nm,0.3s,baz=300,slow=14,SNR=8.5						
KLR				Lg	Lg	07 39 50.6	
	comp=N,0.4nm,0.3s,baz=262,slow=16,SNR=3.8						
KLR	**Kul'dur**	**12.94**	**114**	*c iP*	**Pn**	**07 36 21.8**	**+0.2**
BRCR	**Berchikul'**	**14.18**	**279**	*e*P	**Pn**	**07 36 38.5**	**+0.1**
ZALV	**Zalesovo Beam**	**16.58**	**275**	Pn	**Pn**	**07 37 11.5**	**+1.3**
	comp=N,0.2nm,0.3s,baz=51,slow=12,SNR=3.6						
ZALV				Lg	Lg	07 41 57.2	
	comp=N,0.0nm,0.3s,baz=69,slow=34,SNR=1.8						
USA0B	**Ussuriysk Arra**	**16.65**	**128**	⇓*e*P	**Pn**	**07 37 07.1**	**-3.9**
USRK	**Ussuriysk Ar.**	**16.65**	**128**	Lg	Lg	07 41 56.9	
	baz=320,slow=30,SNR=3.0						
DGZ	**Jazzator, Alta**	**16.94**	**259**	⇓*e*P	**Pn**	**07 37 16.1**	**+1.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**16.98**	**17**	Pn	**Pn**	**07 37 10.5**	**-4.5**
	comp=Z,0.2nm,0.3s,baz=121,slow=2.4,SNR=2.3						
TIXI				Sn	Sn	07 40 09.5	-14
	comp=Z,0.6nm,0.3s,baz=328,slow=21,SNR=7.1						
TIXI				Lg	Lg	07 42 06.8	
	comp=Z,0.3nm,0.3s,baz=110,slow=15,SNR=1.5						
TIXI	**Tiksi**	**16.98**	**17**	⇑*e*P	**Pn**	**07 37 10.2**	**-4.8**
NVS	**Novosibirsk**	**17.20**	**279**	*e*P	**Pn**	**07 37 18.2**	**+0.3**
NRIK	**Noril'sk**	**17.70**	**329**	P	Pn	07 37 17.1	-6.9
	comp=Z,0.8nm,0.3s,baz=114,slow=12,SNR=4.9						
NRIK				S	Sn	07 40 23.0	-18
	comp=Z,0.1nm,0.3s,baz=141,slow=13,SNR=2.5						
NRIK				Lg	Lg	07 42 22.1	
	baz=69,slow=14,SNR=0.9						
NRIK	**Noril'sk**	**17.70**	**329**	⇑*e*P	**Pn**	**07 37 20.3**	**-3.7**
NRIK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SEY	**Seymchan**	**20.61**	**55**	P	**P**	**07 37 56.5**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=254,slow=12,SNR=5.2						
SEY	**Seymchan**	**20.61**	**55**	⇑*e*P	**P**	**07 37 57.4**	**+0.6**
KURK	**Kurchatov**	**21.36**	**270**	P	**P**	**07 38 07.7**	**+2.7**
MK31	**Makanchi Array**	**21.42**	**258**	*de*P	**P**	**07 38 06.8**	**+1.1**
MKAR	**Makanchi Array**	**21.42**	**258**	P	**P**	**07 38 06.7**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=62,slow=8.7,SNR=18						
MKAR	**

comp=Z,2.6nm,0.9s,baz=68,slow=9.8,SNR=2.1
GEYT Alibeck 40.69 268 P **P** **07 40 59.1 +0.9**
comp=Z,1.5nm,0.3s,baz=30,slow=12,SNR=1.7
FINES FINESS Array B 42.48 315 P **P** **07 41 13.3 +0.7**
comp=Z,0.9nm,0.6s,baz=52,slow=9.9,SNR=5.9
FINES FINESS Array B 42.48 315 *i* P **P** **07 41 14.5 +1.9**
FINES pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 44.95 37 P **P** **07 41 32.6 +0.2**
comp=Z,0.9nm,0.9s,baz=306,slow=10.0,SNR=7.0
INK Inuvik 46.61 28 P **P** **07 41 44.9 -0.6**
comp=Z,1.7nm,0.9s,baz=315,slow=2.9,SNR=3.5
NOA NORSAR Array B 48.37 321 P **P** **07 41 59.1 -0.2**
comp=Z,0.5nm,0.8s,baz=53,slow=7.8,SNR=2.4
YKA Yellowknife Ar 56.01 25 P **P** **07 42 55.3 -0.6**
comp=Z,1.1nm,0.7s,baz=332,slow=6.8,SNR=10
YKA Yellowknife Ar 56.01 25 *i* P **P** **07 42 55.5 -0.4**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ESDC Sonseca Array 70.99 314 P **P** **07 44 36.0 +0.6**
comp=Z,0.8nm,0.8s,baz=23,slow=6.2,SNR=8.0
NVAR Mina Array Bea 76.11 40 P **P** **07 45 05.8 0.0**
comp=Z,0.3nm,0.6s,baz=323,slow=5.4,SNR=3.7
WRA Warramunga Arr 77.68 160 P **P** **07 45 14.3 0.0**
baz=350,slow=6.6,SNR=5.1
ASAR Alice Springs 81.23 161 P **P** **07 45 33.3 -0.4**
comp=Z,0.3nm,0.7s,baz=356,slow=5.1,SNR=4.2
TXAR Lajitas Array 89.25 32 P **P** **07 46 13.7 -0.4**
comp=Z,0.4nm,1.1s,baz=316,slow=2.5,SNR=1.6
TORD Torodi Ar. Bea 90.97 295 P **P** **07 46 21.5 -0.5**
comp=Z,0.5nm,0.7s,baz=20,slow=4.3,SNR=2.2

*IDC **03** 07:33:53.0±1.8,55.˚94N×113.˚34E,h0km,mb3.5/4, mb1 3.9/6,mb1mx3.5/55,mbtmp3.7/6,ML5.5/1,MS2.7/1, Ms1 2.7/1,ms1mx2.4/30,Error ellipse: s-maj=65.0km s-min=26.7km az=137.0*
*MOS **03** 07:33:52.0±1.9,55.˚86N×113.˚43E,h8km,mb3.8/1,Error ellipse: s-maj=23.0km s-min=11.1km az=73.1*
*BYKL **03** 07:33:56.5±0.1,56.˚10N×113.˚68E,h4km±3km*
ISC 03 07:33:54.9±0.9,**56.˚00N**±0.˚02×**113.˚50E**±0.˚02,**h9**km±6km, **n40,σ2s15/63,mb3.5/4,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.12**	**15**	*e*Pg		**Pg**		**07 33 57.6**	**-0.2**
SVKR				Pmax				07 33 58.8	
	14μm,0.2s								
SVKR				*e*Sg		**Sg**		**07 33 59.3**	**-0.5**
SVKR				Smax				07 34 07.2	
	65μm,0.7s								
SVKR	**Severomuysk**	**0.12**	**15**	*e*PG		**Pg**		**07 33 57.5**	**-0.2**
SVKR				pmax	pmax				
	comp=Z,9μm,0.6s								
UKT	**Uakit**	**0.52**	**172**	*e*Pg		**Pb**		**07 34 07.4**	**+1.1**
UKT				Pmax				07 34 08.4	
	comp=Z,449nm,0.2s								
UKT				*e*Sg		**Sb**		**07 34 15.0**	**+1.1**
UKT				Smax				07 34 24.5	
	comp=Z,2μm,0.3s								
YOA	**Uoyan**	**1.01**	**278**	*e*Pg		**Pn**		**07 34 16.2**	**+0.9**
YOA				Pmax				07 34 28.3	
	comp=Z,4μm,1.0s								
YOA				*e*Sg		**Sn**		**07 34 30.6**	**+1.0**
YOA				*e*				07 34 37.0	
YOA				max				07 34 47.4	
	comp=Z,6μm,0.9s								
KMO	**Kumora**	**1.30**	**266**	*e*Pg		**Pg**		**07 34 21.6**	**+1.7**
KMO				*e*				07 34 25.5	
KMO				max				07 34 26.5	
	comp=Z,1μm,0.5s								
KMO				*e*Sg		**Sg**		**07 34 39.6**	**+2.9**
KMO				*e*				07 34 43.4	
KMO				max				07 34 45.9	
	comp=Z,6μm,1.0s								
KMO	**Kumora**	**1.30**	**266**	*e*PG		**Pg**		**07 34 20.9**	**+1.0**
KMO				pmax	pmax				
	comp=Z,1μm,0.6s								
NLYR	**Nelyaty**	**1.32**	**67**	*e*Pg		**Pn**		**07 34 18.4**	**-1.3**
NLYR				*e*Pb		**Pb**		**07 34 20.3**	**+0.3**
NLYR				max				07 34 23.2	
	comp=Z,1μm,0.3s								
NLYR				*e*Sg		**Sb**		**07 34 34.0**	**-3.1**
NLYR				*e*Sb		**Sn**		**07 34 37.5**	**0.0**
NLYR				*e*				07 34 43.3	
NLYR				max				07 34 43.7	
	comp=Z,2μm,1.0s								
NLYR	**Nelyaty**	**1.32**	**67**	*e*PG		**Pn**		**07 34 18.6**	**-1.1**
NLYR				*e*				07 34 34.7	
NLYR				pmax	pmax				
	comp=Z,1μm,0.5s								
NLYR				smax	smax				
	comp=E,2μm,0.8s								
YLYR	**Ulyunkhan**	**1.75**	**231**	*e*Pg		**Pg**		**07 34 30.6**	**+2.2**
YLYR				Pmax				07 34 32.2	
	comp=E,511nm,0.4s								
YLYR				*e*Sg		**Sg**		**07 34 55.2**	**+4.2**
YLYR				Smax				07 35 02.7	
	comp=E,1μm,0.5s								
BOD	**Bodaibo**	**1.84**	**8**	*e*Pg		**Pn**		**07 34 28.1**	**+1.3**
BOD				Pmax				07 34 29.3	
	comp=E,2μm,1.0s								
BOD				*e*Sg		**Sn**		**07 34 50.3**	**0.0**
BOD				Smax				07 34 54.3	
	comp=E,3μm,0.9s								
BOD	**Bodaibo**	**1.84**	**8**	*e*PN		**Pn**		**07 34 27.8**	**+1.0**
BOD				*e*				07 34 50.3	
BOD				pmax	pmax				
	comp=Z,2μm,1.1s								
BOD				smax	smax				
	comp=E,3μm,0.8s								
NIZ	**Nizh Angarsk**	**2.24**	**266**	*e*Pg		**Pg**		**07 34 38.8**	**+0.9**
NIZ				Pmax				07 34 39.3	
	comp=E,503nm,0.5s								
NIZ				*e*Sn		**Sb**		**07 35 05.3**	**+1.8**
NIZ				*e*Sg		**Sg**		**07 35 09.3**	**+2.4**
NIZ				*e*				07 35 10.7	
NIZ				max				07 35 11.0	
	comp=E,1μm,0.6s								
CRS	**Chara**	**2.79**	**69**	*e*Pn		**Pn**		**07 34 40.3**	**+0.4**
CRS				*e*Pg		**Pb**		**07 34 43.8**	**-1.3**
CRS				Pmax				07 34 47.0	
	comp=E,2μm,1.1s								
CRS				*e*Sn		**Sn**		**07 35 12.3**	**-1.5**
CRS				*e*Sg		**Sb**		**07 35 19.3**	**-0.1**
CRS				Smax				07 35 22.2	
	comp=E,2μm,1.5s								
SYVR	**Suvo**	**3.10**	**222**	*e*Pn		**Pb**		**07 34 48.2**	**-2.0**
SYVR				*e*Pg		**Pg**		**07 34 54.7**	**+0.4**
SYVR				Pmax				07 34 59.1	
	comp=E,288nm,1.0s								
SYVR				*e*Sg		**Sg**		**07 35 37.1**	**+2.7**
SYVR				Smax				07 35 47.4	
	comp=E,796nm,1.4s								
VTMR	**Vitim**	**3.49**	**352**	Pg		**Pb**		**07 34 57.0**	**+0.2**
VTMR				*e*Sg		**Sb**		**07 35 41.5**	**+2.2**
KHNR	**Khani**	**3.71**	**73**	*e*Sg		**Sb**		**07 35 46.8**	**+1.1**
MXMB	**Maximikha**	**3.89**	**227**	*e*Sg		**Sg**		**07 36 00.9**	**+1.0**
CIT	**Chita**	**3.99**	**180**	*e*Pg		**Pg**		**07 35 10.6**	**-0.7**
CIT				Pmax				07 35 11.0	
	comp=E,126nm,0.2s								
CIT				*e*Sg		**Sg**		**07 36 03.7**	**+0.8**
CIT				Smax				07 36 09.8	
	comp=E,485nm,0.7s								
TUP	**Tupik**	**4.02**	**110**	*e*Pn		**Pn**		**07 34 57.9**	**+1.3**
TUP				*e*Pg		**Pb**		**07 35 07.4**	**+1.5**
TUP				Pmax				07 35 09.5	
	comp=E,181nm,0.6s								
TUP				*e*Sg		**Sb**		**07 35 58.5**	**+3.9**
TUP				*e*				07 36 03.6	
TUP				max				07 36 18.1	
	comp=E,656nm,1.4s								
TUP	**Tupik**	**4.02**	**110**	*e*PN		**Pn**		**07 34 58.0**	**+1.3**
TUP				*e*				07 35 07.8	
TUP				*e*				07 35 58.6	
TUP				pmax	pmax				
	comp=Z,172nm,0.6s								
TUP				smax	smax				
	comp=N,525nm,1.2s								
OGRR	**Ongureny**	**4.15**	**238**	*e*Pg		**Pg**		**07 35 13.9**	**-0.5**
OGRR				Pmax				07 35 16.5	
	comp=N,82nm,1.1s								
OGRR				*e*Sg		**Sg**		**07 36 09.2**	**+1.0**
OGRR				Smax				07 36 27.4	
	comp=N,256nm,1.8s								
KELR	**Kotokel**	**4.54**	**227**	*e*Sg		**Sg**		**07 36 21.5**	**+1.0**
YKLR	**Yuktali**	**4.58**	**79**	*e*Pg		**Pb**		**07 35 16.8**	**+1.4**
YKLR				*e*Sn		**Sn**		**07 35 56.2**	**-1.5**
YKLR				*e*Sg		**Sb**		**07 36 14.5**	**+3.8**
TRG	**Tyrgan**	**5.29**	**235**	*e*Sg		**Sg**		**07 36 44.1**	**-0.6**
TRG				max				07 36 59.1	
	comp=N,142nm,1.0s								
UUDB	**Ulan-Yde**	**5.39**	**222**	*e*Pg		**Pg**		**07 35 35.6**	**-2.5**
UUDB				Pmax				07 35 38.2	
	comp=N,57nm,0.9s								
UUDB				*e*Sg		**Sg**		**07 36 47.5**	**-0.3**
UUDB				Smax				07 36 53.3	
	comp=N,639nm,1.5s								
KPC	**Khapcheranga**	**6.34**	**187**	*e*Sg		**Sg**		**07 37 16.6**	**-1.8**
KPC				Smax				07 37 32.5	
	comp=N,374nm,1.2s								
IENR	**Iengra**	**6.36**	**83**	*e*Sg		**Sb**		**07 37 10.1**	**+8.3**
IVK	**Ivanovka**	**6.82**	**236**	Sg		**Sg**		**07 37 32.1**	**-1.6**
IVK				Smax				07 37 42.3	
	comp=N,164nm,1.4s								
TLY	**Talaya**	**7.26**	**238**	Lg		Lg		07 37 40.3	
	baz=308,slow=23,SNR=1.3								
TLY	**Talaya**	**7.26**	**238**	*e*Sg		**Sg**		**07 37 45.3**	**-2.5**
TLY				Smax				07 38 01.0	
	comp=N,100nm,1.2s								
ARS	**Arshan**	**7.71**	**243**	Pg		Pg		07 36 17.9	-4.4
ARS				Pmax				07 36 20.6	
	comp=N,22nm,0.6s								
ARS				*e*Sg		**Sg**		**07 37 58.3**	**-3.7**
ARS				Smax				07 38 07.2	
	comp=N,400nm,0.9s								
ZAK	**Zakamensk**	**8.32**	**232**	*e*Sg		**Sg**		**07 38 19.0**	**-2.8**
ZAK				Smax				07 38 30.9	
	comp=N,134nm,1.6s								
ORL	**Orlik**	**8.73**	**252**	*e*Pg		Pg		07 36 37.1	-4.8
ORL				Pmax				07 36 54.2	
	comp=N,24nm,1.7s								
ORL				*e*Sg		**Sg**		**07 38 30.6**	**-4.2**
ORL				Smax				07 38 44.1	
	comp=N,124nm,1.7s								
SONM	**Songino Array**	**9.28**	**211**	Pn		**Pn**		**07 36 06.3**	**-2.6**
	comp=N,0.4nm,0.3s,baz=23,slow=12,SNR=2.4								
SONM				Lg		Lg		07 38 48.9	
	comp=N,1.0nm,0.3s,baz=32,slow=29,SNR=1.0								
SONM				LR		LR		07 39 55.0	
	comp=N,43nm,19.7s,baz=54,slow=39								
TIXI	**Tiksi**	**17.01**	**17**	P		**Pn**		**07 37 53.0**	**+0.3**
	comp=N,0.8nm,0.3s,baz=238,slow=2.8,SNR=5.4								
KURK	**Kurchatov**	**21.32**	**270**	P		**P**		**07 38 41.1**	**-0.8**
KURBB	**Kurchatov Arra**	**21.41**	**270**	P		**P**		**07 38 41.1**	**-1.8**
	comp=N,1.0nm,0.5s,baz=60,slow=11,SNR=1.7								
ILAR	**Eielson Array**	**44.99**	**37**	P		**P**		**07 42 08.3**	**-1.8**
	comp=N,0.6nm,0.8s,baz=298,slow=7.7,SNR=3.5								
YKA	**Yellowknife Ar**	**56.05**	**25**	P		**P**		**07 43 33.5**	**0.0**
	comp=N,0.7nm,0.8s,baz=332,slow=6.8,SNR=5.4								
NVAR	**Mina Array Bea**	**76.16**	**39**	P		**P**		**07 45 45.1**	**+1.7**
	comp=N,0.2nm,0.4s,baz=348,slow=3.9,SNR=1.8								

IDC 03 07:35:12.2±6.8,**7.˚59S**×**124.˚28E,h562**km±58km,**mb2.9/1, mb1 3.1/4,mb1mx2.6/40,mbtmp3.9/4,Error ellipse: s-maj=212.7km s-min=107.5km az=66.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.67**	**193**	P		P		07 36 26.4	0.0
	30nm,0.3s,baz=97,slow=9.4,SNR=14								
BATI				S		S		07 37 27.1	+0.5
	7.1nm,0.3s,baz=165,slow=21,SNR=1.4								
WRA	**Warramunga Arr**	**15.68**	**143**	P		P		07 38 28.3	+0.1
	0.4nm,0.3s,baz=320,slow=11,SNR=19								
ASAR	**Alice Springs**	**18.46**	**151**	P		P		07 38 53.3	-0.5
	0.3nm,0.3s,baz=327,slow=8.9,SNR=18								
STKA	**Stephens Creek**	**29.05**	**149**	P		P		07 40 27.8	0.0
	1.0nm,0.5s,baz=331,slow=10,SNR=3.3								

*IDC **03** 07:41:40.0±4.7,8.˚35S×118.˚82E,h210km±43km,mb3.0/3, mb1 3.1/6,mb1mx2.9/36,mbtmp3.5/6,Error ellipse: s-maj=107.6km s-min=17.3km az=61.0*
*DJA **03** 07:41:43.6±0.7,8.˚5S×12.˚0E±.˚,h176km±9km,M3.4/6, MLv3.4/6*
ISC 03 07:41:39.1±0.8,**7.˚9S**±0.˚1×**119.˚60E**±0.˚07,**h200**km,**n15, σ1s66/15,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.86**	**158**	P		**Pn**		**07 42 15.5**	**-0.8**
PLAI	**Plampang**	**2.02**	**244**	P		**Pn**		**07 42 19.2**	**+1.4**
EDFI	**Ende, Flores**	**2.22**	**112**	P		**Pn**		**07 42 21.7**	**+1.6**
BASI	**Baing, Sumba**	**2.47**	**157**	P		**Pn**		**07 42 21.8**	**-0.9**
TWSI	**Taliwang, Sumb**	**2.81**	**253**	P		**Pn**		**07 42 28.2**	**+1.6**
KAPI	**Kappang**	**2.90**	**3**	P		Pn		07 42 35.6	+8.0
	5.7nm,0.3s,baz=192,slow=7.2,SNR=11								
BNSI	**Bone**	**3.54**	**8**	P		Pn		07 42 43.9	+8.6
FITZ	**Fitzroy Crossi**	**11.69**	**150**	P		**Pn**		**07 44 20.3**	**+0.1**
	0.1nm,0.3s,baz=319,slow=11,SNR=2.0								
FITZ				S		Sn		07 46 19.4	-11
	0.4nm,0.3s,baz=184,slow=17,SNR=9.4								
DBJI	**Dramaga**	**12.82**	**275**	P		**Pn**		**07 44 32.3**	**-2.2**
SGSI	**Sangihe**	**12.96**	**27**	P		**P**		**07 44 38.8**	**-0.7**
KSI	**Kapahiang**	**17.45**	**283**	P		**P**		**07 45 28.8**	**-0.3**
WRA	**Warramunga Arr**	**18.61**	**131**	P		**Pn**		**07 45 44.3**	**-0.2**
	0.3nm,0.3s,baz=302,slow=13,SNR=9.5								
WRA				S		**S**		**07 49 00.7**	**-2.7**
	0.0nm,0.3s,baz=333,slow=26,SNR=2.5								
ASAR	**Alice Springs**	**20.81**	**140**	P		**P**		**07 46 08.2**	**+2.9**
	1.1nm,0.4s,baz=315,slow=9.3,SNR=26								
ASAR				S		**S**		**07 49 45.4**	**-0.7**
	0.3nm,0.7s,baz=330,slow=26,SNR=4.2								
STKA	**Stephens Creek**	**31.41**	**142**	P		**P**		**07 47 43.2**	**+1.6**
	1.3nm,0.6s,baz=316,slow=7.0,SNR=3.6								
MKAR	**Makanchi Array**	**63.78**	**332**	P		**P**		**07 51 49.5**	**-0.3**
	0.1nm,0.4s,baz=133,slow=8.1,SNR=2.0								

*IDC **03** 07:42:43.5±2.2,55.˚98N×113.˚84E,h0km,mb3.0/3, mb1 3.2/4,mb1mx3.1/43,mbtmp3.1/4,ML2.9/1,Error ellipse: s-maj=61.6km s-min=24.0km az=131.0*
*BYKL **03** 07:42:46.0±0.1,56.˚07N×113.˚69E,h4km±2km*
ISC 03 07:42:45.5±0.6,**55.˚97N**±0.˚02×**113.˚57E**±0.˚02,**h10**km,**n38, σ2s59/91,mb3.1/3,5C-1D,East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.14**	**358**	⇑*i*Pg		**Pg**		**07 42 48.0**	**-0.8**
SVKR				*e*Sg		**Sg**		**07 42 50.3**	**-0.9**
SVKR				Pmax					
	11μm,0.1s								
SVKR				Smax					
	28μm,0.5s								
UKT	**Uakit**	**0.49**	**176**	⇑*i*Pg		**Pb**		**07 42 55.7**	**-0.5**
UKT				*e*Sg		**Sb**		**07 43 03.5**	**+0.1**
UKT				Pmax					
	128nm,0.2s								
UKT				Smax					
	600nm,0.3s								
YOA	**Uoyan**	**1.05**	**280**	*e*Pg		**Pb**		**07 43 06.1**	**+0.4**
YOA				*e*				07 43 09.5	
YOA				*e*Sg		**Sn**		**07 43 21.3**	**+0.4**
YOA				*e*				07 43 27.6	
YOA				max					
	488nm,0.2s								
YOA				max					
	3μm,0.3s								
NLYR	**Nelyaty**	**1.30**	**66**	⇑*i*Pg		**Pn**		**07 43 07.7**	**-2.0**
NLYR				*e*Pb		**Pb**		**07 43 09.7**	**-0.3**
NLYR				*e*Sg		**Sb**		**07 43 23.9**	**-2.9**
NLYR				*e*Sb		**Sg**		**07 43 27.8**	**+0.5**
NLYR				max					
	400nm,0.3s								
NLYR				max					
	1μm,0.6s								
KMO	**Kumora**	**1.33**	**267**	⇑*i*Pg		**Pg**		**07 43 11.1**	**0.0**
KMO				*e*				07 43 13.2	
KMO				*e*				07 43 16.3	
KMO				*e*Sg		**Sg**		**07 43 30.2**	**+1.8**
KMO				*e*				07 43 33.6	
KMO				max					
	209nm,0.3s								
KMO				max					
	1μm,1.0s								
YLYR	**Ulyunkhan**	**1.76**	**232**	⇓*i*Pn		**Pg**		**07 43 19.2**	**0.0**
YLYR				*e*Pg		**Pb**		**07 43 20.0**	**+2.2**
YLYR				*e*				07 43 26.0	
YLYR				*e*Sg		**Sg**		**07 43 44.1**	**+2.2**
YLYR				Pmax					
	168nm,0.3s								
YLYR				Smax					
	768nm,0.2s								
BOD	**Bodaibo**	**1.87**	**7**	⇑*i*Pg		**Pn**		**07 43 17.5**	**0.0**
BOD				*e*				07 43 19.3	
BOD				*e*				07 43 21.2	
BOD				*e*Sg		**Sn**		**07 43 40.6**	**-0.5**
BOD				Pmax					
	201nm,0.3s								
BOD				Smax					
	594nm,0.4s								
NIZ	**Nizh Angarsk**	**2.28**	**267**	*e*Pn		**Pb**		**07 43 26.2**	**-0.5**
NIZ				*e*Pg		**Pg**		**07 43 28.7**	**-0.4**
NIZ				*e*				07 43 30.5	
NIZ				*e*Sn		**Sb**		**07 43 54.8**	**-0.1**
NIZ				*e*Sg		**Sg**		**07 43 59.2**	**+0.6**
NIZ				max					
	50nm,0.5s								
NIZ				Smax					
	510nm,0.6s								
CRS	**Chara**	**2.77**	**68**	*e*Pn		**Pn**		**07 43 30.2**	**+0.3**
CRS				*e*Pg		**Pb**		**07 43 34.3**	**-0.8**
CRS				*e*Sn		**Sn**		**07 44 01.7**	**-1.7**
CRS				*e*Sg		**Sb**		**07 44 09.1**	**0.0**
CRS				Pmax					
	175nm,0.9s								
CRS				Smax					
	477nm,1.0s								
SYVR	**Suvo**	**3.11**	**223**	*e*Pn		**Pn**		**07 43 37.1**	**+2.6**
SYVR				*e*Pg		**Pg**		**07 43 42.9**	**-2.0**
SYVR				*e*PgPg		**PbPb**		**07 43 45.5**	**+1.6**
SYVR				*e*				07 44 06.8	
SYVR				*e*Sn		**Sb**		**07 44 15.7**	**-3.0**
SYVR				*e*Sg		**Sg**		**07 44 25.2**	**+0.1**
SYVR				max					
	45nm,0.6s								
SYVR				Smax					
	341nm,1.4s								
VTMR	**Vitim**	**3.52**	**351**	*e*Pg		**Pb**		**07 43 48.2**	**+0.4**
VTMR				*e*				07 44 11.8	
VTMR				*e*Sn		**Sn**		**07 44 21.6**	**-0.2**
VTMR				*e*Sg		**Sb**		**07 44 32.1**	**+1.6**
KHNR	**Khani**	**3.68**	**72**	*e*Pn		**Pn**		**07 43 42.3**	**-0.2**
KHNR				*e*Pg		**Pb**		**07 43 50.1**	**-0.5**
KHNR				*e*Sn		**Sn**		**07 44 24.2**	**-1.7**
KHNR				*e*Sg		**Sb**		**07 44 36.3**	**+1.0**
MXMB	**Maximikha**	**3.90**	**228**	*e*Pg		**Pg**		**07 43 58.6**	**-1.6**
MXMB				*e*Sn		**Sn**		**07 44 34.6**	**+3.3**
MXMB				*e*Sg		**Sg**		**07 44 50.6**	**-0.1**
MXMB				*e*				07 44 58.4	
CIT	**Chita**	**3.96**	**180**	*e*Sg		**Sg**		**07 44 51.7**	**-0.8**
CIT				Smax					
	182nm,0.3s								
TUP	**Tupik**	**3.97**	**110**	*e*Pn		**Pn**		**07 43 47.0**	**+0.5**
TUP				*e*Pg		**Pb**		**07 43 56.9**	**+1.3**
TUP				*e*Sn		**Sn**		**07 44 31.9**	**-1.2**
TUP				*e*Sg		**Sb**		**07 44 47.9**	**+4.2**
TUP				*e*				07 44 53.2	
TUP				Pmax					
	45nm,0.5s								
TUP				max					
	215nm,0.5s								
OGRR	**Ongureny**	**4.17**	**238**	*e*Pn		**Pn**		**07 43 52.9**	**+3.8**
OGRR				*e*Pg		**Pg**		**07 44 02.7**	**-2.6**
OGRR				*e*Sn		**Sn**		**07 44 39.5**	**+1.6**
OGRR				*e*Sg		**Sg**		**07 44 57.6**	**-1.7**
OGRR				Pmax					
	22nm,0.6s								
OGRR				Smax					
	89nm,0.8s								
KELR	**Kotokel**	**4.54**	**227**	*e*Sg		**Sg**		**07 45 09.5**	**-1.8**
YKLR	**Yuktali**	**4.55**	**79**	*e*Pn		**Pn**		**07 43 54.6**	**+0.3**
YKLR				*e*Pg		**Pb**		**07 44 05.4**	**+0.1**
YKLR				*e*				07 44 35.2	
YKLR				*e*Sn		**Sn**		**07 44 45.6**	**-1.6**
YKLR				*e*Sg		**Sb**		**07 45 03.5**	**+3.3**
YKLR				*e*				07 45 25.0	
ZRHB	**Zarechye**	**5.09**	**230**	*e*Sg		**Sg**		**07 45 28.3**	**-0.3**
ZRHB				Smax					
	244nm,1.6s								
TRG	**Tyrgan**	**5.31**	**236**	*e*Pn		**Pn**		**07 44 08.1**	**+3.3**
TRG				*e*Pg		**Pg**		**07 44 23.4**	**-3.7**
TRG				*e*Sn		**Sn**		**07 45 08.2**	**+2.2**
TRG				*e*Sg		**Sg**		**07 45 33.4**	**-2.3**
TRG				*e*				07 45 35.7	
TRG				Pmax					
	11nm,0.7s								
TRG				max					
	48nm,0.8s								
UUDB	**Ulan-Yde**	**5.39**	**223**	*e*Pg		**Pg**		**07 44 25.2**	**-3.5**
UUDB				*e*Sn		**Sn**		**07 45 10.8**	**+2.8**
UUDB				*e*Sg		**Sg**		**07 45 36.1**	**-2.4**
UUDB				Pmax					
	30nm,1.5s								
UUDB				Smax					
	172nm,1.5s								
FFNB	**Fofonovo**	**5.62**	**228**	*e*Pn		**Pn**		**07 44 12.2**	**+3.2**
FFNB				*e*Pg		**Pg**		**07 44 29.7**	**-3.3**
FFNB				*e*Sn		**Sn**		**07 45 15.2**	**+1.6**
FFNB				*e*Sg		**Sg**		**07 45 43.3**	**-2.4**
KAB	**Kabansk**	**5.66**	**229**	*e*Sg		**Sg**		**07 45 45.9**	**-1.2**
KAB				Smax					
	250nm,1.0s								
STDB	**Stepnoy Dvoret**	**5.70**	**231**	*e*Sg		**Sg**		**07 45 45.0**	**-3.3**
HRMR	**Khuramsha**	**5.86**	**225**	*e*Pn		**Pn**		**07 44 15.6**	**+3.3**
HRMR				*e*Pg		**Pg**		**07 44 34.0**	**-3.5**
HRMR				*e*Sn		**Sn**		**07 45 22.2**	**+2.8**
HRMR				*e*Sg		**Sg**		**07 45 51.5**	**-1.8**
HRMR				Pmax					
	23nm,0.6s								
HRMR				Smax					
	226nm,0.7s								
BGT	**Bolshoye Golou**	**6.21**	**234**	*e*Sg		**Sg**		**07 46 02.3**	**-2.5**
BGT				Smax					
	64nm,1.4s								
KPC	**Khapcheranga**	**6.32**	**187**	*e*Sg		**Sg**		**07 46 05.0**	**-3.2**
KPC				*e*				07 46 18.9	
KPC				max					
	128nm,1.0s								
IENR	**Iengra**	**6.32**	**83**	*e*Sg		**Sb**		**07 45 58.2**	**+7.0**
CLNS	**Chul'man**	**6.35**	**77**	*e*Sg		**Sg**		**07 46 00.6**	**-8.4

MKAR Makanchi Array 21.41 258 P **P** **07 47 34.5 +1.3**
0.3nm,0.7s,baz=52,slow=9.3,SNR=2.1
KURBB Kurchatov Arra 21.45 270 P **P** **07 47 34.5 +0.9**
0.5nm,0.5s,baz=62,slow=12,SNR=1.8
YKA Yellowknife Ar 56.05 25 P **P** **07 52 22.8 -1.2**
0.2nm,0.6s,baz=332,slow=6.6,SNR=5.1

*MAN **03** 07:50:56.5, 13°.24N × 124°.35E, h1km, MS2.9*
*IDC **03** 07:50:59.5±2.2, 11°.34N × 121°.10E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/42, mbtmp3.2/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/21, Error ellipse: s-maj=279.3km s-min=24.3km az=63.0*
ISC 03 07:50:58.2±1.1, 13°.08N±0°.06 × 124°.1E±0°.1, h10km, n13, σ1s77/14, mb3.3/4, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCSP	**San Jose Seism**	**0.79**	**316**	*e*P		**Pg**	**07 51 13.8**	**+0.5**
SCSP				*e*S		**Sn**	**07 51 28.7**	**+1.6**
GQP	**Guinayangan**	**1.79**	**297**	*e*P		**Pg**	**07 51 32.8**	**+0.3**
JCNP	**Jose Panganiba**	**1.80**	**312**	*e*P		**Pn**	**07 51 30.2**	**+1.0**
JCNP				*e*S		**Sg**	**07 51 55.4**	**-0.7**
RCP	**Roxas**	**2.00**	**221↑**	*e*P		**Pg**	**07 51 37.0**	**+0.5**
LQP	**Lukban**	**2.67**	**293↑**	*e*P		**Pg**	**07 51 49.4**	**-0.1**
MSLP	**Maasin**	**3.03**	**165**	*e*P		**Pn**	**07 51 48.8**	**+2.6**
MSLP				*e*S		**Sb**	**07 52 30.4**	**+1.1**
TGY	**Tagaytay City**	**3.22**	**289↓**	*e*P		Pn	07 51 39.3	-10
CNOP	**Candoni, Negro**	**3.53**	**204**	*e*P		**Pn**	**07 51 53.4**	**+0.3**
CNOP				*e*S		Sn	07 52 19.6	-15
PMG	**Port Moresby**	**32.01**	**133**	LR		LR	08 12 50.0	
	comp=Z,60nm,18.1s,baz=65,slow=40							
WRA	**Warramunga Arr**	**34.34**	**163**	P		**P**	**07 57 42.2**	**-3.1**
	0.3nm,0.8s,baz=330,slow=11,SNR=2.3							
ASAR	**Alice Springs**	**37.77**	**165**	P		**P**	**07 58 11.2**	**-3.4**
	0.5nm,1.0s,baz=343,slow=7.5,SNR=2.0							
MKAR	**Makanchi Array**	**48.50**	**322**	P		**P**	**07 59 42.2**	**+0.9**
	0.6nm,0.7s,baz=118,slow=8.7,SNR=6.0							
KURBB	**Kurchatov Arra**	**52.55**	**325**	P		**P**	**08 00 12.2**	**+0.4**
	0.3nm,0.8s,baz=126,slow=7.6,SNR=2.2							

*ISK **03** 07:56:25.2, 37°.17N × 30°.39E, h8km, ML2.5/7*
*DDA **03** 07:56:25.8, 37°.14N × 30°.45E, h6km ± 4km, ML2.1*
ISC 03 07:56:25.9±1.1, 37°.15N±0°.02 × 30°.42E±0°.03, h4km±9km, n18, σ1s77/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KORT	**Korkueli**	**0.15**	**200**	PG		**Pg**	**07 56 28.6**	**-0.4**
KORT				SG		**Sg**	**07 56 31.8**	**+0.8**
BUCA	**Burdur, Bucak-**	**0.21**	**32**	*i* P		**Pg**	**07 56 29.7**	**-0.4**
BUCA				*i* S		**Sg**	**07 56 33.7**	**+0.8**
BUCA				IAML			07 56 35.0	
	comp=E,474nm,0.4s							
BUCA				IAML			07 56 37.0	
	comp=N,466nm,0.6s							
ANTB	**Antalya**	**0.31**	**142**	PG		**Pb**	**07 56 32.7**	**-1.3**
ANTB				SG		**Sb**	**07 56 37.8**	**-1.6**
BCK	**Bucak**	**0.34**	**24**	PG		**Pg**	**07 56 32.2**	**-0.4**
BCK				SG		**Sg**	**07 56 36.9**	**-0.2**
ELL	**Elmali**	**0.57**	**226**	PG		**Pg**	**07 56 36.8**	**0.0**
ELL				SG		**Sg**	**07 56 45.2**	**+1.0**
BRDR	**BURDUR-Merkez**	**0.62**	**333**	*i* P		**Pg**	**07 56 37.3**	**-0.5**
BRDR				*i* S		**Sb**	**07 56 48.1**	**-0.4**
BRDR				IAML			07 56 49.0	
	comp=E,134nm,0.4s							
BRDR				IAML			07 56 51.0	
	comp=N,105nm,0.5s							
ISP	**Isparta**	**0.68**	**7**	PG		**Pg**	**07 56 38.8**	**-0.2**
GOLH	**Golhisar**	**0.69**	**278**	*i* P		**Pg**	**07 56 39.0**	**-0.2**
GOLH				*i* S		**Sn**	**07 56 51.6**	**-2.2**
GOLH				IAML			07 56 54.0	
	comp=E,111nm,0.5s							
GOLH				IAML			07 56 55.0	
	comp=N,170nm,0.4s							
AKUM	**Antalya-Kumluc**	**0.82**	**184**	*i* P		**Pb**	**07 56 42.3**	**-0.5**
AKUM				*i* S		**Sn**	**07 57 00.4**	**+3.5**
AKUM				IAML			07 57 07.0	
	comp=N,62nm,0.9s							
KEPZ	**Antalya-Kepez**	**0.98**	**104**	*i* P		**Pb**	**07 56 44.6**	**-0.8**
KEPZ				*i* S		**Sn**	**07 57 03.2**	**+2.3**
AKAS	**Kas**	**1.12**	**216**	PN		**Pg**	**07 56 47.1**	**-0.3**
KZIL	**AFYON_Kizioren**	**1.13**	**349**	*i* P		**Pg**	**07 56 46.6**	**-1.0**
KZIL				*i* S		**Sn**	**07 57 04.6**	**-0.1**
KZIL				IAML			07 57 10.0	
	comp=E,34nm,0.8s							
FETY	**Fethiye**	**1.18**	**245**	PN		**Pg**	**07 56 48.0**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.24**	**285**	*i* P		**Pg**	**07 56 49.0**	**-0.7**
TAVA				*i* S		**Sn**	**07 57 07.9**	**+0.5**
TAVA				IAML			07 57 08.0	
	comp=N,33nm,0.6s							
TAVA				IAML			07 57 12.0	
	comp=E,54nm,0.6s							
YVAC	**Isparta, Yalva**	**1.30**	**30**	*i* P		**Pg**	**07 56 51.1**	**+0.3**
YVAC				*i* S		**Sn**	**07 57 12.6**	**+3.7**
KHAL	**Karahalli**	**1.43**	**329**	*i* P		**Pn**	**07 56 51.4**	**-1.3**
KHAL				*i* S		**Sg**	**07 57 16.3**	**+4.5**
KHAL				IAML			07 57 18.0	
	comp=N,20nm,0.9s							
KHAL				IAML			07 57 18.0	
	comp=E,28nm,0.9s							
DALY	**Dalyan (Mula)**	**1.45**	**257**	*i* P		**Pg**	**07 56 53.3**	**-0.4**
DALY				*i* S		**Sg**	**07 57 16.6**	**+4.1**
DALY				IAML			07 57 20.0	
	comp=E,35nm,0.6s							
DALY				IAML			07 57 25.0	
	comp=N,41nm,0.5s							
YER	**Yerkesik**	**1.71**	**270**	PN		**Pn**	**07 56 55.4**	**-1.1**

WEL 03 07:58:47.6±1.2, 33°S±30°.× 18°.0W±3°.4, h304km±41km, M3.8/9, mB4.1/2, ML3.4/1, MLv3.8/9, Mw(mB)3.2/2, Error ellipse: s-maj=0.1km s-min=0.0km az=129.5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.32**	**199**	P		Pn	07 59 59.1	+1.6
MXZ				S		S	08 00 52.9	-0.6
WMGZ	**Waiomatatini S**	**4.54**	**197**	P		Pn	07 59 59.7	-0.2
WMGZ				S		S	08 00 58.5	+0.6
HAZ	**Te Kaha**	**4.66**	**203**	P		Pn	08 00 01.4	+0.2
HAZ				S		S	08 01 01.6	+1.3
PKGZ	**Pakihiroa**	**4.69**	**200**	P		Pn	08 00 01.1	-0.6
PKGZ				S		S	08 01 01.5	+0.3
PUZ	**Puketiti**	**4.81**	**197**	P		Pn	08 00 02.4	-0.6
PUZ				S		S	08 01 04.3	+0.6
RUGZ	**Raukumara Rang**	**4.88**	**203**	P		Pn	08 00 04.2	+0.3
RUGZ				S		S	08 01 03.4	-1.9
TWGZ	**Tauwhareparae**	**4.99**	**199**	S		S	08 01 09.2	+1.9
MWZ	**Matawai**	**5.27**	**202**	P		Pn	08 00 07.8	-0.4
MWZ				S		S	08 01 13.0	-0.2
TKGZ	**Te Karaka**	**5.27**	**199**	P		Pn	08 00 07.5	-0.8
TKGZ				S		S	08 01 13.7	+0.5
URZ	**Urewera**	**5.34**	**206**	P		Pn	08 00 09.2	+0.1
URZ				S		S	08 01 15.2	+0.5
MUGZ	**Murupara**	**5.66**	**207**	P		Pn	08 00 13.1	+0.2
MUGZ				S		S	08 01 22.6	+1.0
RTZ	**Ruatahuna**	**5.70**	**205**	P		Pn	08 00 13.3	-0.2

IDC 03 08:06:27.4±4.4, 6°.08S × 150°.12E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/31, mbtmp3.3/3, Error ellipse: s-maj=152.1km s-min=53.6km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.62**	**227**	P		P	08 11 09.1	+0.6
	0.4nm,0.7s,baz=51,slow=9.6,SNR=2.4							
ASAR	**Alice Springs**	**23.43**	**220**	P		P	08 11 38.5	0.0
	0.6nm,0.9s,baz=52,slow=9.5,SNR=5.8							
FITZ	**Fitzroy Crossi**	**26.71**	**241**	P		P	08 12 08.4	-0.2
	1.4nm,0.9s,baz=64,slow=7.8,SNR=2.5							
TORD	**Torodi Ar. Bea**	**148.12**	**285**	PKPbc		PKPbc	08 26 15.7	-0.6
	0.2nm,0.4s,baz=105,slow=2.1,SNR=2.7							

IDC 03 08:06:30.1±2.7, 54°.24N × 87°.16E, h0km, mb1 3.1/2, mb1mx3.0/43, mbtmp3.1/2, ML2.9/2, Error ellipse: s-maj=22.9km s-min=16.5km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.41**	**259**	*i*			08 14 02.0	
	baz=76,slow=319,SNR=2.8							
ZALV	**Zalesovo Beam**	**1.41**	**259**	Pg		Pn	08 06 55.4	-1.7
	2.9nm,0.3s,baz=73,slow=17,SNR=24							
ZALV				Lg		Lg	08 07 15.8	
	2.2nm,0.3s,baz=76,slow=27,SNR=8.2							
KURBB	**Kurchatov Arra**	**6.40**	**239**	Pn		Pn	08 08 06.8	+1.2
	0.1nm,0.3s,baz=57,slow=14,SNR=9.4							
KURBB				Sn		Sn	08 09 18.4	-0.9
	0.0nm,0.3s,baz=345,slow=20,SNR=0.9							
KURBB				Lg		Lg	08 09 51.0	
	0.0nm,0.3s,baz=50,slow=32,SNR=2.2							
MKAR	**Makanchi Array**	**8.08**	**205**	Pn		Pn	08 08 29.7	+1.0
	0.2nm,0.3s,baz=26,slow=14,SNR=10							
MKAR				Sn		Sn	08 09 59.5	-1.0
	0.1nm,0.3s,baz=27,slow=26,SNR=3.1							
MKAR				Lg		Lg	08 10 39.3	
	0.1nm,0.3s,baz=23,slow=27,SNR=3.2							

*IDC **03** 08:08:39.3±5.8, 24°.08S × 69°.44W, h78km±41km, mb3.3/5, mb1 3.6/7, mb1mx3.5/26, mbtmp3.7/7, ML3.9/2, MS2.6/1, Ms1 2.7/1, ms1mx2.3/11, Error ellipse: s-maj=51.8km s-min=28.2km az=26.0*
*GUC **03** 08:08:39.6±0.7, 23°.97S × 69°.55W, h85km±5km, ML3.7*
ISC 03 08:08:39.8±0.8, 23°.97S±0°.04 × 69°.54W±0°.06, h80km±8km, n30, σ0s61/31, mb3.5/5, 5C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB15	**IPOC Station P**	**0.76**	**5↓**	*i*P		**Pn**	**08 08 56.3**	**+0.1**
PB15				*i* S		**Sn**	**08 09 08.8**	**+0.3**
PB14	**IPOC Station P**	**1.03**	**230↑**	*i*P		**Pn**	**08 08 59.5**	**+0.1**
PB14				*i* S		**Sn**	**08 09 14.3**	**+0.2**
PB14				IAML			08 09 17.9	
	comp=E,2μm,0.7s							
PB10	**IPOC Station P**	**1.03**	**296↑**	*i*P		**Pn**	**08 08 59.4**	**+0.2**
PB10				*i* S		**Sn**	**08 09 13.8**	**+0.2**
PB10				IAML			08 09 16.5	
	comp=N,3μm,0.4s							
GO02	**Mina Guanaco**	**1.19**	**182↑**	*i*P		**Pn**	**08 09 01.9**	**+0.5**
GO02				*i* S		**Sn**	**08 09 18.6**	**+0.9**
PB06	**IPOC Station P**	**1.25**	**359↑**	*i*P		**Pn**	**08 09 02.3**	**+0.2**
PB06				*i* S		**Sn**	**08 09 19.1**	**+0.3**
PB06				IAML			08 09 20.3	
	comp=E,2μm,0.1s							
PB05	**IPOC Station P**	**1.26**	**331↓**	*i*P		**Pn**	**08 09 02.2**	**0.0**
PB05				*i* S		**Sn**	**08 09 19.6**	**+0.6**
PB05				IAML			08 09 21.2	
	comp=E,3μm,0.3s							
LVC	**Limon Verde**	**1.47**	**23**	P		**Pn**	**08 09 05.6**	**+0.5**
	comp=E,35nm,0.3s,baz=166,slow=8.8,SNR=390							
LVC				S		**Sn**	**08 09 25.0**	**+0.9**
	comp=E,265nm,0.3s,baz=355,slow=20,SNR=23							
LVC	**Limon Verde**	**1.47**	**23**	*e*P		**Pn**	**08 09 05.5**	**+0.4**
LVC				*e*S		**Sn**	**08 09 24.9**	**+0.9**
PB04	**IPOC Station P**	**1.72**	**341↓**	*i*P		**Pn**	**08 09 07.7**	**-0.4**
PB04				*i* S		**Sn**	**08 09 30.1**	**+0.5**
PB04				IAML			08 09 34.1	
	comp=E,925nm,0.2s							
PB03	**IPOC Station P**	**1.92**	**354↓**	*i*P		**Pn**	**08 09 10.6**	**-0.2**
PB03				*i* S		**Sn**	**08 09 34.3**	**+0.1**
PB03				IAML			08 09 39.8	
	comp=E,859nm,0.3s							
PB09	**IPOC Station P**	**2.18**	**7**	*e*P		**Pn**	**08 09 15.1**	**+0.9**
PB09				IAML			08 09 49.0	
	comp=E,884nm,0.5s							
PB07	**IPOC Station P**	**2.25**	**352↓**	*i*P		**Pn**	**08 09 14.9**	**-0.3**
PB07				IAML			08 09 51.4	
	comp=E,742nm,0.5s							
AC01	**Pan de Azucar**	**2.38**	**204↑**	*i*P		**Pn**	**08 09 16.1**	**-0.6**
PB01	**IPOC Station P**	**2.91**	**1↓**	*i*P		**Pn**	**08 09 23.7**	**-0.3**
LPAZ	**La Paz**	**7.75**	**10**	P		**Pn**	**08 10 30.4**	**-0.1**
	comp=E,0.2nm,0.3s,baz=191,slow=5.7,SNR=8.8							
LPAZ				LR		LR	08 14 28.6	
	comp=E,46nm,20.4s,baz=265,slow=44							
SIV	**San Ignacio**	**11.23**	**47**	P		**Pn**	**08 11 16.0**	**-1.5**
	comp=E,4.4nm,0.3s,baz=242,slow=9.9,SNR=118							
SIV				S		Sn	08 13 10.9	-10
	comp=E,0.2nm,0.3s,baz=222,slow=14,SNR=1.6							
H03N1	**Juan Fernandez**	**12.51**	**219**	T		T	08 23 27.2	
	baz=43,slow=72,SNR=34							
H03N2	**Juan Fernandez**	**12.52**	**219**	T		T	08 23 36.2	
	baz=43,slow=72,SNR=34							
H03N3	**Juan Fernandez**	**12.53**	**219**	T		T	08 23 26.1	
	baz=43,slow=72,SNR=31							
BDFB	**Brasilia**	**21.86**	**72**	P		**P**	**08 13 25.1**	**-1.1**
	comp=E,0.7nm,0.3s,baz=220,slow=11,SNR=2.1							
TXAR	**Lajitas Array**	**62.33**	**326**	P		**P**	**08 18 54.4**	**+0.4**
	comp=E,0.2nm,0.7s,baz=147,slow=11,SNR=2.3							
PDAR	**Pinedale Array**	**75.96**	**331**	P		**P**	**08 20 19.1**	**+0.9**
	comp=E,0.1nm,0.5s,baz=116,slow=8.1,SNR=1.7							
TORD	**Torodi Ar. Bea**	**78.73**	**70**	P		**P**	**08 20 33.9**	**-0.2**
	comp=E,1.2nm,0.5s,baz=258,slow=5.0,SNR=13							
YKA	**Yellowknife Ar**	**93.31**	**341**	P		**P**	**08 21 45.5**	**+0.3**
	comp=E,0.3nm,0.7s,baz=141,slow=5.0,SNR=5.9							
H11S2	**WAKE ISLAND Hyd**	**27.57**	**275**	T		T	10 47 36.3	
	baz=107,slow=75,SNR=8.5							
H11S1	**WAKE ISLAND Hyd**	**27.58**	**275**	T		T	10 47 37.0	
	baz=107,slow=75,SNR=5.9							
H11S3	**WAKE ISLAND Hyd**	**27.58**	**275**	T		T	10 47 36.9	
	baz=107,slow=75,SNR=5.5							
H11N3	**WAKE ISLAND Hyd**	**27.72**	**277**	T		T	10 47 43.1	
	baz=107							
H11N1	**WAKE ISLAND Hyd**	**27.73**	**277**	T		T	10 47 50.2	
	baz=107							
H11N2	**WAKE ISLAND Hyd**	**27.73**	**277**	T		T	10 47 46.7	
	baz=107							

*BJI **03** 08:16:19.9±0.0, 56°.29N × 113°.93E, h7km, mB4.5/4, mb4.3/9, Ms4.2/2*
*MOS **03** 08:16:22.3±1.1, 56°.06N × 113°.77E, h6km, mb4.1/6, Error ellipse: s-maj=8.5km s-min=5.7km az=73.8*
*IDC **03** 08:16:22.7±0.7, 56°.01N × 113°.70E, h0km, mb3.8/16, mb1 4.0/19, mb1mx3.9/49, mbtmp3.8/19, ML3.2/2, MS3.5/12, Ms1 3.5/12, ms1mx3.3/42, Error ellipse: s-maj=17.8km s-min=16.5km az=16.0*
*BYKL **03** 08:16:24.0±0.1, 56°.08N × 113°.71E, h4km±2km*
ISC 03 08:16:23.7±0.8, 56°.09N±0°.02 × 113°.70E±0°.02, h8km±5km, n108, σ2s77/176, mb4.0/19, MS3.4/8, 17C-11D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SVKR	**Severomuysk**	**0.08**	**290↑**	*i*Pg		**Pg**	**08 16 26.0**	**+0.1**
SVKR				Pmax			08 16 26.6	
	23μm,0.3s							
SVKR				*e*Sg		**Sg**	**08 16 28.2**	**+0.8**
SVKR				Smax			08 16 35.5	
	161μm,0.9s							
SVKR	**Severomuysk**	**0.08**	**290**	*e*PG		**Pg**	**08 16 26.0**	**+0.1**
SVKR				*e*S		**Sg**	**08 16 29.1**	**+1.7**
UKT	**Uakit**	**0.60**	**184↑**	*i*Pg		**Pg**	**08 16 34.3**	**-1.0**
UKT				Pmax			08 16 39.6	
	375nm,0.3s							
UKT				*e*Sg		**Sg**	**08 16 42.9**	**-0.3**
UKT				Smax			08 16 49.6	
	3μm,0.5s							
UKT	**Uakit**	**0.60**	**184↑**	*i*PG		**Pg**	**08 16 34.4**	**-0.9**
UKT				*e*			08 16 43.6	
UKT				pmax	pmax			
	comp=Z,146nm,0.2s							
UKT				smax	smax			
	comp=N,1μm,0.2s							
YOA	**Uoyan**	**1.11**	**273**	*e*Pg		**Pg**	**08 16 43.6**	**-1.3**
YOA				*e*Pg		**Pg**	**08 16 44.5**	**-0.4**
YOA				max			08 16 50.0	
	comp=N,2μm,0.4s							
YOA				*e*Sg		**Sg**	**08 16 58.5**	**-0.8**
YOA				*e*Sb		**Sn**	**08 17 02.3**	**+1.3**
YOA				max			08 17 43.2	
	comp=N,11μm,2.4s							
YOA	**Uoyan**	**1.11**	**273**	*e*PG		**Pg**	**08 16 44.5**	**-0.4**
YOA				*e*			08 17 02.3	
YOA				pmax	pmax			
	comp=Z,1μm,0.3s							
YOA				smax	smax			
	comp=E,10μm,0.6s							
NLYR	**Nelyaty**	**1.19**	**69↓**	*i*Pg		**Pg**	**08 16 45.8**	**-0.7**
NLYR				*e*Pb		**Pn**	**08 16 47.9**	**+1.2**
NLYR				max			08 16 50.0	
	comp=E,1μm,0.4s							
NLYR				*e*Sg		**Sg**	**08 17 01.5**	**-0.4**
NLYR				*e*			08 17 05.8	
NLYR				max			08 17 06.7	
	comp=E,12μm,1.0s							
NLYR	**Nelyaty**	**1.19**	**69**	*e*PG		**Pg**	**08 16 45.7**	**-0.7**
NLYR				*e*			08 17 01.6	
NLYR				pmax	pmax			
	comp=Z,1μm,0.6s							
NLYR				smax	smax			
	comp=N,12μm,0.6s							
KMO	**Kumora**	**1.42**	**263↑**	*i*Pg		**Pn**	**08 16 49.5**	**-0.3**
KMO				*e*			08 16 51.7	
KMO				max			08 16 57.7	
	comp=N,1μm,0.7s							
KMO				*e*Sg		**Sb**	**08 17 08.7**	**+0.1**
KMO				*e*			08 17 11.7	
KMO				max			08 17 13.0	
	comp=N,10μm,1.0s							
KMO	**Kumora**	**1.42**	**263**	*e*PG		**Pn**	**08 16 49.7**	**-0.1**
KMO				*e*			08 17 10.1	
KMO				pmax	pmax			
	comp=Z,813nm,0.5s							
KMO				smax	smax			
	comp=N,10μm,0.8s							
BOD	**Bodaibo**	**1.74**	**5↑**	*i*Pg		**Pn**	**08 16 55.4**	**+1.2**
BOD				Pmax			08 16 58.0	
	comp=N,2μm,1.1s							
BOD				*e*Sg		**Sn**	**08 17 17.8**	**+1.2**
BOD				Smax			08 17 20.1	
	comp=N,6μm,0.7s							
BOD	**Bodaibo**	**1.74**	**5↑**	*i*PN		**Pn**	**08 16 55.4**	**+1.2**
BOD				*e*			08 16 55.9	
BOD				*e*			08 17 18.3	
BOD				pmax	pmax			
	comp=Z,2μm,1.1s							
BOD				smax	smax			
	comp=E,6μm,0.6s							
YLYR	**Ulyunkhan**	**1.89**	**231↓**	*i*Pn		**Pn**	**08 16 57.6**	**+1.3**
YLYR				*e*Pg		**Pb**	**08 16 58.4**	**0.0**
YLYR				Pmax			08 17 01.6	
	comp=E,362nm,0.6s							
YLYR				*e*Sg		**Sb**	**08 17 23.2**	**+1.1**
YLYR				Smax			08 17 28.8	
	comp=E,2μm,0.9s							
YLYR	**Ulyunkhan**	**1.89**	**231↓**	*i*PN		**Pn**	**08 16 57.6**	**+1.3**
YLYR				*e*			08 16 59.2	
YLYR				*e*S		**Sb**	**08 17 22.1**	**0.0**
YLYR				*e*			08 17 23.2	
YLYR				pmax	pmax			
	comp=Z,363nm,0.5s							
YLYR				smax	smax			
	comp=E,2μm,0.8s							
NIZ	**Nizh Angarsk**	**2.36**	**264**	*e*Pn		**Pn**	**08 17 04.7**	**+1.9**
NIZ				*e*Pg		**Pb**	**08 17 06.9**	**+0.4**
NIZ				Pmax			08 17 11.7	
	comp=E,228nm,0.6s							
NIZ				*e*			08 17 35.4	
NIZ				*e*Sg		**Sb**	**08 17 38.0**	**+2.3**
NIZ				Smax			08 17 39.7	
	comp=E,3μm,0.9s							
NIZ	**Nizh Angarsk**	**2.36**	**264**	*e*PN		**Pb**	**08 17 07.7**	**+1.2**
NIZ				*e*			08 17 38.6	
NIZ				pmax	pmax			
	comp=Z,296nm,1.0s							
NIZ				smax	smax			
	comp=N,3μm,0.9s							
CRS	**Chara**	**2.66**	**70↓**	*i*Pn		**Pn**	**08 17 08.3**	**+1.3**
CRS				*e*Pg		**Pb**	**08 17 12.8**	**+1.2**
CRS				Pmax			08 17 15.0	
	comp=N,1μm,1.1s							
CRS				*e*Sg		**Sb**	**08 17 46.7**	**+2.3**
CRS				Smax			08 17 49.9	
	comp=N,6μm,1.7s							
CRS	**Chara**	**2.66**	**70↓**	*i*PN		**Pn**	**08 17 08.2**	**+1.3**
CRS				*e*			08 17 13.4	
CRS				*e*			08 17 47.3	
CRS				pmax	pmax			
	comp=Z,1μm,1.0s							
CRS				smax	smax			
	comp=E,6μm,1.2s							
SYVR	**Suvo**	**3.24**	**223**	*e*Pn		**Pn**	**08 17 16.1**	**+1.3**
SYVR				*e*Pg		**Pb**	**08 17 21.9**	**+0.4**
SYVR				Pmax			08 17 26.7	
	comp=E,208nm,1.0s							
SYVR				*e*			08 17 44.0	
SYVR				*e*Sn		**Sn**	**08 17 53.3**	**-0.3**
SYVR				*e*Sg		**Sb**	**08 18 04.1**	**+3.0**
SYVR				*e*			08 18 12.1	
SYVR				max			08 18 15.7	
	comp=E,2μm,1.7s							
SYVR	**Suvo**	**3.24**	**223**	*e*PN		**Pn**	**08 17 15.9**	**+1.1**
SYVR				*e*			08 17 24.4	
SYVR				*e*			08 18 03.9	
SYVR				pmax	pmax			
	comp=Z,212nm,1.0s							
SYVR				smax	smax			
	comp=N,2μm,1.3s							
VTMR	**Vitim**	**3.42**	**350**	*e*Pn		**Pn**	**08 17 18.3**	**+1.1**
VTMR				*e*Pg		**Pb**	**08 17 25.5**	**+1.1**
VTMR				*e*PgPg		**PbPb**	**08 17 27.1**	**-0.5**
VTMR				*e*			08 17 49.3	
VTMR				*e*Sn		**Sn**	**08 17 58.2**	**+0.3**
VTMR				*e*Sg		**Sb**	**08 18 09.0**	**+2.9**
KHNR	**Khani**	**3.58**	**74**	*e*Pn		**Pn**	**08 17 20.2**	**+0.7**
KHNR				*e*Pg		**Pb**	**08 17 28.3**	**+1.1**
KHNR				*e*			08 17 52.9	
KHNR				*e*Sn		**Sn**	**08 18 01.1**	**-0.9**
KHNR				*e*Sg		**Sb**	**08 18 13.7**	**+2.9**
TUP	**Tupik**	**3.95**	**112↓**	*i*Pn		**Pn**	**08 17 25.2**	**+0.7**
TUP				*e*Pg		**Pb**	**08 17 34.6**	**+1.1**
TUP				Pmax			08 17 38.0	
	comp=N,175nm,0.6s							
TUP				*e*			08 17 54.7	
TUP				*e*Sn		**Sn**	**08 18 10.0**	**-1.1**
TUP				*e*Sg		**Sb**	**08 18 25.5**	**+4.1**
TUP				Smax			08 18 35.2	
	comp=N,2μm,1.1s							
TUP	**Tupik**	**3.95**	**112↓**	*i*PN		**Pn**	**08 17 25.3**	**+0.7**
TUP				*e*			08 17 35.2	
TUP				*e*S		**Sn**	**08 18 11.6**	**+0.5**
TUP				*e*

YKLR eSg Sb 08 18 41.1 +5.1
KELR Kotokel 4.68 227 ePn Pn 08 17 36.1 +1.5
KELR ePg Pb 08 17 47.9 +2.0
KELR eSg Sg 08 18 48.8 -5.0
ZRHB Zarechye 5.22 230 ePn Pn 08 17 43.8 +1.8
ZRHB ePg Pb 08 17 57.8 +2.7
ZRHB Pmax 08 18 32.5
comp=N,107nm,0.8s
ZRHB eSg Sg 08 19 05.4 -5.7
ZRHB Smax 08 19 31.8
comp=N,1μm,1.4s
TRG Tyrgan 5.43 235 ePn Pn 08 17 46.5 +1.5
TRG e 08 17 56.3
TRG ePg Pb 08 18 02.1 +3.3
TRG e 08 18 04.7
TRG max 08 18 06.8
comp=N,38nm,1.1s
TRG eSg Sg 08 19 12.0 -6.0
TRG Smax 08 19 29.5
comp=N,280nm,2.0s
TRG Tyrgan 5.43 235 ePN Pn 08 17 45.3 +0.3
TRG e 08 18 01.0
TRG eS Sn 08 18 46.8 -0.9
TRG e 08 19 10.4
TRG pmax pmax
comp=Z,38nm,0.8s
TRG smax smax
comp=N,261nm,1.8s
UUDB Ulan-Yde 5.53 223 ePn Pn 08 17 46.7 +0.4
UUDB ePg Pb 08 18 03.2 +2.8
UUDB Pmax 08 18 11.9
comp=N,61nm,1.0s
UUDB eSn Sn 08 18 48.1 -1.9
UUDB eSg Sb 08 19 14.3 +7.5
UUDB Smax 08 19 21.0
comp=N,750nm,1.7s
FFNB Fofonovo 5.75 228 ePn Pn 08 17 51.2 +1.9
FFNB e 08 18 05.2
FFNB ePg Pb 08 18 07.0 +2.8
FFNB e 08 18 10.4
FFNB eSg Sb 08 19 21.1 +7.9
STDB Stepnoy Dvoret 5.83 231 ePn Pn 08 17 52.1 +1.7
STDB e 08 18 02.5
STDB ePg Pb 08 18 09.1 +3.5
STDB eSn Sn 08 18 55.8 -1.6
STDB eSg Sg 08 19 24.5 -6.2
HRMR Khuramsha 5.99 225 ePn Pn 08 17 53.9 +1.3
HRMR e 08 18 05.0
HRMR ePg Pb 08 18 11.8 +3.5
HRMR Pmax 08 18 18.3
comp=N,84nm,0.7s
HRMR eSg Sg 08 19 30.2 -5.6
HRMR Smax 08 19 45.7
comp=N,1μm,1.0s
IENR Iengra 6.24 84 eSg Sg 08 19 36.1 -7.7
CLNS Chul'man 6.25 78 ePn Pn 08 17 57.1 +0.9
CLNS e 08 18 13.0
CLNS ePg Pb 08 18 16.1 +3.4
CLNS eSn Sn 08 19 06.1 -1.7
CLNS e 08 19 29.4
CLNS eSg Sg 08 19 37.2 -7.0
BGT Bolshoye Golou 6.34 234 eSg Pn 08 17 58.8 +1.4
BGT eSg Pg 08 18 18.6 -6.5
BGT eSg Sg 08 19 40.3 -6.8
BGT Smax 08 19 55.4
comp=N,213nm,1.4s
KPC Khapcheranga 6.45 188 ePn Pn 08 17 58.9 0.0
KPC ePg Pb 08 18 20.1 +4.0
KPC Pmax 08 19 02.7
comp=N,26nm,0.8s
KPC eSn Sn 08 19 10.9 -1.8
KPC e 08 19 26.5
KPC eSg Sg 08 19 42.8 -7.7
KPC Smax 08 20 00.8
comp=N,596nm,1.2s
KPC Khapcheranga 6.45 188 ePN Pn 08 17 58.8 -0.1
KPC e 08 18 19.1
KPC e 08 19 42.5
KPC pmax pmax
comp=Z,22nm,0.7s
KPC smax smax
comp=E,595nm,1.1s
LSTR Listvyanka 6.72 235 ePn Pn 08 18 03.9 +1.2
LSTR e 08 18 14.3
LSTR ePg Pb 08 18 24.1 +3.3
LSTR Pmax 08 18 28.6
comp=E,12nm,1.0s
LSTR eSn Sn 08 19 17.0 -2.4
LSTR eSg Sg 08 19 52.2 -7.1
LSTR Smax 08 19 59.5
comp=E,273nm,2.1s
IRK Irkutsk 6.74 239 eSg Sg 08 19 52.4 -7.6
IRK Smax 08 20 00.6
comp=E,371nm,0.9s
IRK Irkutsk 6.74 239 ePG Pg 08 18 27.9 -4.8
IRK e 08 19 53.6
IRK pmax pmax
comp=Z,159nm,0.1s
IRK smax smax
comp=E,370nm,0.8s
IVK Ivanovka 6.96 236 ePn Pn 08 18 07.1 +1.2
IVK ePg Pb 08 18 28.4 +3.6
IVK Pmax 08 19 12.8
comp=E,29nm,1.5s
IVK eSn Sn 08 19 24.1 -1.1
IVK eSg Sg 08 19 58.4 -8.6
IVK Smax 08 20 12.7
comp=E,306nm,2.4s
TLY Talaya 7.40 238 ePn Pn 08 18 13.4 +1.4
TLY e 08 18 24.1
TLY ePg Pb 08 18 37.2 +4.9
TLY Pmax 08 18 42.3
comp=E,14nm,0.8s
TLY eSn Sn 08 19 34.6 -1.5
TLY eSg Sb 08 20 11.3 +11
TLY Smax 08 20 30.2
comp=E,176nm,2.6s
TLY Talaya 7.40 238 ePN Pn 08 18 13.3 +1.3
TLY e 08 18 39.3
TLY e 08 20 12.7
TLY pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 7.75 149 *ce*PN Pn 08 18 16.1 -0.7
ARS Arshan 7.84 243 ePn Pn 08 18 19.0 +0.9
ARS e 08 18 30.0
ARS ePg Pb 08 18 44.2 +4.3
ARS Pmax 08 18 49.1
comp=Z,24nm,0.7s
ARS eSg Sg 08 20 25.2 -10
ARS Smax 08 20 32.2
comp=Z,486nm,0.9s
ARS Arshan 7.84 243 ePG Pb 08 18 44.2 +4.3
ARS pmax pmax
comp=Z,24nm,0.6s
ZEA Zeya 8.16 101 ePN Pn 08 18 33.7 +11
ZEA eS Sn 08 19 51.0 -3.6
ZEA e 08 20 13.7
ZEA pmax pmax
comp=Z,10.0nm,0.6s
ZEA smax smax
comp=E,40nm,0.7s
ZAK Zakamensk 8.46 232 eSg Sg 08 20 45.7 -9.4
ZAK Smax 08 20 59.2
comp=E,163nm,1.9s
ZAK Zakamensk 8.46 232 ePN Pn 08 18 30.5 +3.9
ZAK e 08 20 46.1
ZAK pmax pmax
comp=Z,7.0nm,0.3s
ZAK smax smax
comp=N,163nm,1.9s
MOY Mondy 8.71 245 ePn Pn 08 18 31.3 +1.3
MOY max 08 18 45.6
comp=N,33nm,1.9s
MOY eSn Sn 08 20 06.1 -2.3
MOY e 08 20 34.5
MOY eSg Sg 08 20 53.6 -9.5
MOY Smax 08 21 00.8
comp=N,249nm,1.7s
MOY Mondy 8.71 245 ePN Pn 08 18 32.8 +2.8
MOY e 08 19 02.8
MOY eS Sn 08 20 07.4 -1.0
MOY e 08 20 53.7
ORL Orlik 8.86 252 ePn Pn 08 18 33.3 +1.2
ORL ePg Pg 08 19 04.5 -8.7
ORL Pmax 08 19 20.1
comp=N,27nm,1.1s
ORL eSn Sn 08 20 08.1 -4.0
ORL eSg Sg 08 20 58.3 -10
ORL Smax 08 21 15.4
comp=N,207nm,1.6s
ORL Orlik 8.86 252 ePN Pn 08 18 33.7 +1.6
ORL e 08 19 03.9
ORL eS Sn 08 20 12.2 +0.1
ORL e 08 20 59.6
ORL pmax pmax
comp=Z,29nm,0.8s
ORL smax smax
comp=N,207nm,1.8s
ULN Ulaanbaatar 9.20 209⍰ *e*P Pn 08 18 35.1 -1.6
SONM Songino Array 9.41 212 Pn Pn 08 18 39.4 -0.3
comp=N,0.3nm,0.3s,baz=30,slow=11,SNR=3.8
SONM Lg Lg 08 21 16.0
comp=N,0.8nm,0.3s,baz=296,slow=26,SNR=4.0
SONM LR LR 08 22 32.9
comp=N,79nm,20.6s,baz=30,slow=40
YAK Yakutsk 10.14 48 Sn Sn 08 20 36.2 -6.9
comp=N,0.2nm,0.3s,baz=187,slow=3.1,SNR=1.2
YAK Lg Lg 08 21 34.4
comp=N,0.4nm,0.3s,baz=328,slow=20,SNR=7.0
YAK Yakutsk 10.14 48 *ce*P Pn 08 18 50.4 +1.0
KLR Kul'dur 12.91 115 Pn Pn 08 19 25.9 -1.3
comp=N,0.1nm,0.3s,baz=315,slow=18,SNR=2.9
KLR Lg Lg 08 23 07.4
comp=N,0.5nm,0.3s,baz=246,slow=23,SNR=7.8
KLR LR LR 08 24 45.5
comp=N,264nm,19.3s,baz=208,slow=39
KLR Kul'dur 12.91 115⍰ *e*P Pn 08 19 28.1 +0.8
BRCR Berchikul' 14.23 279⍰ *e*P Pn 08 19 46.2 +0.8
USA0B Ussuriysk Arra 16.64 128⍰ *e*P Pn 08 20 18.9 +1.8
USRK Ussuriysk Ar. 16.64 128 Lg Lg 08 25 03.1
baz=323,slow=27,SNR=4.5
USRK LR LR 08 26 53.0
comp=N,183nm,19.4s,baz=337,slow=38
ZALV Zalesovo Beam 16.65 275 Pn Pn 08 20 15.6 -1.5
baz=63,slow=13,SNR=7.1
ZALV Lg Lg 08 25 03.4
comp=N,0.1nm,0.3s,baz=81,slow=28,SNR=1.8
ZALV LR LR 08 27 06.5
comp=N,146nm,20.6s,baz=70,slow=39
ZALV Zalesovo Beam 16.65 275 *i* P Pn 08 20 19.2 +2.1
ZALV pmax pmax
comp=Z,2.0nm,0.7s
TIXI Tiksi 16.89 17 Pn Pn 08 20 16.4 -3.6
comp=Z,1.0nm,0.3s,baz=208,slow=6.8,SNR=18
DGZ Jazzator, Alta 17.02 259⍰ *e*P Pn 08 20 22.8 +0.7
DGZ pmax pmax
comp=Z,1.0nm,0.7s
NVS Novosibirsk 17.25 279⍰ *e*P Pn 08 20 24.8 +0.1
NRIK Noril'sk 17.67 329 P Pn 08 20 24.9 -4.9
comp=Z,0.8nm,0.3s,baz=112,slow=12,SNR=17
NRIK Lg Lg 08 25 29.9
comp=Z,0.2nm,0.3s,baz=0.2,slow=13,SNR=1.5
NRIK LR LR 08 27 57.1
comp=Z,200nm,21.6s,baz=132,slow=39
NRIK Noril'sk 17.67 329⍰ *e*P Pn 08 20 26.8 -3.0
NRIK pmax pmax
comp=Z,6.0nm,0.8s
MA2 Magadan 19.87 65⍰ *e*P P 08 20 55.1 +0.2
MA2 pmax pmax
comp=Z,3.0nm,0.9s
SEY Seymchan 20.52 55⍰ *i* P P 08 21 03.2 +1.2
KSRS Korea Array 20.95 147 P P 08 21 06.3 -0.6
comp=Z,0.4nm,0.3s,baz=44,slow=41,SNR=2.4
KSRS LR LR 08 30 09.2
comp=Z,164nm,19.1s,baz=342,slow=40
MK31 Makanchi Array 21.50 258⍰ *e*P P 08 21 13.8 +1.0
MKAR Makanchi Array 21.50 258 P P 08 21 13.0 +0.2
comp=Z,1.4nm,0.6s,baz=61,slow=10,SNR=13
MKAR LR LR 08 29 45.2
comp=Z,167nm,18.5s,baz=46,slow=37
MKAR Makanchi Array 21.50 258 *i* P P 08 21 16.7 +3.9
MKAR pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 25.04 281 *ce*P P 08 21 49.1 +1.1
BRVK pmax pmax
comp=Z,3.0nm,0.6s
PETK Petropavlovsk- 25.34 78 LR LR 08 31 15.7
comp=Z,66nm,18.4s,baz=285,slow=35
MJAR Matsushiro Arr 25.62 129 LR LR 08 32 14.5
comp=Z,122nm,19.1s,baz=345,slow=37
BILL Bilibino 26.43 42⍰ *e*P P 08 22 02.0 +1.5
BILL *e* 08 22 05.5
BILL PPP PPP 08 22 48.0
BILL SSS SSS 08 28 02.0
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,57nm,18.0s
AAK Ala-Archa 28.43 258⍰ *e*P P 08 22 17.0 -1.8
AAK pmax pmax
comp=Z,3.0nm,1.0s
ARU Arti 29.93 294 LR LR 08 36 22.4
comp=Z,179nm,18.5s,baz=81,slow=40
JCJ Chichijima 35.47 133 LR LR 08 38 00.9
comp=Z,44nm,18.1s,baz=122,slow=37
KLMR Klimovskoe 37.16 309 *e*P P 08 23 31.8 -2.8
KLMR pmax pmax
comp=Z,12nm,1.3s
KLMR Klimovskoe 37.16 309 *e*P P 08 23 31.9 -2.7
KLMR AMP 08 23 35.8
comp=Z,12nm,1.3s
ARCES ARCESS Array B 38.60 326 P P 08 23 46.9 +0.2
comp=Z,2.1nm,0.9s,baz=84,slow=9.2,SNR=1.9
ARCES LR LR 08 44 38.7
comp=Z,68nm,18.1s,baz=55,slow=44
FINES FINESS Array B 42.48 315 P P 08 24 19.3 +0.5
comp=Z,3.3nm,0.8s,baz=59,slow=12,SNR=8.6
ILAR Eielson Array 44.85 37 P P 08 24 38.7 +0.9
comp=Z,1.1nm,0.8s,baz=298,slow=9.3,SNR=15
INK Inuvik 46.52 28 P P 08 24 52.1 +1.2
comp=Z,1.4nm,0.8s,baz=23,slow=14,SNR=5.3
AKASG Malin Array Be 47.66 301 P P 08 25 00.8 +0.7
comp=Z,0.9nm,0.7s,baz=42,slow=8.9,SNR=4.8
NOA NORSAR Array B 48.36 321 P P 08 25 06.1 +0.7
comp=Z,0.5nm,0.6s,baz=50,slow=7.9,SNR=3.2
BRTR Keskin Array B 53.00 288 P P 08 25 40.6 -0.3
comp=Z,0.7nm,0.7s,baz=66,slow=7.1,SNR=4.2
BRTR Keskin Array B 53.00 288 *i* P P 08 25 44.2 +3.3
BRTR pmax pmax
comp=Z,1.0nm,0.7s
CLL Collm 54.59 311 *e*P P 08 25 53.0 +0.9
CLL Collm 54.59 311 *e*P P 08 25 53.0 +0.9
YKA Yellowknife Ar 55.92 25 P P 08 26 01.5 0.0
comp=Z,2.1nm,0.8s,baz=331,slow=6.8,SNR=22
FFC Flin Flon 65.77 22 *i* P P 08 27 06.4 -2.2
ESDC Sonseca Array 70.99 314 P P 08 27 42.9 +1.2
comp=Z,2.0nm,0.9s,baz=20,slow=6.1,SNR=14
PDAR Pinedale Array 74.95 32 P P 08 28 05.9 +0.6
comp=Z,0.6nm,0.8s,baz=44,slow=4.5,SNR=4.9
NVAR Mina Array Bea 76.02 40 P P 08 28 12.5 +1.0
comp=Z,0.8nm,0.8s,baz=309,slow=5.4,SNR=6.0
WRA Warramunga Arr 77.72 160 P P 08 28 20.8 0.0
comp=Z,1.0nm,0.9s,baz=352,slow=6.5,SNR=5.5
ASAR Alice Springs 81.27 161 P P 08 28 39.7 -0.4
comp=Z,0.4nm,0.8s,baz=3.1,slow=5.4,SNR=5.2
TORD Torodi Ar. Bea 91.00 295 P P 08 29 29.3 +0.9
comp=Z,1.2nm,1.0s,baz=48,slow=5.0,SNR=3.6

*KISR **03** 08:18:33.9±3.9, 6.˚49N×40.˚11E, h0km±999km, Hypocentre not reviewed by the ISC*
*IDC **03** 08:20:00.1±0.6, 13.˚79N×51.˚65E, h0km, mb4.1/23, mb1 4.2/24, mb1mx4.1/53, mbtmp4.1/24, ML4.1/1, MS3.5/13, Ms1 3.5/13, ms1mx3.2/48, Error ellipse: s-maj=16.4km s-min=14.0km az=115.0*
*NEIC **03** 08:20:01.6±1.9, 13.˚84N±0.˚06×51.˚60E±0.˚07, h10km±1km, mb4.4/22, Error ellipse: s-maj=11.8km s-min=9.0km az=111.0*
*OMAN **03** 08:20:04.4, 13.˚84N×51.˚93E, h30km, ml3.9/5*
ISC 03 08:20:03.7±0.6, 13.˚96N±0.˚07×51.˚59E±0.˚07, h21km, n74, σ1°49/72, mb4.3/32, MS3.2/11, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**2.92**	**127**		Pn	08 20 42.0	-7.1
SOCY	**Socotra**	**2.92**	**127**	P	Pn	08 20 41.6	-7.6
SNR=15							
ABTO	**Aybut**	**3.75**	**26**	P	**Pn**	**08 20 59.6**	**-0.8**
SNR=30							
ABTO				S	**Sn**	**08 21 43.5**	**-0.6**
RBK	**Rabkut**	**4.33**	**35**	P	**Pn**	**08 21 08.6**	**+0.2**
SNR=147							
RBK				S	**Sn**	**08 21 58.1**	**-0.1**
WHFO	**Wadi Hawf**	**4.46**	**28**	P	**Pn**	**08 21 09.5**	**-0.6**
SNR=167							
WHFO				S	**Sn**	**08 22 01.1**	**-0.3**
DMTO	**DMTO**	**4.94**	**40**	P	**Pn**	**08 21 16.8**	**+0.1**
SNR=15							
DOK	**Doka**	**5.23**	**27**	P	**Pn**	**08 21 20.5**	**-0.3**
SNR=15							
ATD	**Arta Tunnel**	**8.87**	**255**	LR	LR	08 25 03.7	
comp=Z,519nm,18.2s,baz=71,slow=34							
ATD	**Arta Tunnel**	**8.87**	**255**		**Pn**	**08 22 10.0**	**-0.8**
RAYN	**Ar Rayn**	**11.12**	**330**	Pn	**Pn**	**08 22 39.4**	**-2.2**
WSAR	**Wadi Sarin**	**11.38**	**35**	Pn	**Pn**	**08 22 45.0**	**-0.2**
1.1nm,0.3s,baz=258,slow=12,SNR=9.4							
WSAR				Sn	**Sn**	**08 24 44.1**	**-7.7**
0.3nm,0.3s,baz=92,slow=14,SNR=1.6							
WSAR				LR	LR	08 27 05.5	
comp=Z,207nm,18.6s,baz=238,slow=37							
UOSS	**Minazif**	**11.76**	**21**	Pn	**Pn**	**08 22 49.6**	**-0.7**
QRN	**Al-Qurain**	**15.10**	**348**	*eP*		08 23 33.9	
RDF	**Al-Radifah**	**15.36**	**347**	*eP*		08 23 37.2	
MIB	**Mutribah**	**16.25**	**347**	*eP*		08 23 49.1	
LODK	**Lodwar**	**19.14**	**238**	P	**Pn**	**08 24 27.8**	**+1.1**
SNR=5.7							
KMBO	**Kilima Mbogo**	**20.66**	**225**	P	**P**	**08 24 41.2**	**-1.3**
2.8nm,0.4s,baz=45,slow=13,SNR=18							
KMBO				LR	LR	08 32 36.5	
comp=Z,107nm,20.8s,baz=89,slow=37							
EIL	**Elat**	**21.93**	**318**	P	**P**	**08 24 56.7**	**+0.8**
3.5nm,0.8s,baz=131,slow=9.3,SNR=2.6							
HRA	**Herat**	**22.51**	**24**	P	**P**	**08 25 03.6**	**+1.4**
HRA				IAmb	IAmb	08 25 06.9	
comp=Z,16nm,0.9s							
MMAI	**Mount Meron Ar**	**24.03**	**325**	P	**P**	**08 25 19.8**	**+2.4**
comp=Z,0.9nm,0.2s,baz=134,slow=8.3,SNR=4.5							
MMAI				LR	LR	08 35 11.9	
comp=Z,78nm,18.3s,baz=115,slow=38							
GEYT	**Alibeck**	**24.57**	**12**	P	**P**	**08 25 24.1**	**+1.9**
comp=Z,15nm,0.9s,baz=205,slow=13,SNR=16							
GEYT				LR	LR	08 35 08.0	
comp=Z,63nm,21.2s,baz=85,slow=37							
GEYT	**Alibeck**	**24.57**	**12**	P	**P**	**08 25 22.9**	**+0.6**
GEYT				IAmb	IAmb	08 25 26.2	
comp=Z,12nm,0.8s							
GYA0B	**ALIBECK ARRAY**	**24.57**	**12**	P	**P**	**08 25 22.3**	**+0.1**
KBL	**Kabul**	**25.86**	**35**	P	**P**	**08 25 36.5**	**+2.2**
KBL				IAmb	IAmb	08 25 41.5	
comp=Z,18nm,1.2s							
GNI	**Garni**	**26.77**	**348**	LR	LR	08 38 00.3	
comp=Z,104nm,18.1s,baz=184,slow=40							
GNI	**Garni**	**26.77**	**348**	P	**P**	**08 25 40.6**	**-1.7**
PALK	**Pallekele**	**29.35**	**100**	LR	LR	08 35 01.2	
comp=Z,59nm,18.2s,baz=37,slow=31							
ELL	**Elmali**	**29.84**	**323**	P	**P**	**08 26 10.9**	**+1.2**
BRTR	**Keskin Array B**	**30.13**	**332**	P	**P**	**08 26 13.4**	**+1.2**
comp=Z,1.7nm,0.7s,baz=146,slow=10,SNR=7.8							
BRTR				LR	LR	08 39 01.0	
comp=Z,53nm,20.4s,baz=136,slow=38							
KBZ	**Khabaz**	**30.59**	**348**	P	**P**	**08 26 17.7**	**+1.7**
comp=Z,6.8nm,1.2s,baz=165,slow=11,SNR=4.7							
KBZ				LR	LR	08 41 04.3	
comp=Z,211nm,18.7s,baz=136,slow=41							
KK31	**Karatay Array**	**33.29**	**26**	P	**P**	**08 26 41.3**	**+1.4**
KK31				IAmb	IAmb	08 26 44.3	
comp=Z,2.5nm,0.9s							
KKAR	**Karatay Array**	**33.29**	**26**	P	**P**	**08 26 41.2**	**+1.3**
KKAR	**Karatay Array**	**33.29**	**26**	P	**P**	**08 26 41.8**	**+1.9**
AAK	**Ala-Archa**	**34.74**	**30**	P	**P**	**08 26 53.2**	**+0.6**
AAK				IAmb	IAmb	08 26 56.8	
comp=Z,4.2nm,0.9s							
ABKAR	**Akbulak array**	**35.86**	**9**	P	**P**	**08 27 03.2**	**+1.3**
SHL	**Shillong**	**39.49**	**67**	P	**P**	**08 27 32.7**	**-0.5**
AKASG	**Malin Array Be**	**40.89**	**338**	P	**P**	**08 27 45.3**	**+1.0**
comp=Z,4.6nm,0.8s,baz=146,slow=7.4,SNR=16							
AKASG	**Malin Array Be**	**40.89**	**338**	P	**P**	**08 27 44.5**	**+0.2**
AKBB	**Malin Array Si**	**40.89**	**338**	P	**P**	**08 27 44.0**	**-0.2**
AKBB				IAmb	IAmb	08 27 46.5	
comp=Z,11nm,1.1s							
MATP	**Matopo**	**41.03**	**214**	P	**P**	**08 27 44.7**	**-1.2**
comp=Z,2.1nm,0.6s,baz=34,slow=11,SNR=9.2							
MAKZ	**Makanchi**	**41.45**	**32**	P	**P**	**08 27 50.0**	**+1.0**
MAKZ				IAmb	IAmb	08 28 06.5	
comp=Z,7.4nm,1.4s							
MK31	**Makanchi Array**	**41.60**	**32**	P	**P**	**08 27 51.3**	**+1.0**
MK31				IAmb	IAmb	08 28 02.8	
comp=Z,8.5nm,1.4s							
MKAR	**Makanchi Array**	**41.60**	**32**	P	**P**	**08 27 51.3**	**+1.0**
comp=Z,1.4nm,0.6s,baz=220,slow=8.1,SNR=11							
MKAR	**Makanchi Array**	**41.60**	**32**	P	**P**	**08 27 49.1**	**-1.1**
BRVK	**Borovoye**	**41.73**	**17**	P	**P**	**08 27 51.8**	**+0.7**
ARU	**Arti**	**42.72**	**6**	P	**P**	**08 27 60.0**	**+0.9**
comp=Z,1.5nm,0.2s,baz=199,slow=7.7,SNR=5.6							
ARU	**Arti**	**42.72**	**6**	P	**P**	**08 27 59.6**	**+0.5**
ARU				IAmb	IAmb	08 28 01.7	
comp=Z,7.0nm,1.0s							
CRVS	**Cervenica-Dubn**	**42.76**	**331**	*eP*	**P**	**08 28 02.2**	**+2.6**
WMQ	**Urumqi**	**42.84**	**39**	*eP*	**P**	**08 28 03.1**	**+2.6**
CM31	**Chiang Mai Arr**	**45.59**	**78**	P	**P**	**08 28 23.4**	**+0.7**
CM31				IAmb	IAmb	08 28 23.7	
comp=Z,6.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**45.59**	**78**	P	**P**	**08 28 22.1**	**-0.6**
comp=Z,4.8nm,0.9s,baz=277,slow=8.9,SNR=24							
CMAR				LR	LR	08 46 04.2	
comp=Z,27nm,21.9s,baz=228,slow=34							
GERES	**GERESS Array B**	**46.68**	**326**	P	**P**	**08 28 31.3**	**+0.3**
comp=Z,0.7nm,0.6s,baz=126,slow=6.8,SNR=3.5							
GERES	**GERESS Array B**	**46.68**	**326**	P	**P**	**08 28 30.5**	**-0.4**
KHC	**Kasperske Hory**	**46.91**	**326**	*eP*	**P**	**08 28 29.0**	**-3.7**
KLMR	**Klimovskoe**	**47.64**	**352**	*eP*	**P**	**08 28 37.4**	**-0.7**
KLMR				AMP		08 28 40.3	
comp=Z,38nm,1.2s							
ZAA0	**Zalesovo Array**	**47.67**	**26**	P	**P**	**08 28 38.4**	**-0.1**
ZALV	**Zalesovo Beam**	**47.67**	**26**	P	**P**	**08 28 38.9**	**+0.4**
comp=Z,4.8nm,0.6s,baz=233,slow=8.1,SNR=17							
ZALV	**Zalesovo Beam**	**47.67**	**26**	P	**P**	**08 28 38.1**	**-0.3**
TORD	**Torodi Ar. Bea**	**48.44**	**275**	P	**P**	**08 28 45.6**	**+0.5**
comp=Z,1.0nm,0.8s,baz=92,slow=7.5,SNR=5.8							
TORD				LR	LR	08 48 33.6	
comp=Z,27nm,18.9s,baz=160,slow=35							
BOSA	**Boshof**	**49.40**	**211**	P	**P**	**08 28 51.2**	**-1.1**
comp=Z,6.3nm,1.3s,baz=44,slow=7.3,SNR=5.4							
BOSA				LR	LR	08 52 07.7	
comp=Z,75nm,18.9s,baz=102,slow=39							
BOSA	**Boshof**	**49.40**	**211**	P	**P**	**08 28 51.2**	**-1.1**
BOSA				IAmb	IAmb	08 28 59.5	
comp=Z,7.6nm,1.1s							
FINES	**FINESS Array B**	**50.86**	**345**	P	**P**	**08 29 04.0**	**+1.2**
comp=Z,7.7nm,0.8s,baz=130,slow=10,SNR=20							
FINES	**FINESS Array B**	**50.86**	**345**	P	**P**	**08 29 01.9**	**-0.8**
LZH	**Lanzhou**	**51.54**	**55**	*eP*	**P**	**08 29 09.5**	**+1.0**
LZH				pP	sP	08 29 14.2	-1.7
LZH				sP	pwP	08 29 16.3	-0.5
LZH				pmax	pmax		
comp=Z,16nm,1.0s							
ESDC	**Sonseca Array**	**54.81**	**309**	P	**P**	**08 29 32.7**	**+0.3**
comp=Z,1.8nm,0.8s,baz=88,slow=6.5,SNR=15							
ESDC	**Sonseca Array**	**54.81**	**309**	P	**P**	**08 29 32.0**	**-0.5**
NOA	**NORSAR Array B**	**55.29**	**337**	P	**P**	**08 29 35.7**	**+0.2**
comp=Z,1.1nm,0.8s,baz=132,slow=6.6,SNR=4.1							
DBIC	**Dimbokro**	**55.90**	**269**	LR	LR	08 54 08.3	
comp=Z,43nm,19.3s,baz=95,slow=37							
SONM	**Songino Array**	**56.34**	**41**	P	**P**	**08 29 44.4**	**+0.9**
comp=Z,1.7nm,0.9s,baz=247,slow=8.1,SNR=5.1							
SONM	**Songino Array**	**56.34**	**41**	P	**P**	**08 29 43.4**	**0.0**
ARCES	**ARCESS Array B**	**57.92**	**349**	P	**P**	**08 29 54.1**	**+0.1**
comp=Z,3.0nm,0.6s,baz=144,slow=5.0,SNR=18							
HHC	**Hu-ho-hao-te**	**58.35**	**50**	*eP*	**P**	**08 29 58.1**	**+0.5**
HHC				pmax	pmax		
comp=Z,14nm,0.7s							
HHC				pmax	pmax		
comp=Z,140nm,6.0s							
KLR	**Kul'dur**	**73.15**	**42**	P	**P**	**08 31 32.5**	**-0.4**
comp=Z,1.8nm,0.8s,baz=265,slow=9.1,SNR=3.9							
WRA	**Warramunga Arr**	**88.05**	**111**	P	**P**	**08 32 52.4**	**-0.8**
comp=Z,0.5nm,0.8s,baz=297,slow=3.9							
ASAR	**Alice Springs**	**88.66**	**115**	P	**P**	**08 32 54.9**	**-1.1**
comp=Z,0.2nm,0.6s,baz=285,slow=4.6,SNR=4.8							
PDAR	**Pinedale Array**	**120.95**	**344**	PKP	**PKiKP**	**08 38 54.8**	**-0.6**
comp=Z,0.2nm,0.6s,baz=44,slow=5.4,SNR=1.7							
NVAR	**Mina Array Bea**	**127.03**	**350**	PKP	**PKiKP**	**08 39 07.0**	**-0.5**
comp=Z,0.5nm,0.7s,baz=349,slow=0.9,SNR=2.9							

*SOME **03** 08:28:26.8, 43°.15N×81°.25E, h0km*
*NNC **03** 08:28:27.9×1.1, 43°.20N×81°.29E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=10.1km s-min=4.9km az=159.0*
ISC 03 08:28:27.4±1.8, 43°.16N±0°.07×81°.29E±0.05, h16km±13km, n43, σ2=76/64, 11C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**0.74**	**293**	⇑eP	**Pb**	**08 28 42.6**	**+0.6**
	74nm,0.1s						
KTMS				eS	**Sb**	**08 28 53.5**	**+1.6**
	135nm,0.2s						
KTMS	**Ketmen**	**0.74**	**293**	P	**Pb**	**08 28 42.6**	**+0.6**
	108nm,0.1s						
KTMS				S	**Sb**	**08 28 53.5**	**+1.6**
	135nm,0.2s						
PDGK	**Podgornoye**	**1.33**	**278**	P	**Pb**	**08 28 52.8**	**+0.9**
	20nm,0.1s						
PDGK				S	**Sg**	**08 29 11.4**	**+1.1**
	85nm,0.4s						
PDGK	**Podgornoye**	**1.33**	**278**	⇑P	**Pb**	**08 28 52.9**	**+0.9**
	14nm,0.3s						
PDGK				⇓S	**Sg**	**08 29 11.6**	**+1.3**
	37nm,0.3s						
SHLS	**Shalkode**	**1.34**	**270**	eP	**Pn**	**08 28 48.1**	**-3.4**
	82nm,0.2s						
SHLS				eS	**Sb**	**08 29 03.1**	**-6.0**
	122nm,0.2s						
SHLS	**Shalkode**	**1.34**	**270**	P	**Pn**	**08 28 48.1**	**-3.4**
	82nm,0.2s						
SHLS				S	**Sb**	**08 29 02.6**	**-6.5**
	122nm,0.2s						
DJR	**Jarkent**	**1.60**	**318**	eP	**Pb**	**08 28 57.4**	**+0.8**
	38nm,0.3s						
DJR				eS	**Sg**	**08 29 18.9**	**+0.1**
	39nm,0.3s						
UZB	**Uzynbulak**	**1.66**	**270**	eP	**Pb**	**08 28 58.8**	**+1.2**
	17nm,0.1s						
UZB				eS	**Sg**	**08 29 21.5**	**+0.6**
	153nm,0.2s						
KPKS	**Kokpek**	**1.93**	**280**	⇑eP	**Pb**	**08 29 03.1**	**+0.9**
	137nm,0.2s						
KPKS				eS	**Sg**	**08 29 29.2**	**-0.2**
	328nm,0.3s						
ZHN	**Zhinishke**	**2.09**	**271**	eP	**Pb**	**08 29 06.2**	**+1.3**
	6.2nm,0.2s						
ZHN				eS	**Sg**	**08 29 34.3**	**-0.3**
	37nm,0.2s						
ZHN	**Zhinishke**	**2.09**	**271**	Pg	**Pb**	**08 29 06.2**	**+1.3**
	12nm,0.2s						
ZHN				Lg	Lg	08 29 34.3	
	46nm,0.2s						
SATY	**Saty**	**2.12**	**268**	eP	**Pg**	**08 29 07.7**	**-0.3**
	23nm,0.1s						
SATY				eS	**Sg**	**08 29 36.0**	**+0.6**
	213nm,0.2s						
MNBS	**Baschi**	**2.29**	**295**	eP	**Pb**	**08 29 08.5**	**+0.1**
	43nm,0.4s						
MNBS				eS	**Sb**	**08 29 38.0**	**+1.6**
	48nm,0.2s						
MNBS	**Baschi**	**2.29**	**295**	Pg	**Pb**	**08 29 08.5**	**+0.1**
	43nm,0.4s						
MNBS				Lg	Lg	08 29 38.0	
	48nm,0.2s						
ARXS	**Arharly**	**2.72**	**294**	eP	**Pb**	**08 29 17.5**	**+1.8**
	11nm,0.5s						
ARXS				eS	**Sg**	**08 29 52.6**	**-2.2**
	20nm,0.2s						
KOTS	**Kotyrbulak**	**3.06**	**273**	eP	**Pb**	**08 29 22.8**	**+1.3**
	16nm,0.2s						
KOTS				eS	**Sb**	**08 30 02.5**	**+3.9**
	64nm,0.3s						
KOTS	**Kotyrbulak**	**3.06**	**273**	Pg	**Pb**	**08 29 22.8**	**+1.3**
	16nm,0.2s						
KOTS				Lg	Lg	08 30 02.5	
	64nm,0.3s						
MDOK	**Medeo**	**3.10**	**271**	eP	**Pb**	**08 29 23.7**	**+1.5**
	4.6nm,0.3s						
MDOK				eS	**Sb**	**08 30 03.8**	**+3.9**
	20nm,0.5s						
MDOK	**Medeo**	**3.10**	**271**	⇓Pg	**Pg**	**08 29 26.6**	**-0.3**
	2.2nm,0.4s						
MDOK				⇓Lg	Lg	08 30 05.3	
	9.6nm,0.4s						
MDOK	**Medeo**	**3.10**	**271**	Pg	**Pb**	**08 29 23.7**	**+1.5**
	4.6nm,0.3s						
MDOK				Lg	Lg	08 30 03.8	
	20nm,0.5s						
TNSS	**Tian-Shan**	**3.18**	**269**	eP	**Pb**	**08 29 25.1**	**+1.3**
	4.0nm,0.3s						
TNSS				eS	**Sb**	**08 30 06.0**	**+3.6**
	13nm,0.3s						
TNSS	**Tian-Shan**	**3.18**	**269**	Pg	**Pb**	**08 29 25.1**	**+1.3**
	4.0nm,0.3s						
TNSS				Lg	Lg	08 30 06.0	
	13nm,0.3s						
KTBS	**Karatobe**	**3.40**	**281**	eP	**Pb**	**08 29 29.7**	**+2.5**
	4.6nm,0.5s						
KTBS				eS	**Sg**	**08 30 13.8**	**-2.8**
	28nm,0.3s						
KTBS	**Karatobe**	**3.40**	**281**	Pg	**Pb**	**08 29 29.7**	**+2.5**
	4.6nm,0.5s						
KTBS				Lg	Lg	08 30 13.8	
	28nm,0.3s						
IZV	**Izvestkoviy**	**3.43**	**269**	eP	**Pb**	**08 29 29.6**	**+1.8**
	4.0nm,0.2s						
IZV				eS	**Sb**	**08 30 13.6**	**+4.3**
	51nm,0.6s						
IZV	**Izvestkoviy**	**3.43**	**269**	Pg	**Pb**	**08 29 29.6**	**+1.8**
	4.0nm,0.2s						
IZV				Lg	Lg	08 30 13.6	
	51nm,0.6s						
MTBS	**Maitube**	**3.56**	**271**	Pg	**Pb**	**08 29 32.3**	**+2.4**
	2.7nm,0.3s						
MTBS				Lg	Lg	08 30 18.5	
	14nm,0.3s						
KUU	**Kurty**	**3.67**	**283**	eP	**Pb**	**08 29 33.6**	**+1.7**
	5.7nm,0.6s						
KUU				eS	**Sb**	**08 30 20.9**	**+4.7**
	13nm,0.2s						
KUU	**Kurty**	**3.67**	**283**	Pg	**Pb**	**08 29 33.6**	**+1.7**
	5.7nm,0.6s						
KUU				Lg	Lg	08 30 20.9	
	13nm,0.2s						
MAKZ	**Makanchi**	**3.68**	**7**	⇓Pg	**Pb**	**08 29 33.6**	**+1.6**
	2.3nm,0.7s						
MAKZ				⇑Lg	Lg	08 30 19.6	
	2.2nm,0.4s						
MK31	**Makanchi Array**	**3.70**	**11**	⇑Pg	**Pb**	**08 29 34.9**	**+2.6**
	0.4nm,0.2s,baz=203,slow=15,SNR=12						
MK31				⇓Lg	Lg	08 30 21.3	
	9.4nm,0.6s,baz=198,slow=27,SNR=8.0						
KST	**Kastek**	**3.90**	**270**	eP	**Pb**	**08 29 38.7**	**+2.8**
	5.9nm,0.6s						
KST				eS	**Sg**	**08 30 29.2**	**-3.5**
	19nm,0.4s						
KST	**Kastek**	**3.90**	**270**	Pg	**Pb**	**08 29 38.7**	**+2.8**
	5.9nm,0.6s						
KST				Lg	Lg	08 30 29.2	
	19nm,0.4s						
DGS	**Degeres**	**4.04**	**273**	eP	**Pb**	**08 29 40.8**	**+2.7**
	4.0nm,0.3s						
DGS				eS	**Sg**	**08 30 32.9**	**-4.0**
	21nm,0.6s						
DGS	**Degeres**	**4.04**	**273**	Pg	**Pb**	**08 29 40.8**	**+2.7**
	4.0nm,0.3s						
DGS				Lg	Lg	08 30 32.9	
	21nm,0.6s						
KRBS	**Karabastau**	**4.12**	**279**	eP	**Pb**	**08 29 42.4**	**+2.8**
	4.1nm,0.5s						
KRBS				eS	**Sb**	**08 30 35.1**	**+5.9**
	11nm,0.3s						
KRBS	**Karabastau**	**4.12**	**279**	Pg	**Pb**	**08 29 42.4**	**+2.8**
	4.1nm,0.5s						
KRBS				Lg	Lg	08 30 35.1	
	11nm,0.3s						
TKM2	**Tokmak 2**	**4.18**	**269**	⇑Pg	**Pb**	**08 29 44.3**	**+3.6**
	1.7nm,0.6s						
TKM2				⇑Lg	Lg	08 30 39.6	
	8.8nm,0.7s						
ZSN	**Zaisan**	**4.97**	**29**	eP	**Pb**	**08 29 57.5**	**+3.6**
	5.3nm,0.3s						
ZSN				eS	**Sg**	**08 31 02.2**	**-4.7**
	20nm,0.4s						
ZSN	**Zaisan**	**4.97**	**29**	Pg	**Pb**	**08 29 57.5**	**+3.6**
	4.2nm,0.3s						
ZSN				Lg	Lg	08 31 02.4	
	20nm,0.3s						
AAK	**Ala-Archa**	**5.02**	**266**	⇑Pg	**Pb**	**08 29 58.7**	**+3.8**
	2.4nm,0.8s						
AAK				⇑Lg	Lg	08 31 07.6	
	6.9nm,0.7s						
KURBB	**Kurchatov Arra**	**7.70**	**347**	⇑Lg	Lg	08 32 30.1	
	4.9nm,0.6s						
KK31	**Karatay Array**	**7.89**	**273**	⇑Lg	Lg	08 32 40.3	
	2.2nm,0.8s,baz=86,slow=28,SNR=4.2						

*NEIC **03** 08:29:29.8, 67°.63N×145°.54W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 1.46; Mθθ -7.02; Mφφ 5.57; Mtt 0.86; Mθφ -4.24; Mθt -0.87; Fault plane solution: M0 7.79000×10^15 NP1:φs 117.47000°, δ84.63000°, λ169.78000°. NP2:φs 208.44000°, δ79.83000°, λ5.45000°. Principal axes: T 7.0717, Plg11.0000°, Azm73.0000°; N 1.2790, Plg78.0000°, Azm270.0000°; P -8.3507, Plg3.0000°, Azm163.0000°;*
*IDC **03** 08:29:29.2±0.5, 67°.76N×145°.74W, h0km, mb4.0/20, mb1 4.2/26, mb1mx4.1/58, mbtmp4.1/26, ML4.2/6, MS3.8/31, Ms1 3.8/31, ms1mx3.7/56 Error ellipse: s-maj=12.4km s-min=9.5km az=67.0*
*NEIC **03** 08:29:30.1±1.6, 67°.61N±0°.03×145°.6W±0°.1, h10km±1km, Error ellipse: s-maj=8.8km s-min=3.0km az=241.0*
*AEIC **03** 08:29:30±1.9, 67°.55N±0°.03×145°.7W±0°.1, h11km±4km, ML4.6, mb4.6/42(NEIC), ML4.7/55(NEIC), Mwr4.5/76(NEIC), Mww4.6(NEIC), Error ellipse: s-maj=6.0km s-min=4.1km az=66.0*
*NEIC **03** 08:29:32, 67°.63N×145°.76W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 1.79; Mθθ -7.25; Mφφ 5.47; Mtt 2.93; Mθφ -4.84; Mθt -2.57; Fault plane solution: M0 9.03000×10^15 NP1:φs 209.00000°, δ63.00000°, λ12.00000°. NP2:φs 113.00000°, δ79.00000°, λ153.00000°. Principal axes: T 8.7779, Plg26.0000°, Azm68.0000°; N 0.4760, Plg61.0000°, Azm274.0000°; P -9.2539, Plg11.0000°, Azm164.0000°;*
ISC 03 08:29:30.0±0.4, 67°.64N±0°.04×145°.47W±0°.04, h10km, n196, σ1§13/186, mb4.5/47, MS3.8/29, 14C-26D, Fault plane solution: NP1:φs 316.53128°, δ85.41876°, λ -155.72116°. NP2:φs 224.46790°, δ65.80370°, λ -5.02356°. Principal axes: T Plg13.4937°, Azm88.0500°; N Plg65.3185°, Azm326.7727°; P Plg20.2609°, Azm183.1319°; Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BMAR	**Burnt Mountain**	**0.40**	**122**		**Pg**	**08 29 38.3**	**+0.5**
FYU	**Fort Yukon**	**1.08**	**175**	Pg	**Pb**	**08 29 50.3**	**-0.4**
FYU					**Sg**	**08 30 05.0**	**+0.2**
PS04	**TAPS Pump Stn4**	**1.66**	**300**		**Pn**	**08 29 59.2**	**+0.1**
TOLK	**Toolik Lake Re**	**1.84**	**305**	Pn	**Pn**	**08 30 02.3**	**+0.7**
TOLK				Sn	**Sn**	**08 30 24.2**	**-0.7**
TOLK				IAML		08 30 34.4	
	comp=E,8μm,1.2s						
TOLK	**Toolik Lake Re**	**1.84**	**305**	P		08 30 02.2	
	baz=128,SNR=1000						
COLD	**Coldfoot**	**1.87**	**259**	Pn	**Pn**	**08 30 01.1**	**-0.9**
COLD	**Coldfoot**	**1.87**	**259**	P		08 30 00.9	
	baz=79,SNR=1000						
PRP	**Porcupine Dome**	**2.13**	**181**		**Pn**	**08 30 05.0**	**-0.7**
PRP				IAML		08 30 36.3	
	comp=E,4μm,0.6s						
PRP				IAML		08 30 38.8	
	comp=N,5μm,0.7s						
PS05	**TAPS Pump Stn5**	**2.19**	**250**		**Pn**	**08 30 04.6**	**-1.7**
PS06	**TAPS Pump Stn6**	**2.47**	**225**		**Pn**	**08 30 08.6**	**-1.6**
PS07	**TAPS Pump Stn7**	**2.60**	**207**		**Pn**	**08 30 11.0**	**-1.0**
POKR	**Poker Plat Res**	**2.66**	**198**		**Pn**	**08 30 11.9**	**-0.9**
POKR				IAML		08 30 59.8	
	comp=E,4μm,0.9s						
POKR				IAML		08 31 02.9	
	comp=N,3μm,1.0s						
POKR	**Poker Plat Res**	**2.66**	**198**	P		08 30 11.9	
	baz=14,SNR=131						
MDM	**Murphy Dome**	**2.92**	**204**	Pn	**Pn**	**08 30 16.3**	**0.0**
MDM				IAML		08 31 04.2	
	comp=E,4μm,0.6s						
IL31		**2.94**	**192**		**Pn**	**08 30 17.2**	**+0.6**
ILAR	**Eielson Array**	**2.94**	**192**	Pn	**Pn**	**08 30 17.5**	**+0.8**
	comp=E,32nm,0.3s,baz=4.0,slow=14,SNR=427						
ILAR				Pg	**Pb**	**08 30 23.1**	**+0.8**
	comp=E,213nm,0.3s,baz=16,slow=16,SNR=73						
ILAR				Sn	**Sn**	**08 30 51.3**	**-0.7**
	comp=E,111nm,0.3s,baz=3.9,slow=28,SNR=3.6						
ILAR				Lg	Lg	08 30 58.5	
	comp=E,448nm,0.3s,baz=5.4,slow=31,SNR=17						
ILAR	**Eielson Array**	**2.94**	**192**		**Pn**	**08 30 15.5**	**-1.2**
COLA	**College**	**2.94**	**200**	IAML		08 31 07.1	
	comp=E,2μm,0.9s						
COLA	**College**	**2.94**	**200**		**Pn**	**08 30 16.0**	**-0.6**
I53US	**FAIRBANKS INFR**	**2.94**	**200**	Pn	**Pn**	**08 30 18.0**	**+1.3**
	baz=21,slow=24,SNR=0.4						
I53US				*i*		08 40 20.0	
	baz=23,slow=323,SNR=0.5						
TCOL	**CIGO, UAF Yank**	**2.94**	**200**		**Pn**	**08 30 16.0**	**-0.7**
TCOL	**CIGO, UAF Yank**	**2.94**	**200**	P		08 30 15.9	
	baz=16,SNR=26						
I23K	**Minto, Yukon-K**	**2.95**	**214**		**Pn**	**08 30 15.4**	**-1.5**
I23K	**Minto, Yukon-K**	**2.95**	**214**	P		08 30 15.4	
	baz=29,SNR=358						
CCB	**Clear Creek Bu**	**3.15**	**199**		**Pn**	**08 30 18.6**	**-1.0**
CCB				IAML		08 31 14.7	
	comp=E,2μm,0.9s						
PS08	**TAPS Pump Stn8**	**3.16**	**191**		**Pn**	**08 30 18.8**	**-0.9**
HDA	**Harding Lake**	**3.30**	**191**		**Pn**	**08 30 21.2**	**-0.4**
HDA	**Harding Lake**	**3.30**	**191**	P		08 30 21.0	
	baz=7.2,SNR=430						
HDA				P		08 30 21.0	
	baz=7.2,SNR=430						
WRH	**Wood River Hil**	**3.36**	**200**		**Pn**	**08 30 22.3**	**-0.1**
WRH				IAML		08 31 19.9	
	comp=E,2μm,1.3s						
EGAK	**Eagle**	**3.36**	**147**	Pn	**Pn**	**08 30 22.1**	**-0.4**
EGAK				IAML		08 31 21.9	
	comp=E,2μm,1.6s						
EGAK				IAML		08 31 24.6	
	comp=E,2μm,0.7s						
EGAK	**Eagle**	**3.36**	**147**	P		08 30 21.8	
	baz=327,SNR=171						
MLY	**Manley**	**3.37**	**222**	Pn	**Pn**	**08 30 21.1**	**-1.6**
MLY				IAML		08 31 18.4	
	comp=N,1μm,1.1s						
MLY				IAML		08 31 21.9	
	comp=E,2μm,0.9s						
MLY	**Manley**	**3.37**	**222**	P		08 30 20.9	
	baz=36,SNR=229						
NEA2	**Nenana**	**3.39**	**207**		**Pn**	**08 30 21.4**	**-1.5**
NEA2	**Nenana**	**3.39**	**207**	P		08 30 21.4	
	baz=22,SNR=80						
IM03		**3.67**	**247**		**Pn**	**08 30 24.1**	**-2.6**
IMAR	**Indian Mountai**	**3.67**	**247**		**Pn**	**08 30 24.0**	**-2.7**
SCRK	**Sand Creek**	**3.73**	**170**	Pn	**Pn**	**08 30 27.9**	**+0.3**
SCRK				IAML		08 31 30.1	
	comp=E,2μm,1.0s						
SCRK	**Sand Creek**	**3.73**	**170**	P		08 30 27.5	
	baz=348,SNR=253						
BWN	**Browne**	**3.85**	**207**		**Pn**	**08 30 28.2**	**-1.0**
K27K	**Chicken**	**3.88**	**157**		**Pn**	**08 30 29.6**	**-0.1**
DOT	**Dot Lake**	**4.05**	**171**	Pn	**Pn**	**08 30 32.1**	**+0.1**
MCK	**McKinley**	**4.18**	**202**	Pn	**Pn**	**08 30 33.2**	**-0.6**
MCK				IAML		08 31 39.8	
	comp=E,1μm,1.0s						
MCK				IAML		08 31 58.6	
	comp=N,1μm,1.5s						
MCK	**McKinley**	**4.18**	**202**	P		08 30 32.5	
	baz=17,SNR=120						
BPAW	**Bear Paw Mtn.**	**4.21**	**215**	Pn	**Pn**	**08 30 32.4**	**-1.9**
BPAW				IAML		08 31 48.4	
	comp=E,1μm,2.3s						
BPAW				IAML		08 31 50.1	
	comp=N,925nm,1.3s						
BPAW	**Bear Paw Mtn.**	**4.22**	**215**	P		08 30 32.6	
	baz=29,SNR=79						
DAWY	**Dawson**	**4.37**	**142**	Pn	**Pn**	**08 30 35.9**	**-0.4**
DAWY				IAML		08 31 57.9	
	comp=E,580nm,1.5s						
RND	**Reindeer**	**4.48**	**200**		**Pn**	**08 30 37.5**	**-0.4**
RND				IAML		08 31 51.8	
	comp=N,636nm,1.8s						
RND				IAML		08 31 55.6	
	comp=E,988nm,1.3s						
INK	**Inuvik**	**4.55**	**76**	Pn	**Pn**	**08 30 39.6**	**+0.9**
	comp=E,4.1nm,0.3s,baz=254,slow=18,SNR=88						
INK				Sn	**Sn**	**08 31 27.6**	**-3.8**
	comp=E,22nm,0.3s,baz=239,slow=16,SNR=3.5						
INK				Lg	Lg	08 31 45.9	
	comp=E,23nm,0.3s,baz=164,slow=27,SNR=3.8						
INK				LR	LR	08 32 46.0	
	comp=E,2μm,18.5s,baz=318,slow=43						
INK	**Inuvik**	**4.55**	**76**	Pn	**Pn**	**08 30 37.8**	**-0.9**
TRF	**Thorofare Moun**	**4.66**	**208**	Pn	**Pn**	**08 30 39.2**	**-1.2**
TRF				IAML		08 31 60.0	
	comp=N,850nm,1.6s						
TRF	**Thorofare Moun**	**4.66**	**208**	P		08 30 39.0	
	baz=22,SNR=60						
KTH	**Kantishna Hill**	**4.69**	**211**		**Pn**	**08 30 39.3**	**-1.4**
KTH	**Kantishna Hill**	**4.69**	**211**	IAML		08 31 58.6	
	comp=E,909nm,1.3s						
PAX	**Paxson**	**4.69**	**180**		**Pn**	**08 30 40.5**	**-0.3**
PAX	**Paxson**	**4.69**	**180**	P		08 30 40.6	
	baz=358,SNR=29						
CHUM	**Lake Minchumin**	**4.71**	**220**	P		08 30 39.3	
	baz=33,SNR=75						
MENT	**Mentasta**	**4.78**	**170**		**Pn**	**08 30 41.8**	**-0.2**
L27K	**Beaver Creek,**	**4.84**	**160**		**Pn**	**08 30 42.5**	**-0.3**
L27K				IAML		08 32 05.6	
	comp=N,429nm,0.7s						
L27K				IAML		08 32 06.7	
	comp=E,576nm,1.1s						
BC03		**4.84**	**160**		**Pn**	**08 30 42.6**	**-0.2**
BCAR	**Beaver Creek A**	**4.84**	**160**		**Pn**	**08 30 41.3**	**-1.5**
WAT2	**Susitna Watana**	**4.88**	**197**		**Pn**	**08 30 43.5**	**+0.1**
WAT2	**Susitna Watana**	**4.88**	**197**	P		08 30 43.5	
	baz=13,SNR=54						
HUR	**Hurricane**	**5.00**	**202**		**Pn**	**08 30 45.3**	**+0.4**
WAT1	**Susitna Watana**	**5.00**	**196**		**Pn**	**08 30 44.8**	**-0.2**
WAT7	**Susitna Watana**	**5.03**	**198**		**Pn**	**08 30 45.5**	**0.0**
WAT6	**Susitna Watana**	**5.17**	**192**		**Pn**	**08 30 47.6**	**+0.2**
WAT6	**Susitna Watana**	**5.17**	**192**	P		08 30 47.4	
	baz=8.0,SNR=48						
A21K	**Barrow**	**5.38**	**318**		**Pn**	**08 30 49.9**	**-0.3**
A21K	**Barrow**	**5.38**	**318**	P		08 30 50.0	
	baz=130,SNR=121						
PPLA	**Purkeypile**	**5.53**	**214**		**Pn**	**08 30 50.7**	**-1.7**
PPLA	**Purkeypile**	**5.53**	**214**	P		08 31 50.1	
	baz=27,SNR=26						
M24K	**Tolsona, Glenn**	**5.56**	**183**		**Pn**	**08 30 53.4**	**+0.6**
M24K	**Tolsona, Glenn**	**5.56**	**183**	P		08 30 53.4	
	baz=1.0,SNR=16						
PS11	**TAPS Pump St11**	**5.58**	**180**		**Pn**	**08 30 53.7**	**+0.7**
BVCY	**Beaver Creek**	**5.60**	**157**		**Pn**	**08 30 53.1**	**-0.1**
CUT	**Chuliitna**	**5.64**	**203**		**Pn**	**08 30 53.6**	**0.0**
CUT	**Chuliitna**	**5.64**	**203**	P		08 30 52.9	
	baz=18,SNR=6.3						
SCM	**Sheep Creek Mo**	**5.88**	**189**		**Pn**	**08 30 58.2**	**+1.0**
SML	**Sawmill**	**5.98**	**193**		**Pn**	**08 30 58.6**	**0.0**
SML	**Sawmill**	**5.98**	**193**	P		08 30 58.1	
	baz=9.2,SNR=35						
N25K	**Chitina, Valde**	**6.07**	**176**		**Pn**	**08 30 59.7**	**0.0**
N25K	**Chitina, Valde**	**6.07**	**176**	P		08 30 59.8	
	baz=355,SNR=25						
GHO	**Glory Hole Cre**	**6.08**	**196**		**Pn**	**08 30 59.4**	**-0.4**
KLU	**Klutina**	**6.18**	**182**		**Pn**	**08 31 01.6**	**+0.4**
KLU	**Klutina**	**6.18**	**182**	P		08 31 01.6	
	baz=360,SNR=26						
YUK2	**White River**	**6.20**	**159**		**Pn**	**08 31 01.7**	**+0.1**
SKT	**Skwentna**	**6.24**	**207**		**Pn**	**08 31 01.5**	**-0.5**
SKT	**Skwentna**	**6.24**	**207**	P		08 31 01.5	
	baz=21,SNR=11						
GLB	**Gilahina Butte**	**6.26**	**173**		**Pn**	**08 31 02.4**	**0.0**
YUK3	**Moose Creek**	**6.26**	**158**		**Pn**	**08 31 02.4**	**-0.2**
PMR	**Palmer**	**6.27**	**196**	Pn	**Pn**	**08 31 02.3**	**-0.1**
PMR	**Palmer**	**6.27**	**196**	P		08 31 02.3	
	baz=12,SNR=26						
MCARA	**McCarthy VSAT**	**6.37**	**169**		**Pn**	**08 31 04.5**	**+0.7**
KNK	**Knik Glacier**	**6.38**	**193**		**Pn**	**08 31 05.1**	**+1.1**
VRDI	**Verde Repeater**	**6.50**	**171**		**Pn**	**08 31 06.3**	**+0.7**
RDOG	**Red Dog Mine**	**6.61**	**282**	Pn	**Pn**	**08 31 06.4**	**-0.6**
BMRM	**Bremner River**	**6.71**	**176**		**Pn**	**08 31 09.2**	**+0.7**
BMRM	**Bremner River**	**6.71**	**176**	P		08 31 09.3	
	baz=356,SNR=66						
BARN	**Barnard Glacie**	**6.81**	**164**	Pn	**Pn**	**08 31 10.3**	**+0.3**
GLI	**Glacier Island**	**6.83**	**187**		**Pn**	**08 31 09.8**	**-0.2**
GLI	**Glacier Island**	**6.83**	**187**	P		08 31 10.2	
	baz=3.9,SNR=24						
RC01	**Rabbit Creek A**	**6.83**	**198**	Pn	**Pn**	**08 31 10.3**	**+0.2**
RC01	**Rabbit Creek A**	**6.83**	**198**	P		08 31 11.6	
	baz=13,SNR=12						
PWL	**Port Wells**	**6.92**	**192**		**Pn**	**08 31 11.9**	**+0.5**
FID	**Fort Fidalgo**	**6.93**	**184**		**Pn**	**08 31 12.3**	**+0.8**
CTGM	**Chitina Glacie**	**6.94**	**163**		**Pn**	**08 31 12.5**	**+0.8**
CRQM	**Cirque**	**6.99**	**171**		**Pn**	**08 31 13.4**	**+1.0**
TGL	**Tana Glacier**	**7.01**	**169**		**Pn**	**08 31 13.8**	**+1.2**
LOGN	**Logan Glacier**	**7.11**	**162**		**Pn**	**08 31 14.7**	**+0.6**
GRNC	**Granite Creek**	**7.12**	**165**		**Pn**	**08 31 15.4**	**+1.1**
EYAK	**Cordova Ski Ar**	**7.12**	**181**		**Pn**	**08 31 13.5**	**-0.5**
RAGM	**Ragged Mountai**	**7.29**	**177**		**Pn**	**08 31 16.9**	**+0.4**
BERG	**Berg Lake**	**7.32**	**173**		**Pn**	**08 31 15.8**	**-1.0**
HMT	**Hamilton**	**7.35**	**175**		**Pn**	**08 31 16.7**	**-0.6**
O22K	**Cooper Landing**	**7.42**	**197**		**Pn**	**08 31 17.9**	**-0.3**
O22K	**Cooper Landing**	**7.42**	**197**	P		08 31 19.1	
	baz=12,SNR=12						
TABL	**Table Mountain**	**7.47**	**163**		**Pn**	**08 31 20.9**	**+1.8**
YAH	**Yahtse**	**7.49**	**166**		**Pn**	**08 31 19.9**	**+0.6**
HYT	**Haines Junctio**	**7.66**	**149**	Pn	**Pn**	**08 31 21.2**	**-0.4**
KAIM	**Kayak Island**	**7.76**	**176**		**Pn**	**08 31 23.7**	**+0.9**
RSO	**Redoubt South**	**7.88**	**207**		**Pn**	**08 31 23.7**	**-0.9**
PINM	**Pinnacle**	**7.91**	**161**	P		08 31 27.2	
	baz=344,SNR=33						
C36M	**Paulatuk**	**8.03**	**68**	Pn	**Pn**	**08 31 25.3**	**-1.2**
C36M	**Paulatuk**	**8.03**	**68**	P		08 31 25.2	
	baz=267,SNR=72						
WHY	**Whitehorse**	**8.38**	**142**	Pn	**Pn**	**08 31 31.4**	**-0.1**
CNPM	**China Poot**	**8.54**	**200**		**Pn**	**08 31 32.6**	**-0.9**
ANM	**Nome**	**8.63**	**258**	Pn	**Pn**	**08 31 33.7**	**-1.1**
ANM	**Nome**	**8.63**	**258**	P		08 31 32.9	
	baz=61,SNR=10						
TNA	**Tin City**	**9.15**	**267**	Pn	**Pn**	**08 31 40.8**	**-1.1**
TNA	**Tin City**	**9.15**	**267**	P		08 31 40.1	
	baz=68,SNR=36	

comp=Z,2.7nm,0.5s,baz=50,slow=4.2,SNR=15
HRY Holter Researc 27.18 123 P P 08 35 13.2 -0.1
PINE Pine Mountain 27.22 139 P P 08 35 13.6 -0.3
TIXI Tiksi 27.69 317 P P 08 35 20.8 +3.3
comp=Z,2.7nm,0.8s,baz=27,slow=5.9,SNR=3.9
TIXI LR LR 08 48 33.6
comp=Z,194nm,19.6s,baz=80,slow=42
MA2 Magadan 28.19 285 P P 08 35 22.4 +0.2
comp=Z,2.1nm,0.4s,baz=127,slow=10,SNR=1.7
MA2 LR LR 08 46 35.2
comp=Z,222nm,19.6s,baz=50,slow=37
YBH Yreka Blue Hor 28.74 143 LR LR 08 46 00.8
comp=Z,194nm,20.4s,baz=323,slow=34
ULM Lac du Bonnet 29.82 101 LR LR 08 47 37.3
comp=Z,191nm,18.1s,baz=327,slow=36
PETK Petropavlovsk- 30.31 270 P P 08 35 40.4 -0.7
comp=Z,1.3nm,0.6s,baz=69,slow=16,SNR=6.3
PETK LR LR 08 49 12.5
comp=Z,95nm,20.7s,baz=92,slow=39
PDAR Pinedale Array 31.43 124 P P 08 35 53.3 +2.0
comp=Z,1.4nm,0.8s,baz=336,slow=6.5,SNR=11
PDAR Pinedale Array 31.43 124 P P 08 35 51.4 +0.1
KVN Kaiserville 32.40 138 P P 08 35 59.2 -0.6
KVN IAmb IAmb 08 36 07.1
comp=Z,10nm,1.3s
NVAR Mina Array Bea 32.94 139 P P 08 36 07.2 +2.7
comp=Z,6.2nm,0.9s,baz=327,slow=6.6,SNR=28
NVAR LR LR 08 49 24.3
comp=Z,284nm,18.5s,baz=352,slow=36
NVAR Mina Array Bea 32.94 139 P P 08 36 04.3 -0.2
YAK Yakutsk 33.80 302 LR LR 08 52 20.6
comp=Z,321nm,18.8s,baz=86,slow=41
F36A Milaca 34.34 103 P P 08 36 16.2 -0.1
TCRU Three Creeks R 34.36 131 P P 08 36 16.4 -0.6
TCRU IAmb IAmb 08 36 32.7
comp=Z,3.9nm,0.5s
ECSD EROS Data Cent 35.02 108 P P 08 36 22.6 +0.3
E43A Lone Tree Farm 36.37 96 P P 08 36 34.4 +0.6
N35A Tabor 37.88 109 P P 08 36 46.3 -0.4
L40A Anamosa 38.45 104 P P 08 36 51.7 +0.3
L40A IAmb IAmb 08 36 57.9
comp=Z,11nm,0.8s
ANMO Albuquerque 39.55 126 P P 08 37 02.0 +1.0
L44A Lake County Fo 39.59 100 P P 08 37 02.0 +1.0
L44A IAmb IAmb 08 37 08.3
comp=Z,18nm,0.9s
P38A Dawn 39.73 108 P P 08 37 02.8 +0.6
P38A IAmb IAmb 08 37 08.3
comp=Z,13nm,0.8s
L46A Eue Claire 40.34 99 P P 08 37 06.6 -0.6
L46A IAmb IAmb 08 37 13.8
comp=Z,12nm,1.0s
P40A Paris 40.35 106 P P 08 37 09.3 +1.9
P40A IAmb IAmb 08 37 12.8
comp=Z,15nm,1.2s
KAN05 Bluff City Nor 40.42 114 P P 08 37 07.4 -0.5
HDIL Hopedale 40.48 103 P P 08 37 09.4 +1.0
L48A N Adams 41.11 97 P P 08 37 13.1 -0.5
R40A Maddies Statio 41.37 108 P P 08 37 14.4 -1.4
R40A IAmb IAmb 08 37 21.7
comp=Z,8.8nm,1.1s
S39A Bolivar 41.52 109 P P 08 37 16.4 -0.6
S39A IAmb IAmb 08 37 22.9
comp=Z,8.1nm,0.9s
N47A Urbana 41.55 99 P P 08 37 16.8 -0.4
CCM Cathedral Cave 41.95 107 P P 08 37 20.7 +0.2
Q44A Meyer Farm, Va 42.02 104 P P 08 37 20.7 -0.5
Q44A IAmb IAmb 08 37 27.1
comp=Z,16nm,1.1s
WMOK Wichita Mounta 42.25 117 P P 08 37 24.1 +1.0
MGMO Mountain Grove 42.38 108 P P 08 37 25.0 +0.9
MGMO IAmb IAmb 08 37 29.8
comp=Z,17nm,1.0s
U40A Yellville 42.87 109 P P 08 37 28.9 +0.8
U40A IAmb IAmb 08 37 33.7
comp=Z,7.4nm,0.8s
ARCES ARCESS Array B 42.95 5 P P 08 37 28.1 -0.2
comp=Z,3.3nm,1.0s,baz=2.3,slow=6.1,SNR=4.4
ARCES PcP **PcP 08 39 18.9 +0.4**
comp=Z,3.7nm,1.0s,baz=344,slow=2.9,SNR=2.0
KLR Kul'dur 43.18 288 P P 08 37 29.1 -1.3
comp=Z,0.8nm,0.6s,baz=52,slow=14,SNR=2.1
KLR LR LR 08 55 33.2
comp=Z,202nm,18.6s,baz=32,slow=36
ASAJ Asahikawa 43.42 275 LR LR 08 57 06.6
comp=Z,157nm,19.2s,baz=310,slow=38
FCAR Ozark Folk Cen 43.55 109 P P 08 37 33.5 0.0
FCAR IAmb IAmb 08 37 38.6
comp=Z,14nm,1.3s
LCAR Lake Charles 43.74 108 P P 08 37 35.1 0.0
LCAR IAmb IAmb 08 37 39.2
comp=Z,14nm,1.5s
WVT Waverly 44.91 104 P P 08 37 45.7 +1.3
WVT IAmb IAmb 08 37 48.9
comp=Z,14nm,1.3s
S51A Beattyville 45.17 99 P P 08 37 45.4 -1.1
TX31 Lajitas Ar. Si 45.62 125 P P 08 37 51.1 +0.9
TX32 Lajitas Array 45.62 125 P P 08 37 51.1 +0.8
TX32 IAmb IAmb 08 37 57.2
comp=Z,6.2nm,1.3s
TXAR Lajitas Array 45.62 125 P P 08 37 52.6 +2.3
comp=Z,2.1nm,0.9s,baz=350,slow=7.1,SNR=15
TXAR LR LR 08 57 14.5
comp=Z,197nm,19.9s,baz=0.0,slow=36
TXAR Lajitas Array 45.62 125 P P 08 37 50.3 +0.1
OXF Oxford 45.77 107 P P 08 37 52.2 +1.0
JCT Junction City 45.80 121 P P 08 37 52.2 +0.6
JCT IAmb IAmb 08 38 00.7
comp=Z,4.9nm,0.8s
USRK Ussuriysk Ar. 47.34 284 P P 08 38 03.4 -0.1
comp=Z,0.7nm,0.6s,baz=50,slow=12,SNR=4.5
FINES FINESS Array B 51.07 5 P P 08 38 31.4 -0.3
comp=Z,1.6nm,0.5s,baz=356,slow=7.8,SNR=14
MJAR Matsushiro Arr 51.64 274 LR LR 09 01 53.1
comp=Z,66nm,19.7s,baz=50,slow=38
SONM Songino Array 52.95 307 P P 08 38 44.9 -1.2
comp=Z,0.8nm,0.6s,baz=32,slow=8.5,SNR=1.3
SONM LR LR 09 05 22.4
comp=Z,222nm,18.0s,baz=20,slow=41
ZALV Zalesovo Beam 53.08 325 P P 08 38 45.8 -1.0
comp=Z,0.7nm,0.5s,baz=18,slow=7.9,SNR=3.7
ZALV LR LR 09 03 35.5
comp=Z,91nm,19.8s,baz=20,slow=39
KIRV Kirov 53.60 350 LR LR 09 02 08.2
comp=Z,54nm,21.6s,baz=20,slow=37
KSRS Korea Array 54.73 283 P P 08 38 59.0 -0.1
comp=Z,1.5nm,0.9s,baz=16,slow=9.4,SNR=4.4
ARU Arti 54.97 344 LR LR 09 02 38.7
comp=Z,74nm,21.9s,baz=74,slow=36
JNU Nakatsue 57.46 278 LR LR 09 05 18.2
comp=Z,107nm,18.9s,baz=22,slow=38
HHC Hu-ho-hao-te 57.53 299 *eP* P 08 39 13.5 -5.7
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,150nm,7.2s
HHC LR LR
comp=N,470nm,15.7s
HHC LR LR
comp=E,700nm,14.9s
HHC LR LR
comp=Z,290nm,14.5s
BELG Belogornoye 59.89 351 LR LR 09 08 18.4
comp=Z,46nm,18.8s,baz=286,slow=39
CLL Collm 60.28 15 *eP* **P 08 39 40.0 +2.0**
MKAR Makanchi Array 60.36 324 P P 08 39 38.2 -0.5
comp=Z,0.6nm,0.6s,baz=52,slow=6.5,SNR=5.6
MKAR LR LR 09 08 21.4
comp=Z,66nm,18.4s,baz=9.5,slow=39
MKAR Makanchi Array 60.36 324 P P 08 39 37.9 -0.7
MAKZ Makanchi 60.41 324 P P 08 39 38.8 -0.3
MAKZ IAmb IAmb 08 39 46.1
comp=Z,5.8nm,1.5s
AKTO Aktyubinsk 60.93 343 LR LR 09 06 04.4
comp=Z,44nm,21.9s,baz=6.2,slow=36
ABKAR Akbulak array 61.87 341 P P 08 39 49.8 +1.0
ABKAR IAmb IAmb 08 39 58.6
comp=Z,4.7nm,1.1s
ABKAR Akbulak array 61.87 341 P P 08 39 49.2 +0.4
WMQ Urumqi 61.87 319 *eP* **P 08 39 45.6 -3.4**
AKASG Malin Array Be 61.92 4 P P 08 39 48.8 -0.3
comp=Z,1.6nm,0.5s,baz=360,slow=6.7,SNR=6.8
AKASG LR LR 09 07 12.1
comp=Z,32nm,18.8s,baz=340,slow=37
GTA Gaotai 62.60 308 *eP* **P 08 39 57.3 +3.3**
GTA pP sP 08 40 05.8 +7.1
GTA sP pP 08 40 09.6 +12
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,34nm,4.6s
GTA LR LR
comp=N,210nm,17.1s
GTA LR LR
comp=E,140nm,16.0s
GTA LR LR
comp=Z,250nm,18.5s
GERES GERESS Array B 62.78 15 P P 08 39 55.9 +0.9
comp=Z,1.3nm,0.9s,baz=331,slow=7.9,SNR=4.2
NJ2 Nanjing 62.88 288 *eP* **P 08 39 55.2 -0.6**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
LZH Lanzhou 64.39 303 *eP* **P 08 40 01.8 -4.1**
LZH pP sP 08 40 10.7 +0.1
LZH sP pP 08 40 14.0 +4.7
LZH PP **PP 08 42 29.0 +2.0**
LZH pmax pmax
comp=Z,13nm,1.2s
LZH pmax pmax
comp=Z,100nm,5.4s
LZH LR LR
comp=N,320nm,16.3s
LZH LR LR
comp=E,530nm,16.8s
LZH LR LR
comp=Z,160nm,16.3s
AAK Ala-Archa 65.98 329 LR LR 09 12 09.1
comp=Z,115nm,20.7s,baz=20,slow=39
KK31 Karatay Array 66.28 332 P P 08 40 18.3 +0.4
KK31 IAmb IAmb 08 40 22.1
comp=Z,2.6nm,1.0s
KKAR Karatay Array 66.28 332 P P 08 40 17.9 0.0
KBZ Khabaz 68.78 354 LR LR 09 10 48.0
comp=Z,17nm,21.6s,baz=360,slow=36
ESDC Sonseca Array 69.12 31 P P 08 40 36.9 +1.0
comp=Z,0.9nm,1.0s,baz=322,slow=4.3,SNR=4.0
ESDC LR LR 09 11 03.8
comp=Z,35nm,21.5s,baz=325,slow=36
ESDC Sonseca Array 69.12 31 P P 08 40 37.2 +1.3
BRTR Keskin Array B 72.96 1 P P 08 40 59.9 +0.6
comp=Z,1.6nm,1.0s,baz=347,slow=5.9,SNR=3.0
BRTR LR LR 09 14 49.1
comp=Z,29nm,19.4s,baz=16,slow=37
QIZ Qiongzhong 78.02 291 P P 08 41 22.6 -5.8
QIZ S **S 08 51 20.3 -1.6**
QIZ LR LR
comp=N,260nm,15.9s
QIZ LR LR
comp=E,270nm,17.8s
QIZ LR LR
comp=Z,240nm,18.1s
CMAR Chiang Mai Arr 82.31 300 P P 08 41 51.4 -0.1
comp=Z,2.0nm,0.3s,baz=10,slow=5.5,SNR=1.7

IDC 03 08:33:42.4±2.5, 2°27N×126°67E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/46, mbtmp3.2/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/21 Error ellipse: s-maj=205.6km s-min=28.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.32**	**162**	P	P	08 38 52.4	+0.1
	0.3nm,0.3s,baz=341,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**26.72**	**165**	P	P	08 39 23.8	+0.1
	0.1nm,0.4s,baz=344,slow=7.4,SNR=5.7						
ASAR				LR	LR	08 52 27.4	
	comp=Z,56nm,18.1s,baz=222,slow=42						
MKAR	**Makanchi Array**	**58.72**	**326**	P	P	08 43 41.9	-0.2
	0.2nm,0.7s,baz=122,slow=7.0,SNR=1.8						

IDC 03 08:47:57.8±2.5, 53°90N×86°54E, h0km, mb1 2.8/2, mb1mx2.8/38, mbtmp2.8/2, ML2.6/2, 2C, Error ellipse: s-maj=21.4km s-min=13.0km az=69.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**273**	*i*		08 52 03.2	
	baz=90,slow=326,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.02**	**273**	Pg	Pg	08 48 16.8	-0.6
	0.7nm,0.3s,baz=94,slow=12,SNR=6.3						
ZALV				Lg	Lg	08 48 31.8	
	2.5nm,0.3s,baz=94,slow=30,SNR=3.3						
ZALV				Rg	Rg	08 48 37.5	
	2.2nm,0.3s,baz=96,slow=30,SNR=4.9						
KURBB	**Kurchatov Arra**	**5.91**	**240**	Pn	Pn	08 49 27.3	+0.8
	0.1nm,0.3s,baz=56,slow=14,SNR=6.6						
KURBB				Lg	Lg	08 51 06.7	
	0.1nm,0.3s,baz=64,slow=30,SNR=1.5						
MK31	**Makanchi Array**	**7.62**	**203**	↑Pg	Pb	08 50 15.6	+4.9
	0.4nm,0.6s,baz=140,slow=16,SNR=8.7						
MK31				↑Lg	Lg	08 50 59.8	
	0.9nm,0.8s,baz=138,slow=28						
MKAR	**Makanchi Array**	**7.62**	**203**	Pn	Pn	08 49 51.0	+1.0
	0.1nm,0.3s,baz=27,slow=14,SNR=6.4						
MKAR				Lg	Lg	08 51 58.8	
	baz=18,slow=29,SNR=1.8						

*IDC **03** 08:48:07.6±1.3, 56°.06N×113°.82E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.5/42, mbtmp3.7/10, ML3.0/2, Error ellipse: s-maj=30.7km s-min=16.2km az=150.0*
*BYKL **03** 08:48:08.8±0.1, 56°.10N×113°.69E, h5km±2km*
ISC 03 08:48:08.7±0.5, 55°.98N±0°.02×113°.57E±0°.02, h10km, n50, σ2s 69/109, mb3.6/6, 8C-2D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.14**	**358**	↑*i*Pg	**Pg**	**08 48 10.8**	**-1.1**
SVKR				*e*Sg	**Sg**	**08 48 12.4**	**-1.8**
SVKR				Pmax			
	20μm,0.2s						
SVKR				Smax			
	77μm,0.6s						
UKT	**Uakit**	**0.49**	**176**	↑*i*Pg	**Pb**	**08 48 19.4**	**-0.1**
UKT				*e*Sg	**Sb**	**08 48 27.5**	**+0.7**
UKT				Pmax			
	185nm,0.2s						
UKT				Smax			
	842nm,0.5s						
YOA	**Uoyan**	**1.04**	**279**	↑*i*Pg	**Pn**	**08 48 29.2**	**-0.2**
YOA				*e*Pb	**Pb**	**08 48 30.6**	**+1.7**
YOA				*e*Sg	**Sn**	**08 48 43.8**	**-0.2**
YOA				max			
	966nm,0.4s						
YOA				Smax			
	4μm,0.6s						
NLYR	**Nelyaty**	**1.30**	**66**	↑*i*Pg	**Pn**	**08 48 30.2**	**-2.7**
NLYR				*e*Pb	**Pg**	**08 48 32.5**	**-1.1**
NLYR				*e*		08 48 34.0	
NLYR				*e*Sg	**Sb**	**08 48 46.2**	**-3.7**
NLYR				*e*Sb	**Sg**	**08 48 50.1**	**-0.3**
NLYR				*e*		08 48 57.9	
NLYR				Pmax			
	467nm,0.3s						
NLYR				max			
	2μm,0.7s						
KMO	**Kumora**	**1.33**	**267**	↑*i*Pg	**Pg**	**08 48 34.4**	**+0.1**
KMO				*e*		08 48 36.2	
KMO				*e*Sg	**Sg**	**08 48 53.1**	**+1.5**
KMO				*e*		08 48 56.5	
KMO				max			
	532nm,0.4s						
KMO				max			
	5μm,0.8s						
YLYR	**Ulyunkhan**	**1.76**	**232**	↓*i*Pn	**Pg**	**08 48 42.5**	**+0.1**
YLYR				*e*Pg	**Pb**	**08 48 43.0**	**+1.9**
YLYR				*e*		08 48 44.8	
YLYR				*e*Sg	**Sg**	**08 49 07.9**	**+2.6**
YLYR				Pmax			
	252nm,0.1s						
YLYR				Smax			
	1μm,0.2s						
BOD	**Bodaibo**	**1.86**	**7**	↑*i*Pg	**Pn**	**08 48 40.0**	**-0.6**
BOD				*e*		08 48 42.3	
BOD				*e*Sg	**Sn**	**08 49 02.7**	**-1.4**
BOD				max			
	234nm,0.3s						
BOD				Smax			
	1μm,0.3s						
NIZ	**Nizh Angarsk**	**2.28**	**266**	*e*Pn	**Pb**	**08 48 48.8**	**-1.1**
NIZ				*e*Pg	**Pg**	**08 48 51.5**	**-0.8**
NIZ				*e*Sn	**Sb**	**08 49 18.7**	**+0.6**
NIZ				*e*Sg	**Sg**	**08 49 22.8**	**+1.0**
NIZ				Pmax			
	153nm,0.6s						
NIZ				Smax			
	2μm,0.5s						
CRS	**Chara**	**2.77**	**69**	*e*Pn	**Pn**	**08 48 52.7**	**-0.4**
CRS				*e*Pg	**Pb**	**08 48 57.2**	**-1.1**
CRS				*e*		08 48 59.1	
CRS				*e*Sn	**Sn**	**08 49 25.1**	**-1.5**
CRS				*e*Sg	**Sb**	**08 49 31.6**	**-0.6**
CRS				max			
	334nm,0.8s						
CRS				Smax			
	560nm,0.7s						
SYVR	**Suvo**	**3.11**	**223**	*e*Pn	**Pb**	**08 49 00.5**	**-3.6**
SYVR				*e*Pg	**Pg**	**08 49 07.0**	**-1.2**
SYVR				*e*PgPg	**PbPb**	**08 49 10.7**	**+3.5**
SYVR				*e*		08 49 30.7	
SYVR				*e*Sn	**Sb**	**08 49 38.2**	**-3.8**
SYVR				*e*Sg	**Sg**	**08 49 49.3**	**+0.8**
SYVR				max			
	68nm,0.6s						
SYVR				Smax			
	292nm,0.4s						
VTMR	**Vitim**	**3.51**	**351**	*e*Pn	**Pn**	**08 49 02.7**	**-0.6**
VTMR				*e*		08 49 11.6	
VTMR				*e*Sn	**Sn**	**08 49 43.4**	**-1.4**
VTMR				*e*Sg	**Sb**	**08 49 53.5**	**0.0**
KHNR	**Khani**	**3.68**	**73**	*e*Pn	**Pn**	**08 49 05.0**	**-0.7**
KHNR				*e*Pg	**Pb**	**08 49 13.0**	**-0.8**
KHNR				*e*Sn	**Sn**	**08 49 47.1**	**-2.0**
KHNR				*e*Sg	**Sb**	**08 49 59.8**	**+1.3**
MXMB	**Maximikha**	**3.91**	**228**	*e*Pg	**Pg**	**08 49 21.7**	**-1.8**
MXMB				*e*Sn	**Sn**	**08 49 56.8**	**+2.2**
MXMB				*e*Sg	**Sg**	**08 50 13.7**	**-0.4**
MXMB				*e*		08 50 22.3	
CIT	**Chita**	**3.97**	**180**	*e*Pg	**Pg**	**08 49 22.0**	**-2.6**
CIT				*e*Sn	**Sn**	**08 49 59.9**	**+3.7**
CIT				*e*Sg	**Sg**	**08 50 14.8**	**-1.2**
CIT				Pmax			
	215nm,0.1s						
CIT				Smax			
	267nm,0.5s						
TUP	**Tupik**	**3.98**	**110**	*e*Pn	**Pn**	**08 49 10.1**	**+0.4**
TUP				*e*Pg	**Pb**	**08 49 20.3**	**+1.4**
TUP				*e*Sn	**Sn**	**08 49 55.0**	**-1.4**
TUP				*e*Sg	**Sg**	**08 50 11.9**	**-4.4**
TUP				*e*		08 50 16.9	
TUP				Pmax			
	61nm,0.6s						
TUP				max			
	469nm,0.8s						
OGRR	**Ongureny**	**4.17**	**238**	↓*i*Pn	**Pn**	**08 49 16.1**	**+3.7**
OGRR				*e*Pg	**Pg**	**08 49 25.6**	**-3.0**
OGRR				*e*Sn	**Sn**	**08 50 04.3**	**+3.1**
OGRR				*e*Sg	**Sg**	**08 50 21.8**	**-0.8**
OGRR				Pmax			
	47nm,0.7s						
OGRR				Smax			
	194nm,0.9s						
YKLR	**Yuktali**	**4.55**	**79**	*e*Pn	**Pn**	**08 49 18.3**	**+0.8**
YKLR				*e*Pg	**Pb**	**08 49 28.3**	**-0.2**
YKLR				*e*		08 49 31.9	
YKLR				*e*Sn	**Sn**	**08 50 07.3**	**-3.1**
YKLR				*e*Sg	**Sb**	**08 50 25.8**	**+2.4**
KELR	**Kotokel**	**4.55**	**227**	*e*Sg	**Sg**	**08 50 33.6**	**-1.1**
ZRHB	**Zarechye**	**5.09**	**230**	*e*Pn	**Pn**	**08 49 28.0**	**+3.0**
ZRHB				*e*Pg	**Pg**	**08 49 43.0**	**-3.1**
ZRHB				*e*Sn	**Sn**	**08 50 24.8**	**+1.0**
ZRHB				*e*Sg	**Sg**	**08 50 50.5**	**-1.5**
ZRHB				Pmax			
	43nm,0.5s						
ZRHB				Smax			
	347nm,1.5s						
TRG	**Tyrgan**	**5.31**	**236**	*e*Pn	**Pn**	**08 49 30.7**	**+2.7**
TRG				*e*Pg	**Pg**	**08 49 45.8**	**-4.5**
TRG				*e*Sg	**Sg**	**08 50 55.9**	**-3.2**
TRG				*e*		08 51 29.7	
TRG				Pmax			
	18nm,0.6s						
TRG				Smax			
	85nm,1.0s						
UUDB	**Ulan-Yde**	**5.40**	**223**	*e*Pg	**Pg**	**08 49 48.5**	**-3.5**
UUDB				*e*Sn	**Sn**	**08 50 33.4**	**+2.0**
UUDB				*e*Sg	**Sg**	**08 50 59.8**	**-2.1**
UUDB				Pmax			
	31nm,1.2s						
UUDB				Smax			
	275nm,1.3s						
FFNB	**Fofonovo**	**5.62**	**228**	*e*Pn	Pn	08 49 36.2	+3.9
FFNB				*e*Pg	**Pg**	**08 49 52.9**	**-3.4**
FFNB				*e*Sn	**Sn**	**08 50 38.7**	**+1.8**
FFNB				*e*Sg	**Sg**	**08 51 07.0**	**-2.0**
FFNB				*e*		08 51 34.4	
KAB	**Kabansk**	**5.67**	**229**	*e*Sg	**Sg**	**08 51 08.2**	**-2.2**
KAB				Smax			
	493nm,1.0s						
STDB	**Stepnoy Dvoret**	**5.70**	**231**	*e*Pg	**Pg**	**08 49 54.5**	**-3.3**
STDB				*e*Sg	**Sg**	**08 51 09.7**	**-1.8**
HRMR	**Khuramsha**	**5.86**	**225**	*e*Pn	**Pn**	**08 49 38.7**	**+3.1**
HRMR				*e*Pg	**Pg**	**08 49 57.3**	**-3.5**
HRMR				*e*		08 50 02.3	
HRMR				*e*Sn	**Sn**	**08 50 45.5**	**+2.7**
HRMR				*e*Sg	**Sg**	**08 51 15.0**	**-1.7**
HRMR				Pmax			
	50nm,0.6s						
HRMR				Smax			
	293nm,0.6s						
BGT	**Bolshoye Golou**	**6.22**	**234**	*e*		08 51 19.6	
BGT				*e*Sg	**Sg**	**08 51 24.8**	**-3.3**
BGT				Smax			
	62nm,0.3s						
IENR	**Iengra**	**6.32**	**83**	*e*Sg	Sg	08 51 22.0	-10
KPC	**Khapcheranga**	**6.33**	**187**	*e*Pg	**Pg**	**08 50 05.7**	**-4.1**
KPC				*e*Sn	**Sn**	**08 50 56.3**	**+1.9**
KPC				*e*Sg	**Sg**	**08 51 29.0**	**-2.7**
KPC				*e*		08 51 50.3	
KPC				Pmax			
	13nm,0.7s						
KPC				Smax			
	164nm,1.0s						
CLNS	**Chul'man**	**6.35**	**78**	*e*Sg	**Sb**	**08 51 21.6**	**+6.5**
LSTR	**Listvyanka**	**6.60**	**235**	*e*Sg	**Sg**	**08 51 37.6**	**-2.8**
LSTR				Smax			
	66nm,1.5s						
IVK	**Ivanovka**	**6.84**	**236**	*e*Pn	**Pn**	**08 49 52.1**	**+3.1**
IVK				Pg	Pg	08 50 14.1	-5.4
IVK				*e*Sn	**Sn**	**08 51 09.0**	**+2.2**
IVK				*e*Sg	**Sg**	**08 51 43.3**	**-4.7**
IVK				*e*		08 52 09.5	
IVK				Pmax			
	8.0nm,0.7s						
IVK				Smax			
	72nm,1.5s						
TLY	**Talaya**	**7.28**	**238**	Pg	**Pb**	**08 50 12.6**	**-2.4**
	0.0nm,0.3s,baz=64,slow=17,SNR=1.4						
TLY				Lg	Lg	08 51 55.5	
	0.0nm,0.3s,baz=278,slow=18,SNR=9.8						
TLY	**Talaya**	**7.28**	**238**	Pg	Pg	08 50 21.9	-6.1
TLY				*e*Sn	**Sn**	**08 51 19.4**	**+1.7**
TLY				*e*Sg	**Sg**	**08 51 56.5**	**-5.6**
TLY				Pmax			
	6.0nm,0.8s						
TLY				Smax			
	45nm,1.0s						
ARS	**Arshan**	**7.73**	**243**	*e*Pn	**Pn**	**08 50 03.1**	**+1.9**
ARS				*e*Pg	Pg	08 50 30.3	-6.2
ARS				*e*Sg	**Sg**	**08 52 10.5**	**-6.0**
ARS				Pmax			
	12nm,0.8s						
ARS				Smax			
	264nm,0.8s						
ZAK	**Zakamensk**	**8.34**	**232**	*e*Sg	**Sg**	**08 52 30.5**	**-5.6**
ZAK				Smax			
	34nm,1.3s						
MOY	**Mondy**	**8.60**	**245**	*e*Pn	**Pn**	**08 50 16.1**	**+2.9**
MOY				*e*Pg	Pg	08 50 46.1	-7.1
MOY				*e*		08 50 52.5	
MOY				*e*Sn	**Sn**	**08 51 51.1**	**+0.9**
MOY				*e*Sg	**Sg**	**08 52 37.5**	**-6.9**

MOY max
18nm,1.0s
MOY Smax
96nm,0.9s
ORL Orlik 8.76 253 *e*Pn **Pn 08 50 17.5 +2.1**
ORL *e* 08 50 28.1
ORL Pg Pg 08 50 49.3 -6.9
ORL *e*Sn **Sn 08 51 53.8 -0.3**
ORL *e*Sg **Sg 08 52 43.0 -6.5**
ORL Pmax
26nm,1.3s
ORL Smax
72nm,1.3s
SONM Songino Array 9.28 211 Pn **Pn 08 50 24.5 +1.9**
0.2nm,0.3s,baz=24,slow=13,SNR=3.0
SONM Lg Lg 08 52 58.6
0.8nm,0.3s,baz=29,slow=27,SNR=3.6
YAK Yakutsk 10.27 47 Lg Lg 08 53 18.0
0.3nm,0.3s,baz=75,slow=4.4,SNR=1.5
KLR Kul'dur 12.93 114 Pn **Pn 08 51 11.2 -1.2**
KLR 0.1nm,0.3s,baz=311,slow=20,SNR=1.2
Lg Lg 08 54 47.0
0.3nm,0.3s,baz=223,slow=17,SNR=4.0
TIXI Tiksi 17.01 17 Pn Pn 08 51 57.2 -9.1
TIXI 0.3nm,0.3s,baz=111,slow=7.2,SNR=2.0
Sn Sn 08 54 57.1 -18
TIXI 0.3nm,0.3s,baz=320,slow=15,SNR=1.5
Lg Lg 08 57 00.7
baz=301,slow=21,SNR=1.0
NRIK Noril'sk 17.73 329 P **Pn 08 52 11.7 -3.5**
NRIK 0.4nm,0.3s,baz=138,slow=8.2,SNR=2.9
S Sn 08 55 16.5 -16
NRIK 0.2nm,0.3s,baz=5.0,slow=18,SNR=1.9
Lg Lg 08 57 17.0
0.2nm,0.3s,baz=141,slow=11,SNR=1.7
SEY Seymchan 20.64 54 P **P 08 52 47.4 -0.6**
3.4nm,0.3s,baz=74,slow=0.4,SNR=27
MKAR Makanchi Array 21.41 258 P **P 08 52 59.3 +2.9**
MKAR 1.0nm,0.7s,baz=53,slow=12,SNR=7.6
Lg Lg 08 59 31.4
0.2nm,0.6s,baz=8.3,slow=13,SNR=6.6
KURBB Kurchatov Arra 21.45 270 P **P 08 52 58.8 +2.0**
KURBB 2.3nm,0.6s,baz=65,slow=11,SNR=2.8
Lg Lg 08 59 33.2
0.7nm,0.5s,baz=104,slow=24,SNR=5.8
KURBB Kurchatov Arra 21.45 270 ⇑Pg **P 08 53 02.5 +5.7**
KURBB 5.7nm,0.8s,baz=276,slow=26
⇑Lg Lg 08 53 46.5
10nm,0.6s,baz=278,slow=29
BVAR Borovoye Array 24.94 281 P **P 08 53 33.1 +1.3**
1.3nm,0.8s,baz=72,slow=9.7,SNR=3.8
FINES FINESS Array B 42.51 315 P **P 08 56 04.9 +1.2**
0.7nm,0.8s,baz=47,slow=10,SNR=1.1
YKA Yellowknife Ar 56.05 25 P **P 08 57 45.6 -1.5**
0.4nm,0.6s,baz=334,slow=6.8,SNR=6.8
ESDC Sonseca Array 71.01 314 P **P 08 59 27.0 +0.6**
0.5nm,0.8s,baz=28,slow=6.6,SNR=5.3

IDC 03 08:50:48.9±4.0, 54°.16N×88°.89E, h0km, mb1 3.1/3, mb1mx3.0/41, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=40.2km s-min=23.5km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.41**	**267**	*i*		09 07 00.0	
	baz=81,slow=326,SNR=2.1						
ZALV	**Zalesovo Beam**	**2.41**	**267**	Pn	Pn	08 51 29.2	-0.4
	1.8nm,0.3s,baz=82,slow=16,SNR=15						
ZALV				Lg	Lg	08 52 05.3	
	2.8nm,0.3s,baz=87,slow=27,SNR=18						
KURBB	**Kurchatov Arra**	**7.26**	**245**	Pn	Pn	08 52 36.7	+0.5
	0.1nm,0.3s,baz=60,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**8.49**	**212**	Pn	Pn	08 52 53.9	+0.8
	0.2nm,0.3s,baz=32,slow=13,SNR=6.3						

NNC ***03*** *08:53:49.3±2.2, 53°.51N×87°.66E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=18.6km s-min=9.1km az=52.0, Suspected Mining explosion.*

IDC 03 08:53:50.0±2.9, 53°.50N×87°.59E, h0km, mb1 3.1/2, mb1mx3.0/41, mbtmp3.1/2, ML2.8/2, 5C-3D, Error ellipse: s-maj=24.3km s-min=14.2km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.71**	**286**	*i*		09 03 35.6	
	baz=101,slow=315,SNR=3.0						
ZAA0	**Zalesovo Array**	**1.71**	**286**	⇑P	Pn	08 54 20.1	-0.9
	0.6nm,0.3s						
ZAA0				⇓S	Sb	08 54 44.3	+0.1
	6.6nm,1.1s						
ZALV	**Zalesovo Beam**	**1.71**	**286**	Pg	Pn	08 54 20.1	-0.8
	5.7nm,0.3s,baz=103,slow=14,SNR=40						
ZALV				Lg	Lg	08 54 45.0	
	3.9nm,0.3s,baz=105,slow=11,SNR=4.3						
KURBB	**Kurchatov Arra**	**6.29**	**246**	Pn	Pn	08 55 24.2	+0.4
	0.1nm,0.3s,baz=60,slow=14,SNR=4.5						
KURBB				Sn	Sn	08 56 35.8	-0.6
	baz=125,slow=33,SNR=0.9						
KURBB				Lg	Lg	08 57 08.6	
	0.1nm,0.3s,baz=63,slow=33,SNR=6.9						
KURBB	**Kurchatov Arra**	**6.29**	**246**	⇑Pn	Pn	08 55 24.5	+0.7
	1.0nm,0.3s						
KURBB				⇑Sn	Sn	08 56 36.7	+0.4
	1.7nm,0.5s						
KURBB				⇑Lg	Lg	08 57 08.2	
	10nm,0.9s						
MK31	**Makanchi Array**	**7.53**	**209**	⇑Pn	Pn	08 55 42.2	+1.3
	1.7nm,0.8s,baz=27,slow=13,SNR=22						
MK31				⇓Sn	Sn	08 57 08.3	+1.4
	1.3nm,0.8s						
MK31				⇓Lg	Lg	08 57 47.2	
	2.6nm,0.8s,baz=32,slow=29,SNR=6.0						
MKAR	**Makanchi Array**	**7.53**	**209**	Pn	Pn	08 55 42.5	+1.6
	0.3nm,0.3s,baz=28,slow=13,SNR=14						
MKAR				Sn	Sn	08 57 06.6	-0.3
	0.0nm,0.3s,baz=28,slow=25,SNR=3.8						
MKAR				Lg	Lg	08 57 46.1	
	0.1nm,0.3s,baz=24,slow=37,SNR=7.7						

ANF ***03*** *09:07:06.4±0.2, 36°.66N×97°.75W, h2km, ML3.5/11, Error ellipse: s-maj=2.1km s-min=1.7km az=149.0*

TUL ***03*** *09:07:06.5±1.6, 36°.67N±0°.02×97°.76W±0°.02, h5km±7km, ML2.9, mb_Lg2.9/50(NEIC), Error ellipse: s-maj=2.9km s-min=2.1km az=181.0*

NEIC ***03*** *09:07:06.8±0.7, 36°.65N±0°.02×97°.75W±0°.02, h3km±7km, Error ellipse: s-maj=3.2km s-min=1.9km az=166.0*

ISC 03 09:07:06.8±1.2, 36.65N±0.02×97.75W±0.02, h1km±12km, n68, σ0951/55, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.22**	**336**	Pg	**Pg**	**09 07 11.0**	**+0.1**
GC02				Sg	**Sg**	**09 07 14.1**	**+0.3**
CROK	**Carrier**	**0.24**	**232**	Pg	**Pg**	**09 07 11.6**	**+0.3**
KAN14	**Manchester OK**	**0.35**	**331**	Pg	**Pg**	**09 07 13.4**	**0.0**
OK032	**Salt Plains WL**	**0.40**	**293**		**Pg**	**09 07 14.4**	**0.0**
OK032				Sg	**Sg**	**09 07 20.0**	**+0.4**
KAN13	**South Haven SW**	**0.42**	**31**	Sg	**Sg**	**09 07 20.7**	**+0.3**
KAN09	**Caldwell North**	**0.49**	**12**	Sg	**Sg**	**09 07 23.0**	**+0.3**
KAN12	**Harper NE Stat**	**0.67**	**343**	IAmb_Lg		09 07 27.0	
	comp=Z,115nm,0.8s						
OK029	**Liberty Lake**	**0.89**	**164**		**Pg**	**09 07 23.6**	**-0.1**
QUOK	**Quay**	**0.97**	**119**		**Pg**	**09 07 25.1**	**-0.3**
BCOK	**Bluff Creek, N**	**1.00**	**173**		**Pg**	**09 07 25.6**	**-0.3**
OK031	**S. Brethren Rd**	**1.01**	**133**		**Pg**	**09 07 25.9**	**-0.3**
T35A	**Sooner Cattle**	**1.03**	**75**		**Pg**	**09 07 26.0**	**-0.5**
T35B	**Sooner Cattle**	**1.03**	**75**	P	**Pg**	**09 07 26.0**	**-0.5**
	baz=255,SNR=76						
T35B				S	**Sg**	**09 07 39.7**	**-0.2**
	baz=255						
T35B	**Sooner Cattle**	**1.03**	**75**	P		09 07 26.0	
	baz=255,SNR=76						
T35B				S		09 07 39.7	
	baz=255						
U32A	**Winter Ranch,**	**1.04**	**255**		**Pg**	**09 07 26.1**	**-0.7**
U32A	**Winter Ranch,**	**1.04**	**255**	P	**Pg**	**09 07 26.1**	**-0.7**
	baz=75,SNR=12						
U32A				S	**Sg**	**09 07 40.3**	**0.0**
	baz=75						
U32A	**Winter Ranch,**	**1.04**	**255**	P		09 07 26.1	
	baz=75,SNR=12						
U32A				S		09 07 40.3	
	baz=75						
OK030	**Cody Creek RV**	**1.06**	**132**		**Pg**	**09 07 26.8**	**-0.4**
OK025	**Westminster Rd**	**1.12**	**162**		**Pg**	**09 07 27.9**	**-0.4**
OKCFA	**Oklahoma City**	**1.26**	**169**	Pn	**Pg**	**09 07 30.3**	**-0.6**
OKCFA	**Oklahoma City**	**1.26**	**169**	P	**Pg**	**09 07 30.3**	**-0.6**
	baz=349,SNR=11						
OKCFA				S	**Sb**	**09 07 48.1**	**+0.2**
	baz=349						
OKCFA	**Oklahoma City**	**1.26**	**169**	P		09 07 30.3	
	baz=349,SNR=11						
OKCFA				S		09 07 48.1	
	baz=349						
OKCSW	**OKLAHOMA CITY**	**1.27**	**168**		**Pg**	**09 07 30.5**	**-0.6**
FNO	**Franklin**	**1.42**	**168**		**Pn**	**09 07 33.5**	**-0.2**
TUL1	**Leonard**	**1.75**	**114**	P	**Pn**	**09 07 38.0**	**-0.2**
	baz=296,SNR=78						
TUL1				S	**Sb**	**09 08 01.9**	**-0.2**
	baz=296						
TUL1	**Leonard**	**1.75**	**114**	P		09 07 38.0	
	baz=296,SNR=78						
TUL1				S		09 08 01.9	
	baz=296						
R32A	**Long Quarter,**	**1.93**	**337**		**Pn**	**09 07 41.0**	**+0.3**
R32A	**Long Quarter,**	**1.93**	**337**	S	**Sb**	**09 08 06.7**	**-0.5**
	baz=156						
R32A	**Long Quarter,**	**1.93**	**337**	S		09 08 06.7	
	baz=156						
X34A	**Smith Ranch, M**	**2.05**	**182**	Pn	**Pn**	**09 07 43.1**	**+0.7**
WMOK	**Wichita Mounta**	**2.08**	**204**		**Pn**	**09 07 42.7**	**-0.2**
WMOK	**Wichita Mounta**	**2.08**	**204**	P	**Pn**	**09 07 42.7**	**-0.2**
	baz=23,SNR=83						
WMOK				S	**Sb**	**09 08 11.3**	**-0.5**
	baz=23						
WMOK	**Wichita Mounta**	**2.08**	**204**	P		09 07 42.7	
	baz=23,SNR=83						
WMOK				S		09 08 11.3	
	baz=23						
KSU1	**Kansas State U**	**2.61**	**20**		**Pn**	**09 07 50.0**	**-0.1**
KSU1	**Kansas State U**	**2.61**	**20**	P	**Pn**	**09 07 49.9**	**-0.1**
	baz=200						
KSU1	**Kansas State U**	**2.61**	**20**	P		09 07 49.9	
	baz=200						
U38A	**Gravette**	**2.72**	**93**		**Pn**	**09 07 51.6**	**0.0**
U38A	**Gravette**	**2.72**	**93**	P	**Pn**	**09 07 51.6**	**0.0**
	baz=275,SNR=10.0						
U38A	**Gravette**	**2.72**	**93**	P		09 07 51.6	
	baz=275,SNR=10.0						
X37A	**Clayton**	**2.83**	**136**		**Pn**	**09 07 52.9**	**-0.2**
X37A				IAmb_Lg		09 08 43.1	
	comp=Z,34nm,0.8s						
X37A	**Clayton**	**2.83**	**136**	P	**Pn**	**09 07 53.1**	**0.0**
	baz=318,SNR=24						
X37A				Sb	**Sb**	**09 08 34.9**	**+1.7**
	baz=318						
X37A	**Clayton**	**2.83**	**136**	P		09 07 53.1	
	baz=318,SNR=24						
X37A				Sb		09 08 34.9	
	baz=318						
HHAR	**Hobbs**	**3.09**	**96**		**Pn**	**09 07 56.6**	**-0.1**
S39A	**Bolivar**	**3.69**	**72**		**Pn**	**09 08 04.7**	**-0.2**
S39A	**Bolivar**	**3.69**	**72**	P	**Pn**	**09 08 04.6**	**-0.3**
	baz=255,SNR=8.2						
S39A				S	**Sn**	**09 08 49.2**	**+0.2**
	baz=255						
S39A	**Bolivar**	**3.69**	**72**	P		09 08 04.6	
	baz=255,SNR=8.2						
S39A				S		09 08 49.2	
	baz=255						
U40A	**Yellville**	**3.96**	**93**	Pn	**Pn**	**09 08 08.5**	**-0.1**
U40A				Pg	**Pb**	**09 08 18.0**	**+0.7**
MIAR	**Mount Ida**	**4.00**	**120**	IAmb_Lg		09 09 14.7	
	comp=Z,25nm,0.9s						
Z38A	**Mt. Pleasant**	**4.08**	**145**	IAmb_Lg		09 09 19.2	
	comp=Z,34nm,0.9s						
N33A	**J Bar K, Exete**	**4.09**	**3**	Pn	**Pn**	**09 08 09.5**	**-0.9**
X40A	**Basin Creek Fa**	**4.55**	**117**	IAmb_Lg		09 09 39.8	
	comp=Z,19nm,0.8s						
WHAR	**Wooly Hollow**	**4.63**	**105**	IAmb_Lg		09 09 39.6	
	comp=Z,17nm,0.8s						
WHTX	**Lake Whitney,**	**4.66**	**177**	Pn	**Pn**	**09 08 17.8**	**-0.4**
WHTX	**Lake Whitney,**	**4.66**	**177**	P	**Pn**	**09 08 17.8**	**-0.4**
	baz=357,SNR=7.8						
WHTX	**Lake Whitney,**	**4.66**	**177**	P		09 08 17.8	
	baz=357,SNR=7.8						
R40A	**Maddies Statio**	**4.66**	**68**	Pn	**Pn**	**09 08 17.8**	**-0.4**
R40A	**Maddies Statio**	**4.66**	**68**	P	**Pn**	**09 08 17.7**	**-0.6**
	baz=251,SNR=9.3						
R40A	**Maddies Statio**	**4.66**	**68**	P		09 08 17.7	
	baz=251,SNR=9.3						
BGNE	**Belgrade**	**4.76**	**356**	Pn	**Pn**	**09 08 19.1**	**-0.6**
BGNE				IAmb_Lg		09 09 43.8	
	comp=Z,31nm,0.8s						
WLAR	**White Oak Lake**	**4.81**	**127**	IAmb_Lg		09 09 46.1	
	comp=Z,22nm,1.1s						
237A	**Washetta, Mont**	**4.91**	**160**	Pn	**Pn**	**09 08 20.7**	**-1.0**
P40A	**Paris**	**5.34**	**56**	IAmb_Lg		09 09 59.2	
	comp=Z,12nm,0.8s						
LCAR	**Lake Charles**	**5.36**	**94**	IAmb_Lg		09 09 59.3	
	comp=Z,23nm,0.9s						
T25A	**Trinidad**	**5.36**	**277**	Pn	**Pn**	**09 08 28.3**	**+0.2**
T25A				IAmb_Lg		09 10 08.9	
	comp=Z,13nm,0.8s						
CCM	**Cathedral Cave**	**5.37**	**73**	IAmb_Lg		09 10 06.5	
	comp=Z,19nm,0.9s						
PBMO	**Poplar Bluff**	**5.88**	**87**	IAmb_Lg		09 10 22.5	
	comp=Z,18nm,0.8s						
FVM	**French Village**	**5.99**	**75**	IAmb_Lg		09 10 18.5	
	comp=Z,13nm,0.9s						
JCT	**Junction City**	**6.39**	**196**	IAmb_Lg		09 10 34.8	
	comp=Z,13nm,0.9s						
143A	**Socs Landing,**	**6.55**	**125**	IAmb_Lg		09 10 44.3	
	comp=Z,15nm,0.9s						
N41A	**Harden Midland**	**6.74**	**51**	IAmb_Lg		09 10 39.4	
	comp=Z,17nm,0.8s						
S44A	**Carbondale**	**6.86**	**79**	IAmb_Lg		09 10 47.1	
	comp=Z,17nm,0.9s						
SIUC	**Sorn Illin**	**6.89**	**79**	IAmb_Lg		09 10 42.6	
	comp=Z,14nm,0.9s						
W45A	**Hickory Valley**	**7.11**	**100**	IAmb_Lg		09 11 00.9	
	comp=Z,21nm,0.9s						
ECSD	**EROS Data Cent**	**7.13**	**7**	P	**Pn**	**09 08 50.8**	**-1.3**
	baz=187,SNR=8.4						
ECSD	**EROS Data Cent**	**7.13**	**7**	P		09 08 50.8	
	baz=187,SNR=8.4						
P43A	**Skaggs, Pawnee**	**7.14**	**63**	IAmb_Lg		09 10 54.8	
	comp=Z,20nm,0.9s						
T45A	**Paducah**	**7.31**	**84**	IAmb_Lg		09 11 05.8	
	comp=Z,19nm,0.8s						
L40A	**Anamosa**	**7.40**	**41**	IAmb_Lg		09 11 07.3	
	comp=Z,14nm,0.7s						
O44A	**Mansfield**	**8.08**	**62**	IAmb_Lg		09 11 20.9	
	comp=Z,11nm,0.7s						
T47A	**Sharon Grove**	**8.54**	**85**	IAmb_Lg		09 11 44.2	
	comp=Z,9.6nm,0.8s						
K22A	**Caspar**	**9.03**	**314**	IAmb_Lg		09 12 12.8	
	comp=Z,9.4nm,1.1s						

BJI ***03*** *09:11:43.1±0.0, 5°.47S×153°.32E, h8km, mB5.3/34, mb4.7/45, Ms5.1/28, Ms7 4.8/29*

IDC ***03*** *09:11:44.3±0.5, 5°.57S×153°.05E, h0km, mb4.7/32, mb1 4.7/33, mb1mx4.7/46, mbtmp4.7/33, ML2.8/1, MS4.5/27, Ms1 4.6/27, ms1mx4.4/40, Error ellipse: s-maj=16.4km s-min=11.4km az=96.0*

DJA ***03*** *09:11:48.3±0.3, 6°.5S±3°×15°.3E±°, h10km, M5.0/21, mb4.9/21, mB5.3/9, MLv5.4/2, Mw(mB)4.7/9, MwMwp5.2/5, Mwp5.4/5*

NEIC ***03*** *09:11:49.0±1.8, 5°.60S±0°.06×153°.12E±0°.07, h35km±1km, mb4.9/85, Error ellipse: s-maj=12.1km s-min=10.0km az=234.0*

GCMT ***03*** *09:11:52.0±0.1, 5°.86S±0°.01×153°.01E±0°.01, h17km, MW5.4/139, Moment Tensor Solution. s116,c188; s139,c255; Duration: 1ś2 Moment tensor: Scale 10^17 Nm; Mrr0.84±.02; Mθθ-0.78±.01; Mϕϕ-0.06±.01; Mrθ1.09±.05; Mθϕ0.19±.01; Mϕr-0.31±.03; Best double couple: M₀1.40500×10^17 NP1:ϕs282.00000°, δ18.00000°, λ87.00000°. NP2:ϕs106.00000°, δ72.00000°, λ91.00000°. Principal axes: T 1.4140, Plg63.0000°, Azm17.0000°; N -0.0180, Plg1.0000°, Azm285.0000°; P -1.3960, Plg27.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function

ISC 03 09:11:49.8±0.3, 5°.65S±0°.05×153°.15E±0°.05, h37km, n220, σ1878/217, mb4.8/90, MS4.6/37, 1C-1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.75**	**326**		**Pn**	**09 12 16.0**	**-1.7**
RABL	**Rabaul**	**1.75**	**326**	P	**Pn**	**09 12 16.9**	**-0.8**
PMG	**Port Moresby**	**7.01**	**238**	Pn	**Pn**	**09 13 29.6**	**-0.4**
	11nm,0.3s,baz=55,slow=5.7,SNR=21						
PMG				Sn	**Sn**	**09 14 51.9**	**+3.3**
	10.0nm,0.3s,baz=97,slow=22,SNR=11						
PMG				LR	LR	09 16 17.7	
	comp=Z,4μm,22.0s,baz=30,slow=39						
PMG	**Port Moresby**	**7.01**	**238**	Pn	**Pn**	**09 13 29.5**	**-0.5**
PMG	**Port Moresby**	**7.01**	**238**	P	**Pn**	**09 13 29.9**	**-0.1**
HNR	**Honiara**	**7.71**	**120**	Pn	Pn	09 13 44.9	+5.4
	3.7nm,0.3s,baz=218,slow=12,SNR=2.1						
HNR				Sn	Sn	09 15 21.8	+16
	3.1nm,0.3s,baz=73,slow=7.0,SNR=1.9						
HNR				LR	LR	09 16 27.9	
	comp=Z,3μm,18.3s,baz=303,slow=36						
HNR	**Honiara**	**7.71**	**120**		**Pn**	**09 13 39.9**	**+0.3**
COEN	**Coen**	**12.83**	**229**	Pn	**Pn**	**09 14 49.6**	**-0.1**
PATS	**Pohnpei**	**13.43**	**23**	Pn	**Pn**	**09 14 55.7**	**-2.2**
CTA	**Charters Tower**	**15.84**	**204**	Pn	**P**	**09 15 32.0**	**-1.5**
	0.5nm,0.3s,baz=29,slow=13,SNR=18						
CTA				LR	LR	09 21 39.1	
	comp=Z,3μm,19.1s,baz=32,slow=38						
CTAO	**Charters Tower**	**15.84**	**204**	Pn	**Pn**	**09 15 30.5**	**+0.3**
SANVU	**Saraoutou**	**16.89**	**126**	Pn	**Pn**	**09 15 41.3**	**-2.1**
SANVU				IAmb	IAmb	09 16 09.2	
	comp=Z,96nm,1.1s						
EIDS	**Eidsvold**	**19.71**	**186**	P	**P**	**09 16 13.7**	**-2.4**
DZM	**Mont Dzumac**	**20.78**	**143**	P	Pn	09 16 30.0	-0.5
	comp=Z,23nm,0.8s,baz=4.7,slow=16,SNR=7.9						
FAKI	**Fak Fak**	**21.02**	**277**	P	**P**	**09 16 28.2**	**-2.2**
FAKI	**Fak Fak**	**21.02**	**277**	P	**P**	**09 16 29.6**	**-0.9**
	comp=Z,23nm,0.8s						
SIJI	**Sorong**	**22.36**	**281**	P	**P**	**09 16 43.2**	**-1.7**
	comp=Z,12nm,0.5s,baz=349,slow=21,SNR=7.3						
SWI	**Sorong**	**22.36**	**282**	P	**P**	**09 16 51.7**	**+6.8**
MTN	**Manton Dam**	**22.86**	**250**	P	**P**	**09 16 47.5**	**-2.7**
WR0	**Warramunga Arr**	**23.02**	**230**	P	**P**	**09 16 50.2**	**-1.6**
WR0				IAmb	IAmb	09 17 07.9	
	comp=Z,40nm,0.9s						
WB0	**Warramunga Arr**	**23.02**	**231**	P	**P**	**09 16 50.0**	**-1.7**
WB0				IAmb	IAmb	09 16 53.4	
	comp=Z,54nm,1.1s						
ANA2	**Anatahan**	**23.06**	**341**	P	**P**	**09 16 49.8**	**-2.3**
WRAB	**Tennant Creek**	**23.15**	**230**	P	**P**	**09 16 51.6**	**-1.5**
WRAB				IAmb	IAmb	09 17 03.4	
	comp=Z,69nm,1.2s						
WB2	**Warramunga Arr**	**23.15**	**230**	P	**P**	**09 16 51.0**	**-2.1**
WB2				IAmb	IAmb	09 17 03.5	
	comp=Z,76nm,1.2s						
WRA	**Warramunga Arr**	**23.16**	**230**	P	**P**	**09 16 52.1**	**-1.1**
	comp=Z,29nm,1.0s,baz=53,slow=10,SNR=64						
WRA				LR	LR	09 26 48.9	
	comp=Z,2μm,18.6s,baz=60,slow=39						
AS31	**Alice Springs**	**25.77**	**224**	P	**P**	**09 17 16.2**	**-1.2**
ASAR	**Alice Springs**	**25.77**	**224**	P	**P**	**09 17 16.6**	**-0.7**
	comp=Z,11nm,0.7s,baz=58,slow=9.0,SNR=88						
ASAR				PcP	**PcP**	**09 20 47.5**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=58,slow=2.0,SNR=4.6						
ASAR				LR	LR	09 27 12.0	
	comp=Z,2μm,20.1s,baz=49,slow=36						
ASAR	**Alice Springs**	**25.77**	**224**	P	**P**	**09 17 15.1**	**-2.3**
MSVF	**Nonsavu**	**27.13**	**118**	LR	LR	09 27 59.7	
	comp=Z,1μm,18.3s,baz=313,slow=36						
H11S3	**WAKE ISLAND Hy**	**27.46**	**29**	T	T	09 46 07.5	
	baz=208,slow=74,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	**27.46**	**29**	T	T	09 46 05.6	
	baz=208,slow=74,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**27.47**	**29**	T	T	09 46 10.7	
	baz=208,slow=74,SNR=2.7						
STKA	**Stephens Creek**	**28.25**	**201**	P	**P**	**09 17 38.2**	**-1.2**
	comp=Z,10nm,0.9s,baz=3.3,slow=8.3,SNR=16						
STKA				LR	LR	09 28 56.5	
	comp=Z,2μm,19.1s,baz=30,slow=36						
STKA	**Stephens Creek**	**28.25**	**201**	P	**P**	**09 17 38.9**	**-0.6**
SOEI	**Soe**	**28.91**	**260**	P	**P**	**09 17 42.2**	**-3.5**
BATI	**Baumata**	**29.55**	**259**	LR	LR	09 31 43.4	
	comp=Z,2μm,20.1s,baz=102,slow=41						
FITZ	**Fitzroy Crossi**	**29.57**	**243**	P	**P**	**09 17 50.5**	**-0.9**
	comp=Z,34nm,0.6s,baz=64,slow=7.8,SNR=97						
FITZ				LR	LR	09 31 23.2	
	comp=Z,1μm,18.2s,baz=65,slow=40						
FITZ	**Fitzroy Crossi**	**29.57**	**243**	P	**P**	**09 17 50.2**	**-1.2**
MMRI	**Maumere**	**30.81**	**263**	P	**P**	**09 18 00.4**	**-2.0**
BBOO	**Buckleboo**	**31.37**	**208**	P	**P**	**09 18 06.2**	**-0.9**
BBOO				IAmb	IAmb	09 18 07.4	
	comp=Z,22nm,1.2s						
KAPI	**Kappang**	**33.26**	**269**	P	**P**	**09 18 24.1**	**+0.2**
	comp=Z,3.9nm,0.3s,baz=80,slow=14,SNR=2.6						
KAPI	**Kappang**	**33.26**	**269**	P	**P**	**09 18 20.3**	**-3.6**
KAPI				IAmb	IAmb	09 18 27.5	
	comp=Z,13nm,1.0s						
JCJ	**Chichijima**	**34.24**	**342**	LR	LR	09 31 25.6	
	comp=Z,277nm,20.0s,baz=136,slow=35						
FORT	**Forrest**	**34.36**	**220**	P	**P**	**09 18 32.2**	**-1.1**
PSA00	**Pilbara Seismi**	**35.91**	**241**	P	**P**	**09 18 45.5**	**-1.3**
PSA00	**Pilbara Seismi**	**35.91**	**241**	P	**P**	**09 18 44.9**	**-1.9**
PSA00				IAmb	IAmb	09 18 51.4	
	comp=Z,14nm,1.1s						
PKE	**Pukeiti**	**38.34**	**154**	P	P	09 19 29.0	+22
HAZ	**Te Kaha**	**39.04**	**148**	P	P	09 19 18.2	+5.2
MUGZ	**Murupara**	**39.08**	**150**	P	**P**	**09 19 14.6**	**+1.2**
URZ	**Urewera**	**39.08**	**150**	P	**P**	**09 19 14.7**	**+1.3**
	comp=Z,17nm,1.1s,baz=301,slow=20,SNR=3.1						
URZ	**Urewera**	**39.08**	**150**	P	**P**	**09 19 13.3**	**-0.1**
URZ				IAmb	IAmb	09 19 34.5	
	comp=Z,23nm,1.1s						
URZ	**Urewera**	**39.08**	**150**	P	**P**	**09 19 15.0**	**+1.6**
PKGZ	**Pakihiroa**	**39.30**	**148**	P	**P**	**09 19 19.8**	**+4.5**
MWZ	**Matawai**	**39.35**	**149**	P	**P**	**09 19 18.8**	**+3.1**
TWGZ	**Tauwhareparae**	**39.46**	**149**	P	P	09 19 22.3	+5.7
BKZ	**Black Stump Fm**	**39.48**	**151**	P	**P**	**09 19 17.3**	**+0.5**
BKZ	**Black Stump Fm**	**39.48**	**151**	P	**P**	**09 19 18.2**	**+1.5**
PUZ	**Puketiti**	**39.53**	**148**	P	**P**	**09 19 21.1**	**+4.0**
KRHZ	**Kereru**	**39.79**	**152**	P	**P**	**09 19 23.6**	**+4.2**
TSZ	**Takapari Road**	**39.93**	**152**	P	**P**	**09 19 22.0**

NJ2 pmax pmax
comp=Z,280nm,5.1s
NJ2 LR LR
comp=Z,990nm,13.7s
NJ2 LR LR
comp=Z,950nm,12.8s
NJ2 LR LR
comp=Z,780nm,19.9s
ASAJ Asahikawa 50.45 350 LR LR 09 40 59.0
comp=Z,518nm,18.5s,baz=170,slow=35
USRK Ussuriysk Ar. 53.16 341 P **P** **09 21 04.0 0.0**
comp=Z,8.0nm,1.0s,baz=166,slow=8.6,SNR=7.3
USRK LR LR 09 39 20.8
comp=Z,262nm,21.4s,baz=163,slow=31
USRK Ussuriysk Ar. 53.16 341 P **P** **09 21 03.0 -1.1**
MNSI Mandailing Nat 53.88 275 P **P** **09 21 09.3 -0.5**
MDJ Mudanjiang 54.34 339 P **P** **09 21 12.8 +0.2**
MDJ sP pP 09 21 17.0 -5.6
MDJ pmax pmax
comp=Z,26nm,2.3s
MDJ pmax pmax
comp=Z,720nm,5.6s
NONG Nongkai 54.67 297 P **P** **09 21 17.5 +2.0**
GYA Guiyang 55.19 308 ⇓P **P** **09 21 21.9 +2.6**
GYA S S 09 29 10.1 +10
GYA pmax pmax
comp=Z,260nm,6.6s
GYA LR LR
comp=Z,560nm,19.4s
CN2 Changchun 55.21 336 *e*P **P** **09 21 18.2 -0.8**
CN2 S **S** **09 28 58.3 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,290nm,3.2s
CN2 LR LR
comp=Z,540nm,15.0s
CN2 LR LR
comp=Z,610nm,15.0s
CN2 LR LR
comp=Z,540nm,14.0s
GSI Gunungsitoli 55.93 275 P **P** **09 21 23.7 -1.0**
UTTA Uttaradit 56.88 295 P **P** **09 21 35.0 +3.7**
comp=Z,14nm,0.9s
PPT Papeete 57.14 107 LR LR 09 43 34.1
comp=Z,280nm,18.8s,baz=280,slow=33
PPT2 Papeete2 57.14 107 *e*S **S** **09 29 30.6 +4.1**
comp=Z,762nm,25.0s
PPT2 *e*LQ LQ 09 35 55.8
comp=Z,1μm,25.2s
PPT2 *e*LR LR 09 38 20.2
comp=Z,401nm,23.5s
XAN Xi'an 57.48 317 P **P** **09 21 36.5 +1.1**
XAN pP pP 09 21 43.4 -1.9
XAN pmax pmax
comp=Z,7.0nm,0.8s
SUKH Sukhothai 57.62 295 P P 09 21 43.1 +6.4
comp=Z,13nm,1.0s
KLR Kul'dur 57.76 344 P **P** **09 21 36.0 -1.0**
comp=Z,3.7nm,1.0s,baz=167,slow=7.8,SNR=5.5
KLR LR LR 09 45 49.8
comp=Z,224nm,18.7s,baz=165,slow=36
TBI Tubuai 57.89 114 *e*S **S** **09 29 40.9 +4.8**
comp=Z,434nm,27.2s
TBI *e*LQ LQ 09 36 13.3
comp=Z,2μm,31.2s
TBI *e*LR LR 09 38 42.5
comp=Z,564nm,22.8s
CM36 Chiang Mai Arr 58.44 296 P **P** **09 21 45.0 +2.6**
CM09 Chiang Mai Arr 58.51 296 P **P** **09 21 47.0 +4.1**
comp=Z,127nmcomp=Z,7.4nm,0.8s
CM01 Chiang Mai Arr 58.53 295 P **P** **09 21 47.6 +4.7**
comp=Z,6.9nm,0.6s
CM05 Chiang Mai Arr 58.54 295 P **P** **09 21 46.0 +3.0**
comp=Z,5.8nm,0.9s
CM02 Chiang Mai Arr 58.55 295 P **P** **09 21 47.1 +4.0**
comp=Z,6.9nm,1.3s
CMAR Chiang Mai Arr 58.56 296 P **P** **09 21 43.4 +0.2**
comp=Z,1.9nm,0.3s,baz=110,slow=5.5,SNR=13
CMAR LR LR 09 48 24.4
comp=Z,146nm,18.1s,baz=142,slow=38
CMAR Chiang Mai Arr 58.56 296 P **P** **09 21 42.6 -0.6**
CM13 Chiang Mai Arr 58.58 295 P **P** **09 21 46.0 +2.7**
comp=Z,6.8nm,1.1s
PEA0B Petropavlovsk- 58.66 3 P **P** **09 21 43.4 +0.1**
PETK Petropavlovsk- 58.66 3 P **P** **09 21 43.5 +0.3**
comp=Z,11nm,0.8s,baz=155,slow=6.1,SNR=18
PETK LR LR 09 43 55.3
comp=Z,338nm,20.9s,baz=190,slow=33
PETK Petropavlovsk- 58.66 3 P **P** **09 21 42.3 -1.0**
CMMT Chiang Mai 58.67 296 P **P** **09 21 46.0 +2.0**
comp=Z,296nmcomp=Z,4.3nm,1.4s
CM33 Chiang Mai Arr 58.67 296 P **P** **09 21 47.0 +3.0**
CD2 Chengdu 59.55 311 P **P** **09 21 49.2 -0.7**
CD2 S **S** **09 30 00.3 +2.7**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 LR LR
comp=Z,820nm,18.4s
CD2 LR LR
comp=Z,770nm,22.4s
CD2 LR LR
comp=Z,1μm,18.4s
HHC Hu-ho-hao-te 59.94 324 *e*P **P** **09 21 52.2 -0.3**
HHC PP **PP** **09 24 07.1 +2.0**
HHC S **S** **09 30 03.4 +1.1**
HHC ScS **ScS** **09 31 39.7 -0.6**
HHC pmax pmax
comp=Z,17nm,0.8s
HHC pmax pmax
comp=Z,360nm,6.7s
HHC LR LR
comp=Z,650nm,15.3s
HHC LR LR
comp=Z,500nm,14.5s
HHC LR LR
comp=Z,630nm,15.3s
LZH Lanzhou 62.08 316 *e*P **P** **09 22 07.9 +0.7**
LZH pP pP 09 22 10.7 -6.5
LZH sP sP 09 22 15.0 -6.6
LZH S **S** **09 30 34.0 +4.1**
LZH sS pS 09 30 40.9 -1.1
LZH pmax pmax
comp=Z,12nm,1.4s
LZH pmax pmax
comp=Z,270nm,8.1s
LZH LR LR
comp=Z,500nm,16.3s
LZH LR LR
comp=Z,580nm,16.8s
LZH LR LR
comp=Z,380nm,18.4s
MA2 Magadan 65.05 359 P **P** **09 22 25.2 -0.9**
TAOE Nuku Hiva Isla 66.17 97 *e*LR LR 09 42 34.3
comp=Z,401nm,21.1s
GTA Gaotai 66.52 317 *e*P **P** **09 22 37.9 +1.8**
GTA pP pP 09 22 41.1 -5.1
GTA sP sP 09 22 43.9 -6.8
GTA S **S** **09 31 28.8 +4.2**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,210nm,6.0s
GTA LR LR
comp=Z,240nm,18.5s
GTA LR LR
comp=Z,290nm,18.2s
GTA LR LR
comp=Z,330nm,20.0s
ULN Ulaanbaatar 66.90 328 P **P** **09 22 38.2 -0.2**
ULN lAmb lAmb 09 22 40.3
comp=Z,13nm,1.2s
SHL Shillong 67.04 301 P **P** **09 22 39.1 -0.7**
SONM Songino Array 67.23 328 P **P** **09 22 41.2 +0.7**
comp=Z,3.6nm,0.6s,baz=140,slow=6.4,SNR=19
SONM LR LR 09 50 07.9
comp=Z,303nm,21.0s,baz=120,slow=34
SONM Songino Array 67.23 328 P **P** **09 22 39.6 -0.9**
SONM lAmb lAmb 09 22 44.2
comp=Z,11nm,1.4s
YAK Yakutsk 69.87 348 P **P** **09 22 56.4 -0.1**
comp=Z,11nm,0.4s,baz=253,slow=1.1,SNR=2.1
YAK LR LR 09 55 38.8
comp=Z,191nm,18.3s,baz=167,slow=38
YAK Yakutsk 69.87 348 lAmb lAmb 09 23 00.0
comp=Z,41nm,1.2s

TLY Talaya 70.99 330 P **P** **09 23 03.2 -0.4**
comp=Z,2.4nm,0.6s,baz=162,slow=1.0,SNR=5.0
TLY Talaya 70.99 330 P **P** **09 23 03.0 -0.6**
RKT Rikitea 71.14 112 *e*S **S** **09 32 23.6 +3.9**
comp=Z,283nm,26.2s
RKT *e*LQ LQ 09 41 49.3
comp=Z,664nm,30.0s
RKT *e*LR LR 09 44 48.9
comp=Z,592nm,24.5s
VNDA Vanda 71.97 178 P **P** **09 23 10.1 +1.0**
comp=Z,2.0nm,0.9s,baz=339,slow=7.1,SNR=7.5
VNDA LR LR 09 52 18.3
comp=Z,223nm,18.4s,baz=6.0,slow=34
VNDA Vanda 71.97 178 P **P** **09 23 09.1 0.0**
PALK Pallekele 73.42 279 P **P** **09 23 19.4 +0.5**
comp=Z,7.1nm,0.9s,baz=200,slow=7.1,SNR=5.5
PALK Pallekele 73.42 279 P **P** **09 23 18.9 0.0**
BILL Bilibino 74.10 5 P **P** **09 23 21.0 -0.7**
BILL lAmb lAmb 09 23 37.6
comp=Z,22nm,1.2s
GAMB Gambell 74.10 15 P **P** **09 23 22.2 +0.5**
ANM Nome 76.48 17 P **P** **09 23 35.4 -0.1**
WMQ Urumqi 76.60 317 *e*P **P** **09 23 37.6 +0.9**
WMQ PcP **sP** **09 23 51.0 -0.1**
WMQ S **S** **09 33 21.3 +0.7**
WMQ sS pS 09 33 29.7 -3.8
WMQ pmax pmax
comp=Z,17nm,1.5s
WMQ pmax pmax
comp=Z,370nm,5.5s
WMQ LR LR
comp=Z,320nm,9.1s
WMQ LR LR
comp=Z,200nm,23.7s
WMQ LR LR
comp=Z,320nm,6.9s
HYB Hyderabad 77.10 289 *i* P **P** **09 23 40.0 0.0**
TIXI Tiksi 78.78 352 P **P** **09 23 48.6 +0.4**
comp=Z,5.2nm,1.0s,baz=125,slow=7.8,SNR=12
TIXI Tiksi 78.78 352 P **P** **09 23 48.2 0.0**
TIXI lAmb lAmb 09 23 51.1
comp=Z,24nm,1.4s
RDOG Red Dog Mine 79.70 15 P **P** **09 23 54.2 +0.9**
RDOG lAmb lAmb 09 24 08.7
comp=Z,12nm,1.0s
ZSN Zaisan 79.74 320 *e*P **P** **09 23 53.6 -0.4**
baz=320
ZSN *e*S **S** **09 33 57.6 +3.4**
baz=320
RC01 Rabbit Creek A 79.80 24 P **P** **09 23 53.3 -0.7**
RC01 lAmb lAmb 09 23 55.0
comp=Z,13nm,1.0s
PWL Port Wells 80.26 25 P **P** **09 23 56.1 -0.4**
KTH Kantishna Hill 80.67 22 P **P** **09 23 57.2 -1.4**
KTH lAmb lAmb 09 23 59.3
comp=Z,12nm,1.1s
SML Sawmill 80.75 24 P **P** **09 23 58.9 -0.3**
SML lAmb lAmb 09 23 59.8
comp=Z,17nm,1.1s
IMAR Indian Mountai 81.06 19 P **P** **09 24 00.3 -0.3**
MK31 Makanchi Array 81.19 319 P **P** **09 24 00.8 -1.0**
MKAR Makanchi Array 81.19 319 P **P** **09 24 01.8 0.0**
comp=Z,3.7nm,0.9s,baz=101,slow=6.4,SNR=12
MKAR Makanchi Array 81.19 319 P **P** **09 24 01.5 -0.3**
RND Reindeer 81.37 23 P **P** **09 24 01.4 -1.0**
RND lAmb lAmb 09 24 02.7
comp=Z,15nm,1.1s
MAKZ Makanchi 81.40 319 P **P** **09 24 02.1 -0.8**
MAKZ lAmb lAmb 09 24 24.2
comp=Z,13nm,1.2s
MCK McKinley 81.51 22 P **P** **09 24 02.1 -1.1**
MLY Manley 81.55 21 P **P** **09 24 02.5 -0.8**
MLY lAmb lAmb 09 24 04.4
comp=Z,10nm,1.1s
KLU Klutina 81.59 25 P **P** **09 24 03.9 +0.2**
KLU lAmb lAmb 09 24 05.2
comp=Z,16nm,1.1s
M24K Tolsona, Glenn 81.78 24 P **P** **09 24 05.5 +0.9**
NEA2 Nenana 81.91 22 P **P** **09 24 04.0 -1.2**
NEA2 lAmb lAmb 09 24 05.8
comp=Z,10nm,1.0s
ZAA0 Zalesovo Array 82.05 326 P **P** **09 24 05.1 -1.0**
ZAA0 lAmb lAmb 09 24 14.5
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 82.05 326 P **P** **09 24 05.4 -0.7**
comp=Z,4.3nm,0.6s,baz=107,slow=5.9,SNR=17
ZALV Zalesovo Beam 82.05 326 P **P** **09 24 05.1 -1.0**
SHLS Shalkode 82.08 315 *e*P **P** **09 24 04.5 -2.2**
comp=Z,4.8nm,1.4s,baz=315
WRH Wood River Hil 82.21 22 P **P** **09 24 05.6 -1.2**
WRH lAmb lAmb 09 24 06.9
comp=Z,8.3nm,1.0s
UZB Uzynbulak 82.39 315 *e*P **P** **09 24 07.3 -1.1**
baz=315
GLB Gilahina Butte 82.47 26 P **P** **09 24 07.9 -0.3**
GLB lAmb lAmb 09 24 34.2
comp=Z,9.7nm,1.1s
TCOL CIGO, UAF Yank 82.50 22 P **P** **09 24 06.8 -1.4**
TCOL lAmb lAmb 09 24 08.8
comp=Z,12nm,1.0s
COLA College 82.51 22 P **P** **09 24 06.8 -1.4**
COLA lAmb lAmb 09 24 08.8
comp=Z,13nm,1.1s
KPKS Kokpek 82.70 315 *e*P **P** **09 24 08.8 -1.1**
comp=Z,5.0nm,1.3s,baz=315
MCARA McCarthy VSAT 82.78 26 P **P** **09 24 09.9 +0.1**
MCARA lAmb lAmb 09 24 12.2
comp=Z,13nm,1.1s
SATY Saty 82.80 315 *e*P **P** **09 24 09.1 -1.4**
baz=315
IL31 82.81 22 P **P** **09 24 08.3 -1.5**
IL31 lAmb lAmb 09 24 09.6
comp=Z,8.1nm,1.1s
ILAR Eielson Array 82.81 22 P **P** **09 24 08.2 -1.7**
comp=Z,5.5nm,1.0s,baz=256,slow=4.8,SNR=26
ILAR LR LR 09 57 09.7
comp=Z,404nm,19.4s,baz=243,slow=33
ILAR Eielson Array 82.81 22 P **P** **09 24 07.9 -2.0**
COLD Coldfoot 82.94 19 P **P** **09 24 10.7 +0.2**
MENT Mentasta 83.18 24 P **P** **09 24 11.6 -0.3**
BARN Barnard Glacie 83.24 26 P **P** **09 24 12.5 0.0**
BARN lAmb lAmb 09 24 13.5
comp=Z,11nm,1.1s
TDK Taldyqorghan 83.29 316 *e*P **P** **09 24 12.8 -0.1**
baz=316
CTGM Chitina Glacie 83.35 27 P **P** **09 24 12.4 -0.5**
CTGM lAmb lAmb 09 24 14.5
comp=Z,12nm,1.1s
A21K Barrow 83.54 14 P **P** **09 24 13.9 +0.5**
A21K lAmb lAmb 09 24 27.8
comp=Z,14nm,1.2s
SCRK Sand Creek 83.54 23 P **P** **09 24 13.3 -0.5**
SEM Semipalatinsk 83.57 322 *e*P **P** **09 24 13.4 -1.0**
baz=322
MDOK Medeo 83.79 314 *e*P **P** **09 24 14.9 -0.7**
baz=314
TOLK Toolik Lake Re 83.91 18 P **P** **09 24 15.3 -0.2**
TOLK lAmb lAmb 09 24 16.8
comp=Z,6.6nm,1.1s
L27K Beaver Creek, 84.01 25 P **P** **09 24 15.7 -0.4**
L27K lAmb lAmb 09 24 17.5
comp=Z,7.4nm,1.2s
BCAR Beaver Creek A 84.03 25 P **P** **09 24 15.8 -0.4**
FYU Fort Yukon 84.29 21 P **P** **09 24 17.8 +0.4**
FYU lAmb lAmb 09 24 19.0
comp=Z,8.7nm,1.1s
QSPA South Pole Qui 84.31 180 P **P** **09 24 18.4 +0.6**
K27K Chicken 84.32 24 P **P** **09 24 18.7 +1.0**
KUU Kurty 84.46 315 *e*P **P** **09 24 17.5 -1.3**
comp=Z,22nm,0.9s,baz=315
KURK Kurchatov 84.65 322 P **P** **09 24 19.3 -0.3**
KURBB Kurchatov Arra 84.68 322 P **P** **09 24 19.3 -0.5**
comp=Z,13nm,1.2s,baz=105,slow=3.8,SNR=25
NIL Nilore 84.74 304 P **P** **09 24 20.1 -0.4**
TKM2 Tokmak 2 84.77 314 P **P** **09 24 21.8 +1.1**
SNR=6.5
BMAR Burnt Mountain 84.92 20 P **P** **09 24 20.4 -0.2**
MAW Mawson 84.92 203 P **P** **09 24 21.1 +0.5**
comp=Z,5.4nm,0.6s,baz=153,slow=3.9,SNR=4.1
MAW LR LR 09 59 23.5
comp=Z,459nm,19.3s,baz=79,slow=34
MAW Mawson 84.92 203 P **P** **09 24 20.9 +0.3**
EGAK Eagle 85.00 23 P **P** **09 24 20.6 -0.4**
EGAK lAmb lAmb 09 24 23.1
comp=Z,7.5nm,1.1s

UCH Uchtor 85.41 313 P **P** **09 24 25.3 +1.1**
SNR=13
DAWY Dawson 85.42 24 P **P** **09 24 22.9 -0.3**
AAK Ala-Archa 85.50 313 P **P** **09 24 23.5 -0.8**
comp=Z,3.2nm,0.7s,baz=111,slow=6.5,SNR=7.7
AAK Ala-Archa 85.50 313 P **P** **09 24 24.8 +0.5**
SNR=5.2
AAK Ala-Archa 85.50 313 P **P** **09 24 24.6 +0.3**
AML Almayashu 85.98 313 P **P** **09 24 27.9 +1.0**
SNR=24
EKS2 Erkin-Say 86.03 313 P **P** **09 24 27.5 +0.7**
SNR=7.0
BTLS Baital 86.31 316 *e*P **P** **09 24 27.5 -0.5**
comp=Z,12nm,1.6s,baz=316
NRIK Noril'sk 86.88 341 P **P** **09 24 29.3 -0.9**
comp=Z,6.4nm,0.7s,baz=98,slow=5.0,SNR=16
NRIK LR LR 10 05 32.7
comp=Z,272nm,18.3s,baz=118,slow=37
NRIK Noril'sk 86.88 341 P **P** **09 24 29.2 -1.0**
NRIK lAmb lAmb 09 24 31.9
comp=Z,12nm,1.1s
KKAR Karatay Array 88.47 313 P **P** **09 24 38.1 -0.4**
IUG luzhnay 88.67 312 *e*P **P** **09 24 38.6 -1.0**
baz=312
INK Inuvik 89.12 21 P **P** **09 24 39.9 -1.0**
INK lAmb lAmb 09 24 42.9
comp=Z,5.0nm,1.1s
BVAR Borovoye Array 90.13 323 P **P** **09 24 44.5 -1.5**
comp=Z,4.1nm,0.9s,baz=92,slow=9.0,SNR=18
BRVK Borovoye 90.20 323 P **P** **09 24 44.9 -1.4**
BRVK lAmb lAmb 09 24 55.1
comp=Z,8.0nm,0.9s
NVAR Mina Array Bea 92.33 52 P **P** **09 24 57.5 +0.7**
comp=Z,1.0nm,1.0s,baz=259,slow=6.8,SNR=5.2
NVAR LR LR 09 59 45.5
comp=Z,618nm,20.3s,baz=258,slow=31
NVAR Mina Array Bea 92.33 52 P **P** **09 24 55.4 -1.5**
SYO Syowa Base 92.99 199 ⇓*e*X P 09 25 11.0 +12
YKA Yellowknife Ar 96.01 28 P **P** **09 25 12.2 -0.6**
comp=Z,2.2nm,1.0s,baz=271,slow=4.4,SNR=17
YKA LR LR 10 04 02.4
comp=Z,377nm,20.3s,baz=0.0,slow=33
ARU Arti 97.21 326 P **P** **09 25 17.1 -1.4**
comp=Z,1.7nm,0.2s,baz=64,slow=4.6,SNR=5.8
ARU Arti 97.21 326 lAmb lAmb 09 25 19.9
comp=Z,20nm,1.4s
PDAR Pinedale Array 99.16 48 LR LR 10 06 41.3
comp=Z,952nm,18.7s,baz=260,slow=33
AKASG Malin Array Be 115.39 324 PKP **PKiKP** **09 30 27.5 -0.1**
comp=Z,0.3nm,0.4s,baz=66,slow=2.0,SNR=1.5
BRTR Keskin Array B 116.13 312 PKP **PKPdf** **09 30 29.4 -0.2**
comp=Z,0.3nm,0.5s,baz=99,slow=4.7,SNR=2.1
PLCA Paso Flores 118.89 143 PKP **PKiKP** **09 30 35.4 +0.5**
comp=Z,1.7nm,1.0s,baz=287,slow=11,SNR=1.9
VYHS Vyhne 122.38 326 *e*PKP **PKPdf** **09 30 40.9 -0.3**
GERES GERESS Array B 124.96 328 PKP **PKiKP** **09 30 47.3 +0.7**
comp=Z,1.2nm,0.8s,baz=85,slow=1.5,SNR=5.6
GERES GERESS Array B 124.96 328 **PKiKP** **09 30 46.5 -0.1**
LPAZ La Paz 133.71 119 PKP **PKiKP** **09 31 06.2 +0.5**
comp=Z,2.8nm,0.8s,baz=338,slow=3.1,SNR=9.8
CPUP Villa Florida 136.60 139 PKP **PKiKP** **09 31 10.8 +0.3**
comp=Z,1.7nm,0.8s,baz=336,slow=3.1,SNR=4.2
BDFB Brasilia 150.22 136 PKPbc **PKiKP** **09 31 39.3 +0.4**
comp=Z,6.7nm,0.6s,baz=43,slow=3.2,SNR=11
TORD Torodi Ar. Bea 150.90 287 PKPbc **PKPbc** **09 31 39.0 -0.5**
comp=Z,8.8nm,0.8s,baz=47,slow=2.5,SNR=25
TORD Torodi Ar. Bea 150.90 287 PKPab **PKPab** **09 31 47.9 +1.0**

IDC 03 09:14:35.2±2.8, 54°33N×86°64E, h0km, mb1 2.9/3, mb1mx2.8/51, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=23.0km s-min=13.4km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.14**	**251**	*i*			09 21 30.0	
	baz=67,slow=322,SNR=4.3							
ZALV	**Zalesovo Beam**	**1.14**	**251**	Pg		Pg	09 14 56.8	-0.1
	1.3nm,0.3s,baz=68,slow=16,SNR=13							
ZALV				Lg		Lg	09 15 14.2	
	1.1nm,0.3s,baz=72,slow=25,SNR=4.8							
KURBB	**Kurchatov Arra**	**6.19**	**236**	Pn		Pn	09 16 08.7	+1.0
	0.1nm,0.3s,baz=53,slow=14,SNR=11							
KURBB				Lg		Lg	09 17 53.5	
	0.0nm,0.3s,baz=55,slow=34,SNR=2.0							
MKAR	**Makanchi Array**	**8.04**	**202**	Pn		Pn	09 16 34.2	+1.1
	0.1nm,0.3s,baz=22,slow=13,SNR=4.9							
MKAR				Sn		Sn	09 18 01.9	-2.7
	0.1nm,0.3s,baz=30,slow=24,SNR=3.1							
MKAR				Lg		Lg	09 18 51.1	
	0.0nm,0.3s,baz=23,slow=30,SNR=1.5							
BVAR	**Borovoye Array**	**9.74**	**269**	Pn		Pn	09 16 55.8	-0.5
	0.1nm,0.3s,baz=75,slow=14,SNR=2.1							
BVAR				Sn		Sn	09 18 39.4	-6.9
	0.3nm,0.3s,baz=142,slow=32,SNR=6.0							

LDG 03 09:19:16.5±0.1, 44°50N×6°66E, h5km, Md0.8/1, Error ellipse: s-maj=2.7km s-min=1.4km az=26.0, France

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.24**	**19**	*e*Pg		Pg	09 19 21.5	+0.2
ORIF	**Oris-en-Rattie**	**0.70**	**307**	*e*Pg		Pg	09 19 29.8	-0.1

LDG 03 09:19:19.6±0.1, 44°50N×6°67E, h5km, Md0.8/1, Error ellipse: s-maj=2.4km s-min=1.3km az=26.0, France

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MBDF	**Montbardon**	**0.24**	**19**	*e*Pg		Pg	09 19 24.6	+0.3
MBDF				*e*Sg		Sg	09 19 27.7	+0.2
	1.3nm,0.2s							
MBDF	**Montbardon**	**0.24**	**19**	*e*Sg		Pg	09 19 24.6	+0.3
	0.7nm,0.2s							
ORIF	**Oris-en-Rattie**	**0.70**	**307**	*e*Pg		Pg	09 19 32.9	-0.1

*IDC **03** 09:20:47.2±1.1, 0°56N×125°88E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.5/46, mbtmp3.7/6, ML3.3/2, Error ellipse: s-maj=52.8km s-min=19.1km az=63.0*

ISC 03 09:20:53.0±1.3, 0°6N±0°2×126°0E±0°1, h44km, n6, σ1§02/7, mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.48**	**105**	Pn		**Pn**	**09 22 12.0**	**-0.3**
	0.7nm,0.3s,baz=231,slow=22,SNR=1.6							
SIJI				Sn		**Sn**	**09 23 14.6**	**+0.5**
	1.5nm,0.3s,baz=157,slow=24,SNR=1.7							
FITZ	**Fitzroy Crossi**	**18.53**	**181**	P		**P**	**09 25 05.9**	**-0.2**
	0.1nm,0.3s,baz=11,slow=10,SNR=1.3							
WRA	**Warramunga Arr**	**21.96**	**159**	P		**P**	**09 25 42.2**	**-1.0**
	3.3nm,0.7s,baz=337,slow=12,SNR=13							
ASAR	**Alice Springs**	**25.28**	**163**	P		**P**	**09 26 16.2**	**+0.7**
	0.7nm,0.4s,baz=345,slow=12,SNR=16							
MKAR	**Makanchi Array**	**59.75**	**327**	P		**P**	**09 30 54.6**	**+1.1**
	0.3nm,0.4s,baz=124,slow=8.5,SNR=9.6							
KURBB	**Kurchatov Arra**	**64.01**	**329**	P		**P**	**09 31 20.9**	**-1.1**
	0.4nm,0.5s,baz=127,slow=6.2,SNR=6.0							

*IDC **03** 09:32:50.2±0.6, 7°08S×13°05W, h0km, mb4.2/23, mb1 4.2/24, mb1mx4.0/59, mbtmp4.1/24, ML3.2/1, Error ellipse: s-maj=16.9km s-min=15.3km az=154.0*
*NEIC **03** 09:32:51.1±2.5, 7°2S±0°1×13°21W±0°09, h10km±1km, mb4.6/11, Error ellipse: s-maj=21.2km s-min=10.1km az=142.0*

ISC 03 09:32:52.0±0.5, 7°10S±0°09×13°17W±0°08, h13km, n45, σ1§27/42, mb4.3/23, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**1.45**	**235**			**Pn**	**09 33 14.7**	**-3.1**
H10N2	**ASCENSION HYDR**	**1.50**	**241**	Pn		**Pn**	**09 33 16.1**	**-2.2**
H10N1	**ASCENSION HYDR**	**1.50**	**240**	Pn		**Pn**	**09 33 16.5**	**-1.9**
H10N3	**ASCENSION HYDR**	**1.52**	**241**	Pn		**Pn**	**09 33 16.7**	**-1.9**
H10S2	**ASCENSION HYDR**	**2.36**	**218**	Pn		**Pn**	**09 33 29.4**	**-0.8**
H10S2				T		T	09 35 39.4	
	baz=176,slow=74,SNR=161							
H10S3	**ASCENSION HYDR**	**2.37**	**219**	Pn		**Pn**	**09 33 29.5**	**-0.8**
H10S3				T		T	09 36 01.0	
	baz=44,slow=74,SNR=534							
LIC	**Lamto**	**15.53**	**32**	*e*P		**P**	**09 36 34.6**	**-0.5**

	30nm,1.0s								
KIC	**Kosan Boka**	**15.79**	**32**	*eP*		**Pn**	**09 36 33.0**	**-1.3**
	13nm,0.9s								
TIC	**Toumodi**	**15.89**	**31**	*eP*		**Pn**	**09 36 34.5**	**-1.0**
DBIC	**Dimbokro**	**15.99**	**31**	Pn		**Pn**	**09 36 35.3**	**-1.6**
	0.1nm,0.3s,baz=185,slow=14,SNR=5.2								
DBIC	**Dimbokro**	**15.99**	**31**			**Pn**	**09 36 36.0**	**-0.9**
RCBR	**Riachuelo**	**22.63**	**272**	P		**P**	**09 37 54.0**	**+1.1**
	17nm,1.1s,baz=97,slow=9,SNR=3.9								
RCBR	**Riachuelo**	**22.63**	**272**	P		**P**	**09 37 52.7**	**-0.2**
RCBR				IAmb		IAmb	09 37 56.2		
	comp=Z,36nm,1.4s								
KOWA	**Kowa**	**23.30**	**23**	P		**P**	**09 37 58.1**	**-1.6**
	comp=Z,5.0nm,0.7s,baz=206,slow=11,SNR=12								
KOWA	**Kowa**	**23.30**	**23**	P		**P**	**09 38 00.5**	**+0.7**
KOWA				IAmb		IAmb	09 38 24.1		
	comp=Z,26nm,1.4s								
TOAO	**Torodi Ar. Sit**	**24.95**	**36**	P		**P**	**09 38 13.7**	**-1.6**
TOA0				IAmb		IAmb	09 38 31.4		
	comp=Z,16nm,1.1s								
TORD	**Torodi Ar. Bea**	**24.95**	**36**	P		**P**	**09 38 13.7**	**-1.7**
	comp=Z,3.2nm,0.7s,baz=226,slow=10,SNR=16								
SUR	**Sutherland**	**40.38**	**133**	P		**P**	**09 40 30.1**	**0.0**
	comp=Z,14nm,1.1s,baz=265,slow=11,SNR=3.2								
LSZ	**Lusaka**	**41.31**	**105**	P		**P**	**09 40 36.9**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=272,slow=7.9,SNR=4.1								
LSZ	**Lusaka**	**41.31**	**105**	IAmb		IAmb	09 40 48.8		
	comp=Z,7.8nm,1.4s								
BOSA	**Boshof**	**42.09**	**125**	P		**P**	**09 40 43.0**	**-1.1**
	comp=Z,3.7nm,0.8s,baz=294,slow=8.3,SNR=5.2								
BOSA	**Boshof**	**42.09**	**125**	IAmb		IAmb	09 40 43.2		
	comp=Z,10.0nm,1.1s								
MATP	**Matopo**	**42.44**	**113**	P		**P**	**09 40 45.5**	**-1.6**
	comp=Z,1.7nm,0.6s,baz=276,slow=7.5,SNR=8.9								
ESDC	**Sonseca Array**	**47.31**	**10**	P		**P**	**09 41 25.8**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=180,slow=8.9,SNR=2.0								
SIV	**San Ignacio**	**47.67**	**255**	P		**P**	**09 41 29.3**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=12,SNR=2.5								
SAML	**Samuel**	**49.53**	**264**	P		**P**	**09 41 42.6**	**-0.3**
SAML				IAmb		IAmb	09 41 53.2		
	comp=Z,8.9nm,1.1s								
KMBO	**Kilima Mbogo**	**50.61**	**86**	P		**P**	**09 41 52.3**	**+0.9**
	comp=Z,1.5nm,0.3s,baz=244,slow=5.4,SNR=3.5								
LPAZ	**La Paz**	**54.45**	**255**	P		**P**	**09 42 20.5**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=100,slow=5.9,SNR=4.6								
LPAZ	**La Paz**	**54.45**	**255**	P		**P**	**09 42 18.5**	**-1.8**
DAVOX	**Davos/Dischmat**	**57.42**	**19**	P		**P**	**09 42 40.5**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=42,slow=21,SNR=4.6								
GERES	**GERESS Array B**	**60.48**	**20**	P		**P**	**09 43 01.5**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=206,slow=8.6,SNR=4.7								
GERES	**GERESS Array B**	**60.48**	**20**	P		**P**	**09 43 03.2**	**+1.5**
ROSC	**El Rosal**	**62.17**	**279**	P		**P**	**09 43 15.8**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=298,slow=22,SNR=1.6								
BRTR	**Keskin Array B**	**63.53**	**39**	P		**P**	**09 43 22.8**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=205,slow=6.2,SNR=7.2								
SNAA	**Sanae**	**64.83**	**176**	P		**P**	**09 43 31.1**	**+0.8**
	comp=Z,2.9nm,0.8s,baz=329,slow=5.9,SNR=3.8								
SNAA	**Sanae**	**64.83**	**176**	P		**P**	**09 43 31.6**	**+1.3**
SNAA				IAmb		IAmb	09 43 40.0		
	comp=Z,13nm,1.4s								
AKASG	**Malin Array Be**	**68.20**	**27**	P		**P**	**09 43 51.5**	**-0.6**
	comp=Z,3.2nm,0.9s,baz=228,slow=6.7,SNR=6.2								
KBZ	**Khabaz**	**71.51**	**39**	P		**P**	**09 44 13.2**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=270,slow=4.0,SNR=3.6								
UOSS	**Minazif**	**74.58**	**62**	P		**P**	**09 44 31.4**	**+0.2**
FINES	**FINESS Array B**	**74.83**	**18**	P		**P**	**09 44 32.0**	**+0.1**
	comp=Z,4.0nm,1.3s,baz=230,slow=11,SNR=1.1								
TXAR	**Lajitas Array**	**93.87**	**299**	P		**P**	**09 46 10.9**	**+1.1**
	comp=Z,0.5nm,1.0s,baz=74,slow=6.7,SNR=2.2								
KURBB	**Kurchatov Arra**	**96.51**	**40**	P		**P**	**09 46 22.7**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=255,slow=5.7,SNR=1.9								
KURK	**Kurchatov**	**96.57**	**40**	P		**P**	**09 46 22.7**	**+1.1**
MKAR	**Makanchi Array**	**98.86**	**44**	P		Pdif	09 46 33.1	+1.1
	comp=Z,0.4nm,1.0s,baz=264,slow=5.4,SNR=2.2								
PDAR	**Pinedale Array**	**99.46**	**312**	P		**Pdif**	**09 46 36.4**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=141,slow=5.8,SNR=1.8								

*IDC **03** 09:35:19.0±0.5, 7°.09S×13°.00W, h0km, mb4.2/29, mb1 4.2/30, mb1mx4.1/57, mbtmp4.1/30, ML3.3/1, MS4.2/11, Ms1 4.2/11, ms1mx3.9/31, Error ellipse: s-maj=18.0km s-min=12.3km az=140.0*

*NEIC **03** 09:35:20.7±2.0, 7°.07S±0°.09×13°.14W±0°.08, h10km±1km, mb4.8/20, Error ellipse: s-maj=15.8km s-min=12.2km az=140.0*

*GCMT **03** 09:35:22.7±0.3, 6°.94S±0°.04×13°.12W±0°.03, h18km±1km, MW4.9/89, Moment Tensor Solution. s28,c31; s89,c103; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~3.16±.21; Mθθ 1.27±.15; Mϕϕ 1.89±.14; Mrθ 0.09±.43; Mϕθ -0.07±.08; Mϕr -0.42±.35; Best double couple: Mo 2.56600×10^16 NP1: ϕs 353.00000°, δ 50.00000°, λ -89.00000°. NP2: ϕs 353.00000°, δ 50.00000°, λ -91.00000°. Principal axes: T 1.9350, Plg 5.0000°, Azm 83.0000°; N 1.2620, Plg 1.0000°, Azm 353.0000°; P -3.1970, Plg 85.0000°, Azm 257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 09:35:20.9±0.5, 7°.1S×13°.06W±0°.09, h13km, n63, σ1=8°/56, mb4.4/40, MS4.1/10, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASCN	**Ascension**	**1.53**	**237**	Pn	**Pn**	**09 35 47.2**	**-0.8**
H10N2	**ASCENSION HYDR**	**1.59**	**243**	T	T	09 37 31.2	
	baz=62,slow=73,SNR=38						
H10N1	**ASCENSION HYDR**	**1.59**	**242**	T	T	09 37 29.1	
	baz=62,slow=73,SNR=44						
H10N3	**ASCENSION HYDR**	**1.61**	**243**	T	T	09 37 38.5	
	baz=62,slow=73,SNR=41						
H10S2	**ASCENSION HYDR**	**2.42**	**220**	T	T	09 38 30.4	
	baz=176,slow=74,SNR=65						
H10S3	**ASCENSION HYDR**	**2.43**	**221**	T	T	09 38 38.7	
	baz=44,slow=74,SNR=52						
LIC	**Lamto**	**15.47**	**31**	*eP*	**Pn**	**09 39 00.5**	**+1.4**
	49nm,1.0s						
KIC	**Kosan Boka**	**15.74**	**32**	*eP*	**Pn**	**09 39 01.3**	**-1.2**
	22nm,0.9s						
TIC	**Toumodi**	**15.83**	**31**	*eP*	**Pn**	**09 39 04.6**	**+0.8**
DBIC	**Dimbokro**	**15.94**	**31**	Pn	**Pn**	**09 39 03.0**	**-2.2**
	0.1nm,0.3s,baz=197,slow=12,SNR=4.5						
DBIC				LR	LR	09 43 56.0	
	comp=Z,443nm,19.8s,baz=192,slow=32						
DBIC	**Dimbokro**	**15.94**	**31**	Pn	**Pn**	**09 39 04.2**	**-0.9**
RCBR	**Riachuelo**	**22.73**	**272**	P	**P**	**09 40 23.3**	**+0.3**
	8.5nm,1.0s,baz=52,slow=12,SNR=2.3						
RCBR				LR	LR	09 46 50.1	
	comp=Z,621nm,20.6s,baz=118,slow=30						
RCBR	**Riachuelo**	**22.73**	**272**	P	**P**	**09 40 23.0**	**0.0**
KOWA	**Kowa**	**23.25**	**23**	P	**P**	**09 40 28.2**	**-0.1**
	6.1nm,0.8s,baz=204,slow=10,SNR=9.4						
KOWA				LR	LR	09 48 32.8	
	comp=Z,600nm,19.5s,baz=202,slow=34						
KOWA	**Kowa**	**23.25**	**23**	P	**P**	**09 40 30.0**	**+1.7**
KOWA				IAmb	IAmb	09 40 49.5	
	comp=Z,21nm,1.1s						
TOA0	**Torodi Ar. Sit**	**24.89**	**36**	P	**P**	**09 40 42.9**	**-0.8**
TOA0				IAmb	IAmb	09 40 59.6	
	comp=Z,14nm,0.9s						
TORD	**Torodi Ar. Bea**	**24.89**	**36**	P	**P**	**09 40 42.9**	**-0.9**
	comp=Z,4.7nm,0.5s,baz=217,slow=9.8,SNR=25						
TORD				LR	LR	09 49 07.0	
	comp=Z,504nm,20.4s,baz=210,slow=33						
BDFB	**Brasilia**	**35.26**	**253**	P	**P**	**09 42 15.8**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=74,slow=7.9,SNR=3.8						
BDFB				LR	LR	09 53 45.1	
	comp=Z,484nm,21.5s,baz=107,slow=31						
LSZ	**Lusaka**	**41.21**	**105**	P	**P**	**09 43 06.0**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=328,slow=5.8,SNR=4.2						
BOSA	**Boshof**	**42.01**	**125**	P	**P**	**09 43 11.1**	**-1.3**
	comp=Z,4.6nm,1.0s,baz=343,slow=4.2,SNR=4.4						
MATP	**Matopo**	**42.35**	**113**	P	**P**	**09 43 14.8**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=282,slow=6.1,SNR=6.9						
CPUP	**Villa Florida**	**46.22**	**240**	P	**P**	**09 43 47.0**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=95,slow=8.6,SNR=3.5						
CPUP				LR	LR	10 01 33.1	
	comp=Z,290nm,18.6s,baz=66,slow=34						
CPUP	**Villa Florida**	**46.22**	**240**	IAmb	IAmb	09 43 48.5	
	comp=Z,3.6nm,1.1s						
ESDC	**Sonseca Array**	**47.29**	**10**	P	**P**	**09 43 52.4**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=198,slow=8.9,SNR=1.9						
ESDC				LR	LR	10 03 20.0	
	comp=Z,137nm,19.4s,baz=160,slow=36						
KEST	**Kesra**	**47.54**	**25**	P	**P**	**09 43 58.5**	**+2.2**
	comp=Z,4.8nm,0.7s,baz=201,slow=8.6,SNR=2.5						
KEST				LR	LR	10 04 05.1	
	comp=Z,387nm,19.6s,baz=194,slow=36						
SIV	**San Ignacio**	**47.77**	**255**	P	**P**	**09 43 59.2**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=117,slow=9.0,SNR=2.2						
SAML	**Samuel**	**49.64**	**264**	P	**P**	**09 44 13.1**	**+0.3**
SAML				IAmb	IAmb	09 44 22.4	
	comp=Z,11nm,1.2s						
KMBO	**Kilima Mbogo**	**50.50**	**86**	LR	LR	10 04 19.1	
	comp=Z,374nm,18.6s,baz=270,slow=34						
LPAZ	**La Paz**	**54.55**	**255**	P	**P**	**09 44 49.8**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=69,slow=3.9,SNR=5.9						
LPAZ				LR	LR	10 07 33.9	
	comp=Z,230nm,19.6s,baz=108,slow=35						
LVC	**Limon Verde**	**55.82**	**248**	P	**P**	**09 44 59.8**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=306,slow=5.5,SNR=3.2						
AC02	**Maricunga**	**56.62**	**243**	P	**P**	**09 45 02.3**	**-2.4**
AC02				IAmb	IAmb	09 45 15.2	
	comp=Z,14nm,1.4s						
PB07	**IPOC Station P**	**56.62**	**249**	P	**P**	**09 45 03.8**	**-0.6**
PB07				IAmb	IAmb	09 45 24.6	
	comp=Z,14nm,1.3s						
GO02	**Mina Guanaco**	**56.78**	**245**	P	**P**	**09 45 05.8**	**+0.2**
DAVOX	**Davos/Dischmat**	**57.39**	**19**	P	**P**	**09 45 09.6**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=225,slow=9.5,SNR=4.6						
FETA	**Feichten**	**57.87**	**19**	*eP*	**P**	**09 45 12.6**	**-0.1**
	comp=Z,7.4nm,1.0s						
SQTA	**Sankt Quirin**	**58.21**	**19**	*eP*	**P**	**09 45 15.4**	**+0.5**
	comp=Z,12nm,0.9s						
MOTA	**Mogsalm**	**58.28**	**19**	*eP*	**P**	**09 45 15.3**	**-0.2**
	comp=Z,10.0nm,1.1s						
RETA	**Reutte**	**58.30**	**19**	P	**P**	**09 45 15.5**	**0.0**
	comp=Z,5.4nm,0.7s						
GO04	**Tololo Observa**	**58.66**	**239**	P	**P**	**09 45 18.5**	**-0.1**
GERES	**GERESS Array B**	**60.45**	**20**	P	**P**	**09 45 29.9**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=192,slow=9.0,SNR=7.0						
GERES	**GERESS Array B**	**60.45**	**20**	P	**P**	**09 45 30.7**	**+0.3**
ROSC	**El Rosal**	**62.27**	**279**	P	**P**	**09 45 44.7**	**+0.9**
	comp=Z,3.3nm,0.4s,baz=178,slow=6.2,SNR=3.9						
ROSC	**El Rosal**	**62.27**	**279**	P	**P**	**09 45 44.0**	**+0.2**
ROSC				IAmb	IAmb	09 45 54.0	
	comp=Z,9.7nm,1.0s						
EKA	**Eskdalemuir Ar**	**62.75**	**6**	P	**P**	**09 45 44.8**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=196,slow=12,SNR=1.6						
MLR	**Muntele Rosu**	**62.92**	**30**	P	**P**	**09 45 45.3**	**-1.9**
	comp=Z,2.2nm,0.4s,baz=126,slow=19,SNR=2.1						
BR131	**Keskin Array S**	**63.46**	**39**	P	**P**	**09 45 49.2**	**-1.7**
BR131				IAmb	IAmb	09 46 00.3	
	comp=Z,9.2nm,1.1s						
BRTR	**Keskin Array B**	**63.46**	**39**	P	**P**	**09 45 52.8**	**+1.8**
	comp=Z,1.4nm,0.6s,baz=224,slow=7.1,SNR=6.0						
SNAA	**Sanae**	**64.82**	**176**	P	**P**	**09 45 59.4**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=311,slow=5.5,SNR=7.8						
SNAA	**Sanae**	**64.82**	**176**	P	**P**	**09 46 01.0**	**+1.8**
SNAA				IAmb	IAmb	09 46 02.5	
	comp=Z,8.3nm,1.0s						
AKASG	**Malin Array Be**	**68.15**	**27**	P	**P**	**09 46 20.2**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=226,slow=7.2,SNR=5.5						
AKBB	**Malin Array Si**	**68.15**	**27**	P	**P**	**09 46 20.3**	**-0.5**
HFS	**Hagfors**	**70.29**	**14**	P	**P**	**09 46 34.5**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=177,slow=8.7,SNR=2.7						
NOA	**NORSAR Array B**	**70.55**	**12**	P	**P**	**09 46 36.3**	**+0.9**
	comp=Z,0.8nm,1.0s,baz=220,slow=7.7,SNR=1.6						
NOA				LR	LR	10 20 17.8	
	comp=Z,73nm,18.4s,baz=45,slow=38						
KBZ	**Khabaz**	**71.45**	**39**	P	**P**	**09 46 42.4**	**+1.2**
	comp=Z,4.3nm,1.0s,baz=236,slow=13,SNR=4.1						
UOSS	**Minazif**	**74.49**	**62**	P	**P**	**09 46 59.9**	**+0.3**
FINES	**FINESS Array B**	**74.80**	**18**	P	**P**	**09 47 01.6**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=222,slow=2.6,SNR=6.3						
ARCES	**ARCESS Array B**	**80.91**	**13**	P	**P**	**09 47 35.9**	**+1.3**
	comp=Z,3.6nm,1.1s,baz=226,slow=4.5,SNR=1.9						
WVT	**Waverly**	**82.01**	**308**	P	**P**	**09 47 39.3**	**-1.8**
WVT				IAmb	IAmb	09 47 50.2	
	comp=Z,5.5nm,0.9s						
AKTO	**Aktyubinsk**	**83.60**	**37**	P	**P**	**09 47 47.5**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=253,slow=14,SNR=2.5						
AAK	**Ala-Archa**	**92.96**	**48**	P	**P**	**09 48 34.6**	**+0.2**
	comp=Z,3.6nm,0.4s,baz=234,slow=8.7,SNR=1.9						
TXAR	**Lajitas Array**	**93.96**	**299**	P	**P**	**09 48 39.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=111,slow=4.9,SNR=3.6						
RES	**Resolute Bay**	**94.64**	**345**	P	**P**	**09 48 41.8**	**+0.6**
RES				IAmb	IAmb	09 48 59.3	
	comp=Z,5.5nm,1.4s						
KURBB	**Kurchatov Arra**	**96.44**	**40**	P	**P**	**09 48 50.5**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=280,slow=6.4,SNR=1.1						

IDC 03 09:43:40.9±2.1, 53°.74N×87°.05E, h0km, mb1 3.0/3, mb1mx2.9/61, mbtmp3.0/3, ML2.8/3, Error ellipse: s-maj=19.3km s-min=14.0km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.34**	**280**	*i*		09 50 37.8	
	baz=100,slow=331,SNR=2.0						
ZALV	**Zalesovo Beam**	**1.34**	**280**	Pg	Pg	09 44 05.3	-1.3
	0.8nm,0.3s,baz=98,slow=17,SNR=6.1						
ZALV				Lg	Lg	09 44 24.1	
	2.0nm,0.3s,baz=101,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**6.10**	**243**	Pn	Pn	09 45 12.1	-0.2
KURBB	0.0nm,0.3s,baz=60,slow=13,SNR=3.2			Lg	Lg	09 46 54.5	
	0.0nm,0.3s,baz=63,slow=32,SNR=4.9						
MKAR	**Makanchi Array**	**7.59**	**206**	Pn	Pn	09 45 34.6	+1.9
	0.2nm,0.3s,baz=25,slow=13,SNR=9.9						
MKAR				Sn	Sn	09 47 00.2	+0.7
	0.1nm,0.3s,baz=25,slow=21,SNR=2.3						
MKAR				Lg	Lg	09 47 41.5	
	0.0nm,0.3s,baz=24,slow=29,SNR=2.0						
SONM	**Songino Array**	**13.57**	**108**	Pn	Pn	09 46 53.1	-1.5
	0.3nm,0.3s,baz=315,slow=14,SNR=1.6						

*MAN **03** 09:48:12.0, 5°.71N×126°.14E, h79km, MS3.6*

*NEIC **03** 09:48:13.6±1.8, 5°.84N±0°.06×126°.1E±0°.1, h127km±7km, mb4.0/16, Error ellipse: s-maj=16.0km s-min=7.9km az=74.0*

*IDC **03** 09:48:13.3±4.4, 5°.84N×126°.01E, h121km±42km, mb3.5/13, mb1 3.7/14, mb1mx3.5/42, mbtmp3.9/14, MS3.9/1, Ms1 3.9/1, ms1mx2.9/39, Error ellipse: s-maj=42.0km s-min=14.5km az=77.0*

ISC 03 09:48:12.7±0.7, 5°.82N±0°.04×126°.13E±0°.07, h115km±6km, n46, σ1=50/53, mb4.0/19, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.51**	**304**	*eP*	**Pn**	**09 48 28.0**	**-2.1**
DDMP				*eS*	**Sn**	**09 48 40.3**	**-2.8**
MATI	**Mati**	**1.12**	**6**	*eP*	**Pn**	**09 48 34.4**	**-1.1**
MATI				*eS*	**Sn**	**09 48 51.8**	**-1.1**
DAV	**Davao City (W)**	**1.36**	**336**	Pn	**Pn**	**09 48 39.2**	**+1.1**
DAV				Sn	**Sn**	**09 49 00.6**	**+3.2**
SKMP	**Bagumbayan, Su**	**1.73**	**294**	*eP*	**Pn**	**09 48 41.4**	**-1.1**
SKMP				*eS*	**Sn**	**09 49 05.1**	**-0.1**
BUKP	**Musuan**	**2.31**	**333**	*eP*	**Pn**	**09 48 50.4**	**+0.6**
BUKP				*eS*	**Sn**	**09 49 19.0**	**+0.8**
CGP	**Cagayan de Oro**	**2.98**	**331**	*eP*	**Pn**	**09 49 01.7**	**+3.1**
BUTP	**Butuan**	**3.17**	**351**	*eP*	**Pn**	**09 49 03.0**	**+1.9**
BUTP				*eS*	**Sn**	**09 49 43.9**	**+5.5**
PAGZ	**Pagadian**	**3.39**	**307**	*eP*	**Pn**	**09 49 04.2**	**+0.2**
PAGZ				*eS*	**Sn**	**09 49 44.7**	**+1.0**
MSLP	**Maasin**	**4.47**	**344**	*eP*	**Pn**	**09 49 20.2**	**+1.8**
TNTI	**Ternate**	**5.16**	**166**	Pn	**Pn**	**09 49 28.4**	**+0.6**
TNTI				Sn	**Sn**	**09 50 26.6**	**+0.3**
TOLI2	**Tolitoli**	**7.10**	**229**		**Pn**	**09 49 54.7**	**+0.8**
TOLI2				Sn	**Sn**	**09 51 13.1**	**-0.1**
LUWI	**Luwuk**	**7.60**	**206**	Pn	**Pn**	**09 50 02.5**	**+1.7**
MYLDM	**Lahad Datu**	**7.62**	**266**	Pn	**Pn**	**09 50 03.1**	**+2.0**
SIJI	**Sorong**	**8.39**	**142**	P	**Pn**	**09 50 12.5**	**+0.9**
	1.3nm,0.3s,baz=216,slow=19,SNR=2.1						
FAKI	**Fak Fak**	**10.62**	**145**	Pn	**Pn**	**09 50 41.7**	**+0.1**
MTN	**Manton Dam**	**19.20**	**165**	P	**P**	**09 52 28.0**	**+0.3**
MTN				IAmb	IAmb	09 52 41.8	
	comp=Z,6.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.77**	**181**	P	**P**	**09 53 15.9**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=3,slow=8.0,SNR=7.9						
FITZ	**Fitzroy Crossi**	**23.77**	**181**	P	**P**	**09 53 15.8**	**+1.0**
WB0	**Warramunga Arr**	**26.70**	**162**	P	**P**	**09 53 41.3**	**0.0**
WRA	**Warramunga Arr**	**26.84**	**163**	P	**P**	**09 53 42.6**	**0.0**
	comp=Z,0.6nm,0.4s,baz=343,slow=10,SNR=15						
WB2	**Warramunga Arr**	**26.85**	**163**	P	**P**	**09 53 42.7**	**0.0**
WB2				IAmb	IAmb	09 54 02.3	
	comp=Z,4.5nm,1.1s						
WR0	**Warramunga Arr**	**26.92**	**162**	P	**P**	**09 53 43.0**	**-0.3**
WR0				IAmb	IAmb	09 54 06.4	
	comp=Z,6.3nm,1.4s						
PSA00	**Pilbara Seismi**	**27.91**	**193**	P	**P**	**09 53 52.6**	**+0.5**
AS31	**Alice Springs**	**30.27**	**166**	P	**P**	**09 54 13.3**	**+0.2**
ASAR	**Alice Springs**	**30.27**	**166**	P	**P**	**09 54 13.5**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=344,slow=7.2,SNR=25						
USRK	**Ussuriysk Ar.**	**38.57**	**7**	P	**P**	**09 55 24.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=167,slow=10,SNR=4.0						
NWAO	**Narrogin (SRO)**	**39.45**	**192**	P	**P**	**09 55 32.7**	**+0.9**
BBOO	**Buckleboo**	**39.56**	**167**	P	**P**	**09 55 33.9**	**+1.3**
STKA	**Stephens Creek**	**40.28**	**159**	P	**P**	**09 55 39.8**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=330,slow=14,SNR=5.4						
STKA	**Stephens Creek**	**40.28**	**159**	P	**P**	**09 55 39.6**	**+0.9**
SONM	**Songino Array**	**45.14**	**341**	P	**P**	**09 56 17.9**	**0.0**
	comp=Z,0.4nm,0.4s,baz=170,slow=11,SNR=2.5						
MK31	**Makanchi Array**	**55.51**	**325**	P	**P**	**09 57 34.8**	**-1.1**
MK31				IAmb	IAmb	09 57 36.5	
	comp=Z,2.0nm,1.2s						
MKAR	**Makanchi Array**	**55.51**	**325**	P	**P**	**09 57 35.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=124,slow=8.2,SNR=10						
AAK	**Ala-Archa**	**58.42**	**317**	LR	LR	10 23 55.5	
	comp=Z,93nm,18.6s,baz=208,slow=37						
KK31	**Karatay Array**	**61.31**	**316**	P	**P**	**09 58 13.7**	**-2.5**
KK31				IAmb	IAmb	09 58 16.2	
	comp=Z,1.5nm,0.8s						
KKAR	**Karatay Array**	**61.31**	**316**	P	**P**	**09 58 14.3**	**-1.9**
KKAR				IAmb	IAmb	09 58 16.2	
	comp=Z,1.5nm,0.8s						
BRVK	**Borovoye**	**65.33**	**327**	P	**P**	**09 58 41.9**	**-0.6**
BRVK				IAmb	IAmb	09 59 01.2	
	comp=Z,2.1nm,0.7s						
UOSS	**Minazif**	**69.38**	**294**	P	**P**	**09 59 07.5**	**-1.1**
ABKAR	**Akbulak array**	**70.17**	**320**	P	**P**	**09 59 11.8**	**-1.2**
ABKAR				IAmb	IAmb	09 59 12.2	
	comp=Z,4.1nm,1.3s						
AKTO	**Aktyubinsk**	**71.66**	**321**	P	**P**	**09 59 21.2**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=96,slow=11,SNR=5.5						
ILAR	**Eielson Array**	**83.48**	**26**	P	**P**	**10 00 27.4**	**0.0**
	comp=Z,0.2nm,0.5s,baz=253,slow=4.3,SNR=4.3						
BRTR	**Keskin Array B**	**88.24**	**310**	P	**P**	**10 00 50.7**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=56,slow=3.6,SNR=2.9						
ARCES	**ARCESS Array B**	**88.29**	**340**	P	**P**	**10 00 50.5**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=81,slow=5.3,SNR=8.0						
FINES	**FINESS Array B**	**89.72**	**332**	P	**P**	**10 00 57.3**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=89,slow=7.2,SNR=1.4						
YKA	**Yellowknife Ar**	**97.85**	**24**	P	Pdif	10 01 35.4	+0.3
	comp=Z,0.4nm,1.1s,baz=270,slow=6.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**121.69**	**289**	PKP	**PKPdf**	**10 06 52.7**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=74,slow=2.2,SNR=4.7						

*IDC **03** 10:05:36.5±0.7, 16°.06N×98°.17W, h0km, mb4.0/14, mb1 4.2/18, mb1mx4.0/41, mbtmp4.0/18, ML3.5/4, Error ellipse: s-maj=18.4km s-min=12.1km az=32.0*

*NEIC **03** 10:05:39.2±2.9, 16°.11N±0°.04×98°.23W±0°.04, h19km±4km, mb4.4/105, Md4.5/89(MEX), Error ellipse: s

CCIG	Comitan	5.89	87	Pn		Pn	10 07 03.2	-1.9
RTAL	Retalhuleu	6.52	103	Pn		Pn	10 07 15.7	+2.1
HUEH	Huehuetenango	6.55	96	Pn		Pn	10 07 12.8	-1.4
APG	El Apazote	7.59	97	Pn		Pn	10 07 29.1	+0.7
	0.7nm,0.3s,baz=283,slow=20,SNR=13							
APG				Sn		Sn	10 08 54.2	-0.4
	1.5nm,0.3s,baz=66,slow=22,SNR=3.7							
APG				Lg		Lg	10 09 33.6	
	0.9nm,0.3s,baz=230,slow=12,SNR=5.6							
ZAIG	Zacatecas	7.81	329	Pn		Pn	10 07 29.4	-2.2
PETF	Flores	8.10	83	Pn		Pn	10 07 35.1	-0.2
ESQI	Esquipulas	8.74	99	Pn		Pn	10 07 43.4	-0.7
MTO3	Montecristo	8.75	100	Pn		Pn	10 07 44.0	-0.4
TEIG	Tepich	10.36	65	Pn		Pn	10 08 04.3	-1.9
	1.0nm,0.3s,baz=70,slow=7.6,SNR=15							
TEIG				Sn		Sn	10 09 57.3	-5.0
	3.6nm,0.3s,baz=44,slow=22,SNR=6.4							
TEIG	Tepich	10.36	65	Pn		Pn	10 08 03.7	-2.5
H06E1	SOCORRO T-PHAS	12.38	284	T		T	10 21 15.9	
	SNR=7.8							
BOAB	BOACO BROADBAN	12.73	105	Pn		Pn	10 08 38.5	-0.2
ORTG	Ortega, Santa	13.69	113	Pn		Pn	10 08 54.2	+2.3
ESPN	Las Esperanzas	14.08	104	Pn		Pn	10 08 56.5	-0.6
TXAR	Lajitas Array	14.12	340	Pn		Pn	10 08 59.6	+1.9
	0.0nm,0.3s,baz=358,slow=34,SNR=2.9							
TXAR				Lg		Lg	10 13 05.5	
	0.0nm,0.3s,baz=160,slow=21,SNR=1.7							
TX32	Lajitas Array	14.12	340	Pn		Pn	10 08 59.1	+1.4
JTS	Las Juntas de	14.17	112	Pn		P	10 09 02.4	-3.6
	0.8nm,0.3s,baz=206,slow=3.3,SNR=5.3							
JTS	Las Juntas de	14.17	112	Pn		Pn	10 08 57.6	-0.9
CAO2	Cobano, Puntar	14.30	115			P	10 09 05.4	-2.0
JCT	Junction City	14.42	355	Pn		Pn	10 09 01.2	-0.6
HDC	Heredia	15.04	112	Pn		Pn	10 09 12.7	+2.3
PEZE	Perez Zeledon,	15.70	113	Pn		Pn	10 09 15.8	-3.1
WHTX	Lake Whitney,	15.88	3	Pn		Pn	10 09 20.6	-0.6
ABTX	Abilene, Hawle	16.54	356			P	10 09 32.3	+0.1
MSTX	Muleshoe	18.29	348	P		Pn	10 09 50.2	-1.4
X34A	Smith Ranch, M	18.47	1	P		P	10 09 53.2	-0.3
146A	Union	18.50	25	P		P	10 09 52.8	-1.0
146A				IAmb		IAmb	10 10 01.9	
	comp=Z,24nm,0.9s							
121A	Cookes Peak, D	18.54	334	P		P	10 09 53.1	-1.4
X37A	Clayton	18.63	7	P		P	10 09 55.2	-0.1
MIAR	Mount Ida	18.88	12	P		P	10 09 58.6	+0.6
BNM	Barren Site	19.52	339	P		P	10 10 06.0	+0.6
ANMO	Albuquerque	20.19	340	P		Pn	10 10 15.1	+0.7
	comp=Z,3.0nm,0.6s,baz=152,slow=11,SNR=16							
ANMO	Albuquerque	20.19	340			P	10 10 13.8	+1.2
HHAR	Hobbs	20.51	10	P		P	10 10 16.4	+0.7
U38A	Gravette	20.59	9	P		P	10 10 16.7	0.0
152A	Waverly Hall	20.60	34	P		P	10 10 17.9	+1.1
152A				IAmb		IAmb	10 10 24.7	
	comp=Z,24nm,1.5s							
214A	Organ Pipe Nat	20.63	323	P		P	10 10 15.8	-1.3
U40A	Yellville	20.78	12	P		P	10 10 18.2	-0.5
LCAR	Lake Charles	20.91	16	P		P	10 10 21.6	+1.5
MGMO	Mountain Grove	21.67	13	P		P	10 10 26.3	-2.0
MGMO				IAmb		IAmb	10 10 39.5	
	comp=Z,9.4nm,0.8s							
T25A	Trinidad	21.69	347	P		P	10 10 27.1	-1.7
T25A				IAmb		IAmb	10 10 35.7	
	comp=Z,18nm,1.1s							
PBMO	Poplar Bluff	21.78	17	P		P	10 10 29.4	0.0
PBMO				IAmb		IAmb	10 10 39.4	
	comp=Z,20nm,0.8s							
GOGA	Godfrey	21.84	35	P		P	10 10 28.7	-1.5
GOGA				IAmb		IAmb	10 10 36.5	
	comp=Z,13nm,0.7s							
Y52A	Lilburn	21.87	33	P		P	10 10 29.4	-1.1
S39A	Bolivar	21.98	11	P		P	10 10 32.3	+0.6
S39A				IAmb		IAmb	10 10 34.7	
	comp=Z,9.5nm,1.0s							
SWET	Sewanee	22.04	28	P		P	10 10 31.3	-1.0
SWET				IAmb		IAmb	10 10 39.2	
	comp=Z,22nm,0.8s							
WVT	Waverly	22.05	23	P		P	10 10 31.4	-1.0
WVT				IAmb		IAmb	10 10 41.3	
	comp=Z,16nm,0.9s							
V48A	Smith Brothers	22.10	25	P		P	10 10 31.5	-1.5
V48A				IAmb		IAmb	10 10 39.5	
	comp=Z,13nm,0.8s							
W50A	Signal Mountai	22.31	29	P		P	10 10 33.5	-1.7
CLTN	Cedars of Leba	22.61	26	P		P	10 10 35.6	-2.8
CLTN				IAmb		IAmb	10 10 48.3	
	comp=Z,8.1nm,0.9s							
WUAZ	Wupatki	22.64	331	P		P	10 10 41.2	+2.3
WUAZ				IAmb		IAmb	10 10 50.4	
	comp=Z,7.1nm,1.0s							
R40A	Maddies Statio	22.77	12	P		P	10 10 40.2	+0.2
R40A				IAmb		IAmb	10 10 48.7	
	comp=Z,12nm,0.9s							
CCM	Cathedral Cave	22.77	14	P		P	10 10 39.5	-0.5
CCM				IAmb		IAmb	10 10 51.7	
	comp=Z,8.2nm,0.8s							
CPCT	Cooper Cave	22.89	30	P		P	10 10 41.7	+0.4
CPCT				IAmb		IAmb	10 10 47.8	
	comp=Z,11nm,0.7s							
W52A	Murphy	22.89	31	P		P	10 10 40.1	-1.4
FVM	French Village	22.91	16	P		P	10 10 41.3	-0.2
FVM				IAmb		IAmb	10 10 49.5	
	comp=Z,11nm,1.1s							
MVCO	Mesa Verde	22.93	339	P		P	10 10 43.5	+1.5
MVCO				IAmb		IAmb	10 10 45.1	
	comp=Z,9.3nm,1.1s							
S44A	Carbondale	22.97	19	P		P	10 10 43.1	+0.9
S44A				IAmb		IAmb	10 10 44.4	
	comp=Z,13nm,0.7s							
SIUC	Southern Illin	23.00	19	P		P	10 10 42.5	+0.1
SIUC				IAmb		IAmb	10 10 50.6	
	comp=Z,14nm,0.8s							
T47A	Sharon Grove	23.08	23	P		P	10 10 42.0	-1.2
T47A				IAmb		IAmb	10 10 51.1	
	comp=Z,24nm,1.1s							
HODGE	Hodges	23.12	36	P		P	10 10 43.6	-0.1
KSCO	Kaye Shedlock'	23.18	351	P		P	10 10 45.1	+0.7
KSCO				IAmb		IAmb	10 11 06.2	
	comp=Z,5.7nm,0.8s							
U49A	Red Boiling Sp	23.20	26	P		P	10 10 44.9	+0.3
U49A				IAmb		IAmb	10 10 51.7	
	comp=Z,18nm,0.8s							
V51A	Loudon	23.25	30	P		P	10 10 44.2	-0.9
V51A				IAmb		IAmb	10 10 52.7	
	comp=Z,22nm,1.2s							
BG3	Lake Jocassee	23.33	33	P		P	10 10 45.8	0.0
BG3				IAmb		IAmb	10 10 53.8	
	comp=Z,8.4nm,1.1s							
TKL	Tuckaleechee C	23.42	31	P		P	10 10 46.0	-0.8
	comp=Z,3.1nm,0.9s,baz=200,slow=14,SNR=2.5							
TKL	Tuckaleechee C	23.42	31	IAmb		IAmb	10 10 54.5	
	comp=Z,12nm,1.2s							
USIN	University of	23.74	21	P		P	10 10 49.9	+0.1
PV01	Paradox Valley	23.79	340	P		P	10 10 51.8	+1.2
PAULI	Pauline	23.80	35	P		P	10 10 49.5	-1.0
PAULI				IAmb		IAmb	10 10 57.7	
	comp=Z,12nm,0.8s							
P38A	Dawn	23.84	9	P		P	10 10 50.4	-0.4
PV13	Radium Mtn., P	23.90	339	P		P	10 10 52.4	+0.7
P40A	Paris	24.01	12	P		P	10 10 52.4	0.0
P40A				IAmb		IAmb	10 10 59.9	
	comp=Z,23nm,1.2s							
T50A	Nancy	24.03	27	P		P	10 10 52.4	-0.3
T50A				IAmb		IAmb	10 10 59.9	
	comp=Z,8.0nm,0.8s							
PV12	Saucer Basin,	24.04	339	P		P	10 10 54.0	+1.1
PV12				IAmb		IAmb	10 11 11.8	
	comp=Z,9.9nm,1.2s							
Q44A	Meyer Farm, Va	24.16	18	P		P	10 10 52.5	-1.3
Q44A				IAmb		IAmb	10 11 01.7	
	comp=Z,12nm,0.9s							
SMCO	Snowmass	24.26	343	P		P	10 10 56.0	+0.8
SMCO				IAmb		IAmb	10 11 01.5	
	comp=Z,16nm,1.4s							
ZARC	Zaragoza, Cauc	24.42	108	eP		P	10 11 10.4	+14
WCI	Wyandotte Cave	24.47	23	P		P	10 10 56.6	-0.1
WCI				IAmb		IAmb	10 11 04.1	
	comp=Z,8.8nm,0.8s							
ISCO	Idaho Springs	24.51	346	P		P	10 10 59.3	+1.9
ISCO				IAmb		IAmb	10 11 06.2	
	comp=Z,5.1nm,0.8s							
N33A	J Bar K, Exete	24.60	1	P		P	10 10 59.1	+1.3
YOTC	Yotoco, Valle	24.66	117	eP		P	10 10 57.0	-1.7
GUY2C	Guyana, Caldas	24.92	113	eP		P	10 11 03.2	+1.7
N38A	Joes South For	25.03	9	P		P	10 11 02.2	+0.5
U54A	Nelsons Funny	25.08	33	P		P	10 11 03.0	+0.7
OTAV	Otavalo	25.09	127	P		P	10 11 02.1	-0.9
MTPU	Mount Pierson	25.10	333	P		P	10 11 01.4	-1.4
MTPU				IAmb		IAmb	10 11 14.3	
	comp=Z,16nm,1.2s							
S51A	Beattyville	25.10	28	P		P	10 11 01.4	-1.0
POPC	Popayan, Colom	25.14	120	eP		P	10 11 06.8	+3.5
TOLC	Tolima	25.25	114	eP		P	10 11 06.6	+2.2
Q16A	Castle Valley	25.43	336	P		P	10 11 07.6	+2.0
Q16A				IAmb		IAmb	10 11 16.6	
	comp=Z,5.5nm,0.8s							
MSU	Marysvale	25.49	334	P		P	10 11 08.8	+2.6
O20A	White River Ci	25.51	342	P		P	10 11 08.7	+2.4
O20A				IAmb		IAmb	10 11 17.4	
	comp=Z,18nm,1.2s							
ORTC	Ortega, Tolima	25.64	116	eP		P	10 11 09.9	+2.3
P17A	Butcher Ranch,	25.75	337	P		P	10 11 09.9	+1.5
TMUT	Trail Mountain	25.77	336	P		P	10 11 11.8	+2.9
PHWY	Pilot Hill	25.91	348	P		P	10 11 12.4	+2.3
PHWY				IAmb		IAmb	10 11 14.4	
	comp=Z,9.9nm,1.4s							
ROSC	El Rosal	26.02	113	P		P	10 11 12.4	+1.1
	comp=Z,2.6nm,0.4s,baz=323,slow=20,SNR=1.5							
V58A	Windy Hill, Pi	26.04	37	P		P	10 11 11.8	+0.9
SFIN	Lafayette	26.11	20	P		P	10 11 11.0	-0.4
P49A	Miami Univ. Ec	26.21	24	P		P	10 11 12.0	-0.5
Q51A	Peebles	26.35	27	P		P	10 11 13.6	-0.2
M44A	Midewin, Midew	26.74	17	P		P	10 11 17.2	0.0
Q52A	Bidwell	26.78	28	P		P	10 11 17.5	-0.1
Q52A				IAmb		IAmb	10 11 27.3	
	comp=Z,14nm,0.8s							
P51A	Williamsport	26.86	27	P		P	10 11 17.8	-0.4
P51A				IAmb		IAmb	10 11 25.4	
	comp=Z,13nm,0.8s							
L42A	Oliver, Polo	26.89	14	P		P	10 11 17.2	-1.4
L42A				IAmb		IAmb	10 11 19.2	
	comp=Z,13nm,1.1s							
O49A	Covington	26.93	24	P		P	10 11 20.8	+1.9
O49A				IAmb		IAmb	10 11 27.9	
	comp=Z,9.2nm,0.8s							
N47A	Urbana	27.03	21	P		P	10 11 20.0	+0.3
SDV	Santo Domingo	27.88	101	P		P	10 11 30.1	+2.2
	comp=Z,4.2nm,0.7s,baz=332,slow=15,SNR=3.1							
BW06	Boulder Array	28.32	342	P		P	10 11 31.8	+0.2
PD31	Pinedale Array	28.32	342	P		P	10 11 30.9	-0.8
PDAR	Pinedale Array	28.32	342	P		P	10 11 32.7	+1.1
	comp=Z,1.4nm,1.1s,baz=146,slow=8.6,SNR=6.7							
NVAR	Mina Array Bea	28.41	326	P		P	10 11 35.0	+2.6
	comp=Z,0.6nm,0.8s,baz=155,slow=9.6,SNR=6.6							
NVAR	Mina Array Bea	28.41	326	P		P	10 11 35.5	+3.1
LKWY	Lake	30.21	343	P		P	10 11 48.5	+0.1
RLMT	Red Lodge	30.42	345	P		P	10 11 52.0	+1.8
WVOR	Wild Horse Val	31.56	331	P		P	10 12 01.8	+1.6
WVOR				IAmb		IAmb	10 12 10.2	
	comp=Z,10nm,1.4s							
DLMT	Dillon	31.60	341	P		P	10 12 02.8	+2.2
DLMT				IAmb		IAmb	10 12 16.0	
	comp=Z,9.5nm,1.4s							
J08A	Circle Bar Ran	32.20	332	P		P	10 12 08.0	+2.2
J08A				IAmb		IAmb	10 12 08.9	
	comp=Z,4.8nm,1.0s							
HRY	Holter Researc	32.58	343	P		P	10 12 10.7	+1.6
FFC	Flin Flon	38.69	357	P		P	10 13 02.0	+0.7
LPAZ	La Paz	43.78	136	P		P	10 13 44.9	+0.5
	comp=Z,1.0nm,0.8s,baz=345,slow=9.1,SNR=3.9							
LPAZ	La Paz	43.78	136	IAmb		IAmb	10 13 50.7	
	comp=Z,3.3nm,1.2s							
YKA	Yellowknife Ar	47.79	350	P		P	10 14 14.7	+0.1
	comp=Z,0.9nm,0.9s,baz=158,slow=7.8,SNR=7.4							
YKA				PcP		PcP	10 15 43.1	-0.3
	comp=Z,0.4nm,0.9s,baz=151,slow=5.6,SNR=3.7							
YKA				PP		PP	10 16 08.4	+2.0
	comp=Z,0.7nm,1.0s,baz=154,slow=8.5,SNR=3.9							
H03N2	Juan Fernandez	52.57	160	T		T	11 11 25.6	
	baz=337,slow=74							
H03N1	Juan Fernandez	52.58	160	T		T	11 11 24.6	
	baz=337,slow=74							
H03N3	Juan Fernandez	52.59	160	T		T	11 11 25.9	
	baz=337							
DAWY	Dawson	55.57	339	P		P	10 15 14.4	+1.5
BCAR	Beaver Creek A	55.79	338	P		P	10 15 16.4	+1.9
FID	Port Fidalgo	56.35	334	P		P	10 15 19.9	+1.5
K27K	Chicken	56.47	339	P		P	10 15 21.0	+1.7
K27K				IAmb		IAmb	10 15 22.7	
	comp=Z,6.3nm,1.1s							
EGAK	Eagle	56.62	340	P		P	10 15 21.3	+1.0
EGAK				IAmb		IAmb	10 15 40.4	
	comp=Z,3.2nm,1.2s							
INK	Inuvik	56.83	345	P		P	10 15 21.5	-0.2
	comp=Z,3.0nm,1.0s,baz=118,slow=7.5,SNR=10							
INK	Inuvik	56.83	345			P	10 15 22.6	+0.8
INK				IAmb		IAmb	10 15 23.9	
	comp=Z,6.5nm,1.4s							
BRLK	Bradley Lake	57.82	332	P		P	10 15 30.1	+1.1
GHO	Glory Hole Cre	57.88	334	P		P	10 15 30.4	+1.0
PMR	Palmer	57.88	334	P		P	10 15 31.1	+1.8
PMR				IAmb		IAmb	10 15 31.2	
	comp=Z,7.3nm,1.1s							
CPUP	Villa Florida	57.96	136	P		P	10 15 29.6	-0.7
	comp=Z,1.6nm,0.9s,baz=305,slow=6.5,SNR=3.6							
CPUP	Villa Florida	57.96	136	IAmb		IAmb	10 15 36.2	
	comp=Z,2.9nm,1.2s							
SUA	Susitna One	58.51	333	P		P	10 15 34.9	+1.1
IL31		58.62	338	P		P	10 15 35.1	+0.8
IL31				IAmb		IAmb	10 15 37.2	
	comp=Z,4.4nm,1.2s							
ILAR	Eielson Array	58.62	338	P		P	10 15 35.7	+1.3
	comp=Z,1.1nm,0.9s,baz=143,slow=5.8,SNR=11							
RND	Reindeer	58.65	336	P		P	10 15 36.0	+1.3
RND				IAmb		IAmb	10 15 37.4	
	comp=Z,5.5nm,1.0s							
BDFB	Brasilia	58.76	120	P		P	10 15 35.8	-0.4
	comp=Z,2.8nm,0.7s,baz=304,slow=7.7,SNR=5.0							
BDFB	Brasilia	58.76	120	IAmb		IAmb	10 15 42.6	
	comp=Z,4.0nm,0.8s							
TRF	Thorofare Moun	59.24	336	P		P	10 15 40.0	+1.1
BWN	Browne	59.27	337	P		P	10 15 39.5	+0.6
MLY	Manley	60.16	337	P		P	10 15 45.7	+0.6
MLY				IAmb		IAmb	10 15 47.4	
	comp=Z,4.0nm,1.0s							
PLCA	Paso Flores	62.09	156	P		P	10 15 59.2	+0.7
	comp=Z,1.6nm,1.1s,baz=349,slow=5.2,SNR=1.5							
SEY	Seymchan	84.33	334	P		P	10 18 10.6	+1.1
	comp=Z,0.6nm,0.6s,baz=30,slow=14,SNR=1.9							
ARCES	ARCESS Array B	86.02	17	P		P	10 18 17.8	-0.1
	comp=Z,5.5nm,1.1s,baz=327,slow=6.5,SNR=2.7							
WRA	Warramunga Arr	129.98	257	PKP		PKPdf	10 24 48.9	+0.6
	comp=Z,1.4nm,0.9s,baz=83,slow=2.3,SNR=8.6							
ASAR	Alice Springs	130.57	252	PKP		PKiKP	10 24 50.1	0.0
	comp=Z,0.6nm,0.8s,baz=84,slow=1.7,SNR=7.2							

IDC 03 10:17:06.2±3.0, 54°.40N×86°.98E, h0km, mb1 3.0/2, mb1mx2.9/41, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=24.7km s-min=18.4km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.35	251	*i*		10 24 00.0	
	baz=69,slow=327,SNR=1.8						
ZALV	Zalesovo Beam	1.35	251	Pg	Pg	10 17 30.6	-1.4
ZALV	1.4nm,0.3s,baz=71,slow=16,SNR=10			Lg	Lg	10 17 49.1	
KURBB	1.4nm,0.3s,baz=72,slow=19,SNR=3.5 Kurchatov Arra	6.39	237	Pn	Pn	10 18 42.9	+1.3
KURBB	0.1nm,0.3s,baz=54,slow=14,SNR=6.0			Sn	Sn	10 19 53.9	-1.3
KURBB	0.0nm,0.3s,baz=277,slow=15,SNR=1.1			Lg	Lg	10 20 31.8	
MKAR	0.0nm,0.3s,baz=60,slow=32,SNR=3.2 Makanchi Array	8.18	203	Pn	Pn	10 19 06.8	+0.7
MKAR	0.2nm,0.3s,baz=23,slow=13,SNR=4.6			Sn	Sn	10 20 38.8	-0.4
	0.1nm,0.3s,baz=257,slow=11,SNR=1.5						

IDC 03 10:21:09.8±4.4, 31°.42S×68°.23W, h35km±.34km, mb3.4/3, mb1 3.6/6, mb1mx3.5/35, mbtmp3.5/6, ML3.6/3, Error ellipse: s-maj=34.7km s-min=25.6km az=100.0

ISC 03 10:21:10.3±0.9, 31°.46S×70°.10×68°.3W×0°.1, h35km, n11, σ1§83/12, mb3.7/3, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	8.83	356	Pn		Pn	10 23 14.3	-1.6
	0.2nm,0.3s,baz=157,slow=13,SNR=1.3							
LVC				Lg		Lg	10 25 42.0	
	1.0nm,0.3s,baz=151,slow=23,SNR=2.4							
PLCA	Paso Flores	9.44	191	Pn		Pn	10 23 24.9	+1.1
	0.1nm,0.3s,baz=352,slow=18,SNR=6.6							
PLCA				Lg		Lg	10 26 01.8	
	0.2nm,0.3s,baz=127,slow=23,SNR=2.0							
CPUP	Villa Florida	10.86	65	Pn		Pn	10 23 43.1	-0.1
	0.2nm,0.3s,baz=239,slow=11,SNR=3.4							
CPUP				Sn		Sn	10 25 43.5	0.0
	0.1nm,0.3s,baz=250,slow=9.3,SNR=3.1							
CPUP				Lg		Lg	10 26 52.6	
	0.5nm,0.3s,baz=342,slow=20,SNR=1.7							
LPAZ	La Paz	15.10	0	Pn		P	10 24 50.0	+3.4
	0.2nm,0.3s,baz=156,slow=11,SNR=12							
SIV	San Ignacio	16.74	25	Pn		P	10 25 07.0	+2.9
	0.3nm,0.3s,baz=193,slow=8.3,SNR=6.6							
SNAA	Sanae	52.76	159	P		P	10 30 20.7	-0.8
	0.7nm,0.6s,baz=324,slow=19,SNR=1.6							
TXAR	Lajitas Array	69.20	327	P		P	10 32 13.4	-0.2
	0.3nm,0.9s,baz=163,slow=6.6,SNR=1.9							
TORD	Torodi Ar. Bea	80.33	68	P		P	10 33 18.1	-0.2
	0.7nm,0.8s,baz=234,slow=5.0,SNR=2.5							
KURBB	Kurchatov Arra	148.85	42	PKPbc		PKPbc	10 40 52.4	-1.4
	0.4nm,0.7s,baz=286,slow=2.2,SNR=3.3							
ZALV	Zalesovo Beam	150.38	33	PKPbc		PKPbc	10 40 56.3	-1.2
	0.8nm,0.4s,baz=330,slow=1.9,SNR=4.1							
MKAR	Makanchi Array	152.70	47	PKPbc		PKPbc	10 41 01.4	-1.6
	0.3nm,0.7s,baz=302,slow=2.7,SNR=4.3							

HEL 03 10:28:19.6±0.5, 67°.75N×34°.98E, h0km, ML2.3, Explosion
IDC 03 10:28:33.6±2.2, 67°.89N×32°.68E, h0km, mb1 2.8/2, mb1mx2.6/49, mbtmp2.7/2, ML2.0/2, Error ellipse: s-maj=21.1km s-min=9.3km az=85.0

ISC 03 10:28:26.1±2.3, 67°.83N±0°.05×34°.1E±0°.1, h0km, n14, σ1§45/22, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	Varrio	1.70	269	PG	Pn	10 28 56.6	-0.4
VRF				MSG		10 29 20.2	
	comp=Z,27nm,0.2s						
VRF				SG	Sg	10 29 23.0	+2.3
OLKF	Oulanka, Finla	2.38	233	PG	Pn	10 29 06.3	0.0
OLKF				SG	Sb	10 29 39.8	+0.2
KU6	Riekki	2.45	224	PG	Pn	10 29 07.5	+0.2
KU6				MSG		10 29 37.6	
	comp=Z,7.9nm,0.2s						
KU6				SG	Sb	10 29 41.6	-0.1
MSF	Maaselka	2.77	228	PG	Pn	10 29 13.1	+1.4
	baz=53						
MSF				SG	Sb	10 29 50.8	-0.1
SGF	Sodankyl	2.92	266	PG	Pb	10 29 17.1	-1.8
SGF				SG	Sg	10 29 59.3	-0.3
KEV	Kevo	3.22	310	PB	Pn	10 29 19.9	+2.1
KEV				SB	Sb	10 30 02.9	-0.8
RNF	Rovaniemi	3.37	252	PB	Pn	10 29 19.4	-0.5
ARA0	ARCESS Array S	3.57	303	PB	Pn	10 29 23.7	+1.0
ARA0				SG	Sg	10 30 21.0	+0.4
ARCES	ARCESS Array B	3.57	303	Pn	Pn	10 29 23.6	+0.9
	baz=123,slow=15,SNR=40						
ARCES				Pg	Pb	10 29 28.1	-1.9
	baz=121,slow=15,SNR=5.4						
ARCES				Lg	Lg	10 30 10.6	
	baz=118,slow=29,SNR=11						
HEF	Hetta	3.94	283	PG	Pb	10 29 34.7	-1.7
	baz=95						
OUL	Oulu	4.29	234	PG	Pb	10 29 40.8	-1.4
	baz=49						
PAJU	Pajala	4.30	264	PB	Pn	10 29 36.1	+3.4
I37NO	I37NO	5.83	289	*i*		11 03 00.0	
	baz=96,slow=326,SNR=1.1						
FINES	FINESS Array B	7.27	212	Pn	Pn	10 30 14.7	+1.3
	comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=1.8						
FINES				Sn	Sn	10 31 36.9	+0.4
	comp=Z,0.1nm,0.3s,baz=27,slow=22,SNR=1.5						
FINES				Lg	Lg	10 32 06.2	
	comp=Z,0.2nm,0.3s,baz=21,slow=22,SNR=1.9						

NNC 03 10:31:01.4±1.4, 53°.69N×86°.91E, h0km, mb2.8, mpv2.7, Error ellipse: s-maj=12.1km s-min=5.7km az=40.0, Suspected Mining explosion.

IDC 03 10:31:00.5±2.3, 53°.69N×86°.92E, h0km, mb1 3.1/2, mb1mx2.9/57, mbtmp3.1/2, ML2.9/2, 5C-3D, Error ellipse: s-maj=20.5km s-min=12.9km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.27	283	*i*		10 37 47.8	
	baz=100,slow=326,SNR=2.6						
ZAA0	Zalesovo Array	1.27	283	⇑P	Pg	10 31 25.0	0.0
	0.3nm,0.2s						
ZAA0				⇑S	Sb	10 31 42.6	+0.3
	4.0nm,0.8s						
ZALV	Zalesovo Beam	1.27	283	Pg	Pg	10 31 23.2	-1.

RAO Sn **Sn** **10 31 58.2 -0.3**
815nm,0.3s,baz=124,slow=22,SNR=7.1
RAO **Raoul Island** **1.27 43** P **Pn** **10 31 40.1 -1.4**
RAO 10 31 56.7
RAO **Raoul Island** **1.27 43** Sn **Sb** **10 31 56.6 -1.4**
MXZ **Matakaoa Point** **7.71 197** Pn **Pn** **10 33 09.6 -0.5**
MXZ **Matakaoa Point** **7.71 197** P **Pn** **10 33 09.2 -0.9**
MXZ S **Sn** **10 34 40.6 +3.2**
WMGZ **Waiomatatini S** **7.93 196** P **Pn** **10 33 13.9 +0.8**
WMGZ S **Sn** **10 34 47.7 +4.9**
HAZ **Te Kaha** **8.03 199** P **Pn** **10 33 11.7 -2.8**
HAZ S **Sn** **10 34 49.0 +3.6**
OUZ **Omahuta** **8.07 230** Pn **Pn** **10 33 14.9 0.0**
PKGZ **Pakihiroa** **8.08 197** P **Pn** **10 33 15.9 +0.7**
PKGZ S **Sn** **10 34 46.7 +0.1**
PUZ **Puketiti** **8.21 196** P **Pn** **10 33 15.6 -1.3**
PUZ S **Sn** **10 34 48.2 -1.6**
RUGZ **Raukumara Rang** **8.26 199** P **Pn** **10 33 17.0 -0.7**
RUGZ S **Sn** **10 34 51.7 +0.6**
TWGZ **Tauwhareparae** **8.38 197** P **Pn** **10 33 20.0 +0.8**
TWGZ S **Sn** **10 34 52.6 -1.3**
WHRZ **Whale Island** **8.38 203** P **Pn** **10 33 23.7 +4.5**
OPRZ **Ohinepanea** **8.52 205** P **Pn** **10 33 23.5 +2.4**
CNGZ **Carnagh Statio** **8.61 195** P **Pn** **10 33 20.5 -1.9**
CNGZ S **Sn** **10 35 01.3 +1.7**
MWZ **Matawai** **8.64 199** P **Pn** **10 33 19.5 -3.4**
MWZ S **Sn** **10 35 00.3 -0.2**
TKGZ **Te Karaka** **8.66 197** P **Pn** **10 33 23.1 0.0**
TKGZ S **Sn** **10 35 03.8 +3.1**
EDRZ **Edgecumbe** **8.68 203** P **Pn** **10 33 26.3 +2.8**
URZ **Urewera** **8.70 201** Pn **Pn** **10 33 21.8 -1.8**
4.7nm,0.3s,baz=300,slow=24,SNR=30
URZ Sn **Sn** **10 34 59.7 -2.1**
baz=4.7,slow=21,SNR=1.0
URZ **Urewera** **8.70 201** Pn **Pn** **10 33 22.7 -0.9**
URZ **Urewera** **8.70 201** P **Pn** **10 33 22.5 -1.1**
URZ S **Sn** **10 35 03.6 +1.9**
RAGZ **Rawiri** **8.83 199** P **Pn** **10 33 23.5 -1.9**
RAGZ S **Sn** **10 35 04.7 -0.4**
TOZ **Tahuroa Road** **8.84 210** P Pn 10 33 31.1 +5.6
TARZ **Mount Tarawera** **8.88 204** P **Pn** **10 33 27.7 +1.5**
RIGZ **Rimuhau** **8.93 197** P **Pn** **10 33 26.7 -0.1**
RIGZ S **Sn** **10 35 08.7 +1.2**
MUGZ **Murupara** **9.01 202** P **Pn** **10 33 27.3 -0.6**
MUGZ S **Sn** **10 35 10.6 +1.2**
RTZ **Ruatahuna** **9.07 201** P **Pn** **10 33 27.3 -1.4**
RTZ S **Sn** **10 35 13.6 +2.7**
PRGZ **Paritu Road** **9.11 196** P **Pn** **10 33 28.2 -1.0**
PRGZ S **Sn** **10 35 11.1 -0.7**
SNGZ **Shannon Statio** **9.12 199** P **Pn** **10 33 28.6 -0.7**
SNGZ S **Sn** **10 35 13.7 +1.6**
PRRZ **Plateau Road** **9.15 204** P **Pn** **10 33 32.0 +2.1**
ALRZ **Allen Road** **9.23 204** P **Pn** **10 33 34.6 +3.7**
RAHZ **Arahi** **9.31 200** P **Pn** **10 33 30.9 -1.2**
RAHZ S **Sn** **10 35 20.2 +3.4**
MHGZ **Mahia Peninsul** **9.32 196** P **Pn** **10 33 31.3 -0.8**
MHGZ S **Sn** **10 35 18.1 +1.1**
MTHZ **Maungataniwha** **9.33 201** P **Pn** **10 33 31.5 -0.8**
MTHZ S **Sn** **10 35 20.0 +2.7**
TLZ **Tolley Road** **9.33 208** P **Pn** **10 33 36.5 +4.2**
WHHZ **Waihua** **9.42 199** P **Pn** **10 33 34.8 +1.3**
NMHZ **Naumai** **9.56 201** P **Pn** **10 33 37.0 +1.5**
WAZ **Wairara** **9.58 206** P **Pn** **10 33 38.3 +2.5**
HATZ **Hinemaiaia** **9.61 204** P **Pn** **10 33 37.2 +1.1**
ARHZ **Aropaoanui** **9.66 199** P **Pn** **10 33 37.8 +1.0**
RATZ **Rangitukua** **9.71 205** P **Pn** **10 33 42.1 +4.6**
BKZ **Black Stump Fm** **9.72 202** Pn **Pn** **10 33 35.9 -1.8**
BKZ **Black Stump Fm** **9.72 202** P **Pn** **10 33 35.9 -1.8**
HIZ **Hauiti** **9.77 210** Pn **Pn** **10 33 40.0 +1.7**
HIZ **Hauiti** **9.77 210** P **Pn** **10 33 41.9 +3.6**
MCHZ **McNeill Hill** **9.91 200** P **Pn** **10 33 40.6 +0.3**
TMVZ **Te Maari** **9.95 205** P **Pn** **10 33 40.0 -0.9**
ETVZ **East Tongariro** **9.96 205** P **Pn** **10 33 40.9 -0.2**
KWHZ **Kaweka Forest** **9.98 201** P **Pn** **10 33 40.4 -0.8**
WTVZ **West Tongariro** **9.99 205** P **Pn** **10 33 43.2 +1.7**
OTVZ **Oturere** **10.01 205** P **Pn** **10 33 41.7 0.0**
BHHZ **Black Hill Sta** **10.16 203** P **Pn** **10 33 42.9 -0.7**
WNVZ **Wahianoa** **10.18 205** P **Pn** **10 33 46.4 +2.4**
KAHZ **Kahuranaki** **10.19 199** P **Pn** **10 33 41.5 -2.6**
KRHZ **Kereru** **10.20 201** P **Pn** **10 33 40.6 -3.6**
PNHZ **Pukenui** **10.50 201** P **Pn** **10 33 47.1 -1.2**
BFZ **Birch Farm** **11.19 199** Pn Pn 10 33 52.6 -5.1
MSWZ **Moikau Station** **12.16 201** Pn Pn 10 34 06.7 -4.4
BHW **Baring Head** **12.28 203** Pn **Pn** **10 34 11.0 -1.6**
TUWZ **Tuamarina** **12.62 205** Pn Pn 10 34 12.7 -4.6
NNZ **Nelson** **12.66 208** Pn Pn 10 34 13.4 -4.4
QRZ **Quartz Range** **12.70 211** **Pn** **10 34 18.9 +0.6**
MSVF **Nonsavu** **12.71 347** Pn **Pn** **10 34 18.3 -0.4**
0.1nm,0.3s,baz=212,slow=19,SNR=1.9
MSVF LR LR 10 38 26.7
comp=Z,9µm,18.0s,baz=194,slow=34
MSVF **Nonsavu** **12.71 347** P **Pn** **10 34 19.8 +1.1**
MSVF **Nonsavu** **12.71 347** Pn **Pn** **10 34 19.8 +1.1**
BSWZ **Blackbirch Sta** **12.90 205** Pn **Pn** **10 34 19.4 -1.7**
KHZ **Kahutara** **13.63 204** Pn Pn 10 34 26.9 -4.1
DZM **Mont Dzumac** **15.43 298** Pn **P** **10 35 01.1 +0.8**
0.6nm,0.3s,baz=119,slow=19,SNR=11
DZM LR LR 10 39 50.8
comp=Z,10µm,18.4s,baz=124,slow=33
RPZ **Rata Peaks** **15.69 208** Pn **Pn** **10 34 59.7 +0.9**
0.7nm,0.3s,baz=63,slow=2.3,SNR=1.8
RPZ LR LR 10 41 17.4
comp=Z,2µm,18.8s,baz=45,slow=38
WKZ **Wanaka** **17.45 210** Pn **Pn** **10 35 18.0 -3.2**
MLZ **Mavora Lakes** **18.26 210** P **Pn** **10 35 31.2 0.0**
RAR **Rarotonga** **19.39 67** LR LR 10 41 17.7
comp=Z,1µm,21.4s,baz=226,slow=31
TBI **Tubuai** **27.10 83** *e*S **S** **10 41 40.7 +1.6**
411nm,32.0s
TBI *e*LQ LQ 10 42 40.5
4µm,26.0s
TBI *e*LR LR 10 43 45.9
comp=Z,5µm,29.5s,baz=247
TBI **Tubuai** **27.10 83** *e*T T 11 04 35.2
87nm,0.4s
HNR **Honiara** **28.57 312** LR LR 10 46 53.6
comp=Z,2µm,20.6s,baz=151,slow=33
RMQ **Roma** **28.65 269** P **P** **10 37 16.7 +2.0**
baz=28,SNR=5.0
PAE **Paea** **29.47 72** *e*T T 11 07 41.9
29nm,0.3s
PPT2 **Papeete2** **29.51 72** *e*S **S** **10 42 22.3 +5.1**
284nm,24.2s
PPT2 *e*LQ LQ 10 43 35.6
3µm,24.0s
PPT2 *e*LR LR 10 44 48.7
comp=Z,4µm,28.8s,baz=233
PPT2 **Papeete2** **29.51 72** *e*T T 11 07 45.6
22nm,0.3s
PPT **Papeete** **29.52 71** LR LR 10 45 59.2
comp=Z,847nm,20.8s,baz=246,slow=30
TOO **Toolangi** **30.33 246** P **P** **10 37 29.5 -0.1**
baz=30,SNR=10
TOO **Toolangi** **30.33 246** P **P** **10 37 28.7 -0.8**
TOO pmax pmax
comp=Z,97nm,1.6s
TOO **Toolangi** **30.33 246** P **P** **10 37 28.7 -0.8**
TOO IAmb IAmb 10 37 33.7
comp=Z,97nm,1.6s
CMSA **Cobar Meteorol** **30.34 258** P **P** **10 37 31.1 +1.4**
baz=30,SNR=11
MEH **Mehetia** **30.61 73** *e*T T 11 09 05.5
comp=Z,56nm,0.3s
VAH **Vaihoa** **32.33 70** *e*T T 11 11 18.3
comp=Z,82nm,0.2s
CTA **Charters Tower** **32.99 280** LR LR 10 49 53.6
comp=Z,4µm,18.7s,baz=127,slow=34
CTAO **Charters Tower** **32.99 280** P **P** **10 37 53.7 +0.6**
CTAO pmax pmax
comp=Z,35nm,1.0s
CTAO **Charters Tower** **32.99 280** P **P** **10 37 53.7 +0.6**
CTAO IAmb IAmb 10 38 02.9
comp=Z,35nm,0.9s
ARPS **Mount Arapiles** **33.23 248** P **P** **10 37 55.3 +0.4**
baz=33,SNR=5.5
STKA **Stephens Creek** **33.77 257** P **P** **10 38 01.1 +1.4**
comp=Z,49nm,1.2s,baz=93,slow=9.6,SNR=21
STKA LR LR 10 50 35.7
comp=Z,2µm,18.5s,baz=92,slow=34
STKA **Stephens Creek** **33.77 257** P **P** **10 37 59.9 +0.2**
baz=34,SNR=15
STKA **Stephens Creek** **33.77 257** P **P** **10 38 00.7 +1.0**
STKA pmax pmax
comp=Z,24nm,1.4s
STKA **Stephens Creek** **33.77 257** P **P** **10 38 00.7 +1.0**
MTSU **Mount Surprise** **35.49 281** P **P** **10 38 16.5 +1.7**
baz=35,SNR=8.1
HTT **Hallett** **35.81 254** P **P** **10 38 18.2 +0.8**
baz=36,SNR=16
PMG **Port Moresby** **37.81 296** P **P** **10 38 33.8 -0.7**
comp=Z,14nm,0.8s,baz=211,slow=12,SNR=2.0
PMG LR LR 10 53 18.7
comp=Z,1µm,18.2s,baz=133,slow=35
PMG **Port Moresby** **37.81 296**‖ *e*P **P** **10 38 34.4 -0.2**
PMG pmax pmax
comp=Z,22nm,1.1s
PMG **Port Moresby** **37.81 296** P **P** **10 38 35.4 +0.9**
BBOO **Buckleboo** **38.27 254** P **P** **10 38 39.6 +1.2**
baz=38,SNR=27
BBOO **Buckleboo** **38.27 254** P **P** **10 38 38.8 +0.4**
BBOO IAmb IAmb 10 38 42.0
comp=Z,70nm,0.8s
COEN **Coen** **38.46 286** P **P** **10 38 40.5 +0.4**
QIS **Mount Isa** **38.52 275** P **P** **10 38 42.7 +2.1**
baz=38,SNR=3.8
RKT **Rikitea** **39.70 91** *e*S **S** **10 44 55.3 +1.3**
comp=Z,345nm,27.2s
RKT *e*LQ LQ 10 48 06.0
comp=Z,941nm,23.5s
RKT *e*LR LR 10 49 47.0
comp=Z,4µm,27.5s
RKT **Rikitea** **39.70 91** *e*T T 11 20 11.0
comp=Z,5.2nm,0.3s
TAOE **Nuku Hiva Isla** **41.95 68** *e*S **S** **10 45 34.8 +7.0**
TAOE *e*LQ LQ 10 48 58.2
comp=Z,2µm,26.6s
TAOE *e*LR LR 10 50 34.3
comp=Z,2µm,28.9s,baz=238
AS31 **Alice Springs** **42.34 267** P **P** **10 39 12.5 +0.3**
ASAR **Alice Springs** **42.34 267** P **P** **10 39 12.1 -0.1**
comp=Z,8.8nm,0.8s,baz=103,slow=7.5,SNR=121
ASAR LR LR 10 56 18.4
comp=Z,3µm,18.4s,baz=114,slow=36
ASAR **Alice Springs** **42.34 267** P **P** **10 39 11.1 -1.1**
ASAR **Alice Springs** **42.34 267** P **P** **10 39 11.1 -1.1**
MANU **Manus Island** **42.49 305** P **P** **10 39 14.6 +1.2**
MANU IAmb IAmb 10 39 21.7
comp=Z,62nm,1.2s
WR0 **Warramunga Arr** **43.13 272** P **P** **10 39 19.1 +0.5**
WB2 **Warramunga Arr** **43.30 272** P **P** **10 39 19.9 -0.1**
WB2 IAmb IAmb 10 39 27.1
comp=Z,66nm,1.1s
WRAB **Tennant Creek** **43.30 272** *i* P **P** **10 39 19.6 -0.4**
WRAB **Tennant Creek** **43.30 272** P **P** **10 39 19.7 -0.3**
WRAB IAmb IAmb 10 39 27.1
comp=Z,63nm,1.1s
WRA **Warramunga Arr** **43.31 272** P **P** **10 39 20.4 +0.4**
comp=Z,24nm,0.9s,baz=110,slow=7.2,SNR=4.0
WRA LR LR 10 56 19.1
comp=Z,2µm,18.1s,baz=105,slow=35
WB0 **Warramunga Arr** **43.33 273** P **P** **10 39 20.2 0.0**
WB0 IAmb IAmb 10 39 27.4
comp=Z,58nm,1.0s
FORT **Forrest** **45.35 255** P **P** **10 39 37.6 +1.4**
baz=45,SNR=6.5
FORT **Forrest** **45.35 255** P **P** **10 39 35.2 -1.0**
WRKA **Warakurna** **46.73 263** P **P** **10 39 46.4 -0.9**
baz=46,SNR=18
JAY **Jayapura** **47.11 298** P **P** **10 39 51.6 +1.3**
comp=Z,27nm,0.8s,baz=149,slow=9.0
JAY LR LR 10 57 17.2
comp=Z,1µm,21.0s,baz=122,slow=33
GENI **Genyem** **47.47 297** P **P** **10 39 55.0 +1.9**
comp=Z,113nm,1.3s
KDU **Kakadu** **48.11 280** P **P** **10 39 59.1 +1.1**
baz=48,SNR=3.5
SBA **Scott Base** **48.19 184** P **P** **10 39 59.4 +1.6**
SBA pmax pmax
comp=Z,82nm,1.4s
SBA **Scott Base** **48.19 184** P **P** **10 39 59.4 +1.6**
VNDA **Vanda** **48.23 186** P **P** **10 39 58.1 0.0**
comp=Z,2.8nm,0.9s,baz=18,slow=8.6,SNR=8.6
VNDA LR LR 10 56 09.0
comp=Z,320nm,21.0s,baz=24,slow=31
VNDA **Vanda** **48.23 186** P **P** **10 39 58.0 -0.2**
VNDA pmax pmax
comp=Z,28nm,1.7s
VNDA **Vanda** **48.23 186** P **P** **10 39 58.0 -0.2**
VNDA IAmb IAmb 10 40 13.2
comp=Z,28nm,1.7s
KMBL **Kambalda** **50.34 253** P **P** **10 40 15.3 +0.4**
baz=50,SNR=7.5
BAKI **Biak** **51.50 295** P **P** **10 40 23.7 -0.1**
FITZ **Fitzroy Crossi** **51.58 270** LR LR 11 01 10.2
comp=Z,2µm,19.9s,baz=110,slow=35
FITZ **Fitzroy Crossi** **51.58 270** P **P** **10 40 24.7 +0.3**
baz=51,SNR=39
FITZ **Fitzroy Crossi** **51.58 270** P **P** **10 40 24.1 -0.3**
FITZ IAmb IAmb 10 40 31.9
comp=Z,46nm,1.0s
FAKI **Fak Fak** **53.53 291** P **P** **10 40 39.1 +0.1**
FAKI IAmb IAmb 10 40 46.0
comp=Z,39nm,0.8s
FAKI **Fak Fak** **53.53 291** P **P** **10 40 39.0 +0.1**
comp=Z,65nm,1.0s
KLBR **Kellerberrin** **53.68 251** P **P** **10 40 38.8 -1.0**
baz=53,SNR=26
NWAO **Narrogin (SRO)** **53.74 249** P **P** **10 40 40.0 -0.3**
baz=53,SNR=4.2
NWAO **Narrogin (SRO)** **53.74 249** P **P** **10 40 39.5 -0.8**
NWAO pmax pmax
comp=Z,140nm,1.9s
NWAO **Narrogin (SRO)** **53.74 249** P **P** **10 40 39.5 -0.8**
NWAO **Narrogin (SRO)** **53.74 249** IAMs_20 IAMs_20 11 02 13.1
comp=Z,944nm,20.0s
BNDI **Bandanaira** **54.54 287** P **P** **10 40 46.4 +0.1**
comp=Z,3µmcomp=Z,111nm,1.7s
BLDU **Ballidu** **54.82 252** P **P** **10 40 47.3 -0.8**
baz=54,SNR=6.7
MUN **Mundaring** **54.84 250** P **P** **10 40 47.8 -0.4**
baz=54,SNR=5.6
PSA00 **Pilbara Seismi** **55.22 264** P **P** **10 40 50.5 -0.6**
SIJI **Sorong** **55.53 292** P **P** **10 40 53.8 +0.4**
comp=Z,28nm,0.9s,baz=162,slow=3.2
MORW **Morawa** **55.84 254** P **P** **10 40 55.6 0.0**
baz=56,SNR=4.2
MORW **Morawa** **55.84 254** P **P** **10 40 55.0 -0.5**
MORW IAmb IAmb 10 40 56.2
comp=Z,48nm,1.2s
SOEI **Soe** **56.55 279** P **P** **10 41 01.4 +0.5**
SOEI **Soe** **56.55 279** P **P** **10 41 01.3 +0.4**
comp=Z,2µmcomp=Z,91nm,1.6s
BATI **Baumata** **56.85 278** LR LR 11 05 53.0
comp=Z,4µm,18.3s,baz=141,slow=36
MMRI **Maumere** **58.84 279** P **P** **10 41 17.4 +0.5**
MMRI IAMs_20 IAMs_20 11 08 20.6
comp=Z,815nm,18.0s
MMRI **Maumere** **58.84 279** P **P** **10 41 17.5 +0.5**
comp=Z,113nm,1.2s
SANI **Sanana** **59.16 287** P **P** **10 41 18.7 -0.4**
comp=Z,993nmcomp=Z,45nm,1.3s
EDFI **Ende, Flores** **59.26 278** P **P** **10 41 19.3 -0.6**
comp=Z,484nmcomp=Z,23nm,0.8s
GIRL **Giralia** **59.62 260** P **P** **10 41 22.9 +0.8**
baz=59,SNR=3.5
GIRL **Giralia** **59.62 260** P **P** **10 41 22.7 +0.5**
TNTI **Ternate** **59.64 291** P **P** **10 41 21.1 -1.2**
QSPA **South Pole Qui** **59.92 180** P **P** **10 41 23.8 0.0**
comp=Z,44nm,1.0s,baz=36,slow=2.4,SNR=44
QSPA **South Pole Qui** **59.92 180** P **P** **10 41 23.6 -0.2**
RPN **Rapa Nui** **60.24 106** LR LR 11 00 35.4
comp=Z,902nm,21.8s,baz=260,slow=29
LUWI **Luwuk** **62.38 286** P **P** **10 41 40.0 -1.0**
PLAI **Plampang** **62.58 276** P **P** **10 41 42.9 +0.5**
comp=Z,1µmcomp=Z,172nm,0.9s
KAPI **Kappang** **62.80 281** LR LR 11 09 59.4
comp=Z,634nm,18.1s,baz=151,slow=37
BNSI **Bone** **62.82 281** P **P** **10 41 45.1 +1.1**
comp=Z,883nmcomp=Z,42nm,1.7s
GTOI **Gorontalo** **63.12 288** P **P** **10 41 47.7 +1.8**
comp=Z,14nm,0.7s
SPSI **Sidrap Palu** **63.33 282** P **P** **10 41 48.0 +0.6**
comp=Z,20nm,0.9s
TWSI **Taliwang, Sumb** **63.40 275** P **P** **10 41 49.9 +2.1**
comp=Z,50nm,1.0s
TTSI **Tana Toraja** **63.77 283** P **P** **10 41 50.6 +0.3**
comp=Z,33nm,1.1s
SRBI **Singaraja** **65.15 275** P **P** **10 41 59.3 0.0**
comp=Z,72nm,1.5s
TOLI2 **Tolitoli** **65.22 287** P **P** **10 41 58.0 -1.9**
TOLI2 IAmb IAmb 10 42 00.1
comp=Z,16nm,1.2s
BBKI **Banjar Baru** **67.79 279** P **P** **10 42 16.5 +0.3**
comp=Z,44nm,1.1s
BELA **Belgrano 2** **70.10 172** P **P** **10 42 28.9 -0.7**
BELA IAmb IAmb 10 42 29.9
comp=Z,32nm,1.1s
KKM **Kota Kinabalu** **71.75 289** P **P** **10 42 41.3 +0.6**
KKM IAmb IAmb 10 42 42.7
comp=Z,61nm,1.7s
CISI **Cisompet, Garu** **71.80 272** P **P** **10 42 40.0 -1.1**
CISI IAMs_20 IAMs_20 11 14 39.8
comp=Z,841nm,19.0s
MAW **Mawson** **72.23 201** LR LR 11 12 11.3
comp=Z,656nm,21.1s,baz=101,slow=34
LEM **Lembang** **72.33 272** P **P** **10 42 44.6 +0.3**
comp=Z,33nm,0.7s,baz=158,slow=14,SNR=7.0
LEM LR LR 11 14 46.0
comp=Z,583nm,19.9s,baz=98,slow=36
SBUM **Sibu** **73.11 283** P **P** **10 42 48.4 -0.4**
SBUM IAMs_20 IAMs_20 11 14 20.1
comp=Z,660nm,22.0s
SBUM **Sibu** **73.11 283** P **P** **10 42 49.0 +0.2**
KSM **Kuching** **74.22 281** P **P** **10 42 54.8 -0.4**
KSM IAmb IAmb 10 43 01.8
comp=Z,16nm,0.9s
KSM **Kuching** **74.22 281** P **P** **10 42 53.0 -2.3**
KLSI **75.88 273** P P 10 42 59.7 -5.2
PMBI **Palembang** **76.72 274** IAMs_20 IAMs_20 11 18 14.1
comp=Z,783nm,20.0s
SYO **Syowa Base** **77.14 193**‖ *e*X P 10 43 17.2 +6.1
SYO **Syowa Base** **77.14 193**‖ *e*PcP **PcP** **10 43 23.4 +1.5**
MJAR **Matsushiro Arr** **77.63 326** P **P** **10 43 12.6 -1.6**
comp=Z,4.5nm,0.9s,baz=165,slow=5.6,SNR=6.4
MJAR **Matsushiro Arr** **77.63 326** P **P** **10 43 12.6 -1.6**
MJAR pmax pmax
comp=Z,15nm,1.5s
MJAR **Matsushiro Arr** **77.63 326** IAmb IAmb 10 43 20.9
comp=Z,15nm,1.5s
MAJO **Matsushiro** **77.63 326**‖ *e*P **P** **10 43 13.9 -0.3**
MAJO pmax pmax
comp=Z,27nm,1.3s
MAT **Matsushiro** **77.63 326** P **P** **10 43 13.5 -0.7**
MAT *e*S **S** **10 53 03.4 -2.5**
SNAA **Sanae** **78.39 179** P **P** **10 43 17.2 -0.9**
SNAA **Sanae** **78.39 179** PcP **PcP** **10 43 28.4 +1.1**
SNAA **Sanae** **78.39 179** pP **P** **10 43 21.0 +2.9**
SNAA **Sanae** **78.39 179** *d* iP **P** **10 43 16.7 -1.4**
SNAA pmax pmax
comp=Z,57nm,1.3s
SNAA **Sanae** **78.39 179** P **P** **10 43 16.6 -1.4**
VNA3 **Neumayer Olymp** **78.56 176** P **P** **10 43 18.1 -1.0**
VNA3 **Neumayer Olymp** **78.56 176** PcP **PcP** **10 43 29.3 +1.3**
VNA2 **Neumayer--Watz** **78.99 177** P **P** **10 43 20.8 -0.6**
baz=163,slow=5.8
VNA2 **Neumayer--Watz** **78.99 177** PP PP 10 46 18.4 -1.1
VNA2 **Neumayer--Watz** **78.99 177** PcP **PcP** **10 43 30.0 +0.1**
VNA2 **Neumayer--Watz** **78.99 177** pP **P** **10 43 24.5 +3.1**
NVL **N'lazarevskaya** **79.04 184** *e*P P 10 43 11.5 -10
NVL pmax pmax
comp=Z,98nm,1.5s
VNA1 **Neumayer--Stat** **79.22 177** P **P** **10 43 21.9 -0.7**
MYKOM **Kota Tinggi** **79.89 278** IAMs_20 IAMs_20 11 19 29.5
comp=Z,486nm,19.0s
H03S2 **Juan Fernandez** **81.23 124** T T 12 12 30.4
baz=238,slow=74,SNR=204
H03S1 **Juan Fernandez** **81.24 124** T T 12 12 31.6
baz=238,slow=74,SNR=223
H03S3 **Juan Fernandez** **81.25 124** T T 12 12 30.4
baz=238,slow=74,SNR=254
DLV **T Lat** **81.35 289** P **P** **10 43 33.8 -1.4**
H03N3 **Juan Fernandez** **81.42 124** T T 12 12 48.9
baz=241,slow=72,SNR=202
H03N2 **Juan Fernandez** **81.43 124** T T 12 12 46.9
baz=241,slow=72,SNR=130
H03N1 **Juan Fernandez** **81.44 124** T T 12 12 49.6
baz=241,slow=72,SNR=218
JRMM **Jerantut** **82.14 279** P P 10 43 34.0 -5.2
PLCA **Paso Flores** **83.22 133** P **P** **10 43 45.6 +1.0**
comp=Z,12nm,1.2s,baz=222,slow=4.5,SNR=7.5
PLCA LR LR 11 11 39.2
comp=Z,488nm,21.2s,baz=236,slow=29
PLCA **Paso Flores** **83.22 133** P **P** **10 43 45.4 +0.9**
PLCA pmax pmax
comp=Z,60nm,1.6s
PLCA **Paso Flores** **83.22 133** P **P** **10 43 45.4 +0.9**
TJN **Taejon** **83.23 319**‖ *e*P **P** **10 43 43.5 -0.8**
SKR **Severo-Kuril's** **83.50 344** *de*P **P** **10 43 49.5 +4.2**
SKR pmax pmax
comp=Z,200nm,7.7s
SKR MLR MLR
comp=Z,200nm,17.0s
KSRS **Korea Array** **83.68 320** P **P** **10 43 47.3 +0.7**
comp=Z,5.9nm,1.0s,baz=148,slow=5.9,SNR=12
KSRS LR LR 11 16 10.1
comp=Z,253nm,21.6s,baz=157,slow=32
IPM **Ipoh** **83.69 279** IAMs_20 IAMs_20 11 18 58.0
comp=Z,496nm,20.0s
KSAR **Wonju Array Be** **83.70 320** P **P** **10 43 44.6 -2.1**
KSAR **Wonju Array Be** **83.70 320** P **P** **10 43 44.6 -2.1**
QIZ **Qiongzhong** **84.20 296** P **P** **10 43 50.3 +0.6**
QIZ S **S** **10 54 15.7 +0.6**
QIZ LR LR
comp=Z,250nm,21.6s
QIZ LR LR
comp=Z,250nm,38.2s
QIZ LR LR
comp=Z,610nm,43.8s
YSS **Yuzh-Sakhalins** **84.22 335**‖ *e*P **P** **10 43 48.7 -0.4**
YSS pmax pmax
comp=Z,33nm,1.4s
KULM **Kulim** **84.42 279** IAMs_20 IAMs_20 11 22 56.5
comp=Z,476nm,19.0s
RPSI **Rantau Prapat** **84.58 276** P **P** **10 43 50.8 -1.0**
PSI **Prapat** **84.64 276** P **P** **10 43 50.8 -1.4**
comp=Z,3.1nm,0.4s,baz=180,slow=4.9,SNR=6.4
BI02 **San Fabin de** **85.03 130** P **P** **10 43 53.3 -0.6**
BI02 IAmb IAmb 10 43 55.5
comp=Z,30nm,1.6s
GSI **Gunungsitoli** **85.05 274** P **P** **10 43 54.0 -0.1**
GSI **Gunungsitoli** **85.05 274** P **P** **10 43 54.1 -0.1**
comp=Z,2µmcomp=Z,38nm,0.9s
PET **Petropavlovsk** **85.14 347** *e*P **P** **10 43 52.7 -0.9**
PET *e*S **S** **10 54 21.4 -1.6**
PET pmax pmax
comp=Z,500nm,10.8s
PET MLR MLR
comp=Z,700nm,21.0s
PEA0B **Petropavlovsk-** **85.42 346**‖ *e*P **P** **10 43 55.4 +0.4**
PETK **Petropavlovsk-** **85.42 346** P **P** **10 43 55.6 +0.6**
comp=Z,4.9nm,0.7s,baz=150,slow=6.8,SNR=6.3
PETK LR LR 11 15 45.2
comp=Z,494nm,21.8s,baz=171,slow=31
PETK **Petropavlovsk-** **85.42 346** P **P** **10 43 55.8 +0.8**
PETK **Petropavlovsk-** **85.42 346** P **P** **10 43 55.8 +0.8**
NJ2 **Nanjing** **85.52 311** *e*P **P** **10 43 58.2 +2.2**
NJ2 pmax pmax
comp=Z,18nm,0.6s
ESJX **Sierra Juarez** **85.95 49** P **P** **10 43 59.7 +1.3**
ESJX IAmb IAmb 10 44 02.0
comp=Z,55nm,1.8s
MWC **Mount Wilson** **86.02 46** P **P** **10 44 00.2 +1.5**
MWC pmax pmax
comp=Z,58nm,1.8s
MWC **Mount Wilson** **86.02 46** P **P** **10 44 00.2 +1.5**
MWC IAmb IAmb 10 44 01.5
comp=Z,58nm,1.8s
MURC **Murrieta** **86.16 47** P 10 44 01.5
baz=230
MONP2 **Monument Peak** **86.20 48** P 10 44 01.7
baz=230
IKP **In-Ko-Pah, Jac** **86.25 49** P 10 44 01.0
baz=230
BFSC **Mount Baldy Ra** **86.28 47** P 10 44 01.4
baz=229
BO02 **Sierra Bellavi** **86.41 128** P **P** **10 44 01.0 +0.2**
VES **Vestal, Richgr** **86.44 45** P 10 44 02.1
baz=228
EDW2 **Edwards Air Fo** **86.49 46** P 10 44 02.5
baz=229,SNR=6.8
USRK **Ussuriysk Ar.** **86.56 327** P **P** **10 44 01.5 +0.7**
comp=Z,5.4nm,0.8s,baz=147,slow=4.6,SNR=12
USRK **Ussuriysk Ar.** **86.56 327** P **P** **10 44 01.8 +0.9**
USRK **Ussuriysk Ar.** **86.56 327** P **P** **10 44 01.8 +0.9**

PFO Pinyon Flats O 86.64 48⇑ *e*P P **10 44 03.0 +1.3**
PFO pmax pmax
comp=Z,4.0nm,0.8s
ISA Isabella, Lake 86.70 45 P 10 44 03.9
baz=229,SNR=6.8
ISA Isabella, Lake 86.70 45 P P **10 44 03.1 +1.2**
ISA pmax pmax
comp=Z,14nm,1.2s
ISA Isabella, Lake 86.70 45 P P **10 44 03.1 +1.2**
ISA IAmb IAmb 10 44 04.2
comp=Z,14nm,1.1s
CMB Columbia Colle 87.13 42 P P **10 44 03.9 0.0**
CMB pmax pmax
comp=Z,5.0nm,1.0s
CMB Columbia Colle 87.13 42 P P **10 44 03.9 0.0**
BELC Belle Mtn. Jos 87.18 48 P 10 44 06.5
baz=230,SNR=8.0
O02D Mt. Diablo Mer 87.23 40 P 10 44 06.7
baz=226,SNR=5.3
BC3 Big Chuckawall 87.31 48 P 10 44 07.9
baz=231,SNR=5.5
AFDM Forest Hills D 87.41 41 P P **10 44 05.8 +0.6**
AFDM IAmb IAmb 10 44 07.7
comp=Z,24nm,1.9s
CWC Cottonwood Cre 87.45 45 P 10 44 07.4
baz=229
HEC Hector,Ludlow 87.49 47 P 10 44 07.8
baz=230,SNR=7.5
ORV Oroville 87.52 41 P P **10 44 05.9 +0.2**
ORV pmax pmax
comp=Z,18nm,1.6s
ORV Oroville 87.52 41 P P **10 44 05.9 +0.2**
ORV IAmb IAmb 10 44 08.5
comp=Z,18nm,1.6s
LHMI Lhok Sumawe 87.56 277 IAMs_20 IAMs_20 11 18 39.6
comp=Z,579nm,18.0s
MPMC Manual Prospec 87.56 45 P 10 44 07.7
baz=229,SNR=8.5
WDC Whiskeytown Da 87.64 39 P P **10 44 07.1 +0.8**
WDC pmax pmax
comp=Z,12nm,1.3s
WDC Whiskeytown Da 87.64 39 P P **10 44 07.0 +0.8**
WDC IAmb IAmb 10 44 08.3
comp=Z,12nm,1.3s
IRM Iron Mountain 87.83 48 P 10 44 09.7
baz=231,SNR=15
GMRC Granite Mounta 87.89 47 P 10 44 09.6
baz=230,SNR=6.9
214A Organ Pipe Nat 88.01 51 P 10 44 10.4
baz=232,SNR=6.6
FURC Furnace Creek, 88.21 45 P 10 44 11.0
baz=230
PNTR Pine Nut 88.29 42 P P **10 44 07.9 -1.8**
PNTR IAmb IAmb 10 44 18.1
comp=Z,9.8nm,0.8s
LHV Little Huntoon 88.38 43 IAmb IAmb 10 44 18.5
comp=Z,20nm,1.5s
PDMCI Parker Dam,Lak 88.57 49 P 10 44 13.0
baz=231
NVAR Mina Array Bea 88.62 43 P P **10 44 11.9 +0.7**
comp=Z,2.4nm,0.7s,baz=220,slow=7.8,SNR=18
NVAR LR LR 11 19 35.9
comp=Z,313nm,18.1s,baz=207,slow=33
NVAR Mina Array Bea 88.62 43 P P **10 44 12.2 +0.9**
NV11 Mina Array Sit 88.70 43 P P **10 44 13.0 +1.5**
NV11 IAmb IAmb 10 44 13.4
comp=Z,15nm,1.4s
CO03 El Pedregal 88.71 125 P P **10 44 10.3 -1.6**
HUMO Hull Mountain 88.83 38 P P **10 44 13.8 +1.9**
HUMO IAmb IAmb 10 44 15.4
comp=Z,44nm,1.8s
PAHR Pah Rah Range 88.83 42 P P **10 44 12.2 +0.2**
PAHR IAmb IAmb 10 44 13.7
comp=Z,14nm,1.4s
TPNV Topopah Spring 88.90 45 P 10 44 14.6
baz=230,SNR=5.6
TPH Tonopah 89.03 44 P P **10 44 13.7 +0.6**
TPH pmax pmax
comp=Z,66nm,1.3s
TPH Tonopah 89.03 44 P P **10 44 13.7 +0.6**
KVN Kaiserville 89.14 43 P P **10 44 12.8 -0.8**
KVN pmax pmax
comp=Z,10.0nm,1.3s
KVN Kaiserville 89.14 43 P P **10 44 12.8 -0.8**
SHPR Sheep Range 89.30 46 P P **10 44 13.1 -1.3**
SHPR IAmb IAmb 10 44 17.8
comp=Z,31nm,1.7s
CN2 Changchun 89.50 323 *e*P P **10 44 12.3 -2.6**
CN2 pmax pmax
comp=Z,10.0nm,2.1s
CN2 LR LR
comp=Z,380nm,24.0s
CN2 LR LR
comp=Z,440nm,24.0s
CN2 LR LR
comp=Z,650nm,23.0s
TUC Tucson 89.59 52 P 10 44 18.3
baz=233
TUC Tucson 89.59 52 P P **10 44 15.0 -0.8**
TUC pmax pmax
comp=Z,74nm,1.8s
TUC Tucson 89.59 52 P P **10 44 15.0 -0.8**
MOD Modoc Plateau 89.78 40 P P **10 44 15.5 -1.0**
MOD IAmb IAmb 10 44 19.1
comp=Z,24nm,1.6s
PRN Pahroc Range 89.93 46 P P **10 44 16.2 -1.1**
PRN IAmb IAmb 10 44 20.7
comp=Z,21nm,1.4s
I04A Tendick Farm, 89.94 37 P 10 44 18.4
baz=226
SLVN Son La 90.12 295 P P **10 44 18.2 -0.3**
SLVN IAmb IAmb 10 44 21.6
comp=Z,26nm,1.7s
R11A Troy Canyon, C 90.19 45 P 10 44 19.3
baz=230
R11A Troy Canyon, C 90.20 45 P P **10 44 18.9 +0.3**
J05D Fort Rock, OR 90.21 38 P 10 44 20.0
baz=227
H04D Lebanon 90.27 36 P 10 44 20.2
baz=226
KLR Kul'dur 90.46 330 P P **10 44 20.0 +0.8**
comp=Z,3.6nm,1.1s,baz=116,slow=2.7,SNR=5.7
KLR Kul'dur 90.46 330⇑ *e*P P **10 44 18.8 -0.5**
KLR pmax pmax
comp=Z,2.0nm,0.8s
H04A Detroit Lake 90.67 37 P P **10 44 21.0 +0.6**
PINE Pine Mountain 90.71 38 P P **10 44 21.8 +0.9**
PINE IAmb IAmb 10 44 23.8
comp=Z,27nm,1.2s
GYA Guiyang 90.77 300 ⇑P P **10 44 21.9 +0.5**
GYA S S **10 55 12.7 -5.5**
GYA pmax pmax
comp=Z,14nm,1.6s
GYA LR LR
comp=Z,240nm,19.0s
I05D Terrebonne, OR 90.87 37 P 10 44 23.1
baz=227
WVOR Wild Horse Val 91.06 40 P P **10 44 22.5 +0.1**
WVOR pmax pmax
comp=Z,33nm,1.9s
WVOR Wild Horse Val 91.06 40 P P **10 44 22.5 +0.1**
WVOR IAmb IAmb 10 44 25.1
comp=Z,33nm,1.9s
CCUT Cedar City 91.07 46 IAmb IAmb 10 44 26.1
comp=Z,25nm,1.8s
KNB Kanab 91.08 47 P P **10 44 22.8 0.0**
KNB pmax pmax
comp=Z,35nm,1.8s
KNB Kanab 91.08 47 P P **10 44 22.8 0.0**
KNB IAmb IAmb 10 44 26.1
comp=Z,35nm,1.8s
WUAZ Wupatki 91.11 49 P 10 44 24.1
baz=233
WUAZ Wupatki 91.11 49 P P **10 44 23.8 +1.0**
WUAZ IAmb IAmb 10 44 25.3
comp=Z,19nm,1.4s
SZCU Shurtz Canyon 91.27 46 IAmb IAmb 10 44 27.0
comp=Z,26nm,1.9s
SPR3 Spring Creek 3 91.37 45 IAmb IAmb 10 44 26.4
comp=Z,31nm,2.0s
PKCU Pink Cliffs 91.67 47 IAmb IAmb 10 44 28.6
comp=Z,19nm,1.3s
I07A Izee 91.67 38 IAmb IAmb 10 44 27.1
comp=Z,15nm,1.4s
J08A Circle Bar Ran 91.75 39 IAmb IAmb 10 44 28.1
comp=Z,14nm,1.4s

ELK Elko 91.92 43 P P **10 44 26.5 -0.1**
ELK pmax pmax
comp=Z,9.0nm,1.6s
ELK Elko 91.92 43 P P **10 44 26.5 -0.1**
ELK IAMs_20 IAMs_20 11 22 39.1
comp=Z,422nm,18.0s
MTPU Mount Pierson 92.11 47 IAmb IAmb 10 44 31.4
comp=Z,24nm,1.7s
AC02 Maricunga 92.12 123 P P **10 44 29.3 +0.9**
AC02 IAmb IAmb 10 44 30.5
comp=Z,29nm,1.7s
BJT Baijiatuao 92.22 316 IAMs_20 IAMs_20 11 21 13.8
comp=Z,524nm,21.0s
BJI Beijing 92.23 316 P P **10 44 30.3 +2.6**
BJI S S **10 55 34.0 +3.5**
BJI pmax pmax
comp=Z,7.0nm,0.9s
BJI LR LR
comp=Z,260nm,20.5s
BJI LR LR
comp=Z,330nm,21.2s
BJI LR LR
comp=Z,660nm,36.7s
MSU Marysvale 92.40 46 P P **10 44 27.6 -1.2**
MSU Marysvale 92.40 46 P P **10 44 27.6 -1.2**
CMAR Chiang Mai Arr 92.59 290 P P **10 44 30.9 +1.0**
comp=Z,1.1nm,0.3s,baz=135,slow=3.4,SNR=8.2
CMAR Chiang Mai Arr 92.59 290 P P **10 44 30.4 +0.5**
CMAR Chiang Mai Arr 92.59 290 P P **10 44 30.4 +0.5**
G08A Pilot Rock 92.77 38 P P **10 44 31.4 +1.2**
G08A IAmb IAmb 10 44 32.0
comp=Z,21nm,1.6s
MA2 Magadan 92.89 345 IAMs_20 IAMs_20 11 22 01.2
comp=Z,483nm,20.0s
TX31 Lajitas Ar. Si 92.93 58 P P **10 44 32.0 +0.6**
TX32 Lajitas Array 92.93 58 P P **10 44 31.8 +0.5**
TX32 IAmb IAmb 10 44 34.3
comp=Z,29nm,1.9s
TXAR Lajitas Array 92.93 58 P P **10 44 32.1 +0.7**
comp=Z,0.5nm,0.7s,baz=224,slow=7.0,SNR=7.6
TXAR LR LR 11 21 52.0
comp=Z,151nm,18.1s,baz=0.0,slow=33
TXAR Lajitas Array 92.93 58 P P **10 44 32.4 +1.0**
TXAR Lajitas Array 92.93 58 P P **10 44 32.4 +1.0**
MNTX Cornudas Mount 92.99 55 P 10 44 32.4
baz=236
MNTX Cornudas Mount 93.00 55 P P **10 44 31.2 -0.3**
HVU Hansel Valley 94.02 43 P P **10 44 36.6 +0.5**
HVU pmax pmax
comp=Z,6.0nm,1.0s
HVU Hansel Valley 94.02 43 P P **10 44 36.6 +0.5**
ANMO Albuquerque 94.06 52 P 10 44 38.1
baz=236
ANMO Albuquerque 94.06 52⇑ *i*P P **10 44 38.0 +1.4**
ANMO pmax pmax
comp=Z,2.0nm,1.5s
ANMO Albuquerque 94.06 52 P P **10 44 36.1 -0.5**
HLID Hailey 94.16 41 P 10 44 38.1
baz=231
HLID Hailey 94.16 41 P P **10 44 37.0 +0.2**
NNA Nana 94.23 106⇓ *e*P P **10 44 39.9 +2.2**
NNA pmax pmax
comp=Z,54nm,1.4s
ANM Nome 95.03 6 IAMs_20 IAMs_20 11 19 26.4
comp=Z,412nm,22.0s
CUT Chulitna 95.10 13 IAMs_20 IAMs_20 11 19 57.2
comp=Z,507nm,21.0s
HHC Hu-ho-hao-te 95.53 314 *e*P P **10 44 44.0 +1.0**
HHC S S **10 55 58.6 -1.2**
HHC SS SS **11 02 30.4 +1.6**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,190nm,6.5s
HHC LR LR
comp=Z,230nm,17.9s
HHC LR LR
comp=Z,360nm,17.9s
HHC LR LR
comp=Z,430nm,17.0s
ZEA Zeya 95.68 331 *e*P P **10 44 38.9 -4.3**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA MLR MLR
comp=N,300nm,13.0s
ZEA MLR MLR
comp=E,200nm,13.0s
ZEA MLR MLR
comp=Z,300nm,15.0s
BARN Barnard Glacie 95.85 17 IAMs_20 IAMs_20 11 18 15.9
comp=Z,527nm,21.0s
HIA Hailar 96.09 325 IAMs_20 IAMs_20 11 22 54.0
comp=Z,441nm,22.0s
REDW Red Top Meadow 96.10 43 P P **10 44 46.5 +0.8**
REDW IAmb IAmb 10 44 48.0
comp=Z,13nm,1.6s
SNOW Snow King Moun 96.22 43 P P **10 44 46.1 -0.2**
SNOW IAmb IAmb 10 45 16.6
comp=Z,12nm,1.6s
JCT Junction City 96.38 59 IAMs_20 IAMs_20 11 23 32.4
comp=Z,425nm,19.0s
LOHW Long Hollow 96.39 43 IAMs_20 IAMs_20 11 25 14.5
comp=Z,364nm,19.0s
PDAR Pinedale Array 96.52 44 P P **10 44 48.0 +0.3**
comp=Z,0.6nm,0.8s,baz=123,slow=5.5,SNR=5.8
BOZ Bozeman (W) 96.97 41 P 10 44 51.6
baz=233
NEA2 Nenana 97.32 12 IAMs_20 IAMs_20 11 20 42.7
comp=Z,528nm,22.0s
TCOL CIGO, UAF Yank 97.80 13 IAMs_20 IAMs_20 11 23 32.5
comp=Z,472nm,20.0s
COLA College 97.80 13 IAMs_20 IAMs_20 11 23 32.5
comp=Z,444nm,20.0s
ILAR Eielson Array 97.90 13 P Pdif 10 44 53.6 +0.6
comp=Z,0.6nm,1.1s,baz=217,slow=7.4,SNR=2.3
ILAR LR LR 11 22 24.9
comp=Z,219nm,20.9s,baz=222,slow=31
LZH Lanzhou 97.97 307 *e*P Pdif 10 44 56.5 +2.2
LZH pP pwP 10 45 01.4 +1.6
LZH sP sP 10 45 05.0 +7.1
LZH pmax pmax
comp=Z,8.0nm,1.0s
RDOG Red Dog Mine 98.67 6 IAMs_20 IAMs_20 11 22 14.6
comp=Z,574nm,21.0s
LPAZ La Paz 98.94 115 LR LR 11 22 21.2
comp=Z,186nm,19.7s,baz=213,slow=31
RSSD Black Hills 100.62 45 IAMs_20 IAMs_20 11 21 56.5
comp=Z,458nm,21.0s
OK025 Westminster Rd 100.74 55 IAMs_20 IAMs_20 11 27 54.7
comp=Z,594nm,22.0s
YAK Yakutsk 100.76 338 IAMs_20 IAMs_20 11 22 47.6
comp=Z,410nm,22.0s
ULN Ulaanbaatar 102.10 319 IAMs_20 IAMs_20 11 26 43.2
comp=Z,588nm,22.0s
GTA Gaotai 102.40 308 *e*P **Pdif 10 45 15.7 +1.8**
GTA pP sPdif 10 45 19.4 +1.9
GTA sP pPdif 10 45 21.6 +5.1
GTA pmax pmax
comp=Z,3.0nm,0.7s
GTA pmax pmax
comp=Z,46nm,5.3s
GTA LR LR
comp=Z,130nm,22.5s
GTA LR LR
comp=Z,200nm,22.9s
GTA LR LR
comp=Z,280nm,24.7s
A21K Barrow 102.45 7 IAMs_20 IAMs_20 11 25 05.4
comp=Z,337nm,21.0s
SONM Songino Array 102.46 318 P **Pdif 10 45 14.2 +0.2**
comp=Z,0.2nm,0.4s,baz=134,slow=6.2,SNR=2.1
PALK Pallekele 102.59 271 IAMs_20 IAMs_20 11 26 01.7
comp=Z,581nm,22.0s
SDV Santo Domingo 110.18 91 IAMs_20 IAMs_20 11 27 06.4
comp=Z,339nm,22.0s
WMQ Urumqi 112.48 309 *e*PKP **PKiKP 10 49 55.5 +1.4**
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,240nm,28.1s
MK31 Makanchi Array 117.04 310 PKIKP **PKPdf 10 50 00.8 -1.9**
MK31 Makanchi Array 117.04 310 **PKPdf 10 50 00.8 -1.9**
MKAR Makanchi Array 117.04 310 PKP **PKPdf 10 50 01.2 -1.5**
comp=Z,1.4nm,1.0s,baz=119,slow=4.2,SNR=8.6

MKAR Makanchi Array 117.04 310 PKIKP **PKPdf 10 50 01.0 -1.7**
MKAR Makanchi Array 117.04 310 PKPdf **PKPdf 10 50 01.0 -1.7**
BOSA Boshof 117.14 204 PKP **PKiKP 10 50 06.0 +2.2**
comp=Z,3.1nm,0.9s,baz=164,slow=10,SNR=2.3
MAKZ Makanchi 117.25 310 PKIKP **PKPdf 10 50 01.6 -1.5**
MAKZ Makanchi 117.25 310 PKPdf **PKPdf 10 50 01.6 -1.5**
RES Resolute Bay 117.28 17 PKIKP **PKiKP 10 50 02.5 +0.2**
RES Resolute Bay 117.28 17 **PKiKP 10 50 02.5 +0.2**
ZALV Zalesovo Beam 117.36 319 PKIKP **PKPdf 10 50 01.1 -1.9**
ZALV Zalesovo Beam 117.36 319 **PKPdf 10 50 01.1 -1.9**
UZB Uzynbulak 118.26 306 *e*PKP **PKPdf 10 50 02.8 -2.5**
baz=306
UZB Uzynbulak 118.26 306 *e*PKIKP **PKPdf 10 50 02.8 -2.5**
KPKS Kokpek 118.59 306 *e*PKP **PKPdf 10 50 03.3 -2.6**
baz=306
KPKS Kokpek 118.59 306 *e*PKIKP **PKPdf 10 50 03.3 -2.6**
SATY Saty 118.67 305 *e*PKP **PKPdf 10 50 03.1 -3.0**
baz=305
SATY Saty 118.67 305 *e*PKIKP **PKPdf 10 50 03.1 -3.0**
NRIK Noril'sk 119.13 336 PKP **PKPdf 10 50 05.8 -0.2**
comp=Z,1.3nm,0.4s,baz=76,slow=6.8,SNR=4.7
NRIK Noril'sk 119.13 336 *c i*PKIKP **PKPdf 10 50 05.6 -0.4**
SEM Semipalatinsk 119.26 314 *e*PKP **PKPdf 10 50 04.5 -2.6**
baz=314
SEM Semipalatinsk 119.26 314 *e*PKIKP **PKPdf 10 50 04.5 -2.6**
MDOK Medeo 119.66 305 *e*PKP **PKPdf 10 50 05.5 -2.5**
baz=305
MDOK Medeo 119.66 305 *e*PKIKP **PKPdf 10 50 05.5 -2.5**
KURK Kurchatov 120.34 314 PKIKP **PKPdf 10 50 07.1 -1.7**
KURK Kurchatov 120.34 314 **PKPdf 10 50 07.1 -1.7**
KUU Kurty 120.34 306 *e*PKP **PKPdf 10 50 07.1 -2.1**
baz=306
KUU Kurty 120.34 306 *e*PKIKP **PKPdf 10 50 07.0 -2.1**
KURBB Kurchatov Arra 120.38 314 PKP **PKPdf 10 50 07.1 -1.8**
comp=Z,2.1nm,0.8s,baz=100,slow=2.0,SNR=16
KURBB PP PP **10 51 36.5 +0.8**
comp=Z,0.8nm,1.0s,baz=92,slow=6.5,SNR=2.9
AAK Ala-Archa 121.35 304 PKP **PKPdf 10 50 09.5 -1.8**
comp=Z,1.5nm,0.7s,baz=104,slow=4.2,SNR=1.9
AAK Ala-Archa 121.35 304⇑ *i*PKIKP **PKPdf 10 50 10.4 -0.9**
AAK pmax pmax
comp=Z,24nm,2.5s
AAK Ala-Archa 121.35 304 IAMs_20 IAMs_20 11 49 42.3
comp=Z,244nm,20.0s
BRZS Berezniki 123.97 312 *e*PKP **PKPdf 10 50 13.6 -2.3**
baz=312
BRZS Berezniki 123.97 312 *e*PKIKP **PKPdf 10 50 13.5 -2.3**
KKAR Karatay Array 124.31 304 PKIKP **PKPdf 10 50 15.5 -1.3**
KKAR Karatay Array 124.31 304 PKPdf **PKPdf 10 50 15.5 -1.3**
BVAR Borovoye Array 125.71 316 PKP **PKPdf 10 50 17.7 -1.4**
comp=Z,1.2nm,0.8s,baz=148,slow=8.7,SNR=8.2
BRVK Borovoye 125.78 316 *c i*PKIKP **PKPdf 10 50 18.5 -0.7**
BRVK pmax pmax
comp=Z,15nm,1.7s
BRVK Borovoye 125.78 316 PKPdf **PKPdf 10 50 18.6 -0.6**
LSZ Lusaka 127.80 214 PKIKP **PKPdf 10 50 24.0 -0.4**
LSZ Lusaka 127.80 214 **PKPdf 10 50 24.0 -0.4**
SOCY Socotra 128.00 262 IAMs_20 IAMs_20 11 39 28.1
comp=Z,380nm,22.0s
ABKAR Akbulak array 132.18 311 PKPdf **PKPdf 10 50 30.1 -1.4**
ARU Arti 132.43 321 PKP **PKiKP 10 50 32.7 -0.1**
comp=Z,0.8nm,0.3s,baz=288,slow=20,SNR=1.5
ARU Arti 132.43 321 *i* PKIKP **PKPdf 10 50 31.5 -0.3**
ARU 10 52 52.4
GEYT Alibeck 132.76 295 PKP **PKiKP 10 50 35.5 +1.4**
comp=Z,1.7nm,0.7s,baz=321,slow=3.9,SNR=1.1
AKTO Aktyubinsk 133.38 313 PKP **PKPdf 10 50 33.4 -0.4**
comp=Z,2.1nm,0.8s,baz=156,slow=2.0,SNR=4.3
KMBO Kilima Mbogo 133.57 234 PKP **PKPdf 10 50 35.5 0.0**
comp=Z,1.4nm,0.3s,baz=11,slow=2.8,SNR=4.0
ARCES ARCESS Array B 138.22 347 PKP **PKPdf 10 50 40.7 -1.5**
comp=Z,4.3nm,0.9s,baz=341,slow=2.6,SNR=5.3
RAYN Ar Rayn 140.03 271 IAMs_20 IAMs_20 11 53 28.7
comp=Z,298nm,20.0s
KLMR Klimovskoe 140.21 332 *e*PKIKP **PKPdf 10 50 43.3 -2.7**
KLMR pmax pmax
comp=Z,18nm,1.4s
KLMR Klimovskoe 140.21 332 *e*PKPdf **PKPdf 10 50 43.4 -2.6**
KLMR AMP 10 50 48.4
comp=Z,18nm,1.4s
MOS Moscow 143.72 325 *e*PKIKP **PKPdf 10 50 53.1 +0.6**
ZEI Tsey 143.73 302 *i* PKIKP PKPbc 10 50 50.6 -0.2
ZEI pmax pmax
comp=Z,14nm,1.4s
GOF Gofitskoye 144.04 306⇑ *e*PKIKP **PKPdf 10 50 52.6 -0.8**
KBZ Khabaz 144.35 304 PKP PKPbc 10 50 53.0 +0.7
comp=Z,8.6nm,1.1s,baz=332,slow=7.0,SNR=4.0
KBZ Khabaz 144.35 304 *i* PKIKP **PKPdf 10 50 54.0 +0.1**
LPSR Galich'ya Gora 144.45 320 *e*PKIKP **PKPab 10 50 51.6 -0.5**
LPSR pmax pmax
comp=Z,20nm,0.9s
KIV Kislovodsk 144.47 304 *i* PKIKP PKPbc 10 50 52.8 -0.1
KIV pmax pmax
comp=Z,26nm,1.1s
OBN Obninsk 144.55 325 *c i*PKIKP PKPbc 10 50 52.5 -0.1
OBN *i* 10 50 58.6
OBN pmax pmax
comp=Z,109nm,1.8s
OBN pmax pmax
comp=Z,63nm,1.4s
OBN MLR MLR
comp=Z,249nm,21.0s
GEVA Gevas 144.62 295 PKPdf PKPbc 10 50 53.8 +0.1
FIA1 FINESS Array S 144.68 339 PKPdf **PKPab 10 50 52.5 -0.2**
FINES FINESS Array B 144.68 339 PKP **PKPab 10 50 52.3 -0.3**
comp=Z,18nm,0.8s,baz=62,slow=3.7,SNR=110
FINES FINESS Array B 144.68 339 PKIKP **PKPab 10 50 51.8 -0.9**
FINES FINESS Array B 144.68 339 PKPdf **PKPab 10 50 51.8 -0.9**
VSR Storozhevoye 144.85 318 *e*PKIKP **PKPab 10 50 52.9 -0.8**
VSR pmax pmax
comp=Z,30nm,1.3s
NSS Namsos 144.97 352 *e*PKPdf **PKPdf 10 50 55.5 +1.1**
MARD Mardin 146.44 293 PKPdf **PKPdf 10 50 58.1 +0.2**
AAL Aland 147.44 342 *e*P **PKPab 10 51 02.3 -0.9**
MTSE Matsula 147.52 338 *e*P **PKPbc 10 51 01.7 +0.2**
DOMB Dombas 147.71 353 *e*PKPbc **PKPbc 10 51 02.3 +0.3**
AKN Aaknes 147.77 355 *e*PKPdf **PKPbc 10 51 00.9 -1.2**
NC303 NORSAR Array S 148.22 351 PKPbc **PKPbc 10 51 02.9 -0.4**
NC303 PKPab **sPKPab 10 51 09.7 -0.3**
NC405 NORSAR Array S 148.28 350 PKPbc **PKPbc 10 51 03.0 -0.5**
UPP Uppsala 148.30 344 *e*P **PKPdf 10 51 01.7 +1.6**
NB201 NORSAR Array S 148.40 351 **PKPbc 10 51 03.4 -0.4**
NB2 NORSAR Subarra 148.42 351 PKPab **PKPbc 10 51 03.0 -0.9**
baz=14,slow=2.9
NOA NORSAR Array B 148.42 351 PKPbc **PKPbc 10 51 03.0 -0.9**
comp=Z,5.8nm,0.8s,baz=16,slow=4.3,SNR=21
FOO Floro 148.48 356 *e*PKPdf **PKPdf 10 51 00.3 -0.1**
FOO *e*PKPbc **PKiKP 10 51 05.1 -0.4**
NBO00 NORSAR Array S 148.49 351 **PKPbc 10 51 03.9 -0.2**
NBO00 PKPab **sPKPab 10 51 10.5 -0.6**
NAO01 NORSAR Array S 148.65 351 **PKPbc 10 51 04.8 +0.4**
NC602 NORSAR Array S 148.66 350 **PKPbc 10 51 04.0 -0.4**
NC602 PKPab **pPKPab 10 51 10.1 -0.7**
NC602 NORSAR Array S 148.66 350 *e*PKPdf **PKPdf 10 51 00.9 +0.2**
IDID Didziasalis 148.95 331 *e*P **PKPbc 10 51 05.8 +0.5**
MNK Minsk 149.01 329 *e*PKP2 **PKPbc 10 51 05.0 -0.5**
MNK Minsk 149.01 329 *i* PKP **PKPbc 10 51 03.5 -2.0**
MNK *i* PKP **PKPbc 10 51 03.5 -2.0**
MNK *i* PKP **PKPbc 10 51 03.5 -2.0**
MNK *i* PKS **PKSdf 10 54 38.5 +2.3**
MNK *i* PP **PP 10 54 39.4 +2.9**
MNK *i* PPP PPP 10 57 59.0
MNK *i* SKS SKSdf 10 58 58.5 +49
MNK *i* SKKS SKKSdf 11 07 24.8 +18
MNK *i* SS **SS 11 13 53.1 +5.6**
MNK *i* SSS SSS 11 19 29.8
MNK *i* LQ LQ 11 50 15.5
MNK *i* LR LR 11 57 21.1
MNK *i* LRM MLR 12 01 12.3
comp=E,48nm,20.8s
MNK *i* LRM MLR 12 01 55.5
comp=Z,260nm,20.1s
MNK *i* LRM MLR 12 02 21.4
comp=N,545nm,20.8s
ISAL Salakas 149.02 332 *e*P **PKiKP 10 51 07.4 +0.6**
SUE Sulen 149.03 357 *e*PKPdf **PKPdf 10 51 01.9 +0.6**
SKAR Skarslia 149.13 353 *e*PKPdf **PKPdf 10 51 01.8 +0.2**
SKAR *e*PKPab **pPKPab 10 51 12.1 -0.7**
IIGN Ignalina 149.14 332 *e*P **PKiKP 10 51 06.6 -0.4**
NACGM Naroch 149.22 331 *i* PKP **PKPbc 10 51 06.1 +0.1**
NACGM *i* PKP **PKPbc 10 51 06.1 +0.1**
NACGM *i* PKP **PKPbc 10 51 06.1 +0.1**
NACGM *i* PP PP 10 54 55.1 +17

NACGM *i* SKS **SKSdf** **10 58 00.2 -10**
NACGM *i* PPP PPP 10 58 17.0
NACGM *i* SKKS **SKKSac** **11 01 24.4 -4.4**
NACGM *i* SS SS 11 14 23.1 +33
NACGM *i* SSS SSS 11 18 35.6
NACGM *i* LQ LQ 11 35 00.8
NACGM *i* LR LR 11 47 35.0
GAZ Gaziantep 149.29 293 PKPbc 10 51 06.7 -0.2
ASK Askoy 149.58 356 *e*PKPdf **PKPdf 10 51 01.4 -0.7**
BER Bergen 149.67 356 *e*PKPdf **PKPdf 10 51 02.9 +0.6**
PABE Paberze 149.92 334 *e*P **PKPbc 10 51 06.0 -1.7**
KONO Kongsberg 149.98 351 PKPbc 10 51 07.9 +0.1
KONO PKPab **PKPab 10 51 14.2 +0.8**
KONO Kongsberg 149.98 351 *e*PKPdf **PKPdf 10 51 03.4 +0.6**
KONO *e*PKPbc **PKiKP 10 51 08.3 -0.4**
ODD1 Odda 150.04 354 *e*PKPdf **PKPdf 10 51 03.7 +0.7**
ODD1 *e*PKPbc **PKiKP 10 51 08.8 0.0**
PBUR Paburge 150.27 336 *e*P **PKPbc 10 51 07.4 -1.1**
AKASG Malin Array Be 150.66 322 PKP **PKPdf 10 51 02.8 -1.4**
comp=N,0.3nm,0.3s,baz=90,slow=1.0,SNR=6.6
AKASG PKPbc **PKPbc 10 51 09.2 -0.4**
comp=N,5.6nm,0.6s,baz=48,slow=2.8,SNR=28
AKBB Malin Array Si 150.66 322 PKIKP **PKPbc 10 51 08.5 -1.1**
AKBB Malin Array Si 150.66 322 PKPbc 10 51 08.5 -1.1
SUW Suwalki 151.33 332 *e*P **PKiKP 10 51 11.8 +0.1**
HOMB Homborsund 151.46 352 *e*PKPdf **PKPdf 10 51 06.3 +1.1**
HOMB *e*PKPbc **PKiKP 10 51 12.0 +0.3**
ILGA Ilgaz 151.51 301 PKiKP 10 51 12.8 +0.1
SNART Snartemo 151.54 353 *e*PKPdf **PKPdf 10 51 06.0 +0.8**
SNART *e*PKPbc **PKiKP 10 51 12.1 +0.2**
BR131 Keskin Array S 151.81 299 PKIKP **PKPbc 10 51 12.4 -0.6**
BR131 Keskin Array S 151.81 299 PKPbc 10 51 12.4 -0.6
BRTR Keskin Array B 151.81 299 PKP **PKPdf 10 51 04.4 -2.1**
comp=N,0.6nm,0.9s,baz=74,slow=15,SNR=3.7
BRTR PKPbc **PKPbc 10 51 12.3 -0.6**
comp=N,2.9nm,0.9s,baz=139,slow=2.8,SNR=13
BRTR Keskin Array B 151.81 299 PKIKP **PKPbc 10 51 11.7 -1.2**
BRTR Keskin Array B 151.81 299 PKPbc 10 51 11.7 -1.2
ISP Isparta 154.52 295 IAMs_20 IAMs_20 12 08 36.1
comp=Z,271nm,20.0s
BUR08 Bucovina Ar. S 154.56 320 PKPdf **PKPdf 10 51 06.9 -3.3**
BUR08 **PKPab 10 51 33.7 +0.5**
BURAR Bucovina Array 154.57 320 PKiKP 10 51 20.1 +1.4
BURAR **PKPab 10 51 33.2 0.0**
KWP Kalwaria Pacla 154.63 326 PKP2 **PKPab 10 51 33.7 +0.4**
KWP Kalwaria Pacla 154.63 326 PKPbc **PKiKP 10 51 19.4 +0.8**
KWP **PKPab 10 51 33.6 +0.4**
LIC Lamto 155.47 165 *e*P **PKPab 10 51 36.7 -1.0**
comp=Z,74nm,1.5s
KIC Kosan Boka 155.67 166 *e*P **PKPab 10 51 38.9 +0.3**
comp=Z,41nm,1.5s
CRVS Cervenica-Dubn 155.72 326 *e*PKP2 **PKPab 10 51 38.4 +0.4**
TIC Toumodi 155.88 165 *e*P **PKPab 10 51 39.4 -0.1**
DBIC Dimbokro 155.94 165 PKPab **PKPab 10 51 39.3 -0.4**
comp=Z,2.3nm,0.5s,baz=128,slow=5.6,SNR=4.2
CLL Collm 157.11 341 *e*PKPdf **PKPdf 10 51 15.0 +1.7**
CLL *i* PKPab **PKPab 10 51 42.4 -1.4**
comp=Z,27nm,1.8s
CLL *i* 10 51 50.0
comp=Z,15nm,1.2s
CLL *e*SS SS 11 15 24.0 +8.2
CLL *e*SSS SSS 11 21 28.0
CLL *e*SSSS 11 25 18.0
CLL Collm 157.11 341 *e*PKIKP **PKPdf 10 51 15.0 +1.7**
CLL pmax pmax
comp=Z,27nm,1.8s
BRG Berggiesshubel 157.21 339 *e*PKP **PKPdf 10 51 13.1 -0.4**
BRG Amp 10 51 15.0
comp=Z,2.9nm,0.9s
BRG *ex* x 10 51 44.2
BRG Amp 10 51 52.9
comp=Z,50nm,2.1s
VYHS Vyhne 157.24 328 *e*PKP2 **PKPab 10 51 47.8 +3.3**
KARP Karpathos 157.50 291 IAMs_20 IAMs_20 12 17 01.0
comp=Z,243nm,20.0s
MODS Modra-Piesok 158.02 330 *e*PKP2 **PKPab 10 51 50.4 +2.5**
VTS Vitosha 158.36 311 PKP2 **PKPab 10 51 50.1 +0.3**
VTS Vitosha 158.36 311 PKPab 10 51 50.1 +0.3
KHC Kasperske Hory 158.83 337 *e*PKIKP PKPdf 10 51 23.5 +7.9
KHC Kasperske Hory 158.83 337 *e*PKP PKPdf 10 51 23.5 +7.9
GRF Grafenberg Arr 159.07 341 *e*PKPab **PKPab 10 51 53.1 +0.7**
baz=25,slow=3.8
DIVS Divibare 159.58 318 IAMs_20 IAMs_20 12 11 36.6
comp=Z,238nm,21.0s
TUE Stuetta 162.52 341 PKPab **PKPab 10 52 08.1 +0.3**
TOA0 Torodi Ar. Sit 163.03 182 PKPdf 10 51 20.4 -0.7
TOA0 PKPab **PKPab 10 52 08.6 -1.8**
TORD Torodi Ar. Bea 163.03 182 PKP **PKPdf 10 51 20.6 -0.5**
comp=Z,5.3nm,1.1s,baz=312,slow=0.5,SNR=11
TORD PKPab **PKPab 10 52 07.9 -2.5**
comp=Z,10nm,0.8s,baz=177,slow=3.1,SNR=18
TORD PP **PP 10 55 53.2 -0.6**
comp=Z,1.9nm,1.1s,baz=180,slow=3.9,SNR=3.6
TORD Torodi Ar. Bea 163.03 182 PKPdf 10 51 19.1 -1.9
KOWA Kowa 163.69 162 PKPdf 10 51 20.1 -1.6
KOWA PKPab **PKPab 10 52 11.7 -1.6**
PAB San Pablo 169.65 24 PKP2 **PKPab 10 52 37.9 -1.3**
PAB 11 51 25.6
PAB San Pablo 169.65 24 PKPdf 10 51 25.6 0.0
PAB PKPab **PKPab 10 52 37.9 -1.3**
ESDC Sonseca Array 169.67 22 PKP **PKPdf 10 51 26.0 +0.4**
comp=Z,1.6nm,1.0s,baz=347,slow=2.4,SNR=13
ESDC PKPab **PKPab 10 52 39.5 +0.2**
comp=Z,0.7nm,1.0s,baz=330,slow=5.1,SNR=4.4
ESDC Sonseca Array 169.67 22 PKPdf 10 51 25.6 0.0
TAM Tamanrasset 171.64 209 PKP2 **PKPab 10 52 46.5 -2.0**
TAM 11 51 26.9
TAM Tamanrasset 171.64 209 PKPdf 10 51 26.9 -0.4
TAM PKPab **PKPab 10 52 46.5 -2.0**

IDC ***03*** *10:47:43.5±0.4, 5.55S×153.01E, h0km, mb4.5/31, mb1 4.6/33, mb1mx4.6/47, mbtmp4.5/33, ML3.3/2, MS4.3/7, Ms1 4.2/7, ms1mx3.7/40, Error ellipse: s-maj=16.0km s-min=10.8km az=89.0*
NEIC ***03*** *10:47:45.4±1.8, 5.59S±0.0×152.97E±0.08, h13km±3km, mb4.8/67, Error ellipse: s-maj=12.6km s-min=2.4km az=112.0*
BJI ***03*** *10:47:49.2±0.0, 5.61S×152.49E, h35km, mB5.1/21, mb4.6/33, Ms4.8/12, Ms7 4.5/12*
DJA ***03*** *10:47:50.4±0.6, 6.3S×153.00E±0.06, h37km, M5.0/25, mB5.6/6, mb4.9/25, MLv4.9/3, Mw(mB)5.1/6*
ISC 03 10:47:48.8±0.3, 5.57S±0.05×153.00E±0.06, h37km, n165, σ1§15/176, mb4.7/67, MS4.5/11, 2D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.60**	**329**		**Pn**	**10 48 14.9**	**+0.4**
RABL	**Rabaul**	**1.60**	**329**	P	**Pn**	**10 48 15.4**	**+0.9**
MANU	**Manus Island**	**6.62**	**302**	Pn	**Pn**	**10 49 25.6**	**+2.0**
PMG	**Port Moresby**	**6.93**	**236**	Pn	**Pn**	**10 49 28.0**	**+0.1**
	8.3nm,0.3s,baz=57,slow=7.5,SNR=15						
PMG				Sn	**Sn**	**10 50 48.6**	**+3.1**
	3.8nm,0.3s,baz=96,slow=18,SNR=6.7						
PMG	**Port Moresby**	**6.93**	**236**	Pn	**Pn**	**10 49 27.8**	**0.0**
PMG	**Port Moresby**	**6.93**	**236**	P	**Pn**	**10 49 30.3**	**+2.4**
COEN	**Coen**	**12.77**	**229**	Pn	**Pn**	**10 50 46.7**	**-1.2**
PATS	**Pohnpei**	**13.41**	**23**	Pn	**Pn**	**10 50 55.7**	**-1.0**
CTA	**Charters Tower**	**15.86**	**204**	Pn	**Pn**	**10 51 29.3**	**0.0**
	0.3nm,0.3s,baz=33,slow=13,SNR=15						
CTAO	**Charters Tower**	**15.86**	**204**	Pn	**Pn**	**10 51 28.4**	**-1.0**
SANVU	**Saraoutou**	**17.06**	**126**	P	**Pn**	**10 51 45.0**	**+0.4**
SANVU				IAmb	IAmb	10 51 52.0	
	comp=Z,104nm,1.0s						
EIDS	**Eidsvold**	**19.78**	**185**	P	**P**	**10 52 16.4**	**+0.5**
EIDS				IAmb	IAmb	10 52 17.4	
	comp=Z,36nm,0.8s						
FAKI	**Fak Fak**	**20.86**	**276**		**P**	**10 52 26.9**	**-0.8**
FAKI	**Fak Fak**	**20.86**	**276**	P	**P**	**10 52 27.2**	**-0.5**
	comp=Z,19nm,0.9s						
DZM	**Mont Dzumac**	**20.94**	**143**	P	**P**	**10 52 29.5**	**+0.9**
	comp=Z,29nm,0.7s,baz=324,slow=4.7,SNR=11						
SIJI	**Sorong**	**22.19**	**281**	P	**P**	**10 52 43.0**	**+1.0**
	comp=Z,25nm,0.8s,baz=92,slow=12,SNR=4.3						
MTN	**Manton Dam**	**22.75**	**250**	P	**P**	**10 52 47.0**	**-0.9**
WB0	**Warramunga Arr**	**22.95**	**230**	P	**P**	**10 52 49.0**	**-1.1**
WR0	**Warramunga Arr**	**22.95**	**230**	P	**P**	**10 52 48.4**	**-1.7**
WR0				IAmb	IAmb	10 52 52.0	
	comp=Z,54nm,1.1s						
BNDI	**Bandanaira**	**23.03**	**272**	P	**P**	**10 52 50.6**	**-0.3**
WB2	**Warramunga Arr**	**23.09**	**230**	P	**P**	**10 52 48.6**	**-2.9**
WRA	**Warramunga Arr**	**23.10**	**230**	P	**P**	**10 52 50.4**	**-1.1**
	comp=Z,41nm,1.0s,baz=53,slow=9.9,SNR=94						
WRA				PcP	**PcP**	**10 56 40.6**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=48,slow=2.0,SNR=7.8						
ARMA	**Armidale**	**24.76**	**183**	P	**P**	**10 53 06.9**	**-0.2**
ARMA				IAmb	IAmb	10 53 09.4	
	comp=Z,48nm,1.4s						
AS31	**Alice Springs**	**25.73**	**224**	P	**P**	**10 53 15.7**	**-0.2**
ASAR	**Alice Springs**	**25.73**	**224**	P	**P**	**10 53 15.8**	**-0.1**
	comp=Z,13nm,0.8s,baz=56,slow=9.1,SNR=91						
ASAR				PcP	**PcP**	**10 56 46.8**	**+1.2**
	comp=Z,3.5nm,0.7s,baz=60,slow=2.2,SNR=8.0						
ASAR	**Alice Springs**	**25.73**	**224**	P	**P**	**10 53 14.7**	**-1.2**
ASAR					**PcP**	**10 56 46.0**	**+0.4**
SANI	**Sanana**	**27.17**	**276**	P	**P**	**10 53 29.3**	**+0.3**
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**28.27**	**201**	P	**P**	**10 53 37.5**	**-1.1**
	comp=Z,8.8nm,0.7s,baz=353,slow=8.6,SNR=17						
STKA				LR	LR	11 03 54.9	
	comp=Z,273nm,18.5s,baz=12,slow=34						
STKA	**Stephens Creek**	**28.27**	**201**	P	**P**	**10 53 37.2**	**-1.5**
SOEI	**Soe**	**28.77**	**260**	P	**P**	**10 53 44.0**	**+0.6**
SOEI	**Soe**	**28.77**	**260**	P	**P**	**10 53 44.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**29.48**	**243**	P	**P**	**10 53 49.0**	**-0.5**
	comp=Z,21nm,0.7s,baz=80,slow=7.8,SNR=113						
FITZ	**Fitzroy Crossi**	**29.48**	**243**	P	**P**	**10 53 49.2**	**-0.3**
GTOI	**Gorontalo**	**30.57**	**281**	P	**P**	**10 53 59.5**	**+0.2**
	comp=Z,9.5nm,0.8s						
MMRI	**Maumere**	**30.67**	**262**	P	**P**	**10 53 58.9**	**-1.3**
EDFI	**Ende, Flores**	**31.22**	**262**	P	**P**	**10 54 03.8**	**-1.3**
	comp=Z,16nm,0.8s						
FORT	**Forrest**	**34.33**	**220**	P	**P**	**10 54 31.6**	**-0.4**
OUZ	**Omahuta**	**35.10**	**150**	P	**P**	**10 54 40.2**	**+1.7**
OUZ				IAmb	IAmb	10 54 40.7	
	comp=Z,23nm,1.3s						
PSA00	**Pilbara Seismi**	**35.82**	**240**	P	**P**	**10 54 44.2**	**-0.8**
JAGI	**Jajag, Banyuwa**	**38.65**	**263**	P	**P**	**10 55 07.7**	**-1.4**
JAGI				IAmb	IAmb	10 55 21.4	
	comp=Z,28nm,0.9s						
URZ	**Urewera**	**39.23**	**149**	P	**P**	**10 55 14.6**	**+1.0**
	comp=Z,5.6nm,0.6s,baz=308,slow=20,SNR=1.9						
URZ	**Urewera**	**39.23**	**149**	P	**P**	**10 55 14.6**	**+1.0**
URZ				IAmb	IAmb	10 55 30.3	
	comp=Z,39nm,1.4s						
BKZ	**Black Stump Fm**	**39.63**	**151**	P	**P**	**10 55 17.4**	**+0.4**
LTZ	**Lake Taylor**	**40.81**	**158**	P	**P**	**10 55 26.4**	**-0.3**
LTZ				IAmb	IAmb	10 55 55.6	
	comp=Z,41nm,1.5s						
MSWZ	**Moikau Station**	**40.85**	**154**	P	**P**	**10 55 26.4**	**-0.7**
GIRL	**Giralia**	**41.07**	**242**	P	**P**	**10 55 29.8**	**+0.7**
RPZ	**Rata Peaks**	**41.19**	**160**	P	**P**	**10 55 30.7**	**+0.9**
	comp=Z,12nm,0.9s,baz=130,slow=3.4,SNR=5.2						
MORW	**Morawa**	**42.03**	**232**	P	**P**	**10 55 36.5**	**-0.4**
MORW				IAmb	IAmb	10 55 59.5	
	comp=Z,13nm,1.1s						
JNU	**Nakatsue**	**43.83**	**333**	P	**P**	**10 55 51.7**	**+0.3**
	comp=Z,8.5nm,0.9s,baz=179,slow=10,SNR=1.7						
MJAR	**Matsushiro Arr**	**44.12**	**343**	P	**P**	**10 55 54.3**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=152,slow=7.5,SNR=4.4						
MJAR	**Matsushiro Arr**	**44.12**	**343**	P	**P**	**10 55 52.8**	**-0.8**
KSRS	**Korea Array**	**48.77**	**333**	P	**P**	**10 56 31.1**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=156,slow=9.9,SNR=4.2						
QIZ	**Qiongzhong**	**49.03**	**301**	P	**P**	**10 56 31.4**	**-1.0**
QIZ				S	**S**	**11 03 36.0**	**+1.2**
QIZ				LR	LR		
	comp=Z,250nm,20.1s						
QIZ				LR	LR		
	comp=Z,240nm,38.7s						
NJ2	**Nanjing**	**49.56**	**321**	*e*P	**P**	**10 56 38.2**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**53.03**	**341**	P	**P**	**10 57 03.0**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=183,slow=8.2,SNR=2.3						
MNSI	**Mandailing Nat**	**53.72**	**275**	P	**P**	**10 57 07.2**	**-0.4**
	comp=Z,2µmcomp=Z,24nm,0.6s						
GSI	**Gunungsitoli**	**55.77**	**275**	P	**P**	**10 57 21.5**	**-1.0**
GSI	**Gunungsitoli**	**55.77**	**275**	P	**P**	**10 57 22.4**	**-0.1**
	comp=Z,3µmcomp=Z,34nm,0.9s						
XAN	**Xi'an**	**57.31**	**317**	P	**P**	**10 57 33.0**	**-0.2**
XAN				pP	pP	10 57 42.6	-0.3
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLR	**Kul'dur**	**57.63**	**344**	P	**P**	**10 57 35.0**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=148,slow=4.9,SNR=7.9						
CMAR	**Chiang Mai Arr**	**58.38**	**296**	P	**P**	**10 57 42.7**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=41,slow=13,SNR=5.1						
CMAR	**Chiang Mai Arr**	**58.38**	**296**	P	**P**	**10 57 41.6**	**+0.7**
CHTO	**Chiang Mai**	**58.49**	**296**	P	**P**	**10 57 42.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**58.59**	**3**	P	**P**	**10 57 42.9**	**+1.2**
PETK	**Petropavlovsk-**	**58.59**	**3**	P	**P**	**10 57 42.8**	**+1.1**
	comp=Z,12nm,0.6s,baz=166,slow=6.3,SNR=16						
HHC	**Hu-ho-hao-te**	**59.78**	**324**	*e*P	**P**	**10 57 52.4**	**+2.0**
HHC				sP	pwP	10 58 07.8	+1.9
HHC				S	**S**	**11 06 00.9**	**+1.7**
HHC				ScS	**ScS**	**11 07 36.1**	**-2.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,260nm,5.8s						
HHC				LR	LR		
	comp=Z,250nm,17.9s						
HHC				LR	LR		
	comp=Z,370nm,17.9s						
HHC				LR	LR		
	comp=Z,430nm,18.7s						
LZH	**Lanzhou**	**61.91**	**316**	*e*P	**P**	**10 58 03.7**	**-1.3**
LZH				pP	pP	10 58 15.9	+1.0
LZH				sP	pwP	10 58 22.9	+2.5
LZH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MA2	**Magadan**	**64.96**	**359**	P	**P**	**10 58 24.8**	**+0.3**
GTA	**Gaotai**	**66.35**	**317**	*e*P	**P**	**10 58 29.9**	**-4.1**
GTA				pP	pP	10 58 44.8	+0.8
GTA				sP	pwP	10 58 50.9	+1.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	**66.75**	**328**	P	**P**	**10 58 36.8**	**+0.4**
ULN				IAmb	IAmb	10 58 38.7	
	comp=Z,8.7nm,1.2s						
SHL	**Shillong**	**66.86**	**301**	P	**P**	**10 58 37.4**	**-0.2**
SONM	**Songino Array**	**67.07**	**328**	P	**P**	**10 58 39.5**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=141,slow=5.4,SNR=10						
SONM				LR	LR	11 27 51.4	
	comp=Z,344nm,21.9s,baz=126,slow=36						
SONM	**Songino Array**	**67.07**	**328**	P	**P**	**10 58 39.1**	**+0.7**
SONM				IAmb	IAmb	10 58 40.8	
	comp=Z,7.0nm,1.4s						
TLY	**Talaya**	**70.84**	**330**	P	**P**	**10 59 02.5**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=252,slow=4.9,SNR=3.2						
TLY				LR	LR	11 29 33.5	
	comp=Z,149nm,20.7s,baz=121,slow=35						
VNDA	**Vanda**	**72.06**	**178**	P	**P**	**10 59 09.2**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=320,slow=5.9,SNR=18						
VNDA	**Vanda**	**72.06**	**178**	P	**P**	**10 59 09.8**	**+1.2**
PALK	**Pallekele**	**73.25**	**279**	P	**P**	**10 59 17.6**	**+0.6**
PALK				IAmb	IAmb	10 59 18.5	
	comp=Z,9.7nm,0.9s						
BILL	**Bilibino**	**74.03**	**5**	P	**P**	**10 59 21.2**	**+0.9**
GAMB	**Gambell**	**74.06**	**15**	P	**P**	**10 59 21.9**	**+1.3**
GAMB				IAmb	IAmb	10 59 30.5	
	comp=Z,8.5nm,1.2s						
WMQ	**Urumqi**	**76.44**	**317**	*e*P	**P**	**10 59 36.1**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,55nm,3.7s						
WMQ				LR	LR		
	comp=Z,990nm,29.2s						
WMQ				LR	LR		
	comp=Z,3µm,29.1s						
WMQ				LR	LR		
	comp=Z,310nm,29.5s						
ANM	**Nome**	**76.44**	**17**	P	**P**	**10 59 35.0**	**+0.7**
TIXI	**Tiksi**	**78.68**	**352**	P	**P**	**10 59 46.5**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=150,slow=5.5,SNR=4.8						
TIXI	**Tiksi**	**78.68**	**352**	P	**P**	**10 59 46.7**	**+0.2**
SUA	**Susitna One**	**79.57**	**24**	P	**P**	**10 59 51.4**	**-0.4**
SUA				IAmb	IAmb	10 59 53.0	
	comp=Z,6.3nm,0.8s						
ZSN	**Zaisan**	**79.58**	**320**	*e*P	**P**	**10 59 52.4**	**+0.3**
	baz=320						
PWL	**Port Wells**	**80.25**	**25**	P	**P**	**10 59 55.4**	**0.0**
PWL				IAmb	IAmb	10 59 56.8	
	comp=Z,12nm,0.8s						
SML	**Sawmill**	**80.73**	**24**	P	**P**	**10 59 58.1**	**+0.1**
SML				IAmb	IAmb	11 00 09.0	
	comp=Z,19nm,1.2s						
MK31	**Makanchi Array**	**81.03**	**319**	P	**P**	**11 00 00.3**	**+0.4**
MKAR	**Makanchi Array**	**81.03**	**319**	P	**P**	**11 00 00.7**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=102,slow=5.5,SNR=14						
MKAR				PKKP	**PKKPdf**	**11 18 27.4**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=256,slow=4.3,SNR=3.5						
MKAR				LR	LR	11 38 41.2	
	comp=Z,98nm,18.7s,baz=96,slow=38						
MKAR	**Makanchi Array**	**81.03**	**319**	P	**P**	**11 00 00.1**	**+0.2**
IMAR	**Indian Mountai**	**81.03**	**19**	P	**P**	**11 00 00.1**	**+0.6**
MAKZ	**Makanchi**	**81.24**	**319**	P	**P**	**11 00 01.7**	**+0.6**
RND	**Reindeer**	**81.35**	**23**	P	**P**	**11 00 01.0**	**-0.4**
RND				IAmb	IAmb	11 00 01.9	
	comp=Z,4.8nm,0.8s						
MCK	**McKinley**	**81.49**	**22**	P	**P**	**11 00 01.7**	**-0.3**
MCK				IAmb	IAmb	11 00 02.7	
	comp=Z,9.8nm,0.9s						
MLY	**Manley**	**81.52**	**21**	P	**P**	**11 00 02.3**	**+0.1**
MLY				IAmb	IAmb	11 00 04.4	
	comp=Z,4.3nm,0.7s						
KLU	**Klutina**	**81.58**	**25**	P	**P**	**11 00 03.3**	**+0.7**
KLU				IAmb	IAmb	11 00 06.5	
	comp=Z,8.1nm,1.0s						
NEA2	**Nenana**	**81.89**	**22**	P	**P**	**11 00 03.3**	**-0.8**
ZAA0	**Zalesovo Array**	**81.89**	**326**	P	**P**	**11 00 03.6**	**-0.7**
ZAA0				IAmb	IAmb	11 00 05.2	
	comp=Z,4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**81.89**	**326**	P	**P**	**11 00 04.2**	**0.0**
	comp=Z,4.6nm,0.7s,baz=108,slow=5.9,SNR=22						
ZALV				LR	LR	11 37 11.4	
	comp=Z,221nm,21.8s,baz=91,slow=36						
ZALV	**Zalesovo Beam**	**81.89**	**326**	P	**P**	**11 00 03.9**	**-0.4**
SHLS	**Shalkode**	**81.91**	**315**	*e*P	**P**	**11 00 03.5**	**-1.3**
	baz=315						
CCB	**Clear Creek Bu**	**82.39**	**22**	P	**P**	**11 00 05.9**	**-0.7**
CCB				IAmb	IAmb	11 00 07.4	
	comp=Z,7.2nm,1.2s						
TCOL	**CIGO, UAF Yank**	**82.48**	**22**	P	**P**	**11 00 06.3**	**-0.7**
TCOL				IAmb	IAmb	11 00 07.9	
	comp=Z,8.6nm,0.9s						
COLA	**College**	**82.48**	**22**	P	**P**	**11 00 06.5**	**-0.6**
COLA				IAmb	IAmb	11 00 08.0	
	comp=Z,8.2nm,0.8s						
KPKS	**Kokpek**	**82.54**	**315**	*e*P	**P**	**11 00 08.2**	**+0.2**
	baz=315						
IL31		**82.79**	**22**	P	**P**	**11 00 07.7**	**-1.0**
ILAR	**Eielson Array**	**82.79**	**22**	P	**P**	**11 00 07.7**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=251,slow=5.4,SNR=24						
ILAR				PKKPbc	**PKKPbc**	**11 18 32.7**	**-3.0**
	comp=Z,0.1nm,0.6s,baz=342,slow=1.6,SNR=5.4						
ILAR	**Eielson Array**	**82.79**	**22**	P	**P**	**11 00 07.8**	**-0.9**
MENT	**Mentasta**	**83.17**	**24**	P	**P**	**11 00 09.8**	**-1.0**
SEM	**Semipalatinsk**	**83.41**	**322**	*e*P	**P**	**11 00 11.9**	**-0.6**
	baz=322						
MDOK	**Medeo**	**83.62**	**314**	*e*P	**P**	**11 00 13.3**	**-0.4**
	baz=314						
TOLK	**Toolik Lake Re**	**83.88**	**18**	P	**P**	**11 00 14.5**	**+0.2**
TOLK				IAmb	IAmb	11 00 17.0	
	comp=Z,4.0nm,0.8s						
L27K	**Beaver Creek,**	**84.00**	**25**	P	**P**	**11 00 15.8**	**+0.8**
L27K				IAmb	IAmb	11 00 19.1	
	comp=Z,5.2nm,1.2s						
BCAR	**Beaver Creek A**	**84.02**	**25**	P	**P**	**11 00 15.6**	**+0.5**
KUU	**Kurty**	**84.29**	**315**	*e*P	**P**	**11 00 17.2**	**+0.3**
	comp=Z,13nm,1.1s,baz=315						
QSPA	**South Pole Qui**	**84.40**	**180**	P	**P**	**11 00 17.1**	**-0.1**
KURBB	**Kurchatov Arra**	**84.52**	**322**	P	**P**	**11 00 18.2**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=103,slow=4.1,SNR=26						
NIL	**Nilore**	**84.57**	**304**	P	**P**	**11 00 19.3**	**+0.7**
TKM2	**Tokmak 2**	**84.60**	**314**	P	**P**	**11 00 20.0**	**+1.2**
	SNR=5.0						
BMAR	**Burnt Mountain**	**84.89**	**20**	P	**P**	**11 00 20.6**	**+1.1**
MAW	**Mawson**	**84.94**	**203**	P	**P**	**11 00 20.3**	**+0.6**
	comp=Z,6.8nm,1.0s,baz=251,slow=18,SNR=2.5						
HYT	**Haines Junctio**	**85.02**	**27**	P	**P**	**11 00 21.4**	**+1.0**
HYT				IAmb	IAmb	11 00 48.7	
	comp=Z,4.3nm,1.0s						
UCH	**Uchtor**	**85.23**	**313**	P	**P**	**11 00 24.2**	**+1.9**
	SNR=12						
AAK	**Ala-Archa**	**85.33**	**313**	P	**P**	**11 00 23.9**	**+1.5**
	comp=Z,4.3nm,0.7s,baz=126,slow=5.0,SNR=11						
AAK	**Ala-Archa**	**85.33**	**313**	P	**P**	**11 00 24.0**	**+1.5**
AAK				IAmb	IAmb	11 00 24.8	
	comp=Z,5.4nm,0.8s						
USP	**Ospenovka**	**85.46**	**314**	P	**P**	**11 00 24.1**	**+1.2**
	SNR=8.4						
AML	**Almayashu**	**85.81**	**313**	P	**P**	**11 00 27.0**	**+1.9**
	SNR=19						
EKS2	**Erkin-Say**	**85.86**	**313**	P	**P**	**11 00 26.2**	**+1.3**
	SNR=5.2						
BTLS	**Baital**	**86.14**	**316**	*e*P	**P**	**11 00 26.3**	**+0.2**
	baz=316						
NRIK	**Noril'sk**	**86.75**	**341**	P	**P**	**11 00 28.6**	**+0.1**
	comp=Z,4.1nm,0.6s,baz=127,slow=3.4,SNR=6.8						
NRIK				LR	LR	11 39 23.9	
	comp=Z,207nm,20.3s,baz=119,slow=36						
NRIK	**Noril'sk**	**86.75**	**341**	P	**P**	**11 00 29.0**	**+0.4**
NRIK				IAmb	IAmb	11 00 30.0	
	comp=Z,4.4nm,0.6s						
IUG	**Iuzhnay**	**88.50**	**312**	*e*P	**P**	**11 00 37.8**	**+0.1**
	baz=312						
INK

ESDC	**Sonseca Array**	**140.19 332**			**PKPdf**	**11 07 12.2**	**-1.9**
BDFB	**Brasilia**	**150.39 136**	PKPbc		**PKPbc**	**11 07 37.8**	**+0.4**
	comp=Z,12nm,0.7s,baz=209,slow=4.5,SNR=24						
BDFB	**Brasilia**	**150.39 136**			**PKiKP**	**11 07 38.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**150.72 287**	PKPbc		**PKPbc**	**11 07 38.5**	**+0.3**
	comp=Z,11nm,0.7s,baz=57,slow=2.6,SNR=40						
KIC	**Kosan Boka**	**157.85 273**	*e*PKP1		**PKPab**	**11 08 15.7**	**+0.2**
	comp=Z,6.8nm,0.7s						
DBIC	**Dimbokro**	**157.95 274**	PKPab		**PKPab**	**11 08 14.3**	**-1.7**
	comp=Z,3.4nm,0.8s,baz=79,slow=6.2,SNR=4.4						
TIC	**Toumodi**	**158.12 274**	*e*PKP1		**PKPab**	**11 08 16.2**	**-0.5**
LIC	**Lamto**	**158.13 273**	*e*PKP1		**PKPab**	**11 08 16.8**	**0.0**
	comp=Z,11nm,0.8s						

IDC 03 10:54:37.4±10.0, **0°44'N**×**100°02'W**, **h0**km, **mb3.6**/4, **mb1 4.0**/4, **mb1mx3.7**/25, **mbtmp3.6**/4, **MS4.1**/3, **Ms1 4.1**/3, **ms1mx3.2**/28, **Error ellipse: s-maj=386.1km s-min=129.1km az=105.0, Galapagos Triple Junction region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**28.94**	**353**	P	P	11 00 37.8	-0.8
	0.4nm,0.8s,baz=166,slow=12,SNR=4.6						
H03N2	**Juan Fernandez**	**39.11**	**152**	T	T	11 45 16.9	
	baz=326,slow=78,SNR=6.3						
H03N1	**Juan Fernandez**	**39.12**	**151**	T	T	11 45 17.3	
	baz=326,slow=78,SNR=6.3						
H03N3	**Juan Fernandez**	**39.12**	**152**	T	T	11 45 17.4	
	baz=326,slow=78,SNR=6.9						
PDAR	**Pinedale Array**	**43.00**	**350**	P	P	11 02 39.6	+0.8
	0.6nm,0.8s,baz=150,slow=9.2,SNR=4.7						
CPUP	**Villa Florida**	**48.98**	**126**	LR	LR	11 22 53.6	
	comp=Z,167nm,18.6s,baz=230,slow=35						
YKA	**Yellowknife Ar**	**62.87**	**352**	P	P	11 05 05.5	+0.6
	0.5nm,0.9s,baz=163,slow=6.6,SNR=5.1						
ILAR	**Eielson Array**	**72.55**	**341**	P	P	11 06 05.5	-0.5
	0.7nm,0.6s,baz=147,slow=5.4,SNR=14						
URZ	**Urewera**	**84.67**	**232**	LR	LR	11 34 28.4	
	comp=Z,63nm,20.6s,baz=210,slow=28						
RPZ	**Rata Peaks**	**89.52**	**226**	LR	LR	11 37 53.2	
	comp=Z,133nm,18.7s,baz=41,slow=29						

IDC 03 10:55:16.9±3.3, **54°39'N**×**86°48'E**, **h0**km, **mb1 2.8**/2, **mb1mx2.7**/49, **mbtmp2.8**/2, **ML2.7**/2, **Error ellipse: s-maj=27.4km s-min=16.4km az=46.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.07**	**246**	*i*		11 02 00.0	
	baz=65,slow=330,SNR=0.7						
ZALV	**Zalesovo Beam**	**1.07**	**246**	Pg	Pg	10 55 36.9	-0.5
	1.7nm,0.3s,baz=65,slow=16,SNR=15						
ZALV				Lg	Lg	10 55 52.3	
	0.9nm,0.3s,baz=64,slow=26,SNR=4.3						
KURBB	**Kurchatov Arra**	**6.15**	**235**	Pn	Pn	10 56 49.9	+1.1
	0.1nm,0.3s,baz=53,slow=8.4,SNR=4.6						
MKAR	**Makanchi Array**	**8.06**	**201**	Pn	Pn	10 57 15.8	+0.7
	0.1nm,0.3s,baz=24,slow=13,SNR=6.5						

*IDC **03** 10:59:09.2±2.2, 7.°10S×129.°17E, h150km±28km, mb3.0/1, mb1 3.1/6, mb1mx3.0/34, mbtmp3.6/6, Error ellipse: s-maj=27.7km s-min=20.5km az=114.0*

ISC 03 10:59:07.1±0.9, **7°25S**±0.°06×**129°38E**±0.°10, **h139**km, **n6**, σ**3**§**91**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.37**	**242**	P	**Pn**	**11 00 39.2**	**+0.5**
	3.2nm,0.3s,baz=94,slow=11,SNR=2.1						
BATI				S	**Sn**	**11 01 50.8**	**+0.3**
	1.7nm,0.3s,baz=109,slow=17,SNR=1.5						
SIJI	**Sorong**	**6.61**	**17**	P	**Pn**	**11 00 43.4**	**+1.5**
	0.9nm,0.3s,baz=225,slow=20,SNR=1.5						
SIJI				S	**Sn**	**11 01 51.8**	**-4.3**
	0.1nm,0.3s,baz=287,slow=22,SNR=1.5						
FITZ	**Fitzroy Crossi**	**11.39**	**198**	P	**Pn**	**11 01 47.4**	**+1.7**
	0.1nm,0.3s,baz=11,slow=11,SNR=7.1						
FITZ				S	**Sn**	**11 03 46.1**	**-5.4**
	0.1nm,0.3s,baz=218,slow=1.4,SNR=2.5						
WRA	**Warramunga Arr**	**13.51**	**160**	P	**Pn**	**11 02 17.2**	**+4.0**
	0.3nm,0.3s,baz=340,slow=13,SNR=16						
WRA				S	**Sn**	**11 04 41.7**	**-0.9**
	0.4nm,0.3s,baz=338,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.89**	**166**	P	**Pn**	**11 03 00.2**	**+4.8**
	0.1nm,0.3s,baz=344,slow=10,SNR=6.2						
ASAR				S	**S**	**11 05 58.7**	**-5.4**
	0.0nm,0.3s,baz=342,slow=24,SNR=1.5						
MKAR	**Makanchi Array**	**68.10**	**327**	P	**P**	**11 09 51.1**	**-0.8**
	0.2nm,0.4s,baz=128,slow=9.5,SNR=2.1						

*IDC **03** 11:09:07.9±1.8, 9.°94S×160.°94E, h0km, mb3.8/5, mb1 4.1/6, mb1mx3.7/35, mbtmp3.9/6, ML3.6/1, Error ellipse: s-maj=30.0km s-min=27.9km az=31.0*

*NEIC **03** 11:09:10.4±1.4, 10.°1S±0.°1×160.°72E±0.°04, h10km±1km, mb4.2/5, Error ellipse: s-maj=21.4km s-min=6.5km az=11.0*

ISC 03 11:09:09.9±1.0, **10°0S**±0.°1×**160°8E**±0.°1, **h10**km, **n15**, σ**1**§**16**/16, **mb3.9**/7, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.03**	**303**	Pn	**Pn**	**11 09 31.2**	**+0.8**
	118nm,0.3s,baz=185,slow=6.3,SNR=88						
HNR				Sn	**Sn**	**11 09 45.8**	**+1.0**
	669nm,0.3s,baz=168,slow=24,SNR=15						
SANVU	**Saraoutou**	**8.25**	**132**	Pn	**Pn**	**11 11 10.9**	**+1.1**
RABL	**Rabaul**	**10.34**	**303**	Pn	**Pn**	**11 11 38.6**	**+0.1**
PMG	**Port Moresby**	**13.48**	**271**	Pn	**Pn**	**11 12 20.5**	**-0.9**
CTA	**Charters Tower**	**17.26**	**233**	P	**P**	**11 13 13.9**	**+1.1**
	0.1nm,0.3s,baz=73,slow=14,SNR=4.6						
CTAO	**Charters Tower**	**17.26**	**233**	P	**Pn**	**11 13 11.4**	**+0.2**
WR0	**Warramunga Arr**	**27.21**	**246**	P	**P**	**11 14 53.4**	**-0.8**
WB0	**Warramunga Arr**	**27.29**	**246**	P	**P**	**11 14 54.6**	**-0.2**
WB0				IAmb	IAmb	11 15 19.7	
	comp=Z,3.6nm,0.9s						
WB2	**Warramunga Arr**	**27.38**	**246**	P	**P**	**11 14 55.7**	**0.0**
WB2				IAmb	IAmb	11 15 09.7	
	comp=Z,8.3nm,1.4s						
WRA	**Warramunga Arr**	**27.39**	**246**	P	**P**	**11 14 56.3**	**+0.5**
	comp=Z,2.2nm,1.1s,baz=75,slow=9.4,SNR=4.6						
ASAR	**Alice Springs**	**29.06**	**239**	P	**P**	**11 15 10.6**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=64,slow=10.0,SNR=1.4						
FITZ	**Fitzroy Crossi**	**35.01**	**253**	P	**P**	**11 16 03.8**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=75,slow=6.6						
FITZ	**Fitzroy Crossi**	**35.01**	**253**	P	**P**	**11 15 60.0**	**-3.0**
FITZ				IAmb	IAmb	11 16 08.0	
	comp=Z,3.4nm,0.9s						
SONM	**Songino Array**	**75.01**	**325**	P	**P**	**11 20 51.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=141,slow=5.0,SNR=3.6						
YKA	**Yellowknife Ar**	**96.29**	**28**	P	**P**	**11 22 36.9**	**-1.5**
	comp=Z,0.2nm,0.8s,baz=254,slow=3.8,SNR=2.6						

*IDC **03** 11:15:24.2±1.9, 5.°67S×153.°18E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/50, mbtmp3.7/7, MS3.7/1, Ms1 3.7/1, ms1mx2.8/41, Error ellipse: s-maj=78.0km s-min=21.7km az=121.0*

ISC 03 11:15:29.5±1.5, **5°7S**±0.°3×**153°2E**±0.°3, **h37**km, **n10**, σ**0**§**91**/10, **mb3.5**/7, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.06**	**238**	Sn	**Sn**	**11 18 29.6**	**+0.3**
	1.1nm,0.3s,baz=85,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**23.19**	**291**	P	**P**	**11 20 32.7**	**-0.5**
	1.3nm,0.9s,baz=56,slow=10,SNR=6.4						
ASAR	**Alice Springs**	**25.79**	**224**	P	**P**	**11 20 57.0**	**-0.2**
	0.6nm,0.7s,baz=58,slow=9.0,SNR=9.5						
ASAR				PcP	**PcP**	**11 24 28.2**	**+1.7**
	0.3nm,0.7s,baz=51,slow=3.3,SNR=2.3						
MSVF	**Nonsavu**	**27.02**	**118**	LR	LR	11 32 04.6	
	comp=Z,152nm,18.3s,baz=174,slow=37						
FITZ	**Fitzroy Crossi**	**29.62**	**243**	P	**P**	**11 21 30.7**	**-0.9**
	1.0nm,0.6s,baz=74,slow=9.9,SNR=6.8						
PETK	**Petropavlovsk-**	**58.73**	**3**	P	**P**	**11 25 24.0**	**+0.6**
	3.0nm,0.9s,baz=173,slow=7.9,SNR=4.8						
SONM	**Songino Array**	**67.33**	**328**	P	**P**	**11 26 20.9**	**0.0**
	0.2nm,0.5s,baz=130,slow=6.6,SNR=1.2						
ILAR	**Eielson Array**	**82.84**	**22**	P	**P**	**11 27 48.6**	**-1.1**
	0.4nm,1.0s,baz=243,slow=6.0,SNR=2.5						
BVAR	**Borovoye Array**	**90.24**	**323**	P	**P**	**11 28 26.3**	**+0.1**
	0.6nm,0.8s,baz=145,slow=5.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**151.00**	**287**	PKPbc	**PKPbc**	**11 35 19.9**	**+0.3**
	0.5nm,0.6s,baz=86,slow=3.0,SNR=2.9						

*NNC **03** 11:23:41.0±1.0, 43.°70N×69.°83E, h0km, mb3.7, mpv3.2, Error ellipse: s-maj=5.1km s-min=3.6km az=121.0, Suspected Mining explosion.*

*SOME **03** 11:23:40.6, 43.°63N×69.°75E*

*KRNET **03** 11:23:40.7±0.1, 43.°60N×69.°48E, mb3.0*

ISC 03 11:23:37.3±2.2, **43°89N**±0.°09×**69°84E**±0.°08, **h0**km, **n18**, σ**1**§**08**/29, **14C-8D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Borolday**	**0.86**	**180**	*e*P	**Pn**	**11 23 56.6**	**-0.1**
	baz=64						
BRLS				*e*S	**Sb**	**11 24 08.0**	**+0.9**
	baz=64						
KK31	**Karatay Array**	**0.92**	**148**	⇑P	**Pb**	**11 23 55.7**	**-0.5**
	1.2nm,0.3s,baz=322,slow=16,SNR=121						
KK31				⇑S	**Sg**	**11 24 07.0**	**+0.1**
	13nm,0.4s,baz=322,slow=31,SNR=128						
IUG	**luzhnay**	**1.74**	**175**	*e*P	**Pb**	**11 24 09.9**	**-0.4**
	baz=64						
IUG				*e*S	**Sn**	**11 24 31.4**	**-0.6**
	baz=64						
MNAS	**Manas**	**2.40**	**125**	⇓*i*P	**Pg**	**11 24 24.8**	**+1.5**
	baz=16						
MNAS				⇓*i*S	**Sg**	**11 24 56.8**	**+2.5**
	baz=16						
TRKS	**Terek-Say**	**2.54**	**157**	⇓*i*P	**Pb**	**11 24 24.3**	**+0.4**
	baz=49						
TRKS				⇓*i*S	**Sb**	**11 24 56.2**	**+0.4**
	baz=49						
EKS2	**Erkin-Say**	**3.12**	**112**	⇑*i*P	**Pg**	**11 24 36.0**	**-1.2**
	baz=5.0						
EKS2				⇑*e*S	**Sg**	**11 25 15.9**	**-1.8**
	baz=5.0						
AML	**Almayashu**	**3.32**	**121**	⇑*e*P	**Pb**	**11 24 38.1**	**+0.7**
	baz=14						
AML				⇑*i*S	**Sb**	**11 25 19.8**	**+1.3**
	baz=14						
ARSB	**Arslanbob**	**3.45**	**137**	⇑*i*P	**Pb**	**11 24 37.9**	**-1.6**
	baz=30						
ARSB				⇑*e*S	**Sb**	**11 25 20.0**	**-2.0**
	baz=30						
AAK	**Ala-Archa**	**3.62**	**109**	⇑*i*P	**Pb**	**11 24 42.5**	**+0.2**
	baz=3.0						
AAK				⇑*i*S	**Sb**	**11 25 28.4**	**+1.6**
	baz=3.0						
AAK	**Ala-Archa**	**3.62**	**109**	⇓Pg	**Pg**	**11 24 46.4**	**-0.3**
	3.0nm,0.6s						
AAK				⇓Lg	Lg	11 25 36.2	
	2.9nm,0.5s						
UCH	**Uchtor**	**3.80**	**114**	⇓*i*P	**Pb**	**11 24 45.2**	**-0.4**
	baz=9.0						
UCH				⇓*i*S	**Sb**	**11 25 32.3**	**-0.1**
	baz=9.0						
ARLS	**Aral**	**3.87**	**120**	⇑*e*P	**Pb**	**11 24 45.4**	**-1.1**
	baz=14						
ARLS				⇑*i*S	**Sb**	**11 25 32.8**	**-1.1**
	baz=14						
KRBS	**Karabastau**	**4.23**	**91**	Pg	**Pg**	**11 24 59.0**	**+0.7**
	2.9nm,0.5s						
KRBS				Lg	Lg	11 25 57.0	
	6.6nm,0.5s						
TKM2	**Tokmak 2**	**4.30**	**101**	⇑Pg	**Pg**	**11 24 59.7**	**-0.1**
	2.9nm,0.9s						
TKM2				⇑Lg	Lg	11 25 57.5	
	6.7nm,0.7s						
KST	**Kastek**	**4.53**	**99**	Pg	**Pg**	**11 25 05.0**	**+0.8**
	2.0nm,0.2s						
KST				Lg	Lg	11 26 07.2	
	7.7nm,0.6s						
KUU	**Kurty**	**4.70**	**88**	Pg	**Pg**	**11 25 07.5**	**+0.2**
	2.5nm,0.2s						
KUU				Lg	Lg	11 26 11.0	
	9.5nm,0.5s						
MTBS	**Maitube**	**4.85**	**97**	Pg	**Pg**	**11 25 11.2**	**+1.0**
	1.0nm,0.1s						
MTBS				Lg	Lg	11 26 17.9	
	4.9nm,0.5s						
KTBS	**Karatobe**	**4.95**	**90**	Pg	**Pg**	**11 25 12.0**	**-0.3**
	1.6nm,0.6s						
KTBS				Lg	Lg	11 26 19.3	
	12nm,0.4s						

*NEIC **03** 11:37:56.6±1.6, 2.°6N±0.°1×128.°0E±0.°2, h180km±10km, mb4.1/6, Error ellipse: s-maj=22.1km s-min=15.5km az=77.0*

*IDC **03** 11:37:56.5±3.0, 2.°63N×128.°24E, h177km±32km, mb3.3/7, mb1 3.4/8, mb1mx3.1/43, mbtmp3.8/8, Error ellipse: s-maj=48.3km s-min=14.7km az=79.0*

ISC 03 11:37:58.2±0.8, **2°52N**±0.°09×**128°1E**±0.°1, **h200**km, **n17**, σ**1**§**52**/19, **mb4.0**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.89**	**203**		**Pn**	**11 38 33.7**	**-2.0**
SIJI	**Sorong**	**4.62**	**137**	P	**Pn**	**11 39 06.8**	**-1.1**
	1.5nm,0.3s,baz=342,slow=20,SNR=1.7						
SIJI				S	**Sn**	**11 39 59.5**	**-3.2**
	0.6nm,0.3s,baz=198,slow=19,SNR=1.3						
FAKI	**Fak Fak**	**6.81**	**143**	Pn	**Pn**	**11 39 36.5**	**+0.4**
TOLI2	**Tolitoli**	**7.45**	**259**		**Pn**	**11 39 42.3**	**-2.1**
MTN	**Manton Dam**	**15.56**	**169**		**Pn**	**11 41 27.5**	**+0.2**
MTN				IAmb	IAmb	11 41 56.1	
	comp=Z,10nm,1.2s						
FITZ	**Fitzroy Crossi**	**20.64**	**187**	P	**P**	**11 42 22.4**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=10,slow=11,SNR=2.0						
WB0	**Warramunga Arr**	**23.00**	**165**	P	**P**	**11 42 46.5**	**+0.8**
WB0				IAmb	IAmb	11 42 48.0	
	comp=Z,5.2nm,1.0s						
WRA	**Warramunga Arr**	**23.15**	**165**	P	**P**	**11 42 47.9**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=344,slow=10,SNR=30						
WB2	**Warramunga Arr**	**23.15**	**165**	P	**P**	**11 42 48.1**	**+1.1**
WB2				IAmb	IAmb	11 42 49.2	
	comp=Z,4.3nm,0.8s						
WR0	**Warramunga Arr**	**23.22**	**164**	P	**P**	**11 42 48.8**	**+1.1**
WR0				IAmb	IAmb	11 42 51.6	
	comp=Z,8.9nm,1.4s						
ASAR	**Alice Springs**	**26.64**	**168**	P	**P**	**11 43 19.4**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=351,slow=6.8,SNR=7.3						
ASAR				PcP	**PcP**	**11 46 39.1**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=350,slow=2.8,SNR=2.0						
MJAR	**Matsushiro Arr**	**35.11**	**14**	P	**P**	**11 44 30.7**	**-1.9**
	comp=Z,1.5nm,0.6s,baz=186,slow=9.4,SNR=4.1						
STKA	**Stephens Creek**	**36.53**	**161**	P	**P**	**11 44 46.0**	**+1.3**
	comp=Z,1.5nm,0.4s,baz=331,slow=6.5,SNR=5.9						
STKA	**Stephens Creek**	**36.53**	**161**	P	**P**	**11 44 46.2**	**+1.5**
NWAO	**Narrogin (SRO)**	**36.73**	**195**	P	**P**	**11 44 47.1**	**+0.8**
SONM	**Songino Array**	**48.88**	**341**	P	**P**	**11 46 24.4**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=136,slow=6.1,SNR=1.6						
MKAR	**Makanchi Array**	**59.32**	**325**	P	**P**	**11 47 40.0**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=120,slow=8.1,SNR=8.7						

IDC 03 11:49:33.0±1.7, **12°96N**×**146°31E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.3**/54, **mbtmp3.6**/4, **Error ellipse: s-maj=64.7km s-min=34.6km az=99.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.75**	**200**	P	P	11 56 25.2	-0.1
	0.5nm,1.0s,baz=23,slow=9.5,SNR=2.7						
MKAR	**Makanchi Array**	**62.91**	**316**	P	P	12 00 01.2	0.0
	0.4nm,0.3s,baz=91,slow=8.4,SNR=9.9						
ILAR	**Eielson Array**	**68.54**	**25**	P	P	12 00 37.1	0.0
	0.1nm,0.4s,baz=242,slow=5.7,SNR=2.3						
FINES	**FINESS Array B**	**92.31**	**335**	P	P	12 02 44.9	-0.1
	0.4nm,0.5s,baz=64,slow=6.3,SNR=1.4						

*IDC **03** 11:52:42.2±0.8, 0.°54S×122.°44E, h0km, mb4.0/10, mb1 4.1/11, mb1mx3.8/48, mbtmp3.9/11, ML4.0/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/44, Error ellipse: s-maj=27.7km s-min=14.9km az=69.0*

*DJA **03** 11:52:44.6±0.2, 1.°S±2.°×12.°2E±.°, h10km, M4.7/19, mb5.0/10, mB5.2/6, MLv4.8/19, Mw(mB)4.5/6*

*NEIC **03** 11:52:48.0±2.2, 0.°69S±0.°03×122.°32E±0.°04, h41km±9km, mb4.3/16, Error ellipse: s-maj=6.4km s-min=3.8km az=102.0*

ISC 03 11:52:47.6±0.5, **0°66S**±0.°05×**122°30E**±0.°04, **h35**km, **n75**, σ**1**§**56**/75, **mb4.2**/23, **MS3.3**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.60**	**129**		**Pn**	**11 52 57.9**	**-1.8**
LUWI				Sn	**Sn**	**11 53 08.3**	**0.0**
LUWI	**Luwuk**	**0.60**	**129**	P	**Pn**	**11 52 56.7**	**-3.0**
LUWI				S	**Sn**	**11 53 04.6**	**-3.6**
APSI	**Ampana**	**0.70**	**249**	P	**Pn**	**11 52 57.7**	**-3.3**
APSI				S	**Sn**	**11 53 07.0**	**-3.6**
MRSI	**Marisa**	**1.19**	**342**	P	**Pn**	**11 53 05.5**	**-2.3**
GTOI	**Gorontalo**	**1.47**	**29**	P	**Pn**	**11 53 10.1**	**-1.6**
KMSI	**Cibinong**	**2.08**	**54**	P	**Pn**	**11 53 21.0**	**+0.9**
TOLI2	**Tolitoli**	**2.33**	**319**	Pn	**Pn**	**11 53 23.4**	**-0.1**
KDI	**Kendari**	**3.29**	**174**	P	**Pn**	**11 53 35.6**	**-1.1**
TTSI	**Tana Toraja**	**3.43**	**226**	P	**Pn**	**11 53 38.7**	**+0.1**
TTSI				S	Sn	11 54 30.2	+12
SANI	**Sanana**	**3.93**	**111**	P	**Pn**	**11 53 45.0**	**-0.6**
SANI				S	**Sn**	**11 54 30.9**	**+0.4**
SPSI	**Sidrap Palu**	**4.14**	**218**	P	**Pn**	**11 53 48.1**	**-0.3**
SPSI				S	**Sn**	**11 54 36.6**	**+0.9**
BNSI	**Bone**	**4.31**	**211**	P	**Pn**	**11 53 49.6**	**-1.2**
SGKI	**Sangatta, Kali**	**4.70**	**272**	P	**Pn**	**11 53 58.8**	**+2.7**
KAPI	**Kappang**	**5.02**	**210**	Pn	**Pn**	**11 54 00.2**	**-0.2**
	44nm,0.3s,baz=26,slow=7.9,SNR=98						
KAPI				Sn	**Sn**	**11 54 55.7**	**-1.6**
	1.6nm,0.3s,baz=17,slow=19,SNR=1.1						
KAPI				LR	LR	11 56 18.4	
	comp=Z,637nm,19.5s,baz=46,slow=42						
KAPI	**Kappang**	**5.02**	**210**	Pn	**Pn**	**11 54 00.5**	**0.0**
KAPI				Sn	**Sn**	**11 54 56.1**	**-1.2**
TNTI	**Ternate**	**5.26**	**74**		**Pn**	**11 54 03.8**	**-0.1**
TNTI	**Ternate**	**5.26**	**74**	P	**Pn**	**11 54 04.5**	**+0.7**
	0.2nm55nm,0.8s						
NLAI	**Namlea**	**5.43**	**118**	P	**Pn**	**11 54 05.2**	**-1.0**
	0.4nm3µm99nm,0.8s						
BKB	**Balikpapan**	**5.44**	**264**	Pn	**Pn**	**11 54 06.1**	**-0.2**
BKB	**Balikpapan**	**5.44**	**264**	P	**Pn**	**11 54 04.9**	**-1.4**
	0.8nm168nm,0.6s						
KBKI	**Kotabaru**	**6.67**	**247**	P	**Pn**	**11 54 22.0**	**-1.2**
	0.6nm2µm171nm,0.7s						
MYLDM	**Lahad Datu**	**6.94**	**327**	Pn	**Pn**	**11 54 29.2**	**+2.3**
MMRI	**Maumere**	**7.92**	**180**		**Pn**	**11 54 41.2**	**+0.8**
BBKI	**Banjar Baru**	**7.96**	**249**	P	**Pn**	**11 54 40.0**	**-0.9**
	0.6nm10µm47nm,0.6s						
EDFI	**Ende, Flores**	**8.06**	**184**	P	**Pn**	**11 54 42.0**	**-0.3**
	447nm40nm,0.6s						
DAV	**Davao City (W)**	**8.35**	**23**	Pn	**Pn**	**11 54 46.3**	**0.0**
SIJI	**Sorong**	**8.96**	**91**	Pn	**Pn**	**11 54 55.9**	**+1.1**
	3.4nm,0.3s,baz=240,slow=12,SNR=9.6						
KKM	**Kota Kinabalu**	**9.02**	**318**	Pn	**Pn**	**11 54 55.6**	**+0.1**
SOEI	**Soe**	**9.24**	**168**		**Pn**	**11 54 59.5**	**+0.9**
FAKI	**Fak Fak**	**10.19**	**103**	Pn	**Pn**	**11 55 09.6**	**-2.0**
FAKI	**Fak Fak**	**10.19**	**103**	P	**Pn**	**11 55 10.9**	**-0.6**
SBUM	**Sibu**	**10.54**	**287**	Pn	**Pn**	**11 55 15.8**	**-0.6**
JAGI	**Jajag, Banyuwa**	**11.23**	**226**	Pn	**Pn**	**11 55 25.8**	**+0.1**
LEM	**Lembang**	**15.88**	**247**	LR	LR	12 02 36.3	
	comp=Z,158nm,20.4s,baz=28,slow=37						
FITZ	**Fitzroy Crossi**	**17.63**	**169**	P	**P**	**11 56 51.3**	**-0.1**
	0.1nm,0.3s,baz=359,slow=7.0,SNR=2.0						
PSA00	**Pilbara Seismi**	**20.92**	**186**	P	**P**	**11 57 27.8**	**+0.5**
PSA00				IAmb	IAmb	11 57 28.3	
	comp=Z,12nm,0.9s						
IPM	**Ipoh**	**21.86**	**284**	P	**P**	**11 57 35.0**	**-2.6**
IPM				IAmb	IAmb	11 57 45.8	
	comp=Z,17nm,1.1s						
WB0	**Warramunga Arr**	**22.38**	**149**	P	**P**	**11 57 43.0**	**-0.1**
WB0				IAmb	IAmb	11 57 52.9	
	comp=Z,12nm,1.1s						
WRAB	**Tennant Creek**	**22.49**	**149**	P	**P**	**11 57 40.2**	**-4.1**
WRA	**Warramunga Arr**	**22.49**	**149**	P	**P**	**11 57 43.5**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=332,slow=10,SNR=38						
WRA	**Warramunga Arr**	**22.49**	**149**	P	**P**	**11 57 44.2**	**-0.1**
WB2	**Warramunga Arr**	**22.50**	**149**	P	**P**	**11 57 45.0**	**+0.6**
WB2				IAmb	IAmb	11 57 52.4	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**22.61**	**149**	P	**P**	**11 57 45.6**	**+0.1**
WR0				IAmb	IAmb	11 57 56.1	
	comp=Z,7.8nm,0.8s						
RPSI	**Rantau Prapat**	**23.61**	**278**	P	**P**	**11 57 55.2**	**-0.5**
RPSI	**Rantau Prapat**	**23.61**	**278**	P	**P**	**11 57 56.6**	**+1.0**
PSI	**Prapat**	**23.62**	**278**	P	**P**	**11 57 56.6**	**+0.7**
	comp=Z,8.6nm,0.6s,baz=180,slow=1.7,SNR=6.9						
PSI				LR	LR	12 07 28.6	
	comp=Z,181nm,18.1s,baz=274,slow=37						
TRTT	**Trang**	**24.07**	**291**	P	**P**	**11 58 05.0**	**+5.0**
	comp=Z,16nm,1.3s						
GSI	**Gunungsitoli**	**24.80**	**275**	P	**P**	**11 58 05.7**	**-1.0**
AS31	**Alice Springs**	**25.49**	**155**	P	**P**	**11 58 13.7**	**+0.9**
ASAR	**Alice Springs**	**25.49**	**155**	P	**P**	**11 58 12.9**	**+0

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK05	**Karatay Array**	**0.52**	**259**	⇓P	**Pg**	**11 54 33.5**	**+0.8**
KK05				⇓S	**Sg**	**11 54 39.5**	**+0.1**
KK06	**Karatay Array**	**0.52**	**257**	⇓P	**Pg**	**11 54 33.2**	**+0.5**
KK06				⇓S	**Sg**	**11 54 39.1**	**-0.4**
KK02	**Karatay Array**	**0.53**	**258**	⇓P	**Pg**	**11 54 33.4**	**+0.5**
KK02				⇓S	**Sg**	**11 54 39.7**	**-0.1**
KK31	**Karatay Array**	**0.53**	**258**	⇓P	**Pg**	**11 54 33.4**	**+0.5**
	0.6nm,0.3s,baz=115,slow=18,SNR=33						
KK31				⇑S	**Sg**	**11 54 39.5**	**-0.3**
	2.3nm,0.3s,baz=171,slow=37,SNR=22						
KK04	**Karatay Array**	**0.54**	**259**	⇑P	**Pg**	**11 54 33.6**	**+0.7**
KK04				⇓S	**Sg**	**11 54 39.7**	**-0.2**
KK01	**Karatay Array**	**0.54**	**258**	⇑P	**Pg**	**11 54 33.5**	**+0.6**
KK01				⇑S	**Sg**	**11 54 39.7**	**-0.2**
KK09	**Karatay Array**	**0.54**	**260**	⇑P	**Pg**	**11 54 33.8**	**+0.8**
KK09				⇑S	**Sg**	**11 54 40.0**	**+0.1**
KK03	**Karatay Array**	**0.54**	**258**	⇑P	**Pg**	**11 54 33.6**	**+0.6**
KK03				⇑S	**Sg**	**11 54 39.9**	**-0.2**
KK07	**Karatay Array**	**0.54**	**257**	⇓P	**Pg**	**11 54 33.5**	**+0.3**
KK07				⇓S	**Sg**	**11 54 39.4**	**-0.7**
KK08	**Karatay Array**	**0.55**	**258**	⇓P	**Pg**	**11 54 33.8**	**+0.5**
KK08				⇑S	**Sg**	**11 54 39.8**	**-0.5**
MNAS	**Manas**	**1.19**	**127**	⇑*e*P	**Pb**	**11 54 46.4**	**+0.1**
	baz=21						
MNAS				⇑*i*S	**Sg**	**11 55 01.0**	**0.0**
	baz=21						
TRKS	**Terek-Say**	**1.69**	**182**	⇑*i*P	**Pg**	**11 54 55.8**	**+0.8**
	baz=83						
TRKS				⇑*i*S	**Sb**	**11 55 17.5**	**+0.9**
	baz=83						
EKS2	**Erkin-Say**	**1.96**	**106**	⇓*i*P	**Pg**	**11 55 01.1**	**+0.9**
	baz=1.0						
EKS2				⇓*i*S	**Sg**	**11 55 26.3**	**+0.7**
	baz=1.0						
AML	**Almayashu**	**2.12**	**120**	⇓*i*P	**Pg**	**11 55 03.3**	**-0.1**
	baz=16						
AML				⇓*i*S	**Sg**	**11 55 30.4**	**-0.5**
	baz=16						
ARSB	**Arslanbob**	**2.30**	**145**	⇑*e*P	**Pb**	**11 55 04.9**	**-0.2**
	baz=43						
ARSB				⇑*i*S	**Sb**	**11 55 33.3**	**-0.9**
	baz=43						
AAK	**Ala-Archa**	**2.47**	**102**	⇑Pg	**Pg**	**11 55 11.2**	**+1.1**
	0.7nm,0.4s						
AAK				⇑Lg	Lg	11 55 46.0	
	2.1nm,0.8s						
UCH	**Uchtor**	**2.62**	**111**	⇓*i*P	**Pb**	**11 55 10.6**	**-0.2**
	baz=8.0						
UCH				⇓*i*S	**Sb**	**11 55 43.1**	**-0.6**
	baz=8.0						
ARLS	**Aral**	**2.66**	**120**	⇑*i*P	**Pb**	**11 55 10.7**	**-0.6**
	baz=17						
ARLS				⇑*i*S	**Sb**	**11 55 43.1**	**-1.5**
	baz=17						

*THR **03** 11:58:17.0±0.3,28.2°12N×51.6°62E,h32km±14km,ML3.2*
*IDC **03** 11:58:17.1±1.6,28.0°09N×51.6°67E,h0km,mb3.7/5,*
mb1 3.8/7,mb1mx3.5/37,mbtmp3.7/7,ML3.4/2,Error ellipse: s-maj=38.9km s-min=27.8km az=24.0
*TEH **03** 11:58:18.9,28.3°1N×51.7°7E,h10km,ML3.5*
ISC 03 11:58:18.4±0.9,28°18N±0.0°09×51°69E±0.0°08,h10km,n29,
σ1§13/30,mb3.6/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.77**	**333**	*e*Pn	**Pg**	**11 58 32.3**	**-0.9**
QIR1	**Qir**	**1.23**	**76**	*e*Pg	**Pn**	**11 58 41.0**	**-0.7**
QIR1				*e*		11 59 12.4	
	comp=Z,99nm,0.7s						
KAZ1	**Kazerun**	**1.44**	**358**	*e*Pg	**Pn**	**11 58 44.4**	**-0.2**
KAZ1				*e*		11 59 09.8	
	comp=Z,99nm,0.2s						
LMD1	**Lamerd**	**1.55**	**122**	*e*Pg	**Pg**	**11 58 48.8**	**+0.7**
LMD1				*e*		11 59 22.9	
	comp=Z,99nm,0.4s						
SHI	**Shiraz**	**1.63**	**26**	*e*Pn	**Pn**	**11 58 46.5**	**-0.8**
SHI				*e*		11 58 52.6	
	comp=Z,99nm,0.3s						
JHRM	**Jahrom**	**1.69**	**78**	*e*Pg	**Pb**	**11 58 49.6**	**-0.1**
JHRM				*e*		11 59 15.3	
	comp=Z,99nm,0.5s						
KLNJ	**Kolanjah**	**2.82**	**358**	*e*Pn	**Pn**	**11 59 04.1**	**+0.2**
IRAM	**Ramesheh**	**3.67**	**9**	*e*Pn	**Pn**	**11 59 15.4**	**0.0**
IMEH	**Mehriz**	**4.09**	**38**	*e*Pn	**Pn**	**11 59 22.2**	**+1.0**
ISAD	**Sadrabad**	**4.11**	**24**	*e*Pn	**Pn**	**11 59 21.6**	**+0.1**
IPIR	**Pirpir**	**4.54**	**351**	*e*Pn	**Pn**	**11 59 28.2**	**+0.7**
KHGB	**Koh Gabri**	**4.72**	**61**	*e*Pn	**Pn**	**11 59 30.3**	**+0.4**
IZEF	**Zefreh**	**4.74**	**7**	*e*Pn	**Pn**	**11 59 30.4**	**+0.3**
KRBR	**Kerman**	**4.79**	**67**	*e*Pn	**Pn**	**11 59 30.6**	**-0.3**
KRBR	**Kerman**	**4.79**	**67**	*e*Pn	**Pn**	**11 59 30.6**	**-0.3**
YZKH	**Yazd**	**4.89**	**30**	*e*Pn	**Pn**	**11 59 32.0**	**-0.1**
YZKH	**Yazd**	**4.89**	**30**	*e*Pn	**Pn**	**11 59 32.0**	**-0.1**
KRSH	**Karshahi**	**5.79**	**4**	*e*Pn	**Pn**	**11 59 43.5**	**-0.9**
KBAM	**BAM**	**6.02**	**79**	*e*Pn	**Pn**	**11 59 49.0**	**+1.4**
ISFB	**Sefidab**	**6.17**	**4**	*e*Pn	**Pn**	**11 59 49.1**	**-0.6**
TPRV	**Parvadeh(Tabas**	**6.47**	**40**	*e*Pn	**Pn**	**11 59 54.0**	**+0.2**
IQOM	**Qom**	**6.67**	**356**	*e*Pn	**Pn**	**11 59 55.5**	**-1.1**
WSAR	**Wadi Sarin**	**7.96**	**127**	Pn	**Pn**	**12 00 13.9**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=309,slow=6.2,SNR=9.2						
WSAR				Sn	**Sn**	**12 01 39.6**	**-4.7**
	comp=Z,0.3nm,0.3s,baz=277,slow=19,SNR=1.6						
BRTR	**Keskin Array B**	**18.85**	**312**	P	**Pn**	**12 02 39.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=127,slow=9.6,SNR=6.4						
MKAR	**Makanchi Array**	**30.30**	**44**	P	**P**	**12 04 30.4**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=232,slow=6.8,SNR=3.9						
FINES	**FINESS Array B**	**37.40**	**340**	P	**P**	**12 05 32.0**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=135,slow=8.2,SNR=7.0						
NOA	**NORSAR Array B**	**42.51**	**332**	P	**P**	**12 06 14.3**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=120,slow=8.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**48.78**	**263**	P	**P**	**12 07 03.5**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=62,slow=7.6,SNR=2.8						
YKA	**Yellowknife Ar**	**88.98**	**354**	P	**P**	**12 11 14.4**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=11,slow=5.0,SNR=5.4						

*UPP **03** 12:04:24.8±0.0,67.6°65N×20.7°98E,h0km,ML1.6,Explosion*
*HEL **03** 12:04:25.3±0.0,67.6°65N×20.7°99E,h0km,ML1.7,*
ML1.6(UPP),Explosion
*IDC **03** 12:04:25.1±1.9,67.6°68N×21.2°4E,h0km,mb1 2.4/2,*
mb1mx2.4/41,mbtmp2.4/2,ML1.9/2,Error ellipse: s-maj=24.0km s-min=8.3km az=107.0
ISC 03 12:04:24.6±0.8,67°64N±0.0°02×20°98E±0.0°03,h0km,n36,
σ0§91/47,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.40**	**323**	P	**Pg**	**12 04 32.3**	**+0.1**
KUA				S	**Sg**	**12 04 37.8**	**+0.5**
KUA	**Kurravaara**	**0.40**	**323**	*i* P	**Pg**	**12 04 32.3**	**+0.1**
KUA				*i* S	**Sg**	**12 04 37.8**	**+0.5**
MASU	**Masugnsbyn**	**0.43**	**114**	P	**Pg**	**12 04 33.3**	**+0.5**
MASU	**Masugnsbyn**	**0.43**	**114**	P	**Pg**	**12 04 33.3**	**+0.5**
DUNU	**Dundret**	**0.54**	**197**	P	**Pg**	**12 04 35.3**	**+0.4**
DUNU	**Dundret**	**0.54**	**197**	*i* P	**Pg**	**12 04 35.3**	**+0.4**
RATU	**Laukkuluspa**	**0.56**	**290**	P	**Pg**	**12 04 35.3**	**+0.1**
RATU	**Laukkuluspa**	**0.56**	**290**	*i* P	**Pg**	**12 04 35.3**	**+0.1**
LANU	**Lannavaara**	**0.56**	**42**	P	**Pg**	**12 04 35.1**	**-0.2**
LANU	**Lannavaara**	**0.56**	**42**	*e*P	**Pg**	**12 04 35.1**	**-0.2**
LANU				*e*S	**Sg**	**12 04 43.2**	**+0.6**
KOVU	**Salmi**	**0.66**	**333**	P	**Pg**	**12 04 37.2**	**0.0**
KOVU	**Salmi**	**0.66**	**333**	*i* P	**Pg**	**12 04 37.2**	**0.0**
NIKU	**Nikkaluokta**	**0.77**	**288**	P	**Pg**	**12 04 39.2**	**-0.1**
NIKU	**Nikkaluokta**	**0.77**	**288**	*i* P	**Pg**	**12 04 39.2**	**-0.1**
PAJU	**Pajala**	**1.03**	**126**	P	**Pg**	**12 04 43.9**	**-0.5**
PAJU	**Pajala**	**1.03**	**126**	*e*P	**Pg**	**12 04 43.8**	**-0.5**
	baz=302						
PAJU				*e*SB	**Sg**	**12 04 58.1**	**+0.5**
HEF	**Hetta**	**1.27**	**51**	*e*P	**Pg**	**12 04 47.7**	**-1.2**
HEF	**Hetta**	**1.27**	**51**	*e*P	**Pg**	**12 04 47.8**	**-1.1**
HEF				MSG		12 05 04.0	
	comp=Z,4.1nm,0.2s						
HEF				*e*SB	**Sg**	**12 05 04.7**	**-0.7**
KIF	**Kilpisjarvi**	**1.38**	**357**	*e*P	**Pg**	**12 04 50.1**	**-0.7**
KIF	**Kilpisjarvi**	**1.38**	**357**	*e*P	**Pg**	**12 04 50.3**	**-0.6**
	baz=168						
KIF				MSG		12 05 06.0	
	comp=Z,11nm,0.2s						
KIF				*e*SB	**Sb**	**12 05 09.2**	**0.0**
HARU	**Harads**	**1.48**	**180**	P	**Pn**	**12 04 52.1**	**-0.3**
HARU	**Harads**	**1.48**	**180**	*e*P	**Pn**	**12 04 52.1**	**-0.3**
I37NO	**I37NO**	**1.69**	**330**	*i*		12 14 40.0	
	baz=147,slow=329,SNR=2.3						
TOF	**Tornio**	**2.05**	**138**	*e*PG	**Pb**	**12 05 01.8**	**-0.8**
	baz=322						
TOF				MSG		12 05 26.5	
	comp=Z,5.2nm,0.2s						
TOF				*e*SG	**Sb**	**12 05 28.9**	**+0.4**
SGF	**Sodankyl**	**2.14**	**93**	*e*PB	**Pn**	**12 05 02.7**	**+1.3**
	baz=277						
SGF				*e*SG	**Sb**	**12 05 30.6**	**-0.6**
RNF	**Rovaniemi**	**2.22**	**115**	*e*PB	**Pn**	**12 05 03.7**	**+1.1**
	baz=305						
RNF				*e*SG	**Sb**	**12 05 33.8**	**+0.2**
ARCES	**ARCESS Array B**	**2.53**	**39**	Pn	**Pn**	**12 05 07.5**	**+0.6**
	baz=217,slow=14,SNR=20						
ARCES				Lg	Lg	12 05 40.3	
	baz=214,slow=24,SNR=17						
ARA0	**ARCESS Array S**	**2.53**	**39**	*e*P	**Pn**	**12 05 07.2**	**+0.4**
	baz=219						
ARA0				*e*SG	**Sb**	**12 05 42.7**	**+0.3**
KEV	**Kevo**	**3.06**	**43**	*e*S	**Sn**	**12 05 51.3**	**-0.1**
KEV				MSG		12 05 55.3	
	comp=Z,2.0nm,0.2s						
OUL	**Oulu**	**3.24**	**140**	*e*SG	**Sb**	**12 06 03.8**	**+1.0**
VRF	**Varrio**	**3.29**	**84**	*e*SB	**Sb**	**12 06 04.0**	**-0.4**
MSF	**Maaselka**	**3.63**	**115**	*e*P	**Pn**	**12 05 24.0**	**+2.0**
MSF				*e*SG	**Sb**	**12 06 16.1**	**+1.9**
KU6	**Riekki**	**3.88**	**111**	*e*S	**Sn**	**12 06 12.4**	**+0.9**
HUSU	**Husum**	**4.38**	**190**	*e*S	**Sn**	**12 06 23.0**	**-0.8**
VAF	**Ylistaro**	**4.67**	**170**	*e*SG	**Sg**	**12 06 51.0**	**-3.3**
FINES	**FINESS Array B**	**6.59**	**158**	Pn	**Pn**	**12 06 04.2**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=350,slow=13,SNR=1.2						
FINES				Sn	**Sn**	**12 07 17.2**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=344,slow=29,SNR=1.7						
FINES				Lg	Lg	12 07 51.4	
	comp=Z,0.1nm,0.3s,baz=357,slow=22,SNR=3.1						

*IDC **03** 12:06:30.6±2.7,15.2°45S×177.5°56W,h431km±28km,mb3.1/5,*
mb1 3.3/6,mb1mx3.0/29,mbtmp3.8/6,Error ellipse:
s-maj=91.5km s-min=23.4km az=148.0
ISC 03 12:06:31.9±1.6,15.5°5S±0.6°×177.7°W±0.4°,h450km,n6,
σ1§10/6,mb3.4/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.66**	**241**	P	**P**	**12 07 52.1**	**-1.0**
	2.0nm,0.3s,baz=78,slow=11,SNR=9.0						
STKA	**Stephens Creek**	**40.44**	**239**	P	**P**	**12 13 29.8**	**-0.1**
	0.8nm,0.5s,baz=66,slow=10.0,SNR=1.6						
WRA	**Warramunga Arr**	**45.82**	**257**	P	**P**	**12 14 13.1**	**+0.7**
	0.4nm,0.3s,baz=91,slow=6.5,SNR=37						
ASAR	**Alice Springs**	**46.17**	**252**	P	**P**	**12 14 16.3**	**+1.3**
	6.4nm,0.6s,baz=84,slow=7.7,SNR=152						
ILAR	**Eielson Array**	**83.43**	**13**	P	**P**	**12 18 09.9**	**-0.6**
	0.4nm,0.6s,baz=228,slow=5.5,SNR=7.5						
TXAR	**Lajitas Array**	**84.12**	**58**	P	**P**	**12 18 15.2**	**+0.3**
	0.3nm,0.7s,baz=202,slow=6.8,SNR=3.8						

*NEIC **03** 12:23:55.4±1.6,23.3°N±0.1°×94.2°6E±0.0°8,h110km±9km,*
mb4.5/11,Error ellipse: s-maj=17.8km s-min=7.2km
az=208.0
*IDC **03** 12:23:57.1±3.9,23.2°61N×94.3°80E,h118km±35km,mb3.6/5,*
mb1 3.7/6,mb1mx3.1/48,mbtmp3.9/6,Error ellipse:
s-maj=116.9km s-min=14.8km az=61.0
*NDI **03** 12:23:58.9±1.3,23.2°79N×94.2°55E,h28km±24km,ML4.1,*
mb4.5(NEIC)
ISC 03 12:23:54.7±0.7,23°57N±0.0°07×94°67E±0.0°09,h99km,n39,
σ1§79/40,mb4.3/12,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**1.89**	**236**	*e*P	**Pn**	**12 24 30.1**	**+4.1**
SAIH				IAML		12 24 58.5	
	comp=E,600nm,0.3s						
SAIH				IAML		12 24 59.0	
	comp=N,543nm,0.4s						
SHL	**Shillong**	**3.22**	**309**	*e*P	**Pn**	**12 24 45.4**	**+1.8**
SHL				*e*S	**Sn**	**12 25 19.5**	**-1.8**
SHL				IAML		12 25 21.4	
	comp=N,6μm,0.2s						
SHL				IAML		12 25 22.0	
	comp=E,5μm,0.2s						
SHL	**Shillong**	**3.22**	**309**		**Pn**	**12 24 45.4**	**+1.8**
ITAN	**ITANAGAR**	**3.66**	**347**	*e*P	**Pn**	**12 24 50.5**	**+1.2**
ITAN				IAML		12 25 30.7	
	comp=E,658nm,0.2s						
ITAN				IAML		12 25 31.6	
	comp=N,1μm,0.2s						
GUWA	**GUWAHATI**	**3.76**	**315**	*e*P	**Pn**	**12 24 51.4**	**+0.8**
GUWA				IAML		12 25 31.5	
	comp=E,219nm,0.2s						
ZIRO	**ZIRO**	**4.01**	**350**	*e*P	**Pn**	**12 24 56.1**	**+2.0**
ZIRO				*e*S	**Sn**	**12 25 35.9**	**-4.3**
ZIRO				IAML		12 25 39.4	
	comp=N,956nm,0.3s						
ZIRO				IAML		12 25 41.3	
	comp=E,823nm,0.2s						
DHUB	**DHUBRI**	**4.90**	**301**	*e*P	**Pn**	**12 25 07.0**	**+1.0**
DHUB				IAML		12 25 59.5	
	comp=N,444nm,0.2s						
DHUB				IAML		12 25 59.8	
	comp=E,398nm,0.1s						
CHTO	**Chiang Mai**	**6.19**	**139**	Pn	**Pn**	**12 25 23.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**6.47**	**141**	P	**Pn**	**12 25 29.4**	**+2.0**
	baz=314,slow=13,SNR=5.1						
LSA	**Lhasa**	**6.87**	**333**	Pn	**Pn**	**12 25 34.7**	**+1.5**
TAPN	**Taplejung**	**7.33**	**302**	*e*P	**Pn**	**12 25 41.0**	**+1.7**
	comp=E,46nm,0.3s						
ODAN	**Odare**	**7.36**	**298**	*e*P	**Pn**	**12 25 41.3**	**+1.6**
	comp=E,37nm,0.2s						
RAMN	**Ramite**	**8.04**	**296**	*e*P	**Pn**	**12 25 51.0**	**+2.0**
	comp=E,27nm,0.4s						
JIRN	**Jiri**	**8.67**	**300**	*e*P	**Pn**	**12 25 59.4**	**+1.8**
	comp=E,37nm,0.2s						
GUN	**Gumba**	**9.03**	**300**	*e*P	**Pn**	**12 26 03.5**	**+1.0**
	comp=E,37nm,0.3s						
PKI	**Pulchoki**	**9.26**	**297**	*e*P	**Pn**	**12 26 07.4**	**+1.8**
	comp=E,25nm,0.4s						
PKIN	**Phulchoki**	**9.27**	**297**	*e*P	**Pn**	**12 26 06.7**	**+0.9**
	comp=E,28nm,0.3s						
DMN	**Daman**	**9.52**	**297**	*e*P	**Pn**	**12 26 10.1**	**+1.0**
	comp=E,5.4nm,0.3s						
GKN	**Gorkha**	**10.06**	**298**	*e*P	**Pn**	**12 26 17.1**	**+0.7**
	comp=E,39nm,0.4s						
KOLN	**Koldanda**	**10.82**	**295**	*e*P	**Pn**	**12 26 26.9**	**+0.1**
	comp=E,23nm,0.2s						
PBA	**Port Blair**	**11.99**	**189**		Pn	12 26 37.8	-4.6
MK31	**Makanchi Array**	**25.22**	**340**	P	**P**	**12 29 12.6**	**+1.4**
MKAR	**Makanchi Array**	**25.22**	**340**	P	**P**	**12 29 12.2**	**+0.9**
	comp=E,2.2nm,0.5s,baz=152,slow=10,SNR=27						
MKAR	**Makanchi Array**	**25.22**	**340**	P	**P**	**12 29 11.9**	**+0.7**
MAKZ	**Makanchi**	**25.33**	**339**	P	**P**	**12 29 14.6**	**+2.4**
KURBB	**Kurchatov Arra**	**29.78**	**339**	P	**P**	**12 29 52.3**	**+0.4**
	comp=E,0.4nm,0.3s,baz=145,slow=9.7,SNR=4.6						
KURK	**Kurchatov**	**29.83**	**339**	P	**P**	**12 29 52.3**	**0.0**
ZALV	**Zalesovo Beam**	**31.23**	**349**	P	**P**	**12 30 04.8**	**+0.2**
	comp=E,0.3nm,0.3s,baz=159,slow=10,SNR=2.0						
JSU	**Suzuyama**	**32.59**	**68**	P	**P**	**12 30 20.6**	**+3.8**
CISI	**Cisompet, Garu**	**33.50**	**156**	P	**P**	**12 30 21.0**	**-3.9**
WB0	**Warramunga Arr**	**57.93**	**135**	P	**P**	**12 33 36.6**	**-0.2**
WB0				IAmb	IAmb	12 33 36.9	
	comp=Z,2.6nm,0.5s						
WRA	**Warramunga Arr**	**58.02**	**135**	P	**P**	**12 33 37.3**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=324,slow=7.5,SNR=36						
WB2	**Warramunga Arr**	**58.03**	**135**	P	**P**	**12 33 37.6**	**0.0**
WB2				IAmb	IAmb	12 33 38.2	
	comp=Z,1.9nm,0.7s						
WR0	**Warramunga Arr**	**58.16**	**135**	P	**P**	**12 33 38.4**	**-0.1**
WR0				IAmb	IAmb	12 33 50.6	
	comp=Z,5.4nm,1.2s						
FIA1	**FINESS Array S**	**59.36**	**329**	P	**P**	**12 33 46.1**	**-0.1**
FIA1				IAmb	IAmb	12 34 09.9	
	comp=Z,7.4nm,1.4s						
NWAO	**Narrogin (SRO)**	**60.17**	**158**	P	**P**	**12 33 51.5**	**-0.6**
NWAO				IAmb	IAmb	12 34 02.7	
	comp=Z,5.8nm,0.9s						
AS31	**Alice Springs**	**60.47**	**138**	P	**P**	**12 33 54.5**	**+0.1**
AS31				IAmb	IAmb	12 33 55.2	
	comp=Z,0.6nm,0.6s						
ASAR	**Alice Springs**	**60.47**	**138**	P	**P**	**12 33 54.5**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=322,slow=6.9,SNR=60						
BBOO	**Buckleboo**	**68.58**	**143**	P	**P**	**12 34 46.0**	**-0.9**
BBOO				IAmb	IAmb	12 34 46.9	
	comp=Z,14nm,1.1s						

*IDC **03** 12:26:04.4±2.2,28.4°44N×62.4°28E,h0km,mb3.5/4,*
mb1 3.6/5,mb1mx3.3/43,mbtmp3.6/5,ML3.3/1,Error ellipse: s-maj=58.2km s-min=30.2km az=124.0
*OMAN **03** 12:26:17.5,27.4°35N×62.4°15E,h0km,mb4.7/5*
ISC 03 12:26:04.4±1.0,27°93N±0.0°09×62°78E±0.0°09,h10km,n17,
σ3§37/24,mb3.6/4,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**5.98**	**220**	Pn	**Pn**	**12 27 36.4**	**+3.4**
	0.8nm,0.3s,baz=52,slow=12,SNR=16						
WSAR				Sn	**Sn**	**12 28 38.3**	**-3.3**
	2.5nm,0.3s,baz=192,slow=22,SNR=23						
BANOM	**Banah**	**6.12**	**252**	P	**Pn**	**12 27 39.5**	**+4.6**
	SNR=19						
BANOM				S	**Sn**	**12 28 43.9**	**-1.0**
SHME	**Shamm**	**6.21**	**254**	P	Pn	12 27 41.5	+5.4
	SNR=6.7						
SHME				S	**Sn**	**12 28 48.2**	**+1.1**
WBK	**Wadi Bani Khal**	**6.32**	**214**	P	**Pn**	**12 27 40.6**	**+3.0**
	SNR=27						
WBK				S	**Sn**	**12 28 46.8**	**-3.1**
MDH	**Madha**	**6.36**	**247**	P	**Pn**	**12 27 41.9**	**+3.7**
	SNR=6.8						
MDH				S	**Sn**	**12 28 48.3**	**-2.6**
SMDO	**Samad**	**6.46**	**222**	P	**Pn**	**12 27 44.2**	**+4.5**
SMDO				S	**Sn**	**12 28 51.1**	**-2.4**
HOQ	**Hoqain**	**6.55**	**230**	P	**Pn**	**12 27 44.6**	**+3.7**
HOQ				S	**Sn**	**12 28 51.1**	**-4.7**
UOSS	**Minazif**	**6.60**	**245**	P	**Pn**	**12 27 44.8**	**+3.3**
SOHO	**SOHO**	**6.77**	**237**	P	**Pn**	**12 27 47.4**	**+3.7**
ASHO	**Ashiyiah**	**6.84**	**243**	P	**Pn**	**12 27 48.8**	**+4.0**
BSY	**Bisya**	**7.21**	**226**	P	**Pn**	**12 27 54.1**	**+4.1**
BSY				S	**Sn**	**12 29 10.7**	**-1.3**
UMZA	**Um Al Zommool**	**8.62**	**235**	P	Pn	12 28 14.5	+5.2
UMZA				S	**Sn**	**12 29 45.2**	**-1.5**
THW	**Thamme Wali**	**9.14**	**56**	P	**Pn**	**12 28 18.2**	**+1.8**
MKAR	**Makanchi Array**	**24.28**	**34**	P	**P**	**12 31 21.7**	**-0.1**
	0.2nm,0.4s,baz=226,slow=7.7,SNR=2.5						
KURBB	**Kurchatov Arra**	**25.63**	**24**	P	**P**	**12 31 32.8**	**-1.1**
	0.7nm,0.7s,baz=219,slow=8.6,SNR=6.4						
FINES	**FINESS Array B**	**41.45**	**334**	P	**P**	**12 33 46.5**	**-4.5**
	0.6nm,0.4s,baz=116,slow=9.4,SNR=7.8						
ARCES	**ARCESS Array B**	**46.86**	**343**	P	**P**	**12 34 31.9**	**-2.4**
	0.6nm,0.7s,baz=137,slow=9.8,SNR=4.0						

*BJI **03** 12:32:30.0±0.0,23.0°00S×176.3°30W,h10km,mB5.7/31,*
mb5.3/47,Ms5.1/21,Ms7 4.8/19
*NOU **03** 12:32:32.2,22.7°45S×174.5°57W,h116km,mb5.3,Tonga Islands Region*
*MOS **03** 12:32:33.3±0.9,22.7°89S×176.3°41W,h24km,mb5.5/54,*
MS4.5/5,Error ellipse: s-maj=8.9km s-min=7.4km az=47.5
*BGR **03** 12:32:37.8±0.0,23.0°01S×174.9°8W,h29km±1km*
*NEIC **03** 12:32:38.7±1.7,23.0°02S±0.0°07×176.3°5W±0.0°09,h59km±4km,*
mb5.2/276,Mwc5.5(GCMT),Error ellipse: s-maj=12.7km
s-min=9.5km az=118.0
*IDC **03** 12:32:42.1±0.6,22.9°91S×176.7°44W,h85km±4km,mb4.8/35,*
mb1 4.9/35,mb1mx4.8/44,mbtmp5.1/35,MS4.3/26,
Ms1 4.3/26,ms1mx4.2/30,Error ellipse: s-maj=12.4km
s-min=10.8km az=147.0
*GCMT **03** 12:32:42.7±0.1,23.0°09S±0.0°01×175.9°9W±0.0°01,h89km,*
MW5.4/147,Moment Tensor Solution. s138,c260;
s147,c288; Duration: 1s3 Moment tensor: Scale 10^17
Nm; Mrr0.89±.02; Mθθ0.19±.02; Mϕϕ-1.08±.02;
Mrθ-0.40±.01; Mrϕ0.24±.02; Mθϕ-1.36±.01; Best double
couple: Mw1.75000×10^17 NP1:ϕs326.00000°,δ23.00000°,
λ46.00000°. NP2:ϕs192.00000°,δ74.00000°,λ106.00000°.
Principal axes: T 1.7250, Plg58.0000°, Azm124.0000°;
N 0.0530, Plg16.0000°, Azm7.0000°; P -1.7750,
Plg27.0000°, Azm269.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
*NEIC **03** 12:32:43.23.0°04S×175.8°0W,h34km,Moment Tensor*
Solution. Moment tensor: Scale 10^17Nm; Mrr0.09;
Mθθ0.52; Mϕϕ-0.60; Mrθ-0.61; Mrϕ0.20; Mθϕ-2.45; Fault
plane solution: Mw2.59000×10^17 NP1:ϕs301.00000°,
δ11.00000°,λ15.00000°. NP2:ϕs195.00000°,δ87.00000°,
λ100.00000°. Principal axes: T 2.4018, Plg47.0000°,
*Azm116.0000°; N 0

BKZ S Sn 12 39 25.9 -20
SANVU Saraoutou 17.33 293 P **P** **12 36 38.1 +1.1**
SANVU Saraoutou 17.33 293 P **P** **12 36 42.1 +5.0**
comp=Z,774nm,1.0s
MCHZ McNeill Hill 17.42 198 P **Pn** **12 36 34.8 -2.6**
MCHZ S Sn 12 39 31.3 -19
KWHZ Kaweka Forest 17.48 199 P **Pn** **12 36 34.6 -3.6**
KWHZ S Sn 12 39 36.2 -16
NGZ Ngauruhoe 17.52 201 P **Pn** **12 36 36.7 -2.1**
BHHZ Black Hill Sta 17.65 200 P **Pn** **12 36 36.4 -4.0**
BHHZ S Sn 12 39 39.5 -17
WNWZ Wahianoa 17.66 201 P **Pn** **12 36 37.6 -2.9**
MOVZ Moawhango 17.68 201 P **Pn** **12 36 36.6 -4.0**
KAHZ Kahuranaki 17.69 198 P **Pn** **12 36 38.4 -2.4**
KAHZ S Sn 12 39 35.9 -21
KRHZ Kereru 17.70 199 P **Pn** **12 36 36.5 -4.4**
KRHZ S Sn 12 39 36.9 -20
MTVZ Mangateitei 17.75 201 P **Pn** **12 36 41.0 -0.5**
MTVZ S Sn 12 39 40.9 -18
PXZ Pawanui 17.92 197 P **P** **12 36 39.5 -3.9**
PXZ S Sn 12 39 41.1 -21
PNHZ Pukenui 18.00 199 P **P** **12 36 39.6 -4.8**
PNHZ S Sn 12 39 42.4 -22
WPHZ Waipukurau 18.07 198 P **P** **12 36 42.5 -2.6**
TSZ Takapari Road 18.20 199 P **P** **12 36 43.9 -2.7**
DVHZ Dannevirke 18.36 199 P **P** **12 36 45.2 -3.1**
PRWZ Pori Road 18.66 199 P **P** **12 36 48.3 -3.2**
BFZ Birch Farm 18.69 198 P **P** **12 36 50.0 -2.0**
MSWZ Moikau Station 19.66 199 P **P** **12 37 00.4 -2.1**
SNZO South Karori 19.74 201 P **P** **12 37 03.4 +0.1**
BHW Baring Head 19.77 200 P **P** **12 37 01.6 -2.0**
PLWZ Palliser 19.80 199 P **P** **12 37 02.9 -1.1**
QRZ Quartz Range 20.09 205 P **P** **12 37 05.0 -2.2**
TUWZ Tuamarina 20.10 202 P **P** **12 37 02.9 -4.3**
NNZ Nelson 20.11 203 P **P** **12 37 05.3 -2.0**
CMWZ Cape Campbell 20.29 201 P **P** **12 37 06.4 -3.0**
BSWZ Blackbirch Sta 20.38 202 P **P** **12 37 07.2 -3.0**
KNTN Kanton 20.62 13 P **P** **12 37 10.9 -2.1**
THZ Tophouse 20.76 203 P **P** **12 37 13.2 -1.3**
KHZ Kahutara 21.11 201 P **P** **12 37 15.0 -3.1**
LTZ Lake Taylor 21.88 203 P **P** **12 37 25.9 -0.5**
OXZ Oxford 22.43 203 P **P** **12 37 31.5 -0.8**
MQZ McQueen's Vall 22.56 201 P **P** **12 37 32.1 -1.5**
RPZ Rata Peaks 23.13 204 P **P** **12 37 37.0 -2.6**
comp=Z,12nm,0.4s,baz=18,slow=2.5,SNR=11
RPZ S **S** **12 41 38.0 -8.2**
comp=Z,5.7nm,0.3s,baz=324,slow=18,SNR=2.1
RPZ LR LR 12 46 45.8
comp=Z,522nm,21.0s,baz=28,slow=36
RPZ Rata Peaks 23.13 204 P **P** **12 37 37.9 -1.6**
FOZ Fox Glacier 23.46 206 P **P** **12 37 41.0 -1.6**
LHI Lord Howe Isla 23.46 244 P **P** **12 37 42.1 -0.7**
baz=23,SNR=4.2
LHI Lord Howe Isla 23.46 244 P **P** **12 37 42.3 -0.5**
LHI IAmb IAmb 12 37 46.3
comp=Z,84nm,0.9s
LHI Lord Howe Isla 23.46 244 P **P** **12 37 45.9 +3.1**
LBZ Lake Benmore 24.03 204 P **P** **12 37 46.4 -1.4**
ODZ Otahua Downs 24.42 203 P **P** **12 37 51.0 -0.3**
TBI Tubuai 24.63 96 *e*P **P** **12 37 54.1 +0.6**
comp=Z,697nm,1.4s
TBI *e*LQ LQ 12 42 48.6
comp=Z,858nm,31.0s
TBI *e*LR LR 12 43 55.7
comp=Z,5μm,30.5s,baz=263
TBI Tubuai 24.63 96 *e*T T 13 02 49.6
comp=Z,76nm,0.4s
PAE Paea 25.56 83 *e*P **P** **12 38 02.0 0.0**
comp=Z,18nm,1.1s
PAE Paea 25.56 83 *e*T T 13 03 27.1
comp=Z,57nm,0.4s
PPT2 Papeete2 25.59 83 *e*P **P** **12 38 02.8 +0.5**
comp=Z,114nm,1.2s
PPT2 *e*S **S** **12 42 17.1 -9.1**
comp=Z,548nm,23.2s
PPT2 *e*LR LR 12 44 21.4
comp=Z,7μm,28.5s,baz=249
PPT2 Papeete2 25.59 83 *e*T T 13 03 30.0
comp=Z,72nm,0.4s
PPT Papeete 25.59 83 P **P** **12 38 03.3 +1.0**
comp=Z,60nm,0.8s,baz=197,slow=19,SNR=7.9
PPT LR LR 12 45 31.0
comp=Z,907nm,21.3s,baz=252,slow=30
MLZ Mavora Lakes 25.66 206 P **P** **12 38 02.3 -0.4**
WHZ Wether Hill Ro 26.16 206 P **P** **12 38 06.2 -0.9**
WHZ IAmb IAmb 12 38 10.3
comp=Z,63nm,1.2s
HNR Honiara 26.49 297 LR LR 12 47 24.0
comp=Z,130nm,19.0s,baz=156,slow=34
HNR Honiara 26.49 297 P **P** **12 38 12.1 +1.7**
HNR pmax pmax
comp=Z,280nm,1.1s
HNR Honiara 26.49 297 P **P** **12 38 12.1 +1.7**
MEH Mehetia 26.89 84 *e*P **P** **12 38 14.5 +0.5**
comp=Z,33nm,1.3s
MEH Mehetia 26.89 84 *e*T T 13 05 36.8
comp=Z,150nm,0.3s
ARMA Armidale 29.54 249 P **P** **12 38 38.7 +1.1**
baz=30,SNR=11
ARMA Armidale 29.54 249 P **P** **12 38 38.5 +0.8**
ARMA IAmb IAmb 12 38 44.1
comp=Z,56nm,1.3s
EIDS Eidsvold 29.84 259 P **P** **12 38 40.6 +0.4**
baz=30,SNR=9.5
EIDS Eidsvold 29.84 259 P **P** **12 38 40.2 0.0**
EIDS IAmb IAmb 12 38 41.8
comp=Z,40nm,1.2s
MGCD Mangrove Creek 30.40 243 P **P** **12 38 46.2 +1.1**
baz=30,SNR=19
RMQ Roma 31.89 257 P **P** **12 38 59.5 +1.2**
baz=32,SNR=36
CNB Canberra Magne 32.25 240 P **P** **12 39 00.8 -0.7**
baz=32,SNR=9.9
CAN Canberra 32.54 240 P **P** **12 39 06.3 +2.3**
CAN pmax pmax
comp=Z,59nm,1.5s
CMSA Cobar Meteorol 34.72 248 P **P** **12 39 22.5 -0.4**
baz=35,SNR=31
CTA Charters Tower 34.92 268 P **P** **12 39 25.4 +0.6**
comp=Z,122nm,0.5s,baz=92,slow=12
CTAO Charters Tower 34.92 268 P **P** **12 39 24.9 +0.1**
CTAO pmax pmax
comp=Z,130nm,0.6s
CTAO Charters Tower 34.92 268 P **P** **12 39 24.9 +0.1**
TOO Toolangi 35.80 237 P **P** **12 39 32.7 +0.6**
baz=36,SNR=8.0
TOO Toolangi 35.80 237 P **P** **12 39 31.5 -0.7**
TOO pmax pmax
comp=Z,49nm,1.3s
TOO Toolangi 35.80 237 P **P** **12 39 31.5 -0.7**
TOO IAmb IAmb 12 39 38.2
comp=Z,48nm,1.3s
RABL Rabaul 35.81 297 P **P** **12 39 31.0 -1.4**
RABL IAmb IAmb 12 39 53.2
comp=Z,31nm,0.7s
QLP Quilpie 35.94 256 P **P** **12 39 33.8 +0.4**
baz=36,SNR=14
MTSU Mount Surprise 37.15 270 P **P** **12 39 44.1 +0.3**
baz=37,SNR=59
TAOE Nuku Hiva Isla 37.35 74 *e*LR LR 12 49 45.0
comp=Z,3μm,29.6s
TAOE Nuku Hiva Isla 37.35 74 *e*T T 13 18 39.7
comp=Z,96nm,0.3s
PMG Port Moresby 37.52 285 LR LR 12 52 34.1
comp=Z,741nm,19.7s,baz=116,slow=32
PMG Port Moresby 37.52 285 *d i*P **P** **12 39 46.8 -0.2**
PMG pmax pmax
comp=Z,178nm,1.0s
PMG Port Moresby 37.52 285 P **P** **12 39 47.1 +0.1**
PMG Port Moresby 37.52 285 P **P** **12 39 47.1 +0.1**
RKT Rikitea 37.89 98 *e*LQ LQ 12 48 29.7
comp=Z,720nm,24.8s
RKT *e*LR LR 12 50 00.3
comp=Z,4μm,30.8s
RKT Rikitea 37.89 98 *e*T T 13 19 24.4
comp=Z,20nm,0.3s
STKA Stephens Creek 38.22 247 P **P** **12 39 52.0 -0.8**
comp=Z,10nm,0.4s,baz=96,slow=9.6,SNR=46
STKA LR LR 12 53 14.8
comp=Z,1μm,20.7s,baz=81,slow=32
STKA Stephens Creek 38.22 247 P **P** **12 39 52.2 -0.5**
baz=38,SNR=53
STKA Stephens Creek 38.22 247 *d i*P **P** **12 39 52.0 -0.8**
STKA Stephens Creek 38.22 247 P **P** **12 39 52.8 +0.1**
ARPS Mount Arapiles 38.51 239 P **P** **12 39 56.6 +1.5**
baz=38,SNR=5.9
COEN Coen 39.40 276 P **P** **12 40 03.0 +0.1**
COEN IAmb IAmb 12 40 08.5
comp=Z,54nm,0.9s
HTT Hallett 40.55 245 P **P** **12 40 11.1 -1.1**
baz=40,SNR=26
QIS Mount Isa 40.94 265 P **P** **12 40 14.7 -0.8**
baz=41,SNR=13
MANU Manus Island 40.97 295 P **P** **12 40 15.4 -0.3**
BBOO Buckleboo 42.93 246 P **P** **12 40 29.9 -1.7**
baz=43,SNR=33
BBOO Buckleboo 42.93 246 P **P** **12 40 30.0 -1.7**
AS31 Alice Springs 45.56 259 P **P** **12 40 51.6 -1.3**
ASAR Alice Springs 45.56 259 P **P** **12 40 51.8 -1.1**
comp=Z,42nm,0.9s,baz=92,slow=7.7,SNR=430
ASAR PcP **PcP** **12 42 31.1 +0.5**
comp=Z,4.9nm,0.6s,baz=102,slow=4.1,SNR=2.1
ASAR ScP **ScP** **12 46 16.8 -1.5**
comp=Z,4.2nm,0.9s,baz=109,slow=4.3,SNR=6.7
ASAR S **S** **12 47 25.0 -5.9**
comp=Z,1.3nm,0.9s,baz=98,slow=15,SNR=4.5
ASAR ScS **ScS** **12 50 38.6 -5.4**
comp=Z,2.6nm,1.0s,baz=90,slow=7.4,SNR=7.9
ASAR LR LR 12 58 43.7
comp=Z,1μm,18.3s,baz=116,slow=34
ASAR Alice Springs 45.56 259 P **P** **12 40 50.5 -2.3**
WR0 Warramunga Arr 45.71 264 P **P** **12 40 52.5 -1.4**
WR0 IAmb IAmb 12 40 56.9
comp=Z,31nm,0.7s
WB2 Warramunga Arr 45.89 264 P **P** **12 40 53.7 -1.7**
WB0 Warramunga Arr 45.89 264 P **P** **12 40 53.9 -1.5**
WRAB Tennant Creek 45.89 264 P **P** **12 40 54.0 -1.4**
WRAB pmax pmax
comp=Z,109nm,1.0s
WRAB Tennant Creek 45.89 264 P **P** **12 40 54.0 -1.4**
WRA Warramunga Arr 45.90 264 P **P** **12 40 54.0 -1.4**
comp=Z,87nm,0.9s,baz=102,slow=8.3,SNR=185
WRA PcP **PcP** **12 42 31.8 +0.1**
comp=Z,17nm,0.9s,baz=98,slow=4.0,SNR=5.9
WRA ScP **ScP** **12 46 18.8 -0.9**
comp=Z,8.1nm,1.1s,baz=98,slow=4.2,SNR=9.2
WRA S S 12 47 24.4 -11
comp=Z,6.4nm,1.1s,baz=101,slow=14,SNR=8.0
WRA ScS **ScS** **12 50 39.6 -6.6**
comp=Z,1.2nm,1.1s,baz=118,slow=6.8,SNR=3.5
WRA LR LR 12 59 14.0
comp=Z,467nm,18.9s,baz=100,slow=35
WRA Warramunga Arr 45.90 264 P **P** **12 40 53.0 -2.5**
JAY Jayapura 46.40 290 LR LR 12 59 08.2
comp=Z,293nm,19.1s,baz=126,slow=34
JAY Jayapura 46.40 290 P **P** **12 40 59.3 -0.1**
JAY pmax pmax
comp=Z,90nm,1.0s
JAY Jayapura 46.40 290 P **P** **12 40 59.3 -0.1**
comp=Z,773nmcomp=Z,56nm,0.9s
GENI Genyem 46.82 289 P **P** **12 41 02.3 -0.4**
comp=Z,3μmcomp=Z,54nm,0.5s
KIP Kipapa 47.63 23 *e*P **P** **12 41 09.1 +0.3**
KIP pmax pmax
comp=Z,227nm,2.2s
KDU Kakadu 49.65 273 P **P** **12 41 22.9 -1.6**
baz=50,SNR=24
FORT Forrest 49.82 248 P **P** **12 41 23.7 -1.9**
baz=50,SNR=39
FORT Forrest 49.82 248 P **P** **12 41 23.8 -1.9**
WRKA Warakurna 50.37 256 P **P** **12 41 28.5 -1.5**
baz=50,SNR=56
MTN Manton Dam 50.83 272 P **P** **12 41 32.3 -1.2**
baz=51,SNR=19
MTN Manton Dam 50.83 272 P **P** **12 41 32.5 -1.0**
BAKI Biak 51.05 288 P **P** **12 41 36.4 +1.3**
comp=Z,2μmcomp=Z,115nm,0.9s
FAKI Fak Fak 53.66 284 P **P** **12 41 54.9 +0.5**
FAKI Fak Fak 53.66 284 P **P** **12 41 53.5 -1.0**
comp=Z,65nm,1.0s
FITZ Fitzroy Crossi 54.33 264 P **P** **12 41 58.3 -0.9**
baz=54,SNR=130
FITZ Fitzroy Crossi 54.33 264 P **P** **12 41 58.6 -0.7**
KMBL Kambalda 55.02 247 P **P** **12 42 04.0 -0.2**
baz=55,SNR=6.2
BNDI Bandanaira 55.08 281 P **P** **12 42 04.7 -0.1**
comp=Z,3μmcomp=Z,6μmcomp=Z,175nm,1.0s
SIJI Sorong 55.46 286 LR LR 13 06 57.1
comp=Z,253nm,19.0s,baz=106,slow=37
SBA Scott Base 55.47 184 P **P** **12 42 09.6 +3.0**
SBA pmax pmax
comp=Z,18nm,0.8s
SBA Scott Base 55.47 184 P **P** **12 42 09.6 +3.0**
SBA IAmb IAmb 12 42 12.9
comp=Z,18nm,0.8s
SWI Sorong 55.47 286 P **P** **12 42 07.9 +0.3**
comp=Z,2μmcomp=Z,332nm,1.0s
VNDA Vanda 55.55 186 P **P** **12 42 09.5 +2.3**
comp=Z,5.5nm,0.8s,baz=2.7,slow=8.0,SNR=22
VNDA LR LR 13 04 09.5
comp=Z,106nm,19.5s,baz=9.0,slow=34
VNDA Vanda 55.55 186 P **P** **12 42 09.7 +2.5**
VNDA pmax pmax
comp=Z,24nm,1.5s
VNDA Vanda 55.55 186 P **P** **12 42 09.7 +2.5**
MSAI Masohi 56.46 282 P **P** **12 42 24.0 +9.4**
NLAI Namlea 58.16 281 P **P** **12 42 26.4 -0.2**
comp=Z,1μmcomp=Z,66nm,1.2s
SOEI Soe 58.21 273 P **P** **12 42 27.0 -0.1**
SOEI Soe 58.21 273 P **P** **12 42 27.8 +0.6**
comp=Z,2μmcomp=Z,222nm,0.8s
KLBR Kellerberrin 58.48 246 P **P** **12 42 27.3 -1.4**
baz=58,SNR=27
BATI Baumata 58.61 272 P **P** **12 42 31.3 +1.5**
comp=Z,66nm,0.6s
PSA00 Pilbara Seismi 58.70 258 P **P** **12 42 28.9 -1.4**
PSA00 IAmb IAmb 12 42 30.7
comp=Z,36nm,1.1s
PSA00 Pilbara Seismi 58.70 258 P **P** **12 42 27.1 -3.2**
PSA00 IAmb IAmb 12 42 33.8
comp=Z,25nm,1.4s
NWAO Narrogin (SRO) 58.71 244 P **P** **12 42 29.2 -1.0**
baz=59,SNR=5.9
NWAO Narrogin (SRO) 58.71 244 P **P** **12 42 29.4 -0.8**
NWAO pmax pmax
comp=Z,18nm,0.9s
NWAO Narrogin (SRO) 58.71 244 P **P** **12 42 29.4 -0.8**
NWAO IAmb IAmb 12 42 32.9
comp=Z,18nm,0.9s
NWAO Narrogin (SRO) 58.71 244 P **P** **12 42 29.2 -1.0**
NWAO IAmb IAmb 12 42 32.9
comp=Z,15nm,0.9s
BLDU Ballidu 59.53 247 P **P** **12 42 34.4 -1.6**
baz=59,SNR=30
SANI Sanana 59.66 282 P **P** **12 42 36.5 -0.6**
comp=Z,80nm,0.9s
TNTI Ternate 59.67 285 P **P** **12 42 35.8 -1.3**
TNTI Ternate 59.67 285 P **P** **12 42 38.5 +1.4**
comp=Z,976nmcomp=Z,109nm,1.1s
MUN Mundaring 59.72 245 P **P** **12 42 36.1 -1.1**
baz=60,SNR=10
MORW Morawa 60.39 249 P **P** **12 42 40.4 -1.5**
baz=60,SNR=27
MORW Morawa 60.39 249 P **P** **12 42 40.7 -1.2**
MORW IAmb IAmb 12 42 44.9
comp=Z,27nm,0.8s
MMRI Maumere 60.48 273 P **P** **12 42 40.8 -1.9**
MMRI Maumere 60.48 273 P **P** **12 42 41.2 -1.5**
comp=Z,75nm,0.9s
EDFI Ende, Flores 60.95 273 P **P** **12 42 44.9 -1.1**
comp=Z,523nmcomp=Z,52nm,0.8s
CASY Casey 62.38 206 P **P** **12 42 55.8 +1.1**
CASY IAmb IAmb 12 43 00.1
comp=Z,31nm,0.8s
LUWI Luwuk 63.00 281 P **P** **12 42 58.9 -0.7**
LUWI Luwuk 63.00 281 P **P** **12 42 57.3 -2.3**
comp=Z,61nm,1.2s
GIRL Giralia 63.45 255 P **P** **12 43 02.8 +0.3**
baz=63,SNR=9.1
GIRL Giralia 63.45 255 P **P** **12 43 02.7 +0.2**
GTOI Gorontalo 63.51 283 P **P** **12 43 03.1 +0.2**
comp=Z,42nm,0.9s
JCJ Chichijima 64.01 319 LR LR 13 06 11.3
comp=Z,247nm,21.7s,baz=126,slow=32
BNSI Bone 64.05 277 P **P** **12 43 05.5 -1.0**
comp=Z,33nm,0.8s
APSI Ampana 64.07 281 P **P** **12 43 04.9 -1.8**
comp=Z,34nm,0.9s
KAPI Kappang 64.13 276 P **P** **12 43 05.8 -1.3**
KAPI pmax pmax
comp=Z,10.0nm,0.9s
KAPI Kappang 64.13 276 P **P** **12 43 05.8 -1.3**
MRSI Marisa 64.40 282 P **P** **12 43 07.8 -1.0**
PLAI Plampang 64.52 271 P **P** **12 43 08.2 -1.4**
comp=Z,76nm,1.0s
SPSI Sidrap Palu 64.53 277 P **P** **12 43 07.4 -2.3**
comp=Z,16nm,0.8s
TWSI Taliwang, Sumb 65.38 271 P **P** **12 43 14.7 -0.5**
comp=Z,25nm,1.6s
TOLI2 Tolitoli 65.72 282 P **P** **12 43 16.0 -1.4**
TOLI2 IAmb IAmb 12 43 22.0
comp=Z,22nm,0.7s
QSPA South Pole Qui 67.05 180 P **P** **12 43 26.6 +1.4**
comp=Z,11nm,0.6s,baz=21,slow=0.9,SNR=72
QSPA South Pole Qui 67.05 180 P **P** **12 43 26.9 +1.6**
QSPA IAmb IAmb 12 43 31.8
comp=Z,64nm,1.3s
BBKI Banjar Baru 69.24 275 P **P** **12 43 39.9 +0.2**
comp=Z,26nm,0.6s
KKM Kota Kinabalu 71.97 285 P **P** **12 43 56.1 -0.2**
JOW Kunigami 73.02 310 P **P** **12 44 00.6 -1.7**
comp=Z,16nm,0.8s,baz=167,slow=11,SNR=2.8
MJAR Matsushiro Arr 73.20 323 P **P** **12 44 01.0 -2.0**
comp=Z,4.9nm,0.9s,baz=153,slow=6.5,SNR=6.5
MJAR LR LR 13 11 26.5
comp=Z,182nm,21.8s,baz=100,slow=32
MAJO Matsushiro 73.20 323 *e*P **P** **12 44 02.5 -0.6**
MAJO pmax pmax
comp=Z,7.0nm,0.9s
MAT Matsushiro 73.20 323 P **P** **12 44 01.5 -1.6**
MAT S **S** **12 53 25.4 -1.1**
SBUM Sibu 74.02 280 P **P** **12 44 07.3 -1.1**
SBUM Sibu 74.02 280 P **P** **12 44 08.0 -0.4**
CISI Cisompet, Garu 74.16 268 P **P** **12 44 07.8 -1.5**
CISI IAmb IAmb 12 44 13.1
comp=Z,32nm,0.7s
CISI Cisompet, Garu 74.16 268 P **P** **12 44 08.3 -1.0**
comp=Z,56nm,0.8s
ADK Adak 74.60 360 P **P** **12 44 10.6 -0.2**
ADK pmax pmax
comp=Z,81nm,1.0s
ADK Adak 74.60 360 P **P** **12 44 10.6 -0.2**
JNU Nakatsue 75.22 316 P **P** **12 44 14.6 -0.4**
comp=Z,125nm,0.9s,baz=123,slow=3.4,SNR=5.1
JNU Nakatsue 75.22 316 IAmb IAmb 12 44 15.9
comp=Z,19nm,0.9s
KSM Kuching 75.36 278 P **P** **12 44 14.9 -1.3**
KSM IAmb IAmb 12 44 20.2
comp=Z,21nm,0.8s
KSM Kuching 75.36 278 P **P** **12 44 15.0 -1.2**
H06S1 SOCORRO T 76.08 63 T T 14 07 49.6
SNR=6.1
NACB Ninganchiao 76.43 304 P **P** **12 44 21.3 -0.6**
NACB IAmb IAmb 12 44 24.3
comp=Z,39nm,0.9s
TPUB Ta-pu 76.70 303 P **P** **12 44 22.4 -1.1**
SSLB Suanglung 76.71 303 IAmb IAmb 12 44 22.7
comp=Z,27nm,0.7s
ASAJ Asahikawa 76.72 331 P **P** **12 44 24.1 +1.0**
comp=Z,6.7nm,0.6s,baz=191,slow=16,SNR=4.6
ASAJ LR LR 13 14 34.6
comp=Z,211nm,19.8s,baz=108,slow=33
BELA Belgrano 2 76.84 172 IAmb IAmb 12 44 28.9
comp=Z,49nm,1.3s
SKR Severo-Kuril's 77.35 342 *e*P **P** **12 44 26.5 0.0**
SKR *e*S **S** **12 54 06.6 -5.2**
SKR pmax pmax
comp=Z,100nm,11.2s
SKR MLR MLR
comp=Z,100nm,19.0s
LWLI Liwa 78.57 269 P **P** **12 44 35.6 +1.3**
comp=Z,44nm,0.7s
PKM Mcpherson Peak 78.64 44 P 12 44 36.4
baz=232
PMBI Palembang 78.71 272 P P 12 44 45.3 +10
SAO San Andreas Ge 78.79 42 P **P** **12 44 36.2 +1.3**
SAO pmax pmax
comp=Z,23nm,1.0s
SAO San Andreas Ge 78.79 42 P **P** **12 44 36.2 +1.3**
SAO IAmb IAmb 12 44 37.6
comp=Z,23nm,0.9s
PET Petropavlovsk 78.82 345 *e*P **P** **12 44 34.8 +0.2**
PET *e*S **S** **12 54 30.4 +2.9**
YSS Yuzh-Sakhalins 78.88 333 *e*P **P** **12 44 37.9 +2.9**
PETK Petropavlovsk- 79.13 344 P **P** **12 44 35.7 -0.6**
comp=Z,14nm,0.9s,baz=116,slow=8.0,SNR=17
PETK LR LR 13 14 22.9
comp=Z,182nm,20.2s,baz=152,slow=32
ARVC Arvin 79.42 45 P 12 44 40.3
baz=232
ESJX Sierra Juarez 79.49 49 P **P** **12 44 39.4 +0.3**
MURC Murrieta 79.58 47 P 12 44 40.7
baz=233,SNR=6.1
BFSC Mount Baldy Ra 79.65 46 P 12 44 41.1
baz=233,SNR=5.5
MONP2 Monument Peak 79.68 48 P 12 44 41.6
baz=234,SNR=7.5
VES Vestal, Richgr 79.69 44 P 12 44 41.4
baz=232,SNR=7.1
MAW Mawson 79.73 200 P **P** **12 44 41.0 +1.5**
comp=Z,57nm,1.0s,baz=135,slow=5.9,SNR=20
MAW LR LR 13 17 33.0
comp=Z,248nm,21.1s,baz=99,slow=34
MAW Mawson 79.73 200 P **P** **12 44 40.8 +1.3**
RMX La Rumorosa 79.75 48 IAmb IAmb 12 44 47.6
comp=Z,24nm,1.0s
IKP In-Ko-Pah, Jac 79.75 48 P 12 44 42.1
baz=234,SNR=7.2
EDW2 Edwards Air Fo 79.81 45 P 12 44 42.2
baz=233,SNR=16
KSRS Korea Array 79.85 318 P **P** **12 44 40.2 -0.3**
comp=Z,3.1nm,0.9s,baz=149,slow=6.6,SNR=7.7
KSRS LR LR 13 14 36.9
comp=Z,143nm,21.3s,baz=126,slow=32
ISA Isabella, Lake 79.98 44 P 12 44 43.5
baz=232,SNR=17
ISA Isabella, Lake 79.98 44 P **P** **12 44 38.4 -3.1**
ISA pmax pmax
comp=Z,33nm,1.0s
ISA Isabella, Lake 79.98 44 P **P** **12 44 38.4 -3.1**
ISA IAmb IAmb 12 44 44.1
comp=Z,33nm,1.0s
PFO Pinyon Flats O 80.08 47 P 12 44 43.9
baz=234,SNR=7.2
TPFO Pinon Flats 80.08 47 P 12 44 43.8
baz=234,SNR=6.8
PFO Pinyon Flats O 80.08 47 P **P** **12 44 43.3 +1.2**
comp=Z,11nm,0.9s,baz=234,slow=2.5,SNR=13
PFO Pinyon Flats O 80.08 47 *d i*P **P** **12 44 43.4 +1.3**
PFO pmax pmax
comp=Z,21nm,1.0s
SWSC Sam W. Stewart 80.14 48 P 12 44 43.9
baz=234
O02D Mt. Diablo Mer 80.21 39 P 12 44 44.8
baz=229,SNR=12
CMB Columbia Colle 80.25 42 P **P** **12 44 41.6 -1.2**
CMB pmax pmax
comp=Z,12nm,1.0s
CMB Columbia Colle 80.25 42 P **P** **12 44 41.6 -1.2**
LRMC Laurel Mtn Rad 80.38 45 P 12 44 45.7
baz=233
KSI Kapahiang 80.44 270 P **P** **12 44 44.3 -0.1**
comp=Z,6μmcomp=Z,72nm,1.0s
CHGN Chignik 80.46 10 P 12 44 45.1
baz=197
RRX Edison Barstow 80.47 46 P 12 44 45.8
baz=233
ORV Oroville 80.55 40 P **P** **12 44 44.9 +0.5**
ORV pmax pmax
comp=Z,11nm,1.0s
ORV Oroville 80.55 40 P **P** **12 44 44.9 +0.5**
WDC Whiskeytown Da 80.62 38 P **P** **12 44 45.4 +0.7**
WDC pmax pmax
comp=Z,19nm,1.1s
WDC Whiskeytown Da 80.62 38 P **P** **12 44 45.4 +0.7**
BELC Belle Mtn. Jos 80.62 47 P 12 44 46.8
baz=234,SNR=10.0
CWC Cottonwood Cre 80.70 44 P 12 44 47.0
baz=232
N02D Trinity Center 80.78 38 P 12 44 47.7
baz=229,SNR=5.5
BC3 Big Chuckawall 80.78 48 P 12 44 47.7
baz=234,SNR=7.6
MPMC Manual Prospec 80.85 45 P 12 44 47.9
baz=233,SNR=16
O03E Paynes Creek 80.86 39 P 12 44 47.2
baz=229,SNR=8.4

GLA Glamis 80.87 48 P 12 44 48.3
baz=235
GLA Glamis 80.87 48 P **P** **12 44 46.6 +0.3**
GLA pmax pmax
comp=Z,24nm,1.1s
GLA Glamis 80.87 48 P **P** **12 44 46.6 +0.3**
GLA IAmb IAmb 12 44 49.1
comp=Z,24nm,1.1s
HEC Hector-Ludlow 80.88 46 P 12 44 48.0
baz=234,SNR=21
MLAC Mammoth, Mammo 80.95 43 P 12 44 49.3
baz=232
M02C Callahan 80.97 38 P 12 44 48.8
baz=228,SNR=6.7
TIN Tinemaha, Big 80.98 43 P 12 44 49.0
baz=232
L02E Cave Junction 81.07 37 P 12 44 49.2
baz=228
WAKR Walker 81.13 42 P **P** **12 44 48.5 +0.8**
WAKR IAmb IAmb 12 44 50.5
comp=Z,38nm,1.3s
YBH Yreka Blue Hor 81.28 38 P **P** **12 44 49.6 +1.3**
comp=Z,10nm,0.8s,baz=146,slow=0.8,SNR=23
YBH Yreka Blue Hor 81.28 38 P **P** **12 44 49.3 +1.0**
IRM Iron Mountain 81.28 47 P 12 44 50.5
baz=235,SNR=11
GMRC Granite Mounta 81.30 47 P 12 44 50.4
baz=234,SNR=8.8
K02D Willamette Mer 81.39 36 P 12 44 50.9
baz=228
PNTR Pine Nut 81.39 41 P **P** **12 44 50.8 +1.6**
PNTR IAmb IAmb 12 44 55.2
comp=Z,44nm,1.3s
MYKOM Kota Tinggi 81.40 276 P **P** **12 44 50.6 +1.1**
MYKOM Kota Tinggi 81.40 276 P **P** **12 44 53.0 +3.5**
DLV T Lat 81.40 287 P **P** **12 44 49.1 -0.5**
DLV IAmb IAmb 12 44 55.1
comp=Z,13nm,0.7s
HSIG 81.42 54 P **P** **12 44 50.1 +0.9**
HSIG IAmb IAmb 12 44 51.0
comp=Z,14nm,0.7s
BEKR Beckworth 81.43 40 P **P** **12 44 50.9 +1.7**
VCNR Virginia City 81.49 41 P **P** **12 44 51.0 +1.4**
VCNR IAmb IAmb 12 44 55.7
comp=Z,24nm,1.3s
FURC Furnace Creek, 81.50 45 P 12 44 51.2
baz=233,SNR=5.9
LHV Little Huntoon 81.54 42 P **P** **12 44 50.7 +1.1**
LHV IAmb IAmb 12 44 56.0
comp=Z,31nm,1.1s
YERR Yerington 81.55 41 P **P** **12 44 51.1 +1.2**
YERR IAmb IAmb 12 44 52.3
comp=Z,32nm,1.4s
J01E Myrtle Point 81.56 36 P 12 44 51.3
baz=227
214A Organ Pipe Nat 81.66 50 P 12 44 51.8
baz=236
214A Organ Pipe Nat 81.66 50 P **P** **12 44 50.1 -0.3**
HUMO Hull Mountain 81.72 37 P **P** **12 44 51.4 +0.8**
RYN Ryan 81.77 42 P **P** **12 44 51.3 +0.3**
NVAR Mina Array Bea 81.78 42 P **P** **12 44 52.3 +1.1**
comp=Z,14nm,1.0s,baz=225,slow=8.9,SNR=28
NVAR pP **sP** **12 45 15.0 +0.5**
comp=Z,6.4nm,0.9s,baz=225,slow=9.0,SNR=3.9
NVAR LR LR 13 14 08.4
comp=Z,130nm,20.9s,baz=206,slow=30
M04C Macdoel 81.80 38 P 12 44 52.7
baz=229,SNR=6.7
L04D Klamath Falls 81.83 37 P 12 44 52.9
baz=229,SNR=5.5
NV11 Mina Array Sit 81.87 42 P **P** **12 44 51.9 +0.3**
PAHR Pah Rah Range 81.91 41 P **P** **12 44 52.3 +0.5**
PAHR IAmb IAmb 12 44 57.8
comp=Z,26nm,1.3s
USA0B Ussuriysk Arra 81.96 325‖ *e*P **P** **12 44 52.8 +1.1**
USRK Ussuriysk Ar. 81.96 325 P **P** **12 44 51.9 +0.2**
comp=Z,7.7nm,0.8s,baz=113,slow=3.0,SNR=14
USRK LR LR 13 18 02.0
comp=Z,135nm,19.6s,baz=131,slow=33
USRK Ussuriysk Ar. 81.96 325 P **P** **12 44 52.0 +0.3**
USRK Ussuriysk Ar. 81.96 325 P **P** **12 44 52.0 +0.3**
PDMCI Parker Dam,Lak 82.05 48 P 12 44 54.5
baz=235,SNR=7.7
TPNV Topopah Spring 82.18 44 P 12 44 55.1
baz=234,SNR=14
TPNV Topopah Spring 82.19 44 P **P** **12 44 53.8 +0.5**
TPNV pmax pmax
comp=Z,17nm,0.9s
TPNV Topopah Spring 82.19 44 P **P** **12 44 53.8 +0.5**
TPNV IAmb IAmb 12 44 58.9
comp=Z,17nm,0.9s
I03D Drain, OR 82.24 36 P 12 44 54.8
baz=228
TPH Tonopah 82.24 43 P **P** **12 44 53.8 +0.2**
TPH pmax pmax
comp=Z,76nm,0.9s
TPH Tonopah 82.24 43 P **P** **12 44 53.8 +0.2**
KVN Kaiserville 82.28 42 P **P** **12 44 54.2 +0.4**
KVN pmax pmax
comp=Z,25nm,1.3s
KVN Kaiserville 82.28 42 P **P** **12 44 54.2 +0.4**
KVN IAmb IAmb 12 44 59.6
comp=Z,25nm,1.3s
J04D Umpqua Nationa 82.61 37 P 12 44 57.6
baz=229
SHPR Sheep Range 82.63 45 P **P** **12 44 55.9 +0.3**
NJ2 Nanjing 82.73 309 *e*P **P** **12 44 56.0 0.0**
NJ2 pmax pmax
comp=Z,24nm,0.6s
MOD Modoc Plateau 82.76 39 P **P** **12 44 56.1 0.0**
MOD IAmb IAmb 12 45 02.0
comp=Z,18nm,0.9s
I04A Tendick Farm, 82.81 36 P 12 44 57.6
baz=228
KDAK Kodiak Island 82.91 13 P **P** **12 44 56.8 +0.5**
comp=Z,14nm,0.9s,baz=192,slow=1.2,SNR=6.7
KDAK Kodiak Island 82.91 13‖ *e*P **P** **12 44 59.0 +2.7**
KDAK pmax pmax
comp=Z,134nm,1.9s
KDAK Kodiak Island 82.91 13 IAmb IAmb 12 45 06.8
comp=Z,41nm,1.2s
K05A Summer Lake 82.95 38 P **P** **12 44 58.1 +0.9**
K05A IAmb IAmb 12 44 59.9
comp=Z,32nm,1.0s
H04D Lebanon 83.12 35 P 12 44 59.6
baz=228
J05D Fort Rock, OR 83.12 37 P 12 44 59.5
baz=230
PRN Pahroc Range 83.23 45 P **P** **12 45 00.1 +1.4**
PRN IAmb IAmb 12 45 01.6
comp=Z,29nm,1.1s
H03S2 Juan Fernandez 83.24 124 T T 14 16 54.9
baz=245,slow=74,SNR=1603
H03S1 Juan Fernandez 83.25 124 T T 14 16 56.1
baz=245,slow=74,SNR=1830
H03S3 Juan Fernandez 83.25 124 T T 14 16 54.9
baz=245,slow=74,SNR=2214
TUC Tucson 83.29 51 P 12 45 00.8
baz=238
TUC Tucson 83.29 51 P **P** **12 45 00.6 +1.5**
TUC pmax pmax
comp=Z,25nm,1.0s
TUC Tucson 83.29 51 P **P** **12 45 00.6 +1.5**
TUC IAmb IAmb 12 45 02.0
comp=Z,24nm,0.9s
QIZ Qiongzhong 83.36 294 P **P** **12 44 57.3 -2.2**
QIZ S **S** **12 55 16.8 +0.6**
QIZ LR LR
comp=Z,260nm,14.2s
QIZ LR LR
comp=Z,170nm,12.7s
QIZ LR LR
comp=Z,220nm,20.6s
H03N2 Juan Fernandez 83.39 123 T T 14 17 02.6
baz=250,slow=72,SNR=1652
H03N3 Juan Fernandez 83.39 123 T T 14 17 02.6
baz=250,slow=72,SNR=1737
H03N1 Juan Fernandez 83.40 123 T T 14 17 01.9
baz=250,slow=72,SNR=1620
R11A Troy Canyon, C 83.44 44 P 12 45 00.9
baz=234,SNR=12
R11A Troy Canyon, C 83.44 44 P **P** **12 45 00.1 +0.3**
JRMM Jerantut 83.49 277 P **P** **12 45 00.0 -0.4**
MDJ Mudanjiang 83.51 324 P **P** **12 45 00.0 +0.3**
MDJ pP PcP 12 45 03.1 -0.8
MDJ sP pP 12 45 04.6 -12
MDJ pmax pmax
comp=Z,25nm,1.0s
MDJ pmax pmax
comp=Z,280nm,4.4s
MDJ Mudanjiang 83.51 324 P **P** **12 45 00.2 +0.5**
MDJ IAmb IAmb 12 45 02.0
comp=Z,20nm,1.0s
PINE Pine Mountain 83.61 37 P **P** **12 45 01.2 +0.7**
PINE IAmb IAmb 12 45 06.9
comp=Z,40nm,1.1s
I05D Terrebonne, OR 83.75 36 P 12 45 02.8
baz=229
WVOR Wild Horse Val 84.05 39 P **P** **12 45 03.8 +1.0**
WVOR pmax pmax
comp=Z,30nm,1.2s
WVOR Wild Horse Val 84.05 39 P **P** **12 45 03.8 +1.0**
WVOR IAmb IAmb 12 45 08.6
comp=Z,30nm,1.1s
LCMT Little Creek M 84.18 46 P **P** **12 45 04.2 +0.6**
LCMT IAmb IAmb 12 45 06.3
comp=Z,24nm,1.0s
G05D Wamic, OR 84.35 36 P 12 45 05.6
baz=229
HPIG 84.38 58 P **P** **12 45 05.2 +0.4**
CCUT Cedar City 84.41 45 P **P** **12 45 06.0 +1.2**
CCUT IAmb IAmb 12 45 07.8
comp=Z,19nm,1.0s
KNB Kanab 84.47 46 P **P** **12 45 05.9 +0.8**
KNB pmax pmax
comp=Z,35nm,1.1s
KNB Kanab 84.47 46 P **P** **12 45 05.9 +0.8**
KNB IAmb IAmb 12 45 08.0
comp=Z,35nm,1.1s
E04D Cinebar 84.56 34 P 12 45 07.1
baz=228
I07A Izee 84.60 37 P **P** **12 45 07.0 +1.5**
SYO Syowa Base 84.61 192‖ *i* PcP **PcP** **12 45 09.0 +0.5**
SYO Syowa Base 84.61 192‖ *e*pP pP 12 45 21.1 -0.8
SPR3 Spring Creek 3 84.61 44 P **P** **12 45 06.9 +1.0**
WUAZ Wupatki 84.61 48 P **P** **12 45 07.2 +1.4**
WUAZ IAmb IAmb 12 45 08.7
comp=Z,34nm,1.2s
WUAZ Wupatki 84.61 48 P 12 45 07.9
baz=237
SZCU Shurtz Canyon 84.62 45 P **P** **12 45 06.6 +0.8**
SZCU IAmb IAmb 12 45 08.7
comp=Z,27nm,1.1s
PSUT Pine Spring 84.65 44 P **P** **12 45 06.9 +1.0**
ZAIG Zacatecas 84.89 63 P **P** **12 45 07.8 +0.2**
PKCU Pink Cliffs 85.04 46 P **P** **12 45 08.2 +0.1**
IPM Ipoh 85.05 277 P **P** **12 45 08.0 -0.3**
IPM Ipoh 85.05 277 P **P** **12 45 08.0 -0.3**
ELK Elko 85.06 42 P **P** **12 45 08.1 +0.1**
ELK pmax pmax
comp=Z,11nm,1.1s
ELK Elko 85.06 42 P **P** **12 45 08.1 +0.1**
BRLK Bradley Lake 85.09 13 P **P** **12 45 08.1 +0.7**
BRSE Bradley Lake S 85.09 13 P 12 45 08.4
baz=204
CN2 Changchun 85.28 322 *e*P **P** **12 45 08.5 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
RSO Redoubt South 85.38 11 P **P** **12 45 10.3 +1.3**
SNAA Sanae 85.44 178 P **P** **12 45 09.6 +0.3**
SNAA Sanae 85.44 178‖ *i* P **P** **12 45 10.0 +0.7**
SNAA pmax pmax
comp=Z,16nm,1.5s
SNAA Sanae 85.44 178 P **P** **12 45 09.4 +0.1**
SNAA IAmb IAmb 12 45 14.4
comp=Z,34nm,1.2s
MTPU Mount Pierson 85.46 45 P **P** **12 45 11.7 +1.5**
MTPU IAmb IAmb 12 45 17.1
comp=Z,33nm,1.1s
VNA3 Neumayer Olymp 85.51 176 P **P** **12 45 09.9 +0.3**
VNA3 Neumayer Olymp 85.51 176 PP PP 12 48 28.1 +0.1
KLR Kul'dur 85.52 329 P **P** **12 45 10.1 +0.3**
comp=Z,4.8nm,0.9s,baz=113,slow=2.2,SNR=10
KLR Kul'dur 85.52 329 *c i* P **P** **12 45 10.2 +0.4**
KLR pmax pmax
comp=Z,5.0nm,0.9s
121A Cookes Peak, D 85.57 52 P 12 45 13.0
baz=239
121A Cookes Peak, D 85.57 52 P **P** **12 45 10.2 -0.5**
121A IAmb IAmb 12 45 17.4
comp=Z,26nm,1.1s
TCRU Three Creeks R 85.60 45 P **P** **12 45 11.3 +0.5**
TCRU IAmb IAmb 12 45 17.2
comp=Z,21nm,1.1s
G08A Pilot Rock 85.66 37 P **P** **12 45 10.7 0.0**
G08A IAmb IAmb 12 45 16.5
comp=Z,13nm,1.1s
KULM Kulim 85.71 278 P **P** **12 45 11.5 -0.1**
KULM IAmb IAmb 12 45 17.6
comp=Z,28nm,1.1s
KULM Kulim 85.71 278 P **P** **12 45 11.0 -0.6**
MSU Marysvale 85.72 45 P **P** **12 45 12.6 +1.2**
MSU Marysvale 85.72 45 P **P** **12 45 12.6 +1.2**
B05A Bryant 85.94 33 P 12 45 13.5
baz=228
VNA2 Neumayer--Watz 85.97 176 P **P** **12 45 12.5 +0.6**
baz=193,slow=3.8
VNA2 Neumayer--Watz 85.97 176 PP PP 12 48 32.2 +0.6
E07A Sunnyside 85.98 35 P **P** **12 45 13.1 +1.0**
E07A IAmb IAmb 12 45 14.0
comp=Z,21nm,1.2s
O22K Cooper Landing 85.98 13 P **P** **12 45 13.5 +1.7**
LTY Liberty 86.00 34 P **P** **12 45 12.6 +0.2**
LTY IAmb IAmb 12 45 17.8
comp=Z,21nm,1.5s
HAWA Hanford 86.05 35 P **P** **12 45 13.1 +0.6**
SPCR Spurr Chakacha 86.16 11 P 12 45 12.6
baz=202
VNA1 Neumayer--Stat 86.19 176 P **P** **12 45 13.5 +0.7**
VNA1 Neumayer--Stat 86.19 176 PP PP 12 48 32.3 -1.0
RPSI Rantau Prapat 86.27 274 P **P** **12 45 15.1 +0.7**
RPSI Rantau Prapat 86.27 274 IAmb IAmb 12 45 19.4
comp=Z,23nm,1.0s
NVL N'lazarevskaya 86.28 183 *e*P P 12 45 20.2 +6.9
NVL pmax pmax
comp=Z,14nm,0.8s
MFID Camas Ranch 86.29 39 IAmb IAmb 12 45 19.4
comp=Z,13nm,1.1s
PSI Prapat 86.31 275 P **P** **12 45 15.1 +0.4**
comp=Z,20nm,1.0s,baz=180,slow=7.3,SNR=9.7
PLCA Paso Flores 86.37 133 P **P** **12 45 15.8 +1.2**
comp=Z,18nm,1.0s,baz=237,slow=4.1,SNR=26
PLCA LR LR 13 16 14.0
comp=Z,102nm,21.2s,baz=240,slow=30
PLCA Paso Flores 86.37 133 P **P** **12 45 15.4 +0.8**
PLCA IAmb IAmb 12 45 17.5
comp=Z,27nm,1.0s
BI03 Tigo 86.38 129 P **P** **12 45 14.5 -0.1**
RC01 Rabbit Creek A 86.53 13 P 12 45 15.2
baz=204,SNR=7.1
RC01 Rabbit Creek A 86.53 13 P **P** **12 45 14.0 -0.5**
PWL Port Wells 86.61 13 P **P** **12 45 14.9 0.0**
MA2 Magadan 86.65 344 P **P** **12 45 14.4 -0.7**
comp=Z,13nm,0.8s,baz=150,slow=3.4,SNR=12
MA2 Magadan 86.65 344 *c i* P **P** **12 45 14.6 -0.5**
MA2 pmax pmax
comp=Z,17nm,1.0s
MA2 Magadan 86.65 344 P **P** **12 45 14.7 -0.4**
MA2 IAmb IAmb 12 45 15.4
comp=Z,19nm,0.9s
SUA Susitna One 86.68 12 P 12 45 15.8
baz=203,SNR=13
SUA Susitna One 86.68 12 P **P** **12 45 15.4 0.0**
TMUT Trail Mountain 86.79 45 P **P** **12 45 17.7 +1.0**
D08A Wollman Farm, 86.79 35 P **P** **12 45 16.0 -0.1**
D08A IAmb IAmb 12 45 18.3
comp=Z,12nm,0.9s
GLI Glacier Island 86.90 14 P 12 45 16.7
baz=207,SNR=7.6
GLI Glacier Island 86.90 14 P **P** **12 45 16.1 -0.2**
EYAK Cordova Ski Ar 86.91 15 P 12 45 17.4
baz=208
EYAK Cordova Ski Ar 86.91 15 IAmb IAmb 12 45 21.2
comp=Z,25nm,1.3s
MNTX Cornudas Mount 86.92 54 P 12 45 18.4
baz=241
MNTX Cornudas Mount 86.92 54 IAmb IAmb 12 45 19.6
comp=Z,22nm,0.9s
FID Port Fidalgo 86.92 14 IAmb IAmb 12 45 21.1
comp=Z,32nm,1.3s
GSI Gunungsitoli 86.97 273 P **P** **12 45 18.5 +0.7**
comp=Z,64nm,1.0s
F10A Beach Ranch, E 87.04 37 P **P** **12 45 17.3 -0.2**
F10A IAmb IAmb 12 45 23.0
comp=Z,21nm,1.1s
TX32 Lajitas Array 87.08 57 P **P** **12 45 18.9 +0.8**
TX32 IAmb IAmb 12 45 20.6
comp=Z,25nm,0.9s
TXAR Lajitas Array 87.08 57 P **P** **12 45 19.1 +1.0**
comp=Z,18nm,0.9s,baz=215,slow=7.1,SNR=74
TXAR pP **sP** **12 45 42.5 +1.0**
comp=Z,8.6nm,0.9s,baz=211,slow=7.0,SNR=4.6
TXAR LR LR 13 15 43.1
comp=Z,163nm,21.9s,baz=0.0,slow=30
TXAR Lajitas Array 87.08 57 P **P** **12 45 18.9 +0.9**
KNK Knik Glacier 87.09 13 P 12 45 17.3
baz=206
KNK Knik Glacier 87.09 13 P **P** **12 45 17.8 +0.6**
KNK IAmb IAmb 12 45 22.0
comp=Z,30nm,1.0s
SPUT South Promonto 87.11 43 P **P** **12 45 18.6 +0.6**
PMR Palmer 87.11 13 P 12 45 17.7
baz=205,SNR=8.8
SRU San Rafael Swe 87.13 45 P **P** **12 45 18.6 +0.4**
SRU pmax pmax
comp=Z,21nm,0.8s
SRU San Rafael Swe 87.13 45 P **P** **12 45 18.6 +0.4**
SRU IAmb IAmb 12 45 20.2
comp=Z,21nm,0.8s
HVU Hansel Valley 87.17 42 P **P** **12 45 18.8 +0.5**
HVU pmax pmax
comp=Z,16nm,1.3s
HVU Hansel Valley 87.17 42 P **P** **12 45 18.8 +0.5**
HVU IAmb IAmb 12 45 23.7
comp=Z,16nm,1.3s
P17A Butcher Ranch, 87.19 45 P **P** **12 45 19.4 +0.9**
P17A IAmb IAmb 12 45 24.4
comp=Z,19nm,1.1s
HLID Hailey 87.20 40 P 12 45 19.1
baz=234
HLID Hailey 87.21 40 P **P** **12 45 19.6 +1.2**
BNM Barren Site 87.22 51 P **P** **12 45 19.4 +0.6**
GHO Glory Hole Cre 87.32 13 P **P** **12 45 18.9 +0.5**
JLU Jordanelle 87.35 44 P **P** **12 45 19.7 +0.4**
B08A Colville Reser 87.40 34 P **P** **12 45 19.1 +0.1**
B08A IAmb IAmb 12 45 20.5
comp=Z,9.8nm,0.8s
WRAK Wrangell Islan 87.40 23 P 12 45 20.7
baz=220
SML Sawmill 87.47 13 P 12 45 22.4
baz=206
SML Sawmill 87.47 13 IAmb IAmb 12 45 35.6
comp=Z,25nm,1.1s
BMRM Bremner River 87.54 15 P 12 45 19.8
baz=209
C09A Chrisman Ranch 87.60 35 IAmb IAmb 12 45 21.8
comp=Z,16nm,0.8s
CUT Chulitna 87.63 12 P 12 45 20.2
baz=204,SNR=7.7
CUT Chulitna 87.64 12 P **P** **12 45 20.0 +0.2**
TCUT Toone Canyon 87.66 43 P **P** **12 45 20.7 -0.1**
TCUT IAmb IAmb 12 45 22.8
comp=Z,17nm,0.9s
KLU Klutina 87.70 14 P 12 45 20.9
baz=208,SNR=7.2
KLU Klutina 87.71 14 P **P** **12 45 20.8 +0.5**
KLU IAmb IAmb 12 45 24.8
comp=Z,24nm,1.1s
CRQM Cirque 87.72 16 P **P** **12 45 21.3 +0.8**
CRQM IAmb IAmb 12 45 25.8
comp=Z,27nm,1.0s
BI02 San Fabin de 87.72 129 P **P** **12 45 22.2 +1.1**
BI02 IAmb IAmb 12 45 23.3
comp=Z,22nm,0.8s
PV10 Paradox Valley 87.72 46 IAmb IAmb 12 45 25.6
comp=Z,12nm,0.9s
ANM Nome 87.72 5 P 12 45 23.2
baz=190
PV17 East Wray Mesa 87.72 47 IAmb IAmb 12 45 28.1
comp=Z,13nm,1.2s
ANMO Albuquerque 87.74 50 P 12 45 22.4
baz=240
ANMO Albuquerque 87.74 50 P **P** **12 45 22.7 +1.4**
comp=Z,12nm,0.9s,baz=218,slow=6.0,SNR=25
ANMO pP **sP** **12 45 45.5 +0.8**
comp=Z,7.5nm,1.0s,baz=206,slow=5.4,SNR=3.6
ANMO Albuquerque 87.74 50 *c i* P **P** **12 45 22.1 +0.8**
ANMO pmax pmax
comp=Z,15nm,1.0s
ANMO Albuquerque 87.74 50 P **P** **12 45 21.4 +0.2**
ANMO IAmb IAmb 12 45 23.6
comp=Z,16nm,0.9s
PPLA Purkeypile 87.74 11 P 12 45 22.2
baz=202
PV20 West Nyswonger 87.75 47 P **P** **12 45 20.6 -0.6**
PV20 IAmb IAmb 12 45 28.2
comp=Z,14nm,1.1s
PV13 Radium Mtn., P 87.75 47 P **P** **12 45 21.8 +0.6**
PV13 IAmb IAmb 12 45 28.3
comp=Z,13nm,1.2s
PV16 Nyswonger Mesa 87.77 47 P **P** **12 45 21.7 +0.4**
PV03 Paradox Valley 87.79 47 P **P** **12 45 22.1 +0.7**
TGL Tana Glacier 87.79 16 P **P** **12 45 20.9 +0.2**
TGL IAmb IAmb 12 45 26.1
comp=Z,37nm,1.2s
PV11 David Mesa, Pa 87.79 47 P **P** **12 45 21.3 -0.1**
PV04 Paradox Valley 87.82 47 P **P** **12 45 22.4 +0.9**
PV04 IAmb IAmb 12 45 28.8
comp=Z,11nm,1.0s
PV02 Paradox Valley 87.84 47 P **P** **12 45 22.2 +0.6**
PV02 IAmb IAmb 12 45 26.4
comp=Z,12nm,1.0s
PV01 Paradox Valley 87.91 47 P **P** **12 45 22.4 +0.4**
GDL2 Guadalupe Moun 87.92 54 P **P** **12 45 22.9 +0.9**
TABL Table Mountain 87.95 17 P **P** **12 45 22.9 +1.3**
TABL IAmb IAmb 12 45 28.9
comp=Z,25nm,1.0s
GRNC Granite Creek 88.04 16 P **P** **12 45 23.4 +1.3**
GRNC IAmb IAmb 12 45 29.8
comp=Z,28nm,1.0s
VRDI Verde Repeater 88.05 15 P **P** **12 45 22.8 +0.7**
VRDI IAmb IAmb 12 45 27.4
comp=Z,33nm,1.2s
PV15 Paradox Valley 88.08 47 P **P** **12 45 23.6 +0.8**
EFI East Falkland 88.08 147‖ *i* P **P** **12 45 23.4 +1.0**
EFI pmax pmax
comp=Z,63nm,1.1s
TPTI 88.09 274 P **P** **12 45 23.1 -0.1**
comp=Z,9.8nm,0.9s
N25K Chitina, Valde 88.11 15 P 12 45 23.1
baz=209
N25K Chitina, Valde 88.11 15 P **P** **12 45 22.8 +0.6**
N25K IAmb IAmb 12 45 31.4
comp=Z,23nm,0.9s
GLB Gilahina Butte 88.15 15 P **P** **12 45 23.0 +0.7**
GLB IAmb IAmb 12 45 29.3
comp=Z,17nm,1.0s
M24K Tolsona, Glenn 88.19 14 P 12 45 23.9
baz=208,SNR=6.3
M24K Tolsona, Glenn 88.20 14 P **P** **12 45 23.1 +0.5**
MCARA McCarthy VSAT 88.28 15 P 12 45 24.1
baz=210
WAT6 Susitna Watana 88.29 13 P 12 45 23.4
baz=206,SNR=18
LOGN Logan Glacier 88.32 16 P **P** **12 45 24.8 +1.5**
BARN Barnard Glacie 88.35 16 P **P** **12 45 24.9 +1.5**
CTG Chitna Glacier 88.35 16 P 12 45 24.6
baz=212
CTGM Chitina Glacie 88.35 16 P **P** **12 45 24.4 +1.0**
CTGM IAmb IAmb 12 45 28.8
comp=Z,21nm,0.9s
WAT2 Susitna Watana 88.47 12 P 12 45 24.1
baz=205,SNR=15
NEW Newport 88.50 35 P **P** **12 45 25.1 +0.8**
NEW Newport 88.50 35 P **P** **12 45 25.1 +0.8**
NEW IAmb IAmb 12 45 29.2
comp=Z,12nm,1.1s
NEW Newport 88.50 35 P 12 45 25.0
baz=232
RDMU Red Mountain 88.53 44 P **P** **12 45 25.9 +1.0**
TNA Tin City 88.54 3 P 12 45 24.9
baz=188
TNA Tin City 88.55 3 P **P** **12 45 24.6 +0.6**
TNA IAmb IAmb 12 45 30.5
comp=Z,10nm,0.8s
KTH Kantishna Hill 88.57 11 P **P** **12 45 23.8 -0.5**
TRF Thorofare Moun 88.59 11 P 12 45 24.4

baz=204,SNR=36
TRF Thorofare Moun 88.59 11 P P 12 45 24.3 -0.2
CHUM Lake Minchumin 88.64 10 P 12 45 24.1
baz=202,SNR=15
SKAG Skagway 88.80 20 P 12 45 27.5
baz=217
SKAG Skagway 88.80 20 P P 12 45 27.1 +1.7
RND Reindeer 88.82 12 P P 12 45 25.9 +0.4
RND pmax pmax
comp=Z,63nm,1.1s
RND Reindeer 88.82 12 P P 12 45 25.9 +0.4
BJI Beijing 88.82 315 P P 12 45 26.0 +0.1
BJI pmax pmax
comp=Z,9.0nm,0.9s
S22A 4UR Ranch, Cre 88.89 48 P 12 45 28.1
baz=240
BO02 Sierra Bellavi 88.93 128 P P 12 45 27.4 +0.5
BO02 IAmb IAmb 12 45 28.9
comp=Z,20nm,1.1s
CMIG Matias Romero 88.94 71 P P 12 45 28.0 +1.0
comp=Z,4.4nm,0.7s,baz=240,slow=5.6,SNR=4.0
BPAW Bear Paw Mtn. 89.07 11 P 12 45 26.0
baz=203,SNR=6.4
BPAW Bear Paw Mtn. 89.07 11 P P 12 45 25.7 -0.8
BPAW IAmb IAmb 12 45 29.7
comp=Z,12nm,1.2s
MCK McKinley 89.10 12 P 12 45 27.0
baz=205,SNR=23
MCK McKinley 89.10 12 P P 12 45 27.0 +0.2
MCK pmax pmax
comp=Z,35nm,1.1s
MCK McKinley 89.10 12 P P 12 45 26.9 +0.2
O20A White River Ci 89.17 45 P P 12 45 28.4 +0.5
O20A IAmb IAmb 12 45 33.0
comp=Z,9.9nm,1.0s
O20A White River Ci 89.17 45 P 12 45 28.9
baz=239
SEY Seymchan 89.20 346 P P 12 45 27.1 -0.1
comp=Z,29nm,0.9s,baz=149,slow=5.3,SNR=74
SEY Seymchan 89.20 346⇑ eP P 12 45 27.5 +0.3
HYT Haines Junctio 89.27 18 P P 12 45 28.6 +0.9
HYT IAmb IAmb 12 45 33.4
comp=Z,17nm,1.2s
GYA Guiyang 89.30 299 eP P 12 45 29.7 +1.0
GYA PP PP 12 49 05.1 +4.7
GYA SKS SKSac 12 55 50.4 -3.5
GYA pmax pmax
comp=Z,8.0nm,0.9s
DLMT Dillon 89.30 39 P P 12 45 28.7 +0.4
DLMT IAmb IAmb 12 45 34.0
comp=Z,11nm,1.1s
MSO Missoula 89.37 37 P 12 45 28.6
baz=235
MSO Missoula 89.37 37 P P 12 45 28.4 -0.2
BWN Browne 89.40 11 P P 12 45 27.4 -0.7
MENT Mentasta 89.47 14 P P 12 45 29.4 +0.9
MENT IAmb IAmb 12 45 35.9
comp=Z,15nm,0.9s
SMCO Snowmass 89.52 47 P P 12 45 30.6 +0.8
SMCO IAmb IAmb 12 45 32.8
comp=Z,12nm,1.2s
LOHW Long Hollow 89.52 41 P P 12 45 29.7 +0.3
LOHW IAmb IAmb 12 45 35.1
comp=Z,14nm,1.4s
BW06 Boulder Array 89.71 43 P 12 45 31.0
baz=238
BW06 Boulder Array 89.71 43 IAmb IAmb 12 45 35.4
comp=Z,10nm,1.1s
PD31 Pinedale Array 89.71 43 P P 12 45 30.8 +0.4
PD31 IAmb IAmb 12 45 35.4
comp=Z,9.6nm,1.1s
PDAR Pinedale Array 89.71 43 P P 12 45 30.9 +0.4
comp=Z,4.6nm,0.8s,baz=204,slow=3.3,SNR=19
PDAR LR LR 13 18 36.1
comp=Z,93nm,21.1s,baz=230,slow=31
PDAR Pinedale Array 89.71 43 P P 12 45 29.8 -0.6
FLWY Flagg Ranch 89.72 41 IAmb IAmb 12 45 36.4
comp=Z,21nm,1.2s
DLBC Dease Lake 89.76 22 P P 12 45 31.5 +1.5
DLBC IAmb IAmb 12 45 36.0
comp=Z,21nm,1.1s
YHB Horse Butte 89.79 40 IAmb IAmb 12 45 36.9
comp=Z,13nm,1.1s
NEA2 Nenana 89.86 11 P 12 45 30.2
baz=205
NEA2 Nenana 89.86 11 P P 12 45 29.3 -1.0
YMR Madison River 89.88 40 IAmb IAmb 12 45 36.8
comp=Z,18nm,1.2s
WHY Whitehorse 89.90 19 IAmb IAmb 12 45 36.4
comp=Z,17nm,1.1s
MSTX Muleshoe 89.93 53 P 12 45 32.5
baz=242
MSTX Muleshoe 89.93 53 P P 12 45 31.5 0.0
PBKT Sadao Pong 89.95 288 IAmb IAmb 12 45 31.3
comp=Z,34nm,1.4s
H17A Grant Village 89.96 41 P 12 45 33.9
baz=237
H17A Grant Village 89.96 41 P P 12 45 28.9 -2.6
H17A IAmb IAmb 12 45 38.3
comp=Z,11nm,1.1s
MLY Manley 89.97 11 P 12 45 30.3
baz=203,SNR=19
MLY Manley 89.97 11 IAmb IAmb 12 45 34.7
comp=Z,19nm,1.2s
BOZ Bozeman (W) 90.00 39 P 12 45 32.9
baz=236
BOZ Bozeman (W) 90.00 39 P P 12 45 32.1 +0.6
BOZ pmax pmax
comp=Z,20nm,1.1s
BOZ Bozeman (W) 90.00 39 P P 12 45 32.1 +0.6
BOZ IAmb IAmb 12 45 37.3
comp=Z,20nm,1.1s
YHH Holmes Hill 90.01 40 P P 12 45 32.4 +0.6
YHH IAmb IAmb 12 45 39.0
comp=Z,14nm,1.2s
L27K Beaver Creek, 90.02 15 P 12 45 32.1
baz=211
L27K Beaver Creek, 90.02 15 P P 12 45 31.6 +0.5
L27K IAmb IAmb 12 45 35.9
comp=Z,15nm,1.1s
BCAR Beaver Creek A 90.03 15 P P 12 45 30.9 -0.3
LOEI Loei 90.07 289 P P 12 45 38.3 +6.0
HDA Harding Lake 90.09 12 P 12 45 31.6
baz=207,SNR=22
HDA P 12 45 31.6
baz=207,SNR=22
CCB Clear Creek Bu 90.14 12 P P 12 45 31.3 -0.2
LKWY Lake 90.16 41 IAmb IAmb 12 45 39.0
comp=Z,14nm,1.1s
T25A Trinidad 90.26 49 P 12 45 33.6
baz=241
T25A Trinidad 90.26 49 IAmb IAmb 12 45 38.4
comp=Z,9.7nm,1.1s
I23K Minto, Yukon-K 90.31 11 P 12 45 34.1
baz=205,SNR=5.6
I23K Minto, Yukon-K 90.31 11 IAmb IAmb 12 45 39.9
comp=Z,15nm,1.2s
SCRK Sand Creek 90.32 14 P 12 45 33.5
baz=210
SCRK Sand Creek 90.32 14 IAmb IAmb 12 45 37.7
comp=Z,9.8nm,0.9s
TCOL CIGO, UAF Yank 90.33 12 P 12 45 32.5
baz=206,SNR=12
COLA College 90.34 12 P 12 45 32.5
baz=206
COLA College 90.34 12c iP P 12 45 32.3 -0.1
COLA pmax pmax
comp=Z,11nm,0.9s
COLA College 90.34 12 P P 12 45 32.1 -0.3
MDM Murphy Dome 90.34 12 P P 12 45 32.2 -0.3
IMAR Indian Mountai 90.38 9 P P 12 45 33.0 +0.4
IL31 90.43 12 P P 12 45 32.5 -0.3
IL31 IAmb IAmb 12 45 36.7
comp=Z,20nm,1.0s
ILAR Eielson Array 90.43 12 P P 12 45 32.6 -0.3
comp=Z,16nm,1.0s,baz=218,slow=5.6,SNR=26
ILAR pP sP 12 45 55.9 -0.5
comp=Z,2.1nm,0.7s,baz=223,slow=6.5,SNR=2.0
ILAR PP PP 12 49 14.5 +6.1
comp=Z,1.0nm,0.8s,baz=223,slow=6.5,SNR=4.5
ILAR PKKP PKKPdf 13 03 00.4 0.0
comp=Z,0.3nm,0.6s,baz=354,slow=2.4,SNR=4.8
ILAR Eielson Array 90.43 12 P P 12 45 32.8 -0.1
ILAR Eielson Array 90.43 12 P P 12 45 32.8 -0.1
HRY Holter Researc 90.50 38 P P 12 45 34.4 +0.6
JCT Junction City 90.58 57 P P 12 45 34.4 -0.1
JCT pmax pmax
comp=Z,7.0nm,0.8s
JCT Junction City 90.58 57 P P 12 45 34.4 -0.1
JCT IAmb IAmb 12 45 42.2
comp=Z,7.1nm,0.8s
ZEA Zeya 90.62 330 eP P 12 45 34.1 +0.1
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=Z,200nm,16.0s
POKR Poker Plat Res 90.64 12 P 12 45 34.8
baz=206
POKR Poker Plat Res 90.64 12 P P 12 45 33.3 -0.5
POKR IAmb IAmb 12 45 38.8
comp=Z,20nm,1.1s
YNE Yellowstone No 90.64 40 P P 12 45 34.5 -0.1
YNE IAmb IAmb 12 45 40.7
comp=Z,21nm,1.1s
RWWY Rawlins 90.64 44 P P 12 45 35.2 +0.5
RWWY IAmb IAmb 12 45 36.3
comp=Z,14nm,1.2s
WALA Waterton Lakes 90.68 36 P P 12 45 35.1 +0.5
WALA IAmb IAmb 12 45 36.3
comp=Z,11nm,1.0s
PHIT Phitsanulok 90.68 288 P P 12 45 37.0 +1.9
UTTA Uttaradit 90.78 289 P P 12 45 37.0 +1.4
K27K Chicken 90.79 14 P 12 45 36.1
baz=211
K27K Chicken 90.79 14 P P 12 45 34.6 0.0
XAN Xi'an 90.94 307 P P 12 45 36.5 +0.4
XAN pP PcP 12 45 43.8 +6.7
XAN pmax pmax
comp=Z,35nm,1.1s
XAN Xi'an 90.94 307 P P 12 45 35.6 -0.5
XAN pmax pmax
comp=Z,24nm,0.9s
XAN Xi'an 90.94 307 P P 12 45 35.6 -0.5
RLMT Red Lodge 91.14 41 P 12 45 38.4
baz=238
RLMT Red Lodge 91.14 41 P P 12 45 37.1 +0.2
RLMT IAmb IAmb 12 45 42.8
comp=Z,12nm,1.1s
AMTX Amarillo 91.16 52 P 12 45 38.3
baz=243
GCMT Greyclif 91.26 40 P P 12 45 38.0 +0.6
RDOG Red Dog Mine 91.35 5 P 12 45 38.5
baz=192
RDOG Red Dog Mine 91.36 5 IAmb IAmb 12 45 42.1
comp=Z,12nm,0.9s
PRP Porcupine Dome 91.36 12 P 12 45 38.1
baz=208
SUKH Sukhothai 91.48 288 P P 12 45 40.0 +1.1
K22A Casper 91.56 44 IAmb IAmb 12 45 44.3
comp=Z,15nm,1.1s
EGAK Eagle 91.64 14 P 12 45 39.7
baz=212
EGAK Eagle 91.64 14 P P 12 45 39.4 +0.9
LCO Las Campanas 91.65 122 P P 12 45 41.2 +1.3
LCO pmax pmax
comp=Z,27nm,1.3s
LCO Las Campanas 91.65 122 P P 12 45 41.1 +1.3
ABTX Abilene, Hawle 91.65 55 P 12 45 40.6
baz=244
ABTX Abilene, Hawle 91.65 55 P P 12 45 39.9 +0.5
HIA Hailar 91.69 324⇑ eP P 12 45 38.8 -0.3
HIA pmax pmax
comp=Z,6.0nm,1.0s
BILL Bilibino 91.72 354 deP P 12 45 39.4 +0.6
BILL e*SP PcP 12 45 43.3 +3.7
BILL e 12 49 18.4
BILL 12 56 25.0
BILL pmax pmax
comp=Z,17nm,1.3s
BILL MLR MLR
comp=Z,143nm,19.0s
BILL Bilibino 91.72 354 P P 12 45 39.3 +0.6
BILL IAmb IAmb 12 45 42.9
comp=Z,15nm,1.1s
LAMP Lampang 91.90 289 P P 12 45 42.4 +1.6
KMI Kunming 91.93 296 ⇑P P 12 45 40.6 -0.5
KMI pP PcP 12 45 44.8 +2.9
KMI sP pP 12 45 46.7 -11
KMI pmax pmax
comp=Z,18nm,1.4s
KMI pmax pmax
comp=Z,91nm,3.7s
KMI LR LR
comp=Z,160nm,32.6s
KMI LR LR
comp=Z,280nm,25.2s
KMI LR LR
comp=Z,600nm,35.6s
APG El Apazote 92.00 75 P P 12 45 42.5 +0.9
comp=Z,18nm,1.2s,baz=244,slow=5.5,SNR=5.7
COLD Coldfoot 92.08 10 P 12 45 41.8
baz=204,SNR=11
HHC Hu-ho-hao-te 92.27 314 eP P 12 45 41.1 -1.1
HHC SKS SKSac 12 56 07.7 -2.6
HHC S S 12 56 38.8 -1.7
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,200nm,4.6s
HHC LR LR
comp=Z,240nm,17.9s
HHC LR LR
comp=Z,250nm,17.0s
HHC LR LR
comp=Z,260nm,16.2s
CM36 Chiang Mai Arr 92.36 289 P P 12 45 44.0 +1.0
CM35 Chiang Mai Arr 92.38 289 P P 12 45 44.0 +1.0
CM04 Chiang Mai Arr 92.42 289 P P 12 45 44.9 +1.7
CM09 Chiang Mai Arr 92.42 289 P P 12 45 45.0 +1.8
CM01 Chiang Mai Arr 92.44 289 P P 12 45 45.0 +1.7
CM34 Chiang Mai Arr 92.45 289 P P 12 45 44.0 +0.7
CM05 Chiang Mai Arr 92.45 289 P P 12 45 45.0 +1.6
CM02 Chiang Mai Arr 92.46 289 P P 12 45 45.1 +1.7
CM31 Chiang Mai Arr 92.47 289 P P 12 45 45.7 +2.2
CMAR Chiang Mai Arr 92.47 289 P P 12 45 44.3 +0.8
comp=Z,16nm,1.1s,baz=124,slow=3.0,SNR=55
CMAR PP PP 12 49 30.3 +4.8
comp=Z,0.5nm,0.5s,baz=134,slow=6.9,SNR=4.2
CMAR LR LR 13 26 29.4
comp=Z,78nm,20.9s,baz=165,slow=35
CMAR Chiang Mai Arr 92.47 289 i P P 12 45 44.2 +0.8
CMAR pmax pmax
comp=Z,17nm,1.0s
CMAR Chiang Mai Arr 92.47 289 P P 12 45 44.2 +0.7
CM15 Chiang Mai Arr 92.48 289 P P 12 45 45.0 +1.5
CM13 Chiang Mai Arr 92.49 289 P P 12 45 45.1 +1.6
CMMT Chiang Mai 92.61 289 P P 12 45 44.1 0.0
CM33 Chiang Mai Arr 92.61 289 P P 12 45 44.0 -0.1
CHTO Chiang Mai 92.61 289 P P 12 45 44.8 +0.7
CHTO pmax pmax
comp=Z,17nm,0.9s
CHTO Chiang Mai 92.61 289 P P 12 45 44.8 +0.7
CM32 Chiang Mai Arr 92.63 289 P P 12 45 46.0 +1.8
WHTX Lake Whitney, 93.05 57 P P 12 45 46.6 +0.8
WHTX Lake Whitney, 93.05 57 P 12 45 46.6
baz=245
BMAR Burnt Mountain 93.23 12 P P 12 45 47.1 +1.2
TOLK Toolik Lake Re 93.47 9 P 12 45 50.0
baz=204,SNR=8.1
TOLK Toolik Lake Re 93.47 9 P P 12 45 48.6 +1.7
TOLK IAmb IAmb 12 45 52.3
comp=Z,14nm,1.2s
CD2 Chengdu 93.50 302 P P 12 45 48.3 +0.3
CD2 LR LR
comp=Z,350nm,10.0s
CD2 LR LR
comp=Z,570nm,30.4s
LAO LASA Array 93.77 40 P 12 45 50.7
baz=240
LAO LASA Array 93.77 40 P P 12 45 49.1 +0.3
U32A Winter Ranch, 93.78 52 P P 12 45 48.8 -0.3
RSSD Black Hills 93.86 43 P P 12 45 50.0 +0.4
RSSD pmax pmax
comp=Z,26nm,0.9s
RSSD Black Hills 93.86 43 P P 12 45 50.0 +0.4
RSSD Black Hills 93.86 43 P 12 45 49.9
baz=242
AC02 Maricunga 93.89 121 P P 12 45 52.1 +1.6
AC02 IAmb IAmb 12 45 53.6
comp=Z,20nm,1.4s
YAK Yakutsk 95.06 337 P P 12 45 44.2 -1.0
comp=Z,6.6nm,0.4s,baz=171,slow=2.4,SNR=5.0
YAK Yakutsk 95.06 337c iP P 12 45 53.3 -1.0
YAK pmax pmax
comp=Z,19nm,1.0s
A21K Barrow 95.09 6 P 12 45 54.7
baz=198
A21K Barrow 95.10 6 P P 12 45 56.1 +1.8
A21K IAmb IAmb 12 45 58.9
comp=Z,10.0nm,1.1s
LZH Lanzhou 95.58 307 ⇓P P 12 45 57.7 +0.1
LZH pP PcP 12 46 02.5 +4.7
LZH S S 12 57 16.6 +6.8
LZH pmax pmax
comp=Z,15nm,1.3s
LZH pmax pmax
comp=Z,70nm,9.2s
INK Inuvik 96.30 15 P P 12 45 59.7 -0.1
comp=Z,3.4nm,0.9s,baz=207,slow=3.8,SNR=9.5
K31A O'Neill 96.63 47 P P 12 46 03.1 +1.1
YKA Yellowknife Ar 98.14 24 PKKPbc PKKPbc 13 02 40.3 -2.8
comp=Z,0.3nm,0.7s,baz=47,slow=2.7,SNR=4.6
ULN Ulaanbaatar 98.33 319⇓ eP Pdif 12 46 10.8 +1.1
ULN pmax pmax
comp=Z,2.0nm,0.9s
ECSD EROS Data Cent 98.51 46 P 12 46 10.9
baz=246
ECSD EROS Data Cent 98.51 46 P Pdif 12 46 10.9 +0.5
ECSD IAmb IAmb 12 46 11.9
comp=Z,16nm,1.4s
SONM Songino Array 98.72 318 P Pdif 12 46 12.4 +1.0
comp=Z,0.3nm,0.5s,baz=98,slow=2.3,SNR=2.9
SONM PP PP 12 50 12.6 -0.9
comp=Z,0.6nm,0.8s,baz=126,slow=7.5,SNR=3.8
SONM LR LR 13 24 15.1
comp=Z,60nm,21.5s,baz=88,slow=31
SONM Songino Array 98.72 318 IAmb IAmb 12 46 18.0
comp=Z,1.0nm,1.1s
LPAZ La Paz 99.61 112 P Pdif 12 46 18.1 +1.3
comp=Z,2.1nm,0.7s,baz=237,slow=3.6,SNR=4.8
LPAZ PKKP PKKPdf 13 02 39.8 -1.9
comp=Z,1.6nm,0.9s,baz=82,slow=3.1,SNR=3.6
LPAZ LR LR 13 24 23.0
comp=Z,113nm,19.1s,baz=234,slow=31
GTA Gaotai 99.82 309 P Pdif 12 46 17.8 +1.3
GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,110nm,5.1s
GTA LR LR
comp=Z,88nm,18.9s
GTA LR LR
comp=Z,120nm,19.3s
GTA LR LR
comp=Z,120nm,18.9s
TIXI Tiksi 101.61 345⇑ eP Pdif 12 46 23.3 -0.2
TLY Talaya 101.88 321 eP Pdif 12 46 26.6 +1.4
TLY pmax pmax
comp=Z,4.0nm,0.9s
TLY MLR MLR
comp=Z,272nm,17.0s
ZALV Zalesovo Beam 113.47 320 PKiKP PKiKP 12 51 08.2 -1.2
comp=Z,2.3nm,0.7s,baz=163,slow=1.2,SNR=10.0
NRIK Noril'sk 113.51 337⇑ iPKIKP PKiKP 12 51 12.3 +3.2
MK31 Makanchi Array 114.10 312⇑ iPKIKP PKPdf 12 51 09.6 -1.3
MKAR Makanchi Array 114.10 312 PKiKP PKPdf 12 51 09.6 -1.3
comp=Z,3.6nm,0.9s,baz=92,slow=0.8,SNR=16
MKAR PKKPab PKKPbc 13 01 53.0 0.0
comp=Z,0.6nm,0.6s,baz=274,slow=4.9,SNR=7.1
MKAR Makanchi Array 114.10 312 iPKIKP PKPdf 12 51 09.8 -1.1
MKAR Makanchi Array 114.10 312 PKPdf 12 51 09.8 -1.1
AAK Ala-Archa 119.12 307⇓ iPKIKP PKiKP 12 51 23.4 +2.5
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 119.12 307 PKPdf 12 51 19.0 -1.9
NEEM North Greenlan 119.72 12 i P PKPdf 12 51 21.1 -0.1
KK31 Karatay Array 122.07 307 PKIKP PKPdf 12 51 25.3 -1.1
KK31 Karatay Array 122.07 307 PKPdf PKPdf 12 51 25.3 -1.1
KKAR Karatay Array 122.07 307 PKIKP PKPdf 12 51 25.2 -1.2
KKAR Karatay Array 122.07 307 PKPdf PKPdf 12 51 25.2 -1.2
KKAR Karatay Array 122.07 307 PKPdf PKPdf 12 51 25.7 -0.6
BRVK Borovoye 122.11 319 iPKIKP PKiKP 12 51 27.8 +1.6
BRVK Borovoye 122.11 319 PKPdf PKiKP 12 51 26.7 +0.4
KBL Kabul 122.50 297 PKIKP PKiKP 12 51 27.9 0.0
KBL Kabul 122.50 297 PKiKP 12 51 27.9 0.0
SPA0 Spitsbergen Ar 124.48 357 PKiKP 12 51 32.7 +2.4
SPA0 Spitsbergen Ar 124.48 357 ePKPdf PKPdf 12 51 29.7 -0.3
BOSA Boshof 124.62 203 PKP PKiKP 12 51 32.4 +0.1
comp=Z,6.9nm,1.0s,baz=176,slow=4.7,SNR=6.9
DAG Danmarks Havn 125.08 6 eP PKPdf 12 51 30.8 -0.3
SUMG Summit 125.21 14 i P PKiKP 12 51 33.0 +0.7
DBG Daneborg 127.12 8 i P PKiKP 12 51 37.3 +1.7
ARU Arti 128.20 325 i PKIKP PKiKP 12 51 38.4 +0.2
ARU SP SP 13 03 38.7 -3.0
ARU Arti 128.20 325 PKPdf PKPdf 12 51 36.1 -1.5
ABKAR Akbulak array 129.03 316 PKPdf PKPdf 12 51 39.8 -0.3
GEYT Alibeck 131.49 301 PKP PKPdf 12 51 43.7 -0.9
comp=Z,2.1nm,0.5s,baz=60,slow=5.6,SNR=2.1
GEYT SKPbc SKPbc 12 55 02.3 -2.3
comp=Z,12nm,0.9s,baz=90,slow=1.4,SNR=12
GEYT Alibeck 131.49 301 PKiKP 12 51 48.0 +2.5
ARA0 ARCESS Array S 131.69 350 ePKPdf PKPdf 12 51 44.0 +0.1
ARCES ARCESS Array B 131.69 350 PKP PKPdf 12 51 43.9 0.0
comp=Z,9.1nm,0.9s,baz=22,slow=0.9,SNR=16
ARCES pPKP sPKPdf 12 52 07.7 0.0
comp=Z,3.6nm,0.5s,baz=5.5,slow=1.7,SNR=3.1
ARCES SKPab SKPbc 12 55 03.0 -1.3
comp=Z,21nm,1.1s,baz=38,slow=3.4,SNR=8.3
ARCES ARCESS Array B 131.69 350 PKIKP PKiKP 12 51 44.5 -0.4
ARCES ARCESS Array B 131.69 350 PKiKP 12 51 44.5 -0.4
KIRV Kirov 131.96 330⇑ iPKIKP PKiKP 12 51 47.3 +1.6
PRGR Permogore 132.02 335 ePKIKP PKiKP 12 51 47.4 +1.7
PRGR pmax pmax
comp=Z,9.0nm,0.8s
TRO Tromso 132.51 353 ePKPdf PKiKP 12 51 46.1 -0.3
KTK1 Kautokeino 132.52 351 ePKPdf PKPdf 12 51 45.4 -0.1
LOF Lofoten 134.49 355 ePKPdf PKPdf 12 51 49.5 +0.3
STEI Steigen 134.54 354 ePKPdf PKPdf 12 51 49.1 -0.2
KLMR Klimovskoe 134.84 336 ePKIKP PKPdf 12 51 45.7 -4.3
KLMR pmax pmax
comp=Z,25nm,1.3s
KLMR Klimovskoe 134.84 336 ePKPdf PKPdf 12 51 45.8 -4.3
KLMR AMP 12 51 55.1
comp=Z,25nm,1.3s
LSZ Lusaka 135.03 214 PKIKP PKPdf 12 51 51.7 -0.3
LSZ Lusaka 135.03 214 PKPdf 12 51 51.7 -0.3
BELG Belogornoye 135.59 323 ⇓iPKIKP PKiKP 12 51 54.5 +1.3
NSS Namsos 138.16 355 e PKPpre 12 51 48.0
NSS ePKPdf PKiKP 12 51 57.2 -1.0
FINES FINESS Array B 138.65 344 PKhKP PKPpre 12 51 46.0
comp=Z,1.2nm,0.5s,baz=50,slow=3.3,SNR=14
FINES SKPbc SKPbc 12 55 25.0 -1.6
comp=Z,2.7nm,0.6s,baz=356,slow=1.8,SNR=6.1
FINES FINESS Array B 138.65 344 PKIKP PKiKP 12 52 00.0 +0.8
FINES FINESS Array B 138.65 344 PKiKP 12 51 60.0 +0.8
MAK Makhachkala 138.81 310 deP Pdif 12 48 59.6 -10
MAK i 12 51 55.7
MAK pmax pmax
comp=Z,180nm,1.4s
VRH Novokhopyorsk 139.40 323 ePKIKP PKPdf 12 51 57.1 -1.6
VRH pmax pmax
comp=Z,10.0nm,0.7s
KMBO Kilima Mbogo 139.49 238 PKhKP PKPpre 12 51 53.9
comp=Z,1.6nm,0.3s,baz=74,slow=6.2,SNR=4.1
KMBO SKPbc SKPbc 12 55 29.6 -1.2
comp=Z,1.4nm,0.3s,baz=86,slow=5.9,SNR=3.2
OBN Obninsk 139.75 331⇑ iPKIKP PKiKP 12 52 01.6 0.0
OBN e 12 52 07.4
OBN e 12 59 11.9
OBN ePS 13 05 27.0
OBN pmax pmax
comp=Z,10.0nm,0.6s
OBN MLR MLR
comp=Z,100nm,20.0s
LPSR Galich'ya Gora 140.13 327 ePKIKP PKPdf 12 51 56.9 -3.1
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 140.77 325 ePKIKP PKiKP 12 52 03.8 -0.1
VSR pmax pmax
comp=Z,20nm,1.2s
AKN Aaknes 140.81 358 ePdif Pdif 12 49 17.7 -0.5
AKN ePKPdf PKPdf 12 52 01.5 +0.5
DOMB Dombas 140.84 356 ePKPdf PKPdf 12 52 01.7 +0.6
AAL Aland 141.17 347 eP PKPdf 12 51 55.8 -5.9
FOO Floro 141.45 359 ePKPdf PKPdf 12 52 02.9 +0.8

MTSE	Matsula	141.57	343	*e*P		PKPdf	12 51 57.5	-5.0
NOA	NORSAR Array B	141.67	354	PKhKP		PKPdf	12 51 56.5	-6.2
	comp=Z,2.6nm,0.8s,baz=18,slow=2.8,SNR=9.5							
KBZ	Khabaz	141.80	312	PKhKP		PKPdf	12 52 00.5	-2.8
	comp=Z,3.6nm,0.8s,baz=98,slow=5.6,SNR=6.5							
KBZ	Khabaz	141.80	312	⇓*e*PKIKP		PKPdf	12 52 01.0	-2.3
KIV	Kislovodsk	141.86	313	*i* PKIKP		PKPdf	12 52 02.6	-1.0
KIV				pmax		pmax		
	comp=Z,36nm,1.1s							
KIV				MLR		MLR		
	comp=Z,323nm,24.0s							
NAO01	NORSAR Array S	141.89	354	PKPdf		PKPdf	12 52 01.1	-1.9
NC602	NORSAR Array S	141.94	354	*e*Pdif		Pdif	12 49 22.7	-0.5
NC602				*e*			12 51 57.0	
NC602				*e*PKPdf		PKiKP	12 52 05.3	-0.7
SUE	Sulen	142.00	359	*e*PKPdf		PKPdf	12 52 03.9	+0.8
AKH	Akhalkalaki	142.10	308	⇑P		PKPdf	12 52 00.2	-4.0
SKAR	Skarslia	142.25	356	*e*		PKPdf	12 51 57.5	-6.2
SKAR				*e*PKPdf		PKiKP	12 52 03.1	-3.6
BER	Bergen	142.66	359	*e*PKPdf		PKPdf	12 52 05.1	+0.8
ODD1	Odda	143.10	358	*e*		PKPdf	12 52 04.4	-0.8
KONO	Kongsberg	143.18	355	⇑*e*PKIKP		PKPdf	12 52 06.1	+0.8
KONO	Kongsberg	143.18	355	*e*		PKPab	12 52 01.3	+0.3
KONO				*e*PKPdf		PKPdf	12 52 05.4	+0.1
BLS5	Blasjo	143.59	358	*e*PKPdf		PKPdf	12 52 06.2	+0.1
IIGN	Ignalina	143.66	338	*e*P		PKPab	12 52 03.3	+0.3
NACGM	Naroch	143.82	337	*i* PKP		PKPdf	12 52 06.3	-0.3
NACGM	Naroch	143.82	337	*i* PKP		PKPdf	12 52 06.3	-0.3
NACGM	Naroch	143.82	337	*i* PKP		PKPdf	12 52 06.3	-0.3
NACGM	Naroch	143.82	337	*i* PP		PP	12 55 11.7	-8.1
NACGM	Naroch	143.82	337	*i* PPP		PPP	12 58 22.5	
NACGM	Naroch	143.82	337	*i* SKS		SKSdf	12 59 39.4	+29
NACGM	Naroch	143.82	337	*i* SKKS			13 01 05.1	
NACGM	Naroch	143.82	337	*i* SS		SS	13 13 37.1	-21
NACGM	Naroch	143.82	337	*i* SSS		SSS	13 17 55.2	
NACGM	Naroch	143.82	337	*i* LQ		LQ	13 35 55.5	
NACGM	Naroch	143.82	337	*i* LR		LR	13 44 48.0	
PABE	Paberze	144.27	340	*e*P		PKPdf	12 52 06.5	-0.8
TJOU	Tjoern	144.58	353	*i* P		PKPab	12 52 06.0	-0.4
HOMB	Homborsund	144.63	356	*i* P		PKPbc	12 52 06.8	+0.1
HOMB	Homborsund	144.63	356	*e*PKPbc		PKPbc	12 52 06.8	+0.1
SNART	Snartemo	144.64	357	*i* P		PKPab	12 52 06.6	0.0
SNART	Snartemo	144.64	357	*e*PKPbc		PKPbc	12 52 06.7	-0.1
KOPT	Kop Dagi	144.69	307	PKPdf		PKPdf	12 52 08.8	-0.1
MBAR	Mbarara	144.75	232	PKIKP		PKPdf	12 52 09.9	+0.2
MBAR	Mbarara	144.75	232			PKPdf	12 52 09.9	+0.2
BORU	Boraas	144.82	352	*i* P		PKPab	12 52 06.5	-0.8
ANN	Anapa	144.97	317	*e*PKIKP		PKPab	12 52 08.5	+0.2
ANN				pmax		pmax		
	comp=Z,205nm,1.0s							
ONAU	Onsala	145.16	352	*i* P		PKPbc	12 52 08.2	-0.3
MARD	Mardin	145.20	303			PKPbc	12 52 09.1	-0.3
BLEU	Blekinge	145.60	348	*i* P		PKPdf	12 52 09.0	-0.5
SUW	Suwalki	145.77	340	*e*PKP		PKPab	12 52 11.0	0.0
SUW	Suwalki	145.77	340	*e*P		PKPab	12 52 10.9	0.0
SUW	Suwalki	145.77	340	PKP2		PKPbc	12 52 10.6	+0.1
SUW	Suwalki	145.77	340			PKPbc	12 52 10.6	+0.1
DEL	Delary	145.78	350	*i* P		PKPdf	12 52 10.0	+0.1
GOET	G??ttrup	145.80	355	*e*P		PKiKP	12 53 14.3	-0.6
GOET				IAmb		IAmb	12 52 14.8	
	comp=Z,98nm,1.1s							
AKASG	Malin Array Be	146.00	331	PKPbc		PKPdf	12 52 10.4	0.0
	comp=Z,30nm,0.6s,baz=42,slow=4.4,SNR=60							
AKASG				pPKPbc		sPKPdf	12 52 34.0	-0.3
	comp=Z,8.4nm,0.5s,baz=37,slow=4.4,SNR=2.1							
AKASG	Malin Array Be	146.00	331			PKPdf	12 52 10.1	-0.3
AKBB	Malin Array Si	146.00	331	*de*PKIKP		PKPdf	12 52 09.9	-0.5
AKBB	Malin Array Si	146.00	331			PKPbc	12 52 11.0	-0.3
MUD	Monsted U'grnd	146.38	355	*i* P		PKPab	12 52 12.9	-0.2
MUD				IAmb		IAmb	12 52 15.8	
	comp=Z,119nm,1.2s							
LUNU	Lund	146.66	350	*i* P		PKPbc	12 52 12.9	-0.2
COP	Copenhagen	146.76	351	IAmb		IAmb	12 52 16.6	
	comp=Z,124nm,1.3s							
COP	Copenhagen	146.76	351	*e*P		PKPbc	12 52 14.0	+0.6
BSD	Bornholm Skovb	146.90	348	*e*P		PKPab	12 52 15.3	+0.1
BSD	Bornholm Skovb	146.90	348	IAmb		IAmb	12 52 16.6	
	comp=Z,84nm,1.3s							
BSD	Bornholm Skovb	146.90	348	*i* P		PKPdf	12 52 12.0	+0.2
GAZ	Gaziantep	147.98	304			PKPbc	12 52 17.3	-0.2
GKP	Gorka Klasztor	148.11	345	*e*P		PKPab	12 52 20.4	+0.3
SORM	Soroca	148.20	328	⇑P		PKPbc	12 52 17.5	0.0
SORM	Soroca	148.20	328	⇑PKP2		PKPbc	12 52 17.5	0.0
BZK	Bozkurt	148.50	314	⇓P		PKPbc	12 52 17.3	-1.3
BSEG	Bad Segeberg	148.75	352	*e*PKPbc		PKPab	12 52 22.9	+0.3
	baz=13,slow=2.3							
MILM	Milestii Mici	148.79	326	⇑P		PKPbc	12 52 18.9	-0.2
LVV	L'vov	148.88	334	*e*PKP2		PKPab	12 52 22.4	-0.9
ILGA	Ilgaz	149.10	313			PKPbc	12 52 20.7	+0.2
KWP	Kalwaria Pacla	149.55	335	*e*PKP		PKPab	12 52 24.4	-1.7
KWP	Kalwaria Pacla	149.55	335	PKP2		PKiKP	12 52 21.6	-0.4
KWP	Kalwaria Pacla	149.55	335			PKiKP	12 52 21.6	-0.4
KWP				PKPab		PKPab	12 52 26.9	+0.9
RUE	Ruedersdorf	149.61	348	*e*PKPbc		PKPab	12 52 25.0	-1.1
	baz=13,slow=2.3							
BR131	Keskin Array S	149.72	310	PKP2		PKPbc	12 52 21.9	0.0
BR131	Keskin Array S	149.72	310			PKPbc	12 52 21.9	0.0
BR131				PKPab		PKPab	12 52 27.9	+0.5
BRTR	Keskin Array B	149.72	310	PKPbc		PKPbc	12 52 21.3	-0.6
	comp=Z,8.9nm,0.8s,baz=142,slow=3.9,SNR=24							
BRTR	Keskin Array B	149.72	310			PKPdf	12 52 19.3	+2.2
TLCR		149.90	323	⇑P		PKPdf	12 52 18.7	+1.7
BUR08	Bucovina Ar. S	150.04	330			PKPbc	12 52 22.4	+0.1
BURAR	Bucovina Array	150.05	330	⇑P		PKiKP	12 52 23.9	+0.6
BURAR	Bucovina Array	150.05	330	⇑PKP2		PKiKP	12 52 23.9	+0.6
BURAR	Bucovina Array	150.05	330			PKPbc	12 52 21.6	-0.8
GHRR		150.08	326	⇑P		PKPab	12 52 26.4	-1.9
OJC	Ojcow	150.10	339	*e*PKP		PKPbc	12 52 22.6	+0.3
OJC	Ojcow	150.10	339	PKP2		PKPbc	12 52 22.5	+0.3
OJC	Ojcow	150.10	339			PKPbc	12 52 22.5	+0.3
BIZ	Bicaz	150.13	328	⇑P		PKPbc	12 52 21.7	-0.8
NRDL	Niedersach Rie	150.19	352	*e*PKPbc		PKPab	12 52 26.3	-2.1
	baz=13,slow=2.3							
FLTG	Flechtingen	150.19	351	*e*PKPbc		PKPab	12 52 26.2	-2.3
	baz=13,slow=2.3							
CFR	Carcaliu	150.28	324	⇑P		PKiKP	12 52 23.7	+0.1
CFR	Carcaliu	150.28	324	⇑PKIKP		PKiKP	12 52 23.7	+0.1
TPGR	Topolog	150.32	323	⇑P		PKiKP	12 52 24.3	+0.5
ASSE	Asse, Remlinge	150.47	351	*e*PKPbc		PKPab	12 52 27.1	-2.5
	baz=13,slow=2.3							
VRI	Vrincioaia	150.56	326	⇑P		PKiKP	12 52 24.4	+0.2
VRI	Vrincioaia	150.56	326	⇑PKIKP		PKiKP	12 52 24.4	+0.2
KSP	Ksiaz	150.57	344	*e*PKP		PKiKP	12 52 24.1	0.0
NIE	Niedzica	150.61	338	*e*PKP		PKiKP	12 52 24.3	+0.1
IBBN	Ibbenbueren	150.61	355	*e*PKPbc		PKPab	12 52 27.4	-2.8
	baz=13,slow=2.3							
PLOR	Plostina	150.61	326	⇓P		PKPdf	12 52 13.8	-4.4
PLOR	Plostina	150.61	326	⇓PKIKP		PKPdf	12 52 13.8	-4.4
CRVS	Cervenica-Dubn	150.62	336	*e*PKIKP		PKiKP	12 52 27.0	+2.7
CRVS	Cervenica-Dubn	150.62	336	*e*PKP		PKiKP	12 52 27.0	+2.7
CLZ	Clausthal	150.79	352	*e*PKPbc		PKPab	12 52 28.2	-3.0
	baz=13,slow=2.3							
OSTC	Ostas	150.85	344	⇑*e*PKP		PKiKP	12 52 24.4	-0.3
OSTC				*ex*		x	12 52 27.7	
CHVC	Chvalec	150.87	344	⇑*e*PKP		PKiKP	12 52 24.8	+0.1
CLL	Collm	150.88	348	*e*(PKPdf)		PKPdf	12 52 21.0	+2.6
CLL				*i* PKPbc		PKiKP	12 52 24.4	-0.3
	comp=Z,25nm,0.7s							
CLL				*i*			12 52 27.2	
	comp=Z,95nm,1.0s							
CLL				*e*PKPab		PKPab	12 52 31.0	-0.4
CLL				*i*			12 52 34.1	
CLL				*ep*PKPbc		pPKPbc	12 52 42.0	+0.6
CLL				*ep*PKPab		sPKPbc	12 52 48.0	+0.2
CLL				*e*PP		PP	12 56 00.0	-1.0
CLL	Collm	150.88	348	PKIKP		PKiKP	12 52 24.6	-0.1
CLL	Collm	150.88	348	*e*PKPbc		PKiKP	12 52 28.0	+3.4
	baz=13,slow=2.3							
UPC	Upice	150.95	344	*e*PKIKP		PKiKP	12 52 24.8	-0.1
UPC	Upice	150.95	344	⇑*e*PKP		PKiKP	12 52 24.8	-0.1
DPC	Dobruska-Polom	151.01	343	*e*PKIKP		PKiKP	12 52 24.9	-0.2
DPC				*e*			12 52 27.9	
DPC	Dobruska-Polom	151.01	343	⇑*e*PKP		PKiKP	12 52 24.9	-0.2
DPC				*ex*		x	12 52 27.9	
MDUB	Mudurnu	151.06	313	PKPbc		PKPbc	12 52 24.7	-0.3
BRG	Berggiesshubel	151.10	347	*i* P		PKPbc	12 52 24.9	+0.2
BRG				Amp			12 52 25.8	
	comp=Z,26nm,0.7s							
BRG				*i* x		x	12 52 28.2	
BRG				Amp			12 52 29.5	
	comp=Z,61nm,0.9s							
BRG				*ex*		x	12 52 49.1	
	comp=Z,28nm,1.1s			Amp			12 52 50.8	
BRG	Berggiesshubel	151.10	347	*e*PKPbc		PKiKP	12 52 28.7	+3.6
	baz=13,slow=2.3							
LANS	Liptovska Anna	151.12	338	*e*PKIKP		PKiKP	12 52 26.1	+0.8
LANS	Liptovska Anna	151.12	338	*e*PKP		PKiKP	12 52 26.1	+0.8
GTTG	Gottingen	151.13	352	*e*PKPbc		PKiKP	12 52 28.7	+3.5
	baz=13,slow=2.3							
DOPR	Dopca	151.16	328	⇑P		PKiKP	12 52 25.8	+0.3
FBE	Freiberg	151.18	347	*e*PKPbc		PKPab	12 52 29.2	-3.5
	baz=13,slow=2.3							
MORC	Moravsky Berou	151.19	341	*e*PKP		PKiKP	12 52 28.0	+2.5
MORC	Moravsky Berou	151.19	341	PKIKP		PKiKP	12 52 25.3	-0.1
MORC	Moravsky Berou	151.19	341			PKiKP	12 52 25.3	-0.1
NEUB	Neuenburg	151.19	349	*e*PKPbc		PKiKP	12 52 28.8	+3.5
	baz=13,slow=2.3							
MLR	Muntele Rosu	151.22	326	⇑P		PKiKP	12 52 27.5	+1.7
MLR	Muntele Rosu	151.22	326	PKIKP		PKPbc	12 52 25.4	+0.2
MLR	Muntele Rosu	151.22	326			PKPbc	12 52 25.4	+0.2
PVCC	Panska Ves	151.28	346	⇑*e*PKIKP		PKiKP	12 52 25.8	+0.3
PVCC				*e*			12 52 29.2	
PVCC	Panska Ves	151.28	346	⇑*e*PKP		PKiKP	12 52 25.8	+0.3
PVCC				*ex*		x	12 52 29.2	
BUG	Bochum--Univer	151.51	355	*e*PKPbc		PKiKP	12 52 29.3	+3.4
	baz=13,slow=2.3							
CSS	Mathiatis	151.63	301			PKPbc	12 52 26.6	+0.2
CSS				PKPab		PKPab	12 52 32.5	-2.7
KASTN	Kahler Asten	151.65	354	*e*PKPbc		PKiKP	12 52 29.9	+3.5
	baz=13,slow=2.3							
VOIR		151.71	327	⇑P		PKiKP	12 52 29.2	+2.5
VOIR		151.71	327	⇑PKIKP		PKiKP	12 52 29.2	+2.5
PRU	Pruhonice	151.79	345	*e*PKIKP		PKiKP	12 52 26.5	-0.1
PRU				*e*			12 52 29.5	
PRU	Pruhonice	151.79	345	⇑*e*PKP		PKiKP	12 52 26.5	-0.1
PRU				*ex*		x	12 52 29.5	
DRGR		151.79	332	⇓P		PKPbc	12 52 26.5	0.0
DRGR		151.79	332	⇓PKIKP		PKPbc	12 52 26.5	0.0
PLN	Plauen	151.82	349	*e*PKPbc		PKiKP	12 52 30.3	+3.6
	baz=13,slow=2.3							
TANN	Tannenbergstha	151.83	348	*e*PKPbc		PKiKP	12 52 30.4	+3.6
	baz=13,slow=2.3							
VRAC	Vranov	151.88	342	*e*PKP		PKiKP	12 52 29.6	+2.7
VYHS	Vyhne	151.90	338	*e*PKIKP		PKiKP	12 52 29.1	+2.2
VYHS				*e*			12 52 37.1	
VYHS	Vyhne	151.90	338	*e*PKP		PKiKP	12 52 29.1	+2.2
VYHS				*e*			12 52 37.1	
GUNZ	Gunzen	151.91	348	*e*PKPbc		PKiKP	12 52 30.7	+3.8
	baz=13,slow=2.3							
LEF	Lefka	151.93	302	⇑P		PKPbc	12 52 26.6	-0.4
JAVC	Velka Javorina	151.96	340	*e*PKP		PKiKP	12 52 30.8	+3.7
ARR	Arges	151.96	328	⇑P		PKiKP	12 52 28.1	+0.9
WERN	Wernitzgruen	151.97	348	*e*PKPbc		PKiKP	12 52 31.0	+4.0
	baz=13,slow=2.3							
NKC	Novy Kostel	152.01	348	*e*PKIKP		PKiKP	12 52 29.4	+2.3
NKC	Novy Kostel	152.01	348	⇑*e*PKP		PKiKP	12 52 29.4	+2.3
PSZ	Piszkesteto	152.02	336	⇑P		PKiKP	12 52 28.0	+0.7
PSZ	Piszkesteto	152.02	336	⇑PKIKP		PKiKP	12 52 28.0	+0.7
PSZ	Piszkesteto	152.02	336			PKiKP	12 52 27.1	-0.1
PSZ				PKPab		PKPab	12 52 37.2	+0.7
KRUC	Moravsky	152.16	342	*e*PKP		PKiKP	12 52 30.1	+2.7
PBCC	Pribram	152.20	346	⇑*e*PKP		PKiKP	12 52 27.5	0.0
PBCC				*ex*		x	12 52 30.5	
MANZ	Manzenberg	152.31	348	*e*PKPbc		PKiKP	12 52 31.5	+3.8
	baz=13,slow=2.3							
SMOL	Smolenice	152.34	340	*e*PKIKP		PKiKP	12 52 30.8	+3.0
SMOL				*e*			12 52 39.9	
SMOL	Smolenice	152.34	340	*e*PKP		PKiKP	12 52 30.8	+3.0
SMOL				*e*			12 52 39.9	
MEM	Membach	152.42	357	*d*PKiKP		PKiKP	12 52 29.2	+1.3
MEM				*dp*PKP		PKPbc	12 52 30.8	+3.2
AHRW	Bad Neuenahr-A	152.42	355	*e*PKPbc		PKiKP	12 52 31.4	+3.6
	baz=13,slow=2.3							
BTNL	Ternell	152.44	357	*d*PKiKP		PKPbc	12 52 27.7	0.0
BTNL				*dp*PKP		PKiKP	12 52 30.7	+2.8
BSTI	Sart Tilman	152.47	357	*dp*PKP		PKiKP	12 52 31.2	+3.2
ROTZ	Rotzenmuhle	152.50	348	*e*PKPbc		PKiKP	12 52 31.7	+3.6
	baz=13,slow=2.3							
ROTZ				*ep*PKPbc		pPKPdf	12 52 40.1	+1.7
MODS	Modra-Piesok	152.51	340	*e*PKIKP		PKiKP	12 52 31.6	+3.4
MODS	Modra-Piesok	152.51	340	*e*PKP		PKiKP	12 52 31.6	+3.4
TNS	Taunus Mts	152.62	353	*e*PKPbc		PKiKP	12 52 32.0	+3.6
	baz=13,slow=2.3							
TNS				*ep*PKPbc		PKPab	12 52 40.4	+1.6
SIRR	Siria	152.66	332	⇑P		PKPdf	12 52 20.0	-1.2
GRA1	Grafenberg Arr	152.75	349	PKPdf		PKPdf	12 52 18.2	-3.1
GRA1						PKiKP	12 52 28.7	+0.1
GRA1						PKPab	12 52 40.9	+1.5
GRF	Grafenberg Arr	152.75	349	PKIKP		PKiKP	12 52 28.7	+0.1
GRF							12 52 40.9	
GRF	Grafenberg Arr	152.75	349	*e*PKPbc		PKiKP	12 52 32.4	+3.7
	baz=13,slow=2.3							
GRF				*ep*PKPbc		PKPab	12 52 41.1	+1.7
GRFO	Grafenberg	152.75	349	PKPdf		PKPdf	12 52 18.3	-2.9
GRFO						PKiKP	12 52 30.2	+1.6
GRFO				PKPab		PKPab	12 52 40.1	+0.7
BMRD	Maredsous	152.77	359	*d*PKiKP		PKiKP	12 52 28.6	0.0
BMRD				*dp*PKP		PKPbc	12 52 31.7	+3.3
KHC	Kasperske Hory	152.82	346	⇑*e*PKIKP		PKPdf	12 52 23.9	+2.5
KHC	Kasperske Hory	152.82	346	⇑*e*PKP		PKiKP	12 52 28.8	0.0
KHC				*ex*		x	12 52 32.1	
KHC				*ex*		x	12 52 43.0	
KHC	Kasperske Hory	152.82	346	PKPbc		PKiKP	12 52 32.4	+3.5
KHC				PKPab		PKPab	12 52 41.1	+1.4
GZR	Gura Zlata	152.83	330	⇑P		PKiKP	12 52 30.6	+1.6
GZR	Gura Zlata	152.83	330	⇑PKIKP		PKiKP	12 52 30.6	+1.6
CKRC	Cesky Krumlov	152.94	345	⇑*e*PKP		PKPbc	12 52 25.4	-3.5
CKRC				*ex*		x	12 52 29.2	
CKRC				*ex*		x	12 52 32.2	
WET	Wettzell	152.96	347	*e*PKPbc		PKiKP	12 52 32.8	+3.7
	baz=13,slow=2.3							
WET				*ep*PKPbc		PKPab	12 52 41.9	+1.6
DOU	Dourbes	152.98	359	*dp*PKP		PKiKP	12 52 31.8	+2.7
GEC2	GERESS Array S	153.06	345			PKPbc	12 52 29.2	-0.1
GEC2				PKPab		PKPab	12 52 41.6	+0.8
GEC2	GERESS Array S	153.06	345	*e*PKPbc		PKiKP	12 52 32.9	+3.5
	baz=13,slow=2.3							
GEC2				*ep*PKPbc		PKPab	12 52 42.0	+1.2
GERES	GERESS Array B	153.06	345	PKPbc		PKPbc	12 52 29.1	-0.1
	comp=Z,2.5nm,0.6s,baz=43,slow=1.7,SNR=7.8							
GERES	GERESS Array B	153.06	345	PKIKP		PKPdf	12 52 24.7	+2.8
GERES	GERESS Array B	153.06	345			PKPdf	12 52 24.7	+2.8
BZS	Buzias	153.19	331	⇑P		PKPdf	12 52 25.5	+3.5
BZS	Buzias	153.19	331	⇑PKIKP		PKPdf	12 52 25.5	+3.5
CONA	Conrad Observa	153.34	342	*e*P		PKPdf	12 52 25.0	+2.7
	comp=Z,5.1nm,1.0s							
CONA				*i* P		PKiKP	12 52 33.4	+3.4
	comp=Z,19nm,0.7s							
WLF	Walferdange	153.35	356	*dp*PKP		PKiKP	12 52 33.1	+3.3
WLF	Walferdange	153.35	356	*ep*PKPbc		PKPab	12 52 42.2	+0.3
HERR	Herculane	153.39	329	⇑P		PKiKP	12 52 30.4	+0.4
MOA	Molln	153.85	344	*e*P		PKPdf	12 52 25.3	+2.3
	comp=Z,3.2nm,0.8s							
MOA				*e*P		PKiKP	12 52 34.0	+3.0
	comp=Z,5.8nm,0.8s							
MOA				*i* P		sPKPdf	12 52 45.9	-0.9
	comp=Z,30nm,1.1s							
MORH	Mrgy, Hungar	153.91	336	⇑P		PKPdf	12 52 26.5	+3.5
ARSA	Arzberg	154.05	341	*e*P		PKPdf	12 52 25.4	+2.1
	comp=Z,2.4nm,0.8s							
ARSA				*e*P		PKiKP	12 52 33.6	+2.2
	comp=Z,3.2nm,0.8s							
ARSA				*e*P		sPKPdf	12 52 46.4	-0.7
	comp=Z,17nm,1.1s							
BFO	Black Forest	154.50	353	PKP2		PKPab	12 52 47.1	+0.3
BFO	Black Forest	154.50	353			PKiKP	12 52 33.3	+1.0
BFO						PKPab	12 52 47.1	+0.3
SOKA	Soboth	154.71	342	*i* P		PKPdf	12 52 26.5	+2.3
	comp=Z,7.8nm,1.3s							
SOKA				*i* P		PKiKP	12 52 35.5	+2.6
	comp=Z,8.2nm,0.9s							
SOKA				*i* P		PKPab	12 52 48.0	+0.2
	comp=Z,24nm,1.2s							
KBA	Koelnbreinsper	154.80	344	*i* P		PKPdf	12 52 26.4	+1.9
	comp=Z,4.5nm,0.8s							
KBA				*i* P		PKiKP	12 52 34.5	+1.3
	comp=Z,6.9nm,1.2s							
KBA				*e*P		PKPab	12 52 47.8	-0.5
	comp=Z,13nm,0.9s							
WATA	Walderalm	154.95	347	*e*P		PKiKP	12 52 36.4	+3.0
	comp=Z,6.2nm,0.8s							
WATA				*i* P		pPKPbc	12 52 50.3	-0.5
	comp=Z,19nm,1.2s							
RETA	Reutte	154.96	349	*e*P		PKPdf	12 52 28.1	+3.5
	comp=Z,1.0nm,0.4s							
RETA				*i* P		pPKPbc	12 52 50.3	-0.5
	comp=Z,17nm,1.2s							
OBKA	Obir	155.00	342	*i* P		PKPdf	12 52 26.9	+2.2
	comp=Z,3.9nm,0.9s							
OBKA				*i* P		pPKPdf	12 52 35.0	-7.2
	comp=Z,2.7nm,0.7s							
OBKA				*e*P		sPKPdf	12 52 47.8	-0.8
	comp=Z,21nm,0.9s							
WTTA	Wattenberg	155.01	347	*e*P		PKPdf	12 52 28.4	+3.6
	comp=Z,7.5nm,1.1s							
WTTA				*i* P		pPKPdf	12 52 36.3	-6.0
	comp=Z,9.2nm,0.8s							
WTTA				*e*P		pPKPbc	12 52 50.6	-0.4
	comp=Z,28nm,0.9s							
MOTA	Moosalm	155.03	348	*i* P		PKPdf	12 52 28.1	+3.4
	comp=Z,8.3nm,1.0s							
MOTA				*e*P		pPKPdf	12 52 36.4	-5.8
	comp=Z,9.4nm,0.9s							
MOTA				*i* P		pPKPbc	12 52 50.6	-0.5
	comp=Z,24nm,0.9s							
CLF	Chambon-Foret	155.04	2	PKPdf		PKPdf	12 52 21.2	-3.3
CLF				PKPbc		pPKPdf	12 52 37.3	-4.7
CLF				PKPab		pPKPbc	12 52 50.2	-0.6
SQTA	Sankt Quirin	155.13	348	*e*P		PKPdf	12 52 28.6	+3.7
	comp=Z,7.2nm,1.0s							
SQTA				*i* P		pPKPdf	12 52 36.9	-5.4
	comp=Z,6.4nm,0.8s							
SQTA				*i* P		pPKPbc	12 52 52.3	+1.2
	comp=Z,19nm,1.3s							
MYKA	Terra Mystica	155.14	344	*e*P		PKPdf	12 52 26.9	+2.0
	comp=Z,5.6nm,1.0s							
MYKA				*i* P		pPKPdf	12 52 36.1	-6.2
	comp=Z,5.3nm,0.8s							
MYKA				*i* P		PKPab	12 52 50.2	+0.6
	comp=Z,22nm,0.9s							
ABTA	Abfaltersbach	155.31	345	*i* P		PKPdf	12 52 27.6	+2.5
	comp=Z,16nm,1.0s							
ABTA				*e*P		pPKPdf	12 52 36.7	-5.9
	comp=Z,12nm,0.8s							
ABTA				*i* P		pPKPbc	12 52 51.1	-0.5
	comp=Z,15nm,0.9s							
DAVA	Damuels	155.31	350	*e*P		PKPdf	12 52 38.4	-4.3
	comp=Z,7.2nm,0.8s							
DAVA				*i* P		PKPab	12 52 50.9	+0.5
	comp=Z,11nm,1.0s							
ZOU	Zoufplan	155.38	345	PKPdf		PKPdf

PAVA eS Sn 12 37 26.4 0.0
PAVA Las Pavas 0.77 343 eP Pn 12 37 14.2 -0.4
PAVA eS Sn 12 37 26.4 0.0
LALI Alcalda de L 0.79 311 eP Pn 12 37 13.7 -0.9
LALI Alcalda de L 0.79 311 eP Pn 12 37 13.7 -0.9
AEIL Aeropuerto Ilo 0.82 331 eP Pn 12 37 15.0 -0.2
AEIL eS Sn 12 37 27.3 -0.1
AEIL Aeropuerto Ilo 0.82 331 eP Pn 12 37 15.0 -0.2
AEIL eS Sn 12 37 27.3 -0.1
LBRS Las Brisas 0.83 337 eP Pn 12 37 14.8 -0.5
LBRS Las Brisas 0.83 337 eP Pn 12 37 14.8 -0.5
IGN Direccin Gen 0.86 329 eP Pn 12 37 15.3 -0.4
IGN eS Sn 12 37 28.0 -0.2
IGN Direccin Gen 0.86 329 eP Pn 12 37 15.3 -0.4
IGN eS Sn 12 37 28.0 -0.2
LCND La Caada 0.86 67 eP Pn 12 37 15.7 +0.1
LCND eS Sn 12 37 28.2 0.0
LCND eS 12 37 28.3
SNET Serv Nac Est T 0.87 324 eS Sn 12 37 27.3 -1.2
SNET Serv Nac Est T 0.87 324 eS Sn 12 37 27.3 -1.2
SNET Serv Nac Est T 0.87 324 Pn 12 37 15.2 -0.6
SEMO Seminario San 0.88 325 eP Pn 12 37 15.7 -0.2
SEMO eS Sn 12 37 27.4 -1.2
ITCA Escuela Especi 0.89 321 eS Sn 12 37 27.7 -1.2
ITCA Escuela Especi 0.89 321 eS Sn 12 37 27.7 -1.2
CNCH Conchagua 0.90 70 eP Pn 12 37 16.1 -0.1
CNCH eS Sn 12 37 29.3 +0.1
CNCH Conchagua 0.90 70 eP Pn 12 37 16.1 -0.1
CNCH eS Sn 12 37 29.3 +0.1
BOQS Boqueron 0.94 324 eP Pn 12 37 16.5 -0.2
BOQS Boqueron 0.94 324 eP Pn 12 37 16.5 -0.2
CEDA San Andres 1.06 321 eS Sn 12 37 32.4 -0.1
CEDA IAML 12 37 41.8
comp=Z,14µm,0.7s
CEDA San Andres 1.06 321 eS Sn 12 37 32.4 -0.1
CEDA IAML 12 37 41.8
comp=Z,14µm,0.7s
TACO Tacachico 1.17 328 eS Sn 12 37 34.3 -0.7
TACO Tacachico 1.17 328 eS Sn 12 37 34.3 -0.7
LLGN La Laguna 1.20 349 eP Pn 12 37 19.7 -0.2
LLGN eS Sn 12 37 35.6 -0.2
LLGN La Laguna 1.20 349 eP Pn 12 37 19.7 -0.2
LLGN eS Sn 12 37 35.6 -0.2
CEVE Cerro Verde 1.23 314 eS Sn 12 37 36.8 +0.1
CEVE IAML 12 37 45.1
comp=Z,22µm,0.5s
CEVE Cerro Verde 1.23 314 eS Sn 12 37 36.8 +0.1
CEVE IAML 12 37 45.1
comp=Z,22µm,0.5s
SBLS San Blas 1.24 314 eP Pn 12 37 20.6 +0.1
SBLS San Blas 1.24 314 eP Pn 12 37 20.6 +0.1
SNJE San Jose 1.25 316 eP Pn 12 37 20.4 -0.2
SNJE San Jose 1.25 316 eP Pn 12 37 20.4 -0.2
MTO3 Montecristo 1.55 336 eS Sn 12 37 44.4 +0.3
MTO3 Montecristo 1.55 336 eS Sn 12 37 44.4 +0.3
MTO3 Montecristo 1.55 336 Pn 12 37 24.6 +0.1
MTO3 Sn Sn 12 37 45.0 +0.8
CRIN San Cristobal 1.64 99 Pn 12 37 26.4 +0.8
CRIN Sn Sn 12 37 47.5 +1.5
ESQI Esquipulas 1.69 339 eP Pn 12 37 26.9 +0.6
ESQI Esquipulas 1.69 339 Pn 12 37 26.9 +0.6
ESQI Sn Sn 12 37 47.9 +0.6
TGUH Tegucigalpa,Un 1.76 52 Pn Pn 12 37 27.8 +0.5
TGUH Sn Sn 12 37 50.1 +1.1
CNGN Cerro Negro 2.02 103 eP Pn 12 37 30.9 +0.3
CNGN Cerro Negro 2.02 103 eP Pn 12 37 30.9 +0.3
NBG Las Nubes 2.26 315 eP Pn 12 37 36.2 +2.1
MRL Marmol 2.30 336⊓ eP Pn 12 37 36.3 +1.7
MRL eS Sn 12 38 16.6 +15
PCG Pacaya 2.32 308 eP Pn 12 37 36.3 +1.4
FUG Fuego 3 2.54 305 eP Pn 12 37 39.3 +1.5
APG El Apazote 2.64 320 P Pn 12 37 39.9 +0.7
comp=Z,9.5nm,0.3s,baz=121,slow=7.6,SNR=89
MATN Matagalpa 2.71 91 Pn 12 37 44.0 +3.9
BOAB BOACO BROADBAN 3.01 100 Pn Pn 12 37 44.0 -0.1
BOAB Sn Sn 12 38 20.4 +1.3
ERG Entre ros, C 3.14 298 eP Pn 12 37 47.1 +1.4
ERG eS Sn 12 38 33.4 +11
RTAL Retalhuleu 3.29 298 Pn 12 37 49.6 +1.8
RTAL Sn Sn 12 38 26.2 +0.5
HUEH Huehuetenango 3.57 311 Pn 12 37 52.7 +0.8
ACON Acoyapa 3.59 106 Pn 12 37 52.2 +0.2
PETF Flores 4.08 344 Pn 12 37 59.7 +1.1
ORTG Ortega, Santa 4.11 129 Pn Pn 12 38 01.5 +2.4
SAJU San Juanillo, 4.12 134 eP Pn 12 38 00.3 +1.1
CUI Cuipilapa 4.16 123 eP Pn 12 38 00.7 +0.9
PLVR Palo Verde 4.20 128 eP Pn 12 38 01.2 +0.8
ESPN Las Esperanzas 4.37 100 Pn Pn 12 38 02.2 -0.4
INDI Punta indio, G 4.41 134 eP Pn 12 38 04.5 +1.4
JTS Las Juntas de 4.54 126 P Pn 12 38 06.9 +1.9
comp=Z,9.4nm,0.3s,baz=345,slow=19,SNR=85
JTS S Sn 12 38 54.0 -2.5
comp=Z,10nm,0.3s,baz=324,slow=19,SNR=1.3
JTS Las Juntas de 4.54 126 eP Pn 12 38 07.3 +2.3
JTS Las Juntas de 4.54 126 Pn Pn 12 38 06.7 +1.7
ARE1 Arenal 1 4.64 122 eP Pn 12 38 08.7 +2.5
CCIG Comitan 4.67 315 Pn 12 38 07.6 +0.7
COVE Coope Vega, Sa 4.77 118 Pn 12 38 07.9 -0.2
CAO2 Cobano, Puntar 4.81 132 Pn 12 38 10.5 +1.9
LAFE Finca La Fe, P 4.88 130 eP Pn 12 38 11.1 +1.6
SRA1 San Ramn 5.04 124 eP Pn 12 38 14.9 +3.0
HDC Heredia 5.39 123 eP Pn 12 38 18.9 +2.4
HDC Heredia 5.39 123 Pn 12 38 19.0 +2.4
LCR2 La Lucha 2 5.62 124 eP Pn 12 38 22.5 +2.6
RIMA Rio Macho 5.72 123 eP Pn 12 38 23.8 +2.6
CDM Cerro de Muert 5.92 125 eP Pn 12 38 27.3 +3.0
BATAN Batan 5.96 118 Pn Pn 12 38 25.6 +1.4
EDO Dominical 6.02 127 eP Pn 12 38 27.4 +2.2
PEZE Perez Zeledon, 6.09 125 eP Pn 12 38 29.0 +2.8
PEZE Perez Zeledon, 6.09 125 Pn Pn 12 38 29.2 +3.0
DRK0 Durika 6.51 124 eP Pn 12 38 34.4 +2.4
EDPN Palmar Norte 6.52 127 eP Pn 12 38 34.5 +2.5
EDBA Buenos Aires 6.54 125 eP Pn 12 38 34.7 +2.4
RIOS Rincon, Osa 6.64 129 eP Pn 12 38 36.4 +2.8
RIOS Rincon, Osa 6.64 129 Pn 12 38 36.2 +2.6
POTG Potrero Grande 6.73 125 eP Pn 12 38 38.0 +3.0
LPLA Las Palmas La 6.83 124 eP Pn 12 38 38.7 +2.3
EDSV San Vito 6.98 126 eP Pn 12 38 41.9 +3.4
BRU2 Volcan 7.22 125 eP Pn 12 38 44.1 +2.4
TEIG Tepich 7.22 3 P Pn 12 38 43.5 +1.9
comp=Z,25nm,0.3s,baz=178,slow=5.1,SNR=138
TEIG LR LR 12 41 54.1
comp=Z,508nm,18.8s,baz=182,slow=42
TEIG Tepich 7.22 3 Pn 12 38 43.8 +2.2
CMIG Matias Romero 7.23 305 P Pn 12 38 44.0 +2.3
comp=Z,1.9nm,0.3s,baz=152,slow=9.7,SNR=21
CMIG S Sn 12 40 03.0 +0.6
comp=Z,3.2nm,0.3s,baz=221,slow=20,SNR=2.0
BCIP Isla Barro Col 9.49 113 Pn Pn 12 39 13.8 +1.1
FSCY Frank Sound, G 9.59 48 Pn Pn 12 39 15.6 +1.7
TLIG Tlapa 10.55 297 Pn Pn 12 39 30.7 +3.6
SOR Soroa 11.17 28 Pn Pn 12 39 39.5 +4.0
MTDJ Mount Denham 11.96 63 Pn Pn 12 39 49.4 +3.0
SJCC San Jacinto, C 13.61 102 eP P 12 40 15.1 0.0
PAYG Puerto Ayora 13.65 187 Pn P 12 40 13.0 -2.5
UREC San Jos de Ur 13.96 111 eP P 12 40 17.2 -1.8
CBOC Ciudad Bolivar 14.37 118 eP Pn 12 40 20.2 +1.4
HELC Santa Helena 14.63 116 eP Pn 12 40 21.4 -0.9
ZARC Zaragoza, Cauc 14.68 110 eP P 12 40 25.0 -1.9
SMLC San Martn de 14.96 105 eP Pn 12 40 28.0 +1.8
GUY2C Guyana, Caldas 15.25 119 eP P 12 40 31.9 -1.9
PTBC PUERTO BERRIO, 15.43 113 eP Pn 12 40 31.9 -0.3
NORC Norcasia 15.51 117 eP P 12 40 36.0 -0.2
TOLC Tolima 15.63 121 eP P 12 40 39.2 +1.3
BBAC Balboa, Cauca 15.72 133 eP P 12 40 38.1 -0.6
POPC Popayan, Colom 15.79 130 eP P 12 40 39.4 -0.1
OCAC Ocana 15.84 106 eP P 12 40 39.0 -1.0
ORTC Ortega, Tolima 16.07 123 eP P 12 40 42.0 -0.4
SOTA Rioblanco 16.11 131 eP P 12 40 45.9 +2.6
PCON Cinco Dias 16.14 130 eP P 12 40 47.1 +3.3
MARP Paez Belalcaza 16.14 128 eP P 12 40 47.0 +3.5
SPBC San Pablo de B 16.16 115 eP P 12 40 43.3 -0.3
OTAV Otavalo 16.23 140 Pn P 12 40 43.4 -1.3
OTAV Otavalo 16.23 140 eP P 12 40 46.7 +2.0
ROSC El Rosal 16.34 118 P P 12 40 45.0 -0.9
comp=Z,0.6nm,0.3s,baz=344,slow=20,SNR=1.5
ROSC LR LR 12 48 38.0
comp=Z,75nm,21.3s,baz=34,slow=43
PAMC Pamplona, Colo 16.72 108 eP P 12 40 49.5 -0.6
RUSC La Rusia 16.94 113 eP Pn 12 40 50.5 -1.1
656A Willston 17.29 18 P P 12 40 57.6 +1.8

553A Crawfordville 17.58 12 P 12 41 03.4 +4.4
553A IAmb IAmb 12 41 25.8
comp=Z,41nm,0.9s
451A Vernon 17.77 8 P P 12 41 02.4 +1.3
SDV Santo Domingo 18.20 101 P P 12 41 06.1 -0.1
comp=Z,1.6nm,0.3s,baz=297,slow=5.5,SNR=9.9
SDV LR LR 12 49 36.2
comp=Z,252nm,21.4s,baz=162,slow=42
SDV Santo Domingo 18.20 101 P 12 41 06.6 +0.4
SDV IAmb IAmb 12 41 23.2
comp=Z,26nm,0.8s
SDV Santo Domingo 18.20 101 eP P 12 41 05.2 -1.0
SDV Santo Domingo 18.20 101 eP P 12 41 06.3 +0.1
MACC Macarena, Meta 18.23 125 eP Pn 12 41 07.1 +0.2
344A Westbrook Farm 18.49 355 P Pn 12 41 11.5 +1.7
352A Blakely 18.74 10 P Pn 12 41 15.0 +2.1
TIGA Tifton 18.97 14 P P 12 41 13.1 -1.2
TIGA Tifton 18.97 14 P 12 41 17.9
baz=195
VBMS Vicksburg 19.23 355 P P 12 41 18.5 +1.5
VBMS Vicksburg 19.23 355 P 12 41 21.3
baz=174
435B Jarrell 19.53 337 P P 12 41 21.1 +0.8
435B IAmb IAmb 12 41 34.2
comp=Z,30nm,1.1s
146A Union 19.57 359 P P 12 41 21.2 +0.3
146A IAmb IAmb 12 41 32.8
comp=Z,30nm,0.8s
152A Waverly Hall 19.94 10 P P 12 41 27.2 +2.4
152A IAmb IAmb 12 41 29.5
comp=Z,27nm,0.8s
237A Washetta, Mont 20.03 342 P P 12 41 27.1 +1.3
LRAL Lakeview Retre 20.03 4 P Pn 12 41 28.4 +0.2
LRAL Lakeview Retre 20.03 4 P 12 41 28.8
baz=185,SNR=5.1
Z47A Carrollton 20.14 2 P P 12 41 27.7 +0.8
Z47A IAmb IAmb 12 41 30.9
comp=Z,22nm,0.7s
154A Montrose 20.21 14 P P 12 41 28.6 +0.9
JCT Junction City 20.21 331 P P 12 41 29.0 +1.1
JCT Junction City 20.21 331 P 12 41 29.4
baz=147,SNR=6.6
Z51A Franklin 20.51 8 P P 12 41 31.1 +0.1
Z51A IAmb IAmb 12 41 57.6
comp=Z,27nm,1.2s
WHTX Lake Whitney, 20.56 338 P P 12 41 32.8 +1.2
WHTX IAmb IAmb 12 41 49.9
comp=Z,32nm,0.7s
Y49A Blount Mountai 20.89 5 P P 12 41 35.7 +0.6
GOGA Godfrey 20.90 12 P P 12 41 36.6 +1.5
GOGA IAmb IAmb 12 41 39.6
comp=Z,16nm,0.7s
GOGA Godfrey 20.90 12 P 12 41 37.3
baz=194,SNR=9.0
Z38A Mt. Pleasant 20.99 345 P P 12 41 37.9 +1.8
Z38A IAmb IAmb 12 41 44.5
comp=Z,17nm,0.8s
HPIG 21.11 314 P P 12 41 39.1 +1.4
Y52A Lilburn 21.22 11 P P 12 41 40.4 +1.7
Y52A IAmb IAmb 12 41 43.1
comp=Z,23nm,0.7s
TXAR Lajitas Array 21.40 322 P P 12 41 42.6 +1.9
comp=Z,4.6nm,0.6s,baz=141,slow=9.4,SNR=51
TXAR Lajitas Array 21.40 322 P P 12 41 42.3 +1.6
TX31 Lajitas Ar. Si 21.40 322 P P 12 41 42.9 +2.2
TX31 IAmb IAmb 12 41 43.7
comp=Z,21nm,0.8s
TX32 Lajitas Array 21.40 322 P P 12 41 42.6 +1.9
X48A Hartselle 21.44 4 P P 12 41 42.2 +1.3
FPAL Fort Paine 21.65 7 P P 12 41 44.5 +1.3
FPAL IAmb IAmb 12 41 47.1
comp=Z,12nm,0.7s
X40A Basin Creek Fa 21.74 351 P P 12 41 45.5 +1.4
X40A Basin Creek Fa 21.74 351 P 12 41 46.0
baz=169
X51A Calhoun 21.78 9 P P 12 41 45.5 +1.0
X51A IAmb IAmb 12 42 14.8
comp=Z,32nm,1.0s
PLAL Pickwick Lake 21.92 1 P P 12 41 46.5 +0.5
MIAR Mount Ida 21.93 349 P P 12 41 47.7
baz=167
MIAR Mount Ida 21.93 349 P P 12 41 47.2 +1.1
MIAR IAmb IAmb 12 42 12.8
comp=Z,17nm,0.9s
HODGE Hodges 21.96 14 P P 12 41 48.2 +1.7
HODGE IAmb IAmb 12 41 50.7
comp=Z,12nm,0.7s
ABTX Abilene, Hawle 21.97 335 P P 12 41 46.6 -0.1
ABTX IAmb IAmb 12 41 50.8
comp=Z,15nm,0.7s
ABTX Abilene, Hawle 21.97 335 P 12 41 48.2
baz=150
JSC Jenkinsville 22.27 16 P P 12 41 51.6 +1.8
Y57A Sumter 22.27 18 P P 12 41 52.2 +2.3
SWET Sewanee 22.29 6 P P 12 41 50.7 +0.6
W41B Gary Mavity, V 22.33 352 P 12 41 52.3
baz=171,SNR=10
W50A Signal Mountai 22.34 7 P P 12 41 51.6 +1.0
X37A Clayton 22.35 345 P P 12 41 51.6 +0.9
ATAH Atahualpa 22.45 152 LR LR 12 50 06.2
comp=Z,98nm,18.2s,baz=341,slow=35
WHAR Wooly Hollow 22.45 352 P P 12 41 53.0 +1.2
WHAR IAmb IAmb 12 42 15.2
comp=Z,40nm,1.2s
BG3 Lake Jocassee 22.54 12 P P 12 41 54.6 +1.9
W39A Magazine 22.60 349 P P 12 41 54.3 +1.0
W39A IAmb IAmb 12 42 19.3
comp=Z,39nm,1.4s
W39A Magazine 22.60 349 P 12 41 55.1
baz=167,SNR=7.2
PAULI Pauline 22.63 15 P P 12 41 54.6 +0.9
CPCT Cooper Cave 22.70 9 P P 12 41 55.2 +0.8
CPCT IAmb IAmb 12 42 18.1
comp=Z,19nm,0.7s
V48A Smith Brothers 22.73 4 P P 12 41 55.2 +0.5
BIRD Birdtown, Kers 22.84 18 P P 12 41 56.7 +0.9
BIRD IAmb IAmb 12 41 58.0
comp=Z,20nm,0.6s
TKL Tuckaleechee C 23.02 10 P P 12 41 58.1 +0.4
comp=Z,12nm,0.6s,baz=181,slow=11,SNR=20
TKL Tuckaleechee C 23.02 10 P P 12 41 58.4 +0.6
TKL IAmb IAmb 12 41 59.5
comp=Z,12nm,0.7s
FCAR Ozark Folk Cen 23.02 353 P P 12 41 58.1 +0.4
FCAR IAmb IAmb 12 42 23.0
comp=Z,23nm,0.8s
KMSC Kings Mountain 23.06 16 P P 12 41 59.4 +1.3
KMSC IAmb IAmb 12 41 59.5
comp=Z,10nm,0.7s
KMSC Kings Mountain 23.06 16 P 12 41 59.2
baz=198
X34A Smith Ranch, M 23.07 340 P P 12 41 59.6 +1.4
X34A IAmb IAmb 12 42 02.1
comp=Z,21nm,0.6s
WVT Waverly 23.07 2 P P 12 41 58.8 +0.7
WVT Waverly 23.07 2 P 12 41 59.3
baz=182
LCAR Lake Charles 23.10 355 P P 12 41 58.5 +0.1
CLTN Cedars of Leba 23.12 5 P P 12 41 58.5 -0.1
V53A Saluda 23.21 12 P P 12 42 00.6 +0.9
V53A IAmb IAmb 12 42 25.1
comp=Z,20nm,0.9s
V52A Sevierville 23.23 11 P P 12 41 59.9 +0.2
W57A Gilead 23.45 18 P P 12 42 03.6 +1.9
W57A IAmb IAmb 12 42 27.6
comp=Z,15nm,1.0s
FNO Franklin 23.54 342 P P 12 42 03.6 +1.0
U40A Yellville 23.58 352 P P 12 42 04.7 +1.8
U40A Yellville 23.58 352 P 12 42 04.5
baz=170,SNR=32
U49A Red Boiling Sp 23.59 6 P P 12 42 02.7 -0.3
U49A IAmb IAmb 12 42 24.8
comp=Z,25nm,1.3s
X60A Albert Glenn T 23.61 23 P 12 42 04.0
baz=207
HHAR Hobbs 23.68 349 P P 12 42 05.2 +1.4
HHAR IAmb IAmb 12 42 06.9
comp=Z,14nm,0.6s
PCRV Puerto La Cruz 23.74 94 P P 12 42 05.0 +0.3
comp=Z,9.6nm,0.5s,baz=225,slow=5.8,SNR=9.8
PBMO Poplar Bluff 23.75 357 P P 12 42 04.8 +0.4
PBMO IAmb IAmb 12 42 08.0
comp=Z,16nm,0.6s
V55A Taylorsville 23.76 15 P P 12 42 05.2 +0.7
V55A IAmb IAmb 12 42 30.9
comp=Z,28nm,1.4s
V56A Mocksville 23.91 17 P 12 42 06.7
baz=200
U38A Gravette 23.92 349 P P 12 42 06.7 +0.8
GDL2 Guadalupe Moun 23.93 326 P P 12 42 07.8 +1.6
T47A Sharon Grove 23.96 3 P P 12 42 06.1 -0.2
T47A IAmb IAmb 12 42 07.3
comp=Z,19nm,0.7s
MNTX Cornudas Mount 24.13 323 P P 12 42 08.4 +0.5
MNTX Cornudas Mount 24.13 323 P 12 42 08.7
baz=137,SNR=7.6
V57A Coltrane Farms 24.19 18 P 12 42 09.1
baz=202
U54A Nelsons Funny 24.25 14 P P 12 42 09.6 +0.6
U54A Nelsons Funny 24.25 14 P 12 42 10.1
baz=196,SNR=5.1
MGMO Mountain Grove 24.29 353 P P 12 42 09.9 +0.6
MGMO IAmb IAmb 12 42 33.2
comp=Z,31nm,1.1s
V58A Windy Hill, Pi 24.31 19 P P 12 42 10.1 +0.6
U56A King 24.45 16 P P 12 42 11.8 +1.0
U56A IAmb IAmb 12 42 15.8
comp=Z,11nm,0.7s
MSTX Muleshoe 24.51 331 P P 12 42 11.4 -0.1
MSTX IAmb IAmb 12 42 12.8
comp=Z,28nm,0.9s
MSTX Muleshoe 24.51 331 P 12 42 12.1
baz=145,SNR=9.4
S44A Carbondale 24.62 359 P P 12 42 12.2 -0.1
S44A IAmb IAmb 12 42 32.1
comp=Z,16nm,0.9s
SIUC Southern Illin 24.64 359 P P 12 42 13.1 +0.7
SIUC IAmb IAmb 12 42 32.2
comp=Z,14nm,0.8s
AMTX Amarillo 24.78 334 P P 12 42 14.7 +0.9
AMTX IAmb IAmb 12 42 15.9
comp=Z,14nm,0.8s
S39A Bolivar 24.96 351 P P 12 42 15.8 +0.4
CCM Cathedral Cave 25.08 355 P P 12 42 16.8 +0.3
CCM IAmb IAmb 12 42 39.1
comp=Z,24nm,1.0s
CCM Cathedral Cave 25.08 355 P 12 42 16.7
baz=174
OK032 Salt Plains WL 25.21 342 P P 12 42 16.8 -0.9
WCI Wyandotte Cave 25.24 4 P 12 42 18.1
baz=185
WCI Wyandotte Cave 25.24 4 P P 12 42 18.6 +0.7
WCI IAmb IAmb 12 42 18.8
comp=Z,12nm,0.7s
U59A Littleton 25.26 21 P P 12 42 16.7 -1.4
U59A IAmb IAmb 12 42 44.6
comp=Z,10nm,0.8s
R40A Maddies Statio 25.41 353 P P 12 42 19.5 0.0
R50A Paris 25.50 8 P P 12 42 19.1 -1.3
T59A Double "B" Far 25.90 21 P P 12 42 25.0 +1.0
T59A IAmb IAmb 12 42 50.2
comp=Z,21nm,0.9s
S56A Natural Bridge 25.92 17 P 12 42 24.9
baz=201
R54A Victor 26.03 14 P 12 42 25.4
baz=197
121A Cookes Peak, D 26.16 321 P P 12 42 27.9 +1.4
121A Cookes Peak, D 26.16 321 P 12 42 29.0
baz=134
R55A Marlinton 26.34 15 P P 12 42 28.7 +0.8
R55A IAmb IAmb 12 42 47.7
comp=Z,36nm,1.5s
R55A Marlinton 26.34 15 P 12 42 29.0
baz=199
Q51A Peebles 26.38 9 IAmb IAmb 12 42 50.7
comp=Z,32nm,1.3s
Q53A Leroy 26.56 13 P 12 42 30.1
baz=196
P40A Paris 26.61 354 P P 12 42 30.6 +0.2
P40A IAmb IAmb 12 42 31.1
comp=Z,14nm,0.7s
R56A Bull Pasture M 26.65 16 P 12 42 31.6
baz=200
R57A Stanardsville 26.80 18 P 12 42 32.8
baz=202
Q54A Coxs Mills 26.83 14 IAmb IAmb 12 42 33.5
comp=Z,14nm,0.6s
LENM Lemitar 26.84 325 P P 12 42 32.6 0.0
P38A Dawn 26.89 352 P P 12 42 33.8 +1.0
P38A IAmb IAmb 12 42 57.8
comp=Z,11nm,0.8s
KSU1 Kansas State U 26.95 346 P P 12 42 33.0 -0.3
KSU1 IAmb IAmb 12 42 53.9
comp=Z,9.8nm,0.9s
ANMO Albuquerque 27.14 327 P 12 42 37.1
baz=139
ANMO Albuquerque 27.14 327 P P 12 42 36.9 +1.5
comp=Z,0.8nm,0.5s,baz=153,slow=7.1,SNR=5.2
ANMO Albuquerque 27.14 327 P P 12 42 37.8 +2.4
Q56A Snyder Ridge, 27.30 16 P 12 42 37.8
baz=200
Q56A Snyder Ridge, 27.30 16 P P 12 42 37.7 +1.1
Q56A IAmb IAmb 12 43 02.6
comp=Z,10.0nm,0.8s
Q57A Strasburg 27.51 18 P 12 42 40.3
baz=202
CBKS Cedar Bluff 27.53 341 P 12 42 39.5
baz=156
CBKS Cedar Bluff 27.53 341 P P 12 42 38.8 +0.2
CBKS IAmb IAmb 12 42 40.6
comp=Z,11nm,0.7s
O52A Adamsville 27.71 11 P P 12 42 40.5 +0.4
O52A IAmb IAmb 12 42 40.9
comp=Z,11nm,0.6s
T25A Trinidad 27.87 332 P 12 42 43.9
baz=146,SNR=7.8
O53A New Philadelph 27.96 12 P 12 42 42.8
baz=196
P57A Homestead Farm 28.05 18 IAmb IAmb 12 42 45.1
comp=Z,11nm,0.7s
P57A Homestead Farm 28.05 18 P 12 42 44.5
baz=202
KSCO Kaye Shedlock' 28.72 337 IAmb IAmb 12 42 51.2
comp=Z,11nm,0.5s
M50A Fremont 28.75 9 P P 12 42 49.6 +0.2
N54A Moraine State 28.91 14 P 12 42 51.1
baz=198
L40A Anamosa 29.06 356 IAmb IAmb 12 42 55.4
comp=Z,8.9nm,0.7s
SSPA Standing Stone 29.15 17 P 12 42 52.9
baz=202
S22A 4UR Ranch, Cre 29.49 330 P 12 42 58.3
baz=142,SNR=9.2
M54A Oil Creek Stat 29.50 14 P 12 42 56.1
baz=198
BOAV Boa Vista 29.80 108 eP P 12 42 55.9 -3.2
N59A State Game Lan 30.06 20 P 12 43 01.9
baz=206
ISCO Idaho Springs 30.60 334 P P 12 43 07.3 +1.2
ISCO Idaho Springs 30.60 334 P 12 43 07.8
baz=146,SNR=7.4
SMCO Snowmass 30.70 332 P P 12 43 08.9 +1.7
PV03 Paradox Valley 30.90 328 P P 12 43 10.7 +2.0
PV12 Saucer Basin, 30.92 328 IAmb IAmb 12 43 12.0
comp=Z,9.0nm,0.6s
PV18 Skein Mesa, Pa 30.93 328 P P 12 43 10.9 +2.0
PV18 IAmb IAmb 12 43 12.6
comp=Z,6.4nm,0.5s
PV11 David Mesa, Pa 30.95 328 P P 12 43 11.2 +2.1
PV11 IAmb IAmb 12 43 11.9
comp=Z,8.3nm,0.6s
PV17 East Wray Mesa 30.98 328 IAmb IAmb 12 43 12.9
comp=Z,22nm,1.5s
PV16 Nyswonger Mesa 30.98 328 IAmb IAmb 12 43 12.9
comp=Z,15nm,1.5s
PV04 Paradox Valley 31.03 328 IAmb IAmb 12 43 13.5
comp=Z,21nm,1.5s
I37A Lemond, Waseca 31.19 353 P P 12 43 11.2 +0.2
I51A Listowel 31.43 11 P 12 43 12.5
baz=194
PTGA Pitinga 31.59 113 P P 12 43 13.6 -1.2
N23A Red Feather La 31.65 335 P 12 43 16.8
baz=147
PHWY Pilot Hill 31.79 336 P P 12 43 17.1 +0.5
PHWY IAmb IAmb 12 43 18.8
comp=Z,11nm,1.4s
ETMB Extrema 31.81 134 eP P 12 43 17.6 +0.9
J56A Wolcott 31.88 16 P P 12 43 17.0 +0.1
J56A Wolcott 31.88 16 P 12 43 16.9
baz=202
O20A White River Ci 32.05 331 P P 12 43 21.0 +2.1

O20A IAmb IAmb 12 43 21.7
comp=Z,14nm,1.2s
O20A White River Ci 32.05 331 P 12 43 20.7
baz=142,SNR=6.7
MACA Manacapuru-AM 32.12 118 *eP* **P 12 43 17.5 -1.9**
J57A Williamstown 32.25 17 P 12 43 19.7
baz=204
SPMN Marine on St. 32.33 355 P **P 12 43 20.2 -0.7**
SPMN Marine on St. 32.33 355 P 12 43 20.7
baz=172,SNR=6.3
SRU San Rafael Swe 32.41 327 P **P 12 43 23.2 +1.2**
MTPU Mount Pierson 32.56 324 P **P 12 43 24.9 +1.5**
PFO Pinyon Flats O 32.56 314 LR LR 12 58 24.2
comp=Z,48nm,18.2s,baz=58,slow=39
Q16A Castle Valley 32.61 326 P **P 12 43 26.3 +2.6**
H53A Bobcaygeon 32.66 13 P 12 43 23.6
baz=198
SADO Sadowa 32.73 13 P **P 12 43 23.8 -0.6**
P17A Butcher Ranch, 32.79 328 P **P 12 43 24.6 -0.7**
P17A IAmb IAmb 12 43 29.2
comp=Z,5.3nm,0.7s
RWWY Rawlins 32.84 334 P **P 12 43 27.0 +1.2**
COWI Conover 33.02 359 P **P 12 43 26.1 -0.9**
COWI IAmb IAmb 12 43 30.3
comp=Z,16nm,1.1s
K22A Casper 33.35 336 P **P 12 43 31.4 +1.3**
F33A 5 Mile Ranch, 33.38 350 P **P 12 43 29.6 -0.5**
SAML Samuel 33.42 129 P **P 12 43 29.7 -1.2**
SAML IAmb IAmb 12 43 48.4
comp=Z,9.9nm,0.8s
SAML Samuel 33.42 129 *eP* **P 12 43 30.6 -0.2**
RSSD Black Hills 33.71 340 P **P 12 43 34.2 +1.0**
RSSD IAmb IAmb 12 43 35.9
comp=Z,6.7nm,0.6s
RSSD Black Hills 33.71 340 P 12 43 34.9
baz=152
PSUT Pine Spring 33.85 323 P **P 12 43 36.9 +2.3**
ALGO Algonquin Park 34.09 13 P 12 43 35.5
baz=199
TCUT Toone Canyon 34.35 329 IAmb IAmb 12 43 42.4
comp=Z,7.6nm,0.7s
MPMC Manual Prospec 34.61 317 P 12 43 42.8
baz=124
BW06 Boulder Array 34.74 333 P **P 12 43 43.1 +0.9**
BW06 Boulder Array 34.74 333 P 12 43 42.8
baz=142,SNR=7.2
PD31 Pinedale Array 34.74 333 P **P 12 43 42.4 +0.2**
PDAR Pinedale Array 34.74 333 P **P 12 43 42.9 +0.7**
comp=Z,2.0nm,0.6s,baz=126,slow=11,SNR=25
PDAR LR LR 12 58 59.5
comp=Z,68nm,21.0s,baz=80,slow=38
PDAR Pinedale Array 34.74 333 P **P 12 43 42.4 +0.2**
R11A Troy Canyon, C 34.77 321 P **P 12 43 44.4 +2.0**
R11A Troy Canyon, C 34.77 321 P 12 43 44.2
baz=129
SPUT South Promonto 35.02 328 IAmb IAmb 12 43 47.5
comp=Z,4.8nm,1.0s
LPAZ La Paz 35.49 144 P **P 12 43 50.8 +1.5**
comp=Z,1.7nm,0.6s,baz=343,slow=6.8,SNR=10
LPAZ LR LR 12 59 04.3
comp=Z,68nm,18.8s,baz=346,slow=37
LPAZ La Paz 35.49 144 P **P 12 43 51.1 +1.8**
HVU Hansel Valley 35.53 328 P **P 12 43 49.8 +0.8**
D55A Sainte-Anne-du 35.71 16 P 12 43 49.5
baz=202
AGMN Agassiz Nation 35.72 352 P 12 43 49.9
baz=168,SNR=9.6
SNOW Snow King Moun 35.83 332 P **P 12 43 53.0 +1.5**
LOHW Long Hollow 35.88 332 P **P 12 43 53.0 +1.0**
LOHW IAmb IAmb 12 43 55.0
comp=Z,7.0nm,0.7s
MDND Maddock 35.94 347 P **P 12 43 52.2 +0.1**
MDND Maddock 35.94 347 P 12 43 52.2
baz=162
ELK Elko 36.13 325 P **P 12 43 55.5 +1.3**
FLWY Flagg Ranch 36.29 333 P **P 12 43 56.8 +1.3**
NV11 Mina Array Sit 36.41 319 P **P 12 43 58.9 +2.4**
PB16 IPOC Station P 36.42 148 P **P 12 43 59.0 +1.8**
H17A Grant Village 36.48 333 P **P 12 43 58.4 +1.2**
H17A IAmb IAmb 12 44 04.7
comp=Z,4.6nm,0.9s
H17A Grant Village 36.48 333 P 12 43 58.8
baz=142
YPP Pitchstone Pla 36.48 333 P **P 12 44 00.2 +3.0**
NVAR Mina Array Bea 36.51 319 P **P 12 43 59.3 +1.9**
comp=Z,2.2nm,0.6s,baz=132,slow=7.5,SNR=26
NVAR PcP **PcP 12 46 21.6 +1.7**
comp=Z,1.4nm,0.5s,baz=114,slow=4.4,SNR=8.9
NVAR Mina Array Bea 36.51 319 P **P 12 43 58.2 +0.8**
RLMT Red Lodge 36.51 335 P **P 12 43 57.9 +0.6**
RLMT Red Lodge 36.51 335 P 12 43 58.2
baz=145,SNR=16
LHV Little Huntoon 36.53 319 P **P 12 43 59.9 +2.7**
LHV IAmb IAmb 12 44 03.0
comp=Z,3.7nm,0.6s
YMP Mirror Lake Pl 36.57 334 P **P 12 43 60.0 +2.0**
YMP IAmb IAmb 12 44 08.9
comp=Z,7.7nm,0.8s
LAO LASA Array 36.70 340 P **P 12 44 00.3 +1.6**
LAO IAmb IAmb 12 44 02.1
comp=Z,8.3nm,0.7s
YNE Yellowstone No 36.73 334 P **P 12 43 59.9 +0.7**
KVN Kaiserville 36.74 320 P **P 12 44 01.4 +2.0**
YNR Norris Junctio 36.78 334 P **P 12 44 01.5 +1.9**
YNR IAmb IAmb 12 44 02.9
comp=Z,5.1nm,0.7s
YMR Madison River 36.87 333 P **P 12 44 01.5 +1.1**
YMR IAmb IAmb 12 44 03.1
comp=Z,9.6nm,0.9s
YHH Holmes Hill 36.91 333 P **P 12 44 02.0 +1.1**
YHH IAmb IAmb 12 44 07.4
comp=Z,5.0nm,0.6s
YHB Horse Butte 37.03 333 P **P 12 44 03.3 +1.5**
YHB IAmb IAmb 12 44 07.5
comp=Z,7.0nm,0.7s
MNMC Minye Minye 37.05 149 P **P 12 44 04.8 +2.6**
YHL Hebgen Lake 37.11 333 P **P 12 44 04.3 +1.8**
YHL IAmb IAmb 12 44 06.2
comp=Z,8.3nm,0.7s
QLMT Earthquake Lak 37.20 333 P **P 12 44 05.4 +2.2**
GCMT Greycliff 37.22 336 P **P 12 44 04.2 +0.9**
ULM Lac du Bonnet 37.63 352 P **P 12 44 05.2 -1.2**
comp=Z,9.6nm,0.6s,baz=168,slow=9.2,SNR=25
ULM LR LR 13 00 52.9
comp=Z,108nm,19.9s,baz=146,slow=38
ULM Lac du Bonnet 37.63 352 P **P 12 44 05.4 -1.1**
DGMT Dagmar 37.66 343 P **P 12 44 07.7 +0.9**
DGMT Dagmar 37.66 343 P 12 44 07.8
baz=155,SNR=9.9
HLID Hailey 37.66 329 P 12 44 08.2
baz=136,SNR=6.6
HLID Hailey 37.66 329 P **P 12 44 07.9 +0.8**
BCYI Bear Canyon 37.71 331 P **P 12 44 09.2 +1.6**
MATQ Matagami 37.79 12 P 12 44 07.0
baz=198,SNR=6.0
MCMT McKenzie Canyo 37.84 332 P **P 12 44 10.6 +1.9**
BOZ Bozeman (W) 37.89 334 P 12 44 10.2
baz=142,SNR=22
BOZ Bozeman (W) 37.89 334 P **P 12 44 10.0 +1.1**
DLMT Dillon 38.13 332 P **P 12 44 10.5 -0.5**
DLMT IAmb IAmb 12 44 13.0
comp=Z,4.1nm,0.8s
VILB Vilhena 38.24 131 *eP* **P 12 44 12.1 0.0**
MFID Camas Ranch 38.28 328 P **P 12 44 14.4 +2.2**
LRM Limekiln Ridge 38.42 333 P **P 12 44 13.9 +0.4**
NPGB Novo Progresso 38.65 119 *eP* **P 12 44 15.2 -0.3**
HRY Holter Researc 38.85 334 P **P 12 44 18.0 +1.1**
EGMT Eagleton 39.10 338 P 12 44 20.1
baz=146,SNR=31
EGMT Eagleton 39.10 338 P **P 12 44 19.9 +1.0**
WVOR Wild Horse Val 39.16 324 P **P 12 44 20.6 +1.0**
J08A Circle Bar Ran 39.66 325 P **P 12 44 24.4 +0.6**
SIV San Ignacio 39.69 136 PcP **PcP 12 46 30.9 +1.1**
baz=319,slow=4.9
MSO Missoula 39.86 333 P **P 12 44 25.7 +0.4**
MSO IAmb IAmb 12 44 26.9
comp=Z,6.8nm,0.9s
MSO Missoula 39.86 333 P 12 44 26.1
baz=140
BMO Blue Mountains 40.04 328 P **P 12 44 26.6 -0.2**
LVC Limon Verde 40.34 151 P **P 12 44 32.1 +2.3**
comp=Z,6.2nm,1.0s,baz=272,slow=7.9,SNR=4.6
CLDB Colider 40.36 124 *eP* **P 12 44 29.1 -0.6**
PTLB Pontes e Lacer 40.67 133 *eP* **P 12 44 32.7 +0.5**
JTMT Jette 40.71 333 P **P 12 44 33.2 +0.8**

F10A Beach Ranch, E 40.78 329 P **P 12 44 33.5 +0.6**
F10A IAmb IAmb 12 44 35.7
comp=Z,5.0nm,0.7s
YBH Yreka Blue Hor 41.17 321 P **P 12 44 35.4 -0.8**
comp=Z,1.1nm,0.6s,baz=115,slow=5.6,SNR=5.5
YBH Yreka Blue Hor 41.17 321 P **P 12 44 35.6 -0.6**
YBH IAmb IAmb 12 44 51.0
comp=Z,12nm,0.8s
PINE Pine Mountain 41.33 324 P **P 12 44 38.1 +0.5**
WALA Waterton Lakes 41.56 335 P **P 12 44 39.9 +0.5**
GO02 Mina Guanaco 42.24 154 P **P 12 44 47.7 +2.4**
GO02 IAmb IAmb 12 44 48.8
comp=Z,5.5nm,0.8s
NEW Newport 42.37 332 P **P 12 44 45.6 -0.2**
E07A Sunnyside 42.51 328 P **P 12 44 47.0 0.0**
C09A Chrisman Ranch 42.58 331 P **P 12 44 48.0 +0.5**
C09A IAmb IAmb 12 44 49.1
comp=Z,4.8nm,0.6s
H04A Detroit Lake 42.58 324 P **P 12 44 48.1 +0.6**
FFC Flin Flon 42.94 349 P **P 12 44 50.3 0.0**
FFC IAmb IAmb 12 44 51.1
comp=Z,8.3nm,0.6s
E03A Lebam 44.48 326 P **P 12 45 04.6 +1.9**
SNDB Serra Nova Dou 44.63 122 *eP* **P 12 45 02.3 -2.1**
B06A Marblemount 44.64 329 P **P 12 45 04.5 +0.5**
A05A Maple Falls 45.25 329 P **P 12 45 08.5 -0.4**
A05A IAmb IAmb 12 45 34.0
comp=Z,12nm,1.0s
FCC Fort Churchill 45.88 356 P **P 12 45 13.1 -0.5**
ARAG Araguaiana, MT 46.30 127 *eP* **P 12 45 16.7 -0.9**
AQDB Aquidauana 46.46 135 *eP* **P 12 45 19.0 +0.3**
CO03 El Pedregal 46.88 159 P **P 12 45 24.1 +2.2**
H03N2 Juan Fernandez 47.09 169 T T 13 35 41.6
baz=347,slow=76,SNR=38
H03N1 Juan Fernandez 47.09 169 T T 13 35 43.0
baz=347,slow=76,SNR=37
H03N3 Juan Fernandez 47.10 169 T T 13 35 41.8
baz=347,slow=76,SNR=41
BDFB Brasilia 49.28 124 P **P 12 45 40.2 -0.6**
comp=Z,4.7nm,0.6s,baz=293,slow=3.8,SNR=10.0
BDFB Brasilia 49.28 124 P **P 12 45 39.4 -1.4**
BDFB IAmb IAmb 12 45 40.7
comp=Z,5.0nm,0.7s
CPUP Villa Florida 49.58 142 P **P 12 45 42.5 -0.2**
comp=Z,1.9nm,0.5s,baz=331,slow=9.1,SNR=14
CPUP Villa Florida 49.58 142 IAmb IAmb 12 46 01.3
comp=Z,6.1nm,1.1s
ITRB Iturama 49.80 130 *eP* **P 12 45 43.7 -0.8**
PCMB Pacaembu 50.32 133 *eP* **P 12 45 47.8 -0.6**
BB19B Bebedouro 51.98 130 *eP* **P 12 46 00.9 -0.1**
FRTB Fartura 52.63 133 *eP* **P 12 46 04.7 -1.0**
YKA Yellowknife Ar 52.79 345 P **P 12 46 05.7 -0.5**
comp=Z,8.2nm,0.7s,baz=138,slow=8.1,SNR=169
ITAB Concordia 53.45 139 *eP* **P 12 46 12.0 +0.3**
VAO Valinhos 54.30 131 *eP* **P 12 46 15.7 -2.3**
DLBC Dease Lake 54.91 335 P **P 12 46 22.9 +0.9**
NBIT Itapeh - BA 56.10 118 *eP* **P 12 46 29.4 -1.6**
TGL Tana Glacier 61.65 333 P **P 12 47 09.5 +0.6**
TGL IAmb IAmb 12 47 12.2
comp=Z,7.2nm,1.0s
L27K Beaver Creek, 62.29 336 P **P 12 47 13.4 +0.3**
L27K IAmb IAmb 12 47 14.0
comp=Z,5.2nm,0.8s
L27K Beaver Creek, 62.29 336 P 12 47 13.0
baz=118
INK Inuvik 62.34 343 P **P 12 47 12.8 -0.4**
comp=Z,11nm,0.8s,baz=120,slow=7.0,SNR=21
INK Inuvik 62.34 343 P **P 12 47 12.8 -0.4**
GLB Gilahina Butte 62.38 334 P **P 12 47 14.0 +0.3**
GLB IAmb IAmb 12 47 15.8
comp=Z,3.7nm,0.8s
BMRM Bremner River 62.53 333 P **P 12 47 15.5 +0.9**
BMRM Bremner River 62.53 333 P 12 47 15.4
baz=114
N25K Chitina, Valde 62.79 334 P **P 12 47 16.9 +0.4**
N25K IAmb IAmb 12 47 18.7
comp=Z,7.2nm,0.9s
N25K Chitina, Valde 62.79 334 P 12 47 16.7
baz=115
K27K Chicken 62.85 337 P **P 12 47 16.9 +0.3**
K27K IAmb IAmb 12 47 17.7
comp=Z,4.1nm,0.7s
K27K Chicken 62.85 337 P 12 47 17.0
baz=118
EGAK Eagle 62.86 338 P **P 12 47 15.3 -1.5**
EGAK IAmb IAmb 12 47 16.9
comp=Z,4.4nm,0.8s
EGAK Eagle 62.86 338 P 12 47 16.3
baz=120
MENT Mentasta 63.00 335 P **P 12 47 18.1 +0.3**
MENT IAmb IAmb 12 47 46.5
comp=Z,7.3nm,1.2s
KLU Klutina 63.32 333 P **P 12 47 20.0 0.0**
KLU IAmb IAmb 12 47 21.0
comp=Z,5.2nm,0.7s
KLU Klutina 63.32 333 P 12 47 20.3
baz=114
SCM Sheep Creek Mo 64.07 333 P **P 12 47 25.2 +0.3**
SCM IAmb IAmb 12 47 36.1
comp=Z,11nm,1.2s
KNK Knik Glacier 64.42 333 P **P 12 47 27.6 +0.5**
KNK IAmb IAmb 12 47 27.8
comp=Z,6.9nm,0.8s
KNK Knik Glacier 64.42 333 P 12 47 27.0
baz=111
TULEG Thule 64.43 5 P **P 12 47 26.3 -0.6**
SML Sawmill 64.51 333 P **P 12 47 27.9 +0.2**
SML IAmb IAmb 12 47 28.1
comp=Z,5.7nm,0.9s
GHO Glory Hole Cre 64.76 333 P **P 12 47 29.6 +0.2**
PMR Palmer 64.78 333 P 12 47 29.2
baz=110
PRP Porcupine Dome 64.84 337 P **P 12 47 30.0 0.0**
PRP IAmb IAmb 12 47 31.1
comp=Z,7.9nm,0.8s
PRP Porcupine Dome 64.84 337 P 12 47 29.6
baz=116
RC01 Rabbit Creek A 64.89 332 P **P 12 47 30.4 +0.3**
RC01 Rabbit Creek A 64.89 332 P 12 47 30.1
baz=110
HDA Harding Lake 64.93 336 P 12 47 30.0
baz=114
HDA P 12 47 30.0
baz=114
BRLK Bradley Lake 65.00 330 P **P 12 47 31.9 +0.9**
WAT2 Susitna Watana 65.04 334 P 12 47 30.9
baz=112
IL31 65.05 336 P **P 12 47 30.9 -0.2**
IL31 IAmb IAmb 12 47 32.0
comp=Z,13nm,1.4s
ILAR Eielson Array 65.05 336 P **P 12 47 30.2 -0.9**
comp=Z,4.2nm,0.7s,baz=172,slow=5.1,SNR=19
FYU Fort Yukon 65.20 338 P **P 12 47 31.8 -0.2**
FYU IAmb IAmb 12 47 32.4
comp=Z,6.2nm,0.8s
KDAK Kodiak Island 65.27 328 P **P 12 47 31.1 -1.6**
comp=Z,13nm,1.0s,baz=120,slow=8.1,SNR=2.8
RND Reindeer 65.32 335 P **P 12 47 33.0 +0.1**
BMAR Burnt Mountain 65.36 339 P **P 12 47 33.4 +0.2**
CCB Clear Creek Bu 65.36 336 P **P 12 47 32.9 -0.3**
CCB IAmb IAmb 12 47 33.4
comp=Z,4.4nm,0.6s
POKR Poker Plat Res 65.40 337 P **P 12 47 33.8 +0.4**
WRH Wood River Hil 65.41 336 P **P 12 47 32.8 -0.6**
WRH IAmb IAmb 12 47 33.2
comp=Z,4.7nm,0.7s
COLA College 65.47 336 P **P 12 47 33.3 -0.5**
COLA IAmb IAmb 12 47 34.1
comp=Z,6.2nm,0.8s
COLA College 65.47 336 P 12 47 33.4
baz=113
MCK McKinley 65.47 335 P **P 12 47 33.7 -0.2**
MCK IAmb IAmb 12 47 34.4
comp=Z,6.8nm,0.9s
MCK McKinley 65.47 335 P 12 47 33.5
baz=112
SUA Susitna One 65.47 332 P **P 12 47 34.2 +0.2**
SUA IAmb IAmb 12 47 34.9
comp=Z,6.0nm,0.6s
SUA Susitna One 65.47 332 P 12 47 34.1
baz=109
TCOL CIGO, UAF Yank 65.47 336 P 12 47 33.4
baz=113
MDM Murphy Dome 65.65 336 P **P 12 47 35.1 0.0**
MDM IAmb IAmb 12 47 36.0
comp=Z,3.7nm,0.8s
NEA2 Nenana 65.84 336 P **P 12 47 36.8 +0.6**
NEA2 IAmb IAmb 12 47 37.1
comp=Z,5.0nm,0.6s
NEA2 Nenana 65.84 336 P 12 47 36.0
baz=112
BWN Browne 65.85 335 P **P 12 47 36.1 -0.2**
TRF Thorofare Moun 65.94 334 P **P 12 47 37.0 -0.1**
TRF IAmb IAmb 12 47 40.7
comp=Z,8.7nm,0.8s
TRF Thorofare Moun 65.94 334 P 12 47 36.7
baz=110
I23K Minto, Yukon-K 66.17 336 P **P 12 47 38.6 +0.3**
I23K Minto, Yukon-K 66.17 336 P 12 47 38.3
baz=112,SNR=5.9
KTH Kantishna Hill 66.24 334 P **P 12 47 38.7 -0.2**
KTH IAmb IAmb 12 47 38.9
comp=Z,6.8nm,0.7s
SUMG Summit 66.39 15 P **P 12 47 39.7 -0.4**
BPAW Bear Paw Mtn. 66.45 335 P **P 12 47 39.9 -0.3**
BPAW Bear Paw Mtn. 66.45 335 P 12 47 39.7
baz=110,SNR=9.4
PPLA Purkeypile 66.57 333 P **P 12 47 40.7 -0.4**
PPLA IAmb IAmb 12 47 43.4
comp=Z,5.3nm,0.9s
PPLA Purkeypile 66.57 333 P 12 47 40.6
baz=108
MLY Manley 66.67 336 P **P 12 47 41.3 -0.3**
MLY Manley 66.67 336 P 12 47 41.3
baz=110,SNR=14
EUNU Eureka 67.11 0 P **P 12 47 43.8 -0.4**
COLD Coldfoot 67.26 338 P **P 12 47 45.8 +0.6**
COLD IAmb IAmb 12 47 46.8
comp=Z,7.1nm,0.8s
COLD Coldfoot 67.26 338 P 12 47 46.1
baz=112,SNR=6.7
PPT Papeete 67.31 245 LR LR 13 12 21.9
comp=Z,58nm,18.8s,baz=334,slow=31
TOLK Toolik Lake Re 67.58 340 P **P 12 47 47.2 0.0**
TOLK Toolik Lake Re 67.58 340 P 12 47 47.4
baz=113,SNR=8.5
RDOG Red Dog Mine 72.15 338 P **P 12 48 15.7 +0.4**
RDOG IAmb IAmb 12 48 16.1
comp=Z,5.0nm,0.7s
RDOG Red Dog Mine 72.15 338 P 12 48 15.7
baz=100
ANM Nome 72.64 334 P 12 48 18.4
baz=96
TNA Tin City 73.81 335 P **P 12 48 25.6 +0.5**
TNA IAmb IAmb 12 48 26.6
comp=Z,4.1nm,0.8s
TNA Tin City 73.81 335 P 12 48 25.9
baz=94
ESDC Sonseca Array 77.83 52 P **P 12 48 45.9 -2.8**
comp=Z,0.6nm,0.8s,baz=285,slow=5.6,SNR=7.1
SPITS Spitsbergen Ar 80.44 12 LR LR 13 24 29.1
comp=Z,34nm,21.6s,baz=315,slow=36
NOA NORSAR Array B 83.50 29 P **P 12 49 16.3 -2.2**
comp=Z,0.2nm,0.6s,baz=290,slow=5.3,SNR=3.3
ARCES ARCES Array B 86.09 19 P **P 12 49 30.1 -1.2**
comp=Z,1.3nm,0.8s,baz=298,slow=6.0,SNR=3.8
TORD Torodi Ar. Bea 87.49 77 P **P 12 49 36.6 -2.6**
comp=Z,0.2nm,0.5s,baz=296,slow=5.4,SNR=1.6
MODS Modra-Piesok 90.73 40 *eP* **P 12 49 53.9 +0.1**
SEY Seymchan 90.99 336 P **P 12 49 54.2 -0.4**
comp=Z,1.6nm,0.2s,baz=109,slow=14,SNR=3.7
VYHS Vyhne 91.66 39 *eP* **P 12 49 56.0 -2.1**
MSVF Nonsavu 96.90 253 LR LR 13 25 05.8
comp=Z,136nm,21.9s,baz=8.9,slow=30
NRIK Inuvik 97.86 1 LR LR 13 34 35.8
comp=Z,80nm,21.8s,baz=87,slow=35
BOSA Boshof 117.03 116 PKP **PKiKP 12 55 36.3 +0.2**
comp=Z,1.3nm,0.5s,baz=326,slow=1.5,SNR=7.8
KSRS Korea Array 119.17 327 PKP **PKPdf 12 55 39.9 0.0**
comp=Z,1.9nm,0.6s,baz=4.5,slow=1.8,SNR=5.7
WRA Warramunga Arr 138.23 255 PKP **PKiKP 12 56 18.0 -0.6**
comp=Z,2.1nm,0.6s,baz=91,slow=2.3,SNR=15
WRA Warramunga Arr 138.23 255 **PKiKP 12 56 18.4 -0.2**
ASAR Alice Springs 138.32 249 PKhKP PKPpre 12 56 08.3
comp=Z,0.2nm,0.5s,baz=107,slow=3.4,SNR=4.9
ASAR PKP **PKiKP 12 56 18.7 0.0**
comp=Z,1.3nm,0.6s,baz=86,slow=1.8,SNR=11
FITZ Fitzroy Crossi 146.55 257 PKPbc **PKPab 12 56 33.9 0.0**
comp=Z,3.7nm,0.5s,baz=147,slow=3.6,SNR=17
CMAR Chiang Mai Arr 147.87 346 PKPbc **PKPdf 12 56 33.9 +0.4**
comp=Z,2.2nm,0.7s,baz=315,slow=2.4,SNR=11

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*BJI **03** 12:45:20.0±0.0, 10°.56N×93°.12E, h98km, mb4.8/18, mb4.4/27*
*NEIC **03** 12:45:21.7±2.2, 10°.52N±0°.09×93°.3E±0°.1, h104km±5km, mb4.6/44, Error ellipse: s-maj=16.7km s-min=9.4km az=54.0*
*NDI **03** 12:45:23.3±3.8, 10°.79N×93°.78E, h100km, mb4.8, ML4.3, mb4.6(NEIC)*
*IDC **03** 12:45:23.4±2.4, 10°.60N×93°.48E, h115km±21km, mb4.0/26, mb1 4.1/29, mb1mx4.0/57, mbtmp4.3/29, MS3.0/2, Ms1 3.0/2, ms1mx2.7/50, Error ellipse: s-maj=14.7km s-min=9.3km az=57.0*

ISC 03 12:45:22.6±0.9, 10°.56N±0°.05×93°.34E±0°.06, h112km±8km, n199, σ1s67/205, mb4.5/63, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**1.24**	**332**	*eP*	Pn	12 45 45.7	-0.8
PBA				*eS*	Sn	12 46 04.7	0.0
PBA				IAML		12 46 06.4	
	comp=E,6μm,0.3s						
PBA				AMP		12 46 07.0	
	comp=N,84μm,0.2s						
PBA	**Port Blair**	**1.24**	**332**	Pn	Pn	12 45 45.5	-1.1
DGPR	**DIGLIPUR**	**2.63**	**351**	IAmb	IAmb	12 43 20.3	
DGPR				*eP*	**Pn**	**12 46 05.2**	**+1.3**
DGPR				*eS*	**Sn**	**12 46 32.2**	**-3.4**
DGPR				IAML		12 46 34.1	
	comp=N,491nm,0.3s						
DGPR				IAML		12 46 34.6	
	comp=E,702nm,0.3s						
DGPR				IAmb	IAmb	12 50 07.0	
CMBY	**CAMPBELL BAY**	**3.57**	**171**	*eP*	**Pn**	**12 46 16.2**	**-0.1**
CMBY				*eS*	**Sn**	**12 46 55.6**	**-2.2**
CMBY				IAML		12 46 58.0	
	comp=N,1μm,0.4s						
LHMI	**Lhok Sumawe**	**6.39**	**146**		**Pn**	**12 46 53.8**	**-0.5**
UTHA	**Uthaitani**	**7.75**	**49**	P	Pn	12 47 17.7	+4.9
	comp=N,0.1nmcomp=N,250nmcomp=N,21nm,0.7s						
UMPA	**Umpang Tak**	**7.77**	**43**	P	**Pn**	**12 47 13.0**	**0.0**
	comp=N,0.2nmcomp=N,603nmcomp=N,52nm,0.7s						
PSI	**Prapat**	**9.49**	**144**	P	**Pn**	**12 47 36.8**	**+0.3**
	comp=N,1.6nm,0.3s,baz=360,slow=11,SNR=9.4						
PSI				LR	LR	12 51 13.0	
	comp=N,86nm,18.2s,baz=260,slow=37						
CM13	**Chiang Mai Arr**	**9.50**	**34**	P	**Pn**	**12 47 39.6**	**+3.2**
	comp=N,0.1nmcomp=N,147nmcomp=N,20nm,0.8s						
CM05	**Chiang Mai Arr**	**9.50**	**34**	P	**Pn**	**12 47 39.8**	**+3.3**
	comp=N,0.1nmcomp=N,173nmcomp=N,22nm,0.9s						
CM04	**Chiang Mai Arr**	**9.52**	**34**	P	**Pn**	**12 47 40.1**	**+3.4**
	comp=N,0.1nmcomp=N,244nmcomp=N,30nm,0.5s						
CM01	**Chiang Mai Arr**	**9.52**	**34**	P	**Pn**	**12 47 40.0**	**+3.2**
	comp=N,0.1nmcomp=N,231nmcomp=N,32nm,0.7s						
CM02	**Chiang Mai Arr**	**9.53**	**34**	P	**Pn**	**12 47 40.1**	**+3.3**
	comp=N,0.1nmcomp=N,185nmcomp=N,24nm,0.8s						
CM15	**Chiang Mai Arr**	**9.53**	**34**	P	**Pn**	**12 47 40.4**	**+3.5**
	comp=N,0.1nmcomp=N,20nm,0.7s						
CM31	**Chiang Mai Arr**	**9.54**	**34**	P	**Pn**	**12 47 40.4**	**+3.3**
	comp=N,2.5nmcomp=N,7μmcomp=N,694nm,0.7s						
CM31	**Chiang Mai Arr**	**9.54**	**34**	Pn	**Pn**	**12 47 37.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**9.54**	**34**	P	**Pn**	**12 47 37.4**	**+0.3**
	comp=N,2.4nm,0.3s,baz=227,slow=15,SNR=30						
CMAR	**Chiang Mai Arr**	**9.54**	**34**	Pn	**Pn**	**12 47 38.7**	**+1.6**
CM09	**Chiang Mai Arr**	**9.56**	**34**	P	**Pn**	**12 47 40.6**	**+3.4**
	comp=N,0.1nmcomp=N,275nmcomp=N,33nm,0.8s						
RPSI	**Rantau Prapat**	**9.58**	**144**	Pn	**Pn**	**12 47 36.4**	**-1.1**
IPM	**Ipoh**	**9.72**	**128**	Pn	**Pn**	**12 47 39.9**	**+0.4**
CHTO	**Chiang Mai**	**9.84**	**33**		**Pn**	**12 47 40.9**	**-0.1**
CMMT	**Chiang Mai**	**9.84**	**33**	P	**Pn**	**12 47 42.7**	**+1.6**
	comp=N,0.0nmcomp=N,7.3nm,0.8s						
LAMP	**Lampang**	**9.99**	**37**	P	**Pn**	**12 47 47.2**	**+4.1**
	comp=N,0.1nmcomp=N,29nm,0.7s						
GSI	**Gunungsitoli**	**10.11**	**155**	Pn	**Pn**	**12 47 41.7**	**-3.0**
SAIH	**SAIHA**	**11.87**	**358**	*eP*	**Pn**	**12 48 07.1**	**-1.3**
SAIH				IAmb	IAmb	12 48 10.2	
	comp=Z,62nm,0.3s						
PALK	**Pallekele**	**12.90**	**256**	P	**P**	**12 48 25.9**	**-2.4**
	comp=Z,0.3nm,0.3s,baz=51,slow=3.2,SNR=1.5						

PALK S Sn 12 50 34.1 -10
comp=Z,4.4nm,0.3s,baz=99,slow=21,SNR=18
PALK LR LR 12 52 42.9
comp=Z,59nm,21.0s,baz=114,slow=34
MDRS Chennai 13.06 282 *eP* **P 12 48 28.4 -1.6**
SLVN Son La 14.76 42 **P 12 48 47.8 -1.1**
BOK Bokaro 14.96 333 *eP* **P 12 48 51.0 -0.1**
BOK IAmb IAmb 12 48 54.4
comp=Z,39nm,0.6s
SHL Shillong 14.99 355 *eP* **Pn 12 48 48.0 -0.9**
SHL IAmb IAmb 12 48 50.2
comp=Z,25nm,0.8s
SHL Shillong 14.99 355 Pn **Pn 12 48 47.4 -1.5**
KOHI KOHIMA 15.10 3 *eP* **Pn 12 48 47.6 -2.6**
KOHI IAmb IAmb 12 48 49.0
comp=Z,51nm,0.6s
KOHI *eS* **Sn 12 51 29.5 -7.8**
GUWA GUWAHATI 15.63 355 *eP* **Pn 12 48 56.5 -0.2**
GUWA IAmb IAmb 12 48 60.0
comp=Z,37nm,0.5s
MOKO MOKOCHONG 15.72 4 *eP* **Pn 12 48 55.4 -2.6**
MOKO IAmb IAmb 12 49 02.4
comp=Z,33nm,0.6s
ODAN Odare 17.16 342 *eP* **Pn 12 49 19.1 +3.3**
RAMN Ramite 17.50 340 *eP* **Pn 12 49 23.4 +3.5**
TAPN Taplejung 17.53 343 *eP* **Pn 12 49 26.7 +6.5**
JIRN Jiri 18.30 339 *eP* **Pn 12 49 30.9 +1.4**
GUN Gumba 18.63 339 *eP* **Pn 12 49 33.5 0.0**
DMN Daman 18.65 337 *eP* Pn 12 49 40.6 +7.0
KKN Kakani 18.74 337 *eP* **Pn 12 49 39.4 +4.7**
GKN Gorkha 19.18 336 *eP* **Pn 12 49 39.6 -0.2**
KOLN Koldanda 19.42 333 *eP* **Pn 12 49 42.5 -0.1**
DANN Dangsing 19.85 334 *eP* **Pn 12 49 46.9 -0.9**
GYA Guiyang 20.22 37 *eP* **P 12 49 49.2 +0.3**
GYA pmax pmax
comp=Z,11nm,0.7s
SBUM Sibu 20.40 112 P **P 12 49 51.2 +0.3**
CD2 Chengdu 22.45 24 P **P 12 50 13.6 +1.2**
CD2 LR LR
comp=Z,260nm,12.2s
CD2 LR LR
comp=Z,350nm,9.2s
CD2 LR LR
comp=Z,570nm,30.4s
H08S3 Diego Garcia H 27.52 230 T T 13 18 23.6
baz=49,slow=75,SNR=17
H08S2 Diego Garcia B 27.52 230 T T 13 18 46.8
baz=49,slow=75,SNR=6.8
H08S1 Diego Garcia D 27.54 230 T T 13 18 28.3
baz=49,slow=75,SNR=4.2
TOLI2 Tolitoli 28.84 107 P **P 12 51 10.0 -0.6**
TPUB Ta-pu 28.95 61 P **P 12 51 12.6 +0.9**
TPUB IAmb IAmb 12 51 38.9
comp=Z,14nm,1.0s
GTA Gaotai 29.31 10 P **P 12 51 15.6 +0.9**
GTA pP pP 12 51 37.4 -1.9
GTA sP sP 12 51 49.2 -3.2
GTA sS sS 12 56 40.6 -1.3
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,110nm,4.4s
NIL Nilore 29.46 324 **P 12 51 15.4 -0.5**
NIL IAmb IAmb 12 51 18.6
comp=Z,11nm,1.1s
NJ2 Nanjing 31.82 44 *eP* **P 12 51 39.0 +2.2**
NJ2 pmax pmax
comp=Z,16nm,0.5s
WMQ Urumqi 33.50 353 *eP* **P 12 51 53.6 +2.3**
WMQ pP pP 12 52 14.5 -1.2
WMQ sP sP 12 52 25.7 -2.8
WMQ pmax pmax
comp=Z,19nm,1.1s
WMQ pmax pmax
comp=Z,100nm,5.7s
WMQ LR LR
comp=Z,1μm,29.3s
WMQ LR LR
comp=Z,3μm,28.8s
HHC Hu-ho-hao-te 34.20 25 *eP* **P 12 52 01.1 +3.6**
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,120nm,6.8s
SHLS Shalkode 34.65 342 *eP* **P 12 52 01.3 -0.1**
comp=Z,3.6nm,0.6s,baz=343
UZB Uzynbulak 34.78 342 *eP* **P 12 52 02.9 +0.4**
baz=342
SATY Saty 34.90 341 *eP* **P 12 52 04.3 +0.8**
comp=Z,4.5nm,0.7s,baz=341
KPKS Kokpek 35.17 341 *eP* **P 12 52 06.4 +0.6**
comp=Z,5.2nm,0.9s,baz=341
TNSS Tian-Shan 35.37 339 *eP* **P 12 52 08.5 +0.6**
baz=339
MDOK Medeo 35.45 339 *eP* **P 12 52 09.4 +1.2**
baz=339
AAA Alma-Ata 35.53 339 *eP* **P 12 52 10.5 +1.6**
comp=Z,11nm,0.5s,baz=339
KBK Karagaybulak 35.78 337 P **P 12 52 13.1 +1.9**
SNR=7.3
AML Almayashu 35.85 335 P **P 12 52 13.7 +1.6**
SNR=7.7
AAK Ala-Archa 35.95 336 P **P 12 52 14.3 +1.8**
SNR=5.8
AAK Ala-Archa 35.95 336 P **P 12 52 13.9 +1.3**
AAK IAmb IAmb 12 52 15.2
comp=Z,6.1nm,0.9s
EKS2 Erkin-Say 36.26 335 P **P 12 52 16.8 +1.6**
SNR=7.6
KUU Kurty 36.33 339 *eP* **P 12 52 15.6 -0.1**
baz=339
USP Ospenovka 36.48 337 P **P 12 52 17.5 +0.6**
SNR=8.2
SGDS Sogindy 36.58 337 *eP* **P 12 52 18.3 +0.5**
baz=337
TDK Taldyqorghan 36.65 342 *eP* **P 12 52 19.2 +1.0**
comp=Z,8.5nm,0.5s,baz=342
MK31 Makanchi Array 37.31 347 P **P 12 52 23.9 0.0**
MK31 IAmb IAmb 12 52 24.9
comp=Z,4.4nm,0.8s
MKAR Makanchi Array 37.31 347 P **P 12 52 24.0 +0.1**
comp=Z,4.7nm,0.5s,baz=173,slow=9.4,SNR=46
MKAR PcP **PcP 12 54 41.8 +0.9**
comp=Z,1.0nm,0.6s,baz=129,slow=2.0,SNR=3.6
MKAR Makanchi Array 37.31 347 P **P 12 52 23.6 -0.3**
MKAR **PcP 12 54 41.3 +0.4**
MAKZ Makanchi 37.40 347 P **P 12 52 24.6 0.0**
MAKZ IAmb IAmb 12 52 25.3
comp=Z,6.2nm,0.6s
ZSN Zaisan 37.46 351 *eP* **P 12 52 25.6 +0.5**
baz=351
DZA Taraz 37.49 333 *eP* **P 12 52 26.2 +0.7**
baz=333
IUG Iuzhnay 37.51 331 *eP* **P 12 52 27.1 +1.4**
comp=Z,7.1nm,0.7s,baz=331
KK31 Karatay Array 38.03 333 P **P 12 52 29.3 -0.6**
KK31 IAmb IAmb 12 52 32.4
comp=Z,7.2nm,0.9s
KKAR Karatay Array 38.03 333 P **P 12 52 29.2 -0.8**
KKAR IAmb IAmb 12 52 32.4
comp=Z,7.2nm,0.9s
BTLS Baital 38.15 338 *eP* **P 12 52 31.3 +0.3**
baz=338
SONM Songino Array 38.75 14 P **P 12 52 36.4 +0.3**
comp=Z,1.7nm,0.6s,baz=197,slow=8.5,SNR=12
SONM PcP **PcP 12 54 46.1 +0.6**
comp=Z,1.5nm,0.4s,baz=191,slow=3.3,SNR=10
SONM Songino Array 38.75 14 P **P 12 52 35.2 -0.8**
SONM PcP **PcP 12 54 46.1 +0.6**
KSRS Korea Array 41.02 43 P **P 12 52 54.0 -0.8**
comp=Z,1.0nm,0.6s,baz=244,slow=8.6,SNR=4.4
JNU Nakatsue 41.12 51 P **P 12 52 55.2 -0.6**
comp=Z,5.5nm,0.9s,baz=230,slow=7.9,SNR=1.6
JNU Nakatsue 41.12 51 P **P 12 52 54.9 -0.9**
JNU IAmb IAmb 12 52 57.9
comp=Z,21nm,1.3s
GEYT Alibeck 41.70 317 P **P 12 53 03.1 +2.7**
comp=Z,40nm,0.5s,baz=146,slow=8.3,SNR=37
GYA0B ALIBECK ARRAY 41.70 317 P **P 12 53 03.3 +2.8**
TLY Talaya 41.86 10 P **P 12 53 02.8 +1.3**
comp=Z,2.2nm,0.7s,baz=213,slow=8.5,SNR=6.8
TLY Talaya 41.86 10 P **P 12 53 01.3 -0.3**
FITZ Fitzroy Crossi 42.75 132 P **P 12 53 09.2 0.0**
comp=Z,1.0nm,0.4s,baz=318,slow=7.6,SNR=8.4
FITZ PcP **PcP 12 54 59.5 +0.7**
comp=Z,4.3nm,0.5s,baz=325,slow=4.9,SNR=23
FITZ Fitzroy Crossi 42.75 132 P **P 12 53 09.2 0.0**
BRZS Berezniki 42.86 340 *eP* **P 12 53 09.9 +0.3**
baz=340
ZAA0 Zalesovo Array 43.81 353 P **P 12 53 17.4 +0.3**
ZAA0 IAmb IAmb 12 53 18.4
comp=Z,7.1nm,0.9s
ZALV Zalesovo Beam 43.81 353 P **P 12 53 17.6 +0.4**
comp=Z,4.1nm,0.4s,baz=177,slow=8.9,SNR=20
BRVK Borovoye 46.27 341 P **P 12 53 36.5 -0.2**
BRVK IAmb IAmb 12 53 37.5
comp=Z,6.9nm,0.5s
RAYN Ar Rayn 47.30 292 P **P 12 53 46.6 +1.3**
RAYN IAmb IAmb 12 53 48.4
comp=Z,3.9nm,0.6s
ABKAR Akbulak array 47.52 331 **P 12 53 47.6 +1.2**
WB0 Warramunga Arr 50.42 127 P **P 12 54 08.3 -0.7**
WB0 IAmb IAmb 12 54 20.3
comp=Z,3.8nm,1.1s
WRA Warramunga Arr 50.48 127 P **P 12 54 08.8 -0.7**
comp=Z,0.8nm,0.3s,baz=300,slow=10.0,SNR=14
WRA PcP **PcP 12 55 26.1 0.0**
comp=Z,1.3nm,0.5s,baz=314,slow=2.9,SNR=10
WRA Warramunga Arr 50.48 127 P **P 12 54 08.2 -1.2**
WB2 Warramunga Arr 50.48 127 P **P 12 54 08.7 -0.8**
WR0 Warramunga Arr 50.64 127 P **P 12 54 10.1 -0.6**
ASAR Alice Springs 52.25 131 P **P 12 54 21.2 -1.4**
ASAR PcP **PcP 12 55 33.0 +0.3**
comp=Z,1.2nm,0.5s,baz=302,slow=7.6,SNR=32
ASAR S **S 13 01 35.1 -4.3**
comp=Z,2.2nm,0.7s,baz=315,slow=3.7,SNR=14
ASAR Alice Springs 52.25 131 P **P 12 54 22.5 -0.2**
AS31 Alice Springs 52.25 131 P **P 12 54 21.7 -1.0**
comp=Z,0.4nm,0.8s,baz=289,slow=14,SNR=6.0
KBZ Khabaz 54.59 317 P **P 12 54 40.4 +1.0**
comp=Z,5.0nm,0.9s,baz=164,slow=5.5,SNR=5.8
KIV Kislovodsk 54.82 317 P **P 12 54 42.2 +1.0**
NRIK Noril'sk 58.84 358 P **P 12 55 09.3 +0.3**
comp=Z,1.9nm,0.4s,baz=180,slow=2.0,SNR=3.2
BR131 Keskin Array S 60.10 310 P **P 12 55 17.3 -1.2**
BR131 IAmb IAmb 12 55 18.8
comp=Z,4.7nm,0.8s
BRTR Keskin Array B 60.10 310 P **P 12 55 18.0 -0.4**
comp=Z,3.5nm,0.7s,baz=118,slow=7.0,SNR=6.8
BRTR Keskin Array B 60.10 310 P **P 12 55 17.8 -0.6**
STKA Stephens Creek 62.53 134 P **P 12 55 35.0 +0.3**
comp=Z,1.2nm,0.5s,baz=326,slow=9.4,SNR=5.0
KARP Karpathos 64.58 304 P **P 12 55 49.0 +0.8**
TIXI Tiksi 64.78 12 P **P 12 55 47.8 -1.0**
AKASG Malin Array Be 65.58 321 P **P 12 55 53.6 -0.7**
comp=Z,0.5nm,0.3s,baz=82,slow=5.5,SNR=3.3
MNK Minsk 67.29 325 *i* P P 12 56 00.3 -4.8
comp=E,2.0nm,0.8s
MNK *i* P P 12 56 00.3 -4.8
comp=N,14nm,0.9s
MNK *i* P P 12 56 00.3 -4.8
comp=Z,20nm,0.8s
MNK *i* pP pP 12 56 25.4 -7.1
MNK *i* PcP **PcP 12 56 27.4 -4.7**
MNK *i* sP sP 12 56 36.7 -7.9
MNK *i* PP **PP 12 58 29.4 -5.3**
MNK *i* PPP PPP 13 00 07.2
MNK *i* S **S 13 04 44.5 -6.8**
MNK *i* sS sS 13 05 31.2 -7.9
MNK *i* ScS SKiKP 13 06 18.6 +25
MNK *i* SS SS 13 09 25.8 +13
MNK *i* SSS SSS 13 11 39.0
MNK *i* LQ LQ 13 18 24.0
MNK *i* LR LR 13 19 40.7
MNK *i* LRM MLR 13 24 55.0
comp=E,37nm,19.6s
MNK *i* LRM MLR 13 25 02.7
comp=N,695nm,19.6s
MNK *i* LRM MLR 13 25 42.3
comp=Z,172nm,19.6s
BURAR Bucovina Array 67.55 317 P **P 12 56 08.1 +1.0**
BUR08 Bucovina Ar. S 67.56 317 P **P 12 56 05.4 -1.8**
BUR08 IAmb IAmb 12 56 08.5
comp=Z,3.4nm,0.8s
LVZ Lovozero 68.78 340 P **P 12 56 14.7 +0.3**
ITM Ithomi 68.91 306 P **P 12 56 15.1 -0.6**
ITM IAmb IAmb 12 56 15.6
comp=Z,11nm,1.0s
SUW Suwalki 69.88 324 P **P 12 56 20.9 -0.3**
FIA1 FINESS Array S 69.98 332 P **P 12 56 21.9 +0.1**
FIA1 IAmb IAmb 12 56 25.0
comp=Z,18nm,1.5s
FINES FINESS Array B 69.98 332 P **P 12 56 21.6 -0.1**
comp=Z,3.6nm,0.5s,baz=116,slow=8.1,SNR=19
FINES FINESS Array B 69.98 332 P **P 12 56 21.8 +0.1**
CRVS Cervenica-Dubn 70.21 318 *eP* **P 12 56 23.6 +0.2**
VYHS Vyhne 71.90 318 *eP* **P 12 56 34.1 +0.5**
KEV Kevo 72.06 340 P **P 12 56 35.0 +0.9**
KEV IAmb IAmb 12 56 50.4
comp=Z,28nm,1.5s
ARA0 ARCESS Array S 72.49 340 *eP* **P 12 56 37.5 +0.8**
ARCES ARCESS Array B 72.49 340 P **P 12 56 37.1 +0.3**
comp=Z,2.1nm,0.4s,baz=92,slow=6.0,SNR=22
ARCES ARCESS Array B 72.49 340 P **P 12 56 37.7 +1.0**
ARCES IAmb IAmb 12 56 38.2
comp=Z,5.0nm,0.9s
KTK1 Kautokeino 73.12 339 *eP* **P 12 56 41.0 +0.5**
HAMF Hammerfest 73.41 341 *eP* **P 12 56 42.6 +0.6**
DPC Dobruska-Polom 73.66 319 *eP* **P 12 56 44.5 +0.4**
CHVC Chvalec 73.85 320 *eP* **P 12 56 46.0 +0.9**
JETT Jettan, Norway 74.23 340 *eP* **P 12 56 48.1 +1.1**
SOKA Soboth 74.38 316 *i* P **P 12 56 48.1 -0.3**
comp=Z,5.7nm,1.0s
TRO Tromso 74.75 340 *eP* **P 12 56 50.6 +0.7**
GERES GERESS Array B 75.31 318 P **P 12 56 54.3 +0.6**
comp=Z,2.9nm,0.5s,baz=93,slow=6.5,SNR=20
GERES GERESS Array B 75.31 318 P **P 12 56 54.4 +0.7**
KHC Kasperske Hory 75.40 318 *eP* **P 12 56 54.2 +0.1**
FAUS Fauske 75.72 337 *eP* **P 12 56 56.0 +0.5**
CLL Collm 75.80 320 *eP* **P 12 56 58.0 +1.7**
CLL e 12 57 05.0
STEI Steigen 75.81 338 *eP* **P 12 56 56.5 +0.6**
MOR8 Moi Rana 75.92 336 *eP* **P 12 56 56.3 -0.4**
BOSA Boshof 76.35 237 P **P 12 57 01.9 +2.0**
comp=Z,3.9nm,0.5s,baz=84,slow=5.6,SNR=19
LOF Lofoten 76.47 338 *eP* **P 12 56 59.7 0.0**
WTTA Wattenberg 76.71 316 *i* P **P 12 57 01.4 -0.4**
comp=Z,5.8nm,0.4s
NSS Namsos 76.83 334 *eP* **P 12 57 02.1 +0.3**
NC602 NORSAR Array S 76.85 330 *eP* **P 12 57 01.7 -0.3**
SQTA Sankt Quirin 77.00 316 *i* P **P 12 57 03.0 -0.4**
comp=Z,4.6nm,0.4s
NB2 NORSAR Subarra 77.02 330 P **P 12 57 02.5 -0.6**
baz=92,slow=5.9
NOA NORSAR Array B 77.02 330 P **P 12 57 02.7 -0.3**
comp=Z,1.2nm,0.6s,baz=91,slow=5.8,SNR=5.8
SPA0 Spitsbergen Ar 77.07 348 *eP* **P 12 57 03.7 +0.7**
MOTA Moosalm 77.07 316 *i* P **P 12 57 03.3 -0.5**
comp=Z,4.1nm,0.8s
OSL Oslo 77.24 329 *eP* **P 12 57 04.5 +0.3**
RETA Reutte 77.30 316 *i* P **P 12 57 04.8 -0.2**
comp=Z,5.2nm,0.5s
FETA Feichten 77.33 316 *i* P **P 12 57 05.2 -0.1**
comp=Z,3.6nm,0.7s
KONO Kongsberg 77.80 329 *eP* **P 12 57 07.5 +0.1**
DAVA Damuels 77.90 316 *i* P **P 12 57 08.5 +0.1**
comp=Z,6.3nm,0.6s
DOMB Dombas 78.07 331 *eP* **P 12 57 08.4 -0.5**
SKAR Skarslia 78.44 330 *eP* **P 12 57 11.3 +0.3**
KEST Kesra 79.07 305 P **P 12 57 15.8 +0.8**
comp=Z,5.3nm,0.6s,baz=36,slow=5.0,SNR=5.5
HYA Hoyanger 79.46 330 *eP* **P 12 57 16.6 +0.2**
SENIN Lac Senin/Sane 79.73 315 P **P 12 57 18.2 -0.3**
SUE Sulen 80.16 330 *eP* **P 12 57 21.2 +1.1**
A21K Barrow 86.35 18 P **P 12 57 52.5 +0.7**
A21K IAmb IAmb 12 57 53.0
comp=Z,9.3nm,0.9s
ESDC Sonseca Array 88.89 310 P **P 12 58 05.3 +0.6**
comp=Z,0.7nm,0.6s,baz=60,slow=4.3,SNR=13
TORD Torodi Ar. Bea 89.22 283 P **P 12 58 07.5 +0.9**
comp=Z,1.6nm,0.7s,baz=83,slow=4.9,SNR=5.5
TORD Torodi Ar. Bea 89.22 283 IAmb IAmb 12 58 08.4
comp=Z,1.4nm,0.8s
TOLK Toolik Lake Re 89.69 19 P **P 12 58 08.8 +1.0**
TOLK IAmb IAmb 12 58 10.5
comp=Z,1.8nm,0.5s
BMAR Burnt Mountain 91.93 19 P **P 12 58 19.1 +0.9**
ILAR Eielson Array 92.57 22 P **P 12 58 19.6 -1.5**
comp=Z,1.0nm,0.7s,baz=305,slow=4.5,SNR=12
ILAR PKKPbc **PKKPdf 13 15 33.5 +0.9**
comp=Z,0.3nm,0.5s,baz=132,slow=1.7,SNR=6.2
ILAR Eielson Array 92.57 22 P **P 12 58 20.6 -0.6**
PRP Porcupine Dome 92.66 21 P **P 12 58 22.8 +1.0**
PRP IAmb IAmb 12 58 23.2
comp=Z,2.8nm,0.8s
INK Inuvik 94.64 16 P **P 12 58 30.8 +0.3**
comp=Z,3.2nm,0.6s,baz=330,slow=4.6,SNR=30
INK Inuvik 94.64 16 P **P 12 58 30.6 0.0**
RES Resolute Bay 94.77 2 P **P 12 58 31.6 +0.6**
comp=Z,3.7nm,0.8s,baz=336,slow=5.1,SNR=15
RES Resolute Bay 94.77 2 P **P 12 58 31.8 +0.7**
VNDA Vanda 95.70 168 P **P 12 58 35.8 +0.6**
comp=Z,0.2nm,0.3s,baz=315,slow=5.7,SNR=1.6
C36M Paulatuk 96.14 13 P **P 12 58 37.2 -0.1**
YKA Yellowknife Ar 104.01 13 Pdiff **Pdif 12 59 12.8 +0.1**
comp=Z,0.1nm,0.6s,baz=324,slow=3.3,SNR=2.6
PDAR Pinedale Array 122.95 20 PKP **PKPdf 13 04 06.3 0.0**
comp=Z,0.3nm,0.4s,baz=103,slow=1.1,SNR=7.2
PDAR Pinedale Array 122.95 20 **PKiKP 13 04 06.8 +0.3**
NVAR Mina Array Bea 123.01 29 PKP **PKiKP 13 04 07.8 +1.1**
comp=Z,0.6nm,0.6s,baz=302,slow=2.0,SNR=4.2
NVAR Mina Array Bea 123.01 29 **PKiKP 13 04 08.0 +1.2**
ANMO Albuquerque 131.01 22 PKP **PKPdf 13 04 22.1 +0.2**
comp=Z,0.6nm,0.5s,baz=321,slow=6.5,SNR=1.8
TXAR Lajitas Array 137.08 22 PKP **PKiKP 13 04 34.4 -0.7**
comp=Z,0.5nm,0.4s,baz=216,slow=0.5,SNR=17
TXAR Lajitas Array 137.08 22 **PKiKP 13 04 35.6 +0.5**
PLCA Paso Flores 146.74 203 PKPbc **PKPab 13 04 53.3 0.0**
comp=Z,5.3nm,0.8s,baz=175,slow=1.7,SNR=16
CPUP Villa Florida 148.17 236 PKPbc **PKPbc 13 04 56.9 +0.8**
comp=Z,1.2nm,0.6s,baz=20,slow=0.4,SNR=4.4
PLCV Puerto La Cruz 149.91 312 **PKPbc 13 05 00.1 -0.7**
PCRV Puerto La Cruz 149.93 313 PKPbc **PKPbc 13 05 00.1 -0.8**
comp=Z,7.6nm,0.5s,baz=8.2,slow=3.0,SNR=7.8
CMIG Matias Romero 151.35 17 PKPbc **PKPbc 13 05 03.9 -0.2**
comp=Z,3.2nm,0.7s,baz=52,slow=4.8,SNR=8.4
PTGA Pitinga 151.73 288 PKPbc **PKiKP 13 05 05.6 +0.1**
comp=Z,0.9nm,0.3s,baz=30,slow=5.5,SNR=2.5
APG El Apazote 154.33 9 PKPab **PKPab 13 05 24.4 -0.8**
comp=Z,6.1nm,0.9s,baz=5.2,slow=4.8,SNR=6.8

PRU 03 12:50:17.6±0.0, 49.84N×18.50E, h0km, Mining Induced Event Csm, E=5.8e+04, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**270**	*e*PG	Pg		12 50 23.1	+1.1
OKC				*e*SG	Sg		12 50 26.1	+1.2
comp=Z,43nm,0.4s								
MORC	**Moravsky Berou**	**0.62**	**265**	*e*PG	Pg		12 50 30.0	+0.5
MORC				*e*SG	Sg		12 50 37.8	+0.2
OJC	**Ojcow**	**0.92**	**65**	*e*Pg	Pg		12 50 34.1	-1.1
OJC				*e*Sg	Sg		12 50 47.1	0.0
LANS	**Liptovska Anna**	**0.94**	**137**	*e*PG	Pg		12 50 34.5	-1.0
LANS				*e*SG	Sg		12 50 47.8	+0.2
LANS				*e*LG	Lg		12 50 51.1	
JAVC	**Velka Javorina**	**1.12**	**209**	*e*PG	Pb		12 50 39.6	-0.3
VRAC	**Vranov**	**1.35**	**248**	*e*PG	Pg		12 50 42.8	-0.7
VRAC				*e*SG	Sg		12 51 00.8	-0.1
VYHS	**Vyhne**	**1.36**	**171**	*e*PG	Pg		12 50 42.5	-1.2
VYHS				*e*SG	Sg		12 51 01.3	-0.1
DPC	**Dobruska-Polom**	**1.49**	**291**	*e*PG	Pn		12 50 44.6	-1.1
DPC				*e*SG	Sg		12 51 05.2	-0.3
comp=Z,6.9nm,0.4s								
SMOL	**Smolenice**	**1.50**	**208**	*e*SN	Sn		12 51 06.4	+0.3
KRUC	**Moravsky**	**1.58**	**241**	*e*PG	Pn		12 50 46.3	-0.5
KRUC				*e*SG	Sn		12 51 07.7	-0.3
OSTC	**Ostas**	**1.63**	**297**	*e*PG	Pn		12 50 48.0	+0.4
OSTC				*e*SG	Sg		12 51 10.3	+0.2
comp=Z,12nm,0.6s								
MODS	**Modra-Piesok**	**1.67**	**209**	*e*SN	Sn		12 51 09.7	-0.6
UPC	**Upice**	**1.73**	**294**	*e*SG	Sn		12 51 12.2	+0.4
comp=Z,5.9nm,0.4s								
CHVC	**Chvalec**	**1.74**	**296**	*e*SG	Sg		12 51 13.8	+0.3
15nm,0.8s								
KHC	**Kasperske Hory**	**3.29**	**259**	*e*PG	Pb		12 51 17.2	+0.4
KHC				*e*SG	Sg		12 52 00.5	-2.6

NEIC ***03*** *12:57:34.9±1.9, 11.1°S±0.2×161.8°E±0.2, h10km±2km, mb4.2/5, Error ellipse: s-maj=38.7km s-min=4.8km az=42.0*

IDC ***03*** *12:57:38.0±3.3, 10.63S×162.14E, h69km±24km, mb3.3/4, mb1 3.6/6, mb1mx3.4/37, mbtmp3.8/6, Error ellipse: s-maj=40.6km s-min=19.8km az=53.0*

ISC 03 12:57:31.7±1.2, 10.5S±0.2×162.0E±0.1, h10km, n12, σ1s28/13, mb3.8/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.29**	**298**	P			**Pb**	**12 58 14.4**	**+1.3**
28nm,0.3s,baz=174,slow=2.6,SNR=19									
HNR				S			**Sg**	**12 58 46.0**	**+0.7**
108nm,0.3s,baz=156,slow=22,SNR=11									
SANVU	**Saraoutou**	**7.05**	**135**	Pn			**Pn**	**12 59 15.9**	**+0.8**
DZM	**Mont Dzumac**	**12.26**	**160**	P			**Pn**	**13 00 28.6**	**+2.0**
0.2nm,0.3s,baz=24,slow=8.7,SNR=18									
WR0	**Warramunga Arr**	**28.08**	**247**	P			**P**	**13 03 22.2**	**-1.5**
WR0				IAmb	IAmb		13 03 36.6		
comp=Z,5.4nm,1.2s									
WB0	**Warramunga Arr**	**28.16**	**248**	P			**P**	**13 03 24.6**	**+0.2**
WB0				IAmb	IAmb		13 03 45.0		
comp=Z,6.7nm,1.5s									
WB2	**Warramunga Arr**	**28.25**	**247**	P			**P**	**13 03 24.9**	**-0.4**
WRA	**Warramunga Arr**	**28.26**	**247**	P			**P**	**13 03 25.7**	**+0.4**
comp=Z,0.8nm,0.7s,baz=78,slow=9.2,SNR=5.8									
ASAR	**Alice Springs**	**29.81**	**240**	P			**P**	**13 03 38.9**	**-0.2**
comp=Z,0.4nm,0.6s,baz=64,slow=9.9,SNR=7.7									
FITZ	**Fitzroy Crossi**	**35.99**	**254**	P			**P**	**13 04 33.6**	**+0.5**
FITZ				IAmb	IAmb		13 04 57.2		
comp=Z,6.5nm,1.4s									
NWAO	**Narrogin (SRO)**	**46.75**	**234**	P			**P**	**13 05 59.0**	**-2.4**
SONM	**Songino Array**	**76.09**	**325**	P			**P**	**13 09 19.9**	**+0.2**
15nm,0.7nm,0.9s,baz=141,slow=4.8,SNR=2.6									
MKAR	**Makanchi Array**	**90.63**	**317**	P			**P**	**13 10 33.5**	**-1.0**
comp=Z,0.1nm,0.4s,baz=96,slow=4.5,SNR=1.6									

NEIC ***03*** *13:02:53.0±1.9, 16.1°S±0.4×177.7°W±0.2, h460km±13km, mb4.0/12, Error ellipse: s-maj=59.9km s-min=15.5km az=148.0*

IDC ***03*** *13:02:54.9±2.1, 15.44S×178.10W, h449km±26km, mb3.3/9, mb1 3.6/11, mb1mx3.4/31, mbtmp4.1/11, Error ellipse: s-maj=75.8km s-min=15.9km az=151.0*

ISC 03 13:02:52.9±0.8, 15.8S±0.3×177.8W±0.2, h450km, n30, σ1s44/30, mb3.8/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.42**	**243**	P			**P**	**13 04 13.1**	**+1.1**
15nm,0.3s,baz=56,slow=7.4,SNR=70									
AFI	**Afiamalu**	**6.12**	**73**	P			**P**	**13 04 26.9**	**-1.7**
DZM	**Mont Dzumac**	**16.16**	**245**	P			**P**	**13 06 17.8**	**+1.3**
0.3nm,0.3s,baz=41,slow=20,SNR=2.4									
CTA	**Charters Tower**	**34.42**	**257**	P			**P**	**13 09 02.8**	**+1.4**
3.5nm,0.9s,baz=70,slow=10,SNR=1.9									
COEN	**Coen**	**37.72**	**267**	P			**P**	**13 09 28.2**	**-0.8**
STKA	**Stephens Creek**	**40.19**	**239**	P			**P**	**13 09 51.0**	**+2.1**
1.0nm,0.4s,baz=80,slow=10,SNR=5.4									
WB0	**Warramunga Arr**	**45.58**	**258**	P			**P**	**13 10 31.4**	**-0.2**
WB0				IAmb	IAmb		13 10 32.0		
comp=Z,3.9nm,0.6s									
WB2	**Warramunga Arr**	**45.61**	**257**	P			**P**	**13 10 31.8**	**0.0**
WB2				IAmb	IAmb		13 10 32.3		
comp=Z,3.6nm,0.8s									
WRAB	**Tennant Creek**	**45.61**	**257**	P			**P**	**13 10 30.6**	**-1.2**
WRA	**Warramunga Arr**	**45.62**	**257**	P			**P**	**13 10 31.6**	**-0.3**
comp=Z,0.7nm,0.3s,baz=96,slow=8.7,SNR=26									
WRA	**Warramunga Arr**	**45.62**	**257**	P			**P**	**13 10 31.6**	**-0.3**
AS31	**Alice Springs**	**45.95**	**252**	P			**P**	**13 10 34.4**	**0.0**
AS31				IAmb	IAmb		13 10 35.3		
comp=Z,3.9nm,0.5s									
ASAR	**Alice Springs**	**45.95**	**252**	P			**P**	**13 10 34.8**	**+0.3**
comp=Z,8.4nm,0.5s,baz=86,slow=8.5,SNR=139									
ASAR	**Alice Springs**	**45.95**	**252**	P			**P**	**13 10 34.2**	**-0.2**
MTN	**Manton Dam**	**49.47**	**266**	P			**P**	**13 11 01.6**	**+0.6**
MTN				IAmb	IAmb		13 11 17.4		
comp=Z,8.3nm,1.1s									
FORT	**Forrest**	**51.46**	**243**	P			**P**	**13 11 15.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**53.97**	**259**	P			**P**	**13 11 31.6**	**-2.1**
NWAO	**Narrogin (SRO)**	**60.73**	**241**	P			**P**	**13 12 17.0**	**-2.9**
GIRL	**Giralia**	**64.07**	**252**	P			**P**	**13 12 40.1**	**-1.7**
NVAR	**Mina Array Bea**	**77.50**	**44**	P			**P**	**13 14 02.8**	**+1.4**
comp=Z,0.2nm,0.6s,baz=225,slow=9.1,SNR=6.7									

CCB	**Clear Creek Bu**	**83.39**	**13**	P	**P**	**13 14 32.1**	**+0.8**
CCB				IAmb	IAmb	13 14 32.3	
	comp=Z,1.7nm,0.6s						
DLBC	**Dease Lake**	**83.66**	**23**	P	**P**	**13 14 29.8**	**-3.0**
DLBC				IAmb	IAmb	13 14 31.4	
	comp=Z,3.1nm,0.7s						
ILAR	**Eielson Array**	**83.70**	**13**	P	**P**	**13 14 33.6**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=230,slow=5.3,SNR=11						
ILAR	**Eielson Array**	**83.70**	**13**	P	**P**	**13 14 32.9**	**0.0**
TXAR	**Lajitas Array**	**84.37**	**58**	P	**P**	**13 14 39.7**	**+2.5**
	comp=Z,0.6nm,0.8s,baz=224,slow=6.9,SNR=7.9						
PDAR	**Pinedale Array**	**85.42**	**43**	P	**P**	**13 14 43.8**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=210,slow=2.7,SNR=5.7						
YKA	**Yellowknife Ar**	**92.17**	**25**	P	**P**	**13 15 14.1**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=237,slow=4.1,SNR=7.2						
BRTR	**Keskin Array B**	**143.66**	**317**	PKP	**PKPdf**	**13 21 35.0**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=174,slow=2.2,SNR=5.1						
GERES	**GERESS Array B**	**145.71**	**346**	PKPbc	**PKPab**	**13 21 41.5**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=343,slow=4.2,SNR=4.1						
DAVOX	**Davos/Dischmat**	**148.44**	**350**	PKPbc	**PKiKP**	**13 21 49.3**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=93,slow=5.2,SNR=2.3						

*IDC **03** 13:04:43.4±1.0,7.68S×156.79E, h392km±12km, mb3.3/13, mb1 3.5/17, mb1mx3.4/33, mbtmp4.1/17, Error ellipse: s-maj=16.1km s-min=11.2km az=125.0*

ISC 03 13:04:44.0±0.6, 7.68S±0.10×156.82E±0.09, h398km, n19, σ0.97/24, mb3.5/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.55**	**120**	P	**Pn**	**13 05 51.8**	**0.0**
	21nm,0.3s,baz=214,slow=5.6,SNR=8.7						
HNR				S	**S**	**13 06 45.1**	**-1.6**
	26nm,0.3s,baz=176,slow=23,SNR=11						
CTA	**Charters Tower**	**16.03**	**219**	P	**P**	**13 08 08.9**	**+1.2**
	0.7nm,0.3s,baz=48,slow=13,SNR=8.9						
JAY	**Jayapura**	**16.85**	**287**	P	**P**	**13 08 15.6**	**-1.0**
	1.3nm,0.3s,baz=82,slow=6.6,SNR=4.6						
DZM	**Mont Dzumac**	**17.05**	**148**	P	**P**	**13 08 19.1**	**+0.4**
	0.8nm,0.3s,baz=250,slow=9.4,SNR=7.4						
WRA	**Warramunga Arr**	**24.96**	**238**	P	**P**	**13 09 33.6**	**0.0**
	1.8nm,0.6s,baz=64,slow=8.7,SNR=26						
WRA				PcP	**PcP**	**13 12 56.7**	**0.0**
	0.7nm,0.5s,baz=69,slow=2.6,SNR=7.2						
WRA				S	**S**	**13 13 26.8**	**-0.9**
	0.5nm,0.6s,baz=69,slow=17,SNR=3.3						
ASAR	**Alice Springs**	**27.12**	**232**	P	**P**	**13 09 52.5**	**-0.3**
	0.8nm,0.6s,baz=62,slow=9.6,SNR=17						
ASAR				PcP	**PcP**	**13 13 01.6**	**-0.1**
	0.4nm,0.5s,baz=78,slow=1.8,SNR=4.9						
ASAR				S	**S**	**13 14 01.4**	**-0.3**
	0.5nm,1.0s,baz=50,slow=17,SNR=2.3						
KSRS	**Korea Array**	**52.40**	**331**	P	**P**	**13 13 18.0**	**+0.7**
	1.9nm,0.9s,baz=131,slow=6.8,SNR=4.8						
PETK	**Petropavlovsk-**	**60.56**	**1**	P	**P**	**13 14 14.2**	**+0.4**
	4.6nm,1.0s,baz=219,slow=1.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	**62.71**	**295**	P	**P**	**13 14 28.7**	**-0.1**
	0.3nm,0.3s,baz=111,slow=4.9,SNR=2.7						
VNDA	**Vanda**	**69.86**	**179**	P	**P**	**13 15 13.2**	**+0.7**
	0.6nm,0.6s,baz=337,slow=4.4,SNR=4.4						
SONM	**Songino Array**	**70.89**	**327**	P	**P**	**13 15 19.5**	**+0.2**
	1.6nm,0.8s,baz=138,slow=5.7,SNR=9.2						
ILAR	**Eielson Array**	**83.35**	**21**	P	**P**	**13 16 25.8**	**-1.5**
	0.4nm,0.4s,baz=254,slow=5.5,SNR=6.2						
MKAR	**Makanchi Array**	**85.11**	**318**	P	**P**	**13 16 36.5**	**0.0**
	1.6nm,0.6s,baz=98,slow=5.7,SNR=25						
ZALV	**Zalesovo Beam**	**85.75**	**326**	P	**P**	**13 16 38.3**	**-1.1**
	0.8nm,0.5s,baz=102,slow=6.2,SNR=4.8						
KURBB	**Kurchatov Arra**	**88.52**	**321**	P	**P**	**13 16 51.1**	**-1.4**
	0.4nm,0.7s,baz=95,slow=3.6,SNR=6.0						
NVAR	**Mina Array Bea**	**90.73**	**51**	P	**P**	**13 17 03.5**	**+0.1**
	0.2nm,0.4s,baz=209,slow=8.2,SNR=3.6						
YKA	**Yellowknife Ar**	**96.09**	**28**	P	**P**	**13 17 27.6**	**+0.5**
	0.5nm,0.7s,baz=261,slow=4.4,SNR=9.2						
YKA				pP	**pP**	**13 19 00.8**	**+2.5**
	0.1nm,0.5s,baz=266,slow=4.3,SNR=4.1						
ESDC	**Sonseca Array**	**143.78**	**335**	PKP	PKPab	13 23 31.5	+0.2
	1.0nm,0.9s,baz=24,slow=3.2,SNR=7.0						
BDFB	**Brasilia**	**146.21**	**133**	PKPbc	**PKPbc**	**13 23 39.2**	**-0.4**
	1.3nm,0.7s,baz=247,slow=5.3,SNR=4.4						

IDC 03 13:08:26.6±4.2, 30.12S×178.66W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/26, mbtmp3.6/2, Error ellipse: s-maj=134.5km s-min=19.7km az=143.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.08**	**37**	Pn	Pb	13 08 48.5	+0.3
	53nm,0.3s,baz=240,slow=22,SNR=2.1						
RAO				Sn	Sn	13 09 06.6	+1.9
	118nm,0.3s,baz=105,slow=20,SNR=4.8						
ASAR	**Alice Springs**	**42.55**	**267**	P	P	13 16 23.8	-0.5
	0.4nm,0.6s,baz=104,slow=7.1,SNR=5.0						
WRA	**Warramunga Arr**	**43.51**	**272**	P	P	13 16 32.3	+0.2
	0.5nm,0.6s,baz=111,slow=7.7,SNR=12						
H03S2	**Juan Fernandez**	**81.10**	**124**	T	T	14 50 01.0	
	baz=238,slow=74,SNR=7.9						
H03S1	**Juan Fernandez**	**81.11**	**124**	T	T	14 49 51.5	
	baz=238,slow=74,SNR=7.8						
H03S3	**Juan Fernandez**	**81.12**	**124**	T	T	14 49 50.2	
	baz=238,slow=74,SNR=7.4						
H03N3	**Juan Fernandez**	**81.29**	**124**	T	T	14 49 58.7	
	baz=241,slow=73,SNR=7.0						
H03N2	**Juan Fernandez**	**81.29**	**124**	T	T	14 49 58.4	
	baz=241,slow=73,SNR=5.0						
H03N1	**Juan Fernandez**	**81.31**	**124**	T	T	14 49 59.5	
	baz=241,slow=73,SNR=7.8						
H10N3	**ASCENSION HYDR**	**89.31**	**155**	T	T	16 03 36.8	
	baz=204,slow=75,SNR=16						
H10N1	**ASCENSION HYDR**	**89.31**	**156**	T	T	16 03 37.4	
	baz=204,slow=75,SNR=20						
H10N2	**ASCENSION HYDR**	**89.32**	**156**	T	T	16 03 38.3	
	baz=204,slow=75,SNR=16						
FINES	**FINESS Array B**	**144.68**	**340**	PKP	PKPdf	13 28 04.2	-0.4
	0.5nm,0.4s,baz=18,slow=0.6,SNR=8.5						

*IDC **03** 13:17:16.2±2.7,31.30S×68.43W, h91km±25km, mb3.2/2, mb1 3.6/6, mb1mx3.4/28, mbtmp3.7/6, Error ellipse: s-maj=50.8km s-min=25.3km az=93.0*

ISC 03 13:17:17.0±1.0, 31.3S±0.1×68.5W±0.3, h104km, n8, σ0.86/8, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**8.66**	**357**	P	**Pn**	**13 19 18.4**	**-1.4**
	1.9nm,0.3s,baz=173,slow=6.9,SNR=14						
PLCA	**Paso Flores**	**9.56**	**189**	P	**Pn**	**13 19 31.2**	**-0.5**
	0.2nm,0.3s,baz=328,slow=9.5,SNR=7.6						
LPAZ	**La Paz**	**14.94**	**1**	P	**Pn**	**13 20 44.1**	**+0.6**
	0.2nm,0.3s,baz=179,slow=13,SNR=4.9						
SIV	**San Ignacio**	**16.67**	**26**	P	**Pn**	**13 21 04.7**	**+0.3**
	0.2nm,0.3s,baz=220,slow=12,SNR=8.6						
TXAR	**Lajitas Array**	**69.96**	**327**	P	**P**	**13 28 12.0**	**+0.9**
	0.2nm,0.8s,baz=141,slow=5.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	**80.45**	**68**	P	**P**	**13 29 18.1**	**+0.4**
	0.7nm,0.8s,baz=240,slow=4.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**150.34**	**32**	PKPbc	**PKiKP**	**13 36 56.5**	**+0.1**
	1.0nm,0.4s,baz=320,slow=3.8,SNR=5.8						
MKAR	**Makanchi Array**	**152.74**	**47**	PKPbc	**PKPbc**	**13 37 01.4**	**0.0**
	0.4nm,0.8s,baz=333,slow=0.6,SNR=4.4						

*INMG **03** 13:17:16.8±1.4,32.38N×7.79W, h0km, ML2.3, Error ellipse: s-maj=6.5km s-min=4.1km az=110.0*
*MDD **03** 13:17:16.9±3.3,32.34N×7.58W, h0km, mb3.5/2, Error ellipse: s-maj=59.8km s-min=27.2km az=83.0, PRXIMO*
*SFS **03** 13:17:30.0,32.33N×7.81W, h2km, MARRUECOS*

ISC 03 13:17:20.5±3.3, 32.6N±0.2×7.71W±0.1, h10km, n25, σ1.906/37, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AVE	**Averroes**	**0.76**	**19**	*e*P	**Pb**	**13 17 37.2**	**+1.3**
AVE				*e*S	**Sn**	**13 17 52.9**	**+4.0**
IFR	**Ifrane**	**2.36**	**66**	*e*P	**Pb**	**13 18 04.0**	**+0.7**
IFR				*e*S	**Sg**	**13 18 35.8**	**-0.6**
PBDV	**Barranco-do-Ve**	**4.66**	**358**	P	**Pn**	**13 18 30.9**	**-0.1**
PBDV				S	**Sn**	**13 19 25.9**	**+0.8**
PBDV	**Barranco-do-Ve**	**4.66**	**358**	*e*Pn	**Pn**	**13 18 30.9**	**-0.1**
PBDV				*e*Sn	**Sn**	**13 19 25.9**	**+0.8**
MORF	**Marmelete**	**4.78**	**351**	S	**Sn**	**13 19 27.7**	**-0.4**

MORF	**Marmelete**	**4.78**	**351**	*e*Sn	**Sn**	**13 19 27.7**	**-0.4**
PVAQ	**Vaqueiros**	**4.81**	**360**	P	**Pn**	**13 18 32.4**	**-0.7**
PVAQ				S	**Sn**	**13 19 28.6**	**-0.3**
	3.8nm,0.6s						
PVAQ	**Vaqueiros**	**4.81**	**360**	*e*Pn	**Pn**	**13 18 32.4**	**-0.7**
PVAQ				*e*Sn	**Sn**	**13 19 28.6**	**-0.3**
PVAQ				A	A	13 19 29.9	
	3.8nm,0.6s						
EGRO	**El Granado**	**4.95**	**2**	P	**Pn**	**13 18 34.5**	**-0.4**
	0.5nm,0.2s,SNR=5.5						
EGRO				S	**Sn**	**13 19 30.7**	**-1.5**
	SNR=7.9						
PTEO	**Sao Teotonio**	**5.03**	**351**	S	**Sn**	**13 19 33.2**	**-0.9**
PTEO	**Sao Teotonio**	**5.03**	**351**	*e*Sn	**Sn**	**13 19 33.2**	**-0.9**
PCVE	**Castro Verde**	**5.05**	**357**	P	**Pn**	**13 18 36.0**	**-0.3**
PCVE				S	**Sn**	**13 19 34.3**	**-0.4**
	4.5nm,0.6s						
PCVE	**Castro Verde**	**5.05**	**357**	*e*Pn	**Pn**	**13 18 36.0**	**-0.3**
PCVE				*e*Sn	**Sn**	**13 19 34.3**	**-0.4**
PCVE				A	A	13 19 36.6	
	4.5nm,0.6s						
MESJ	**Messejana**	**5.27**	**356**	P	**Pn**	**13 18 39.2**	**-0.1**
MESJ	**Messejana**	**5.27**	**356**	*e*Pn	**Pn**	**13 18 39.2**	**-0.1**
PNCL	**Nicolau / Gran**	**5.56**	**353**	S	**Sn**	**13 19 47.1**	**-0.2**
	1.7nm,0.6s						
PNCL	**Nicolau / Gran**	**5.56**	**353**	*e*Sn	**Sn**	**13 19 47.1**	**-0.2**
PNCL				A	A	13 20 04.0	
	1.7nm,0.6s						
PBAR	**Barrancos**	**5.61**	**5**	P	**Pn**	**13 18 43.2**	**-0.8**
PBAR				S	**Sn**	**13 19 47.9**	**-0.6**
	1.9nm,0.6s						
PBAR	**Barrancos**	**5.61**	**5**	*e*Pn	**Pn**	**13 18 43.2**	**-0.8**
PBAR				*e*Sn	**Sn**	**13 19 47.9**	**-0.6**
PBAR				A	A	13 20 11.1	
	1.9nm,0.6s						
ECAB	**El Cabril**	**5.79**	**18**	P	**Pn**	**13 18 46.0**	**-0.6**
	0.4nm,0.2s,SNR=6.6						
ECAB				S	**Sn**	**13 19 50.2**	**-2.9**
	2.2nm,0.6s,SNR=5.6						
PESTR	**Estremoz**	**6.28**	**1**	*e*Sn	**Sn**	**13 20 04.3**	**-0.7**
PMTG	**Montargil**	**6.49**	**356**	P	**Pn**	**13 18 56.1**	**0.0**
PMTG	**Montargil**	**6.49**	**356**	*e*Pn	**Pn**	**13 18 56.1**	**0.0**
PMRV	**Marv??o**	**6.84**	**2**	P	**Pn**	**13 19 00.2**	**-0.7**
PMRV	**Marv??o**	**6.84**	**2**	*e*Pn	**Pn**	**13 19 00.2**	**-0.7**

*IDC **03** 13:38:13.8±69.0, 21.46S×179.70W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/22, mbtmp3.9/3, Error ellipse: s-maj=1248.0km s-min=160.0km az=84.0*

ISC 03 13:39:09.6±2.6, 23.2S±0.2×179.7W±0.3, h600km, n29, σ1.970/37, mb3.7/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**6.25**	**165**	P	**P**	**13 40 52.7**	**0.0**
HAZ	**Te Kaha**	**14.66**	**188**	P	**P**	**13 42 10.9**	**-3.5**
HAZ				S	**S**	**13 44 44.7**	**-0.5**
PKGZ	**Pakihiroa**	**14.75**	**187**	P	**P**	**13 42 13.4**	**-1.9**
PKGZ				S	**S**	**13 44 46.9**	**-0.1**
RUGZ	**Raukumara Rang**	**14.88**	**188**	P	**P**	**13 42 17.2**	**+0.6**
RUGZ				S	**S**	**13 44 51.0**	**+1.9**
PUZ	**Puketiti**	**14.91**	**186**	P	**P**	**13 42 19.1**	**+2.3**
PUZ				S	**S**	**13 44 47.8**	**-1.8**
TWGZ	**Tauwhareparae**	**15.05**	**187**	P	**P**	**13 42 20.4**	**+2.3**
TWGZ				S	**S**	**13 44 52.1**	**+0.3**
URZ	**Urewera**	**15.24**	**189**	P	**P**	**13 42 18.0**	**-1.8**
URZ				S	**S**	**13 44 54.8**	**-0.1**
MWZ	**Matawai**	**15.26**	**188**	P	**P**	**13 42 20.3**	**+0.4**
CNGZ	**Carnagh Statio**	**15.33**	**186**	P	**P**	**13 42 22.0**	**+1.5**
MUGZ	**Murupara**	**15.51**	**190**	P	**P**	**13 42 22.1**	**-0.1**
RIGZ	**Rimuhau**	**15.60**	**187**	P	**P**	**13 42 23.2**	**+0.1**
RTZ	**Ruatahuna**	**15.61**	**190**	P	**P**	**13 42 23.0**	**-0.2**
NMHZ	**Naumai**	**16.11**	**190**	P	**P**	**13 42 28.3**	**+0.4**
BKZ	**Black Stump Fm**	**16.23**	**191**	P	**P**	**13 42 28.7**	**-0.2**
TMVZ	**Te Maari**	**16.32**	**193**	P	**P**	**13 42 30.7**	**+0.9**
ETVZ	**East Tongariro**	**16.34**	**193**	P	**P**	**13 42 29.9**	**-0.1**
OTVZ	**Oturere**	**16.38**	**193**	P	**P**	**13 42 29.9**	**-0.5**
MCHZ	**McNeill Hill**	**16.47**	**190**	P	**P**	**13 42 30.9**	**-0.1**
KWHZ	**Kaweka Forest**	**16.49**	**191**	P	**P**	**13 42 25.2**	**-6.1**
VRZ	**Vera Road**	**16.54**	**195**	P	**P**	**13 42 35.6**	**+3.9**
WNVZ	**Wahianoa**	**16.55**	**193**	P	**P**	**13 42 32.3**	**+0.4**
BHHZ	**Black Hill Sta**	**16.62**	**191**	P	**P**	**13 42 31.7**	**-0.7**
BHHZ				S	**S**	**13 45 17.6**	**0.0**
KRHZ	**Kereru**	**16.71**	**190**	P	**P**	**13 42 33.1**	**-0.2**
KAHZ	**Kahuranaki**	**16.78**	**189**	P	**P**	**13 42 34.7**	**+0.8**
KAHZ				S	**S**	**13 45 19.7**	**-0.5**
PXZ	**Pawanui**	**17.02**	**189**	P	**P**	**13 42 37.0**	**+1.0**
TSZ	**Takapari Road**	**17.19**	**191**	P	**P**	**13 42 38.6**	**+1.0**
STKA	**Stephens Creek**	**35.20**	**247**	P	**P**	**13 45 15.2**	**+0.1**
	1.0nm,0.4s,baz=106,slow=15,SNR=4.2						
ASAR	**Alice Springs**	**42.38**	**260**	P	**P**	**13 46 13.6**	**+0.6**
	0.7nm,0.5s,baz=96,slow=8.5,SNR=11						
WRA	**Warramunga Arr**	**42.69**	**265**	P	**P**	**13 46 14.5**	**-0.9**
	1.1nm,0.4s,baz=95,slow=8.4,SNR=80						

*IDC **03** 13:51:30.8±1.3,30.02S×178.82W, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.8/35, mbtmp3.8/5, ML3.7/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/30, Error ellipse: s-maj=52.9km s-min=16.6km az=147.0*

ISC 03 13:51:35.3±0.9, 30.1S±0.2×178.7W±0.2, h35km, n21, σ0.95/10, mb3.8/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.12**	**39**	Pn	**Pn**	**13 51 53.2**	**-1.3**
	66nm,0.3s,baz=284,slow=21,SNR=5.4						
RAO				Sn	**Sn**	**13 52 08.8**	**+0.1**
	83nm,0.3s,baz=76,slow=23,SNR=4.7						
URZ	**Urewera**	**8.81**	**202**	Pn	**Pn**	**13 53 39.6**	**-0.5**
	0.7nm,0.3s,baz=115,slow=22,SNR=8.9						
DZM	**Mont Dzumac**	**15.54**	**298**	LR	LR	13 59 46.0	
	comp=Z,118nm,19.5s,baz=48,slow=32						
ASAR	**Alice Springs**	**42.50**	**267**	P	**P**	**13 59 27.4**	**-0.1**
	1.0nm,0.8s,baz=114,slow=8.4,SNR=8.4						
WRA	**Warramunga Arr**	**43.46**	**272**	P	**P**	**13 59 34.9**	**-0.4**
	1.2nm,0.6s,baz=111,slow=7.7,SNR=14						
JAY	**Jayapura**	**47.22**	**298**	LR	LR	14 17 20.7	
	comp=Z,57nm,21.3s,baz=224,slow=33						
FITZ	**Fitzroy Crossi**	**51.73**	**270**	P	**P**	**14 00 39.5**	**0.0**
	0.8nm,0.8s,baz=149,slow=12,SNR=1.6						
PMSA	**Palmer Station**	**72.76**	**156**	LR	LR	14 30 01.3	
	comp=Z,58nm,19.2s,baz=359,slow=32						
H03S2	**Juan Fernandez**	**81.13**	**124**	T	T	15 32 49.9	
	baz=238,slow=74,SNR=8.8						
H03S1	**Juan Fernandez**	**81.14**	**124**	T	T	15 32 51.2	
	baz=238,slow=74,SNR=8.6						
H03S3	**Juan Fernandez**	**81.15**	**124**	T	T	15 32 50.0	
	baz=238,slow=74,SNR=9.7						
H03N3	**Juan Fernandez**	**81.33**	**124**	T	T	15 33 01.9	
	baz=241,slow=72,SNR=7.0						
H03N2	**Juan Fernandez**	**81.33**	**124**	T	T	15 33 00.7	
	baz=241,slow=72,SNR=7.6						
H03N1	**Juan Fernandez**	**81.34**	**124**	T	T	15 33 02.1	
	baz=241,slow=72,SNR=13						
NVAR	**Mina Array Bea**	**88.47**	**43**	P	**P**	**14 04 26.2**	**+2.0**
	0.7nm,0.8s,baz=219,slow=6.3,SNR=4.5						
H10N3	**ASCENSION HYDR**	**89.31**	**156**	T	T	16 46 39.5	
	baz=204,slow=75,SNR=23						
H10N1	**ASCENSION HYDR**	**89.32**	**156**	T	T	16 46 39.7	
	baz=204,slow=75,SNR=33						
H10N2	**ASCENSION HYDR**	**89.33**	**156**	T	T	16 46 40.8	
	baz=204,slow=75,SNR=30						
FINES	**FINESS Array B**	**144.68**	**340**	PKP	**PKPdf**	**14 11 07.0**	**-0.5**
	2.0nm,0.7s,baz=64,slow=4.4,SNR=10						
NOA	**NORSAR Array B**	**148.39**	**351**	PKPbc	**PKPbc**	**14 11 17.5**	**+0.1**
	0.4nm,0.6s,baz=15,slow=4.3,SNR=4.3						
AKASG	**Malin Array Be**	**150.71**	**322**	PKPbc	**PKiKP**	**14 11 24.3**	**+0.3**
	0.3nm,0.4s,baz=57,slow=2.1,SNR=1.8						

*IDC **03** 13:57:13.3±1.3,5.27S×152.99E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/46, mbtmp3.8/9, ML1.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=41.4km s-min=20.5km az=123.0*

ISC 03 13:57:18.6±1.3, 5.4S±0.2×153.0E±0.2, h37km, n13, σ0.47/12, mb3.8/8, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.09**	**235**	Pn	**Pn**	**13 59 00.1**	**+0.2**
	0.5nm,0.3s,baz=181,slow=23,SNR=2.5						
PMG				Sn	**Sn**	**14 00 19.2**	**0.0**
	1.8nm,0.3s,baz=77,slow=15,SNR=7.1						

HNR	**Honiara**	**7.96**	**121**	LR	LR	14 02 10.9	
	comp=Z,64nm,21.0s,baz=48,slow=37						
WRA	**Warramunga Arr**	**23.27**	**230**	P	**P**	**14 02 23.2**	**+0.1**
	3.6nm,0.9s,baz=54,slow=9.8,SNR=14						
ASAR	**Alice Springs**	**25.91**	**223**	P	**P**	**14 02 47.1**	**-0.3**
	0.9nm,0.8s,baz=57,slow=8.3,SNR=8.1						
FITZ	**Fitzroy Crossi**	**29.61**	**242**	P	**P**	**14 03 20.2**	**-0.4**
	2.9nm,0.9s,baz=47,slow=7.5,SNR=9.8						
CMAR	**Chiang Mai Arr**	**58.33**	**295**	P	**P**	**14 07 10.3**	**0.0**
	1.4nm,0.9s,baz=112,slow=5.9,SNR=6.4						
SONM	**Songino Array**	**66.92**	**328**	P	**P**	**14 08 08.0**	**+0.7**
	0.3nm,0.4s,baz=152,slow=6.5,SNR=2.8						
MKAR	**Makanchi Array**	**80.90**	**319**	P	**P**	**14 09 29.2**	**+0.2**
	0.5nm,0.9s,baz=111,slow=5.3,SNR=4.8						
ZALV	**Zalesovo Beam**	**81.74**	**326**	P	**P**	**14 09 32.4**	**-0.9**
	1.0nm,0.6s,baz=108,slow=4.8,SNR=5.0						
ILAR	**Eielson Array**	**82.59**	**22**	P	**P**	**14 09 37.3**	**-0.2**
	0.3nm,0.7s,baz=243,slow=5.6,SNR=2.9						
YKA	**Yellowknife Ar**	**95.80**	**28**	LR	LR	14 49 34.5	
	comp=Z,20nm,20.1s,baz=0.0,slow=33						
BDFB	**Brasilia**	**150.51**	**135**	PKPbc	**PKiKP**	**14 17 08.8**	**+0.5**
	2.9nm,0.7s,baz=198,slow=5.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**150.71**	**287**	PKPbc	**PKPbc**	**14 17 07.9**	**0.0**
	2.0nm,0.8s,baz=61,slow=2.4,SNR=9.7						

IDC 03 13:58:56.8±5.6, 29.70S×178.42W, h0km, mb3.4/2, mb1 3.6/2, mb1mx3.4/34, mbtmp3.4/2, Error ellipse: s-maj=307.4km s-min=82.4km az=166.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.78**	**266**	P	P	14 06 56.8	+0.4
	0.2nm,0.8s,baz=110,slow=8.4,SNR=1.6						
WRA	**Warramunga Arr**	**43.71**	**272**	P	P	14 07 03.5	-0.5
	0.3nm,0.3s,baz=111,slow=8.2,SNR=10						
FINES	**FINESS Array B**	**144.37**	**340**	PKP	PKPdf	14 18 33.6	-0.6
	0.7nm,0.8s,baz=93,slow=5.6,SNR=1.4						

WEL 03 14:02:47.2, 41.3S±308.3×17.5E±10.6, h15km±107km, M2.1/5, ML2.3/5, MLv2.1/5, Error ellipse: s-maj=0.5km s-min=0.2km az=1.7, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAW	**Cannon Point**	**0.23**	**281**	P	Pb	14 03 01.7	+8.6
OGWZ	**Otaki Gorge**	**0.37**	**336**	P	Pn	14 02 57.2	-0.7
KIW	**Kapiti Island**	**0.45**	**310**	P	Pb	14 02 56.9	+0.1
MRZ	**Mangatainoka R**	**0.52**	**18**	P	Pb	14 02 58.2	+0.3
TCW	**Tory Channel**	**0.83**	**266**	P	Pg	14 03 03.6	+0.3
WNVZ	**Wahianoa**	**1.83**	**6**	P	Pn	14 03 15.1	-3.1
TUVZ	**Tukino**	**1.89**	**7**	P	Pn	14 03 17.0	-2.0
ETVZ	**East Tongariro**	**2.03**	**7**	P	Pn	14 03 21.1	+0.2
TMVZ	**Te Maari**	**2.05**	**7**	P	Pn	14 03 21.7	+0.5

*KRNET **03** 14:16:02.6±0.1, 41.02N×69.74E, mb2.7*
*NNC **03** 14:16:07.2±3.3, 41.16N×69.59E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=27.5km s-min=14.5km az=21.0*

ISC 03 14:16:05.8±1.9, 40.98N±0.05×69.9E±0.1, h10km, n14, σ1.942/25, 21C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**1.10**	**59**	⇑*i*P	**Pg**	**14 16 24.7**	**-2.3**
	baz=67						
TRKS				⇑*i*S	**Sg**	**14 16 40.9**	**-0.5**
	baz=67						
BTK	**Batken**	**1.17**	**142**	⇓*e*P	**Pb**	**14 16 26.5**	**-1.6**
	baz=39						
BTK				⇓*i*S	**Sb**	**14 16 43.7**	**+0.4**
	baz=39						
DRK	**Karamyk**	**2.10**	**135**	⇑*i*P	**Pn**	**14 16 42.1**	**+0.8**
	baz=33						
DRK				⇑*i*S	**Sb**	**14 17 11.2**	**+0.8**
	baz=33						
KK31	**Karatay Array**	**2.18**	**12**	⇑Pn	**Pn**	**14 16 43.5

ALJA AML AML
comp=E,14450µm,0.6s
ALJA AML AML
comp=N,18850µm,0.7s
PETRA Petralia Sopra 1.21 128 P **Pn** 14 46 51.4 -2.0
PETRA AML AML
comp=N,11450µm,0.6s
PETRA AML AML
comp=E,11850µm,0.6s
IFIL Filicudi I Eol 1.30 90 P **Pn** 14 46 52.7 -1.8
IFIL AML AML
comp=E,13600µm,0.7s
IFIL AML AML
comp=N,5045µm,0.5s
RESU Resuttano 1.30 136 P **Pn** 14 46 53.2 -1.4
RESU AML AML
comp=N,7060µm,0.7s
RESU AML AML
comp=E,5320µm,0.6s
MSFR San Fratello 1.43 112 P **Pn** 14 46 53.9 -2.5
MSFR AML AML
comp=E,798µm,1.3s
MSFR AML AML
comp=N,1268µm,1.2s
GALF Gagliano Caste 1.57 123 P **Pn** 14 46 56.8 -1.5
GALF AML AML
comp=E,2035µm,0.7s
GALF AML AML
comp=N,2060µm,0.6s
CAGR Agira 1.58 127 AML AML
comp=E,4155µm,0.8s
CAGR AML AML
comp=E,3780µm,0.7s
CAGR AML AML
comp=N,4800µm,0.7s
VAE Valguarnera 1.62 132 Pn **Pb** 14 47 00.8 +0.3
comp=N,16nm,0.3s,baz=202,slow=2.6,SNR=28
VAE Sn **Sg** 14 47 25.1 +2.1
comp=N,26nm,0.3s,baz=206,slow=20,SNR=8.1
MUCR Ucria 1.64 109 P **Pn** 14 46 57.5 -1.8
MUCR AML AML
comp=N,1835µm,0.4s
MUCR AML AML
comp=E,1720µm,0.8s
VPL Vulcano Piano 1.64 96 P **Pn** 14 46 57.2 -2.0
VPL AML AML
comp=E,3230µm,1.1s
VPL AML AML
comp=N,3705µm,0.6s
VPL AML AML
comp=E,4290µm,0.7s
VPL AML AML
comp=N,4430µm,0.6s
CLTA Licata 1.65 149 P **Pn** 14 46 57.7 -1.6
CLTA AML AML
comp=E,1710µm,1.2s
CLTA AML AML
comp=N,1885µm,1.0s
CLTA AML AML
comp=E,1710µm,1.2s
CLTA AML AML
comp=N,2505µm,1.6s
EPZF Pizzo Felice 1.71 116 P **Pn** 14 46 58.6 -1.6
EPZF AML AML
comp=N,3705µm,0.5s
EPZF AML AML
comp=E,3195µm,0.7s
EMSG Monte Spagnolo 1.78 115 AML AML
comp=N,2990µm,0.7s
EMSG AML AML
comp=E,3510µm,0.6s
RAFF Raffo Rosso 1.78 139 P **Pn** 14 46 59.7 -1.4
RAFF AML AML
comp=E,1730µm,1.0s
RAFF AML AML
comp=N,2100µm,1.2s
IST3 Stromboli F 1.83 82 P **Pn** 14 47 00.6 -1.2
IST3 AML AML
comp=N,777µm,0.2s
IST3 AML AML
comp=E,506µm,0.2s
NOV Novara 1.84 107 P **Pn** 14 47 00.4 -1.6
NOV AML AML
comp=N,1355µm,1.5s
NOV AML AML
comp=E,1415µm,1.3s
ESLN Serra La Nave 1.85 118 P **Pn** 14 47 00.1 -2.2
ESLN AML AML
comp=E,2195µm,0.8s
ESLN AML AML
comp=N,2395µm,0.8s
MCSR Castroreale 1.91 105 P **Pn** 14 47 00.8 -2.2
MCSR AML AML
comp=E,2185µm,0.5s
MCSR AML AML
comp=N,2130µm,0.4s
MPNC Port Mandanici 1.97 102 P **Pn** 14 47 01.9 -1.8
MPNC AML AML
comp=E,1940µm,0.5s
MPNC AML AML
comp=N,1535µm,0.5s
HLNI Lentini 1.98 128 P **Pn** 14 47 01.3 -2.6
HLNI AML AML
comp=E,996µm,1.3s
HLNI AML AML
comp=N,1012µm,0.6s
MSRU Castanea 2.06 98 P **Pn** 14 47 03.2 -1.8
MSRU AML AML
comp=N,510µm,0.9s
MSRU AML AML
comp=E,659µm,1.1s
MEU Monte Lauro 2.18 132 P **Pn** 14 47 04.2 -2.5
MEU AML AML
comp=N,2750µm,0.6s
MEU AML AML
comp=E,2305µm,0.9s
HAGA Augusta 2.20 125 P **Pn** 14 47 04.8 -2.1
HAGA AML AML
comp=E,1060µm,1.1s
HAGA AML AML
comp=N,1205µm,1.0s
SSY Sortino 2.23 129 P **Pn** 14 47 05.9 -1.4
SSY AML AML
comp=N,2805µm,0.4s
SSY AML AML
comp=E,1360µm,0.6s
GMB Gambarie 2.33 99 P **Pn** 14 47 07.4 -1.5
GMB AML AML
comp=E,961µm,0.8s
GMB AML AML
comp=N,1182µm,0.7s
JOPP Joppolo 2.33 88 P **Pn** 14 47 06.8 -1.9
JOPP AML AML
comp=E,170µm,0.4s
JOPP AML AML
comp=N,148µm,0.4s
HAVL Avola 2.39 132 P **Pn** 14 47 08.5 -1.0
HAVL AML AML
comp=E,1004µm,0.8s
HAVL AML AML
comp=N,934µm,0.4s
MPAZ Palizzi 2.52 103 P **Pn** 14 47 10.2 -1.1
MPAZ AML AML
comp=N,372µm,0.4s
MPAZ AML AML
comp=E,444µm,0.5s
SOI Samo 2.52 101 P **Pn** 14 47 10.5 -0.9
SOI AML AML
comp=N,328µm,0.9s
SOI AML AML
comp=E,348µm,0.5s
CET2 Cetraro 2.55 67 P **Pn** 14 47 10.4 -1.4
CET2 AML AML
comp=N,322µm,0.7s
CET2 AML AML
comp=E,262µm,0.8s
CDRU Civita di Ruta 2.66 43 P **Pn** 14 47 11.9 -1.4
CDRU AML AML
comp=E,152µm,1.4s
CDRU AML AML
comp=N,75µm,1.4s
CAR1 CAROLEI 2.66 74 P **Pn** 14 47 11.9 -1.4
CAR1 AML AML
comp=N,712µm,0.4s
CAR1 AML AML
comp=E,646µm,0.4s
T0702 Acquaformosa (2.72 64 P **Pn** 14 47 13.1 -1.0

PAOL Paolisi 2.76 27 AML AML
comp=N,98µm,0.8s
PAOL AML AML
comp=E,72µm,1.1s
SPS2 Spezzano della 2.77 74 P **Pn** 14 47 12.6 -2.1
SPS2 AML AML
comp=E,64µm,1.4s
SPS2 AML AML
comp=N,101µm,0.4s
PLAC Placanica 2.77 92 P **Pn** 14 47 12.7 -2.1
PLAC AML AML
comp=N,198µm,0.7s
PLAC AML AML
comp=E,180µm,0.6s
VSL Villasalto 2.90 289 P **Pn** 14 47 14.8 -1.7
VSL AML AML
comp=E,392µm,0.2s
VSL AML AML
comp=N,223µm,1.0s
CELI Celico 2.92 73 P **Pn** 14 47 16.0 -1.0
CELI AML AML
comp=N,347µm,0.6s
CELI AML AML
comp=E,288µm,1.3s
CGL Cagliari Serpe 2.92 287 P **Pn** 14 47 14.9 -2.1
DGI Dorgali Grotta 3.09 305 P **Pn** 14 47 17.4 -1.8
KEST Kesra 4.03 226 Pn **Pn** 14 47 32.2 +0.1
comp=E,2.1nm,0.3s,baz=341,slow=5.8,SNR=7.9
KEST Sn **Sn** 14 48 17.9 -1.1
comp=E,1.3nm,0.3s,baz=126,slow=20,SNR=1.5
NRCA Norcia 4.25 2 ⇑P **Pn** 14 47 34.5 -0.7
NRCA AML AML
comp=E,167µm,0.1s
NRCA AML AML
comp=N,115µm,1.1s
CESI CESI - Serrava 4.42 360 S **Sn** 14 48 21.0 -7.7
FDMO Fiordimonte 4.45 2 S **Sn** 14 48 23.0 -6.5
ASSB Assisi San Ben 4.46 358 P **Pb** 14 47 45.9 -3.1
PGF Pioggiola 4.96 324 *e*P **Pn** 14 47 46.2 +1.3
PGF *e*Sn Sn 14 48 33.3 -8.7
comp=N,5.7nm,0.5s
SRN Sarande 5.66 75 ⇑P **Pn** 14 47 51.3 -3.1
PUK Puka 6.36 55 P **Pb** 14 48 18.2 -3.1
SBF Sospel 6.70 324 *e*P **Pn** 14 48 08.6 -0.2
LMR La Mourre 6.78 316 *e*P **Pn** 14 48 09.2 -0.7
FRF La Foret Royal 6.87 318 *e*P **Pn** 14 48 10.8 -0.2
MBDF Montbardon 7.67 325 *e*P **Pn** 14 48 25.2 +3.0
SMRF Simiane la Rot 7.72 317 *e*P **Pn** 14 48 22.8 +0.1
OBKA Obir 8.01 8 *e*Pn **Pn** 14 48 30.8 +3.9
comp=N,4.9nm,0.6s
MYKA Terra Mystica 8.06 4 *e*Pn **Pn** 14 48 32.0 +4.5
comp=N,8.2nm,0.7s
ABTA Abfaltersbach 8.17 358 *i* Pn **Pn** 14 48 32.6 +3.7
comp=N,2.8nm,0.5s
ORIF Oris-en-Rattie 8.23 323 *e*P **Pn** 14 48 31.8 +2.0
SOKA Soboth 8.24 10 *e*Pn **Pn** 14 48 33.2 +3.2
comp=N,3.4nm,1.0s
DAVOX Davos/Dischmat 8.49 346 Pn **Pn** 14 48 35.5 +2.0
comp=N,0.1nm,0.3s,baz=180,slow=19,SNR=2.0
KBA Koelnbreinsper 8.50 2 *e*Pn **Pn** 14 48 38.0 +4.4
comp=N,4.0nm,0.6s
FETA Feichten 8.59 350 *e*Pn Pn 14 48 40.3 +5.6
comp=N,7.7nm,1.1s
LASF Ste Croix 8.74 312 *e*Sn Sn 14 50 04.1 -11
comp=N,1.4nm,0.3s
VIVF Saint-Julien-l 8.79 318 *e*P **Pn** 14 48 37.5 +0.1
VIVF *e*Sn Sn 14 50 05.2 -11
comp=N,1.2nm,0.3s
MOA Molln 9.32 6 *e*Pn **Pn** 14 48 49.1 +4.4
comp=N,11nm,0.7s
MTLF Montolieu 9.38 304 *e*P **Pn** 14 48 44.0 -1.5
MTLF *e*Sn Sn 14 50 19.2 -12
comp=N,0.5nm,0.2s
CONA Conrad Observa 9.59 12 *e*Pn **Pn** 14 48 51.6 +3.2
comp=N,1.6nm,0.8s
GERES GERESS Array B 10.28 3 Pn **Pn** 14 48 58.8 +1.0
comp=N,0.1nm,0.3s,baz=185,slow=13,SNR=6.0
GERES LR LR 14 53 47.3
comp=N,52nm,18.2s,baz=139,slow=42
KHC Kasperske Hory 10.56 2 *e*P **Pn** 14 49 04.5 +2.9
KHC *ex* x 14 49 13.5
VRAC Vranov 11.04 13 LR LR 14 53 24.8
comp=N,29nm,19.2s,baz=237,slow=37
ESDC Sonseca Array 13.15 280 Pn **Pn** 14 49 36.1 -1.0
comp=N,0.1nm,0.3s,baz=90,slow=14,SNR=1.9
ESDC LR LR 14 53 59.0
comp=N,89nm,18.8s,baz=175,slow=34
NACGM Naroch 18.83 25 *i* P Pn 14 50 58.6 +8.1
NACGM *i* P Pn 14 50 58.6 +8.1
NACGM *i* P Pn 14 50 58.6 +8.1
NACGM *i* PP **PnPn** 14 51 10.7 +8.0
NACGM *i* PPP PPP 14 51 20.6
NACGM *i* S **S** 14 54 28.2 +4.6
NACGM *i* SSS SSS 14 55 00.1
NACGM *i* LQ LQ 14 56 51.5
NACGM *i* LR LR 14 58 15.1
HFS Hagfors 21.58 1 P **P** 14 51 20.1 +0.3
comp=N,1.6nm,0.6s,baz=164,slow=16,SNR=4.6
NOA NORSAR Array B 22.51 358 P **P** 14 51 30.1 +0.4
comp=N,1.0nm,0.7s,baz=175,slow=11,SNR=4.2
NOA LR LR 15 01 25.9
comp=N,35nm,18.3s,baz=65,slow=40
KBZ Khabaz 23.09 68 P **P** 14 51 39.2 +3.3
comp=N,3.2nm,0.7s,baz=277,slow=5.9,SNR=6.3
FINES FINESS Array B 24.30 15 P **P** 14 51 48.5 +0.9
comp=N,1.4nm,0.6s,baz=202,slow=7.4,SNR=6.6
TORD Torodi Ar. Bea 27.22 204 P **P** 14 52 13.5 -0.8
comp=N,1.3nm,1.0s,baz=10,slow=9.0,SNR=4.7
ARCES ARCESS Array B 31.74 8 LR LR 15 06 38.3
comp=N,30nm,20.4s,baz=285,slow=38
MKAR Makanchi Array 50.14 57 P **P** 14 55 26.6 +1.1
comp=N,1.9nm,0.7s,baz=285,slow=6.1,SNR=29
SONM Songino Array 64.73 48 P **P** 14 57 09.3 +0.7
comp=N,0.2nm,0.3s,baz=299,slow=5.9,SNR=2.3
YKA Yellowknife Ar 70.83 337 P **P** 14 57 48.3 +1.8
comp=N,0.2nm,0.4s,baz=49,slow=6.1,SNR=4.0

*MOS **03** 14:51:36.0±0.8, 48°.75N×155°.29E, h28km, mb4.5/1, Error ellipse: s-maj=14.6km s-min=4.0km az=73.7*
*KRSC **03** 14:51:36.1±1.9, 48°.77N×156°.25E, h29km±25km, ML4.5*
*SKHL **03** 14:51:36.5±0.1, 48°.70N×155°.50E, h77km±5km, mb4.6/10*
*NEIC **03** 14:51:38.8±1.6, 48°.8N±0°.1×155°.1E±0°.2, h71km±5km, mb4.4/4, Error ellipse: s-maj=24.7km s-min=12.0km az=132.0*
*IDC **03** 14:51:40.4±2.5, 48°.93N×154°.96E, h87km±22km, mb3.5/13, mb1 3.7/19, mb1mx3.5/52, mbtmp3.9/19, MS3.1/8, Ms1 3.1/8, ms1mx2.8/37, Error ellipse: s-maj=21.6km s-min=12.4km az=133.0*
ISC 03 14:51:36.9±2.0, 48°.7N±0°.1×155°.39E±0°.08, h61km±17km, n115, σ1§36/110, mb3.9/16, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.02**	**13**	*e*PN	**Pn**	**14 52 08.1**	**-0.5**
SKR				*e*S	**Sn**	**14 52 29.9**	**-2.8**
SKR				pmax	pmax		
	comp=Z,121nm,0.5s						
SKR				smax	smax		
	comp=N,1µm,0.6s						
SKR				smax	smax		
	comp=E,575nm,0.8s						
SKR	**Severo-Kuril's**	**2.02**	**13**	*e*P	**Pn**	**14 52 07.8**	**-0.8**
SKR				*e*S	**Sn**	**14 52 31.7**	**-1.0**
SKR	**Severo-Kuril's**	**2.02**	**13**	*e*P	**Pn**	**14 52 08.6**	**0.0**
SKR				AMB	AMB	14 52 14.3	
	comp=E,120nm,0.5s						
SKR				*e*S	**Sn**	**14 52 32.7**	**0.0**
SKR				A	A	14 52 37.6	
	comp=E,1µm,0.7s						
SKR				A	A	14 52 37.6	
	comp=E,570nm,0.7s						
ALID	**Alaid**	**2.15**	**3**	PN	**Pn**	**14 52 10.1**	**-0.5**
ALID				S	**Sn**	**14 52 36.2**	**0.0**
ALID	**Alaid**	**2.15**	**3**	*e*P	**Pn**	**14 52 10.1**	**-0.5**
ALID				*e*S	**Sn**	**14 52 36.2**	**0.0**
PAU	**Pauzhetka**	**2.90**	**18**	PN	**Pn**	**14 52 21.4**	**+0.8**
PAU				S	**Sn**	**14 52 55.0**	**+0.9**
PAU	**Pauzhetka**	**2.90**	**18**	*e*P	**Pn**	**14 52 21.4**	**+0.8**
PAU				*e*S	**Sn**	**14 52 55.0**	**+0.9**
PAU	**Pauzhetka**	**2.90**	**18**	*e*P	**Pn**	**14 52 21.4**	**+0.8**
PAU				AMB	AMB	14 52 22.2	
	comp=E,50nm,0.6s						
PAU				*e*S	**Sn**	**14 52 55.0**	**+0.9**
PAU				A	A	14 53 02.8	
	comp=E,570nm,0.4s						
PAU				A	A	14 53 02.8	
	comp=E,420nm,0.4s						
KDTR	**Khodutka, Kamc**	**3.54**	**28**	PN	**Pn**	**14 52 28.7**	**-0.6**
KDTR				S	**Sn**	**14 53 07.1**	**-2.8**
KDTR	**Khodutka, Kamc**	**3.54**	**28**	*e*P	**Pn**	**14 52 28.7**	**-0.6**
KDTR				*e*S	**Sn**	**14 53 07.1**	**-2.8**
MIPR	**Malaya Ipel'ka**	**3.66**	**13**	PN	**Pn**	**14 52 32.1**	**+1.0**
MIPR	**Malaya Ipel'ka**	**3.66**	**13**	*e*P	**Pn**	**14 52 32.1**	**+1.0**
ASAK	**Asacha**	**4.00**	**23**	PN	**Pn**	**14 52 37.2**	**+1.5**
ASAK	**Asacha**	**4.00**	**23**	*e*P	**Pn**	**14 52 37.2**	**+1.5**
MTVR	**Mutnovka**	**4.16**	**24**	PN	**Pn**	**14 52 38.7**	**+0.7**
MTVR				S	**Sn**	**14 53 24.1**	**-1.3**
MTVR	**Mutnovka**	**4.16**	**24**	*e*P	**Pn**	**14 52 38.7**	**+0.7**
MTVR				*e*S	**Sn**	**14 53 24.1**	**-1.3**
GRL	**Gorelyy**	**4.20**	**23**	PN	**Pn**	**14 52 39.6**	**+1.1**
GRL	**Gorelyy**	**4.20**	**23**	*e*P	**Pn**	**14 52 39.6**	**+1.1**
APC	**Apacha**	**4.35**	**14**	PN	**Pn**	**14 52 41.7**	**+1.2**
APC	**Apacha**	**4.35**	**14**	*e*P	**Pn**	**14 52 41.7**	**+1.2**
KRMR	**Karymshinskiy**	**4.46**	**22**	PN	**Pn**	**14 52 43.5**	**+1.5**
KRMR				S	**Sn**	**14 53 33.6**	**+1.0**
KRMR	**Karymshinskiy**	**4.46**	**22**	*e*P	**Pn**	**14 52 43.5**	**+1.5**
KRMR				*e*S	**Sn**	**14 53 33.6**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.63**	**18**	PN	**Pn**	**14 52 46.2**	**+2.0**
PEA0B	**Petropavlovsk-**	**4.63**	**18**		**Pn**	**14 52 46.2**	**+2.0**
PETK	**Petropavlovsk-**	**4.63**	**18**	P	**Pn**	**14 52 46.0**	**+1.7**
	comp=E,1.9nm,0.3s,baz=178,slow=12,SNR=145						
PETK				LR	LR	14 54 53.7	
	comp=E,100nm,18.4s,baz=206,slow=43						
PETK	**Petropavlovsk-**	**4.63**	**18**	PN	**Pn**	**14 52 46.0**	**+1.7**
PETK	**Petropavlovsk-**	**4.63**	**18**		**Pn**	**14 52 46.1**	**+1.8**
PET	**Petropavlovsk**	**4.78**	**24**	*e*PN	**Pn**	**14 52 47.1**	**+0.8**
PET				*e*S	**Sn**	**14 53 39.0**	**-1.2**
PET				smax	smax		
	comp=E,158nm,0.5s						
PET				smax	smax		
	comp=N,125nm,0.5s						
PET	**Petropavlovsk**	**4.78**	**24**	Pn	**Pn**	**14 52 47.0**	**+0.8**
PET	**Petropavlovsk**	**4.78**	**24**	*e*P	**Pn**	**14 52 47.1**	**+0.8**
PET				AMB	AMB	14 52 48.3	
	comp=N,20nm,0.5s						
PET				*e*S	**Sn**	**14 53 39.4**	**-0.8**
PET				A	A	14 53 55.2	
	comp=N,130nm,0.5s						
PET				A	A	14 53 55.2	
	comp=N,160nm,0.5s						
DALK	**Dalny**	**4.81**	**25**	PN	**Pn**	**14 52 47.4**	**+0.7**
DALK				S	**Sn**	**14 53 40.9**	**-0.2**
DALK	**Dalny**	**4.81**	**25**	*e*P	**Pn**	**14 52 47.4**	**+0.7**
DALK				*e*S	**Sn**	**14 53 40.9**	**-0.2**
UGLR	**Uglovaya**	**4.99**	**24**	PN	**Pn**	**14 52 50.8**	**+1.5**
UGLR	**Uglovaya**	**4.99**	**24**	*e*P	**Pn**	**14 52 50.8**	**+1.5**
KOK	**Koryaka**	**5.01**	**23**	PN	**Pn**	**14 52 50.7**	**+1.1**
KOK	**Koryaka**	**5.01**	**23**	*e*P	**Pn**	**14 52 50.7**	**+1.1**
KOK	**Koryaka**	**5.01**	**23**	*e*P	**Pn**	**14 52 50.7**	**+1.1**
AVH	**Avacha**	**5.01**	**24**	PN	**Pn**	**14 52 51.3**	**+1.7**
AVH	**Avacha**	**5.01**	**24**	*e*P	**Pn**	**14 52 51.3**	**+1.7**
SMAR	**Somma**	**5.03**	**24**	PN	**Pn**	**14 52 51.4**	**+1.4**
SMAR	**Somma**	**5.03**	**24**	*e*P	**Pn**	**14 52 51.4**	**+1.4**
KRER	**Koryakskii**	**5.05**	**24**	PN	**Pn**	**14 52 51.3**	**+1.0**
KRER	**Koryakskii**	**5.05**	**24**	*e*P	**Pn**	**14 52 51.3**	**+1.0**
SDLR	**Sedlovina**	**5.07**	**24**	PN	**Pn**	**14 52 51.1**	**+0.7**
SDLR	**Sedlovina**	**5.07**	**24**	*e*P	**Pn**	**14 52 51.1**	**+0.7**
KRX	**Arik**	**5.08**	**23**	PN	**Pn**	**14 52 52.2**	**+1.7**
KRX	**Arik**	**5.08**	**23**	*e*P	**Pn**	**14 52 52.2**	**+1.7**
NLC	**Nalytchevo**	**5.11**	**28**	*e*S	**Sn**	**14 53 45.9**	**-2.4**
GNL	**Ganaly**	**5.23**	**17**	PN	**Pn**	**14 52 53.9**	**+1.3**
GNL	**Ganaly**	**5.23**	**17**	*e*P	**Pn**	**14 52 53.9**	**+1.3**
SPN	**Mys Shipunski**	**5.27**	**32**	PN	**Pn**	**14 52 52.5**	**-0.5**
SPN	**Mys Shipunski**	**5.27**	**32**	*e*P	**Pn**	**14 52 52.5**	**-0.5**
SPN				*e*S	**Sn**	**14 53 49.9**	**-2.4**
SPN	**Mys Shipunski**	**5.27**	**32**	*e*P	**Pn**	**14 52 52.5**	**-0.5**
KUR	**Kuril'sk**	**6.22**	**239**	*i*PN	Pn	14 53 07.2	+1.2
KUR				S	Sn	14 54 15.8	+0.1
KUR				pmax	pmax		
	comp=Z,71nm,0.5s						
KUR				pmax	pmax		
	comp=N,22nm,0.3s						
KUR	**Kuril'sk**	**6.22**	**239**	*i* P	Pn	14 53 07.4	+1.4
KUR				AMB	AMB	14 53 07.8	
	comp=N,20nm,0.4s						
KUR				AMB	AMB	14 53 07.8	
	comp=N,70nm,0.4s						
KUR				*e*S	Sn	14 54 15.2	-0.5
KUR				A	A	14 54 32.6	
	comp=N,210nm,0.7s						
KUR				A	A	14 54 32.6	
	comp=N,230nm,0.7s						
MKZ	**Mys Kozlova**	**7.05**	**32**	PN	**Pn**	**14 53 16.5**	**-0.8**
MKZ	**Mys Kozlova**	**7.05**	**32**	*e*P	**Pn**	**14 53 16.5**	**-0.8**
MKZ	**Mys Kozlova**	**7.05**	**32**	*e*P	**Pn**	**14 53 16.5**	**-0.8**
KZV	**Kizimen**	**7.08**	**23**	PN	**Pn**	**14 53 20.6**	**+2.7**
KZV	**Kizimen**	**7.08**	**23**	*e*P	**Pn**	**14 53 20.6**	**+2.7**
TUMD	**Tumrok D**	**7.19**	**24**	*e*P	**Pn**	**14 53 20.8**	**+1.5**
TUMR	**Tumrok**	**7.19**	**22**	PN	**Pn**	**14 53 20.8**	**+1.3**
TUMR	**Tumrok**	**7.19**	**22**	*e*P	**Pn**	**14 53 21.1**	**+1.6**
YUK	**Yuzh-Kuril'sk**	**8.08**	**238**	*i* P	Pn	14 53 31.5	-0.1
YUK				AMB	AMB	14 54 32.2	
	comp=N,110nm,0.8s						
YUK				AMB	AMB	14 54 32.2	
	comp=N,140nm,0.8s						
YUK				*e*S	Sn	14 54 57.3	-4.1
YUK				A	A	14 55 00.8	
	comp=N,210nm,0.9s						
YUK				A	A	14 55 00.8	
	comp=N,240nm,0.9s						
TYV	**Tymovskoe**	**8.51**	**289**	*e*P	**Pn**	**14 53 38.6**	**+1.2**
TYV				AMB	AMB	14 53 42.0	
	comp=N,20nm,0.7s						
YSS	**Yuzh-Sakhalins**	**8.68**	**263**	*e*PN	Pn	14 53 40.6	+0.9
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	**8.68**	**263**	*e*P	Pn	14 53 40.6	+0.9
YSS				AMB	AMB	14 53 43.0	
	comp=Z,20nm,0.9s						
KBTR	**Krutoberegovo**	**8.76**	**28**	PN	**Pn**	**14 53 41.0**	**+0.3**
KBTR	**Krutoberegovo**	**8.76**	**28**	*e*P	**Pn**	**14 53 41.0**	**+0.3**
JKA	**Kamikawa-asahi**	**9.96**	**247**		Pn	14 53 59.0	+1.8
JKA	**Kamikawa-asahi**	**9.96**	**247**	*e*P	Pn	14 53 59.0	+1.8
ASAJ	**Asahikawa**	**9.96**	**247**	P	Pn	14 53 58.0	+0.8
	comp=Z,9.7nm,0.3s,baz=74,slow=14,SNR=71						
ASAJ	**Asahikawa**	**9.96**	**247**	PN	Pn	14 53 59.0	+1.8
MA2	**Magadan**	**11.20**	**348**	P	**Pn**	**14 54 14.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=146,slow=15,SNR=5.2						
MA2				LR	LR	14 57 59.6	
	comp=Z,53nm,20.0s,baz=204,slow=35						
SEY	**Seymchan**	**14.34**	**354**	P	**Pn**	**14 54 56.8**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=176,slow=10,SNR=5.2						
EKMR	**Ekimchan**	**14.79**	**296**	*e*P	Pn	14 54 59.8	-2.7
EKMR				AMB	AMB	14 55 10.5	
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**15.52**	**281**	P	**Pn**	**14 55 11.7**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=87,slow=17,SNR=2.3						
USRK	**Ussuriysk Ar.**	**16.72**	**263**	P	**Pn**	**14 55 27.3**	**+0.3**
	baz=69,slow=12,SNR=10						
BMKR	**Bomnak**	**17.44**	**300**	*e*P	**P**	**14 55 33.0**	**-3.3**
MJAR	**Matsushiro Arr**	**17.50**	**232**	LR	LR	15 03 04.1	
	comp=Z,61nm,18.6s,baz=235,slow=39						
KROS	**Kirovskiy**	**18.49**	**299**	*e*P	**P**	**14 55 49.0**	**+1.2**
KSRS	**Korea Array**	**22.88**	**251**	P	**P**	**14 56 34.7**	**-0.5**
	comp=Z,1.7nm,0.5s,baz=48,slow=10,SNR=11						
KSRS				LR	LR	15 05 02.8	
	comp=Z,35nm,19.2s,baz=48,slow=35						
JNU	**Nakatsue**	**24.06**	**239**	LR	LR	15 07 25.1	
	comp=Z,44nm,19.9s,baz=13,slow=40						
TIXI	**Tiksi**	**26.05**	**341**	P	**P**	**14 57 01.2**	**-2.9**
	comp=Z,1.7nm,0.4s,baz=166,slow=6.6,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**30.38**	**158**	T	T	15 29 35.1	
	baz=345,slow=76,SNR=53						
H11N1	**WAKE ISLAND Hy**	**30.39**	**158**	T	T	15 29 38.5	
	baz=345,slow=76,SNR=117						
H11N3	**WAKE ISLAND Hy**	**30.39**	**158**	T	T	15 29 35.9	
	baz=345,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy**	**31.50**	**159**	T	T	15 31 02.7	
	baz=345,slow=76,SNR=673						
H11S3	**WAKE ISLAND Hy**	**31.51**	**159**	T	T	15 31 03.6	
	baz=345,slow=76,SNR=1311						
H11S2	**WAKE ISLAND Hy**	**31.52**	**159**	T	T	15 31 10.2	
	baz=345,slow=76,SNR=661						
ILAR	**Eielson Array**	**34.05**	**40**	P	**P**	**14 58 16.1**	**+1.3**
	comp=Z,0.6nm,1.0s,baz=275,slow=10,SNR=6.9						
PAX	**Paxson**	**34.74**	**43**	P	P	14 58 24.8	+3.8
PAX				pmax	pmax		

comp=Z,15nm,1.1s
PAX **Paxson** **34.74 43** P P 14 58 24.8 +3.9
L27K **Beaver Creek,** **36.39 43** P **P** **14 58 35.6 +0.6**
L27K IAmb IAmb 14 58 54.7
comp=Z,6.9nm,1.2s
EGAK **Eagle** **36.50 40** P **P** **14 58 37.5 +1.6**
EGAK IAmb IAmb 14 58 50.2
comp=Z,4.6nm,1.0s
MKAR **Makanchi Array** **47.41 297** P **P** **15 00 02.8 -2.2**
comp=Z,0.2nm,0.4s,baz=60,slow=6.5,SNR=4.8
MKAR LR LR 15 20 56.1
comp=Z,40nm,18.9s,baz=12,slow=37
YKA **Yellowknife Ar** **48.42 38** P **P** **15 00 13.6 +1.1**
comp=Z,0.8nm,0.9s,baz=297,slow=7.5,SNR=7.0
CMAR **Chiang Mai Arr** **54.32 257** P **P** **15 00 57.0 -0.2**
comp=Z,1.6nm,0.8s,baz=32,slow=7.4,SNR=11
ARCES **ARCESS Array B** **56.49 341** P **P** **15 01 10.3 -1.8**
comp=Z,4.3nm,1.1s,baz=26,slow=8.3,SNR=2.1
ARCES LR LR 15 28 25.9
comp=Z,22nm,18.5s,baz=40,slow=39
PDAR **Pinedale Array** **62.35 56** P **P** **15 01 54.8 +1.6**
comp=Z,0.6nm,0.9s,baz=336,slow=3.3,SNR=4.1
FINES **FINESS Array B** **62.90 335** P **P** **15 01 54.3 -1.9**
comp=Z,1.7nm,1.0s,baz=37,slow=7.9,SNR=5.8
FINES **FINESS Array B** **62.90 335** P **P** **15 01 55.0 -1.2**
FINES **FINESS Array B** **62.90 335** P **P** **15 01 55.0 -1.2**
BATI **Baumata** **65.01 215** LR LR 15 27 36.4
comp=Z,20nm,21.6s,baz=87,slow=33
SDCO **Great Sand Dun** **68.06 58** P **P** **15 02 31.0 +0.7**
WRA **Warramunga Arr** **70.89 201** P **P** **15 02 46.8 -0.7**
comp=Z,0.9nm,0.7s,baz=16,slow=6.4,SNR=8.6
WRA **Warramunga Arr** **70.89 201** P **P** **15 02 47.5 +0.1**
WRA **Warramunga Arr** **70.89 201** P **P** **15 02 47.5 +0.1**
ASAR **Alice Springs** **74.58 200** P **P** **15 03 11.1 +1.8**
comp=Z,0.9nm,0.6s,baz=13,slow=5.6,SNR=18
ASAR **Alice Springs** **74.58 200** P **P** **15 03 10.5 +1.3**
TXAR **Lajitas Array** **75.20 62** P **P** **15 03 15.1 +2.0**
comp=Z,0.8nm,0.6s,baz=295,slow=4.0,SNR=8.3
GERES **GERESS Array B** **77.33 335** P **P** **15 03 24.9 0.0**
comp=Z,0.2nm,0.4s,baz=38,slow=6.6,SNR=2.1
H03N2 **Juan Fernandez** **137.22 90** T T 17 44 05.2
baz=310,slow=77,SNR=58
H03N1 **Juan Fernandez** **137.23 90** T T 17 44 06.5
baz=310,slow=77,SNR=66
H03N3 **Juan Fernandez** **137.23 90** T T 17 44 07.5
baz=310,slow=77,SNR=50

TAP ***03*** *14:52:57.0,24.03N×122.18E,h30km±1km,ML3.4,D*
JMA ***03*** *14:52:56.8±0.1,23.98N×122.18E,h40km±3km,M2.7*
ISC 03 14:52:56.8±1.0,24.02N±0.02×122.19E±0.02,h33km±8km,
n142,σ1§03/264,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.55**	**276**	P	**Pb**	**14 53 08.1**	**-0.1**
	baz=275						
TWD				S	**Sb**	**14 53 16.1**	**+0.2**
	baz=275						
EWUT	**Wuta**	**0.57**	**318**	*e*P	**Pn**	**14 53 09.0**	**+0.4**
	baz=318						
EWUT				*e*S	**Sn**	**14 53 17.4**	**+0.5**
	baz=318						
NACB	**Ninganchiao**	**0.57**	**286**	P	**Pb**	**14 53 08.4**	**0.0**
	baz=285						
NACB				S	**Sb**	**14 53 16.6**	**+0.1**
	baz=285						
ENA	**Nanau**	**0.58**	**315**	P	**Pb**	**14 53 08.9**	**+0.3**
	baz=315						
ENA				S	**Sn**	**14 53 18.4**	**+1.3**
	baz=315						
TWC	**Suao**	**0.67**	**332**	P	**Pb**	**14 53 09.9**	**-0.2**
	baz=333						
TWC				S	**Sb**	**14 53 18.9**	**-0.2**
	baz=333						
ETLH	**Xiulin Townshi**	**0.68**	**286**	P	**Pn**	**14 53 10.1**	**0.0**
	baz=285						
ETLH				S	**Sb**	**14 53 19.7**	**+0.2**
	baz=285						
ESL	**Shilin**	**0.73**	**254**	P	**Pn**	**14 53 10.6**	**-0.2**
	baz=252						
ESL				S	**Sb**	**14 53 20.6**	**-0.1**
	baz=252						
NDS	**Dongshan**	**0.75**	**325**	*e*P	**Pb**	**14 53 11.7**	**+0.2**
	baz=325						
NDS				*e*S	**Sb**	**14 53 21.5**	**+0.1**
	baz=325						
EGFH	**Guangfu**	**0.79**	**244**	*e*P	**Pn**	**14 53 11.6**	**0.0**
	baz=242						
EGFH				*e*S	**Sb**	**14 53 23.1**	**+0.7**
	baz=242						
JYNG	**Yonagunijimaku**	**0.81**	**58**	P	**Pn**	**14 53 12.3**	**+0.4**
JYNG				*e*S	**Sb**	**14 53 23.7**	**+0.6**
ENTT	**Nioudou**	**0.84**	**317**	*e*P	**Pn**	**14 53 12.8**	**+0.4**
	baz=317						
ENTT				*e*S	**Sb**	**14 53 24.4**	**+0.3**
	baz=317						
NNSB	**Datong**	**0.84**	**299**	P	**Pn**	**14 53 12.8**	**+0.3**
	baz=298						
NNSB				S	**Sn**	**14 53 23.6**	**-0.3**
	baz=298						
NNSH	**Datong**	**0.84**	**299**	*e*P	**Pn**	**14 53 12.9**	**+0.4**
	baz=298						
NNSH				S	**Sn**	**14 53 23.7**	**-0.2**
	baz=298						
ILA	**Ilan**	**0.85**	**331**	*e*S	**Sb**	**14 53 24.6**	**+0.5**
	baz=332						
TWE	**Neicheng**	**0.85**	**326**	*e*P	**Pn**	**14 53 13.0**	**+0.5**
	baz=326						
TWE				*e*S	**Sb**	**14 53 24.8**	**+0.7**
	baz=326						
NDT	**Datong Townshi**	**0.85**	**313**	*e*P	**Pn**	**14 53 13.0**	**+0.5**
	baz=313						
NDT				*e*S	**Sn**	**14 53 24.1**	**+0.3**
	baz=313						
NNS	**Nan Shan**	**0.86**	**299**	P	**Pn**	**14 53 13.0**	**+0.3**
	baz=299						
NNS				S	**Sn**	**14 53 24.8**	**+0.6**
	baz=299						
WHF	**Hehuan Shan**	**0.86**	**279**	P	**Pn**	**14 53 12.8**	**-0.1**
	baz=277						
WHF				S	**Sn**	**14 53 24.5**	**-0.1**
	baz=277						
YOJ	**Yonaguni jima**	**0.86**	**59**	P	**Pb**	**14 53 13.2**	**-0.2**
YOJ				*e*S	**Sb**	**14 53 24.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.86**	**59**	*i* P	**Pb**	**14 53 13.5**	**+0.1**
	baz=59						
YOJ				*i* S	**Sb**	**14 53 25.1**	**+0.5**
	baz=59						
HGSD	**Ruisui**	**0.88**	**233**	*e*P	**Pn**	**14 53 12.6**	**-0.2**
	baz=232						
HGSD				*e*S	**Sn**	**14 53 24.6**	**0.0**
	baz=232						
NTC	**Toucheng**	**0.90**	**338**	*e*P	**Pn**	**14 53 13.1**	**0.0**
	baz=338						
NTC				*e*S	**Sn**	**14 53 25.4**	**+0.5**
	baz=338						
FUSS	**Fushou**	**0.90**	**285**	*e*P	**Pn**	**14 53 13.7**	**+0.4**
	baz=284						
FUSS				S	**Sn**	**14 53 25.2**	**-0.1**
	baz=284						
CHGB	**Renai**	**0.93**	**273**	P	**Pn**	**14 53 14.1**	**+0.3**
	baz=272						
CHGB				S	**Sn**	**14 53 26.8**	**+0.6**
	baz=272						
EHY	**Hungye**	**0.95**	**238**	*e*P	**Pn**	**14 53 14.0**	**+0.2**
	baz=236						
EHY				*e*S	**Sn**	**14 53 26.4**	**+0.1**
	baz=236						
TWT	**Tachien**	**0.96**	**284**	P	**Pb**	**14 53 15.1**	**+0.1**
	baz=283						
TWT				S	**Sb**	**14 53 28.2**	**+0.7**
	baz=283						
TDCB	**Techi**	**0.97**	**284**	P	**Pn**	**14 53 14.8**	**+0.5**
	baz=283						
TDCB				*e*S	**Sn**	**14 53 27.1**	**0.0**
	baz=283						
NWLT	**Wulai**	**0.98**	**320**	*e*P	**Pn**	**14 53 14.9**	**+0.6**
	baz=320						
NWLT				*e*S	**Sn**	**14 53 27.4**	**+0.2**
	baz=320						
YHNB	**Yeheng**	**0.99**	**311**	*e*P	**Pn**	**14 53 14.9**	**+0.5**
	baz=311						
YHNB				S	**Sn**	**14 53 26.7**	**-0.6**
	baz=311						
VWDT	**VWDT**	**1.00**	**255**	P	**Pn**	**14 53 15.2**	**+0.7**
	baz=253						
VWDT				S	**Sn**	**14 53 27.9**	**+0.4**
	baz=253						
TWB1	**Santiao Chiao**	**1.00**	**349**	*e*P	**Pn**	**14 53 15.0**	**+0.4**
	baz=350						
TWB1				*e*S	**Sn**	**14 53 27.2**	**-0.3**
	baz=350						
NSK	**Sanguang**	**1.00**	**311**	*e*P	**Pn**	**14 53 15.1**	**+0.4**
	baz=310						
NSK				*e*S	**Sn**	**14 53 27.3**	**-0.5**
	baz=310						
TIPB	**Shuangxi**	**1.00**	**341**	*e*P	**Pn**	**14 53 15.2**	**+0.5**
	baz=341						
TIPB				S	**Sn**	**14 53 28.3**	**+0.6**
	baz=341						
YULB	**Yu-li**	**1.03**	**233**	*e*P	**Pn**	**14 53 15.1**	**+0.1**
	baz=231						
YULB				*e*S	**Sn**	**14 53 28.0**	**-0.3**
	baz=231						
EYUL	**Yuli**	**1.04**	**230**	*e*P	**Pn**	**14 53 15.8**	**+0.6**
	baz=229						
EYUL				S	**Sn**	**14 53 29.4**	**+0.7**
	baz=229						
TWF1	**Yuli**	**1.06**	**231**	*e*P	**Pn**	**14 53 15.4**	**+0.1**
	baz=229						
TWF1				*e*S	**Sn**	**14 53 29.1**	**+0.1**
	baz=229						
TWA	**Mucha**	**1.11**	**330**	*e*P	**Pb**	**14 53 17.4**	**-0.1**
	baz=330						
TWA				*e*S	**Sb**	**14 53 31.2**	**-0.3**
	baz=330						
NWF	**Wu-fen Shan**	**1.11**	**340**	*e*P	**Pn**	**14 53 16.9**	**+0.7**
	baz=340						
NWF				*e*S	**Sn**	**14 53 30.7**	**+0.3**
	baz=340						
WFSB	**Wu-fen Shan**	**1.11**	**340**	*e*P	**Pn**	**14 53 16.8**	**+0.7**
	baz=340						
WFSB				*e*S	**Sn**	**14 53 30.8**	**+0.5**
	baz=340						
NHDH	**Xindian Distri**	**1.12**	**327**	*e*S	**Sb**	**14 53 31.6**	**-0.3**
	baz=327						
WPL	**Puli Township**	**1.13**	**270**	P	**Pn**	**14 53 17.3**	**+1.0**
	baz=269						
WPL				*e*S	**Sb**	**14 53 32.0**	**-0.3**
	baz=269						
TATO	**Taipei**	**1.15**	**326**	*e*P	**Pb**	**14 53 17.9**	**-0.2**
	baz=326						
TATO				*e*S	**Sn**	**14 53 32.0**	**+0.8**
	baz=326						
DPDB	**Guoxing**	**1.16**	**271**	*e*P	**Pb**	**14 53 18.0**	**-0.3**
	baz=270						
DPDB				*e*S	**Sn**	**14 53 32.4**	**+0.9**
	baz=270						
SSLB	**Suanglung**	**1.16**	**259**	*e*P	**Pn**	**14 53 17.1**	**+0.3**
	baz=257						
SSLB				*e*S	**Sn**	**14 53 31.8**	**+0.3**
	baz=257						
WHP	**Taichung City**	**1.17**	**283**	*e*P	**Pb**	**14 53 18.1**	**-0.4**
	baz=282						
WHP				*e*S	**Sn**	**14 53 33.0**	**+1.1**
	baz=282						
TNOU	**National Taiwa**	**1.19**	**341**	*e*P	**Pn**	**14 53 17.5**	**+0.4**
	baz=341						
TNOU				*e*S	**Sn**	**14 53 32.1**	**0.0**
	baz=341						
CHKT	**Chengkung**	**1.19**	**220**	*e*P	**Pn**	**14 53 18.1**	**+1.0**
	baz=218						
CHKT				*e*S	**Sn**	**14 53 30.4**	**-1.8**
	baz=218						
SMLT	**Sun Moon Lake**	**1.19**	**264**	*e*P	**Pn**	**14 53 17.9**	**+0.7**
	baz=262						
SMLT				*e*S	**Sn**	**14 53 32.5**	**+0.1**
	baz=262						
TAP	**Taipei**	**1.19**	**328**	*e*P	**Pn**	**14 53 17.4**	**+0.2**
	baz=328						
TAP				*e*S	**Sb**	**14 53 33.6**	**-0.3**
	baz=328						
TYC	**Yuchr**	**1.23**	**265**	*e*P	**Pn**	**14 53 18.6**	**+0.9**
	baz=264						
TYC				*e*S	**Sn**	**14 53 34.1**	**+0.9**
	baz=264						
NJD	**Zhudong**	**1.23**	**305**	*e*P	**Pb**	**14 53 19.0**	**-0.5**
	baz=305						
NJD				*e*S	**Sn**	**14 53 34.6**	**+1.2**
	baz=305						
LIOB	**Emei**	**1.24**	**300**	*e*P	**Pn**	**14 53 19.0**	**+1.1**
	baz=300						
LIOB				*e*S	**Sb**	**14 53 34.9**	**-0.5**
	baz=300						
NSTT	**Nanjuang**	**1.25**	**299**	*e*P	**Pb**	**14 53 19.3**	**-0.4**
	baz=299						
NSTT				*e*S	**Sn**	**14 53 34.4**	**+0.8**
	baz=299						
YUS	**Yu-Shan**	**1.25**	**245**	*e*P	**Pn**	**14 53 19.3**	**+0.8**
	baz=244						
YUS				S	**Sn**	**14 53 34.4**	**-0.1**
	baz=244						
YM01	**YM01**	**1.26**	**333**	*e*P	**Pn**	**14 53 18.9**	**+0.8**
	baz=333						
YM01				*e*S	**Sn**	**14 53 34.7**	**+0.7**
	baz=333						
YM10	**YM10**	**1.27**	**333**	*e*P	**Pn**	**14 53 19.0**	**+0.7**
	baz=333						
YM10				S	**Sn**	**14 53 34.5**	**+0.3**
	baz=333						
WHYT	**Xinyi Township**	**1.27**	**256**	*e*P	**Pb**	**14 53 19.7**	**-0.5**
	baz=254						
WHYT				*e*S	**Sb**	**14 53 36.1**	**-0.1**
	baz=254						
NTY	**Taoyuan**	**1.27**	**320**	*e*P	**Pn**	**14 53 18.2**	**-0.1**
	baz=320						
NTY				*e*S	**Sb**	**14 53 35.9**	**-0.3**
	baz=320						
YM11	**YM11**	**1.27**	**334**	*e*P	**Pn**	**14 53 19.2**	**+0.9**
	baz=334						
YM11				*e*S	**Sn**	**14 53 35.4**	**+1.1**
	baz=334						
YM05	**YM05**	**1.27**	**333**	*e*P	**Pn**	**14 53 18.8**	**+0.4**
	baz=333						
YM05				*e*S	**Sb**	**14 53 35.9**	**-0.5**
	baz=333						
YM04	**YM04**	**1.28**	**332**	*e*P	**Pn**	**14 53 19.2**	**+0.8**
	baz=332						
YM04				*e*S	**Sn**	**14 53 34.6**	**+0.2**
	baz=332						
YM08	**YM08**	**1.29**	**335**	*e*P	**Pn**	**14 53 19.0**	**+0.5**
	baz=335						
YM08				*e*S	**Sn**	**14 53 34.4**	**-0.2**
	baz=335						
TWS1	**Kuangyinshan**	**1.29**	**327**	*e*P	**Pb**	**14 53 19.8**	**-0.6**
	baz=327						
TWS1				*e*S	**Sn**	**14 53 35.7**	**+1.1**
	baz=327						
HSN1	**Hsinchu**	**1.31**	**305**	*e*P	**Pn**	**14 53 19.8**	**+1.0**
	baz=305						
HSN1				*e*S	**Sn**	**14 53 36.5**	**+1.3**
	baz=305						
ANP	**Anpu**	**1.31**	**332**	*e*S	**Sn**	**14 53 36.5**	**+1.1**
	baz=332						
NCU	**National Centr**	**1.32**	**316**	*e*S	**Sn**	**14 53 36.4**	**+1.0**
	baz=316						
NCUH	**Zhongli**	**1.32**	**316**	*e*P	**Pn**	**14 53 20.1**	**+1.1**
	baz=315						
NCUH				*e*S	**Sn**	**14 53 36.6**	**+1.2**
	baz=315						
EDH	**Donghe**	**1.32**	**218**	*e*S	**Sn**	**14 53 34.8**	**-0.8**
	baz=217						
NTST	**Danshui**	**1.33**	**329**	*e*S	**Sb**	**14 53 37.0**	**-0.8**
	baz=329						
TWQ1	**Liyutan**	**1.34**	**284**	*e*P	**Pb**	**14 53 20.8**	**-0.5**
	baz=283						
TWQ1				*e*S	**Sn**	**14 53 36.5**	**+0.6**
	baz=283						
SBCB	**Hsinchu**	**1.34**	**305**	*e*P	**Pn**	**14 53 20.1**	**+0.8**
	baz=304						
SBCB				*e*S	**Sn**	**14 53 37.0**	**+1.0**
	baz=304						
WJS	**Zhushan**	**1.36**	**262**	*e*P	**Pn**	**14 53 20.7**	**+1.3**
	baz=261						
WJS				*e*S	**Sb**	**14 53 38.7**	**+0.1**
	baz=261						
ELDTW	**Lidau**	**1.36**	**233**	*e*P	**Pn**	**14 53 20.0**	**+0.4**
	baz=231						
ELDTW				*e*S	**Sn**	**14 53 35.9**	**-0.7**
	baz=231						
TWY	**Chenhua**	**1.36**	**337**	*e*P	**Pb**	**14 53 20.9**	**-0.8**
	baz=337						
TWY				*e*S	**Sn**	**14 53 37.0**	**+0.5**
	baz=337						
NSY	**Sanyi**	**1.37**	**287**	*e*P	**Pn**	**14 53 20.8**	**+1.2**
	baz=286						
WWF	**Wufeng**	**1.37**	**271**	*e*P	**Pb**	**14 53 21.2**	**-0.6**
	baz=270						
WWF				*e*S	**Sb**	**14 53 38.3**	**-0.7**
	baz=270						
ALS	**Alishan**	**1.37**	**249**	*e*P	**Pn**	**14 53 21.2**	**+1.3**
	baz=247						
ALS				*e*S	**Sn**	**14 53 38.2**	**+1.2**
	baz=247						
NMLH	**Miaoli**	**1.38**	**292**	*e*P	**Pn**	**14 53 21.0**	**+1.2**
	baz=291						
NMLH				*e*S	**Sn**	**14 53 37.3**	**+0.3**
	baz=291						
WNT	**Mingjian**	**1.39**	**264**	*e*P	**Pb**	**14 53 21.6**	**-0.5**
	baz=263						
WNT				*e*S	**Sn**	**14 53 38.4**	**+1.3**
	baz=263						
WNT1	**Nantou City**	**1.39**	**266**	*e*P	**Pb**	**14 53 21.4**	**-0.8**
	baz=264						
WNT1				*e*S	**Sn**	**14 53 38.5**	**+1.4**
	baz=264						
TCU	**Taichung**	**1.39**	**276**	*e*P	**Pn**	**14 53 21.3**	**+1.3**
	baz=274						
TCU				*e*S	**Sn**	**14 53 38.2**	**+0.9**
	baz=274						
NHW	**Xinwu Township**	**1.43**	**313**	*e*S	**Sn**	**14 53 39.5**	**+1.3**
	baz=313						
IRIF	**Iriomote-Funau**	**1.44**	**77**	P	**Pn**	**14 53 21.2**	**+0.7**
IRIF				S	**Sn**	**14 53 38.9**	**+0.6**
CHN5	**Tsauling**	**1.45**	**253**	*e*P	**Pb**	**14 53 22.5**	**-0.8**
	baz=252						
CHN5				*e*S	**Sb**	**14 53 40.6**	**-0.8**
	baz=252						
WDJ	**Dajia District**	**1.46**	**283**	*e*P	**Pn**	**14 53 22.0**	**+1.2**
	baz=282						
WDJ				*e*S	**Sn**	**14 53 39.9**	**+1.1**
	baz=282						
LONT	**Longtian**	**1.48**	**222**	*e*P	**Pn**	**14 53 20.9**	**-0.2**
	baz=220						
LONT				*e*S	**Sn**	**14 53 38.9**	**-0.4**
	baz=220						
LDUT	**Ludao**	**1.50**	**207**	*e*P	**Pn**	**14 53 21.1**	**-0.2**
	baz=205						
WCHH	**Zhanghua**	**1.50**	**273**	*e*P	**Pn**	**14 53 22.4**	**+1.1**
	baz=272						
WCHH				*e*S	**Sn**	**14 53 41.2**	**+1.4**
	baz=272						
WGK	**Gukeng**	**1.53**	**258**	*e*P	**Pn**	**14 53 23.3**	**+1.5**
	baz=256						
WGK				*e*S	**Sn**	**14 53 42.0**	**+1.4**
	baz=256						
STYH	**Taoyuan**	**1.55**	**237**	*e*P	**Pn**	**14 53 23.4**	**+1.3**
	baz=236						
STYH				*e*S	**Sn**	**14 53 42.3**	**+1.2**
	baz=236						
WDLH	**Douliu**	**1.55**	**258**	*e*P	**Pn**	**14 53 23.6**	**+1.5**
	baz=257						
WDLH				*e*S	**Sb**	**14 53 43.3**	**-0.9**
	baz=257						
STYT	**Tauyuan**	**1.57**	**237**	*e*P	**Pn**	**14 53 23.8**	**+1.3**
	baz=236						
STYT				*e*S	**Sn**	**14 53 42.7**	**+1.0**
	baz=236						
TWGBT	**Beinan**	**1.57**	**221**	*e*P	**Pn**	**14 53 22.6**	**+0.1**
	baz=219						
TWGBT				*e*S	**Sn**	**14 53 41.3**	**-0.5**
	baz=219						
TWG	**Pinlang**	**1.58**	**221**	*e*P	**Pn**	**14 53 22.9**	**+0.4**
	baz=219						
TWG				*e*S	**Sn**	**14 53 41.1**	**-0.7**
	baz=219						
TPUB	**Ta-pu**	**1.60**	**244**	*e*P	**Pn**	**14 53 24.5**	**+1.7**
	baz=243						
TPUB				*e*S	**Sb**	**14 53 44.5**	**-1.2**
	baz=243						
WTP	**Ta-pu**	**1.64**	**242**	*e*P	**Pn**	**14 53 25.1**	**+1.7**
	baz=241						
WTP				*e*S	**Sn**	**14 53 45.0**	**+1.5**
	baz=241						
CHN2	**Minshiung**	**1.65**	**253**	*e*P	**Pn**	**14 53 24.8**	**+1.4**
	baz=252						
CHN2				*e*S	**Sn**	**14 53 44.1**	**+0.6**
	baz=252						
WRL	**Guolierlin Hig**	**1.67**	**266**	*e*P	**Pn**	**14 53 25.5**	**+1.8**
	baz=265						
WRL				*e*S	**Sn**	**14 53 45.9**	**+1.9**
	baz=265						
JKRS	**Kuro-shima**	**1.67**	**82**	P	**Pn**	**14 53 24.9**	**+1.1**
JKRS				*e*S	**Sn**	**14 53 45.6**	**+1.5**
WTK	**Tuku**	**1.69**	**259**	*e*P	**Pn**	**14 53 25.3**	**+1.4**
	baz=258						
WTK				*e*S	**Sn**	**14 53 46.1**	**+1.6**
	baz=258						
CHY	**Chiayi**	**1.70**	**253**	*e*P	**Pn**	**14 53 26.0**	**+1.8**
	baz=251						
CHY				*e*S	**Sn**	**14 53 46.4**	**+1.6**
	baz=251						
TWK	**Hsinying**	**1.73**	**245**	*e*P	**Pn**	**14 53 26.4**	**+1.7**
	baz=243						
TWK				*e*S	**Sn**	**14 53 47.0**	**+1.2**
	baz=243						
CHN1	**Nanshi**	**1.74**	**242**	*e*P	**Pn**	**14 53 26.5**	**+1.8**
	baz=241						
CHN1				*e*S	**Sn**	**14 53 47.4**	**+1.5**
	baz=241						
SGST	**Jiashian**	**1.75**	**238**	*e*P	**Pn**	**14 53 26.2**	**+1.3**
	baz=237						
SGST				*e*S	**Sn**	**14 53 47.1**	**+1.1**
	baz=237						
SNST	**Tainan City**	**1.75**	**243**	*e*P	**Pn**	**14 53 26.6**	**+1.8**
	baz=242						
SNST				*e*S	**Sn**	**14 53 47.6**	**+1.6**
	baz=242						
SLGT	**Liugui**	**1.75**	**235**	*e*P	**Pn**	**14 53 26.2**	**+1.4**
	baz=233						
SLGT				*e*S	**Sb**	**14 53 48.7**	**-1.2**
	baz=233						
WTCT	**Ta-ch'eng**	**1.76**	**265**	*e*P	**Pn**	**14 53 26.1**	**+1.2**
	baz=264						
WTCT				*e*S	**Sn**	**14 53 47.4**	**+1.2**
	baz=264						
JIJ	**Ishigaki jima**	**1.81**	**79**	P	**Pn**	**14 53 26.0**	**+0.3**
JIJ				S	**Sn**	**14 53 47.3**	**-0.3**
ECL	**Taimali**	**1.82**	**219**	*e*S	**Sn**	**14 53 46.8**	**-0.9**
	baz=218						
WSF	**Szhu**	**1.85**	**259**	*e*P	**Pn**	**14 53 27.1**	**+1.0**
	baz=257						
WSF				*e*S	**Sn**	**14 53 49.5**	**+1.1**
	baz=257						
SSD	**Sandimen**	**1.92**	**229**	*e*P	**Pn**	**14 53 29.1**	**+2.0**
	baz=227						
SSD				*e*S	**Sn**	**14 53 51.3**	**+1.2**
	baz=227						
CHN3	**Shinhua**	**1.92**	**241**	*e*S	**Sn**	**14 53 51.7**	**+1.4**
	baz=240						
SCST	**Cishan**	**1.93**	**234**	*e*P	**Pn**	**14 53 29.3**	**+2.0**
	baz=233						
SCST				*e*S	**Sn**	**14 53 51.6**	**+1.2**
	baz=233						
TSMG	**Majia**	**1.93**	**228**	*e*P	**Pn**	**14 53 29.3**	**+1.9**
	baz=226						
TSMG				*e*S	**Sn**	**14 53 52.1**	**+1.5**
	baz=226						
CHN8	**Yiju**	**1.94**	**250**	*e*P	**Pn**	**14 53 28.7**	**+1.3**
	baz=249						
CHN8				*e*S	**Sn**	**14 53 51.8**	**+1.1**
	baz=249						
MASBT	**Mashibuluo**	**2.01**	**226**	*e*P	**Pn**	**14 53 29.4**	**+1.1**
	baz=225						
MASBT				*e*S	**Sn**	**14 53 53.7**	**+1.4**
	baz=225						
JISG	**Ishigakijimahi**	**2.01**	**73**	P	**Pn**	**14 53 28.8**	**+0.4**
JISG				S	**Sn**	**14 53 51.4**	**-1.1**
TWM1	**Shoushan**	**2.02**	**234**	*e*S	**Sn**	**14 53 54.9**	**+2.2**
	baz=233						
SCLT	**Jiali**	**2.02**	**246**	*e*S	**Sn**	**14 53 53.9**	**+1.2**
	baz=244						
EAST	**Anshuo**	**2.05**	**218**	*e*P	**Pn**	**14 53 30.2**	**+1.2**
	baz=216						
EAST				*e*S	**Sn**	**14 53 53.2**	**-0.2**
	baz=216						
LAY	**Lan-yu**	**2.06**	**197**	*e*P	**Pn**	**14 53 29.0**	**-0.1**
	baz=196						
LAY				*e*S	**Sn**	**14 53 51.9**	**-1.8**
	baz=196						
SSPT	**Xinbi**	**2.14**	**225**	*e*P	**Pn**	**14 53 31.9**	**+1.7**
	baz=223						
SSPT				*e*S	**Sn**	**14 53 57.3**	**+1.7**
	baz=223						

SCZT	**Fangliau** baz=220	**2.19 222**	*eS*	**Sn**	**14 53 58.4**	**+1.6**
SLIU	**Shizi** baz=215	**2.21 216**	*eS*	**Sn**	**14 53 56.3**	**-1.1**
JTJ	**Tarama**	**2.37 74**	P	**Pn**	**14 53 34.1**	**+0.7**
JTJ			S	**Sn**	**14 54 01.7**	**+0.4**
TWP	**Hsiaoliuchiu** baz=224	**2.37 226**	*eS*	**Sn**	**14 54 02.9**	**+1.5**
HEN	**Hengchun** baz=213	**2.41 214**	*eS*	**Sn**	**14 54 02.3**	**-0.1**
WDGT	**Dungji** baz=251	**2.44 252**	*eP*	**Pn**	**14 53 35.6**	**+1.2**
WDGT			*eS*	**Sn**	**14 54 03.2**	**+0.1**
PHUB	**P'eng-hu** baz=257	**2.46 259**	*eP*	**Pn**	**14 53 34.8**	**+0.3**
PHUB			*eS*	**Sn**	**14 54 03.9**	**+0.4**
PNG	**Penghu** baz=259	**2.46 260**	*eP*	**Pn**	**14 53 36.0**	**+1.4**
PNG			*eS*	**Sn**	**14 54 04.3**	**+0.8**
VCHM	**Qimei** baz=252	**2.66 253**	*eP*	**Pn**	**14 53 38.5**	**+1.2**
VCHM			*eS*	**Sn**	**14 54 08.9**	**+0.4**
VWUC	**VWUC** baz=291	**2.68 292**	*eP*	**Pn**	**14 53 37.8**	**+0.2**
VWUC			*eS*	**Sn**	**14 54 07.3**	**-1.7**
MATB	**Ma-tsu** baz=315	**2.94 317**	*eS*	**Sn**	**14 54 13.4**	**-2.0**
MSUT	**Lienchiang** baz=316	**2.97 317**	*eS*	**Sn**	**14 54 13.9**	**-2.3**
PTMZ	**Houxiangcun** baz=289	**2.98 291**	*eP*	**Pn**	**14 53 41.9**	**+0.2**
PTMZ			*eS*	**Sn**	**14 54 14.3**	**-2.0**
LYJJ	**Jianjiangzhen** baz=318	**3.35 319**	*eP*	**Pn**	**14 53 50.8**	**+4.0**
LYJJ			*eS*	**Sn**	**14 54 23.2**	**-2.2**
XPSS	**Dashiqiu** baz=328	**3.42 328**	*eP*	**Pn**	**14 53 47.8**	**0.0**
XPSS			*eS*	**Sn**	**14 54 25.1**	**-2.0**
KNM	**Kinmen** baz=276	**3.46 277**	*eP*	**Pn**	**14 53 50.8**	**+2.5**
KNM			*eS*	**Sn**	**14 54 31.0**	**+2.9**
KNMB	**Chin-men Tao** baz=277	**3.50 278**	*eP*	**Pn**	**14 53 49.1**	**+0.1**
KNMB			*eS*	**Sn**	**14 54 26.7**	**-2.6**
MHZQ	**Yeshan** baz=305	**3.54 306**	*eP*	**Pn**	**14 53 49.2**	**-0.3**
MHZQ			*eS*	**Sn**	**14 54 28.1**	**-2.1**
AXDP	**Jialang** baz=282	**3.95 284**	*eP*	**Pn**	**14 53 55.4**	**+0.3**
AXDP			*eS*	**Sn**	**14 54 38.1**	**-2.1**
ZPLA	**Ao Xicun** baz=268	**4.07 270**	*eP*	**Pn**	**14 53 56.9**	**+0.2**

*NEIC **03** 14:59:54.3±2.4, 8.64S±0.09×118.00E±0.07, h119km±9km, mb4.2/15, Error ellipse: s-maj=13.3km s-min=10.5km az=181.0*

*IDC **03** 14:59:54.6±1.6, 8.82S×117.86E, h113km±14km, mb3.9/18, mb1 4.0/21, mb1mx3.8/46, mbtmp4.3/21, MS2.8/2, Ms1 3.0/2, ms1mx2.4/37, Error ellipse: s-maj=16.2km s-min=9.6km az=70.0*

*DJA **03** 14:59:55.0±0.2, 9°S±2°×11°8E±°, h113km±2km, M4.6/26, mB5.1/8, mb4.6/26, MLv4.7/20, Mw(mB)4.5/8*

ISC 03 14:59:54.6±0.6, **8.86S**±0.05×**117.97E**±0.04, **h116**km±5km, **n98**, σ1°**42**/108, **mb4.3**/30, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PLAI	**Plampang**	**0.19**	**279**	P		**Pn**	**15 00 11.1**	**+0.4**
PLAI				S		**Sn**	**15 00 22.3**	**-0.5**
TWSI	**Taliwang, Sumb**	**1.08**	**276**	P		**Pn**	**15 00 18.3**	**+1.3**
TWSI				S		**Sn**	**15 00 34.8**	**+0.8**
DNP	**Denpasar**	**2.73**	**274**	P		**Pn**	**15 00 38.5**	**+1.3**
SRBI	**Singaraja**	**2.83**	**286**	P		**Pn**	**15 00 39.7**	**+1.2**
BASI	**Baing, Sumba**	**2.91**	**118**	P		**Pn**	**15 00 40.3**	**+0.7**
EDFI	**Ende, Flores**	**3.68**	**89**	P		**Pn**	**15 00 50.9**	**+1.0**
JAGI	**Jajag, Banyuwa**	**3.79**	**276**	Pn		**Pn**	**15 00 51.4**	**+0.2**
JAGI	**Jajag, Banyuwa**	**3.79**	**276**	P		**Pn**	**15 00 51.4**	**+0.2**
ABJI	**Asen Bagus**	**3.84**	**286**	P		**Pn**	**15 00 53.6**	**+1.7**
BKSI	**Bulukumba**	**4.11**	**32**	P		**Pn**	**15 00 57.9**	**+2.3**
KAPI	**Kappang** 11nm,0.3s,baz=202,slow=8.5,SNR=62	**4.21**	**25**	P		**Pn**	**15 00 59.0**	**+2.1**
KAPI				S		**Sn**	**15 01 47.0**	**+1.8**
	41nm,0.3s,baz=96,slow=23,SNR=22							
KAPI				LR		LR	15 02 51.9	
	comp=Z,18nm,18.0s,baz=248,slow=42							
KAPI	**Kappang**	**4.21**	**25**	Pn		**Pn**	**15 00 52.2**	**-4.6**
MMRI	**Maumere**	**4.23**	**87**	Pn		**Pn**	**15 00 58.1**	**+1.0**
MMRI	**Maumere**	**4.23**	**87**	P		**Pn**	**15 00 58.1**	**+1.0**
KMMI	**Kalianget**	**4.35**	**294**	P		**Pn**	**15 00 59.4**	**+0.7**
BNSI	**Bone**	**4.91**	**26**	P		**Pn**	**15 01 07.2**	**+0.9**
SPSI	**Sidrap Palu** 0.3nm50nm,0.7s	**5.18**	**20**	P		**Pn**	**15 01 12.0**	**+2.1**
BATI	**Baumata** 80nm,0.3s,baz=280,slow=0.6,SNR=180	**5.78**	**104**	P		**Pn**	**15 01 18.2**	**+0.2**
BATI				S		**Sn**	**15 02 20.9**	**-2.3**
	97nm,0.3s,baz=281,slow=23,SNR=10							
BATI	**Baumata** 0.9nm4µm171nm,0.6s	**5.78**	**104**	P		**Pn**	**15 01 17.5**	**-0.5**
KBKI	**Kotabaru** 0.2nm21nm,0.8s	**5.80**	**342**	P		**Pn**	**15 01 19.3**	**+0.9**
BBKI	**Banjar Baru**	**6.19**	**330**	P		Pn	15 01 38.2	+15
SOEI	**Soe**	**6.28**	**99**	Pn		**Pn**	**15 01 25.3**	**+0.4**
SOEI	**Soe** 1.1nm2µm299nm,0.7s	**6.28**	**99**	P		**Pn**	**15 01 22.7**	**-2.2**
UGM	**Wanagama** 1.0nm70nm,1.2s	**7.42**	**277**	P		**Pn**	**15 01 42.0**	**+1.7**
APSI	**Ampana** 575nm29nm,1.2s	**8.70**	**25**	P		**Pn**	**15 02 01.4**	**+3.8**
MRSI	**Marisa**	**10.08**	**23**	P		**Pn**	**15 02 18.0**	**+1.7**
CISI	**Cisompet, Garu**	**10.13**	**277**	Pn		**Pn**	**15 02 15.6**	**-1.4**
SANI	**Sanana** 43nm,1.2s	**10.46**	**50**	P		**Pn**	**15 02 22.5**	**+1.1**
GTOI	**Gorontalo**	**10.69**	**28**	P		Pn	15 02 33.2	+8.8
FITZ	**Fitzroy Crossi** 1.0nm,0.3s,baz=342,slow=13,SNR=52	**11.83**	**142**	P		**Pn**	**15 02 38.7**	**-1.0**
FITZ				S		Sn	15 04 39.6	-10
	2.0nm,0.3s,baz=206,slow=21,SNR=5.0							
FITZ	**Fitzroy Crossi**	**11.83**	**142**			**Pn**	**15 02 38.4**	**-1.3**
BNDI	**Bandanaira** 5µm225nm,0.6s	**12.61**	**71**	P		**Pn**	**15 02 52.5**	**+2.5**
MTN	**Manton Dam**	**13.52**	**108**	Pn		**Pn**	**15 02 59.7**	**-2.2**
KLSI	3.6nm,1.3s	**13.78**	**287**	P		**P**	**15 03 07.8**	**-1.9**
FAKI	**Fak Fak**	**15.38**	**68**			**Pn**	**15 03 23.6**	**-1.8**
FAKI	**Fak Fak** 39nm,0.6s	**15.38**	**68**	P		**Pn**	**15 03 23.1**	**-2.3**
SWI	**Sorong** 45nm,0.8s	**15.44**	**60**	P		**Pn**	**15 03 25.5**	**-0.6**
SIJI	**Sorong** 2.5nm,0.3s,baz=217,slow=9.3,SNR=15	**15.44**	**60**	P		**Pn**	**15 03 25.4**	**-0.8**
WB0	**Warramunga Arr**	**19.24**	**126**	P		**Pn**	**15 04 11.3**	**-0.8**
WB0	comp=Z,8.2nm,0.8s			IAmb		IAmb	15 04 13.2	
WRA	**Warramunga Arr** comp=Z,1.4nm,0.3s,baz=300,slow=12,SNR=80	**19.29**	**127**	P		**P**	**15 04 10.6**	**+0.1**
WRA				S		**S**	**15 07 38.2**	**-4.6**
	comp=Z,0.7nm,0.3s,baz=306,slow=21,SNR=7.0							
WRA	**Warramunga Arr**	**19.29**	**127**	P		**P**	**15 04 10.7**	**+0.2**
WRAB	**Tennant Creek**	**19.30**	**127**	P		**P**	**15 04 10.7**	**+0.2**
WRAB	comp=Z,12nm,0.9s			IAmb		IAmb	15 04 14.1	
WB2	**Warramunga Arr**	**19.30**	**127**	P		**P**	**15 04 11.3**	**+0.7**
WB2	comp=Z,10nm,0.9s			IAmb		IAmb	15 04 14.1	
WR0	**Warramunga Arr**	**19.46**	**126**	P		**P**	**15 04 13.2**	**+0.8**
WR0	comp=Z,11nm,0.7s			IAmb		IAmb	15 04 16.0	
BAKI	**Biak** comp=Z,54nm,1.0s	**19.60**	**68**	P		**Pn**	**15 04 15.9**	**-0.5**
AS31	**Alice Springs**	**21.20**	**136**	P		**P**	**15 04 33.1**	**+2.0**
AS31	comp=Z,3.0nm,0.5s			IAmb		IAmb	15 04 35.1	
ASAR	**Alice Springs** comp=Z,4.2nm,0.5s,baz=312,slow=8.7,SNR=70	**21.20**	**136**	P		**P**	**15 04 32.2**	**+1.1**
ASAR	comp=Z,2.8nm,0.6s,baz=314,slow=24,SNR=8.5			S		**S**	**15 08 22.6**	**+2.2**
ASAR	comp=Z,0.9nm,0.6s,baz=354,slow=1.8,SNR=4.6			ScP		**ScP**	**15 11 58.5**	**-0.1**
ASAR	**Alice Springs**	**21.20**	**136**	P		**P**	**15 04 33.0**	**+1.9**
PSI	**Prapat** comp=Z,7.2nm,0.4s,baz=180,slow=9.3,SNR=14	**22.24**	**301**	P		**P**	**15 04 41.3**	**-0.9**
TSI	**Tuntungan** comp=Z,4µmcomp=Z,93nm,1.0s	**22.91**	**302**	P		**P**	**15 04 49.1**	**+0.4**
FORT	**Forrest**	**23.76**	**158**	P		**P**	**15 04 57.4**	**+1.0**
NWAO	**Narrogin (SRO)** comp=Z,8.6nm,0.5s,baz=15,slow=9.4,SNR=14	**23.96**	**182**	P		**P**	**15 04 58.6**	**+0.4**
NWAO	comp=Z,7.9nm,0.6s,baz=8.2,slow=13,SNR=8.7			pP		**pP**	**15 05 20.8**	**-0.4**
NWAO				S		S	15 09 19.2	+13
	comp=Z,8.1nm,0.5s,baz=104,slow=6.6,SNR=6.7							
NWAO	**Narrogin (SRO)**	**23.96**	**182**	P		**P**	**15 04 58.6**	**+0.4**
NWAO	comp=Z,18nm,1.1s			IAmb		IAmb	15 05 00.8	
TPTI	comp=Z,18nm,0.8s	**23.96**	**299**	P		**P**	**15 04 58.2**	**-0.2**
STKA	**Stephens Creek** comp=Z,1.9nm,0.4s,baz=318,slow=9.5,SNR=13	**31.72**	**140**	P		**P**	**15 06 08.4**	**+1.0**
STKA	comp=Z,1.5nm,0.6s,baz=310,slow=3.3,SNR=3.5			PcP		**PcP**	**15 08 57.4**	**+0.9**
STKA	**Stephens Creek**	**31.72**	**140**	P		**P**	**15 06 09.0**	**+1.5**
CMAR	**Chiang Mai Arr** comp=Z,0.7nm,0.7s,baz=148,slow=6.4,SNR=5.7	**33.00**	**325**	P		**P**	**15 06 18.5**	**-0.3**
CMAR	comp=Z,1.1nm,0.6s,baz=183,slow=2.8,SNR=6.7			PcP		**PcP**	**15 09 00.8**	**+0.6**
CMAR	comp=Z,0.5nm,0.3s,baz=173,slow=4.3,SNR=4.1			ScP		**ScP**	**15 12 34.9**	**+0.9**
CMAR	comp=Z,79nm,18.6s,baz=328,slow=40			LR		LR	15 21 41.5	
PALK	**Pallekele** comp=Z,2.1nm,0.7s,baz=225,slow=16,SNR=1.7	**40.45**	**292**	P		**P**	**15 07 20.7**	**-1.3**
TAPN	**Taplejung** comp=Z,16nm,0.5s	**46.42**	**322**	*eP*		**P**	**15 08 10.4**	**+0.3**
RAMN	**Ramite** comp=Z,10nm,0.5s	**46.82**	**320**	*eP*		**P**	**15 08 12.8**	**-0.4**
JIRN	**Jiri** comp=Z,20nm,0.6s	**47.58**	**321**	*eP*		**P**	**15 08 19.0**	**-0.2**
GUN	**Gumba** comp=Z,22nm,0.7s	**47.95**	**321**	*eP*		**P**	**15 08 21.9**	**-0.2**
PKI	**Pulchoki** comp=Z,7.6nm,0.6s	**48.01**	**320**	*eP*		**P**	**15 08 21.4**	**-1.1**
PKIN	**Phulchoki** comp=Z,10nm,0.5s	**48.02**	**320**	*eP*		**P**	**15 08 21.5**	**-1.0**
DMN	**Daman**	**48.23**	**320**	*eP*		**P**	**15 08 23.1**	**-1.0**
GKN	**Gorkha** comp=Z,7.3nm,0.4s	**48.80**	**320**	*eP*		**P**	**15 08 27.5**	**-0.9**
DANN	**Dangsing** comp=Z,34nm,0.6s	**49.60**	**319**	*eP*		**P**	**15 08 33.7**	**-0.9**
USRK	**Ussuriysk Ar.** comp=Z,2.1nm,0.7s,baz=178,slow=4.9,SNR=9.0	**54.31**	**12**	P		**P**	**15 09 09.4**	**+0.5**
USRK	**Ussuriysk Ar.**	**54.31**	**12**	P		**P**	**15 09 08.2**	**-0.7**
SONM	**Songino Array** comp=Z,1.7nm,0.6s,baz=175,slow=8.5,SNR=6.5	**57.37**	**351**	P		**P**	**15 09 31.1**	**+0.3**
KLR	**Kul'dur** comp=Z,0.5nm,0.4s,baz=195,slow=16,SNR=1.8	**59.09**	**10**	P		**P**	**15 09 43.0**	**+0.4**
MK31	**Makanchi Array**	**63.87**	**333**	P		**P**	**15 10 14.0**	**-0.8**
MKAR	**Makanchi Array** comp=Z,0.9nm,0.4s,baz=143,slow=6.5,SNR=24	**63.87**	**333**	P		**P**	**15 10 14.3**	**-0.5**
MKAR	**Makanchi Array**	**63.87**	**333**	P		**P**	**15 10 14.2**	**-0.6**
AAK	**Ala-Archa** comp=Z,3.3nm,0.6s,baz=159,slow=6.6,SNR=15	**64.79**	**326**	P		**P**	**15 10 21.1**	**0.0**
AAK	**Ala-Archa** comp=Z,3.5nm,0.7s	**64.79**	**326**	P		**P**	**15 10 19.9**	**-1.2**
AAK				IAmb		IAmb	15 10 21.6	
WSAR	**Wadi Sarin** comp=Z,8.6nm,1.0s,baz=120,slow=4.5,SNR=4.2	**66.20**	**300**	P		**P**	**15 10 29.4**	**-0.9**
SOCY	**Socotra**	**66.93**	**287**	P		**P**	**15 10 34.5**	**-0.7**
KKAR	**Karatay Array**	**67.34**	**324**	P		**P**	**15 10 35.3**	**-1.9**
ZAA0	**Zalesovo Array**	**68.55**	**340**	P		**P**	**15 10 42.6**	**-1.9**
ZAA0	comp=Z,2.0nm,0.7s			IAmb		IAmb	15 10 44.6	
ZALV	**Zalesovo Beam** comp=Z,1.8nm,0.4s,baz=148,slow=5.3,SNR=11	**68.55**	**340**	P		**P**	**15 10 43.2**	**-1.3**
ZALV	comp=Z,1.1nm,0.6s,baz=120,slow=4.5,SNR=3.9			pP		**pP**	**15 11 13.6**	**+0.3**
ZALV	**Zalesovo Beam**	**68.55**	**340**	P		**P**	**15 10 42.3**	**-2.2**
PETK	**Petropavlovsk-** comp=Z,1.3nm,0.6s,baz=160,slow=4.7,SNR=4.0	**70.36**	**24**	P		**P**	**15 10 55.2**	**-0.4**
VNDA	**Vanda** comp=Z,1.5nm,0.4s,baz=315,slow=8.0,SNR=26	**72.29**	**171**	P		**P**	**15 11 08.6**	**+1.6**
SEY	**Seymchan** comp=Z,0.3nm,0.4s,baz=217,slow=20,SNR=4.5	**76.30**	**15**	P		**P**	**15 11 30.9**	**+0.6**
KBZ	**Khabaz** comp=Z,2.2nm,0.9s,baz=97,slow=4.8,SNR=4.2	**85.46**	**315**	P		**P**	**15 12 18.9**	**-0.4**
BOSA	**Boshof** comp=Z,2.9nm,0.7s,baz=79,slow=1.4,SNR=6.2	**88.18**	**241**	P		**P**	**15 12 33.9**	**+0.7**
SNAA	**Sanae**	**90.86**	**196**	P		**P**	**15 12 46.9**	**+2.1**
VNA2	**Neumayer--Watz**	**92.50**	**196**	P		**P**	**15 12 54.1**	**+1.9**
VNA1	**Neumayer--Stat**	**92.89**	**196**	P		**P**	**15 12 52.4**	**-1.6**
VNA3	**Neumayer Olymp**	**92.89**	**195**	P		**P**	**15 12 56.2**	**+2.1**
YKA	**Yellowknife Ar** comp=Z,2.2nm,0.4s,baz=327,slow=1.2,SNR=4.1	**114.48**	**24**	PKP		**PKiKP**	**15 18 20.8**	**+0.3**
TORD	**Torodi Ar. Bea** comp=Z,1.0nm,0.5s,baz=65,slow=1.6,SNR=7.1	**117.43**	**280**	PKP		**PKPdf**	**15 18 27.3**	**-0.3**
ESDC	**Sonseca Array** comp=Z,0.2nm,0.5s,baz=12,slow=1.6,SNR=1.7	**120.04**	**311**	PKP		**PKiKP**	**15 18 32.7**	**+0.6**
NVAR	**Mina Array Bea** comp=Z,0.5nm,0.6s,baz=287,slow=2.1,SNR=3.8	**121.71**	**50**	PKP		**PKiKP**	**15 18 36.8**	**+1.2**
TXAR	**Lajitas Array** comp=Z,0.9nm,0.8s,baz=319,slow=5.0,SNR=4.8	**136.01**	**57**	SKPbc		**SKPbc**	**15 22 24.0**	**-0.2**
CPUP	**Villa Florida** comp=Z,2.1nm,0.4s,baz=182,slow=2.4,SNR=10	**144.73**	**187**	PKP		**PKPdf**	**15 19 19.1**	**+0.7**
BDFB	**Brasilia** comp=Z,2.0nm,0.5s,baz=130,slow=1.8,SNR=5.0	**151.98**	**210**	PKPbc		**PKiKP**	**15 19 39.0**	**+1.5**

*DDA **03** 15:21:58.4, 36.06N×29.68E, h12km±2km, ML3.1*
*ISK **03** 15:22:00.6, 36.21N×29.51E, h8km, ML3.1/10*

ISC 03 15:21:57.8±1.5, **36.07N**±0.05×**29.62E**±0.03, **h2**km±11km, **n32**, σ1°**47**/43, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
AKAS	**Kas**	**0.16**	**356**	*i* P		**Pg**	**15 21 59.4**	**-1.6**
AKAS	comp=N,29µm,0.4s			IAML			15 22 01.0	
AKAS				*i* S		**Sg**	**15 22 01.3**	**-1.9**
AKAS	comp=E,15µm,0.4s			IAML			15 22 03.0	
AKUM	**Antalya-Kumluc**	**0.64**	**66**	*i* P		**Pg**	**15 22 10.0**	**0.0**
FETY	**Fethiye**	**0.71**	**323**	PG		**Pg**	**15 22 10.9**	**-0.5**
CAEL	**Denizli, Camel**	**1.08**	**347**	*i* P		**Pb**	**15 22 19.4**	**+0.1**
CAEL				*i* S		**Sn**	**15 22 34.8**	**-0.8**
CAEL	comp=E,842nm,0.7s			IAML			15 22 49.0	
CAEL				IAML			15 22 52.0	
	comp=N,834nm,0.8s							
DALY	**Dalyan (Mula)**	**1.08**	**314**	*i* P		**Pn**	**15 22 19.6**	**-0.2**
DALY				*i* S		**Sn**	**15 22 35.6**	**+0.3**
DALY	comp=N,348nm,0.6s			IAML			15 22 45.0	
DALY	comp=E,303nm,0.7s			IAML			15 22 45.0	
DALY	**Dalyan (Mula)**	**1.08**	**314**	PG		**Pg**	**15 22 18.6**	**+0.2**
DALY				SG		**Sg**	**15 22 31.9**	**-0.5**
ANTB	**Antalya**	**1.18**	**45**	PN		**Pn**	**15 22 23.1**	**+1.9**
ANTB				SN		**Sn**	**15 22 39.5**	**+1.8**
ARG	**Arkhangelos**	**1.22**	**277**	PN		**Pg**	**15 22 22.5**	**+1.4**
TURN	**Turunc**	**1.31**	**303**	PN		**Pb**	**15 22 23.5**	**+0.4**
BUCA	**Burdur, Bucak-**	**1.47**	**31**	*i* P		**Pg**	**15 22 28.1**	**+2.3**
TAVA	**DENIZLI_Tavas**	**1.50**	**338**	*i* P		**Pb**	**15 22 26.7**	**+0.3**
TAVA				*i* S		**Sg**	**15 22 45.8**	**-0.3**
TAVA	comp=N,249nm,0.5s			IAML			15 22 53.0	
TAVA	comp=E,217nm,1.0s			IAML			15 22 54.0	
YER	**Yerkesik**	**1.51**	**315**	PN		**Pb**	**15 22 26.5**	**0.0**
MULA	**Mugla, Merkez-**	**1.58**	**319**	*i* P		**Pb**	**15 22 28.1**	**+0.4**
MULA				*i* S		**Sb**	**15 22 47.0**	**-1.1**
MULA	comp=N,261nm,0.8s			IAML			15 22 53.0	
MULA	comp=E,355nm,0.9s			IAML			15 22 56.0	
BCK	**Bucak**	**1.59**	**29**	PN		**Pg**	**15 22 28.8**	**+0.5**
BRDR	**BURDUR-Merkez**	**1.66**	**12**	*i* P		**Pg**	**15 22 29.9**	**+0.3**
BRDR				*i* S		**Sg**	**15 22 55.0**	**+3.9**
BRDR	comp=E,176nm,0.9s			IAML			15 22 56.0	
BASM	**Basmaki-Afyon**	**1.88**	**10**	PN		**Pb**	**15 22 32.2**	**-0.6**
KARP	**Karpathos**	**2.06**	**256**	PN		**Pb**	**15 22 35.9**	**-0.1**
AYDN	**Tasoluk**	**2.11**	**319**	*i* P		**Pb**	**15 22 37.6**	**+0.8**
GAZI	**Gazipasa**	**2.19**	**85**	*i* P		**Pn**	**15 22 31.8**	**-3.3**
SEDI	**Konya, Seydise**	**2.20**	**51**	*i* P		**Pb**	**15 22 38.4**	**0.0**
SEDI				*i* S		**Sg**	**15 23 08.0**	**-0.5**
KZIL	**AFYON_Kizioren**	**2.22**	**11**	*i* P		**Pn**	**15 22 36.2**	**+0.5**
KHAL	**Karahalli**	**2.30**	**357**	*i* P		**Pn**	**15 22 37.5**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**2.33**	**324**	PN		**Pn**	**15 22 38.1**	**+0.9**
DDIM	**Aydin, Didim**	**2.36**	**307**	*i* P		**Pn**	**15 22 38.7**	**+1.3**
YVAC	**Isparta, Yalva**	**2.55**	**30**	*i* P		**Pb**	**15 22 43.3**	**-1.0**
KULA	**Kula-Manisa**	**2.56**	**343**	PN		**Pn**	**15 22 41.0**	**+0.7**
SHUT	**Suhut-Afyon**	**2.59**	**16**	PN		**Pn**	**15 22 42.3**	**+1.6**
DOGA	**KONYA_Doganhis**	**2.61**	**38**	*i* P		**Pn**	**15 22 43.3**	**+2.2**
DOGA				*i* S		**Sb**	**15 23 16.5**	**-1.4**
DOGA	comp=N,93nm,0.7s			IAML			15 23 26.0	
USAK	**Uak-Merkez**	**2.68**	**350**	*i* P		**Pn**	**15 22 39.8**	**-2.1**
ERMK	**Ermenek**	**2.72**	**77**	*i* P		**Pn**	**15 22 45.0**	**+2.4**
KKBE	**Karaman, Kazim**	**2.91**	**66**	*i* P		**Pn**	**15 22 44.6**	**-0.5**
KKBE				*i* S		**Sb**	**15 23 24.0**	**-2.4**
DGB	**zmir**	**2.95**	**313**	*i* P		**Pb**	**15 22 49.4**	**-1.7**

*IDC **03** 15:24:55.0±2.7, 6.05S×148.65E, h104km±23km, mb3.4/8, mb1 3.6/11, mb1mx3.5/32, mbtmp3.8/11, Error ellipse: s-maj=33.3km s-min=16.4km az=99.0*

ISC 03 15:24:54.3±0.8, **6.04S**±0.09×**148.8E**±0.1, **h100**km, **n14**, σ0°**89**/15, **mb3.7**/8, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PMG	**Port Moresby** 5.7nm,0.3s,baz=25,slow=11,SNR=18	**3.71**	**206**	P		**Pn**	**15 25 49.4**	**-0.2**
PMG				S		**Sn**	**15 26 31.9**	**-0.5**
	9.1nm,0.3s,baz=313,slow=6.6,SNR=12							
PMG	**Port Moresby**	**3.71**	**206**	P		**Pn**	**15 25 49.9**	**+0.3**
RABL	**Rabaul**	**3.83**	**61**	P		**Pn**	**15 25 51.0**	**-0.3**
JAY	**Jayapura** 1.1nm,0.3s,baz=128,slow=12,SNR=1.4	**8.79**	**293**	P		**Pn**	**15 26 59.2**	**+0.6**
WRA	**Warramunga Arr** 0.4nm,0.3s,baz=48,slow=11,SNR=32	**19.70**	**224**	P		**P**	**15 29 15.2**	**-0.7**
ASAR	**Alice Springs** 0.7nm,0.5s,baz=54,slow=8.9,SNR=32	**22.63**	**218**	P		**P**	**15 29 47.2**	**+0.1**
FITZ	**Fitzroy Crossi** 3.1nm,0.7s,baz=48,slow=8.2,SNR=19	**25.57**	**240**	P		**P**	**15 30 13.7**	**-0.4**
USRK	**Ussuriysk Ar.** 0.9nm,0.6s,baz=155,slow=4.1,SNR=2.4	**52.26**	**345**	P		**P**	**15 33 55.5**	**+0.2**
PETK	**Petropavlovsk-** 1.4nm,0.7s,baz=147,slow=5.1,SNR=10	**59.41**	**6**	P		**P**	**15 34 47.6**	**+1.4**
VNDA	**Vanda** 0.8nm,0.7s,baz=298,slow=8.5,SNR=5.4	**71.77**	**177**	P		**P**	**15 36 06.4**	**+1.0**
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=109,slow=7.2,SNR=2.3	**78.67**	**320**	P		**P**	**15 36 43.6**	**-1.9**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=150,slow=6.0,SNR=1.8	**80.00**	**327**	P		**P**	**15 36 51.5**	**-1.0**
ILAR	**Eielson Array** 0.6nm,0.6s,baz=251,slow=5.2,SNR=8.6	**84.83**	**23**	P		**P**	**15 37 17.1**	**-0.4**
TORD	**Torodi Ar. Bea** 0.2nm,0.5s,baz=81,slow=4.1,SNR=1.7	**146.82**	**285**	PKPbc		**PKPbc**	**15 44 25.8**	**-0.2**

*NOU **03** 15:36:47.2, 34.09S×177.35W, h207km, mb4.6, South of Kermadec Islands*

*NEIC **03** 15:36:50.7±2.7, 33.27S±0.07×179.5W±0.1, h91km±7km, mb4.4/11, Error ellipse: s-maj=14.1km s-min=8.8km az=68.0*

*IDC **03** 15:36:53.8±2.2, 33.06S×179.82W, h103km±19km, mb4.0/9, mb1 4.2/12, mb1mx4.0/35, mbtmp4.5/12, MS3.0/2, Ms1 3.0/2, ms1mx2.7/23, Error ellipse: s-maj=21.8km s-min=15.4km az=91.0*

*WEL **03** 15:36:55.6±1.3, 34°S±14'×17°8W±1°5, h210km±20km, M4.0/64, mB4.7/45, ML5.1/43, MLv4.9/64, Mw(mB)3.9/45, Error ellipse: s-maj=0.0km s-min=0.0km az=131.3*

ISC 03 15:36:52.4±0.5, **33.30S**±0.05×**179.36W**±0.09, **h100**km, **n152**, σ1°**92**/140, **mb4.3**/13, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAO	**Raoul Island** 139nm,0.3s,baz=74,slow=22,SNR=6.4	**4.22**	**17**	P		**Pn**	**15 37 54.0**	**-0.6**
RAO				S		**Sn**	**15 38 41.6**	**-1.2**
	511nm,0.3s,baz=76,slow=19,SNR=11							
RAO	**Raoul Island**	**4.22**	**17**	P		**Pn**	**15 37 52.9**	**-1.6**
MXZ	**Matakaoa Point**	**4.66**	**203**	Pn		**Pn**	**15 37 59.7**	**-0.7**
MXZ	**Matakaoa Point**	**4.66**	**203**	P		**Pn**	**15 37 59.4**	**-0.9**
MXZ				S		**Sn**	**15 38 50.3**	**-2.9**
WMGZ	**Waiomatatini S**	**4.86**	**201**	P		**Pn**	**15 38 02.8**	**-0.3**
WMGZ				S		**Sn**	**15 38 56.3**	**-1.8**
HAZ	**Te Kaha**	**5.02**	**207**	P		**Pn**	**15 38 04.8**	**-0.4**
HAZ				S		**Sn**	**15 39 01.9**	**-0.1**
PKGZ	**Pakihiroa**	**5.03**	**204**	P		**Pn**	**15 38 04.5**	**-1.0**
PKGZ				S		**Sn**	**15 39 00.5**	**-1.8**
PUZ	**Puketiti**	**5.14**	**202**	P		**Pn**	**15 38 05.5**	**-1.4**
PUZ				S		**Sn**	**15 39 01.9**	**-3.1**
RUGZ	**Raukumara Rang**	**5.24**	**207**	P		**Pn**	**15 38 07.1**

OTVZ	Oturere	7.09 213	P		Pn	15 38 31.6	-2.0
TWVZ	Taurewa	7.13 215	P		Pn	15 38 34.4	+0.4
NGZ	Ngauruhoe	7.13 213	P		Pn	15 38 34.5	+0.3
KAHZ	Kahuranaki	7.15 204	P		Pn	15 38 31.0	-3.2
TUVZ	Tukino	7.18 213	P		Pn	15 38 34.6	-0.2
BHHZ	Black Hill Sta	7.19 210	P		Pn	15 38 31.8	-3.1
KRHZ	Kereru	7.20 207	P		Pn	15 38 31.1	-3.8
FWVZ	Far West T-bar	7.22 213	P		Pn	15 38 35.4	0.0
WHVZ	Whangaehu Hut	7.23 213	P		Pn	15 38 35.9	+0.4
MOVZ	Moawhango	7.25 212	P		Pn	15 38 34.4	-1.3
TRVZ	Turoa	7.26 213	P		Pn	15 38 35.9	0.0
WNVZ	Wahianoa	7.26 213	P		Pn	15 38 35.3	-0.6
PKVZ	Pokaka	7.34 214	P		Pn	15 38 36.9	0.0
MTVZ	Mangateitei	7.36 213	P		Pn	15 38 37.1	-0.1
PXZ	Pawanui	7.37 203	P		Pn	15 38 33.7	-3.4
PNHZ	Pukenui	7.50 207	P		Pn	15 38 35.4	-3.6
VRZ	Vera Road	7.50 218	P		Pn	15 38 40.3	+1.3
WPHZ	Waipukurau	7.54 205	P		Pn	15 38 37.2	-2.4
PRHZ	Porangahau	7.66 204	P		Pn	15 38 37.0	-4.1
DVHZ	Dannevirke	7.85 206	P		Pn	15 38 40.5	-3.3
WAZ	Wanganui	7.88 214	P		Pn	15 38 43.4	-0.8
NEZ	North Egmont	7.96 220	P		Pn	15 38 47.3	+2.0
PKE	Pukeiti	7.96 221	P		Pn	15 38 47.6	+2.3
KHEZ	Kahui Hut	8.02 220	P		Pn	15 38 48.0	+1.9
PRWZ	Pori Road	8.14 206	P		Pn	15 38 44.6	-3.2
BFZ	Birch Farm	8.16 204	Pn		Pn	15 38 44.2	-3.7
MRZ	Mangatainoka R	8.38 207	P		Pn	15 38 46.7	-4.3
TRWZ	Traveller	8.99 205	P		Pn	15 38 55.4	-3.9
TUWZ	Tuamarina	9.70 211			Pn	15 39 04.0	-4.9
KHZ	Kahutara	10.68 210	Pn		Pn	15 39 16.8	-5.5
MSVF	Nonsavu	15.68 351	P		Pn	15 40 26.3	-1.5
	4.1nm,0.3s,baz=204,slow=5.8,SNR=27						
MSVF	Nonsavu	15.68 351			P	15 40 29.0	-0.7
MSVF	Nonsavu	15.68 351	P		P	15 40 29.3	-0.4
OUENC	Ouen Island, N	16.31 308	P		P	15 40 44.0	+7.4
DZM	Mont Dzumac	16.81 308	LR		LR	15 45 18.4	
	comp=Z,175nm,19.9s,baz=205,slow=31						
SANVU	Saraoutou	21.54 322	P		P	15 41 35.2	+1.6
SANVU	Saraoutou	21.54 322	P		P	15 41 35.8	+2.2
CTA	Charters Tower	33.26 285	P		P	15 43 18.3	-2.0
	1.7nm,0.5s,baz=101,slow=14,SNR=2.1						
RABL	Rabaul	39.30 311	P		P	15 44 09.7	-2.0
AS31	Alice Springs	41.89 271	P		P	15 44 30.9	-2.1
ASAR	Alice Springs	41.89 271	P		P	15 44 31.0	-2.1
	3.5nm,0.5s,baz=108,slow=7.4,SNR=114						
ASAR			S		S	15 50 40.0	-4.0
	0.5nm,0.8s,baz=113,slow=14,SNR=4.4						
ASAR	Alice Springs	41.89 271	P		P	15 44 31.3	-1.7
WB2	Warramunga Arr	43.14 276	P		P	15 44 41.2	-1.9
WB2			IAmb		IAmb	15 44 43.8	
	comp=Z,5.1nm,1.0s						
WRAB	Tennant Creek	43.14 276	P		P	15 44 39.6	-3.5
WRAB			IAmb		IAmb	15 44 54.9	
	comp=Z,4.2nm,0.6s						
WRA	Warramunga Arr	43.15 276	P		P	15 44 40.9	-2.3
	comp=Z,1.9nm,0.5s,baz=112,slow=8.1,SNR=34						
WRA	Warramunga Arr	43.15 276	P		P	15 44 41.0	-2.2
WB0	Warramunga Arr	43.18 276	P		P	15 44 41.2	-2.3
WB0			IAmb		IAmb	15 44 44.4	
	comp=Z,8.0nm,1.2s						
VNDA	Vanda	45.10 186	P		P	15 45 01.5	+3.5
	comp=Z,1.4nm,1.0s,baz=356,slow=6.6,SNR=6.0						
VNDA	Vanda	45.10 186	P		P	15 44 59.2	+1.2
VNDA			IAmb		IAmb	15 45 03.6	
	comp=Z,6.7nm,1.4s						
QSPA	South Pole Qui	56.81 180	P		P	15 46 29.3	+3.2
	comp=Z,5.2nm,0.8s,baz=356,slow=0.6,SNR=37						
QSPA	South Pole Qui	56.81 180	P		P	15 46 29.5	+3.4
BELA	Belgrano 2	67.07 172	P		P	15 47 35.1	+0.7
BELA			IAmb		IAmb	15 47 37.9	
	comp=Z,8.1nm,1.3s						
SNAA	Sanae	75.29 179	P		P	15 48 26.2	+2.1
VNA3	Neumayer Olymp	75.49 177	P		P	15 48 26.8	+1.7
VNA2	Neumayer--Watz	75.91 177	P		P	15 48 30.0	+2.5
H03S2	Juan Fernandez	79.82 124	T		T	17 17 23.2	
	baz=235,slow=74,SNR=40						
H03S1	Juan Fernandez	79.83 124	T		T	17 17 24.5	
	baz=235,slow=74,SNR=46						
H03S3	Juan Fernandez	79.84 124	T		T	17 17 31.3	
	baz=235,slow=74,SNR=42						
H03N3	Juan Fernandez	80.03 123	T		T	17 17 41.8	
	baz=239,slow=72,SNR=103						
H03N2	Juan Fernandez	80.04 123	T		T	17 17 40.5	
	baz=239,slow=72,SNR=64						
H03N1	Juan Fernandez	80.05 123	T		T	17 17 40.9	
	baz=239,slow=72,SNR=81						
KSRS	Korea Array	85.83 321	P		P	15 49 19.1	-1.5
	comp=Z,2.1nm,0.7s,baz=139,slow=5.5,SNR=9.6						
PETK	Petropavlovsk-	88.34 346	P		P	15 49 33.0	+0.7
	comp=Z,6.6nm,0.8s,baz=120,slow=6.2,SNR=11						
PETK	Petropavlovsk-	88.34 346	P		P	15 49 32.2	-0.1
USRK	Ussuriysk Ar.	88.95 327	P		P	15 49 35.6	+0.2
	comp=Z,1.9nm,0.9s,baz=110,slow=7.2,SNR=4.1						
USRK	Ussuriysk Ar.	88.95 327	P		P	15 49 33.0	-2.4
NVAR	Mina Array Bea	91.14 43	P		P	15 49 48.5	+2.5
	comp=Z,0.3nm,0.6s,baz=288,slow=0.9,SNR=2.1						
MKAR	Makanchi Array	79.83 309	PKP		PKPdf	15 55 27.3	-1.2
	comp=Z,0.8nm,0.4s,baz=220,slow=1.3,SNR=27						
ZALV	Zalesovo Beam	119.41 318	PKP		PKPdf	15 55 28.5	-0.9
	comp=Z,0.9nm,0.4s,baz=156,slow=1.2,SNR=7.0						
ARCES	ARCESS Array B	141.15 346	PKhKP		PKPdf	15 56 05.5	-4.5
	comp=Z,2.9nm,0.8s,baz=22,slow=1.3,SNR=5.8						
KBZ	Khabaz	145.67 300	PKPbc		PKPbc	15 56 18.5	-0.7
	comp=Z,7.6nm,1.0s,baz=170,slow=1.6,SNR=10.0						
FINES	FINESS Array B	147.42 337	PKPbc		PKPdf	15 56 22.9	+1.8
	comp=Z,7.5nm,0.5s,baz=41,slow=5.0,SNR=67						
NOA	NORSAR Array B	151.41 349	PKPbc		PKPbc	15 56 33.3	-0.4
	comp=Z,1.4nm,0.4s,baz=17,slow=4.1,SNR=17						
LIC	Lamto	152.55 168	ePKIKP		PKiKP	15 56 40.3	+2.4
	comp=Z,18nm,0.6s						
KIC	Kosan Boka	152.73 168	ePKIKP		PKPbc	15 56 40.1	+2.0
	comp=Z,8.6nm,0.7s						
AKASG	Malin Array Be	152.80 318	PKPbc		PKPbc	15 56 36.1	-1.0
	comp=Z,4.5nm,0.6s,baz=63,slow=2.4,SNR=17						
BRTR	Keskin Array B	152.82 293	PKPbc		PKPbc	15 56 36.2	-1.5
	comp=Z,2.0nm,0.5s,baz=136,slow=4.1,SNR=12						
TIC	Toumodi	152.96 168	ePKIKP		PKPbc	15 56 40.0	+1.4
DBIC	Dimbokro	153.01 168	PKPbc		PKPbc	15 56 40.3	+1.6
	comp=Z,1.3nm,0.3s,baz=135,slow=3.8,SNR=7.5						
CLL	Collm	159.87 337	ePKPdf		PKPdf	15 56 40.0	+0.9
CLL			*i* PKPab		PKPab	15 57 18.9	+0.1
	comp=Z,5.0nm,0.6s						
TORD	Torodi Ar. Bea	159.91 183	PKPab		PKPab	15 57 20.5	+0.7
	comp=Z,0.5nm,0.4s,baz=200,slow=2.9,SNR=5.0						
GERES	GERESS Array B	161.63 232	PKPab		PKPab	15 57 26.4	-0.4
	comp=Z,0.8nm,0.8s,baz=12,slow=7.1,SNR=6.3						
ESDC	Sonseca Array	172.64 29	PKP		PKPdf	15 56 52.0	+2.4
	comp=Z,0.6nm,0.9s,baz=48,slow=2.2,SNR=5.2						

IDC ***03*** *15:50:05.1±2.5,4.°92S×144.°82E,h107km±25km, mb3.3/3, mb1 3.6/6, mb1mx3.3/38, mbtmp3.8/6, MS3.4/1, Ms1 3.4/1, ms1mx2.4/18, Error ellipse: s-maj=27.4km s-min=19.6km az=55.0*

ISC 03 15:50:04.8±1.3,4.°9S±0.°1×144.°8E±0.°2, h100km±10km, n7, σ0.°73/7, mb3.4/3, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JAY	Jayapura	4.71	300	P		Pn	15 51 13.9	+0.2
	1.3nm,0.3s,baz=96,slow=10,SNR=4.9							
PMG	Port Moresby	5.06	152	P		Pn	15 51 19.2	+0.8
	2.6nm,0.3s,baz=22,slow=8.0,SNR=7.4							
PMG				S		Sn	15 52 15.0	-0.7
	0.8nm,0.3s,baz=194,slow=12,SNR=1.2							
WRA	Warramunga Arr	18.09	213	P		P	15 54 08.2	-0.7
	0.7nm,0.3s,baz=36,slow=10,SNR=45							
ASAR	Alice Springs	21.42	208	P		P	15 54 45.1	+0.3
	1.0nm,0.6s,baz=37,slow=10,SNR=16							
FITZ	Fitzroy Crossi	22.86	233	P		P	15 54 59.5	-0.5
	1.2nm,0.6s,baz=42,slow=7.5,SNR=5.9							
MSVF	Nonsavu	34.94	114	LR		LR	16 10 59.6	
	comp=Z,60nm,18.5s,baz=90,slow=36							
ILAR	Eielson Array	85.34	24	P		P	16 02 30.1	-0.4
	0.6nm,0.8s,baz=244,slow=6.0,SNR=5.2							

IDC 03 15:57:53.9±1.8,16.°27S×178.°35E,h0km, mb3.5/3, mb1 3.8/3, mb1mx3.5/29, mbtmp3.5/3, Error ellipse: s-maj=49.6km s-min=23.6km az=101.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.48	191	Pn		Pb	15 58 22.7	+0.3
	23nm,0.3s,baz=172,slow=4.3,SNR=58							
MSVF				Sn		Sn	15 58 42.9	+0.8
	74nm,0.3s,baz=288,slow=23,SNR=6.5							
WRA	Warramunga Arr	41.91	258	P		P	16 05 47.5	+0.9
	0.9nm,1.2s,baz=101,slow=8.4,SNR=3.0							
ASAR	Alice Springs	42.29	253	P		P	16 05 48.4	-1.3
	0.4nm,0.8s,baz=76,slow=9.4,SNR=4.7							
ILAR	Eielson Array	85.03	14	P		P	16 10 30.9	-0.1
	0.7nm,0.8s,baz=224,slow=6.1,SNR=5.8							

BGS ***03*** *16:31:58.4±1.4,48.°75N×4.°91W, h5km, ML2.5*
LDG ***03*** *16:32:01.5±0.1,48.°85N×4.°49W, h5km, Md3.1/2, Ml3.1/36, Error ellipse: s-maj=1.9km s-min=1.5km az=60.0*

ISC 03 16:31:56.5±1.5,48.°78N±0.°03×4.°88W±0.°05, h6km±10km, n53, σ3.°36/94, France

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ROSF	Rostrenen	1.16	112	*e*P		Pg	16 32 18.9	+0.2
ROSF	Rostrenen	1.16	112	*e*P		Pg	16 32 18.9	+0.2
ROSF	Rostrenen	1.16	112	*e*Pg		Pg	16 32 19.1	+0.4
ROSF	Rostrenen	1.16	112	*e*Pn		Pg	16 32 20.3	+1.6
ROSF				*e*Sg		Sg	16 32 31.8	-1.9
	69nm,0.3s							
CCA1	Carnmenellis	1.43	351	*e*P		Pn	16 32 24.0	+1.0
CCA1				*e*S		Sb	16 32 43.0	+0.9
CCA1				IAML			16 32 44.5	
	comp=N,42nm,0.1s							
CCA1				IAML			16 32 44.8	
	comp=E,41nm,0.2s							
CCA1	Carnmenellis	1.43	351	*e*P		Pn	16 32 24.0	+1.0
CCA1				*e*S		Sb	16 32 43.0	+0.9
CCA1				IAML			16 32 44.5	
	comp=N,42nm,0.1s							
CCA1				IAML			16 32 44.8	
	comp=E,41nm,0.2s							
QUIF	Quistinic	1.43	126	*e*Pn		Pn	16 32 24.1	+1.0
QUIF	Quistinic	1.43	126	*e*Pg		Pn	16 32 25.0	+1.9
QUIF				*e*Sg		Sb	16 32 42.0	-0.2
	comp=E,52nm,0.2s							
SGMF	Saint Gilles	1.63	108	*e*Pn		Pn	16 32 26.2	+0.4
SGMF	Saint Gilles	1.63	108	*e*Pg		Pn	16 32 27.7	+1.9
SGMF				*e*Sg		Sn	16 32 46.0	-1.2
	comp=E,38nm,0.2s							
DYA	Yadsworthy	1.77	20	*e*P		Pn	16 32 28.3	+0.5
DYA				IAML			16 32 56.9	
	comp=N,26nm,0.2s							
DYA				IAML			16 32 58.6	
	comp=E,28nm,0.4s							
DYA	Yadsworthy	1.77	20	*e*P		Pn	16 32 28.3	+0.5
DYA				IAML			16 32 56.9	
	comp=N,26nm,0.2s							
DYA				IAML			16 32 58.6	
	comp=E,28nm,0.4s							
JVM	Valle D.L. Mar	1.82	75	*e*P		Pn	16 32 30.1	+1.8
JVM	Valle D.L. Mar	1.82	75	*e*P		Pn	16 32 30.1	+1.8
JSA	Saint Aubin	1.83	76	*e*P		Pn	16 32 27.3	-1.3
JSA				*e*S		Sn	16 32 51.2	-0.9
JSA				IAML			16 32 54.3	
	comp=N,73nm,0.2s							
JSA				IAML			16 32 54.5	
	comp=E,73nm,0.2s							
JSA	Saint Aubin	1.83	76	*e*P		Pn	16 32 27.3	-1.3
JSA				*e*S		Sn	16 32 51.2	-0.9
JSA				IAML			16 32 54.3	
	comp=N,73nm,0.2s							
JSA				IAML			16 32 54.5	
	comp=E,73nm,0.2s							
JRS	Jersey	1.88	76	*e*P		Pn	16 32 31.2	+1.9
JRS				*e*S		Sn	16 32 53.0	-0.4
JRS				IAML			16 32 56.5	
	comp=N,61nm,0.3s							
JRS				IAML			16 32 58.1	
	comp=E,46nm,0.3s							
JRS	Jersey	1.88	76	*e*P		Pn	16 32 31.2	+1.9
JRS				*e*S		Sn	16 32 53.0	-0.4
JRS				IAML			16 32 56.5	
	comp=N,61nm,0.3s							
JRS				IAML			16 32 58.1	
	comp=E,46nm,0.3s							
JLP	Les Platons	1.89	75	*e*P		Pn	16 32 31.2	+1.9
JLP				*e*S		Sn	16 32 53.8	+0.3
JLP	Les Platons	1.89	75	*e*P		Pn	16 32 31.2	+1.9
JLP				*e*S		Sn	16 32 53.8	+0.3
JQE	Queens East	1.92	76	*e*P		Pn	16 32 31.6	+1.8
JQE	Queens East	1.92	76	*e*P		Pn	16 32 31.6	+1.8
HTL	Hartland	2.23	6	*e*P		Pn	16 32 35.8	+1.7
HTL				IAML			16 33 11.7	
	comp=N,37nm,0.4s							
HTL				IAML			16 33 14.5	
	comp=E,36nm,0.4s							
HTL	Hartland	2.23	6	*e*P		Pn	16 32 35.8	+1.7
HTL				IAML			16 33 11.7	
	comp=N,37nm,0.4s							
HTL				IAML			16 33 14.5	
	comp=E,36nm,0.4s							
GRR	Gorron	2.70	97	*e*Pn		Pn	16 32 40.7	+0.2
GRR	Gorron	2.70	97	*e*Pg		Pb	16 32 46.7	+1.4
GRR				*e*Sn		Sn	16 33 09.3	-4.2
GRR				*e*Sg		Sb	16 33 18.3	-0.3
	comp=E,29nm,0.2s							
FLN	La Foliniere	2.91	89	*e*Pn		Pn	16 32 43.5	+0.1
FLN	La Foliniere	2.91	89	*e*Pg		Pb	16 32 50.6	+1.8
	baz=270							
FLN				*e*Sn		Sn	16 33 14.3	-4.4
FLN				*e*Sg		Sb	16 33 24.9	+0.2
	comp=E,29nm,0.3s,baz=270							
LDF	La Druitiere	3.16	92	*e*Pn		Pn	16 32 46.6	-0.2
LDF	La Druitiere	3.16	92	*e*Pg		Pb	16 32 55.1	+2.0
LDF				*e*Sn		Sn	16 33 19.8	-5.1
LDF				*e*Sg		Sb	16 33 32.3	+0.5
	comp=E,41nm,0.4s							
MFF	Saint Martin d	3.87	122	*e*Pn		Pn	16 32 57.7	+1.1
MFF	Saint Martin d	3.87	122	*e*Pg		Pg	16 33 09.8	-0.8
MFF				*e*Sn		Sn	16 33 38.8	-3.6
MFF				*e*Sg		Sb	16 33 57.0	+4.7
	comp=E,7.6nm,0.2s							
HYF	Humbligny	5.27	104	*e*Pn		Pn	16 33 15.9	+0.1
HYF				*e*Sn		Sn	16 34 10.9	-6.0
HYF				*e*Sg		Sb	16 34 39.1	+6.6
TCF	Toulx Ste Croi	5.41	115	*e*Pn		Pn	16 33 18.1	+0.3
TCF	Toulx Ste Croi	5.41	115	*e*Pg		Pb	16 33 37.7	+6.2
TCF				*e*Sn		Sn	16 34 15.1	-5.3
	comp=E,2.0nm,0.2s							
TCF				*e*Sg		Sb	16 34 44.4	+7.8
	comp=E,1.9nm,0.2s							
LFF	La Frestale	5.44	133	*e*Pn		Pn	16 33 19.4	+1.2
LFF	La Frestale	5.44	133	*e*Pg		Pg	16 33 39.0	-1.7
LFF				*e*Sn		Sn	16 34 17.3	-3.8
LFF				*e*Sg		Sg	16 34 47.4	-3.8
	comp=E,16nm,0.6s							
RJF	Les Rejaudoux	5.58	126	*e*Pn		Pn	16 33 21.2	+1.0
RJF				*e*Sn		Sn	16 34 20.4	-4.3
	comp=E,1.9nm,0.3s							
RJF				*e*Sg		Sg	16 34 51.3	-4.5
	comp=E,11nm,0.3s							
BGF	Bois d'Agland	5.67	110	*e*Pn		Pn	16 33 21.4	0.0
BGF				*e*Sn		Sn	16 34 21.0	-5.8
	comp=E,5.7nm,0.3s							
BGF				*e*Sg		Sb	16 34 52.3	+8.1
	comp=E,14nm,0.4s							
SSF	Saint Saulge	5.89	104	*e*Pn		Pn	16 33 24.2	-0.2
SSF				*e*Sn		Sn	16 34 25.3	-7.0
SSF				*e*Sg		Sb	16 34 58.2	+7.7
	comp=E,4.9nm,0.4s							
AVF	Avril sur Loir	5.89	107	*e*Pn		Pn	16 33 24.1	-0.3
AVF				*e*Sn		Sn	16 34 26.1	-6.2
	comp=E,1.6nm,0.2s							
AVF				*e*Sg		Sb	16 34 59.1	+8.6
	comp=E,2.4nm,0.4s							
LOR	Lormes	6.05	101	*e*Pn		Pn	16 33 26.8	+0.2
	baz=282							
LOR				*e*Sn		Sn	16 34 29.5	-6.8
	comp=E,4.5nm,0.4s							
LOR				*e*Sg		Sb	16 35 03.2	+8.0
	comp=E,4.3nm,0.4s							
CAF	Calviac	6.13	126	*e*Pn		Pn	16 33 28.4	+0.8
CAF				*e*Sn		Sn	16 34 33.2	-4.8
	comp=E,2.5nm,0.3s							
CAF				*e*Sg		Sg	16 35 08.4	-4.7
	comp=E,17nm,0.9s							
SJPF	Ste Jean	6.21	154	*e*Pn		Pn	16 33 30.9	+2.1
SJPF				*e*Sn		Sn	16 34 37.8	-2.3
	comp=E,1.3nm,0.2s							
SMF	Signal de Mont	6.26	107	*e*Pn		Pn	16 33 29.7	+0.2
SMF				*e*Sn		Sn	16 34 34.7	-6.6
	comp=E,1.1nm,0.2s							
SMF				*e*Sg		Sb	16 35 09.7	+8.6
	comp=E,1.7nm,0.3s							
MEZF	Maizieres J'vi	6.59	89	*e*Pn		Pn	16 33 33.1	-0.8
MEZF				*e*Sn		Sn	16 34 42.1	-7.3
	comp=E,1.9nm,0.3s							
ETSF	Etsaut	6.61	151	*e*Pn		Pn	16 33 36.6	+2.3
ETSF				*e*Sn		Sn	16 34 47.5	-2.5
	comp=E,0.9nm,0.2s							
SFTF	Sexfontaines	6.62	91	*e*Pn		Pn	16 33 33.7	-0.7
SFTF				*e*Sn		Sn	16 34 41.5	-8.6
	comp=E,3.4nm,0.3s							
EPF	Esparros	6.80	146	*e*Pn		Pn	16 33 38.7	+1.7
EPF	Esparros	6.80	146	*e*Pg		Pg	16 34 07.3	+0.5
EPF				*e*Sn		Sn	16 34 50.9	-3.8
	comp=E,1.5nm,0.2s							
MTLF	Montolieu	7.34	135	*e*Pn		Pn	16 33 45.1	+0.8
MTLF				*e*Sn		Sn	16 35 03.6	-4.3
	comp=E,2.0nm,0.3s							
CABF	La Chapelle	7.71	102	*e*Pn		Pn	16 33 48.9	-0.6
CABF				*e*Sn		Sn	16 35 09.1	-8.1
	comp=E,1.1nm,0.3s							
CDF	Champ du Feu	8.07	88	*e*Pn		Pn	16 33 53.2	-1.2
CDF				*e*Sn		Sn	16 35 17.2	-8.8
	comp=E,1.1nm,0.3s							

IDC 03 16:38:44.7±2.1,5.°02S×152.°51E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/29,mbtmp3.6/5,ML1.2/1, Error ellipse: s-maj=120.6km s-min=26.7km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.87	230	Pn		Pn	16 40 27.4	+0.7
	0.3nm,0.3s,baz=42,slow=16,SNR=1.0							
PMG				Sn		Sn	16 41 42.4	-3.2
	0.6nm,0.3s,baz=332,slow=20,SNR=2.2							
WRA	Warramunga Arr	23.08	228	P		P	16 43 51.3	-0.9
	0.4nm,0.5s,baz=52,slow=10.0,SNR=6.7							
ASAR	Alice Springs	25.79	222	P		P	16 44 16.9	-0.7
	0.3nm,0.5s,baz=53,slow=9.5,SNR=10.0							
FITZ	Fitzroy Crossi	29.30	241	P		P	16 44 51.0	+1.9
	0.9nm,0.7s,baz=67,slow=9.1,SNR=2.2							
ILAR	Eielson Array	82.47	22	P		P	16 51 08.7	-0.1
	0.5nm,0.8s,baz=242,slow=5.4,SNR=5.3							

TIR ***03*** *16:48:42.5,42.°29N×18.°58E,h16km±13km, Ml2.5*
BEO ***03*** *16:48:44.9±0.8,42.°19N×18.°68E,h0km, ML1.9/7*
PDG ***03*** *16:48:45.2±0.0,42.°27N×18.°68E,h0km±11km, MD2.3/2, ML2.3/14, Error ellipse: s-maj=0.0km s-min=0.1km az=0.0*
RHSSO ***03*** *16:48:45.9±0.6,42.°26N×18.°70E,h4km±1km, ML2.2/7*

ISC 03 16:48:45.7±1.1,42.°28N±0.°03×18.°71E±0.°02,h4km±9km, n41, σ0.°76/77, 9C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BUM	Brajici-Budva	0.14	82	⇓*i*Pg		Pg	16 48 48.2	-0.3
BUM				*i* Sg		Sg	16 48 50.4	+0.1
HCY	Herceg Novi	0.23	316	⇑*i*Pg		Pg	16 48 50.1	-0.1
HCY				*e*Sg		Sg	16 48 54.2	+1.0
HCY	Herceg Novi	0.23	316	⇑*i*Pg		Pg	16 48 49.6	-0.6
HCY				*i* Sg		Sg	16 48 53.1	-0.1
CEME	Cevo	0.31	30	⇑*i*Pg		Pg	16 48 51.1	-0.6
CEME				*i* Sg		Sg	16 48 56.3	+0.6
DRME	Dracevica, Mon	0.37	105	*e*Pg		Pg	16 48 52.7	-0.1
DRME				*e*Sg		Sg	16 48 59.1	+1.6
DRME	Dracevica, Mon	0.37	105	*e*Pg		Pg	16 48 52.3	-0.5
DRME				*i* Sg		Sg	16 48 58.3	+0.8
PDG	Podgorica	0.43	70	*e*Pg		Pg	16 48 53.6	-0.4
PDG				*e*Sg		Sg	16 49 00.0	+0.4
PDG	Podgorica	0.43	70	⇓*i*Pg		Pg	16 48 53.2	-0.8
PDG				*e*Sg		Sg	16 49 00.1	+0.4
TTG	Podgorica	0.43	70	⇑*i*Pg		Pg	16 48 53.6	-0.4
TTG				*i* Sg		Sg	16 49 00.8	+1.2
TREB	Trebinje	0.51	329	*e*Pg		Pg	16 48 54.9	-0.5
TREB				*e*Sg		Sg	16 49 03.1	+1.0
TREB	Trebinje	0.51	329	⇓*i*Pg		Pg	16 48 55.0	-0.5
TREB				*e*Sg		Sb	16 49 03.3	-1.7
ULC	Ulcinj	0.51	128	⇓*i*Pg		Pg	16 48 54.7	-0.8
ULC				*i* Sg		Sg	16 49 02.9	+0.8
NKME	Niksic	0.52	20	⇑*i*Pg		Pg	16 48 55.1	-0.5
NKME				*i* Sg		Sg	16 49 03.5	+1.1
NKY	Niksic	0.57	22	⇑*i*Pg		Pg	16 48 56.1	-0.6
NKY				*i* Sg		Sg	16 49 05.4	+1.3
BRY	Bratogost	0.63	349	*e*Pg		Pg	16 48 57.5

4.3nm,0.4s,baz=8.3,slow=15,SNR=7.7
YHNB Yeheng 23.73 291 P P 17 03 57.9 +0.2
SSLB Suanglung 23.95 288 P P 17 03 59.9 +0.3
BATI Baumata 35.46 220 P P 17 05 39.5 -1.3
11nm,0.5s,baz=124,slow=7.9,SNR=6.6
SBUM Sibu 36.34 249 P P 17 05 48.8 +0.5
SBUM IAmb IAmb 17 05 49.3
comp=Z,3.6nm,0.5s
CTA Charters Tower 37.73 179 P P 17 06 00.3 +0.4
comp=Z,1.6nm,0.6s,baz=22,slow=11,SNR=3.9
KSM Kuching 38.48 249 P P 17 06 06.4 +0.2
KSM IAmb IAmb 17 06 16.9
comp=Z,8.5nm,1.1s
WB0 Warramunga Arr 39.05 197 P P 17 06 10.6 -0.3
WB0 IAmb IAmb 17 06 11.3
comp=Z,12nm,1.2s
WR0 Warramunga Arr 39.20 197 P P 17 06 11.2 -0.9
WR0 IAmb IAmb 17 06 12.4
comp=Z,8.6nm,1.4s
WRAB Tennant Creek 39.23 197 P P 17 06 11.8 -0.4
WB2 Warramunga Arr 39.23 197 P P 17 06 11.8 -0.6
WB2 IAmb IAmb 17 06 12.6
comp=Z,5.5nm,0.6s
WRA Warramunga Arr 39.24 197 P P 17 06 11.9 -0.5
comp=Z,3.3nm,0.4s,baz=16,slow=8.2,SNR=66
WRA PcP **PcP 17 08 16.1 0.0**
comp=Z,0.4nm,0.6s,baz=22,slow=4.1,SNR=1.4
WRA Warramunga Arr 39.24 197 P P 17 06 11.3 -1.1
FITZ Fitzroy Crossi 40.89 210 P P 17 06 26.0 +0.1
comp=Z,1.1nm,0.3s,baz=35,slow=7.8,SNR=28
FITZ Fitzroy Crossi 40.89 210 P P 17 06 25.8 -0.1
AS31 Alice Springs 42.90 196 P P 17 06 41.8 -0.3
AS31 IAmb IAmb 17 06 45.2
comp=Z,1.3nm,0.3s
ASAR Alice Springs 42.90 196 P P 17 06 41.9 -0.2
comp=Z,1.1nm,0.4s,baz=14,slow=7.2,SNR=44
ASAR PcP **PcP 17 08 28.4 +0.3**
comp=Z,0.2nm,0.5s,baz=23,slow=3.1,SNR=1.7
ASAR Alice Springs 42.90 196 P P 17 06 41.2 -0.9
CHTO Chiang Mai 44.40 279 P P 17 06 54.3 +0.1
CMAR Chiang Mai Arr 44.44 278 P P 17 06 55.0 +0.5
comp=Z,2.6nm,0.8s,baz=71,slow=6.8,SNR=21
CMAR Chiang Mai Arr 44.44 278 P P 17 06 55.5 +1.1
DZM Mont Dzumac 44.55 152 P P 17 06 56.4 +1.1
comp=Z,5.0nm,0.8s,baz=337,slow=12,SNR=1.8
KULM Kulim 45.84 260 P P 17 07 06.0 +0.4
KULM IAmb IAmb 17 07 15.7
comp=Z,6.1nm,1.1s
MBWA Marble Bar 46.46 214 P P 17 07 08.9 -1.2
PSA00 Pilbara Seismi 46.73 214 P P 17 07 11.9 -0.4
PSA00 IAmb IAmb 17 07 31.4
comp=Z,18nm,1.2s
ARMA Armidale 48.34 173 P P 17 07 23.9 -0.7
ARMA IAmb IAmb 17 07 29.8
comp=Z,16nm,1.4s
STKA Stephens Creek 49.64 185 P P 17 07 34.0 -0.2
comp=Z,0.8nm,0.4s,baz=356,slow=11,SNR=5.8
STKA Stephens Creek 49.64 185 P P 17 07 34.0 -0.2
GSI Gunungsitoli 50.13 256 P P 17 07 39.1 +0.8
GSI IAmb IAmb 17 07 40.3
comp=Z,5.6nm,0.8s
MORW Morawa 54.82 212 P P 17 08 11.9 -0.4
MORW IAmb IAmb 17 08 27.3
comp=Z,12nm,1.2s
ZALV Zalesovo Beam 58.73 323 P P 17 08 39.4 0.0
comp=Z,0.4nm,0.4s,baz=106,slow=5.1,SNR=1.6
MKAR Makanchi Array 59.11 314 P P 17 08 42.6 +0.4
comp=Z,0.2nm,0.3s,baz=97,slow=6.8,SNR=4.3
MKAR Makanchi Array 59.11 314 P P 17 08 42.2 +0.1
NRIK Noril'sk 62.41 340 P P 17 09 04.3 +0.4
comp=Z,0.9nm,0.6s,baz=159,slow=10,SNR=1.7
BKZ Black Stump Fm 63.59 154 P P 17 09 12.4 +0.3
ILAR Eielson Array 64.33 26 P P 17 09 16.8 +0.2
comp=Z,0.4nm,0.5s,baz=247,slow=5.8,SNR=8.7
ILAR pP **pP 17 10 09.8 -2.2**
comp=Z,0.6nm,0.8s,baz=242,slow=6.6,SNR=4.2
YKA Yellowknife Ar 78.66 28 P P 17 10 43.4 +1.5
comp=Z,0.7nm,0.6s,baz=288,slow=5.2,SNR=16
YKA pP **pP 17 11 36.7 -3.0**
comp=Z,0.4nm,0.7s,baz=287,slow=5.4,SNR=4.5
NVAR Mina Array Bea 83.56 52 P P 17 11 11.0 +2.6
comp=Z,0.8nm,0.7s,baz=260,slow=7.1,SNR=4.5
NVAR pP **pP 17 12 05.4 -1.5**
comp=Z,0.7nm,0.7s,baz=266,slow=4.8,SNR=3.5
FINES FINESS Array B 87.67 335 P P 17 11 26.2 -1.6
comp=Z,1.4nm,1.0s,baz=59,slow=5.4,SNR=5.9
PDAR Pinedale Array 88.32 45 P P 17 11 32.8 +1.2
comp=Z,0.1nm,0.3s,baz=230,slow=7.0,SNR=2.5
LPAZ La Paz 147.54 92 PKPbc PKiKP 17 18 26.0 0.0
comp=Z,1.4nm,0.5s,baz=250,slow=2.0,SNR=7.0

IDC 03 17:00:51.4±4.2, 4°74.5S×151°73.6E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/38, mbtmp3.5/3, ML1.5/1, Error ellipse: s-maj=187.5km s-min=48.2km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.49**	**224**	Pn	Pn	17 02 30.5	+2.3
	0.7nm,0.3s,baz=157,slow=7.7,SNR=3.3						
PMG				Sn	Sn	17 03 51.4	+8.3
	2.7nm,0.3s,baz=229,slow=16,SNR=5.9						
WRA	**Warramunga Arr**	**22.70**	**227**	P	P	17 05 54.3	-0.7
	0.6nm,0.8s,baz=50,slow=9.8,SNR=2.8						
ASAR	**Alice Springs**	**25.49**	**221**	P	P	17 06 21.1	-0.6
	0.9nm,0.9s,baz=54,slow=9.0,SNR=6.8						
TORD	**Torodi Ar. Bea**	**149.28**	**288**	PKPbc	PKPbc	17 20 43.1	-0.1
	0.5nm,0.7s,baz=82,slow=2.3,SNR=2.8						

MEX 03 17:28:18.5±0.4, 14°47N×92°43W, h74km±45km, MD3.6, Near coast of Chiapas

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*IDC **03** 17:35:36.5±5.8, 38°.12N×22°.23E, h0km, mb3.4/3, mb1 3.4/4, mb1mx3.2/43, mbtmp3.3/4, ML2.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/34, Error ellipse: s-maj=217.7km s-min=29.1km az=175.0*
*THE **03** 17:35:37.4, 38°.27N×22°.21E, h0km±1km, ML3.0/14, Error ellipse: s-maj=1.7km s-min=0.4km az=166.0*
*ATH **03** 17:35:37.5, 38°.28N×22°.20E, h9km±2km, ML3.0/14, Error ellipse: s-maj=2.8km s-min=0.7km az=282.0*
ISC 03 17:35:37.8±0.9, 38°28N±0°.02×22°21E±0°.02, h7km±7km, n51, σ0s72/78, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KALE	**Kalithea**	**0.12**	**336**	P	**Pg**	**17 35 40.0**	**-0.6**
KALE				S	**Sg**	**17 35 42.3**	**-0.1**
KALE				AML	AML	17 35 42.8	
	comp=E,30313μm,0.5s						
KALE				AML	AML	17 35 44.2	
	comp=N,43846μm,0.4s						
KALE	**Kalithea**	**0.12**	**336**	P	**Pg**	**17 35 40.0**	**-0.6**
KALE				S	**Sg**	**17 35 42.3**	**-0.1**
	comp=N,18μm,0.3s						
TRIZ	**Trizonia**	**0.14**	**310**	P	**Pg**	**17 35 40.4**	**-0.3**
TRIZ				S	**Sg**	**17 35 42.8**	**+0.2**
TRIZ	**Trizonia**	**0.14**	**310**	P	**Pg**	**17 35 40.4**	**-0.3**
TRIZ				S	**Sg**	**17 35 42.8**	**+0.2**
	comp=N,22μm,0.4s						
LAKA	**Lakka**	**0.18**	**259**	P	**Pg**	**17 35 41.3**	**-0.2**
LAKA				S	**Sg**	**17 35 44.6**	**+0.6**
LAKA				AML	AML	17 35 45.7	
	comp=E,24364μm,0.5s						
LAKA				AML	AML	17 35 47.0	
	comp=N,26819μm,0.6s						
LAKA	**Lakka**	**0.18**	**259**	P	**Pg**	**17 35 41.3**	**-0.2**
LAKA				S	**Sg**	**17 35 44.5**	**+0.5**
	comp=N,12μm,0.5s						
KLV	**Kalavryta, Ach**	**0.24**	**191**	P	**Pg**	**17 35 42.3**	**-0.2**
KLV				S	**Sg**	**17 35 45.9**	**+0.2**
KLV				AML	AML	17 35 50.1	
	comp=N,2393μm,0.6s						
KLV				AML	AML	17 35 50.4	
	comp=E,3986μm,0.7s						
KLV	**Kalavryta, Ach**	**0.24**	**191**	P	**Pg**	**17 35 42.2**	**-0.3**
KLV				S	**Sg**	**17 35 45.9**	**+0.2**
DLFA	**Delphi**	**0.30**	**48**	P	**Pg**	**17 35 43.4**	**-0.4**
DLFA				S	**Sg**	**17 35 48.0**	**+0.1**
DLFA				AML	AML	17 35 49.1	
	comp=N,6577μm,0.4s						
DLFA				AML	AML	17 35 50.5	
	comp=E,6444μm,0.4s						
THAL	**Thalero**	**0.43**	**123**	P	**Pg**	**17 35 45.9**	**-0.3**
THAL				S	**Sg**	**17 35 52.1**	**+0.2**
THAL				AML	AML	17 36 00.1	
	comp=N,5164μm,0.3s						
THAL				AML	AML	17 36 01.5	
	comp=E,5567μm,0.3s						
THAL	**Thalero**	**0.43**	**123**	P	**Pg**	**17 35 45.9**	**-0.3**
THAL				S	**Sg**	**17 35 52.1**	**+0.2**
	comp=E,2μm,0.2s						
DRO	**Drossia**	**0.51**	**230**	P	**Pg**	**17 35 47.2**	**-0.4**
DRO				S	**Sg**	**17 35 54.2**	**0.0**
DRO				AML	AML	17 36 00.5	
	comp=E,2388μm,0.3s						
DRO				AML	AML	17 36 01.4	
	comp=N,2666μm,0.5s						
DRO	**Drossia**	**0.51**	**230**	P	**Pg**	**17 35 47.0**	**-0.6**
DRO				S	**Sg**	**17 35 54.2**	**0.0**
	comp=N,1μm,0.3s						
AXAR	**Agios Charalam**	**0.60**	**36**	P	**Pg**	**17 35 48.5**	**-1.0**
AXAR				S	**Sg**	**17 35 57.7**	**+0.3**
AXAR				AML	AML	17 36 03.6	
	comp=E,7050μm,0.4s						
AXAR				AML	AML	17 36 06.5	
	comp=N,6723μm,0.5s						
AXAR	**Agios Charalam**	**0.60**	**36**	P	**Pg**	**17 35 48.5**	**-1.0**
AXAR				S	**Sb**	**17 35 58.7**	**-0.8**
	comp=N,4μm,0.5s						
RLS	**Riolos of Patr**	**0.62**	**250**	P	**Pg**	**17 35 49.3**	**-0.5**
RLS	**Riolos of Patr**	**0.62**	**250**	P	**Pg**	**17 35 49.1**	**-0.7**
PVO	**Paravola**	**0.63**	**303**	P	**Pg**	**17 35 49.3**	**-0.7**
PVO	**Paravola**	**0.63**	**303**	P	**Pg**	**17 35 49.3**	**-0.7**
PVO				S	**Sb**	**17 35 59.5**	**-0.8**
	comp=N,588nm,0.4s						
LTK	**Loutraki**	**0.65**	**113**	P	**Pg**	**17 35 50.2**	**-0.2**
LTK	**Loutraki**	**0.65**	**113**	P	**Pg**	**17 35 50.2**	**-0.2**
LOUT	**Loutraki**	**0.67**	**115**	P	**Pg**	**17 35 50.5**	**-0.2**
LOUT	**Loutraki**	**0.67**	**115**	P	**Pg**	**17 35 50.5**	**-0.2**
EVR	**Evrytania**	**0.71**	**334**	P	**Pg**	**17 35 50.8**	**-0.7**
EVR				S	**Sg**	**17 36 01.4**	**+0.6**
EVR				AML	AML	17 36 03.1	
	comp=N,5386μm,0.7s						
EVR				AML	AML	17 36 06.3	
	comp=E,3363μm,0.5s						
EVR	**Evrytania**	**0.71**	**334**	P	**Pg**	**17 35 50.6**	**-0.9**
EVR				S	**Sg**	**17 36 01.8**	**+1.0**
	comp=E,2μm,0.6s						
LKR	**Lokris**	**0.73**	**59**	P	**Pg**	**17 35 50.7**	**-1.1**
LKR				S	**Sg**	**17 36 01.3**	**0.0**
LKR				AML	AML	17 36 05.5	
	comp=N,1625μm,0.2s						
LKR				AML	AML	17 36 05.6	
	comp=E,2065μm,0.2s						
LKR	**Lokris**	**0.73**	**59**	P	**Pg**	**17 35 50.3**	**-1.5**
LKR				S	**Sg**	**17 36 01.5**	**+0.3**
	comp=E,910nm,0.2s						
MAKR	**Makrakomi, Fth**	**0.74**	**356**	P	**Pg**	**17 35 51.8**	**-0.2**
MAKR				S	**Sg**	**17 36 02.2**	**+0.6**
MAKR				AML	AML	17 36 12.2	
	comp=N,1004μm,0.9s						
MAKR				AML	AML	17 36 12.3	
	comp=E,1033μm,0.4s						
MAKR	**Makrakomi, Fth**	**0.74**	**356**	P	**Pg**	**17 35 51.8**	**-0.2**
MAKR				S	**Sb**	**17 36 02.9**	**-0.5**
	comp=E,2μm,0.4s						
AGG	**Agios Georgios**	**0.75**	**7**	P	**Pg**	**17 35 51.3**	**-1.0**
AGG				AML	AML	17 36 08.3	
	comp=E,1332μm,0.6s						
AGG				AML	AML	17 36 10.4	
	comp=N,1020μm,0.8s						
AGG	**Agios Georgios**	**0.75**	**7**	P	**Pg**	**17 35 51.0**	**-1.3**
AGG				S	**Sg**	**17 36 02.7**	**+0.7**
	comp=N,570nm,0.7s						
ATAL	**Atalanti**	**0.76**	**57**	P	**Pg**	**17 35 51.4**	**-1.1**
ATAL				S	**Sg**	**17 36 02.4**	**-0.1**
ATAL				AML	AML	17 36 06.3	
	comp=N,1816μm,0.4s						
ATAL				AML	AML	17 36 06.4	
	comp=E,1116μm,0.7s						
ATAL	**Atalanti**	**0.76**	**57**	P	**Pg**	**17 35 51.4**	**-1.1**
ATAL				S	**Sb**	**17 36 03.4**	**-0.6**
	comp=E,728nm,0.6s						
VIL2	**Platees**	**0.84**	**94**	P	**Pb**	**17 35 54.7**	**0.0**
PDO	**Prodromos**	**0.86**	**292**	P	**Pg**	**17 35 53.1**	**-1.3**
PDO	**Prodromos**	**0.86**	**292**	P	**Pg**	**17 35 53.1**	**-1.3**
VILL	**Villia**	**0.88**	**97**	P	**Pg**	**17 35 54.7**	**0.0**
VLX	**Vlachokerasia**	**0.92**	**171**	P	**Pg**	**17 35 54.2**	**-1.2**
VLX				AML	AML	17 36 12.7	
	comp=N,2378μm,0.4s						
VLX				AML	AML	17 36 12.7	
	comp=E,2480μm,0.4s						
VLX	**Vlachokerasia**	**0.92**	**171**	P	**Pg**	**17 35 54.2**	**-1.2**
VLX				S	**Sb**	**17 36 07.8**	**-0.7**
	comp=E,1μm,0.4s						
SMIA	**Simia**	**0.99**	**52**	P	**Pg**	**17 35 56.0**	**-0.8**
SMIA				S	**Sg**	**17 36 09.8**	**+0.1**
SMIA				AML	AML	17 36 13.3	
	comp=N,3213μm,0.6s						
SMIA				AML	AML	17 36 15.8	
	comp=E,2621μm,0.6s						
SMIA	**Simia**	**0.99**	**52**	P	**Pg**	**17 35 56.0**	**-0.8**
SMIA				S	**Sg**	**17 36 09.9**	**+0.2**
	comp=E,1μm,0.6s						
THL	**Klokotos Trika**	**1.29**	**353**	P	**Pg**	**17 36 02.0**	**-0.6**
THL	**Klokotos Trika**	**1.29**	**353**	P	**Pg**	**17 36 02.0**	**-0.6**
DION	**Dionisos Attik**	**1.38**	**98**	P	**Pg**	**17 36 03.1**	**-1.1**
VLI	**Veliai**	**1.66**	**159**	P	**Pn**	**17 36 07.0**	**-0.4**
VLI	**Veliai**	**1.66**	**159**	P	**Pn**	**17 36 06.7**	**-0.7**
BRTR	**Keskin Array B**	**9.02**	**77**	Pn	**Pn**	**17 37 51.1**	**+2.6**
	comp=E,0.1nm,0.3s,baz=253,slow=15,SNR=1.8						
ESDC	**Sonseca Array**	**20.37**	**282**	P	**P**	**17 40 15.4**	**+0.4**
	comp=E,0.5nm,0.8s,baz=77,slow=11,SNR=4.9						
JMIC	**Jan Mayen**	**36.43**	**344**	LR	LR	17 57 51.0	
	comp=E,30nm,19.7s,baz=276,slow=36						
MKAR	**Makanchi Array**	**44.12**	**59**	P	**P**	**17 43 46.8**	**0.0**
	comp=E,0.3nm,0.4s,baz=274,slow=7.8,SNR=12						
ZALV	**Zalesovo Beam**	**44.64**	**48**	P	**P**	**17 43 51.2**	**+0.4**
	comp=E,0.4nm,0.3s,baz=263,slow=12,SNR=2.7						

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*IDC **03** 17:39:16.2±1.6, 41°.85N×123°.89E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/69, mbtmp3.5/5, ML1.9/1, MS4.2/1, Ms1 4.2/1, ms1mx2.5/3, Error ellipse: s-maj=27.8km s-min=20.4km az=44.0*
ISC 03 17:39:18.1±1.2, 41°.92N±0°.10×123°.8E±0°.1, h10km, n8, σ1s59/7, mb3.6/4, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**5.46**	**143**	Pg	**Pb**	**17 40 54.3**	**+0.7**
	0.4nm,0.3s,baz=327,slow=17,SNR=4.6						
KSRS				Lg	Lg	17 42 07.0	
	1.9nm,0.3s,baz=321,slow=30,SNR=11						
USRK	**Ussuriysk Ar.**	**6.39**	**66**	Pn	**Pn**	**17 40 49.9**	**-2.4**
	baz=259,slow=13,SNR=7.1						
USRK				Pg	**Pb**	**17 41 10.9**	**+1.6**
	baz=246,slow=16,SNR=10						
USRK				Lg	Lg	17 42 39.5	
	baz=251,slow=28,SNR=10						
KLR	**Kul'dur**	**9.17**	**34**	Lg	Lg	17 44 09.8	
	0.1nm,0.3s,baz=308,slow=11,SNR=5.1						
TIXI	**Tiksi**	**29.91**	**3**	P	**P**	**17 45 25.0**	**-0.6**
	0.5nm,0.5s,baz=118,slow=4.3,SNR=3.1						
JAY	**Jayapura**	**46.80**	**157**	LR	LR	18 05 43.9	
	comp=Z,256nm,19.9s,baz=105,slow=34						
ILAR	**Eielson Array**	**52.74**	**33**	P	**P**	**17 48 33.4**	**+0.7**
	0.2nm,0.7s,baz=291,slow=7.6,SNR=2.2						
FINES	**FINESS Array B**	**57.63**	**326**	P	**P**	**17 49 08.1**	**+0.1**
	0.5nm,0.9s,baz=58,slow=13,SNR=1.3						
NVAR	**Mina Array Bea**	**82.06**	**45**	P	**P**	**17 51 39.5**	**+0.5**
	0.5nm,0.6s,baz=329,slow=6.6,SNR=3.1						

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*BJI **03** 17:44:01.0±0.0, 17°.32S×176°.76W, h379km, mB5.1/41, mb5.2/62*
*NOU **03** 17:44:02.1, 17°.34S×176°.85W, h376km, ML5.0, Fiji Islands Region*
*NEIC **03** 17:44:03.2±2.4, 17°.35S±0°.07×176°.98W±0°.07, h379km±3km, mb5.2/397, Error ellipse: s-maj=10.7km s-min=9.4km az=165.0*
*MOS **03** 17:44:03.7±0.8, 17°.26S×177°.18W, h392km, mb5.1/24, Error ellipse: s-maj=8.0km s-min=7.2km az=60.1*
*IDC **03** 17:44:03.2±0.4, 17°.26S×177°.10W, h371km±3km, mb4.7/42, mb1 4.7/46, mb1mx4.7/49, mbtmp5.4/46, Error ellipse: s-maj=8.4km s-min=6.5km az=159.0*
*BGR **03** 17:44:05.3±0.0, 17°.15S×175°.53W, h373km±5km*
*GCMT **03** 17:44:07.2±0.1, 17°.28S±0°.01×176°.98W±0°.01, h386km, MW5.8/152, Moment Tensor Solution. s152,c301; Duration: 1s9 Moment tensor: Scale 10^17 Nm; Mrr=2.93±.05; Mθθ2.34±.08; Mϕϕ0.59±.09; Mrθ2.58±.07; Mθϕ-4.48±.07; Mϕr1.91±.07; Best double couple: Mo6.13000×10^17 NP1:ϕs165.00000°, δ56.00000°, λ-31.00000°. NP2:ϕs274.00000°, δ65.00000°, λ-141.00000°. Principal axes: T 6.1060, Plg6.0000°, Azm38.0000°; N 0.0500, Plg45.0000°, Azm302.0000°; P -6.1540, Plg44.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*
ISC 03 17:44:02.9±0.2, 17°39S±0°.03×176°97W±0°.03, h379km±1km, h380km; pP-P, n1192, σ1s39/1372, mb5.2/309, 86C-84D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.76**	**265**	P	**Pn**	**17 45 21.7**	**+0.2**
	235nm,0.3s,baz=242,slow=23,SNR=688						
MSVF				S	**S**	**17 46 25.0**	**-0.2**
	12nm,0.3s,baz=119,slow=21,SNR=28						
MSVF	**Nonsavu**	**4.76**	**265**	Pn	**Pn**	**17 45 22.3**	**+0.8**
MSVF				S	**S**	**17 46 27.2**	**+2.0**
MSVF	**Nonsavu**	**4.76**	**265**	P	**Pn**	**17 45 22.8**	**+1.3**
AFI	**Afiamalu**	**6.08**	**56**	P	**Pn**	**17 45 32.1**	**-3.7**
AFI	**Afiamalu**	**6.08**	**56**	Pn	**Pn**	**17 45 32.0**	**-3.7**
AFI				S	S	17 46 40.6	-11
AFI	**Afiamalu**	**6.08**	**56**	P	**Pn**	**17 45 32.5**	**-3.3**
FUNA	**Funafuti**	**9.56**	**337**		**Pn**	**17 46 13.8**	**-2.1**
RAO	**Raoul Island**	**11.84**	**184**	P	**P**	**17 46 41.6**	**0.0**
	188nm,0.3s,baz=57,slow=17,SNR=8.2						
RAO				S	**S**	**17 48 48.1**	**-4.6**
	683nm,0.3s,baz=127,slow=22,SNR=12						
RAO	**Raoul Island**	**11.84**	**184**	P	**P**	**17 46 40.2**	**-1.3**
RAO				S	**S**	**17 48 47.1**	**-5.6**
RAO	**Raoul Island**	**11.84**	**184**	P	**Pn**	**17 46 43.1**	**+0.7**
DVP	**Devils Point**	**14.16**	**266**	P	**Pn**	**17 47 09.0**	**-0.4**
	988μm,0.8s						
MARNC	**Mare, Loyalty**	**14.72**	**252**	P	**P**	**17 47 13.4**	**+0.2**
LIFNC	**LIFOU**	**15.30**	**255**	P	**P**	**17 47 19.6**	**+0.1**
SANVU	**Saraoutou**	**15.31**	**275**	P	**P**	**17 47 19.9**	**+0.3**
SANVU	**Saraoutou**	**15.31**	**275**	P	**Pn**	**17 47 21.2**	**-1.3**
KNTN	**Kanton**	**15.41**	**20**	P	**P**	**17 47 18.8**	**-2.0**
KNTN	**Kanton**	**15.41**	**20**	P	**P**	**17 47 19.2**	**-1.6**
PINNC	**Pines Island,**	**15.54**	**248**	P	**P**	**17 47 23.3**	**+1.2**
YATNC	**Mamie plateau,**	**15.89**	**250**	P	**P**	**17 47 26.1**	**+0.2**
OUENC	**Ouen Island, N**	**16.02**	**249**	P	**P**	**17 47 28.0**	**+0.7**
DZM	**Mont Dzumac**	**16.29**	**251**	P	**P**	**17 47 30.3**	**-0.1**
	25nm,0.3s,baz=76,slow=12,SNR=214						
DZM				S	**S**	**17 50 23.7**	**+1.5**
	baz=168,slow=5.4,SNR=4.2						
ONTNC	**Ouen Toro**	**16.34**	**250**	P	**P**	**17 47 31.3**	**+0.5**
RAR	**Rarotonga**	**16.67**	**106**	P	**Pn**	**17 47 36.8**	**-1.5**
	1.8nm,0.3s,baz=272,slow=7.2,SNR=7.3						
RAR	**Rarotonga**	**16.67**	**106**	P	**P**	**17 47 34.4**	**+0.1**
RAR	**Rarotonga**	**16.67**	**106**	P	**P**	**17 47 33.1**	**-1.2**
KOUNC	**Koumac, New Ca**	**18.00**	**257**	P	**P**	**17 47 48.5**	**0.0**
NFK	**Norfolk Island**	**18.06**	**227**	P	**P**	**17 47 51.3**	**+2.2**
	baz=18,SNR=18						
NFK	**Norfolk Island**	**18.06**	**227**	P	**P**	**17 47 49.6**	**+0.5**
OUZ	**Omahuta**	**19.65**	**204**	P	**P**	**17 48 06.2**	**+0.7**
MXZ	**Matakaoa Point**	**20.53**	**191**	P	**P**	**17 48 12.6**	**-1.0**
MXZ				S	**S**	**17 51 35.1**	**-3.1**
HAZ	**Te Kaha**	**20.81**	**192**	P	**P**	**17 48 15.7**	**-0.5**
URZ	**Urewera**	**21.43**	**193**	P	**P**	**17 48 19.5**	**-2.2**
	76nm,0.3s,baz=302,slow=23,SNR=220						
URZ				S	**S**	**17 51 50.7**	**-2.2**
	139nm,0.8s,baz=244,slow=22,SNR=7.6						
URZ	**Urewera**	**21.43**	**193**	P	**P**	**17 48 19.6**	**-2.2**
URZ				IAmb	IAmb	17 48 38.4	
	comp=Z,104nm,0.6s						
URZ	**Urewera**	**21.43**	**193**	P	**P**	**17 48 19.6**	**-2.1**
CNGZ	**Carnagh Statio**	**21.44**	**190**	P	**P**	**17 48 22.1**	**+0.3**
TKGZ	**Te Karaka**	**21.46**	**191**	P	**P**	**17 48 21.8**	**-0.2**
PRGZ	**Paritu Road**	**21.92**	**191**	P	**P**	**17 48 28.3**	**+2.0**
KNZ	**Kokohu**	**22.06**	**191**	P	**P**	**17 48 27.8**	**+0.3**
RAHZ	**Arahi**	**22.07**	**192**	P	**P**	**17 48 26.4**	**-1.2**
RAHZ				S	**S**	**17 52 11.9**	**+8.7**
MHGZ	**Mahia Peninsul**	**22.14**	**191**	P	**P**	**17 48 28.8**	**+0.5**
WHHZ	**Waihua**	**22.20**	**192**	P	**P**	**17 48 28.6**	**-0.1**
HIZ	**Hauiti**	**22.23**	**197**	P	**P**	**17 48 29.4**	**+0.3**
ARHZ	**Aropaoanui**	**22.42**	**192**	P	**P**	**17 48 30.1**	**-0.7**
BKZ	**Black Stump Fm**	**22.44**	**193**	P	**P**	**17 48 29.2**	**-1.7**
BKZ				IAmb	IAmb	17 48 40.0	
	comp=Z,71nm,0.7s						
BHHZ	**Black Hill Sta**	**22.84**	**194**	P	**P**	**17 48 32.2**	**-2.4**
HNR	**Honiara**	**23.79**	**286**	P	**P**	**17 48 41.2**	**-2.2**
	comp=Z,282nm,0.7s,baz=150,slow=1.6,SNR=26						
HNR	**Honiara**	**23.79**	**286**	P	**P**	**17 48 42.6**	**-0.8**
HNR				pmax	pmax		
	comp=Z,338nm,0.7s						
HNR	**Honiara**	**23.79**	**286**	P	**P**	**17 48 42.5**	**-0.8**
HNR	**Honiara**	**23.79**	**286**	P	**P**	**17 48 44.8**	**+1.4**
	comp=Z,448nm,0.8s						
BFZ	**Birch Farm**	**23.94**	**193**	P	**P**	**17 48 43.1**	**-1.4**
BFZ				IAmb	IAmb	17 48 45.0	
	comp=Z,106nm,0.7s						
BFZ					**S**	**17 52 33.8**	**+1.1**
MSWZ	**Moikau Station**	**24.87**	**194**	P	**P**	**17 48 51.6**	**-1.1**
SNZO	**South Karori**	**24.90**	**195**	P	**P**	**17 48 52.2**	**-0.8**
SNZO					**S**	**17 52 45.5**	**-2.2**
BHW	**Baring Head**	**24.95**	**195**	P	**P**	**17 48 52.1**	**-1.3**
PLWZ	**Palliser**	**25.01**	**194**	P	**P**	**17 48 52.4**	**-1.7**
PLWZ					**S**	**17 52 47.4**	**-2.2**
QRZ	**Quartz Range**	**25.05**	**199**	P	**P**	**17 48 54.2**	**-0.2**
NNZ	**Nelson**	**25.16**	**197**	P	**P**	**17 48 54.9**	**-0.5**
NNZ					**S**	**17 52 48.5**	**-3.3**
TUWZ	**Tuamarina**	**25.20**	**196**	P	**P**	**17 48 54.4**	**-1.3**
CMWZ	**Cape Campbell**	**25.43**	**195**	P	**P**	**17 48 57.1**	**-0.7**
BSWZ	**Blackbirch Sta**	**25.49**	**196**	P	**P**	**17 48 57.8**	**-0.5**
THZ	**Tophouse**	**25.80**	**198**	P	**P**	**17 49 00.8**	**-0.3**
LHI	**Lord Howe Isla**	**25.88**	**233**	P	**P**	**17 49 03.9**	**+2.0**
	baz=26,SNR=6.6						
LHI	**Lord Howe Isla**	**25.88**	**233**	P	**P**	**17 49 02.5**	**+0.6**
LHI	**Lord Howe Isla**	**25.88**	**233**	P	**P**	**17 49 02.9**	**+1.0**
PAE	**Paea**	**26.11**	**

ARMA Armidale 31.39 240 P **P** **17 49 50.4 -0.1**
PYZ Puysegur Point 31.75 202 P **P** **17 49 53.2 -0.1**
PYZ IAmb IAmb 17 50 01.0
comp=Z,76nm,0.8s
MGCD Mangrove Creek 32.72 235 P **P** **17 50 02.8 +1.0**
baz=33,SNR=64
RIV Riverview 32.90 234 P **P** **17 50 04.2 +0.9**
baz=33,SNR=4.3
RABL Rabaul 32.96 290 P **P** **17 50 01.3 -2.9**
RABL IAmb IAmb 17 50 16.4
comp=Z,109nm,0.6s
RABL **PcP** **17 52 38.9 +0.7**
RABL ScP **ScP** **17 55 47.4 +1.6**
RMQ Roma 32.97 248 P **P** **17 50 04.3 +0.2**
baz=33,SNR=233
PATS Pohnpei 34.29 313 P **P** **17 50 15.2 -0.1**
CNB Canberra Magne 34.83 233 P **P** **17 50 20.9 +1.0**
baz=35,SNR=166
CTA Charters Tower 34.89 260 P **P** **17 50 20.0 -0.5**
comp=Z,86nm,0.6s,baz=86,slow=10,SNR=99
CTA ScP **ScP** **17 55 55.5 +3.0**
comp=Z,23nm,1.1s,baz=16,slow=3.9,SNR=7.5
CTAO Charters Tower 34.89 260 P **P** **17 50 19.5 -1.0**
CTAO pmax pmax
comp=Z,98nm,0.7s
CTAO Charters Tower 34.89 260 P **P** **17 50 19.4 -1.0**
CTAO IAmb IAmb 17 50 22.2
comp=Z,98nm,0.7s
CTAO **pwP** **17 51 35.0 +0.8**
CTAO ScP **ScP** **17 55 56.9 +4.4**
CAN Canberra 35.11 233 P **P** **17 50 22.0 -0.2**
CAN pmax pmax
comp=Z,204nm,1.2s
CAN Canberra 35.11 233 P **P** **17 50 22.0 -0.2**
CAN IAmb IAmb 17 50 24.1
comp=Z,204nm,1.2s
YNG Young 35.21 235 P **P** **17 50 23.9 +0.8**
baz=35,SNR=10
PMG Port Moresby 35.73 278 P **P** **17 50 28.0 +0.4**
comp=Z,62nm,0.7s,baz=93,slow=7.4,SNR=17
PMG Port Moresby 35.73 278 *deP* **P** **17 50 28.5 +0.9**
PMG pmax pmax
comp=Z,66nm,0.9s
PMG Port Moresby 35.73 278 P **P** **17 50 27.9 +0.2**
PMG IAmb IAmb 17 50 32.4
comp=Z,74nm,0.8s
PMG Port Moresby 35.73 278 P **P** **17 50 28.9 +1.3**
CMSA Cobar Meteorol 36.60 240 P **P** **17 50 34.4 -0.3**
baz=37,SNR=523
TAOE Nuku Hiva Isla 36.79 81 P **P** **17 50 37.0 +0.4**
TAOE IAmb IAmb 17 50 41.0
comp=Z,339nm,1.7s
MTSU Mount Surprise 36.83 263 P **P** **17 50 36.1 -0.7**
baz=37,SNR=89
QLP Quilpie 37.00 249 P **P** **17 50 37.4 -0.7**
baz=37,SNR=240
MANU Manus Island 38.20 290 P **P** **17 50 47.4 -0.8**
MANU IAmb IAmb 17 50 50.7
comp=Z,71nm,0.8s
MANU ScP **ScP** **17 56 08.5 +3.5**
COEN Coen 38.48 269 P **P** **17 50 49.8 -0.7**
TOO Toolangi 38.56 231 P **P** **17 50 51.9 +1.0**
baz=39,SNR=153
TOO Toolangi 38.56 231 P **P** **17 50 51.6 +0.7**
TOO pmax pmax
comp=Z,263nm,0.9s
TOO Toolangi 38.56 231 P **P** **17 50 51.5 +0.7**
TAU Tasmania Unive 39.55 222 P **P** **17 50 59.5 +0.7**
TAU pmax pmax
comp=Z,71nm,0.9s
TAU Tasmania Unive 39.55 222 P **P** **17 50 59.5 +0.7**
TAU IAmb IAmb 17 51 01.4
comp=Z,71nm,0.9s
RKT Rikitea 39.71 105 *eP* **P** **17 51 02.3 +1.9**
comp=Z,163nm,1.0s
WAKE Wake Island 39.84 335 P **P** **17 51 00.7 -0.7**
STKA Stephens Creek 40.08 241 P **P** **17 51 03.8 +0.4**
comp=Z,93nm,0.6s,baz=84,slow=9.4,SNR=263
STKA ScP **ScP** **17 56 15.2 +3.3**
comp=Z,9.6nm,0.9s,baz=304,slow=5.3,SNR=2.9
STKA S **S** **17 56 39.9 -0.9**
comp=Z,20nm,1.1s,baz=234,slow=17,SNR=5.2
STKA Stephens Creek 40.08 241 P **P** **17 51 03.7 +0.3**
baz=40,SNR=211
STKA Stephens Creek 40.08 241 *ceP* **P** **17 51 04.0 +0.6**
STKA Stephens Creek 40.08 241 P **P** **17 51 03.1 -0.3**
ARPS Mount Arapiles 41.06 234 P **P** **17 51 11.6 +0.4**
baz=41,SNR=43
QIS Mount Isa 41.10 258 P **P** **17 51 10.9 -0.9**
baz=41,SNR=9.5
MCQ Macquarie Isla 41.43 201 P **P** **17 51 14.7 +0.9**
MCQ pmax pmax
comp=Z,295nm,1.5s
MCQ Macquarie Isla 41.43 201 P **P** **17 51 14.7 +0.9**
MCQ IAmb IAmb 17 51 36.6
comp=Z,295nm,1.4s
KHU Kahuku 42.02 31 P **P** **17 51 18.8 -0.5**
KHU pmax pmax
comp=Z,128nm,0.9s
KHU Kahuku 42.02 31 P **P** **17 51 18.8 -0.5**
KHU IAmb IAmb 17 51 35.3
comp=Z,128nm,0.9s
KHLU Kahalu`u 42.18 30 P **P** **17 51 20.8 +0.3**
AIN Ainahou 42.20 31 P **P** **17 51 21.0 +0.3**
HLP Hilina Pali 42.21 31 P **P** **17 51 18.9 -1.8**
MWH Moku'aweowe 42.23 31 P **P** **17 51 20.1 -1.2**
MWH IAmb IAmb 17 51 31.3
comp=Z,131nm,1.0s
MLOA Mauna Loa Obse 42.28 31 P **P** **17 51 22.3 +0.6**
HUH Hualalai 42.28 30 P **P** **17 51 22.1 +0.7**
WRMHI West Rim 42.31 31 P **P** **17 51 22.5 +1.0**
PUH Pauahi 42.32 31 P **P** **17 51 21.5 -0.1**
PUH IAmb IAmb 17 51 23.9
comp=Z,167nm,0.9s
MLH Mauna Loa 42.34 31 P **P** **17 51 21.6 -0.2**
STCH Steam Cracks 42.38 31 P **P** **17 51 22.9 +0.9**
HMH Humu'ula Sheep 42.39 31 P **P** **17 51 23.4 +1.1**
JCUZ Jacuzzi 42.39 31 P **P** **17 51 22.7 +0.7**
NPOC North of Pu'u 42.39 31 P **P** **17 51 23.0 +0.9**
POHA Pohakuloa 42.49 31 P **P** **17 51 23.8 +0.7**
HTT Hallett 42.59 239 P **P** **17 51 23.8 +0.2**
baz=43,SNR=149
HON Honolulu 42.73 27 P **P** **17 51 24.9 +0.3**
HON pmax pmax
comp=Z,142nm,0.9s
HON Honolulu 42.73 27 P **P** **17 51 24.9 +0.3**
HON IAmb IAmb 17 51 26.2
comp=Z,142nm,0.9s
KIP Kipapa 42.81 26 *eP* **P** **17 51 25.7 +0.4**
KIP pmax pmax
comp=Z,193nm,1.9s
KIP Kipapa 42.81 26 P **P** **17 51 26.3 +1.0**
KIP IAmb IAmb 17 51 27.1
comp=Z,99nm,1.1s
HLK Haleakala 43.01 29 P **P** **17 51 28.1 +0.9**
JAY Jayapura 44.09 285 P **P** **17 51 35.8 +0.1**
comp=Z,26nm,0.5s,baz=158,slow=3.8,SNR=19
JAY S **S** **17 57 41.1 +1.6**
comp=Z,14nm,1.0s,baz=57,slow=23,SNR=6.9
JAY Jayapura 44.09 285 P **P** **17 51 35.5 -0.1**
comp=Z,37nm,0.5s
PTCN Pitcairn Islan 44.18 108 P **P** **17 51 37.2 +1.0**
GENI Genyem 44.56 284 P **P** **17 51 39.7 +0.5**
comp=Z,4µmcomp=Z,431nm,0.6s
BBOO Buckleboo 44.86 241 P **P** **17 51 41.3 0.0**
baz=45,SNR=198
BBOO Buckleboo 44.86 241 P **P** **17 51 41.1 -0.2**
BBOO IAmb IAmb 17 51 42.4
comp=Z,148nm,0.8s
MIDW Midway 45.33 360 P **P** **17 51 44.5 -0.4**
MIDW IAmb IAmb 17 51 45.6
comp=Z,114nm,1.1s
WR0 Warramunga Arr 45.89 259 P **P** **17 51 48.4 -1.1**
WR0 **pwP** **17 53 07.2 -0.3**
WB0 Warramunga Arr 46.04 259 P **P** **17 51 49.0 -1.8**
WB0 IAmb IAmb 17 51 51.6
comp=Z,99nm,1.2s
WB0 **pwP** **17 53 07.7 -1.0**
WB2 Warramunga Arr 46.06 259 P **P** **17 51 49.7 -1.2**
WB2 IAmb IAmb 17 51 51.9
comp=Z,162nm,1.4s
WB2 pP **pwP** **17 53 07.9 -1.0**
WB2 sP **sP** **17 53 49.1 +1.0**
WRAB Tennant Creek 46.07 259 *c iP* **P** **17 51 50.3 -0.6**
WRAB pmax pmax
comp=Z,86nm,1.3s
WRAB Tennant Creek 46.07 259 P **P** **17 51 49.1 -1.8**
WRAB IAmb IAmb 17 51 51.8
comp=Z,130nm,1.4s
WRAB pP **pwP** **17 53 08.4 -0.5**
WRA Warramunga Arr 46.08 259 P **P** **17 51 49.9 -1.2**
comp=Z,29nm,0.6s,baz=94,slow=6.9,SNR=225
WRA PP **sP** **17 53 47.8 -0.5**
comp=Z,19nm,1.1s,baz=96,slow=9.1,SNR=4.7
WRA ScP **ScP** **17 56 39.1 +2.5**
comp=Z,15nm,0.9s,baz=87,slow=4.2,SNR=10.0
WRA S **S** **17 58 02.5 -5.1**
comp=Z,7.2nm,1.0s,baz=94,slow=14,SNR=6.6
WRA PKiKP **PKiKP** **18 00 13.8 -1.2**
comp=Z,1.7nm,0.7s,baz=97,slow=0.8,SNR=4.5
WRA Warramunga Arr 46.08 259 P **P** **17 51 49.5 -1.5**
WRA pP **pwP** **17 53 07.7 -1.3**
AS31 Alice Springs 46.25 254 P **P** **17 51 51.4 -1.0**
AS31 IAmb IAmb 17 51 53.8
comp=Z,94nm,0.5s
ASAR Alice Springs 46.25 254 P **P** **17 51 51.6 -0.7**
comp=Z,269nm,0.5s,baz=88,slow=8.2,SNR=3038
ASAR ScP **ScP** **17 56 40.1 +2.8**
comp=Z,14nm,0.9s,baz=106,slow=4.2,SNR=7.7
ASAR S **S** **17 58 06.4 -3.7**
comp=Z,51nm,0.9s,baz=90,slow=16,SNR=44
ASAR Alice Springs 46.25 254 P **P** **17 51 50.9 -1.4**
ASAR **pwP** **17 53 10.9 +0.9**
ASAR ScP **ScP** **17 56 39.9 +2.6**
SRPI Serui, Papua 48.47 283 P **P** **17 52 09.9 +0.7**
comp=Z,55nm,0.5s
GUMO Guam 48.65 307 P **P** **17 52 10.0 -0.5**
GUMO pmax pmax
comp=Z,635nm,1.6s
GUMO Guam 48.65 307 P **P** **17 52 10.0 -0.5**
BAKI Biak 48.84 284 P **P** **17 52 12.1 0.0**
comp=Z,2µmcomp=Z,96nm,0.7s
KDU Kakadu 48.94 268 P **P** **17 52 12.2 -0.6**
baz=49,SNR=76
MTN Manton Dam 50.19 268 P **P** **17 52 21.6 -0.5**
baz=50,SNR=44
MTN Manton Dam 50.19 268 P **P** **17 52 20.8 -1.3**
MTN IAmb IAmb 17 52 24.1
comp=Z,74nm,0.8s
MTN ScP **ScP** **17 56 56.7 +2.6**
WRKA Warakurna 51.31 252 P **P** **17 52 29.7 -0.6**
baz=51,SNR=527
FORT Forrest 51.47 244 P **P** **17 52 30.7 -0.6**
baz=52,SNR=161
FORT Forrest 51.47 244 P **P** **17 52 30.5 -0.9**
SIJI Sorong 53.46 282 P **P** **17 52 45.9 -0.2**
comp=Z,91nm,0.5s,baz=92,slow=6.2,SNR=89
SIJI ScP **ScP** **17 57 10.6 +2.3**
comp=Z,8.5nm,0.8s,baz=64,slow=6.5,SNR=3.8
SWI Sorong 53.47 282 P **P** **17 52 45.7 -0.4**
comp=Z,2µmcomp=Z,188nm,0.7s
BNDI Bandanaira 53.52 277 P **P** **17 52 46.8 +0.3**
comp=Z,2µmcomp=Z,222nm,0.7s
FITZ Fitzroy Crossi 54.47 260 P **P** **17 52 52.8 -0.4**
comp=Z,17nm,0.5s,baz=95,slow=3.6,SNR=85
FITZ S **S** **18 00 00.7 -1.7**
comp=Z,3.1nm,1.0s,baz=289,slow=23,SNR=7.2
FITZ Fitzroy Crossi 54.47 260 P **P** **17 52 52.9 -0.3**
baz=54,SNR=81
FITZ Fitzroy Crossi 54.47 260 P **P** **17 52 52.9 -0.3**
NLAI Namlea 56.58 278 P **P** **17 53 08.0 -0.1**
comp=Z,76nm,0.7s
SOEI Soe 57.45 269 P **P** **17 53 13.7 -0.6**
SOEI Soe 57.45 269 P **P** **17 53 15.2 +1.0**
comp=Z,3µmcomp=Z,344nm,0.8s
TNTI Ternate 57.68 282 P **P** **17 53 15.1 -0.6**
TNTI Ternate 57.68 282 P **P** **17 53 16.1 +0.4**
comp=Z,560nmcomp=Z,56nm,0.8s
BATI Baumata 57.91 269 P **P** **17 53 18.7 +1.3**
comp=Z,76nm,0.6s,baz=171,slow=1.9,SNR=24
BATI Baumata 57.91 269 P **P** **17 53 18.4 +1.1**
comp=Z,627nmcomp=Z,55nm,0.8s
SANI Sanana 58.01 279 P **P** **17 53 17.2 -0.8**
comp=Z,782nmcomp=Z,102nm,0.8s
PSA00 Pilbara Seismi 59.37 255 IAmb IAmb 17 53 30.4
comp=Z,46nm,0.8s
JCJ Chichijima 59.38 317 P **P** **17 53 26.3 -0.7**
comp=Z,90nm,0.7s,baz=302,slow=5.1,SNR=6.0
JCJ Chichijima 59.38 317 P **P** **17 53 26.3 -0.7**
JCJ IAmb IAmb 17 53 27.9
comp=Z,89nm,0.6s
MMRI Maumere 59.66 270 P **P** **17 53 28.7 -0.5**
MMRI Maumere 59.66 270 P **P** **17 53 28.6 -0.7**
comp=Z,2µmcomp=Z,164nm,0.6s
EDFI Ende, Flores 60.16 270 P **P** **17 53 31.9 -0.8**
comp=Z,681nmcomp=Z,77nm,0.8s
KLBR Kellerberrin 60.29 243 P **P** **17 53 32.5 -0.7**
baz=60,SNR=101
NWAO Narrogin (SRO) 60.66 242 P **P** **17 53 35.4 -0.3**
baz=61,SNR=7.0
NWAO Narrogin (SRO) 60.66 242 P **P** **17 53 34.5 -1.2**
NWAO pmax pmax
comp=Z,154nm,1.7s
NWAO Narrogin (SRO) 60.66 242 P **P** **17 53 34.2 -1.5**
NWAO IAmb IAmb 17 53 36.5
comp=Z,192nm,1.7s
NWAO Narrogin (SRO) 60.66 242 P **P** **17 53 34.5 -1.2**
NWAO IAmb IAmb 17 53 36.5
comp=Z,154nm,1.7s
KMSI Cibinong 60.78 281 P **P** **17 53 36.4 -0.3**
comp=Z,91nm,0.8s
SBA Scott Base 61.03 184 P **P** **17 53 40.1 +2.8**
SBA pmax pmax
comp=Z,98nm,0.9s
SBA Scott Base 61.03 184 P **P** **17 53 40.1 +2.8**
SBA IAmb IAmb 17 53 41.8
comp=Z,98nm,0.9s
MATI Mati 61.07 288 *eP* **P** **17 53 36.4 -2.3**
VNDA Vanda 61.08 185 P **P** **17 53 40.0 +2.3**
comp=Z,44nm,1.1s,baz=0.2,slow=7.3,SNR=92
VNDA Vanda 61.08 185 P **P** **17 53 40.0 +2.3**
VNDA Vanda 61.08 185 P **P** **17 53 39.8 +2.1**
VNDA IAmb IAmb 17 53 41.2
comp=Z,119nm,1.5s
DDMP Don Marcelino, 61.23 287 *eP* **P** **17 53 37.2 -2.5**
BLDU Balidu 61.24 244 P **P** **17 53 38.8 -0.8**
baz=61,SNR=79
LUWI Luwuk 61.38 279 IAmb IAmb 17 53 43.8
comp=Z,103nm,0.9s
LUWI Luwuk 61.38 279 P **P** **17 53 40.3 -0.4**
comp=Z,2µmcomp=Z,128nm,1.3s
MUN Mundaring 61.58 243 P **P** **17 53 41.8 0.0**
baz=62,SNR=18
GTOI Gorontalo 61.72 280 P **P** **17 53 43.2 +0.3**
comp=Z,386nmcomp=Z,38nm,0.8s
MORW Morawa 61.95 246 P **P** **17 53 43.8 -0.4**
baz=62,SNR=82
MORW Morawa 61.95 246 P **P** **17 53 43.6 -0.6**
MORW IAmb IAmb 17 53 46.0
comp=Z,43nm,0.6s
GLSP General Luna, 62.37 291 *eP* **P** **17 53 47.2 0.0**
SKMP Bagumbayan, Su 62.46 287 *eP* **P** **17 53 46.2 -1.6**
BUTP Butuan 62.48 290 *eP* **P** **17 53 47.0 -0.9**
APSI Ampana 62.48 278 P **P** **17 53 48.8 +0.8**
comp=Z,809nmcomp=Z,92nm,0.8s
BUKP Musuan 62.53 289 *eP* **P** **17 53 47.8 -0.6**
MRSI Marisa 62.67 280 P **P** **17 53 49.0 -0.2**
BNSI Bone 62.87 274 P **P** **17 53 50.9 +0.4**
comp=Z,98nm,0.9s
KAPI Kappang 63.03 273 P **P** **17 53 50.7 -0.8**
comp=Z,26nm,0.6s,baz=135,slow=4.2,SNR=16
KAPI Kappang 63.03 273 P **P** **17 53 50.8 -0.8**
KAPI pmax pmax
comp=Z,38nm,0.8s
KAPI Kappang 63.03 273 P **P** **17 53 50.8 -0.8**
KAPI IAmb IAmb 17 54 02.4
comp=Z,38nm,0.8s
CGP Cagayan de Oro 63.09 289 *eP* **P** **17 53 53.2 +1.2**
H01W1 Cape Leeuwin H 63.13 239 P **P** **17 53 53.4 +1.8**
baz=101,slow=7.1,SNR=7.7
H01W3 Cape Leeuwin H 63.14 239 P **P** **17 53 53.5 +1.9**
baz=101,slow=7.1,SNR=7.3
H01W2 Cape Leeuwin H 63.14 239 P **P** **17 53 55.1 +3.4**
baz=101,slow=7.1,SNR=7.3
SPSI Sidrap Palu 63.32 274 P **P** **17 53 52.7 -0.7**
comp=Z,70nm,0.8s
MSLP Maasin 63.65 291 *eP* **P** **17 53 54.8 -0.7**
PLAI Plampang 63.88 269 P **P** **17 53 56.7 -0.3**
comp=Z,1µmcomp=Z,172nm,0.7s
PAGZ Pagadian 64.04 288 *eP* **P** **17 53 57.1 -1.0**
GIRL Giralia 64.36 253 P **P** **17 54 01.1 +1.1**
baz=64,SNR=28
GIRL Giralia 64.36 253 P **P** **17 53 60.0 0.0**
TWSI Taliwang, Sumb 64.75 268 P **P** **17 54 02.0 -0.7**
comp=Z,1µmcomp=Z,153nm,0.8s
JHJ Hachijo jima 2 65.03 321 P **P** **17 54 03.8 -0.1**
comp=Z,165nm,0.4s,baz=127,slow=7.3,SNR=8.9
CNOP Candoni, Negro 65.51 290 *eP* **P** **17 54 03.6 -3.8**
DNP Denpasar 66.36 268 P **P** **17 54 10.9 -2.0**
comp=Z,18µmcomp=Z,311nm,0.9s
SRBI Singaraja 66.52 269 P **P** **17 54 13.6 -0.2**
comp=Z,75nm,0.6s
KBKI Kotabaru 66.95 274 P **P** **17 54 17.1 +0.6**
comp=Z,495nmcomp=Z,55nm,1.2s
CASY Casey 67.18 205 P **P** **17 54 17.3 +0.3**
JAGI Jajag, Banyuwa 67.43 268 P **P** **17 54 17.9 -1.6**
JAGI Jajag, Banyuwa 67.43 268 P **P** **17 54 19.0 -0.5**
comp=Z,1µmcomp=Z,195nm,0.8s
MYLDM Lahad Datu 67.52 283 P **P** **17 54 20.5 +0.4**
MYLDM IAmb IAmb 17 54 35.7
comp=Z,63nm,1.0s
ABJI Asem Bagus 67.53 269 P **P** **17 54 20.1 0.0**
comp=Z,84nm,0.9s
SJMP San Jose 67.95 292 *eP* **P** **17 54 22.1 -0.6**
KMMI Kalianget 67.98 269 P **P** **17 54 24.0 +1.1**
comp=Z,101nm,1.1s
BBKI Banjar Baru 68.16 273 P **P** **17 54 24.4 +0.3**
comp=Z,72nm,0.9s
BBKI pP **pP** **17 55 46.5 -0.3**
comp=Z,72nm,0.9s
JGF Kuroka 68.18 321 IAmb IAmb 17 54 26.4
comp=Z,25nm,0.6s
INU Inuyama 68.22 321 P **P** **17 54 23.8 -0.1**
INU IAmb IAmb 17 54 25.7
comp=Z,75nm,1.6s
MJAR Matsushiro Arr 68.32 322 P **P** **17 54 24.0 -0.5**
comp=Z,38nm,0.8s,baz=156,slow=6.3,SNR=63
MJAR pP **pP** **17 55 46.0 -0.9**
comp=Z,19nm,1.1s,baz=156,slow=6.3,SNR=5.7
MJAR Matsushiro Arr 68.32 322 P **P** **17 54 23.7 -0.8**
MJAR **pP** **17 55 47.2 +0.3**
MAJO Matsushiro 68.32 322 *d iP* **P** **17 54 24.1 -0.4**
MAJO pmax pmax
comp=Z,24nm,0.8s
MAJO Matsushiro 68.32 322 P **P** **17 54 23.7 -0.8**
MAJO IAmb IAmb 17 54 24.9
comp=Z,34nm,0.8s
MAJO pP **pP** **17 55 46.3 -0.6**
MAT Matsushiro 68.32 322 P **P** **17 54 23.5 -1.0**
MAT S **S** **18 02 53.4 -1.0**
TGY Tagaytay City 68.79 293 P **P** **17 54 28.5 +0.6**
comp=Z,21nm,0.3s,baz=256,slow=3.4,SNR=3.7
MTKI Muara Teweh, K 68.87 276 P **P** **17 54 29.8 +1.4**
comp=Z,42nm,0.9s
MTKI pP **pP** **17 55 51.6 +0.1**
comp=Z,42nm,0.9s
JOW Kunigami 68.96 309 P **P** **17 54 28.7 +0.1**
comp=Z,25nm,0.8s,baz=166,slow=3.9,SNR=6.8
JOW Kunigami 68.96 309 P **P** **17 54 29.5 +0.8**
JOW IAmb IAmb 17 54 30.4
comp=Z,41nm,1.0s
ADK Adak 68.97 0 P **P** **17 54 28.2 +0.1**
ADK pmax pmax
comp=Z,83nm,1.2s
ADK Adak 68.97 0 P **P** **17 54 28.1 +0.1**
ADK IAmb IAmb 17 54 32.6
comp=Z,83nm,1.2s
JWT Wachi 69.16 320 P **P** **17 54 29.7 0.0**
JWT IAmb IAmb 17 54 31.2
comp=Z,48nm,1.2s
SPMM Sapulut 69.25 282 P **P** **17 54 29.0 -1.7**
JSD Sado 69.33 324 P **P** **17 54 30.4 -0.2**
JSD IAmb IAmb 17 54 31.1
comp=Z,34nm,0.8s
ATKA Atka Island 69.33 2 P **P** **17 54 29.7 -0.6**
ATKA IAmb IAmb 17 54 35.1
comp=Z,93nm,1.2s
BATP Bataraza 69.49 287 *eP* **P** **17 54 32.0 -0.1**
JTM Tenmabayashi 69.76 327 P **P** **17 54 33.3 +0.1**
KKM Kota Kinabalu 69.95 283 P **P** **17 54 35.0 0.0**
KKM IAmb IAmb 17 54 40.3
comp=Z,25nm,0.7s
JSU Suzuyama 70.05 314 P **P** **17 54 35.2 +0.1**
JSU IAmb IAmb 17 55 58.5
comp=Z,111nm,1.5s
APYP Conner 70.16 297 *eP* **P** **17 54 35.8 -0.2**
SMY Shemya 70.25 354 P **P** **17 54 35.3 -0.5**
SMY pmax pmax
comp=Z,228nm,1.4s
SMY Shemya 70.25 354 P **P** **17 54 35.3 -0.5**
JHS Saijyo 70.41 318 P **P** **17 54 37.9 +0.6**
JHS IAmb IAmb 17 54 38.7
comp=Z,53nm,0.7s
NIKH Nikolski High 70.42 5 P **P** **17 54 36.3 -0.5**
SZP Santa 70.69 296 IAmb IAmb 17 55 06.5
comp=Z,141nm,1.7s
JNU Nakatsue 70.72 315 P **P** **17 54 38.5 -0.6**
comp=Z,29nm,0.7s,baz=53,slow=1.7,SNR=22
JNU Nakatsue 70.72 315 P **P** **17 54 38.9 -0.3**
JNU IAmb IAmb 17 54 40.1
comp=Z,41nm,0.8s
UGM Wanagama 71.04 267 P **P** **17 54 40.7 -0.8**
UGM Wanagama 71.04 267 P **P** **17 54 41.0 -0.5**
comp=Z,174nm,0.7s
SMRI Semarang 71.35 268 P **P** **17 54 45.2 +1.9**
comp=Z,154nm,0.9s
JKA Kamikawa-asahi 71.49 330 P **P** **17 54 43.4 0.0**
ASAJ Asahikawa 71.49 330 P **P** **17 54 43.3 -0.1**
comp=Z,28nm,0.6s,baz=234,slow=6.1,SNR=24
ASAJ Asahikawa 71.49 330 P **P** **17 54 43.4 0.0**
ASAJ pmax pmax
comp=Z,227nm,1.9s
YOJ Yonaguni jima 71.79 304 P **P** **17 54 45.6 0.0**
YOJ pmax pmax
comp=Z,113nm,0.9s
YOJ Yonaguni jima 71.79 304 P **P** **17 54 45.6 0.0**
STKI Sintang 72.43 276 P **P** **17 54 51.0 +1.3**
comp=Z,24nm,0.7s
SBUM Sibu 72.48 278 P **P** **17 54 50.0 +0.1**
YULB Yu-li 72.65 302 P **P** **17 54 49.0 -1.7**
YULB IAmb IAmb 17 54 54.9
comp=Z,28nm,0.7s
NACB Ninganchiao 72.78 303 IAmb IAmb 17 54 52.0
comp=Z,93nm,1.2s
SSLB Suanglung 73.11 302 IAmb IAmb 17 54 53.4
comp=Z,37nm,0.5s
TPUB Ta-pu 73.15 302 P **P** **17 54 52.8 -0.9**
YHNB Yeheng 73.19 303 IAmb IAmb 17 54 54.1
comp=Z,77nm,1.3s
PET Petropavlovsk 73.22 345 *eP* **P** **17 54 49.8 -3.5**
PET *e*PP **pP** **17 56 15.7 -1.1**
PET *e*SP **sP** **17 56 54.0 -2.7**
PET *eS* **SKiKP** **18 03 46.8 +2.6**
PET pmax pmax
comp=Z,29nm,1.1s
PET MLR MLR
comp=Z,200nm,19.0s
PEA0B Petropavlovsk- 73.54 344 P **P** **17 54 55.3 +0.1**
PEA0B pmax pmax
comp=Z,191nm,1.9s
PEA0B Petropavlovsk- 73.54 344 P **P** **17 54 55.2 +0.1**
PETK Petropavlovsk- 73.54 344 P **P** **17 54 54.8 -0.4**
comp=Z,18nm,0.4s,baz=116,slow=8.9,SNR=171
PETK Petropavlovsk- 73.54 344 P **P** **17 54 54.6 -0.5**
PETK **pP** **17 56 18.9 +0.1**
YSS Yuzh-Sakhalins 73.58 333 *eP* **P** **17 54 55.8 +0.3**
YSS *e* **17 55 15.0**
YSS *eS* **S** **18 03 52.0 -1.8**
YSS pmax pmax
comp=Z,50nm,0.8s
YSS smax smax
comp=E,600nm,8.2s
YSS Yuzh-Sakhalins 73.58 333 P **P** **17 54 55.9 +0.4**
YSS IAmb IAmb 17 54 57.3
comp=Z,38nm,0.9s
KSM Kuching 73.98 277 IAmb IAmb 17 55 03.0
comp=Z,62nm,0.9s
KSM Kuching 73.98 277 P **P** **17 54 59.0 +0.4**
CBJI Citeko 74.95 268 P **P** **17 55 04.7 +0.6**
comp=Z,182nm,0.7s
TJN Taejon 74.97 316 *eP* **P** **17 55 03.3 -0.4**
XMIS Christmas Isla 75.00 264 IAmb IAmb 17 55 08.1
comp=Z,34nm,0.8s
DBJI Dramaga 75.01 268 P **P** **17 55 04.1 -0.4**
comp=Z,5µmcomp=Z,67nm,1.1s
SAO San Andreas Ge 75.10 43 P **P** **17 55 05.7 +1.2**

SAO pmax pmax
comp=Z,76nm,1.7s
SAO San Andreas Ge 75.10 43 P **P** **17 55 05.7 +1.2**
SAO lAmb lAmb 17 55 08.0
comp=Z,76nm,1.6s
TPI Tanjungpandan 75.23 272 P **P** **17 55 05.9 +0.2**
comp=Z,34nm,0.9s
KSRS Korea Array 75.23 318 P **P** **17 55 05.9 +0.7**
comp=Z,17nm,0.8s,baz=126,slow=6.7,SNR=75
CIS Catalina Islan 75.29 48 P 17 55 07.5
baz=237
KS19 Wonju Array Si 75.30 318 P **P** **17 55 05.4 -0.2**
UGL Uglegorsk 75.50 334 *eP* **P** **17 55 05.7 -0.7**
UGL pmax pmax
comp=Z,60nm,1.0s
KMRM Mail Ridge 75.74 39 lAmb lAmb 17 55 12.4
comp=Z,54nm,0.7s
MWC Mount Wilson 75.98 47 P **P** **17 55 11.2 +1.5**
MWC pmax pmax
comp=Z,26nm,1.0s
MWC Mount Wilson 75.98 47 P **P** **17 55 11.2 +1.5**
KHMM Horse Mountain 76.13 39 P **P** **17 55 11.9 +1.6**
KHMM lAmb lAmb 17 55 19.4
comp=Z,50nm,1.4s
VES Vestal, Richgr 76.15 45 P 17 55 12.5
baz=236
MURC Murrieta 76.25 48 P 17 55 13.3
baz=238
BFSC Mount Baldy Ra 76.27 47 P 17 55 13.0
baz=238,SNR=11
O02D Mt. Diablo Mer 76.27 40 P 17 55 14.0
baz=233
EDW2 Edwards Air Fo 76.38 46 P 17 55 13.6
baz=237,SNR=15
MSHR Mys Shultsa 76.39 323⇑ *eP* **P** **17 55 12.9 +1.3**
MSHR pmax pmax
comp=Z,47nm,1.3s
MONP2 Monument Peak 76.44 49 P 17 55 14.6
baz=239,SNR=22
ISA Isabella, Lake 76.47 46 P 17 55 14.4
baz=237,SNR=12
ISA Isabella, Lake 76.47 46 P **P** **17 55 14.2 +1.9**
ISA pmax pmax
comp=Z,18nm,1.0s
ISA Isabella, Lake 76.47 46 P **P** **17 55 14.2 +1.9**
ISA pP **pP** **17 56 37.2 +0.5**
CMB Columbia Colle 76.52 43 P **P** **17 55 13.7 +1.2**
CMB pmax pmax
comp=Z,12nm,0.9s
CMB Columbia Colle 76.52 43 P **P** **17 55 13.7 +1.2**
IKP In-Ko-Pah, Jac 76.54 49 P 17 55 15.1
baz=239,SNR=11
TYV Tymovskoe 76.63 335 *eP* **P** **17 55 13.1 +0.4**
TYV pmax pmax
comp=Z,200nm,2.8s
TYV pmax pmax
comp=Z,30nm,1.1s
WDC Whiskeytown Da 76.67 40 P **P** **17 55 14.3 +1.1**
WDC pmax pmax
comp=Z,13nm,0.9s
WDC Whiskeytown Da 76.67 40 P **P** **17 55 14.3 +1.1**
ORV Oroville 76.70 41 pP pP 17 56 35.8 -2.0
BLSI Bandar Lampung 76.78 268 P **P** **17 55 13.0 -1.4**
comp=Z,105nm,0.6s
PFO Pinyon Flats O 76.78 48 P 17 55 16.2
baz=239,SNR=7.9
PFO Pinyon Flats O 76.78 48 P **P** **17 55 15.4 +1.2**
comp=Z,9.0nm,0.7s,baz=260,slow=4.6,SNR=14
PFO Pinyon Flats O 76.78 48 *ceP* **P** **17 55 15.8 +1.7**
PFO pmax pmax
comp=Z,16nm,0.9s
PFO Pinyon Flats O 76.78 48 P **P** **17 55 15.8 +1.7**
TPFO Pinon Flats 76.78 48 P 17 55 16.2
baz=239,SNR=6.6
N02D Trinity Center 76.80 39 P 17 55 16.5
baz=233
PPBI Pangkal Pinang 76.85 272 P **P** **17 55 15.2 +0.4**
comp=Z,53nm,0.9s
OHAK Old Harbor 76.91 13 P 17 55 14.5
baz=203
LRMC Laurel Mtn Rad 76.91 46 P 17 55 16.8
baz=237,SNR=6.2
SWSC Sam W. Stewart 76.91 49 P 17 55 17.0
baz=239
O03E Paynes Creek 76.95 40 P 17 55 16.3
baz=234
M02C Callahan 76.97 39 P 17 55 17.5
baz=232
USA0B Ussuriysk Arra 76.97 325⇑ *eP* **P** **17 55 15.5 +0.8**
USRK Ussuriysk Ar. 76.97 325 P **P** **17 55 14.6 -0.1**
comp=Z,5.4nm,0.7s,baz=168,slow=4.8,SNR=15
USRK pP **pP** **17 56 38.8 -0.6**
comp=Z,6.0nm,1.0s,baz=148,slow=6.6,SNR=3.2
USRK Ussuriysk Ar. 76.97 325 P **P** **17 55 14.9 +0.2**
USRK *PP **pP** **17 56 39.3 -0.1**
USRK Ussuriysk Ar. 76.97 325 P **P** **17 55 14.9 +0.2**
USRK pP **pP** **17 56 39.3 -0.1**
L02E Cave Junction 76.99 38 P 17 55 17.3
baz=232
SLBS Sierra La Lagu 77.11 60 P **P** **17 55 17.9 +1.8**
SLBS lAmb lAmb 17 55 19.7
comp=Z,70nm,1.6s
CWC Cottonwood Cre 77.16 45 P 17 55 18.1
baz=237
YBH Yreka Blue Hor 77.26 39 P **P** **17 55 17.7 +1.2**
comp=Z,9.5nm,0.5s,baz=198,slow=3.0,SNR=29
K02D Willamette Mer 77.29 37 P 17 55 18.8
baz=232
BELC Belle Mtn. Jos 77.31 48 P 17 55 19.3
baz=239,SNR=13
MPMC Manual Prospec 77.36 46 P 17 55 19.4
baz=237,SNR=20
WAKR Walker 77.41 43 lAmb lAmb 17 55 22.2
comp=Z,36nm,1.2s
KASI Kota Agung 77.45 268 P **P** **17 55 16.9 -1.2**
comp=Z,1µmcomp=Z,188nm,0.9s
KLSI 77.46 269 P **P** **17 55 16.8 -1.3**
comp=Z,3.5nm,0.8s
HEC Hector,Ludlow 77.50 47 P 17 55 19.9
baz=238,SNR=13
BC3 Big Chuckawall 77.52 49 P 17 55 20.4
baz=239,SNR=8.3
KDAK Kodiak Island 77.58 13 P 17 55 18.2
baz=204
KDAK Kodiak Island 77.58 13 P **P** **17 55 18.3 +0.6**
comp=Z,12nm,0.4s,baz=235,slow=2.8,SNR=20
KDAK Kodiak Island 77.58 13⇑ *eP* **P** **17 55 18.9 +1.2**
KDAK pmax pmax
comp=Z,70nm,1.5s
KDAK Kodiak Island 77.58 13 P **P** **17 55 18.3 +0.6**
BEKR Beckworth 77.59 41 lAmb lAmb 17 55 22.7
comp=Z,43nm,1.4s
BEKR pP pP 17 56 42.8 -0.5
PNTR Pine Nut 77.63 42 P **P** **17 55 20.3 +1.5**
PNTR lAmb lAmb 17 55 23.3
comp=Z,35nm,0.7s
HUMO Hull Mountain 77.65 38 P **P** **17 55 19.8 +1.3**
HUMO pP **pP** **17 56 42.8 -0.4**
HUMO lAmb lAmb 17 56 49.9
comp=Z,68nm,1.9s
GLA Glamis 77.67 49 P 17 55 21.4
baz=240
GLA Glamis 77.67 49 lAmb lAmb 17 55 23.0
comp=Z,54nm,1.3s
L04D Klamath Falls 77.79 38 P 17 55 21.8
baz=233
YERR Yerington 77.80 42 P **P** **17 55 20.7 +1.0**
YERR lAmb lAmb 17 55 23.3
comp=Z,36nm,0.5s
M04C Macdoel 77.81 39 P 17 55 21.6
baz=233
LHV Little Huntoon 77.87 43 P **P** **17 55 21.6 +1.8**
LHV lAmb lAmb 17 55 23.6
comp=Z,24nm,0.9s
LHV pP **pP** **17 56 43.6 -0.9**
GMRC Granite Mounta 77.95 48 P 17 55 22.6
baz=239,SNR=11
IRM Iron Mountain 78.00 48 P 17 55 23.1
baz=239,SNR=10.0
FURC Furnace Creek, 78.00 46 P 17 55 22.6
baz=238
LWLI Liwa 78.01 268 P **P** **17 55 20.3 -1.0**
comp=Z,4µmcomp=Z,115nm,0.7s
RYN Ryan 78.07 43 lAmb lAmb 17 55 25.4
comp=Z,32nm,1.3s
I03D Drain, OR 78.09 37 P 17 55 23.0
baz=232

NVAR Mina Array Bea 78.10 43 P **P** **17 55 23.4 +2.0**
comp=Z,22nm,0.6s,baz=226,slow=8.0,SNR=76
NVAR pP **pwP** **17 56 47.6 -1.3**
comp=Z,5.2nm,0.9s,baz=229,slow=8.2,SNR=2.1
NVAR Mina Array Bea 78.10 43 P **P** **17 55 22.4 +1.0**
PAHR Pah Rah Range 78.12 42 P **P** **17 55 21.9 +0.5**
NV11 Mina Array Sit 78.20 43 P **P** **17 55 23.0 +1.2**
NV11 lAmb lAmb 17 55 25.1
comp=Z,22nm,0.7s
NV11 pP **pP** **17 56 46.7 0.0**
J04D Umpqua Nationa 78.53 38 P 17 55 26.7
baz=233
MDJ Mudanjiang 78.56 324 P **P** **17 55 24.7 +1.3**
MDJ pP pwP 17 56 50.4 -1.0
MDJ pmax pmax
comp=Z,36nm,0.9s
MDJ pmax pmax
comp=Z,800nm,4.8s
MDJ Mudanjiang 78.56 324 lAmb lAmb 17 55 25.4
comp=Z,28nm,0.9s
KVN Kaiserville 78.58 43 lAmb lAmb 17 55 27.1
comp=Z,23nm,0.7s
214A Organ Pipe Nat 78.61 51 P 17 55 26.2
baz=241
214A Organ Pipe Nat 78.62 51 lAmb lAmb 17 55 28.1
comp=Z,30nm,1.1s
TPH Tonopah 78.62 44 P **P** **17 55 25.6 +1.4**
TPH **pP** **17 56 50.0 +1.0**
HSIG 78.66 55 lAmb lAmb 17 55 27.7
comp=Z,64nm,1.7s
TPNV Topopah Spring 78.67 45 P 17 55 26.5
baz=238,SNR=19
NJ2 Nanjing 78.67 309 *eP* **P** **17 55 24.8 +0.5**
NJ2 pmax pmax
comp=Z,23nm,0.5s
I04A Tendick Farm, 78.69 37 P 17 55 26.8
baz=232
PDMCI Parker Dam,Lak 78.79 49 P 17 55 27.1
baz=240,SNR=9.3
MOD Modoc Plateau 78.81 39 P **P** **17 55 25.7 +0.7**
LHSI Lahat 78.86 269 P **P** **17 55 25.3 -0.4**
comp=Z,36nm,1.0s
K05A Summer Lake 78.94 39 pP pP 17 56 52.1 +1.4
H04D Lebanon 78.95 36 P 17 55 28.5
baz=232
J05D Fort Rock, OR 79.06 38 P 17 55 28.2
baz=233
DLV T Lat 79.17 286 lAmb lAmb 17 55 32.9
comp=Z,33nm,1.0s
SHPR Sheep Range 79.19 46 P **P** **17 55 28.3 +1.0**
GRNR Gornyy 79.21 332⇓ *iP* **P** **17 55 27.3 +0.5**
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=Z,220nm,15.0s
H04A Detroit Lake 79.36 36 P **P** **17 55 29.0 +1.3**
PINE Pine Mountain 79.54 38 P **P** **17 55 30.6 +1.6**
PINE lAmb lAmb 17 55 32.5
comp=Z,25nm,0.8s
PINE pP **pP** **17 56 55.3 +1.3**
PRN Pahroc Range 79.73 46 P **P** **17 55 31.7 +1.6**
PRN pP **pP** **17 56 56.4 +1.2**
BRLK Bradley Lake 79.75 13 lAmb lAmb 17 57 00.1
comp=Z,67nm,1.4s
BRSE Bradley Lake S 79.76 13 P 17 55 30.1
baz=205
R11A Troy Canyon, C 79.86 45 P 17 55 32.4
baz=238,SNR=12
RSO Redoubt South 80.00 12 P **P** **17 55 30.6 -0.5**
WVOR Wild Horse Val 80.13 40 lAmb lAmb 17 55 36.6
comp=Z,18nm,0.7s
DL2 Dalian 80.16 316 P **P** **17 55 32.7 +0.6**
DL2 pP **pP** **17 56 56.9 -0.3**
DL2 sP **sP** **17 57 41.1 +4.4**
DL2 S **S** **18 05 07.1 +2.4**
DL2 pmax pmax
comp=Z,18nm,0.5s
MYKOM **Kota Tinggi 80.22 275** lAmb lAmb 17 55 37.5
comp=Z,26nm,1.0s
MYKOM **Kota Tinggi 80.22 275** P **P** **17 55 33.0 0.0**
E04D Cinebar 80.29 35 P 17 55 36.0
baz=232
TUC Tucson 80.30 52 P **P** **17 55 35.4 +2.3**
TUC pmax pmax
comp=Z,60nm,1.3s
TUC Tucson 80.30 52 P **P** **17 55 35.4 +2.3**
TUC lAmb lAmb 17 55 37.5
comp=Z,60nm,1.3s
TUC pP **pP** **17 56 59.4 +0.9**
TUC Tucson 80.30 52 P 17 55 36.0
baz=242
KLR Kul'dur 80.37 329 P **P** **17 55 33.5 +0.5**
comp=Z,4.5nm,0.6s,baz=87,slow=4.9,SNR=17
KLR Kul'dur 80.37 329⇓ *eP* **P** **17 55 33.2 +0.2**
KLR pmax pmax
comp=Z,7.0nm,0.8s
F05D White Salmon 80.49 36 P 17 55 35.8
baz=233
QIZ Qiongzhong 80.50 293 P **P** **17 55 34.8 +0.5**
QIZ pP **pP** **17 56 57.6 -2.3**
QIZ S **S** **18 05 11.2 +2.2**
QIZ sS **sS** **18 07 46.8 +6.4**
QIZ pmax pmax
comp=Z,300nm,13.1s
D03D Eldon 80.62 34 P 17 55 37.3
baz=231
SPCR Spurr Chakacha 80.79 12 P 17 55 35.8
baz=204
D05A Enumclaw 80.99 34 P **P** **17 55 37.9 +1.7**
D05A lAmb lAmb 17 55 40.8
comp=Z,83nm,1.3s
D05A **pwP** **17 57 03.5 -1.4**
GAMB Gambell 81.00 2 P 17 55 36.9
baz=185
GAMB Gambell 81.00 2 lAmb lAmb 17 55 39.3
comp=Z,51nm,1.6s
SPR3 Spring Creek 3 81.03 44 P **P** **17 55 38.4 +1.3**
MA2 Magadan 81.06 344 P **P** **17 55 35.2 -1.2**
comp=Z,7.3nm,0.6s,baz=132,slow=8.8,SNR=21
MA2 pP **pP** **17 57 01.5 -0.3**
comp=Z,7.1nm,1.0s,baz=134,slow=7.0,SNR=3.2
MA2 Magadan 81.06 344 *diP* **P** **17 55 35.7 -0.7**
MA2 pmax pmax
comp=Z,33nm,2.5s
MA2 Magadan 81.06 344 P **P** **17 55 35.3 -1.0**
MA2 pP **pP** **17 57 00.5 -1.3**
MA2 lAmb lAmb 17 57 05.7
comp=Z,108nm,1.8s
KNB Kanab 81.07 47 lAmb lAmb 17 55 42.3
comp=Z,32nm,1.3s
PSUT Pine Spring 81.12 45 P **P** **17 55 38.7 +1.3**
RC01 Rabbit Creek A 81.20 13 P 17 55 38.2
baz=206
PWL Port Wells 81.30 14 lAmb lAmb 17 55 40.9
comp=Z,49nm,1.2s
SUA Susitna One 81.32 12 P 17 55 38.0
baz=205
SUA Susitna One 81.32 12 lAmb lAmb 17 55 40.9
comp=Z,37nm,0.6s
ELK Elko 81.34 43 P **P** **17 55 40.0 +1.4**
ELK pP **pP** **17 57 04.5 +0.4**
WUAZ Wupatki 81.37 49 P 17 55 41.3
baz=242
WUAZ Wupatki 81.37 49 lAmb lAmb 17 55 42.8
comp=Z,36nm,1.2s
WHN Wuhan 81.41 306⇑ *iP* **P** **17 55 40.1 +1.3**
WHN pP **pwP** **17 57 09.4 +2.3**
WHN S **S** **18 05 20.6 +2.7**
WHN pmax pmax
comp=Z,48nm,0.9s
G08A Pilot Rock 81.56 37 P **P** **17 55 40.4 +0.9**
G08A **pP** **17 57 04.6 -0.4**
B05A Bryant 81.59 34 P 17 55 40.8
baz=232
GLI Glacier Island 81.60 14 P 17 55 39.8
baz=209
GLI Glacier Island 81.61 14 P **P** **17 55 39.3 +0.1**
GLI lAmb lAmb 17 55 42.3
comp=Z,30nm,0.8s
PKCU Pink Cliffs 81.63 47 P **P** **17 55 41.5 +1.3**
PKCU lAmb lAmb 17 55 45.0
comp=Z,71nm,1.2s
PKCU pP **pP** **17 57 06.6 +0.7**
SKT Skwentna 81.64 12 P 17 55 38.6
baz=204
EYAK Cordova Ski Ar 81.64 15 P 17 55 39.9
baz=210
KNK Knik Glacier 81.77 13 P 17 55 40.6
baz=207
KNK Knik Glacier 81.77 13 lAmb lAmb 17 57 10.2
comp=Z,75nm,1.7s
RAGM Ragged Mountai 81.77 16 lAmb lAmb 17 55 42.3
comp=Z,54nm,1.4s
PMR Palmer 81.78 13 P 17 55 40.1
baz=207
PMR Palmer 81.78 13 P **P** **17 55 39.9 -0.1**
PMR *PP **pP** **17 57 05.9 +0.2**
PMR pmax pmax
comp=Z,36nm,1.4s
PMR Palmer 81.78 13 P **P** **17 55 39.9 -0.1**
PMR pP **pP** **17 57 05.9 +0.2**
PMR lAmb lAmb 17 57 11.0
comp=Z,36nm,1.4s
E07A Sunnyside 81.79 36 P **P** **17 55 41.4 +1.0**
HMT Hamilton 81.83 16 lAmb lAmb 17 55 44.2
comp=Z,43nm,1.2s
HAWA Hanford 81.87 36 P **P** **17 55 41.4 +0.6**
HAWA lAmb lAmb 17 55 44.2
comp=Z,22nm,0.8s
GHO Glory Hole Cre 81.98 13 lAmb lAmb 17 55 43.6
comp=Z,29nm,0.6s
MTPU Mount Pierson 82.01 46 lAmb lAmb 17 55 46.1
comp=Z,36nm,1.2s
TCRU Three Creeks R 82.11 46 lAmb lAmb 17 55 49.7
comp=Z,24nm,0.9s
SML Sawmill 82.14 13 P 17 55 41.9
baz=208
SML Sawmill 82.14 13 lAmb lAmb 17 57 13.1
comp=Z,73nm,1.7s
JRMM Jerantut 82.16 277 P **P** **17 55 44.0 +0.9**
ANM Nome 82.18 5 P 17 55 42.7
baz=191
ANM Nome 82.18 5 P **P** **17 55 42.1 +0.1**
ANM *PP **pP** **17 57 08.5 +0.7**
ANM pmax pmax
comp=Z,62nm,1.9s
ANM Nome 82.18 5 P **P** **17 55 42.1 +0.1**
ANM lAmb lAmb 17 55 45.7
comp=Z,62nm,1.9s
ANM **pP** **17 57 08.5 +0.7**
E08A Dider Farm, El 82.20 36 lAmb lAmb 17 55 45.8
comp=Z,24nm,0.7s
CUT Chulitna 82.27 12 P 17 55 42.2
baz=206,SNR=20
BMRM Bremner River 82.29 15 P 17 55 42.8
baz=211
BMRM Bremner River 82.29 15 P **P** **17 55 42.7 -0.1**
BMRM pP **pP** **17 57 07.8 -0.6**
BMRM lAmb lAmb 17 57 14.1
comp=Z,54nm,1.2s
PPLA Purkeypile 82.35 11 P 17 55 42.5
baz=204
W18A Petrified Fore 82.36 50 P 17 55 46.2
baz=243
W18A Petrified Fore 82.37 50 P **P** **17 55 45.9 +2.0**
W18A lAmb lAmb 17 55 47.9
comp=Z,26nm,0.8s
SCM Sheep Creek Mo 82.39 14 lAmb lAmb 17 55 45.7
comp=Z,33nm,0.6s
KLU Klutina 82.42 14 P 17 55 44.2
baz=210
KLU Klutina 82.42 14 lAmb lAmb 17 57 13.2
comp=Z,48nm,1.8s
BKNI Bangkinang 82.45 273 P **P** **17 55 44.2 -0.4**
comp=Z,87nm,0.6s
CRQE Cirque 82.49 16 P 17 55 44.1
baz=212
YAH Yahtse 82.53 17 P **P** **17 55 44.6 +0.4**
YAH lAmb lAmb 17 55 46.8
comp=Z,32nm,0.8s
D08A Wollman Farm, 82.60 36 P **P** **17 55 45.6 +1.0**
D08A pP **pP** **17 57 07.6 -2.7**
DUG Dugway, Tooele 82.65 44 P 17 55 47.0
baz=240,SNR=6.8
121A Cookes Peak, D 82.66 53 P 17 55 48.4
baz=244
121A Cookes Peak, D 82.66 53 P **P** **17 55 47.5 +2.0**
121A lAmb lAmb 17 55 49.3
comp=Z,87nm,1.5s
TABL Table Mountain 82.76 17 lAmb lAmb 17 55 47.7
comp=Z,31nm,0.8s
N25K Chitina, Valde 82.84 15 P 17 55 45.7
baz=211,SNR=19
N25K Chitina, Valde 82.84 15 lAmb lAmb 17 55 47.8
comp=Z,28nm,0.7s
GLB Gilahina Butte 82.89 15 P **P** **17 55 45.4 -0.4**
GLB lAmb lAmb 17 55 48.8
comp=Z,134nm,2.0s
GLB pP **pP** **17 57 11.8 +0.1**
M24K Tolsona, Glenn 82.89 14 P 17 55 47.1
baz=210,SNR=9.8
F10A Beach Ranch, E 82.95 37 P **P** **17 55 47.2 +0.7**
F10A lAmb lAmb 17 55 52.3
comp=Z,40nm,1.0s
ZAIG Zacatecas 82.95 64 lAmb lAmb 17 55 51.5
comp=Z,95nm,1.5s
WAT6 Susitna Watana 82.96 13 P 17 55 46.3
baz=208,SNR=26
TNA Tin City 82.97 4 P 17 55 46.4
baz=189
TNA Tin City 82.98 4 pP pP 17 57 12.6 +0.7
NLU North Lily Min 83.02 45 P **P** **17 55 48.7 +1.5**
MCARA **McCarthy VSAT 83.05 16** P 17 55 47.3
baz=212
MCARA **McCarthy VSAT 83.05 16** pP pP 17 57 12.0 -0.4
LOGN Logan Glacier 83.12 17 lAmb lAmb 17 55 49.4
comp=Z,27nm,1.0s
WAT2 Susitna Watana 83.12 13 P 17 55 46.9
baz=207,SNR=18
Q16A Castle Valley 83.13 46 lAmb lAmb 17 55 53.6
comp=Z,74nm,1.7s
BARN Barnard Glacie 83.14 16 P **P** **17 55 47.1 -0.1**
BARN pP **pP** **17 57 13.7 +0.5**
CTG Chitna Glacier 83.14 17 P 17 55 47.5
baz=214
CTGM Chitina Glacie 83.14 17 P **P** **17 55 47.1 -0.2**
CTGM **pP** **17 57 13.8 +0.7**
KTH Kantishna Hill 83.19 11 lAmb lAmb 17 55 49.9
comp=Z,30nm,1.0s
TRF Thorofare Moun 83.22 12 P 17 55 46.8
baz=206,SNR=34
BESE Bessie Mountai 83.22 21 P **P** **17 55 48.6 +1.0**
CHUM Lake Minchumin 83.23 11 P 17 55 46.8
baz=204,SNR=20
TMUT Trail Mountain 83.29 45 lAmb lAmb 17 55 52.6
comp=Z,88nm,1.3s
HLID Hailey 83.34 41 P 17 55 50.6
baz=238,SNR=51
HLID Hailey 83.34 41 **P** **17 55 50.2 +1.6**
SPUT South Promonto 83.44 43 lAmb lAmb 17 55 55.6
comp=Z,23nm,0.9s
RND Reindeer 83.46 12 P **P** **17 55 48.5 -0.2**
RND pmax pmax
comp=Z,194nm,1.6s
RND Reindeer 83.46 12 P **P** **17 55 48.5 -0.2**
HVU Hansel Valley 83.47 43 P **P** **17 55 50.6 +1.3**
HVU *PP **pP** **17 57 15.9 +0.5**
HVU pmax pmax
comp=Z,20nm,0.8s
HVU Hansel Valley 83.47 43 P **P** **17 55 50.6 +1.3**
HVU pP **pP** **17 57 15.9 +0.5**
SEY Seymchan 83.58 346 P **P** **17 55 48.5 -0.6**
comp=Z,18nm,0.6s,baz=147,slow=5.5,SNR=168
SEY pP **pP** **17 57 14.6 -0.7**
comp=Z,15nm,1.0s,baz=150,slow=6.3,SNR=5.2
SEY Seymchan 83.58 346⇓ *iP* **P** **17 55 48.7 -0.5**
SRU San Rafael Swe 83.67 46 P **P** **17 55 51.8 +1.4**
SRU *PP **pP** **17 57 17.8 +1.2**
SRU pmax pmax
comp=Z,106nm,1.5s
SRU San Rafael Swe 83.67 46 P **P** **17 55 51.8 +1.4**
SRU lAmb lAmb 17 55 53.8
comp=Z,106nm,1.5s
SRU pP **pP** **17 57 17.8 +1.2**
BPAW Bear Paw Mtn. 83.67 11 P 17 55 48.8
baz=205,SNR=12
P17A Butcher Ranch, 83.69 45 lAmb lAmb 17 55 54.2
comp=Z,58nm,1.5s
IPM Ipoh 83.72 277 lAmb lAmb 17 55 56.4
comp=Z,57nm,0.9s
IPM Ipoh 83.72 277 P **P** **17 55 52.0 +1.0**
SKAG Skagway 83.74 20 P 17 55 52.2

baz=220
MCK McKinley 83.74 12 P 17 55 49.6
baz=207,SNR=28
SKAG Skagway 83.74 20 lAmb lAmb 17 55 54.1
comp=Z,78nm,1.8s
MCK McKinley 83.74 12 lAmb lAmb 17 55 54.6
comp=Z,36nm,0.8s
PMSA Palmer Station 83.75 157 P **P** **17 55 52.0 +1.9**
PAX Paxson 83.81 14 P 17 55 50.4
baz=210
PAX Paxson 83.81 14 P **P** **17 55 50.5 0.0**
PAX lAmb lAmb 17 55 52.9
comp=Z,65nm,1.8s
PAX pP **pP** **17 57 17.1 +0.3**
LENM Lemitar 83.98 52 P **P** **17 55 53.5 +1.4**
MNSI Mandailing Nat 83.98 273 P **P** **17 55 52.7 +0.4**
comp=Z,24nm,0.8s
TCUT Toone Canyon 84.03 44 lAmb lAmb 17 55 57.4
comp=Z,46nm,0.9s
HYT Haines Junctio 84.13 18 P **P** **17 55 52.2 +0.1**
HYT **pWP** **17 57 20.1 -1.1**
MNTX Cornudas Mount 84.16 54 P **P** **17 55 54.3 +1.5**
MNTX lAmb lAmb 17 55 56.3
comp=Z,69nm,1.3s
MNTX Cornudas Mount 84.16 54 P 17 55 55.2
baz=246
MENT Mentasta 84.19 15 lAmb lAmb 17 55 54.8
comp=Z,45nm,1.3s
BNM Barren Site 84.23 52 P **P** **17 55 55.1 +1.7**
BNM pP **pP** **17 57 19.0 -0.6**
NEW Newport 84.29 35 P 17 55 54.0
baz=236
NEW Newport 84.29 35 P **P** **17 55 53.7 +0.6**
NEW pmax pmax
comp=Z,8.0nm,0.8s
NEW Newport 84.29 35 P **P** **17 55 53.7 +0.6**
KULM Kulim 84.33 277 P **P** **17 55 55.0 +1.0**
PV10 Paradox Valley 84.35 47 lAmb lAmb 17 55 56.3
comp=Z,55nm,1.4s
PV19 Morning Glory 84.36 47 P **P** **17 55 55.7 +1.7**
PV19 lAmb lAmb 17 55 57.2
comp=Z,35nm,1.1s
PV14 Lion Creek, Pa 84.36 47 lAmb lAmb 17 55 56.6
comp=Z,36nm,1.1s
PV17 East Wray Mesa 84.37 47 P **P** **17 55 55.4 +1.5**
PV17 pP **pP** **17 57 25.5 +5.1**
BJI Beijing 84.39 315 P **P** **17 55 54.3 +0.6**
BJI pP **pP** **17 57 21.2 +1.4**
BJI sP **sP** **17 58 01.2 +2.2**
BJI SKS **SKSac** **18 05 39.6 -0.9**
BJI S **S** **18 05 47.2 0.0**
BJI pmax pmax
comp=Z,20nm,1.1s
PV18 Skein Mesa, Pa 84.39 47 lAmb lAmb 17 55 56.6
comp=Z,43nm,1.3s
PV20 West Nyswonger 84.39 47 lAmb lAmb 17 55 57.3
comp=Z,51nm,1.2s
PV13 Radium Mtn., P 84.41 47 P **P** **17 55 55.4 +1.2**
PV13 lAmb lAmb 17 55 56.8
comp=Z,31nm,1.3s
PV16 Nyswonger Mesa 84.41 47 lAmb lAmb 17 55 56.9
comp=Z,46nm,1.4s
PV03 Paradox Valley 84.43 47 P **P** **17 55 55.9 +1.6**
PV03 lAmb lAmb 17 55 57.6
comp=Z,50nm,1.5s
PV11 David Mesa, Pa 84.44 47 lAmb lAmb 17 55 57.6
comp=Z,64nm,1.4s
PV04 Paradox Valley 84.46 47 P **P** **17 55 55.9 +1.5**
NEA2 Nenana 84.48 12 P 17 55 53.4
baz=207,SNR=11
PV02 Paradox Valley 84.49 47 lAmb lAmb 17 55 57.2
comp=Z,36nm,1.4s
PV02 pP pP 17 57 27.3 +6.2
PV12 Saucer Basin, 84.49 47 P **P** **17 55 55.9 +1.3**
TX32 Lajitas Array 84.56 57 P **P** **17 55 55.9 +1.0**
TXAR Lajitas Array 84.56 57 P **P** **17 55 57.8 +2.8**
comp=Z,48nm,1.1s,baz=219,slow=5.9,SNR=171
TXAR Lajitas Array 84.56 57 P **P** **17 55 57.2 +2.2**
TXAR Lajitas Array 84.56 57 P **P** **17 55 57.2 +2.2**
MLY Manley 84.57 11 P 17 55 53.3
baz=205,SNR=28
MLY Manley 84.57 11 lAmb lAmb 17 55 55.4
comp=Z,34nm,1.3s
WRH Wood River Hil 84.57 12 P **P** **17 55 53.1 -0.9**
WRH **pP** **17 57 20.1 -0.4**
PV01 Paradox Valley 84.57 47 lAmb lAmb 17 55 57.5
comp=Z,41nm,1.5s
PV22 Blue Mesa, Par 84.60 47 lAmb lAmb 17 55 57.8
comp=Z,34nm,1.3s
TLIG Tlapa 84.60 70 lAmb lAmb 17 55 59.6
comp=Z,77nm,1.5s
ANMO Albuquerque 84.70 51 P 17 55 57.5
baz=245
ANMO Albuquerque 84.70 51 *d i* P **P** **17 55 57.1 +1.4**
ANMO pmax pmax
comp=Z,22nm,1.2s
ANMO Albuquerque 84.70 51 P **P** **17 55 56.9 +1.2**
ANMO lAmb lAmb 17 55 59.3
comp=Z,31nm,1.3s
ANMO pP **pP** **17 57 22.6 +0.5**
DOT Dot Lake 84.72 14 P **P** **17 55 54.7 -0.2**
DOT lAmb lAmb 17 55 57.5
comp=Z,29nm,0.6s
DOT pP **pP** **17 57 21.8 +0.4**
HDA Harding Lake 84.75 13 P 17 55 54.6
baz=209,SNR=57
HDA P 17 55 54.6
baz=209,SNR=57
WHY Whitehorse 84.81 19 P **P** **17 55 55.6 +0.1**
WHY lAmb lAmb 17 55 58.2
comp=Z,39nm,1.4s
MAW Mawson 84.81 199 P **P** **17 55 55.7 +0.4**
comp=Z,38nm,1.0s,baz=92,slow=5.0,SNR=13
MAW Mawson 84.81 199 P **P** **17 55 56.6 +1.3**
baz=85,SNR=9.1
I23K Minto, Yukon-K 84.92 11 P 17 55 55.4
baz=206,SNR=23
I23K Minto, Yukon-K 84.93 11 P **P** **17 55 54.9 -0.9**
I23K pP **pP** **17 57 21.3 -0.8**
TCOL CIGO, UAF Yank 84.97 12 P 17 55 55.6
baz=208,SNR=17
COLA College 84.97 12 P 17 55 55.9
baz=208
COLA College 84.97 12 *d i* P **P** **17 55 55.5 -0.5**
COLA pmax pmax
comp=Z,29nm,0.8s
COLA College 84.97 12 P **P** **17 55 55.5 -0.5**
COLA pP **pP** **17 57 22.4 -0.1**
SCRK Sand Creek 85.02 14 P 17 55 56.5
baz=211,SNR=21
SCRK Sand Creek 85.02 14 P **P** **17 55 56.2 -0.3**
SCRK pP **pP** **17 57 23.7 +0.7**
AHID Auburn Hatcher 85.03 42 P **P** **17 55 58.4 +1.3**
IL31 85.08 12 lAmb lAmb 17 55 58.9
comp=Z,58nm,1.2s
ILAR Eielson Array 85.08 12 P **P** **17 55 56.0 -0.5**
comp=Z,13nm,0.4s,baz=225,slow=5.3,SNR=185
ILAR pP **pP** **17 57 23.4 +0.3**
comp=Z,6.8nm,0.9s,baz=227,slow=5.5,SNR=4.1
ILAR PKiKP **PKiKP** **18 01 05.2 -0.1**
comp=Z,0.9nm,0.6s,baz=247,slow=3.3,SNR=6.5
ILAR PKKPbc **PKKPbc** **18 14 01.1 -3.4**
comp=Z,0.6nm,0.8s,baz=327,slow=3.2,SNR=4.5
ILAR PKPPKP **P'P'df** **18 22 02.5 -5.2**
comp=Z,0.4nm,0.8s,baz=353,slow=2.3,SNR=4.3
ILAR Eielson Array 85.08 12 P **P** **17 55 55.4 -1.2**
ILAR pP **pP** **17 57 22.2 -0.9**
ILAR P'P'df 18 21 56.7 -11
POKR Poker Plat Res 85.27 12 P 17 55 57.7
baz=208,SNR=9.6
POKR Poker Plat Res 85.27 12 P **P** **17 55 57.2 -0.4**
POKR **pP** **17 57 23.4 -0.6**
MSO Missoula 85.33 38 P 17 55 59.6
baz=239
DLMT Dillon 85.38 40 P **P** **17 55 59.1 +0.4**
DLMT lAmb lAmb 17 56 02.2
comp=Z,21nm,0.8s
ZEA Zeya 85.40 330 *e* P **P** **17 55 58.7 +0.3**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,30nm,1.4s
REDW Red Top Meadow 85.48 42 lAmb lAmb 17 56 02.8
comp=Z,44nm,1.4s
K27K Chicken 85.51 15 P 17 55 59.9
baz=213
S22A 4UR Ranch, Cre 85.63 48 P 17 56 02.3
baz=244
LRM Limekiln Ridge 85.70 39 P **P** **17 56 01.2 +0.8**
O20A White River Ci 85.70 46 P 17 56 01.5
baz=243
O20A White River Ci 85.70 46 lAmb lAmb 17 56 04.8
comp=Z,41nm,1.4s
LOHW Long Hollow 85.76 42 P **P** **17 56 02.0 +1.2**
LOHW lAmb lAmb 17 56 06.1
comp=Z,36nm,1.8s
TSI Tuntungan 85.76 275 P **P** **17 56 02.4 +1.3**
comp=Z,55nm,0.9s
FLWY Flagg Ranch 85.93 41 P **P** **17 56 02.9 +1.4**
FLWY lAmb lAmb 17 56 07.4
comp=Z,110nm,2.0s
FLWY **pwP** **17 57 30.9 -0.4**
YHB Horse Butte 85.94 41 lAmb lAmb 17 56 04.8
comp=Z,27nm,1.1s
TIY Taiyuan 85.95 311 *e* P **P** **17 56 02.9 +1.4**
TIY S **SKSac** **18 05 54.0 +3.4**
TIY pmax pmax
comp=Z,99nm,0.7s
GYA Guiyang 85.98 299 ⇑P **P** **17 56 03.2 +1.2**
GYA pP pP 17 57 29.3 +0.7
GYA pmax pmax
comp=Z,38nm,0.9s
YHL Hebgen Lake 86.00 41 lAmb lAmb 17 56 06.0
comp=Z,38nm,0.8s
PRP Porcupine Dome 86.01 13 P 17 56 01.5
baz=210
PRP Porcupine Dome 86.01 13 P **P** **17 56 00.8 -0.5**
PRP lAmb lAmb 17 56 03.8
comp=Z,93nm,1.8s
PRP pP **pP** **17 57 27.9 -0.1**
BW06 Boulder Array 86.03 43 P 17 56 03.1
baz=242
PDAR Pinedale Array 86.03 43 P **P** **17 56 03.2 +1.2**
comp=Z,2.7nm,0.5s,baz=220,slow=3.9,SNR=30
PDAR pP **pP** **17 57 28.6 +0.1**
comp=Z,2.4nm,0.9s,baz=243,slow=4.0,SNR=2.6
PDAR PKKPbc **PKKPbc** **18 14 00.5 -0.9**
comp=Z,0.5nm,0.6s,baz=98,slow=7.6,SNR=4.2
PDAR Pinedale Array 86.03 43 P **P** **17 56 02.2 +0.1**
GSI Gunungsitoli 86.05 273 P **P** **17 56 03.3 +0.8**
comp=Z,116nm,0.8s
BILL Bilibino 86.06 354 *d i* P **P** **17 56 00.5 -0.8**
BILL *i* *PP **pP** **17 57 26.6 -1.3**
BILL *SP **sP** **17 58 12.0 +4.9**
BILL *i* S **SKSac** **18 05 49.1 -0.6**
BILL *i* 18 06 05.4
BILL *e* 18 07 00.6
BILL *e*SS **SS** **18 11 55.5 +4.3**
BILL pmax pmax
comp=Z,50nm,1.3s
BILL Bilibino 86.06 354 P **P** **17 56 00.7 -0.6**
BILL pP **pP** **17 57 26.4 -1.5**
BOZ Bozeman (W) 86.09 40 P 17 56 03.9
baz=240,SNR=29
BOZ Bozeman (W) 86.09 40 P **P** **17 56 03.1 +1.0**
BOZ lAmb lAmb 17 56 05.7
comp=Z,52nm,1.4s
BOZ **pP** **17 57 29.8 +1.1**
H17A Grant Village 86.15 41 P 17 56 05.6
baz=241,SNR=12
SMCO Snowmass 86.16 47 lAmb lAmb 17 56 05.3
comp=Z,44nm,1.7s
DAWY Dawson 86.21 16 P **P** **17 56 01.8 -0.4**
DAWY lAmb lAmb 17 56 06.2
comp=Z,15nm,0.7s
DAWY pP **pP** **17 57 29.8 +1.0**
EGAK Eagle 86.36 15 P 17 56 03.1
baz=214,SNR=18
EGAK Eagle 86.36 15 lAmb lAmb 17 57 32.7
comp=Z,85nm,1.9s
HRY Holter Researc 86.52 39 P **P** **17 56 05.6 +1.4**
SLVN Son La 86.53 293 lAmb lAmb 17 56 07.1
comp=Z,24nm,1.0s
PAYG Puerto Ayora 86.64 90 P **P** **17 56 07.8 +2.4**
COLD Coldfoot 86.65 10 P 17 56 05.0
baz=206,SNR=22
COLD Coldfoot 86.66 10 lAmb lAmb 17 57 34.6
comp=Z,34nm,1.3s
HIA Hailar 86.75 324 lAmb lAmb 17 57 36.9
comp=Z,82nm,1.8s
YNE Yellowstone No 86.80 41 lAmb lAmb 17 56 09.5
comp=Z,18nm,0.9s
TPTI 87.01 274 P **P** **17 56 07.4 +0.3**
comp=Z,5µmcomp=Z,27nm,0.8s
XAN Xi'an 87.04 307 P **P** **17 56 07.7 +0.9**
XAN pmax pmax
comp=Z,56nm,1.2s
XAN pmax pmax
comp=Z,170nm,3.5s
XAN LR LR
comp=Z,260nm,7.6s
XAN LR LR
comp=Z,260nm,12.5s
XAN LR LR
comp=Z,470nm,25.0s
MSTX Muleshoe 87.08 53 lAmb lAmb 17 56 09.5
comp=Z,22nm,0.9s
MSTX Muleshoe 87.08 53 P 17 56 08.8
baz=247
T25A Trinidad 87.12 50 P 17 56 08.6
baz=246
T25A Trinidad 87.12 50 P **P** **17 56 07.9 +0.5**
RLMT Red Lodge 87.32 41 P 17 56 10.2
baz=242,SNR=19
RLMT Red Lodge 87.32 41 lAmb lAmb 17 56 11.7
comp=Z,41nm,1.4s
ISCO Idaho Springs 87.37 47 P **P** **17 56 09.0 +0.4**
ISCO pmax pmax
comp=Z,7.0nm,0.9s
ISCO Idaho Springs 87.37 47 P **P** **17 56 09.0 +0.4**
ISCO Idaho Springs 87.37 47 P 17 56 10.3
baz=245
N23A Red Feather La 87.61 46 P 17 56 11.3
baz=245
833A Chaparral WMA, 87.65 60 P 17 56 12.3
baz=249
HHC Hu-ho-hao-te 87.89 314 *e* P **P** **17 56 11.8 +1.0**
HHC pP pP 17 57 37.2 -0.5
HHC sP sP 17 58 16.0 -0.6
HHC PP **PP** **17 59 45.5 +2.0**
HHC SKS **SKSac** **18 06 03.5 +1.2**
HHC S **S** **18 06 20.8 -0.3**
HHC pmax pmax
comp=Z,37nm,0.9s
HHC pmax pmax
comp=Z,170nm,4.0s
K22A Casper 87.98 44 lAmb lAmb 17 56 16.5
comp=Z,54nm,1.9s
TOLK Toolik Lake Re 88.04 10 P 17 56 11.1
baz=206
TOLK Toolik Lake Re 88.04 10 P **P** **17 56 10.9 +0.2**
TOLK **pP** **17 57 37.9 -0.1**
JCT Junction City 88.10 57 lAmb lAmb 17 56 18.5
comp=Z,58nm,1.6s
JCT Junction City 88.10 57 P 17 56 13.8
baz=249
AMTX Amarillo 88.27 53 lAmb lAmb 17 56 14.9
comp=Z,33nm,1.2s
AMTX Amarillo 88.27 53 P 17 56 14.1
baz=248
EGMT Eagleton 88.39 38 P 17 56 14.4
baz=242
EGMT Eagleton 88.39 38 P **P** **17 56 13.8 +1.0**
EGMT lAmb lAmb 17 56 17.1
comp=Z,36nm,1.4s
KMI Kunming 88.82 297 ⇓P **P** **17 56 17.4 +1.8**
KMI pP pwP 17 57 44.8 -0.4
KMI sP sP 17 58 24.0 +1.7
KMI SKS **SKSac** **18 06 09.4 +0.7**
KMI S **ScS** **18 06 33.5 -1.0**
KMI pmax pmax
comp=Z,36nm,1.4s
KMI pmax pmax
comp=Z,150nm,5.1s
KMI LR LR
comp=Z,330nm,18.9s
KMI LR LR
comp=Z,280nm,21.7s
KMI LR LR
comp=Z,300nm,32.7s
KMI Kunming 88.82 297 lAmb lAmb 17 56 18.3
comp=Z,81nm,1.5s
ABTX Abilene, Hawle 89.00 55 P 17 56 17.9
baz=249
YAK Yakutsk 89.61 338 P **P** **17 56 17.4 -0.6**
comp=Z,11nm,0.6s,baz=242,slow=0.7,SNR=10
YAK Yakutsk 89.61 338 *e*P **P** **17 56 16.7 -1.4**
YAK *e* 17 59 51.5
YAK *e*S **SKSac** **18 06 07.4 -3.7**
YAK *e* 18 06 36.7
YAK pmax pmax
comp=Z,16nm,0.8s
YAK pmax pmax
comp=N,2.0nm,0.7s
YAK smax smax
comp=N,150nm,2.5s
YAK smax smax
comp=E,116nm,2.7s
LAO LASA Array 89.92 41 P 17 56 22.6
baz=244
CD2 Chengdu 89.94 302 P **P** **17 56 22.1 +1.6**
CD2 pP pwP 17 57 50.1 -0.6
CD2 S **S** **18 06 39.9 -0.4**
CD2 sS sS 18 09 17.7 +2.2
CD2 pmax pmax
comp=E,40nm,0.9s
CD2 pmax pmax
comp=E,240nm,6.3s
SYO Syowa Base 89.96 192 ⇓*e*X P 17 56 28.1 +8.3
435B Jarrell 89.99 58 P 17 56 23.3
baz=250
435B Jarrell 89.99 58 P **P** **17 56 22.1 +1.4**
435B lAmb lAmb 17 56 23.9
comp=Z,38nm,0.8s
CM31 Chiang Mai Arr 90.00 289 lAmb lAmb 17 56 23.4
comp=Z,29nm,1.0s
CMAR Chiang Mai Arr 90.00 289 P **P** **17 56 22.2 +1.3**
comp=Z,16nm,0.9s,baz=104,slow=2.8,SNR=82
CMAR PKiKP **PKiKP** **18 01 15.5 +0.7**
comp=Z,1.3nm,0.7s,baz=256,slow=0.2,SNR=4.2
CMAR PKKPbc **PKKPbc** **18 13 50.5 +0.4**
comp=Z,2.9nm,1.0s,baz=286,slow=4.4,SNR=12
CMAR Chiang Mai Arr 90.00 289 P **P** **17 56 21.2 +0.2**
CMAR **pP** **17 57 48.5 +0.1**
CMAR **PKiKP** **18 01 14.8 0.0**
CMAR PKKPdf **PKKPbc** **18 13 49.9 -0.2**
CCIG Comitan 90.01 73 lAmb lAmb 17 56 25.1
comp=Z,48nm,1.2s
CHTO Chiang Mai 90.11 290 P **P** **17 56 21.7 +0.2**
CHTO *PP **pP** **17 57 49.6 +0.7**
CHTO pmax pmax
comp=Z,26nm,1.0s
CHTO Chiang Mai 90.11 290 P **P** **17 56 21.7 +0.2**
CHTO lAmb lAmb 17 56 23.5
comp=Z,26nm,0.9s
CHTO pP **pP** **17 57 49.6 +0.7**
RSSD Black Hills 90.24 44 P 17 56 23.1
baz=246
RSSD Black Hills 90.24 44 P **P** **17 56 22.7 +0.9**
RSSD pmax pmax
comp=Z,66nm,1.5s
RSSD Black Hills 90.24 44 P **P** **17 56 22.7 +0.9**
RSSD lAmb lAmb 17 56 23.9
comp=Z,66nm,1.5s
WHTX Lake Whitney, 90.51 57 P 17 56 25.2
baz=250
PLCA Paso Flores 90.69 133 P **P** **17 56 25.4 +1.4**
comp=Z,47nm,0.9s,baz=233,slow=4.3,SNR=54
PLCA PKKPbc **PKKPbc** **18 13 47.5 -1.5**
comp=Z,2.2nm,0.9s,baz=28,slow=5.8,SNR=5.3
U32A Winter Ranch, 90.84 52 lAmb lAmb 17 56 27.1
comp=Z,75nm,1.6s
INK Inuvik 91.03 15 P **P** **17 56 23.9 -0.6**
comp=Z,12nm,0.7s,baz=224,slow=3.4,SNR=36
INK pP **pP** **17 57 52.8 +0.9**
comp=Z,2.0nm,0.9s,baz=240,slow=11,SNR=2.4
INK PP **PP** **18 00 03.1 -4.2**
comp=Z,3.5nm,1.0s,baz=206,slow=8.3,SNR=3.4
INK Inuvik 91.03 15 P **P** **17 56 24.1 -0.5**
INK lAmb lAmb 17 56 26.3
comp=Z,39nm,1.3s
INK **pP** **17 57 50.5 -1.4**
SNAA Sanae 91.08 178 P **P** **17 56 25.6 +0.6**
SNAA Sanae 91.08 178 PKiKP **PKiKP** **18 01 15.6 +0.3**
SNAA Sanae 91.08 178 PKKPbc PKKPbc 18 13 46.1 -3.1
comp=Z,2.2nm,1.1s,baz=98,slow=4.7,SNR=4.5
SNAA Sanae 91.08 178 *d i* P **P** **17 56 25.4 +0.4**
SNAA pmax pmax
comp=Z,62nm,1.2s
VNA3 Neumayer Olymp 91.17 176 P **P** **17 56 26.5 +1.1**
VNA3 Neumayer Olymp 91.17 176 PKiKP **PKiKP** **18 01 16.2 +0.7**
VNA2 Neumayer--Watz 91.62 177 P **P** **17 56 28.9 +1.4**
baz=188,slow=3.9
VNA2 Neumayer--Watz 91.62 177 PKiKP **PKiKP** **18 01 16.7 +0.4**
VNA2 Neumayer--Watz 91.62 177 pP pP 17 57 57.0 +2.2
LZH Lanzhou 91.66 307 ⇓P **P** **17 56 29.6 +1.1**
LZH pP pwP 17 57 58.0 -0.8
LZH sP sP 17 58 37.2 +2.3
LZH SKS **SKSac** **18 06 22.7 -1.7**
LZH S **S** **18 06 50.7 -5.0**
LZH sS sS 18 09 32.4 +0.8
LZH pmax pmax
comp=Z,72nm,1.2s
LZH pmax pmax
comp=Z,160nm,9.8s
BI02 San Fabin de 91.79 129 lAmb lAmb 17 56 32.4
comp=Z,28nm,1.1s
R32A Long Quarter, 91.79 50 P **P** **17 56 30.3 +1.5**
VNA1 Neumayer--Stat 91.84 176 P **P** **17 56 30.3 +1.9**
VNA1 Neumayer--Stat 91.84 176 PKiKP **PKiKP** **18 01 17.2 +0.6**
DGMT Dagmar 91.92 39 P 17 56 31.3
baz=246
MTO3 Montecristo 91.99 76 P **P** **17 56 32.3 +1.8**
MTO3 lAmb lAmb 17 56 33.6
comp=Z,34nm,1.1s
BO02 Sierra Bellavi 92.89 128 lAmb lAmb 17 56 37.5
comp=Z,39nm,1.2s
T35A Sooner Cattle 92.91 52 lAmb lAmb 17 56 36.5
comp=Z,35nm,0.9s
X37A Clayton 93.02 55 lAmb lAmb 17 56 36.8
comp=Z,14nm,0.8s
YKA Yellowknife Ar 93.29 24 P **P** **17 56 35.3 +0.2**
comp=Z,5.6nm,0.6s,baz=242,slow=4.4,SNR=96
YKA pP **pP** **17 58 03.9 +1.5**
comp=Z,2.2nm,1.1s,baz=242,slow=4.5,SNR=3.3
YKA PP **PP** **18 00 25.8 +0.7**
comp=Z,2.1nm,0.9s,baz=239,slow=7.3,SNR=6.8
YKA PKiKP **PKiKP** **18 01 19.7 +0.6**
comp=Z,0.5nm,0.6s,baz=248,slow=1.2,SNR=7.6
YKA PKKPbc **PKKPdf** **18 13 40.5 -1.2**
comp=Z,0.4nm,0.5s,baz=54,slow=2.6,SNR=5.1
YKA PKPPKP **P'P'df** **18 21 53.5 +1.1**
comp=Z,1.0nm,0.8s,baz=69,slow=3.5,SNR=8.0
KSU1 Kansas State U 93.56 50 P 17 56 39.1
baz=251
KSU1 Kansas State U 93.56 50 P **P** **17 56 36.9 0.0**
PEL Peldehue 93.61 126 P **P** **17 56 41.0 +3.5**
PEL pmax pmax
comp=Z,36nm,1.4s
ULN Ulaanbaatar 93.66 319 *d i* P **P** **17 56 36.9 -0.4**
ULN pmax pmax
comp=Z,19nm,1.4s
ULN Ulaanbaatar 93.66 319 P **P** **17 56 37.0 -0.4**
ULN **pP** **17 58 05.0 +0.2**
ULN lAmb lAmb 17 58 09.7
comp=Z,21nm,1.2s
VA03 San Esteban 93.87 126 P **P** **17 56 39.5 +0.8**
SONM Songino Array 94.06 319 P **P** **17 56 38.3 -0.9**
comp=Z,2.2nm,0.6s,baz=124,slow=4.5,SNR=14
SONM pP **pP** **17 58 07.3 +0.7**
comp=Z,3.0nm,1.0s,baz=121,slow=3.0,SNR=6.2
SONM PP **PP** **18 00 35.5 +3.9**
comp=Z,0.5nm,0.8s,baz=126,slow=6.6,SNR=3.5
SONM PKKPbc **PKKPbc** **18 13 41.1 -0.2**
comp=Z,2.0nm,1.1s,baz=256,slow=1.8,SNR=5.8
SONM PKPPKP **P'P'df** **18 21 51.0 -0.3**
comp=Z,0.5nm,0.9s,baz=211,slow=1.7,SNR=3.6
SONM Songino Array 94.06 319 P **P** **17 56 38.3 -0.9**
SONM pP **pP** **17 58 06.4 -0.2**
SONM **PKiKP** **18 01 21.2 +0.1**
C36M Paulatuk 94.20 16 P 17 56 39.1
baz=230
C36M Paulatuk 94.20 16 P **P** **17 56 38.9 -0.2**
C36M lAmb lAmb 17 56 40.9
comp=Z,32nm,1.6s
MIAR Mount Ida 94.41 55 lAmb lAmb 17 56 43.0
comp=Z,13nm,1.1s
MIAR Mount Ida 94.41 55 P 17 56 42.4

baz=252
W39A Magazine 94.45 55 P 17 56 42.9
baz=252
CO03 El Pedregal 94.52 124 IAmb IAmb 17 56 45.0
comp=Z,15nm,0.9s
GO04 Tololo Observa 94.69 123 P **P** **17 56 44.1 +1.4**
JTS Las Juntas de 94.92 81 *de*P **P** **17 56 45.4 +1.7**
JTS pmax pmax
comp=Z,19nm,1.0s
JTS Las Juntas de 94.92 81 P **P** **17 56 44.4 +0.7**
JTS IAmb IAmb 17 56 49.1
comp=Z,16nm,1.0s
ECSD EROS Data Cent 95.08 46 P 17 56 44.8
baz=251
LCO Las Campanas 95.22 122 P **P** **17 56 46.8 +1.6**
LCO pmax pmax
comp=Z,112nm,2.0s
LCO Las Campanas 95.22 122 P **P** **17 56 46.8 +1.6**
U40A Yellville 95.52 54 IAmb IAmb 17 56 48.1
comp=Z,12nm,1.1s
U40A Yellville 95.52 54 P 17 56 47.4
baz=253
S39A Bolivar 95.57 52 IAmb IAmb 17 56 48.7
comp=Z,43nm,1.9s
W41B Gary Mavity, V 95.64 55 P 17 56 48.5
baz=253
WHAR Wooly Hollow 95.65 55 P **P** **17 56 46.5 0.0**
WHAR IAmb IAmb 17 56 49.1
comp=Z,19nm,1.1s
GTA Gaotai 95.76 309 ⇑P **P** **17 56 47.8 +0.7**
GTA pP pP 17 58 14.6 -0.2
GTA sP sP 17 58 54.1 +0.4
GTA SKS **SKSac** **18 06 45.6 -0.7**
GTA pmax pmax
comp=Z,9.0nm,0.9s
GTA pmax pmax
comp=Z,79nm,4.4s
F33A 5 Mile Ranch, 95.98 44 IAmb IAmb 17 56 50.1
comp=Z,11nm,0.8s
P38A Dawn 95.99 50 IAmb IAmb 17 56 50.0
comp=Z,18nm,1.0s
TIXI Tiksi 96.00 345 P **P** **17 56 46.1 -1.2**
comp=Z,4.7nm,0.7s,baz=129,slow=4.0,SNR=16
TIXI PKiKP **PKiKP** **18 01 25.0 +1.4**
comp=Z,1.3nm,0.7s,baz=160,slow=2.5,SNR=4.0
TIXI Tiksi 96.00 345 ⇑*i*P **P** **17 56 46.7 -0.5**
TIXI pmax pmax
comp=Z,40nm,1.3s
TIXI Tiksi 96.00 345 P **P** **17 56 45.9 -1.3**
TIXI **pP** **17 58 12.3 -2.7**
MGMO Mountain Grove 96.21 53 P **P** **17 56 50.2 +1.2**
MGMO IAmb IAmb 17 56 51.4
comp=Z,16nm,0.8s
LCAR Lake Charles 96.76 54 IAmb IAmb 17 56 53.7
comp=Z,14nm,1.4s
P40A Paris 97.06 51 IAmb IAmb 17 56 55.7
comp=Z,11nm,0.9s
ULM Lac du Bonnet 97.63 40 P Pdif 17 56 55.1 +0.1
comp=Z,1.8nm,0.7s,baz=236,slow=6.0,SNR=4.2
ULM Lac du Bonnet 97.63 40⇓*e*P **P** **17 56 54.6 -0.5**
ULM Lac du Bonnet 97.63 40 P Pdif 17 56 55.1 +0.1
ULM IAmb IAmb 18 00 53.7
comp=Z,12nm,1.4s
F36A Milaca 97.83 44 IAmb IAmb 17 56 58.0
comp=Z,9.4nm,0.9s
SHL Shillong 98.32 294 IAmb IAmb 17 57 00.8
comp=Z,6.9nm,0.9s
L40A Anamosa 98.37 49 P Pdif 17 56 58.5 -0.1
MNMC Minye Minye 99.95 114 Pdif **Pdif** **17 57 06.1 -0.5**
LSA Lhasa 100.00 298 Pdiff **Pdif** **17 57 07.8 +1.1**
LPAZ La Paz 102.32 112 P **Pdif** **17 57 19.7 +2.2**
comp=Z,2.8nm,1.0s,baz=330,slow=2.7,SNR=8.5
LPAZ PP **PKiKP** **18 01 38.5 +1.2**
comp=Z,9.5nm,1.3s,baz=254,slow=8.3,SNR=7.6
LPAZ PKKPbc **PKKPbc** **18 13 18.1 +0.4**
comp=Z,1.9nm,0.8s,baz=105,slow=0.4,SNR=8.5
LPAZ La Paz 102.32 112 Pdif **Pdif** **17 57 19.8 +2.3**
LPAZ **PKiKP** **18 01 37.4 +0.1**
LPAZ **PKKPbc** **18 13 17.7 0.0**
TAPN Taplejung 102.38 295 *e*P **PKiKP** **18 01 37.3 +0.6**
comp=Z,2.4nm,0.2s
ODAN Odare 102.55 294 *e*P **PKiKP** **18 01 37.8 +0.8**
JIRN Jiri 103.77 295 *e*P **PKiKP** **18 01 39.5 +0.1**
comp=Z,17nm,0.6s
GUN Gumba 104.09 295 *e*P **PKiKP** **18 01 39.7 -0.2**
comp=Z,14nm,0.6s
PKI Pulchoki 104.43 295 *e*P **PKiKP** **18 01 40.1 -0.4**
comp=Z,13nm,0.6s
PKIN Phulchoki 104.44 295 *e*P **PKiKP** **18 01 40.0 -0.5**
comp=Z,16nm,0.7s
KKN Kakani 104.58 295 *e*P **PKiKP** **18 01 39.7 -0.9**
comp=Z,22nm,0.6s
DMN Daman 104.70 295 *e*P **PKiKP** **18 01 40.2 -0.7**
comp=Z,9.9nm,0.6s
GKN Gorkha 105.19 295 *e*P **PKiKP** **18 01 40.6 -1.1**
comp=Z,12nm,0.7s
DANN Dangsing 106.01 295 *e*P **PKiKP** **18 01 43.2 -0.2**
comp=Z,24nm,0.6s
KOLN Koldanda 106.04 295 *e*P **PKiKP** **18 01 42.8 -0.5**
comp=Z,9.9nm,0.6s
ZSN Zaisan 108.07 315 *e*PKiKP **PKiKP** **18 01 45.6 -0.7**
baz=315
ZAA0 Zalesovo Array 108.67 322 PKiKP **PKiKP** **18 01 46.3 -0.9**
ZALV Zalesovo Beam 108.67 322 PKiKP **PKiKP** **18 01 46.6 -0.5**
comp=Z,5.9nm,0.6s,baz=138,slow=1.0,SNR=31
ZALV PKKPbc **PKKPbc** **18 12 59.9 +0.8**
comp=Z,0.4nm,0.4s,baz=266,slow=4.0,SNR=4.8
MK31 Makanchi Array 109.76 314 Pdif **Pdif** **17 57 48.9 -0.2**
MK31 PKiKP **PKiKP** **18 01 48.9 -0.5**
MK31 PKKPbc **PKKPbc** **18 12 54.5 -0.9**
MKAR Makanchi Array 109.76 314 Pdiff **Pdif** **17 57 49.5 +0.4**
comp=Z,1.2nm,0.8s,baz=83,slow=6.0,SNR=5.4
MKAR PKiKP **PKiKP** **18 01 49.1 -0.3**
comp=Z,5.3nm,0.7s,baz=72,slow=0.7,SNR=40
MKAR PKKPbc **PKKPbc** **18 12 54.7 -0.7**
comp=Z,6.2nm,0.8s,baz=273,slow=2.7,SNR=42
MKAR Makanchi Array 109.76 314 Pdif **Pdif** **17 57 48.8 -0.4**
D55A Sainte-Anne-du 110.29 46 P 18 01 50.7
baz=266
SEM Semipalatinsk 111.31 318 *e*PKiKP **PKiKP** **18 01 51.0 -1.5**
baz=318
SEM *e*SKSac **SKSac** **18 07 55.8 -1.7**
baz=318
SEM Semipalatinsk 111.31 318 *i* PKiKP **PKiKP** **18 01 51.0 -1.5**
SEM *e* 18 07 55.7
PDGK Podgornoye 111.48 310 PKiKP **PKiKP** **18 01 52.2 -0.8**
SHLS Shalkode 111.49 310 *e*PKiKP **PKiKP** **18 01 51.5 -1.6**
baz=310
SHLS Shalkode 111.49 310 *i* PKiKP **PKiKP** **18 01 51.4 -1.6**
UZB Uzynbulak 111.81 310 *e*PKiKP **PKiKP** **18 01 52.8 -0.9**
baz=310
UZB *e*SKSac **SKSac** **18 07 58.6 -1.1**
baz=310
UZB Uzynbulak 111.81 310 *i* PKiKP **PKiKP** **18 01 52.7 -0.9**
UZB *e* 18 07 58.5
D58A Chemin du LacG 112.06 46 P 18 01 54.1
baz=268
KPKS Kokpek 112.08 310 *e*PKiKP **PKiKP** **18 01 53.3 -0.8**
baz=310
KPKS Kokpek 112.08 310 *i* PKiKP **PKiKP** **18 01 53.3 -0.8**
SATY Saty 112.25 310 *e*PKiKP **PKiKP** **18 01 53.5 -0.9**
baz=310
SATY *e*SKSac **SKSac** **18 08 00.2 -1.2**
baz=310
SATY Saty 112.25 310 *i* PKiKP **PKiKP** **18 01 53.5 -0.9**
SATY *e* 18 08 00.2
TDK Taldyqorghan 112.35 312 *e*PKiKP **PKiKP** **18 01 53.4 -1.1**
baz=312
TDK *e*SKSac **SKSac** **18 08 00.2 -1.2**
baz=312
TDK Taldyqorghan 112.35 312 *i* PKiKP **PKiKP** **18 01 53.3 -1.1**
TDK *e* 18 08 00.2
MDOK Medeo 113.25 310 *e*PKiKP **PKiKP** **18 01 55.7 -0.8**
baz=310
MDOK Medeo 113.25 310 *i* PKiKP **PKiKP** **18 01 55.6 -0.8**
TNSS Tian-Shan 113.32 310 *e*PKiKP **PKiKP** **18 01 56.5 -0.4**
baz=310
TNSS Tian-Shan 113.32 310 *i* PKiKP **PKiKP** **18 01 56.5 -0.4**
AAA Alma-Ata 113.35 310 *e*PKiKP **PKiKP** **18 01 55.9 -0.6**
baz=310
AAA Alma-Ata 113.35 310 *i* PKiKP **PKiKP** **18 01 55.9 -0.6**
KUU Kurty 113.79 311 *e*PKiKP **PKiKP** **18 01 55.7 -1.6**
baz=311
KUU Kurty 113.79 311 *i* PKiKP **PKiKP** **18 01 55.6 -1.6**
ULHL Ulahol 113.81 309 P **PKiKP** **18 01 58.2 +0.7**
SNR=6.1

TKM2 Tokmak 2 114.31 310 P PKPdf 18 01 58.1 -0.4
SNR=16
TKM2 Tokmak 2 114.31 310 PKiKP PKPdf 18 01 56.8 -1.7
NEEM North Greenlan 114.35 11 *i* P **PKiKP** **18 01 58.0 +0.2**
F63A Nahmakanta, Br 114.66 47 P 18 01 59.2
baz=270
D62A Allapoint, All 114.68 46 P 18 01 58.9
baz=271
KBK Karagaybulak 114.78 309 P **PKiKP** **18 01 59.7 +0.3**
SNR=15
CHMS Chumysh 114.93 310 P PKPdf 18 01 59.2 -0.3
SNR=8.9
SGDS Sogindy 115.03 310 *e*PKP **PKPdf** **18 01 58.9 -0.8**
baz=310
SGDS Sogindy 115.03 310 *e*PKiKP **PKPdf** **18 01 58.9 -0.8**
UCH Uchtor 115.09 309 P **PKiKP** **18 02 01.1 +0.8**
SNR=25
AAK Ala-Archa 115.11 309 PKP **PKiKP** **18 02 00.2 +0.2**
comp=Z,6.0nm,0.8s,baz=135,slow=3.9,SNR=33
AAK PKKPbc **PKKPbc** **18 12 38.7 +1.1**
comp=Z,4.8nm,0.8s,baz=254,slow=3.7,SNR=14
AAK Ala-Archa 115.11 309 P **PKiKP** **18 02 00.3 +0.3**
SNR=8.1
AAK Ala-Archa 115.11 309 *i* PKiKP **PKPdf** **18 01 59.8 -0.2**
SNR=14
AAK Ala-Archa 115.11 309*c* *i* PKiKP **PKPdf** **18 02 00.0 0.0**
AAK pmax pmax
comp=Z,45nm,1.7s
AAK Ala-Archa 115.11 309 PKiKP **PKPdf** **18 01 59.4 -0.6**
AAK PKKPbc **PKKPbc** **18 12 38.1 +0.5**
USP Ospenovka 115.12 310 P **PKPdf** **18 01 59.7 -0.1**
SNR=16
D63A Stockholm 115.33 46 P 18 02 00.4
baz=272
UPNV Upernavik 115.42 16 *i* P **PKPdf** **18 01 59.5 0.0**
BTLS Baital 115.45 312 *e*PKP **PKPdf** **18 01 59.6 -0.8**
baz=312
BTLS Baital 115.45 312 *e*PKiKP **PKPdf** **18 01 59.5 -0.8**
PTGA Pitinga 115.45 99 PKPdf **PKPdf** **18 02 00.8 -0.5**
E64A Bridgewater 115.53 46 P 18 02 00.5
baz=271
EKS2 Erkin-Say 115.64 309 P **PKiKP** **18 02 01.5 +0.5**
SNR=15
NIL Nilore 115.68 299 PKiKP **PKPdf** **18 01 59.7 -1.5**
NIL Nilore 115.68 299 PKPdf **PKPdf** **18 01 59.7 -1.5**
AML Almayashu 115.70 309 P **PKiKP** **18 02 01.8 +0.4**
SNR=28
BRZS Berezniki 116.18 318 *e*PKP **PKPdf** **18 02 00.4 -1.3**
baz=318
BRZS Berezniki 116.18 318 *e*PKiKP **PKPdf** **18 02 00.3 -1.3**
NUUG Nuugaatsiaq 116.78 17 *i* P **PKiKP** **18 02 02.2 +0.1**
BRVK Borovoye 117.36 321*d* *i* PKiKP **PKPdf** **18 02 03.2 -0.6**
BRVK pmax pmax
comp=Z,21nm,1.0s
BRVK Borovoye 117.36 321 PKPdf **PKPdf** **18 02 03.4 -0.3**
DZA Taraz 117.44 310 *e*PKP **PKPdf** **18 02 03.5 -0.8**
baz=310
DZA Taraz 117.44 310 *e*PKiKP **PKPdf** **18 02 03.5 -0.8**
KK31 Karatay Array 118.04 310 *i* PKiKP **PKPdf** **18 02 04.7 -0.7**
KK31 Karatay Array 118.04 310 PKPdf **PKPdf** **18 02 04.8 -0.7**
KK31 PKKPbc **PKKPbc** **18 12 27.6 +0.3**
KKAR Karatay Array 118.04 310 PKiKP **PKPdf** **18 02 04.9 -0.5**
KKAR Karatay Array 118.04 310 PKPdf **PKPdf** **18 02 04.9 -0.5**
IUG luzhnay 118.42 309 *e*PKP **PKPdf** **18 02 05.5 -0.8**
baz=309
IUG luzhnay 118.42 309 *e*PKiKP **PKPdf** **18 02 05.5 -0.8**
SPA0 Spitsbergen Ar 118.83 357 PKPdf **PKiKP** **18 02 06.2 +0.2**
SPA0 Spitsbergen Ar 118.83 357 *e*PKPdf **PKiKP** **18 02 06.5 +0.5**
KBL Kabul 119.21 300 PKiKP **PKPdf** **18 02 08.1 -0.1**
KBL Kabul 119.21 300 PKPdf **PKPdf** **18 02 08.1 -0.1**
DAG Danmarks Havn 119.56 6 *i* P **PKPdf** **18 02 06.7 -0.7**
SFJD Kangerlussuaq 119.70 21 *i* P **PKiKP** **18 02 07.9 0.0**
SUMG Summit 119.91 13 *i* P **PKiKP** **18 02 09.6 +0.8**
SUMG Summit 119.91 13 PKiKP **PKiKP** **18 02 08.9 +0.1**
SUMG Summit 119.91 13 PKPdf **PKiKP** **18 02 08.9 +0.1**
BDFB Brasilia 119.92 120 PKP **PKiKP** **18 02 10.3 +0.3**
comp=Z,7.5nm,0.8s,baz=277,slow=2.4,SNR=11
BDFB PKKPbc **PKKPbc** **18 12 21.8 +1.7**
comp=Z,2.6nm,0.7s,baz=83,slow=4.8,SNR=4.9
BDFB Brasilia 119.92 120 PKPdf **PKPdf** **18 02 09.9 -0.1**
NUUK Nuuk 120.55 25 *i* P **PKiKP** **18 02 10.4 +0.7**
SVE Sverdlovsk 121.96 327 *e*PKiKP **PKiKP** **18 02 12.8 +0.1**
SVE pmax pmax
comp=Z,41nm,0.9s
ARU Arti 123.17 327 *i* PKiKP **PKPdf** **18 02 14.9 +0.1**
ARU 18 03 58.2
ARU 18 08 50.3
ARU SP SP 18 13 11.9 -5.8
ARU Arti 123.17 327 PKPdf **PKPdf** **18 02 14.7 -0.1**
ARU PKKPbc **PKKPbc** **18 12 08.6 -0.2**
OPO Ambohidratompo 123.77 233 PKP **PKiKP** **18 02 17.6 -0.1**
comp=Z,8.8nm,0.7s,baz=112,slow=3.3,SNR=11
ISOG Isortoq, Green 124.43 20 *i* P **PKPdf** **18 02 16.8 -0.2**
AB31 Akbulak array 124.46 318 *i* PKiKP **PKPdf** **18 02 17.5 0.0**
ABKAR Akbulak array 124.46 318 PKPdf **PKPdf** **18 02 16.9 -0.6**
NRS Narsarsuaq 124.53 26 *i* P **PKiKP** **18 02 17.6 0.0**
SCO Scoresbysund 124.79 10 *i* P **PKiKP** **18 02 18.5 +0.6**
HAMF Hammerfest 125.30 352 *e*PKPdf **PKPdf** **18 02 18.5 0.0**
LVZ Lovozero 125.63 346 ⇓*i* PKiKP **PKiKP** **18 02 19.9 +0.2**
LVZ pmax pmax
comp=Z,10.0nm,0.7s
ARA0 ARCESS Array S 126.04 350 *e*PKPdf **PKiKP** **18 02 20.6 +0.2**
ARCES ARCESS Array B 126.04 350 PKP **PKiKP** **18 02 20.4 0.0**
comp=Z,31nm,0.7s,baz=37,slow=1.2,SNR=71
ARCES PKKPbc **PKKPbc** **18 11 56.6 -1.3**
comp=Z,4.9nm,0.8s,baz=223,slow=5.0,SNR=9.4
PRGR Permogore 126.63 336 *e*PKiKP **PKPdf** **18 02 19.6 -1.7**
PRGR pmax pmax
comp=Z,21nm,0.5s
KIRV Kirov 126.72 332 PKP **PKiKP** **18 02 22.2 +0.2**
comp=Z,32nm,0.9s,baz=36,slow=1.0,SNR=23
JETT Jettan, Norway 126.74 352 *e*PKPdf **PKiKP** **18 02 21.8 -0.1**
TRO Tromso 126.85 353 *e*PKPdf **PKiKP** **18 02 22.1 +0.1**
KTK1 Kautokeino 126.86 351 *e*PKPdf **PKiKP** **18 02 22.0 -0.1**
WSAR Wadi Sarin 127.79 286 PKP **PKiKP** **18 02 25.2 -0.1**
comp=Z,11nm,1.0s,baz=158,slow=3.5,SNR=3.7
GEYT Alibeck 127.88 305 PKP **PKiKP** **18 02 25.2 +0.1**
comp=Z,24nm,0.9s,baz=241,slow=2.7,SNR=30
LOF Lofoten 128.84 355 *e*PKPdf **PKiKP** **18 02 25.8 -0.2**
STEI Steigen 128.88 354 *e*PKPdf **PKPdf** **18 02 25.7 +0.3**
N2VA Vr,y 129.36 355 *e*PKPdf **PKiKP** **18 02 27.5 +0.4**
KLMR Klimovskoe 129.40 338 *e*PKiKP **PKPdf** **18 02 24.6 -2.0**
KLMR 18 03 56.4
KLMR *e* 18 14 57.4
KLMR pmax pmax
comp=Z,56nm,1.3s
KLMR Klimovskoe 129.40 338 *e*PKPdf **PKPdf** **18 02 24.7 -1.9**
KLMR AMP 18 02 28.3
comp=Z,56nm,1.3s
KLMR *e*pPKPdf **pPKPdf** **18 03 56.5 -2.3**
KLMR *e*SKP SKPab 18 05 14.4 +2.6
KLMR *e*SKKPbc **SKKPbc** **18 14 57.5 -3.5**
NBB08 Skaug oppvekst 129.46 354 *e*PKPdf **PKPdf** **18 02 25.8 -0.7**
BOSA Boshof 129.47 206 PKP **PKiKP** **18 02 28.6 -0.2**
comp=Z,7.6nm,0.8s,baz=145,slow=3.2,SNR=10
BOSA SKPbc SKPbc 18 05 16.3 +2.7
comp=Z,3.4nm,0.8s,baz=201,slow=6.3,SNR=3.0
BOSA PKKP **PKKPdf** **18 12 30.8 -1.5**
comp=Z,2.6nm,1.0s,baz=290,slow=3.2,SNR=3.1
BOSA Boshof 129.47 206 PKPdf **PKPdf** **18 02 27.1 -0.9**
N2RO R,st 129.55 355 *e*PKPdf **PKPdf** **18 02 25.1 -1.5**
NBB28 Valnes 129.67 354 *e*PKPdf **PKPdf** **18 02 25.8 -1.1**
SOHO SOHO 129.76 287 *i* PKPdf **PKPdf** **18 02 28.0 -0.4**
SNR=7.5
SHAO Shalim 130.03 279 PKiKP **PKPdf** **18 02 29.4 +0.3**
UOSS Minazif 130.10 288 PKiKP **PKPdf** **18 02 29.1 0.0**
MSFE Esma-Masafi 130.16 289 PKiKP **PKPdf** **18 02 29.0 -0.1**
HATD Hatta, Dubai 130.16 288 *i* PKPdf **PKPdf** **18 02 28.6 -0.5**
SNR=6.1
ASHO Ashiyiah 130.22 288 *i* PKPdf **PKPdf** **18 02 28.9 -0.4**
SNR=6.7
ALNE Al Ain 130.47 287 *i* PKiKP **PKiKP** **18 02 30.7 0.0**
SNR=6.9
SOCY Socotra 130.57 271 PKPdf **PKPdf** **18 02 30.4 +0.1**
SOCY SKPbc **SKPab** **18 05 19.5 +1.2**
BELG Belogornoye 130.65 325*c* *i* PKiKP **PKiKP** **18 02 30.2 +0.1**
FAQ Al Faqa, Dubai 130.65 288 *i* PKiKP **PKiKP** **18 02 30.6 -0.4**
SNR=11
MOR8 Moi Rana 130.66 354 *e*PKPdf **PKPdf** **18 02 27.7 -1.2**
ASUD Al Ashush, Dub 130.88 288 *i* PKiKP **PKiKP** **18 02 31.8 +0.3**
SNR=7.8
LBTB Lobatse 132.47 208 PKP **PKPdf** **18 02 34.3 +0.6**
comp=Z,6.2nm,0.7s,baz=172,slow=3.6
LBTB Lobatse 132.47 208 **PKPdf** **18 02 33.8 +0.1**

NSS Namsos 132.50 355 *e*PKPdf **PKPdf** **18 02 31.5 -0.8**
FINES FINESS Array B 133.05 345 PKhKP PKPpre 18 02 19.6
comp=Z,0.7nm,0.5s,baz=359,slow=2.8,SNR=6.2
FINES PKP **PKiKP** **18 02 34.2 -0.5**
comp=Z,18nm,0.8s,baz=80,slow=1.7,SNR=24
FINES SKPbc **SKPab** **18 05 26.9 -0.4**
comp=Z,13nm,0.9s,baz=61,slow=4.8,SNR=14
FINES SKKPbc **SKKPbc** **18 14 54.0 +6.0**
comp=Z,1.0nm,0.6s,baz=152,slow=5.4,SNR=3.9
FINES FINESS Array B 133.05 345 PKPdf **PKPdf** **18 02 31.0 -2.4**
MOS Moscow 133.59 334 *i* PKiKP **PKPdf** **18 02 34.6 0.0**
VRH Novokhopyorsk 134.41 327 *e*PKiKP **PKPdf** **18 02 36.4 +0.1**
VRH pmax pmax
comp=Z,30nm,0.6s
OBN Obninsk 134.45 334⇓*e*PKiKP **PKPdf** **18 02 36.0 -0.3**
OBN *e* 18 04 08.8
OBN *e*PPP PPP 18 08 21.2
OBN *e*PS PS 18 16 32.8 +53
OBN pmax pmax
comp=Z,8.0nm,0.9s
OBN pmax pmax
comp=Z,50nm,1.5s
OBN Obninsk 134.45 334 PKPdf **PKPdf** **18 02 36.3 0.0**
OBN SKPbc **SKPab** **18 05 32.8 -0.8**
MAK Makhachkala 134.57 314 *i* P **Pdif** **17 59 38.3 -1.2**
MAK *i* 18 02 37.8
MAK *e* 18 04 08.7
MAK *e* 18 05 15.4
MAK *e*PPP PPP 18 08 11.8
MAK *e* 18 09 13.2
MAK *e*SS SS 18 22 38.9 +3.6
MAK pmax pmax
comp=Z,70nm,0.8s
MOL Molde 134.75 357 *e*PKPdf **PKPdf** **18 02 36.0 -0.6**
MATP Matopo 134.87 215 PKHKP PKPpre 18 02 26.4
comp=Z,1.3nm,0.6s,baz=298,slow=6.8,SNR=1.5
MATP PKP **PKPdf** **18 02 39.0 +0.7**
comp=Z,10nm,0.8s,baz=167,slow=2.1,SNR=6.1
MATP SKPbc **SKPab** **18 05 35.0 -1.8**
comp=Z,9.1nm,1.0s,baz=140,slow=4.2,SNR=6.1
LPSR Galich'ya Gora 135.00 330 *e*PKiKP **PKPdf** **18 02 36.3 -1.1**
LPSR pmax pmax
comp=Z,20nm,1.3s
AKN Aaknes 135.17 357 *e*PKPdf **PKPdf** **18 02 38.0 +0.5**
AAL Aland 135.54 348 *e*P **PKiKP** **18 02 39.5 -0.3**
GROC Groznyy 135.66 315 PKIKP **PKPdf** **18 02 37.3 -1.6**
GROC *e* 18 09 13.1
GROC pmax pmax
comp=Z,22nm,0.8s
VSR Storozhevoye 135.72 328 *e*PKiKP **PKPdf** **18 02 38.6 -0.2**
VSR pmax pmax
comp=Z,30nm,1.1s
VORD Divnogorie 135.80 328 *e*PKiKP **PKPdf** **18 02 38.6 -0.3**
VORD pmax pmax
comp=Z,20nm,0.8s
NOA NORSAR Array B 136.01 354 PKhKP PKPpre 18 02 27.9
comp=Z,0.5nm,0.6s,baz=58,slow=1.9,SNR=1.9
NOA PKP **PKPdf** **18 02 39.6 +0.5**
comp=Z,6.0nm,0.8s,baz=19,slow=4.1,SNR=11
NOA SKPbc **SKPbc** **18 05 37.0 +2.4**
comp=Z,12nm,1.1s,baz=9.2,slow=2.3,SNR=13
GOF Gofitskoye 136.71 318⇑*e*PKiKP **PKiKP** **18 02 42.1 -0.6**
ZEI Tsey 137.10 315 *i* PKiKP **PKPdf** **18 02 41.5 -0.4**
ZEI pmax pmax
comp=Z,15nm,1.3s
KBZ Khabaz 137.38 317 PKP **PKiKP** **18 02 43.8 -0.2**
comp=Z,5.2nm,0.9s,baz=138,slow=2.6,SNR=4.2
KBZ SKPbc **SKiKP** **18 05 42.3 -1.2**
comp=Z,4.1nm,1.0s,baz=133,slow=2.9,SNR=5.1
KBZ Khabaz 137.38 317*c* *i* PKiKP **PKiKP** **18 02 44.2 +0.1**
KIV Kislovodsk 137.42 317 PKPdf **PKPdf** **18 02 42.2 -0.1**
KIV Kislovodsk 137.42 317 *i* PKiKP **PKPdf** **18 02 42.5 +0.2**
KIV pmax pmax
comp=Z,40nm,1.1s
GNI Garni 137.49 311 PKP **PKiKP** **18 02 45.0 +0.3**
comp=Z,16nm,0.9s,baz=309,slow=0.5,SNR=10
GNI SKPbc **SKiKP** **18 05 42.5 -1.6**
comp=Z,8.0nm,0.9s,baz=200,slow=1.3,SNR=8.7
GNI Garni 137.49 311 PKiKP **PKPdf** **18 02 43.5 +0.8**
GNI Garni 137.49 311 ⇑*i* PKiKP **PKPdf** **18 02 43.1 +0.5**
GNI Garni 137.49 311 PKPdf **PKPdf** **18 02 41.1 -1.5**
GNI SKPbc **SKiKP** **18 05 43.3 -0.8**
UMR Umm Al-Rimmam 137.50 295 *e*P 18 02 32.2
KONO Kongsberg 137.52 355 ⇓*i* PKiKP **PKPdf** **18 02 42.7 +0.8**
NEY Neytrino 137.70 316 ⇓*i* PKiKP **PKiKP** **18 02 46.4 +1.4**
RDF Al-Radifah 137.71 294 *e*P 18 02 32.0
MIB Mutribah 137.80 295 *e*P 18 02 33.1
AKH Akhalkalaki 137.91 313 ⇑P **PKPdf** **18 02 37.8 -5.7**
IDID Didziasalis 138.03 340 *e*P **PKPdf** **18 02 36.1 -6.8**
IIGN Ignalina 138.16 340 *e*P **PKPdf** **18 02 36.4 -6.7**
MNK Minsk 138.30 338 *i* PKP **PKiKP** **18 02 45.0 -0.6**
comp=E,1.0nm,0.8s
MNK *i* PKP **PKiKP** **18 02 45.0 -0.6**
comp=N,11nm,0.8s
MNK *i* PKP **PKiKP** **18 02 45.0 -0.6**
comp=Z,42nm,0.8s
MNK *i* pPKP **pPKPdf** **18 04 16.0 +0.3**
MNK *i* sPKP 18 04 53.4
MNK *i* PP **PP** **18 05 37.9 +0.8**
MNK *i* PPP PPP 18 08 28.9
MNK *i* SKS SKSdf 18 09 59.6 +42
MNK *i* SKKS SKKSdf 18 18 32.6 -20
MNK *i* PPS PPS 18 21 17.5
MNK *i* SPP SPP 18 21 19.4
MNK *i* SS **SS** **18 23 25.2 +7.5**
MNK *i* SSS SSS 18 28 12.7
NACGM Naroch 138.35 340 *i* PKP **PKPdf** **18 02 36.3 -7.2**
NACGM *i* PKP **PKPdf** **18 02 36.3 -7.2**
NACGM *i* PKP **PKPdf** **18 02 36.3 -7.2**
NACGM *i* pPKP pPKPdf 18 03 44.6 -31
NACGM *i* PP **PP** **18 05 43.5 +6.1**
NACGM *i* PKS PKSdf 18 05 53.8 -26
NACGM *i* PPP PPP 18 07 37.7
NACGM *i* SKS SKSdf 18 08 44.8 -32
NACGM *i* SKKS **SKKSac** **18 11 50.3 -2.5**
NACGM *i* PS PS 18 15 03.1 -69
NACGM *i* SS SS 18 23 31.8 +13
NACGM *i* SSS SSS 18 29 04.6
PABE Paberze 138.73 342 *e*P **PKPdf** **18 02 38.5 -5.7**
HOMB Homborsund 138.98 356 *i* P **PKPdf** **18 02 38.4 -6.2**
LSZ Lusaka 139.15 219 PKhKP PKPpre 18 02 38.4
comp=Z,2.7nm,0.7s,baz=149,slow=3.2,SNR=7.5
LSZ PKP **PKiKP** **18 02 48.4 -0.3**
comp=Z,7.0nm,0.6s,baz=106,slow=3.3,SNR=13
LSZ Lusaka 139.15 219 PKPpre 18 02 40.5
BORU Boraas 139.16 352 *i* P PKPpre 18 02 36.0
KAC Achnashellach 139.47 7 *e*P PKPpre 18 02 37.4
RAYN Ar Rayn 139.85 286 *i* PKPdf **PKPdf** **18 02 41.1 -6.2**
SNR=6.7
RAYN Ar Rayn 139.85 286 PKHKP PKPpre 18 02 40.3
RAYN Ar Rayn 139.85 286 PKPpre 18 02 40.3
RAYN PP **PP** **18 05 49.2 +0.8**
BLEU Blekinge 139.96 349 *e*P **PKPdf** **18 02 40.2 -6.1**
DEL Delary 140.13 351 *i* P **PKPdf** **18 02 38.9 -7.8**
SUW Suwalki 140.25 341 *e*P **PKPdf** **18 02 41.8 -5.2**
AKASG Malin Array Be 140.72 334 PKhKP PKPpre 18 02 40.8
comp=Z,1.4nm,0.4s,baz=38,slow=4.2,SNR=15
AKASG pPKP pPKPdf 18 04 21.2 +1.0
comp=Z,4.7nm,1.0s,baz=34,slow=2.2,SNR=2.2
AKASG SKPbc **SKiKP** **18 05 50.1 0.0**
comp=Z,6.3nm,0.9s,baz=40,slow=3.6,SNR=8.0
LUNU Lund 141.00 351 *i* P **PKPdf** **18 02 42.1 -6.2**
EBL Broad Law 141.40 5 *e*P **PKPdf** **18 02 44.1 -5.0**
KMBO Kilima Mbogo 141.59 245 PKhKP **PKPdf** **18 02 46.1 -4.9**
comp=Z,1.9nm,0.8s,baz=352,slow=18,SNR=5.0
KMBO PKP **PKiKP** **18 02 52.5 -1.4**
comp=Z,9.4nm,0.9s,baz=70,slow=1.3,SNR=12
GKP Gorka Klasztor 142.51 346 *e*P **PKPdf** **18 02 48.2 -2.9**
H07N1 FLORES T-PHASE 143.00 46 *e*PKP **PKPdf** **18 02 52.8 +0.4**
SORM Soroca 143.00 332 ⇑P **PKPdf** **18 02 49.3 -2.8**
SORM Soroca 143.00 332 ⇑PKiKP **PKPdf** **18 02 49.3 -2.8**
H07S1 FLORES T-PHASE 143.08 47 *e*PKP **PKPdf** **18 02 53.2 +0.6**
BSEG Bad Segeberg 143.09 353 *e*PKPbc PKPbc 18 02 50.2 +0.4
baz=13,slow=3.0
LVV L'vov 143.48 337 *e*PKiKP PKPab 18 02 50.7 +0.2
WLF1 Llynfaes 143.70 8 *e*P PKPbc 18 02 51.5 -0.1
YRC Rhoscolyn 143.72 8 *e*P PKPbc 18 02 51.6 -0.1
RUE Ruedersdorf 143.97 349 *e*PKPbc **PKPdf** **18 02 53.4 -0.2**
baz=13,slow=3.0
GAZ Gaziantep 144.06 310 PKPbc 18 02 53.8 +0.4
STNC Stoke 144.13 5 *e*P **PKPdf** **18 02 53.5 -0.4**
FOEL Foel Wylfa 144.24 6 *e*P **PKPab** **18 02 52.6 -0.6**
NRDL Niedersach Rie 144.53 353 *e*PKPbc **PKPdf** **18 02 55.2 +0.7**

baz=13,slow=3.0
FLTG Flechtingen 144.53 351 *e*PKPbc **PKPdf 18 02 54.9 +0.3**
baz=13,slow=3.0
PRAR RASCA 144.53 333 ⇑P **PKPab 18 02 54.6 0.0**
CWF Charnwood Fore 144.56 5 *e*P PKPbc 18 02 53.3 -1.0
ILGA Ilgaz 144.62 318 **PKPdf 18 02 56.1 +0.6**
HLM1 Long Mynd 144.63 6 *e*P PKPbc 18 02 53.9 -0.7
WACR West Acre 144.69 3 *e*P PKPbc 18 02 53.8 -0.9
BIR Birlad 144.71 330 ⇑P **PKPab 18 02 55.7 +0.4**
BIR Birlad 144.71 330 ⇑PKIKP **PKPab 18 02 55.7 +0.4**
BURAR Bucovina Array 144.78 334 ⇑P **PKPab 18 02 56.3 +0.7**
BURAR Bucovina Array 144.78 334 ⇑PKIKP **PKPab 18 02 56.3 +0.7**
BURAR Bucovina Array 144.78 334 **PKPab 18 02 55.5 -0.1**
ASSE Asse, Remlinge 144.81 352 *e*PKPbc **PKPab 18 02 56.4 +1.1**
baz=13,slow=3.0
VARL Varlezi 144.87 329 ⇑P **PKPab 18 02 56.9 +1.0**
TLCR 144.89 328 ⇑P **PKPab 18 02 56.6 +0.7**
TLCR 144.89 328 ⇑PKIKP **PKPab 18 02 56.6 +0.7**
BIZ Bicaz 144.91 332 ⇑P **PKPab 18 02 56.9 +0.9**
IBBN Ibbenburen 144.96 355 *e*PKPbc **PKPab 18 02 56.9 +0.9**
baz=13,slow=3.0
GHRR 144.96 330 ⇓P **PKPab 18 02 57.5 +1.3**
UZH Uzhgorod 145.11 338 ⇑*e*PKIKP **PKPdf 18 02 54.0 -1.7**
UZH *i* 18 04 27.0
CLZ Clausthal 145.13 352 *e*PKPbc **PKPab 18 02 57.6 +0.9**
baz=13,slow=3.0
MCH1 Michaelchurch 145.14 7 *e*P **PKPbc 18 02 56.4 +0.2**
SCHL Schela 145.16 329 ⇑P **PKPab 18 02 57.7 +0.7**
PCED Cedros 145.16 46 *e*PKP **PKPbc 18 02 56.7 +0.1**
TUDR 145.17 329 ⇑P **PKPab 18 02 58.5 +1.4**
CRVS Cervenica-Dubn 145.18 339 *e*PKIKP **PKPab 18 02 57.3 +0.3**
CRVS *e* 18 04 27.8
CRVS Cervenica-Dubn 145.18 339 *e*PKP **PKPab 18 02 57.3 +0.3**
CRVS *e* 18 04 27.8
CALA Caldeira 145.18 46 *e*PKP **PKPdf 18 02 55.5 -0.8**
CLL Collm 145.24 349 *i* PKPdf **PKPbc 18 02 56.7 +0.3**
CLL *i* PKPbc **PKPab 18 02 57.0 -0.1**
comp=Z,205nm,0.9s
CLL *ep*PKPdf pPKPab 18 04 25.0 -1.3
CLL *ep*PKiKP **pPKiKP 18 04 35.0 +2.8**
CLL *e*SKPdf **SKPdf 18 05 51.0 -2.5**
CLL *e*SKPbc **SKiKP 18 06 03.0 +3.6**
CLL *e* 18 07 35.0
CLL *e*PPP PPP 18 09 48.0
CLL *e*(pPPP) 18 10 52.0
CLL *e*SKKSac **SKKSac 18 12 34.0 +1.5**
CLL *e*SKSP 18 15 59.0
CLL *e*SPP SPP 18 18 14.0
CLL *e* 18 21 33.0
CLL *e*SS **SS 18 24 34.0 -3.2**
CLL *e*sSS 18 27 06.0
CLL *e*SSS SSS 18 30 12.0
CLL *e*sSSS 18 32 30.0
CLL *e* 18 34 12.0
CLL Collm 145.24 349 *i* PKP2 **PKPbc 18 02 56.7 +0.3**
CLL *i* 18 02 57.0
CLL pmax pmax
comp=Z,205nm,0.9s
CLL Collm 145.24 349 PKPdf **PKPbc 18 02 56.3 -0.1**
CFR Carcaliu 145.24 328 ⇑P **PKPbc 18 02 56.6 0.0**
CFR Carcaliu 145.24 328 ⇑PKP2 **PKPbc 18 02 56.6 0.0**
OSTC Ostas 145.26 345 *e*PKP **PKPab 18 02 57.6 +0.4**
CHVC Chvalec 145.27 345 *e*PKP **PKPab 18 02 57.2 -0.1**
PETR Petresti 145.29 330 ⇑P **PKPab 18 02 58.8 +1.3**
TPGR Topolog 145.32 328 ⇑P **PKPab 18 02 58.2 +0.6**
ODBI Odobesti 145.35 330 ⇓P **PKPab 18 02 58.7 +1.0**
UPC Upice 145.35 345 *e*PKP2 **PKPab 18 02 57.5 -0.1**
UPC Upice 145.35 345 *e*PKP **PKPab 18 02 57.5 -0.1**
BR131 Keskin Array S 145.37 316 *c i*PKP2 **PKPdf 18 02 56.7 0.0**
BR131 Keskin Array S 145.37 316 PKPdf **PKPdf 18 02 56.6 -0.1**
BR131 pPKPbc 18 04 28.3 -0.1
BRTR Keskin Array B 145.37 316 PKPbc **PKPbc 18 02 57.5 +0.1**
comp=Z,69nm,0.9s,baz=140,slow=3.7,SNR=215
BRTR pPKPbc pPKPbc 18 04 28.1 -0.2
comp=Z,17nm,0.9s,baz=102,slow=1.6,SNR=6.2
OKC Ostrava-Krasne 145.41 343 *e*PKP2 **PKPab 18 02 58.0 +0.2**
OKC Ostrava-Krasne 145.41 343 *e*PKP **PKPab 18 02 58.0 +0.2**
PICO Pico 145.41 46 *e*PKP **PKPdf 18 02 57.0 +0.3**
DPC Dobruska-Polom 145.42 345 *e*PKP2 **PKPbc 18 02 57.5 +0.4**
DPC Dobruska-Polom 145.42 345 *e*PKP **PKPbc 18 02 57.5 +0.4**
DPC *ep*PKP **pPKPdf 18 04 31.9 +3.2**
VRI Vrincioaia 145.43 330 ⇑P **PKPbc 18 02 57.4 +0.2**
VRI Vrincioaia 145.43 330 ⇑PKP2 **PKPbc 18 02 57.4 +0.2**
ROSA Rosais 145.43 46 *e*PKP **PKPdf 18 02 56.7 +0.1**
BMR Baia Mare 145.44 335 ⇑P **PKPab 18 02 58.1 +0.1**
BMR Baia Mare 145.44 335 ⇑PKP2 **PKPab 18 02 58.1 +0.1**
STRD Stroud 145.44 6 *e*P **PKPab 18 02 57.5 +0.4**
BRG Berggiesshubel 145.47 348 PKP2 **PKPbc 18 02 57.4 +0.2**
BRG Berggiesshubel 145.47 348 ⇑*i*PKP **PKPbc 18 02 57.5 +0.3**
BRG Amp 18 02 59.0
comp=Z,111nm,0.9s
BRG *ex* x 18 03 24.5
BRG Amp 18 03 26.5
comp=Z,26nm,1.2s
BRG pPKP pPKPab 18 04 27.4 +0.1
BRG Amp 18 04 32.2
comp=Z,53nm,2.1s
BRG *ex* x 18 04 35.8
BRG Amp 18 04 37.5
comp=Z,43nm,1.7s
BRG *ex* x 18 27 15.0
BRG Berggiesshubel 145.47 348 *e*PKKSac **PKPab 18 02 58.6 +0.6**
baz=13,slow=3.0
GTTG Gottingen 145.47 352 *e*PKPbc **PKPab 18 02 58.7 +0.7**
baz=13,slow=3.0
PLOR Plostina 145.47 330 ⇓P **PKPab 18 02 58.8 +0.5**
FBE Freiberg 145.54 348 *e*PKPbc **PKPab 18 02 59.1 +0.9**
baz=13,slow=3.0
NEUB Neuenburg 145.54 350 *e*PKPbc **PKPab 18 02 58.7 +0.4**
baz=13,slow=3.0
ARCR ARCALIA 145.56 334 ⇑P **PKPbc 18 02 57.9 +0.3**
KRLC Kraliky 145.56 344 *e*PKP2 **PKPbc 18 02 57.8 +0.3**
KRLC Kraliky 145.56 344 *e*PKP **PKPbc 18 02 57.8 +0.3**
PMAN Manadas 145.58 46 *e*PKP **PKPbc 18 02 58.0 +0.1**
LANS Liptovska Anna 145.62 341 *e*PKP2 **PKPab 18 02 59.4 +0.7**
LANS Liptovska Anna 145.62 341 *e*PKP **PKPab 18 02 59.4 +0.7**
LANS *e* 18 04 29.7
MORC Moravsky Berou 145.63 343 *e*PKP **PKPbc 18 02 57.8 0.0**
MORC *e* 18 04 28.5
MORC Moravsky Berou 145.63 343 PKP2 **PKPbc 18 02 57.8 0.0**
MORC Moravsky Berou 145.63 343 PKPdf **PKPbc 18 02 57.5 -0.2**
MORC pPKPbc 18 04 28.9 -0.1
PVCC Panska Ves 145.66 347 *e*PKP2 **PKPbc 18 02 58.1 +0.3**
PVCC Panska Ves 145.66 347 *e*PKP **PKPbc 18 02 58.1 +0.3**
HARR Harsova 145.68 328 ⇑P **PKPbc 18 02 58.5 +0.5**
HARR Harsova 145.68 328 ⇑PKP2 **PKPbc 18 02 58.5 +0.5**
TLBR Topalu 145.72 328 ⇑P **PKPab 18 02 59.2 +0.1**
SWN1 Swindon 145.73 5 *e*P **PKPbc 18 02 58.0 +0.1**
SHEL Horse Pasture 145.76 165 PKP2 **PKPab 18 03 00.6 +0.5**
SHEL 19 02 56.1
SHEL Horse Pasture 145.76 165 PKPdf **PKPdf 18 02 56.1 -1.8**
SHEL **PKPab 18 03 00.6 +0.5**
MFTR Murfatlar 145.78 327 ⇑P **PKPab 18 02 59.6 +0.2**
BUG Bochum--Univer 145.85 355 *e*PKPbc **PKPab 18 02 59.5 +0.1**
baz=13,slow=3.0
BUG *ep*PKPbc **pPKPdf 18 04 29.3 -0.1**
baz=12,slow=3.5
KECS Kecovo 145.87 339 *e*PKP2 **PKPab 18 02 59.4 -0.2**
KECS Kecovo 145.87 339 *e*PKP **PKPab 18 02 59.4 -0.2**
KECS *e* 18 04 29.8
TSMN Mangalia Port- 145.95 326 ⇑P **PKPab 18 02 60.0 -0.1**
DOPR Dopca 145.97 332 ⇓P **PKPbc 18 02 59.0 +0.1**
KASTN Kahler Asten 145.99 354 *e*PKPbc **PKPab 18 03 00.1 0.0**
baz=13,slow=3.0
KASTN *ep*PKPbc pPKPbc 18 04 29.9 +0.1
baz=12,slow=3.5
AMRR Amara 146.04 328 ⇑P **PKPbc 18 02 59.6 +0.6**
AMRR Amara 146.04 328 ⇑PKP2 **PKPbc 18 02 59.6 +0.6**
ISR Istrita 146.06 330 ⇑P **PKPbc 18 02 59.1 -0.1**
ISR Istrita 146.06 330 ⇑PKP2 **PKPbc 18 02 59.1 -0.1**
MLR Muntele Rosu 146.07 331 ⇑P **PKPbc 18 02 59.8 +0.5**
MLR Muntele Rosu 146.07 331 ⇑PKP2 **PKPbc 18 02 59.8 +0.5**
MLR Muntele Rosu 146.07 331 PKPdf **PKPdf 18 02 56.6 -1.1**
MLR PKPbc **PKPbc 18 02 59.8 +0.5**
MLR **pPKPdf 18 04 28.9 -1.3**
PRA Prague 146.12 347 *e*PKP2 **PKPab 18 03 00.2 -0.4**
PRA Prague 146.12 347 *e*PKP **PKPab 18 03 00.2 -0.4**
HWQ Hawqa 146.13 306 *e*P **PKPbc 18 03 00.0 +0.2**
CJR Cluj-Napoca 146.17 334 ⇓P **PKPab 18 03 00.7 -0.2**
CJR Cluj-Napoca 146.17 334 ⇓PKP2 **PKPab 18 03 00.7 -0.2**
PLN Plauen 146.18 350 *e*PKPdf **PKPbc 18 02 59.2 -0.1**
baz=14,slow=1.6
PLN *e*PKPbc **PKPab 18 03 00.8 0.0**
baz=13,slow=3.0
PLN *ep*PKPbc pPKPbc 18 04 30.7 +0.4
baz=12,slow=3.5
PRU Pruhonice 146.18 347 *e*PKP2 **PKPdf 18 02 58.4 +0.9**
PRU *e* 18 02 58.8
PRU *e* 18 04 30.4
PRU Pruhonice 146.18 347 *e*PKP **PKPdf 18 02 58.4 +0.9**
PRU *ex* x 18 03 00.3
PRU *ep*PKP pPKPbc 18 04 30.4 -0.2
UBBA Unterbreizbach 146.18 352 *e*PKPdf **PKPbc 18 02 59.0 -0.1**
baz=14,slow=1.6
UBBA *ep*PKPbc pPKPbc 18 04 30.5 +0.2
baz=12,slow=3.5
TANN Tannenbergstha 146.19 349 *e*PKPdf **PKPbc 18 02 59.2 -0.1**
baz=14,slow=1.6
TANN *e*PKPbc **PKPab 18 03 00.9 0.0**
baz=13,slow=3.0
TANN *ep*PKPbc pPKPbc 18 04 30.8 +0.5
baz=12,slow=3.5
PSCM Serra do Cume 146.20 45 *e*PKP **PKPbc 18 02 58.9 -0.8**
GUNZ Gunzen 146.26 349 *e*PKPdf **PKPbc 18 02 59.5 0.0**
baz=14,slow=1.6
GUNZ *e*PKPbc **PKPab 18 03 01.2 +0.1**
baz=13,slow=3.0
GUNZ *ep*PKPbc pPKPbc 18 04 31.2 +0.6
baz=12,slow=3.5
ELSH Elham, Standar 146.28 2 *e*P **PKPab 18 03 00.4 -0.7**
MDB Medias 146.28 333 ⇓P **PKPab 18 03 01.4 +0.1**
MDB Medias 146.28 333 ⇓PKP2 **PKPab 18 03 01.4 +0.1**
LTVH Ltavrtes, Hu 146.29 337 ⇑P **PKPab 18 03 01.2 -0.1**
VRAC Vranov 146.31 344 ⇑P **PKPbc 18 03 00.3 +0.6**
VRAC Vranov 146.31 344 *e*PKP **PKPbc 18 02 58.8 -0.9**
VRAC *e* 18 04 30.9
VRAC Vranov 146.31 344 ⇑PKP2 **PKPbc 18 03 00.3 +0.6**
WERN Wernitzgruen 146.33 349 *e*PKPdf **PKPbc 18 02 59.7 -0.1**
baz=14,slow=1.6
WERN *e*PKPbc **PKPab 18 03 01.6 +0.1**
baz=13,slow=3.0
WERN *ep*PKPbc pPKPbc 18 04 31.5 +0.8
baz=12,slow=3.5
NKC Novy Kostel 146.37 349 *e*PKP2 **PKPbc 18 02 59.3 -0.5**
NKC Novy Kostel 146.37 349 *e*PKP **PKPbc 18 02 59.3 -0.5**
LEHL Lehliu 146.40 329 ⇑P **PKPab 18 03 01.3 -0.5**
VYHS Vyhne 146.40 341 *e*PKP2 **PKPab 18 03 01.0 -0.7**
VYHS Vyhne 146.40 341 *e*PKP **PKPab 18 03 01.0 -0.7**
VYHS *e* 18 04 30.9
JAVC Velka Javorina 146.42 342 *e*PKP **PKPbc 18 03 00.0 -0.1**
JAVC *e* 18 04 32.1
DRGR 146.46 335 ⇓P **PKPbc 18 03 01.2 +0.9**
DRGR 146.46 335 ⇓PKP2 **PKPbc 18 03 01.2 +0.9**
BHL Bhannes 146.49 306 *e*P **PKPbc 18 03 01.1 +0.3**
SULR 146.53 329 ⇑P **PKPbc 18 03 01.1 +0.7**
HMNX Herstmonceux 146.53 3 *e*P **PKPbc 18 02 59.8 -0.4**
VOIR 146.53 331 ⇑P **PKPbc 18 02 59.9 -0.6**
VOIR 146.53 331 ⇑PKP2 **PKPbc 18 02 59.9 -0.6**
MDUB Mudurnu 146.53 319 pPKPdf 18 04 29.5 -1.6
PSZ Piszkesteto 146.56 339 ⇑P **PKPbc 18 03 01.4 +0.9**
PSZ Piszkesteto 146.56 339 ⇑PKP2 **PKPbc 18 03 01.4 +0.9**
PSZ Piszkesteto 146.56 339 pPKPdf 18 04 30.6 -0.2
PBCC Pribram 146.58 347 *e*PKP **PKPbc 18 03 00.5 -0.9**
PBCC *ex* x 18 04 31.8
KRUC Moravsky 146.59 344 *e*PKP **PKPdf 18 02 59.1 +0.8**
KRUC *e* 18 04 31.4
KRUC Moravsky 146.59 344 PKIKP **PKPdf 18 02 59.2 +0.9**
QRWL Qaraoun 146.59 305 *e*P **PKPdf 18 02 59.9 +1.0**
BEBN Eben Emael 146.60 357 *d*PKPab **PKPbc 18 03 00.8 +0.4**
BEBN *dp*PKP pPKPbc 18 04 31.3 0.0
DQRL Deir Qamar 146.62 305 *e*P **PKPbc 18 03 02.1 +0.9**
UCC Uccle 146.65 358 *d*PKPab **PKPbc 18 03 01.0 +0.4**
UCC *dp*PKP pPKPbc 18 04 31.3 -0.2
MANZ Manzenberg 146.66 349 *e*PKPdf **PKPbc 18 03 00.0 -0.7**
baz=14,slow=1.6
MANZ *e*PKPbc **PKPab 18 03 02.4 -0.4**
baz=13,slow=3.0
MANZ *ep*PKPbc pPKPab 18 04 32.4 +0.4
baz=12,slow=3.5
AHRW Bad Neuenahr-A 146.76 355 *e*PKPdf **PKPbc 18 02 60.0 -0.9**
baz=14,slow=1.6
AHRW *e*PKPbc **PKPab 18 03 02.6 -0.4**
baz=13,slow=3.0
AHRW *ep*PKPbc pPKPab 18 04 32.7 +0.3
baz=12,slow=3.5
MEM Membach 146.77 357 *d*PKPbc **PKPdf 18 02 59.3 +0.8**
MEM *d*PKPab **PKPbc 18 03 01.7 +0.8**
MEM *dp*PKP pPKPbc 18 04 31.9 0.0
ARR Arges 146.77 332 ⇓P **PKPdf 18 02 59.9 +1.1**
BTNL Ternell 146.78 356 *d*PKPbc **PKPdf 18 02 59.4 +0.9**
BTNL *d*PKPab **PKPbc 18 03 01.6 +0.6**
BTNL *dp*PKP pPKPbc 18 04 32.0 0.0
SMOL Smolenice 146.80 342 *e*PKP2 **PKiKP 18 03 02.6 -0.7**
SMOL Smolenice 146.80 342 *e*PKP **PKiKP 18 03 02.6 -0.7**
SMOL *e* 18 04 32.5
BSTI Sart Tilman 146.82 357 *d*PKPbc **PKPdf 18 02 59.6 +1.1**
BSTI *d*PKPab **PKPbc 18 03 01.8 +0.8**
BSTI *dp*PKP pPKPbc 18 04 32.2 +0.2
ROTZ Rotzenmuhle 146.86 349 *e*PKPdf **PKPbc 18 03 00.2 -0.9**
baz=14,slow=1.6
ROTZ *e*PKPbc **PKiKP 18 03 02.9 -0.5**
baz=13,slow=3.0
ROTZ *ep*PKPbc pPKPab 18 04 33.2 +0.5
baz=12,slow=3.5
SNF Seneffe 146.94 359 *d*PKP **PKPbc 18 03 02.1 +0.7**
SNF *dx* x 18 03 04.2
SNF *dp*PKP pPKPbc 18 04 32.0 -0.4
TNS Taunus Mts 146.95 354 *e*PKPdf **PKPbc 18 03 00.5 -1.0**
baz=14,slow=1.6
TNS *e*PKPbc **PKiKP 18 03 03.0 -0.6**
baz=13,slow=3.0
TNS *ep*PKPbc pPKPab 18 04 33.3 +0.1
baz=12,slow=3.5
MODS Modra-Piesok 146.97 342 *e*PKIKP **PKPbc 18 03 00.3 -1.3**
MODS *e* 18 03 03.0
MODS *e* 18 04 33.0
MODS Modra-Piesok 146.97 342 *e*PKP **PKPbc 18 03 00.3 -1.3**
MODS *e* 18 03 03.0
MODS *e* 18 04 33.0
BCLA Clavier 147.00 357 *d*PKPbc **PKPbc 18 03 01.4 -0.2**
BCLA *d*PKP **PKPab 18 03 04.3 +0.3**
BCLA *dp*PKPdf **pPKPdf 18 04 31.7 +0.3**
BCLA *dp*PKP pPKPab 18 04 33.4 +0.2
MMAI Mount Meron Ar 147.00 304 PKPbc **PKPbc 18 03 03.2 +1.0**
comp=Z,135nm,0.8s,baz=62,slow=4.3,SNR=283
BHOU Houvegnez 147.02 356 *d*PKPbc **PKPdf 18 03 00.2 +1.2**
BHOU *d*PKP **PKPbc 18 03 02.5 +0.9**
BHOU *dp*PKP **pPKPab 18 04 33.2 +0.1**
BGES Gesves 147.04 358 *d*PKPbc **PKPbc 18 03 01.4 -0.3**
BGES *dp*PKP **pPKPab 18 04 33.2 -0.2**
GRF Grafenberg Arr 147.10 350 *e*PKPdf **PKPbc 18 03 00.8 -1.0**
baz=14,slow=1.6
GRF *e*PKPbc **PKiKP 18 03 03.6 -0.2**
baz=13,slow=3.0
GRF *ep*PKPbc **pPKPab 18 04 34.1 +0.4**
baz=12,slow=3.5
GRFO Grafenberg 147.10 350 PKPdf **PKPdf 18 02 59.3 +0.2**
GRFO PKPbc **PKPbc 18 03 02.6 +0.7**
GRFO pPKPdf **pPKPdf 18 04 32.0 +0.3**
BMRD Maredsous 147.13 358 *d*PKPbc **PKPdf 18 02 59.9 +0.8**
BMRD *d*PKiKP **PKiKP 18 03 03.9 0.0**
BMRD *dp*PKP **pPKPdf 18 04 32.0 +0.3**
KHC Kasperske Hory 147.20 347 *ce*PKIKP **PKPdf 18 03 00.3 +1.0**
KHC Kasperske Hory 147.20 347 *ex* **PKPdf 18 03 03.1 +3.8**
KHC *ex* x 18 03 12.5
KHC *ep*PKP **pPKPab 18 04 34.1 +0.1**
RAZG Razgrad 147.20 328 ⇑P **PKPbc 18 03 03.3 +1.0**
HUMR Humele 147.25 330 ⇑P **PKPbc 18 03 02.8 +0.4**
RCHB Rochefort 147.26 357 *d*PKP **PKPbc 18 03 02.7 +0.5**
RCHB *dp*PKP **pPKPbc 18 04 33.3 0.0**
SIRR Siria 147.31 336 ⇑P **PKPbc 18 03 03.2 +0.7**
WET Wettzell 147.33 348 PKIKP **PKPdf 18 03 00.5 +1.0**
WET Wettzell 147.33 348 *e*PKPdf **PKPbc 18 03 01.1 -1.4**
baz=14,slow=1.6
WET *e*PKPbc **PKiKP 18 03 04.2 -0.2**
baz=13,slow=3.0
WET *ep*PKPbc **pPKPab 18 04 34.9 +0.4**
baz=12,slow=3.5
CKRC Cesky Krumlov 147.33 346 *e*PKP **PKPdf 18 03 00.5 +1.0**
CKRC *ex* x 18 03 03.6
CKRC *ex* x 18 04 35.7
GIVF Givet 147.33 358 *e*PKIKP **PKPdf 18 02 59.8 +0.3**
GIVF pmax pmax
comp=Z,73nm,0.8s
DOU Dourbes 147.34 358 *d*PKiKP **PKPbc 18 03 03.1 +0.7**
DOU *dx* x 18 03 05.8
DOU *dx* x 18 03 13.3
DOU *dp*PKP **pPKPbc 18 04 33.8 +0.1**
MBAR Mbarara 147.38 240 PKPbc **PKPbc 18 03 04.6 +0.7**
comp=Z,46nm,0.9s,baz=117,slow=1.6,SNR=37
MBAR Mbarara 147.38 240 PKIKP **PKPdf 18 02 59.4 -1.5**
MBAR 18 03 05.0
MBAR Mbarara 147.38 240 PKPdf **PKPdf 18 02 59.4 -1.5**
MBAR PKPbc **PKiKP 18 03 05.0 -0.8**
MBAR **pPKPdf 18 04 34.2 +0.8**
GEC2 GERESS Array S 147.44 347 *e*PKPdf **PKPdf 18 03 01.3 +1.4**
baz=14,slow=1.6
GEC2 *e*PKPbc **PKiKP 18 03 04.4 -0.4**
baz=13,slow=3.0
GEC2 *ep*PKPbc **pPKPab 18 04 35.3 +0.1**
baz=12,slow=3.5
GERES GERESS Array B 147.44 347 PKPbc **PKPbc 18 03 03.3 +0.4**
comp=Z,29nm,0.8s,baz=30,slow=2.9,SNR=85
GERES pPKPbc **pPKPbc 18 04 33.5 -0.8**
comp=Z,4.2nm,0.7s,baz=27,slow=4.5,SNR=2.0
GZR Gura Zlata 147.56 334 ⇑P **PKPdf 18 03 00.2 +0.1**
PSET Sete Cidades 147.60 45 *e*PKP **PKPdf 18 02 58.0 -2.3**
AMBH Ambrzfalva 147.60 337 ⇑P **PKPbc 18 03 04.0 +0.7**
WLF Walferdange 147.70 356 *d*PKPab **PKiKP 18 03 04.4 -0.7**
WLF *dp*PKP **pPKPbc 18 04 33.7 -1.1**
WLF Walferdange 147.70 356 *e*PKPdf **PKPbc 18 03 02.2 -1.3**
baz=14,slow=1.6
WLF *e*PKPbc **PKiKP 18 03 05.6 +0.6**
baz=13,slow=3.0
WLF *ep*PKPbc **pPKPab 18 04 36.0 0.0**
baz=12,slow=3.5
ZIMR 147.71 329 ⇑P **PKiKP 18 03 04.9 -0.4**
ZIMR 147.71 329 ⇑PKP2 **PKiKP 18 03 04.9 -0.4**
CMLA Cha da Macela 147.76 45 *e*PKP **PKPdf 18 02 59.5 -1.1**
CONA Conrad Observa 147.77 344 *e*P **PKPdf 18 03 00.8 +0.5**
comp=Z,18nm,1.6s,SNR=61
CONA *i* P **pPKPab 18 04 36.5 0.0**
comp=Z,45nm,1.4s
CSS Mathiatis 147.84 309 PKPdf **PKPdf 18 02 59.1 -1.7**
CSS PKPbc **PKPbc 18 03 04.8 +0.5**
CSS PKPab **PKPab 18 03 07.9 -0.1**
CSS pPKPdf **pPKPbc 18 04 36.4 +0.7**
BZS Buzias 147.86 335 ⇑P **PKPdf 18 03 01.2 +0.8**
JVM Valle D.L. Mar 147.97 6 *e*P **PKPbc 18 03 04.2 +0.2**
JSA Saint Aubin 148.00 6 *e*P **PKPbc 18 03 03.3 -0.8**
LEF Lefka 148.10 309 ⇑P **PKPbc 18 03 05.5 +0.6**
HERR Herclane 148.13 333 ⇑P **PKPdf 18 03 01.7 +0.8**
BANR Banloc 148.25 335 ⇑P **PKPbc 18 03 05.0 +0.1**
MOA Molln 148.25 346 *i* P **PKPdf 18 03 01.2 +0.1**
comp=Z,7.0nm,1.1s
MOA *i* P **PKPbc 18 03 05.5 +0.6**
comp=Z,70nm,1.3s,SNR=19
MOA *e*P **pPKPab 18 04 39.0 +0.8**
comp=Z,25nm,1.1s
STU Stuttgart 148.29 352 *e*PKPdf **PKPdf 18 03 02.8 +1.7**
baz=14,slow=1.6
STU *e*PKPbc **PKiKP 18 03 06.7 +0.3**
baz=13,slow=3.0
STU *ep*PKPbc **pPKPab 18 04 38.1 -0.2**
baz=12,slow=3.5
PUNG Punghina 148.38 332 ⇑P **PKiKP 18 03 06.1 -0.5**
EIL Elat 148.39 299 PKP **PKPdf 18 03 01.5 -0.3**
comp=Z,28nm,0.9s,baz=329,slow=1.6,SNR=17
EIL PKPbc **PKPbc 18 03 06.3 +0.5**
comp=Z,64nm,0.8s,baz=30,slow=1.5,SNR=54
BAIL Bailesti 148.40 331 ⇓P **PKiKP 18 03 07.3 +0.7**
MORH Mrgy, Hungar 148.46 339 ⇓P **PKiKP 18 03 01.9 +0.5**
MORH Mrgy, Hungar 148.46 339 ⇓*i*P **PKPdf 18 03 01.2 -0.2**
ARSA Arzberg 148.49 344 *e*P **PKPdf 18 03 01.4 -0.1**
comp=Z,8.5nm,1.1s
ARSA *i* P **PKPbc 18 03 06.0 +0.4**
comp=Z,40nm,1.1s,SNR=7.1
ARSA *e*P **pPKPbc 18 04 37.8 +0.8**
comp=Z,25nm,1.4s
MDVR Moldovita 148.50 334 ⇑P **PKPdf 18 03 02.0 +0.4**
FUR Furstenfeldbru 148.57 349 *e*PKPdf **PKPdf 18 03 02.9 +1.3**
baz=14,slow=1.6
FUR *e*PKPbc **PKiKP 18 03 07.3 +0.3**
baz=13,slow=3.0
FLN La Foliniere 148.57 4 *e*PKHKP **PKPdf 18 03 01.7 +0.2**
FLN pmax pmax
comp=Z,108nm,0.8s
ROSF Rostrenen 148.70 8 *e*PKP2 **PKPbc 18 03 05.8 -0.2**
ROSF pmax pmax
comp=Z,78nm,1.0s
LDF La Druitiere 148.77 4 *e*PKHKP **PKPdf 18 03 01.9 +0.1**
LDF pmax pmax
comp=Z,73nm,1.0s
BFO Black Forest 148.83 353 PKP2 **PKiKP 18 03 07.3 -0.2**
BFO Black Forest 148.83 353 PKPdf **PKPdf 18 03 01.2 -0.8**
BFO PKPbc **PKiKP 18 03 07.3 -0.2**
BFO pPKPdf **pPKPbc 18 04 37.0 -1.2**
BFO Black Forest 148.83 353 *e*PKPdf **PKPdf 18 03 03.3 +1.2**
baz=14,slow=1.6
BFO *e*PKPbc **PKiKP 18 03 07.9 +0.4**
baz=13,slow=3.0
BEHE Becsehely 148.84 341 ⇓*i*P **PKiKP 18 03 08.8 +1.3**
CDF Champ du Feu 148.86 355 *e*PKHKP **PKPdf 18 03 02.2 +0.1**
CDF pmax pmax
comp=Z,78nm,0.7s
SGMF Saint Gilles 148.88 7 *e*PKHKP **PKPdf 18 03 01.9 -0.1**
SGMF pmax pmax
comp=Z,71nm,0.8s
GRR Gorron 148.92 5 *e*PKHKP **PKPdf 18 03 02.3 +0.2**
GRR pmax pmax
comp=Z,81nm,0.8s
FRGS Fruska Gora 148.95 337 ⇓P **PKiKP 18 03 07.7 -0.1**
FRGS Fruska Gora 148.95 337 ⇓*i*P **PKPbc 18 03 07.0 +0.2**
KOGS Kog 149.01 342 *i* PKPbc **PKPbc 18 03 06.9 +0.1**
KOGS *ep*PKPbc **pPKPbc 18 04 37.5 -1.0**
SOKA Soboth 149.14 344 *i* P **PKPdf 18 03 02.5 -0.2**
comp=Z,12nm,1.2s,SNR=43
SOKA *i* P **PKPbc 18 03 07.2 -0.1**
comp=Z,97nm,1.6s
KBA Koelnbreinsper 149.19 346 *i* P **PKPdf 18 03 02.4 -0.4**
comp=Z,8.4nm,1.2s
KBA *i* P **PKPbc 18 03 07.2 -0.3**
comp=Z,52nm,0.6s,SNR=21
KBA *e*P **pPKPbc 18 04 39.1 -0.2**
comp=Z,10nm,0.9s
KBA Koelnbreinsper 149.19 346 PKHKP **PKPdf 18 03 02.7 -0.1**
UBR Ueberruh 149.23 351 *e*PKPdf **PKPdf 18 03 03.9 +1.2**
baz=14,slow=1.6
UBR *e*PKPbc **PKiKP 18 03 08.8 +0.4**
baz=13,slow=3.0
ALN Alexandroupoli 149.31 325 P **PKPbc 18 03 07.5 -0.2**
WATA Walderalm 149.31 349 *i* P **PKPdf 18 03 03.0 0.0**
comp=Z,20nm,1.8s,SNR=36
WATA *i* P **PKPbc 18 03 08.1 +0.3**
comp=Z,56nm,0.7s
WATA *i* P **pPKPbc 18 04 39.7 +0.1**
comp=Z,15nm,1.0s
RETA Reutte 149.31 350 *i* P **PKPdf 18 03 03.1 +0.3**
comp=Z,7.6nm,0.9s
RETA *i* P **PKiKP 18 03 08.2 -0.5**
comp=Z,52nm,0.7s,SNR=14
RETA *e*P **pPKPbc 18 04 40.0 +0.6**
comp=Z,14nm,1.1s
WTTA Wattenberg 149.37 348 *i* P **PKPdf 18 03 03.4 +0.3**
comp=Z,14nm,1.0s,SNR=68
WTTA *i* P **PKiKP 18 03 08.5 -0.3**
comp=Z,138nm,0.7s
WTTA *e*P **pPKPbc 18 04 40.1 +0.3**
comp=Z,15nm,1.1s
WTTA Wattenberg 149.37 348 PKHKP **PKPdf 18 03 03.7 +0.6**
MOTA Moosalm 149.39 349 *i* P **PKPdf 18 03 03.1 0.0**
comp=Z,22nm,1.3s,SNR=40
MOTA *i* P **PKPbc 18 03 08.3 +0.3**
comp=Z,129nm,1.2s
MOTA *e*P **pPKPbc 18 04 40.1 +0.3**
comp=Z,17nm,1.2s
RDO Rodhopi 149.41 325 P **PKPbc 18 03 08.1 +0.1**
OBKA Obir 149.43 344 *i* P **PKPdf 18 03 02.7 -0.4**
comp=Z,4.0nm,1.0s
OBKA *i* P **PKPbc 18 03 07.7 -0.3**
comp=Z,53nm,1.5s,SNR=12
BOVS Bovan 149.43 333 ⇑P **PKPbc 18 03 08.3 +0.4**
HINF Hinteralfeld 149.49 355 *e*PKHKP **PKPdf 18 03 03.2 +0.1**
HINF pmax pmax
comp=Z,30nm,0.7s
SQTA Sankt Quirin 149.49 349 *i* P **PKPdf 18 03 03.4 +0.2**
comp=Z,14nm,0.8s,SNR=45
SQTA *i* P **PKiKP 18 03 08.7 -0.4**
comp=Z,70nm,0.7s
SQTA *e*P **pPKPbc 18 04 40.5 +0.6**

	comp=Z,21nm,1.3s							
VTS	**Vitosha**	**149.52**	**330**	⇑P	**PKiKP**	**18 03 08.9**	**-0.4**
VTS	**Vitosha**	**149.52**	**330**	⇑PKP2	**PKiKP**	**18 03 08.9**	**-0.4**
ASCN	**Ascension**	**149.53**	**144**		**PKPbc**	**18 03 08.7**	**-0.4**
MYKA	**Terra Mystica**	**149.54**	**346**	*i* P	**PKPdf**	**18 03 03.0**	**-0.3**
	comp=Z,17nm,1.6s							
MYKA				*i* P	**PKPbc**	**18 03 07.9**	**-0.3**
	comp=Z,66nm,0.7s,SNR=21							
MYKA				*e*P	**pPKPbc**	**18 04 40.0**	**-0.1**
	comp=Z,42nm,1.4s							
TEKS	**Tekeris**	**149.57**	**336**	*e*P	**PKPbc**	**18 03 07.9**	**-0.4**
DAVA	**Damuels**	**149.65**	**351**	*i* P	**PKPdf**	**18 03 03.9**	**+0.4**
	comp=Z,16nm,1.7s							
DAVA				*i* P	**PKiKP**	**18 03 09.2**	**-0.3**
	comp=Z,126nm,0.8s,SNR=29							
DAVA				*e*P	**pPKPbc**	**18 04 40.9**	**+0.5**
	comp=Z,25nm,1.2s							
ABTA	**Abfaltersbach**	**149.69**	**347**	*i* P	**PKPdf**	**18 03 03.2**	**-0.3**
	comp=Z,35nm,1.2s,SNR=66							
ABTA				*i* P	**PKPbc**	**18 03 08.4**	**-0.2**
	comp=Z,107nm,0.7s							
DIVS	**Divibare**	**149.77**	**335**	⇓*i*P	**PKPbc**	**18 03 08.9**	**0.0**
DIVS	**Divibare**	**149.77**	**335**	PKPdf	**PKPdf**	**18 03 03.2**	**-0.5**
DIVS				PKPbc	**PKiKP**	**18 03 09.8**	**+0.1**
DIVS				pPKPdf	**pPKPbc**	**18 04 38.6**	**-1.9**
FETA	**Feichten**	**149.77**	**350**	*i* P	**PKPdf**	**18 03 04.3**	**+0.5**
	comp=Z,26nm,0.8s,SNR=53							
FETA				*i* P	**PKiKP**	**18 03 09.5**	**-0.2**
	comp=Z,98nm,1.1s							
CRES	**Cresnjev**	**149.81**	**343**	⇓*i*P	**PKPbc**	**18 03 08.9**	**+0.1**
LJU	**Ljubljana**	**149.86**	**344**	*i* PKPdf	**PKPdf**	**18 03 04.1**	**+0.4**
LJU				*i* PKPbc	**PKiKP**	**18 03 09.5**	**-0.2**
SMTH	**Samothraki Isl**	**149.88**	**324**	P	**PKPbc**	**18 03 09.0**	**-0.2**
AKAS	**Kas**	**149.91**	**314**	PKPdf	**PKPbc**	**18 03 08.0**	**-1.5**
KAVA	**Kavala**	**150.07**	**326**	P	**PKPbc**	**18 03 09.8**	**+0.2**
MRAK	**Mrakovica**	**150.10**	**340**	*e*P	**PKPab**	**18 03 13.9**	**-3.1**
NVR	**Nevrokopi**	**150.16**	**327**	P	**PKPbc**	**18 03 09.6**	**-0.2**
BOJS	**Bojanci**	**150.16**	**343**	*i* PKPdf	**PKPdf**	**18 03 04.8**	**+0.6**
BOJS				*i* PKPbc	**PKiKP**	**18 03 10.5**	**+0.2**
BOJS				*e*pPKPbc	**pPKPbc**	**18 04 41.5**	**0.0**
CEY	**Cerknica**	**150.17**	**344**	⇓*i*P	**PKPbc**	**18 03 09.7**	**0.0**
HAPS	**Han Pijesak,BI**	**150.18**	**337**	*e*P	**PKPbc**	**18 03 09.9**	**0.0**
LOR	**Lormes**	**150.19**	**359**	*e*PKIKP	**PKPdf**	**18 03 04.5**	**+0.3**
LOR				pmax	pmax			
	comp=Z,94nm,0.8s							
BBLS	**Lazići**	**150.19**	**336**	⇓*i*P	**PKiKP**	**18 03 10.6**	**+0.1**
THAS	**Thassos island**	**150.24**	**325**	P	**PKPbc**	**18 03 09.2**	**-0.7**
BLY	**Banja Luka**	**150.24**	**339**	⇓*i*P	**PKiKP**	**18 03 10.2**	**-0.3**
PRK	**Paraskevi**	**150.28**	**322**	P	**PKiKP**	**18 03 11.2**	**+0.5**
RUDO	**Rudo**	**150.42**	**336**	*e*P	**PKiKP**	**18 03 10.9**	**0.0**
LIA	**Limnos Island**	**150.47**	**324**	P	**PKPbc**	**18 03 10.5**	**0.0**
MGRS	**Mrkonjic Grad**	**150.57**	**339**	*e*P	**PKiKP**	**18 03 11.6**	**+0.4**
PLE	**Pljevlja**	**150.65**	**335**	⇑*i*PKP	**PKPbc**	**18 03 11.2**	**+0.2**
AVF	**Avril sur Loir**	**150.68**	**360**	*e*PKIKP	**PKPdf**	**18 03 07.3**	**+2.4**
AVF				pmax	pmax			
	comp=Z,41nm,0.8s							
STIP	**Stip**	**150.73**	**330**	*i* P	**PKPbc**	**18 03 10.7**	**-0.4**
MFF	**Saint Martin d**	**150.75**	**4**	*e*PKIKP	**PKPdf**	**18 03 05.4**	**+0.4**
MFF				pmax	pmax			
	comp=Z,121nm,1.1s							
IVA	**Berane**	**150.82**	**334**	*e*PKP	**PKPbc**	**18 03 11.3**	**-0.1**
OUR	**Ouranopolis**	**150.82**	**326**	P	**PKPbc**	**18 03 10.9**	**-0.4**
VAY	**Valandovo**	**150.83**	**329**	*i* P	**PKPbc**	**18 03 11.3**	**0.0**
SENIN	**Lac Senin/Sane**	**150.89**	**354**	PKPdf	**PKPdf**	**18 03 05.0**	**-0.6**
SENIN				PKPbc	**PKiKP**	**18 03 12.5**	**+0.4**
SMG	**Samos**	**150.90**	**319**	P	**PKPbc**	**18 03 11.5**	**-0.1**
ARG	**Arkhangelos**	**150.93**	**315**	P	**PKiKP**	**18 03 12.2**	**0.0**
UPM	**Unac-Piva**	**150.95**	**336**	*e*P	**PKPbc**	**18 03 11.5**	**-0.3**
UPM	**Unac-Piva**	**150.95**	**336**	⇑*i*PKP	**PKPbc**	**18 03 11.6**	**-0.3**
KOME	**Kolasin**	**151.00**	**335**	⇑*i*PKP	**PKPbc**	**18 03 11.8**	**0.0**
PVY	**Plav**	**151.02**	**334**	*e*PKP	**PKPbc**	**18 03 11.8**	**-0.1**
PLG	**Polygyros**	**151.08**	**327**	P	**PKPbc**	**18 03 11.2**	**-0.8**
TCF	**Toulx Ste Croi**	**151.17**	**1**	*e*PKIKP	**PKPdf**	**18 03 06.0**	**+0.3**
TCF				pmax	pmax			
	comp=Z,73nm,0.9s							
NKY	**Niksic**	**151.24**	**335**	*e*PKP	**PKPbc**	**18 03 12.1**	**-0.3**
NKME	**Niksic**	**151.29**	**335**	*e*PKP	**PKPbc**	**18 03 11.8**	**-0.6**
NIS1	**Nisyros Isl.**	**151.34**	**317**	P	**PKPbc**	**18 03 12.2**	**-0.5**
BRY	**Bratogost**	**151.35**	**336**	⇓*i*P	**PKPbc**	**18 03 12.5**	**-0.2**
BRY	**Bratogost**	**151.35**	**336**	*e*PKP	**PKPbc**	**18 03 12.0**	**-0.7**
PDG	**Podgorica**	**151.45**	**334**	⇓*i*P	**PKPbc**	**18 03 12.5**	**-0.2**
TTG	**Podgorica**	**151.45**	**334**	⇑*i*PKP	**PKPbc**	**18 03 12.0**	**-0.7**
CEME	**Cevo**	**151.49**	**335**	⇑*i*PKP	**PKPbc**	**18 03 11.9**	**-1.0**
PHP	**Peshkopia**	**151.55**	**332**	P	**PKPbc**	**18 03 12.7**	**-0.3**
TREB	**Trebinje**	**151.58**	**336**	*e*P	**PKPbc**	**18 03 12.1**	**-0.9**
DRME	**Dracevica, Mon**	**151.68**	**334**	⇓*i*P	**PKPbc**	**18 03 12.9**	**-0.4**
DRME	**Dracevica, Mon**	**151.68**	**334**	⇑*i*PKP	**PKPbc**	**18 03 12.3**	**-1.0**
BUM	**Brajici-Budva**	**151.71**	**335**	*e*PKP	**PKPbc**	**18 03 12.6**	**-0.8**
HCY	**Herceg Novi**	**151.75**	**335**	*e*P	**PKPbc**	**18 03 12.3**	**-1.1**
LIT	**Litokhoron**	**151.78**	**327**	P	**PKPbc**	**18 03 12.4**	**-1.2**
FNA	**Florina**	**151.82**	**330**	P	**PKPbc**	**18 03 12.8**	**-0.2**
OHR	**Ohrid**	**151.84**	**331**	*i* P	**PKiKP**	**18 03 14.0**	**0.0**
ULC	**Ulcinj**	**151.84**	**334**	*e*PKP	**PKPbc**	**18 03 12.8**	**-0.9**
RJF	**Les Rejaudoux**	**152.13**	**2**	*e*PKIKP	**PKPdf**	**18 03 08.8**	**+1.6**
RJF				pmax	pmax			
	comp=Z,24nm,0.8s							
SSB	**Saint Sauveur**	**152.16**	**358**	PKIKP	**PKPdf**	**18 03 07.4**	**+0.1**
SSB						18 03 14.5		
SSB						18 03 24.5		
SSB	**Saint Sauveur**	**152.16**	**358**	PKPdf	**PKPdf**	**18 03 07.4**	**+0.1**
SSB				PKPbc	**PKiKP**	**18 03 14.5**	**0.0**
SSB				PKPab	**PKPab**	**18 03 24.5**	**-1.0**
BNI	**Bardonecchia**	**152.25**	**354**	PKIKP	**PKPdf**	**18 03 07.8**	**+0.3**
BNI						18 03 26.4		
BNI	**Bardonecchia**	**152.25**	**354**	PKPdf	**PKPdf**	**18 03 07.8**	**+0.3**
BNI				PKPbc	**PKiKP**	**18 03 16.0**	**+1.2**
BNI				PKPab	**PKPab**	**18 03 26.4**	**+0.4**
BNI				pPKPdf	**pPKPbc**	**18 04 44.3**	**-2.4**
NEST	**Nestorio**	**152.26**	**330**	P	**PKiKP**	**18 03 15.0**	**+0.1**
THL	**Klokotos Trika**	**152.42**	**327**	P	**PKPbc**	**18 03 13.8**	**-1.2**
ORIF	**Oris-en-Rattie**	**152.45**	**356**	*e*PKIKP	**PKPdf**	**18 03 08.8**	**+1.0**
ORIF				pmax	pmax			
	comp=Z,20nm,0.6s							
KPRO	**Kipourio**	**152.46**	**328**	P	**PKiKP**	**18 03 15.5**	**+0.2**
ATAL	**Atalanti**	**152.51**	**325**	P	**PKPbc**	**18 03 15.0**	**-0.2**
CAF	**Calviac**	**152.53**	**1**	*e*PKIKP	**PKPdf**	**18 03 08.4**	**+0.6**
CAF				pmax	pmax			
	comp=Z,33nm,0.8s							
MBDF	**Montbardon**	**152.56**	**354**	*e*PKIKP	**PKPdf**	**18 03 09.2**	**+1.2**
MBDF				pmax	pmax			
	comp=Z,37nm,0.7s							
VIVF	**Saint-Julien-l**	**152.58**	**357**	*e*PKIKP	**PKPdf**	**18 03 08.8**	**+0.9**
VIVF				pmax	pmax			
	comp=Z,36nm,0.9s							
ATHU	**Athens Univers**	**152.58**	**323**	P	**PKPbc**	**18 03 15.1**	**-0.3**
THR3	**Thira Island,**	**152.60**	**318**	P	**PKPbc**	**18 03 14.9**	**-0.6**
ATH	**Athens Observa**	**152.62**	**323**	P	**PKPbc**	**18 03 15.2**	**-0.2**
THR6	**Thira Island,**	**152.64**	**318**	P	**PKPbc**	**18 03 15.1**	**-0.4**
AXAR	**Agios Charalam**	**152.66**	**325**	P	**PKPbc**	**18 03 15.0**	**-0.6**
MAKR	**Makrakomi, Fth**	**152.76**	**326**	P	**PKPbc**	**18 03 14.8**	**-1.0**
LTK	**Loutraki**	**153.01**	**324**	P	**PKPbc**	**18 03 15.1**	**-1.3**
NPS	**Neapolis**	**153.15**	**316**	P	**PKiKP**	**18 03 17.0**	**+0.2**
KALE	**Kalithea**	**153.21**	**325**	P	**PKPbc**	**18 03 15.7**	**-1.1**
TRIZ	**Trizonia**	**153.27**	**325**	P	**PKiKP**	**18 03 17.2**	**+0.3**
KRND	**KRANIDI**	**153.35**	**322**	P	**PKPbc**	**18 03 16.5**	**-0.6**
LAKA	**Lakka**	**153.41**	**325**	P	**PKPbc**	**18 03 14.9**	**-2.3**
KLV	**Kalavryta, Ach**	**153.46**	**325**	P	**PKPbc**	**18 03 16.7**	**-0.7**
AQU	**L'Aquila**	**153.58**	**343**	*e*P	**PKiKP**	**18 03 17.9**	**+0.4**
IDI	**Anoyia**	**153.61**	**317**	P	**PKPdf**	**18 03 07.9**	**-1.8**
IDI	**Anoyia**	**153.61**	**317**	⇓P	**PKPdf**	**18 03 12.5**	**+2.8**
PGAV	**Gavieira, Arco**	**153.66**	**19**	*e*PKPdf	**PKPdf**	**18 03 10.7**	**+1.1**
PGAV				*i* LQ	LQ	18 03 18.9		
CASP	**Castiglione de**	**153.81**	**347**	PKPdf	**PKPdf**	**18 03 09.3**	**-0.4**
CASP				PKPbc	**PKPbc**	**18 03 17.5**	**-0.4**
VAM	**Vamos**	**153.99**	**318**	P	**PKiKP**	**18 03 19.3**	**+0.8**
SJPF	**Ste Jean**	**154.10**	**7**	*e*PKIKP	**PKPdf**	**18 03 10.9**	**+0.8**
SJPF				pmax	pmax			
	comp=Z,17nm,1.2s							
MTLF	**Montolieu**	**154.12**	**1**	*e*PKIKP	**PKPdf**	**18 03 10.7**	**+0.6**
MTLF				pmax	pmax			
	comp=Z,26nm,1.2s							
PBRG	**Braganca**	**154.26**	**17**	*e*PKPbc	**PKiKP**	**18 03 19.7**	**+0.7**
PBRG	**Braganca**	**154.26**	**17**	*e*PKPab	**PKPab**	**18 03 35.6**	**+1.0**
EPF	**Esparros**	**154.34**	**5**	*e*PKIKP	**PKPdf**	**18 03 11.1**	**+0.6**
EPF				pmax	pmax			
	comp=Z,23nm,1.3s							
POLO	**Lamas de Olo**	**154.34**	**19**	*e*PKPdf	**PKPdf**	**18 03 12.3**	**+1.7**
POLO				*i* LQ	LQ	18 03 20.4		
ETSF	**Etsaut**	**154.39**	**6**	*e*PKIKP	**PKPdf**	**18 03 11.4**	**+0.8**
ETSF				pmax	pmax			
	comp=Z,16nm,1.2s							
PVRL	**Vila Real**	**154.46**	**19**	*e*PKPdf	**PKPdf**	**18 03 12.0**	**+1.3**
MVO	**Moncorvo**	**154.77**	**18**	*e*PKPdf	**PKPdf**	**18 03 12.3**	**+1.2**
MVO				*i* LQ	LQ	18 03 21.0		
MVO	**Moncorvo**	**154.77**	**18**	*e*PKPab	**PKPab**	**18 03 37.6**	**+0.8**
PVIS	**Viseu**	**154.91**	**20**	*e*PKPdf	**PKPdf**	**18 03 10.2**	**-1.1**
PVIS	**Viseu**	**154.91**	**20**	*e*PKPab	**PKPab**	**18 03 38.4**	**+1.0**
TIP	**Timpagrande**	**155.21**	**334**	PKPdf	**PKPdf**	**18 03 10.9**	**-0.9**
TIP				PKPab		18 03 21.4	-17	
TIP				PKPab	PKPab	18 03 38.5	-0.3	
TIP				pPKPdf	**pPKPdf**	**18 04 41.4**	**-3.1**	
TIP					**pPKPab**	**18 05 07.3**	**0.0**	
PCAS	**Casmilo, Conde**	**155.30**	**22**	*e*PKPdf	**PKPdf**	**18 03 12.0**	**+0.2**
PCAS				*i* LQ	LQ	18 03 21.6		
PCAS	**Casmilo, Conde**	**155.30**	**22**	*e*PKPab	**PKPab**	**18 03 39.9**	**+0.9**
MTE	**Manteigas**	**155.31**	**20**	*e*PKPdf	**PKPdf**	**18 03 12.6**	**+0.7**
MTE				*i* LQ	LQ	18 03 22.3		
MTE	**Manteigas**	**155.31**	**20**	*e*PKPab	**PKPab**	**18 03 40.1**	**+1.0**
MTE	**Manteigas**	**155.31**	**20**	PKPdf	**PKPdf**	**18 03 12.1**	**+0.2**
MTE				PKPdif	PKPab	18 03 21.9	-17	
PSBE	**So Bento**	**155.67**	**23**	*e*PKPdf	**PKPdf**	**18 03 14.1**	**+1.8**
PSBE				*i* LQ	LQ	18 03 22.9		
PSBE	**So Bento**	**155.67**	**23**	*e*PKPab	**PKPab**	**18 03 41.8**	**+1.1**
PCBR	**Castelo Branco**	**155.84**	**20**	*e*PKPdf	**PKPdf**	**18 03 13.8**	**+1.3**
PCBR				*i* LQ	LQ	18 03 23.2		
PCBR	**Castelo Branco**	**155.84**	**20**	*e*PKPab	**PKPab**	**18 03 42.9**	**+1.6**
PMAFR	**Mafra**	**155.97**	**24**	*e*PKPab	**PKPab**	**18 03 43.0**	**+1.0**
PMRV	**Marv??o**	**156.24**	**20**	*e*PKPdf	**PKPdf**	**18 03 14.4**	**+1.3**
PMRV				*i* LQ	LQ	18 03 24.2		
PMRV	**Marv??o**	**156.24**	**20**	*e*PKPab	**PKPab**	**18 03 43.9**	**+0.8**
PMTG	**Montargil**	**156.27**	**22**	*e*PKPdf	**PKPdf**	**18 03 12.7**	**-0.4**
PMTG				*i* LQ	LQ	18 03 24.9		
PMTG	**Montargil**	**156.27**	**22**	*e*PKPab	**PKPab**	**18 03 43.8**	**+0.6**
PESTR	**Estremoz**	**156.67**	**21**	PKPdf	**PKPdf**	**18 03 12.9**	**-0.8**
PESTR					**PKPab**	**18 03 44.7**	**-0.3**
EVO	**Evora**	**156.82**	**22**	*e*PKPdf	**PKPdf**	**18 03 15.7**	**+1.9**
EVO				*i* LQ	LQ	18 03 25.1		
EVO	**Evora**	**156.82**	**22**	*e*PKPab	**PKPab**	**18 03 46.5**	**+0.9**
ESDC	**Sonseca Array**	**156.97**	**14**	PKP	**PKPdf**	**18 03 14.9**	**+0.8**
	comp=Z,6.1nm,1.0s,baz=342,slow=2.7,SNR=28							
ESDC				PKPab	**PKPab**	**18 03 46.4**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=329,slow=3.5,SNR=7.6							
PNCL	**Nicolau / Gran**	**157.00**	**24**	*e*PKPdf	**PKPdf**	**18 03 14.4**	**+0.4**
PNCL	**Nicolau / Gran**	**157.00**	**24**	*e*PKPab	**PKPab**	**18 03 47.3**	**+0.9**
PAB	**San Pablo**	**157.00**	**15**	PKIKP	**PKPdf**	**18 03 14.1**	**0.0**
PAB	**San Pablo**	**157.00**	**15**	PKPdf	**PKPdf**	**18 03 14.1**	**0.0**
PBEJ	**Beja**	**157.32**	**23**	*e*PKPdf	**PKPdf**	**18 03 16.2**	**+1.7**
MESJ	**Messejana**	**157.35**	**24**	*e*PKPdf	**PKPdf**	**18 03 14.7**	**+0.2**
MESJ	**Messejana**	**157.35**	**24**	*e*PKPdf	**PKPdf**	**18 03 16.1**	**+1.6**
MESJ				*i* LQ	LQ	18 03 25.5		
MESJ	**Messejana**	**157.35**	**24**	*e*PKPab	**PKPab**	**18 03 48.5**	**+0.6**
PTEO	**Sao Teotonio**	**157.41**	**25**	*e*PKPdf	**PKPdf**	**18 03 16.1**	**+1.5**
PTEO				*i* LQ	LQ	18 03 26.6		
PTEO	**Sao Teotonio**	**157.41**	**25**	*e*PKPab	**PKPab**	**18 03 41.9**	**-6.3**
PBAR	**Barrancos**	**157.49**	**21**	*e*PKPdf	**PKPdf**	**18 03 16.0**	**+1.3**
PBAR				*i* LQ	LQ	18 03 25.9		
PBAR	**Barrancos**	**157.49**	**21**	*e*PKPab	**PKPab**	**18 03 49.5**	**+1.0**
PCVE	**Castro Verde**	**157.60**	**24**	*e*PKPdf	**PKPdf**	**18 03 16.5**	**+1.7**
PCVE	**Castro Verde**	**157.60**	**24**	*e*PKPab	**PKPab**	**18 03 50.0**	**+1.0**
MORF	**Marmelete**	**157.65**	**25**	*e*PKPdf	**PKPdf**	**18 03 14.9**	**-0.1**
MORF	**Marmelete**	**157.65**	**25**	*e*PKPdf	**PKPdf**	**18 03 16.8**	**+1.8**
MORF				*i* LQ	LQ	18 03 26.0		
PVAQ	**Vaqueiros**	**157.93**	**23**	*e*PKPdf	**PKPdf**	**18 03 17.1**	**+1.9**
PVAQ	**Vaqueiros**	**157.93**	**23**	*e*PKPab	**PKPab**	**18 03 51.7**	**+1.3**
PBDV	**Barranco-do-Ve**	**157.99**	**24**	*e*PKPdf	**PKPdf**	**18 03 17.4**	**+2.1**
PBDV	**Barranco-do-Ve**	**157.99**	**24**	*e*PKPab	**PKPab**	**18 03 47.4**	**-3.3**
KEST	**Kesra**	**160.88**	**344**	PKPab	**PKPab**	**18 04 03.0**	**-0.4**
	comp=Z,12nm,0.9s,baz=192,slow=3.6,SNR=5.0							
LIC	**Lamto**	**166.40**	**144**	*e*PKIKP	**PKPdf**	**18 03 24.7**	**+0.4**
	comp=Z,158nm,1.2s							
LIC	**Lamto**	**166.40**	**144**	*e*PKP2	**PKPab**	**18 04 29.4**	**+1.2**
	comp=Z,64nm,1.1s							
KIC	**Kosan Boka**	**166.67**	**144**	*e*PKIKP	**PKPdf**	**18 03 24.8**	**+0.2**
	comp=Z,64nm,1.0s							
KIC	**Kosan Boka**	**166.67**	**144**	*e*PKP2	**PKPab**	**18 04 30.6**	**+1.2**
	comp=Z,31nm,1.0s							
TIC	**Toumodi**	**166.74**	**143**	*e*PKIKP	**PKPdf**	**18 03 25.0**	**+0.4**
TIC	**Toumodi**	**166.74**	**143**	*e*PKP2	**PKPab**	**18 04 30.8**	**+1.1**
DBIC	**Dimbokro**	**166.86**	**143**	PKP	**PKPdf**	**18 03 24.7**	**0.0**
	comp=Z,23nm,1.0s,baz=123,slow=1.3,SNR=20							
DBIC				PKPab	**PKPab**	**18 04 31.5**	**+1.3**
	comp=Z,20nm,1.0s,baz=197,slow=5.7,SNR=6.2							
KOWA	**Kowa**	**172.64**	**112**	PP	PP	18 08 49.1	+0.9	
	comp=Z,5.0nm,1.0s,baz=231,slow=2.5,SNR=5.3							
KOWA	**Kowa**	**172.64**	**112**		**PKPdf**	**18 03 27.0**	**-1.0**	
KOWA				PKPab	**PKPab**	**18 04 56.0**	**-0.1**	
KOWA					**PP**	**18 08 46.8**	**-1.4**	
TORD	**Torodi Ar. Bea**	**175.59**	**163**	PKP	**PKPdf**	**18 03 28.6**	**-0.3**
	comp=Z,23nm,1.0s,baz=336,slow=1.6,SNR=82							
TORD				PKPab	**PKPab**	**18 05 10.5**	**+1.8**
	comp=Z,23nm,0.8s,baz=207,slow=3.5,SNR=30							
TORD				PP	**PP**	**18 08 58.5**	**-1.8**
	comp=Z,8.4nm,1.1s,baz=178,slow=3.9,SNR=9.2							
TORD	**Torodi Ar. Bea**	**175.59**	**163**		**PKPdf**	**18 03 28.3**	**-0.7**
TORD					**pPKPdf**	**18 05 00.8**	**-1.3**
TORD				PKPab	**PKPab**	**18 05 10.2**	**+1.5**

*SKHL **03** 17:48:53.4±0.4,46°.20N×153°.10E,h61km±4km,mb4.3/5*
*MOS **03** 17:48:54.9±1.1,46°.46N×152°.83E,h53km,mb4.3/3,Error ellipse: s-maj=15.8km s-min=10.4km az=81.5*
*IDC **03** 17:48:55.8±4.1,46°.47N×152°.84E,h40km±26km, mb3.6/9, mb1 3.8/13,mb1mx3.5/70,mbtmp3.8/13,ML4.1/2,MS3.5/1, Ms1 3.5/1,ms1mx2.6/46,Error ellipse: s-maj=47.8km s-min=25.1km az=149.0*
*NEIC **03** 17:49:00.4±1.7,46°.8N±0°.1×152°.59E±0°.09,h67km±7km, mb4.7/18,Error ellipse: s-maj=16.9km s-min=9.1km az=172.0*

ISC 03 17:48:56.7±0.7,46°.51N±0°.09×152°.79E±0°.08,h40km,n54, σ1§33/58,mb4.0/17,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.67**	**251**	*d*	*i* PN	**Pn**		**17 49 49.7**	**-1.1**
KUR					*e*S	**Sn**		**17 50 32.4**	**-0.3**
KUR					pmax	pmax			
	comp=Z,149nm,0.4s								
KUR					smax	smax			
	comp=N,103nm,0.7s								
KUR					smax	smax			
	comp=E,79nm,0.9s								
KUR	**Kuril'sk**	**3.67**	**251**		*i* P	**Pn**		**17 49 49.7**	**-1.1**
KUR					AMB	AMB		17 49 49.9	
	comp=E,40nm,0.4s								
KUR					AMB	AMB		17 49 49.9	
	comp=E,150nm,0.4s								
KUR					*e*S	**Sn**		**17 50 32.2**	**-0.5**
KUR					A	A		17 50 40.8	
	comp=E,100nm,0.7s								
KUR					A	A		17 50 40.8	
	comp=E,80nm,0.7s								
SKR	**Severo-Kuril's**	**4.73**	**27**	*e*PN		**Pn**		**17 50 05.1**	**-0.2**
SKR				*e*S		**Sn**		**17 50 58.6**	**-0.3**
SKR				pmax		pmax			
	comp=Z,27nm,0.9s								
SKR				smax		smax			
	comp=E,129nm,0.7s								
SKR				smax		smax			
	comp=N,154nm,0.7s								
SKR	**Severo-Kuril's**	**4.73**	**27**	*e*P		**Pn**		**17 50 05.1**	**-0.2**
SKR				AMB		AMB		17 50 05.5	
	comp=N,30nm,0.9s								
SKR				*e*S		**Sn**		**17 50 58.6**	**-0.3**
SKR				A		A		17 51 09.1	
	comp=N,150nm,0.7s								
SKR				A		A		17 51 09.1	
	comp=N,130nm,0.7s								
PAU	**Pauzhetka**	**5.63**	**27**	*e*P		**Pn**		**17 50 18.6**	**+0.9**
PAU				AMB		AMB		17 50 22.1	
	comp=N,20nm,0.6s								
PAU				*e*S		**Sn**		**17 51 22.3**	**+1.3**
PAU				A		A		17 51 30.1	
	comp=N,30nm,0.4s								
PAU				A		A		17 51 30.1	
	comp=N,20nm,0.4s								
YSS	**Yuzh-Sakhalins**	**6.91**	**277**	*e*P		**Pn**		**17 50 36.7**	**+1.4**
YSS				AMB		AMB		17 50 38.5	
	comp=N,10.0nm,0.7s								
PEA0B	**Petropavlovsk-**	**7.33**	**24**	PN		**Pn**		**17 50 42.2**	**+1.1**
PEA0B	**Petropavlovsk-**	**7.33**	**24**	Pn		**Pn**		**17 50 42.2**	**+1.1**
PETK	**Petropavlovsk-**	**7.33**	**24**	Pn		**Pn**		**17 50 40.3**	**-0.8**
	comp=N,0.4nm,0.3s,baz=178,slow=12,SNR=18								
PETK	**Petropavlovsk-**	**7.33**	**24**	PN		**Pn**		**17 50 41.7**	**+0.6**
PETK	**Petropavlovsk-**	**7.33**	**24**			**Pn**		**17 50 41.7**	**+0.6**
PET	**Petropavlovsk**	**7.55**	**28**	*e*S		**Sn**		**17 52 07.2**	**-1.0**
PET				A		A		17 52 10.0	
	comp=N,50nm,0.7s								
PET				A		A		17 52 10.0	
	comp=N,30nm,0.7s								
JKA	**Kamikawa-asahi**	**7.57**	**255**	Pn		**Pn**		**17 50 47.2**	**+2.8**
ASAJ	**Asahikawa**	**7.57**	**255**	Pn		**Pn**		**17 50 43.7**	**-0.7**
	comp=N,0.9nm,0.3s,baz=62,slow=14,SNR=7.2								
ASAJ	**Asahikawa**	**7.57**	**255**	PN		**Pn**		**17 50 47.2**	**+2.8**
TYV	**Tymovskoe**	**8.00**	**307**	*e*P		**Pn**		**17 50 52.6**	**+2.4**
TYV				AMB		AMB		17 50 54.1	
	comp=N,10.0nm,0.7s								
MA2	**Magadan**	**13.15**	**355**	Pn		**Pn**		**17 52 03.3**	**+2.7**
	comp=N,0.3nm,0.3s,baz=138,slow=17,SNR=4.2								
MA2	**Magadan**	**13.15**	**355**			**Pn**		**17 52 00.0**	**-0.6**
KLR	**Kul'dur**	**14.38**	**289**	LR		LR		17 57 24.6	
	comp=N,216nm,20.6s,baz=266,slow=35								
USRK	**Ussuriysk Ar.**	**14.80**	**269**	Pn		**Pn**		**17 52 22.9**	**-0.2**
	baz=72,slow=11,SNR=5.1								
JHJ2	**Mitsune**	**16.65**	**221**			**P**		**17 52 51.9**	**+3.0**
JWT	**Wachi**	**17.23**	**236**			**P**		**17 52 56.5**	**+1.1**
JWT				IAmb		IAmb		17 53 10.8	
	comp=Z,94nm,1.7s								
JHS	**Saijyo**	**18.77**	**239**			**Pn**		**17 53 14.3**	**+1.3**
JHS				IAmb		IAmb		17 53 31.2	
	comp=Z,73nm,1.5s								
TRF	**Thorofare Moun**	**35.37**	**41**	P		**P**		**17 55 46.8**	**-1.4**
MDM	**Murphy Dome**	**36.31**	**38**	P		**P**		**17 55 54.3**	**-1.7**
MDM				IAmb		IAmb		17 55 59.1	
	comp=Z,68nm,1.4s								
TCOL	**CIGO, UAF Yank**	**36.46**	**38**	P		**P**		**17 55 55.

OHAK	Old Harbor	3.30	186	Pn	Pn	17 54 29.2	-2.1		
KLU	Klutina	3.45	70		Pn	17 54 32.2	-1.2		
KLU	Klutina	3.45	70	IAML		17 55 13.3			
	comp=E,12nm,3.8s								
KLU				IAML		17 56 18.9			
	comp=N,15nm,3.3s								
M24K	Tolsona, Glenn	3.54	60	Pn	Pn	17 54 34.4	-0.1		
MCK	McKinley	3.70	27	Pn	Pn	17 54 34.7	-1.8		
MCK				IAML		17 55 52.1			
	comp=N,20nm,2.0s								
MCK				IAML		17 55 58.5			
	comp=E,22nm,3.4s								
BPAW	Bear Paw Mtn.	3.70	12	Pn	Pn	17 54 35.1	-1.5		
BPAW				IAML		17 56 06.6			
	comp=E,9.0nm,3.6s								
BPAW				IAML		17 56 57.5			
	comp=N,12nm,3.6s								
BMRM	Bremner River	4.00	80	Pn	Pn	17 54 39.7	-0.9		
BMRM				IAML		17 55 47.5			
	comp=E,21nm,0.9s								
N25K	Chitina, Valde	4.09	71	Pn	Pn	17 54 42.0	+0.1		
N25K				IAML		17 55 48.9			
	comp=N,15nm,2.9s								
N25K				IAML		17 56 29.3			
	comp=E,16nm,3.7s								
GLB	Gilahina Butte	4.44	74	Pn	Pn	17 54 46.7	+0.3		
GLB				IAML		17 55 37.4			
	comp=E,12nm,4.1s								
GLB				IAML		17 55 55.4			
	comp=N,12nm,3.5s								
NEA2	Nenana	4.44	21	Pn	Pn	17 54 45.7	-0.7		
NEA2				IAML		17 57 20.6			
	comp=N,9.0nm,3.7s								
NEA2				IAML		17 57 37.5			
	comp=E,9.4nm,3.5s								
VRDI	Verde Repeater	4.58	77	Pn	Pn	17 54 48.6	+0.1		
VRDI				IAML		17 56 20.4			
	comp=E,11nm,4.4s								
CRQM	Cirque	4.72	83	Pn	Pn	17 54 48.8	-1.5		
CCB	Clear Creek Bu	4.74	26	Pn	Pn	17 54 50.1	-0.3		
CCB				IAML		17 55 56.9			
	comp=E,10.0nm,0.9s								
MCARA	McCarthy VSAT	4.80	75	Pn	Pn	17 54 52.5	+1.3		
TGL	Tana Glacier	4.87	83	Pn	Pn	17 54 50.9	-1.3		
MENT	Mentasta	4.92	56	Pn	Pn	17 54 53.5	+0.6		
IL31		5.06	30	Pn	Pn	17 54 54.4	-0.2		
ILAR	Eielson Array	5.06	30	Pn	Pn	17 54 54.1	-0.5		
GRNC	Granite Creek	5.40	83	Pn	Pn	17 55 00.1	+0.7		
YAH	Yahtse	5.43	87	Pn	Pn	17 54 57.1	-2.8		
BARN	Barnard Glacie	5.44	79	Pn	Pn	17 55 00.7	+0.7		
IMAR	Indian Mountai	5.53	356	Pn	Pn	17 55 01.3	+0.3		
CTGM	Chitina Glacie	5.60	80	Pn	Pn	17 55 02.9	+0.9		
TABL	Table Mountain	5.72	86	Pn	Pn	17 55 03.9	+0.2		
LOGN	Logan Glacier	5.76	82	Pn	Pn	17 55 04.9	+0.6		

*SJA **03** 18:31:00.8±0.7, 36°.00S×74°.33W, h14km±17km, ML4.7, MW4.4*
*IDC **03** 18:31:07.3±0.7, 36°.10S×73°.69W, h0km, mb4.3/12, mb1 4.4/15, mb1mx4.2/37, mbtmp4.3/15, ML4.0/3, MS4.2/4, Ms1 4.2/4, ms1mx3.6/24, Error ellipse: s-maj=24.9km s-min=16.0km az=84.0*
*GUC **03** 18:31:08.1±0.6, 36°.05S×73°.76W, h32km±14km, ML4.9*
*NEIC **03** 18:31:08, 36°.05S×73°.76W, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=6.56; $M_{\theta\theta}$=0.91; $M_{\phi\phi}$=-5.65; $M_{r\theta}$=-2.28; $M_{\theta\phi}$=-2.50; $M_{\phi r}$=-3.53; Fault plane solution: $M_0$7.87000×10^{15} NP1:ϕ_s208.45000°, δ61.19000°, λ95.09000°. NP2:ϕ_s17.96000°, δ29.22000°, λ80.83000°. Principal axes: T 7.8075, Plg73.0000°, Azm131.0000°; N 0.1144, Plg4.0000°, Azm26.0000°; P -7.9220, Plg16.0000°, Azm295.0000°;*
*VAO **03** 18:31:10.2±0.9, 36°.18S×73°.30W, h10km, mb4.7*
*NEIC **03** 18:31:10.1±1.4, 36°.01S±0°.05×73°.44W±0°.09, h16km±3km, mb4.9/73, Mwr4.5/17, ML4.9(GUC), Error ellipse: s-maj=11.1km s-min=6.9km az=72.0*
ISC 03 18:31:08.6±0.4, **36°.05S**±0°.04×**73°.63W**±0°.04, **h10**km, **n209,** σ1**§37**/201, **mb4.9**/45, **MS4.1**/5, **2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BI03	**Tigo**	**0.93**	**149**	*i* P		**Pg**	**18 31 25.6**	**-1.0**
BI03				*e*S		**Sg**	**18 31 38.1**	**-0.7**
BI03				IAML			18 31 40.7	
	comp=N,98μm,0.5s							
BI03	**Tigo**	**0.93**	**149**	Pg		**Pg**	**18 31 25.6**	**-1.0**
BI03				Sg		**Sg**	**18 31 38.6**	**-0.2**
LAJA	**Laja**	**1.44**	**149**	*e*P		**Pn**	**18 31 32.9**	**-1.8**
BI02	**San Fabin de**	**2.00**	**109**	*i* P		**Pn**	**18 31 42.0**	**-0.6**
BI02				IAML			18 32 14.1	
	comp=E,7μm,0.5s							
BI02	**San Fabin de**	**2.00**	**109**			**Pn**	**18 31 42.0**	**-0.6**
BI02				Sn		**Sn**	**18 32 06.5**	**-1.3**
BO03	**Pichilemu**	**2.06**	**42**	*e*P		**Pn**	**18 31 42.0**	**-1.3**
BO02	**Sierra Bellavi**	**2.64**	**63**	*e*P		**Pn**	**18 31 51.1**	**-0.3**
BO02				IAML			18 32 39.8	
	comp=E,6μm,0.4s							
BO02	**Sierra Bellavi**	**2.64**	**63**			**Pn**	**18 31 50.8**	**-0.6**
CANA	**Caviahue**	**2.76**	**133**	*i* P		**Pn**	**18 31 54.0**	**+0.9**
CANA				*e*S		**Sb**	**18 32 33.6**	**+1.5**
CANA				IAML			18 32 48.1	
	comp=Z,2μm,0.9s							
VA05	**Santo Domingo**	**2.91**	**35**	*e*P		**Pn**	**18 31 53.8**	**-1.1**
VA05				IAML			18 32 51.5	
	comp=E,2μm,0.4s							
MT09	**Talagante**	**3.14**	**45**	*e*P		**Pn**	**18 31 57.8**	**-0.5**
MT09				IAML			18 32 56.0	
	comp=E,3μm,0.5s							
PUMA	**Malargue**	**3.44**	**82**	*i* P		**Pn**	**18 32 04.7**	**+2.3**
PUMA				*e*S		**Sb**	**18 32 53.7**	**+2.0**
EDS3	**Malargue**	**3.45**	**87**	*i* P		**Pn**	**18 32 05.4**	**+2.8**
EDS3				*e*S		**Sb**	**18 32 50.4**	**-1.5**
MT02	**Curacav**	**3.46**	**37**	*e*P		**Pn**	**18 32 00.9**	**-1.6**
MT02				IAML			18 33 09.2	
	comp=E,690nm,0.6s							
MT02	**Curacav**	**3.46**	**37**	Pn		**Pn**	**18 32 00.7**	**-1.8**
MT05	**Renca**	**3.56**	**43**	*e*P		**Pn**	**18 32 03.6**	**-0.4**
MT05				IAML			18 33 21.0	
	comp=E,2μm,0.5s							
MT05	**Renca**	**3.56**	**43**			**Pn**	**18 32 02.8**	**-1.2**
LMEL	**Las Melosas**	**3.57**	**53**	*e*P		**Pn**	**18 32 04.8**	**+0.6**
MT03	**Universidad Ad**	**3.62**	**46**	*e*P		**Pn**	**18 32 04.3**	**-0.5**
LAMA	**Las Malvinas**	**3.77**	**74**	*i* P		**Pn**	**18 32 09.6**	**+2.7**
PEL	**Peldehue**	**3.78**	**41**	*e*P		**Pn**	**18 32 06.7**	**-0.4**
PEL	**Peldehue**	**3.78**	**41**	Pn		**Pn**	**18 32 06.6**	**-0.4**
PEL	**Peldehue**	**3.78**	**41**	*i* P		**Pn**	**18 32 07.3**	**+0.3**
PEL				*e*S		**Sb**	**18 33 00.5**	**-0.8**
VA03	**San Esteban**	**4.15**	**39**	*e*P		**Pn**	**18 32 11.7**	**-0.5**
VA03	**San Esteban**	**4.15**	**39**			**Pn**	**18 32 11.5**	**-0.7**
RFA	**San Rafael**	**4.41**	**75**	*i* P		**Pn**	**18 32 17.4**	**+1.8**
RFA				IAML			18 33 34.1	
	comp=Z,722nm,0.8s							
H03S1	**Juan Fernandez**	**4.86**	**295**	Pn		**Pn**	**18 32 20.0**	**-1.5**
	baz=79,slow=13,SNR=17							
H03S1				T		T	18 37 16.6	
	baz=119,slow=74,SNR=1956							
H03S3	**Juan Fernandez**	**4.87**	**296**	Pn		**Pn**	**18 32 20.2**	**-1.5**
	baz=79,slow=13,SNR=13							
H03S3				T		T	18 37 17.3	
	baz=119,slow=74,SNR=1753							
H03S2	**Juan Fernandez**	**4.88**	**295**	Pn		**Pn**	**18 32 19.9**	**-1.9**
	baz=79,slow=13,SNR=21							
H03S2				T		T	18 37 16.7	
	baz=119,slow=74,SNR=2239							
AAGR	**Agrelo**	**4.94**	**55**	*i* P		**Pn**	**18 32 24.9**	**+1.8**
AAGR				IAML			18 33 56.4	
	comp=Z,274nm,1.3s							
LL04	**Puerto Octay**	**4.95**	**169**	*e*P		**Pn**	**18 32 20.9**	**-2.1**
ARCO	**CERRO ARCO**	**5.03**	**52**	*i* P		**Pn**	**18 32 26.6**	**+2.3**
ARCO				IAML			18 33 56.7	
	comp=Z,310nm,0.7s							
H03N1	**Juan Fernandez**	**5.06**	**299**	Pn		**Pn**	**18 32 23.1**	**-1.2**
	baz=273,slow=74,SNR=40							
H03N1				T		T	18 37 39.6	
	baz=134,slow=74,SNR=125							
H03N3	**Juan Fernandez**	**5.07**	**299**	Pn		**Pn**	**18 32 23.8**	**-0.6**
	baz=116,slow=74,SNR=25							
H03N3				T		T	18 37 42.3	
	baz=134,slow=74,SNR=113							
H03N2	**Juan Fernandez**	**5.08**	**299**	Pn		**Pn**	**18 32 23.7**	**-0.8**
H03N2				T		T	18 37 36.9	
	baz=134,slow=74,SNR=100							

AUSP	**Uspallata**	**5.19**	**44**	*i* P		**Pn**	**18 32 27.6**	**+1.0**	
PLCA	**Paso Flores**	**5.27**	**154**	Pn		**Pn**	**18 32 27.4**	**0.0**	
	comp=Z,1.4nm,0.3s,baz=332,slow=11,SNR=27								
PLCA				Lg		Lg	18 33 49.8		
	comp=Z,5.7nm,0.3s,baz=252,slow=23,SNR=3.9								
PLCA	**Paso Flores**	**5.27**	**154**	Pn		**Pn**	**18 32 28.0**	**+0.6**	
RTLS	**Leoncito**	**5.56**	**42**	*i* P		**Pn**	**18 32 32.8**	**+1.1**	
RTLS				IAML			18 34 17.0		
	comp=E,350nm,1.6s								
CO03	**El Pedregal**	**5.75**	**26**	Pn		**Pn**	**18 32 33.2**	**-0.9**	
RTCV	**Cerro Valdivia**	**5.94**	**47**	*i* P		**Pn**	**18 32 37.0**	**+0.2**	
RTCV				IAML			18 34 31.5		
	comp=Z,175nm,1.5s								
ZON	**Zonda**	**6.09**	**44**	Pn		**Pn**	**18 32 38.5**	**-0.3**	
ZON	**Zonda**	**6.09**	**44**	*i* P		**Pn**	**18 32 38.6**	**-0.3**	
ZON				IAML			18 34 30.6		
	comp=Z,133nm,0.9s								
GO04	**Tololo Observa**	**6.32**	**23**	Pn		**Pn**	**18 32 40.2**	**-1.9**	
RTLL	**Cerro Villicun**	**6.37**	**44**	*i* P		**Pn**	**18 32 42.3**	**-0.3**	
RTLL				IAML			18 34 24.2		
	comp=Z,150nm,0.6s								
LL01	**San Ignacio de**	**6.39**	**172**			**Pn**	**18 32 43.7**	**+0.9**	
ACCO	**Cerro Coronel**	**6.65**	**36**	*i* P		**Pn**	**18 32 46.5**	**-0.2**	
ACCO				IAML			18 34 39.8		
	comp=Z,130nm,0.8s								
GO07	**Milladeo Hill,**	**7.06**	**180**			**Pn**	**18 32 52.9**	**+0.9**	
LCO	**Las Campanas**	**7.44**	**20**	Pn		**Pn**	**18 32 55.7**	**-1.7**	
AC04	**Llanos de Chal**	**8.11**	**16**	Pn		**Pn**	**18 33 04.4**	**-2.1**	
GO03	**Copiap**	**8.91**	**20**	Pn		**Pn**	**18 33 15.3**	**-2.1**	
AC02	**Maricunga**	**9.95**	**24**	Pn		**Pn**	**18 33 30.6**	**-1.5**	
AC01	**Pan de Azucar**	**10.20**	**16**	Pn		**Pn**	**18 33 31.2**	**-4.0**	
GO02	**Mina Guanaco**	**11.39**	**19**	Pn		**Pn**	**18 33 50.0**	**-1.8**	
LPA	**La Plata**	**12.85**	**90**	*e*P		Pn	18 34 06.1	-5.2	
LPA					PP	**PbPb**	**18 34 47.4**	**-5.8**	
LPA					S	**Sn**	**18 36 32.0**	**-2.4**	
LPA					SSS	SSS	18 36 54.8		
LPA					SS	**SbSb**	**18 37 28.5**	**+0.8**	
LPA					SCS	**ScS**	**18 46 50.4**	**-5.6**	
LPA					PKIKS		18 51 14.9		
LPA					SKIKS		18 54 55.3		
PB15	**IPOC Station P**	**13.29**	**17**	Pn		**Pn**	**18 34 15.1**	**-2.5**	
PB04	**IPOC Station P**	**14.00**	**13**	Pn		**Pn**	**18 34 28.4**	**+1.1**	
LVC	**Limon Verde**	**14.01**	**18**	Pn		**Pn**	**18 34 28.6**	**+1.1**	
	comp=Z,0.2nm,0.3s,baz=313,slow=9.5,SNR=2.1								
LVC				Lg		Lg	18 38 28.2		
	comp=Z,0.4nm,0.3s,baz=8.7,slow=2.9,SNR=6.9								
LVC	**Limon Verde**	**14.01**	**18**	Pn		**Pn**	**18 34 27.5**	**0.0**	
PB07	**IPOC Station P**	**14.64**	**14**	Pn		**Pn**	**18 34 38.4**	**+2.4**	
PB09	**IPOC Station P**	**14.71**	**16**	Pn		**Pn**	**18 34 38.5**	**+1.6**	
GO09	**Cerro Castillo**	**15.25**	**177**	Pn		**Pn**	**18 34 42.4**	**-1.4**	
PB01	**IPOC Station P**	**15.38**	**15**			**Pn**	**18 34 45.5**	**-0.4**	
PB11	**IPOC Station P**	**16.60**	**13**	P		**P**	**18 35 03.9**	**-0.3**	
PSGCX	**Pisagua**	**16.68**	**12**			**P**	**18 35 04.8**	**-0.2**	
CPUP	**Villa Florida**	**16.96**	**60**	P		**P**	**18 35 08.0**	**0.0**	
	comp=Z,0.2nm,0.3s,baz=207,slow=12,SNR=5.1								
CPUP	**Villa Florida**	**16.96**	**60**	P		**Pn**	**18 35 05.2**	**-0.8**	
MNMC	**Minye Minye**	**17.22**	**13**	P		**Pn**	**18 35 10.2**	**+0.6**	
CPSB	**Cacapava Do Su**	**17.80**	**77**	*e*P		**Pn**	**18 35 15.8**	**-0.6**	
PB16	**IPOC Station P**	**18.02**	**13**	P		**P**	**18 35 20.2**	**0.0**	
EFI	**East Falkland**	**19.17**	**149**	P		**P**	**18 35 32.2**	**+0.1**	
ITAB	**Concordia**	**20.27**	**70**	*e*P		**P**	**18 35 43.6**	**-0.8**	
LPAZ	**La Paz**	**20.28**	**15**	P		Pn	18 35 46.5	-0.6	
	comp=Z,3.4nm,0.7s,baz=176,slow=17,SNR=12								
LPAZ	**La Paz**	**20.28**	**15**	P		**P**	**18 35 45.4**	**+0.3**	
LPAZ	**La Paz**	**20.28**	**15**	*e*P		Pn	18 35 47.3	+0.3	
CNLB	**Canela**	**20.29**	**77**	*e*P		**P**	**18 35 43.6**	**-1.0**	
PTGB	**Pitanga**	**21.72**	**65**	*e*P		**P**	**18 36 01.3**	**+1.3**	
AQDB	**Aquidauana**	**22.08**	**50**	*e*P		**P**	**18 36 03.3**	**-0.6**	
SIV	**San Ignacio**	**22.90**	**33**	P		**P**	**18 36 12.4**	**-0.2**	
	comp=Z,9.6nm,0.9s,baz=231,slow=12,SNR=25								
SIV					LR	LR	18 46 56.3		
	comp=Z,625nm,19.8s,baz=227,slow=41								
NNA	**Nana**	**24.13**	**352**	P		**P**	**18 36 24.3**	**-0.5**	
NNA				IAmb		IAmb	18 36 30.6		
	comp=Z,56nm,1.4s								
PCMB	**Pacaembu**	**24.23**	**60**	*e*P		**P**	**18 36 25.0**	**-0.8**	
PTLB	**Pontes e Lacer**	**24.26**	**36**	*e*P		**P**	**18 36 26.1**	**+0.2**	
FRTB	**Fartura**	**24.37**	**65**	*e*P		**P**	**18 36 27.5**	**+0.5**	
PP1B	**Ponte de Pedra**	**24.77**	**47**	*e*P		**P**	**18 36 30.9**	**+0.2**	
SPB	**Sao Paulo**	**25.81**	**68**	P		**P**	**18 36 39.5**	**-0.5**	
SPB				IAmb		IAmb	18 36 45.5		
	comp=Z,18nm,0.8s								
SPB	**Sao Paulo**	**25.81**	**68**	*e*P		**P**	**18 36 39.8**	**-0.2**	
VILB	**Vilhena**	**25.98**	**31**	*e*P		**P**	**18 36 43.6**	**+1.9**	
ITRB	**Iturama**	**26.13**	**58**	*e*P		**P**	**18 36 43.6**	**+0.6**	
RCLB	**Rio Claro- Sao**	**26.42**	**66**	*e*P		**P**	**18 36 45.8**	**+0.2**	
VAO	**Valinhos**	**26.50**	**68**	*e*P		**P**	**18 36 47.2**	**+0.9**	
BB19B	**Bebedouro**	**26.52**	**63**	*e*P		**P**	**18 36 47.0**	**+0.4**	
ETMB	**Extrema**	**26.97**	**16**	*e*P		**P**	**18 36 51.1**	**+0.6**	
PARB	**Paraibuna**	**27.33**	**70**	*e*P		**P**	**18 36 53.1**	**-0.7**	
ARAG	**Araguaiana, MT**	**28.09**	**49**	*e*P		**P**	**18 36 59.6**	**-1.0**	
SAML	**Samuel**	**28.61**	**22**	*e*P		**P**	**18 37 06.7**	**+1.5**	
IPMB	**Ipaneri, GO**	**28.79**	**58**	*e*P		**P**	**18 37 05.4**	**-1.5**	
BSCB	**Bom Sucesso**	**29.32**	**67**	*e*P		**P**	**18 37 11.5**	**-0.1**	
PMSA	**Palmer Station**	**29.33**	**172**	LR		LR	18 49 10.1		
	comp=Z,378nm,18.1s,baz=313,slow=37								
BDFB	**Brasilia**	**30.57**	**55**	P		**P**	**18 37 22.2**	**-0.5**	
	comp=Z,3.8nm,0.8s,baz=207,slow=7.3,SNR=5.1								
BDFB	**Brasilia**	**30.57**	**55**	P		**P**	**18 37 22.0**	**-0.7**	
JANB	**Januaria**	**33.50**	**59**	*e*P		**P**	**18 37 48.1**	**-0.3**	
SDBA	**SAO DESIDERIO**	**34.98**	**55**	*e*P		**P**	**18 37 59.5**	**-1.8**	
ITTB	**Itaituba**	**35.58**	**32**	*e*P		**P**	**18 38 08.0**	**+1.7**	
SMTB	**Santa Maria do**	**35.98**	**48**	*e*P		**P**	**18 38 09.7**	**-0.1**	
OTAV	**Otavalo**	**36.38**	**352**	P		**P**	**18 38 15.6**	**+1.9**	
OTAV	**Otavalo**	**36.38**	**352**	*e*P		**P**	**18 38 16.5**	**+2.9**	
NBIT	**Itapeh - BA**	**37.06**	**64**	*e*P		**P**	**18 38 18.7**	**-0.4**	
PTGA	**Pitinga**	**37.36**	**23**	*e*P		**P**	**18 38 24.3**	**+2.8**	
NBLA	**Lagarto - SE**	**40.88**	**61**	*e*P		**P**	**18 38 51.5**	**+0.4**	
NBTA	**Tacaratu-PE**	**41.99**	**59**	*e*P		**P**	**18 39 00.6**	**+0.4**	
NBMA	**Muriti-CE**	**42.77**	**57**	*e*P		**P**	**18 39 06.7**	**+0.2**	
NBAN	**Anadia - AL**	**42.87**	**62**	*e*P		**P**	**18 39 07.1**	**-0.2**	
RIOS	**Rincon, Osa**	**45.47**	**346**	P		**P**	**18 39 29.4**	**+1.4**	
RIOS				IAmb		IAmb	18 39 36.6		
	comp=Z,13nm,0.9s								
VNA3	**Neumayer Olymp**	**47.98**	**157**	P		**P**	**18 39 47.2**	**+0.1**	
VNA3	**Neumayer Olymp**	**47.98**	**157**	pP		pP	18 39 53.6	+3.6	
VNA1	**Neumayer--Stat**	**48.32**	**156**	pP		pP	18 39 55.9	+3.3	
VNA2	**Neumayer--Watz**	**48.65**	**156**	P		**P**	**18 39 52.6**	**+0.3**	
	baz=292,slow=8.8								
VNA2	**Neumayer--Watz**	**48.65**	**156**	PP		PP	18 41 45.3	+0.3	
VNA2	**Neumayer--Watz**	**48.65**	**156**	PcP		**PcP**	**18 41 18.2**	**+0.6**	
VNA2	**Neumayer--Watz**	**48.65**	**156**	pP		pP	18 39 58.2	+3.1	
SNAA	**Sanae**	**50.20**	**157**	P		**P**	**18 40 04.3**	**+0.1**	
SNAA	**Sanae**	**50.20**	**157**	pP		pP	18 40 09.9	+2.9	
SNAA	**Sanae**	**50.20**	**157**	P		**P**	**18 40 04.2**	**+0.1**	
	comp=Z,6.5nm,0.9s,baz=281,slow=6.1,SNR=12								
SNAA	**Sanae**	**50.20**	**157**	P		**P**	**18 40 03.7**	**-0.5**	
SNAA				IAmb		IAmb	18 40 17.3		
	comp=Z,13nm,1.1s								
RKT	**Rikitea**	**54.09**	**266**	*e*T		T	19 38 48.0		
	comp=Z,1.6nm,0.3s								
QSPA	**South Pole Qui**	**54.19**	**180**	P		**P**	**18 40 33.5**	**-0.5**	
	comp=Z,5.4nm,0.9s,baz=112,slow=3.0,SNR=12								
QSPA	**South Pole Qui**	**54.19**	**180**	P		**P**	**18 40 35.3**	**+1.3**	
QSPA				IAmb		IAmb	18 40 41.9		
	comp=Z,12nm,1.0s								
MEH	**Mehetia**	**67.30**	**264**	*e*T		T	19 55 17.7		
	comp=Z,23nm,0.2s								
PPT2	**Papeete2**	**68.67**	**263**	*e*LR		LR	19 02 44.3		
	comp=Z,170nm,24.8s								
PPT	**Papeete**	**68.68**	**263**	LR		LR	19 04 55.7		
	comp=Z,100nm,18.4s,baz=48,slow=30								
TXAR	**Lajitas Array**	**70.91**	**332**	P		**P**	**18 42 27.4**	**+1.3**	
	comp=Z,1.9nm,0.6s,baz=156,slow=8.8,SNR=21								
TX31	**Lajitas Ar. Si**	**70.91**	**332**	P		**P**	**18 42 27.0**	**+1.0**	
TX32	**Lajitas Array**	**70.91**	**332**	P		**P**	**18 42 27.6**	**+1.6**	
TX32				IAmb		IAmb	18 42 33.9		
	comp=Z,12nm,1.6s								
X48A	**Hartselle**	**71.25**	**348**	P		**P**	**18 42 28.6**	**+0.7**	
MAW	**Mawson**	**71.59**	**164**	LR		LR	19 14 15.2		
	comp=Z,200nm,18.1s,baz=240,slow=36								
SWET	**Sewanee**	**71.82**	**349**	P		**P**	**18 42 31.7**	**+0.4**	
PLAL	**Pickwick Lake**	**71.94**	**348**	P		**P**	**18 42 32.1**	**+0.1**	
PLAL				IAmb		IAmb	18 42 38.0		
	comp=Z,11nm,1.1s								
V48A	**Smith Brothers**	**72.47**	**349**	P		**P**	**18 42 35.4**	**+0.2**	
CLTN	**Cedars of Leba**	**72.74**	**349**	P		**P**	**18 42 37.2**	**+0.5**	
CLTN				IAmb		IAmb	18 42 43.8		
	comp=Z,21nm,1.4s								
WVT	**Waverly**	**73.02**	**348**	P		**P**	**18 42 38.6**	**+0.2**	
WHAR	**Wooly Hollow**	**73.07**	**344**	P		**P**	**18 42 39.5**	**+0.8**	
WHAR				IAmb		IAmb	18 42 45.9		
	comp=Z,18nm,1.2s								

W39A	**Magazine**	**73.33**	**343**	P		**P**	**18 42 40.2**	**0.0**	
LCAR	**Lake Charles**	**73.58**	**345**	P		**P**	**18 42 41.4**	**-0.3**	
LCAR				IAmb		IAmb	18 42 48.3		
	comp=Z,14nm,1.3s								
MNTX	**Cornudas Mount**	**73.68**	**332**	P		**P**	**18 42 42.7**	**+0.3**	
U40A	**Yellville**	**74.22**	**344**	P		**P**	**18 42 45.8**	**+0.3**	
U40A				IAmb		IAmb	18 42 46.5		
	comp=Z,8.5nm,1.0s								
AMTX	**Amarillo**	**75.26**	**336**	P		**P**	**18 42 51.9**	**+0.3**	
FVM	**French Village**	**75.29**	**346**	P		**P**	**18 42 50.2**	**-1.4**	
FVM				IAmb		IAmb	18 42 59.2		
	comp=Z,19nm,1.4s								
121A	**Cookes Peak, D**	**75.35**	**331**	P		**P**	**18 42 51.9**	**-0.5**	
121A				IAmb		IAmb	18 43 00.9		
	comp=Z,14nm,1.3s								
CCM	**Cathedral Cave**	**75.52**	**346**	P		**P**	**18 42 53.3**	**+0.4**	
S39A	**Bolivar**	**75.61**	**344**	P		**P**	**18 42 53.7**	**+0.3**	
WUPA	**West Chester U**	**75.63**	**358**	P		**P**	**18 42 53.4**	**-0.1**	
R40A	**Maddies Statio**	**75.95**	**345**	P		**P**	**18 42 55.9**	**+0.5**	
R40A				IAmb		IAmb	18 43 02.2		
	comp=Z,13nm,1.1s								
LENM	**Lemitar**	**76.47**	**332**	P		**P**	**18 42 59.6**	**+0.9**	
LIC	**Lamto**	**76.66**	**72**	*e*PKP1		P	18 43 06.0	+6.0	
	comp=Z,57nm,1.4s								
TIC	**Toumodi**	**76.92**	**72**	*e*PKP1		P	18 43 06.6	+5.0	
KIC	**Kosan Boka**	**76.96**	**72**	*e*PKP1		P	18 43 07.0	+5.2	
	comp=Z,23nm,1.1s								
ANMO	**Albuquerque**	**76.97**	**333**	P		**P**	**18 43 03.0**	**+1.4**	
DBIC	**Dimbokro**	**77.07**	**72**	P		**P**	**18 43 04.4**	**+2.1**	
	comp=Z,6.4nm,0.9s,baz=198,slow=7.0,SNR=5.3								
DBIC	**Dimbokro**	**77.07**	**72**	IAmb		IAmb	18 43 29.8		
	comp=Z,20nm,1.4s								
P40A	**Paris**	**77.10**	**345**	P		**P**	**18 43 01.9**	**0.0**	
P38A	**Dawn**	**77.50**	**344**	P		**P**	**18 43 04.2**	**0.0**	
P38A				IAmb		IAmb	18 43 10.7		
	comp=Z,16nm,1.2s								
T25A	**Trinidad**	**78.22**	**335**	P		**P**	**18 43 09.3**	**+0.9**	
T25A				IAmb		IAmb	18 43 16.9		
	comp=Z,19nm,1.2s								
MVCO	**Mesa Verde**	**79.74**	**332**	P		**P**	**18 43 18.0**	**+1.2**	
MVCO				IAmb		IAmb	18 43 25.1		
	comp=Z,15nm,1.4s								
BOSA	**Boshof**	**80.27**	**118**	P		**P**	**18 43 20.6**	**+0.5**	
	comp=Z,3.8nm,0.9s,baz=263,slow=6.2,SNR=5.6								
BOSA	**Boshof**	**80.27**	**118**	IAmb		IAmb	18 43 26.9		
	comp=Z,15nm,1.2s								
PV01	**Paradox Valley**	**80.58**	**333**	P		**P**	**18 43 22.7**	**+1.3**	
PV13	**Radium Mtn., P**	**80.70**	**333**	P		**P**	**18 43 23.2**	**+1.

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CDM	Cerro de Muert	0.05	360	eP			Pg	18 32 33.4	+0.5
PEZE	Perez Zeledon,	0.15	145	eP			Pg	18 32 34.1	+0.7
PEZE	Perez Zeledon,	0.15	145				Pg	18 32 34.0	+0.7
PEZE					Sg		Sg	18 32 37.6	+1.5
EDDO	Dominical	0.27	202	eP			Pb	18 32 36.2	+0.7
RIMA	Rio Macho	0.28	339	eP			Pb	18 32 35.7	-0.2
RIMA				eS			Sb	18 32 40.2	-0.2
LCR2	La Lucha 2	0.34	315	eP			Pb	18 32 36.8	-0.1
CVTR	Volcan Turrial	0.51	0	eP			Pb	18 32 39.8	-0.2
DRK0	Durika	0.56	115	eP			Pb	18 32 39.9	-0.8
EDBA	Buenos Aires	0.59	125	eP			Pb	18 32 40.1	-1.0
HDC3	Heredia 3	0.60	325	eP			Pb	18 32 41.4	0.0
HDC	Heredia	0.60	325	eP			Pb	18 32 41.4	0.0
HDC	Heredia	0.60	325				Pb	18 32 41.0	-0.4
HDC					Sg		Sb	18 32 50.4	+0.7
EDPN	Palmar Norte	0.62	151	eP			Pb	18 32 41.9	+0.3
BATAN	Batan	0.70	33	eP			Pb	18 32 42.6	-0.4
BATAN	Batan	0.70	33				Pb	18 32 42.8	-0.2
BATAN							Sb	18 32 53.2	+0.8
POTG	Potrero Grande	0.78	125	eP			Pb	18 32 43.8	-0.5
RIOS	Rincon, Osa	0.83	163	eP			Pg	18 32 44.3	-1.2
RIOS	Rincon, Osa	0.83	163				Pg	18 32 44.3	-1.2
RIOS					Sn		Sg	18 32 55.7	-0.8
SRA1	San Ramn	0.91	309	eP			Pb	18 32 46.1	-0.6
EDSV	San Vito	1.03	131	eP			Pn	18 32 48.9	-0.2
PTJ1	Puerto Jimnez	1.06	155	eP			Pg	18 32 48.3	-1.5
LAFE	Finca La Fe, P	1.17	285	eP			Pn	18 32 51.0	+0.2
BRU2	Volcan	1.27	124	eP			Pn	18 32 52.0	-0.4
CDITO	Canoas	1.28	136	eP			Pn	18 32 51.2	-1.1
FORC	Fortuna	1.31	317	iP			Pn	18 32 53.0	-0.4
FORC				iS			Sn	18 33 11.7	+1.8
CAO2	Cobano, Puntar	1.34	278				Pn	18 32 53.0	-0.2
ARE1	Arenal 1	1.34	315	eP			Pg	18 32 53.8	-1.3
CEDE	Laguna Cedeo	1.35	317	iP			Pn	18 32 53.0	-0.4
CEDE				iS			Sn	18 33 11.8	+0.9
COVE	Coope Vega, Sa	1.36	333	eP			Pn	18 32 53.6	+0.1
COVE	Coope Vega, Sa	1.36	333				Pn	18 32 53.5	+0.1
JTS	Las Juntas de	1.41	304	Pg			Pn	18 32 53.9	-0.2
	479nm,0.3s,baz=153,slow=15,SNR=508								
JTS					Lg		Lg	18 33 12.9	
	605nm,0.3s,baz=16,slow=22,SNR=9.4								
JTS					LR		LR	18 33 22.7	
	comp=Z,2µm,21.2s,baz=344,slow=38								
JTS	Las Juntas de	1.41	304	eP			Pn	18 32 54.0	-0.2
ACAL	Aguas Claras	1.68	312	iP			Pb	18 32 58.7	-1.1
PTEN	Parque Tenorio	1.70	315	iP			Pb	18 32 59.0	-1.2
INDI	Punta indio, G	1.75	282	eP			Pn	18 32 59.0	+0.1
CUI	Cuipilapa	1.79	310	eP			Pn	18 32 59.5	+0.1
COLC	Colonia	1.83	309	iP			Pb	18 33 00.9	-1.4
HORNC	Hornillas	1.84	311	iP			Pn	18 33 00.6	+0.5
GUAB	Guayabo de Bag	1.88	310	iP			Pb	18 33 01.9	-1.2
ORTG	Ortega, Santa	1.88	297	Pn			Pn	18 33 00.8	+0.2
GPS2	Hotel Rincn d	2.00	309	iP			Pb	18 33 04.1	-1.1
SAJU	San Juanillo,	2.00	286	eP			Pn	18 33 02.1	-0.1
GPS3	Bodega del ICE	2.01	308	iP			Pn	18 33 03.6	+1.2
BUAI	Buenos Aires	2.06	312	iP			Pn	18 33 03.9	+0.8
LAPC	Finca la Perla	2.07	308	iP			Pn	18 33 03.1	-0.1
ESPN	Las Esperanzas	2.73	349	eP			Pn	18 33 12.8	+0.6
ESPN	Las Esperanzas	2.73	349				Pn	18 33 11.8	-0.4
ACON	Acoyapa	2.81	331	eP			Pn	18 33 13.9	+0.4
ACON	Acoyapa	2.81	331				Pn	18 33 12.7	-0.7
GMAL	Guarumal, Vera	3.04	124	eP			Pn	18 33 16.3	-0.2
BCIP	Isla Barro Col	3.89	95	eP			Pn	18 33 28.2	-0.1
BCIP	Isla Barro Col	3.89	95				Pn	18 33 28.1	-0.1
BCIP	Isla Barro Col	3.89	95	eP			Pn	18 33 27.5	-0.8
MATN	Matagalpa	4.01	328				Pn	18 33 32.6	+2.6
PRVC	Isla de Provid	4.51	31	eP			Pn	18 33 35.4	-1.4
CRIN	San Cristobal	4.53	315				Pn	18 33 38.4	+1.3
TGUH	Tegucigalpa,Un	5.68	323				Pn	18 33 54.0	+1.0
CAPC	Capurgana	6.39	97	eP			Pn	18 34 03.5	+0.8
SNET	Serv Nac Est T	6.78	308	Pn			Pn	18 34 09.1	+0.9
SOLC	Bahia Solano	7.09	117	eP			Pn	18 34 12.2	0.0
MTO3	Montecristo	7.33	312				Pn	18 34 18.7	+3.0
LCBC	Los crdobas,	7.33	94	eP			Pn	18 34 18.6	+3.0
ESQI	Esquipulas	7.42	313				Pn	18 34 16.9	0.0
DBBC	Dabeiba	7.87	108	eP			Pn	18 34 23.3	+0.1
MOTC	Monteria, Cord	8.03	94	eP			Pn	18 34 26.3	+1.1
UREC	San Jos de Ur	8.32	101	eP			Pn	18 34 29.3	+0.1
SJCC	San Jacinto, C	8.47	87	eP			Pn	18 34 31.0	-0.3
CBOC	Ciudad Bolivar	8.49	115	eP			Pn	18 34 31.1	-0.5
APG	El Apazote	8.53	311	Pn			Pn	18 34 33.3	+1.0
	0.9nm,0.3s,baz=96,slow=7.5,SNR=9.8								
HELC	Santa Helena	8.80	111	eP			Pn	18 34 38.4	+2.3
ZARC	Zaragoza, Cauc	9.03	102	eP			Pn	18 34 39.0	+0.1
YOTC	Yotoco, Valle	9.18	126	eP			Pn	18 34 40.2	-0.9
RTAL	Retalhuleu	9.22	304	Pn			Pn	18 34 41.9	+0.3
GUY2C	Guyana, Caldas	9.35	116	eP			Pn	18 34 43.6	-0.2
PETF	Flores	9.46	322	Pn			Pn	18 34 44.2	-0.7
HUEH	Huehuetenango	9.51	308	Pn			Pn	18 34 47.0	+1.2
RREF	El Recreo	9.52	118	eP			Pn	18 34 51.3	+5.1
SMRC	Santa Marta, M	9.53	79	eP			Pn	18 34 44.5	-1.3
SMLC	San Martn de	9.60	93	eP			Pn	18 34 45.3	-1.4
PTBC	PUERTO BERRIO,	9.64	107	eP			Pn	18 34 46.3	+1.5
TOLC	Tolima	9.70	120	eP			Pn	18 34 52.7	+4.3
BBAC	Balboa, Cauca	9.86	139	eP			Pn	18 34 53.1	+2.6
POPC	Popayan, Colom	9.87	134	eP			Pn	18 34 52.8	+2.1
ORTC	Ortega, Tolima	10.12	123	eP			Pn	18 34 57.3	+3.4
SOTA	Rioblanco	10.21	135	eP			Pn	18 34 57.6	+2.1
PCON	Cinco Dias	10.22	134	eP			Pn	18 34 57.3	+1.5
BRRC	Barranca, Sant	10.23	103	eP			Pn	18 34 56.7	+1.3
SPBC	San Pablo de B	10.34	111	eP			Pn	18 34 58.7	+1.7
OCAC	Ocana	10.40	96	eP			Pn	18 34 57.6	-0.2
GCUF	Volcan Galeras	10.41	142	eP			Pn	18 34 56.5	-1.8
ROSC	El Rosal	10.45	116	LR			LR	18 40 06.9	
	comp=Z,330nm,18.2s,baz=8.0,slow=45								
ROSC	El Rosal	10.45	116				Pn	18 34 59.0	+0.2
CCIG	Comitan	10.58	310				Pn	18 35 01.1	+0.7
PAMC	Pamplona, Colo	11.15	100	eP			Pn	18 35 10.8	+2.3
RUSC	La Rusia	11.18	102	eP			Pn	18 35 09.0	+0.3
TEIG	Tepich	11.52	338	LR			LR	18 39 39.5	
	comp=Z,502nm,19.9s,baz=152,slow=38								
SDV	Santo Domingo	12.98	92	Pn			Pn	18 35 31.3	-1.8
	3.5nm,0.3s,baz=281,slow=13,SNR=7.3								
SDV					LR		LR	18 41 26.3	
	comp=Z,600nm,20.4s,baz=267,slow=42								
SDV	Santo Domingo	12.98	92	Pn			Pn	18 35 31.6	-1.5
CMIG	Matias Romero	13.19	306	Pn			Pn	18 35 36.7	+0.9
	0.9nm,0.3s,baz=133,slow=12,SNR=8.1								
GTBY	Guantanamo Bay	13.31	38	Pn			Pn	18 35 39.5	+2.0
ATAH	Atahualpa	17.37	162	LR			LR	18 42 27.6	
	comp=Z,416nm,19.9s,baz=337,slow=34								
SJG	San Juan	19.11	62	LR			LR	18 43 33.2	
	comp=Z,413nm,19.9s,baz=223,slow=35								
ZAIG	Zacatecas	22.33	308	P			P	18 37 27.7	+1.1
152A	Waverly Hall	23.07	358	P			P	18 37 33.4	-0.6
152A					IAmb		IAmb	18 37 42.8	
	comp=Z,9.3nm,0.8s								
Y52A	Lilburn	24.25	359	P			P	18 37 48.7	+3.3
Y52A					IAmb		IAmb	18 37 53.6	
	comp=Z,16nm,0.9s								
PAULI	Pauline	25.26	4	P			P	18 38 00.1	+5.5
PAULI					IAmb		IAmb	18 38 04.0	
	comp=Z,17nm,1.1s								
PLAL	Pickwick Lake	25.67	352	P			P	18 38 02.5	+4.3
PLAL					IAmb		IAmb	18 38 07.0	
	comp=Z,8.3nm,0.9s								
JCT	Junction City	25.68	327	P			P	18 37 59.7	+1.2
TKL	Tuckaleechee C	26.04	360	P			P	18 38 05.4	+3.8
TKL					IAmb		IAmb	18 38 21.2	
	comp=Z,18nm,1.4s								
TXAR	Lajitas Array	27.15	319	P			P	18 38 10.8	-1.0
	comp=Z,0.1nm,0.4s,baz=116,slow=4.1,SNR=1.8								
ULM	Lac du Bonnet	41.84	348	P			P	18 40 15.1	-3.1
	comp=Z,3.7nm,1.0s,baz=163,slow=8.4,SNR=5.3								
ULM	Lac du Bonnet	41.84	348	P			P	18 40 19.4	+1.2
ULM					IAmb		IAmb	18 40 23.2	
	comp=Z,10nm,0.8s								
NVAR	Mina Array Bea	42.29	319	P			P	18 40 23.1	+0.7
	comp=Z,0.5nm,0.9s,baz=170,slow=6.4,SNR=2.4								
PLCA	Paso Flores	51.45	167	P			P	18 41 33.1	-0.6
	0.9nm,0.3s,baz=334,slow=8.6,SNR=8.7								
PLCA	Paso Flores	51.45	167	IAmb			IAmb	18 41 35.5	
	comp=Z,9.3nm,0.9s								
YKA	Yellowknife Ar	57.42	344	P			P	18 42 15.3	-1.4
	comp=Z,0.4nm,0.7s,baz=134,slow=7.9,SNR=7.3								
RES	Resolute Bay	65.46	357	P			P	18 43 10.0	-0.9
RES					IAmb		IAmb	18 43 16.5	
	comp=Z,6.6nm,1.4s								
ILAR	Eielson Array	70.17	336	P			P	18 43 39.5	-1.2
	comp=Z,0.5nm,0.7s,baz=115,slow=4.5,SNR=5.8								
ESDC	Sonseca Array	76.17	51	P			P	18 44 16.0	-0.7
	comp=Z,1.7nm,0.9s,baz=276,slow=5.8,SNR=11								
ESDC	Sonseca Array	76.17	51	P			P	18 44 16.4	-0.4
NOA	NORSAR Array B	84.17	29	P			P	18 44 58.1	-1.4
	comp=Z,0.7nm,0.9s,baz=279,slow=5.0,SNR=2.3								
CLL	Collm	86.86	39	eP			P	18 45 12.0	-1.0
CLL				i pP			sP	18 45 18.8	-2.9
	comp=Z,8.0nm,1.2s								
GERES	GERESS Array B	87.80	41	P			P	18 45 15.7	-2.1
	comp=Z,0.4nm,0.8s,baz=184,slow=2.0,SNR=4.1								
FINES	FINESS Array B	90.98	27	P			P	18 45 30.0	-2.2
	comp=Z,0.7nm,0.7s,baz=292,slow=5.1,SNR=3.9								
ASAR	Alice Springs	141.39	244	PKhKP		PKPpre		18 51 51.9	
ASAR				PKP		PKPdf		18 52 00.0	-0.2
	comp=Z,1.3nm,0.9s,baz=106,slow=3.1,SNR=8.5								
WRA	Warramunga Arr	141.80	250	PKhKP		PKPpre		18 51 53.8	
WRA				PKP		PKPdf		18 52 00.8	-0.2
	comp=Z,1.6nm,0.9s,baz=96,slow=2.7,SNR=8.7								
CMAR	Chiang Mai Arr	152.09	355	PKPbc		PKPdf		18 52 21.8	+3.6
	comp=Z,0.9nm,0.7s,baz=319,slow=3.1,SNR=5.9								

TAP 03 18:37:59.2, 24.42N×121.90E, h21km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	Wuta	0.12	282	eP			Pb	18 38 03.8	-2.0
	baz=282								
EWUT				eS			Sb	18 38 07.2	-3.2
	baz=282								
ENA	Nanau	0.15	273	P			Pb	18 38 04.2	-1.2
	baz=272								
ENA				S			Sb	18 38 08.0	-1.7
	baz=272								
TWC	Suao	0.19	346	P			Pb	18 38 04.8	-0.3
	baz=348								
TWC				S			Sb	18 38 08.6	-0.7
	baz=348								
NDS	Dongshan	0.27	321	P			Pb	18 38 06.1	+0.5
	baz=321								
NDS				eS			Sb	18 38 11.0	+1.0
	baz=321								
TWE	Neicheng	0.37	324	eP			Pb	18 38 07.8	+0.8
	baz=325								
TWE				eS			Sb	18 38 13.9	+1.7
	baz=325								
NACB	Ninganchiao	0.37	229	P			Pb	18 38 07.4	+0.4
	baz=228								
NACB				S			Sb	18 38 13.9	+1.5
	baz=228								
ENTT	Nioudou	0.38	306	P			Pb	18 38 07.9	+0.8
	baz=305								
ENTT				eS			Sb	18 38 13.7	+1.2
	baz=305								
NDT	Datong Townshi	0.40	297	eP			Pb	18 38 08.4	+0.9
	baz=297								
NDT				eS			Sb	18 38 14.9	+1.8
	baz=297								
ETLH	Xiulin Townshi	0.44	241	eP			Pb	18 38 08.5	+0.2
	baz=240								
ETLH				eS			Sb	18 38 15.9	+1.6
	baz=240								
NNSB	Datong	0.47	271	eP			Pb	18 38 09.5	+0.6
	baz=270								
NNSB				S			Sb	18 38 16.8	+1.3
	baz=270								
NNSH	Datong	0.47	271	eP			Pb	18 38 09.2	+0.3
	baz=270								
NNSH				eS			Sb	18 38 16.9	+1.4
	baz=270								
NNS	Nan Shan	0.48	272	eP			Pb	18 38 09.7	+0.6
	baz=272								
NNS				eS			Sb	18 38 17.0	+1.2
	baz=272								
NWLT	Wulai	0.51	314	eS			Sb	18 38 17.5	+1.0
	baz=314								
YHNB	Yeheng	0.54	297	eP			Pb	18 38 10.7	+0.6
	baz=297								
YHNB				eS			Sb	18 38 18.7	+1.2
	baz=297								
TIPB	Shuangxi	0.55	353	P			Pb	18 38 11.0	+0.6
	baz=352								
TIPB				eS			Sb	18 38 19.1	+1.1
	baz=352								
NSK	Sanguang	0.56	297	eP			Pb	18 38 10.8	+0.3
	baz=297								
NSK				eS			Sb	18 38 19.0	+0.9
	baz=297								
FUSS	Fushou	0.62	254	eP			Pb	18 38 12.2	+0.5
	baz=253								
FUSS				eS			Sn	18 38 21.8	-0.8
	baz=253								
WHF	Hehuan Shan	0.64	245	eP			Pb	18 38 12.3	+0.2
	baz=244								
WHF				eS			Sb	18 38 22.1	+1.2
	baz=244								
TDCB	Techi	0.70	256	eP			Pn	18 38 13.6	-0.4
	baz=256								
TDCB				eS			Sb	18 38 23.2	+1.0
	baz=256								
CHGB	Renai	0.76	242	eP			Pb	18 38 14.2	+0.3
	baz=241								

JMA 03 18:38:58.9±0.1, 24.65N×123.83E, h0km, M0.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IRIF	Iriomote-Funau	0.33	196	P			Pg	18 39 05.7	+0.5
IRIF				S			Sg	18 39 10.5	+1.1
JIJ	Ishigaki jima	0.40	135	P			Pg	18 39 07.2	+0.6
JIJ				S			Sg	18 39 12.7	+0.8
JISG	Ishigakijimahi	0.44	98	P			Pg	18 39 08.1	+0.7
JKRS	Kuro-shima	0.44	158	P			Pg	18 39 08.1	+0.7
JKRS				S			Sg	18 39 14.7	+1.6

TRN 03 18:40:47.8, 16.83N×61.18W, h31km, MD3.8, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ABD	La Joyeuse, An	0.46	219	eP			Pn	18 40 58.9	+0.6
ABD				eS			Sn	18 41 07.5	+2.0
ANBD	Bethesda, Anti	0.60	291	eP			Pn	18 41 01.3	+1.2
ANBD				eS			Sn	18 41 11.5	+2.7
BPA	Boggy Peak	0.68	288	eP			Pn	18 41 02.5	+1.2
BPA				eS			Sn	18 41 13.4	+2.4
CBE	Ff, Capester	0.86	208	eP			Pb	18 41 05.3	+1.1
CBE				eS			Sb	18 41 18.7	+3.2
MAGL	Barre de l'ile	0.88	186	eP			Pb	18 41 04.9	+0.3
MAGL				eS			Sb	18 41 18.2	+2.1
MLYT	Lee's Yard	0.97	264	eP			Pb	18 41 09.3	+3.2
MLYT				eS			Sb	18 41 20.7	+2.1
ANWB	Willy Bob	1.01	325	eP			Pb	18 41 06.8	+0.1
ANWB				eS			Sb	18 41 21.8	+2.0
TDBA	Terre de Bas,	1.07	204	eP			Pb	18 41 08.6	+0.8
TDBA				eS			Sb	18 41 22.0	+0.5
TBG	Guadaloupe-3	1.07	205	eP			Pb	18 41 08.6	+0.8
TBG				eS			Sb	18 41 23.2	+1.8
DSLB	Salisbury	1.41	189	eP			Pb	18 41 13.5	0.0
DSLB				eS			Sb	18 41 32.3	+1.2
DLPL	La Plaine	1.49	182	eP			Pn	18 41 13.3	+0.7
DLPL				eS			Sb	18 41 33.8	+0.2
SKOC	St. Kitts, UWI	1.55	287	eP			Pb	18 41 16.1	+0.2
SVN	Savane Anatole	1.98	180	eP			Pb	18 41 21.4	-1.8
BAMF	Morne Balai	2.01	179	eP			Pb	18 41 21.7	-2.0
PCM	Pelee Case Pet	2.01	181	eP			Pb	18 41 22.0	-1.6
CXM	Morne La Croix	2.01	180	eP			Pn	18 41 21.8	+2.0
GBMF	Grand Be	2.02	180	eP			Pn	18 41 21.8	+1.9
PML	Morne Lenard	2.04	180	eP			Pn	18 41 21.9	+1.8
ILAM	Ilet Lapin Mar	2.07	172	eP			Pn	18 41 21.2	+0.8
ILAM				eS			Sn	18 41 46.4	+1.2
FDF	Fort de France	2.09	179	eP			Pn	18 41 22.5	+1.7
FDF				eS			Sb	18 41 48.3	-2.3
ZAM	Aeronautique	2.25	176	eP			Pn	18 41 24.4	+1.4
MVM	Montagne Vaucl	2.28	173	eP			Pn	18 41 25.1	+1.6
TRMF	Trois Ilets	2.29	177	eP			Pn	18 41 25.0	+1.5
BIM	Bigot	2.31	177	eP			Pn	18 41 25.4	+1.7
BIM				eS			Sn	18 41 53.7	+2.6
MPOM	Morne Pois Mar	2.40	172	eP			Pn	18 41 26.0	+1.1
MPOM				eS			Sn	18 41 54.7	+1.4
SLBI	Saint Lucia, B	2.80	176	eP			Pn	18 41 33.2	+2.7
SLBI				eS			Sn	18 42 04.1	+0.8

IDC ***03*** *18:42:33.7±0.8, 9.62N×83.64W, h0km, mb3.9/10, mb1 4.2/14, mb1mx4.1/31, mbtmp4.0/14, ML4.0/3, MS3.9/14, Ms1 3.9/14, ms1mx3.6/40, Error ellipse: s-maj=26.4km s-min=12.3km az=24.0*

IASPEI ***03*** *18:42:36.5±0.0, 9.51N×83.75W, h18km, Error ellipse: s-maj=0.1km s-min=0.1km az=225.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

INET ***03*** *18:42:36.6, 9.45N×83.73W, h2km, MW4.3*

NEIC ***03*** *18:42:37.9, 9.47N×83.81W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=3.03; Mθθ=3.06; Mϕϕ 6.09; Mrθ=3.93; Mϕr=4.19; Mθr=4.80; Fault plane solution: Mo 9.15000×10^15 NP1:ϕs342.28000°, δ75.13000°, λ-134.96000°. NP2:ϕs237.87000°, δ46.85000°, λ-20.59000°. Principal axes: T 8.6904, Plg18.0000°, Azm104.0000°; N 0.8661, Plg43.0000°, Azm357.0000°; P -9.5566, Plg42.0000°, Azm210.0000°;*

UCR ***03*** *18:42:37.2±1.7, 9.53N×83.75W, h10km±2km, MW5.1, mb4.6(NEIC), Fault plane solution: NP1:ϕs16.01000°, δ52.84000°, λ-64.59000°.*

NEIC ***03*** *18:42:38.1±2.9, 9.49N±0.07°×83.80W±0.02, h12km±3km, mb4.7/57, Mwr4.6/23, Error ellipse: s-maj=9.8km s-min=2.7km az=190.0*

ISC 03 18:42:37.7±0.6, 9.51N±0.02×83.73W±0.03, h16km±4km, n191, σ1ϑ75/196, mb4.6/32, MS3.8/9, 15C-4D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CDM	Cerro de Muert	0.06	323	iP			Pg	18 42 41.1	-0.2
CDM				eS			Sg	18 42 43.9	+0.2
PEZE	Perez Zeledon,	0.13	158	eP			Pg	18 42 41.6	0.0
PEZE	Perez Zeledon,	0.13	158				Pg	18 42 41.5	-0.1
PEZE							Sb	18 42 44.9	+0.3
EDDO	Dominical	0.29	208	eP			Pg	18 42 43.9	0.0
EDDO				iS			Sb	18 42 49.3	+0.3
RIMA	Rio Macho	0.29	333	eP			Pg	18 42 43.4	-0.7
RIMA				eS			Sg	18 42 48.0	-0.4
LCR2	La Lucha 2	0.36	311	iP			Pg	18 42 44.4	-0.8
LCR2				eS			Sg	18 42 49.7	-0.6
OCM	Ochomogo	0.45	329	eP			Pg	18 42 45.9	-0.9
CVTR	Volcan Turrial	0.51	357	eP			Pg	18 42 47.5	-0.5
CVTR				eS			Sg	18 42 54.1	-0.8
DRK0	Durika	0.54	117	eP			Pg	18 42 47.4	-1.0
EDBA	Buenos Aires	0.56	127	eP			Pg	18 42 47.6	-1.3
EDBA				eS			Sg	18 42 55.4	-1.0
HDC	Heredia	0.62	322	iP			Pg	18 42 49.1	-0.8
HDC	Heredia	0.62	322				Pg	18 42 48.9	-1.1
HDC					Sg		Sg	18 42 57.7	-0.6
BATAN	Batan	0.68	31				Pb	18 42 50.5	-0.6
BATAN					Sg		Sb	18 43 01.1	+0.8
POTG	Potrero Grande	0.75	127	iP			Pb	18 42 51.5	-0.9
RIOS	Rincon, Osa	0.83	165	eP			Pb	18 42 51.9	-1.8
RIOS	Rincon, Osa	0.83	165				Pb	18 42 51.8	-1.8
RIOS					Sg		Sb	18 43 02.9	-1.7
SRA1	San Ramn	0.94	308	iP			Pb	18 42 53.9	-1.7
EDSV	San Vito	1.01	132	eP			Pb	18 42 56.3	-0.5
LAFE	Finca La Fe, P	1.20	284	eP			Pn	18 42 58.4	-1.4
BRU2	Volcan	1.25	125	iP			Pn	18 42 59.5	-1.0
FORC	Fortuna	1.33	316	iP			Pn	18 43 00.9	-0.7
FORC				iS			Sb	18 43 19.4	+0.3
CASO	Castillo	1.35	313	iP			Pn	18 43 01.0	-0.9
CASO				iS			Sn	18 43 19.3	-0.2
ARE1	Arenal 1	1.36	314	iP			Pn	18 43 01.5	-0.5
CEDE	Laguna Cedeo	1.37	315	iP			Pn	18 43 00.7	-1.5
CEDE				iS			Sn	18 43 19.7	-0.3
CAO2	Cobano, Puntar	1.37	278				Pn	18 43 00.2	-1.9
COVE	Coope Vega, Sa	1.38	331	iP			Pn	18 43 01.2	-1.0
COVE	Coope Vega, Sa	1.38	331				Pn	18 43 01.2	-1.0
COVE					Sg		Sn	18 43 19.8	-0.2
JTS	Las Juntas de	1.44	303	Pg			Pn	18 43 01.6	-1.5
	618nm,0.3s,baz=165,slow=9.3,SNR=588								
JTS					Lg		Lg	18 43 19.4	
	933nm,0.3s,baz=19,slow=22,SNR=16								
JTS	Las Juntas de	1.44

CMIG	**Matias Romero**	**13.21**	**306**	Pn		**Pn**	**18 45 44.8**	**+0.1**
	1.0nm,0.3s,baz=142,slow=9.9,SNR=11							
SOR	**Soroa**	**13.23**	**3**	Pn		**Pn**	**18 45 47.3**	**+2.5**
GTBY	**Guantanamo Bay**	**13.29**	**38**	Pn		**Pn**	**18 45 47.3**	**+1.6**
TLIG	**Tlapa**	**16.49**	**301**	Pn		**Pn**	**18 46 28.6**	**+0.1**
ATAH	**Atahualpa**	**17.37**	**162**	LR		LR	18 52 45.7	
	comp=Z,456nm,18.6s,baz=344,slow=35							
AGPR	**Aguadilla, PR**	**18.41**	**59**	P		**Pn**	**18 46 54.0**	**+1.7**
IGPR	**InterUniversit**	**19.06**	**62**	P		**Pn**	**18 47 00.3**	**+0.1**
SJG	**San Juan**	**19.08**	**61**	P		**P**	**18 46 58.2**	**-1.4**
	baz=288,slow=19,SNR=3.2							
SJG				LR		LR	18 53 39.8	
	comp=Z,433nm,19.4s,baz=245,slow=35							
SJG	**San Juan**	**19.08**	**61**	P		**P**	**18 46 60.0**	**+0.3**
SJG				IAmb		IAmb	18 47 04.2	
	comp=Z,39nm,1.1s							
PDPR	**Patillas Dam,**	**19.15**	**62**	P		**Pn**	**18 47 04.3**	**+3.0**
GCPR	**Guaynabo City**	**19.22**	**61**	P		**Pn**	**18 47 03.3**	**+1.1**
HUMP	**Col San Antoni**	**19.35**	**62**	P		**Pn**	**18 47 05.6**	**+1.8**
CBYP	**Canovanas**	**19.40**	**61**	P		**Pn**	**18 47 06.1**	**+1.7**
CBYP				IAmb		IAmb	18 47 08.8	
	comp=Z,89nm,1.4s							
MOIG	**Morelia**	**19.67**	**303**	P		**P**	**18 47 05.7**	**-0.7**
MOIG				IAmb		IAmb	18 47 21.8	
	comp=Z,33nm,0.9s							
656A	**Willston**	**19.79**	**3**	P		**Pn**	**18 47 09.3**	**+0.4**
656A				IAmb		IAmb	18 47 25.8	
	comp=Z,75nm,1.5s							
553A	**Crawfordville**	**20.59**	**358**	P		Pn	18 47 17.5	-0.8
553A				IAmb		IAmb	18 47 24.6	
	comp=Z,56nm,1.1s							
BRAL	**Brewton**	**21.77**	**352**	P		**P**	**18 47 33.6**	**+4.8**
TIGA	**Tifton**	**21.82**	**0**	P		**P**	**18 47 30.5**	**+1.2**
TIGA				IAmb		IAmb	18 48 08.5	
	comp=Z,53nm,1.5s							
ZAIG	**Zacatecas**	**22.35**	**308**	P		**P**	**18 47 36.2**	**+0.8**
250A	**Grady**	**22.48**	**354**	P		**P**	**18 47 38.2**	**+1.8**
250A				IAmb		IAmb	18 48 26.0	
	comp=Z,21nm,0.6s							
257A	**Skidaway Islan**	**22.50**	**6**	P		**P**	**18 47 39.2**	**+2.7**
344A	**Westbrook Farm**	**22.79**	**344**	P		**P**	**18 47 41.0**	**+1.5**
154A	**Montrose**	**23.00**	**1**	P		**P**	**18 47 42.6**	**+0.8**
152A	**Waverly Hall**	**23.07**	**358**	P		**P**	**18 47 42.5**	**0.0**
152A				IAmb		IAmb	18 47 50.2	
	comp=Z,16nm,0.6s							
LRAL	**Lakeview Retre**	**23.61**	**353**	P		**P**	**18 47 49.2**	**+1.4**
NHSC	**New Hope**	**23.71**	**7**	P		**P**	**18 47 51.7**	**+2.8**
Z51A	**Franklin**	**23.73**	**357**	P		**P**	**18 47 50.5**	**+1.3**
GOGA	**Godfrey**	**23.79**	**1**	P		**P**	**18 47 49.9**	**+0.3**
Z47A	**Carrollton**	**23.92**	**351**	P		**P**	**18 47 52.6**	**+1.7**
Z47A				IAmb		IAmb	18 47 58.2	
	comp=Z,30nm,0.9s							
Y52A	**Lilburn**	**24.24**	**359**	P		**P**	**18 47 55.7**	**+1.8**
Y52A				IAmb		IAmb	18 48 01.1	
	comp=Z,33nm,1.1s							
NATX	**Nacogdoches**	**24.36**	**337**	P		**P**	**18 47 58.1**	**+3.2**
NATX				IAmb		IAmb	18 48 07.5	
	comp=Z,16nm,0.7s							
Y49A	**Blount Mountai**	**24.36**	**355**	P		**P**	**18 47 56.4**	**+1.4**
Y49A				IAmb		IAmb	18 48 02.3	
	comp=Z,23nm,1.4s							
HODGE	**Hodges**	**24.64**	**3**	P		**P**	**18 47 58.9**	**+1.3**
HODGE				IAmb		IAmb	18 48 04.8	
	comp=Z,12nm,0.7s							
Y59A	**Loris**	**24.77**	**10**	P		**P**	**18 48 04.3**	**+5.6**
435B	**Jarrell**	**24.80**	**331**	P		**P**	**18 47 58.6**	**-0.4**
Y45A	**Yeager Farm, C**	**24.83**	**348**	P		**P**	**18 48 04.0**	**+4.8**
X51A	**Calhoun**	**24.96**	**358**	P		**P**	**18 48 03.0**	**+2.6**
X51A				IAmb		IAmb	18 48 06.8	
	comp=Z,14nm,0.9s							
X48A	**Hartselle**	**25.01**	**354**	P		**P**	**18 48 03.7**	**+2.8**
X48A				IAmb		IAmb	18 48 09.8	
	comp=Z,18nm,1.4s							
BIRD	**Birdtown, Kers**	**25.20**	**6**	P		**P**	**18 48 06.6**	**+4.0**
BIRD				IAmb		IAmb	18 48 11.3	
	comp=Z,18nm,0.9s							
X58A	**Rowland**	**25.25**	**9**	P		**P**	**18 48 03.6**	**+0.6**
PAULI	**Pauline**	**25.26**	**4**	P		**P**	**18 48 06.2**	**+3.2**
BG3	**Lake Jocassee**	**25.38**	**2**	P		**P**	**18 48 04.1**	**-0.1**
BG3				IAmb		IAmb	18 48 12.6	
	comp=Z,19nm,1.1s							
W52A	**Murphy**	**25.47**	**360**	P		**P**	**18 48 06.6**	**+1.6**
W52A				IAmb		IAmb	18 48 12.7	
	comp=Z,12nm,0.7s							
KMSC	**Kings Mountain**	**25.61**	**5**	P		**P**	**18 48 07.4**	**+1.1**
KMSC				IAmb		IAmb	18 48 14.2	
	comp=Z,21nm,1.1s							
W50A	**Signal Mountai**	**25.61**	**357**	P		**P**	**18 48 06.6**	**+0.2**
W50A				IAmb		IAmb	18 48 14.8	
	comp=Z,19nm,1.3s							
PTGA	**Pitinga**	**25.75**	**112**	LR		LR	18 59 03.4	
	comp=Z,221nm,19.6s,baz=206,slow=38							
TKL	**Tuckaleechee C**	**26.03**	**360**	LR		LR	18 58 23.4	
	comp=Z,298nm,19.1s,baz=184,slow=37							
MIAR	**Mount Ida**	**26.51**	**342**	P		**P**	**18 48 15.4**	**+1.0**
TXAR	**Lajitas Array**	**27.16**	**319**	P		**P**	**18 48 20.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=129,slow=10.0,SNR=3.8							
TXAR	**Lajitas Array**	**27.16**	**319**	P		**P**	**18 48 22.6**	**+2.0**
FCAR	**Ozark Folk Cen**	**27.35**	**345**	P		**P**	**18 48 21.0**	**-1.0**
FCAR				IAmb		IAmb	18 48 27.2	
	comp=Z,15nm,1.1s							
U40A	**Yellville**	**27.98**	**344**	P		**P**	**18 48 28.4**	**+0.7**
LPIG	**La Paz**	**29.21**	**303**	LR		LR	19 01 32.5	
	comp=Z,120nm,18.2s,baz=129,slow=39							
S39A	**Bolivar**	**29.37**	**344**	P		**P**	**18 48 40.5**	**+0.5**
LPAZ	**La Paz**	**29.92**	**149**	LR		LR	19 02 02.5	
	comp=Z,102nm,19.8s,baz=314,slow=39							
N38A	**Joes South For**	**32.28**	**346**	P		**P**	**18 49 06.2**	**+0.5**
ECSD	**EROS Data Cent**	**35.90**	**344**	P		**P**	**18 49 38.9**	**+1.9**
F36A	**Milaca**	**37.19**	**349**	P		**P**	**18 49 49.7**	**+1.7**
F33A	**5 Mile Ranch,**	**37.77**	**346**	P		**P**	**18 49 54.8**	**+1.9**
F33A				IAmb		IAmb	18 49 56.8	
	comp=Z,11nm,0.8s							
AGMN	**Agassiz Nation**	**39.99**	**347**	P		**P**	**18 50 13.6**	**+2.1**
ULM	**Lac du Bonnet**	**41.85**	**348**	P		**P**	**18 50 23.2**	**-3.6**
	comp=Z,5.9nm,0.8s,baz=147,slow=5.6,SNR=5.1							
ULM	**Lac du Bonnet**	**41.85**	**348**	P		**P**	**18 50 28.2**	**+1.4**
ULM				IAmb		IAmb	18 50 30.7	
	comp=Z,14nm,0.9s							
BDFB	**Brasilia**	**43.31**	**125**	LR		LR	19 09 09.6	
	comp=Z,256nm,19.9s,baz=302,slow=37							
FCC	**Fort Churchill**	**49.78**	**353**	P		**P**	**18 51 30.8**	**+1.6**
FCC				IAmb		IAmb	18 51 56.4	
	comp=Z,9.5nm,1.6s							
PLCA	**Paso Flores**	**51.45**	**167**	P		**P**	**18 51 41.7**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=346,slow=9.6,SNR=8.7							
PLCA	**Paso Flores**	**51.45**	**167**	P		**P**	**18 51 42.1**	**-0.1**
PLCA				IAmb		IAmb	18 51 51.8	
	comp=Z,12nm,1.2s							
YKA	**Yellowknife Ar**	**57.42**	**344**	P		**P**	**18 52 22.8**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=139,slow=7.3,SNR=5.9							
SUMG	**Summit**	**68.56**	**13**	*i* P		**P**	**18 53 42.9**	**+3.2**
SUMG	**Summit**	**68.56**	**13**	P		**P**	**18 53 41.6**	**+2.0**
NEEM	**North Greenlan**	**70.01**	**7**	*i* P		**P**	**18 53 51.3**	**+2.8**
IL31		**70.17**	**336**	P		**P**	**18 53 49.7**	**+0.5**
IL31				IAmb		IAmb	18 53 57.8	
	comp=Z,5.6nm,1.3s							
ILAR	**Eielson Array**	**70.17**	**336**	P		**P**	**18 53 47.6**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=121,slow=3.9,SNR=7.4							
ILAR	**Eielson Array**	**70.17**	**336**	P		**P**	**18 53 50.6**	**+1.3**
RND	**Reindeer**	**70.53**	**334**	P		**P**	**18 53 52.8**	**+1.1**
RND				IAmb		IAmb	18 54 03.2	
	comp=Z,10nm,1.3s							
NEA2	**Nenana**	**71.00**	**336**	P		**P**	**18 53 55.3**	**+1.0**
I23K	**Minto, Yukon-K**	**71.29**	**336**	P		**P**	**18 53 55.6**	**-0.5**
I23K				IAmb		IAmb	18 54 00.7	
	comp=Z,5.3nm,1.2s							
ESDC	**Sonseca Array**	**76.14**	**51**	P		**P**	**18 54 23.4**	**-1.7**
	comp=Z,1.9nm,0.8s,baz=276,slow=6.4,SNR=14							
ESDC				LR		LR	19 24 18.2	
	comp=Z,53nm,19.4s,baz=75,slow=33							
ESDC	**Sonseca Array**	**76.14**	**51**	P		**P**	**18 54 24.1**	**-1.0**
ESDC				IAmb		IAmb	18 54 31.3	
	comp=Z,5.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**83.47**	**78**	P		**P**	**18 55 02.4**	**-2.9**
	comp=Z,0.7nm,1.1s,baz=316,slow=4.0,SNR=2.1							
NOA	**NORSAR Array B**	**84.15**	**29**	P		**P**	**18 55 06.9**	**-1.0**
	comp=Z,0.7nm,1.0s,baz=285,slow=5.3,SNR=2.0							
NOA				LR		LR	19 30 51.1	
	comp=Z,30nm,19.4s,baz=285,slow=34							
CLL	**Collm**	**86.84**	**39**	*i* P		**P**	**18 55 20.0**	**-1.4**
CLL				*i* pP		**pP**	**18 55 25.9**	**-1.8**
	comp=Z,7.0nm,1.0s							
GERES	**GERESS Array B**	**87.77**	**41**	P		**P**	**18 55 24.0**	**-2.2**
	comp=Z,0.5nm,0.6s,baz=259,slow=1.4,SNR=5.0							
GERES				LR		LR	19 31 27.7	
	comp=Z,75nm,18.3s,baz=266,slow=34							
GERES	**GERESS Array B**	**87.77**	**41**	P		**P**	**18 55 23.9**	**-2.2**
FINES	**FINESS Array B**	**90.96**	**27**	P		**P**	**18 55 38.2**	**-2.5**
	comp=Z,0.8nm,0.8s,baz=0.0,slow=6.9,SNR=1.4							
FINES				LR		LR	19 33 12.4	
	comp=Z,50nm,18.9s,baz=316,slow=34							
ASAR	**Alice Springs**	**141.42**	**244**	PKhKP		PKPpre	19 02 00.0	
	comp=Z,0.8nm,0.9s,baz=113,slow=3.0,SNR=5.2							
ASAR				PKP		**PKPdf**	**19 02 07.8**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=128,slow=1.7,SNR=5.4							
ASAR	**Alice Springs**	**141.42**	**244**			PKPpre	19 01 59.2	
WRA	**Warramunga Arr**	**141.84**	**250**	PKhKP		PKPpre	19 02 02.2	
	comp=Z,1.5nm,0.9s,baz=101,slow=2.7,SNR=6.2							
FITZ	**Fitzroy Crossi**	**150.27**	**250**	PKPbc		**PKPbc**	**19 02 27.4**	**-1.5**
	comp=Z,3.8nm,1.0s,baz=157,slow=2.5,SNR=5.5							
FITZ	**Fitzroy Crossi**	**150.27**	**250**			**PKPbc**	**19 02 27.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**152.09**	**355**	PKPbc		**PKPbc**	**19 02 30.6**	**-2.6**
	comp=Z,0.7nm,0.7s,baz=335,slow=3.0,SNR=6.1							
CMAR	**Chiang Mai Arr**	**152.09**	**355**			**PKPdf**	**19 02 27.9**	**+1.2**

WEL 03 18:45:31.8±0.9, 35°S±15°×17°8E±2°1, h242km±17km, M3.5/18, mB4.0/1, ML3.8/10, MLv3.5/18, Mw(mB)3.0/1, Error ellipse: s-maj=0.0km s-min=0.0km az=123.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.37**	**183**	P	Pn	18 46 17.1	+0.1
MXZ				S	S	18 46 52.1	-0.6
HAZ	**Te Kaha**	**2.61**	**192**	P	Pn	18 46 19.9	+0.4
HAZ				S	S	18 46 57.7	+0.5
WMGZ	**Waiomatatini S**	**2.62**	**180**	P	Pn	18 46 20.1	+0.5
WMGZ				S	S	18 46 57.7	+0.3
PKGZ	**Pakihiroa**	**2.71**	**186**	P	Pn	18 46 21.1	+0.6
PKGZ				S	S	18 46 58.5	-0.6
RUGZ	**Raukumara Rang**	**2.83**	**192**	P	Pn	18 46 22.3	+0.3
RUGZ				S	S	18 47 00.6	-1.1
MWZ	**Matawai**	**3.22**	**193**	P	Pn	18 46 27.4	+1.3
MWZ				S	S	18 47 10.4	+1.2
URZ	**Urewera**	**3.24**	**199**	P	Pn	18 46 26.5	+0.2
URZ				S	S	18 47 10.4	+0.9
MUGZ	**Murupara**	**3.54**	**202**	P	Pn	18 46 30.1	+0.4
MUGZ				S	S	18 47 15.9	+0.2
RIGZ	**Rimuhau**	**3.55**	**189**	P	Pn	18 46 29.9	0.0
RIGZ				S	S	18 47 17.5	+1.5
SNGZ	**Shannon Statio**	**3.69**	**193**	P	Pn	18 46 32.1	+0.6
SNGZ				S	S	18 47 19.8	+1.0
MTHZ	**Maungataniwha**	**3.87**	**199**	P	Pn	18 46 33.6	0.0
MTHZ				S	S	18 47 23.1	+0.3
ARHZ	**Aropaoanui**	**4.22**	**195**	P	Pn	18 46 38.4	+0.7
ARHZ				S	S	18 47 30.8	+0.6
BKZ	**Black Stump Fm**	**4.26**	**201**	P	Pn	18 46 38.0	-0.3
BKZ				S	S	18 47 29.9	-1.2
TMVZ	**Te Maari**	**4.49**	**208**	P	Pn	18 46 42.1	+1.1
OTVZ	**Oturere**	**4.54**	**208**	P	Pn	18 46 42.4	+0.7
BHHZ	**Black Hill Sta**	**4.69**	**203**	P	Pn	18 46 43.0	-0.5
BHHZ				S	S	18 47 41.2	+0.7
WNVZ	**Wahianoa**	**4.71**	**208**	P	Pn	18 46 44.0	+0.2
KRHZ	**Kereru**	**4.74**	**200**	P	Pn	18 46 42.8	-1.2
KRHZ				S	S	18 47 41.1	-0.5
KAHZ	**Kahuranaki**	**4.76**	**195**	P	Pn	18 46 43.3	-1.0
KAHZ				S	S	18 47 44.4	+2.4
PXZ	**Pawanui**	**4.99**	**194**	P	Pn	18 46 45.8	-1.2
PNHZ	**Pukenui**	**5.04**	**200**	P	Pn	18 46 45.9	-1.8
TSZ	**Takapari Road**	**5.24**	**201**	P	Pn	18 46 49.2	-1.0

*BJI **03** 18:48:37.0±0.0, 0°.10S×122°.33E, h121km, mB4.9/18, mb4.5/30*
*DJA **03** 18:48:42.6±0.2, 0°.N±2°×12°.2E±°, h121km±2km, M4.5/49, mB5.1/18, mb4.7/49, MLv4.8/19, Mw(mB)4.4/18*
*NEIC **03** 18:48:42.4±2.0, 0°.39N±0°.07×122°.05E±0°.07, h124km±6km, mb4.8/84, Error ellipse: s-maj=10.9km s-min=9.1km az=47.0*
*IDC **03** 18:48:42.2±0.7, 0°.39N×122°.07E, h123km±6km, mb4.1/27, mb1 4.2/32, mb1mx4.0/59, mbtmp4.5/32, MS2.9/5, Ms1 2.9/5, ms1mx2.7/50, Error ellipse: s-maj=14.8km s-min=8.1km az=70.0*
*KLM **03** 18:48:44, 0°.45N×122°.21E, h139km, mb4.7*

ISC 03 18:48:42.2±0.4, 0°.44N±0°.04×122°.06E±0°.05, h123km±3km, h124km: pP-P, n259, c1930/283, mb4.7/87, 1C-1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.12**	**287**	P	**Pn**	**18 48 58.2**	**-0.7**
MRSI				S	**Sn**	**18 49 09.7**	**-1.9**
GTOI	**Gorontalo**	**0.97**	**78**	P	**Sn**	**18 49 19.9**	**-0.8**
APSI	**Ampana**	**1.40**	**197**	P	**Pn**	**18 49 09.0**	**+0.3**
LUWI	**Luwuk**	**1.64**	**154**	Pn	**Pn**	**18 49 11.9**	**+0.5**
LUWI				Sn	**Sn**	**18 49 34.2**	**+0.6**
LUWI	**Luwuk**	**1.64**	**154**	P	**Pn**	**18 49 11.9**	**+0.5**
KMSI	**Cibinong**	**1.93**	**86**	P	**Pn**	**18 49 16.4**	**+1.6**
TTSI	**Tana Toraja**	**4.12**	**213**	P	**Pn**	**18 49 44.4**	**+0.9**
KDI	**Kendari**	**4.41**	**173**	P	**Pn**	**18 49 47.6**	**+0.4**
SGKI	**Sangatta, Kali**	**4.56**	**258**	P	**Pn**	**18 49 48.3**	**-1.0**
SANI	**Sanana**	**4.64**	**122**	P	**Pn**	**18 49 48.8**	**-1.6**
SPSI	**Sidrap Palu**	**4.94**	**208**	P	**Pn**	**18 49 54.7**	**+0.3**
BNSI	**Bone**	**5.19**	**202**	P	**Pn**	**18 49 59.0**	**+1.2**
	1.3nm4µm280nm,0.6s						
TNTI	**Ternate**	**5.32**	**86**	Pn	**Pn**	**18 49 58.4**	**-1.1**
TNTI	**Ternate**	**5.32**	**86**	P	**Pn**	**18 50 00.0**	**+0.5**
	0.2nm698nm54nm,0.6s						
BKB	**Balikpapan**	**5.43**	**252**		**Pn**	**18 50 00.9**	**-0.1**
BKB	**Balikpapan**	**5.43**	**252**	P	**Pn**	**18 50 01.0**	**0.0**
	0.8nm2µm168nm,0.5s						
KAPI	**Kappang**	**5.89**	**203**	P	**Pn**	**18 50 07.4**	**+0.2**
	14nm,0.3s,baz=50,slow=3.9,SNR=13						
KAPI				LR	LR	18 51 60.0	
	comp=Z,19nm,18.8s,baz=52,slow=34						
KAPI	**Kappang**	**5.89**	**203**	Pn	**Pn**	**18 50 06.6**	**-0.6**
MYLDM	**Lahad Datu**	**5.90**	**323**	Pn	**Pn**	**18 50 08.9**	**+1.6**
NLAI	**Namlea**	**6.22**	**126**	P	**Pn**	**18 50 12.5**	**+0.8**
	0.7nm2µm86nm,0.8s						
SKMP	**Bagumbayan, Su**	**6.53**	**22**	*e*P	**Pn**	**18 50 14.6**	**-1.2**
SKMP				*e*S	**Sn**	**18 51 26.0**	**-3.0**
DDMP	**Don Marcelino,**	**6.70**	**33**	*e*P	**Pn**	**18 50 19.4**	**+1.2**
DDMP				*e*S	**Sn**	**18 51 34.5**	**+1.3**
KBKI	**Kotabaru**	**6.96**	**238**	P	**Pn**	**18 50 21.8**	**+0.1**
	0.2nm709nm56nm,0.7s						
SPMM	**Sapulut**	**7.01**	**307**	P	**Pn**	**18 50 24.0**	**+1.6**
MTKI	**Muara Teweh, K**	**7.29**	**259**	P	**Pn**	**18 50 25.3**	**-0.9**
	0.5nm2µm30nm,0.9s						
PAGZ	**Pagadian**	**7.47**	**10**	*e*P	**Pn**	**18 50 29.7**	**+1.0**
PAGZ				*e*S	**Sn**	**18 51 47.5**	**-4.4**
BUKP	**Musuan**	**7.97**	**22**	*e*P	**Pn**	**18 50 37.5**	**+2.1**
BUKP				*e*S	**Sn**	**18 52 05.5**	**+1.4**
KKM	**Kota Kinabalu**	**8.06**	**314**	Pn	**Pn**	**18 50 38.0**	**+1.3**
BBKI	**Banjar Baru**	**8.19**	**242**	P	**Pn**	**18 50 39.6**	**+1.3**
	20nm,0.5s						
CGP	**Cagayan de Oro**	**8.38**	**18**	*e*P	Pn	18 50 46.3	+5.4
MMRI	**Maumere**	**9.02**	**179**	Pn	**Pn**	**18 50 47.7**	**-1.7**
MMRI	**Maumere**	**9.02**	**179**	P	**Pn**	**18 50 50.8**	**+1.3**
	846nm56nm,0.7s						
EDFI	**Ende, Flores**	**9.14**	**182**	P	**Pn**	**18 50 52.3**	**+1.1**
	22nm,0.6s						
BUTP	**Butuan**	**9.18**	**23**	*e*P	Pn	18 50 56.6	+4.9
SWI	**Sorong**	**9.29**	**98**	P	**Pn**	**18 50 53.9**	**+0.8**
	22nm,0.8s						
SIJI	**Sorong**	**9.30**	**98**	P	**Pn**	**18 50 53.5**	**+0.2**
	1.7nm,0.3s,baz=252,slow=7.9,SNR=11						
CNOP	**Candoni, Negro**	**9.34**	**4**	*e*P	**Pn**	**18 50 55.6**	**+1.7**
CNOP				*e*S	**Sn**	**18 52 34.4**	**-2.9**
SBUM	**Sibu**	**10.04**	**282**	Pn	**Pn**	**18 51 01.8**	**-1.4**
SBUM	**Sibu**	**10.04**	**282**	P	**Pn**	**18 51 02.0**	**-1.2**
PLAI	**Plampang**	**10.15**	**205**	P	**Pn**	**18 51 06.4**	**+1.7**
	39nm,1.2s						
SOEI	**Soe**	**10.37**	**168**	Pn	**Pn**	**18 51 05.9**	**-1.8**
SOEI	**Soe**	**10.37**	**168**	P	**Pn**	**18 51 08.4**	**+0.7**
	53nm,1.0s						
STKI	**Sintang**	**10.59**	**268**	P	**Pn**	**18 51 12.2**	**+1.5**
	2µm8.2nm,0.5s						
BATI	**Baumata**	**10.70**	**171**	P	**Pn**	**18 51 12.8**	**+0.7**
	0.6nm,0.3s,baz=326,slow=7.3,SNR=4.4						
BATI				LR	LR	18 55 59.1	
	comp=Z,117nm,18.9s,baz=352,slow=41						
BATI	**Baumata**	**10.70**	**171**	P	**Pn**	**18 51 13.6**	**+1.5**
	25nm,0.7s						
FAKI	**Fak Fak**	**10.72**	**108**	Pn	**Pn**	**18 51 11.5**	**-0.9**
FAKI	**Fak Fak**	**10.72**	**108**	P	**Pn**	**18 51 12.1**	**-0.3**
	46nm,1.6s						
KMMI	**Kalianget**	**10.98**	**227**	P	**Pn**	**18 51 18.1**	**+2.2**
	51nm,1.1s						
ENPP	**El Nido**	**11.01**	**346**	*e*P	**Pn**	**18 51 20.0**	**+3.7**
KSM	**Kuching**	**11.79**	**275**	P	**Pn**	**18 51 26.0**	**-0.7**
JAGI	**Jajag, Banyuwa**	**11.85**	**222**	P	**P**	**18 51 39.4**	**+4.1**
JCNP	**Jose Panganiba**	**13.77**	**3**	*e*P	**Pn**	**18 51 53.4**	**+1.0**
MACP	**Maragondon, Ca**	**13.80**	**355**	*e*P	**P**	**18 51 58.1**	**+1.1**
UGM	**Wanagama**	**14.18**	**234**		**P**	**18 52 00.8**	**-0.6**
MTN	**Manton Dam**	**15.97**	**146**	P	**P**	**18 52 21.7**	**+0.5**
	baz=16,SNR=3.8						
MTN	**Manton Dam**	**15.97**	**146**		**P**	**18 52 21.4**	**+0.2**
MTN				IAmb	IAmb	18 52 24.5	
	comp=Z,34nm,1.2s						
LEM	**Lembang**	**16.12**	**243**	P	**P**	**18 52 23.7**	**+0.7**
	comp=Z,2.5nm,0.3s,baz=358,slow=9.0,SNR=11						
LEM	**Lembang**	**16.12**	**243**	P	**P**	**18 52 23.7**	**+0.7**
	comp=Z,21nm,0.7s						
KDU	**Kakadu**	**16.64**	**142**	P	**P**	**18 52 29.3**	**+0.8**
	baz=17,SNR=6.2						
CBJI	**Citeko**	**16.64**	**246**	P	**P**	**18 52 30.7**	**+2.1**
	comp=Z,97nm,0.8s						
DBJI	**Dramaga**	**16.78**	**245**	P	**P**	**18 52 31.1**	**+0.9**
	comp=Z,31nm,1.1s						
SZP	**Santa**	**17.08**	**355**		**Pn**	**18 52 35.1**	**+1.6**
SZP				IAmb	IAmb	18 52 46.4	
	comp=Z,23nm,0.8s						
KLSI		**18.05**	**253**	P	**P**	**18 52 43.8**	**-0.3**
	comp=Z,7.3nm,0.8s						
MYKOM	**Kota Tinggi**	**18.25**	**274**	P	**P**	**18 52 46.7**	**+0.3**
MYKOM	**Kota Tinggi**	**18.25**	**274**	P	**P**	**18 52 47.0**	**+0.6**
KASI	**Kota Agung**	**18.51**	**251**	P	**P**	**18 52 49.4**	**+0.2**
	comp=Z,45nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.76**	**169**	P	**P**	**18 52 52.2**	**+0.4**
	comp=Z,7.6nm,0.3s,baz=6.7,slow=8.2,SNR=298						
FITZ	**Fitzroy Crossi**	**18.76**	**169**	P	**P**	**18 52 52.3**	**+0.5**
	baz=19,SNR=122						
FITZ	**Fitzroy Crossi**	**18.76**	**169**	P	**P**	**18 52 52.0**	**+0.3**
LHSI	**Lahat**	**19.00**	**257**	P	**Pn**	**18 52 56.5**	**-0.1**
	comp=Z,70nm,0.7s						
XMIS	**Christmas Isla**	**19.60**	**236**	P	**P**	**18 52 58.6**	**-2.4**
XMIS				IAmb	IAmb	18 53 04.5	
	comp=Z,36nm,0.9s						
JRMM	**Jerantut**	**19.86**	**280**	P	**P**	**18 53 05.0**	**+1.1**
KSI	**Kapahiang**	**19.88**	**258**	P	**P**	**18 53 03.7**	**-0.4**
SDSI	**Sungai Dareh**	**20.68**	**266**	P	**P**	**18 53 13.7**	**+1.1**
	comp=Z,33nm,0.8s						
IPM	**Ipoh**	**21.39**	**281**	P	**P**	**18 53 20.5**	**+0.2**
IPM				IAmb	IAmb	18 53 21.8	
	comp=Z,17nm,0.7s						
IPM	**Ipoh**	**21.39**	**281**	P	**P**	**18 53 21.0**	**+0.7**
KULM	**Kulim**	**21.91**	**283**	P	**P**	**18 53 25.4**	**-0.4**
KULM	**Kulim**	**21.91**	**283**	P	**P**	**18 53 26.0**	**+0.2**
PSA00	**Pilbara Seismi**	**21.99**	**186**	P	**P**	**18 53 25.2**	**-1.3**
PSA00				IAmb	IAmb	18 53 26.7	
	comp=Z,18nm,0.6s						
PSA00	**Pilbara Seismi**	**21.99**	**186**	P	**P**	**18 53 25.5**	**-1.0**
PSA00				IAmb	IAmb	18 53 26.9	
	comp=Z,7.7nm,0.7s						
QIZ	**Qiongzhong**	**22.02**	**328**	P	**P**	**18 53 28.4**	**+1.5**
QIZ

FORT	**Forrest**	**31.57 170**	P	**P**	**18 54 52.8**	**-0.3**
	baz=32,SNR=19					
FORT	**Forrest**	**31.57 170**	P	**P**	**18 54 52.6**	**-0.6**
NJ2	**Nanjing**	**31.59 355**	*e*P	**P**	**18 54 55.0**	**+1.7**
NJ2			pmax	pmax		
	comp=Z,7.0nm,0.5s					
KLBR	**Kellerberrin**	**32.12 187**	P	**P**	**18 54 57.1**	**-0.8**
	baz=32,SNR=42					
MUN	**Mundaring**	**32.72 189**	P	**P**	**18 55 02.4**	**-0.8**
	baz=33,SNR=5.1					
JCJ	**Chichijima**	**32.81 34**	LR	LR	19 08 04.1	
	comp=Z,19nm,21.5s,baz=180,slow=35					
JCJ	**Chichijima**	**32.81 34**	P	**P**	**18 55 03.9**	**-0.2**
NWAO	**Narrogin (SRO)**	**33.50 187**	P	**P**	**18 55 09.6**	**-0.5**
	comp=Z,23nm,0.7s,baz=19,slow=7.2,SNR=21					
NWAO	**Narrogin (SRO)**	**33.50 187**	P	**P**	**18 55 09.6**	**-0.5**
	baz=34,SNR=13					
NWAO	**Narrogin (SRO)**	**33.50 187**	P	**P**	**18 55 09.3**	**-0.6**
NWAO			IAmb	IAmb	18 55 10.8	
	comp=Z,28nm,0.8s					
NWAO	**Narrogin (SRO)**	**33.50 187**	P	**P**	**18 55 09.5**	**-0.5**
NWAO			IAmb	IAmb	18 55 10.8	
	comp=Z,21nm,0.8s					
QLP	**Quilpie**	**34.33 143**	P	**P**	**18 55 17.6**	**+0.3**
	baz=34,SNR=7.7					
JMN	**Monobe**	**34.92 17**	P	**P**	**18 55 23.0**	**+0.7**
BBOO	**Buckleboo**	**35.61 160**	P	**P**	**18 55 27.9**	**-0.3**
	baz=36,SNR=28					
BBOO	**Buckleboo**	**35.61 160**	P	**P**	**18 55 27.6**	**-0.6**
BBOO			IAmb	IAmb	18 55 28.6	
	comp=Z,17nm,0.8s					
XAN	**Xi'an**	**35.62 341**	P	**P**	**18 55 28.6**	**+0.3**
JWT	**Wachi**	**36.83 18**	P	**P**	**18 55 40.1**	**+1.6**
STKA	**Stephens Creek**	**37.08 152**	P	**P**	**18 55 40.9**	**+0.2**
	comp=Z,27nm,0.8s,baz=326,slow=8.6,SNR=51					
STKA	**Stephens Creek**	**37.08 152**	P	**P**	**18 55 41.1**	**+0.4**
	baz=37,SNR=38					
STKA	**Stephens Creek**	**37.08 152**	P	**P**	**18 55 40.7**	**0.0**
KSRS	**Korea Array**	**37.23 8**	P	**P**	**18 55 43.5**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=179,slow=8.5,SNR=5.5					
KSRS			PcP	**PcP**	**18 57 58.6**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=177,slow=2.7,SNR=4.1					
HTT	**Hallett**	**37.24 156**	P	**P**	**18 55 42.5**	**+0.4**
	baz=37,SNR=61					
INU	**Inuyama**	**37.42 20**	P	**P**	**18 55 43.4**	**-0.1**
INU			IAmb	IAmb	18 56 05.9	
	comp=Z,54nm,1.7s					
JGF	**Kuroka**	**37.77 21**	P	**P**	**18 55 48.1**	**+1.6**
EIDS	**Eidsvold**	**38.02 135**	P	**P**	**18 55 47.7**	**-1.0**
EIDS			IAmb	IAmb	18 56 08.3	
	comp=Z,20nm,1.6s					
SHL	**Shillong**	**38.37 313**	P	**P**	**18 55 52.0**	**+0.1**
SHL			IAmb	IAmb	18 55 54.4	
	comp=Z,12nm,1.0s					
CMSA	**Cobar Meteorol**	**38.90 147**	P	**P**	**18 55 56.8**	**+0.9**
	baz=39,SNR=22					
MAT	**Matsushiro**	**38.92 21**	P	**P**	**18 55 55.4**	**-0.7**
MJAR	**Matsushiro Arr**	**38.92 21**	P	**P**	**18 55 55.9**	**-0.2**
	comp=Z,4.8nm,0.8s,baz=189,slow=8.6,SNR=9.2					
BJT	**Baijiatuan**	**39.76 353**	P	**P**	**18 56 04.1**	**+1.2**
JSD	**Sado**	**40.28 20**	P	**P**	**18 56 07.7**	**+0.4**
JMM	**Marumori**	**41.05 23**	P	**P**	**18 56 15.0**	**+1.4**
ARPS	**Mount Arapiles**	**41.32 156**	P	**P**	**18 56 16.6**	**+0.7**
	baz=41,SNR=15					
HHC	**Hu-ho-hao-te**	**41.34 348**	*e*P	**P**	**18 56 17.8**	**+1.8**
HHC			pmax	pmax		
	comp=Z,8.0nm,0.6s					
HHC			pmax	pmax		
	comp=Z,110nm,5.5s					
LSA	**Lhasa**	**41.39 317**	P	**P**	**18 56 19.5**	**+2.4**
LSA			IAmb	IAmb	18 56 20.5	
	comp=Z,7.7nm,0.5s					
ARMA	**Armidale**	**41.63 140**	P	**P**	**18 56 20.4**	**+1.8**
	baz=42,SNR=12					
ARMA	**Armidale**	**41.63 140**	P	**P**	**18 56 20.0**	**+1.4**
ARMA			IAmb	IAmb	18 57 00.8	
	comp=Z,32nm,1.5s					
PALK	**Pallekele**	**41.79 280**	P	**P**	**18 56 20.3**	**+0.2**
	comp=Z,5.5nm,0.7s,baz=202,slow=10.0,SNR=8.0					
PALK	**Pallekele**	**41.79 280**	P	**P**	**18 56 20.6**	**+0.5**
TAPN	**Taplejung**	**42.45 312**	*e*P	**P**	**18 56 27.1**	**+1.5**
	comp=Z,30nm,0.5s					
RAMN	**Ramite**	**43.07 311**	*e*P	**P**	**18 56 32.4**	**+1.9**
	comp=Z,55nm,0.7s					
CAN	**Canberra**	**43.56 147**	P	**P**	**18 56 35.3**	**+1.2**
CAN			IAmb	IAmb	18 56 59.2	
	comp=Z,57nm,1.6s					
TOO	**Toolangi**	**43.58 153**	P	**P**	**18 56 35.7**	**+1.5**
	baz=44,SNR=8.7					
TOO	**Toolangi**	**43.58 153**	P	**P**	**18 56 35.6**	**+1.4**
TOO			IAmb	IAmb	18 56 57.0	
	comp=Z,39nm,1.6s					
JIRN	**Jiri**	**43.76 311**	*e*P	**P**	**18 56 37.6**	**+1.4**
	comp=Z,62nm,0.6s					
CNB	**Canberra Magne**	**43.76 147**	P	**P**	**18 56 37.4**	**+1.7**
	baz=44,SNR=11					
GTA	**Gaotai**	**43.79 335**	P	**P**	**18 56 38.1**	**+2.1**
GTA			pP	pP	18 57 05.2	+1.3
GTA			sP	sP	18 57 19.3	+1.6
GTA			ScP	**ScP**	**19 01 53.3**	**-7.7**
GTA			pmax	pmax		
	comp=Z,2.0nm,1.0s					
GUN	**Gumba**	**44.12 311**	*e*P	**P**	**18 56 40.6**	**+1.5**
	comp=Z,76nm,0.5s					
PKI	**Pulchoki**	**44.30 311**	*e*P	**P**	**18 56 41.4**	**+0.9**
	comp=Z,22nm,0.6s					
PKIN	**Phulchoki**	**44.31 311**	*e*P	**P**	**18 56 41.4**	**+0.9**
	comp=Z,22nm,0.5s					
USA0B	**Ussuriysk Arra**	**44.46 10**	P	**P**	**18 56 41.5**	**+0.5**
USA0B			IAmb	IAmb	18 56 48.1	
	comp=Z,38nm,1.6s					
USRK	**Ussuriysk Ar.**	**44.46 10**	P	**P**	**18 56 41.2**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=214,slow=5.3,SNR=8.1					
USRK	**Ussuriysk Ar.**	**44.46 10**	P	**P**	**18 56 41.9**	**+0.9**
KKN	**Kakani**	**44.51 311**	*e*P	**P**	**18 56 43.3**	**+1.3**
	comp=Z,21nm,0.4s					
DMN	**Daman**	**44.55 310**	*e*P	**P**	**18 56 43.7**	**+1.3**
	comp=Z,27nm,0.6s					
GKN	**Gorkha**	**45.11 311**	*e*P	**P**	**18 56 47.9**	**+1.2**
	comp=Z,44nm,0.6s					
KOLN	**Koldanda**	**45.78 310**	*e*P	**P**	**18 56 53.4**	**+1.4**
	comp=Z,45nm,0.6s					
DANN	**Dangsing**	**45.95 311**	*e*P	**P**	**18 56 54.6**	**+1.1**
	comp=Z,90nm,0.6s					
PYUN	**Piuthan**	**46.41 310**	*e*P	**P**	**18 56 58.5**	**+1.5**
	comp=Z,88nm,0.6s					
TAU	**Tasmania Unive**	**48.76 155**	P	**P**	**18 57 15.6**	**+1.1**
ULN	**Ulaanbaatar**	**49.00 347**	P	**P**	**18 57 16.9**	**+0.3**
ULN			IAmb	IAmb	18 57 47.8	
	comp=Z,12nm,1.6s					
SONM	**Songino Array**	**49.13 346**	P	**P**	**18 57 19.2**	**+1.7**
	comp=Z,1.3nm,0.5s,baz=164,slow=8.3,SNR=7.9					
SONM			pP	**pP**	**18 57 45.7**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=164,slow=8.0,SNR=4.8					
SONM	**Songino Array**	**49.13 346**	P	**P**	**18 57 18.7**	**+1.2**
WMQ	**Urumqi**	**52.93 329**	*e*P	**P**	**18 57 48.1**	**+2.1**
WMQ			pmax	pmax		
	comp=Z,15nm,0.7s					
WMQ			pmax	pmax		
	comp=Z,220nm,4.9s					
WMQ			LR	LR		
	comp=Z,2μm,28.8s					
WMQ			LR	LR		
	comp=Z,3μm,29.0s					
WMQ			LR	LR		
	comp=Z,180nm,29.2s					
WMQ	**Urumqi**	**52.93 329**	P	**P**	**18 57 45.8**	**-0.2**
WMQ			IAmb	IAmb	18 57 49.4	
	comp=Z,7.0nm,0.4s					
TLY	**Talaya**	**53.37 346**	P	**P**	**18 57 49.6**	**+0.7**
NIL	**Nilore**	**56.39 311**	P	**P**	**18 58 11.6**	**+0.5**
ZSN	**Zaisan**	**56.89 331**	*e*P	**P**	**18 58 14.7**	**+0.4**
	baz=330					
SHLS	**Shalkode**	**57.05 324**	*e*P	**P**	**18 58 14.9**	**-0.7**
	comp=Z,6.2nm,0.9s,baz=324					
SHLS			*e*S	**S**	**19 05 59.6**	**-1.5**
	baz=324					
UZB	**Uzynbulak**	**57.31 324**	*e*P	**P**	**18 58 18.8**	**+1.3**
	baz=323					
SATY	**Saty**	**57.62 323**	*e*P	**P**	**18 58 20.5**	**+0.8**
	comp=Z,5.7nm,0.7s,baz=323					
KPKS	**Kokpek**	**57.69 324**	*e*P	**P**	**18 58 21.1**	**+0.9**
	comp=Z,6.6nm,0.6s,baz=324					
MK31	**Makanchi Array**	**57.75 329**	P	**P**	**18 58 21.7**	**+1.3**
MK31			IAmb	IAmb	18 58 22.9	
	comp=Z,8.3nm,0.8s					
MK31			pP	**pP**	**18 58 50.1**	**+0.1**
MKAR	**Makanchi Array**	**57.75 329**	P	**P**	**18 58 21.6**	**+1.3**
	comp=Z,10nm,0.6s,baz=124,slow=8.5,SNR=153					
MKAR			pP	**pP**	**18 58 50.0**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=144,slow=8.0,SNR=2.2					
MKAR	**Makanchi Array**	**57.75 329**	P	**P**	**18 58 21.3**	**+0.9**
MKAR			pP	**pP**	**18 58 50.1**	**+0.1**
MAKZ	**Makanchi**	**57.92 329**	P	**P**	**18 58 22.8**	**+1.2**
MAKZ			IAmb	IAmb	18 58 23.9	
	comp=Z,8.4nm,0.7s					
TNSS	**Tian-Shan**	**58.49 322**	*e*P	**P**	**18 58 27.6**	**+1.5**
	baz=322					
MDOK	**Medeo**	**58.50 323**	*e*P	**P**	**18 58 26.8**	**+0.9**
	baz=322					
AAA	**Alma-Ata**	**58.61 323**	*e*P	**P**	**18 58 27.4**	**+0.9**
	baz=322					
TDK	**Taldyqorghan**	**58.76 325**	*e*P	**P**	**18 58 28.6**	**+1.2**
	comp=Z,18nm,0.6s,baz=325					
TKM2	**Tokmak 2**	**59.26 322**	P	**P**	**18 58 32.8**	**+1.6**
	SNR=14					
KUU	**Kurty**	**59.34 323**	*e*P	**P**	**18 58 32.0**	**+0.6**
	comp=Z,16nm,0.6s,baz=323					
KBK	**Karagaybulak**	**59.52 321**	P	**P**	**18 58 35.4**	**+2.5**
	SNR=5.8					
UCH	**Uchtor**	**59.57 321**	P	**P**	**18 58 35.6**	**+1.9**
	SNR=6.8					
AAK	**Ala-Archa**	**59.80 321**	P	**P**	**18 58 36.3**	**+1.5**
	comp=Z,4.5nm,0.6s,baz=135,slow=5.9,SNR=34					
AAK	**Ala-Archa**	**59.80 321**	P	**P**	**18 58 36.9**	**+2.1**
	SNR=11					
AAK	**Ala-Archa**	**59.80 321**	P	**P**	**18 58 36.5**	**+1.7**
AAK			IAmb	IAmb	18 58 37.7	
	comp=Z,5.8nm,0.8s					
KBL	**Kabul**	**59.94 310**	P	**P**	**18 58 36.3**	**+0.3**
AML	**Almayashu**	**60.05 320**	P	**P**	**18 58 38.5**	**+1.7**
	SNR=12					
USP	**Ospenovka**	**60.12 322**	P	**P**	**18 58 38.4**	**+1.5**
	SNR=11					
SGDS	**Sogindy**	**60.14 322**	*e*P	**P**	**18 58 38.0**	**+1.0**
	baz=322					
PETK	**Petropavlovsk-**	**60.26 24**	pP	pP	18 59 06.7	-0.7
	comp=Z,4.2nm,0.9s,baz=134,slow=8.5,SNR=3.3					
EKS2	**Erkin-Say**	**60.26 321**	P	**P**	**18 58 39.6**	**+1.7**
	SNR=10					
MLZ	**Mavora Lakes**	**61.07 145**	P	**P**	**18 58 43.9**	**+0.6**
FOZ	**Fox Glacier**	**61.07 142**	P	**P**	**18 58 43.4**	**+0.2**
SEM	**Semipalatinsk**	**61.13 331**	*e*P	**P**	**18 58 43.8**	**0.0**
	baz=331					
BTLS	**Baital**	**61.34 323**	*e*P	**P**	**18 58 45.1**	**+0.1**
	baz=323					
QRZ	**Quartz Range**	**61.44 138**	P	**P**	**18 58 46.9**	**+1.1**
ZAA0	**Zalesovo Array**	**61.53 336**	P	**P**	**18 58 46.2**	**+0.1**
ZALV	**Zalesovo Beam**	**61.53 336**	P	**P**	**18 58 46.4**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=123,slow=5.5,SNR=12					
ZALV	**Zalesovo Beam**	**61.53 336**	P	**P**	**18 58 45.7**	**-0.4**
LBZ	**Lake Benmore**	**61.75 143**	P	**P**	**18 58 48.0**	**+0.2**
RPZ	**Rata Peaks**	**61.93 142**	P	**P**	**18 58 49.2**	**+0.2**
DZA	**Taraz**	**61.94 320**	*e*P	**P**	**18 58 49.5**	**+0.4**
	baz=320					
KURBB	**Kurchatov Arra**	**62.12 330**	P	**P**	**18 58 50.5**	**+0.4**
	comp=Z,11nm,1.0s,baz=115,slow=5.9,SNR=14					
THZ	**Tophouse**	**62.14 139**	P	**P**	**18 58 51.0**	**+0.5**
NNZ	**Nelson**	**62.20 138**	P	**P**	**18 58 51.7**	**+0.9**
OXZ	**Oxford**	**62.35 141**	P	**P**	**18 58 52.2**	**+0.4**
IUG	**Iuzhnay**	**62.44 319**	*e*P	**P**	**18 58 52.5**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=318					
KK31	**Karatay Array**	**62.57 320**	P	**P**	**18 58 53.7**	**+0.4**
KK31			IAmb	IAmb	18 58 55.1	
	comp=Z,4.5nm,0.8s					
KKAR	**Karatay Array**	**62.57 320**	P	**P**	**18 58 53.7**	**+0.4**
KKAR			IAmb	IAmb	18 58 55.1	
	comp=Z,4.5nm,0.8s					
KKAR	**Karatay Array**	**62.57 320**	P	**P**	**18 58 53.4**	**+0.1**
KKAR			pP	**pP**	**18 59 23.7**	**+0.4**
BRZS	**Berezniki**	**64.78 327**	*e*P	**P**	**18 59 07.3**	**-0.4**
	comp=Z,6.9nm,1.1s,baz=327					
HRA	**Herat**	**65.16 308**	P	**P**	**18 59 10.4**	**-0.3**
HRA			IAmb	IAmb	18 59 11.7	
	comp=Z,4.4nm,0.8s					
WSAR	**Wadi Sarin**	**65.52 295**	P	**P**	**18 59 12.2**	**-0.7**
	comp=Z,5.5nm,0.8s,baz=174,slow=7.3,SNR=4.1					
BVAR	**Borovoye Array**	**67.62 329**	P	**P**	**18 59 25.6**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=201,slow=11,SNR=19					
BRVK	**Borovoye**	**67.69 329**	P	**P**	**18 59 26.5**	**+0.3**
BRVK			IAmb	IAmb	18 59 28.1	
	comp=Z,5.2nm,0.8s					
BRVK			pP	**pP**	**18 59 55.7**	**-0.9**
GEYT	**Alibeck**	**69.39 311**	P	**P**	**18 59 37.3**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=134,slow=4.3,SNR=6.8					
TIXI	**Tiksi**	**71.23 2**	P	**P**	**18 59 46.7**	**-0.8**
ABKAR	**Akbulak array**	**71.81 322**	P	**P**	**18 59 51.7**	**+0.2**
ABKAR			PcP	**PcP**	**19 00 09.0**	**-0.7**
ABKAR	**Akbulak array**	**71.81 322**	P	**P**	**18 59 51.4**	**-0.1**
ABKAR			PcP	**PcP**	**19 00 09.3**	**-0.4**
ABKAR			pP	**pP**	**19 00 21.0**	**-1.3**
NRIK	**Noril'sk**	**72.57 348**	P	**P**	**18 59 55.5**	**0.0**
	comp=Z,2.2nm,0.6s,baz=95,slow=5.5,SNR=4.6					
NRIK	**Noril'sk**	**72.57 348**	P	**P**	**18 59 54.8**	**-0.7**
AKTO	**Aktyubinsk**	**73.39 323**	P	**P**	**19 00 00.4**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=124,slow=6.2,SNR=14					
ARU	**Arti**	**75.27 329**	P	**P**	**19 00 11.4**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=278,slow=2.5,SNR=6.5					
ARU			pP	**pP**	**19 00 41.9**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=350,slow=1.5,SNR=4.1					
ARU	**Arti**	**75.27 329**	P	**P**	**19 00 10.7**	**-0.9**
ARU			pP	**pP**	**19 00 40.6**	**-2.1**
VNDA	**Vanda**	**80.81 172**	P	**P**	**19 00 41.6**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=314,slow=7.3,SNR=16					
VNDA	**Vanda**	**80.81 172**	P	**P**	**19 00 41.6**	**-0.2**
KBZ	**Khabaz**	**81.86 314**	P	**P**	**19 00 47.9**	**0.0**
	comp=Z,1.8nm,0.8s,baz=111,slow=4.9,SNR=5.0					
KLMR	**Klimovskoe**	**85.97 331**	*e*P	**P**	**19 01 05.9**	**-2.6**
KLMR			AMP		19 01 21.2	
	comp=Z,7.0nm,1.1s					
KLMR			*e*pP	**pP**	**19 01 36.8**	**-3.3**
ILAR	**Eielson Array**	**90.06 25**	P	**P**	**19 01 27.1**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=222,slow=4.9,SNR=2.2					
ARCES	**ARCESS Array B**	**91.89 340**	P	**P**	**19 01 34.7**	**-1.6**
	comp=Z,3.2nm,1.0s,baz=90,slow=6.3,SNR=3.7					
ARCES	**ARCESS Array B**	**91.89 340**	IAmb	IAmb	19 02 10.7	
	comp=Z,13nm,1.4s					
FINES	**FINESS Array B**	**92.49 331**	P	**P**	**19 01 37.8**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=49,slow=5.8,SNR=4.6					
MATP	**Matopo**	**93.49 250**	P	**P**	**19 01 42.8**	**-2.1**
	comp=Z,1.0nm,0.6s,baz=49,slow=4.5,SNR=5.9					
TORD	**Torodi Ar. Bea**	**119.39 285**	PKP	**PKPdf**	**19 07 16.6**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=87,slow=1.5,SNR=15					
TORD			pPKP	**pPKPdf**	**19 07 49.6**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=83,slow=1.9,SNR=3.1					
DBIC	**Dimbokro**	**126.56 279**	PKP	**PKPdf**	**19 07 29.9**	**-2.2**
	comp=Z,1.1nm,0.4s,baz=26,slow=2.9,SNR=1.8					

*IDC **03** 18:58:05.3±1.3,31°.85N×49°.16E,h0km,mb3.7/8,*
mb1 3.8/10,mb1mx3.5/60,mbtmp3.7/10,ML3.8/2,MS3.0/1,
Ms1 3.0/1,ms1mx2.4/61,Error ellipse: s-maj=28.6km
s-min=22.1km az=0.0
*THR **03** 18:58:06.6±0.3,31°.77N×49°.06E,h8km,s7km,ML4.0*
*TEH **03** 18:58:07.1,31°.82N×49°.08E,h8km,ML3.6*
ISC 03 18:58:07.1±0.7,**31°.79N**±0°.05×**49°.08E**±0°.05,**h10**km,**n56,**
σ1°**86**/56,**mb3.7**/7,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.40**	**323**	*e*Pg			**Pg**	**18 58 14.6**	**-0.4**
SHGR				*e*Sg			**Sg**	**18 58 20.5**	**+0.1**
SHGR	**Shooshtar-Gavs**	**0.40**	**323**	*e*Pg			**Pg**	**18 58 14.6**	**-0.4**
AHWZ	**Ahwaz**	**0.59**	**220**	*e*Pg			**Pb**	**18 58 19.9**	**+0.3**
SHK1	**Shahrekord**	**1.62**	**70**	*e*Pg			**Pn**	**18 58 38.4**	**+2.4**
SHK1				*e*				18 59 03.1	
	comp=Z,99nm,0.6s								
DHL1	**Dehloran**	**1.77**	**301**	*e*Pg			**Pb**	**18 58 40.3**	**+0.6**
IPIR	**Pirpir**	**1.77**	**59**	*e*Pg			**Pn**	**18 58 40.8**	**+2.6**
IPIR				*e*				18 59 07.5	
	comp=Z,99nm,0.6s								
IKMR	**Kamar-syah**	**1.82**	**341**	*e*Pg			**Pn**	**18 58 40.3**	**+1.7**
IKMR				*e*				18 59 06.4	
	comp=Z,99nm,0.8s								
IKFM	**Kafar-mosalman**	**2.02**	**329**	*e*Pn			**Pn**	**18 58 43.0**	**+1.7**
IKFM				*e*				18 59 12.5	
	comp=Z,99nm,0.3s								
KHMZ	**Khomeyn**	**2.08**	**21**	*e*Pn			**Pn**	**18 58 44.1**	**+1.8**
KHMZ	**Khomeyn**	**2.08**	**21**	*e*Pn			**Pn**	**18 58 44.1**	**+1.8**
IDOB	**Doab**	**2.13**	**339**	*e*Pn			**Pn**	**18 58 44.4**	**+1.3**
KLNJ	**Kolanjah**	**2.28**	**109**	*e*Pn			**Pn**	**18 58 47.5**	**+2.3**
KLNJ				*e*				18 59 30.8	
	comp=Z,99nm,0.4s								
HSAM	**Samen**	**2.45**	**351**	*e*Pn			**Pn**	**18 58 49.0**	**+1.6**
MIB	**Mutribah**	**2.48**	**218**	*e*P				18 58 49.8	
UMR	**Umm Al-Rimmam**	**2.52**	**208**	*e*P				18 58 49.8	
IGAR	**Gharneh**	**2.58**	**75**	*e*Pn			**Pn**	**18 58 51.6**	**+2.4**
IGAR				*e*				18 59 30.0	
	comp=Z,99nm,0.4s								
IKLH	**Kolahrood**	**2.60**	**53**	*e*Pn			**Pn**	**18 58 52.1**	**+2.6**
IKLH				*e*				18 59 38.4	
	comp=Z,99nm,0.6s								
QAM	**Ghamsar**	**2.79**	**45**	*e*Pn			**Pn**	**18 58 54.5**	**+2.4**
IRAM	**Ramesheh**	**2.81**	**89**	*e*Pn			**Pn**	**18 58 54.4**	**+2.1**
ASAO	**Ashtian**	**2.86**	**16**	*e*Pn			**Pn**	**18 58 55.1**	**+2.0**
ASAO	**Ashtian**	**2.86**	**16**	*e*Pn			**Pn**	**18 58 55.1**	**+2.0**
IZEF	**Zefreh**	**2.96**	**67**	*e*Pn			**Pn**	**18 58 56.8**	**+2.3**
KCHF	**Cheshme Sefid,**	**3.02**	**326**	*e*			**Sg**	**18 59 47.6**	**+3.5**
	comp=Z,99nm,0.4s								
HAGD	**Aghdareh**	**3.03**	**1**	*e*Pn			**Pn**	**18 58 57.4**	**+2.1**
HAGD				*e*				18 59 46.2	
	comp=Z,99nm,0.4s								
RDF	**Al-Radifah**	**3.15**	**205**	*e*P				18 58 59.1	
IALM	**Almabolaq**	**3.16**	**346**	*e*Pn			**Pn**	**18 58 58.4**	**+1.2**
QRN	**Al-Qurain**	**3.20**	**199**	*e*P				18 58 59.7	
IGHG	**Ghaleghazi**	**3.30**	**321**	*e*Pn			**Pn**	**18 59 01.4**	**+2.3**
IGHG				*e*				19 00 07.6	
	comp=Z,99nm,0.9s								
NASN	**Na'in**	**3.31**	**71**	*e*Pn			**Pn**	**18 59 01.4**	**+2.1**
NASN	**Na'in**	**3.31**	**71**	*e*Pn			**Pn**	**18 59 01.4**	**+2.1**
KRSH	**Karshahi**	**3.37**	**49**	*e*Pn			**Pn**	**18 59 02.4**	**+2.5**
IQOM	**Qom**	**3.47**	**28**	*e*Pn			**Pn**	**18 59 03.5**	**+2.0**
AHBU	**AHRAM**	**3.48**	**146**	*e*Pn			**Pn**	**18 59 03.0**	**+1.6**
IRAZ	**Razeghan**	**3.67**	**11**	*e*Pn			**Pn**	**18 59 06.6**	**+2.4**
IDHR	**Dehrash**	**3.68**	**323**	*e*Pn			**Pn**	**18 59 05.3**	**+1.0**
IDHR				*e*				18 59 50.2	
	comp=Z,99nm,0.3s								
ISFB	**Sefidab**	**3.68**	**45**	*e*Pn			**Pn**	**18 59 05.9**	**+1.7**
IVRN	**Varamin**	**3.89**	**34**	*e*Pn			**Pn**	**18 59 09.1**	**+2.1**
ISAD	**Sadrabad**	**3.92**	**87**	*e*Pn			**Pn**	**18 59 10.0**	**+2.4**
QABG	**Abgarm-Qazvin**	**3.93**	**6**	*e*Pn			**Pn**	**18 59 07.4**	**-0.4**
IHSB	**Hasanabad**	**4.07**	**26**	*e*Pn			**Pn**	**18 59 11.2**	**+1.6**
IMHD	**Mahdasht**	**4.11**	**18**	*e*Pn			**Pn**	**18 59 11.9**	**+1.9**
ANAR	**Anarak**	**4.17**	**69**	*e*Pn			**Pn**	**18 59 13.2**	**+2.3**
IGZV	**Ghazvin**	**4.68**	**11**	*e*Pn			**Pn**	**18 59 19.2**	**+1.1**
IMEH	**Mehriz**	**4.74**	**93**	*e*Pn			**Pn**	**18 59 21.1**	**+2.3**
QALM	**Alamut, Qazvin**	**4.81**	**15**	*e*Pn			**Pn**	**18 59 21.0**	**+1.1**
ILAS	**Lasjerd**	**4.83**	**41**	*e*Pn			**Pn**	**18 59 21.6**	**+1.5**
IPRN	**Peran**	**5.20**	**30**	*e*Pn			**Pn**	**18 59 27.8**	**+2.7**
IGLO	**Ghaloghah**	**6.13**	**39**	*e*Pn			**Pn**	**18 59 38.5**	**+0.5**
TKDS	**Koohdasht(Taba**	**7.02**	**73**	*e*Pn			**Pn**	**18 59 51.7**	**+1.6**
GEYT	**Alibeck**	**9.62**	**48**	LR			LR	19 04 44.4	
	comp=Z,95nm,20.4s,baz=25,slow=42								
MMAI	**Mount Meron Ar**	**11.63**	**280**	Pn			**Pn**	**19 00 55.3**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=72,slow=14,SNR=2.3								
WSAR	**Wadi Sarin**	**12.01**	**133**	Pn			**Pn**	**19 00 57.5**	**-0.9**
	comp=Z,1.7nm,0.3s,baz=319,slow=12,SNR=18								
BELG	**Belogornoye**	**20.62**	**357**	P			**P**	**19 02 45.8**	**-0.6**
	comp=Z,9.7nm,0.7s,baz=270,slow=8.2,SNR=3.7								
BVAR	**Borovoye Array**	**26.23**	**30**	P			**P**	**19 03 40.7**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=222,slow=17,SNR=1.9								
MKAR	**Makanchi Array**	**29.49**	**50**	P			**P**	**19 04 11.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=232,slow=4.0,SNR=3.7								
FINES	**FINESS Array B**	**33.24**	**340**	P			**P**	**19 04 42.8**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=132,slow=10,SNR=5.3								
ZALV	**Zalesovo Be

WR0	**Warramunga Arr**	**22.65**	**229**	P	**P**	**19 10 03.7**	**+0.7**
WR0				IAmb	IAmb	19 10 14.6	
	comp=Z,5.5nm,1.0s						
WRAB	**Tennant Creek**	**22.78**	**229**	P	**P**	**19 10 04.2**	**-0.2**
WRAB				IAmb	IAmb	19 10 06.9	
	comp=Z,5.5nm,0.8s						
WB2	**Warramunga Arr**	**22.78**	**229**	P	**P**	**19 10 04.4**	**0.0**
WB2				IAmb	IAmb	19 10 06.8	
	comp=Z,5.1nm,0.6s						
WRA	**Warramunga Arr**	**22.79**	**229**	P	**P**	**19 10 04.5**	**-0.1**
	comp=Z,3.2nm,0.5s,baz=52,slow=10,SNR=46						
WRA				S	**S**	**19 14 10.2**	**-3.7**
	comp=Z,2.5nm,1.2s,baz=56,slow=18,SNR=4.7						
WRA	**Warramunga Arr**	**22.79**	**229**	P	**P**	**19 10 05.2**	**+0.7**
ARMA	**Armidale**	**24.86**	**182**	P	**P**	**19 10 25.6**	**+1.2**
AS31	**Alice Springs**	**25.47**	**223**	P	**P**	**19 10 30.4**	**+0.4**
ASAR	**Alice Springs**	**25.47**	**223**	P	**P**	**19 10 30.4**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=58,slow=8.7,SNR=46						
ASAR	**Alice Springs**	**25.47**	**223**	P	**P**	**19 10 30.5**	**+0.5**
TNTI	**Ternate**	**25.83**	**283**	P	**P**	**19 10 30.9**	**-2.5**
STKA	**Stephens Creek**	**28.21**	**200**	P	**P**	**19 10 53.7**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=6.8,slow=6.8,SNR=4.3						
STKA	**Stephens Creek**	**28.21**	**200**	P	**P**	**19 10 54.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**29.08**	**242**	P	**P**	**19 11 02.0**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=66,slow=7.2,SNR=22						
FITZ	**Fitzroy Crossi**	**29.08**	**242**	P	**P**	**19 11 02.1**	**-0.3**
FITZ				IAmb	IAmb	19 11 02.7	
	comp=Z,3.4nm,0.7s						
JHS	**Saijyo**	**44.17**	**337**	P	**P**	**19 13 10.3**	**-0.3**
KSAR	**Wonju Array Be**	**48.43**	**334**	P	**P**	**19 13 41.6**	**-2.4**
PPT2	**Papeete2**	**57.84**	**107**	*e*LR	LR	19 14 54.0	
	comp=Z,112nm,22.8s						
CMAR	**Chiang Mai Arr**	**57.87**	**296**	P	**P**	**19 14 53.1**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=114,slow=6.0,SNR=5.7						
PETK	**Petropavlovsk-**	**58.49**	**4**	P	**P**	**19 14 57.7**	**0.0**
	comp=Z,2.0nm,1.0s,baz=164,slow=5.8,SNR=1.8						
HHC	**Hu-ho-hao-te**	**59.38**	**325**	*e*P	**P**	**19 15 03.7**	**-0.6**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,250nm,6.8s						
LZH	**Lanzhou**	**61.47**	**316**	*e*P	**P**	**19 15 17.4**	**-1.3**
LZH				pP	pwP	19 15 34.0	+8.3
LZH				sP	PcP	19 15 41.5	-19
LZH				pmax	pmax		
	comp=Z,22nm,1.4s						
SONM	**Songino Array**	**66.69**	**328**	P	**P**	**19 15 52.5**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=133,slow=8.3,SNR=4.0						
SONM	**Songino Array**	**66.69**	**328**	IAmb	IAmb	19 15 54.0	
	comp=Z,1.1nm,0.8s						
WMQ	**Urumqi**	**76.00**	**318**	*e*P	**P**	**19 16 48.6**	**-0.5**
ZALV	**Zalesovo Beam**	**81.51**	**326**	P	**P**	**19 17 17.4**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=115,slow=6.7,SNR=4.3						
ILAR	**Eielson Array**	**82.86**	**22**	P	**P**	**19 17 25.8**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=245,slow=5.3,SNR=38						
KURBB	**Kurchatov Arra**	**84.11**	**322**	P	**P**	**19 17 31.3**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=98,slow=5.2,SNR=2.1						
NVAR	**Mina Array Bea**	**92.72**	**52**	P	**P**	**19 18 15.8**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=297,slow=0.7,SNR=4.1						
YKA	**Yellowknife Ar**	**96.13**	**28**	P	**P**	**19 18 31.2**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=262,slow=5.1,SNR=6.7						
GERES	**GERESS Array B**	**124.43**	**328**	PKP	**PKPdf**	**19 24 00.8**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=228,slow=1.6,SNR=4.6						
TORD	**Torodi Ar. Bea**	**150.20**	**287**	PKPbc	**PKPbc**	**19 24 53.6**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=63,slow=3.3,SNR=8.1						

*IDC **03** 19:12:46.2±3.0,5.°13S×133.°63E,h0km,mb3.8/1, mb1 4.0/5,mb1mx3.5/42,mbtmp3.8/5,ML3.7/4,MS3.0/1, Ms1 3.0/1,ms1mx2.4/45,Error ellipse: s-maj=121.3km s-min=25.1km az=80.0*

*NEIC **03** 19:12:48.1±1.3,4.°96S±0.°07×134.°0E±0.°1,h25km±7km, mb4.1/7,Error ellipse: s-maj=18.9km s-min=9.8km az=77.0*

ISC 03 19:12:48.5±0.8,5.°14S±0.°07×133.°9E±0.°1,h28km,n25, σ1§97/27,mb4.1/4,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.73**	**324**		**Pn**	**19 13 29.5**	**-1.1**
SAUI	**Saumlaki**	**3.81**	**222**	Pn	**Pn**	**19 13 48.9**	**+3.4**
SIJI	**Sorong**	**4.97**	**328**	Pn	**Pn**	**19 14 00.1**	**-1.4**
	0.9nm,0.3s,baz=70,slow=24,SNR=16						
SIJI				Sn	Sn	19 14 49.2	-8.9
	2.2nm,0.3s,baz=151,slow=23,SNR=6.5						
JAY	**Jayapura**	**7.29**	**69**	LR	LR	19 18 03.2	
	comp=Z,115nm,18.7s,baz=216,slow=42						
MTN	**Manton Dam**	**8.12**	**199**		**Pn**	**19 14 48.6**	**+3.9**
SOEI	**Soe**	**10.57**	**244**		**Pn**	**19 15 21.4**	**+3.0**
COEN	**Coen**	**12.68**	**134**	Pn	**Pn**	**19 15 47.5**	**+0.3**
WB0	**Warramunga Arr**	**14.55**	**178**	Pn	**Pn**	**19 16 13.3**	**+0.5**
WB2	**Warramunga Arr**	**14.72**	**178**	Pn	**Pn**	**19 16 15.4**	**+0.4**
WRA	**Warramunga Arr**	**14.72**	**178**	Pn	**Pn**	**19 16 15.6**	**+0.5**
	0.2nm,0.3s,baz=357,slow=13,SNR=12						
WRA				Sn	**Sn**	**19 18 53.5**	**-3.9**
	0.1nm,0.3s,baz=360,slow=23,SNR=2.4						
WRA	**Warramunga Arr**	**14.72**	**178**		**Pn**	**19 16 15.2**	**+0.1**
WR0	**Warramunga Arr**	**14.75**	**178**	P	**Pn**	**19 16 16.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**15.19**	**211**	Pn	**Pn**	**19 16 20.7**	**-0.5**
	0.7nm,0.3s,baz=23,slow=9.8,SNR=19						
FITZ				Sn	**Sn**	**19 19 04.4**	**-4.4**
	0.2nm,0.3s,baz=172,slow=16,SNR=3.5						
FITZ	**Fitzroy Crossi**	**15.19**	**211**		**Pn**	**19 16 20.5**	**-0.7**
FITZ				IAmb	IAmb	19 16 24.0	
	comp=Z,2.8nm,0.8s						
AS31	**Alice Springs**	**18.42**	**180**	P	**Pn**	**19 17 03.0**	**+1.0**
ASAR	**Alice Springs**	**18.42**	**180**	P	**Pn**	**19 17 03.2**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=2.9,slow=11,SNR=20						
ASAR				S	**Sn**	**19 20 24.7**	**-2.6**
	comp=Z,0.0nm,0.3s,baz=356,slow=27,SNR=1.9						
ASAR	**Alice Springs**	**18.42**	**180**	P	**Pn**	**19 17 02.6**	**+0.5**
CTAO	**Charters Tower**	**19.13**	**142**	P	**P**	**19 17 09.3**	**-0.3**
CTAO				IAmb	IAmb	19 17 24.3	
	comp=Z,15nm,1.2s						
FORT	**Forrest**	**26.09**	**191**	P	**P**	**19 18 21.9**	**+1.9**
CMAR	**Chiang Mai Arr**	**41.66**	**305**	P	**P**	**19 20 35.0**	**0.0**
MK31	**Makanchi Array**	**68.86**	**325**	P	**P**	**19 23 51.6**	**+1.0**
MK31				IAmb	IAmb	19 23 59.7	
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**68.86**	**325**	P	**P**	**19 23 52.0**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=119,slow=8.1,SNR=9.3						
MKAR	**Makanchi Array**	**68.86**	**325**	P	**P**	**19 23 51.8**	**+1.1**
MAKZ	**Makanchi**	**69.05**	**325**	P	**P**	**19 23 51.4**	**-0.4**
MAKZ				IAmb	IAmb	19 24 16.9	
	comp=Z,4.4nm,1.5s						
BILL	**Bilibino**	**76.47**	**12**	P	**P**	**19 24 35.0**	**-0.4**
BILL				IAmb	IAmb	19 24 40.2	
	comp=Z,7.4nm,1.6s						

*SOME **03** 19:13:41.6,42.°15N×80.°68E,h10km*

*KRNET **03** 19:13:41.9±0.1,42.°19N×80.°84E,h18km,mb3.1*

*NNC **03** 19:13:43.8±1.6,42.°16N×80.°60E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=10.3km s-min=8.7km az=141.0*

ISC 03 19:13:38.7±2.5,42.°08N±0.°07×80.°79E±0.°07,h7km±11km, n52,σ2§46/85,26C-7D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.41**	**347**	*e*P	**Pb**	**19 14 06.4**	**+1.1**
	baz=44						
KTMS				*e*S	**Sn**	**19 14 24.0**	**+0.3**
	baz=44						
KTMS	**Ketmen**	**1.41**	**347**	*e*P	**Pb**	**19 14 06.4**	**+1.1**
	0.8nm,0.1s						
KTMS				*e*S	**Sn**	**19 14 23.9**	**+0.3**
	26nm,0.3s						
KTMS	**Ketmen**	**1.41**	**347**	P	**Pn**	**19 14 06.2**	**+1.4**
	0.8nm,0.1s						
KTMS				S	**Sn**	**19 14 24.0**	**+0.3**
	26nm,0.3s						
SHLS	**Shalkode**	**1.46**	**318**	*e*P	**Pn**	**19 14 04.4**	**-1.2**
	baz=24						
SHLS				*e*S	**Sb**	**19 14 21.1**	**-3.9**
	baz=24						
SHLS	**Shalkode**	**1.46**	**318**	*e*P	**Pn**	**19 14 04.4**	**-1.2**
	52nm,0.2s						
SHLS				*e*S	**Sb**	**19 14 21.1**	**-3.9**
	80nm,0.3s						
SHLS	**Shalkode**	**1.46**	**318**	P	**Pn**	**19 14 04.4**	**-1.2**
	52nm,0.2s						
SHLS				S	**Sb**	**19 14 21.1**	**-3.9**
	80nm,0.3s						
PDGK	**Podgornoye**	**1.58**	**323**	⇓P	**Pb**	**19 14 09.2**	**+0.9**
	1.6nm,0.3s						
PDGK				⇓S	**Sg**	**19 14 30.6**	**+1.2**
	6.9nm,0.6s						
UZB	**Uzynbulak**	**1.69**	**310**	*e*P	**Pg**	**19 14 12.1**	**+1.0**
	baz=6.0						
UZB				*e*S	**Sg**	**19 14 34.1**	**+1.1**
	baz=6.0						
UZB	**Uzynbulak**	**1.69**	**310**	*e*P	**Pg**	**19 14 12.1**	**+1.0**
	8.4nm,0.2s						
UZB				*e*S	**Sg**	**19 14 34.1**	**+1.1**
	14nm,0.2s						
UZB	**Uzynbulak**	**1.69**	**310**	P	**Pg**	**19 14 12.1**	**+1.0**
	8.4nm,0.2s						
UZB				S	**Sg**	**19 14 34.1**	**+1.1**
	14nm,0.2s						
PRZ	**Przheval'sk**	**1.82**	**284**	⇑*i*P	**Pg**	**19 14 15.8**	**+2.2**
	baz=81						
PRZ				⇑*i*S	**Sg**	**19 14 40.8**	**+3.6**
	baz=81						
SATY	**Saty**	**2.02**	**300**	*e*P	**Pg**	**19 14 18.3**	**+0.9**
	baz=97						
SATY				*e*S	**Sg**	**19 14 44.6**	**+1.1**
	baz=97						
SATY	**Saty**	**2.02**	**300**	*e*P	**Pg**	**19 14 18.3**	**+0.9**
	17nm,0.3s						
SATY				*e*S	**Sg**	**19 14 44.6**	**+1.1**
	29nm,0.1s						
ZHN	**Zhinishke**	**2.05**	**303**	*e*P	**Pg**	**19 14 18.6**	**+0.5**
	baz=0.0						
ZHN				*e*S	**Sg**	**19 14 44.9**	**+0.2**
	baz=0.0						
ZHN	**Zhinishke**	**2.05**	**303**	*e*P	**Pg**	**19 14 18.6**	**+0.5**
	126nm,0.3s						
ZHN				*e*S	**Sg**	**19 14 44.9**	**+0.2**
	8.9nm,0.2s						
ZHN	**Zhinishke**	**2.05**	**303**	Pg	**Pg**	**19 14 18.6**	**+0.5**
	126nm,0.3s						
ZHN				Lg	Lg	19 14 44.9	
	8.9nm,0.2s						
KPKS	**Kokpek**	**2.08**	**312**	*e*P	**Pg**	**19 14 19.1**	**+0.5**
	baz=10.0						
KPKS				*e*S	**Sg**	**19 14 46.2**	**+0.5**
	baz=10.0						
KPKS	**Kokpek**	**2.08**	**312**	*e*P	**Pg**	**19 14 19.1**	**+0.5**
	30nm,0.2s						
KPKS				*e*S	**Sg**	**19 14 46.1**	**+0.5**
	65nm,0.4s						
DJR	**Jarkent**	**2.37**	**342**	*e*P	**Pb**	**19 14 23.7**	**+2.0**
	1.9nm,0.3s						
DJR				*e*S	**Sg**	**19 14 53.8**	**-1.0**
	21nm,0.5s						
DJR	**Jarkent**	**2.37**	**342**	Pg	**Pb**	**19 14 23.7**	**+2.0**
	1.9nm,0.3s						
DJR				Lg	Lg	19 14 53.8	
	21nm,0.5s						
ANVS	**Anan'yevo**	**2.42**	**288**	⇑*i*P	**Pb**	**19 14 24.7**	**+2.1**
	baz=85						
ANVS				⇑*i*S	**Sg**	**19 14 55.6**	**-0.8**
	baz=85						
MNBS	**Baschi**	**2.66**	**320**	*e*P	**Pb**	**19 14 28.2**	**+1.5**
	11nm,0.1s						
MNBS				*e*S	**Sg**	**19 15 01.8**	**-2.3**
	41nm,0.3s						
KDJ	**Kajisay**	**2.69**	**272**	⇑*e*P	**Pb**	**19 14 28.7**	**+1.5**
	baz=70						
KDJ				⇑*i*S	**Sb**	**19 15 02.9**	**+2.4**
	baz=70						
KOTS	**Kotyrbulak**	**2.95**	**294**	*e*P	**Pb**	**19 14 34.2**	**+2.6**
	13nm,0.3s						
KOTS				*e*S	**Sg**	**19 15 12.0**	**-1.5**
	15nm,0.6s						
KOTS	**Kotyrbulak**	**2.95**	**294**	Pg	**Pb**	**19 14 34.3**	**+2.6**
	13nm,0.3s						
KOTS				Lg	Lg	19 15 12.0	
	15nm,0.6s						
MDOK	**Medeo**	**2.97**	**293**	*e*P	**Pb**	**19 14 34.4**	**+2.4**
	8.9nm,0.5s						
MDOK				*e*S	**Sg**	**19 15 12.2**	**-1.9**
	9.9nm,0.5s						
MDOK	**Medeo**	**2.97**	**293**	⇑Pn	**Pb**	**19 14 33.8**	**+1.8**
	5.2nm,0.4s						
MDOK				⇑Lg	Lg	19 15 12.3	
	7.3nm,0.6s						
MDOK	**Medeo**	**2.97**	**293**	Pg	**Pb**	**19 14 34.4**	**+2.4**
	8.9nm,0.5s						
MDOK				Lg	Lg	19 15 12.2	
	9.9nm,0.5s						
TNSS	**Tian-Shan**	**3.00**	**290**	*e*P	**Pb**	**19 14 34.5**	**+1.8**
	4.5nm,0.3s						
TNSS				*e*S	**Sg**	**19 15 12.5**	**-2.5**
	4.6nm,0.3s						
TNSS	**Tian-Shan**	**3.00**	**290**	Pg	**Pb**	**19 14 34.5**	**+1.8**
	4.5nm,0.3s						
TNSS				Lg	Lg	19 15 12.5	
	4.6nm,0.3s						
ARXS	**Arharly**	**3.04**	**316**	*e*P	**Pb**	**19 14 34.6**	**+1.4**
	6.1nm,0.3s						
ARXS				*e*S	**Sb**	**19 15 12.9**	**+2.3**
	8.3nm,0.4s						
IZV	**Izvestkoviy**	**3.23**	**289**	*e*P	**Pb**	**19 14 38.5**	**+2.0**
	3.7nm,0.3s						
IZV				*e*S	**Sg**	**19 15 19.7**	**-2.9**
	11nm,0.6s						
IZV	**Izvestkoviy**	**3.23**	**289**	Pg	**Pb**	**19 14 38.5**	**+2.0**
	3.7nm,0.3s						
IZV				Lg	Lg	19 15 19.7	
	11nm,0.6s						
ULHL	**Ulahol**	**3.39**	**274**	⇑*i*P	**Pb**	**19 14 38.2**	**-1.0**
	baz=72						
ULHL				⇑*i*S	**Sb**	**19 15 19.6**	**-1.0**
	baz=72						
MTBS	**Maitube**	**3.39**	**290**	*e*P	**Pb**	**19 14 41.2**	**+2.1**
	1.5nm,0.2s						
MTBS				*e*S	**Sg**	**19 15 24.0**	**-3.6**
	6.5nm,0.5s						
MTBS	**Maitube**	**3.39**	**290**	Pg	**Pb**	**19 14 41.2**	**+2.1**
	1.5nm,0.2s						
MTBS				Lg	Lg	19 15 24.0	
	6.5nm,0.5s						
KTBS	**Karatobe**	**3.43**	**300**	*e*P	**Pb**	**19 14 41.8**	**+2.0**
	1.9nm,0.5s						
KTBS				*e*S	**Sg**	**19 15 25.4**	**-3.5**
	15nm,0.5s						
KTBS	**Karatobe**	**3.43**	**300**	Pg	**Pb**	**19 14 41.8**	**+2.0**
	1.9nm,0.5s						
KTBS				Lg	Lg	19 15 25.4	
	15nm,0.5s						
BOOM	**Boomskoye usch**	**3.62**	**278**	⇑*i*P	**Pb**	**19 14 42.0**	**-1.2**
	baz=76						
BOOM				⇑*i*S	**Sb**	**19 15 25.6**	**-1.8**
	baz=76						
KUU	**Kurty**	**3.74**	**301**	*e*P	**Pb**	**19 14 47.3**	**+2.3**
	1.8nm,0.4s						
KUU				*e*S	**Sg**	**19 15 34.4**	**-4.3**
	5.3nm,0.4s						
KUU	**Kurty**	**3.74**	**301**	Pg	**Pb**	**19 14 47.3**	**+2.3**
	1.8nm,0.4s						
KUU				Lg	Lg	19 15 34.4	
	5.3nm,0.4s						
TKM2	**Tokmak 2**	**3.93**	**284**	⇑*i*P	**Pb**	**19 14 45.9**	**-2.6**
	baz=82						
TKM2				⇑*i*S	**Sb**	**19 15 32.3**	**-4.0**
	baz=82						
TKM2	**Tokmak 2**	**3.93**	**284**	⇑Pg	**Pb**	**19 14 51.5**	**+3.0**
	3.7nm,1.1s						
TKM2				⇑Lg	Lg	19 15 42.4	
	1.8nm,0.4s						
KRBS	**Karabastau**	**4.09**	**295**	*e*P	**Pb**	**19 14 53.8**	**+2.7**
	1.6nm,0.4s						
KRBS				*e*S	**Sg**	**19 15 45.6**	**-4.5**
	2.8nm,0.6s						
KRBS	**Karabastau**	**4.09**	**295**	Pg	**Pb**	**19 14 53.8**	**+2.7**
	1.6nm,0.4s						
KRBS				Lg	Lg	19 15 45.6	
	2.8nm,0.6s						
KBK	**Karagaybulak**	**4.37**	**280**	⇓*e*P	**Pb**	**19 14 52.3**	**-3.6**
	baz=78						
KBK				⇓*i*S	**Sb**	**19 15 43.3**	**-5.5**
	baz=78						
UCH	**Uchtor**	**4.67**	**274**	⇓*e*P	Pn	19 14 55.9	+5.9
	baz=73						
UCH				⇓*i*S	**Sn**	**19 15 48.9**	**+4.3**
	baz=73						
AAK	**Ala-Archa**	**4.70**	**279**	⇑*i*P	Pn	19 14 56.9	+6.8
	baz=78						
AAK				⇑*i*S	**Sn**	**19 15 51.6**	**+6.6**
	baz=78						
AAK	**Ala-Archa**	**4.70**	**279**	⇑Pg	**Pg**	**19 15 08.3**	**-0.4**
	3.0nm,1.1s						
AAK				⇑Lg	Lg	19 16 07.5	
	2.6nm,0.6s						
MAKZ	**Makanchi**	**4.80**	**10**	⇑Pn	Pn	19 14 58.8	+7.4
	3.8nm,1.5s						
MAKZ				⇑Lg	Lg	19 16 13.8	
	1.7nm,0.9s						
ARLS	**Aral**	**4.83**	**270**	⇑*i*P	Pb	19 14 59.6	-4.1
	baz=68						
ARLS				⇑*i*S	**Sb**	**19 15 56.1**	**-5.9**
	baz=68						
MK31	**Makanchi Array**	**4.83**	**12**	⇑Pn	Pn	19 14 59.5	+7.6
	0.1nm,0.2s,baz=199,slow=14,SNR=18						
MK31				⇓Sn	**Sb**	**19 15 57.6**	**-4.4**
	0.3nm,0.3s						
MK31				⇑Lg	Lg	19 16 15.8	
	2.0nm,0.7s,baz=195,slow=29,SNR=6.0						

*IDC **03** 19:22:18.8±0.4,5.°03S×153.°07E,h0km,mb4.9/36, mb1 4.9/37,mb1mx4.9/47,mbtmp4.9/37,ML3.7/1,MS4.6/33, Ms1 4.6/33,ms1mx4.5/47,Error ellipse: s-maj=16.2km s-min=9.5km az=84.0*

*MOS **03** 19:22:23.1±1.0,4.°96S×153.°02E,h34km,mb5.5/39, MS4.7/11,Error ellipse: s-maj=8.2km s-min=5.3km az=113.4*

*BJI **03** 19:22:24.7±0.0,4.°79S×153.°22E,h52km,mB5.2/59, mb5.0/69,Ms5.0/53,Ms7 4.8/54*

*NEIC **03** 19:22:25.9±1.7,5.°04S±0.°06×153.°04E±0.°07,h53km±4km, mb5.2/149,Error ellipse: s-maj=10.7km s-min=8.2km az=52.0*

*GCMT **03** 19:22:25.9±0.2,5.°26S±0.°01×153.°21E±0.°01,h28km, MW5.2/120,Moment Tensor Solution. s82,c118; s120,c187; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.51±.02; Mθθ0.07±.01; Mϕϕ-0.57±.02; Mrθ0.62±.03; Mθϕ-0.30±.01; Mϕr-0.12±.03; Best double couple: M0.84900×10^17 NP1:ϕ172.00000°,δ49.00000°, λ38.00000°. NP2:ϕ55.00000°,δ62.00000°,λ132.00000°. Principal axes: T 0.9910, Plg52.0000°, Azm17.0000°; N -0.2840, Plg37.0000°, Azm213.0000°; P -0.7070, Plg8.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **03** 19:22:27.2±0.4,5.°5E±3.°×15.°3E±.°,h76km±3km,M5.0/43, mb5.0/43,mB5.4/20,MLv5.5/3,Mw(mB)4.9/20, MwMwp4.5/2,Mwp4.9/2*

ISC 03 19:22:25.4±0.4,5.°11S±0.°04×153.°09E±0.°04,h48km±2km, h48km:pP-P,n523,σ1§67/537,mb5.2/175,MS4.7/60, 36C-22D,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.30**	**315**	Pn	**Pn**	**19 22 46.8**	**-0.3**
RABL	**Rabaul**	**1.30**	**315**	P	**Pn**	**19 22 47.9**	**+0.8**
MANU	**Manus Island**	**6.47**	**298**	Pn	**Pn**	**19 24 00.5**	**+2.3**
PMG	**Port Moresby**	**7.26**	**234**	Pn	**Pn**	**19 24 09.8**	**+0.8**
	6.0nm,0.3s,baz=49,slow=18,SNR=21						
PMG				Sn	**Sn**	**19 25 26.0**	**-4.2**
	4.0nm,0.3s,baz=61,slow=9.1,SNR=3.0						
PMG	**Port Moresby**	**7.26**	**234**	⇑*e*P	**Pn**	**19 24 09.2**	**+0.2**
PMG	**Port Moresby**	**7.26**	**234**	Pn	**Pn**	**19 24 10.6**	**+1.6**
PMG	**Port Moresby**	**7.26**	**234**	P	**Pn**	**19 24 13.3**	**+4.3**
HNR	**Honiara**	**8.04**	**123**	Pn	**Pn**	**19 24 21.0**	**+1.3**
	16nm,0.3s,baz=250,slow=5.0,SNR=16						
HNR				LR	LR	19 27 34.5	
	comp=Z,6μm,19.8s,baz=298,slow=39						
HNR	**Honiara**	**8.04**	**123**	P	**Pn**	**19 24 22.9**	**+3.2**
HNR	**Honiara**	**8.04**	**123**	Pn	**Pn**	**19 24 22.9**	**+3.2**
HNR	**Honiara**	**8.04**	**123**	P	**Pn**	**19 24 23.8**	**+4.1**
PATS	**Pohnpei**	**12.96**	**24**	P	**Pn**	**19 25 25.9**	**-1.2**
	baz=13,SNR=20						
PATS	**Pohnpei**	**12.96**	**24**	Pn	**Pn**	**19 25 24.8**	**-2.3**
MMPI	**Merauke**	**13.04**	**255**	P	**Pn**	**19 25 32.3**	**+4.1**
	215nm,1.2s						
GENI	**Genyem**	**13.13**	**281**	P	**Pn**	**19 25 32.5**	**+3.2**
	3μm3μm83nm,1.5s						
COEN	**Coen**	**13.14**	**227**	Pn	**Pn**	**19 25 32.0**	**+2.5**
MTSU	**Mount Surprise**	**15.52**	**213**	P	**P**	**19 26 05.9**	**+1.0**
	baz=16,SNR=24						
CTA	**Charters Tower**	**16.30**	**203**	Pn	**Pn**	**19 26 11.6**	**+0.4**
	0.2nm,0.3s,baz=33,slow=12,SNR=4.2						
CTA				LR	LR	19 32 06.9	
	comp=Z,1μm,18.2s,baz=24,slow=36						
CTAO	**Charters Tower**	**16.30**	**203**	P	**P**	**19 26 12.6**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,117nm,1.7s						
CTAO	**Charters Tower**	**16.30**	**203**	P	**P**	**19 26 12.6**	**-0.9**
SRPI	**Serui, Papua**	**17.12**	**280**	P	**P**	**19 26 23.7**	**+1.1**
	comp=Z,87nm,0.8s						
SANVU	**Saraoutou**	**17.26**	**128**	Pn	**Pn**	**19 26 22.9**	**-0.2**
SANVU				IAmb	IAmb	19 26 26.4	
	comp=Z,108nm,0.9s						
KWAJ	**Kwajalein Atol**	**20.02**	**46**	P	**P**	**19 26 54.5**	**+0.1**
KWAJ				pmax	pmax		
	comp=Z,304nm,0.8s						
KWAJ	**Kwajalein Atol**	**20.02**	**46**		**P**	**19 26 54.5**	**+0.1**
QIS	**Mount Isa**	**20.18**	**219**	P	**P**	**19 26 57.0**	**+0.8**
	baz=20,SNR=7.9						
EIDS	**Eidsvold**	**20.23**	**185**	P	Pn	19 26 59.5	+0.6
	baz=20,SNR=5.1						
EIDS	**Eidsvold**	**20.23**	**185**	P	Pn	19 26 58.3	-0.6
GUMO	**Guam**	**20.29**	**336**	P	**P**	**19 26 57.7**	**+0.3**
GUMO				pmax	pmax		
	comp=Z,527nm,1.2s						
GUMO	**Guam**	**20.29**	**336**	P	**P**	**19 26 57.7**	**+0.3**
FAKI	**Fak Fak**	**20.90**	**275**	P	**P**	**19 27 03.9**	**-0.1**
DZM	**Mont Dzumac**	**21.25**	**144**	P	**P**	**19 27 08.1**	**+0.4**
	comp=Z,196nm,1.1s,baz=296,slow=9.3,SNR=29						
DZM				LR	LR	19 34 36.3	
	comp=Z,3μm,19.4s,baz=310,slow=35						
RMQ	**Roma**	**21.65**	**191**	P	**

comp=Z,993nm,19.4s,baz=47,slow=37
ASAR Alice Springs 26.11 223 P P 19 27 56.6 +1.5
ASAR ScP **ScP 19 35 05.6 +7.7**
FUNA Funafuti 26.14 99 P P 19 27 55.9 +0.5
FUNA IAmb IAmb 19 28 30.7
comp=Z,116nm,1.2s
TNTI Ternate 26.35 282 P P 19 27 54.4 -2.9
TNTI Ternate 26.35 282 P P 19 27 57.0 -0.3
comp=Z,766nmcomp=Z,20nm,1.4s
CMSA Cobar Meteorol 27.19 194 P P 19 28 03.8 -0.9
baz=27,SNR=5.2
SANI Sanana 27.21 275 P P 19 28 05.4 +0.3
comp=Z,30nm,0.8s
MSVF Nonsavu 27.45 119 LR LR 19 38 25.1
comp=Z,3µm,19.0s,baz=300,slow=35
WAKE Wake Island 27.68 28 P P 19 28 07.4 -1.7
STKA Stephens Creek 28.72 201 P P 19 28 18.0 -0.3
comp=Z,2.8nm,0.7s,baz=24,slow=11,SNR=8.6
STKA PP **PnPn 19 29 03.5 -7.3**
comp=Z,8.4nm,0.9s,baz=24,slow=14,SNR=4.3
STKA ScP **ScP 19 35 12.2 +6.6**
comp=Z,15nm,1.2s,baz=45,slow=6.0,SNR=6.8
STKA LR LR 19 39 58.4
comp=Z,728nm,18.8s,baz=15,slow=37
STKA Stephens Creek 28.72 201 P P 19 28 20.1 +1.8
baz=29,SNR=5.6
STKA Stephens Creek 28.72 201⇓*e*P P 19 28 18.6 +0.3
STKA Stephens Creek 28.72 201 P P 19 28 16.7 -1.6
SOEI Soe 28.94 259 P P 19 28 20.0 -0.5
SOEI IAmb IAmb 19 29 16.9
comp=Z,55nm,1.0s
MNI Manado 28.96 282 P P 19 28 20.6 -0.1
MNI pmax pmax
comp=Z,47nm,0.7s
BATI Baumata 29.58 258 LR LR 19 42 39.3
comp=Z,3µm,21.8s,baz=104,slow=41
BATI Baumata 29.58 258 P P 19 28 27.3 +1.1
comp=Z,15nm,1.1s
FITZ Fitzroy Crossi 29.76 242 P P 19 28 26.7 -1.0
comp=Z,15nm,0.6s,baz=70,slow=5.7,SNR=87
FITZ LR LR 19 41 47.8
comp=Z,775nm,19.3s,baz=65,slow=39
FITZ Fitzroy Crossi 29.76 242 P P 19 28 26.8 -1.0
baz=30,SNR=60
FITZ Fitzroy Crossi 29.76 242 P P 19 28 26.6 -1.0
FITZ IAmb IAmb 19 28 44.9
comp=Z,78nm,1.4s
CAN Canberra 30.30 187 P P 19 28 30.7 -1.6
CAN pmax pmax
comp=Z,38nm,1.3s
CAN Canberra 30.30 187 P P 19 28 30.7 -1.6
LUWI Luwuk 30.53 277 P P 19 28 31.0 -3.6
GTOI Gorontalo 30.58 280 P P 19 28 34.5 -0.5
comp=Z,15nm,1.0s
SKMP Bagumbayan, Su 30.75 292 *e*P P 19 28 36.3 -0.2
MMRI Maumere 30.82 262 P P 19 28 36.9 -0.2
MMRI IAmb IAmb 19 29 19.6
comp=Z,42nm,1.0s
WRKA Warakurna 30.96 228 P P 19 28 37.4 -0.8
baz=31,SNR=20
HTT Hallett 31.11 203 P P 19 28 39.8 +0.3
baz=31,SNR=4.5
EDFI Ende, Flores 31.37 262 P P 19 28 43.2 +1.1
comp=Z,13nm,1.3s
BBOO Buckleboo 31.81 208 P P 19 28 41.1 -4.5
PAGZ Pagadian 32.31 293 *e*P P 19 28 50.6 +0.4
TOLI2 Tolitoli 32.85 280 P P 19 28 52.2 -2.8
KAPI Kappang 33.20 269 LR LR 19 45 57.4
comp=Z,343nm,18.1s,baz=93,slow=43
CNOP Candoni, Negro 33.77 296 *e*P P 19 29 00.7 -2.3
FORT Forrest 34.73 220 P P 19 29 10.4 -0.7
baz=35,SNR=8.9
FORT Forrest 34.73 220 P P 19 29 09.9 -1.1
OUZ Omahuta 35.45 150 P P 19 29 18.3 +1.2
OUZ IAmb IAmb 19 29 37.0
comp=Z,63nm,1.5s
MYLDM Lahad Datu 36.02 286 P P 19 29 23.6 +1.1
MYLDM IAmb IAmb 19 30 07.7
comp=Z,39nm,1.1s
PSA00 Pilbara Seismi 36.12 240 P P 19 29 22.4 -0.7
PSA00 Pilbara Seismi 36.12 240 P P 19 29 21.5 -1.6
RAO Raoul Island 36.45 135 LR LR 19 42 22.0
comp=Z,1µm,21.6s,baz=286,slow=33
LQP Lukban 36.67 302⇓*e*P P 19 29 28.0 -0.1
TGY Tagaytay City 37.17 301 *e*P P 19 29 31.1 -1.2
ENPP El Nido 37.21 296 *e*P P 19 29 31.5 -1.0
BATP Bataraza 37.80 291 *e*P P 19 29 37.2 -0.2
TAU Tasmania Unive 37.99 187 P P 19 29 40.2 +1.5
TAU pmax pmax
comp=Z,109nm,1.7s
TAU Tasmania Unive 37.99 187 P P 19 29 40.1 +1.5
SMPP San Manuel, Pa 38.40 304 *e*P P 19 29 40.6 -1.9
SGCP Mt. Cagua 38.41 308 *e*P P 19 29 45.6 +3.0
KKM Kota Kinabalu 38.44 286 P P 19 29 42.4 -0.6
HIZ Hauiti 38.69 152 P P 19 29 44.7 0.0
SZP Santa 39.31 306 P P 19 29 48.5 -1.6
SZP IAmb IAmb 19 30 10.5
comp=Z,44nm,1.1s
URZ Urewera 39.58 150 P P 19 29 52.7 +0.6
comp=Z,25nm,1.1s,baz=121,slow=23,SNR=4.1
URZ LR LR 19 46 06.4
comp=Z,697nm,18.3s,baz=33,slow=36
URZ Urewera 39.58 150 P P 19 29 52.7 +0.6
URZ IAmb IAmb 19 30 08.7
comp=Z,77nm,1.3s
QRZ Quartz Range 39.61 157 P P 19 29 53.2 +0.9
QRZ IAmb IAmb 19 30 08.8
comp=Z,49nm,1.1s
JOW Kunigami 39.81 324 P P 19 29 53.8 -0.4
comp=Z,67nm,1.1s,baz=162,slow=9.1,SNR=8.0
JOW LR LR 19 43 04.7
comp=Z,713nm,21.0s,baz=134,slow=31
JOW Kunigami 39.81 324 P P 19 29 53.9 -0.3
BKZ Black Stump Fm 39.98 151 P P 19 29 56.5 +1.0
JHJ Hachijo jima 2 40.06 343 LR LR 19 45 37.9
comp=Z,816nm,18.2s,baz=183,slow=35
NNZ Nelson 40.28 156 P P 19 29 59.6 +1.7
NNZ IAmb IAmb 19 30 33.0
comp=Z,52nm,1.1s
THZ Tophouse 40.55 157 P P 19 30 02.1 +1.9
THZ IAmb IAmb 19 30 22.9
comp=Z,50nm,1.1s
TUWZ Tuamarina 40.69 156 P P 19 30 01.4 +0.2
BSWZ Blackbirch Sta 40.90 156 P P 19 30 03.9 +0.8
FOZ Fox Glacier 41.02 161 P P 19 30 06.0 +2.1
BHW Baring Head 41.06 155 P P 19 30 05.2 +0.9
CMWZ Cape Campbell 41.06 156 P P 19 30 04.8 +0.4
BFZ Birch Farm 41.07 153 P P 19 30 07.6 +3.1
BFZ IAmb IAmb 19 30 28.8
comp=Z,96nm,1.4s
LTZ Lake Taylor 41.19 158 P P 19 30 05.7 +0.2
MSWZ Moikau Station 41.22 154 P P 19 30 05.4 -0.3
PLWZ Palliser 41.35 155 P P 19 30 08.5 +1.7
KHZ Kahutara 41.36 157 P P 19 30 06.1 -0.6
GIRL Giralia 41.37 241 P P 19 30 07.5 +0.4
baz=41,SNR=3.5
GIRL Giralia 41.37 241 P P 19 30 06.9 -0.2
YOJ Yonaguni jima 41.49 316 P P 19 30 07.9 -0.2
YOJ pmax pmax
comp=Z,297nm,1.5s
YOJ Yonaguni jima 41.49 316 P P 19 30 07.9 -0.2
SBUM Sibu 41.51 279 P P 19 30 07.7 -0.8
OXZ Oxford 41.58 159 P P 19 30 08.6 0.0
RPZ Rata Peaks 41.58 160 P P 19 30 10.9 +2.2
comp=Z,32nm,1.1s,baz=319,slow=2.9,SNR=3.6
RPZ Rata Peaks 41.58 160 IAmb IAmb 19 31 00.8
comp=Z,94nm,1.4s
YULB Yu-li 42.02 314 P P 19 30 12.8 +0.4
YULB IAmb IAmb 19 30 15.0
comp=Z,132nm,1.8s
MLZ Mavora Lakes 42.19 164 P P 19 30 13.5 -0.1
MLZ IAmb IAmb 19 30 25.2
comp=Z,124nm,1.6s
KLBR Kellerberrin 42.30 227 P P 19 30 13.2 -1.5
baz=42,SNR=7.0
JSU Suzuyama 42.33 331 P P 19 30 14.2 -0.7
JSU IAmb IAmb 19 30 16.0
comp=Z,36nm,0.9s
MORW Morawa 42.37 231 P P 19 30 15.7 +0.4
baz=42,SNR=6.9
MORW Morawa 42.37 231 P P 19 30 15.1 -0.2
BLDU Ballidu 42.59 229 P P 19 30 16.1 -0.9
baz=43,SNR=5.1
YHNB Yeheng 42.76 315 IAmb IAmb 19 31 10.9
comp=Z,36nm,0.9s

KSM Kuching 43.23 278 P P 19 30 21.7 -0.8
JNU Nakatsue 43.47 333 P P 19 30 22.8 -1.3
comp=Z,101nm,1.0s,baz=107,slow=3.1,SNR=21
JNU Nakatsue 43.47 333 P P 19 30 23.4 -0.7
MUN Mundaring 43.63 228 P P 19 30 26.7 +1.2
baz=44,SNR=4.6
MJAR Matsushiro Arr 43.71 343 P P 19 30 24.0 -2.0
comp=Z,5.4nm,1.1s,baz=161,slow=8.6,SNR=6.3
MJAR PcP **PcP 19 32 13.6 +1.3**
comp=Z,12nm,0.9s,baz=164,slow=3.7,SNR=7.5
MJAR ScP **ScP 19 36 05.6 +5.3**
comp=Z,1.7nm,0.8s,baz=157,slow=2.2,SNR=4.1
MJAR LR LR 19 46 51.4
comp=Z,783nm,21.3s,baz=145,slow=34
MJAR Matsushiro Arr 43.71 343 P P 19 30 24.3 -1.7
MJAR **PcP 19 32 14.3 +1.9**
MAJO Matsushiro 43.72 343⇓*e*P P 19 30 24.0 -2.0
MAJO pmax pmax
comp=Z,14nm,1.4s
MAT Matsushiro 43.72 343 P P 19 30 23.3 -2.7
MAT S **S 19 37 01.6 +8.7**
LEM Lembang 45.24 265 P P 19 30 40.1 +1.4
LEM pmax pmax
comp=Z,40nm,0.9s
TPI Tanjungpandan 45.38 271 P P 19 30 40.1 +0.5
comp=Z,20nm,1.3s
PPBI Pangkal Pinang 46.94 272 P P 19 30 49.9 -2.0
comp=Z,598nmcomp=Z,10nm,1.1s
DLV T Lat 47.48 291 P P 19 30 55.8 -0.5
DLV IAmb IAmb 19 31 00.3
comp=Z,41nm,1.2s
TJN Taejon 47.78 332*d i*P P 19 30 58.6 +0.5
KASI Kota Agung 48.37 267 P P 19 31 00.4 -2.6
comp=Z,35nm,1.1s
RAR Rarotonga 48.39 114 LR LR 19 48 25.6
comp=Z,663nm,21.9s,baz=286,slow=32
KSRS Korea Array 48.41 333 P P 19 31 02.5 -0.3
comp=Z,14nm,1.0s,baz=153,slow=9.1,SNR=30
KSRS ScP **ScP 19 36 24.9 +5.2**
comp=Z,1.9nm,0.9s,baz=133,slow=6.9,SNR=4.7
KSRS LR LR 19 50 56.9
comp=Z,380nm,18.7s,baz=138,slow=36
KSAR Wonju Array Be 48.41 333 P P 19 31 01.8 -1.1
KSAR Wonju Array Be 48.41 333 P P 19 31 01.8 -1.1
KS19 Wonju Array Si 48.47 333 P P 19 31 02.5 -0.9
LWLI Liwa 48.83 268 P P 19 31 04.1 -2.6
comp=Z,2µmcomp=Z,40nm,0.8s
QIZ Qiongzhong 48.87 301 P P 19 31 07.0 +0.2
QIZ S **S 19 38 08.9 +1.6**
QIZ sS **sS 19 38 31.9 +3.8**
QIZ LR LR
comp=Z,280nm,21.1s
QIZ LR LR
comp=Z,480nm,20.6s
QIZ LR LR
comp=Z,630nm,22.6s
INCN Inchon 49.02 332 P P 19 31 07.7 +0.1
INCN pmax pmax
comp=Z,246nm,1.5s
INCN Inchon 49.02 332 P P 19 31 07.7 +0.1
NJ2 Nanjing 49.27 321 *e*P P 19 31 10.6 +1.1
NJ2 pmax pmax
comp=Z,27nm,0.6s
NJ2 LR LR
comp=Z,1µm,18.9s
NJ2 LR LR
comp=Z,850nm,18.9s
NJ2 LR LR
comp=Z,530nm,19.1s
ASAJ Asahikawa 49.91 350 P P 19 31 13.9 -0.3
comp=Z,26nm,0.9s,baz=238,slow=13,SNR=5.3
WHN Wuhan 51.28 316⇑P P 19 31 25.6 +0.8
MSHR Mys Shultsa 51.48 339⇓*e*P P 19 31 26.1 0.0
MSHR pmax pmax
comp=Z,13nm,1.0s
DL2 Dalian 52.59 329 P P 19 31 35.1 +0.7
DL2 S **S 19 39 02.8 +4.6**
DL2 pmax pmax
comp=Z,27nm,1.3s
DL2 pmax pmax
comp=Z,97nm,4.0s
DL2 LR LR
comp=Z,520nm,18.0s
DL2 LR LR
comp=Z,400nm,20.1s
DL2 LR LR
comp=Z,560nm,20.5s
USRK Ussuriysk Ar. 52.63 341 P P 19 31 34.5 -0.2
comp=Z,14nm,0.9s,baz=162,slow=7.8,SNR=24
USRK LR LR 19 54 15.0
comp=Z,186nm,19.0s,baz=147,slow=36
USRK Ussuriysk Ar. 52.63 341 P P 19 31 33.5 -1.1
USRK Ussuriysk Ar. 52.63 341 P P 19 31 33.5 -1.1
USA0B Ussuriysk Arra 52.63 341*de*P P 19 31 34.7 +0.1
YSS Yuzh-Sakhalins 52.64 351⇑*e*P P 19 31 34.4 -0.2
YSS *e* 19 31 43.9
YSS *e*S **S 19 39 00.0 +1.4**
YSS *e* 19 44 22.2
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,800nm,14.0s
YSS Yuzh-Sakhalins 52.64 351 P P 19 31 34.3 -0.3
MNSI Mandailing Nat 53.76 275 P P 19 31 41.2 -2.3
comp=Z,16nm,1.1s
MDJ Mudanjiang 53.81 339 P P 19 31 43.3 0.0
MDJ pP pP 19 31 57.5 +1.4
MDJ sP sP 19 32 03.6 +2.2
MDJ pmax pmax
comp=Z,29nm,1.4s
MDJ pmax pmax
comp=Z,570nm,6.8s
MDJ Mudanjiang 53.81 339 P P 19 31 42.6 -0.7
MDJ IAmb IAmb 19 31 44.5
comp=Z,31nm,1.1s
CN2 Changchun 54.70 336 *e*P P 19 31 49.7 -0.1
CN2 S **S 19 39 20.4 -6.3**
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 pmax pmax
comp=Z,350nm,4.4s
CN2 LR LR
comp=Z,570nm,18.0s
CN2 LR LR
comp=Z,320nm,18.0s
CN2 LR LR
comp=Z,560nm,16.0s
GYA Guiyang 54.81 307 *e*P P 19 31 52.0 +0.9
GYA pP pP 19 32 05.8 +1.9
GYA S **S 19 39 28.2 -0.8**
GYA pmax pmax
comp=Z,7.0nm,1.2s
GYA LR LR
comp=Z,470nm,15.1s
GYA LR LR
comp=Z,580nm,19.0s
GYA LR LR
comp=Z,710nm,19.0s
SKR Severo-Kuril's 55.63 2 *e*P P 19 32 06.4 +10
SKR *e*S S 19 40 00.9 +22
SKR pmax pmax
comp=Z,100nm,7.1s
SKR MLR MLR
comp=Z,300nm,19.0s
GSI Gunungsitoli 55.81 275 P P 19 31 55.8 -2.6
comp=Z,11nm,0.6s
BJI Beijing 56.31 326 P P 19 32 01.1 -0.3
BJI pP **pP 19 32 15.8 +1.4**
BJI S **S 19 39 49.8 +1.6**
BJI pmax pmax
comp=Z,11nm,1.8s
BJI LR LR
comp=Z,280nm,23.0s
BJI LR LR
comp=Z,380nm,21.5s
BJI LR LR
comp=Z,510nm,24.1s
TYV Tymovskoe 56.47 352 *e*P P 19 32 02.5 +0.1
TYV pmax pmax
comp=Z,600nm,3.8s
TYV pmax pmax
comp=Z,42nm,1.5s
UTTA Uttaradit 56.59 295 P P 19 32 05.3 +1.5
XAN Xi'an 57.04 316 P P 19 32 06.8 -0.1
XAN pmax pmax
comp=Z,19nm,1.1s

XAN pmax pmax
comp=Z,210nm,4.2s
XAN LR LR
comp=Z,500nm,21.3s
XAN LR LR
comp=Z,690nm,20.7s
XAN LR LR
comp=Z,1µm,21.6s
XAN Xi'an 57.04 316 P P 19 32 06.7 -0.1
XAN pmax pmax
comp=Z,23nm,1.3s
XAN Xi'an 57.04 316 IAmb IAmb 19 32 07.9
comp=Z,17nm,0.9s
KLR Kul'dur 57.22 344 P P 19 32 07.9 +0.2
comp=Z,61nm,1.2s,baz=151,slow=5.8,SNR=39
KLR Kul'dur 57.22 344*c i*P P 19 32 07.6 -0.1
KLR pmax pmax
comp=Z,71nm,1.4s
PPT Papeete 57.36 108 LR LR 19 55 13.8
comp=Z,324nm,18.3s,baz=326,slow=34
PPT2 Papeete2 57.36 108 *e*S S 19 40 03.0 -0.1
comp=Z,183nm,26.5s
PPT2 *e*LQ LQ 19 46 29.1
comp=Z,579nm,24.8s
PPT2 *e*LR LR 19 48 51.9
comp=Z,439nm,26.2s
KMI Kunming 57.40 304 ⇓P P 19 32 11.5 +1.8
KMI pP pP 19 32 24.1 +1.5
KMI sP sP 19 32 30.3 +2.4
KMI S **S 19 40 06.4 +2.8**
KMI pmax pmax
comp=Z,14nm,1.3s
KMI pmax pmax
comp=Z,82nm,6.3s
KMI LR LR
comp=Z,370nm,19.7s
KMI LR LR
comp=Z,500nm,23.7s
KMI LR LR
comp=Z,660nm,22.8s
LAMP Lampang 57.67 296 P P 19 32 13.9 +2.5
PET Petropavlovsk 58.11 4 *e*P P 19 32 13.7 -0.1
PET *e*S **S 19 40 11.1 -0.3**
PET pmax pmax
comp=Z,38nm,1.2s
PET pmax pmax
comp=Z,100nm,10.8s
PET MLR MLR
comp=Z,300nm,19.0s
PEA0B Petropavlovsk- 58.13 3⇓*e*P P 19 32 14.9 +0.8
PEA0B Petropavlovsk- 58.13 3 P P 19 32 14.5 +0.5
PETK Petropavlovsk- 58.13 3 P P 19 32 14.3 +0.3
comp=Z,23nm,0.8s,baz=160,slow=6.2,SNR=72
PETK LR LR 19 53 59.2
comp=Z,162nm,21.7s,baz=192,slow=33
PETK Petropavlovsk- 58.13 3 P P 19 32 13.9 -0.2
PETK Petropavlovsk- 58.13 3 P P 19 32 13.8 -0.2
CM36 Chiang Mai Arr 58.15 295 P P 19 32 16.0 +1.2
TBI Tubuai 58.17 114 *e*S S 19 40 10.5 -2.9
comp=Z,185nm,29.5s
TBI *e*LQ LQ 19 46 46.3
comp=Z,866nm,29.5s
TBI *e*LR LR 19 49 15.9
comp=Z,1µm,28.2s
CM04 Chiang Mai Arr 58.22 295 P P 19 32 17.4 +2.0
CM09 Chiang Mai Arr 58.22 295 P P 19 32 17.8 +2.5
CM05 Chiang Mai Arr 58.25 295 P P 19 32 17.5 +2.0
CM02 Chiang Mai Arr 58.26 295 P P 19 32 17.4 +1.8
CM31 Chiang Mai Arr 58.27 295 P P 19 32 17.3 +1.6
CMAR Chiang Mai Arr 58.27 295 P P 19 32 16.4 +0.8
comp=Z,6.1nm,0.9s,baz=111,slow=5.1,SNR=40
CMAR Chiang Mai Arr 58.27 295 P P 19 32 15.3 -0.4
CMAR Chiang Mai Arr 58.27 295 P P 19 32 15.3 -0.4
CM15 Chiang Mai Arr 58.28 295 P P 19 32 17.0 +1.2
CMMT Chiang Mai 58.37 296 P P 19 32 16.0 -0.5
CM33 Chiang Mai Arr 58.38 296 P P 19 32 17.0 +0.6
CHTO Chiang Mai 58.38 296 P P 19 32 15.7 -0.7
CHTO pmax pmax
comp=Z,36nm,1.4s
CHTO Chiang Mai 58.38 296 P P 19 32 15.7 -0.7
CHTO IAmb IAmb 19 32 19.1
comp=Z,36nm,1.4s
CD2 Chengdu 59.16 311⇑*i*P P 19 32 22.1 +0.4
CD2 S **S 19 40 25.5 -0.5**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 pmax pmax
comp=Z,140nm,5.9s
CD2 LR LR
comp=Z,790nm,18.8s
CD2 LR LR
comp=Z,1µm,22.2s
CD2 LR LR
comp=Z,1µm,21.4s
HHC Hu-ho-hao-te 59.47 324 *e*P P 19 32 24.1 +0.4
HHC S **S 19 40 34.1 +4.3**
HHC sS sS 19 40 54.5 +2.8
HHC SS **SS 19 44 27.1 +1.3**
HHC pmax pmax
comp=Z,22nm,1.2s
HHC pmax pmax
comp=Z,160nm,5.7s
HHC LR LR
comp=Z,410nm,18.7s
HHC LR LR
comp=Z,480nm,18.7s
HHC LR LR
comp=Z,730nm,20.5s
BTO Baotou 60.22 323 P P 19 32 30.1 +1.2
HIA Hailar 61.43 336 IAmb IAmb 19 33 09.1
comp=Z,34nm,1.5s
LZH Lanzhou 61.65 316 *e*P P 19 32 40.0 +1.2
LZH pP pP 19 32 52.7 +0.8
LZH sP sP 19 32 57.0 -0.1
LZH PcP **PcP 19 33 19.5 -0.5**
LZH pmax pmax
comp=Z,36nm,1.0s
LZH pmax pmax
comp=Z,200nm,9.8s
LZH LR LR
comp=Z,520nm,20.6s
LZH LR LR
comp=Z,560nm,20.6s
LZH LR LR
comp=Z,400nm,20.6s
ZEA Zeya 62.52 343 *e*P P 19 32 44.0 0.0
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA pmax pmax
comp=Z,40nm,1.3s
MA2 Magadan 64.51 359 P P 19 32 56.6 -0.5
comp=Z,58nm,0.9s,baz=165,slow=6.3,SNR=64
MA2 Magadan 64.51 359*c i*P P 19 32 56.8 -0.3
MA2 pmax pmax
comp=Z,115nm,1.3s
MA2 Magadan 64.51 359 P P 19 32 56.5 -0.6
GTA Gaotai 66.08 317 ⇑P P 19 33 08.7 +0.9
GTA pP sP 19 33 26.4 +0.1
GTA sP PcP 19 33 33.1 -4.9
GTA S **S 19 41 49.2 -3.6**
GTA pmax pmax
comp=Z,19nm,1.5s
GTA pmax pmax
comp=Z,140nm,7.6s
GTA LR LR
comp=Z,250nm,19.3s
GTA LR LR
comp=Z,420nm,18.9s
GTA LR LR
comp=Z,570nm,19.6s
CIT Chita 66.10 335 *e*P P 19 33 08.0 +0.4
CIT *e* 19 33 33.4
CIT pmax pmax
comp=Z,58nm,1.6s
ULN Ulaanbaatar 66.41 328*c i*P P 19 33 10.5 +0.7
ULN pmax pmax
comp=Z,17nm,1.2s
ULN Ulaanbaatar 66.41 328 P P **19 33 09.0 -0.8**
ULN IAmb IAmb 19 33 12.1
comp=Z,39nm,1.4s
SHL Shillong 66.71 300 P P **19 33 12.0 -0.2**
SHL pmax pmax
comp=Z,20nm,0.8s
SHL Shillong 66.71 300 P P **19 33 12.0 -0.2**
SHL IAmb IAmb 19 33 38.2
comp=Z,20nm,0.8s

SONM Songino Array 66.74 328 P **P** **19 33 12.1 +0.3**
comp=Z,7.2nm,0.9s,baz=136,slow=4.3,SNR=33
SONM LR LR 20 03 01.0
comp=Z,426nm,19.0s,baz=98,slow=37
SONM Songino Array 66.74 328 P **P** **19 33 11.5 -0.3**
SONM pmax pmax
comp=Z,25nm,1.4s
SONM Songino Array 66.74 328 P **P** **19 33 11.5 -0.3**
SONM IAmb IAmb 19 33 14.1
comp=Z,25nm,1.4s
SEY Seymchan 67.86 360 P **P** **19 33 18.2 -0.2**
comp=Z,7.3nm,0.6s,baz=162,slow=4.8,SNR=33
SEY LR LR 19 58 08.1
comp=Z,370nm,20.6s,baz=161,slow=32
SEY Seymchan 67.86 360‖ *e*P **P** **19 33 18.7 +0.3**
LSA Lhasa 68.65 304 P **P** **19 33 25.3 +0.6**
LSA pmax pmax
comp=Z,29nm,1.4s
LSA Lhasa 68.65 304 P **P** **19 33 25.6 +0.9**
LSA pmax pmax
comp=Z,9.0nm,0.8s
YAK Yakutsk 69.33 348 P **P** **19 33 27.5 -0.1**
comp=Z,8.4nm,0.4s,baz=132,slow=1.4,SNR=40
YAK Yakutsk 69.33 348*c i*P **P** **19 33 28.2 +0.6**
YAK *e**PP **pP** **19 33 40.8 0.0**
YAK *e* 19 33 51.7
YAK *e* 19 36 04.3
YAK *e*PPP PPP 19 37 43.6
YAK *e*S **S** **19 42 30.3 -0.3**
YAK *e**SS **sS** **19 42 57.2 +3.4**
YAK *e* 19 43 28.7
YAK pmax pmax
comp=Z,132nm,1.3s
YAK pmax pmax
comp=N,46nm,1.3s
YAK pmax pmax
comp=E,18nm,1.4s
YAK pmax pmax
comp=Z,108nm,3.2s
YAK pmax pmax
comp=N,33nm,3.3s
YAK pmax pmax
comp=E,45nm,3.2s
YAK smax smax
comp=N,89nm,4.1s
YAK smax smax
comp=E,119nm,4.1s
YAK Yakutsk 69.33 348 P **P** **19 33 27.8 +0.2**
ZAK Zakamensk 69.91 329 *e*P **P** **19 33 31.3 -0.3**
ZAK pmax pmax
comp=Z,26nm,1.2s
BOD Bodaibo 70.18 339 *e*P **P** **19 33 31.8 -1.2**
BOD pmax pmax
comp=Z,32nm,1.5s
TLY Talaya 70.49 330 P **P** **19 33 34.6 -0.5**
comp=Z,7.9nm,1.0s,baz=148,slow=5.7,SNR=16
TLY Talaya 70.49 330 *e*P **P** **19 33 35.4 +0.4**
TLY *e*S SKiKP 19 43 03.8 -12
TLY pmax pmax
comp=Z,30nm,1.0s
TLY MLR MLR
comp=Z,614nm,15.0s
TLY Talaya 70.49 330 P **P** **19 33 34.8 -0.2**
IRK Irkutsk 70.52 331 *e*P **P** **19 33 34.7 -0.5**
IRK pmax pmax
comp=Z,44nm,3.7s
TAPN Taplejung 70.81 301 *e*P **P** **19 33 38.2 +0.4**
comp=Z,121nm,1.5s
ODAN Odare 70.95 301 *e*P **P** **19 33 38.9 +0.3**
comp=Z,23nm,0.6s
RKT Rikitea 71.41 113 *e*LR LR 19 55 29.4
comp=Z,704nm,23.8s
RAMN Ramite 71.65 300 *e*P **P** **19 33 43.7 +0.8**
MOY Mondy 71.83 329 *e*P **P** **19 33 43.7 +0.5**
MOY pmax pmax
comp=Z,58nm,1.6s
JIRN Jiri 72.19 301 *e*P **P** **19 33 46.5 +0.2**
comp=Z,131nm,1.6s
VNDA Vanda 72.51 178 P **P** **19 33 47.5 +0.7**
comp=Z,1.9nm,0.8s,baz=323,slow=6.3,SNR=12
VNDA LR LR 20 02 48.0
comp=Z,248nm,18.6s,baz=354,slow=34
VNDA Vanda 72.51 178 P **P** **19 33 47.7 +0.9**
VNDA pmax pmax
comp=Z,27nm,1.4s
VNDA Vanda 72.51 178 P **P** **19 33 47.7 +0.9**
VNDA IAmb IAmb 19 34 13.5
comp=Z,27nm,1.4s
GUN Gumba 72.53 301 *e*P **P** **19 33 48.2 0.0**
PKI Pulchoki 72.84 301 *e*P **P** **19 33 49.9 -0.1**
comp=Z,99nm,1.3s
PKIN Phulchoki 72.85 301 *e*P **P** **19 33 49.8 -0.2**
comp=Z,110nm,1.5s
KKN Kakani 73.00 301 *e*P **P** **19 33 50.9 0.0**
comp=Z,27nm,0.7s
SBA Scott Base 73.05 177 P **P** **19 33 51.4 +1.5**
SBA pmax pmax
comp=Z,34nm,1.4s
SBA Scott Base 73.05 177 P **P** **19 33 51.4 +1.5**
SBA IAmb IAmb 19 34 09.7
comp=Z,34nm,1.4s
DMN Daman 73.11 301 *e*P **P** **19 33 51.4 -0.1**
comp=Z,132nm,1.2s
BILL Bilibino 73.57 5*d i*P **P** **19 33 53.3 +0.2**
BILL *e**PP **pP** **19 34 00.5 -5.8**
BILL *e* 19 34 07.3
BILL *e**SP **sP** **19 34 12.0 +0.6**
BILL S **S** **19 43 16.0 -3.4**
BILL pmax pmax
comp=Z,49nm,1.3s
BILL MLR MLR
comp=Z,244nm,20.0s
BILL Bilibino 73.57 5 P **P** **19 33 53.0 -0.1**
BILL IAmb IAmb 19 33 55.7
comp=Z,30nm,0.9s
GAMB Gambell 73.60 15 P 19 33 53.5
baz=217
GKN Gorkha 73.61 301 *e*P **P** **19 33 54.4 0.0**
comp=Z,128nm,1.3s
KOLN Koldanda 74.44 301 *e*P **P** **19 33 58.7 -0.6**
comp=Z,113nm,1.3s
DANN Dangsing 74.45 301 *e*P **P** **19 33 59.2 -0.2**
PYUN Piuthan 75.04 301 *e*P **P** **19 34 02.4 -0.4**
comp=Z,114nm,1.2s
ANM Nome 75.99 17 P 19 34 07.6
baz=223
ANM Nome 75.99 17 P **P** **19 34 07.0 -0.2**
ANM pmax pmax
comp=Z,15nm,1.1s
ANM Nome 75.99 17 P **P** **19 34 07.0 -0.2**
TNA Tin City 76.02 16 P 19 34 07.5
baz=220
TNA Tin City 76.02 16 P **P** **19 34 07.0 -0.3**
WMQ Urumqi 76.16 317 *e*P **P** **19 34 09.6 +0.9**
WMQ pP pP 19 34 23.4 +1.2
WMQ sP sP 19 34 28.5 +1.1
WMQ pmax pmax
comp=Z,47nm,1.3s
WMQ pmax pmax
comp=Z,520nm,5.1s
WMQ LR LR
comp=Z,820nm,28.9s
WMQ LR LR
comp=Z,4μm,28.9s
WMQ LR LR
comp=Z,500nm,22.3s
WMQ Urumqi 76.16 317 P **P** **19 34 10.3 +1.6**
WMQ pmax pmax
comp=Z,36nm,1.5s
KDAK Kodiak Island 76.33 27 LR LR 20 04 02.5
comp=Z,492nm,19.8s,baz=255,slow=33
HYB Hyderabad 76.86 289 *i* P **P** **19 34 12.0 -1.1**
HYB *e*PcP **PcP** **19 34 22.5 -1.7**
HYB *es*P **sP** **19 34 34.0 +2.3**
SVW2 Sparrevohn 77.00 23 P **P** **19 34 13.3 +0.3**
TIXI Tiksi 78.24 352 P **P** **19 34 19.1 -0.5**
comp=Z,18nm,0.7s,baz=140,slow=6.3,SNR=39
TIXI Tiksi 78.24 352*c i*P **P** **19 34 19.2 -0.5**
TIXI pmax pmax
comp=Z,355nm,1.7s
TIXI Tiksi 78.24 352 P **P** **19 34 18.8 -0.9**
DGZ Jazzator, Alta 78.50 323*c i*P **P** **19 34 22.3 +0.5**
DGZ pmax pmax
comp=Z,48nm,1.0s
SUA Susitna One 79.12 24 P **P** **19 34 23.7 -1.2**
SUA IAmb IAmb 19 35 04.4
comp=Z,18nm,0.9s
SUA Susitna One 79.12 24 P 19 34 23.7
baz=237
RDOG Red Dog Mine 79.20 15 P 19 34 25.9
baz=225
RDOG Red Dog Mine 79.21 15 P **P** **19 34 25.2 +0.1**
RDOG IAmb IAmb 19 35 01.6
comp=Z,50nm,1.3s
ZSN Zaisan 79.29 320⇑ *i*P **P** **19 34 26.6 +0.6**
comp=Z,16nm,1.2s,baz=320
ZSN Zaisan 79.29 320*c i*P **P** **19 34 26.6 +0.6**
ZSN pmax pmax
comp=Z,16nm,1.2s
RC01 Rabbit Creek A 79.34 25 P 19 34 26.7
baz=238
RC01 Rabbit Creek A 79.34 25 IAmb IAmb 19 35 03.0
comp=Z,31nm,1.1s
PPLA Purkeypile 79.35 22 P 19 34 25.8
baz=236
CUT Chulitna 79.82 23 P 19 34 27.5
baz=238
CUT Chulitna 79.82 23 P **P** **19 34 27.8 -0.7**
CUT IAmb IAmb 19 36 39.4
comp=Z,72nm,1.6s
PMR Palmer 79.85 24 P **P** **19 34 27.5 -1.1**
PMR pmax pmax
comp=Z,57nm,1.8s
PMR Palmer 79.85 24 P **P** **19 34 27.5 -1.1**
PMR IAmb IAmb 19 35 06.4
comp=Z,57nm,1.8s
PMR Palmer 79.85 24 P 19 34 28.3
baz=239
CHUM Lake Minchumin 79.86 22 P 19 34 28.8
baz=236,SNR=9.0
GHO Glory Hole Cre 80.03 24 P **P** **19 34 29.1 -0.6**
GHO IAmb IAmb 19 35 35.9
comp=Z,70nm,1.8s
KNK Knik Glacier 80.03 25 P 19 34 28.9
baz=240
KNK Knik Glacier 80.04 25 IAmb IAmb 19 35 20.4
comp=Z,26nm,1.1s
SML Sawmill 80.29 24 P **P** **19 34 30.7 -0.4**
SML IAmb IAmb 19 35 12.9
comp=Z,35nm,0.9s
SML Sawmill 80.29 24 P 19 34 30.8
baz=240,SNR=9.2
GLI Glacier Island 80.34 25 P **P** **19 34 30.1 -1.2**
GLI Glacier Island 80.34 25 P 19 34 30.9
baz=241
TRF Thorofare Moun 80.38 22 P 19 34 30.1
baz=238
BPAW Bear Paw Mtn. 80.47 22 P 19 34 30.8
baz=237,SNR=7.1
FID Port Fidalgo 80.55 26 IAmb IAmb 19 35 06.6
comp=Z,21nm,1.0s
MK31 Makanchi Array 80.75 319*c i*P **P** **19 34 34.2 +0.3**
MK31 pmax pmax
comp=Z,50nm,1.2s
MK31 Makanchi Array 80.75 319 IAmb IAmb 19 34 35.8
comp=Z,37nm,1.2s
MKAR Makanchi Array 80.75 319 P **P** **19 34 34.3 +0.5**
comp=Z,20nm,1.0s,baz=102,slow=5.2,SNR=82
MKAR PKKPbc **PKKPbc** **19 53 13.6 -1.5**
comp=Z,0.4nm,0.8s,baz=269,slow=2.3,SNR=3.8
MKAR LR LR 20 10 43.3
comp=Z,391nm,19.4s,baz=88,slow=36
MKAR Makanchi Array 80.75 319 P **P** **19 34 33.4 -0.5**
MKAR Makanchi Array 80.75 319 P **P** **19 34 33.4 -0.5**
WAT2 Susitna Watana 80.78 23 P 19 34 32.7
baz=239,SNR=7.4
RND Reindeer 80.90 23 IAmb IAmb 19 35 19.1
comp=Z,17nm,0.8s
WAT6 Susitna Watana 80.92 24 P 19 34 33.9
baz=240,SNR=6.3
MAKZ Makanchi 80.96 319 P **P** **19 34 34.7 -0.3**
MAKZ pmax pmax
comp=Z,56nm,1.2s
MAKZ Makanchi 80.96 319 P **P** **19 34 34.7 -0.3**
MAKZ IAmb IAmb 19 34 36.9
comp=Z,56nm,1.1s
MCK McKinley 81.04 22 P 19 34 33.9
baz=239,SNR=16
MCK McKinley 81.04 22 IAmb IAmb 19 35 19.8
comp=Z,38nm,1.0s
MLY Manley 81.07 21 P **P** **19 34 34.3 -0.9**
MLY Manley 81.07 21 P 19 34 34.7
baz=237,SNR=16
KLU Klutina 81.14 25 IAmb IAmb 19 35 22.0
comp=Z,27nm,1.1s
KLU Klutina 81.14 25 P 19 34 35.7
baz=242,SNR=9.4
M24K Tolsona, Glenn 81.32 25 P 19 34 36.9
baz=242,SNR=5.7
M24K Tolsona, Glenn 81.32 25 P **P** **19 34 36.5 -0.2**
NEA2 Nenana 81.44 22 IAmb IAmb 19 35 10.4
comp=Z,24nm,1.3s
NEA2 Nenana 81.44 22 P 19 34 35.7
baz=239,SNR=9.7
BMRM Bremner River 81.46 26 P 19 34 37.1
baz=243
POO Poona 81.46 290 *ex* **P** **19 34 35.0 -3.2**
BMRM Bremner River 81.46 26 IAmb IAmb 19 35 18.9
comp=Z,36nm,1.1s
ZAA0 Zalesovo Array 81.57 326 P **P** **19 34 36.9 -1.1**
ZALV Zalesovo Beam 81.57 326 P **P** **19 34 37.6 -0.4**
comp=Z,21nm,0.6s,baz=110,slow=5.9,SNR=86
ZALV LR LR 20 12 29.5
comp=Z,211nm,18.8s,baz=112,slow=37
ZALV Zalesovo Beam 81.57 326 P **P** **19 34 37.0 -1.0**
ZALV Zalesovo Beam 81.57 326 P **P** **19 34 37.0 -1.0**
I23K Minto, Yukon-K 81.63 21 P 19 34 37.5
baz=238
SHLS Shalkode 81.65 315⇑ *i*P **P** **19 34 37.9 -1.0**
comp=Z,6.9nm,1.1s,baz=315
SHLS Shalkode 81.65 315*c i*P **P** **19 34 37.9 -1.0**
SHLS pmax pmax
comp=Z,7.0nm,1.1s
PDGK Podgornoye 81.68 315 P **P** **19 34 38.8 -0.2**
WRH Wood River Hil 81.74 22 P **P** **19 34 37.3 -1.4**
WRH IAmb IAmb 19 35 12.7
comp=Z,55nm,1.8s
N25K Chitina, Valde 81.75 25 P 19 34 38.7
baz=243
CCB Clear Creek Bu 81.94 22 IAmb IAmb 19 35 13.6
comp=Z,25nm,1.4s
MDM Murphy Dome 81.94 22 IAmb IAmb 19 35 13.8
comp=Z,25nm,1.4s
UZB Uzynbulak 81.96 315 *e*P **P** **19 34 41.0 +0.5**
comp=Z,34nm,2.4s,baz=315
UZB Uzynbulak 81.96 315 *e*P **P** **19 34 41.0 +0.5**
UZB pmax pmax
comp=Z,34nm,2.4s
CRQM Cirque 82.01 26 IAmb IAmb 19 35 26.7
comp=Z,21nm,0.9s
GLB Gilahina Butte 82.02 26 P **P** **19 34 39.0 -1.3**
GLB IAmb IAmb 19 35 17.3
comp=Z,36nm,1.2s
CRQE Cirque 82.03 26 P 19 34 39.1
baz=245
TCOL CIGO, UAF Yank 82.03 22 P 19 34 39.3
baz=240
TCOL CIGO, UAF Yank 82.03 22 IAmb IAmb 19 34 45.5
comp=Z,17nm,0.7s
COLA College 82.03 22 P 19 34 39.3
baz=240
COLA College 82.03 22*d i*P **P** **19 34 39.0 -1.2**
COLA pmax pmax
comp=Z,14nm,1.1s
COLA College 82.03 22 P **P** **19 34 38.3 -1.9**
COLA IAmb IAmb 19 34 45.5
comp=Z,17nm,0.7s
VRDI Verde Repeater 82.08 26 IAmb IAmb 19 35 21.6
comp=Z,46nm,1.5s
HDA Harding Lake 82.14 22 P 19 34 41.0
baz=241
HDA P 19 34 41.0
baz=241
KPKS Kokpek 82.28 315 *e*P **P** **19 34 42.5 +0.3**
comp=Z,57nm,2.4s,baz=315
KPKS Kokpek 82.28 315 *e*P **P** **19 34 42.4 +0.3**
KPKS pmax pmax
comp=Z,57nm,2.4s
MCARA McCarthy VSAT 82.33 26 P 19 34 42.3
baz=244
MCARA McCarthy VSAT 82.33 26 P **P** **19 34 41.8 -0.1**
MCARA IAmb IAmb 19 35 16.3
comp=Z,36nm,1.1s
IL31 82.34 22 IAmb IAmb 19 35 14.8
comp=Z,26nm,1.5s
ILAR Eielson Array 82.34 22 P **P** **19 34 40.1 -1.8**
comp=Z,7.4nm,1.1s,baz=256,slow=4.9,SNR=29
ILAR LR LR 20 09 34.7
comp=Z,292nm,19.2s,baz=244,slow=34
ILAR Eielson Array 82.34 22 P **P** **19 34 39.5 -2.4**
ILAR Eielson Array 82.34 22 P **P** **19 34 39.5 -2.4**
SATY Saty 82.38 315‖ *i*P **P** **19 34 43.4 +0.7**
comp=Z,26nm,2.3s,baz=314
SATY *e*S **S** **19 44 56.5 +1.0**
baz=314
SATY Saty 82.38 315*d i*P **P** **19 34 43.4 +0.7**
SATY *e*S **S** **19 44 56.5 +1.0**
SATY pmax pmax
comp=Z,26nm,2.3s
COLD Coldfoot 82.46 19 P **P** **19 34 42.4 0.0**
COLD IAmb IAmb 19 35 17.7
comp=Z,48nm,1.8s
COLD Coldfoot 82.46 19 P 19 34 42.7
baz=237,SNR=11
BARN Barnard Glacie 82.79 26 IAmb IAmb 19 35 30.5
comp=Z,24nm,1.0s
TDK Taldyqorghan 82.86 316 *e*P **P** **19 34 45.7 +0.6**
comp=Z,76nm,1.7s,baz=316
TDK Taldyqorghan 82.86 316 *e*P **P** **19 34 45.6 +0.6**
TDK pmax pmax
comp=Z,76nm,1.7s
CTG Chitna Glacier 82.90 27 P 19 34 45.2
baz=246
CTGM Chitina Glacie 82.90 27 IAmb IAmb 19 35 31.5
comp=Z,33nm,1.0s
A21K Barrow 83.04 14 P **P** **19 34 44.6 -0.7**
A21K IAmb IAmb 19 35 27.2
comp=Z,38nm,1.4s
A21K Barrow 83.04 14 P 19 34 45.7
baz=231
SCRK Sand Creek 83.08 23 IAmb IAmb 19 35 20.1
comp=Z,27nm,1.4s
SCRK Sand Creek 83.08 23 P 19 34 45.1
baz=243,SNR=7.1
SEM Semipalatinsk 83.10 322 *e*P **P** **19 34 45.7 -0.8**
comp=Z,24nm,1.7s,baz=322
SEM *e*S **S** **19 45 01.8 -1.0**
baz=322
SEM Semipalatinsk 83.10 322 *e*P **P** **19 34 45.6 -0.8**
SEM *e*S **S** **19 45 01.8 -1.0**
SEM pmax pmax
comp=Z,24nm,1.7s
PRP Porcupine Dome 83.20 22 P 19 34 49.9
baz=242
KSH Kashi 83.35 311 P **P** **19 34 50.0 +2.2**
KSH pmax pmax
comp=Z,15nm,0.7s
KSH pmax pmax
comp=Z,270nm,2.9s
MDOK Medeo 83.37 314 *i* P **P** **19 34 48.8 +0.9**
baz=314
MDOK *e*S **S** **19 45 05.6 -0.1**
baz=314
MDOK Medeo 83.37 314 *i* P **P** **19 34 48.7 +0.9**
MDOK *e*S **S** **19 45 05.5 -0.1**
TNSS Tian-Shan 83.41 314⇑ *i*P **P** **19 34 49.6 +1.1**
baz=314
TNSS Tian-Shan 83.41 314*c i*P **P** **19 34 49.5 +1.1**
TOLK Toolik Lake Re 83.42 18 P **P** **19 34 47.1 -0.3**
TOLK Toolik Lake Re 83.42 18 P 19 34 47.8
baz=238,SNR=6.2
AAA Alma-Ata 83.47 314 *e*P **P** **19 34 49.4 +1.1**
baz=314
AAA Alma-Ata 83.47 314 *e*P **P** **19 34 49.4 +1.1**
ULHL Ulahol 83.74 313 P **P** **19 34 50.9 +1.0**
SNR=6.6
K27K Chicken 83.86 24 IAmb IAmb 19 35 25.0
comp=Z,26nm,1.2s
K27K Chicken 83.86 24 P 19 34 50.3
baz=245
KUU Kurty 84.03 315⇑ *i*P **P** **19 34 51.5 +0.4**
comp=Z,92nm,1.4s,baz=315
KUU Kurty 84.03 315*c i*P **P** **19 34 51.4 +0.4**
KUU pmax pmax
comp=Z,92nm,1.4s
KURK Kurchatov 84.19 322 P **P** **19 34 50.9 -0.7**
KURK Kurchatov 84.19 322 P **P** **19 34 50.9 -0.7**
KURBB Kurchatov Arra 84.22 322 P **P** **19 34 50.9 -0.9**
comp=Z,34nm,1.2s,baz=106,slow=4.1,SNR=17
KURBB Kurchatov Arra 84.22 322 P **P** **19 34 51.7 -0.1**
TKM2 Tokmak 2 84.35 314 P **P** **19 34 53.7 +0.7**
SNR=20
TKM2 Tokmak 2 84.35 314 *i* P **P** **19 34 54.0 +1.0**
TKM2 pmax pmax
comp=Z,19nm,0.8s
NIL Nilore 84.39 304 P **P** **19 34 53.1 0.0**
NIL pmax pmax
comp=Z,106nm,1.4s
NIL Nilore 84.39 304 P **P** **19 34 53.1 0.0**
EGAK Eagle 84.53 23 IAmb IAmb 19 35 41.5
comp=Z,18nm,0.9s
EGAK Eagle 84.53 23 P 19 34 53.2
baz=246
HYT Haines Junctio 84.58 27 IAmb IAmb 19 35 28.8
comp=Z,20nm,0.9s
KBK Karagaybulak 84.76 314 P **P** **19 34 55.8 +0.8**
SNR=20
QSPA South Pole Qui 84.85 180 P **P** **19 34 55.4 +0.5**
comp=Z,5.1nm,0.6s,baz=278,slow=0.8,SNR=37
QSPA South Pole Qui 84.85 180 P **P** **19 34 55.4 +0.5**
QSPA IAmb IAmb 19 35 13.4
comp=Z,26nm,1.0s
CHMS Chumysh 84.97 314 P **P** **19 34 56.4 +0.5**
SNR=26
UCH Uchtor 84.99 313 P **P** **19 34 58.1 +1.6**
SNR=49
AAK Ala-Archa 85.09 313 P **P** **19 34 56.8 +0.2**
comp=Z,9.0nm,0.6s,baz=132,slow=5.0,SNR=52
AAK Ala-Archa 85.09 313 P **P** **19 34 57.7 +1.1**
SNR=29
AAK Ala-Archa 85.09 313*c i*P **P** **19 34 57.5 +0.9**
AAK pmax pmax
comp=Z,46nm,1.0s
AAK Ala-Archa 85.09 313 P **P** **19 34 57.4 +0.7**
AAK IAmb IAmb 19 34 59.0
comp=Z,18nm,0.8s
SGDS Sogindy 85.15 314⇑ *i*P **P** **19 34 57.4 +0.5**
comp=Z,11nm,1.4s,baz=314
SGDS Sogindy 85.15 314*c i*P **P** **19 34 57.3 +0.5**
SGDS pmax pmax
comp=Z,11nm,1.4s
USP Ospenovka 85.21 314 P **P** **19 34 58.0 +0.9**
SNR=48
MAW Mawson 85.39 203 P **P** **19 34 57.5 +0.1**
comp=Z,6.7nm,0.7s,baz=115,slow=6.4,SNR=6.2
MAW LR LR 20 11 25.9
comp=Z,277nm,19.1s,baz=64,slow=34
MAW Mawson 85.39 203 P **P** **19 34 57.5 +0.1**
MAW pmax pmax
comp=Z,11nm,1.6s
AML Almayashu 85.57 313 P **P** **19 35 00.7 +1.4**
SNR=69
EKS2 Erkin-Say 85.61 313 P **P** **19 35 00.3 +1.1**
SNR=38
BTLS Baital 85.88 316⇑ *i*P **P** **19 35 00.9 +0.5**
comp=Z,34nm,1.5s,baz=316
BTLS *e*S **SKSac** **19 45 21.5 -0.8**
baz=316
BTLS Baital 85.88 316*c i*P **P** **19 35 00.8 +0.5**
BTLS *e*S **SKSac** **19 45 21.4 -0.8**
BTLS pmax pmax
comp=Z,34nm,1.5s
NRIK Noril'sk 86.35 341 P **P** **19 35 02.5 +0.5**
comp=Z,23nm,0.9s,baz=120,slow=5.2,SNR=38
NRIK LR LR 20 12 38.1
comp=Z,281nm,21.5s,baz=120,slow=35
NRIK Noril'sk 86.35 341*c i*P **P** **19 35 01.8 -0.3**
NRIK pmax pmax
comp=Z,37nm,1.1s
DZA Taraz 87.42 313⇑ *i*P **P** **19 35 08.3 +0.4**
baz=313
DZA Taraz 87.42 313*c i*P **P** **19 35 08.3 +0.4**
DLBC Dease Lake 87.50 31 LR LR 20 09 45.6
comp=Z,586nm,19.1s,baz=314,slow=33
BRZS Berezniki 87.73 320⇑ *e*P **P** **19 35 08.4 -0.8**
comp=Z,7.3nm,1.3s,baz=320
BRZS Berezniki 87.73 320*ce*P **P** **19 35 08.4 -0.8**
BRZS pmax pmax
comp=Z,7.0nm,1.3s
KBL Kabul 87.97 305 P **P** **19 35 10.7 -0.3**

KBL					pmax	pmax			
	comp=Z,10.0nm,1.3s								
KK31	**Karatay Array**	**88.05**	**313**	*i*	P	**P**	**19**	**35**	**10.7 -0.2**
KK31	**Karatay Array**	**88.05**	**313**		IAmb	IAmb	19	35	13.9
	comp=Z,24nm,1.6s								
KKAR	**Karatay Array**	**88.05**	**313**		P	**P**	**19**	**35**	**10.8 -0.1**
KKAR	**Karatay Array**	**88.05**	**313**		P	**P**	**19**	**35**	**10.8 -0.1**
KKAR	**Karatay Array**	**88.05**	**313**		IAmb	IAmb	19	35	13.9
	comp=Z,24nm,1.6s								
IUG	**luzhnay**	**88.26**	**312**	‖ *i*	P	**P**	**19**	**35**	**12.4 +0.4**
	comp=Z,6.2nm,2.0s,baz=312								
IUG					*e*S	**SKSac**	**19**	**45**	**36.1 -1.1**
	baz=312								
IUG	**luzhnay**	**88.26**	**312**	*c i*	P	**P**	**19**	**35**	**12.4 +0.4**
IUG					*e*S	**SKSac**	**19**	**45**	**36.1 -1.1**
IUG					pmax	pmax			
	comp=Z,6.0nm,2.0s								
INK	**Inuvik**	**88.64**	**21**		P	**P**	**19**	**35**	**12.9 -0.2**
INK					pmax	pmax			
	comp=Z,9.0nm,1.1s								
INK	**Inuvik**	**88.64**	**21**		IAmb	IAmb	19	36	01.5
	comp=Z,13nm,1.1s								
BVAR	**Borovoye Array**	**89.66**	**323**		P	**P**	**19**	**35**	**16.9 -1.4**
	comp=Z,13nm,0.9s,baz=62,slow=10,SNR=64								
BRVK	**Borovoye**	**89.73**	**323**	*c i*	P	**P**	**19**	**35**	**17.7 -0.8**
BRVK					pmax	pmax			
	comp=Z,64nm,1.6s								
BRVK	**Borovoye**	**89.73**	**323**		P	**P**	**19**	**35**	**17.4 -1.1**
NVAR	**Mina Array Bea**	**92.05**	**52**		P	**P**	**19**	**35**	**29.9 -0.1**
	comp=Z,1.0nm,0.8s,baz=254,slow=7.3,SNR=6.4								
NVAR					LR	LR	20	10	20.1
	comp=Z,423nm,20.4s,baz=274,slow=31								
NVAR	**Mina Array Bea**	**92.05**	**52**		P	**P**	**19**	**35**	**29.2 -0.8**
NV11	**Mina Array Sit**	**92.17**	**52**		P	**P**	**19**	**35**	**29.5 -0.9**
NV11					IAmb	IAmb	19	36	16.1
	comp=Z,9.4nm,1.1s								
C36M	**Paulatuk**	**92.22**	**21**		P	**P**	**19**	**35**	**28.8 -0.9**
C36M	**Paulatuk**	**92.22**	**21**		P		19	35	29.4
	baz=262								
SYO	**Syowa Base**	**93.47**	**199**	‖ *e*	P	**P**	**19**	**35**	**35.7 +0.2**
HRA	**Herat**	**93.55**	**304**		IAmb	IAmb	19	35	38.4
	comp=Z,20nm,1.3s								
YKA	**Yellowknife Ar**	**95.57**	**28**		P	**P**	**19**	**35**	**44.9 -0.4**
	comp=Z,1.5nm,0.9s,baz=268,slow=4.5,SNR=14								
YKA					PKKPbc	**PKKPbc**	**19**	**52**	**38.5 -0.5**
	comp=Z,0.1nm,0.5s,baz=94,slow=2.3,SNR=3.8								
YKA					LR	LR	20	14	36.8
	comp=Z,403nm,20.1s,baz=0.0,slow=33								
SVE	**Sverdlovsk**	**95.59**	**327**	‖ *e*	P	**P**	**19**	**35**	**44.8 -0.7**
SVE					pmax	pmax			
	comp=Z,25nm,1.5s								
AB31	**Akbulak array**	**95.89**	**319**	*i*	P	**P**	**19**	**35**	**45.8 -1.2**
ABKAR	**Akbulak array**	**95.89**	**319**		P	**P**	**19**	**35**	**45.3 -1.7**
ABKAR					IAmb	IAmb	19	35	47.5
	comp=Z,13nm,1.4s								
ABKAR	**Akbulak array**	**95.89**	**319**		P	**P**	**19**	**35**	**44.5 -2.6**
ARU	**Arti**	**96.73**	**326**	*c i*	P	**P**	**19**	**35**	**49.0 -1.7**
ARU							19	39	42.5
ARU					S	**SKSac**	**19**	**46**	**21.0 -2.6**
ARU					pmax	pmax			
	comp=Z,24nm,1.1s								
ARU					MLR	MLR			
	comp=Z,344nm,21.0s								
ARU	**Arti**	**96.73**	**326**		P	**P**	**19**	**35**	**48.9 -1.8**
GEYT	**Alibeck**	**97.03**	**307**		P	**P**	**19**	**35**	**51.4 -1.2**
	comp=Z,0.9nm,0.6s,baz=13,slow=6.8,SNR=1.3								
PDAR	**Pinedale Array**	**98.85**	**48**		LR	LR	20	17	24.5
	comp=Z,462nm,18.8s,baz=284,slow=34								
KIRV	**Kirov**	**101.46**	**329**	‖ *e*	P	**Pdif**	**19**	**36**	**10.9 -0.9**
PRGR	**Permogore**	**102.74**	**332**	*e*	P	**Pdif**	**19**	**36**	**13.8 -3.6**
PRGR					pmax	pmax			
	comp=Z,14nm,1.3s								
TXAR	**Lajitas Array**	**104.03**	**61**		PP	PP	19	40	53.1 +11
	comp=Z,0.2nm,0.6s,baz=226,slow=4.8,SNR=2.2								
KLMR	**Klimovskoe**	**105.79**	**332**	*e*	P	**Pdif**	**19**	**36**	**28.9 -2.0**
KLMR					pmax	pmax			
	comp=Z,15nm,1.4s								
KLMR	**Klimovskoe**	**105.79**	**332**	*e*	Pdif	**Pdif**	**19**	**36**	**29.0 -2.0**
KLMR					AMP		19	36	30.0
	comp=Z,15nm,1.4s								
ARCES	**ARCESS Array B**	**107.25**	**343**		PKiKP	**PKiKP**	**19**	**40**	**47.6 +1.6**
	comp=Z,3.1nm,1.0s,baz=50,slow=2.1,SNR=5.0								
OBN	**Obninsk**	**109.14**	**327**	‖ *e*	P	**Pdif**	**19**	**36**	**45.5 -0.5**
OBN					pmax	pmax			
	comp=Z,16nm,1.5s								
FINES	**FINESS Array B**	**111.45**	**336**		Pdiff	**Pdif**	**19**	**36**	**55.1 -1.0**
	comp=Z,0.6nm,0.5s,baz=78,slow=5.9,SNR=12								
FINES					PKiKP	**PKiKP**	**19**	**40**	**54.9 +0.8**
	comp=Z,1.2nm,0.8s,baz=52,slow=3.1,SNR=5.5								
MNK	**Minsk**	**114.00**	**329**	*i*	PP	**PP**	**19**	**41**	**49.9 -3.5**
MNK				*i*	PP	PP	19	42	01.8 +8.4
MNK				*i*	PP	PP	19	42	01.8 +8.4
MNK				*i*	PPP	PPP	19	44	14.2
MNK				*i*	SKP		19	44	30.2
MNK				*i*	PKS	**PKSdf**	**19**	**44**	**31.9 -3.7**
MNK				*i*	SKS	**SKSdf**	**19**	**48**	**14.8 +7.5**
MNK				*i*	PS	**PKKPdf**	**19**	**52**	**00.1 -4.7**
MNK				*i*	SP	SP	19	52	51.6 +87
MNK				*i*	SS	**SS**	**19**	**57**	**36.3 -3.3**
MNK				*i*	SKKS	SKKSdf	20	00	05.1 +52
MNK				*i*	SSS	SSS	20	01	45.6
MNK				*i*	LQ	LQ	20	19	20.5
MNK				*i*	LR	LR	20	25	00.8
MNK				*i*	LRM	MLR	20	31	13.4
	comp=E,18nm,19.3s								
MNK				*i*	LRM	MLR	20	31	23.0
	comp=Z,250nm,19.3s								
MNK				*i*	LRM	MLR	20	31	26.3
	comp=N,151nm,19.3s								
AKASG	**Malin Array Be**	**114.91**	**324**		PKP	**PKiKP**	**19**	**41**	**00.9 -0.1**
	comp=N,2.4nm,0.6s,baz=60,slow=1.9,SNR=12								
BRTR	**Keskin Array B**	**115.72**	**312**		PKP	**PKPdf**	**19**	**41**	**03.2 +0.1**
	comp=N,1.9nm,0.9s,baz=90,slow=1.2,SNR=6.3								
NOA	**NORSAR Array B**	**117.30**	**340**		PKP	**PKPdf**	**19**	**41**	**05.3 -0.1**
	comp=N,0.7nm,0.7s,baz=49,slow=2.0,SNR=4.4								
PLCA	**Paso Flores**	**119.36**	**143**		PKP	**PKPdf**	**19**	**41**	**09.4 -0.6**
	comp=N,4.0nm,1.0s,baz=252,slow=1.1,SNR=3.1								
BOSA	**Boshof**	**119.67**	**233**		PKP	**PKiKP**	**19**	**41**	**11.5 +0.3**
	comp=N,2.8nm,0.8s,baz=63,slow=6.8,SNR=1.4								
CRVS	**Cervenica-Dubn**	**120.20**	**325**	*e*	PKIKP	**PKiKP**	**19**	**41**	**12.4 +1.0**
CRVS	**Cervenica-Dubn**	**120.20**	**325**	*e*	PKP	**PKiKP**	**19**	**41**	**12.4 +1.0**
LANS	**Liptovska Anna**	**121.19**	**326**	*e*	PKIKP	**PKiKP**	**19**	**41**	**14.9 +1.5**
LANS	**Liptovska Anna**	**121.19**	**326**	*e*	PKP	**PKiKP**	**19**	**41**	**14.8 +1.4**
BI02	**San Fabin de**	**121.33**	**139**		PKPdf	**PKiKP**	**19**	**41**	**14.6 +0.5**
MORC	**Moravsky Berou**	**121.89**	**328**	*e*	PKP	**PKiKP**	**19**	**41**	**16.2 +1.5**
VYHS	**Vyhne**	**121.90**	**326**	*e*	PKIKP	**PKPdf**	**19**	**41**	**14.7 +0.1**
VYHS	**Vyhne**	**121.90**	**326**	*e*	PKP	**PKPdf**	**19**	**41**	**14.7 +0.1**
VTS	**Vitosha**	**122.06**	**318**		PKIKP	**PKiKP**	**19**	**41**	**15.5 0.0**
VTS	**Vitosha**	**122.06**	**318**		PKPdf	**PKiKP**	**19**	**41**	**15.5 0.0**
KRLC	**Kraliky**	**122.12**	**328**	*e*	PKIKP	**PKiKP**	**19**	**41**	**16.0 +0.8**
KRLC					MLR	MLR			
	comp=Z,300nm,21.1s								
KRLC	**Kraliky**	**122.12**	**328**	*e*	PKPDF	**PKiKP**	**19**	**41**	**16.0 +0.8**
KRLC					AMS	AMS	20	36	10.0
	comp=Z,300nm,21.1s								
OSTC	**Ostas**	**122.13**	**329**	*e*	PKPDF	**PKiKP**	**19**	**41**	**18.1 +2.9**
DPC	**Dobruska-Polom**	**122.20**	**329**	*e*	PKIKP	**PKiKP**	**19**	**41**	**16.3 +1.0**
DPC					MLR	MLR			
	comp=Z,300nm,22.2s								
DPC	**Dobruska-Polom**	**122.20**	**329**	*e*	PKPDF	**PKiKP**	**19**	**41**	**16.3 +1.0**
DPC					AMS	AMS	20	37	10.0
	comp=Z,300nm,22.2s								
JAVC	**Velka Javorina**	**122.34**	**327**	*e*	PKP	**PKiKP**	**19**	**41**	**18.0 +2.3**
D58A	**Chemin du LacG**	**122.52**	**36**		P		19	41	16.0
	baz=302								
VRAC	**Vranov**	**122.67**	**328**	*e*	PKP	**PKiKP**	**19**	**41**	**17.6 +1.4**
MODS	**Modra-Piesok**	**122.83**	**326**	*e*	PKIKP	**PKiKP**	**19**	**41**	**17.8 +1.2**
MODS	**Modra-Piesok**	**122.83**	**326**	*e*	PKP	**PKiKP**	**19**	**41**	**17.8 +1.2**
KRUC	**Moravsky**	**122.92**	**327**	*e*	PKP	**PKiKP**	**19**	**41**	**17.8 +1.1**
PVCC	**Panska Ves**	**122.98**	**330**		AMS	AMS	20	39	10.0
	comp=Z,300nm,18.1s								
BRG	**Berggiesshubel**	**123.08**	**330**	*e*	PKP	**PKiKP**	**19**	**41**	**17.2 +0.2**
BRG					Amp		19	41	19.9
	comp=Z,13nm,1.3s								
CLL	**Collm**	**123.26**	**331**	*e*	Pdif	**Pdif**	**19**	**37**	**49.0 +0.1**
CLL				*i*	PKPdf	**PKiKP**	**19**	**41**	**18.4 +1.1**
	comp=Z,10.0nm,1.2s								
CLL				*e*	PP	**PP**	**19**	**42**	**52.0 -5.3**
CLL				*e*	PS	PS	19	52	59.0 +4.3
CLL				*e*	PPS	PPS	19	54	22.0
CLL				*e*	SS	SS	19	59	48.0 +8.9
CLL				*e*	SSS	SSS	20	04	24.0
CLL					Lm	MLR	20	37	00.0
	comp=N,200nm,20.8s								
CLL					Lm	MLR	20	37	00.0
	comp=E,100nm,20.0s								
CLL					Lm	MLR	20	37	00.0
	comp=Z,300nm,20.4s								
CLL	**Collm**	**123.26**	**331**	*i*	PKIKP	**PKiKP**	**19**	**41**	**18.4 +1.1**
CLL					pmax	pmax			
	comp=Z,10.0nm,1.2s								
CLL					MLR	MLR			
	comp=Z,300nm,20.4s								
PRU	**Pruhonice**	**123.33**	**329**	*e*	PKIKP	**PKiKP**	**19**	**41**	**18.8 +1.3**
PRU					MLR	MLR			
	comp=Z,300nm,23.7s								
PRU	**Pruhonice**	**123.33**	**329**	*e*	PKPDF	**PKiKP**	**19**	**41**	**18.8 +1.3**
PRU					AMS	AMS	20	38	40.0
	comp=Z,300nm,23.7s								
DIVS	**Divibare**	**123.48**	**321**		PKPdf	**PKPdf**	**19**	**41**	**17.8 -0.1**
PBCC	**Pribram**	**123.80**	**329**	*e*	PKPDF	**PKiKP**	**19**	**41**	**19.8 +1.3**
CONA	**Conrad Observa**	**123.86**	**327**	*e*	P	**PKiKP**	**19**	**41**	**19.2 +0.4**
	comp=Z,5.6nm,1.2s								
I60A	**Shoreham**	**123.94**	**39**		P		19	41	20.5
	baz=300								
FNA	**Florina**	**124.11**	**317**		PKIKP	**PKiKP**	**19**	**41**	**19.7 +0.3**
FNA	**Florina**	**124.11**	**317**		PKPdf	**PKiKP**	**19**	**41**	**19.7 +0.3**
CKRC	**Cesky Krumlov**	**124.17**	**328**	*e*	PKPDF	**PKiKP**	**19**	**41**	**19.7 +0.5**
E61A	**Lac Etchemin**	**124.27**	**35**		P		19	41	20.8
	baz=304								
KHC	**Kasperske Hory**	**124.35**	**329**	*e*	PKIKP	**PKiKP**	**19**	**41**	**20.8 +1.2**
KHC					MLR	MLR			
	comp=Z,300nm,17.2s								
KHC	**Kasperske Hory**	**124.35**	**329**	*e*	PKPDF	**PKiKP**	**19**	**41**	**20.8 +1.2**
KHC				*ep*	PKP	**sPKPdf**	**19**	**41**	**38.4 0.0**
KHC					AMS	AMS	20	39	30.0
	comp=Z,300nm,17.2s								
KHC	**Kasperske Hory**	**124.35**	**329**		PKPdf	**PKPdf**	**19**	**41**	**19.3 0.0**
ARSA	**Arzberg**	**124.44**	**326**	*i*	P	**PKiKP**	**19**	**41**	**21.5 +1.7**
	comp=Z,4.4nm,0.9s								
GEC2	**GERESS Array S**	**124.47**	**329**		PKPdf	**PKPdf**	**19**	**41**	**18.7 -0.9**
GERES	**GERESS Array B**	**124.47**	**329**		PKP	**PKiKP**	**19**	**41**	**20.2 +0.2**
	comp=Z,4.5nm,0.8s,baz=50,slow=2.1,SNR=28								
GERES	**GERESS Array B**	**124.47**	**329**		PKIKP	**PKPdf**	**19**	**41**	**19.3 -0.3**
GERES	**GERESS Array B**	**124.47**	**329**			**PKPdf**	**19**	**41**	**19.3 -0.3**
MOA	**Moiln**	**124.78**	**327**	*e*	P	**PKiKP**	**19**	**41**	**21.6 +1.1**
	comp=Z,3.5nm,1.1s								
SOKA	**Soboth**	**125.05**	**326**	*e*	P	**PKiKP**	**19**	**41**	**21.3 +0.1**
	comp=Z,5.5nm,1.1s								
GRF	**Grafenberg Arr**	**125.18**	**331**	*e*	PKPdf	**PKiKP**	**19**	**41**	**21.5 +0.3**
	baz=49,slow=1.2								
KBA	**Koelnbreinsper**	**125.74**	**327**	*e*	P	**PKiKP**	**19**	**41**	**23.2 +0.6**
	comp=Z,8.4nm,1.2s,SNR=5.7								
LCO	**Las Campanas**	**125.95**	**132**		PKIKP	PKPpre	19	41	15.8
LCO	**Las Campanas**	**125.95**	**132**			PKPpre	19	41	15.8
ABTA	**Abfaltersbach**	**126.39**	**327**	*e*	P	**PKPdf**	**19**	**41**	**23.5 +0.2**
	comp=Z,11nm,1.1s,SNR=6.3								
WATA	**Walderalm**	**126.52**	**328**	*e*	P	**PKiKP**	**19**	**41**	**24.1 -0.1**
	comp=Z,15nm,1.4s								
WTTA	**Wattenberg**	**126.54**	**328**	*e*	P	**PKiKP**	**19**	**41**	**24.4 +0.2**
	comp=Z,15nm,0.9s								
MOTA	**Moosalm**	**126.77**	**328**	*e*	P	**PKiKP**	**19**	**41**	**24.6 0.0**
	comp=Z,13nm,0.9s								
SQTA	**Sankt Quirin**	**126.79**	**328**	*e*	P	**PKiKP**	**19**	**41**	**25.1 +0.5**
	comp=Z,11nm,1.0s								
RETA	**Reutte**	**126.85**	**329**	*e*	P	**PKiKP**	**19**	**41**	**26.2 +1.5**
	comp=Z,6.6nm,1.0s								
BTNL	**Ternell**	**126.90**	**334**	*d*	PKiKP	**PKiKP**	**19**	**41**	**25.8 +1.2**
MEM	**Membach**	**126.94**	**334**	*d*	PKiKP	**PKiKP**	**19**	**41**	**25.7 +1.1**
MEM					*dx*	x	19	41	29.2
FETA	**Feichten**	**127.17**	**328**	*e*	P	**PKiKP**	**19**	**41**	**26.0 +0.5**
	comp=Z,13nm,0.9s,SNR=14								
DAVA	**Damuels**	**127.44**	**329**	*e*	P	**PKiKP**	**19**	**41**	**27.5 +1.6**
	comp=Z,9.2nm,1.0s								
WLF	**Walferdange**	**127.57**	**333**	*d*	PKiKP	**PKiKP**	**19**	**41**	**27.6 +1.7**
BMRD	**Maredsous**	**127.70**	**335**	*d*	PKiKP	**PKiKP**	**19**	**41**	**27.4 +1.3**
BMRD				*dp*	PKP	**pPKPdf**	**19**	**41**	**40.1 +0.4**
TUE	**Stuetta**	**128.25**	**329**		PKPdf	**PKPdf**	**19**	**41**	**25.7 -1.4**
AC02	**Maricunga**	**128.28**	**130**		PKPdf	**PKPdf**	**19**	**41**	**27.8 -0.3**
LPAZ	**La Paz**	**134.02**	**118**		PKP	**PKiKP**	**19**	**41**	**40.2 -0.5**
	comp=Z,4.0nm,0.6s,baz=280,slow=3.0,SNR=9.8								
LPAZ						SKPbc	**SKPab**	**19**	**45**	**10.3 +2.7**
	comp=Z,3.4nm,0.7s,baz=244,slow=1.9,SNR=9.3								
LPAZ	**La Paz**	**134.02**	**118**		PKIKP	**PKPdf**	**19**	**41**	**40.0 +0.7**
LPAZ	**La Paz**	**134.02**	**118**		PKPdf	**PKPdf**	**19**	**41**	**40.0 +0.7**
CPUP	**Villa Florida**	**137.04**	**138**		PKP	**PKiKP**	**19**	**41**	**45.4 -0.4**
	comp=Z,3.0nm,0.9s,baz=259,slow=1.6,SNR=7.1								
CPUP	**Villa Florida**	**137.04**	**138**		PKIKP	**PKPdf**	**19**	**41**	**44.7 +0.7**
CPUP	**Villa Florida**	**137.04**	**138**		PKPdf	**PKPdf**	**19**	**41**	**44.7 +0.7**
PGAV	**Gavieira, Arco**	**139.72**	**338**	*e*	PKPdf	**PKPdf**	**19**	**41**	**45.7 -2.8**
ESDC	**Sonseca Array**	**139.84**	**332**		PKiKP	PKPpre	19	41	42.7
	comp=Z,2.1nm,1.1s,baz=54,slow=2.8,SNR=7.5								
ESDC						PKP	**PKPdf**	**19**	**41**	**49.7 +0.9**
	comp=Z,1.1nm,0.9s,baz=307,slow=1.3,SNR=6.1								
ESDC						PP	**PP**	**19**	**44**	**48.3 +4.1**
	comp=Z,0.7nm,0.8s,baz=34,slow=6.9,SNR=5.3								
ESDC	**Sonseca Array**	**139.84**	**332**			PKPpre	19	41	38.6
MVO	**Moncorvo**	**139.93**	**336**	*e*	PKPdf	**PKPdf**	**19**	**41**	**48.7 -0.2**
MTE	**Manteigas**	**140.78**	**336**	*e*	PKPdf	**PKPdf**	**19**	**41**	**49.0 -1.5**
PCBR	**Castelo Branco**	**141.23**	**336**	*e*	PKPdf	**PKiKP**	**19**	**41**	**54.9 +1.0**
SAML	**Samuel**	**141.24**	**111**		PKIKP	**PKPdf**	**19**	**41**	**51.8 -0.1**
SAML	**Samuel**	**141.24**	**111**			**PKPdf**	**19**	**41**	**51.8 -0.1**
PMRV	**Marvˀˀo**	**141.55**	**335**	*e*	PKPdf	**PKPdf**	**19**	**41**	**48.9 -2.9**
PMTG	**Montargil**	**142.19**	**336**	*e*	PKPdf	**PKiKP**	**19**	**41**	**57.2 +1.3**
PBAR	**Barrancos**	**142.44**	**334**	*e*	PKPdf	**PKPdf**	**19**	**41**	**49.8 -3.6**
EVO	**Evora**	**142.56**	**335**	*e*	PKPdf	**PKPdf**	**19**	**41**	**51.4 -2.2**
PNCL	**Nicolau / Gran**	**143.13**	**336**	*e*	PKPdf	PKPbc	19	41	53.0 +1.4
MESJ	**Messejana**	**143.23**	**335**	*e*	PKPdf	PKPbc	19	41	53.0 +1.2
PCVE	**Castro Verde**	**143.33**	**335**	*e*	PKPdf	**PKPdf**	**19**	**41**	**54.0 -1.0**
PTEO	**Sao Teotonio**	**143.69**	**335**	*e*	PKPdf	**PKPdf**	**19**	**41**	**55.0 -0.6**
SPB	**Sao Paulo**	**145.15**	**146**			**PKPbc**	**19**	**41**	**57.3 -0.8**
PTGA	**Pitinga**	**146.48**	**99**		PKPdf	**PKPdf**	**19**	**42**	**01.6 +0.4**
BDFB	**Brasilia**	**150.65**	**135**		PKP	**PKPdf**	**19**	**42**	**08.6 +0.6**
	comp=Z,7.3nm,0.5s,baz=14,slow=1.2,SNR=12								
BDFB						PKPbc	**PKiKP**	**19**	**42**	**14.0 0.0**
	comp=Z,18nm,0.7s,baz=222,slow=1.0,SNR=24								
BDFB	**Brasilia**	**150.65**	**135**		PKPdf	**PKPdf**	**19**	**42**	**07.2 -0.8**
BDFB					PKPbc	**PKiKP**	**19**	**42**	**14.1 0.0**
TOA0	**Torodi Ar. Sit**	**150.67**	**288**		PKPdf	**PKPdf**	**19**	**42**	**08.0 +0.1**
TOA0					PKPbc	**PKPbc**	**19**	**42**	**13.0 -0.4**
TORD	**Torodi Ar. Bea**	**150.67**	**288**		PKP	**PKPdf**	**19**	**42**	**08.3 +0.4**
	comp=Z,5.5nm,1.0s,baz=48,slow=1.8,SNR=8.5								
TORD						PKPbc	**PKPbc**	**19**	**42**	**13.0 -0.4**
	comp=Z,39nm,1.0s,baz=39,slow=2.8,SNR=74								
TORD	**Torodi Ar. Bea**	**150.67**	**288**			**PKPdf**	**19**	**42**	**07.3 -0.6**
KIC	**Kosan Boka**	**157.90**	**274**	*e*	PKP2	**PKPab**	**19**	**42**	**51.3 +0.1**
	comp=Z,68nm,1.7s								
DBIC	**Dimbokro**	**158.00**	**275**		PKPab	**PKPab**	**19**	**42**	**50.3 -1.3**
	comp=Z,4.3nm,0.8s,baz=84,slow=4.5,SNR=4.8								
TIC	**Tomondi**	**158.17**	**275**	*e*	PKP2	**PKPab**	**19**	**42**	**49.9 -2.4**
LIC	**Lamto**	**158.19**	**274**	*e*	PKP2	**PKPab**	**19**	**42**	**50.4 -2.0**
	comp=Z,24nm,1.2s								
	comp=N,28nm,1.2s								
PD31	**Pinedale Array**	**3.19**	**246**			**Pn**	**19**	**33**	**53.9 +0.9**
PDAR	**Pinedale Array**	**3.19**	**246**		Pn	**Pb**	**19**	**33**	**59.1 +0.1**
	comp=N,4.5nm,0.3s,baz=76,slow=15,SNR=22								
PDAR					Pg	**Pg**	**19**	**34**	**03.1 +0.6**
	comp=N,4.5nm,0.3s,baz=69,slow=18,SNR=32								
PDAR					Lg	Lg	19	34	43.4
	comp=N,6.0nm,0.3s,baz=66,slow=30,SNR=20								
PDAR	**Pinedale Array**	**3.19**	**246**			**Pn**	**19**	**33**	**51.6 -1.4**
GCMT	**Greycliff**	**3.31**	**301**			**Pb**	**19**	**34**	**00.9 -0.3**
H17A	**Grant Village**	**3.57**	**276**			**Pb**	**19**	**34**	**02.4 -3.3**
H17A					IAML		19	35	10.0
	comp=N,23nm,1.3s								
H17A					IAML		19	35	14.4
	comp=E,21nm,1.8s								
LOHW	**Long Hollow**	**3.65**	**263**			**Pn**	**19**	**33**	**59.6 +0.2**
LOHW					IAML		19	35	48.6
	comp=E,18nm,2.3s								
FLWY	**Flagg Ranch**	**3.66**	**271**			**Pn**	**19**	**33**	**59.4 -0.2**
FLWY					IAML		19	35	13.6
	comp=E,55nm,1.8s								
YPP	**Pitchstone Pla**	**3.73**	**274**			**Pn**	**19**	**34**	**00.7 +0.1**
YHH	**Holmes Hill**	**3.80**	**281**			**Pn**	**19**	**34**	**01.9 +0.4**
REDW	**Red Top Meadow**	**3.88**	**260**			**Pn**	**19**	**34**	**02.5 -0.1**
REDW					IAML		19	36	00.8
	comp=E,34nm,1.4s								
REDW					IAML		19	36	08.0
	comp=E,47nm,1.5s								
YHL	**Hebgen Lake**	**4.04**	**282**			**Pn**	**19**	**34**	**04.8 -0.1**
YHL					IAML		19	35	28.1
	comp=E,19nm,1.5s								
YHL					IAML		19	35	28.6
	comp=N,20nm,1.6s								
OGNE	**Ogallala**	**4.16**	**139**			**Pn**	**19**	**34**	**05.3 -0.9**
ISCO	**Idaho Springs**	**4.35**	**180**			**Pn**	**19**	**34**	**07.8 -1.3**
ISCO					IAML		19	35	20.9
	comp=N,18nm,1.1s								
DGMT	**Dagmar**	**4.43**	**12**			**Pn**	**19**	**34**	**09.9 0.0**
O20A	**White River Ci**	**4.46**	**207**			**Pn**	**19**	**34**	**08.5 -2.1**
O20A					IAML		19	36	22.9
	comp=E,33nm,1.8s								
O20A					IAML		19	36	51.4
	comp=N,34nm,2.2s								
BOZ	**Bozeman (W)**	**4.51**	**291**			**Pn**	**19**	**34**	**10.2 -0.9**
BOZ					IAML		19	35	33.2
	comp=N,18nm,2.2s								
EGMT	**Eagleton**	**4.83**	**325**			**Pn**	**19**	**34**	**15.2 -0.2**
HWUT	**Hardware Ranch**	**5.06**	**242**			**Pn**	**19**	**34**	**18.6 -0.1**
HWUT					IAML		19	36	04.3
	comp=N,19nm,1.0s								
TCUT	**Toone Canyon**	**5.24**	**237**			**Pn**	**19**	**34**	**21.1 -0.2**
HVU	**Hansel Valley**	**5.76**	**248**			**Pn**	**19**	**34**	**30.6 +2.2**
PV22	**Blue Mesa, Par**	**6.10**	**204**			**Pn**	**19**	**34**	**33.4 +0.4**
SRU	**San Rafael Swe**	**6.24**	**218**			**Pn**	**19**	**34**	**34.9 0.0**
PV16	**Nyswonger Mesa**	**6.34**	**204**			**Pn**	**19**	**34**	**36.1 -0.3**
I10CA	**LAC DU BONNET**	**8.90**	**44**	*i*			20	28	20.0
	baz=225,slow=337,SNR=2.4								
ULM	**Lac du Bonnet**	**9.01**	**44**		Pn	**Pn**	**19**	**35**	**14.7 +2.1**
	comp=N,0.4nm,0.3s,baz=224,slow=11,SNR=5.5								
ULM					Lg	Lg	19	37	48.6
	comp=N,0.1nm,0.3s,baz=285,slow=13,SNR=4.4								

*NEIC **03** 19:33:01.5±1.0, 44.°16N±0.°05×105.°62W±0.°04, h0km±1km, ML3.1/42, Error ellipse: s-maj=8.8km s-

CTAO	**Charters Tower**	**31.78**	**270**	P	**P**	**19 51 45.2**	**+0.4**
TOO	**Toolangi**	**32.75**	**237**	P	**P**	**19 51 53.5**	**+0.6**
TOO				IAmb	IAmb	19 52 04.1	
	comp=Z,8.0nm,1.1s						
TAU	**Tasmania Unive**	**33.22**	**227**	P	**P**	**19 51 57.3**	**+0.6**
STKA	**Stephens Creek**	**35.04**	**248**	P	**P**	**19 52 12.1**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=103,slow=11,SNR=5.6						
STKA	**Stephens Creek**	**35.04**	**248**	IAmb	IAmb	19 52 15.3	
	comp=Z,1.9nm,1.4s						
COEN	**Coen**	**36.40**	**279**	P	**P**	**19 52 23.9**	**+0.2**
BBOO	**Buckleboo**	**39.76**	**247**	P	**P**	**19 52 50.3**	**-0.6**
BBOO				IAmb	IAmb	19 52 57.5	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**42.35**	**260**	P	**P**	**19 53 11.2**	**-0.5**
ASAR	**Alice Springs**	**42.35**	**260**	P	**P**	**19 53 11.3**	**-0.4**
	comp=Z,2.6nm,0.4s,baz=96,slow=7.7,SNR=147						
ASAR				ScP	**ScP**	**19 57 57.1**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=102,slow=4.6,SNR=6.3						
ASAR	**Alice Springs**	**42.35**	**260**	P	**P**	**19 53 10.3**	**-1.5**
WR0	**Warramunga Arr**	**42.53**	**266**	P	**P**	**19 53 12.2**	**-0.9**
WB2	**Warramunga Arr**	**42.70**	**266**	P	**P**	**19 53 13.5**	**-1.0**
WB2				IAmb	IAmb	19 53 13.9	
	comp=Z,5.9nm,0.5s						
WB0	**Warramunga Arr**	**42.71**	**266**	P	**P**	**19 53 13.4**	**-1.1**
WB0				IAmb	IAmb	19 53 14.2	
	comp=Z,8.0nm,0.7s						
WRA	**Warramunga Arr**	**42.72**	**266**	P	**P**	**19 53 13.7**	**-1.0**
	comp=Z,5.0nm,0.4s,baz=97,slow=8.4,SNR=196						
WRA	**Warramunga Arr**	**42.72**	**266**	P	**P**	**19 53 13.3**	**-1.3**
PTCN	**Pitcairn Islan**	**44.95**	**102**	P	**P**	**19 53 30.6**	**-1.3**
FORT	**Forrest**	**46.63**	**249**	P	**P**	**19 53 43.6**	**-1.0**
MTN	**Manton Dam**	**47.75**	**274**	P	**P**	**19 53 51.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**51.14**	**265**	P	**P**	**19 54 18.2**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=104,slow=7.0,SNR=17						
SIJI	**Sorong**	**52.69**	**288**	P	**P**	**19 54 29.0**	**-0.6**
	comp=Z,5.1nm,0.4s,baz=62,slow=9.1,SNR=8.1						
SOEI	**Soe**	**55.14**	**275**	P	**P**	**19 54 47.8**	**+0.7**
SOEI				IAmb	IAmb	19 54 52.3	
	comp=Z,8.6nm,0.9s						
BATI	**Baumata**	**55.52**	**274**	P	**P**	**19 54 50.3**	**+0.7**
	comp=Z,5.2nm,0.4s,baz=31,slow=16,SNR=2.5						
MORW	**Morawa**	**57.19**	**250**	P	**P**	**19 55 00.3**	**-0.6**
MORW				IAmb	IAmb	19 55 12.4	
	comp=Z,11nm,1.1s						
TXAR	**Lajitas Array**	**90.13**	**58**	P	**P**	**19 58 10.2**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=219,slow=5.1,SNR=5.3						

WEL 03 19:48:44.1±1.0,**38°S**±5°×**17°9E**±°,**h33**km,**M2.4**/14, **ML2.7**/14,**MLv2.4**/14,**Error ellipse: s-maj=0.0km s-min=0.0km az=109.4,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.45**	**305**	P	Pn	19 48 55.1	+0.8
WMGZ				S	Sn	19 49 03.6	+2.4
PUZ	**Puketiti**	**0.49**	**270**	P	Pn	19 48 55.2	+0.3
PUZ				S	Sn	19 49 03.8	+1.5
PKGZ	**Pakihiroa**	**0.66**	**286**	P	Pb	19 48 57.6	+0.2
PKGZ				S	Sn	19 49 07.7	+1.2
CNGZ	**Carnagh Statio**	**0.67**	**232**	P	Pb	19 48 57.6	+0.1
TWGZ	**Tauwhareparae**	**0.72**	**262**	P	Pb	19 48 58.4	+0.1
TWGZ				S	Sb	19 49 09.6	+1.7
TKGZ	**Te Karaka**	**0.89**	**246**	P	Pn	19 49 00.3	0.0
TKGZ				S	Sb	19 49 13.4	+0.7
HAZ	**Te Kaha**	**0.93**	**290**	P	Pn	19 49 01.2	+0.4
RUGZ	**Raukumara Rang**	**0.96**	**276**	P	Pn	19 49 01.4	0.0
RUGZ				S	Sn	19 49 14.1	+0.1
RIGZ	**Rimuhau**	**1.08**	**234**	P	Pn	19 49 02.7	-0.2
RIGZ				S	Sb	19 49 17.6	-0.6
MWZ	**Matawai**	**1.10**	**256**	P	Pn	19 49 03.3	+0.1
MWZ				S	Sn	19 49 17.9	+0.6
URZ	**Urewera**	**1.41**	**262**	P	Pb	19 49 08.6	-1.2
RTZ	**Ruatahuna**	**1.59**	**250**	P	Pn	19 49 10.5	+0.6
RTZ				S	Sn	19 49 30.4	+1.0
MUGZ	**Murupara**	**1.71**	**256**	P	Pn	19 49 12.2	+0.6
MUGZ				S	Sn	19 49 33.2	+0.9
MTHZ	**Maungataniwha**	**1.78**	**244**	P	Pn	19 49 12.8	+0.2
MTHZ				S	Sn	19 49 34.6	+0.5
MCHZ	**McNeill Hill**	**2.19**	**231**	P	Pn	19 49 18.0	-0.2
KAHZ	**Kahuranaki**	**2.32**	**222**	P	Pn	19 49 19.0	-1.0
BHHZ	**Black Hill Sta**	**2.62**	**237**	P	Pn	19 49 22.0	-2.1
TMVZ	**Te Maari**	**2.70**	**246**	P	Pn	19 49 24.8	-0.5
ETVZ	**East Tongariro**	**2.70**	**246**	P	Pn	19 49 25.0	-0.3
KRVZ	**Karewarewa**	**2.73**	**247**	P	Pn	19 49 24.5	-1.3

IDC 03 19:51:11.8±2.3,**30°47S**×**179°89W**,**h0**km,**mb3.1**/2, **mb1 3.5**/3,**mb1mx3.4**/35,**mbtmp3.3**/3,**ML3.6**/1,**Error ellipse: s-maj=58.4km s-min=45.4km az=115.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.15**	**197**	Pn	Pn	19 53 11.2	-0.2
	0.8nm,0.3s,baz=124,slow=23,SNR=5.6						
ASAR	**Alice Springs**	**41.48**	**268**	P	P	19 59 00.4	-0.3
	0.1nm,0.5s,baz=109,slow=7.6,SNR=1.3						
WRA	**Warramunga Arr**	**42.47**	**273**	P	P	19 59 08.9	+0.1
	0.4nm,0.9s,baz=110,slow=7.9,SNR=2.3						
FINES	**FINESS Array B**	**144.64**	**339**	PKP	PKPab	20 10 46.9	-1.3
	0.4nm,0.5s,baz=241,slow=1.4,SNR=5.4						
NOA	**NORSAR Array B**	**148.56**	**350**	PKPbc	PKPbc	20 11 00.6	+0.6
	0.3nm,0.7s,baz=4.6,slow=3.0,SNR=3.4						

*IDC **03** 19:56:39.3±2.1,5°.38S×153°.16E,h0km,mb3.8/8, mb1 4.0/9,mb1mx3.8/44,mbtmp3.9/9,ML2.0/1,MS3.5/1, Ms1 3.5/1,ms1mx2.8/41,Error ellipse: s-maj=85.7km s-min=19.0km az=121.0*

ISC 03 19:56:45.1±1.9,**5°.4S**±0°.3×**153°.0E**±0°.4,**h37**km,**n12**, σ0°.81/12,**mb3.8**/8,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.05**	**235**	Pn	**Pn**	**19 58 26.7**	**+0.9**
	1.4nm,0.3s,baz=52,slow=3.7,SNR=5.6						
PMG				Sn	**Sn**	**19 59 43.6**	**-1.2**
	1.3nm,0.3s,baz=156,slow=22,SNR=3.8						
WRA	**Warramunga Arr**	**23.23**	**230**	P	**P**	**20 01 48.8**	**-0.5**
	0.7nm,0.5s,baz=54,slow=9.6,SNR=8.4						
ASAR	**Alice Springs**	**25.88**	**223**	P	**P**	**20 02 14.0**	**+0.3**
	0.5nm,0.8s,baz=57,slow=9.4,SNR=10						
FITZ	**Fitzroy Crossi**	**29.57**	**242**	LR	LR	20 14 17.5	
	comp=Z,97nm,19.4s,baz=132,slow=36						
PETK	**Petropavlovsk-**	**58.39**	**3**	P	**P**	**20 06 36.3**	**-0.4**
	1.6nm,0.4s,baz=157,slow=8.0,SNR=4.2						
MA2	**Magadan**	**64.76**	**359**	P	**P**	**20 07 19.8**	**+0.3**
	4.0nm,0.8s,baz=170,slow=8.9,SNR=6.7						
SEY	**Seymchan**	**68.11**	**360**	P	**P**	**20 07 41.1**	**+0.3**
	0.7nm,0.4s,baz=164,slow=15,SNR=11						
MKAR	**Makanchi Array**	**80.89**	**319**	P	**P**	**20 08 55.6**	**+0.1**
	0.3nm,0.6s,baz=94,slow=5.8,SNR=6.2						
ZALV	**Zalesovo Beam**	**81.74**	**326**	P	**P**	**20 08 59.5**	**-0.3**
	1.0nm,0.6s,baz=120,slow=4.0,SNR=6.1						
ILAR	**Eielson Array**	**82.60**	**22**	P	**P**	**20 09 03.1**	**-1.0**
	0.5nm,0.8s,baz=250,slow=5.7,SNR=4.3						
MDT	**Midelt**	**145.63**	**325**	PKPbc	**PKPab**	**20 16 22.2**	**+1.4**
	1.1nm,0.7s,baz=356,slow=2.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**150.68**	**287**	PKPbc	**PKPbc**	**20 16 34.2**	**-0.1**
	0.6nm,0.5s,baz=69,slow=2.8,SNR=4.6						

*IDC **03** 20:06:28.9±2.1,34°.24N×23°.54E,h0km,mb3.7/8, mb1 3.7/11,mb1mx3.5/42,mbtmp3.6/11,ML3.5/3,MS3.5/2, Ms1 3.5/2,ms1mx2.6/60,Error ellipse: s-maj=37.4km s-min=20.7km az=14.0*

*ATH **03** 20:06:34.6,34°.35N×23°.65E,h16km±2km,ML3.3/5,Error ellipse: s-maj=4.0km s-min=3.2km az=93.0*

*THE **03** 20:06:36.2,34°.43N×23°.67E,h13km±1km,ML3.3/5,Error ellipse: s-maj=2.1km s-min=1.5km az=244.0*

*DDA **03** 20:06:45.0,35°.04N×24°.29E,h108km±64km,ML3.0*

ISC 03 20:06:34.5±1.2,**34°.2N**±0°.1×**23°.7E**±0°.1,**h35**km±4km,**n43**, σ2°.56/60,**mb3.6**/8,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.67**	**26**	P	**Pn**	**20 06 46.8**	**-0.7**
GVD				S	**Sn**	**20 06 54.3**	**-2.5**
GVD				AML	AML	20 06 57.1	
	comp=E,6735μm,0.4s						
GVD				AML	AML	20 06 59.1	
	comp=N,9979μm,0.3s						
GVD	**Gavdhos**	**0.67**	**26**	P	**Pn**	**20 06 47.0**	**-0.6**
GVD				S	**Sn**	**20 06 54.3**	**-2.5**
	comp=N,4μm,0.3s						
GVDS	**Gavdos**	**0.68**	**26**	P	**Pn**	**20 06 46.7**	**-0.9**
KNDR	**Palaiochora Ch**	**1.00**	**358**	P	**Pn**	**20 06 50.5**	**-1.5**
KNDR				S	**Sn**	**20 07 03.7**	**-1.1**
	comp=N,430nm,0.6s						
SIVA	**Sivas**	**1.19**	**48**	P	**Pn**	**20 06 55.7**	**+1.2**
SIVA				S	**Sn**	**20 07 11.7**	**+2.2**
SIVA				AML	AML	20 07 19.5	
	comp=E,3628μm,0.5s						
SIVA				AML	AML	20 07 23.4	
	comp=N,2954μm,0.7s						
SIVA	**Sivas**	**1.19**	**48**	P	**Pn**	**20 06 56.1**	**+1.6**
SIVA				S	**Sn**	**20 07 11.7**	**+2.2**
	comp=N,2μm,0.5s						
VAM	**Vamos**	**1.23**	**18**	P	**Pn**	**20 06 55.2**	**0.0**
VAM				S	**Sn**	**20 07 10.3**	**-0.3**
VAM				AML	AML	20 07 17.4	
	comp=N,1992μm,0.7s						
VAM				AML	AML	20 07 19.4	
	comp=E,2180μm,0.8s						
VAM	**Vamos**	**1.23**	**18**	P	**Pn**	**20 06 55.2**	**0.0**
VAM				S	**Sn**	**20 07 10.3**	**-0.3**
	comp=E,1μm,0.7s						
IMMV	**Iera Moni Meta**	**1.24**	**10**	P	**Pn**	**20 06 55.3**	**0.0**
IMMV				S	**Sn**	**20 07 11.1**	**+0.2**
IMMV				AML	AML	20 07 14.6	
	comp=E,3720μm,0.4s						
IMMV				AML	AML	20 07 14.7	
	comp=N,3021μm,0.5s						
IMMV	**Iera Moni Meta**	**1.24**	**10**	P	**Pn**	**20 06 55.4**	**0.0**
IMMV				S	**Sn**	**20 07 11.1**	**+0.2**
	comp=N,2μm,0.5s						
PRNS	**Prines Rethymn**	**1.30**	**29**	P	**Pn**	**20 06 56.6**	**+0.6**
IDI	**Anoyia**	**1.42**	**42**	Pn	**Pn**	**20 06 59.3**	**+1.4**
	comp=N,17nm,0.3s,baz=213,slow=13,SNR=79						
IDI				Sn	**Sn**	**20 07 19.6**	**+4.2**
	comp=N,20nm,0.3s,baz=135,slow=20,SNR=12						
IDI	**Anoyia**	**1.42**	**42**	P	**Pn**	**20 06 59.3**	**+1.4**
IDI				AML	AML	20 07 23.9	
	comp=E,771μm,0.5s						
IDI				AML	AML	20 07 25.7	
	comp=N,514μm,0.7s						
IDI	**Anoyia**	**1.42**	**42**	P	**Pn**	**20 06 59.2**	**+1.4**
NPS	**Neapolis**	**1.86**	**56**	P	**Pn**	**20 07 06.6**	**+2.7**
NPS	**Neapolis**	**1.86**	**56**	P	**Pn**	**20 07 06.6**	**+2.7**
ZKR	**Zakros**	**2.23**	**66**	P	**Pn**	**20 07 12.0**	**+3.1**
ZKR	**Zakros**	**2.23**	**66**	P	**Pn**	**20 07 12.0**	**+3.1**
THR6	**Thira Island,**	**2.52**	**32**	P	**Pn**	**20 07 13.6**	**+0.7**
THR5	**Thira Island,**	**2.55**	**31**	P	**Pn**	**20 07 13.5**	**+0.2**
THR3	**Thira Island,**	**2.57**	**32**	P	**Pn**	**20 07 13.8**	**+0.3**
TURN	**Turunc**	**4.47**	**54**	*i* P	**Pn**	**20 07 40.2**	**+0.5**
TURN				*i* S	**Sn**	**20 08 23.5**	**-7.0**
DALY	**Dalyan (Mula)**	**4.77**	**56**	*i* P	**Pn**	**20 07 43.8**	**0.0**
DALY				*i* S	**Sn**	**20 08 37.6**	**-0.3**
DALY				IAML		20 09 05.0	
	comp=N,26nm,1.5s						
AKAS	**Kas**	**5.21**	**66**	*i* P	**Pn**	**20 07 51.1**	**+1.1**
AKAS				*i* S	**Sn**	**20 08 42.9**	**-5.9**
AKAS				IAML		20 08 48.0	
	comp=E,18nm,0.4s						
AKAS				IAML		20 08 51.0	
	comp=N,31nm,0.6s						
CAEL	**Denizli, Camel**	**5.39**	**56**	*i* P	**Pn**	**20 07 55.2**	**+2.8**
CAEL				*i* S	**Sn**	**20 08 49.1**	**-4.1**
GOLH	**Golhisar**	**5.61**	**56**	*i* P	**Pn**	**20 07 54.9**	**-0.6**
GOLH				*i* S	**Sn**	**20 08 53.9**	**-4.8**
GOLH				IAML		20 09 19.0	
	comp=N,12nm,1.2s						
AKUM	**Antalya-Kumluc**	**5.80**	**67**	*i* P	**Pn**	**20 07 59.1**	**+1.2**
AKUM				*i* S	**Sn**	**20 08 57.5**	**-5.7**
AKUM				IAML		20 09 11.0	
	comp=N,21nm,1.4s						
AKUM				IAML		20 09 12.0	
	comp=E,15nm,1.0s						
KEPZ	**Antalya-Kepez**	**6.95**	**65**	*i* P	**Pn**	**20 08 15.6**	**+1.8**
KEPZ				*i* S	**Sn**	**20 09 24.8**	**-6.8**
KEPZ				IAML		20 09 30.0	
	comp=E,5.7nm,0.8s						
KEPZ				IAML		20 09 46.0	
	comp=N,5.3nm,0.8s						
ERMK	**Ermenek**	**7.87**	**70**	*i* P	**Pn**	**20 08 27.4**	**+0.8**
BRTR	**Keskin Array B**	**9.63**	**52**	Pn	**Pn**	**20 08 52.5**	**+1.7**
	comp=N,0.1nm,0.3s,baz=241,slow=15,SNR=2.1						
MMAI	**Mount Meron Ar**	**9.81**	**94**	Pn	**Pn**	**20 08 52.4**	**-0.7**
	comp=N,1.6nm,0.3s,baz=293,slow=11,SNR=13						
MMAI				Sn	**Sn**	**20 10 37.4**	**-4.7**
	comp=N,1.0nm,0.3s,baz=274,slow=20,SNR=2.7						
EIL	**Elat**	**10.56**	**112**	Pn	**Pn**	**20 09 04.5**	**+1.2**
	comp=N,0.5nm,0.3s,baz=356,slow=7.9,SNR=9.3						
EIL				Sn	**Sn**	**20 10 55.4**	**-4.9**
	comp=N,0.3nm,0.3s,baz=42,slow=12,SNR=2.0						
VRAC	**Vranov**	**15.96**	**343**	LR	LR	20 17 55.1	
	comp=N,45nm,18.6s,baz=180,slow=43						
GERES	**GERESS Array B**	**16.39**	**336**	Pn	**P**	**20 10 25.1**	**+0.8**
	comp=N,0.1nm,0.3s,baz=137,slow=13,SNR=6.5						
HFS	**Hagfors**	**26.73**	**349**	P	**P**	**20 12 09.4**	**-0.9**
	comp=N,1.3nm,0.6s,baz=157,slow=7.7,SNR=5.8						
FINES	**FINESS Array B**	**27.27**		P	**P**	**20 12 13.7**	**-1.5**
	comp=N,0.5nm,0.6s,baz=177,slow=11,SNR=4.0						
NOA	**NORSAR Array B**	**28.01**	**347**	P	**P**	**20 12 20.4**	**-1.5**
	comp=N,0.3nm,0.7s,baz=150,slow=9.8,SNR=2.4						
EKA	**Eskdalemuir Ar**	**28.14**	**327**	P	**P**	**20 12 23.0**	**0.0**
	comp=N,0.4nm,0.5s,baz=118,slow=9.0,SNR=1.5						
ARCES	**ARCESS Array B**	**35.37**	**1**	P	**P**	**20 13 25.1**	**-1.1**
	comp=N,2.7nm,1.0s,baz=189,slow=9.6,SNR=2.4						
MKAR	**Makanchi Array**	**45.27**	**56**	P	**P**	**20 14 48.9**	**+0.4**
	comp=N,0.7nm,0.5s,baz=270,slow=7.0,SNR=15						
ZALV	**Zalesovo Beam**	**46.49**	**46**	P	**P**	**20 14 57.8**	**-0.2**
	comp=N,0.7nm,0.3s,baz=266,slow=8.8,SNR=7.2						
SADO	**Sadowa**	**74.84**	**314**	LR	LR	20 51 17.5	
	comp=N,91nm,18.2s,baz=349,slow=36						
YKA	**Yellowknife Ar**	**77.96**	**342**	P	**P**	**20 18 28.9**	**+0.3**
	comp=N,0.1nm,0.4s,baz=34,slow=6.8,SNR=2.9						

*IDC **03** 20:14:31.7±1.5,24°.30S×179°.78E,h509km±16km, mb3.6/14,mb1 3.7/16,mb1mx3.5/32,mbtmp4.5/16,Error ellipse: s-maj=17.8km s-min=16.2km az=8.0*

*NEIC **03** 20:14:32.4±1.7,24°.33S±0°.10×179°.8E±0°.2,h526km±8km, mb4.3/21,Error ellipse: s-maj=21.5km s-min=13.8km az=87.0*

ISC 03 20:14:32.0±0.7,**24°.3S**±0°.1×**179°.8E**±0°.1,**h517**km,**n44**, σ1°.01/45,**mb4.2**/23,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.38**	**158**	P	**P**	**20 16 03.5**	**+0.3**
	74nm,0.3s,baz=47,slow=19,SNR=2.2						
MSVF	**Nonsavu**	**6.69**	**345**	P	**P**	**20 16 15.8**	**-0.2**
	0.8nm,0.3s,baz=180,slow=19,SNR=2.6						
EIDS	**Eidsvold**	**26.08**	**262**	P	**P**	**20 19 24.4**	**+0.3**
CTA	**Charters Tower**	**31.30**	**271**	P	**P**	**20 20 10.2**	**+0.5**
	12nm,0.5s,baz=93,slow=11,SNR=34						
CTAO	**Charters Tower**	**31.30**	**271**	P	**P**	**20 20 10.3**	**+0.5**
STKA	**Stephens Creek**	**34.43**	**249**	P	**P**	**20 20 36.0**	**0.0**
	1.9nm,0.5s,baz=92,slow=10.0,SNR=14						
STKA	**Stephens Creek**	**34.43**	**249**	IAmb	IAmb	20 20 36.5	
	comp=Z,0.7nm,0.7s						
PMG	**Port Moresby**	**34.45**	**290**	P	**P**	**20 20 36.8**	**+0.4**
	comp=Z,11nm,0.7s,baz=127,slow=18,SNR=2.7						
PMG	**Port Moresby**	**34.45**	**290**	IAmb	IAmb	20 21 00.3	
	comp=Z,17nm,1.0s						
COEN	**Coen**	**36.00**	**280**	P	**P**	**20 20 50.2**	**+0.9**
COEN				IAmb	IAmb	20 20 52.1	
	comp=Z,5.9nm,0.9s						
BBOO	**Buckleboo**	**39.15**	**247**	P	**P**	**20 21 13.9**	**-1.0**
BBOO				IAmb	IAmb	20 21 32.9	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**41.81**	**261**	P	**P**	**20 21 36.0**	**-0.4**
ASAR	**Alice Springs**	**41.81**	**261**	P	**P**	**20 21 36.0**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=99,slow=7.6,SNR=28						
ASAR	**Alice Springs**	**41.81**	**261**	P	**P**	**20 21 35.7**	**-0.7**
WR0	**Warramunga Arr**	**42.02**	**267**	P	**P**	**20 21 37.3**	**-0.8**
JOHN	**Johnston Islan**	**42.05**	**15**	P	**P**	**20 21 36.4**	**-1.7**
WB2	**Warramunga Arr**	**42.20**	**267**	P	**P**	**20 21 38.5**	**-0.9**
WB2				IAmb	IAmb	20 21 39.4	
	comp=Z,7.4nm,0.9s						
WB0	**Warramunga Arr**	**42.20**	**267**	P	**P**	**20 21 38.8**	**-0.7**
WB0				IAmb	IAmb	20 21 39.5	
	comp=Z,5.7nm,0.7s						
WB0				PcP	**PcP**	**20 23 19.8**	**-2.0**
WRA	**Warramunga Arr**	**42.21**	**267**	P	**P**	**20 21 38.4**	**-1.2**
	comp=Z,4.0nm,0.5s,baz=103,slow=8.1,SNR=68						
WRA				ScP	**ScP**	**20 26 25.8**	**+2.7**
	comp=Z,0.5nm,0.8s,baz=98,slow=4.1,SNR=7.6						
WRA	**Warramunga Arr**	**42.21**	**267**	P	**P**	**20 21 38.1**	**-1.5**
WRA				PcP	**pwP**	**20 23 19.3**	**+1.5**
JAY	**Jayapura**	**43.50**	**294**	P	**P**	**20 21 49.5**	**-0.2**
	comp=Z,12nm,0.7s,baz=136,slow=4.9,SNR=5.2						
FORT	**Forrest**	**46.03**	**250**	P	**P**	**20 22 07.6**	**-1.3**
MTN	**Manton Dam**	**47.31**	**275**	P	**P**	**20 22 17.8**	**-1.1**
FAKI	**Fak Fak**	**50.52**	**287**	P	**P**	**20 22 40.8**	**-1.9**
FITZ	**Fitzroy Crossi**	**50.63**	**266**	P	**P**	**20 22 43.4**	**0.0**
SIJI	**Sorong**	**52.38**	**289**	P	**P**	**20 22 56.1**	**-0.1**
	comp=Z,16nm,0.6s,baz=94,slow=7.0,SNR=15						
SOEI	**Soe**	**54.70**	**275**	P	**P**	**20 23 12.1**	**-0.7**
SOEI				IAmb	IAmb	20 23 22.8	
	comp=Z,13nm,0.8s						
BATI	**Baumata**	**55.08**	**274**	P	**P**	**20 23 16.1**	**+0.8**
	comp=Z,6.0nm,0.4s,baz=146,slow=1.5,SNR=4.8						
MORW	**Morawa**	**56.59**	**250**	P	**P**	**20 23 24.7**	**-0.9**
MORW				IAmb	IAmb	20 23 38.0	
	comp=Z,14nm,1.4s						
TOLI2	**Tolitoli**	**62.50**	**285**	P	**P**	**20 24 05.9**	**+0.6**
TOLI2				IAmb	IAmb	20 24 06.5	
	comp=Z,5.3nm,0.7s						
QSPA	**South Pole Qui**	**65.83**	**180**	P	**P**	**20 24 25.5**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=47,slow=1.3,SNR=8.6						
KKM	**Kota Kinabalu**	**68.84**	**287**	P	**P**	**20 24 45.5**	**+0.4**
KKM				IAmb	IAmb	20 24 57.8	
	comp=Z,22nm,1.5s						
KSM	**Kuching**	**72.00**	**280**	P	**P**	**20 25 03.7**	**0.0**
KSM				IAmb	IAmb	20 25 21.8	
	comp=Z,19nm,1.5s						
MJAR	**Matsushiro Arr**	**72.09**	**326**	P	**P**	**20 25 03.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=147,slow=5.8,SNR=4.1						
PETK	**Petropavlovsk-**	**79.40**	**347**	P	**P**	**20 25 44.4**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=140,slow=7.6,SNR=2.5						
USRK	**Ussuriysk Ar.**	**80.97**	**327**	P	**P**	**20 25 53.5**	**+1.3**
	comp=Z,0.6nm,0.4s,baz=158,slow=6.5,SNR=2.8						
USRK	**Ussuriysk Ar.**	**80.97**	**327**	P	**P**	**20 25 53.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**89.49**	**290**	P	**P**	**20 26 36.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=149,slow=1.7,SNR=5.1						
TXAR	**Lajitas Array**	**90.77**	**58**	P	**P**	**20 26 40.7**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=215,slow=7.3,SNR=10						
ARCES	**ARCESS Array B**	**132.20**	**348**	PKP	**PKPdf**	**20 32 45.8**	**-0.4**
	comp=Z,1.7nm,1.0s,baz=60,slow=2.2,SNR=1.3						
FINES	**FINESS Array B**	**138.72**	**341**	PKhKP	PKPpre	20 32 48.8	
	comp=Z,0.7nm,0.7s,baz=46,slow=4.0,SNR=3.7						
FINES				PKP	**PKPdf**	**20 32 58.6**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=89,slow=5.8,SNR=4.5						
AKASG	**Malin Array Be**	**145.17**	**327**	PKPbc	**PKPdf**	**20 33 10.3**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=35,slow=3.2,SNR=5.7						
BRTR	**Keskin Array B**	**147.65**	**307**	PKPbc	**PKPbc**	**20 33 17.5**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=133,slow=5.2,SNR=4.1						
CLL	**Collm**	**151.14**	**343**	*i* PKPbc	**PKPbc**	**20 33 26.0**	**-0.3**

*NEIC **03** 20:15:24.1±2.8,31°.89S±0°.08×179°.8E±0°.1,h351km±6km, mb4.2/27,Error ellipse: s-maj=18.5km s-min=10.2km az=107.0*

*NOU **03** 20:15:25.7,31°.99S×179°.79W,h375km,mb4.3,Kermadec Islands Region*

*WEL **03** 20:15:26.3±0.6,32°.8S±0°.8×17°.9W±2°.0,h363km±7km, M4.8/30,mB5.3/30,ML5.8/5,MLv5.6/20,Mw(mB)4.7/30, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6*

*IDC **03** 20:15:26.6±1.2,31°.66S×179°.90E,h370km±10km,mb3.6/9, mb1 3.8/12,mb1mx3.6/33,mbtmp4.4/12,Error ellipse: s-maj=15.4km s-min=14.2km az=83.0*

ISC 03 20:15:25.4±0.4,**31°.83S**±0°.05×**179°.81E**±0°.07,**h363**km, **n182**,σ1°.69/215,**mb4.1**/21,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.22**	**38**	P	**Pn**	**20 16 26.6**	**-1.2**
GLKZ				S	**S**	**20 17 16.1**	**-1.9**
RAO	**Raoul Island**	**3.23**	**38**	P	**Pn**	**20 16 27.4**	**-0.5**
	80nm,0.3s,baz=311,slow=20,SNR=2.6						
RA

LTZ	Lake Taylor	12.46	207			P	20 18 10.5	-0.9
OXZ	Oxford	13.02	206			P	20 18 17.1	-0.4
MQZ	McQueen's Vall	13.13	203	P		P	20 18 16.8	-1.9
RPZ	Rata Peaks	13.72	208	P		P	20 18 25.0	-0.3
	3.7nm,0.3s,baz=343,slow=2.6,SNR=11							
RPZ				S		S	20 20 48.6	-5.7
	5.3nm,0.3s,baz=27,slow=16,SNR=14							
RPZ	Rata Peaks	13.72	208			P	20 18 24.8	-0.4
FOZ	Fox Glacier	14.09	211	P		P	20 18 27.1	-2.2
MSVF	Nonsavu	14.13	353	P		P	20 18 30.1	0.0
	0.4nm,0.3s,baz=163,slow=17,SNR=3.3							
MSVF	Nonsavu	14.13	353	P		P	20 18 28.9	-1.2
MSVF	Nonsavu	14.13	353	P		P	20 18 30.9	+0.8
LBZ	Lake Benmore	14.63	208	P		P	20 18 32.7	-2.5
OUENC	Ouen Island, N	14.86	306	P		Pn	20 18 41.0	+0.7
ODZ	Otahua Downs	15.00	206	P		P	20 18 39.1	-0.2
YATNC	Mamie plateau,	15.07	307	P		Pn	20 18 45.7	+2.9
	26nm,1.1s							
DZM	Mont Dzumac	15.37	306	P		Pn	20 18 45.8	-0.5
	0.8nm,0.3s,baz=163,slow=21,SNR=7.7							
WKZ	Wanaka	15.47	210	P		P	20 18 42.9	-1.5
MLZ	Mavora Lakes	16.29	211	P		P	20 18 52.0	-1.1
WHZ	Wether Hill Ro	16.78	210	P		P	20 18 57.0	-1.4
WHZ				IAmb		IAmb	20 19 01.8	
	comp=Z,38nm,1.3s							
AFI	Afiamalu	19.43	25	P		P	20 19 26.4	-0.6
AFI	Afiamalu	19.43	25	P		P	20 19 27.4	+0.4
CAN	Canberra	25.85	254	P		P	20 20 27.1	+1.7
CAN				IAmb		IAmb	20 20 55.8	
	comp=Z,33nm,1.4s							
TAU	Tasmania Unive	27.93	237	P		P	20 20 45.6	+2.1
TAU				IAmb		IAmb	20 20 54.0	
	comp=Z,21nm,1.2s							
TOO	Toolangi	28.69	249	P		P	20 20 51.8	+1.5
TOO				IAmb		IAmb	20 21 07.2	
	comp=Z,31nm,1.6s							
KNTN	Kanton	29.99	17	P		P	20 21 01.5	-0.3
KNTN	Kanton	29.99	17	P		P	20 21 01.7	-0.2
CTA	Charters Tower	32.23	283	P		P	20 21 22.9	+1.5
	comp=Z,5.9nm,0.3s,baz=104,slow=10,SNR=14							
CTAO	Charters Tower	32.23	283	P		P	20 21 22.3	+0.9
CTAO				IAmb		IAmb	20 21 23.8	
	comp=Z,10.0nm,0.9s							
STKA	Stephens Creek	32.35	260	P		P	20 21 24.3	+2.0
	comp=Z,4.4nm,0.5s,baz=101,slow=13,SNR=13							
STKA	Stephens Creek	32.35	260	P		P	20 21 24.6	+2.3
BBOO	Buckleboo	36.79	257	P		P	20 22 00.8	+0.8
BBOO				IAmb		IAmb	20 22 10.4	
	comp=Z,18nm,1.2s							
RABL	Rabaul	37.81	311	P		P	20 22 10.3	+1.8
COEN	Coen	37.92	289	P		P	20 22 10.6	+1.1
COEN				IAmb		IAmb	20 22 11.3	
	comp=Z,4.2nm,0.9s							
AS31	Alice Springs	41.19	270	P		P	20 22 36.0	-0.1
ASAR	Alice Springs	41.19	270	P		P	20 22 36.9	+0.7
	comp=Z,1.7nm,0.7s,baz=108,slow=7.7,SNR=10							
ASAR				ScP		ScP	20 27 41.2	-0.7
	comp=Z,0.6nm,0.7s,baz=114,slow=4.1,SNR=6.5							
ASAR				S		S	20 28 20.1	-2.0
	comp=Z,0.5nm,1.1s,baz=116,slow=15,SNR=4.0							
ASAR	Alice Springs	41.19	270	P		P	20 22 35.8	-0.4
KWAJ	Kwajalein Atol	42.06	342	P		P	20 22 42.8	-0.2
WR0	Warramunga Arr	42.13	275	P		P	20 22 44.1	+0.3
WB2	Warramunga Arr	42.30	275	P		P	20 22 44.8	-0.3
WRA	Warramunga Arr	42.31	275	P		P	20 22 45.4	+0.2
	comp=Z,2.0nm,0.5s,baz=111,slow=8.1,SNR=15							
WRA				S		S	20 28 34.0	-4.4
	comp=Z,0.7nm,1.0s,baz=123,slow=12,SNR=3.7							
WRA	Warramunga Arr	42.31	275	P		P	20 22 45.1	0.0
WB0	Warramunga Arr	42.34	275	P		P	20 22 45.6	+0.2
WB0				IAmb		IAmb	20 22 47.7	
	comp=Z,4.9nm,0.9s							
FORT	Forrest	43.88	257	P		P	20 22 57.9	+0.5
FORT				IAmb		IAmb	20 22 59.4	
	comp=Z,11nm,0.8s							
SBA	Scott Base	46.48	184	P		P	20 23 20.1	+3.2
SBA				IAmb		IAmb	20 23 23.2	
	comp=Z,6.3nm,1.2s							
VNDA	Vanda	46.49	185	P		P	20 23 18.6	+1.6
	comp=Z,0.5nm,0.5s,baz=354,slow=6.7,SNR=5.8							
VNDA	Vanda	46.49	185	P		P	20 23 18.7	+1.6
FITZ	Fitzroy Crossi	50.51	272	P		P	20 23 48.7	+0.5
CASY	Casey	52.99	208	P		P	20 24 04.8	-0.8
CASY				IAmb		IAmb	20 24 06.5	
	comp=Z,5.8nm,0.9s							
MORW	Morawa	54.34	255	P		P	20 24 15.2	-0.7
MORW				IAmb		IAmb	20 24 21.7	
	comp=Z,6.5nm,0.9s							
QSPA	South Pole Qui	58.28	180	P		P	20 24 45.1	+2.1
	comp=Z,22nm,0.7s,baz=38,slow=3.6,SNR=74							
QSPA	South Pole Qui	58.28	180	P		P	20 24 45.0	+2.1
QSPA				IAmb		IAmb	20 24 45.9	
	comp=Z,27nm,0.9s							
QSPA				PcP		PcP	20 25 31.0	+1.4
BELA	Belgrano 2	68.61	173	P		P	20 25 50.4	+0.8
BELA				IAmb		IAmb	20 25 51.2	
	comp=Z,11nm,0.8s							
SNAA	Sanae	76.77	179	P		P	20 26 37.9	+0.7
SNAA	Sanae	76.77	179	PKiKP		PKiKP	20 32 16.6	+0.3
SNAA	Sanae	76.77	179	P		P	20 26 38.0	+0.8
SNAA				IAmb		IAmb	20 26 38.8	
	comp=Z,7.8nm,1.0s							
VNA3	Neumayer Olymp	76.99	177	P		P	20 26 39.2	+0.8
VNA2	Neumayer--Watz	77.40	178	P		P	20 26 41.8	+1.1
	baz=182,slow=4.8							
VNA2	Neumayer--Watz	77.40	178	PKiKP		PKiKP	20 32 18.4	+1.2
VNA2	Neumayer--Watz	77.40	178	pP		pP	20 27 56.9	-4.9
VNA1	Neumayer--Stat	77.64	177	P		P	20 26 43.0	+1.1
PETK	Petropavlovsk-	86.75	347	P		P	20 27 28.9	+0.2
	comp=Z,3.9nm,0.8s,baz=133,slow=6.3,SNR=5.6							
NVAR	Mina Array Bea	90.57	44	P		P	20 27 47.8	+0.6
	comp=Z,0.4nm,0.7s,baz=224,slow=5.0,SNR=2.9							
HHC	Hu-ho-hao-te	95.89	315	*e*P		P	20 28 11.0	-0.5
HHC				pmax		pmax		
	comp=Z,9.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,150nm,6.6s							
ILAR	Eielson Array	99.75	14	P		Pdif	20 28 28.5	+0.5
	comp=Z,0.5nm,1.0s,baz=211,slow=5.1,SNR=2.1							
WMQ	Urumqi	112.64	308	*e*P		PKiKP	20 33 19.2	+0.2
MKAR	Makanchi Array	117.25	310	PKP		PKPdf	20 33 26.8	-0.9
	comp=Z,0.2nm,0.6s,baz=131,slow=2.5,SNR=4.3							
ZALV	Zalesovo Beam	117.85	318	PKP		PKPdf	20 33 26.8	-1.8
	comp=Z,0.3nm,0.3s,baz=93,slow=2.9,SNR=2.7							
KURK	Kurchatov	120.68	314			PKPdf	20 33 33.2	-0.9
KURBB	Kurchatov Arra	120.71	313	PKP		PKPdf	20 33 33.2	-0.9
	comp=Z,0.6nm,0.5s,baz=111,slow=1.6,SNR=7.2							
KURBB				SKP			20 36 32.1	
	comp=Z,0.4nm,0.5s,baz=108,slow=0.8,SNR=5.5							
BVAR	Borovoye Array	126.11	315	PKP		PKPdf	20 33 44.4	0.0
	comp=Z,0.9nm,0.6s,baz=197,slow=9.3,SNR=7.6							
KMBO	Kilima Mbogo	131.72	235	SKPbc		SKPbc	20 36 46.7	-1.0
	comp=Z,0.5nm,0.6s,baz=62,slow=4.8,SNR=4.8							
GEYT	Alibeck	132.45	294	SKPbc		SKPbc	20 36 48.5	-0.7
	comp=Z,2.2nm,0.7s,baz=355,slow=3.2,SNR=3.9							
ARU	Arti	132.98	320	PKP		PKiKP	20 33 58.0	-0.6
	comp=Z,0.6nm,0.4s,baz=182,slow=8.6,SNR=4.3							
ARU				SKPbc		SKPbc	20 36 49.8	-0.5
	comp=Z,1.5nm,0.7s,baz=258,slow=1.8,SNR=7.7							
SPA0	Spitsbergen Ar	132.99	355	*e*Pdif		Pdif	20 30 56.8	+1.1
SPA0				*e*PKPdf		PKiKP	20 33 58.0	-0.1
SPITS	Spitsbergen Ar	132.99	355	PKP		PKiKP	20 33 57.5	-0.6
	comp=Z,1.5nm,0.5s,baz=128,slow=9.3,SNR=5.7							
HOPEN	Hopen	133.71	352	*e*PKPdf		PKiKP	20 33 59.8	+0.2
BJO1	Bjornoya	136.20	353	*e*Pdif		Pdif	20 31 10.8	+0.9
HAMF	Hammerfest	138.97	348	*e*Pdif		Pdif	20 31 23.0	+0.7
ARA0	ARCESS Array S	139.56	346	*e*Pdif		Pdif	20 31 25.7	+0.7
ARCES	ARCESS Array B	139.56	346	PKhKP		PKPpre	20 34 02.2	
	comp=Z,2.1nm,0.9s,baz=58,slow=1.5,SNR=9.9							
ARCES				PKP		PKPdf	20 34 10.2	+1.0
	comp=Z,1.8nm,0.7s,baz=72,slow=1.9,SNR=6.9							
ARCES				SKPbc		SKPbc	20 37 09.5	-0.2
	comp=Z,2.9nm,1.0s,baz=46,slow=3.9,SNR=4.3							
BELG	Belogornoye	139.91	315	SKPbc		SKPbc	20 37 10.9	-0.2
	comp=Z,13nm,0.9s,baz=155,slow=5.5,SNR=7.0							
KTK1	Kautokeino	140.45	347	*e*Pdif		Pdif	20 31 30.4	+1.5
KTK1				*e*PKPdf		PKiKP	20 34 12.2	-1.3
JMIC	Jan Mayen	140.53	4	*e*Pdif		Pdif	20 31 29.2	-0.1
TRO	Tromso	140.65	350	*e*Pdif		Pdif	20 31 29.9	+0.1
TRO				*e*PKPdf		PKiKP	20 34 12.4	-1.4
STEI	Steigen	142.75	350	*e*Pdif		Pdif	20 31 39.7	+0.5
STEI				*e*PKPdf		PKPdf	20 34 13.8	-1.1
FAUS	Fauske	143.26	350	*e*Pdif		Pdif	20 31 38.8	-2.7
FAUS				*e*PKPdf		PKiKP	20 34 17.5	-1.7
NBB30	Finnes	143.86	351	*e*PKPdf		PKPdf	20 34 17.9	+1.0
FIA1	FINESS Array S	145.80	338			PKPdf	20 34 20.8	+0.4
FINES	FINESS Array B	145.80	338	PKPbc		PKPbc	20 34 21.1	-0.6
	comp=Z,13nm,0.6s,baz=50,slow=4.4,SNR=115							
FINES	FINESS Array B	145.80	338			PKPdf	20 34 20.9	+0.5
MTSE	Matsula	148.60	336	*e*P		PKPbc	20 34 28.4	-0.9
DOMB	Dombas	149.19	351	*e*PKPbc		PKPbc	20 34 30.5	-0.2
AKN	Aaknes	149.29	353	*e*PKPbc		PKPbc	20 34 31.3	+0.3
IDID	Didziasalis	149.82	329	*e*P		PKPbc	20 34 32.3	-0.1
NOA	NORSAR Array B	149.84	349	PKPbc		PKPbc	20 34 31.8	-0.5
	comp=Z,2.8nm,0.7s,baz=17,slow=4.2,SNR=16							
NOA				PKPab		PKPab	20 34 38.2	-1.0
	comp=Z,2.2nm,0.6s,baz=23,slow=3.2,SNR=13							
IIGN	Ignalina	150.03	329	*e*P		PKPbc	20 34 33.0	+0.1
FOO	Floro	150.03	355	*e*PKPbc		PKPbc	20 34 32.7	0.0
NC602	NORSAR Array S	150.07	348	*e*PKPdf		PKPdf	20 34 27.9	+0.5
NC602				*e*PKPbc		PKPbc	20 34 31.9	-0.9
SKAR	Skarslia	150.60	351	*e*PKPdf		PKPdf	20 34 28.6	+0.3
SKAR				*e*PKPbc		PKPbc	20 34 34.1	0.0
PABE	Paberze	150.87	331	*e*P		PKPbc	20 34 34.5	-0.3
OSL	Oslo	150.96	349	*e*PKPdf		PKPdf	20 34 28.9	+0.2
ASK	Askoy	151.12	354	*e*PKPdf		PKPdf	20 34 29.5	+0.5
ASK				*e*PKPbc		PKiKP	20 34 36.3	+0.6
BER	Bergen	151.21	354	*e*PKPdf		PKPdf	20 34 29.4	+0.3
BER				*e*PKPbc		PKiKP	20 34 36.0	+0.2
AKASG	Malin Array Be	151.23	320	PKPbc		PKPbc	20 34 35.4	-0.4
	comp=Z,0.9nm,0.5s,baz=69,slow=2.3,SNR=11							
KONO	Kongsberg	151.42	350	*e*PKPdf		PKPdf	20 34 30.5	+1.0
KONO				*e*PKPbc		PKiKP	20 34 36.1	-0.2
BRTR	Keskin Array B	151.57	296	PKPbc		PKPbc	20 34 37.1	-0.1
	comp=Z,0.4nm,0.5s,baz=133,slow=3.4,SNR=2.5							
BLS5	Blasjo	152.05	353	*e*PKPdf		PKPdf	20 34 30.1	-0.4
BLS5				*e*PKPab		PKPab	20 34 48.2	-0.2
HOMB	Homborsund	152.91	350	*e*PKPbc		PKiKP	20 34 39.5	+0.1
LIC	Lamto	154.12	169	*e*PKP1		PKPab	20 34 58.6	+0.2
	comp=Z,9.2nm,0.3s							
TIC	Toumodi	154.54	169	*e*PKP1		PKPab	20 34 58.8	-1.4
DBIC	Dimbokro	154.59	169	PKPab		PKPab	20 35 01.1	+0.8
	comp=Z,3.0nm,0.6s,baz=190,slow=5.9,SNR=4.5							
TORD	Torodi Ar. Bea	161.32	186	PKPab		PKPab	20 35 30.6	+1.1
	comp=Z,2.0nm,0.5s,baz=168,slow=3.4,SNR=22							
ESDC	Sonseca Array	171.60	20	PKPab		PKPab	20 36 13.9	-0.6
	comp=Z,0.3nm,0.8s,baz=324,slow=7.3,SNR=4.2							

*IDC **03** 20:16:13.8±7.2,34.˚50N×23.˚82E,h0km,mb3.6/4, mb1 3.5/5,mb1mx3.2/39,mbtmp3.5/5,ML2.0/1,Error ellipse: s-maj=140.6km s-min=46.5km az=19.0*
*ATH **03** 20:16:18.1,34.˚37N×23.˚78E,h37km±7km,ML3.1/5, Error ellipse: s-maj=7.5km s-min=3.2km az=16.0*
*THE **03** 20:16:19.0,34.˚44N×23.˚65E,h14km±1km,ML3.2/3, Error ellipse: s-maj=1.9km s-min=1.2km az=93.0*

ISC 03 20:16:15.9±2.6,34.˚4N±0.˚1×23.˚68E±0.˚09,h15km±11km, n21,σ1ᵗ27/30,mb3.7/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.57	36	P	Pn	20 16 29.5	-0.1
GVD				S	Sn	20 16 37.3	-1.5
GVD				AML	AML	20 16 41.0	
	comp=N,6469μm,0.4s						
GVD				AML	AML	20 16 41.1	
	comp=E,4811μm,0.4s						
GVD	Gavdhos	0.57	36	P	Pn	20 16 29.5	-0.1
GVD				S	Sn	20 16 37.3	-1.5
	comp=E,3μm,0.4s						
GVDS	Gavdos	0.58	35	P	Pn	20 16 29.5	-0.1
IMMV	Iera Moni Meta	1.11	13	P	Pg	20 16 37.9	+0.5
IMMV				S	Sn	20 16 53.2	+1.1
IMMV				AML	AML	20 16 57.3	
	comp=E,2153μm,0.6s						
IMMV				AML	AML	20 16 58.6	
	comp=N,2222μm,0.6s						
IMMV	Iera Moni Meta	1.11	13	P	Pb	20 16 37.7	+0.8
IMMV				S	Sn	20 16 53.2	+1.1
	comp=N,1μm,0.6s						
VAM	Vamos	1.12	22	P	Pn	20 16 37.9	+0.9
VAM				S	Sn	20 16 53.5	+1.3
VAM				AML	AML	20 17 00.2	
	comp=N,1660μm,0.8s						
VAM				AML	AML	20 17 02.1	
	comp=E,2229μm,0.7s						
VAM	Vamos	1.12	22	P	Pn	20 16 38.0	+0.9
VAM				S	Sn	20 16 53.5	+1.3
SIVA	Sivas	1.13	55	P	Pn	20 16 38.9	+1.7
SIVA				S	Sn	20 16 52.0	-0.5
SIVA				AML	AML	20 17 03.4	
	comp=N,2937μm,0.6s						
SIVA				AML	AML	20 17 05.1	
	comp=E,3372μm,0.8s						
SIVA	Sivas	1.13	55	P	Pn	20 16 38.9	+1.7
SIVA				S	Sn	20 16 54.5	+2.0
	comp=E,2μm,0.6s						
PRNS	Prines Rethymn	1.20	34	P	Pg	20 16 39.2	+0.1
IDI	Anoyia	1.35	47	P	Pg	20 16 41.7	-0.2
IDI				S	Sg	20 16 58.5	-1.1
IDI				AML	AML	20 17 06.6	
	comp=E,437μm,0.5s						
IDI				AML	AML	20 17 08.3	
	comp=N,342μm,0.6s						
IDI	Anoyia	1.35	47	P	Pg	20 16 41.8	-0.2
NPS	Neapolis	1.82	60	P	Pb	20 16 49.1	+0.1
NPS	Neapolis	1.82	60	P	Pb	20 16 49.1	+0.1
ZKR	Zakros	2.22	70	P	Pn	20 16 54.6	+2.5
ZKR	Zakros	2.22	70	P	Pn	20 16 54.6	+2.5
BRTR	Keskin Array B	9.58	53	Pn	Pn	20 18 33.1	-0.3
	comp=N,0.0nm,0.3s,baz=232,slow=14,SNR=2.1						
HFS	Hagfors	26.59	349	P	P	20 21 52.5	-0.8
	comp=N,1.0nm,0.7s,baz=143,slow=10,SNR=4.2						
KURBB	Kurchatov Arra	42.56	50	P	P	20 24 09.5	-1.4
	comp=N,0.3nm,0.6s,baz=276,slow=8.6,SNR=2.9						
MKAR	Makanchi Array	45.22	56	P	P	20 24 31.8	-0.7
	comp=N,0.9nm,0.7s,baz=274,slow=8.3,SNR=8.9						
ZALV	Zalesovo Beam	46.43	46	P	P	20 24 40.1	-1.7
	comp=N,0.3nm,0.3s,baz=260,slow=7.2,SNR=3.5						

IDC 03 20:34:42.4±3.5,30.˚25S×178.˚36W,h0km,mb3.5/2, mb1 3.8/3,mb1mx3.6/29,mbtmp3.7/3,ML3.6/1,Error ellipse: s-maj=72.6km s-min=55.2km az=98.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.83	204	Pn	Pn	20 36 51.2	-0.1
	0.7nm,0.3s,baz=298,slow=23,SNR=1.6						
ASAR	Alice Springs	42.80	267	P	P	20 42 42.0	-0.2
	0.5nm,0.8s,baz=104,slow=7.2,SNR=4.9						
WRA	Warramunga Arr	43.78	272	P	P	20 42 50.0	-0.1
	0.6nm,0.6s,baz=112,slow=7.5,SNR=7.1						
FINES	FINESS Array B	144.89	340	PKP	PKPbc	20 54 20.2	+0.3
	1.1nm,0.9s,baz=57,slow=5.1,SNR=5.2						

*IDC **03** 20:35:00.8±0.6,37.˚15N×142.˚39E,h0km,mb3.8/16, mb1 4.1/22,mb1mx3.8/74,mbtmp3.9/22,ML3.5/5,MS3.3/7, Ms1 3.3/7,ms1mx2.9/55,Error ellipse: s-maj=18.2km s-min=13.2km az=125.0*
*NIED **03** 20:35:01.2,37.˚22N×142.˚37E,h14km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.26; $M_{\theta\theta}$0.25; $M_{\phi\phi}$0.01; $M_{r\theta}$-0.12; $M_{\theta\phi}$-0.23; $M_{\phi r}$1.46; Fault plane solution: $M_0$1.49000×10^{15} NP1: ϕ_s173.00000°,δ87.00000°,λ-80.00000°. NP2: ϕ_s281.00000°,δ10.00000°,λ-162.00000°.*
*JMA **03** 20:35:01.2±0.3,37.˚22N×142.˚37E,h14km±4km,M4.3*
*NEIC **03** 20:35:03.7±2.0,37.˚16N±0.˚06×142.˚40E±0.˚09,h17km±4km, mb4.5/40,Error ellipse: s-maj=11.1km s-min=7.4km az=116.0*

ISC 03 20:35:01.9±0.5,37.˚15N±0.˚05×142.˚36E±0.˚05,h9km,n111, σ1ᵗ71/105,mb4.4/34,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	1.21	281	P	Pb	20 35 23.2	-1.8
JFK				*e*S	Sb	20 35 38.9	-1.8
ONAJ	Iwakimizuishiy	1.25	268	P	Pn	20 35 24.0	-1.6
JMST	Minamisoumatoc	1.31	296	P	Pn	20 35 24.3	-2.0
JMST				*e*S	Sb	20 35 41.1	-2.4
JIKH	Ishinomakikobu	1.36	329	P	Pn	20 35 25.0	-2.1
JMM	Marumori	1.44	300	P	Pn	20 35 26.4	-1.7
JMM				*e*S	Sn	20 35 44.5	-2.7
JMM	Marumori	1.44	300	Pn	Pn	20 35 26.3	-1.9
JIO	Ouri	1.53	329	P	Pn	20 35 27.6	-1.8
JFT	Otama	1.66	283	P	Pn	20 35 30.7	-0.5
JOU	Okura	1.81	313	P	Pn	20 35 32.3	-1.0
JOU				S	Sn	20 35 53.7	-2.7
JYT	Yasato	1.97	243	Pn	Pn	20 35 35.7	+0.3
JMK	Ichinoseki	2.01	334	P	Pn	20 35 35.8	-0.2
JYS	Shirataka	2.11	301	P	Pn	20 35 37.1	-0.3
JFY	Yanaizu	2.14	278	P	Pn	20 35 37.5	-0.3
MJAR	Matsushiro Arr	3.39	261	Pn	Pn	20 35 55.9	+1.0
	2.7nm,0.3s,baz=84,slow=14,SNR=63						
MJAR				Sn	Sn	20 36 36.6	+1.3
	1.9nm,0.3s,baz=92,slow=28,SNR=3.9						
MJAR				LR	LR	20 37 29.2	
	comp=Z,610nm,18.5s,baz=85,slow=44						
MJAR	Matsushiro Arr	3.39	261		Pn	20 35 55.5	+0.5
MAT	Matsushiro	3.39	261	P	Pn	20 35 56.0	+1.0
MAT				S	Sn	20 36 34.4	-0.9
JTM	Tenmabayashi	3.77	345	Pn	Pn	20 36 02.1	+1.9
JSG	Sagara	4.20	235	Pn	Pn	20 36 08.6	+2.5
JGF	Kuroka	4.33	251	Pn	Pn	20 36 10.3	+2.5
JHJ2	Mitsune	4.54	208	Pn	Pn	20 36 09.3	-1.4
JHJ	Hachijo jima 2	4.54	208	Pn	Pn	20 36 11.3	+0.4
	34nm,0.3s,baz=38,slow=18,SNR=16						
JHJ				Sn	Sn	20 36 59.8	-4.0
	88nm,0.3s,baz=71,slow=22,SNR=8.8						
INU	Inuyama	4.68	249			20 36 14.4	+1.7
ERM	Erimo	4.90	7	Pn	Pn	20 36 14.9	-0.7
JEW	Eniwo	5.73	353	Pn	Pn	20 36 27.4	+0.3
JWT	Wachi	5.93	254	Pn	Pn	20 36 32.1	+2.2
ASAJ	Asahikawa	6.96	1	Pn	Pn	20 36 44.2	+0.2
	1.4nm,0.3s,baz=216,slow=11,SNR=3.0						
ASAJ				Sn	Sn	20 37 57.4	-5.9
	0.4nm,0.3s,baz=345,slow=20,SNR=1.5						
JKA	Kamikawa-asahi	6.96	1		Pn	20 36 44.2	+0.2
JMN	Monobe	7.72	246	Pn	Pn	20 36 56.5	+2.0
JHS	Saijyo	7.79	257	Pn	Pn	20 36 58.7	+3.2
JCJ	Chichijima	10.03	181	Pn	Pn	20 37 26.1	0.0
	5.4nm,0.3s,baz=306,slow=18,SNR=5.2						
JCJ				Sn	Sn	20 39 11.7	-7.0
	8.5nm,0.3s,baz=248,slow=19,SNR=1.6						
JNU	Nakatsue	10.23	250	Pn	Pn	20 37 29.2	+0.3
	0.1nm,0.3s,baz=36,slow=8.7,SNR=2.0						
JNU				Sn	Sn	20 39 11.9	-12
	0.2nm,0.3s,baz=300,slow=20,SNR=2.8						
JNU				LR	LR	20 41 39.5	
	comp=Z,135nm,19.7s,baz=59,slow=39						
USRK	Ussuriysk Ar.	10.56	315	Pn	Pn	20 37 37.6	+4.2
	baz=130,slow=14,SNR=6.4						
USRK	Ussuriysk Ar.	10.56	315		Pn	20 37 36.7	+3.3
USA0B	Ussuriysk Arra	10.56	315	Pn	Pn	20 37 37.2	+3.8
JTU	Tsushima	10.85	260	Pn	Pn	20 37 41.5	+4.2
KSRS	Korea Array	11.51	276	Pn	Pn	20 37 47.9	+1.6
	0.1nm,0.3s,baz=89,slow=13,SNR=2.0						
KSRS				LR	LR	20 42 03.3	
	comp=Z,135nm,19.3s,baz=100,slow=36						
KLR	Kul'dur	14.32	331	LR	LR	20 43 42.7	
	comp=Z,93nm,19.8s,baz=136,slow=36						
PETK	Petropavlovsk-	19.21	29	LR	LR	20 46 21.4	
	comp=Z,38nm,19.9s,baz=184,slow=35						
SEY	Seymchan	26.54	10	P	P	20 40 40.5	+0.8
	1.2nm,0.6s,baz=197,slow=9.7,SNR=9.6						
H11N2	WAKE ISLAND Hy	27.56	122	T	T	21 09 48.5	
	baz=315,slow=75,SNR=167						
H11N1	WAKE ISLAND Hy	27.57	122	T	T	21 09 46.3	
	baz=315,slow=75,SNR=143						
H11N3	WAKE ISLAND Hy	27.58	122	T	T	21 09 45.0	
	baz=315,slow=75,SNR=135						
H11S1	WAKE ISLAND Hy	28.29	124	T	T	21 10 37.8	
	baz=317,slow=76,SNR=133						
H11S3	WAKE ISLAND Hy	28.29

comp=Z,1.7nm,0.8s,baz=312,slow=7.6,SNR=7.1
RES Resolute Bay 62.30 15 IAmb IAmb 20 45 24.8
comp=Z,1.9nm,0.8s
YKA Yellowknife Ar 63.33 30 P **P 20 45 31.1 +0.2**
comp=Z,0.6nm,0.7s,baz=304,slow=6.6,SNR=11
FIA1 FINESS Array S 69.06 333 P **P 20 46 06.9 -0.8**
FINES FINESS Array B 69.06 333 P **P 20 46 07.6 -0.1**
comp=Z,0.8nm,0.6s,baz=46,slow=6.0,SNR=3.3
FFC Flin Flon 73.19 33 P **P 20 46 33.1 +0.2**
FFC IAmb IAmb 20 46 34.8
comp=Z,8.7nm,1.4s
FCC Fort Churchill 73.56 27 P **P 20 46 34.7 -0.2**
NVAR Mina Array Bea 74.31 54 P **P 20 46 40.4 +0.4**
comp=Z,0.6nm,0.7s,baz=289,slow=4.5,SNR=4.1
FRB Frobisher Bay 76.48 14 P **P 20 46 52.0 +0.3**
comp=Z,3.3nm,0.7s,baz=339,slow=6.2,SNR=6.2
PDAR Pinedale Array 77.04 46 P **P 20 46 55.7 +0.1**
comp=Z,0.5nm,0.7s,baz=284,slow=3.6,SNR=5.4
GERES GERESS Array B 83.01 329 P **P 20 47 27.6 0.0**
comp=Z,0.1nm,0.4s,baz=27,slow=6.6,SNR=2.1
GERES GERESS Array B 83.01 329 P **P 20 47 27.4 -0.1**
TXAR Lajitas Array 89.45 53 P **P 20 47 59.8 +0.2**
comp=Z,0.2nm,0.5s,baz=270,slow=2.1,SNR=3.9
LPAZ La Paz 145.98 61 PKPbc **PKPdf 20 54 42.8 +0.3**
comp=Z,1.7nm,0.8s,baz=225,slow=2.9,SNR=6.1
LPAZ La Paz 145.98 61 **PKPbc 20 54 43.2 0.0**
H03N2 Juan Fernandez 146.28 96 T T 23 38 14.3
baz=291,slow=76,SNR=9.3
H03N3 Juan Fernandez 146.29 96 T T 23 38 09.4
baz=291,slow=76,SNR=8.3
H03N1 Juan Fernandez 146.30 96 T T 23 38 21.4
baz=291,slow=76,SNR=9.9

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*TUL **03** 20:54:00.8±1.6,36°.49N±0°.01×98°.15W±0°.03,h7km±6km, ML3.3,mb_Lg3.3/112(NEIC), Error ellipse: s-maj=3.3km s-min=1.7km az=87.0*
*NEIC **03** 20:54:00.8±1.4,36°.48N±0°.01×98°.13W±0°.04,h12km±5km, Error ellipse: s-maj=5.1km s-min=1.9km az=89.0*
*IDC **03** 20:54:01.9±1.9,36°.57N×98°.43W,h0km,mb1 3.5/3, mb1mx3.2/54,mbtmp3.2/3,ML3.2/3, Error ellipse: s-maj=25.8km s-min=14.3km az=99.0*
ISC 03 20:54:00.5±0.9, 36°.50N±0°.02×98°.15W±0°.03, h12km±6km, n109,σ0s89/103, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.13**	**88**		**Pg**	**20 54 04.0**	**+0.1**
CROK				Sg	**Sg**	**20 54 06.5**	**+0.3**
OK032	**Salt Plains WL**	**0.31**	**350**		**Pb**	**20 54 07.3**	**-0.6**
OK032				Sg	**Sg**	**20 54 11.2**	**+0.2**
GC02	**Grant County #**	**0.42**	**33**		**Pb**	**20 54 09.4**	**-0.5**
GC02				Sg	**Sb**	**20 54 15.6**	**-0.6**
KAN14	**Manchester OK**	**0.48**	**18**		**Pb**	**20 54 10.6**	**-0.3**
KAN14				Sg	**Sb**	**20 54 17.6**	**-0.3**
KAN10	**Anthony SW Sta**	**0.62**	**4**		**Pb**	**20 54 13.2**	**-0.1**
KAN05	**Bluff City Nor**	**0.65**	**20**		**Pb**	**20 54 13.7**	**0.0**
KAN05				Sg	**Sb**	**20 54 22.8**	**+0.1**
U32A	**Winter Ranch,**	**0.70**	**260**		**Pg**	**20 54 14.0**	**-0.1**
U32A				IAmb_Lg		20 54 22.6	
	comp=Z,222nm,0.8s						
U32A				Sg	**Sg**	**20 54 23.8**	**+0.5**
KAN01	**Argonia South**	**0.72**	**25**		**Pb**	**20 54 14.9**	**-0.1**
KAN01				Sg	**Sb**	**20 54 25.1**	**+0.3**
KAN08	**Anthony NE Sta**	**0.74**	**11**		**Pb**	**20 54 15.4**	**+0.1**
KAN08				Sg	**Sb**	**20 54 25.6**	**+0.3**
KAN13	**South Haven SW**	**0.74**	**46**		**Pb**	**20 54 15.2**	**-0.1**
KAN13				Sg	**Sb**	**20 54 25.5**	**+0.1**
KAN13				IAmb_Lg		20 54 25.7	
	comp=Z,322nm,1.1s						
KAN09	**Caldwell North**	**0.76**	**33**		**Pb**	**20 54 15.7**	**0.0**
KAN09				Sg	**Sb**	**20 54 26.3**	**+0.3**
KAN12	**Harper NE Stat**	**0.80**	**8**		**Pb**	**20 54 16.6**	**+0.2**
KAN12				Sg	**Sb**	**20 54 27.9**	**+0.6**
OK029	**Liberty Lake**	**0.90**	**141**		**Pb**	**20 54 17.9**	**-0.1**
OK029				Sg	**Sb**	**20 54 29.9**	**0.0**
BCOK	**Bluff Creek, N**	**0.95**	**153**		**Pb**	**20 54 18.2**	**-0.6**
BCOK				Sg	**Sb**	**20 54 31.1**	**-0.2**
OK025	**Westminster Rd**	**1.13**	**144**		**Pb**	**20 54 21.7**	**-0.2**
OK025				Sg	**Sb**	**20 54 36.9**	**+0.4**
OK031	**S. Brethren Rd**	**1.19**	**117**		**Pn**	**20 54 23.0**	**+0.1**
OK031				Sg	**Sb**	**20 54 38.5**	**+0.3**
QUOK	**Quay**	**1.21**	**105**		**Pb**	**20 54 23.2**	**0.0**
OKCFA	**Oklahoma City**	**1.22**	**152**		**Pn**	**20 54 23.4**	**+0.1**
OKCFA				Sg	**Sb**	**20 54 39.1**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.23**	**152**		**Pg**	**20 54 22.9**	**-1.3**
OKCSW				Sg	**Sb**	**20 54 39.6**	**+0.1**
OK030	**Cody Creek RV**	**1.24**	**117**		**Pb**	**20 54 23.6**	**-0.2**
OK030				Sg	**Sn**	**20 54 40.4**	**+0.1**
T35A	**Sooner Cattle**	**1.38**	**72**		**Pg**	**20 54 26.4**	**-0.5**
T35A				Sn	**Sn**	**20 54 44.8**	**+1.2**
FNO	**Franklin**	**1.38**	**154**		**Pn**	**20 54 25.6**	**+0.1**
FNO				Sn	**Sn**	**20 54 45.2**	**+1.5**
WMOK	**Wichita Mounta**	**1.83**	**197**	Pn	**Pn**	**20 54 32.7**	**+0.9**
WMOK				Sn	**Sb**	**20 54 57.6**	**+0.7**
X34A	**Smith Ranch, M**	**1.91**	**172**		**Pn**	**20 54 39.9**	**+1.0**
R32A	**Long Quarter,**	**1.97**	**347**		**Pn**	**20 54 35.8**	**-0.5**
CBKS	**Cedar Bluff**	**2.63**	**332**		**Pn**	**20 54 43.4**	**+0.6**
KSU1	**Kansas State U**	**2.87**	**25**		**Pn**	**20 54 46.7**	**+0.7**
KSU1				IAmb_Lg		20 55 34.4	
	comp=Z,56nm,0.8s						
X37A	**Clayton**	**2.96**	**129**		**Pn**	**20 54 47.3**	**0.0**
X37A				IAmb_Lg		20 55 39.7	
	comp=Z,145nm,1.0s						
U38A	**Gravette**	**3.03**	**90**		**Pn**	**20 54 48.5**	**+0.3**
Z35A	**Perchaven, San**	**3.25**	**167**		**Pn**	**20 54 51.5**	**+0.3**
AMTX	**Amarillo**	**3.30**	**242**		**Pn**	**20 54 51.6**	**-0.4**
AMTX				IAmb_Lg		20 55 49.1	
	comp=Z,113nm,0.8s						
HHAR	**Hobbs**	**3.40**	**92**		**Pn**	**20 54 53.9**	**+0.6**
HHAR				IAmb_Lg		20 55 56.0	
	comp=Z,58nm,0.7s						
W39A	**Magazine**	**3.77**	**109**		**Pn**	**20 55 00.7**	**+2.2**
W39A				IAmb_Lg		20 56 06.9	
	comp=Z,103nm,0.8s						
S39A	**Bolivar**	**4.03**	**71**		**Pn**	**20 55 02.9**	**+0.9**
S39A				IAmb_Lg		20 56 19.0	
	comp=Z,52nm,0.7s						
ABTX	**Abilene, Hawle**	**4.06**	**198**		**Pn**	**20 55 01.5**	**-1.0**
ABTX				IAmb_Lg		20 56 13.6	
	comp=Z,46nm,0.8s						
Z38A	**Mt. Pleasant**	**4.15**	**140**	Pn	**Pn**	**20 55 04.4**	**+0.9**
Z38A				IAmb_Lg		20 56 14.3	
	comp=Z,115nm,0.8s						
MIAR	**Mount Ida**	**4.21**	**116**		**Pn**	**20 55 03.7**	**-0.6**
MIAR				IAmb_Lg		20 56 20.0	
	comp=Z,69nm,0.8s						
N33A	**J Bar K, Exete**	**4.27**	**7**		**Pn**	**20 55 05.3**	**+0.1**
U40A	**Yellville**	**4.27**	**90**		**Pn**	**20 55 06.9**	**+1.6**
U40A				IAmb_Lg		20 56 16.9	
	comp=Z,75nm,0.9s						
KSCO	**Kaye Shedlock'**	**4.35**	**307**		**Pn**	**20 55 09.1**	**+2.6**
KSCO				IAmb_Lg		20 56 29.3	
	comp=Z,80nm,0.7s						
WHTX	**Lake Whitney,**	**4.53**	**173**	Pn	**Pn**	**20 55 09.9**	**+1.0**
MSTX	**Muleshoe**	**4.55**	**238**	Pn	**Pn**	**20 55 10.2**	**+0.9**
MSTX				IAmb_Lg		20 56 35.6	
	comp=Z,35nm,0.7s						
MGMO	**Mountain Grove**	**4.76**	**80**		**Pn**	**20 55 12.6**	**+0.6**
MGMO				IAmb_Lg		20 56 45.6	
	comp=Z,40nm,0.8s						
N35A	**Tabor**	**4.77**	**23**		**Pn**	**20 55 11.9**	**-0.3**
X40A	**Basin Creek Fa**	**4.78**	**113**		**Pn**	**20 55 13.9**	**+1.7**
X40A				IAmb_Lg		20 56 44.8	
	comp=Z,62nm,0.8s						
P38A	**Dawn**	**4.79**	**48**		**Pn**	**20 55 12.5**	**+0.1**
P38A				IAmb_Lg		20 56 43.0	
	comp=Z,76nm,0.8s						
BGNE	**Belgrade**	**4.90**	**360**	Pn	**Pn**	**20 55 15.5**	**+1.6**
BGNE				IAmb_Lg		20 56 49.5	
	comp=Z,93nm,0.8s						
WHAR	**Wooly Hollow**	**4.91**	**103**		**Pn**	**20 55 13.6**	**-0.4**
WHAR				IAmb_Lg		20 56 37.3	
	comp=Z,41nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.91**	**95**		**Pn**	**20 55 15.2**	**+1.2**
FCAR				IAmb_Lg		20 56 35.0	
	comp=Z,42nm,0.8s						
WLAR	**White Oak Lake**	**4.99**	**123**		**Pn**	**20 55 14.8**	**-0.4**
WLAR				IAmb_Lg		20 56 45.9	
	comp=Z,57nm,0.9s						
R40A	**Maddies Statio**	**5.01**	**67**		**Pn**	**20 55 16.4**	**+1.0**
R40A				IAmb_Lg		20 56 47.0	
	comp=Z,97nm,1.1s						
T25A	**Trinidad**	**5.07**	**279**	Pn	**Pn**	**20 55 16.5**	**0.0**
T25A				IAmb_Lg		20 56 43.1	
	comp=Z,63nm,0.9s						
OGNE	**Ogallala**	**5.38**	**327**	Pn	**Pn**	**20 55 20.0**	**-0.6**
NATX	**Nacogdoches**	**5.54**	**148**	IAmb_Lg		20 57 09.8	
	comp=Z,31nm,0.8s						
L34A	**Svendsen Farm,**	**5.63**	**14**		**Pn**	**20 55 20.9**	**-3.1**
LCAR	**Lake Charles**	**5.66**	**92**		**Pn**	**20 55 23.6**	**-0.7**
P40A	**Paris**	**5.68**	**56**		**Pn**	**20 55 23.7**	**-1.0**
P40A				IAmb_Lg		20 57 03.2	
	comp=Z,72nm,0.8s						
CCM	**Cathedral Cave**	**5.72**	**72**		**Pn**	**20 55 24.5**	**-0.6**
CCM				IAmb_Lg		20 57 06.3	
	comp=Z,79nm,0.9s						
435B	**Jarrell**	**5.72**	**175**	IAmb_Lg		20 57 10.8	
	comp=Z,33nm,0.7s						
N38A	**Joes South For**	**5.76**	**40**	Pn	**Pn**	**20 55 25.4**	**-0.3**
N38A				IAmb_Lg		20 57 07.0	
	comp=Z,58nm,0.7s						
CCAR	**Cane Creek**	**5.82**	**114**	IAmb_Lg		20 57 15.0	
	comp=Z,77nm,0.9s						
CPRX	**Cap Rock**	**5.84**	**235**	Pn	**Pn**	**20 55 26.9**	**-0.2**
K31A	**O'Neill**	**6.13**	**356**	IAmb_Lg		20 57 33.0	
	comp=Z,80nm,0.9s						
HBAR	**Harrisburg**	**6.14**	**97**	Pn	**Pn**	**20 55 30.5**	**-0.5**
JCT	**Junction City**	**6.16**	**193**		**Pn**	**20 55 29.9**	**-1.4**
PBMO	**Poplar Bluff**	**6.21**	**85**		**Pn**	**20 55 30.1**	**-1.8**
PBMO				IAmb_Lg		20 57 29.9	
	comp=Z,52nm,0.9s						
FVM	**French Village**	**6.33**	**74**	Pn	**Pn**	**20 55 32.3**	**-1.3**
FVM				IAmb_Lg		20 57 33.8	
	comp=Z,44nm,0.9s						
SLM	**Saint Louis**	**6.63**	**69**	IAmb_Lg		20 57 34.4	
	comp=Z,46nm,0.8s						
143A	**Socs Landing,**	**6.73**	**122**	IAmb_Lg		20 57 43.7	
	comp=Z,45nm,0.8s						
ISCO	**Idaho Springs**	**6.74**	**301**		**Pn**	**20 55 40.7**	**+1.2**
ISCO				IAmb_Lg		20 57 40.1	
	comp=Z,32nm,0.8s						
ANMO	**Albuquerque**	**6.94**	**260**	Pg	Pb	20 56 06.5	+5.5
	comp=Z,0.2nm,0.3s,baz=74,slow=17,SNR=2.9						
ANMO				Lg	Lg	20 57 34.7	
	comp=Z,2.5nm,0.3s,baz=345,slow=19,SNR=6.8						
ANMO	**Albuquerque**	**6.94**	**260**		**Pn**	**20 55 42.6**	**+0.5**
N41A	**Harden Midland**	**7.09**	**51**	Pn	**Pn**	**20 55 43.0**	**-0.9**
S44A	**Carbondale**	**7.20**	**78**	IAmb_Lg		20 57 55.3	
	comp=Z,61nm,0.8s						
SIUC	**Southern Illin**	**7.24**	**78**	IAmb_Lg		20 57 52.6	
	comp=Z,52nm,0.8s						
BNM	**Barren Site**	**7.32**	**254**		**Pn**	**20 55 48.5**	**+1.2**
ECSD	**EROS Data Cent**	**7.32**	**9**	Pn	**Pn**	**20 55 47.1**	**0.0**
OXF	**Oxford**	**7.39**	**103**	IAmb_Lg		20 58 09.2	
	comp=Z,29nm,0.8s						
W45A	**Hickory Valley**	**7.40**	**98**	IAmb_Lg		20 58 12.7	
	comp=Z,34nm,0.7s						
PHWY	**Pilot Hill**	**7.45**	**312**	IAmb_Lg		20 58 11.0	
	comp=Z,30nm,0.8s						
LENM	**Lemitar**	**7.58**	**255**		**Pn**	**20 55 50.1**	**-0.9**
Q44A	**Meyer Farm, Va**	**7.62**	**69**	Pn	**Pn**	**20 55 50.6**	**-0.7**
MNTX	**Cornudas Mount**	**7.68**	**233**	Pn	**Pn**	**20 55 52.3**	**+0.2**
L40A	**Anamosa**	**7.72**	**42**		**Pn**	**20 55 52.6**	**-0.1**
SUSD	**Miller**	**7.96**	**356**	IAmb_Lg		20 58 22.4	
	comp=Z,27nm,0.8s						
MVCO	**Mesa Verde**	**8.33**	**278**		**Pn**	**20 56 01.5**	**+0.2**
I37A	**Lemond, Waseca**	**8.33**	**24**		**Pn**	**20 56 01.6**	**+0.5**
I37A				IAmb_Lg		20 58 36.6	
	comp=Z,29nm,0.8s						
WVT	**Waverly**	**8.34**	**89**	IAmb_Lg		20 58 32.9	
	comp=Z,18nm,1.1s						
146A	**Union**	**8.43**	**115**	IAmb_Lg		20 58 24.3	
	comp=Z,23nm,0.7s						
TX31	**Lajitas Ar. Si**	**8.52**	**215**	Pn	**Pn**	**20 56 03.7**	**-0.1**
TX32	**Lajitas Array**	**8.52**	**215**		**Pn**	**20 56 03.9**	**+0.1**
TXAR	**Lajitas Array**	**8.52**	**215**	Pn	**Pn**	**20 56 03.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=32,slow=10,SNR=8.0						
TXAR				Lg	Lg	20 58 23.5	
	comp=Z,0.5nm,0.3s,baz=31,slow=29,SNR=2.4						
TXAR	**Lajitas Array**	**8.52**	**215**		**Pn**	**20 56 03.3**	**-0.4**
PV11	**David Mesa, Pa**	**8.72**	**285**	IAmb_Lg		20 58 57.0	
	comp=Z,16nm,1.0s						
RWWY	**Rawlins**	**8.74**	**309**	IAmb_Lg		20 58 55.8	
	comp=Z,19nm,0.8s						
JFWS	**Jewell Farm**	**8.83**	**41**	IAmb_Lg		20 58 55.8	
	comp=Z,41nm,0.8s						
RSSD	**Black Hills**	**8.84**	**331**	IAmb_Lg		20 59 07.7	
	comp=Z,23nm,0.9s						
T47A	**Sharon Grove**	**8.88**	**84**	IAmb_Lg		20 58 48.4	
	comp=Z,29nm,1.0s						
K22A	**Casper**	**8.92**	**316**	IAmb_Lg		20 58 57.0	
	comp=Z,34nm,0.9s						
P46A	**Rosedale**	**9.17**	**67**	IAmb_Lg		20 59 00.4	
	comp=Z,46nm,0.8s						
V48A	**Smith Brothers**	**9.19**	**91**	IAmb_Lg		20 58 56.0	
	comp=Z,26nm,1.2s						
I40A	**Norwalk**	**9.36**	**36**	IAmb_Lg		20 59 12.2	
	comp=Z,19nm,0.7s						
CLTN	**Cedars of Leba**	**9.55**	**89**	IAmb_Lg		20 59 07.2	
	comp=Z,13nm,0.9s						
WCI	**Wyandotte Cave**	**9.59**	**76**	Pn	**Pn**	**20 56 18.6**	**+0.3**
WCI				IAmb_Lg		20 59 14.0	
	comp=Z,26nm,0.7s						
SPMN	**Marine on St.**	**9.61**	**23**	IAmb_Lg		20 59 22.6	
	comp=Z,16nm,0.9s						
U49A	**Red Boiling Sp**	**9.96**	**86**	IAmb_Lg		20 59 20.8	
	comp=Z,13nm,1.0s						
PDAR	**Pinedale Array**	**10.79**	**309**	Pn	**Pn**	**20 56 36.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=121,slow=14,SNR=2.3						
PDAR				Lg	Lg	20 59 30.9	
	comp=Z,0.3nm,0.3s,baz=116,slow=28,SNR=3.2						
S51A	**Beattyville**	**11.68**	**80**		**Pn**	**20 56 47.7**	**+0.8**
ULM	**Lac du Bonnet**	**13.84**	**6**	Pn	**Pn**	**20 57 13.3**	**-3.1**
	comp=Z,0.3nm,0.3s,baz=186,slow=14,SNR=2.2						
ULM				Sn	Sn	20 59 38.3	-12
	comp=Z,0.1nm,0.3s,baz=348,slow=20,SNR=1.4						
ULM				Lg	Lg	21 01 15.8	
	comp=Z,0.2nm,0.3s,baz=281,slow=21,SNR=3.0						

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*IDC **03** 20:59:53.8±0.7,81°.82N×4°.41W,h0km, mb3.6/15, mb1 3.8/17,mb1mx3.6/54,mbtmp3.7/17,ML4.0/2,MS3.2/10, Ms1 3.2/10,ms1mx3.0/53, Error ellipse: s-maj=19.7km s-min=12.7km az=43.0*
*DNK **03** 20:59:54.4±2.6,81°.88N×4°.03W,h14km±30km,ML2.7*
*NEIC **03** 20:59:55.0±2.3,81°.84N±0°.10×4°.7W±0°.6,h10km±1km, mb4.4/18, Error ellipse: s-maj=17.6km s-min=11.8km az=26.0*
*BER **03** 20:59:56.5±2.7,81°.98N×3°.91W,h30km±30km,ML2.8, ML1.7(DNK), Confirmed Earthquake*
*IEPN **03** 20:59:58.0,81°.84N×2°.81W,h10km*
ISC 03 20:59:54.2±0.5, 81°.72N±0°.06×4°.45W±0°.04, h10km, n75, σ2s88/91, mb3.9/21, MS3.1/5, 4C-2D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**1.79**	**272**	*i* P	**Pn**	**21 00 25.1**	**+0.2**
NOR				*i* S	**Sn**	**21 00 46.7**	**-1.0**
NOR				IAML		21 00 47.9	
	comp=Z,140nm,0.4s						
NOR	**Nord**	**1.79**	**272**	*i* P	**Pn**	**21 00 25.1**	**+0.2**
NOR				*i* S	**Sn**	**21 00 46.7**	**-1.0**
NOR				IAML		21 00 47.9	
	comp=Z,140nm,0.4s						
KBS	**Kingsbay**	**3.92**	**127**	*i* P	**Pn**	**21 00 54.0**	**-0.2**
KBS				IAML		21 01 42.4	
	comp=Z,55nm,0.3s						
KBS	**Kingsbay**	**3.92**	**127**		**Pn**	**21 00 53.5**	**-0.8**
KBS				Sn	**Sn**	**21 01 35.3**	**-4.9**
KBS	**Kingsbay**	**3.92**	**127**	*e*P	**Pn**	**21 00 54.0**	**-0.2**
KBS				*e*S	**Sn**	**21 01 35.8**	**-4.4**
KBS				IAML		21 01 42.2	
	comp=Z,25nm,0.3s						
KBS	**Kingsbay**	**3.92**	**127**	*i* P	**Pn**	**21 00 53.5**	**-0.8**
KBS				*e*S	**Sn**	**21 01 34.9**	**-5.4**
BRBB	**Barentsburg B**	**4.87**	**128**	*e*P	**Pn**	**21 01 07.4**	**+0.2**
BRBB				*e*S	**Sn**	**21 01 59.3**	**-4.2**
BRBA	**Barentsburg A**	**4.90**	**129**	*e*P	**Pn**	**21 01 08.8**	**+1.2**
BRBA				*e*S	**Sn**	**21 01 59.9**	**-4.3**
BRBA				IAML		21 02 16.0	
	comp=Z,9.2nm,0.3s						
SPA0	**Spitsbergen Ar**	**5.05**	**124**	Pn	**Pn**	**21 01 08.9**	**-0.9**
SPA0				Sn	**Sn**	**21 02 03.0**	**-5.1**
SPA0	**Spitsbergen Ar**	**5.05**	**124**	*e*P	**Pn**	**21 01 09.3**	**-0.5**
SPA0				*e*S	**Sn**	**21 02 03.0**	**-5.1**
SPA0				IAML		21 02 07.5	
	comp=Z,12nm,0.8s						
SPA0	**Spitsbergen Ar**	**5.05**	**124**	*i*↑P	**Pn**	**21 01 09.2**	**-0.5**
SPA0				*i* S	**Sn**	**21 02 01.6**	**-6.5**
SPITS	**Spitsbergen Ar**	**5.05**	**124**	Pn	**Pn**	**21 01 09.3**	**-0.5**
	baz=318,slow=1.1,SNR=402						
SPITS				Sn	**Sn**	**21 02 04.4**	**-3.6**
	baz=0.9,slow=19,SNR=1.3						
SPITS				LR	LR	21 03 07.4	
	comp=Z,328nm,19.3s,baz=180,slow=38						
DAG	**Danmarks Havn**	**5.61**	**215**	*i* P	**Pn**	**21 01 18.5**	**+1.1**
DAG				*i* S	**Sn**	**21 02 18.5**	**-3.3**
DAG				IAML		21 02 24.3	
	comp=Z,34nm,0.5s						
DAG	**Danmarks Havn**	**5.61**	**215**	*i* P	**Pn**	**21 01 18.5**	**+1.1**
DAG				*i* S	**Sn**	**21 02 18.5**	**-3.3**
DAG				IAML		21 02 24.3	
	comp=Z,34nm,0.5s						
HSPB	**Hornsund (broa**	**5.96**	**132**	*e*P	**Pn**	**21 01 22.8**	**+0.6**
HSPB				*e*S	**Sn**	**21 02 25.9**	**-4.4**
HSPB				IAML		21 02 32.5	
	comp=Z,5.3nm,0.3s						
HSPB	**Hornsund (broa**	**5.96**	**132**	*i*↓P	**Pn**	**21 01 22.8**	**+0.6**
HSPB				*e*S	**Sn**	**21 02 26.2**	**-4.1**
HOPEN	**Hopen**	**7.51**	**118**	*e*P	**Pn**	**21 01 42.4**	**-1.1**
HOPEN				*e*S	**Sn**	**21 03 01.1**	**-7.4**
HOPEN				IAML		21 03 05.9	
	comp=Z,7.6nm,0.3s						
HOPEN	**Hopen**	**7.51**	**118**	*e*P	**Pn**	**21 01 42.6**	**-0.9**
HOPEN				*e*S	**Sn**	**21 03 01.0**	**-7.4**
ZFI	**Zemlya Franca-**	**7.75**	**70**	*i*↓P	**Pn**	**21 01 43.6**	**-3.1**
ZFI				*e*S	Sn	21 03 01.7	-13
DBG	**Daneborg**	**8.08**	**212**	*i* P	**Pn**	**21 01 51.7**	**+0.4**
DBG				*i* S	**Sn**	**21 03 17.8**	**-4.8**
DBG				IAML		21 03 24.3	
	comp=Z,10nm,0.4s						
DBG	**Daneborg**	**8.08**	**212**	*i* P	**Pn**	**21 01 51.7**	**+0.4**
DBG				*i* S	**Sn**	**21 03 17.8**	**-4.8**
DBG				IAML		21 03 24.3	
	comp=Z,10nm,0.4s						
BJO1	**Bjornoya**	**8.60**	**134**	*e*P	**Pn**	**21 01 58.0**	**-0.3**
BJO1	**Bjornoya**	**8.60**	**134**	*e*P	**Pn**	**21 01 57.6**	**-0.8**
BJO1				S	Sn	21 03 24.0	-11
NEEM	**North Greenlan**	**9.16**	**267**	*e*P	**Pn**	**21 02 04.3**	**-2.1**
NEEM				*i*		21 02 06.3	
NEEM				*i* S	**Sn**	**21 03 42.4**	**-7.0**
NEEM				IAML		21 03 48.9	
	comp=Z,24nm,0.7s						
JMIC	**Jan Mayen**	**10.83**	**187**	*e*P	**Pn**	**21 02 31.9**	**+3.0**
SUMG	**Summit**	**11.57**	**237**	*i* P	**Pn**	**21 02 38.5**	**-0.9**
SUMG				IAML		21 04 48.3	
	comp=Z,20nm,0.6s						
SUMG	**Summit**	**11.57**	**237**		**Pn**	**21 02 38.5**	**-0.9**
SUMG	**Summit**	**11.57**	**237**	*i* P	**Pn**	**21 02 38.5**	**-0.9**
SUMG				IAML		21 04 48.3	
	comp=Z,20nm,0.6s						
SCO	**Scoresbysund**	**11.94**	**209**	Pn	**Pn**	**21 02 47.5**	**+3.4**
EUNU	**Eureka**	**12.07**	**305**		Pn	21 02 40.9	-5.1
TULEG	**Thule**	**12.42**	**281**	*i* P	Pn	21 02 45.7	-5.0
TULEG				*i* S	Sn	21 04 55.1	-14
TULEG				IAML		21 05 13.7	
	comp=Z,6.9nm,0.3s						
TULEG	**Thule**	**12.42**	**281**		**Pn**	**21 02 45.9**	**-4.8**
TULEG	**Thule**	**12.42**	**281**	*i* P	Pn	21 02 45.7	-5.0
TULEG				*i* S	Sn	21 04 55.1	-14
TULEG				IAML		21 05 13.7	
	comp=Z,6.9nm,0.3s						
HAMF	**Hammerfest**	**12.72**	**134**	*e*P	**Pn**	**21 02 55.9**	**+1.2**
KEV	**Kevo**	**13.92**	**131**	Pn	**Pn**	**21 03 10.9**	**-0.2**
ARCES	**ARCESS Array B**	**13.97**	**133**	Pn	**Pn**	**21 03 11.1**	**-0.7**
	baz=351,slow=12,SNR=13						
ARCES				Sn	Sn	21 05 34.6	-12
	baz=7.1,slow=23,SNR=2.3						
ARCES				LR	LR	21 07 59.3	
	comp=Z,65nm,21.1s,baz=350,slow=35						
RES	**Resolute Bay**	**17.53**	**298**	P	**Pn**	**21 03 53.0**	**-5.1**
	comp=Z,1.1nm,0.3s,baz=36,slow=12,SNR=46						
RES				S	Sn	21 06 55.3	-18
	comp=Z,0.2nm,0.3s,baz=353,slow=17,SNR=2.1						
RES				LR	LR	21 10 28.3	
	comp=Z,186nm,20.7s,baz=68,slow=36						
RES	**Resolute Bay**	**17.53**	**298**		**Pn**	**21 03 52.7**	**-5.5**
RES				IAmb	IAmb	21 03 54.1	
	comp=Z,12nm,0.7s						
BORG	**Borgarnes**	**17.58**	**204**	LR	LR	21 09 42.4	
	comp=Z,50nm,18.1s,baz=97,slow=33						
SFJD	**Kangerlussuaq**	**18.33**	**244**	P	**Pn**	**21 04 04.4**	**-3.5**
	comp=Z,1.0nm,0.3s,baz=22,slow=13,SNR=5.9						
SFJD				S	Sn	21 07 13.9	-18
	comp=Z,0.5nm,0.3s,baz=285,slow=18,SNR=3.9						
SFJD				LR	LR	21 11 47.4	
	com

comp=Z,0.5nm,0.9s,baz=32,slow=7.4,SNR=4.3
TOA0 Torodi Ar. Sit 68.65 174 P **P** **21 10 58.5 +1.4**
TOA0 IAmb IAmb 21 10 59.8
comp=Z,5.9nm,1.1s
TORD Torodi Ar. Bea 68.65 174 P **P** **21 10 59.0 +1.8**
comp=Z,3.3nm,0.8s,baz=358,slow=6.3,SNR=16

IDC ***03*** *21:00:28.9±2.1,5°.13S×152°.31E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.5/28, mbtmp3.5/5, Error ellipse: s-maj=88.4km s-min=25.8km az=124.0*
ISC 03 21:00:33.7±2.1,5°.3S±0°.4×152°.4E±0°.4, h35km, n7, σ0s96/7, mb3.5/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC	h m s		ISC
PMG	**Port Moresby**	**6.62**	**231**	Sn	**Sn**	**21 03 23.4**		**+0.4**
	1.1nm,0.3s,baz=342,slow=20,SNR=1.4							
WRA	**Warramunga Arr**	**22.84**	**229**	P	**P**	**21 05 33.4**		**-0.6**
	0.7nm,0.7s,baz=54,slow=10.0,SNR=3.9							
ASAR	**Alice Springs**	**25.54**	**222**	P	**P**	**21 06 00.7**		**+1.3**
	0.9nm,0.6s,baz=54,slow=9.6,SNR=11							
FITZ	**Fitzroy Crossi**	**29.08**	**242**	P	**P**	**21 06 30.2**		**-1.0**
	1.1nm,0.8s,baz=55,slow=10,SNR=2.0							
MKAR	**Makanchi Array**	**80.41**	**319**	P	**P**	**21 12 42.5**		**+0.7**
	0.1nm,0.6s,baz=107,slow=6.8,SNR=2.2							
ILAR	**Eielson Array**	**82.74**	**22**	P	**P**	**21 12 53.5**		**-0.2**
	0.3nm,0.7s,baz=247,slow=4.7,SNR=6.6							
TORD	**Torodi Ar. Bea**	**150.07**	**287**	PKPab	**PKPab**	**21 20 27.6**		**0.0**
	0.2nm,0.4s,baz=94,slow=2.9,SNR=4.4							

BJI ***03*** *21:17:48.9±0.0,6°.55S×148°.22E, h34km, mB5.7/70, mb5.2/76, Ms5.7/87, Ms7 5.5/85*
IDC ***03*** *21:17:49.8±0.3,6°.17S×147°.73E, h0km, mb5.2/36, mb1 5.1/39, mb1mx5.1/45, mbtmp5.1/39, ML5.0/2, MS5.5/36, Ms1 5.5/36, ms1mx5.4/39, Error ellipse: s-maj=12.3km s-min=8.5km az=84.0*
MOS ***03*** *21:17:53.5±1.1,6°.19S×147°.65E, h33km, mb5.5/34, MS5.6/36, Error ellipse: s-maj=7.0km s-min=4.5km az=104.9*
NEIC ***03*** *21:17:54.5,6°.31S×147°.69E, h33km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.98; $M_{\theta\theta}$-4.43; $M_{\phi\phi}$-0.55; $M_{r\theta}$3.19; $M_{r\phi}$1.94; $M_{\theta\phi}$-0.50; Fault plane solution: M_o6.05000×10^{17} NP1:ϕ_s105.08000°, δ61.18000°, λ82.54000°. NP2:ϕ_s300.27000°, δ29.69000°, λ103.27000°. Principal axes: T 5.9609, Plg73.0000°, Azm357.0000°; N 0.1655, Plg7.0000°, Azm109.0000°; P -6.1263, Plg16.0000°, Azm201.0000°;*
NEIC ***03*** *21:17:54.8±2.0,6°.29S±0°.05×147°.75E±0°.06, h30km±1km, mb5.4/229, Ms_20 5.8/401, Mwb5.8/88, Mww5.9, Mwc5.9(GCMT) Error ellipse: s-maj=10.5km s-min=7.8km az=289.0*
DJA ***03*** *21:17:58.1±0.3,6°.S±2°.×14°.8E±°, h71km±3km, M5.6/96, mB5.9/83, mb5.7/96, MLv6.1/4, Mw(mB)5.5/83, MwMwp5.6/55, Mwp5.7/55*
GCMT ***03*** *21:17:59.8±0.1,6°.45S×147°.73E, h37km, MW5.9/164, Moment Tensor Solution. s164,c341; s157,c476; Duration: 2s2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.81±.01; $M_{\theta\theta}$-0.82±.00; $M_{\phi\phi}$0.01±.01; $M_{r\theta}$0.29±.01; $M_{r\phi}$0.28±.00; $M_{\theta\phi}$-0.10±.01; Best double couple: M_o0.91200×10^{18} NP1:ϕ_s286.00000°, δ35.00000°, λ89.00000°. NP2:ϕ_s108.00000°, δ55.00000°, λ91.00000°. Principal axes: T 0.8630, Plg80.0000°, Azm21.0000°; N 0.0980, Plg1.0000°, Azm287.0000°; P -0.9610, Plg10.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***03*** *21:18:00,6°.45S×147°.79E, h37km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}7.81; $M_{\theta\theta}$-8.13; $M_{\phi\phi}$0.32; $M_{r\theta}$2.60; $M_{r\phi}$2.99; $M_{\theta\phi}$-0.59; Fault plane solution: M_o8.92000×10^{17} NP1:ϕ_s290.00000°, δ36.00000°, λ93.00000°. NP2:ϕ_s106.00000°, δ54.00000°, λ88.00000°. Principal axes: T 8.2251, Plg81.0000°, Azm6.0000°; N 1.2639, Plg2.0000°, Azm107.0000°; P -9.4890, Plg9.0000°, Azm197.0000°;*
NEIC ***03*** *21:18:01,6°.24S×147°.71E, h46km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}8.35; $M_{\theta\theta}$-7.07; $M_{\phi\phi}$-1.29; $M_{r\theta}$5.12; $M_{r\phi}$1.78; $M_{\theta\phi}$-0.69; Fault plane solution: M_o9.52000×10^{17} NP1:ϕ_s289.00000°, δ29.00000°, λ97.00000°. NP2:ϕ_s102.00000°, δ61.00000°, λ86.00000°. Principal axes: T 9.9021, Plg73.0000°, Azm3.0000°; N -0.8255, Plg3.0000°, Azm103.0000°; P -9.0766, Plg16.0000°, Azm194.0000°;*
ISC 03 21:17:54.9±0.3,6°.34S±0°.03×147°.71E±0°.03, h33km±1km, h33km:pP-P,n990, σ2s04/878, mb5.4/248, MS5.8/284, 31C-32D, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC	h m s		ISC
PMG	**Port Moresby**	**3.10**	**190**	Pn	**Pn**	**21 18 43.1**		**+1.6**
	100nm,0.3s,baz=38,slow=4.7,SNR=137							
PMG				Sn	**Sb**	**21 19 23.5**		**-3.1**
	228nm,0.3s,baz=38,slow=19,SNR=3.3							
PMG	**Port Moresby**	**3.10**	**190**	*d* *iP*	**Pn**	**21 18 42.5**		**+1.0**
PMG				pmax	pmax			
	comp=Z,2μm,1.2s							
PMG	**Port Moresby**	**3.10**	**190**	Pn	**Pn**	**21 18 42.8**		**+1.3**
PMG	**Port Moresby**	**3.10**	**190**	P	**Pn**	**21 18 45.0**		**+3.5**
MANU	**Manus Island**	**4.28**	**355**	Pn	**Pn**	**21 19 01.3**		**+3.4**
RABL	**Rabaul**	**4.92**	**64**	Pn	**Pn**	**21 19 07.7**		**+1.1**
RABL	**Rabaul**	**4.92**	**64**	P	**Pn**	**21 19 09.6**		**+3.0**
MMPI	**Merauke**	**7.57**	**253**	P	**Pn**	**21 19 46.3**		**+3.3**
	comp=Z,8.4nmcomp=Z,50μmcomp=Z,13μmcomp=Z,1μm,0.8s							
JAY	**Jayapura**	**7.95**	**298**	Pn	**Pn**	**21 19 52.1**		**+3.8**
	comp=Z,34nm,0.3s,baz=108,slow=5.9,SNR=45							
JAY				Sn	**Sn**	**21 21 18.4**		**+1.1**
	baz=308,slow=17,SNR=1.0							
JAY				LR	LR	21 23 24.2		
	comp=Z,70μm,21.1s,baz=114,slow=42							
JAY	**Jayapura**	**7.95**	**298**	P	**Pn**	**21 19 52.9**		**+4.6**
	comp=Z,20μmcomp=Z,4μmcomp=Z,357nm,1.0s							
GENI	**Genyem**	**8.39**	**296**	P	Pn	21 19 59.7		+5.4
	comp=Z,32μmcomp=Z,15μmcomp=Z,1μm,0.9s							
COEN	**Coen**	**8.79**	**210**	Pn	**Pn**	**21 20 01.6**		**+1.9**
MTSU	**Mount Surprise**	**12.18**	**195**	P	**Pn**	**21 20 48.2**		**+2.0**
	baz=12,SNR=72							
SRPI	**Serui, Papua**	**12.27**	**291**	P	**Pn**	**21 20 50.2**		**+2.7**
	comp=Z,18μmcomp=Z,8μmcomp=Z,927nm,0.6s							
HNR	**Honiara**	**12.50**	**105**	Pn	**Pn**	**21 20 52.1**		**+1.5**
	comp=Z,13nm,0.3s,baz=224,slow=5.5,SNR=28							
HNR				LR	LR	21 23 47.1		
	comp=Z,6μm,21.4s,baz=272,slow=28							
HNR	**Honiara**	**12.50**	**105**	P	**Pn**	**21 20 52.7**		**+2.1**
HNR	**Honiara**	**12.50**	**105**	Pn	**Pn**	**21 20 52.7**		**+2.1**
BAKI	**Biak**	**12.66**	**293**	P	**Pn**	**21 20 56.9**		**+4.1**
	comp=Z,7μmcomp=Z,712nm,0.9s							
CTA	**Charters Tower**	**13.74**	**186**	Pn	**Pn**	**21 21 10.1**		**+2.6**
	comp=Z,1.5nm,0.3s,baz=9.8,slow=14,SNR=19							
CTA				LR	LR	21 26 13.2		
	comp=Z,30μm,21.8s,baz=354,slow=36							
CTAO	**Charters Tower**	**13.74**	**186**	P	**Pn**	**21 21 09.8**		**+2.3**
CTAO	**Charters Tower**	**13.74**	**186**	Pn	**Pn**	**21 21 09.8**		**+2.3**
KMPI	**Kaimana, Papua**	**14.21**	**280**	P	**P**	**21 21 25.6**		**+4.7**
FAKI	**Fak Fak**	**15.78**	**282**		**P**	**21 21 39.4**		**+0.9**
FAKI				IAmb	IAmb	21 21 43.2		
	comp=Z,148nm,0.8s							
FAKI	**Fak Fak**	**15.78**	**282**	P	**Pn**	**21 21 35.4**		**+0.5**
	comp=Z,13μmcomp=Z,5μmcomp=Z,244nm,0.9s							
QIS	**Mount Isa**	**16.18**	**208**	P	**Pn**	**21 21 41.1**		**+1.2**
	baz=16,SNR=117							
KDU	**Kakadu**	**16.30**	**246**	P	**P**	**21 21 42.9**		**-1.2**
	baz=16,SNR=82							
SAUI	**Saumlaki**	**16.37**	**263**	Pn	**P**	**21 21 44.3**		**-0.6**
SAUI	**Saumlaki**	**16.37**	**263**	P	**P**	**21 21 47.7**		**+2.7**
	comp=Z,17μmcomp=Z,14μmcomp=Z,1μm,1.1s							
PATS	**Pohnpei**	**16.83**	**39**	P	**P**	**21 21 51.7**		**+1.7**
	baz=17,SNR=5.9							
PATS	**Pohnpei**	**16.83**	**39**		**Pn**	**21 21 49.2**		**+1.0**
SIJI	**Sorong**	**17.29**	**288**	P	**P**	**21 21 55.4**		**+0.2**
	comp=Z,3.2nm,0.3s,baz=93,slow=10,SNR=47							
SIJI				LR	LR	21 30 22.1		
	comp=Z,21μm,21.0s,baz=116,slow=44							
SWI	**Sorong**	**17.29**	**288**	P	**P**	**21 21 57.2**		**+2.0**
SWI				pmax	pmax			
	comp=Z,717nm,1.1s							
SWI	**Sorong**	**17.29**	**288**	P	**P**	**21 21 55.2**		**0.0**
	comp=Z,12μmcomp=Z,7μmcomp=Z,719nm,1.2s							

MTN	**Manton Dam**	**17.57**	**247**	P	**P**	**21 21 60.0**		**+1.7**
	baz=18,SNR=16							
MTN	**Manton Dam**	**17.57**	**247**		**P**	**21 21 59.4**		**+1.1**
BNDI	**Bandanaira**	**17.82**	**275**	P	**P**	**21 22 03.6**		**+2.6**
	comp=Z,14μmcomp=Z,20μmcomp=Z,1μm,1.0s							
WB0	**Warramunga Arr**	**18.59**	**223**	P	**P**	**21 22 09.7**		**+0.1**
WR0	**Warramunga Arr**	**18.63**	**222**	P	**P**	**21 22 09.7**		**-0.3**
WR0				IAmb	IAmb	21 22 18.9		
	comp=Z,195nm,1.0s							
WRAB	**Tennant Creek**	**18.74**	**223**	*i* P	**P**	**21 22 11.4**		**+0.2**
WRAB	**Tennant Creek**	**18.74**	**223**	P	**P**	**21 22 11.3**		**+0.2**
WRAB				IAmb	IAmb	21 22 27.0		
	comp=Z,169nm,0.9s							
WC3	**Warramunga Arr**	**18.74**	**223**	P	**Pn**	**21 22 12.0**		**+0.3**
	baz=19							
WB2	**Warramunga Arr**	**18.74**	**223**	P	**P**	**21 22 11.5**		**+0.3**
WB2				IAmb	IAmb	21 22 27.1		
	comp=Z,157nm,0.9s							
WRA	**Warramunga Arr**	**18.75**	**223**	P	**Pn**	**21 22 11.7**		**-0.2**
	comp=Z,11nm,0.3s,baz=53,slow=10,SNR=73							
WRA				S	**Sn**	**21 25 37.7**		**-3.2**
	comp=Z,0.5nm,0.3s,baz=38,slow=19,SNR=2.2							
WRA				LR	LR	21 30 14.3		
	comp=Z,29μm,19.6s,baz=45,slow=39							
WRA				ScP	**ScP**	**21 30 15.0**		**+3.2**
	comp=Z,0.6nm,0.3s,baz=48,slow=2.4,SNR=4.7							
WRA	**Warramunga Arr**	**18.75**	**223**	P	**P**	**21 22 10.7**		**-0.6**
EIDS	**Eidsvold**	**19.20**	**171**	P	**Pn**	**21 22 17.1**		**-0.1**
	baz=19,SNR=50							
EIDS	**Eidsvold**	**19.20**	**171**	P	**P**	**21 22 16.7**		**+0.6**
GUMO	**Guam**	**20.00**	**352**	P	**P**	**21 22 25.6**		**+0.7**
GUMO				pmax	pmax			
	comp=Z,285nm,0.8s							
GUMO	**Guam**	**20.00**	**352**	P	**P**	**21 22 25.6**		**+0.7**
RMQ	**Roma**	**20.06**	**177**	P	Pn	21 22 26.8		-0.7
	baz=20,SNR=79							
QLP	**Quilpie**	**20.40**	**189**	P	**P**	**21 22 30.0**		**+0.8**
	baz=20,SNR=102							
NLAI	**Namlea**	**20.77**	**278**	P	Pn	21 22 35.0		-0.9
	comp=Z,255nm,0.7s							
SANVU	**Sarautou**	**21.15**	**117**	P	**P**	**21 22 37.2**		**-0.2**
TNTI	**Ternate**	**21.50**	**288**	P	**P**	**21 22 44.4**		**+3.2**
TNTI	**Ternate**	**21.50**	**288**	P	**P**	**21 22 41.0**		**-0.2**
	comp=Z,8μmcomp=Z,3μmcomp=Z,112nm,1.8s							
AS31	**Alice Springs**	**21.75**	**216**	P	**P**	**21 22 45.2**		**+1.3**
AS31				IAmb	IAmb	21 22 51.5		
	comp=Z,134nm,1.2s							
ASAR	**Alice Springs**	**21.75**	**216**	P	**P**	**21 22 44.5**		**+0.6**
	comp=Z,152nm,0.8s,baz=52,slow=9.0,SNR=385							
ASAR				S	**S**	**21 26 45.3**		**+2.3**
	comp=Z,94nm,1.0s,baz=38,slow=18,SNR=9.0							
ASAR				ScP	**ScP**	**21 30 22.5**		**+3.6**
	comp=Z,19nm,1.1s,baz=43,slow=3.2,SNR=6.7							
ASAR				LR	LR	21 31 55.7		
	comp=Z,27μm,18.7s,baz=35,slow=39							
ASAR	**Alice Springs**	**21.75**	**216**	P	**P**	**21 22 44.3**		**+0.5**
ASAR					**S**	**21 26 45.4**		**+2.5**
ASPA	**Alice Springs**	**21.75**	**216**	P	**P**	**21 22 44.4**		**+0.5**
	baz=22							
SANI	**Sanana**	**22.08**	**280**	P	**P**	**21 22 46.5**		**-0.9**
	comp=Z,12μmcomp=Z,4μmcomp=Z,361nm,0.8s							
SOEI	**Soe**	**23.46**	**260**	P	**P**	**21 23 03.3**		**+1.4**
	comp=Z,10μmcomp=Z,9μmcomp=Z,414nm,0.9s							
DZM	**Mont Dzumac**	**23.91**	**133**	P	**P**	**21 23 06.7**		**+0.6**
	comp=Z,24nm,0.7s,baz=217,slow=10.0,SNR=12							
BATI	**Baumata**	**24.10**	**259**	P	**P**	**21 23 09.9**		**+2.0**
	comp=Z,596nm,0.7s,baz=132,slow=1.4,SNR=116							
BATI				LR	LR	21 35 03.6		
	comp=Z,28μm,20.8s,baz=98,slow=43							
BATI	**Baumata**	**24.10**	**259**	P	**P**	**21 23 08.9**		**+1.0**
	comp=Z,7μmcomp=Z,4μmcomp=Z,590nm,1.0s							
ARMA	**Armidale**	**24.23**	**172**	P	**P**	**21 23 09.1**		**+0.1**
	baz=24,SNR=11							
ARMA	**Armidale**	**24.23**	**172**	IAmb	IAmb	21 23 18.1		
	comp=Z,140nm,1.0s							
FITZ	**Fitzroy Crossi**	**24.50**	**240**	P	**P**	**21 23 12.1**		**+0.7**
	comp=Z,448nm,0.9s,baz=57,slow=11,SNR=241							
FITZ				LR	LR	21 33 57.9		
	comp=Z,22μm,19.7s,baz=62,slow=39							
FITZ	**Fitzroy Crossi**	**24.50**	**240**	P	**P**	**21 23 11.8**		**+0.4**
	baz=24,SNR=416							
KMSI	**Cibinong**	**24.66**	**285**	P	**P**	**21 23 14.3**		**+1.3**
	comp=Z,5μmcomp=Z,629nm,0.7s							
KWAJ	**Kwajalein Atol**	**24.89**	**53**	P	**P**	**21 23 13.4**		**-1.6**
KWAJ				pmax	pmax			
	comp=Z,180nm,0.9s							
KWAJ				MLR	MLR			
	comp=Z,12μm,20.0s							
KWAJ	**Kwajalein Atol**	**24.89**	**53**	P	**P**	**21 23 13.3**		**-1.6**
KDI	**Kendari**	**25.10**	**274**	P	**P**	**21 23 17.9**		**+0.9**
CMSA	**Cobar Meteorol**	**25.14**	**184**	P	**P**	**21 23 17.7**		**+0.6**
	baz=25,SNR=46							
MMRI	**Maumere**	**25.36**	**263**	P	**P**	**21 23 19.0**		**-0.3**
MMRI	**Maumere**	**25.36**	**263**	P	**P**	**21 23 18.6**		**-0.7**
	comp=Z,6μmcomp=Z,5μmcomp=Z,586nm,0.7s							
LUWI	**Luwuk**	**25.43**	**281**	P	**P**	**21 23 21.2**		**+1.3**
	comp=Z,8μmcomp=Z,1μm,1.1s							
DAV	**Davao City (W)**	**25.79**	**301**	LR	LR	21 34 14.5		
	comp=Z,5μm,18.6s,baz=108,slow=38							
EDFI	**Ende, Flores**	**25.91**	**263**	P	**P**	**21 23 22.9**		**-1.5**
	comp=Z,4μmcomp=Z,2μmcomp=Z,132nm,0.7s							
STKA	**Stephens Creek**	**26.04**	**192**	P	**P**	**21 23 25.8**		**+0.5**
	comp=Z,20nm,0.4s,baz=355,slow=8.9,SNR=64							
STKA				LR	LR	21 34 24.1		
	comp=Z,17μm,19.5s,baz=1.2,slow=38							
STKA	**Stephens Creek**	**26.04**	**192**	P	**P**	**21 23 25.1**		**-0.2**
	baz=26,SNR=60							
STKA	**Stephens Creek**	**26.04**	**192**	*ce*P	**P**	**21 23 25.2**		**0.0**
STKA	**Stephens Creek**	**26.04**	**192**	P	**P**	**21 23 25.3**		**0.0**
WRKA	**Warakurna**	**26.30**	**223**	P	**P**	**21 23 26.9**		**-0.8**
	baz=26,SNR=743							
SKMP	**Bagumbayan, Su**	**26.42**	**299**	*e*P	**P**	**21 23 30.1**		**+1.2**
APSI	**Ampana**	**26.56**	**281**	P	**P**	**21 23 31.4**		**+1.3**
	comp=Z,5μmcomp=Z,3μmcomp=Z,214nm,0.9s							
MRSI	**Marisa**	**26.60**	**284**	P	**P**	**21 23 30.0**		**-0.5**
	comp=Z,7μmcomp=Z,2μmcomp=Z,112nm,1.1s							
BUKP	**Musuan**	**26.64**	**302**	*e*P	**P**	**21 23 31.7**		**+0.7**
GLSP	**General Luna,**	**26.82**	**307**	*e*P	**P**	**21 23 36.6**		**+4.1**
MGCD	**Mangrove Creek**	**26.92**	**174**	P	**P**	**21 23 35.8**		**+2.6**
	baz=27,SNR=33							
BASI	**Baing, Sumba**	**27.12**	**260**	P	**P**	**21 23 36.3**		**+1.1**
	comp=Z,4μmcomp=Z,4μmcomp=Z,524nm,0.9s							
CGP	**Cagayan de Oro**	**27.25**	**302**	*i* *iP*	**P**	**21 23 41.3**		**+4.9**
WSI	**Waingapu**	**27.34**	**261**	P	**P**	**21 23 37.6**		**+0.4**
BNSI	**Bone**	**27.55**	**273**	P	**P**	**21 23 41.4**		**+2.3**
	comp=Z,2μmcomp=Z,83nm,0.9s							
YNG	**Young**	**27.83**	**179**	P	**P**	**21 23 42.7**		**+1.4**
	baz=28,SNR=38							
KAPI	**Kappang**	**27.86**	**271**	P	**P**	**21 23 42.9**		**+1.1**
	comp=Z,48nm,1.0s,baz=112,slow=7.4,SNR=12							
KAPI				LR	LR	21 38 05.5		
	comp=Z,4μm,19.2s,baz=84,slow=44							
KAPI	**Kappang**	**27.86**	**271**	P	**P**	**21 23 42.9**		**+1.1**
KAPI				IAmb	IAmb	21 24 00.0		
	comp=Z,63nm,0.9s							
TOLI2	**Tolitoli**	**27.89**	**284**	IAmb	IAmb	21 23 59.0		
	comp=Z,64nm,0.8s							
SPSI	**Sidrap Palu**	**27.93**	**273**	P	**P**	**21 23 44.0**		**+1.5**
	comp=Z,5μmcomp=Z,1μmcomp=Z,75nm,1.3s							
TTSI	**Tana Toraja**	**27.99**	**275**	P	**P**	**21 23 46.0**		**+3.0**
	comp=Z,3μmcomp=Z,171nm,0.9s							
MSLP	**Maasin**	**28.04**	**306**	*e*P	**P**	**21 23 45.3**		**+1.9**
PAGZ	**Pagadian**	**28.06**	**300**	*e*P	P	21 23 49.7		+6.0
HTT	**Hallett**	**28.17**	**196**	P	**P**	**21 23 44.4**		**0.0**
	baz=28,SNR=66							
BBOO	**Buckleboo**	**28.49**	**201**	P	**P**	**21 23 47.2**		**0.0**
	baz=28,SNR=30							
BBOO	**Buckleboo**	**28.49**	**201**	P	**P**	**21 23 47.4**		**+0.1**
BBOO				IAmb	IAmb	21 23 53.2		
	comp=Z,179nm,1.3s							
CAN	**Canberra**	**28.87**	**178**	P	**P**	**21 23 51.9**		**+1.3**
CAN				pmax	pmax			
	comp=Z,55nm,1.0s							
CAN				MLR	MLR			
	comp=Z,20μm,22.0s							
CAN	**Canberra**	**28.87**	**178**	P	**P**	**21 23 51.9**		**+1.3**
CAN				IAmb	IAmb	21 24 00.6		
	comp=Z,55nm,1.0s							
CAN				IAMs_20	IAMs_20	21 35 12.5		
	comp=Z,20μm,22.0s							
CNOP	**Candoni, Negro**	**29.70**	**303**	*e*P	P	21 24 11.9		+14
PLAI	**Plampang**	**29.77**	**263**	P	**P**	**21 23 56.5**		**-2.4**
	comp=Z,4μmcomp=Z,1μmcomp=Z,132nm,0.7s							
FORT	**Forrest**	**30.52**	**215**	P	**P**	**21 24 05.4**		**+0.2**
	baz=31,SNR=47							
FORT	**Forrest**	**30.52**	**215**	P	**P**	**21 24 05.9**		**+0.6**

TWSI	**Taliwang, Sumb**	**30.65**	**264**	P	**P**	**21 24 05.1**		**-1.6**
	comp=Z,2μmcomp=Z,497nmcomp=Z,32nm,0.7s							
ARPS	**Mount Arapiles**	**30.76**	**189**	P	**P**	**21 24 08.6**		**+1.3**
	baz=31,SNR=19							
MBWA	**Marble Bar**	**30.83**	**239**	IAMs_20	IAMs_20	21 38 00.2		
	comp=Z,17μm,18.0s							
PSA00	**Pilbara Seismi**	**30.91**	**238**	P	**P**	**21 24 08.3**		**-0.5**
PSA00				IAmb	IAmb	21 24 19.1		
	comp=Z,60nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**30.97**	**37**	T	T	21 56 48.2		
	baz=221							
H11S2	**WAKE ISLAND Hy**	**30.98**	**37**	T	T	21 56 34.1		
	baz=221,slow=74,SNR=10							
H11S1	**WAKE ISLAND Hy**	**30.99**	**37**	T	T	21 56 33.1		
	baz=221,slow=74,SNR=13							
BKB	**Balikpapan**	**31.15**	**278**	P	P	**21 24 12.7**		**+1.6**
BKB	**Balikpapan**	**31.15**	**278**	P	P	21 24 17.3		+6.3
TOO	**Toolangi**	**31.15**	**183**	P	**P**	**21 24 12.6**		**+1.7**
	baz=31,SNR=4.9							
TOO	**Toolangi**	**31.15**	**183**	P	**P**	**21 24 11.4**		**+0.6**
TOO				pmax	pmax			
	comp=Z,35nm,1.1s							
TOO	**Toolangi**	**31.15**	**183**	P	**P**	**21 24 11.4**		**+0.6**
FUNA	**Funafuti**	**31.29**	**96**	P	**P**	**21 24 12.0**		**-0.3**
MYLDM	**Lahad Datu**	**31.33**	**291**	P	**P**	**21 24 13.4**		**+0.8**
KBKI	**Kotabaru**	**31.57**	**274**	P	**P**	**21 24 16.0**		**+1.2**
	comp=Z,1μmcomp=Z,97nm,0.8s							
MSVF	**Nonsavu**	**31.70**	**114**	P	**P**	**21 24 17.7**		**+1.8**
	comp=Z,15nm,0.8s,baz=253,slow=19,SNR=4.5							
MSVF				LR	LR	21 36 18.1		
	comp=Z,7μm,19.2s,baz=283,slow=35							
MSVF	**Nonsavu**	**31.70**	**114**	P	**P**	**21 24 16.7**		**+0.7**
MSVF				IAmb	IAmb	21 24 32.3		
	comp=Z,57nm,1.1s							
H11N1	**WAKE ISLAND Hy**	**32.04**	**36**	T	T	21 58 34.7		
	baz=219,slow=76,SNR=7.2							
H11N3	**WAKE ISLAND Hy**	**32.05**	**36**	T	T	21 58 38.6		
	baz=219,slow=76,SNR=6.7							
H11N2	**WAKE ISLAND Hy**	**32.06**	**36**	T	T	21 58 15.6		
	baz=219,slow=76,SNR=9.3							
JCNP	**Jose Panganiba**	**32.19**	**310**	*e*P	**P**	**21 24 21.5**		**+1.4**
BBKI	**Banjar Baru**	**32.87**	**273**	P	**P**	**21 24 28.0**		**+1.8**
	comp=Z,2μmcomp=Z,97nm,1.0s							
LQP	**Lukban**	**32.98**	**308**	*i* *e*P	**P**	**21 24 25.2**		**-2.0**
ENPP	**El Nido**	**33.11**	**302**	*e*P	**P**	**21 24 24.2**		**-4.0**
MTKI	**Muara Teweh, K**	**33.17**	**278**	P	**P**	**21 24 31.0**		**+2.2**
	comp=Z,1μmcomp=Z,47nm,0.9s							
JAGI	**Jajag, Banyuwa**	**33.34**	**264**	P	**P**	**21 24 29.4**		**-0.9**
	comp=Z,4μmcomp=Z,2μmcomp=Z,137nm,0.9s							
TGY	**Tagaytay City**	**33.45**	**308**	P	**P**	**21 24 34.3**		**+3.1**
	comp=Z,236nm,0.3s,baz=108,slow=1.6,SNR=6.1							
KMMI	**Kalianget**	**33.52**	**267**	P	P	21 24 43.4		+12
JCJ	**Chichijima**	**33.67**	**351**	P	**P**	**21 24 31.3**		**-1.5**
	comp=Z,225nm,0.5s,baz=231,slow=8.8,SNR=14							
JCJ				LR	LR	21 36 03.6		
	comp=Z,7μm,21.7s,baz=172,slow=33							
JCJ	**Chichijima**	**33.67**	**351**	P	**P**	**21 24 32.1**		**-0.8**
QVP	**Quezon City--P**	**33.70**	**308**	*e*P	**P**	**21 24 35.1**		**+1.8**
MACP	**Maragondon, Ca**	**33.71**	**308**	*e*P	**P**	**21 24 30.9**		**-2.5**
LUBP	**Lubang**	**33.78**	**306**	*e*P	**P**	**21 24 34.4**		**+0.4**
CVP	**Callao Caves**	**34.99**	**313**	*i* *e*P	**P**	**21 24 40.9**		**-3.6**
APYP	**Conner**	**35.52**	**313**	*e*P	**P**	**21 24 48.9**		**-0.1**
GIRL	**Giralia**	**36.11**	**240**	P	**P**	**21 24 56.3**		**+2.2**
	baz=36,SNR=23							
GIRL	**Giralia**	**36.11**	**240**	P	**P**	**21 24 55.8**		**+1.7**
TAU	**Tasmania Unive**	**36.42**	**180**	P	**P**	**21 24 57.7**

PPBI Pangkal Pinang 41.66 274 P **P** **21 25 41.0 +0.3**
comp=Z,5μmcomp=Z,3μmcomp=Z,269nm,1.0s
MXZ Matakaoa Point 41.71 143 P **P** **21 25 41.7 +0.9**
MXZ IAMs_20 IAMs_20 21 42 34.9
comp=Z,12μm,19.0s
BKZ Black Stump Fm 41.73 146 P **P** **21 25 44.0 +2.9**
BKZ IAMs_20 IAMs_20 21 41 27.4
comp=Z,11μm,21.0s
JSG Sagara 41.77 348 P **P** **21 25 42.5 +1.2**
THZ Tophouse 41.78 151 P **P** **21 25 44.0 +2.6**
THZ IAmb IAmb 21 26 01.9
comp=Z,47nm,0.9s
THZ IAMs_20 IAMs_20 21 43 06.7
comp=Z,10μm,19.0s
XMIS Christmas Isla 41.79 261 P **P** **21 25 43.3 +1.5**
XMIS IAmb IAmb 21 25 47.2
comp=Z,104nm,0.8s
FOZ Fox Glacier 41.84 156 IAMs_20 IAMs_20 21 41 43.0
comp=Z,9μm,19.0s
JMN Monobe 41.95 343 IAmb IAmb 21 25 59.5
comp=Z,132nm,1.3s
H01W1 Cape Leeuwin H 41.98 223 P **P** **21 25 46.8 +4.0**
baz=73,slow=7.2,SNR=7.6
H01W3 Cape Leeuwin H 41.99 223 P **P** **21 25 46.9 +4.0**
baz=73,slow=7.2,SNR=8.0
H01W2 Cape Leeuwin H 42.00 223 P **P** **21 25 45.1 +2.1**
baz=73,slow=7.2,SNR=6.1
TUWZ Tuamarina 42.03 150 P **P** **21 25 44.8 +1.5**
QZH Quanzhou 42.08 319⇑ *i*P **P** **21 25 43.4 -0.5**
QZH sP **sP** **21 25 56.9 -0.6**
QZH S **S** **21 32 00.6 -0.8**
QZH sS **sS** **21 32 18.2 +0.8**
QZH LR LR
comp=Z,3μm,23.2s
QZH LR LR
comp=Z,2μm,19.9s
QZH LR LR
comp=Z,4μm,24.6s
BSWZ Blackbirch Sta 42.21 151 P **P** **21 25 45.6 +0.8**
LTZ Lake Taylor 42.28 153 P **P** **21 25 47.2 +1.7**
LTZ IAmb IAmb 21 26 00.4
comp=Z,75nm,1.0s
LTZ IAMs_20 IAMs_20 21 41 24.9
comp=Z,16μm,21.0s
JNU Nakatsue 42.38 339 P **P** **21 25 44.5 -1.8**
comp=Z,56nm,0.8s,baz=147,slow=3.9,SNR=20
JNU Nakatsue 42.38 339 P **P** **21 25 47.1 +0.8**
JNU IAmb IAmb 21 25 48.1
comp=Z,75nm,0.9s
BHW Baring Head 42.48 149 P **P** **21 25 48.2 +1.2**
RPZ Rata Peaks 42.50 155 P **P** **21 25 48.8 +1.7**
comp=Z,16nm,0.6s,baz=27,slow=16,SNR=7.0
RPZ Rata Peaks 42.50 155 P **P** **21 25 48.4 +1.2**
RPZ IAmb IAmb 21 26 02.9
comp=Z,66nm,0.9s
KHZ Kahutara 42.59 152 P **P** **21 25 48.4 +0.6**
KHZ IAmb IAmb 21 26 02.1
comp=Z,64nm,1.2s
KHZ IAMs_20 IAMs_20 21 43 53.0
comp=Z,12μm,19.0s
OXZ Oxford 42.61 154 P **P** **21 25 48.9 +0.8**
OXZ IAMs_20 IAMs_20 21 41 42.6
comp=Z,14μm,21.0s
BFZ Birch Farm 42.66 148 P **P** **21 25 48.5 0.0**
BFZ IAmb IAmb 21 25 58.2
comp=Z,41nm,0.6s
INU Inuyama 42.67 347 IAmb IAmb 21 26 00.9
comp=Z,43nm,0.9s
MSWZ Moikau Station 42.68 149 P **P** **21 25 49.2 +0.5**
LBZ Lake Benmore 42.69 156 P **P** **21 25 49.1 +0.4**
LBZ IAmb IAmb 21 26 05.3
comp=Z,54nm,1.0s
LBZ IAMs_20 IAMs_20 21 42 19.7
comp=Z,11μm,20.0s
MLZ Mavora Lakes 42.73 159 P **P** **21 25 48.7 -0.3**
MLZ IAmb IAmb 21 26 02.9
comp=Z,57nm,1.0s
PLWZ Palliser 42.79 149 **P** **21 25 49.7 +0.1**
KLSI 42.81 270 P **P** **21 25 49.6 -0.5**
comp=Z,523nmcomp=Z,16nm,1.4s
JGF Kuroka 42.84 348 IAmb IAmb 21 25 53.8
comp=Z,67nm,0.7s
PMBI Palembang 42.92 273 P **P** **21 25 53.2 +2.2**
PMBI Palembang 42.92 273 P **P** **21 25 52.9 +1.9**
comp=Z,5μmcomp=Z,8μmcomp=Z,618nm,1.0s
JYT Yasato 42.93 351 IAmb IAmb 21 25 53.5
comp=Z,84nm,0.8s
PYZ Puysegur Point 42.93 161 P **P** **21 25 51.3 +0.7**
KASI Kota Agung 42.98 269 P **P** **21 25 49.6 -1.9**
comp=Z,2μmcomp=Z,161nm,1.1s
JWT Wachi 42.99 345 P **P** **21 25 50.7 -0.6**
JWT IAmb IAmb 21 25 53.1
comp=Z,86nm,0.8s
WHZ Wether Hill Ro 43.12 159 P **P** **21 25 52.4 +0.2**
WHZ IAmb IAmb 21 26 06.0
comp=Z,102nm,1.5s
MQZ McQueen's Vall 43.19 153 P **P** **21 25 53.3 +0.6**
MQZ IAmb IAmb 21 26 11.9
comp=Z,60nm,1.1s
MQZ IAMs_20 IAMs_20 21 41 49.8
comp=Z,10μm,21.0s
JHS Saijyo 43.36 342 IAmb IAmb 21 26 11.7
comp=Z,141nm,1.5s
LWLI Liwa 43.45 269 P **P** **21 25 55.1 -0.3**
comp=Z,697μmcomp=Z,6μmcomp=Z,169nm,1.1s
MJAR Matsushiro Arr 43.58 349 P **P** **21 25 54.8 -1.1**
comp=Z,79nm,0.8s,baz=166,slow=7.3,SNR=61
MJAR ScP **ScP** **21 31 35.7 +3.2**
comp=Z,4.8nm,1.0s,baz=169,slow=5.9,SNR=5.3
MJAR LR LR 21 42 38.6
comp=Z,3μm,19.1s,baz=150,slow=34
MJAR Matsushiro Arr 43.58 349 P **P** **21 25 54.7 -1.3**
MJAR IAmb IAmb 21 26 02.9
comp=Z,39nm,0.9s
MAJO Matsushiro 43.58 349*ce*P **P** **21 25 54.7 -1.2**
MAJO pmax pmax
comp=Z,108nm,1.0s
MAJO Matsushiro 43.58 349 P **P** **21 25 55.2 -0.7**
MAT Matsushiro 43.58 349 P **P** **21 25 54.2 -1.7**
MAT S **S** **21 32 24.8 +1.6**
MJB9 Matsu-Tunnel 43.58 349 P **P** **21 25 55.5 -0.5**
LHSI Lahat 44.08 271 P **P** **21 25 59.8 -0.5**
comp=Z,4μmcomp=Z,178nm,1.2s
JMBI JAMBI 44.20 274 P **P** **21 26 02.2 +0.9**
comp=Z,5μmcomp=Z,449nm,0.9s
KSI Kapahiang 45.02 271 P **P** **21 26 07.1 -0.8**
comp=Z,119nm,0.8s
QIZ Qiongzhong 45.03 305 P **P** **21 26 06.6 -1.2**
QIZ PP **PP** **21 27 55.0 +1.5**
QIZ S **S** **21 32 46.8 +2.0**
QIZ sS **sS** **21 33 02.0 +0.3**
QIZ SS **SS** **21 36 07.0 -0.6**
QIZ LR LR
comp=Z,2μm,22.3s
QIZ LR LR
comp=Z,3μm,25.5s
QIZ LR LR
comp=Z,5μm,22.7s
SDSI Sungai Dareh 46.48 275 P **P** **21 26 20.1 +0.7**
comp=Z,2μmcomp=Z,219nm,0.9s
TJN Taejon 46.58 337⇑ *e*P **P** **21 26 19.1 -0.7**
BKNI Bangkinang 47.05 276 P **P** **21 26 23.1 -0.8**
comp=Z,6μmcomp=Z,3μmcomp=Z,235nm,1.3s
NJ2 Nanjing 47.06 326⇓ *i*P **P** **21 26 24.4 +0.8**
NJ2 pP **pP** **21 26 30.9 -2.6**
NJ2 sP **sP** **21 26 34.4 -2.9**
NJ2 S **S** **21 33 16.4 +2.9**
NJ2 sS **sS** **21 33 30.6 +0.7**
NJ2 pmax pmax
comp=Z,31nm,0.7s
NJ2 pmax pmax
comp=Z,560nm,4.1s
NJ2 LR LR
comp=Z,6μm,22.7s
NJ2 LR LR
comp=Z,2μm,20.8s
NJ2 LR LR
comp=Z,5μm,19.1s
JTM Tenmabayashi 47.29 353 P **P** **21 26 25.4 +0.2**
KSRS Korea Array 47.32 338 P **P** **21 26 24.0 -1.5**
comp=Z,18nm,0.8s,baz=154,slow=8.5,SNR=50
KSRS ScP **ScP** **21 31 51.7 +3.8**
comp=Z,2.8nm,1.0s,baz=146,slow=6.0,SNR=4.5
KSRS LR LR 21 44 01.1
comp=Z,7μm,21.5s,baz=146,slow=33
KSAR Wonju Array Be 47.33 338 P **P** **21 26 23.9 -1.7**
KSAR Wonju Array Be 47.33 338 P **P** **21 26 23.9 -1.7**
KS19 Wonju Array Si 47.39 338 IAmb IAmb 21 26 44.4
comp=Z,47nm,1.1s
INCN Inchon 47.83 337 P **P** **21 26 30.6 +1.0**
INCN pmax pmax
comp=Z,51nm,0.9s
INCN MLR MLR
comp=Z,5μm,21.0s
INCN Inchon 47.83 337 P **P** **21 26 30.6 +1.0**
INCN IAmb IAmb 21 26 36.7
comp=Z,51nm,0.8s
IPM Ipoh 47.84 282 P **P** **21 26 30.7 +0.7**
IPM IAmb IAmb 21 26 46.9
comp=Z,38nm,0.8s
ERM Erimo 48.30 355 IAMs_20 IAMs_20 21 43 50.2
comp=Z,10μm,22.0s
KULM Kulim 48.38 283 P **P** **21 26 33.4 -0.8**
KULM IAmb IAmb 21 26 48.1
comp=Z,31nm,0.7s
MNSI Mandailing Nat 48.56 277 P **P** **21 26 35.1 -0.5**
comp=Z,2μmcomp=Z,174nm,0.8s
WHN Wuhan 48.64 321⇓ P **P** **21 26 36.7 +0.8**
WHN sP **sP** **21 26 53.3 +3.7**
WHN S **S** **21 33 33.2 -2.9**
WHN sS **sS** **21 33 51.5 -0.9**
WHN pmax pmax
comp=Z,59nm,0.9s
WHN pmax pmax
comp=Z,1μm,5.6s
WHN LR LR
comp=Z,8μm,21.6s
WHN LR LR
comp=Z,5μm,21.2s
WHN LR LR
comp=Z,10μm,20.7s
MCQ Macquarie Isla 48.87 171 P **P** **21 26 38.5 +1.2**
MCQ pmax pmax
comp=Z,166nm,1.0s
MCQ Macquarie Isla 48.87 171 P **P** **21 26 38.5 +1.2**
PSI Prapat 49.55 279 P **P** **21 26 42.8 -0.5**
comp=Z,45nm,1.1s,baz=178,slow=1.3,SNR=22
PSI LR LR 21 52 58.6
comp=Z,2μm,19.3s,baz=90,slow=43
TSI Tuntungan 50.04 280 P **P** **21 26 46.2 -0.7**
comp=Z,6μmcomp=Z,3μmcomp=Z,127nm,1.1s
JKA Kamikawa-asahi 50.43 355 P **P** **21 26 49.6 +0.3**
JKA IAmb IAmb 21 26 54.3
comp=Z,83nm,1.2s
ASAJ Asahikawa 50.43 355 P **P** **21 26 49.2 -0.1**
comp=Z,50nm,1.1s,baz=222,slow=16,SNR=5.4
ASAJ LR LR 21 46 48.1
comp=Z,4μm,20.4s,baz=179,slow=35
ASAJ Asahikawa 50.43 355 P **P** **21 26 49.7 +0.4**
ASAJ pmax pmax
comp=Z,83nm,1.2s
COCO West Island 50.49 259 P **P** **21 26 50.9 +0.6**
COCO pmax pmax
comp=Z,145nm,1.1s
COCO MLR MLR
comp=Z,3μm,21.0s
COCO West Island 50.49 259 P **P** **21 26 50.9 +0.6**
GSI Gunungsitoli 50.62 277 P **P** **21 26 50.1 -1.3**
GSI Gunungsitoli 50.62 277 P **P** **21 26 49.6 -1.7**
comp=Z,5μmcomp=Z,2μmcomp=Z,174nm,0.8s
MSHR Mys Shultsa 50.97 344 *i* P **P** **21 26 52.0 -1.4**
SLVN Son La 51.02 304 P **P** **21 26 55.0 +0.8**
DL2 Dalian 51.10 334 P **P** **21 26 53.9 -0.5**
DL2 PP **PP** **21 28 54.2 +2.7**
DL2 S **S** **21 34 11.7 +1.6**
DL2 SS **SS** **21 37 47.0 +1.1**
DL2 pmax pmax
comp=Z,35nm,0.9s
DL2 pmax pmax
comp=Z,810nm,6.8s
DL2 LR LR
comp=Z,5μm,22.1s
DL2 LR LR
comp=Z,3μm,23.8s
DL2 LR LR
comp=Z,7μm,23.2s
TIA Tai'an 51.14 328 P **P** **21 26 54.4 -0.4**
TIA S **S** **21 34 08.0 -2.8**
TIA pmax pmax
comp=Z,39nm,0.8s
TIA LR LR
comp=Z,4μm,18.8s
TIA LR LR
comp=Z,3μm,18.3s
TIA LR LR
comp=Z,7μm,19.4s
KUR Kuril'sk 51.34 0 *e*P **P** **21 27 00.0 +3.9**
KUR *e* 21 27 12.0
KUR 21 28 56.2
KUR S **S** **21 34 18.0 +4.9**
KUR *e*SS **ScS** **21 36 45.0 +1.0**
TPTI 51.35 279 P **P** **21 26 54.4 -2.4**
comp=Z,854nmcomp=Z,53nm,1.0s
GYA Guiyang 51.44 311⇓ P **P** **21 26 58.7 +1.3**
GYA PP **PP** **21 28 50.0 -4.9**
GYA S **S** **21 34 17.6 +2.1**
GYA LR LR
comp=Z,2μm,19.4s
GYA LR LR
comp=Z,900nm,20.2s
GYA LR LR
comp=Z,2μm,24.2s
TEY Ternei 52.11 350⇑ *e*P **P** **21 27 00.9 -0.9**
TEY pmax pmax
comp=Z,50nm,1.2s
USA0B Ussuriysk Arra 52.27 346⇑ *e*P **P** **21 27 03.0 -0.1**
USA0B Ussuriysk Arra 52.27 346 IAmb IAmb 21 27 05.5
comp=Z,47nm,1.1s
USRK Ussuriysk Ar. 52.27 346 P **P** **21 27 02.4 -0.7**
comp=Z,24nm,0.8s,baz=171,slow=7.9,SNR=38
USRK Ussuriysk Ar. 52.27 346 P **P** **21 27 02.0 -1.1**
SNY Shenyang 52.77 337⇓ P **P** **21 27 06.2 -0.6**
SNY S **S** **21 34 33.2 +0.3**
SNY pmax pmax
comp=Z,26nm,0.8s
SNY pmax pmax
comp=Z,890nm,7.5s
SNY LR LR
comp=Z,4μm,24.0s
SNY LR LR
comp=Z,3μm,22.1s
SNY LR LR
comp=Z,9μm,24.5s
YSS Yuzh-Sakhalins 53.24 356⇑ *e*P **P** **21 27 11.7 +1.5**
YSS *e* 21 27 25.4
YSS *e*S **S** **21 34 44.6 +5.4**
YSS *e* 21 35 00.7
YSS pmax pmax
comp=Z,40nm,0.8s
YSS smax smax
comp=N,700nm,6.8s
YSS Yuzh-Sakhalins 53.24 356 P **P** **21 27 10.6 +0.4**
YSS IAmb IAmb 21 27 16.6
comp=Z,62nm,1.0s
MDJ Mudanjiang 53.28 344 P **P** **21 27 11.5 +0.9**
MDJ pP pP 21 27 20.5 +0.3
MDJ S **S** **21 34 47.8 +8.0**
MDJ sS sS 21 34 59.0 +3.3
MDJ pmax pmax
comp=Z,46nm,0.9s
MDJ pmax pmax
comp=Z,350nm,3.8s
MDJ LR LR
comp=Z,3μm,18.0s
MDJ LR LR
comp=Z,2μm,17.8s
MDJ LR LR
comp=Z,7μm,24.2s
MDJ Mudanjiang 53.28 344 IAmb IAmb 21 27 17.6
comp=Z,49nm,1.1s
KMI Kunming 53.77 307⇑⇑ P **P** **21 27 14.2 -0.6**
KMI pP sP 21 27 27.7 -0.8
KMI sP pP 21 27 32.9 +7.9
KMI PcP **PcP** **21 28 17.3 -3.3**
KMI PP **PP** **21 29 20.1 +4.0**
KMI S **S** **21 34 51.0 +3.5**
KMI sS sS 21 35 06.3 +1.8
KMI SS **SKiKP** **21 38 27.0 -0.1**
KMI pmax pmax
comp=Z,42nm,1.2s
KMI LR LR
comp=Z,1μm,22.6s
KMI LR LR
comp=Z,2μm,22.6s
KMI LR LR
comp=Z,4μm,25.1s
KMI Kunming 53.77 307 P **P** **21 27 15.9 +1.2**
KMI pmax pmax
comp=Z,19nm,1.0s
KMI MLR MLR
comp=Z,2μm,19.0s
KMI Kunming 53.77 307 P **P** **21 27 15.9 +1.2**
CN2 Changchun 53.82 340 *e*P **P** **21 27 14.7 +0.2**
CN2 S **S** **21 34 46.9 -0.2**
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,950nm,4.4s
CM31 Chiang Mai Arr 54.03 298 P **P** **21 27 17.8 +1.2**
CMAR Chiang Mai Arr 54.03 298 P **P** **21 27 15.9 -0.7**
comp=Z,6.3nm,0.8s,baz=120,slow=5.7,SNR=16
CMAR LR LR 21 48 59.3
comp=Z,2μm,22.0s,baz=148,slow=35
CMAR PKPPKP 21 57 32.0
comp=Z,0.7nm,0.4s,baz=316,slow=4.6,SNR=8.5
CMAR Chiang Mai Arr 54.03 298 P **P** **21 27 16.9 +0.3**
CMAR Chiang Mai Arr 54.03 298 P **P** **21 27 16.9 +0.3**
CHTO Chiang Mai 54.17 299 P **P** **21 27 18.6 +1.0**
CHTO pmax pmax
comp=Z,12nm,1.1s
CHTO MLR MLR
comp=Z,2μm,21.0s
CHTO Chiang Mai 54.17 299 P **P** **21 27 18.6 +1.0**
XAN Xi'an 54.40 320 P **P** **21 27 16.7 -2.3**
XAN pP sP 21 27 31.7 -1.1
XAN S **S** **21 34 52.6 -2.8**
XAN sS sS 21 35 12.8 +0.3
XAN pmax pmax
comp=Z,8.0nm,1.3s
XAN pmax pmax
comp=Z,840nm,8.1s
XAN LR LR
comp=Z,3μm,20.0s
XAN LR LR
comp=Z,2μm,22.1s
XAN LR LR
comp=Z,5μm,25.0s
XAN Xi'an 54.40 320 IAmb IAmb 21 27 23.1
comp=Z,28nm,0.8s
BJT Baijiatuao 54.53 330 IAMs_20 IAMs_20 21 49 17.2
comp=Z,6μm,21.0s
BJT Baijiatuao 54.53 330 IAmb IAmb 21 27 22.1
comp=Z,26nm,0.9s
BJI Beijing 54.54 330 P **P** **21 27 19.4 -0.5**
BJI PP **PP** **21 29 24.5 +2.0**
BJI S **S** **21 34 56.9 -0.1**
BJI pmax pmax
comp=Z,15nm,0.7s
BJI pmax pmax
comp=Z,670nm,5.5s
BJI LR LR
comp=Z,2μm,17.8s
BJI LR LR
comp=Z,4μm,20.9s
BJI LR LR
comp=Z,5μm,26.2s
TIY Taiyuan 54.78 326 *e*P **P** **21 27 22.2 +0.4**
TIY S **S** **21 35 03.1 +2.6**
TIY sS **pS** **21 35 14.8 +2.5**
TIY pmax pmax
comp=Z,630nm,12.0s
TIY LR LR
comp=Z,1μm,13.8s
TIY LR LR
comp=Z,4μm,22.7s
TIY LR LR
comp=Z,6μm,23.8s
XMAS Kiritimati 55.38 83 P **P** **21 27 26.4 0.0**
CD2 Chengdu 56.02 314⇑ *i*P **P** **21 27 32.3 +1.5**
CD2 pP pP 21 27 42.6 +1.5
CD2 sP sP 21 27 44.4 -0.1
CD2 PP **PP** **21 29 39.4 +3.4**
CD2 S **S** **21 35 18.8 +1.5**
CD2 sS sS 21 35 32.8 -1.6
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 LR LR
comp=Z,3μm,19.2s
CD2 LR LR
comp=Z,3μm,18.2s
CD2 LR LR
comp=Z,4μm,19.8s
KLR Kul'dur 57.07 348 P **P** **21 27 37.0 -0.8**
comp=Z,26nm,0.8s,baz=170,slow=3.6,SNR=64
KLR LR LR 21 51 38.8
comp=Z,2μm,20.2s,baz=168,slow=36
KLR Kul'dur 57.07 348 *i* P **P** **21 27 37.2 -0.6**
TYV Tymovskoe 57.14 356 *e*P **P** **21 27 39.6 +1.4**
TYV *e*S **S** **21 35 36.7 +5.5**
TYV pmax pmax
comp=Z,700nm,3.4s
TYV pmax pmax
comp=Z,51nm,1.0s
TYV smax smax
comp=E,17nm,1.8s
TYV smax smax
comp=E,500nm,3.8s
SKR Severo-Kuril's 57.26 6 *e*P **P** **21 27 38.2 -0.8**
SKR *e* 21 27 54.2
SKR *e* 21 29 51.1
SKR *e*PPP PPP 21 31 09.3
SKR *e*S **S** **21 35 34.7 +2.0**
SKR *e*SS **ScS** **21 37 27.6 +1.7**
SKR *e*SSS SSS 21 39 24.2
SKR pmax pmax
comp=Z,600nm,4.2s
SKR pmax pmax
comp=Z,70nm,1.5s
HHC Hu-ho-hao-te 57.49 328 *e*P **P** **21 27 39.8 -1.3**
HHC S **S** **21 35 36.5 -0.1**
HHC sS sS 21 35 54.6 +1.3
HHC SS **SS** **21 39 26.7 -0.3**
HHC pmax pmax
comp=Z,39nm,0.7s
HHC pmax pmax
comp=Z,850nm,6.6s
HHC LR LR
comp=Z,3μm,23.8s
HHC LR LR
comp=Z,3μm,22.1s
HHC LR LR
comp=Z,6μm,22.1s
GRNR Gornyy 57.71 352⇓ *i*P **P** **21 27 43.5 +1.2**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
BTO Baotou 58.15 327 P **P** **21 27 46.9 +1.2**
LZH Lanzhou 58.93 319⇓ P **P** **21 27 52.0 +0.7**
LZH pP pP 21 27 59.5 -2.0
LZH sP sP 21 28 02.3 -2.9
LZH PP **PP** **21 29 59.1 -2.8**
LZH S **S** **21 35 49.0 -6.6**
LZH SS **SS** **21 39 51.2 +1.4**
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,330nm,8.7s
LZH LR LR
comp=Z,3μm,18.4s
LZH LR LR
comp=Z,3μm,20.1s
LZH LR LR
comp=Z,3μm,20.1s
NKL Nikolayevsk 59.56 355 *e*P **P** **21 27 53.8 -1.3**
NKL *e* 21 30 02.0
NKL *e*S **S** **21 36 06.6 +3.9**
NKL pmax pmax
comp=E,88nm,0.8s
NKL pmax pmax
comp=Z,50nm,1.2s
NKL smax smax
comp=E,40nm,0.5s
NKL smax smax
comp=N,1.0nm,1.5s
NKL MLR MLR
comp=E,2μm,18.0s
NKL MLR MLR
comp=N,13nm,22.0s

NKL MLR MLR
comp=Z,2µm,21.0s
PEA0B Petropavlovsk- 59.82 7 ‖ *e*P **P 21 27 56.7 -0.3**
PEA0B Petropavlovsk- 59.82 7 P **P 21 27 56.6 -0.3**
PETK Petropavlovsk- 59.82 7 P **P 21 27 56.1 -0.8**
comp=Z,57nm,0.8s,baz=165,slow=6.1,SNR=90
PETK LR LR 21 49 32.8
comp=Z,7µm,21.7s,baz=197,slow=32
PETK Petropavlovsk- 59.82 7 P **P 21 27 57.7 +0.8**
PETK Petropavlovsk- 59.82 7 P **P 21 27 57.7 +0.8**
PET Petropavlovsk 59.86 8 *ce*P **P 21 27 56.1 -1.0**
PET *e* 21 30 15.4
PET *e*S **S 21 36 05.2 -1.4**
PET pmax pmax
comp=Z,1µm,8.1s
PET pmax pmax
comp=Z,90nm,0.8s
PET pmax pmax
comp=Z,2µm,15.3s
PET pmax pmax
comp=N,2µm,18.0s
PET Petropavlovsk 59.86 8 P **P 21 27 56.2 -1.0**
HIA Hailar 60.52 339 IAMs_20 IAMs_20 21 53 17.6
comp=Z,5µm,19.0s
POHA Pohakuloa 61.55 64 IAMs_20 IAMs_20 21 49 41.4
comp=Z,6µm,21.0s
PAE Paea 62.12 107 *e*P **P 21 28 15.2 +2.0**
comp=Z,15nm,1.0s
PPT Papeete 62.12 106 P **P 21 28 14.0 +0.8**
comp=Z,98nm,1.1s,baz=270,slow=9.1,SNR=7.5
PPT LR LR 21 52 47.3
comp=Z,1µm,18.6s,baz=265,slow=34
PPT2 Papeete2 62.12 106 *e*P **P 21 28 15.5 +2.2**
comp=Z,54nm,1.0s
PPT2 *e*S **S 21 36 36.3 -0.5**
comp=Z,4µm,24.5s
PPT2 *e*LQ LQ 21 44 05.7
comp=Z,4µm,30.5s
PPT2 *e*LR LR 21 46 44.1
comp=Z,4µm,25.5s
PPTF Pamatai, Papee 62.13 106 P **P 21 28 15.5 +2.1**
ZEA Zeya 62.29 346 *e*P **P 21 28 12.6 -1.1**
ZEA *e*S **S 21 36 37.8 +0.2**
ZEA pmax pmax
comp=N,60nm,0.9s
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=Z,100nm,0.9s
ZEA pmax pmax
comp=Z,500nm,8.6s
ZEA smax smax
comp=E,500nm,14.7s
TBI Tubuai 62.58 113 *e*P **P 21 28 18.3 +2.0**
comp=E,194nm,0.9s
TBI *e*S **S 21 36 42.4 0.0**
comp=E,3µm,26.2s
TBI *e*LQ LQ 21 44 15.3
comp=E,3µm,24.5s
TBI *e*LR LR 21 46 57.2
comp=E,3µm,38.0s
SHL Shillong 62.80 303 P **P 21 28 17.8 -0.1**
SHL pmax pmax
comp=Z,19nm,0.9s
SHL Shillong 62.80 303 P **P 21 28 17.8 -0.1**
SHL IAmb IAmb 21 28 22.6
comp=Z,19nm,0.9s
SMY Shemya 62.97 18 P **P 21 28 18.8 +0.6**
SMY pmax pmax
comp=Z,227nm,1.3s
SMY Shemya 62.97 18 P **P 21 28 18.8 +0.6**
GTA Gaotai 63.46 320 *e*P **P 21 28 20.2 -1.7**
GTA pP pP 21 28 28.5 -3.9
GTA sP sP 21 28 32.5 -3.3
GTA S **S 21 36 51.4 -1.6**
GTA sS pS 21 37 07.8 +2.3
GTA SS **SS 21 41 02.9 +2.3**
GTA pmax pmax
comp=Z,6.0nm,1.1s
GTA pmax pmax
comp=Z,740nm,7.7s
GTA LR LR
comp=Z,1µm,20.4s
GTA LR LR
comp=Z,1µm,24.7s
GTA LR LR
comp=Z,2µm,22.9s
AMKA Amchitka 63.56 22 P **P 21 28 22.2 0.0**
MEH Mehetia 63.57 107 *e*P **P 21 28 24.7 +1.8**
comp=Z,34nm,1.0s
VAH Vaihoa 63.94 104 *e*P **P 21 28 27.0 +1.6**
comp=Z,95nm,1.0s
ULN Ulaanbaatar 64.75 331 *c i*P **P 21 28 28.6 -1.6**
ULN pmax pmax
comp=Z,43nm,0.8s
ULN Ulaanbaatar 64.75 331 P **P 21 28 29.0 -1.2**
ULN IAmb IAmb 21 28 32.4
comp=Z,39nm,0.8s
ULN Ulaanbaatar 64.75 331 IAMs_20 IAMs_20 21 55 59.5
comp=Z,5µm,22.0s
LSA Lhasa 65.01 307 P **P 21 28 33.4 +0.7**
LSA PP **PP 21 30 59.1 +3.0**
LSA S **S 21 37 10.6 -2.7**
LSA pmax pmax
comp=Z,33nm,0.9s
LSA pmax pmax
comp=Z,2µm,8.4s
LSA LR LR
comp=Z,4µm,21.4s
LSA LR LR
comp=Z,3µm,18.5s
LSA LR LR
comp=Z,7µm,22.8s
LSA Lhasa 65.01 307 IAmb IAmb 21 28 51.5
comp=Z,14nm,0.7s
CIT Chita 65.04 337 *e*P **P 21 28 32.7 +0.8**
CIT *e* 21 28 43.7
CIT *e* 21 29 00.8
CIT pmax pmax
comp=Z,197nm,2.5s
SONM Songino Array 65.05 331 P **P 21 28 31.4 -0.7**
comp=Z,20nm,0.9s,baz=142,slow=7.5,SNR=49
SONM LR LR 21 56 10.3
comp=Z,7µm,21.6s,baz=127,slow=35
SONM PKP2bc 21 57 20.4
comp=Z,8.3nm,1.2s,baz=259,slow=1.7,SNR=9.2
SONM Songino Array 65.05 331 P **P 21 28 30.7 -1.4**
SONM IAmb IAmb 21 28 44.8
comp=Z,38nm,1.2s
CASY Casey 65.12 196 P **P 21 28 32.6 +0.4**
ADK Adak 65.49 23 IAMs_20 IAMs_20 21 51 18.0
comp=Z,6µm,21.0s
MA2 Magadan 65.75 2 P **P 21 28 35.3 -1.0**
comp=Z,23nm,0.8s,baz=171,slow=5.5,SNR=26
MA2 LR LR 21 57 12.4
comp=Z,2µm,18.8s,baz=182,slow=36
MA2 Magadan 65.75 2 *ce*P **P 21 28 35.7 -0.6**
MA2 pmax pmax
comp=Z,62nm,1.4s
MA2 Magadan 65.75 2 P **P 21 28 34.9 -1.4**
TAPN Taplejung 66.93 303 *e*P **P 21 28 44.9 0.0**
comp=Z,4.8nm,0.3s
ODAN Odare 67.03 303 *e*P **P 21 28 47.3 +1.9**
comp=Z,45nm,0.8s
RAMN Ramite 67.72 302 *e*P **P 21 28 51.5 +1.6**
comp=Z,14nm,0.6s
PALK Pallekele 68.20 280 P **P 21 28 53.4 +0.5**
comp=Z,20nm,1.0s,baz=194,slow=6.3,SNR=9.1
PALK Pallekele 68.20 280 *ce*P **P 21 28 52.8 -0.1**
PALK pmax pmax
comp=Z,42nm,1.4s
PALK Pallekele 68.20 280 P **P 21 28 52.5 -0.3**
ZAK Zakamensk 68.28 331 *e*P **P 21 28 51.0 -1.7**
ZAK pmax pmax
comp=Z,44nm,1.1s
ZAK pmax pmax
comp=Z,24nm,1.1s
JIRN Jiri 68.30 303 *e*P **P 21 28 52.8 -0.9**
GUN Gumba 68.65 303 *e*P **P 21 28 54.7 -1.1**
comp=Z,18nm,0.4s
PKI Pulchoki 68.92 303 *e*P **P 21 28 56.8 -0.7**
comp=Z,14nm,0.7s
PKIN Phulchoki 68.94 303 *e*P **P 21 28 56.9 -0.6**
comp=Z,29nm,0.9s
TLY Talaya 68.97 332 P **P 21 28 56.6 -0.3**
comp=Z,9.2nm,0.7s,baz=193,slow=4.0,SNR=8.3

TLY LR LR 21 58 15.2
comp=Z,5µm,21.9s,baz=124,slow=35
TLY Talaya 68.97 332 *e*P **P 21 28 57.9 +1.0**
TLY pmax pmax
comp=Z,83nm,1.7s
TLY Talaya 68.97 332 P **P 21 28 57.2 +0.3**
TLY IAMs_20 IAMs_20 21 58 02.3
comp=Z,4µm,21.0s
IRK Irkutsk 69.07 333 *e*P **P 21 28 57.0 -0.5**
IRK *e* 21 29 09.1
IRK *e* 21 29 28.2
IRK pmax pmax
comp=Z,109nm,2.9s
KKN Kakani 69.11 303 *e*P **P 21 28 57.7 -0.8**
comp=Z,31nm,0.7s
SEY Seymchan 69.17 2 P **P 21 28 56.7 -1.1**
comp=Z,26nm,1.2s,baz=171,slow=4.6,SNR=38
SEY PKP2bc 21 57 05.8
comp=Z,2.5nm,0.9s,baz=349,slow=5.2,SNR=3.5
SEY LR LR 21 58 05.2
comp=Z,3µm,19.7s,baz=182,slow=35
SEY Seymchan 69.17 2 ‖ *e*P **P 21 28 56.0 -1.8**
DMN Daman 69.19 303 *e*P **P 21 28 58.8 -0.3**
comp=Z,37nm,0.8s
BOD Bodaibo 69.52 342 *e*P **P 21 28 57.7 -2.4**
BOD pmax pmax
comp=Z,48nm,1.5s
YAK Yakutsk 69.58 351 P **P 21 28 59.7 -0.7**
comp=Z,16nm,0.6s,baz=206,slow=0.7,SNR=19
YAK Yakutsk 69.58 351 *c i*P **P 21 29 00.2 -0.2**
YAK *e**PP **sP 21 29 14.2 -0.3**
YAK *e* 21 29 23.7
YAK *e* 21 31 33.4
YAK *e*PPP PPP 21 33 14.7
YAK *e*S **S 21 38 05.5 -0.5**
YAK *e**SS **sS 21 38 24.0 +1.6**
YAK *e* 21 38 53.4
YAK *e*SS **SS 21 42 36.7 +2.2**
YAK pmax pmax
comp=Z,76nm,1.3s
YAK pmax pmax
comp=N,37nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=Z,141nm,3.0s
YAK pmax pmax
comp=N,73nm,3.3s
YAK pmax pmax
comp=E,40nm,3.0s
YAK smax smax
comp=N,66nm,1.9s
YAK smax smax
comp=E,31nm,1.8s
YAK Yakutsk 69.58 351 P **P 21 29 00.4 0.0**
GKN Gorkha 69.71 303 *e*P **P 21 29 00.6 -1.6**
comp=E,33nm,0.7s
MOY Mondy 70.21 331 *e*P **P 21 29 04.3 -0.4**
MOY pmax pmax
comp=Z,120nm,1.7s
KOLN Koldanda 70.51 302 *e*P **P 21 29 06.2 -0.9**
comp=Z,52nm,0.8s
PYUN Piuthan 71.12 302 *e*P **P 21 29 09.0 -1.8**
comp=Z,56nm,0.7s
TAOE Nuku Hiva Isla 71.45 97 *e*S **S 21 38 28.7 -1.2**
comp=Z,2µm,28.5s
TAOE Nuku Hiva Isla 71.45 97 *e*LR LR 21 51 03.5
comp=Z,2µm,20.8s
VNDA Vanda 71.53 177 P **P 21 29 13.2 +1.0**
comp=Z,17nm,1.1s,baz=320,slow=6.5,SNR=34
VNDA LR LR 21 56 02.5
comp=Z,3µm,21.8s,baz=347,slow=32
VNDA Vanda 71.53 177 IAmb IAmb 21 29 26.3
comp=Z,38nm,1.0s
SBA Scott Base 72.17 176 P **P 21 29 17.0 +1.1**
SBA Scott Base 72.17 176 P **P 21 29 17.0 +1.1**
SBA IAmb IAmb 21 29 31.5
comp=Z,52nm,1.4s
HYB Hyderabad 72.24 290 *i*P **P 21 29 16.0 -1.6**
HYB *e*PcP **PcP 21 29 34.5 -1.1**
WMQ Urumqi 73.51 319 *e*P **P 21 29 25.5 +0.9**
WMQ pP pP 21 29 34.6 -0.7
WMQ sP sP 21 29 39.1 +0.5
WMQ PcP **PcP 21 29 43.1 +2.6**
WMQ S **S 21 38 51.7 -0.6**
WMQ sS sS 21 39 07.9 -2.1
WMQ SS **SS 21 43 38.3 +2.6**
WMQ pmax pmax
comp=Z,24nm,1.7s
WMQ pmax pmax
comp=Z,700nm,4.5s
WMQ LR LR
comp=Z,2µm,18.5s
WMQ LR LR
comp=Z,930nm,14.5s
WMQ LR LR
comp=Z,2µm,25.7s
DGAR Diego Garcia 74.64 264 ‖ *e*P **P 21 29 31.9 +0.1**
DGAR pmax pmax
comp=Z,230nm,0.9s
DGAR Diego Garcia 74.64 264 P **P 21 29 31.8 +0.1**
SDPT Sand Point 74.87 28 P 21 29 31.6
baz=234
BILL Bilibino 75.36 7 *de*P **P 21 29 34.3 -0.4**
BILL *e**PP **pP 21 29 43.0 -1.8**
BILL *e* 21 29 48.9
BILL *e**SP **sP 21 29 52.7 +3.8**
BILL *e* 21 32 17.8
BILL *e*S **S 21 39 17.4 +5.5**
BILL pmax pmax
comp=Z,27nm,1.3s
BILL MLR MLR
comp=Z,805nm,17.0s
MNCI Minicoy 75.84 280 P **P 21 29 38.2 -0.4**
RKT Rikitea 75.89 112 *e*P **P 21 29 40.3 +1.6**
comp=Z,100nm,1.1s
RKT *e*S **S 21 39 18.8 -0.7**
comp=Z,2µm,27.8s
RKT Rikitea 75.89 112 *e*LR LR 21 53 06.8
comp=Z,4µm,34.2s
GAMB Gambell 76.28 17 P 21 29 40.8
baz=222
GAMB Gambell 76.28 17 IAMs_20 IAMs_20 21 58 48.2
comp=Z,4µm,20.0s
DGZ Jazzator, Alta 76.32 325 ‖ *e*P **P 21 29 38.6 -2.2**
DGZ pmax pmax
comp=Z,20nm,1.5s
CHGN Chignik 76.37 28 P 21 29 41.2
baz=236
POO Poona 76.85 291 *e*P **P 21 29 42.0 -2.3**
ZSN Zaisan 76.86 322 *e*P **P 21 29 42.8 -1.0**
baz=322
ZSN Zaisan 76.86 322 *e*P **P 21 29 42.7 -1.0**
MK31 Makanchi Array 78.21 320 *c i*P **P 21 29 49.0 -2.3**
MKAR Makanchi Array 78.21 320 P **P 21 29 49.3 -2.0**
comp=Z,10nm,0.8s,baz=101,slow=6.9,SNR=81
MKAR S **S 21 39 46.6 +2.6**
comp=Z,0.3nm,0.7s,baz=108,slow=9.3,SNR=1.8
MKAR PKPPKP 21 56 55.2
comp=Z,1.9nm,1.1s,baz=29,slow=2.8,SNR=4.2
MKAR LR LR 22 06 33.2
comp=Z,1µm,18.3s,baz=97,slow=37
MKAR Makanchi Array 78.21 320 P **P 21 29 49.0 -2.3**
MAKZ Makanchi 78.41 320 P **P 21 29 50.1 -2.3**
MAKZ pmax pmax
comp=Z,20nm,0.8s
MAKZ Makanchi 78.41 320 P **P 21 29 50.1 -2.3**
MAKZ IAmb IAmb 21 30 03.7
comp=Z,20nm,0.8s
SII Sitkinak Islan 78.50 29 P 21 29 54.1
baz=239
TNA Tin City 78.70 17 P 21 29 53.7
baz=225
SHLS Shalkode 78.77 316 *e*P **P 21 29 52.0 -2.6**
comp=Z,7.8nm,0.7s,baz=316
SHLS *e*S **S 21 39 45.0 -5.4**
baz=316
SHLS Shalkode 78.77 316 *e*P **P 21 29 52.0 -2.6**
SHLS *e*S **S 21 39 44.9 -5.4**
SHLS pmax pmax
comp=Z,8.0nm,0.7s
ANM Nome 78.80 19 P 21 29 53.7
baz=228
ANM Nome 78.80 19 IAMs_20 IAMs_20 21 58 51.6
comp=Z,4µm,22.0s
PDGK Podgornoye 78.81 316 *i*P **P 21 29 53.4 -1.4**

PDGK pmax pmax
comp=Z,32nm,0.9s
TIXI Tiksi 78.82 354 ‖ *e*P **P 21 29 52.8 -1.3**
TIXI Tiksi 78.82 354 P **P 21 29 53.1 -1.0**
UZB Uzynbulak 79.07 316 *e*P **P 21 29 55.2 -1.2**
comp=Z,9.3nm,0.8s,baz=316
UZB *e*S **S 21 39 51.3 -2.4**
baz=316
UZB Uzynbulak 79.07 316 *e*P **P 21 29 55.1 -1.2**
UZB *e*S **S 21 39 51.2 -2.4**
UZB pmax pmax
comp=Z,9.0nm,0.8s
OHAK Old Harbor 79.25 28 P 21 29 57.4
baz=240
KPKS Kokpek 79.41 316 *e*P **P 21 29 56.9 -1.2**
baz=316
KPKS Kokpek 79.41 316 *e*P **P 21 29 56.9 -1.2**
SATY Saty 79.47 316 *e*P **P 21 29 57.5 -1.0**
baz=316
SATY *e*S **S 21 39 55.4 -2.4**
baz=316
SATY Saty 79.47 316 *e*P **P 21 29 57.4 -1.0**
SATY *e*S **S 21 39 55.3 -2.4**
ZALV Zalesovo Beam 79.68 328 P **P 21 29 56.3 -2.9**
comp=Z,7.3nm,0.5s,baz=108,slow=5.2,SNR=44
ZALV S **S 21 40 03.5 +4.3**
comp=Z,0.6nm,0.7s,baz=120,slow=8.5,SNR=2.0
ZALV PKP2bc 21 56 31.1
comp=Z,0.8nm,0.7s,baz=260,slow=4.2,SNR=3.4
ZALV LR LR 22 05 12.4
comp=Z,3µm,20.4s,baz=112,slow=36
ZALV Zalesovo Beam 79.68 328 *i*P **P 21 29 57.4 -1.7**
ZALV pmax pmax
comp=Z,7.0nm,0.5s
KDAK Kodiak Island 79.86 28 IAMs_20 IAMs_20 21 58 26.2
comp=Z,5µm,22.0s
TDK Taldyqorghan 80.10 318 *e*P **P 21 30 00.8 -1.0**
baz=318
TDK *e*S **S 21 40 01.9 -2.3**
baz=318
TDK Taldyqorghan 80.10 318 *e*P **P 21 30 00.7 -1.0**
TDK *e*S **S 21 40 01.9 -2.3**
KSH Kashi 80.13 312 P **P 21 30 01.2 -0.9**
KSH PP **PP 21 33 06.7 +2.0**
KSH S **S 21 40 04.7 -0.2**
KSH pmax pmax
comp=Z,11nm,1.4s
KSH pmax pmax
comp=Z,650nm,4.8s
KSH LR LR
comp=Z,1µm,16.0s
KSH LR LR
comp=Z,2µm,12.8s
KSH LR LR
comp=Z,3µm,10.7s
MDOK Medeo 80.44 316 *e*P **P 21 30 03.1 -0.7**
baz=316
MDOK *e*S **S 21 40 06.0 -2.1**
baz=316
MDOK Medeo 80.44 316 *e*P **P 21 30 03.1 -0.7**
MDOK *e*S **S 21 40 06.0 -2.1**
TNSS Tian-Shan 80.47 315 *e*P **P 21 30 03.8 -0.5**
baz=315
TNSS Tian-Shan 80.47 315 *e*P **P 21 30 03.7 -0.5**
AAA Alma-Ata 80.55 316 *e*P **P 21 30 03.7 -0.6**
baz=316
AAA Alma-Ata 80.55 316 *e*P **P 21 30 03.6 -0.6**
NIL Nilore 80.70 305 P **P 21 30 03.1 -2.1**
NIL pmax pmax
comp=Z,44nm,0.8s
NIL MLR MLR
comp=Z,1µm,20.0s
NIL Nilore 80.70 305 P **P 21 30 03.1 -2.1**
NIL IAmb IAmb 21 30 11.8
comp=Z,44nm,0.8s
SEM Semipalatinsk 80.83 323 *e*P **P 21 30 04.1 -1.6**
baz=323
SEM Semipalatinsk 80.83 323 *e*P **P 21 30 04.1 -1.6**
KUU Kurty 81.16 316 *e*P **P 21 30 06.3 -1.1**
comp=Z,24nm,0.9s,baz=316
KUU *e*S **S 21 40 12.6 -2.7**
baz=316
KUU Kurty 81.16 316 *e*P **P 21 30 06.3 -1.1**
KUU *e*S **S 21 40 12.5 -2.7**
KUU pmax pmax
comp=Z,24nm,0.9s
HOM Homer 81.21 27 IAMs_20 IAMs_20 22 01 05.5
comp=Z,4µm,21.0s
CNPM China Poot 81.32 27 IAMs_20 IAMs_20 22 02 45.7
comp=Z,4µm,20.0s
TKM2 Tokmak 2 81.39 315 P **P 21 30 07.8 -1.1**
SNR=11
TKM2 Tokmak 2 81.39 315 *i*P **P 21 30 07.7 -1.1**
TKM2 pmax pmax
comp=Z,12nm,0.7s
BRLK Bradley Lake 81.59 27 IAmb IAmb 21 30 29.0
comp=Z,20nm,0.8s
BRSE Bradley Lake S 81.65 27 P 21 30 09.1
baz=242
KBK Karagaybulak 81.77 315 P **P 21 30 10.7 -0.1**
SNR=12
RDOG Red Dog Mine 81.86 17 P 21 30 10.8
baz=230
RDOG Red Dog Mine 81.86 17 IAMs_20 IAMs_20 22 02 21.5
comp=Z,5µm,21.0s
KURK Kurchatov 81.91 323 P **P 21 30 08.7 -2.4**
KURK S **S 21 40 26.4 +3.8**
KURK Kurchatov 81.91 323 P **P 21 30 08.7 -2.4**
KURBB Kurchatov Arra 81.93 323 P **P 21 30 08.7 -2.5**
comp=Z,4.8nm,0.9s,baz=119,slow=4.1,SNR=26
KURBB S **S 21 40 26.4 +3.6**
comp=Z,0.5nm,0.7s,baz=91,slow=12,SNR=1.8
KURBB PKPPKP **P'P'df 21 56 50.4 +4.8**
comp=Z,1.1nm,0.8s,baz=284,slow=3.0,SNR=6.8
UCH Uchtor 81.96 314 P **P 21 30 12.5 +0.3**
SNR=22
CHMS Chumysh 82.00 315 P **P 21 30 11.4 -0.5**
SNR=12
AAK Ala-Archa 82.08 314 P **P 21 30 11.6 -0.9**
comp=Z,8.9nm,0.8s,baz=138,slow=6.6,SNR=38
AAK S **S 21 40 24.4 -0.8**
comp=Z,0.2nm,0.3s,baz=18,slow=20,SNR=1.5
AAK Ala-Arcba 82.08 314 P **P 21 30 11.8 -0.7**
SNR=14
AAK Ala-Arcba 82.08 314 ‖ *e*P **P 21 30 12.2 -0.3**
AAK pmax pmax
comp=Z,24nm,0.7s
AAK Ala-Arcba 82.08 314 P **P 21 30 11.5 -1.0**
MAW Mawson 82.21 203 P **P 21 30 12.7 +0.3**
comp=Z,20nm,0.8s,baz=65,slow=5.5,SNR=13
MAW LR LR 22 07 05.0
comp=Z,4µm,18.7s,baz=86,slow=36
MAW Mawson 82.21 203 P **P 21 30 11.9 -0.5**
baz=82,SNR=7.1
MAW Mawson 82.21 203 P **P 21 30 13.4 +1.0**
MAW pmax pmax
comp=Z,12nm,1.2s
MAW Mawson 82.21 203 P **P 21 30 13.4 +1.0**
SGDS Sogindy 82.22 315 *e*P **P 21 30 11.7 -1.3**
baz=315
SGDS *e*S **S 21 40 23.8 -2.6**
baz=315
SGDS Sogindy 82.22 315 *e*P **P 21 30 11.6 -1.4**
SGDS *e*S **S 21 40 23.7 -2.6**
USP Ospenovka 82.25 315 P **P 21 30 13.0 -0.2**
SNR=16
O22K Cooper Landing 82.44 26 IAMs_20 IAMs_20 22 00 22.3
comp=Z,6µm,22.0s
SUA Susitna One 82.46 25 P 21 30 11.7
baz=242
SUA Susitna One 82.46 25 IAmb IAmb 21 30 31.1
comp=Z,26nm,1.2s
SUA IAMs_20 IAMs_20 22 00 23.7
comp=Z,5µm,22.0s
AML Almayashu 82.52 314 P **P 21 30 15.4 +0.3**
SNR=24
FIS Fire Island 82.53 26 IAMs_20 IAMs_20 22 00 46.7
comp=Z,6µm,22.0s
PPLA Purkeypile 82.56 24 P 21 30 13.1
baz=240
EKS2 Erkin-Say 82.60 314 P **P 21 30 15.1 -0.1**
SNR=17
RC01 Rabbit Creek A 82.72 26 IAmb IAmb 21 30 28.5
comp=Z,29nm,1.0s
RC01 IAMs_20 IAMs_20 22 02 19.5
comp=Z,4µm,21.0s
RC01 Rabbit Creek A 82.72 26 P 21 30 13.3

baz=243
CHUM Lake Minchumin 83.00 23 P 21 30 14.8
baz=240
BTLS Baital 83.06 317 *e*P **P** **21 30 16.4 -1.0**
BTLS baz=317 *e*S **S** **21 40 32.5 -2.3**
baz=317
BTLS Baital 83.06 317 *e*P **P** **21 30 16.3 -1.0**
BTLS *e*S **S** **21 40 32.4 -2.3**
CUT Chulitna 83.10 24 P 21 30 14.8
baz=242
CUT Chulitna 83.10 24 IAmb IAmb 21 30 29.6
comp=Z,26nm,0.8s CUT IAMs_20 IAMs_20 22 02 11.8
comp=Z,5µm,21.0s
PMR Palmer 83.20 25 IAmb IAmb 21 30 36.5
comp=Z,40nm,1.4s
PMR Palmer 83.20 25 P 21 30 16.1
baz=243
GHO Glory Hole Cre 83.37 25 IAmb IAmb 21 30 31.8
comp=Z,26nm,1.0s
KTH Kantishna Hill 83.38 23 IAMs_20 IAMs_20 22 02 53.1
comp=Z,5µm,21.0s
KNK Knik Glacier 83.41 26 IAmb IAmb 21 30 30.5
comp=Z,18nm,1.0s
KNK Knik Glacier 83.41 26 P 21 30 18.3
baz=244
TRF Thorofare Moun 83.58 24 P 21 30 17.2
baz=242
TRF Thorofare Moun 83.58 24 IAMs_20 IAMs_20 22 02 59.4
comp=Z,4µm,22.0s
BPAW Bear Paw Mtn. 83.62 23 P 21 30 18.5
baz=241
QSPA South Pole Qui 83.63 180 P **P** **21 30 19.9 -0.1**
QSPA South Pole Qui 83.63 180 IAMs_20 IAMs_20 22 05 23.5
comp=Z,4µm,20.0s
SML Sawmill 83.64 25 IAmb IAmb 21 30 36.1
comp=Z,39nm,0.9s SML IAMs_20 IAMs_20 22 03 50.0
comp=Z,5µm,21.0s
SML Sawmill 83.64 25 P 21 30 17.9
baz=244,SNR=7.1
GLI Glacier Island 83.78 27 IAmb IAmb 21 30 30.4
comp=Z,28nm,0.8s GLI IAMs_20 IAMs_20 22 00 35.7
comp=Z,5µm,22.0s
GLI Glacier Island 83.78 27 P 21 30 18.7
baz=245
FID Port Fidalgo 84.00 27 P **P** **21 30 21.6 -0.2**
FID IAmb IAmb 21 30 33.3
comp=Z,21nm,0.8s FID IAMs_20 IAMs_20 22 00 25.9
comp=Z,4µm,22.0s
WAT2 Susitna Watana 84.05 24 P 21 30 19.6
baz=244
SCM Sheep Creek Mo 84.08 26 P **P** **21 30 22.1 -0.2**
SCM pmax pmax
comp=Z,40nm,1.0s SCM MLR MLR
comp=Z,6µm,20.0s
SCM Sheep Creek Mo 84.08 26 P **P** **21 30 22.1 -0.2**
SCM IAmb IAmb 21 30 36.0
comp=Z,40nm,1.0s
RND Reindeer 84.14 24 IAmb IAmb 21 30 35.8
comp=Z,20nm,0.8s
MLY Manley 84.16 22 IAMs_20 IAMs_20 22 02 26.6
comp=Z,4µm,22.0s
MLY Manley 84.16 22 P 21 30 20.2
baz=241,SNR=14
WAT6 Susitna Watana 84.23 25 P 21 30 20.8
baz=244,SNR=5.9
BWN Browne 84.25 23 IAmb IAmb 21 30 39.6
comp=Z,41nm,1.0s BWN IAMs_20 IAMs_20 22 03 50.6
comp=Z,3µm,21.0s
MCK McKinley 84.25 24 IAmb IAmb 21 30 35.9
comp=Z,46nm,1.2s MCK IAMs_20 IAMs_20 22 03 21.1
comp=Z,5µm,21.0s
MCK McKinley 84.25 24 P 21 30 19.2
baz=243,SNR=13
KBL Kabul 84.30 306 P **P** **21 30 22.4 -1.8**
KBL pmax pmax
comp=Z,9.0nm,1.1s
KBL Kabul 84.30 306 P **P** **21 30 22.4 -1.8**
DZA Taraz 84.40 314 *e*P **P** **21 30 23.1 -1.2**
comp=Z,12nm,0.8s,baz=314 DZA *e*S **SKSac** **21 40 42.9 -3.0**
baz=314
DZA Taraz 84.40 314 *e*P **P** **21 30 23.0 -1.2**
DZA *e*S **SKSac** **21 40 42.8 -3.0**
DZA pmax pmax
comp=Z,12nm,0.8s
KLU Klutina 84.55 26 P 21 30 23.2
baz=246,SNR=8.5
KLU Klutina 84.55 26 IAmb IAmb 21 30 36.4
comp=Z,28nm,0.9s KLU IAMs_20 IAMs_20 22 01 25.1
comp=Z,6µm,22.0s
NEA2 Nenana 84.59 23 P 21 30 22.3
baz=243
NEA2 Nenana 84.59 23 IAmb IAmb 21 30 37.4
comp=Z,19nm,1.1s NEA2 IAMs_20 IAMs_20 22 02 26.0
comp=Z,3µm,22.0s
RAGM Ragged Mountai 84.67 27 IAMs_20 IAMs_20 22 05 41.3
comp=Z,4µm,20.0s
M24K Tolsona, Glenn 84.69 26 P 21 30 23.6
baz=246
M24K Tolsona, Glenn 84.69 26 IAmb IAmb 21 30 40.1
comp=Z,32nm,0.8s
I23K Minto, Yukon-K 84.73 22 IAMs_20 IAMs_20 22 03 07.8
comp=Z,3µm,22.0s
I23K Minto, Yukon-K 84.73 22 P 21 30 23.0
baz=243
HMT Hamilton 84.84 28 IAMs_20 IAMs_20 22 05 25.8
comp=Z,5µm,20.0s
WRH Wood River Hil 84.92 23 P **P** **21 30 23.6 -2.7**
WRH IAmb IAmb 21 30 39.5
comp=Z,21nm,1.1s WRH IAMs_20 IAMs_20 22 01 51.6
comp=Z,3µm,22.0s
BMRM Bremner River 84.93 27 P 21 30 24.8
baz=247
BMRM Bremner River 84.93 27 P **P** **21 30 26.9 +0.3**
BMRM IAmb IAmb 21 30 46.1
comp=Z,55nm,1.4s BMRM IAMs_20 IAMs_20 22 03 33.1
comp=Z,4µm,20.0s
SUCK Suckling Hills 84.97 28 IAMs_20 IAMs_20 22 01 06.1
comp=Z,4µm,22.0s
KK31 Karatay Array 85.03 314 IAmb IAmb 21 30 30.3
comp=Z,30nm,1.1s
KKAR Karatay Array 85.03 314 IAmb IAmb 21 30 30.3
comp=Z,30nm,1.1s
MDM Murphy Dome 85.08 23 P **P** **21 30 26.8 -0.4**
MDM IAMs_20 IAMs_20 22 02 40.8
comp=Z,3µm,22.0s
IUG Iuzhnay 85.16 313 *e*P **P** **21 30 27.1 -1.1**
comp=Z,7.3nm,1.2s,baz=313
IUG Iuzhnay 85.16 313 *e*P **P** **21 30 27.1 -1.1**
IUG pmax pmax
comp=Z,7.0nm,1.2s
N25K Chitina, Valde 85.18 26 P 21 30 26.6
baz=247
N25K Chitina, Valde 85.18 26 IAmb IAmb 21 30 41.9
comp=Z,20nm,1.2s
COLA College 85.19 23 *de*P **P** **21 30 26.1 -1.5**
COLA pmax pmax
comp=Z,11nm,1.0s
BRZS Berezniki 85.30 321 *e*P **P** **21 30 27.2 -1.4**
comp=Z,10nm,1.1s,baz=321
BRZS Berezniki 85.30 321 *e*P **P** **21 30 27.2 -1.4**
BRZS pmax pmax
comp=Z,10.0nm,1.1s
HDA Harding Lake 85.33 23 IAMs_20 IAMs_20 22 04 54.7
comp=Z,3µm,20.0s
HDA Harding Lake 85.33 23 P 21 30 25.5
baz=245
HDA P 21 30 25.5
baz=245
PAX Paxson 85.34 25 P 21 30 27.1
baz=246
COLD Coldfoot 85.40 20 P 21 30 26.9
baz=242
GLB Gilahina Butte 85.47 27 IAmb IAmb 21 30 43.1
comp=Z,29nm,1.2s GLB IAMs_20 IAMs_20 22 03 53.2
comp=Z,3µm,22.0s
ILAR Eielson Array 85.51 23 P **P** **21 30 25.8 -3.5**
comp=Z,6.8nm,0.7s,baz=252,slow=4.4,SNR=43
ILAR S **SKSac** **21 40 52.9 +1.0**
comp=Z,0.4nm,1.0s,baz=243,slow=6.0,SNR=2.0
ILAR PKKPbc **PKKPbc** **21 48 34.4 -1.6**
comp=Z,0.7nm,0.8s,baz=351,slow=1.2,SNR=7.7
ILAR LR LR 22 03 29.1
comp=Z,2µm,21.6s,baz=250,slow=32
CRQM Cirque 85.52 27 IAmb IAmb 21 30 44.3
comp=Z,26nm,1.0s
CRQE Cirque 85.53 27 P 21 30 29.7
baz=249
VRDI Verde Repeater 85.55 27 IAmb IAmb 21 30 43.6
comp=Z,20nm,1.2s VRDI IAMs_20 IAMs_20 22 03 31.4
comp=Z,3µm,21.0s
A21K Barrow 85.60 15 IAMs_20 IAMs_20 22 04 08.3
comp=Z,4µm,21.0s
TGL Tana Glacier 85.66 27 IAmb IAmb 21 30 44.9
comp=Z,19nm,1.0s TGL IAMs_20 IAMs_20 22 05 33.3
comp=Z,4µm,20.0s
MCARA McCarthy VSAT 85.80 27 P 21 30 29.6
baz=249
MCARA McCarthy VSAT 85.80 27 P **P** **21 30 31.5 +0.7**
MCARA IAmb IAmb 21 30 44.7
comp=Z,18nm,1.0s MCARA IAMs_20 IAMs_20 22 03 38.0
comp=Z,3µm,22.0s
NRIK Noril'sk 85.81 342 P **P** **21 30 29.4 -1.3**
comp=Z,10nm,0.9s,baz=120,slow=5.7,SNR=19
NRIK LR LR 22 10 24.9
comp=Z,2µm,18.6s,baz=119,slow=37
NRIK Noril'sk 85.81 342 *ce*P **P** **21 30 28.2 -2.5**
NRIK pmax pmax
comp=Z,48nm,1.8s
NRIK Noril'sk 85.81 342 IAmb IAmb 21 30 38.0
comp=Z,13nm,0.8s
YAH Yahtse 86.02 28 P **P** **21 30 31.7 -0.5**
YAH IAmb IAmb 21 30 46.4
comp=Z,26nm,1.1s YAH IAMs_20 IAMs_20 22 04 49.9
comp=Z,3µm,20.0s
GRNC Granite Creek 86.14 28 IAMs_20 IAMs_20 22 05 25.2
comp=Z,3µm,21.0s
DOT Dot Lake 86.19 25 IAmb IAmb 21 30 46.9
comp=Z,16nm,0.9s
TOLK Toolik Lake Re 86.28 19 P 21 30 31.2
baz=242
BARN Barnard Glacie 86.30 27 IAmb IAmb 21 30 48.3
comp=Z,21nm,0.8s BARN IAMs_20 IAMs_20 22 06 04.3
comp=Z,4µm,20.0s
TABL Table Mountain 86.33 28 IAmb IAmb 21 30 48.2
comp=Z,28nm,0.9s TABL IAMs_20 IAMs_20 22 03 27.1
comp=Z,3µm,22.0s
PRP Porcupine Dome 86.35 23 P 21 30 32.9
baz=246
SCRK Sand Creek 86.35 24 P **P** **21 30 32.5 -1.1**
SCRK IAMs_20 IAMs_20 22 04 03.5
comp=Z,5µm,21.0s
SCRK Sand Creek 86.35 24 P 21 30 32.4
baz=248
CTG Chitna Glacier 86.41 28 P 21 30 33.5
baz=250
CTGM Chitina Glacie 86.42 28 IAmb IAmb 21 30 48.8
comp=Z,29nm,0.9s CTGM IAMs_20 IAMs_20 22 06 07.3
comp=Z,3µm,20.0s
LOGN Logan Glacier 86.52 28 IAmb IAmb 21 30 49.1
comp=Z,20nm,0.8s
PCA Pinnacle 86.63 29 IAmb IAmb 21 30 52.0
comp=Z,29nm,0.9s
PINM Pinnacle 86.63 29 P 21 30 35.4
baz=251
FYU Fort Yukon 86.88 22 P **P** **21 30 36.1 +0.1**
FYU IAmb IAmb 21 30 50.0
comp=Z,17nm,0.9s
BCPM Bancas Point 86.88 29 P **P** **21 30 36.3 +0.1**
BCPM IAmb IAmb 21 30 51.1
comp=Z,25nm,1.0s
K27K Chicken 87.15 25 IAmb IAmb 21 30 52.0
comp=Z,27nm,1.1s K27K IAMs_20 IAMs_20 22 05 12.8
comp=Z,4µm,22.0s
K27K Chicken 87.15 25 P 21 30 36.8
baz=249
BVAR Borovoye Array 87.46 324 P **P** **21 30 37.3 -1.8**
comp=Z,11nm,0.8s,baz=157,slow=8.0,SNR=24
BVAR S **SKSac** **21 41 04.0 -0.4**
comp=Z,0.7nm,0.8s,baz=131,slow=8.3,SNR=4.5
BRVK Borovoye 87.53 324 ‖ *e*P **P** **21 30 36.7 -2.7**
BRVK pmax pmax
comp=Z,12nm,1.0s
BRVK Borovoye 87.53 324 P **P** **21 30 37.5 -2.0**
BRVK IAmb IAmb 21 30 45.5
comp=Z,13nm,0.8s
EGAK Eagle 87.78 24 IAmb IAmb 21 30 51.1
comp=Z,20nm,1.0s EGAK IAMs_20 IAMs_20 22 03 31.5
comp=Z,5µm,22.0s
DAWY Dawson 88.28 25 IAmb IAmb 21 30 57.6
comp=Z,50nm,1.5s
JIS Juneau Island 89.03 31 IAMs_20 IAMs_20 22 03 00.7
comp=Z,3µm,20.0s
WHY Whitehorse 89.35 29 P **P** **21 30 47.5 -0.6**
RER Riviere de l'E 89.57 249 P **P** **21 30 48.9 -1.0**
WRAK Wrangell Islan 89.70 33 IAMs_20 IAMs_20 22 04 23.4
comp=Z,4µm,20.0s
SYO Syowa Base 90.52 200 ‖ *e*P **P** **21 30 53.7 +0.5**
SYO Syowa Base 90.52 200 ‖ *e*PcP **PcP** **21 30 56.0 +1.7**
SYO Syowa Base 90.52 200 ‖ *ep*P pP 21 31 04.2 +0.4
INK Inuvik 91.71 21 PKKPbc PKKPbc 21 48 18.1 -2.6
comp=Z,1.0nm,0.5s,baz=63,slow=3.1,SNR=6.5
JCC Jacoby Creek, 92.78 49 IAMs_20 IAMs_20 22 06 50.9
comp=Z,3µm,20.0s
AB31 Akbulak array 93.30 319 ‖ *e*P **P** **21 31 03.6 -2.9**
AB31 pmax pmax
comp=Z,16nm,1.2s
ABKAR Akbulak array 93.30 319 P **P** **21 31 04.6 -1.9**
ABKAR IAmb IAmb 21 31 07.7
comp=Z,15nm,1.1s
MCCM Marconi Confer 93.40 52 IAMs_20 IAMs_20 22 10 12.5
comp=Z,3µm,19.0s
GEYT Alibeck 93.53 308 P **P** **21 31 06.3 -1.6**
comp=Z,2.5nm,0.7s,baz=90,slow=1.9,SNR=5.6
GEYT LR LR 22 15 56.5
comp=Z,1µm,21.4s,baz=100,slow=37
GEYT Alibeck 93.53 308 P **P** **21 31 07.5 -0.4**
NLWA Neilton Lookou 93.55 43 IAMs_20 IAMs_20 22 08 01.7
comp=Z,3µm,19.0s
SVE Sverdlovsk 93.66 327 *e*P **P** **21 31 07.5 -0.4**
SVE pmax pmax
comp=Z,17nm,1.6s SVE MLR MLR
comp=Z,2µm,20.0s
O02D Mt. Diablo Mer 93.66 50 P 21 31 08.6
baz=265
M02C Callahan 93.72 49 P 21 31 09.7
baz=265
HUMO Hull Mountain 93.75 48 P **P** **21 31 08.9 +0.2**
HUMO IAmb IAmb 21 31 22.9
comp=Z,25nm,1.4s HUMO IAMs_20 IAMs_20 22 04 23.5
comp=Z,5µm,22.0s
N02D Trinity Center 93.79 49 P 21 31 08.1
baz=265
YBH Yreka Blue Hor 93.86 49 P **P** **21 31 08.6 -0.8**
YBH pmax pmax
comp=Z,12nm,1.2s YBH MLR MLR
comp=Z,5µm,20.0s
YBH Yreka Blue Hor 93.86 49 P **P** **21 31 08.6 -0.8**
YBH IAmb IAmb 21 31 23.4
comp=Z,12nm,1.1s
WDC Whiskeytown Da 93.88 50 P **P** **21 31 09.1 -0.3**
WDC pmax pmax
comp=Z,7.0nm,0.9s WDC MLR MLR
comp=Z,4µm,20.0s
WDC Whiskeytown Da 93.88 50 P **P** **21 31 09.1 -0.3**
WDC IAMs_20 IAMs_20 22 07 55.1
comp=Z,4µm,20.0s
O03E Paynes Creek 94.42 50 P 21 31 08.2
baz=266
ORV Oroville 94.59 51 P **P** **21 31 12.1 -0.6**
ORV pmax pmax
comp=Z,10.0nm,1.0s ORV MLR MLR
comp=Z,2µm,20.0s
ORV Oroville 94.59 51 P **P** **21 31 12.1 -0.6**
ORV IAmb IAmb 21 31 26.9
comp=Z,9.9nm,1.0s ORV IAMs_20 IAMs_20 22 07 51.0
comp=Z,2µm,20.0s
ARU Arti 94.76 326 *c i*P **P** **21 31 10.4 -2.6**
ARU 21 34 56.8
ARU S **SKSac** **21 41 42.3 -3.7**
ARU SP SP 21 43 43.1 +3.2
ARU PS PS 21 44 23.7 +39
ARU SS **SS** **21 48 56.0 +7.4**
ARU pmax pmax
comp=Z,19nm,1.9s ARU MLR MLR
comp=Z,3µm,21.0s
ARU Arti 94.76 326 P **P** **21 31 11.1 -1.9**
SOCY Socotra 94.94 282 IAmb IAmb 21 31 31.5
comp=Z,16nm,0.9s
AFDM Forest Hills D 94.96 51 P **P** **21 31 13.9 -0.5**
AFDM IAmb IAmb 21 31 28.7
comp=Z,9.6nm,1.0s
C36M Paulatuk 95.25 21 IAMs_20 IAMs_20 22 11 05.6
comp=Z,4µm,21.0s
C36M Paulatuk 95.25 21 P 21 31 15.0
baz=266
CMB Columbia Colle 95.36 52 IAMs_20 IAMs_20 22 10 17.2
comp=Z,3µm,19.0s
BEKR Beckworth 95.50 51 P **P** **21 31 17.9 +0.9**
BEKR IAmb IAmb 21 31 30.6
comp=Z,15nm,1.3s
PKM Mcpherson Peak 95.61 56 P 21 31 17.9
baz=266
MOD Modoc Plateau 95.66 49 P **P** **21 31 18.1 +0.4**
BELA Belgrano 2 95.90 180 IAmb IAmb 21 31 21.4
comp=Z,21nm,1.0s
VCNR Virginia City 96.01 51 IAmb IAmb 21 31 18.5
comp=Z,6.6nm,0.5s
PAHR Pah Rah Range 96.24 51 P **P** **21 31 20.0 -0.3**
I07A Izee 96.36 46 P **P** **21 31 21.0 +0.2**
I07A IAmb IAmb 21 31 34.4
comp=Z,13nm,1.4s
HAWA Hanford 96.44 44 IAMs_20 IAMs_20 22 10 08.5
comp=Z,2µm,19.0s
ISA Isabella, Lake 96.75 55 P 21 31 21.2
baz=267
RYN Ryan 96.85 52 P **P** **21 31 23.2 0.0**
PASC Pasadena Art C 96.91 56 IAMs_20 IAMs_20 22 08 27.6
comp=Z,3µm,21.0s
NVAR Mina Array Bea 97.01 52 P **P** **21 31 23.8 -0.2**
comp=Z,0.4nm,0.3s,baz=247,slow=6.7,SNR=5.3
NVAR LR LR 22 08 38.8
comp=Z,2µm,20.4s,baz=265,slow=31
NVAR Mina Array Bea 97.01 52 P Pdif 21 31 25.4 +1.3
MWC Mount Wilson 97.02 56 P **P** **21 31 23.2 -0.9**
MWC pmax pmax
comp=Z,23nm,1.3s
MWC Mount Wilson 97.02 56 P **P** **21 31 23.2 -0.9**
MWC IAmb IAmb 21 31 39.4
comp=Z,23nm,1.3s
EDW2 Edwards Air Fo 97.10 56 P 21 31 22.7
baz=267
CWC Cottonwood Cre 97.10 54 P 21 31 22.8
baz=267
KVN Kaiserville 97.20 52 P **P** **21 31 24.0 -0.8**
KVN pmax pmax
comp=Z,5.0nm,1.3s
KVN Kaiserville 97.20 52 P **P** **21 31 24.0 -0.8**
BFSC Mount Baldy Ra 97.35 56 P 21 31 24.1
baz=267
LRMC Laurel Mtn Rad 97.38 55 P 21 31 25.4
baz=268
MPMC Manual Prospec 97.56 55 P 21 31 25.4
baz=268
109C Camp Elliot, M 97.75 58 IAMs_20 IAMs_20 22 09 02.9
comp=Z,3µm,20.0s
ABPO Ambohimpanom 97.80 250 P **P** **21 31 27.5 -0.4**
ABPO pmax pmax
comp=Z,13nm,1.0s ABPO MLR MLR
comp=Z,2µm,20.0s
ABPO Ambohimpanom 97.80 250 P **P** **21 31 27.5 -0.4**
ABPO IAmb IAmb 21 31 30.0
comp=Z,13nm,1.0s
ABPO Ambohimpanom 97.80 250 IAMs_20 IAMs_20 22 13 35.3
comp=Z,2µm,20.0s
BMO Blue Mountains 97.96 46 IAMs_20 IAMs_20 22 06 39.7
comp=Z,4µm,22.0s
NEW Newport 98.13 42 IAMs_20 IAMs_20 22 10 54.9
comp=Z,3µm,20.0s
NEW Newport 98.13 42 IAmb IAmb 21 31 42.1
comp=Z,22nm,1.5s
PFO Pinyon Flats O 98.32 57 IAMs_20 IAMs_20 22 09 09.0
comp=Z,4µm,20.0s
TPNV Topopah Spring 98.59 54 P **P** **21 31 30.1 -1.0**
TPNV pmax pmax
comp=Z,5.0nm,1.1s TPNV MLR MLR
comp=Z,2µm,20.0s
TPNV Topopah Spring 98.59 54 P **P** **21 31 30.1 -1.0**
TPNV IAMs_20 IAMs_20 22 10 39.0
comp=Z,2µm,20.0s
YKA Yellowknife Ar 99.14 28 P **Pdif** **21 31 30.7 -2.0**
comp=Z,1.1nm,0.8s,baz=271,slow=4.7,SNR=14
YKA PP **PP** **21 35 28.8 -6.4**
comp=Z,1.1nm,0.8s,baz=268,slow=6.7,SNR=6.0
YKA PKKPbc **PKKPbc** **21 47 57.4 -3.1**
comp=Z,1.2nm,0.8s,baz=96,slow=3.3,SNR=9.7
YKA SKKPbc SKKPbc 21 51 42.8 +2.8
comp=Z,0.2nm,0.6s,baz=91,slow=2.9,SNR=4.3
YKA LR LR 22 13 51.4
comp=Z,2µm,20.1s,baz=0.0,slow=34
ELK Elko 99.44 50 P **Pdif** **21 31 34.3 -0.6**
ELK pmax pmax
comp=Z,2.0nm,0.9s ELK MLR MLR
comp=Z,4µm,19.0s
ELK Elko 99.44 50 P **Pdif** **21 31 34.3 -0.6**
ELK IAMs_20 IAMs_20 22 14 12.1
comp=Z,3µm,19.0s
SNAA Sanae 99.78 189 Pdiff **Pdif** **21 31 34.4 -1.1**
SNAA Sanae 99.78 189 *i* P **Pdif** **21 31 37.1 +1.6**
MSO Missoula 100.30 44 IAMs_20 IAMs_20 22 14 01.5
comp=Z,3µm,19.0s
VNA2 Neumayer--Watz 101.12 188 Pdiff **Pdif** **21 31 41.6 +0.2**
baz=138,slow=3.4
VNA3 Neumayer Olymp 101.13 187 Pdiff **Pdif** **21 31 41.3 -0.2**
DLMT Dillon 101.29 45 IAMs_20 IAMs_20 22 08 58.8
comp=Z,4µm,22.0s
PRGR Permogore 101.29 332 *e*P **Pdif** **21 31 42.0 -0.3**
DUG Dugway, Tooele 101.29 50 IAMs_20 IAMs_20 22 15 30.3
comp=Z,3µm,19.0s
MAK Makhachkala 101.76 312 *e*P **Pdif** **21 31 45.9 +1.1**
MAK *e* 21 35 50.2
MAK *e* 21 42 20.2
MAK pmax pmax
comp=Z,75nm,0.9s
BOZ Bozeman (W) 101.96 45 IAMs_20 IAMs_20 22 09 41.4
comp=Z,3µm,22.0s
HWUT Hardware Ranch 102.19 49 IAMs_20 IAMs_20 22 11 53.0
comp=Z,2µm,21.0s
WUAZ Wupatki 102.53 55 IAMs_20 IAMs_20 22 15 32.4
comp=Z,2µm,19.0s
FLWY Flagg Ranch 102.70 46 IAMs_20 IAMs_20 22 11 31.3
comp=Z,4µm,20.0s
ALE Alert 102.81 4 IAMs_20 IAMs_20 22 14 55.0
comp=Z,3µm,21.0s
TUC Tucson 103.07 58 IAMs_20 IAMs_20 22 11 36.0
comp=Z,4µm,20.0s
PDAR Pinedale Array 103.62 48 Pdiff **Pdif** **21 31 52.0 -1.4**
comp=Z,0.5nm,0.6s,baz=207,slow=1.3,SNR=4.7
PDAR PKKPbc **PKKPbc** **21 47 44.9 -2.2**
comp=Z,0.2nm,0.6s,baz=123,slow=3.3,SNR=3.8
PDAR PKPPKP 21 56 08.6
comp=Z,1.2nm,1.1s,baz=116,slow=3.4,SNR=4.1
RLMT Red Lodge 103.65 45 IAMs_20 IAMs_20 22 10 24.3
comp=Z,3µm,22.0s
KBS Kingsbay 104.20 352 IAMs_20 IAMs_20 22 17 55.0
comp=Z,2µm,22.0s
KLMR Klimovskoe 104.33 331 *e*P **Pdif** **21 31 52.7 -3.1**
KLMR *e* 21 36 11.9
KLMR *e*PS PS 21 45 23.7 -3.5

KLMR eSS SS 21 50 57.6 -4.3
KLMR pmax pmax
comp=Z,8.0nm,0.8s
KLMR MLR MLR
comp=Z,3µm,20.0s
KLMR Klimovskoe 104.33 331 ePdif **Pdif 21 31 52.7 -3.1**
KLMR AMP 21 31 56.7
comp=Z,8.0nm,0.8s
KLMR ePP **PKiKP 21 36 11.9 -0.3**
KLMR ePS **PS 21 45 23.8 -3.4**
KLMR ePS **PS 21 45 23.8 -3.4**
KLMR ePKKPbc **PKKPbc 21 47 41.7 -3.5**
KLMR eSS **SS 21 50 57.6 -4.3**
KLMR eSS **SS 21 50 57.6 -4.3**
KLMR LQ LQ 22 09 44.2
KLMR LQ LQ 22 09 44.2
KLMR LR LR 22 19 42.7
KLMR AMP 22 21 02.1
comp=Z,3µm,20.4s
LVZ Lovozero 104.41 339 IAMs_20 IAMs_20 22 22 28.9
comp=Z,2µm,22.0s
MVCO Mesa Verde 104.78 53 IAMs_20 IAMs_20 22 17 24.9
comp=Z,2µm,19.0s
APA Apatity 104.97 339⇑ *i*P **Pdif 21 31 45.8 -13**
APA pmax pmax
comp=Z,5.0nm,1.1s
LAO LASA Array 105.60 43 IAMs_20 IAMs_20 22 16 16.7
comp=Z,3µm,20.0s
SMCO Snowmass 105.84 51 IAMs_20 IAMs_20 22 17 31.8
comp=Z,3µm,19.0s
KEV Kevo 106.23 342 IAMs_20 IAMs_20 22 23 45.8
comp=Z,2µm,19.0s
Y22D IRIS PASSCAL I 106.25 56 IAMs_20 IAMs_20 22 12 02.9
comp=Z,3µm,21.0s
ANMO Albuquerque 106.58 56 IAMs_20 IAMs_20 22 14 49.5
comp=Z,2µm,21.0s
DGMT Dagmar 106.69 41 IAMs_20 IAMs_20 22 14 33.5
comp=Z,2µm,20.0s
EPT El Paso 106.72 59 IAMs_20 IAMs_20 22 18 52.6
comp=Z,2µm,19.0s
PHWY Pilot Hill 106.79 49 IAMs_20 IAMs_20 22 17 24.8
comp=Z,3µm,20.0s
ARCES ARCESS Array B 106.80 342 Pdiff **Pdif 21 32 05.8 -0.9**
comp=Z,2.6nm,0.8s,baz=76,slow=7.6,SNR=5.1
ARCES PKiKP **PKiKP 21 36 15.1 -1.5**
comp=Z,1.8nm,0.8s,baz=74,slow=1.6,SNR=6.9
ARCES PKKPbc **PKKPbc 21 47 37.0 -0.9**
comp=Z,1.3nm,0.8s,baz=318,slow=1.6,SNR=7.6
FFC Flin Flon 106.83 35 IAMs_20 IAMs_20 22 15 18.5
comp=Z,4µm,21.0s
ISCO Idaho Springs 106.84 50 IAMs_20 IAMs_20 22 18 54.0
comp=Z,2µm,19.0s
TULEG Thule 107.08 8 IAMs_20 IAMs_20 22 16 23.0
comp=Z,3µm,22.0s
OBN Obninsk 107.20 326 IAMs_20 IAMs_20 22 22 19.6
comp=Z,3µm,21.0s
MNTX Cornudas Mount 107.68 59 IAMs_20 IAMs_20 22 14 44.0
comp=Z,2µm,20.0s
TXAR Lajitas Array 109.30 61 PKKPbc PKKPbc 21 47 28.9 0.0
comp=Z,1.0nm,0.8s,baz=73,slow=4.2,SNR=5.2
OGNE Ogallala 109.41 49 IAMs_20 IAMs_20 22 18 56.9
comp=Z,3µm,19.0s
FINES FINESS Array B 110.29 334 Pdiff **Pdif 21 32 20.3 -2.0**
comp=Z,2.5nm,0.7s,baz=83,slow=4.6,SNR=9.6
FINES PKiKP **PKiKP 21 36 22.9 -0.4**
comp=Z,3.1nm,0.8s,baz=73,slow=6.4,SNR=8.6
AMTX Amarillo 110.49 55 IAMs_20 IAMs_20 22 18 10.1
comp=Z,2µm,20.0s
CBKS Cedar Bluff 111.48 51 IAMs_20 IAMs_20 22 15 40.1
comp=Z,3µm,22.0s
AGMN Agassiz Nation 112.15 40 IAMs_20 IAMs_20 22 20 51.7
comp=Z,3µm,20.0s
MNK Minsk 112.18 327 *i* PKP **PKiKP 21 36 24.7 -2.3**
comp=E,1.0nm,0.9s
MNK *i* PKP **PKiKP 21 36 24.7 -2.3**
comp=N,4.0nm,0.9s
MNK *i* PKP **PKiKP 21 36 24.7 -2.3**
comp=Z,12nm,0.9s
MNK *i* PP PP 21 37 03.4 -8.3
MNK *i* PP PP 21 37 03.4 -8.3
MNK *i* PP PP 21 37 03.4 -8.3
MNK *i* PPP PPP 21 39 25.1
MNK *i* SKS **SKSdf 21 43 29.5 -7.2**
MNK *i* SP **SP 21 46 27.8 -13**
MNK *i* PS PKKPbc 21 46 36.9 -43
MNK *i* SS **SS 21 52 38.4 -10**
MNK *i* SKKS SKKSdf 21 54 37.9 -12
MNK *i* SSS SSS 21 57 02.9
MNK *i* LQ LQ 22 13 55.1
MNK *i* LR LR 22 18 56.8
MNK *i* LRM MLR 22 25 06.1
comp=E,143nm,20.6s
MNK *i* LRM MLR 22 25 08.7
comp=Z,1µm,20.6s
MNK *i* LRM MLR 22 25 10.6
comp=N,629nm,20.6s
U32A Winter Ranch, 112.45 53 IAMs_20 IAMs_20 22 21 09.8
comp=Z,2µm,19.0s
IDID Didziasalis 112.48 328 *e*P **PKiKP 21 36 27.5 -0.1**
BRTR Keskin Array B 112.49 310 PKiKP **PKiKP 21 36 28.2 -0.1**
comp=Z,1.5nm,0.9s,baz=0.0,slow=0.5,SNR=3.9
BRTR PKKPbc **PKKPbc 21 47 18.3 -0.5**
comp=Z,1.6nm,1.0s,baz=223,slow=5.7,SNR=4.6
NACGM Naroch 112.62 328 *i* PKP **PKiKP 21 36 29.4 +1.5**
NACGM *i* PKP **PKiKP 21 36 29.4 +1.5**
NACGM *i* PKP **PKiKP 21 36 29.4 +1.5**
NACGM *i* SKP **SKPdf 21 39 55.7 -5.5**
NACGM *i* SKS **SKSac 21 43 12.8 +3.8**
NACGM *i* SSS SSS 22 01 22.5
NACGM *i* LQ LQ 22 11 36.3
NACGM *i* LQ LQ 22 18 24.3
ISAL Salakas 112.71 328 *e*P **PKiKP 21 36 31.3 +3.3**
AKASG Malin Array Be 112.72 323 PKiKP **PKiKP 21 36 27.7 -0.5**
comp=Z,1.1nm,0.5s,baz=62,slow=2.2,SNR=8.3
AKASG PKKPbc **PKKPbc 21 47 16.7 -1.5**
comp=Z,0.8nm,0.5s,baz=263,slow=4.0,SNR=6.6
AKBB Malin Array Si 112.72 323⇓ *i*PKIKP **PKiKP 21 36 27.0 -1.2**
IIGN Ignalina 112.74 328 *e*P **PKiKP 21 36 28.8 +0.6**
WMOK Wichita Mounta 112.87 55 IAMs_20 IAMs_20 22 18 01.2
comp=Z,3µm,20.0s
OK032 Salt Plains WL 113.01 53 IAMs_20 IAMs_20 22 22 25.6
comp=Z,3µm,20.0s
OK029 Liberty Lake 113.78 54 IAMs_20 IAMs_20 22 27 55.1
comp=Z,2µm,21.0s
KSU1 Kansas State U 113.83 50 IAMs_20 IAMs_20 22 22 56.1
comp=Z,3µm,19.0s
PABE Paberze 113.85 329 *e*P **PKiKP 21 36 30.1 -0.2**
UNM Universidad Na 113.86 72 IAMs_20 IAMs_20 22 16 14.5
comp=Z,2µm,22.0s
OK025 Westminster Rd 113.91 54 IAMs_20 IAMs_20 22 23 08.5
comp=Z,2µm,19.0s
OK031 S. Brethren Rd 114.25 53 IAMs_20 IAMs_20 22 23 19.4
comp=Z,2µm,19.0s
OK030 Cody Creek RV 114.29 53 IAMs_20 IAMs_20 22 23 23.7
comp=Z,2µm,20.0s
KVTX Kingsville 114.52 63 IAMs_20 IAMs_20 22 28 14.4
comp=Z,2µm,19.0s
BOSA Boshof 114.63 235 PKP **PKiKP 21 36 33.1 +0.4**
comp=Z,2.1nm,0.7s,baz=154,slow=3.3,SNR=7.0
SUW Suwalki 114.90 328 *e*P PKPdf 21 36 33.3 +1.0
SUW Suwalki 114.90 328 IAMs_20 IAMs_20 22 27 38.1
comp=Z,3µm,20.0s
X37A Clayton 115.67 55 IAMs_20 IAMs_20 22 20 00.2
comp=Z,3µm,20.0s
LBTB Lobatse 115.68 238 PKIKP **PKiKP 21 36 35.9 +1.0**
LBTB Lobatse 115.68 238 **PKiKP 21 36 35.9 +1.0**
SCIA State Center 115.69 46 IAMs_20 IAMs_20 22 24 55.0
comp=Z,2µm,19.0s
BURAR Bucovina Array 116.24 320 **PKiKP 21 36 36.6 +1.4**
LSZ Lusaka 116.36 250 PKIKP **PKiKP 21 36 36.8 +0.4**
LSZ MLR MLR
comp=Z,2µm,19.0s
LSZ Lusaka 116.36 250 **PKiKP 21 36 36.8 +0.4**
LSZ Lusaka 116.36 250 IAMs_20 IAMs_20 22 27 48.3
comp=Z,2µm,19.0s
NOA NORSAR Array B 116.53 338 PKP **PKPdf 21 36 33.3 -2.0**
comp=Z,2.2nm,0.9s,baz=55,slow=1.9,SNR=6.9
NOA PP **PP 21 37 40.2 -1.9**
comp=Z,1.0nm,0.9s,baz=83,slow=6.0,SNR=3.6
MBAR Mbarara 116.72 266 IAMs_20 IAMs_20 22 24 57.6
comp=Z,2µm,20.0s
NATX Nacogdoches 116.75 58 IAMs_20 IAMs_20 22 24 10.0
comp=Z,2µm,19.0s
W39A Magazine 116.83 54 IAMs_20 IAMs_20 22 18 36.9
comp=Z,2µm,22.0s
KWP Kalwaria Pacla 117.01 323 IAMs_20 IAMs_20 22 29 46.1
comp=Z,2µm,20.0s
VOIR 117.10 318⇑P **PKiKP 21 36 38.4 +1.5**
COWI Conover 117.19 41 IAMs_20 IAMs_20 22 20 18.2
comp=Z,3µm,21.0s
U40A Yellville 117.32 52 IAMs_20 IAMs_20 22 25 42.8
comp=Z,2µm,19.0s
JFWS Jewell Farm 117.50 45 IAMs_20 IAMs_20 22 22 55.8
comp=Z,3µm,21.0s
UZH Uzhgorod 117.66 322 *i* PKIKP **PKiKP 21 36 42.1 +4.3**
UZH *e* 21 36 48.1
UZH *e*PS **PS 21 47 35.3 -0.7**
CRVS Cervenica-Dubn 118.05 323 *e*PKIKP **PKiKP 21 36 39.1 +0.5**
CRVS Cervenica-Dubn 118.05 323 *e*PKP **PKiKP 21 36 39.1 +0.5**
KONO Kongsberg 118.05 337 IAMs_20 IAMs_20 22 30 58.5
comp=Z,3µm,20.0s
DRGR 118.13 320⇑P **PKPdf 21 36 38.9 0.0**
GKP Gorka Klasztor 118.38 329 *e*PKP **PKPdf 21 36 38.9 -0.2**
GKP Gorka Klasztor 118.38 329 *e*P **PKPdf 21 36 38.8 -0.2**
OJC Ojcow 118.45 325 *e*PKP **PKPdf 21 36 38.8 -0.5**
NIE Niedzica 118.52 324 *e*PKP **PKiKP 21 36 40.1 +0.5**
GZR Gura Zlata 118.61 319⇑P **PKPdf 21 36 38.3 -1.5**
HDIL Hopedale 118.91 47 IAMs_20 IAMs_20 22 28 02.2
comp=Z,3µm,20.0s
SIRR Siria 119.00 320⇑P **PKiKP 21 36 40.9 +0.4**
BZS Buzias 119.28 319⇑P **PKPdf 21 36 39.8 -1.2**
VTS Vitosha 119.30 316⇑P **PKiKP 21 36 43.0 +1.6**
L44A Lake County Fo 119.37 45 IAMs_20 IAMs_20 22 23 44.3
comp=Z,3µm,20.0s
HQIL Hanson Quary C 119.54 45 IAMs_20 IAMs_20 22 24 47.8
comp=Z,3µm,21.0s
MDVR Moldovita 119.54 319⇓P **PKPdf 21 36 39.6 -2.0**
OKC Ostrava-Krasne 119.57 325 AMS AMS 22 30 30.0
comp=Z,2µm,18.0s
MORC Moravsky Berou 119.95 325 *e*PKP **PKPdf 21 36 42.0 -0.2**
KSP Ksiaz 120.11 327 *e*PKP **PKPdf 21 36 42.1 -0.4**
VBMS Vicksburg 120.12 56 IAMs_20 IAMs_20 22 26 49.1
comp=Z,2µm,19.0s
KRLC Kraliky 120.23 326 *e*PKIKP **PKPdf 21 36 42.3 -0.5**
KRLC *e* 21 36 53.0
KRLC MLR MLR
comp=Z,2µm,20.6s
KRLC Kraliky 120.23 326 *e*PKPDF **PKPdf 21 36 42.3 -0.5**
KRLC *e*pPKP **pPKPdf 21 36 53.0 -0.5**
KRLC AMS AMS 22 30 40.0
comp=Z,2µm,20.6s
OSTC Ostas 120.30 326 *e*PKPDF **PKPdf 21 36 42.4 -0.5**
OSTC AMS AMS 22 30 20.0
comp=Z,3µm,21.9s
JAVC Velka Javorina 120.31 324 *e*PKP **PKiKP 21 36 43.8 +0.7**
DPC Dobruska-Polom 120.35 326 *e*PKIKP **PKPdf 21 36 42.5 -0.5**
DPC *e* 21 36 51.8
DPC *e*PS PKKPdf 21 47 56.7 +33
DPC MLR MLR
comp=Z,2µm,18.9s
DPC Dobruska-Polom 120.35 326 *e*PKPDF **PKPdf 21 36 42.5 -0.5**
DPC *ex* x 21 36 51.8
DPC *e*PS **PS 21 47 56.7 -3.5**
DPC AMS AMS 22 30 40.0
comp=Z,2µm,18.9s
CHVC Chvalec 120.38 326 *e*PKPDF **PKiKP 21 36 43.1 0.0**
CHVC AMS AMS 22 30 20.0
comp=Z,3µm,22.3s
UPC Upice 120.44 326 AMS AMS 22 30 30.0
comp=Z,3µm,21.2s
H03S2 Juan Fernandez 120.48 135 T T 23 46 39.9
baz=238,slow=74,SNR=3.8
H03S1 Juan Fernandez 120.49 135 T T 23 46 43.1
baz=238,slow=74,SNR=4.6
H03S3 Juan Fernandez 120.50 135 T T 23 46 41.5
baz=238,slow=74,SNR=5.2
SMOL Smolenice 120.62 324 *e*PKIKP **PKiKP 21 36 43.8 +0.2**
SMOL Smolenice 120.62 324 *e*PKP **PKiKP 21 36 43.8 +0.2**
MODS Modra-Piesok 120.77 324 *e*PKIKP **PKiKP 21 36 45.3 +1.4**
MODS Modra-Piesok 120.77 324 *e*PKP **PKiKP 21 36 45.3 +1.4**
KRUC Moravsky 120.95 325 *e*PKP **PKPdf 21 36 43.3 -0.8**
PVCC Panska Ves 121.22 327 *e*PKIKP **PKPdf 21 36 44.2 -0.4**
PVCC MLR MLR
comp=Z,2µm,21.1s
PVCC Panska Ves 121.22 327 *e*PKPDF **PKPdf 21 36 44.2 -0.4**
PVCC AMS AMS 22 30 40.0
comp=Z,2µm,21.1s
WVT Waverly 121.31 51 IAMs_20 IAMs_20 22 27 35.2
comp=Z,3µm,20.0s
TREC Trest 121.35 325 AMS AMS 22 31 20.0
comp=Z,2µm,21.4s
BRG Berggiesshubel 121.37 328 *e*P **PKPdf 21 36 44.3 -0.5**
BRG Amp 21 36 47.2
comp=Z,13nm,0.9s
BRG *ex* x 21 36 55.1
BRG Amp 21 36 56.7
comp=Z,8.3nm,0.9s
BRG PP **PP 21 38 19.0 +3.2**
BRG PS **PS 21 48 02.0 -7.1**
BRG SS SS 21 55 13.0 +25
BRG Amp 22 33 06.0
comp=Z,3.0nm,17.2s
BRG Amp 22 33 10.0
comp=E,1.8nm,17.6s
BRG Amp 22 33 11.0
comp=N,1.7nm,19.3s
BRG Berggiesshubel 121.37 328 *e*PKPdf **PKiKP 21 36 46.4 +1.4**
baz=56,slow=1.9
BSEG Bad Segeberg 121.40 332 *e*PKPdf **PKiKP 21 36 46.7 +1.8**
baz=56,slow=1.9
PLAL Pickwick Lake 121.43 53 IAMs_20 IAMs_20 22 28 15.6
comp=Z,2µm,19.0s
PLCA Paso Flores 121.45 147 PKP **PKPdf 21 36 45.2 -0.3**
comp=Z,13nm,0.8s,baz=218,slow=4.4,SNR=20
PLCA PKKPbc **PKKPbc 21 46 45.5 -1.6**
comp=Z,2.8nm,1.0s,baz=333,slow=2.3,SNR=3.8
PRU Pruhonice 121.52 326 *e*PKIKP **PKPdf 21 36 43.0 -2.2**
PRU *e* 21 38 19.7
PRU *e*PS **PS 21 48 06.5 -4.0**
PRU MLR MLR
comp=Z,3µm,19.8s
PRU Pruhonice 121.52 326 *e*PKPDF **PKPdf 21 36 43.0 -2.2**
PRU *e*PP **PP 21 38 19.7 +2.9**
PRU *e*SP SP 21 48 06.5 +1.0
PRU AMS AMS 22 31 00.0
comp=Z,3µm,19.8s
PRA Prague 121.53 327 AMS AMS 22 31 00.0
comp=Z,3µm,20.8s
CLL Collm 121.62 328 *i* PKPdf **PKPdf 21 36 44.3 -1.0**
comp=Z,14nm,0.9s
CLL *i* pPKPdf **pPKPdf 21 36 54.4 -1.7**
CLL *e*PP **PP 21 38 18.0 +0.5**
CLL *e*PPP PPP 21 40 53.0
CLL *e*PS **PS 21 48 08.0 -3.3**
CLL *e*PPS PPS 21 49 36.0
CLL *e*SS SS 21 54 48.0 -2.9
CLL *e*SSS SSS 21 59 30.0
CLL *e*SSSS 22 03 48.0
CLL Lm MLR 22 33 00.0
comp=N,3µm,20.2s
CLL Lm MLR 22 33 00.0
comp=E,2µm,21.3s
CLL Lm MLR 22 33 00.0
comp=Z,3µm,20.0s
CLL Collm 121.62 328 *i* PKIKP **PKPdf 21 36 44.3 -1.0**
CLL *i* 21 36 54.4
CLL *e* 21 38 18.0
CLL pmax pmax
comp=Z,14nm,0.9s
CLL MLR MLR
comp=Z,3µm,20.0s
CLL Collm 121.62 328 *e*PKPdf **PKiKP 21 36 46.6 +1.2**
baz=56,slow=1.9
FBE Freiberg 121.65 328 *e*PKPdf **PKiKP 21 36 47.2 +1.7**
baz=56,slow=1.9
CONA Conrad Observa 121.82 324 *e*P **PKPdf 21 36 45.4 -0.6**
comp=Z,9.2nm,0.8s,SNR=5.6
CONA *e*P **PKKPbc 21 46 46.0 +0.1**
comp=Z,3.0nm,0.9s
WCI Wyandotte Cave 121.85 49 PKIKP **PKPdf 21 36 45.7 -0.5**
WCI MLR MLR
comp=Z,4µm,22.0s
WCI Wyandotte Cave 121.85 49 PKPdf **PKPdf 21 36 45.7 -0.5**
FLTG Flechtingen 121.93 330 *e*PKPdf **PKiKP 21 36 47.2 +1.2**
baz=56,slow=1.9
PBCC Pribram 121.98 326 *e*PKPDF **PKPdf 21 36 46.1 0.0**
CKRC Cesky Krumlov 122.26 325 *e*PKPDF **PKPdf 21 36 45.9 -0.8**
CKRC AMS AMS 22 31 50.0
comp=Z,2µm,18.6s
AAM Ann Arbor 122.27 43 IAMs_20 IAMs_20 22 29 46.8
comp=Z,2µm,19.0s
NEUB Neuenburg 122.31 329 *e*PKPdf **PKiKP 21 36 48.1 +1.3**
baz=56,slow=1.9
ARSA Arzberg 122.35 323 *i* P **PKPdf 21 36 46.7 -0.2**
comp=Z,4.6nm,0.7s
ARSA *e*P **PKKPbc 21 46 44.2 +0.4**
comp=Z,3.1nm,0.7s
NRDL Niedersach Rie 122.39 331 *e*PKPdf **PKiKP 21 36 48.6 +1.8**
baz=56,slow=1.9
TANN Tannenbergstha 122.41 328 *e*PKPdf **PKiKP 21 36 48.4 +1.2**
baz=56,slow=1.9
KHC Kasperske Hory 122.50 326 *i* PKIKP **PKiKP 21 36 47.3 -0.1**
KHC Kasperske Hory 122.50 326 *e*PKPDF **PKPdf 21 36 45.7 -1.5**
KHC *ep*PKP **pPKPdf 21 36 57.1 -0.8**
KHC *e*PP **PP 21 38 29.5 +5.9**
KHC *e*SP SP 21 48 14.9 +0.6
KHC AMS AMS 22 31 50.0
comp=Z,3µm,22.6s
GUNZ Gunzen 122.50 328 *e*PKPdf **PKiKP 21 36 48.9 +1.6**
baz=56,slow=1.9
NKC Novy Kostel 122.52 328 *e*PKIKP **PKPdf 21 36 46.5 -0.6**
NKC *e* 21 36 56.6
NKC MLR MLR
comp=Z,4µm,18.1s
NKC Novy Kostel 122.52 328 *e*PKPDF **PKPdf 21 36 46.5 -0.6**
NKC *ep*PKP **pPKPdf 21 36 56.6 -1.3**
NKC AMS AMS 22 33 20.0
comp=Z,4µm,18.1s
WERN Wernitzgruen 122.52 328 *e*PKPdf **PKiKP 21 36 48.8 +1.4**
baz=56,slow=1.9
PLN Plauen 122.53 328 *e*PKPdf **PKiKP 21 36 48.6 +1.3**
baz=56,slow=1.9
P49A Miami Univ. Ec 122.56 47 IAMs_20 IAMs_20 22 29 53.9
comp=Z,2µm,20.0s
GEC2 GERESS Array S 122.59 326 *e*PKPdf **PKiKP 21 36 48.6 +1.0**
baz=56,slow=1.9
GERES GERESS Array B 122.59 326 PKP **PKPdf 21 36 45.5 -1.9**
comp=Z,5.7nm,0.7s,baz=85,slow=1.7,SNR=34
GERES PKKPbc **PKKPab 21 46 41.9 +0.3**
comp=Z,0.5nm,0.6s,baz=209,slow=2.4,SNR=6.2
CLZ Clausthal 122.65 330 *e*PKPdf **PKiKP 21 36 49.2 +1.6**
baz=56,slow=1.9
MOA Molln 122.78 324 *i* P **PKPdf 21 36 47.5 -0.2**
comp=Z,4.7nm,0.9s
MOA *e*P **PKKPbc 21 46 41.5 -0.6**
comp=Z,5.2nm,1.2s
LRAL Lakeview Retre 122.81 55 IAMs_20 IAMs_20 22 23 05.3
comp=Z,3µm,21.0s
MANZ Manzenberg 122.84 327 *e*PKPdf **PKiKP 21 36 49.3 +1.4**
baz=56,slow=1.9
WET Wettzell 122.88 326 *e*PKPdf **PKiKP 21 36 49.4 +1.3**
baz=56,slow=1.9
SOKA Soboth 122.92 323 *e*P **PKPdf 21 36 47.4 -0.7**
comp=Z,11nm,0.8s,SNR=9.5
SOKA *e*P **PKKPbc 21 46 41.7 +0.1**
comp=Z,3.7nm,1.0s
GTTG Gottingen 123.03 330 *e*PKPdf **PKiKP 21 36 49.8 +1.5**
baz=56,slow=1.9
BRAL Brewton 123.23 57 IAMs_20 IAMs_20 22 24 47.7
comp=Z,2µm,22.0s
OBKA Obir 123.30 323 *e*P **PKPdf 21 36 48.0 -0.8**
comp=Z,9.0nm,1.5s
OBKA *i* P **PKKPbc 21 46 40.9 +0.8**
comp=Z,3.9nm,0.9s
GRA1 Grafenberg Arr 123.48 328 IAMs_20 IAMs_20 22 34 01.8
comp=Z,2µm,19.0s
GRFO Grafenberg 123.48 328 IAMs_20 IAMs_20 22 34 01.8
comp=Z,2µm,19.0s
ACSO Alum Creek Sta 123.54 45 IAMs_20 IAMs_20 22 26 37.8
comp=Z,2µm,21.0s
IBBN Ibbenburen 123.63 332 *e*PKPdf **PKiKP 21 36 50.9 +1.5**
baz=56,slow=1.9
KBA Koelnbreinsper 123.72 324 *i* P **PKPdf 21 36 49.2 -0.6**
comp=Z,8.5nm,0.9s,SNR=6.0
KBA Koelnbreinsper 123.72 324 PKIKP **PKiKP 21 36 50.1 +0.1**
MYKA Terra Mystica 123.78 323 *i* P **PKPdf 21 36 48.6 -1.2**
comp=Z,7.7nm,0.7s
MYKA *e*P **PKKPbc 21 46 38.7 +0.5**
comp=Z,3.9nm,0.7s
KASTN Kahler Asten 124.01 330 *e*PKPdf **PKiKP 21 36 51.6 +1.4**
baz=56,slow=1.9
ABTA Abfaltersbach 124.38 324 *e*P **PKPdf 21 36 49.9 -1.0**
comp=Z,17nm,0.8s,SNR=10
ABTA *i* P **PKKPbc 21 46 36.3 +0.5**
comp=Z,3.8nm,1.0s
P52A Corning 124.38 46 IAMs_20 IAMs_20 22 28 30.9
comp=Z,2µm,20.0s
BUG Bochum--Univer 124.42 331 *e*PKPdf **PKiKP 21 36 52.3 +1.4**
baz=56,slow=1.9
WATA Walderalm 124.60 325 *e*P **PKPdf 21 36 50.6 -0.7**
comp=Z,15nm,0.9s,SNR=5.5
WTTA Wattenberg 124.61 325 *e*P **PKPdf 21 36 50.8 -0.6**
comp=Z,25nm,0.9s,SNR=10
WTTA Wattenberg 124.61 325 PKIKP **PKPdf 21 36 51.0 -0.4**
O53A New Philadelph 124.78 45 IAMs_20 IAMs_20 22 31 51.4
comp=Z,2µm,20.0s
ERPA Erie 124.82 42 IAMs_20 IAMs_20 22 30 53.1
comp=Z,3µm,20.0s
MOTA Moosalm 124.86 325 *e*P **PKPdf 21 36 50.8 -1.1**
comp=Z,22nm,0.8s,SNR=9.6
MOTA *i* P **PKKPbc 21 46 33.6 -0.4**
comp=Z,3.3nm,0.8s
SQTA Sankt Quirin 124.87 325 *e*P **PKPdf 21 36 51.2 -0.6**
comp=Z,17nm,1.0s,SNR=6.4
SQTA *e*P **PKKPab 21 46 32.9 +0.9**
comp=Z,4.6nm,1.1s
RETA Reutte 124.98 326 *i* P **PKPdf 21 36 51.8 -0.2**
comp=Z,8.4nm,1.0s
STU Stuttgart 125.09 328 IAMs_20 IAMs_20 22 33 44.5
comp=Z,2µm,20.0s
STU Stuttgart 125.09 328 *e*PKPdf **PKiKP 21 36 53.6 +1.2**
baz=56,slow=1.9
UBR Ueberruh 125.23 326 *e*PKPdf **PKiKP 21 36 53.6 +0.8**
baz=56,slow=1.9
FETA Feichten 125.26 325 *e*P **PKPdf 21 36 52.4 -0.3**
comp=Z,16nm,0.9s,SNR=9.1
M54A Oil Creek Stat 125.31 43 IAMs_20 IAMs_20 22 29 18.1
comp=Z,2µm,22.0s
N54A Moraine State 125.33 43 IAMs_20 IAMs_20 22 29 40.7
comp=Z,3µm,20.0s
TGUH Tegucigalpa,Un 125.44 77 IAMs_20 IAMs_20 22 24 11.9
comp=Z,2µm,20.0s
BTNL Ternell 125.52 331 *d*PKP **PKiKP 21 36 53.4 +0.2**
BTNL *d*pPKP **pPKPdf 21 37 03.1 -0.6**
GOGA Godfrey 125.54 53 IAMs_20 IAMs_20 22 29 57.4
comp=Z,3µm,19.0s
MEM Membach 125.56 331 *d*PKP **PKPdf 21 36 53.0 +0.1**
MEM *d*pPKP **pPKPdf 21 37 02.4 -1.3**
DAVA Damuels 125.58 326 *e*P **PKPdf 21 36 52.9 -0.4**
comp=Z,18nm,0.8s,SNR=8.2
BFO Black Forest 125.82 328 PKIKP **PKPdf 21 36 53.1 -0.4**
BFO MLR MLR
comp=Z,2µm,19.0s
BFO Black Forest 125.82 328 PKPdf **PKPdf 21 36 53.1 -0.4**
BFO IAMs_20 IAMs_20 22 34 23.7
comp=Z,2µm,19.0s
BFO Black Forest 125.82 328 *e*PKPdf **PKiKP 21 36 54.6 +0.6**
baz=56,slow=1.9
INTR Introdacqua 125.87 318 PKPdf **PKPdf 21 36 54.0 +0.1**
BCLA Clavier 126.03 331 *d*PKP **PKiKP 21 36 54.1 -0.1**
BCLA *d*pPKP **pPKPdf 21 37 02.0 -2.6**
AQU L'Aquila 126.04 319 IAMs_20 IAMs_20 22 37 57.4
comp=Z,2µm,20.0s
WLF Walferdange 126.11 330 *d*PKP **PKiKP 21 36 56.1 +1.7**
BGES Gesves 126.15 331 *d*PKP **PKiKP 21 36 54.3 -0.2**
J56A Wolcott 126.30 39 **PKiKP 21 36 55.7 +0.7**
TUE Stuetta 126.35 325 IAMs_20 IAMs_20 22 34 59.1
comp=Z,3µm,22.0s
R55A Marlinton 126.36 46 IAMs_20 IAMs_20 22 28 30.3
comp=Z,2µm,21.0s
BMRD Maredsous 126.36 331 *d*PKP **PKPdf 21 36 54.2 -0.2**
BMRD *d*pPKP **pPKPdf 21 37 01.8 -3.4**
BMRD *ds*PKP 21 37 05.5
SNF Seneffe 126.45 332 *d*PKP **PKPdf 21 36 54.0 -0.6**
ECH Echery 126.51 328 IAMs_20 IAMs_20 22 34 34.9
comp=Z,3µm,20.0s
BLA Blacksburg 126.56 48 IAMs_20 IAMs_20 22 28 12.8
comp=Z,2µm,20.0s
DOU Dourbes 126.58 331 *d*PKP **PKiKP 21 36 56.3 +1.0**
O56A Blue Knob Stat 126.60 44 IAMs_20 IAMs_20 22 32 38.5
comp=Z,3µm,20.0s
Q56A Snyder Ridge, 126.70 45 IAMs_20 IAMs_20 22 31 22.4
comp=Z,2µm,20.0s
SSPA Standing Stone 126.90 43 PKPdf **PKiKP 21 36 56.6 +0.3**
SSPA Standing Stone 126.90 43 IAMs_20 IAMs_20 22 25 18.2
comp=Z,2µm,22.0s
LONY Lake Ozonia 127.00 37 IAMs_20 IAMs_20 22 33 16.4
comp=Z,2µm,19.0s

VLC	**Villacollemand**	**127.02**	**322**		IAMs_20	IAMs_20	22 36 04.2		
	comp=Z,2µm,22.0s								
S57A	**Dark Hollow, R**	**127.41**	**47**		IAMs_20	IAMs_20	22 29 10.2		
	comp=Z,3µm,22.0s								
SENIN	**Lac Senin/Sane**	**127.56**	**326**		IAMs_20	IAMs_20	22 35 54.0		
	comp=Z,2µm,21.0s								
JTS	**Las Juntas de**	**127.78**	**82**	PKIKP	**PKPdf**		**21 36 58.3**	**+0.1**	
JTS				MLR	MLR				
	comp=Z,2µm,20.0s								
JTS	**Las Juntas de**	**127.78**	**82**	PKPdf	**PKPdf**		**21 36 58.3**	**+0.1**	
JTS	**Las Juntas de**	**127.78**	**82**		IAMs_20	IAMs_20	22 25 32.1		
	comp=Z,2µm,20.0s								
JTS	**Las Juntas de**	**127.78**	**82**	*e*P	**PKPdf**		**21 36 58.0**	**-0.2**	
S58A	**Poland Farm, P**	**128.12**	**46**		IAMs_20	IAMs_20	22 31 19.0		
	comp=Z,2µm,20.0s								
CBN	**Corbin Frederi**	**128.35**	**45**		IAMs_20	IAMs_20	22 32 40.9		
	comp=Z,2µm,20.0s								
HDC	**Heredia**	**128.61**	**82**		IAMs_20	IAMs_20	22 26 00.0		
	comp=Z,2µm,19.0s								
BNI	**Bardonecchia**	**128.70**	**325**		IAMs_20	IAMs_20	22 39 19.2		
	comp=Z,2µm,19.0s								
DWPF	**Disney Wildern**	**128.74**	**59**		IAMs_20	IAMs_20	22 40 44.7		
	comp=Z,2µm,19.0s								
LCO	**Las Campanas**	**128.99**	**136**	PKIKP	**PKiKP**		**21 37 01.4**	**+0.2**	
LCO	**Las Campanas**	**128.99**	**136**	PKPdf	**PKiKP**		**21 37 01.4**	**+0.2**	
T60A	**Surry**	**129.27**	**46**		IAMs_20	IAMs_20	22 32 10.4		
	comp=Z,2µm,20.0s								
V60A	**Jim Taylor Roa**	**129.47**	**48**		IAMs_20	IAMs_20	22 30 30.9		
	comp=Z,2µm,20.0s								
F63A	**Nahmakanta, Br**	**129.49**	**33**		IAMs_20	IAMs_20	22 28 09.7		
	comp=Z,3µm,21.0s								
PKME	**Peaks-Kenny Pk**	**129.66**	**34**		IAMs_20	IAMs_20	22 28 06.4		
	comp=Z,3µm,22.0s								
SSB	**Saint Sauveur**	**129.75**	**327**		IAMs_20	IAMs_20	22 36 35.8		
	comp=Z,2µm,20.0s								
U61A	**Possum Corner**	**129.83**	**47**		IAMs_20	IAMs_20	22 33 16.3		
	comp=Z,2µm,20.0s								
K63A	**Dunstable**	**129.92**	**37**		IAMs_20	IAMs_20	22 30 26.6		
	comp=Z,3µm,20.0s								
WES	**Weston**	**130.22**	**38**		IAMs_20	IAMs_20	22 30 55.5		
	comp=Z,2µm,20.0s								
KEST	**Kesra**	**131.93**	**313**	PKP	**PKiKP**		**21 37 06.8**	**+0.1**	
	comp=Z,6.5nm,0.9s,baz=90,slow=4.0,SNR=5.9								
NNA	**Nana**	**132.10**	**112**	*i* PKIKP	**PKPdf**		**21 37 06.7**	**+0.2**	
BCIP	**Isla Barro Col**	**132.82**	**83**		IAMs_20	IAMs_20	22 31 44.7		
	comp=Z,1µm,20.0s								
BCIP	**Isla Barro Col**	**132.82**	**83**	*e*P	**PKPdf**		**21 37 05.9**	**-1.9**	
UPA	**Univ. de Panam**	**133.12**	**84**	*e*P	**PKPdf**		**21 37 08.2**	**-0.1**	
TUMC	**Tumaco**	**133.48**	**93**	*e*P	**PKPdf**		**21 37 05.3**	**-3.8**	
OTAV	**Otavalo**	**133.54**	**96**	PKIKP	**PKPdf**		**21 37 10.2**	**+0.5**	
OTAV				MLR	MLR				
	comp=Z,900nm,20.0s								
OTAV	**Otavalo**	**133.54**	**96**	PKPdf	**PKPdf**		**21 37 10.2**	**+0.5**	
OTAV	**Otavalo**	**133.54**	**96**	*e*P	**PKiKP**		**21 37 10.8**	**-0.2**	
GCUF	**Volcan Galeras**	**134.77**	**95**	*e*P	**PKiKP**		**21 37 13.3**	**-0.2**	
BBAC	**Balboa, Cauca**	**134.97**	**93**	*e*P	**PKPdf**		**21 37 10.4**	**-1.8**	
SOLC	**Bahia Solano**	**135.16**	**88**	*e*P	**PKPdf**		**21 37 11.5**	**-0.7**	
POPC	**Popayan, Colom**	**135.60**	**93**	*e*P	**PKPdf**		**21 37 12.0**	**-1.3**	
SOTA	**Rioblanco**	**135.62**	**93**	*e*P	**PKiKP**		**21 37 15.1**	**-0.2**	
PCON	**Cinco Dias**	**135.85**	**93**	*e*P	**PKiKP**		**21 37 15.7**	**-0.2**	
PB16	**IPOC Station P**	**135.85**	**124**	PKPdf	**PKPdf**		**21 37 10.9**	**-3.1**	
PB16				pPKPdf	**PKiKP**		**21 37 17.0**	**+1.3**	
YOTC	**Yotoco, Valle**	**136.07**	**91**	*e*P	**PKPdf**		**21 37 06.5**	**-7.6**	
GTBY	**Guantanamo Bay**	**136.31**	**68**		IAMs_20	IAMs_20	22 29 31.1		
	comp=Z,2µm,22.0s								
MARP	**Paez Belalcaza**	**136.34**	**93**	*e*P	**PKPdf**		**21 37 13.2**	**-1.6**	
DBBC	**Dabeiba**	**136.38**	**86**	*e*P	PKPpre		21 37 05.6		
CBOC	**Ciudad Bolivar**	**136.53**	**88**	*e*P	**PKPdf**		**21 37 10.9**	**-4.1**	
GARC	**Garzon, Huila**	**136.73**	**94**	*e*P	**PKPdf**		**21 37 12.3**	**-3.1**	
BETC	**Betania**	**136.84**	**93**	*e*P	**PKPdf**		**21 37 14.8**	**-0.6**	
MOTC	**Monteria, Cord**	**136.95**	**84**	*e*P	**PKiKP**		**21 37 16.5**	**-0.8**	
HELC	**Santa Helena**	**137.03**	**88**	*e*P	**PKPdf**		**21 37 09.8**	**-6.3**	
ANIL	**Santa Ana**	**137.04**	**90‖**	*e*P	**PKPdf**		**21 37 16.1**	**0.0**	
UREC	**San Jos de Ur**	**137.07**	**85**	*e*P	**PKPdf**		**21 37 08.7**	**-7.0**	
RREF	**El Recreo**	**137.13**	**90**	*e*P	**PKPdf**		**21 37 16.3**	**-0.4**	
GUY2C	**Guyana, Caldas**	**137.13**	**89**	*e*P	PKPpre		21 37 07.2		
TOLC	**Tolima**	**137.13**	**90**	*e*P	**PKPdf**		**21 37 14.7**	**-1.6**	
PTLC	**Puerto Leguiza**	**137.14**	**97**	*e*P	**PKPdf**		**21 37 13.5**	**-2.4**	
ORTC	**Ortega, Tolima**	**137.15**	**91**	*e*P	PKPpre		21 37 07.3		
SJCC	**San Jacinto, C**	**137.41**	**82**	*e*P	**PKPdf**		**21 37 16.9**	**+0.4**	
NORC	**Norcasia**	**137.65**	**89**	*e*P	**PKPdf**		**21 37 13.7**	**-3.2**	
ZARC	**Zaragoza, Cauc**	**137.73**	**86**	*e*P	PKPpre		21 37 07.0		
LPAZ	**La Paz**	**138.01**	**123**	PKhKP	PKPpre		21 37 08.8		
	comp=Z,7.9nm,0.7s,baz=211,slow=1.6,SNR=14								
LPAZ				SKPbc	**SKiKP**		**21 40 52.4**	**-1.7**	
	comp=Z,19nm,1.1s,baz=237,slow=0.4,SNR=8.3								
LPAZ	**La Paz**	**138.01**	**123**	PKIKP	**PKPdf**		**21 37 17.7**	**-0.5**	
LPAZ	**La Paz**	**138.01**	**123**		**PKPdf**		**21 37 17.7**	**-0.5**	
LPAZ	**La Paz**	**138.01**	**123**	*e*P	PKPpre		21 37 10.2		
PBRG	**Braganca**	**138.02**	**331**	*e*PP	PP		21 40 06.3	+2.2	
PBRG	**Braganca**	**138.02**	**331**	*e*SS	SS		21 58 38.5	+26	
PTBC	**PUERTO BERRIO**	**138.10**	**87**	*e*P	PKPpre		21 37 05.7		
ROSC	**El Rosal**	**138.15**	**90**	PKhKP	PKPpre		21 37 12.8		
	comp=Z,16nm,0.5s,baz=139,slow=20,SNR=12								
ROSC				PKP	**PKPdf**		**21 37 18.7**	**+0.5**	
	comp=Z,95nm,0.7s,baz=243,slow=4.5,SNR=20								
ROSC	**El Rosal**	**138.15**	**90**	*e*P	**PKPdf**		**21 37 12.8**	**-5.4**	
ESDC	**Sonseca Array**	**138.16**	**327**	PKhKP	PKPpre		21 37 08.7		
	comp=Z,0.9nm,1.0s,baz=24,slow=4.3,SNR=4.6								
ESDC				PKP	**PKPdf**		**21 37 16.5**	**-0.6**	
	comp=Z,1.8nm,0.8s,baz=19,slow=2.1,SNR=11								
ESDC				PP	**PP**		**21 40 06.0**	**+0.8**	
	comp=Z,0.9nm,0.9s,baz=32,slow=6.9,SNR=4.5								
ESDC	**Sonseca Array**	**138.16**	**327**		**PKiKP**		**21 37 18.2**	**-0.9**	
SMRC	**Santa Marta, M**	**138.30**	**80**	*e*P	**PKPdf**		**21 37 13.7**	**-4.2**	
MACC	**Macarena, Meta**	**138.36**	**94**	*e*P	**PKPdf**		**21 37 12.2**	**-6.0**	
SPBC	**San Pablo de B**	**138.44**	**89**	*e*P	**PKPdf**		**21 37 10.8**	**-7.6**	
PAB	**San Pablo**	**138.46**	**327**		IAMs_20	IAMs_20	22 42 57.5		
	comp=Z,2µm,21.0s								
SMLC	**San Martn de**	**138.52**	**84**	*e*P	**PKPdf**		**21 37 13.1**	**-5.2**	
PGAV	**Gavieira, Arco**	**138.61**	**333**	*e*PP	PP		21 40 12.1	+4.3	
PGAV	**Gavieira, Arco**	**138.61**	**333**	*e*SS	SS		21 59 16.2	+57	
PGAV	**Gavieira, Arco**	**138.61**	**333**	*e*LR	LR		22 27 10.0		
	comp=Z,2µm,22.0s								
MVO	**Moncorvo**	**138.65**	**331**	*e*PKPdf	**PKiKP**		**21 37 20.4**	**+0.3**	
MVO	**Moncorvo**	**138.65**	**331**	*e*PP	PP		21 40 10.8	+2.7	
MVO	**Moncorvo**	**138.65**	**331**	*e*SS	SS		21 59 22.0	+62	
MVO	**Moncorvo**	**138.65**	**331**	*e*LR	LR		22 28 20.1		
	comp=Z,3µm,20.0s								
VILC	**Villavicencio,**	**138.71**	**91**	*e*P	**PKPdf**		**21 37 11.6**	**-7.4**	
POLO	**Lamas de Olo**	**138.85**	**332**	*e*PKPdf	**PKiKP**		**21 37 20.6**	**0.0**	
POLO	**Lamas de Olo**	**138.85**	**332**	*e*PP	PP		21 40 12.0	+2.6	
BRRC	**Barranca, Sant**	**138.86**	**86**	*e*P	**PKPdf**		**21 37 19.5**	**+0.5**	
PVRL	**Vila Real**	**138.89**	**332**	*e*PKPdf	**PKPdf**		**21 37 19.0**	**+0.6**	
OCAC	**Ocana**	**139.27**	**85**	*e*P	**PKPdf**		**21 37 15.3**	**-4.6**	
BARC	**Barichara**	**139.37**	**87**	*e*P	PKPdf		21 37 12.5	-7.8	
RUSC	**La Rusia**	**139.44**	**88**	*e*P	PKPpre		21 37 10.4		
CPUP	**Villa Florida**	**139.44**	**144**	PKhKP	PKPpre		21 37 14.9		
	comp=Z,5.2nm,0.8s,baz=273,slow=3.2,SNR=5.3								
CPUP				SKPbc	**SKiKP**		**21 40 55.7**	**-0.4**	
	comp=Z,5.1nm,1.0s,baz=300,slow=1.7,SNR=3.2								
CPUP	**Villa Florida**	**139.44**	**144**	PKIKP	**PKPdf**		**21 37 18.3**	**-1.5**	
CPUP	**Villa Florida**	**139.44**	**144**	PKPdf	**PKPdf**		**21 37 18.3**	**-1.5**	
MTE	**Manteigas**	**139.48**	**331**	*e*PKPdf	**PKPdf**		**21 37 20.5**	**+1.0**	
MTE	**Manteigas**	**139.48**	**331**	*e*PP	PP		21 40 18.6	+5.3	
MTE	**Manteigas**	**139.48**	**331**	*e*SS	SS		21 59 28.1	+58	
MTE	**Manteigas**	**139.48**	**331**	*e*LR	LR		22 29 51.7		
	comp=Z,3µm,20.0s								
GRTK	**Grand Turk**	**139.54**	**64**		IAMs_20	IAMs_20	22 33 23.3		
	comp=Z,2µm,21.0s								
GUVC	**San Jose del G**	**139.62**	**94**	*e*P	PKPpre		21 37 09.9		
CRJC	**Cerrejon, Guaj**	**139.63**	**80**	*e*P	**PKPdf**		**21 37 20.9**	**+0.4**	
PAMC	**Pamplona, Colo**	**139.87**	**86**	*e*P	PKPdf		21 37 12.3	-9.2	
PCBR	**Castelo Branco**	**139.88**	**330**	*e*PKPdf	**PKiKP**		**21 37 22.3**	**-0.3**	
SDDR	**Presa de Saban**	**140.03**	**68**		IAMs_20	IAMs_20	22 40 26.8		
	comp=Z,1µm,20.0s								
COI	**Coimbra**	**140.05**	**331**	*e*PP	PP		21 40 21.1	+4.5	
COI	**Coimbra**	**140.05**	**331**	*e*SS	SS		21 59 33.8	+57	
TAM	**Tamanrasset**	**140.08**	**298**	PKIKP	**PKPdf**		**21 37 22.3**	**+1.1**	
TAM				MLR	MLR				
	comp=Z,900nm,20.0s								
TAM	**Tamanrasset**	**140.08**	**298**			PKPpre	21 37 15.1		
TAM				PKPdf	**PKPdf**		**21 37 22.3**	**+1.1**	
PMRV	**Marv??o**	**140.15**	**329**	*e*PKPdf	**PKPdf**		**21 37 21.9**	**+1.2**	
PMRV	**Marv??o**	**140.15**	**329**	*e*PP	PP		21 40 20.6	+3.3	
PMRV	**Marv??o**	**140.15**	**329**	*e*SS	SS		21 59 28.9	+51	
PMRV	**Marv??o**	**140.15**	**329**	*e*LR	LR		22 30 25.5		
PMRV	**Marv??o**	**140.15**	**329**	-MS			22 40 51.1		
PCAS	**Casmilo, Conde**	**140.21**	**331**	*e*PP	PP		21 40 23.0	+5.3	
BBSR	**BB Station**	**140.22**	**45**		IAMs_20	IAMs_20	22 38 41.3		
	comp=Z,2µm,20.0s								
PTGC	**Puerto Gaitan,**	**140.27**	**91**	*e*P	PKPdf		21 37 11.3	-10	
URIC	**Uribia, Colomb**	**140.45**	**79**	*e*P	**PKPdf**		**21 37 15.5**	**-6.3**	
PESTR	**Estremoz**	**140.67**	**329**	*e*PP	PP		21 40 24.9	+4.3	
PESTR	**Estremoz**	**140.67**	**329**	*e*SS	SS		21 59 19.7	+36	
PSBE	**So Bento**	**140.78**	**331**	*e*PKPdf	**PKPdf**		**21 37 23.0**	**+1.2**	
PSBE	**So Bento**	**140.78**	**331**	*e*PP	PP		21 40 23.3	+2.2	
PMTG	**Montargil**	**140.84**	**330**	*e*PKPdf	**PKiKP**		**21 37 25.7**	**+1.1**	
PMTG	**Montargil**	**140.84**	**330**	*e*PP	PP		21 40 25.6	+4.1	
PBAR	**Barrancos**	**140.90**	**328**	*e*PKPdf	**PKPdf**		**21 37 22.7**	**+0.6**	
PBAR	**Barrancos**	**140.90**	**328**	*e*PP	PP		21 40 22.0	0.0	
PBAR	**Barrancos**	**140.90**	**328**	*e*SS	SS		21 58 52.3	+5.8	
EVO	**Evora**	**141.14**	**329**	*e*PKPdf	**PKPdf**		**21 37 21.5**	**-1.0**	
PMAFR	**Mafra**	**141.45**	**331**	*e*PP	PP		21 40 29.7	+4.5	
PMAFR	**Mafra**	**141.45**	**331**	*e*SS	SS		21 59 51.7	+59	
SOCV	**Socops**	**141.71**	**85**	*e*P	**PKPdf**		**21 37 18.4**	**-5.8**	
MESJ	**Messejana**	**141.77**	**329**	*e*PKPdf	**PKPdf**		**21 37 20.6**	**-3.0**	
MESJ				*e*PP	**PP**		**21 40 25.7**	**-1.5**	
MESJ					IAMs_20	IAMs_20	22 42 00.8		
	comp=Z,1µm,18.5s								
MESJ	**Messejana**	**141.77**	**329**	*e*PKIKP	**PKPdf**		**21 37 20.6**	**-3.0**	
MESJ				*e*			21 40 25.7		
PCVE	**Castro Verde**	**141.83**	**328**	*e*PKPdf	**PKPdf**		**21 37 21.2**	**-2.6**	
PCVE	**Castro Verde**	**141.83**	**328**	*e*PP	PP		21 40 34.7	+7.1	
PVAQ	**Vaqueiros**	**141.83**	**328**	*e*PKPdf	**PKPdf**		**21 37 20.1**	**-3.7**	
PVAQ	**Vaqueiros**	**141.83**	**328**	*e*PP	PP		21 40 32.9	+5.2	
PVAQ	**Vaqueiros**	**141.83**	**328**	*e*SS	SS		21 59 28.2	+31	
PVAQ	**Vaqueiros**	**141.83**	**328**	*e*LR	LR		22 30 23.5		
	comp=Z,1µm,20.0s								
SDV	**Santo Domingo**	**141.92**	**84**	*e*P	**PKPdf**		**21 37 18.5**	**-6.3**	
PBDV	**Barranco-do-Ve**	**142.07**	**328**	*e*PP	PP		21 40 29.5	+0.4	
MORF	**Marmelete**	**142.40**	**328**	*e*PKPdf	**PKPdf**		**21 37 21.9**	**-3.0**	
MORF				*e*PP	**PP**		**21 40 29.6**	**-1.5**	
MORF					IAMs_20	IAMs_20	22 41 47.6		
	comp=Z,2µm,24.0s								
MORF	**Marmelete**	**142.40**	**328**	*e*PKPdf	**PKPdf**		**21 37 24.1**	**-0.7**	
MORF	**Marmelete**	**142.40**	**328**	*e*PP	PP		21 40 34.2	+3.1	
PFVI	**Vila Bisbo**	**142.62**	**328**	*e*PP	PP		21 40 36.7	+4.3	
PFVI	**Vila Bisbo**	**142.62**	**328**	*e*SS	SS		21 59 29.3	+23	
BAUV	**El Baul**	**144.48**	**84**	*e*	**PKPab**		**21 37 24.2**	**-3.2**	
SJG	**San Juan**	**144.97**	**67**		IAMs_20	IAMs_20	22 45 52.6		
	comp=Z,2µm,22.0s								
SJG	**San Juan**	**144.97**	**67**	*e*P	**PKPab**		**21 37 26.8**	**-2.2**	
SHEL	**Horse Pasture**	**145.63**	**230**	PKP2	**PKPab**		**21 37 32.7**	**+1.1**	
SHEL	**Horse Pasture**	**145.63**	**230**		**PKPab**		**21 37 32.7**	**+1.1**	
SAML	**Samuel**	**145.66**	**116**	PKIKP	**PKPdf**		**21 37 30.0**	**-1.1**	
SAML				MLR	MLR				
	comp=Z,1µm,22.0s								
SAML	**Samuel**	**145.66**	**116**		**PKPdf**		**21 37 30.0**	**-1.1**	
SAML	**Samuel**	**145.66**	**116**		IAMs_20	IAMs_20	22 56 24.7		
	comp=Z,1µm,22.0s								
CUPR	**Culebra, Puert**	**145.71**	**67**	PKPdf	**PKPdf**		**21 37 30.3**	**-0.7**	
TOA0	**Torodi Ar. Sit**	**145.86**	**284**	PKPdf	**PKPdf**		**21 37 31.7**	**+0.3**	
TORD	**Torodi Ar. Bea**	**145.86**	**284**	PKPbc	**PKPdf**		**21 37 30.7**	**-0.7**	
	comp=Z,84nm,0.8s,baz=51,slow=3.0,SNR=82								
TORD				SKPbc	**SKiKP**		**21 41 13.0**	**+3.5**	
	comp=Z,6.5nm,0.9s,baz=67,slow=1.6,SNR=4.2								
TORD				SKKPbc	**SKKPab**		**21 49 01.2**	**-1.2**	
	comp=Z,3.2nm,1.0s,baz=288,slow=3.9,SNR=4.8								
TORD	**Torodi Ar. Bea**	**145.86**	**284**		**PKPdf**		**21 37 31.2**	**-0.2**	
SPB	**Sao Paulo**	**146.78**	**154**		**PKPab**		**21 37 35.5**	**-0.1**	
SPB					IAMs_20	IAMs_20	22 36 30.9		
	comp=Z,2µm,21.0s								
SEUS	**St. Eustatius**	**148.04**	**67**	*e*	**PKPab**		**21 37 46.7**	**+5.8**	
SEUS	**St. Eustatius**	**148.04**	**67**		IAMs_20	IAMs_20	22 40 06.9		
	comp=Z,1µm,20.0s								
ANWB	**Willy Bob**	**149.08**	**66**	*e*	**PKPbc**		**21 37 39.8**	**-1.0**	
ANWB	**Willy Bob**	**149.08**	**66**		IAMs_20	IAMs_20	22 50 11.3		
	comp=Z,1µm,20.0s								
BPA	**Boggy Peak**	**149.20**	**67**	*e*	**PKPbc**		**21 37 39.3**	**-1.9**	
ANBD	**Bethesda, Anti**	**149.28**	**67**	*e*	**PKPdf**		**21 37 39.1**	**+2.2**	
CBE	**Ff, Capester**	**149.70**	**69**	*e*	**PKPbc**		**21 37 42.4**	**0.0**	
ABD	**La Joyeuse, An**	**149.70**	**68**	*e*	**PKPbc**		**21 37 40.8**	**-1.6**	
TBG	**Guadaloupe-3**	**149.72**	**69**	*e*	**PKPbc**		**21 37 42.0**	**-0.4**	
TDBA	**Terre de Bas,**	**149.73**	**69**	*e*	**PKPbc**		**21 37 42.2**	**-0.3**	
MAGL	**Barre de l'ile**	**150.03**	**69**	*e*	**PKPbc**		**21 37 41.5**	**-1.7**	
DSLB	**Salisbury**	**150.03**	**70**	*e*	**PKPbc**		**21 37 41.3**	**-1.9**	
PMOZ	**Porto Moniz, M**	**150.14**	**334**	*e*PP	PP		21 41 19.4	+2.6	
PMOZ	**Porto Moniz, M**	**150.14**	**334**	*e*LR	LR		22 33 29.8		
	comp=Z,1µm,22.0s								
FDF	**Fort de France**	**150.45**	**71**	*e*	**PKiKP**		**21 37 45.6**	**+0.6**	
GRGR	**Grenville**	**150.46**	**77**	*e*	**PKPdf**		**21 37 41.1**	**+2.2**	
GRGR	**Grenville**	**150.46**	**77**		IAMs_20	IAMs_20	22 43 35.8		
	comp=Z,1µm,22.0s								
BIM	**Bigot**	**150.58**	**72**	*e*	**PKPbc**		**21 37 43.1**	**-1.4**	
GCMP	**Grenada, Carri**	**150.63**	**76**	*e*	**PKPdf**		**21 37 40.9**	**+1.8**	
SVB	**Belmont**	**150.66**	**74**	*e*	**PKPbc**		**21 37 43.8**	**-1.0**	
SVB	**Belmont**	**150.66**	**74**		**PKPbc**		**21 37 43.4**	**-1.4**	
SLBI	**Saint Lucia, B**	**150.78**	**73**	*e*	**PKPbc**		**21 37 43.8**	**-1.2**	
MPOM	**Morne Pois Mar**	**150.79**	**72**	*e*	**PKPbc**		**21 37 44.3**	**-0.7**	
MCLT	**Moule a Chique**	**150.87**	**73**	*e*	**PKPbc**		**21 37 44.5**	**-0.7**	
TPP	**Pointe-a-Pierr**	**150.88**	**80**	*e*	**PKPbc**		**21 37 45.5**	**+0.2**	
TRN	**Trinidad (W)**	**150.90**	**80**	*e*	**PKPbc**		**21 37 44.7**	**-0.6**	
KOWA	**Kowa**	**151.07**	**289**	PKPdf	**PKPdf**		**21 37 40.2**	**+0.3**	
KOWA				PKPbc	**PKiKP**		**21 37 46.6**	**+0.3**	
TPR	**Prospect**	**151.44**	**78**	*e*	**PKPbc**		**21 37 44.9**	**-1.7**	
PTGA	**Pitinga**	**151.49**	**103**	PKPdf	**PKPdf**		**21 37 40.8**	**+0.1**	
PTGA				PKPbc	**PKiKP**		**21 37 48.4**	**+1.2**	
TOSP	**Speyside**	**151.66**	**78**	*e*	**PKiKP**		**21 37 47.6**	**+0.1**	
KIC	**Kosan Boka**	**152.62**	**272**	*e*PKIKP	**PKiKP**		**21 37 49.9**	**+0.3**	
	comp=Z,58nm,0.9s								
DBIC	**Dimbokro**	**152.75**	**272**	PKP	**PKPdf**		**21 37 43.0**	**+0.5**	
	comp=Z,14nm,1.0s,baz=135,slow=1.4,SNR=6.1								
DBIC				PKPbc	**PKiKP**		**21 37 49.7**	**0.0**	
	comp=Z,32nm,0.8s,baz=88,slow=2.8,SNR=18								
LIC	**Lamto**	**152.91**	**271**	*e*PKIKP	**PKPbc**		**21 37 49.3**	**-0.6**	
	comp=Z,114nm,0.8s								
TIC	**Toumodi**	**152.91**	**272**	*e*PKIKP	**PKPbc**		**21 37 49.5**	**-0.5**	
BDFB	**Brasilia**	**153.17**	**145**	PKP	**PKPdf**		**21 37 43.4**	**+0.2**	
	comp=Z,21nm,1.0s,baz=152,slow=2.3,SNR=20								
BDFB				PKPbc	**PKPbc**		**21 37 50.2**	**-0.3**	
	comp=Z,75nm,0.7s,baz=189,slow=1.7,SNR=45								
BDFB	**Brasilia**	**153.17**	**145**	PKPdf	**PKPdf**		**21 37 44.5**	**+1.3**	
BDFB				PKPbc	**PKiKP**		**21 37 50.9**	**+0.2**	
MDP	**Montagnes des**	**159.71**	**92**	PKP	**PKPdf**		**21 37 51.7**	**+0.1**	
	comp=Z,20nm,1.0s,baz=19,slow=2.9								
MDP				PKPab	**PKPab**		**21 38 30.6**	**+0.3**	
	comp=Z,24nm,0.8s,baz=267,slow=3.8,SNR=3.2								

*NEIC **03** 21:28:37.0±0.8, 36˚.664N±0˚.010×97˚.69W±0˚.04, h3km±8km, Error ellipse: s-maj=4.5km s-min=0.7km az=73.0*
*TUL **03** 21:28:36.8±1.4, 36˚.69N±0˚.02×97˚.68W±0˚.03, h6km±7km, ML3.4, mb_Lg3.3/93(NEIC), Error ellipse: s-maj=3.5km s-min=2.4km az=68.0*
*ANF **03** 21:28:37.2±0.2, 36˚.66N×97˚.68W, h6km, ML4.2/20, Error ellipse: s-maj=2.1km s-min=1.9km az=3.0*
ISC 03 21:28:37.0±1.1, 36˚.67N±0˚.02×97˚.67W±0˚.02, h3km±10km, n111, n0ϑ52/91, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.24**	**321**	Pg	**Pg**	**21 28 41.6**	**0.0**
GC02				Sg	**Sg**	**21 28 44.9**	**+0.2**
CROK	**Carrier**	**0.30**	**238**		**Pg**	**21 28 43.0**	**+0.3**
CROK				Sg	**Sg**	**21 28 47.5**	**+0.9**
KAN14	**Manchester OK**	**0.37**	**321**	Pg	**Pg**	**21 28 44.1**	**-0.1**
KAN14				Sg	**Sg**	**21 28 49.1**	**0.0**
KAN13	**South Haven SW**	**0.38**	**24**		**Pg**	**21 28 44.3**	**0.0**
KAN13				Sg	**Sg**	**21 28 49.5**	**+0.2**
OK032	**Salt Plains WL**	**0.46**	**288**		**Pg**	**21 28 45.6**	**-0.1**
OK032				Sg	**Sg**	**21 28 51.9**	**+0.2**
KAN05	**Bluff City Nor**	**0.47**	**340**		**Pg**	**21 28 45.9**	**-0.1**
KAN09	**Caldwell North**	**0.47**	**5**		**Pg**	**21 28 45.9**	**-0.2**
KAN01	**Argonia South**	**0.49**	**352**		**Pg**	**21 28 46.2**	**-0.2**
KAN10	**Anthony SW Sta**	**0.57**	**324**		**Pg**	**21 28 47.7**	**-0.2**
KAN08	**Anthony NE Sta**	**0.61**	**337**		**Pg**	**21 28 48.5**	**-0.2**
KAN12	**Harper NE Stat**	**0.68**	**338**		**Pg**	**21 28 49.8**	**-0.3**
OK029	**Liberty Lake**	**0.88**	**169**		**Pg**	**21 28 54.0**	**0.0**
QUOK	**Quay**	**0.92**	**122**		**Pg**	**21 28 54.6**	**-0.1**
T35A	**Sooner Cattle**	**0.96**	**75**		**Pg**	**21 28 55.1**	**-0.4**
T35B	**Sooner Cattle**	**0.96**	**75**	P	**Pg**	**21 28 55.2**	**-0.3**
	baz=257,SNR=188						
T35B				S	**Sg**	**21 29 07.8**	**-0.1**
	baz=257						
T35B	**Sooner Cattle**	**0.96**	**75**	P		21 28 55.2	
	baz=257,SNR=188						
T35B				S		21 29 07.8	
	baz=257						
OK031	**S. Brethren Rd**	**0.98**	**136**		**Pg**	**21 28 55.7**	**0.0**
BCOK	**Bluff Creek, N**	**1.01**	**177**		**Pg**	**21 28 56.2**	**-0.1**
OK030	**Cody Creek RV**	**1.03**	**135**	Pg	**Pg**	**21 28 56.6**	**-0.1**
OK005	**Luther M Schoo**	**1.08**	**159**	Pg	**Pg**	**21 28 57.0**	**-0.7**
OK009	**Oakdale Elemen**	**1.10**	**169**	Pg	**Pg**	**21 28 58.0**	**-0.1**
U32A	**Winter Ranch,**	**1.11**	**255**		**Pg**	**21 28 57.5**	**-0

	comp=Z,74nm,0.8s								
KSCO	**Kaye Shedlock'**	**4.57**	**302**	P			21 29 47.3		
	baz=119								
WHAR	**Wooly Hollow**	**4.58**	**106**			**Pn**	**21 29 47.8**	**+0.7**	
WHAR				IAmb_Lg			21 31 03.5		
	comp=Z,71nm,0.9s								
R40A	**Maddies Statio**	**4.59**	**68**			**Pn**	**21 29 47.8**	**+0.5**	
R40A				IAmb_Lg			21 31 12.2		
	comp=Z,49nm,0.8s								
R40A	**Maddies Statio**	**4.59**	**68**	P		**Pn**	**21 29 47.3**	**0.0**	
	baz=251,SNR=12								
R40A	**Maddies Statio**	**4.59**	**68**	P			21 29 47.3		
	baz=251,SNR=12								
W41B	**Gary Mavity, V**	**4.65**	**107**	P		**Pn**	**21 29 47.8**	**-0.2**	
	baz=291								
W41B	**Gary Mavity, V**	**4.65**	**107**	P			21 29 48.8		
	baz=291								
W41B				Sb			21 31 01.7		
	baz=291								
W41B	**Gary Mavity, V**	**4.65**	**107**	P			21 29 47.8		
	baz=291								
WHTX	**Lake Whitney,**	**4.67**	**178**			**Pn**	**21 29 48.6**	**+0.3**	
WHTX	**Lake Whitney,**	**4.67**	**178**	P		**Pn**	**21 29 47.9**	**-0.4**	
	baz=358								
WHTX	**Lake Whitney,**	**4.67**	**178**	P			21 29 48.3		
	baz=358								
WHTX				S			21 30 41.5		
	baz=358								
WHTX	**Lake Whitney,**	**4.67**	**178**	P			21 29 47.9		
	baz=358								
BGNE	**Belgrade**	**4.75**	**356**			**Pn**	**21 29 49.8**	**+0.2**	
BGNE				IAmb_Lg			21 31 17.3		
	comp=Z,68nm,0.7s								
BGNE	**Belgrade**	**4.75**	**356**	P		**Pn**	**21 29 48.9**	**-0.6**	
	baz=175,SNR=21								
BGNE	**Belgrade**	**4.75**	**356**	P			21 29 49.1		
	baz=175								
BGNE				S			21 30 45.1		
	baz=175								
BGNE	**Belgrade**	**4.75**	**356**	P			21 29 48.9		
	baz=175,SNR=21								
WLAR	**White Oak Lake**	**4.77**	**127**	Pn		**Pn**	**21 29 51.4**	**+1.7**	
WLAR				IAmb_Lg			21 31 20.1		
	comp=Z,38nm,0.8s								
237A	**Washetta, Mont**	**4.90**	**161**	Pn		**Pn**	**21 29 51.3**	**-0.2**	
P40A	**Paris**	**5.28**	**55**	IAmb_Lg			21 31 30.8		
	comp=Z,65nm,0.7s								
CCM	**Cathedral Cave**	**5.30**	**73**	IAmb_Lg			21 31 29.7		
	comp=Z,44nm,0.9s								
CCM	**Cathedral Cave**	**5.30**	**73**	P			21 29 58.0		
	baz=257								
L34A	**Svendsen Farm,**	**5.39**	**10**	IAmb_Lg			21 31 26.8		
	comp=Z,44nm,0.7s								
T25A	**Trinidad**	**5.42**	**277**	Pn		**Pn**	**21 29 58.6**	**-0.3**	
T25A				IAmb_Lg			21 31 36.1		
	comp=Z,52nm,0.9s								
T25A	**Trinidad**	**5.42**	**277**	P			21 29 58.4		
	baz=93,SNR=6.3								
OGNE	**Ogallala**	**5.46**	**323**			**Pn**	**21 29 59.4**	**0.0**	
OGNE				IAmb_Lg			21 31 40.1		
	comp=Z,63nm,0.8s								
OGNE	**Ogallala**	**5.46**	**323**	P		**Pn**	**21 29 59.1**	**-0.3**	
	baz=140,SNR=7.5								
OGNE	**Ogallala**	**5.46**	**323**	P			21 30 00.0		
	baz=140								
OGNE	**Ogallala**	**5.46**	**323**	P			21 29 59.1		
	baz=140,SNR=7.5								
NATX	**Nacogdoches**	**5.49**	**152**	IAmb_Lg			21 31 46.9		
	comp=Z,28nm,0.8s								
PBMO	**Poplar Bluff**	**5.82**	**87**	IAmb_Lg			21 31 48.9		
	comp=Z,40nm,0.7s								
435B	**Jarrell**	**5.87**	**179**	IAmb_Lg			21 31 56.6		
	comp=Z,41nm,0.9s								
435B	**Jarrell**	**5.87**	**179**	P			21 30 04.2		
	baz=359								
FVM	**French Village**	**5.92**	**75**	IAmb_Lg			21 31 44.7		
	comp=Z,52nm,0.9s								
SLM	**Saint Louis**	**6.22**	**69**	IAmb_Lg			21 31 57.7		
	comp=Z,35nm,0.8s								
Q24A	**Divide**	**6.35**	**293**	P			21 30 11.7		
	baz=109								
Q24A				S			21 31 23.8		
	baz=109								
JCT	**Junction City**	**6.42**	**197**	IAmb_Lg			21 32 15.9		
	comp=Z,33nm,0.8s								
143A	**Socs Landing,**	**6.50**	**126**	IAmb_Lg			21 32 16.5		
	comp=Z,44nm,1.0s								
SIUC	**Southern Illin**	**6.83**	**79**	IAmb_Lg			21 32 19.4		
	comp=Z,38nm,0.8s								
ISCO	**Idaho Springs**	**6.99**	**299**	Pn		**Pn**	**21 30 20.4**	**-0.2**	
ISCO				IAmb_Lg			21 32 24.3		
	comp=Z,26nm,0.8s								
W45A	**Hickory Valley**	**7.05**	**100**	IAmb_Lg			21 32 19.4		
	comp=Z,42nm,0.7s								
OXF	**Oxford**	**7.07**	**105**	IAmb_Lg			21 32 28.1		
	comp=Z,40nm,0.7s								
P43A	**Skaggs, Pawnee**	**7.08**	**63**	IAmb_Lg			21 32 23.7		
	comp=Z,46nm,0.8s								
ECSD	**EROS Data Cent**	**7.11**	**6**			**Pn**	**21 30 21.4**	**-0.4**	
ECSD				IAmb_Lg			21 32 32.0		
	comp=Z,20nm,1.1s								
ECSD	**EROS Data Cent**	**7.11**	**6**	P			21 30 20.4		
	baz=187								
Q44A	**Meyer Farm, Va**	**7.21**	**69**	IAmb_Lg			21 32 37.2		
	comp=Z,44nm,1.0s								
PHWY	**Pilot Hill**	**7.63**	**310**	IAmb_Lg			21 32 42.5		
	comp=Z,21nm,0.8s								
I37A	**Lemond, Waseca**	**8.03**	**23**	IAmb_Lg			21 33 03.6		
	comp=Z,27nm,1.0s								
USIN	**University of**	**8.08**	**78**	IAmb_Lg			21 33 02.7		
	comp=Z,28nm,0.8s								
JFWS	**Jewell Farm**	**8.46**	**40**	IAmb_Lg			21 33 09.2		
	comp=Z,36nm,0.8s								
T47A	**Sharon Grove**	**8.48**	**85**	IAmb_Lg			21 33 15.6		
	comp=Z,17nm,0.8s								
Z47A	**Carrollton**	**8.61**	**111**	IAmb_Lg			21 33 15.4		
	comp=Z,22nm,1.1s								
RSSD	**Black Hills**	**8.89**	**329**	IAmb_Lg			21 33 24.5		
	comp=Z,15nm,0.9s								
RWWY	**Rawlins**	**8.94**	**307**	IAmb_Lg			21 33 34.9		
	comp=Z,17nm,0.9s								
I40A	**Norwalk**	**9.01**	**35**	IAmb_Lg			21 33 43.2		
	comp=Z,18nm,0.7s								
PV11	**David Mesa, Pa**	**9.05**	**284**	IAmb_Lg			21 33 36.7		
	comp=Z,14nm,1.2s								
K22A	**Casper**	**9.07**	**314**	IAmb_Lg			21 33 43.3		
	comp=Z,23nm,0.8s								
SFIN	**Lafayette**	**9.08**	**63**	IAmb_Lg			21 33 26.5		
	comp=Z,25nm,0.8s								
BLO	**Bloomington**	**9.16**	**71**	IAmb_Lg			21 33 31.8		
	comp=Z,29nm,0.7s								
WCI	**Wyandotte Cave**	**9.18**	**77**	IAmb_Lg			21 33 28.9		
	comp=Z,20nm,0.8s								
W18A	**Petrified Fore**	**9.91**	**265**	IAmb_Lg			21 33 44.7		
	comp=Z,17nm,1.1s								

JMA 03 21:39:00.9±0.4, 26°.93N×125°.07E, h210km, M3.8, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKE	**Kume jima 2**	**1.65**	**111**	P		Pn	21 39 37.6	+0.8
JAGN	**Aguni-jima**	**1.97**	**99**	P		Pn	21 39 40.3	+0.4
JAGN				S		S	21 40 10.0	+0.2
JIKM	**Ikemajima**	**2.00**	**175**	P		Pn	21 39 40.5	+0.3
JIKM				S		S	21 40 10.5	0.0
JIRB	**Irabujima**	**2.10**	**177**	P		Pn	21 39 41.6	+0.4
JIRB				S		S	21 40 11.1	-1.1
JOGS	**Gusukube**	**2.18**	**172**	P		Pn	21 39 42.9	+0.8
JOGS				S		S	21 40 13.5	-0.3
JTJ	**Tarama**	**2.30**	**188**	P		Pn	21 39 43.8	+0.5
JTJ				S		S	21 40 14.7	-1.3
JISG	**Ishigakijimahi**	**2.43**	**197**	P		Pn	21 39 44.8	+0.1
JISG				S		S	21 40 17.1	-1.4
JJT3	**Tamagusuku3**	**2.55**	**107**	P		Pn	21 39 47.2	+1.2
JIH	**Iheya**	**2.59**	**87**	P		Pn	21 39 46.8	+0.5
JIH				S		S	21 40 20.2	-1.2
JNTH	**Nagotoyohara**	**2.67**	**98**	P		Pn	21 39 47.6	+0.3
JNTH				S		S	21 40 21.1	-2.0
JIJ	**Ishigaki jima**	**2.69**	**198**	P		Pn	21 39 46.9	-0.7
JIJ				S		S	21 40 20.7	-2.9
JKRS	**Kuro-shima**	**2.85**	**200**	P		Pn	21 39 48.8	-0.5
JKRS				S		S	21 40 24.5	-2.3
JOW	**Kunigami**	**2.86**	**91**	P		Pn	21 39 49.5	0.0
JOW				S		S	21 40 24.4	-2.6
JYRO	**Yoronjima**	**3.02**	**87**	P		Pn	21 39 50.5	-0.7
JYRO				S		S	21 40 27.2	-3.0
HATJ	**Hateruma jima**	**3.08**	**202**	*e*S		S	21 40 29.0	-2.6
YOJ	**Yonaguni jima**	**3.08**	**218**	P		Pn	21 39 52.3	+0.3
JYNG	**Yonagunijimaku**	**3.12**	**218**	P		Pn	21 39 52.8	+0.3
JOKE	**Okinoerabujima**	**3.15**	**81**	P		Pn	21 39 52.2	-0.6
JOKE				S		S	21 40 30.4	-2.6
JTK	**Tokunoshima**	**3.56**	**75**	P		Pn	21 39 56.8	-0.8
JTK				S		S	21 40 38.5	-3.2
JAMN	**Amaminishikomi**	**3.87**	**69**	P		Pn	21 40 00.7	-0.7
JAMN				S		S	21 40 45.6	-3.0
JAM	**Amami Oshima**	**4.28**	**69**	S		S	21 40 54.4	-3.4
JMZ	**Minamidaito 2**	**5.63**	**100**	P		Pn	21 40 23.1	-0.4
JMZ				*e*S		S	21 41 23.3	-5.4

*IDC **03** 21:42:43.9±0.6, 37°.37N×74°.51E, h0km, mb4.0/29, mb1 4.2/36, mb1mx4.0/68, mbtmp4.1/36, ML3.8/7, MS4.5/1, Ms1 4.5/1, ms1mx3.2/44, Error ellipse: s-maj=13.2km s-min=11.1km az=20.0*

*BJI **03** 21:42:47.4±0.0, 37°.55N×74°.69E, h12km, mB4.6/9, mb4.2/27, ML4.3/5, Ms4.2/11, Ms7 4.0/13*

*MOS **03** 21:42:47.7±1.0, 37°.51N×74°.64E, h29km, mb4.3/17, Error ellipse: s-maj=5.9km s-min=3.8km az=91.1*

*NNC **03** 21:42:50.1±1.9, 37°.18N×73°.01E, h0km, mb4.9, mpv4.9, Error ellipse: s-maj=17.0km s-min=10.3km az=156.0*

*NEIC **03** 21:42:51.7±2.1, 37°.53N±0°.06×74°.60E±0°.08, h57km±8km, mb4.3/23, Error ellipse: s-maj=9.6km s-min=8.6km az=131.0*

ISC 03 21:42:45.2±0.3, 37°.31N±0°.03×74°.49E±0°.04, h10km, n227, c2814/241, mb4.2/52, 25C-21D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIL	**Nilore**	**3.79**	**196**	PN		**Pb**	**21 43 50.6**	**-1.6**
NIL	**Nilore**	**3.79**	**196**	Pn		**Pb**	**21 43 50.6**	**-1.6**
CEP	**Cherat**	**4.06**	**212**	P		**Pb**	**21 43 54.8**	**-2.2**
AML	**Almayashu**	**4.86**	**353**	P		**Pn**	**21 43 60.0**	**+1.2**
	SNR=36							
UCH	**Uchtor**	**4.91**	**0**	P		**Pn**	**21 44 00.9**	**+1.3**
	SNR=135							
THN	**Thein Dam**	**4.97**	**168**	*e*P		Pn	21 44 05.0	+5.2
THN				*e*S		**Sb**	**21 45 04.0**	**-8.0**
THW	**Thamme Wali**	**5.04**	**207**	P		Pb	21 44 06.8	-6.7
ULHL	**Ulahol**	**5.11**	**15**	P		**Pn**	**21 44 04.2**	**+2.1**
	SNR=13							
KBL	**Kabul**	**5.21**	**240**	PN		Pn	21 44 08.6	+5.2
KBL	**Kabul**	**5.21**	**240**	Pn		Pn	21 44 08.6	+5.2
AAK	**Ala-Archa**	**5.32**	**0**	Pn		**Pn**	**21 44 06.9**	**+1.9**
	4.8nm,0.3s,baz=179,slow=9.2,SNR=58							
AAK				Pg		**Pb**	**21 44 17.1**	**-1.4**
	15nm,0.3s,baz=176,slow=13,SNR=25							
AAK				Sn		**Sn**	**21 45 11.0**	**+4.6**
	3.6nm,0.3s,baz=329,slow=12,SNR=1.3							
AAK	**Ala-Archa**	**5.32**	**0**	P		**Pn**	**21 44 06.5**	**+1.5**
	SNR=50							
AAK	**Ala-Archa**	**5.32**	**0**	⇓P		Pb	21 44 13.3	-5.2
	251nm,1.2s							
AAK				⇑S		**Sb**	**21 45 21.9**	**-0.6**
	187nm,1.1s							
AAK	**Ala-Archa**	**5.32**	**0**	*d* iPN		**Pn**	**21 44 06.2**	**+1.3**
AAK				pmax		pmax		
	comp=Z,50nm,0.7s							
AAK	**Ala-Archa**	**5.32**	**0**	Pn		**Pn**	**21 44 05.8**	**+0.8**
KBK	**Karagaybulak**	**5.35**	**4**	P		**Pn**	**21 44 06.5**	**+1.2**
	SNR=50							
EKS2	**Erkin-Say**	**5.38**	**354**	P		**Pn**	**21 44 07.2**	**+1.6**
	SNR=36							
SARP	**Sargodha**	**5.58**	**196**	P		Pn	21 44 13.5	+5.2
TKM2	**Tokmak 2**	**5.67**	**8**	P		**Pn**	**21 44 11.3**	**+1.5**
	SNR=56							
TKM2	**Tokmak 2**	**5.67**	**8**	⇓P		Pb	21 44 20.1	-4.3
	comp=Z,62nm,0.5s							
TKM2				⇓S		**Sb**	**21 45 34.3**	**+1.8**
	comp=Z,88nm,0.6s							
CHMS	**Chumysh**	**5.69**	**2**	P		**Pn**	**21 44 11.4**	**+1.6**
	SNR=46							
IUG	**Iuzhnay**	**5.93**	**326**	*e*P		**Pn**	**21 44 14.4**	**+1.2**
	baz=324							
IUG				*e*S		**Sn**	**21 45 20.4**	**-0.9**
	baz=324							
IUG	**Iuzhnay**	**5.93**	**326**	*e*PN		**Pn**	**21 44 14.4**	**+1.2**
USP	**Ospenovka**	**5.95**	**0**	P		**Pn**	**21 44 15.0**	**+1.6**
	SNR=9.2							
TNSS	**Tian-Shan**	**6.02**	**17**	*e*P		**Pn**	**21 44 15.6**	**+0.9**
	baz=17							
TNSS	**Tian-Shan**	**6.02**	**17**	*e*PN		**Pn**	**21 44 15.6**	**+0.9**
DZA	**Taraz**	**6.08**	**338**	*e*P		**Pn**	**21 44 16.2**	**+0.9**
	baz=336							
DZA				*e*S		**Sn**	**21 45 23.1**	**-1.8**
	baz=336							
DZA	**Taraz**	**6.08**	**338**	*e*PN		**Pn**	**21 44 16.1**	**+0.9**
BHK	**Bhakra**	**6.09**	**164**	*e*P		**Pn**	**21 44 18.0**	**+2.7**
SGDS	**Sogindy**	**6.14**	**1**	*e*P		**Pn**	**21 44 16.3**	**+0.3**
	baz=0.2							
SGDS	**Sogindy**	**6.14**	**1**	*e*PN		**Pn**	**21 44 16.3**	**+0.3**
MDOK	**Medeo**	**6.17**	**18**	*e*P		**Pn**	**21 44 15.9**	**-0.7**
	baz=18							
MDOK	**Medeo**	**6.17**	**18**	⇓P		**Pb**	**21 44 30.9**	**-2.0**
	comp=Z,64nm,1.0s							
MDOK				⇓S		**Sb**	**21 45 46.8**	**+0.1**
	comp=Z,294nm,1.3s							
MDOK	**Medeo**	**6.17**	**18**	*e*PN		**Pn**	**21 44 15.8**	**-0.7**
AAA	**Alma-Ata**	**6.18**	**17**	*e*P		**Pn**	**21 44 16.9**	**+0.3**
	baz=16							
AAA	**Alma-Ata**	**6.18**	**17**	*e*PN		**Pn**	**21 44 16.8**	**+0.3**
KNDC	**Almaty**	**6.20**	**17**	⇑P		**Pb**	**21 44 32.6**	**-0.7**
	comp=Z,133nm,0.7s							
KNDC				⇑S		**Sb**	**21 45 50.1**	**+2.5**
	comp=Z,543nm,1.1s							
SATY	**Saty**	**6.48**	**26**	*e*P		**Pn**	**21 44 21.5**	**+0.7**
	baz=26							
SATY	**Saty**	**6.48**	**26**	*e*PN		**Pn**	**21 44 21.4**	**+0.7**
KK31	**Karatay Array**	**6.54**	**334**	⇓P		**Pn**	**21 44 22.5**	**+0.9**
	comp=Z,31nm,0.5s,baz=141,slow=12,SNR=328							
KK31				S		**Sn**	**21 45 35.7**	**-0.5**
	comp=Z,110nm,0.7s,baz=144,slow=16,SNR=7.0							
KK31	**Karatay Array**	**6.54**	**334**	PN		**Pn**	**21 44 22.4**	**+0.9**
KK31							21 45 35.6	
KK31	**Karatay Array**	**6.54**	**334**	Pn		**Pn**	**21 44 22.4**	**+0.9**
KK31				Sn		**Sn**	**21 45 35.6**	**-0.5**
KKAR	**Karatay Array**	**6.54**	**334**	PN		**Pn**	**21 44 22.5**	**+1.0**
KKAR							21 45 35.2	
KKAR	**Karatay Array**	**6.54**	**334**	Pn		**Pn**	**21 44 22.5**	**+1.0**
KKAR				Sn		**Sn**	**21 45 35.2**	**-0.9**
KKAR	**Karatay Array**	**6.54**	**334**	Pn		**Pn**	**21 44 22.0**	**+0.5**
KKAR				Sn		**Sn**	**21 45 35.1**	**-1.1**
SMLA	**Simla**	**6.55**	**159**	*e*P		Pn	21 44 25.8	+4.2
SMLA				*e*S		**Sn**	**21 45 39.5**	**+3.2**
SMLA				IAML			21 45 45.3	
	comp=N,149nm,0.5s							
SMLA				IAML			21 45 47.2	
	comp=E,80nm,0.3s							
KUU	**Kurty**	**6.73**	**11**	*e*P		**Pn**	**21 44 24.0**	**-0.1**
	comp=E,17nm,0.7s,baz=11							
KUU	**Kurty**	**6.73**	**11**	*e*PN		**Pn**	**21 44 24.0**	**-0.1**
KUU				pmax		pmax		
	comp=Z,17nm,0.7s							
UZB	**Uzynbulak**	**6.78**	**29**	*e*P		**Pn**	**21 44 25.5**	**+0.5**
	baz=30							
UZB	**Uzynbulak**	**6.78**	**29**	*e*PN		**Pn**	**21 44 25.4**	**+0.5**
KPKS	**Kokpek**	**6.93**	**26**	*e*P		**Pn**	**21 44 27.6**	**+0.6**
	baz=26							
KPKS	**Kokpek**	**6.93**	**26**	*e*PN		**Pn**	**21 44 27.5**	**+0.6**
SHLS	**Shalkode**	**6.97**	**32**	*e*P		**Pn**	**21 44 29.9**	**+2.3**
	comp=Z,6.7nm,0.6s,baz=34							
SHLS	**Shalkode**	**6.97**	**32**	*e*PN		**Pn**	**21 44 29.8**	**+2.3**
SHLS				pmax		pmax		
	comp=Z,7.0nm,0.6s							
PDGK	**Podgornoye**	**7.12**	**31**	⇑P		**Pb**	**21 44 46.3**	**-2.8**
	comp=Z,29nm,0.8s							
PDGK				⇑S		**Sb**	**21 46 17.4**	**+3.3**
	comp=Z,251nm,1.1s							
DDI	**Dehra Dun**	**7.57**	**156**	*e*P		Pn	21 44 40.1	+4.4
DDI				*e*S		**Sn**	**21 46 06.8**	**+5.1**
DDI				AMP			21 46 17.9	
	comp=N,1μm,0.4s							
BTLS	**Baital**	**7.73**	**358**	*e*P		**Pn**	**21 44 38.3**	**+0.5**
	baz=357							
BTLS	**Baital**	**7.73**	**358**	*e*P		**Pn**	**21 44 38.3**	**+0.5**
TDK	**Taldyqorghan**	**8.23**	**20**	*e*P		**Pn**	**21 44 45.6**	**+0.9**
	baz=20							
TDK	**Taldyqorghan**	**8.23**	**20**	*e*P		**Pn**	**21 44 45.6**	**+0.9**

NDI	**New Delhi**	**8.90**	**164**	*e*P		Pn	21 44 59.0	+5.1	
NDI				*ex*		x	21 46 43.0		
HRA	**Herat**	**10.36**	**257**	Pn		**Pn**	**21 45 18.2**	**+4.1**	
MAKZ	**Makanchi**	**11.00**	**28**	⇑P		Pn	21 45 36.5	+14	
	comp=N,8.7nm,1.0s								
MAKZ	**Makanchi**	**11.00**	**28**	P		**Pn**	**21 45 23.2**	**+0.6**	
MAKZ	**Makanchi**	**11.00**	**28**	Pn		**Pn**	**21 45 23.2**	**+0.6**	
MK31	**Makanchi Array**	**11.11**	**29**	⇓P		Pn	21 45 38.6	+15	
	comp=N,4.4nm,0.8s,baz=203,slow=12,SNR=24								
MK31	**Makanchi Array**	**11.11**	**29**	*de*P		**Pn**	**21 45 23.7**	**-0.4**	
MK31	**Makanchi Array**	**11.11**	**29**	Pn		**Pn**	**21 45 24.1**	**0.0**	
MKAR	**Makanchi Array**	**11.11**	**29**	Pn		**Pn**	**21 45 24.4**	**+0.4**	
	comp=N,0.3nm,0.3s,baz=212,slow=13,SNR=16								
MKAR				Lg		Lg	21 48 19.2		
	comp=N,0.2nm,0.3s,baz=218,slow=28,SNR=2.8								
MKAR	**Makanchi Array**	**11.11**	**29**	*i* P		**Pn**	**21 45 24.8**	**+0.7**	
MKAR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
MKAR	**Makanchi Array**	**11.11**	**29**	Pn		**Pn**	**21 45 23.4**	**-0.6**	
PYUN	**Piuthan**	**11.63**	**140**	*e*P		**Pn**	**21 45 31.6**	**0.0**	
	comp=Z,168nm,0.4s								
DANN	**Dangsing**	**11.85**	**136**	*e*P		**Pn**	**21 45 34.0**	**-0.5**	
	comp=Z,43nm,0.4s								
WMQ	**Urumqi**	**11.96**	**53**	*e*P		**Pn**	**21 45 38.2**	**+2.4**	
WMQ				pP			21 45 45.0		
WMQ				S		**Sn**	**21 47 50.4**	**+1.2**	
WMQ				sS			21 48 01.6		
WMQ				pmax		pmax			
	comp=Z,18nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,110nm,4.7s								
WMQ				LR		LR			
	comp=Z,1μm,13.7s								
WMQ				LR		LR			
	comp=Z,1μm,24.3s								
WMQ	**Urumqi**	**11.96**	**53**	P		**Pn**	**21 45 33.9**	**-1.9**	
WMQ	**Urumqi**	**11.96**	**53**			**Pn**	**21 45 33.9**	**-1.9**	
KOLN	**Koldanda**	**12.22**	**138**	*e*P		**Pn**	**21 45 39.2**	**-0.3**	
	comp=Z,92nm,0.6s								
GKN	**Gorkha**	**12.61**	**134**	*e*P		**Pn**	**21 45 44.1**	**-0.7**	
	comp=Z,17nm,0.4s								
ZSN	**Zaisan**	**12.70**	**34**	*e*P		**Pn**	**21 45 45.6**	**-0.2**	
	baz=34								
ZSN	**Zaisan**	**12.70**	**34**	*e*P		**Pn**	**21 45 45.6**	**-0.2**	
GEYT	**Alibeck**	**13.00**	**278**	Pn		**Pn**	**21 45 48.3**	**-1.7**	
	comp=Z,1.5nm,0.3s,baz=112,slow=11,SNR=14								
GEYT				Sn		**Sn**	**21 48 16.6**	**+1.9**	
	comp=Z,1.5nm,0.3s,baz=137,slow=21,SNR=6.6								
GEYT	**Alibeck**	**13.00**	**278**	Pn		**Pn**	**21 45 48.7**	**-1.4**	
GYA0B	**ALIBECK ARRAY**	**13.00**	**278**	⇑P		Pn	21 45 43.3	-6.7	
GYA0B				⇑S		Sn	21 47 55.5	-19	
GYA0B	**ALIBECK ARRAY**	**13.00**	**278**	Pn		**Pn**	**21 45 48.9**	**-1.1**	
KKN	**Kakani**	**13.14**	**133**	*e*P		**Pn**	**21 45 51.3**	**-0.8**	
	comp=Z,33nm,0.6s								
DMN	**Daman**	**13.17**	**134**	*e*P		**Pn**	**21 45 51.2**	**-1.4**	
	comp=Z,25nm,0.4s								
PKIN	**Phulchoki**	**13.37**	**133**	*e*P		**Pn**	**21 45 54.1**	**-1.2**	
	comp=Z,43nm,0.6s								
PKI	**Pulchoki**	**13.38**	**133**	*e*P		**Pn**	**21 45 55.0**	**-0.5**	
	comp=Z,44nm,0.5s								
GUN	**Gumba**	**13.40**	**131**	*e*P		**Pn**	**21 45 54.1**	**-1.7**	
	comp=Z,20nm,0.5s								
KURBB	**Kurchatov Arra**	**13.62**	**11**	Pn		**Pn**	**21 45 56.1**	**-2.3**	
	comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=19								
KURBB				Lg		Lg	21 49 47.5		
	baz=209,slow=30,SNR=6.8								
KURK	**Kurchatov**	**13.73**	**11**	P		**Pn**	**21 45 56.1**	**-3.7**	
KURK	**Kurchatov**	**13.73**	**11**			**Pn**	**21 45 56.1**	**-3.7**	
SEM	**Semipalatinsk**	**13.73**	**16**	*e*P		**Pn**	**21 46 00.0**	**-0.1**	
	baz=16								
SEM	**Semipalatinsk**	**13.73**	**16**	*e*P		**Pn**	**21 46 00.0**	**-0.1**	
JIRN	**Jiri**	**13.77**	**131**	*e*P		**Pn**	**21 45 59.0**	**-1.9**	
	comp=Z,72nm,0.5s								
BHPL	**Bhopal**	**14.25**	**169**	*e*P		**Pn**	**21 46 07.3**	**+0.2**	
BHPL				IAmb		IAmb	21 46 12.8		
	comp=Z,13nm,0.5s								
BHPL				*e*S		**Sn**	**21 48 40.8**	**-4.5**	
RAMN	**Ramite**	**14.54**	**132**	*e*P		**Pn**	**21 46 08.1**	**-3.2**	
	comp=Z,22nm,0.5s								
TAPN	**Taplejung**	**14.93**	**128**	*e*P		**Pn**	**21 46 13.2**	**-3.5**	
	comp=Z,33nm,0.7s								
ODAN	**Odare**	**15.08**	**130**	*e*P		**Pn**	**21 46 15.6**	**-3.1**	
	comp=Z,30nm,0.6s								
DGZ	**Jazzator, Alta**	**15.51**	**33**

ARU IAmb IAmb 21 47 57.2
comp=Z,12nm,0.9s
GANJ Ganja 22.11 287 P **P** **21 47 43.6 +2.8**
LGD Lagodekhi 22.19 291 P **P** **21 47 44.8 +3.2**
DDFL Dedoflistskaro 22.27 290 P **P** **21 47 46.6 +4.1**
DVE Vedeno 22.35 293 *de*P **P** **21 47 46.1 +2.8**
GROC Groznyy 22.61 294 *e*P **P** **21 47 46.6 +0.6**
GROC *e* 21 48 09.9
GROC pmax pmax
comp=Z,36nm,1.0s
NAX Nakhchivan 22.81 284 P **P** **21 47 51.1 +2.8**
BTNK Botanikuri 23.27 290 P **P** **21 47 56.0 +3.1**
GNI Garni 23.33 286 P **P** **21 47 55.3 +1.6**
comp=Z,4.2nm,0.7s,baz=45,slow=6.1,SNR=9.1
GNI Garni 23.33 286⇓ *e*P **P** **21 47 55.4 +1.6**
GNI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 23.33 286 P **P** **21 47 55.8 +2.1**
LZH Lanzhou 23.53 84 *e*P **P** **21 47 55.0 -0.7**
LZH pP sP 21 48 06.4 +4.4
LZH sP pP 21 48 11.5 +11
LZH pmax pmax
comp=Z,16nm,1.0s
BELG Belogornoye 24.11 317 P **P** **21 48 00.0 -0.8**
comp=Z,13nm,0.6s,baz=180,slow=1.0,SNR=12
BELG Belogornoye 24.11 317⇑ *e*P **P** **21 47 59.6 -1.2**
BELG pmax pmax
comp=Z,2.0nm,0.6s
NCK Nalchik 24.24 294⇑ *e*P **P** **21 48 02.2 0.0**
NCK pmax pmax
comp=Z,5.0nm,0.7s
ZAK Zakamensk 24.36 48 *e*P **P** **21 48 02.7 -0.7**
ZAK pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 24.76 295 P **P** **21 48 08.5 +1.6**
comp=Z,2.1nm,0.8s,baz=131,slow=8.2,SNR=5.0
KBZ Khabaz 24.76 295⇑ *e*P **P** **21 48 08.7 +1.8**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
GOF Gofitskoye 24.79 298⇑ *e*P P 21 48 16.7 +10
GOF pmax pmax
comp=Z,22nm,0.8s
GEVA Gevas 24.80 282 P **P** **21 48 07.9 +0.4**
GEVA IAmb IAmb 21 48 26.1
comp=Z,4.8nm,0.9s
NEY Neytrino 24.86 294⇑ *e*P **P** **21 48 10.2 +2.1**
NEY pmax pmax
comp=Z,1.0nm,0.9s
KVAR Kislovodsk Arr 24.92 295 P **P** **21 48 09.0 +0.4**
comp=Z,2.1nm,0.4s,baz=56,slow=10,SNR=2.7
KIV Kislovodsk 24.93 295 *e*P **P** **21 48 08.3 -0.3**
KIV *e*S **S** **21 52 27.5 -4.5**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 24.93 295 P **P** **21 48 09.5 +0.9**
KIV IAmb IAmb 21 48 25.3
comp=Z,6.1nm,0.7s
TLY Talaya 25.07 46⇑ *e*P **P** **21 48 07.6 -2.1**
TLY pmax pmax
comp=Z,2.0nm,0.7s
SONM Songino Array 25.57 56 P **P** **21 48 14.8 +0.4**
comp=Z,3.0nm,0.6s,baz=254,slow=10,SNR=12
SONM Songino Array 25.57 56 P **P** **21 48 14.5 0.0**
ULN Ulaanbaatar 26.01 56⇑ *e*P **P** **21 48 18.3 -0.2**
ULN pmax pmax
comp=Z,2.0nm,0.7s
ULN Ulaanbaatar 26.01 56 P **P** **21 48 18.1 -0.4**
KIRV Kirov 26.83 331 P **P** **21 48 26.2 +0.7**
comp=Z,4.2nm,0.6s,baz=175,slow=6.9,SNR=3.5
KMI Kunming 26.93 109 ⇑P **P** **21 48 28.2 +1.2**
KMI pmax pmax
comp=Z,7.0nm,2.1s
CHTO Chiang Mai 28.24 124 P **P** **21 48 41.1 +2.6**
CHTO pmax pmax
comp=Z,3.0nm,0.7s
CHTO Chiang Mai 28.24 124 P **P** **21 48 41.1 +2.6**
CMAR Chiang Mai Arr 28.49 125 P **P** **21 48 42.2 +1.4**
comp=Z,0.6nm,0.4s,baz=310,slow=11,SNR=2.2
HHC Hu-ho-hao-te 28.86 71 *e*P **P** **21 48 44.5 +0.5**
HHC pmax pmax
comp=Z,12nm,0.7s
OBN Obninsk 31.20 317⇓ *e*P **P** **21 49 05.1 +0.7**
OBN *e*SSS SSS 21 56 10.7
OBN pmax pmax
comp=Z,6.0nm,1.0s
BR131 Keskin Array S 31.86 287⇑ *e*P **P** **21 49 12.1 +1.5**
BR131 Keskin Array S 31.86 287 P **P** **21 49 11.4 +0.9**
BR131 IAmb IAmb 21 49 17.5
comp=Z,7.5nm,1.0s
BRTR Keskin Array B 31.86 287 P **P** **21 49 11.8 +1.2**
comp=Z,1.0nm,0.4s,baz=96,slow=6.6,SNR=9.3
BRTR Keskin Array B 31.86 287 P **P** **21 49 11.2 +0.6**
KLMR Klimovskoe 32.21 328 *e*P **P** **21 49 10.9 -2.3**
KLMR pmax pmax
comp=Z,12nm,1.1s
KLMR Klimovskoe 32.21 328 *e*P **P** **21 49 10.9 -2.3**
KLMR AMP 21 49 16.3
comp=Z,12nm,1.1s
NRIK Noril'sk 32.87 8 P **P** **21 49 19.0 +0.1**
comp=Z,4.2nm,1.0s,baz=214,slow=8.6,SNR=6.3
NRIK Noril'sk 32.87 8⇓ *e*P **P** **21 49 20.3 +1.4**
NRIK pmax pmax
comp=Z,11nm,1.5s
NRIK Noril'sk 32.87 8 P **P** **21 49 18.2 -0.7**
NRIK IAmb IAmb 21 49 21.0
comp=Z,8.4nm,1.2s
AKASG Malin Array Be 34.65 307 P **P** **21 49 34.2 -0.4**
comp=Z,0.8nm,0.4s,baz=76,slow=7.6,SNR=5.7
AKASG Malin Array Be 34.65 307 *i* P **P** **21 49 36.7 +2.1**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
VALR Valaam 36.20 326⇓ *e*P **P** **21 49 48.0 +0.3**
VALR pmax pmax
comp=Z,31nm,1.1s
NACGM Naroch 36.62 314 *i* P **P** **21 49 51.5 0.0**
NACGM *i* P **P** **21 49 51.5 0.0**
NACGM *i* P **P** **21 49 51.5 0.0**
NACGM *i* PP **PP** **21 51 17.6 +2.9**
NACGM *i* PPP PPP 21 51 35.6
NACGM *i* S **S** **21 55 39.2 +5.0**
NACGM *i* SS **SS** **21 58 21.9 +8.0**
NACGM *i* SSS SSS 21 58 43.4
NACGM *i* LR LR 22 05 14.2
LVZ Lovozero 37.78 337⇓ *e*P **P** **21 49 59.9 -1.3**
LVZ pmax pmax
comp=Z,45nm,1.3s
FINES FINESS Array B 38.41 325 P **P** **21 50 06.2 -0.3**
comp=Z,3.4nm,0.5s,baz=109,slow=9.9,SNR=26
FINES FINESS Array B 38.41 325 *i* P **P** **21 50 05.0 -1.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 38.41 325 P **P** **21 50 06.7 +0.2**
SUW Suwalki 38.61 312 P **P** **21 50 08.9 +0.6**
SUW pmax pmax
comp=Z,15nm,1.0s
SUW Suwalki 38.61 312 P **P** **21 50 08.9 +0.6**
ARCES ARCESS Array B 41.50 336 P **P** **21 50 31.8 -0.3**
comp=Z,3.7nm,0.5s,baz=108,slow=8.3,SNR=20
ARCES ARCESS Array B 41.50 336 P **P** **21 50 33.2 +1.1**
ARCES pmax pmax
comp=Z,10.0nm,1.0s
ARCES ARCESS Array B 41.50 336 P **P** **21 50 33.2 +1.1**
GSI Gunungsitoli 41.67 144 P **P** **21 50 36.2 +2.1**
YAK Yakutsk 41.68 36⇑ *e*P **P** **21 50 32.0 -1.7**
YAK pmax pmax
comp=Z,2.0nm,0.6s
KSRS Korea Array 41.97 73 P **P** **21 50 36.7 +0.4**
comp=Z,0.5nm,0.5s,baz=285,slow=9.7,SNR=2.0
KLR Kul'dur 42.40 55 P **P** **21 50 39.4 -0.4**
comp=Z,1.0nm,0.6s,baz=274,slow=9.6,SNR=2.8
KLR Kul'dur 42.40 55⇑ *e*P **P** **21 50 38.9 -0.8**
KLR pmax pmax
comp=Z,2.0nm,1.1s
DPC Dobruska-Polom 42.88 307 *e*P **P** **21 50 47.1 +3.4**
DPC Dobruska-Polom 42.88 307 *e*P **P** **21 50 47.1 +3.4**
TIXI Tiksi 43.98 22 P **P** **21 50 52.6 +0.4**
comp=Z,3.1nm,0.5s,baz=260,slow=4.1,SNR=8.2
TIXI Tiksi 43.98 22⇓ *e*P **P** **21 50 52.7 +0.5**
TIXI pmax pmax
comp=Z,10.0nm,0.6s
TIXI Tiksi 43.98 22 P **P** **21 50 52.3 +0.1**
TIXI IAmb IAmb 21 51 01.1
comp=Z,3.7nm,0.8s
CKRC Cesky Krumlov 44.36 305 *e*P P 21 51 00.4 +4.8
GERES GERESS Array B 44.75 305 P **P** **21 50 59.0 +0.2**
comp=Z,0.3nm,0.7s,baz=81,slow=6.1,SNR=1.5
KHC Kasperske Hory 44.79 305 *e*P **P** **21 50 59.8 +0.7**
KHC Kasperske Hory 44.79 305 *e*P **P** **21 50 59.8 +0.7**
CLL Collm 44.87 309 *e*(P) **P** **21 51 02.0 +2.4**
CLL *e*PP **PP** **21 52 47.0 +2.8**
CLL *e*pPP 21 53 01.0
CLL Collm 44.87 309 *e*P **P** **21 51 02.0 +2.4**
NOA NORSAR Array B 45.44 322 P **P** **21 51 03.2 -0.8**
comp=Z,0.2nm,0.6s,baz=101,slow=7.2,SNR=7.4
CTI Castel Tesino 46.64 302 P **P** **21 51 13.8 0.0**
CTI pmax pmax
comp=Z,4.0nm,1.0s
CTI Castel Tesino 46.64 302 P **P** **21 51 13.8 0.0**
CTI IAmb IAmb 21 51 16.5
comp=Z,3.8nm,1.0s
SPITS Spitsbergen Ar 47.36 346 P **P** **21 51 19.1 +0.3**
comp=Z,8.3nm,1.1s,baz=135,slow=16,SNR=2.0
VLC Villacollemand 47.96 299 P **P** **21 51 24.6 +0.6**
MA2 Magadan 51.99 39 P **P** **21 51 54.7 +0.3**
comp=Z,1.3nm,0.5s,baz=251,slow=5.0,SNR=4.2
MA2 Magadan 51.99 39 P **P** **21 51 54.4 +0.1**
MA2 IAmb IAmb 21 52 00.2
comp=Z,6.9nm,1.4s
SEY Seymchan 52.18 34 P **P** **21 51 55.9 +0.2**
comp=Z,0.9nm,0.7s,baz=291,slow=14,SNR=2.6
DAV Davao City (W) 55.19 110 LR LR 22 16 10.2
comp=Z,371nm,18.5s,baz=112,slow=36
BILL Bilibino 56.64 27⇓ *e*P **P** **21 52 28.9 +0.8**
BILL *e* 21 52 33.3
BILL pmax pmax
comp=Z,2.0nm,1.2s
ESDC Sonseca Array 59.54 299 P **P** **21 52 49.0 +0.1**
comp=Z,0.9nm,0.6s,baz=54,slow=6.8,SNR=15
ESDC Sonseca Array 59.54 299 P **P** **21 52 49.3 +0.4**
ESDC IAmb IAmb 21 52 51.8
comp=Z,5.6nm,1.4s
TORD Torodi Ar. Bea 68.52 270 P **P** **21 53 47.2 -1.0**
comp=Z,1.0nm,0.4s,baz=46,slow=5.9,SNR=12
INK Inuvik 72.63 11 P **P** **21 54 12.4 0.0**
comp=Z,0.7nm,0.6s,baz=357,slow=6.3,SNR=3.7
FITZ Fitzroy Crossi 73.18 129 P **P** **21 54 16.9 +0.6**
comp=Z,1.5nm,0.9s,baz=304,slow=3.6,SNR=1.9
ILAR Eielson Array 73.21 17 P **P** **21 54 15.5 -0.5**
comp=Z,0.5nm,0.7s,baz=318,slow=5.9,SNR=7.7
WRA Warramunga Arr 80.09 124 P **P** **21 54 55.2 -0.2**
comp=Z,0.9nm,0.7s,baz=327,slow=5.9,SNR=11
WRA Warramunga Arr 80.09 124 *i* P **P** **21 54 56.7 +1.3**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 80.09 124 IAmb IAmb 21 54 55.4
comp=Z,0.1nm,0.7s
YKA Yellowknife Ar 80.27 4 P **P** **21 54 55.0 -0.8**
comp=Z,0.8nm,0.6s,baz=350,slow=5.0,SNR=13
YKA Yellowknife Ar 80.27 4 *i* P **P** **21 54 54.2 -1.6**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 82.47 127 P **P** **21 55 08.2 +0.2**
comp=Z,0.5nm,0.7s,baz=318,slow=5.6,SNR=9.0

*IDC **03** 21:53:01.4±0.8,5.°42S×152.°29E,h0km,mb4.3/16, mb1 4.5/17,mb1mx4.3/35,mbtmp4.3/17,ML1.7/1,MS4.2/1, Ms1 4.2/1,ms1mx3.5/34,Error ellipse: s-maj=24.0km s-min=15.0km az=124.0*
*NEIC **03** 21:53:02.1±1.8,5.°54S±0.°06×152.°56E±0.°08,h10km±1km, mb4.6/29,Error ellipse: s-maj=13.3km s-min=10.4km az=79.0*
*DJA **03** 21:53:04.4±1.0,6.°3S±7.°×15.°3E±1.°1,h52km±12km,M5.1/6, mB5.4/2,mb4.5/6,MLv5.4/3,Mw(mB)4.9/2*

ISC 03 21:53:06.5±0.5,5.°55S±0.°06×152.°51E±0.°08,h40km,n59, σ1§20/58,mb4.3/30,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.40**	**345**			**Pn**	**Pn**	**21 53 29.3**	**-0.3**
MANU	**Manus Island**	**6.21**	**304**			**Pn**	**Pn**	**21 54 38.2**	**+2.6**
PMG	**Port Moresby**	**6.55**	**234**			**Pn**	**Pn**	**21 54 37.3**	**-3.1**
	1.0nm,0.3s,baz=46,slow=11,SNR=3.4								
PMG						Sn	**Sn**	**21 55 52.6**	**-1.2**
	18nm,0.3s,baz=217,slow=22,SNR=12								
PMG	**Port Moresby**	**6.55**	**234**	Pn		**Pn**	**Pn**	**21 54 41.2**	**+0.9**
PMG	**Port Moresby**	**6.55**	**234**	P		**Pn**	**Pn**	**21 54 42.6**	**+2.2**
HNR	**Honiara**	**8.32**	**118**	Pn		**Pn**	**Pn**	**21 55 02.3**	**-2.3**
CTA	**Charters Tower**	**15.68**	**202**	Pn		**Pn**	**P**	**21 56 50.4**	**+2.1**
	0.2nm,0.3s,baz=14,slow=13,SNR=6.0								
CTAO	**Charters Tower**	**15.68**	**202**	Pn		**Pn**	**Pn**	**21 56 45.4**	**+0.7**
EIDS	**Eidsvold**	**19.75**	**184**	P		**P**	**P**	**21 57 32.3**	**-0.9**
DZM	**Mont Dzumac**	**21.24**	**142**	P		**P**	**P**	**21 57 52.5**	**+3.1**
	7.4nm,0.8s,baz=313,slow=19,SNR=2.6								
DZM						LR	LR	22 05 12.7	
	comp=Z,597nm,18.4s,baz=18,slow=34								
SIJI	**Sorong**	**21.71**	**282**	P		**P**	**P**	**21 57 52.4**	**-2.0**
	5.8nm,0.6s,baz=136,slow=4.3,SNR=3.9								
MTN	**Manton Dam**	**22.30**	**250**	P		**P**	**P**	**21 58 00.3**	**-0.5**
MTN						IAmb	IAmb	21 58 17.1	
	comp=Z,13nm,1.0s								
WB0	**Warramunga Arr**	**22.60**	**230**	P		**P**	**P**	**21 58 03.8**	**-0.1**
WB0						IAmb	IAmb	21 58 22.3	
	comp=Z,7.7nm,0.9s								
WR0	**Warramunga Arr**	**22.60**	**229**	P		**P**	**P**	**21 58 04.3**	**+0.4**
WR0						IAmb	IAmb	21 58 11.1	
	comp=Z,6.9nm,0.8s								
WB2	**Warramunga Arr**	**22.73**	**229**	P		**P**	**P**	**21 58 04.4**	**-0.9**
WB2						IAmb	IAmb	21 58 13.9	
	comp=Z,9.5nm,0.8s								
WRA	**Warramunga Arr**	**22.74**	**229**	P		**P**	**P**	**21 58 04.2**	**-1.2**
	comp=Z,5.1nm,0.7s,baz=54,slow=9.8,SNR=39								
WRA	**Warramunga Arr**	**22.74**	**229**	P		**P**	**P**	**21 58 05.0**	**-0.5**
AS31	**Alice Springs**	**25.41**	**223**	P		**P**	**P**	**21 58 31.8**	**+1.2**
ASAR	**Alice Springs**	**25.41**	**223**	P		**P**	**P**	**21 58 30.8**	**+0.2**
	comp=Z,3.4nm,0.5s,baz=58,slow=9.0,SNR=64								
ASAR	**Alice Springs**	**25.41**	**223**	P		**P**	**P**	**21 58 31.9**	**+1.3**
STKA	**Stephens Creek**	**28.12**	**200**	P		**P**	**P**	**21 58 55.6**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=341,slow=9.6,SNR=3.1								
BATI	**Baumata**	**28.94**	**259**	P		**P**	**P**	**21 59 01.2**	**-1.1**
	comp=Z,9.3nm,0.6s,baz=45,slow=1.4,SNR=3.8								
FITZ	**Fitzroy Crossi**	**29.05**	**242**	P		**P**	**P**	**21 59 02.0**	**-1.3**
	comp=Z,6.7nm,0.5s,baz=52,slow=8.0,SNR=14								
FITZ	**Fitzroy Crossi**	**29.05**	**242**	P		**P**	**P**	**21 59 02.1**	**-1.2**
FITZ						IAmb	IAmb	21 59 05.8	
	comp=Z,6.9nm,0.6s								
BBOO	**Buckleboo**	**31.16**	**207**	P		**P**	**P**	**21 59 21.3**	**-0.5**
BBOO						IAmb	IAmb	21 59 26.7	
	comp=Z,24nm,1.4s								
GIRL	**Giralia**	**40.66**	**241**	P		**P**	**P**	**22 00 43.1**	**-0.1**
MORW	**Morawa**	**41.66**	**232**	P		**P**	**P**	**22 00 52.7**	**+1.4**
MORW						IAmb	IAmb	22 00 55.5	
	comp=Z,5.9nm,0.7s								
JSD	**Sado**	**45.35**	**344**	P		**P**	**P**	**22 01 20.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**57.94**	**296**	P		**P**	**P**	**22 02 55.0**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=124,slow=6.0,SNR=7.6								
CHTO	**Chiang Mai**	**58.06**	**296**	P		**P**	**P**	**22 02 56.3**	**+0.1**
PETK	**Petropavlovsk-**	**58.60**	**4**	P		**P**	**P**	**22 02 59.6**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=119,slow=3.2,SNR=6.4								
HHC	**Hu-ho-hao-te**	**59.49**	**325**	*e*P		**P**	**P**	**22 03 05.1**	**-0.7**
HHC						pmax	pmax		
	comp=Z,10.0nm,0.7s								
HHC						pmax	pmax		
	comp=Z,930nm,7.3s								
AMKA	**Amchitka**	**61.18**	**19**	P		**P**	**P**	**22 03 15.5**	**-1.5**
GTA	**Gaotai**	**66.01**	**318**	*e*P		**P**	**P**	**22 03 48.9**	**-0.4**
GTA						pP	pP	22 03 52.1	-8.0
GTA						sP	sP	22 03 55.0	-9.3
GTA						pmax	pmax		
	comp=Z,2.0nm,1.0s								
SHL	**Shillong**	**66.44**	**301**			IAmb	IAmb	22 03 52.4	
	comp=Z,7.8nm,1.1s								
SONM	**Songino Array**	**66.81**	**328**	P		**P**	**P**	**22 03 53.8**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=142,slow=6.1,SNR=5.4								
SONM	**Songino Array**	**66.81**	**328**			IAmb	IAmb	22 03 55.5	
	comp=Z,1.3nm,0.7s								
WMQ	**Urumqi**	**76.10**	**318**	*e*P		**P**	**P**	**22 04 52.3**	**+2.0**
ANM	**Nome**	**76.57**	**17**	P				22 04 54.5	
	baz=223								
TNA	**Tin City**	**76.59**	**16**	P				22 04 53.9	
	baz=221								
SUA	**Susitna One**	**79.75**	**24**	P				22 05 11.2	
	baz=238,SNR=5.2								
RDOG	**Red Dog Mine**	**79.78**	**16**	P				22 05 12.2	
	baz=225								
RC01	**Rabbit Creek A**	**79.97**	**25**	P				22 05 12.5	
	baz=239								
CHUM	**Lake Minchumin**	**80.47**	**22**	P				22 05 15.8	
	baz=236,SNR=11								
KNK	**Knik Glacier**	**80.67**	**25**	P				22 05 16.8	
	baz=240								
MK31	**Makanchi Array**	**80.70**	**319**	P		**P**	**P**	**22 05 14.8**	**-0.8**
MKAR	**Makanchi Array**	**80.70**	**319**	P		**P**	**P**	**22 05 15.4**	**-0.2**
	comp=Z,2.1nm,1.0s,baz=101,slow=6.2,SNR=13								
MKAR	**Makanchi Array**	**80.70**	**319**	P		**P**	**P**	**22 05 15.2**	**-0.4**
MAKZ	**Makanchi**	**80.91**	**319**	P		**P**	**P**	**22 05 16.3**	**-0.4**
MAKZ						IAmb	IAmb	22 05 18.6	
	comp=Z,2.4nm,0.9s								
SML	**Sawmill**	**80.92**	**24**	P				22 05 18.1	
	baz=240,SNR=8.7								
GLI	**Glacier Island**	**80.98**	**26**	P				22 05 18.4	
	baz=241								
TRF	**Thorofare Moun**	**81.00**	**22**	P				22 05 17.2	
	baz=238								
BPAW	**Bear Paw Mtn.**	**81.08**	**22**	P				22 05 17.6	
	baz=237								
WAT2	**Susitna Watana**	**81.40**	**23**	P				22 05 19.9	
	baz=240,SNR=6.0								
WAT6	**Susitna Watana**	**81.55**	**24**	P				22 05 21.1	
	baz=240								
ZALV	**Zalesovo Beam**	**81.62**	**326**	P		**P**	**P**	**22 05 18.9**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=111,slow=4.2,SNR=6.5								
ZALV	**Zalesovo Beam**	**81.62**	**326**	P		**P**	**P**	**22 05 19.2**	**-1.0**
MCK	**McKinley**	**81.66**	**23**	P		**P**	**P**	**22 05 20.6**	**+0.2**
MCK	**McKinley**	**81.66**	**23**	P				22 05 21.0	
	baz=239,SNR=12								
MLY	**Manley**	**81.68**	**21**	P				22 05 21.9	
	baz=237,SNR=20								
MLY	**Manley**	**81.68**	**21**	P		**P**	**P**	**22 05 21.5**	**+1.0**
KLU	**Klutina**	**81.77**	**25**	P				22 05 23.1	
	baz=242								
M24K	**Tolsona, Glenn**	**81.96**	**25**	P				22 05 24.3	
	baz=242								
NEA2	**Nenana**	**82.05**	**22**	P				22 05 23.1	
	baz=239,SNR=8.9								
BMRM	**Bremner River**	**82.10**	**26**	P				22 05 24.5	
	baz=243								
I23K	**Minto, Yukon-K**	**82.24**	**21**	P				22 05 24.3	
	baz=238,SNR=5.4								
WRH	**Wood River Hil**	**82.36**	**22**	P		**P**	**P**	**22 05 23.5**	**-0.4**
WRH						IAmb	IAmb	22 05 25.9	
	comp=Z,9.3nm,1.1s								
N25K	**Chitina, Valde**	**82.39**	**25**	P				22 05 26.2	
	baz=243								
TCOL	**CIGO, UAF Yank**	**82.64**	**22**	P				22 05 26.2	
	baz=240								
COLA	**College**	**82.65**	**22**	P				22 05 26.2	
	baz=240								
CRQE	**Cirque**	**82.67**	**27**	P				22 05 27.9	
	baz=245								
HDA	**Harding Lake**	**82.76**	**22**	P				22 05 26.6	
	baz=241								
HDA						P		22 05 26.6	
	baz=241								
ILAR	**Eielson Array**	**82.96**	**22**	P		**P**	**P**	**22 05 27.4**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=247,slow=5.5,SNR=61								
DOT	**Dot Lake**	**83.53**	**24**	P		**P**	**P**	**22 05 30.5**	**+0.5**
CTG	**Chitna Glacier**	**83.54**	**27**	P				22 05 32.6	
	baz=246								
SCRK	**Sand Creek**	**83.70**	**23**	P				22 05 32.4	
	baz=244,SNR=5.9								
TOLK	**Toolik Lake Re**	**84.01**	**18**	P				22 05 34.5	
	baz=238,SNR=5.6								
K27K	**Chicken**	**84.48**	**24**	P				22 05 37.5	
	baz=245								
EGAK	**Eagle**	**85.16**	**23**	P		**P**	**P**	**22 05 38.6**	**+0.3**
EGAK						IAmb	IAmb	22 05 41.1	
	comp=Z,6.2nm,0.9s								
EGAK	**Eagle**	**85.16**	**23**	P				22 05 40.3	
	baz=246								
HYT	**Haines Junctio**	**85.23**	**28**	P		**P**	**P**	**22 05 39.2**	**+0.3**
DAWY	**Dawson**	**85.58**	**24**	P		**P**	**P**	**22 05 41.2**	**+0.8**
DAWY						IAmb	IAmb	22 05 43.7	
	comp=Z,14nm,1.5s								
NRIK	**Noril'sk**	**86.58**	**341**	P		**P**	**P**	**22 05 45.0**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=103,slow=3.0,SNR=5.9								
KKAR	**Karatay Array**	**87.94**	**313**	P		**P**	**P**	**22 05 51.9**	**-0.5**
NVAR	**Mina Array Bea**	**92.77**	**52**	P		**P**	**P**	**22 06 17.2**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=253,slow=6.8,SNR=3.9								
C36M	**Paulatuk**	**92.83**	**21**	P				22 06 15.3	
	baz=262								
C36M	**Paulatuk**	**92.83**	**21**	P		**P**	**P**	**22 06 15.3**	**+0.8**
C36M						IAmb	IAmb	22 06 16.2	
	comp=Z,3.9nm,0.9s								
YKA	**Yellowknife Ar**	**96.22**	**28**	P		**P**	**P**	**22 06 31.1**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=272,slow=4.8,SNR=5.0								
GERES	**GERESS Array B**	**124.54**	**328**	PKP		**PKPdf**		**22 12 02.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=112,slow=1.4,SNR=4.1								
TORD	**Torodi Ar. Bea**	**150.26**	**287**	PKPbc		**PKPbc**		**22 12 54.4**	**0.0**
	comp=Z,2.0nm,0.8s,baz=43,slow=2.8,SNR=11								

*IDC **03** 21:55:47.5±3.2,6.°23S×147.°77E,h0km,mb3.8/3, mb1 3.9/5,mb1mx3.6/33,mbtmp3.8/5,ML3.7/1,MS4.5/1, Ms1 4.5/1,ms1mx3.5/32,Error ellipse: s-maj=72.3km s-min=36.3km az=90.0*

ISC 03 21:55:52.9±2.7,6.°2S±0.°2×147.°9E±0.°5,h60km,n7,σ0§96/7, mb3.7/3,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.26**	**193**	Pn		**Pn**	**Pn**	**21 56 40.9**	**-0.8**
	1.8nm,0.3s,baz=333,slow=14,SNR=0.8								
PMG						Sn	**Sn**	**21 57 19.9**	**+0.6**
	3.3nm,0.3s,baz=24,slow=20,SNR=1.4								
WRA	**Warramunga Arr**	**18.97**	**223**	P		**P**	**P**	**22 00 08.6**	**-1.0**
	0.2nm,0.3s,baz=48,slow=10,SNR=1.5								
ASAR	**Alice Springs**	**21.97**	**216**	P		**P**	**P**	**22 00 41.5**	**-0.4**
	1.4nm,0.5s,baz=48,slow=9.2,SNR=7.9								
FITZ	**Fitzroy Crossi**	**24.72**	**239**	P		**P**	**P**	**22 01 09.6**	**+0.8**
	1.7nm,0.6s,baz=51,slow=6.5,SNR=2.1								
STKA	**Stephens Creek**	**26.21**	**192**	P		**P**	**P**	**22 01 23.2**	**+1.0**
	1.3nm,0.5s,baz=21,slow=12,SNR=2.2								
KLR	**Kul'dur**	**56.98**	**347**	LR		LR		22 29 25.3	
	comp=Z,356nm,18.8s,baz=216,slow=35								
TORD	**Torodi Ar. Bea**	**146.00**	**284**	PKPbc		**PKiKP**		**22 15 30.2**	**-0.2**
	0.2nm,0.6s,baz=83,slow=4.8,SNR=1.3								

*SOF **03** 22:01:08.6,41.°05N×22.°46E,h2km,MD2.5*
*IASPEI **03** 22:01:08.4±0.8,40.°99N±0.°03×22.°47E±0.°02,h14km±5km, Error ellipse: s-maj=4.2km s-min=3.1km az=158.4,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*SKO **03** 22:01:08.9,41.°05N×22.°41E,h15km*
*ATH **03** 22:01:09.5,40.°98N×22.°50E,h9km±2km,ML2.3/6,Error ellipse: s-maj=2.1km s-min=0.8km az=250.0*
*THE **03** 22:01:09.5,40.°99N×22.°50E,h6km±1km,ML2.1/7,Error ellipse: s-maj=1.3km s-min=0.4km az=326.0*
*BEO **03** 22:01:11.9±0.7,41.°22N×22.°28E,h0km,ML1.8/6*

ISC 03 22:01:08.5±0.8,40.°98N±0.°02×22.°46E±0.°02,h15km±5km, n44,σ0§68/64,1C,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.05**	**244**	P		**Pg**		**22 01 11.4**	**0.0**
GRG				S		**Sg**		**22 01 13.1**	**-0.1**
GRG				AML		AML		22 01 13.6	
	comp=E,63933μm,0.1s								
GRG				AML		AML		22 01 13.6

THE	**Thessaloniki**	**0.52**	**132**	P	**Pb**	**22 01 19.0**	**-0.2**
THE				S	**Sg**	**22 01 25.4**	**-0.2**
THE				AML	AML	22 01 26.7	
	comp=N,1089μm,0.3s						
THE				AML	AML	22 01 26.8	
	comp=E,511μm,0.2s						
THE	**Thessaloniki**	**0.52**	**132**	P	**Pb**	**22 01 19.1**	**-0.1**
THE				S	**Sb**	**22 01 26.1**	**-0.4**
	comp=E,302nm,0.3s						
HORT	**Hortiatis**	**0.62**	**128**	P	**Pb**	**22 01 20.7**	**-0.3**
HORT				S	**Sb**	**22 01 29.5**	**0.0**
HORT				AML	AML	22 01 35.9	
	comp=N,396μm,0.4s						
HORT				AML	AML	22 01 36.0	
	comp=E,340μm,0.2s						
HORT	**Hortiatis**	**0.62**	**128**	P	**Pb**	**22 01 20.8**	**-0.2**
HORT				S	**Sb**	**22 01 29.5**	**0.0**
	comp=E,168nm,0.3s						
KTI	**Kastanea**	**0.64**	**204**	P	**Pn**	**22 01 22.1**	**-1.0**
SOH	**Sokhos**	**0.70**	**103**	P	**Pb**	**22 01 22.4**	**+0.1**
SOH	**Sokhos**	**0.70**	**103**	P	**Pb**	**22 01 22.4**	**+0.1**
SOH				S	**Sg**	**22 01 31.9**	**+0.6**
	comp=E,160nm,0.3s						
STIP	**Stip**	**0.74**	**344**	*i* Pg	**Pg**	**22 01 22.7**	**-0.3**
FNA	**Florina**	**0.84**	**257**	P	**Pn**	**22 01 25.4**	**-0.4**
FNA				S	**Sn**	**22 01 38.3**	**+0.3**
FNA				AML	AML	22 01 43.2	
	comp=N,571μm,0.4s						
FNA				AML	AML	22 01 43.4	
	comp=E,416μm,0.3s						
FNA	**Florina**	**0.84**	**257**	P	**Pn**	**22 01 25.4**	**-0.4**
FNA				S	**Sn**	**22 01 38.3**	**+0.3**
	comp=E,250nm,0.3s						
KZN	**Kozani**	**0.85**	**218**	P	**Pn**	**22 01 25.7**	**-0.3**
KZN	**Kozani**	**0.85**	**218**	P	**Pn**	**22 01 25.7**	**-0.3**
LIT	**Litokhoron**	**0.88**	**178**	P	**Pn**	**22 01 26.3**	**0.0**
LIT	**Litokhoron**	**0.88**	**178**	P	**Pn**	**22 01 26.2**	**0.0**
PLG	**Polygyros**	**0.96**	**128**	P	**Pn**	**22 01 27.3**	**-0.2**
PLG	**Polygyros**	**0.96**	**128**	P	**Pn**	**22 01 27.3**	**-0.2**
KKB	**Krupnik**	**1.00**	**28**	P	**Pb**	**22 01 27.2**	**-0.4**
NVR	**Nevrokopi**	**1.12**	**70**	P	**Pn**	**22 01 30.0**	**+0.3**
NVR				S	**Sb**	**22 01 44.5**	**+0.4**
NVR				AML	AML	22 01 49.5	
	comp=E,124μm,0.3s						
NVR				AML	AML	22 01 50.9	
	comp=N,85μm,0.5s						
NVR	**Nevrokopi**	**1.12**	**70**	P	**Pn**	**22 01 30.0**	**+0.3**
NVR				S	**Sb**	**22 01 45.2**	**+1.2**
	comp=N,45nm,0.3s						
MMB	**Musomiste**	**1.13**	**57**	P	**Pn**	**22 01 30.0**	**+0.2**
NEST	**Nestorio**	**1.21**	**243**	P	**Pg**	**22 01 32.7**	**+0.9**
NEST	**Nestorio**	**1.21**	**243**	P	**Pg**	**22 01 32.7**	**+0.9**
OHR	**Ohrid**	**1.26**	**277**	*i* Pg	**Pg**	**22 01 33.1**	**+0.3**
OHR				*i* Sg	**Sg**	**22 01 50.4**	**+1.1**
THL	**Klokotos Trika**	**1.45**	**194**	P	**Pg**	**22 01 35.9**	**-0.5**
THL	**Klokotos Trika**	**1.45**	**194**	P	**Pg**	**22 01 35.9**	**-0.5**
BOSS	**Bosilegrad**	**1.52**	**1**	*e*Pg	**Pn**	**22 01 35.0**	**-0.1**
BOSS				*e*Sg	**Sn**	**22 01 52.1**	**-2.5**
GJIK	**Gjilan**	**1.67**	**333**	*i* Pg	**Pb**	**22 01 39.4**	**+0.5**
GJIK				*i* Sg	**Sg**	**22 02 01.4**	**-0.8**
VTS	**Vitosha**	**1.74**	**19**	*e*Pg	**Pb**	**22 01 40.2**	**0.0**
VTS				*e*Sg	**Sn**	**22 02 00.8**	**+0.6**
VTS	**Vitosha**	**1.74**	**19**	P	**Pb**	**22 01 40.4**	**+0.2**
PRZK	**Prizren**	**1.77**	**315**	*i* Pn	**Pg**	**22 01 42.0**	**-0.5**
RZN	**Rozhen**	**1.84**	**67**	P	**Pg**	**22 01 43.6**	**-0.2**
BARS	**Barje**	**1.90**	**346**	*e*Pg	**Pn**	**22 01 40.6**	**+0.3**
BARS				*e*Sg	**Sn**	**22 02 03.7**	**-0.3**
SMRK	**Smrekonice**	**2.21**	**330**	*i* Pn	**Pb**	**22 01 46.9**	**-1.2**
ZAPS	**Zavoj**	**2.30**	**3**	*e*Pn	**Pb**	**22 01 48.6**	**-1.0**
KDZ	**Kurdzhali**	**2.33**	**72**	P	**Pb**	**22 01 51.1**	**+1.0**
SELS	**Selova**	**2.45**	**336**	*e*Pn	**Pn**	**22 01 48.6**	**+0.7**
IVAS	**Ivanjica**	**3.11**	**327**	*e*Pn	**Pn**	**22 01 58.9**	**+1.9**
DIVS	**Divibare**	**3.61**	**331**	*e*Pn	**Pn**	**22 02 05.3**	**+1.4**

IDC 03 22:14:37.5±6.5, 6°68S×147°87E, h114km±56km, mb3.5/2, mb1 3.5/4, mb1mx3.1/35, mbtmp3.7/4, Error ellipse: s-maj=89.9km s-min=55.3km az=123.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.79**	**195**	P	Pn	22 15 19.9	-1.0
	6.1nm,0.3s,baz=176,slow=3.2,SNR=6.1						
PMG				S	Sn	22 15 55.7	+1.3
	3.9nm,0.3s,baz=348,slow=17,SNR=1.9						
WRA	**Warramunga Arr**	**18.61**	**224**	P	P	22 18 45.1	-1.1
	0.3nm,0.3s,baz=51,slow=11,SNR=11						
ASAR	**Alice Springs**	**21.57**	**217**	P	P	22 19 18.4	+0.2
	1.6nm,0.6s,baz=52,slow=9.1,SNR=41						
FITZ	**Fitzroy Crossi**	**24.46**	**240**	P	P	22 19 45.6	-0.5
	2.4nm,0.7s,baz=57,slow=8.4,SNR=9.5						
TORD	**Torodi Ar. Bea**	**146.09**	**284**	PKPbc	PKPbc	22 34 05.7	+0.2
	0.4nm,0.7s,baz=68,slow=3.0,SNR=2.2						

*NEIC **03** 22:29:53.9±1.7, 2°.48N±0°.08×126°.95E±0°.08, h54km±8km, mb4.4/28, Error ellipse: s-maj=14.2km s-min=9.1km az=221.0*

*IDC **03** 22:29:54.4±2.2, 2°.37N×126°.64E, h46km±21km, mb4.1/23, mb1 4.2/24, mb1mx4.0/43, mbtmp4.3/24, ML4.1/1, MS3.0/2, Ms1 3.0/2, ms1mx2.8/46, Error ellipse: s-maj=24.6km s-min=8.6km az=72.0*

*KLM **03** 22:29:55, 2°.49N×127°.15E, h74km, mb4.6*

*DJA **03** 22:29:55.1±0.3, 3°.1S×12°.7E±°, h46km±4km, M4.5/24, mB5.2/7, mb4.7/24, ML4.4/12, Mw(mB)4.6/7*

ISC 03 22:29:54.5±0.4, 2°.52N±0°.05×126°.96E±0°.06, h53km, n98, σ1s33/98, mb4.4/41, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.79**	**167**		**Pn**	**22 30 22.4**	**-0.5**
TNTI	**Ternate**	**1.79**	**167**	P	**Pn**	**22 30 22.2**	**-0.8**
SGSI	**Sangihe**	**1.84**	**309**	P	**Pn**	**22 30 21.8**	**-1.9**
KMSI	**Cibinong**	**3.55**	**237**	P	**Pn**	**22 30 47.8**	**+0.7**
GTOI	**Gorontalo**	**4.37**	**245**	P	**Pn**	**22 30 58.1**	**-0.2**
DAV	**Davao City (W)**	**4.72**	**343**	LR	LR	22 32 48.0	
	comp=Z,131nm,19.9s,baz=130,slow=36						
MRSI	**Marisa**	**5.41**	**248**	P	**Pn**	**22 31 13.2**	**+0.5**
	0.7nm2μm197nm,0.5s						
SIJI	**Sorong**	**5.47**	**128**	P	**Pn**	**22 31 17.0**	**+3.5**
	5.3nm,0.3s,baz=337,slow=20,SNR=12						
SIJI				LR	LR	22 33 20.0	
	comp=Z,180nm,19.1s,baz=288,slow=36						
LUWI	**Luwuk**	**5.48**	**230**	Pn	**Pn**	**22 31 12.9**	**-0.7**
LUWI	**Luwuk**	**5.48**	**230**	P	**Pn**	**22 31 13.6**	**0.0**
	0.7nm2μm134nm,0.7s						
NLAI	**Namlea**	**5.72**	**179**	P	**Pn**	**22 31 17.4**	**+0.4**
	0.2nm3μm20nm,0.5s						
MSAI	**Masohi**	**6.15**	**161**	P	**Pn**	**22 31 22.6**	**-0.3**
	3.6nm13μm575nm,0.7s						
APSI	**Ampana**	**6.31**	**237**	P	**Pn**	**22 31 26.3**	**+1.3**
	0.3nm850nm87nm,1.0s						
TOLI2	**Tolitoli**	**6.33**	**257**	Pn	**Pn**	**22 31 23.7**	**-1.6**
FAKI	**Fak Fak**	**7.56**	**136**		Pn	22 31 37.2	-5.0
MYLDM	**Lahad Datu**	**8.84**	**288**	Pn	**Pn**	**22 32 00.3**	**+0.5**
SPSI	**Sidrap Palu**	**9.65**	**228**	P	**Pn**	**22 32 10.7**	**-0.1**
	18nm,0.9s						
BNSI	**Bone**	**9.70**	**225**	P	**Pn**	**22 32 11.7**	**+0.2**
	17nm,0.8s						
KKM	**Kota Kinabalu**	**11.27**	**288**	Pn	**Pn**	**22 32 32.6**	**-0.5**
EDFI	**Ende, Flores**	**12.37**	**205**	P	**Pn**	**22 32 49.6**	**+1.6**
	7.6nm,0.7s						
GENI	**Genyem**	**14.15**	**111**	P	**P**	**22 33 16.6**	**-1.7**
	78nm,0.8s						
PLAI	**Plampang**	**14.52**	**219**	P	**Pn**	**22 33 18.9**	**+1.8**
	40nm,0.7s						
JAY	**Jayapura**	**14.63**	**110**	P	**P**	**22 33 23.8**	**+0.1**
	12nm,0.9s						
SBUM	**Sibu**	**14.72**	**270**		**Pn**	**22 33 21.6**	**+1.9**
SBUM	**Sibu**	**14.72**	**270**	P	**P**	**22 33 26.0**	**+1.3**
TWSI	**Taliwang, Sumb**	**15.03**	**222**	P	**P**	**22 33 27.2**	**-0.9**
	38nm,0.9s						
SRBI	**Singaraja**	**15.75**	**228**	P	**P**	**22 33 35.0**	**-1.1**
	26nm,1.1s						
KSM	**Kuching**	**16.67**	**267**	P	**P**	**22 33 51.0**	**+4.7**
FITZ	**Fitzroy Crossi**	**20.53**	**184**	P	**P**	**22 34 27.4**	**-1.2**
	6.9nm,0.5s,baz=25,slow=7.7,SNR=15						
FITZ	**Fitzroy Crossi**	**20.53**	**184**	P	**P**	**22 34 27.8**	**-0.9**
FITZ				IAmb	IAmb	22 34 33.8	
	comp=Z,10nm,0.7s						
TPUB	**Ta-pu**	**21.55**	**344**	P	**P**	**22 34 37.5**	**-2.1**
TPUB				IAmb	IAmb	22 34 43.7	
	comp=Z,24nm,1.1s						
SSLB	**Suanglung**	**21.93**	**345**	P	**P**	**22 34 42.7**	**-0.9**
SSLB				IAmb	IAmb	22 34 51.8	
	comp=Z,9.8nm,0.7s						
COEN	**Coen**	**22.95**	**136**	P	**P**	**22 34 54.1**	**-0.5**
WB0	**Warramunga Arr**	**23.32**	**162**	P	**P**	**22 34 56.8**	**-1.4**
KLSI		**23.33**	**252**	P	**P**	**22 34 58.9**	**+0.5**
	comp=Z,7.7nm,0.9s						
WRA	**Warramunga Arr**	**23.47**	**162**	P	**P**	**22 34 58.2**	**-1.4**
	comp=Z,10.0nm,0.5s,baz=342,slow=10,SNR=31						
WRA				S	**S**	**22 39 10.3**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=337,slow=24,SNR=4.4						
WB2	**Warramunga Arr**	**23.47**	**162**	P	**P**	**22 34 57.8**	**-1.9**
WR0	**Warramunga Arr**	**23.55**	**162**	P	**P**	**22 34 59.0**	**-1.3**
WR0				IAmb	IAmb	22 35 02.6	
	comp=Z,12nm,0.8s						
PSA00	**Pilbara Seismi**	**24.93**	**196**	P	**P**	**22 35 12.5**	**-0.4**
PSA00				IAmb	IAmb	22 35 18.8	
	comp=Z,9.8nm,0.8s						
AS31	**Alice Springs**	**26.89**	**166**	P	**P**	**22 35 29.7**	**-1.0**
ASAR	**Alice Springs**	**26.89**	**166**	P	**P**	**22 35 29.8**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=333,slow=6.0,SNR=20						
ASAR				PcP	**PcP**	**22 38 53.0**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=341,slow=3.1,SNR=4.5						
ASAR				S	**S**	**22 40 05.3**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=353,slow=14,SNR=2.0						
CHAI	**Chaiyaphum**	**27.95**	**300**	P	**P**	**22 35 40.0**	**-0.3**
CTA	**Charters Tower**	**29.39**	**141**	P	**P**	**22 35 53.8**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=296,slow=12,SNR=1.5						
CTAO	**Charters Tower**	**29.39**	**141**	P	**P**	**22 35 53.4**	**+0.5**
CTAO				IAmb	IAmb	22 36 02.3	
	comp=Z,16nm,1.4s						
UTHA	**Uthaitani**	**30.04**	**297**	P	**P**	**22 35 58.9**	**+0.1**
NJ2	**Nanjing**	**30.35**	**346**	*e*P	**P**	**22 36 02.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SUKH	**Sukhothai**	**30.67**	**301**	P	**P**	**22 36 04.0**	**-0.3**
CM09	**Chiang Mai Arr**	**31.64**	**302**	P	**P**	**22 36 14.0**	**+1.1**
	comp=Z,0.0nmcomp=Z,6.9nm,0.9s						
CM02	**Chiang Mai Arr**	**31.67**	**302**	P	**P**	**22 36 14.3**	**+1.1**
	comp=Z,0.0nmcomp=Z,6.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.69**	**302**	P	**P**	**22 36 12.5**	**-0.8**
	comp=Z,2.9nm,0.7s,baz=119,slow=7.1,SNR=16						
CMAR	**Chiang Mai Arr**	**31.69**	**302**	P	**P**	**22 36 12.2**	**-1.1**
CM13	**Chiang Mai Arr**	**31.70**	**302**	P	**P**	**22 36 14.5**	**+1.0**
	comp=Z,0.0nmcomp=Z,5.2nm,0.9s						
CMMT	**Chiang Mai**	**31.84**	**303**	P	**P**	**22 36 13.0**	**-1.7**
	comp=Z,0.0nmcomp=Z,5.5nm,0.7s						
CHTO	**Chiang Mai**	**31.85**	**303**	P	**P**	**22 36 13.6**	**-1.1**
CHTO				IAmb	IAmb	22 36 15.1	
	comp=Z,7.5nm,0.7s						
KMI	**Kunming**	**32.40**	**316**	||P	**P**	**22 36 20.7**	**+1.0**
KMI				pP	pP	22 36 32.0	-0.7
KMI				sP	sP	22 36 37.6	-1.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KSRS	**Korea Array**	**34.78**	**1**	P	**P**	**22 36 42.6**	**+2.6**
	comp=Z,1.4nm,0.5s,baz=177,slow=9.3,SNR=7.0						
MJAR	**Matsushiro Arr**	**35.41**	**16**	P	**P**	**22 36 48.2**	**+2.6**
	comp=Z,0.6nm,0.3s,baz=252,slow=7.8,SNR=4.2						
BBOO	**Buckleboo**	**36.18**	**167**	P	**P**	**22 36 51.0**	**-1.1**
EIDS	**Eidsvold**	**36.27**	**141**	P	**P**	**22 36 51.7**	**-1.3**
NWAO	**Narrogin (SRO)**	**36.44**	**194**	P	**P**	**22 36 53.7**	**-0.5**
	comp=Z,2.2nm,0.4s,baz=23,slow=8.7,SNR=6.3						
NWAO	**Narrogin (SRO)**	**36.44**	**194**	IAmb	IAmb	22 37 01.8	
	comp=Z,7.6nm,1.1s						
STKA	**Stephens Creek**	**36.93**	**159**	P	**P**	**22 36 58.3**	**-0.2**
	comp=Z,13nm,0.7s,baz=334,slow=8.9,SNR=24						
STKA	**Stephens Creek**	**36.93**	**159**	P	**P**	**22 36 57.5**	**-1.0**
LZH	**Lanzhou**	**39.66**	**330**	*e*P	**P**	**22 37 17.5**	**-4.1**
LZH				pP	pP	22 37 20.3	-15
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC	**Hu-ho-hao-te**	**40.61**	**342**	*e*P	**P**	**22 37 29.5**	**+0.1**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.9s						
SHL	**Shillong**	**40.78**	**307**	P	**P**	**22 37 29.9**	**-1.2**
SHL				IAmb	IAmb	22 37 33.7	
	comp=Z,4.6nm,0.5s						
USRK	**Ussuriysk Ar.**	**41.74**	**5**	P	**P**	**22 37 40.8**	**+2.4**
	comp=Z,4.0nm,0.9s,baz=184,slow=6.8,SNR=8.3						
USRK	**Ussuriysk Ar.**	**41.74**	**5**	P	**P**	**22 37 37.6**	**-0.8**
LSA	**Lhasa**	**43.41**	**312**	P	**P**	**22 37 50.8**	**-2.0**
SONM	**Songino Array**	**48.51**	**342**	P	**P**	**22 38 33.3**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=156,slow=10.0,SNR=6.3						
WMQ	**Urumqi**	**53.84**	**325**	*e*P	**P**	**22 39 13.2**	**+1.0**
WMQ				pP	pP	22 39 23.1	-2.9
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,38nm,4.5s						
WMQ				LR	LR		
	comp=N,760nm,28.9s						
WMQ				LR	LR		
	comp=E,2μm,29.0s						
WMQ				LR	LR		
	comp=Z,550nm,25.3s						
MK31	**Makanchi Array**	**58.67**	**326**	P	**P**	**22 39 46.2**	**-0.3**
MKAR	**Makanchi Array**	**58.67**	**326**	P	**P**	**22 39 46.2**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=120,slow=7.7,SNR=33						
MKAR	**Makanchi Array**	**58.67**	**326**	P	**P**	**22 39 46.0**	**-0.6**
MAKZ	**Makanchi**	**58.86**	**325**	P	**P**	**22 39 47.2**	**-0.7**
MAKZ				IAmb	IAmb	22 39 51.9	
	comp=Z,2.4nm,0.8s						
BSWZ	**Blackbird Sta**	**61.19**	**141**	P	**P**	**22 40 01.8**	**-2.1**
AAK	**Ala-Archa**	**61.40**	**318**	P	**P**	**22 40 04.6**	**-0.9**
ZAA0	**Zalesovo Array**	**61.76**	**333**	P	**P**	**22 40 07.6**	**+0.1**
ZALV	**Zalesovo Beam**	**61.76**	**333**	P	**P**	**22 40 06.8**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=126,slow=7.1,SNR=7.2						
MSWZ	**Moikau Station**	**61.89**	**140**	P	**P**	**22 40 06.8**	**-1.9**
KBL	**Kabul**	**62.44**	**308**	P	**P**	**22 40 12.0**	**-0.7**
KBL				IAmb	IAmb	22 40 13.5	
	comp=Z,3.2nm,0.7s						
KURBB	**Kurchatov Arra**	**62.87**	**328**	P	**P**	**22 40 14.3**	**-0.7**
	comp=Z,5.8nm,0.7s,baz=117,slow=6.6,SNR=35						
KURK	**Kurchatov**	**62.88**	**328**	P	**P**	**22 40 14.3**	**-0.8**
TIXI	**Tiksi**	**69.04**	**1**	P	**P**	**22 40 53.7**	**-0.5**
TIXI				IAmb	IAmb	22 40 57.0	
	comp=Z,5.3nm,1.2s						
NRIK	**Noril'sk**	**71.65**	**346**	P	**P**	**22 41 11.7**	**+1.4**
	comp=Z,3.3nm,0.7s,baz=118,slow=5.8,SNR=4.0						
NRIK	**Noril'sk**	**71.65**	**346**	P	**P**	**22 41 10.1**	**-0.2**
OPO	**Ambohidratompo**	**81.11**	**251**	P	**P**	**22 42 04.5**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=63,slow=2.3,SNR=1.9						
VNDA	**Vanda**	**82.21**	**173**	P	**P**	**22 42 09.8**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=312,slow=5.6,SNR=16						
VNDA	**Vanda**	**82.21**	**173**	P	**P**	**22 42 09.6**	**+0.2**
VNDA				IAmb	IAmb	22 42 11.1	
	comp=Z,3.9nm,0.8s						
MAW	**Mawson**	**82.71**	**200**	P	**P**	**22 42 12.9**	**+0.7**
	comp=Z,4.2nm,0.7s,baz=18,slow=9.6,SNR=2.5						
GEVA	**Gevas**	**83.66**	**308**	P	**P**	**22 42 17.4**	**-0.6**
KBZ	**Khabaz**	**83.97**	**314**	P	**P**	**22 42 20.1**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=172,slow=12,SNR=2.1						
ILAR	**Eielson Array**	**86.09**	**25**	P	**P**	**22 42 31.6**	**+2.1**
	comp=Z,0.4nm,0.8s,baz=263,slow=4.7,SNR=2.9						
BRTR	**Keskin Array B**	**90.96**	**310**	P	**P**	**22 42 53.1**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=143,slow=4.3,SNR=5.6						
ARCES	**ARCESS Array B**	**91.65**	**340**	P	**P**	**22 42 55.9**	**+0.2**
	comp=Z,4.6nm,1.1s,baz=86,slow=5.0,SNR=5.8						
FINES	**FINESS Array B**	**93.00**	**332**	P	**P**	**22 43 03.2**	**+1.1**
	comp=Z,1.1nm,0.8s,baz=67,slow=3.6,SNR=5.8						
FINES				LR	LR	23 29 41.3	
	comp=Z,369nm,20.8s,baz=240,slow=39						
FINES	**FINESS Array B**	**93.00**	**332**	P	**P**	**22 43 02.0**	**0.0**
TORD	**Torodi Ar. Bea**	**123.50**	**287**	PKP	**PKPdf**	**22 48 47.3**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=55,slow=1.8,SNR=1.7						

*IDC **03** 22:30:32.1±2.4, 7°.00S×130°.41E, h94km±29km, mb3.7/1, mb1 3.8/6, mb1mx3.4/40, mbtmp4.1/6, Error ellipse: s-maj=42.1km s-min=22.0km az=93.0*

ISC 03 22:30:29.9±0.9, 7°.02S±0°.06×130°.5E±0°.1, h78km, n6, σ2s83/11, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.16**	**7**	P	**Pn**	**22 31 59.9**	**+1.5**
	3.2nm,0.3s,baz=191,slow=16,SNR=26						
SIJI				S	**Sn**	**22 33 03.0**	**-4.5**
	2.8nm,0.3s,baz=237,slow=22,SNR=2.6						
BATI	**Baumata**	**7.46**	**244**	P	**Pn**	**22 32 18.8**	**+2.7**
	3.4nm,0.3s,baz=57,slow=16,SNR=2.1						
BATI				S	**Sn**	**22 33 36.5**	**-2.7**
	2.4nm,0.3s,baz=179,slow=20,SNR=1.6						
FITZ	**Fitzroy Crossi**	**11.98**	**203**	P	**Pn**	**22 33 19.3**	**+1.5**
	1.1nm,0.3s,baz=40,slow=13,SNR=28						
FITZ				S	**Sn**	**22 35 25.8**	**-3.9**
	0.5nm,0.3s,baz=159,slow=16,SNR=1.8						
WRA	**Warramunga Arr**	**13.38**	**164**	P	**Pn**	**22 33 37.8**	**+1.2**
	0.7nm,0.3s,baz=341,slow=13,SNR=21						
WRA				S	**Sn**	**22 36 01.5**	**-2.1**
	1.1nm,0.3s,baz=333,slow=23,SNR=2.6						
ASAR	**Alice Springs**	**16.87**	**169**	P	**P**	**22 34 23.2**	**+1.1**
	0.5nm,0.3s,baz=339,slow=9.2,SNR=30						
ASAR				S	**Sn**	**22 37 26.6**	**-1.7**
	0.3nm,0.3s,baz=356,slow=28,SNR=3.4						
MKAR	**Makanchi Array**	**68.51**	**327**	P	**P**	**22 41 24.2**	**+0.1**
	0.8nm,0.4s,baz=131,slow=6.6,SNR=5.6						

IDC 03 22:35:14.7±2.8, 49°.78S×111°.31E, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.7/38, mbtmp4.0/2, MS4.1/2, Ms1 4.1/2, ms1mx3.4/34, Error ellipse: s-maj=176.4km s-min=60.9km az=129.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.01**	**9**	T	T	22 53 08.8	
	baz=191,slow=74,SNR=11						
H01W1	**Cape Leeuwin H**	**15.02**	**9**	T	T	22 53 10.0	
	baz=191,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**15.03**	**9**	T	T	22 53 10.0	
	baz=191,slow=74,SNR=15						
ASAR	**Alice Springs**	**31.49**	**42**	P	P	22 41 38.4	+0.2
	1.0nm,0.7s,baz=208,slow=8.4,SNR=7.0						
WRA	**Warramunga Arr**	**34.97**	**40**	P	P	22 42 08.0	-0.5
	2.5nm,0.8s,baz=207,slow=8.9,SNR=11						
RPZ	**Rata Peaks**	**40.43**	**105**	LR	LR	22 54 31.1	
	comp=Z,198nm,20.7s,baz=286,slow=29						
PMG	**Port Moresby**	**50.05**	**49**	LR	LR	23 04 40.5	
	comp=Z,286nm,20.5s,baz=90,slow=35						
YKA	**Yellowknife A**	**152.10**	**45**	PKPbc	PKPbc	22 55 09.9	-0.7
	0.1nm,0.3s,baz=277,slow=1.8,SNR=6.9						
YKA				PKPab	PKPab	22 55 20.8	+0.5
	0.3nm,0.7s,baz=275,slow=3.6,SNR=5.2						

*IDC **03** 22:45:37.0±3.2, 6°.21S×147°.63E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.5/42, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=63.6km s-min=41.0km az=86.0*

ISC 03 22:45:37.2±2.6, 5°.8S±0°.2×147°.8E±0°.4, h35km, n6, σ1s82/7, mb3.6/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.69**	**190**	Pn	**Pn**	**22 46 30.7**	**-1.0**
	5.5nm,0.3s,baz=40,slow=7.9,SNR=6.1						
PMG				Sn	**Sn**	**22 47 16.2**	**+2.2**
	6.9nm,0.3s,baz=138,slow=18,SNR=2.3						
WRA	**Warramunga Arr**	**19.24**	**222**	P	**Pn**	**22 49 58.8**	**-1.0**
	0.3nm,0.3s,baz=46,slow=1,SNR=12						
ASAR	**Alice Springs**	**22.27**	**215**	P	**P**	**22 50 30.4**	**-1.2**
	1.1nm,0.5s,baz=50,slow=8.8,SNR=25						
FITZ	**Fitzroy Crossi**	**24.87**	**239**	P	**P**	**22 50 58.1**	**+1.3**
	2.2nm,0.6s,baz=48,slow=8.9,SNR=9.2						
STKA	**Stephens Creek**	**26.64**	**192**	P	**P**	**22 51 11.8**	**-0.9**
	0.7nm,0.4s,baz=15,slow=14,SNR=3.1						
TORD	**Torodi Ar. Bea**	**145.79**	**285**	PKPbc	**PKiKP**	**23 05 18.9**	**+1.6**
	0.4nm,0.6s,baz=84,slow=4.8,SNR=2.4						

*MDD **03** 22:48:52.4±1.5, 37°.21N×13°.16W, h0km, mb3.8/15, Error ellipse: s-maj=13.7km s-min=11.0km az=49.0, PRXIMO*

*IGIL **03** 22:48:53.4, 37°.27N×13°.17W, h5km, ML2.5*

*INMG **03** 22:48:54.1±1.2, 37°.00N×13°.51W, h10km, ML2.6, Error ellipse: s-maj=5.3km s-min=4.3km az=97.0*

*CNRM **03** 22:48:58.2, 36°.59N×12°.67W, h30km, Hypocentre not reviewed by the ISC*

**ISC 03 22:48:49.8±3.3, 37°.24N±0°.09×13°.3W±0°.2, h

PBEJ A A 22 50 50.1
comp=N,4.1nm,0.2s
PMTG Montargil 4.37 64 P **Pn 22 49 57.9 +1.8**
PMTG S **Sn 22 50 46.5 -0.6**
comp=N,3.9nm,0.2s
PMTG Montargil 4.37 64 *e*Pn **Pn 22 49 57.9 +1.8**
PMTG *e*Sn **Sn 22 50 46.5 -0.6**
PMTG A A 22 50 51.1
comp=N,3.9nm,0.2s
PVAQ Vaqueiros 4.42 86 P **Pn 22 49 58.7 +1.8**
PVAQ S **Sn 22 50 46.2 -2.2**
comp=N,9.6nm,0.2s
PVAQ Vaqueiros 4.42 86 *e*Pn **Pn 22 49 58.7 +1.8**
PVAQ *e*Sn **Sn 22 50 46.2 -2.2**
PVAQ A A 22 50 51.0
comp=N,9.6nm,0.2s
PVAQ Vaqueiros 4.42 86 P 22 49 57.7
PVAQ S 22 50 46.0
EGRO El Granado 4.61 85 P **Pn 22 50 01.2 +1.7**
comp=N,0.3nm,0.1s,SNR=8.9
EGRO S **Sn 22 50 50.3 -2.7**
comp=N,1.9nm,0.1s,SNR=6.7
PCAS Casmilo, Conde 4.66 52 P **Pn 22 50 02.3 +2.0**
PCAS S **Sn 22 50 54.6 +0.1**
comp=N,2.6nm,0.3s
PCAS Casmilo, Conde 4.66 52 *e*Pn **Pn 22 50 02.3 +2.0**
PCAS *e*Sn **Sn 22 50 54.6 +0.1**
PCAS A A 22 50 57.6
comp=N,2.6nm,0.3s
PESTR Estremoz 4.76 68 *e*Pn **Pn 22 50 04.0 +2.4**
PESTR *e*Sn **Sn 22 50 55.7 -1.1**
PESTR A A 22 51 00.4
comp=N,3.4nm,0.2s
PESTR Estremoz 4.76 68 P 22 50 04.8
PBAR Barrancos 5.02 77 P **Pn 22 50 09.0 +3.9**
PBAR S **Sn 22 51 01.2 -1.9**
comp=N,2.9nm,0.6s
PBAR Barrancos 5.02 77 *e*Pn **Pn 22 50 09.0 +3.9**
PBAR *e*Sn **Sn 22 51 01.2 -1.9**
PBAR A A 22 51 05.3
comp=N,2.9nm,0.6s
PMRV Marv??o 5.10 63 P **Pn 22 50 08.3 +2.0**
PMRV S **Sn 22 51 03.2 -2.1**
comp=N,4.5nm,0.2s
PMRV Marv??o 5.10 63 *e*Pn **Pn 22 50 08.3 +2.0**
PMRV *e*Sn **Sn 22 51 03.2 -2.1**
PMRV A A 22 51 10.0
comp=N,4.5nm,0.2s
PCBR Castelo Branco 5.22 58 P **Pn 22 50 09.9 +2.0**
PCBR S **Sn 22 51 07.9 -0.2**
comp=N,1.2nm,0.3s
PCBR Castelo Branco 5.22 58 *e*Pn **Pn 22 50 09.9 +2.0**
PCBR *e*Sn **Sn 22 51 07.9 -0.2**
PCBR A A 22 51 10.0
comp=N,2.5nm,0.3s
PVIS Viseu 5.43 49 P **Pn 22 50 12.6 +1.8**
PVIS S **Sn 22 51 13.1 -0.3**
comp=N,2.2nm,0.2s
PVIS Viseu 5.43 49 *e*Pn **Pn 22 50 12.6 +1.8**
PVIS *e*Sn **Sn 22 51 13.1 -0.3**
PVIS A A 22 51 16.9
comp=N,4.5nm,0.2s
MTE Manteigas 5.46 53 P **Pn 22 50 14.2 +2.9**
MTE S **Sn 22 51 13.6 -0.6**
comp=N,2.6nm,0.4s
MTE Manteigas 5.46 53 *e*Pn **Pn 22 50 14.2 +2.9**
MTE *e*Sn **Sn 22 51 13.6 -0.6**
MTE A A 22 51 17.0
comp=N,5.2nm,0.4s
PVRL Vila Real 5.89 45 S **Sn 22 51 23.9 -0.9**
comp=N,1.2nm,0.2s
PVRL Vila Real 5.89 45 *e*Sn **Sn 22 51 23.9 -0.9**
PVRL A A 22 51 28.0
comp=N,2.5nm,0.2s
POLO Lamas de Olo 5.91 44 P **Pn 22 50 19.4 +1.9**
POLO S **Sn 22 51 23.6 -1.8**
comp=N,1.4nm,0.7s
POLO Lamas de Olo 5.91 44 *e*Pn **Pn 22 50 19.4 +1.9**
POLO *e*Sn **Sn 22 51 23.6 -1.8**
POLO A A 22 51 24.5
comp=N,1.4nm,0.7s
ESPR Espera 5.93 91 P **Pn 22 50 19.6 +2.0**
comp=N,1.2nm,0.1s,SNR=4.8
ESPR S **Sn 22 51 24.0 -1.7**
comp=N,7.8nm,0.2s,SNR=4.7
PCAB Cabril 6.02 41 S **Sn 22 51 27.1 -0.9**
PCAB Cabril 6.02 41 *e*Sn **Sn 22 51 27.1 -0.9**
EZAM Zamans 6.03 34 P **Pn 22 50 20.1 +1.0**
comp=N,1.4nm,0.1s,SNR=7.9
EZAM S **Sn 22 51 24.6 -3.5**
comp=N,3.3nm,0.1s,SNR=7.9
PGAV Gavieira, Arco 6.09 38 P **Pn 22 50 22.1 +2.2**
PGAV S **Sn 22 51 27.0 -2.7**
comp=N,4.3nm,0.7s
PGAV Gavieira, Arco 6.09 38 *e*Pn **Pn 22 50 22.1 +2.2**
PGAV *e*Sn **Sn 22 51 27.0 -2.7**
PGAV A A 22 51 28.5
comp=N,4.3nm,0.7s
ELOB Lobios 6.12 39 P **Pn 22 50 22.1 +1.8**
comp=N,0.6nm,0.1s,SNR=8.5
ELOB S **Sn 22 51 27.8 -2.6**
comp=N,1.6nm,0.1s,SNR=6.2
MVO Moncorvo 6.22 49 P **Pn 22 50 23.6 +1.9**
comp=N,0.7nm,0.1s,SNR=7.9
MVO S **Sn 22 51 31.2 -1.7**
comp=N,2.1nm,0.1s,SNR=7.9
MVO Moncorvo 6.22 49 *e*Pn **Pn 22 50 23.8 +2.0**
MVO *e*Sn **Sn 22 51 31.4 -1.6**
MVO A A 22 51 35.2
comp=N,5.3nm,0.6s
ECAB El Cabril 6.27 80 P **Pn 22 50 24.8 +2.4**
comp=N,0.3nm,0.2s,SNR=6.8
ECAB S **Sn 22 51 29.9 -4.3**
comp=N,2.0nm,0.2s,SNR=9.0
EPLA Plasencia 6.28 61 P **Pn 22 50 25.4 +2.9**
comp=N,0.1nm,0.0s,SNR=7.9
EPLA S **Sn 22 51 32.7 -1.7**
comp=N,1.9nm,0.1s,SNR=6.4
HORN Hornachuelos 6.38 82 P 22 50 23.4
HORN S 22 51 32.5
EMAZ Mazaricos 6.58 29 P **Pn 22 50 28.1 +1.5**
comp=N,2.0nm,0.1s,SNR=7.9
EMAZ S **Sn 22 51 36.6 -5.0**
comp=N,3.4nm,0.1s,SNR=7.9
ZHG ZHG 6.60 123 P 22 50 26.9
PBRG Braganca 6.79 46 P **Pn 22 50 31.6 +2.1**
PBRG S **Sn 22 51 45.8 -1.1**
PBRG Braganca 6.79 46 *e*Pn **Pn 22 50 31.6 +2.1**
PBRG *e*Sn **Sn 22 51 45.8 -1.1**
EAGO Agolada(Pontev 6.82 34 P **Pn 22 50 31.5 +1.6**
comp=N,0.8nm,0.1s,SNR=7.9
EAGO S **Sn 22 51 42.5 -5.2**
comp=N,1.7nm,0.1s,SNR=7.9
EADA Adamuz 6.94 80 P **Pn 22 50 34.7 +3.1**
comp=N,0.3nm,0.1s,SNR=7.9
EADA S **Sn 22 51 47.7 -2.9**
comp=N,1.5nm,0.1s,SNR=10
EGOR Sierra Gorda, 7.30 88 P **Pn 22 50 38.9 +2.3**
comp=N,0.1nm,0.1s,SNR=7.9
EGOR S **Sn 22 51 57.9 -1.8**
comp=N,2.3nm,0.3s,SNR=7.9
PAB San Pablo 7.36 69 P **Pn 22 50 39.4 +1.9**
comp=N,0.1nm,0.1s,SNR=7.9
PAB S **Sn 22 51 58.2 -2.9**
comp=N,0.4nm,0.2s,SNR=7.9
OUK Oukaimeden 7.49 142 P 22 50 35.8
OUK S 22 51 50.3
EPON Pontenova 7.66 36 P **Pn 22 50 42.6 +1.2**
comp=N,1.0nm,0.1s,SNR=7.9
EPON S **Sn 22 52 04.4 -3.9**
comp=N,0.2nm,0.1s,SNR=7.9
ESDC Sonseca Array 7.69 69 P **Pn 22 50 43.6 +1.8**
comp=N,0.4nm,0.3s,baz=256,slow=13,SNR=5.2
ESDC S **Sn 22 52 06.3 -2.6**
comp=N,0.8nm,0.2s,baz=254,slow=23,SNR=5.0
TTIG Tnine Tigouga, 7.78 148 P 22 50 34.9
GUD Guadarrama 7.86 62 S **Sn 22 52 10.9 -2.6**
comp=N,0.5nm,0.2s,SNR=7.9
EQES Quesada 8.11 83 S **Sn 22 52 17.0 -2.5**
comp=N,1.8nm,0.4s,SNR=7.9
MD31 MD31 8.22 120 P 22 50 46.4
MD31 S 22 52 10.2
MDT Midelt 8.35 119 P 22 50 50.0
MDT S 22 52 12.0
EARI Arriondas 8.63 43 P **Pn 22 50 57.6 +3.0**
comp=N,0.8nm,0.2s,SNR=7.9
EARI S **Sn 22 52 28.6 -3.5**
comp=N,1.3nm,0.9s,SNR=7.9
ETOR Torete 9.42 64 P **Pn 22 51 07.8 +2.2**
comp=N,0.7nm,0.1s,SNR=7.9
ETOR S **Sn 22 52 48.3 -3.3**
comp=N,2.7nm,0.3s,SNR=7.9

IDC 03 22:52:56.6±4.0, 19°87N×121°65E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/52, mbtmp3.5/3, Error ellipse: s-maj=323.8km s-min=28.4km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.47**	**162**	P	P	23 00 44.9	0.0
	1.1nm,0.7s,baz=343,slow=8.9,SNR=8.4						
MKAR	**Makanchi Array**	**41.80**	**319**	P	P	23 00 47.3	-0.1
	0.2nm,0.6s,baz=106,slow=7.7,SNR=4.1						
ASAR	**Alice Springs**	**44.89**	**164**	P	P	23 01 12.3	-0.3
	0.4nm,0.6s,baz=338,slow=6.4,SNR=4.4						

*NEIC **03** 22:54:24.9±1.6, 19°19S×177°5W±0°1, h268km±14km, mb4.1/17, Error ellipse: s-maj=18.5km s-min=9.3km az=125.0*
*IDC **03** 22:54:30.6±4.7, 18°96S×178°02W, h288km±33km, mb3.4/8, mb1 3.7/9, mb1mx3.4/43, mbtmp4.0/9, Error ellipse: s-maj=99.9km s-min=17.0km az=152.0*
ISC 03 22:54:25.0±0.7, 19°3S±0°1×177°7W±0°1, h250km, n43, σ1°33/43, mb3.9/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.36**	**290**	P	**Pn**	**22 55 34.8**	**+1.6**
	1.3nm,0.3s,baz=124,slow=9.4,SNR=5.7						
AFI	**Afiamalu**	**7.78**	**47**	Pn	**Pn**	**22 56 13.7**	**-2.0**
URZ	**Urewera**	**19.43**	**192**	P	**P**	**22 58 34.5**	**+1.6**
URZ				IAmb	IAmb	22 58 44.0	
	comp=Z,11nm,1.1s						
BKZ	**Black Stump Fm**	**20.43**	**193**	P	**P**	**22 58 43.7**	**+0.1**
BKZ				IAmb	IAmb	22 58 46.6	
	comp=Z,11nm,1.2s						
MSWZ	**Moikau Station**	**22.86**	**194**	P	**P**	**22 59 09.5**	**+2.7**
QRZ	**Quartz Range**	**23.04**	**199**	P	**P**	**22 59 09.4**	**+1.0**
NNZ	**Nelson**	**23.15**	**197**	P	**P**	**22 59 06.8**	**-2.5**
BSWZ	**Blackbirch Sta**	**23.48**	**196**	P	**P**	**22 59 11.4**	**-0.9**
THZ	**Tophouse**	**23.79**	**198**	P	**P**	**22 59 14.9**	**-0.3**
THZ				IAmb	IAmb	22 59 26.6	
	comp=Z,14nm,1.0s						
KHZ	**Kahutara**	**24.22**	**196**	P	**P**	**22 59 18.9**	**-0.1**
KHZ				IAmb	IAmb	22 59 30.2	
	comp=Z,12nm,1.0s						
LTZ	**Lake Taylor**	**24.91**	**198**	P	**P**	**22 59 26.6**	**+1.3**
CTA	**Charters Tower**	**33.95**	**262**	P	**P**	**23 00 46.5**	**+1.3**
	comp=Z,2.6nm,0.4s,baz=86,slow=9.3,SNR=6.5						
CTAO	**Charters Tower**	**33.95**	**262**	P	**P**	**23 00 46.3**	**+1.1**
CTAO				IAmb	IAmb	23 00 47.1	
	comp=Z,4.8nm,1.0s						
COEN	**Coen**	**37.85**	**272**	P	**P**	**23 01 18.7**	**+0.5**
BBOO	**Buckleboo**	**43.38**	**242**	P	**P**	**23 02 02.4**	**-0.7**
BBOO				IAmb	IAmb	23 02 11.1	
	comp=Z,6.2nm,1.1s						
WR0	**Warramunga Arr**	**44.91**	**261**	P	**P**	**23 02 15.1**	**-0.3**
WB0	**Warramunga Arr**	**45.07**	**261**	P	**P**	**23 02 16.1**	**-0.6**
WB0				IAmb	IAmb	23 02 17.0	
	comp=Z,4.5nm,0.6s						
WB2	**Warramunga Arr**	**45.09**	**261**	P	**P**	**23 02 16.3**	**-0.5**
WB2				IAmb	IAmb	23 02 16.8	
	comp=Z,3.6nm,0.5s						
WRA	**Warramunga Arr**	**45.10**	**261**	P	**P**	**23 02 16.5**	**-0.4**
	comp=Z,3.0nm,0.5s,baz=96,slow=7.1,SNR=39						
WRA	**Warramunga Arr**	**45.10**	**261**	P	**P**	**23 02 15.7**	**-1.2**
AS31	**Alice Springs**	**45.12**	**256**	P	**P**	**23 02 17.2**	**+0.1**
ASAR	**Alice Springs**	**45.12**	**256**	P	**P**	**23 02 16.8**	**-0.3**
	comp=Z,7.2nm,0.6s,baz=92,slow=8.4,SNR=53						
ASAR	**Alice Springs**	**45.12**	**256**	P	**P**	**23 02 16.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**53.51**	**261**	P	**P**	**23 03 19.9**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=102,slow=6.5,SNR=7.9						
FITZ	**Fitzroy Crossi**	**53.51**	**261**	P	**P**	**23 03 20.3**	**-0.1**
MORW	**Morawa**	**60.59**	**247**	P	**P**	**23 04 09.2**	**-0.5**
MORW				IAmb	IAmb	23 04 09.6	
	comp=Z,8.2nm,1.1s						
GIRL	**Giralia**	**63.19**	**254**	P	**P**	**23 04 23.4**	**-3.7**
NVAR	**Mina Array Bea**	**79.94**	**43**	P	**P**	**23 06 09.0**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=231,slow=9.4,SNR=3.7						
TXAR	**Lajitas Array**	**86.14**	**57**	P	**P**	**23 06 40.2**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=215,slow=7.0,SNR=7.3						
ILAR	**Eielson Array**	**87.08**	**13**	P	**P**	**23 06 42.4**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=200,slow=2.4,SNR=2.6						
PDAR	**Pinedale Array**	**87.87**	**43**	P	**P**	**23 06 48.8**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=250,slow=2.7,SNR=2.8						
ARCES	**ARCESS Array B**	**127.81**	**350**	PKP	**PKPdf**	**23 12 59.2**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=5.2,slow=3.0,SNR=8.5						
BRTR	**Keskin Array B**	**146.26**	**314**	PKPbc	**PKPbc**	**23 13 36.1**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=158,slow=4.7,SNR=4.9						
GERES	**GERESS Array B**	**149.13**	**345**	PKPbc	**PKPbc**	**23 13 42.4**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=46,slow=3.9,SNR=8.8						
CONA	**Conrad Observa**	**149.40**	**342**	*i* P	**PKPbc**	**23 13 44.1**	**-0.4**
	comp=Z,1.5nm,0.6s						
MOA	**Molln**	**149.92**	**344**	*i* P	**PKPbc**	**23 13 44.8**	**-0.8**
	comp=Z,0.6nm,0.3s						
KBA	**Koelnbreinsper**	**150.87**	**344**	*i* P	**PKPbc**	**23 13 47.3**	**-0.9**
	comp=Z,1.3nm,0.5s						
WATA	**Walderalm**	**151.04**	**347**	*i* P	**PKPbc**	**23 13 47.3**	**-1.1**
	comp=Z,1.2nm,0.3s						
RETA	**Reutte**	**151.06**	**348**	*i* P	**PKPbc**	**23 13 47.9**	**-0.5**
	comp=Z,0.2nm,0.2s						
WTTA	**Wattenberg**	**151.09**	**347**	*i* P	**PKPbc**	**23 13 47.6**	**-1.0**
	comp=Z,3.5nm,0.6s						
SQTA	**Sankt Quirin**	**151.22**	**347**	*i* P	**PKiKP**	**23 13 48.5**	**-0.8**
	comp=Z,0.6nm,0.2s						
ABTA	**Abfaltersbach**	**151.38**	**345**	*i* P	**PKPbc**	**23 13 48.2**	**-1.0**
	comp=Z,3.2nm,0.6s						
FETA	**Feichten**	**151.51**	**348**	*e*P	**PKPbc**	**23 13 48.5**	**-1.1**
	comp=Z,0.9nm,0.4s						

IDC 03 22:54:56.6±40.0, 17°26S×169°41E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/43, mbtmp4.0/4, Error ellipse: s-maj=690.1km s-min=111.4km az=75.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.07**	**235**	P	P	23 00 59.5	+0.7
	1.7nm,0.7s,baz=56,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	**33.31**	**260**	P	P	23 01 35.8	-0.5
	0.7nm,0.8s,baz=95,slow=8.7,SNR=5.0						
ASAR	**Alice Springs**	**33.80**	**253**	P	P	23 01 41.1	+0.4
	1.9nm,0.8s,baz=80,slow=9.1,SNR=18						
FITZ	**Fitzroy Crossi**	**41.63**	**262**	P	P	23 02 46.0	-0.9
	2.4nm,0.9s,baz=113,slow=7.7,SNR=4.1						

*IDC **03** 22:56:19.2±1.1, 28°52N×95°58E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.4/52, mbtmp3.5/7, Error ellipse: s-maj=108.4km s-min=19.4km az=57.0*
ISC 03 22:56:24.9±1.1, 28°9N±0°2×96°0E±0°1, h35km, n19, σ1°20/19, mb3.6/6, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**7.43**	**260**	*e*P	**Pn**	**22 58 12.2**	**+1.0**
	8.3nm,0.3s						
ODAN	**Odare**	**7.84**	**257**	*e*P	**Pn**	**22 58 17.6**	**+0.9**
	23nm,0.3s						
RAMN	**Ramite**	**8.49**	**259**	*e*P	**Pn**	**22 58 26.9**	**+1.2**
	31nm,0.3s						
JIRN	**Jiri**	**8.69**	**264**	*e*P	**Pn**	**22 58 29.3**	**+0.7**
	60nm,0.3s						
GUN	**Gumba**	**8.92**	**266**	*e*P	**Pn**	**22 58 31.9**	**+0.2**
	24nm,0.2s						
PKI	**Pulchoki**	**9.39**	**265**	*e*P	**Pn**	**22 58 38.1**	**0.0**
	100nm,0.4s						
PKIN	**Phulchoki**	**9.40**	**265**	*e*P	**Pn**	**22 58 38.1**	**-0.1**
	130nm,0.4s						
KKN	**Kakani**	**9.47**	**266**	*e*P	**Pn**	**22 58 39.4**	**+0.4**
	37nm,0.3s						
DMN	**Daman**	**9.65**	**265**	*e*P	**Pn**	**22 58 41.7**	**+0.1**
	23nm,0.5s						
GKN	**Gorkha**	**10.00**	**268**	*e*P	**Pn**	**22 58 45.5**	**-0.8**
	8.8nm,0.3s						
DANN	**Dangsing**	**10.73**	**270**	*e*P	**Pn**	**22 58 53.8**	**-2.6**
	8.6nm,0.3s						

KOLN Koldanda 10.94 267 *e*P **Pn 22 58 56.8 -2.4**
11nm,0.3s
MKAR Makanchi Array 20.85 333 P **P 23 01 04.1 +0.5**
0.9nm,0.5s,baz=142,slow=13,SNR=15
KURBB Kurchatov Arra 25.41 334 P **P 23 01 49.3 +0.3**
0.4nm,0.4s,baz=142,slow=8.0,SNR=1.4
ZALV Zalesovo Beam 26.35 345 P **P 23 01 59.7 +2.2**
0.9nm,0.5s,baz=152,slow=10.0,SNR=5.2
WRA Warramunga Arr 61.05 138 P **P 23 06 34.6 -0.9**
0.3nm,0.6s,baz=322,slow=8.4,SNR=6.8
NOA NORSAR Array B 62.70 327 P **P 23 06 45.9 -0.1**
0.3nm,0.6s,baz=63,slow=4.8,SNR=3.7
ASAR Alice Springs 63.74 141 P **P 23 06 53.0 -0.4**
0.1nm,0.6s,baz=320,slow=6.4,SNR=4.0
GERES GERESS Array B 63.98 313 P **P 23 06 54.9 +0.1**
0.2nm,0.4s,baz=90,slow=6.7,SNR=4.0

*IDC **03** 23:04:04.3±0.8, 4°03N×126°32E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/42, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=71.8km s-min=17.4km az=66.0*
ISC 03 23:04:10.5±0.8, 4°1N±0°2×126°6E±0°3, h45km, n10, σ0°84/12, mb3.9/8, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.77**	**137**	Pn	**Pn**	**23 05 46.9**	**-0.4**
	2.4nm,0.3s,baz=344,slow=9.9,SNR=5.4						
SIJI				Sn	**Sn**	**23 07 03.3**	**+0.1**
	1.2nm,0.3s,baz=151,slow=23,SNR=1.9						
WRA	**Warramunga Arr**	**25.06**	**163**	P	**P**	**23 09 30.4**	**-0.5**
	1.4nm,0.4s,baz=340,slow=11,SNR=8.5						
ASAR	**Alice Springs**	**28.49**	**166**	P	**P**	**23 10 02.6**	**+0.9**
	0.2nm,0.3s,baz=347,slow=7.7,SNR=3.5						
SONM	**Songino Array**	**46.92**	**341**	P	**P**	**23 12 37.0**	**+0.2**
	0.6nm,0.5s,baz=159,slow=8.8,SNR=3.1						
MKAR	**Makanchi Array**	**57.20**	**325**	P	**P**	**23 13 52.5**	**-0.7**
	0.4nm,0.4s,baz=116,slow=7.8,SNR=15						
MKAR				PcP	**PcP**	**23 14 48.0**	**+0.7**
	0.3nm,0.7s,baz=114,slow=3.5,SNR=2.4						
ZALV	**Zalesovo Beam**	**60.22**	**333**	P	**P**	**23 14 12.8**	**-1.1**
	0.4nm,0.4s,baz=118,slow=8.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**61.38**	**327**	P	**P**	**23 14 20.7**	**-1.2**
	0.8nm,0.2s,baz=122,slow=6.2,SNR=7.1						
TIXI	**Tiksi**	**67.48**	**1**	P	**P**	**23 15 01.5**	**+0.1**
	1.3nm,0.3s,baz=191,slow=2.5,SNR=3.0						
NRIK	**Noril'sk**	**70.05**	**346**	P	**P**	**23 15 18.5**	**+1.1**
	2.3nm,0.6s,baz=132,slow=7.0,SNR=7.2						
TORD	**Torodi Ar. Bea**	**122.71**	**288**	PKP	**PKPdf**	**23 23 02.0**	**-0.5**
	0.4nm,0.9s,baz=86,slow=2.4,SNR=2.3						

*NEIC **03** 23:04:34.3±1.8, 18°9S±0°1×177°7W±0°1, h411km±9km, mb4.2/33, Error ellipse: s-maj=17.3km s-min=16.0km az=105.0*
*IDC **03** 23:04:38.2±1.7, 18°94S×177°95W, h438km±17km, mb3.5/13, mb1 3.7/15, mb1mx3.5/37, mbtmp4.3/15, Error ellipse: s-maj=20.3km s-min=12.4km az=138.0*
ISC 03 23:04:33.8±0.5, 18°93S±0°09×177°65W±0°09, h400km, n70, σ1°29/71, mb4.2/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.25**	**286**	P	**Pn**	**23 05 51.9**	**+3.5**
	2.1nm,0.3s,baz=112,slow=18,SNR=7.7						
MSVF	**Nonsavu**	**4.25**	**286**	P	**Pn**	**23 05 51.4**	**+3.0**
AFI	**Afiamalu**	**7.53**	**49**	P	**Pn**	**23 06 20.7**	**-2.9**
FUNA	**Funafuti**	**10.79**	**343**	P	**Pn**	**23 07 00.7**	**-0.3**
DZM	**Mont Dzumac**	**15.22**	**255**	P	**P**	**23 07 50.5**	**+1.7**
	0.7nm,0.3s,baz=75,slow=18,SNR=8.6						
OUZ	**Omahuta**	**17.98**	**204**	P	**P**	**23 08 18.7**	**+0.7**
OUZ				IAmb	IAmb	23 08 21.2	
	comp=Z,13nm,0.6s						
URZ	**Urewera**	**19.79**	**192**	P	**P**	**23 08 34.7**	**-1.4**
URZ				IAmb	IAmb	23 08 35.6	
	comp=Z,11nm,0.8s						
BKZ	**Black Stump Fm**	**20.79**	**193**	P	**P**	**23 08 44.5**	**-0.9**
BKZ				IAmb	IAmb	23 08 54.0	
	comp=Z,8.7nm,1.1s						
PLWZ	**Palliser**	**23.36**	**194**	P	**P**	**23 09 07.8**	**-0.8**
QRZ	**Quartz Range**	**23.39**	**199**	P	**P**	**23 09 07.7**	**-1.2**
NNZ	**Nelson**	**23.50**	**197**	P	**P**	**23 09 11.7**	**+1.8**
BSWZ	**Blackbirch Sta**	**23.83**	**196**	P	**P**	**23 09 13.8**	**+1.0**
THZ	**Tophouse**	**24.14**	**197**	P	**P**	**23 09 14.4**	**-1.2**
KHZ	**Kahutara**	**24.57**	**196**	P	**P**	**23 09 18.1**	**-1.3**
KHZ				IAmb	IAmb	23 09 22.5	
	comp=Z,12nm,0.8s						
LTZ	**Lake Taylor**	**25.26**	**198**	P	**P**	**23 09 25.0**	**-0.6**
LTZ				IAmb	IAmb	23 09 28.3	
	comp=Z,14nm,1.1s						
MLZ	**Mavora Lakes**	**28.89**	**201**	P	**P**	**23 09 56.8**	**-0.9**
MLZ				IAmb	IAmb	23 10 10.8	
	comp=Z,16nm,1.2s						
WHZ	**Wether Hill Ro**	**29.41**	**201**	P	**P**	**23 10 02.1**	**-0.1**
EIDS	**Eidsvold**	**29.61**	**252**	P	**P**	**23 10 04.5**	**+0.3**
EIDS				IAmb	IAmb	23 10 04.7	
	comp=Z,5.1nm,0.8s						
ARMA	**Armidale**	**30.07**	**242**	P	**P**	**23 10 09.2**	**+0.9**
CAN	**Canberra**	**33.67**	**234**	P	**P**	**23 10 39.0**	**-0.2**
CAN				IAmb	IAmb	23 10 39.6	
	comp=Z,6.3nm,0.7s						
CTA	**Charters Tower**	**34.00**	**262**	P	**P**	**23 10 41.6**	**-0.6**
	comp=Z,5.8nm,0.6s,baz=98,slow=10,SNR=8.3						
CTAO	**Charters Tower**	**34.00**	**262**	P	**P**	**23 10 42.1**	**-0.1**
CTAO				IAmb	IAmb	23 10 42.7	
	comp=Z,9.8nm,0.8s						
TOO	**Toolangi**	**37.10**	**232**	P	**P**	**23 11 07.7**	**-0.3**
TOO				IAmb	IAmb	23 11 08.7	
	comp=Z,13nm,0.8s						
COEN	**Coen**	**37.84**	**271**	P	**P**	**23 11 12.3**	**-2.1**
COEN				IAmb	IAmb	23 11 19.0	
	comp=Z,4.1nm,0.9s						
STKA	**Stephens Creek**	**38.78**	**242**	P	**P**	**23 11 22.1**	**+0.1**
	comp=Z,12nm,0.8s,baz=88,slow=10,SNR=22						
STKA	**Stephens Creek**	**38.78**	**242**	P	**P**	**23 11 21.9**	**0.0**
BBOO	**Buckleboo**	**43.55**	**242**	P	**P**	**23 11 59.6**	**-0.6**
WR0	**Warramunga Arr**	**44.97**	**260**	P	**P**	**23 12 11.1**	**-0.4**
WB0	**Warramunga Arr**	**45.13**	**261**	P	**P**	**23 12 11.8**	**-1.0**
WB2	**Warramunga Arr**	**45.15**	**260**	P	**P**	**23 12 12.0**	**-0.9**
WRA	**Warramunga Arr**	**45.16**	**260**	P	**P**	**23 12 11.6**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=97,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	**45.16**	**260**	P	**P**	**23 12 12.0**	**-1.0**
AS31	**Alice Springs**	**45.22**	**255**	P	**P**	**23 12 12.5**	**-0.9**
ASAR	**Alice Springs**	**45.22**	**255**	P	**P**	**23 12 12.7**	**-0.7**
	comp=Z,5.3nm,0.5s,baz=90,slow=8.5,SNR=91						
ASAR				S	**S**	**23 18 17.2**	**-5.8**
	comp=Z,0.6nm,0.7s,baz=92,slow=15,SNR=5.2						
ASAR	**Alice Springs**	**45.22**	**255**	P	**P**	**23 12 12.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**53.58**	**261**	P	**P**	**23 13 15.8**	**+0.1**
PSA00	**Pilbara Seismi**	**58.35**	**256**	P	**P**	**23 13 48.4**	**-0.8**
PSA00				IAmb	IAmb	23 13 49.3	
	comp=Z,11nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.37**	**242**	P	**P**	**23 13 55.4**	**-0.5**
NWAO				IAmb	IAmb	23 14 00.1	
	comp=Z,10nm,1.1s						
SBA	**Scott Base**	**59.45**	**184**	P	**P**	**23 13 57.9**	**+2.3**
SBA				IAmb	IAmb	23 13 58.7	
	comp=Z,10.0nm,1.0s						
VNDA	**Vanda**	**59.49**	**185**	P	**P**	**23 13 56.8**	**+0.9**
	comp=Z,2.4nm,0.9s,baz=344,slow=6.9,SNR=13						
**VND

ILAR	**Eielson Array**	**86.72**	**13**	P	**P**	**23 16 32.6**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=215,slow=4.8,SNR=4.7						
ILAR	**Eielson Array**	**86.72**	**13**	P	**P**	**23 16 33.2**	**0.0**
YKA	**Yellowknife Ar**	**94.96**	**25**	P	**P**	**23 17 11.6**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=238,slow=4.0,SNR=3.8						
MKAR	**Makanchi Array**	**110.36**	**314**	PKiKP	**PKiKP**	**23 22 18.5**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=82,slow=1.1,SNR=5.1						
ARCES	**ARCESS Array B**	**127.44**	**350**	PKP	**PKiKP**	**23 22 51.8**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=349,slow=1.2,SNR=6.4						
FINES	**FINESS Array B**	**134.37**	**344**	PKP	**PKPdf**	**23 23 04.4**	**0.0**
	comp=Z,1.7nm,0.9s,baz=62,slow=4.5,SNR=6.6						
BRTR	**Keskin Array B**	**146.01**	**314**	PKPbc	**PKPbc**	**23 23 28.4**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=136,slow=5.6,SNR=8.9						
CLL	**Collm**	**146.61**	**348**	*i* PKPbc	**PKPbc**	**23 23 29.7**	**+0.7**
	comp=Z,6.0nm,0.5s						
GERES	**GERESS Array B**	**148.78**	**345**	PKPbc	**PKiKP**	**23 23 35.4**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=27,slow=3.3,SNR=7.9						
CONA	**Conrad Observa**	**149.06**	**342**	*e*P	**PKiKP**	**23 23 37.2**	**+0.6**
	comp=Z,1.7nm,0.7s						
ARSA	**Arzberg**	**149.77**	**342**	*e*P	**PKiKP**	**23 23 38.5**	**+0.5**
	comp=Z,1.1nm,0.4s						
KBA	**Koelnbreinsper**	**150.51**	**345**	*e*P	**PKiKP**	**23 23 39.6**	**-0.1**
	comp=Z,0.9nm,0.5s						
WTTA	**Wattenberg**	**150.74**	**347**	*i* P	**PKiKP**	**23 23 40.1**	**-0.1**
	comp=Z,2.4nm,0.5s						
MOTA	**Moosalm**	**150.77**	**348**	*i* P	**PKiKP**	**23 23 40.2**	**0.0**
	comp=Z,0.8nm,0.5s						
SQTA	**Sankt Quirin**	**150.87**	**348**	*i* P	**PKiKP**	**23 23 40.2**	**-0.1**
	comp=Z,0.5nm,0.2s						
ABTA	**Abfaltersbach**	**151.03**	**345**	*i* P	**PKPbc**	**23 23 40.2**	**-0.1**
	comp=Z,1.8nm,0.5s						
FETA	**Feichten**	**151.15**	**348**	*i* P	**PKiKP**	**23 23 41.2**	**+0.2**
	comp=Z,1.3nm,0.7s						

*IDC **03** 23:25:32.5±3.1,30.40S×177.72W,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.7/40,mbtmp3.8/4,Error ellipse: s-maj=63.8km s-min=22.5km az=109.0*

ISC 03 23:25:28.7±2.7,30.4S±0.2×177.0W±0.3,h10km,n6, σ1§07/7,mb3.9/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.41**	**323**	Pn	**Pg**	**23 25 56.9**	**+1.1**
	65nm,0.3s,baz=56,slow=14,SNR=6.9						
RAO				Sn	**Sb**	**23 26 11.9**	**-1.3**
	247nm,0.3s,baz=142,slow=23,SNR=9.3						
CTA	**Charters Tower**	**34.69**	**278**	P	**P**	**23 32 19.0**	**+0.2**
	1.3nm,0.4s,baz=102,slow=9.3,SNR=1.8						
STKA	**Stephens Creek**	**35.36**	**257**	P	**P**	**23 32 25.1**	**+0.6**
	1.0nm,0.5s,baz=112,slow=12,SNR=3.9						
ASAR	**Alice Springs**	**44.01**	**266**	P	**P**	**23 33 36.2**	**-0.5**
	0.2nm,0.4s,baz=105,slow=7.7,SNR=2.5						
WRA	**Warramunga Arr**	**45.00**	**272**	P	**P**	**23 33 43.6**	**-1.0**
	0.5nm,0.3s,baz=111,slow=8.0,SNR=12						
FINES	**FINESS Array B**	**145.44**	**341**	PKPbc	**PKiKP**	**23 45 09.8**	**-0.4**
	0.9nm,0.6s,baz=60,slow=4.6,SNR=7.5						

*IDC **03** 23:30:15.8±1.9,20.96S×169.64E,h87km±15km,mb4.0/8, mb1 4.2/11,mb1mx3.9/38,mbtmp4.4/11,MS3.7/2, Ms1 3.8/2,ms1mx3.1/22,Error ellipse: s-maj=25.1km s-min=14.5km az=167.0*

*NOU **03** 23:30:16.4,20.92S×169.53E,h83km,mb4.6, Vanuatu Islands*

*NEIC **03** 23:30:16.1±1.1,20.85S±0.10×169.68E±0.10,h98km±10km, mb4.4/21,Error ellipse: s-maj=13.9km s-min=13.4km az=170.0*

ISC 03 23:30:16.6±0.5,20.96S±0.06×169.65E±0.07,h100km,n53, σ1§17/54,mb4.3/15,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**1.60**	**251**	P	**Pn**	**23 30 41.5**	**-2.5**
LIFNC	**LIFOU**	**2.26**	**274**	P	**Pn**	**23 30 50.0**	**-2.6**
PINNC	**Pines Island,**	**2.63**	**231**	P	**Pn**	**23 30 55.6**	**-1.8**
YATNC	**Mamie plateau,**	**2.79**	**246**	P	**Pn**	**23 30 57.6**	**-2.0**
OUENC	**Ouen Island, N**	**2.99**	**240**	P	**Pn**	**23 31 01.3**	**-0.9**
DZM	**Mont Dzumac**	**3.18**	**249**	P	**Pn**	**23 31 04.5**	**-0.4**
	74nm,0.3s,baz=82,slow=15,SNR=95						
DZM				S	**Sn**	**23 31 40.6**	**-1.5**
	201nm,0.3s,baz=304,slow=22,SNR=10.0						
ONTNC	**Ouen Toro**	**3.26**	**245**	P	**Pn**	**23 31 05.1**	**-0.7**
DVP	**Devils Point**	**3.50**	**337**	P	**Pn**	**23 31 06.9**	**-2.2**
SANVU	**Saraoutou**	**5.96**	**337**	Pn	**Pn**	**23 31 40.5**	**-1.8**
SANVU	**Saraoutou**	**5.96**	**337**	P	**Pn**	**23 31 41.7**	**-0.6**
MSVF	**Nonsavu**	**8.55**	**69**	P	**Pn**	**23 32 18.0**	**+0.3**
	0.7nm,0.3s,baz=258,slow=10,SNR=8.4						
MSVF	**Nonsavu**	**8.55**	**69**	Pn	**Pn**	**23 32 17.3**	**-0.5**
MSVF	**Nonsavu**	**8.55**	**69**	P	**Pn**	**23 32 19.0**	**+1.2**
OUZ	**Omahuta**	**14.62**	**167**	Pn	**P**	**23 33 39.8**	**-2.3**
EIDS	**Eidsvold**	**17.63**	**252**	P	**Pn**	**23 34 17.9**	**+2.0**
EIDS				IAmb	IAmb	23 34 20.6	
	comp=Z,16nm,1.0s						
MXZ	**Matakaoa Point**	**18.17**	**157**	P	**P**	**23 34 20.9**	**-0.3**
MXZ				IAmb	IAmb	23 34 35.5	
	comp=Z,37nm,1.2s						
URZ	**Urewera**	**18.41**	**161**	P	**Pn**	**23 34 25.0**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=312,slow=22,SNR=8.4						
URZ	**Urewera**	**18.41**	**161**	P	**Pn**	**23 34 24.9**	**-0.2**
URZ				IAmb	IAmb	23 34 36.2	
	comp=Z,11nm,0.9s						
BKZ	**Black Stump Fm**	**19.07**	**164**	P	**Pn**	**23 34 31.8**	**-1.3**
BKZ				IAmb	IAmb	23 34 34.3	
	comp=Z,12nm,0.7s						
CTA	**Charters Tower**	**21.93**	**268**	P	**P**	**23 35 03.2**	**+1.1**
	comp=Z,4.7nm,0.8s,baz=99,slow=12,SNR=7.4						
CTAO	**Charters Tower**	**21.93**	**268**	P	**P**	**23 35 03.3**	**+1.2**
LBZ	**Lake Benmore**	**23.36**	**179**	P	**P**	**23 35 16.8**	**+0.6**
LBZ				IAmb	IAmb	23 35 34.8	
	comp=Z,27nm,1.1s						
RABL	**Rabaul**	**23.81**	**312**	P	**P**	**23 35 20.8**	**+0.3**
PMG	**Port Moresby**	**24.52**	**295**	P	**P**	**23 35 27.7**	**+0.8**
	comp=Z,16nm,0.6s,baz=142,slow=6.3,SNR=3.7						
COEN	**Coen**	**26.17**	**281**	P	**P**	**23 35 43.3**	**+1.4**
COEN				IAmb	IAmb	23 35 44.0	
	comp=Z,6.2nm,1.0s						
STKA	**Stephens Creek**	**27.30**	**241**	P	**P**	**23 35 52.8**	**+0.9**
	comp=Z,2.9nm,0.6s,baz=78,slow=8.3,SNR=8.0						
STKA	**Stephens Creek**	**27.30**	**241**	IAmb	IAmb	23 35 54.2	
	comp=Z,1.1nm,0.8s						
BBOO	**Buckleboo**	**32.07**	**241**	P	**P**	**23 36 34.9**	**+0.8**
WR0	**Warramunga Arr**	**32.87**	**265**	P	**P**	**23 36 41.1**	**-0.2**
WR0				IAmb	IAmb	23 36 41.8	
	comp=Z,5.1nm,1.1s						
WB0	**Warramunga Arr**	**33.04**	**266**	P	**P**	**23 36 42.4**	**-0.3**
WB0				IAmb	IAmb	23 36 42.5	
	comp=Z,4.3nm,0.9s						
WB2	**Warramunga Arr**	**33.05**	**265**	P	**P**	**23 36 42.6**	**-0.2**
WB2				IAmb	IAmb	23 36 43.3	
	comp=Z,7.4nm,1.1s						
WRA	**Warramunga Arr**	**33.06**	**265**	P	**P**	**23 36 42.4**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=104,slow=7.9,SNR=35						
WRA	**Warramunga Arr**	**33.06**	**265**	P	**P**	**23 36 42.6**	**-0.3**
AS31	**Alice Springs**	**33.13**	**259**	P	**P**	**23 36 43.9**	**+0.4**
ASAR	**Alice Springs**	**33.13**	**259**	P	**P**	**23 36 43.8**	**+0.3**
	comp=Z,18nm,0.7s,baz=93,slow=9.5,SNR=180						
ASAR				ScP	**ScP**	**23 43 02.3**	**+2.4**
	comp=Z,0.6nm,0.8s,baz=104,slow=3.6,SNR=5.7						
ASAR				LR	LR	23 49 19.3	
	comp=Z,93nm,21.0s,baz=191,slow=34						
ASAR	**Alice Springs**	**33.13**	**259**	P	**P**	**23 36 43.5**	**+0.1**
MTN	**Manton Dam**	**37.65**	**276**	P	**P**	**23 37 22.5**	**+0.2**
FAKI	**Fak Fak**	**40.58**	**291**	P	**P**	**23 37 45.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**41.48**	**266**	P	**P**	**23 37 54.9**	**+0.9**
FITZ				IAmb	IAmb	23 37 55.8	
	comp=Z,7.4nm,0.8s						
TOLI2	**Tolitoli**	**52.57**	**288**	P	**P**	**23 39 19.9**	**-0.4**
VNDA	**Vanda**	**56.73**	**182**	P	**P**	**23 39 49.8**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=340,slow=9.2,SNR=5.3						
SBA	**Scott Base**	**56.95**	**181**	P	**P**	**23 39 51.6**	**+0.6**
QSPA	**South Pole Qui**	**69.10**	**180**	P	**P**	**23 41 11.8**	**+0.1**
QSPA				IAmb	IAmb	23 41 14.0	
	comp=Z,6.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**79.56**	**294**	P	**P**	**23 42 15.1**	**+2.1**
	comp=Z,1.0nm,0.4s,baz=138,slow=5.9,SNR=1.7						
CMAR				LR	LR	00 19 31.5	
	comp=Z,65nm,19.5s,baz=2.0,slow=37						
NVAR	**Mina Array Bea**	**89.65**	**48**	P	**P**	**23 43 03.4**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=227,slow=8.6,SNR=12						
NVAR	**Mina Array Bea**	**89.65**	**48**	P	**P**	**23 43 03.0**	**-0.7**
CONA	**Conrad Observa**	**145.81**	**328**	*e*P	**PKPab**	**23 49 44.7**	**0.0**
	comp=Z,3.8nm,1.1s						
GERES	**GERESS Array B**	**146.18**	**331**	PKPbc	**PKPbc**	**23 49 44.8**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=33,slow=3.2,SNR=16						
SOKA	**Soboth**	**147.07**	**327**	*e*P	**PKPbc**	**23 49 47.0**	**-1.0**
	comp=Z,0.7nm,0.6s						
ABTA	**Abfaltersbach**	**148.26**	**329**	*e*P	**PKPdf**	**23 49 48.2**	**+0.5**
	comp=Z,3.1nm,0.8s						
MOTA	**Moosalm**	**148.46**	**332**	*i* P	**PKPbc**	**23 49 50.9**	**-0.9**
	comp=Z,5.8nm,1.1s						
SQTA	**Sankt Quirin**	**148.51**	**331**	*i* P	**PKPbc**	**23 49 51.1**	**-0.7**
	comp=Z,3.4nm,0.6s						
FETA	**Feichten**	**148.88**	**332**	*e*P	**PKPbc**	**23 49 52.3**	**-0.5**
	comp=Z,2.7nm,0.9s						

IDC 04 00:15:18.4±7.0,6.81S×148.03E,h103km±57km,mb3.4/2, mb1 3.4/4,mb1mx3.1/24,mbtmp3.6/4,Error ellipse: s-maj=91.4km s-min=58.0km az=123.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.72**	**198**	P	Pn	00 15 59.7	-1.0
	2.9nm,0.3s,baz=134,slow=21,SNR=2.3						
PMG				S	Sn	00 16 34.3	+1.3
	2.6nm,0.3s,baz=210,slow=6.0,SNR=3.1						
WRA	**Warramunga Arr**	**18.63**	**224**	P	P	00 19 27.3	-0.8
	0.3nm,0.3s,baz=52,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**21.57**	**217**	P	P	00 19 60.0	+0.1
	0.8nm,0.4s,baz=49,slow=9.3,SNR=24						
FITZ	**Fitzroy Crossi**	**24.54**	**241**	P	P	00 20 28.2	-0.4
	2.1nm,0.7s,baz=60,slow=12,SNR=6.5						
TORD	**Torodi Ar. Bea**	**146.27**	**283**	PKPbc	PKPbc	00 34 48.2	0.0
	0.5nm,0.7s,baz=70,slow=4.7,SNR=2.8						

*ANF **04** 00:20:01.8±0.2,36.92N×97.64W,h5km,ML4.1/15,Error ellipse: s-maj=2.1km s-min=1.9km az=3.0*

*TUL **04** 00:20:01.6±1.4,36.94N±0.02×97.63W±0.06,h5km±7km, ML3.4,mb_Lg3.3/105(NEIC),Error ellipse: s-maj=7.0km s-min=3.0km az=87.0*

*NEIC **04** 00:20:01.9±1.3,36.91N±0.04×97.65W±0.06,h5km±7km, Error ellipse: s-maj=7.6km s-min=5.0km az=69.0*

*IDC **04** 00:20:02.2±2.0,37.05N×98.21W,h0km,mb3.3/1, mb1 3.5/4,mb1mx3.3/31,mbtmp3.2/4,ML2.9/3,Error ellipse: s-maj=29.9km s-min=15.0km az=100.0*

ISC 04 00:20:01.8±0.9,36.93N±0.02×97.62W±0.02,h9km±7km, n125,σ0§99/107,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN13	**South Haven SW**	**0.14**	**54**		**Pg**	**00 20 04.9**	**-0.1**
KAN13				Sg	**Sg**	**00 20 07.2**	**0.0**
GC02	**Grant County #**	**0.20**	**248**		**Pg**	**00 20 06.0**	**0.0**
GC02				Sg	**Sg**	**00 20 09.0**	**+0.2**
KAN09	**Caldwell North**	**0.21**	**1**	Pg	**Pg**	**00 20 06.0**	**-0.1**
KAN09				Sg	**Sg**	**00 20 09.0**	**0.0**
KAN01	**Argonia South**	**0.25**	**334**		**Pg**	**00 20 06.8**	**-0.1**
KAN05	**Bluff City Nor**	**0.27**	**312**		**Pg**	**00 20 07.1**	**-0.1**
KAN05				Sg	**Sg**	**00 20 10.9**	**+0.1**
KAN08	**Anthony NE Sta**	**0.41**	**317**		**Pg**	**00 20 09.7**	**-0.1**
KAN10	**Anthony SW Sta**	**0.42**	**297**		**Pg**	**00 20 10.1**	**-0.1**
KAN12	**Harper NE Stat**	**0.47**	**321**		**Pg**	**00 20 10.9**	**-0.1**
OK032	**Salt Plains WL**	**0.49**	**255**	Pg	**Pg**	**00 20 11.2**	**-0.1**
CROK	**Carrier**	**0.51**	**214**	Pg	**Pg**	**00 20 11.8**	**0.0**
T35A	**Sooner Cattle**	**0.89**	**90**		**Pg**	**00 20 18.7**	**-0.3**
T35B	**Sooner Cattle**	**0.89**	**90**	P	**Pg**	**00 20 18.5**	**-0.5**
	baz=272,SNR=214						
T35B				S	**Sg**	**00 20 30.3**	**-0.2**
	baz=272						
T35B	**Sooner Cattle**	**0.89**	**90**	P		00 20 18.5	
	baz=272,SNR=214						
T35B				S		00 20 30.3	
	baz=272						
QUOK	**Quay**	**1.06**	**135**		**Pg**	**00 20 21.7**	**-0.4**
OK029	**Liberty Lake**	**1.14**	**173**		**Pg**	**00 20 23.3**	**-0.4**
OK031	**S. Brethren Rd**	**1.16**	**147**		**Pg**	**00 20 23.6**	**-0.5**
OK030	**Cody Creek RV**	**1.21**	**146**		**Pg**	**00 20 24.5**	**-0.5**
U32A	**Winter Ranch,**	**1.24**	**244**		**Pg**	**00 20 24.9**	**-0.6**
U32A	**Winter Ranch,**	**1.24**	**244**	P	**Pg**	**00 20 24.8**	**-0.7**
	baz=62,SNR=17						
U32A				S	**Sg**	**00 20 41.6**	**0.0**
	baz=62						
U32A	**Winter Ranch,**	**1.24**	**244**	P		00 20 24.8	
	baz=62,SNR=17						
U32A				S		00 20 41.6	
	baz=62						
BCOK	**Bluff Creek, N**	**1.27**	**179**		**Pg**	**00 20 25.6**	**-0.5**
OK009	**Oakdale Elemen**	**1.35**	**173**	Pn	**Pn**	**00 20 27.0**	**0.0**
OK025	**Westminster Rd**	**1.36**	**170**		**Pn**	**00 20 27.3**	**+0.2**
OK001	**Jones High Sch**	**1.39**	**169**	Pn	**Pn**	**00 20 27.1**	**-0.4**
OKCFA	**Oklahoma City**	**1.52**	**175**	Pn	**Pn**	**00 20 29.7**	**+0.5**
OKCFA	**Oklahoma City**	**1.52**	**175**	P	**Pn**	**00 20 29.7**	**+0.5**
	baz=354,SNR=8.3						
OKCFA				S	**Sg**	**00 20 50.8**	**+0.2**
	baz=354						
OKCFA	**Oklahoma City**	**1.52**	**175**	P		00 20 29.7	
	baz=354,SNR=8.3						
OKCFA				S		00 20 50.8	
	baz=354						
OKCSW	**OKLAHOMA CITY**	**1.53**	**174**		**Pn**	**00 20 29.9**	**+0.6**
FNO	**Franklin**	**1.68**	**174**		**Pn**	**00 20 32.8**	**+1.3**
R32A	**Long Quarter,**	**1.72**	**330**		**Pn**	**00 20 32.8**	**+0.7**
R32A	**Long Quarter,**	**1.72**	**330**	P	**Pn**	**00 20 32.8**	**+0.7**
	baz=150,SNR=97						
R32A				S	**Sb**	**00 20 55.7**	**+0.2**
	baz=150						
R32A	**Long Quarter,**	**1.72**	**330**	P		00 20 32.8	
	baz=150,SNR=97						
R32A				S		00 20 55.7	
	baz=150						
TUL1	**Leonard**	**1.79**	**124**	P	**Pn**	**00 20 33.9**	**+0.9**
	baz=305,SNR=162						
TUL1				S	**Sb**	**00 20 58.2**	**+0.7**
	baz=305						
TUL1	**Leonard**	**1.79**	**124**	P		00 20 33.9	
	baz=305,SNR=162						
TUL1				S		00 20 58.2	
	baz=305						
KSU1	**Kansas State U**	**2.31**	**20**		**Pn**	**00 20 41.1**	**+1.0**
KSU1	**Kansas State U**	**2.31**	**20**	P	**Pn**	**00 20 40.9**	**+0.7**
	baz=201,SNR=58						
KSU1	**Kansas State U**	**2.31**	**20**	P		00 20 40.9	
	baz=201,SNR=58						
X34A	**Smith Ranch, M**	**2.33**	**184**	Pn	**Pn**	**00 20 41.5**	**+1.1**
WMOK	**Wichita Mounta**	**2.38**	**204**	Pn	**Pn**	**00 20 41.9**	**+0.8**
WMOK	**Wichita Mounta**	**2.38**	**204**	P	**Pn**	**00 20 41.5**	**+0.4**
	baz=23,SNR=27						
WMOK				S	**Sn**	**00 21 12.3**	**+1.8**
	baz=23						
WMOK	**Wichita Mounta**	**2.38**	**204**	P		00 20 41.5	
	baz=23,SNR=27						
WMOK				S		00 21 12.3	
	baz=23						
CBKS	**Cedar Bluff**	**2.52**	**319**		**Pn**	**00 20 45.0**	**+2.0**
CBKS				IAmb_Lg		00 21 23.0	
	comp=Z,106nm,0.7s						
CBKS	**Cedar Bluff**	**2.52**	**319**	P	**Pn**	**00 20 43.9**	**+0.9**
	baz=138,SNR=20						
CBKS	**Cedar Bluff**	**2.52**	**319**	P		00 20 43.9	
	baz=138,SNR=20						
U38A	**Gravette**	**2.65**	**100**		**Pn**	**00 20 46.6**	**+1.9**
U38A	**Gravette**	**2.65**	**100**	P	**Pn**	**00 20 46.5**	**+1.7**
	baz=282,SNR=46						
U38A	**Gravette**	**2.65**	**100**	P		00 20 46.5	
	baz=282,SNR=46						
X37A	**Clayton**	**2.97**	**141**	Pn	**Pn**	**00 20 50.9**	**+1.7**
X37A				IAmb_Lg		00 21 42.6	
	comp=Z,107nm,0.7s						
HHAR	**Hobbs**	**3.03**	**101**		**Pn**	**00 20 51.4**	**+1.3**
S39A	**Bolivar**	**3.51**	**76**	Pn	**Pn**	**00 20 57.7**	**+1.0**
S39A				IAmb_Lg		00 21 55.2	
	comp=Z,89nm,0.8s						
W39A	**Magazine**	**3.56**	**118**		**Pn**	**00 20 59.2**	**+1.9**
W39A				IAmb_Lg		00 22 01.5	
	comp=Z,85nm,0.8s						
Z35A	**Perchaven, San**	**3.60**	**175**	S		00 21 42.5	
	baz=355						
Z35A	**Perchaven, San**	**3.60**	**175**		**Pn**	**00 20 58.7**	**+0.8**
Z35A	**Perchaven, San**	**3.60**	**175**	S	**Sn**	**00 21 42.5**	**+1.9**
	baz=355						
N33B	**J Bar K, Exete**	**3.81**	**2**	P	**Pn**	**00 21 00.9**	**+0.2**
	baz=182,SNR=7.1						
N33B	**J Bar K, Exete**	**3.81**	**2**	P		00 21 00.9	
	baz=182,SNR=7.1						
N33A	**J Bar K, Exete**	**3.81**	**2**	Pn	**Pn**	**00 21 01.5**	**+0.8**
N33A				IAmb_Lg		00 22 11.7	
	comp=Z,55nm,0.9s						
AMTX	**Amarillo**	**3.87**	**239**	Pn	**Pn**	**00 21 03.1**	**+1.4**
U40A	**Yellville**	**3.88**	**97**		**Pn**	**00 21 02.3**	**+0.6**
U40A	**Yellville**	**3.88**	**97**	P	**Pn**	**00 21 02.5**	**+0.8**
	baz=280,SNR=34						
U40A	**Yellville**	**3.88**	**97**	P		00 21 02.5	
	baz=280,SNR=34						
U40A				P		00 21 02.5	
	baz=280,SNR=34						
MIAR	**Mount Ida**	**4.06**	**125**	Pn	**Pn**	**00 21 04.6**	**+0.4**
MIAR				IAmb_Lg		00 22 17.9	
	comp=Z,42nm,0.8s						
P38A	**Dawn**	**4.20**	**49**		**Pn**	**00 21 05.9**	**-0.2**
P38A				IAmb_Lg		00 22 15.4	
	comp=Z,94nm,0.7s						
N35A	**Tabor**	**4.22**	**21**		**Pn**	**00 21 06.7**	**+0.3**
Z38A	**Mt. Pleasant**	**4.25**	**149**	Pn	**Pn**	**00 21 08.5**	**+1.7**
MGMO	**Mountain Grove**	**4.29**	**85**		**Pn**	**00 21 09.0**	**+1.6**
MGMO				IAmb_Lg		00 22 20.0	
	comp=Z,80nm,0.7s						
R40A	**Maddies Statio**	**4.46**	**71**		**Pn**	**00 21 11.0**	**+1.3**
R40A				IAmb_Lg		00 22 28.2	
	comp=Z,85nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.47**	**299**		**Pn**	**00 21 10.0**	**+0.1**
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P	**Pn**	**00 21 10.6**	**+0.7**
	baz=116						
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P		00 21 10.6	
	baz=116						
BGNE	**Belgrade**	**4.49**	**355**	Pn	**Pn**	**00 21 10.3**	**+0.2**
BGNE	**Belgrade**	**4.49**	**355**	P	**Pn**	**00 21 10.8**	**+0.6**
	baz=175,SNR=20						
BGNE	**Belgrade**	**4.49**	**355**	P		00 21 10.8	
	baz=175,SNR=20						
FCAR	**Ozark Folk Cen**	**4.56**	**102**		**Pn**	**00 21 11.7**	**+0.7**
FCAR				IAmb_Lg		00 22 23.0	
	comp=Z,74nm,0.9s						
X40A	**Basin Creek Fa**	**4.60**	**121**		**Pn**	**00 21 13.2**	**+1.6**
X40A				IAmb_Lg		00 22 32.6	
	comp=Z,57nm,0.9s						
ABTX	**Abilene, Hawle**	**4.61**	**202**		**Pn**	**00 21 12.4**	**+0.7**
WHAR	**Wooly Hollow**	**4.62**	**109**	Pn	**Pn**	**00 21 13.4**	**+1.5**
WHAR				IAmb_Lg		00 22 29.9	
	comp=Z,81nm,1.0s						
W41B	**Gary Mavity, V**	**4.70**	**110**	P	**Pn**	**00 21 13.6**	**+0.7**
	baz=294,SNR=9.5						
W41B	**Gary Mavity, V**	**4.70**	**110**	P		00 21 13.6	
	baz=294,SNR=9.5						
WLAR	**White Oak Lake**	**4.91**	**130**	Pn	**Pn**	**00 21 15.0**	**-0.8**
WLAR				IAmb_Lg		00 22 50.8	
	comp=Z,52nm,0.9s						
WHTX	**Lake Whitney,**	**4.93**	**178**	Pn	**Pn**	**00 21 16.0**	**-0.1**
WHTX	**Lake Whitney,**	**4.93**	**178**	P	**Pn**	**00 21 16.5**	**+0.4**
	baz=358,SNR=8.6						
WHTX	**Lake Whitney,**	**4.93**	**178**	P		00 21 16.5	
	baz=358,SNR=8.6						
P40A	**Paris**	**5.10**	**58**		**Pn**	**00 21 20.3**	**+1.8**
P40A				IAmb_Lg		00 22 49.9	
	comp=Z,66nm,0.8s						
L34A	**Svendsen Farm,**	**5.12**	**10**	Pn	**Pn**	**00 21 20.6**	**+1.8**
L34A				IAmb_Lg		00 22 53.4	
	comp=Z,72nm,0.8s						
MSTX	**Muleshoe**	**5.13**	**236**	Pn	**Pn**	**00 21 21.3**	**+2.2**
MSTX				IAmb_Lg		00 22 58.1	
	comp=Z,38nm,1.1s						
237A	**Washetta, Mont**	**5.14**	**163**	Pn	**Pn**	**00 21 18.9**	**-0.1**
237A				IAmb_Lg		00 22 57.9	
	comp=Z,69nm,1.1s						
N38A	**Joes South For**	**5.16**	**40**		**Pn**	**00 21 19.4**	**+0.1**
N38A				IAmb_Lg		00 22 54.9	
	comp=Z,75nm,0.8s						
CCM	**Cathedral Cave**	**5.20**	**76**	IAmb_Lg		00 22 46.4	
	comp=Z,47nm,0.7s						
OGNE	**Ogallala**	**5.28**	**321**	Pn	**Pn**	**00 21 21.9**	**+0.8**
OGNE				IAmb_Lg		00 22 53.0	
	comp=Z,53nm,0.8s						
LCAR	**Lake Charles**	**5.28**	**97**	Pn	**Pn**	**00 21 22.2**	**+1.2**
LCAR				IAmb_Lg		00 22 48.6	
	comp=Z,45nm,0.9s						
T25A	**Trinidad**	**5.43**	**274**	Pn	**Pn**	**00 21 22.9**	**-0.4**
T25A				IAmb_Lg		00 23 02.2	
	comp=Z,40nm,0.9s						
NATX	**Nacogdoches**	**5.71**	**154**	IAmb_Lg		00 23 18.0	
	comp=Z,32nm,0.8s						
K31A	**O'Neill**	**5.75**	**352**		**Pn**	**00 21 28.4**	**+0.9**
K31A				IAmb_Lg		00 23 06.3	
	comp=Z,70nm,0.8s						
PBMO	**Poplar Bluff**	**5.77**	**89**	IAm

PDAR Pg 00 23 13.2
comp=Z,0.1nm,0.3s,baz=116,slow=16,SNR=2.2
PDAR Lg Lg 00 25 25.6
comp=Z,0.2nm,0.3s,baz=114,slow=31,SNR=1.8
O49A Covington 10.90 69 Pn **Pn 00 22 37.4 -0.7**
COWI Conover 11.15 32 Pn **Pn 00 22 43.0 +1.6**
N49A Columbus Grove 11.20 65 Pn **Pn 00 22 41.5 -0.7**
ULM Lac du Bonnet 13.38 5 Pn Pn 00 23 07.2 -4.6
comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=1.7
ULM Lg Lg 00 26 49.5
comp=Z,0.3nm,0.3s,baz=279,slow=19,SNR=1.4
ILAR Eielson Array 40.13 330 P **P 00 27 36.0 -1.7**
comp=Z,0.2nm,0.6s,baz=115,slow=7.2,SNR=4.8

DJA ***04*** *00:20:01.4±0.9, 3°S±8'×12°7'E±°, h84km±6km, M4.1/7, mb4.7/1, mB5.0/1, MLv3.8/7, Mw(mB)4.4/1*
IDC ***04*** *00:20:06.2±4.5, 3°39'S×127°53'E, h147km±50km, mb3.4/3, mb1 3.6/6, mb1mx3.3/31, mbtmp4.0/6, Error ellipse: s-maj=49.4km s-min=18.1km az=86.0*
ISC 04 00:20:01.1±0.9, **3°39'S**±0'.09×**127°10'E**±0'.07, **h100**km, **n11, σ0s81/13, mb3.6/3, Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.15**	**1**	P	**Pn**	**00 20 14.5**	**-0.7**
NLAI				S	**Sn**	**00 20 24.4**	**-1.2**
SANI	**Sanana**	**1.73**	**320**	P	**Pn**	**00 20 29.8**	**-0.5**
BNDI	**Bandanaira**	**3.02**	**112**	P	**Pn**	**00 20 47.0**	**-0.1**
SWI	**Sorong**	**4.86**	**59**	P	**Pn**	**00 21 12.2**	**+0.3**
SIJI	**Sorong**	**4.86**	**59**	P	**Pn**	**00 21 12.3**	**+0.4**
	32nm,0.3s,baz=108,slow=24,SNR=74						
SIJI				S	**Sn**	**00 22 05.8**	**-1.3**
	9.8nm,0.3s,baz=125,slow=23,SNR=12						
FAKI	**Fak Fak**	**5.17**	**85**	P	**Pn**	**00 21 15.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**14.68**	**185**	P	**P**	**00 23 27.5**	**+0.1**
	0.1nm,0.3s,baz=10,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**17.90**	**157**	P	**P**	**00 24 02.5**	**-0.5**
	1.3nm,0.3s,baz=340,slow=11,SNR=43						
ASAR	**Alice Springs**	**21.20**	**163**	P	**P**	**00 24 38.5**	**-0.3**
	1.5nm,0.4s,baz=344,slow=11,SNR=28						
STKA	**Stephens Creek**	**31.44**	**156**	P	**P**	**00 26 13.1**	**0.0**
	0.8nm,0.3s,baz=331,slow=9.7,SNR=3.8						
MKAR	**Makanchi Array**	**63.65**	**327**	P	**P**	**00 30 23.1**	**+1.5**
	0.4nm,0.6s,baz=130,slow=8.2,SNR=5.1						

NOU ***04*** *00:23:13.6, 35°.76S×179°.15E, h343km, MLv4.3, Off E. Coast of N. Island, N.Z.*
WEL 04 00:23:33.8±0.9, **36°S**±9'×**178°E**±1°0, **h218**km±9km, **M3.1**/19, **MLv3.1**/19, **Error ellipse: s-maj=0.0km s-min=0.0km az=85.1, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.22**	**156**	P	Pn	00 24 06.7	-0.2
MXZ				S	S	00 24 33.5	+0.8
HAZ	**Te Kaha**	**1.31**	**177**	P	Pn	00 24 07.4	-0.1
HAZ				S	S	00 24 33.9	+0.1
PKGZ	**Pakihiroa**	**1.48**	**168**	P	Pn	00 24 09.1	+0.2
WMGZ	**Waiomatatini S**	**1.49**	**157**	P	Pn	00 24 09.0	+0.1
WMGZ				S	S	00 24 36.9	+0.5
RUGZ	**Raukumara Rang**	**1.52**	**180**	P	Pn	00 24 08.9	-0.4
RUGZ				S	S	00 24 31.8	-5.2
KUZ	**Kuaotunu**	**1.61**	**259**	P	Pn	00 24 10.3	+0.3
PUZ	**Puketiti**	**1.69**	**164**	P	Pn	00 24 10.7	0.0
PUZ				S	S	00 24 39.6	+0.1
TWGZ	**Tauwhareparae**	**1.75**	**172**	P	Pn	00 24 12.0	+0.8
TWGZ				S	S	00 24 42.0	+1.6
GRZ	**Great Barrier**	**1.81**	**275**	P	Pn	00 24 11.7	0.0
URZ	**Urewera**	**1.87**	**194**	P	Pn	00 24 12.4	+0.1
URZ				S	S	00 24 42.8	+0.5
MWZ	**Matawai**	**1.89**	**184**	P	Pn	00 24 13.0	+0.4
MWZ				S	S	00 24 43.6	+0.8
CNGZ	**Carnagh Statio**	**2.08**	**169**	P	Pn	00 24 14.7	+0.4
MUGZ	**Murupara**	**2.16**	**199**	P	Pn	00 24 15.2	0.0
RTZ	**Ruatahuna**	**2.24**	**194**	P	Pn	00 24 15.9	-0.2
RTZ				S	S	00 24 48.9	-0.1
HRRZ	**Handcock Road**	**2.24**	**209**	P	Pn	00 24 17.3	+1.2
RIGZ	**Rimuhau**	**2.26**	**178**	P	Pn	00 24 17.0	+0.8
SNGZ	**Shannon Statio**	**2.35**	**187**	P	Pn	00 24 17.3	+0.1
RAHZ	**Arahi**	**2.51**	**191**	P	Pn	00 24 19.0	+0.1
RAHZ				S	S	00 24 54.9	+0.8
KNZ	**Kokohu**	**2.57**	**180**	P	Pn	00 24 18.9	-0.6
KNZ				S	S	00 24 51.6	-3.5
MRHZ	**Matea Rd**	**2.59**	**202**	P	Pn	00 24 19.7	-0.1
WHHZ	**Waihua**	**2.65**	**188**	P	Pn	00 24 20.5	+0.1
WHHZ				S	S	00 24 57.9	+1.1
MHGZ	**Mahia Peninsul**	**2.71**	**176**	P	Pn	00 24 20.8	-0.3
NMHZ	**Naumai**	**2.74**	**194**	P	Pn	00 24 21.6	+0.2
ARHZ	**Aropaoanui**	**2.87**	**191**	P	Pn	00 24 22.5	-0.3
BKZ	**Black Stump Fm**	**2.88**	**199**	P	Pn	00 24 22.1	-0.8
HIZ	**Hauiti**	**3.05**	**227**	P	Pn	00 24 26.4	+1.5
TMZ	**Te Maari**	**3.09**	**210**	P	Pn	00 24 25.4	-0.1
ETVZ	**East Tongariro**	**3.11**	**210**	P	Pn	00 24 25.3	-0.4
WTVZ	**West Tongariro**	**3.14**	**211**	P	Pn	00 24 25.7	-0.3
TWVZ	**Taurewa**	**3.17**	**214**	P	Pn	00 24 26.2	-0.1
NGZ	**Ngauruhoe**	**3.19**	**211**	P	Pn	00 24 26.4	-0.2
CKHZ	**Cape Kidnapper**	**3.24**	**188**	P	Pn	00 24 26.5	-0.6
TUVZ	**Tukino**	**3.25**	**209**	P	Pn	00 24 26.6	-0.7
FWVZ	**Far West T-bar**	**3.27**	**210**	P	Pn	00 24 27.2	-0.5
WHVZ	**Whangaehu Hut**	**3.28**	**210**	P	Pn	00 24 27.1	-0.7
BHHZ	**Black Hill Sta**	**3.30**	**202**	P	Pn	00 24 26.7	-1.2
WNVZ	**Wahianoa**	**3.32**	**209**	P	Pn	00 24 27.3	-0.8
MOVZ	**Moawhango**	**3.33**	**207**	P	Pn	00 24 26.8	-1.4
KRHZ	**Kereru**	**3.36**	**198**	P	Pn	00 24 27.2	-1.3
PKVZ	**Pokaka**	**3.39**	**212**	P	Pn	00 24 28.4	-0.5
KAHZ	**Kahuranaki**	**3.41**	**191**	P	Pn	00 24 27.7	-1.3
MTVZ	**Mangateitei**	**3.42**	**210**	P	Pn	00 24 28.8	-0.4
PXZ	**Pawanui**	**3.64**	**190**	P	Pn	00 24 30.2	-1.6
TSZ	**Takapari Road**	**3.85**	**200**	P	Pn	00 24 32.4	-2.0
DVHZ	**Dannevirke**	**4.03**	**197**	P	Pn	00 24 32.6	-3.9

IDC ***04*** *00:24:49.3±1.6, 4°.47S×125°.54E, h425km±23km, mb2.8/3, mb1 3.1/7, mb1mx2.9/30, mbtmp3.9/7, Error ellipse: s-maj=28.4km s-min=18.7km az=83.0*
ISC 04 00:24:49.9±1.1, **4°58S**±0'.10×**125°6E**±0'.2, **h441**km, **n7, σ1s23/9, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.92**	**199**	P	**P**	**00 26 23.0**	**-0.1**
	16nm,0.3s,baz=1.8,slow=1.3,SNR=12						
BATI				S	**S**	**00 27 38.9**	**-0.2**
	6.4nm,0.3s,baz=120,slow=21,SNR=6.2						
SIJI	**Sorong**	**6.75**	**57**	P	**P**	**00 26 31.4**	**-0.5**
	2.1nm,0.3s,baz=325,slow=8.3,SNR=4.2						
FITZ	**Fitzroy Crossi**	**13.44**	**180**	P	**P**	**00 27 45.4**	**+0.9**
	0.6nm,0.3s,baz=12,slow=10,SNR=19						
FITZ				S	**S**	**00 30 06.7**	**-2.1**
	0.1nm,0.3s,baz=158,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**17.49**	**152**	P	**P**	**00 28 28.3**	**+0.6**
	0.2nm,0.3s,baz=334,slow=10,SNR=6.2						
ASAR	**Alice Springs**	**20.60**	**158**	P	**P**	**00 28 59.2**	**+1.8**
	0.3nm,0.3s,baz=344,slow=9.6,SNR=7.1						
MKAR	**Makanchi Array**	**63.84**	**328**	P	**P**	**00 34 37.7**	**0.0**
	0.6nm,0.6s,baz=114,slow=7.8,SNR=7.8						
ZALV	**Zalesovo Beam**	**67.53**	**335**	P	**P**	**00 35 00.3**	**-0.3**
	0.3nm,0.3s,baz=141,slow=5.5,SNR=2.7						

DJA ***04*** *00:33:22.9±1.5, 4°S±3'×14°0E±°, h22km±13km, M4.7/9, mB5.0/2, mb4.5/9, MLv4.8/4, Mw(mB)4.3/2*
NEIC ***04*** *00:33:23.7±2.5, 3°.46S±0'.09×139°.51E±0'.08, h45km±8km, mb4.2/13, Error ellipse: s-maj=13.6km s-min=11.7km az=152.0*
IDC ***04*** *00:33:26.9±3.3, 3°.43S×139°.80E, h53km±30km, mb3.8/7, mb1 4.1/11, mb1mx3.9/26, mbtmp4.3/11, ML4.2/2, MS3.5/12, Ms1 3.5/12, ms1mx3.3/33, Error ellipse: s-maj=27.4km s-min=18.5km az=63.0*
ISC 04 00:33:24.5±0.5, **3°63S**±0'.05×**139°71E**±0'.07, **h37**km, **n58, σ2s24/45, mb4.2**/11, **MS3.5**/9, **1C, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**1.13**	**24**	P	**Pn**	**00 33 41.6**	**-2.1**
GENI				S	**Sn**	**00 33 55.6**	**-2.4**
SMPI	**Sarmi**	**1.91**	**328**	P	**Pn**	**00 33 57.8**	**+3.3**
SRPI	**Serui, Papua**	**3.88**	**297**	P	Pn	00 34 26.4	+4.8
BAKI	**Biak**	**4.34**	**304**	P	**Pn**	**00 34 32.0**	**+4.1**
MANU	**Manus Island**	**7.81**	**79**	Pn	**Pn**	**00 35 17.0**	**+1.3**
SIJI	**Sorong**	**8.87**	**288**	P	**Pn**	**00 35 33.7**	**+3.4**
	1.8nm,0.3s,baz=182,slow=22,SNR=2.5						
SIJI				LR	LR	00 39 47.8	
	comp=Z,124nm,19.7s,baz=37,slow=43						
PMG	**Port Moresby**	**9.37**	**128**	P	**Pn**	**00 35 41.0**	**+4.0**
	1.3nm,0.3s,baz=300,slow=15,SNR=8.8						
PMG	**Port Moresby**	**9.37**	**128**	Pn	**Pn**	**00 35 39.6**	**+2.6**
PMG	**Port Moresby**	**9.37**	**128**	P	Pn	00 35 41.8	+4.8
SAUI	**Saumlaki**	**9.42**	**242**	Pn	**Pn**	**00 35 35.2**	**-2.5**
COEN	**Coen**	**10.82**	**162**	Pn	**Pn**	**00 35 58.8**	**+1.8**
MTN	**Manton Dam**	**12.48**	**222**	Pn	**Pn**	**00 36 19.2**	**-0.5**
SOEI	**Soe**	**16.50**	**248**	P	**P**	**00 37 18.1**	**+2.4**
	55nm,0.9s						
WB0	**Warramunga Arr**	**16.86**	**198**		**Pn**	**00 37 17.1**	**-0.8**
WB0				IAmb	IAmb	00 37 31.4	
	comp=Z,8.9nm,0.7s						
WR0	**Warramunga Arr**	**17.00**	**197**	Pn	**Pn**	**00 37 19.0**	**-0.5**
WR0				IAmb	IAmb	00 37 28.6	
	comp=Z,13nm,0.6s						
WRAB	**Tennant Creek**	**17.03**	**197**	P	**P**	**00 37 21.1**	**-0.3**
WB2	**Warramunga Arr**	**17.04**	**197**	Pn	**Pn**	**00 37 19.7**	**-0.3**
WRA	**Warramunga Arr**	**17.04**	**197**	P	**Pn**	**00 37 19.4**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=16,slow=13,SNR=23						
WRA				S	**Sn**	**00 40 23.8**	**-4.8**
	comp=Z,0.4nm,0.3s,baz=13,slow=23,SNR=2.9						
WRA				LR	LR	00 44 16.2	
	comp=Z,181nm,21.7s,baz=130,slow=38						
WRA	**Warramunga Arr**	**17.04**	**197**		**Pn**	**00 37 18.9**	**-1.2**
BATI	**Baumata**	**17.21**	**247**	P	**P**	**00 37 26.5**	**+3.0**
	comp=Z,4.7nm,0.3s,baz=208,slow=7.0,SNR=4.3						
CTA	**Charters Tower**	**17.56**	**159**	P	**P**	**00 37 29.3**	**+2.0**
	comp=Z,0.6nm,0.3s,baz=338,slow=12,SNR=13						
CTAO	**Charters Tower**	**17.56**	**159**	P	**P**	**00 37 30.1**	**+2.7**
FITZ	**Fitzroy Crossi**	**19.92**	**223**	P	**Pn**	**00 37 56.4**	**+1.4**
	comp=Z,5.9nm,0.5s,baz=44,slow=9.5,SNR=28						
FITZ				S	**S**	**00 41 29.2**	**-6.3**
	comp=Z,3.6nm,0.7s,baz=207,slow=11,SNR=3.1						
FITZ				LR	LR	00 46 33.7	
	comp=Z,167nm,18.4s,baz=61,slow=39						
FITZ	**Fitzroy Crossi**	**19.92**	**223**		**P**	**00 37 53.1**	**-0.1**
FITZ				IAmb	IAmb	00 38 01.3	
	comp=Z,7.8nm,0.9s						
AS31	**Alice Springs**	**20.70**	**195**		Pn	00 38 03.5	-0.7
AS31				IAmb	IAmb	00 38 18.3	
	comp=Z,5.5nm,0.6s						
ASAR	**Alice Springs**	**20.70**	**195**	P	Pn	00 38 04.3	+0.1
	comp=Z,11nm,0.8s,baz=27,slow=9.9,SNR=131						
ASAR				S	**S**	**00 41 50.3**	**-0.6**
	comp=Z,1.5nm,1.0s,baz=14,slow=30,SNR=2.6						
ASAR				LR	LR	00 46 29.8	
	comp=Z,177nm,18.1s,baz=30,slow=37						
ASAR	**Alice Springs**	**20.70**	**195**	P	**P**	**00 38 02.4**	**+0.7**
EIDS	**Eidsvold**	**24.23**	**154**	P	**P**	**00 38 39.0**	**+1.0**
EIDS				IAmb	IAmb	00 38 41.8	
	comp=Z,11nm,0.8s						
STKA	**Stephens Creek**	**28.16**	**177**	LR	LR	00 51 37.8	
	comp=Z,236nm,18.4s,baz=18,slow=38						
NWAO	**Narrogin (SRO)**	**35.94**	**213**	P	**P**	**00 40 21.3**	**-0.3**
MJAR	**Matsushiro Arr**	**39.99**	**358**	LR	LR	00 56 21.3	
	comp=Z,26nm,19.4s,baz=350,slow=35						
RPSI	**Rantau Prapat**	**41.24**	**278**	P	P	00 41 00.7	-5.7
RPSI				IAmb	IAmb	00 41 13.6	
	comp=Z,5.6nm,0.7s						
KSAR	**Wonju Array Be**	**42.31**	**346**	P	P	00 41 09.3	-5.4
KSRS	**Korea Array**	**42.32**	**346**	LR	LR	00 56 30.3	
	comp=Z,42nm,20.9s,baz=135,slow=33						
KMI	**Kunming**	**45.87**	**311**	⇑P	P	00 41 36.9	-6.9
KMI				pP	pP	00 41 43.9	-11
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CD2	**Chengdu**	**48.53**	**318**	P	P	00 41 54.2	-10
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TUWZ	**Tuamarina**	**48.55**	**146**	P	**P**	**00 42 04.4**	**+0.3**
BSWZ	**Blackbirch Sta**	**48.71**	**146**	P	**P**	**00 42 05.6**	**+0.2**
HHC	**Hu-ho-hao-te**	**51.20**	**333**	eP	P	00 42 15.3	-9.1
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
KLR	**Kul'dur**	**53.10**	**353**	LR	LR	01 03 00.3	
	comp=Z,46nm,19.2s,baz=144,slow=34						
GTA	**Gaotai**	**56.40**	**323**	eP	**P**	**00 43 04.2**	**+1.7**
GTA				pP	sP	00 43 15.1	-2.9
GTA				sP	pP	00 43 20.4	+6.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**58.97**	**334**	LR	LR	01 08 51.3	
	comp=Z,48nm,19.5s,baz=66,slow=36						
AMKA	**Amchitka**	**64.34**	**26**	P	**P**	**00 43 55.0**	**-1.3**
YAK	**Yakutsk**	**65.93**	**355**	LR	LR	01 11 30.8	
	comp=Z,23nm,18.0s,baz=90,slow=35						
WMQ	**Urumqi**	**66.34**	**321**	eP	P	00 44 01.5	-8.1
MKAR	**Makanchi Array**	**71.12**	**322**	P	**P**	**00 44 40.2**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=96,slow=8.6,SNR=23						
MKAR	**Makanchi Array**	**71.12**	**322**	P	**P**	**00 44 37.3**	**-2.0**
ZALV	**Zalesovo Beam**	**73.23**	**330**	P	**P**	**00 44 51.0**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=110,slow=6.2,SNR=5.4						
ZALV	**Zalesovo Beam**	**73.23**	**330**	P	**P**	**00 44 49.9**	**-1.7**
VNDA	**Vanda**	**74.78**	**175**	P	**P**	**00 45 01.6**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=333,slow=7.1,SNR=5.6						
VNDA				LR	LR	01 16 51.7	
	comp=Z,56nm,20.7s,baz=332,slow=35						
VNDA	**Vanda**	**74.78**	**175**	IAmb	IAmb	00 45 08.3	
	comp=Z,1.9nm,1.1s						
NRIK	**Noril'sk**	**80.88**	**344**	P	**P**	**00 45 33.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=116,slow=7.4,SNR=2.2						
NRIK				LR	LR	01 20 14.3	
	comp=Z,27nm,21.6s,baz=86,slow=35						
NRIK	**Noril'sk**	**80.88**	**344**	P	**P**	**00 45 32.7**	**-1.7**
NRIK				IAmb	IAmb	00 45 35.2	
	comp=Z,2.8nm,1.1s						
ILAR	**Eielson Array**	**86.25**	**24**	P	**P**	**00 46 00.2**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=258,slow=4.2,SNR=17						
ILAR	**Eielson Array**	**86.25**	**24**	P	**P**	**00 45 59.6**	**-2.4**
DBIC	**Dimbokro**	**144.59**	**276**	PKP	**PKPdf**	**00 52 57.4**	**-0.9**
	comp=Z,6.3nm,0.9s,baz=43,slow=2.6,SNR=5.6						
CPUP	**Villa Florida**	**145.96**	**152**	PKPbc	**PKiKP**	**00 53 02.7**	**-1.7**
	comp=Z,3.0nm,1.1s,baz=214,slow=9.6,SNR=4.8						
LPAZ	**La Paz**	**146.10**	**126**	PKPbc	**PKPab**	**00 53 03.7**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=245,slow=1.6,SNR=6.9						

KRSC 04 00:34:26.9±2.2, **49°03N**×**156°70E**, **h60**km±42km, **ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.70**	**347**	eP	Pn	00 34 56.4	+2.1
SKR				eS	Sn	00 35 16.5	+1.5
ALID	**Alaid**	**1.99**	**338**	eP	Pn	00 34 57.3	-1.0
PAU	**Pauzhetka**	**2.44**	**2**	eP	Pn	00 35 06.7	+2.3
PAU				eS	Sn	00 35 35.4	+2.3
KDTR	**Khodutka, Kamc**	**2.92**	**17**	eP	Pn	00 35 14.4	+3.6
KDTR				eS	Sn	00 35 48.0	+3.3
MIPR	**Malaya Ipel'ka**	**3.25**	**1**	eP	Pn	00 35 17.2	+1.8
ASAK	**Asacha**	**3.45**	**12**	eP	Pn	00 35 22.5	+4.4
ASAK				eS	Sn	00 36 02.7	+5.0
MTVR	**Mutnovka**	**3.59**	**15**	eS	Sn	00 36 05.5	+4.3
RUS	**Russkaya**	**3.60**	**18**	eP	Pn	00 35 23.8	+3.7
RUS				eS	Sn	00 36 04.1	+2.8
GRL	**Gorelyy**	**3.63**	**13**	eP	Pn	00 35 24.7	+4.0
GRL				eS	Sn	00 36 06.7	+4.3
UGLR	**Uglovaya**	**4.40**	**17**	eP	Pn	00 35 35.5	+4.4
KOK	**Koryaka**	**4.44**	**15**	eP	Pn	00 35 36.0	+4.3
SMAR	**Somma**	**4.44**	**16**	eP	Pn	00 35 35.8	+3.9
SDLR	**Sedlovina**	**4.47**	**17**	eP	Pn	00 35 35.7	+3.5
SPN	**Mys Shipunski**	**4.58**	**26**	eP	Pn	00 35 35.9	+2.3
SPN				eS	Sn	00 36 27.8	+2.4
MKZ	**Mys Kozlova**	**6.35**	**27**	eP	Pn	00 36 01.0	+3.2

IDC ***04*** *00:41:10.5±7.2, 6°.45S×147°.76E, h73km±52km, mb3.7/3, mb1 3.8/5, mb1mx3.4/39, mbtmp3.9/5, ML3.6/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/31, Error ellipse: s-maj=60.9km s-min=49.9km az=74.0*
ISC 04 00:41:13.6±2.6, **6°6S**±0'.2×**147°7E**±0'.4, **h100**km, **n7, σ1s77/7, mb3.8**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.84**	**191**	P	**Pn**	**00 41 55.8**	**-1.5**
	7.2nm,0.3s,baz=27,slow=7.8,SNR=7.4						
PMG				S	**Sn**	**00 42 30.7**	**-0.3**
	5.1nm,0.3s,baz=241,slow=22,SNR=4.0						
WRA	**Warramunga Arr**	**18.57**	**223**	P	**P**	**00 45 23.3**	**+0.4**
	0.2nm,0.3s,baz=51,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**21.55**	**217**	P	**P**	**00 45 56.3**	**+1.2**
	2.7nm,0.6s,baz=52,slow=8.7,SNR=12						
FITZ	**Fitzroy Crossi**	**24.38**	**240**	P	**P**	**00 46 21.9**	**-0.7**
	4.8nm,1.0s,baz=69,slow=10,SNR=6.9						
STKA	**Stephens Creek**	**25.79**	**192**	P	**P**	**00 46 38.0**	**+2.7**
	1.9nm,0.7s,baz=27,slow=12,SNR=4.3						
MJAR	**Matsushiro Arr**	**43.83**	**349**	LR	LR	01 05 06.0	
	comp=Z,51nm,21.9s,baz=265,slow=33						
TORD	**Torodi Ar. Bea**	**145.93**	**284**	PKPbc	**PKPdf**	**01 00 40.8**	**-1.0**
	0.3nm,0.6s,baz=68,slow=2.5,SNR=1.7						

TUL ***04*** *00:48:01.8±1.1, 36°.938N±0°.008×97°.63W±0°.01, h5km±6km, ML3.0, mb_Lg3.0/91(NEIC), Error ellipse: s-maj=1.5km s-min=1.0km az=133.0*
ANF ***04*** *00:48:02.4±0.3, 36°.91N×97°.65W, h5km, ML3.5/10, Error ellipse: s-maj=3.2km s-min=2.9km az=162.0*
NEIC ***04*** *00:48:02.2±0.7, 36°.93N±0°.01×97°.622W±0°.009, h4km±6km, Error ellipse: s-maj=2.0km s-min=0.7km az=206.0*
ISC 04 00:48:02.1±1.0, **36°93N**±0°.02×**97°63W**±0°.02, **h5**km±10km, **n83, σ0s72/61, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.15**	**55**	Pg	**Pg**	**00 48 05.1**	**0.0**
KAN13				Sg	**Sg**	**00 48 07.4**	**+0.3**
GC02	**Grant County #**	**0.20**	**248**	Pg	**Pg**	**00 48 05.8**	**-0.2**
GC02				Sg	**Sg**	**00 48 09.2**	**+0.6**
KAN09	**Caldwell North**	**0.21**	**2**	Pg	**Pg**	**00 48 06.2**	**-0.1**
KAN09				Sg	**Sg**	**00 48 09.2**	**+0.2**
KAN01	**Argonia South**	**0.25**	**335**	Pg	**Pg**	**00 48 06.9**	**0.0**
KAN01				Sg	**Sg**	**00 48 10.5**	**+0.3**
KAN05	**Bluff City Nor**	**0.27**	**313**	Pg	**Pg**	**00 48 07.2**	**0.0**
KAN05				Sg	**Sg**	**00 48 11.0**	**+0.2**
KAN08	**Anthony NE Sta**	**0.41**	**318**	Pg	**Pg**	**00 48 09.9**	**-0.1**
KAN08				Sg	**Sg**	**00 48 15.6**	**+0.4**
KAN10	**Anthony SW Sta**	**0.42**	**298**	Pg	**Pg**	**00 48 10.3**	**+0.1**
KAN10				Sg	**Sg**	**00 48 16.2**	**+0.5**
KAN12	**Harper NE Stat**	**0.47**	**322**	Pg	**Pg**	**00 48 11.0**	**-0.2**
KAN12				Sg	**Sg**	**00 48 17.6**	**+0.2**
OK032	**Salt Plains WL**	**0.48**	**255**	Pg	**Pg**	**00 48 11.3**	**0.0**
OK032				Sg	**Sg**	**00 48 18.0**	**+0.3**
CROK	**Carrier**	**0.51**	**214**	Pg	**Pg**	**00 48 12.0**	**+0.1**
CROK				Sg	**Sg**	**00 48 19.1**	**+0.7**
T35A	**Sooner Cattle**	**0.90**	**90**		**Pg**	**00 48 18.8**	**-0.5**
T35A				Sg	**Sg**	**00 48 30.4**	**-0.4**
T35B	**Sooner Cattle**	**0.90**	**90**	P	**Pg**	**00 48 18.9**	**-0.4**
	baz=272						
T35B				S	**Sg**	**00 48 30.5**	**-0.3**
	baz=272						
T35B	**Sooner Cattle**	**0.90**	**90**	P		00 48 18.9	
	baz=272						
T35B				S		00 48 30.5	
	baz=272						
QUOK	**Quay**	**1.06**	**135**	Pg	**Pg**	**00 48 22.0**	**-0.3**
QUOK				Sg	**Sg**	**00 48 35.9**	**-0.1**
U32A	**Winter Ranch,**	**1.23**	**244**		**Pg**	**00 48 25.1**	**-0.5**
U32A					**Pb**	**00 48 25.3**	**-0.6**
U32A	**Winter Ranch,**	**1.23**	**244**	P	**Pg**	**00 48 24.9**	**-0.8**
	baz=63						
U32A				S	**Sg**	**00 48 41.6**	**-0.1**
	baz=63						
U32A	**Winter Ranch,**	**1.23**	**244**	P		00 48 24.9	
	baz=63						
U32A				S		00 48 41.6	
	baz=63						
OKCFA	**Oklahoma City**	**1.52**	**175**	P	**Pn**	**00 48 30.0**	**+0.1**
	baz=354,SNR=5.3						
OKCFA				S	**Sg**	**00 48 51.1**	**+0.3**
	baz=354						
OKCFA	**Oklahoma City**	**1.52**	**175**	P		00 48 30.0	
	baz=354,SNR=5.3						
OKCFA				S		00 48 51.1	
	baz=354						
R32A	**Long Quarter,**	**1.72**	**330**	P	**Pn**	**00 48 32.7**	**-0.1**
	baz=150,SNR=16						
R32A				S	**Sb**	**00 48 55.9**	**-0.4**
	baz=150						
R32A	**Long Quarter,**	**1.72**	**330**	P	

	comp=Z,17nm,1.0s								
K31A	**O'Neill**	5.75	352	IAmb_Lg			00 51 14.6		
	comp=Z,26nm,0.8s								
PBMO	**Poplar Bluff**	5.78	89	IAmb_Lg			00 51 05.1		
	comp=Z,21nm,0.7s								
HBAR	**Harrisburg**	5.80	102	IAmb_Lg			00 51 02.5		
	comp=Z,18nm,0.8s								
FVM	**French Village**	5.83	77	IAmb_Lg			00 51 05.3		
	comp=Z,20nm,0.8s								
SCIA	**State Center**	6.03	33	IAmb_Lg			00 51 25.4		
	comp=Z,25nm,0.8s								
SLM	**Saint Louis**	6.10	72	IAmb_Lg			00 51 12.4		
	comp=Z,20nm,1.0s								
435B	**Jarrell**	6.13	180	IAmb_Lg			00 51 24.1		
	comp=Z,18nm,0.7s								
N41A	**Harden Midland**	6.50	52	IAmb_Lg			00 51 30.3		
	comp=Z,28nm,0.8s								
143A	**Socs Landing,**	6.63	128	IAmb_Lg			00 51 51.8		
	comp=Z,27nm,0.9s								
342A	**Flagon Creek P**	7.07	140	IAmb_Lg			00 51 42.3		
	comp=Z,18nm,0.8s								
L40A	**Anamosa**	7.13	42	IAmb_Lg			00 51 51.8		
	comp=Z,20nm,0.8s								
PHWY	**Pilot Hill**	7.49	308	IAmb_Lg			00 51 59.8		
	comp=Z,11nm,0.8s								
O44A	**Mansfield**	7.87	63	IAmb_Lg			00 52 12.3		
	comp=Z,20nm,0.8s								
PLAL	**Pickwick Lake**	7.99	101	IAmb_Lg			00 52 10.7		
	comp=Z,19nm,0.9s								
USIN	**University of**	7.99	80	IAmb_Lg			00 52 16.0		
	comp=Z,23nm,0.9s								
JFWS	**Jewell Farm**	8.24	41	IAmb_Lg			00 52 42.2		
	comp=Z,19nm,0.8s								
MNTX	**Cornudas Mount**	8.26	233	IAmb_Lg			00 52 31.0		
	comp=Z,10nm,0.8s								
T47A	**Sharon Grove**	8.43	86	IAmb_Lg			00 52 32.7		
	comp=Z,18nm,1.1s								
P46A	**Rosedale**	8.63	69	IAmb_Lg			00 52 39.6		
	comp=Z,19nm,0.8s								
Z47A	**Carrollton**	8.67	113	IAmb_Lg			00 52 41.9		
	comp=Z,18nm,0.9s								
RSSD	**Black Hills**	8.68	328	IAmb_Lg			00 52 54.0		
	comp=Z,8.7nm,0.7s								
MVCO	**Mesa Verde**	8.69	275	IAmb_Lg			00 53 00.9		
	comp=Z,14nm,1.1s								
RWWY	**Rawlins**	8.82	306	IAmb_Lg			00 52 57.1		
	comp=Z,16nm,0.8s								
O20A	**White River Ci**	8.91	294	IAmb_Lg			00 53 00.9		
	comp=Z,11nm,0.8s								
PV02	**Paradox Valley**	8.91	282	IAmb_Lg			00 53 06.1		
	comp=Z,11nm,1.1s								
F33A	**5 Mile Ranch,**	8.96	6	IAmb_Lg			00 53 03.9		
	comp=Z,14nm,0.8s								
PV13	**Radium Mtn., P**	8.97	281	IAmb_Lg			00 52 59.1		
	comp=Z,9.6nm,1.0s								
PV11	**David Mesa, Pa**	9.03	282	IAmb_Lg			00 52 57.2		
	comp=Z,15nm,1.0s								
BLO	**Bloomington**	9.04	72	IAmb_Lg			00 52 53.7		
	comp=Z,19nm,0.9s								
PV04	**Paradox Valley**	9.06	283	IAmb_Lg			00 53 09.0		
	comp=Z,13nm,1.1s								
WCI	**Wyandotte Cave**	9.09	78	IAmb_Lg			00 52 51.6		
	comp=Z,13nm,0.7s								
PV20	**West Nyswonger**	9.11	282	IAmb_Lg			00 53 02.1		
	comp=Z,11nm,0.9s								
PV05	**Paradox Valley**	9.19	281	IAmb_Lg			00 53 12.6		
	comp=Z,11nm,1.0s								
121A	**Cookes Peak, D**	9.44	245	IAmb_Lg			00 52 57.6		
	comp=Z,9.7nm,0.8s								
F36A	**Milaca**	9.44	18	IAmb_Lg			00 53 21.1		
	comp=Z,18nm,1.0s								
P48A	**Milroy**	9.93	72	IAmb_Lg			00 53 23.3		
	comp=Z,12nm,0.8s								

IDC ***04*** *00:49:58.1±0.6,36˚.18N×97˚.56W,h0km,mb3.9/10, mb1 4.0/19,mb1mx3.8/56,mbtmp3.8/19,ML3.4/8,MS2.9/5, Ms1 2.9/5,ms1mx2.5/47,Error ellipse: s-maj=10.7km s-min=9.1km az=152.0*

ANF ***04*** *00:49:59.2±0.2,36˚.13N×97˚.55W,h5km,ML4.7/20,Error ellipse: s-maj=2.1km s-min=1.7km az=95.0*

TUL ***04*** *00:49:59.2±1.5,36˚.12N±0˚.02×97˚.56W±0˚.06,h5km±7km, ML4.0,mb_Lg4.0/149(NEIC),Mwr3.7/28(NEIC),Error ellipse: s-maj=6.8km s-min=2.3km az=67.0*

NEIC ***04*** *00:49:59.3,36˚.14N×97˚.56W,h3km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-3.89; $M_{\theta\theta}$3.50; $M_{\phi\phi}$0.40; $M_{r\theta}$-1.00; $M_{\theta\phi}$0.33; $M_{r\phi}$0.20; Fault plane solution: M_o3.86000×10^{14} NP1:φ88.09000°, δ52.48000°,λ-85.13000°. NP2:φ260.13000°,δ37.78000°, λ-96.31000°. Principal axes: T 3.6574, Plg7.0000°, Azm175.0000°; N 0.3842, Plg4.0000°, Azm265.0000°; P -4.0416, Plg82.0000°, Azm23.0000°;*

NEIC ***04*** *00:49:59.1±1.6,36˚.14N±0˚.02×97˚.55W±0˚.05,h2km±7km Error ellipse: s-maj=7.1km s-min=0.5km az=65.0*

ISC 04 00:49:59.1±1.0,36˚.13N±0˚.02×97˚.56W±0˚.03,h7km±7km, n203,σ1§06/199,mb4.0/9,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.35**	**165**	Pg	**Pg**	**00 50 06.0**	**+0.1**
OK029				Sg	**Sg**	**00 50 10.8**	**+0.3**
BCOK	**Bluff Creek, N**	**0.48**	**185**		**Pg**	**00 50 08.3**	**0.0**
BCOK				Sg	**Sg**	**00 50 14.9**	**+0.4**
CROK	**Carrier**	**0.50**	**318**	Pg	**Pg**	**00 50 09.3**	**+0.5**
CROK				Sg	**Sg**	**00 50 16.5**	**+1.1**
OK009	**Oakdale Elemen**	**0.56**	**168**		**Pg**	**00 50 10.0**	**+0.1**
OK009				Sg	**Sg**	**00 50 18.0**	**+0.7**
OK005	**Luther M Schoo**	**0.56**	**148**		**Pg**	**00 50 09.6**	**-0.4**
OK025	**Westminster Rd**	**0.58**	**162**		**Pg**	**00 50 10.4**	**+0.1**
OK025				IAmb_Lg		00 50 17.6	
	comp=Z,3μm,0.9s						
OK001	**Jones High Sch**	**0.61**	**159**	Pg	**Pg**	**00 50 10.9**	**0.0**
OK031	**S. Brethren Rd**	**0.61**	**107**		**Pg**	**00 50 11.1**	**+0.2**
OK031				IAmb_Lg		00 50 19.1	
	comp=Z,1μm,0.8s						
OK030	**Cody Creek RV**	**0.66**	**108**		**Pg**	**00 50 12.1**	**+0.2**
OK030				IAmb_Lg		00 50 20.9	
	comp=Z,1μm,0.8s						
QUOK	**Quay**	**0.69**	**87**		**Pg**	**00 50 12.7**	**+0.2**
OKCFA	**Oklahoma City**	**0.72**	**173**		**Pg**	**00 50 12.8**	**-0.2**
OKCFA				IAmb_Lg		00 50 21.8	
	comp=Z,2μm,1.0s						
OKCFA	**Oklahoma City**	**0.72**	**173**	P	**Pg**	**00 50 12.8**	**-0.2**
	baz=353,SNR=64						
OKCFA				S	**Sg**	**00 50 22.5**	**+0.1**
	baz=353						
OKCFA	**Oklahoma City**	**0.72**	**173**	P		00 50 12.8	
	baz=353,SNR=64						
OKCFA				S		00 50 22.5	
	baz=353						
OKCSW	**OKLAHOMA CITY**	**0.73**	**172**		**Pg**	**00 50 13.0**	**-0.2**
GC02	**Grant County #**	**0.76**	**342**	Pg	**Pg**	**00 50 13.9**	**+0.2**
OK032	**Salt Plains WL**	**0.85**	**322**		**Pg**	**00 50 15.5**	**+0.1**
KAN13	**South Haven SW**	**0.88**	**4**	Pg	**Pg**	**00 50 16.3**	**+0.2**
FNO	**Franklin**	**0.88**	**171**		**Pg**	**00 50 16.3**	**+0.2**
FNO				IAmb_Lg		00 50 27.6	
	comp=Z,2μm,1.0s						
KAN09	**Caldwell North**	**1.00**	**357**	Pg	**Pg**	**00 50 18.5**	**+0.1**
KAN05	**Bluff City Nor**	**1.01**	**346**		**Pg**	**00 50 18.5**	**+0.1**
KAN01	**Argonia South**	**1.03**	**351**		**Pg**	**00 50 18.9**	**-0.1**
KAN10	**Anthony SW Sta**	**1.08**	**337**		**Pg**	**00 50 19.5**	**-0.3**
KAN08	**Anthony NE Sta**	**1.14**	**343**		**Pg**	**00 50 20.9**	**-0.1**
KAN08				IAmb_Lg		00 50 38.5	
	comp=Z,827nm,0.9s						
T35A	**Sooner Cattle**	**1.15**	**47**	Pg	**Pg**	**00 50 21.1**	**-0.1**
T35B	**Sooner Cattle**	**1.15**	**47**	P	**Pg**	**00 50 21.1**	**-0.2**
	baz=227						
T35B				S	**Sg**	**00 50 36.1**	**-0.1**
	baz=227						
T35B	**Sooner Cattle**	**1.15**	**47**	P		00 50 21.1	
	baz=227						
T35B				S		00 50 36.1	
	baz=227						
U32A	**Winter Ranch,**	**1.19**	**282**	Pg	**Pg**	**00 50 21.8**	**-0.2**
U32A	**Winter Ranch,**	**1.19**	**282**	P	**Pg**	**00 50 21.4**	**-0.6**
	baz=102						
U32A	**Winter Ranch,**	**1.19**	**282**	P		00 50 21.4	
	baz=102						
KAN12	**Harper NE Stat**	**1.21**	**343**		**Pg**	**00 50 22.2**	**-0.2**
TUL1	**Leonard**	**1.45**	**98**	P	**Pn**	**00 50 25.5**	**-0.3**
	baz=279,SNR=126						
TUL1				S	**Sb**	**00 50 45.4**	**+0.1**
	baz=279						
TUL1	**Leonard**	**1.45**	**98**	P		00 50 25.4	
	baz=279,SNR=91						
TUL1				S		00 50 45.9	
	baz=279						
TUL1	**Leonard**	**1.45**	**98**	P		00 50 25.5	
	baz=279,SNR=126						
TUL1				S		00 50 45.4	
	baz=279						
X34A	**Smith Ranch, M**	**1.54**	**188**	Pn	**Pn**	**00 50 27.8**	**+0.7**
WMOK	**Wichita Mounta**	**1.71**	**216**	Pn	**Pn**	**00 50 29.6**	**+0.1**
WMOK	**Wichita Mounta**	**1.71**	**216**	P	**Pn**	**00 50 29.8**	**+0.4**
	baz=35						
WMOK				S	**Sn**	**00 50 52.7**	**+1.1**
	baz=35						
WMOK	**Wichita Mounta**	**1.71**	**216**	P		00 50 29.8	
	baz=35,SNR=46						
WMOK				S		00 50 52.1	
	baz=35						
WMOK	**Wichita Mounta**	**1.71**	**216**	P		00 50 29.8	
	baz=35						
WMOK				S		00 50 52.7	
	baz=35						
X37A	**Clayton**	**2.36**	**130**	Pn	**Pn**	**00 50 39.5**	**+1.1**
X37A				IAmb_Lg		00 51 20.4	
	comp=Z,652nm,1.0s						
X37A	**Clayton**	**2.36**	**130**	P	**Pn**	**00 50 39.3**	**+1.0**
	baz=311,SNR=29						
X37A				S	**Sn**	**00 51 09.4**	**+1.8**
	baz=311						
X37A	**Clayton**	**2.36**	**130**	P		00 50 39.3	
	baz=311,SNR=29						
X37A				S		00 51 09.4	
	baz=311						
R32A	**Long Quarter,**	**2.46**	**338**	Pn	**Pb**	**00 50 42.0**	**-1.8**
R32A				IAmb_Lg		00 51 22.9	
	comp=Z,403nm,0.9s						
R32A	**Long Quarter,**	**2.46**	**338**	P	**Pn**	**00 50 40.6**	**+0.8**
	baz=158,SNR=76						
R32A				S	**Sn**	**00 51 12.0**	**+1.8**
	baz=158						
R32A	**Long Quarter,**	**2.46**	**338**	P		00 50 40.6	
	baz=158,SNR=76						
R32A				S		00 51 12.0	
	baz=158						
U38A	**Gravette**	**2.58**	**82**	P	**Pn**	**00 50 42.2**	**+0.8**
	baz=264,SNR=16						
U38A	**Gravette**	**2.58**	**82**	P		00 50 42.2	
	baz=264,SNR=16						
Z35A	**Perchaven, San**	**2.81**	**175**		**Pn**	**00 50 45.5**	**+1.0**
Z35A	**Perchaven, San**	**2.81**	**175**	P	**Pn**	**00 50 45.5**	**+1.0**
	baz=355,SNR=16						
Z35A				S	**Sn**	**00 51 20.2**	**+1.6**
	baz=355						
Z35A	**Perchaven, San**	**2.81**	**175**	P		00 50 45.5	
	baz=355,SNR=16						
Z35A				S		00 51 20.2	
	baz=355						
HHAR	**Hobbs**	**2.93**	**86**	Pn	**Pn**	**00 50 46.5**	**+0.2**
HHAR				IAmb_Lg		00 51 38.1	
	comp=Z,291nm,0.7s						
KSU1	**Kansas State U**	**3.06**	**14**	Pn	**Pn**	**00 50 50.0**	**+2.1**
KSU1				IAmb_Lg		00 51 40.7	
	comp=Z,387nm,0.8s						
KSU1	**Kansas State U**	**3.06**	**14**	P	**Pn**	**00 50 48.4**	**+0.4**
	baz=194,SNR=7.0						
KSU1	**Kansas State U**	**3.06**	**14**	Pn		00 50 49.5	
	baz=194,SNR=31						
KSU1				Pb		00 50 55.8	
	baz=194						
KSU1	**Kansas State U**	**3.06**	**14**	P		00 50 48.4	
	baz=194,SNR=7.0						
CBKS	**Cedar Bluff**	**3.19**	**328**	Pn	**Pn**	**00 50 50.6**	**+0.9**
CBKS				IAmb_Lg		00 51 44.1	
	comp=Z,298nm,0.9s						
CBKS	**Cedar Bluff**	**3.19**	**328**	P	**Pn**	**00 50 50.3**	**+0.5**
	baz=147,SNR=9.1						
CBKS	**Cedar Bluff**	**3.19**	**328**	Pn		00 50 51.7	
	baz=147,SNR=21						
CBKS				Pb		00 50 58.1	
	baz=147						
CBKS				Sb		00 51 40.6	
	baz=147						
CBKS	**Cedar Bluff**	**3.19**	**328**	P		00 50 50.3	
	baz=147,SNR=9.1						
W39A	**Magazine**	**3.21**	**106**	Pn	**Pn**	**00 50 51.0**	**+0.9**
W39A				IAmb_Lg		00 51 44.1	
	comp=Z,394nm,0.8s						
W39A	**Magazine**	**3.21**	**106**	P	**Pn**	**00 50 50.6**	**+0.5**
	baz=288,SNR=9.8						
W39A				S	**Sn**	**00 51 30.4**	**+1.7**
	baz=288						
W39A	**Magazine**	**3.21**	**106**	P		00 50 50.7	
	baz=288,SNR=5.3						
W39A				S		00 51 30.6	
	baz=288						
W39A	**Magazine**	**3.21**	**106**	P		00 50 50.6	
	baz=288,SNR=9.8						
W39A				S		00 51 30.4	
	baz=288						
Z38A	**Mt. Pleasant**	**3.57**	**143**		**Pn**	**00 50 55.4**	**+0.5**
Z38A	**Mt. Pleasant**	**3.57**	**143**	P	**Pn**	**00 50 55.5**	**+0.6**
	baz=324						
Z38A				S	**Sn**	**00 51 38.1**	**+0.8**
	baz=324						
Z38A	**Mt. Pleasant**	**3.57**	**143**	P		00 50 55.5	
	baz=324						
Z38A				S		00 51 38.1	
	baz=324						
AMTX	**Amarillo**	**3.58**	**251**	Pn	**Pn**	**00 50 56.2**	**+1.0**
AMTX				IAmb_Lg		00 51 55.1	
	comp=Z,229nm,0.8s						
AMTX	**Amarillo**	**3.58**	**251**	P	**Pn**	**00 50 56.2**	**+1.0**
	baz=69,SNR=10						
AMTX	**Amarillo**	**3.58**	**251**	P		00 50 56.3	
	baz=69						
AMTX	**Amarillo**	**3.58**	**251**	P		00 50 56.2	
	baz=69,SNR=10						
MIAR	**Mount Ida**	**3.62**	**115**	Pn	**Pn**	**00 50 56.9**	**+1.2**
MIAR				IAmb_Lg		00 52 00.2	
	comp=Z,444nm,0.8s						
MIAR	**Mount Ida**	**3.62**	**115**	P	**Pn**	**00 50 56.7**	**+1.0**
	baz=297,SNR=12						
MIAR				S	**Sn**	**00 51 40.4**	**+1.6**
	baz=297						
MIAR	**Mount Ida**	**3.62**	**115**	P		00 50 56.7	
	baz=297,SNR=6.6						
MIAR				S		00 51 40.0	
	baz=297						
MIAR	**Mount Ida**	**3.62**	**115**	P		00 50 56.7	
	baz=297,SNR=12						
MIAR				S		00 51 40.4	
	baz=297						
S39A	**Bolivar**	**3.74**	**64**	Pn	**Pn**	**00 50 58.2**	**+1.0**
S39A				IAmb_Lg		00 51 58.4	
	comp=Z,430nm,0.8s						
U40A	**Yellville**	**3.81**	**85**	Pn	**Pn**	**00 50 58.1**	**-0.2**
U40A				IAmb_Lg		00 52 08.7	
	comp=Z,572nm,0.8s						
U40A	**Yellville**	**3.81**	**85**	P		00 50 58.8	
	baz=268,SNR=6.5						
ABTX	**Abilene, Hawle**	**3.90**	**207**	Pn	**Pn**	**00 50 59.9**	**+0.4**
ABTX				IAmb_Lg		00 52 07.7	
	comp=Z,222nm,0.9s						
ABTX	**Abilene, Hawle**	**3.90**	**207**	Pb		00 51 07.7	
	baz=26,SNR=26						
ABTX				S		00 51 44.9	
	baz=26						
WHTX	**Lake Whitney,**	**4.13**	**179**		**Pn**	**00 51 02.8**	**+0.1**
WHTX				IAmb_Lg		00 52 15.0	
	comp=Z,229nm,1.1s						
WHTX	**Lake Whitney,**	**4.13**	**179**	P	**Pn**	**00 51 03.2**	**+0.5**
	baz=359,SNR=14						
WHTX	**Lake Whitney,**	**4.13**	**179**	P		00 51 03.3	
	baz=359,SNR=8.7						
WHTX				Sb		00 52 04.6	
	baz=359						
WHTX	**Lake Whitney,**	**4.13**	**179**	P		00 51 03.2	
	baz=359,SNR=14						
X40A	**Basin Creek Fa**	**4.20**	**112**	Pn	**Pn**	**00 51 05.2**	**+1.5**
X40A				IAmb_Lg		00 52 16.5	
	comp=Z,546nm,0.7s						
X40A	**Basin Creek Fa**	**4.20**	**112**	P		00 51 04.8	
	baz=294						
237A	**Washetta, Mont**	**4.37**	**160**		**Pn**	**00 51 06.0**	**0.0**
237A				IAmb_Lg		00 52 26.7	
	comp=Z,322nm,0.9s						
237A	**Washetta, Mont**	**4.37**	**160**	P	**Pn**	**00 51 06.0**	**0.0**
	baz=341,SNR=14						
237A				S		00 51 56.4	
	baz=341						
237A	**Washetta, Mont**	**4.37**	**160**	P		00 51 06.0	
	baz=341,SNR=14						
237A				S		00 51 56.4	
	baz=341						
WHAR	**Wooly Hollow**	**4.37**	**100**	Pn	**Pn**	**00 51 06.2**	**+0.2**
WHAR				IAmb_Lg		00 52 16.0	
	comp=Z,463nm,0.9s						
MGMO	**Mountain Grove**	**4.38**	**75**	Pn	**Pn**	**00 51 07.0**	**+1.0**
MGMO				IAmb_Lg		00 52 20.5	
	comp=Z,304nm,0.8s						
WLAR	**White Oak Lake**	**4.39**	**122**		**Pn**	**00 51 07.0**	**+0.7**
WLAR				IAmb_Lg		00 52 24.7	
	comp=Z,259nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.42**	**92**	Pn	**Pn**	**00 51 06.1**	**-0.5**
FCAR				IAmb_Lg		00 52 21.4	
	comp=Z,278nm,0.8s						
W41B	**Gary Mavity, V**	**4.43**	**101**	P	**Pn**	**00 51 07.0**	**+0.2**
	baz=284,SNR=9.7						
W41B	**Gary Mavity, V**	**4.43**	**101**	P		00 51 07.3	
	baz=284						
W41B				S		00 51 57.6	
	baz=284						
W41B				Sb		00 52 16.0	
	baz=284						
W41B	**Gary Mavity, V**	**4.43**	**101**	P		00 51 07.0	
	baz=284,SNR=9.7						
N33A	**J Bar K, Exete**	**4.60**	**1**		**Pn**	**00 51 08.5**	**-0.6**
N33A				IAmb_Lg		00 52 34.0	
	comp=Z,290nm,0.8s						
P38A	**Dawn**	**4.72**	**41**	IAmb_Lg		00 52 30.8	
	comp=Z,346nm,0.8s						
R40A	**Maddies Statio**	**4.74**	**61**		**Pn**	**00 51 11.5**	**+0.4**
R40A	**Maddies Statio**	**4.74**	**61**	P	**Pn**	**00 51 11.7**	**+0.6**
	baz=244,SNR=15						
R40A	**Maddies Statio**	**4.74**	**61**	P		00 51 11.7	
	baz=244,SNR=15						
MSTX	**Muleshoe**	**4.79**	**245**		**Pn**	**00 51 12.1**	**+0.3**
MSTX	**Muleshoe**	**4.79**	**245**	P		00 51 12.2	
	baz=62						
MSTX				Sb		00 52 26.1	
	baz=62						
Z41A	**Richland Creek**	**4.86**	**125**	S		00 52 08.4	
	baz=308						
KSCO	**Kaye Shedlock'**	**4.94**	**307**	Pn	**Pn**	**00 51 16.5**	**+2.5**
KSCO	**Kaye Shedlock'**	**4.94**	**307**	P		00 51 16.3	
	baz=124						
N35A	**Tabor**	**4.96**	**17**		**Pn**	**00 51 14.3**	**+0.3**
NATX	**Nacogdoches**	**4.98**	**150**	IAmb_Lg		00 52 47.4	
	comp=Z,188nm,1.0s						
NATX	**Nacogdoches**	**4.98**	**150**	S		00 52 11.3	
	baz=332						
LCAR	**Lake Charles**	**5.19**	**89**		**Pn**	**00 51 17.1**	**-0.1**
LCAR				IAmb_Lg		00 52 47.1	
	comp=Z,226nm,0.9s						
BGNE	**Belgrade**	**5.29**	**355**		**Pn**	**00 51 18.7**	**+0.1**
BGNE	**Belgrade**	**5.29**	**355**	P	**Pn**	**00 51 18.7**	**+0.1**
	baz=175						
BGNE	**Belgrade**	**5.29**	**355**	P		00 51 18.8	
	baz=175						
BGNE	**Belgrade**	**5.29**	**355**	P		00 51 18.7	
	baz=175						
435B	**Jarrell**	**5.34**	**180**		**Pn**	**00 51 19.4**	**+0.1**
435B				IAmb_Lg		00 53 02.3	
	comp=Z,228nm,0.7s						
435B	**Jarrell**	**5.34**	**180**	P	**Pn**	**00 51 19.5**	**+0.2**
	baz=0.2,SNR=8.3						
435B	**Jarrell**	**5.34**	**180**	P		00 51 19.4	
	baz=0.2						
435B				S		00 52 20.5	
	baz=0.2						
435B	**Jarrell**	**5.34**	**180**	P		00 51 19.5	
	baz=0.2,SNR=8.3						
CCM	**Cathedral Cave**	**5.40**	**67**	Pn	**Pn**	**00 51 20.4**	**+0.2**
CCM				IAmb_Lg		00 52 51.5	
	comp=Z,222nm,0.8s						
P40A	**Paris**	**5.53**	**50**		**Pn**	**00 51 23.2**	**+1.3**
T25A	**Trinidad**	**5.60**	**282**	IAmb_Lg		00 53 03.5	
	comp=Z,218nm,1.0s						
T25A	**Trinidad**	**5.60**	**282**	P		00 51 23.7	
	baz=98						
HBAR	**Harrisburg**	**5.64**	**94**	Pn	**Pn**	**00 51 26.4**	**+3.0**
X43A	**Marvell**	**5.69**	**104**	S		00 52 31.6	
	baz=288						
JCT	**Junction City**	**5.94**	**199**	Pn	**Pn**	**00 51 27.2**	**-0.4**
JCT				IAmb_Lg		00 53 11.8	
	comp=Z,322nm,0.8s						
JCT	**Junction City**	**5.94**	**199**	P		00 51 27.8	
	baz=18						
OGNE	**Ogallala**	**5.95**	**325**		**Pn**	**00 51 29.0**	**+1.2**
OGNE				IAmb_Lg		00 53 19.1	
	comp=Z,202nm,0.7s						
OGNE	**Ogallala**	**5.95**	**325**	P		00 51 29.2	
	baz=143						
OGNE				S		00 52 36.1	
	baz=143						
FVM	**French Village**	**6.00**	**70**	IAmb_Lg		00 53 10.8	
	comp=Z,169nm,0.7s						
143A	**Socs Landing,**	**6.13**	**122**	IAmb_Lg		00 53 21.0	
	comp=Z,247nm,0.8s						
MET	**Memphis--Engin**	**6.29**	**97**	IAmb_Lg		00 53 20.1	
	comp=Z,259nm,0.7s						
SLM	**Saint Louis**	**6.34**	**65**	IAmb_Lg		00 53 26.6	
	comp=Z,218nm,0.8s						
PENMO	**Penman**	**6.42**	**85**	IAmb_Lg		00 53 27.1	
	comp=Z,268nm,0.8s						
LNXT	**Lenox**	**6.53**	**88**	IAmb_Lg		00 53 37.4	
	comp=Z,320nm,0.7s						
HALT	**Halls**	**6.67**	**89**	IAmb_Lg		00 53 46.9	
	comp=Z,244nm,0.7s						
SCIA	**State Center**	**6.68**	**29**	P		00 51 38.7	
	baz=212						
OXF	**Oxford**	**6.86**	**101**		**Pn**	**00 51 39.3**	**-0.8**
OXF				IAmb_Lg		00 53 50.5	
	comp=Z,171nm,0.9s						
OXF	**Oxford**	**6.86**	**101**	P		00 51 39.1	
	baz=286,SNR=5.3						
GDL2	**Guadalupe Moun**	**6.87**	**237**	Pn	**Pn**	**00 51 40.9**	**+0.5**
SIUC	**Southern Illin**	**6.87**	**74**	IAmb_Lg		00 53 34.0	
	comp=Z,271nm,0.8s						
W45A	**Hickory Valley**	**6.89**	**96**		**Pn**	**00 51 40.5**	**-0.1**
W45A				IAmb_Lg		00 53 39.3	
	comp=Z,236nm,0.8s						
W45A	**Hickory Valley**	**6.89**	**96**	P	**Pn**	**00 51 40.6**	**-0.1**
	baz=280,SNR=5.8						
W45A	**Hickory Valley**	**6.89**	**96**	P		00 51 40.6	
	baz=280,SNR=5.8						
Y45A	**Yeager Farm, C**	**6.96**	**107**	IAmb_Lg		00 53 57.8	
	comp=Z,128nm,0.7s						
VBMS	**Vicksburg**	**7.02**	**122**	IAmb_Lg		00 53 58.9	
	comp=Z,85nm,0.8s						
UTMT	**University of**	**7.03**	**86**	Pn	**Pn**	**00 51 43.9**	**+1.4**
P43A	**Skaggs, Pawnee**	**7.26**	**59**	Pn	**Pn**	**00 51 45.3**	**-0.3**
P43A				IAmb_Lg		00 53 56.3	
	comp=Z,505nm,0.7s						
P43A	**Skaggs,

ECSD IAmb_Lg 00 54 10.2
comp=Z,106nm,0.7s
ECSD EROS Data Cent 7.63 5 P 00 51 50.1
baz=186
ECSD S 00 53 13.8
baz=186
BNM Barren Site 7.69 258 Pn **Pn** **00 51 52.6 +0.9**
L40A Anamosa 7.70 38 Pn **Pn** **00 51 52.4 +0.7**
L40A IAmb_Lg 00 54 12.7
comp=Z,249nm,0.8s
PLAL Pickwick Lake 7.82 96 **Pn** **00 51 52.8 -0.6**
PLAL IAmb_Lg 00 54 13.4
comp=Z,89nm,0.8s
146A Union 7.85 114 Pn **Pn** **00 51 53.5 -0.3**
146A IAmb_Lg 00 54 28.3
comp=Z,96nm,1.0s
HDIL Hopedale 7.85 53 **Pn** **00 51 53.6 -0.1**
HDIL Hopedale 7.85 53 P **Pn** **00 51 53.7 -0.1**
baz=238,SNR=6.7
HDIL Hopedale 7.85 53 P 00 51 53.6
baz=238,SNR=13
HDIL Hopedale 7.85 53 P 00 51 53.7
baz=238,SNR=6.7
MNTX Cornudas Mount 7.86 238 Pn **Pn** **00 51 54.1 +0.2**
MNTX IAmb_Lg 00 54 30.0
comp=Z,84nm,1.2s
MNTX Cornudas Mount 7.86 238 P **Pn** **00 51 54.3 +0.4**
baz=54,SNR=7.8
MNTX Cornudas Mount 7.86 238 P 00 51 54.9
baz=54,SNR=6.3
MNTX Cornudas Mount 7.86 238 P 00 51 54.3
baz=54,SNR=7.8
WVT Waverly 7.88 87 Pn **Pn** **00 51 58.0 +3.8**
Y22D IRIS PASSCAL I 7.94 258 IAmb_Lg 00 54 28.4
comp=Z,140nm,0.8s
PHWY Pilot Hill 8.04 312 **Pn** **00 51 57.6 +0.9**
PHWY IAmb_Lg 00 54 35.4
comp=Z,139nm,1.0s
SMCO Snowmass 8.06 295 Pn **Pn** **00 52 01.5 +4.5**
N23A Red Feather La 8.11 308 P 00 51 59.8
baz=123
O44A Mansfield 8.21 58 **Pn** **00 51 59.2 +0.5**
346A Big Creek Wild 8.23 123 Pn **Pn** **00 51 59.3 +0.2**
Z47A Carrollton 8.35 108 **Pn** **00 52 00.7 +0.1**
SUSD Miller 8.37 353 Pn **Pn** **00 52 02.1 +1.3**
SUSD IAmb_Lg 00 54 33.7
comp=Z,164nm,0.8s
SUSD Miller 8.37 353 S 00 53 32.1
baz=172
T47A Sharon Grove 8.46 81 Pn **Pn** **00 52 02.8 +0.7**
L42A Oliver, Polo 8.49 44 Pn **Pn** **00 52 02.5 0.0**
L42A IAmb_Lg 00 54 47.1
comp=Z,192nm,0.8s
I37A Lemond, Waseca 8.49 21 Pn **Pn** **00 52 05.0 +2.4**
I37A IAmb_Lg 00 54 41.4
comp=Z,192nm,0.8s
TX31 Lajitas Ar. Si 8.51 219 **Pn** **00 52 02.4 -0.5**
TX32 Lajitas Array 8.51 219 **Pn** **00 52 02.9 0.0**
TXAR Lajitas Array 8.51 219 Pn **Pn** **00 52 01.5 -1.4**
comp=Z,0.8nm,0.3s,baz=38,slow=10,SNR=8.9
TXAR Pg Pg 00 52 27.5 -14
comp=Z,1.1nm,0.3s,baz=40,slow=16,SNR=3.9
TXAR Lg Lg 00 54 22.2
comp=Z,3.7nm,0.3s,baz=35,slow=14,SNR=4.9
TXAR LR LR 00 55 32.6
comp=Z,110nm,18.0s,baz=0.0,slow=39
TXAR Lajitas Array 8.51 219 **Pn** **00 52 03.6 +0.7**
V48A Smith Brothers 8.72 89 IAmb_Lg 00 54 53.6
comp=Z,66nm,1.0s
X48A Hartselle 8.76 98 Pn **Pn** **00 52 08.8 +2.6**
X48A IAmb_Lg 00 54 40.1
comp=Z,84nm,1.1s
JFWS Jewell Farm 8.82 38 **Pn** **00 52 07.1 +0.1**
JFWS IAmb_Lg 00 54 45.2
comp=Z,204nm,0.7s
JFWS Jewell Farm 8.82 38 P 00 52 08.0
baz=222,SNR=5.2
P46A Rosedale 8.89 64 **Pn** **00 52 09.4 +1.3**
CLTN Cedars of Leba 9.09 87 **Pn** **00 52 12.2 +1.5**
CLTN IAmb_Lg 00 54 58.6
comp=Z,88nm,1.0s
M44A Midewin, Midew 9.10 52 Pn **Pn** **00 52 11.1 +0.3**
M44A IAmb_Lg 00 54 55.3
comp=Z,153nm,0.7s
WCI Wyandotte Cave 9.23 74 **Pn** **00 52 13.7 +1.0**
WCI IAmb_Lg 00 54 58.1
comp=Z,197nm,1.1s
WCI Wyandotte Cave 9.23 74 P 00 52 14.0
baz=260
LRAL Lakeview Retre 9.24 106 Pn **Pn** **00 52 12.5 -0.4**
SFIN Lafayette 9.26 60 **Pn** **00 52 13.6 +0.5**
SFIN IAmb_Lg 00 54 54.3
comp=Z,196nm,0.9s
SFIN Lafayette 9.26 60 P 00 52 13.5
baz=246
BLO Bloomington 9.27 68 **Pn** **00 52 13.9 +0.8**
PV11 David Mesa, Pa 9.28 287 IAmb_Lg 00 54 56.6
comp=Z,64nm,1.2s
RWWY Rawlins 9.34 309 Pn **Pn** **00 52 15.6 +1.1**
RWWY IAmb_Lg 00 55 06.2
comp=Z,116nm,1.2s
PV17 East Wray Mesa 9.34 287 Pn **Pn** **00 52 16.1 +1.7**
PV20 West Nyswonger 9.36 287 Pn **Pn** **00 52 17.4 +2.7**
PV19 Morning Glory 9.37 287 Pn **Pn** **00 52 16.5 +1.7**
RSSD Black Hills 9.39 330 IAmb_Lg 00 55 08.6
comp=Z,62nm,0.9s
RSSD Black Hills 9.39 330 P 00 52 17.0
baz=146
RSSD S 00 54 00.7
baz=146
I40A Norwalk 9.40 32 **Pn** **00 52 14.2 -0.8**
I40A IAmb_Lg 00 55 13.2
comp=Z,104nm,0.8s
Y49A Blount Mountai 9.43 101 Pn **Pn** **00 52 15.4 0.0**
Y49A IAmb_Lg 00 55 00.5
comp=Z,59nm,0.8s
HQIL Hanson Quary C 9.44 50 **Pn** **00 52 16.4 +0.8**
K22A Casper 9.51 316 **Pn** **00 52 17.4 +0.8**
K22A IAmb_Lg 00 55 22.2
comp=Z,148nm,1.1s
K22A Casper 9.51 316 P 00 52 17.5
baz=130
U49A Red Boiling Sp 9.52 84 Pn **Pn** **00 52 17.6 +1.0**
U49A IAmb_Lg 00 55 10.8
comp=Z,80nm,1.1s
L44A Lake County Fo 9.62 48 Pn **Pn** **00 52 18.3 +0.3**
L44A Lake County Fo 9.62 48 P 00 52 19.1
baz=234
K43A Burlington 9.69 45 Pn **Pn** **00 52 18.9 -0.1**
F33A 5 Mile Ranch, 9.74 5 **Pn** **00 52 20.1 +0.3**
F33A IAmb_Lg 00 55 19.2
comp=Z,88nm,1.0s
SPMN Marine on St. 9.77 20 Pn **Pn** **00 52 21.8 +1.7**
SPMN IAmb_Lg 00 55 23.2
comp=Z,68nm,0.8s
FPAL Fort Paine 9.89 96 Pn **Pn** **00 52 23.4 +1.6**
R49A Shelbyville 10.12 74 Pn **Pn** **00 52 25.1 +0.3**
P48A Milroy 10.16 67 Pn **Pn** **00 52 24.3 -1.2**
F36A Milaca 10.19 16 Pn **Pn** **00 52 26.8 +1.0**
I42A Draeger Farm, 10.19 38 Pn **Pn** **00 52 26.4 +0.6**
250A Grady 10.24 111 Pn **Pn** **00 52 24.9 -1.7**
N47A Urbana 10.44 59 Pn **Pn** **00 52 29.3 +0.1**
X51A Calhoun 10.49 95 Pn **Pn** **00 52 28.9 -1.2**
L46A Eue Claire 10.54 53 Pn **Pn** **00 52 29.6 -1.0**
Z51A Franklin 10.57 102 Pn **Pn** **00 52 31.6 +0.5**
CPCT Cooper Cave 10.62 90 Pn **Pn** **00 52 31.5 -0.2**
G40A Rib Lake 10.70 29 Pn **Pn** **00 52 32.5 -0.3**
P49A Miami Univ. Ec 10.71 68 Pn **Pn** **00 52 31.4 -1.6**
P49A Miami Univ. Ec 10.71 68 P 00 52 31.7
baz=255
V51A Loudon 10.71 88 Pn **Pn** **00 52 32.7 -0.3**
R50A Paris 10.77 75 Pn **Pn** **00 52 33.6 -0.3**
O49A Covington 11.17 65 Pn **Pn** **00 52 38.4 -0.9**
H43A Windswept, Lux 11.18 39 Pn **Pn** **00 52 38.7 -0.7**
TKL Tuckaleechee C 11.20 88 Pn **Pn** **00 52 39.2 -0.4**
comp=Z,0.2nm,0.3s,baz=270,slow=10,SNR=2.1
TKL Lg Lg 00 55 42.0
comp=Z,2.5nm,0.3s,baz=130,slow=13,SNR=5.7
S51A Beattyville 11.29 78 Pn **Pn** **00 52 40.5 -0.4**
V52A Sevierville 11.32 87 Pn **Pn** **00 52 41.0 -0.3**
BW06 Boulder Array 11.39 309 Pn **Pn** **00 52 42.9 +0.4**
PD31 Pinedale Array 11.39 309 Pn **Pn** **00 52 41.9 -0.6**
PDAR Pinedale Array 11.39 309 Pn **Pn** **00 52 42.0 -0.4**
comp=Z,0.8nm,0.3s,baz=112,slow=15,SNR=11
PDAR Pg 00 53 24.9
comp=Z,0.5nm,0.3s,baz=116,slow=14,SNR=3.0
PDAR Lg Lg 00 55 52.2
comp=Z,0.9nm,0.3s,baz=111,slow=36,SNR=2.7
PDAR LR LR 00 57 49.8
comp=Z,39nm,18.4s,baz=104,slow=42
N49A Columbus Grove 11.52 61 Pn **Pn** **00 52 41.9 -2.1**
Q51A Peebles 11.64 71 Pn **Pn** **00 52 44.7 -1.1**
L48A N Adams 11.74 56 Pn **Pn** **00 52 44.6 -2.4**
COWI Conover 11.80 30 Pn **Pn** **00 52 47.7 -0.3**
AAM Ann Arbor 12.41 56 Pn **Pn** **00 52 55.2 -1.0**
Q52A Bidwell 12.46 72 Pn **Pn** **00 52 55.9 -1.1**
EYMN Ely 12.63 19 P 00 52 57.2
baz=203
EYMN S 00 55 11.6
baz=203
P52A Corning 12.68 69 P 00 52 58.4
baz=259
Q53A Leroy 13.02 73 P 00 53 03.5
baz=263
ULM Lac du Bonnet 14.16 4 Pn Pn 00 53 15.3 -4.8
comp=Z,0.4nm,0.3s,baz=181,slow=11,SNR=5.3
ULM Sn Sn 00 55 43.3 -14
comp=Z,0.7nm,0.3s,baz=102,slow=20,SNR=4.4
ULM Lg Lg 00 57 13.6
comp=Z,0.3nm,0.3s,baz=331,slow=5.7,SNR=1.9
ULM LR LR 00 59 35.4
comp=Z,39nm,18.6s,baz=270,slow=41
SADO Sadowa 16.43 53 Pn **Pn** **00 53 44.6 -5.6**
comp=Z,0.3nm,0.3s,baz=266,slow=12,SNR=3.9
SADO Sn Sn 00 56 40.4 -12
comp=Z,0.2nm,0.3s,baz=218,slow=12,SNR=1.6
SADO Lg Lg 00 58 26.2
comp=Z,0.2nm,0.3s,baz=319,slow=19,SNR=2.1
NVAR Mina Array Bea 16.67 284 Pn **Pn** **00 53 52.8 -0.7**
comp=Z,0.1nm,0.3s,baz=99,slow=12,SNR=1.9
NVAR LR LR 01 01 26.9
comp=Z,62nm,19.4s,baz=268,slow=42
TEIG Tepich 17.82 150 P **P** **00 54 09.3 +0.9**
comp=Z,0.4nm,0.3s,baz=9.6,slow=13,SNR=1.8
TEIG S Sn 00 57 12.8 -14
comp=Z,0.2nm,0.3s,baz=194,slow=17,SNR=2.2
CMIG Matias Romero 19.11 172 P **P** **00 54 23.2 +0.5**
comp=Z,0.2nm,0.3s,baz=32,slow=9.5,SNR=1.7
YBH Yreka Blue Hor 20.31 294 P **P** **00 54 36.0 +0.2**
comp=Z,4.1nm,0.9s,baz=130,slow=3.3,SNR=3.4
YKA Yellowknife Ar 28.44 343 P **P** **00 55 53.8 -0.5**
comp=Z,0.6nm,0.6s,baz=143,slow=9.1,SNR=13
ILAR Eielson Array 40.84 330 P **P** **00 57 41.9 +0.7**
comp=Z,2.2nm,0.8s,baz=109,slow=6.9,SNR=20
ARCES ARCESS Array B 66.78 19 P **P** **01 00 50.4 -0.5**
comp=Z,4.0nm,1.1s,baz=324,slow=5.6,SNR=4.8
ESDC Sonseca Array 70.48 55 P **P** **01 01 14.5 -0.1**
comp=Z,0.8nm,1.0s,baz=296,slow=6.9,SNR=4.3
FINES FINESS Array B 72.58 25 P **P** **01 01 26.9 +0.2**
comp=Z,1.7nm,0.7s,baz=335,slow=6.2,SNR=6.3
CPUP Villa Florida 72.80 143 P **P** **01 01 27.5 -0.9**
comp=Z,1.2nm,0.8s,baz=19,slow=7.9,SNR=3.2
GERES GERESS Array B 75.71 39 P **P** **01 01 45.7 +0.3**
comp=Z,0.2nm,0.5s,baz=339,slow=5.2,SNR=1.8
TORD Torodi Ar. Bea 89.67 74 P **P** **01 02 57.1 -1.2**
comp=Z,1.0nm,0.9s,baz=309,slow=5.0,SNR=3.5
ZALV Zalesovo Beam 90.26 359 P **P** **01 03 00.3 -0.2**
comp=Z,0.5nm,0.4s,baz=28,slow=6.5,SNR=3.7
ASAR Alice Springs 134.17 271 PKP **PKPdf** **01 09 18.5 +0.5**
MAW Mawson 146.57 167 PKPbc **PKPbc** **01 09 40.6 +0.3**
comp=Z,4.4nm,0.8s,baz=221,slow=9.3,SNR=2.1

FUNV ***04*** *00:56:44.9, 10°.41N×72°.42W, h71km, MW3.6*
RSNC ***04*** *00:56:48.0±0.8, 10°.65N×72°.20W, h123km±15km, ML2.7*
ISC 04 00:56:45.6±1.9,**10°.31N**±0°.05×**72°.29W**±0°.08,**h67**km±18km,
n15,σ1s**00**/20,**Venezuela**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MCQV	**Machiques**	**0.36**	**223**	*eP*		**Pn**	**00 56 56.5**	**-0.4**
MCQV				*eS*		**Sn**	**00 57 05.1**	**0.0**
URIC	**Uribia, Colomb**	**1.41**	**12**	*eP*		**Pn**	**00 57 10.0**	**+0.7**
URIC				*eS*		**Sn**	**00 57 28.2**	**+1.1**
URIC				*i*			00 57 29.2	
comp=Z,95nm,0.2s								
DABV	**Dabajuro**	**1.73**	**69**	*eP*		**Pn**	**00 57 13.2**	**-0.4**
DABV				*eS*		**Sn**	**00 57 34.2**	**-0.6**
SMRC	**Santa Marta, M**	**2.08**	**294**	*eP*		Pn	00 57 22.3	+4.0
SMRC				*eS*		Sn	00 57 48.1	+4.8
SMRC				*i*			00 57 51.0	
comp=Z,12nm,0.2s								
OCAC	**Ocana**	**2.30**	**206**	*eP*		Pn	00 57 27.0	+5.6
OCAC				*eS*		Sn	00 57 58.5	+10
OCAC				*i*			00 58 03.0	
comp=Z,74nm,0.3s								
CURV	**Curarigua**	**2.31**	**97**	*eP*		**Pn**	**00 57 21.3**	**-0.2**
CURV				*eS*		**Sn**	**00 57 50.3**	**+1.3**
SMLC	**San Martn de**	**2.31**	**230**	*eP*		Pn	00 57 29.1	+7.6
SMLC				*eS*		Sn	00 58 00.1	+11
SMLC				*i*			00 58 04.3	
comp=Z,44nm,0.2s								
CAPV	**Capacho**	**2.43**	**181**	*eP*		**Pn**	**00 57 22.1**	**-1.2**
CAPV				*eS*		**Sn**	**00 57 52.3**	**+0.2**
SIQV	**Siquisique**	**2.46**	**82**	*eP*		**Pn**	**00 57 22.6**	**-1.0**
SIQV				*eS*		**Sn**	**00 57 52.5**	**-0.1**
SOCV	**Socops**	**2.46**	**145**	*eP*		**Pn**	**00 57 24.5**	**+1.1**
SOCV				*eS*		**Sn**	**00 57 53.6**	**+1.1**
MONV	**Montecano**	**2.80**	**54**	*eP*		**Pn**	**00 57 26.8**	**-1.3**
SANV	**Sanarito**	**2.83**	**106**	*eP*		**Pn**	**00 57 29.9**	**+1.3**
SANV				*eS*		**Sn**	**00 58 02.0**	**+0.3**
PAMC	**Pamplona, Colo**	**2.98**	**188**	*eP*		Pn	00 57 38.5	+7.4
PAMC				*eS*		Sn	00 58 19.1	+13
PAMC				*i*			00 58 21.5	
comp=Z,8.3nm,0.2s								
MAPV	**Macapo**	**3.80**	**97**	*eP*		**Pn**	**00 57 41.5**	**-0.3**
BAUV	**El Baul**	**4.40**	**108**	*eP*		**Pn**	**00 57 50.4**	**+0.4**
BAUV				*eS*		**Sn**	**00 58 38.3**	**-1.8**

SKO ***04*** *01:26:10.8, 41°.51N×20°.29E, h15km*
TIR ***04*** *01:26:13.7, 41°.53N×20°.28E, h15km, Md3.1, Ml3.1*
ATH ***04*** *01:26:13.1, 41°.66N×20°.27E, h16km±7km, ML3.0/3, Error ellipse: s-maj=8.3km s-min=1.2km az=304.0*
THE ***04*** *01:26:14.9, 41°.50N×20°.31E, h7km±1km, ML2.8/4, Error ellipse: s-maj=1.3km s-min=0.6km az=4.0*
PDG ***04*** *01:26:14.4±0.4, 41°.53N×20°.30E, h11km, ML3.0/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
BEO ***04*** *01:26:15.0±0.3, 41°.51N×20°.32E, h6km±4km, ML2.6/15*
ISC 04 01:26:14.8±1.0,**41°.52N**±0°.01×**20°.30E**±0°.02,**h4**km±9km,
n113,σ1s**06**/161,**13C-12D**,**Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.19**	**32**	P		**Pg**	**01 26 19.1**	**+0.5**
PHP				S		**Sg**	**01 26 22.4**	**+1.2**
PHP	**Peshkopia**	**0.19**	**32**	P		**Pg**	**01 26 19.0**	**+0.4**
baz=37								
PHP				S		**Sg**	**01 26 22.0**	**+0.9**
baz=37								
PHP				AMP				
comp=N,15nm,0.5s,baz=37								
TIR	**Tirane**	**0.37**	**242**	P		**Pg**	**01 26 21.7**	**-0.4**
TIR				S		**Sg**	**01 26 27.6**	**+0.7**
TIR				AML		AML	01 26 28.8	
comp=N,11189μm,0.3s								
TIR				AML		AML	01 26 30.5	
comp=E,8383μm,0.4s								
TIR	**Tirane**	**0.37**	**242**	P		**Pg**	**01 26 21.7**	**-0.4**
TIR				S		**Sg**	**01 26 27.2**	**+0.3**
comp=E,2μm,0.4s								
TIR	**Tirane**	**0.37**	**242**	*e*Pg		**Pg**	**01 26 21.5**	**-0.5**
TIR				*e*Sg		**Sg**	**01 26 27.3**	**+0.3**
TIR	**Tirane**	**0.37**	**242**	↓P		**Pg**	**01 26 21.5**	**-0.5**
TIR				↑S		**Sg**	**01 26 27.3**	**+0.3**
TIR	**Tirane**	**0.37**	**242**	P		**Pg**	**01 26 21.5**	**-0.5**
baz=240								
TIR				S		**Sg**	**01 26 27.4**	**+0.5**
baz=240								
TIR				AMP				
comp=N,8.8nm,0.3s,baz=240								
TIR	**Tirane**	**0.37**	**242**	↑ *i*Pg		**Pg**	**01 26 21.6**	**-0.4**
OHR	**Ohrid**	**0.56**	**138**	↑ *i*Pg		**Pg**	**01 26 24.8**	**-0.7**
OHR				*i* Sg		**Sg**	**01 26 34.1**	**+1.4**
OHR				*e*Lg		Lg	01 26 34.2	
comp=N,2μm,1.7s								
OHR				*e*Lg		Lg	01 26 34.3	
comp=E,334nm,0.5s								

PUK Puka 0.60 330 P **Pg** **01 26 25.8 -0.6**
baz=331
PUK S **Sg** **01 26 34.5 +0.3**
baz=331
PUK AMP
comp=E,3.5nm,0.3s,baz=331
PRZK Prizren 0.77 26 *i* Pg **Pg** **01 26 28.9 -0.6**
PRZK *i* Sg **Sg** **01 26 39.5 0.0**
BCI Bajram Curri 0.86 348 P **Pg** **01 26 30.3 -1.1**
baz=350
BCI S **Sb** **01 26 43.0 -1.2**
baz=350
BCI AMP
comp=E,4.1nm,0.7s,baz=350
ULC Ulcinj 0.91 299 *i* Pg **Pg** **01 26 30.9 -1.4**
ULC Ulcinj 0.91 299 ↓*i*Pg **Pg** **01 26 30.8 -1.4**
ULC *i* Sg **Sb** **01 26 45.4 -0.2**
ZATK Zatriq 0.95 14 ↑*i*Pg **Pg** **01 26 32.1 -1.0**
KBN Korca 0.97 158 P **Pg** **01 26 32.9 -0.5**
KBN S **Sg** **01 26 46.6 +0.6**
comp=E,598nm,0.4s
KBN Korca 0.97 158 P **Pg** **01 26 33.0 -0.4**
baz=157
KBN S **Sb** **01 26 47.5 +0.1**
baz=157
KBN AMP
comp=E,1.8nm,0.6s,baz=157
DRME Dracevica, Mon 1.07 309 *e*Pn **Pg** **01 26 33.6 -1.7**
DRME Dracevica, Mon 1.07 309 ↓*i*Pg **Pg** **01 26 34.1 -1.2**
DRME *i* Sg **Sn** **01 26 50.8 -1.0**
FNA Florina 1.10 132 P **Pg** **01 26 34.7 -1.2**
FNA S **Sb** **01 26 51.0 -0.1**
FNA AML AML 01 26 55.0
comp=E,1216μm,0.4s
FNA AML AML 01 26 55.3
comp=N,1520μm,0.3s
FNA Florina 1.10 132 P **Pg** **01 26 34.6 -1.2**
FNA S **Sb** **01 26 50.9 -0.1**
comp=N,635nm,0.3s
FNA Florina 1.10 132 P **Pg** **01 26 34.7 -1.2**
baz=131
FNA S **Sb** **01 26 52.0 +0.9**
baz=131
FNA Florina 1.10 132 *i* Pg **Pg** **01 26 34.5 -1.2**
FNA *i* Sg **Sb** **01 26 51.0 -0.1**
PVY Plav 1.10 347 ↓*i*Pg **Pg** **01 26 34.7 -1.3**
PVY *i* Sg **Sn** **01 26 51.9 -1.0**
PDG Podgorica 1.20 320 *e*Pg **Pg** **01 26 36.3 -1.5**
PDG *e*Sg **Sn** **01 26 54.2 -0.8**
PDG Podgorica 1.20 320 ↓P **Pg** **01 26 36.4 -1.4**
PDG ↑S **Sn** **01 26 54.8 -0.2**
PDG Podgorica 1.20 320 *e*Pn **Pg** **01 26 36.2 -1.5**
PDG Podgorica 1.20 320 *i* Pg **Pg** **01 26 36.3 -1.5**
PDG *i* Sg **Sn** **01 26 54.8 -0.2**
TTG Podgorica 1.20 320 ↓*i*Pg **Pg** **01 26 36.3 -1.5**
TTG *i* Sg **Sn** **01 26 55.3 +0.3**
VLO Vlora 1.22 210 P **Pg** **01 26 37.1 -1.1**
VLO S **Sg** **01 26 54.4 +0.4**
VLO Vlora 1.22 210 P **Pg** **01 26 37.3 -0.9**
baz=210
VLO S **Sg** **01 26 54.3 +0.3**
baz=210
VLO AMP
comp=E,1.5nm,0.4s,baz=210
NEST Nestorio 1.24 153 P **Pg** **01 26 37.9 -0.7**
NEST S **Sb** **01 26 55.6 +0.3**
NEST AML AML 01 27 01.3
comp=E,624μm,0.8s
NEST AML AML 01 27 02.4
comp=N,506μm,0.4s
NEST Nestorio 1.24 153 P **Pg** **01 26 38.0 -0.7**
NEST S **Sg** **01 26 54.4 -0.4**
comp=N,218nm,0.5s
GJIK Gjilan 1.26 42 *i* Pg **Pg** **01 26 38.0 -1.1**
GJIK *i* Sg **Sn** **01 26 56.2 -0.5**
BUM Brajici-Budva 1.31 307 ↓*i*Pg **Pg** **01 26 38.5 -1.4**
BUM *i* Sg **Sn** **01 26 59.1 +1.2**
IVA Berane 1.38 347 ↓*i*Pg **Pg** **01 26 39.9 -1.4**
IVA *i* Sg **Sn** **01 27 01.5 +1.8**
LSK Leskovik 1.39 171 P **Pn** **01 26 39.4 -1.7**
LSK S **Sg** **01 26 58.6 -0.9**
LSK Leskovik 1.39 171 P **Pn** **01 26 40.6 -0.4**
baz=170
LSK S **Sn** **01 27 00.9 +1.0**
baz=170
LSK AMP
comp=N,1.3nm,0.5s,baz=170
STIP Stip 1.42 82 *i* Pn **Pb** **01 26 43.7 +1.8**
SMRK Smrekonice 1.43 19 *i* Pn **Pn** **01 26 41.3 -0.2**
KOME Kolasin 1.45 336 ↑*i*Pg **Pn** **01 26 41.2 -0.7**
KOME *i* Sg **Sn** **01 27 03.4 +2.0**
CEME Cevo 1.45 315 ↑*i*Pg **Pn** **01 26 40.7 -1.2**
CEME *i* Sg **Sn** **01 27 03.5 +2.1**
PENT Pentalofos 1.47 154 P **Pn** **01 26 42.3 +0.2**
PENT Pentalofos 1.47 154 P **Pn** **01 26 41.4 -0.8**
NKME Niksic 1.60 322 ↓*i*Pn **Pn** **01 26 43.1 -0.8**
NKME *i* Sn **Sg** **01 27 07.0 +0.8**
NKY Niksic 1.62 323 ↓*i*Pn **Pn** **01 26 43.9 -0.3**
NKY *i* Sn **Sg** **01 27 07.4 +0.6**
HCY Herceg Novi 1.64 305 *e*Pn **Pn** **01 26 43.6 -0.8**
HCY Herceg Novi 1.64 305 ↑*i*Pn **Pn** **01 26 44.0 -0.4**
HCY *i* Sn **Sg** **01 27 09.9 +0.5**
KZN Kozani 1.65 137 P **Pn** **01 26 44.6 0.0**
SRN Sarande 1.66 188 P **Pb** **01 26 45.7 -0.2**
baz=188
SRN S **Sg** **01 27 09.6 +1.5**
baz=188
SRN AMP
comp=N,0.5nm,0.8s,baz=188
GRG Griva 1.68 109 P **Pn** **01 26 44.8 -0.2**
GRG Griva 1.68 109 *i* Pn **Pn** **01 26 44.6 -0.4**
BARS Barje 1.71 41 *e*Pn **Pn** **01 26 44.8 -0.6**
BARS Barje 1.71 41 *i* Pn **Pb** **01 26 46.6 -0.2**
VAY Valandovo 1.72 96 *e*Pn **Pn** **01 26 44.6 -0.9**
VAY *e*Sn **Sn** **01 27 07.3 -0.5**
VAY Valandovo 1.72 96 *i* Pn **Pn** **01 26 44.9 -0.6**
SJES Sjenica 1.75 352 *e*Pn **Pn** **01 26 46.6 +0.5**
SJES *e*Sn **Sn** **01 27 08.7 -1.1**
KPRO Kipourio 1.76 152 P **Pn** **01 26 46.3 +0.2**
SELS Selova 1.80 19 *e*Pn **Pn** **01 26 45.2 -1.5**
KEK Kerkira 1.85 192 P **Pn** **01 26 47.7 +0.4**
TREB Trebinje 1.88 310 *e*Pn **Pn** **01 26 48.0 +0.3**
TREB *e*Sn **Sb** **01 27 13.2 -0.4**
TREB Trebinje 1.88 310 *e*Pn **Pn** **01 26 48.4 +0.7**
BOSS Bosilegrad 1.89 58 *e*Pn **Pn** **01 26 48.4 +0.5**
BRY Bratogost 1.90 317 *e*Pn **Pn** **01 26 48.7 +0.5**
BRY Bratogost 1.90 317 *e*Pn **Pn** **01 26 47.9 -0.3**
BRY *i* Sn **Sb** **01 27 14.3 0.0**
JAN Janina 1.91 167 P **Pb** **01 26 50.2 -0.1**
PLE Pljevlja 1.93 340 ↑*i*Pn **Pn** **01 26 48.3 -0.2**
PLE *i* Sn **Sb** **01 27 14.9 -0.2**
KNT Kendrikon 1.99 100 P **Pn** **01 26 48.6 -0.7**
KNT Kendrikon 1.99 100 *i* Pn **Pn** **01 26 48.5 -0.7**
IVAS Ivanjica 2.06 357 *e*Pn **Pn** **01 26 49.4 -0.8**
IVAS *e*Sn **Sb** **01 27 17.4 -1.3**
RUDO Rudo 2.20 342 *e*Pn **Pn** **01 26 52.6 +0.4**
THL Klokotos Trika 2.35 146 P **Pn** **01 26 56.2 +2.0**
STON Ston 2.36 306 *e*Pn **Pn** **01 26 54.4 +0.1**
GRUS Gruza 2.38 7 *e*Pn **Pn** **01 26 55.5 +0.8**
BBLS Lazići 2.43 345 *e*Pn **Pn** **01 26 56.2 +0.8**
BBLS Lazići 2.43 345 *e*Pn **Pn** **01 26 55.7 +0.3**
VTS Vitosha 2.44 62 *e*Pn **Pn** **01 26 55.7 +0.1**
VTS Vitosha 2.44 62 ↓P **Pn** **01 26 55.7 +0.1**
ZAPS Zavoj 2.46 44 *e*Pn **Pn** **01 26 55.5 -0.2**
ZAPS *e*Sn **Sn** **01 27 25.8 -0.4**
DIVS Divibare 2.58 355 *e*Pn **Pn** **01 26 57.0 -0.5**
DIVS *e*Sn **Sn** **01 27 29.2 -0.2**
DIVS Divibare 2.58 355 *e*Pn **Pn** **01 26 56.0 -1.5**
NVR Nevrokopi 2.68 93 P **Pn** **01 26 59.4 +0.6**
ZAGS Zajecar 2.69 31 *e*Pn **Pn** **01 26 58.5 -0.4**
TRUS Trudelj 2.70 2 *e*Pn **Pn** **01 26 59.7 +0.7**
HAPS Han Pijesak,Bl 2.75 339 *e*Pn **Pn** **01 27 00.1 +0.3**
HAPS Han Pijesak,Bl 2.75 339 *e*Pn **Pn** **01 26 59.8 0.0**
EVR Evrytania 2.85 156 P **Pb** **01 27 04.0 -2.3**
AGG Agios Georgios 2.94 148 P **Pn** **01 27 03.9 +1.6**
MAKA Makarska 3.00 307 *e*Pn **Pn** **01 27 03.6 +0.4**
KUBS Kucevo 3.06 19 *e*Pn **Pn** **01 27 04.4 +0.5**
RICI Ricice 3.06 311 *e*Pn **Pn** **01 27 05.2 +1.2**
HVAR Hvar 3.30 301 *e*Pn **Pn** **01 27 07.4 +0.1**
MDVR Moldovita 3.42 17 ↓P **Pn** **01 27 09.2 +0.3**
FRGS Fruska Gora 3.65 355 *e*Pn **Pn** **01 27 10.8 -1.3**
FRGS Fruska Gora 3.65 355 ↑P **Pn** **01 27 11.4 -0.7**

FRGS	**Fruska Gora**	**3.65**	**355**	*e*Pn		**Pn**	**01 27 11.7**	**-0.4**
HERR	**Herculane**	**3.69**	**24**	⇑P		**Pn**	**01 27 12.5**	**-0.1**
MGRS	**Mrkonjic Grad**	**3.73**	**322**	*e*Pn		**Pn**	**01 27 16.9**	**+3.7**
KIJV	**Kijevo**	**3.79**	**312**	*e*Pn		**Pn**	**01 27 15.1**	**+1.1**
BLY	**Banja Luka**	**3.95**	**326**	*e*Pn		**Pn**	**01 27 19.3**	**+3.1**
ZIRJ	**Zirje**	**4.05**	**303**	*e*Pn		**Pn**	**01 27 17.6**	**+0.2**
MORI	**Morici**	**4.12**	**306**	*e*Pn		**Pn**	**01 27 19.5**	**+1.0**
GZR	**Gura Zlata**	**4.27**	**24**	⇑P		**Pn**	**01 27 20.7**	**+0.1**
UDBI	**Udbina**	**4.48**	**314**	*e*Pn		**Pn**	**01 27 25.2**	**+1.7**
DUGI	**Dugi Otok**	**4.58**	**304**	*e*Pn		**Pn**	**01 27 25.6**	**+0.7**
MORH	**Mrgy, Hungar**	**4.84**	**346**	⇑P		**Pn**	**01 27 28.8**	**+0.4**
MORH	**Mrgy, Hungar**	**4.84**	**346**	*e*Pn		**Pn**	**01 27 27.8**	**-0.6**
NVLJ	**Novalja**	**5.01**	**309**	*e*Pn		**Pn**	**01 27 31.1**	**+0.4**
CRES	**Cresnjev**	**5.55**	**322**	*e*Pn		**Pn**	**01 27 37.8**	**-0.4**
CEY	**Cerknica**	**5.99**	**317**	*e*Pn		**Pn**	**01 27 44.5**	**+0.2**
SOKA	**Soboth**	**6.40**	**325**	*i* Pn		**Pn**	**01 27 50.6**	**+0.7**
	comp=N,1.2nm,0.5s							
OBKA	**Obir**	**6.48**	**322**	*e*Pn		**Pn**	**01 27 52.4**	**+1.3**
OBKA	comp=N,0.4nm,0.3s			*e*Sn		**Sn**	**01 29 10.4**	**+4.9**
	comp=N,1.7nm,0.4s							
ARSA	**Arzberg**	**6.67**	**331**	*i* Pn		**Pn**	**01 27 56.6**	**+3.0**
	comp=N,1.0nm,0.3s							

*NEIC **04** 01:34:19.6±1.3,56°.1S±0'.1×27°.2W±0'.2, h75km±5km, mb4.9/39, Error ellipse: s-maj=17.0km s-min=13.2km az=204.0*
*IDC **04** 01:34:20.3±4.6,56°.10S×27°.04W, h81km±41km, mb4.3/12, mb1 4.4/14, mb1mx4.2/22, mbtmp4.7/14, ML4.7/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/26, Error ellipse: s-maj=18.1km s-min=14.2km az=70.0*

ISC 04 01:34:18.3±0.4, 56°.17S±0'.06×27°.15W±0'.08, h63km, n113, σ0s89/110, mb4.8/28, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.67**	**286**	Pn	**Pn**	**01 35 38.2**	**-1.7**
VNA1	**Neumayer--Stat**	**16.67**	**158**	P	**P**	**01 38 10.0**	**+1.2**
VNA3	**Neumayer Olymp**	**16.87**	**160**	P	**P**	**01 38 12.3**	**+1.3**
VNA2	**Neumayer--Watz**	**17.07**	**158**	P	**P**	**01 38 14.1**	**+0.9**
	baz=319,slow=12						
SNAA	**Sanae**	**18.62**	**156**	P	**Pn**	**01 38 31.7**	**+0.5**
SNAA	**Sanae**	**18.62**	**156**	P	**Pn**	**01 38 31.6**	**+0.4**
	3.2nm,0.3s,baz=304,slow=9.7,SNR=73						
SNAA				S	**Sn**	**01 41 53.4**	**-5.1**
	0.1nm,0.3s,baz=329,slow=18,SNR=1.7						
SNAA	**Sanae**	**18.62**	**156**	P	**P**	**01 38 31.2**	**+0.9**
EFI	**East Falkland**	**18.66**	**271**	P	**P**	**01 38 31.5**	**+0.7**
EFI				IAmb	IAmb	01 38 36.4	
	comp=Z,81nm,1.2s						
PMSA	**Palmer Station**	**19.84**	**229**	P	**P**	**01 38 44.5**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=342,slow=11,SNR=2.1						
PMSA				LR	LR	01 44 13.9	
	comp=Z,93nm,19.5s,baz=102,slow=30						
PMSA	**Palmer Station**	**19.84**	**229**	P	**P**	**01 38 44.1**	**+0.6**
PMSA				IAmb	IAmb	01 38 50.2	
	comp=Z,60nm,0.7s						
BELA	**Belgrano 2**	**21.96**	**184**	P	**P**	**01 39 06.4**	**+0.2**
BELA				IAmb	IAmb	01 39 09.0	
	comp=Z,57nm,1.1s						
GO09	**Cerro Castillo**	**26.80**	**261**	P	**P**	**01 39 50.1**	**-2.0**
GO09				IAmb	IAmb	01 40 01.4	
	comp=Z,64nm,1.5s						
PLTB	**Pedras Altas**	**30.60**	**312**	*e*P	**P**	**01 40 26.9**	**+0.9**
ITAB	**Concordia**	**34.03**	**318**	*e*P	**P**	**01 40 57.4**	**+1.3**
QSPA	**South Pole Qui**	**34.08**	**180**	P	**P**	**01 40 57.2**	**+0.9**
	comp=Z,16nm,0.5s,baz=202,slow=2.7,SNR=165						
QSPA	**South Pole Qui**	**34.08**	**180**	P	**P**	**01 40 57.2**	**+0.9**
PTGB	**Pitanga**	**36.30**	**320**	*e*P	**P**	**01 41 16.3**	**+0.6**
CPUP	**Villa Florida**	**36.91**	**311**	P	**P**	**01 41 20.5**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=158,slow=8.4,SNR=12						
CPUP				PcP	**PcP**	**01 43 40.4**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=169,slow=2.6,SNR=3.4						
CPUP	**Villa Florida**	**36.91**	**311**	P	**P**	**01 41 20.4**	**-0.3**
PEL	**Peldehue**	**37.70**	**289**	P	**P**	**01 41 26.7**	**-0.7**
PEL				IAmb	IAmb	01 41 33.5	
	comp=Z,8.9nm,0.7s						
MT02	**Curacav**	**37.85**	**288**	P	**P**	**01 41 27.4**	**-1.3**
VA03	**San Esteban**	**37.92**	**290**	P	**P**	**01 41 29.0**	**-0.4**
VA03				IAmb	IAmb	01 41 37.1	
	comp=Z,14nm,1.2s						
BB19B	**Bebedouro**	**38.50**	**327**	*e*P	**P**	**01 41 35.1**	**+0.9**
PCMB	**Pacaembu**	**38.87**	**323**	*e*P	**P**	**01 41 38.1**	**+0.8**
CO02	**Combarbal**	**39.38**	**291**	P	**P**	**01 41 40.9**	**-0.8**
CO02				IAmb	IAmb	01 41 49.2	
	comp=Z,30nm,1.3s						
CO03	**El Pedregal**	**39.51**	**291**	P	**P**	**01 41 41.4**	**-1.2**
CO03				IAmb	IAmb	01 42 01.0	
	comp=Z,17nm,1.4s						
MAW	**Mawson**	**40.04**	**143**	P	**P**	**01 41 47.0**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=252,slow=11,SNR=1.7						
MAW	**Mawson**	**40.04**	**143**	P	**P**	**01 41 47.5**	**+1.0**
SUR	**Sutherland**	**40.65**	**75**	P	**P**	**01 41 51.3**	**-0.9**
	comp=Z,7.2nm,1.0s,baz=219,slow=14,SNR=1.7						
SUR	**Sutherland**	**40.65**	**75**	P	**P**	**01 41 52.8**	**+0.5**
SUR				IAmb	IAmb	01 42 03.3	
	comp=Z,17nm,1.1s						
LCO	**Las Campanas**	**40.98**	**293**	P	**P**	**01 41 54.2**	**-0.9**
LCO				IAmb	IAmb	01 42 03.8	
	comp=Z,20nm,1.5s						
AQDB	**Aquidauana**	**41.51**	**317**	*e*P	**P**	**01 41 58.9**	**-0.2**
AC02	**Maricunga**	**41.95**	**297**	P	**P**	**01 42 03.0**	**-0.4**
AC02				IAmb	IAmb	01 42 04.5	
	comp=Z,13nm,0.9s						
JANB	**Januaria**	**43.09**	**335**	*e*P	**P**	**01 42 12.7**	**+0.6**
BDFB	**Brasilia**	**43.48**	**330**	P	**P**	**01 42 15.9**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=171,slow=8.7,SNR=3.4						
BDFB	**Brasilia**	**43.48**	**330**	IAmb	IAmb	01 42 22.8	
	comp=Z,1.8nm,0.8s						
GO02	**Mina Guanaco**	**43.57**	**297**	P	**P**	**01 42 15.3**	**-0.9**
GO02				IAmb	IAmb	01 42 17.1	
	comp=Z,14nm,0.6s						
ARAG	**Araguaiana, MT**	**44.56**	**325**	*e*P	**P**	**01 42 25.0**	**+1.2**
LVC	**Limon Verde**	**45.38**	**300**	P	**P**	**01 42 30.9**	**+0.2**
LVC				IAmb	IAmb	01 42 31.9	
	comp=Z,14nm,0.6s						
LVC	**Limon Verde**	**45.38**	**300**	*e*P	**P**	**01 42 30.9**	**+0.2**
SDBA	**SAO DESIDERIO**	**45.78**	**335**	*e*P	**P**	**01 42 34.4**	**+0.8**
NBLA	**Lagarto - SE**	**45.83**	**345**	*e*P	**P**	**01 42 34.7**	**+0.8**
SBA	**Scott Base**	**45.96**	**184**	P	**P**	**01 42 35.8**	**+1.6**
SBA				IAmb	IAmb	01 42 37.7	
	comp=Z,13nm,1.1s						
BOSA	**Boshof**	**45.98**	**76**	P	**P**	**01 42 33.5**	**-1.5**
	comp=Z,3.9nm,1.0s,baz=236,slow=7.0,SNR=5.6						
BOSA				LR	LR	01 59 21.2	
	comp=Z,44nm,18.1s,baz=214,slow=33						
BOSA	**Boshof**	**45.98**	**76**	P	**P**	**01 42 35.3**	**+0.2**
PB09	**IPOC Station P**	**46.23**	**300**	P	**P**	**01 42 37.7**	**+0.5**
VNDA	**Vanda**	**46.45**	**183**	P	**P**	**01 42 39.0**	**+1.0**
	comp=Z,6.5nm,0.6s,baz=189,slow=6.2,SNR=45						
VNDA	**Vanda**	**46.45**	**183**		**P**	**01 42 39.1**	**+1.0**
VNDA				IAmb	IAmb	01 42 40.6	
	comp=Z,7.3nm,0.7s						
PEXB	**Peixe**	**46.93**	**331**	*e*P	**P**	**01 42 44.0**	**+1.5**
NBAN	**Anadia - AL**	**46.94**	**348**	*e*P	**P**	**01 42 43.0**	**+0.5**
PB01	**IPOC Station P**	**46.99**	**301**	P	**P**	**01 42 42.8**	**-0.3**
PTLB	**Pontes e Lacer**	**47.40**	**316**	*e*P	**P**	**01 42 46.2**	**0.0**
PB08	**IPOC Station P**	**47.61**	**302**	P	**P**	**01 42 48.3**	**+0.1**
NBTA	**Tacaratu-PE**	**47.71**	**345**	*e*P	**P**	**01 42 48.9**	**+0.3**
NBRF	**Rio Formoso -**	**47.79**	**349**	*e*P	**P**	**01 42 49.7**	**+0.6**
SNDB	**Serra Nova Dou**	**47.91**	**327**	*e*P	**P**	**01 42 51.2**	**+1.1**
PSGCX	**Pisagua**	**48.53**	**301**	P	**P**	**01 42 54.5**	**-0.5**
PSGCX				IAmb	IAmb	01 42 55.4	
	comp=Z,11nm,0.6s						
MNMC	**Minye Minye**	**48.68**	**302**	P	**P**	**01 42 56.4**	**+0.1**
LBTB	**Lobatse**	**49.02**	**73**	P	**P**	**01 42 59.0**	**+0.3**
H10N1	**ASCENSION HYDR**	**49.23**	**17**	T	T	02 37 10.1	
	baz=189,slow=75						
H10N3	**ASCENSION HYDR**	**49.23**	**17**	T	T	02 37 04.1	
	baz=189,slow=75						
H10N2	**ASCENSION HYDR**	**49.24**	**17**	T	T	02 37 06.8	
	baz=189,slow=75						
PB16	**IPOC Station P**	**49.33**	**302**	P	**P**	**01 43 01.8**	**+0.2**
VILB	**Vilhena**	**50.09**	**316**	*e*P	**P**	**01 43 06.3**	**-0.5**
CLDB	**Colider**	**50.40**	**322**	*e*P	**P**	**01 43 09.0**	**-0.1**
LPAZ	**La Paz**	**50.47**	**305**	P	**P**	**01 43 10.7**	**+0.4**
	comp=Z,6.1nm,0.4s,baz=144,slow=4.3,SNR=73						
LPAZ	**La Paz**	**50.47**	**305**	P	**P**	**01 43 10.5**	**+0.1**
LPAZ				IAmb	IAmb	01 43 11.6	
	comp=Z,18nm,1.2s						
LPAZ	**La Paz**	**50.47**	**305**	*e*P	**P**	**01 43 11.0**	**+0.6**
NPGB	**Novo Progresso**	**53.83**	**324**	*e*P	**P**	**01 43 34.5**	**-0.1**
SAML	**Samuel**	**54.91**	**315**	*e*P	**P**	**01 43 42.1**	**-0.2**
ETMB	**Extrema**	**55.36**	**311**	*e*P	**P**	**01 43 45.3**	**-0.4**
ITTB	**Itaituba**	**56.47**	**325**	*e*P	**P**	**01 43 53.6**	**+0.1**
MALB	**Monte Alegre**	**58.39**	**328**	*e*P	**P**	**01 44 07.6**	**+0.6**
LSZ	**Lusaka**	**58.39**	**69**	P	**P**	**01 44 06.6**	**-0.7**
LSZ				IAmb	IAmb	01 44 08.3	
	comp=Z,9.7nm,1.1s						
MCPB	**Macapa, AP**	**59.17**	**331**	*e*P	**P**	**01 44 13.7**	**+1.2**
MACA	**Manacapuru-AM**	**59.28**	**320**	*e*P	**P**	**01 44 12.5**	**-0.8**
PTGA	**Pitinga**	**61.28**	**322**	*e*P	**P**	**01 44 26.7**	**-0.3**
BOAV	**Boa Vista**	**64.39**	**322**	*e*P	**P**	**01 44 46.9**	**-0.7**
LIC	**Lamto**	**64.80**	**24**	*e*P	**P**	**01 44 49.6**	**-0.6**
	comp=Z,23nm,0.6s						
KIC	**Kosan Boka**	**64.99**	**25**	*e*P	**P**	**01 44 51.7**	**+0.2**
	comp=Z,16nm,0.8s						
TIC	**Toumodi**	**65.20**	**24**	*e*P	**P**	**01 44 52.3**	**-0.5**
DBIC	**Dimbokro**	**65.27**	**25**	P	**P**	**01 44 53.4**	**+0.1**
	comp=Z,6.4nm,0.5s,baz=162,slow=7.7,SNR=12						
DBIC	**Dimbokro**	**65.27**	**25**	P	**P**	**01 44 53.3**	**+0.1**
DBIC				IAmb	IAmb	01 44 54.0	
	comp=Z,7.5nm,0.8s						
OTAV	**Otavalo**	**69.74**	**304**	P	**P**	**01 45 22.6**	**+0.5**
OTAV	**Otavalo**	**69.74**	**304**	*e*P	**P**	**01 45 22.4**	**+0.3**
TOA0	**Torodi Ar. Sit**	**73.15**	**29**	P	**P**	**01 45 42.0**	**+0.1**
TOA0				IAmb	IAmb	01 45 42.6	
	comp=Z,7.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**73.15**	**29**	P	**P**	**01 45 42.1**	**+0.3**
	comp=Z,5.8nm,0.4s,baz=201,slow=6.2,SNR=67						
TORD	**Torodi Ar. Bea**	**73.15**	**29**	P	**P**	**01 45 41.7**	**-0.2**
TAU	**Tasmania Unive**	**81.18**	**176**	P	**P**	**01 46 26.7**	**0.0**
MTO3	**Montecristo**	**87.26**	**301**	P	**P**	**01 46 57.5**	**-0.5**
MTO3				IAmb	IAmb	01 46 58.0	
	comp=Z,9.5nm,0.7s						
ESQI	**Esquipulas**	**87.39**	**301**	P	**P**	**01 46 58.0**	**-0.4**
MDT	**Mideit**	**90.69**	**19**	LR	LR	02 24 09.3	
	comp=Z,38nm,18.1s,baz=144,slow=33						
STKA	**Stephens Creek**	**91.78**	**170**	P	**P**	**01 47 19.5**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=195,slow=5.9,SNR=4.9						
TEIG	**Tepich**	**91.80**	**305**	P	**P**	**01 47 18.9**	**0.0**
ASAR	**Alice Springs**	**98.87**	**162**	P	Pdif	01 47 52.7	+1.3
	comp=Z,1.4nm,0.7s,baz=186,slow=4.2,SNR=9.7						
ASAR	**Alice Springs**	**98.87**	**162**	P	**P**	**01 47 51.3**	**-0.1**
EDW2	**Edwards Air Fo**	**118.60**	**291**	P		01 52 58.0	
	baz=140						
R11A	**Troy Canyon, C**	**120.02**	**295**	P		01 53 01.1	
	baz=140						
DUG	**Dugway, Tooele**	**120.04**	**298**	P		01 53 00.9	
	baz=140						
PDAR	**Pinedale Array**	**120.43**	**302**	PKP	**PKPdf**	**01 53 00.3**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=117,slow=3.5,SNR=2.2						
NVAR	**Mina Array Bea**	**121.47**	**293**	PKP	**PKPdf**	**01 53 04.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=120,slow=2.4,SNR=4.6						
FINES	**FINESS Array B**	**124.48**	**28**	PKP	**PKPdf**	**01 53 07.6**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=158,slow=2.5,SNR=22						
O03E	**Paynes Creek**	**124.66**	**292**	P		01 53 09.6	
	baz=137						
MSO	**Missoula**	**125.53**	**303**	P		01 53 11.9	
	baz=137						
N02D	**Trinity Center**	**125.63**	**292**	P		01 53 12.3	
	baz=137						
ARCES	**ARCESS Array B**	**131.05**	**22**	PKP	**PKPdf**	**01 53 20.1**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=180,slow=0.9,SNR=8.3						
YKA	**Yellowknife Ar**	**136.28**	**318**	PKP	**PKPdf**	**01 53 30.0**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=122,slow=2.5,SNR=18						
ZALV	**Zalesovo Beam**	**142.40**	**64**	PKhKP	PKPpre	01 53 36.6	
	comp=Z,0.4nm,0.3s,baz=221,slow=5.4,SNR=2.7						
ZALV				PKP	**PKPdf**	**01 53 42.2**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=223,slow=2.1,SNR=7.2						
INK	**Inuvik**	**145.91**	**320**	PKPbc	**PKPbc**	**01 53 49.0**	**+0.1**
CTGM	**Chitina Glacie**	**146.66**	**306**	PKPbc	**PKPbc**	**01 53 51.5**	**0.0**
CTG	**Chitina Glacier**	**146.66**	**306**	P		01 53 50.8	
	baz=112						
DAWY	**Dawson**	**146.89**	**312**	PKPbc	**PKPdf**	**01 53 50.9**	**+1.0**
BERG	**Berg Lake**	**147.53**	**304**	PKPbc	**PKPbc**	**01 53 53.9**	**+0.1**
L27K	**Beaver Creek,**	**147.60**	**309**	P		01 53 53.1	
	baz=106						
EGAK	**Eagle**	**147.84**	**313**	P		01 53 53.4	
	baz=106						
K27K	**Chicken**	**148.00**	**311**	P		01 53 54.7	
	baz=107						
N25K	**Chitina, Valde**	**148.36**	**306**	P		01 53 56.0	
	baz=109						
EYAK	**Cordova Ski Ar**	**148.54**	**304**	P		01 53 56.7	
	baz=110						
DOT	**Dot Lake**	**148.74**	**310**	PKPbc	**PKPbc**	**01 53 57.5**	**+0.6**
SCRK	**Sand Creek**	**148.80**	**311**	P		01 53 57.0	
	baz=106						
SCRK	**Sand Creek**	**148.80**	**311**	PKPbc	**PKiKP**	**01 53 58.2**	**-0.3**
KLU	**Klutina**	**148.93**	**305**	P		01 53 57.7	
	baz=108,SNR=6.9						
KLU	**Klutina**	**148.93**	**305**	PKPbc	**PKPbc**	**01 53 58.0**	**+0.4**
M24K	**Tolsona, Glenn**	**149.23**	**307**	P		01 53 58.6	
	baz=107						
PRP	**Porcupine Dome**	**149.81**	**313**	P		01 53 59.2	
	baz=102						
PRP	**Porcupine Dome**	**149.81**	**313**	PKPbc	**PKiKP**	**01 54 00.5**	**-0.1**
PRP				PKPab	**PKPab**	**01 54 05.3**	**-0.1**
WAT6	**Susitna Watana**	**150.06**	**307**	P		01 54 00.0	
	baz=105,SNR=8.6						
KNK	**Knik Glacier**	**150.06**	**305**	P		01 53 59.8	
	baz=107						
KNK	**Knik Glacier**	**150.07**	**305**	PKPbc	**PKPbc**	**01 53 59.8**	**-0.4**
SML	**Sawmill**	**150.12**	**305**	P		01 53 59.8	
	baz=106,SNR=5.4						
ILAR	**Eielson Array**	**150.22**	**311**	PKPbc	**PKPbc**	**01 53 59.5**	**-1.0**
	comp=Z,4.6nm,0.7s,baz=103,slow=0.8,SNR=36						
PMR	**Palmer**	**150.43**	**305**	P		01 54 00.9	
	baz=106						
WAT2	**Susitna Watana**	**150.54**	**308**	P		01 54 01.2	
	baz=104,SNR=12						
RC01	**Rabbit Creek A**	**150.56**	**304**	P		01 54 01.6	
	baz=106						
BRSE	**Bradley Lake S**	**150.64**	**301**	P		01 54 01.4	
	baz=108						
SONM	**Songino Array**	**150.71**	**87**	PKPbc	**PKPbc**	**01 54 01.2**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=222,slow=4.0,SNR=5.8						
MCK	**McKinley**	**150.87**	**309**	P		01 54 01.9	
	baz=102,SNR=9.6						
KDAK	**Kodiak Island**	**150.89**	**296**	P		01 54 01.9	
	baz=110						
OHAK	**Old Harbor**	**151.05**	**295**	P		01 54 02.4	
	baz=111						
NEA2	**Nenana**	**151.10**	**311**	P		01 54 01.9	
	baz=101,SNR=7.2						
SUA	**Susitna One**	**151.14**	**304**	P		01 54 02.8	
	baz=105						
CUT	**Chulitna**	**151.15**	**306**	P		01 54 02.8	
	baz=104						
I23K	**Minto, Yukon-K**	**151.32**	**312**	P		01 54 02.2	
	baz=100						
TRF	**Thorofare Moun**	**151.40**	**308**	P		01 54 02.9	
	baz=102,SNR=8.7						
SKT	**Skwentna**	**151.63**	**305**	P		01 54 03.6	
	baz=104						
TOLK	**Toolik Lake Re**	**151.79**	**319**	P		01 54 03.8	
	baz=93,SNR=18						
BPAW	**Bear Paw Mtn.**	**151.83**	**309**	P		01 54 03.5	
	baz=100,SNR=19						
MLY	**Manley**	**151.88**	**311**	P		01 54 03.5	
	baz=99						
COLD	**Coldfoot**	**151.93**	**316**	P		01 54 05.5	
	baz=95,SNR=5.0						
PPLA	**Purkeypile**	**152.13**	**307**	P		01 54 04.5	
	baz=102						
CHUM	**Lake Minchumin**	**152.37**	**309**	P		01 54 04.6	
	baz=100						

IDC 04 01:37:07.2±5.2, 4°.38S×128°.81E, h221km±68km, mb2.8/1, mb1 3.0/4, mb1mx2.8/41, mbtmp3.5/4, Error ellipse: s-maj=95.6km s-min=18.0km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.26**	**35**	P	Pn	01 38 14.1	+1.0
	5.0nm,0.3s,baz=228,slow=22,SNR=32						
SIJI				S	S	01 39 05.0	+0.2
	3.4nm,0.3s,baz=264,slow=23,SNR=10						
WRA	**Warramunga Arr**	**16.38**	**161**	P	P	01 40 43.6	-0.4
	0.2nm,0.3s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**19.79**	**166**	P	P	01 41 21.0	-0.1
	0.2nm,0.3s,baz=348,slow=12,SNR=11						
MKAR	**Makanchi Array**	**65.40**	**327**	P	P	01 47 26.4	+0.1
	0.1nm,0.4s,baz=117,slow=8.3,SNR=2.8						

*DJA **04** 01:41:25.3±0.5, 7°.5S×13°.0E±°, h202km±18km, M4.3/6, mB4.7/3, mb4.0/6, MLv4.5/6, Mw(mB)3.9/3*
*IDC **04** 01:41:25.1±2.3, 6°.88S×129°.79E, h130km±26km, mb3.4/2, mb1 3.8/7, mb1mx3.4/39, mbtmp4.1/7, MS2.4/1, Ms1 2.4/1, ms1mx2.1/15, Error ellipse: s-maj=24.6km s-min=18.9km az=91.0*

ISC 04 01:41:25.0±0.8, 6°.83S±0'.06×129°.80E±0'.08, h150km, n14, σ2s12/17, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.88**	**128**	P	**Pn**	**01 42 01.8**	**+3.1**
FAKI	**Fak Fak**	**4.59**	**32**	P	**Pn**	**01 42 32.7**	**-0.3**
KMPI	**Kaimana, Papua**	**5.00**	**51**	P	**Pn**	**01 42 39.1**	**+0.7**
SIJI	**Sorong**	**6.10**	**14**	P	**Pn**	**01 42 53.8**	**+0.7**
	1.3nm,0.3s,baz=240,slow=20,SNR=1.9						
SIJI				S	**Sn**	**01 43 59.0**	**-3.0**
	5.4nm,0.3s,baz=186,slow=23,SNR=7.5						
SIJI				LR	LR	01 46 19.6	
	comp=Z,38nm,21.1s,baz=118,slow=48						
SOEI	**Soe**	**6.20**	**242**	P	**Pn**	**01 42 55.3**	**+0.8**
	0.2nm938nm44nm,0.6s						
BATI	**Baumata**	**6.94**	**241**	P	**Pn**	**01 43 04.7**	**+0.5**
	12nm,0.3s,baz=342,slow=1.0,SNR=9.4						
BATI				S	**Sn**	**01 44 21.0**	**-1.0**
	14nm,0.3s,baz=56,slow=20,SNR=6.3						
BATI	**Baumata**	**6.94**	**241**	P	**Pn**	**01 43 05.6**	**+1.4**
	0.2nm37nm,0.8s						
EDFI	**Ende, Flores**	**8.26**	**256**	P	**Pn**	**01 43 22.7**	**+0.7**
	9.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.91**	**200**	P	**Pn**	**01 44 10.4**	**+0.3**
	0.7nm,0.3s,baz=33,slow=9.3,SNR=33						
FITZ				S	Sn	01 46 10.5	-11
	1.8nm,0.3s,baz=94,slow=23,SNR=7.3						
PLAI	**Plampang**	**12.08**	**260**	P	**Pn**	**01 44 11.3**	**-1.1**
WRA	**Warramunga Arr**	**13.76**	**162**	P	**Pn**	**01 44 32.3**	**-1.6**
	1.1nm,0.3s,baz=340,slow=13,SNR=29						
WRA				S	Sn	01 46 56.2	-10
	2.0nm,0.3s,baz=335,slow=22,SNR=7.4						
ASAR	**Alice Springs**	**17.20**	**167**	P	**Pn**	**01 45 17.4**	**+1.1**
	1.1nm,0.3s,baz=345,slow=10.0,SNR=106						
ASAR				S	**S**	**01 48 22.3**	**-5.0**
	0.5nm,0.3s,baz=357,slow=30,SNR=4.3						
STKA	**Stephens Creek**	**27.24**	**158**	P	**P**	**01 46 57.0**	**+1.8**
	0.9nm,0.4s,baz=347,slow=15,SNR=3.4						
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**01 52 10.3**	**+2.5**
	0.2nm,0.4s,baz=122,slow=6.8,SNR=6.6						

*IDC **04** 01:41:50.5±2.4, 54°.23N×143°.01E, h0km, mb3.4/3, mb1 3.6/6, mb1mx3.3/37, mbtmp3.5/6, ML4.0/2, MS2.9/3, Ms1 2.9/3, ms1mx2.4/46, Error ellipse: s-maj=47.3km s-min=22.6km az=159.0*
*SKHL **04** 01:41:52.6±0.4, 54°.50N×142°.80E, h15km±3km, mb4.9/2*

ISC 04 01:41:53.7±0.7, 54°.35N±0°.06×143°.35E±0°.07, h10km, n11, σ2s28/15, mb3.3/3, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	**0.84**	**197**	*e*Pg	**Pg**	**01 42 09.7**	**-0.1**
OKH				AMB	AMB	01 42 10.7	
	500nm,0.2s						
OKH				*i* Sg	**Sg**	**01 42 21.9**	**+1.1**
OKH				A	A	01 42 23.3	
	6μm,0.5s						
OKH				A	A	01 42 23.3	
	4μm,0.5s						
NKL	**Nikolayevsk**	**1.99**	**234**	*e*Pg	**Pb**	**01 42 29.7**	**-0.2**
NKL				AMB	AMB	01 42 30.0	
	400nm,0.3s						
NKL				*e*Sg	**Sb**	**01 42 55.4**	**+0.7**
NKL				A	A	01 42 57.5	
	700nm,0.5s						
NKL				A	A	01 42 57.5	
	900nm,0.5s						
TYV	**Tymovskoe**	**3.52**	**187**	*e*P	**Pn**	**01 42 49.0**	**+0.7**
TYV				AMB	AMB	01 42 49.7	
	20nm,1.0s						
TYV				*e*S	**Sn**	**01 43 31.0

THE				S	Sg	02 20 23.8	+0.4	
	comp=E,135nm,0.4s							
THE	**Thessaloniki**	**0.64**	**116**	*i* Pg	**Pg**	**02 20 14.7**	**-0.4**	
FNA	**Florina**	**0.65**	**259**	P	**Pg**	**02 20 14.9**	**-0.3**	
FNA				S	**Sg**	**02 20 24.0**	**+0.3**	
FNA				AML	AML	02 20 25.0		
	comp=N,1580μm,0.2s							
FNA				AML	AML	02 20 25.0		
	comp=E,1098μm,0.2s							
FNA	**Florina**	**0.65**	**259**	P	**Pg**	**02 20 14.9**	**-0.3**	
FNA				S	**Sg**	**02 20 24.1**	**+0.4**	
	comp=E,670nm,0.2s							
FNA	**Florina**	**0.65**	**259**	*e*Pg	**Pg**	**02 20 14.6**	**-0.6**	
FNA				*e*Sg	**Sg**	**02 20 22.4**	**-1.3**	
FNA	**Florina**	**0.65**	**259**	⇓*i*Pg	**Pg**	**02 20 14.9**	**-0.3**	
FNA				*i* Sg	**Sg**	**02 20 24.3**	**+0.6**	
KZN	**Kozani**	**0.69**	**209**	P	**Pg**	**02 20 15.7**	**-0.4**	
KZN				S	**Sg**	**02 20 25.3**	**+0.1**	
KZN				AML	AML	02 20 32.0		
	comp=E,831μm,0.7s							
KZN				AML	AML	02 20 33.5		
	comp=N,465μm,0.7s							
KZN	**Kozani**	**0.69**	**209**	P	**Pg**	**02 20 15.6**	**-0.4**	
KZN				S	**Sg**	**02 20 25.6**	**+0.4**	
	comp=N,195nm,0.4s							
HORT	**Hortiatis**	**0.75**	**115**	P	**Pg**	**02 20 16.8**	**-0.3**	
HORT				S	**Sb**	**02 20 27.6**	**-0.5**	
HORT				AML	AML	02 20 33.3		
	comp=E,385μm,0.5s							
HORT				AML	AML	02 20 34.5		
	comp=N,410μm,0.5s							
HORT	**Hortiatis**	**0.75**	**115**	P	**Pg**	**02 20 16.7**	**-0.3**	
HORT				S	**Sg**	**02 20 27.0**	**+0.2**	
HORT	**Hortiatis**	**0.75**	**115**	PG	**Pg**	**02 20 17.2**	**+0.1**	
HORT				SG	**Sb**	**02 20 27.8**	**-0.3**	
STIP	**Stip**	**0.78**	**359**	⇑*i*Pg	**Pb**	**02 20 18.5**	**+0.1**	
STIP				*i* Sg	**Sn**	**02 20 32.3**	**+0.8**	
LIT	**Litokhoron**	**0.84**	**165**	P	**Pg**	**02 20 18.3**	**-0.6**	
LIT				S	**Sb**	**02 20 31.3**	**+0.5**	
LIT				AML	AML	02 20 35.0		
	comp=N,249μm,0.3s							
LIT				AML	AML	02 20 38.0		
	comp=E,272μm,0.4s							
LIT	**Litokhoron**	**0.84**	**165**	P	**Pg**	**02 20 17.8**	**-1.1**	
LIT				S	**Sg**	**02 20 30.1**	**+0.3**	
LIT	**Litokhoron**	**0.84**	**165**	*i* Pg	**Pg**	**02 20 18.3**	**-0.6**	
SOH	**Sokhos**	**0.87**	**96**	P	**Pg**	**02 20 19.0**	**-0.5**	
SOH				S	**Sg**	**02 20 31.1**	**+0.3**	
SOH	**Sokhos**	**0.87**	**96**	⇓*i*Pg	**Pg**	**02 20 18.9**	**-0.6**	
SOH				*i* Sg	**Sb**	**02 20 31.5**	**-0.2**	
NEST	**Nestorio**	**1.01**	**241**	P	**Pg**	**02 20 21.7**	**-0.6**	
NEST	**Nestorio**	**1.01**	**241**	P	**Pg**	**02 20 21.6**	**-0.6**	
NEST				S	**Sn**	**02 20 37.0**	**-0.5**	
	comp=N,108nm,0.5s							
PLG	**Polygyros**	**1.08**	**119**	P	**Pb**	**02 20 23.1**	**-0.4**	
PLG				S	**Sb**	**02 20 37.4**	**-0.4**	
PLG				AML	AML	02 20 43.3		
	comp=E,408μm,0.6s							
PLG				AML	AML	02 20 44.6		
	comp=N,364μm,0.7s							
OHR	**Ohrid**	**1.09**	**281**	*i* Pg	**Pb**	**02 20 23.0**	**-0.6**	
OHR				*i* Sg	**Sn**	**02 20 38.7**	**-0.5**	
OHR				*e*Lg	Lg	02 20 38.8		
	comp=N,146nm,0.6s							
OHR				*e*Lg	Lg	02 20 39.5		
	comp=E,124nm,0.5s							
PENT	**Pentalofos**	**1.09**	**229**	P	**Pb**	**02 20 23.1**	**-0.5**	
PENT	**Pentalofos**	**1.09**	**229**	P	**Pb**	**02 20 23.0**	**-0.6**	
PENT				S	**Sn**	**02 20 39.2**	**-0.1**	
KKB	**Krupnik**	**1.16**	**34**	P	**Pb**	**02 20 24.3**	**-0.5**	
KPRO	**Kipourio**	**1.16**	**214**	P	**Pb**	**02 20 24.7**	**-0.1**	
KPRO	**Kipourio**	**1.16**	**214**	P	**Pb**	**02 20 24.5**	**-0.3**	
KPRO				S	**Sg**	**02 20 40.2**	**+0.3**	
	comp=E,175nm,0.6s							
NVR	**Nevrokopi**	**1.32**	**70**	P	**Pn**	**02 20 27.1**	**-0.2**	
NVR				S	**Sb**	**02 20 44.4**	**-0.2**	
NVR				AML	AML	02 20 47.9		
	comp=N,170μm,0.5s							
NVR				AML	AML	02 20 53.9		
	comp=E,111μm,0.6s							
NVR	**Nevrokopi**	**1.32**	**70**	P	**Pn**	**02 20 27.1**	**-0.2**	
NVR				S	**Sg**	**02 20 45.4**	**+0.2**	
MMB	**Musomiste**	**1.33**	**59**	P	**Pb**	**02 20 27.4**	**-0.3**	
THL	**Klokotos Trika**	**1.36**	**186**	P	**Pn**	**02 20 27.8**	**+0.2**	
THL				S	**Sb**	**02 20 45.6**	**0.0**	
THL				AML	AML	02 20 54.0		
	comp=E,213μm,0.5s							
THL				AML	AML	02 20 58.9		
	comp=N,121μm,0.8s							
THL	**Klokotos Trika**	**1.36**	**186**	P	**Pn**	**02 20 27.9**	**+0.2**	
OUR	**Ouranopolis**	**1.47**	**113**	P	**Pb**	**02 20 29.8**	**-0.2**	
OUR				S	**Sb**	**02 20 49.4**	**+0.6**	
OUR				AML	AML	02 20 55.1		
	comp=N,411μm,0.5s							
OUR				AML	AML	02 20 55.8		
	comp=E,301μm,0.5s							
OUR	**Ouranopolis**	**1.47**	**113**	PN	**Pg**	**02 20 30.5**	**-0.3**	
OUR				SN	**Sg**	**02 20 50.1**	**+0.2**	
PAIG	**Paliouri**	**1.49**	**131**	P	**Pn**	**02 20 29.4**	**-0.1**	
PAIG				S	**Sb**	**02 20 49.7**	**+0.2**	
PAIG				AML	AML	02 20 57.7		
	comp=E,197μm,0.5s							
PAIG				AML	AML	02 20 57.9		
	comp=N,246μm,0.5s							
BOSS	**Bosilegrad**	**1.59**	**7**	*e*Pg	**Pb**	**02 20 32.0**	**-0.2**	
BOSS				*e*Sg	**Sg**	**02 20 53.3**	**-0.6**	
GJIK	**Gjilan**	**1.65**	**340**	*i* Pn	**Pb**	**02 20 33.0**	**-0.2**	
PRZK	**Prizren**	**1.69**	**320**	*i* Pn	**Pb**	**02 20 34.3**	**+0.3**	
KAVA	**Kavala**	**1.75**	**87**	P	**Pn**	**02 20 33.7**	**+0.7**	
KAVA				S	**Sb**	**02 20 57.0**	**+0.2**	
KAVA				AML	AML	02 21 04.1		
	comp=E,232μm,0.6s							
KAVA				AML	AML	02 21 05.8		
	comp=N,140μm,0.9s							
VTS	**Vitosha**	**1.87**	**24**	*e*Pn	**Pb**	**02 20 35.8**	**-1.2**	
VTS				*e*Sn	**Sb**	**02 20 59.9**	**-0.5**	
VTS	**Vitosha**	**1.87**	**24**	P	Pn	02 20 27.1	-7.8	
VTS	**Vitosha**	**1.87**	**24**	*i* Pn	**Pb**	**02 20 35.8**	**-1.2**	
AGG	**Agios Georgios**	**1.89**	**177**	P	**Pn**	**02 20 35.5**	**+0.4**	
AGG	**Agios Georgios**	**1.89**	**177**	PN	**Pn**	**02 20 36.0**	**+0.9**	
AGG				SN	**Sb**	**02 21 00.5**	**-0.6**	
BARS	**Barje**	**1.92**	**351**	*e*Pn	**Pn**	**02 20 35.7**	**+0.2**	
BARS				*e*Sn	**Sb**	**02 21 00.6**	**-1.3**	
THAS	**Thassos island**	**1.93**	**98**	P	**Pn**	**02 20 36.5**	**+0.9**	
ZATK	**Zatriq**	**1.94**	**323**	*i* Pn	**Pb**	**02 20 38.2**	**0.0**	
SMRK	**Smrekonice**	**2.17**	**335**	*i* Pn	**Pn**	**02 20 40.1**	**+1.1**	
PLD	**Plovdiv**	**2.22**	**57**	*e*Pn	**Pb**	**02 20 41.6**	**-1.3**	
PLD				*e*Sn	**Sb**	**02 21 09.0**	**-1.4**	
PLD	**Plovdiv**	**2.22**	**57**	PN	**Pn**	**02 20 40.8**	**+1.3**	
PLD				SN	**Sb**	**02 21 08.9**	**-1.4**	
ZAPS	**Zavoj**	**2.38**	**7**	*e*Pn	**Pn**	**02 20 43.8**	**-1.8**	
SELS	**Selova**	**2.44**	**341**	*e*Pn	**Pn**	**02 20 43.2**	**+0.6**	
RDO	**Rodhopi**	**2.53**	**84**	PN	**Pn**	**02 20 45.2**	**+1.4**	
PDG	**Podgorica**	**2.68**	**305**	*e*Pn	**Pn**	**02 20 48.0**	**+2.1**	
BLKB	**Belogradchik**	**2.73**	**7**	*e*Pn	**Pn**	**02 20 48.2**	**+1.6**	
BLKB				*e*Sn	**Sn**	**02 21 21.4**	**+1.7**	
SJES	**Sjenica**	**2.88**	**325**	*e*Pn	**Pn**	**02 20 50.6**	**+1.9**	
ZAGS	**Zajecar**	**2.90**	**0**	*e*Pn	**Pn**	**02 20 49.4**	**+0.6**	
ALN	**Alexandroupoli**	**2.91**	**89**	PN	**Pn**	**02 20 50.6**	**+1.6**	
IVAS	**Ivanjica**	**3.07**	**331**	*e*Pn	**Pn**	**02 20 52.3**	**+1.0**	
DIVS	**Divibare**	**3.58**	**333**	*e*Pn	**Pn**	**02 20 59.2**	**+0.9**	

IDC 04 02:49:13.3±20.0, 6°41'S×125°61'E, h550km±312km, mb2.6/1, mb1 2.7/3, mb1mx2.4/34, mbtmp3.4/3, Error ellipse: s-maj=211.6km s-min=91.3km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.90**	**149**	P	P	02 52 31.9	0.0
	0.3nm,0.3s,baz=326,slow=11,SNR=23						
ASAR	**Alice Springs**	**18.92**	**156**	P	P	02 52 59.2	-0.4
	0.3nm,0.3s,baz=327,slow=8.5,SNR=27						
MKAR	**Makanchi Array**	**65.41**	**329**	P	P	02 59 02.0	0.0
	0.3nm,0.5s,baz=129,slow=7.9,SNR=4.7						

SKO 04 02:58:22.4, 41°01'N×22°43'E, h15km, 1C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.06**	**202**	⇑*i*Pg	Pg	02 58 25.3	-0.1
GRG				*i* Sg	Sg	02 58 27.0	-0.2
VAY	**Valandovo**	**0.33**	**19**	⇓*i*Pg	Pg	02 58 29.1	-0.1
VAY				*i* Sg	Sb	02 58 34.7	-0.4
VAY				*e*Lg	Lg	02 58 35.7	
	comp=N,7.6nm,0.5s						
VAY				*e*Lg	Lg	02 58 36.8	
	comp=E,4.2nm,0.3s						
KNT	**Kendrikon**	**0.39**	**67**	⇓*i*Pg	Pg	02 58 30.4	+0.2
KNT				*i* Sg	Sg	02 58 35.7	+0.1
STIP	**Stip**	**0.71**	**345**	*i* Pg	Pn	02 58 37.7	-0.2

TIR 04 02:58:47.3, 41°52'N×20°27'E, h6km±3km, Md2.1, Ml1.3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.21**	**39**	P	Pg	02 58 52.2	+0.7
	baz=38						
PHP				S	Sg	02 58 55.2	+0.9
	baz=38						
PHP				AMP			
	comp=N,0.3nm,0.1s,baz=38						
TIR	**Tirane**	**0.35**	**240**	P	Pg	02 58 54.4	+0.3
	baz=241						
TIR				S	Sb	02 59 00.1	-1.5
	baz=241						
PUK	**Puka**	**0.59**	**332**	P	Pg	02 58 59.2	+0.5
	baz=332						
PUK				S	Sb	02 59 08.1	-0.6
	baz=332						
PUK				AMP			
	comp=N,0.1nm,0.2s,baz=332						

*TRN **04** 03:05:08.1, 11°33'N×62°14'W, h145km, MD4.0*
TRN Felt in Trinidad, MMI II.
*FUNV **04** 03:05:09.2, 11°24'N×62°19'W, h133km, MW4.2*

ISC 04 03:05:05.6±1.3, 11°28'N±0°03×62°20'W±0°05, h155km±11km, n57, σ1°9'67/84, 1C-2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**1.00**	**128**	⇑*i*P	Pn	03 05 32.4	+1.5
TRN				*e*S	Sn	03 05 49.3	-1.0
GRGR	**Grenville**	**1.01**	**32**	*e*P	Pn	03 05 31.3	+0.4
GRGR				*e*S	Sn	03 05 49.8	-0.6
GRGR	**Grenville**	**1.01**	**32**	*e*P	Pn	03 05 31.2	+0.3
GRGR				*e*S	Sn	03 05 49.3	-1.0
CRUV	**Carupano**	**1.18**	**240**	⇓*i*P	Pn	03 05 34.0	+1.6
CRUV				*e*S	Sn	03 05 51.3	-1.6
TPP	**Pointe-a-Pierr**	**1.21**	**142**	*e*P	Pn	03 05 34.7	+2.0
TPP				*e*S	Sn	03 05 53.9	+0.5
TBH	**Brigand Hill**	**1.37**	**125**	*i* P	Pn	03 05 35.8	+1.6
TBH				*e*S	Sn	03 05 56.5	+0.3
TPR	**Prospect**	**1.40**	**94**	*i* P	Pn	03 05 35.2	+0.6
TPR				*e*S	Sn	03 05 55.7	-1.1
GCMP	**Grenada, Carri**	**1.42**	**32**	*e*P	Pn	03 05 34.7	0.0
GCMP				*e*S	Sn	03 05 55.9	-1.3
TOSP	**Speyside**	**1.64**	**89**	*i* P	Pn	03 05 37.3	+0.3
TOSP				*e*S	Sn	03 05 59.9	-1.2
SVOC	**Richmond Hill,**	**2.10**	**27**	*e*	Pn	03 05 45.0	+2.8
SVOC				*e*S	Sn	03 06 08.8	-1.6
SVB	**Belmont**	**2.19**	**25**	*e*P	Pn	03 05 44.1	+0.8
SVB				*e*S	Sn	03 06 11.0	-1.5
SVV	**Soufriere Volc**	**2.25**	**25**	*e*P	Pn	03 05 45.0	+1.0
SVV				*e*S	Sn	03 06 12.9	-0.7
MCLT	**Moule a Chique**	**2.71**	**27**	*e*P	Pn	03 05 50.2	+0.6
MCLT				*e*S	Sn	03 06 21.6	-2.1
SLB	**Belfond**	**2.78**	**24**	*e*P	Pn	03 05 52.0	+1.6
SLB				*e*S	Sn	03 06 23.4	-1.8
SLCP	**Castries, St.**	**2.96**	**23**	*e*P	Pn	03 05 54.8	+2.1
SLCP				*e*S	Sn	03 06 27.4	-1.8
SLBI	**Saint Lucia, B**	**2.98**	**24**	*e*P	Pn	03 05 53.4	+0.4
SLBI				*e*S	Sn	03 06 27.9	-1.8
BCHC	**Barbados, Cave**	**3.12**	**53**	*e*P	Pn	03 05 56.6	+1.9
BCHC				*e*S	Sn	03 06 29.6	-3.2
BBGH	**Gun Hill**	**3.18**	**54**	*e*P	Pn	03 05 56.8	+1.4
BBGH				*e*S	Sn	03 06 31.6	-2.5
BBGH	**Gun Hill**	**3.18**	**54**	*e*P	Pn	03 05 56.9	+1.4
BBGH				*e*S	Sn	03 06 33.4	-0.7
RIOV	**Rio Grande**	**3.21**	**173**	*e*P	Pn	03 05 57.0	+1.1
RIOV				*e*S	Sn	03 06 32.7	-2.2
BBSP	**Saint Philip**	**3.24**	**56**	*e*P	Pn	03 05 58.4	+2.2
BBSP				*e*S	Sn	03 06 34.0	-1.5
BIM	**Bigot**	**3.40**	**19**	*e*P	Pn	03 05 58.8	+0.4
BIM				*e*S	Sn	03 06 36.6	-2.7
MPOM	**Morne Pois Mar**	**3.41**	**22**	*e*P	Pn	03 05 58.8	+0.4
MPOM				*e*S	Sn	03 06 37.1	-2.3
TRMF	**Trois Ilets**	**3.43**	**19**	*e*P	Pn	03 05 59.7	+1.1
ZAM	**Aeronautique**	**3.47**	**19**	*e*P	Pn	03 06 00.3	+1.2
LPMF	**Morne Lapointe**	**3.49**	**20**	*e*P	Pn	03 06 00.9	+1.5
MVM	**Montagne Vaucl**	**3.50**	**21**	*e*P	Pn	03 06 00.7	+1.1
FDF	**Fort de France**	**3.58**	**17**	*e*P	Pn	03 06 01.0	+0.3
FDF				*e*S	Sn	03 06 42.0	-1.6
PML	**Morne Lenard**	**3.62**	**16**	*e*P	Pn	03 06 02.5	+1.4
GBMF	**Grand Be**	**3.64**	**16**	*e*P	Pn	03 06 02.6	+1.1
PCM	**Pelee Case Pet**	**3.65**	**15**	*e*P	Pn	03 06 02.6	+1.2
CXM	**Morne La Croix**	**3.66**	**16**	*e*P	Pn	03 06 03.1	+1.5
BAMF	**Morne Balai**	**3.66**	**16**	*e*P	Pn	03 06 03.0	+1.3
SVN	**Savane Anatole**	**3.68**	**16**	*e*P	Pn	03 06 03.4	+1.4
ILAM	**Ilet Lapin Mar**	**3.71**	**20**	*e*P	Pn	03 06 04.5	+2.3
ILAM				*e*S	Sn	03 06 44.1	-2.2
BIRV	**Birongo**	**4.07**	**259**	*e*P	Pn	03 06 08.7	+1.7
BIRV				*e*S	Sn	03 06 52.9	-1.9
DSLB	**Salisbury**	**4.21**	**10**	*e*P	Pn	03 06 10.5	+1.8
TDBA	**Terre de Bas,**	**4.58**	**7**	*e*	Pn	03 06 18.7	+5.2
TBG	**Guadaloupe-3**	**4.58**	**7**	*e*P	Pn	03 06 16.1	+2.5
MAGL	**Barre de l'ile**	**4.73**	**11**	*e*P	Pn	03 06 15.2	-0.3
MAGL	**Barre de l'ile**	**4.73**	**11**	*e*S	Sn	03 07 08.3	-1.9
CBE	**Ff, Capester**	**4.80**	**7**	*e*P	Pn	03 06 17.2	+0.7
CBE	**Ff, Capester**	**4.80**	**7**	*e*S	Sn	03 07 13.9	+2.0
TACV	**Tcata**	**4.87**	**257**	*e*P	Pn	03 06 19.6	+2.0
LUEV	**Luepa**	**5.45**	**172**	⇓*i*P	Pn	03 06 25.2	0.0
LUEV				*e*S	Sn	03 07 23.4	-4.1
TURV	**Turiamo**	**5.60**	**262**	*e*P	Pn	03 06 28.6	+1.6
BPA	**Boggy Peak**	**5.75**	**3**	*e*P	Pn	03 06 30.0	+1.0
ANBD	**Bethesda, Anti**	**5.75**	**4**	*e*P	Pn	03 06 30.9	+1.8
BAUV	**El Baul**	**6.20**	**249**	*e*P	Pn	03 06 35.3	+0.2
BAUV				*e*S	Sn	03 07 40.7	-4.4
MAPV	**Macapo**	**6.32**	**257**	*e*P	Pn	03 06 38.2	+1.6
ANWB	**Willy Bob**	**6.37**	**4**	*e*P	Pn	03 06 39.3	+2.1
SANV	**Sanarito**	**7.43**	**257**	*e*P	Pn	03 06 52.3	+0.8
SIQV	**Siquisique**	**7.49**	**266**	*e*P	Pn	03 06 53.6	+1.2
MONV	**Montecano**	**7.64**	**276**	*e*P	Pn	03 06 55.7	+1.4
CURV	**Curarigua**	**7.73**	**261**	*e*P	Pn	03 06 56.9	+1.3
PAYV	**Puerto Ayacuch**	**7.93**	**223**	*e*P	Pn	03 06 58.5	+0.4
SOCV	**Socops**	**9.03**	**252**	*e*P	Pn	03 07 12.5	-0.3

*ANF **04** 03:26:11.5±3.4, 44°49'N×129°03'W, h5km, ML3.7/7, Error ellipse: s-maj=38.1km s-min=8.0km az=77.0, Hypocentre not reviewed by the ISC*

NEIC 04 03:26:08.3±1.5, 44°62'N±0°04×129°5'W±0°2, h10km±2km, mb3.9/10, ML3.4/10, Error ellipse: s-maj=20.6km s-min=5.3km az=258.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02D	**Swisshome**	**4.07**	**95**	P		03 27 09.1	
	baz=278,SNR=26						
KEBM	**Edson Butte**	**4.11**	**113**	Pn	Pn	03 27 07.2	-4.0
COR	**Corvallis**	**4.41**	**88**	Pn	Pn	03 27 14.4	-0.8
COR				IAML		03 27 53.9	
	39nm,2.2s						
COR				IAML		03 28 47.8	
	38nm,3.6s						
G03D	**McMinnville, O**	**4.45**	**80**	P		03 27 15.6	
	baz=262,SNR=30						
I03D	**Drain, OR**	**4.50**	**100**	P		03 27 15.0	
	baz=283,SNR=21						
E03A	**Lebam**	**4.57**	**63**	Pn	Pn	03 27 17.1	-0.3
E03A				IAML		03 28 27.6	
	comp=N,34nm,2.7s						
E03A				IAML		03 29 54.3	
	comp=E,46nm,2.4s						

F04D	**Rainier, OR**	**4.78**	**70**	P		03 27 20.6		
	baz=252							
NLWA	**Neilton Lookou**	**4.79**	**53**	Pn	Pn	03 27 19.6	-0.9	
NLWA				IAML		03 28 13.8		
	comp=E,40nm,4.1s							
NLWA				IAML		03 28 24.1		
	comp=E,26nm,2.6s							
H04D	**Lebanon**	**4.81**	**89**	P		03 27 20.5		
	baz=272,SNR=35							
I04A	**Tendick Farm,**	**5.14**	**97**	P		03 27 24.8		
	baz=281							
H04A	**Detroit Lake**	**5.20**	**87**		Pn	03 27 26.0	-0.1	
E04D	**Cinebar**	**5.22**	**66**	P		03 27 27.1		
	baz=248,SNR=14							
D03D	**Eldon**	**5.31**	**54**	P		03 27 28.1		
	baz=236,SNR=6.7							
D04E	**Lakebay**	**5.33**	**59**	P		03 27 29.2		
	baz=241,SNR=20							
J04D	**Umpqua Nationa**	**5.49**	**102**	P		03 27 30.1		
	baz=286							
YBH	**Yreka Blue Hor**	**5.72**	**118**	Pn	Pn	03 27 35.2	+1.8	
L04D	**Klamath Falls**	**5.75**	**112**	P		03 27 33.7		
	baz=297,SNR=5.9							
LON	**Longmire**	**5.78**	**66**		Pn	03 27 34.4	+0.4	
PGC	**Sidney**	**5.78**	**44**	Pn	Pn	03 27 34.2	+0.2	
F05D	**White Salmon**	**5.80**	**75**	P		03 27 34.7		
	baz=258							
D05A	**Enumclaw**	**5.82**	**61**	Pn	Pn	03 27 35.7	+1.1	
G05D	**Wamic, OR**	**5.82**	**81**	P		03 27 35.6		
	baz=265,SNR=18							
I05D	**Terrebonne, OR**	**5.83**	**90**	P		03 27 34.2		
	baz=274							
J05D	**Fort Rock, OR**	**6.09**	**100**	P		03 27 38.1		
	baz=285							
PINE	**Pine Mountain**	**6.19**	**95**	Pn	Pn	03 27 39.4	-0.4	
B05A	**Bryant**	**6.27**	**52**	P		03 27 42.0		
	baz=234,SNR=19							
LTY	**Liberty**	**6.68**	**64**		Pn	03 27 46.9	+0.5	
A05A	**Maple Falls**	**6.70**	**47**		Pn	03 27 47.3	+0.7	
B06A	**Marblemount**	**6.75**	**52**		Pn	03 27 48.1	+0.9	
C06D	**Leavenworth**	**6.80**	**58**	P		03 27 50.5		
	baz=242							
E07A	**Sunnyside**	**7.02**	**71**	Pn	Pn	03 27 51.4	+0.3	
I07A	**Izee**	**7.17**	**91**	Pn	Pn	03 27 53.9	+0.7	
HAWA	**Hanford**	**7.21**	**72**	Pn	Pn	03 27 54.2	+0.6	
G08A	**Pilot Rock**	**7.49**	**81**	Pn	Pn	03 27 57.9	+0.3	
D08A	**Wollman Farm,**	**7.76**	**68**	Pn	Pn	03 28 01.2	0.0	
B08A	**Colville Reser**	**7.93**	**58**		Pn	03 28 04.1	+0.5	
J08A	**Circle Bar Ran**	**8.03**	**95**		Pn	03 28 06.8	+1.7	
C09A	**Chrisman Ranch**	**8.39**	**64**		Pn	03 28 09.5	-0.4	
BMO	**Blue Mountains**	**8.67**	**84**		Pn	03 28 13.1	-0.6	
NEW	**Newport**	**9.27**	**62**	Pn	Pn	03 28 21.5	-0.4	
JTMT	**Jette**	**10.99**	**68**		Pn	03 28 44.6	-0.9	
MSO	**Missoula**	**11.08**	**73**		Pn	03 28 46.4	-0.5	
WALA	**Waterton Lakes**	**11.54**	**62**	Pn	Pn	03 28 53.4	+0.3	
MCMT	**McKenzie Canyo**	**11.83**	**83**	Pn	Pn	03 28 57.3	+0.1	
GCMT	**Greycliff**	**14.01**	**78**	Pn	Pn	03 29 27.5	+0.6	
EGMT	**Eagleton**	**14.04**	**69**	Pn	Pn	03 29 25.9	-1.3	
TCRU	**Three Creeks R**	**14.07**	**109**	Pn	Pn	03 29 28.5	+0.7	
MSU	**Marysvale**	**14.30**	**109**	Pn	Pn	03 29 30.9	0.0	
PV10	**Paradox Valley**	**16.51**	**105**	Pn	Pn	03 30 00.1	0.0	
PV10				IAmb	IAmb	03 30 04.4		
	comp=Z,8.7nm,1.0s							
PV07	**Paradox Valley**	**16.75**	**104**	Pn	Pn	03 30 02.8	-0.3	
ISCO	**Idaho Springs**	**18.30**	**97**		P	03 30 23.4	+0.8	
T25A	**Trinidad**	**20.32**	**103**	P	P	03 30 44.7	+0.1	
T25A				IAmb	IAmb	03 30 45.9		
	comp=Z,8.1nm,0.9s							
FFC	**Flin Flon**	**20.34**	**50**		P	03 30 44.8	+0.4	
FFC				IAmb	IAmb	03 30 47.9		
	comp=Z,3.7nm,0.8s							
BNM	**Barren Site**	**20.45**	**113**	P	P	03 30 46.0	-0.2	
K31A	**O'Neill**	**22.27**	**84**	P	P	03 31 04.9	-0.4	
ULM	**Lac du Bonnet**	**23.28**	**64**	P	P	03 31 15.1	-0.8	
ULM				IAmb	IAmb	03 31 15.5		
	comp=Z,3.3nm,0.8s							
F33A	**5 Mile Ranch,**	**23.31**	**75**	P	P	03 31 15.8	-0.5	
AGMN	**Agassiz Nation**	**23.33**	**69**	P	P	03 31 15.8	-0.6	
AGMN				IAmb	IAmb	03 31 16.1		
	comp=Z,2.7nm,0.8s							
B35A	**Bob, Littlefor**	**24.75**	**69**	P	P	03 31 30.0	+0.2	
B35A				IAmb	IAmb	03 31 30.3		
	comp=Z,4.7nm,0.8s							

IDC 04 03:50:28.8±3.6, 6°14S×147°78E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.3/32, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=77.2km s-min=35.8km az=92.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.31**	**191**	Pn	Pn	03 51 19.8	-2.0
	3.9nm,0.3s,baz=29,slow=18,SNR=5.7						
PMG				Sn	Sn	03 52 01.5	-0.4
	4.4nm,0.3s,baz=35,slow=14,SNR=6.4						
WRA	**War

PATS **Pohnpei** 13.30 24 Pn **Pn** 04 11 42.8 -0.1
MTSU **Mount Surprise** 15.18 213 P **Pn** 04 12 08.1 -0.3
baz=15,SNR=28
CTA **Charters Tower** 15.96 203 Pn **Pn** 04 12 19.2 +0.5
comp=Z,0.2nm,0.3s,baz=31,slow=12,SNR=10
CTAO **Charters Tower** 15.96 203 P **P** 04 12 22.4 +0.3
CTAO pmax pmax
comp=Z,64nm,1.4s
CTAO **Charters Tower** 15.96 203 P **P** 04 12 22.4 +0.3
SANVU **Saraoutou** 17.25 126 P **P** 04 12 36.4 +0.1
SANVU IAmb IAmb 04 12 44.8
comp=Z,179nm,1.0s
BAKI **Biak** 17.26 283 P **Pn** 04 12 35.4 +0.3
comp=Z,3µmcomp=Z,148nm,1.4s
QIS **Mount Isa** 19.84 219 P **P** 04 13 04.6 -0.2
baz=20,SNR=18
EIDS **Eidsvold** 19.94 185 P **P** 04 13 05.7 -0.1
baz=20,SNR=7.5
EIDS **Eidsvold** 19.94 185 **P** 04 13 06.1 +0.3
EIDS IAmb IAmb 04 13 14.6
comp=Z,72nm,1.1s
GUMO **Guam** 20.47 337 P Pn 04 13 12.9 -1.0
GUMO pmax pmax
comp=Z,581nm,1.1s
GUMO **Guam** 20.47 337 Pn 04 13 12.9 -1.0
FAKI **Fak Fak** 20.73 276 P **P** 04 13 15.1 +0.6
FAKI **Fak Fak** 20.73 276 P Pn 04 13 17.6 +0.6
DZM **Mont Dzumac** 21.14 143 P **P** 04 13 19.0 0.0
comp=Z,32nm,1.0s,baz=208,slow=4.2,SNR=14
DZM LR LR 04 20 49.3
comp=Z,4µm,18.5s,baz=328,slow=35
RMQ **Roma** 21.34 190 P **P** 04 13 22.4 +1.3
baz=21,SNR=24
KDU **Kakadu** 21.41 249 P **P** 04 13 21.3 -0.6
baz=21,SNR=39
SIJI **Sorong** 22.05 281 P **P** 04 13 27.7 -1.0
comp=Z,6.5nm,0.4s,baz=93,slow=8.8,SNR=4.6
SIJI LR LR 04 23 28.4
comp=Z,2µm,18.2s,baz=99,slow=41
SWI **Sorong** 22.05 281 P **P** 04 13 32.9 +4.1
SWI pmax pmax
comp=Z,129nm,0.9s
SWI **Sorong** 22.05 281 P **P** 04 13 27.6 -1.2
comp=Z,3µmcomp=Z,130nm,0.9s
QLP **Quilpie** 22.63 200 P **P** 04 13 33.6 -1.3
baz=23,SNR=7.0
MTN **Manton Dam** 22.70 249 P **P** 04 13 35.9 +0.1
baz=23,SNR=52
MTN **Manton Dam** 22.70 249 P **P** 04 13 36.2 +0.5
MTN IAmb IAmb 04 13 50.4
comp=Z,80nm,1.1s
WB0 **Warramunga Arr** 22.98 230 P **P** 04 13 38.5 -0.1
WR0 **Warramunga Arr** 22.98 229 P **P** 04 13 38.1 -0.5
WRAB **Tennant Creek** 23.11 230*c i* P **P** 04 13 39.0 -0.9
WRAB pmax pmax
comp=Z,152nm,1.7s
WRAB **Tennant Creek** 23.11 230 P **P** 04 13 40.0 0.0
WB2 **Warramunga Arr** 23.11 230 P **P** 04 13 39.7 -0.3
WRA **Warramunga Arr** 23.12 230 P **P** 04 13 39.3 -0.8
comp=Z,53nm,1.2s,baz=54,slow=9.2,SNR=80
WRA PcP **PcP** 04 17 28.5 -0.3
comp=Z,6.4nm,1.0s,baz=40,slow=2.0,SNR=4.2
WRA ScP **ScP** 04 21 07.5 +1.8
comp=Z,0.5nm,0.8s,baz=45,slow=2.6,SNR=1.5
WRA LR LR 04 21 54.7
comp=Z,740nm,21.0s,baz=25,slow=35
WRA **Warramunga Arr** 23.12 230 *i* P **P** 04 13 39.2 -0.8
WRA pmax pmax
comp=Z,51nm,1.2s
ARMA **Armidale** 24.92 183 P **P** 04 13 58.4 +1.4
ARMA IAmb IAmb 04 14 05.9
comp=Z,92nm,1.5s
AS31 **Alice Springs** 25.77 223 P **P** 04 14 03.7 -1.0
ASAR **Alice Springs** 25.77 223 P **P** 04 14 03.8 -1.0
comp=Z,16nm,0.9s,baz=58,slow=9.4,SNR=45
ASAR PcP **PcP** 04 17 34.8 +0.3
comp=Z,5.7nm,1.0s,baz=22,slow=2.8,SNR=2.0
ASAR ScP **ScP** 04 21 16.6 +3.7
comp=Z,0.6nm,0.9s,baz=61,slow=2.9,SNR=2.0
ASAR **Alice Springs** 25.77 223 P **P** 04 14 03.4 -1.4
ASAR 04 17 34.8
ASAR **Alice Springs** 25.77 223 P **P** 04 14 03.4 -1.4
TNTI **Ternate** 26.21 283 P **P** 04 14 09.2 +0.4
TNTI IAmb IAmb 04 14 24.7
comp=Z,38nm,1.1s
FUNA **Funafuti** 26.30 98 P **P** 04 14 10.2 +0.6
CMSA **Cobar Meteorol** 26.87 194 P **P** 04 14 12.6 -1.9
baz=27,SNR=6.2
SANI **Sanana** 27.04 276 P P 04 14 24.9 +8.6
MSVF **Nonsavu** 27.48 119 LR LR 04 25 15.9
comp=Z,1µm,19.5s,baz=288,slow=36
STKA **Stephens Creek** 28.39 201 P **P** 04 14 26.3 -1.9
comp=Z,8.3nm,0.8s,baz=26,slow=14,SNR=7.3
STKA LR LR 04 26 19.7
comp=Z,2µm,18.7s,baz=10,slow=38
STKA **Stephens Creek** 28.39 201 P **P** 04 14 26.7 -1.5
baz=28,SNR=6.9
STKA **Stephens Creek** 28.39 201 P **P** 04 14 27.6 -0.5
STKA pmax pmax
comp=Z,4.0nm,0.9s
STKA **Stephens Creek** 28.39 201 P **P** 04 14 27.6 -0.5
SOEI **Soe** 28.69 260 P **P** 04 14 31.1 -0.1
SOEI IAmb IAmb 04 14 39.5
comp=Z,40nm,1.2s
SOEI **Soe** 28.69 260 P **P** 04 14 32.8 +1.6
comp=Z,1µmcomp=Z,71nm,1.1s
BATI **Baumata** 29.33 259 P **P** 04 14 35.9 -0.9
comp=Z,13nm,0.3s,baz=97,slow=10,SNR=2.3
BATI LR LR 04 28 28.0
comp=Z,4µm,21.0s,baz=112,slow=41
BATI **Baumata** 29.33 259 P **P** 04 14 37.5 +0.7
comp=Z,48nm,1.0s
FITZ **Fitzroy Crossi** 29.45 242 P **P** 04 14 36.0 -1.7
comp=Z,13nm,0.6s,baz=53,slow=7.9,SNR=60
FITZ LR LR 04 28 07.4
comp=Z,2µm,18.3s,baz=64,slow=40
FITZ **Fitzroy Crossi** 29.45 242 P **P** 04 14 36.1 -1.7
baz=29,SNR=26
FITZ **Fitzroy Crossi** 29.45 242 P **P** 04 14 36.4 -1.4
FITZ IAmb IAmb 04 14 46.4
comp=Z,39nm,0.9s
CAN **Canberra** 30.00 186 P **P** 04 14 43.3 +0.9
CAN pmax pmax
comp=Z,25nm,1.1s
CAN **Canberra** 30.00 186 P **P** 04 14 43.3 +0.9
CAN IAmb IAmb 04 14 50.8
comp=Z,25nm,1.1s
LUWI **Luwuk** 30.37 277 P **P** 04 14 45.4 -0.5
LUWI IAmb IAmb 04 14 52.3
comp=Z,21nm,0.9s
GTOI **Gorontalo** 30.43 280 P **P** 04 14 48.3 +1.8
comp=Z,1µmcomp=Z,25nm,0.9s
WRKA **Warakurna** 30.62 228 P **P** 04 14 45.9 -2.2
baz=31,SNR=28
HTT **Hallett** 30.77 203 P **P** 04 14 47.6 -1.7
baz=31,SNR=5.2
EDFI **Ende, Flores** 31.13 262 P **P** 04 14 49.1 -3.7
BBOO **Buckleboo** 31.47 208 P **P** 04 14 56.5 +1.1
BBOO IAmb IAmb 04 15 02.6
comp=Z,58nm,1.4s
APSI **Ampana** 31.50 277 P **P** 04 14 56.7 +0.8
comp=Z,29nm,1.2s
TOLI2 **Tolitoli** 32.71 280 P **P** 04 15 05.8 -0.8
ARPS **Mount Arapiles** 32.83 196 P **P** 04 15 06.6 -0.6
baz=33,SNR=7.1
KAPI **Kappang** 33.00 269 P **P** 04 15 10.2 +1.1
KAPI pmax pmax
comp=Z,21nm,1.4s
KAPI **Kappang** 33.00 269 P **P** 04 15 10.2 +1.1
OUZ **Omahuta** 35.30 150 P **P** 04 15 30.0 +1.2
OUZ IAmb IAmb 04 15 38.6
comp=Z,39nm,1.3s
MYLDM **Lahad Datu** 35.91 286 P **P** 04 15 34.0 -0.3
BBKI **Banjar Baru** 37.98 271 P P 04 16 06.9 +15
KMBL **Kambalda** 38.89 225 P **P** 04 15 58.0 -1.4
baz=39,SNR=7.5
URZ **Urewera** 39.43 149 P **P** 04 16 04.2 +0.5
comp=Z,33nm,1.2s,baz=121,slow=23,SNR=6.0
URZ **Urewera** 39.43 149 IAmb IAmb 04 16 13.8
comp=Z,75nm,1.3s
JOW **Kunigami** 39.92 325 P **P** 04 16 08.1 0.0
JOW IAmb IAmb 04 16 22.8
comp=Z,41nm,1.1s
GIRL **Giralia** 41.05 241 P **P** 04 16 16.2 -1.3
baz=41,SNR=4.1
GIRL **Giralia** 41.05 241 P **P** 04 16 17.3 -0.2

RPZ **Rata Peaks** 41.39 160 P **P** 04 16 20.9 +1.0
comp=Z,22nm,0.9s,baz=215,slow=4.3,SNR=1.9
KLBR **Kellerberrin** 41.96 227 P **P** 04 16 22.7 -2.1
baz=42,SNR=7.7
MLZ **Mavora Lakes** 41.97 164 P **P** 04 16 26.2 +1.5
MORW **Morawa** 42.04 232 P **P** 04 16 24.9 -0.6
baz=42,SNR=5.8
MORW **Morawa** 42.04 232 P **P** 04 16 26.0 +0.5
MORW IAmb IAmb 04 16 33.0
comp=Z,25nm,0.9s
YULB **Yu-li** 42.07 314 P **P** 04 16 26.2 +0.5
TPUB **Ta-pu** 42.49 313 P **P** 04 16 29.2 0.0
KSM **Kuching** 43.07 278 P **P** 04 16 34.2 +0.1
JNU **Nakatsue** 43.63 333 P **P** 04 16 37.0 -1.2
comp=Z,37nm,0.9s,baz=140,slow=4.5,SNR=9.9
JNU **Nakatsue** 43.63 333 P **P** 04 16 37.4 -0.8
MJAR **Matsushiro Arr** 43.92 343 P **P** 04 16 38.3 -2.3
comp=Z,2.8nm,0.6s,baz=163,slow=8.7,SNR=5.7
MJAR PcP **PcP** 04 18 25.1 -1.3
comp=Z,2.9nm,0.8s,baz=156,slow=3.8,SNR=2.4
MJAR LR LR 04 32 31.8
comp=Z,408nm,21.7s,baz=195,slow=33
MJAR **Matsushiro Arr** 43.92 343 P **P** 04 16 38.3 -2.3
MJAR pmax pmax
comp=Z,4.0nm,0.8s
MJAR **Matsushiro Arr** 43.92 343 IAmb IAmb 04 16 47.6
comp=Z,3.6nm,0.8s
MAJO **Matsushiro** 43.92 343 *eP* **P** 04 16 39.3 -1.3
MAJO pmax pmax
comp=Z,14nm,1.1s
MAJO **Matsushiro** 43.92 343 P **P** 04 16 39.9 -0.7
MAT **Matsushiro** 43.92 343 P **P** 04 16 40.3 -0.3
MAT *eS* **S** 04 23 12.2 +1.2
QZH **Quanzhou** 44.97 314 *eP* **P** 04 16 52.8 +3.7
QZH LR LR
comp=Z,720nm,20.6s
TPI **Tanjungpandan** 45.19 271 P P 04 16 59.7 +8.7
DLV **T Lat** 47.39 292 P **P** 04 17 08.5 -0.1
TJN **Taejon** 47.94 332 *eP* **P** 04 17 10.8 -1.4
KSRS **Korea Array** 48.57 333 P **P** 04 17 16.7 -0.3
comp=Z,5.4nm,0.9s,baz=150,slow=7.5,SNR=8.7
KSRS LR LR 04 34 48.1
comp=Z,355nm,21.8s,baz=145,slow=32
KSAR **Wonju Array Be** 48.57 333 P **P** 04 17 16.4 -0.7
KSAR **Wonju Array Be** 48.57 333 P **P** 04 17 16.4 -0.7
KS19 **Wonju Array Si** 48.63 333 P **P** 04 17 17.8 +0.2
KS19 IAmb IAmb 04 17 25.5
comp=Z,16nm,0.9s
QIZ **Qiongzhong** 48.84 301 P **P** 04 17 19.0 -0.5
QIZ S **S** 04 24 23.5 +1.4
QIZ LR LR
comp=Z,410nm,18.6s
QIZ LR LR
comp=Z,420nm,14.8s
QIZ LR LR
comp=Z,380nm,16.1s
INCN **Inchon** 49.18 332 P **P** 04 17 21.5 -0.3
INCN pmax pmax
comp=Z,55nm,0.9s
INCN **Inchon** 49.18 332 P **P** 04 17 21.5 -0.3
NJ2 **Nanjing** 49.36 321 *eP* **P** 04 17 24.4 +1.2
NJ2 S **S** 04 24 32.2 +3.3
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,790nm,16.1s
NJ2 LR LR
comp=Z,590nm,16.1s
NJ2 LR LR
comp=Z,2µm,19.6s
MYKOM **Kota Tinggi** 49.50 277 P **P** 04 17 24.2 -0.4
MYKOM IAmb IAmb 04 17 33.0
comp=Z,18nm,1.1s
JKA **Kamikawa-asahi** 50.15 350 IAmb IAmb 04 17 38.0
comp=Z,23nm,0.9s
ASAJ **Asahikawa** 50.15 350 P **P** 04 17 28.4 -0.6
comp=Z,22nm,0.9s,baz=114,slow=9.7,SNR=9.8
WHN **Wuhan** 51.34 317 ⇑P **P** 04 17 40.9 +2.6
WHN S **S** 04 24 59.8 +3.2
WHN pmax pmax
comp=Z,150nm,1.7s
WHN LR LR
comp=Z,2µm,16.9s
WHN LR LR
comp=Z,1µm,23.8s
BKNI **Bangkinang** 52.08 275 P **P** 04 17 44.9 +0.8
DL2 **Dalian** 52.73 329 P **P** 04 17 50.8 +2.4
DL2 sP **sP** 04 17 56.3 -0.3
DL2 S **S** 04 25 23.0 +7.7
DL2 pmax pmax
comp=Z,23nm,1.2s
DL2 pmax pmax
comp=Z,130nm,6.7s
DL2 LR LR
comp=Z,480nm,19.3s
DL2 LR LR
comp=Z,450nm,16.4s
DL2 LR LR
comp=Z,840nm,21.3s
USA0B **Ussuriysk Arra** 52.84 341 ⇓*eP* **P** 04 17 48.2 -0.9
USA0B **Ussuriysk Arra** 52.84 341 P **P** 04 17 49.0 -0.1
USA0B IAmb IAmb 04 17 58.0
comp=Z,22nm,1.0s
USRK **Ussuriysk Ar.** 52.84 341 P **P** 04 17 48.6 -0.6
comp=Z,6.9nm,0.9s,baz=167,slow=9.0,SNR=11
USRK LR LR 04 40 13.3
comp=Z,283nm,18.5s,baz=149,slow=36
USRK **Ussuriysk Ar.** 52.84 341 P **P** 04 17 48.1 -1.1
USRK **Ussuriysk Ar.** 52.84 341 P **P** 04 17 48.1 -1.1
YSS **Yuzh-Sakhalins** 52.89 351 *eP* **P** 04 17 50.5 +1.0
YSS *e* 04 17 56.5
YSS *e* 04 19 02.0
YSS pmax pmax
comp=Z,20nm,1.3s
YSS MLR MLR
comp=Z,800nm,16.0s
YSS MLR MLR
comp=N,500nm,13.0s
KULM **Kulim** 53.23 281 P **P** 04 17 52.6 0.0
KULM IAmb IAmb 04 17 54.6
comp=Z,24nm,1.4s
TIA **Tai'an** 53.24 324 P **P** 04 17 51.4 -0.9
TIA pmax pmax
comp=Z,6.0nm,0.5s
TIA pmax pmax
comp=Z,380nm,2.9s
TIA LR LR
comp=Z,98nm,6.4s
TIA LR LR
comp=Z,430nm,8.3s
TIA LR LR
comp=Z,640nm,17.8s
MNSI **Mandailing Nat** 53.59 275 P **P** 04 17 55.2 -0.1
comp=Z,653nmcomp=Z,33nm,1.0s
MDJ **Mudanjiang** 54.01 340 P **P** 04 17 58.8 +1.0
MDJ IAmb IAmb 04 18 06.5
comp=Z,15nm,0.9s
RPSI **Rantau Prapat** 54.50 277 P **P** 04 18 02.0 +0.1
PSI **Prapat** 54.51 277 P **P** 04 18 02.0 -0.2
PSI pmax pmax
comp=Z,12nm,1.0s
GYA **Guiyang** 54.82 308 ⇑P **P** 04 18 07.3 +3.1
GYA pmax pmax
comp=Z,14nm,1.4s
GYA LR LR
comp=Z,710nm,16.7s
CN2 **Changchun** 54.87 336 *eP* **P** 04 18 05.3 +1.2
CN2 PP **PP** 04 20 10.2 +3.0
CN2 S **S** 04 25 41.3 -3.0
CN2 SS **SS** 04 29 24.6 -3.5
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 LR LR
comp=Z,560nm,18.0s
CN2 LR LR
comp=Z,590nm,18.0s
CN2 LR LR
comp=Z,720nm,20.0s
GSI **Gunungsitoli** 55.64 275 P **P** 04 18 09.8 -0.4
GSI **Gunungsitoli** 55.64 275 P **P** 04 18 11.5 +1.3
comp=Z,12µmcomp=Z,48nm,1.0s
COCO **West Island** 55.72 259 *i* P **P** 04 18 08.2 -2.5
BJT **Baijiatuau** 56.42 327 P **P** 04 18 14.5 -0.8
BJT pmax pmax
comp=Z,7.0nm,1.0s

BJT **Baijiatuau** 56.42 327 P **P** 04 18 14.5 -0.8
BJI **Beijing** 56.43 327 P **P** 04 18 14.6 -0.7
BJI PP **PP** 04 20 21.5 +0.3
BJI S **S** 04 26 08.3 +3.1
BJI pmax pmax
comp=Z,9.0nm,2.0s
BJI pmax pmax
comp=Z,250nm,3.8s
BJI LR LR
comp=Z,440nm,17.8s
BJI LR LR
comp=Z,370nm,17.6s
BJI LR LR
comp=Z,540nm,33.5s
TYV **Tymovskoe** 56.73 352 *eP* **P** 04 18 16.3 -0.9
TYV pmax pmax
comp=Z,15nm,1.6s
TYV pmax pmax
comp=Z,700nm,4.5s
XAN **Xi'an** 57.11 317 P **P** 04 18 19.4 -1.0
XAN pP pP 04 18 27.4 +1.2
XAN S **S** 04 26 12.8 -1.7
XAN pmax pmax
comp=Z,12nm,1.0s
XAN pmax pmax
comp=Z,220nm,4.0s
XAN LR LR
comp=Z,660nm,16.8s
XAN LR LR
comp=Z,560nm,16.3s
XAN LR LR
comp=Z,940nm,23.0s
XAN **Xi'an** 57.11 317 P **P** 04 18 20.0 -0.4
XAN pmax pmax
comp=Z,22nm,1.0s
XAN **Xi'an** 57.11 317 P **P** 04 18 20.0 -0.4
XAN IAmb IAmb 04 18 28.2
comp=Z,22nm,1.0s
MLSI **Meulaboh, Aceh** 57.22 279 P P 04 18 28.2 +6.7
KMI **Kunming** 57.39 304 ⇑P **P** 04 18 25.9 +3.2
KMI pP pP 04 18 29.8 +1.3
KMI sP sP 04 18 31.4 +0.4
KMI PP **PP** 04 20 30.8 +0.5
KMI S **S** 04 26 19.5 +0.7
KMI sS pS 04 26 24.7 -1.3
KMI SS **SS** 04 30 12.0 +3.2
KMI pmax pmax
comp=Z,17nm,1.4s
KMI pmax pmax
comp=Z,130nm,3.5s
KMI LR LR
comp=Z,300nm,14.8s
KMI LR LR
comp=Z,510nm,19.2s
KMI LR LR
comp=Z,620nm,16.1s
KMI **Kunming** 57.39 304 P **P** 04 18 22.7 0.0
KMI pmax pmax
comp=Z,27nm,1.2s
KMI **Kunming** 57.39 304 P **P** 04 18 22.7 0.0
KMI IAmb IAmb 04 18 26.8
comp=Z,26nm,1.2s
KLR **Kul'dur** 57.44 344 *c i* P **P** 04 18 20.9 -1.4
KLR pmax pmax
comp=Z,59nm,1.5s
PPT **Papeete** 57.47 107 LR LR 04 41 42.6
comp=Z,285nm,18.0s,baz=270,slow=35
PPT2 **Papeete2** 57.47 107 *eP* **P** 04 18 24.8 +1.6
comp=Z,51nm,1.3s
PPT2 *eS* **S** 04 26 19.0 -0.8
comp=Z,527nm,23.5s
PPT2 *e*LR LR 04 35 12.9
comp=Z,1µm,30.0s
PAE **Paea** 57.47 107 *eP* **P** 04 18 24.5 +1.4
comp=Z,13nm,1.2s
CM31 **Chiang Mai Arr** 58.21 295 P **P** 04 18 28.8 +0.4
CM31 IAmb IAmb 04 18 38.0
comp=Z,26nm,0.9s
CMAR **Chiang Mai Arr** 58.21 295 P **P** 04 18 28.2 -0.1
comp=Z,2.1nm,0.3s,baz=121,slow=5.9,SNR=12
CMAR LR LR 04 41 40.0
comp=Z,185nm,20.9s,baz=162,slow=34
CMAR PKP2bc 04 48 19.6
comp=Z,0.8nm,0.3s,baz=299,slow=3.6,SNR=6.7
CMAR **Chiang Mai Arr** 58.21 295 *ceP* **P** 04 18 28.2 -0.1
CMAR pmax pmax
comp=Z,3.0nm,0.5s
CMAR **Chiang Mai Arr** 58.21 295 P **P** 04 18 28.0 -0.3
TBI **Tubuai** 58.24 114 *eS* **S** 04 26 29.2 -0.4
comp=Z,332nm,25.2s
TBI *e*LR LR 04 35 35.3
comp=Z,3µm,31.2s
CHTO **Chiang Mai** 58.32 296 P **P** 04 18 28.9 -0.2
CHTO pmax pmax
comp=Z,21nm,1.2s
CHTO **Chiang Mai** 58.32 296 P **P** 04 18 28.9 -0.2
CHTO IAmb IAmb 04 18 45.8
comp=Z,21nm,1.1s
PET **Petropavlovsk** 58.40 4 *eP* **P** 04 18 28.0 -1.0
PET *e**PP **sP** 04 18 37.6 +0.4
PET *eS* **S** 04 26 27.6 -3.0
PET pmax pmax
comp=Z,36nm,1.2s
PET pmax pmax
comp=Z,200nm,16.8s
PET **Petropavlovsk** 58.40 4 P **P** 04 18 28.5 -0.5
PEA0B **Petropavlovsk-** 58.43 3 *ceP* **P** 04 18 28.7 -0.5
PEA0B **Petropavlovsk-** 58.43 3 P **P** 04 18 28.3 -0.9
PETK **Petropavlovsk-** 58.43 3 P **P** 04 18 28.6 -0.6
comp=Z,13nm,0.5s,baz=167,slow=6.8,SNR=20
PETK LR LR 04 42 32.3
comp=Z,141nm,18.9s,baz=200,slow=35
PETK **Petropavlovsk-** 58.43 3 P **P** 04 18 28.4 -0.8
PETK **Petropavlovsk-** 58.43 3 P **P** 04 18 28.4 -0.8
CD2 **Chengdu** 59.19 311 P **P** 04 18 34.4 -0.6
CD2 S **S** 04 26 43.5 +1.7
CD2 sS pS 04 26 50.6 +1.6
CD2 SS **SS** 04 30 40.1 +3.5
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,370nm,6.7s
CD2 LR LR
comp=Z,1µm,18.6s
CD2 LR LR
comp=Z,980nm,19.6s
CD2 LR LR
comp=Z,1µm,24.5s
NKL **Nikolayevsk** 59.23 351 *eP* **P** 04 18 33.0 -1.7
NKL *eS* **S** 04 26 47.6 +6.2
NKL pmax pmax
comp=E,78nm,1.3s
NKL pmax pmax
comp=N,1.0nm,0.7s
NKL pmax pmax
comp=Z,15nm,1.5s
NKL pmax pmax
comp=Z,57nm,3.6s
NKL smax smax
comp=E,103nm,2.2s
NKL smax smax
comp=N,1.0nm,2.7s
NKL MLR MLR
comp=E,693nm,12.0s
NKL MLR MLR
comp=N,9.0nm,13.0s
NKL MLR MLR
comp=Z,341nm,19.0s
HHC **Hu-ho-hao-te** 59.58 324 *eP* **P** 04 18 40.0 +2.4
HHC S **S** 04 26 44.7 -1.9
HHC sS sS 04 26 57.5 +0.5
HHC SS **SS** 04 30 47.1 +4.6
HHC pmax pmax
comp=Z,27nm,1.1s
HHC pmax pmax
comp=Z,180nm,5.8s
HHC LR LR
comp=Z,380nm,17.9s
HHC LR LR
comp=Z,420nm,17.0s
HHC LR LR
comp=Z,640nm,17.9s
BTO **Baotou** 60.33 323 P **P** 04 18 42.2 -0.5
HIA **Hailar** 61.61 336 ⇓*eP* **P** 04 18 52.3 +1.2
HIA pmax pmax
comp=Z,12nm,1.0s

HIA	**Hailar**	**61.61**	**336**	P	**P**	**04 18 52.2**	**+1.1**
HIA				IAmb	IAmb	04 18 54.2	
	comp=Z,13nm,1.2s						
LZH	**Lanzhou**	**61.72**	**316**	*e*P	**P**	**04 18 52.3**	**0.0**
LZH				sP	pP	04 18 59.4	+1.2
LZH				S	**S**	**04 27 12.3**	**-1.9**
LZH				sS	sS	04 27 23.5	-0.6
LZH				SS	**SS**	**04 31 17.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,9.8s						
LZH				LR	LR		
	comp=Z,350nm,20.1s						
LZH				LR	LR		
	comp=Z,350nm,19.0s						
LZH				LR	LR		
	comp=Z,310nm,19.5s						
ZEA	**Zeya**	**62.74**	**343**	*e*P	**P**	**04 18 58.0**	**-0.6**
ZEA				pmax	pmax		
	comp=N,20nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEA				MLR	MLR		
	comp=N,200nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
MA2	**Magadan**	**64.79**	**359**	*ce*P	**P**	**04 19 10.8**	**-1.2**
MA2				pmax	pmax		
	comp=Z,58nm,1.3s						
MA2	**Magadan**	**64.79**	**359**	P	**P**	**04 19 11.4**	**-0.6**
GTA	**Gaotai**	**66.15**	**317**	P	**P**	**04 19 21.6**	**+0.2**
GTA				pP	pP	04 19 24.7	-2.6
GTA				sP	sP	04 19 27.7	-2.1
GTA				S	S	04 28 18.3	+9.2
GTA				pmax	pmax		
	comp=Z,7.0nm,1.9s						
GTA				pmax	pmax		
	comp=Z,320nm,6.6s						
GTA				LR	LR		
	comp=Z,190nm,17.8s						
GTA				LR	LR		
	comp=Z,320nm,17.8s						
GTA				LR	LR		
	comp=Z,380nm,22.5s						
CIT	**Chita**	**66.27**	**335**	*e*P	**P**	**04 19 21.0**	**-0.8**
CIT				*e*		04 19 56.6	
ULN	**Ulaanbaatar**	**66.54**	**328**⇓	*e*P	**P**	**04 19 24.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,21nm,1.7s						
ULN	**Ulaanbaatar**	**66.54**	**328**	P	**P**	**04 19 23.8**	**0.0**
ULN				IAmb	IAmb	04 19 33.6	
	comp=Z,13nm,1.1s						
SHL	**Shillong**	**66.68**	**301**	P	**P**	**04 19 24.7**	**-0.5**
SHL				pmax	pmax		
	comp=Z,36nm,1.0s						
SHL	**Shillong**	**66.68**	**301**	P	**P**	**04 19 24.7**	**-0.5**
SONM	**Songino Array**	**66.87**	**328**	P	**P**	**04 19 23.8**	**-2.0**
	comp=Z,2.8nm,0.6s,baz=146,slow=6.0,SNR=9.5						
SONM				LR	LR	04 47 03.5	
	comp=Z,349nm,21.6s,baz=106,slow=35						
SONM				PKP2bc		04 48 00.3	
	comp=Z,0.4nm,0.3s,baz=343,slow=1.5,SNR=2.1						
SONM	**Songino Array**	**66.87**	**328**	P	**P**	**04 19 25.5**	**-0.3**
SONM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SONM	**Songino Array**	**66.87**	**328**	P	**P**	**04 19 25.5**	**-0.3**
SEY	**Seymchan**	**68.14**	**360**⇓	*e*P	**P**	**04 19 32.8**	**-0.5**
LSA	**Lhasa**	**68.64**	**305**	P	**P**	**04 19 38.0**	**+0.2**
LSA				pmax	pmax		
	comp=Z,20nm,1.1s						
LSA	**Lhasa**	**68.64**	**305**	P	**P**	**04 19 38.0**	**+0.2**
LSA				IAmb	IAmb	04 19 47.0	
	comp=Z,20nm,1.1s						
YAK	**Yakutsk**	**69.57**	**349**	*e*P	**P**	**04 19 42.4**	**+0.2**
YAK				*e**PP	**PcP**	**04 20 02.7**	**-2.5**
YAK				*e*		04 22 11.9	
YAK				*e*S	S	04 28 39.6	-9.3
YAK				*e**SS	**SKSac**	**04 29 36.6**	**-4.6**
YAK				*e*SS	**SS**	**04 33 18.9**	**+1.8**
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,17nm,0.3s						
YAK				smax	smax		
	comp=E,74nm,14.4s						
YAK				smax	smax		
	comp=N,107nm,15.6s						
YAK	**Yakutsk**	**69.57**	**349**	P	**P**	**04 19 42.1**	**-0.1**
ZAK	**Zakamensk**	**70.04**	**329**	*e*P	**P**	**04 19 45.0**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,18nm,1.4s						
BOD	**Bodaibo**	**70.38**	**339**	*e*P	**P**	**04 19 45.9**	**-1.4**
BOD				pmax	pmax		
	comp=Z,25nm,2.2s						
TLY	**Talaya**	**70.63**	**330**	*e*P	**P**	**04 19 49.7**	**+0.6**
TLY				*e*S	**S**	**04 29 01.1**	**-0.7**
TLY				pmax	pmax		
	comp=Z,25nm,1.2s						
TLY				MLR	MLR		
	comp=Z,575nm,13.0s						
TLY	**Talaya**	**70.63**	**330**	P	**P**	**04 19 49.2**	**+0.1**
IRK	**Irkutsk**	**70.67**	**331**	*e*P	**P**	**04 19 47.4**	**-1.8**
IRK				pmax	pmax		
	comp=Z,54nm,4.0s						
TAPN	**Taplejung**	**70.78**	**301**	*e*P	**P**	**04 19 50.8**	**-0.1**
	comp=Z,85nm,1.1s						
ODAN	**Odare**	**70.92**	**301**	*e*P	**P**	**04 19 51.5**	**-0.1**
RKT	**Rikitea**	**71.48**	**112**	*e*S	**S**	**04 29 12.8**	**+0.1**
	comp=Z,354nm,27.0s						
RKT	**Rikitea**	**71.48**	**112**	*e*LR	LR	04 41 40.9	
	comp=Z,2μm,32.0s						
SDPT	**Sand Point**	**71.71**	**26**	P		04 19 54.8	
	baz=230						
JIRN	**Jiri**	**72.17**	**301**	*e*P	**P**	**04 19 57.8**	**-1.5**
VNDA	**Vanda**	**72.23**	**178**	P	**P**	**04 19 57.8**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=325,slow=6.2,SNR=13						
VNDA				LR	LR	04 49 58.7	
	comp=Z,235nm,18.3s,baz=7.5,slow=34						
VNDA	**Vanda**	**72.23**	**178**	P	**P**	**04 19 58.9**	**+0.6**
VNDA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VNDA	**Vanda**	**72.23**	**178**	P	**P**	**04 19 58.9**	**+0.6**
GUN	**Gumba**	**72.50**	**301**	*e*P	**P**	**04 20 00.5**	**-0.7**
	comp=Z,55nm,0.7s						
SBA	**Scott Base**	**72.78**	**177**	P	**P**	**04 20 02.8**	**+1.3**
SBA				pmax	pmax		
	comp=Z,40nm,1.5s						
SBA	**Scott Base**	**72.78**	**177**	P	**P**	**04 20 02.8**	**+1.3**
SBA				IAmb	IAmb	04 20 11.6	
	comp=Z,40nm,1.4s						
PKI	**Pulchoki**	**72.81**	**301**	*e*P	**P**	**04 20 02.4**	**-0.7**
KKN	**Kakani**	**72.98**	**301**	*e*P	**P**	**04 20 02.5**	**-1.4**
DMN	**Daman**	**73.08**	**301**	*e*P	**P**	**04 20 04.1**	**-0.5**
	comp=Z,190nm,1.2s						
PALK	**Pallekele**	**73.11**	**279**⇑	*e*P	**P**	**04 20 05.8**	**+1.0**
PALK				pmax	pmax		
	comp=Z,32nm,2.7s						
PALK	**Pallekele**	**73.11**	**279**	P	**P**	**04 20 04.9**	**+0.2**
GKN	**Gorkha**	**73.58**	**301**	*e*P	**P**	**04 20 06.1**	**-1.3**
	comp=Z,108nm,1.1s						
BILL	**Bilibino**	**73.87**	**5**	*d*iP	**P**	**04 20 07.5**	**-0.5**
BILL				*e*		04 22 52.5	
BILL				*e*PPP	PPP	04 24 33.8	
BILL				*i*S	**SKiKP**	**04 29 36.2**	**+0.3**
BILL				pmax	pmax		
	comp=Z,95nm,1.3s						
BILL				MLR	MLR		
	comp=Z,322nm,18.0s						
BILL	**Bilibino**	**73.87**	**5**	P	**P**	**04 20 07.5**	**-0.5**
GAMB	**Gambell**	**73.93**	**16**	P	**P**	**04 20 08.6**	**+0.1**
GAMB				IAmb	IAmb	04 20 14.9	
	comp=Z,32nm,1.4s						
GAMB	**Gambell**	**73.93**	**16**	P		04 20 12.5	
	baz=217						
SII	**Sitkinak Islan**	**75.26**	**27**	P		04 20 17.1	
	baz=235						
OHAK	**Old Harbor**	**76.04**	**27**	P		04 20 20.2	
	baz=236						
WMQ	**Urumqi**	**76.24**	**317**	P	**P**	**04 20 23.5**	**+1.2**
WMQ				pP	sP	04 20 30.8	0.0
WMQ				S	**S**	**04 30 10.2**	**+4.5**
WMQ	**Urumqi**	**76.24**	**317**	P	**P**	**04 20 22.2**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,38nm,1.3s						
WMQ	**Urumqi**	**76.24**	**317**	P	**P**	**04 20 22.2**	**-0.1**
WMQ				IAmb	IAmb	04 20 26.4	
	comp=Z,38nm,1.3s						
ANM	**Nome**	**76.31**	**17**	P		04 20 22.1	
	baz=223						
HYB	**Hyderabad**	**76.77**	**289**	*i*P	**P**	**04 20 23.0**	**-2.8**
SVW2	**Sparrevohn**	**77.34**	**23**	P	**P**	**04 20 27.9**	**-0.2**
SVW2				IAmb	IAmb	04 20 41.9	
	comp=Z,21nm,1.2s						
TIXI	**Tiksi**	**78.50**	**352**	*de*P	**P**	**04 20 33.1**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,98nm,1.7s						
TIXI	**Tiksi**	**78.50**	**352**	P	**P**	**04 20 33.7**	**-0.5**
BRSE	**Bradley Lake S**	**78.54**	**25**	P		04 20 33.9	
	baz=238						
DGZ	**Jazzator, Alta**	**78.61**	**323**⇓	*e*P	**P**	**04 20 35.0**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,34nm,1.6s						
ZSN	**Zaisan**	**79.38**	**320**	*e*P	**P**	**04 20 38.5**	**-1.2**
	comp=Z,70nm,3.3s,baz=320						
ZSN	**Zaisan**	**79.38**	**320**	*e*P	**P**	**04 20 38.5**	**-1.2**
ZSN				pmax	pmax		
	comp=Z,69nm,3.3s						
SUA	**Susitna One**	**79.46**	**24**	IAmb	IAmb	04 20 40.7	
	comp=Z,18nm,0.7s						
SUA	**Susitna One**	**79.46**	**24**	P		04 20 38.3	
	baz=238,SNR=12						
RDOG	**Red Dog Mine**	**79.53**	**15**	P		04 20 41.4	
	baz=225						
RC01	**Rabbit Creek A**	**79.68**	**25**	P		04 20 39.8	
	baz=238						
RC01	**Rabbit Creek A**	**79.68**	**25**	IAmb	IAmb	04 20 49.2	
	comp=Z,30nm,1.2s						
PPLA	**Purkeypile**	**79.69**	**22**	P		04 20 41.0	
	baz=236						
NDI	**New Delhi**	**80.10**	**300**	*e*P	**P**	**04 20 45.0**	**+1.0**
CUT	**Chulitna**	**80.16**	**23**	P		04 20 44.2	
	baz=238						
PMR	**Palmer**	**80.19**	**24**	P		04 20 42.4	
	baz=239,SNR=5.5						
PMR	**Palmer**	**80.19**	**24**	P	**P**	**04 20 42.7**	**-1.0**
PMR				pmax	pmax		
	comp=Z,12nm,1.0s						
PMR	**Palmer**	**80.19**	**24**	P	**P**	**04 20 42.7**	**-1.0**
CHUM	**Lake Minchumin**	**80.20**	**22**	P		04 20 43.4	
	baz=236,SNR=11						
GHO	**Glory Hole Cre**	**80.37**	**24**	IAmb	IAmb	04 21 00.2	
	comp=Z,20nm,0.9s						
SML	**Sawmill**	**80.63**	**24**	IAmb	IAmb	04 21 01.8	
	comp=Z,31nm,1.0s						
SML	**Sawmill**	**80.63**	**24**	P		04 20 45.3	
	baz=240,SNR=8.6						
TRF	**Thorofare Moun**	**80.71**	**22**	P		04 20 44.5	
	baz=238						
BPAW	**Bear Paw Mtn.**	**80.81**	**22**	P		04 20 45.8	
	baz=237						
MK31	**Makanchi Array**	**80.83**	**319**	*ce*P	**P**	**04 20 46.6**	**-0.9**
MK31				pmax	pmax		
	comp=Z,14nm,1.0s						
MK31	**Makanchi Array**	**80.83**	**319**	IAmb	IAmb	04 20 52.2	
	comp=Z,28nm,1.4s						
MKAR	**Makanchi Array**	**80.83**	**319**	P	**P**	**04 20 46.9**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=102,slow=6.9,SNR=20						
MKAR				PKPbc	**PKKPbc**	**04 39 33.7**	**+5.5**
	comp=Z,1.0nm,1.1s,baz=284,slow=4.9,SNR=3.5						
MKAR				LR	LR	04 55 06.4	
	comp=Z,222nm,21.6s,baz=102,slow=35						
MKAR	**Makanchi Array**	**80.83**	**319**	P	**P**	**04 20 46.7**	**-0.8**
MAKZ	**Makanchi**	**81.04**	**319**	P	**P**	**04 20 48.2**	**-0.4**
MAKZ	**Makanchi**	**81.04**	**319**	P	**P**	**04 20 48.2**	**-0.4**
SCM	**Sheep Creek Mo**	**81.05**	**25**	IAmb	IAmb	04 20 57.3	
	comp=Z,14nm,0.9s						
WAT2	**Susitna Watana**	**81.11**	**23**	P		04 20 47.1	
	baz=239,SNR=6.5						
RND	**Reindeer**	**81.24**	**23**	IAmb	IAmb	04 21 04.2	
	comp=Z,21nm,1.1s						
WAT6	**Susitna Watana**	**81.26**	**24**	P		04 20 48.3	
	baz=240						
MCK	**McKinley**	**81.38**	**22**	P		04 20 48.6	
	baz=239,SNR=15						
MLY	**Manley**	**81.41**	**21**	P		04 20 49.0	
	baz=237,SNR=13						
MLY	**Manley**	**81.41**	**21**	IAmb	IAmb	04 20 53.4	
	comp=Z,30nm,1.4s						
KLU	**Klutina**	**81.48**	**25**	P		04 20 52.6	
	baz=242,SNR=6.6						
KLU	**Klutina**	**81.48**	**25**	IAmb	IAmb	04 21 00.8	
	comp=Z,30nm,1.0s						
M24K	**Tolsona, Glenn**	**81.66**	**25**	P		04 20 51.6	
	baz=242						
M24K	**Tolsona, Glenn**	**81.66**	**25**	P	**P**	**04 20 51.6**	**-0.1**
M24K				IAmb	IAmb	04 21 04.8	
	comp=Z,24nm,0.9s						
ZAA0	**Zalesovo Array**	**81.69**	**326**	P	**P**	**04 20 50.1**	**-1.8**
ZAA0				IAmb	IAmb	04 20 59.6	
	comp=Z,14nm,0.9s						
ZALV	**Zalesovo Beam**	**81.69**	**326**	P	**P**	**04 20 50.4**	**-1.5**
	comp=Z,2.9nm,0.5s,baz=115,slow=6.5,SNR=13						
ZALV				LR	LR	04 57 02.7	
	comp=Z,263nm,21.1s,baz=126,slow=36						
ZALV	**Zalesovo Beam**	**81.69**	**326**	P	**P**	**04 20 50.1**	**-1.7**
SHLS	**Shalkode**	**81.71**	**315**	*e*P	**P**	**04 20 49.6**	**-2.8**
	comp=Z,42nm,2.5s,baz=315						
SHLS	**Shalkode**	**81.71**	**315**	*e*P	**P**	**04 20 49.6**	**-2.8**
SHLS				pmax	pmax		
	comp=Z,42nm,2.5s						
PDGK	**Podgornoye**	**81.74**	**315**	P	**P**	**04 20 52.2**	**-0.4**
NEA2	**Nenana**	**81.78**	**22**	P		04 20 50.5	
	baz=239,SNR=7.8						
NEA2	**Nenana**	**81.78**	**22**	IAmb	IAmb	04 20 59.9	
	comp=Z,13nm,0.9s						
BMRM	**Bremner River**	**81.80**	**26**	P		04 20 52.3	
	baz=243						
I23K	**Minto, Yukon-K**	**81.96**	**21**	P		04 20 52.3	
	baz=238						
UZB	**Uzynbulak**	**82.02**	**315**	*e*P	**P**	**04 20 52.7**	**-1.5**
	comp=Z,37nm,2.4s,baz=315						
UZB				*e*S	**S**	**04 31 07.8**	**+0.3**
	baz=315						
UZB	**Uzynbulak**	**82.02**	**315**	*e*P	**P**	**04 20 52.6**	**-1.5**
UZB				*e*S	**S**	**04 31 07.7**	**+0.3**
UZB				pmax	pmax		
	comp=Z,37nm,2.4s						
N25K	**Chitina, Valde**	**82.09**	**25**	P		04 20 53.6	
	baz=243						
KPKS	**Kokpek**	**82.34**	**315**	*e*P	**P**	**04 20 54.0**	**-1.8**
	comp=Z,54nm,2.1s,baz=315						
KPKS				*e*S	**S**	**04 31 10.9**	**+0.2**
	baz=315						
KPKS	**Kokpek**	**82.34**	**315**	*e*P	**P**	**04 20 53.9**	**-1.8**
KPKS				*e*S	**S**	**04 31 10.8**	**+0.2**
KPKS				pmax	pmax		
	comp=Z,54nm,2.1s						
CRQM	**Cirque**	**82.35**	**26**	IAmb	IAmb	04 21 05.9	
	comp=Z,26nm,1.1s						
GLB	**Gilahina Butte**	**82.36**	**26**	IAmb	IAmb	04 21 04.6	
	comp=Z,21nm,1.0s						
TCOL	**CIGO, UAF Yank**	**82.36**	**22**	IAmb	IAmb	04 21 00.1	
	comp=Z,13nm,0.8s						
TCOL	**CIGO, UAF Yank**	**82.36**	**22**	P		04 20 53.8	
	baz=240						
CRQE	**Cirque**	**82.37**	**26**	P		04 20 56.0	
	baz=245						
COLA	**College**	**82.37**	**22**⇑	*e*P	**P**	**04 20 54.0**	**-1.2**
COLA				pmax	pmax		
	comp=Z,19nm,1.2s						
COLA	**College**	**82.37**	**22**	P	**P**	**04 20 53.6**	**-1.5**
COLA				IAmb	IAmb	04 21 03.2	
	comp=Z,14nm,0.9s						
COLA	**College**	**82.37**	**22**	P		04 20 53.8	
	baz=240						
VRDI	**Verde Repeater**	**82.42**	**26**	IAmb	IAmb	04 21 05.0	
	comp=Z,16nm,0.9s						
SATY	**Saty**	**82.43**	**315**	*e*P	**P**	**04 20 55.1**	**-1.2**
	comp=Z,36nm,2.5s,baz=315						
SATY				*e*S	**S**	**04 31 12.4**	**+0.7**
	baz=315						
SATY	**Saty**	**82.43**	**315**	*e*P	**P**	**04 20 55.0**	**-1.2**
SATY				*e*S	**S**	**04 31 12.4**	**+0.7**
SATY				pmax	pmax		
	comp=Z,36nm,2.5s						
HDA	**Harding Lake**	**82.47**	**22**	P		04 20 54.0	
	baz=241						
HDA				P		04 20 54.0	
	baz=241						
TGL	**Tana Glacier**	**82.49**	**27**	IAmb	IAmb	04 21 05.5	
	comp=Z,18nm,1.2s						
MCARA	**McCarthy VSAT**	**82.67**	**26**	IAmb	IAmb	04 21 06.9	
	comp=Z,21nm,1.0s						
MCARA	**McCarthy VSAT**	**82.67**	**26**	P		04 20 57.0	
	baz=245						
ILAR	**Eielson Array**	**82.68**	**22**	P	**P**	**04 20 54.6**	**-2.2**
	comp=Z,3.9nm,0.8s,baz=246,slow=5.7,SNR=30						
ILAR				LR	LR	04 55 12.2	
	comp=Z,370nm,19.0s,baz=249,slow=34						
ILAR	**Eielson Array**	**82.68**	**22**	P	**P**	**04 20 55.0**	**-1.8**
ILAR	**Eielson Array**	**82.68**	**22**	P	**P**	**04 20 55.0**	**-1.8**
COLD	**Coldfoot**	**82.79**	**19**	P		04 20 59.8	
	baz=237,SNR=8.8						
TDK	**Taldyqorghan**	**82.92**	**316**	*e*P	**P**	**04 20 57.8**	**-0.9**
	baz=316						
TDK	**Taldyqorghan**	**82.92**	**316**	*e*P	**P**	**04 20 57.7**	**-0.9**
TABL	**Table Mountain**	**83.11**	**27**	IAmb	IAmb	04 21 09.5	
	comp=Z,28nm,1.3s						
BARN	**Barnard Glacie**	**83.13**	**26**	IAmb	IAmb	04 21 09.1	
	comp=Z,19nm,1.0s						
SEM	**Semipalatinsk**	**83.20**	**322**	*e*P	**P**	**04 20 59.1**	**-1.1**
	baz=322						
SEM				*e*S	**S**	**04 31 19.6**	**+0.2**
	baz=322						
SEM	**Semipalatinsk**	**83.20**	**322**	*e*P	**P**	**04 20 59.0**	**-1.1**
SEM				*e*S	**S**	**04 31 19.6**	**+0.2**
CTG	**Chitna Glacier**	**83.24**	**27**	P		04 20 59.8	
	baz=246						
DOT	**Dot Lake**	**83.24**	**24**	IAmb	IAmb	04 21 08.8	
	comp=Z,15nm,1.0s						
CTGM	**Chitina Glacie**	**83.24**	**27**	IAmb	IAmb	04 21 10.6	
	comp=Z,16nm,1.0s						
LOGN	**Logan Glacier**	**83.33**	**27**	IAmb	IAmb	04 21 09.9	
	comp=Z,17nm,1.1s						
A21K	**Barrow**	**83.36**	**14**	P		04 20 59.7	
	baz=231,SNR=7.7						
KSH	**Kashi**	**83.39**	**311**	P	**P**	**04 21 01.6**	**+0.3**
KSH				S	**S**	**04 31 21.0**	**-0.5**
KSH				pmax	pmax		
	comp=Z,18nm,1.2s						
KSH				pmax	pmax		
	comp=Z,580nm,2.9s						
KSH				LR	LR		
	comp=Z,130nm,6.4s						
KSH				LR	LR		
	comp=Z,290nm,8.8s						
KSH				LR	LR		
	comp=Z,390nm,8.1s						
SCRK	**Sand Creek**	**83.42**	**23**	P		04 20 60.0	
	baz=243						
MDOK	**Medeo**	**83.42**	**314**	*e*P	**P**	**04 21 00.1**	**-1.4**
	baz=314						
MDOK				*e*S	**S**	**04 31 21.2**	**-0.7**
	baz=314						
MDOK	**Medeo**	**83.42**	**314**	*e*P	**P**	**04 21 00.0**	**-1.4**
MDOK				*e*S	**S**	**04 31 21.1**	**-0.7**
TNSS	**Tian-Shan**	**83.46**	**314**	*e*P	**P**	**04 21 01.2**	**-0.8**
	baz=314						
TNSS	**Tian-Shan**	**83.46**	**314**	*e*P	**P**	**04 21 01.1**	**-0.8**
AAA	**Alma-Ata**	**83.53**	**314**	*e*P	**P**	**04 21 00.2**	**-1.7**
	baz=314						
AAA	**Alma-Ata**	**83.53**	**314**	*e*P	**P**	**04 21 00.1**	**-1.7**
PRP	**Porcupine Dome**	**83.54**	**22**	P		04 21 02.0	
	baz=242						
TOLK	**Toolik Lake Re**	**83.75**	**18**	P		04 21 03.0	
	baz=238						
L27K	**Beaver Creek,**	**83.89**	**25**	IAmb	IAmb	04 21 12.8	
	comp=Z,11nm,1.1s						
L27K	**Beaver Creek,**	**83.89**	**25**	P		04 21 03.0	
	baz=246						
KUU	**Kurty**	**84.09**	**315**	*e*P	**P**	**04 21 02.9**	**-1.8**
	comp=Z,154nm,2.6s,baz=315						
KUU				*e*S	**S**	**04 31 25.3**	**-3.0**
	baz=315						
KUU	**Kurty**	**84.09**	**315**	*e*P	**P**	**04 21 02.8**	**-1.8**
KUU				*e*S	**S**	**04 31 25.2**	**-3.0**
KUU				pmax	pmax		
	comp=Z,154nm,2.6s						
FYU	**Fort Yukon**	**84.14**	**21**	IAmb	IAmb	04 21 08.0	
	comp=Z,9.9nm,1.1s						
K27K	**Chicken**	**84.20**	**24**	IAmb	IAmb	04 21 20.7	
	comp=Z,14nm,1.2s						
K27K	**Chicken**	**84.20**	**24**	P		04 21 04.7	
	baz=245						
KURBB	**Kurchatov Arra**	**84.32**	**322**	P	**P**	**04 21 04.0**	**-1.6**
NIL	**Nilore**	**84.38**	**304**	P	**P**	**04 21 05.7**	**-0.6**
NIL				pmax	pmax		
	comp=Z,82nm,0.8s						
NIL	**Nilore**	**84.38**	**304**	P	**P**	**04 21 05.7**	**-0.6**
TKM2	**Tokmak 2**	**84.40**	**314**	P	**P**	**04 21 05.6**	**-0.9**
	SNR=6.6						
TKM2	**Tokmak 2**	**84.40**	**314**	*i*P	**P**	**04 21 06.1**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,26nm,1.2s						
QSPA	**South Pole Qui**	**84.57**	**180**	P	**P**	**04 21 07.1**	**+0.3**
KBK	**Karagaybulak**	**84.81**	**314**	P	P	04 21 17.3	+8.8
	SNR=5.0						
EGAK	**Eagle**	**84.87**	**23**	IAmb	IAmb	04 21 26.4	
	comp=Z,9.6nm,1.0s						
EGAK	**Eagle**	**84.87**	**23**	P		04 21 07.3	
	baz=246						
HYT	**Haines Junctio**	**84.92**	**27**	IAmb	IAmb	04 21 19.1	
	comp=Z,15nm,1.0s						
UCH	**Uchtor**	**85.04**	**313**	P	**P**	**04 21 10.9**	**+0.9**
	SNR=22						
MAW	**Mawson**	**85.06**	**203**	P	**P**	**04 21 09.9**	**+0.9**
	comp=Z,5.2nm,1.0s,baz=76,slow=4.7,SNR=4.0						
MAW				LR	LR	04 56 32.2	
	comp=Z,141nm,18.6s,baz=64,slow=34						
AAK	**Ala-Archa**	**85.14**	**313**	P	**P**	**04 21 12.9**	**+2.8**
	SNR=7.8						
AAK	**Ala-Archa**	**85.14**	**313**	*ce*P	**P**	**04 21 09.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,96nm,1.7s						
AAK	**Ala-Archa**	**85.14**	**313**	P	**P**	**04 21 09.2**	**-0.9**
SGDS	**Sogindy**	**85.21**	**314**	*e*P	**P**	**04 21 08.7**	**-1.6**
	baz=314						
SGDS	**Sogindy**	**85.21**	**314**	*e*P	**P**	**04 21 08.7**	**-1.6**
USP	**Ospenovka**	**85.26**	**314**	P	**P**	**04 21 10.4**	**-0.2**
	SNR=7.4						
DAWY	**Dawson**	**85.29**	**24**	IAmb	IAmb	04 21 26.3	
	comp=Z,18nm,1.5s						
BESE	**Bessie Mountai**	**85.45**	**30**	P	**P**	**04 21 11.6**	**+0.4**
BESE				IAmb	IAmb	04 21 21.7	
	comp=Z,27nm,1.3s						
AML	**Almayashu**	**85.62**	**313**	P	**P**	**04 21 13.0**	**+0.2**
	SNR=35						
EKS2	**Erkin-Say**	**85.66**	**313**	P	**P**	**04 21 12.9**	**+0.3**
	SNR=17						
NRIK	**Noril'sk**	**86.55**	**341**	P	**P**	**04 21 15.6**	**-0.7**
	comp=Z,13nm,0.8s,baz=111,slow=3.9,SNR=9.7						
NRIK				LR	LR	04 57 43.5	
	comp=Z,155nm,21.6s,baz=120,slow=34						
NRIK	**Noril'sk**	**86.55**	**341**	*ce*P	**P**	**04 21 14.8**	**-1.5**
NRIK				pmax	pmax		
	comp=Z,44nm,1.2s						
DZA	**Taraz**	**87.47**	**313**	*e*P	**P**	**04 21 20.8**	**-0.7**
	baz=313						
DZA	**Taraz**	**87.47**	**313**	*e*P	**P**	**04 21 20.7**	**-0.7**
BRZS

INK	**Inuvik**	**88.98**	**21**	PKKPbc	PKKPbc	04 39 06.5	-3.1
	comp=Z,0.9nm,1.0s,baz=175,slow=2.3,SNR=3.9						
BRVK	**Borovoye**	**89.83**	**323**	*ce*P	**P**	**04 21 30.3**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s						
BRVK	**Borovoye**	**89.83**	**323**	P	**P**	**04 21 31.0**	**-1.3**
J05D	**Fort Rock, OR**	**90.66**	**47**	P		04 21 39.1	
	baz=263						
LHV	**Little Huntoon**	**92.21**	**52**	IAmb	IAmb	04 21 52.8	
	comp=Z,8.6nm,1.2s						
NVAR	**Mina Array Bea**	**92.38**	**52**	P	**P**	**04 21 44.5**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=254,slow=6.1,SNR=9.6						
NVAR				LR	LR	04 59 21.2	
	comp=Z,597nm,18.2s,baz=264,slow=33						
NVAR	**Mina Array Bea**	**92.38**	**52**	P	**P**	**04 21 44.2**	**-0.6**
G08A	**Pilot Rock**	**92.50**	**45**	IAmb	IAmb	04 21 53.9	
	comp=Z,8.0nm,1.2s						
C36M	**Paulatuk**	**92.55**	**21**	IAmb	IAmb	04 21 53.6	
	comp=Z,1.1nm,0.8s						
C36M	**Paulatuk**	**92.55**	**21**	P		04 21 43.6	
	baz=262						
J08A	**Circle Bar Ran**	**92.67**	**47**	IAmb	IAmb	04 21 54.2	
	comp=Z,6.8nm,1.3s						
HRA	**Herat**	**93.54**	**304**	P	**P**	**04 21 49.4**	**-0.8**
BMO	**Blue Mountains**	**93.63**	**45**	P	**P**	**04 21 50.8**	**+0.6**
BMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BMO	**Blue Mountains**	**93.63**	**45**	P	**P**	**04 21 50.8**	**+0.6**
BMO				IAmb	IAmb	04 21 58.9	
	comp=Z,6.4nm,1.1s						
TPNV	**Topopah Spring**	**93.90**	**53**	P	**P**	**04 21 52.2**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TPNV	**Topopah Spring**	**93.90**	**53**	P	**P**	**04 21 52.2**	**+0.5**
TPNV				IAmb	IAmb	04 22 00.9	
	comp=Z,9.6nm,1.4s						
SPR3	**Spring Creek 3**	**95.52**	**51**	P	**P**	**04 21 59.0**	**-0.3**
YKA	**Yellowknife Ar**	**95.91**	**28**	P	**P**	**04 21 59.7**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=266,slow=4.4,SNR=20						
YKA				PKIKP	**PKiKP**	**04 26 37.8**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=272,slow=1.2,SNR=4.5						
YKA				PKKPbc	**PKKPdf**	**04 38 52.5**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=96,slow=3.0,SNR=6.2						
YKA				LR	LR	04 59 26.0	
	comp=Z,382nm,22.0s,baz=0.0,slow=32						
AB31	**Akbulak array**	**95.97**	**319**	*i* P	**P**	**04 22 03.2**	**+2.5**
ABKAR	**Akbulak array**	**95.97**	**319**	P	**P**	**04 22 00.4**	**-0.4**
WALA	**Waterton Lakes**	**96.14**	**41**	IAmb	IAmb	04 22 10.9	
	comp=Z,10nm,1.1s						
ARU	**Arti**	**96.86**	**326***c*	*i*P	**P**	**04 22 04.2**	**-0.4**
ARU						04 26 01.6	
ARU				S	**SKSac**	**04 32 41.5**	**+1.3**
ARU				SS	**SS**	**04 40 01.7**	**+0.7**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ARU	**Arti**	**96.86**	**326**	P	**P**	**04 22 03.2**	**-1.3**
ARU				IAmb	IAmb	04 22 11.8	
	comp=Z,10nm,1.0s						
GEYT	**Alibeck**	**97.04**	**307**	LR	LR	05 09 05.1	
	comp=Z,169nm,18.9s,baz=75,slow=38						
GYA0B	**ALIBECK ARRAY**	**97.04**	**307**	P	**P**	**04 22 05.1**	**-0.8**
GYA0B				IAmb	IAmb	04 22 16.1	
	comp=Z,7.0nm,1.0s						
AKTO	**Aktyubinsk**	**97.23**	**320**	LR	LR	05 07 07.2	
	comp=Z,123nm,19.7s,baz=82,slow=36						
AKTO	**Aktyubinsk**	**97.23**	**320**	P	**P**	**04 22 04.1**	**-2.3**
PDAR	**Pinedale Array**	**99.18**	**48**	P	**Pdif**	**04 22 14.6**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=196,slow=4.2,SNR=4.3						
PDAR				LR	LR	05 03 13.4	
	comp=Z,912nm,18.6s,baz=270,slow=33						
PRGR	**Permogore**	**102.89**	**332**	*e*P	**Pdif**	**04 22 30.5**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MAK	**Makhachkala**	**104.91**	**313**	*e*P	**Pdif**	**04 22 34.5**	**-6.3**
MAK				*e*		04 26 55.2	
MAK				*e*PPP	PPP	04 29 08.8	
MAK				*e*		04 33 12.0	
MAK				*e*PS	**PS**	**04 36 13.2**	**-2.4**
MAK				pmax	pmax		
	comp=Z,221nm,1.4s						
KLMR	**Klimovskoe**	**105.95**	**332**	*e*P	**Pdif**	**04 22 44.8**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
KLMR	**Klimovskoe**	**105.95**	**332**	*e*Pdif	**Pdif**	**04 22 44.9**	**-0.1**
KLMR				AMP		04 22 47.3	
	comp=Z,16nm,1.5s						
ARCES	**ARCESS Array B**	**107.46**	**343**	PKiKP	**PKiKP**	**04 26 59.3**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=44,slow=2.9,SNR=1.6						
SOC	**Sochi**	**110.42**	**315**	*i* PKIKP	**PKiKP**	**04 27 07.8**	**+1.7**
SOC				*e*		04 27 37.7	
SOC				*e*PPP	PPP	04 30 00.6	
SOC				*e*PS	**PS**	**04 37 04.1**	**-7.6**
SOC				*e*SS	SS	04 43 08.7	+0.5
SOC				*e*SSS	SSS	04 47 15.6	
SOC				MLR	MLR		
	comp=Z,163nm,21.0s						
FINES	**FINESS Array B**	**111.63**	**336**	Pdiff	**Pdif**	**04 23 08.2**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=11,slow=1.9,SNR=5.8						
FINES				PKiKP	**PKiKP**	**04 27 07.5**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=96,slow=5.6,SNR=2.0						
AKASG	**Malin Array Be**	**115.03**	**324**	PKP	**PKiKP**	**04 27 13.3**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=53,slow=2.6,SNR=2.9						
BRTR	**Keskin Array B**	**115.76**	**312**	PKP	**PKPdf**	**04 27 17.2**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=125,slow=7.3,SNR=1.5						
NOA	**NORSAR Array B**	**117.50**	**340**	PKP	**PKPdf**	**04 27 18.0**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=47,slow=1.8,SNR=2.8						
CLTN	**Cedars of Leba**	**117.87**	**52**		**PKiKP**	**04 27 20.9**	**+0.2**
BURAR	**Bucovina Array**	**118.71**	**322**	PKPdf	**PKiKP**	**04 27 22.4**	**+0.4**
MATQ	**Matagami**	**118.79**	**35**	P		04 27 24.1	
	baz=299						
CRVS	**Cervenica-Dubn**	**120.32**	**325**	*e*PKIKP	**PKiKP**	**04 27 29.8**	**+4.7**
CRVS	**Cervenica-Dubn**	**120.32**	**325**	*e*PKP	**PKiKP**	**04 27 29.8**	**+4.7**
G54A	**Lake Saint Pet**	**120.53**	**39**	P		04 27 24.8	
	baz=296						
OJC	**Ojcow**	**120.56**	**327**	*e*P	**PKiKP**	**04 27 28.4**	**+2.9**
NIE	**Niedzica**	**120.71**	**326**	*e*P	**PKiKP**	**04 27 29.0**	**+3.1**
Q53A	**Leroy**	**120.71**	**48**	P		04 27 25.7	
	baz=290						
N54A	**Moraine State**	**121.07**	**45**	P		04 27 29.1	
	baz=292						
O54A	**Avella**	**121.08**	**46**	PKPdf	**PKiKP**	**04 27 27.0**	**+0.2**
M54A	**Oil Creek Stat**	**121.09**	**44**	P		04 27 29.3	
	baz=293						
LANS	**Liptovska Anna**	**121.32**	**326**	*e*PKIKP	pPKPdf	04 27 36.2	+3.0
LANS	**Liptovska Anna**	**121.32**	**326**	*e*	pPKPdf	04 27 36.2	+3.0
D55A	**Sainte-Anne-du**	**121.38**	**37**	P		04 27 29.1	
	baz=300						
PAULI	**Pauline**	**121.77**	**52**		**PKiKP**	**04 27 28.8**	**+0.5**
D56A	**ZEC Mazanza, M**	**121.80**	**36**	P		04 27 27.1	
	baz=300						
VYHS	**Vyhne**	**122.02**	**326**	*e*PKIKP	**PKiKP**	**04 27 31.9**	**+3.5**
VYHS				*e*		04 27 36.0	
VYHS	**Vyhne**	**122.02**	**326**	*e*PKP	**PKiKP**	**04 27 31.9**	**+3.5**
VYHS				*e*		04 27 36.0	
MORC	**Moravsky Berou**	**122.02**	**327**	*e*PKIKP	**PKiKP**	**04 27 30.7**	**+2.3**
MORC	**Moravsky Berou**	**122.02**	**327**	PKIKP	**PKiKP**	**04 27 29.3**	**+0.9**
MORC	**Moravsky Berou**	**122.02**	**327**	PKPdf	**PKiKP**	**04 27 29.3**	**+0.9**
KMSC	**Kings Mountain**	**122.05**	**52**	P		04 27 29.4	
	baz=288						
KSP	**Ksiaz**	**122.06**	**329**	*e*P	**PKiKP**	**04 27 31.9**	**+3.5**
KRLC	**Kraliky**	**122.26**	**328**	*e*PKIKP	**PKPdf**	**04 27 28.2**	**-0.5**
KRLC				*e*		04 27 36.3	
KRLC				MLR	MLR		
	comp=Z,300nm,19.9s						
KRLC	**Kraliky**	**122.26**	**328**	*e*PKPDF	**PKPdf**	**04 27 28.2**	**-0.5**
KRLC				*ep*PKP	**pPKPdf**	**04 27 36.3**	**+1.3**
KRLC				AMS	AMS	05 20 50.0	
	comp=Z,300nm,19.9s						
OSTC	**Ostas**	**122.27**	**329**	AMS	AMS	05 22 00.0	
	comp=Z,300nm,17.3s						
N56A	**West Decatur**	**122.27**	**44**	P		04 27 30.4	
	baz=294						
DPC	**Dobruska-Polom**	**122.34**	**329**	AMS	AMS	05 21 50.0	
	comp=Z,200nm,18.0s						
P56A	**Dayton Farm, R**	**122.44**	**46**	P		04 27 34.6	
	baz=292						
JAVC	**Velka Javorina**	**122.47**	**327**	*e*PKIKP	**PKiKP**	**04 27 32.5**	**+3.2**
SSPA	**Standing Stone**	**122.67**	**44**	P		04 27 29.9	
	baz=294						
VRAC	**Vranov**	**122.80**	**327**	*e*PKIKP	**PKiKP**	**04 27 32.3**	**+2.4**
N57A	**Milroy**	**122.85**	**44**	P		04 27 32.1	
	baz=294						
D58A	**Chemin du LacG**	**122.87**	**36**	P		04 27 32.3	
	baz=302						
BSEG	**Bad Segeberg**	**122.88**	**335**	*e*PKPdf	**PKiKP**	**04 27 34.2**	**+4.3**
	baz=50,slow=1.9						
BSEG				*ep*PKPdf	**sPKPdf**	**04 27 38.5**	**+0.5**
	baz=49,slow=2.0						
MODS	**Modra-Piesok**	**122.95**	**326**	*e*PKIKP	**PKiKP**	**04 27 33.0**	**+2.7**
MODS				*e*		04 27 39.3	
MODS	**Modra-Piesok**	**122.95**	**326**	*e*PKP	**PKiKP**	**04 27 33.0**	**+2.7**
MODS				*e*		04 27 39.2	
O57A	**Amberson**	**123.01**	**45**	P		04 27 32.8	
	baz=294						
E58A	**La Victoria**	**123.02**	**37**	P		04 27 31.7	
	baz=301						
KRUC	**Moravsky**	**123.05**	**327**	*e*PKIKP	**PKiKP**	**04 27 32.3**	**+1.9**
LONY	**Lake Ozonia**	**123.09**	**39**	P		04 27 33.2	
	baz=299						
PVCC	**Panska Ves**	**123.13**	**330**	AMS	AMS	05 25 10.0	
	comp=Z,300nm,16.2s						
BRG	**Berggiesshubel**	**123.23**	**330**	*e*PKP	**PKiKP**	**04 27 31.3**	**+0.6**
BRG				Amp		04 27 34.8	
	comp=Z,40nm,2.0s						
BRG				*ex*	x	04 27 37.3	
BRG				Amp		04 27 39.4	
	comp=Z,14nm,1.0s						
BRG				Amp		04 46 38.0	
	comp=E,0.3nm,9.3s						
BRG				Amp		04 47 43.0	
	comp=Z,0.4nm,11.8s						
BRG				Amp		04 47 46.0	
	comp=N,0.3nm,8.9s						
BRG				Amp		05 23 18.0	
	comp=N,0.2nm,15.7s						
BRG				Amp		05 23 36.0	
	comp=E,0.1nm,15.1s						
BRG				Amp		05 23 39.0	
	comp=Z,0.3nm,22.8s						
BRG	**Berggiesshubel**	**123.23**	**330**	*e*PKPdf	**PKiKP**	**04 27 34.5**	**+3.8**
	baz=50,slow=1.9						
BRG				*ep*PKPdf	**sPKPdf**	**04 27 39.1**	**+0.2**
	baz=49,slow=2.0						
CLL	**Collm**	**123.41**	**331**	*e*PKPdf	**PKiKP**	**04 27 31.0**	**0.0**
CLL				*i* pPKPdf	**pPKPdf**	**04 27 38.5**	**+1.4**
	comp=Z,10.0nm,1.0s						
CLL				*e*PP	**PP**	**04 29 18.0**	**+6.6**
CLL				*e*PPP	PPP	04 31 06.0	
CLL				*e*SKSac	**SKSac**	**04 34 36.0**	**+4.7**
CLL				*e*SP	**SP**	**04 38 54.0**	**-11**
CLL				*e*PS	**PS**	**04 39 11.0**	**+2.1**
CLL				*e*PPS	PPS	04 40 26.0	
CLL				*e*SSS	SSS	04 50 36.0	
CLL				*e*		04 52 28.0	
CLL				*e*SSSS		04 54 24.0	
CLL				Lm	MLR	05 22 00.0	
	comp=Z,300nm,19.5s						
CLL	**Collm**	**123.41**	**331**	*e*PKIKP	**PKiKP**	**04 27 31.0**	**0.0**
CLL				*i*		04 27 38.5	
CLL				MLR	MLR		
	comp=Z,300nm,19.5s						
CLL	**Collm**	**123.41**	**331**	*ep*PKPdf	pPKPdf	04 27 39.1	+2.1
	baz=49,slow=2.0						
H58A	**Gabriels**	**123.45**	**39**	P		04 27 33.8	
	baz=299						
PRU	**Pruhonice**	**123.47**	**329**	AMS	AMS	05 23 50.0	
	comp=Z,300nm,15.6s						
FBE	**Freiberg**	**123.49**	**330**	*e*PKPdf	**PKiKP**	**04 27 35.3**	**+4.1**
	baz=50,slow=1.9						
O58A	**Lewisberry**	**123.55**	**45**	P		04 27 34.2	
	baz=294						
FLTG	**Flechtingen**	**123.57**	**333**	*e*PKPdf	**PKiKP**	**04 27 35.1**	**+3.8**
	baz=50,slow=1.9						
FLTG				*ep*PKPdf	**sPKPdf**	**04 27 39.5**	**0.0**
	baz=49,slow=2.0						
HLG	**Helgoland**	**123.71**	**336**	*e*PKPdf	**PKiKP**	**04 27 36.0**	**+4.5**
	baz=50,slow=1.9						
I59A	**Olmsteadville**	**123.94**	**39**	P		04 27 33.6	
	baz=299						
ASSE	**Asse, Remlinge**	**123.96**	**333**	*e*PKPdf	**PKiKP**	**04 27 36.1**	**+4.2**
	baz=50,slow=1.9						
ASSE				*ep*PKPdf	**sPKPdf**	**04 27 40.4**	**+0.3**
	baz=49,slow=2.0						
NRDL	**Niedersach Rie**	**123.96**	**334**	*e*PKPdf	**PKiKP**	**04 27 36.1**	**+4.1**
	baz=50,slow=1.9						
NRDL				*ep*PKPdf	**sPKPdf**	**04 27 40.7**	**+0.6**
	baz=49,slow=2.0						
M59A	**Waymart**	**123.97**	**43**	P		04 27 34.1	
	baz=296						
CONA	**Conrad Observa**	**123.99**	**326**	*e*P	**PKPdf**	**04 27 32.0**	**-0.1**
	comp=Z,11nm,1.7s						
NEUB	**Neuenburg**	**124.06**	**332**	*ep*PKPdf	pPKPdf	04 27 40.6	+2.3
	baz=49,slow=2.0						
TANN	**Tannenbergstha**	**124.25**	**330**	*e*PKPdf	**PKiKP**	**04 27 36.5**	**+3.6**
	baz=50,slow=1.9						
TANN				*ep*PKPdf	**sPKPdf**	**04 27 41.1**	**+0.2**
	baz=49,slow=2.0						
I60A	**Shoreham**	**124.28**	**39**	P		04 27 35.2	
	baz=300						
CLZ	**Clausthal**	**124.29**	**333**	*ep*PKPdf	pPKPdf	04 27 41.4	+2.6
	baz=49,slow=2.0						
CKRC	**Kasperske Hory**	**124.49**	**329**	*e*PKIKP	**PKiKP**	**04 27 33.2**	**-0.1**
KHC	**Kasperske Hory**	**124.49**	**329**	*e*PKPDF	**PKiKP**	**04 27 33.6**	**+0.3**
KHC				*ep*PKP	**pPKPdf**	**04 27 40.5**	**+1.2**
KHC				AMS	AMS	05 21 50.0	
	comp=Z,400nm,17.2s						
KHC	**Kasperske Hory**	**124.49**	**329**	PKPdf	**PKiKP**	**04 27 33.4**	**0.0**
O60A	**Telford**	**124.52**	**44**	P		04 27 33.8	
	baz=296						
WUPA	**West Chester U**	**124.55**	**44**	PKPdf	**PKiKP**	**04 27 33.5**	**-0.1**
GEC2	**GERESS Array S**	**124.60**	**328**	*e*PKPdf	**PKiKP**	**04 27 37.1**	**+3.5**
	baz=50,slow=1.9						
GEC2				*ep*PKPdf	**sPKPdf**	**04 27 41.7**	**0.0**
	baz=49,slow=2.0						
GERES	**GERESS Array B**	**124.60**	**328**	PKP	**PKPdf**	**04 27 32.8**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=76,slow=2.2,SNR=12						
E61A	**Lac Etchemin**	**124.61**	**35**	P		04 27 33.0	
	baz=304						
GTTG	**Gottingen**	**124.68**	**333**	*e*PKPdf	**PKiKP**	**04 27 37.5**	**+4.0**
	baz=50,slow=1.9						
GTTG				*ep*PKPdf	**sPKPdf**	**04 27 42.1**	**+0.4**
	baz=49,slow=2.0						
MANZ	**Manzenberg**	**124.70**	**330**	*e*PKPdf	**PKiKP**	**04 27 37.5**	**+3.8**
	baz=50,slow=1.9						
MANZ				*ep*PKPdf	**sPKPdf**	**04 27 41.9**	**+0.1**
	baz=49,slow=2.0						
ROTZ	**Rotzenmuhle**	**124.79**	**330**	*e*PKPdf	**PKiKP**	**04 27 37.5**	**+3.7**
	baz=50,slow=1.9						
ROTZ				*ep*PKPdf	**sPKPdf**	**04 27 42.0**	**0.0**
	baz=49,slow=2.0						
WET	**Wettzell**	**124.84**	**329**	*e*PKPdf	**PKiKP**	**04 27 37.6**	**+3.6**
	baz=50,slow=1.9						
WET				*ep*PKPdf	**sPKPdf**	**04 27 42.2**	**+0.1**
	baz=49,slow=2.0						
MOA	**Molln**	**124.91**	**327**	*e*P	**PKPdf**	**04 27 33.7**	**-0.1**
	comp=Z,5.8nm,1.4s						
IBBN	**Ibbenburen**	**125.12**	**335**	*e*PKPdf	**PKiKP**	**04 27 38.2**	**+3.8**
	baz=50,slow=1.9						
IBBN				*ep*PKPdf	**sPKPdf**	**04 27 42.8**	**+0.4**
	baz=49,slow=2.0						
SOKA	**Soboth**	**125.17**	**326**	*e*P	**PKiKP**	**04 27 36.3**	**+1.5**
	comp=Z,12nm,1.1s						
GRF	**Grafenberg Arr**	**125.33**	**330**	*ep*PKPdf	pPKPdf	04 27 43.2	+2.3
	baz=49,slow=2.0						
OBKA	**Obir**	**125.54**	**326**	*e*P	**PKiKP**	**04 27 37.0**	**+1.5**
	comp=Z,5.5nm,0.9s						
KASTN	**Kahler Asten**	**125.62**	**333**	*ep*PKPdf	pPKPdf	04 27 43.9	+2.5
	baz=49,slow=2.0						
KBA	**Koelnbreinsper**	**125.87**	**327**	*e*P	**PKiKP**	**04 27 37.2**	**+0.9**
	comp=Z,9.4nm,1.3s						
MYKA	**Terra Mystica**	**125.97**	**326**	*i* P	**PKiKP**	**04 27 37.2**	**+0.8**
	comp=Z,7.0nm,1.2s						
FUR	**Furstenfeldbru**	**126.29**	**329**	*e*PKPdf	**PKiKP**	**04 27 40.4**	**+3.5**
	baz=50,slow=1.9						
FUR				*ep*PKPdf	**sPKPdf**	**04 27 45.1**	**+0.2**
	baz=49,slow=2.0						
TNS	**Taunus Mts**	**126.29**	**332**	*ep*PKPdf	pPKPdf	04 27 45.2	+2.4
	baz=49,slow=2.0						
ABTA	**Abfaltersbach**	**126.52**	**327**	*e*P	**PKiKP**	**04 27 38.5**	**+1.0**
	comp=Z,16nm,1.1s						
WATA	**Walderalm**	**126.66**	**328**	*e*P	**PKiKP**	**04 27 39.1**	**+1.3**
	comp=Z,14nm,1.2s						
WTTA	**Wattenberg**	**126.67**	**328**	*i* P	**PKiKP**	**04 27 39.4**	**+1.5**
	comp=Z,21nm,0.9s						
AHRW	**Bad Neuenahr-A**	**126.69**	**333**	*ep*PKPdf	pPKPdf	04 27 46.0	+2.6
	baz=49,slow=2.0						
MOTA	**Moosalm**	**126.90**	**328**	*e*P	**PKiKP**	**04 27 39.9**	**+1.5**
	comp=Z,16nm,1.0s						
SQTA	**Sankt Quirin**	**126.92**	**328**	*e*P	**PKiKP**	**04 27 39.9**	**+1.6**
	comp=Z,13nm,0.9s						
STU	**Stuttgart**	**126.93**	**331**	PKIKP	**PKPdf**	**04 27 37.7**	**+0.1**
STU	**Stuttgart**	**126.93**	**331**	PKPdf	**PKPdf**	**04 27 37.7**	**+0.1**
STU	**Stuttgart**	**126.93**	**331**	*ep*PKPdf	pPKPdf	04 27 46.2	+2.2
	baz=49,slow=2.0						
RETA	**Reutte**	**126.99**	**329**	*e*P	**PKPdf**	**04 27 37.5**	**-0.4**
	comp=Z,6.9nm,1.0s						
BTNL	**Ternell**	**127.07**	**334**	*dx*	pPKPdf	04 27 46.0	+1.8
MEM	**Membach**	**127.11**	**334**	*d*PKP	**PKPdf**	**04 27 37.3**	**-0.6**
MEM				*dp*PKP	**PKiKP**	**04 27 41.3**	**+2.9**
MEM				*ds*PKP		04 27 43.0	
MEM				*dx*	x	04 27 46.2	
UBR	**Ueberruh**	**127.20**	**329**	*e*PKPdf	**PKiKP**	**04 27 41.9**	**+3.1**
	baz=50,slow=1.9						
UBR				*ep*PKPdf	**sPKPdf**	**04 27 46.4**	**-0.2**
	baz=49,slow=2.0						
FETA	**Feichten**	**127.31**	**328**	*e*P	**PKPdf**	**04 27 38.6**	**-0.1**
	comp=Z,14nm,1.0s						
DAVA	**Damuels**	**127.57**	**329**	*i* P	**PKiKP**	**04 27 39.7**	**+0.1**
	comp=Z,10nm,1.0s						
BFO	**Black Forest**	**127.65**	**331**	*ep*PKPdf	pPKPdf	04 27 47.3	+2.0
	baz=49,slow=2.0						
WLF	**Walferdange**	**127.73**	**333**	*dx*	pPKPdf	04 27 48.2	+2.8
WLF	**Walferdange**	**127.73**	**333**	*ep*PKPdf	pPKPdf	04 27 48.4	+3.0
	baz=49,slow=2.0						
BMRD	**Maredsous**	**127.87**	**335**	*d*PKP	**PKPdf**	**04 27 39.2**	**-0.1**
BMRD				*dp*PKP	**PKiKP**	**04 27 42.2**	**+2.2**
BMRD				*dx*	x	04 27 46.3	
SNF	**Seneffe**	**127.92**	**335**	*d*PKP	**PKPdf**	**04 27 38.9**	**-0.5**
SNF				*dp*PKP	**PKiKP**	**04 27 42.9**	**+2.9**
DOU	**Dourbes**	**128.09**	**335**	*d*PKP	**PKiKP**	**04 27 42.2**	**+1.8**
DOU				*dx*	x	04 27 47.8	
TUE	**Stuetta**	**128.38**	**328**	PKPdf	**PKPdf**	**04 27 40.8**	**0.0**
INTR	**Introdacqua**	**128.47**	**321**	PKPdf	**PKiKP**	**04 27 41.9**	**+0.4**
OTAV	**Otavalo**	**128.49**	**94**	PKIKP	**PKiKP**	**04 27 43.5**	**+0.7**
OTAV	**Otavalo**	**128.49**	**94**	PKPdf	**PKiKP**	**04 27 43.5**	**+0.7**
MURB	**Monte Urbino**	**128.60**	**323**	PKPdf	**PKiKP**	**04 27 43.1**	**+1.4**
GCUF	**Volcan Galeras**	**129.70**	**93**	*e*P	**PKiKP**	**04 27 46.4**	**+1.1**
SOTA	**Rioblanco**	**130.52**	**92**	*e*P	**PKPdf**	**04 27 41.9**	**-4.3**
BNI	**Bardonecchia**	**130.72**	**329**	PKIKP	**PKiKP**	**04 27 45.6**	**-0.5**
BNI	**Bardonecchia**	**130.72**	**329**	PKPdf	**PKiKP**	**04 27 45.6**	**-0.5**
YOTC	**Yotoco, Valle**	**130.92**	**89**	*e*P	**PKPdf**	**04 27 44.7**	**-1.7**
MARP	**Paez Belalcaza**	**131.23**	**91**	*e*P	**PKPdf**	**04 27 46.4**	**-0.8**
URED	**San Jos de Ur**	**131.86**	**84**	*e*P	PKPpre	04 27 36.7	
GUY2C	**Guyana, Caldas**	**131.97**	**88**	*e*P	**PKPdf**	**04 27 46.2**	**-2.6**
TOLC	**Tolima**	**131.98**	**89**	*e*P	**PKPdf**	**04 27 45.5**	**-3.2**
PB16	**IPOC Station P**	**132.01**	**120**	PKPdf	**PKiKP**	**04 27 49.8**	**-0.1**
ORTC	**Ortega, Tolima**	**132.01**	**90**	*e*P	**PKPdf**	**04 27 47.7**	**-0.7**
NORC	**Norcasia**	**132.47**	**87**	*e*P	PKPpre	04 27 40.6	
ROSC	**El Rosal**	**132.99**	**88**	PKP	**PKPdf**	**04 27 50.7**	**+0.1**
	comp=Z,2.8nm,0.3s,baz=65,slow=3.0,SNR=7.9						
SPBC	**San Pablo de B**	**133.27**	**87**	*e*P	PKPpre	04 27 42.9	
VILC	**Villavicencio,**	**133.57**	**89**	*e*P	**PKiKP**	**04 27 54.8**	**+2.1**
OCAC	**Ocana**	**134.05**	**84**	*e*P	**PKPdf**	**04 27 49.8**	**-2.5**
LPAZ	**La Paz**	**134.06**	**119**	PKP	**PKPdf**	**04 27 53.5**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=251,slow=1.3,SNR=15						
LPAZ	**La Paz**	**134.06**	**119**	PKIKP	**PKPdf**	**04 27 53.2**	**+0.3**
LPAZ	**La Paz**	**134.06**	**119**	PKPdf	**PKPdf**	**04 27 53.2**	**+0.3**
SDV	**Santo Domingo**	**136.70**	**83**		**PKPdf**	**04 27 57.9**	**+0.6**
CPUP	**Villa Florida**	**136.96**	**139**	PKP	**PKiKP**	**04 27 59.0**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=103,slow=3.8,SNR=5.1						
CPUP	**Villa Florida**	**136.96**	**139**	PKIKP	**PKiKP**	**04 27 58.8**	**-0.2**
CPUP	**Villa Florida**	**136.96**	**139**		**PKiKP**	**04 27 58.8**	**-0.2**
PBRG	**Braganca**	**139.45**	**336**	*e*PKPdf	**PKPdf**	**04 28 02.2**	**+0.8**
ESDC	**Sonseca Array**	**139.99**	**332**	PKhKP	PKPpre	04 27 56.8	
	comp=Z,1.0nm,1.0s,baz=6.9,slow=4.0,SNR=4.3						
ESDC	**Sonseca Array**	**139.99**	**332**		**PKPdf**	**04 28 02.2**	**-0.3**
SAML	**Samuel**	**141.32**	**111**	PKIKP	**PKPdf**	**04 28 05.7**	**+0.2**
SAML	**Samuel**	**141.32**	**111**		**PKPdf**	**04 28 05.7**	**+0.2**
PSBE	**So Bento**	**142.22**	**337**	*e*PKPdf	**PKPdf**	**04 28 05.

baz=311
OKCSW **OKLAHOMA CITY** 1.66 132 Pn **Pn** 04 11 00.7 0.0
FNO **Franklin** 1.78 135 Pb **Pb** 04 11 03.5 -0.5
WMOK **Wichita Mounta** 1.79 176 Pn **Pn** 04 11 01.8 -0.8
WMOK **Wichita Mounta** 1.79 176 P Pn **Pn** 04 11 01.7 -0.8
baz=353,SNR=147
WMOK S **Sn** **04 11 25.5 -0.2**
baz=353
WMOK **Wichita Mounta** 1.79 176 P 04 11 01.7
baz=353,SNR=147
WMOK S 04 11 25.5
baz=353
OK031 **S. Brethren Rd** 1.80 108 Pn **Pn** 04 11 02.7 +0.1
QUOK **Quay** 1.84 100 Pn **Pn** 04 11 03.9 +0.7
OK030 **Cody Creek RV** 1.85 108 Pn **Pn** 04 11 03.7 +0.4
R32A **Long Quarter,** 1.91 6 Pn **Pn** 04 11 04.7 +0.5
R32A **Long Quarter,** 1.91 6 P Pn **Pn** 04 11 04.6 +0.5
baz=188
R32A S **Sb** **04 11 31.1 +0.8**
baz=188
R32A **Long Quarter,** 1.91 6 P 04 11 04.6
baz=188
R32A S 04 11 31.1
baz=188
T35A **Sooner Cattle** 2.00 78 Pn **Pn** 04 11 06.2 +0.9
T35B **Sooner Cattle** 2.00 78 P Pn **Pn** 04 11 06.0 +0.6
baz=260,SNR=58
T35B Sb **Sg** **04 11 34.5 -0.3**
baz=260
T35B **Sooner Cattle** 2.00 78 P 04 11 06.0
baz=260,SNR=58
T35B Sb 04 11 34.5
baz=260
CBKS **Cedar Bluff** 2.37 345 Pn **Pn** 04 11 11.3 +0.8
CBKS **Cedar Bluff** 2.37 345 P Pn **Pn** 04 11 12.1 +1.5
baz=166,SNR=34
CBKS S **Sb** **04 11 42.7 -1.1**
baz=166
CBKS **Cedar Bluff** 2.37 345 P 04 11 12.1
baz=166,SNR=34
CBKS S 04 11 42.7
baz=166
TUL1 **Leonard** 2.62 103 P Pn **Pn** 04 11 13.8 -0.2
baz=284
TUL1 **Leonard** 2.62 103 P 04 11 13.8
baz=284
AMTX **Amarillo** 2.76 234 Pn **Pn** 04 11 16.3 +0.4
KSU1 **Kansas State U** 3.17 35 Pn **Pn** 04 11 21.9 +0.4
KSU1 **Kansas State U** 3.17 35 P Pn **Pn** 04 11 21.9 +0.4
baz=217
KSU1 Sb **Sg** **04 12 10.5 -2.1**
baz=217
KSU1 **Kansas State U** 3.17 35 P 04 11 21.9
baz=217
KSU1 Sb 04 12 10.5
baz=217
Z35A **Perchaven, San** 3.48 156 Pn **Pn** 04 11 24.9 -0.8
Z35A **Perchaven, San** 3.48 156 Sb **Sb** 04 12 17.1 +1.5
baz=336
Z35A **Perchaven, San** 3.48 156 Sb 04 12 17.1
baz=336
X37A **Clayton** 3.50 122 Pn **Pn** 04 11 26.0 +0.1
X37A IAmb_Lg 04 12 31.9
comp=Z,52nm,0.7s
X37A **Clayton** 3.50 122 P Pn **Pn** 04 11 25.8 -0.2
baz=304,SNR=20
X37A **Clayton** 3.50 122 P 04 11 25.8
baz=304,SNR=20
U38A **Gravette** 3.68 90 Pn **Pn** 04 11 28.7 +0.2
U38A IAmb_Lg 04 12 34.4
comp=Z,25nm,0.7s
U38A **Gravette** 3.68 90 P Pn **Pn** 04 11 29.3 +0.8
baz=272,SNR=20
U38A **Gravette** 3.68 90 P 04 11 29.3
baz=272,SNR=20
KSCO **Kaye Shedlock'** 3.83 312 Pn **Pn** 04 11 30.9 +0.3
KSCO IAmb_Lg 04 12 36.5
comp=Z,30nm,0.8s
ABTX **Abilene, Hawle** 3.93 189 Pn **Pn** 04 11 31.4 -0.6
ABTX **Abilene, Hawle** 3.93 189 P **Pn** 04 11 31.7 -0.3
baz=7.0
ABTX **Abilene, Hawle** 3.93 189 P 04 11 31.7
baz=7.0
MSTX **Muleshoe** 4.04 232 Pn **Pn** 04 11 34.1 +0.6
MSTX **Muleshoe** 4.04 232 Sb **Sb** 04 12 34.6 +2.9
baz=49
MSTX **Muleshoe** 4.04 232 Sb 04 12 34.6
baz=49
HHAR **Hobbs** 4.05 92 Pn **Pn** 04 11 33.9 +0.4
W39A **Magazine** 4.40 106 Pn **Pn** 04 11 38.4 +0.1
W39A IAmb_Lg 04 12 59.0
comp=Z,33nm,0.7s
T25A **Trinidad** 4.42 280 Pn **Pn** 04 11 38.5 -0.5
T25A IAmb_Lg 04 12 54.4
comp=Z,25nm,0.8s
Z38A **Mt. Pleasant** 4.61 134 Pn **Pn** 04 11 41.2 0.0
Z38A IAmb_Lg 04 13 00.2
comp=Z,23nm,0.8s
S39A **Bolivar** 4.64 74 Pn **Pn** 04 11 41.3 -0.5
S39A IAmb_Lg 04 12 58.3
comp=Z,32nm,0.8s
S39A **Bolivar** 4.64 74 P **Pn** 04 11 42.0 +0.2
baz=257,SNR=14
S39A **Bolivar** 4.64 74 P 04 11 42.0
baz=257,SNR=14
WHTX **Lake Whitney,** 4.69 164 Pn **Pn** 04 11 42.3 0.0
MIAR **Mount Ida** 4.80 113 Pn **Pn** 04 11 43.6 -0.3
MIAR **Mount Ida** 4.80 113 P Pn **Pn** 04 11 43.7 -0.3
baz=295,SNR=13
MIAR S **Sn** **04 12 39.9 -0.2**
baz=295
MIAR **Mount Ida** 4.80 113 P 04 11 43.7
baz=295,SNR=13
MIAR S 04 12 39.9
baz=295
BGNE **Belgrade** 4.92 7 Pn **Pn** 04 11 45.2 -0.4
BGNE IAmb_Lg 04 13 15.5
comp=Z,31nm,0.8s
U40A **Yellville** 4.92 90 **Pn** 04 11 45.4 -0.1
U40A IAmb_Lg 04 13 14.8
comp=Z,24nm,0.8s
U40A **Yellville** 4.92 90 P Pn **Pn** 04 11 45.6 +0.1
baz=274,SNR=12
U40A **Yellville** 4.92 90 P 04 11 45.6
baz=274,SNR=12
U40A P 04 11 45.6
baz=274,SNR=12
OGNE **Ogallala** 5.03 332 Pn **Pn** 04 11 47.3 +0.1
N35A **Tabor** 5.04 30 Pn **Pn** 04 11 46.1 -1.2
N35A LR 04 13 14.1
P38A **Dawn** 5.28 52 Pn **Pn** 04 11 51.0 +0.6
P38A IAmb_Lg 04 13 22.2
comp=Z,20nm,0.8s
P38A **Dawn** 5.28 52 P Pn **Pn** 04 11 51.5 +1.1
baz=236,SNR=6.6
P38A **Dawn** 5.28 52 P 04 11 51.5
baz=236,SNR=6.6
X40A **Basin Creek Fa** 5.38 110 Pn **Pn** 04 11 51.6 -0.3
X40A IAmb_Lg 04 13 29.9
comp=Z,16nm,0.9s
MGMO **Mountain Grove** 5.39 81 Pn **Pn** 04 11 51.9 -0.2
MGMO IAmb_Lg 04 13 24.5
comp=Z,24nm,0.8s
WHAR **Wooly Hollow** 5.54 101 Pn **Pn** 04 11 55.0 +0.9
WHAR LR 04 13 25.8
WHAR IAmb_Lg 04 13 34.6
comp=Z,28nm,1.0s
FCAR **Ozark Folk Cen** 5.55 95 Pn **Pn** 04 11 54.3 0.0
FCAR IAmb_Lg 04 13 36.6
comp=Z,17nm,0.7s
WLAR **White Oak Lake** 5.56 119 IAmb_Lg 04 13 32.2
comp=Z,17nm,0.8s
R40A **Maddies Statio** 5.60 70 Pn **Pn** 04 11 55.1 +0.2
R40A LR 04 13 26.3
R40A **Maddies Statio** 5.60 70 P **Pn** 04 11 55.5 +0.6
baz=254,SNR=11
R40A **Maddies Statio** 5.60 70 P 04 11 55.5
baz=254,SNR=11
L34A **Svendsen Farm,** 5.79 19 Pn **Pn** 04 11 58.4 +0.9
L34A IAmb_Lg 04 13 47.7
comp=Z,38nm,0.7s
435B **Jarrell** 5.84 168 IAmb_Lg 04 13 38.9
comp=Z,18nm,0.8s
JCT **Junction City** 6.07 187 Pn **Pn** 04 12 00.4 -1.0
JCT IAmb_Lg 04 13 53.9
comp=Z,21nm,0.8s

K31A **O'Neill** 6.09 1 Pn **Pn** 04 12 01.6 -0.1
K31A LR 04 13 45.1
K31A IAmb_Lg 04 13 59.0
comp=Z,24nm,0.7s
N38A **Joes South For** 6.18 45 Pn **Pn** 04 12 04.1 +1.3
N38A LR 04 13 47.8
N38A IAmb_Lg 04 13 57.9
comp=Z,35nm,0.7s
ISCO **Idaho Springs** 6.19 304 Pn **Pn** 04 12 01.5 -1.7
GDL2 **Guadalupe Moun** 6.22 228 Pn **Pn** 04 12 04.0 +0.6
P40A **Paris** 6.22 59 Pn **Pn** 04 12 05.3 +1.9
ANMO **Albuquerque** 6.31 258 Pn **Pn** 04 12 06.0 +1.2
ANMO LR 04 13 44.7
LCAR **Lake Charles** 6.31 92 Pn **Pn** 04 12 05.0 +0.4
CCM **Cathedral Cave** 6.33 74 Pn **Pn** 04 12 05.8 +0.9
CCM LR 04 13 49.5
CCM IAmb_Lg 04 13 56.9
comp=Z,24nm,0.8s
BNM **Barren Site** 6.71 252 Pn **Pn** 04 12 07.6 -2.7
BNM LR 04 14 02.7
PBMO **Poplar Bluff** 6.85 85 IAmb_Lg 04 14 14.9
comp=Z,20nm,0.7s
Y22D **IRIS PASSCAL I** 6.96 252 IAmb_Lg 04 14 22.6
comp=Z,16nm,0.8s
PHWY **Pilot Hill** 6.96 315 IAmb_Lg 04 14 13.6
comp=Z,16nm,0.8s
SCIA **State Center** 6.98 38 IAmb_Lg 04 14 29.3
comp=Z,16nm,0.7s
SLM **Saint Louis** 7.23 70 IAmb_Lg 04 14 18.0
comp=Z,16nm,0.7s
GNAR **Gosnell** 7.24 92 IAmb_Lg 04 14 28.5
comp=Z,28nm,0.9s
ECSD **EROS Data Cent** 7.42 13 Pn **Pn** 04 12 18.7 -1.2
K38A **Parkersburg** 7.75 36 IAmb_Lg 04 14 54.0
comp=Z,18nm,0.8s
SIUC **Southern Illin** 7.87 78 IAmb_Lg 04 14 39.0
comp=Z,20nm,0.8s
SUSD **Miller** 7.91 360 IAmb_Lg 04 14 56.0
comp=Z,11nm,0.7s
TX31 **Lajitas Ar. Si** 8.19 210 Pn **Pn** 04 12 27.5 -3.1
TX32 **Lajitas Array** 8.19 210 Pn **Pn** 04 12 28.1 -2.4
TXAR **Lajitas Array** 8.19 210 Pn **Pn** 04 12 28.1 -2.4
Q44A **Meyer Farm, Va** 8.22 70 Pn **Pn** 04 12 30.4 -0.5
K22A **Casper** 8.46 319 IAmb_Lg 04 15 20.1
comp=Z,15nm,0.9s
RSSD **Black Hills** 8.52 334 IAmb_Lg 04 15 15.2
comp=Z,15nm,1.2s
JFWS **Jewell Farm** 9.25 44 IAmb_Lg 04 15 33.8
comp=Z,15nm,0.8s
T47A **Sharon Grove** 9.52 84 IAmb_Lg 04 15 48.7
comp=Z,10nm,1.0s
P46A **Rosedale** 9.76 68 IAmb_Lg 04 15 45.3
comp=Z,16nm,0.7s

IDC 04 04:36:41.5±3.3,3.92S×151.78E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.4/32,mbtmp3.5/4,Error ellipse: s-maj=103.1km s-min=31.1km az=110.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.30**	**225**	P	P	04 41 50.7	-0.6
	0.3nm,0.5s,baz=53,slow=10,SNR=5.9						
ASAR	**Alice Springs**	**26.15**	**220**	P	P	04 42 16.9	-0.8
	0.3nm,0.4s,baz=56,slow=9.2,SNR=6.6						
FITZ	**Fitzroy Crossi**	**29.21**	**239**	P	P	04 42 47.0	+1.8
	1.0nm,1.0s,baz=89,slow=7.5,SNR=5.4						
SONM	**Songino Array**	**65.04**	**328**	P	P	04 47 22.0	-1.8
	0.8nm,0.6s,baz=117,slow=8.3,SNR=2.3						
TORD	**Torodi Ar. Bea**	**149.07**	**289**	PKPbc	PKiKP	04 56 34.0	-0.1
	0.2nm,0.4s,baz=83,slow=2.7,SNR=1.7						

*IDC **04** 04:38:17.0±0.5,38.39N×20.49E,h0km,mb4.3/32, mb1 4.4/45,mb1mx4.3/57,mbtmp4.3/45,ML3.8/12, MS3.6/13,Ms1 3.6/13,ms1mx3.2/77,Error ellipse: s-maj=11.3km s-min=10.1km az=145.0*
*MOS **04** 04:38:17.6±1.1,38.30N×20.35E,h18km,mb4.7/24,Error ellipse: s-maj=5.1km s-min=2.7km az=84.1*
*PDG **04** 04:38:18.7±0.7,38.35N×20.42E,h18km±1km,ML4.3/13, Error ellipse: s-maj=1.3km s-min=1.4km az=0.0*
*ATH **04** 04:38:19.7,38.31N×20.53E,h13km±1km,ML4.2/20,Error ellipse: s-maj=2.3km s-min=0.7km az=249.0*
*BEO **04** 04:38:20.0±0.6,38.47N×20.25E,h0km,ML4.1/20*
*MED_RC **04** 04:38:20.0±0.3,38.31N×20.52E,h20km,MW4.5/19, Moment Tensor Solution.Mantle waves: s19,c28; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr0.78±.07; Mθθ-0.09±.04; Mϕϕ-0.70±.04; Mrθ0.20±.05; Mθϕ0.19±.02; Mrϕ0.06±.03; Best double couple: M≤0.79000×10^16 NP1:ϕs151.00000°,δ46.00000°, λ71.00000°. NP2:ϕs357.00000°,δ47.00000°,λ109.00000°. Principal axes: T 0.8300, Plg77.0000°, Azm344.0000°; N -0.0800, Plg13.0000°, Azm164.0000°; P -0.7500, Plg0.0000°, Azm74.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **04** 04:38:20.9±2.2,38.33N±0.06×20.48E±0.07,h24km±5km Error ellipse: s-maj=9.0km s-min=7.4km az=195.0*
*THE **04** 04:38:20.0,38.32Nx20.53E,h11km,ML4.2/10,Error ellipse: s-maj=0.8km s-min=0.4km az=254.0*
*HLW **04** 04:38:24.6,38.38Nx22.00E,h12km±23km,Md5.0,Ml4.9*

ISC 04 04:38:19.4±0.5,38.30N±0.02×20.50E±0.02,h18km±2km, n471,σ1s78/562,mb4.5/70,MS3.4/9,31C-31D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF5	**Kardakata, Kep**	**0.03**	**223**	P	**Pg**	**04 38 22.1**	**-0.4**
KEF5				S	**Sg**	**04 38 24.0**	**-0.6**
KEF5	**Kardakata, Kep**	**0.03**	**223**	P	**Pg**	**04 38 22.2**	**-0.4**
KEF5				S	**Sg**	**04 38 24.1**	**-0.6**
KEF4	**Livadi, Kephal**	**0.07**	**232**	P	**Pg**	**04 38 22.6**	**-0.2**
KEF4				S	**Sg**	**04 38 25.0**	**0.0**
KEF4	**Livadi, Kephal**	**0.07**	**232**	P	**Pg**	**04 38 22.6**	**-0.2**
KEF4				S	**Sg**	**04 38 25.0**	**0.0**
LXRA	**Lixouri, Kepha**	**0.11**	**205**	P	**Pg**	**04 38 22.7**	**-0.5**
LXRA				S	**Sb**	**04 38 26.3**	**+1.4**
ARGA	**Argostoli. Kep**	**0.13**	**187**	P	**Pg**	**04 38 23.2**	**-0.1**
ARGA				S	**Sg**	**04 38 26.0**	**+0.1**
VLS	**Valsamata**	**0.14**	**150**	P	**Pg**	**04 38 23.3**	**-0.2**
VLS				S	**Sg**	**04 38 25.9**	**-0.4**
VLS				AML	AML	04 38 26.6	
VLS				AML	AML	04 38 26.8	
VLS	**Valsamata**	**0.14**	**150**	P	**Pg**	**04 38 23.5**	**-0.1**
VLS				S	**Sg**	**04 38 26.3**	**-0.1**
	330μm,0.2s						
VLS	**Valsamata**	**0.14**	**150**	P	**Pg**	**04 38 23.5**	**-0.1**
VLS				S	**Sg**	**04 38 26.3**	**-0.1**
KEF3	**Kipouria, Keph**	**0.15**	**230**	P	**Pg**	**04 38 23.2**	**-0.4**
KEF3				S	**Sg**	**04 38 25.8**	**-0.7**
KEF3	**Kipouria, Keph**	**0.15**	**230**	P	**Pg**	**04 38 23.3**	**-0.4**
KEF3				S	**Sg**	**04 38 26.1**	**-0.4**
FSK	**Fiskardo**	**0.16**	**18**	P	**Pg**	**04 38 23.3**	**-0.5**
FSK				S	**Sg**	**04 38 25.7**	**-1.1**
FSK	**Fiskardo**	**0.16**	**18**	P	**Pg**	**04 38 23.6**	**-0.2**
FSK				S	**Sg**	**04 38 26.1**	**-0.7**
	250μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.45**	**163**	P	**Pg**	**04 38 28.3**	**-0.1**
VLMS				S	**Sb**	**04 38 35.5**	**+0.4**
VLMS				AML	AML	04 38 43.4	
	comp=N,84103μm,0.4s						
VLMS				AML	AML	04 38 44.4	
	comp=E,73635μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.45**	**163**	P	**Pg**	**04 38 28.6**	**+0.1**
VLMS				S	**Sb**	**04 38 35.9**	**+0.8**
	comp=E,28μm,0.2s						
LKD2	**Lefkada island**	**0.50**	**14**	P	**Pg**	**04 38 28.7**	**-0.8**
LKD2				AML	AML	04 38 43.8	
	comp=E,49724μm,0.3s						
LKD2				AML	AML	04 38 44.0	
	comp=N,57505μm,0.4s						
LKD2	**Lefkada island**	**0.50**	**14**	P	**Pg**	**04 38 29.1**	**-0.4**
LKD2				S	**Sb**	**04 38 36.4**	**-0.4**
	comp=N,27μm,0.4s						
PDO	**Prodromos**	**0.61**	**61**	P	**Pg**	**04 38 30.8**	**-0.8**
PDO				AML	AML	04 38 43.7	
	comp=E,49368μm,0.7s						
PDO				AML	AML	04 38 47.3	
	comp=N,55444μm,0.5s						
PDO	**Prodromos**	**0.61**	**61**	P	**Pg**	**04 38 31.2**	**-0.4**
PDO				S	**Sg**	**04 38 39.9**	**+0.1**
	comp=N,37μm,0.6s						

LTHK **Lithakia** 0.65 156 P **Pg** 04 38 31.8 -0.4
LTHK S **Sb** **04 38 41.8 +0.8**
LTHK AML AML 04 38 48.1
comp=N,59302μm,0.7s
LTHK AML AML 04 38 49.4
comp=E,37471μm,0.5s
LTHK **Lithakia** 0.65 156 P **Pg** **04 38 32.1 -0.1**
LTHK S **Sb** **04 38 42.6 +1.7**
comp=E,25μm,0.7s
VTN **Vitineika** 0.67 125 P **Pg** 04 38 32.3 -0.2
RLS **Riolos of Patr** 0.80 107 P **Pb** 04 38 34.4 -0.5
RLS AML AML 04 38 53.0
comp=E,20447μm,0.6s
RLS AML AML 04 38 56.5
comp=N,16479μm,0.5s
RLS **Riolos of Patr** 0.80 107 P **Pb** **04 38 34.5 -0.3**
RLS S **Sb** **04 38 46.0 +0.7**
comp=N,8μm,0.5s
PVO **Paravola** 0.87 68 P **Pb** 04 38 35.9 0.0
PVO AML AML 04 38 55.5
comp=E,51839μm,0.5s
PVO AML AML 04 38 55.9
comp=N,51428μm,0.4s
PVO **Paravola** 0.87 68 P **Pb** 04 38 36.0 +0.1
PVO S **Sg** **04 38 48.2 +0.5**
comp=N,26μm,0.5s
DRO **Drossia** 1.02 110 P **Pb** 04 38 37.6 -0.9
DRO AML AML 04 39 01.5
comp=N,52943μm,0.5s
DRO AML AML 04 39 05.4
comp=E,55268μm,0.6s
DRO **Drossia** 1.02 110 P **Pb** 04 38 38.5 0.0
LAKA **Lakka** 1.17 93 P **Pn** 04 38 40.6 -0.4
LAKA AML AML 04 39 03.5
comp=N,33490μm,0.7s
LAKA AML AML 04 39 09.2
comp=E,63538μm,0.8s
LAKA **Lakka** 1.17 93 P **Pn** 04 38 40.7 -0.2
LAKA S **Sn** 04 38 57.0 +0.6
EVR **Evrytania** 1.20 59 P **Pn** 04 38 41.1 -0.2
EVR AML AML 04 39 04.4
comp=E,14416μm,0.6s
EVR AML AML 04 39 09.6
comp=N,15029μm,0.7s
EVR **Evrytania** 1.20 59 P **Pn** 04 38 41.2 -0.2
EVR S **Sn** 04 38 57.5 +0.3
TRIZ **Trizonia** 1.24 87 P **Pn** 04 38 41.7 -0.2
TRIZ **Trizonia** 1.24 87 P **Pn** 04 38 41.8 -0.1
TRIZ S **Sn** 04 38 59.0 +0.9
KALE **Kalithea** 1.29 86 P **Pn** 04 38 42.5 -0.1
KALE AML AML 04 39 07.2
comp=N,13827μm,0.9s
KALE AML AML 04 39 08.1
comp=E,8675μm,0.4s
KALE **Kalithea** 1.29 86 P **Pn** 04 38 42.6 -0.1
KALE S **Sg** 04 39 01.4 +0.1
KLV **Kalavryta, Ach** 1.33 101 P **Pn** 04 38 43.3 +0.1
KLV AML AML 04 39 08.4
comp=N,5775μm,0.8s
KLV AML AML 04 39 10.1
comp=E,9302μm,0.8s
KLV **Kalavryta, Ach** 1.33 101 P **Pn** 04 38 43.5 +0.3
KLV S **Sg** **04 39 02.2 -0.2**
comp=E,4μm,0.8s
JAN **Janina** 1.38 11 P **Pg** 04 38 45.5 -0.5
JAN AML AML 04 39 11.4
comp=E,14096μm,0.4s
JAN AML AML 04 39 12.4
comp=N,17099μm,0.4s
JAN **Janina** 1.38 11 P **Pb** 04 38 45.2 +0.5
JAN S **Sg** 04 39 03.4 -0.6
JAN **Janina** 1.38 11 P **Pb** 04 38 45.2 +0.5
JAN S **Sg** 04 39 03.4 -0.6
MAKR **Makrakomi, Fth** 1.46 60 P **Pb** 04 38 46.1 0.0
MAKR AML AML 04 39 13.4
comp=N,13517μm,1.3s
MAKR AML AML 04 39 19.7
comp=E,14299μm,0.9s
KASA **Kassiopi** 1.51 343 P **Pb** 04 38 46.8 -0.1
KEK **Kerkira** 1.51 339 P **Pn** 04 38 46.0 +0.4
KEK AML AML 04 39 15.3
comp=N,8764μm,0.5s
KEK AML AML 04 39 18.4
comp=E,9568μm,0.6s
KEK **Kerkira** 1.51 339 P **Pb** 04 38 46.5 -0.4
KEK S **Sb** 04 39 06.5 +0.7
comp=E,4μm,0.5s
DLFA **Delphi** 1.58 83 P **Pn** 04 38 47.4 +0.8
DLFA AML AML 04 39 16.6
comp=N,5302μm,0.7s
DLFA AML AML 04 39 18.5
comp=E,5276μm,0.7s
ITM **Ithomi** 1.59 134 P **Pb** 04 38 48.3 0.0
ITM AML AML 04 39 22.0
comp=N,7273μm,0.5s
ITM AML AML 04 39 24.7
comp=E,8571μm,1.5s
ITM **Ithomi** 1.59 134 **Pb** 04 38 48.4 0.0
AGG **Agios Georgios** 1.60 63 P **Pb** 04 38 48.3 -0.3
AGG AML AML 04 39 19.0
comp=N,9901μm,0.6s
AGG AML AML 04 39 19.2
comp=E,15092μm,0.8s
AGG **Agios Georgios** 1.60 63 P **Pb** 04 38 49.3 +0.7
AGG **Agios Georgios** 1.60 63 **Pb** 04 38 49.2 +0.7
THAL **Thalero** 1.73 98 P **Pb** 04 38 50.7 +0.1
THL **Klokotos Trika** 1.73 43 P **Pb** 04 38 50.8 +0.2
THL AML AML 04 39 20.1
comp=E,12168μm,0.6s
THL AML AML 04 39 20.4
comp=N,8874μm,0.8s
AXAR **Agios Charalam** 1.76 74 P **Pb** 04 38 51.6 +0.5
AXAR AML AML 04 39 26.9
comp=E,13023μm,0.5s
AXAR AML AML 04 39 30.1
comp=N,32595μm,1.3s
KPRO **Kipourio** 1.78 22 P **Pb** 04 38 52.1 +0.5
PENT **Pentalofos** 1.96 15 P **Pb** 04 38 54.6 0.0
LTK **Loutraki** 1.97 97 P **Pn** 04 38 53.6 +1.7
LOUT **Loutraki** 1.98 98 P **Pb** 04 38 54.4 -0.5
LKR **Lokris** 1.99 79 P **Pb** 04 38 55.0 -0.2
ATAL **Atalanti** 2.02 78 P **Pb** 04 38 55.2 -0.4
NEST **Nestorio** 2.15 11 P **Pb** 04 38 57.5 -0.5
VIL2 **Platees** 2.18 92 P **Pb** 04 38 57.4 -1.0
SMIA **Simia** 2.20 74 P **Pb** 04 38 57.4 -1.3
KZN **Kozani** 2.23 26 P **Pb** 04 38 58.1 -1.2
KZN **Kozani** 2.23 26 P **Pb** 04 38 58.0 -1.2
NEO **Neokhori** 2.35 64 P **Pb** 04 38 59.5 -1.8
SCTE **Santa Cesarea** 2.37 319 **Pn** 04 38 58.0 +0.6
LIT **Litokhoron** 2.37 40 P **Pb** 04 39 00.1 -1.5
LIT **Litokhoron** 2.37 40 **Pb** 04 39 00.1 -1.5
VLI **Veliai** 2.50 128 P **Pb** 04 39 05.2 +1.3
ATH **Athens Observa** 2.56 96 P **Pn** 04 39 02.1 +2.1
FNA **Florina** 2.57 15 *e*Pn **Pn** 04 39 01.9 +1.7
FNA *e*Sn **Sn** 04 39 32.3 +1.2
FNA **Florina** 2.57 15 P **Pn** 04 39 01.7 +1.5
FNA **Florina** 2.57 15 Pn **Pn** 04 39 01.7 +1.5
ATHU **Athens Univers** 2.61 96 P **Pn** 04 39 02.9 +2.1
PTL **Penteli** 2.67 94 P **Pn** 04 39 03.8 +2.3
EREA **Eretria** 2.70 86 P **Pn** 04 39 04.6 +2.6
DION **Dionisos Attik** 2.72 94 P **Pn** 04 39 04.5 +2.3
OHR **Ohrid** 2.81 5 *e*P **Pn** 04 39 05.6 +2.0
OHR *e*S **Sn** 04 39 38.1 +1.0
OHR **Ohrid** 2.81 5 *i* Pn **Pn** 04 39 05.9 +2.3
PAIG **Paliouri** 2.96 56 *e*P **Pb** 04 39 09.7 -1.9
THE **Thessaloniki** 3.01 39 P **Pn** 04 39 08.5 +2.3
GRG **Griva** 3.03 28 P **Pn** 04 39 07.7 +1.2
TIP **Timpagrande** 3.05 288 ⇑P **Pn** 04 39 08.0 +1.1
TIP **Timpagrande** 3.05 288 **Pn** 04 39 07.4 +0.5
TIR **Tirane** 3.08 351 *e*Pn **Pn** 04 39 08.3 +1.1
TIR **Tirane** 3.08 351 P **Pn** 04 39 08.2 +1.1
TIR **Tirane** 3.08 351 Pn **Pn** 04 39 08.2 +1.1
SOH **Sokhos** 3.35 40 P **Pn** 04 39 13.0 +2.1
KNT **Kendrikon** 3.40 32 P **Pn** 04 39 13.5 +1.9
VAY **Valandovo** 3.41 27 *e*Pn **Pn** 04 39 13.1 +1.4
VAY **Valandovo** 3.41 27 *e*P **Pn** 04 39 13.1 +1.4
VAY **Valandovo** 3.41 27 *i* Pn **Pn** 04 39 13.1 +1.4
CEL **Celeste** 3.62 271 Pn **Pn** 04 39 15.6 +0.8
STIP **Stip** 3.63 20 *i* Pn **Pn** 04 39 17.6 +2.9
SKO **Skopje** 3.73 11 P **Pn** 04 39 17.5 +1.3
SKO **Skopje** 3.73 11 *i* Pn **Pn** 04 39 17.7 +1.5
MATE **Matera** 3.76 310 ⇑P **Pn** 04 39 16.9 +0.5
ULC **Ulcinj** 3.78 346 ⇓*i*Pn **Pn** 04 39 16.7 -0.1

ULC *i* Sn **Sn** **04 39 59.6 -1.3**
DRME Dracevica, Mon 4.01 346 *e*Pn **Pn** **04 39 20.0 +0.1**
DRME Dracevica, Mon 4.01 346⇑ *i*Pn **Pn** **04 39 19.8 -0.1**
DRME *i* Sn **Sn** **04 40 05.0 -1.4**
BUM Brajici-Budva 4.18 343⇓ *i*Pn **Pn** **04 39 22.1 -0.2**
BUM *i* Sn **Sn** **04 40 09.0 -1.7**
APE Apeiranthos 4.18 106⇓ P **Pb** **04 39 28.2 -4.2**
APE Apeiranthos 4.18 106⇑ *e*P **Pn** **04 39 23.8 +1.5**
PDG Podgorica 4.23 347 *e*Pn **Pn** **04 39 22.9 -0.1**
PDG *e*Sn **Sn** **04 40 09.7 -2.2**
PDG Podgorica 4.23 347⇓ P **Pn** **04 39 22.7 -0.3**
PDG Podgorica 4.23 347 *e*Pn **Pn** **04 39 22.9 -0.1**
PDG Podgorica 4.23 347 Pn **Pn** **04 39 22.9 -0.1**
TTG Podgorica 4.23 347 P **Pn** **04 39 23.1 +0.1**
TTG S **Sn** **04 40 11.0 -0.9**
TTG Podgorica 4.23 347⇑ *i*Pn **Pn** **04 39 23.0 -0.1**
TTG *i* Sn **Sn** **04 40 10.4 -1.5**
PVY Plav 4.31 355⇑ *i*Pn **Pn** **04 39 24.2 0.0**
PVY *i* Sn **Sn** **04 40 12.6 -1.4**
CEME Cevo 4.41 345⇑ *i*Pn **Pn** **04 39 25.1 -0.4**
CEME *i* Sn **Sn** **04 40 14.5 -1.9**
HCY Herceg Novi 4.41 340 P **Pn** **04 39 24.7 -0.8**
HCY S **Sn** **04 40 15.0 -1.5**
HCY Herceg Novi 4.41 340 *e*Pn **Pn** **04 39 24.5 -1.0**
HCY Herceg Novi 4.41 340⇑ *i*Pn **Pn** **04 39 24.6 -1.0**
HCY *i* Sn **Sn** **04 40 14.6 -1.9**
BOSS Bosilegrad 4.45 19 *e*Pn **Pn** **04 39 27.4 +1.3**
BOSS *e*Sn **Sn** **04 40 17.5 0.0**
IVA Berane 4.59 354⇑ *i*Pn **Pn** **04 39 28.1 +0.1**
IVA *i* Sn **Sn** **04 40 19.3 -1.6**
KOME Kolasin 4.60 351⇑ *i*Pn **Pn** **04 39 28.2 0.0**
KOME *i* Sn **Sn** **04 40 19.5 -1.8**
NKME Niksic 4.61 346⇓ *i*Pn **Pn** **04 39 28.3 0.0**
NKME *i* Sn **Sn** **04 40 19.5 -1.9**
BARS Barje 4.62 12 *e*Pn **Pn** **04 39 27.9 -0.4**
BARS *e*Sn **Sn** **04 40 21.0 -0.5**
IDI Anoyia 4.63 129 Pn **Pn** **04 39 30.1 +1.5**
comp=N,0.6nm,0.3s,baz=348,slow=15,SNR=1.3
IDI Sn **Sn** **04 40 20.6 -1.4**
comp=N,5.7nm,0.3s,baz=71,slow=20,SNR=4.0
IDI LR LR 04 41 39.6
comp=N,762nm,18.1s,baz=302,slow=43
IDI Anoyia 4.63 129⇑ P **Pb** **04 39 36.2 -4.0**
NKY Niksic 4.65 346 P **Pn** **04 39 28.8 -0.1**
NKY S **Sn** **04 40 21.0 -1.4**
NKY Niksic 4.65 346 *e*Pn **Pn** **04 39 28.7 -0.1**
NKY *i* Sn **Sn** **04 40 20.4 -2.0**
TREB Trebinje 4.70 340 *e*Pn **Pn** **04 39 28.5 -0.9**
TREB Trebinje 4.70 340 *e*Pn **Pn** **04 39 28.6 -0.9**
VTS Vitosha 4.79 25 *e*Pn **Pn** **04 39 31.8 +1.0**
VTS Vitosha 4.79 25⇑ P **Pn** **04 39 32.1 +1.3**
VTS Vitosha 4.79 25 P **Pn** **04 39 31.6 +0.8**
VTS Vitosha 4.79 25 Pn **Pn** **04 39 31.6 +0.8**
BRY Bratogost 4.83 343 P **Pn** **04 39 30.7 -0.7**
BRY S **Sn** **04 40 25.0 -1.9**
BRY Bratogost 4.83 343 *e*Pn **Pn** **04 39 30.3 -1.1**
BRY Bratogost 4.83 343⇑ *i*Pn **Pn** **04 39 30.5 -0.9**
BRY *i* Sn **Sn** **04 40 24.6 -2.3**
VAE Valguarnera 4.88 262 Pn **Pn** **04 39 34.0 +2.0**
comp=N,4.1nm,0.3s,baz=165,slow=8.9,SNR=2.8
SELS Selova 4.93 5 *e*Pn **Pn** **04 39 32.6 -0.1**
SELS *e*Sn **Sn** **04 40 28.2 -1.1**
SJES Sjenica 4.97 356 *e*Pn **Pn** **04 39 33.8 +0.5**
SJES *e*Sn **Sn** **04 40 27.8 -2.5**
PLD Plovdiv 4.98 39 *e*Pn **Pn** **04 39 35.9 +2.6**
RAFF Raffo Rosso 4.98 259 **Pn** **04 39 32.7 -0.6**
ALN Alexandroupoli 5.01 57 P **Pn** **04 39 35.1 +1.4**
ALN Alexandroupoli 5.01 57 Pn **Pn** **04 39 35.1 +1.4**
SGRT San Giovanni R 5.02 315 Pn **Pn** **04 39 34.4 +0.4**
PLE Pljevlja 5.09 351⇓ *i*Pn **Pn** **04 39 34.9 0.0**
PLE *i* Sn **Sn** **04 40 31.2 -2.1**
ZAPS Zavoj 5.22 17 *e*Pn **Pn** **04 39 37.9 +1.2**
IVAS Ivanjica 5.28 357 *e*Pn **Pn** **04 39 37.1 -0.3**
IVAS *e*Sn **Sn** **04 40 36.1 -1.7**
PAOL Paolisi 5.33 303 **Pn** **04 39 39.9 +1.8**
RUDO Rudo 5.38 351 *e*Pn **Pn** **04 39 38.1 -0.7**
BOVS Bovan 5.41 9⇑ P **Pn** **04 39 39.2 +0.1**
GRUS Gruza 5.58 2 *e*Pn **Pn** **04 39 41.1 -0.5**
BBLS Lazići 5.62 352 *e*Pn **Pn** **04 39 41.4 -0.7**
BBLS Lazići 5.62 352 *e*Pn **Pn** **04 39 41.6 -0.5**
ZAGS Zajecar 5.66 13 *e*Pn **Pn** **04 39 42.3 -0.3**
ZAGS *e*Sn **Sn** **04 40 45.3 -1.8**
CORL Corleone 5.69 268 **Pn** **04 39 44.8 +1.7**
DIVS Divibare 5.80 356 *e*Pn **Pn** **04 39 43.8 -0.9**
DIVS *e*Sn **Sn** **04 40 47.3 -3.5**
DIVS Divibare 5.80 356 *e*Pn **Pn** **04 39 44.1 -0.6**
DIVS Divibare 5.80 356 Pn **Pn** **04 39 44.1 -0.6**
HAPS Han Pijesak,BI 5.89 349 *e*Pn **Pn** **04 39 44.4 -1.6**
TRUS Trudelj 5.92 359 *e*Pn **Pn** **04 39 45.6 -0.5**
TRUS *e*Sn **Sn** **04 40 50.0 -3.5**
KARP Karpathos 6.00 115 Pn **Pn** **04 39 48.6 +1.2**
INTR Introdacqua 6.26 308 Pn **Pn** **04 39 52.4 +1.4**
TEKS Tekeris 6.28 354 *e*Pn **Pn** **04 39 50.4 -0.8**
TEKS *e*Sn **Sn** **04 40 58.7 -3.8**
TEKS Tekeris 6.28 354 *e*Pn **Pn** **04 39 50.3 -1.9**
MDVR Moldovita 6.54 8⇓ P **Pn** **04 39 55.1 +0.4**
MGRS Mrkonjic Grad 6.63 338 *e*Pn **Pn** **04 39 55.9 0.0**
HERR Herculane 6.73 12⇑ P **Pn** **04 39 57.7 +0.5**
AQU L'Aquila 6.76 309 P **Pn** **04 39 59.6 +1.8**
AQU L'Aquila 6.76 309 *e*Pn **Pn** **04 40 00.4 +2.6**
AQU L'Aquila 6.76 309 **Pn** **04 39 59.6 +1.8**
FRGS Fruska Gora 6.87 356 *e*Pn **Pn** **04 39 57.8 -1.4**
FRGS Fruska Gora 6.87 356⇑ P **Pn** **04 39 58.7 -0.5**
FRGS Fruska Gora 6.87 356 *e*Pn **Pn** **04 39 58.0 -1.2**
BLY Banja Luka 6.90 340 *e*Pn **Pn** **04 39 59.4 -0.3**
NRCA Norcia 7.21 311 **Pn** **04 40 05.3 +1.2**
MRAK Mrakovica 7.22 339 *e*Pn **Pn** **04 40 02.2 -2.0**
GZR Gura Zlata 7.29 13⇓ P **Pn** **04 40 05.1 +0.1**
BZS Buzias 7.36 6 P **Pn** **04 40 07.2 +1.3**
BZS pmax pmax
comp=Z,8.0nm,1.1s
AKAS Kas 7.55 103 Pn **Pn** **04 40 10.3 +1.6**
ELL Elmali 7.64 99 P **Pn** **04 40 11.8 +1.9**
ELL Elmali 7.64 99 Pn **Pn** **04 40 11.8 +1.9**
MURB Monte Urbino 7.82 312 **Pn** **04 40 13.8 +1.5**
SLUM Salum 7.82 149 P **Pn** **04 40 12.7 +0.4**
baz=158
SLUM AMP 04 41 00.0
baz=158
SLUM S **Sn** **04 41 32.1 -8.3**
baz=158
VOIR 7.89 24 P **Pn** **04 40 15.3 +1.9**
VOIR pmax pmax
comp=Z,23nm,0.9s
LATE Laterza 7.90 306 Pn **Pn** **04 40 14.8 +1.3**
SIRR Siria 8.01 6⇓ P **Pn** **04 40 15.6 +0.7**
MORH Mrgy, Hungar 8.03 351⇑ P **Pn** **04 40 14.0 -1.0**
MORH Mrgy, Hungar 8.03 351 *e*Pn **Pn** **04 40 13.0 -2.1**
ISR Istrita 8.17 32 P **Pn** **04 40 20.8 +3.6**
ISR pmax pmax
comp=Z,53nm,0.7s
MLR Muntele Rosu 8.25 28 Pn **Pn** **04 40 22.8 +4.5**
comp=Z,0.5nm,0.3s,baz=239,slow=7.9,SNR=8.4
MLR LR LR 04 44 50.5
comp=Z,206nm,21.1s,baz=178,slow=48
MLR Muntele Rosu 8.25 28⇓ P **Pn** **04 40 20.2 +1.9**
MLR Muntele Rosu 8.25 28 P **Pn** **04 40 19.4 +1.1**
MLR Muntele Rosu 8.25 28 Pn **Pn** **04 40 19.4 +1.1**
NEHR Nehoiu 8.33 29⇓ P **Pn** **04 40 21.8 +2.5**
CRES Cresnjev 8.40 335 *e*Pn **Pn** **04 40 19.3 -0.9**
DOPR Dopca 8.47 24⇓ P **Pn** **04 40 22.6 +1.4**
MDUB Mudurnu 8.56 72 Pn **Pn** **04 40 23.1 +0.5**
DRGR 8.64 10⇑ P **Pn** **04 40 25.0 +1.4**
DRGR 8.64 10 P **Pn** **04 40 25.2 +1.6**
DRGR pmax pmax
comp=Z,5.0nm,1.2s
CEY Cerknica 8.69 331 *e*Pn **Pn** **04 40 23.8 -0.5**
OSSC Osservatorio P 8.73 310 **Pn** **04 40 25.6 +0.8**
PLOR Plostina 8.82 29⇓ P **Pn** **04 40 28.6 +2.6**
PLOR Plostina 8.82 29 P **Pn** **04 40 28.6 +2.6**
VRI Vrincioaia 8.86 29⇑ P **Pn** **04 40 28.4 +1.9**
VRI Vrincioaia 8.86 29 P **Pn** **04 40 28.4 +1.9**
TRI Trieste 8.93 328 P **Pn** **04 40 26.8 -0.8**
TRI Trieste 8.93 328 Pn **Pn** **04 40 26.8 -0.8**
KEST Kesra 9.28 257 Pn **Pn** **04 40 32.4 0.0**
comp=Z,0.6nm,0.3s,baz=54,slow=5.9,SNR=8.4
KEST Sn **Sn** **04 42 12.9 -3.5**
baz=282,slow=17,SNR=1.3
KEST Kesra 9.28 257 Pn **Pn** **04 40 33.6 +1.2**
SOKA Soboth 9.29 336 *i* Pn **Pn** **04 40 31.3 -1.2**
comp=Z,20nm,0.5s,SNR=25
SOKA *e*Sn **Sn** **04 42 11.4 -5.1**
comp=Z,13nm,0.6s
OBKA Obir 9.30 334 *e*Pn **Pn** **04 40 33.0 +0.3**
comp=Z,4.9nm,0.2s,SNR=19
OBKA *e*Sn **Sn** **04 42 14.3 -2.6**
comp=Z,45nm,0.7s
ZCCA Zocca 9.37 313 **Pn** **04 40 35.3 +1.8**
VLC Villacollemand 9.60 311 Pn **Pn** **04 40 37.2 +0.5**
PSZ Piszkesteto 9.62 358 P **Pn** **04 40 36.9 -0.1**
PSZ Piszkesteto 9.62 358 Pn **Pn** **04 40 36.9 -0.1**
SRO Srobarova 9.64 351 *e*SN **Sn** **04 42 19.3 -5.7**
TEOL Teolo 9.64 320 **Pn** **04 40 37.2 -0.1**
ARSA Arzberg 9.66 339 *e*Pn **Pn** **04 40 36.3 -1.2**
comp=Z,9.9nm,0.6s
MYKA Terra Mystica 9.74 331 *i* Pn **Pn** **04 40 38.4 -0.2**
comp=Z,6.9nm,0.4s
MYKA *e*Sn **Sn** **04 42 21.1 -6.4**
comp=Z,11nm,0.6s
BURAR Bucovina Array 9.93 19⇑ P **Pn** **04 40 43.2 +2.0**
BURAR Bucovina Array 9.93 19 P **Pn** **04 40 43.2 +2.0**
BURAR Bucovina Array 9.93 19 Pn **Pn** **04 40 41.3 +0.1**
SWA2 9.93 154 P **Pn** **04 40 39.7 -1.6**
baz=161
SWA2 AMP 04 42 00.0
baz=161
ZOU Zoufplan 9.94 328 Pn **Pn** **04 40 40.7 -0.8**
PRMA PARMA 9.99 313 Pn **Pn** **04 40 42.9 +0.8**
CTI Castel Tesino 10.14 323 P **Pn** **04 40 43.2 -1.0**
CTI Castel Tesino 10.14 323 Pn **Pn** **04 40 43.2 -1.0**
CONA Conrad Observa 10.20 342 *e*Pn **Pn** **04 40 43.7 -1.2**
comp=Z,3.4nm,0.5s
KBA Koelnbreinsper 10.22 331 *e*Pn **Pn** **04 40 45.3 -0.1**
comp=Z,4.0nm,0.3s,SNR=18
KBA *e*Sn **Sn** **04 42 35.4 -4.2**
comp=Z,8.0nm,0.4s
KBA Koelnbreinsper 10.22 331 P **Pn** **04 40 45.5 +0.1**
KBA pmax pmax
comp=Z,28nm,0.9s
VYHS Vyhne 10.26 354 *e*P **Pn** **04 40 45.2 -0.5**
VYHS *e* 04 42 34.0
VYHS Vyhne 10.26 354 *e*PN **Pn** **04 40 45.2 -0.5**
VYHS *e*SN **Sn** **04 42 34.0 -6.2**
ABTA Abfaltersbach 10.29 328 *e*Pn **Pn** **04 40 45.7 -0.5**
comp=Z,16nm,0.5s,SNR=13
ABTA Sn **Sn** **04 42 36.4 -4.6**
comp=Z,89nm,1.1s
BR131 Keskin Array S 10.33 78 *ce*P Pn 04 40 53.4 +6.6
BRTR Keskin Array B 10.33 78 Pn **Pn** **04 40 51.4 +4.7**
comp=Z,0.7nm,0.3s,baz=261,slow=12,SNR=20
BRTR LR LR 04 45 27.9
comp=Z,335nm,21.2s,baz=129,slow=42
BRTR Keskin Array B 10.33 78 *i* P Pn 04 40 53.7 +6.9
BRTR pmax pmax
comp=Z,2.0nm,0.4s
BRTR Keskin Array B 10.33 78 Pn **Pn** **04 40 48.8 +2.1**
MODS Modra-Piesok 10.33 348 *e*P **Pn** **04 40 49.4 +2.7**
MODS *e* 04 42 38.0
MODS Modra-Piesok 10.33 348 *e*PN **Pn** **04 40 49.4 +2.7**
MODS *e*SN **Sn** **04 42 38.0 -4.1**
UZH Uzhgorod 10.41 7 *e*P Pn 04 40 53.4 +5.7
UZH *i* S **Sn** **04 42 52.4 +8.6**
UZH MLR MLR
comp=N,70nm,12.0s
UZH MLR MLR
comp=E,60nm,12.0s
UZH MLR MLR
comp=Z,50nm,12.0s
SALO Salr 10.41 318 Pn **Pn** **04 40 47.8 -0.1**
SMOL Smolenice 10.45 349 *e*P **Pn** **04 40 51.2 +2.9**
SMOL Smolenice 10.45 349 *e*PN **Pn** **04 40 51.2 +2.9**
MOA Molln 10.57 337 *i* Pn **Pn** **04 40 49.4 -0.6**
comp=Z,19nm,0.7s,SNR=14
MOA *e*Sn **Sn** **04 42 44.4 -3.5**
comp=Z,11nm,0.7s
CRVS Cervenica-Dubn 10.62 3 *e*P **Pn** **04 40 52.9 +2.3**
CRVS Cervenica-Dubn 10.62 3 *e*PN **Pn** **04 40 52.9 +2.3**
JAVC Velka Javorina 10.75 350 *e*PN **Pn** **04 40 52.2 -0.2**
WTTA Wattenberg 11.06 327 *i* Pn **Pn** **04 40 57.1 +0.2**
comp=Z,8.3nm,0.3s,SNR=11
WTTA *i* Sn **Sn** **04 42 56.8 -3.4**
comp=Z,44nm,0.9s
NIE Niedzica 11.11 359 P **Pn** **04 40 58.7 +1.3**
NIE pmax pmax
comp=Z,3.0nm,1.1s
WATA Walderalm 11.15 327 *i* Pn **Pn** **04 40 58.6 +0.6**
comp=Z,9.2nm,0.4s,SNR=7.5
WATA *e*Sn **Sn** **04 42 58.1 -4.1**
comp=Z,24nm,0.7s
KRUC Moravsky 11.15 346 *e*PN **Pn** **04 40 56.7 -1.2**
KRUC Moravsky 11.15 346 P **Pn** **04 40 58.4 +0.5**
KRUC pmax pmax
comp=Z,4.0nm,0.8s
SQTA Sankt Quirin 11.22 326 *i* Pn **Pn** **04 41 00.0 +1.1**
comp=Z,9.2nm,0.4s
SQTA *i* Sn **Sn** **04 43 00.8 -3.1**
comp=Z,15nm,0.4s
FETA Feichten 11.29 324 *i* Pn **Pn** **04 41 00.5 +0.6**
comp=Z,2.7nm,0.4s
FETA *i* Sn **Sn** **04 43 02.5 -3.2**
comp=Z,5.3nm,0.4s
VRAC Vranov 11.36 347 Pn **Pn** **04 40 59.6 -1.1**
comp=Z,0.2nm,0.3s,baz=166,slow=12,SNR=4.1
VRAC LR LR 04 45 46.9
comp=Z,124nm,18.6s,baz=165,slow=40
VRAC Vranov 11.36 347 *e*PN **Pn** **04 40 59.6 -1.1**
MOTA Moosalm 11.36 326 *i* Pn **Pn** **04 41 01.9 +1.0**
comp=Z,6.1nm,0.3s,SNR=26
MOTA *i* Sn **Sn** **04 43 03.7 -3.7**
comp=Z,20nm,0.8s
CKRC Cesky Krumlov 11.43 339 *e*P **Pn** **04 41 00.3 -1.4**
DAVOX Davos/Dischmat 11.53 321 Pn **Pn** **04 41 04.1 +0.9**
comp=Z,1.5nm,0.3s,baz=130,slow=19,SNR=15
DAVOX Sn **Sn** **04 43 04.1 -7.4**
comp=Z,1.1nm,0.3s,baz=142,slow=18,SNR=2.2
TUE Stuetta 11.59 318 Pn **Pn** **04 41 04.8 +0.6**
RETA Reutte 11.62 325 *e*Pn **Pn** **04 41 05.0 +0.6**
comp=Z,2.6nm,0.4s
RETA *e*Sn **Sn** **04 43 11.2 -2.4**
comp=Z,7.6nm,0.4s
GEC2 GERESS Array S 11.63 337 Pn **Pn** **04 41 03.5 -1.0**
GERES GERESS Array B 11.63 337 Pn **Pn** **04 41 03.0 -1.5**
comp=Z,0.7nm,0.3s,baz=156,slow=14,SNR=24
GERES Sn **Sn** **04 43 05.2 -8.6**
comp=Z,0.4nm,0.3s,baz=167,slow=18,SNR=1.9
GERES GERESS Array B 11.63 337 P **Pn** **04 41 03.0 -1.5**
MORC Moravsky Berou 11.66 350 *e*PN **Pn** **04 41 04.5 -0.5**
MORC Moravsky Berou 11.66 350 P **Pn** **04 41 04.2 -0.8**
MORC Moravsky Berou 11.66 350 Pn **Pn** **04 41 04.2 -0.8**
DAVA Damuels 11.88 322 *i* Pn **Pn** **04 41 09.0 +0.9**
comp=Z,1.8nm,0.3s
DAVA *i* Sn **Sn** **04 43 18.1 -2.1**
comp=Z,28nm,0.5s
KHC Kasperske Hory 11.92 337 *de*P **Pn** **04 41 06.6 -1.9**
KHC pmax pmax
comp=Z,25nm,2.1s
KHC Kasperske Hory 11.92 337 *e*P **Pn** **04 41 06.5 -1.9**
KHC *ex* x 04 42 05.5
KHC *e*S **Sn** **04 43 14.0 -6.9**
KHC Kasperske Hory 11.92 337 Pn **Pn** **04 41 06.8 -1.7**
FUR Furstenfeldbru 11.92 329 P **Pn** **04 41 07.9 -0.6**
FUR pmax pmax
comp=Z,22nm,0.7s
KRLC Kraliky 12.07 348 *e*P **Pn** **04 41 10.3 -0.1**
KRLC Kraliky 12.07 348 *e*P **Pn** **04 41 10.3 -0.1**
RYAN Fayoum 12.28 136 P **Pn** **04 41 12.2 -1.2**
baz=141
RYAN S Sn 04 43 12.5 -17
baz=141
DPC Dobruska-Polom 12.41 347 *e*P **Pn** **04 41 15.3 +0.2**
DPC Dobruska-Polom 12.41 347 *e*P **Pn** **04 41 15.3 +0.2**
PRU Pruhonice 12.44 342 P **Pn** **04 41 15.6 +0.2**
PRU pmax pmax
comp=Z,3.0nm,1.0s
SENIN Lac Senin/Sane 12.65 314 **Pn** **04 41 18.9 +0.3**
GLL Jalalah 12.73 130 P **Pn** **04 41 16.6 -3.0**
baz=134
HFRF Wahat Farafira 12.91 147 P **Pn** **04 41 19.7 -2.4**
baz=153
GRFO Grafenberg 13.19 333 P **Pn** **04 41 27.5 +1.8**
GRFO Grafenberg 13.19 333 Pn **Pn** **04 41 27.5 +1.8**
MMAI Mount Meron Ar 13.21 109 Pn **Pn** **04 41 24.1 -2.2**
comp=Z,1.2nm,0.3s,baz=300,slow=12,SNR=7.1
MMAI Sn **Sn** **04 43 47.4 -5.4**
comp=Z,1.4nm,0.3s,baz=310,slow=26,SNR=2.3
NKC Novy Kostel 13.24 337 P **Pn** **04 41 30.8 +4.4**
NKC pmax pmax
comp=Z,3.0nm,0.7s
STU Stuttgart 13.28 326 P **Pn** **04 41 25.7 -1.2**
STU pmax pmax
comp=Z,18nm,0.8s
BFO Black Forest 13.36 322 P **Pn** **04 41 29.4 +1.3**
BFO Black Forest 13.36 322 Pn **Pn** **04 41 29.4 +1.3**
BRG Berggiesshubel 13.40 342 P **Pn** **04 41 27.3 -1.3**
BRG pmax pmax
comp=Z,6.0nm,2.5s
AKASG Malin Array Be 13.86 24 Pn **Pn** **04 41 34.2 -0.7**
comp=Z,0.8nm,0.3s,baz=213,slow=12,SNR=4.6
AKASG PcP **PcP** **04 46 57.3 +0.4**
comp=Z,0.6nm,0.3s,baz=235,slow=1.4,SNR=4.3
AKBB Malin Array Si 13.86 24⇑ *e*P **Pn** **04 41 37.0 +2.2**
AKBB Malin Array Si 13.86 24 Pn **Pn** **04 41 35.6 +0.8**
ECH Echery 13.86 320 P **Pn** **04 41 33.8 -1.1**
ECH Echery 13.86 320 Pn **Pn** **04 41 33.8 -1.1**
MOX Moxa 13.86 336 P **Pn** **04 41 33.0 -1.9**
MOX pmax pmax
comp=Z,8.0nm,1.2s
CLL Collm 14.04 340 *e*pP **Pn** **04 41 41.0 +3.7**
CLL *e*PP **PnPn** **04 41 47.0 +1.8**
CLL *e* 04 41 53.0
CLL L L 04 45 00.0
comp=Z,100nm,19.6s
CLL Collm 14.04 340 *e*P **Pn** **04 41 41.0 +3.7**
CLL Collm 14.04 340 Pn **Pn** **04 41 37.1 -0.2**
ANN Anapa 14.23 58 *e*P **Pn** **04 41 40.5 +0.5**
ANN *e*S **Sn** **04 44 18.9 +1.5**
ANN pmax pmax
comp=Z,146nm,1.2s
EIL Elat 14.75 121 Pn **Pn** **04 41 46.6 -0.5**
comp=Z,0.3nm,0.3s,baz=291,slow=18,SNR=2.0
EIL Sn Sn 04 44 18.2 -12
comp=Z,0.2nm,0.3s,baz=85,slow=22,SNR=1.4
HDK1 Dakhla 14.79 147 P **Pn** **04 41 45.4 -2.4**
baz=152
GKP Gorka Klasztor 15.14 352 *e*P **Pn** **04 41 53.4 +1.2**
WLF Walferdange 15.32 322 P **Pn** **04 41 54.6 0.0**
WLF pmax pmax
comp=Z,28nm,1.0s
WLF Walferdange 15.32 322 Pn **Pn** **04 41 54.6 0.0**
WLF IAmb IAmb 04 42 09.0
comp=Z,28nm,1.0s
SOC Sochi 15.44 64 *e*P **Pn** **04 41 57.0 +0.7**
SOC *e* 04 44 49.9
SOC MLR MLR
comp=Z,47nm,14.0s
SUW Suwalki 15.82 6 *e*P **Pn** **04 42 01.6 +0.5**
SUW Suwalki 15.82 6 P **Pn** **04 42 01.7 +0.6**
SUW pmax pmax
comp=Z,56nm,1.0s
SUW Suwalki 15.82 6 Pn **Pn** **04 42 01.7 +0.6**
SUW IAmb IAmb 04 42 10.9
comp=Z,56nm,1.0s
MARD Mardin 16.06 87 Pn **Pn** **04 42 04.5 0.0**
DOU Dourbes 16.36 321 P **P** **04 42 10.6 -0.2**
DOU pmax pmax
comp=Z,20nm,1.6s
UCC Uccle 16.93 323 P **Pn** **04 42 14.9 -0.4**
UCC pmax pmax
comp=Z,15nm,0.8s
UCC Uccle 16.93 323 Pn **Pn** **04 42 14.9 -0.4**
MNK Minsk 16.97 15 *i* P **Pn** **04 42 12.9 -2.8**
comp=E,3.0nm,0.8s
MNK *i* P **Pn** **04 42 12.9 -2.8**
comp=N,36nm,0.8s
MNK *i* P **Pn** **04 42 12.9 -2.8**
comp=Z,43nm,0.8s
MNK *i* PP **pP** **04 42 22.4 -0.2**
MNK *i* S **Sn** **04 45 21.2 -2.5**
MNK *i* SS **S** **04 45 34.0 +0.4**
MNK *i* PcP PcP 04 46 39.2 -22
MNK *i* LQ LQ 04 47 12.0
MNK *i* LR LR 04 48 28.9
MNK *i* LRM MLR 04 49 08.4
comp=E,21nm,14.7s
MNK *i* LRM MLR 04 49 12.8
comp=N,199nm,16.9s
MNK *i* LRM MLR 04 49 14.8
comp=Z,73nm,15.3s
BSEG Bad Segeberg 17.12 339 P **P** **04 42 20.9 +1.7**
BSEG pmax pmax
comp=Z,12nm,1.4s
NACGM Naroch 17.15 12 *i* P **P** **04 42 18.9 -0.6**
NACGM *i* P **P** **04 42 18.9 -0.6**
NACGM *i* P **P** **04 42 18.9 -0.6**
NACGM *i* PP **sP** **04 42 26.1 -0.9**
NACGM *i* PPP PPP 04 42 37.2
NACGM *i* S **S** **04 45 38.1 +0.8**
NACGM *i* SS **SnSn** **04 45 53.1 +12**
NACGM *i* SSS SSS 04 46 11.0
NACGM *i* LQ LQ 04 47 36.6
NACGM *i* LR LR 04 48 57.9
PABE Paberze 17.37 7 *e*P **Pn** **04 42 19.3 -1.4**
IIGN Ignalina 17.49 11 *e*P **Pn** **04 42 21.4 -0.8**
IDID Didziasalis 17.53 12 *e*P **Pn** **04 42 22.7 -0.1**
KIV Kislovodsk 17.62 64 *e*P **P** **04 42 27.0 +2.0**
KIV pmax pmax
comp=Z,48nm,1.0s
KIV Kislovodsk 17.62 64 Pn **Pn** **04 42 21.7 -2.3**
ISAL Salakas 17.69 11 *e*P **Pn** **04 42 24.4 -0.3**
KBZ Khabaz 17.73 65 P **P** **04 42 27.1 +1.0**
comp=Z,0.1nm,0.3s,baz=283,slow=7.6,SNR=7.9
KBZ Khabaz 17.73 65⇑ *e*P **P** **04 42 28.5 +2.5**
NCK Nalchik 18.19 66⇓ *e*P **P** **04 42 35.5 +4.3**
NCK pmax pmax
comp=Z,8.0nm,0.7s
ZEI Tsey 18.32 68 *e*P **P** **04 42 34.8 +2.0**
ZEI pmax pmax
comp=Z,13nm,1.2s
VSR Storozhevoye 18.44 40 *e*P **P** **04 42 30.3 -3.5**
VSR pmax pmax
comp=Z,9.0nm,0.5s
GNI Garni 18.86 77 P **Pn** **04 42 40.6 +1.3**
comp=Z,1.1nm,0.3s,baz=242,slow=21,SNR=4.5
GNI Garni 18.86 77 *di*P **Pn** **04 42 40.6 +1.3**
GNI pmax pmax
comp=Z,99nm,2.5s
GNI Garni 18.86 77 P **Pn** **04 42 41.2 +1.9**
GNI IAmb IAmb 04 42 47.2
comp=Z,63nm,1.2s
ESBB Sonseca Array 19.05 282 P **P** **04 42 40.9 +0.2**
ESDC Sonseca Array 19.05 282 P **Pn** **04 42 41.5 0.0**
comp=Z,0.2nm,0.3s,baz=74,slow=11,SNR=16
ESDC LR LR 04 50 05.4
comp=Z,100nm,18.3s,baz=45,slow=37
ESDC Sonseca Array 19.05 282 P **Pn** **04 42 42.4 +0.9**
LPSR Galich'ya Gora 19.20 36 *e*P **P** **04 42 41.6 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
PAB San Pablo 19.36 281 P **Pn** **04 42 45.8 +0.6**
PAB pmax pmax
comp=Z,15nm,1.3s
PAB San Pablo 19.36 281 **Pn** **04 42 45.8 +0.6**
VRH Novokhopyorsk 19.75 42 *e*P **P** **04 42 49.0 +0.9**
VRH pmax pmax
comp=Z,40nm,1.6s
GROC Groznyy 19.75 68 *e*P **P** **04 42 46.1 -2.1**
GROC *e*S **S** **04 46 29.3 -0.8**
GROC pmax pmax
comp=Z,10.0nm,0.4s
GROC MLR MLR
comp=Z,447nm,14.0s
OBN Obninsk 20.02 28 P **P** **04 42 50.9 -0.2**
comp=Z,0.8nm,0.3s,baz=206,slow=23,SNR=3.6
OBN LR LR 04 51 13.3
comp=Z,24nm,19.8s,baz=178,slow=39
OBN Obninsk 20.02 28 *de*P **P** **04 42 50.3 -0.7**
OBN *e* 04 43 11.8
OBN *e*S **S** **04 46 32.5 -2.8**
OBN pmax pmax
comp=Z,40nm,1.7s
OBN MLR MLR
comp=Z,165nm,16.0s
OBN Obninsk 20.02 28 P **P** **04 42 51.5 +0.5**
OBN IAmb IAmb 04 42 56.6
comp=Z,32nm,1.2s
TAM Tamanrasset 20.09 224 P Pn 04 42 53.5 -0.6
TAM pmax pmax
comp=Z,6.0nm,1.2s
TAM Tamanrasset 20.09 224 P Pn 04 42 53.5 -0.5
MTSE Matsula 20.54 5 *e*P **P** **04 42 55.8 -0.9**

GNBR	**Gunib**	**20.55**	**70**⇑	*e*P		Pn		04 42 59.0	-0.3
GNBR				pmax		pmax			
	comp=Z,38nm,0.9s								
MOS	**Moscow**	**20.89**	**28**	*e*P		**P**		**04 42 59.6**	**-0.8**
MOS				*e*				04 43 35.8	
MOS				*e*				04 46 57.8	
MOS				pmax		pmax			
	comp=Z,100nm,1.7s								
MOS				pmax		pmax			
	comp=Z,107nm,1.6s								
MAK	**Makhachkala**	**20.98**	**69**	*e*P		**P**		**04 43 01.6**	**+0.1**
MAK				*e*S		**S**		**04 46 57.0**	**+2.5**
MAK				pmax		pmax			
	comp=Z,170nm,0.4s								
MAK				MLR		MLR			
	comp=Z,102nm,15.0s								
AKT	**Akhty**	**21.10**	**73***de*	P		**P**		**04 43 04.1**	**+1.0**
AKT				pmax		pmax			
	comp=Z,12nm,1.2s								
MDT	**Midelt**	**21.12**	**263**	P		**P**		**04 43 03.5**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=74,slow=8.3,SNR=9.1								
MVO	**Moncorvo**	**21.33**	**286**	*e*P		**P**		**04 43 06.2**	**+0.8**
PBAR	**Barrancos**	**21.60**	**278**	*e*P		**P**		**04 43 09.9**	**+1.6**
	comp=Z,24nm,1.2s								
UPP	**Uppsala**	**21.65**	**356**	*e*P		**P**		**04 43 07.2**	**-1.4**
PMRV	**Marv??o**	**21.72**	**282**	*e*P		**P**		**04 43 10.8**	**+1.2**
	comp=Z,35nm,1.5s								
PCBR	**Castelo Branco**	**21.74**	**283**	*e*P		**P**		**04 43 11.2**	**+1.4**
	comp=Z,23nm,1.4s								
MTE	**Manteigas**	**21.75**	**284**	*e*P		**P**		**04 43 10.2**	**+0.2**
	comp=Z,48nm,1.5s								
MTE	**Manteigas**	**21.75**	**284**	P		**P**		**04 43 11.5**	**+1.5**
MTE				IAmb		IAmb		04 43 15.1	
	comp=Z,41nm,1.3s								
PESTR	**Estremoz**	**21.93**	**280**	P		**P**		**04 43 12.6**	**+0.7**
PVIS	**Viseu**	**22.00**	**285**	*e*P		**P**		**04 43 16.2**	**+3.6**
	comp=Z,37nm,1.4s								
PVAQ	**Vaqueiros**	**22.27**	**276**	*e*P		**P**		**04 43 16.4**	**+0.9**
HFS	**Hagfors**	**22.27**	**351**	P		**P**		**04 43 14.4**	**-0.9**
	comp=Z,7.7nm,0.4s,baz=163,slow=11,SNR=35								
HFS				LR		LR		04 54 18.8	
	comp=Z,83nm,21.8s,baz=180,slow=43								
EVO	**Evora**	**22.31**	**280**	*e*P		**P**		**04 43 16.5**	**+0.6**
PMTG	**Montargil**	**22.40**	**281**	*e*P		**P**		**04 43 16.3**	**-0.6**
KONO	**Kongsberg**	**22.47**	**345**⇑	*e*P		**P**		**04 43 17.2**	**-0.2**
KONO				pmax		pmax			
	comp=Z,25nm,1.7s								
MESJ	**Messejana**	**22.58**	**278**	*e*P		**P**		**04 43 20.4**	**+1.6**
PNCL	**Nicolau / Gran**	**22.77**	**279**	*e*P		**P**		**04 43 22.0**	**+1.2**
	comp=Z,36nm,1.7s								
PTEO	**Sao Teotonio**	**23.03**	**277**	*e*P		**P**		**04 43 26.0**	**+2.5**
NC602	**NORSAR Array S**	**23.15**	**349**	P		**P**		**04 43 24.2**	**-0.3**
NC602				IAmb		IAmb		04 43 42.3	
	comp=Z,20nm,0.8s								
PFVI	**Vila Bisbo**	**23.19**	**276**	*e*P		**P**		**04 43 26.2**	**+1.1**
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P		**P**		**04 43 25.8**	**-0.5**
	comp=Z,11nm,0.8s,baz=125,slow=10,SNR=23								
NAO01	**NORSAR Array S**	**23.36**	**348**	P		**P**		**04 43 26.2**	**-0.5**
FINES	**FINESS Array B**	**23.43**	**7**	P		**P**		**04 43 25.6**	**-1.7**
	comp=Z,8.0nm,0.5s,baz=172,slow=9.2,SNR=54								
FINES				PcP		**PcP**		**04 47 13.4**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=126,slow=2.6,SNR=4.2								
FINES				LR		LR		04 54 57.1	
	comp=Z,118nm,18.6s,baz=204,slow=43								
FIA1	**FINESS Array S**	**23.43**	**7**	P		**P**		**04 43 26.5**	**-0.8**
FIA1				IAmb		IAmb		04 43 34.2	
	comp=Z,17nm,0.8s								
NC405	**NORSAR Array S**	**23.49**	**349**	P		**P**		**04 43 27.3**	**-0.6**
NB201	**NORSAR Array S**	**23.49**	**349**	P		**P**		**04 43 28.0**	**+0.1**
NOA	**NORSAR Array B**	**23.49**	**349**	P		**P**		**04 43 27.5**	**-0.5**
	comp=Z,6.5nm,0.8s,baz=154,slow=9.2,SNR=29								
NOA				LR		LR		04 53 57.8	
	comp=Z,73nm,20.4s,baz=165,slow=40								
BELG	**Belogornoye**	**23.53**	**44**	P		**P**		**04 43 28.6**	**+0.2**
	comp=Z,41nm,0.8s,baz=307,slow=2.0,SNR=20								
BELG	**Belogornoye**	**23.53**	**44***de*	P		**P**		**04 43 28.6**	**+0.2**
BELG				pmax		pmax			
	comp=Z,7.0nm,0.9s								
NBO00	**NORSAR Array S**	**23.55**	**348**	P		**P**		**04 43 28.5**	**-0.1**
NC303	**NORSAR Array S**	**23.64**	**349**	P		**P**		**04 43 28.9**	**-0.6**
NC204	**NORSAR Array S**	**23.79**	**348**	P		**P**		**04 43 30.9**	**0.0**
VALR	**Valaam**	**23.97**	**12**	*e*P		**P**		**04 43 33.5**	**+1.0**
VALR				pmax		pmax			
	comp=Z,22nm,0.8s								
KLMR	**Klimovskoe**	**25.53**	**22**	*e*P		**P**		**04 43 45.4**	**-1.3**
KLMR				pmax		pmax			
	comp=Z,28nm,1.2s								
KLMR	**Klimovskoe**	**25.53**	**22**	*e*P		**P**		**04 43 45.5**	**-1.3**
KLMR				AMP				04 43 54.1	
	comp=Z,28nm,1.2s								
RAYN	**Ar Rayn**	**25.92**	**117**	P		**P**		**04 43 52.0**	**+1.4**
RAYN				pmax		pmax			
	comp=Z,18nm,1.3s								
RAYN	**Ar Rayn**	**25.92**	**117**	P		**P**		**04 43 52.0**	**+1.4**
RAYN				IAmb		IAmb		04 43 58.4	
	comp=Z,18nm,1.3s								
KIRV	**Kirov**	**27.56**	**33**	P		**P**		**04 44 05.5**	**+0.5**
	comp=Z,5.6nm,0.5s,baz=188,slow=7.1,SNR=3.6								
KIRV	**Kirov**	**27.56**	**33**⇑	*e*P		**P**		**04 44 04.3**	**-0.7**
PRGR	**Permogore**	**28.06**	**26**	*e*P		**P**		**04 44 08.3**	**-1.1**
PRGR				pmax		pmax			
	comp=Z,17nm,0.7s								
AKTO	**Aktyubinsk**	**29.12**	**53**	P		**P**		**04 44 20.7**	**+1.6**
	comp=Z,1.7nm,0.5s,baz=279,slow=17,SNR=6.1								
GEYT	**Alibeck**	**29.47**	**79**	P		**P**		**04 44 23.3**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=274,slow=8.5,SNR=2.6								
GYA0B	**ALIBECK ARRAY**	**29.47**	**79**	P		**P**		**04 44 25.9**	**+3.5**
GYA0B				IAmb		IAmb		04 44 33.9	
	comp=Z,6.0nm,0.6s								
TOA0	**Torodi Ar. Sit**	**30.12**	**219**	P		**P**		**04 44 29.1**	**+1.0**
TOA0				IAmb		IAmb		04 44 34.8	
	comp=Z,5.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**30.12**	**219**	P		**P**		**04 44 29.0**	**+0.9**
	comp=Z,6.3nm,1.0s,baz=31,slow=9.2,SNR=17								
TORD				PcP		**PcP**		**04 47 30.1**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=61,slow=2.2,SNR=5.6								
TORD	**Torodi Ar. Bea**	**30.12**	**219**	P		**P**		**04 44 29.1**	**+1.0**
ABKAR	**Akbulak array**	**30.19**	**56**	P		**P**		**04 44 27.5**	**-1.0**
ARU	**Arti**	**30.98**	**42***c*	*i*P		P		04 44 30.1	-5.3
ARU				S		**S**		**04 49 31.8**	**-7.2**
ARU				pmax		pmax			
	comp=Z,3.0nm,0.7s								
ARCES	**ARCESS Array B**	**31.41**	**3**	P		**P**		**04 44 38.2**	**-0.9**
	comp=Z,3.4nm,0.8s,baz=187,slow=11,SNR=32								
ARCES				PcP		**PcP**		**04 47 32.2**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=217,slow=2.3,SNR=6.0								
ARCES	**ARCESS Array B**	**31.41**	**3**	P		**P**		**04 44 38.2**	**-0.9**
ARCES				pmax		pmax			
	comp=Z,15nm,1.5s								
ARCES	**ARCESS Array B**	**31.41**	**3**	IAmb		IAmb		04 44 56.3	
	comp=Z,15nm,1.4s								
KOWA	**Kowa**	**32.13**	**229**	P		**P**		**04 44 46.6**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=16,slow=9.1,SNR=9.6								
KOWA				PcP		**PcP**		**04 47 36.1**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=305,slow=4.8,SNR=5.1								
SVE	**Sverdlovsk**	**32.19**	**42**	*e*P		**P**		**04 44 45.7**	**-0.4**
SVE				pmax		pmax			
	comp=Z,7.0nm,0.6s								
BRVK	**Borovoye**	**36.99**	**50**⇓	*e*P		**P**		**04 45 27.6**	**0.0**
BRVK				pmax		pmax			
	comp=Z,7.0nm,1.3s								
BRVK	**Borovoye**	**36.99**	**50**	P		**P**		**04 45 28.4**	**+0.8**
BRVK				IAmb		IAmb		04 45 34.7	
	comp=Z,11nm,1.1s								
KK31	**Karatay Array**	**37.76**	**66**	P		**P**		**04 45 34.0**	**-0.3**
KK31				pmax		pmax			
	comp=Z,7.0nm,0.8s								
KK31	**Karatay Array**	**37.76**	**66**	P		**P**		**04 45 34.0**	**-0.3**
KK31				IAmb		IAmb		04 45 39.5	
	comp=Z,7.0nm,0.8s								
KKAR	**Karatay Array**	**37.76**	**66**	P		**P**		**04 45 33.6**	**-0.8**
KKAR	**Karatay Array**	**37.76**	**66**	P		**P**		**04 45 33.5**	**-0.8**
DBIC	**Dimbokro**	**38.97**	**223**	P		**P**		**04 45 45.1**	**+0.4**
	comp=Z,11nm,1.2s,baz=356,slow=13,SNR=4.3								
DBIC				LR		LR		05 02 32.4	
	comp=Z,108nm,19.6s,baz=338,slow=37								
TIC	**Toumodi**	**39.08**	**223**	*e*PKIKP		**P**		**04 45 46.5**	**+0.9**
KIC	**Kosan Boka**	**39.17**	**222**	*e*PKIKP		**P**		**04 45 46.8**	**+0.4**
	comp=Z,35nm,1.3s								
LIC	**Lamto**	**39.44**	**222**	*e*PKIKP		**P**		**04 45 46.7**	**-1.9**
	comp=Z,42nm,1.3s								
SOCY	**Socotra**	**39.55**	**122**	P		**P**		**04 45 51.3**	**+1.7**
SOCY				IAmb		IAmb		04 45 54.7	
	comp=Z,23nm,1.5s								
AAK	**Ala-Archa**	**40.72**	**66**⇓	*e*P		**P**		**04 45 59.4**	**+0.1**
AAK				pmax		pmax			
	comp=Z,11nm,0.8s								
AAK	**Ala-Archa**	**40.72**	**66**	P		**P**		**04 45 59.8**	**+0.6**
SUMG	**Summit**	**44.70**	**338**	*i*P		**P**		**04 46 32.8**	**+1.4**
SUMG	**Summit**	**44.70**	**338**	P		**P**		**04 46 31.6**	**+0.2**
SUMG				pmax		pmax			
	comp=Z,18nm,1.3s								
SUMG	**Summit**	**44.70**	**338**	P		**P**		**04 46 31.6**	**+0.2**
SUMG				IAmb		IAmb		04 46 35.4	
	comp=Z,18nm,1.3s								
MK31	**Makanchi Array**	**45.25**	**58***d*	*i*P		**P**		**04 46 34.9**	**-0.8**
MK31	**Makanchi Array**	**45.25**	**58**	P		**P**		**04 46 35.9**	**+0.2**
MKAR	**Makanchi Array**	**45.25**	**58**	P		**P**		**04 46 34.9**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=276,slow=7.5,SNR=32								
MKAR				PcP		**PcP**		**04 48 15.6**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=278,slow=3.5,SNR=2.5								
ZAA0	**Zalesovo Array**	**45.62**	**48**	P		**P**		**04 46 38.0**	**-0.4**
ZAA0				IAmb		IAmb		04 46 44.9	
	comp=Z,7.9nm,0.7s								
ZALV	**Zalesovo Beam**	**45.62**	**48**	P		**P**		**04 46 37.8**	**-0.7**
	comp=Z,4.7nm,0.5s,baz=277,slow=8.6,SNR=28								
ZALV	**Zalesovo Beam**	**45.62**	**48**	P		**P**		**04 46 37.5**	**-0.9**
NRIK	**Noril'sk**	**46.69**	**27**⇓	*e*P		**P**		**04 46 47.8**	**+1.1**
NRIK				pmax		pmax			
	comp=Z,6.0nm,1.3s								
NRIK	**Noril'sk**	**46.69**	**27**	P		**P**		**04 46 47.8**	**+1.1**
NRIK				IAmb		IAmb		04 47 05.4	
	comp=Z,2.5nm,0.7s								
DGZ	**Jazzator, Alta**	**47.97**	**54**⇓	*e*P		**P**		**04 46 56.8**	**-0.3**
DGZ				pmax		pmax			
	comp=Z,1.0nm,0.9s								
FRB	**Frobisher Bay**	**56.03**	**328**	P		**P**		**04 47 57.6**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=67,slow=9.4,SNR=5.2								
FRB				LR		LR		05 13 47.8	
	comp=Z,325nm,19.6s,baz=341,slow=38								
TLY	**Talaya**	**57.22**	**47**⇓	*e*P		**P**		**04 48 06.2**	**+0.8**
TLY				pmax		pmax			
	comp=Z,3.0nm,1.2s								
TLY	**Talaya**	**57.22**	**47**	P		**P**		**04 48 08.9**	**+3.5**
TLY				IAmb		IAmb		04 48 13.3	
	comp=Z,8.8nm,1.3s								
TIXI	**Tiksi**	**59.54**	**20**⇓	*e*P		**P**		**04 48 21.8**	**+0.6**
TIXI	**Tiksi**	**59.54**	**20**	P		**P**		**04 48 22.1**	**+0.8**
TIXI				IAmb		IAmb		04 48 23.9	
	comp=Z,4.0nm,1.1s								
RES	**Resolute Bay**	**59.64**	**344**	P		**P**		**04 48 22.1**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=21,slow=10,SNR=4.6								
SONM	**Songino Array**	**60.39**	**51**	P		**P**		**04 48 27.4**	**-0.2**
	comp=Z,1.7nm,0.9s,baz=280,slow=8.6,SNR=3.0								
ULN	**Ulaanbaatar**	**60.78**	**50**⇑	*e*P		**P**		**04 48 30.4**	**+0.1**
ULN				pmax		pmax			
	comp=Z,2.0nm,0.9s								
YAK	**Yakutsk**	**65.01**	**29**⇓	*e*P		**P**		**04 48 57.9**	**-0.1**
YAK				pmax		pmax			
	comp=Z,17nm,0.6s								
BOSA	**Boshof**	**66.72**	**175**	P		**P**		**04 49 10.1**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=21,slow=8.0,SNR=2.0								
CMAR	**Chiang Mai Arr**	**69.89**	**82**	P		**P**		**04 49 28.9**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=306,slow=7.3,SNR=5.8								
A21K	**Barrow**	**70.66**	**359**	P		**P**		**04 49 34.3**	**+0.9**
BILL	**Bilibino**	**70.90**	**13**⇓	*e*P		**P**		**04 49 34.5**	**-0.4**
BILL				*e*				04 49 56.2	
BILL				pmax		pmax			
	comp=Z,7.0nm,1.7s								
INK	**Inuvik**	**71.94**	**350**	P		**P**		**04 49 41.3**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=9.7,slow=6.1,SNR=9.1								
SEY	**Seymchan**	**72.03**	**21**⇑	*e*P		**P**		**04 49 40.7**	**-1.1**
ERPA	**Erie**	**72.19**	**310**	P		**P**		**04 49 45.0**	**+1.8**
YKA	**Yellowknife Ar**	**73.27**	**340**	P		**P**		**04 49 49.8**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=38,slow=5.3,SNR=23								
KLR	**Kul'dur**	**73.79**	**40***de*	P		**P**		**04 49 53.0**	**+0.5**
KLR				pmax		pmax			
	comp=Z,8.0nm,1.0s								
BMAR	**Burnt Mountain**	**73.98**	**354**	P		**P**		**04 49 55.5**	**+2.1**
MA2	**Magadan**	**74.19**	**24**⇑	*e*P		**P**		**04 49 55.6**	**+0.9**
MA2				pmax		pmax			
	comp=Z,11nm,1.7s								
MA2	**Magadan**	**74.19**	**24**	P		**P**		**04 49 55.3**	**+0.6**
MA2				IAmb		IAmb		04 50 02.5	
	comp=Z,7.4nm,1.0s								
O52A	**Adamsville**	**74.50**	**309**	P		**P**		**04 49 57.8**	**+1.0**
COLD	**Coldfoot**	**74.56**	**356**	P		**P**		**04 49 57.8**	**+1.1**
COLD				IAmb		IAmb		04 49 58.9	
	comp=Z,8.7nm,1.2s								
ULM	**Lac du Bonnet**	**75.59**	**324**	P		**P**		**04 50 03.7**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=45,slow=3.2,SNR=14								
ULM	**Lac du Bonnet**	**75.59**	**324**⇑	*e*P		**P**		**04 50 03.2**	**+0.3**
ULM	**Lac du Bonnet**	**75.59**	**324**	P		**P**		**04 50 04.1**	**+1.1**
ULM				IAmb		IAmb		04 50 04.8	
	comp=Z,6.9nm,0.9s								
COLA	**College**	**76.75**	**355**⇓	*e*P		**P**		**04 50 08.2**	**-1.0**
COLA				pmax		pmax			
	comp=Z,3.0nm,1.0s								
ILAR	**Eielson Array**	**76.78**	**354**	P		**P**		**04 50 08.7**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=359,slow=4.4,SNR=12								
USA0B	**Ussuriysk Arra**	**77.20**	**43**⇓	*e*P		**P**		**04 50 12.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**77.20**	**43**	P		**P**		**04 50 12.0**	**-0.2**
	comp=Z,5.0nm,0.9s,baz=318,slow=4.2,SNR=8.4								
KSRS	**Korea Array**	**79.26**	**51**	P		**P**		**04 50 23.8**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=296,slow=4.5,SNR=2.3								
YSS	**Yuzh-Sakhalins**	**80.68**	**36**	*e*P		**P**		**04 50 32.1**	**+0.9**
YSS				*e*				04 50 39.1	
YSS				pmax		pmax			
	comp=Z,30nm,1.2s								
PTGA	**Pitinga**	**82.96**	**264**	LR		LR		05 26 07.3	
	comp=Z,56nm,18.7s,baz=280,slow=35								
BDFB	**Brasilia**	**82.55**	**244**	LR		LR		05 28 53.4	
	comp=Z,186nm,21.4s,baz=194,slow=36								
KDAK	**Kodiak Island**	**84.10**	**356**	P		**P**		**04 50 49.0**	**+0.1**
	comp=Z,4.7nm,0.7s,baz=33,slow=4.6,SNR=4.3								
KDAK	**Kodiak Island**	**84.10**	**356**	P		**P**		**04 50 49.0**	**+0.1**
KDAK				pmax		pmax			
	comp=Z,34nm,1.4s								
KDAK	**Kodiak Island**	**84.10**	**356**	IAmb		IAmb		04 50 50.3	
	comp=Z,34nm,1.4s								
MJAR	**Matsushiro Arr**	**85.91**	**46**	P		**P**		**04 50 59.0**	**+0.6**
	comp=Z,1.3nm,0.2s,baz=319,slow=4.8,SNR=4.2								
MJAR	**Matsushiro Arr**	**85.91**	**46**	P		**P**		**04 50 59.0**	**+0.6**
PDAR	**Pinedale Array**	**87.43**	**326**	P		**P**		**04 51 05.2**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=83,slow=6.1,SNR=4.7								
PDAR	**Pinedale Array**	**87.43**	**326**	P		**P**		**04 51 06.0**	**0.0**
ELK	**Elko**	**91.53**	**328**	P		**P**		**04 51 25.5**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=80,slow=12,SNR=3.8								
ELK	**Elko**	**91.53**	**328**	P		**P**		**04 51 25.5**	**+0.2**
ELK				pmax		pmax			
	comp=Z,4.0nm,1.5s								
ELK	**Elko**	**91.53**	**328**	IAmb		IAmb		04 51 28.6	
	comp=Z,4.2nm,1.4s								
NVAR	**Mina Array Bea**	**94.75**	**329**	P		**P**		**04 51 41.1**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=305,slow=2.6,SNR=5.0								
TX31	**Lajitas Ar. Si**	**94.87**	**314**	P		**P**		**04 51 41.6**	**+0.9**
TXAR	**Lajitas Array**	**94.87**	**314**	P		**P**		**04 51 41.5**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=90,slow=5.0,SNR=3.8								
WRA	**Warramunga Arr**	**120.56**	**92**	PKP		**PKPdf**		**04 57 09.7**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=320,slow=1.7,SNR=6.1								
ASAR	**Alice Springs**	**122.20**	**96**	PKP		**PKPdf**		**04 57 12.8**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=301,slow=1.7,SNR=6.3								

JMA ***04*** *04:49:20.4±0.1,24.39N×122.97E,h49km±1km,M3.3*
TAP ***04*** *04:49:20.3,24.32N×122.95E,h44km,ML3.5,C*
ISC 04 04:49:20.7±1.2,24.29N±0.03×122.98E±0.02,h43km±7km,
n107,σ1§37/209,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.16**	**350**	P		**Pn**	**04 49 27.9**	**-0.2**
JYNG				S		**Sn**	**04 49 33.2**	**0.0**
YOJ	**Yonaguni jima**	**0.17**	**11**	P		**Pn**	**04 49 28.1**	**0.0**
YOJ				S		**Sn**	**04 49 33.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.17**	**11**	*i* P		**Pn**	**04 49 28.1**	**0.0**
	baz=19							
YOJ				*i* S		**Sn**	**04 49 33.6**	**+0.3**
	baz=19							
IRIF	**Iriomote-Funau**	**0.69**	**86**	P		**Pn**	**04 49 33.8**	**-0.3**
IRIF				S		**Sn**	**04 49 44.1**	**+0.4**
HATJ	**Hateruma jima**	**0.79**	**107**	P		**Pn**	**04 49 36.1**	**+0.6**
HATJ				*e*S		**Sn**	**04 49 46.8**	**+0.6**
JKRS	**Kuro-shima**	**0.94**	**93**	P		**Pn**	**04 49 37.9**	**+0.4**
JKRS				S		**Sn**	**04 49 50.8**	**+0.9**
JIJ	**Ishigaki jima**	**1.07**	**86**	P		**Pn**	**04 49 38.9**	**-0.3**
JIJ				S		**Sn**	**04 49 52.6**	**-0.3**
TWC	**Suao**	**1.07**	**287**	*i* P		**Pn**	**04 49 38.3**	**-1.0**
	baz=296							
TWC				*i* S		**Sn**	**04 49 51.0**	**-2.0**
	baz=296							
EWUT	**Wuta**	**1.10**	**278**	P		**Pn**	**04 49 39.3**	**-0.4**
	baz=287							
EWUT				S		**Sn**	**04 49 52.3**	**-1.4**
	baz=287							
ENA	**Nanau**	**1.13**	**277**	*i* P		**Pn**	**04 49 39.7**	**-0.4**
	baz=285							
ENA				*i* S		**Sn**	**04 49 53.4**	**-1.2**
	baz=285							
TWB1	**Santiao Chiao**	**1.15**	**309**	*i* P		**Pn**	**04 49 39.4**	**-0.9**
	baz=317							
TWB1				*i* S		**Sn**	**04 49 53.4**	**-1.4**
	baz=317							
NDS	**Dongshan**	**1.20**	**287**	*i* P		**Pn**	**04 49 40.7**	**-0.3**
	baz=294							
NDS				*i* S		**Sn**	**04 49 54.8**	**-1.3**
	baz=294							
TIPB	**Shuangxi**	**1.25**	**303**	*i* P		**Pn**	**04 49 41.2**	**-0.5**
	baz=312							
TIPB				*i* S		**Sn**	**04 49 55.8**	**-1.6**
	baz=312							
JISG	**Ishigakijimahi**	**1.25**	**76**	P		**Pn**	**04 49 41.4**	**-0.3**
JISG				S		**Sn**	**04 49 56.9**	**-0.5**
NACB	**Ninganchiao**	**1.27**	**265**	P		**Pn**	**04 49 41.9**	**-0.1**
	baz=249							
NACB				S		**Sn**	**04 49 57.4**	**-0.3**
	baz=249							
TWE	**Neicheng**	**1.27**	**290**	*i* P		**Pn**	**04 49 41.7**	**-0.2**
	baz=289							
TWE				*i* S		**Sn**	**04 49 56.5**	**-1.2**
	baz=289							
TWD	**Chiawan**	**1.28**	**261**	P		**Pn**	**04 49 41.9**	**-0.2**
	baz=245							
TWD				S		**Sn**	**04 49 57.5**	**-0.5**
	baz=245							
ENTT	**Nioudou**	**1.33**	**285**	*e*P		**Pn**	**04 49 43.7**	**+0.8**
	baz=291							
ENTT				*e*S		**Sn**	**04 49 59.2**	**-0.2**
	baz=291							
NWF	**Wu-fen Shan**	**1.33**	**306**	P		**Pn**	**04 49 42.6**	**-0.3**
	baz=305							
NWF				S		**Sn**	**04 49 58.2**	**-1.3**
	baz=305							
WFSB	**Wu-fen Shan**	**1.33**	**306**	P		**Pn**	**04 49 42.7**	**-0.2**
	baz=305							
WFSB				S		**Sn**	**04 49 58.1**	**-1.3**
	baz=305							
ETLH	**Xiulin Townshi**	**1.37**	**267**	P		**Pn**	**04 49 44.2**	**+0.8**
	baz=265							
ETLH				S		**Sn**	**04 50 00.9**	**+0.5**
	baz=265							
NDT	**Datong Townshi**	**1.37**	**283**	P		**Pn**	**04 49 44.1**	**+0.8**
	baz=290							
NDT				S		**Sn**	**04 50 00.9**	**+0.6**
	baz=290							
TNOU	**National Taiwa**	**1.39**	**308**	P		**Pn**	**04 49 43.0**	**-0.6**
	baz=316							
TNOU				S		**Sn**	**04 49 59.0**	**-1.7**
	baz=316							
NWLT	**Wulai**	**1.43**	**290**	P		**Pn**	**04 49 44.4**	**+0.2**
	baz=300							
NWLT				S		**Sn**	**04 50 01.1**	**-0.6**
	baz=300							
TWA	**Mucha**	**1.44**	**299**	P		**Pn**	**04 49 44.0**	**-0.3**
	baz=298							
TWA				S		**Sn**	**04 50 00.8**	**-1.3**
	baz=298							
NNSB	**Datong**	**1.46**	**276**	*e*P		**Pn**	**04 49 45.9**	**+1.2**
	baz=275							
NNSB				*e*S		**Sn**	**04 50 03.2**	**+0.5**
	baz=275							
NNSH	**Datong**	**1.46**	**276**	*e*P		**Pn**	**04 49 45.5**	**+0.8**
	baz=

	baz=293							
NSTT	**Nanjuang**	**1.83**	**281**	*eP*	**Pn**	**04 49 51.0**	**+1.3**
	baz=292							
NSTT				*eS*	**Sn**	**04 50 12.9**	**+1.2**
	baz=292							
WHP	**Taichung City**	**1.85**	**270**	*eP*	**Pn**	**04 49 51.6**	**+1.5**
	baz=258							
WHP				*eS*	**Sn**	**04 50 14.4**	**+2.1**
	baz=258							
WPL	**Puli Township**	**1.86**	**262**	*eP*	**Pn**	**04 49 51.1**	**+1.0**
	baz=251							
WPL				*eS*	**Sn**	**04 50 11.7**	**-0.8**
	baz=251							
FULB	**Fuli**	**1.89**	**235**	*eP*	**Pn**	**04 49 49.2**	**-1.3**
	baz=222							
FULB				*eS*	**Sn**	**04 50 11.6**	**-1.5**
	baz=222							
DPDB	**Guoxing**	**1.89**	**263**	*eP*	**Pn**	**04 49 51.5**	**+1.0**
	baz=252							
DPDB				*eS*	**Sn**	**04 50 14.5**	**+1.3**
	baz=252							
SSLB	**Suanglung**	**1.92**	**255**	*eP*	**Pn**	**04 49 51.2**	**+0.3**
	baz=254							
SSLB				*eS*	**Sn**	**04 50 13.0**	**-0.8**
	baz=254							
SMLT	**Sun Moon Lake**	**1.94**	**258**	*eP*	**Pn**	**04 49 52.1**	**+0.8**
	baz=247							
SMLT				*eS*	**Sn**	**04 50 15.6**	**+1.1**
	baz=247							
TWQ1	**Liyutan**	**2.01**	**272**	*eP*	**Pn**	**04 49 54.7**	**+2.5**
	baz=271							
TWQ1				*eS*	**Sn**	**04 50 18.9**	**+2.8**
	baz=271							
YUS	**Yu-Shan**	**2.02**	**247**	*eP*	**Pn**	**04 49 53.0**	**+0.3**
	baz=245							
YUS				*eS*	**Sn**	**04 50 16.6**	**-0.4**
	baz=245							
EDH	**Donghe**	**2.02**	**230**	*eP*	**Pn**	**04 49 51.2**	**-1.1**
	baz=219							
EDH				*eS*	**Sn**	**04 50 13.2**	**-3.2**
	baz=219							
JIRB	**Irabujima**	**2.07**	**75**	P	**Pn**	**04 49 53.0**	**0.0**
JIRB				*eS*	**Sn**	**04 50 17.0**	**-0.6**
WWF	**Wufeng**	**2.10**	**264**	*eP*	**Pn**	**04 49 55.1**	**+1.8**
	baz=262							
WWF				*eS*	**Sn**	**04 50 21.6**	**+3.4**
	baz=262							
ELDTW	**Lidau**	**2.10**	**239**	*eP*	**Pn**	**04 49 52.8**	**-0.8**
	baz=237							
ELDTW				*eS*	**Sn**	**04 50 16.6**	**-2.0**
	baz=237							
WJS	**Zhushan**	**2.11**	**258**	*eP*	**Pn**	**04 49 55.5**	**+1.9**
	baz=256							
WJS				*eS*	**Sn**	**04 50 21.3**	**+2.8**
	baz=256							
LDUT	**Ludao**	**2.12**	**221**	*eP*	**Pn**	**04 49 51.9**	**-1.8**
	baz=210							
LDUT				*eS*	**Sn**	**04 50 15.2**	**-3.7**
	baz=210							
WNT1	**Nantou City**	**2.13**	**260**	*eP*	**Pn**	**04 49 56.2**	**+2.4**
	baz=247							
WNT1				*eS*	**Sn**	**04 50 21.8**	**+2.7**
	baz=247							
ALS	**Alishan**	**2.13**	**249**	*eP*	**Pn**	**04 49 54.9**	**+0.8**
	baz=247							
ALS				*eS*	**Sn**	**04 50 19.9**	**+0.3**
	baz=247							
WNT	**Mingjian**	**2.13**	**259**	*eP*	**Pn**	**04 49 56.0**	**+2.1**
	baz=249							
WNT				*eS*	**Sn**	**04 50 21.0**	**+1.8**
	baz=249							
JMJ	**Miyako jima 2**	**2.17**	**76**	*eS*	**Sn**	**04 50 22.1**	**+2.0**
	baz=77							
LONT	**Longtian**	**2.19**	**231**	*eP*	**Pn**	**04 49 53.9**	**-0.6**
	baz=221							
LONT				*eS*	**Sn**	**04 50 19.6**	**-0.8**
	baz=221							
CHN5	**Tsauling**	**2.21**	**252**	*eP*	**Pn**	**04 49 57.1**	**+2.1**
	baz=242							
CHN5				*eS*	**Sn**	**04 50 23.3**	**+2.1**
	baz=242							
TWGBT	**Beinan**	**2.28**	**230**	*eP*	**Pn**	**04 49 55.6**	**-0.3**
	baz=240							
TWGBT				*eS*	**Sn**	**04 50 21.0**	**-1.7**
	baz=240							
TWG	**Pinlang**	**2.28**	**230**	*eP*	**Pn**	**04 49 56.0**	**+0.1**
	baz=240							
TWG				*eS*	**Sn**	**04 50 21.2**	**-1.5**
	baz=240							
STYH	**Taoyuan**	**2.31**	**241**	*eP*	**Pn**	**04 49 56.6**	**+0.5**
	baz=232							
STYH				*eS*	**Sn**	**04 50 23.5**	**+0.1**
	baz=232							
WDLH	**Douliu**	**2.31**	**255**	*eP*	**Pn**	**04 49 58.4**	**+2.1**
	baz=243							
WDLH				*eS*	**Sn**	**04 50 25.8**	**+2.3**
	baz=243							
TPUB	**Ta-pu**	**2.37**	**246**	*eP*	**Pn**	**04 49 58.8**	**+1.7**
	baz=244							
TPUB				*eS*	**Sn**	**04 50 26.4**	**+1.5**
	baz=244							
CHN4	**Tsaushan**	**2.38**	**247**	*eP*	**Pn**	**04 49 59.2**	**+2.1**
	baz=245							
CHN4				*eS*	**Sn**	**04 50 28.2**	**+3.1**
	baz=245							
WTP	**Ta-pu**	**2.40**	**245**	*eP*	**Pn**	**04 49 59.6**	**+2.1**
	baz=243							
WTP				*eS*	**Sn**	**04 50 28.5**	**+2.6**
	baz=243							
WRL	**Guolierlin Hig**	**2.41**	**261**	*eP*	**Pn**	**04 49 59.6**	**+2.0**
	baz=260							
WRL				*eS*	**Sn**	**04 50 27.8**	**+1.9**
	baz=260							
WTK	**Tuku**	**2.44**	**256**	*eP*	**Pn**	**04 50 00.1**	**+2.0**
	baz=245							
WTK				*eS*	**Sn**	**04 50 28.8**	**+2.1**
	baz=245							
CHY	**Chiayi**	**2.47**	**252**	*eP*	**Pn**	**04 49 59.9**	**+1.5**
	baz=250							
CHY				*eS*	**Sn**	**04 50 28.6**	**+1.3**
	baz=250							
SLGT	**Liugui**	**2.50**	**239**	*eP*	**Pn**	**04 50 01.1**	**+2.2**
	baz=230							
SLGT				*eS*	**Sn**	**04 50 30.2**	**+2.1**
	baz=230							
TWK	**Hsinying**	**2.50**	**246**	*eP*	**Pn**	**04 50 01.1**	**+2.2**
	baz=244							
TWK				*eS*	**Sn**	**04 50 31.0**	**+2.8**
	baz=244							
CHN1	**Nanshi**	**2.50**	**244**	*eP*	**Pn**	**04 50 00.9**	**+2.0**
	baz=242							
CHN1				*eS*	**Sn**	**04 50 30.7**	**+2.5**
	baz=242							
SGST	**Jiashian**	**2.50**	**242**	*eP*	**Pn**	**04 50 01.1**	**+2.2**
	baz=240							
SGST				*eS*	**Sn**	**04 50 30.5**	**+2.2**
	baz=240							
ECL	**Taimali**	**2.51**	**228**	*eP*	**Pn**	**04 49 57.8**	**-1.3**
	baz=236							
ECL				*eS*	**Sn**	**04 50 26.2**	**-2.2**
	baz=236							
SNST	**Tainan City**	**2.51**	**245**	*eP*	**Pn**	**04 50 02.0**	**+3.0**
	baz=243							
SNST				*eS*	**Sn**	**04 50 31.1**	**+2.7**
	baz=243							
LAY	**Lan-yu**	**2.60**	**211**	*eP*	**Pn**	**04 49 58.4**	**-1.9**
	baz=209							
LAY				*eS*	**Sn**	**04 50 27.6**	**-3.0**
	baz=209							
SSD	**Sandimen**	**2.65**	**235**	*eP*	**Pn**	**04 50 02.5**	**+1.6**
	baz=229							
SSD				*eS*	**Sn**	**04 50 30.9**	**-0.9**
	baz=229							
TSMG	**Majia**	**2.66**	**234**	*eP*	**Pn**	**04 50 01.8**	**+0.7**
	baz=228							
TSMG				*eS*	**Sn**	**04 50 31.6**	**-0.5**
	baz=228							
SCST	**Cishan**	**2.67**	**239**	*eP*	**Pn**	**04 50 04.5**	**+3.2**
	baz=227							
SCST				*eS*	**Sn**	**04 50 35.6**	**+3.1**
	baz=227							
MASBT	**Mashibuluo**	**2.73**	**233**	*eP*	**Pn**	**04 50 03.0**	**+1.0**
	baz=226							
MASBT				*eS*	**Sn**	**04 50 33.7**	**0.0**
	baz=226							
EAST	**Anshuo**	**2.73**	**226**	*eP*	**Pn**	**04 50 01.8**	**-0.3**
	baz=232							
EAST				*eS*	**Sn**	**04 50 32.6**	**-1.3**
	baz=232							
SSPT	**Xinbi**	**2.85**	**231**	*eP*	**Pn**	**04 50 05.1**	**+1.4**
	baz=225							
SSPT				*eS*	**Sn**	**04 50 37.0**	**+0.1**
	baz=225							
SLIU	**Shizi**	**2.88**	**225**	*eP*	**Pn**	**04 50 04.4**	**+0.3**
	baz=214							
SLIU				*eS*	**Sn**	**04 50 37.5**	**0.0**
	baz=214							
SCZT	**Fangliau**	**2.89**	**229**	*eP*	**Pn**	**04 50 05.7**	**+1.5**
	baz=221							
SCZT				*eS*	**Sn**	**04 50 36.9**	**-0.8**
	baz=221							
WDGT	**Dungji**	**3.21**	**252**	*eP*	**Pn**	**04 50 09.6**	**+1.0**
	baz=250							
WDGT				*eS*	**Sn**	**04 50 46.2**	**+0.6**
	baz=250							
PHUB	**P'eng-hu**	**3.21**	**257**	*eP*	**Pn**	**04 50 08.8**	**+0.2**
	baz=255							
PHUB				*eS*	**Sn**	**04 50 45.5**	**-0.2**
	baz=255							
PNG	**Penghu**	**3.21**	**258**	*eP*	**Pn**	**04 50 08.7**	**+0.1**
	baz=256							
PNG				*eS*	**Sn**	**04 50 45.5**	**-0.3**
	baz=256							
VWUC	**VWUC**	**3.28**	**283**	*eP*	**Pn**	**04 50 09.7**	**0.0**
	baz=283							
VWUC				*eS*	**Sn**	**04 50 46.2**	**-1.2**
	baz=283							
MATB	**Ma-tsu**	**3.31**	**305**	*eP*	**Pn**	**04 50 09.1**	**-0.9**
	baz=305							
MATB				*eS*	**Sn**	**04 50 46.2**	**-1.9**
	baz=305							
VCHM	**Qimei**	**3.42**	**252**	*eS*	**Sn**	**04 50 50.8**	**-0.2**
	baz=250							
PTMZ	**Houxiangcun**	**3.58**	**283**	*eP*	**Pn**	**04 50 14.4**	**+0.6**
	baz=283							
PTMZ				*eS*	**Sn**	**04 50 53.4**	**-1.5**
	baz=283							
LYJJ	**Jianjiangzhen**	**3.67**	**308**	*eP*	**Pn**	**04 50 16.0**	**+1.0**
	baz=309							
AXDP	**Jialang**	**4.60**	**279**	*eP*	**Pn**	**04 50 27.1**	**-0.6**
	baz=279							
AXDP				*eS*	**Sn**	**04 51 18.3**	**-1.5**
	baz=279							

NEIC ***04*** *04:56:22.1±1.4, 19.00N±0.10×68.73W±0.08, h121km±23km, Error ellipse: s-maj=14.6km s-min=9.5km az=199.0*

RSPR ***04*** *04:56:22.2, 19.05N×68.68W, h129km±5km, MD3.7/10*

OSPL ***04*** *04:56:23.7±2.0, 19.09N×68.88W, h22km±22km, ML3.0*

ISC 04 04:56:22.2±1.8, 18.8N±0.1×68.84W±0.04, h111km±21km, n53, σ1°48/60, 10C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**1.06**	**254**	*i*	P	**Pn**	**Pn**	**04 56 42.8**	**-1.2**
SDD					*eS*	**Sn**	**Sn**	**04 56 58.0**	**-2.5**
LOSC1	**San Cristbal**	**1.25**	**254**	*i*	P	**Pn**	**Pn**	**04 56 45.2**	**-0.9**
LOSC1					*eS*	**Sn**	**Sn**	**04 57 02.4**	**-1.9**
LOSC1					IAML			04 57 02.8	
	comp=Z,1μm,1.6s								
BON1	**Bonao**	**1.48**	**277**	*i*	P	**Pn**	**Pn**	**04 56 49.0**	**+0.2**
BON1					*eS*	**Sn**	**Sn**	**04 57 08.3**	**-0.7**
BON1					IAML			04 57 09.9	
	comp=Z,241nm,0.4s								
BANI	**BANI**	**1.48**	**256**	*i*	P	**Pn**	**Pn**	**04 56 48.6**	**-0.3**
BANI					IAML			04 57 18.8	
	comp=Z,121nm,0.4s								
AGPR	**Aguadilla, PR**	**1.67**	**100**	⇑	*eP*	**Pn**	**Pn**	**04 56 51.7**	**+0.7**
AGPR	**Aguadilla, PR**	**1.67**	**100**		*eS*	**Sn**	**Sn**	**04 57 14.6**	**+1.6**
AGPR	**Aguadilla, PR**	**1.67**	**100**			**Pn**	**Pn**	**04 56 51.4**	**+0.4**
AGPR					IAML			04 57 19.4	
	comp=E,547nm,0.4s								
AGPR	**Aguadilla, PR**	**1.67**	**100**	*i*	P	**Pn**	**Pn**	**04 56 51.9**	**+0.9**
AGPR					*eS*	**Sn**	**Sn**	**04 57 12.9**	**-0.1**
AGPR					IAML			04 57 18.9	
	comp=Z,276nm,0.2s								
MPR	**Mayaguez**	**1.71**	**108**		Pn	**Pn**	**Pn**	**04 56 51.3**	**-0.2**
MPR					IAML			04 57 21.7	
	comp=N,227nm,0.3s								
MPR					IAML			04 57 23.1	
	comp=E,200nm,0.2s								
MPR	**Mayaguez**	**1.71**	**108**	*i*	P	**Pn**	**Pn**	**04 56 52.1**	**+0.7**
MPR					IAML			04 57 22.1	
	comp=Z,65nm,0.8s								
LSP	**Las Mesas**	**1.77**	**109**	⇑	*eP*	**Pn**	**Pn**	**04 56 53.1**	**+0.9**
LSP	**Las Mesas**	**1.77**	**109**		*eS*	**Sn**	**Sn**	**04 57 17.0**	**+1.8**
LSP	**Las Mesas**	**1.77**	**109**			**Pn**	**Pn**	**04 56 53.1**	**+0.9**
LSP						**Sn**	**Sn**	**04 57 17.0**	**+1.8**
MLPR	**Magueyes Islan**	**1.88**	**114**			**Pn**	**Pn**	**04 56 52.7**	**-1.0**
SC01	**Santiago de lo**	**1.90**	**291**	*i*	P	**Pn**	**Pn**	**04 56 56.5**	**+2.6**
SC01					*eS*	**Sn**	**Sn**	**04 57 21.8**	**+3.6**
SC01					IAML			04 57 31.7	
	comp=Z,98nm,0.2s								
AOPR	**Arecibo Observ**	**2.02**	**101**	⇑	*eP*	**Pn**	**Pn**	**04 56 56.3**	**+0.8**
AOPR	**Arecibo Observ**	**2.02**	**101**		*eS*	**Sn**	**Sn**	**04 57 21.0**	**0.0**
AOPR	**Arecibo Observ**	**2.02**	**101**		Pn	**Pn**	**Pn**	**04 56 55.6**	**+0.1**
AOPR	**Arecibo Observ**	**2.02**	**101**			**Pn**	**Sn**	**04 57 21.0**	**0.0**
AOPR	**Arecibo Observ**	**2.02**	**101**		IAML			04 57 28.3	
	comp=N,871nm,0.3s								
AOPR					IAML			04 57 28.6	
	comp=E,1μm,0.2s								
EMPR	**Esperanza - Ma**	**2.21**	**97**	⇑	*eP*	**Pn**	**Pn**	**04 56 57.5**	**-0.4**
EMPR	**Esperanza - Ma**	**2.21**	**97**		*eS*	**Sn**	**Sn**	**04 57 25.1**	**-0.1**
EMPR	**Esperanza - Ma**	**2.21**	**97**			**Pn**	**Pn**	**04 56 57.0**	**-0.9**
EMPR					IAML			04 57 35.0	
	comp=N,327nm,0.5s								
EMPR	**Esperanza - Ma**	**2.21**	**97**				**Sn**	**04 57 25.1**	**-0.1**
OBIP	**Obispado Ponce**	**2.24**	**108**	‖	*iP*	**Pn**	**Pn**	**04 56 57.4**	**-0.8**
OBIP	**Obispado Ponce**	**2.24**	**108**		*eS*	**Sn**	**Sn**	**04 57 27.1**	**+1.2**
OBIP	**Obispado Ponce**	**2.24**	**108**			**Pn**	**Pn**	**04 56 57.3**	**-1.0**
OBIP					IAML			04 57 33.8	
	comp=E,116nm,0.5s								
CELP	**Cerrillos**	**2.25**	**107**	⇑	*eP*	**Pn**	**Pn**	**04 56 59.1**	**+0.7**
CELP	**Cerrillos**	**2.25**	**107**		*eS*	**Sn**	**Sn**	**04 57 27.2**	**+0.9**
CELP	**Cerrillos**	**2.25**	**107**			**Pn**	**Pn**	**04 56 59.1**	**+0.7**
CELP						**Sn**	**Sn**	**04 57 27.2**	**+0.9**
SDDR	**Presa de Saban**	**2.33**	**276**	⇑	*eP*	**Pn**	**Pn**	**04 57 01.9**	**+2.5**
SDDR	**Presa de Saban**	**2.33**	**276**		*eS*	**Sn**	**Sn**	**04 57 33.0**	**+5.1**
SDDR	**Presa de Saban**	**2.33**	**276**		Pn	**Pn**	**Pn**	**04 57 00.6**	**+1.1**
SDDR					IAML			04 57 36.2	
	comp=E,214nm,0.7s								
SDDR					IAML			04 57 37.9	
	comp=E,149nm,0.7s								
SDDR	**Presa de Saban**	**2.33**	**276**	*i*	P	**Pn**	**Pn**	**04 57 00.5**	**+1.1**
SDDR					*eS*	**Sn**	**Sn**	**04 57 23.5**	**-4.5**
SDDR					IAML			04 57 37.2	
	comp=Z,54nm,1.2s								
SJG	**San Juan**	**2.64**	**104**				**Pn**	**04 57 03.4**	**0.0**
SJG					IAML			04 57 40.3	
	comp=Z,144nm,0.3s								
SJG					IAML			04 57 42.0	
	comp=Z,168nm,0.3s								
GCPR	**Guaynabo City**	**2.66**	**99**	⇑	*eP*	**Pn**	**Pn**	**04 57 02.8**	**-0.8**
GCPR	**Guaynabo City**	**2.66**	**99**		*eS*	**Sn**	**Sn**	**04 57 35.2**	**-0.3**
GCPR	**Guaynabo City**	**2.66**	**99**			**Pn**	**Pn**	**04 57 02.5**	**-1.2**
IGPR	**InterUniversit**	**2.72**	**107**	⇑	*eP*	**Pn**	**Pn**	**04 57 04.0**	**-0.4**
IGPR	**InterUniversit**	**2.72**	**107**		*eS*	**Sn**	**Sn**	**04 57 37.5**	**+0.6**
PDPR	**Patillas Dam,**	**2.78**	**105**			**Pn**	**Pn**	**04 57 05.7**	**+0.4**
PDPR					IAML			04 57 46.2	
	comp=E,92nm,0.3s								
CBYP	**Canovanas**	**2.87**	**99**	⇑	*eP*	**Pn**	**Pn**	**04 57 06.4**	**-0.1**
CBYP	**Canovanas**	**2.87**	**99**		*eS*	**Sn**	**Sn**	**04 57 41.0**	**+0.2**
CBYP	**Canovanas**	**2.87**	**99**			**Pn**	**Pn**	**04 57 06.5**	**-0.1**
CUPR	**Culebra, Puert**	**3.41**	**97**	⇑	*eP*	**Pn**	**Pn**	**04 57 12.9**	**-0.7**
CUPR	**Culebra, Puert**	**3.41**	**97**		*eS*	**Sn**	**Sn**	**04 57 53.2**	**-0.1**
CUPR	**Culebra, Puert**	**3.41**	**97**		Pn	**Pn**	**Pn**	**04 57 11.5**	**-2.0**
CUPR	**Culebra, Puert**	**3.41**	**97**			**Pn**	**Sn**	**04 57 53.2**	**-0.1**
CUPR	**Culebra, Puert**	**3.41**	**97**		IAML			04 58 00.1	
	comp=N,28nm,0.3s								
CUPR					IAML			04 58 07.2	
	comp=E,24nm,1.0s								
GRTK	**Grand Turk**	**3.48**	**322**	⇑	*iP*	**Pn**	**Pn**	**04 57 14.1**	**-0.4**
GRTK	**Grand Turk**	**3.48**	**322**		Pn	**Pn**	**Pn**	**04 57 12.7**	**-1.8**
GRTK					IAML			04 58 14.0	
	comp=E,113nm,2.5s								
GRTK					IAML			04 59 01.0	
	comp=E,91nm,2.6s								
GRTK	**Grand Turk**	**3.48**	**322**	*i*	P	**Pn**	**Pn**	**04 57 14.1**	**-0.4**
GRTK					*eS*	**Sn**	**Sn**	**04 57 54.0**	**-1.1**
TBVI	**Tortola**	**4.02**	**94**	*eS*		**Sn**	**Sn**	**04 58 06.4**	**-1.7**

ANF ***04*** *05:02:35.5±0.3, 36.13N×97.57W, h4km±2km, ML4.1/19, Error ellipse: s-maj=2.0km s-min=1.8km az=145.0*

NEIC ***04*** *05:02:35.7, 36.13N×97.57W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr-1.12; Mθθ0.97; Mφφ0.15; Mrθ0.03; Mrφ-0.38; Mθφ0.06; Fault plane solution: M0 1.2000×10^14 NP1:φ115.00000°, δ45.00000°, λ-85.00000°. NP2:φ288.00000°, δ45.00000°, λ-95.00000°. Principal axes: T 1.1229, Plg0.0000°, Azm21.0000°; N 0.0007, Plg4.0000°, Azm291.0000°; P -1.1236, Plg86.0000°, Azm113.0000°;*

TUL ***04*** *05:02:35.7±1.1, 36.12N±0.01×97.57W±0.03, h5km±7km, ML3.2, mb_Lg3.4/126(NEIC), Mwr3.3/8(SLM) Error ellipse: s-maj=3.1km s-min=1.7km az=67.0*

NEIC ***04*** *05:02:35.8±0.8, 36.12N±0.007×97.57W±0.02, h5km±7km, Error ellipse: s-maj=2.2km s-min=0.9km az=109.0*

IDC ***04*** *05:02:35.1±1.0, 36.17N×97.64W, h0km, mb3.3/2, mb1 3.6/7, mb1mx3.3/73, mbtmp3.3/7, ML3.6/3, Error ellipse: s-maj=14.7km s-min=12.2km az=154.0*

ISC 04 05:02:35.9±1.0, 36.13N±0.02×97.56W±0.02, h6km±8km, n121, σ0°68/102, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.35**	**166**				**Pg**	**05 02 42.5**	**-0.2**
OK029						Sg	**Sg**	**05 02 47.4**	**+0.2**
BCOK	**Bluff Creek, N**	**0.48**	**185**				**Pg**	**05 02 44.8**	**-0.3**
BCOK						Sg	**Sg**	**05 02 51.4**	**0.0**
CROK	**Carrier**	**0.50**	**317**				**Pg**	**05 02 45.8**	**+0.1**
CROK						Sg	**Sg**	**05 02 53.0**	**+0.7**
OK009	**Oakdale Elemen**	**0.56**	**169**				**Pg**	**05 02 46.5**	**-0.2**
OK025	**Westminster Rd**	**0.58**	**162**				**Pg**	**05 02 46.9**	**-0.2**
OK025					IAmb_Lg			05 02 54.2	
	comp=Z,781nm,0.9s								
OK025						Sg	**Sg**	**05 02 55.0**	**+0.3**
OK031	**S. Brethren Rd**	**0.61**	**107**				**Pg**	**05 02 47.8**	**+0.1**
OK031						Sg	**Sg**	**05 02 56.0**	**+0.3**
OK001	**Jones High Sch**	**0.61**	**159**				**Pg**	**05 02 47.6**	**-0.1**
OK030	**Cody Creek RV**	**0.66**	**108**				**Pg**	**05 02 48.7**	**0.0**
OK030						Sg	**Sg**	**05 02 57.6**	**+0.3**
QUOK	**Quay**	**0.69**	**87**				**Pg**	**05 02 49.4**	**+0.2**
QUOK						Sg	**Sg**	**05 02 58.9**	**+0.8**
OKCFA	**Oklahoma City**	**0.72**	**173**				**Pg**	**05 02 49.3**	**-0.5**
OKCFA					IAmb_Lg			05 02 58.9	
	comp=Z,653nm,0.9s								
OKCFA	**Oklahoma City**	**0.72**	**173**	P			**Pg**	**05 02 49.3**	**-0.5**
	baz=352,SNR=22								
OKCFA				S			**Sg**	**05 02 59.3**	**+0.1**
	baz=352								
OKCFA	**Oklahoma City**	**0.72**	**173**	P				05 02 49.3	
	baz=352,SNR=22								
OKCFA				S				05 02 59.3	
	baz=352								
OKCSW	**OKLAHOMA CITY**	**0.73**	**172**				**Pg**	**05 02 49.5**	**-0.5**
GC02	**Grant County #**	**0.76**	**341**				**Pg**	**05 02 50.4**	**-0.1**
OK032	**Salt Plains WL**	**0.85**	**322**				**Pg**	**05 02 52.0**	**-0.3**
KAN13	**South Haven SW**	**0.88**	**4**				**Pg**	**05 02 52.8**	**0.0**
KAN14	**Manchester OK**	**0.88**	**339**				**Pg**	**05 02 52.6**	**-0.3**
KAN14						Sg	**Sg**	**05 03 04.8**	**+0.4**
FNO	**Franklin**	**0.88**	**172**				**Pg**	**05 02 52.8**	**-0.1**
FNO					IAmb_Lg			05 03 05.4	
	comp=Z,263nm,0.8s								
KAN09	**Caldwell North**	**1.00**	**357**				**Pg**	**05 02 54.9**	**-0.2**
KAN05	**Bluff City Nor**	**1.00**	**346**				**Pg**	**05 02 55.0**	**-0.3**
KAN01	**Argonia South**	**1.03**	**351**				**Pg**	**05 02 55.4**	**-0.3**
KAN10	**Anthony SW Sta**	**1.08**	**337**				**Pg**	**05 02 55.9**	**-0.7**
KAN08	**Anthony NE Sta**	**1.14**	**343**				**Pb**	**05 02 57.4**	**-0.7**
T35A	**Sooner Cattle**	**1.15**	**47**				**Pb**	**05 02 57.7**	**-0.5**
T35B	**Sooner Cattle**	**1.15**	**47**	P			**Pb**	**05 02 57.6**	**-0.7**
	baz=227								
T35B				S			**Sb**	**05 03 13.0**	**-0.5**
	baz=227								
T35B	**Sooner Cattle**	**1.15**	**47**	P				05 02 57.6	
	baz=227								
T35B				S				05 03 13.0	
	baz=227								
U32A	**Winter Ranch,**	**1.19**	**282**				**Pb**	**05 02 57.7**	**-1.2**
U32A	**Winter Ranch,**	**1.19**	**282**	S			**Sb**	**05 03 14.2**	**-0.4**
	baz=102								
U32A	**Winter Ranch,**	**1.19**	**282**	S				05 03 14.2	
	baz=102								
KAN12	**Harper NE Stat**	**1.21**	**343**				**Pn**	**05 02 58.7**	**-0.8**
TUL1	**Leonard**	**1.45**	**98**	P			**Pn**	**05 03 02.1**	**-0.6**
	baz=279,SNR=206								
TUL1				S			**Sb**	**05 03 22.0**	**-0.1**
	baz=279								
TUL1	**Leonard**	**1.45**	**98**	P				05 03 02.1	
	baz=279,SNR=206								
TUL1				S				05 03 22.0	
	baz=279								
X34A	**Smith Ranch, M**	**1.54**	**188**	Pn			**Pn**	**05 03 04.2**	**+0.2**
X34A					IAmb_Lg			05 03 23.7	
	comp=Z,138nm,0.9s								
WMOK	**Wichita Mounta**	**1.71**	**216**				**Pn**	**05 03 06.2**	**-0.1**
WMOK	**Wichita Mounta**	**1.71**	**216**	P			**Pn**	**05 03 06.1**	**-0.3**
	baz=35,SNR=259								
WMOK				S			**Sb**	**05 03 28.8**	**-0.8**
	baz=35								
WMOK	**Wichita Mounta**	**1.71**	**216**	P				05 03 06.1	
	baz=35,SNR=259								
WMOK				S				05 03 28.8	
	baz=35								
X37A	**Clayton**	**2.36**	**130**				**Pn**	**05 03 16.0**	**+0.8**
X37A					IAmb_Lg			05 03 57.0	
	comp=Z,182nm,1.0s								
X37A	**Clayton**	**2.36**	**130**	P			**Pn**	**05 03 15.9**	**+0.7**
	baz=

	baz=69								
AMTX	**Amarillo**	**3.59**	**251**	P				05 03 32.7	
	baz=69,SNR=7.5								
AMTX				S				05 04 15.3	
	baz=69								
MIAR	**Mount Ida**	**3.62**	**115**			**Pn**		**05 03 32.3**	**-0.3**
MIAR				IAmb_Lg				05 04 36.8	
	comp=Z,95nm,0.8s								
MIAR	**Mount Ida**	**3.62**	**115**	P		**Pn**		**05 03 33.2**	**+0.7**
	baz=297,SNR=62								
MIAR				S		**Sn**		**05 04 16.5**	**+0.9**
	baz=297								
MIAR	**Mount Ida**	**3.62**	**115**	P				05 03 33.2	
	baz=297,SNR=62								
MIAR				S				05 04 16.5	
	baz=297								
S39A	**Bolivar**	**3.73**	**64**	Pn		**Pn**		**05 03 34.6**	**+0.5**
S39A				IAmb_Lg				05 04 35.0	
	comp=Z,96nm,0.9s								
S39A	**Bolivar**	**3.73**	**64**	P		**Pn**		**05 03 34.7**	**+0.6**
	baz=246,SNR=34								
S39A	**Bolivar**	**3.73**	**64**	P				05 03 34.7	
	baz=246,SNR=34								
U40A	**Yellville**	**3.81**	**85**	Pn		**Pn**		**05 03 34.6**	**-0.6**
U40A				IAmb_Lg				05 04 39.3	
	comp=Z,124nm,0.7s								
U40A	**Yellville**	**3.81**	**85**	P		**Pn**		**05 03 34.9**	**-0.3**
	baz=268,SNR=16								
U40A	**Yellville**	**3.81**	**85**	P				05 03 34.9	
	baz=268,SNR=16								
U40A				P				05 03 34.9	
	baz=268,SNR=16								
ABTX	**Abilene, Hawle**	**3.90**	**207**	IAmb_Lg				05 04 40.4	
	comp=Z,66nm,0.9s								
WHTX	**Lake Whitney,**	**4.13**	**179**	P		**Pn**		**05 03 39.7**	**+0.1**
	baz=359,SNR=15								
WHTX	**Lake Whitney,**	**4.13**	**179**	P				05 03 39.7	
	baz=359,SNR=15								
X40A	**Basin Creek Fa**	**4.20**	**112**			**Pn**		**05 03 39.8**	**-0.7**
X40A				IAmb_Lg				05 04 49.3	
	comp=Z,128nm,0.8s								
237A	**Washetta, Mont**	**4.37**	**160**	IAmb_Lg				05 05 05.9	
	comp=Z,75nm,0.8s								
237A	**Washetta, Mont**	**4.37**	**160**	P		**Pn**		**05 03 42.8**	**0.0**
	baz=341								
237A				S		**Sn**		**05 04 33.1**	**-1.0**
	baz=341								
237A	**Washetta, Mont**	**4.37**	**160**	P				05 03 42.8	
	baz=341								
237A				S				05 04 33.1	
	baz=341								
WHAR	**Wooly Hollow**	**4.37**	**100**	Pn		**Pn**		**05 03 42.8**	**-0.1**
WHAR				IAmb_Lg				05 04 58.3	
	comp=Z,93nm,0.8s								
MGMO	**Mountain Grove**	**4.38**	**75**			**Pn**		**05 03 43.2**	**+0.3**
MGMO				IAmb_Lg				05 04 53.2	
	comp=Z,74nm,0.9s								
WLAR	**White Oak Lake**	**4.39**	**122**	IAmb_Lg				05 05 07.3	
	comp=Z,61nm,0.7s								
FCAR	**Ozark Folk Cen**	**4.41**	**92**			**Pn**		**05 03 42.4**	**-1.1**
FCAR				IAmb_Lg				05 05 07.5	
	comp=Z,54nm,0.8s								
W41B	**Gary Mavity, V**	**4.43**	**101**	P		**Pn**		**05 03 43.4**	**-0.2**
	baz=284,SNR=7.2								
W41B	**Gary Mavity, V**	**4.43**	**101**	P				05 03 43.4	
	baz=284,SNR=7.2								
N33A	**J Bar K, Exete**	**4.60**	**1**	IAmb_Lg				05 05 09.7	
	comp=Z,63nm,0.7s								
P38A	**Dawn**	**4.72**	**41**	IAmb_Lg				05 05 12.6	
	comp=Z,69nm,0.7s								
R40A	**Maddies Statio**	**4.74**	**61**			**Pn**		**05 03 47.8**	**-0.1**
R40A				IAmb_Lg				05 05 06.2	
	comp=Z,71nm,0.7s								
R40A	**Maddies Statio**	**4.74**	**61**	P		**Pn**		**05 03 48.3**	**+0.3**
	baz=244,SNR=25								
R40A	**Maddies Statio**	**4.74**	**61**	P				05 03 48.3	
	baz=244,SNR=25								
KSCO	**Kaye Shedlock'**	**4.95**	**307**	IAmb_Lg				05 05 17.2	
	comp=Z,58nm,0.7s								
NATX	**Nacogdoches**	**4.98**	**150**	IAmb_Lg				05 05 23.4	
	comp=Z,43nm,1.0s								
LCAR	**Lake Charles**	**5.19**	**89**	IAmb_Lg				05 05 23.2	
	comp=Z,60nm,1.0s								
BGNE	**Belgrade**	**5.29**	**355**	IAmb_Lg				05 05 33.0	
	comp=Z,96nm,0.8s								
BGNE	**Belgrade**	**5.29**	**355**	P		**Pn**		**05 03 55.3**	**-0.1**
	baz=175								
BGNE	**Belgrade**	**5.29**	**355**	P				05 03 55.3	
	baz=175								
435B	**Jarrell**	**5.34**	**180**	Pn		**Pn**		**05 03 54.3**	**-1.8**
435B				IAmb_Lg				05 05 31.7	
	comp=Z,64nm,0.7s								
CCM	**Cathedral Cave**	**5.40**	**67**	Pn		**Pn**		**05 03 57.2**	**+0.2**
CCM				IAmb_Lg				05 05 39.3	
	comp=Z,39nm,0.8s								
T25A	**Trinidad**	**5.60**	**282**	IAmb_Lg				05 05 39.7	
	comp=Z,70nm,1.1s								
N38A	**Joes South For**	**5.76**	**35**	P		**Pn**		**05 04 02.1**	**+0.2**
	baz=217								
N38A	**Joes South For**	**5.76**	**35**	P				05 04 02.1	
	baz=217								
JCT	**Junction City**	**5.94**	**199**	IAmb_Lg				05 05 48.2	
	comp=Z,88nm,0.8s								
JCT	**Junction City**	**5.94**	**199**	P		**Pn**		**05 04 04.4**	**-0.1**
	baz=18								
JCT	**Junction City**	**5.94**	**199**	P				05 04 04.4	
	baz=18								
OGNE	**Ogallala**	**5.95**	**325**	IAmb_Lg				05 05 53.4	
	comp=Z,59nm,0.8s								
FVM	**French Village**	**6.00**	**70**	IAmb_Lg				05 06 01.0	
	comp=Z,43nm,0.8s								
143A	**Socs Landing,**	**6.13**	**122**	IAmb_Lg				05 05 58.4	
	comp=Z,59nm,0.8s								
SLM	**Saint Louis**	**6.34**	**65**	IAmb_Lg				05 06 02.6	
	comp=Z,66nm,1.1s								
HENM	**Henderson Moun**	**6.55**	**83**	IAmb_Lg				05 06 12.2	
	comp=Z,73nm,0.7s								
HALT	**Halls**	**6.67**	**90**	IAmb_Lg				05 06 17.6	
	comp=Z,70nm,0.9s								
OXF	**Oxford**	**6.86**	**101**	IAmb_Lg				05 06 22.5	
	comp=Z,37nm,0.9s								
SIUC	**Southern Illin**	**6.87**	**74**	IAmb_Lg				05 06 17.7	
	comp=Z,56nm,0.7s								
W45A	**Hickory Valley**	**6.89**	**96**	IAmb_Lg				05 06 19.1	
	comp=Z,47nm,0.7s								
735A	**Kenedy**	**7.26**	**182**	IAmb_Lg				05 06 36.7	
	comp=Z,40nm,0.9s								
ANMO	**Albuquerque**	**7.35**	**263**	Pn		**Pn**		**05 04 23.6**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=346,slow=4.2,SNR=1.4								
ANMO				Pg		**Pb**		**05 04 47.5**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=77,slow=16,SNR=2.8								
ANMO				Lg		Lg		05 06 22.7	
	comp=Z,0.8nm,0.3s,baz=81,slow=7.6,SNR=3.6								
ECSD	**EROS Data Cent**	**7.62**	**5**			**Pn**		**05 04 27.2**	**-0.3**
ECSD				IAmb_Lg				05 06 46.7	
	comp=Z,27nm,0.8s								
L40A	**Anamosa**	**7.70**	**38**	IAmb_Lg				05 06 49.7	
	comp=Z,57nm,0.8s								
146A	**Union**	**7.84**	**114**	IAmb_Lg				05 06 52.2	
	comp=Z,23nm,0.8s								
HDIL	**Hopedale**	**7.85**	**53**			**Pn**		**05 04 30.4**	**-0.2**
Y22D	**IRIS PASSCAL I**	**7.94**	**258**	IAmb_Lg				05 07 00.8	
	comp=Z,59nm,0.9s								
PHWY	**Pilot Hill**	**8.04**	**312**	IAmb_Lg				05 07 03.1	
	comp=Z,28nm,0.8s								
USIN	**University of**	**8.12**	**74**	IAmb_Lg				05 06 59.2	
	comp=Z,44nm,1.0s								
O44A	**Mansfield**	**8.21**	**58**	IAmb_Lg				05 06 55.2	
	comp=Z,48nm,0.8s								
SUSD	**Miller**	**8.37**	**353**	IAmb_Lg				05 07 10.6	
	comp=Z,42nm,0.9s								
L42A	**Oliver, Polo**	**8.48**	**44**	IAmb_Lg				05 07 12.8	
	comp=Z,41nm,0.8s								
I37A	**Lemond, Waseca**	**8.49**	**21**	Pn		**Pn**		**05 04 39.4**	**0.0**
I37A				IAmb_Lg				05 07 27.2	
	comp=Z,44nm,0.8s								
TXAR	**Lajitas Array**	**8.51**	**219**	Pn		**Pn**		**05 04 38.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=40,slow=12,SNR=5.4								
TXAR				Lg		Lg		05 06 58.0	
	comp=Z,1.4nm,0.3s,baz=46,slow=20,SNR=6.2								
X48A	**Hartselle**	**8.76**	**98**	IAmb_Lg				05 07 22.9	
	comp=Z,20nm,1.1s								
JFWS	**Jewell Farm**	**8.81**	**38**	Pn		**Pn**		**05 04 43.7**	**-0.2**
JFWS				IAmb_Lg				05 07 24.5	
	comp=Z,45nm,0.8s								
P46A	**Rosedale**	**8.89**	**64**	Pn		**Pn**		**05 04 45.2**	**+0.2**
P46A				IAmb_Lg				05 07 21.0	
	comp=Z,50nm,0.9s								
CLTN	**Cedars of Leba**	**9.09**	**87**	IAmb_Lg				05 07 28.3	
	comp=Z,25nm,1.2s								
WCI	**Wyandotte Cave**	**9.23**	**74**	Pn		**Pn**		**05 04 50.5**	**+0.9**
WCI				IAmb_Lg				05 07 32.9	
	comp=Z,34nm,1.0s								
SFIN	**Lafayette**	**9.26**	**60**	Pn		**Pn**		**05 04 50.1**	**+0.2**
SFIN				IAmb_Lg				05 07 38.7	
	comp=Z,32nm,0.7s								
BLO	**Bloomington**	**9.26**	**68**	Pn		**Pn**		**05 04 50.9**	**+0.9**
RWWY	**Rawlins**	**9.34**	**309**	IAmb_Lg				05 07 41.9	
	comp=Z,26nm,1.1s								
I40A	**Norwalk**	**9.40**	**32**			**Pn**		**05 04 51.6**	**-0.2**
I40A				IAmb_Lg				05 07 38.7	
	comp=Z,21nm,0.7s								
Y49A	**Blount Mountai**	**9.42**	**101**	IAmb_Lg				05 07 47.3	
	comp=Z,22nm,1.1s								
K22A	**Casper**	**9.51**	**316**	IAmb_Lg				05 08 01.8	
	comp=Z,34nm,1.0s								
U49A	**Red Boiling Sp**	**9.52**	**84**	IAmb_Lg				05 07 52.1	
	comp=Z,22nm,1.2s								
F36A	**Milaca**	**10.18**	**16**	Pn		**Pn**		**05 05 03.2**	**+0.6**
G40A	**Rib Lake**	**10.69**	**29**	Pn		**Pn**		**05 05 09.2**	**-0.4**
TKL	**Tuckaleechee C**	**11.19**	**88**	Pn		**Pn**		**05 05 15.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=6.2,slow=5.7,SNR=1.1								
TKL				Lg		Lg		05 08 23.5	
	comp=Z,0.3nm,0.3s,baz=182,slow=19,SNR=3.0								
PDAR	**Pinedale Array**	**11.39**	**309**	Pn		**Pn**		**05 05 18.8**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=123,slow=13,SNR=3.1								
PDAR				Lg		Lg		05 08 27.3	
	comp=Z,0.4nm,0.3s,baz=119,slow=30,SNR=3.6								
ULM	**Lac du Bonnet**	**14.16**	**4**	Pn		Pn		05 05 51.3	-5.7
	comp=Z,0.2nm,0.3s,baz=241,slow=21,SNR=1.6								
ULM				Lg		Lg		05 09 52.7	
	comp=Z,0.1nm,0.3s,baz=284,slow=19,SNR=2.1								
YKA	**Yellowknife Ar**	**28.44**	**343**	P		**P**		**05 08 30.4**	**-0.7**
	comp=Z,0.1nm,0.5s,baz=146,slow=8.9,SNR=2.8								
ILAR	**Eielson Array**	**40.84**	**330**	P		**P**		**05 10 18.8**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=104,slow=6.6,SNR=6.5								

IDC 04 05:04:02.6±3.6, 23°.86S×66°.68W, h186km±33km, mb1 2.9/3, mb1mx2.7/39, mbtmp3.3/3, Error ellipse: s-maj=62.9km s-min=36.4km az=172.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.40**	**301**	P	Pn	05 04 45.7	+0.8
	1.2nm,0.3s,baz=119,slow=6.9,SNR=29						
LVC				S	Sn	05 05 17.7	0.0
	4.9nm,0.3s,baz=108,slow=20,SNR=36						
LPAZ	**La Paz**	**7.66**	**349**	P	Pn	05 05 52.5	+0.4
	0.4nm,0.3s,baz=174,slow=8.8,SNR=15						
BDFB	**Brasilia**	**19.36**	**68**	P	P	05 08 14.1	-0.3
	0.1nm,0.3s,baz=225,slow=17,SNR=3.7						
ZALV	**Zalesovo Beam**	**143.13**	**28**	PKP	PKPdf	05 23 14.6	+0.6
	0.3nm,0.3s,baz=298,slow=3.1,SNR=1.6						
MKAR	**Makanchi Array**	**146.23**	**40**	PKPbc	PKPdf	05 23 19.9	+0.2
	0.1nm,0.4s,baz=0.0,slow=4.3,SNR=1.8						

IDC 04 05:15:29.2±3.9, 5°.53S×153°.04E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/45, mbtmp3.5/2, Error ellipse: s-maj=167.6km s-min=52.3km az=124.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.15**	**230**	P	P	05 20 38.3	+0.8
	1.4nm,0.7s,baz=55,slow=10.0,SNR=9.2						
ASAR	**Alice Springs**	**25.78**	**224**	P	P	05 21 01.0	-1.1
	0.6nm,0.8s,baz=54,slow=9.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.75**	**287**	PKPbc	PKPbc	05 35 24.7	0.0
	0.5nm,0.7s,baz=65,slow=2.6,SNR=2.8						

IDC 04 05:16:54.7±3.3, 9°.48S×119°.56E, h78km±34km, mb3.6/3, mb1 3.8/8, mb1mx3.5/45, mbtmp3.9/8, Error ellipse: s-maj=39.5km s-min=17.6km az=50.0
DJA 04 05:16:56.9±0.8, 9°.5S±4°×12°.0E±°, h33km±16km, M4.0/13, mb4.2/2, MLv4.0/13
ISC 04 05:16:52.7±0.8, 9°.55S±0°.06×119°.60E±0°.05, h50km, n20, σ3°.42/24, mb4.0/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**0.70**	**100**	P	**Pn**	**05 17 10.8**	**+4.3**
BASI	**Baing, Sumba**	**1.17**	**125**	P	Pn	05 17 17.9	+5.1
PLAI	**Plampang**	**1.93**	**292**	P	**Pn**	**05 17 26.8**	**+3.6**
PLAI				S	**Sn**	**05 17 49.1**	**+2.8**
EDFI	**Ende, Flores**	**2.22**	**69**	P	**Pn**	**05 17 30.0**	**+2.8**
MMRI	**Maumere**	**2.76**	**71**	P	**Pn**	**05 17 38.1**	**+3.5**
TWSI	**Taliwang, Sumb**	**2.80**	**287**	P	**Pn**	**05 17 39.0**	**+4.0**
BATI	**Baumata**	**4.06**	**100**	P	**Pn**	**05 17 56.9**	**+4.5**
	39nm,0.3s,baz=282,slow=1.1,SNR=41						
BATI				S	**Sn**	**05 18 42.0**	**+3.2**
	34nm,0.3s,baz=38,slow=19,SNR=9.5						
BATI	**Baumata**	**4.06**	**100**	P	**Pn**	**05 17 56.4**	**+4.0**
BKSI	**Bulukumba**	**4.23**	**7**	P	**Pn**	**05 17 57.6**	**+2.8**
DNP	**Denpasar**	**4.42**	**281**	P	**Pn**	**05 18 01.0**	**+3.8**
KAPI	**Kappang**	**4.51**	**2**	P	**Pn**	**05 18 00.7**	**+2.1**
	3.7nm,0.3s,baz=150,slow=8.2,SNR=9.4						
KAPI				S	**Sn**	**05 18 48.0**	**-1.7**
	12nm,0.3s,baz=213,slow=23,SNR=14						
SOEI	**Soe**	**4.61**	**93**	P	**Pn**	**05 18 03.7**	**+3.6**
BNSI	**Bone**	**5.14**	**6**	P	**Pn**	**05 18 09.9**	**+2.7**
	0.1nm24nm,0.9s						
SPSI	**Sidrap Palu**	**5.55**	**2**	P	**Pn**	**05 18 15.4**	**+2.5**
FITZ	**Fitzroy Crossi**	**10.32**	**146**	P	**Pn**	**05 19 19.2**	**+1.0**
	1.0nm,0.3s,baz=339,slow=11,SNR=44						
FITZ				S	**Sn**	**05 21 06.9**	**-5.7**
	1.3nm,0.3s,baz=354,slow=23,SNR=9.2						
WRA	**Warramunga Arr**	**17.59**	**128**	P	**P**	**05 20 55.6**	**+0.7**
	0.3nm,0.3s,baz=306,slow=13,SNR=14						
WRA				S	Sn	05 23 58.1	-12
	0.3nm,0.3s,baz=297,slow=24,SNR=4.2						
ASAR	**Alice Springs**	**19.60**	**137**	P	**Pn**	**05 21 19.0**	**+0.3**
	0.2nm,0.3s,baz=318,slow=10,SNR=14						
ASAR				S	**S**	**05 24 50.7**	**-4.9**
	0.1nm,0.3s,baz=308,slow=22,SNR=1.4						
CMAR	**Chiang Mai Arr**	**34.49**	**324**	P	**P**	**05 23 34.9**	**-1.4**
	1.2nm,0.4s,baz=152,slow=7.4,SNR=6.0						
MKAR	**Makanchi Array**	**65.21**	**333**	P	**P**	**05 27 26.7**	**-2.3**
	0.4nm,0.5s,baz=140,slow=7.6,SNR=5.8						
ZALV	**Zalesovo Beam**	**69.76**	**339**	P	**P**	**05 27 56.0**	**-1.5**
	1.1nm,0.6s,baz=137,slow=6.6,SNR=5.0						

INET 04 05:19:33.0, 12°.32N×87°.68W, h15km, ML4.1
SNET 04 05:19:34.2±0.8, 12°.38N×87°.80W, h29km±4km, ML3.8
UCR 04 05:19:34.4±1.2, 12°.01N×87°.20W, h200km±63km, MW3.5
ISC 04 05:19:33.2±7.2, 12°.27N±0°.09×87°.73W±0°.08, h34km±16km, n19, σ0°.35/24, 2C-4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.00**	**354**	⇓*iP*	**Pn**	**05 19 50.8**	**-0.2**
CNCH				*eS*	**Sn**	**05 20 03.9**	**-0.1**
LCND	**La Caada**	**1.04**	**351**	⇓*eP*	**Pn**	**05 19 51.2**	**-0.2**
LCND				*eS*	**Sn**	**05 20 04.9**	**+0.1**
LCND				IAML		05 20 07.4	
	comp=Z,5μm,0.3s						
LCY	**Lacayo**	**1.27**	**334**	⇑*eP*	**Pn**	**05 19 54.5**	**-0.2**
LCY				*eS*	**Sn**	**05 20 10.7**	**+0.1**
PACA	**Pacayal**	**1.32**	**334**	*eP*	**Pn**	**05 19 55.4**	**0.0**
ALJI	**Alcalda de J**	**1.33**	**322**	⇓*iP*	**Pn**	**05 19 55.0**	**-0.3**
ALJI				IAML		05 20 12.9	
	comp=Z,1μm,0.2s						
TECA	**Tecapa**	**1.43**	**328**	*eP*	**Pn**	**05 19 56.5**	**-0.4**
TECA				*eS*	**Sn**	**05 20 14.4**	**-0.2**
FAGO	**Alcalda de S**	**1.46**	**345**	*eP*	**Pn**	**05 19 57.2**	**0.0**
FAGO				*eS*	**Sn**	**05 20 15.2**	**0.0**
PQSS	**Presa 15 de Se**	**1.57**	**329**	⇑*iP*	**Pn**	**05 19 58.9**	**+0.2**
PQSS				IAML		05 20 22.3	
	comp=Z,346nm,0.2s						
COEG	**Centro de Oper**	**1.75**	**320**	*eP*	**Pn**	**05 20 00.8**	**-0.4**
COEG				IAML		05 20 26.8	
	comp=Z,1μm,0.2s						
TGUH	**Tegucigalpa,Un**	**1.83**	**14**	⇓*iP*	**Pn**	**05 20 02.4**	**+0.1**
PAVA	**Las Pavas**	**1.85**	**321**	*eP*	**Pn**	**05 20 02.9**	**+0.2**
LFRS	**El Faro**	**1.87**	**316**	*eP*	**Pn**	**05 20 02.8**	**-0.1**
LBRS	**Las Brisas**	**1.94**	**319**	*eP*	**Pn**	**05 20 04.2**	**+0.4**
SNET	**Serv Nac Est T**	**2.03**	**314**	*eP*	**Pn**	**05 20 05.4**	**+0.3**
SNET				IAML		05 20 31.8	
	comp=Z,714nm,0.3s						
JAYA	**Jayaque - finc**	**2.17**	**309**	*eP*	**Pn**	**05 20 06.9**	**-0.2**
JAYA				IAML		05 20 37.1	
	comp=Z,1μm,0.2s						
TACO	**Tacachico**	**2.31**	**317**	*eP*	**Pn**	**05 20 09.2**	**+0.2**
HORNC	**Hornillas**	**2.94**	**122**	*i P*	**Pn**	**05 20 17.4**	**-0.3**
COLC	**Colonia**	**2.94**	**123**	*i P*	**Pn**	**05 20 18.5**	**+0.9**
CUI	**Cuipilapa**	**2.98**	**122**	*i P*	**Pn**	**05 20 17.4**	**-0.7**

IDC 04 05:20:19.5±3.1, 5°.38S×153°.31E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/46, mbtmp3.9/6, Error ellipse: s-maj=94.3km s-min=28.2km az=111.0
ISC 04 05:20:25.4±3.3, 5°.5S±0°.3×153°.3E±0°.6, h43km, n7, σ0°.46/7, mb3.8/6, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.41**	**230**	P	**P**	**05 25 30.6**	**-0.3**
	2.6nm,0.8s,baz=55,slow=9.6,SNR=7.4						
ASAR	**Alice Springs**	**26.03**	**224**	P	**P**	**05 25 55.1**	**+0.3**
	0.7nm,0.6s,baz=56,slow=9.2,SNR=6.7						
FITZ	**Fitzroy Crossi**	**29.81**	**243**	P	**P**	**05 26 28.3**	**-0.3**
	1.1nm,0.5s,baz=86,slow=9.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**58.64**	**295**	P	**P**	**05 30 19.3**	**+0.5**
	0.8nm,0.3s,baz=93,slow=5.9,SNR=4.3						
MKAR	**Makanchi Array**	**81.18**	**319**	P	**P**	**05 32 36.3**	**-0.4**
	0.3nm,0.4s,baz=94,slow=7.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**82.00**	**326**	P	**P**	**05 32 40.6**	**-0.3**
	1.7nm,0.6s,baz=112,slow=6.5,SNR=9.0						
TORD	**Torodi Ar. Bea**	**151.02**	**287**	PKPbc	**PKiKP**	**05 40 15.6**	**+0.3**
	2.0nm,0.7s,baz=62,slow=2.8,SNR=9.2						

IDC 04 05:27:07.1±0.6, 18°.05S×174°.52W, h0km, mb4.3/17, mb1 4.5/18, mb1mx4.4/37, mbtmp4.3/18, ML4.5/1, MS3.5/12, Ms1 3.5/12, ms1mx3.3/29, Error ellipse: s-maj=21.5km s-min=15.3km az=143.0
BJI 04 05:27:08.5±0.0, 17°.80S×174°.75W, h5km, mB5.5/11, mb5.0/19, Ms5.0/4, Ms7 4.6/4
NEIC 04 05:27:12.8±2.4, 17°.6S±0°.1×174°.1W±0°.1, h82km±6km, mb4.6/75, Error ellipse: s-maj=20.3km s-min=12.3km az=137.0
ISC 04 05:27:08.9±0.5, 17°.67S±0°.09×174°.01W±0°.09, h35km, n175, σ1°.96/136, mb4.7/57, MS3.4/12, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.31**	**30**	Pn	Pn	05 28 17.0	+4.9
MSVF	**Nonsavu**	**7.57**	**268**	Pn	Pn	05 28 52.4	-4.5
	0.3nm,0.3s,baz=314,slow=12,SNR=3.2						
MSVF	**Nonsavu**	**7.57**	**268**		**Pn**	**05 28 58.5**	**+1.6**
RAR	**Rarotonga**	**13.88**	**107**	LR	LR	05 34 26.2	
	comp=Z,183nm,21.0s,baz=248,slow=31						
KNTN	**Kanton**	**14.97**	**9**	Pn	**P**	**05 30 40.7**	**-2.5**
SANVU	**Saraoutou**	**18.15**	**274**	P	**P**	**05 31 17.2**	**-1.2**
DZM	**Mont Dzumac**	**18.90**	**253**	LR	LR	05 37 06.3	
	comp=Z,150nm,21.8s,baz=312,slow=33						
URZ	**Urewera**	**21.94**	**199**	P	**P**	**05 31 55.0**	**-4.3**
	7.8nm,0.7s,baz=111,slow=23,SNR=5.1						
PAE	**Paea**	**23.27**	**94**	*e*T	T	05 56 07.5	
	19nm,0.3s						
PPT2	**Papeete2**	**23.28**	**94**	*e*LQ	LQ	05 37 01.0	
	380nm,24.2s						
PPT2				*e*LR	LR	05 37 53.5	
	comp=Z,155nm,26.8s						
PPT2	**Papeete2**	**23.28**	**94**	*e*T	T	05 56 09.0	
	13nm,0.3s						
PPT	**Papeete**	**23.28**	**93**	LR	LR	05 38 49.7	
	comp=Z,76nm,18.8s,baz=282,slow=30						
TBI	**Tubuai**	**23.66**	**108**	*e*LQ	LQ	05 37 03.9	
	392nm,25.0s						
TBI				*e*LR	LR	05 37 52.0	
	comp=Z,167nm,30.0s						
TBI	**Tubuai**	**23.66**	**108**	*e*T	T	05 56 33.3	
	15nm,0.4s						
MEH	**Mehetia**	**24.70**	**94**	*e*T	T	05 57 54.3	
	28nm,0.2s						
VAH	**Vaihoa**	**25.41**	**88**	*e*T	T	05 58 47.8	
	7.5nm,0.2s						
HNR	**Honiara**	**26.59**	**285**	LR	LR	05 41 01.3	
	comp=Z,78nm,20.2s,baz=216,slow=32						
RPZ	**Rata Peaks**	**28.87**	**203**	LR	LR	05 44 08.0	
	comp=Z,235nm,18.7s,baz=21,slow=36						
TAOE	**Nuku Hiva Isla**	**34.05**	**80**	*e*T	T	06 09 37.3	
	122nm,0.2s						
RKT	**Rikitea**	**36.91**	**105**	*e*T	T	06 13 07.6	
	4.5nm,0.3s						
CTA	**Charters Tower**	**37.62**	**260**	P	**P**	**05 34 18.9**	**-1.8**
	3.6nm,0.7s,baz=101,slow=11,SNR=7.1						
CTAO	**Charters Tower

comp=Z,44nm,19.1s,baz=343,slow=31
NVAR **Mina Array Bea** 76.40 42 P P 05 38 53.4 -1.8
TPNV **Topopah Spring** 76.89 44 P P 05 38 57.8 -0.1
TPNV IAmb IAmb 05 39 10.4
comp=Z,14nm,1.4s
KVN **Kaiserville** 76.89 41 P P 05 38 55.4 -2.4
KVN IAmb IAmb 05 39 05.5
comp=Z,12nm,1.5s
MOD **Modoc Plateau** 77.26 38 P P 05 38 59.0 -0.8
SHPR **Sheep Range** 77.37 45 P P 05 38 58.2 -2.4
SHPR IAmb IAmb 05 39 09.5
comp=Z,14nm,1.5s
KSRS **Korea Array** 77.37 316 P P 05 39 05.1 +4.8
comp=Z,3.5nm,1.0s,baz=133,slow=7.1,SNR=10
KSRS LR LR 06 07 14.6
comp=Z,17nm,21.3s,baz=0.0,slow=31
PRN **Pahroc Range** 77.94 44 P P 05 39 01.9 -1.8
PRN IAmb IAmb 05 39 21.9
comp=Z,11nm,1.2s
PINE **Pine Mountain** 78.07 36 P P 05 39 03.4 -0.9
PINE IAmb IAmb 05 39 19.6
comp=Z,18nm,1.4s
R11A **Troy Canyon, C** 78.11 43 P P 05 39 02.0 -2.6
TUC **Tucson** 78.28 51 P P 05 39 03.0 -2.7
WVOR **Wild Horse Val** 78.56 38 P P 05 39 04.8 -2.2
WVOR IAmb IAmb 05 39 19.2
comp=Z,16nm,1.4s
USRK **Ussuriysk Ar.** 78.85 324 LR LR 06 09 26.5
comp=Z,66nm,19.0s,baz=153,slow=32
LCMT **Little Creek M** 78.94 45 P P 05 39 06.9 -2.4
I07A **Izee** 79.06 37 P P 05 39 07.4 -2.3
CCUT **Cedar City** 79.14 45 P P 05 39 09.3 -1.2
J08A **Circle Bar Ran** 79.22 38 P P 05 39 09.9 -0.7
J08A IAmb IAmb 05 39 18.8
comp=Z,11nm,1.3s
KNB **Kanab** 79.23 46 P P 05 39 09.9 -1.0
KNB IAmb IAmb 05 39 21.8
comp=Z,12nm,1.4s
PSUT **Pine Spring** 79.34 44 P P 05 39 10.6 -1.0
SZCU **Shurtz Canyon** 79.35 45 P P 05 39 09.0 -2.6
SZCU IAmb IAmb 05 39 20.6
comp=Z,14nm,1.5s
WUAZ **Wupatki** 79.45 47 P P 05 39 11.9 -0.2
ELK **Elko** 79.66 41 P P 05 39 10.8 -2.4
PKCU **Pink Cliffs** 79.80 45 P P 05 39 13.9 -0.2
PKCU IAmb IAmb 05 39 30.1
comp=Z,16nm,1.3s
G08A **Pilot Rock** 80.11 36 P P 05 39 14.2 -1.1
G08A IAmb IAmb 05 39 27.5
comp=Z,16nm,1.5s
MTPU **Mount Pierson** 80.19 45 P P 05 39 14.2 -2.1
MTPU IAmb IAmb 05 39 29.6
comp=Z,12nm,1.4s
BMO **Blue Mountains** 80.78 37 P P 05 39 16.8 -2.2
BMO IAmb IAmb 05 39 30.7
comp=Z,8.6nm,1.4s
MFID **Camas Ranch** 80.81 39 P P 05 39 18.2 -1.0
NJ2 **Nanjing** 81.07 308 *eP* P 05 39 24.1 +3.4
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
TMUT **Trail Mountain** 81.50 44 P P 05 39 21.0 -2.2
TMUT IAmb IAmb 05 39 39.8
comp=Z,8.6nm,1.2s
HLID **Hailey** 81.75 39 P P 05 39 24.1 -0.1
HVU **Hansel Valley** 81.78 41 P P 05 39 22.9 -1.5
BELA **Belgrano 2** 81.84 172 P P 05 39 21.9 -2.1
BELA IAmb IAmb 05 39 30.9
comp=Z,11nm,1.2s
SRU **San Rafael Swe** 81.86 45 P P 05 39 24.6 -0.4
SRU IAmb IAmb 05 39 33.5
comp=Z,12nm,1.5s
TCUT **Toone Canyon** 82.31 43 P P 05 39 26.1 -1.2
PV05 **Paradox Valley** 82.31 46 P P 05 39 27.6 +0.2
TX31 **Lajitas Ar. Si** 82.36 56 P P 05 39 27.4 -0.2
TX31 IAmb IAmb 05 39 38.0
comp=Z,7.3nm,1.1s
TX32 **Lajitas Array** 82.36 56 P P 05 39 25.1 -2.5
TXAR **Lajitas Array** 82.36 56 P P 05 39 34.0 +6.4
comp=Z,0.2nm,0.3s,baz=208,slow=10.0,SNR=6.0
ANMO **Albuquerque** 82.70 50 P P 05 39 28.1 -1.3
ANMO IAmb IAmb 05 39 38.3
comp=Z,12nm,1.4s
RND **Reindeer** 83.17 11 P P 05 39 29.7 -1.4
RDMU **Red Mountain** 83.23 44 P P 05 39 29.3 -2.8
RDMU IAmb IAmb 05 39 39.2
comp=Z,8.1nm,1.2s
MCMT **McKenzie Canyo** 83.38 39 P P 05 39 32.4 -0.5
DLMT **Dillon** 83.82 39 P P 05 39 33.1 -1.8
DLMT IAmb IAmb 05 39 51.0
comp=Z,7.3nm,1.1s
REDW **Red Top Meadow** 83.83 41 P P 05 39 33.8 -1.3
MSO **Missoula** 83.84 37 P P 05 39 32.8 -2.2
MSO IAmb IAmb 05 39 49.4
comp=Z,9.4nm,1.3s
O20A **White River Ci** 83.90 45 P P 05 39 33.0 -2.5
O20A IAmb IAmb 05 39 42.9
comp=Z,10nm,1.2s
SNOW **Snow King Moun** 83.94 41 P P 05 39 33.7 -2.0
SNOW IAmb IAmb 05 39 47.1
comp=Z,9.8nm,0.9s
WRH **Wood River Hil** 84.28 11 P P 05 39 35.7 -0.9
SMCO **Snowmass** 84.30 46 P P 05 39 35.1 -2.7
SMCO IAmb IAmb 05 39 46.1
comp=Z,10nm,1.4s
YPP **Pitchstone Pla** 84.33 40 P P 05 39 35.7 -2.0
PD31 **Pinedale Array** 84.34 42 P P 05 39 37.7 0.0
PD31 IAmb IAmb 05 39 48.2
comp=Z,8.2nm,1.2s
PDAR **Pinedale Array** 84.34 42 P P 05 39 43.9 +6.2
comp=Z,2.6nm,0.8s,baz=212,slow=3.1,SNR=17
PDAR **Pinedale Array** 84.34 42 P P 05 39 36.0 -1.7
YMR **Madison River** 84.43 40 P P 05 39 35.7 -2.5
YMR IAmb IAmb 05 39 51.7
comp=Z,12nm,1.2s
H03S2 **Juan Fernandez** 84.44 124 T T 07 12 52.2
baz=250,slow=75,SNR=90
H03S1 **Juan Fernandez** 84.45 124 T T 07 12 52.2
baz=250,slow=75,SNR=83
H03S3 **Juan Fernandez** 84.45 124 T T 07 12 50.9
baz=250,slow=75,SNR=98
CCB **Clear Creek Bu** 84.49 11 P P 05 39 34.8 -2.9
BOZ **Bozeman (W)** 84.52 39 P P 05 39 37.4 -1.1
BOZ IAmb IAmb 05 39 45.9
comp=Z,7.5nm,1.2s
H03N2 **Juan Fernandez** 84.55 123 T T 07 12 55.6
baz=257,slow=73,SNR=164
H03N3 **Juan Fernandez** 84.55 123 T T 07 12 55.2
baz=257,slow=73,SNR=174
YHH **Holmes Hill** 84.56 40 P P 05 39 36.6 -2.4
YHH IAmb IAmb 05 39 57.0
comp=Z,9.6nm,1.3s
H03N1 **Juan Fernandez** 84.57 123 T T 07 12 55.8
baz=257,slow=73,SNR=113
LKWY **Lake** 84.72 40 P P 05 39 37.4 -2.3
ILAR **Eielson Array** 84.78 11 P P 05 39 44.2 +5.1
comp=Z,3.2nm,1.1s,baz=220,slow=5.9,SNR=8.6
ILAR **Eielson Array** 84.78 11 P P 05 39 37.5 -1.6
MSTX **Muleshoe** 85.00 52 P P 05 39 40.2 -1.0
PRP **Porcupine Dome** 85.70 11 P P 05 39 41.5 -2.5
PRP IAmb IAmb 05 40 01.3
comp=Z,9.4nm,1.3s
BJI **Beijing** 86.61 314 P P 05 39 53.3 +4.5
BJI pmax pmax
comp=Z,7.0nm,1.9s
ABTX **Abilene, Hawle** 86.85 54 P P 05 39 50.4 +0.1
RPSI **Rantau Prapat** 88.02 273 P P 05 39 53.8 -2.4
PSI **Prapat** 88.05 274 P P 05 39 57.5 +1.0
comp=Z,4.5nm,0.7s,baz=180,slow=5.3,SNR=9.6
LAO **LASA Array** 88.32 40 P P 05 39 55.4 -1.6
PLCA **Paso Flores** 88.42 132 P P 05 40 02.4 +4.5
comp=Z,1.9nm,0.8s,baz=284,slow=4.9,SNR=4.4
XAN **Xi'an** 89.48 306 P P 05 40 07.4 +4.7
XAN pP sP 05 40 15.6 -1.8
XAN pmax pmax
comp=Z,12nm,1.5s
HHC **Hu-ho-hao-te** 90.14 313 *eP* P 05 40 07.0 +1.3
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,190nm,6.6s
VNA3 **Neumayer Olymp** 90.66 175 P P 05 40 10.2 +2.7
SNAA **Sanae** 90.68 177 P P 05 40 10.1 +2.4
VNA2 **Neumayer--Watz** 91.14 176 P P 05 40 12.3 +2.5
YKA **Yellowknife Ar** 92.40 24 P P 05 40 20.9 +5.4
comp=Z,0.7nm,0.9s,baz=227,slow=4.0,SNR=9.8

CMAR **Chiang Mai Arr** 92.77 288 P P 05 40 21.8 +3.5
comp=Z,0.7nm,0.3s,baz=105,slow=2.7,SNR=11
CMAR **Chiang Mai Arr** 92.77 288 P P 05 40 17.3 -1.0
LZH **Lanzhou** 94.10 306 ⇑P P 05 40 25.6 +1.4
LZH pP pP 05 40 30.8 -4.2
LZH sP sP 05 40 33.1 -5.8
LZH pmax pmax
comp=Z,22nm,1.3s
KWP **Kalwaria Pacla** 145.38 341 *e*PKP **PKiKP** 05 46 47.4 +0.3
OJC **Ojcow** 145.69 344 *e*PKP **PKiKP** 05 46 48.3 +0.7
KSP **Ksiaz** 145.90 348 *e*PKP **PKiKP** 05 46 48.6 +0.6
CLL **Collm** 145.98 352 *i* PKPbc **PKiKP** 05 46 48.6 +0.4
comp=Z,14nm,1.3s
CLL *i* PKiKP **pPKPdf** 05 46 53.6 -1.6
comp=Z,17nm,1.4s
BRG **Berggiesshubel** 146.27 351 *e*PKP **PKiKP** 05 46 50.1 +1.2
BRG Amp 05 46 53.4
comp=Z,25nm,1.7s
NIE **Niedzica** 146.28 343 *e*PKP **PKPab** 05 46 46.5 -0.2
DPC **Dobruska-Polom** 146.36 348 *e*PKP **PKiKP** 05 46 51.3 +2.2
CRVS **Cervenica-Dubn** 146.41 341 *e*PKP **PKiKP** 05 46 51.6 +2.4
KRLC **Kraliky** 146.53 347 *e*PKP **PKiKP** 05 46 51.6 +2.1
MORC **Moravsky Berou** 146.65 346 *e*PKP **PKiKP** 05 46 50.7 +1.0
VRAC **Vranov** 147.29 347 *e*PKP **PKiKP** 05 46 53.1 +2.1
JAVC **Velka Javorina** 147.48 346 *e*PKP **PKiKP** 05 46 54.0 +2.5
BRTR **Keskin Array B** 147.50 318 PKPbc **PKiKP** 05 46 53.2 +1.2
comp=Z,0.6nm,0.9s,baz=27,slow=4.8,SNR=1.3
BRTR **Keskin Array B** 147.50 318 **PKPab** 05 46 50.3 -1.6
VYHS **Vyhne** 147.52 344 *e*PKP **PKiKP** 05 46 54.9 +3.4
KRUC **Moravsky** 147.57 347 *e*PKP **PKiKP** 05 46 53.8 +2.2
MLR **Muntele Rosu** 147.65 333 PKPbc **PKPab** 05 46 54.6 +2.4
comp=Z,3.1nm,0.8s,baz=262,slow=5.0,SNR=3.4
MLR **Muntele Rosu** 147.65 333 **PKiKP** 05 46 50.6 -1.5
KHC **Kasperske Hory** 148.02 351 *e*PKP **PKPab** 05 46 55.7 +2.3
MODS **Modra-Piesok** 148.02 346 *e*PKP **PKPab** 05 46 56.8 +3.4
CKRC **Cesky Krumlov** 148.20 350 *e*PKP **PKPab** 05 46 55.6 +1.4
GERES **GERESS Array B** 148.28 350 PKPbc **PKPab** 05 46 55.8 +1.2
comp=Z,1.6nm,0.8s,baz=338,slow=1.4,SNR=11
GERES **GERESS Array B** 148.28 350 **PKPab** 05 46 54.1 -0.5
CONA **Conrad Observa** 148.76 347 *i* P **PKPab** 05 46 58.5 +2.0
comp=Z,12nm,1.3s
MOA **Molln** 149.15 349 *e*P **PKPab** 05 46 57.8 -0.2
comp=Z,7.1nm,1.5s
RETA **Reutte** 150.01 354 *e*P **PKPab** 05 46 59.6 -1.9
comp=Z,5.8nm,1.2s
KBA **Koelnbreinsper** 150.05 350 *e*P **PKPab** 05 46 59.4 -2.5
comp=Z,8.6nm,2.1s
WATA **Walderalm** 150.06 352 *i* P **PKPab** 05 46 59.0 -2.9
comp=Z,4.4nm,0.8s
MOTA **Moosalm** 150.11 353 *e*P **PKPab** 05 46 59.5 -2.6
comp=Z,8.5nm,1.3s
SOKA **Soboth** 150.12 347 *e*P **PKPab** 05 46 59.3 -2.8
comp=Z,9.4nm,1.5s
WTTA **Wattenberg** 150.12 352 *e*P **PKPab** 05 47 01.4 -0.8
comp=Z,9.5nm,1.0s
DAVA **Damuels** 150.29 355 *e*P **PKPab** 05 47 01.9 -1.0
comp=Z,8.1nm,1.2s
FETA **Feichten** 150.47 353 *e*P **PKPab** 05 47 02.6 -1.0
comp=Z,4.4nm,1.0s
ABTA **Abfaltersbach** 150.51 351 *e*P **PKPab** 05 47 00.9 -2.8
comp=Z,5.6nm,1.0s
DAVOX **Davos/Dischmat** 150.79 355 PKPbc **PKPab** 05 47 02.9 -2.1
comp=Z,5.7nm,0.9s,baz=349,slow=3.8,SNR=10.0
ESDC **Sonseca Array** 156.43 19 PKPab **PKPab** 05 47 34.3 +5.4
comp=Z,0.9nm,0.8s,baz=311,slow=2.9,SNR=5.0
TORD **Torodi Ar. Bea** 173.88 137 PKP **PKPdf** 05 47 19.4 +3.6
comp=Z,0.9nm,0.8s,baz=265,slow=0.3,SNR=3.7
TORD PKPab **PKPab** 05 48 49.9 +3.8
comp=Z,0.4nm,0.5s,baz=236,slow=1.6,SNR=2.4

JMA 04 05:59:32.7±0.2, 38°21'N×144°16'E, h43km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.12**	**274**	P	Pn	06 00 06.7	+1.0
JIKH				S	Sn	06 00 32.0	+1.2
OFUJ	**Ofunato**	**2.13**	**295**	P	Pn	06 00 07.0	+1.2
OFUJ				*e*S	Sn	06 00 32.6	+1.5
JIO	**Ouri**	**2.22**	**277**	S	Sn	06 00 34.5	+1.2
MIYJ	**Miyakonagasawa**	**2.28**	**307**	P	Pn	06 00 08.7	+0.9
MIYJ				*e*S	Sn	06 00 35.4	+0.7
JMK	**Ichinoseki**	**2.42**	**289**	P	Pn	06 00 11.4	+1.7
JOM	**Ohasama**	**2.57**	**300**	P	Pn	06 00 13.7	+1.9
JOM				*e*S	Sn	06 00 43.9	+2.1
JANG	**Nango**	**2.98**	**317**	*e*S	Sn	06 00 52.9	+1.0
JYK	**Kaneyama**	**3.06**	**285**	P	Pn	06 00 20.9	+2.3
JYK				*e*S	Sn	06 00 56.7	+2.7
JFT	**Otama**	**3.10**	**258**	P	Pn	06 00 20.5	+1.3
JFT				S	Sn	06 00 56.8	+1.8
JCH	**Churui**	**4.44**	**352**	P	Pn	06 00 37.7	+0.2
JCH				*e*S	Sn	06 01 25.3	-2.6
JRY	**Ryogami san**	**4.74**	**244**	P	Pn	06 00 42.8	+1.2
JRY				*e*S	Sn	06 01 34.6	-0.7
NEM2	**Nemuro 2**	**5.29**	**13**	P	Pn	06 00 47.2	-1.9
NEM2				*e*S	Sn	06 01 43.5	-5.2
JTKR	**Abashiri--Toko**	**5.76**	**358**	*e*S	Sn	06 01 57.2	-3.1

IDC 04 06:03:20.6±2.1, 7.77°S×122.19°E, h0km, mb3.5/1, mb1 3.8/3, mb1mx3.5/27, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=294.4km s-min=28.8km az=56.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.88**	**137**	Pn	Pn	06 07 19.1	+0.6
	0.2nm,0.3s,baz=314,slow=13,SNR=11						
WRA				Sn	Sn	06 10 15.0	-12
	0.2nm,0.3s,baz=312,slow=23,SNR=2.1						
ASAR	**Alice Springs**	**19.39**	**146**	P	P	06 07 48.1	-0.2
	0.3nm,0.3s,baz=326,slow=12,SNR=24						
ASAR				S	Sn	06 11 15.8	-12
	0.1nm,0.3s,baz=321,slow=21,SNR=4.6						
MKAR	**Makanchi Array**	**64.87**	**331**	P	P	06 14 01.6	0.0
	0.3nm,0.5s,baz=128,slow=8.0,SNR=5.5						

IDC 04 06:16:31.8±1.7, 2.20°N×126.85°E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/42, mbtmp3.5/5, MS3.1/1, Ms1 3.1/1, ms1mx2.3/28, Error ellipse: s-maj=116.5km s-min=20.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.20**	**183**	P	P	06 21 07.9	-0.5
	0.7nm,0.5s,baz=1.5,slow=9.1,SNR=6.7						
WRA	**Warramunga Arr**	**23.20**	**162**	P	P	06 21 39.9	-0.6
	1.0nm,0.4s,baz=341,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.61**	**165**	P	P	06 22 13.1	+0.9
	0.4nm,0.5s,baz=343,slow=11,SNR=16						
JCJ	**Chichijima**	**28.79**	**29**	LR	LR	06 35 56.2	
	comp=Z,31nm,18.3s,baz=144,slow=40						
MKAR	**Makanchi Array**	**58.88**	**326**	P	P	06 26 33.5	+0.9
	0.2nm,0.3s,baz=125,slow=7.3,SNR=6.8						
KURBB	**Kurchatov Arra**	**63.09**	**328**	P	P	06 26 59.6	-1.5
	0.2nm,0.4s,baz=130,slow=6.0,SNR=2.2						

*IDC **04** 06:16:59.2±2.9, 57.42°S×25.95°W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/25, mbtmp3.9/3, Error ellipse: s-maj=101.1km s-min=48.0km az=2.0*
*NEIC **04** 06:17:10.6±1.1, 57.3°S±0.1°×26.0°W±0.3°, h84km±7km, mb4.1/9, Error ellipse: s-maj=20.4km s-min=14.9km az=93.0*
ISC 04 06:17:08.2±0.8, 57.3°S±0.1°×25.8°W±0.2°, h65km, n26, σ0°53/25, mb4.2/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.73**	**292**	Pn	Pn	06 18 45.1	+0.9
VNA1	**Neumayer--Stat**	**15.34**	**158**	P	Pn	06 20 39.9	-0.5
VNA3	**Neumayer Olymp**	**15.55**	**160**	P	Pn	06 20 42.5	-0.6
VNA2	**Neumayer--Watz**	**15.74**	**157**	P	Pn	06 20 45.7	+0.2
	baz=308,slow=11						
SNAA	**Sanae**	**17.28**	**155**	P	P	06 21 05.3	-0.1
SNAA	**Sanae**	**17.28**	**155**		Pn	06 21 04.7	-0.1
PMSA	**Palmer Station**	**19.67**	**232**	P	P	06 21 31.4	-0.1
QSPA	**South Pole Qui**	**32.93**	**180**	P	P	06 23 36.2	+0.1
QSPA				IAmb	IAmb	06 23 56.0	
	comp=Z,4.6nm,1.3s						
CPUP	**Villa Florida**	**38.21**	**311**	P	P	06 24 20.6	-0.9
CPUP				IAmb	IAmb	06 24 30.6	

comp=Z,5.8nm,1.5s
VNDA **Vanda** 45.34 182 P P 06 25 19.4 +0.3
SIV **San Ignacio** 48.99 313 P P 06 25 46.9 -1.3
comp=Z,0.6nm,0.4s,baz=146,slow=7.3,SNR=3.0
LPAZ **La Paz** 51.71 305 P P 06 26 09.1 -0.3
comp=Z,0.9nm,0.3s,baz=137,slow=5.8,SNR=13
LPAZ **La Paz** 51.71 305 IAmb IAmb 06 26 10.3
comp=Z,1.3nm,0.7s
SAML **Samuel** 56.22 314 P P 06 26 41.3 -0.2
SAML IAmb IAmb 06 26 48.9
comp=Z,1.7nm,1.1s
TOA0 **Torodi Ar. Sit** 73.81 28 P P 06 28 36.0 +0.6
TOA0 IAmb IAmb 06 28 36.4
comp=Z,5.0nm,1.4s
TORD **Torodi Ar. Bea** 73.81 28 P P 06 28 36.1 +0.7
comp=Z,0.6nm,0.6s,baz=191,slow=6.7,SNR=3.6
YKA **Yellowknife Ar** 137.61 316 PKP **PKPdf** 06 36 22.6 -0.5
comp=Z,0.2nm,0.5s,baz=116,slow=3.1,SNR=7.7
DAWY **Dawson** 148.19 310 PKPbc **PKPbc** 06 36 44.6 -0.6
BCAR **Beaver Creek A** 148.87 308 PKPbc **PKPbc** 06 36 47.3 +0.3
L27K **Beaver Creek,** 148.88 308 PKPbc **PKPbc** 06 36 47.3 +0.3
SCRK **Sand Creek** 150.09 309 PKPbc **PKPbc** 06 36 50.3 +0.3
BMAR **Burnt Mountain** 151.12 316 PKPbc **PKiKP** 06 36 53.0 +0.2
ILAR **Eielson Array** 151.51 310 PKPbc **PKPbc** 06 36 53.4 +0.2
comp=Z,0.8nm,0.5s,baz=115,slow=1.2,SNR=9.3
WRH **Wood River Hil** 151.95 309 PKPbc **PKPbc** 06 36 54.4 +0.2
RND **Reindeer** 152.03 306 PKPbc **PKiKP** 06 36 55.1 +0.3
TOLK **Toolik Lake Re** 153.12 318 PKPbc **PKiKP** 06 36 57.2 +0.3

*IDC **04** 06:22:58.0±0.9, 29.73°N×131.32°E, h0km, mb3.6/9, mb1 3.8/12, mb1mx3.6/39, mbtmp3.6/12, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/32, Error ellipse: s-maj=34.6km s-min=18.3km az=85.0*
*JMA **04** 06:23:01.6±0.2, 29.71°N×131.47°E, h50km±3km, M3.5*
ISC 04 06:23:01.0±0.9, 29.71°N±0.05°×131.41°E±0.09, h21km±6km, n25, σ0°93/36, mb3.6/9, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMTN	**Minamitane**	**0.81**	**328**	P	Pn	06 23 17.3	0.0
JMTN				S	Sn	06 23 29.4	+0.6
JYAK	**Yakushimahirau**	**0.94**	**304**	P	Pn	06 23 19.1	+0.1
JYAK				S	Sn	06 23 32.4	+0.6
JTN	**Tanegashima 3**	**1.01**	**339**	P	Pb	06 23 19.9	0.0
JTN				S	Sn	06 23 33.7	0.0
JKC	**Kuchinoerabu**	**1.29**	**306**	P	Pb	06 23 24.9	+0.3
JNN	**Nakanoshima**	**1.34**	**276**	P	Pb	06 23 25.4	0.0
JTSR	**Tashiro 2**	**1.51**	**344**	P	Pn	06 23 27.1	+0.2
JTSR				S	Sn	06 23 45.7	-0.3
JNAR	**Kushima--Naru**	**1.82**	**356**	P	Pn	06 23 31.5	+0.4
JNAR				S	Sn	06 23 53.1	-0.4
JNKG	**Nichinankitago**	**1.95**	**359**	P	Pn	06 23 33.5	+0.6
JNKG				S	Sn	06 23 56.1	-0.6
JSU	**Suzuyama**	**1.97**	**336**	P	Pn	06 23 33.5	+0.3
JSU				S	Sn	06 23 56.6	-0.7
JTAJ	**Takarajima**	**2.00**	**254**	P	Pn	06 23 34.6	+1.0
JTAJ				S	Sn	06 23 58.0	0.0
JAM	**Amami Oshima**	**2.04**	**231**	P	Pn	06 23 34.7	+0.6
JAM				S	Sn	06 23 58.7	-0.2
JTZ	**Takazaki**	**2.20**	**353**	P	Pn	06 23 37.1	+0.7
JTZ				S	Sn	06 24 02.7	-0.3
JNU	**Nakatsue**	**3.43**	**353**	Pn	Pn	06 23 54.1	+0.7
	5.5nm,0.3s,baz=158,slow=0.6,SNR=27						
JNU				Sn	Sn	06 24 30.7	-2.8
	3.4nm,0.3s,baz=305,slow=18,SNR=6.1						
JOW	**Kunigami**	**3.98**	**225**	Pn	Pn	06 24 00.8	0.0
	5.8nm,0.3s,baz=117,slow=19,SNR=6.6						
JOW				Sn	Sn	06 24 44.0	-2.9
	3.8nm,0.3s,baz=44,slow=28,SNR=1.8						
KSRS	**Korea Array**	**8.25**	**340**	Pn	Pn	06 24 59.1	-0.3
	0.4nm,0.3s,baz=151,slow=7.5,SNR=1.7						
ASAJ	**Asahikawa**	**16.91**	**29**	LR	LR	06 34 09.2	
	comp=Z,40nm,18.1s,baz=158,slow=40						
MKAR	**Makanchi Array**	**41.45**	**308**	P	P	06 30 45.7	-0.6
	0.2nm,0.6s,baz=97,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**49.44**	**176**	P	P	06 31 49.9	+0.2
	0.5nm,0.8s,baz=359,slow=8.7,SNR=3.2						
ASAR	**Alice Springs**	**53.12**	**177**	P	P	06 32 17.9	+0.6
	0.5nm,0.8s,baz=10,slow=12,SNR=14						
FINES	**FINESS Array B**	**71.22**	**331**	P	P	06 34 16.7	-1.5
	0.8nm,0.6s,baz=80,slow=2.1,SNR=5.0						
YKA	**Yellowknife Ar**	**74.19**	**26**	P	P	06 34 36.4	+0.6
	0.5nm,0.9s,baz=311,slow=6.0,SNR=6.4						
AKASG	**Malin Array Be**	**74.70**	**320**	P	P	06 34 39.2	+0.1
	0.2nm,0.3s,baz=52,slow=6.0,SNR=1.4						
NOA	**NORSAR Array B**	**77.42**	**334**	P	P	06 34 55.8	+1.3
	0.4nm,0.7s,baz=50,slow=5.5,SNR=1.9						
GERES	**GERESS Array B**	**84.09**	**324**	P	P	06 35 29.4	-1.0
	0.1nm,0.4s,baz=51,slow=7.7,SNR=2.1						
NVAR	**Mina Array Bea**	**86.09**	**48**	P	P	06 35 41.3	+0.5
	0.3nm,0.6s,baz=304,slow=6.4,SNR=4.2						

*JMA **04** 06:32:07.2±0.1, 42.46°N×142.16°E, h15km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs286.00000°, δ28.00000°, λ17.00000°. NP2: φs181.00000°, δ82.00000°, λ117.00000°. Principal axes: T Plg46.0000°, Azm119.0000°; N Plg27.0000°, Azm357.0000°; P Plg32.0000°, Azm249.0000°;*
JMA Felt II J1.
*IDC **04** 06:32:11.8±1.9, 42.52°N×142.17°E, h68km±17km, mb3.1/7, mb1 3.3/8, mb1mx3.2/32, mbtmp3.4/8 Error ellipse: s-maj=42.2km s-min=15.5km az=103.0*
ISC 04 06:32:07.4±0.9, 42.48°N±0.04°×142.15°E±0.03, h26km±6km, n28, σ1°25/28, mb3.3/7, 2C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIAM	**Iburiatsuma**	**0.22**	**310**	P	Pb	06 32 12.6	-0.8
JIAM				*e*S	Sb	06 32 18.5	+1.0
JSHD	**Hidakashinhida**	**0.24**	**107**	⇓P	Pb	06 32 12.6	-1.0
JBT2	**Biratori 2**	**0.34**	**28**	⇓P	Pb	06 32 14.0	-1.0
JBT2				*e*S	Sb	06 32 21.0	+0.8
JNBK	**Urakawa-nobuka**	**0.49**	**114**	P	Pb	06 32 16.8	-0.6
JEW	**Eniwo**	**0.63**	**305**	⇓P	Pb	06 32 19.6	-0.2
JFR	**Furan**	**0.76**	**25**	P	Pb	06 32 21.4	-0.5
JNB	**Noboribetsu**	**0.82**	**269**	⇓P	Pb	06 32 21.6	-1.4
JNB				*e*S	Sb	06 32 33.2	-0.5
JTHR	**Tokachihiroo**	**0.87**	**102**	⇑P	Pb	06 32 23.0	-0.8
JEM	**Erimo**	**0.88**	**122**	P	Pb	06 32 23.4	-0.6
JCH	**Churui**	**0.90**	**81**	P	Pb	06 32 23.5	-0.9
JISS	**Ishikarishitsu**	**0.96**	**326**	⇑P	Pn	06 32 25.2	+0.1
JISS				*e*S	Sn	06 32 39.9	+1.9
JKB	**Kayabe**	**1.02**	**235**	⇓P	Pn	06 32 25.2	-0.8
JKB				*e*S	Sn	06 32 40.1	+0.6
JAB	**Ashibetsu**	**1.02**	**3**	P	Pb	06 32 26.9	+0.5
ASAJ	**Asahikawa**	**1.67**	**11**	P	Pb	06 32 36.3	-1.1
	55nm,0.3s,baz=223,slow=12,SNR=260						
ASAJ				S	Sb	06 32 59.5	+1.6
	7.0nm,0.3s,baz=120,slow=33,SNR=1.9						
MJAR	**Matsushiro Arr**	**6.67**	**208**	P	Pn	06 33 47.5	+3.8
	0.1nm,0.3s,baz=31,slow=12,SNR=1.5						
SEY	**Seymchan**	**21.35**	**13**	P	P	06 36 51.5	-0.8
	0.4nm,0.3s,baz=261,slow=15,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**30.83**	**130**	T	T	07 11 02.9	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**30.84**	**130**	T	T	07 11 01.8	
	baz=320						
H11N3	**WAKE ISLAND Hy**	**30.85**	**130**	T	T	07 11 04.6	
	baz=320						
H11S1	**WAKE ISLAND Hy**	**31.70**	**131**	T	T	07 12 09.3	
	baz=324						
H11S3	**WAKE ISLAND Hy**	**31.70**	**131**	T	T	07 12 09.3	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**31.71**	**131**	T	T	07 12 09.3	
	baz=324						
YKA	**Yellowknife Ar**	**58.85**	**32**	P	P	06 42 02.4	-0.8
	0.1nm,0.5s,baz=311,slow=6.1,SNR=4.4						
WRA	**Warramunga Arr**	**62.53**	**188**	P	P	06 42 28.5	-0.2
	0.2nm,0.8s,baz=5.9,slow=6.

Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HDC	**Heredia**	**0.61**	**324**	*eP*	Pb	07 15 02.1	-0.5
HDC				*eS*	Sb	07 15 10.9	-0.4
BATAN	**Batan**	**0.70**	**32**	*eP*	Pb	07 15 03.6	-0.3
BATAN				*eS*	Sb	07 15 13.2	-0.5
PTJ1	**Puerto Jimnez**	**1.06**	**155**	*eP*	Pg	07 15 09.4	-0.5
PTJ1				*eS*	Sg	07 15 23.7	+0.1
BRU2	**Volcan**	**1.26**	**124**	*eP*	Pn	07 15 12.4	-1.2
BRU2				*eS*	Sg	07 15 30.2	0.0
CNI2	**El Empalme, Bo**	**1.26**	**94**	*eP*	Pn	07 15 12.1	-1.4
CNI2				*eS*	Sb	07 15 28.6	-1.4
CDITO	**Canoas**	**1.27**	**137**	*eP*	Pn	07 15 12.2	-1.3
CDITO				*eS*	Sb	07 15 28.7	-1.4
BC3P	**Paso Ancho**	**1.32**	**121**	*eS*	Sn	07 15 32.4	+0.2
JTS	**Las Juntas de**	**1.42**	**304**	*eP*	Pn	07 15 15.1	-0.6
JTS				*eS*	Sb	07 15 33.8	-0.8
BCO2	**Palmira**	**1.44**	**123**	*eP*	Pn	07 15 15.5	-0.5
BCO2				*eS*	Sb	07 15 34.0	-1.2

IDC 04 07:23:09.6±4.9, 5°.26S×153°.16E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/22, mbtmp3.2/2, Error ellipse: s-maj=253.0km s-min=55.0km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.42**	**230**	P	P	07 28 20.0	-0.5
	0.9nm,0.8s,baz=54,slow=9.8,SNR=5.9						
ASAR	**Alice Springs**	**26.06**	**224**	P	P	07 28 45.4	+0.5
	0.3nm,0.8s,baz=59,slow=9.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**150.79**	**288**	PKPbc	PKPbc	07 43 04.8	-0.3
	0.5nm,0.7s,baz=70,slow=1.7,SNR=2.3						

IDC 04 07:46:32.1±2.5, 25°.72N×101°.18E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/43, mbtmp3.4/3, Error ellipse: s-maj=668.8km s-min=28.3km az=56.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**25.84**	**329**	P	P	07 52 05.2	0.0
	0.5nm,0.9s,baz=124,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	**55.66**	**141**	P	P	07 56 09.6	-0.7
	0.3nm,0.4s,baz=311,slow=8.6,SNR=8.3						
ASAR	**Alice Springs**	**58.43**	**144**	P	P	07 56 30.4	+0.5
	0.1nm,0.4s,baz=326,slow=6.6,SNR=7.4						

MEX 04 07:51:04.7±0.8, 17°.27N×95°.12W, h122km±11km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.29**	**129**	*i* P	Pn	07 51 20.6	-1.3
CMIG				*eS*	Sn	07 51 32.7	-2.1
VHO	**Vista Hermosa**	**1.56**	**263**	*eP*	Pn	07 51 32.0	-1.1
VHO				*eS*	Sn	07 51 53.2	-1.5
TGIG		**1.97**	**104**	*eP*	Pn	07 51 37.6	-0.3
TGIG				*eS*	Sn	07 52 01.8	-1.6
TOIG	**Toxpalan**	**2.03**	**294**	*eP*	Pn	07 51 38.1	-0.6
TOIG				*eS*	Sn	07 52 03.5	-1.2
YOIG	**Yosondua**	**2.36**	**260**	*eP*	Pn	07 51 41.3	-1.8
YOIG				*eS*	Sn	07 52 09.9	-2.5
PNIG	**Pinotepa**	**3.01**	**254**	*eP*	Pn	07 52 03.5	+12
PNIG				*eS*	Sn	07 52 21.9	-5.2

IDC 04 08:04:11.9±451.0, 48°.20N×47°.63E, h0km, Error ellipse: s-maj=138.7km s-min=114.3km az=172.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**7.15**	**68**	*i*		08 52 10.0	
	baz=255,slow=336,SNR=1.7						
I43RU	**DUBNA INFRASON**	**0.63**	**327**	*i*		09 12 10.0	
	baz=140,slow=334,SNR=0.9						
I37NO	**I37NO**	**25.34**	**336**	*i*		10 37 03.0	
	baz=130,slow=327,SNR=0.7						

BJI ***04*** *08:06:16.5±0.0, 2°.86S×127°.92E, h27km, mB5.2/51, mb5.0/69, Ms4.7/49, Ms7 4.4/52*

IDC ***04*** *08:06:17.8±1.5, 2°.82S×127°.67E, h14km±8km, mb4.9/41, mb1 5.0/44, mb1mx4.9/52, mbtmp5.0/44, ML5.7/4, MS4.3/33, Ms1 4.3/33, ms1mx4.3/42, Error ellipse: s-maj=11.4km s-min=7.6km az=65.0*

NEIC ***04*** *08:06:18, 2°.77S×127°.68E, h24km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.29; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-0.95; $M_{r\theta}$-0.21; $M_{r\phi}$0.54; $M_{\theta\phi}$-0.32; Fault plane solution: $M_0$1.07000×10^{17} NP1:ϕ_s205.24000°, δ80.03000°, λ155.08000°. NP2:ϕ_s299.84000°, δ65.48000°, λ10.97000°. Principal axes: T 0.9633, Plg25.0000°, Azm160.0000°; N 0.1956, Plg63.0000°, Azm5.0000°; P -1.1589, Plg10.0000°, Azm255.0000°;*

MOS ***04*** *08:06:18.5±0.9, 2°.81S×127°.68E, h33km, mb5.4/58, MS4.5/12 Error ellipse: s-maj=7.2km s-min=4.3km az=116.5*

NEIC ***04*** *08:06:18.2±1.8, 2°.78S±0°.05×127°.69E±0°.03, h18km±3km, mb5.4/141, Ms_20 4.7/84, Mwb5.3/22, Mwc5.3(GCMT), Error ellipse: s-maj=8.2km s-min=3.7km az=161.0*

GCMT ***04*** *08:06:21.2±0.1, 2°.64S±0°.01×127°.71E±0°.01, h16km, MW5.3/140, Moment Tensor Solution. s101,c141; s140,c263; Duration: 1‡1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.09±.01; $M_{\theta\theta}$0.53±.01; $M_{\phi\phi}$-0.61±.01; $M_{r\theta}$-0.54±.05; $M_{r\phi}$0.43±.01; $M_{\theta\phi}$-0.62±.05; Best double couple: $M_0$1.08200×10^{17} NP1:ϕ_s302.00000°, δ43.00000°, λ6.00000°. NP2:ϕ_s207.00000°, δ86.00000°, λ133.00000°. Principal axes: T 1.1760, Plg35.0000°, Azm153.0000°; N -0.1880, Plg42.0000°, Azm23.0000°; P -0.9880, Plg28.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***04*** *08:06:21.7±0.1, 3°.5±1°×12°.8E±°, h46km±2km, M5.3/95, mB5.8/72, mb5.7/95, MLv5.8/22, Mw(mB)5.3/72, MwMwp5.0/18, Mwp5.2/18*

NEIC ***04*** *08:06:22, 2°.63S×127°.73E, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.12; $M_{\theta\theta}$0.61; $M_{\phi\phi}$-0.73; $M_{r\theta}$-0.59; $M_{r\phi}$0.46; $M_{\theta\phi}$-0.43; Fault plane solution: $M_0$1.10000×10^{17} NP1:ϕ_s304.00000°, δ54.00000°, λ13.00000°. NP2:ϕ_s206.00000°, δ79.00000°, λ143.00000°. Principal axes: T 1.2044, Plg33.0000°, Azm158.0000°; N -0.2593, Plg52.0000°, Azm13.0000°; P -0.9451, Plg17.0000°, Azm260.0000°;*

KLM ***04*** *08:06:23, 2°.69S×127°.81E, h50km, mb5.6*

ISC 04 08:06:20.3±0.5, 2°.79S±0°.03×127°.70E±0°.03, h31km±3km, h31km:pP-P, n666, σ1ꞩ77/697, mb5.3/191, MS4.5/87, 89C-54D, Fault plane solution: NP1:ϕ_s217.41997°, δ83.32167°, λ150.65219°. **NP2:**ϕ_s311.16119°, δ60.87055°, λ7.65071°. **Principal axes:** T Plg25.2419°, Azm170.3749°; N Plg59.9680°, Azm25.7342°; P Plg15.1873°, Azm267.7278°; **Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.75**	**233**	P	**Pb**	**08 06 35.7**	**+0.8**
NLAI				S	**Sn**	**08 06 48.6**	**+3.6**
MSAI	**Masohi**	**1.34**	**114**	P	**Pb**	**08 06 46.0**	**+1.1**
SANI	**Sanana**	**1.86**	**293**	P	**Pn**	**08 06 47.9**	**-2.2**
SANI				S	**Sn**	**08 07 08.1**	**-4.4**
BNDI	**Bandanaira**	**2.79**	**128**	P	**Pn**	**08 07 05.3**	**+2.4**
BNDI				S	**Sn**	**08 07 38.8**	**+3.3**
TNTI	**Ternate**	**3.55**	**355**		**Pn**	**08 07 12.1**	**-1.2**
TNTI	**Ternate**	**3.55**	**355**	P	**Pn**	**08 07 13.4**	**+0.1**
TNTI				S	**Sn**	**08 07 53.7**	**-0.6**
SWI	**Sorong**	**4.04**	**62**	P	**Pn**	**08 07 20.5**	**+0.5**
SWI	**Sorong**	**4.04**	**62**	P	**Pn**	**08 07 20.5**	**+0.5**
SWI				S	**Sn**	**08 08 06.0**	**-0.3**
SIJI	**Sorong**	**4.04**	**62**	Pn	**Pn**	**08 07 21.4**	**+1.4**
	194nm,0.3s,baz=242,slow=8.7,SNR=220						
SIJI				Sn	**Sn**	**08 08 07.2**	**+0.9**
	338nm,0.3s,baz=54,slow=22,SNR=28						
FAKI	**Fak Fak**	**4.54**	**92**	Pn	**Pn**	**08 07 27.1**	**+0.1**
FAKI	**Fak Fak**	**4.54**	**92**	P	**Pn**	**08 07 28.3**	**+1.3**
FAKI				S	**Sn**	**08 08 18.0**	**-0.8**
KMSI	**Cibinong**	**5.00**	**312**	P	**Pn**	**08 07 32.5**	**-0.7**
KDI	**Kendari**	**5.21**	**257**	P	**Pn**	**08 07 37.3**	**+1.2**
LUWI	**Luwuk**	**5.22**	**289**		**Pn**	**08 07 36.5**	**+0.2**
LUWI	**Luwuk**	**5.22**	**289**	P	**Pn**	**08 07 36.0**	**-0.3**
	30nm46μm4μm,0.9s						
KMPI	**Kaimana, Papua**	**6.06**	**98**	P	**Pn**	**08 07 48.7**	**+1.0**
	14nm13μm1μm,0.8s						
SAUI	**Saumlaki**	**6.28**	**145**	Pn	**Pn**	**08 07 53.4**	**+2.5**
SAUI	**Saumlaki**	**6.28**	**145**	P	Pn	08 07 55.8	+4.9
APSI	**Ampana**	**6.33**	**287**	P	**Pn**	**08 07 52.6**	**+1.1**
	33m4μm93μm8μm,0.7s						
MRSI	**Marisa**	**6.61**	**299**	P	**Pn**	**08 07 55.0**	**-0.4**
	9.5nm4μm12μm1μm,0.6s						
SGSI	**Sangihe**	**6.79**	**341**	P	**Pn**	**08 07 56.6**	**-1.2**
	3.6nm898nm,0.5s						
SOEI	**Soe**	**7.72**	**206**	P	Pn	08 08 16.4	+5.7
BNSI	**Bone**	**7.75**	**258**	P	**Pn**	**08 08 13.6**	**+2.6**
	3.4nm8μm902nm,0.7s						
TTSI	**Tana Toraja**	**7.88**	**268**	P	**Pn**	**08 08 15.1**	**+2.3**
	2.8nm7μm8μm840nm,0.9s						
TOLI2	**Tolitoli**	**7.93**	**299**	Pn	**Pn**	**08 08 13.0**	**-0.5**
MMRI	**Maumere**	**7.96**	**223**		**Pn**	**08 08 16.7**	**+2.9**
MMRI	**Maumere**	**7.96**	**223**	P	**Pn**	**08 08 15.9**	**+2.0**
	6μm8μm405nm,1.1s						
BKSI	**Bulukumba**	**7.97**	**251**	P	**Pn**	**08 08 15.7**	**+1.7**
	11μm1μm,0.7s						
SPSI	**Sidrap Palu**	**8.01**	**261**	P	**Pn**	**08 08 17.2**	**+2.7**
	7μm49μm6μm,0.8s						
KAPI	**Kappang**	**8.23**	**254**	Pn	**Pn**	**08 08 21.0**	**+3.3**
	2.5nm,0.3s,baz=255,slow=9.2,SNR=4.2						
KAPI				LR	LR	08 11 51.4	
	comp=Z,2μm,21.5s,baz=95,slow=41						
KAPI	**Kappang**	**8.23**	**254**	P	**Pn**	**08 08 20.8**	**+3.1**
KAPI	**Kappang**	**8.23**	**254**	Pn	**Pn**	**08 08 20.8**	**+3.1**
BATI	**Baumata**	**8.39**	**208**	Pn	**Pn**	**08 08 24.5**	**+4.7**
	27nm,0.3s,baz=118,slow=1.7,SNR=15						
BATI	**Baumata**	**8.39**	**208**	P	**Pn**	**08 08 21.7**	**+1.8**
	2μm4μm435nm,0.9s						
EDFI	**Ende, Flores**	**8.41**	**225**	P	**Pn**	**08 08 22.7**	**+2.4**
	3μm2μm226nm,0.8s						
BAKI	**Biak**	**8.55**	**79**	P	**Pn**	**08 08 22.5**	**+0.5**
	8μm740nm,0.8s						
SRPI	**Serui, Papua**	**8.58**	**84**	P	**Pn**	**08 08 22.2**	**-0.2**
	751nm,0.8s						
DDMP	**Don Marcelino,**	**9.05**	**347**	*eP*	**Pn**	**08 08 26.4**	**-2.6**
DDMP				*eS*	**Sn**	**08 10 02.3**	**-7.6**
SKMP	**Bagumbayan, Su**	**9.77**	**341**	*eP*	**Pn**	**08 08 35.7**	**-3.0**
MATI	**Mati**	**9.78**	**352**	*eP*	**Pn**	**08 08 41.7**	**+2.8**
WSI	**Waingapu**	**10.04**	**227**	P	**Pn**	**08 08 45.2**	**+2.7**
KCP	**Kidapawan**	**10.07**	**345**	*eP*	**Pn**	**08 08 41.4**	**-1.6**
BASI	**Baing, Sumba**	**10.22**	**223**	P	**Pn**	**08 08 47.0**	**+2.0**
	3μm5μm638nm,1.2s						
MTN	**Manton Dam**	**10.55**	**161**	P	**Pn**	**08 08 52.1**	**+2.7**
	baz=10,SNR=121						
MTN	**Manton Dam**	**10.55**	**161**		**Pn**	**08 08 51.0**	**+1.5**
SMKI	**Samarinda**	**10.74**	**282**	P	**Pn**	**08 08 53.0**	**+0.9**
	10μm524nm,0.9s						
BKB	**Balikpapan**	**10.90**	**278**	Pn	**Pn**	**08 08 57.1**	**+2.8**
BKB	**Balikpapan**	**10.90**	**278**	P	**Pn**	**08 08 56.2**	**+1.9**
	4μm14μm2μm,0.8s						
KDU	**Kakadu**	**10.91**	**155**	P	**Pn**	**08 08 55.6**	**+1.3**
	baz=11,SNR=158						
BUKP	**Musuan**	**10.92**	**346**	*eP*	**Pn**	**08 08 52.8**	**-1.8**
PAGZ	**Pagadian**	**11.41**	**338**	*eP*	**Pn**	**08 08 58.3**	**-2.9**
KBKI	**Kotabaru**	**11.53**	**267**	P	**Pn**	**08 09 06.2**	**+3.3**
	4μm552nm,0.9s						
PLAI	**Plampang**	**11.55**	**238**	P	**Pn**	**08 09 07.5**	**+4.3**
	4μm4μm495nm,0.9s						
CGP	**Cagayan de Oro**	**11.56**	**345**	*eP*	**Pn**	**08 09 02.0**	**-1.4**
BUTP	**Butuan**	**11.86**	**350**	*eP*	**Pn**	**08 09 06.9**	**-0.5**
MYLDM	**Lahad Datu**	**12.13**	**311**	Pn	**Pn**	**08 09 10.4**	**-0.7**
TWSI	**Taliwang, Sumb**	**12.28**	**241**	P	**Pn**	**08 09 15.5**	**+2.4**
	3μm2μm142nm,0.8s						
GLSP	**Gerai Luna,**	**12.59**	**353**	*eP*	**Pn**	**08 09 16.0**	**-1.3**
BBKI	**Banjar Baru**	**12.86**	**267**	P	**Pn**	**08 09 21.3**	**+0.2**
	4μm168nm,0.9s						
MTKI	**Muara Teweh, K**	**12.93**	**278**	P	**Pn**	**08 09 24.3**	**+2.3**
	6μm255nm,1.0s						
JAY	**Jayapura**	**12.99**	**89**	Pn	**Pn**	**08 09 23.8**	**+0.8**
	6.6nm,0.3s,baz=20,slow=6.9,SNR=6.8						
JAY				LR	LR	08 16 16.6	
	comp=Z,4μm,20.6s,baz=295,slow=46						
JAY	**Jayapura**	**12.99**	**89**	P	**P**	**08 09 29.1**	**-3.9**
MSLP	**Maasin**	**13.15**	**348**	*eP*	**Pn**	**08 09 22.4**	**-2.6**
SRBI	**Singaraja**	**13.50**	**247**	P	**Pn**	**08 09 33.1**	**+3.3**
	4μm3μm302nm,1.1s						
CNOP	**Candoni, Negro**	**13.51**	**338**	*eP*	**Pn**	**08 09 27.7**	**-2.2**
OCLP	**Ormoc**	**14.09**	**347**	*eP*	**Pn**	**08 09 36.0**	**-1.8**
ABJI	**Asem Bagus**	**14.30**	**249**	P	**P**	**08 09 44.3**	**-3.2**
	4μm494nm,0.9s						
KMMI	**Kalianget**	**14.32**	**252**	P	**P**	**08 09 45.0**	**-2.8**
	3μm6μm552nm,1.2s						
KKM	**Kota Kinabalu**	**14.44**	**307**		**Pn**	**08 09 41.4**	**-1.4**
JAGI	**Jajag, Banyuwa**	**14.61**	**247**	Pn	**Pn**	**08 09 47.2**	**+2.2**
JAGI	**Jajag, Banyuwa**	**14.61**	**247**	P	**Pn**	**08 09 46.5**	**+1.5**
	4μm4μm329nm,0.8s						
BATP	**Bataraza**	**15.16**	**319**	*eP*	**Pn**	**08 09 52.9**	**+0.6**
FITZ	**Fitzroy Crossi**	**15.35**	**187**	Pn	**Pn**	**08 09 54.6**	**-0.2**
	0.8nm,0.3s,baz=27,slow=11,SNR=4						
FITZ				LR	LR	08 16 22.0	
	comp=Z,2μm,21.6s,baz=7.0,slow=40						
FITZ	**Fitzroy Crossi**	**15.35**	**187**	P	**Pn**	**08 09 54.4**	**-0.4**
	baz=15,SNR=51						
FITZ	**Fitzroy Crossi**	**15.35**	**187**		**Pn**	**08 09 53.9**	**-0.8**
FITZ				IAmb	IAmb	08 10 01.2	
	comp=Z,212nm,1.2s						
PBKI	**Pangkalan Bun**	**16.01**	**270**	P	**P**	**08 10 05.7**	**-0.9**
	comp=Z,5μmcomp=Z,546nm,1.1s						
ENPP	**El Nido**	**16.16**	**329**	*eP*	**Pn**	**08 10 02.2**	**-3.1**
SBUM	**Sibu**	**16.33**	**288**	P	**Pn**	**08 10 08.2**	**+0.8**
SBUM	**Sibu**	**16.33**	**288**	P	**P**	**08 10 10.0**	**-0.1**
WOJI	**Wonogiri, Jawa**	**17.44**	**253**	P	**P**	**08 10 23.2**	**+0.8**
	comp=Z,339nm,1.1s						
JCNP	**Jose Panganiba**	**17.68**	**344**	*eP*	**Pn**	**08 10 22.0**	**-2.3**
SMRI	**Semarang**	**17.71**	**256**	P	**P**	**08 10 25.7**	**+0.3**
SMRI				IAmb	IAmb	08 10 45.1	
	comp=Z,337nm,0.8s						
SMRI	**Semarang**	**17.71**	**256**	P	**P**	**08 10 26.7**	**+1.3**
	comp=Z,4μmcomp=Z,475nm,0.8s						
UGM	**Wanagama**	**17.84**	**253**		**P**	**08 10 28.1**	**+1.3**
UGM	**Wanagama**	**17.84**	**253**	P	**P**	**08 10 29.3**	**+2.4**
	comp=Z,3μmcomp=Z,8μmcomp=Z,526nm,1.9s						
LQP	**Lukban**	**17.87**	**340**	*eP*	**Pn**	**08 10 23.2**	**-3.7**
LQP	**Lukban**	**17.87**	**340**	*eP*	**Pn**	**08 10 23.2**	**-3.7**
KSM	**Kuching**	**17.90**	**283**	P	**P**	**08 10 27.9**	**+0.5**
KSM				IAmb	IAmb	08 10 32.1	
	comp=Z,306nm,0.8s						
KSM	**Kuching**	**17.90**	**283**	P	**P**	**08 10 29.0**	**+1.5**
LUBP	**Lubang**	**18.00**	**336**	*eP*	**Pn**	**08 10 25.5**	**-2.8**
TGY	**Tagaytay City**	**18.07**	**338**	P	**Pn**	**08 10 28.0**	**-1.2**
	comp=Z,74nm,0.3s,baz=216,slow=1.9,SNR=4.8						
WB0	**Warramunga Arr**	**18.10**	**159**	P	**Pn**	**08 10 28.2**	**-1.2**
WRAB	**Tennant Creek**	**18.23**	**160**	*c i* P	**P**	**08 10 30.4**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,859nm,1.0s						
WRA	**Warramunga Arr**	**18.24**	**160**	P	**P**	**08 10 30.3**	**-0.9**
	comp=Z,44nm,0.3s,baz=341,slow=12,SNR=1039						
WRA				S	**Sn**	**08 13 53.5**	**-0.6**
	comp=Z,3.5nm,0.3s,baz=346,slow=21,SNR=5.3						
WRA				LR	LR	08 18 25.7	
	comp=Z,3μm,18.4s,baz=335,slow=40						
WRA	**Warramunga Arr**	**18.24**	**160**	*i* P	**P**	**08 10 28.8**	**-2.4**
WRA				pmax	pmax		
	comp=Z,770nm,0.8s						
WB2	**Warramunga Arr**	**18.25**	**160**	P	**P**	**08 10 30.7**	**-0.5**
WC3	**Warramunga Arr**	**18.27**	**160**	P	**P**	**08 10 29.5**	**-2.0**
	baz=18						
MACP	**Maragondon, Ca**	**18.30**	**338**	*eP*	**P**	**08 10 30.2**	**-1.6**
COEN	**Coen**	**18.89**	**127**	P	**P**	**08 10 37.7**	**-0.7**
	baz=19						
COEN	**Coen**	**18.89**	**127**	P	**P**	**08 10 38.5**	**+0.2**
MANU	**Manus Island**	**19.66**	**88**	P	**P**	**08 10 46.1**	**-0.8**
JCJI	**Jatiwangi**	**19.71**	**259**	P	Pn	08 11 05.9	+17
TPI	**Tanjungpandan**	**20.02**	**270**	P	Pn	08 10 52.6	-0.1
	comp=Z,1μmcomp=Z,134nm,1.1s						
PSA00	**Pilbara Seismi**	**20.18**	**202**	P	**P**	**08 10 52.0**	**-0.4**
PSA00				IAmb	IAmb	08 10 53.3	
	comp=Z,141nm,0.6s						
LEM	**Lembang**	**20.41**	**258**	P	**P**	**08 10 56.1**	**+0.9**
	comp=Z,116nm,0.7s,baz=28,slow=5.0,SNR=16						
LEM				S	Sn	08 14 47.4	+0.6
	comp=Z,108nm,0.9s,baz=4.3,slow=20,SNR=4.0						
PMG	**Port Moresby**	**20.42**	**110**	P	**P**	**08 10 55.4**	**+0.3**
	comp=Z,123nm,0.7s,baz=330,slow=2.6,SNR=24						
PMG				LR	LR	08 21 00.3	
	comp=Z,2μm,21.8s,baz=297,slow=43						
PMG	**Port Moresby**	**20.42**	**110**	*i* P	**P**	**08 10 55.4**	**+0.3**
PMG				pmax	pmax		
	comp=Z,108nm,0.8s						
PMG	**Port Moresby**	**20.42**	**110**	P	**P**	**08 10 55.4**	**+0.3**
PMG				IAmb	IAmb	08 11 01.0	
	comp=Z,130nm,0.8s						
BOLP	**Bolinao**	**20.54**	**338**	*eP*	**P**	**08 10 53.8**	**-2.6**
CBJI	**Citeko**	**21.09**	**259**	P	**P**	**08 11 03.1**	**+0.7**
	comp=Z,372nm,0.9s						
QIS	**Mount Isa**	**21.13**	**148**	P	**P**	**08 11 01.8**	**-1.0**
	baz=21,SNR=190						
DBJI	**Dramaga**	**21.21**	**259**	P	**P**	**08 11 04.4**	**+0.7**
	comp=Z,86nm,0.8s						
SZP	**Santa**	**21.44**	**341**	P	**P**	**08 11 04.3**	**-1.7**
SZP				IAmb	IAmb	08 11 32.5	
	comp=Z,180nm,0.9s						
PPBI	**Pangkal Pinang**	**21.55**	**271**	P	**P**	**08 11 13.5**	**+6.1**
AS31	**Alice Springs**	**21.61**	**164**	P	**P**	**08 11 07.2**	**-0.6**
ASPA	**Alice Springs**	**21.61**	**164**	P	**P**	**08 11 07.9**	**+0.1**
	baz=22						
ASAR	**Alice Springs**	**21.61**	**164**	P	**P**	**08 11 07.6**	**-0.2**
	comp=Z,1μm,0.8s,baz=338,slow=8.3,SNR=5856						
ASAR				S	**S**	**08 15 02.5**	**-3.2**
	comp=Z,126nm,1.0s,baz=345,slow=19,SNR=18						
ASAR				ScP	**ScP**	**08 18 44.5**	**+0.3**
	comp=Z,7.8nm,0.7s,baz=348,slow=2.5,SNR=6.5						
ASAR				LR	LR	08 20 09.0	
	comp=Z,1μm,20.1s,baz=346,slow=38						
ASAR	**Alice Springs**	**21.61**	**164**	P	**P**	**08 11 07.3**	**-0.6**
ASAR	**Alice Springs**	**21.61**	**164**	P	**P**	**08 11 07.3**	**-0.6**
WRKA	**Warakurna**	**22.13**	**179**	P	**P**	**08 11 12.8**	**-0.7**
	baz=22,SNR=568						
MTSU	**Mount Surprise**	**22.31**	**134**	P	**P**	**08 11 14.4**	**-1.1**
	baz=22,SNR=130						
BLSI	**Bandar Lampung**	**22.54**	**263**	P	**P**	**08 11 18.5**	**+0.5**
	comp=Z,136nm,0.4s						
KLSI		**23.00**	**265**	P	**P**	**08 11 24.2**	**+1.4**
	comp=Z,1μmcomp=Z,84nm,0.8s						
XMIS	**Christmas Isla**	**23.18**	**250**	P	**P**	**08 11 22.7**	**-1.9**
DSRI	**Dabo**	**23.23**	**275**	P	**P**	**08 11 22.4**	**-2.7**
	comp=Z,3μmcomp=Z,58nm,1.0s						
KASI	**Kota Agung**	**23.30**	**263**	P	**P**	**08 11 24.6**	**-1.2**
	comp=Z,13μmcomp=Z,176nm,1.0s						
KASI				pP	**pP**	**08 11 32.6**	**-0.7**
	comp=Z,13μmcomp=Z,176nm,1.0s						
GIRL	**Giralia**	**23.67**	**212**	P	**P**	**08 11 28.5**	**-0.8**
	baz=24,SNR=17						
GIRL	**Giralia**	**23.67**	**212**	P	**P**	**08 11 28.4**	**-0.8**
LWLI	**Liwa**	**23.69**	**264**	P	**P**	**08 11 31.1**	**+1.4**
	comp=Z,209nm,0.8s						
LWLI				pP	**pP**	**08 11 38.9**	**+1.4**
	comp=Z,209nm,0.8s						
DLV	**T Lat**	**24.06**	**308**	P	**P**	**08 11 31.8**	**-1.5**
LHSI	**Lahat**	**24.16**	**267**	P	**P**	**08 11 36.3**	**+2.3**
	comp=Z,4μmcomp=Z,211nm,0.9s						
RABL	**Rabaul**	**24.46**	**94**	P	**P**	**08 11 35.3**	**-1.4**
MNAI	**Manna**	**24.75**	**266**	P	**P**	**08 11 37.5**	**-1.8**
MNAI	**Manna**	**24.75**	**266**	P	**P**	**08 11 35.7**	**-3.6**
CTA	**Charters Tower**	**24.97**	**135**	P	**P**	**08 11 41.3**	**0.0**
	comp=Z,103nm,1.0s,baz=316,slow=12,SNR=65						
CTA				PcP	**PcP**	**08 15 17.2**	**+0.9**
	comp=Z,29nm,0.9s,baz=254,slow=6.1,SNR=3.6						
CTA				ScP	**ScP**	**08 18 55.1**	**+1.8**
	comp=Z,25nm,1.0s,baz=223,slow=19,SNR=3.6						
CTA				LR	LR	08 23 23.0	
	comp=Z,2μm,21.3s,baz=313,slow=41						
CTAO	**Charters Tower**	**24.97**	**135**	P	**P**	**08 11 41.2**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,94nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,2μm,21.0s						
CTAO	**Charters Tower**	**24.97**	**135**	P	**P**	**08 11 41.2**	**-0.1**
CTAO				IAmb	IAmb	08 11 44.9	
	comp=Z,94nm,0.8s						
CTAO	**Charters Tower**	**24.97**	**135**	IAMs_20	IAMs_20	08 23 11.5	
	comp=Z,2μm,21.0s						
KSI	**Kapahiang**	**25.08**	**267**	P	P	08 11 56.8	+14
SDSI	**Sungai Dareh**	**25.32**	**274**	P	**P**	**08 11 54.7**	**+1.1**
	comp=Z,6μmcomp=Z,118nm,1.0s						
BKNI	**Bangkinang**	**26.83**	**276**	P	P	08 12 09.1	+11
TPUB	**Ta-pu**	**26.83**	**345**	P	**P**	**08 11 57.2**	**-0.8**
TPUB				IAmb	IAmb	08 12 24.1	
	comp=Z,98nm,0.8s						
IPM	**Ipoh**	**27.62**	**285**	P	**P**	**08 12 04.6**	**-0.7**
IPM	**Ipoh**	**

STKA Stephens Creek 31.75 157 P **P** **08 12 40.9 -0.9**
baz=32,SNR=244
STKA Stephens Creek 31.75 157*c i*P **P** **08 12 40.7 -1.0**
STKA Stephens Creek 31.75 157 P **P** **08 12 40.2 -1.6**
STKA IAmb IAmb 08 12 43.2
comp=Z,35nm,0.8s
EIDS Eidsvold 31.79 137 P **P** **08 12 42.8 +0.7**
baz=32,SNR=6.1
EIDS Eidsvold 31.79 137 P **P** **08 12 40.9 -1.3**
EIDS IAMs_20 IAMs_20 08 26 51.5
comp=Z,2µm,21.0s
NONG Nongkai 31.86 311 P **P** **08 12 44.0 +1.2**
comp=Z,134nm,0.9s
PHET Kaeng Krachan 31.94 300 P **P** **08 12 46.0 +2.4**
comp=Z,1µmcomp=Z,135nm,0.9s
MLSI Meulaboh, Aceh 32.05 283 P P 08 12 53.1 +8.5
HTT Hallett 32.24 162 P **P** **08 12 45.3 -0.8**
baz=32,SNR=85
HNR Honiara 32.71 103 P **P** **08 12 49.7 -0.7**
comp=Z,159nm,0.8s,baz=198,slow=4.1,SNR=6.6
HNR Honiara 32.71 103 P **P** **08 12 49.1 -1.3**
JCJ Chichijima 32.83 24 LR LR 08 23 58.0
comp=Z,364nm,19.5s,baz=204,slow=32
CMSA Cobar Meteorol 33.25 151 P **P** **08 12 54.5 -0.3**
baz=33,SNR=222
UTHA Uthaitani 33.37 304 P **P** **08 12 58.2 +2.1**
comp=Z,562nmcomp=Z,58nm,0.8s
SLVN Son La 33.43 317 P **P** **08 12 55.3 -1.3**
PHIT Phitsanulok 33.45 307 P **P** **08 12 59.5 +2.7**
comp=Z,190nm,0.8s
UTTA Uttaradit 33.65 308 P **P** **08 13 00.7 +2.2**
comp=Z,582nmcomp=Z,75nm,0.9s
UMPA Umpang Tak 34.19 304 P **P** **08 13 05.5 +2.3**
comp=Z,4µmcomp=Z,52nm,0.9s
SUKH Sukhothai 34.24 307 P **P** **08 13 06.1 +2.5**
comp=Z,102nm,0.8s
LAMP Lampang 34.81 309 P **P** **08 13 11.4 +2.8**
comp=Z,67m,0.9s
CM36 Chiang Mai Arr 35.23 308 P **P** **08 13 14.0 +1.8**
CM04 Chiang Mai Arr 35.26 308 P **P** **08 13 15.0 +2.5**
comp=Z,236nmcomp=Z,25nm,1.0s
CM09 Chiang Mai Arr 35.27 308 P **P** **08 13 15.0 +2.4**
comp=Z,241nmcomp=Z,29nm,1.0s
CM35 Chiang Mai Arr 35.28 308 P **P** **08 13 15.0 +2.4**
CM01 Chiang Mai Arr 35.29 308 P **P** **08 13 15.7 +3.0**
comp=Z,269nmcomp=Z,28nm,1.2s
CM05 Chiang Mai Arr 35.29 308 P **P** **08 13 15.2 +2.6**
comp=Z,165nmcomp=Z,16nm,1.1s
CM02 Chiang Mai Arr 35.30 308 P **P** **08 13 15.8 +2.9**
comp=Z,218nmcomp=Z,26nm,1.1s
CM31 Chiang Mai Arr 35.32 308 P **P** **08 13 16.0 +3.0**
comp=Z,10µmcomp=Z,570nm,0.5s
CMAR Chiang Mai Arr 35.32 308 P **P** **08 13 14.7 +1.7**
comp=Z,11nm,0.9s,baz=138,slow=7.9,SNR=42
CMAR PcP **PcP** **08 15 44.1 +1.0**
comp=Z,3.2nm,0.6s,baz=151,slow=3.1,SNR=1.9
CMAR ScP **ScP** **08 19 29.4 +2.6**
comp=Z,1.5nm,0.3s,baz=146,slow=3.0,SNR=7.0
CMAR LR LR 08 28 12.3
comp=Z,418nm,21.7s,baz=125,slow=37
CM13 Chiang Mai Arr 35.33 308 P **P** **08 13 15.0 +2.0**
comp=Z,203nmcomp=Z,21nm,1.0s
CM15 Chiang Mai Arr 35.33 308 P **P** **08 13 16.0 +2.9**
comp=Z,28nm,1.0s
CM34 Chiang Mai Arr 35.38 309 P **P** **08 13 15.0 +1.5**
GYA Guiyang 35.48 326 ⇑P **P** **08 13 17.2 +2.8**
GYA pP sP 08 13 26.8 +1.2
GYA S **S** **08 18 50.8 +2.9**
GYA pmax pmax
comp=Z,15nm,1.2s
GYA LR LR
comp=Z,370nm,20.5s
CM32 Chiang Mai Arr 35.50 308 P **P** **08 13 17.0 +2.5**
WHN Wuhan 35.51 340 ⇓P **P** **08 13 16.1 +1.7**
WHN pmax pmax
comp=Z,64nm,0.9s
WHN LR LR
comp=Z,3µm,46.1s
CMMT Chiang Mai 35.51 308 P **P** **08 13 16.0 +1.3**
comp=Z,500nmcomp=Z,37nm,1.1s
CM33 Chiang Mai Arr 35.52 308 P **P** **08 13 16.0 +1.3**
CHTO Chiang Mai 35.52 308 P **P** **08 13 15.1 +0.4**
CHTO pmax pmax
comp=Z,74nm,1.2s
CHTO MLR MLR
comp=Z,600nm,20.0s
CHTO Chiang Mai 35.52 308 P **P** **08 13 15.1 +0.4**
CHTO IAmb IAmb 08 13 30.6
comp=Z,74nm,1.1s
ARMA Armidale 35.61 143 P **P** **08 13 15.6 +0.1**
baz=36,SNR=44
ARMA Armidale 35.61 143 P **P** **08 13 15.0 -0.4**
ARMA IAMs_20 IAMs_20 08 29 07.7
comp=Z,1µm,18.0s
NJ2 Nanjing 35.65 347 *e*P **P** **08 13 17.1 +1.5**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
JNU Nakatsue 35.84 5 LR LR 08 26 41.3
comp=Z,331nm,19.4s,baz=176,slow=34
ARPS Mount Arapiles 36.24 161 P **P** **08 13 20.5 -0.1**
baz=36,SNR=153
YNG Young 36.81 151 P **P** **08 13 25.8 +0.3**
baz=37,SNR=64
KMI Kunming 36.83 320 ⇓P **P** **08 13 28.9 +2.9**
KMI pP pP 08 13 35.3 +1.3
KMI sP pwP 08 13 38.8 -0.6
KMI PP **PnPn** **08 14 51.1 +0.7**
KMI S **S** **08 19 09.8 +1.1**
KMI pmax pmax
comp=Z,29nm,1.3s
KMI pmax pmax
comp=Z,120nm,3.5s
KMI LR LR
comp=Z,380nm,16.7s
KMI LR LR
comp=Z,260nm,27.0s
KMI LR LR
comp=Z,490nm,18.0s
ENH Enshi 37.20 333 IAMs_20 IAMs_20 08 29 44.7
comp=Z,977nm,22.0s
MGCD Mangrove Creek 37.36 147 P **P** **08 13 31.6 +1.4**
baz=37,SNR=15
JHJ Hachijo jima 2 37.50 17 LR LR 08 29 15.5
comp=Z,668nm,19.7s,baz=159,slow=37
PBA Port Blair 37.60 293 IAMs_20 IAMs_20 08 30 05.2
comp=Z,1µm,20.0s
CAN Canberra 37.92 151 P **P** **08 13 34.2 -0.8**
CAN pmax pmax
comp=Z,209nm,0.7s
CAN MLR MLR
comp=Z,2µm,19.0s
CAN Canberra 37.92 151 P **P** **08 13 34.2 -0.8**
CAN IAMs_20 IAMs_20 08 30 54.8
comp=Z,2µm,19.0s
CNB Canberra Magne 38.10 151 P **P** **08 13 37.8 +1.3**
baz=38,SNR=43
TOO Toolangi 38.28 157 P **P** **08 13 38.8 +0.8**
baz=38,SNR=38
TOO Toolangi 38.28 157 P **P** **08 13 37.3 -0.6**
TOO pmax pmax
comp=Z,58nm,1.0s
TOO MLR MLR
comp=Z,2µm,20.0s
TOO Toolangi 38.28 157 P **P** **08 13 37.3 -0.6**
TOO IAmb IAmb 08 13 41.7
comp=Z,58nm,0.9s
TOO IAMs_20 IAMs_20 08 30 43.2
comp=Z,2µm,20.0s
JWT Wachi 38.55 10 P **P** **08 13 40.6 +0.4**
JWT IAmb IAmb 08 13 53.4
comp=Z,120nm,1.3s
INU Inuyama 38.93 12 P **P** **08 13 43.1 -0.3**
JGF Kuroka 39.24 12 P **P** **08 13 46.0 0.0**
TIA Tai'an 40.04 347 P **P** **08 13 53.1 +0.5**
TIA pmax pmax
comp=Z,5.0nm,0.4s
KSRS Korea Array 40.04 0 P **P** **08 13 53.0 +0.4**
comp=Z,4.4nm,0.8s,baz=177,slow=9.4,SNR=15
KSRS PcP **PcP** **08 15 58.1 +1.0**
comp=Z,1.8nm,0.8s,baz=160,slow=3.9,SNR=2.1
KSRS ScP **ScP** **08 19 47.2 +3.1**
comp=Z,1.7nm,0.7s,baz=191,slow=2.6,SNR=6.6
KSRS LR LR 08 31 38.5
comp=Z,321nm,20.6s,baz=182,slow=38
KSRS Korea Array 40.04 0 P **P** **08 13 53.0 +0.4**
MAJO Matsushiro 40.34 13 *i* P **P** **08 13 54.3 -0.8**
MAJO pmax pmax
comp=Z,20nm,0.9s
MAJO Matsushiro 40.34 13 P **P** **08 13 53.7 -1.4**
MAJO Matsushiro 40.34 13 IAMs_20 IAMs_20 08 28 36.5
comp=Z,1µm,20.0s
MAT Matsushiro 40.34 13 P **P** **08 13 53.7 -1.4**
MJAR Matsushiro Arr 40.34 13 P **P** **08 13 53.3 -1.8**
comp=Z,15nm,0.9s,baz=192,slow=9.0,SNR=20
MJAR ScP **ScP** **08 19 47.7 +2.2**
comp=Z,4.7nm,1.0s,baz=199,slow=5.7,SNR=4.4
MJAR LR LR 08 28 48.4
comp=Z,683nm,21.4s,baz=200,slow=34
MJAR Matsushiro Arr 40.34 13 P **P** **08 13 53.3 -1.8**
MJAR pmax pmax
comp=Z,13nm,0.9s
JYT Yasato 40.53 16 IAMs_20 IAMs_20 08 26 43.7
comp=Z,588nm,22.0s
CD2 Chengdu 40.54 328 ⇑*i*P **P** **08 13 58.8 +1.9**
CD2 S **S** **08 20 06.8 +2.5**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,410nm,7.5s
CD2 LR LR
comp=Z,500nm,14.7s
CD2 LR LR
comp=Z,1µm,20.2s
CD2 LR LR
comp=Z,740nm,15.3s
XAN Xi'an 40.68 336 P **P** **08 13 57.6 -0.4**
XAN pP pP 08 14 03.8 -2.1
XAN S **S** **08 20 11.3 +5.0**
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN pmax pmax
comp=Z,100nm,6.0s
XAN LR LR
comp=Z,420nm,25.0s
XAN LR LR
comp=Z,470nm,25.0s
XAN LR LR
comp=Z,590nm,25.0s
XAN Xi'an 40.68 336 P **P** **08 13 57.3 -0.7**
XAN pmax pmax
comp=Z,103nm,1.5s
XAN Xi'an 40.68 336 P **P** **08 13 57.3 -0.7**
XAN IAmb IAmb 08 14 21.7
comp=Z,103nm,1.5s
SANVU Saraoutou 40.89 110 P **P** **08 14 00.0 +0.1**
LHI Lord Howe Isla 41.10 137 IAMs_20 IAMs_20 08 25 26.2
comp=Z,712nm,18.0s
DL2 Dalian 41.87 353 P **P** **08 14 08.0 +0.4**
DL2 S **S** **08 20 26.6 +3.0**
DL2 pmax pmax
comp=Z,26nm,0.8s
DL2 LR LR
comp=Z,290nm,17.8s
DL2 LR LR
comp=Z,460nm,19.8s
DL2 LR LR
comp=Z,650nm,16.8s
DZM Mont Dzumac 42.21 120 P **P** **08 14 10.4 -0.4**
comp=Z,122nm,0.8s,baz=285,slow=6.5,SNR=40
JMM Marumori 42.23 15 P **P** **08 14 09.4 -1.2**
JMM IAmb IAmb 08 14 24.9
comp=Z,59nm,0.9s
TIY Taiyuan 42.71 342 *e*P **P** **08 14 14.9 +0.3**
TIY pmax pmax
comp=Z,18nm,0.9s
TAU Tasmania Unive 43.61 159 P **P** **08 14 21.3 -0.4**
TAU pmax pmax
comp=Z,98nm,1.4s
TAU Tasmania Unive 43.61 159 P **P** **08 14 21.3 -0.4**
TAU IAmb IAmb 08 14 35.8
comp=Z,98nm,1.4s
BJT Baijiatuau 43.89 347 P **P** **08 14 23.5 -0.5**
BJT pmax pmax
comp=Z,30nm,1.2s
BJT Baijiatuau 43.89 347 P **P** **08 14 23.5 -0.5**
BJI Beijing 43.91 347 P **P** **08 14 23.6 -0.6**
BJI S **S** **08 20 58.8 +5.2**
BJI pmax pmax
comp=Z,8.0nm,0.8s
BJI LR LR
comp=Z,150nm,11.8s
BJI LR LR
comp=Z,330nm,22.2s
BJI LR LR
comp=Z,160nm,24.1s
LZH Lanzhou 44.64 332 ⇑P **P** **08 14 32.8 +2.5**
LZH pP sP 08 14 41.5 -0.1
LZH sP pwP 08 14 44.9 +1.3
LZH PP **PP** **08 16 17.7 +2.8**
LZH S **S** **08 21 05.9 +1.2**
LZH sS sS 08 21 22.4 +4.5
LZH pmax pmax
comp=Z,42nm,1.0s
LZH pmax pmax
comp=Z,280nm,4.1s
LZH LR LR
comp=Z,510nm,17.9s
LZH LR LR
comp=Z,360nm,16.3s
LZH LR LR
comp=Z,400nm,15.7s
SHL Shillong 44.70 311 P **P** **08 14 32.1 +1.1**
SHL pmax pmax
comp=Z,100nm,0.9s
SHL Shillong 44.70 311 P **P** **08 14 32.1 +1.1**
MSHR Mys Shultsa 45.27 4*ce*P **P** **08 14 34.3 -0.6**
MSHR pmax pmax
comp=Z,30nm,1.0s
HHC Hu-ho-hao-te 45.86 343 *e*P **P** **08 14 41.1 +1.3**
HHC sP sP 08 14 51.2 +0.1
HHC S **S** **08 21 23.1 +0.9**
HHC SS **ScS** **08 24 38.7 +5.0**
HHC pmax pmax
comp=Z,20nm,1.1s
HHC pmax pmax
comp=Z,180nm,4.6s
HHC LR LR
comp=Z,240nm,17.0s
HHC LR LR
comp=Z,230nm,17.0s
HHC LR LR
comp=Z,430nm,17.9s
USA0B Ussuriysk Arra 46.94 4 *i* P **P** **08 14 48.3 +0.3**
USA0B Ussuriysk Arra 46.94 4 P **P** **08 14 48.2 +0.1**
USA0B IAmb IAmb 08 15 02.4
comp=Z,22nm,0.8s
USRK Ussuriysk Ar. 46.94 4 P **P** **08 14 48.6 +0.6**
comp=Z,12nm,0.6s,baz=184,slow=6.5,SNR=38
USRK LR LR 08 33 46.8
comp=Z,219nm,22.0s,baz=168,slow=35
MDJ Mudanjiang 47.22 2 P **P** **08 14 51.9 +1.6**
MDJ pmax pmax
comp=Z,29nm,1.2s
MDJ pmax pmax
comp=Z,460nm,3.9s
MDJ Mudanjiang 47.22 2 P **P** **08 14 50.4 +0.1**
MDJ IAmb IAmb 08 15 16.4
comp=Z,39nm,1.1s
LSA Lhasa 47.60 315 P **P** **08 14 55.9 +1.8**
LSA pmax pmax
comp=Z,64nm,0.9s
LSA MLR MLR
comp=Z,200nm,21.0s
LSA Lhasa 47.60 315 P **P** **08 14 55.9 +1.8**
PALK Pallekele 47.95 282 P **P** **08 14 56.3 -0.2**
comp=Z,9.2nm,0.8s,baz=186,slow=9.8,SNR=6.1
PALK Pallekele 47.95 282 P **P** **08 14 56.6 +0.1**
PALK IAmb IAmb 08 15 15.6
comp=Z,35nm,1.1s
PALK Pallekele 47.95 282 IAMs_20 IAMs_20 08 36 36.6
comp=Z,582nm,20.0s
TEY Ternei 48.27 8⇓*e*P **P** **08 14 59.3 +0.9**
TEY *e* 08 15 10.0
TEY pmax pmax
comp=Z,40nm,0.9s
TEY pmax pmax
comp=N,20nm,0.8s
ASAJ Asahikawa 48.57 14 P **P** **08 15 01.5 +0.8**
comp=N,10nm,0.8s,baz=218,slow=12,SNR=7.5
ASAJ LR LR 08 34 21.0
comp=N,601nm,21.4s,baz=206,slow=35
ASAJ Asahikawa 48.57 14 P **P** **08 15 00.1 -0.6**
ASAJ pmax pmax
comp=Z,35nm,0.9s
JKA Kamikawa-asahi 48.57 14 P **P** **08 15 00.1 -0.6**
JKA IAmb IAmb 08 15 14.4
comp=Z,35nm,0.9s
ODAN Odare 48.80 310 *e*P **P** **08 15 04.9 +1.8**
comp=Z,74nm,0.9s
TAPN Taplejung 48.81 311 *e*P **P** **08 15 04.6 +1.3**
comp=Z,22nm,0.4s
GTA Gaotai 49.20 331 P **P** **08 15 06.7 +0.8**
GTA pP pP 08 15 12.9 -1.1
GTA sP sP 08 15 15.7 -1.6
GTA ScP **ScP** **08 20 25.4 +3.5**
GTA pmax pmax
comp=Z,8.0nm,0.7s
GTA pmax pmax
comp=Z,82nm,6.9s
GTA LR LR
comp=Z,220nm,21.1s
GTA LR LR
comp=Z,310nm,17.1s
GTA LR LR
comp=Z,480nm,18.9s
RAMN Ramite 49.45 309 *e*P **P** **08 15 10.1 +2.0**
comp=Z,79nm,0.7s
JIRN Jiri 50.12 310 *e*P **P** **08 15 14.7 +1.3**
comp=Z,53nm,1.0s
GUN Gumba 50.49 310 *e*P **P** **08 15 17.4 +1.3**
comp=Z,81nm,0.7s
PKI Pulchoki 50.68 309 *e*P **P** **08 15 18.2 +0.7**
PKIN Phulchoki 50.69 309 *e*P **P** **08 15 18.5 +0.9**
comp=Z,7.0nm,0.4s
DMN Daman 50.93 309 *e*P **P** **08 15 20.7 +1.3**
comp=Z,97nm,1.2s
YSS Yuzh-Sakhalins 51.28 13 *e*P **P** **08 15 21.4 +0.2**
YSS *e**SP **sP** **08 15 32.2 -0.4**
YSS *e* 08 17 25.2
YSS *e*S **S** **08 22 37.4 -0.6**
GKN Gorkha 51.49 310 *e*P **P** **08 15 24.7 +1.3**
comp=Z,53nm,0.9s
FUNA Funafuti 51.52 99 P **P** **08 15 23.3 -0.4**
MSVF Nonsavu 51.53 110 P **P** **08 15 23.7 -0.1**
comp=Z,70nm,1.0s,baz=203,slow=4.3,SNR=13
MSVF Nonsavu 51.53 110 *i* P **P** **08 15 24.6 +0.8**
MSVF pmax pmax
comp=Z,106nm,1.1s
MSVF Nonsavu 51.53 110 P **P** **08 15 25.3 +1.5**
KLR Kul'dur 51.93 3 LR LR 08 37 08.1
comp=Z,236nm,21.8s,baz=182,slow=36
KLR Kul'dur 51.93 3*ce*P **P** **08 15 25.9 -0.2**
KLR pmax pmax
comp=Z,48nm,1.5s
KOLN Koldanda 52.18 309 *e*P **P** **08 15 30.0 +1.4**
comp=Z,69nm,0.5s
DANN Dangsing 52.33 309 *e*P **P** **08 15 31.0 +1.1**
comp=Z,90nm,0.7s
HYB Hyderabad 52.45 294 *i* P **P** **08 15 30.0 -0.6**
HYB *e*PcP **PcP** **08 16 40.0 -1.1**
OUZ Omahuta 53.35 133 P **P** **08 15 37.5 +0.6**
ULN Ulaanbaatar 53.59 343*ce*P **P** **08 15 38.2 -0.4**
ULN pmax pmax
comp=Z,33nm,1.0s
ULN Ulaanbaatar 53.59 343 P **P** **08 15 38.3 -0.3**
ULN IAmb IAmb 08 15 51.8
comp=Z,35nm,0.9s
SONM Songino Array 53.75 342 P **P** **08 15 40.1 +0.3**
comp=Z,13nm,0.9s,baz=151,slow=8.7,SNR=22
SONM Songino Array 53.75 342 P **P** **08 15 40.1 +0.3**
SONM pmax pmax
comp=Z,21nm,1.0s
GRNR Gornyy 53.87 7⇑*i*P P 08 15 50.1 +10
DCZ Deep Cove 54.75 147 P **P** **08 15 45.6 -1.3**
FOZ Fox Glacier 55.11 144 P **P** **08 15 49.6 +0.1**
MLZ Mavora Lakes 55.22 146 P **P** **08 15 50.0 -0.4**
QRZ Quartz Range 55.31 139 P **P** **08 15 52.2 +1.1**
WKZ Wanaka 55.40 145 P **P** **08 15 52.0 +0.3**
WHZ Wether Hill Ro 55.45 147 P **P** **08 15 51.3 -0.8**
HIZ Hauiti 55.75 136 P **P** **08 15 55.7 +1.4**
LBZ Lake Benmore 55.82 144 P **P** **08 15 54.5 -0.2**
TOZ Tahuroa Road 55.85 135 P **P** **08 15 56.8 +1.9**
RPZ Rata Peaks 55.95 143 P **P** **08 15 55.2 -0.5**
comp=Z,365nm,1.0s,baz=308,slow=2.9,SNR=57
RPZ Rata Peaks 55.95 143 P **P** **08 15 55.7 0.0**
THZ Tophouse 56.04 140 P **P** **08 15 56.7 +0.3**
TLZ Tolley Road 56.14 135 P **P** **08 15 59.0 +1.9**
LTZ Lake Taylor 56.18 142 P **P** **08 15 58.0 +0.6**
ZEA Zeya 56.33 360 *e*P **P** **08 15 59.1 +1.0**
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA MLR MLR
comp=N,200nm,14.0s
OXZ Oxford 56.33 142 P **P** **08 15 58.0 -0.4**
TGRZ Tauranga 56.38 134 P **P** **08 16 00.2 +1.3**
TWVZ Taurewa 56.41 136 P **P** **08 16 00.5 +1.4**
WATZ Wairara 56.45 136 P **P** **08 16 01.3 +1.9**
ODZ Otahua Downs 56.47 145 P **P** **08 15 58.9 -0.3**
ODZ IAmb IAmb 08 16 00.9
comp=Z,80nm,1.2s
UTU Utuhina 56.53 135 P **P** **08 16 01.2 +1.3**
WTVZ West Tongariro 56.53 136 P **P** **08 16 02.1 +2.0**
TUWZ Tuamarina 56.54 139 P **P** **08 15 59.4 -0.5**
RATZ Rangitukua 56.55 136 P **P** **08 16 02.1 +2.1**
OTVZ Oturere 56.61 136 P **P** **08 16 02.4 +1.8**
TMVZ Te Maari 56.61 136 P **P** **08 16 02.4 +1.8**
ETVZ East Tongariro 56.63 136 P **P** **08 16 02.5 +1.8**
OMRZ Omania 56.63 135 P **P** **08 16 02.4 +1.8**
HSRZ Hossack Road 56.63 135 P **P** **08 16 01.8 +1.2**
WNVZ Wahianoa 56.64 136 P **P** **08 16 02.3 +1.5**
BSWZ Blackbirch Sta 56.64 140 P **P** **08 15 60.0 -0.6**
OPRZ Ohinepanea 56.65 134 P **P** **08 16 01.8 +1.2**
WPRZ Whakapapatarin 56.66 135 P **P** **08 16 02.8 +1.9**
MOVZ Moawhango 56.78 136 P **P** **08 16 02.2 +0.5**
KHZ Kahutara 56.78 141 P **P** **08 16 01.2 -0.4**
RRRZ Republican Roa 56.83 135 P **P** 08 15 54.0 -8.1
CMWZ Cape Campbell 56.88 140 P **P** **08 16 01.9 -0.4**
EDRZ Edgecumbe 56.89 135 P **P** **08 16 04.4 +1.9**
MQZ McQueen's Vall 56.91 142 P **P** **08 16 02.8 +0.3**
ZAK Zakamensk 56.97 342 *e*P **P** **08 16 03.0 +0.2**
ZAK *e* 08 16 51.6
ZAK pmax pmax
comp=Z,12nm,1.4s
ZAK pmax pmax
comp=Z,12nm,1.2s
SNZO South Karori 56.98 139 P **P** **08 16 01.9 -1.1**
POO Poona 57.06 294 *e*P **P** **08 16 04.0 0.0**
BHW Baring Head 57.14 139 P **P** **08 16 02.8 -1.3**
BKZ Black Stump Fm 57.18 136 IAMs_20 IAMs_20 08 38 30.3
comp=Z,924nm,22.0s
URZ Urewera 57.22 135 P **P** **08 16 04.5 -0.2**
comp=Z,147nm,0.6s,baz=302,slow=23,SNR=37
TSZ Takapari Road 57.22 137 P **P** **08 16 04.9 +0.1**
KRHZ Kereru 57.31 136 P **P** **08 16 05.7 +0.3**
PNHZ Pukenui 57.32 137 P **P** **08 16 05.5 0.0**
MSWZ Moikau Station 57.39 139 P **P** **08 16 04.6 -1.3**
PLWZ Palliser 57.47 139 P **P** **08 16 05.6 -0.9**
DVHZ Dannevirke 57.48 137 P **P** **08 16 06.6 0.0**
RUGZ Raukumara Rang 57.50 134 P **P** **08 16 06.3 -0.5**
BFZ Birch Farm 57.71 138 P **P** **08 16 07.9 -0.2**
MXZ Matakaoa Point 57.79 133 P **P** **08 16 08.9 +0.1**
TLY Talaya 57.99 343 *e*P **P** **08 16 11.9 +2.0**
TLY *e*S S 08 24 19.0 +11
TLY *e* 08 25 47.8
TLY *e*SSS SSS 08 30 24.9
TLY pmax pmax
comp=Z,50nm,1.9s
TLY MLR MLR
comp=Z,211nm,15.0s
IRK Irkutsk 58.30 343 *e*P **P** **08 16 13.0 +0.9**
IRK pmax pmax
comp=Z,47nm,2.7s
WMQ Urumqi 58.64 327 P **P** **08 16 16.0 +1.3**
WMQ pP pP 08 16 22.2 -0.8
WMQ sP pwP 08 16 33.2 +4.9
WMQ S **S** **08 24 21.3 +4.2**
WMQ ScS **ScS** **08 26 01.4 -1.0**
WMQ pmax pmax
comp=Z,57nm,1.1s
WMQ pmax pmax
comp=Z,1µm,3.7s
WMQ LR LR

comp=Z,840nm,20.1s
WMQ LR LR
comp=Z,1µm,29.3s
WMQ LR LR
comp=Z,2µm,23.5s
WMQ Urumqi 58.64 327 IAMs_20 IAMs_20 08 43 30.1
comp=Z,286nm,19.0s
MOY Mondy 58.81 341 *e*P **P** **08 16 16.7 +0.9**
MOY pmax pmax
comp=Z,59nm,2.6s
PEA0B Petropavlovsk- 61.12 20 *ce*P **P** **08 16 32.2 +0.7**
PETK Petropavlovsk- 61.12 20 P **P** **08 16 31.9 +0.4**
comp=Z,20nm,1.0s,baz=204,slow=3.3,SNR=12
PETK LR LR 08 42 23.5
comp=Z,158nm,20.7s,baz=216,slow=35
PET Petropavlovsk 61.38 21 *e*P **P** **08 16 34.7 +1.5**
PET *e*S **S** **08 24 52.1 +0.3**
PET *e* 08 26 23.3
PET pmax pmax
comp=Z,50nm,1.1s
PET MLR MLR
comp=Z,400nm,16.0s
PET MLR MLR
comp=Z,200nm,21.0s
PET Petropavlovsk 61.38 21 P **P** **08 16 32.8 -0.4**
PET IAmb IAmb 08 16 56.7
comp=Z,54nm,1.1s
BOD Bodaibo 61.41 352 *e*P **P** **08 16 33.3 0.0**
BOD pmax pmax
comp=Z,74nm,1.3s
ZSN Zaisan 62.51 329 *e*P **P** **08 16 39.1 -1.8**
comp=Z,4.2nm,0.7s,baz=328
ZSN Zaisan 62.51 329 *e*P **P** **08 16 39.9 -1.0**
ZSN pmax pmax
comp=Z,4.0nm,0.7s
DGZ Jazzator, Alta 62.74 332 *d i*P **P** **08 16 43.1 +0.5**
DGZ pmax pmax
comp=Z,10.0nm,1.1s
NIL Nilore 62.76 310 P **P** **08 16 42.6 -0.3**
NIL pmax pmax
comp=Z,23nm,0.9s
NIL Nilore 62.76 310 P **P** **08 16 42.6 -0.3**
NIL IAmb IAmb 08 17 06.8
comp=Z,23nm,0.8s
SHLS Shalkode 63.01 322 *e*P **P** **08 16 42.1 -2.4**
comp=Z,16nm,1.1s,baz=322
SHLS *e*S **S** **08 25 09.1 -4.0**
baz=322
SHLS Shalkode 63.01 322 *e*P **P** **08 16 42.1 -2.4**
SHLS *e*S **S** **08 25 09.1 -4.0**
SHLS pmax pmax
comp=Z,16nm,1.1s
PDGK Podgornoye 63.09 322 P **P** **08 16 44.9 -0.1**
UZB Uzynbulak 63.27 322 *e*P **P** **08 16 46.2 -0.1**
comp=Z,6.2nm,1.1s,baz=322
UZB *e*S **S** **08 25 16.5 0.0**
baz=322
UZB Uzynbulak 63.27 322 *e*P **P** **08 16 46.1 -0.1**
UZB *e*S **S** **08 25 16.4 0.0**
UZB pmax pmax
comp=Z,6.0nm,1.1s
KSH Kashi 63.39 317 P **P** **08 16 49.8 +2.7**
KSH S **S** **08 25 19.2 +1.3**
KSH pmax pmax
comp=Z,12nm,1.7s
KSH LR LR
comp=Z,190nm,6.2s
KSH LR LR
comp=Z,190nm,6.7s
KSH LR LR
comp=Z,99nm,4.4s
MK31 Makanchi Array 63.47 327 *i*P **P** **08 16 47.2 -0.2**
MK31 pmax pmax
comp=Z,27nm,0.8s
MK31 Makanchi Array 63.47 327 P **P** **08 16 47.2 -0.2**
MK31 IAmb IAmb 08 17 03.4
comp=Z,23nm,0.9s
MKAR Makanchi Array 63.47 327 P **P** **08 16 47.9 +0.5**
comp=Z,17nm,0.7s,baz=120,slow=8.2,SNR=72
MKAR PKPPKP **P'P'df** **08 45 40.5 -3.1**
comp=Z,1.0nm,1.0s,baz=343,slow=1.6,SNR=5.6
MKAR LR LR 08 46 58.0
comp=Z,188nm,19.6s,baz=120,slow=38
SATY Saty 63.60 322 *e*P **P** **08 16 48.1 -0.4**
comp=Z,10.0nm,0.7s,baz=322
SATY Saty 63.60 322 *e*P **P** **08 16 48.0 -0.4**
SATY pmax pmax
comp=Z,10.0nm,0.7s
MAKZ Makanchi 63.65 327 P **P** **08 16 48.0 -0.6**
MAKZ Makanchi 63.65 327 P **P** **08 16 47.9 -0.7**
MAKZ IAmb IAmb 08 17 01.1
comp=Z,63nm,1.4s
KPKS Kokpek 63.65 322 *e*P **P** **08 16 47.7 -1.1**
comp=Z,12nm,0.8s,baz=322
KPKS *e*S **S** **08 25 20.0 -1.1**
baz=322
KPKS Kokpek 63.65 322 *e*P **P** **08 16 47.6 -1.1**
KPKS *e*S **S** **08 25 19.9 -1.1**
KPKS pmax pmax
comp=Z,12nm,0.8s
TNSS Tian-Shan 64.50 321 *e*P **P** **08 16 54.6 -0.1**
baz=321
TNSS Tian-Shan 64.50 321 *e*P **P** **08 16 54.6 -0.1**
MDOK Medeo 64.51 321 *e*P **P** **08 16 53.8 -0.7**
baz=321
MDOK Medeo 64.51 321 *e*P **P** **08 16 53.7 -0.7**
CASY Casey 64.52 188 P **P** **08 16 52.4 -1.5**
AAA Alma-Ata 64.61 321 *e*P **P** **08 16 55.8 +0.7**
baz=321
AAA Alma-Ata 64.61 321 *e*P **P** **08 16 55.7 +0.7**
TDK Taldyqorghan 64.65 323 *e*P **P** **08 16 55.1 -0.1**
baz=323
TDK *e*S **S** **08 25 33.5 +0.2**
baz=323
TDK Taldyqorghan 64.65 323 *e*P **P** **08 16 55.0 -0.1**
TDK *e*S **S** **08 25 33.4 +0.2**
YAK Yakutsk 64.66 1 LR LR 08 47 36.5
comp=Z,166nm,19.8s,baz=236,slow=38
YAK Yakutsk 64.66 1 *ce*P **P** **08 16 56.5 +1.7**
YAK pmax pmax
comp=Z,26nm,0.7s
YAK Yakutsk 64.66 1 IAMs_20 IAMs_20 08 48 05.7
comp=Z,287nm,20.0s
MA2 Magadan 64.78 13 P **P** **08 16 55.8 +0.2**
comp=Z,13nm,1.0s,baz=198,slow=6.8,SNR=12
MA2 Magadan 64.78 13 *ce*P **P** **08 16 57.2 +1.6**
MA2 pmax pmax
comp=Z,42nm,2.5s
MA2 Magadan 64.78 13 P **P** **08 16 56.5 +0.9**
TKM2 Tokmak 2 65.30 320 P **P** **08 17 00.3 +0.6**
SNR=14
TKM2 Tokmak 2 65.30 320 *i*P **P** **08 16 59.9 +0.2**
TKM2 pmax pmax
comp=Z,37nm,1.2s
KUU Kurty 65.32 322 *e*P **P** **08 16 59.1 -0.4**
comp=Z,39nm,0.8s,baz=321
KUU Kurty 65.32 322 *e*P **P** **08 16 59.1 -0.4**
KUU pmax pmax
comp=Z,39nm,0.8s
UCH Uchtor 65.66 319 P **P** **08 17 03.6 +1.3**
SNR=18
AAK Ala-Archa 65.87 320 P **P** **08 17 03.2 -0.1**
comp=Z,4.5nm,0.8s,baz=118,slow=6.1,SNR=13
AAK Ala-Archa 65.87 320 P **P** **08 17 04.3 +1.1**
SNR=6.1
AAK Ala-Archa 65.87 320 *ce*P **P** **08 17 04.1 +0.8**
AAK pmax pmax
comp=Z,56nm,1.7s
AAK Ala-Archa 65.87 320 P **P** **08 17 03.8 +0.5**
AAK IAmb IAmb 08 17 22.2
comp=Z,31nm,1.1s
AML Almayashu 66.15 319 P **P** **08 17 06.3 +0.9**
SNR=18
USP Ospenovka 66.17 320 P **P** **08 17 05.8 +0.7**
SNR=17
SGDS Sogindy 66.18 320 *e*P **P** **08 17 03.8 -1.3**
baz=320
SGDS Sogindy 66.18 320 *e*P **P** **08 17 03.8 -1.3**
KBL Kabul 66.32 310 P **P** **08 17 05.9 -0.5**
KBL pmax pmax
comp=Z,25nm,0.9s
KBL MLR MLR
comp=Z,200nm,20.0s
KBL Kabul 66.32 310 P **P** **08 17 05.8 -0.5**
KBL IAmb IAmb 08 17 21.5
comp=Z,25nm,0.8s

EKS2 Erkin-Say 66.34 319 P **P** **08 17 07.3 +1.0**
SNR=13
SEM Semipalatinsk 66.73 329 *e*P **P** **08 17 06.7 -2.0**
baz=329
SEM Semipalatinsk 66.73 329 *e*P **P** **08 17 06.6 -2.1**
ZAA0 Zalesovo Array 66.82 334 P **P** **08 17 08.0 -0.9**
ZALV Zalesovo Beam 66.82 334 P **P** **08 17 08.3 -0.6**
comp=Z,5.5nm,0.8s,baz=112,slow=5.4,SNR=24
ZALV PKPPKP PKPPKPbc 08 45 40.5
comp=Z,2.5nm,0.8s,baz=306,slow=5.0,SNR=9.5
ZALV LR LR 08 48 31.4
comp=Z,92nm,21.0s,baz=134,slow=38
ZALV Zalesovo Beam 66.82 334 *i*P **P** **08 17 09.0 +0.1**
ZALV pmax pmax
comp=Z,6.0nm,0.8s
GAR Garm 67.09 315 IAMs_20 IAMs_20 08 51 07.9
comp=Z,419nm,19.0s
BTLS Baital 67.32 322 *e*P **P** **08 17 11.4 -0.9**
comp=Z,7.7nm,1.2s,baz=322
BTLS Baital 67.32 322 *e*P **P** **08 17 11.3 -0.9**
BTLS pmax pmax
comp=Z,8.0nm,1.2s
KURBB Kurchatov Arra 67.75 329 P **P** **08 17 14.5 -0.3**
CHGR Chuyangaron 67.79 314 IAMs_20 IAMs_20 08 46 53.2
comp=Z,552nm,22.0s
DZA Taraz 68.05 319 *e*P **P** **08 17 16.1 -1.0**
baz=318
DZA Taraz 68.05 319 *e*P **P** **08 17 16.0 -1.0**
SEY Seymchan 68.15 12 P **P** **08 17 17.9 +0.7**
comp=Z,24nm,1.1s,baz=207,slow=5.7,SNR=46
SEY Seymchan 68.15 12 *d i*P **P** **08 17 18.8 +1.7**
IUG Iuzhnay 68.60 318 *e*P **P** **08 17 20.0 -0.5**
baz=317
IUG Iuzhnay 68.60 318 *e*P **P** **08 17 20.0 -0.5**
KK31 Karatay Array 68.69 319 *i*P **P** **08 17 20.9 0.0**
KK31 Karatay Array 68.69 319 P **P** **08 17 20.9 0.0**
KK31 IAmb IAmb 08 17 33.5
comp=Z,58nm,1.4s
KKAR Karatay Array 68.69 319 P **P** **08 17 21.6 +0.6**
KKAR pmax pmax
comp=Z,58nm,1.4s
KKAR Karatay Array 68.69 319 P **P** **08 17 21.6 +0.6**
KKAR IAmb IAmb 08 17 33.5
comp=Z,58nm,1.4s
BRZS Berezniki 70.57 326 *e*P **P** **08 17 31.2 -1.3**
comp=Z,5.9nm,0.7s,baz=326
BRZS Berezniki 70.57 326 *e*P **P** **08 17 31.1 -1.3**
BRZS pmax pmax
comp=Z,6.0nm,0.7s
HRA Herat 71.58 308 P **P** **08 17 39.0 -0.2**
BRVK Borovoye 73.37 328 *ce*P **P** **08 17 49.0 -0.1**
BRVK pmax pmax
comp=Z,39nm,1.7s
BRVK Borovoye 73.37 328 P **P** **08 17 48.7 -0.4**
BRVK IAmb IAmb 08 18 01.5
comp=Z,72nm,1.4s
TIXI Tiksi 74.31 0 P **P** **08 17 53.8 -0.4**
comp=Z,5.9nm,0.6s,baz=182,slow=3.5,SNR=18
TIXI Tiksi 74.31 0 *c i*P **P** **08 17 54.4 +0.2**
TIXI Tiksi 74.31 0 P **P** **08 17 53.1 -1.1**
TIXI IAmb IAmb 08 18 21.9
comp=Z,50nm,1.3s
TIXI IAMs_20 IAMs_20 08 56 39.3
comp=Z,249nm,20.0s
SOCY Socotra 74.71 283 P **P** **08 17 57.0 -0.8**
SOCY IAmb IAmb 08 18 22.9
comp=Z,33nm,1.1s
SOCY IAMs_20 IAMs_20 08 51 01.6
comp=Z,405nm,21.0s
BILL Bilibino 75.58 14 *de*P **P** **08 18 02.0 +0.3**
BILL *e* 08 18 16.4
BILL *e* 08 20 55.2
BILL *e*S **SKSac** **08 28 00.7 -8.4**
BILL pmax pmax
comp=Z,22nm,2.7s
BILL MLR MLR
comp=Z,222nm,19.0s
GEYT Alibeck 75.76 310 P **P** **08 18 03.0 -0.4**
comp=Z,1.5nm,0.5s,baz=157,slow=7.9,SNR=4.2
GEYT LR LR 08 57 15.1
comp=Z,160nm,20.6s,baz=180,slow=40
VNDA Vanda 76.88 173 P **P** **08 18 08.1 -0.8**
comp=Z,30nm,0.8s,baz=316,slow=6.4,SNR=147
VNDA LR LR 08 52 01.5
comp=Z,375nm,18.8s,baz=336,slow=36
VNDA Vanda 76.88 173 P **P** **08 18 07.4 -1.5**
VNDA IAmb IAmb 08 18 09.0
comp=Z,30nm,0.8s
NRIK Noril'sk 76.95 346 P **P** **08 18 09.8 +0.4**
comp=Z,6.4nm,1.0s,baz=159,slow=6.4,SNR=13
NRIK LR LR 08 54 40.3
comp=Z,344nm,20.1s,baz=104,slow=38
NRIK Noril'sk 76.95 346 *ce*P **P** **08 18 08.7 -0.7**
NRIK pmax pmax
comp=Z,23nm,1.6s
NRIK Noril'sk 76.95 346 P **P** **08 18 09.6 +0.2**
AB31 Akbulak array 77.81 322 *i*P **P** **08 18 14.1 -0.5**
ABKAR Akbulak array 77.81 322 P **P** **08 18 13.9 -0.7**
MAW Mawson 78.03 201 P **P** **08 18 14.7 -0.7**
comp=Z,20nm,1.0s,baz=78,slow=6.3,SNR=11
MAW LR LR 08 50 57.0
comp=Z,292nm,18.0s,baz=60,slow=34
MAW Mawson 78.03 201 P **P** **08 18 14.2 -1.3**
baz=78,SNR=7.7
MAW Mawson 78.03 201 P **P** **08 18 14.3 -1.2**
AKTO Aktyubinsk 79.36 322 P **P** **08 18 23.0 -0.2**
comp=Z,4.7nm,0.7s,baz=99,slow=7.3,SNR=18
GAMB Gambell 79.94 23 P 08 18 27.9
baz=242
GAMB Gambell 79.95 23 IAMs_20 IAMs_20 08 52 28.2
comp=Z,182nm,18.0s
ARU Arti 80.94 328 P **P** **08 18 30.9 -0.6**
comp=Z,2.3nm,0.5s,baz=93,slow=2.5,SNR=7.2
ARU Arti 80.94 328 *c i*P **P** **08 18 30.9 -0.6**
ARU 08 21 34.8
ARU S **S** **08 28 38.8 +0.6**
ARU SS **SS** **08 33 47.6 -5.2**
ARU pmax pmax
comp=Z,16nm,1.2s
ARU Arti 80.94 328 P **P** **08 18 30.0 -1.5**
SDPT Sand Point 82.05 33 P **P** **08 18 37.4 0.0**
SDPT Sand Point 82.05 33 P 08 18 38.1
baz=253
TNA Tin City 82.20 22 P 08 18 38.5
baz=245
PAE Paea 82.22 107 *e*P **P** **08 18 41.0 +1.9**
comp=Z,4.5nm,0.8s
PPT2 Papeete2 82.23 107 *e*P **P** **08 18 41.4 +2.1**
comp=Z,43nm,1.0s
PPT2 Papeete2 82.23 107 *e*LR LR 08 44 29.8
comp=Z,620nm,35.2s
PPT Papeete 82.23 107 P **P** **08 18 37.8 -1.4**
comp=Z,28nm,0.9s,baz=86,slow=13,SNR=1.9
PPT LR LR 08 51 36.7
comp=Z,74nm,21.6s,baz=276,slow=33
TBI Tubuai 82.33 113 *e*P **P** **08 18 41.7 +2.1**
comp=Z,146nm,1.0s
TBI Tubuai 82.33 113 *e*S **S** **08 28 52.5 -1.3**
comp=Z,84nm,30.5s
TBI Tubuai 82.33 113 *e*LR LR 08 44 33.5
comp=Z,355nm,25.8s
ANM Nome 82.79 24 P **P** **08 18 41.2 +0.1**
ANM pmax pmax
comp=Z,26nm,1.2s
ANM Nome 82.79 24 P **P** **08 18 41.2 +0.1**
ANM Nome 82.79 24 P 08 18 42.1
baz=248
MEH Mehetia 83.67 108 *e*P **P** **08 18 48.2 +1.6**
comp=Z,17nm,1.0s
RAYN Ar Rayn 83.96 294 P **P** **08 18 48.3 +0.2**
RAYN pmax pmax
comp=Z,18nm,0.9s
RAYN Ar Rayn 83.96 294 P **P** **08 18 48.3 +0.2**
RAYN IAmb IAmb 08 19 12.4
comp=Z,18nm,0.9s
RAYN IAMs_20 IAMs_20 09 03 08.3
comp=Z,288nm,21.0s
VAH Vaihoa 84.14 105 *e*P **P** **08 18 50.6 +1.6**
comp=Z,47nm,0.9s
RDOG Red Dog Mine 84.99 21 P **P** **08 18 51.9 -0.4**
RDOG IAmb IAmb 08 19 07.8
comp=Z,42nm,1.4s
RDOG Red Dog Mine 84.99 21 P 08 18 53.1
baz=250
SII Sitkinak Islan 85.78 33 P 08 18 56.4
baz=258

SVW2 Sparrevohn 86.03 28 P **P** **08 18 57.8 +0.2**
SVW2 IAmb IAmb 08 19 12.2
comp=Z,38nm,1.2s
BELG Belogornoye 86.14 323 *i*P **P** **08 18 57.8 -0.5**
BELG pmax pmax
comp=Z,6.0nm,1.0s
KIRV Kirov 86.27 329 *ce*P **P** **08 18 59.0 +0.2**
OHAK Old Harbor 86.39 32 P 08 19 00.5
baz=259
SYO Syowa Base 86.73 201 ‖ *e*P **P** **08 19 00.4 -0.5**
KDAK Kodiak Island 86.86 32 *i*P **P** **08 19 02.5 +0.8**
KDAK pmax pmax
comp=Z,39nm,1.0s
KDAK Kodiak Island 86.86 32 P **P** **08 19 02.6 +0.9**
QSPA South Pole Qui 87.16 180 P **P** **08 19 02.1 -1.1**
comp=Z,69nm,0.8s,baz=314,slow=1.4,SNR=290
QSPA South Pole Qui 87.16 180 P **P** **08 19 01.7 -1.5**
RSO Redoubt South 87.26 29 P **P** **08 19 04.7 +0.9**
ZEI Tsey 87.32 313 *e*P **P** **08 19 03.7 -0.9**
ZEI pmax pmax
comp=Z,22nm,0.9s
GEVA Gevas 87.51 308 IAMs_20 IAMs_20 09 02 51.4
comp=Z,164nm,21.0s
SPCR Spurr Chakacha 87.65 29 P 08 19 06.1
baz=260
HOM Homer 87.67 30 P 08 19 05.6
baz=260
CNPM China Poot 87.85 30 P **P** **08 19 07.0 +0.5**
PPLA Purkeypile 87.96 27 P 08 19 05.8
baz=260
A21K Barrow 88.06 18 P 08 19 07.9
baz=256
A21K Barrow 88.06 18 P **P** **08 19 07.9 +0.7**
BRLK Bradley Lake 88.06 30 P **P** **08 19 07.9 +0.4**
CHUM Lake Minchumin 88.08 26 P 08 19 08.2
baz=260
SKT Skwentna 88.10 28 P 08 19 07.8
baz=260
BRSE Bradley Lake S 88.13 30 P 08 19 08.7
baz=261
KBZ Khabaz 88.15 314 LR LR 09 03 20.3
comp=Z,73nm,22.0s,baz=84,slow=39
KBZ Khabaz 88.15 314 *i*P **P** **08 19 07.5 -0.7**
KBZ pmax pmax
comp=Z,23nm,1.7s
GOF Gofitskoye 88.18 315 ‖ *e*P **P** **08 19 11.3 +2.9**
GOF pmax pmax
comp=Z,18nm,0.8s
KIV Kislovodsk 88.32 314 *e*P **P** **08 19 09.8 +0.6**
KIV pmax pmax
comp=Z,23nm,1.1s
SUA Susitna One 88.39 28 P **P** **08 19 08.4 -0.8**
SUA IAmb IAmb 08 19 21.9
comp=Z,17nm,0.8s
SUA Susitna One 88.39 28 P 08 19 08.9
baz=261
BPAW Bear Paw Mtn. 88.69 26 P **P** **08 19 10.7 +0.3**
BPAW Bear Paw Mtn. 88.69 26 P 08 19 10.6
baz=261
O22K Cooper Landing 88.74 29 P 08 19 11.5
baz=262
O22K Cooper Landing 88.74 29 P **P** **08 19 10.8 +0.1**
RC01 Rabit Creek A 88.82 29 P 08 19 11.3
baz=262
TRF Thorofare Moun 88.90 26 P 08 19 10.7
baz=262
MLY Manley 88.94 25 P **P** **08 19 11.8 +0.2**
MLY Manley 88.94 25 P 08 19 11.5
baz=261
PMR Palmer 89.18 28 P **P** **08 19 12.1 -0.5**
PMR pmax pmax
comp=Z,13nm,1.0s
PMR Palmer 89.18 28 P **P** **08 19 12.1 -0.5**
PMR Palmer 89.18 28 P 08 19 12.7
baz=263
BWN Browne 89.36 26 P **P** **08 19 13.3 -0.2**
BWN IAmb IAmb 08 19 32.9
comp=Z,20nm,0.9s
KNK Knik Glacier 89.47 29 P **P** **08 19 14.2 0.0**
KNK IAmb IAmb 08 19 31.1
comp=Z,45nm,1.1s
KNK Knik Glacier 89.47 29 P 08 19 14.3
baz=263
COLD Coldfoot 89.49 23 P 08 19 14.9
baz=262
RND Reindeer 89.53 27 P **P** **08 19 13.4 -1.1**
RND pmax pmax
comp=Z,18nm,1.0s
RND Reindeer 89.53 27 P **P** **08 19 13.4 -1.1**
RND IAmb IAmb 08 19 29.4
comp=Z,18nm,1.0s
I23K Minto, Yukon-K 89.54 25 P **P** **08 19 14.7 +0.4**
I23K IAmb IAmb 08 19 31.3
comp=Z,43nm,1.2s
I23K Minto, Yukon-K 89.54 25 P 08 19 14.9
baz=262
MCK McKinley 89.54 26 P 08 19 13.8
baz=263
MCK McKinley 89.54 26 P **P** **08 19 13.7 -0.7**
MCK pmax pmax
comp=Z,34nm,1.4s
MCK McKinley 89.54 26 P **P** **08 19 13.7 -0.7**
MCK IAmb IAmb 08 19 28.7
comp=Z,34nm,1.4s
SML Sawmill 89.58 28 P **P** **08 19 14.5 -0.2**
SML IAmb IAmb 08 19 31.3
comp=Z,34nm,1.0s
SML Sawmill 89.58 28 P 08 19 14.8
baz=263
NEA2 Nenana 89.59 25 P 08 19 15.1
baz=263
WAT2 Susitna Watana 89.60 27 P 08 19 14.7
baz=263
VRH Novokhopyorsk 89.63 321 *e*P **P** **08 19 13.7 -1.3**
VRH pmax pmax
comp=Z,40nm,1.8s
TOLK Toolik Lake Re 89.92 21 P **P** **08 19 15.4 -0.7**
TOLK Toolik Lake Re 89.92 21 P 08 19 17.0
baz=262
WAT6 Susitna Watana 89.94 27 P 08 19 16.7
baz=264
MDM Murphy Dome 89.99 25 P **P** **08 19 15.1 -1.4**
WRH Wood River Hil 89.99 26 P **P** **08 19 15.9 -0.6**
WRH IAmb IAmb 08 19 32.8
comp=Z,22nm,1.2s
CCB Clear Creek Bu 90.13 25 P **P** **08 19 16.2 -0.9**
CCB IAmb IAmb 08 19 30.0
comp=Z,32nm,1.4s
COLA College 90.14 25 *i*P **P** **08 19 17.8 +0.7**
COLA pmax pmax
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 90.39 269 P **P** **08 19 18.9 -0.9**
comp=Z,1.7nm,0.3s,baz=118,slow=22,SNR=6.4
KMBO LR LR 08 56 56.7
comp=Z,101nm,19.4s,baz=94,slow=34
HDA Harding Lake 90.48 26 P 08 19 17.4
baz=265
HDA P 08 19 17.4
baz=265
IL31 90.54 25 P **P** **08 19 17.8 -1.2**
ILAR Eielson Array 90.54 25 P **P** **08 19 17.9 -1.2**
comp=Z,1.9nm,0.8s,baz=269,slow=4.3,SNR=21
ILAR PP **PP** **08 23 01.6 +7.6**
comp=Z,0.5nm,0.9s,baz=246,slow=8.8,SNR=2.2
ILAR PKKPbc **PKKPdf** **08 36 46.9 +1.7**
comp=Z,2.3nm,0.8s,baz=55,slow=1.6,SNR=20
M24K Tolsona, Glenn 90.62 28 P 08 19 20.5
baz=265
KLU Klutina 90.69 29 P 08 19 20.5
baz=266
PAX Paxson 91.02 27 P 08 19 22.4
baz=266
PRP Porcupine Dome 91.17 25 P 08 19 20.0
baz=266
VSR Storozhevoye 91.23 321 *e*P **P** **08 19 21.5 -1.0**
VSR pmax pmax
comp=Z,10.0nm,1.1s
BMRM Bremner River 91.29 29 P **P** **08 19 23.1 +0.4**
BMRM IAmb IAmb 08 19 38.0
comp=Z,44nm,1.4s
BMRM Bremner River 91.29 29 P 08 19 23.6
baz=267
KAIM Kayak Island 91.33 30 P **P** **08 19 21.5 -1.2**
KAIM Kayak Island 91.33 30 P 08 19 24.4
baz=267
N25K Chitina, Valde 91.33 29 P **P** **08 19 23.3 +0.4**

N25K IAmb IAmb 08 19 38.4
comp=Z,23nm,1.2s
N25K Chitina, Valde 91.33 29 P 08 19 24.1
baz=267
LPSR Galich'ya Gora 91.45 322 *e*P **P 08 19 22.3 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 91.53 331 *e*P **P 08 19 20.9 -2.7**
KLMR pmax pmax
comp=Z,8.0nm,0.8s
KLMR Klimovskoe 91.53 331 *e*P **P 08 19 20.9 -2.7**
KLMR AMP 08 19 22.7
comp=Z,8.0nm,0.8s
KLMR *e*PP **PP 08 22 55.9 -5.9**
GLB Gilahina Butte 91.70 29 P **P 08 19 25.0 +0.4**
GLB IAmb IAmb 08 19 40.5
comp=Z,35nm,1.3s
SCRK Sand Creek 91.74 26 P 08 19 25.6
baz=267
VRDI Verde Repeater 91.87 29 IAMs_20 IAMs_20 08 53 44.7
comp=Z,285nm,19.0s
BGLC Bering Glacier 91.90 30 P 08 19 27.4
baz=268
CRQE Cirque 92.02 29 P 08 19 27.7
baz=268
MCARA McCarthy VSAT 92.08 29 P 08 19 27.7
baz=268
MOS Moscow 92.33 326 *e*P **P 08 19 26.0 -1.5**
MOS *e* 08 19 37.6
MOS *e* 08 23 08.7
MOS pmax pmax
comp=Z,24nm,0.9s
K27K Chicken 92.58 26 P **P 08 19 29.2 +0.7**
K27K Chicken 92.58 26 P 08 19 29.6
baz=269
YAH Yahtse 92.68 30 P **P 08 19 30.4 +1.1**
L27K Beaver Creek, 92.68 27 P 08 19 29.9
baz=269
BARN Barnard Glacie 92.73 29 P **P 08 19 30.6 +1.1**
BARN IAmb IAmb 08 19 57.0
comp=Z,24nm,0.8s
CTG Chitna Glacier 92.89 29 P 08 19 31.5
baz=270
CTGM Chitina Glacie 92.89 29 P **P 08 19 30.6 +0.4**
CTGM IAMs_20 IAMs_20 08 57 23.9
comp=Z,300nm,19.0s
OBN Obninsk 92.92 325 *de*P **P 08 19 29.2 -1.0**
OBN *e* 08 23 18.4
OBN pmax pmax
comp=Z,7.0nm,0.7s
OBN MLR MLR
comp=Z,126nm,18.0s
EGAK Eagle 92.99 25 P **P 08 19 30.9 +0.6**
EGAK IAmb IAmb 08 19 45.6
comp=Z,16nm,1.1s
LOGN Logan Glacier 93.05 29 P **P 08 19 31.4 +0.5**
LOGN IAmb IAmb 08 19 46.1
comp=Z,28nm,1.2s
PINM Pinnacle 93.42 30 P 08 19 33.4
baz=270
DAWY Dawson 93.77 26 P **P 08 19 32.0 -2.1**
DAWY IAmb IAmb 08 19 51.3
comp=Z,21nm,1.1s
APA Apatity 94.21 337 ⇓ *i*P **P 08 19 40.4 +4.5**
APA pmax pmax
comp=Z,5.0nm,1.0s
HYT Haines Junctio 94.76 29 P **P 08 19 39.7 +0.9**
HYT IAmb IAmb 08 19 54.4
comp=Z,18nm,1.0s
BRTR Keskin Array B 94.89 309 P **P 08 19 39.2 -0.7**
comp=Z,0.7nm,0.8s,baz=134,slow=6.2,SNR=2.2
BRTR PP PP 08 23 38.0 +9.0
comp=Z,1.8nm,0.9s,baz=114,slow=5.5,SNR=4.1
BRTR LR LR 09 12 11.0
comp=Z,84nm,18.1s,baz=97,slow=42
INK Inuvik 95.83 22 P **P 08 19 42.8 -0.5**
comp=Z,2.7nm,0.9s,baz=252,slow=5.0,SNR=10
INK Inuvik 95.83 22 P **P 08 19 42.8 -0.5**
INK pmax pmax
comp=Z,15nm,1.2s
INK Inuvik 95.83 22 P **P 08 19 42.8 -0.5**
INK IAmb IAmb 08 19 57.9
comp=Z,15nm,1.1s
SKAG Skagway 95.94 31 P 08 19 44.8
baz=275
WHY Whitehorse 96.06 29 P **P 08 19 45.0 +0.3**
WHY IAmb IAmb 08 19 58.8
comp=Z,24nm,1.2s
ARCES ARCESS Array B 96.86 340 P **P 08 19 47.1 -0.9**
comp=Z,5.1nm,0.7s,baz=72,slow=5.5,SNR=23
ARCES PKKPbc **PKKPbc 08 36 29.0 -3.6**
comp=Z,1.5nm,0.7s,baz=271,slow=3.3,SNR=12
ARCES LR LR 09 11 51.7
comp=Z,97nm,18.4s,baz=105,slow=41
AKASG Malin Array Be 97.52 321 P **P 08 19 50.4 -1.0**
comp=Z,0.3nm,0.3s,baz=70,slow=3.0,SNR=1.6
AKASG LR LR 09 09 59.8
comp=Z,62nm,19.7s,baz=60,slow=39
KBS Kingsbay 97.55 350 *de*P **P 08 19 50.2 -0.7**
KBS pmax pmax
comp=Z,39nm,2.5s
MNK Minsk 97.97 325 *i* P Pdif 08 19 59.5 +6.2
comp=E,3.0nm,0.9s
MNK *i* P Pdif 08 19 59.5 +6.2
comp=N,25nm,0.9s
MNK *i* P Pdif 08 19 59.5 +6.2
comp=Z,28nm,1.1s
MNK *i* PP PP 08 24 01.9 +10
MNK *i* PPP PPP 08 26 08.0
MNK *i* S **SKSac 08 30 35.0 +6.3**
MNK *i* SS SS 08 38 17.7 +18
MNK *i* SSS SSS 08 42 06.6
MNK *i* LO LO 08 58 49.6
MNK *i* LR LR 09 02 51.2
MNK *i* LRM MLR 09 05 39.1
comp=E,15nm,22.9s
MNK *i* LRM MLR 09 05 48.0
comp=N,168nm,22.3s
MNK *i* LRM MLR 09 05 48.0
comp=Z,97nm,20.8s
FINES FINESS Array B 98.00 332 P **P 08 19 51.9 -1.3**
comp=Z,1.2nm,0.7s,baz=77,slow=8.4,SNR=4.5
FINES PKKPbc **PKKPbc 08 36 30.1 +0.8**
comp=Z,1.1nm,0.8s,baz=308,slow=6.3,SNR=3.6
NACGM Naroch 98.55 325 *i* P **P 08 19 54.4 -1.5**
NACGM *i* P **P 08 19 54.4 -1.5**
NACGM *i* P **P 08 19 54.4 -1.5**
NACGM *i* pP **pwP 08 20 12.4 +2.4**
NACGM *i* PP **PP 08 24 01.2 +4.6**
NACGM *i* PPP PPP 08 27 24.2
NACGM *i* SKS 08 30 07.9
NACGM *i* SKKS **SKKSac 08 30 56.9 -4.7**
NACGM *i* S ScS 08 31 58.1 +35
NACGM *i* PS PS 08 33 58.9 +67
NACGM *i* SS SS 08 38 22.8 +15
NACGM *i* SSS SSS 08 44 10.1
C36M Paulatuk 98.98 20 P **P 08 19 56.9 -0.5**
C36M IAmb IAmb 08 20 10.4
comp=Z,23nm,1.3s
SNAA Sanae 99.18 194 Pdiff **Pdif 08 19 57.5 -1.0**
SNAA Sanae 99.18 194 P **Pdif 08 19 56.8 -1.7**
comp=Z,1.9nm,0.7s,baz=204,slow=7.8,SNR=16
SNAA Sanae 99.18 194 P **Pdif 08 19 58.0 -0.5**
BOSA Boshof 99.57 241 P **Pdif 08 19 59.8 -1.5**
comp=Z,4.3nm,0.7s,baz=121,slow=5.2,SNR=11
BOSA LR LR 08 59 43.2
comp=Z,172nm,20.2s,baz=110,slow=32
VRI Vrincioaia 99.64 316 ⇑P **Pdif 08 19 53.8 -7.2**
PLOR Plostina 99.69 316 ⇓P **Pdif 08 20 06.0 +4.7**
BIZ Bicaz 99.95 317 ⇓P **Pdif 08 20 03.0 +0.6**
MLR Muntele Rosu 100.22 316 ⇑P **Pdif 08 20 04.5 +0.7**
MLR Muntele Rosu 100.22 316 IAMs_20 IAMs_20 09 10 12.5
comp=Z,240nm,20.0s
OZUR 100.27 316 ⇓P **Pdif 08 20 17.7 +14**
BURAR Bucovina Array 100.47 318 ⇑P **Pdif 08 20 05.4 +0.6**
ALN Alexandroupoli 100.63 311 IAMs_20 IAMs_20 09 12 27.6
comp=Z,140nm,22.0s
VNA2 Neumayer--Watz 100.78 194 Pdiff **Pdif 08 20 05.5 0.0**
VNA3 Neumayer Olymp 101.07 193 Pdiff **Pdif 08 20 07.5 +0.7**
UZH Uzhgorod 102.25 319 *e*P **Pdif 08 20 15.5 +3.0**
DRGR 102.28 317 ⇓P **Pdif 08 20 13.3 +0.5**
HERR Herculane 102.78 315 ⇑P **Pdif 08 20 19.8 +4.9**
YKA Yellowknife Ar 104.97 25 Pdiff **Pdif 08 20 23.2 -1.0**
comp=Z,0.2nm,0.5s,baz=291,slow=4.3,SNR=5.5
YKA PKiKP **PKiKP 08 24 39.2 +0.2**
comp=Z,0.4nm,0.6s,baz=317,slow=1.6,SNR=5.8
YKA PKKPbc **PKKPbc 08 36 05.3 -3.6**
comp=Z,1.0nm,0.6s,baz=110,slow=3.0,SNR=15
NB2 NORSAR Subarra 105.01 333 P **Pdif 08 20 23.0 -1.6**
baz=70,slow=4.4
NOA NORSAR Array B 105.01 333 Pdiff **Pdif 08 20 22.8 -1.8**
comp=Z,1.3nm,0.8s,baz=68,slow=4.5,SNR=6.3
NOA PKKPbc **PKKPbc 08 36 07.3 -1.6**
comp=Z,0.7nm,0.7s,baz=67,slow=3.3,SNR=6.7
MORH Mrgy, Hungar 105.14 317 ⇑P **PKKPbc 08 36 07.3 -0.6**
SCTE Santa Cesarea 106.47 311 IAMs_20 IAMs_20 09 08 06.1
comp=Z,115nm,21.0s
CLL Collm 107.43 323 *e*SKSac **SKSac 08 31 13.0 -0.4**
CLL *e*PS PS 08 34 24.0 -1.2
CLL *e*PPS PPS 08 35 18.0
CLL *e* 08 41 48.0
CLL *e*SSS SSS 08 44 24.0
CLL *e* 08 50 12.0
CLL LmV 09 16 00.0
comp=Z,200nm,21.1s
GERES GERESS Array B 107.74 321 PKiKP **PKiKP 08 24 45.4 +0.7**
comp=Z,0.6nm,0.7s,baz=48,slow=2.0,SNR=4.2
GERES PKKPbc **PKKPbc 08 35 58.7 -1.5**
comp=Z,0.5nm,0.6s,baz=325,slow=1.6,SNR=5.1
WTTA Wattenberg 109.53 320 *i* P **PKiKP 08 24 49.0 +0.8**
comp=Z,3.1nm,0.6s
MOTA Moosalm 109.85 320 *e*P **PKiKP 08 24 48.5 -0.3**
comp=Z,4.9nm,1.0s
LHV Little Huntoon 110.31 50 IAMs_20 IAMs_20 09 05 11.8
comp=Z,392nm,21.0s
NVAR Mina Array Bea 110.42 50 PKiKP **PKiKP 08 24 51.0 +0.8**
comp=Z,0.4nm,0.8s,baz=298,slow=1.9,SNR=3.7
NVAR PP **PP 08 25 22.8 -2.8**
comp=Z,1.3nm,1.0s,baz=286,slow=5.4,SNR=4.3
NVAR PKKPbc **PKKPbc 08 35 51.4 0.0**
comp=Z,0.9nm,0.7s,baz=142,slow=3.7,SNR=8.7
ELK Elko 112.13 47 PKKPbc PKKPbc 08 35 46.2 +0.3
comp=Z,1.1nm,0.8s,baz=148,slow=3.8,SNR=5.6
EGMT Eagleton 113.36 38 IAMs_20 IAMs_20 09 03 30.2
comp=Z,321nm,20.0s
DUG Dugway, Tooele 114.06 47 IAMs_20 IAMs_20 09 10 53.7
comp=Z,234nm,18.0s
PDAR Pinedale Array 115.50 43 PKP **PKiKP 08 24 58.8 -1.0**
comp=Z,0.8nm,0.9s,baz=211,slow=0.9,SNR=4.9
PDAR PKKPbc **PKKPbc 08 35 33.3 -1.2**
comp=Z,1.9nm,0.6s,baz=117,slow=5.4,SNR=15
PDAR Pinedale Array 115.50 43 **PKPdf 08 25 00.3 +0.5**
PIX Pinacate 115.88 56 IAMs_20 IAMs_20 09 02 58.0
comp=Z,226nm,19.0s
LAO LASA Array 116.10 38 **PKiKP 08 25 00.3 -0.3**
O20A White River Ci 117.38 46 **PKPdf 08 25 02.4 -1.0**
PV22 Blue Mesa, Par 117.55 48 IAMs_20 IAMs_20 09 01 04.1
comp=Z,226nm,19.0s
PV18 Skein Mesa, Pa 117.56 48 IAMs_20 IAMs_20 08 58 51.4
comp=Z,177nm,20.0s
PV01 Paradox Valley 117.84 48 **PKPdf 08 25 03.2 -1.3**
ULM Lac du Bonnet 120.11 31 PKP **PKPdf 08 25 07.0 -1.1**
comp=Z,2.8nm,0.7s,baz=301,slow=1.4,SNR=7.3
ULM Lac du Bonnet 120.11 31 PKiKP **PKPdf 08 25 07.0 -1.1**
ANMO Albuquerque 120.53 51 *c i* PKiKP **PKiKP 08 25 10.0 +0.2**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
CART Cartagena 121.70 313 IAMs_20 IAMs_20 09 19 46.1
comp=Z,132nm,20.0s
ESDC Sonseca Array 122.90 317 PKP **PKPdf 08 25 13.0 -0.9**
comp=Z,0.6nm,0.8s,baz=67,slow=1.7,SNR=1.9
ECSD EROS Data Cent 123.46 37 **PKPdf 08 25 14.7 -0.1**
TXAR Lajitas Array 124.61 56 PKP **PKPdf 08 25 16.4 -1.2**
comp=Z,1.0nm,0.8s,baz=204,slow=2.7,SNR=7.2
TXAR PKKPbc **PKKPbc 08 35 03.7 +3.6**
comp=Z,0.5nm,0.8s,baz=114,slow=6.0,SNR=4.3
TORD Torodi Ar. Bea 125.66 284 PKP **PKPdf 08 25 19.8 +0.1**
comp=Z,5.1nm,0.8s,baz=48,slow=2.1,SNR=17
TORD PKKPbc **PKKPbc 08 34 58.9 +3.3**
comp=Z,1.8nm,1.0s,baz=303,slow=7.0,SNR=5.0
OK025 Westminster Rd 127.11 46 IAMs_20 IAMs_20 09 15 59.1
comp=Z,304nm,20.0s
OK031 S. Brethren Rd 127.29 46 IAMs_20 IAMs_20 09 08 06.9
comp=Z,209nm,21.0s
JCT Junction City 127.37 53 PKiKP **PKPdf 08 25 22.7 0.0**
JCT Junction City 127.37 53 **PKPdf 08 25 22.6 0.0**
MGMO Mountain Grove 129.84 42 IAMs_20 IAMs_20 09 21 14.8
comp=Z,248nm,22.0s
CCM Cathedral Cave 130.01 40 PKiKP **PKPdf 08 25 27.7 +0.2**
CCM Cathedral Cave 130.01 40 **PKPdf 08 25 27.7 +0.2**
KIC Kosan Boka 132.48 276 *e*PKiKP **PKiKP 08 25 35.3 +1.4**
comp=Z,17nm,0.9s
DBIC Dimbokro 132.58 276 PKP **PKiKP 08 25 34.2 +0.2**
comp=Z,7.9nm,0.8s,baz=82,slow=3.5,SNR=6.5
DBIC SKPbc **SKPab 08 28 59.0 -0.4**
comp=Z,15nm,0.8s,baz=112,slow=6.2,SNR=5.7
TIC Toumodi 132.74 276 *e*PKiKP **PKiKP 08 25 34.9 +0.5**
LIC Lamto 132.77 276 *e*PKiKP **PKiKP 08 25 34.9 +0.4**
comp=Z,34nm,0.8s
PLCA Paso Flores 133.59 161 PKP **PKPdf 08 25 34.8 +0.6**
comp=Z,15nm,0.7s,baz=200,slow=2.2,SNR=43
PLCA SKPbc **SKPab 08 29 02.0 -0.9**
comp=Z,17nm,1.1s,baz=203,slow=4.3,SNR=9.6
BI03 Tigo 136.10 156 **PKiKP 08 25 40.2 -0.4**
TGUH Tegucigalpa,Un 143.70 70 PKPbc 08 25 51.8 +0.8
LCO Las Campanas 143.79 152 PKiKP PKPbc 08 25 51.6 +0.6
LCO Las Campanas 143.79 152 PKPbc 08 25 51.6 +0.5
GO03 Copiap 145.20 151 **PKPdf 08 25 56.8 +1.0**
JTS Las Juntas de 146.74 76 PKP2 **PKPab 08 26 01.8 +0.3**
JTS Las Juntas de 146.74 76 PKPab **PKPab 08 26 01.8 +0.3**
JTS Las Juntas de 146.74 76 *e*P **PKPbc 08 26 00.8 +0.5**
PB14 IPOC Station P 147.56 148 **PKPbc 08 26 02.4 -0.3**
PEZE Perez Zeledon, 148.14 77 PKPab **PKPab 08 26 06.9 -0.2**
CBCY The Bluff, Cay 148.33 56 **PKiKP 08 26 05.8 -0.3**
LVC Limon Verde 150.00 148 PKP **PKPdf 08 26 05.4 +1.2**
comp=Z,78nm,0.7s,baz=279,slow=3.7,SNR=8.6
LVC PKPbc **PKiKP 08 26 10.4 +0.4**
comp=Z,78nm,0.7s,baz=251,slow=2.6,SNR=62
LVC Limon Verde 150.00 148 PKiKP **PKPdf 08 26 03.4 -0.8**
LVC Limon Verde 150.00 148 PKPdf **PKPdf 08 26 03.4 -0.8**
PB07 IPOC Station P 150.17 146 **PKiKP 08 26 10.2 +0.1**
CPUP Villa Florida 150.65 171 PKP **PKPdf 08 26 05.8 +1.2**
comp=Z,18nm,1.1s,baz=151,slow=0.5,SNR=16
CPUP PKPbc **PKiKP 08 26 10.9 +0.2**
comp=Z,70nm,0.8s,baz=179,slow=1.5,SNR=93
TA01 Diego Aracena 150.91 144 **PKiKP 08 26 11.2 -0.2**
PB01 IPOC Station P 150.94 145 **PKPdf 08 26 06.2 +0.9**
NNA Nana 151.53 122 PKPbc **PKiKP 08 26 12.9 0.0**
comp=Z,108nm,0.9s,baz=260,slow=5.9,SNR=36
NNA Nana 151.53 122 *c i* PKiKP **PKiKP 08 26 14.1 +1.2**
NNA pmax pmax
comp=Z,369nm,1.3s
NNA Nana 151.53 122 **PKiKP 08 26 13.3 +0.4**
NNA IAMs_20 IAMs_20 09 26 57.6
comp=Z,240nm,21.0s
PB11 IPOC Station P 151.84 143 **PKPdf 08 26 08.0 +1.2**
ATAH Atahualpa 152.15 111 PKPbc **PKiKP 08 26 15.8 +1.0**
comp=Z,40nm,0.8s,baz=205,slow=1.8,SNR=3.9
OTAV Otavalo 153.74 95 PKiKP **PKPbc 08 26 17.7 -0.3**
OTAV Otavalo 153.74 95 **PKPbc 08 26 17.7 -0.3**
LPAZ La Paz 155.42 141 PKP **PKPdf 08 26 13.8 +1.3**
comp=Z,8.1nm,1.0s,baz=52,slow=1.7,SNR=21
LPAZ PKPbc **pPKPdf 08 26 21.8 +0.4**
comp=Z,18nm,0.9s,baz=38,slow=5.7,SNR=28
LPAZ PKPab **PKPab 08 26 38.7 +0.8**
comp=Z,16nm,0.7s,baz=201,slow=8.7,SNR=9.5
LPAZ La Paz 155.42 141 PKiKP **PKPdf 08 26 13.6 +1.0**
LPAZ La Paz 155.42 141 PKPdf **PKPdf 08 26 13.6 +1.0**
LPAZ La Paz 155.42 141 *e*P **PKPdf 08 26 11.4 -1.1**
POPC Popayan, Colom 155.65 90 *e*P **PKPdf 08 26 10.1 -2.4**
YOTC Yotoco, Vale 155.97 86 *e*P **PKPdf 08 26 13.7 +0.9**
MARP Paez Belalcaza 156.37 89 *e*P **PKPdf 08 26 15.4 +1.9**
TOLC Tolima 156.96 85 *e*P **PKPdf 08 26 15.4 +1.1**
ZARC Zaragoza, Cauc 157.06 77 *e*P **PKPdf 08 26 13.7 -0.4**
ORTC Ortega, Tolima 157.06 87 *e*P **PKPdf 08 26 10.1 -4.0**
PTBC PUERTO BERRIO 157.61 80 *e*P **PKPdf 08 26 12.8 -2.0**
ROSC El Rosal 157.93 84 PKP **PKPdf 08 26 16.8 +1.2**
comp=Z,7.0nm,0.7s,baz=238,slow=22,SNR=6.2
ROSC PKPab **PKPab 08 26 49.5 +0.7**
comp=Z,20nm,0.8s,baz=230,slow=12,SNR=7.8
ROSC El Rosal 157.93 84 **PKPdf 08 26 15.9 +0.3**
ROSC El Rosal 157.93 84 *e*P **PKPdf 08 26 16.7 +1.2**
SPBC San Pablo de B 158.10 82 *e*P **PKPdf 08 26 11.4 -4.0**
OCAC Ocana 158.40 75 *e*P **PKPdf 08 26 15.4 -0.5**
MACC Macarena, Meta 158.46 91 *e*P **PKPdf 08 26 16.7 +0.9**
RUSC La Rusia 159.05 81 *e*P **PKPdf 08 26 19.4 +2.3**
SIV San Ignacio 159.42 155 PKP **PKPdf 08 26 17.8 +1.0**
comp=Z,6.2nm,0.8s,baz=224,slow=1.1,SNR=33
SIV PKPab **PKPab 08 26 54.9 +0.5**
comp=Z,19nm,0.9s,baz=206,slow=3.6,SNR=15
SJG San Juan 159.60 41 IAMs_20 IAMs_20 09 48 45.9
comp=Z,178nm,18.0s
BDFB Brasilia 161.20 193 PKP **PKPdf 08 26 20.0 +1.1**
comp=Z,4.3nm,0.7s,baz=180,slow=4.2,SNR=6.7
BDFB PKPab **PKPab 08 27 00.7 -1.5**
comp=Z,4.9nm,0.7s,baz=207,slow=2.4,SNR=7.6
BDFB Brasilia 161.20 193 PKIKP **PKPdf 08 26 19.0 +0.1**
BDFB Brasilia 161.20 193 PKPdf **PKPdf 08 26 19.0 +0.1**
RCBR Riachuelo 161.52 242 PKPab **PKPab 08 27 03.0 -0.8**
comp=Z,10nm,0.9s,baz=94,slow=8.3,SNR=2.5
SAML Samuel 164.07 137 PKIKP **PKPdf 08 26 22.3 +0.6**
SAML Samuel 164.07 137 **PKPdf 08 26 22.3 +0.6**
PTGA Pitinga 171.57 114 PKPab **PKPab 08 27 48.8 +0.6**
comp=Z,6.6nm,0.8s,baz=285,slow=2.8,SNR=7.8

IDC ***04*** *08:27:01.4±0.9, 24°.35N×127°.19E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.6/57, mbtmp3.8/9, ML3.8/2 Error ellipse: s-maj=36.9km s-min=17.2km az=79.0*
JMA ***04*** *08:27:05.3±0.2, 24°.49N×127°.02E, h86km, M3.3*
ISC 04 08:27:02.4±3.6, 24°.32N±0'.06×127°.16E±0'.04, h14km±23km, n32, σ1°.96/55, mb3.6/7, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.66**	**286**	P	**Pn**	**08 27 31.3**	**+0.4**
JOGS				S	**Sn**	**08 27 50.3**	**-1.7**
JMJ2	**Miyako jima3**	**1.72**	**285**	P	**Pn**	**08 27 32.0**	**+0.2**
JMJ2				S	**Sn**	**08 27 51.7**	**-1.9**
JIKM	**Ikemajima**	**1.84**	**290**	P	**Pn**	**08 27 33.7**	**+0.2**
JIKM				S	**Sn**	**08 27 54.7**	**-1.9**
JIRB	**Irabujima**	**1.88**	**286**	P	**Pn**	**08 27 34.0**	**0.0**
JIRB				S	**Sn**	**08 27 54.7**	**-2.8**
JJT3	**Tamagusuku3**	**1.90**	**17**	P	**Pb**	**08 27 35.1**	**-1.8**
JJT3				*e*S	**Sn**	**08 27 57.1**	**-1.1**
JKE	**Kume jima 2**	**2.03**	**351**	P	**Pn**	**08 27 36.1**	**0.0**
JKE				S	**Sn**	**08 27 58.6**	**-2.6**
JTJ	**Tarama**	**2.26**	**279**	P	**Pn**	**08 27 39.4**	**+0.1**
JTJ				*e*S	**Sn**	**08 28 03.7**	**-3.2**
JAGN	**Aguni-jima**	**2.26**	**2**	P	**Pn**	**08 27 39.8**	**+0.5**
JAGN				*e*S	**Sn**	**08 28 05.4**	**-1.6**
JNTH	**Nagotoyohara**	**2.33**	**19**	P	**Pn**	**08 27 40.4**	**+0.2**
JNTH				S	**Sn**	**08 28 05.8**	**-2.8**
JISG	**Ishigakijimahi**	**2.61**	**276**	P	**Pn**	**08 27 44.2**	**+0.1**
JISG				*e*S	**Sn**	**08 28 12.5**	**-3.0**
JOW	**Kunigami**	**2.70**	**22**	Pn	**Pn**	**08 27 45.9**	**+0.6**
	12nm,0.3s,baz=127,slow=18,SNR=59						
JOW				Sn	**Sn**	**08 28 15.7**	**-2.1**
	20nm,0.3s,baz=113,slow=26,SNR=8.7						
JOW	**Kunigami**	**2.70**	**22**	P	**Pn**	**08 27 45.3**	**0.0**
JOW				*e*S	**Sn**	**08 28 15.4**	**-2.4**
JIJ	**Ishigaki jima**	**2.75**	**272**	P	**Pn**	**08 27 46.0**	**0.0**
JIJ				S	**Sn**	**08 28 14.3**	**-4.8**
JIH	**Iheya**	**2.80**	**15**	P	**Pn**	**08 27 47.7**	**+1.0**
JIH				*e*S	**Sn**	**08 28 19.7**	**-0.6**
JKRS	**Kuro-shima**	**2.88**	**269**	P	**Pn**	**08 27 48.0**	**+0.3**
JKRS				*e*S	**Sn**	**08 28 19.4**	**-2.7**
JYRO	**Yoronjima**	**2.94**	**23**	P	**Pn**	**08 27 49.5**	**+0.9**
JYRO				S	**Sn**	**08 28 22.5**	**-1.1**
IRIF	**Iriomote-Funau**	**3.13**	**271**	P	**Pn**	**08 27 50.9**	**-0.3**
IRIF				*e*S	**Sn**	**08 28 26.2**	**-2.1**
JOKE	**Okinoerabujima**	**3.29**	**22**	P	**Pn**	**08 27 54.6**	**+1.2**
JOKE				*e*S	**Sn**	**08 28 31.9**	**-0.4**
JTK	**Tokunoshima**	**3.81**	**25**	P	**Pn**	**08 28 01.4**	**+0.8**
JTK				*e*S	**Sn**	**08 28 42.8**	**-2.4**
JMZ	**Minamidaito 2**	**3.98**	**67**	P	**Pn**	**08 28 03.3**	**+0.4**
JMZ				*e*S	**Sn**	**08 28 44.1**	**-5.2**
JKDJ	**Kitadaitoujima**	**4.09**	**66**	P	**Pn**	**08 28 04.3**	**-0.1**
JKDJ				S	**Sn**	**08 28 48.3**	**-3.7**
JAMN	**Amaminishikomi**	**4.31**	**24**	P	**Pn**	**08 28 08.1**	**+0.7**
JAMN				*e*S	**Sn**	**08 28 55.0**	**-2.5**
JAM	**Amami Oshima**	**4.63**	**28**	P	**Pn**	**08 28 12.5**	**+0.6**
JAM				*e*S	**Sn**	**08 29 01.3**	**-4.1**
JTAJ	**Takarajima**	**5.15**	**20**	P	**Pn**	**08 28 20.0**	**+1.0**
JNU	**Nakatsue**	**9.36**	**20**	Pn	**Pn**	**08 29 17.4**	**+0.6**
	1.9nm,0.3s,baz=323,slow=2.3,SNR=11						
MKAR	**Makanchi Array**	**42.12**	**314**	P	**P**	**08 34 56.3**	**+2.3**
	0.3nm,0.4s,baz=97,slow=12,SNR=10						
ZALV	**Zalesovo Beam**	**43.20**	**324**	P	**P**	**08 35 03.5**	**+0.8**
	0.4nm,0.4s,baz=115,slow=5.5,SNR=1.6						
WRA	**Warramunga Arr**	**44.55**	**170**	P	**P**	**08 35 15.3**	**+1.5**
	2.1nm,0.7s,baz=351,slow=8.6,SNR=16						
KURBB	**Kurchatov Arra**	**45.59**	**318**	P	**P**	**08 35 22.8**	**+1.0**
	0.2nm,0.3s,baz=104,slow=8.7,SNR=4.7						
ASAR	**Alice Springs**	**48.15**	**172**	P	**P**	**08 35 43.3**	**+1.2**
	0.7nm,0.8s,baz=356,slow=14,SNR=17						
NRIK	**Noril'sk**	**50.78**	**343**	P	**P**	**08 36 01.5**	**-0.1**
	2.5nm,0.6s,baz=192,slow=4.9,SNR=8.8						
YKA	**Yellowknife Ar**	**80.66**	**24**	P	**P**	**08 39 16.3**	**+1.8**
	0.1nm,0.5s,baz=307,slow=4.9,SNR=1.5						

NNC ***04*** *08:28:43.5±2.7, 36°.38N×68°.52E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=28.5km s-min=18.5km az=144.0*
ISC 04 08:28:39.5±3.1, 36°.1N±0'.2×68°.5E±0'.1, h10km, n12, σ0°.93/14, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**7.20**	**12**	⇓P	**Pn**	**08 30 26.6**	**+1.7**
	1.9nm,0.5s,baz=198,slow=16,SNR=28						
KK31				S	**Sn**	**08 31 46.0**	**-0.8**
	1.4nm,0.3s,baz=189,slow=23,SNR=4.0						
AML	**Almayashu**	**7.29**	**32**	P	**Pn**	**08 30 27.2**	**+0.7**
	SNR=36						
UCH	**Uchtor**	**7.74**	**36**	P	**Pn**	**08 30 33.1**	**+0.5**
	SNR=28						
AAK	**Ala-Archa**	**8.05**	**34**	P	**Pn**	**08 30 37.2**	**+0.5**
	SNR=15						
AAK	**Ala-Archa**	**8.05**	**34**	⇑P	**Pn**	**08 30 37.2**	**+0.5**
	8.3nm,0.5s						
AAK				⇑S	**Sn**	**08 32 07.8**	**-0.1**
	3.4nm,0.7s						
KBK	**Karagaybulak**	**8.28**	**35**	P	**Pn**	**08 30 41.4**	**+1.6**
	SNR=5.2						
CHMS	**Chumysh**	**8.46**	**33**	P	**Pn**	**08 30 43.0**	**+0.9**
	SNR=5.2						
USP	**Ospenovka**	**8.56**	**31**	P	**Pn**	**08 30 43.5**	**-0.1**
	SNR=6.4						
ULHL	**Ulahol**	**8.63**	**42**	P	**Pn**	**08 30 45.3**	**+0.6**
	SNR=8.3						
AB31	**Akbulak array**	**14.58**	**337**	P	**Pn**	**08 32 05.8**	**0.0**
	0.4nm,0.3s,baz=156,slow=12,SNR=16						
AKTO	**Aktyubinsk**	**16.23**	**335**	⇓P	**P**	**08 32 30.0**	**-0.6**
	1.9nm,0.8s						
KURBB	**Kurchatov Arra**	**16.27**	**23**	⇑P	**P**	**08 32 30.1**	**-0.9**
	1.7nm,0.6s						

ANF ***04*** *08:35:29.8±0.4, 36°.32N×97°.53W, h6km±3km, ML4.5/26, Error ellipse: s-maj=2.6km s-min=2.2km az=106.0*
IDC ***04*** *08:35:30.0±1.7, 36°.38N×97°.57W, h0km, mb3.5/1, mb1 3.7/5, mb1mx3.4/52, mbtmp3.4/5, ML3.4/4, Error ellipse: s-maj=24.2km s-min=11.6km az=105.0*
TUL ***04*** *08:35:30±1.0, 36°.33N±0'.01×97°.53W±0'.02, h6km±7km, ML3.7, mb_Lg3.7/136(NEIC), Mwr3.4/37(NEIC), Error ellipse: s-maj=2.7km s-min=1.7km az=65.0*
NEIC ***04*** *08:35:30, 36°.33N×97°.52W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.28; $M_{\theta\theta}$=0.89; $M_{\phi\phi}$=-0.61; $M_{r\theta}$=0.10; $M_{r\phi}$=-1.19; $M_{\theta\phi}$=-0.10; Fault plane solution: $M_0$1.44000×10^{14} NP1:φ_0=164.01000°, δ=88.51000°, λ=4.65000°. NP2:φ_0=73.89000°, δ=85.35000°, λ=178.51000°. Principal axes: T 1.5577, Plg4.0000°, Azm29.0000°; N -0.2895, Plg85.0000°, Azm182.0000°; P -1.2682, Plg2.0000°, Azm299.0000°;*
NEIC ***04*** *08:35:30.0±1.0, 36°.33N±0'.01×97°.52W±0'.02, h4km±8km Error ellipse: s-maj=2.8km s-min=1.7km az=67.0*
ISC 04 08:35:29.9±1.0, 36°.33N±0'.02×97°.53W±0'.02, h8km±8km, n154, σ0°.84/157, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.41**	**296**		**Pg**	**08 35 38.2**	**+0.4**
CROK				Sg	**Sg**	**08 35 43.1**	**-0.1**
OK029	**Liberty Lake**	**0.53**	**173**		**Pg**	**08

OK031 Sg **Sg** **08 35 52.0 +0.3**
QUOK Quay **0.68 103** **Pg** **08 35 43.2 +0.1**
QUOK Sg **Sg** **08 35 51.5 -0.4**
KAN13 South Haven SW **0.69 3** **Pg** **08 35 43.3 +0.2**
KAN13 Sg **Sg** **08 35 52.0 0.0**
KAN14 Manchester OK **0.72 331** **Pg** **08 35 43.8 +0.1**
KAN14 Sg **Sg** **08 35 53.2 +0.1**
OK030 Cody Creek RV **0.72 123** **Pg** **08 35 43.9 +0.1**
OK030 Sg **Sg** **08 35 54.2 +0.9**
OK032 Salt Plains WL **0.72 311** **Pg** **08 35 43.9 0.0**
OK032 Sg **Sg** **08 35 53.7 +0.4**
OK009 Oakdale Elemen **0.75 173** **Pb** **08 35 45.2 0.0**
OK025 Westminster Rd **0.76 168** **Pg** **08 35 44.6 +0.1**
OK025 Sg **Sg** **08 35 55.0 +0.5**
KAN09 Caldwell North **0.81 355** **Pg** **08 35 45.5 0.0**
KAN09 Sg **Sg** **08 35 56.2 +0.2**
KAN05 Bluff City Nor **0.83 341** **Pg** **08 35 45.8 0.0**
KAN05 Sg **Sg** **08 35 56.9 +0.3**
KAN01 Argonia South **0.84 347** **Pg** **08 35 46.2 +0.1**
KAN01 Sg **Sg** **08 35 57.6 +0.4**
OKCFA Oklahoma City **0.91 176** **Pg** **08 35 47.3 -0.2**
OKCFA Sg **Sg** **08 35 59.6 +0.3**
OKCFA Oklahoma City **0.91 176** P **Pg** **08 35 47.3 -0.2**
baz=356,SNR=43
OKCFA S **Sg** **08 35 59.7 +0.4**
baz=356
OKCFA Oklahoma City **0.91 176** P 08 35 47.3
baz=356,SNR=43
OKCFA S 08 35 59.7
baz=356
KAN10 Anthony SW Sta **0.92 330** **Pg** **08 35 47.4 -0.1**
KAN10 Sg **Sg** **08 35 59.5 +0.1**
OKCSW OKLAHOMA CITY **0.92 175** **Pg** **08 35 47.4 -0.2**
OKCSW Sg **Sg** **08 36 00.2 +0.6**
KAN08 Anthony NE Sta **0.96 339** **Pg** **08 35 48.3 -0.1**
KAN08 Sg **Sg** **08 36 01.2 +0.3**
T35A Sooner Cattle **1.01 54** **Pg** **08 35 48.8 -0.5**
T35B Sooner Cattle **1.01 54** P **Pg** **08 35 49.0 -0.2**
baz=235,SNR=685
T35B S **Sg** **08 36 02.3 0.0**
baz=235
T35B Sooner Cattle **1.01 54** P 08 35 49.0
baz=235,SNR=685
T35B S 08 36 02.3
baz=235
KAN12 Harper NE Stat **1.04 339** **Pg** **08 35 49.6 -0.2**
KAN12 Sg **Sg** **08 36 03.7 +0.4**
FNO Franklin **1.07 174** **Pg** **08 35 50.7 +0.2**
FNO Sg **Sb** **08 36 05.2 +0.3**
U32A Winter Ranch, **1.19 273** **Pg** **08 35 52.0 -0.7**
U32A Sg **Sg** **08 36 08.5 +0.3**
U32A Winter Ranch, **1.19 273** P **Pg** **08 35 52.0 -0.7**
baz=92,SNR=138
U32A S **Sg** **08 36 08.3 +0.2**
baz=92
U32A Winter Ranch, **1.19 273** P 08 35 52.0
baz=92,SNR=138
U32A S 08 36 08.3
baz=92
TUL1 Leonard **1.47 106** P **Pn** **08 35 56.4 -0.2**
baz=287,SNR=600
TUL1 S **Sn** **08 36 16.5 +0.4**
baz=287
TUL1 Leonard **1.47 106** P 08 35 56.4
baz=287,SNR=265
TUL1 S 08 36 16.6
baz=287
TUL1 Leonard **1.47 106** P 08 35 56.4
baz=287,SNR=600
TUL1 S 08 36 16.5
baz=287
X34A Smith Ranch, M **1.74 188** Pn **Pb** **08 36 01.7 -0.4**
X34A lAmb_Lg 08 36 29.0
comp=Z,605nm,0.8s
WMOK Wichita Mounta **1.89 213** **Pn** **08 36 03.0 +0.5**
WMOK lAmb_Lg 08 36 30.8
comp=Z,242nm,0.7s
WMOK Wichita Mounta **1.89 213** P **Pn** **08 36 03.1 +0.7**
baz=32,SNR=624
WMOK Wichita Mounta **1.89 213** P 08 36 03.0
baz=32,SNR=351
WMOK S 08 36 28.9
baz=32
WMOK Wichita Mounta **1.89 213** P 08 36 03.1
baz=32,SNR=624
R32A Long Quarter, **2.29 336** **Pn** **08 36 09.4 +1.3**
R32A Long Quarter, **2.29 336** P **Pn** **08 36 08.7 +0.6**
baz=155,SNR=84
R32A S **Sn** **08 36 37.5 +1.0**
baz=155
R32A Long Quarter, **2.29 336** P 08 36 08.7
baz=155,SNR=84
R32A S 08 36 37.5
baz=155
X37A Clayton **2.47 134** **Pn** **08 36 11.5 +1.0**
X37A Clayton **2.47 134** P **Pn** **08 36 11.5 +1.0**
baz=315,SNR=300
X37A Clayton **2.47 134** P 08 36 11.5
baz=315,SNR=300
U38A Gravette **2.54 87** **Pn** **08 36 12.4 +0.9**
U38A Gravette **2.54 87** P **Pn** **08 36 12.1 +0.7**
baz=268,SNR=103
U38A Gravette **2.54 87** P 08 36 12.1
baz=268,SNR=103
KSU1 Kansas State U **2.86 14** **Pn** **08 36 16.9 +1.0**
KSU1 Kansas State U **2.86 14** P **Pn** **08 36 16.7 +0.9**
baz=195
KSU1 Kansas State U **2.86 14** P 08 36 16.8
baz=195,SNR=25
KSU1 Kansas State U **2.86 14** P 08 36 16.7
baz=195
HHAR Hobbs **2.90 90** **Pn** **08 36 17.1 +0.7**
Z35A Perchaven, San **3.00 176** **Pn** **08 36 18.6 +0.9**
Z35A Perchaven, San **3.00 176** P **Pn** **08 36 18.8 +1.1**
baz=356,SNR=22
Z35A S **Sn** **08 36 55.4 +1.6**
baz=356
Z35A Perchaven, San **3.00 176** P 08 36 18.8
baz=356,SNR=22
Z35A S 08 36 55.4
baz=356
CBKS Cedar Bluff **3.04 325** **Pn** **08 36 19.0 +0.7**
CBKS Cedar Bluff **3.04 325** P **Pn** **08 36 18.7 +0.4**
baz=144,SNR=25
CBKS Cedar Bluff **3.04 325** P 08 36 18.7
baz=144,SNR=18
CBKS S 08 36 55.8
baz=144
CBKS Cedar Bluff **3.04 325** P 08 36 18.7
baz=144,SNR=25
W39A Magazine **3.25 109** **Pn** **08 36 21.9 +0.8**
W39A lAmb_Lg 08 37 20.7
comp=Z,240nm,0.7s
W39A Magazine **3.25 109** P **Pn** **08 36 21.5 +0.4**
baz=292,SNR=18
W39A Magazine **3.25 109** P 08 36 21.6
baz=292,SNR=14
W39A Magazine **3.25 109** P 08 36 21.5
baz=292,SNR=18
S39A Bolivar **3.63 67** **Pn** **08 36 26.2 -0.2**
S39A lAmb_Lg 08 37 31.0
comp=Z,255nm,0.9s
S39A Bolivar **3.63 67** P **Pn** **08 36 27.2 +0.8**
baz=249,SNR=55
S39A Bolivar **3.63 67** P 08 36 27.2
baz=249,SNR=55
AMTX Amarillo **3.68 248** **Pn** **08 36 28.4 +1.3**
AMTX Amarillo **3.68 248** P **Pn** **08 36 28.3 +1.2**
baz=66,SNR=10
AMTX Amarillo **3.68 248** P 08 36 28.3
baz=66
AMTX Sn 08 37 13.0
baz=66
AMTX Sb 08 37 23.2
baz=66
AMTX Amarillo **3.68 248** P 08 36 28.3
baz=66,SNR=10
MIAR Mount Ida **3.69 118** **Pn** **08 36 27.8 +0.6**
MIAR Mount Ida **3.69 118** P **Pn** **08 36 28.2 +1.0**
baz=300,SNR=96
MIAR Mount Ida **3.69 118** P 08 36 28.2
baz=300,SNR=25
MIAR S 08 37 11.7
baz=300
MIAR Mount Ida **3.69 118** P 08 36 28.2
baz=300,SNR=96

Z38A Mt. Pleasant **3.71 145** **Pn** **08 36 27.9 +0.4**
Z38A lAmb_Lg 08 37 33.4
comp=Z,325nm,1.0s
Z38A Mt. Pleasant **3.71 145** P **Pn** **08 36 28.2 +0.7**
baz=326
Z38A Mt. Pleasant **3.71 145** P 08 36 28.2
baz=326
U40A Yellville **3.77 88** **Pn** **08 36 28.2 -0.2**
U40A lAmb_Lg 08 37 31.7
comp=Z,230nm,0.8s
U40A Yellville **3.77 88** P **Pn** **08 36 28.3 -0.1**
baz=271,SNR=57
U40A Yellville **3.77 88** P 08 36 28.3
baz=271,SNR=12
U40A S 08 37 12.7
baz=271
U40A Yellville **3.77 88** P 08 36 28.3
baz=271,SNR=57
U40A P 08 36 28.3
baz=271,SNR=57
ABTX Abilene, Hawle **4.09 206** **Pn** **08 36 33.5 +0.8**
ABTX Abilene, Hawle **4.09 206** P **Pn** **08 36 33.1 +0.4**
baz=25
ABTX Abilene, Hawle **4.09 206** P 08 36 33.4
baz=25,SNR=21
ABTX Abilene, Hawle **4.09 206** P 08 36 33.1
baz=25
X40A Basin Creek Fa **4.25 114** **Pn** **08 36 35.8 +0.8**
X40A lAmb_Lg 08 37 46.3
comp=Z,125nm,1.0s
X40A Basin Creek Fa **4.25 114** P **Pn** **08 36 36.1 +1.1**
baz=297,SNR=7.7
X40A Basin Creek Fa **4.25 114** P 08 36 36.2
baz=297,SNR=5.6
X40A Basin Creek Fa **4.25 114** P 08 36 36.1
baz=297,SNR=7.7
X40A P 08 36 36.1
baz=297,SNR=7.7
MGMO Mountain Grove **4.30 77** **Pn** **08 36 36.7 +1.0**
MGMO lAmb_Lg 08 37 56.6
comp=Z,154nm,0.7s
WHTX Lake Whitney, **4.33 179** P 08 36 36.4
baz=359
WHTX S 08 37 26.6
baz=359
WHTX Lake Whitney, **4.33 179** P 08 36 36.4
baz=359,SNR=32
WHTX S 08 37 26.6
baz=359
WHTX Lake Whitney, **4.33 179** **Pn** **08 36 36.5 +0.5**
WHTX Lake Whitney, **4.33 179** P **Pn** **08 36 36.4 +0.4**
baz=359,SNR=32
WHTX S **Sn** **08 37 26.6 0.0**
baz=359
WHAR Wooly Hollow **4.38 102** **Pn** **08 36 37.6 +0.9**
WHAR lAmb_Lg 08 37 50.4
comp=Z,122nm,0.9s
FCAR Ozark Folk Cen **4.40 94** **Pn** **08 36 37.0 0.0**
FCAR lAmb_Lg 08 37 50.7
comp=Z,124nm,0.9s
N33A J Bar K, Exete **4.40 1** lAmb_Lg 08 38 00.9
comp=Z,148nm,0.8s
W41B Gary Mavity, V **4.45 103** P **Pn** **08 36 37.5 -0.2**
baz=287,SNR=52
W41B Gary Mavity, V **4.45 103** P 08 36 37.3
baz=287,SNR=9.0
W41B S 08 37 30.0
baz=287
W41B Gary Mavity, V **4.45 103** P 08 36 37.5
baz=287,SNR=52
WLAR White Oak Lake **4.48 125** **Pn** **08 36 38.5 +0.4**
WLAR lAmb_Lg 08 37 53.3
comp=Z,107nm,1.1s
237A Washetta, Mont **4.55 161** lAmb_Lg 08 38 03.4
comp=Z,96nm,0.9s
237A Washetta, Mont **4.55 161** P **Pn** **08 36 39.6 +0.6**
baz=342,SNR=6.3
237A S **Sn** **08 37 31.2 -0.8**
baz=342
237A Washetta, Mont **4.55 161** P 08 36 39.6
baz=342,SNR=6.3
237A S 08 37 31.2
baz=342
P38A Dawn **4.56 43** **Pn** **08 36 39.2 0.0**
P38A lAmb_Lg 08 38 01.7
comp=Z,91nm,0.7s
P38A Dawn **4.56 43** P **Pn** **08 36 39.3 +0.1**
baz=225,SNR=19
P38A Dawn **4.56 43** P 08 36 39.3
baz=225,SNR=19
R40A Maddies Statio **4.63 63** **Pn** **08 36 40.8 +0.7**
R40A Maddies Statio **4.63 63** P **Pn** **08 36 40.7 +0.5**
baz=246,SNR=44
R40A Maddies Statio **4.63 63** P 08 36 40.7
baz=246,SNR=44
N35A Tabor **4.76 18** **Pn** **08 36 41.8 -0.2**
N35A lAmb_Lg 08 38 10.9
comp=Z,236nm,0.7s
N35A Tabor **4.76 18** P **Pn** **08 36 42.2 +0.2**
baz=199,SNR=9.0
N35A Tabor **4.76 18** P 08 36 42.2
baz=199,SNR=9.0
KSCO Kaye Shedlock' **4.85 305** **Pn** **08 36 43.2 -0.1**
KSCO lAmb_Lg 08 38 18.2
comp=Z,96nm,0.8s
KSCO Kaye Shedlock' **4.85 305** P 08 36 44.1
baz=122
MSTX Muleshoe **4.90 243** **Pn** **08 36 43.9 -0.1**
MSTX Muleshoe **4.90 243** P 08 36 44.9
baz=60,SNR=9.7
Z41A Richland Creek **4.95 127** P **Pn** **08 36 44.7 +0.2**
baz=310,SNR=7.4
Z41A Richland Creek **4.95 127** P 08 36 44.7
baz=310,SNR=8.6
Z41A S 08 37 41.1
baz=310
Z41A Richland Creek **4.95 127** P 08 36 44.7
baz=310,SNR=7.4
Z41A P 08 36 44.7
baz=310,SNR=7.4
BGNE Belgrade **5.10 355** P 08 36 47.0
baz=174
BGNE S 08 37 43.8
baz=174
NATX Nacogdoches **5.14 152** **Pn** **08 36 47.2 +0.1**
NATX lAmb_Lg 08 38 22.0
comp=Z,114nm,0.8s
LCAR Lake Charles **5.16 91** lAmb_Lg 08 38 16.8
comp=Z,120nm,0.9s
CCAR Cane Creek **5.30 115** lAmb_Lg 08 38 25.2
comp=Z,98nm,0.9s
CCM Cathedral Cave **5.31 69** **Pn** **08 36 49.6 +0.2**
CCM lAmb_Lg 08 38 20.2
comp=Z,152nm,0.7s
CCM Cathedral Cave **5.31 69** P **Pn** **08 36 49.4 0.0**
baz=253,SNR=10
CCM Cathedral Cave **5.31 69** P 08 36 50.0
baz=253
CCM Cathedral Cave **5.31 69** P 08 36 49.4
baz=253,SNR=10
P40A Paris **5.38 52** **Pn** **08 36 50.9 +0.4**
P40A lAmb_Lg 08 38 29.3
comp=Z,93nm,0.7s
435B Jarrell **5.53 180** **Pn** **08 36 53.1 +0.5**
435B lAmb_Lg 08 38 31.7
comp=Z,139nm,0.9s
435B Jarrell **5.53 180** P **Pn** **08 36 52.9 +0.3**
baz=0.5,SNR=13
435B S **Sn** **08 37 55.0 -1.4**
baz=0.5
435B Jarrell **5.53 180** P 08 36 52.8
baz=0.5,SNR=7.0
435B S 08 37 54.8
baz=0.5
435B Jarrell **5.53 180** P 08 36 52.9
baz=0.5,SNR=13
435B S 08 37 55.0
baz=0.5
N38A Joes South For **5.58 36** **Pn** **08 36 53.7 +0.5**
N38A lAmb_Lg 08 38 40.9
comp=Z,142nm,0.7s
N38A Joes South For **5.58 36** P **Pn** **08 36 52.9 -0.4**
baz=218,SNR=9.2
N38A Joes South For **5.58 36** P 08 36 52.9
baz=218,SNR=9.2
T25A Trinidad **5.59 280** **Pn** **08 36 52.7 -0.8**
PBMO Poplar Bluff **5.73 83** lAmb_Lg 08 38 30.7

comp=Z,161nm,0.9s
OGNE Ogallala **5.80 324** **Pn** **08 36 57.0 +0.7**
OGNE lAmb_Lg 08 38 42.3
comp=Z,104nm,0.7s
OGNE Ogallala **5.80 324** P **Pn** **08 36 57.3 +0.9**
baz=141
OGNE Ogallala **5.80 324** P 08 36 57.3
baz=141
OGNE Ogallala **5.80 324** P 08 36 57.3
baz=141
LPAR Lepanto **5.91 95** lAmb_Lg 08 38 44.6
comp=Z,160nm,0.7s
FVM French Village **5.91 72** lAmb_Lg 08 38 36.1
comp=Z,186nm,0.9s
JCT Junction City **6.13 199** **Pn** **08 37 00.8 -0.1**
JCT lAmb_Lg 08 38 52.6
comp=Z,143nm,0.9s
JCT Junction City **6.13 199** P **Pn** **08 37 00.2 -0.6**
baz=17,SNR=10.0
JCT Junction City **6.13 199** P 08 37 00.4
baz=17
JCT Junction City **6.13 199** P 08 37 00.2
baz=17,SNR=10.0
143A Socs Landing, **6.22 124** **Pn** **08 37 01.1 -0.8**
143A lAmb_Lg 08 39 02.8
comp=Z,68nm,0.9s
MET Memphis--Engin **6.29 99** lAmb_Lg 08 38 57.7
comp=Z,173nm,1.0s
PVMO Portageville **6.32 87** lAmb_Lg 08 38 54.6
comp=Z,205nm,0.8s
SCIA State Center **6.50 30** **Pn** **08 37 06.3 +0.5**
SCIA lAmb_Lg 08 39 07.2
comp=Z,114nm,0.8s
SCIA State Center **6.50 30** P 08 37 05.9
baz=212
SCIA S 08 38 17.7
baz=212
SDCO Great Sand Dun **6.53 285** P 08 37 07.9
baz=100
SDCO Sb 08 38 52.7
baz=100
Q24A Divide **6.59 296** P 08 37 07.9
baz=111
S44A Carbondale **6.76 76** **Pn** **08 37 08.8 -0.5**
SIUC Southern Illin **6.79 76** **Pn** **08 37 09.5 -0.4**
N41A Harden Midland **6.82 48** **Pn** **08 37 11.1 +0.9**
OXF Oxford **6.87 103** lAmb_Lg 08 39 16.8
comp=Z,90nm,0.8s
W45A Hickory Valley **6.88 97** lAmb_Lg 08 39 18.0
comp=Z,156nm,1.0s
Y45A Yeager Farm, C **6.99 108** Pn **Pn** **08 37 13.2 +0.6**
Y45A lAmb_Lg 08 39 25.1
comp=Z,128nm,1.1s
P43A Skaggs, Pawnee **7.14 60** **Pn** **08 37 16.3 +1.7**
P43A lAmb_Lg 08 39 17.0
comp=Z,168nm,0.8s
Q44A Meyer Farm, Va **7.23 67** Pn **Pn** **08 37 15.7 -0.1**
ISCO Idaho Springs **7.26 301** **Pn** **08 37 17.1 +0.6**
ISCO Idaho Springs **7.26 301** P 08 37 17.5
baz=116
K38A Parkersburg **7.30 29** **Pn** **08 37 15.2 -1.6**
K38A lAmb_Lg 08 39 34.9
comp=Z,111nm,1.0s
ANMO Albuquerque **7.40 262** Pn **Pn** **08 37 22.2 +3.8**
comp=Z,0.1nm,0.3s,baz=92,slow=17,SNR=2.1
ANMO Pg Pb 08 37 45.2 +6.5
comp=Z,0.8nm,0.3s,baz=86,slow=16,SNR=12
ANMO Lg Lg 08 39 20.3
comp=Z,6.8nm,0.3s,baz=149,slow=11,SNR=11
ANMO Albuquerque **7.40 262** **Pn** **08 37 20.4 +2.1**
ECSD EROS Data Cent **7.43 5** **Pn** **08 37 18.5 -0.1**
ECSD EROS Data Cent **7.43 5** P 08 37 19.1
baz=186,SNR=5.4
ECSD S 08 38 39.5
baz=186
L40A Anamosa **7.53 39** **Pn** **08 37 19.0 -1.0**
L40A lAmb_Lg 08 39 30.3
comp=Z,94nm,0.8s
HDIL Hopedale **7.72 54** **Pn** **08 37 22.8 +0.3**
HDIL Hopedale **7.72 54** P 08 37 23.4
baz=239,SNR=8.0
HDIL S 08 38 45.3
baz=239
BNM Barren Site **7.75 256** **Pn** **08 37 25.1 +1.7**
OLIL Olney **7.87 69** **Pn** **08 37 26.0 +1.4**
PHWY Pilot Hill **7.93 311** **Pn** **08 37 25.7 -0.1**
MNTX Cornudas Mount **7.99 237** **Pn** **08 37 26.6 +0.3**
SMCO Snowmass **8.00 294** **Pn** **08 37 26.7 -0.1**
N23A Red Feather La **8.01 307** P 08 37 27.8
baz=122
USIN University of **8.04 75** lAmb_Lg 08 39 57.4
comp=Z,114nm,0.8s
O44A Mansfield **8.09 59** **Pn** **08 37 27.2 -0.4**
O44A lAmb_Lg 08 39 55.2
comp=Z,124nm,0.7s
SUSD Miller **8.18 353** lAmb_Lg 08 40 10.2
comp=Z,114nm,1.0s
SUSD Miller **8.18 353** S 08 38 56.7
baz=172
I37A Lemond, Waseca **8.30 21** **Pn** **08 37 29.3 -1.2**
I37A lAmb_Lg 08 40 00.7
comp=Z,53nm,0.8s
L42A Oliver, Polo **8.33 45** **Pn** **08 37 29.1 -1.9**
L42A lAmb_Lg 08 39 54.3
comp=Z,68nm,0.8s
JFWS Jewell Farm **8.65 38** **Pn** **08 37 34.6 -0.7**
JFWS lAmb_Lg 08 40 20.3
comp=Z,48nm,0.7s
JFWS Jewell Farm **8.65 38** P **Pn** **08 37 34.3 -1.0**
baz=223,SNR=15
JFWS Jewell Farm **8.65 38** P 08 37 34.5
baz=223,SNR=7.2
JFWS S 08 39 08.0
baz=223
JFWS Jewell Farm **8.65 38** P 08 37 34.3
baz=223,SNR=15
TX31 Lajitas Ar. Si **8.68 218** **Pn** **08 37 34.8 -1.0**
TX32 Lajitas Array **8.68 218** **Pn** **08 37 35.0 -0.8**
TXAR Lajitas Array **8.68 218** Pn **Pn** **08 37 35.1 -0.7**
comp=Z,0.7nm,0.3s,baz=36,slow=11,SNR=23
TXAR Pg Pg 08 38 04.2 -12
comp=Z,1.7nm,0.3s,baz=47,slow=16,SNR=8.1
TXAR Lg Lg 08 40 01.0
comp=Z,2.7nm,0.3s,baz=51,slow=23,SNR=5.4
V48A Smith Brothers **8.69 91** lAmb_Lg 08 40 02.0
comp=Z,41nm,0.8s
M44A Midewin, Midew **8.96 53** lAmb_Lg 08 40 12.8
comp=Z,86nm,0.8s
CLTN Cedars of Leba **9.05 88** lAmb_Lg 08 40 16.8
comp=Z,66nm,1.3s
SFIN Lafayette **9.14 61** lAmb_Lg 08 40 16.7
comp=Z,117nm,0.8s
WCI Wyandotte Cave **9.15 75** lAmb_Lg 08 40 21.6
comp=Z,111nm,0.8s
WCI Wyandotte Cave **9.15 75** S 08 39 22.0
baz=262
BLO Bloomington **9.17 69** **Pn** **08 37 43.9 +1.4**
I40A Norwalk **9.22 33** lAmb_Lg 08 40 37.2
comp=Z,35nm,1.0s
RSSD Black Hills **9.23 329** **Pn** **08 37 44.2 +0.7**
RSSD lAmb_Lg 08 40 30.1
comp=Z,44nm,0.9s
LRAL Lakeview Retre **9.27 108** P 08 37 42.2
baz=294
121A Cookes Peak, D **9.28 249** lAmb_Lg 08 40 31.2
comp=Z,58nm,1.1s
HQIL Hanson Quary C **9.30 51** lAmb_Lg 08 40 29.0
comp=Z,114nm,1.1s
K22A Casper **9.39 315** lAmb_Lg 08 40 42.3
comp=Z,50nm,0.9s
U49A Red Boiling Sp **9.47 85** lAmb_Lg 08 40 38.9
comp=Z,38nm,0.9s
K43A Burlington **9.54 45** lAmb_Lg 08 40 44.0
comp=Z,54nm,0.8s
F33A 5 Mile Ranch, **9.55 5** **Pn** **08 37 46.6 -1.0**
SPMN Marine on St. **9.58 20** **Pn** **08 37 46.4 -1.6**
SPMN Marine on St. **9.58 20** P 08 37 46.8
baz=204
SPMN S 08 39 31.6
baz=204
F36A Milaca **9.99 16** **Pn** **08 37 51.6 -2.0**
F36A lAmb_Lg 08 40 52.4
comp=Z,37nm,1.3s
W50A Signal Mountai **9.99 93** lAmb_Lg 08 40 54.6
comp=Z,53nm,0.7s
TKL Tuckaleechee C **11.17 89** Lg Lg 08 41 15.3
comp=Z,1.0nm,0.3s,baz=185,slow=19,SNR=6.1

PDAR	**Pinedale Array**	**11.29**	**308**	Pn	**Pn**	**08 38 11.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=126,slow=15,SNR=2.3						
PDAR				Pg		08 38 54.6	
	comp=Z,0.4nm,0.3s,baz=119,slow=17,SNR=4.0						
PDAR				Lg	Lg	08 41 22.6	
	comp=Z,1.0nm,0.3s,baz=104,slow=34,SNR=7.6						
AGMN	**Agassiz Nation**	**12.03**	**5**	Pn	**Pn**	**08 38 18.8**	**-2.8**
B35A	**Bob, Littlefor**	**12.35**	**12**		**Pn**	**08 38 23.3**	**-2.6**
ULM	**Lac du Bonnet**	**13.97**	**4**	Pn	Pn	08 38 43.4	-4.6
	comp=Z,0.3nm,0.3s,baz=185,slow=10,SNR=2.4						
ULM				Sn	Sn	08 41 09.7	-13
	comp=Z,0.4nm,0.3s,baz=95,slow=17,SNR=2.2						
ULM				Lg	Lg	08 42 42.2	
	comp=Z,0.4nm,0.3s,baz=101,slow=18,SNR=4.1						
NVAR	**Mina Array Bea**	**16.64**	**283**	Pn	**P**	**08 39 26.3**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=102,slow=17,SNR=2.1						
ILAR	**Eielson Array**	**40.68**	**330**	P	**P**	**08 43 12.2**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=110,slow=6.8,SNR=7.0						

IDC 04 08:59:36.1±3.7, 28°50S×178°16W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.4/22, mbtmp3.4/2, Error ellipse: s-maj=480.1km s-min=96.6km az=165.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.10**	**265**	P	P	09 07 38.0	-0.3
	0.3nm,0.9s,baz=105,slow=7.5,SNR=1.8						
WRA	**Warramunga Arr**	**43.92**	**270**	P	P	09 07 45.0	0.0
	0.4nm,0.4s,baz=107,slow=8.1,SNR=6.6						
FINES	**FINESS Array B**	**143.32**	**341**	PKP	PKPdf	09 19 11.2	-0.6
	1.0nm,0.7s,baz=38,slow=3.4,SNR=6.7						

IDC 04 09:18:55.2±3.7, 53°54N×90°80E, h0km, mb1 2.9/3, mb1mx2.8/67, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=32.8km s-min=25.9km az=30.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.57**	**279**	*i*		09 41 20.0	
	baz=90,slow=319,SNR=1.0						
ZALV	**Zalesovo Beam**	**3.57**	**279**	Pn	Pn	09 19 53.7	+1.8
	0.4nm,0.3s,baz=95,slow=16,SNR=9.6						
ZALV				Lg	Lg	09 20 47.1	
	1.1nm,0.3s,baz=93,slow=25,SNR=7.8						
TLY	**Talaya**	**8.04**	**98**	Lg	Lg	09 23 08.6	
	0.0nm,0.3s,baz=86,slow=23,SNR=6.6						
KURBB	**Kurchatov Arra**	**8.10**	**254**	Pn	Pn	09 20 53.2	-0.8
	0.0nm,0.3s,baz=65,slow=15,SNR=4.9						
KURBB				Sn	Sn	09 22 25.6	-0.7
	0.0nm,0.3s,baz=68,slow=27,SNR=13						
KURBB				Lg	Lg	09 23 11.8	
	0.0nm,0.3s,baz=68,slow=29,SNR=5.5						
MKAR	**Makanchi Array**	**8.68**	**222**	Pn	Pn	09 21 02.9	+0.9
	0.1nm,0.3s,baz=30,slow=15,SNR=3.1						
MKAR				Lg	Lg	09 23 29.7	
	0.0nm,0.3s,baz=37,slow=22,SNR=3.7						

IDC 04 09:28:21.1±14.0, 18°41S×165°89E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.6/27, mbtmp3.7/4, ML2.4/1, Error ellipse: s-maj=261.0km s-min=40.6km az=50.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.68**	**172**	Pn	Pn	09 29 19.3	-0.1
	0.3nm,0.3s,baz=130,slow=22,SNR=20						
DZM				Sn	Sn	09 29 57.7	-5.8
	0.3nm,0.3s,baz=119,slow=22,SNR=7.3						
STKA	**Stephens Creek**	**25.68**	**234**	P	P	09 33 52.9	-0.1
	1.6nm,0.7s,baz=75,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	**29.82**	**262**	P	P	09 34 29.9	-0.2
	0.4nm,0.6s,baz=91,slow=9.5,SNR=7.2						
ASAR	**Alice Springs**	**30.27**	**254**	P	P	09 34 34.3	+0.2
	1.8nm,0.8s,baz=80,slow=9.1,SNR=24						

*IDC **04** 09:39:15.6±1.5, 34°.75N×24°.84E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.6/44, mbtmp3.7/8, ML3.9/3, Error ellipse: s-maj=31.5km s-min=18.4km az=102.0*
*ATH **04** 09:39:20.8, 34°.70N×24°.92E, h14km±2km, ML3.2/6, Error ellipse: s-maj=3.8km s-min=1.8km az=2.0*
*THE **04** 09:39:21.8, 34°.76N×24°.88E, h18km, ML3.1/8, Error ellipse: s-maj=1.2km s-min=0.5km az=359.0*
ISC 04 09:39:18.6±1.7, 34°.61N±0°.07×24°.85E±0°.03, h15km±9km, n32, σ1§17/49, mb3.7/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.41**	**355**	P	**Pb**	**09 39 27.9**	**+0.5**
SIVA				S	**Sg**	**09 39 32.5**	**+0.2**
SIVA				AML	AML	09 39 34.6	
	comp=N,37355μm,0.2s						
SIVA				AML	AML	09 39 34.7	
	comp=E,32581μm,0.3s						
SIVA	**Sivas**	**0.41**	**355**	P	**Pb**	**09 39 28.0**	**+0.5**
SIVA				S	**Sg**	**09 39 32.6**	**+0.2**
	comp=E,17μm,0.3s						
TMBK	**Timbaki Herakl**	**0.46**	**351**	P	**Pb**	**09 39 29.0**	**+0.5**
TMBK				S	**Sg**	**09 39 34.0**	**-0.2**
	comp=E,4μm,0.2s						
GVDS	**Gavdos**	**0.67**	**290**	P	**Pn**	**09 39 35.0**	**+1.5**
GVDS				S	**Sn**	**09 39 44.2**	**+0.4**
	comp=E,2μm,0.2s						
GVD	**Gavdhos**	**0.67**	**290**	P	**Pn**	**09 39 34.7**	**+1.2**
GVD				AML	AML	09 39 48.6	
	comp=N,4458μm,0.3s						
GVD				AML	AML	09 39 51.4	
	comp=E,5321μm,0.3s						
GVD	**Gavdhos**	**0.67**	**290**	P	**Pn**	**09 39 34.7**	**+1.2**
GVD				S	**Sn**	**09 39 44.0**	**+0.2**
	comp=E,3μm,0.4s						
IDI	**Anoyia**	**0.68**	**3**	Pn	**Pg**	**09 39 31.7**	**-0.2**
	comp=E,110nm,0.3s,baz=195,slow=11,SNR=319						
IDI				Sn	**Sg**	**09 39 40.5**	**-0.3**
	comp=E,212nm,0.3s,baz=300,slow=14,SNR=22						
IDI	**Anoyia**	**0.68**	**3**	P	**Pg**	**09 39 31.6**	**-0.2**
IDI				S	**Sg**	**09 39 40.1**	**-0.7**
IDI				AML	AML	09 39 41.7	
	comp=N,2827μm,0.2s						
IDI				AML	AML	09 39 42.4	
	comp=E,3459μm,0.4s						
IDI	**Anoyia**	**0.68**	**3**	P	**Pg**	**09 39 31.7**	**-0.2**
IDI				S	**Sg**	**09 39 40.5**	**-0.3**
	comp=E,2μm,0.3s						
IACM	**Heraklion**	**0.71**	**14**	P	**Pg**	**09 39 32.9**	**+0.3**
PRNS	**Prines Rethymn**	**0.81**	**339**	P	**Pb**	**09 39 34.8**	**+0.5**
PRNS				S	**Sg**	**09 39 45.0**	**+0.1**
FRMA	**Ierapetra Chan**	**0.83**	**61**	P	**Pn**	**09 39 37.2**	**+1.5**
FRMA				S	**Sn**	**09 39 49.7**	**+2.1**
	comp=E,410nm,0.5s						
NPS	**Neapolis**	**0.90**	**44**	P	**Pg**	**09 39 36.1**	**0.0**
NPS				S	**Sg**	**09 39 47.1**	**-0.7**
NPS				AML	AML	09 39 49.2	
	comp=E,2017μm,0.3s						
NPS				AML	AML	09 39 50.9	
	comp=N,1608μm,0.3s						
NPS	**Neapolis**	**0.90**	**44**	P	**Pg**	**09 39 36.0**	**0.0**
NPS				S	**Sg**	**09 39 47.0**	**-0.9**
	comp=N,1μm,0.6s						
VAM	**Vamos**	**0.96**	**326**	P	**Pb**	**09 39 37.4**	**+0.5**
VAM				S	**Sn**	**09 39 51.6**	**+0.7**
VAM				AML	AML	09 39 52.8	
	comp=E,4740μm,0.2s						
VAM				AML	AML	09 39 53.8	
	comp=N,3434μm,0.4s						
VAM	**Vamos**	**0.96**	**326**	P	**Pb**	**09 39 37.2**	**+0.3**
VAM				S	**Sb**	**09 39 50.0**	**+0.6**
IMMV	**Iera Moni Meta**	**1.11**	**320**	P	**Pn**	**09 39 40.2**	**+0.6**
IMMV				S	**Sn**	**09 39 56.0**	**+1.4**
IMMV				AML	AML	09 39 59.0	
	comp=E,2920μm,0.4s						
IMMV				AML	AML	09 40 00.1	
	comp=N,2420μm,0.3s						
IMMV	**Iera Moni Meta**	**1.11**	**320**	P	**Pb**	**09 39 39.8**	**+0.3**
IMMV				S	**Sb**	**09 39 54.2**	**+0.5**
	comp=N,1μm,0.4s						
KNDR	**Palaiochora Ch**	**1.14**	**303**	P	**Pn**	**09 39 41.2**	**+1.2**
KNDR				S	**Sn**	**09 39 57.5**	**+2.1**
STIA	**Sitia Lasithi**	**1.18**	**60**	P	**Pg**	**09 39 41.0**	**-0.3**
STIA				S	**Sg**	**09 39 55.2**	**-1.4**
ZKR	**Zakros**	**1.23**	**66**	P	**Pg**	**09 39 42.8**	**+0.6**
ZKR	**Zakros**	**1.23**	**66**	P	**Pg**	**09 39 42.1**	**-0.2**
ANKY	**Antikythira Is**	**1.78**	**315**	P	**Pb**	**09 39 51.4**	**+0.5**
KARP	**Karpathos**	**2.11**	**63**	P	**Pn**	**09 39 55.6**	**+2.3**
AKASG	**Malin Array Be**	**16.39**	**10**	Pn	**Pn**	**09 43 06.1**	**-1.9**
	comp=N,1.3nm,0.3s,baz=200,slow=11,SNR=4.3						
GERES	**GERESS Array B**	**16.45**	**333**	Pn	**Pn**	**09 43 08.8**	**-0.1**
	comp=N,0.2nm,0.3s,baz=145,slow=12,SNR=10						
KBZ	**Khabaz**	**16.66**	**52**	Pn	**Pn**	**09 43 13.1**	**+1.6**
	comp=N,0.1nm,0.3s,baz=253,slow=6.2,SNR=5.3						
FINES	**FINESS Array B**	**26.86**	**1**	P	**P**	**09 44 54.8**	**-3.6**
	comp=N,3.0nm,1.1s,baz=166,slow=12,SNR=4.5						
NOA	**NORSAR Array B**	**27.86**	**346**	P	**P**	**09 45 04.6**	**-2.9**
	comp=N,0.2nm,0.5s,baz=146,slow=8.8,SNR=4.2						
TORD	**Torodi Ar. Bea**	**29.95**	**230**	P	**P**	**09 45 26.9**	**+0.6**
	comp=N,0.5nm,0.5s,baz=34,slow=8.6,SNR=3.1						
ARCES	**ARCESS Array B**	**34.98**	**0**	P	P	09 46 06.3	-3.5
	comp=N,0.6nm,0.5s,baz=165,slow=5.0,SNR=6.0						
MKAR	**Makanchi Array**	**44.29**	**56**	P	**P**	**09 47 26.4**	**-1.3**
	comp=N,0.8nm,0.4s,baz=270,slow=8.1,SNR=17						

*JMA **04** 10:13:27.8±0.2, 37°.38N×134°.04E, h429km±3km, M3.3*
*IDC **04** 10:13:29.1±0.9, 37°.34N×134°.04E, h418km±11km, mb2.9/10, mb1 3.1/15, mb1mx3.0/49, mbtmp3.8/15, Error ellipse: s-maj=13.7km s-min=13.3km az=108.0*
ISC 04 10:13:28.7±0.7, 37°.44N±0°.08×134°.03E±0°.06, h400km, n29, σ1§59/35, mb3.2/10, 1C, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOI	**OKI**	**1.31**	**209**	P	**Pn**	**10 14 22.8**	**+1.7**
JKSM	**Kasumi**	**1.92**	**164**	*e*S	**S**	**10 15 11.6**	**+2.5**
JKY	**Yasaka**	**2.01**	**154**	P	**Pn**	**10 14 26.4**	**+1.6**
JKY				*e*S	**S**	**10 15 12.4**	**+2.3**
JWT	**Wachi**	**2.42**	**152**	P	**Pn**	**10 14 29.4**	**+1.8**
JWT				*e*S	**S**	**10 15 17.1**	**+2.0**
JHS	**Saijyo**	**2.55**	**197**	P	**Pn**	**10 14 29.5**	**+0.9**
JGT2	**ShimaneMisato**	**2.68**	**208**	P	**Pn**	**10 14 30.5**	**+1.0**
JGT2				*e*S	**S**	**10 15 20.0**	**+1.5**
JYTA	**Yamagatataniai**	**2.85**	**130**	P	**Pn**	**10 14 32.3**	**+1.5**
JYTA				S	**S**	**10 15 22.7**	**+1.7**
JSD	**Sado**	**3.40**	**79**	P	**Pn**	**10 14 36.8**	**+1.5**
JNG	**Nsakai**	**3.42**	**106**	P	**Pn**	**10 14 36.9**	**+1.3**
MAT	**Matsushiro**	**3.46**	**104**	P	**Pn**	**10 14 36.7**	**+0.8**
MAT				S	**S**	**10 15 33.1**	**+2.8**
MJAR	**Matsushiro Arr**	**3.46**	**104**	P	**Pn**	**10 14 37.5**	**+1.6**
	0.2nm,0.3s,baz=286,slow=11,SNR=30						
KSRS	**Korea Array**	**4.86**	**272**	P	**Pn**	**10 14 51.1**	**+1.9**
	1.9nm,0.3s,baz=95,slow=10,SNR=73						
KSRS				S	**S**	**10 15 57.8**	**+3.1**
	baz=102,slow=23,SNR=5.8						
JFT	**Otama**	**5.01**	**87**	⇑P	**Pn**	**10 14 51.2**	**+0.3**
JNU	**Nakatsue**	**5.03**	**212**	P	**Pn**	**10 14 51.9**	**+0.7**
	1.7nm,0.3s,baz=79,slow=0.7,SNR=14						
JMM	**Marumori**	**5.38**	**83**	P	**Pn**	**10 14 54.7**	**+0.1**
JRG	**Rokugo**	**5.54**	**67**	P	**Pn**	**10 14 57.6**	**+1.3**
JMK	**Ichinoseki**	**5.86**	**73**	P	**Pn**	**10 15 00.1**	**+0.4**
USRK	**Ussuriysk Ar.**	**6.92**	**348**	P	**P**	**10 15 13.3**	**+1.4**
	baz=169,slow=10,SNR=28						
ASAJ	**Asahikawa**	**9.30**	**42**	P	**Pn**	**10 15 38.9**	**+0.4**
	2.7nm,0.3s,baz=230,slow=12,SNR=25						
SONM	**Songino Array**	**22.72**	**306**	P	**P**	**10 17 57.7**	**-0.1**
	2.1nm,0.6s,baz=109,slow=8.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**37.28**	**312**	P	**P**	**10 20 04.7**	**+0.6**
	0.5nm,0.6s,baz=108,slow=9.5,SNR=2.0						
MKAR	**Makanchi Array**	**38.88**	**301**	P	**P**	**10 20 16.4**	**-1.0**
	1.2nm,0.7s,baz=89,slow=10,SNR=13						
ARU	**Arti**	**52.10**	**317**	P	**P**	**10 21 57.8**	**-1.5**
	1.0nm,0.5s,baz=87,slow=17,SNR=1.9						
ILAR	**Eielson Array**	**52.29**	**32**	P	**P**	**10 22 00.0**	**-0.6**
	0.5nm,0.7s,baz=286,slow=8.2,SNR=9.2						
INK	**Inuvik**	**56.67**	**26**	P	**P**	**10 22 30.8**	**-0.8**
	1.1nm,1.0s,baz=306,slow=7.9,SNR=3.7						
WRA	**Warramunga Arr**	**57.08**	**180**	P	**P**	**10 22 32.8**	**-2.2**
	0.8nm,0.7s,baz=356,slow=7.6,SNR=5.2						
ASAR	**Alice Springs**	**60.78**	**180**	P	**P**	**10 22 58.1**	**-2.0**
	0.3nm,0.6s,baz=12,slow=13,SNR=8.6						
YKA	**Yellowknife Ar**	**66.32**	**28**	P	**P**	**10 23 34.8**	**-0.6**
	0.2nm,0.6s,baz=302,slow=6.2,SNR=5.5						
PDAR	**Pinedale Array**	**81.44**	**42**	P	**P**	**10 25 01.9**	**-0.8**
	0.5nm,0.8s,baz=328,slow=5.3,SNR=3.7						

*UCR **04** 10:17:36.8±1.5, 6°.77N×82°.41W, h20km, MW3.7*
ISC 04 10:17:35.5±1.7, 6°.8N±0°.1×82°.5W±0°.2, h10km, n37, σ1§22/38, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMAL	**Guarumal, Vera**	**1.63**	**52**	*e*P	**Pn**	**10 18 02.2**	**-2.1**
CCOL	**Caracol de Cor**	**1.70**	**345**	*e*P	**Pn**	**10 18 05.0**	**-0.2**
CDITO	**Canoas**	**1.83**	**349**	*e*P	**Pn**	**10 18 06.5**	**-0.6**
BRU2	**Volcan**	**2.03**	**356**	*e*P	**Pn**	**10 18 09.2**	**-0.7**
EDSV	**San Vito**	**2.10**	**348**	*e*P	**Pn**	**10 18 11.0**	**+0.2**
RIOS	**Rincon, Osa**	**2.16**	**333**	*e*P	**Pn**	**10 18 11.2**	**-0.4**
RIOS				*e*S	**Sn**	**10 18 36.5**	**-2.0**
LPLA	**Las Palmas La**	**2.31**	**348**	*i*P	**Pn**	**10 18 14.4**	**+0.7**
POTG	**Potrero Grande**	**2.35**	**346**	*e*P	**Pn**	**10 18 14.9**	**+0.6**
EDPN	**Palmar Norte**	**2.38**	**337**	*e*P	**Pn**	**10 18 14.8**	**+0.3**
AZU	**Azuero**	**2.46**	**65**	*e*P	**Pn**	**10 18 14.2**	**-1.6**
EDBA	**Buenos Aires**	**2.50**	**343**	*e*P	**Pn**	**10 18 17.3**	**+1.0**
DRK0	**Durika**	**2.59**	**344**	*e*P	**Pn**	**10 18 17.9**	**+0.3**
SRBA	**San Rafael, Bu**	**2.59**	**342**	*e*P	**Pn**	**10 18 18.0**	**+0.4**
PEZE	**Perez Zeledon,**	**2.84**	**337**	*e*P	**Pn**	**10 18 21.8**	**+0.7**
CDM	**Cerro de Muert**	**3.03**	**336**	*e*P	**Pn**	**10 18 24.8**	**+0.8**
RIMA	**Rio Macho**	**3.27**	**336**	*e*P	**Pn**	**10 18 27.8**	**+0.8**
LCR2	**La Lucha 2**	**3.30**	**334**	*e*P	**Pn**	**10 18 28.5**	**+1.0**
VTCV	**VTCV, Calle Va**	**3.42**	**340**	*e*P	**Pn**	**10 18 30.4**	**+1.4**
CVTR	**Volcan Turrial**	**3.46**	**340**	*e*P	**Pn**	**10 18 31.4**	**+1.5**
BCIP	**Isla Barro Col**	**3.58**	**48**	*e*P	**Pn**	**10 18 30.8**	**-0.3**
HDC	**Heredia**	**3.58**	**334**	*e*P	**Pn**	**10 18 33.0**	**+1.7**
HDC3	**Heredia 3**	**3.58**	**334**	*e*P	**Pn**	**10 18 33.0**	**+1.7**
LAFE	**Finca La Fe, P**	**3.84**	**322**	*e*P	**Pn**	**10 18 35.5**	**+0.9**
JTS	**Las Juntas de**	**4.25**	**326**	*e*P	**Pn**	**10 18 41.4**	**+1.0**
INDI	**Punta indio, G**	**4.26**	**317**	*e*P	**Pn**	**10 18 42.0**	**+1.5**
ARE1	**Arenal 1**	**4.27**	**330**	*e*P	**Pn**	**10 18 44.1**	**+3.5**
PLVR	**Palo Verde**	**4.53**	**322**	*e*P	**Pn**	**10 18 45.2**	**+0.9**
YOTC	**Yoloco, Valle**	**6.75**	**114**	*e*P	**Pn**	**10 19 14.2**	**-0.6**
HELC	**Santa Helena**	**6.98**	**94**	*e*P	**Pn**	**10 19 16.8**	**-1.4**
GUY2C	**Guyana, Caldas**	**7.29**	**102**	*e*P	**Pn**	**10 19 23.3**	**+0.8**
SOTA	**Rioblanco**	**7.48**	**128**	*e*P	**Pn**	**10 19 26.1**	**+0.9**
TOLC	**Tolima**	**7.49**	**106**	*e*P	**Pn**	**10 19 25.8**	**+0.6**
PCON	**Cinco Dias**	**7.53**	**125**	*e*P	**Pn**	**10 19 26.7**	**+0.7**
GCUF	**Volcan Galeras**	**7.54**	**137**	*e*P	**Pn**	**10 19 26.6**	**+0.6**
ZARC	**Zaragoza, Cauc**	**7.65**	**84**	*e*P	**Pn**	**10 19 25.8**	**-1.2**
ORTC	**Ortega, Tolima**	**7.79**	**111**	*e*P	**Pn**	**10 19 30.1**	**+1.2**
GARC	**Garzon, Huila**	**8.36**	**123**	*e*P	**Pn**	**10 19 37.0**	**+0.1**

*IDC **04** 10:21:30.6±6.4, 25°.37S×68°.88W, h104km±53km, mb3.3/1, mb1 3.2/2, mb1mx3.0/25, mbtmp3.6/2, Error ellipse: s-maj=76.7km s-min=49.7km az=118.0*
*GUC **04** 10:21:32.1±0.6, 25°.30S×69°.06W, h126km±4km, ML3.5*
ISC 04 10:21:31.6±0.9, 25°.31S±0°.04×69°.07W±0°.09, h126km±7km, n21, σ1§35/34, 2C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GO02	**Mina Guanaco**	**0.49**	**287**	*i*P	**Pn**	**10 21 51.0**	**+0.3**
GO02				*i* S	**Sn**	**10 22 04.8**	**-0.1**
GO02				IAML		10 22 06.5	
	comp=N,2μm,0.2s						
PB14	**IPOC Station P**	**1.39**	**299**	⇓*i*P	**Pn**	**10 21 59.4**	**+0.9**
PB14				*i* S	**Sn**	**10 22 19.8**	**+0.8**
AC02	**Maricunga**	**1.52**	**182**	⇓*i*P	**Pn**	**10 22 00.8**	**+0.5**
AC02				*i* S	**Sn**	**10 22 22.3**	**+0.2**
AC01	**Pan de Azucar**	**1.61**	**238**	*i*P	**Pn**	**10 22 01.1**	**+0.3**
AC01				*i* S	**Sn**	**10 22 23.2**	**+0.2**
AC01				IAML		10 22 24.4	
	comp=N,359nm,0.4s						
PB15	**IPOC Station P**	**2.12**	**350**	*e*P	**Pn**	**10 22 07.9**	**+0.8**
PB15				*i* S	**Sn**	**10 22 35.0**	**+0.7**
PB10	**IPOC Station P**	**2.24**	**323**	⇓*i*P	**Pn**	**10 22 09.2**	**+0.8**
PB10				*i* S	**Sn**	**10 22 35.0**	**-1.6**
PB10				IAML		10 22 43.3	
	comp=E,154nm,0.3s						
GO03	**Copiap**	**2.50**	**204**	⇑*e*P	**Pn**	**10 22 11.5**	**-0.3**
GO03				*i* S	**Sn**	**10 22 38.9**	**-3.8**
GO03				IAML		10 22 44.9	
	comp=E,103nm,0.2s						
PB06	**IPOC Station P**	**2.63**	**350**	*e*P	**Pn**	**10 22 14.1**	**+0.6**
PB06				*i* S	**Sn**	**10 22 45.1**	**-0.7**
PB06				IAML		10 22 46.9	
	comp=N,255nm,0.3s						
PB05	**IPOC Station P**	**2.65**	**337**	⇓*i*P	**Pn**	**10 22 14.0**	**+0.2**
PB05				*i* S	**Sn**	**10 22 42.3**	**-3.9**
PB05				IAML		10 22 56.7	
	comp=E,183nm,0.5s						
LVC	**Limon Verde**	**2.69**	**3**	P	**Pn**	**10 22 14.9**	**+0.4**
	comp=E,4.0nm,0.3s,baz=186,slow=11,SNR=47						
LVC				S	**Sn**	**10 22 46.3**	**-1.1**
	comp=E,23nm,0.3s,baz=209,slow=10,SNR=42						
LVC	**Limon Verde**	**2.69**	**3**	*e*P	**Pn**	**10 22 14.7**	**+0.2**
LVC				*i* S	**Sn**	**10 22 45.4**	**-2.0**
PB04	**IPOC Station P**	**3.12**	**341**	*e*P	**Pn**	**10 22 19.6**	**-0.4**
PB04				IAML		10 23 08.1	
	comp=N,158nm,0.2s						
PB03	**IPOC Station P**	**3.30**	**349**	*e*P	**Pn**	**10 22 22.1**	**-0.2**
AC04	**Llanos de Chal**	**3.40**	**211**	*e*P	**Pn**	**10 22 22.1**	**-1.2**
PB07	**IPOC Station P**	**3.64**	**348**	*e*P	**Pn**	**10 22 26.4**	**-0.4**
PB01	**IPOC Station P**	**4.26**	**355**	⇓*i*P	**Pn**	**10 22 34.5**	**-0.5**
PB01				*i* S	**Sn**	**10 23 22.0**	**-2.0**
TORD	**Torodi Ar. Bea**	**78.79**	**70**	P	**P**	**10 33 20.9**	**0.0**
	comp=N,0.3nm,0.5s,baz=252,slow=5.2,SNR=1.7						
ASAR	**Alice Springs**	**126.47**	**206**	PKP	**PKPdf**	**10 40 21.6**	**+1.1**
	comp=N,0.3nm,0.8s,baz=148,slow=1.6,SNR=4.6						
WRA	**Warramunga Arr**	**129.59**	**209**	PKP	**PKPdf**	**10 40 27.1**	**+0.7**
	comp=N,0.3nm,0.9s,baz=152,slow=1.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**145.42**	**27**	PKPbc	**PKPab**	**10 40 56.5**	**+1.7**
	comp=N,0.9nm,0.5s,baz=318,slow=2.0,SNR=4.9						
ZALV				pPKPbc	**pPKPdf**	**10 41 28.6**	**-1.1**
	comp=N,0.2nm,0.3s,baz=327,slow=2.5,SNR=3.7						
MKAR	**Makanchi Array**	**148.73**	**39**	PKPbc	**PKiKP**	**10 41 05.8**	**+0.4**
	comp=N,0.4nm,0.5s,baz=311,slow=3.3,SNR=4.6						

IDC 04 10:38:00.4±2.2, 4°.00N×126°.51E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/37, mbtmp3.4/3, Error ellipse: s-maj=177.5km s-min=28.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.01**	**162**	P	P	10 43 26.1	-0.2
	1.2nm,0.8s,baz=342,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**28.43**	**166**	P	P	10 43 57.3	+0.2
	0.1nm,0.6s,baz=345,slow=9.9,SNR=1.5						
MKAR	**Makanchi Array**	**57.21**	**325**	P	P	10 47 49.5	0.0
	0.1nm,0.4s,baz=129,slow=8.2,SNR=4.1						

IDC 04 10:54:16.0±8.0, 2°.50S×127°.13E, h0km, mb3.3/2, mb1 3.5/4, mb1mx3.2/49, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=139.4km s-min=40.2km az=122.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.45**	**69**	Pn	Pn	10 55 26.4	+1.7
	0.8nm,0.3s,baz=130,slow=23,SNR=1.4						
SIJI				Sn	Sn	10 56 13.7	-3.5
	0.7nm,0.3s,baz=170,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**18.71**	**158**	P	P	10 58 35.9	-0.4
	0.1nm,0.3s,baz=340,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**22.04**	**163**	P	P	10 59 12.8	+0.3
	0.3nm,0.8s,baz=344,slow=11,SNR=7.0						
STKA	**Stephens Creek**	**32.24**	**157**	P	P	11 00 45.4	-0.9
	0.5nm,0.4s,baz=335,slow=14,SNR=2.8						

*IDC **04** 11:07:42.8±1.1, 50°.37N×173°.44W, h0km, mb4.1/17, mb1 4.3/17, mb1mx4.1/47, mbtmp4.1/17, MS3.1/17, Ms1 3.1/17, ms1mx2.9/54, Error ellipse: s-maj=30.9km s-min=15.2km az=13.0*
*NEIC **04** 11:07:45.5±1.7, 50°.68N±0°.04×173°.34W±0°.07, h10km±1km, mb4.5/165, ML3.8(AEIC), Error ellipse: s-maj=8.3km s-min=6.5km az=221.0*
*AEIC **04** 11:07:48±2.1, 50°.54N±0°.10×173°.30W±0°.07, h4km±5km, Error ellipse: s-maj=14.3km s-min=6.8km az=177.0*
ISC 04 11:07:45.5±0.7, 50°.65N±0°.08×173°.31W±0°.04, h10km, n254, σ1§17/241, mb4.4/74, MS3.0/14, Andreanof Islands

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

PPLA **Purkeypile** 16.75 35 Pn 11 11 40.4 +0.3
PPLA IAmb IAmb 11 11 52.6
comp=Z,32nm,1.3s
PPLA **Purkeypile** 16.75 35 P 11 11 40.9
baz=232
CUT **Chulitna** 17.20 38 P Pn 11 11 45.1 -0.4
CUT IAmb IAmb 11 11 58.7
comp=Z,48nm,1.5s
CUT **Chulitna** 17.20 38 P 11 11 46.5
baz=237
PMR **Palmer** 17.25 41 P Pn 11 11 45.6 -0.5
PMR **Palmer** 17.25 41 P 11 11 46.0
baz=241
PWL **Port Wells** 17.26 44 Pn 11 11 41.9 -4.4
CHUM **Lake Minchumin** 17.33 32 P 11 11 48.1
baz=230,SNR=12
GHO **Glory Hole Cre** 17.42 41 P Pn 11 11 47.0 -1.4
GHO IAmb IAmb 11 11 49.6
comp=Z,18nm,0.6s
KNK **Knik Glacier** 17.45 42 P Pn 11 11 46.3 -2.4
KNK **Knik Glacier** 17.45 42 P 11 11 46.9
baz=243
KTH **Kantishna Hill** 17.61 34 P P 11 11 51.2 -0.5
KTH IAmb IAmb 11 11 54.3
comp=Z,22nm,0.9s
SML **Sawmill** 17.68 41 P Pn 11 11 50.0 -1.6
SML IAmb IAmb 11 11 52.6
comp=Z,25nm,1.0s
SML **Sawmill** 17.68 41 P 11 11 51.1
baz=242,SNR=13
TRF **Thorofare Moun** 17.78 35 P Pn 11 11 53.0 +0.1
TRF **Thorofare Moun** 17.78 35 P 11 11 53.0
baz=234
GLI **Glacier Island** 17.82 45 Pn 11 11 50.8 -2.5
BPAW **Bear Paw Mtn.** 17.92 33 P P 11 11 55.1 +0.1
BPAW IAmb IAmb 11 11 58.2
comp=Z,38nm,0.8s
BPAW **Bear Paw Mtn.** 17.92 33 P 11 11 55.1
baz=232,SNR=46
PETK **Petropavlovsk-** 18.02 289 LR LR 11 18 40.5
comp=Z,38nm,21.1s,baz=88,slow=36
FID **Port Fidalgo** 18.05 46 P Pn 11 11 52.9 -3.2
FID IAmb IAmb 11 11 57.2
comp=Z,46nm,1.2s
SCM **Sheep Creek Mo** 18.12 42 P Pn 11 11 54.3 -2.7
WAT2 **Susitna Watana** 18.15 38 P 11 11 56.2
baz=238
RND **Reindeer** 18.29 36 Pn 11 11 57.7 -1.4
WAT6 **Susitna Watana** 18.30 40 P 11 11 58.5
baz=241,SNR=9.2
EYAK **Cordova Ski Ar** 18.31 47 P Pn 11 11 56.6 -2.6
EYAK **Cordova Ski Ar** 18.31 47 P 11 11 57.6
baz=249
IMAR **Indian Mountai** 18.34 26 P Pn 11 11 59.7 0.0
MCK **McKinley** 18.43 35 P P 11 11 60.0 -0.8
MCK **McKinley** 18.44 35 P 11 12 00.2
baz=236,SNR=9.4
BWN **Browne** 18.50 34 P P 11 12 01.3 -0.1
BWN IAmb IAmb 11 12 04.2
comp=Z,38nm,1.1s
KLU **Klutina** 18.59 44 P P 11 11 59.7 -2.8
KLU **Klutina** 18.59 44 P 11 12 00.2
baz=246,SNR=10
MLY **Manley** 18.59 31 Pn 11 12 03.2 +0.5
MLY **Manley** 18.59 31 P 11 12 04.1
baz=230,SNR=20
M24K **Tolsona, Glenn** 18.73 42 P P 11 12 02.7 -1.4
M24K **Tolsona, Glenn** 18.73 42 P 11 12 04.4
baz=244,SNR=13
RAGM **Ragged Mountai** 18.76 48 P P 11 12 03.4 -0.9
NEA2 **Nenana** 18.88 33 P P 11 12 04.5 -1.1
NEA2 **Nenana** 18.88 33 P 11 12 04.9
baz=234,SNR=11
HMT **Hamilton** 18.94 48 P P 11 12 06.1 -0.2
BMRM **Bremner River** 18.98 46 P 11 12 05.5 -1.4
BMRM **Bremner River** 18.98 46 P 11 12 06.5
baz=250,SNR=13
SUCK **Suckling Hills** 19.09 49 P P 11 12 07.9 -0.1
I23K **Minto, Yukon-K** 19.12 32 P Pn 11 12 09.0 0.0
I23K IAmb IAmb 11 12 12.7
comp=Z,19nm,0.8s
I23K **Minto, Yukon-K** 19.12 32 P 11 12 08.9
baz=232,SNR=29
WRH **Wood River Hil** 19.16 34 P P 11 12 06.9 -1.8
N25K **Chitina, Valde** 19.21 44 P P 11 12 07.3 -2.1
N25K IAmb IAmb 11 12 11.0
comp=Z,13nm,0.7s
N25K **Chitina, Valde** 19.21 44 P 11 12 09.1
baz=248,SNR=15
CCB **Clear Creek Bu** 19.36 34 P P 11 12 09.1 -1.8
CCB IAmb IAmb 11 12 13.1
comp=Z,16nm,0.6s
MDM **Murphy Dome** 19.39 33 P P 11 12 10.4 -0.9
PAX **Paxson** 19.40 40 P P 11 12 11.3 -0.2
PAX **Paxson** 19.40 40 P 11 12 10.7
baz=243,SNR=5.4
TCOL **CIGO, UAF Yank** 19.47 33 P P 11 12 11.9 -0.1
TCOL IAmb IAmb 11 12 14.7
comp=Z,14nm,0.6s
TCOL **CIGO, UAF Yank** 19.47 33 P 11 12 11.7
baz=235,SNR=9.4
COLA **College** 19.47 33 P P 11 12 11.9 -0.1
COLA IAmb IAmb 11 12 14.7
comp=Z,14nm,0.6s
COLA **College** 19.47 33 P 11 12 11.7
baz=235
GLB **Gilahina Butte** 19.51 45 P P 11 12 12.3 -0.3
GLB IAmb IAmb 11 12 14.6
comp=Z,11nm,0.7s
HDA **Harding Lake** 19.54 35 P 11 12 11.8
baz=237,SNR=35
HDA P 11 12 11.8
baz=237,SNR=35
CRQM **Cirque** 19.59 47 P P 11 12 14.1 +0.4
VRDI **Verde Repeater** 19.60 46 P P 11 12 13.6 -0.1
VRDI IAmb IAmb 11 12 17.6
comp=Z,33nm,1.0s
CRQE **Cirque** 19.62 47 P 11 12 14.1
baz=252
TGL **Tana Glacier** 19.74 48 P Pn 11 12 16.2 -0.4
IL31 19.76 34 P P 11 12 14.3 -0.9
ILAR **Eielson Array** 19.76 34 P P 11 12 13.6 -1.7
comp=Z,6.4nm,0.6s,baz=231,slow=9.5,SNR=54
ILAR LR LR 11 20 04.1
comp=Z,50nm,18.5s,baz=246,slow=37
ILAR **Eielson Array** 19.76 34 P P 11 12 14.7 -0.6
POKR **Poker Plat Res** 19.76 33 P P 11 12 14.8 -0.4
POKR **Poker Plat Res** 19.76 33 P 11 12 14.2
baz=235,SNR=5.9
MCARA **McCarthy VSAT** 19.84 46 P P 11 12 16.8 +0.6
MCARA IAmb IAmb 11 12 20.8
comp=Z,35nm,1.0s
MCARA **McCarthy VSAT** 19.84 46 P 11 12 16.6
baz=251
MENT **Mentasta** 20.11 41 P P 11 12 18.9 -0.3
BILL **Bilibino** 20.12 338 P P 11 12 15.4 -3.8
BILL IAmb IAmb 11 12 29.9
comp=Z,9.6nm,0.6s
YAH **Yahtse** 20.15 49 P Pn 11 12 21.5 -0.1
COLD **Coldfoot** 20.23 26 Pn 11 12 21.5 -0.7
COLD IAmb IAmb 11 12 25.8
comp=Z,24nm,1.0s
COLD **Coldfoot** 20.23 26 P 11 12 21.6
baz=226,SNR=35
GRNC **Granite Creek** 20.24 48 P P 11 12 21.7 +0.9
DOT **Dot Lake** 20.27 39 P 11 12 20.3 -0.6
DOT IAmb IAmb 11 12 27.3
comp=Z,21nm,0.9s
BARN **Barnard Glacie** 20.38 47 Pn 11 12 23.3 -1.0
SCRK **Sand Creek** 20.45 38 P P 11 12 22.4 -0.5
SCRK IAmb IAmb 11 12 25.0
comp=Z,27nm,0.8s
SCRK **Sand Creek** 20.45 38 P 11 12 22.1
baz=243,SNR=45
TABL **Table Mountain** 20.46 49 P Pn 11 12 25.3 +0.1
CTG **Chitna Glacier** 20.50 48 P 11 12 25.8
baz=254
CTGM **Chitina Glacie** 20.50 48 P P 11 12 24.5 +1.0
LOGN **Logan Glacier** 20.62 48 P Pn 11 12 26.1 -1.0
PRP **Porcupine Dome** 20.65 33 P P 11 12 24.6 -0.4
PRP IAmb IAmb 11 12 29.1
comp=Z,11nm,0.8s
PRP **Porcupine Dome** 20.65 33 P 11 12 24.0
baz=237
PINM **Pinnacle** 20.81 50 P 11 12 29.0
baz=258,SNR=16
L27K **Beaver Creek,** 20.96 42 P P 11 12 28.4 +0.2
L27K IAmb IAmb 11 12 34.7
comp=Z,12nm,0.8s
L27K **Beaver Creek,** 20.96 42 P 11 12 30.1
baz=248
BCAR **Beaver Creek A** 20.98 42 P P 11 12 29.4 +0.8
K27K **Chicken** 21.23 39 P P 11 12 31.4 +0.2
K27K IAmb IAmb 11 12 37.6
comp=Z,31nm,1.1s
K27K **Chicken** 21.23 39 P 11 12 32.8
baz=245
TOLK **Toolik Lake Re** 21.39 24 P P 11 12 32.1 -0.9
TOLK IAmb IAmb 11 12 35.1
comp=Z,18nm,0.8s
TOLK **Toolik Lake Re** 21.39 24 P 11 12 34.1
baz=224,SNR=20
EGAK **Eagle** 21.91 38 P P 11 12 38.5 +0.1
EGAK IAmb IAmb 11 12 40.4
comp=Z,18nm,0.6s
EGAK **Eagle** 21.91 38 P 11 12 38.6
baz=245,SNR=32
BMAR **Burnt Mountain** 22.04 30 P P 11 12 41.1 +1.2
A21K **Barrow** 22.09 14 P P 11 12 40.4 0.0
A21K IAmb IAmb 11 12 42.9
comp=Z,12nm,0.8s
A21K **Barrow** 22.10 14 P 11 12 40.2
baz=209,SNR=5.9
SEY **Seymchan** 22.13 317 P P 11 12 41.6 +0.7
comp=Z,4.2nm,0.8s,baz=111,slow=10,SNR=21
MA2 **Magadan** 22.15 308 P P 11 12 41.5 +0.4
comp=Z,2.0nm,0.5s,baz=61,slow=19,SNR=2.1
MA2 LR LR 11 20 18.2
comp=Z,41nm,20.7s,baz=106,slow=34
MA2 **Magadan** 22.15 308 P P 11 12 40.6 -0.5
MA2 IAmb IAmb 11 12 49.1
comp=Z,15nm,1.2s
HYT **Haines Junctio** 22.29 49 P P 11 12 43.8 +1.1
DAWY **Dawson** 22.34 40 P P 11 12 42.9 -0.3
DAWY IAmb IAmb 11 12 47.5
comp=Z,24nm,1.2s
SKAG **Skagway** 23.17 53 P P 11 12 53.0 +1.2
SKAG IAmb IAmb 11 12 57.4
comp=Z,12nm,0.9s
SKAG **Skagway** 23.17 53 P 11 12 52.9
baz=264
WHY **Whitehorse** 23.54 50 P P 11 12 57.9 +2.3
JIS **Juneau Island** 23.59 56 P P 11 12 56.6 +0.6
JIS IAmb IAmb 11 13 15.9
comp=Z,18nm,0.8s
CRAG **Craig** 24.37 63 P P 11 13 05.4 +2.0
WRAK **Wrangell Islan** 24.73 61 P 11 13 08.6
baz=274
DLBC **Dease Lake** 25.88 56 P P 11 13 18.1 +0.9
comp=Z,5.8nm,0.7s,baz=279,slow=9.5,SNR=19
DLBC LR LR 11 24 11.5
comp=Z,58nm,19.7s,baz=294,slow=38
DLBC **Dease Lake** 25.88 56 P P 11 13 20.1 +2.9
DLBC IAmb IAmb 11 13 28.0
comp=Z,9.7nm,0.9s
INK **Inuvik** 26.13 33 P P 11 13 19.8 +0.7
comp=Z,7.8nm,0.9s,baz=231,slow=9.7,SNR=27
INK **Inuvik** 26.13 33 P P 11 13 19.6 +0.5
INK IAmb IAmb 11 13 22.1
comp=Z,9.4nm,0.9s
BBB **Bella Bella** 27.88 69 LR LR 11 21 27.8
comp=Z,48nm,21.6s,baz=348,slow=29
C36M **Paulatuk** 29.71 33 P 11 13 52.7
baz=256
D03D **Eleo** 32.52 76 P 11 14 18.1
baz=294
A05A **Maple Falls** 32.55 73 P P 11 14 17.2 +0.8
E03A **Lebam** 32.65 78 P P 11 14 18.4 +1.1
B05A **Bryant** 32.83 74 P 11 14 20.0
baz=294
YKA **Yellowknife Ar** 33.22 46 P P 11 14 23.5 +1.4
comp=Z,2.8nm,0.8s,baz=270,slow=8.3,SNR=46
YKA LR LR 11 28 34.8
comp=Z,30nm,21.3s,baz=0.0,slow=37
E04D **Cinebar** 33.26 77 P 11 14 24.9
baz=296
LON **Longmire** 33.65 76 P P 11 14 27.6 +1.5
LON IAmb IAmb 11 14 28.6
comp=Z,4.4nm,0.8s
H04A **Detroit Lake** 34.36 80 P P 11 14 33.0 +0.7
B08A **Colville Reser** 34.48 72 P P 11 14 33.5 +0.3
B08A IAmb IAmb 11 14 35.1
comp=Z,7.0nm,0.8s
H11N2 **WAKE ISLAND Hy** 34.61 214 T T 11 51 03.1
baz=25,slow=76,SNR=5.8
H11N3 **WAKE ISLAND Hy** 34.62 214 T T 11 51 02.3
baz=25,slow=76,SNR=5.7
H11N1 **WAKE ISLAND Hy** 34.63 214 T T 11 51 03.0
baz=25,slow=76,SNR=5.7
G05D **Wamic, OR** 34.64 78 P 11 14 36.3
baz=298
I05D **Terrebonne, OR** 35.06 80 P 11 14 40.0
baz=299
F07A **Phinny Hill Vi** 35.20 77 P P 11 14 40.9 +1.4
HAWA **Hanford** 35.21 76 P P 11 14 40.8 +1.1
YBH **Yreka Blue Hor** 35.52 84 P P 11 14 43.9 +1.5
YBH IAmb IAmb 11 14 46.8
comp=Z,6.1nm,1.4s
J05D **Fort Rock, OR** 35.65 81 P 11 14 45.1
baz=300
H11S1 **WAKE ISLAND Hy** 35.81 214 T T 11 52 31.4
baz=23,slow=75,SNR=12
H11S2 **WAKE ISLAND Hy** 35.82 214 T T 11 52 28.4
baz=23,slow=75,SNR=14
H11S3 **WAKE ISLAND Hy** 35.83 214 T T 11 52 30.8
baz=23,slow=75,SNR=10
NEW **Newport** 35.85 71 P P 11 14 45.3 +0.1
NEW IAmb IAmb 11 14 46.5
comp=Z,3.8nm,0.8s
NEW **Newport** 35.85 71 P 11 14 45.4
baz=295,SNR=5.9
M04C **Macdoel** 36.05 84 P 11 14 48.3
baz=302
K05A **Summer Lake** 36.15 82 P P 11 14 49.9 +2.0
K05A IAmb IAmb 11 14 50.6
comp=Z,8.8nm,0.9s
O02D **Mt. Diablo Mer** 36.32 87 P 11 14 50.9
baz=304
I07A **Izee** 36.33 79 P P 11 14 50.8 +1.4
I07A IAmb IAmb 11 14 51.5
comp=Z,7.0nm,0.7s
O03E **Paynes Creek** 36.88 86 P 11 14 53.9
baz=304
MOD **Modoc Plateau** 36.95 83 P P 11 14 56.0 +1.2
MJAR **Matsushiro Arr** 37.16 267 LR LR 11 27 37.2
comp=Z,14nm,20.7s,baz=245,slow=32
J08A **Circle Bar Ran** 37.34 79 P P 11 14 59.4 +1.4
J08A IAmb IAmb 11 14 60.0
comp=Z,7.3nm,0.6s
WVOR **Wild Horse Val** 37.72 81 P P 11 15 02.6 +1.4
WVOR IAmb IAmb 11 15 03.2
comp=Z,6.9nm,0.8s
MSO **Missoula** 38.43 72 P P 11 15 07.5 +0.4
MSO **Missoula** 38.43 72 P 11 15 07.0
baz=298
PNTR **Pine Nut** 38.96 86 P P 11 15 13.4 +1.6
PNTR IAmb IAmb 11 15 13.9
comp=Z,8.2nm,0.8s
WAKR **Walker** 39.41 87 P P 11 15 17.2 +1.7
HLID **Hailey** 39.76 77 P P 11 15 19.4 +1.0
HLID **Hailey** 39.77 77 P 11 15 19.3
baz=302,SNR=7.8
RYN **Ryan** 39.91 86 P P 11 15 20.8 +1.1
KVN **Kaiserville** 39.94 85 P P 11 15 20.7 +0.8
BCYI **Bear Canyon** 40.00 75 P P 11 15 20.3 -0.1
MCMT **McKenzie Canyo** 40.07 74 P P 11 15 21.6 +0.6
NVAR **Mina Array Bea** 40.17 86 P P 11 15 22.3 +0.4
comp=Z,2.7nm,0.9s,baz=281,slow=8.9,SNR=17
NVAR **Mina Array Bea** 40.17 86 P P 11 15 23.2 +1.3
NV11 **Mina Array Sit** 40.26 86 P P 11 15 23.8 +1.2
EGMT **Eagleton** 40.36 68 P P 11 15 23.5 +0.3
EGMT IAmb IAmb 11 15 24.3
comp=Z,5.0nm,0.7s
EGMT **Eagleton** 40.36 68 P 11 15 23.2
baz=298
BOZ **Bozeman (W)** 40.43 72 P P 11 15 24.0 +0.1
BOZ **Bozeman (W)** 40.43 72 P 11 15 23.8
baz=300
ELK **Elko** 40.78 81 P P 11 15 27.9 +1.0
TPH **Tonopah** 41.07 86 P P 11 15 29.1 -0.2
YHL **Hebgen Lake** 41.08 73 P P 11 15 29.6 +0.2
YHH **Holmes Hill** 41.31 73 P P 11 15 31.3 -0.1
YHH IAmb IAmb 11 15 32.4
comp=Z,7.6nm,1.2s
CWC **Cottonwood Cre** 41.51 88 P 11 15 33.8
baz=308
GCMT **Greycliff** 41.52 71 P P 11 15 32.9 +0.1
H17A **Grant Village** 41.69 73 P P 11 15 35.2 +0.8
H17A IAmb IAmb 11 15 37.0
comp=Z,8.6nm,1.4s
H17A **Grant Village** 41.69 73 P 11 15 36.5
baz=302
LKWY **Lake** 41.70 73 P P 11 15 35.3 +0.8
FFC **Flin Flon** 41.72 56 P P 11 15 33.9 -0.2
FFC IAmb IAmb 11 15 34.7
comp=Z,4.6nm,0.6s
ISA **Isabella, Lake** 41.74 89 P P 11 15 35.0 +0.4
ISA **Isabella, Lake** 41.74 89 P 11 15 34.8
baz=308
HVU **Hansel Valley** 41.74 78 P P 11 15 35.1 +0.4
HVU IAmb IAmb 11 15 36.3
comp=Z,4.6nm,0.7s
R11A **Troy Canyon, C** 41.94 84 P 11 15 36.7
baz=306,SNR=6.0
RLMT **Red Lodge** 42.10 72 P P 11 15 38.2 +0.6
RLMT IAmb IAmb 11 15 41.0
comp=Z,5.8nm,0.8s
RLMT **Red Lodge** 42.10 72 P 11 15 38.0
baz=301,SNR=8.1
MPMC **Manual Prospec** 42.12 88 P 11 15 38.5
baz=308
SPUT **South Promonto** 42.21 78 P P 11 15 39.3 +0.8
SPUT IAmb IAmb 11 15 40.2
comp=Z,5.3nm,0.9s
FURC **Furnace Creek,** 42.27 87 P 11 15 39.5
baz=308
SPR3 **Spring Creek 3** 42.35 82 P P 11 15 41.3 +1.4
LRMC **Laurel Mtn Rad** 42.36 89 P 11 15 40.0
baz=309
TPNV **Topopah Spring** 42.36 86 P P 11 15 40.6 +0.8
TPNV IAmb IAmb 11 15 41.3
comp=Z,8.2nm,0.8s
TPNV **Topopah Spring** 42.36 86 P 11 15 40.6
baz=308,SNR=16
DUG **Dugway, Tooele** 42.61 80 P 11 15 42.7
baz=305,SNR=5.6
PRN **Pahroc Range** 42.84 85 P P 11 15 45.0 +1.2
PSUT **Pine Spring** 42.93 83 P P 11 15 45.0 +0.6
PSUT IAmb IAmb 11 15 45.7
comp=Z,5.0nm,0.8s
TCUT **Toone Canyon** 42.96 78 P P 11 15 44.8 0.0
TCUT IAmb IAmb 11 15 46.3
comp=Z,6.3nm,0.8s
SHOC **Shoshone, Teco** 42.99 87 P 11 15 45.5
baz=308
CTU **Camp Tracy** 42.99 79 P P 11 15 45.0 +0.1
CTU IAmb IAmb 11 15 46.3
comp=Z,6.1nm,0.9s
KSRS **Korea Array** 43.14 276 LR LR 11 34 22.5
comp=Z,14nm,19.0s,baz=106,slow=37
BFSC **Mount Baldy Ra** 43.16 90 P 11 15 46.9
baz=310
BW06 **Boulder Array** 43.19 75 P P 11 15 46.8 +0.3
BW06 IAmb IAmb 11 15 47.6
comp=Z,6.5nm,1.0s
PD31 **Pinedale Array** 43.19 75 P P 11 15 47.0 +0.4
PD31 IAmb IAmb 11 15 47.6
comp=Z,5.7nm,1.0s
PDAR **Pinedale Array** 43.19 75 P P 11 15 46.9 +0.4
comp=Z,4.1nm,0.8s,baz=314,slow=3.7,SNR=40
PDAR LR LR 11 33 02.7
comp=Z,19nm,18.2s,baz=344,slow=35
PDAR **Pinedale Array** 43.19 75 P P 11 15 46.7 +0.1
BW06 **Boulder Array** 43.19 75 P 11 15 46.8
baz=303,SNR=9.0
JLU **Jordanelle** 43.23 79 P P 11 15 47.1 +0.1
JLU IAmb IAmb 11 15 48.5
comp=Z,6.1nm,1.0s
DGMT **Dagmar** 43.39 65 P P 11 15 48.5 +0.6
DGMT IAmb IAmb 11 15 49.0
comp=Z,11nm,1.4s
MPU **Maple Canyon** 43.45 79 P P 11 15 48.8 0.0
TUQ **Turquoise Moun** 43.50 88 P 11 15 49.5
baz=309
BBRC **Big Bear Solar** 43.61 90 P 11 15 50.9
baz=310
HEC **Hector,Ludlow** 43.62 89 P 11 15 50.4
baz=309
TCRU **Three Creeks R** 43.77 82 P P 11 15 52.1 +0.8
TCRU IAmb IAmb 11 15 56.6
comp=Z,5.4nm,1.1s
CCUT **Cedar City** 43.83 83 P P 11 15 52.3 +0.6
CCUT IAmb IAmb 11 15 53.3
comp=Z,5.2nm,1.1s
FCC **Fort Churchill** 43.92 48 P P 11 15 52.8 +0.9
FCC IAmb IAmb 11 15 53.7
comp=Z,11nm,0.9s
SZCU **Shurtz Canyon** 43.97 83 P P 11 15 52.7 -0.2
MSU **Marysvale** 44.00 82 P P 11 15 53.4 +0.3
GMRC **Granite Mounta** 44.08 88 P 11 15 54.0
baz=309,SNR=6.6
TMUT **Trail Mountain** 44.14 80 P P 11 15 55.2 +0.9
TMUT IAmb IAmb 11 15 55.9
comp=Z,5.5nm,0.8s
LCMT **Little Creek M** 44.23 84 P P 11 15 55.1 +0.3
LCMT IAmb IAmb 11 15 56.6
comp=Z,5.3nm,0.8s
MTPU **Mount Pierson** 44.27 82 P P 11 15 55.8 +0.3
PFO **Pinyon Flats O** 44.32 90 P 11 15 55.9
baz=310
TPFO **Pinon Flats** 44.33 90 P 11 15 55.8
baz=310
P17A **Butcher Ranch,** 44.33 79 P P 11 15 55.8 +0.1
P17A IAmb IAmb 11 15 57.2
comp=Z,5.9nm,0.7s
BELC **Belle Mtn. Jos** 44.36 89 P 11 15 56.0
baz=310
Q16A **Castle Valley** 44.39 80 P P 11 15 56.5 +0.3
Q16A IAmb IAmb 11 15 58.0
comp=Z,9.1nm,0.9s
RDMU **Red Mountain** 44.42 77 P P 11 15 56.6 +0.1
KNB **Kanab** 44.49 84 P P 11 15 57.5 +0.5
KNB IAmb IAmb 11 15 58.9
comp=Z,5.2nm,0.8s
SRU **San Rafael Swe** 44.68 80 P P 11 15 58.0 -0.5
SRU IAmb IAmb 11 16 00.4
comp=Z,6.1nm,0.7s
IRM **Iron Mountain** 44.81 89 P 11 15 59.6
baz=310
BC3 **Big Chuckawall** 44.93 89 P 11 16 00.3
baz=310
PDMCI **Parker Dam,Lak** 45.35 88 P 11 16 04.1
baz=310
O20A **White River Ci** 45.50 77 P P 11 16 04.2 -0.8
O20A **White River Ci** 45.50 77 P 11 16 05.1
baz=306
PV14 **Lion Creek, Pa** 46.06 80 P P 11 16 09.5 0.0
PV14 IAmb IAmb 11 16 10.3
comp=Z,5.3nm,1.0s
PV22 **Blue Mesa, Par** 46.11 79 P P 11 16 09.9 0.0
PV22 IAmb IAmb 11 16 10.6
comp=Z,5.4nm,0.8s
PV04 **Paradox Valley** 46.12 79 P P 11 16 09.8 -0.2
PV19 **Morning Glory** 46.12 80 P P 11 16 10.0 0.0
PV19 IAmb IAmb 11 16 10.8
comp=Z,6.0nm,0.8s
PV17 **East Wray Mesa** 46.16 80 P P 11 16 10.2 -0.1
PV16 **Nyswonger Mesa** 46.16 80 P P 11 16 10.1 -0.3
PV16 IAmb IAmb 11 16 11.1
comp=Z,5.1nm,0.8s
PV05 **Paradox Valley** 46.19 80 P P 11 16 10.7 +0.2
PV05 IAmb IAmb 11 16 12.6
comp=Z,5.7nm,1.0s
PV11 **David Mesa, Pa** 46.20 80 P P 11 16 10.8 +0.2
PV18 **Skein Mesa, Pa** 46.21 80 P P 11 16 10.7 0.0
PV18 IAmb IAmb 11 16 11.5
comp=Z,4.9nm,0.8s
PV12 **Saucer Basin,** 46.23 79 P P 11 16 10.9 0.0
PV03 **Paradox Valley** 46.24 80 P P 11 16 10.8 -0.1
PV07 **Paradox Valley** 46.26 79 P P 11 16 10.4 -0.7
PV07 IAmb IAmb 11 16 11.3
comp=Z,3.9nm,0.8s
PV13 **Radium Mtn., P** 46.32 80 P P 11 16 11.4 -0.2
WUAZ **Wupatki** 46.34 84 P P 11 16 11.6 -0.1
WUAZ IAmb IAmb 11 16 13.1
comp=Z,6.3nm,0.8s
PV02 **Paradox Valley** 46.34 80 P P 11 16 11.6 -0.1

WUAZ	**Wupatki**	**46.34**	**84**	P			11 16 12.2	
	baz=309							
PV15	**Paradox Valley**	**46.42**	**79**	P		**P**	**11 16 11.8**	**-0.6**
N23A	**Red Feather La**	**46.47**	**75**	P			11 16 13.6	
	baz=306							
PV01	**Paradox Valley**	**46.49**	**80**	P		**P**	**11 16 12.6**	**-0.3**
NRIK	**Noril'sk**	**46.75**	**331**	P		**P**	**11 16 15.3**	**+1.0**
	comp=Z,2.0nm,0.5s,baz=99,slow=4.4,SNR=4.5							
ULM	**Lac du Bonnet**	**47.14**	**59**	P		**P**	**11 16 17.3**	**-0.3**
	comp=Z,3.7nm,0.9s,baz=310,slow=6.6,SNR=6.4							
ULM	**Lac du Bonnet**	**47.14**	**59**	P		**P**	**11 16 17.3**	**-0.3**
ULM				IAmb	IAmb		11 16 18.1	
	comp=Z,6.2nm,1.1s							
W18A	**Petrified Fore**	**47.63**	**84**	P		**P**	**11 16 22.0**	**+0.2**
W18A				IAmb	IAmb		11 16 23.2	
	comp=Z,6.8nm,1.1s							
W18A	**Petrified Fore**	**47.63**	**84**	P			11 16 22.3	
	baz=310							
S22A	**4UR Ranch, Cre**	**47.81**	**79**	P			11 16 24.2	
	baz=308,SNR=5.9							
AGMN	**Agassiz Nation**	**48.20**	**61**	P			11 16 25.1	
	baz=304							
TUC	**Tucson**	**48.78**	**87**	P			11 16 30.5	
	baz=311							
ULN	**Ulaanbaatar**	**49.66**	**300**	P		**P**	**11 16 37.5**	**+0.3**
T25A	**Trinidad**	**49.70**	**78**	P		**P**	**11 16 38.0**	**+0.3**
T25A	**Trinidad**	**49.70**	**78**	P			11 16 38.6	
	baz=309							
ANMO	**Albuquerque**	**49.81**	**81**	P			11 16 39.1	
	baz=310							
BNM	**Barren Site**	**50.21**	**82**	P		**P**	**11 16 42.2**	**+0.5**
121A	**Cookes Peak, D**	**50.54**	**85**	P		**P**	**11 16 44.0**	**-0.1**
121A				IAmb	IAmb		11 16 45.1	
	comp=Z,3.4nm,0.8s							
121A	**Cookes Peak, D**	**50.54**	**85**	P			11 16 44.4	
	baz=311							
HHC	**Hu-ho-hao-te**	**51.21**	**290**	*e*P		**P**	**11 16 51.0**	**+2.0**
HHC				pmax	pmax			
	comp=Z,13nm,0.7s							
HHC				pmax	pmax			
	comp=Z,110nm,7.5s							
MNTX	**Cornudas Mount**	**52.61**	**84**	P		**P**	**11 16 57.9**	**-1.5**
MNTX	**Cornudas Mount**	**52.61**	**84**	P			11 16 59.6	
	baz=312							
MSTX	**Muleshoe**	**52.75**	**80**	P		**P**	**11 17 00.1**	**-0.5**
MSTX				IAmb	IAmb		11 17 01.8	
	comp=Z,9.1nm,1.0s							
MSTX	**Muleshoe**	**52.76**	**80**	P			11 17 00.4	
	baz=311							
AMTX	**Amarillo**	**52.84**	**78**	P		**P**	**11 17 01.1**	**-0.1**
AMTX				IAmb	IAmb		11 17 01.8	
	comp=Z,7.5nm,1.1s							
AMTX	**Amarillo**	**52.84**	**78**	P			11 17 00.9	
	baz=311							
GDL2	**Guadalupe Moun**	**52.92**	**83**	P		**P**	**11 17 00.7**	**-1.1**
WMOK	**Wichita Mounta**	**54.74**	**76**	P		**P**	**11 17 13.6**	**-1.4**
WMOK				IAmb	IAmb		11 17 15.5	
	comp=Z,3.1nm,0.8s							
WMOK	**Wichita Mounta**	**54.74**	**76**	P			11 17 14.7	
	baz=311							
TX31	**Lajitas Ar. Si**	**55.30**	**85**	P		**P**	**11 17 18.1**	**-1.1**
TX32	**Lajitas Array**	**55.30**	**85**	P		**P**	**11 17 18.2**	**-0.9**
TX32				IAmb	IAmb		11 17 19.8	
	comp=Z,6.0nm,1.1s							
TXAR	**Lajitas Array**	**55.30**	**85**	P		**P**	**11 17 18.8**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=298,slow=5.5,SNR=17							
TXAR	**Lajitas Array**	**55.30**	**85**	P		**P**	**11 17 18.4**	**-0.8**
LZH	**Lanzhou**	**58.91**	**290**	*e*P		**P**	**11 17 45.3**	**+0.6**
LZH				sP	pwP		11 17 52.7	-1.3
LZH				pmax	pmax			
	comp=Z,13nm,1.2s							
ARCES	**ARCESS Array B**	**59.33**	**352**	P		**P**	**11 17 46.7**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=23,slow=7.9,SNR=8.5							
ARCES				LR	LR		11 43 42.3	
	comp=Z,27nm,21.2s,baz=10.0,slow=36							
ARCES	**ARCESS Array B**	**59.33**	**352**	P		**P**	**11 17 47.2**	**+0.2**
WMQ	**Urumqi**	**62.61**	**306**	*e*P		**P**	**11 18 13.4**	**+3.7**
MK31	**Makanchi Array**	**63.16**	**312**	P		**P**	**11 18 11.8**	**-1.4**
MK31				IAmb	IAmb		11 18 22.9	
	comp=Z,2.4nm,1.1s							
MKAR	**Makanchi Array**	**63.16**	**312**	P		**P**	**11 18 13.3**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=51,slow=5.4,SNR=10.0							
MKAR				LR	LR		11 47 57.0	
	comp=Z,23nm,18.2s,baz=33,slow=38							
MKAR	**Makanchi Array**	**63.16**	**312**	P		**P**	**11 18 12.4**	**-0.9**
BRVK	**Borovoye**	**63.64**	**323**	P		**P**	**11 18 16.4**	**+0.1**
BRVK				IAmb	IAmb		11 18 20.1	
	comp=Z,4.6nm,0.9s							
FINES	**FINESS Array B**	**67.18**	**350**	P		**P**	**11 18 40.1**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=38,slow=3.4,SNR=4.4							
FINES				LR	LR		11 48 22.7	
	comp=Z,14nm,21.4s,baz=38,slow=36							
FINES	**FINESS Array B**	**67.18**	**350**	P		**P**	**11 18 38.4**	**-0.7**
NOA	**NORSAR Array B**	**68.60**	**358**	P		**P**	**11 18 49.4**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=3.8,slow=6.4,SNR=5.6							
NOA				LR	LR		11 50 51.2	
	comp=Z,4.9nm,18.2s,baz=90,slow=38							
CMAR	**Chiang Mai Arr**	**74.55**	**280**	LR	LR		11 52 19.1	
	comp=Z,9.3nm,21.4s,baz=270,slow=36							
AKASG	**Malin Array Be**	**77.21**	**346**	P		**P**	**11 19 38.9**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=16,slow=5.7,SNR=6.6							
CLL	**Collm**	**78.27**	**356**	*i* P		**P**	**11 19 45.9**	**+0.8**
CLL				PcP		**pwP**	**11 19 55.7**	**+0.3**
GERES	**GERESS Array B**	**80.70**	**355**	P		**P**	**11 19 59.8**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=27,slow=4.5,SNR=2.9							
GEYT	**Alibeck**	**80.90**	**321**	LR	LR		12 01 15.2	
	comp=Z,23nm,18.9s,baz=90,slow=40							
BRTR	**Keskin Array B**	**86.94**	**340**	LR	LR		12 05 01.5	
	comp=Z,9.8nm,18.8s,baz=64,slow=39							
ASAR	**Alice Springs**	**87.42**	**227**	P		**P**	**11 20 29.8**	**-3.0**
	comp=Z,0.5nm,0.9s,baz=28,slow=4.0,SNR=4.5							

*IDC **04** 11:16:49.7±2.0, 31°.13S×178°.21W, h105km±15km, mb3.8/4, mb1 3.9/6, mb1mx3.6/33, mbtmp4.2/6, Error ellipse: s-maj=48.4km s-min=12.9km az=107.0*

ISC 04 11:16:49.6±1.6, 31°.2S±0°.1×178°.2W±0°.3, h100km, n8, σ1$02/10, mb4.1/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.94**	**8**	P		P	**Pn**	**11 17 22.6**	**+1.1**
	83nm,0.3s,baz=59,slow=21,SNR=2.8								
RAO				S			**Sn**	**11 17 45.3**	**-0.5**
	587nm,0.3s,baz=97,slow=23,SNR=17								
URZ	**Urewera**	**8.03**	**207**	P		P	**Pn**	**11 18 43.3**	**-0.1**
	0.9nm,0.3s,baz=302,slow=23,SNR=15								
URZ				S			**Sn**	**11 20 13.4**	**+1.0**
	7.5nm,0.3s,baz=198,slow=22,SNR=9.9								
RPZ	**Rata Peaks**	**15.11**	**211**	P		P	**P**	**11 20 19.8**	**-0.6**
	1.0nm,0.3s,baz=34,slow=7.3,SNR=1.6								
CTA	**Charters Tower**	**33.73**	**281**	P		P	**P**	**11 23 21.9**	**+0.3**
	1.8nm,0.6s,baz=116,slow=7.6,SNR=5.1								
STKA	**Stephens Creek**	**34.11**	**258**	P		P	**P**	**11 23 25.8**	**+0.9**
	4.7nm,0.6s,baz=99,slow=12,SNR=14								
ASAR	**Alice Springs**	**42.87**	**268**	P		P	**P**	**11 24 37.4**	**-0.9**
	0.8nm,0.6s,baz=102,slow=7.0,SNR=23								
WRA	**Warramunga Arr**	**43.93**	**273**	P		P	**P**	**11 24 45.5**	**-1.3**
	1.3nm,0.3s,baz=111,slow=8.1,SNR=39								
FINES	**FINESS Array B**	**145.81**	**339**	PKPbc			**PKPdf**	**11 36 14.7**	**-1.0**
	1.6nm,0.7s,baz=64,slow=4.9,SNR=10								

*IDC **04** 11:21:33.1±1.0, 5°.63S×153°.43E, h0km, mb4.0/13, mb1 4.1/14, mb1mx3.9/39, mbtmp4.0/14, ML2.2/1, MS3.3/12, Ms1 3.3/12, ms1mx3.1/34, Error ellipse: s-maj=36.9km s-min=17.3km az=118.0*

*DJA **04** 11:21:37.6±2.5, 6°S±4°×15°3E±1°6, h11km±16km, M4.4/7, mb4.0/7, mB4.5/1, MLv4.6/1, Mw(mB)3.6/1*

*NEIC **04** 11:21:38.7±1.8, 5.46S±0°.08×153°.23E±0°.06, h33km±5km, mb4.2/18, Error ellipse: s-maj=13.6km s-min=5.0km az=150.0*

ISC 04 11:21:38.8±0.6, 5°.52S±0°.07×153°.32E±0°.10, h35km, n56, σ0$93/50, mb4.1/21, MS3.2/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.75**	**319**				**Pn**	**11 22 06.5**	**-0.2**
MANU	**Manus Island**	**6.87**	**300**	Pn			**Pn**	**11 23 16.2**	**-0.9**
PMG	**Port Moresby**	**7.23**	**237**	Pn			**Pn**	**11 23 22.0**	**0.0**
	2.2nm,0.3s,baz=341,slow=8.4,SNR=4.5								
PMG				Sn			**Sn**	**11 24 43.9**	**+0.9**
	1.3nm,0.3s,baz=75,slow=21,SNR=7.2								
PMG				LR		LR	LR	11 26 00.0	
	comp=Z,208nm,21.8s,baz=122,slow=37								
PMG	**Port Moresby**	**7.23**	**237**				**Pn**	**11 23 21.4**	**-0.6**
PATS	**Pohnpei**	**13.24**	**22**	Pn			**Pn**	**11 24 44.4**	**0.0**
CTA	**Charters Tower**	**16.03**	**205**	Pn			**P**	**11 25 23.4**	**-1.4**
	0.1nm,0.3s,baz=33,slow=13,SNR=4.2								
CTAO	**Charters Tower**	**16.03**	**205**				**P**	**11 25 27.2**	**+2.3**
EIDS	**Eidsvold**	**19.86**	**186**	P			**Pn**	**11 26 07.6**	**-1.0**
DZM	**Mont Dzumac**	**20.78**	**144**	LR		LR	LR	11 33 12.2	
	comp=Z,82nm,19.1s,baz=296,slow=34								
SIJI	**Sorong**	**22.50**	**281**	LR		LR	LR	11 36 55.0	
	comp=Z,22nm,19.2s,baz=51,slow=41								
MTN	**Manton Dam**	**23.07**	**250**	P		P	**P**	**11 26 41.7**	**+0.3**
MTN				IAmb		IAmb	IAmb	11 26 49.9	
	comp=Z,14nm,1.2s								
MTN							**S**	**11 30 50.4**	**+0.1**
WR0	**Warramunga Arr**	**23.23**	**230**	P		P	**P**	**11 26 41.5**	**-1.6**
WR0				IAmb		IAmb	IAmb	11 26 49.3	
	comp=Z,6.0nm,1.1s								
WB0	**Warramunga Arr**	**23.23**	**231**	P		P	**P**	**11 26 42.5**	**-0.6**
WB0				IAmb		IAmb	IAmb	11 26 48.2	
	comp=Z,7.6nm,1.2s								
WRAB	**Tennant Creek**	**23.36**	**230**	P		P	**P**	**11 26 43.4**	**-1.0**
WRAB				IAmb		IAmb	IAmb	11 26 50.6	
	comp=Z,6.6nm,1.1s								
WB2	**Warramunga Arr**	**23.37**	**230**	P		P	**P**	**11 26 43.8**	**-0.6**
WB2				IAmb		IAmb	IAmb	11 26 51.2	
	comp=Z,6.1nm,1.1s								
WRA	**Warramunga Arr**	**23.38**	**230**	P		P	**P**	**11 26 43.2**	**-1.3**
	comp=Z,3.6nm,1.0s,baz=55,slow=10,SNR=7.0								
WRA				LR		LR	LR	11 35 35.6	
	comp=Z,72nm,21.4s,baz=80,slow=36								
AS31	**Alice Springs**	**25.99**	**224**	P		P	**P**	**11 27 09.3**	**+0.8**
ASAR	**Alice Springs**	**25.99**	**224**	P		P	**P**	**11 27 08.0**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=64,slow=8.7,SNR=11								
ASAR	**Alice Springs**	**25.99**	**224**	P		P	**P**	**11 27 08.9**	**+0.4**
STKA	**Stephens Creek**	**28.43**	**201**	P		P	**P**	**11 27 29.1**	**-1.2**
	comp=Z,1.8nm,1.0s,baz=9.9,slow=11,SNR=3.5								
STKA				LR		LR	LR	11 38 40.6	
	comp=Z,74nm,18.2s,baz=28,slow=36								
BATI	**Baumata**	**29.74**	**259**	LR		LR	LR	11 39 57.9	
	comp=Z,90nm,18.9s,baz=156,slow=37								
FITZ	**Fitzroy Crossi**	**29.78**	**243**	P		P	**P**	**11 27 41.5**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=86,slow=13,SNR=1.7								
FITZ				LR		LR	LR	11 40 00.1	
	comp=Z,56nm,19.4s,baz=70,slow=37								
FITZ	**Fitzroy Crossi**	**29.78**	**243**	P		P	**P**	**11 27 41.7**	**-0.8**
FITZ				IAmb		IAmb	IAmb	11 27 51.7	
	comp=Z,6.5nm,1.4s								
MTKI	**Muara Teweh, K**	**38.62**	**275**	P		P	**P**	**11 28 57.8**	**-1.3**
JAGI	**Jajag, Banyuwa**	**38.98**	**263**	P		P	**P**	11 29 09.6	+7.5
NWAO	**Narrogin (SRO)**	**43.27**	**226**	LR		LR	LR	11 47 14.0	
	comp=Z,72nm,19.0s,baz=140,slow=36								
MJAR	**Matsushiro Arr**	**44.17**	**342**	LR		LR	LR	11 45 55.7	
	comp=Z,30nm,21.0s,baz=215,slow=33								
KSRS	**Korea Array**	**48.87**	**333**	LR		LR	LR	11 50 50.3	
	comp=Z,16nm,18.5s,baz=170,slow=36								
PET	**Petropavlovsk**	**58.49**	**4**	P		P	**P**	**11 31 29.9**	**-1.3**
PEA0B	**Petropavlovsk-**	**58.52**	**3**	P		P	**P**	**11 31 32.2**	**+0.7**
PETK	**Petropavlovsk-**	**58.52**	**3**	P		P	**P**	**11 31 32.5**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=155,slow=6.4,SNR=17								
PETK				LR		P	P	11 52 28.9	
	comp=Z,21nm,21.9s,baz=170,slow=32								
PETK	**Petropavlovsk-**	**58.52**	**3**	P		P	**P**	**11 31 32.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**58.65**	**295**	P		P	**P**	**11 31 34.4**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=124,slow=5.3,SNR=4.1								
IMAR	**Indian Mountai**	**80.88**	**19**	P		P	**P**	**11 33 49.3**	**+0.3**
MK31	**Makanchi Array**	**81.20**	**319**	P		P	**P**	**11 33 50.5**	**-0.7**
MKAR	**Makanchi Array**	**81.20**	**319**	P		P	**P**	**11 33 51.4**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=120,slow=4.8,SNR=9.9								
MKAR	**Makanchi Array**	**81.20**	**319**	P		P	**P**	**11 33 51.0**	**-0.1**
MAKZ	**Makanchi**	**81.41**	**319**	P		P	**P**	**11 33 52.4**	**+0.2**
MAKZ				IAmb		IAmb	IAmb	11 33 53.9	
	comp=Z,2.8nm,0.9s								
RAGM	**Ragged Mountai**	**81.42**	**26**	P		P	**P**	**11 33 50.8**	**-1.2**
ZAA0	**Zalesovo Array**	**82.03**	**326**	P		P	**P**	**11 33 54.5**	**-0.7**
ZAA0				IAmb		IAmb	IAmb	11 33 56.0	
	comp=Z,2.9nm,0.7s								
ZALV	**Zalesovo Beam**	**82.03**	**326**	P		P	**P**	**11 33 55.5**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=109,slow=6.2,SNR=13								
ZALV	**Zalesovo Beam**	**82.03**	**326**	P		P	**P**	**11 33 55.2**	**-0.1**
ILAR	**Eielson Array**	**82.62**	**22**	P		P	**P**	**11 33 57.5**	**-0.6**
	comp=Z,0.8nm,1.1s,baz=264,slow=4.7,SNR=4.7								
QSPA	**South Pole Qui**	**84.45**	**180**	P		P	**P**	**11 34 09.5**	**+1.8**
KURK	**Kurchatov**	**84.65**	**322**	P		P	**P**	**11 34 09.5**	**+0.7**
KURBB	**Kurchatov Arra**	**84.68**	**322**	P		P	**P**	**11 34 09.5**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=107,slow=3.9,SNR=11								
AAK	**Alma**	**85.53**	**313**	P		P	**P**	**11 34 14.7**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=112,slow=2.6,SNR=4.6								
AAK	**Ala-Archa**	**85.53**	**313**	P		P	**P**	**11 34 13.1**	**-0.6**
AAK				IAmb		IAmb	IAmb	11 34 15.9	
	comp=Z,3.7nm,1.1s								
NRIK	**Noril'sk**	**86.81**	**341**	P		P	**P**	**11 34 20.4**	**+1.3**
	comp=Z,2.7nm,0.6s,baz=130,slow=6.8,SNR=4.4								
KKAR	**Karatay Array**	**88.50**	**313**	P		P	**P**	**11 34 26.4**	**-1.5**
KKAR				IAmb		IAmb	IAmb	11 34 27.0	
	comp=Z,0.8nm,0.8s								
NVAR	**Mina Array Bea**	**92.12**	**52**	LR		LR	LR	12 13 01.6	
	comp=Z,17nm,18.1s,baz=236,slow=34								
YKA	**Yellowknife Ar**	**95.81**	**28**	P		P	**P**	**11 35 01.0**	**-0.2**
	comp=Z,0.2nm,0.9s,baz=275,slow=3.0,SNR=3.9								
BDFB	**Brasilia**	**150.19**	**135**	PKPbc			**PKPbc**	**11 41 27.1**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=284,slow=4.0,SNR=3.8								
BDFB	**Brasilia**	**150.19**	**135**				**PKiKP**	**11 41 27.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**151.02**	**287**	PKPbc			**PKiKP**	**11 41 29.6**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=61,slow=2.6,SNR=14								
TORD	**Torodi Ar. Bea**	**151.02**	**287**				**PKiKP**	**11 41 30.3**	**+0.6**

*IDC **04** 11:48:37.0±3.2, 16°.00S×173°.07E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/36, mbtmp3.9/7, MS3.2/1, Ms1 3.2/1, ms1mx2.5/37, Error ellipse: s-maj=111.7km s-min=33.1km az=137.0*

ISC 04 11:48:42.2±2.8, 16°.1S±0°.5×173°.1E±0°.5, h35km, n8, σ0$89/7, mb3.8/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.66**	**226**	LR		LR	LR	11 53 44.2	
	comp=Z,150nm,19.0s,baz=356,slow=35								
CTA	**Charters Tower**	**25.82**	**257**	P		P	**P**	**11 54 11.7**	**+1.3**
	1.4nm,0.7s,baz=80,slow=11,SNR=3.7								
STKA	**Stephens Creek**	**32.64**	**236**	P		P	**P**	**11 55 11.0**	**+0.1**
	1.3nm,0.3s,baz=96,slow=9.2,SNR=5.0								
WRA	**Warramunga Arr**	**37.01**	**258**	P		P	**P**	**11 55 47.7**	**-1.1**
	0.5nm,0.8s,baz=89,slow=8.9,SNR=6.2								
ASAR	**Alice Springs**	**37.53**	**252**	P		P	**P**	**11 55 53.0**	**-0.3**
	1.8nm,0.8s,baz=82,slow=8.7,SNR=26								
FITZ	**Fitzroy Crossi**	**45.32**	**260**	P		P	**P**	**11 56 56.7**	**-0.4**
	3.0nm,1.0s,baz=101,slow=10,SNR=4.5								
CMAR	**Chiang Mai Arr**	**80.66**	**292**	P		P	**P**	**12 00 52.5**	**+0.4**
	0.6nm,0.5s,baz=101,slow=3.7,SNR=5.8								
ILAR	**Eielson Array**	**86.18**	**16**	P		P	**P**	**12 01 19.3**	**-0.1**
	0.5nm,0.9s,baz=207,slow=3.7,SNR=2.8								

*DJA **04** 12:11:15.5±0.4, 5°.5S×154°.4E±°, h10km, M4.6/12, mb4.7/12, mB5.0/7, MLv5.0/3, Mw(mB)4.3/7*

*IDC **04** 12:11:24.2±0.6, 5°.57S×153°.17E, h0km, mb4.2/16, mb1 4.4/18, mb1mx4.2/38, mbtmp4.2/18, ML2.8/2, MS3.8/28, Ms1 3.8/28, ms1mx3.7/51, Error ellipse: s-maj=22.7km s-min=14.6km az=113.0*

*BJI **04** 12:11:26.2±0.0, 5°.64S×153°.00E, h27km, mB5.0/22, mb4.4/31, Ms4.6/6, Ms7 4.2/6*

*NEIC **04** 12:11:29.9±1.5, 5°.46S±0°.07×153°.00E±0°.09, h34km±5km, mb4.7/45, Error ellipse: s-maj=13.6km s-min=9.8km az=80.0*

*GCMT **04** 12:11:29.9±0.3, 5°.62S±0°.02×153°.05E±0°.02, h20km±1km, MW4.8/81, Moment Tensor Solution. s17,c19; s81,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.45±.11; $M_{\theta\theta}$0.05±.08; $M_{\phi\phi}$-0.49±.09; $M_{r\theta}$0.69±.17; $M_{\theta\phi}$-1.46±.06; $M_{r\phi}$0.50±.14; Best double couple: $M_0$1.66000×10^{16} NP1:ϕs173.00000°, δ64.00000°, λ-1.00000°. NP2: ϕs263.00000°, δ89.00000°, λ-154.00000°. Principal axes: T 1.3300, Plg18.0000°, Azm35.0000°; N 0.6590, Plg64.0000°, Azm264.0000°; P -1.9890, Plg19.0000°, Azm131.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 12:11:30.2±0.5, 5°.50S±0°.05×153°.08E±0°.08, h37km, n102, σ1$25/86, mb4.6/40, MS3.8/27, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.59**	**325**	Pn			**Pn**	**12 11 54.5**	**-1.4**
RABL				Sn			**Sn**	**12 12 11.7**	**-3.5**
RABL	**Rabaul**	**1.59**	**325**	P			**Pn**	**12 11 55.1**	**-0.8**
MANU	**Manus Island**	**6.66**	**301**	Pn			**Pn**	**12 13 06.4**	**+0.9**
PMG	**Port Moresby**	**7.04**	**236**	Pn			**Pn**	**12 13 10.6**	**-0.2**
	3.3nm,0.3s,baz=28,slow=8.7,SNR=9.3								
PMG				Sn			**Sn**	**12 14 31.1**	**+1.5**
	15nm,0.3s,baz=168,slow=8.9,SNR=8.3								
PMG				LR		LR	LR	12 15 51.6	
	comp=Z,872nm,19.1s,baz=346,slow=38								
PMG	**Port Moresby**	**7.04**	**236**	Pn			**Pn**	**12 13 08.2**	**-2.6**
PMG	**Port Moresby**	**7.04**	**236**	P			Pn	12 13 15.8	+5.0
HNR	**Honiara**	**7.85**	**120**	LR			LR	12 16 26.1	
	comp=Z,1μm,18.4s,baz=284,slow=39								
JAY	**Jayapura**	**12.70**	**283**	LR			LR	12 19 11.5	
	comp=Z,636nm,18.5s,baz=76,slow=36								
PATS	**Pohnpei**	**13.32**	**23**	Pn			**Pn**	**12 14 36.0**	**-0.9**
CTA	**Charters Tower**	**15.95**	**204**	Pn			**Pn**	**12 15 11.8**	**-0.2**
	0.1nm,0.3s,baz=29,slow=17,SNR=7.6								
CTAO	**Charters Tower**	**15.95**	**204**				**Pn**	**12 15 10.9**	**-1.1**
SANVU	**Saraoutou**	**17.03**	**127**				**P**	**12 15 29.0**	**+1.9**
SANVU				IAmb			IAmb	12 15 39.5	
	comp=Z,57nm,0.9s								
EIDS	**Eidsvold**	**19.85**	**185**	P			**P**	**12 15 57.7**	**-0.4**
FAKI	**Fak Fak**	**20.93**	**276**	P			Pn	12 16 12.2	-0.5
	comp=Z,22nm,0.8s								
SIJI	**Sorong**	**22.26**	**281**	P			**P**	**12 16 24.9**	**+0.6**
	comp=Z,11nm,0.7s,baz=126,slow=19,SNR=4.5								
SWI	**Sorong**	**22.27**	**281**	P			**P**	**12 16 30.9**	**+6.6**
	comp=Z,47nm,0.8s								
MTN	**Manton Dam**	**22.85**	**250**	P			**P**	**12 16 29.6**	**-0.9**
MTN				IAmb			IAmb	12 16 47.6	
	comp=Z,41nm,1.2s								
WB0	**Warramunga Arr**	**23.06**	**230**	P			**P**	**12 16 33.2**	**+0.5**
WB0				IAmb			IAmb	12 16 36.7	
	comp=Z,40nm,1.2s								
WR0	**Warramunga Arr**	**23.06**	**230**	P			**P**	**12 16 32.5**	**-0.1**
WR0				IAmb			IAmb	12 16 36.1	
	comp=Z,50nm,1.4s								
WRAB	**Tennant Creek**	**23.19**	**230**	P			**P**	**12 16 34.1**	**+0.1**
WB2	**Warramunga Arr**	**23.20**	**230**	P			**P**	**12 16 33.4**	**-0.6**
WRA	**Warramunga Arr**	**23.21**	**230**	P			**P**	**12 16 33.9**	**-0.2**
	comp=Z,18nm,1.0s,baz=54,slow=9.7,SNR=42								
WRA				LR			LR	12 26 34.0	
	comp=Z,226nm,18.5s,baz=55,slow=39								
WRA	**Warramunga Arr**	**23.21**	**230**	IAmb			IAmb	12 16 42.3	
	comp=Z,0.8nm,1.0s								
AS31	**Alice Springs**	**25.83**	**224**	P			**P**	**12 16 58.2**	**-0.2**
ASAR	**Alice Springs**	**25.84**	**224**	P			**P**	**12 16 57.8**	**-0.6**
	comp=Z,5.8nm,0.9s,baz=56,slow=8.9,SNR=32								
MSVF	**Nonsavu**	**27.26**	**119**	LR			LR	12 26 58.1	
	comp=Z,305nm,20.5s,baz=154,slow=34								
STKA	**Stephens Creek**	**28.36**	**201**	P			**P**	**12 17 18.5**	**-2.5**
	comp=Z,2.4nm,0.7s,baz=13,slow=12,SNR=4.9								
STKA				LR			LR	12 28 53.4	
	comp=Z,239nm,19.1s,baz=15,slow=37								
STKA	**Stephens Creek**	**28.36**	**201**	P			**P**	**12 17 20.4**	**-0.5**
BATI	**Baumata**	**29.51**	**259**	LR			LR	12 31 22.6	
	comp=Z,860nm,20.9s,baz=110,slow=40								
FITZ	**Fitzroy Crossi**	**29.58**	**243**	P			**P**	**12 17 30.8**	**-1.2**
	comp=Z,3.2nm,0.7s,baz=68,slow=6

MAKZ	**Makanchi**	**81.24**	**319**	P		**P**		**12 23 41.6**	**-0.9**
MAKZ				IAmb		IAmb		12 23 51.8	
	comp=Z,8.5nm,1.3s								
MCK	**McKinley**	**81.40**	**22**	P		**P**		**12 23 42.9**	**-0.1**
MCK				IAmb		IAmb		12 24 02.7	
	comp=Z,11nm,1.2s								
MLY	**Manley**	**81.43**	**21**	P		**P**		**12 23 43.2**	**+0.1**
MLY				IAmb		IAmb		12 24 07.9	
	comp=Z,11nm,1.4s								
KLU	**Klutina**	**81.48**	**25**	P		**P**		**12 23 43.6**	**0.0**
KLU				IAmb		IAmb		12 24 11.5	
	comp=Z,9.2nm,1.0s								
M24K	**Tolsona, Glenn**	**81.67**	**24**	P		**P**		**12 23 45.2**	**+0.7**
NEA2	**Nenana**	**81.80**	**22**	P		**P**		**12 23 44.8**	**-0.3**
NEA2				IAmb		IAmb		12 23 46.1	
	comp=Z,6.8nm,1.2s								
ZAA0	**Zalesovo Array**	**81.89**	**326**	P		**P**		**12 23 45.3**	**-0.4**
ZALV	**Zalesovo Beam**	**81.89**	**326**	P		**P**		**12 23 44.3**	**-1.4**
	comp=Z,2.1nm,0.7s,baz=97,slow=7.6,SNR=7.1								
ZALV				LR		LR		13 00 36.7	
	comp=Z,42nm,19.6s,baz=133,slow=36								
ZALV	**Zalesovo Beam**	**81.89**	**326**	P		**P**		**12 23 44.9**	**-0.8**
WRH	**Wood River Hil**	**82.10**	**22**	P		**P**		**12 23 46.9**	**+0.3**
CCB	**Clear Creek Bu**	**82.29**	**22**	P		**P**		**12 23 47.6**	**0.0**
CCB				IAmb		IAmb		12 24 11.4	
	comp=Z,6.5nm,1.2s								
GLB	**Gilahina Butte**	**82.36**	**26**	P		**P**		**12 23 48.2**	**0.0**
GLB				IAmb		IAmb		12 24 15.9	
	comp=Z,8.3nm,1.0s								
IL31		**82.70**	**22**	P		**P**		**12 23 49.2**	**-0.5**
ILAR	**Eielson Array**	**82.70**	**22**	P		**P**		**12 23 49.0**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=259,slow=4.8,SNR=11								
ILAR				LR		LR		12 54 04.9	
	comp=Z,58nm,21.7s,baz=221,slow=31								
ILAR	**Eielson Array**	**82.70**	**22**	P		**P**		**12 23 49.5**	**-0.3**
BARN	**Barnard Glacie**	**83.14**	**26**	P		**P**		**12 23 52.1**	**-0.3**
BARN				IAmb		IAmb		12 24 20.3	
	comp=Z,5.0nm,1.0s								
BCPM	**Bancas Point**	**83.61**	**28**	P		**P**		**12 23 54.7**	**+0.1**
BCAR	**Beaver Creek A**	**83.92**	**25**	P		**P**		**12 23 57.6**	**+1.4**
QSPA	**South Pole Qui**	**84.47**	**180**	P		**P**		**12 23 59.5**	**+0.5**
QSPA				IAmb		IAmb		12 24 20.2	
	comp=Z,7.4nm,1.0s								
NIL	**Nilore**	**84.60**	**304**	P		**P**		**12 23 59.4**	**-0.8**
HYT	**Haines Junctio**	**84.92**	**27**	P		**P**		**12 24 02.0**	**+0.6**
MAW	**Mawson**	**85.04**	**203**	LR		LR		12 59 52.9	
	comp=Z,64nm,18.3s,baz=56,slow=34								
AAK	**Ala-Archa**	**85.35**	**313**	P		**P**		**12 24 03.7**	**-0.3**
AAK				IAmb		IAmb		12 24 25.9	
	comp=Z,6.4nm,0.9s								
NRIK	**Noril'sk**	**86.71**	**341**	P		**P**		**12 24 09.7**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=104,slow=3.6,SNR=4.4								
NRIK	**Noril'sk**	**86.71**	**341**	P		**P**		**12 24 09.3**	**-0.5**
NRIK				IAmb		IAmb		12 24 20.1	
	comp=Z,3.3nm,0.7s								
DLBC	**Dease Lake**	**87.83**	**31**	LR		LR		12 56 40.8	
	comp=Z,97nm,19.6s,baz=326,slow=31								
INK	**Inuvik**	**89.00**	**21**	P		**P**		**12 24 20.3**	**-0.5**
BRVK	**Borovoye**	**90.03**	**323**	P		**P**		**12 24 24.5**	**-1.5**
BRVK				IAmb		IAmb		12 24 34.9	
	comp=Z,3.3nm,0.8s								
NVAR	**Mina Array Bea**	**92.29**	**52**	P		**P**		**12 24 36.8**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=266,slow=6.3,SNR=4.5								
NVAR				LR		LR		12 58 15.6	
	comp=Z,69nm,21.5s,baz=228,slow=30								
NVAR	**Mina Array Bea**	**92.29**	**52**	P		**P**		**12 24 36.4**	**-0.8**
YKA	**Yellowknife Ar**	**95.91**	**28**	P		**P**		**12 24 53.6**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=269,slow=4.5,SNR=8.2								
GEYT	**Alibeck**	**97.26**	**307**	LR		LR		13 11 40.6	
	comp=Z,44nm,20.0s,baz=120,slow=37								
PLCA	**Paso Flores**	**119.05**	**143**	PKP		**PKPdf**		**12 30 15.3**	**-0.3**
	comp=Z,2.0nm,1.0s,baz=226,slow=8.3,SNR=2.9								
GERES	**GERESS Array B**	**124.79**	**328**	PKP		**PKiKP**		**12 30 26.9**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=66,slow=3.2,SNR=4.4								
MDT	**Midelt**	**145.78**	**325**	PKPbc		**PKPab**		**12 31 07.8**	**+1.3**
	comp=Z,4.5nm,1.0s,baz=50,slow=3.9,SNR=3.5								
BDFB	**Brasilia**	**150.37**	**135**	PKPbc		**PKPbc**		**12 31 18.1**	**-0.8**
	comp=Z,8.0nm,1.1s,baz=126,slow=3.5,SNR=6.1								
TORD	**Torodi Ar. Bea**	**150.79**	**287**	PKPbc		**PKPbc**		**12 31 19.9**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=49,slow=1.7,SNR=9.1								
TORD	**Torodi Ar. Bea**	**150.79**	**287**			**PKPbc**		**12 31 19.1**	**-0.6**

IDC 04 12:27:35.7±1.4, 1°06'N×124°48'E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.4/59, mbtmp3.7/4, ML3.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/45, Error ellipse: s-maj=63.0km s-min=23.4km az=58.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.05**	**106**	Pn	Pn	12 29 22.1	+1.8
	1.2nm,0.3s,baz=150,slow=21,SNR=1.7						
SIJI				Sn	Sn	12 30 51.4	+10
	1.2nm,0.3s,baz=131,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	**23.00**	**156**	P	P	12 32 41.2	-1.1
	1.2nm,0.4s,baz=337,slow=11,SNR=21						
PSI	**Prapat**	**25.59**	**274**	LR	LR	12 42 43.0	
	comp=Z,98nm,19.6s,baz=91,slow=36						
ASAR	**Alice Springs**	**26.23**	**160**	P	P	12 33 13.1	+0.5
	0.6nm,0.7s,baz=346,slow=10,SNR=13						
MKAR	**Makanchi Array**	**58.51**	**327**	P	P	12 37 33.8	-0.1
	0.3nm,0.5s,baz=120,slow=7.5,SNR=8.1						
KMBO	**Kilima Mbogo**	**87.25**	**269**	LR	LR	13 16 27.9	
	comp=Z,30nm,19.7s,baz=93,slow=34						

*CRAAG **04** 12:27:35.8, 36°.45N×3°.08E, Ml3.4*
*IDC **04** 12:27:35.8±1.3, 36°.62N×3°.10E, h0km, mb3.3/5, mb1 3.4/8, mb1mx3.2/57, mbtmp3.3/8, ML3.1/3, Error ellipse: s-maj=28.2km s-min=21.3km az=165.0*
*MDD **04** 12:27:40.3±0.3, 36°.54N×3°.11E, h0km, mb3.9/18, Error ellipse: s-maj=2.8km s-min=1.3km az=143.0, PRXIMO*
*LDG **04** 12:27:41.9±0.2, 36°.50N×3°.12E, h25km, Ml3.2/18, Error ellipse: s-maj=4.6km s-min=3.1km az=172.0*
ISC 04 12:27:39.1±0.9, 36°.80N±0°.06×3°.14E±0°.03, h10km, n88, σ2s27/139, mb3.3/5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.08**	**272**	P	**Pg**	**12 27 43.6**	**+2.1**
ABA	**Alger-Bouzarea**	**0.08**	**272**	P	**Pg**	**12 27 43.6**	**+2.1**
ABMS	**Boumerdes**	**0.28**	**100**	P	**Pg**	**12 27 45.7**	**+0.9**
ABMS	**Boumerdes**	**0.28**	**100**	P	**Pg**	**12 27 45.7**	**+0.9**
ADJB	**Djebel Djouab**	**0.68**	**159**	P	Pg	12 27 45.9	-6.5
ADJB	**Djebel Djouab**	**0.68**	**159**	P	Pg	12 27 45.9	-6.5
SET	**Setif**	**1.92**	**107**	P	**Pg**	**12 28 20.0**	**+4.1**
SET	**Setif**	**1.92**	**107**	P	**Pg**	**12 28 20.0**	**+4.1**
ETOS	**Mallorca**	**2.98**	**355**	P	**Pn**	**12 28 28.1**	**+1.7**
	8.0nm,0.3s,SNR=7.9						
ETOS				S	**Sn**	**12 29 05.0**	**+2.8**
	12nm,0.3s,SNR=7.9						
EBEN2	**Beniarda presa**	**3.24**	**306**	P	**Pn**	**12 28 31.0**	**+1.0**
	2.4nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**12 29 08.9**	**+0.3**
	39nm,0.6s,SNR=7.9						
ETRV	**Los Montesinos**	**3.34**	**293**	S	**Sn**	**12 29 09.6**	**-1.4**
	38nm,0.3s,SNR=7.9						
AFON	**Font Roja**	**3.46**	**304**	P	**Pn**	**12 28 34.6**	**+1.5**
	2.1nm,0.6s,SNR=7.9						
AFON				S	**Sn**	**12 29 14.5**	**+0.2**
	5.5nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**3.64**	**288**	P	**Pn**	**12 28 34.5**	**-1.1**
	3.2nm,0.3s,SNR=14						
EMUR				S	**Sn**	**12 29 17.8**	**-0.8**
	3.0nm,0.3s,SNR=6.3						
ETOB	**Tobarra**	**4.15**	**298**	P	**Pn**	**12 28 42.5**	**0.0**
	4.8nm,0.3s,SNR=16						
ETOB				S	**Sn**	**12 29 30.6**	**-0.5**
	10.0nm,0.3s,SNR=10.0						
ECHE	**Chera**	**4.27**	**312**	P	**Pn**	**12 28 45.3**	**+1.1**
	13nm,1.0s,SNR=7.9						
ECHE				S	**Sn**	**12 29 34.3**	**+0.2**
	8.4nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	**4.29**	**274**	S	**Sn**	**12 29 30.6**	**-3.9**
	6.0nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.55**	**323**	P	**Pn**	**12 28 50.0**	**+1.9**
	6.8nm,0.7s,SNR=25						
EMOS				S	**Sn**	**12 29 41.3**	**+0.1**
	10nm,3.1s,SNR=7.9						
ERTA	**Horta de San J**	**4.69**	**333**	P	**Pn**	**12 28 51.7**	**+1.7**
	7.6nm,1.1s,SNR=7.9						
ERTA				S	**Sn**	**12 29 45.0**	**+0.5**
	17nm,3.4s,SNR=7.9						
EQES	**Quesada**	**5.05**	**283**	P	**Pn**	**12 28 55.5**	**+0.6**
	5.4nm,0.4s,SNR=17						
EQES				S	**Sn**	**12 29 49.4**	**-4.0**
	6.2nm,0.3s,SNR=11						
KEST	**Kesra**	**5.13**	**100**	Pn	Pn	12 28 53.8	-2.3
	1.4nm,0.3s,baz=64,slow=19,SNR=14						
KEST				Sn	**Sn**	**12 29 53.7**	**-1.6**
	0.7nm,0.3s,baz=5.8,slow=20,SNR=1.6						
SJAF	**Saint Jean de**	**5.68**	**358**	P	**Pn**	**12 29 06.4**	**+2.8**
	1.6nm,0.3s,SNR=7.9						
SJAF				S	**Sn**	**12 30 10.0**	**+1.1**
	9.9nm,0.6s,SNR=7.9						
ETOR	**Torete**	**5.71**	**316**	P	**Pn**	**12 29 06.0**	**+2.0**
	5.4nm,0.4s,SNR=6.3						
ETOR				S	**Sn**	**12 30 08.5**	**-1.1**
	6.2nm,0.3s,SNR=5.6						
CLLI	**Llivia**	**5.74**	**351**	P	**Pn**	**12 29 07.9**	**+3.4**
	2.3nm,0.3s,SNR=7.2						
CLLI				S	**Sn**	**12 30 11.8**	**+1.2**
	2.5nm,0.3s,SNR=6.1						
CSOR	**Sort**	**5.78**	**345**	P	**Pn**	**12 29 08.0**	**+3.0**
	3.9nm,0.5s,SNR=8.6						
CSOR				S	**Sn**	**12 30 13.1**	**+1.6**
	4.0nm,0.4s,SNR=7.3						
EGOR	**Sierra Gorda,**	**5.81**	**275**	P	**Pn**	**12 29 05.1**	**-0.4**
	0.8nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**12 30 06.9**	**-5.4**
	1.6nm,0.5s,SNR=7.9						
ESDC	**Sonseca Array**	**6.28**	**299**	Pn	**Pn**	**12 29 10.5**	**-1.4**
	0.1nm,0.3s,baz=112,slow=14,SNR=2.9						
ESDC				Sn	**Sn**	**12 30 22.3**	**-1.5**
	0.2nm,0.3s,baz=114,slow=24,SNR=3.6						
ESDC	**Sonseca Array**	**6.28**	**299**	P	**Pn**	**12 29 12.3**	**+0.4**
	0.5nm,0.3s,baz=116,slow=13,SNR=6.9						
ESDC				S	**Sn**	**12 30 21.1**	**-2.6**
	0.1nm,0.3s,baz=133,slow=25,SNR=4.0						
PAB	**San Pablo**	**6.50**	**297**	P	**Pn**	**12 29 16.2**	**+1.3**
	1.9nm,0.3s,SNR=7.9						
MTLF	**Montolieu**	**6.57**	**354**	P	**Pn**	**12 29 18.1**	**+2.3**
MTLF				S	**Sn**	**12 30 31.9**	**+1.1**
	0.7nm,0.3s						
MTLF	**Montolieu**	**6.57**	**354**	*e*Pn	**Pn**	**12 29 18.1**	**+2.3**
MTLF				*e*Sn	**Sn**	**12 30 31.9**	**+1.1**
	1.4nm,0.3s						
EPF	**Esparros**	**6.58**	**342**	P	**Pn**	**12 29 18.4**	**+2.4**
EPF				S	**Sn**	**12 30 32.7**	**+1.5**
	1.4nm,0.3s						
EPF	**Esparros**	**6.58**	**342**	*e*Pn	**Pn**	**12 29 18.4**	**+2.4**
EPF				*e*Sn	**Sn**	**12 30 32.7**	**+1.5**
	2.9nm,0.3s						
ETSF	**Etsaut**	**6.72**	**336**	P	**Pn**	**12 29 21.3**	**+3.4**
ETSF				S	**Sn**	**12 30 35.3**	**+0.7**
	1.5nm,0.5s						
ETSF	**Etsaut**	**6.72**	**336**	*e*Pn	**Pn**	**12 29 21.3**	**+3.4**
ETSF				*e*Sn	**Sn**	**12 30 35.3**	**+0.7**
	3.0nm,0.5s						
ECAB	**El Cabril**	**6.92**	**283**	P	**Pn**	**12 29 20.0**	**-0.7**
	0.7nm,0.4s,SNR=8.5						
ECAB				S	**Sn**	**12 30 33.9**	**-5.7**
	10nm,1.3s						
ATE	**Arette**	**6.94**	**336**	P	**Pn**	**12 29 23.7**	**+2.9**
	1.1nm,0.6s,SNR=7.9						
ATE				S	**Sn**	**12 30 39.9**	**+0.1**
	12nm,0.9s,SNR=7.9						
LMR	**La Mourre**	**7.02**	**21**	P	**Pn**	**12 29 22.7**	**+0.8**
LMR				S	**Sn**	**12 30 41.3**	**-0.5**
LMR	**La Mourre**	**7.02**	**21**	*e*Pn	**Pn**	**12 29 22.7**	**+0.8**
LMR				*e*Sn	**Sn**	**12 30 41.3**	**-0.5**
SJPF	**Ste Jean**	**7.14**	**333**	P	**Pn**	**12 29 26.9**	**+3.3**
SJPF				S	**Sn**	**12 30 46.0**	**+1.2**
	0.9nm,0.4s						
SJPF	**Ste Jean**	**7.14**	**333**	*e*Pn	**Pn**	**12 29 26.9**	**+3.3**
SJPF				*e*Sn	**Sn**	**12 30 46.0**	**+1.2**
	1.9nm,0.4s						
FRF	**La Foret Royal**	**7.27**	**21**	P	**Pn**	**12 29 27.1**	**+1.8**
FRF				S	**Sn**	**12 30 47.1**	**-0.8**
FRF	**La Foret Royal**	**7.27**	**21**	*e*Pn	**Pn**	**12 29 27.1**	**+1.8**
FRF				*e*Sn	**Sn**	**12 30 47.1**	**-0.8**
LASF	**Ste Croix**	**7.29**	**4**	P	**Pn**	**12 29 28.0**	**+2.3**
LASF				S	**Sn**	**12 30 49.0**	**+0.5**
	0.8nm,0.2s						
LASF	**Ste Croix**	**7.29**	**4**	*e*Pn	**Pn**	**12 29 28.0**	**+2.3**
LASF				*e*Sn	**Sn**	**12 30 49.0**	**+0.5**
	1.5nm,0.2s						
PGF	**Pioggiola**	**7.31**	**36**	P	**Pn**	**12 29 26.9**	**+0.9**
PGF				S	**Sn**	**12 30 47.1**	**-1.9**
PGF	**Pioggiola**	**7.31**	**36**	*e*Pn	**Pn**	**12 29 26.9**	**+0.9**
PGF				*e*Sn	**Sn**	**12 30 47.1**	**-1.9**
MDT	**Midelt**	**7.51**	**240**	Pn	Pn	12 29 25.9	-2.8
	0.2nm,0.3s,baz=73,slow=12,SNR=4.6						
SBF	**Sospel**	**7.78**	**24**	*e*Sn	**Sn**	**12 30 59.4**	**-1.2**
VIVF	**Saint-Julien-l**	**8.13**	**8**	P	**Pn**	**12 29 39.5**	**+2.3**
VIVF				S	**Sn**	**12 31 08.9**	**-0.3**
	0.6nm,0.3s						
VIVF	**Saint-Julien-l**	**8.13**	**8**	*e*Pn	**Pn**	**12 29 39.5**	**+2.3**
VIVF				*e*Sn	**Sn**	**12 31 08.9**	**-0.3**
	1.3nm,0.3s						
CAF	**Calviac**	**8.16**	**355**	P	**Pn**	**12 29 40.9**	**+3.3**
CAF				S	**Sn**	**12 31 10.4**	**+0.5**
	0.4nm,0.2s						
CAF	**Calviac**	**8.16**	**355**	*e*Pn	**Pn**	**12 29 40.9**	**+3.3**
CAF				*e*Sn	**Sn**	**12 31 10.4**	**+0.5**
	0.8nm,0.2s						
LFF	**La Frestale**	**8.33**	**348**	P	**Pn**	**12 29 42.9**	**+3.0**
LFF				S	**Sn**	**12 31 14.3**	**+0.3**
	1.3nm,0.3s						
LFF	**La Frestale**	**8.33**	**348**	*e*Pn	**Pn**	**12 29 42.9**	**+3.0**
LFF				*e*Sn	**Sn**	**12 31 14.3**	**+0.3**
	2.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.37**	**14**	P	**Pn**	**12 29 44.8**	**+4.2**
ORIF	**Oris-en-Rattie**	**8.37**	**14**	*e*Pn	**Pn**	**12 29 44.8**	**+4.2**
MBDF	**Montbardon**	**8.39**	**18**	P	Pn	12 29 46.6	+5.8
MBDF				S	**Sn**	**12 31 14.9**	**-0.7**
	0.4nm,0.3s						
MBDF	**Montbardon**	**8.39**	**18**	*e*Pn	Pn	12 29 46.6	+5.8
MBDF				*e*Sn	**Sn**	**12 31 14.9**	**-0.7**
	0.8nm,0.3s						
RJF	**Les Rejaudoux**	**8.59**	**352**	P	**Pn**	**12 29 46.0**	**+2.6**
RJF	**Les Rejaudoux**	**8.59**	**352**	*e*Pn	**Pn**	**12 29 46.0**	**+2.6**
LPG	**La Plagne**	**9.11**	**16**	P	**Pn**	**12 29 53.3**	**+2.5**
LPG	**La Plagne**	**9.11**	**16**	*e*Pn	**Pn**	**12 29 53.3**	**+2.5**
EARI	**Arriondas**	**9.11**	**318**	P	**Pn**	**12 29 53.0**	**+2.3**
	2.0nm,0.4s,SNR=16						
BGF	**Bois d'Agland**	**9.75**	**359**	P	**Pn**	**12 30 01.9**	**+2.5**
BGF	**Bois d'Agland**	**9.75**	**359**	*e*Pn	**Pn**	**12 30 01.9**	**+2.5**
AVF	**Avril sur Loir**	**9.99**	**1**	P	**Pn**	**12 30 06.4**	**+3.8**
AVF				S	**Sn**	**12 31 53.6**	**-1.0**
	0.2nm,0.3s						
AVF	**Avril sur Loir**	**9.99**	**1**	*e*Pn	**Pn**	**12 30 06.4**	**+3.8**
AVF				*e*Sn	**Sn**	**12 31 53.6**	**-1.0**
	0.4nm,0.3s						
CABF	**La Chapelle**	**10.05**	**12**	P	**Pn**	**12 30 06.7**	**+3.2**
CABF				S	**Sn**	**12 31 54.3**	**-2.0**
	0.6nm,0.6s						
CABF	**La Chapelle**	**10.05**	**12**	*e*Pn	**Pn**	**12 30 06.7**	**+3.2**
CABF				*e*Sn	**Sn**	**12 31 54.3**	**-2.0**
	1.2nm,0.6s						
SSF	**Saint Saulge**	**10.26**	**1**	P	**Pn**	**12 30 09.6**	**+3.3**
SSF				S	**Sn**	**12 32 00.1**	**-1.3**
	0.7nm,0.5s						
SSF	**Saint Saulge**	**10.26**	**1**	*e*Pn	**Pn**	**12 30 09.6**	**+3.3**
SSF				*e*Sn	**Sn**	**12 32 00.1**	**-1.3**
	1.4nm,0.5s						
HINF	**Hinteralfeld**	**11.35**	**13**	P	**Pn**	**12 30 22.8**	**+1.5**
HINF				S	**Sn**	**12 32 25.4**	**-2.7**
	0.3nm,0.3s						
HINF	**Hinteralfeld**	**11.35**	**13**	*e*Pn	**Pn**	**12 30 22.8**	**+1.5**
HINF				*e*Sn	**Sn**	**12 32 25.4**	**-2.7**
	0.7nm,0.3s						
HAU	**Haudompre**	**11.45**	**11**	P	**Pn**	**12 30 24.5**	**+1.9**
HAU				S	**Sn**	**12 32 27.8**	**-2.7**
	0.8nm,0.4s						
HAU	**Haudompre**	**11.45**	**11**	*e*Pn	**Pn**	**12 30 24.5**	**+1.9**
HAU				*e*Sn	**Sn**	**12 32 27.8**	**-2.7**
	1.6nm,0.4s						
SFTF	**Sexfontaines**	**11.48**	**6**	P	**Pn**	**12 30 26.4**	**+3.3**
SFTF	**Sexfontaines**	**11.48**	**6**	*e*Pn	**Pn**	**12 30 26.4**	**+3.3**
CDF	**Champ du Feu**	**12.00**	**13**	P	**Pn**	**12 30 32.9**	**+2.7**
CDF				S	**Sn**	**12 32 40.8**	**-3.3**
	0.2nm,0.3s						
CDF	**Champ du Feu**	**12.00**	**13**	*e*Pn	**Pn**	**12 30 32.9**	**+2.7**
CDF				*e*Sn	**Sn**	**12 32 40.8**	**-3.3**
	0.5nm,0.3s						
QUIF	**Quistinic**	**12.04**	**339**	P	**Pn**	**12 30 32.2**	**+1.5**
QUIF	**Quistinic**	**12.04**	**339**	*e*Pn	**Pn**	**12 30 32.2**	**+1.5**
BAIF	**Baives**	**13.28**	**3**	P	**Pn**	**12 30 50.5**	**+2.9**
BAIF				S	**Sn**	**12 33 13.0**	**-2.2**
	0.4nm,0.3s						
BAIF	**Baives**	**13.28**	**3**	*e*Pn	**Pn**	**12 30 50.5**	**+2.9**
BAIF				*e*Sn	**Sn**	**12 33 13.0**	**-2.2**
	0.8nm,0.3s						
AKASG	**Malin Array Be**	**23.26**	**45**	P	**P**	**12 32 45.2**	**-1.3**
	0.4nm,0.4s,baz=241,slow=12,SNR=1.8						
TORD	**Torodi Ar. Bea**	**23.59**	**184**	P	**P**	**12 32 46.0**	**-4.1**
	0.4nm,0.7s,baz=353,slow=6.5,SNR=0.6						
KURBB	**Kurchatov Arra**	**53.94**	**50**	P	**P**	**12 37 02.7**	**0.0**
	0.2nm,0.6s,baz=287,slow=7.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**56.65**	**44**	P	**P**	**12 37 22.3**	**0.0**
	0.3nm,0.3s,baz=306,slow=12,SNR=1.7						
MKAR	**Makanchi Array**	**57.51**	**53**	P	**P**	**12 37 27.1**	**-1.4**
	0.3nm,0.6s,baz=286,slow=5.7,SNR=4.1						

*BGR **04** 12:30:55.4±0.0, 21°.66S×176°.25W, h461km±1km*
*NOU **04** 12:31:02.4, 20°.20S×177°.20W, h521km, mb4.7, Fiji Islands Region*
*IDC **04** 12:31:04.5±1.8, 20°.29S×177°.60W, h516km±18km, mb4.0/20, mb1 4.1/23, mb1mx3.9/38, mbtmp4.9/23, Error ellipse: s-maj=17.6km s-min=11.9km az=142.0*
*NEIC **04** 12:31:05.7±1.2, 20°.10S±0°.03×177°.7W±0°.1, h525km±5km, mb4.5/183, Error ellipse: s-maj=16.6km s-min=4.9km az=92.0*
ISC 04 12:31:05.0±0.4, 20°.17S±0°.08×177°.59W±0°.07, h525km, n391, σ1s28/423, mb4.5/122, 24C-12D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.78**	**300**	P	**P**	**12 32 31.1**	**-0.5**
	32nm,0.3s,baz=121,slow=5.3,SNR=83						
MSVF	**Nonsavu**	**4.78**	**300**	P	**P**	**12 32 31.2**	**-0.4**
MSVF	**Nonsavu**	**4.78**	**300**	P	**P**	**12 32 31.6**	**0.0**
AFI	**Afiamalu**	**8.34**	**43**	P	**P**	**12 33 02.0**	**-3.7**
AFI				S	S	12 34 35.6	-9.0
FUNA	**Funafuti**	**11.98**	**345**	P	**P**	**12 33 41.8**	**-1.6**
DZM	**Mont Dzumac**	**15.02**	**260**	P	**P**	**12 34 15.9**	**+0.7**
	1.4nm,0.3s,baz=104,slow=19,SNR=13						
OUZ	**Omahuta**	**16.89**	**206**	P	**P**	**12 34 34.5**	**+0.8**
OUZ				IAmb	IAmb	12 34 37.7	
	comp=Z,6.5nm,0.7s						
MXZ	**Matakaoa Point**	**17.70**	**191**	P	**P**	**12 34 40.6**	**-0.6**
MXZ	**Matakaoa Point**	**17.70**	**191**	P	**P**	**12 34 40.6**	**-0.6**
WMGZ	**Waiomatatini S**	**17.93**	**190**	P	**P**	**12 34 44.2**	**+0.9**
HAZ	**Te Kaha**	**17.98**	**192**	P	**P**	**12 34 41.8**	**-1.9**
PKGZ	**Pakihiroa**	**18.06**	**191**	P	**P**	**12 34 46.1**	**+1.6**
PUZ	**Puketiti**	**18.20**	**191**	P	**P**	**12 34 45.2**	**-0.6**
RUGZ	**Raukumara Rang**	**18.21**	**192**	P	**P**	**12 34 46.0**	**+0.1**
TWGZ	**Tauwhareparae**	**18.36**	**191**	P	**P**	**12 34 47.7**	**+0.5**
TOZ	**Tahuroa Road**	**18.51**	**197**	P	**P**	**12 34 49.1**	**+0.6**
KARZ	**Kaharoa**	**18.58**	**195**	P	**P**	**12 34 49.4**	**+0.1**
MWZ	**Matawai**	**18.59**	**192**	P	**P**	**12 34 47.4**	**-2.0**
URZ	**Urewera**	**18.61**	**193**	P	**P**	**12 34 46.8**	**-2.6**
	comp=Z,5.5nm,0.3s,baz=121,slow=23,SNR=42						
URZ	**Urewera**	**18.61**	**193**	P	**P**	**12 34 46.8**	**-2.6**
URZ	**Urewera**	**18.61**	**193**	P	**P**	**12 34 47.0**	**-2.5**
TKGZ	**Te Karaka**	**18.63**	**191**	P	**P**	**12 34 48.8**	**-0.8**
RAGZ	**Rawiri**	**18.77**	**192**	P	**P**	**12 34 49.7**	**-1.4**
MUGZ	**Murupara**	**18.89**	**194**	P	**P**	**12 34 49.4**	**-2.7**
RTZ	**Ruatahuna**	**18.98**	**193**	P	**P**	**12 34 50.3**	**-2.6**
PRRZ	**Plateau Road**	**19.00**	**195**	P	**P**	**12 34 51.5**	**-1.5**
HATZ	**Hinemaiaia**	**19.44**	**195**	P	**P**	**12 34 55.0**	**-2.1**
NMHZ	**Naumai**	**19.48**	**193**	P	**P**	**12 34 55.6**	**-1.8**
BKZ	**Black Stump Fm**	**19.61**	**194**	P	**P**	**

KASI **Kota Agung** 76.79 269 P P 12 42 03.3 +0.3
comp=Z,2µmcomp=Z,28nm,0.4s
KSRS **Korea Array** 76.89 318 P P 12 42 04.2 +1.2
comp=Z,3.2nm,1.0s,baz=149,slow=6.6,SNR=8.3
KSAR **Wonju Array Be** 76.91 318 P P 12 42 03.7 +0.5
CIS **Catalina Islan** 77.59 47 P 12 42 08.2
baz=236
KMRM **Mail Ridge** 78.25 39 P P 12 42 12.6 +2.2
KMRM IAmb IAmb 12 42 13.8
comp=Z,19nm,0.8s
VES **Vestal, Richgr** 78.52 45 P 12 42 13.3
baz=235
ESJX **Sierra Juarez** 78.56 50 P P 12 42 14.1 +1.7
BFSC **Mount Baldy Ra** 78.58 47 P 12 42 13.4
baz=236
KHMM **Horse Mountain** 78.65 39 P P 12 42 14.7 +2.0
KHMM IAmb IAmb 12 42 20.0
comp=Z,18nm,1.2s
MONP2 **Monument Peak** 78.70 49 P 12 42 15.1
baz=237,SNR=7.0
EDW2 **Edwards Air Fo** 78.71 46 P 12 42 14.8
baz=236,SNR=8.4
O02D **Mt. Diablo Mer** 78.77 40 P 12 42 15.2
baz=232
RMX **La Rumorosa** 78.79 49 P P 12 42 15.7 +2.1
IKP **In-Ko-Pah, Jac** 78.79 49 P 12 42 15.3
baz=237
ISA **Isabella, Lake** 78.83 45 P 12 42 15.4
baz=235
ISA **Isabella, Lake** 78.83 45 P P 12 42 14.3 +0.6
USA0B **Ussuriysk Arra** 78.91 326 P P 12 42 15.8 +2.0
USA0B IAmb IAmb 12 42 16.3
comp=Z,16nm,0.9s
USRK **Ussuriysk Ar.** 78.91 326 P P 12 42 15.6 +1.9
comp=Z,12nm,0.8s,baz=128,slow=3.3,SNR=23
SII **Sitkinak Islan** 78.93 13 P 12 42 13.9
baz=202
SII **Sitkinak Islan** 78.93 13 P P 12 42 14.5 +0.9
CMB **Columbia Colle** 78.96 43 P P 12 42 15.2 +0.9
PFO **Pinyon Flats O** 79.06 48 P 12 42 16.4
baz=237
TPFO **Pinon Flats** 79.06 48 P 12 42 16.7
baz=237
AFDM **Forest Hills D** 79.13 42 P P 12 42 16.4 +1.2
SWSC **Sam W. Stewart** 79.17 49 P 12 42 16.9
baz=238
WDC **Whiskeytown Da** 79.17 39 P P 12 42 15.3 0.0
ORV **Oroville** 79.17 41 P P 12 42 16.0 +0.7
N02D **Trinity Center** 79.32 39 P 12 42 18.1
baz=232
O03E **Paynes Creek** 79.44 40 P 12 42 18.0
baz=232
M02C **Callahan** 79.49 39 P 12 42 19.3
baz=231
CWC **Cottonwood Cre** 79.53 45 P 12 42 19.1
baz=236
BELC **Belle Mtn. Jos** 79.60 48 P 12 42 19.5
baz=237,SNR=7.7
MPMC **Manual Prospec** 79.71 46 P 12 42 19.9
baz=236
OHAK **Old Harbor** 79.74 13 P 12 42 18.4
baz=203
OHAK **Old Harbor** 79.74 13 P P 12 42 18.4 +0.7
OHAK IAmb IAmb 12 42 30.6
comp=Z,28nm,1.2s
YBH **Yreka Blue Hor** 79.79 38 P P 12 42 20.8 +2.2
BC3 **Big Chuckawall** 79.79 49 P 12 42 20.2
baz=238
HEC **Hector,Ludlow** 79.81 47 P 12 42 20.3
baz=237,SNR=6.6
WAKR **Walker** 79.84 43 P P 12 42 19.1 0.0
WAKR IAmb IAmb 12 42 21.8
comp=Z,13nm,1.0s
MYKOM **Kota Tinggi** 79.89 276 P P 12 42 20.6 +0.9
MYKOM IAmb IAmb 12 42 21.4
comp=Z,12nm,0.8s
GLA **Glamis** 79.92 49 P P 12 42 20.6 +1.2
GLA IAmb IAmb 12 42 22.5
comp=Z,20nm,1.4s
GLA **Glamis** 79.92 49 P 12 42 21.5
baz=238
PNTR **Pine Nut** 80.08 42 P P 12 42 22.0 +1.7
PNTR IAmb IAmb 12 42 22.9
comp=Z,15nm,0.8s
VCNR **Virginia City** 80.17 42 P P 12 42 22.5 +1.7
HUMO **Hull Mountain** 80.20 38 P P 12 42 21.9 +1.2
HUMO IAmb IAmb 12 42 23.5
comp=Z,16nm,1.2s
YERR **Yerington** 80.24 42 P P 12 42 22.7 +1.6
YERR IAmb IAmb 12 42 23.5
comp=Z,17nm,1.3s
GMRC **Granite Mounta** 80.26 47 P 12 42 22.7
baz=237
IRM **Iron Mountain** 80.28 48 P 12 42 23.2
baz=238,SNR=6.7
LHV **Little Huntoon** 80.29 43 P P 12 42 23.3 +2.2
LHV IAmb IAmb 12 42 24.1
comp=Z,14nm,1.2s
L04D **Klamath Falls** 80.33 38 P 12 42 23.1
baz=232
M04C **Macdoel** 80.33 39 P 12 42 23.0
baz=232
KDAK **Kodiak Island** 80.40 13 P 12 42 22.1
baz=204
KDAK **Kodiak Island** 80.40 13 P P 12 42 22.1 +0.8
KDAK IAmb IAmb 12 42 38.2
comp=Z,14nm,1.2s
TUQ **Turquoise Moun** 80.43 47 P 12 42 23.8
baz=237,SNR=6.9
MDJ **Mudanjiang** 80.47 325 P P 12 42 23.8 +1.8
MDJ IAmb IAmb 12 42 24.5
comp=Z,19nm,0.8s
RYN **Ryan** 80.49 43 P P 12 42 23.5 +1.1
NVAR **Mina Array Bea** 80.52 43 P P 12 42 24.3 +1.7
comp=Z,6.0nm,0.9s,baz=224,slow=8.9,SNR=27
PAHR **Pah Rah Range** 80.58 42 P P 12 42 24.3 +1.5
NV11 **Mina Array Sit** 80.62 43 P P 12 42 24.7 +1.6
214A **Organ Pipe Nat** 80.81 51 P 12 42 26.3
baz=240
KVN **Kaiserville** 81.01 43 P P 12 42 26.8 +1.6
KVN IAmb IAmb 12 42 27.4
comp=Z,10.0nm,1.0s
TPNV **Topopah Spring** 81.03 45 P 12 42 27.0
baz=237
PDMCI **Parker Dam,Lak** 81.06 49 P 12 42 27.4
baz=238
J04D **Umpqua Nationa** 81.08 38 P 12 42 27.3
baz=232
I04A **Tendick Farm,** 81.25 37 P 12 42 27.3
baz=231
MOD **Modoc Plateau** 81.32 39 P P 12 42 28.0 +1.4
MOD IAmb IAmb 12 42 29.0
comp=Z,15nm,1.2s
K05A **Summer Lake** 81.47 39 P P 12 42 29.3 +1.9
K05A IAmb IAmb 12 42 30.2
comp=Z,22nm,1.0s
SHPR **Sheep Range** 81.53 46 P P 12 42 28.5 +0.6
J05D **Fort Rock, OR** 81.61 38 P 12 42 29.8
baz=232
PINE **Pine Mountain** 82.09 38 P P 12 42 32.3 +1.7
PRN **Pahroc Range** 82.09 46 P P 12 42 32.0 +1.4
PRN IAmb IAmb 12 42 33.4
comp=Z,11nm,0.9s
I05D **Terrebonne, OR** 82.19 37 P 12 42 32.6
baz=232
R11A **Troy Canyon, C** 82.24 44 P 12 42 32.6
baz=237
R11A **Troy Canyon, C** 82.24 44 P P 12 42 31.7 +0.2
CN2 **Changchun** 82.27 322 eP P 12 42 31.8 +0.6
CN2 pmax pmax
comp=Z,10.0nm,0.9s
TUC **Tucson** 82.47 52 P 12 42 35.1
baz=241
TUC **Tucson** 82.47 52 P P 12 42 34.1 +1.4
TUC IAmb IAmb 12 42 36.0
comp=Z,9.9nm,1.0s
BRSE **Bradley Lake S** 82.59 13 P 12 42 33.1
baz=206
WVOR **Wild Horse Val** 82.63 40 P P 12 42 34.1 +0.8
WVOR IAmb IAmb 12 42 35.8
comp=Z,14nm,1.1s
I07A **Izee** 83.09 38 P P 12 42 37.2 +1.7
I07A IAmb IAmb 12 42 38.1
comp=Z,12nm,0.9s
LCMT **Little Creek M** 83.10 47 P P 12 42 37.0 +1.2
J08A **Circle Bar Ran** 83.27 39 P P 12 42 37.4 +1.0
J08A IAmb IAmb 12 42 38.8
comp=Z,18nm,1.3s
CCUT **Cedar City** 83.30 46 P P 12 42 38.0 +1.1
UBPT **Khong Chiam** 83.39 289 P P 12 42 39.0 +1.5
UBPT IAmb IAmb 12 42 39.5
comp=Z,23nm,1.4s
KNB **Kanab** 83.39 47 P P 12 42 38.9 +1.6
IPM **Ipoh** 83.47 277 P P 12 42 38.2 +0.2
O22K **Cooper Landing** 83.48 13 P 12 42 37.3
baz=206
PSUT **Pine Spring** 83.49 45 P P 12 42 38.4 +0.6
MNSI **Mandailing Nat** 83.54 273 P P 12 42 38.9 +0.6
comp=Z,20nm,0.8s
MA2 **Magadan** 83.57 344 P P 12 42 37.4 +0.1
MA2 IAmb IAmb 12 42 38.2
comp=Z,7.3nm,0.8s
SPCR **Spurr Chakacha** 83.62 12 P 12 42 37.3
baz=204
WUAZ **Wupatki** 83.63 49 P 12 42 40.2
baz=240
WUAZ **Wupatki** 83.64 49 P P 12 42 39.7 +1.2
WUAZ IAmb IAmb 12 42 41.3
comp=Z,9.6nm,1.1s
ELK **Elko** 83.78 43 P P 12 42 39.9 +0.7
GAMB **Gambell** 83.79 3 P 12 42 39.6
baz=186
HPIG 83.93 59 P P 12 42 40.9 +0.7
PKCU **Pink Cliffs** 83.96 47 P P 12 42 42.2 +1.9
PKCU IAmb IAmb 12 42 43.7
comp=Z,14nm,1.1s
RC01 **Rabbit Creek A** 84.02 13 P 12 42 39.6
baz=206
RC01 **Rabbit Creek A** 84.02 13 P P 12 42 39.8 +0.2
RC01 IAmb IAmb 12 42 40.7
comp=Z,16nm,1.1s
KULM **Kulim** 84.11 278 P P 12 42 41.8 +0.7
G08A **Pilot Rock** 84.12 37 P P 12 42 41.3 +0.7
G08A IAmb IAmb 12 42 43.0
comp=Z,9.7nm,0.9s
PWL **Port Wells** 84.13 14 P P 12 42 40.5 +0.4
SUA **Susitna One** 84.15 13 P 12 42 40.5
baz=205,SNR=8.2
SUA **Susitna One** 84.15 13 P P 12 42 40.4 0.0
B05A **Bryant** 84.22 34 P 12 42 42.4
baz=231
MTPU **Mount Pierson** 84.35 46 P P 12 42 43.7 +1.5
GLI **Glacier Island** 84.43 14 P 12 42 41.8
baz=209
GLI **Glacier Island** 84.43 14 P P 12 42 41.9 +0.3
HAWA **Hanford** 84.45 36 P P 12 42 43.0 +0.9
HAWA IAmb IAmb 12 42 44.5
comp=Z,13nm,1.2s
EYAK **Cordova Ski Ar** 84.46 15 P 12 42 42.0
baz=210
KNK **Knik Glacier** 84.59 14 P 12 42 42.5
baz=208
KNK **Knik Glacier** 84.59 14 P P 12 42 42.7 +0.3
KNK IAmb IAmb 12 42 43.5
comp=Z,9.6nm,0.7s
PMR **Palmer** 84.61 13 P 12 42 42.5
baz=207,SNR=7.0
PMR **Palmer** 84.61 13 P P 12 42 42.8 +0.4
PMR IAmb IAmb 12 42 43.0
comp=Z,9.9nm,0.6s
121A **Cookes Peak, D** 84.81 53 P 12 42 46.7
baz=242
121A **Cookes Peak, D** 84.81 53 P P 12 42 45.4 +1.0
RPSI **Rantau Prapat** 84.81 275 P P 12 42 43.4 -1.2
RPSI IAmb IAmb 12 42 45.5
comp=Z,12nm,0.9s
GHO **Glory Hole Cre** 84.81 13 P P 12 42 43.9 +0.3
BMO **Blue Mountains** 84.82 38 P P 12 42 45.0 +1.0
PSI **Prapat** 84.85 275 P P 12 42 44.4 -0.5
comp=Z,8.5nm,0.9s,baz=180,slow=4.5,SNR=4.4
MFID **Camas Ranch** 84.88 40 P P 12 42 45.7 +1.3
BMRM **Bremner River** 85.11 15 P 12 42 45.3
baz=211
BMRM **Bremner River** 85.11 15 P P 12 42 45.4 +0.4
BMRM IAmb IAmb 12 42 46.3
comp=Z,11nm,0.8s
D08A **Wollman Farm,** 85.19 36 P P 12 42 46.4 +0.8
SCM **Sheep Creek Mo** 85.22 14 P P 12 42 46.3 +0.8
KLU **Klutina** 85.24 15 P 12 42 46.1
baz=210
KLU **Klutina** 85.24 15 P P 12 42 46.2 +0.6
KLU IAmb IAmb 12 42 46.9
comp=Z,9.7nm,1.1s
CRQM **Cirque** 85.31 16 P P 12 42 47.0 +0.9
CRQM IAmb IAmb 12 42 48.2
comp=Z,11nm,0.9s
CRQE **Cirque** 85.31 16 P 12 42 46.7
baz=212
YAH **Yahtse** 85.35 17 P P 12 42 46.8 +0.4
YAH IAmb IAmb 12 42 48.3
comp=Z,12nm,0.9s
TGL **Tana Glacier** 85.39 16 P P 12 42 47.1 +0.7
F10A **Beach Ranch, E** 85.50 37 P P 12 42 48.4 +1.0
TABL **Table Mountain** 85.58 17 P P 12 42 48.4 +0.9
GSI **Gunungsitoli** 85.59 273 P P 12 42 48.3 -0.1
GSI **Gunungsitoli** 85.59 273 P P 12 42 49.1 +0.7
comp=Z,39nm,1.0s
VRDI **Verde Repeater** 85.62 16 P P 12 42 47.3 -0.3
VRDI IAmb IAmb 12 42 49.1
comp=Z,17nm,1.5s
TMUT **Trail Mountain** 85.65 45 P P 12 42 49.5 +1.0
TMUT IAmb IAmb 12 42 51.1
comp=Z,13nm,1.3s
GRNC **Granite Creek** 85.65 17 P P 12 42 48.3 +0.5
GRNC IAmb IAmb 12 42 49.5
comp=Z,9.3nm,0.9s
N25K **Chitina, Valde** 85.66 15 P 12 42 48.2
baz=211
N25K **Chitina, Valde** 85.66 15 P P 12 42 47.8 +0.1
N25K IAmb IAmb 12 42 49.1
comp=Z,9.3nm,0.7s
GLB **Gilahina Butte** 85.72 16 P P 12 42 48.0 +0.1
GLB IAmb IAmb 12 42 48.8
comp=Z,7.4nm,0.8s
M24K **Tolsona, Glenn** 85.72 14 P 12 42 49.4
baz=210
B08A **Colville Reser** 85.74 35 P P 12 42 47.9 -0.4
B08A IAmb IAmb 12 42 49.9
comp=Z,6.9nm,0.9s
TNA **Tin City** 85.77 4 P 12 42 48.5
baz=189
TNA **Tin City** 85.78 4 P P 12 42 48.4 +0.4
TNA IAmb IAmb 12 42 49.3
comp=Z,6.2nm,0.7s
WAT6 **Susitna Watana** 85.79 13 P 12 42 48.5
baz=208,SNR=12
HLID **Hailey** 85.82 41 P 12 42 50.4
baz=237
HLID **Hailey** 85.82 41 P P 12 42 50.4 +1.4
HLID IAmb IAmb 12 42 51.5
comp=Z,10nm,1.5s
MCARA **McCarthy VSAT** 85.87 16 P 12 42 49.2
baz=212
MCARA **McCarthy VSAT** 85.87 16 P P 12 42 49.5 +0.9
MCARA IAmb IAmb 12 42 50.8
comp=Z,11nm,1.0s
LOGN **Logan Glacier** 85.94 17 P P 12 42 50.1 +1.0
LOGN IAmb IAmb 12 42 50.7
comp=Z,16nm,1.2s
WAT2 **Susitna Watana** 85.95 13 P 12 42 48.9
baz=207,SNR=6.8
BARN **Barnard Glacie** 85.95 17 P P 12 42 49.9 +0.7
BARN IAmb IAmb 12 42 51.0
comp=Z,10nm,0.8s
CTG **Chitna Glacier** 85.96 17 P 12 42 49.8
baz=214
CTGM **Chitina Glacie** 85.96 17 P P 12 42 50.1 +0.9
CTGM IAmb IAmb 12 42 50.8
comp=Z,8.1nm,0.9s
C09A **Chrisman Ranch** 85.98 36 P P 12 42 49.9 +0.5
C09A IAmb IAmb 12 42 51.4
comp=Z,6.9nm,0.8s
KTH **Kantishna Hill** 86.02 12 P P 12 42 48.8 -0.5
KTH IAmb IAmb 12 42 49.5
comp=Z,13nm,1.0s
SRU **San Rafael Swe** 86.02 46 P P 12 42 51.4 +1.3
SRU IAmb IAmb 12 42 52.2
comp=Z,6.5nm,1.0s
TRF **Thorofare Moun** 86.04 12 P 12 42 49.2
baz=206,SNR=17
TRF **Thorofare Moun** 86.04 12 P P 12 42 49.1 -0.5
CHUM **Lake Minchumin** 86.06 11 P 12 42 48.9
baz=204
MNTX **Cornudas Mount** 86.25 54 P P 12 42 52.4 +1.3
MNTX **Cornudas Mount** 86.25 54 P 12 42 52.8
baz=244
RND **Reindeer** 86.29 13 P P 12 42 50.7 +0.1
BNM **Barren Site** 86.41 52 P P 12 42 53.5 +1.3
TCUT **Toone Canyon** 86.44 44 P P 12 42 53.2 +1.1
TCUT IAmb IAmb 12 42 53.9
comp=Z,6.1nm,1.0s
TX31 **Lajitas Ar. Si** 86.55 57 P P 12 42 53.9 +1.2
TX31 IAmb IAmb 12 42 55.6
comp=Z,12nm,0.9s
TX32 **Lajitas Array** 86.55 57 P P 12 42 53.9 +1.2
TXAR **Lajitas Array** 86.55 57 P P 12 42 54.5 +1.8
comp=Z,2.8nm,0.7s,baz=215,slow=6.1,SNR=18
TXAR **Lajitas Array** 86.55 57 P P 12 42 53.7 +0.9
MCK **McKinley** 86.56 12 P 12 42 51.8
baz=207,SNR=11
MCK **McKinley** 86.56 12 P P 12 42 51.7 -0.1
PAX **Paxson** 86.64 14 P 12 42 52.2
baz=210
PV17 **East Wray Mesa** 86.68 47 P P 12 42 53.4 +0.2
PV12 **Saucer Basin,** 86.80 47 P P 12 42 55.2 +1.4
PV12 IAmb IAmb 12 42 56.1
comp=Z,16nm,1.5s
GYA **Guiyang** 86.82 300 eP P 12 42 54.7 +0.6
GYA pmax pmax
comp=Z,5.0nm,1.0s
BWN **Browne** 86.86 12 P P 12 42 53.3 +0.1
PV01 **Paradox Valley** 86.88 48 P P 12 42 54.6 +0.4
NEW **Newport** 86.88 36 P 12 42 54.6
baz=235
ANMO **Albuquerque** 86.90 51 P P 12 42 54.8 +0.4
ANMO **Albuquerque** 86.90 51 P 12 42 55.7
baz=243
HYT **Haines Junctio** 86.94 18 P P 12 42 55.1 +1.3
HYT IAmb IAmb 12 42 55.3
comp=Z,6.1nm,1.0s
MENT **Mentasta** 87.02 15 P P 12 42 54.0 0.0
GDL2 **Guadalupe Moun** 87.24 54 P P 12 42 56.3 +0.4
NEA2 **Nenana** 87.31 12 P 12 42 54.6
baz=207,SNR=9.4
NEA2 **Nenana** 87.31 12 P P 12 42 54.5 -0.9
NEA2 IAmb IAmb 12 42 55.5
comp=Z,4.8nm,0.8s
MLY **Manley** 87.39 11 P 12 42 55.1
baz=205,SNR=14
MLY **Manley** 87.39 11 P P 12 42 55.2 -0.5
MLY IAmb IAmb 12 42 56.0
comp=Z,7.5nm,0.6s
WRH **Wood River Hil** 87.39 12 P P 12 42 55.5 -0.1
MCMT **McKenzie Canyo** 87.45 40 P P 12 42 58.2 +1.5
DOT **Dot Lake** 87.55 14 P P 12 42 57.2 +0.7
DOT IAmb IAmb 12 42 57.8
comp=Z,13nm,1.2s
HDA **Harding Lake** 87.57 13 P 12 42 56.5
baz=209,SNR=24
HDA P 12 42 56.5
baz=209,SNR=24
L27K **Beaver Creek,** 87.59 15 P 12 42 57.3
baz=214
L27K **Beaver Creek,** 87.59 15 P P 12 42 57.4 +0.7
L27K IAmb IAmb 12 42 58.4
comp=Z,6.7nm,1.1s
BCAR **Beaver Creek A** 87.60 15 P P 12 42 57.2 +0.4
CCB **Clear Creek Bu** 87.61 12 P P 12 42 56.5 -0.2
I23K **Minto, Yukon-K** 87.75 12 P 12 42 57.1
baz=207,SNR=7.3
I23K **Minto, Yukon-K** 87.75 12 P P 12 42 56.8 -0.6
I23K IAmb IAmb 12 42 58.0
comp=Z,5.2nm,0.6s
IMAR **Indian Mountai** 87.76 10 P P 12 42 57.7 +0.3
TCOL **CIGO, UAF Yank** 87.80 12 P 12 42 57.5
baz=208,SNR=13
TCOL **CIGO, UAF Yank** 87.80 12 P P 12 42 57.2 -0.3
COLA **College** 87.80 12 P 12 42 57.4
baz=208
COLA **College** 87.80 12 P P 12 42 57.4 -0.2
MDM **Murphy Dome** 87.80 12 P P 12 42 57.3 -0.3
SCRK **Sand Creek** 87.84 14 P 12 42 58.4
baz=212,SNR=5.4
SCRK **Sand Creek** 87.84 14 P P 12 42 58.7 +0.7
MSO **Missoula** 87.87 38 P 12 42 58.5
baz=238
DLMT **Dillon** 87.88 40 P P 12 42 59.2 +0.6
DLMT IAmb IAmb 12 43 01.1
comp=Z,7.5nm,0.9s
IL31 **IL31** 87.91 13 P P 12 42 57.8 -0.2
IL31 IAmb IAmb 12 42 58.3
comp=Z,6.5nm,0.8s
ILAR **Eielson Array** 87.91 13 P P 12 42 57.8 -0.3
comp=Z,4.2nm,0.7s,baz=221,slow=6.1,SNR=62
S22A **4UR Ranch, Cre** 87.91 48 P 12 43 00.3
baz=243
REDW **Red Top Meadow** 87.93 42 P P 12 43 00.3 +1.2
REDW IAmb IAmb 12 43 01.3
comp=Z,14nm,1.3s
SNOW **Snow King Moun** 88.04 42 P P 12 43 01.1 +1.5
SNOW IAmb IAmb 12 43 01.9
comp=Z,5.7nm,0.8s
POKR **Poker Flat Res** 88.10 12 P 12 42 58.8
baz=208
POKR **Poker Flat Res** 88.10 12 P P 12 42 58.9 -0.1
LRM **Limekiln Ridge** 88.21 39 P P 12 43 01.1 +0.9
LOHW **Long Hollow** 88.21 42 P P 12 43 00.9 +0.6
XAN **Xi'an** 88.24 307 P P 12 43 01.6 +1.2
XAN pP PcP 12 43 08.4 +6.8
XAN pmax pmax
comp=Z,19nm,1.0s
XAN **Xi'an** 88.24 307 P P 12 43 01.1 +0.7
QLMT **Earthquake Lak** 88.32 41 P P 12 43 03.1 +2.3
K27K **Chicken** 88.34 15 P 12 43 01.1
baz=213,SNR=11
K27K **Chicken** 88.34 15 P P 12 43 00.4 +0.2
K27K IAmb IAmb 12 43 02.2
comp=Z,8.4nm,0.9s
FLWY **Flagg Ranch** 88.39 42 P P 12 43 02.7 +1.6
FLWY IAmb IAmb 12 43 03.9
comp=Z,8.8nm,0.9s
YHB **Horse Butte** 88.42 41 P P 12 43 02.4 +1.1
YHB IAmb IAmb 12 43 04.2
comp=Z,9.8nm,1.0s
VNA3 **Neumayer Olymp** 88.45 176 P P 12 43 00.7 0.0
BW06 **Boulder Array** 88.46 43 P P 12 43 02.5 +0.9
BW06 IAmb IAmb 12 43 03.1
comp=Z,3.9nm,0.8s
BW06 **Boulder Array** 88.46 43 P 12 43 02.0
baz=241,SNR=7.6
PD31 **Pinedale Array** 88.46 43 P P 12 43 02.2 +0.7
PDAR **Pinedale Array** 88.46 43 P P 12 43 02.4 +0.9
comp=Z,2.3nm,0.6s,baz=214,slow=3.5,SNR=26
PDAR **Pinedale Array** 88.46 43 P P 12 43 02.1 +0.6
SMCO **Snowmass** 88.47 47 P P 12 43 02.9 +1.0
YHL **Hebgen Lake** 88.48 41 P P 12 43 03.5 +1.9
YMR **Madison River** 88.52 41 P P 12 43 03.6 +1.8
YMR IAmb IAmb 12 43 04.7
comp=Z,7.7nm,0.8s
BOZ **Bozeman (W)** 88.59 40 P 12 43 03.2
baz=239,SNR=14
BOZ **Bozeman (W)** 88.59 40 P P 12 43 03.2 +1.3
BOZ IAmb IAmb 12 43 04.4
comp=Z,8.2nm,0.9s
H17A **Grant Village** 88.62 41 P P 12 43 02.1 -0.1
H17A IAmb IAmb 12 43 05.7
comp=Z,5.6nm,0.9s
H17A **Grant Village** 88.62 41 P 12 43 04.8
baz=240,SNR=5.4
YHH **Holmes Hill** 88.65 41 P P 12 43 03.8 +1.3
YHH IAmb IAmb 12 43 06.3
comp=Z,6.4nm,1.2s
BILL **Bilibino** 88.74 354 P P 12 43 02.6 +0.6
BILL IAmb IAmb 12 43 04.5
comp=Z,4.1nm,0.7s
PRP **Porcupine Dome** 88.84 13 P 12 43 02.6
baz=210
PRP **Porcupine Dome** 88.84 13 P P 12 43 02.7 +0.1
PRP IAmb IAmb 12 43 04.2
comp=Z,4.9nm,0.8s
VNA2 **Neumayer--Watz** 88.89 177 P P 12 43 02.6 -0.3
DAWY **Dawson** 89.03 16 P P 12 43 04.3 +0.8
HRY **Holter Researc** 89.04 39 P P 12 43 05.5 +1.5
VNA1 **Neumayer--Stat** 89.12 176 P P 12 43 04.8 +1.0
EGAK **Eagle** 89.18 15 P 12 43 04.6
baz=214,SNR=15

EGAK	Eagle	89.19	15	P		P		12 43 04.7	+0.6	
YNE	Yellowstone No	89.28	41	P		P		12 43 05.7	+0.4	
YNE				IAmb		IAmb		12 43 08.0		
	comp=Z,8.3nm,1.0s									
HHC	Hu-ho-hao-te	89.39	314	*e*P		P		12 43 04.9	-0.8	
HHC				pmax		pmax				
	comp=Z,13nm,0.7s									
HHC				pmax		pmax				
	comp=Z,92nm,6.4s									
SUKH	Sukhothai	89.40	289	P		P		12 43 08.6	+2.5	
COLD	Coldfoot	89.48	10	P				12 43 06.2		
	baz=206									
COLD	Coldfoot	89.48	10	P		P		12 43 06.3	+0.9	
COLD				IAmb		IAmb		12 43 07.2		
	comp=Z,7.5nm,0.8s									
KMI	Kunming	89.54	297	⇑P		P		12 43 09.2	+2.3	
KMI				pmax		pmax				
	comp=Z,16nm,1.0s									
LAMP	Lampang	89.78	290	P		P		12 43 10.1	+2.3	
RLMT	Red Lodge	89.79	41	P		P		12 43 08.1	+0.5	
RLMT				IAmb		IAmb		12 43 10.1		
	comp=Z,5.4nm,0.9s									
RLMT	Red Lodge	89.79	41	P				12 43 09.3		
	baz=241,SNR=5.3									
N23A	Red Feather La	89.96	46	P				12 43 09.9		
	baz=243									
JCT	Junction City	90.08	58	P				12 43 09.8		
	baz=247									
CM09	Chiang Mai Arr	90.32	289	P		P		12 43 12.0	+1.6	
CM01	Chiang Mai Arr	90.34	289	P		P		12 43 12.0	+1.5	
CM05	Chiang Mai Arr	90.34	289	P		P		12 43 12.6	+2.1	
CM02	Chiang Mai Arr	90.35	289	P		P		12 43 12.9	+2.4	
CM31	Chiang Mai Arr	90.36	289	P		P		12 43 13.7	+3.1	
CMAR	Chiang Mai Arr	90.36	289	P		P		12 43 12.4	+1.8	
	comp=Z,7.0nm,0.9s,baz=124,slow=3.0,SNR=39									
CMAR	Chiang Mai Arr	90.36	289	P		P		12 43 12.2	+1.6	
K22A	Casper	90.37	44	P				12 43 11.4		
	baz=243									
CM15	Chiang Mai Arr	90.38	289	P		P		12 43 13.0	+2.3	
CM33	Chiang Mai Arr	90.49	290	P		P		12 43 12.7	+1.5	
CHTO	Chiang Mai	90.49	290	P		P		12 43 13.0	+1.9	
TOLK	Toolik Lake Re	90.86	10	P				12 43 12.2		
	baz=206									
A21K	Barrow	92.39	7	P				12 43 19.2		
	baz=200									
RSSD	Black Hills	92.65	44	P				12 43 21.6		
	baz=244									
RSSD	Black Hills	92.65	44	P		P		12 43 21.3	+0.5	
RSSD				IAmb		IAmb		12 43 22.4		
	comp=Z,6.0nm,1.0s									
LZH	Lanzhou	92.87	307	*e*P		P		12 43 22.6	+0.6	
LZH				pmax		pmax				
	comp=Z,17nm,1.1s									
INK	Inuvik	93.85	15	P		P		12 43 25.5	+0.1	
INK				IAmb		IAmb		12 43 26.2		
	comp=Z,3.7nm,0.8s									
DGMT	Dagmar	94.42	40	P				12 43 30.0		
	baz=245									
YKA	Yellowknife Ar	96.05	25	P		P		12 43 35.8	+0.2	
	comp=Z,0.9nm,0.9s,baz=238,slow=4.1,SNR=7.1									
ZALV	Zalesovo Beam	110.47	321	PKiKP		PKiKP		12 48 35.9	-1.3	
	comp=Z,0.8nm,0.6s,baz=155,slow=1.9,SNR=5.6									
MKAR	Makanchi Array	111.25	313	PKiKP		PKiKP		12 48 37.6	-1.4	
	comp=Z,1.0nm,0.8s,baz=87,slow=0.7,SNR=16									
BVAR	Borovoye Array	119.07	320	PKP		PKPdf		12 48 52.4	-1.4	
	comp=Z,1.7nm,0.6s,baz=169,slow=8.7,SNR=18									
BRVK	Borovoye	119.13	320			PKPdf		12 48 53.1	-0.7	
ARU	Arti	125.14	326	PKP		PKPdf		12 49 05.1	-0.2	
	comp=Z,0.7nm,0.3s,baz=152,slow=6.2,SNR=5.5									
ARCES	ARCESS Array B	128.66	350	PKP		PKPdf		12 49 11.6	-0.2	
	comp=Z,1.9nm,0.7s,baz=290,slow=0.4,SNR=11									
ARCES	ARCESS Array B	128.66	350			PKPdf		12 49 12.2	+0.5	
GEYT	Alibeck	128.93	303	PKP		PKiKP		12 49 14.4	+0.5	
	comp=Z,2.1nm,0.6s,baz=247,slow=7.7,SNR=3.5									
BELG	Belogornoye	132.56	324	PKP		PKPdf		12 49 20.0	+0.5	
	comp=Z,8.8nm,0.9s,baz=31,slow=3.2,SNR=4.8									
FINES	FINESS Array B	135.56	344	PKhKP		PKPpre		12 49 16.7		
	comp=Z,1.6nm,0.9s,baz=46,slow=5.5,SNR=3.6									
FINES				PKP		PKiKP		12 49 27.1	+0.6	
	comp=Z,1.1nm,0.5s,baz=79,slow=3.4,SNR=7.8									
NOA	NORSAR Array B	138.69	354	PKhKP		PKPpre		12 49 21.1		
	comp=Z,0.5nm,0.7s,baz=16,slow=4.6,SNR=4.6									
NOA				PKP		PKPdf		12 49 32.1	+1.4	
	comp=Z,0.6nm,0.8s,baz=20,slow=4.2,SNR=4.4									
NACGM	Naroch	140.71	338	*i* PKP		PKPdf		12 49 28.1	-6.4	
NACGM				*i* PKP		PKPdf		12 49 28.1	-6.4	
NACGM				*i* PKP		PKPdf		12 49 28.1	-6.4	
NACGM				*i* sP		pPKPdf		12 50 47.7	-50	
NACGM				*i* sPKP				12 52 28.6		
NACGM				*i* PPP		PPP		12 54 49.4		
NACGM				*i* SKS		SKSdf		12 55 09.3	-45	
NACGM				*i* SKKS		SKKSac		12 57 49.9	-51	
NACGM				*i* SP				12 59 48.5		
NACGM				*i* PS				13 02 21.5		
NACGM				*i* SS		SS		13 09 19.1	-66	
NACGM				*i* SSS		SSS		13 13 45.3		
ONAU	Onsala	142.16	352	*i* P		PKPdf		12 49 33.1	-3.9	
BLEU	Blekinge	142.55	348	*i* P		PKPdf		12 49 34.4	-3.3	
SUW	Suwalki	142.66	340	*e*PKP		PKPdf		12 49 35.3	-2.7	
DEL	Delary	142.75	350	*i* P		PKPdf		12 49 35.7	-2.4	
AKASG	Malin Array Be	142.91	332	PKhKP		PKPdf		12 49 35.5	-3.0	
	comp=Z,18nm,0.7s,baz=42,slow=4.6,SNR=44									
MUD	Monsted U'grnd	143.41	354	*e*P		PKPab		12 49 38.0	+0.6	
MUD				IAmb		IAmb		12 49 38.4		
	comp=Z,20nm,0.9s									
LUNU	Lund	143.63	349	*i* P		PKPab		12 49 38.3	0.0	
BSD	Bornholm Skovb	143.84	348	*e*P		PKPab		12 49 38.1	-1.0	
BSD				IAmb		IAmb		12 49 39.4		
	comp=Z,20nm,0.8s									
BEL	Belsk	145.28	340	*e*PKP		PKPab		12 49 44.6	-0.1	
GAZ	Gaziantep	145.32	307			PKPab		12 49 45.4	-0.1	
MBAR	Mbarara	145.42	237	PKPbc		PKPbc		12 49 45.9	+0.5	
	comp=Z,5.7nm,0.7s,baz=159,slow=3.7,SNR=8.8									
MBAR	Mbarara	145.42	237			PKPbc		12 49 46.4	+1.0	
MILM	Milestii Mici	145.72	327	⇑P		PKPdf		12 49 44.6	+1.1	
BSEG	Bad Segeberg	145.75	352	*e*PKPbc		PKPab		12 49 46.2	-0.2	
	baz=14,slow=2.5									
KWP	Kalwaria Pacla	146.44	336	*e*PKP		PKPbc		12 49 47.2	+0.2	
KWP	Kalwaria Pacla	146.44	336			PKPbc		12 49 47.8	+0.8	
RUE	Ruedersdorf	146.56	347	*e*PKPbc		PKPbc		12 49 48.3	+1.2	
	baz=14,slow=2.5									
TLCR		146.86	325	⇑P		PKPbc		12 49 48.4	+0.1	
BR131	Keskin Array S	146.90	313			PKPbc		12 49 48.9	+0.2	
BRTR	Keskin Array B	146.90	313	PKPbc		PKPbc		12 49 48.8	0.0	
	comp=Z,5.3nm,0.7s,baz=138,slow=4.6,SNR=18									
BUR08	Bucovina Ar. S	146.94	331	PKPdf		PKPdf		12 49 46.0	+0.3	
BUR08						PKPbc		12 49 49.7	+1.1	
BURAR	Bucovina Array	146.96	331	⇑P		PKPbc		12 49 49.8	+1.2	
OJC	Ojcow	146.99	339	*e*PKP		PKPbc		12 49 49.0	+0.5	
OJC	Ojcow	146.99	339			PKPbc		12 49 49.0	+0.5	
GHRR		147.02	327	⇑P		PKPbc		12 49 48.7	+0.1	
BIZ	Bicaz	147.04	330	⇑P		PKPbc		12 49 49.6	+0.9	
FLTG	Flechtingen	147.17	350	*e*PKPbc		PKPbc		12 49 49.9	+1.1	
	baz=14,slow=2.5									
NRDL	Niedersach Rie	147.18	351	*e*PKPbc		PKPbc		12 49 50.2	+1.4	
	baz=14,slow=2.5									
CFR	Carcaliu	147.23	325	⇑P		PKPbc		12 49 49.4	+0.2	
ANTO	Ankara	147.41	314	⇑P		PKPab		12 49 54.2	+0.5	
ASSE	Asse, Remlinge	147.45	351	*e*PKPbc		PKiKP		12 49 50.9	-0.2	
	baz=14,slow=2.5									
KSP	Ksiaz	147.48	344	*e*PKP		PKPbc		12 49 50.8	+1.1	
VRI	Vrincioaia	147.49	328	⇑P		PKPbc		12 49 49.4	-0.6	
NIE	Niedzica	147.50	338	*e*PKP		PKiKP		12 49 51.3	-0.2	
CRVS	Cervenica-Dubn	147.50	336	*e*PKP		PKPbc		12 49 50.8	+0.9	
CRVS				*e*				12 49 54.6		
OSTC	Ostas	147.76	343	⇑*e*PKP		PKPbc		12 49 51.5	+1.0	
CHVC	Chvalec	147.78	344	⇑*e*PKP		PKPbc		12 49 51.3	+0.7	
CLZ	Clausthal	147.78	351	*e*PKPbc		PKiKP		12 49 52.1	+0.1	
	baz=14,slow=2.5									
CLL	Collm	147.82	347	⇓*i*PKPbc		PKPbc		12 49 51.1	+0.5	
	comp=Z,26nm,0.7s									
CLL				⇑*i*PKPab		PKPab		12 49 55.1	+0.2	
	comp=Z,12nm,0.9s									
CLL				LmV				13 29 00.0		
	comp=Z,100nm,18.2s									
CLL	Collm	147.82	347	PKPdf		PKPdf		12 49 46.6	-0.3	
CLL						PKPbc		12 49 51.0	+0.5	
CLL	Collm	147.82	347	*e*PKPbc		PKPbc		12 49 51.8	+1.2	
	baz=14,slow=2.5									
UPC	Upice	147.86	344	⇑*e*PKP		PKPbc		12 49 51.5	+0.8	
DPC	Dobruska-Polom	147.92	343	⇑*e*PKP		PKPbc		12 49 51.9	+0.9	
BRG	Berggiesshubel	148.03	346	*i* PKP		PKPbc		12 49 51.8	+0.6	
BRG				Amp				12 49 52.8		
	comp=Z,14nm,0.7s									
BRG				*i* x		x		12 49 56.2		
BRG				Amp				12 49 56.9		
	comp=Z,7.4nm,0.8s									
BRG	Berggiesshubel	148.03	346	*e*PKPbc		PKiKP		12 49 52.5	0.0	
	baz=14,slow=2.5									
KRLC	Kraliky	148.04	342	⇑*e*PKP		PKPbc		12 49 51.9	+0.6	
KRLC				*e*PKPAB		PKPab		12 49 56.7	+0.8	
MORC	Moravsky Berou	148.09	341	*e*PKP		PKPbc		12 49 51.8	+0.4	
MORC	Moravsky Berou	148.09	341			PKPbc		12 49 52.2	+0.8	
FBE	Freiberg	148.12	347	*e*PKPbc		PKiKP		12 49 52.9	+0.2	
	baz=14,slow=2.5									
GTTG	Gottingen	148.13	351	*e*PKPbc		PKiKP		12 49 52.7	+0.1	
	baz=14,slow=2.5									
MLR	Muntele Rosu	148.15	328	PKPdf		PKPdf		12 49 48.0	+0.2	
MLR						PKPbc		12 49 52.0	+0.2	
NEUB	Neuenburg	148.16	349	*e*PKPbc		PKiKP		12 49 52.7	0.0	
	baz=14,slow=2.5									
BUG	Bochum--Univer	148.56	354	*e*PKPbc		PKiKP		12 49 53.6	+0.1	
	baz=14,slow=2.5									
KASTN	Kahler Asten	148.67	353	*e*PKPbc		PKiKP		12 49 54.0	+0.1	
	baz=14,slow=2.5									
PRU	Pruhonice	148.71	345	⇑*e*PKP		PKPbc		12 49 53.5	+0.6	
PLN	Plauen	148.77	348	*e*PKPbc		PKiKP		12 49 54.4	+0.3	
	baz=14,slow=2.5									
TANN	Tannenbergstha	148.78	348	*e*PKPbc		PKiKP		12 49 54.5	+0.3	
	baz=14,slow=2.5									
VRAC	Vranov	148.78	342	⇑P		PKiKP		12 49 54.1	0.0	
VRAC	Vranov	148.78	342	*e*PKP		PKPbc		12 49 53.5	+0.4	
VRAC				*e*				12 50 00.0		
VYHS	Vyhne	148.79	339	*e*PKP		PKPbc		12 49 54.1	+1.0	
VYHS				*e*				12 50 00.2		
GUNZ	Gunzen	148.85	348	*e*PKPbc		PKiKP		12 49 54.7	+0.4	
	baz=14,slow=2.5									
JAVC	Velka Javorina	148.86	340	*e*PKP		PKiKP		12 49 54.9	+0.6	
JAVC				*e*				12 50 01.4		
PSZ	Piszkesteto	148.91	337	⇑P		PKPbc		12 49 54.2	+0.7	
PSZ	Piszkesteto	148.91	337			PKPbc		12 49 53.6	+0.1	
WERN	Wernitzgruen	148.92	348	*e*PKPbc		PKiKP		12 49 55.0	+0.6	
	baz=14,slow=2.5									
NKC	Novy Kostel	148.96	347	⇑*e*PKP		PKPbc		12 49 54.3	+0.8	
NKC				*e*PKPAB		PKPab		12 50 00.4	+0.8	
KRUC	Moravsky	149.06	342	*e*PKP		PKPbc		12 49 54.1	+0.3	
KRUC				*e*				12 50 01.0		
PBCC	Pribram	149.13	345	⇑*e*PKP		PKPbc		12 49 54.5	+0.6	
PBCC				*e*PKPAB		PKPab		12 50 01.2	+0.8	
MANZ	Manzenberg	149.26	348	*e*PKPbc		PKiKP		12 49 55.7	+0.6	
	baz=14,slow=2.5									
MODS	Modra-Piesok	149.41	340	*e*PKP		PKiKP		12 49 56.0	+0.6	
ROTZ	Rotzenmuhle	149.45	347	*e*PKPbc		PKiKP		12 49 56.0	+0.6	
	baz=14,slow=2.5									
AHRW	Bad Neuenahr-A	149.46	354	*e*PKPbc		PKiKP		12 49 56.0	+0.6	
	baz=14,slow=2.5									
AHRW				*e*pPKPbc		pPKPdf		12 51 45.0	-7.7	
MEM	Membach	149.49	355	*d*PKP		PKPbc		12 49 55.1	+0.4	
BTNL	Ternell	149.50	355	*d*PKP		PKPbc		12 49 55.2	+0.4	
BSTI	Sart Tilman	149.54	356	*d*PKiKP		PKPbc		12 49 55.4	+0.6	
TNS	Taunus Mts	149.63	352	*e*PKPbc		PKiKP		12 49 56.5	+0.6	
	baz=14,slow=2.5									
SNF	Seneffe	149.69	358	*d*PKiKP		PKPbc		12 49 55.7	+0.6	
GRA1	Grafenberg Arr	149.71	349			PKPbc		12 49 55.8	+0.4	
GRF	Grafenberg Arr	149.71	349	*e*PKPbc		PKiKP		12 49 56.9	+0.8	
	baz=14,slow=2.5									
GRFO	Grafenberg	149.71	349			PKPbc		12 49 55.6	+0.3	
GRFO					PKPab	PKPab		12 50 04.0	+1.2	
BCLA	Clavier	149.72	356	*d*PKPab		PKPab		12 50 02.6	-0.1	
KHC	Kasperske Hory	149.74	345	⇑*e*PKP		PKPbc		12 49 56.1	+0.7	
KHC				*e*PKPAB		PKPab		12 50 03.8	+0.8	
KHC	Kasperske Hory	149.74	345	PKPdf		PKPdf		12 49 50.6	+0.5	
KHC				PKPbc		PKPbc		12 49 56.1	+0.7	
CKRC	Cesky Krumlov	149.85	344	⇑*e*PKP		PKPbc		12 49 56.4	+0.7	
CKRC				*e*PKPAB		PKPab		12 50 03.6	+0.2	
BMRD	Maredsous	149.87	357	*d*PKP		PKPbc		12 49 56.0	+0.4	
WET	Wettzell	149.89	346	*e*PKPbc		PKiKP		12 49 57.1	+0.7	
	baz=14,slow=2.5									
GEC2	GERESS Array S	149.98	345			PKPbc		12 49 56.3	+0.2	
GEC2	GERESS Array S	149.98	345	*e*PKPbc		PKiKP		12 49 57.2	+0.5	
	baz=14,slow=2.5									
GERES	GERESS Array B	149.98	345	PKP		PKPdf		12 49 49.8	-0.8	
	comp=Z,0.5nm,0.7s,baz=80,slow=5.4,SNR=5.1									
GERES				PKPbc		PKPbc		12 49 56.4	+0.3	
	comp=Z,6.7nm,0.8s,baz=45,slow=2.1,SNR=48									
DOU	Dourbes	150.08	357	*d*PKPdf		PKPdf		12 49 51.3	+0.8	
DOU				*d*PKPbc		PKPbc		12 49 56.0	-0.2	
CONA	Conrad Observa	150.24	342	*e*P		PKPbc		12 49 57.3	+0.6	
	comp=Z,7.6nm,0.8s									
CONA				*i* P		PKPab		12 50 06.4	+1.3	
	comp=Z,4.2nm,0.7s									
WLF	Walferdange	150.41	355	*d*PKPbc		PKPbc		12 49 57.0	+0.1	
WLF				*d*PKiKP		PKiKP		12 49 58.0	+0.5	
WLF				*d*PKPab		PKPab		12 50 06.0	+0.4	
WLF	Walferdange	150.41	355			PKPbc		12 49 57.4	+0.5	
WLF	Walferdange	150.41	355	*e*PKPbc		PKiKP		12 49 58.7	+1.2	
	baz=14,slow=2.5									
WLF				*e*pPKPbc		pPKPdf		12 51 48.4	-5.9	
MOA	Molln	150.76	344	*i* P		PKPbc		12 49 58.2	+0.4	
	comp=Z,2.5nm,0.8s									
MOA				*i* P		PKPab		12 50 08.2	+1.0	
	comp=Z,7.0nm,1.1s									
STU	Stuttgart	150.94	351	*e*PKPbc		PKiKP		12 49 59.4	+0.8	
	baz=14,slow=2.5									
ARSA	Arzberg	150.95	341	*i* P		PKPbc		12 49 58.2	-0.1	
	comp=Z,4.6nm,1.2s									
ARSA				*e*P		PKPab		12 50 08.7	+0.7	
	comp=Z,3.9nm,1.0s									
MANT	Manisa	150.95	315			PKPbc		12 49 59.3	+0.5	
BFO	Black Forest	151.50	352			PKiKP		12 50 00.4	+0.7	
BFO				PKPab		PKPab		12 50 10.7	+0.4	
BFO	Black Forest	151.50	352	*e*PKPbc		PKiKP		12 50 00.5	+0.7	
	baz=14,slow=2.5									
VTS	Vitosha	151.56	327	⇑P		PKPbc		12 49 59.1	-0.9	
SOKA	Soboth	151.61	342	*i* P		PKPbc		12 49 59.5	-0.3	
	comp=Z,2.8nm,1.0s									
SOKA				*i* P		PKPab		12 50 11.5	+0.6	
	comp=Z,4.1nm,1.1s									
KBA	Koelnbreinsper	151.71	344	*i* P		PKPbc		12 50 00.4	+0.2	
	comp=Z,5.1nm,0.9s									
KBA				*i* P		PKPab		12 50 12.5	+1.1	
	comp=Z,5.9nm,0.8s									
WATA	Walderalm	151.89	347	*i* P		PKPbc		12 50 00.4	-0.2	
	comp=Z,7.1nm,1.3s									
WATA				*i* P		PKPab		12 50 12.7	+0.6	
	comp=Z,4.1nm,0.7s									
OBKA	Obir	151.90	342	*e*P		PKPab		12 50 12.3	+0.1	
	comp=Z,5.3nm,0.8s									
RETA	Reute	151.91	348	*i* P		PKPbc		12 50 00.3	-0.2	
	comp=Z,3.3nm,0.9s									
RETA				*i* P		PKPab		12 50 12.7	+0.5	
	comp=Z,5.4nm,1.0s									
WTTA	Wattenberg	151.94	347	*e*P		PKPbc		12 50 00.8	+0.1	
	comp=Z,3.6nm,0.5s									
WTTA				*i* P		PKPab		12 50 13.1	+0.7	
	comp=Z,4.1nm,0.6s									
MOTA	Moosalm	151.98	347	*e*P		PKPbc		12 50 00.5	-0.2	
	comp=Z,7.5nm,1.1s									
MOTA				*e*P		PKPab		12 50 12.8	+0.3	
	comp=Z,6.3nm,0.9s									
DIVS	Divibare	151.99	332			PKPbc		12 50 00.7	-0.1	
DIVS					PKPab	PKPab		12 50 13.2	+0.5	
MYKA	Terra Mystica	152.05	343	*i* P		PKPbc		12 50 00.2	-0.6	
	comp=Z,4.5nm,0.9s									
MYKA				*i* P		PKPab		12 50 12.7	-0.1	
	comp=Z,4.8nm,0.8s									
DAVA	Damuels	152.27	349	*i* P		PKPbc		12 50 00.7	-0.7	
	comp=Z,9.2nm,1.2s									
DAVA				*e*P		PKPab		12 50 14.2	+0.4	
	comp=Z,3.1nm,0.6s									
CTI	Castel Tesino	153.09	346			PKPab		12 50 17.0	-0.3	
SENIN	Lac Senin/Sane	153.56	352	PKPab		PKPab		12 50 20.0	+0.6	
PDG	Podgorica	153.64	331	⇑P		PKPab		12 50 18.7	-0.9	
ESDC	Sonseca Array	159.80	14	PKPab		PKPab		12 50 47.0	+0.7	
	comp=Z,0.3nm,0.6s,baz=13,slow=3.3,SNR=4.2									
TORD	Torodi Ar. Bea	172.99	174	PKP		PKPdf		12 50 13.6	-1.0	
	comp=Z,1.9nm,0.9s,baz=338,slow=0.8,SNR=6.9									
TORD				PKPab		PKPab		12 51 44.1	-0.9	
	comp=Z,0.3nm,0.7s,baz=163,slow=1.9,SNR=2.2									

JMA **04** *12:46:54.9±0.1,24.41N×121.84E,h49km±3km,M3.0*
TAP **04** *12:46:55.5,24.49N×121.90E,h27km,ML3.7,B*
ISC 04 12:46:55.6±0.9,24.48N±0.02×121.93E±0.02,h24km±5km,
n138,σ1°04/221,11C-9D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EWUT	Wuta	0.14	254	⇓*i*P		Pb	12 47 00.8	+0.3
EWUT				*e*S		Sb	12 47 04.3	+0.6
	baz=250							
TWC	Suao	0.14	331	⇑*i*P		Pb	12 47 00.8	+0.3
	baz=250							
TWC				*e*S		Sb	12 47 04.3	+0.4
	baz=344							
ENA	Nanau	0.18	252	⇓*i*P		Pb	12 47 01.0	+0.1
	baz=246							
ENA				*e*S		Sb	12 47 04.7	+0.2
	baz=246							
NDS	Dongshan	0.24	308	*i* P		Pb	12 47 02.0	+0.3
	baz=311							
NDS				*e*S		Sb	12 47 06.1	+0.1
	baz=311							
ILA	Ilan	0.32	330	*e*P		Pb	12 47 03.1	+0.2
	baz=331							
ILA				*e*S		Sb	12 47 07.8	-0.2
	baz=331							
TWE	Neicheng	0.33	315	⇑*i*P		Pb	12 47 03.2	+0.1
	baz=315							
TWE				*e*S		Sb	12 47 08.4	+0.3
	baz=315							
ENTT	Nioudou	0.36	295	⇓*i*P		Pb	12 47 03.6	+0.1
	baz=297							
ENTT				*e*S		Sb	12 47 08.7	-0.3
	baz=297							
NTC	Toucheng	0.38	347	*e*P		Pb	12 47 04.0	+0.2
	baz=357							
NTC				*e*S		Sb	12 47 09.7	+0.3
	baz=357							
NDT	Datong Townshi	0.39	288	P		Pb	12 47 04.2	+0.2
	baz=289							
NDT				*e*S		Sb	12 47 09.6	-0.2
	baz=289							
NACB	Ninganchiao	0.43	224	⇓*i*P		Pb	12 47 04.2	-0.4
	baz=225							
NACB				*e*S		Sb	12 47 11.3	+0.5
	baz=225							
NWLT	Wulai	0.48	307	⇑*e*P		Pb	12 47 05.5	-0.1
	baz=309							
NWLT				*e*S		Sb	12 47 11.8	-0.5
	baz=309							
ETLH	Xiulin Townshi	0.49	236	⇓*e*P		Pb	12 47 05.4	-0.3
	baz=237							
ETLH				*e*S		Sn	12 47 13.4	-1.5
	baz=237							
TIPB	Shuangxi	0.49	349	⇑*i*P		Pb	12 47 06.0	+0.2
	baz=355							
TIPB				S		Sb	12 47 12.9	+0.3
	baz=355							
NNSB	Datong	0.50	264	⇓*i*P		Pb	12 47 05.7	-0.2
	baz=266							
NNSB				*e*S		Sb	12 47 12.8	0.0
	baz=266							
NNSH	Datong	0.50	264	⇓*i*P		Pb	12 47 05.7	-0.2
	baz=264							
NNSH				*e*S		Sb	12 47 12.8	0.0
	baz=264							
TWD	Chiawan	0.50	217	P		Pb	12 47 05.7	-0.1
	baz=214							
TWD				*e*S		Sn	12 47 14.8	-0.3
	baz=214							
NNS	Nan Shan	0.51	265	⇓*i*P		Pb	12 47 05.7	-0.3
	baz=265							
NNS				*

ESL				*e*S	**Sn**	**12 47 22.7**	**+0.1**
	baz=225								
NTST	**Danshui**	**0.80**	**328**	*e*P	**Pn**	**12 47 11.5**	**+0.1**
	baz=338								
NTST				*e*S	**Sn**	**12 47 22.8**	**+0.2**
	baz=338								
CHGB	**Renai**	**0.81**	**239**	P	**Pn**	**12 47 11.0**	**-0.6**
	baz=237								
CHGB				*e*S	**Sn**	**12 47 23.2**	**+0.3**
	baz=237								
NCU	**National Centr**	**0.83**	**306**	P	**Pn**	**12 47 12.0**	**+0.3**
	baz=292								
NCU				*e*S	**Sn**	**12 47 23.9**	**+0.7**
	baz=292								
NCUH	**Zhongli**	**0.83**	**306**	P	**Pn**	**12 47 11.8**	**+0.1**
	baz=292								
NCUH				*e*S	**Sn**	**12 47 24.4**	**+1.1**
	baz=292								
TWY	**Chenhua**	**0.84**	**340**	*e*P	**Pn**	**12 47 12.3**	**+0.4**
	baz=341								
TWY				*e*S	**Sn**	**12 47 23.4**	**-0.2**
	baz=341								
LIOB	**Emei**	**0.84**	**281**	*e*P	**Pn**	**12 47 12.3**	**+0.3**
	baz=281								
LIOB				*e*S	**Sn**	**12 47 23.6**	**0.0**
	baz=281								
NSTT	**Nanjuang**	**0.85**	**280**	*e*P	**Pn**	**12 47 12.5**	**+0.4**
	baz=280								
NSTT				*e*S	**Sn**	**12 47 23.7**	**-0.2**
	baz=280								
HSN1	**Hsinchu**	**0.88**	**290**	*e*P	**Pb**	**12 47 11.6**	**-0.6**
	baz=290								
SBCB	**Hsinchu**	**0.91**	**290**	P	**Pb**	**12 47 13.3**	**+0.6**
	baz=290								
SBCB				*e*S	**Sn**	**12 47 26.4**	**+1.2**
	baz=290								
WHP	**Taichung City**	**0.92**	**257**	P	**Pb**	**12 47 13.4**	**+0.5**
	baz=257								
WHP				*e*S	**Sn**	**12 47 25.6**	**+0.1**
	baz=257								
HSN	**Hsinchu**	**0.93**	**290**	*e*P	**Pb**	**12 47 12.9**	**0.0**
	baz=293								
HSN				*e*S	**Sn**	**12 47 26.7**	**+1.1**
	baz=293								
EGFH	**Guangfu**	**0.93**	**209**	*e*P	**Pn**	**12 47 11.7**	**-1.5**
	baz=220								
JYNG	**Yonagunijimaku**	**0.93**	**92**	P	**Pn**	**12 47 13.0**	**-0.1**
JYNG				*e*S	**Sn**	**12 47 25.8**	**+0.1**
NJN	**Zhunan**	**0.98**	**282**	*e*P	**Pb**	**12 47 14.9**	**+1.0**
	baz=282								
YOJ	**Yonaguni jima**	**0.99**	**91**	P	**Pn**	**12 47 13.8**	**-0.2**
YOJ				*e*S	**Sb**	**12 47 27.9**	**+1.2**
YOJ	**Yonaguni jima**	**0.99**	**91**	*e*P	**Pn**	**12 47 13.3**	**-0.7**
	baz=81								
YOJ				*e*S	**Sn**	**12 47 27.2**	**0.0**
	baz=81								
WPL	**Puli Township**	**1.00**	**242**	*e*P	**Pb**	**12 47 14.4**	**+0.1**
	baz=241								
WPL				*e*S	**Sn**	**12 47 28.0**	**+0.5**
	baz=241								
DPDB	**Guoxing**	**1.02**	**244**	*e*P	**Pb**	**12 47 14.8**	**+0.2**
	baz=244								
VWDT	**VWDT**	**1.02**	**225**	*e*P	**Pb**	**12 47 14.2**	**-0.3**
	baz=214								
VWDT				*e*S	**Sb**	**12 47 28.0**	**+0.4**
	baz=214								
NMLH	**Miaoli**	**1.03**	**273**	*e*P	**Pb**	**12 47 15.2**	**+0.4**
	baz=273								
NMLH				*e*S	**Sb**	**12 47 30.4**	**+2.4**
	baz=273								
TWQ1	**Liyutan**	**1.06**	**263**	*e*P	**Pb**	**12 47 16.3**	**+1.0**
	baz=263								
TWQ1				*e*S	**Sb**	**12 47 30.4**	**+1.7**
	baz=263								
NSY	**Sanyi**	**1.06**	**267**	*e*P	**Pb**	**12 47 16.3**	**+1.0**
	baz=276								
NSY				*e*S	**Sb**	**12 47 30.1**	**+1.3**
	baz=276								
HGSD	**Ruisui**	**1.09**	**205**	*e*P	**Pn**	**12 47 14.7**	**-0.6**
	baz=219								
HGSD				*e*S	**Sb**	**12 47 32.9**	**+3.4**
	baz=219								
SMLT	**Sun Moon Lake**	**1.11**	**238**	P	**Pb**	**12 47 16.3**	**+0.1**
	baz=244								
SMLT				*e*S	**Sb**	**12 47 31.4**	**+1.1**
	baz=244								
EHY	**Hungye**	**1.12**	**210**	P	**Pn**	**12 47 14.0**	**-1.7**
	baz=221								
EHY				*e*S	**Sb**	**12 47 29.9**	**-0.6**
	baz=221								
SSLB	**Suanglung**	**1.13**	**232**	P	**Pb**	**12 47 15.9**	**-0.5**
	baz=220								
SSLB				*e*S	**Sb**	**12 47 33.0**	**+2.4**
	baz=220								
TYC	**Yuchr**	**1.13**	**240**	P	**Pb**	**12 47 16.5**	**0.0**
	baz=231								
WDJ	**Dajia District**	**1.18**	**264**	*e*P	**Pb**	**12 47 18.1**	**+0.8**
	baz=271								
WDJ				*e*S	**Sb**	**12 47 34.4**	**+2.3**
	baz=271								
TCU	**Taichung**	**1.19**	**254**	*e*P	**Pb**	**12 47 17.7**	**+0.2**
	baz=244								
WWF	**Wufeng**	**1.20**	**249**	*e*P	**Pb**	**12 47 18.7**	**+1.0**
	baz=242								
WWF				*e*S	**Sb**	**12 47 36.2**	**+3.4**
	baz=242								
YULB	**Yu-li**	**1.23**	**208**	P	**Pn**	**12 47 15.6**	**-1.7**
	baz=207								
YULB				*e*S	**Sb**	**12 47 33.7**	**+0.1**
	baz=207								
WHYT	**Xinyi Township**	**1.25**	**232**	P	**Pb**	**12 47 18.2**	**-0.4**
	baz=219								
WHYT				*e*S	**Sb**	**12 47 37.8**	**+3.4**
	baz=219								
EYUL	**Yuli**	**1.26**	**206**	*e*P	**Pb**	**12 47 18.0**	**-0.7**
	baz=219								
EYUL				*e*S	**Sb**	**12 47 35.3**	**+0.8**
	baz=219								
TWF1	**Yuli**	**1.27**	**207**	P	**Pn**	**12 47 16.2**	**-1.6**
	baz=218								
TWF1				*e*S	**Sb**	**12 47 35.0**	**+0.4**
	baz=218								
WNT1	**Nantou City**	**1.27**	**243**	*e*P	**Pb**	**12 47 19.8**	**+0.8**
	baz=243								
WNT1				*e*S	**Sb**	**12 47 38.6**	**+3.7**
	baz=243								
WJS	**Zhushan**	**1.28**	**239**	P	**Pb**	**12 47 19.6**	**+0.6**
	baz=224								
WJS				*e*S	**Sb**	**12 47 38.5**	**+3.6**
	baz=224								
WNT	**Mingjian**	**1.28**	**242**	P	**Pb**	**12 47 19.7**	**+0.6**
	baz=241								
WNT				*e*S	**Sb**	**12 47 38.7**	**+3.6**
	baz=241								
WCHH	**Zhanghua**	**1.31**	**252**	*e*P	**Pb**	**12 47 18.7**	**-0.8**
	baz=252								
FULB	**Fuli**	**1.40**	**204**	P	**Pb**	**12 47 20.3**	**-0.9**
	baz=217								
ALS	**Alishan**	**1.41**	**227**	P	**Pb**	**12 47 20.9**	**-0.5**
	baz=215								
CHN5	**Tsauling**	**1.44**	**232**	*e*P	**Pb**	**12 47 21.9**	**+0.1**
	baz=232								
WDLH	**Douliu**	**1.49**	**238**	*e*P	**Pb**	**12 47 22.7**	**0.0**
	baz=225								
WDLH				*e*S	**Sb**	**12 47 43.5**	**+2.2**
	baz=225								
ELDTW	**Lidau**	**1.53**	**213**	*e*P	**Pn**	**12 47 20.8**	**-0.8**
	baz=201								
EDH	**Donghe**	**1.61**	**201**	*e*P	**Pn**	**12 47 22.2**	**-0.3**
	baz=189								
EDH				*e*S	**Sb**	**12 47 43.5**	**-1.1**
	baz=189								
WTK	**Tuku**	**1.61**	**241**	*e*P	**Pb**	**12 47 24.1**	**-0.6**
	baz=241								
WTCT	**Ta-ch'eng**	**1.62**	**248**	*e*P	**Pb**	**12 47 24.9**	**0.0**
	baz=248								
CHN2	**Minshiung**	**1.63**	**235**	*e*P	**Pb**	**12 47 25.6**	**+0.6**
	baz=223								
IRIF	**Iriomote-Funau**	**1.65**	**95**	P	**Pn**	**12 47 23.0**	**-0.1**
IRIF				*e*S	**Sn**	**12 47 44.5**	**+1.0**
CHN4	**Tsaushan**	**1.66**	**227**	*e*P	**Pb**	**12 47 25.6**	**0.0**
	baz=216								
CHN4				*e*S	**Sb**	**12 47 47.4**	**+1.4**
	baz=216								
TPUB	**Ta-pu**	**1.67**	**225**	*e*P	**Pb**	**12 47 25.0**	**-0.7**
	baz=214								
TPUB				*e*S	**Sb**	**12 47 47.0**	**+0.6**
	baz=214								
STYH	**Taoyuan**	**1.68**	**219**	*e*P	**Pb**	**12 47 24.2**	**-1.6**
	baz=219								
CHY	**Chiayi**	**1.69**	**235**	*e*P	**Pb**	**12 47 25.3**	**-0.7**
	baz=234								
CHY				*e*S	**Sb**	**12 47 47.6**	**+0.8**
	baz=234								
STYT	**Tauyuan**	**1.69**	**219**	*e*P	**Pb**	**12 47 24.9**	**-1.3**
	baz=219								
WTP	**Ta-pu**	**1.72**	**225**	*e*P	**Pb**	**12 47 25.8**	**-0.7**
	baz=224								
LONT	**Longtian**	**1.73**	**205**	*e*P	**Pn**	**12 47 23.4**	**-0.8**
	baz=191								
WSF	**Szhu**	**1.77**	**242**	*e*P	**Pn**	**12 47 24.0**	**-0.7**
	baz=242								
TWK	**Hsinying**	**1.79**	**228**	*e*P	**Pb**	**12 47 27.0**	**-0.8**
	baz=227								
SNST	**Tainan City**	**1.81**	**226**	*e*P	**Pb**	**12 47 27.1**	**-1.1**
	baz=226								
CHN1	**Nanshi**	**1.82**	**225**	*e*P	**Pb**	**12 47 27.5**	**-0.7**
	baz=225								
TWG	**Pinlang**	**1.83**	**205**	*e*P	**Pn**	**12 47 24.1**	**-1.4**
	baz=192								
TWGBT	**Beinan**	**1.83**	**205**	*e*P	**Pn**	**12 47 24.0**	**-1.6**
	baz=192								
LDUT	**Ludao**	**1.85**	**193**	*e*P	**Pn**	**12 47 24.2**	**-1.6**
	baz=193								
SGST	**Jiashian**	**1.86**	**222**	*e*P	**Pn**	**12 47 26.7**	**+0.8**
	baz=221								
ICHU	**Yijhu**	**1.88**	**234**	*e*P	**Pb**	**12 47 28.0**	**-1.2**
	baz=233								
SLGT	**Liugui**	**1.89**	**219**	*e*P	**Pb**	**12 47 28.3**	**-1.1**
	baz=219								
JKRS	**Kuro-shima**	**1.92**	**97**	P	**Pn**	**12 47 27.5**	**+0.8**
JKRS				S	**Sn**	**12 47 50.8**	**+0.7**
CHN8	**Yiju**	**1.94**	**235**	*e*P	**Pb**	**12 47 28.6**	**-1.6**
	baz=234								
CHN3	**Shinhua**	**2.00**	**226**	*e*P	**Pb**	**12 47 30.7**	**-0.6**
	baz=225								
JIJ	**Ishigaki jima**	**2.02**	**93**	P	**Pn**	**12 47 28.4**	**+0.2**
JIJ				S	**Sn**	**12 47 52.8**	**0.0**
SCST	**Cishan**	**2.06**	**220**	*e*P	**Pb**	**12 47 30.4**	**-2.0**
	baz=220								
ECL	**Taimali**	**2.08**	**206**	*e*P	**Pn**	**12 47 30.2**	**+1.3**
	baz=195								
SSD	**Sandimen**	**2.10**	**215**	*e*P	**Pb**	**12 47 31.1**	**-1.9**
	baz=201								
TSMG	**Majia**	**2.12**	**214**	*e*P	**Pb**	**12 47 31.2**	**-2.3**
	baz=201								
TWM1	**Shoushan**	**2.15**	**220**	*e*P	**Pb**	**12 47 32.1**	**-1.8**
	baz=220								
JISG	**Ishigakijimahi**	**2.17**	**87**	P	**Pn**	**12 47 30.4**	**+0.1**
JISG				S	**Sn**	**12 47 56.9**	**+0.5**
MASBT	**Mashibuluo**	**2.21**	**213**	*e*P	**Pb**	**12 47 32.7**	**-2.2**
	baz=199								
VWUC	**VWUC**	**2.31**	**283**	*e*P	**Pn**	**12 47 31.2**	**-0.9**
	baz=283								
EAST	**Anshuo**	**2.31**	**206**	*e*P	**Pn**	**12 47 33.3**	**+1.1**
	baz=197								
SSPT	**Xinbi**	**2.35**	**212**	*e*P	**Pb**	**12 47 34.7**	**-2.6**
	baz=199								
PNG	**Penghu**	**2.35**	**248**	*e*P	**Pn**	**12 47 32.9**	**+0.2**
	baz=247								
PHUB	**P'eng-hu**	**2.36**	**246**	*e*P	**Pn**	**12 47 32.4**	**-0.4**
	baz=246								
WDGT	**Dungji**	**2.41**	**240**	*e*P	**Pn**	**12 47 33.9**	**+0.4**
	baz=239								
SCZT	**Fangliau**	**2.42**	**210**	*e*P	**Pn**	**12 47 35.2**	**+1.6**
	baz=198								
MATB	**Ma-tsu**	**2.44**	**313**	*e*P	**Pn**	**12 47 33.0**	**-1.0**
	baz=312								
SLIU	**Shizi**	**2.48**	**205**	*e*P	**Pn**	**12 47 35.2**	**+0.7**
	baz=197								
JTJ	**Tarama**	**2.53**	**86**	P	**Pn**	**12 47 36.1**	**+0.9**
JTJ				*e*S	**Sn**	**12 48 05.9**	**+0.6**
PTMZ	**Houxiangcun**	**2.61**	**283**	*e*P	**Pn**	**12 47 35.4**	**-0.9**
	baz=282								
VCHM	**Qimei**	**2.61**	**241**	*e*P	**Pn**	**12 47 36.0**	**-0.3**
	baz=241								
LYJJ	**Jianjiangzhen**	**2.84**	**317**	*e*P	**Pn**	**12 47 38.3**	**-1.1**
	baz=315								
XPSS	**Dashiqiu**	**2.90**	**328**	*e*P	**Pn**	**12 47 38.8**	**-1.4**
	baz=327								
MHZQ	**Yeshan**	**3.08**	**302**	*e*P	**Pn**	**12 47 41.8**	**-0.8**
	baz=300								
KNM	**Kinmen**	**3.18**	**270**	*e*P	**Pn**	**12 47 45.9**	**+1.8**
	baz=269								
KNMB	**Chin-men Tao**	**3.22**	**270**	*e*P	**Pn**	**12 47 43.9**	**-0.8**
	baz=270								
AXDP	**Jialang**	**3.62**	**277**	*e*P	**Pn**	**12 47 49.3**	**-0.9**
	baz=276								

*ARE **04** 12:52:44±3.0, 15°.80S±0°.10×74°.2W±0°.1, h52km±10km, ML4.3, Error ellipse: s-maj=0.0km s-min=0.0km az=137.0*
NEIC 04 12:52:44.7±1.7, 16°.1S±0°.1×74°.6W±0°.1, h56km±34km, Error ellipse: s-maj=22.4km s-min=10.5km az=48.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.61**	**331**	Pn	Pn	12 53 52.2	+0.3
PB16	**IPOC Station P**	**5.35**	**116**		Pn	12 54 03.6	+1.1
PSGCX	**Pisagua**	**5.51**	**130**	Pn	Pn	12 54 03.4	-0.9
MNMC	**Minye Minye**	**5.65**	**123**		Pn	12 54 05.5	-0.9
PB11	**IPOC Station P**	**5.96**	**129**	Pn	Pn	12 54 10.2	-0.3
LPAZ	**La Paz**	**6.20**	**93**		Pn	12 54 14.2	0.0
PB08	**IPOC Station P**	**6.56**	**129**		Pn	12 54 19.6	+0.6
PB01	**IPOC Station P**	**6.92**	**137**	Pn	Pn	12 54 24.7	+1.0
PB07	**IPOC Station P**	**7.17**	**142**	Pn	Pn	12 54 27.1	-0.1
PB04	**IPOC Station P**	**7.51**	**147**	Pn	Pn	12 54 32.3	+0.5
PB09	**IPOC Station P**	**7.62**	**139**	Pn	Pn	12 54 32.6	-0.7
PB10	**IPOC Station P**	**8.33**	**154**	Pn	Pn	12 54 42.7	-0.1
PB14	**IPOC Station P**	**9.38**	**156**	Pn	Pn	12 54 58.1	+0.6

IDC 04 12:58:27.9±3.8, 5°.33S×153°.19E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/26, mbtmp3.3/2, Error ellipse: s-maj=158.9km s-min=52.2km az=122.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.39**	**230**	P	P	13 03 38.0	-0.5
	0.5nm,0.5s,baz=55,slow=9.8,SNR=5.8						
ASAR	**Alice Springs**	**26.02**	**224**	P	P	13 04 03.1	+0.2
	0.2nm,0.4s,baz=58,slow=9.3,SNR=13						
TORD	**Torodi Ar. Bea**	**150.84**	**287**	PKPbc	PKPbc	13 18 23.3	-0.2
	0.5nm,0.8s,baz=57,slow=2.1,SNR=2.7						

*JMA **04** 13:17:28.3±0.2, 22°.32N×120°.47E, h21km, M3.7*
*TAP **04** 13:17:29.8, 22°.45N×120°.51E, h19km, ML3.7, B*
ISC 04 13:17:30.6±0.8, 22°.45N±0°.02×120°.48E±0°.02, h19km±2km, n125, σ1s06/202, 9C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSPT	**Xinbi**	**0.09**	**64**	⇓*i*P	**Pg**	**13 17 34.2**	**-0.1**
	baz=70						
SSPT				*i* S	**Sg**	**13 17 38.2**	**+1.5**
	baz=70						
WLCH	**Liuqiu**	**0.13**	**226**	⇑*i*P	**Pg**	**13 17 35.8**	**+1.1**
	baz=231						
WLCH				S	**Sg**	**13 17 40.8**	**+3.3**
	baz=231						
SCZT	**Fangliau**	**0.15**	**120**	⇓*i*P	**Pb**	**13 17 34.3**	**+0.7**
	baz=119						
SCZT				*i* S	**Sg**	**13 17 37.9**	**+0.1**
	baz=119						
TWP	**Hsiaoliuchiu**	**0.15**	**229**	⇑*i*P	**Pg**	**13 17 35.9**	**+0.9**
	baz=232						
TWP				*e*S	**Sg**	**13 17 41.0**	**+3.2**
	baz=232						
KAU	**Kaohsiung**	**0.20**	**307**	⇑*i*P	**Pg**	**13 17 37.5**	**+1.8**
	baz=296						
KAU				*e*S	**Sg**	**13 17 41.9**	**+2.8**
	baz=296						
MASBT	**Mashibuluo**	**0.22**	**40**	⇓*i*P	**Pb**	**13 17 35.6**	**0.0**
	baz=43						
MASBT				*i* S	**Sg**	**13 17 39.9**	**+0.4**
	baz=43						
TSPT	**Pingtung City**	**0.23**	**3**	*e*P	**Pg**	**13 17 37.2**	**+1.1**
	baz=360						
TSPT				*e*S	**Sg**	**13 17 43.7**	**+3.8**
	baz=360						
SGLT	**Jiouru**	**0.28**	**2**	*e*P	**Pb**	**13 17 38.3**	**+1.3**
	baz=6.0						
SGLT				*e*S	**Sn**	**13 17 46.0**	**+0.4**
	baz=6.0						
TSMG	**Majia**	**0.30**	**30**	⇓*i*P	**Pg**	**13 17 37.0**	**-0.3**
	baz=36						
TSMG				S	**Sg**	**13 17 42.1**	**+0.4**
	baz=36						
SSD	**Sandimen**	**0.33**	**25**	⇓*i*P	**Pg**	**13 17 37.6**	**-0.2**
	baz=32						
SSD				*e*S	**Sg**	**13 17 43.1**	**+0.5**
	baz=32						
SNJT	**Kaohsiung City**	**0.34**	**336**	*e*P	**Pb**	**13 17 39.3**	**+1.1**
	baz=330						
SNJT				*e*S	**Sn**	**13 17 47.7**	**+0.7**
	baz=330						
EAST	**Anshuo**	**0.34**	**100**	⇓*i*P	**Pg**	**13 17 37.9**	**-0.1**
	baz=99						
EAST				*e*S	**Sb**	**13 17 44.1**	**+0.7**
	baz=99						
SLIU	**Shizi**	**0.37**	**128**	⇓*i*P	**Pg**	**13 17 37.8**	**-0.7**
	baz=129						
SLIU				*i* S	**Sg**	**13 17 43.6**	**-0.2**
	baz=129						
TWM1	**Shoushan**	**0.38**	**352**	*e*P	**Pn**	**13 17 40.7**	**-0.6**
	baz=347						
TWM1				*e*S	**Sn**	**13 17 46.6**	**-1.5**
	baz=347						
TAW	**Tawu**	**0.39**	**103**	⇓*i*P	**Pg**	**13 17 38.7**	**-0.1**
	baz=102						
TAW				*e*S	**Sg**	**13 17 45.1**	**+0.8**
	baz=102						
SCST	**Cishan**	**0.44**	**1**	*e*P	**Pb**	**13 17 41.0**	**+1.1**
	baz=9.0						
SCST				*e*S	**Sn**	**13 17 48.5**	**-1.0**
	baz=9.0						
ECL	**Taimali**	**0.46**	**71**	⇓*i*P	**Pg**	**13 17 39.8**	**-0.3**
	baz=67						
ECL				*e*S	**Sg**	**13 17 46.1**	**-0.3**
	baz=67						
HEN	**Hengchun**	**0.50**	**152**	⇓*e*P	**Pb**	**13 17 40.8**	**0.0**
	baz=156						
HEN				*e*S	**Sb**	**13 17 48.7**	**+1.0**
	baz=156						
SNW	**Nanwan**	**0.54**	**153**	*e*P	**Pg**	**13 17 41.8**	**+0.2**
	baz=158						
SNW				*e*S	**Sn**	**13 17 51.2**	**-0.8**
	baz=158						
SLGT	**Liugui**	**0.57**	**15**	*e*P	**Pb**	**13 17 42.0**	**0.0**
	baz=11						
SLGT				*e*S	**Sn**	**13 17 52.9**	**+0.2**
	baz=11						
TWK1	**Hengchun**	**0.58**	**149**	⇓*i*P	**Pb**	**13 17 42.1**	**-0.1**
	baz=153						
TWK1				S	**Sg**	**13 17 51.3**	**+1.2**
	baz=153						
TWKBT	**Hengchun**	**0.59**	**149**	⇓*i*P	**Pb**	**13 17 42.1**	**-0.2**
	baz=153						
TWKBT				*i* S	**Sg**	**13 17 51.5**	**+1.3**
	baz=153						
CHN3	**Shinhua**	**0.64**	**350**	*e*P	**Pn**	**13 17 44.5**	**-0.3**
	baz=346						
CHN3				*e*S	**Sn**	**13 17 55.9**	**+1.5**
	baz=346						
TAI1	**Yung-k'ang**	**0.64**	**338**	*e*P	**Pg**	**13 17 43.9**	**+0.6**
	baz=335						
TAI1				*e*S	**Sn**	**13 17 55.1**	**+0.7**
	baz=335						
SGST	**Jiashian**	**0.64**	**8**	⇑*i*P	**Pb**	**13 17 43.1**	**-0.1**
	baz=5.0						
SGST				*e*S	**Sn**	**13 17 54.0**	**-0.6**
	baz=5.0						
TWG	**Pinlang**	**0.66**	**55**	⇓*i*P	**Pb**	**13 17 43.4**	**-0.2**
	baz=55						
TWG				*e*S	**Sb**	**13 17 52.3**	**-0.1**
	baz=55						
TWGBT	**Beinan**	**0.67**	**56**	⇓*i*P	**Pb**	**13 17 43.4**	**-0.3**
	baz=54						
TWGBT				*e*S	**Sb**	**13 17 52.3**	**-0.2**
	baz=54						
TSEB	**Hengchuen, Pin**	**0.67**	**144**	⇑*i*P	**Pb**	**13 17 43.2**	**-0.5**
	baz=151						
TSEB				*e*S	**Sg**	**13 17 53.7**	**+1.0**
	baz=151						
TTN	**Taitung**	**0.69**	**63**	*e*P	**Pg**	**13 17 44.6**	**+0.4**
	baz=60						
TTN				*e*S	**Sg**	**13 17 54.8**	**+1.4**
	baz=60						
CHN1	**Nanshi**	**0.74**	**3**	⇑*i*P	**Pg**	**13 17 45.2**	**+0.1**
	baz=340						
CHN1				*e*S	**Sn**	**13 17 56.3**	**-0.6**
	baz=340						
LONT	**Longtian**	**0.75**	**52**	⇓*i*P	**Pb**	**13 17 45.0**	**-0.2**
	baz=51						
LONT				*e*S	**Sb**	**13 17 55.9**	**+0.7**
	baz=51						
STYT	**Tauyuan**	**0.76**	**19**	⇓*i*P	**Pb**	**13 17 45.2**	**-0.2**
	baz=26						
STYT				*e*S	**Sn**	**13 17 57.5**	**0.0**
	baz=26						
STYH	**Taoyuan**	**0.77**	**20**	⇓*i*P	**Pb**	**13 17 45.6**	**+0.1**
	baz=25						
STYH				*e*S	**Sn**	**13 17 57.6**	**-0.1**
	baz=25						
SNST	**Tainan City**	**0.77**	**1**	*e*P	**Pb**	**13 17 45.5**	**0.0**
	baz=358						
SCLT	**Jiali**	**0.77**	**340**	*i* P	**Pb**	**13 17 45.7**	**+0.1**
	baz=336						
SCLT				*i* S	**Sn**	**13 17 58.0**	**+0.3**
	baz=336						
WTP	**Ta-pu**	**0.81**	**9**	⇑*i*P	**Pb**	**13 17 46.0**	**-0.2**
	baz=347						
WTP				*e*S	**Sn**	**13 17 58.6**	**-0.1**
	baz=347						
TWK	**Hsinying**	**0.82**	**0**	*e*P	**Pb**	**13 17 46.3**	**0.0**
	baz=357						
TWK				*e*S	**Sg**	**13 17 58.3**	**+0.7**
	baz=357						
TPUB	**Ta-pu**	**0.86**	**9**	⇑*i*P	**Pb**	**13 17 46.6**	**-0.5**
	baz=348						
TPUB				*e*S	**Sg**	**13 17 59.5**	**+0.5**
	baz=348						
ELDTW	**Lidau**	**0.89**	**34**	⇓*i*P	**Pb**	**13 17 47.2**	**-0.4**
	baz=31						
ELDTW				*e*S	**Sg**	**13 18 00.8**	**+1.0**
	baz=31						
CHN4	**Tsaushan**	**0.91**	**6**	⇑*i*P	**Pb**	**13 17 47.3**	**-0.5**
	baz=346						
CHN4				*e*S	**Sg**	**13 18 00.6**	**+0.2**
	baz=346						
EDH	**Donghe**	**0.92**	**55**	*e*P	**Pb**	**13 17 48.1**	**0.0**
	baz=72						
EDH				*e*S	**Sn**	**13 18 01.8**	**+0.4**
	baz=72						
CHN8	**Yiju**	**0.93**	**344**	*e*P	**Pb**	**13 17 47.5**	**-0.7**
	baz=341						
CHN8				*e*S	**Sn**	**13 18 02.7**	**+1.0**
	baz=341						
LDUT	**Ludao**	**0.94**	**76**	*e*P	**Pb**	**13 17 47.3**	**-1.1**
	baz=76						
LDUT				*e*S	**Sb**	**13 18 01.1**	**+0.6**
	baz=76						
CHKT	**Chengkung**	**1.04**	**51**	*e*P	**Pb**	**13 17 49.8**	**-0.3**
	baz=67						
CHY	**Chiayi**	**1.05**	**357**	*e*P	**Pb**	**13 17 49.2**	**-1.0**
	baz=353						
CHY				*e*S	**Sb**	**13 18 03.6**	**0.0**
	baz=353						
FULB	**Fuli**	**1.06**	**45**	*e*P	**Pb**	**13 17 50.6**	**+0.2**
	baz=31						
LAY	**Lan-yu**	**1

EYUL eS Sn 13 18 08.5 +0.6
baz=38
YULB Yu-li 1.21 38 eP Pn 13 17 52.1 -0.5
baz=35
YULB eS Sb 13 18 08.4 +0.2
baz=35
WSF Szhu 1.21 349 eP Pn 13 17 51.1 -1.5
baz=344
WSF eS Sb 13 18 07.7 -0.7
baz=344
VCHM Qimei 1.23 308 eP Pn 13 17 50.3 -2.7
baz=323
WGK Gukeng 1.24 3 eP Pn 13 17 52.0 -1.0
baz=344
WGK eS Sn 13 18 09.6 +0.3
baz=344
WDLH Douliu 1.24 2 eP Pn 13 17 51.8 -1.2
baz=357
WDLH eS Sn 13 18 09.9 +0.6
baz=357
WTK Tuku 1.24 356 eP Pn 13 17 51.4 -1.6
baz=351
WTK eS Sb 13 18 09.0 -0.2
baz=351
WHYT Xinyi Township 1.29 15 eP Pn 13 17 53.1 -0.7
baz=10.0
WHYT eS Sg 13 18 12.1 -0.4
baz=10.0
EHY Hungye 1.31 36 eP Pn 13 17 53.8 -0.2
baz=31
EHY eS Sb 13 18 12.3 +1.1
baz=31
PHUB P'eng-hu 1.35 322 eP Pn 13 17 52.2 -2.4
baz=320
PHUB eS Sn 13 18 09.1 -3.0
baz=320
HGSD Ruisui 1.36 40 eP Pn 13 17 54.7 0.0
baz=34
HGSD eS Sg 13 18 14.8 +0.2
baz=34
WJS Zhushan 1.39 9 P Pn 13 17 53.7 -1.4
baz=4.0
WJS eS Sb 13 18 14.4 +0.9
baz=4.0
SSLB Suanglung 1.41 18 P Pn 13 17 54.4 -1.0
baz=355
SSLB eS Sb 13 18 14.8 +0.8
baz=355
PNG Penghu 1.41 323 eP Pn 13 17 53.0 -2.4
baz=321
PNG eS Sn 13 18 10.4 -3.0
baz=321
VWDT VWDT 1.44 25 eP Pn 13 17 55.3 -0.4
baz=19
VWDT eS Sb 13 18 15.4 +0.6
baz=19
WNT Mingjian 1.44 7 eP Pn 13 17 54.7 -1.1
baz=2.0
WNT eS Sn 13 18 13.5 -0.7
baz=2.0
WRL Guolierlin Hig 1.45 356 eP Pn 13 17 55.7 -0.3
baz=351
WRL eS Sn 13 18 13.2 -1.4
baz=351
WNT1 Nantou City 1.47 7 eP Pn 13 17 54.5 -1.7
baz=351
SMLT Sun Moon Lake 1.48 15 eP Pn 13 17 55.7 -0.8
baz=12
TYC Yuchr 1.49 13 eP Pn 13 17 55.9 -0.7
baz=11
EGFH Guangfu 1.50 35 eP Pn 13 17 56.1 -0.4
baz=33
WWF Wufeng 1.60 7 eP Pn 13 17 56.9 -1.1
WWF eS Sn 13 18 18.4 +0.2
baz=1.0
ESL Shilin 1.62 33 eP Pn 13 17 58.0 -0.2
baz=26
ESL eS Sn 13 18 19.2 +0.5
baz=26
WPL Puli Township 1.62 16 eP Pn 13 17 57.4 -0.9
baz=12
WCHH Zhanghua 1.63 2 eP Pn 13 17 57.0 -1.3
baz=345
WCHH eS Sn 13 18 18.6 -0.3
baz=345
DPDB Guoxing 1.63 14 eP Pn 13 17 57.8 -0.7
baz=11
TCU Taichung 1.70 6 eP Pn 13 17 58.6 -0.8
TCU eS Sn 13 18 20.6 -0.2
CHGB Renai 1.73 21 eP Pn 13 17 59.5 -0.5
baz=359
CHGB eS Sn 13 18 21.0 -0.7
baz=359
WHF Hehuan Shan 1.84 23 eP Pn 13 18 01.6 -0.1
baz=3.0
WHP Taichung City 1.87 13 eP Pn 13 18 01.4 -0.4
baz=350
WHP eS Sn 13 18 25.8 +0.7
baz=350
WDJ Dajia District 1.90 4 eP Pn 13 18 01.4 -0.7
baz=357
WDJ eS Sn 13 18 26.2 +0.7
baz=357
TDCB Techi 1.90 19 eP Pn 13 18 02.0 -0.4
baz=17
TWT Tachien 1.91 19 eP Pn 13 18 02.3 -0.2
baz=17
TWQ1 Liyutan 1.91 8 eP Pn 13 18 01.7 -0.6
baz=1.0
TWQ1 eS Sn 13 18 27.4 +1.5
baz=1.0
FUSS Fushou 1.93 21 eP Pn 13 18 02.1 -0.6
baz=3.0
NSY Sanyi 1.98 7 eP Pn 13 18 02.7 -0.6
baz=4.0
ETLH Xiulin Townshi 1.98 27 eP Pn 13 18 03.6 +0.3
baz=10.0
NACB Ninganchiao 2.00 30 eP Pn 13 18 02.4 -1.1
baz=28
NMLH Miaoli 2.10 8 eP Pb 13 18 06.7 -1.5
baz=4.0
NNSB Datong 2.14 23 eP Pn 13 18 05.6 +0.1
baz=4.0
NNSH Datong 2.14 23 eP Pn 13 18 05.5 -0.1
baz=4.0
NNS Nan Shan 2.15 22 eP Pn 13 18 05.6 -0.1
baz=1.0
NNS eS Sn 13 18 33.0 +1.1
baz=1.0
NSTT Nanjuang 2.23 12 eP Pn 13 18 05.7 -0.9
baz=354
LIOB Emei 2.25 12 eP Pn 13 18 06.3 -0.6
baz=350
LIOB eS Sn 13 18 34.5 +0.3
baz=350
NDT Datong Townshi 2.35 24 eP Pn 13 18 08.3 +0.1
baz=5.0
NSK Sanguang 2.36 20 eP Pn 13 18 09.3 +0.7
baz=16
YHNB Yeheng 2.36 20 eP Pn 13 18 08.0 -0.6
baz=17
ENTT Nioudou 2.40 24 eP Pn 13 18 09.6 +0.5
baz=7.0
NDS Dongshan 2.46 27 eP Pn 13 18 10.3 +0.6
baz=42
NWLT Wulai 2.50 22 eP Pn 13 18 10.6 +0.1
baz=3.0
TWE Neicheng 2.51 25 eP Pn 13 18 10.8 +0.3
baz=40
TATO Taipei 2.68 20 eP Pn 13 18 12.5 -0.4
baz=359
VWUC VWUC 2.71 340 eP Pn 13 18 11.2 -2.0
baz=337
KNM Kinmen 2.72 317 eP Pn 13 18 13.0 -0.4
baz=314
KNMB Chin-men Tao 2.78 317 eP Pn 13 18 12.3 -2.0
baz=317
TIPB Shuangxi 2.80 26 eP Pn 13 18 13.3 -1.2
baz=38
YM04 YM04 2.86 19 eP Pn 13 18 13.8 -1.7
baz=16
YM01 YM01 2.87 20 eP Pn 13 18 15.2 -0.2
baz=16
PTMZ Houxiangcun 2.87 334 eP Pn 13 18 14.1 -1.3
baz=332
JYNG Yonagunijimaku 3.02 48 P Pn 13 18 18.1 +0.6
JYNG eS Sn 13 18 53.6 +0.5

YOJ Yonaguni jima 3.07 49 P Pn 13 18 19.2 +1.0
YOJ eS Sn 13 18 56.1 +1.7
YOJ Yonaguni jima 3.07 49 eP Pn 13 18 18.4 +0.2
baz=47
AXDP Jialang 3.36 317 eP Pn 13 18 20.6 -1.6
baz=317
IRIF Iriomote-Funau 3.53 57 P Pn 13 18 25.1 +0.6
IRIF eS Sn 13 19 07.5 +1.8
JKRS Kuro-shima 3.70 60 P Pn 13 18 27.0 +0.1
JKRS S Sn 13 19 09.5 -0.5
MATB Ma-tsu 3.72 353 eP Pn 13 18 25.0 -2.2
baz=347
MSUT Lienchiang 3.74 352 eP Pn 13 18 26.0 -1.5
baz=347
JIJ Ishigaki jima 3.87 60 P Pn 13 18 28.7 -0.5
JIJ eS Sn 13 19 12.9 -1.2
MHZQ Yeshan 3.87 340 eP Pn 13 18 27.8 -1.4
baz=338
VDOS Pratas Island 3.90 244 eP Pn 13 18 27.9 -1.7
baz=240
JISG Ishigakijimahi 4.11 58 P Pn 13 18 31.7 -0.8
JISG eS Sn 13 19 19.3 -0.8
XPSS Dashiqiu 4.47 357 eP Pn 13 18 35.4 -2.1
baz=347

IDC 04 13:19:31.4±8.8, 7.00S×117.91E, h265$^{km}_{\pm 99km}$, mb2.7/4, mb1 2.8/5, mb1mx2.6/54, mbtmp3.4/5, Error ellipse: s-maj=157.3km s-min=29.9km az=53.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.36**	**146**	P	Pn	13 22 31.6	+0.2
	0.1nm,0.3s,baz=315,slow=11,SNR=1.5						
FITZ				S	S	13 25 00.5	+0.9
	0.1nm,0.3s,baz=180,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**20.48**	**131**	P	P	13 23 49.8	0.0
	0.2nm,0.4s,baz=307,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**22.60**	**139**	P	P	13 24 09.8	0.0
	0.3nm,0.4s,baz=312,slow=8.7,SNR=19						
MKAR	**Makanchi Array**	**62.20**	**333**	P	P	13 29 25.2	+0.1
	0.2nm,0.3s,baz=144,slow=5.5,SNR=6.7						
ZALV	**Zalesovo Beam**	**66.80**	**339**	P	P	13 29 54.3	-0.2
	0.4nm,0.4s,baz=159,slow=4.5,SNR=2.1						

*IDC **04** 13:21:16.4±0.4, 36.16N×97.58W, h0^{km}, mb4.3/29, mb1 4.4/39, mb1mx4.3/64, mbtmp4.2/39, ML3.5/8, MS3.4/26, Ms1 3.4/26, ms1mx3.2/61, Error ellipse: s-maj=9.5km s-min=8.8km az=96.0*

*ANF **04** 13:21:17.3±0.4, 36.12N×97.58W, h6$^{km}_{\pm 3km}$, ML5.3/27, Error ellipse: s-maj=2.1km s-min=1.8km az=77.0*

*NEIC **04** 13:21:17.3, 36.12N×97.57W, h3^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.71; $M_{\theta\theta}$1.82; $M_{\phi\phi}$-0.11; $M_{r\theta}$-0.57; $M_{r\phi}$0.13; $M_{\theta\phi}$-0.07; Fault plane solution: $M_0$1.86000×10^{15} NP1:ϕ_s267.32000°, δ36.01000°, λ-88.20000°. NP2:ϕ_s85.09000°, δ54.01000°, λ-91.31000°. Principal axes: T 1.9200, Plg9.0000°, Azm176.0000°; N -0.1176, Plg1.0000°, Azm86.0000°; P -1.8023, Plg81.0000°, Azm349.0000°;*

*TUL **04** 13:21:17±1.5, 36.12N±0.03×97.57W±0.06, h5$^{km}_{\pm 5km}$, mb4.3/15(NEIC), mb_Lg4.5/151(NEIC), Mwr4.1/50(NEIC) Error ellipse: s-maj=7.0km s-min=2.4km az=66.0*

*NEIC **04** 13:21:17.2±1.4, 36.14N±0.02×97.56W±0.05, h4$^{km}_{\pm 5km}$, Error ellipse: s-maj=6.8km s-min=2.5km az=69.0*

ISC 04 13:21:17.2±1.1, 36.13N±0.02×97.57W±0.03, h7$^{km}_{\pm 7km}$, n285, σ1^{s}00/260, mb4.3/40, MS3.6/16, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.34**	**164**		**Pg**	**13 21 24.1**	**+0.2**
BCOK	**Bluff Creek, N**	**0.47**	**184**		**Pg**	**13 21 26.4**	**+0.1**
BCOK				Sg	**Sg**	**13 21 33.1**	**+0.7**
CROK	**Carrier**	**0.50**	**319**		**Pg**	**13 21 27.4**	**+0.5**
CROK				Sg	**Sg**	**13 21 34.6**	**+1.1**
OK009	**Oakdale Elemen**	**0.56**	**167**		**Pg**	**13 21 28.2**	**+0.2**
OK025	**Westminster Rd**	**0.58**	**161**		**Pg**	**13 21 28.5**	**+0.2**
OK025				IAmb_Lg		13 21 35.9	
	comp=Z,9μm,0.9s						
OK031	**S. Brethren Rd**	**0.62**	**106**	Sg	**Sg**	**13 21 37.7**	**+0.4**
OK030	**Cody Creek RV**	**0.67**	**107**		**Pg**	**13 21 30.3**	**+0.2**
QUOK	**Quay**	**0.70**	**86**		**Pg**	**13 21 30.9**	**+0.2**
OKCFA	**Oklahoma City**	**0.72**	**172**	Pg	**Pg**	**13 21 30.9**	**-0.1**
OKCFA				IAmb_Lg		13 21 40.6	
	comp=Z,8μm,0.9s						
OKCFA	**Oklahoma City**	**0.72**	**172**	P	**Pg**	**13 21 31.0**	**-0.1**
	baz=352,SNR=161						
OKCFA				S	**Sg**	**13 21 40.9**	**+0.6**
	baz=352						
OKCFA	**Oklahoma City**	**0.72**	**172**	P		13 21 31.0	
	baz=352,SNR=161						
OKCFA				S		13 21 40.9	
	baz=352						
OKCSW	**OKLAHOMA CITY**	**0.73**	**171**		**Pg**	**13 21 31.1**	**-0.1**
GC02	**Grant County #**	**0.76**	**342**	Pg	**Pg**	**13 21 32.0**	**+0.2**
FNO	**Franklin**	**0.88**	**171**		**Pg**	**13 21 34.4**	**+0.3**
FNO				IAmb_Lg		13 21 45.8	
	comp=Z,7μm,1.0s						
KAN14	**Manchester OK**	**0.89**	**339**		**Pg**	**13 21 34.3**	**+0.1**
KAN13	**South Haven SW**	**0.89**	**5**		**Pg**	**13 21 34.4**	**+0.1**
KAN13				IAmb_Lg		13 21 45.6	
	comp=Z,3μm,0.7s						
KAN09	**Caldwell North**	**1.01**	**358**		**Pg**	**13 21 36.6**	**0.0**
KAN05	**Bluff City Nor**	**1.01**	**346**		**Pg**	**13 21 36.6**	**0.0**
KAN01	**Argonia South**	**1.04**	**352**		**Pg**	**13 21 37.0**	**-0.1**
KAN10	**Anthony SW Sta**	**1.08**	**337**	Pg	**Pg**	**13 21 37.6**	**-0.3**
KAN08	**Anthony NE Sta**	**1.14**	**344**		**Pg**	**13 21 39.0**	**-0.1**
KAN08				IAmb_Lg		13 21 56.6	
	comp=Z,2μm,0.7s						
T35A	**Sooner Cattle**	**1.16**	**47**		**Pg**	**13 21 39.3**	**-0.3**
T35B	**Sooner Cattle**	**1.16**	**47**	P	**Pg**	**13 21 39.3**	**-0.2**
	baz=227,SNR=1000						
T35B	**Sooner Cattle**	**1.16**	**47**	P		13 21 39.3	
	baz=227,SNR=1000						
U32A	**Winter Ranch,**	**1.18**	**283**		**Pg**	**13 21 39.3**	**-0.6**
U32A	**Winter Ranch,**	**1.18**	**283**	P	**Pg**	**13 21 39.3**	**-0.6**
	baz=102,SNR=229						
U32A				S	**Sb**	**13 21 55.7**	**+0.1**
	baz=102						
U32A	**Winter Ranch,**	**1.18**	**283**	P		13 21 39.3	
	baz=102,SNR=229						
U32A				S		13 21 55.7	
	baz=102						
KAN12	**Harper NE Stat**	**1.22**	**344**	Pg	**Pg**	**13 21 40.3**	**-0.2**
TUL1	**Leonard**	**1.46**	**98**	P	**Pn**	**13 21 43.6**	**-0.4**
	baz=279,SNR=553						
TUL1				S	**Sg**	**13 22 04.2**	**+0.1**
	baz=279						
TUL1	**Leonard**	**1.46**	**98**	P		13 21 43.7	
	baz=279,SNR=347						
TUL1				S		13 22 04.3	
	baz=279						
TUL1	**Leonard**	**1.46**	**98**	P		13 21 43.6	
	baz=279,SNR=553						
TUL1				S		13 22 04.2	
	baz=279						
X34A	**Smith Ranch, M**	**1.54**	**188**	Pn	**Pn**	**13 21 45.9**	**+0.8**
X34A				IAmb_Lg		13 22 07.7	
	comp=Z,4μm,0.8s						
WMOK	**Wichita Mounta**	**1.70**	**216**	Pn	**Pn**	**13 21 47.6**	**+0.2**
WMOK				IAmb_Lg		13 22 12.1	
	comp=Z,2μm,0.8s						
WMOK	**Wichita Mounta**	**1.70**	**216**	P	**Pn**	**13 21 47.6**	**+0.2**
	baz=35,SNR=1000						
WMOK				S	**Sn**	**13 22 10.4**	**+1.0**
	baz=35						
WMOK	**Wichita Mounta**	**1.70**	**216**	P		13 21 47.6	
	baz=35,SNR=837						
WMOK				S		13 22 10.6	
	baz=35						
WMOK	**Wichita Mounta**	**1.70**	**216**	P		13 21 47.6	
	baz=35,SNR=1000						
WMOK				S		13 22 10.4	
	baz=35						
X37A	**Clayton**	**2.37**	**130**		**Pn**	**13 21 57.2**	**+0.8**
X37A	**Clayton**	**2.37**	**130**	P	**Pn**	**13 21 57.4**	**+0.9**
	baz=311,SNR=75						
X37A	**Clayton**	**2.37**	**130**	P		13 21 57.4	
	baz=311,SNR=75						
R32A	**Long Quarter,**	**2.46**	**339**		**Pn**	**13 21 58.6**	**+0.6**
R32A				IAmb_Lg		13 22 36.4	
	comp=Z,1μm,0.7s						
R32A	**Long Quarter,**	**2.46**	**339**	P	**Pn**	**13 21 58.7**	**+0.8**
	baz=158,SNR=406						
R32A				S	**Sn**	**13 22 29.6**	**+1.2**
	baz=158						
R32A	**Long Quarter,**	**2.46**	**339**	P		13 21 58.7	
	baz=158,SNR=406						
R32A				S		13 22 29.6	
	baz=158						
U38A	**Gravette**	**2.59**	**82**		**Pn**	**13 22 00.3**	**+0.6**
U38A				IAmb_Lg		13 22 42.3	
	comp=Z,913nm,0.7s						
U38A	**Gravette**	**2.59**	**82**	P	**Pn**	**13 22 00.4**	**+0.7**
	baz=264,SNR=177						
U38A	**Gravette**	**2.59**	**82**	P		13 22 00.4	
	baz=264,SNR=177						
Z35A	**Perchaven, San**	**2.80**	**175**		**Pn**	**13 22 03.3**	**+0.8**
Z35A				IAmb_Lg		13 22 50.2	
	comp=Z,874nm,1.1s						
Z35A	**Perchaven, San**	**2.80**	**175**	P	**Pn**	**13 22 03.5**	**+1.0**
	baz=355,SNR=44						
Z35A	**Perchaven, San**	**2.80**	**175**	P		13 22 03.5	
	baz=355,SNR=44						
HHAR	**Hobbs**	**2.94**	**86**		**Pn**	**13 22 05.0**	**+0.6**
HHAR	**Hobbs**	**2.94**	**86**	P	**Pn**	**13 22 05.1**	**+0.6**
	baz=268,SNR=16						
HHAR	**Hobbs**	**2.94**	**86**	P		13 22 05.1	
	baz=268,SNR=16						
KSU1	**Kansas State U**	**3.07**	**14**	Pn	**Pn**	**13 22 07.0**	**+0.8**
KSU1				IAmb_Lg		13 23 00.5	
	comp=Z,1μm,0.8s						
KSU1	**Kansas State U**	**3.07**	**14**	P	**Pn**	**13 22 07.1**	**+1.0**
	baz=195,SNR=69						
KSU1	**Kansas State U**	**3.07**	**14**	Pn		13 22 07.0	
	baz=195,SNR=74						
KSU1				Pb		13 22 14.0	
	baz=195						
KSU1	**Kansas State U**	**3.07**	**14**	P		13 22 07.1	
	baz=195,SNR=69						
CBKS	**Cedar Bluff**	**3.19**	**328**		**Pn**	**13 22 08.9**	
	baz=147,SNR=49						
CBKS				Pb		13 22 16.1	
	baz=147						
CBKS				Sn		13 22 48.0	
	baz=147						
CBKS				Sb		13 22 58.7	
	baz=147						
CBKS	**Cedar Bluff**	**3.19**	**328**	P		13 22 08.9	
	baz=147,SNR=78						
CBKS	**Cedar Bluff**	**3.19**	**328**	Pn	**Pn**	**13 22 09.0**	**+1.2**
CBKS				IAmb_Lg		13 23 01.5	
	comp=Z,2μm,0.7s						
CBKS	**Cedar Bluff**	**3.19**	**328**	P	**Pn**	**13 22 08.9**	**+1.0**
	baz=147,SNR=78						
W39A	**Magazine**	**3.22**	**106**		**Pn**	**13 22 08.8**	**+0.5**
W39A				IAmb_Lg		13 23 05.5	
	comp=Z,818nm,1.0s						
W39A	**Magazine**	**3.22**	**106**	P	**Pn**	**13 22 08.8**	**+0.5**
	baz=288,SNR=105						
W39A				S	**Sn**	**13 22 47.8**	**+0.9**
	baz=288						
W39A	**Magazine**	**3.22**	**106**	P		13 22 08.8	
	baz=288,SNR=45						
W39A				S		13 22 48.1	
	baz=288						
W39A	**Magazine**	**3.22**	**106**	P		13 22 08.8	
	baz=288,SNR=105						
W39A				S		13 22 47.8	
	baz=288						
Z38A	**Mt. Pleasant**	**3.57**	**143**	Pn	**Pn**	**13 22 13.7**	**+0.7**
Z38A	**Mt. Pleasant**	**3.57**	**143**	P	**Pn**	**13 22 13.7**	**+0.7**
	baz=324						
Z38A				S	**Sn**	**13 22 56.3**	**+0.8**
	baz=324						
Z38A	**Mt. Pleasant**	**3.57**	**143**	P		13 22 13.7	
	baz=324						
Z38A				S		13 22 56.3	
	baz=324						
AMTX	**Amarillo**	**3.57**	**251**	Pn	**Pn**	**13 22 14.1**	**+0.8**
AMTX				IAmb_Lg		13 23 15.8	
	comp=Z,1μm,0.8s						
AMTX	**Amarillo**	**3.57**	**251**	P	**Pn**	**13 22 14.0**	**+0.8**
	baz=68,SNR=56						
AMTX	**Amarillo**	**3.57**	**251**	Pn		13 22 14.1	
	baz=68						
AMTX				Pb		13 22 21.3	
	baz=68						
AMTX				Sb		13 23 08.4	
	baz=68						
AMTX	**Amarillo**	**3.57**	**251**	P		13 22 14.0	
	baz=68,SNR=56						
MIAR	**Mount Ida**	**3.63**	**115**	Pn	**Pn**	**13 22 14.7**	**+0.8**
MIAR				IAmb_Lg		13 23 18.1	
	comp=Z,906nm,0.8s						
MIAR	**Mount Ida**	**3.63**	**115**	P	**Pn**	**13 22 14.5**	**+0.6**
	baz=297,SNR=131						
MIAR				S	**Sn**	**13 22 58.8**	**+1.8**
	baz=297						
MIAR	**Mount Ida**	**3.63**	**115**	P		13 22 14.6	
	baz=297,SNR=76						
MIAR				S		13 22 58.8	
	baz=297						
MIAR	**Mount Ida**	**3.63**	**115**	P		13 22 14.5	
	baz=297,SNR=131						
MIAR				S		13 22 58.8	
	baz=297						
S39A	**Bolivar**	**3.75**	**64**		**Pn**	**13 22 16.3**	**+0.8**
S39A				IAmb_Lg		13 23 17.4	
	comp=Z,1μm,0.8s						
S39A	**Bolivar**	**3.75**	**64**	P	**Pn**	**13 22 16.3**	**+0.8**
	baz=246,SNR=96						
S39A	**Bolivar**	**3.75**	**64**	P		13 22 16.3	
	baz=246,SNR=96						
U40A	**Yellville**	**3.82**	**85**	Pn	**Pn**	**13 22 16.4**	**-0.1**
U40A				IAmb_Lg		13 23 21.2	
	comp=Z,2μm,1.1s						
U40A	**Yellville**	**3.82**	**85**	P	**Pn**	**13 22 16.4**	**-0.1**
	baz=268,SNR=35						
U40A	**Yellville**	**3.82**	**85**	P		13 22 16.3	
	baz=268,SNR=16						
U40A	**Yellville**	**3.82**	**85**	P		13 22 16.4	
	baz=268,SNR=35						
U40A				P		13 22 16.4	
	baz=268,SNR=35						
ABTX	**Abilene, Hawle**	**3.89**	**207**	Pn	**Pn**	**13 22 18.1**	**+0.5**
ABTX				IAmb_Lg		13 23 22.1	
	comp=Z,1μm,0.8s						
ABTX	**Abilene, Hawle**	**3.89**	**207**	P	**Pn**	**13 22 18.0**	**+0.4**
	baz=26,SNR=62						
ABTX	**Abilene, Hawle**	**3.89**	**207**	P		13 22 17.9	
	baz=26,SNR=78						
ABTX	**Abilene, Hawle**	**3.89**	**207**	P		13 22 18.0	
	baz=26,SNR=62						
WHTX	**Lake Whitney,**	**4.13**	**179**		**Pn**	**13 22 21.4**	**+0.7**
WHTX				IAmb_Lg		13 23 34.1	
	comp=Z,541nm,1.0s						
WHTX	**Lake Whitney,**	**4.13**	**179**	P	**Pn**	**13 22 21.6**	**+0.8**
	baz=359,SNR=41						
WHTX	**Lake Whitney,**	**4.13**	**179**	P		13 22 21.5	
	baz=359,SNR=10						
WHTX				Sn		13 23 09.5	
	baz=359						
WHTX				Sb		13 23 23.1	
	baz=359						
WHTX	**Lake Whitney,**	**4.13**	**179**	P		13 22 21.6	
	baz=359,SNR=41						
X40A	**Basin Creek Fa**	**4.21**	**112**		**Pn**	**13 22 22.5**	**+0.7**
X40A				IAmb_Lg		13 23 31.2	
	comp=Z,1μm,0.9s						
X40A	**Basin Creek Fa**	**4.21**	**112**	P		13 22 22.9	
	baz=294,SNR=18						
237A	**Washetta, Mont**	**4.37**	**160**	Pn	**Pn**	**13 22 24.1**	**0.0**
237A				IAmb_Lg		13 23 44.0	
	comp=Z,1μm,1.1s						
237A	**Washetta, Mont**	**4.37**	**160**	P	**Pn**	**13 22 24.0**	**0.0**
	baz=341,SNR=13						
237A				S	**Sn**	**13 23 14.3**	**-0.9**
	baz=341						
237A	**Washetta, Mont**	**4.37**	**160**	P		13 22 24.0	
	baz=341,SNR=13						
237A				S		13 23 14.3	
	baz=341						
WHAR	**Wooly Hollow**	**4.38**	**99**		**Pn**	**13 22 24.6**	**+0.3**
WHAR				IAmb_Lg		13 23 36.7	
	comp=Z,1μm,1.0s						
MGMO	**Mountain Grove**	**4.39**	**75**		**Pn**	**13 22 25.0**	**+0.7**
MGMO				IAmb_Lg		13 23 42.0	
	comp=Z,1μm,0.7s						
WLAR	**White Oak Lake**	**4.40**	**122**		**Pn**	**13 22 25.5**	**+1.0**

WLAR IAmb_Lg 13 23 46.0
comp=Z,658nm,0.9s
FCAR Ozark Folk Cen 4.42 91 IAmb_Lg 13 23 39.8
comp=Z,637nm,0.8s
W41B Gary Mavity, V 4.44 101 P **Pn** **13 22 24.9 -0.1**
baz=284,SNR=60
W41B S **Sn** **13 23 16.4 -0.6**
baz=284
W41B Gary Mavity, V 4.44 101 P 13 22 25.0
baz=284,SNR=38
W41B Sn 13 23 16.4
baz=284
W41B Sb 13 23 35.1
baz=284
W41B Gary Mavity, V 4.44 101 P 13 22 24.9
baz=284,SNR=60
W41B S 13 23 16.4
baz=284
N33B J Bar K, Exete 4.60 1 P **Pn** **13 22 27.1 -0.2**
baz=181,SNR=19
N33B J Bar K, Exete 4.60 1 P 13 22 27.1
baz=181,SNR=19
N33A J Bar K, Exete 4.61 1 IAmb_Lg 13 23 54.4
comp=Z,2µm,1.1s
P38A Dawn 4.73 41 Pn **Pn** **13 22 29.8 +0.8**
P38A IAmb_Lg 13 23 49.7
comp=Z,1µm,0.8s
R40A Maddies Statio 4.75 61 Pn **Pn** **13 22 29.9 +0.5**
R40A IAmb_Lg 13 23 45.5
comp=Z,1µm,0.8s
R40A Maddies Statio 4.75 61 P **Pn** **13 22 30.0 +0.6**
baz=244,SNR=45
R40A Maddies Statio 4.75 61 P 13 22 30.0
baz=244,SNR=45
MSTX Muleshoe 4.78 245 Pn **Pn** **13 22 29.9 +0.1**
MSTX Muleshoe 4.78 245 P **Pn** **13 22 29.9 +0.1**
baz=62,SNR=26
MSTX Muleshoe 4.78 245 P 13 22 29.9
baz=62,SNR=47
MSTX Sb 13 23 44.0
baz=62
MSTX Muleshoe 4.78 245 P 13 22 29.9
baz=62,SNR=26
Z41A Richland Creek 4.86 125 P 13 22 31.4
baz=308,SNR=18
Z41A S 13 23 26.2
baz=308
KSCO Kaye Shedlock' 4.94 307 Pn **Pn** **13 22 32.8 +0.8**
KSCO IAmb_Lg 13 24 01.6
comp=Z,1µm,0.9s
KSCO Kaye Shedlock' 4.94 307 P 13 22 33.9
baz=124,SNR=16
KSCO Sb 13 23 50.9
baz=124
N35A Tabor 4.96 17 **Pn** **13 22 32.5 +0.3**
N35A Tabor 4.96 17 P **Pn** **13 22 32.5 +0.3**
baz=198,SNR=17
N35A Tabor 4.96 17 P 13 22 32.5
baz=198,SNR=17
NATX Nacogdoches 4.98 150 S **Sn** **13 23 29.8 -0.6**
baz=332
NATX Nacogdoches 4.98 150 S 13 23 29.8
baz=332
NATX Nacogdoches 4.98 150 S 13 23 29.8
baz=332
LCAR Lake Charles 5.20 89 IAmb_Lg 13 24 04.9
comp=Z,780nm,1.1s
BGNE Belgrade 5.29 355 Pn **Pn** **13 22 36.5 -0.3**
BGNE Belgrade 5.29 355 P **Pn** **13 22 36.8 0.0**
baz=175,SNR=65
BGNE Belgrade 5.29 355 P 13 22 36.8
baz=175,SNR=26
BGNE Belgrade 5.29 355 P 13 22 36.8
baz=175,SNR=65
435B Jarrell 5.33 180 Pn **Pn** **13 22 37.5 +0.2**
435B IAmb_Lg 13 24 08.7
comp=Z,1µm,0.8s
435B Jarrell 5.33 180 P **Pn** **13 22 37.5 +0.2**
baz=0.2,SNR=17
435B Jarrell 5.33 180 P 13 22 37.5
baz=0.2,SNR=13
435B Jarrell 5.33 180 P 13 22 37.5
baz=0.2,SNR=17
CCM Cathedral Cave 5.41 67 IAmb_Lg 13 24 14.9
comp=Z,524nm,0.7s
CCM Cathedral Cave 5.41 67 P **Pn** **13 22 38.8 +0.4**
baz=251,SNR=21
CCM Cathedral Cave 5.41 67 P 13 22 38.8
baz=251
CCM Cathedral Cave 5.41 67 P 13 22 38.8
baz=251,SNR=21
P40A Paris 5.54 51 **Pn** **13 22 40.2 +0.1**
P40A Paris 5.54 51 P **Pn** **13 22 40.2 +0.1**
baz=234,SNR=16
P40A Paris 5.54 51 P 13 22 40.2
baz=234,SNR=16
T25A Trinidad 5.59 282 Pn **Pn** **13 22 40.9 -0.2**
T25A Trinidad 5.59 282 P 13 22 41.0
baz=98,SNR=30
HBAR Harrisburg 5.65 94 IAmb_Lg 13 24 25.2
comp=Z,1µm,0.9s
N38A Joes South For 5.77 35 **Pn** **13 22 43.0 -0.3**
N38A Joes South For 5.77 35 P **Pn** **13 22 43.0 -0.3**
baz=217,SNR=16
N38A Joes South For 5.77 35 P 13 22 43.0
baz=217,SNR=16
PBMO Poplar Bluff 5.79 81 IAmb_Lg 13 24 25.6
comp=Z,946nm,0.8s
JCT Junction City 5.93 199 Pn **Pn** **13 22 45.2 -0.5**
JCT Junction City 5.93 199 P **Pn** **13 22 45.1 -0.5**
baz=18,SNR=11
JCT Junction City 5.93 199 P 13 22 45.1
baz=18,SNR=9.6
JCT Junction City 5.93 199 P 13 22 45.1
baz=18,SNR=11
OGNE Ogallala 5.95 325 Pn **Pn** **13 22 47.4 +1.6**
OGNE Ogallala 5.95 325 P **Pn** **13 22 47.4 +1.6**
baz=143,SNR=39
OGNE Ogallala 5.95 325 P 13 22 47.2
baz=143,SNR=23
OGNE Sb 13 24 22.6
baz=143
OGNE Ogallala 5.95 325 P 13 22 47.4
baz=143,SNR=39
FVM French Village 6.01 70 **Pn** **13 22 47.2 +0.6**
FVM IAmb_Lg 13 24 31.3
comp=Z,566nm,0.8s
GNAR Gosnell 6.12 89 IAmb_Lg 13 24 33.9
comp=Z,877nm,0.9s
143A Socs Landing, 6.14 122 IAmb_Lg 13 24 39.3
comp=Z,472nm,0.8s
MET Memphis--Engin 6.30 97 IAmb_Lg 13 24 45.5
comp=Z,993nm,1.2s
PARMO Parma 6.33 83 IAmb_Lg 13 24 50.6
comp=Z,979nm,0.8s
SLM Saint Louis 6.36 65 IAmb_Lg 13 24 44.9
comp=Z,637nm,0.8s
PVMO Portageville 6.37 85 IAmb_Lg 13 24 41.8
comp=Z,859nm,0.7s
PENMO Penman 6.42 85 IAmb_Lg 13 24 46.0
comp=Z,668nm,0.9s
LNXT Lenox 6.54 88 IAmb_Lg 13 25 01.1
comp=Z,877nm,0.9s
K31A O'Neill 6.55 352 Pn **Pn** **13 22 54.2 +0.2**
K31A O'Neill 6.55 352 P **Pn** **13 22 54.4 +0.4**
baz=172,SNR=13
K31A O'Neill 6.55 352 P 13 22 54.4
baz=172,SNR=13
SDCO Great Sand Dun 6.55 287 Sb 13 24 40.6
baz=102
Q24A Divide 6.65 297 P 13 22 55.6
baz=113,SNR=26
Q24A S 13 24 11.5
baz=113
HALT Halls 6.68 89 IAmb_Lg 13 24 51.2
comp=Z,654nm,0.9s
SCIA State Center 6.69 29 **Pn** **13 22 56.4 +0.4**
SCIA State Center 6.69 29 P 13 22 56.6
baz=212,SNR=8.3
GLAT Glass 6.70 86 IAmb_Lg 13 24 57.1
comp=Z,773nm,0.8s
S44A Carbondale 6.84 74 **Pn** **13 22 58.5 +0.4**
S44A IAmb_Lg 13 24 55.0
comp=Z,844nm,0.8s
S44A Carbondale 6.84 74 P **Pn** **13 22 57.9 -0.2**
baz=259,SNR=15
S44A Carbondale 6.84 74 P 13 22 57.9
baz=259,SNR=15

OXF Oxford 6.87 101 Pn **Pn** **13 22 57.1 -1.2**
OXF IAmb_Lg 13 25 09.3
comp=Z,386nm,0.9s
OXF Oxford 6.87 101 P 13 22 57.2
baz=286,SNR=14
SIUC Southern Illin 6.88 74 IAmb_Lg 13 24 54.2
comp=Z,699nm,0.8s
W45A Hickory Valley 6.90 96 Pn **Pn** **13 22 58.4 -0.4**
W45A IAmb_Lg 13 25 00.2
comp=Z,460nm,0.8s
Y45A Yeager Farm, C 6.96 107 Pn **Pn** **13 23 00.8 +1.1**
Y45A IAmb_Lg 13 25 11.7
comp=Z,338nm,1.0s
N41A Harden Midland 6.98 47 Pn **Pn** **13 23 00.9 +1.0**
735A Kenedy 7.25 182 IAmb_Lg 13 25 27.2
comp=Z,860nm,1.1s
P43A Skaggs, Pawnee 7.27 59 **Pn** **13 23 04.0 +0.1**
P43A Skaggs, Pawnee 7.27 59 P **Pn** **13 23 04.0 +0.1**
baz=244,SNR=15
P43A Skaggs, Pawnee 7.27 59 P 13 23 04.0
baz=244,SNR=15
ISCO Idaho Springs 7.33 302 Pn **Pn** **13 23 05.1 +0.1**
ISCO IAmb_Lg 13 25 14.1
comp=Z,436nm,0.8s
ISCO Idaho Springs 7.33 302 P **Pn** **13 23 05.1 +0.1**
baz=118,SNR=58
ISCO Idaho Springs 7.33 302 P 13 23 05.2
baz=118,SNR=96
ISCO Idaho Springs 7.33 302 P 13 23 05.1
baz=118,SNR=58
ANMO Albuquerque 7.34 263 Pn **Pn** **13 23 05.8 +0.8**
comp=Z,0.6nm,0.3s,baz=94,slow=14,SNR=17
ANMO Pg Pg 13 23 32.6 -5.2
comp=Z,7.8nm,0.3s,baz=77,slow=19,SNR=16
ANMO Lg Lg 13 25 04.1
comp=Z,25nm,0.3s,baz=107,slow=6.9,SNR=6.1
ANMO LR LR 13 25 54.7
comp=Z,49nm,20.4s,baz=54,slow=38
ANMO Albuquerque 7.34 263 **Pn** **13 23 06.2 +1.2**
ANMO Albuquerque 7.34 263 P 13 23 05.7
baz=78
Q44A Meyer Farm, Va 7.34 65 Pn **Pn** **13 23 05.7 +0.8**
Q44A Meyer Farm, Va 7.34 65 P **Pn** **13 23 05.7 +0.8**
baz=250,SNR=16
Q44A Meyer Farm, Va 7.34 65 P 13 23 05.7
baz=250,SNR=16
S22A 4UR Ranch, Cre 7.59 285 P 13 23 09.8
baz=100,SNR=16
ECSD EROS Data Cent 7.63 5 Pn **Pn** **13 23 07.7 -1.2**
ECSD IAmb_Lg 13 25 28.4
comp=Z,563nm,0.8s
ECSD EROS Data Cent 7.63 5 P **Pn** **13 23 07.7 -1.2**
baz=186,SNR=56
ECSD EROS Data Cent 7.63 5 P 13 23 07.6
baz=186,SNR=42
ECSD EROS Data Cent 7.63 5 P 13 23 07.7
baz=186,SNR=56
BNM Barren Site 7.67 258 Pn **Pn** **13 23 09.5 -0.2**
L40A Anrasa 7.71 38 Pn **Pn** **13 23 09.9 0.0**
PLAL Pickwick Lake 7.83 96 IAmb_Lg 13 25 26.1
comp=Z,365nm,1.2s
MNTX Cornudas Mount 7.85 238 Pn **Pn** **13 23 11.7 -0.2**
MNTX IAmb_Lg 13 25 48.1
comp=Z,366nm,1.0s
MNTX Cornudas Mount 7.85 238 P 13 23 11.8
baz=54,SNR=28
146A Union 7.85 114 Pn **Pn** **13 23 11.7 -0.2**
HDIL Hopedale 7.87 53 **Pn** **13 23 11.9 -0.1**
HDIL Hopedale 7.87 53 P 13 23 12.0
baz=238,SNR=53
833A Chaparral WMA, 7.93 192 P 13 23 14.1
baz=11
PHWY Pilot Hill 8.04 312 **Pn** **13 23 14.7 -0.1**
PHWY IAmb_Lg 13 25 40.0
comp=Z,558nm,0.9s
SMCO Snowmass 8.05 295 Pn **Pn** **13 23 15.5 +0.5**
N23A Red Feather La 8.11 308 P 13 23 16.4
baz=123,SNR=56
O44A Mansfield 8.22 58 IAmb_Lg 13 25 48.7
comp=Z,665nm,0.8s
Z47A Carrollton 8.36 108 IAmb_Lg 13 25 55.0
comp=Z,241nm,1.2s
SUSD Miller 8.37 353 **Pn** **13 23 18.8 -0.2**
SUSD Miller 8.37 353 P **Pn** **13 23 18.6 -0.5**
baz=172,SNR=11
SUSD Miller 8.37 353 P 13 23 18.4
baz=172,SNR=6.8
SUSD S 13 24 49.6
baz=172
SUSD Miller 8.37 353 P 13 23 18.6
baz=172,SNR=11
T47A Sharon Grove 8.47 81 Pn **Pn** **13 23 21.1 +0.7**
L42A Oliver, Polo 8.50 44 Pn **Pn** **13 23 20.7 0.0**
L42A IAmb_Lg 13 25 54.6
comp=Z,597nm,0.8s
L42A Oliver, Polo 8.50 44 P **Pn** **13 23 20.7 0.0**
baz=229,SNR=15
L42A Oliver, Polo 8.50 44 P 13 23 20.7
baz=229,SNR=15
TX31 Lajitas Ar. Si 8.50 219 Pn **Pn** **13 23 19.8 -1.0**
TX31 Lajitas Ar. Si 8.50 219 P **Pn** **13 23 19.4 -1.4**
baz=36,SNR=11
TX31 Lajitas Ar. Si 8.50 219 P 13 23 19.4
baz=36,SNR=11
TX32 Lajitas Array 8.50 219 Pn **Pn** **13 23 19.8 -1.1**
TXAR Lajitas Array 8.50 219 Pn **Pn** **13 23 19.6 -1.2**
comp=Z,2.2nm,0.3s,baz=40,slow=11,SNR=39
TXAR Lg Lg 13 25 40.1
comp=Z,24nm,0.3s,baz=45,slow=20,SNR=7.0
TXAR LR LR 13 26 14.9
comp=Z,73nm,19.9s,baz=0.0,slow=35
TXAR Lajitas Array 8.50 219 **Pn** **13 23 19.4 -1.4**
X48A Hartselle 8.77 98 IAmb_Lg 13 26 01.3
comp=Z,247nm,1.1s
JFWS Jewell Farm 8.83 38 Pn **Pn** **13 23 25.3 0.0**
JFWS IAmb_Lg 13 26 10.4
comp=Z,639nm,0.7s
JFWS Jewell Farm 8.83 38 P **Pn** **13 23 24.5 -0.7**
baz=222,SNR=19
JFWS Jewell Farm 8.83 38 P 13 23 25.3
baz=222,SNR=20
JFWS Jewell Farm 8.83 38 P 13 23 24.5
baz=222,SNR=19
MVCO Mesa Verde 8.85 280 P 13 23 27.9
baz=94
P46A Rosedale 8.91 64 **Pn** **13 23 27.0 +0.6**
CLTN Cedars of Leba 9.10 87 IAmb_Lg 13 26 11.0
comp=Z,218nm,1.0s
M44A Midewin, Midew 9.11 52 Pn **Pn** **13 23 28.9 -0.2**
121A Cookes Peak, D 9.17 250 IAmb_Lg 13 26 19.0
comp=Z,346nm,1.2s
121A Cookes Peak, D 9.17 250 P 13 23 29.6
baz=64
WCI Wyandotte Cave 9.24 74 Pn **Pn** **13 23 31.8 +0.9**
WCI IAmb_Lg 13 26 28.6
comp=Z,276nm,0.9s
WCI Wyandotte Cave 9.24 74 P 13 23 31.8
baz=260
LRAL Lakeview Retre 9.25 106 **Pn** **13 23 31.4 +0.4**
LRAL Lakeview Retre 9.25 106 P 13 23 31.4
baz=292,SNR=5.6
SFIN Lafayette 9.27 60 IAmb_Lg 13 26 10.2
comp=Z,497nm,0.8s
SFIN Lafayette 9.27 60 P 13 23 31.9
baz=246,SNR=10
PV11 David Mesa, Pa 9.27 287 IAmb_Lg 13 26 14.6
comp=Z,333nm,1.2s
BLO Bloomington 9.28 68 Pn **Pn** **13 23 30.7 -0.7**
RWWY Rawlins 9.34 309 Pn **Pn** **13 23 32.8 +0.3**
RWWY IAmb_Lg 13 26 27.6
comp=Z,336nm,0.8s
RSSD Black Hills 9.39 330 Pn **Pn** **13 23 33.8 +0.6**
RSSD IAmb_Lg 13 26 27.0
comp=Z,345nm,0.8s
RSSD Black Hills 9.39 330 P **Pn** **13 23 34.0 +0.8**
baz=146,SNR=17
RSSD Black Hills 9.39 330 P 13 23 33.9
baz=146
RSSD Black Hills 9.39 330 P 13 23 34.0
baz=146,SNR=17
I40A Norwalk 9.41 32 **Pn** **13 23 31.8 -1.5**
I40A IAmb_Lg 13 26 20.9
comp=Z,529nm,1.1s
Y49A Blount Mountai 9.43 101 IAmb_Lg 13 26 27.0
comp=Z,203nm,1.2s
SWET Sewanee 9.52 92 IAmb_Lg 13 26 21.1
comp=Z,249nm,1.2s

U49A Red Boiling Sp 9.53 84 IAmb_Lg 13 26 24.1
comp=Z,206nm,1.1s
L44A Lake County Fo 9.63 48 P 13 23 37.3
baz=234,SNR=6.8
L44A S 13 25 19.1
baz=234
F33A 5 Mile Ranch, 9.75 5 **Pn** **13 23 36.8 -1.1**
F33A IAmb_Lg 13 26 36.9
comp=Z,369nm,1.1s
SPMN Marine on St. 9.78 20 **Pn** **13 23 37.1 -1.3**
SPMN IAmb_Lg 13 26 39.6
comp=Z,250nm,0.8s
W18A Petrified Fore 9.95 268 IAmb_Lg 13 26 38.4
comp=Z,183nm,1.2s
I42A Draeger Farm, 10.21 38 P **Pn** **13 23 44.0 -0.2**
baz=223,SNR=6.9
I42A Draeger Farm, 10.21 38 P 13 23 44.0
baz=223,SNR=6.9
G40A Rib Lake 10.71 29 Pn **Pn** **13 23 50.0 -1.0**
P49A Miami Univ. Ec 10.72 68 **Pn** **13 23 50.1 -1.1**
P49A Miami Univ. Ec 10.72 68 P **Pn** **13 23 50.2 -1.0**
baz=256,SNR=7.8
P49A Miami Univ. Ec 10.72 68 P 13 23 50.1
baz=256,SNR=5.6
P49A Miami Univ. Ec 10.72 68 P 13 23 50.2
baz=256,SNR=7.8
V51A Loudon 10.72 88 **Pn** **13 23 51.5 +0.3**
R50A Paris 10.78 75 **Pn** **13 23 52.3 +0.2**
TKL Tuckaleechee C 11.21 88 Pn **Pn** **13 23 58.3 +0.5**
comp=Z,0.5nm,0.3s,baz=205,slow=9.0,SNR=5.9
TKL Lg Lg 13 26 59.2
comp=Z,2.3nm,0.3s,baz=19,slow=20,SNR=3.6
S51A Beattyville 11.30 78 Pn **Pn** **13 23 59.2 +0.1**
V52A Sevierville 11.33 87 Pn **Pn** **13 24 00.5 +0.9**
PD31 Pinedale Array 11.39 309 **Pn** **13 23 59.8 -0.7**
PDAR Pinedale Array 11.39 309 Pn **Pn** **13 24 00.1 -0.5**
comp=Z,2.0nm,0.3s,baz=126,slow=14,SNR=62
PDAR Pg 13 24 40.8
comp=Z,1.9nm,0.3s,baz=117,slow=13,SNR=4.3
PDAR Lg Lg 13 27 12.6
comp=Z,5.6nm,0.3s,baz=114,slow=36,SNR=2.1
PDAR LR LR 13 28 55.8
comp=Z,209nm,20.8s,baz=120,slow=40
PDAR Pinedale Array 11.39 309 **Pn** **13 23 59.1 -1.5**
BW06 Boulder Array 11.39 309 **Pn** **13 23 59.8 -0.7**
BW06 Boulder Array 11.39 309 P 13 23 59.6
baz=122,SNR=14
E38A The Farm, Brul 11.40 21 **Pn** **13 23 58.0 -2.5**
N49A Columbus Grove 11.53 61 **Pn** **13 24 00.5 -1.7**
Q51A Peebles 11.65 71 **Pn** **13 24 03.0 -1.1**
L48A N Adams 11.75 56 Pn **Pn** **13 24 04.2 -1.0**
MDND Maddock 11.81 353 S 13 26 07.6
baz=172
COWI Conover 11.81 30 **Pn** **13 24 04.5 -1.7**
F42A Maple Grove Fa 11.97 34 **Pn** **13 24 06.2 -2.0**
J47A Sunmer 12.11 50 **Pn** **13 24 09.9 -0.3**
ACSO Alum Creek Sta 12.19 66 **Pn** **13 24 09.2 -2.1**
ACSO Alum Creek Sta 12.19 66 P 13 24 09.4
baz=255,SNR=14
AGMN Agassiz Nation 12.23 5 **Pn** **13 24 08.6 -3.2**
AGMN Agassiz Nation 12.23 5 P 13 24 08.8
baz=186,SNR=16
AAM Ann Arbor 12.42 56 Pn **Pn** **13 24 12.9 -1.6**
AAM Ann Arbor 12.42 56 P 13 24 13.3
baz=245,SNR=10
Q52A Bidwell 12.47 72 **Pn** **13 24 14.3 -0.9**
LOHW Long Hollow 12.48 311 **Pn** **13 24 15.4 -0.1**
B35A Bob, Littlefor 12.55 12 Pn **Pn** **13 24 13.0 -3.2**
RLMT Red Lodge 12.62 319 P 13 24 16.9
baz=131,SNR=14
EYMN Ely 12.64 19 **Pn** **13 24 14.6 -2.8**
EYMN Ely 12.64 19 P 13 24 14.2
baz=203,SNR=11
EYMN S 13 26 31.3
baz=203
P52A Corning 12.69 69 P 13 24 17.4
baz=259,SNR=6.2
E43A Lone Tree Farm 12.96 35 **Pn** **13 24 17.9 -3.8**
Q53A Leroy 13.03 73 P 13 24 21.6
baz=263,SNR=8.0
S54A Dingess, Beckl 13.12 78 **Pn** **13 24 23.0 -1.0**
S54A Dingess, Beckl 13.12 78 P 13 24 23.4
baz=268,SNR=7.8
S54A S 13 26 41.2
baz=268
GLMI Grayling 13.13 45 **Pn** **13 24 21.3 -2.8**
GLMI Grayling 13.13 45 P 13 24 21.5
baz=233,SNR=8.2
DGMT Dagmar 13.27 340 Pn **Pn** **13 24 23.6 -2.4**
DGMT Dagmar 13.27 340 P 13 24 23.5
baz=156,SNR=11
BLA Blacksburg 13.81 80 P 13 24 32.5
baz=271
O54A Avella 14.12 68 **Pn** **13 24 34.2 -3.5**
ULM Lac du Bonnet 14.17 4 Pn **Pn** **13 24 34.1 -4.2**
comp=Z,1.1nm,0.3s,baz=176,slow=11,SNR=14
ULM Sn Sn 13 27 02.6 -13
comp=Z,2.7nm,0.3s,baz=260,slow=22,SNR=5.3
ULM Lg Lg 13 28 34.4
comp=Z,1.9nm,0.3s,baz=286,slow=20,SNR=4.6
ULM LR LR 13 30 07.7
comp=Z,437nm,18.2s,baz=158,slow=38
ELK Elko 14.59 294 Pn **Pn** **13 24 43.2 -1.2**
comp=Z,0.0nm,0.3s,baz=105,slow=19,SNR=2.3
ELK LR LR 13 30 22.8
comp=Z,118nm,19.1s,baz=100,slow=38
R56A Bull Pasture M 14.65 76 P 13 24 42.7
baz=267
I51A Listowel 14.81 54 P 13 24 43.1
baz=244,SNR=5.3
HLID Hailey 14.90 305 **Pn** **13 24 48.2 -0.3**
EGMT Eagleton 14.91 327 P 13 24 47.5
baz=138,SNR=7.9
M54A Oil Creek Stat 14.95 64 P 13 24 45.8
baz=255
M56A Emporium 16.02 65 P 13 24 58.7
baz=257
LPIG La Paz 16.26 226 LR LR 13 31 39.0
comp=Z,115nm,18.7s,baz=36,slow=38
SADO Sadowa 16.45 53 Pn **Pn** **13 25 08.4 -0.1**
comp=Z,0.5nm,0.3s,baz=269,slow=14,SNR=5.8
SADO Sn Sn 13 28 00.4 -11
comp=Z,1.1nm,0.3s,baz=287,slow=12,SNR=2.2
SADO Lg Lg 13 29 44.9
comp=Z,3.1nm,0.3s,baz=340,slow=19,SNR=6.9
SADO LR LR 13 31 11.0
comp=Z,42nm,19.2s,baz=178,slow=36
SADO Sadowa 16.45 53 IAmb IAmb 13 25 25.9
comp=Z,25nm,0.9s
NVAR Mina Array Bea 16.66 284 Pn **Pn** **13 25 12.8 +1.3**
comp=Z,0.3nm,0.3s,baz=92,slow=12,SNR=15
NVAR LR LR 13 31 58.8
comp=Z,137nm,18.1s,baz=174,slow=39
NVAR Mina Array Bea 16.66 284 Pn **Pn** **13 25 11.4 -0.1**
H53A Bobcaygeon 16.73 54 P 13 25 08.2
baz=246
RYN Ryan 16.84 285 P **P** **13 25 15.5 -0.3**
BMO Blue Mountains 17.32 306 P **P** **13 25 21.3 +0.2**
TEIG Tepich 17.82 150 P **P** **13 25 27.9 +1.4**
comp=Z,0.5nm,0.3s,baz=1.5,slow=9.7,SNR=4.5
TEIG LR LR 13 34 05.3
comp=Z,44nm,18.6s,baz=318,slow=43
K58A Earlville 18.16 62 P 13 25 27.2
baz=256
K59A Cooperstown 18.73 62 P 13 25 34.4
baz=257
NEW Newport 18.83 316 P **P** **13 25 37.9 +0.4**
comp=Z,0.3nm,0.3s,baz=126,slow=11,SNR=7.0
NEW Newport 18.83 316 P 13 25 38.6
baz=123
CMIG Matias Romero 19.11 172 P **Pn** **13 25 42.6 +1.1**
comp=Z,0.3nm,0.3s,baz=358,slow=9.6,SNR=3.6
CMIG LR LR 13 34 41.9
comp=Z,69nm,18.9s,baz=3.5,slow=42
O03E Paynes Creek 19.47 290 P 13 25 46.6
baz=95
J05D Fort Rock, OR 19.52 299 P 13 25 46.8
baz=104,SNR=7.4
H58A Gabriels 19.63 58 P 13 25 45.4
baz=253
M04C Macdoel 19.67 294 P 13 25 48.9
baz=99,SNR=19
D55A Sainte-Anne-du 19.73 50 P 13 25 47.4
baz=244
E56A St. Veronique 19.80 51 P 13 25 48.7
baz=246

MATQ	**Matagami**	**19.88**	**41**	P			13 25 49.1	
	baz=234,SNR=5.3							
WDC	**Whiskeytown Da**	**20.05**	**290**	P		**P**	**13 25 50.1**	**-0.9**
WDC				IAmb		IAmb	13 25 52.2	
	comp=Z,8.7nm,0.8s							
L04D	**Klamath Falls**	**20.08**	**295**	P			13 25 52.3	
	baz=100,SNR=5.7							
D56A	**ZEC Mazanza, M**	**20.18**	**50**	P			13 25 52.3	
	baz=245							
N02D	**Trinity Center**	**20.21**	**291**	P			13 25 52.8	
	baz=96,SNR=13							
L61B	**Northampton**	**20.24**	**64**	P			13 25 54.4	
	baz=260							
YBH	**Yreka Blue Hor**	**20.31**	**294**	P		**P**	**13 25 53.5**	**-0.3**
	comp=Z,40nm,1.1s,baz=114,slow=4.1,SNR=17							
YBH				LR		LR	13 33 11.1	
	comp=Z,73nm,21.5s,baz=95,slow=35							
M02C	**Callahan**	**20.37**	**293**	P			13 25 54.0	
	baz=97							
E58A	**La Victoria**	**20.86**	**53**	P			13 26 01.1	
	baz=249							
G60A	**Masonville**	**21.09**	**57**	P			13 26 03.0	
	baz=254							
D58A	**Chemin du LacG**	**21.38**	**52**	P			13 26 04.8	
	baz=248,SNR=5.5							
APG	**El Apazote**	**21.98**	**161**	P		**P**	**13 26 12.3**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=356,slow=12,SNR=4.2							
APG				LR		LR	13 36 43.5	
	comp=Z,40nm,21.8s,baz=358,slow=42							
FCC	**Fort Churchill**	**22.76**	**5**	P		**P**	**13 26 20.9**	**+0.9**
FCC				IAmb		IAmb	13 26 23.7	
	comp=Z,14nm,1.1s							
E63A	**Oxbow**	**24.08**	**56**	P			13 26 33.0	
	baz=255							
BBB	**Bella Bella**	**26.89**	**316**	LR		LR	13 38 36.8	
	comp=Z,179nm,18.1s,baz=72,slow=39							
JTS	**Las Juntas de**	**28.16**	**153**	LR		LR	13 40 46.7	
	comp=Z,50nm,19.4s,baz=47,slow=42							
YKA	**Yellowknife Ar**	**28.44**	**343**	P		**P**	**13 27 12.4**	**0.0**
	comp=Z,1.6nm,0.6s,baz=143,slow=9.0,SNR=30							
YKA				LR		LR	13 39 03.1	
	comp=Z,166nm,19.2s,baz=0.0,slow=38							
DR12	**Loma Pena Alta**	**30.24**	**117**	P		**P**	**13 27 30.6**	**+1.7**
DLBC	**Dease Lake**	**30.84**	**327**	P		**P**	**13 27 35.6**	**+1.7**
	comp=Z,3.8nm,0.6s,baz=134,slow=7.1,SNR=18							
DLBC				LR		LR	13 40 02.2	
	comp=Z,120nm,18.1s,baz=108,slow=36							
FRB	**Frobisher Bay**	**32.80**	**23**	P		**P**	**13 27 50.0**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=217,slow=10,SNR=7.5							
C36M	**Paulatuk**	**36.31**	**344**	P		**P**	**13 28 20.4**	**-0.7**
C36M				IAmb		IAmb	13 28 22.6	
	comp=Z,5.2nm,1.3s							
ROSC	**El Rosal**	**37.78**	**140**	LR		LR	13 49 25.6	
	comp=Z,23nm,18.6s,baz=46,slow=45							
INK	**Inuvik**	**37.95**	**339**	P		**P**	**13 28 34.5**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=110,slow=8.2,SNR=9.8							
L27K	**Beaver Creek,**	**38.12**	**329**	P		**P**	**13 28 36.9**	**+0.2**
L27K	**Beaver Creek,**	**38.12**	**329**	P			13 28 37.9	
	baz=114							
EGAK	**Eagle**	**38.59**	**332**	P		**P**	**13 28 41.3**	**+0.8**
EGAK	**Eagle**	**38.59**	**332**	P			13 28 41.2	
	baz=116,SNR=12							
K27K	**Chicken**	**38.62**	**330**	P			13 28 42.1	
	baz=115							
RES	**Resolute Bay**	**38.67**	**1**	P		**P**	**13 28 40.5**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=190,slow=13,SNR=5.6							
RES				PcP		**PcP**	**13 30 52.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=212,slow=17,SNR=5.4							
WAT6	**Susitna Watana**	**40.50**	**327**	P			13 28 57.9	
	baz=107							
SML	**Sawmill**	**40.55**	**326**	P			13 28 58.9	
	baz=105							
PRP	**Porcupine Dome**	**40.58**	**332**	P			13 28 58.4	
	baz=112							
HDA	**Harding Lake**	**40.74**	**330**	P			13 28 59.6	
	baz=110							
HDA				P			13 28 59.6	
	baz=110							
IL31		**40.84**	**330**	P		**P**	**13 29 00.2**	**+1.0**
ILAR	**Eielson Array**	**40.84**	**330**	P		**P**	**13 29 00.3**	**+1.0**
	comp=Z,8.4nm,0.8s,baz=109,slow=7.2,SNR=76							
ILAR				PcP		**PcP**	**13 31 00.7**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=125,slow=0.8,SNR=5.2							
ILAR				LR		LR	13 46 33.1	
	comp=Z,71nm,18.3s,baz=128,slow=37							
WAT2	**Susitna Watana**	**40.98**	**327**	P			13 29 02.4	
	baz=106,SNR=5.6							
CCB	**Clear Creek Bu**	**41.17**	**330**	P		**P**	**13 29 03.2**	**+1.2**
RND	**Reindeer**	**41.23**	**328**	P		**P**	**13 29 04.6**	**+2.0**
RND				IAmb		IAmb	13 29 09.3	
	comp=Z,7.9nm,1.0s							
WRH	**Wood River Hil**	**41.23**	**330**	P		**P**	**13 29 03.7**	**+1.2**
WRH				IAmb		IAmb	13 29 04.3	
	comp=Z,4.8nm,0.9s							
MDM	**Murphy Dome**	**41.44**	**330**	P		**P**	**13 29 05.3**	**+1.1**
MDM				IAmb		IAmb	13 29 07.4	
	comp=Z,8.3nm,1.2s							
TRF	**Thorofare Moun**	**41.86**	**328**	P			13 29 09.4	
	baz=105,SNR=5.4							
I23K	**Minto, Yukon-K**	**41.96**	**330**	P			13 29 10.0	
	baz=108							
BPAW	**Bear Paw Mtn.**	**42.33**	**328**	P			13 29 12.6	
	baz=105							
MLY	**Manley**	**42.48**	**330**	P			13 29 13.8	
	baz=106,SNR=5.7							
PPLA	**Purkeypile**	**42.56**	**326**	P			13 29 14.5	
	baz=103							
TOLK	**Toolik Lake Re**	**43.22**	**335**	P			13 29 19.8	
	baz=111,SNR=8.7							
NEEM	**North Greenlan**	**46.00**	**13**	*i* P		**P**	**13 29 42.2**	**+1.1**
NEEM				IAmb		IAmb	13 29 44.8	
	comp=Z,5.0nm,0.8s							
A21K	**Barrow**	**46.38**	**338**	P			13 29 44.4	
	baz=106							
SUMG	**Summit**	**46.77**	**21**	*i* P		**P**	**13 29 47.8**	**+0.4**
SUMG				IAmb		IAmb	13 29 48.7	
	comp=Z,10nm,1.1s							
DAG	**Danmarks Havn**	**52.62**	**17**	*i* P		**P**	**13 30 30.8**	**-0.5**
DAG				IAmb		IAmb	13 30 31.7	
	comp=Z,2.8nm,0.9s							
LPAZ	**La Paz**	**59.10**	**147**	P		**P**	**13 31 18.3**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=260,slow=2.4,SNR=2.7							
EKA	**Eskdalemuir Ar**	**63.51**	**40**	P		**P**	**13 31 47.5**	**-0.4**
	comp=Z,6.1nm,0.6s,baz=290,slow=6.7,SNR=36							
SEY	**Seymchan**	**66.73**	**332**	P		**P**	**13 32 08.2**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=34,slow=7.3,SNR=2.3							
ARCES	**ARCESS Array B**	**66.79**	**19**	P		**P**	**13 32 08.9**	**-0.1**
	comp=Z,7.0nm,1.0s,baz=316,slow=5.8,SNR=11							
ARCES				LR		LR	14 00 21.8	
	comp=Z,61nm,21.9s,baz=330,slow=35							
PCAS	**Casmilo, Conde**	**67.28**	**56**	*eP*		**P**	**13 32 13.9**	**+1.3**
NOA	**NORSAR Array B**	**67.30**	**30**	P		**P**	**13 32 12.3**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=312,slow=5.4,SNR=3.7							
NOA				LR		LR	14 00 34.4	
	comp=Z,33nm,19.6s,baz=295,slow=35							
PSBE	**So Bento**	**67.33**	**57**	*eP*		**P**	**13 32 13.6**	**+0.6**
MVO	**Moncorvo**	**67.72**	**55**	*eP*		**P**	**13 32 16.2**	**+0.7**
PMTG	**Montargil**	**67.94**	**57**	*eP*		**P**	**13 32 18.3**	**+1.5**
PCBR	**Castelo Branco**	**68.07**	**56**	*eP*		**P**	**13 32 18.3**	**+0.7**
PNCL	**Nicolau / Gran**	**68.20**	**58**	*eP*		**P**	**13 32 19.1**	**+0.7**
PTEO	**Sao Teotonio**	**68.34**	**59**	*eP*		**P**	**13 32 21.8**	**+2.5**
MORF	**Marmelete**	**68.51**	**59**	*eP*		**P**	**13 32 20.8**	**+0.3**
MESJ	**Messejana**	**68.54**	**58**	*eP*		**P**	**13 32 22.5**	**+1.9**
PCVE	**Castro Verde**	**68.77**	**58**	*eP*		**P**	**13 32 22.8**	**+0.8**
PBAR	**Barrancos**	**69.19**	**57**	*eP*		**P**	**13 32 21.6**	**-3.0**
BDFB	**Brasilia**	**69.59**	**129**	P		**P**	**13 32 28.4**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=353,slow=8.1,SNR=3.1							
ESDC	**Sonseca Array**	**70.49**	**55**	P		**P**	**13 32 32.8**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=305,slow=7.7,SNR=11							
FINES	**FINESS Array B**	**72.59**	**25**	P		**P**	**13 32 45.0**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=301,slow=4.4,SNR=15							
FINES				LR		LR	14 04 04.7	
	comp=Z,71nm,18.2s,baz=356,slow=35							
CPUP	**Villa Florida**	**72.81**	**143**	P		**P**	**13 32 46.5**	**0.0**
	comp=Z,2.7nm,0.9s,baz=334,slow=7.8,SNR=4.6							
CLL	**Collm**	**73.84**	**38**	*eP*		**P**	**13 32 53.0**	**+0.6**
NRIK	**Noril'sk**	**74.78**	**358**	P		**P**	**13 32 57.9**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=80,slow=6.1,SNR=2.4							
DAVOX	**Davos/Dischmat**	**74.96**	**43**	P		**P**	**13 33 00.5**	**+1.2**
	comp=Z,5.3nm,0.9s,baz=315,slow=11,SNR=8.7							
GERES	**GERESS Array B**	**75.72**	**39**	P		**P**	**13 33 04.3**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=320,slow=5.6,SNR=7.4							
OBKA	**Obir**	**77.65**	**41**	*i* P		**P**	**13 33 15.1**	**+0.7**
	comp=Z,5.7nm,0.8s							
ARSA	**Arzberg**	**77.68**	**40**	*eP*		**P**	**13 33 15.3**	**+0.7**
	comp=Z,1.8nm,0.6s							
SOKA	**Soboth**	**77.80**	**41**	*i* P		**P**	**13 33 15.9**	**+0.6**
	comp=Z,2.6nm,0.6s							
KEST	**Kesra**	**81.40**	**52**	P		**P**	**13 33 34.3**	**-0.7**
	comp=Z,4.9nm,0.9s,baz=291,slow=8.6,SNR=3.1							
AKASG	**Malin Array Be**	**81.68**	**31**	P		**P**	**13 33 36.2**	**0.0**
	comp=Z,1.3nm,0.4s,baz=314,slow=4.4							
MLR	**Muntele Rosu**	**84.10**	**36**	LR		LR	14 10 51.1	
	comp=Z,17nm,18.2s,baz=190,slow=35							
USRK	**Usuriysk Ar.**	**88.27**	**327**	P		**P**	**13 34 10.3**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=11,slow=1.5,SNR=4.4							
USRK				LR		LR	14 16 44.8	
	comp=Z,31nm,18.9s,baz=169,slow=38							
DBIC	**Dimbokro**	**88.30**	**83**	P		**P**	**13 34 08.5**	**-1.5**
	comp=Z,5.7nm,0.9s,baz=280,slow=1.9,SNR=4.6							
TORD	**Torodi Ar. Bea**	**89.68**	**74**	P		**P**	**13 34 15.8**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=299,slow=5.1,SNR=7.5							
ZALV	**Zalesovo Beam**	**90.27**	**359**	P		**P**	**13 34 18.9**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=358,slow=4.9,SNR=14							
BVAR	**Borovoye Array**	**90.60**	**7**	P		**P**	**13 34 20.3**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=268,slow=8.9,SNR=6.1							
MJAR	**Matsushiro Arr**	**91.07**	**318**	P		**P**	**13 34 23.2**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=62,slow=4.3,SNR=3.6							
AKTO	**Aktyubinsk**	**91.16**	**15**	LR		LR	14 18 42.6	
	comp=Z,39nm,18.2s,baz=342,slow=38							
KBZ	**Khabaz**	**92.77**	**28**	LR		LR	14 15 44.8	
	comp=Z,36nm,19.9s,baz=322,slow=35							
KSRS	**Korea Array**	**95.52**	**325**	LR		LR	14 22 16.1	
	comp=Z,9.0nm,19.5s,baz=5.0,slow=38							
MKAR	**Makanchi Array**	**97.45**	**0**	P		**P**	**13 34 51.1**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=5.2,slow=4.0,SNR=4.4							
HHC	**Hu-ho-hao-te**	**98.86**	**338**	*eP*		**P**	**13 34 57.7**	**-0.6**
HHC				pmax		pmax		
	comp=Z,10.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,82nm,6.0s							
LSZ	**Lusaka**	**127.61**	**81**	PKP		**PKiKP**	**13 40 24.6**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=315,slow=2.9,SNR=1.8							
WRA	**Warramunga Arr**	**131.98**	**275**	PKP		**PKPdf**	**13 40 32.1**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=60,slow=2.1,SNR=8.4							
ASAR	**Alice Springs**	**134.16**	**271**	PKP		**PKPdf**	**13 40 35.4**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=69,slow=2.1,SNR=21							
MAW	**Mawson**	**146.57**	**167**	PKPbc		**PKPbc**	**13 40 58.2**	**-0.2**
	comp=Z,9.7nm,0.9s,baz=213,slow=4.0,SNR=12							

*NEIC **04** 13:31:52.4±0.8, 19°.44N±0°.03×66°.08W±0°.03, h28km±11km, Error ellipse: s-maj=5.7km s-min=2.0km az=46.0*
*RSPR **04** 13:31:52.9, 19°.50N×66°.07W, h54km±12km, MD3.4/7*
ISC 04 13:31:50.7±1.9, 19°.43N±0°.09×66°.07W±0°.05, h14km, n33, σ0s45/34, 5C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.04**	**205**	↑*eP*		**Pg**	**13 32 11.4**	**+0.5**
EMPR	**Esperanza - Ma**	**1.04**	**205**	*eS*		**Sg**	**13 32 25.1**	**+0.5**
EMPR	**Esperanza - Ma**	**1.04**	**205**			**Pg**	**13 32 11.4**	**+0.5**
EMPR						**Sg**	**13 32 25.1**	**+0.5**
EMPR	**Esperanza - Ma**	**1.04**	**205**	IAML			13 32 40.8	
	comp=N,752nm,0.8s							
GCPR	**Guaynabo City**	**1.12**	**181**	↓*eP*		**Pg**	**13 32 12.1**	**-0.2**
GCPR	**Guaynabo City**	**1.12**	**181**	*eS*		**Sn**	**13 32 27.5**	**+0.4**
GCPR	**Guaynabo City**	**1.12**	**181**			**Pg**	**13 32 12.1**	**-0.2**
GCPR						**Sn**	**13 32 27.5**	**+0.4**
GCPR	**Guaynabo City**	**1.12**	**181**	IAML			13 32 35.8	
	comp=E,337nm,1.1s							
CBYP	**Canovanas**	**1.17**	**170**	↑*eP*		**Pg**	**13 32 13.0**	**-0.3**
CBYP	**Canovanas**	**1.17**	**170**	*eS*		**Sb**	**13 32 28.2**	**+0.4**
CBYP	**Canovanas**	**1.17**	**170**			**Pg**	**13 32 13.0**	**-0.3**
CBYP						**Sb**	**13 32 28.4**	**+0.4**
CBYP	**Canovanas**	**1.17**	**170**	IAML			13 32 35.6	
	comp=E,731nm,0.2s							
CBYP				IAML			13 32 36.2	
	comp=N,970nm,0.2s							
AOPR	**Arecibo Observ**	**1.26**	**211**	↓*eP*		**Pb**	**13 32 13.9**	**-0.4**
AOPR	**Arecibo Observ**	**1.26**	**211**	*eS*		**Sn**	**13 32 30.9**	**+0.2**
AOPR	**Arecibo Observ**	**1.26**	**211**			**Pb**	**13 32 13.9**	**-0.4**
AOPR						**Sn**	**13 32 30.9**	**+0.2**
SJG	**San Juan**	**1.31**	**183**			**Pb**	**13 32 15.2**	**-0.1**
SJG				IAML			13 32 35.6	
	comp=N,377nm,0.5s							
SJG				IAML			13 32 39.6	
	comp=N,466nm,0.7s							
CUPR	**Culebra, Puert**	**1.34**	**146**	↑*eP*		**Pn**	**13 32 15.1**	**0.0**
CUPR	**Culebra, Puert**	**1.34**	**146**	*eS*		**Sn**	**13 32 32.9**	**+0.2**
CUPR	**Culebra, Puert**	**1.34**	**146**			**Pb**	**13 32 15.2**	**-0.4**
CUPR	**Culebra, Puert**	**1.34**	**146**			**Sn**	**13 32 32.9**	**+0.2**
AGPR	**Aguadilla, PR**	**1.38**	**226**	↑*eP*		**Pb**	**13 32 15.8**	**-0.5**
AGPR	**Aguadilla, PR**	**1.38**	**226**	*eS*		**Sn**	**13 32 32.9**	**-0.7**
AGPR	**Aguadilla, PR**	**1.38**	**226**			**Pb**	**13 32 15.8**	**-0.5**
AGPR						**Sn**	**13 32 32.9**	**-0.7**
AGPR	**Aguadilla, PR**	**1.38**	**226**	IAML			13 32 42.2	
	comp=E,250nm,0.8s							
AGPR				IAML			13 32 56.9	
	comp=N,236nm,1.0s							
PDPR	**Patillas Dam,**	**1.41**	**178**			**Pb**	**13 32 16.7**	**0.0**
PDPR				IAML			13 32 39.8	
	comp=E,312nm,0.6s							
OBIP	**Obispado Ponce**	**1.47**	**200**	↑*eP*		**Pn**	**13 32 16.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.47**	**200**	*eS*		**Sn**	**13 32 36.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.47**	**200**			**Pn**	**13 32 16.6**	**-0.3**
OBIP						**Sn**	**13 32 36.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.47**	**200**	IAML			13 32 42.3	
	comp=E,294nm,0.6s							
OBIP				IAML			13 32 42.3	
	comp=N,297nm,1.1s							
MPR	**Mayaguez**	**1.58**	**220**			**Pn**	**13 32 18.1**	**-0.2**
MPR				IAML			13 32 47.2	
	comp=N,227nm,0.7s							
ICMP	**Isla Caja de M**	**1.60**	**196**			**Pb**	**13 32 19.2**	**-0.8**
ICMP				IAML			13 32 49.3	
	comp=N,235nm,0.7s							
ICMP				IAML			13 32 56.1	
	comp=E,267nm,0.8s							
MLPR	**Magueyes Islan**	**1.72**	**213**	Pn		**Pb**	**13 32 21.2**	**-1.0**
SDDR	**Presa de Saban**	**4.95**	**266**			**Pn**	**13 33 05.6**	**+0.7**

*NNC **04** 13:39:17.0±0.3, 50°.03N×78°.74E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=3.8km s-min=1.7km az=67.0, Suspected Mining explosion.*
*IDC **04** 13:39:17.4±0.7, 50°.07N×78°.69E, h0km, mb1 3.1/4, mb1mx3.0/56, mbtmp3.1/4, ML2.9/4, Error ellipse: s-maj=7.8km s-min=5.4km az=57.0*
ISC 04 13:39:17.1±0.7, 49°.98N±0°.03×78°.64E±0°.04, h0km, n30, σ1s51/45, 21C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.61**	**353**	↑P		**Pg**	**13 39 28.4**	**-0.5**
KUR07				↑S		**Sg**	**13 39 36.9**	**+0.1**
KUR06	**Kurchatov Arra**	**0.63**	**354**	↑P		**Pg**	**13 39 28.5**	**-0.8**
KUR06				↓S		**Sg**	**13 39 37.1**	**-0.3**
KUR14	**Kurchatov Arra**	**0.64**	**358**	↑P		**Pg**	**13 39 28.5**	**-0.9**
KUR14				↑S		**Sg**	**13 39 37.2**	**-0.5**
KUR15	**Kurchatov Arra**	**0.65**	**356**	↓P		**Pg**	**13 39 28.7**	**-0.8**
KUR15				↓S		**Sg**	**13 39 37.5**	**-0.4**
KURBB	**Kurchatov Arra**	**0.65**	**354**	Pg		**Pg**	**13 39 27.0**	**-2.6**
	3.9nm,0.3s,baz=165,slow=19,SNR=96							
KURBB				Lg		Lg	13 39 37.1	
	6.0nm,0.3s,baz=169,slow=32,SNR=17							
KURBB	**Kurchatov Arra**	**0.65**	**354**	↑P		**Pg**	**13 39 28.8**	**-0.8**
	42nm,0.3s							
KURBB				↑S		**Sg**	**13 39 37.8**	**-0.3**
	177nm,0.5s							
KUR16	**Kurchatov Arra**	**0.66**	**352**	↑P		**Pg**	**13 39 28.9**	**-0.9**
KUR16				↓S		**Sg**	**13 39 37.7**	**-0.6**
KUR17	**Kurchatov Arra**	**0.67**	**351**	↑P		**Pg**	**13 39 28.9**	**-1.0**
KUR17				↑S		**Sg**	**13 39 38.3**	**-0.2**
KUR05	**Kurchatov Arra**	**0.67**	**355**	↑P		**Pg**	**13 39 29.1**	**-0.9**
KUR05				↑S		**Sg**	**13 39 38.2**	**-0.5**
SEM	**Semipalatinsk**	**1.12**	**67**	P		**Pg**	**13 39 36.8**	**-1.8**
	6.6nm,0.1s							
SEM				S		**Sg**	**13 39 50.6**	**-2.6**
	98nm,0.3s							
BRZS	**Berezniki**	**3.85**	**272**	Pg		**Pg**	**13 40 27.6**	**-3.1**
	3.3nm,0.4s							
BRZS				Lg		Lg	13 41 18.6	
	13nm,0.7s							
MAKZ	**Makanchi**	**3.87**	**144**	↑Pn		**Pn**	**13 40 18.3**	**+0.4**
	0.7nm,0.5s							
MAKZ				↑Pg		**Pb**	**13 40 26.5**	**+0.3**
	5.4nm,0.6s							
MAKZ				↓Lg		Lg	13 41 20.0	
	32nm,0.7s							
MK31	**Makanchi Array**	**4.01**	**141**	↑Pn		**Pn**	**13 40 20.3**	**+0.5**
	0.3nm,0.2s,baz=323,slow=10,SNR=88							
MK31				↑Pg		**Pb**	**13 40 29.0**	**+0.4**
	2.7nm,0.4s,baz=330,slow=14,SNR=29							
MK31				↑Lg		Lg	13 41 23.9	
	31nm,0.7s,baz=329,slow=24,SNR=20							
MKAR	**Makanchi Array**	**4.01**	**141**	Pn		**Pn**	**13 40 20.9**	**+1.2**
	0.6nm,0.3s,baz=322,slow=10,SNR=124							
MKAR				Pg		**Pb**	**13 40 29.0**	**+0.4**
	1.7nm,0.3s,baz=322,slow=15,SNR=25							
MKAR				Sn		**Sn**	**13 41 10.8**	**+3.3**
	1.0nm,0.3s,baz=332,slow=20,SNR=9.9							
MKAR				Lg		Lg	13 41 25.0	
	1.7nm,0.3s,baz=330,slow=28,SNR=17							
ZSN	**Zaisan**	**4.84**	**119**	Pg		**Pb**	**13 40 43.5**	**+0.8**
	3.3nm,0.6s							
ZSN				Lg		Lg	13 41 44.1	
	26nm,0.6s							
TDK	**Taldyqorghan**	**4.98**	**182**	Pg		**Pg**	**13 40 49.1**	**-3.3**
	26nm,0.4s							
TDK				Lg		Lg	13 41 55.4	
	28nm,0.7s							
ZAA0	**Zalesovo Array**	**5.52**	**41**	↓Pn		**Pn**	**13 40 40.6**	**+0.1**
	0.5nm,0.6s							
ZAA0				↑Lg		Lg	13 42 08.7	
	1.5nm,0.7s							
ZALV	**Zalesovo Beam**	**5.52**	**41**	Pn		**Pn**	**13 40 40.8**	**+0.3**
	1.2nm,0.3s,baz=229,slow=15,SNR=17							
ZALV				Sn		**Sn**	**13 41 45.8**	**+1.3**
	0.3nm,0.3s,baz=237,slow=19,SNR=2.1							
ZALV				Lg		Lg	13 42 11.4	
	0.6nm,0.3s,baz=224,slow=25,SNR=6.6							
I46RU	**ZALESOVO INFRA**	**5.52**	**41**	*i*			14 11 30.0	
	baz=226,slow=340,SNR=4.9							
DJR	**Jarkent**	**5.70**	**172**	Pg		**Pg**	**13 41 04.4**	**-1.9**
	2.0nm,0.4s							
DJR				Lg		Lg	13 42 21.1	
	20nm,0.6s							
ARXS	**Arharly**	**5.79**	**186**	Pg		**Pg**	**13 41 07.2**	**-0.9**
	3.2nm,0.5s							
ARXS				Lg		Lg	13 42 26.4	
	46nm,0.8s							
MNBS	**Baschi**	**5.90**	**182**	Pg		**Pg**	**13 41 08.4**	**-1.8**
	3.4nm,0.3s							
MNBS				Lg		Lg	13 42 27.6	
	62nm,0.8s							
BVAR	**Borovoye Array**	**5.99**	**304**	Pn		**Pn**	**13 40 48.1**	**+1.2**
	0.2nm,0.3s,baz=18,slow=31,SNR=2.8							
BVAR				Pg		**Pb**	**13 40 59.4**	**-2.9**
	0.4nm,0.3s,baz=303,slow=40,SNR=3.6							
BVAR				Sn		**Sn**	**13 41 55.5**	**-0.6**
	0.8nm,0.3s,baz=125,slow=20,SNR=6.5							
BVAR				Lg		Lg	13 42 24.2	
	0.5nm,0.3s,baz=124,slow=35,SNR=2.4							
BRVK	**Borovoye**	**6.06**	**304**	↑Pn		**Pn**	**13 40 46.8**	**-1.1**
	1.0nm,0.7s							
BRVK				↑Pg		**Pb**	**13 41 05.9**	**+2.4**
	2.9nm,1.0s							
BRVK				↓Sn		**Sn**	**13 41 58.3**	**+0.4**
	4.1nm,0.7s							
BRVK				↑Lg		Lg	13 42 29.5	
	2.6nm,0.5s							
KUU	**Kurty**	**6.28**	**195**	Pg		**Pg**	**13 41 16.0**	**-1.5**
	1.8nm,0.3s							
KUU				Lg		Lg	13 42 40.6	
	20nm,0.8s							
PDGK	**Podgornoye**	**6.67**	**175**	Lg		Lg	13 42 49.8	
	16nm,0.7s							
SATY	**Saty**	**6.92**	**181**	Pg		**Pg**	**13 41 29.5**	**-0.1**
	1.4nm,0.5s							
SATY				Lg		Lg	13 43 03.7	
	14nm,0.8s							
TKM2	**Tokmak 2**	**7.36**	**198**	↓Lg		Lg	13 43 12.2	
	5.1nm,0.7s							
AAK	**Ala-Archa**	**7.88**	**203**	Pn		**Pn**	**13 41 12.8**	**-0.2**
	0.3nm,0.3s,baz=46,sl

	baz=41							
PHP				S		Sg	14 18 27.5	+0.2
	baz=41							
TIR	Tirane	0.34	238	*e*Pg		Pg	14 18 26.2	0.0
TIR				*e*Sg		Sb	14 18 32.6	-0.2
TIR	Tirane	0.34	238	P		Pg	14 18 26.6	+0.4
	baz=239							
TIR				S		Sb	14 18 32.5	-0.3
	baz=239							
TIR	Tirane	0.34	238	*i* Pg		Pg	14 18 26.5	+0.3
PUK	Puka	0.58	333	P		Pg	14 18 30.4	-0.3
	baz=332							
PUK				S		Sb	14 18 39.3	-0.6
	baz=332							
OHR	Ohrid	0.59	135	*i* Pg		Pb	14 18 31.3	-0.5
OHR				*i* Sg		Sb	14 18 38.4	-1.6
OHR				*e*Lg		Lg	14 18 39.5	
	comp=N,158nm,0.5s							
PRZK	Prizren	0.78	29	*i* Pg		Pg	14 18 33.6	-1.0
PRZK				*i* Sg		Sb	14 18 45.4	-0.3
BCI	Bajram Curri	0.85	351	P		Pg	14 18 35.3	-0.6
	baz=350							
BCI				S		Sb	14 18 47.7	+0.1
	baz=350							
ULC	Ulcinj	0.87	301	*i* Pg		Pg	14 18 35.5	-0.7
ZATK	Zatriq	0.96	17	*i* Pg		Pg	14 18 36.7	-1.3
SKO	Skopje	1.00	63	*i* Pg		Pn	14 18 38.4	-1.0
SKO				*i* Sg		Sb	14 18 50.9	-0.9
SKO				*e*Lg		Lg	14 18 51.7	
	comp=N,28nm,0.4s							
FNA	Florina	1.13	131	*i* Pg		Pb	14 18 39.5	-1.5
FNA				*i* Sg		Sn	14 18 55.9	-0.8
PDG	Podgorica	1.17	321	*e*Pg		Pb	14 18 40.7	-0.8
PDG				*e*Sg		Sn	14 18 58.7	+1.2
PDG	Podgorica	1.17	321	*i* Pg		Pb	14 18 41.1	-0.4
PDG				*i* Sg		Sn	14 18 59.4	+1.9
GJIK	Gjilan	1.29	43	*i* Pg		Pb	14 18 43.0	-0.7
GJIK				*i* Sg		Sn	14 19 00.8	+0.2
BEY	Berane	1.37	349	*i* Pg		Pg	14 18 46.2	+0.4
SMRK	Smrekonice	1.44	21	*i* Pn		Pb	14 18 45.9	-0.3
STIP	Stip	1.47	83	*i* Pn		Pg	14 18 49.1	+1.5
STIP				*i* Sn		Sg	14 19 10.9	+4.3
STIP				*e*Lg		Lg	14 19 13.0	
	comp=N,12nm,0.4s							
GRG	Griva	1.72	109	*i* Pn		Pb	14 18 49.6	-1.5
SJES	Sjenica	1.75	353	*e*Pn		Pb	14 18 51.3	-0.2
SJES				*e*Sn		Sb	14 19 13.6	+0.1
SELS	Selova	1.81	21	*e*Pn		Pn	14 18 50.0	-0.5
TREB	Trebinje	1.84	311	*e*Pn		Pb	14 18 52.9	-0.2
TREB				*e*Sn		Sb	14 19 15.5	-0.7
BOSS	Bosilegrad	1.93	59	*e*Pn		Pn	14 18 52.5	+0.4
IVAS	Ivanjica	2.05	358	*e*Pn		Pn	14 18 54.0	+0.2
STON	Ston	2.32	306	*e*Pn		Pb	14 18 59.4	-1.8
STON				Sn		Sb	14 19 31.9	+2.0
BBLS	Lazići	2.42	345	*e*Pn		Pb	14 19 00.8	-2.2
DIVS	Divibare	2.58	356	*e*Pn		Pn	14 19 02.2	+1.1
RICI	Ricice	3.03	312	*e*Pn		Pb	14 19 10.2	-3.1

*ANF **04** 14:54:44.8±0.2, 34°.31N×118°.56W, h17km±1km, ML3.1/34, Error ellipse: s-maj=1.9km s-min=1.4km az=42.0, Hypocentre not reviewed by the ISC*
*SCEDC **04** 14:54:45.5, 34°.33N×118°.55W, h6km, Hypocentre not reviewed by the ISC*
*PAS **04** 14:54:45.5±1.9, 34°.325N±0°.007×118°.554W±0°.009, h6km±3km, ML3.1/176, ML2.8/25(NEIC), Error ellipse: s-maj=1.1km s-min=1.0km az=183.0*

NEIC 04 14:54:44.9±1.1, **34°.335N**±0°.007×**118°.535W**±0°.008, **h17**km±1km, **Error ellipse: s-maj=1.3km s-min=0.4km az=218.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OAT	Oat Mountain	0.07	277		Pg	14 54 47.1	-1.2
PDE	Pardee, Santa	0.11	340		Pb	14 54 50.3	+1.6
BLCC	Black Canyon	0.15	231		Pg	14 54 48.3	-0.7
BLCC					Sg	14 54 50.9	-0.9
DECC	Green Verdugo	0.19	116		Pg	14 54 49.6	+0.1
DECC					Sb	14 54 53.3	+0.1
DECC	Green Verdugo	0.19	116	P		14 54 49.6	
	baz=292,SNR=130						
DECC				S		14 54 53.2	
	baz=292						
HLLC	North Hollywoo	0.21	137		Pg	14 54 50.0	0.0
HLLC					Sg	14 54 53.5	+0.1
DJJ	Donna J Jenkin	0.24	164		Pg	14 54 49.9	-0.4
DJJ	Donna J Jenkin	0.24	164		Pg	14 54 49.9	-0.4
AGOC	Agoura	0.27	226		Pg	14 54 50.1	-0.7
AGOC					Sg	14 54 54.1	-0.7
PYR	Pyramid	0.29	324		Pg	14 54 51.4	+0.1
GR2C	Griffith Obs.	0.29	138		Pg	14 54 51.0	-0.2
GR2C	Griffith Obs.	0.29	138		Sg	14 54 55.4	-0.1
OSI	Osito Audit: C	0.32	331		Sg	14 54 51.8	-4.6
OSI	Osito Audit: C	0.32	331	Pg	Pg	14 54 51.7	0.0
OSI	Osito Audit: C	0.32	331	IAML		14 54 58.7	
	comp=E,1μm,0.5s						
OSI				IAML		14 55 01.4	
	comp=N,1μm,0.7s						
OSI	Osito Audit: C	0.32	331	P		14 54 51.8	
	baz=154,SNR=65						
OSI				S		14 54 57.2	
	baz=154						
PASC	Pasadena Art C	0.33	119	Pg	Pg	14 54 52.0	+0.1
PASC				IAML		14 54 57.6	
	comp=E,1μm,0.5s						
PASC	Pasadena Art C	0.33	119		Sg	14 54 57.0	+0.3
BTPC	Burnt Peak	0.35	355		Pg	14 54 52.2	-0.1
BTPC					Sg	14 54 56.9	-0.5
LEOC	Leona Valley	0.35	33		Pg	14 54 52.2	-0.1
LEOC					Sg	14 54 57.5	+0.1
LCGC	La Cienega, Cu	0.36	159		Pb	14 54 52.8	+0.1
LCGC					Sb	14 54 58.9	+0.8
CJV	Casa Juvan	0.38	59		Pg	14 54 52.8	0.0
GSA	Caltech--GSA	0.39	120		Pb	14 54 53.2	-0.2
GSA					Sb	14 54 59.4	+0.4
CACC	Caltech Cellar	0.40	120		Pg	14 54 53.2	+0.2
CACC					Sb	14 54 59.1	-0.1
PT2	Point Dume	0.40	214		Pg	14 54 52.3	-0.8
PT2					Sg	14 54 58.2	-0.4
ALPC	Antelope	0.40	29		Pg	14 54 53.3	+0.1
ALPC					Sb	14 54 59.1	-0.3
MWC	Mount Wilson	0.41	106		Sb	14 54 59.5	-0.3
MWC	Mount Wilson	0.41	106	Pg	Pg	14 54 53.4	0.0
MWC	Mount Wilson	0.41	106	IAML		14 55 03.6	
	comp=N,2μm,0.2s						
MWC				IAML		14 55 03.8	
	comp=E,3μm,0.2s						
CHFC	Chilao Flat St	0.42	90		Pg	14 54 53.6	0.0
GVRC	Garvey Reservo	0.45	129		Pb	14 54 54.3	0.0
GVRC					Sb	14 55 01.0	+0.3
LRRC	Littlerock Res	0.46	65		Pg	14 54 54.3	+0.1
LRRC					Sb	14 55 01.4	+0.4
JNH	Juniper Hills	0.49	77		Pg	14 54 54.8	0.0
STCC	Santa Clara	0.54	267		Pb	14 54 56.6	+0.8
STCC					Sn	14 55 05.2	-1.2
XTL	Crystal Lake,	0.56	94		Pg	14 54 55.9	-0.1
PEM	Pine Mountain	0.58	107		Pg	14 54 56.3	0.0
THC	Tehachapi Micr	0.58	350		Pg	14 54 56.4	-0.1
TPO	Tropico Hills	0.60	25		Pg	14 54 56.8	0.0
TPO					Sb	14 55 05.4	+0.2
RPV	Rancho Palos V	0.60	170		Pg	14 54 56.6	-0.1
PSRC	Puddingstone R	0.65	112		Pg	14 54 57.5	-0.2
PSRC					Sb	14 55 07.0	+0.4
FMP	Fort Macarthur	0.65	162	P		14 54 58.3	
	baz=341						
SBB	Saddle Back Bu	0.68	59		Pg	14 54 58.2	-0.2
MPI	Mount Pinos, F	0.69	314		Pg	14 54 58.6	0.0
MPI					Sb	14 55 08.7	+0.6
EDW2	Edwards Air Fo	0.70	39		Pg	14 54 58.5	-0.2
EDW2	Edwards Air Fo	0.70	39	P		14 54 58.5	
	baz=220,SNR=40						
EDW2				S		14 55 08.8	
	baz=220						
SSK	Sunset Peak	0.71	100		Pg	14 54 58.6	-0.2
SSK					Sb	14 55 08.8	+0.4
TJR	Tejon Ranch	0.71	346		Pb	14 54 58.6	-0.3
TJR					Sb	14 55 08.9	+0.5
BFSC	Mount Baldy Ra	0.73	97		Pb	14 54 58.9	-0.3
BFSC	Mount Baldy Ra	0.73	97	P		14 54 58.9	
	baz=277,SNR=76						
RYS	Reyes Peak	0.74	295		Pb	14 54 59.9	+0.4
ABL	Mount Abel	0.77	312		Pb	14 54 59.8	-0.1
CHNC	Chino	0.78	115		Pg	14 55 00.4	+0.2
ARVC	Arvin	0.83	343		Pb	14 55 00.8	0.0
ARVC					Sg	14 55 12.7	+0.7
ARVC	Arvin	0.83	343	P		14 55 00.8	
	baz=164,SNR=19						
ARVC				S		14 55 12.8	
	baz=164						
SS2	San Sevaine	0.87	98		Pb	14 55 01.4	-0.1
TEJ	El Tejon	0.90	352		Pb	14 55 01.9	-0.2
TEJ					Sg	14 55 14.7	+0.3
CCAC	Calif City Air	0.92	28		Pb	14 55 02.5	+0.1
CCAC					Sn	14 55 15.5	-0.5
CIAC	Catalina I. Ai	0.94	174		Pb	14 55 02.1	-0.6
CIAC					Sg	14 55 15.7	+0.2
CIS	Catalina Islan	0.94	174	P		14 55 02.1	
	baz=353,SNR=30						
CIS				S		14 55 15.5	
	baz=353						
BCW	Bitter Crk WRg	0.94	310		Pg	14 55 03.1	-0.1
HYS	Haystack Butte	0.96	56		Pb	14 55 03.1	+0.1
HYS					Sg	14 55 15.9	-0.1
SCZ2	Santa Cruz Isl	0.97	250		Pb	14 55 02.1	-1.2
SCZ2					Sg	14 55 16.2	-0.3
SCZ2	Santa Cruz Isl	0.97	250	P		14 55 02.0	
	baz=70						
SCZ2				S		14 55 16.2	
	baz=70						
CSP	Cedar Springs	0.97	92		Pb	14 55 03.4	0.0
SBC	Santa Barbara	0.98	277		Pn	14 55 03.6	-0.2
SBC	Santa Barbara	0.98	277	P		14 55 03.5	
	baz=96,SNR=5.3						
SBC				S		14 55 17.3	
	baz=96						
RVR	Riverside	1.02	109		Pb	14 55 04.0	-0.1
RVR					Sb	14 55 17.4	+0.2
VTV	Victorville	1.02	77		Pg	14 55 04.7	0.0
DTP	Desert Tortois	1.09	31		Pn	14 55 05.5	0.0
SME	Santa Rosa Min	1.10	117		Pb	14 55 05.0	-0.5
ELS	Elsinore Mount	1.15	126		Pn	14 55 05.9	-0.3
PKM	Mcpherson Peak	1.19	298	P		14 55 07.2	
	baz=118,SNR=18						
PKM				S		14 55 23.9	
	baz=118						
SYP	Santa Ynez Pea	1.21	280		Pn	14 55 06.8	-0.3
CFT	Crafton Hills	1.22	104		Pb	14 55 07.5	0.0
PEC	Perris	1.22	111		Pn	14 55 07.0	-0.2
WBSM	Bird Springs	1.24	15		Pg	14 55 08.6	-0.3
FIGC	Figueroa Mtn.	1.26	289		Pb	14 55 08.0	-0.2
ISA	Isabella, Lake	1.32	2	Pn	Pb	14 55 09.4	0.0
ISA				Pg		14 55 09.6	-0.9
ISA	Isabella, Lake	1.32	2	Pb		14 55 09.4	
	baz=183,SNR=38						
CRGC	Crocker Grade	1.33	313		Pb	14 55 09.8	+0.3
MURC	Murrieta	1.33	123	P		14 55 08.6	
	baz=303,SNR=30						
MURC				Sb		14 55 26.9	
	baz=303						
BBRC	Big Bear Solar	1.34	93		Pb	14 55 10.2	+0.5
BBRC	Big Bear Solar	1.34	93	Pg		14 55 10.1	
	baz=273,SNR=38						
BBRC				Sg		14 55 28.8	
	baz=273						
LRMC	Laurel Mtn Rad	1.34	31		Pb	14 55 09.9	+0.3
LRMC	Laurel Mtn Rad	1.34	31	Pb		14 55 09.8	
	baz=212,SNR=57						
SCI2	San Clemente I	1.35	180	Pg		14 55 10.4	
	baz=360,SNR=6.1						
SNCC	San Nicolas Is	1.36	217	Pn	Pn	14 55 08.3	-0.8
SNCC				IAML		14 55 32.7	
	comp=N,223nm,0.4s						
SNCC	San Nicolas Is	1.36	217	P		14 55 08.2	
	baz=36						
SNCC				S		14 55 25.5	
	baz=36						
RRX	Edison Barstow	1.38	67	Pg		14 55 11.0	
	baz=247,SNR=12						
RRX				Sb		14 55 29.7	
	baz=247						
WASM	Alta Sierra Ca	1.40	359		Pn	14 55 08.3	-1.6
WASM					Pg	14 55 11.5	-0.4
HMTC	Hemet	1.42	116		Pn	14 55 09.8	-0.1
DGR	Domenigoni Val	1.44	118		Pn	14 55 10.1	-0.1
CARC	Carrizo Plain	1.45	312		Pb	14 55 11.2	-0.3
POB	Polly Butte	1.49	115		Pn	14 55 10.7	-0.2
SRTC	Snort	1.50	25		Pn	14 55 11.6	+0.5
SMMC	Simmler	1.55	310	Pb		14 55 12.7	
	baz=130,SNR=8.5						
SMMC				Sb		14 55 34.2	
	baz=130						
VES	Vestal, Richgr	1.57	343	Pb		14 55 13.8	
	baz=164,SNR=14						
GORC	Groser Oak Ranc	1.60	137		Pn	14 55 12.2	-0.2
PFO	Pinyon Flats O	1.87	112		Pn	14 55 16.8	+0.6
PFO				IAML		14 55 47.7	
	comp=N,54nm,0.4s						
PFO	Pinyon Flats O	1.87	112	Pn		14 55 16.8	
	baz=293						
PFO				Pb		14 55 18.1	
	baz=293,SNR=9.8						
SPG2	Springville 2	1.87	354		Pn	14 55 16.5	+0.4
109C	Camp Elliot, M	1.87	140		Pn	14 55 15.6	-0.5
109C				IAML		14 55 43.8	
	comp=E,117nm,0.3s						
109C				IAML		14 55 44.0	
	comp=N,120nm,0.2s						
109C	Camp Elliot, M	1.87	140	P		14 55 16.0	
	baz=320						
109C				S		14 55 38.9	
	baz=320						
HEC	Hector,Ludlow	1.88	74	P		14 55 16.9	
	baz=255,SNR=14						
DPP	Dos Picos Cty	1.88	135		Pn	14 55 16.0	-0.3
MPMC	Manual Prospec	1.92	26	P		14 55 18.0	
	baz=207,SNR=23						
BELC	Belle Mtn. Jos	2.13	98	P		14 55 20.9	
	baz=279,SNR=17						
BELC				Sb		14 55 52.1	
	baz=279						
BAR	Barrett	2.27	136		Pn	14 55 21.8	+0.2
BAR				IAML		14 55 57.2	
	comp=N,63nm,0.3s						
BAR				IAML		14 55 59.2	
	comp=E,73nm,0.2s						
MONP2	Monument Peak	2.28	129	P		14 55 22.9	
	baz=310,SNR=7.1						
TUQ	Turquoise Moun	2.41	62	Pg		14 55 30.4	
	baz=244,SNR=10						
TUQ				Sg		14 56 02.2	
	baz=244						
GMRC	Granite Mounta	2.42	78	P		14 55 24.1	
	baz=260,SNR=11						
SHOC	Shoshone, Teco	2.42	49	Pn		14 55 25.0	
	baz=230,SNR=16						
SHOC				Pg		14 55 31.0	
	baz=230						
FURC	Furnace Creek,	2.53	32	Pg		14 55 33.0	
	baz=213,SNR=14						
CBX	Cerro Bola	2.55	142		Pn	14 55 25.6	-0.1
CBX				IAML		14 56 10.6	
	comp=N,36nm,0.6s						
IKP	In-Ko-Pah, Jac	2.63	129	Sb		14 56 06.1	
	baz=310						
PMPB	Monarch Peak	2.64	316	Pn	Pn	14 55 27.0	+0.3
PMPB				IAML		14 55 46.0	
	comp=E,56nm,3.5s						
TIN	Tinemaha, Big	2.72	5	Sg		14 56 14.4	
	baz=186						
IRM	Iron Mountain	2.81	93	Pn		14 55 29.4	
	baz=274						
IRM				Pb		14 55 36.4	
	baz=274,SNR=13						
IRM				Sg		14 56 14.8	
	baz=274						
ESJX	Sierra Juarez	3.18	136	Pn	Pn	14 55 35.6	+1.3
TPNV	Topopah Spring	3.20	35	Pn	Pn	14 55 36.4	+1.8
TPNV	Topopah Spring	3.20	35	P		14 55 36.3	
	baz=216,SNR=7.7						
TPNV				Sg		14 56 27.4	
	baz=216						
MLAC	Mammoth, Mammo	3.30	356	Pg		14 55 46.5	
	baz=176,SNR=5.8						
SAO	San Andreas Ge	3.39	316	Pn	Pn	14 55 37.4	+0.3
SHPR	Sheep Range	3.50	51	Pn	Pn	14 55 40.9	+2.1
SHPR				IAML		14 56 39.8	
	comp=E,15nm,0.6s						
SHPR				IAML		14 56 43.6	
	comp=N,13nm,0.8s						

*JMA **04** 14:59:03.5, 40°.21N×142°.33E, h37km±1km, M3.8*
JMA Felt I J1.
*IDC **04** 14:59:06.3±2.1, 40°.25N×142°.29E, h71km±18km, mb3.4/13, mb1 3.5/17, mb1mx3.4/42, mbtmp3.7/17, MS2.4/5, Ms1 2.4/5, ms1mx2.3/29, Error ellipse: s-maj=22.6km s-min=12.4km az=111.0*

ISC 04 14:59:03.8±1.2, **40°.21N**±0°.04×**142°.32E**±0°.08, **h44**km±11km, **n36**,σ1**28**/41, **mb3.7**/12, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.45	233	P	Pn	14 59 13.4	-0.6
JTH				S	Sn	14 59 20.3	-0.9
JKEN	Kujiedanarisaw	0.47	270	P	Pn	14 59 13.5	-0.8
JKEN				S	Sn	14 59 20.6	-1.1
JANG	Nango	0.64	285	P	Pn	14 59 15.9	-0.6
JANG				S	Sn	14 59 24.8	-0.8
MIYJ	Miyakonagasawa	0.74	212	P	Pn	14 59 17.3	-0.5
MIYJ				S	Sn	14 59 27.3	-0.7
JKZ	Kuzumaki	0.80	254	P	Pn	14 59 18.5	-0.1
JKZ				S	Sn	14 59 29.1	-0.3
JARK	Aomorirokkasho	1.08	318	P	Pn	14 59 22.2	-0.2
JARK				S	Sn	14 59 36.1	-0.1
JOM	Ohasama	1.08	228	P	Pn	14 59 22.7	+0.2
JOM				*e*S	Sn	14 59 36.6	+0.3
JTM	Tenmabayashi	1.12	301	P	Pn	14 59 22.9	0.0
JTM				*e*S	Sn	14 59 37.3	+0.2
JAH	Hinai	1.29	270	P	Pn	14 59 25.6	+0.3
JAH				*e*S	Sn	14 59 42.2	+0.8
JMK	Ichinoseki	1.52	215	P	Pn	14 59 29.4	+1.0
JMK				*e*S	Sn	14 59 48.4	+1.4
JOT	Ohata	1.52	321	P	Pn	14 59 28.5	+0.1
JOT				*e*S	Sn	14 59 47.4	+0.4
JRG	Rokugo	1.53	239	P	Pn	14 59 29.6	+1.0
ASAJ	Asahikawa	3.91	3	P	Pn	15 00 02.2	+0.9
	3.1nm,0.3s,baz=219,slow=8.0,SNR=32						
ASAJ				S	Sn	15 00 47.9	+2.0
	2.6nm,0.3s,baz=15,slow=30,SNR=5.5						
ASAJ				LR	LR	15 01 18.7	
	comp=Z,19nm,18.8s,baz=160,slow=34						
MJAR	Matsushiro Arr	4.88	223	P	Pn	15 00 17.6	+2.9
	0.2nm,0.3s,baz=30,slow=14,SNR=13						
MJAR				LR	LR	15 02 14.4	
	comp=Z,40nm,18.1s,baz=70,slow=38						
USRK	Ussuriysk Ar.	8.64	301	P	Pn	15 01 09.4	+3.2
	baz=94,slow=15,SNR=7.1						
USRK				LR	LR	15 04 45.5	
	comp=Z,38nm,18.6s,baz=201,slow=39						
KSRS	Korea Array	11.56	261	P	Pn	15 01 50.5	+4.3
	0.1nm,0.3s,baz=68,slow=14,SNR=2.0						
KSRS				LR	LR	15 06 07.1	
	comp=Z,18nm,18.1s,baz=210,slow=36						
KLR	Kul'dur	11.73	324	LR	LR	15 06 02.5	
	comp=Z,31nm,19.8s,baz=86,slow=36						
MA2	Magadan	20.10	13	P	P	15 03 32.5	-1.0
	2.0nm,0.6s,baz=157,slow=17,SNR=2.3						
SEY	Seymchan	23.54	12	P	P	15 04 08.9	-0.9
	0.7nm,0.5s,baz=205,slow=14,SNR=6.8						
SONM	Songino Array	26.75	299	P	P	15 04 38.7	-0.6
	1.3nm,0.6s,baz=90,slow=7.2,SNR=2.9						
H11N2	WAKE ISLAND Hy	29.32	127	T	T	15 35 46.6	
	baz=319,slow=75,SNR=58						
H11N1	WAKE ISLAND Hy	29.33	127	T	T	15 35 54.0	
	baz=319,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	29.34	127	T	T	15 36 02.2	
	baz=319,slow=75,SNR=54						
H11S1	WAKE ISLAND Hy	30.14	129	T	T	15 37 11.9	
	baz=321,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	30.14	129	T	T	15 37 02.8	
	baz=321,slow=76,SNR=14						
H11S2	WAKE ISLAND Hy	30.16	129	T	T	15 37 02.6	
	baz=321,slow=76,SNR=11						
ZALV	Zalesovo Beam	40.37	310	P	P	15 06 35.6	-1.4
	0.7nm,0.4s,baz=96,slow=11,SNR=4.2						
MKAR	Makanchi Array	43.11	299	P	P	15 06 59.2	-0.4
	0.5nm,0.6s,baz=86,slow=9.7,SNR=8.2						
ILAR	Eielson Array	46.45	34	P	P	15 07 26.4	+0.5
	0.4nm,0.6s,baz=263,slow=6.0,SNR=11						
INK	Inuvik	51.25	28	P	P	15 08 03.1	+0.6
	0.9nm,0.4s,baz=248,slow=4.8,SNR=8.3						
WRA	Warramunga Arr	60.30	189	P	P	15 09 06.9	-1.0
	0.7nm,1.1s,baz=5.6,slow=6.9,SNR=2.4						
ARCES	ARCESS Array B	61.28	339	P	P	15 09 12.9	-1.2
	1.3nm,0.9s,baz=44,slow=10,SNR=1.3						
ASAR	Alice Springs	64.03	189	P	P	15 09 32.3	-0.6
	0.1nm,0.4s,baz=0.6,slow=6.7,SNR=9.2						
FINES	FINESS Array B	66.34	332	P	P	15 09 46.8	-0.6
	1.1nm,0.7s,baz=48,slow=8.8,SNR=4.7						
NOA	NORSAR Array B	71.54	337	P	P	15 10 19.2	-0.6
	0.7nm,0.8s,baz=37,slow=6.0,SNR=4.0						
AKASG	Malin Array Be	72.23	322	P	P	15 10 23.3	-0.7
	0.2nm,0.3s,baz=48,slow=6.1,SNR=4.6						

*DDA **04** 15:08:28.9, 37°.20N×28°.74E, h7km±5km, ML2.2*
*ISK **04** 15:08:28.2, 37°.13N×28°.78E, h14km, ML2.5/4*

ISC 04 15:08:28.5±1.1, **37°.15N**±0°.03×**28°.74E**±0°.03, **h3**km±11km, **n15**,σ1**32**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DALY	Dalyan (Mula)	0.34	192	*i* P	Pg	15 08 35.0	-0.1
DALY				*i* S	Sg	15 08 39.0	-0.5
DALY				IAML		15 08 44.0	
	comp=E,204nm,0.6s						
DALY				IAML		15 08 44.0	
	comp=N,364nm,0.4s						
DALY	Dalyan (Mula)	0.34	192	PG	Pg	15 08 35.4	+0.3
DALY				SG	Sg	15 08 40.7	+1.2
TAVA	DENIZLI_Tavas	0.34	24	*i* P	Pg	15 08 35.5	+0.4
TAVA				*i* S	Sg	15 08 38.8	-0.9
MULA	Mugla, Merkez-	0.35	287	*i* P	Pb	15 08 36.9	-0.5
MULA				*i* S	Sg	15 08 40.3	+0.5
MULA				IAML		15 08 44.0	
	comp=E,295nm,0.6s						
YER	Yerkesik	0.36	267	PG	Pg	15 08 36.6	+1.1
YER				SG	Sb	15 08 42.7	-1.1
CAEL	Denizli, Camel	0.47	93	*i* P	Pb	15 08 38.3	-1.1
CAEL				IAML		15 08 52.0	
	comp=E,236nm,0.4s						
CAEL				IAML		15 08 55.0	
	comp=N,354nm,0.4s						
FETY	Fethiye	0.58	152	PG	Pg	15 08 39.5	-0.2
FETY				SG	Sg	15 08 47.8	+0.5
GOLH	Golhisar	0.66	82	*i* P	Pg	15 08 41.0	-0.2
GOLH				*i* S	Sb	15 08 50.9	-1.5
GOLH				IAML		15 09 01.0	
	comp=N,142nm,0.6s						
ELL	Elmali	1.02	113	PG	Pg	15 08 47.6	-0.5
AKAS	Kas	1.15	143	*i* P

mb1 3.9/6,mb1mx3.4/30,mbtmp4.0/6,MS3.1/3,Ms1 3.1/3, ms1mx2.5/19,Error ellipse: s-maj=29.7km s-min=23.3km az=40.0

ISC 04 15:16:31.3±1.6, 10°59N±0'04×74°74W±0'04, h10km±10km, n38, σ1§54/57, mb3.6/4, 5C, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRC	**Santa Marta, M**	**0.77**	**42⇑**	*eP*	**Pn**	**15 16 48.6**	**+0.5**
SMRC				*eS*	**Sn**	**15 16 59.3**	**-0.4**
SMRC				*i*		15 17 04.2	
	comp=Z,906nm,0.4s						
SJCC	**San Jacinto, C**	**0.81**	**212⇑**	*iP*	**Pn**	**15 16 49.8**	**+1.0**
SJCC				*eS*	**Sn**	**15 17 01.2**	**+0.3**
SJCC				*i*		15 17 07.6	
	comp=Z,584nm,0.6s						
ARGC	**Ariguani, Magd**	**0.88**	**146⇑**	*eP*	**Pn**	**15 16 50.0**	**+0.3**
ARGC				*eS*	**Sb**	**15 17 01.7**	**+1.4**
ARGC				*i*		15 17 06.3	
	comp=Z,954nm,0.4s						
CRJC	**Cerrejon, Guaj**	**1.88**	**77⇑**	*iP*	**Pn**	**15 17 03.4**	**-0.1**
CRJC				*eS*	**Sn**	**15 17 26.4**	**-1.0**
CRJC				*i*		15 17 27.4	
	comp=Z,933nm,0.6s						
SMLC	**San Martn de**	**1.90**	**159**	*eP*	**Pn**	**15 17 05.5**	**+1.8**
SMLC				*eS*	**Sn**	**15 17 27.5**	**-0.1**
SMLC				*i*		15 17 32.5	
	comp=Z,800nm,0.2s						
MOTC	**Monteria, Cord**	**2.01**	**207**	*eP*	**Pn**	**15 17 06.5**	**+1.2**
MOTC				*eS*	**Sn**	**15 17 29.9**	**-0.7**
MOTC				*i*		15 17 44.0	
	comp=Z,99nm,0.6s						
LCBC	**Los crdobas,**	**2.35**	**223**	*eP*	**Pn**	**15 17 11.3**	**+1.4**
LCBC				*i*		15 17 47.5	
	comp=Z,75nm,0.2s						
OCAC	**Ocana**	**2.72**	**149**	*eP*	**Pn**	**15 17 16.3**	**+1.1**
OCAC				*eS*	**Sn**	**15 17 48.9**	**+0.6**
URIC	**Uribia, Colomb**	**2.92**	**67**	*eP*	**Pn**	**15 17 18.7**	**+1.0**
URIC				*eS*	**Sn**	**15 17 52.8**	**-0.1**
URIC				*i*		15 18 01.5	
	comp=Z,181nm,0.3s						
UREC	**San Jos de Ur**	**2.92**	**196**	*eP*	**Pn**	**15 17 18.8**	**+1.0**
UREC				*eS*	**Sn**	**15 17 52.8**	**-0.2**
UREC				*i*		15 17 54.4	
	comp=Z,69nm,0.1s						
ZARC	**Zaragoza, Cauc**	**3.08**	**182**	*eP*	**Pn**	**15 17 20.9**	**+0.9**
ZARC				*eS*	**Sn**	**15 17 56.5**	**-0.3**
ZARC				*i*		15 18 08.5	
	comp=Z,122nm,0.4s						
CAPC	**Capurgana**	**3.22**	**233**	*eS*	**Sn**	**15 17 59.1**	**-1.2**
CAPC				*i*		15 18 01.9	
	comp=Z,59nm,0.2s						
BRRC	**Barranca, Sant**	**3.60**	**163**	*eP*	**Pn**	**15 17 28.1**	**+0.9**
BRRC				*eS*	**Sn**	**15 18 09.2**	**-0.6**
BRRC				*i*		15 18 32.7	
	comp=Z,59nm,0.5s						
PAMC	**Pamplona, Colo**	**3.81**	**148**	*eP*	**Pn**	**15 17 33.2**	**+2.8**
PAMC				*eS*	**Sn**	**15 18 17.5**	**+2.0**
PAMC				*i*		15 18 23.2	
	comp=Z,91nm,0.4s						
PTBC	**PUERTO BERRIO,**	**4.03**	**176**	*eP*	**Pn**	**15 17 34.1**	**+1.0**
PTBC				*eS*	**Sn**	**15 18 19.1**	**-1.4**
PTBC				*i*		15 18 31.5	
	comp=Z,77nm,0.4s						
BARC	**Barichara**	**4.26**	**159**	*eP*	**Pn**	**15 17 38.3**	**+1.8**
BARC				*eS*	**Sn**	**15 18 26.1**	**-0.2**
BARC				*i*		15 18 42.8	
	comp=Z,66nm,0.4s						
SDV	**Santo Domingo**	**4.39**	**112**	P	**Pn**	**15 17 39.7**	**+1.5**
	comp=Z,28nm,0.3s,baz=298,slow=6.4,SNR=132						
SDV				S	**Sn**	**15 18 28.4**	**-1.1**
	comp=Z,36nm,0.3s,baz=351,slow=21,SNR=10						
SDV				LR	LR	15 19 50.7	
	comp=Z,174nm,19.3s,baz=292,slow=46						
SDV	**Santo Domingo**	**4.39**	**112⇑**	*eP*	**Pn**	**15 17 39.6**	**+1.4**
SDV				*eS*	**Sn**	**15 18 28.5**	**-1.1**
SDV				*i*		15 18 30.9	
	comp=Z,87nm,0.4s						
HELC	**Santa Helena**	**4.44**	**190**	*eP*	**Pn**	**15 17 39.9**	**+1.0**
HELC				*eS*	**Sn**	**15 18 30.6**	**-0.3**
HELC				*i*		15 18 57.2	
	comp=Z,28nm,0.5s						
CBOC	**Ciudad Bolivar**	**4.86**	**195**	*eP*	**Pn**	**15 17 46.7**	**+2.1**
CBOC				*eS*	**Sn**	**15 18 40.4**	**-0.6**
CBOC				*i*		15 18 52.4	
	comp=Z,13nm,0.6s						
RUSC	**La Rusia**	**4.95**	**160**	*eP*	**Pn**	**15 17 47.3**	**+1.2**
RUSC				*eS*	**Sn**	**15 18 43.4**	**-0.2**
RUSC				*i*		15 19 11.1	
	comp=Z,50nm,0.5s						
SPBC	**San Pablo de B**	**4.95**	**172**	*eP*	**Pn**	**15 17 46.5**	**+0.8**
SPBC				*eS*	**Sn**	**15 18 42.4**	**-0.7**
SPBC				*i*		15 18 57.7	
	comp=Z,42nm,0.5s						
NORC	**Norcasia**	**4.99**	**181**	*eP*	**Pn**	**15 17 46.4**	**+0.1**
NORC				*eS*	**Sn**	**15 18 39.4**	**-4.8**
NORC				*i*		15 19 15.1	
	comp=Z,24nm,0.6s						
GUY2C	**Guyana, Caldas**	**5.36**	**187**	*eP*	**Pn**	**15 17 53.4**	**+1.5**
RREF	**El Recreo**	**5.68**	**186**	*eP*	**Pn**	**15 17 58.0**	**+1.7**
RREF				*i*		15 19 34.5	
	comp=N,50nm,0.6s						
ROSC	**El Rosal**	**5.73**	**176**	P	Pn	15 18 02.1	+5.3
	comp=N,4.6nm,0.3s,baz=254,slow=19,SNR=2.5						
ROSC				S	**Sb**	**15 19 14.9**	**-5.5**
	comp=N,3.4nm,0.3s,baz=209,slow=23,SNR=1.4						
ROSC	**El Rosal**	**5.73**	**176**	*i*		15 19 31.2	
	comp=Z,22nm,0.5s						
TOLC	**Tolima**	**5.99**	**186**	*eP*	**Pn**	**15 18 01.7**	**+1.4**
TOLC				*i*		15 19 49.3	
	comp=Z,33nm,0.6s						
VILC	**Villavicencio,**	**6.52**	**171**	*eP*	**Pn**	**15 18 09.6**	**+2.2**
PCRV	**Puerto La Cruz**	**9.95**	**91**	P	**Pn**	**15 18 55.6**	**+1.1**
	comp=Z,3.4nm,0.3s,baz=266,slow=5.7,SNR=13						
PCRV				S	**Sn**	**15 20 46.8**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=199,slow=12,SNR=2.7						
PTGA	**Pitinga**	**18.51**	**127**	LR	LR	15 28 29.8	
	comp=Z,87nm,19.7s,baz=110,slow=39						
NNA	**Nana**	**22.52**	**185**	LR	LR	15 30 43.2	
	comp=Z,40nm,21.3s,baz=335,slow=37						
LPAZ	**La Paz**	**27.49**	**166**	pP	pP	15 22 35.1	+13
	comp=Z,1.2nm,0.7s,baz=334,slow=4.8,SNR=5.3						
PDAR	**Pinedale Array**	**44.12**	**323**	P	**P**	**15 24 41.2**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=116,slow=10,SNR=5.1						
NVAR	**Mina Array Bea**	**47.73**	**313**	P	**P**	**15 25 10.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=125,slow=5.6,SNR=2.5						
YKA	**Yellowknife Ar**	**59.20**	**340**	P	**P**	**15 26 32.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=132,slow=8.1,SNR=15						
ASAR	**Alice Springs**	**149.77**	**241**	PKP	**PKPdf**	**15 36 16.4**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=73,slow=2.0,SNR=4.1						
ASAR				PKPbc	**pPKPdf**	**15 36 20.6**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=109,slow=3.5,SNR=5.3						
WRA	**Warramunga Arr**	**150.49**	**248**	PKPbc	**PKPbc**	**15 36 22.9**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=100,slow=2.6,SNR=9.0						

*IDC **04** 15:17:20.3±1.3, 13°.65N×88°.19W, h0km, mb3.1/3, mb1 3.5/6,mb1mx3.4/34,mbtmp3.2/6,ML3.1/3,MS2.8/4, Ms1 2.8/4,ms1mx2.6/12,Error ellipse: s-maj=56.8km s-min=13.2km az=38.0*

*INET **04** 15:17:23.6, 12°.78N×88°.93W, h22km, MW3.0*

*SNET **04** 15:17:24.4±1.0, 12°.87N×88°.93W, h38km±32km, ML4.1*

*UCR **04** 15:17:24.5±0.8, 12°.86N×88°.94W, h36km±399km, ML4.1*

*GCG **04** 15:17:30.6±0.7, 15°.20N×89°.95W, h236km±15km, MD4.0*

ISC 04 15:17:25.3±1.5, 12°90N±0'09×88°87W±0'04, h44km±13km, n80, σ1§14/92, mb3.2/3, 2C-12D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.51**	**34⇓**	*eP*	**Pn**	**15 17 36.4**	**+0.1**
ALJI				*eS*	**Sn**	**15 17 45.6**	**+1.4**
ALJI	**Alcalda de J**	**0.51**	**34⇓**	*eP*	**Pn**	**15 17 36.4**	**+0.1**
ALJI				*eS*	**Sn**	**15 17 45.6**	**+1.4**
TECA	**Tecapa**	**0.69**	**31**	*eP*	**Pn**	**15 17 38.9**	**0.0**
TECA	**Tecapa**	**0.69**	**31**	*eP*	**Pn**	**15 17 38.9**	**0.0**
LALI	**Alcalda de L**	**0.73**	**323**	*eP*	**Pn**	**15 17 38.1**	**-1.1**
LALI				*eS*	**Sn**	**15 17 48.1**	**-1.2**
LALI	**Alcalda de L**	**0.73**	**323**	*eP*	**Pn**	**15 17 38.1**	**-1.1**
LALI				*eS*	**Sn**	**15 17 48.1**	**-1.2**
UESV	**Universidad de**	**0.73**	**6**	*eP*	**Pn**	**15 17 39.1**	**-0.2**
UESV	**Universidad de**	**0.73**	**6**	*eP*	**Pn**	**15 17 39.1**	**-0.2**
LFRS	**El Faro**	**0.74**	**345**	*eP*	**Pn**	**15 17 38.6**	**-0.9**
LFRS	**El Faro**	**0.74**	**345**	*eP*	**Pn**	**15 17 38.6**	**-0.9**
LCY	**Lacayo**	**0.76**	**47**	*eP*	**Pn**	**15 17 39.8**	**0.0**
LCY	**Lacayo**	**0.76**	**47**	*eP*	**Pn**	**15 17 39.8**	**0.0**
PACA	**Pacayal**	**0.77**	**43**	*eP*	**Pn**	**15 17 40.3**	**+0.4**
PACA				*eS*	**Sn**	**15 17 51.5**	**+1.0**
PACA	**Pacayal**	**0.77**	**43**	*eP*	**Pn**	**15 17 40.3**	**+0.4**
PACA				*eS*	**Sn**	**15 17 51.5**	**+1.0**
PQSS	**Presa 15 de Se**	**0.78**	**23**	*eP*	**Pn**	**15 17 40.4**	**+0.6**
PQSS				*eS*	**Sn**	**15 17 51.9**	**+1.5**
PQSS				IAML		15 17 53.6	
	comp=Z,4μm,0.2s						
VSM	**San Miguel**	**0.78**	**48**	*eP*	**Pn**	**15 17 40.3**	**+0.2**
VSM	**San Miguel**	**0.78**	**48**	*eP*	**Pn**	**15 17 40.3**	**+0.2**
PAVA	**Las Pavas**	**0.81**	**355⇓**	*eP*	**Pn**	**15 17 40.1**	**-0.3**
PAVA	**Las Pavas**	**0.81**	**355⇓**	*eP*	**Pn**	**15 17 40.1**	**-0.3**
AEIL	**Aeropuerto Ilo**	**0.82**	**343**	*eP*	**Pn**	**15 17 40.1**	**-0.5**
AEIL				IAML		15 17 59.9	
	comp=Z,3μm,0.2s						
AEIL	**Aeropuerto Ilo**	**0.82**	**343**	*eP*	**Pn**	**15 17 40.1**	**-0.5**
AEIL				IAML		15 17 59.9	
	comp=Z,3μm,0.2s						
LBRS	**Las Brisas**	**0.85**	**348**	*eP*	**Pn**	**15 17 40.6**	**-0.3**
LBRS	**Las Brisas**	**0.85**	**348**	*eP*	**Pn**	**15 17 40.6**	**-0.3**
UDBS	**Universidad Do**	**0.85**	**341**	*eP*	**Pn**	**15 17 40.4**	**-0.5**
UDBS	**Universidad Do**	**0.85**	**341**	*eP*	**Pn**	**15 17 40.4**	**-0.5**
SNET	**Serv Nac Est T**	**0.85**	**335⇓**	*eP*	**Pn**	**15 17 40.2**	**-0.8**
SNET				IAML		15 17 40.6	
	comp=Z,4μm,0.2s						
SNET	**Serv Nac Est T**	**0.85**	**335⇓**	*eP*	**Pn**	**15 17 40.2**	**-0.8**
SNET				IAML		15 17 40.6	
	comp=Z,4μm,0.2s						
IGN	**Direccin Gen**	**0.86**	**340**	*eP*	**Pn**	**15 17 40.4**	**-0.6**
IGN	**Direccin Gen**	**0.86**	**340**	*eP*	**Pn**	**15 17 40.4**	**-0.6**
ITCA	**Escuela Especi**	**0.86**	**332**	*eP*	**Pn**	**15 17 40.3**	**-0.8**
ITCA	**Escuela Especi**	**0.86**	**332**	*eP*	**Pn**	**15 17 40.3**	**-0.8**
SEMO	**Seminario San**	**0.87**	**336**	*eP*	**Pn**	**15 17 40.1**	**-1.0**
LFU	**La Fuente**	**0.87**	**344**	*eP*	**Pn**	**15 17 40.7**	**-0.6**
LFU	**La Fuente**	**0.87**	**344**	*eP*	**Pn**	**15 17 40.7**	**-0.6**
UESS	**Universidad de**	**0.87**	**338**	*eP*	**Pn**	**15 17 40.6**	**-0.7**
UESS	**Universidad de**	**0.87**	**338**	*eP*	**Pn**	**15 17 40.6**	**-0.7**
PMON	**Piamonte**	**0.91**	**332⇑**	*iP*	**Pn**	**15 17 41.2**	**-0.7**
PMON	**Piamonte**	**0.91**	**332⇑**	*iP*	**Pn**	**15 17 41.2**	**-0.7**
BOQS	**Boqueron**	**0.92**	**334⇓**	*eP*	**Pn**	**15 17 41.5**	**-0.6**
BOQS				*eS*	**Sn**	**15 17 54.6**	**+0.4**
BOQS	**Boqueron**	**0.92**	**334⇓**	*iP*	**Pn**	**15 17 41.5**	**-0.6**
BOQS				*eS*	**Sn**	**15 17 54.6**	**+0.4**
JAYA	**Jayaque - finc**	**0.94**	**323⇓**	*iP*	**Pn**	**15 17 41.1**	**-1.0**
JAYA				*eS*	**Sn**	**15 17 53.8**	**-0.8**
JAYA				IAML		15 17 54.5	
	comp=Z,23μm,0.2s						
JAYA	**Jayaque - finc**	**0.94**	**323⇓**	*iP*	**Pn**	**15 17 41.1**	**-1.0**
JAYA				*eS*	**Sn**	**15 17 53.8**	**-0.8**
JAYA				IAML		15 17 54.5	
	comp=Z,23μm,0.2s						
CEDA	**San Andres**	**1.03**	**330**	*eP*	**Pn**	**15 17 42.8**	**-0.6**
CEDA				IAML		15 18 06.3	
	comp=Z,5μm,0.3s						
CEDA	**San Andres**	**1.03**	**330**	*eP*	**Pn**	**15 17 42.8**	**-0.6**
CEDA				IAML		15 18 06.3	
	comp=Z,5μm,0.3s						
LCND	**La Caada**	**1.03**	**67**	*eP*	**Pn**	**15 17 43.3**	**0.0**
LCND				IAML		15 18 00.4	
	comp=Z,5μm,0.2s						
LCND	**La Caada**	**1.03**	**67**	*eP*	**Pn**	**15 17 43.3**	**0.0**
LCND				IAML		15 18 00.4	
	comp=Z,5μm,0.2s						
CNCH	**Conchagua**	**1.07**	**70**	*eP*	**Pn**	**15 17 43.9**	**-0.1**
CNCH	**Conchagua**	**1.07**	**70**	*eP*	**Pn**	**15 17 43.9**	**-0.1**
FAGO	**Alcalda de S**	**1.08**	**43⇓**	*eP*	**Pn**	**15 17 44.5**	**+0.5**
FAGO	**Alcalda de S**	**1.08**	**43⇓**	*eP*	**Pn**	**15 17 44.5**	**+0.5**
TACO	**Tacachico**	**1.16**	**336**	*eP*	**Pn**	**15 17 44.6**	**-0.5**
TACO	**Tacachico**	**1.16**	**336**	*eP*	**Pn**	**15 17 44.6**	**-0.5**
CEVE	**Cerro Verde**	**1.18**	**321**	*eP*	**Pn**	**15 17 44.8**	**-0.7**
CEVE				IAML		15 18 02.9	
	comp=Z,5μm,0.2s						
CEVE	**Cerro Verde**	**1.18**	**321**	*eP*	**Pn**	**15 17 44.8**	**-0.7**
CEVE				IAML		15 18 02.9	
	comp=Z,5μm,0.2s						
SBLS	**San Blas**	**1.19**	**322**	*eP*	**Pn**	**15 17 45.0**	**-0.7**
SBLS	**San Blas**	**1.19**	**322**	*eP*	**Pn**	**15 17 45.0**	**-0.7**
SNJE	**San Jose**	**1.20**	**323**	*eP*	**Pn**	**15 17 45.0**	**-0.8**
SNJE	**San Jose**	**1.20**	**323**	*eP*	**Pn**	**15 17 45.0**	**-0.8**
RTR	**El Retiro**	**1.25**	**323**	*eP*	**Pn**	**15 17 46.1**	**-0.3**
RTR	**El Retiro**	**1.25**	**323**	*eP*	**Pn**	**15 17 46.1**	**-0.3**
LLGN	**La Laguna**	**1.25**	**357**	*eP*	**Pn**	**15 17 46.7**	**+0.3**
LLGN	**La Laguna**	**1.25**	**357**	*eP*	**Pn**	**15 17 46.7**	**+0.3**
UNIC	**Universidad Ca**	**1.26**	**328**	*eP*	**Pn**	**15 17 46.1**	**-0.4**
UNIC	**Universidad Ca**	**1.26**	**328**	*eP*	**Pn**	**15 17 46.1**	**-0.4**
MTO3	**Montecristo**	**1.56**	**342**	*eP*	**Pn**	**15 17 50.8**	**0.0**
MTO3	**Montecristo**	**1.56**	**342**	*eP*	**Pn**	**15 17 50.8**	**0.0**
ESQI	**Esquipulas**	**1.71**	**344**	*eP*	**Pn**	**15 17 53.0**	**+0.2**
NBG	**Las Nubes**	**2.21**	**319**	*eP*	**Pn**	**15 18 02.7**	**+3.0**
PCG	**Pacaya**	**2.25**	**311**	*eP*	Pn	15 18 06.2	+6.0
PCG				*eS*	**Sn**	**15 18 32.9**	**+6.0**
MRL	**Marmol**	**2.31**	**340**	*eP*	**Pn**	**15 18 02.4**	**+1.4**
FUG	**Fuego 3**	**2.46**	**309**	*eP*	**Pn**	**15 18 05.8**	**+2.8**
FUG				*eS*	**Sn**	**15 18 34.0**	**+2.0**
APG	**El Apazote**	**2.60**	**324**	Pn	**Pn**	**15 18 05.0**	**0.0**
	comp=Z,1.9nm,0.3s,baz=104,slow=19,SNR=4.7						
APG				Pg		15 18 07.6	
	comp=Z,3.1nm,0.3s,baz=128,slow=21,SNR=6.6						
APG				Lg	Lg	15 18 41.9	
	comp=Z,3.9nm,0.3s,baz=140,slow=5.6,SNR=4.7						
JTS	**Las Juntas de**	**4.63**	**124**	Pn	**Pn**	**15 18 33.4**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=174,slow=23,SNR=6.8						
JTS				Pg		15 18 41.2	
	comp=Z,19nm,0.3s,baz=21,slow=5.5,SNR=46						
JTS				Sn	**Sn**	**15 19 25.2**	**-0.1**
	baz=132,slow=23,SNR=1.2						
JTS				Lg	Lg	15 19 46.2	
	comp=Z,3.0nm,0.3s,baz=216,slow=18,SNR=15						
JTS				LR	LR	15 20 35.8	
	comp=Z,82nm,20.8s,baz=133,slow=42						
CMIG	**Matias Romero**	**7.15**	**306**	Pn	**Pn**	**15 19 08.7**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=115,slow=15,SNR=1.9						
CMIG				Sn	**Sn**	**15 20 31.0**	**+3.7**
	comp=Z,0.4nm,0.3s,baz=77,slow=20,SNR=1.4						
CMIG				LR	LR	15 22 10.4	
	comp=Z,56nm,21.9s,baz=108,slow=40						
TEIG	**Tepich**	**7.30**	**4**	LR	LR	15 22 02.8	
	comp=Z,61nm,20.5s,baz=116,slow=43						
TXAR	**Lajitas Array**	**21.36**	**322**	P	**P**	**15 22 09.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=138,slow=11,SNR=5.0						
PDAR	**Pinedale Array**	**34.73**	**333**	P	**P**	**15 24 09.5**	**-2.0**
	comp=Z,0.2nm,0.6s,baz=138,slow=12,SNR=1.9						
NVAR	**Mina Array Bea**	**36.46**	**319**	LR	LR	15 41 24.7	
	comp=Z,25nm,19.5s,baz=242,slow=40						
ILAR	**Eielson Array**	**65.05**	**336**	P	**P**	**15 27 59.8**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=156,slow=4.6,SNR=2.9						
CMAR	**Chiang Mai Arr**	**147.90**	**346**	PKPbc	**PKPdf**	**15 37 03.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=324,slow=4.5,SNR=2.2						

*SKO **04** 15:21:21.4, 40°.70N×21°.23E, h12km*

*THE **04** 15:21:22.1, 40°.78N×21°.17E, h9km±1km, ML2.5/6, Error ellipse: s-maj=1.0km s-min=0.6km az=246.0*

*ATH **04** 15:21:23.4, 40°.72N×21°.26E, h9km±2km, ML2.7/5, Error ellipse: s-maj=2.8km s-min=1.2km az=319.0*

ISC 04 15:21:22.6±0.9, 40°73N±0'.02×21°22E±0'.02, h13km±6km, n29, σ1§24/44, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.13**	**65**	P	**Pg**	**15 21 26.0**	**-0.1**
FNA				S	**Sg**	**15 21 28.4**	**-0.1**
FNA				AML	AML	15 21 28.7	
	comp=E,44814μm,0.2s						
FNA				AML	AML	15 21 28.9	
	comp=N,49412μm,0.2s						
FNA	**Florina**	**0.13**	**65**	P	**Pg**	**15 21 26.0**	**-0.1**
FNA				S	**Sg**	**15 21 28.4**	**-0.1**
	comp=N,24μm,0.2s						
NEST	**Nestorio**	**0.34**	**202**	P	**Pg**	**15 21 29.8**	**+0.3**
NEST				S	**Sg**	**15 21 35.5**	**+1.4**
NEST				AML	AML	15 21 36.3	
	comp=N,3182μm,0.2s						
NEST				AML	AML	15 21 36.4	
	comp=E,4007μm,0.2s						
NEST	**Nestorio**	**0.34**	**202**	P	**Pg**	**15 21 29.8**	**+0.3**
NEST				S	**Sg**	**15 21 34.8**	**+0.7**
	comp=E,1μm,0.3s						
OHR	**Ohrid**	**0.50**	**321**	*i* Pg	**Pg**	**15 21 31.8**	**-0.6**
OHR				*i* Sg	**Sb**	**15 21 39.8**	**-0.7**
OHR				*e*Lg	Lg	15 21 40.6	
	comp=E,256nm,0.3s						
PENT	**Pentalofos**	**0.53**	**186**	P	**Pg**	**15 21 33.6**	**+0.5**
PENT				AML	AML	15 21 46.0	
	comp=E,714μm,0.3s						
PENT				AML	AML	15 21 46.4	
	comp=N,869μm,0.3s						
PENT	**Pentalofos**	**0.53**	**186**	P	**Pg**	**15 21 33.6**	**+0.5**
PENT				S	**Sb**	**15 21 42.0**	**+0.4**
	comp=N,400nm,0.3s						
KZN	**Kozani**	**0.59**	**135**	P	**Pg**	**15 21 34.4**	**+0.1**
KZN				S	**Sb**	**15 21 42.9**	**-0.4**
KZN				AML	AML	15 21 45.9	
	comp=E,1345μm,0.4s						
KZN				AML	AML	15 21 47.3	
	comp=N,1234μm,0.4s						
KZN	**Kozani**	**0.59**	**135**	P	**Pg**	**15 21 34.4**	**+0.1**
KZN				S	**Sb**	**15 21 43.9**	**+0.6**
	comp=N,652nm,0.4s						
KTI	**Kastanea**	**0.76**	**116**	P	**Pg**	**15 21 37.2**	**-0.2**
KPRO	**Kipourio**	**0.78**	**172**	P	**Pg**	**15 21 37.5**	**-0.2**
KPRO				AML	AML	15 21 54.4	
	comp=N,950μm,0.3s						
KPRO				AML	AML	15 21 54.5	
	comp=E,1303μm,0.3s						
KPRO	**Kipourio**	**0.78**	**172**	P	**Pg**	**15 21 37.5**	**-0.2**
KPRO				S	**Sb**	**15 21 49.7**	**+1.1**
	comp=E,570nm,0.3s						
GRG	**Griva**	**0.93**	**75**	P	**Pb**	**15 21 39.8**	**-0.8**
GRG	**Griva**	**0.93**	**75**	P	**Pb**	**15 21 39.8**	**-0.8**
GRG				S	**Sn**	**15 21 53.5**	**-1.2**
	comp=E,148nm,0.4s						
PHP	**Peshkopia**	**1.12**	**329**	P	**Pb**	**15 21 41.6**	**-2.4**
PHP				S	**Sb**	**15 21 57.1**	**-1.4**
LIT	**Litokhoron**	**1.16**	**122**	P	**Pg**	**15 21 44.8**	**-0.1**
LIT	**Litokhoron**	**1.16**	**122**	P	**Pn**	**15 21 44.3**	**-0.3**
VAY	**Valandovo**	**1.18**	**59**	*i* Pg	**Pb**	**15 21 44.6**	**-0.4**
VAY				*i* Sg	**Sg**	**15 22 00.6**	**-0.2**
VAY				*e*Lg	Lg	15 22 02.1	
	comp=N,35nm,0.6s						
TIR	**Tirane**	**1.20**	**302**	*i* Pg	**Pb**	**15 21 45.2**	**+0.1**
STIP	**Stip**	**1.21**	**37**	*i* Pg	**Pg**	**15 21 48.5**	**+2.6**
STIP				*i* Sg	**Sg**	**15 22 07.7**	**+6.0**
STIP				*e*Lg	Lg	15 22 08.1	
	comp=N,8.7nm,0.3s						
THL	**Klokotos Trika**	**1.31**	**152**	P	**Pn**	**15 21 46.7**	**0.0**
THL				S	**Sg**	**15 22 05.5**	**+0.6**
KNT	**Kendrikon**	**1.34**	**71**	P	**Pg**	**15 21 47.6**	**-0.9**
KNT	**Kendrikon**	**1.34**	**71**	P	**Pb**	**15 21 47.0**	**-0.7**
KNT				S	**Sg**	**15 22 05.7**	**-0.3**
HORT	**Hortiatis**	**1.44**	**95**	P	**Pb**	**15 21 49.0**	**-0.4**
KEK	**Kerkira**	**1.48**	**227**	P	**Pg**	**15 21 51.3**	**+0.1**
PRZK	**Prizren**	**1.52**	**347**	*i* Pg	**Pb**	**15 21 50.1**	**-0.7**
GJIK	**Gjilan**	**1.74**	**5**	*i* Pn	**Pb**	**15 21 54.4**	**-0.1**
ZATK	**Zatriq**	**1.78**	**346**	*i* Pn	**Pn**	**15 21 53.5**	**+0.3**
ULC	**Ulcinj**	**1.93**	**310**	*i* Pn	**Pb**	**15 21 57.6**	**-0.1**

IDC 04 15:34:50.6±873.0, 15°.18N×44°.30E, h0km, Error ellipse: s-maj=392.2km s-min=84.7km az=14.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I19DJ	**I19DJ**	**3.84**	**197**	*i*		15 58 50.0	
	baz=16,slow=310,SNR=3.0						
I32KE	**NAIROBI INFRAS**	**17.91**	**205**	*i*		17 31 25.0	
	baz=25,slow=318,SNR=3.7						
I52GB	**DIEGO GARCIA I**	**35.82**	**127**	*i*		19 12 50.0	
	baz=307,slow=314,SNR=2.2						

UCC 04 16:00:14.1±0.0, 49°.88N×4°.95E, h5km, ML3.1, 3D, Mining explosion., France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBOU	**Bougnies**	**0.82**	**308**	*dP*	Pg	16 00 28.2	-1.7
BLCH	**La Chartreuse**	**0.86**	**29**	*dP*	Pg	16 00 29.4	-1.3
BZEV	**Zevekote**	**1.81**	**315**	*dP*	Pb	16 00 47.0	-0.8

*DNK **04** 16:01:10.4±1.8, 51°.11N×16°.11E, h79km±999km*

*PRU **04** 16:01:11.6±

KRUC				*e*Sg	**Sb**	**16 02 27.3**	**+1.5**	
	baz=358							
TANN	**Tannenbergstha**	**2.59**	**245**	*e*Pn	**Pn**	**16 01 53.6**	**+1.9**	
TANN				*e*Pg	**Pg**	**16 02 00.4**	**+2.3**	
TANN				*e*Sg	**Sg**	**16 02 32.3**	**+0.6**	
OJC	**Ojcow**	**2.68**	**119**	*e*Pg	**Pg**	**16 02 01.7**	**+1.8**	
OJC				*e*Sg	**Sg**	**16 02 35.9**	**+1.3**	
OJC	**Ojcow**	**2.68**	**119**	*e*Pg	**Pg**	**16 02 01.9**	**+2.0**	
OJC				*e*Sg	**Sg**	**16 02 37.2**	**+2.6**	
NKC	**Novy Kostel**	**2.69**	**242**	*e*PN	**Pn**	**16 01 54.9**	**+1.9**	
NKC				*e*PG	**Pg**	**16 02 01.2**	**+1.2**	
NKC				*e*SG	**Sg**	**16 02 35.7**	**+0.9**	
	comp=Z,50nm,0.3s							
JAVC	**Velka Javorina**	**2.88**	**159**	*e*PN	**Pn**	**16 01 57.0**	**+1.3**	
JAVC				*e*SG	**Sb**	**16 02 38.5**	**+1.9**	
JAVC	**Velka Javorina**	**2.88**	**159**	*e*Pn	**Pn**	**16 01 56.9**	**+1.3**	
	baz=341							
JAVC				*e*Sg	**Sb**	**16 02 38.4**	**+1.9**	
	comp=Z,13nm,0.5s,baz=341							
KHC	**Kasperske Hory**	**2.93**	**215**	*e*PN	**Pn**	**16 01 57.5**	**+1.1**	
KHC				*e*PG	**Pg**	**16 02 03.8**	**-0.9**	
KHC				*e*SG	**Sg**	**16 02 41.5**	**-1.2**	
	comp=Z,18nm,0.5s							
CKRC	**Cesky Krumlov**	**2.98**	**204**	*e*PN	**Pn**	**16 01 59.2**	**+2.1**	
CKRC				*e*PG	**Pg**	**16 02 05.2**	**-0.5**	
CKRC				*e*SG	**Sg**	**16 02 43.2**	**-1.1**	
	comp=Z,17nm,0.5s							
MOX	**Moxa**	**2.99**	**254**	*e*Sg	**Sg**	**16 02 46.0**	**+1.4**	
MANZ	**Manzenberg**	**3.00**	**240**	*e*Pn	**Pn**	**16 01 59.5**	**+2.1**	
MANZ				*e*Pg	**Pg**	**16 02 07.9**	**+1.9**	
MANZ				*e*Sg	**Sg**	**16 02 46.6**	**+1.6**	
ROTZ	**Rotzenmuhle**	**3.08**	**236**	*e*Pn	**Pn**	**16 01 59.9**	**+1.5**	
ROTZ				*e*Pg	**Pg**	**16 02 08.7**	**+1.2**	
ROTZ				*e*Sg	**Sg**	**16 02 46.7**	**-0.6**	
GEC2	**GERESS Array S**	**3.14**	**211**	*e*Pn	**Pn**	**16 02 00.6**	**+1.4**	
GEC2				*e*Sg	**Sg**	**16 02 48.3**	**-0.9**	
GERES	**GERESS Array B**	**3.14**	**211**	Pn	**Pn**	**16 02 00.9**	**+1.7**	
	comp=Z,1.6nm,0.3s,baz=35,slow=13,SNR=3.5							
GERES				Pg	**Pg**	**16 02 07.5**	**-1.0**	
	comp=Z,3.6nm,0.3s,baz=29,slow=16,SNR=23							
GERES				Sn	**Sn**	**16 02 36.4**	**-1.1**	
	comp=Z,2.3nm,0.3s,baz=32,slow=25,SNR=6.6							
GERES				Lg	Lg	16 02 47.3		
	comp=Z,4.2nm,0.3s,baz=32,slow=27,SNR=9.8							
SMOL	**Smolenice**	**3.16**	**164**	*e*PG	**Pg**	**16 02 11.2**	**+2.1**	
SMOL				*e*SG	**Sg**	**16 02 51.7**	**+1.6**	
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**16 02 10.4**	**+0.2**	
LANS				*e*SG	**Sg**	**16 02 52.4**	**+0.4**	
MODS	**Modra-Piesok**	**3.27**	**167**	*e*PG	**Pg**	**16 02 12.5**	**+1.2**	
MODS				*e*SG	**Sg**	**16 02 54.1**	**+0.4**	
VYHS	**Vyhne**	**3.53**	**149**	*e*PN	**Pn**	**16 02 06.0**	**+1.4**	
VYHS				*e*PG	**Pg**	**16 02 17.3**	**+1.2**	
VYHS				*e*SG	**Sg**	**16 03 02.1**	**+0.2**	
BSD	**Bornholm Skovb**	**3.63**	**349**	*i* P	**Pn**	**16 02 08.3**	**+2.4**	
BSD				*e*S	**Sn**	**16 02 51.0**	**+1.4**	
CONA	**Conrad Observa**	**3.64**	**183**	*i* Pn	**Pn**	**16 02 08.3**	**+2.1**	
	comp=Z,1.0nm,0.2s,SNR=6.7							
CONA				*e*Sg	**Sg**	**16 03 04.3**	**-1.1**	
	comp=Z,20nm,0.5s							
MOA	**Molln**	**3.91**	**199**	*i* Pn	**Pn**	**16 02 11.7**	**+1.9**	
	comp=Z,3.2nm,0.3s,SNR=14							
MOA				*e*Sg	**Sg**	**16 03 14.7**	**+0.7**	
	comp=Z,20nm,0.7s							
ARSA	**Arzberg**	**4.33**	**186**	*e*Pn	**Pn**	**16 02 17.5**	**+1.8**	
	comp=Z,1.2nm,0.2s							
ARSA				*e*Sg	**Sg**	**16 03 27.9**	**+0.3**	
	comp=Z,11nm,0.6s							
CRVS	**Cervenica-Dubn**	**4.33**	**126**	*e*PG	**Pg**	**16 02 33.3**	**+1.8**	
LUNU	**Lund**	**4.38**	**340**	*i* P	**Pn**	**16 02 17.4**	**+1.1**	
LUNU				*e*S	**Sn**	**16 03 07.5**	**-0.5**	
BLEU	**Blekinge**	**4.76**	**358**	*e*	**Pn**	**16 02 22.3**	**+0.9**	
	baz=169,slow=14							
BLEU				*e*P	Pb	16 02 23.8	-8.9	
BLEU				*i* S	**Sn**	**16 03 17.3**	**+0.1**	
KBA	**Koelnbreinsper**	**4.84**	**203**	*i* Pn	**Pn**	**16 02 24.9**	**+2.1**	
	comp=Z,2.2nm,0.3s,SNR=5.5							
DEL	**Delary**	**5.10**	**346**	*i* P	**Pn**	**16 02 27.4**	**+1.3**	
DEL				*e*S	**Sn**	**16 03 24.2**	**-1.4**	
WATA	**Walderalm**	**5.17**	**217**	*i* Pn	**Pn**	**16 02 29.8**	**+2.6**	
	comp=Z,2.5nm,0.5s							
WTTA	**Wattenberg**	**5.21**	**216**	*i* Pn	**Pn**	**16 02 30.2**	**+2.4**	
	comp=Z,2.9nm,0.6s							
MOTA	**Moosalm**	**5.34**	**220**	*e*Pn	**Pn**	**16 02 30.9**	**+1.3**	
	comp=Z,1.6nm,0.4s							
ABTA	**Abfaltersbach**	**5.37**	**208**	*i* Pn	**Pn**	**16 02 31.7**	**+1.7**	
	comp=Z,1.5nm,0.4s							
RETA	**Reutte**	**5.37**	**223**	*i* Pn	**Pn**	**16 02 31.3**	**+1.4**	
	comp=Z,0.8nm,0.2s							
SQTA	**Sankt Quirin**	**5.40**	**218**	*i* Pn	**Pn**	**16 02 32.5**	**+2.0**	
	comp=Z,1.2nm,0.2s							
FETA	**Feichten**	**5.76**	**220**	*e*Pn	**Pn**	**16 02 37.1**	**+1.8**	
	comp=Z,0.4nm,0.3s							
DAVOX	**Davos/Dischmat**	**6.30**	**223**	Pn	**Pn**	**16 02 44.1**	**+1.3**	
	comp=Z,0.2nm,0.3s,baz=28,slow=17,SNR=3.1							
DAVOX				Sn	**Sn**	**16 03 54.5**	**-1.0**	
	comp=Z,0.1nm,0.3s,baz=314,slow=20,SNR=1.6							
DAVOX				Lg	Lg	16 04 27.1		
	comp=Z,0.3nm,0.3s,baz=191,slow=23,SNR=2.0							
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**16 03 10.4**	**+0.7**	
	comp=Z,0.9nm,0.3s,baz=279,slow=12,SNR=6.1							
AKASG				Sn	**Sn**	**16 04 40.7**	**-3.2**	
	comp=Z,0.5nm,0.3s,baz=271,slow=23,SNR=2.2							
HFS	**Hagfors**	**8.70**	**352**	Pn	**Pn**	**16 03 17.8**	**+2.3**	
	comp=Z,0.1nm,0.3s,baz=165,slow=14,SNR=1.0							
FINES	**FINESS Array B**	**11.31**	**25**	Pn	**Pn**	**16 03 51.5**	**+0.3**	
	comp=Z,0.2nm,0.3s,baz=206,slow=11,SNR=9.9							
FINES				Sn	**Sn**	**16 05 50.9**	**-7.3**	
	comp=Z,0.1nm,0.3s,baz=225,slow=19,SNR=2.8							
EKA	**Eskdalemuir Ar**	**12.10**	**296**	Pn	**Pn**	**16 03 59.4**	**-2.5**	
	baz=98,slow=13,SNR=4.7							
ARCES	**ARCESS Array B**	**18.57**	**10**	Pn	**P**	**16 05 24.8**	**-1.9**	
	baz=192,slow=14,SNR=6.1							

DDA ***04*** *16:09:54.2,36°.92N×28°.24E,h7km±2km,ML1.5*
ISK 04 16:09:53.4,36°.92N×28°.23E,h20km,ML1.9/5,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.14**	**174**	*i* P	Pg	16 09 58.0	+0.3
TURN				*i* S	Sb	16 10 00.3	+0.2
TURN				IAML		16 10 02.0	
	comp=E,232nm,0.5s						
TURN				IAML		16 10 02.0	
	comp=N,297nm,0.3s						
TURN	**Turunc**	**0.14**	**174**	PG	Pg	16 09 58.1	+0.3
TURN				SG	Sg	16 10 01.5	+0.8
YER	**Yerkesik**	**0.22**	**12**	PG	Pg	16 09 59.2	+0.2
YER				SG	Sg	16 10 03.4	+0.7
MULA	**Mugla, Merkez-**	**0.35**	**13**	*i* P	Pb	16 10 01.2	+0.2
MULA				*i* S	Sg	16 10 05.9	-0.2
MULA				IAML		16 10 07.0	
	comp=E,76nm,0.4s						
DALY	**Dalyan (Mula)**	**0.36**	**106**	*i* P	Pb	16 10 01.1	0.0
DALY				*i* S	Sb	16 10 07.3	+1.1
DALY				IAML		16 10 09.0	
	comp=E,32nm,0.6s						
DALY				IAML		16 10 09.0	
	comp=N,85nm,1.2s						
DALY	**Dalyan (Mula)**	**0.36**	**106**	PG	Pb	16 10 01.4	+0.3
BDRM	**Kayabasi**	**0.64**	**284**	*i* P	Pn	16 10 08.7	+1.3
BDRM				IAML		16 10 21.0	
	comp=N,31nm,0.5s						
ARG	**Arkhangelos**	**0.70**	**186**	PG	Pg	16 10 07.6	+0.3
ARG				SG	Sn	16 10 18.1	-0.4
BODT	**Bodrum**	**0.75**	**281**	PG	Pn	16 10 08.5	-0.3
TAVA	**DENIZLI_Tavas**	**0.78**	**45**	*i* P	Pn	16 10 09.0	-0.3
AYDN	**Tasoluk**	**0.79**	**340**	*i* P	Pn	16 10 09.9	+0.4
AYDN				IAML		16 10 28.0	
	comp=N,11nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**1.06**	**346**	PG	Pg	16 10 13.7	-0.4
DKL	**Dikili**	**2.39**	**335**	PN	Pn	16 10 32.6	+1.2

DDA ***04*** *16:10:22.9,38°.42N×26°.54E,h8km±1km,ML1.2*
ISK 04 16:10:21.3,38°.42N×26°.42E,h10km,ML1.9/4,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.15**	**112**	*i* P	Pg	16 10 24.9	+0.2
URLA				IAML		16 10 27.0	
	comp=N,119nm,0.4s						
URLA				*i* S	Sg	16 10 27.2	+0.1
	comp=E,97nm,0.1s						
URLA	**Izmir**	**0.15**	**112**	PN	Pg	16 10 24.9	+0.2
URLA	**Izmir**	**0.15**	**112**	PG	Pg	16 10 24.9	+0.2
ZEYE	**Izmir, Urla-Ze**	**0.19**	**159**	*i* P	Pb	16 10 26.9	0.0
ZEYE				*i* S	Sg	16 10 30.7	+2.7
ZEYE				IAML		16 10 31.0	
	comp=E,72nm,0.2s						
ZEYE				IAML		16 10 31.0	
	comp=N,105nm,0.3s						
ZEDA	**zmir-Bergama**	**0.75**	**43**	*i* P	Pb	16 10 37.1	+0.6
ZEDA				*i* S	Sg	16 10 45.5	-0.2
ZEDA				IAML		16 10 49.0	
	comp=N,15nm,0.2s						
DKL	**Dikili**	**0.76**	**30**	PG	Pb	16 10 36.8	+0.2
DKL				SG	Sb	16 10 47.3	+0.4
SIGR	**SIGRI**	**0.91**	**331**	PG	Pb	16 10 39.6	+0.5
SIGR				SG	Sb	16 10 52.2	+0.9
BOZC	**Bozcaada**	**1.45**	**349**	PN	Pb	16 10 48.1	-0.3

IDC ***04*** *16:13:39.1±2.2,2°.31N×95°.71E,h0km,mb3.9/5,mb1 3.9/7, mb1mx3.4/68,mbtmp3.8/7,ML3.5/2,MS3.1/4,Ms1 3.1/4, ms1mx2.6/54,Error ellipse: s-maj=51.0km s-min=24.0km az=36.0*
DJA ***04*** *16:13:43.9±1.3,3°.N±5°.×9°.6E±°.,h19km±6km,M4.0/9, mb4.5/2,mB4.4/1,MLv3.7/9,Mw(mB)3.6/1*
ISC 04 16:13:43.7±1.2,2°.44N±0°.09×95°.77E±0°.08,h25km,n22,
σ0s98/16,mb4.0/5,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.56**	**93**	P	**Pb**	**16 13 54.2**	**-0.7**
SNSI				S	**Sb**	**16 14 03.8**	**+1.2**
TPTI		**1.63**	**60**	P	**Pn**	**16 14 09.2**	**-1.6**
TPTI				S	**Sn**	**16 14 29.8**	**-1.2**
GSI	**Gunungsitoli**	**2.13**	**122**	P	**Pn**	**16 14 17.1**	**-0.6**
TSI	**Tuntungan**	**2.99**	**69**	P	**Pn**	**16 14 30.7**	**+1.2**
LHMI	**Lhok Sumawe**	**3.01**	**23**	P	**Pn**	**16 14 29.8**	**0.0**
PSI	**Prapat**	**3.17**	**83**	Pn	**Pn**	**16 14 32.0**	**-0.2**
	2.3nm,0.3s,baz=360,slow=22,SNR=8.5						
PSI				Sn	**Sn**	**16 15 09.8**	**+0.4**
	3.7nm,0.3s,baz=180,slow=21,SNR=5.8						
MNSI	**Mandailing Nat**	**4.15**	**113**	P	**Pn**	**16 14 46.5**	**+1.1**
LEM	**Lembang**	**14.99**	**128**	LR	LR	16 23 07.0	
	comp=Z,66nm,18.8s,baz=212,slow=38						
CMAR	**Chiang Mai Arr**	**16.22**	**11**	Pn	**Pn**	**16 17 31.5**	**+1.5**
	0.1nm,0.3s,baz=197,slow=13,SNR=7.0						
CMAR				LR	LR	16 23 57.1	
	comp=Z,11nm,18.1s,baz=282,slow=38						
H08S2	**Diego Garcia H**	**25.29**	**246**	T	T	16 45 19.0	
	baz=68,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**25.29**	**247**	T	T	16 45 23.6	
	baz=68,slow=76,SNR=35						
H08S1	**Diego Carcia H**	**25.31**	**246**	T	T	16 45 24.6	
	baz=68,slow=76,SNR=5.9						
H01W3	**Cape Leeuwin H**	**40.94**	**157**	T	T	17 04 51.3	
	baz=332,slow=76,SNR=37						
H01W2	**Cape Leeuwin H**	**40.95**	**157**	T	T	17 04 52.3	
	baz=332,slow=76,SNR=50						
H01W1	**Cape Leeuwin H**	**40.95**	**157**	T	T	17 04 52.5	
	baz=332,slow=76,SNR=48						
WRA	**Warramunga Arr**	**43.90**	**122**	P	**P**	**16 21 47.8**	**-0.9**
	0.6nm,0.8s,baz=298,slow=9.1,SNR=2.4						
MKAR	**Makanchi Array**	**45.71**	**347**	P	**P**	**16 22 03.1**	**+0.4**
	2.1nm,0.8s,baz=162,slow=8.0,SNR=24						
SONM	**Songino Array**	**46.14**	**10**	P	**P**	**16 22 06.4**	**+0.1**
	2.1nm,1.0s,baz=181,slow=8.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**52.12**	**352**	P	**P**	**16 22 51.5**	**-0.2**
	1.1nm,0.4s,baz=165,slow=6.2,SNR=7.4						
BVAR	**Borovoe Array**	**54.62**	**341**	P	**P**	**16 23 09.8**	**-0.3**
	1.2nm,0.7s,baz=158,slow=15,SNR=4.5						
KVAR	**Kislovodsk Arr**	**62.43**	**319**	LR	LR	16 53 04.2	
	comp=Z,74nm,18.2s,baz=91,slow=38						
LBTB	**Lobatse**	**73.16**	**243**	LR	LR	16 55 37.1	
	comp=Z,12nm,18.2s,baz=177,slow=34						

IDC ***04*** *16:15:32.9±1.8,5°.73S×152°.23E,h0km,mb4.1/6, mb1 4.3/7,mb1mx3.8/48,mbtmp4.1/7,ML2.2/1,Error ellipse: s-maj=96.1km s-min=17.2km az=129.0*
NEIC ***04*** *16:15:34.4±2.6,5°.78S±0°.08×152°.5E±0°.1,h10km±2km, mb4.4/19,Error ellipse: s-maj=23.2km s-min=12.1km az=104.0*
ISC 04 16:15:37.5±0.8,5°.8S±0°.1×152°.4E±0°.1,h38km,n32,
σ1s52/33,mb4.3/15,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.59**	**350**	Pn	**Pn**	**16 16 02.5**	**-0.7**
PMG	**Port Moresby**	**6.36**	**235**	Pn	**Pn**	**16 17 08.1**	**-0.6**
	3.5nm,0.3s,baz=49,slow=7.4,SNR=20						
PMG				Sn	**Sn**	**16 18 21.0**	**+1.0**
	2.7nm,0.3s,baz=210,slow=22,SNR=6.0						
PMG	**Port Moresby**	**6.36**	**235**		**Pn**	**16 17 08.9**	**+0.3**
COEN	**Coen**	**12.22**	**228**	Pn	**Pn**	**16 18 29.7**	**+0.6**
PATS	**Pohnpei**	**13.83**	**25**	Pn	**Pn**	**16 18 48.2**	**-2.9**
CTA	**Charters Tower**	**15.45**	**202**	Pn	**P**	**16 19 16.3**	**-0.6**
	0.1nm,0.3s,baz=27,slow=11,SNR=4.7						
CTAO	**Charters Tower**	**15.45**	**202**	Pn	**Pn**	**16 19 12.2**	**-0.6**
EIDS	**Eidsvold**	**19.53**	**184**	P	**P**	**16 19 59.5**	**-2.4**
EIDS				IAmb	IAmb	16 20 20.2	
	comp=Z,14nm,1.4s						
MTN	**Manton Dam**	**22.15**	**250**	P	**P**	**16 20 32.1**	**+1.8**
MTN				IAmb	IAmb	16 20 58.5	
	comp=Z,9.1nm,0.9s						
WB0	**Warramunga Arr**	**22.39**	**230**	P	**P**	**16 20 33.0**	**+0.1**
WR0	**Warramunga Arr**	**22.39**	**229**	P	**P**	**16 20 32.6**	**-0.3**
WR0				IAmb	IAmb	16 20 51.2	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**22.53**	**230**	P	**P**	**16 20 34.5**	**+0.2**
WRA	**Warramunga Arr**	**22.54**	**230**	P	**P**	**16 20 33.1**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=57,slow=10,SNR=16						
AS31	**Alice Springs**	**25.19**	**223**		**P**	**16 20 59.0**	**-0.7**
ASAR	**Alice Springs**	**25.20**	**223**	P	**P**	**16 20 59.1**	**-0.6**
	comp=Z,4.7nm,0.8s,baz=58,slow=9.3,SNR=50						
ASAR	**Alice Springs**	**25.20**	**223**	P	**P**	**16 20 59.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**28.88**	**243**	P	**P**	**16 21 31.6**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=51,slow=8.9,SNR=11						
FITZ	**Fitzroy Crossi**	**28.88**	**243**	P	**P**	**16 21 31.3**	**-1.7**
FITZ				IAmb	IAmb	16 21 38.9	
	comp=Z,4.2nm,0.9s						
TOLI2	**Tolitoli**	**32.34**	**281**	P	**P**	**16 22 02.2**	**-1.3**
TOLI2				IAmb	IAmb	16 22 03.7	
	comp=Z,8.0nm,1.2s						
PETK	**Petropavlovsk-**	**58.82**	**4**	P	**P**	**16 25 32.9**	**+0.8**
	comp=Z,2.8nm,1.0s,baz=155,slow=6.3,SNR=11						
KTH	**Kantishna Hill**	**81.04**	**22**	P	**P**	**16 27 50.0**	**+1.6**
KTH				IAmb	IAmb	16 27 51.0	
	comp=Z,4.4nm,1.0s						
SML	**Sawmill**	**81.15**	**24**	P	**P**	**16 27 50.7**	**+1.7**
SML				IAmb	IAmb	16 27 52.1	
	comp=Z,5.3nm,0.7s						
TRF	**Thorofare Moun**	**81.23**	**22**	P	**P**	**16 27 51.1**	**+1.7**
TRF				IAmb	IAmb	16 27 51.6	
	comp=Z,3.4nm,1.0s						
IMAR	**Indian Mountai**	**81.41**	**20**	P	**P**	**16 27 51.9**	**+1.8**
RND	**Reindeer**	**81.76**	**23**	P	**P**	**16 27 53.9**	**+1.7**
RND				IAmb	IAmb	16 28 04.5	
	comp=Z,5.1nm,1.1s						
MLY	**Manley**	**81.91**	**21**	P	**P**	**16 27 54.7**	**+1.8**
MLY				IAmb	IAmb	16 27 56.5	
	comp=Z,3.6nm,0.6s						
WRH	**Wood River Hil**	**82.59**	**22**	P	**P**	**16 27 57.6**	**+1.2**
WRH				IAmb	IAmb	16 28 09.6	
	comp=Z,4.9nm,1.2s						
ILAR	**Eielson Array**	**83.19**	**22**	P	**P**	**16 28 00.1**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=247,slow=5.6,SNR=27						
BARN	**Barnard Glacie**	**83.67**	**27**	P	**P**	**16 28 04.3**	**+2.0**
CTGM	**Chitina Glacie**	**83.77**	**27**	P	**P**	**16 28 04.8**	**+2.1**
YKA	**Yellowknife Ar**	**96.45**	**28**	P	**P**	**16 29 05.7**	**+3.2**
	comp=Z,0.1nm,0.5s,baz=272,slow=4.6,SNR=5.7						
TORD	**Torodi Ar. Bea**	**150.24**	**286**	PKPbc	**PKPbc**	**16 35 26.4**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=90,slow=4.0,SNR=3.4						

SOME ***04*** *16:26:37.9,43°.78N×86°.32E,h10km*
IDC ***04*** *16:26:40.1±1.1,43°.34N×86°.17E,h0km,mb3.7/7, mb1 3.8/11,mb1mx3.4/70,mbtmp3.7/11,ML3.2/4,MS2.5/3, Ms1 2.5/3,ms1mx2.2/53,Error ellipse: s-maj=33.6km s-min=15.7km az=50.0*
NNC ***04*** *16:26:44.4±2.6,43°.60N×86°.03E,h7km±11km,mb4.1, mpv3.7,Error ellipse: s-maj=18.8km s-min=9.0km az=123.0*

ISC 04 16:26:43.4±1.1,43°.57N±0°.06×86°.16E±0°.06,h10km,n38,
σ2s07/49,mb3.7/7,12C-6D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**3.98**	**347**	*e*P	**Pn**	**16 27 48.5**	**+4.0**
	7.5nm,0.3s						
ZSN				*e*S	**Sb**	**16 28 39.9**	**-2.0**
	28nm,0.4s						
ZSN	**Zaisan**	**3.98**	**347**	Pg	**Pg**	**16 28 00.5**	**+0.9**
ZSN				Lg	Lg	16 29 00.8	
KTMS	**Ketmen**	**4.23**	**270**	*e*P	**Pb**	**16 27 59.1**	**+1.2**
	13nm,0.3s						
KTMS				*e*S	**Sg**	**16 28 57.9**	**-1.2**
	58nm,0.5s						
KTMS	**Ketmen**	**4.23**	**270**	Pg	**Pb**	**16 27 59.1**	**+1.2**
	13nm,0.3s						
KTMS				Lg	Lg	16 28 57.9	
	58nm,0.5s						
MK31	**Makanchi Array**	**4.23**	**321**	⇑Pn	**Pn**	**16 27 49.0**	**+1.2**
	0.7nm,0.3s,baz=140,slow=14,SNR=229						
MK31				⇓Pg	**Pb**	**16 27 59.4**	**+1.6**
	5.5nm,0.4s,baz=141,slow=14,SNR=26						
MK31				⇑Lg	Lg	16 28 54.2	
	54nm,0.8s,baz=136,slow=30,SNR=6.0						
MK31	**Makanchi Array**	**4.23**	**321**		**Pn**	**16 27 49.7**	**+1.8**
MKAR	**Makanchi Array**	**4.23**	**321**	Pn	**Pn**	**16 27 49.5**	**+1.6**
	1.1nm,0.3s,baz=131,slow=14,SNR=42						
MKAR				Sn	**Sn**	**16 28 37.9**	**+0.6**
	3.6nm,0.3s,baz=135,slow=18,SNR=2.9						
MKAR				Lg	Lg	16 28 57.7	
	14nm,0.3s,baz=141,slow=31,SNR=11						
MKAR				LR	LR	16 29 58.8	
	comp=Z,34nm,21.1s,baz=186,slow=45						
MKAR	**Makanchi Array**	**4.23**	**321**	P	**Pn**	**16 27 49.1**	**+1.3**
MAKZ	**Makanchi**	**4.38**	**319**	⇑Pn	**Pn**	**16 27 51.6**	**+1.6**
	7.2nm,0.7s						
MAKZ				⇑Pg	**Pb**	**16 28 03.9**	**+3.5**
	8.5nm,0.6s						
MAKZ				⇓Lg	Lg	16 29 00.7	
	25nm,0.6s						
MAKZ	**Makanchi**	**4.38**	**319**		**Pn**	**16 27 51.7**	**+1.8**
DJR	**Jarkent**	**4.66**	**282**	*e*P	**Pb**	**16 28 07.0**	**+1.7**
	12nm,0.6s						
DJR				*e*S	**Sg**	**16 29 11.6**	**-1.4**
	53nm,0.6s						
DJR	**Jarkent**	**4.66**	**282**	Pg	**Pb**	**16 28 07.0**	**+1.7**
	12nm,0.6s						
DJR				Lg	Lg	16 29 11.2	
	53nm,0.6s						
PDGK	**Podgornoye**	**4.86**	**269**	⇑Pn	**Pn**	**16 27 55.9**	**-0.8**
	4.2nm,0.8s						
PDGK				⇑Pg	**Pb**	**16 28 12.3**	**+3.7**
	12nm,0.7s						
PDGK				⇑Lg	Lg	16 29 14.8	
	71nm,0.9s						
SHLS	**Shalkode**	**4.90**	**267**	*e*P	Pb	16 28 06.4	-3.0
SHLS				*e*S	**Sb**	**16 29 10.8**	**+2.4**
SHLS	**Shalkode**	**4.90**	**267**	Pg	Pb	16 28 06.4	-3.0
SHLS				Lg	Lg	16 29 10.7	
KPKS	**Kokpek**	**5.44**	**271**	*e*P	**Pb**	**16 28 20.4**	**+1.9**
	16nm,0.5s						
KPKS				*e*S	**Sg**	**16 29 34.6**	**-3.3**
	62nm,0.5s						
MNBS	**Baschi**	**5.64**	**278**	*e*P	**Pb**	**16 28 24.1**	**+2.2**
	15nm,0.5s						
MNBS				*e*S	**Sg**	**16 29 41.0**	**-3.3**
	33nm,0.4s						
MNBS	**Baschi**	**5.64**	**278**	Pg	**Pb**	**16 28 24.1**	**+2.2**
	15nm,0.5s						
MNBS				Lg	Lg	16 29 41.0	
	33nm,0.4s						
SATY	**Saty**	**5.68**	**267**	*e*P	**Pb**	**16 28 25.1**	**+2.4**
	5.0nm,0.4s						
SATY				*e*S	**Sg**	**16 29 42.7**	**-3.0**
	27nm,0.6s						
SATY	**Saty**	**5.68**	**267**	Pg	**Pb**	**16 28 25.1**	**+2.4**
	5.0nm,0.4s						
SATY				Lg	Lg	16 29 42.7	
	27nm,0.6s						
ARXS	**Arharly**	**6.06**	**279**	*e*P	**Pb**	**16 28 31.2**	**+2.2**
	8.3nm,0.6s						
ARXS				*e*S	**Sg**	**16 29 53.2**	**-4.5**
	28nm,0.7s						
ARXS	**Arharly**	**6.06**	**279**	Pg	**Pb**	**16 28 31.2**	**+2.2**
	8.3nm,0.6s						
ARXS				Lg	Lg	16 29 53.7	
	28nm,0.7s						
**

comp=Z,41nm,20.7s,baz=236,slow=33
CMAR Chiang Mai Arr 16.00 10 Pn **P** **16 31 38.1 -0.2**
0.3nm,0.3s,baz=198,slow=12,SNR=9.5
CMAR LR LR 16 36 33.6
comp=Z,22nm,21.6s,baz=238,slow=32
H08S2 Diego Garcia H 25.63 246 T T 16 59 29.4
baz=68,slow=76,SNR=29
H08S3 Diego Garcia H 25.63 246 T T 16 59 30.8
baz=68,slow=76,SNR=101
H08S1 Diego Carcia H 25.64 246 T T 16 59 30.8
baz=68,slow=76,SNR=8.3
RAMN Ramite 25.84 340 *e*P **P** **16 33 23.2 +1.8**
22nm,0.7s
TAPN Taplejung 25.87 343 *e*P **P** **16 33 22.7 +1.1**
15nm,0.7s
JIRN Jiri 26.64 340 *e*P **P** **16 33 30.0 +1.3**
37nm,1.0s
PKI Pulchoki 26.83 339 *e*P **P** **16 33 31.4 +1.0**
3.7nm,0.5s
PKIN Phulchoki 26.84 339 *e*P **P** **16 33 32.1 +1.7**
4.1nm,0.6s
GUN Gumba 26.97 340 *e*P **P** **16 33 32.4 +0.7**
13nm,0.7s
KKN Kakani 27.08 339 *e*P **P** **16 33 33.4 +0.9**
10nm,0.9s
GKN Gorkha 27.51 338 *e*P **P** **16 33 36.9 +0.6**
12nm,0.9s
KOLN Koldanda 27.71 336 *e*P **P** **16 33 38.8 +0.7**
7.7nm,0.8s
DANN Dangsing 28.16 337 *e*P **P** **16 33 43.0 +0.8**
9.4nm,0.5s
H01W3 Cape Leeuwin H 40.98 157 T T 17 18 58.3
baz=332,slow=76,SNR=65
H01W2 Cape Leeuwin H 40.99 157 T T 17 18 59.3
baz=332,slow=76,SNR=52
H01W1 Cape Leeuwin H 40.99 157 T T 17 18 57.3
baz=332,slow=76,SNR=40
WRA Warramunga Arr 43.74 123 P **P** **16 35 54.7 -0.5**
0.7nm,0.9s,baz=298,slow=9.5,SNR=4.1
ASAR Alice Springs 45.15 127 P **P** **16 36 06.0 -0.4**
0.4nm,0.8s,baz=301,slow=8.0,SNR=5.3
MKAR Makanchi Array 45.61 347 P **P** **16 36 09.6 -0.1**
2.2nm,0.7s,baz=168,slow=8.4,SNR=4.9
SONM Songino Array 45.93 10 P **P** **16 36 12.8 +0.5**
2.1nm,0.7s,baz=185,slow=8.2,SNR=3.0
ZALV Zalesovo Beam 52.00 352 P **P** **16 36 58.4 -0.2**
1.6nm,0.5s,baz=172,slow=7.8,SNR=9.7
BVAR Borovoye Array 54.55 341 P **P** **16 37 16.1 -1.3**
1.5nm,0.7s,baz=145,slow=14,SNR=6.8
ARCES ARCESS Array B 80.83 340 P **P** **16 40 02.8 -0.1**
1.5nm,0.8s,baz=94,slow=7.2,SNR=6.1
GERES GERESS Array B 83.01 319 P **P** **16 40 14.6 -0.2**
0.5nm,0.8s,baz=83,slow=4.1,SNR=2.7

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*OMAN **04** 16:30:50.3, 28.86N×58.44E, h10km, mb4.8/1, ml3.6/5*
*TEH **04** 16:31:09.1, 27.44N×57.86E, h8km, ML3.1*
ISC 04 16:31:09.4±1.3, 27.55N±0.05×58.07E±0.08, h10km, n17, σ2s32/20, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.51**	**321**	*e*Pg		**Pb**	**16 31 19.7**	**-0.8**
KHNJ				*e*Sg		**Sb**	**16 31 27.3**	**-0.7**
KBAM	**BAM**	**1.62**	**12**	*e*Pn		**Pg**	**16 31 40.9**	**+0.5**
KBAM				*e*			16 32 07.9	
	comp=Z,99nm,0.2s							
GENO	**Geno**	**1.69**	**265**	*e*Pg		**Pn**	**16 31 38.5**	**-0.7**
GENO				*e*Sg		**Sb**	**16 31 59.6**	**-2.6**
GENO				*e*			16 32 03.2	
	comp=Z,99nm,0.4s							
BANOM	**Banah**	**2.27**	**225**	P		**Pn**	**16 31 45.4**	**-1.5**
	SNR=8.5							
BANOM				S		**Sg**	**16 32 27.2**	**+5.0**
SHME	**Shamm**	**2.28**	**230**	P		**Pn**	**16 31 45.0**	**-2.1**
SHME				S		**Sg**	**16 32 26.4**	**+3.6**
CHMN	**Cheshme madani**	**2.35**	**349**	*e*Pn		**Pb**	**16 31 52.4**	**+0.4**
CHMN				*e*			16 32 35.9	
	comp=Z,99nm,0.6s							
NGRK	**Negar Kerman**	**2.40**	**331**	*e*Pn		**Pb**	**16 31 52.2**	**-0.7**
NGRK				*e*			16 32 35.6	
	comp=Z,99nm,0.2s							
TVBK	**TV Kerman**	**2.69**	**335**	*e*		Sg	16 32 49.4	+14
	comp=Z,99nm,0.3s							
MASF	**Masafi**	**2.76**	**219**	P		**Pn**	**16 31 52.0**	**-1.8**
KHGB	**Koh Gabri**	**3.14**	**334**	*e*Pn		**Pb**	**16 32 02.0**	**-3.5**
KHGB				*e*			16 32 52.1	
	comp=Z,99nm,0.5s							
FAQ	**Al Faqa, Dubai**	**3.57**	**219**	P		**Pn**	**16 32 02.8**	**-2.0**
SOHO	**SOHO**	**3.67**	**203**	P		**Pn**	**16 32 05.7**	**-0.5**
ARQ	**Araqi**	**4.42**	**199**	P		**Pn**	**16 32 15.9**	**-0.7**
	SNR=8.5							
WBK	**Wadi Bani Khal**	**4.99**	**170**	P		**Pn**	**16 32 23.1**	**-1.3**
	SNR=11							
ITEG	**Tejag**	**5.36**	**6**	*e*Pn		**Pn**	**16 32 32.9**	**+3.3**
IRAM	**Ramesheh**	**6.52**	**312**	*e*Pn		**Pn**	**16 32 47.5**	**+1.9**
KLNJ	**Kolanjah**	**6.63**	**303**	*e*Pn		**Pn**	**16 32 48.0**	**+0.8**

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*SOME **04** 16:32:51.4, 41.50N×82.42E, h10km*
*NNC **04** 16:32:55.2±2.4, 42.16N×82.72E, h0km, mb3.5, mpv3.1,*
Error ellipse: s-maj=21.7km s-min=11.4km az=169.0
ISC 04 16:32:51.3±2.4, 41.8N±0.1×82.66E±0.08, h13km, n32, σ2s48/46, 6C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.38**	**315**	*e*P		**Pb**	**16 33 34.6**	**+0.5**
	16nm,0.3s							
KTMS				*e*S		**Sg**	**16 34 06.0**	**-1.9**
	42nm,0.6s							
KTMS	**Ketmen**	**2.38**	**315**	Pg		**Pb**	**16 33 34.6**	**+0.5**
	16nm,0.3s							
KTMS				Lg		Lg	16 34 06.0	
	42nm,0.6s							
SHLS	**Shalkode**	**2.74**	**301**	*e*P		**Pb**	**16 33 38.1**	**-2.0**
	85nm,0.4s							
SHLS				*e*S		**Sb**	**16 34 11.9**	**-1.8**
	80nm,0.7s							
SHLS	**Shalkode**	**2.74**	**301**	Pg		**Pb**	**16 33 38.2**	**-2.0**
	85nm,0.4s							
SHLS				Lg		Lg	16 34 11.9	
	80nm,0.7s							
PDGK	**Podgornoye**	**2.81**	**304**	⇓Pn		**Pb**	**16 33 42.4**	**+1.0**
	2.8nm,0.4s							
PDGK				⇑Lg		Lg	16 34 21.5	
	21nm,0.7s							
UZB	**Uzynbulak**	**3.02**	**298**	*e*P		**Pb**	**16 33 46.5**	**+1.5**
	3.1nm,0.3s							
UZB				*e*S		**Sg**	**16 34 26.2**	**-2.1**
	13nm,0.6s							
UZB	**Uzynbulak**	**3.02**	**298**	Pg		**Pb**	**16 33 46.5**	**+1.5**
	3.1nm,0.3s							
UZB				Lg		Lg	16 34 26.2	
	13nm,0.6s							
DJR	**Jarkent**	**3.31**	**321**	*e*P		**Pg**	**16 33 54.5**	**-0.1**
	2.8nm,0.5s							
DJR				*e*S		**Sg**	**16 34 40.0**	**+2.6**
	8.9nm,0.7s							
DJR	**Jarkent**	**3.31**	**321**	Pg		**Pg**	**16 33 54.5**	**-0.1**
	2.8nm,0.5s							
DJR				Lg		Lg	16 34 40.0	
	8.9nm,0.7s							
KPKS	**Kokpek**	**3.38**	**301**	*e*P		**Pb**	**16 33 51.4**	**+0.2**
	6.7nm,0.2s							
KPKS				*e*S		**Sb**	**16 34 34.7**	**+2.4**
	18nm,0.5s							
SATY	**Saty**	**3.40**	**293**	*e*P		**Pb**	**16 33 51.3**	**-0.2**
	3.4nm,0.6s							
SATY				*e*S		**Sb**	**16 34 34.7**	**+1.9**
	9.2nm,0.6s							
SATY	**Saty**	**3.40**	**293**	Pg		**Pb**	**16 33 51.3**	**-0.2**
	3.4nm,0.6s							
SATY				Lg		Lg	16 34 34.7	
	9.2nm,0.6s							
MNBS	**Baschi**	**3.88**	**308**	*e*P		**Pb**	**16 34 01.9**	**+2.2**
	2.3nm,0.5s							
MNBS				*e*S		**Sg**	**16 34 52.8**	**-3.1**
	8.0nm,0.7s							
MNBS	**Baschi**	**3.88**	**308**	Pg		**Pb**	**16 34 01.9**	**+2.2**
	2.3nm,0.5s							
MNBS				Lg		Lg	16 34 52.8	
	8.0nm,0.7s							
KOTS	**Kotyrbulak**	**4.35**	**291**	*e*P		**Pb**	**16 34 10.7**	**+2.9**
	3.9nm,0.5s							
KOTS				*e*S		**Sg**	**16 35 07.3**	**-3.8**
	6.8nm,0.7s							
KOTS	**Kotyrbulak**	**4.35**	**291**	Pg		**Pb**	**16 34 10.7**	**+2.9**
	3.9nm,0.5s							
KOTS				Lg		Lg	16 35 07.3	
	6.8nm,0.7s							
MDOK	**Medeo**	**4.38**	**290**	*e*P		**Pb**	**16 34 09.8**	**+1.7**
	1.5nm,0.4s							
MDOK				*e*S		**Sb**	**16 35 06.0**	**+5.2**
	6.9nm,1.1s							
MDOK	**Medeo**	**4.38**	**290**	Lg		Lg	16 35 11.0	
	7.3nm,0.7s							
MDOK	**Medeo**	**4.38**	**290**	Pg		**Pb**	**16 34 09.8**	**+1.7**
	1.5nm,0.4s							
MDOK				Lg		Lg	16 35 06.0	
	6.9nm,1.1s							
TNSS	**Tian-Shan**	**4.41**	**288**	*e*P		**Pb**	**16 34 09.3**	**+0.3**
	2.5nm,0.4s							
TNSS				*e*S		**Sb**	**16 35 05.5**	**+3.3**
	2.9nm,0.8s							
TNSS	**Tian-Shan**	**4.41**	**288**	Pg		**Pb**	**16 34 09.3**	**+0.3**
	2.5nm,0.4s							
TNSS				Lg		Lg	16 35 05.5	
	2.9nm,0.8s							
KTBS	**Karatobe**	**4.81**	**296**	*e*P		**Pg**	**16 34 19.9**	**-3.5**
	1.1nm,0.5s							
KTBS				*e*S		**Sg**	**16 35 23.1**	**-2.5**
	10nm,0.7s							
KTBS	**Karatobe**	**4.81**	**296**	Pg		**Pg**	**16 34 19.9**	**-3.5**
	1.1nm,0.5s							
KTBS				Lg		Lg	16 35 23.1	
	10nm,0.7s							
MK31	**Makanchi Array**	**5.02**	**357**	Pn		**Pn**	**16 34 06.9**	**+0.6**
	0.3nm,0.5s,baz=193,slow=12,SNR=6.4							
MK31				Pg		**Pb**	**16 34 18.6**	**-0.3**
	0.8nm,0.5s,baz=174,slow=16,SNR=12							
MK31				⇑Lg		Lg	16 35 21.6	
	2.7nm,0.6s,baz=172,slow=27,SNR=4.0							
MAKZ	**Makanchi**	**5.05**	**355**	⇑Pn		**Pn**	**16 34 07.8**	**+1.1**
	0.4nm,0.4s							
MAKZ				⇑Pg		**Pb**	**16 34 18.5**	**-1.0**
	0.8nm,0.6s							
MAKZ				⇑Lg		Lg	16 35 21.6	
	3.2nm,0.7s							
KUU	**Kurty**	**5.11**	**296**	*e*P		**Pg**	**16 34 25.2**	**-3.8**
	0.8nm,0.5s							
KUU				*e*S		**Sg**	**16 35 32.6**	**-2.5**
	3.6nm,0.6s							
KUU	**Kurty**	**5.11**	**296**	Pg		**Pg**	**16 34 25.2**	**-3.8**
	0.8nm,0.5s							
KUU				Lg		Lg	16 35 32.6	
	3.6nm,0.6s							
KST	**Kastek**	**5.12**	**286**	*e*P		**Pb**	**16 34 22.6**	**+1.8**
	1.6nm,0.3s							
KST				*e*S		**Sb**	**16 35 28.7**	**+6.5**
	4.1nm,0.8s							
KST	**Kastek**	**5.12**	**286**	Pg		**Pb**	**16 34 22.6**	**+1.8**
	1.6nm,0.3s							
KST				Lg		Lg	16 35 28.7	
	4.1nm,0.8s							
TKM2	**Tokmak 2**	**5.36**	**285**	⇑Lg		Lg	16 35 42.3	
	2.5nm,0.7s							
KRBS	**Karabastau**	**5.49**	**293**	*e*P		**Pg**	**16 34 34.0**	**-2.4**
	0.7nm,0.5s							
KRBS				*e*S		**Sg**	**16 35 47.4**	**-0.1**
	2.0nm,0.5s							
KRBS	**Karabastau**	**5.49**	**293**	Pg		**Pg**	**16 34 34.0**	**-2.4**
	0.7nm,0.5s							
KRBS				Lg		Lg	16 35 47.4	
	2.0nm,0.5s							

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*IDC **04** 16:35:40.0±0.8, 5.50S×152.99E, h0km, mb4.1/14,*
mb1 4.2/16, mb1mx4.1/32, mbtmp4.0/16, ML2.6/2, MS2.9/2,
Ms1 2.9/2, ms1mx2.6/29, Error ellipse: s-maj=29.5km
s-min=14.2km az=111.0
ISC 04 16:35:45.7±0.8, 5.47S±0.09×152.9E±0.1, h37km, n19, σ0s77/19, mb3.9/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.48**	**329**	P		**Pn**	**16 36 09.5**	**-0.4**
PMG	**Port Moresby**	**6.93**	**235**	Pn		**Pn**	**16 37 24.7**	**-0.1**
	1.4nm,0.3s,baz=38,slow=8.7,SNR=7.2							
PMG				Sn		**Sn**	**16 38 43.4**	**+1.0**
	2.6nm,0.3s,baz=118,slow=10,SNR=1.7							
PMG				LR	LR	LR	16 39 33.9	
	comp=Z,62nm,20.8s,baz=72,slow=34							
HNR	**Honiara**	**7.99**	**120**	LR		LR	16 40 45.7	
	comp=Z,115nm,19.2s,baz=268,slow=39							
CTA	**Charters Tower**	**15.91**	**203**	Pn		**Pn**	**16 39 27.2**	**+0.2**
	0.1nm,0.3s,baz=17,slow=12,SNR=2.9							
WRA	**Warramunga Arr**	**23.11**	**230**	P		**P**	**16 40 49.0**	**+0.4**
	2.1nm,0.6s,baz=54,slow=9.9,SNR=25							
ASAR	**Alice Springs**	**25.75**	**223**	P		**P**	**16 41 13.6**	**+0.5**
	1.2nm,0.5s,baz=59,slow=9.1,SNR=33							
STKA	**Stephens Creek**	**28.33**	**201**	P		**P**	**16 41 36.2**	**0.0**
	1.5nm,0.7s,baz=16,slow=10,SNR=3.9							
FITZ	**Fitzroy Crossi**	**29.46**	**242**	P		**P**	**16 41 45.3**	**-1.0**
	1.0nm,0.4s,baz=33,slow=6.7,SNR=2.4							
KSRS	**Korea Array**	**48.66**	**333**	P		**P**	**16 44 26.1**	**0.0**
	0.8nm,0.7s,baz=159,slow=6.8,SNR=6.0							
USRK	**Ussuriysk Ar.**	**52.92**	**341**	P		**P**	**16 44 57.4**	**-0.8**
	0.7nm,0.7s,baz=160,slow=5.9,SNR=4.1							
CMAR	**Chiang Mai Arr**	**58.28**	**295**	P		**P**	**16 45 37.1**	**-0.1**
	0.3nm,0.5s,baz=113,slow=5.8,SNR=4.1							
PETK	**Petropavlovsk-**	**58.50**	**3**	P		**P**	**16 45 38.6**	**+0.5**
	1.9nm,0.5s,baz=157,slow=6.7,SNR=22							
VNDA	**Vanda**	**72.16**	**178**	P		**P**	**16 47 04.5**	**-1.7**
	1.3nm,0.3s,baz=355,slow=6.5,SNR=21							
MKAR	**Makanchi Array**	**80.92**	**319**	P		**P**	**16 47 56.5**	**+0.3**
	0.4nm,0.6s,baz=97,slow=6.9,SNR=6.6							
ZALV	**Zalesovo Beam**	**81.78**	**326**	P		**P**	**16 47 59.8**	**-0.8**
	1.1nm,0.5s,baz=94,slow=4.9,SNR=5.7							
ILAR	**Eielson Array**	**82.73**	**22**	P		**P**	**16 48 06.0**	**+0.6**
	1.1nm,0.7s,baz=246,slow=5.3,SNR=15							
NRIK	**Norilʹsk**	**86.64**	**341**	P		**P**	**16 48 25.0**	**0.0**
	2.6nm,0.5s,baz=129,slow=4.1,SNR=10							
YKA	**Yellowknife Ar**	**95.96**	**28**	P		**P**	**16 49 09.9**	**+1.4**
	0.4nm,0.6s,baz=269,slow=4.5,SNR=10.0							
TORD	**Torodi Ar. Bea**	**150.63**	**287**	PKPbc		**PKiKP**	**16 55 36.1**	**+0.5**
	1.1nm,0.7s,baz=87,slow=2.9,SNR=6.9							

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*SKO **04** 16:39:44.8, 41.44N×20.27E, h15km*
*PRU **04** 16:39:54.1±0.0, 40.98N×20.29E, h0km*
*TIR **04** 16:39:57.5, 41.49N×20.33E, h12km±2km, Md3.8, Ml3.7*
*BEO **04** 16:39:58.3±0.3, 41.49N×20.39E, h0km, ML3.2/17*
*IDC **04** 16:39:58.5±1.3, 41.54N×20.39E, h0km, mb3.2/5,*
mb1 3.5/10, mb1mx3.4/49, mbtmp3.4/10, ML3.4/5, MS2.7/1,
Ms1 2.7/1, ms1mx2.0/24, Error ellipse: s-maj=16.4km
s-min=14.1km az=9.0
*PDG **04** 16:39:58.5±0.5, 41.55N×20.32E, h10km, MD3.6/7,*
ML3.6/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0
*THE **04** 16:39:59.2, 41.50N×20.32E, h0km±1km, ML3.2/7, Error*
ellipse: s-maj=1.5km s-min=0.6km az=346.0
*LDG **04** 16:39:59.0±0.4, 41.50N×20.32E, h5km, Ml3.3/12, Error*
ellipse: s-maj=12.5km s-min=6.6km az=4.0
ISC 04 16:39:58.8±0.9, 41.49N±0.02×20.28E±0.02, h10km±6km, n161, σ1s43/239, 26C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.23**	**32**	P		**Pg**	**16 40 03.2**	**-0.3**
PHP				S		**Sg**	**16 40 07.0**	**+0.3**
PHP	**Peshkopia**	**0.23**	**32**	P		**Pg**	**16 40 03.2**	**-0.3**
	baz=22							
PHP				S		**Sg**	**16 40 06.9**	**+0.2**
	baz=22							
PHP				AMP				
	comp=N,98nm,0.5s,baz=22							
TIR	**Tirane**	**0.35**	**245**	P		**Pg**	**16 40 05.7**	**0.0**
TIR				S		**Sg**	**16 40 12.0**	**+1.7**
	comp=N,7μm,0.4s							
TIR	**Tirane**	**0.35**	**245**	*e*Pg		**Pg**	**16 40 05.5**	**-0.1**
TIR				*e*Sg		**Sg**	**16 40 11.5**	**+1.2**
TIR	**Tirane**	**0.35**	**245**	⇓P		**Pg**	**16 40 05.0**	**-0.7**
TIR				⇑S		**Sg**	**16 40 10.7**	**+0.4**
TIR	**Tirane**	**0.35**	**245**	P		**Pg**	**16 40 05.6**	**-0.1**
	baz=249							
TIR				S		**Sb**	**16 40 12.3**	**-0.3**
	baz=249							
TIR				AMP				
	comp=E,25nm,0.4s,baz=249							
TIR	**Tirane**	**0.35**	**245**	*i* Pg		**Pg**	**16 40 05.4**	**-0.3**
OHR	**Ohrid**	**0.54**	**134**	*i* Pg		**Pg**	**16 40 08.7**	**-0.7**
OHR				*i* Sg		**Sb**	**16 40 17.8**	**-0.6**
OHR				*e*Lg		Lg	16 40 18.4	
	comp=N,3μm,0.7s							
PUK	**Puka**	**0.62**	**332**	P		**Pg**	**16 40 10.0**	**-0.9**
	baz=330							
PUK				S		**Sb**	**16 40 20.4**	**-0.3**
	baz=330							
PUK				AMP				
	comp=N,14nm,0.3s,baz=330							
PRZK	**Prizren**	**0.80**	**26**	*i* Pg		**Pg**	**16 40 13.1**	**-1.2**
PRZK				*i* Sg		**Sb**	**16 40 25.8**	**0.0**
BCI	**Bajram Curri**	**0.89**	**350**	P		**Pg**	**16 40 14.4**	**-1.5**
	baz=348							
BCI				S		**Sb**	**16 40 28.2**	**0.0**
	baz=348							
BCI				AMP				
	comp=E,13nm,0.7s,baz=348							
ULC	**Ulcinj**	**0.91**	**302**	*i* Pg		**Pg**	**16 40 14.8**	**-1.5**
ULC	**Ulcinj**	**0.91**	**302**	⇑*i*Pg		**Pg**	**16 40 14.8**	**-1.5**
ULC				*i* Sg		**Sb**	**16 40 29.4**	**+0.6**
ZATK	**Zatriq**	**0.99**	**15**	*i* Pg		**Pg**	**16 40 16.3**	**-1.6**
ZATK				*i* Sg		**Sn**	**16 40 33.0**	**+0.1**
DRME	**Dracevica, Mon**	**1.07**	**311**	⇑*i*Pn		**Pg**	**16 40 17.6**	**-1.9**
DRME	**Dracevica, Mon**	**1.07**	**311**	⇓*i*Pg		**Pg**	**16 40 18.0**	**-1.5**
DRME				*i* Sg		**Sb**	**16 40 34.7**	**+1.1**
FNA	**Florina**	**1.09**	**130**	P		**Pg**	**16 40 18.8**	**-0.9**
FNA				S		**Sn**	**16 40 35.0**	**-0.3**
	comp=E,3μm,0.8s							
PVY	**Plav**	**1.13**	**348**	⇑*i*Pg		**Pg**	**16 40 18.4**	**-2.1**
PVY				*i* Sg		**Sb**	**16 40 35.3**	**+0.1**
PDG	**Podgorica**	**1.21**	**321**	*e*Pg		**Pg**	**16 40 20.2**	**-1.8**
PDG				*e*Sg		**Sb**	**16 40 38.7**	**+1.2**
PDG	**Podgorica**	**1.21**	**321**	⇑P		**Pg**	**16 40 20.3**	**-1.8**
PDG				⇑S		**Sn**	**16 40 38.8**	**+0.6**
PDG	**Podgorica**	**1.21**	**321**	⇑*i*Pn		**Pg**	**16 40 20.0**	**-2.1**
TTG	**Podgorica**	**1.21**	**321**	⇑*i*Pg		**Pg**	**16 40 20.3**	**-1.8**
TTG				*i* Sg		**Sn**	**16 40 38.9**	**+0.6**
NEST	**Nestorio**	**1.22**	**151**	P		**Pb**	**16 40 22.0**	**-0.1**
NEST				S		**Sn**	**16 40 39.5**	**+0.8**
	comp=E,1μm,0.7s							
GJIK	**Gjilan**	**1.29**	**41**	*i* Pg		**Pg**	**16 40 22.1**	**-1.5**
GJIK				*i* Sg		**Sn**	**16 40 40.3**	**-0.1**
BUM	**Brajici-Budva**	**1.31**	**308**	⇓*i*Pg		**Pn**	**16 40 22.5**	**-0.8**
BUM				*i* Sg		**Sn**	**16 40 43.0**	**+2.1**
LSK	**Leskovik**	**1.36**	**170**	P		**Pn**	**16 40 24.2**	**+0.3**
LSK				S		**Sn**	**16 40 44.6**	**+2.5**
	comp=E,2μm,0.7s							
LSK	**Leskovik**	**1.36**	**170**	P		**Pn**	**16 40 23.4**	**-0.5**
	baz=171							
LSK				S		**Sn**	**16 40 42.4**	**+0.3**
	baz=171							
LSK				AMP				
	comp=E,5.8nm,0.7s,baz=171							
BEY	**Berane**	**1.41**	**348**	*i* Pn		**Pn**	**16 40 23.6**	**-1.0**
IVA	**Berane**	**1.41**	**348**	⇓*i*Pg		**Pn**	**16 40 23.6**	**-1.0**
IVA				*i* Sg		**Sn**	**16 40 44.8**	**+1.5**
STIP	**Stip**	**1.44**	**81**	*i* Pn		**Pg**	**16 40 27.3**	**+0.8**
STIP				*i* Sn		**Sg**	**16 40 50.2**	**+5.0**
STIP				*e*Lg		Lg	16 40 51.4	
	comp=N,93nm,0.3s							
PENT	**Pentalofos**	**1.45**	**153**	P		**Pb**	**16 40 25.6**	**-0.3**
PENT				S		**Sg**	**16 40 45.8**	**+0.4**
	comp=N,660nm,0.6s							
SMRK	**Smrekonice**	**1.46**	**19**	*i* Pn		**Pn**	**16 40 25.1**	**-0.2**
CEME	**Cevo**	**1.46**	**316**	⇑*i*Pg		**Pn**	**16 40 25.0**	**-0.3**
CEME				*i* Sg		**Sg**	**16 40 47.7**	**+1.8**
KOME	**Kolasin**	**1.47**	**337**	⇓*i*Pg		**Pn**	**16 40 25.0**	**-0.5**
KOME				*i* Sg		**Sg**	**16 40 47.3**	**+1.1**
NKME	**Niksic**	**1.61**	**323**	⇓*i*Pn		**Pn**	**16 40 27.5**	**+0.1**
NKME				*i* Sn		**Sg**	**16 40 51.1**	**+0.4**
SRN	**Sarande**	**1.62**	**188**	P		**Pn**	**16 40 27.9**	**+0.4**
SRN				S		**Sg**	**16 40 51.3**	**+0.3**
	comp=N,368nm,0.7s							
SRN	**Sarande**	**1.62**	**188**	P		**Pb**	**16 40 28.7**	**-0.2**
	baz=190							
SRN				S		**Sg**	**16 40 51.0**	**0.0**
	baz=190							
SRN				AMP				
	comp=E,1.5nm,0.8s,baz=190							
NKY	**Niksic**	**1.63**	**324**	⇑*i*Pn		**Pn**	**16 40 28.0**	**+0.3**
NKY				*i* Sn		**Sg**	**16 40 51.6**	**+0.3**
KZN	**Kozani**	**1.64**	**136**	P		**Pb**	**16 40 28.9**	**-0.2**
KZN				S		**Sg**	**16 40 51.2**	**-0.2**
HCY	**Herceg Novi**	**1.64**	**306**	*e*Pn		**Pn**	**16 40 27.7**	**0.0**
HCY	**Herceg Novi**	**1.64**	**306**	⇑*i*Pn		**Pn**	**16 40 27.9**	**+0.2**
HCY				*i* Sn		**Sg**	**16 40 52.0**	**+0.7**
GRG	**Griva**	**1.69**	**108**	P		**Pn**	**16 40 28.6**	**+0.3**
VAY	**Valandovo**	**1.73**	**95**	*e*Pn		**Pn**	**16 40 28.6**	**-0.3**
VAY	**Valandovo**	**1.73**	**95**	*i* Pg		**Pn**	**16 40 28.8**	**-0.1**
VAY				*i* Sg		**Sb**	**16 40 51.8**	**-0.6**
VAY				*e*Lg		Lg	16 40 52.0	
	comp=N,293nm,0.7s							
KPRO	**Kipourio**	**1.74**	**152**	P		**Pn**	**16 40 29.9**	**+0.7**
KPRO				S		**Sg**	**16 40 53.9**	**-0.9**
BARS	**Barje**	**1.75**	**40**	*e*Pg		**Pn**	**16 40 29.5**	**+0.3**
BARS				*e*Sg		**Sn**	**16 40 52.0**	**+0.5**
BARS	**Barje**	**1.75**	**40**	*i* Pn		**Pn**	**16 40 28.1**	**-1.1**
KTI	**Kastanea**	**1.77**	**128**	P		**Pn**	**16 40 30.0**	**+0.4**
KEK	**Kerkira**	**1.81**	**192**	P		**Pn**	**16 40 31.1**	**+1.0**
KEK				S		**Sg**	**16 40 56.5**	**-0.6**
	comp=N,335nm,0.6s							
SELS	**Selova**	**1.83**	**19**	*e*Pn		**Pn**	**16 40 29.6**	**-0.8**
SELS				*e*Sn		**Sb**	**16 40 54.8**	**-0.7**
JAN	**Janina**	**1.88**	**167**	P		**Pb**	**16 40 32.4**	**-0.9**
JAN				S		**Sb**	**16 40 57.8**	**+0.9**
TREB	**Trebinje**	**1.89**	**311**	*e*Pn		**Pn**	**16 40 31.9**	**+0.8**
TREB				*e*Sn		**Sb**	**16 40 58.7**	**+1.7**
TREB	**Trebinje**	**1.89**	**311**	*e*Pn		**Pn**	**16 40 32.4**	**+1.3**
BRY	**Bratogost**	**1.91**	**318**	⇑*i*Pn		**Pn**	**16 40 32.7**	**+1.1**

MGRS	**Mrkonjic Grad**	**3.75**	**322**	*e*Pn		**Pn**	**16 40 58.6**	**+1.9**
KIJV	**Kijevo**	**3.80**	**313**	*e*Pn		**Pn**	**16 40 59.4**	**+2.0**
KIJV				Sn		**Sn**	**16 41 44.3**	**+2.1**
SRE	**Strehaia**	**3.82**	**33**	⇓P		**Pn**	**16 40 57.8**	**+0.1**
BLY	**Banja Luka**	**3.97**	**326**	*e*Pn		**Pn**	**16 41 01.4**	**+1.7**
ZIRJ	**Zirje**	**4.05**	**304**	*e*Pn		**Pn**	**16 41 01.7**	**+0.9**
ZIRJ				Sn		**Sn**	**16 41 50.2**	**+1.9**
MORI	**Morici**	**4.12**	**307**	*e*Pn		**Pn**	**16 41 03.0**	**+1.2**
MORI				Sn		**Sn**	**16 41 52.1**	**+2.0**
BZS	**Buzias**	**4.24**	**13**	⇓P		**Pn**	**16 41 03.4**	**+0.1**
GZR	**Gura Zlata**	**4.30**	**24**	⇓P		**Pn**	**16 41 04.5**	**+0.2**
UDBI	**Udbina**	**4.49**	**314**	*e*Pn		**Pn**	**16 41 08.8**	**+1.9**
MOSL	**Moslavina**	**4.85**	**329**	*e*Pn		**Pn**	**16 41 12.5**	**+0.6**
MORH	**Mrgy, Hungar**	**4.87**	**346**	⇓P		**Pn**	**16 41 12.7**	**+0.7**
MORH	**Mrgy, Hungar**	**4.87**	**346**	*e*Pn		**Pn**	**16 41 12.7**	**+0.7**
SIRR	**Siria**	**4.88**	**11**	⇑P		**Pn**	**16 41 11.9**	**-0.3**
NVLJ	**Novalja**	**5.01**	**310**	*e*Pn		**Pn**	**16 41 14.9**	**+0.9**
NVLJ				Sn		**Sn**	**16 42 13.6**	**+1.6**
AQU	**L'Aquila**	**5.21**	**282**	*e*Pn		**Pn**	**16 41 13.1**	**-3.6**
VOIR		**5.25**	**40**	⇓P		**Pn**	**16 41 17.7**	**+0.3**
CRES	**Cresnjev**	**5.57**	**323**	*i* Pn		**Pn**	**16 41 22.6**	**+0.9**
CRES	**Cresnjev**	**5.57**	**323**	⇑*i* Pn		**Pn**	**16 41 22.2**	**+0.5**
DRGR		**5.58**	**17**	⇑P		**Pn**	**16 41 22.9**	**+1.0**
MLR	**Muntele Rosu**	**5.74**	**44**	Pn		**Pn**	**16 41 25.7**	**+1.6**
	comp=N,0.9nm,0.3s,baz=160,slow=16,SNR=14							
MLR				Sn		**Sn**	**16 42 30.0**	**-0.1**
	comp=N,0.3nm,0.3s,baz=270,slow=18,SNR=3.4							
MLR				Lg		Lg	16 43 03.6	
	baz=307,slow=16,SNR=3.1							
MLR	**Muntele Rosu**	**5.74**	**44**	⇑P		**Pn**	**16 41 24.2**	**+0.1**
CEY	**Cerknica**	**6.01**	**317**	*e*Pn		**Pn**	**16 41 28.1**	**+0.4**
JAVS	**Javornik**	**6.30**	**316**	*e*Pn		**Pn**	**16 41 32.8**	**+1.0**
PERS	**Pernice**	**6.35**	**326**	*e*Pn		**Pn**	**16 41 33.3**	**+0.9**
SOKA	**Soboth**	**6.42**	**326**	*i* Pn		**Pn**	**16 41 34.6**	**+1.3**
	comp=N,3.4nm,0.5s,SNR=7.2							
SOKA				*e*Sn		**Sn**	**16 42 47.3**	**+0.7**
	comp=N,2.6nm,0.5s							
PSZ	**Piszkesteto**	**6.43**	**358**	⇓P		**Pn**	**16 41 34.4**	**+0.8**
SRO	**Srobarova**	**6.47**	**348**	*e*SN		**Sn**	**16 42 53.2**	**+4.3**
SRO				eLG		Lg	16 43 01.0	
OBKA	**Obir**	**6.50**	**322**	*e*Pn		**Pn**	**16 41 36.1**	**+1.5**
	comp=N,2.0nm,0.4s							
OBKA				Sn		**Sn**	**16 42 51.0**	**+2.3**
	comp=N,7.8nm,0.5s							
ARSA	**Arzberg**	**6.69**	**331**	*i* Pn		**Pn**	**16 41 38.4**	**+1.3**
	comp=N,2.0nm,0.4s							
ARSA				*i* Sn		**Sn**	**16 42 54.1**	**+0.7**
	comp=N,2.6nm,0.5s							
CFR	**Carcaliu**	**6.81**	**55**	⇑P		**Pn**	**16 41 38.8**	**+0.2**
MYKA	**Terra Mystica**	**7.02**	**319**	*i* Pn		**Pn**	**16 41 43.7**	**+2.0**
	comp=N,2.4nm,0.5s							
MYKA				*i* Sn		**Sn**	**16 43 03.0**	**+1.5**
	comp=N,1.7nm,0.4s							
VYHS	**Vyhne**	**7.08**	**352**	*e*PN		Pn	16 41 47.8	+5.4
VYHS				*e*SN		**Sn**	**16 43 02.8**	**0.0**
IDI	**Anoyia**	**7.17**	**148**	Pn		**Pn**	**16 41 45.8**	**+2.0**
	comp=N,0.8nm,0.3s,baz=313,slow=13,SNR=6.3							
IDI				Sn		**Sn**	**16 43 02.3**	**-3.1**
	comp=N,0.9nm,0.3s,baz=224,slow=16,SNR=1.9							
MODS	**Modra-Piesok**	**7.20**	**344**	*e*PN		**Pn**	**16 41 47.8**	**+3.7**
MODS				*e*SN		**Sn**	**16 43 07.0**	**+1.0**
CRVS	**Cervenica-Dubn**	**7.46**	**6**	ePN		**Pn**	**16 41 50.5**	**+2.9**
KBA	**Koelnbreinsper**	**7.48**	**321**	Pn		**Pn**	**16 41 49.0**	**+1.0**
	comp=N,2.4nm,0.5s							
KBA				*e*Sn		**Sn**	**16 43 14.7**	**+1.7**
	comp=N,2.1nm,0.4s							
MOA	**Molln**	**7.67**	**328**	*e*Pn		**Pn**	**16 41 52.6**	**+2.1**
	comp=N,1.9nm,0.4s							
MOA				*e*Sn		**Sn**	**16 43 18.7**	**+1.4**
	comp=N,1.6nm,0.3s							
ABTA	**Abfaltersbach**	**7.67**	**316**	*e*Pn		**Pn**	**16 41 51.7**	**+1.1**
	comp=N,1.8nm,0.3s							
ABTA				*e*Sn		**Sn**	**16 43 17.4**	**-0.1**
	comp=N,9.2nm,0.6s							
WTTA	**Wattenberg**	**8.46**	**316**	*i* Pn		**Pn**	**16 42 03.6**	**+2.1**
	comp=N,4.2nm,0.4s							
WTTA				*i* Sn		**Sn**	**16 43 36.6**	**-0.6**
	comp=N,8.3nm,0.6s							
PGF	**Pioggiola**	**8.47**	**281**	*e*Pn		**Pn**	**16 41 59.5**	**-2.1**
PGF				*e*Sn		**Sn**	**16 43 30.1**	**-7.1**
	comp=N,0.8nm,0.4s							
WATA	**Walderalm**	**8.54**	**316**	*i* Pn		**Pn**	**16 42 04.4**	**+1.9**
	comp=N,2.3nm,0.3s							
WATA				*i* Sn		**Sn**	**16 43 38.4**	**-0.5**
	comp=N,6.1nm,0.5s							
SQTA	**Sankt Quirin**	**8.66**	**314**	*e*Pn		**Pn**	**16 42 06.0**	**+1.8**
	comp=N,4.4nm,0.3s							
GERES	**GERESS Array B**	**8.70**	**330**	Pn		**Pn**	**16 42 05.6**	**+1.0**
	comp=N,0.2nm,0.3s,baz=156,slow=14,SNR=6.6							
GERES				Sn		**Sn**	**16 43 46.5**	**+3.7**
	comp=N,0.2nm,0.3s,baz=150,slow=26,SNR=2.6							
GERES				LR		LR	16 46 03.0	
	comp=N,46nm,19.8s,baz=140,slow=42							
KHC	**Kasperske Hory**	**8.98**	**331**	*e*PN		**Pn**	**16 42 09.5**	**+1.0**
KHC				*e*SN		**Sn**	**16 43 52.3**	**+2.7**
DAVOX	**Davos/Dischmat**	**9.16**	**309**	Pn		**Pn**	**16 42 12.3**	**+1.2**
	comp=N,0.4nm,0.3s,baz=127,slow=21,SNR=3.5							
DAVOX				Sn		**Sn**	**16 43 52.2**	**-2.0**
	comp=N,0.3nm,0.3s,baz=122,slow=21,SNR=3.4							
SBF	**Sospel**	**9.76**	**288**	*e*Pn		**Pn**	**16 42 17.8**	**-1.4**
SBF				*e*Sn		Sn	16 44 00.9	-7.9
	comp=N,0.9nm,0.3s							
FRF	**La Foret Royal**	**10.28**	**286**	*e*Pn		**Pn**	**16 42 26.4**	**+0.1**
FRF				*e*Sn		Sn	16 44 13.4	-8.1
	comp=N,0.9nm,0.3s							
LMR	**La Mourre**	**10.35**	**285**	*e*Pn		**Pn**	**16 42 27.6**	**+0.3**
LMR				*e*Sn		Sn	16 44 15.2	-8.1
	comp=N,0.3nm,0.2s							
MBDF	**Montbardon**	**10.39**	**293**	*e*Pn		**Pn**	**16 42 26.6**	**-1.4**
MBDF				*e*Sn		Sn	16 44 16.3	-8.3
	comp=N,0.6nm,0.2s							
LPG	**La Plagne**	**10.61**	**297**	*e*Pn		**Pn**	**16 42 30.2**	**-0.9**
LPG				*e*Sn		Sn	16 44 20.5	-10
	comp=N,5.4nm,0.7s							
LPL	**La Plagne**	**10.63**	**297**	*e*Pn		**Pn**	**16 42 29.4**	**-1.9**
LPL				*e*Sn		Sn	16 44 22.2	-8.3
	comp=N,3.7nm,0.4s							
SMRF	**Simiane la Rot**	**11.10**	**288**	*e*Pn		**Pn**	**16 42 34.5**	**-3.1**
SMRF				*e*Sn		Sn	16 44 32.9	-8.8
	comp=N,0.5nm,0.3s							
CABF	**La Chapelle**	**11.42**	**301**	*e*Pn		**Pn**	**16 42 41.5**	**-0.5**
HINF	**Hinteralfeld**	**11.46**	**308**	*e*Pn		**Pn**	**16 42 41.2**	**-1.2**
CDF	**Champ du Feu**	**11.51**	**311**	*e*Pn		**Pn**	**16 42 45.0**	**+1.7**
CDF				*e*Sn		**Sn**	**16 44 49.6**	**-2.3**
	comp=N,0.5nm,0.3s							
HAU	**Haudompre**	**11.85**	**308**	*e*Pn		**Pn**	**16 42 45.5**	**-2.2**
VIVF	**Saint-Julien-l**	**11.88**	**292**	*e*Pn		**Pn**	**16 42 45.8**	**-2.5**
VIVF				*e*Sn		Sn	16 44 51.9	-9.0
	comp=N,0.5nm,0.2s							
SMF	**Signal de Mont**	**12.89**	**299**	*e*Pn		**Pn**	**16 43 01.3**	**-0.7**
SSF	**Saint Saulge**	**13.24**	**300**	*e*Pn		**Pn**	**16 43 04.6**	**-2.1**
AVF	**Avril sur Loir**	**13.26**	**299**	*e*Pn		**Pn**	**16 43 06.0**	**-0.9**
LFF	**La Frestale**	**14.66**	**290**	*e*Pn		**Pn**	**16 43 24.1**	**-2.0**
MMAI	**Mount Meron Ar**	**14.70**	**120**	Pn		**P**	**16 43 32.5**	**-0.5**
	comp=N,0.5nm,0.3s,baz=322,slow=9.5,SNR=4.6							
MFF	**Saint Martin d**	**15.54**	**296**	*e*Pn		**Pn**	**16 43 36.4**	**-1.4**
GRR	**Gorron**	**16.45**	**302**	*e*Pn		**Pn**	**16 43 48.1**	**-1.5**
GRR				*e*Sn		Sn	16 46 40.8	-11
	comp=N,1.5nm,0.2s							
HFS	**Hagfors**	**19.11**	**350**	P		**P**	**16 44 21.6**	**+0.1**
	comp=N,0.2nm,0.3s,baz=163,slow=11,SNR=7.0							
FINES	**FINESS Array B**	**20.29**	**8**	P		**P**	**16 44 34.3**	**-0.1**
	comp=N,0.5nm,0.5s,baz=177,slow=12,SNR=4.9							
NOA	**NORSAR Array B**	**20.34**	**347**	P		**P**	**16 44 34.3**	**-0.7**
	comp=N,0.8nm,0.8s,baz=172,slow=12,SNR=4.3							
EKA	**Eskdalemuir Ar**	**20.69**	**320**	P		**P**	**16 44 39.9**	**+1.0**
	comp=N,0.8nm,0.6s,baz=116,slow=9.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	**32.56**	**215**	P		**P**	**16 46 33.4**	**+3.1**
	comp=N,0.3nm,0.5s,baz=17,slow=11,SNR=2.2							
MKAR	**Makanchi Array**	**43.79**	**61**	P		**P**	**16 48 04.2**	**-0.4**
	comp=N,0.2nm,0.3s,baz=281,slow=7.4,SNR=7.4							

*NNC **04** 17:00:14.2±4.3,36°.74N×70°.35E,h154^{km}±97^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=44.1km s-min=27.8km az=31.0*

ISC 04 17:00:13.4±3.7,**36°.7N**±0°.2×**70°.4E**±0°.2,**h150**^{km},**n12, σ0^{s}39/14,3C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**6.04**	**24**	P		**Pn**	**17 01 41.2**	**+0.4**
	SNR=130							
UCH	**Uchtor**	**6.41**	**29**	P		**Pn**	**17 01 46.2**	**+0.3**
	SNR=20							
KK31	**Karatay Array**	**6.43**	**1**	P		**Pn**	**17 01 46.1**	**+0.4**
	1.0nm,0.2s,baz=167,slow=6.4,SNR=38							
KK31				S		**Sn**	**17 02 57.6**	**-0.5**
	0.7nm,0.2s,baz=150,slow=44,SNR=4.3							
EKS2	**Erkin-Say**	**6.54**	**23**	P		**Pn**	**17 01 47.7**	**+0.4**
	SNR=13							
AAK	**Ala-Archa**	**6.76**	**27**	P		**Pn**	**17 01 50.5**	**+0.3**
	SNR=10							
AAK	**Ala-Archa**	**6.76**	**27**	⇑P		**Pn**	**17 01 50.4**	**+0.1**
	4.1nm,0.6s							
AAK				⇓S		**Sn**	**17 03 06.5**	**+0.3**
	6.7nm,0.7s							
KBK	**Karagaybulak**	**6.95**	**29**	P		**Pn**	**17 01 53.0**	**+0.2**
	SNR=5.6							
CHMS	**Chumysh**	**7.17**	**27**	P		**Pn**	**17 01 55.9**	**+0.3**
	SNR=5.1							
USP	**Ospenovka**	**7.32**	**24**	P		**Pn**	**17 01 57.1**	**-0.5**
	SNR=9.0							
TKM2	**Tokmak 2**	**7.43**	**31**	P		**Pn**	**17 01 58.9**	**-0.4**
	SNR=26							
TKM2	**Tokmak 2**	**7.43**	**31**	⇑P		**Pn**	**17 01 58.8**	**-0.5**
	11nm,0.5s							
AB31	**Akbulak array**	**14.69**	**332**	⇑P		**Pn**	**17 03 33.7**	**-0.1**
	0.5nm,0.6s,baz=154,slow=12,SNR=12							

*IDC **04** 17:11:12.5±0.7,33°.94N×136°.67E,h361^{km}±7^{km}, mb3.2/18, mb1 3.5/24,mb1mx3.3/54,mbtmp4.0/24, Error ellipse: s-maj=12.0km s-min=9.2km az=111.0*

*JMA **04** 17:11:13.1±0.1,33°.99N×136°.61E,h360^{km}±1^{km}, M3.4*

ISC 04 17:11:12.7±0.7,**33°.98N**±0°.08×**136°.65E**±0°.07,**h362**^{km}±5^{km}, **n40, σ0^{s}72/51,mb3.5/18,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TTO1	**TONANKAI O.B.S**	**0.37**	**162**	P		**Pn**	**17 11 58.6**	**+0.9**
TTO2	**TONANKAI O.B.S**	**0.40**	**127**	P		**Pn**	**17 11 58.8**	**+1.1**
TTO2				*e*S		**S**	**17 12 35.4**	**+1.5**
JKN2	**Miekihoku**	**0.41**	**310**	P		**Pn**	**17 11 58.5**	**+0.5**
JKN2				*e*S		**S**	**17 12 33.3**	**-1.1**
JIE	**Ise**	**0.42**	**7**	P		**Pn**	**17 11 58.7**	**+0.7**
JIE				*e*S		**S**	**17 12 33.9**	**-0.6**
JMMH	**Miemihama**	**0.54**	**253**	P		**Pn**	**17 11 58.4**	**+0.1**
JMMH				*e*S		**S**	**17 12 33.7**	**-1.2**
JTNC	**Tanabenakahech**	**0.88**	**260**	P		**Pn**	**17 11 59.6**	**+0.3**
JTNC				*e*S		**S**	**17 12 35.8**	**-0.9**
JWY	**Kouya**	**0.91**	**286**	P		**Pn**	**17 11 59.9**	**+0.5**
JWY				*e*S		**S**	**17 12 36.2**	**-0.8**
TK02	**Tokai 2**	**0.92**	**91**	P		**Pn**	**17 12 00.0**	**+0.9**
HMMJ	**Hamamatsu 2**	**1.25**	**45**	P		**Pn**	**17 12 01.0**	**+0.3**
HMMJ				*e*S		**S**	**17 12 38.2**	**-1.1**
JAO	**Obara**	**1.38**	**21**	P		**Pn**	**17 12 02.0**	**+0.6**
JAO				*e*S		**S**	**17 12 40.8**	**+0.2**
JYTA	**Yamagatataniai**	**1.62**	**3**	P		**Pn**	**17 12 03.1**	**+0.6**
JYTA				*e*S		**S**	**17 12 42.3**	**-0.4**
JWT	**Wachi**	**1.66**	**322**	P		**Pn**	**17 12 03.3**	**+0.5**
JWT				*e*S		**S**	**17 12 42.2**	**-1.0**
JNY	**Yasuok**	**1.71**	**36**	P		**Pn**	**17 12 03.5**	**+0.3**
JAI	**Aioi**	**1.83**	**265**	P		**Pn**	**17 12 04.3**	**+0.3**
JHJ	**Hachijo jima 2**	**2.75**	**107**	P		**Pn**	**17 12 10.8**	**0.0**
	43nm,0.3s,baz=78,slow=20,SNR=5.0							
MAT	**Matsushiro**	**2.86**	**26**	P		**Pn**	**17 12 11.3**	**-0.3**
MAT				S		**S**	**17 12 58.4**	**-0.8**
MJAR	**Matsushiro Arr**	**2.86**	**26**	P		**Pn**	**17 12 11.6**	**0.0**
	1.4nm,0.3s,baz=189,slow=9.3,SNR=164							
MJAR				S		**S**	**17 12 59.5**	**+0.3**
	0.3nm,0.3s,baz=185,slow=14,SNR=8.0							
JNU	**Nakatsue**	**4.89**	**262**	P		**Pn**	**17 12 32.4**	**+0.7**
	4.9nm,0.3s,baz=139,slow=1.4,SNR=42							
KSRS	**Korea Array**	**7.90**	**299**	P		**P**	**17 13 07.0**	**+0.2**
	2.9nm,0.3s,baz=114,slow=12,SNR=118							
JCJ	**Chichijima**	**8.35**	**144**	S		S	17 14 37.5	-11
	6.9nm,0.3s,baz=287,slow=20,SNR=2.1							
USRK	**Ussuriysk Ar.**	**10.83**	**342**	P		**Pn**	**17 13 40.6**	**+0.4**
	baz=165,slow=11,SNR=17							
ASAJ	**Asahikawa**	**11.13**	**23**	P		**Pn**	**17 13 42.3**	**-1.5**
	2.5nm,0.3s,baz=215,slow=15,SNR=52							
PETK	**Petropavlovsk-**	**24.31**	**32**	P		**P**	**17 15 58.9**	**+0.3**
	1.6nm,0.9s,baz=259,slow=6.8,SNR=5.7							
SONM	**Songino Array**	**26.53**	**311**	P		**P**	**17 16 19.8**	**+1.2**
	1.0nm,0.5s,baz=95,slow=9.1,SNR=3.5							
MA2	**Magadan**	**27.25**	**16**	P		**P**	**17 16 24.7**	**0.0**
	3.0nm,0.6s,baz=189,slow=10,SNR=5.2							
CMAR	**Chiang Mai Arr**	**36.95**	**255**	P		**P**	**17 17 48.8**	**-0.1**
	1.2nm,0.5s,baz=53,slow=7.1,SNR=17							
ZALV	**Zalesovo Beam**	**41.21**	**315**	P		**P**	**17 18 24.0**	**+0.8**
	1.3nm,0.4s,baz=84,slow=8.7,SNR=6.4							
MKAR	**Makanchi Array**	**42.53**	**304**	P		**P**	**17 18 34.0**	**+0.1**
	2.5nm,0.5s,baz=85,slow=10,SNR=47							
FITZ	**Fitzroy Crossi**	**52.84**	**193**	P		**P**	**17 19 52.2**	**-0.2**
	1.6nm,0.7s,baz=22,slow=8.4,SNR=6.8							
WRA	**Warramunga Arr**	**53.66**	**183**	P		**P**	**17 19 57.5**	**-0.8**
	0.7nm,0.3s,baz=360,slow=7.5,SNR=34							
ILAR	**Eielson Array**	**54.13**	**31**	P		**P**	**17 20 01.2**	**0.0**
	0.9nm,0.6s,baz=256,slow=4.8,SNR=16							
ASAR	**Alice Springs**	**57.38**	**183**	P		**P**	**17 20 24.0**	**-0.5**
	0.4nm,0.3s,baz=353,slow=4.2,SNR=31							
YKA	**Yellowknife Ar**	**68.37**	**28**	P		**P**	**17 21 35.7**	**+0.1**
	0.3nm,0.5s,baz=303,slow=6.0,SNR=5.1							
FINES	**FINESS Array B**	**69.66**	**331**	P		**P**	**17 21 43.1**	**-0.5**
	0.7nm,0.4s,baz=56,slow=5.4,SNR=14							
AKASG	**Malin Array Be**	**74.27**	**321**	P		**P**	**17 22 10.1**	**-0.8**
	0.3nm,0.3s,baz=51,slow=5.1,SNR=2.5							
NOA	**NORSAR Array B**	**75.44**	**336**	P		**P**	**17 22 16.7**	**-0.6**
	0.4nm,0.7s,baz=44,slow=5.6,SNR=2.1							
NVAR	**Mina Array Bea**	**79.93**	**50**	P		**P**	**17 22 43.8**	**+1.1**
	0.9nm,0.6s,baz=302,slow=5.4,SNR=9.6							
PDAR	**Pinedale Array**	**82.56**	**43**	P		**P**	**17 22 57.0**	**+0.7**
	0.9nm,0.7s,baz=320,slow=2.5,SNR=8.8							
GERES	**GERESS Array B**	**83.16**	**326**	P		**P**	**17 22 58.5**	**-0.5**
	0.1nm,0.4s,baz=46,slow=8.4,SNR=1.8							
TXAR	**Lajitas Array**	**95.06**	**50**	P		**P**	**17 23 55.7**	**+0.2**
	0.4nm,0.7s,baz=300,slow=5.7,SNR=3.7							

IDC 04 17:16:53.5±8.2,**6°.20S**×**147°.98E,h46**^{km}±59^{km},**mb3.5/3, mb1 3.6/5,mb1mx3.2/41,mbtmp3.6/5,ML3.7/1,MS3.2/1, Ms1 3.2/1,ms1mx2.3/32,Error ellipse: s-maj=72.0km s-min=52.4km az=71.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**3.29**	**194**	P		Pn	17 17 42.5	-0.1
	3.1nm,0.3s,baz=359,slow=6.5,SNR=12							
PMG				S		Sn	17 18 21.2	+0.7
	5.0nm,0.3s,baz=219,slow=24,SNR=8.5							
WRA	**Warramunga Arr**	**19.04**	**223**	P		P	17 21 11.8	-0.1
	0.2nm,0.3s,baz=52,slow=10,SNR=6.8							
ASAR	**Alice Springs**	**22.02**	**216**	P		P	17 21 43.5	-0.8
	0.9nm,0.4s,baz=52,slow=8.8,SNR=39							
FITZ	**Fitzroy Crossi**	**24.80**	**240**	P		P	17 22 10.8	-0.6
	1.2nm,0.7s,baz=43,slow=9.4,SNR=7.1							
STKA	**Stephens Creek**	**26.24**	**192**	P		P	17 22 25.6	+1.3
	0.7nm,0.4s,baz=351,slow=13,SNR=2.6							
KLR	**Kul'dur**	**56.99**	**347**	LR		LR	17 49 32.8	
	comp=Z,20nm,18.0s,baz=184,slow=34							

*SOME **04** 17:26:05.7,38°.77N×82°.18E,h10^{km}*

*BJI **04** 17:26:07.3±0.0,37°.90N×82°.85E,h7^{km}, mB4.2/3, mb4.2/9, ML4.2/10*

*IDC **04** 17:26:08.9±0.8,37°.91N×83°.12E,h29^{km}±4^{km}, mb3.4/12, mb1 3.6/18,mb1mx3.4/58,mbtmp3.6/18,ML3.5/6,MS2.8/5, Ms1 2.8/5,ms1mx2.5/41, Error ellipse: s-maj=22.5km s-min=12.6km az=55.0*

*NNC **04** 17:26:14.7±1.4,38°.27N×82°.98E,h25^{km}±8^{km}, mb4.2, mpv4.2, Error ellipse: s-maj=9.7km s-min=9.4km az=92.0*

ISC 04 17:26:06.7±0.6,**37°.88N**±0°.07×**83°.23E**±0°.05,**h10**^{km},**n46, σ3^{s}10/68,mb3.7/13,11C-10D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSH	**Kashi**	**5.91**	**288**	Pn		**Pn**	**17 27 35.9**	**+1.6**
KSH				Sn		**Sn**	**17 28 41.6**	**-0.5**
KSH				smax		smax		
	comp=N,120nm,0.3s							
KSH				smax		smax		
	comp=E,180nm,0.3s							
KTMS	**Ketmen**	**5.97**	**339**	*e*P		**Pn**	**17 27 36.6**	**+1.3**
	21nm,0.3s							
KTMS				*e*S		**Sn**	**17 28 42.3**	**-1.5**
	73nm,0.5s							
SHLS	**Shalkode**	**6.00**	**333**	*e*P		**Pn**	**17 27 34.9**	**-0.7**
	87nm,0.1s							
SHLS				*e*S		**Sn**	**17 28 39.3**	**-5.2**
	200nm,0.4s							
PDGK	**Podgornoye**	**6.14**	**334**	⇓Pn		**Sn**	**17 27 38.1**	**+0.5**
	26nm,0.5s							
PDGK				⇓Sn		**Sn**	**17 28 44.1**	**-3.8**
	71nm,0.3s							
PDGK				⇑Lg		Lg	17 29 16.0	
	161nm,0.9s							
UZB	**Uzynbulak**	**6.16**	**330**	*e*P		**Pn**	**17 27 38.5**	**+0.7**
	51nm,0.3s							
UZB				*e*S		**Sn**	**17 28 45.5**	**-2.9**
	136nm,0.4s							
SATY	**Saty**	**6.34**	**326**	*e*P		**Pn**	**17 27 41.6**	**+1.2**
	13nm,0.3s							
SATY				*e*S		**Sn**	**17 28 50.8**	**-2.2**
	64nm,0.3s							
KPKS	**Kokpek**	**6.56**	**330**	*e*P		**Pn**	**17 27 44.2**	**+0.9**
	72nm,0.3s							
KPKS				*e*S		**Sn**	**17 28 55.0**	**-3.2**
	121nm,0.5s							
WMQ	**Urumqi**	**6.83**	**28**	*e*Pn		**Pn**	**17 27 51.3**	**+4.3**
WMQ				Sn		**Sn**	**17 29 09.0**	**+4.2**
WMQ				smax		smax		
	comp=N,110nm,0.5s							
WMQ				smax		smax		
	comp=E,460nm,0.3s							
TNSS	**Tian-Shan**	**7.03**	**319**	*e*P		Pn	17 27 57.6	+7.5
	7.5nm,0.3s							
TNSS				*e*S		**Sn**	**17 29 18.2**	**+8.0**
	20nm,0.5s							
MDOK	**Medeo**	**7.07**	**320**	*e*P		Pn	17 27 57.7	+7.3
	17nm,0.4s							
MDOK				*e*S		**Sn**	**17 29 18.4**	**+7.6**
	15nm,0.4s							
MDOK	**Medeo**	**7.07**	**320**	⇓Pn		**Pn**	**17 27 50.5**	**+0.2**
	8.8nm,0.4s							
MDOK				⇑Sn		**Sn**	**17 29 06.1**	**-4.7**
	19nm,0.6s							
MDOK				⇑Lg		Lg	17 29 47.8	
	58nm,0.7s							
KOTS	**Kotyrbulak**	**7.09**	**321**	*e*P		Pn	17 27 57.3	+6.7
	22nm,0.4s							
KOTS				*e*S		**Sn**	**17 29 17.4**	**+6.1**
	32nm,0.6s							
MNBS	**Baschi**	**7.19**	**331**	*e*P		**Pn**	**17 27 56.0**	**+4.0**
	15nm,0.2s							
MNBS				*e*S		**Sn**	**17 29 15.3**	**+1.7**
	36nm,0.7s							
IZV	**Izvestkoviy**	**7.21**	**318**	*e*P		**Pn**	**17 27 54.7**	**+2.5**
	5.5nm,0.3s							
IZV				*e*S		**Sn**	**17 29 13.4**	**-0.8**
	19nm,0.4s							
MTBS	**Maitube**	**7.37**	**317**	*e*P		Pn	17 28 00.4	+6.0
	8.0nm,0.4s							
MTBS				*e*S		**Sn**	**17 29 22.9**	**+4.9**
	12nm,0.3s							
KST	**Kastek**	**7.56**	**315**	*e*P		Pn	17 28 04.3	+7.2
	9.6nm,0.2s							
KST				*e*S		**Sn**	**17 29 29.5**	**+6.5**
	18nm,0.5s							
KTBS	**Karatobe**	**7.65**	**322**	*e*P		Pn	17

comp=E,0.4nm,0.5s,baz=104,slow=7.5,SNR=2.2
BRTR pP **sP** **17 33 34.5 +2.1**
comp=E,1.4nm,0.6s,baz=84,slow=8.2,SNR=6.0
AKASG Malin Array Be 39.86 307 P **P** **17 33 38.8 -1.4**
comp=E,0.6nm,0.5s,baz=68,slow=8.3,SNR=3.2
AKASG pP **sP** **17 33 47.1 +2.0**
comp=E,0.8nm,0.4s,baz=65,slow=8.6,SNR=5.1
FINES FINESS Array B 42.06 323 P **P** **17 33 57.2 -1.0**
comp=E,5.4nm,1.2s,baz=86,slow=8.2,SNR=5.5
FINES LR LR 17 52 58.5
comp=E,18nm,19.1s,baz=102,slow=38
ARCES ARCESS Array B 43.86 335 P **P** **17 34 11.9 -0.8**
comp=E,1.0nm,0.7s,baz=110,slow=8.9,SNR=6.6
NOA NORSAR Array B 49.23 322 P **P** **17 34 53.2 -1.8**
comp=E,0.3nm,0.5s,baz=84,slow=7.7,SNR=2.4
NOA pP **sP** **17 35 02.0 +2.1**
comp=E,0.5nm,0.6s,baz=84,slow=7.5,SNR=5.2
GERES GERESS Array B 50.07 306 P **P** **17 35 00.8 -0.9**
comp=E,0.4nm,0.8s,baz=82,slow=9.7,SNR=6.2
GERES pP **sP** **17 35 09.6 +3.1**
comp=E,1.7nm,0.8s,baz=79,slow=6.9,SNR=11
ESDC Sonseca Array 65.25 302 pP pP 17 36 55.7 +3.5
comp=E,0.8nm,0.6s,baz=54,slow=6.9,SNR=4.5
WRA Warramunga Arr 74.93 131 P **P** **17 37 47.8 -0.2**
comp=E,0.9nm,0.9s,baz=326,slow=5.7,SNR=6.1
ASAR Alice Springs 77.54 133 P **P** **17 38 02.6 -0.2**
comp=E,0.5nm,0.7s,baz=313,slow=5.2,SNR=8.4
YKA Yellowknife Ar 78.94 8 P **P** **17 38 09.6 -0.5**
comp=E,0.1nm,0.6s,baz=341,slow=4.9,SNR=5.1
YKA pP **PcP** **17 38 18.8 +0.2**
comp=E,0.5nm,0.6s,baz=340,slow=5.2,SNR=9.0

IDC 04 17:31:39.5±1.6, 2.41N×126.87E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.3/44, mbtmp3.4/5, MS2.9/1, Ms1 2.9/1, ms1mx2.2/26, Error ellipse: s-maj=106.5km s-min=24.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.41**	**183**	P	P	17 36 18.8	+0.5
	2.2nm,1.0s,baz=29,slow=13,SNR=2.8						
LEM	**Lembang**	**21.30**	**244**	LR	LR	17 44 33.6	
	comp=Z,34nm,21.5s,baz=75,slow=36						
WRA	**Warramunga Arr**	**23.39**	**162**	P	P	17 36 50.0	-0.2
	0.6nm,0.4s,baz=340,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.81**	**166**	P	P	17 37 21.9	+0.3
	0.2nm,0.7s,baz=348,slow=11,SNR=5.2						
ASAR				PcP	PcP	17 40 43.4	-1.4
	0.2nm,1.0s,baz=346,slow=1.8,SNR=4.0						
STKA	**Stephens Creek**	**36.85**	**159**	P	P	17 38 50.2	+0.5
	0.9nm,0.7s,baz=339,slow=14,SNR=2.1						
MKAR	**Makanchi Array**	**58.72**	**326**	P	P	17 41 39.1	0.0
	0.1nm,0.4s,baz=115,slow=7.5,SNR=4.3						

*IDC **04** 17:42:23.5±6.5, 35.21N×136.93E, h183km±189km, mb2.7/2, mb1 3.0/2, mb1mx2.6/48, mbtmp3.2/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/5, Error ellipse: s-maj=282.9km s-min=148.8km az=15.0*

*JMA **04** 17:42:24.6±0.2, 35.91N×137.68E, h243km±2km, M2.2*

ISC 04 17:42:24.6±1.2, 35.9N±0.1×137.71E±0.0, h242km±8km, n17, σ0°33/23, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGF	**Kuroka**	**0.38**	**229**	P	**Pn**	**17 42 56.3**	**-0.1**
JNY	**Yasuok**	**0.51**	**165**	P	**Pn**	**17 42 56.8**	**0.0**
JNY				*e*S	**S**	**17 43 21.4**	**-0.6**
MAT	**Matsushiro**	**0.80**	**30**	P	**Pn**	**17 42 57.9**	**+0.2**
MAT				S	S	**17 43 24.0**	**+0.2**
MAT	**Matsushiro**	**0.80**	**30**	P	**Pn**	**17 42 57.9**	**+0.2**
MAT				*e*S	**S**	**17 43 24.1**	**+0.2**
MJAR	**Matsushiro Arr**	**0.80**	**30**	P	**Pn**	**17 42 57.6**	**-0.1**
	0.3nm,0.3s,baz=221,slow=5.8,SNR=34						
MJAR				S	**S**	**17 43 24.3**	**+0.4**
	0.0nm,0.3s,baz=14,slow=16,SNR=1.5						
JYTA	**Yamagatataniai**	**0.83**	**252**	P	**Pn**	**17 42 57.9**	**0.0**
JYTA				*e*S	**S**	**17 43 23.5**	**-0.4**
JRY	**Ryogami san**	**0.98**	**80**	P	**Pn**	**17 42 59.2**	**+0.5**
JKG	**Kaga**	**1.19**	**291**	P	**Pn**	**17 43 00.0**	**+0.1**
JHU	**Hanno**	**1.28**	**89**	P	**Pn**	**17 43 00.9**	**+0.3**
JHU				*e*S	**S**	**17 43 28.7**	**0.0**
JAG	**Ashikaga**	**1.53**	**67**	P	**Pn**	**17 43 02.8**	**+0.5**
JAG				*e*S	**S**	**17 43 31.4**	**-0.6**
JWT	**Wachi**	**1.96**	**254**	P	**Pn**	**17 43 06.3**	**+0.2**
JYT	**Yasato**	**2.05**	**79**	P	**Pn**	**17 43 06.8**	**0.0**
JSD	**Sado**	**2.23**	**11**	P	**Pn**	**17 43 08.3**	**-0.2**
JHO	**Hitachi**	**2.44**	**71**	P	**Pn**	**17 43 10.3**	**-0.3**
PETK	**Petropavlovsk-**	**22.26**	**33**	LR	LR	17 56 11.1	
	comp=Z,13nm,19.7s,baz=164,slow=36						
WRA	**Warramunga Arr**	**55.58**	**184**	P	**P**	**17 51 35.1**	**-0.2**
	0.7nm,0.9s,baz=359,slow=7.6,SNR=6.9						
ASAR	**Alice Springs**	**59.30**	**184**	P	**P**	**17 52 01.4**	**+0.3**
	0.1nm,0.6s,baz=0.1,slow=6.2,SNR=4.4						

*NEIC **04** 17:48:48.0±2.2, 6.07S±0.05×130.67E±0.07, h112km±4km, mb5.1/84, Mwb5.1/29, Error ellipse: s-maj=9.9km s-min=7.1km az=88.0*

*MOS **04** 17:48:47.1±0.8, 6.06S×130.68E, h117km, mb5.2/38, Error ellipse: s-maj=9.0km s-min=4.8km az=118.9*

*BJI **04** 17:48:47.2±0.0, 6.17S×130.87E, h133km, mB5.1/49, mb5.0/67*

*NEIC **04** 17:48:48, 6.05S×130.66E, h105km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}2.96; $M_{\theta\theta}$-2.32; $M_{\phi\phi}$-0.64; $M_{r\theta}$0.60; $M_{r\phi}$2.69; $M_{\theta\phi}$3.57; Fault plane solution: M_o5.25000×10^{16} NP1:ϕ_s97.38000°, δ41.81000°, λ34.43000°. NP2:ϕ_s340.32000°, δ67.86000°, λ126.42000°. Principal axes: T 5.6496, Plg53.0000°, Azm294.0000°; N -0.9082, Plg33.0000°, Azm145.0000°; P -4.7413, Plg15.0000°, Azm45.0000°;*

*IDC **04** 17:48:48.2±1.7, 6.09S×130.63E, h109km±15km, mb4.4/23, mb1 4.4/28, mb1mx4.3/37, mbtmp4.8/28, MS3.8/22, Ms1 3.8/22, ms1mx3.7/36 Error ellipse: s-maj=12.7km s-min=8.5km az=74.0*

*DJA **04** 17:48:49.5±0.2, 6°S±2°×13°1E±°, h111km±2km, M4.9/60, mB5.4/49, mb5.1/60, MLv5.7/13, Mw(mB)4.8/49, MwMwp4.7/7, Mwp5.1/7*

*GCMT **04** 17:48:50.0±0.2, 6.00S±0.01×130.69E±0.01, h128km±1km, MW5.1/135, Moment Tensor Solution. s93,c118; s135,c211; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.09±.12; $M_{\theta\theta}$-4.13±.13; $M_{\phi\phi}$0.03±.16; $M_{r\theta}$-0.40±.10; $M_{r\phi}$1.76±.14; $M_{\theta\phi}$4.44±.09; Best double couple: M_o6.14700×10^{16} NP1:ϕ_s87.00000°, δ39.00000°, λ40.00000°. NP2:ϕ_s324.00000°, δ66.00000°, λ122.00000°. Principal axes: T 6.9800, Plg57.0000°, Azm276.0000°; N -1.6660, Plg29.0000°, Azm130.0000°; P -5.3140, Plg16.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 17:48:48.5±0.3, 6.10S±0.03×130.72E±0.04, h118km±2km, h118km:pP-P, n411, σ1s53/437, mb5.0/128, 87C-27D, Fault plane solution: NP1:ϕ_s327.38336°, δ71.88918°, λ105.77775°. NP2:ϕ_s105.11414°, δ23.84432°, λ50.26098°. Principal axes: T Plg60.0615°, Azm260.0427°; N Plg14.9772°, Azm142.3638°; P Plg25.2738°, Azm45.1075°; Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.76**	**333**	P	**Pn**	**17 49 20.7**	**+1.7**
BNDI				S	**Sn**	**17 49 41.9**	**-0.3**
SAUI	**Saumlaki**	**1.96**	**163**		**Pn**	**17 49 22.6**	**+1.2**
SAUI				Sn	**Sn**	**17 49 46.4**	**-0.2**
SAUI	**Saumlaki**	**1.96**	**163**	P	**Pn**	**17 49 22.6**	**+1.2**
SAUI				S	**Sn**	**17 49 46.3**	**-0.2**
MSAI	**Masohi**	**3.26**	**327**	P	**Pn**	**17 49 37.7**	**-0.6**
FAKI	**Fak Fak**	**3.50**	**26**	Pn	**Pn**	**17 49 40.5**	**-0.9**
FAKI				Sn	**Sn**	**17 50 20.1**	**-2.3**
FAKI	**Fak Fak**	**3.50**	**26**	P	**Pn**	**17 49 40.6**	**-0.9**
FAKI				S	**Sn**	**17 50 18.6**	**-3.8**
KMPI	**Kaimana, Papua**	**3.83**	**51**	P	**Pn**	**17 49 45.5**	**-0.3**
NLAI	**Namlea**	**4.59**	**308**	P	**Pn**	**17 49 57.9**	**+1.9**
SIJI	**Sorong**	**5.22**	**6**	P	**Pn**	**17 50 03.4**	**-1.2**
	174nm,0.3s,baz=237,slow=22,SNR=1.171						
SIJI				S	**Sn**	**17 50 59.1**	**-4.5**
	397nm,0.3s,baz=359,slow=23,SNR=22						
SIJI				LR	LR	17 52 02.7	
	comp=Z,1μm,20.3s,baz=147,slow=37						
SWI	**Sorong**	**5.23**	**6**	P	**Pn**	**17 50 03.6**	**-0.9**
SWI				pmax	pmax		
	comp=Z,642nm,0.5s						
SWI	**Sorong**	**5.23**	**6**	P	**Pn**	**17 50 03.7**	**-0.8**
	comp=Z,21nmcomp=Z,4μmcomp=Z,106μmcomp=Z,653nm,0.6s						
SANI	**Sanana**	**6.20**	**310**	P	**Pn**	**17 50 18.8**	**+1.1**
	comp=Z,1.1nmcomp=Z,3μmcomp=Z,5μmcomp=Z,343nm,0.9s						
MTN	**Manton Dam**	**6.72**	**177**	P	**Pn**	**17 50 23.6**	**-1.1**
	baz=6.7,SNR=1000						
MTN				S	**Sn**	**17 51 33.9**	**-5.9**
	baz=6.7						
MTN	**Manton Dam**	**6.72**	**177**	Pn	**Pn**	**17 50 23.6**	**-1.1**
MTN				Sn	**Sn**	**17 51 36.3**	**-3.5**
KDU	**Kakadu**	**6.77**	**165**	P	**Pn**	**17 50 23.7**	**-1.7**
	baz=6.8,SNR=1000						
KDU				S	**Sn**	**17 51 35.1**	**-6.1**
	baz=6.8						
SRPI	**Serui, Papua**	**6.92**	**53**	P	**Pn**	**17 50 27.2**	**-0.3**
	comp=Z,3.6nmcomp=Z,10μmcomp=Z,371nm,0.9s						
BAKI	**Biak**	**7.25**	**48**	P	**Pn**	**17 50 32.6**	**+0.6**
	comp=Z,21μmcomp=Z,1μm,0.9s						
SOEI	**Soe**	**7.35**	**240**	Pn	**Pn**	**17 50 33.8**	**+0.4**
SOEI	**Soe**	**7.35**	**240**	P	**Pn**	**17 50 35.0**	**+1.6**
	comp=Z,6.2nmcomp=Z,6μmcomp=Z,701nm,1.0s						
TNTI	**Ternate**	**7.60**	**334**	Pn	**Pn**	**17 50 35.4**	**-1.3**
TNTI	**Ternate**	**7.60**	**334**	P	**Pn**	**17 50 38.3**	**+1.7**
	comp=Z,0.5nmcomp=Z,1μmcomp=Z,129nm,1.1s						
BATI	**Baumata**	**8.09**	**239**	P	**Pn**	**17 50 44.2**	**+1.0**
	comp=Z,161nm,0.3s,baz=103,slow=2.9,SNR=208						
BATI				S	**Sn**	**17 52 11.0**	**-2.2**
	comp=Z,89nm,0.3s,baz=95,slow=20,SNR=9.7						
BATI	**Baumata**	**8.09**	**239**	P	**Pn**	**17 50 44.3**	**+1.0**
	comp=Z,2μmcomp=Z,6μmcomp=Z,362nm,0.9s						
MMRI	**Maumere**	**8.78**	**253**		**Pn**	**17 50 55.5**	**+2.8**
MMRI	**Maumere**	**8.78**	**253**	P	**Pn**	**17 50 57.0**	**+4.3**
	comp=Z,2μmcomp=Z,3μmcomp=Z,235nm,1.1s						
EDFI	**Ende, Flores**	**9.33**	**253**	P	**Pn**	**17 51 04.1**	**+3.9**
	comp=Z,941nmcomp=Z,70nm,1.1s						
LUWI	**Luwuk**	**9.39**	**302**		**Pn**	**17 51 01.0**	**+0.2**
LUWI	**Luwuk**	**9.39**	**302**	P	**Pn**	**17 51 03.0**	**+2.2**
	comp=Z,3μmcomp=Z,229nm,1.3s						
KMSI	**Cibinong**	**9.44**	**314**	P	**Pn**	**17 51 04.4**	**+2.8**
	comp=Z,2μmcomp=Z,197nm,0.6s						
MNI	**Manado**	**9.52**	**322**	P	**Pn**	**17 51 02.5**	**-0.1**
MNI				pmax	pmax		
	comp=Z,245nm,0.8s						
KNRA	**Kununurra**	**9.71**	**191**	Pn	**Pn**	**17 51 03.7**	**-1.5**
MMPI	**Merauke**	**9.87**	**104**	P	**Pn**	**17 51 09.3**	**+1.9**
	comp=Z,13μmcomp=Z,902nm,1.2s						
GENI	**Genyem**	**10.04**	**70**	P	**Pn**	**17 51 10.6**	**+0.9**
	comp=Z,3μmcomp=Z,226nm,1.2s						
GTOI	**Gorontalo**	**10.20**	**311**	P	Pn	17 51 16.6	+4.8
	comp=Z,670nmcomp=Z,57nm,0.8s						
APSI	**Ampana**	**10.41**	**299**	P	**Pn**	**17 51 18.0**	**+3.3**
	comp=Z,1μmcomp=Z,144nm,1.1s						
JAY	**Jayapura**	**10.57**	**71**	P	**Pn**	**17 51 16.7**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=220,slow=8.7,SNR=20						
JAY				S	**Sn**	**17 53 13.9**	**+0.5**
	comp=Z,4.4nm,0.3s,baz=94,slow=23,SNR=4.1						
JAY	**Jayapura**	**10.57**	**71**	P	**Pn**	**17 51 16.7**	**-0.2**
JAY				pmax	pmax		
	comp=Z,56nm,1.4s						
JAY	**Jayapura**	**10.57**	**71**	P	**Pn**	**17 51 16.2**	**-0.7**
	comp=Z,676nmcomp=Z,35nm,1.0s						
BNSI	**Bone**	**10.70**	**279**	P	Pn	17 51 27.7	+9.1
BASI	**Baing, Sumba**	**10.84**	**247**	P	**Pn**	**17 51 23.1**	**+2.6**
	comp=Z,1μmcomp=Z,2μmcomp=Z,125nm,0.7s						
MRSI	**Marisa**	**10.93**	**306**	P	**Pn**	**17 51 23.0**	**+1.3**
	comp=Z,2μmcomp=Z,159nm,1.1s						
KAPI	**Kappang**	**10.97**	**275**	P	**Pn**	**17 51 21.7**	**-0.5**
	comp=Z,4.1nm,0.3s,baz=113,slow=7.5,SNR=9.8						
KAPI	**Kappang**	**10.97**	**275**	P	**Pn**	**17 51 21.0**	**-1.2**
KAPI	**Kappang**	**10.97**	**275**	Pn	**Pn**	**17 51 21.0**	**-1.2**
SPSI	**Sidrap Palu**	**11.11**	**280**	P	**Pn**	**17 51 26.2**	**+2.1**
	comp=Z,1μmcomp=Z,105nm,1.2s						
TTSI	**Tana Toraja**	**11.28**	**285**	P	**P**	**17 51 32.3**	**-3.3**
TOLI2	**Tolitoli**	**12.24**	**305**	Pn	**Pn**	**17 51 38.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**12.92**	**202**	P	**Pn**	**17 51 43.9**	**-4.0**
	comp=Z,49nm,0.3s,baz=28,slow=9.6,SNR=593						
FITZ				S	Sn	17 53 56.6	-14
	comp=Z,20nm,0.3s,baz=254,slow=21,SNR=6.1						
FITZ				LR	LR	17 57 41.2	
	comp=Z,250nm,19.5s,baz=26,slow=41						
FITZ	**Fitzroy Crossi**	**12.92**	**202**	Pn	Pn	17 51 43.0	-4.9
DDMP	**Don Marcelino,**	**13.11**	**337**	*e*P	**Pn**	**17 51 47.8**	**-2.6**
PLAI	**Plampang**	**13.12**	**257**	P	**Pn**	**17 51 51.1**	**+0.6**
	comp=Z,2μmcomp=Z,101nm,0.5s						
SKMP	**Bagumbayan, Su**	**13.97**	**334**	*e*P	**Pn**	**17 52 00.1**	**-1.4**
TWSI	**Taliwang, Sumb**	**13.97**	**258**	P	**Pn**	**17 52 01.3**	**-0.2**
	comp=Z,606nmcomp=Z,18nm,0.5s						
DAV	**Davao City (W)**	**14.05**	**339**	LR	LR	17 59 37.0	
	comp=Z,278nm,18.0s,baz=118,slow=46						
WB0	**Warramunga Arr**	**14.05**	**166**	Pn	Pn	17 51 57.4	-5.1
WRAB	**Tennant Creek**	**14.20**	**166**	*ce*P	Pn	17 51 59.7	-4.7
WRAB				pmax	pmax		
	comp=Z,132nm,1.3s						
WRAB	**Tennant Creek**	**14.20**	**166**		Pn	17 51 59.4	-5.0
WRA	**Warramunga Arr**	**14.21**	**166**	P	Pn	17 51 59.5	-4.9
	comp=Z,20nm,0.3s,baz=342,slow=12,SNR=230						
WRA				S	Sn	17 54 28.2	-13
	comp=Z,32nm,0.3s,baz=350,slow=23,SNR=10.0						
WRA				LR	LR	17 58 35.7	
	comp=Z,1μm,19.1s,baz=345,slow=41						
WB2	**Warramunga Arr**	**14.21**	**166**	Pn	Pn	17 51 59.7	-4.8
WR0	**Warramunga Arr**	**14.27**	**165**	Pn	Pn	17 52 00.0	-5.3
COEN	**Coen**	**14.53**	**123**	Pn	**Pn**	**17 52 08.5**	**-0.2**
BKB	**Balikpapan**	**14.60**	**289**		**P**	**17 52 12.7**	**0.0**
BKB	**Balikpapan**	**14.60**	**289**	P	**P**	**17 52 17.0**	**+4.3**
KBKI	**Kotabaru**	**14.77**	**280**	P	**P**	**17 52 14.4**	**-0.1**
	comp=Z,1μmcomp=Z,161nm,1.2s						
SRBI	**Singaraja**	**15.52**	**262**	P	**P**	**17 52 22.2**	**-0.6**
	comp=Z,721nmcomp=Z,67nm,1.2s						
PAGZ	**Pagadian**	**15.67**	**332**	*e*P	**P**	**17 52 27.0**	**+2.4**
BUTP	**Butuan**	**15.81**	**341**	*e*P	**P**	**17 52 25.8**	**-0.3**
BBKI	**Banjar Baru**	**16.04**	**279**	P	**P**	**17 52 28.7**	**0.0**
	comp=Z,3μmcomp=Z,156nm,1.4s						
GLSP	**General Luna,**	**16.43**	**344**	*e*P	**Pn**	**17 52 32.5**	**+0.2**
ABJI	**Asem Bagus**	**16.45**	**263**	P	**P**	**17 52 35.6**	**+2.4**
	comp=Z,2μmcomp=Z,71nm,1.4s						
MYLDM	**Lahad Datu**	**16.56**	**312**	P	**P**	**17 52 34.4**	**0.0**
JAGI	**Jajag, Banyuwa**	**16.60**	**261**		**Pn**	**17 52 32.8**	**-1.7**
JAGI				IAmb	IAmb	17 52 39.6	
	comp=Z,51nm,0.6s						
JAGI	**Jajag, Banyuwa**	**16.60**	**261**	P	**Pn**	**17 52 34.3**	**-0.2**
	comp=Z,1μmcomp=Z,70nm,0.8s						
PMG	**Port Moresby**	**16.62**	**102**	P	**P**	**17 52 36.6**	**+1.6**
	comp=Z,4.4nm,0.3s,baz=4.4,slow=8.3,SNR=14						
PMG				LR	LR	18 00 25.3	
	comp=Z,332nm,19.5s,baz=284,slow=42						
PMG	**Port Moresby**	**16.62**	**102**	*ce*P	**P**	**17 52 35.8**	**+0.8**
PMG				pmax	pmax		
	comp=Z,189nm,2.5s						
PMG	**Port Moresby**	**16.62**	**102**	P	**P**	**17 52 35.6**	**+0.6**
PMG				IAmb	IAmb	17 52 51.5	
	comp=Z,131nm,1.0s						
KMMI	**Kalianget**	**16.67**	**266**	P	**P**	**17 52 40.3**	**+4.7**
	comp=Z,3μmcomp=Z,5μmcomp=Z,215nm,1.0s						
MANU	**Manus Island**	**17.08**	**77**		**Pn**	**17 52 41.6**	**+1.3**
MSLP	**Maasin**	**17.15**	**340**	*e*P	**Pn**	**17 52 43.4**	**+2.3**
LLP	**Lapu-Lapu**	**17.64**	**338**	*e*P	**Pn**	**17 52 48.3**	**+1.2**
LLP				*e*S	**Sn**	**17 56 07.4**	**+3.4**
AS31	**Alice Springs**	**17.73**	**170**	P	**P**	**17 52 46.6**	**-0.8**
AS31				IAmb	IAmb	17 52 50.3	
	comp=Z,59nm,0.5s						
ASAR	**Alice Springs**	**17.74**	**170**	P	**P**	**17 52 46.5**	**-0.9**
	comp=Z,22nm,0.3s,baz=5.3,slow=13,SNR=417						
ASAR				S	S	17 55 54.0	-12
	comp=Z,17nm,0.3s,baz=353,slow=27,SNR=8.7						
CNOP	**Candoni, Negro**	**17.75**	**333**	*e*P	**P**	**17 52 46.5**	**-1.0**
MTSU	**Mount Surprise**	**17.87**	**133**	P	**Pn**	**17 52 49.6**	**-0.2**
	baz=18,SNR=48						
OCLP	**Ormoc**	**18.09**	**340**	*e*P	**Pn**	**17 52 53.7**	**+1.3**
GUIM	**Jordan**	**18.48**	**334**	*e*P	**Pn**	**17 52 57.8**	**+0.8**
PSA00	**Pilbara Seismi**	**18.64**	**213**	P	**P**	**17 52 57.4**	**+0.1**
PSA00				IAmb	IAmb	17 53 00.6	
	comp=Z,125nm,1.0s						
KKM	**Kota Kinabalu**	**18.84**	**310**	P	**P**	**17 52 59.9**	**+0.3**
WRKA	**Warakurna**	**18.98**	**187**	P	**P**	**17 53 01.1**	**+0.2**
	baz=19,SNR=418						
PBKI	**Pangkalan Bun**	**19.29**	**279**	P	**Pn**	**17 53 06.3**	**-0.3**
	comp=Z,3μmcomp=Z,321nm,1.1s						
BATP	**Bataraza**	**19.62**	**319**	*e*P	**Pn**	**17 53 09.4**	**-1.0**
UGM	**Wanagama**	**20.13**	**264**	P	**P**	**17 53 12.1**	**-1.4**
UGM	**Wanagama**	**20.13**	**264**	P	Pn	17 53 16.8	+0.4
	comp=Z,84nm,1.8s						
SBUM	**Sibu**	**20.33**	**294**	P	**P**	**17 53 14.4**	**-1.3**
SBUM				IAmb	IAmb	17 53 19.2	
	comp=Z,123nm,1.4s						
CTA	**Charters Tower**	**20.52**	**134**	P	Pn	17 53 19.4	-1.5
	comp=Z,7.0nm,0.7s,baz=313,slow=12,SNR=20						
CTA				S	**S**	**17 57 02.8**	**+1.9**
	comp=Z,7.3nm,0.5s,baz=28,slow=21,SNR=2.4						
CTA				LR	LR	18 02 50.7	
	comp=Z,750nm,19.2s,baz=298,slow=41						
CTA	**Charters Tower**	**20.52**	**134**	P	Pn	17 53 20.1	-0.9
CTA				pmax	pmax		
	comp=Z,43nm,0.9s						
CTAO	**Charters Tower**	**20.52**	**134**	P	**P**	**17 53 19.1**	**+1.4**
CTAO				pmax	pmax		
	comp=Z,40nm,1.0s						
CTAO	**Charters Tower**	**20.52**	**134**	P	**P**	**17 53 19.1**	**+1.4**
ENPP	**El Nido**	**20.54**	**327**	*e*P	**P**	**17 53 18.7**	**+0.9**
KSM	**Kuching**	**21.72**	**290**	P	**P**	**17 53 28.9**	**-1.6**
KSM	**Kuching**	**21.72**	**290**	P	**P**	**17 53 30.0**	**-0.6**
JCNP	**Jose Panganiba**	**21.76**	**339**	*e*P	**P**	**17 53 31.0**	**+0.1**
LUBP	**Lubang**	**22.28**	**332**	*e*P	**P**	**17 53 36.9**	**+0.6**
TGY	**Tagaytay City**	**22.29**	**334**	P	**P**	**17 53 37.9**	**+1.4**
	comp=Z,182nm,0.4s,baz=166,slow=5.7,SNR=6.7						
JCJI	**Jatiwangi**	**22.32**	**268**	P	**P**	**17 53 40.2**	**+3.5**
	comp=Z,5μmcomp=Z,172nm,0.8s						
MACP	**Maragondon, Ca**	**22.53**	**334**	*e*P	**P**	**17 53 36.7**	**-2.1**
GIRL	**Giralia**	**22.88**	**222**	P	**P**	**17 53 43.4**	**+1.2**
	baz=23,SNR=6.8						
GIRL	**Giralia**	**22.88**	**222**	P	**P**	**17 53 43.0**	**+0.8**
LEM	**Lembang**	**22.97**	**267**	P	**P**	**17 53 43.5**	**+0.2**
	comp=Z,35nm,0.6s,baz=73,slow=8.5,SNR=22						
LEM	**Lembang**	**22.97**	**267**	P	**P**	**17 53 42.4**	**-0.9**
LEM				pmax	pmax		
	comp=Z,119nm,1.8s						
CBJI	**Citeko**	**23.73**	**268**	P	**P**	**17 53 50.6**	**+0.5**
	comp=Z,3μmcomp=Z,239nm,1.0s						
DBJI	**Dramaga**	**23.83**	**268**	P	**P**	**17 53 53.0**	**+1.9**
	comp=Z,4μmcomp=Z,24nm,0.5s						
QLP	**Quilpie**	**24.11**	**149**	P	**P**	**17 53 54.7**	**+1.3**
	baz=24,SNR=8.6						
BOLP	**Bolinao**	**24.76**	**335**	*e*P	**P**	**17 53 58.1**	**-1.2**
PPBI	**Pangkal Pinang**	**24.82**	**278**	P	**P**	**17 54 03.6**	**+3.5**
	comp=Z,854nmcomp=Z,39nm,1.7s						
APYP	**Conner**	**25.58**	**339**	*e*P	**P**	**17 54 05.1**	**-1.7**
KLSI		**25.91**	**272**	P	**P**	**17 54 12.8**	**+2.9**
	comp=Z,7.6nm,1.0s						
KASI	**Kota Agung**	**26.09**	**270**	P	**P**	**17 54 12.2**	**+0.6**
	comp=Z,38nm,1.2s						
KMBL	**Kambalda**	**26.47**	**197**	P	**P**	**17 54 15.3**	**+0.6**
	baz=27,SNR=38						
LWLI	**Liwa**	**26.56**	**271**	P	**P**	**17 54 19.1**	**+3.2**
	comp=Z,41nm,1.8s						
MORW	**Morawa**	**26.73**	**210**	P	**P**	**17 54 17.2**	**+0.1**
	baz=27,SNR=22						
MORW	**Morawa**	**26.73**	**210**	P	**P**	**17 54 16.8**	**-0.3**
MORW				IAmb	IAmb	17 55 02.0	
	comp=Z,97nm,1.5s						
BBOO	**Buckleboo**	**27.04**	**170**	P	**P**	**17 54 19.9**	**0.0**
	baz=27,SNR=19						
BBOO	**Buckleboo**	**27.04**	**170**	P	**P**	**17 54 19.3**	**-0.5**
BBOO				IAmb	IAmb	17 55 09.5	
	comp=Z,43nm,0.8s						
LHSI	**Lahat**	**27.19**	**273**	P	**P**	**17 54 25.7**	**+4.3**
	comp=Z,48nm,1.7s						
STKA	**Stephens Creek**	**27.59**	**160**	P	**P**	**17 54 25.2**	**+0.5**
	comp=Z,4.8nm,0.4s,baz=332,slow=8.7,SNR=60						
STKA				LR	LR	18 06 44.7	
	comp=Z,792nm,18.4s,baz=332,slow=39						
STKA	**Stephens Creek**	**27.59**	**160**	P	**P**	**17 54 25.3**	**+0.5**
	baz=28,SNR=28						
STKA	**Stephens Creek**	**27.59**	**160**	*i* P	**P**	**17 54 24.3**	**-0.5**
STKA	**Stephens Creek**	**27.59**	**160**	P	**P**	**17 54 25.2**	**+0.5**
BLDU	**Balidu**	**27.72**	**207**	P	**P**	**17 54 26.3**	**+0.3**
	baz=28,SNR=40						
MYKOM	**Kota Tinggi**	**27.95**	**285**	P	**P**	**17 54 29.1**	**+0.9**
MYKOM	**Kota Tinggi**	**27

TAU pmax pmax
comp=Z,173nm,2.0s
TAU Tasmania Unive 39.49 161 P **P** **17 56 08.7 +1.2**
NJ2 Nanjing 39.59 344 *e*P **P** **17 56 09.8 +1.4**
NJ2 pmax pmax
comp=Z,19nm,0.7s
WHN Wuhan 39.66 338 ⇑P **P** **17 56 10.0 +0.9**
WHN pmax pmax
comp=Z,82nm,1.1s
CM31 Chiang Mai Arr 39.72 309 P **P** **17 56 08.6 -1.2**
CM31 IAmb IAmb 17 56 11.6
comp=Z,53nm,1.4s
CMAR Chiang Mai Arr 39.72 309 P **P** **17 56 10.1 +0.3**
comp=Z,4.9nm,0.6s,baz=136,slow=6.7,SNR=53
CMAR ScP **ScP** **18 01 52.9 +0.4**
comp=Z,2.5nm,1.0s,baz=155,slow=3.8,SNR=7.3
JMN Monobe 39.72 4 P **P** **17 56 08.7 -0.9**
GYA Guiyang 39.89 325 ⇑P **P** **17 56 11.4 +0.2**
GYA sP sP 17 56 52.1 +1.9
GYA PP **PnPn** **17 57 52.3 +2.5**
GYA PcP **PcP** **17 58 17.6 +2.8**
GYA S **S** **18 02 03.7 -3.9**
GYA pmax pmax
comp=Z,21nm,0.9s
GYA pmax pmax
comp=Z,190nm,5.0s
CHTO Chiang Mai 39.92 309 P **P** **17 56 11.1 -0.4**
CHTO pmax pmax
comp=Z,61nm,1.5s
CHTO Chiang Mai 39.92 309 P **P** **17 56 11.1 -0.4**
CHTO IAmb IAmb 17 56 13.1
comp=Z,61nm,1.4s
KMI Kunming 41.28 320 ⇑P **P** **17 56 23.6 +0.8**
KMI pP pP 17 56 48.5 -0.2
KMI S **S** **18 02 29.3 +0.8**
KMI pmax pmax
comp=Z,23nm,1.6s
KMI pmax pmax
comp=Z,200nm,5.1s
KMI LR LR
comp=Z,200nm,16.0s
KMI LR LR
comp=Z,160nm,13.8s
KMI LR LR
comp=Z,190nm,18.8s
MJAR Matsushiro Arr 42.99 9 P **P** **17 56 35.9 -0.3**
comp=Z,5.2nm,0.9s,baz=184,slow=9.4,SNR=14
MJAR LR LR 18 13 21.9
comp=Z,118nm,19.7s,baz=160,slow=34
MJAR Matsushiro Arr 42.99 9 P **P** **17 56 35.9 -0.3**
MJAR pmax pmax
comp=Z,4.0nm,1.0s
MAJO Matsushiro 42.99 9 *i* P **P** **17 56 36.0 -0.2**
MAJO pmax pmax
comp=Z,7.0nm,0.9s
MAT Matsushiro 42.99 9 P **P** **17 56 35.5 -0.7**
MAT S **S** **18 02 52.6 -0.3**
KSRS Korea Array 43.40 357 P **P** **17 56 40.4 +0.9**
comp=Z,1.3nm,0.4s,baz=174,slow=9.0,SNR=14
XAN Xi'an 44.93 334 P **P** **17 56 51.2 -0.6**
XAN pmax pmax
comp=Z,30nm,1.2s
XAN Xi'an 44.93 334 P **P** **17 56 51.0 -0.9**
XAN pmax pmax
comp=Z,39nm,1.2s
XAN Xi'an 44.93 334 P **P** **17 56 51.0 -0.9**
XAN IAmb IAmb 17 56 52.4
comp=Z,39nm,1.2s
CD2 Chengdu 44.94 327 ⇑ *i*P **P** **17 56 51.5 -0.4**
CD2 S **S** **18 03 22.3 +0.8**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,230nm,5.6s
MSVF Nonsavu 47.60 108 LR LR 18 17 58.7
comp=Z,106nm,18.7s,baz=140,slow=37
BJT Baijiatuau 47.81 345 P **P** **17 57 14.3 +0.2**
BJT pmax pmax
comp=Z,18nm,1.0s
BJT Baijiatuau 47.81 345 P **P** **17 57 14.3 +0.2**
BJI Beijing 47.83 345 P **P** **17 57 14.0 -0.3**
BJI pmax pmax
comp=Z,19nm,1.0s
MSHR Mys Shultsa 48.45 0 *i* P **P** **17 57 18.8 -0.2**
MSHR pmax pmax
comp=Z,23nm,1.3s
LZH Lanzhou 48.96 331 ⇓P **P** **17 57 24.5 +1.2**
LZH S **S** **18 04 12.4 -6.3**
LZH pmax pmax
comp=Z,32nm,0.9s
LZH pmax pmax
comp=Z,140nm,6.5s
SHL Shillong 49.13 311 P **P** **17 57 23.8 -1.0**
SHL pmax pmax
comp=Z,42nm,1.2s
SHL Shillong 49.13 311 P **P** **17 57 23.8 -1.0**
SHL IAmb IAmb 17 57 25.4
comp=Z,42nm,1.2s
CN2 Changchun 49.89 355 *e*P **P** **17 57 29.7 -0.3**
CN2 *e*PP **PP** **17 59 27.1 +1.0**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
HHC Hu-ho-hao-te 49.92 341 *e*P **P** **17 57 31.1 +0.7**
HHC pP pwP 17 58 02.5 +0.4
HHC S **S** **18 04 23.9 -8.0**
HHC pmax pmax
comp=Z,21nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.9s
HHC LR LR
comp=Z,140nm,15.3s
HHC LR LR
comp=Z,170nm,15.3s
HHC LR LR
comp=Z,140nm,14.5s
USA0B Ussuriysk Arra 50.08 1 *i* P **P** **17 57 31.2 -0.2**
USRK Ussuriysk Ar. 50.08 1 P **P** **17 57 32.0 +0.6**
comp=Z,3.0nm,0.6s,baz=180,slow=6.6,SNR=9.7
USRK Ussuriysk Ar. 50.08 1 P **P** **17 57 32.0 +0.6**
MDJ Mudanjiang 50.49 359 P **P** **17 57 34.3 -0.1**
ASAJ Asahikawa 51.12 11 P **P** **17 57 39.8 +0.6**
comp=Z,3.5nm,0.4s,baz=238,slow=11,SNR=14
RPZ Rata Peaks 51.52 143 LR LR 18 21 47.1
comp=Z,178nm,18.2s,baz=302,slow=38
PALK Pallekele 51.64 284 *i* P **P** **17 57 42.7 -1.0**
PALK pmax pmax
comp=Z,10.0nm,1.1s
LSA Lhasa 52.05 315 P **P** **17 57 47.4 +0.4**
LSA pmax pmax
comp=Z,23nm,1.1s
LSA Lhasa 52.05 315 P **P** **17 57 47.4 +0.4**
LSA IAmb IAmb 17 57 48.5
comp=Z,23nm,1.1s
URZ Urewera 52.77 134 LR LR 18 21 16.6
comp=Z,153nm,18.0s,baz=31,slow=37
ODAN Odare 53.22 310 *e*P **P** **17 57 55.2 -0.2**
comp=Z,48nm,0.8s
TAPN Taplejung 53.23 311 *e*P **P** **17 57 55.4 -0.2**
comp=Z,48nm,0.4s
MCQ Macquarie Isla 53.36 160 P **P** **17 57 54.1 -1.5**
baz=54,SNR=3.7
GTA Gaotai 53.54 330 ⇑P **P** **17 57 58.0 +0.6**
GTA pP pP 17 58 23.9 -1.0
GTA pmax pmax
comp=Z,27nm,1.2s
GTA pmax pmax
comp=Z,170nm,4.8s
GTA LR LR
comp=Z,90nm,13.8s
GTA LR LR
comp=Z,97nm,14.5s
GTA LR LR
comp=Z,120nm,12.0s
RAMN Ramite 53.87 310 *e*P **P** **17 58 00.3 +0.2**
comp=Z,76nm,0.5s
YSS Yuzh-Sakhalins 53.89 10 *e*P **P** **17 57 59.8 +0.3**
JIRN Jiri 54.54 310 *e*P **P** **17 58 05.1 -0.1**
comp=Z,13nm,0.3s
GUN Gumba 54.91 310 *e*P **P** **17 58 07.6 -0.2**
comp=Z,96nm,0.9s
PKI Pulchoki 55.09 310 *e*P **P** **17 58 08.6 -0.5**
KLR Kul'dur 55.10 1 *ce*P **P** **17 58 09.1 +0.8**
KLR pmax pmax
comp=Z,3.0nm,1.0s
PKIN Phulchoki 55.11 310 *e*P **P** **17 58 08.6 -0.5**
comp=Z,11nm,0.4s

KKN Kakani 55.30 310 *e*P **P** **17 58 10.1 -0.4**
DMN Daman 55.35 310 *e*P **P** **17 58 10.6 -0.2**
GKN Gorkha 55.90 310 *e*P **P** **17 58 14.4 -0.3**
comp=Z,35nm,0.3s
HYB Hyderabad 56.57 295 *i* P **P** **17 58 18.0 -1.4**
HYB *es*P **sP** **17 58 59.0 -0.2**
KOLN Koldanda 56.59 309 *e*P **P** **17 58 19.6 0.0**
DANN Dangsing 56.75 310 *e*P **P** **17 58 20.5 -0.3**
comp=Z,14nm,0.3s
PYUN Piuthan 57.22 309 *e*P **P** **17 58 24.1 +0.1**
ULN Ulaanbaatar 57.64 341 *ce*P **P** **17 58 27.5 +1.0**
ULN pmax pmax
comp=Z,23nm,1.0s
ULN Ulaanbaatar 57.64 341 P **P** **17 58 27.1 +0.5**
ULN IAmb IAmb 17 58 28.7
comp=Z,22nm,1.0s
SONM Songino Array 57.82 341 P **P** **17 58 28.7 +0.9**
comp=Z,6.6nm,0.7s,baz=152,slow=5.9,SNR=19
SONM Songino Array 57.82 341 IAmb IAmb 17 58 30.5
comp=Z,7.4nm,1.0s
ZEA Zeya 59.68 358 *e*P **P** **17 58 40.9 +0.5**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZAK Zakamensk 61.05 340 *e*P **P** **17 58 49.9 0.0**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
TLY Talaya 62.05 341 P **P** **17 58 57.4 +0.9**
comp=Z,1.9nm,0.4s,baz=217,slow=6.4,SNR=5.8
TLY LR LR 18 28 10.5
comp=Z,31nm,19.0s,baz=142,slow=38
TLY Talaya 62.05 341 *e*P **P** **17 58 56.5 0.0**
TLY *e* 17 59 35.5
TLY *e*S **S** **18 07 18.2 +6.3**
TLY pmax pmax
comp=Z,20nm,0.9s
IRK Irkutsk 62.34 342 *e*P **P** **17 58 57.0 -1.4**
IRK *e* 17 59 38.3
IRK pmax pmax
comp=Z,30nm,2.4s
MOY Mondy 62.92 340 *e*P **P** **17 59 03.5 +1.1**
MOY pmax pmax
comp=Z,44nm,2.5s
WMQ Urumqi 63.04 326 P **P** **17 59 04.4 +1.1**
WMQ pP pwP 17 59 33.0 -0.8
WMQ pmax pmax
comp=Z,150nm,0.7s
WMQ pmax pmax
comp=Z,460nm,4.1s
WMQ Urumqi 63.04 326 P **P** **17 59 03.7 +0.4**
WMQ pmax pmax
comp=Z,91nm,1.2s
WMQ Urumqi 63.04 326 P **P** **17 59 03.7 +0.4**
PETK Petropavlovsk- 63.25 18 P **P** **17 59 05.5 +1.1**
comp=Z,3.8nm,0.6s,baz=178,slow=3.9,SNR=9.1
PETK LR LR 18 28 27.2
comp=Z,18nm,18.3s,baz=208,slow=38
BOD Bodaibo 65.13 350 *e*P **P** **17 59 16.3 -0.2**
BOD pmax pmax
comp=Z,15nm,1.4s
ZSN Zaisan 66.89 328 ⇑ *i*P **P** **17 59 28.8 +0.7**
comp=Z,19nm,1.3s,baz=328
ZSN *i* S **S** **18 08 13.2 +1.6**
baz=328
ZSN Zaisan 66.89 328 *c i*P **P** **17 59 28.7 +0.7**
ZSN *i* S **S** **18 08 13.2 +1.6**
ZSN pmax pmax
comp=Z,19nm,1.3s
DGZ Jazzator, Alta 67.06 331 *c i*P **P** **17 59 30.0 +0.7**
DGZ pmax pmax
comp=Z,33nm,1.1s
NIL Nilore 67.18 310 P **P** **17 59 30.2 0.0**
NIL pmax pmax
comp=Z,18nm,1.1s
NIL Nilore 67.18 310 P **P** **17 59 30.2 0.0**
NIL IAmb IAmb 17 59 31.0
comp=Z,18nm,1.1s
MA2 Magadan 67.38 11 *i* P **P** **17 59 30.9 0.0**
MA2 pmax pmax
comp=Z,2.0nm,0.9s
SHLS Shalkode 67.45 322 ⇑ *i*P **P** **17 59 31.3 -0.6**
comp=Z,49nm,1.3s,baz=322
SHLS *e*S **S** **18 08 17.3 -1.5**
baz=322
SHLS Shalkode 67.45 322 *c i*P **P** **17 59 31.2 -0.6**
SHLS *e*S **S** **18 08 17.2 -1.5**
SHLS pmax pmax
comp=Z,49nm,1.3s
PDGK Podgornoye 67.53 322 P **P** **17 59 32.7 +0.4**
UZB Uzynbulak 67.72 322 ⇑ *i*P **P** **17 59 34.5 +1.0**
comp=Z,33nm,1.2s,baz=322
UZB Uzynbulak 67.72 322 *c i*P **P** **17 59 34.5 +1.0**
UZB pmax pmax
comp=Z,33nm,1.2s
KSH Kashi 67.84 317 P **P** **17 59 35.5 +1.1**
KSH pmax pmax
comp=Z,11nm,0.7s
KSH pmax pmax
comp=Z,130nm,3.0s
MK31 Makanchi Array 67.87 326 *c i*P **P** **17 59 34.9 +0.6**
MK31 Makanchi Array 67.87 326 P **P** **17 59 34.8 +0.6**
MKAR Makanchi Array 67.87 326 P **P** **17 59 35.1 +0.8**
comp=Z,39nm,0.3s,baz=113,slow=8.2,SNR=1676
YAK Yakutsk 67.93 359 P **P** **17 59 34.4 +0.2**
baz=165,slow=2.7
YAK Yakutsk 67.93 359 *e*P **P** **17 59 34.5 +0.2**
YAK *e**PP **sP** **18 00 16.7 +3.0**
YAK *e* 18 02 09.2
YAK *e*PPP PPP 18 03 44.7
YAK *e*S **S** **18 08 22.6 -0.8**
YAK *e**SS **SKiKP** **18 09 17.5 -1.2**
YAK pmax pmax
comp=Z,20nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=E,24nm,2.5s
YAK pmax pmax
comp=N,70nm,3.4s
YAK smax smax
comp=E,93nm,2.8s
YAK smax smax
comp=N,41nm,2.3s
YAK Yakutsk 67.93 359 P **P** **17 59 33.7 -0.5**
YAK IAmb IAmb 18 00 18.3
comp=Z,23nm,0.7s
SATY Saty 68.05 321 *i* P **P** **17 59 36.7 +1.1**
comp=Z,42nm,1.4s,baz=321
SATY Saty 68.05 321 *i* P **P** **17 59 36.7 +1.1**
SATY pmax pmax
comp=Z,42nm,1.4s
MAKZ Makanchi 68.05 326 P **P** **17 59 36.1 +0.6**
MAKZ pmax pmax
comp=Z,96nm,1.2s
MAKZ Makanchi 68.05 326 P **P** **17 59 36.1 +0.6**
KPKS Kokpek 68.09 322 ⇑ *i*P **P** **17 59 36.7 +0.8**
comp=Z,72nm,1.2s,baz=322
KPKS Kokpek 68.09 322 *c i*P **P** **17 59 36.7 +0.8**
KPKS pmax pmax
comp=Z,72nm,1.2s
TNSS Tian-Shan 68.95 321 ⇑ *i*P **P** **17 59 42.7 +1.1**
baz=320
TNSS Tian-Shan 68.95 321 ⇑ *i*P **P** **17 59 42.7 +1.1**
MDOK Medeo 68.95 321 *i* P **P** **17 59 42.2 +0.9**
baz=321
MDOK Medeo 68.95 321 *i* P **P** **17 59 42.2 +0.9**
AAA Alma-Ata 69.06 321 *e*P **P** **17 59 42.8 +1.0**
comp=Z,11nm,0.5s,baz=321
AAA *e*S **S** **18 08 39.3 +1.5**
baz=321
AAA Alma-Ata 69.06 321 *e*P **P** **17 59 42.8 +1.0**
AAA *e*S **S** **18 08 39.3 +1.5**
AAA pmax pmax
comp=Z,11nm,0.5s
TDK Taldyqorghan 69.09 323 *i* P **P** **17 59 42.7 +0.8**
comp=Z,80nm,1.5s,baz=323
TDK Taldyqorghan 69.09 323 *i* P **P** **17 59 42.7 +0.8**
TDK pmax pmax
comp=Z,80nm,1.5s
TKM2 Tokmak 2 69.75 320 P **P** **17 59 46.9 +0.6**
SNR=38
TKM2 Tokmak 2 69.75 320 P **P** **17 59 46.9 +0.6**

KUU Kurty 69.77 321 ⇑ *i*P **P** **17 59 46.9 +0.7**
comp=Z,136nm,1.3s,baz=321
KUU Kurty 69.77 321 *c i*P **P** **17 59 46.8 +0.7**
KUU pmax pmax
comp=Z,136nm,1.3s
KBK Karagaybulak 70.04 320 P **P** **17 59 49.3 +1.3**
SNR=22
UCH Uchtor 70.11 319 P **P** **17 59 50.2 +1.4**
SNR=49
AAK Ala-Archa 70.32 319 P **P** **17 59 50.9 +1.2**
SNR=47
AAK Ala-Archa 70.32 319 *ce*P **P** **17 59 50.8 +1.1**
AAK pmax pmax
comp=Z,95nm,1.1s
AAK Ala-Archa 70.32 319 P **P** **17 59 50.6 +0.9**
CHMS Chumysh 70.33 320 P **P** **17 59 50.3 +0.7**
SNR=7.2
AML Almayashu 70.61 319 P **P** **17 59 53.3 +1.6**
SNR=20
USP Ospenovka 70.62 320 P **P** **17 59 52.3 +0.9**
SNR=64
SGDS Sogindy 70.63 320 ⇑ *i*P **P** **17 59 52.0 +0.6**
baz=320
SGDS Sogindy 70.63 320 *c i*P **P** **17 59 52.0 +0.6**
KBL Kabul 70.74 310 P **P** **17 59 52.6 +0.1**
KBL pmax pmax
comp=Z,27nm,0.9s
KBL Kabul 70.74 310 P **P** **17 59 52.6 +0.1**
KBL IAmb IAmb 17 59 54.0
comp=Z,27nm,0.9s
SEY Seymchan 70.79 10 P **P** **17 59 52.9 +1.0**
comp=Z,4.7nm,0.3s,baz=195,slow=4.7,SNR=45
EKS2 Erkin-Say 70.80 319 P **P** **17 59 53.8 +1.3**
SNR=40
ZAA0 Zalesovo Array 71.10 333 P **P** **17 59 53.5 -0.4**
ZAA0 IAmb IAmb 17 59 54.8
comp=Z,25nm,1.2s
ZALV Zalesovo Beam 71.10 333 P **P** **17 59 53.4 -0.5**
comp=Z,4.4nm,0.5s,baz=108,slow=4.8,SNR=38
SEM Semipalatinsk 71.10 329 *e*P **P** **17 59 53.1 -1.2**
comp=Z,6.6nm,1.1s,baz=328
SEM Semipalatinsk 71.10 329 *e*P **P** **17 59 53.9 -0.4**
SEM pmax pmax
comp=Z,7.0nm,1.1s
GAR Garm 71.55 314 P **P** **17 59 57.4 +0.3**
BTLS Baital 71.76 321 ⇑ *i*P **P** **17 59 58.6 +0.5**
comp=Z,19nm,1.2s,baz=321
BTLS Baital 71.76 321 *c i*P **P** **17 59 58.6 +0.5**
BTLS pmax pmax
comp=Z,19nm,1.2s
KURBB Kurchatov Arra 72.12 328 P **P** **18 00 00.2 +0.1**
DZA Taraz 72.51 318 *e*P **P** **18 00 03.2 +0.5**
comp=Z,14nm,1.0s,baz=318
DZA Taraz 72.51 318 *e*P **P** **18 00 03.2 +0.5**
DZA pmax pmax
comp=Z,15nm,1.0s
IUG Iuzhnay 73.05 317 ⇑ *i*P **P** **18 00 07.0 +1.0**
comp=Z,20nm,1.1s,baz=317
IUG Iuzhnay 73.05 317 ⇑ *i*P **P** **18 00 07.0 +1.0**
IUG pmax pmax
comp=Z,20nm,1.1s
KK31 Karatay Array 73.14 318 *i* P **P** **18 00 06.6 +0.2**
KK31 Karatay Array 73.14 318 P **P** **18 00 06.8 +0.4**
KK31 IAmb IAmb 18 00 08.3
comp=Z,41nm,1.2s
KKAR Karatay Array 73.14 318 P **P** **18 00 06.9 +0.5**
KKAR pmax pmax
comp=Z,41nm,1.2s
KKAR Karatay Array 73.14 318 P **P** **18 00 06.8 +0.5**
KKAR IAmb IAmb 18 00 08.2
comp=Z,41nm,1.2s
VNDA Vanda 73.25 173 P **P** **18 00 06.8 +0.4**
comp=Z,4.3nm,0.7s,baz=326,slow=7.6,SNR=28
VNDA LR LR 18 30 08.4
comp=Z,107nm,21.9s,baz=345,slow=34
VNDA Vanda 73.25 173 P **P** **18 00 07.1 +0.7**
VNDA pmax pmax
comp=Z,10.0nm,1.1s
VNDA Vanda 73.25 173 P **P** **18 00 07.1 +0.7**
CHM Chimkent 73.41 317 *e*P **P** **18 00 10.1 +2.0**
comp=Z,6.8nm,0.9s,baz=317
CHM Chimkent 73.41 317 *e*P **P** **18 00 10.0 +2.0**
CHM pmax pmax
comp=Z,7.0nm,0.9s
SBA Scott Base 74.13 173 P **P** **18 00 13.4 +1.9**
SBA pmax pmax
comp=Z,35nm,2.0s
SBA Scott Base 74.13 173 P **P** **18 00 13.4 +1.9**
BRZS Berezniki 74.98 325 *e*P **P** **18 00 17.2 +0.3**
comp=Z,13nm,1.2s,baz=325
BRZS Berezniki 74.98 325 *e*P **P** **18 00 17.2 +0.3**
BRZS pmax pmax
comp=Z,13nm,1.2s
HRA Herat 75.97 308 P **P** **18 00 23.0 -0.2**
HRA IAmb IAmb 18 00 24.9
comp=Z,29nm,1.4s
MAW Mawson 76.05 201 P **P** **18 00 23.5 +0.8**
comp=Z,9.1nm,0.7s,baz=73,slow=5.3,SNR=21
MAW LR LR 18 33 33.2
comp=Z,84nm,18.1s,baz=60,slow=35
MAW Mawson 76.05 201 P **P** **18 00 22.9 +0.3**
MAW pmax pmax
comp=Z,12nm,1.6s
MAW Mawson 76.05 201 P **P** **18 00 22.9 +0.3**
WSAR Wadi Sarin 76.12 296 LR LR 18 40 06.4
comp=Z,30nm,18.6s,baz=108,slow=40
TIXI Tiksi 77.60 359 *d i*P **P** **18 00 31.4 +0.2**
TIXI Tiksi 77.60 359 P **P** **18 00 30.8 -0.5**
BRVK Borovoye 77.76 328 *ce*P **P** **18 00 32.6 +0.1**
BRVK pmax pmax
comp=Z,28nm,1.3s
BRVK Borovoye 77.76 328 P **P** **18 00 32.4 -0.1**
BRVK IAmb IAmb 18 00 34.0
comp=Z,25nm,1.1s
BILL Bilibino 78.08 13 ⇑ *e*P **P** **18 00 33.8 -0.2**
BILL *e**PP **sP** **18 01 11.8 -1.7**
BILL *e* 18 03 33.8
BILL pmax pmax
comp=Z,1.0nm,1.1s
PPT Papeete 78.39 107 LR LR 18 32 23.2
comp=Z,23nm,20.5s,baz=234,slow=33
SOCY Socotra 78.40 284 P **P** **18 00 36.6 -0.4**
GEYT Alibeck 80.18 310 P **P** **18 00 46.9 +0.7**
comp=Z,4.5nm,0.3s,baz=102,slow=6.8,SNR=15
GYA0B ALIBECK ARRAY 80.18 310 P **P** **18 00 46.9 +0.7**
GYA0B IAmb IAmb 18 00 48.1
comp=Z,29nm,1.1s
NRIK Noril'sk 80.86 346 P **P** **18 00 49.9 +0.8**
comp=Z,8.0nm,0.9s,baz=141,slow=4.8,SNR=14
NRIK Noril'sk 80.86 346 *ce*P **P** **18 00 49.3 +0.3**
NRIK pmax pmax
comp=Z,23nm,1.5s
NRIK Noril'sk 80.86 346 P **P** **18 00 49.1 +0.1**
AB31 Akbulak array 82.25 321 *i* P **P** **18 00 56.2 -0.6**
AKTO Aktyubinsk 83.80 322 P **P** **18 01 04.4 -0.4**
QSPA South Pole Qui 83.87 180 P **P** **18 01 04.6 -0.4**
QSPA IAmb IAmb 18 01 07.0
comp=Z,14nm,0.7s
SVE Sverdlovsk 84.37 329 *de*P **P** **18 01 07.6 +0.1**
SVE pmax pmax
comp=Z,37nm,1.4s
ARU Arti 85.32 328 *d i*P **P** **18 01 12.4 +0.2**
ARU 18 04 30.0
ARU S **SKSac** **18 11 26.8 +0.6**
ARU pmax pmax
comp=Z,28nm,1.3s
ARU Arti 85.32 328 P **P** **18 01 11.4 -0.9**
ARU IAmb IAmb 18 01 13.2
comp=Z,27nm,1.2s
RAYN Ar Rayn 88.04 294 P **P** **18 01 25.5 -0.8**
RAYN pmax pmax
comp=Z,31nm,1.2s
RAYN Ar Rayn 88.04 294 P **P** **18 01 25.5 -0.8**
BELG Belogornoye 90.58 323 *i* P **P** **18 01 37.4 0.0**
BELG pmax pmax
comp=Z,1.0nm,0.8s
MLY Manley 90.67 25 P **P** **18 01 37.8 +0.2**
RND Reindeer 91.13 26 P **P** **18 01 38.9 -1.0**
RND pmax pmax
comp=Z,10.0nm,0.9s
RND Reindeer 91.13 26 P **P** **18 01 38.9 -1.0**
RND IAmb IAmb 18 02 18.4
comp=Z,10nm,0.9s
I23K Minto, Yukon-K 91.26 25 P **P** **18 01 40.0 -0.3**
I23K sP **pwP** **18 02 18.5 +0.7**

I23K					IAmb	IAmb	18 02 19.5	
	comp=Z,12nm,1.0s							
COLD	**Coldfoot**	**91.37**	**22**	P	**P**	**P**	**18 01 40.8**	**0.0**
COLD				pP	**pP**	**pP**	**18 02 08.8**	**-0.2**
COLD				IAmb	IAmb	IAmb	18 02 20.2	
	comp=Z,7.3nm,0.9s							
WRH	**Wood River Hil**	**91.67**	**25**	P	**P**	**P**	**18 01 41.6**	**-0.6**
WRH				pP	**pP**	**pP**	**18 02 09.5**	**-0.9**
WRH				sP	**pwP**	**pwP**	**18 02 18.9**	**-0.9**
WRH				IAmb	IAmb	IAmb	18 02 20.3	
	comp=Z,7.5nm,0.9s							
CCB	**Clear Creek Bu**	**91.82**	**25**	P	**P**	**P**	**18 01 41.9**	**-1.0**
CCB				IAmb	IAmb	IAmb	18 02 20.8	
	comp=Z,12nm,1.0s							
COLA	**College**	**91.84**	**25**	*i* P	**P**	**P**	**18 01 44.1**	**+1.1**
COLA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ILAR	**Eielson Array**	**92.23**	**25**	P	**P**	**P**	**18 01 43.3**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=264,slow=4.3,SNR=13							
ILAR				LR	LR	LR	18 38 56.9	
	comp=Z,23nm,19.9s,baz=260,slow=33							
KIV	**Kislovodsk**	**92.77**	**314**	*e*P	**P**	**P**	**18 01 45.7**	**-2.2**
KIV				pmax	pmax			
	comp=Z,20nm,1.1s							
PRGR	**Permogore**	**92.98**	**332**	*e*P	**P**	**P**	**18 01 45.0**	**-3.3**
PRGR				pmax	pmax			
	comp=Z,9.0nm,0.8s							
KMBO	**Kilima Mbogo**	**93.33**	**269**	P	**P**	**P**	**18 01 51.3**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=56,slow=2.8,SNR=5.0							
KMBO				LR	LR	LR	18 40 08.2	
	comp=Z,29nm,18.9s,baz=124,slow=33							
K27K	**Chicken**	**94.21**	**26**	P	**P**	**P**	**18 01 54.5**	**+0.5**
K27K						**pP**	**18 02 22.6**	**+0.4**
K27K						**sP**	**18 02 32.9**	**-0.8**
K27K				IAmb	IAmb	IAmb	18 02 34.0	
	comp=Z,8.7nm,0.9s							
EGAK	**Eagle**	**94.67**	**25**	P	**P**	**P**	**18 01 57.0**	**+0.9**
EGAK				pP	**pP**	**pP**	**18 02 23.4**	**-0.8**
EGAK				sP	**pwP**	**pwP**	**18 02 34.2**	**+0.6**
EGAK				IAmb	IAmb	IAmb	18 02 35.1	
	comp=Z,8.4nm,1.0s							
DAWY	**Dawson**	**95.39**	**26**	P	**P**	**P**	**18 01 59.3**	**-0.1**
DAWY						**pP**	**18 02 27.4**	**-0.2**
DAWY				sP		**sP**	**18 02 38.3**	**-0.9**
KLMR	**Klimovskoe**	**95.87**	**331**	*e*P		**P**	**18 01 58.4**	**-3.1**
KLMR				*e**SP		**sP**	**18 02 41.9**	**-0.9**
KLMR				pmax	pmax			
	comp=Z,8.0nm,1.1s							
KLMR	**Klimovskoe**	**95.87**	**331**	*e*P		**P**	**18 01 58.4**	**-3.1**
KLMR				AMP			18 01 59.4	
	comp=Z,8.0nm,1.1s							
KLMR				*e*sP		**sP**	**18 02 42.0**	**-0.9**
SNAA	**Sanae**	**96.70**	**193**	Pdiff		**P**	**18 02 05.4**	**+0.1**
OBN	**Obninsk**	**97.34**	**325**	*e*P		**P**	**18 02 05.8**	**-2.5**
OBN				*e**PP		**pwP**	**18 02 45.3**	**+2.4**
OBN				*e*			18 06 07.1	
OBN				*e*SS	SS		18 19 56.8	-6.2
OBN				pmax	pmax			
	comp=Z,7.0nm,1.1s							
VNA2	**Neumayer--Watz**	**98.27**	**193**	Pdiff	Pdif		18 02 13.1	+0.8
VNA3	**Neumayer Olymp**	**98.51**	**192**	Pdiff	Pdif		18 02 14.2	+0.8
VNA1	**Neumayer--Stat**	**98.66**	**193**	Pdiff	Pdif		18 02 14.4	+0.3
BRTR	**Keskin Array B**	**99.31**	**309**	P	**Pdif**		**18 02 16.8**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=152,slow=6.1,SNR=4.0							
BRTR				LR	LR		18 55 26.3	
	comp=Z,21nm,19.2s,baz=99,slow=40							
ARCES	**ARCESS Array B**	**100.98**	**340**	P	**Pdif**		**18 02 23.4**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=88,slow=5.0,SNR=9.3							
AKASG	**Malin Array Be**	**101.97**	**320**	P	**Pdif**		**18 02 27.5**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=66,slow=4.7,SNR=3.8							
FINES	**FINESS Array B**	**102.32**	**332**	P	**Pdif**		**18 02 28.9**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=64,slow=4.4,SNR=5.2							
FINES	**FINESS Array B**	**102.32**	**332**	*i* P	**Pdif**		**18 02 29.2**	**-1.2**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.7s							
YKA	**Yellowknife Ar**	**106.63**	**26**	PKiKP	**PKiKP**		**18 06 59.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=302,slow=1.3,SNR=10							
YKA				PKKPbc	**PKKPbc**		**18 18 18.7**	**-3.0**
	comp=Z,0.5nm,0.7s,baz=107,slow=3.1,SNR=7.6							
NOA	**NORSAR Array B**	**109.30**	**333**	Pdiff	**Pdif**		**18 03 01.4**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=65,slow=4.6,SNR=3.6							
NVAR	**Mina Array Bea**	**110.17**	**51**	PKKPbc	PKKPbc		18 18 10.3	+0.4
	comp=Z,0.5nm,0.6s,baz=99,slow=5.6,SNR=2.9							
GERES	**GERESS Array B**	**112.19**	**321**	PKiKP	**PKiKP**		**18 07 10.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=80,slow=1.5,SNR=7.0							
GERES				PP	**PP**		**18 07 56.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=98,slow=1.9,SNR=4.9							
PDAR	**Pinedale Array**	**115.75**	**45**	PKP	**PKiKP**		**18 07 18.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=127,slow=0.7,SNR=5.1							
PDAR				PKKPbc	**PKKPbc**		**18 17 49.0**	**-2.5**
	comp=Z,0.4nm,0.5s,baz=113,slow=6.9,SNR=3.6							
ULM	**Lac du Bonnet**	**121.30**	**33**	PKP	**PKPdf**		**18 07 27.2**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=300,slow=2.1,SNR=6.0							
TXAR	**Lajitas Array**	**123.85**	**59**	PKP	**PKiKP**		**18 07 34.0**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=257,slow=2.1,SNR=4.9							
TXAR				PKKPbc	**PKKPbc**		**18 17 20.7**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=102,slow=5.0,SNR=5.2							
JCT	**Junction City**	**126.80**	**56**	PKiKP	**PKPdf**		**18 07 38.4**	**-0.7**
JCT	**Junction City**	**126.80**	**56**		**PKPdf**		**18 07 38.4**	**-0.7**
ESDC	**Sonseca Array**	**127.36**	**316**	PP	PP		18 09 41.7	+1.0
	comp=Z,0.5nm,0.9s,baz=55,slow=7.8,SNR=4.9							
S39A	**Bolivar**	**129.15**	**45**	PKPdf	**PKPdf**		**18 07 42.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**129.33**	**282**	PKP	**PKPdf**		**18 07 44.2**	**0.0**
	comp=Z,1.0nm,0.6s,baz=66,slow=1.7,SNR=4.9							
TORD				PP	**PP**		**18 10 00.6**	**+5.8**
	comp=Z,0.2nm,0.4s,baz=53,slow=5.7,SNR=5.1							
TORD				SKPbc	SKPab		18 10 53.8	-0.7
	comp=Z,1.7nm,1.0s,baz=71,slow=2.9,SNR=4.1							
PLCA	**Paso Flores**	**129.47**	**159**	PKP	**PKiKP**		**18 07 45.2**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=71,slow=3.0,SNR=6.2							
PLCA				SKPbc	SKPab		18 10 54.1	-0.3
	comp=Z,0.6nm,0.6s,baz=222,slow=2.4,SNR=4.1							
JTS	**Las Juntas de**	**144.46**	**81**	PKIKP	PKPbc		18 08 11.5	+0.6
JTS	**Las Juntas de**	**144.46**	**81**	PKPdf	PKPbc		18 08 11.5	+0.6
ESPN	**Las Esperanzas**	**144.92**	**78**		**PKPdf**		**18 08 12.8**	**-0.1**
PB06	**IPOC Station P**	**145.16**	**146**		**PKPdf**		**18 08 14.1**	**+0.8**
LVC	**Limon Verde**	**145.60**	**147**	PKPbc	**PKPab**		**18 08 16.5**	**+1.4**
	comp=Z,8.2nm,0.5s,baz=222,slow=2.8,SNR=6.4							
LVC	**Limon Verde**	**145.60**	**147**	PKP2	**PKPab**		**18 08 15.4**	**+0.3**
LVC	**Limon Verde**	**145.60**	**147**		**PKPab**		**18 08 15.4**	**+0.3**
PB07	**IPOC Station P**	**145.75**	**144**		**PKPab**		**18 08 16.1**	**+0.6**
CPUP	**Villa Florida**	**146.83**	**167**	PKPbc	**PKPbc**		**18 08 18.1**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=201,slow=2.5,SNR=13							
ATAH	**Atahualpa**	**148.12**	**114**	PKPbc	**PKPab**		**18 08 24.6**	**-0.7**
	comp=Z,6.2nm,0.5s,baz=270,slow=1.0,SNR=6.4							
OTAV	**Otavalo**	**150.31**	**100**	*e*P	**PKPbc**		**18 08 26.6**	**-1.1**
LPAZ	**La Paz**	**150.97**	**140**	PKPbc	**PKiKP**		**18 08 30.1**	**+0.2**
	comp=Z,6.3nm,0.4s,baz=21,slow=2.4,SNR=55							
GCUF	**Volcan Galeras**	**151.59**	**99**	*e*P	PKPdf		18 08 11.0	-13
BBAC	**Balboa, Cauca**	**151.82**	**97**	*e*P	**PKPbc**		**18 08 29.7**	**-1.2**
POPC	**Popayan, Colom**	**152.46**	**96**	*e*P	**PKPbc**		**18 08 31.6**	**-0.8**
PCON	**Cinco Dias**	**152.70**	**97**	*e*P	**PKiKP**		**18 08 33.6**	**0.0**
YOTC	**Yotoco, Valle**	**152.96**	**93**	*e*P	**PKPbc**		**18 08 33.0**	**-0.3**
MARP	**Paez Belalcaza**	**153.21**	**96**	*e*P	**PKiKP**		**18 08 35.0**	**+0.7**
CBOC	**Ciudad Bolivar**	**153.41**	**89**	*e*P	**PKiKP**		**18 08 35.2**	**+0.7**
RREF	**El Recreo**	**154.03**	**91**	*e*P	**PKiKP**		**18 08 39.7**	**+3.3**
GUY2C	**Guyana, Caldas**	**154.03**	**91**	*e*P	**PKPbc**		**18 08 35.1**	**-1.0**
NORC	**Norcasia**	**154.54**	**90**	*e*P	**PKPbc**		**18 08 35.7**	**-1.0**
ZARC	**Zaragoza, Cauc**	**154.56**	**85**	*e*P	**PKPbc**		**18 08 35.6**	**-1.0**
PAMC	**Pamplona, Colo**	**156.71**	**86**	*e*P	**PKPdf**		**18 08 35.0**	**+3.4**

IDC 04 18:07:42.8±2.7, 1°92N×128°93E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/46, mbtmp3.1/3 Error ellipse: s-maj=196.2km s-min=27.2km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.36**	**167**	P	P	18 12 42.4	-0.3
	0.3nm,0.6s,baz=346,slow=11,SNR=1.7						
ASAR	**Alice Springs**	**25.89**	**170**	P	P	18 13 16.7	+0.1
	0.1nm,0.6s,baz=348,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**60.29**	**325**	P	P	18 17 53.3	0.0
	0.2nm,0.4s,baz=117,slow=7.6,SNR=5.9						

*SOME **04** 18:21:19.2, 48°00N×70°97E, h0km*
*NNC **04** 18:21:21.1±0.5, 47°98N×70°83E, h4km±4km, mb3.9, mpv3.6, Error ellipse: s-maj=4.4km s-min=2.5km az=74.0, Suspected Mining explosion.*
*IDC **04** 18:21:22.6±0.8, 48°05N×70°89E, h0km, mb1 3.6/9, mb1mx3.3/52, mbtmp3.6/9, ML2.9/8, Error ellipse: s-maj=10.2km s-min=7.2km az=35.0*
ISC 04 18:21:20.1±0.7, 47°97N±0°04×70°93E±0°04, h0km, n51,

σ2°79/73, 9C-12D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRZS	**Berezniki**	**2.32**	**29**	Pg	**Pb**	**18 22 02.9**	**+0.2**
	18nm,0.2s						
BRZS				Lg	Lg	18 22 34.6	
	65nm,0.6s						
BTLS	**Baital**	**3.64**	**143**	*e*P	**Pg**	**18 22 28.9**	**-0.8**
	10nm,0.5s						
BTLS				*e*S	**Sg**	**18 23 18.6**	**+1.8**
	17nm,0.4s						
BTLS	**Baital**	**3.64**	**143**	Pg	**Pg**	**18 22 28.9**	**-0.8**
	3.8nm,0.3s						
BTLS				Lg	Lg	18 23 18.6	
	9.1nm,0.5s						
KK31	**Karatay Array**	**4.88**	**184**	Pn	**Pn**	**18 22 36.5**	**+1.8**
	2.0nm,0.5s,baz=360,slow=14,SNR=32						
KK31				⇓Sn	**Sn**	**18 23 32.7**	**+0.8**
	3.0nm,0.5s						
KK31				⇑Lg	Lg	18 23 56.8	
	10nm,0.6s,baz=0.3,slow=28,SNR=6.7						
BVAR	**Borovoye Array**	**5.07**	**356**	Pn	**Pn**	**18 22 38.8**	**+1.5**
	2.3nm,0.3s,baz=178,slow=17,SNR=54						
BVAR				Pg	**Pb**	**18 22 50.8**	**+1.2**
	1.0nm,0.3s,baz=156,slow=19,SNR=6.7						
BVAR				Sn	**Sn**	**18 23 35.7**	**-0.8**
	3.4nm,0.3s,baz=178,slow=29,SNR=15						
BVAR				Lg	Lg	18 23 55.1	
	0.9nm,0.3s,baz=189,slow=28,SNR=6.1						
BRVK	**Borovoye**	**5.11**	**356**	⇑Pn	**Pn**	**18 22 39.4**	**+1.6**
	2.1nm,0.4s						
BRVK				⇓Sn	**Sn**	**18 23 38.2**	**+0.7**
	3.2nm,0.4s						
BRVK				⇑Lg	Lg	18 24 05.1	
	17nm,0.8s						
SGDS	**Sogindy**	**5.21**	**149**	Pg	**Pg**	**18 22 57.2**	**-2.7**
	4.2nm,0.5s						
SGDS				Lg	Lg	18 24 06.6	
	15nm,0.7s						
KRBS	**Karabastau**	**5.41**	**141**	*e*P	**Pg**	**18 23 00.8**	**-2.9**
	2.2nm,0.5s						
KRBS				*e*S	**Sg**	**18 24 13.6**	**-0.2**
	17nm,0.7s						
KRBS	**Karabastau**	**5.41**	**141**	Pg	**Pg**	**18 23 00.8**	**-2.9**
	2.2nm,0.5s						
KRBS				Lg	Lg	18 24 13.6	
	17nm,0.7s						
KUU	**Kurty**	**5.55**	**135**	*e*P	**Pg**	**18 23 02.4**	**-4.1**
	1.8nm,0.5s						
KUU				*e*S	**Sg**	**18 24 16.2**	**-2.3**
	21nm,0.7s						
KUU	**Kurty**	**5.55**	**135**	Pg	**Pg**	**18 23 02.4**	**-4.1**
	1.8nm,0.5s						
KUU				Lg	Lg	18 24 16.2	
	21nm,0.7s						
KURBB	**Kurchatov Arra**	**5.63**	**59**	Pn	**Pn**	**18 22 47.9**	**+2.9**
	0.1nm,0.3s,baz=248,slow=13,SNR=17						
KURBB				Pg	**Pg**	**18 23 04.3**	**-3.6**
	0.3nm,0.3s,baz=246,slow=17,SNR=13						
KURBB				Sn	**Sn**	**18 23 50.5**	**+0.1**
	0.1nm,0.3s,baz=242,slow=18,SNR=2.3						
KURBB				Lg	Lg	18 24 18.4	
	0.3nm,0.3s,baz=243,slow=30,SNR=5.5						
KURBB	**Kurchatov Arra**	**5.63**	**59**	⇑Lg	Lg	18 24 24.7	
	36nm,0.6s						
DGS	**Degeres**	**5.82**	**143**	*e*P	**Pg**	**18 23 07.7**	**-3.9**
	2.9nm,0.4s						
DGS				*e*S	**Sg**	**18 24 24.8**	**-2.2**
	36nm,0.6s						
DGS	**Degeres**	**5.82**	**143**	Pg	**Pg**	**18 23 07.7**	**-3.9**
	2.9nm,0.4s						
DGS				Lg	Lg	18 24 24.8	
	36nm,0.6s						
KTBS	**Karatobe**	**5.86**	**135**	*e*P	**Pg**	**18 23 07.7**	**-4.5**
	1.2nm,0.5s						
KTBS				*e*S	**Sg**	**18 24 25.9**	**-2.2**
	34nm,0.6s						
KTBS	**Karatobe**	**5.86**	**135**	Pg	**Pg**	**18 23 07.7**	**-4.5**
	1.2nm,0.5s						
KTBS				Lg	Lg	18 24 25.8	
	34nm,0.6s						
IUG	**Iuzhnay**	**5.86**	**187**	*e*P	**Pg**	**18 23 09.6**	**-2.7**
	3.1nm,0.1s						
IUG				*e*S	**Sg**	**18 24 28.0**	**-0.3**
	18nm,0.7s						
IUG	**Iuzhnay**	**5.86**	**187**	Pg	**Pg**	**18 23 09.6**	**-2.7**
	3.1nm,0.1s						
IUG				Lg	Lg	18 24 28.0	
	18nm,0.7s						
AAK	**Ala-Archa**	**5.90**	**154**	Pn	Pn	18 22 53.4	+4.6
	0.3nm,0.3s,baz=334,slow=14,SNR=5.7						
AAK				Sn	**Sn**	**18 24 01.9**	**+4.8**
	0.6nm,0.3s,baz=326,slow=11,SNR=3.5						
AAK				Lg	Lg	18 24 26.5	
	0.7nm,0.3s,baz=48,slow=14,SNR=3.7						
AAK	**Ala-Archa**	**5.90**	**154**	⇓Lg	Lg	18 24 31.0	
	8.9nm,0.6s						
TKM2	**Tokmak 2**	**6.02**	**145**	⇓Lg	Lg	18 24 35.3	
	11nm,0.6s						
KST	**Kastek**	**6.07**	**143**	*e*P	**Pg**	**18 23 12.9**	**-3.4**
	2.6nm,0.5s						
KST				*e*S	**Sg**	**18 24 33.9**	**-0.9**
	14nm,0.9s						
KST	**Kastek**	**6.07**	**143**	Pg	**Pg**	**18 23 12.9**	**-3.4**
	2.6nm,0.5s						
KST				Lg	Lg	18 24 33.9	
	14nm,0.9s						
IZV	**Izvestkoviy**	**6.35**	**139**	*e*P	**Pg**	**18 23 18.2**	**-3.5**
	2.8nm,0.6s						
IZV				*e*S	**Sg**	**18 24 43.5**	**-0.4**
	30nm,0.7s						
IZV	**Izvestkoviy**	**6.35**	**139**	Pg	**Pg**	**18 23 18.2**	**-3.5**
	2.8nm,0.6s						
IZV				Lg	Lg	18 24 43.5	
	30nm,0.7s						
KOTS	**Kotyrbulak**	**6.42**	**135**	*e*P	**Pg**	**18 23 18.9**	**-4.2**
	3.5nm,0.5s						
KOTS				*e*S	**Sg**	**18 24 44.5**	**-1.7**
	23nm,0.5s						
KOTS	**Kotyrbulak**	**6.42**	**135**	Pg	**Pg**	**18 23 18.9**	**-4.2**
	3.5nm,0.5s						
KOTS				Lg	Lg	18 24 44.5	
	23nm,0.5s						
MDOK	**Medeo**	**6.45**	**136**	⇓Sn	**Sn**	**18 24 13.3**	**+2.7**
	7.8nm,0.5s						
MDOK				⇓Lg	Lg	18 24 49.6	
	19nm,0.6s						
TNSS	**Tian-Shan**	**6.50**	**137**	*e*P	**Pg**	**18 23 21.5**	**-3.1**
	2.2nm,0.5s						
TNSS				*e*S	**Sg**	**18 24 49.3**	**+0.6**
	9.7nm,0.7s						
TNSS	**Tian-Shan**	**6.50**	**137**	Pg	**Pg**	**18 23 21.5**	**-3.1**
	2.2nm,0.5s						
TNSS				Lg	Lg	18 24 49.3	
	9.7nm,0.7s						
KPKS	**Kokpek**	**7.05**	**127**	*e*P	**Pg**	**18 23 31.4**	**-3.8**
	1.6nm,0.1s						
KPKS				*e*S	**Sg**	**18 25 05.6**	**-0.9**
	20nm,0.4s						
DJR	**Jarkent**	**7.15**	**117**	*e*P	**Pg**	**18 23 32.2**	**-4.8**
	0.9nm,0.3s						
DJR				*e*S	**Sg**	**18 25 07.6**	**-1.9**
	6.9nm,0.7s						
DJR	**Jarkent**	**7.15**	**117**	Pg	**Pg**	**18 23 32.2**	**-4.8**
	0.9nm,0.3s						
DJR				Lg	Lg	18 25 07.6	
	6.9nm,0.7s						
SATY	**Saty**	**7.19**	**130**	*e*P	**Pg**	**18 23 33.6**	**-4.1**
	2.6nm,0.8s						
SATY				*e*S	**Sg**	**18 25 10.0**	**-0.8**
	24nm,0.9s						
SATY	**Saty**	**7.19**	**130**	Pg	**Pg**	**18 23 33.6**	**-4.1**
	2.6nm,0.8s						
SATY				Lg	Lg	18 25 10.0	
	24nm,0.9s						
AB31	**Akbulak array**	**7.40**	**284**	⇓Pn	**Pn**	**18 23 09.4**	**+0.1**
	0.6nm,0.7s,baz=266,slow=32,SNR=9.7						
AB31				⇑Sn	**Sn**	**18 24 32.4**	**-1.4**
	0.5nm,0.5s,baz=98,slow=24,SNR=4.6						
AB31				⇓Lg	Lg	18 25 15.0	
	2.9nm,0.7s,baz=89,slow=28,SNR=4.4						
UZB	**Uzynbulak**	**7.45**	**127**	*e*P	**Pg**	**18 23 38.8**	**-4.0**
	4.0nm,0.2s						
UZB				*e*S	**Sg**	**18 25 17.9**	**-1.3**
	11nm,0.8s						
UZB	**Uzynbulak**	**7.45**	**127**	Pg	**Pg**	**18 23 38.8**	**-4.0**
	4.0nm,0.2s						
UZB				Lg	Lg	18 25 17.9	
	11nm,0.8s						
PDGK	**Podgornoye**	**7.58**	**125**	⇑Lg	Lg	18 25 26.6	
	11nm,0.8s						
MAKZ	**Makanchi**	**7.59**	**95**	⇓Pn	**Pn**	**18 23 15.1**	**+3.2**
	1.3nm,0.5s						
MAKZ				⇑Lg	Lg	18 25 27.0	
	7.0nm,0.7s						
SHLS	**Shalkode**	**7.68**	**126**	*e*P	**Pg**	**18 23 45.2**	**-1.9**
	2.3nm,0.3s						
SHLS				*e*S	**Sg**	**18 25 30.3**	**+3.7**
	23nm,1.1s						
SHLS	**Shalkode**	**7.68**	**126**	Pg	**Pg**	**18 23 45.2**	**-1.9**
	2.3nm,0.3s						
SHLS				Lg	Lg	18 25 30.3	
	23nm,1.1s						
MK31	**Makanchi Array**	**7.80**	**94**	⇓Pn	**Pn**	**18 23 17.6**	**+2.8**
	2.0nm,0.5s,baz=272,slow=11,SNR=76						
MK31				⇓Lg	Lg	18 25 32.9	
	4.2nm,0.6s,baz=285,slow=26,SNR=9.2						
MKAR	**Makanchi Array**	**7.80**	**94**	Pn	**Pn**	**18 23 18.0**	**+3.2**
	1.2nm,0.3s,baz=280,slow=12,SNR=79						
MKAR				Sn	**Sn**	**18 24 46.2**	**+2.4**
	0.2nm,0.3s,baz=285,slow=23,SNR=3.5						
MKAR				Lg	Lg	18 25 28.1	
	0.3nm,0.3s,baz=287,slow=26,SNR=4.3						
AKTO	**Aktyubinsk**	**8.81**	**291**	Pn	**Pn**	**18 23 30.6**	**+2.0**
	0.1nm,0.3s,baz=98,slow=7.1,SNR=2.1						
AKTO				Sn	**Sn**	**18 25 06.5**	**-2.0**
	0.1nm,0.3s,baz=192,slow=19,SNR=2.6						
AKTO				Lg	Lg	18 25 55.6	
	0.2nm,0.3s,baz=187,slow=22,SNR=2.4						
AKTO	**Aktyubinsk**	**8.81**	**291**	⇑Pn	**Pn**	**18 23 28.2**	**-0.4**
	1.0nm,0.8s						
AKTO				⇑Sn	**Sn**	**18 25 07.5**	**-1.0**
	1.9nm,0.7s						
AKTO				⇓Lg	Lg	18 26 00.0	
	4.3nm,0.8s						
ZALV	**Zalesovo Beam**	**10.60**	**50**	Pn	**Pn**	**18 23 54.5**	**+1.5**
	0.2nm,0.3s,baz=260,slow=14,SNR=6.2						
ZALV				Sn	**Sn**	**18 25 53.1**	**+0.8**
	0.2nm,0.3s,baz=248,slow=24,SNR=5.7						
ARU	**Arti**	**11.36**	**323**	Pn	**Pn**	**18 24 03.4**	**0.0**
	0.0nm,0.3s,baz=98,slow=8.1,SNR=6.9						
ARU				Sn	Sn	18 26 01.2	-10
	0.0nm,0.3s,baz=119,slow=19,SNR=2.2						
ARU				Lg	Lg	18 27 17.1	
	0.0nm,0.3s,baz=351,slow=23,SNR=3.1						
KIRV	**Kirov**	**16.60**	**318**	Pn	**Pn**	**18 25 10.7**	**-3.3**
	1.1nm,0.3s,baz=289,slow=14,SNR=3.7						
KBZ	**Khabaz**	**19.93**	**268**	P	**Pn**	**18 25 54.6**	**-0.3**
	0.2nm,0.3s,baz=5.8,slow=21,SNR=1.5						

IDC 04 18:35:49.5±3.8, 5°48S×153°34E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.2/25, mbtmp3.3/2, Error ellipse: s-maj=162.1km s-min=52.3km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.41**	**230**	P	P	18 41 00.3	-0.1
	0.5nm,0.5s,baz=55,slow=9.7,SNR=5.3						
ASAR	**Alice Springs**	**26.02**	**224**	P	P	18 41 24.5	-0.1
	2.6nm,0.5s,baz=58,slow=9.0,SNR=12						
TORD	**Torodi Ar. Bea**	**151.02**	**287**	PKPbc	PKPbc	18 55 45.6	0.0
	0.4nm,0.6s,baz=93,slow=3.0,SNR=2.4						

*IDC **04** 18:55:24.3±1.3, 5°50S×153°19E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.8/52, mbtmp3.9/13, ML1.9/1, MS3.1/8, Ms1 3.1/8, ms1mx2.9/35, Error ellipse: s-maj=44.9km s-min=17.2km az=117.0*
ISC 04 18:55:29.7±1.1, 5°6S±0°2×153°2E±0°2, h37km, n18, σ0°93/16, mb3.8/12, MS3.2/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.10**	**237**	Pn	**Pn**	**18 57 10.9**	**-0.1**
	1.3nm,0.3s,baz=39,slow=9.5,SNR=6.4						
PMG				Sn	**Sn**	**18 58 30.6**	**+0.1**
	2.9nm,0.3s,baz=226,slow=13,SNR=7.7						
PMG				LR	LR	18 59 04.9	
	comp=Z,36nm,20.3s,baz=90,slow=31						
DZM	**Mont Dzumac**	**20.79**	**143**	LR	LR	19 06 59.2	
	comp=Z,68nm,21.1s,baz=70,slow=33						
WRA	**Warramunga Arr**	**23.25**	**230**	P	**P**	**19 00 34.1**	**+0.2**
	6.6nm,1.0s,baz=54,slow=10.0,SNR=28						
WRA				LR	LR	19 10 37.8	
	comp=Z,27nm,19.6s,baz=80,slow=39				

2.5nm,0.5s
GEYT Alibeck 9.97 283 Pn **Pn** **19 05 38.2 -2.1**
0.3nm,0.3s,baz=101,slow=14,SNR=1.9
GEYT Sn **Sn** **19 07 31.8 +1.5**
0.3nm,0.3s,baz=158,slow=25,SNR=1.7
PYUN Piuthan 13.43 124 *eP* **Pn** **19 06 25.0 -1.6**
7.4nm,0.2s
MK31 Makanchi Array 13.65 37 P **P** **19 06 35.0 +0.5**
0.6nm,0.8s,baz=210,slow=10,SNR=4.7
MKAR Makanchi Array 13.65 37 Pn **Pn** **19 06 25.9 -3.3**
0.0nm,0.3s,baz=219,slow=14,SNR=2.4
DANN Dangsing 13.79 122 *eP* **Pn** **19 06 29.1 -2.3**
4.8nm,0.2s
KOLN Koldanda 14.05 124 *eP* **Pn** **19 06 33.1 -1.6**
3.4nm,0.4s
GKN Gorkha 14.61 121 *eP* **Pn** **19 06 40.1 -1.7**
7.7nm,0.3s
AB31 Akbulak array 14.99 332 P **P** **19 06 49.9 +0.6**
1.3nm,0.4s,baz=154,slow=12,SNR=38
AB31 S **Sn** **19 09 26.6 -5.0**
1.5nm,0.6s,baz=146,slow=23,SNR=4.8
DMN Daman 15.18 121 *eP* **Pn** **19 06 47.5 -1.7**
2.9nm,0.2s
KKN Kakani 15.19 120 *eP* **Pn** **19 06 47.2 -2.0**
KURBB Kurchatov Arra 15.38 20 Pn **Pn** **19 06 51.8 +0.5**
0.0nm,0.3s,baz=208,slow=9.9,SNR=4.2
PKIN Phulchoki 15.40 120 *eP* **Pn** **19 06 50.9 -1.1**
6.0nm,0.4s
PKI Pulchoki 15.41 120 *eP* **Pn** **19 06 51.0 -1.2**
4.6nm,0.4s
GUN Gumba 15.54 119 *eP* **Pn** **19 06 51.9 -1.9**
6.0nm,0.4s
RAMN Ramite 16.63 120 *eP* **Pn** **19 07 06.5 -0.7**
3.5nm,0.3s
BVAR Borovoye Array 16.65 360 P **P** **19 07 12.2 +4.4**
0.2nm,0.3s,baz=186,slow=13,SNR=2.2
AKTO Aktyubinsk 16.68 331 P **P** **19 07 12.3 +4.2**
0.2nm,0.3s,baz=134,slow=12,SNR=8.2
AKTO Aktyubinsk 16.68 331 ⇑P **P** **19 07 12.6 +4.6**
2.3nm,0.7s
TAPN Taplejung 17.18 117 *eP* **Pn** **19 07 13.7 -0.3**
4.6nm,0.3s
ZALV Zalesovo Beam 20.21 25 P **P** **19 07 48.3 +1.7**
3.3nm,0.4s,baz=219,slow=11,SNR=18
USRK Ussuriysk Ar. 46.61 60 LR LR 19 35 46.7
comp=Z,39nm,18.2s,baz=2.9,slow=42
SIJI Sorong 67.38 109 LR LR 19 43 20.3
comp=Z,31nm,20.8s,baz=46,slow=36

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*IDC **04** 19:07:48.0±1.1, 18°.23S×178°.41W, h604km±11km, mb3.4/12, mb1 3.6/14, mb1mx3.3/33, mbtmp4.3/14, Error ellipse: s-maj=23.3km s-min=13.7km az=148.0*
*NEIC **04** 19:07:48.4±1.3, 18°.1S±0°.1×178°.50W±0°.06, h604km±10km, mb4.1/39, Error ellipse: s-maj=20.8km s-min=7.5km az=185.0*
ISC 04 19:07:47.7±0.6, 18°.1S±0°.1×178°.4W±0°.1, h600km, n87, σ0s89/89, mb4.1/29, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.42**	**276**	P	**P**	**19 09 10.4**	**+0.9**
	8.1nm,0.3s,baz=126,slow=2.7,SNR=35						
MSVF				S	**S**	**19 10 17.7**	**+1.7**
	baz=135,slow=22,SNR=1.3						
MSVF	**Nonsavu**	**3.42**	**276**	P	**P**	**19 09 10.8**	**+1.3**
SANVU	**Saraoutou**	**14.05**	**279**	P	**P**	**19 10 46.5**	**-0.7**
DZM	**Mont Dzumac**	**14.77**	**252**	P	**P**	**19 10 53.0**	**-1.0**
	0.2nm,0.3s,baz=161,slow=8.1,SNR=1.6						
KNTN	**Kanton**	**16.61**	**24**	P	**P**	**19 11 09.3**	**-1.5**
OUZ	**Omahuta**	**18.45**	**201**	P	**P**	**19 11 29.6**	**+2.4**
OUZ				IAmb	IAmb	19 11 43.4	
	comp=Z,8.6nm,1.2s						
URZ	**Urewera**	**20.43**	**190**	P	**P**	**19 11 42.4**	**-2.7**
	comp=Z,7.1nm,1.0s,baz=303,slow=24,SNR=2.0						
URZ	**Urewera**	**20.43**	**190**	P	**P**	**19 11 43.0**	**-2.2**
URZ				IAmb	IAmb	19 11 46.2	
	comp=Z,14nm,1.3s						
HNR	**Honiara**	**22.73**	**289**	P	**P**	**19 12 06.9**	**+0.8**
	comp=Z,109nm,0.5s,baz=168,slow=5.8,SNR=7.2						
QRZ	**Quartz Range**	**23.92**	**197**	P	**P**	**19 12 17.0**	**+0.7**
EIDS	**Eidsvold**	**29.21**	**250**	P	**P**	**19 13 03.2**	**+0.4**
EIDS				IAmb	IAmb	19 13 11.0	
	comp=Z,8.9nm,1.5s						
CTAO	**Charters Tower**	**33.43**	**261**	P	**P**	**19 13 38.2**	**-0.5**
CTAO				IAmb	IAmb	19 13 39.1	
	comp=Z,3.4nm,0.8s						
PMG	**Port Moresby**	**34.52**	**280**	P	**P**	**19 13 46.9**	**-1.0**
	comp=Z,10nm,0.8s,baz=130,slow=7.9,SNR=3.2						
PMG	**Port Moresby**	**34.52**	**280**	P	**P**	**19 13 47.9**	**+0.1**
COEN	**Coen**	**37.13**	**271**	P	**P**	**19 14 09.6**	**+0.2**
COEN				IAmb	IAmb	19 14 10.7	
	comp=Z,4.7nm,0.8s						
WR0	**Warramunga Arr**	**44.42**	**260**	P	**P**	**19 15 06.8**	**-0.2**
WB2	**Warramunga Arr**	**44.60**	**260**	P	**P**	**19 15 07.6**	**-0.7**
WRA	**Warramunga Arr**	**44.61**	**260**	P	**P**	**19 15 07.8**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=97,slow=7.5,SNR=25						
WRA				PcP	**PcP**	**19 16 38.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=93,slow=3.7,SNR=5.7						
WRA	**Warramunga Arr**	**44.61**	**260**	P	**P**	**19 15 07.7**	**-0.7**
AS31	**Alice Springs**	**44.75**	**254**	P	**P**	**19 15 09.6**	**+0.1**
ASAR	**Alice Springs**	**44.75**	**254**	P	**P**	**19 15 09.6**	**+0.1**
	comp=Z,4.4nm,0.7s,baz=85,slow=9.3,SNR=103						
ASAR				PcP	**PcP**	**19 16 38.6**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=103,slow=4.0,SNR=7.9						
ASAR				ScP	**ScP**	**19 19 34.6**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=94,slow=4.9,SNR=1.7						
ASAR	**Alice Springs**	**44.75**	**254**	P	**P**	**19 15 09.1**	**-0.4**
MTN	**Manton Dam**	**48.81**	**269**	P	**P**	**19 15 39.0**	**-1.0**
MTN				IAmb	IAmb	19 15 39.6	
	comp=Z,12nm,1.2s						
MJAR	**Matsushiro Arr**	**68.10**	**323**	P	**P**	**19 17 48.5**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=154,slow=5.5,SNR=2.0						
PETK	**Petropavlovsk-**	**73.91**	**345**	P	**P**	**19 18 22.2**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=129,slow=5.1,SNR=5.7						
SII	**Sitkinak Islan**	**77.14**	**13**	P	**P**	**19 18 40.4**	**+0.1**
OHAK	**Old Harbor**	**77.95**	**14**	P	**P**	**19 18 44.4**	**-0.2**
CMB	**Columbia Colle**	**77.99**	**43**	P	**P**	**19 18 46.4**	**+1.0**
YBH	**Yreka Blue Hor**	**78.69**	**39**	P	**P**	**19 18 50.3**	**+1.3**
BEKR	**Beckworth**	**79.05**	**42**	P	**P**	**19 18 51.7**	**+0.6**
LHV	**Little Huntoon**	**79.35**	**44**	P	**P**	**19 18 54.0**	**+1.6**
LHV				IAmb	IAmb	19 18 54.9	
	comp=Z,4.1nm,0.9s						
NVAR	**Mina Array Bea**	**79.58**	**44**	P	**P**	**19 18 55.0**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=223,slow=8.5,SNR=16						
PAHR	**Pah Rah Range**	**79.58**	**42**	P	**P**	**19 18 54.3**	**+0.4**
KVN	**Kaiserville**	**80.05**	**43**	P	**P**	**19 18 57.1**	**+0.7**
MOD	**Modoc Plateau**	**80.25**	**40**	P	**P**	**19 18 58.1**	**+0.8**
MOD				IAmb	IAmb	19 18 59.2	
	comp=Z,4.3nm,0.7s						
K05A	**Summer Lake**	**80.36**	**39**	P	**P**	**19 18 59.2**	**+1.2**
K05A				IAmb	IAmb	19 19 00.2	
	comp=Z,6.9nm,0.9s						
CNPM	**China Poot**	**80.50**	**14**	P	**P**	**19 18 57.9**	**-0.2**
CNPM				IAmb	IAmb	19 19 14.3	
	comp=Z,21nm,1.4s						
PINE	**Pine Mountain**	**80.96**	**38**	P	**P**	**19 19 01.9**	**+0.9**
PINE				IAmb	IAmb	19 19 02.9	
	comp=Z,6.1nm,0.8s						
PRN	**Pahroc Range**	**81.22**	**46**	P	**P**	**19 19 03.8**	**+1.4**
PRN				IAmb	IAmb	19 19 04.4	
	comp=Z,3.7nm,0.7s						
WUAZ	**Wupatki**	**82.88**	**49**	P	**P**	**19 19 12.4**	**+1.5**
WUAZ				IAmb	IAmb	19 19 13.4	
	comp=Z,5.7nm,1.1s						
GHO	**Glory Hole Cre**	**83.03**	**14**	P	**P**	**19 19 10.7**	**-0.2**
SCM	**Sheep Creek Mo**	**83.45**	**14**	P	**P**	**19 19 12.9**	**-0.1**
N25K	**Chitina, Valde**	**83.92**	**16**	P	**P**	**19 19 15.3**	**0.0**
N25K				IAmb	IAmb	19 19 16.0	
	comp=Z,5.2nm,0.7s						
TRF	**Thorofare Moun**	**84.23**	**12**	P	**P**	**19 19 15.9**	**-1.0**
RND	**Reindeer**	**84.49**	**13**	P	**P**	**19 19 17.9**	**-0.1**
RND				IAmb	IAmb	19 19 18.8	
	comp=Z,5.4nm,0.7s						
HLID	**Hailey**	**84.79**	**41**	P	**P**	**19 19 20.5**	**+0.4**
HLID				IAmb	IAmb	19 19 22.1	
	comp=Z,3.9nm,0.9s						
BCAR	**Beaver Creek A**	**85.86**	**16**	P	**P**	**19 19 25.0**	**+0.3**
IMAR	**Indian Mountai**	**85.90**	**10**	P	**P**	**19 19 24.3**	**-0.4**
TX31	**Lajitas Ar. Si**	**86.10**	**58**	P	**P**	**19 19 26.8**	**+0.2**
TX32	**Lajitas Array**	**86.10**	**58**	P	**P**	**19 19 27.9**	**+1.3**
TX32				IAmb	IAmb	19 19 29.5	
	comp=Z,4.4nm,0.9s						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**19 19 28.5**	**+1.8**
	comp=Z,3.0nm,0.7s,baz=219,slow=6.1,SNR=28						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**19 19 28.0**	**+1.3**
IL31		**86.11**	**13**	P	**P**	**19 19 24.6**	**-1.0**
IL31				IAmb	IAmb	19 19 25.6	
	comp=Z,3.2nm,1.1s						
ILAR	**Eielson Array**	**86.11**	**13**	P	**P**	**19 19 24.9**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=223,slow=5.1,SNR=26						
ILAR	**Eielson Array**	**86.11**	**13**	P	**P**	**19 19 24.4**	**-1.3**
BW06	**Boulder Array**	**87.50**	**43**	P	**P**	**19 19 33.5**	**+0.4**
BW06				IAmb	IAmb	19 19 34.2	
	comp=Z,2.7nm,0.8s						
PD31	**Pinedale Array**	**87.50**	**43**	P	**P**	**19 19 33.7**	**+0.6**
PD31				IAmb	IAmb	19 19 34.2	
	comp=Z,2.2nm,0.8s						
PDAR	**Pinedale Array**	**87.50**	**43**	P	**P**	**19 19 33.7**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=226,slow=3.6,SNR=15						
INK	**Inuvik**	**92.10**	**15**	P	**P**	**19 19 52.8**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=180,slow=4.3,SNR=6.7						
YKA	**Yellowknife Ar**	**94.53**	**25**	P	**P**	**19 20 03.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=238,slow=4.2,SNR=7.0						
ARCES	**ARCESS Array B**	**126.54**	**350**	PKP	**PKPdf**	**19 25 42.3**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=121,slow=1.4,SNR=9.4						
ARCES	**ARCESS Array B**	**126.54**	**350**		**PKPdf**	**19 25 42.5**	**-0.5**
FINES	**FINESS Array B**	**133.41**	**344**	PKP	**PKPdf**	**19 25 54.8**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=57,slow=5.1,SNR=5.3						
FINES	**FINESS Array B**	**133.41**	**344**	PKPdf	**PKPdf**	**19 25 56.5**	**+0.3**
OJC	**Ojcow**	**144.83**	**340**		**PKPbc**	19 26 18.1	+0.1
BRTR	**Keskin Array B**	**144.96**	**315**	PKPbc	**PKPbc**	19 26 18.8	0.0
	comp=Z,1.0nm,0.6s,baz=118,slow=2.7,SNR=7.3						
BRTR	**Keskin Array B**	**144.96**	**315**		**PKPdf**	**19 26 18.4**	**+0.5**
OSTC	**Ostas**	**145.62**	**343**	*e*PKP	**PKPbc**	**19 26 21.1**	**+0.9**
CHVC	**Chvalec**	**145.63**	**344**	*e*PKP	**PKPbc**	**19 26 20.8**	**+0.5**
CLL	**Collm**	**145.69**	**347**	*i* PKPbc	**PKPbc**	**19 26 20.6**	**+0.3**
	comp=Z,9.0nm,0.6s						
CLL	**Collm**	**145.69**	**347**		**PKPbc**	**19 26 19.7**	**-0.6**
DPC	**Dobruska-Polom**	**145.77**	**343**	*e*PKP	**PKPbc**	**19 26 21.4**	**+0.7**
KRLC	**Kraliky**	**145.89**	**343**	*e*PKP	**PKPbc**	**19 26 21.4**	**+0.4**
PVCC	**Panska Ves**	**146.07**	**345**	*e*PKP	**PKPbc**	**19 26 22.2**	**+0.8**
PRU	**Pruhonice**	**146.57**	**345**	*e*PKP	**PKPbc**	**19 26 23.1**	**+0.3**
KHC	**Kasperske Hory**	**147.60**	**345**	*e*PKP	**PKPbc**	**19 26 25.9**	**+0.3**
KHC				*ex*	x	19 26 30.7	
CKRC	**Cesky Krumlov**	**147.71**	**344**	*e*PKP	**PKPbc**	**19 26 26.1**	**+0.2**
GERES	**GERESS Array B**	**147.84**	**345**	PKPbc	**PKPbc**	**19 26 26.6**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=29,slow=3.3,SNR=24						
MOA	**Molln**	**148.61**	**344**	*e*P	**PKPbc**	**19 26 28.7**	**+0.6**
	comp=Z,6.8nm,1.4s						
ARSA	**Arzberg**	**148.80**	**342**	*i* P	**PKPbc**	**19 26 28.8**	**+0.2**
	comp=Z,3.3nm,1.1s						
WATA	**Walderalm**	**149.75**	**346**	*i* P	**PKPbc**	**19 26 31.1**	**0.0**
	comp=Z,2.5nm,0.6s						
WTTA	**Wattenberg**	**149.81**	**346**	*i* P	**PKPbc**	**19 26 31.4**	**+0.2**
	comp=Z,5.7nm,0.6s						
MOTA	**Moosalm**	**149.85**	**347**	*i* P	**PKPbc**	**19 26 31.2**	**-0.1**
	comp=Z,3.1nm,0.8s						
SQTA	**Sankt Quirin**	**149.94**	**347**	*e*P	**PKPbc**	**19 26 31.7**	**+0.2**
	comp=Z,7.6nm,1.3s						
ABTA	**Abfaltersbach**	**150.09**	**345**	*e*P	**PKPbc**	**19 26 31.5**	**-0.3**
	comp=Z,4.9nm,0.6s						
FETA	**Feichten**	**150.23**	**347**	*e*P	**PKPbc**	**19 26 32.6**	**+0.4**
	comp=Z,5.1nm,1.1s						
ESDC	**Sonseca Array**	**158.00**	**12**	PKPab	**PKPab**	**19 27 13.8**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=0.0,slow=2.7,SNR=3.2						

KRSC 04 19:37:45.4±1.9, 50°.07N×159°.60E, h62km±42km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**2.25**	**309**	P	Pn	19 38 22.5	+2.2
PAU				*e*S	Sn	19 38 49.0	+2.0
SKR	**Severo-Kuril's**	**2.31**	**287**	*e*S	Sn	19 38 48.2	-0.1
RUS	**Russkaya**	**2.46**	**344**	*e*P	Pn	19 38 25.1	+2.0
RUS				*e*S	Sn	19 38 53.9	+1.9
ASAK	**Asacha**	**2.55**	**336**	*e*P	Pn	19 38 27.5	+3.1
ASAK				*e*S	Sn	19 38 57.8	+3.5
MTVR	**Mutnovka**	**2.57**	**340**	*e*P	Pn	19 38 27.3	+2.5
MTVR				*e*S	Sn	19 38 58.1	+3.1
GRL	**Gorelyy**	**2.66**	**340**	*e*P	Pn	19 38 29.3	+3.3
GRL				*e*S	Sn	19 39 00.7	+3.6
KRMR	**Karymshinskiy**	**2.91**	**342**	*e*P	Pn	19 38 33.3	+4.1
KRMR				*e*S	Sn	19 39 07.6	+4.6
DALK	**Dalny**	**3.01**	**350**	*e*P	Pn	19 38 33.0	+2.4
DALK				*e*S	Sn	19 39 06.9	+1.5
PET	**Petropavlovsk**	**3.02**	**349**	*e*P	Pn	19 38 33.3	+2.7
PET				*e*S	Sn	19 39 08.0	+2.5
SPN	**Mys Shipunski**	**3.04**	**5**	*e*P	Pn	19 38 33.9	+2.9
SPN				*e*S	Sn	19 39 08.5	+2.3
NLC	**Nalytchevo**	**3.11**	**357**	*e*P	Pn	19 38 35.2	+3.3
NLC				*e*S	Sn	19 39 10.8	+3.0
UGLR	**Uglovaya**	**3.18**	**352**	*e*P	Pn	19 38 36.0	+3.0
SMAR	**Somma**	**3.24**	**351**	*e*P	Pn	19 38 36.6	+2.7
SDLR	**Sedlovina**	**3.24**	**352**	*e*P	Pn	19 38 36.5	+2.6
AVH	**Avacha**	**3.24**	**351**	*e*P	Pn	19 38 36.9	+3.0
KOK	**Koryaka**	**3.28**	**350**	*e*P	Pn	19 38 37.8	+3.4
KRER	**Koryakskii**	**3.28**	**351**	*e*P	Pn	19 38 37.4	+2.9
KRX	**Arik**	**3.35**	**350**	*e*P	Pn	19 38 37.5	+2.2
GNL	**Ganaly**	**3.77**	**345**	*e*P	Pn	19 38 45.8	+4.7
GNL				*e*S	Sn	19 39 29.0	+4.7
KII	**Karymskiy**	**3.97**	**359**	*e*P	Pn	19 38 47.1	+3.3
KII				*e*S	Sn	19 39 32.5	+3.4
MKZ	**Mys Kozlova**	**4.68**	**15**	*e*P	Pn	19 38 56.4	+3.0
KZV	**Kizimen**	**5.07**	**5**	*e*P	Pn	19 39 03.0	+4.1
KZV				*e*S	Sn	19 39 59.9	+3.8
TUMD	**Tumrok D**	**5.17**	**5**	*e*P	Pn	19 39 04.0	+4.0
TUMD				*e*S	Sn	19 40 01.2	+3.0
TUMR	**Tumrok**	**5.23**	**3**	*e*P	Pn	19 39 05.2	+4.1
KBTR	**Krutoberegovo**	**6.45**	**16**	*e*P	Pn	19 39 20.7	+3.2

IDC 04 19:40:30.3±1.4, 2°.63N×128°.79E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/38, mbtmp3.3/5, ML3.0/1, Error ellipse: s-maj=105.2km s-min=20.4km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.27**	**145**	Pn	Pn	19 41 36.8	+0.2
	0.8nm,0.3s,baz=22,slow=24,SNR=13						
SIJI				Sn	Sn	19 42 23.8	-3.3
	0.2nm,0.3s,baz=217,slow=22,SNR=1.6						
WRA	**Warramunga Arr**	**23.09**	**167**	P	P	19 45 38.0	+0.2
	1.3nm,0.8s,baz=347,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.61**	**169**	P	P	19 46 10.1	-0.5
	0.2nm,0.7s,baz=351,slow=8.5,SNR=6.7						
H11S3	**WAKE ISLAND Hy**	**40.31**	**64**	T	T	20 31 19.5	
	baz=251,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**40.33**	**64**	T	T	20 31 23.1	
	baz=251,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**40.33**	**64**	T	T	20 31 19.9	
	baz=251,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**40.89**	**63**	T	T	20 32 12.1	
	baz=250,slow=75,SNR=21						
H11N2	**WAKE ISLAND Hy**	**40.90**	**63**	T	T	20 32 05.4	
	baz=250,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**40.91**	**63**	T	T	20 32 05.2	
	baz=250,slow=75,SNR=19						
SONM	**Songino Array**	**49.01**	**340**	P	P	19 49 18.9	-0.1
	0.1nm,0.4s,baz=152,slow=9.5,SNR=2.3						
MKAR	**Makanchi Array**	**59.63**	**325**	P	P	19 50 36.4	+0.1
	0.2nm,0.4s,baz=126,slow=8.2,SNR=5.1						

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*AEIC **04** 20:10:28±1.3, 51°.41N±0°.04×178°.16W±0°.07, h46km±8km, ML3.2, mb3.7/11(NEIC), Error ellipse: s-maj=8.5km s-min=3.1km az=134.0*
NEIC 04 20:10:29.2±0.9, 51°.5N±0°.1×178°.21W±0°.08, h47km±15km, Error ellipse: s-maj=20.1km s-min=6.2km az=170.0, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**0.40**	**16**		Pn	20 10 39.3	+0.1
GALAA	**Gareloi Lava P**	**0.47**	**312**		Pn	20 10 40.2	+0.3
TAFP	**Tanaga Falls P**	**0.48**	**17**		Pn	20 10 39.9	-0.2
KIMD	**Kanaga Island**	**0.69**	**62**		Pn	20 10 41.8	-0.8
KIKV	**Kanaga Island**	**0.78**	**56**		Pn	20 10 43.4	-0.5
KICM	**Kanaga Island**	**0.79**	**53**		Pn	20 10 44.1	+0.1
KIRH	**Kanaga Island**	**0.83**	**56**		Pn	20 10 44.4	-0.2
ADK	**Adak**	**1.05**	**65**	Pn	Pn	20 10 46.6	-0.9
ADAG	**Mount Adagdak**	**1.14**	**61**		Pn	20 10 48.5	-0.1
CERAA	**Semis' Rag'd T**	**1.39**	**290**		Pn	20 10 52.3	+0.2
GSTD	**Great Sitkin T**	**1.42**	**64**		Pn	20 10 52.7	+0.1
CESW	**Semis' Southwe**	**1.46**	**289**		Pn	20 10 53.1	+0.1
GSMY	**Great Sitkin M**	**1.47**	**65**		Pn	20 10 53.2	0.0
CEAP	**Semis' Anvil P**	**1.48**	**293**		Pn	20 10 53.7	+0.3
GSTR	**Great Sitkin T**	**1.49**	**63**		Pn	20 10 53.5	0.0
AMKA	**Amchitka**	**1.56**	**268**		Pn	20 10 53.8	-0.6
LSPA	**Little Sitkin**	**2.06**	**286**		Pn	20 11 01.7	+0.3
ATKA	**Atka Island**	**2.60**	**72**		Pn	20 11 09.0	+0.3
KOFP	**Korovin Flat P**	**2.68**	**70**		Pn	20 11 10.6	+0.8
OHAK	**Old Harbor**	**15.59**	**59**	Pn	Pn	20 14 03.7	-1.8
OHAK				IAmb	IAmb	20 14 15.9	
	comp=Z,16nm,1.4s						
KDAK	**Kodiak Island**	**16.08**	**57**	Pn	Pn	20 14 10.3	-1.4
SKT	**Skwentna**	**17.90**	**44**	P	P	20 14 34.7	+0.1
KTH	**Kantishna Hill**	**18.84**	**39**		Pn	20 14 45.6	-0.1
KTH				IAmb	IAmb	20 14 57.1	
	comp=Z,6.6nm,1.4s						
TRF	**Thorofare Moun**	**19.04**	**40**	P	P	20 14 47.8	+0.5
TRF				IAmb	IAmb	20 14 56.6	
	comp=Z,3.9nm,1.4s						
RND	**Reindeer**	**19.61**	**41**	P	P	20 14 53.1	-0.3
SCM	**Sheep Creek Mo**	**19.71**	**46**	P	P	20 14 54.1	-0.3
M24K	**Tolsona, Glenn**	**20.31**	**46**	P	P	20 15 01.7	+0.8
M24K				IAmb	IAmb	20 15 15.1	
	comp=Z,11nm,1.4s						

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*IDC **04** 20:12:23.3±3.0, 4°.90S×152°.31E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/37, mbtmp3.5/5, Error ellipse: s-maj=104.0km s-min=27.9km az=103.0*
ISC 04 20:12:30.8±2.5, 5°.0S±0°.2×152°.3E±0°.6, h55km, n6, σ0s79/6, mb3.4/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.93**	**228**	P	**P**	**20 17 30.5**	**0.0**
	0.7nm,0.4s,baz=54,slow=9.8,SNR=15						
ASAR	**Alice Springs**	**25.67**	**222**	P	**P**	**20 17 55.4**	**-0.4**
	0.3nm,0.6s,baz=56,slow=9.3,SNR=17						
STKA	**Stephens Creek**	**28.59**	**199**	P	**P**	**20 18 22.2**	**+0.4**
	0.6nm,0.6s,baz=9.6,slow=16,SNR=3.3						
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**20 24 35.0**	**+0.1**
	0.2nm,0.7s,baz=92,slow=7.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**80.98**	**326**	P	**P**	**20 24 40.1**	**+0.6**
	0.6nm,0.6s,baz=129,slow=8.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**149.84**	**288**	PKPbc	**PKiKP**	**20 32 15.8**	**-1.1**
	0.6nm,0.7s,baz=92,slow=1.7,SNR=3.5						

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*IDC **04** 20:28:18.5±1.1, 9°.38N×58°.09E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/42, mbtmp3.7/7, MS3.4/17, Ms1 3.4/17, ms1mx3.1/52, Error ellipse: s-maj=36.3km s-min=22.7km az=139.0*
ISC 04 20:28:21.2±1.0, 9°.4N±0°.2×58°.1E±0°.2, h17km, n20, σ1s03/9, mb3.8/7, MS3.3/15, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**13.80**	**2**	LR	LR	20 36 00.9	
	comp=Z,160nm,21.3s,baz=201,slow=34						
ATD	**Arta Tunnel**	**15.12**	**279**	LR	LR	20 37 19.4	
	comp=Z,41nm,18.2s,baz=106,slow=36						
PALK	**Pallekele**	**22.49**	**94**	LR	LR	20 40 03.2	
	comp=Z,93nm,20.7s,baz=25,slow=31						
KMBO	**Kilima Mbogo**	**23.21**	**244**	P	**P**	**20 33 27.9**	**+0.1**
	2.5nm,1.0s,baz=47,slow=7.2,SNR=4.5						
MBAR	**Mbarara**	**28.96**	**251**	LR	LR	20 46 33.3	
	comp=Z,101nm,18.7s,baz=47,slow=38						
EIL	**Elat**	**29.59**	**316**	LR	LR	20 46 35.4	
	comp=Z,23nm,18.9s,baz=106,slow=37						
OPO	**Ambohidratompo**	**29.77**	**201**	LR	LR	20 43 20.1	
	comp=Z,70nm,19.4s,baz=182,slow=30						
LSZ	**Lusaka**	**38.43**	**231**	LR	LR	20 50 11.1	
	comp=Z,48nm,18.9s,baz=42,slow=34						
CMAR	**Chiang Mai Arr**	**40.61**	**73**	LR	LR	20 52 13.7	
	comp=Z,26nm,20.2s,baz=357,slow=35						
MATP	**Matopo**	**41.51**	**224**	LR	LR	20 51 45.1	
	comp=Z,52nm,18.4s,baz=52,slow=34						
MKAR	**Makanchi Array**	**42.62**	**25**	P	**P**	**20 36 15.0**	**-1.6**
	0.5nm,0.9s,baz=231,slow=6.4,SNR=5.0						
MKAR				PcP	**PcP**	**20 38 10.2**	**+1.6**
	0.1nm,0.4s,ba

SIJI	**Sorong**	**17.79**	**288**	P	**P**	**21 00 38.0**	**+1.0**
	0.3nm,0.3s,baz=15,slow=24,SNR=2.2						
SIJI				LR	LR	21 09 07.4	
	comp=Z,754nm,21.2s,baz=94,slow=42						
MTN	**Manton Dam**	**17.96**	**248**	P	**Pn**	**21 00 36.7**	**-2.3**
WB0	**Warramunga Arr**	**18.82**	**224**	P	**P**	**21 00 47.0**	**-1.4**
WB0				IAmb	IAmb	21 00 53.8	
	comp=Z,6.2nm,0.7s						
WR0	**Warramunga Arr**	**18.85**	**223**	P	**P**	**21 00 47.7**	**-1.0**
WR0				IAmb	IAmb	21 00 50.6	
	comp=Z,20nm,1.4s						
WRA	**Warramunga Arr**	**18.98**	**224**	P	**P**	**21 00 49.4**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=53,slow=10,SNR=34						
WRA	**Warramunga Arr**	**18.98**	**224**	P	**P**	**21 00 49.6**	**-0.4**
EIDS	**Eidsvold**	**18.98**	**172**	P	**P**	**21 00 50.3**	**+0.3**
EIDS				IAmb	IAmb	21 01 06.0	
	comp=Z,19nm,1.4s						
SANVU	**Saraoutou**	**20.65**	**117**	P	**P**	**21 01 08.9**	**+0.6**
AS31	**Alice Springs**	**21.92**	**217**	P	**P**	**21 01 21.5**	**-0.5**
AS31				IAmb	IAmb	21 01 31.1	
	comp=Z,6.1nm,0.5s						
ASAR	**Alice Springs**	**21.93**	**217**	P	**P**	**21 01 21.8**	**-0.2**
	comp=Z,9.2nm,0.7s,baz=54,slow=9.2,SNR=176						
ASAR				S	**S**	**21 05 20.7**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=32,slow=21,SNR=5.1						
ASAR				ScP	**ScP**	**21 08 58.9**	**+5.9**
	comp=Z,1.1nm,0.9s,baz=62,slow=2.2,SNR=4.5						
ASAR	**Alice Springs**	**21.93**	**217**	P	**P**	**21 01 21.4**	**-0.6**
SANI	**Sanana**	**22.58**	**280**	P	**P**	**21 01 35.4**	**+6.4**
	comp=Z,18nm,0.7s						
SOEI	**Soe**	**23.91**	**261**	P	**P**	**21 01 41.3**	**-0.9**
SOEI	**Soe**	**23.91**	**261**	P	**P**	**21 01 44.2**	**+2.0**
	comp=Z,22nm,1.4s						
ARMA	**Armidale**	**24.02**	**173**	P	**P**	**21 01 43.5**	**+0.4**
ARMA				IAmb	IAmb	21 01 46.3	
	comp=Z,32nm,1.4s						
BATI	**Baumata**	**24.55**	**260**	P	**P**	**21 01 49.5**	**+1.6**
	comp=Z,15nm,0.6s,baz=11,slow=5.2,SNR=3.9						
BATI	**Baumata**	**24.55**	**260**	P	P	21 01 59.1	+11
FITZ	**Fitzroy Crossi**	**24.84**	**240**	P	**P**	**21 01 50.9**	**+0.4**
	comp=Z,18nm,0.4s,baz=60,slow=8.4,SNR=116						
FITZ				LR	LR	21 12 41.6	
	comp=Z,120nm,19.7s,baz=66,slow=39						
FITZ	**Fitzroy Crossi**	**24.84**	**240**	P	**P**	**21 01 50.4**	**-0.1**
MMRI	**Maumere**	**25.82**	**264**	P	**P**	**21 01 59.8**	**+0.3**
STKA	**Stephens Creek**	**26.00**	**193**	P	**P**	**21 02 00.6**	**-0.3**
	comp=Z,9.4nm,0.9s,baz=342,slow=6.1,SNR=13						
STKA				LR	LR	21 13 21.6	
	comp=Z,852nm,18.9s,baz=9.7,slow=39						
STKA	**Stephens Creek**	**26.00**	**193**	P	**P**	**21 02 00.4**	**-0.5**
KAPI	**Kappang**	**28.34**	**271**	LR	LR	21 16 16.1	
	comp=Z,191nm,19.6s,baz=78,slow=42						
MORW	**Morawa**	**37.75**	**230**	P	**P**	**21 03 43.5**	**-0.4**
TPUB	**Ta-pu**	**40.03**	**319**	P	**P**	**21 04 01.3**	**-1.8**
TPUB				IAmb	IAmb	21 04 14.8	
	comp=Z,12nm,1.1s						
JHJ	**Hachijo jima 2**	**40.19**	**349**	LR	LR	21 18 58.3	
	comp=Z,147nm,19.0s,baz=144,slow=34						
TUWZ	**Tuamarina**	**41.66**	**151**	P	**P**	**21 04 16.0**	**-0.2**
MJAR	**Matsushiro Arr**	**43.82**	**348**	P	**P**	**21 04 35.0**	**+1.3**
	comp=Z,7.6nm,1.1s,baz=166,slow=9.0,SNR=6.6						
MJAR				LR	LR	21 20 51.2	
	comp=Z,164nm,21.5s,baz=170,slow=33						
MJAR	**Matsushiro Arr**	**43.82**	**348**	P	**P**	**21 04 34.2**	**+0.5**
MJAR				IAmb	IAmb	21 04 49.6	
	comp=Z,3.2nm,1.0s						
MAT	**Matsushiro**	**43.82**	**348**	P	P	21 04 38.6	+4.9
KSRS	**Korea Array**	**47.64**	**338**	LR	LR	21 23 11.3	
	comp=Z,198nm,21.1s,baz=159,slow=34						
KULM	**Kulim**	**48.88**	**283**	P	**P**	**21 05 13.7**	**-0.2**
KULM				IAmb	IAmb	21 05 15.6	
	comp=Z,4.5nm,0.8s						
PSI	**Prapat**	**50.05**	**279**	LR	LR	21 29 10.3	
	comp=Z,84nm,20.3s,baz=91,slow=39						
USRK	**Ussuriysk Ar.**	**52.53**	**345**	LR	LR	21 26 26.7	
	comp=Z,48nm,19.6s,baz=157,slow=34						
USRK	**Ussuriysk Ar.**	**52.53**	**345**	P	**P**	**21 05 40.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**54.53**	**298**	P	**P**	**21 05 57.0**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=124,slow=7.6,SNR=4.0						
CMAR				LR	LR	21 27 43.7	
	comp=Z,68nm,21.8s,baz=171,slow=34						
KLR	**Kul'dur**	**57.32**	**347**	P	**P**	**21 06 14.4**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=181,slow=6.0,SNR=5.1						
KLR				LR	LR	21 30 10.3	
	comp=Z,50nm,18.6s,baz=190,slow=35						
PETK	**Petropavlovsk-**	**59.91**	**7**	LR	LR	21 28 51.4	
	comp=Z,149nm,21.9s,baz=203,slow=32						
ULN	**Ulaanbaatar**	**65.11**	**331**	P	**P**	**21 07 07.7**	**-0.6**
ULN				IAmb	IAmb	21 07 16.0	
	comp=Z,1.5nm,0.8s						
SONM	**Songino Array**	**65.41**	**330**	P	**P**	**21 07 11.1**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=133,slow=5.0,SNR=3.4						
SONM				LR	LR	21 35 33.6	
	comp=Z,209nm,20.0s,baz=105,slow=36						
SONM	**Songino Array**	**65.41**	**330**	P	**P**	**21 07 10.4**	**+0.2**
VNDA	**Vanda**	**71.36**	**177**	LR	LR	21 37 42.3	
	comp=Z,164nm,18.5s,baz=350,slow=35						
MK31	**Makanchi Array**	**78.63**	**320**	P	**P**	**21 08 28.5**	**-0.8**
MK31				IAmb	IAmb	21 08 36.0	
	comp=Z,2.7nm,1.4s						
MKAR	**Makanchi Array**	**78.63**	**320**	P	**P**	**21 08 28.7**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=109,slow=7.3,SNR=7.7						
MKAR				LR	LR	21 41 47.1	
	comp=Z,32nm,21.9s,baz=93,slow=34						
MKAR	**Makanchi Array**	**78.63**	**320**	P	**P**	**21 08 28.6**	**-0.7**
MAKZ	**Makanchi**	**78.84**	**320**	P	**P**	**21 08 29.6**	**-0.8**
MAKZ				IAmb	IAmb	21 08 37.7	
	comp=Z,1.7nm,1.0s						
ZALV	**Zalesovo Beam**	**80.06**	**328**	LR	LR	21 42 18.6	
	comp=Z,105nm,21.6s,baz=128,slow=34						
ZALV	**Zalesovo Beam**	**80.06**	**328**	P	**P**	**21 08 36.1**	**-0.7**
MAW	**Mawson**	**82.26**	**203**	LR	LR	21 44 39.1	
	comp=Z,51nm,19.5s,baz=61,slow=35						
QSPA	**South Pole Qui**	**83.48**	**180**	P	**P**	**21 08 54.8**	**-0.1**
QSPA				IAmb	IAmb	21 08 57.6	
	comp=Z,8.2nm,1.2s						
ILAR	**Eielson Array**	**85.46**	**23**	P	**P**	**21 09 05.0**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=242,slow=5.6,SNR=7.6						
ILAR				LR	LR	21 41 39.0	
	comp=Z,44nm,21.8s,baz=258,slow=32						
ILAR	**Eielson Array**	**85.46**	**23**	P	**P**	**21 09 06.0**	**+1.4**
NRIK	**Noril'sk**	**86.10**	**342**	LR	LR	21 47 32.9	
	comp=Z,46nm,20.4s,baz=132,slow=36						
GEYT	**Alibeck**	**94.00**	**308**	LR	LR	21 55 33.4	
	comp=Z,43nm,20.8s,baz=110,slow=38						
NVAR	**Mina Array Bea**	**96.72**	**52**	LR	LR	21 46 58.9	
	comp=Z,64nm,20.7s,baz=268,slow=31						
YKA	**Yellowknife Ar**	**99.04**	**28**	P	**Pdif**	**21 10 05.2**	**-2.6**
	comp=Z,0.1nm,0.5s,baz=258,slow=6.1,SNR=3.9						
YKA				LR	LR	21 52 22.2	
	comp=Z,39nm,20.2s,baz=0.0,slow=34						
GERES	**GERESS Array B**	**122.98**	**326**	PKP	**PKPdf**	**21 15 21.6**	**-2.0**
	comp=Z,0.4nm,0.7s,baz=64,slow=4.6,SNR=2.5						
TORD	**Torodi Ar. Bea**	**146.37**	**284**	PKPbc	**PKPab**	**21 16 09.8**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=80,slow=4.0,SNR=18						
BDFB	**Brasilia**	**152.77**	**144**	PKPbc	**PKiKP**	**21 16 25.7**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=338,slow=2.8,SNR=5.2						

*IDC **04** 21:00:54.5±1.5, 6.36S×148.22E, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.7/36, mbtmp3.8/9, ML3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.7/40, Error ellipse: s-maj=51.7km s-min=18.7km az=104.0*

ISC 04 21:01:02.0±1.1, 6.45S±0.09×147.9E±0.2, h51km, n11, σ1°81/14, mb3.6/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.03**	**194**	Pn	**Pn**	**21 01 47.5**	**+0.1**
	22nm,0.3s,baz=338,slow=6.8,SNR=13						
PMG				Sn	**Sn**	**21 02 24.2**	**+1.7**
	46nm,0.3s,baz=176,slow=22,SNR=9.6						
PMG				LR	LR	21 03 20.7	
	comp=Z,287nm,20.8s,baz=104,slow=46						
PMG	**Port Moresby**	**3.03**	**194**	P	**Pn**	**21 01 49.9**	**+2.5**
CTA	**Charters Tower**	**13.65**	**187**	Pn	**Pn**	**21 04 10.7**	**-2.3**
	0.1nm,0.3s,baz=5.7,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**18.80**	**223**	P	**Pn**	**21 05 18.5**	**+0.1**
	0.4nm,0.3s,baz=51,slow=11,SNR=9.6						
WRA				S	**Sn**	**21 08 44.2**	**-3.8**
	0.0nm,0.3s,baz=50,slow=26,SNR=2.7						
ASAR	**Alice Springs**	**21.77**	**217**	P	**P**	**21 05 51.0**	**+1.3**
	4.1nm,0.7s,baz=52,slow=9.1,SNR=14						
ASAR				S	**S**	**21 09 47.7**	**-0.1**
	0.8nm,0.6s,baz=33,slow=21,SNR=6.8						
FITZ	**Fitzroy Crossi**	**24.60**	**240**	P	**P**	**21 06 19.6**	**+2.0**
	5.3nm,0.5s,baz=54,slow=8.9,SNR=22						
STKA	**Stephens Creek**	**25.97**	**192**	P	**P**	**21 06 30.0**	**+0.1**
	1.3nm,0.5s,baz=357,slow=3.9,SNR=5.9						
SONM	**Songino Array**	**65.23**	**331**	P	**P**	**21 11 38.5**	**+0.1**
	0.4nm,0.8s,baz=142,slow=5.3,SNR=2.6						
MKAR	**Makanchi Array**	**78.41**	**320**	P	**P**	**21 12 57.6**	**+0.2**
	0.2nm,0.7s,baz=117,slow=5.0,SNR=2.2						
ILAR	**Eielson Array**	**85.54**	**23**	P	**P**	**21 13 33.3**	**-1.1**
	0.2nm,0.7s,baz=249,slow=5.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**146.07**	**284**	PKPbc	**PKPab**	**21 20 38.0**	**-0.1**
	1.0nm,0.6s,baz=73,slow=4.3,SNR=6.9						

*IDC **04** 21:04:34.7±6.0, 51.80N×170.51E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.4/55, mbtmp3.6/6, ML2.9/1, Error ellipse: s-maj=172.2km s-min=23.5km az=170.0*
*NEIC **04** 21:04:37.7±1.1, 51.8N±0.1×170.5E±0.1, h15km±6km, mb4.0/32, Error ellipse: s-maj=16.5km s-min=10.5km az=181.0*
*KRSC **04** 21:04:45.5±1.7, 52.30N×169.10E, h20km±21km, ML4.1*

ISC 04 21:04:37.4±1.3, 52.2N±0.2×170.22E±0.05, h10km, n64, σ2°07/64, mb4.0/19, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**2.43**	**76**		**Pn**	**21 05 16.3**	**-0.9**
SMY					**Sn**	**21 05 43.4**	**-3.6**
MKZ	**Mys Kozlova**	**5.60**	**298**	*e*P	**Pn**	**21 06 01.9**	**+1.3**
MKZ				*e*S	**Sn**	**21 07 00.1**	**-4.8**
KBTR	**Krutoberegovo**	**5.91**	**316**	*e*P	**Pn**	**21 06 07.6**	**+2.7**
SPN	**Mys Shipunskii**	**6.27**	**282**	*e*P	**Pn**	**21 06 11.9**	**+2.0**
KZV	**Kizimen**	**6.58**	**300**	*e*P	**Pn**	**21 06 17.1**	**+2.9**
TUMR	**Tumrok**	**6.72**	**301**	*e*P	**Pn**	**21 06 19.3**	**+3.1**
KII	**Karymskiy**	**6.74**	**290**	*e*P	**Pn**	**21 06 18.5**	**+2.1**
KII				*e*S	**Sn**	**21 07 28.2**	**-4.9**
SDLR	**Sedlovina**	**6.96**	**283**	*e*P	**Pn**	**21 06 21.9**	**+2.4**
UGLR	**Uglovaya**	**7.00**	**283**	*e*P	**Pn**	**21 06 22.8**	**+2.8**
SMAR	**Somma**	**7.01**	**283**	*e*P	**Pn**	**21 06 23.3**	**+3.0**
KRER	**Koryakskii**	**7.05**	**283**	*e*P	**Pn**	**21 06 23.4**	**+2.6**
AVH	**Avacha**	**7.05**	**283**	*e*P	**Pn**	**21 06 23.2**	**+2.5**
KRX	**Arik**	**7.11**	**284**	*e*P	**Pn**	**21 06 23.4**	**+1.8**
KOK	**Koryaka**	**7.11**	**283**	*e*P	**Pn**	**21 06 23.7**	**+2.1**
RUS	**Russkaya**	**7.18**	**276**	*e*P	**Pn**	**21 06 23.6**	**+1.3**
RUS				*e*S	Sn	21 07 37.2	-6.7
MTVR	**Mutnovka**	**7.38**	**277**	*e*P	**Pn**	**21 06 27.5**	**+2.3**
MTVR				*e*S	Sn	21 07 44.0	-5.0
KRMR	**Karymshinskiy**	**7.40**	**280**	*e*P	**Pn**	**21 06 28.8**	**+3.4**
GRL	**Gorelyy**	**7.44**	**277**	P	**Pn**	**21 06 29.1**	**+3.0**
KDTR	**Khodutka, Kamc**	**7.50**	**272**	*e*S	Sn	21 07 45.6	-6.3
GNL	**Ganaly**	**7.56**	**286**	*e*P	**Pn**	**21 06 30.8**	**+3.0**
PEA0B	**Petropavlovsk-**	**7.67**	**282**		**Pn**	**21 06 32.0**	**+2.9**
PETK	**Petropavlovsk-**	**7.67**	**282**	Pn	**Pn**	**21 06 31.7**	**+2.6**
	0.8nm,0.3s,baz=90,slow=19,SNR=18						
PETK				Sn	**Sn**	**21 07 51.4**	**-4.5**
	0.2nm,0.3s,baz=98,slow=19,SNR=1.5						
NIKH	**Nikolski High**	**12.75**	**78**	Pn	**Pn**	**21 07 37.4**	**-1.1**
TNA	**Tin City**	**17.37**	**31**	P	**P**	**21 08 43.0**	**+2.1**
SVW2	**Sparrevohn**	**20.57**	**51**	P	**P**	**21 09 17.6**	**+1.5**
OHAK	**Old Harbor**	**21.49**	**62**	P	**P**	**21 09 24.5**	**-1.4**
KDAK	**Kodiak Island**	**21.85**	**60**	P	**P**	**21 09 29.0**	**-0.8**
	2.3nm,0.4s,baz=276,slow=6.5,SNR=12						
KDAK	**Kodiak Island**	**21.85**	**60**	P	**P**	**21 09 29.1**	**-0.7**
PPLA	**Purkeypile**	**22.48**	**47**	P	**P**	**21 09 38.3**	**+1.5**
CNPM	**China Poot**	**22.56**	**56**	P	**P**	**21 09 38.1**	**+0.6**
SKT	**Skwentna**	**22.63**	**49**	P	**P**	**21 09 40.5**	**+2.3**
IMAR	**Indian Mountai**	**22.65**	**39**	P	**P**	**21 09 39.1**	**+0.7**
SUA	**Susitna One**	**22.94**	**51**	P	**P**	**21 09 42.5**	**+0.9**
SUA				IAmb	IAmb	21 09 47.8	
	comp=Z,8.5nm,1.5s						
KTH	**Kantishna Hill**	**23.17**	**46**	P	**P**	**21 09 45.5**	**+1.6**
KTH				IAmb	IAmb	21 09 48.4	
	comp=Z,9.4nm,1.5s						
BPAW	**Bear Paw Mtn.**	**23.25**	**44**	P	**P**	**21 09 46.7**	**+2.1**
TRF	**Thorofare Moun**	**23.43**	**46**	P	**P**	**21 09 47.6**	**+1.0**
KNK	**Knik Glacier**	**24.03**	**51**	P	**P**	**21 09 52.2**	**0.0**
RND	**Reindeer**	**24.06**	**46**	P	**P**	**21 09 53.0**	**+0.4**
RND				IAmb	IAmb	21 10 09.6	
	comp=Z,5.9nm,1.3s						
SML	**Sawmill**	**24.12**	**50**	P	**P**	**21 09 53.3**	**+0.2**
SML				IAmb	IAmb	21 09 54.0	
	comp=Z,3.8nm,0.7s						
WRH	**Wood River Hil**	**24.57**	**44**	P	**P**	**21 09 58.5**	**+1.4**
WRH				IAmb	IAmb	21 10 01.0	
	comp=Z,2.2nm,0.8s						
SCM	**Sheep Creek Mo**	**24.59**	**50**	P	**P**	**21 09 58.8**	**+1.3**
MDM	**Murphy Dome**	**24.60**	**43**	P	**P**	**21 09 58.3**	**+0.9**
CCB	**Clear Creek Bu**	**24.72**	**44**	P	**P**	**21 09 59.1**	**+0.7**
CCB				IAmb	IAmb	21 10 04.2	
	comp=Z,6.6nm,1.4s						
IL31		**25.13**	**43**	P	**P**	**21 10 02.3**	**+0.2**
IL31				IAmb	IAmb	21 10 04.7	
	comp=Z,1.6nm,0.7s						
ILAR	**Eielson Array**	**25.13**	**43**	P	**P**	**21 10 01.9**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=254,slow=7.4,SNR=13						
ILAR	**Eielson Array**	**25.13**	**43**	P	**P**	**21 10 02.4**	**+0.3**
M24K	**Tolsona, Glenn**	**25.16**	**50**	P	**P**	**21 10 04.3**	**+1.8**
KLU	**Klutina**	**25.25**	**51**	P	**P**	**21 10 03.6**	**+0.2**
KLU				IAmb	IAmb	21 10 04.8	
	comp=Z,2.5nm,0.7s						
N25K	**Chitina, Valde**	**25.89**	**51**	P	**P**	**21 10 09.4**	**+0.3**
N25K				IAmb	IAmb	21 10 19.3	
	comp=Z,3.3nm,1.1s						
DOT	**Dot Lake**	**26.22**	**46**	P	**P**	**21 10 12.7**	**+0.6**
DOT				IAmb	IAmb	21 10 15.3	
	comp=Z,3.2nm,0.8s						
GLB	**Gilahina Butte**	**26.26**	**51**	P	**P**	**21 10 13.0**	**+0.4**
SCRK	**Sand Creek**	**26.28**	**46**	P	**P**	**21 10 12.9**	**+0.2**
SCRK				IAmb	IAmb	21 10 16.7	
	comp=Z,3.1nm,0.9s						
MENT	**Mentasta**	**26.33**	**48**	P	**P**	**21 10 13.8**	**+0.7**
MENT				IAmb	IAmb	21 10 18.1	
	comp=Z,2.6nm,0.7s						
BMAR	**Burnt Mountain**	**26.55**	**38**	P	**P**	**21 10 16.4**	**+1.3**
K27K	**Chicken**	**27.12**	**46**	P	**P**	**21 10 21.2**	**+1.0**
K27K				IAmb	IAmb	21 10 27.7	
	comp=Z,2.7nm,1.0s						
BCAR	**Beaver Creek A**	**27.22**	**48**	P	**P**	**21 10 22.2**	**+1.0**
EGAK	**Eagle**	**27.57**	**44**	P	**P**	**21 10 24.9**	**+0.7**
EGAK				IAmb	IAmb	21 10 25.2	
	comp=Z,1.9nm,0.8s						
INK	**Inuvik**	**30.82**	**37**	P	**P**	**21 10 54.7**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=282,slow=7.0,SNR=4.3						
INK	**Inuvik**	**30.82**	**37**	P	**P**	**21 10 54.2**	**+1.2**
INK				IAmb	IAmb	21 11 05.3	
	comp=Z,2.2nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**32.51**	**186**	T	T	21 45 02.4	
	baz=4.2						
H11N3	**WAKE ISLAND Hy**	**32.53**	**186**	T	T	21 45 03.3	
	baz=4.2						
H11N1	**WAKE ISLAND Hy**	**32.53**	**186**	T	T	21 45 03.8	
	baz=4.2						
YKA	**Yellowknife Ar**	**39.54**	**45**	P	**P**	**21 12 08.1**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=289,slow=7.7,SNR=5.6						
SONM	**Songino Array**	**40.06**	**290**	P	**P**	**21 12 13.6**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=66,slow=7.1,SNR=1.7						

IDC 04 21:08:33.5±1.7, 6.11S×130.43E, h0km, mb3.5/1, mb1 3.9/6, mb1mx3.6/29, mbtmp3.8/6, ML3.8/5, Error ellipse: s-maj=48.8km s-min=23.4km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.27**	**9**	Pn	Pn	21 09 51.7	-1.9
	4.5nm,0.3s,baz=51,slow=5.3,SNR=50						
SIJI				Sn	Sn	21 10 40.5	-15
	3.9nm,0.3s,baz=218,slow=22,SNR=2.5						
BATI	**Baumata**	**7.84**	**238**	Pn	Pn	21 10 28.6	-0.3
	4.1nm,0.3s,baz=108,slow=7.4,SNR=5.3						
BATI				Sn	Sn	21 11 43.6	-15
	1.4nm,0.3s,baz=323,slow=22,SNR=1.9						
FITZ	**Fitzroy Crossi**	**12.80**	**201**	Pn	Pn	21 11 35.0	-1.9
	0.3nm,0.3s,baz=20,slow=11,SNR=16						
FITZ				Sn	Sn	21 13 38.7	-22
	0.7nm,0.3s,baz=266,slow=7.0,SNR=7.7						
WRA	**Warramunga Arr**	**14.26**	**165**	Pn	Pn	21 11 56.5	-0.5
	0.3nm,0.3s,baz=348,slow=13,SNR=17						
WRA				Sn	Sn	21 14 21.0	-15
	0.6nm,0.3s,baz=335,slow=22,SNR=9.1						
ASAR	**Alice Springs**	**17.77**	**170**	P	P	21 12 43.6	+0.2
	0.3nm,0.3s,baz=342,slow=9.5,SNR=21						
ASAR				S	Sn	21 15 44.9	-16
	0.1nm,0.3s,baz=0.8,slow=26,SNR=1.8						
MKAR	**Makanchi Array**	**67.72**	**326**	P	P	21 19 33.5	+0.6
	0.2nm,0.4s,baz=110,slow=7.8,SNR=7.7						

IDC 04 22:11:14.2±3.8, 5.94S×128.03E, h0km, mb3.2/1, mb1 3.2/3, mb1mx3.1/28, mbtmp3.0/3, ML2.6/2, MS3.7/1, Ms1 3.7/1, ms1mx2.5/12, Error ellipse: s-maj=478.8km s-min=33.0km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.21**	**157**	Pn	Pn	22 14 51.8	+1.3
	0.0nm,0.3s,baz=339,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**18.51**	**163**	P	P	22 15 31.4	-0.8
	0.0nm,0.3s,baz=342,slow=8.8,SNR=5.5						
URZ	**Urewera**	**54.81**	**133**	LR	LR	22 45 10.7	
	comp=Z,64nm,19.6s,baz=211,slow=37						
MKAR	**Makanchi Array**	**66.28**	**327**	P	P	22 22 04.5	0.0
	0.2nm,0.8s,baz=132,slow=6.0,SNR=2.8						

*IDC **04** 22:36:05.6±1.5, 6.60S×148.17E, h0km, mb3.9/6, mb1 4.0/9, mb1mx3.7/44, mbtmp3.9/9, ML4.0/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/32, Error ellipse: s-maj=53.1km s-min=18.4km az=105.0*
*NEIC **04** 22:36:10.7±1.4, 6.5S±0.1×148.0E±0.2, h35km±2km, mb4.0/8, Error ellipse: s-maj=32.3km s-min=6.6km az=129.0*

ISC 04 22:36:12.0±0.7, 6.60S±0.09×148.1E±0.1, h51km, n27, σ1°27/27, mb3.9/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.95**	**199**	Pn	**Pn**	**22 36 55.1**	**-1.4**
	22nm,0.3s,baz=40,slow=7.4,SNR=20						
PMG				Sn	**Sn**	**22 37 34.1**	**+3.5**
	23nm,0.3s,baz=357,slow=18,SNR=8.8						
PMG	**Port Moresby**	**2.95**	**199**		**Pn**	**22 36 56.5**	**0.0**
PMG	**Port Moresby**	**2.95**	**199**	P	**Pn**	**22 36 59.2**	**+2.8**
RABL	**Rabaul**	**4.67**	**59**		**Pn**	**22 37 20.7**	**+0.7**
JAY	**Jayapura**	**8.45**	**298**	LR	LR	22 41 58.6	
	comp=Z,138nm,19.6s,baz=162,slow=42						
COEN	**Coen**	**8.79**	**213**	Pn	**Pn**	**22 38 15.9**	**-0.7**
CTA	**Charters Tower**	**13.53**	**188**	Pn	**Pn**	**22 39 18.9**	**-2.5**
	baz=18,slow=9.6,SNR=0.8						
MTN	**Manton Dam**	**17.87**	**248**	P	**Pn**	**22 40 15.4**	**-1.7**
MTN				IAmb	IAmb	22 40 20.3	
	comp=Z,13nm,1.3s						
WB0	**Warramunga Arr**	**18.70**	**224**	P	**P**	**22 40 25.5**	**-0.8**
WB0				IAmb	IAmb	22 40 40.9	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**18.85**	**224**	P	**P**	**22 40 27.4**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=53,slow=11,SNR=20						
WRA	**Warramunga Arr**	**18.85**	**224**	P	**P**	**22 40 26.8**	**-1.3**
EIDS	**Eidsvold**	**18.87**	**172**	P	**Pn**	**22 40 28.9**	**-0.3**
AS31	**Alice Springs**	**21.79**	**217**	P	**P**	**22 40 60.0**	**0.0**
AS31				IAmb	IAmb	22 41 06.1	
	comp=Z,3.2nm,0.6s						
ASAR	**Alice Springs**	**21.80**	**217**	P	**P**	**22 41 00.1**	**+0.2**
	comp=Z,5.5nm,0.7s,baz=53,slow=9.2,SNR=120						
ASAR				S	**S**	**22 44 58.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=33,slow=21,SNR=6.8						
ASAR	**Alice Springs**	**21.80**	**217**	P	**P**	**22 40 59.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**24.73**	**240**	P	**P**	**22 41 28.8**	**-0.1**
	comp=Z,7.2nm,0.4s,baz=54,slow=8.7,SNR=69						
FITZ	**Fitzroy Crossi**	**24.73**	**240**	P	**P**	**22 41 28.2**	**-0.7**
STKA	**Stephens Creek**	**25.88**	**193**	P	**P**	**22 41 39.1**	**0.0**
	comp=Z,1.5nm,0.5s,baz=352,slow=12,SNR=4.0						
STKA				LR	LR	22 52 58.1	
	comp=Z,73nm,18.8s,baz=24,slow=

MQZ	McQueen's Vall	2.18	211	P		Pn	22 41 13.7	-0.1
INZ	Inchbonnie	2.22	246	P		Pn	22 41 15.7	+1.4
TSZ	Takapari Road	2.23	38	P		Pn	22 41 14.6	0.0
AKCZ	Akaroa Harbour	2.24	204	P		Pn	22 41 13.6	-1.0
LREZ	Lake Rotokare	2.38	4	P		Pb	22 41 21.8	+1.0
RACZ	Rakaia	2.41	218	P		Pn	22 41 16.9	-0.1
PRHZ	Porangahau	2.43	50	P		Pn	22 41 16.3	-0.9
NMEZ	Namu Road	2.44	354	P		Pb	22 41 21.1	-0.6
PNHZ	Pukenui	2.46	39	P		Pn	22 41 17.4	-0.2
WPHZ	Waipukurau	2.46	45	P		Pg	22 41 24.7	-1.1
PREZ	Palmer Road	2.50	360	P		Pb	22 41 21.0	-1.8
KHEZ	Kahui Hut	2.55	357	P		Pn	22 41 21.3	+2.4
NEZ	North Egmont	2.57	358	P		Pb	22 41 22.8	-1.3
NBEZ	Newall Road No	2.58	355	P		Pb	22 41 24.1	-0.1
MTVZ	Mangateitei	2.64	22	P		Pn	22 41 22.9	+2.7
PKE	Pukeiti	2.65	357	P		Pn	22 41 22.1	+1.8
PKVZ	Pokaka	2.70	20	P		Pb	22 41 24.0	-2.2
MOVZ	Moawhango	2.71	27	P		Pn	22 41 22.8	+1.7
WACZ	Wakanui South	2.72	219	P		Pn	22 41 21.3	+0.2
WNVZ	Wahianoa	2.73	24	P		Pn	22 41 23.5	+2.0
TRVZ	Turoa	2.74	23	P		Pb	22 41 25.0	-2.1
VRZ	Vera Road	2.75	9	P		Pn	22 41 23.8	+2.2
BHHZ	Black Hill Sta	2.75	32	P		Pn	22 41 22.4	+0.7
KRHZ	Kereru	2.75	38	P		Pn	22 41 21.1	-0.6
MHEZ	Mangahewa	2.76	2	P		Pb	22 41 28.1	+0.8
DRZ	Dome Shelter	2.77	23	P		Pb	22 41 29.1	+1.4
WHVZ	Whangaehu Hut	2.77	23	P		Pb	22 41 25.1	-2.5
FWVZ	Far West T-bar	2.79	22	P		Pb	22 41 25.2	-2.6
WVZ	Waitaha Valley	2.83	243	P		Pb	22 41 26.9	-1.6
NGZ	Ngauruhoe	2.87	23	P		Pn	22 41 25.4	+2.0
KAHZ	Kahuranaki	2.89	46	P		Pn	22 41 22.6	-1.0
OTVZ	Oturere	2.90	23	P		Pn	22 41 25.6	+1.7
WTVZ	West Tongariro	2.92	22	P		Pn	22 41 26.8	+2.6
TWVZ	Taurewa	2.93	19	P		Pn	22 41 26.5	+2.3
ETVZ	East Tongariro	2.94	24	P		Pn	22 41 26.1	+1.7
KWHZ	Kaweka Forest	2.95	36	P		Pn	22 41 24.5	0.0
TMVZ	Te Maari	2.96	24	P		Pn	22 41 25.9	+1.3
KRVZ	Karewarewa	2.96	23	P		Pn	22 41 27.2	+2.5
RPZ	Rata Peaks	2.97	230	Pn		Pn	22 41 25.3	+0.7
	5.0nm,0.3s,baz=356,slow=1.0,SNR=28							
RPZ				Sn		Sn	22 41 59.6	-0.2
	40nm,0.3s,baz=178,slow=23,SNR=60							
RPZ	Rata Peaks	2.97	230	P		Pn	22 41 25.2	+0.5
ARCZ	Arundel	3.05	225	P		Pn	22 41 26.5	+0.6
KATZ	Kakaramea	3.09	22	P		Pb	22 41 31.1	-1.8
RITZ	Rihia Road	3.13	25	P		Pb	22 41 33.1	-0.5
BKZ	Black Stump Fm	3.20	34	P		Pn	22 41 27.5	-0.4
GCSZ	Gaunt Creek Bo	3.21	241	P		Pn	22 41 29.9	+2.0
RATZ	Rangitukua	3.21	23	P		Pb	22 41 35.0	0.0
WATZ	Wairara	3.34	21	P		Pb	22 41 38.2	+0.9
ARHZ	Aropaoanui	3.35	41	P		Pg	22 41 44.6	+1.9
HIZ	Hauiti	3.36	9	P		Pn	22 41 32.0	+1.9
NMHZ	Naumai	3.39	37	P		Pb	22 41 35.5	-2.6
TMZ	Timaru	3.45	221	P		Pn	22 41 31.7	+0.5
KUTZ	Kaahu Road	3.58	21	P		Pb	22 41 42.5	+1.3
MTHZ	Maungataniwha	3.61	35	P		Pn	22 41 36.0	+2.5
FOZ	Fox Glacier	3.64	241	P		Pn	22 41 35.5	+1.7
WPRZ	Whakapapatarin	3.65	25	P		Pb	22 41 44.4	+2.0
TLZ	Tolley Road	3.66	17	P		Pn	22 41 38.0	+3.8
RAHZ	Arahi	3.67	38	P		Pg	22 41 47.2	-1.6
PRRZ	Plateau Road	3.74	28	P		Pb	22 41 44.4	+0.4
GRRZ	Galatos Road	3.79	24	P		Pb	22 41 46.9	+2.1
HRRZ	Handcock Road	3.80	26	P		Pb	22 41 47.9	+2.8
HSRZ	Hossack Road	3.80	26	P		Pb	22 41 48.6	+2.6
RTZ	Ruatahuna	3.87	35	P		Pn	22 41 38.1	+1.1
LBZ	Lake Benmore	3.88	228	P		Pn	22 41 38.3	+1.1
MUGZ	Murupara	3.90	31	P		Pb	22 41 47.8	+1.1
RRRZ	Republican Roa	3.93	28	P		Pb	22 41 49.6	+2.4
TARZ	Mount Tarawera	4.02	27	P		Pb	22 41 51.2	+2.4
NGRZ	Ngongotaha	4.04	23	P		Pb	22 41 51.1	+2.0
PRGZ	Paritu Road	4.06	45	P		Pg	22 42 01.7	+5.4
ODZ	Otahua Downs	4.11	218	P		Pn	22 41 40.3	-0.1
RAGZ	Rawiri	4.16	38	P		Pg	22 41 56.3	-1.9
KMRZ	Kaimai	4.21	19	P		Pb	22 41 53.9	+1.9
URZ	Urewera	4.22	33	Pn		Pn	22 41 39.5	-2.3
	0.6nm,0.3s,baz=300,slow=23,SNR=1.2							
URZ				Sn		Sn	22 42 28.6	-2.0
	2.9nm,0.3s,baz=225,slow=7.3,SNR=3.9							
URZ	Urewera	4.22	33	P		Pn	22 41 41.3	-0.6
TOZ	Tahuroa Road	4.23	14	P		Pn	22 41 44.9	+2.9
MWZ	Matawai	4.34	37	P		Pn	22 41 42.7	-0.8
OPRZ	Ohinepanea	4.39	25	P		Pn	22 41 45.9	+1.8
TGRZ	Tauranga	4.41	22	P		Pb	22 41 53.7	-1.6
JCZ	Jackson Bay	4.55	239	P		Pn	22 41 47.5	+1.1
RUGZ	Raukumara Rang	4.71	36	P		Pn	22 41 48.0	-0.6
AWAZ	Awhitu Peninsu	4.78	4	P		Pn	22 41 52.1	+2.5
EAZ	Earnscleugh	4.90	225	P		Pn	22 41 51.9	+0.6
ETAZ	East Tamaki Re	4.91	7	P		Pn	22 41 54.5	+3.2
HAZ	Te Kaha	4.93	35	P		Pn	22 41 52.3	+0.7
WIAZ	Waiheke Island	5.09	9	P		Pn	22 41 57.5	+3.6
MBAZ	Motutapu North	5.09	6	P		Pn	22 41 59.3	+5.4
WCZ	Waipu Caves	5.89	1	P		Pn	22 42 08.1	+3.2
SYZ	Scrubby Hill	5.93	216	P		Pn	22 42 06.4	+1.1
ASAR	Alice Springs	38.01	286	P		P	22 47 55.0	-0.5
	0.2nm,0.7s,baz=119,slow=7.1,SNR=1.9							
WRA	Warramunga Arr	40.09	291	P		P	22 48 11.4	-1.6
	0.3nm,0.6s,baz=127,slow=8.3,SNR=2.1							
TORD	Torodi Ar. Bea	150.68	195	PKPbc		PKiKP	23 00 30.3	-0.1
	0.5nm,0.8s,baz=161,slow=2.3,SNR=4.8							

*IDC **04** 22:48:16.9±0.9, 38°.21N×91°.47E, h0km, mb3.6/11, mb1 3.8/16, mb1mx3.7/37, mbtmp3.7/16, ML3.0/4, MS3.1/5, Ms1 3.1/5, ms1mx2.7/40, Error ellipse: s-maj=29.2km s-min=17.0km az=45.0*

*NNC **04** 22:48:24.3±3.9, 38°.70N×90°.90E, h0km, mb4.3, Error ellipse: s-maj=38.6km s-min=31.4km az=40.0*

ISC 04 22:48:19.7±0.9, 38°.49N±0°.10×91°.26E±0°.08, h10km, n23, σ2s43/29, mb3.6/10, 4C-3D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDGK	Podgornoye	10.13	302	⇓Pn		Pn	22 50 47.5	+2.2
	5.0nm,0.8s							
PDGK				⇓Sn		Sn	22 52 39.4	+0.3
	45nm,0.8s							
MK31	Makanchi Array	10.60	324	Pn		Pn	22 50 53.6	+2.0
	3.3nm,0.5s,baz=132,slow=13,SNR=183							
MK31				Sn		Sn	22 52 49.9	-0.5
	6.4nm,0.5s,baz=136,slow=26,SNR=9.5							
MKAR	Makanchi Array	10.60	324	Pn		Pn	22 50 53.5	+1.9
	2.5nm,0.3s,baz=129,slow=14,SNR=122							
MKAR				Sn		Sn	22 52 49.4	-1.0
	1.2nm,0.3s,baz=135,slow=26,SNR=8.1							
MKAR				Lg		Lg	22 53 51.3	
	baz=149,slow=23,SNR=0.9							
MAKZ	Makanchi	10.76	324	⇑Pn		Pn	22 50 55.2	+1.4
	1.8nm,0.6s							
MAKZ				⇑Sn		Sn	22 52 53.9	-0.3
	11nm,0.8s							
TKM2	Tokmak 2	12.68	295	⇑Pn		Pn	22 51 20.6	+0.3
	11nm,0.8s							
TKM2				⇓Sn		Sn	22 53 38.6	-3.0
	12nm,1.1s							
AAK	Ala-Archa	13.40	293	Pn		Pn	22 51 31.8	+1.8
	0.1nm,0.3s,baz=108,slow=22,SNR=3.8							
AAK				Sn		Sn	22 53 56.4	-2.7
	0.1nm,0.3s,baz=225,slow=19,SNR=1.7							
AAK				Lg		Lg	22 55 23.1	
	0.1nm,0.3s,baz=319,slow=23,SNR=0.8							
AAK				LR		LR	22 58 08.0	
	comp=Z,31nm,19.8s,baz=128,slow=43							
SONM	Songino Array	14.45	45	Pn		Pn	22 51 45.5	+1.2
	0.1nm,0.3s,baz=233,slow=14,SNR=6.9							
SONM				Lg		Lg	22 55 50.0	
	0.1nm,0.3s,baz=228,slow=26,SNR=3.6							
SONM				LR		LR	22 57 43.7	
	comp=Z,128nm,18.2s,baz=244,slow=39							
KURBB	Kurchatov Arra	15.12	327	Pn		Pn	22 51 52.5	-0.8
	0.1nm,0.3s,baz=133,slow=13,SNR=4.6							
KURBB				Sn		Sn	22 54 33.3	-7.4
	baz=122,slow=28,SNR=2.0							
KURBB				Lg		Lg	22 56 22.7	
	0.0nm,0.3s,baz=143,slow=23,SNR=1.6							
KURBB	Kurchatov Arra	15.12	327	⇑Pn		Pn	22 51 51.7	-1.5
TLY	Talaya	15.80	29	LR		LR	22 58 57.4	
	comp=Z,40nm,18.1s,baz=195,slow=40							
ZALV	Zelesovo Beam	16.08	346	Pn		Pn	22 52 06.6	+0.8
	0.1nm,0.3s,baz=163,slow=11,SNR=6.4							
ZALV				Sn		Sn	22 54 58.8	-5.3
	0.1nm,0.3s,baz=170,slow=25,SNR=1.7							
BVAR	Borovoye Array	20.47	322	P		P	22 52 59.6	+2.2
	1.6nm,0.9s,baz=120,slow=14,SNR=7.4							
AKTO	Aktyubinsk	26.34	308	P		P	22 53 56.5	+0.9
	0.9nm,0.7s,baz=85,slow=11,SNR=2.0							
ARU	Arti	28.09	320	LR		LR	23 06 19.2	
	comp=Z,22nm,20.1s,baz=163,slow=38							
BRTR	Keskin Array B	44.06	291	P		P	22 56 28.1	+0.2
	1.3nm,1.0s,baz=82,slow=6.3,SNR=3.2							
ARCES	ARCESS Array B	46.09	334	P		P	22 56 44.2	+0.7
	1.8nm,0.9s,baz=90,slow=7.2,SNR=5.0							
NOA	NORSAR Array B	52.60	323	P		P	22 57 33.4	0.0
	0.6nm,0.7s,baz=76,slow=7.3,SNR=2.5							
ILAR	Eielson Array	67.52	23	P		P	22 59 15.8	+0.2
	0.9nm,0.8s,baz=306,slow=5.4,SNR=14							
ILAR				LR		LR	23 29 32.0	
	comp=Z,38nm,20.6s,baz=302,slow=37							
ESDC	Sonseca Array	70.19	305	P		P	22 59 34.5	+1.8
	0.4nm,0.9s,baz=40,slow=6.5,SNR=4.2							
WRA	Warramunga Arr	70.78	137	P		P	22 59 32.9	-3.5
	0.3nm,0.8s,baz=327,slow=6.2,SNR=1.8							
ASAR	Alice Springs	73.62	140	P		P	22 59 50.6	-2.8
	0.5nm,0.8s,baz=334,slow=6.6,SNR=7.6							
YKA	Yellowknife Ar	77.23	12	P		P	23 00 13.5	0.0
	0.3nm,0.9s,baz=344,slow=4.8,SNR=4.4							
TORD	Torodi Ar. Bea	81.61	280	P		P	23 00 38.8	+0.6
	0.3nm,0.6s,baz=37,slow=5.4,SNR=4.9							

NNC 04 23:21:07.4±5.3, 37°.07N×70°.81E, h0km, mb3.9, mpv3.6, 3C, Error ellipse: s-maj=72.1km s-min=26.8km az=59.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	Karatay Array	6.03	358	P		Pn	23 22 37.9	-0.1
	1.4nm,0.2s,baz=178,slow=12,SNR=29							
KK31				⇑S		Sn	23 23 48.9	+1.2
	0.5nm,0.3s,baz=189,slow=24,SNR=3.0							
AAK	Ala-Archa	6.24	26	⇑P		Pn	23 22 41.4	+0.4
	0.9nm,0.3s							
TKM2	Tokmak 2	6.91	31	⇑P		Pn	23 22 49.6	-0.5
	3.4nm,0.5s							

*HEL **04** 23:26:34.0±0.0, 67°.85N×20°.20E, h0km, ML1.3, ML1.9(UPP), Explosion*

UPP 04 23:26:33.4±0.0, 67°.85N×20°.20E, h0km, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	Kurravaara	0.12	25	P		Pg	23 26 35.9	+0.2
KUA				S		Sg	23 26 37.7	+0.4
KUA	Kurravaara	0.12	25	*i* P		Pg	23 26 35.9	+0.2
KUA				*i* S		Sg	23 26 37.7	+0.4
RATU	Laukkuluspa	0.23	265	P		Pg	23 26 38.0	+0.2
RATU	Laukkuluspa	0.23	265	*i* P		Pg	23 26 38.0	+0.2
NIKU	Nikkaluokta	0.44	273	P		Pg	23 26 41.9	+0.1
NIKU	Nikkaluokta	0.44	273	*i* P		Pg	23 26 41.9	+0.1
LANU	Lannavaara	0.71	72	*e*P		Pg	23 26 46.6	-0.3
DUNU	Dundret	0.74	169	P		Pg	23 26 47.2	-0.3
DUNU	Dundret	0.74	169	*i* P		Pg	23 26 47.2	-0.3
MASU	Masugnsbyn	0.79	119	P		Pg	23 26 48.3	-0.2
MASU	Masugnsbyn	0.79	119	*i* P		Pg	23 26 48.3	-0.2
SALU	Saltoluokta	0.80	235	*e*P		Pg	23 26 47.2	-1.4
KIF	Kilpisjarvi	1.19	11	*e*P		Pg	23 26 55.9	-0.2
KIF	Kilpisjarvi	1.19	11	*e*PB		Pg	23 26 56.3	+0.2
KIF				MSG			23 27 09.3	
	comp=Z,1.9nm,0.2s							
KIF				*e*SN		Sn	23 27 15.9	+1.9
PAJU	Pajala	1.39	125	P		Pg	23 26 58.8	-1.3
PAJU	Pajala	1.39	125	*e*P		Pg	23 26 58.7	-1.4
HEF	Hetta	1.41	65	*e*PG		Pn	23 26 59.4	-0.9
	baz=250							
HEF				MSG			23 27 14.4	
	comp=Z,1.4nm,0.2s							
TOF	Tornio	2.40	136	*e*PB		Pn	23 27 15.3	+1.4
TOF				MSG			23 27 45.3	
	comp=Z,1.2nm,0.2s							
RNF	Rovaniemi	2.58	116	*e*PB		Pb	23 27 18.6	-1.9
RNF				*e*SG		Sb	23 27 53.2	+0.6
KEV	Kevo	3.13	49	MSG			23 28 03.6	
	comp=Z,1.8nm,0.2s							
KEV				*e*SB		Sb	23 28 08.3	-0.1
BURU	Burvik	3.31	171	*e*PG		Pb	23 27 33.6	+0.7

UPP 04 23:26:39.2±0.0, 67°.83N×20°.20E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	Kurravaara	0.14	22	P		Pg	23 26 42.1	+0.2
KUA				S		Sg	23 26 44.1	+0.4
RATU	Laukkuluspa	0.23	270	P		Pg	23 26 43.7	+0.2
RATU				S		Sg	23 26 47.1	+0.5
NIKU	Nikkaluokta	0.44	276	P		Pg	23 26 47.7	0.0
NIKU	Nikkaluokta	0.44	276	*i* S		Pg	23 26 47.7	0.0
NIKU	Nikkaluokta	0.44	276	S		Pg	23 26 47.7	0.0
DUNU	Dundret	0.72	168	P		Pg	23 26 52.7	-0.3
MASU	Masugnsbyn	0.78	117	P		Pg	23 26 53.9	-0.2
PAJU	Pajala	1.38	124	P		Pg	23 27 04.5	-1.2

*TEH **04** 23:36:28.2, 33°.80N×48°.23E, h5km, ML3.5*
*THR **04** 23:36:29.6±0.3, 33°.89N×48°.25E, h14km±8km, ML3.4*
*ISN **04** 23:36:30.5±1.2, 33°.85N×48°.15E, h16km±7km, ML3.1*
*KISR **04** 23:36:42.9±0.4, 32°.74N×48°.22E, h143km±50km, ML3.2, Hypocentre not reviewed by the ISC*

ISC 04 23:36:28.8±1.2, 33°.85N±0°.03×48°.25E±0°.02, h2km±12km, n36, σ1s41/41, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDOB	Doab	0.09	224	*e*Pg		Pg	23 36 30.7	+0.1
IKMR	Kamar-syah	0.35	162	*e*Pg		Pg	23 36 34.3	-1.2
IKMR				*e*			23 36 41.3	
	comp=Z,99nm,0.2s							
HSAM	Samen	0.46	39	*e*Pg		Pg	23 36 38.3	+0.6
IKFM	Kafar-mosalman	0.47	226	*e*Pg		Pg	23 36 37.7	-0.1
IKFM				*e*Sg		Sg	23 36 43.2	-0.6
IBZA	Bozab	0.70	332	*e*Pg		Pb	23 36 43.9	+0.1
IALM	Almabolaq	1.01	356	*e*Pg		Pn	23 36 50.1	-0.2
KER	Kermanshah	1.07	300	*e*Pg		Pg	23 36 50.0	+0.7
KCHF	Cheshme Sefid,	1.09	293	*e*Pg		Pb	23 36 50.1	-0.4
KCHF				*e*			23 37 11.5	
	comp=Z,99nm,0.3s							
HAGD	Aghdareh	1.22	37	*e*Pg		Pg	23 36 52.5	+0.4
HAGD				*e*			23 37 12.8	
	comp=Z,99nm,0.6s							
DHL1	Dehloran	1.42	215	*e*Pg		Pb	23 36 56.8	+0.8
KHMZ	Khomeyn	1.43	94	*e*Pg		Pb	23 36 56.1	-0.2
KHMZ	Khomeyn	1.43	94	*e*Pn		Pb	23 36 56.1	-0.2
IGHG	Ghaleghazi	1.48	289	*e*Pg		Pg	23 36 58.7	+1.6
IGHG				*e*			23 37 27.1	
	comp=Z,99nm,0.6s							
ASAO	Ashtian	1.62	64	*e*Pg		Pb	23 36 59.3	-0.4
ASAO				*e*Sg		Sg	23 37 21.0	0.0
ASAO				IAML			23 37 31.0	
	comp=N,467nm,0.6s							
ASAO	Ashtian	1.62	64	*e*Pn		Pb	23 36 59.3	-0.4
IDHR	Dehrash	1.76	299	*e*Pn		Pg	23 37 03.4	+0.9
IDHR				*e*			23 37 37.0	
	comp=Z,99nm,0.4s							
SHGR	Shooshtar-Gavs	1.80	165	*e*Pn		Pb	23 37 02.6	+0.1
SHGR				IAML			23 37 33.6	
	comp=E,237nm,0.7s							
SHGR	Shooshtar-Gavs	1.80	165	*e*Pn		Pb	23 37 02.6	+0.1
IRAZ	Razeghan	2.08	41	*e*			23 37 48.1	
	comp=Z,99nm,0.6s							
IRAZ				*e*Pn		Pb	23 37 07.3	0.0
IBDR	Badra	2.08	250	*e*Pg		Pb	23 37 06.0	-1.2
IBDR				*e*Sg		Sb	23 37 33.0	-0.5
IBDR				AML		AML	23 37 44.2	
	comp=N,208nm,0.7s							
IBDR				AML		AML	23 37 50.6	
	comp=E,197nm,0.6s							
QABG	Abgarm-Qazvin	2.15	30	*e*Pn		Pb	23 37 07.7	-0.9
IPIR	Pirpir	2.50	117	*e*Pn		Pb	23 37 12.7	-1.9
IPIR				*e*			23 38 01.9	
	comp=Z,99nm,0.7s							
AHWZ	Ahwaz	2.54	172	*e*Pn		Pn	23 37 11.6	+0.6
SHK1	Shahrekord	2.68	124	*e*Pn		Pn	23 37 14.7	+1.5
SHK1				*e*			23 38 02.8	
	comp=Z,99nm,0.6s							
IMHD	Mahdasht	2.70	47	*e*Pn		Pb	23 37 16.8	-1.1
IMHD				*e*			23 37 59.3	
	comp=Z,99nm,0.9s							
IGZV	Ghazvin	3.00	32	*e*Pn		Pb	23 37 19.8	-3.3
KRSH	Karshahi	3.23	87	*e*Pn		Pn	23 37 23.4	+2.7
KRSH				*e*			23 38 20.5	
	comp=Z,99nm,0.6s							
QALM	Alamut, Qazvin	3.24	37	*e*Pn		Pb	23 37 23.4	-3.7
BHD	Baghdad	3.29	261	*e*Pn		Pn	23 37 22.0	+0.7
BHD				*e*Sn		Sn	23 38 00.5	-0.4
BHD				AML		AML	23 38 18.1	
	comp=E,100nm,0.5s							
ISFB	Sefidab	3.35	80	*e*Pn		Pn	23 37 24.7	+2.5
NSR	Nassriya	3.35	213	*e*Pn		Pn	23 37 23.0	+0.8
NSR				*e*Sn		Sn	23 38 01.0	-1.5
NSR				AML		AML	23 38 08.3	
	comp=E,77nm,0.4s							
IGAR	Gharneh	3.49	113	*e*Pn		Pn	23 37 25.9	+1.5
IGAR				*e*			23 37 37.5	
	comp=Z,99nm,0.3s							
IZEF	Zefreh	3.54	104	*e*Pn		Pn	23 37 27.9	+2.8
KLNJ	Kolanjah	4.00	134	*e*Pn		Pn	23 37 32.8	+1.3
IRAM	Rameseh	4.03	119	*e*Pn		Pn	23 37 33.3	+1.6
MIB	Mutriban	4.11	191	*e*P			23 37 32.7	
UMR	Umm Al-Rimmam	4.31	186	*e*P			23 37 35.3	
ANAR	Anarak	4.62	97	*e*Pn		Pn	23 37 40.6	+0.8
RDF	Al-Radifah	4.95	187	*e*P			23 37 44.2	
QRN	Al-Qurain	5.10	183	*e*P			23 37 46.0	
QRN				*e*S			23 38 33.4	
QRN				IAML			23 38 34.7	
	comp=Z,27nm,0.1s							

*IDC **04** 23:37:28.9±8.6, 36°.88N×140°.91E, h0km, mb3.4/3, mb1 3.3/4, mb1mx3.2/37, mbtmp3.3/4, ML2.1/1, Error ellipse: s-maj=153.8km s-min=40.7km az=144.0*

*JMA **04** 23:37:30.3±0.1, 36°.34N×140°.99E, h40km±2km, M3.4*

JMA Felt I J1.

ISC 04 23:37:29.3±2.1, 36°.38N±0°.07×141°.1E±0°.1, h27km±10km, n22, σ0s92/21, mb3.0/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHYU	Hitachinakayam	0.40	265	P		Pn	23 37 38.9	-0.3
JHYU				S		Sb	23 37 44.6	+0.8
JHO	Hitachi	0.47	300	P		Pn	23 37 39.9	-0.4
JHO				*e*S		Sb	23 37 46.4	+0.6
JIHU	Itakohorinouch	0.61	228	P		Pn	23 37 42.1	0.0
JYT	Yasato	0.73	259	P		Pb	23 37 43.0	-0.4
JYT				S		Sb	23 37 51.5	-1.5
ONAJ	Iwakimizuishiy	0.76	343	P		Pn	23 37 44.4	+0.1
ONAJ				S		Sn	23 37 54.2	-0.7
JFK	Kawauchi	1.00	351	P		Pb	23 37 47.8	-0.2
JFK				S		Sb	23 38 00.1	-0.7
JFT	Otama	1.28	333	P		Pb	23 37 53.1	+0.3
JAG	Ashikaga	1.31	273	P		Pn	23 37 51.5	-0.3
JAG				S		Sn	23 38 06.9	-1.5
MJAR	Matsushiro Arr	2.32	275	Pn		Pn	23 38 06.0	+0.3
	0.5nm,0.3s,baz=78,slow=6.3,SNR=26							
MJAR				Sn		Sn	23 38 34.8	+1.4
	1.5nm,0.3s,baz=101,slow=20,SNR=6.6							
MAT	Matsushiro	2.32	275	P		Pn	23 38 06.6	+0.9
MAT				*e*S		Sn	23 38 33.1	-0.3
SONM	Songino Array	27.93	305	P		P	23 43 18.4	+1.1
	0.2nm,0.6s,baz=99,slow=8.9,SNR=1.8							
H11N2	WAKE ISLAND Hy	28.05	119	T		T	00 13 19.9	
	baz=312,slow=75,SNR=11							
H11N1	WAKE ISLAND Hy	28.06	119	T		T	00 13 22.3	
	baz=312,slow=75,SNR=9.9							
H11N3	WAKE ISLAND Hy	28.07	119	T		T	00 13 20.3	
	baz=312,slow=75,SNR=6.9							
H11S1	WAKE ISLAND Hy	28.74	121	T		T	00 13 49.6	
	baz=314,slow=75,SNR=26							
H11S3	WAKE ISLAND Hy	28.74	121	T		T	00 13 42.6	
	baz=314,slow=75,SNR=21							
H11S2	WAKE ISLAND Hy	28.75	121	T		T	00 13 43.0	
	baz=314,slow=75,SNR=17							
ZALV	Zelesovo Beam	42.16	313	P		P	23 45 17.9	-1.3

Principal axes: T Plg70.8039°, Azm58.0860°; N Plg2.6641°, Azm320.4055°; P Plg18.9959°, Azm229.4877°; **Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.52**	**348**	⇓	*eP*		**Pn**	**00 07 60.0**	**-0.5**
JUCU					*eS*		**Sn**	**00 08 09.2**	**-0.5**
JUCU					IAML			00 08 12.5	
	comp=Z,174µm,0.3s								
JUCU	**Jucuarįn**	**0.52**	**348**	⇓	*eP*		**Pn**	**00 07 60.0**	**-0.5**
JUCU					*eS*		**Sn**	**00 08 09.2**	**-0.5**
JUCU					IAML			00 08 12.5	
	comp=Z,174µm,0.3s								
CNCH	**Conchagua**	**0.61**	**29**	⇓	*eP*		**Pn**	**00 08 01.8**	**+0.3**
CNCH	**Conchagua**	**0.61**	**29**	⇓	*eP*		**Pn**	**00 08 01.8**	**+0.3**
LCND	**La Caada**	**0.61**	**23**	⇓	*eP*		**Pn**	**00 08 01.7**	**+0.2**
LCND					*eS*		**Sn**	**00 08 12.3**	**+0.9**
LCND	**La Caada**	**0.61**	**23**		*eP*		**Pn**	**00 08 01.5**	**+0.1**
LCND				⇓	*eP*			00 08 01.7	
LCND					*eS*		**Sn**	**00 08 12.1**	**+0.8**
LCND					*eS*			00 08 12.3	
LCND					*eS*			00 08 12.5	
LCY	**Lacayo**	**0.70**	**347**	⇓	*eP*		**Pn**	**00 08 02.6**	**+0.1**
LCY	**Lacayo**	**0.70**	**347**	⇓	*eP*		**Pn**	**00 08 02.6**	**+0.1**
VSM	**San Miguel**	**0.70**	**349**		*eP*		**Pn**	**00 08 02.8**	**+0.1**
VSM	**San Miguel**	**0.70**	**349**		*eP*		**Pn**	**00 08 02.8**	**+0.1**
ALJI	**Alcalda de J**	**0.72**	**324**	⇑	*eP*		**Pn**	**00 08 02.3**	**-0.4**
ALJI					*eS*		**Sn**	**00 08 12.9**	**-0.6**
ALJI	**Alcalda de J**	**0.72**	**324**	⇑	*eP*		**Pn**	**00 08 02.3**	**-0.4**
ALJI					*eS*		**Sn**	**00 08 12.9**	**-0.6**
CNRM	**Centro Naciona**	**0.73**	**357**	⇓	*eP*		**Pn**	**00 08 03.0**	**+0.2**
CNRM					*eS*		**Sn**	**00 08 14.8**	**+1.1**
CNRM	**Centro Naciona**	**0.73**	**357**	⇓	*eP*		**Pn**	**00 08 03.0**	**+0.2**
CNRM					*eS*		**Sn**	**00 08 14.8**	**+1.1**
PACA	**Pacayal**	**0.75**	**346**		*eP*		**Pn**	**00 08 03.4**	**+0.3**
PACA	**Pacayal**	**0.75**	**346**		*eP*		**Pn**	**00 08 03.4**	**+0.3**
TECA	**Tecapa**	**0.83**	**335**	⇓	*iP*		**Pn**	**00 08 04.0**	**-0.1**
TECA	**Tecapa**	**0.83**	**335**	⇓	*iP*		**Pn**	**00 08 04.0**	**-0.1**
FAGO	**Alcalda de S**	**0.95**	**2**	⇓	*iP*		**Pn**	**00 08 06.2**	**+0.7**
FAGO					*eS*		**Sn**	**00 08 20.7**	**+2.2**
FAGO	**Alcalda de S**	**0.95**	**2**	⇓	*iP*		**Pn**	**00 08 06.2**	**+0.7**
FAGO					*eS*		**Sn**	**00 08 20.7**	**+2.2**
PQSS	**Presa 15 de Se**	**0.97**	**335**	⇑	*eP*		**Pn**	**00 08 05.9**	**+0.2**
PQSS					*eS*		**Sn**	**00 08 19.7**	**+0.8**
CRIN	**San Cristobal**	**1.06**	**92**				**Pn**	**00 08 07.5**	**+0.6**
CRIN						Sn	**Sn**	**00 08 23.2**	**+2.0**
UESV	**Universidad de**	**1.09**	**325**		*eP*		**Pn**	**00 08 07.3**	**0.0**
UESV					*eS*		**Sn**	**00 08 21.5**	**-0.3**
UESV					IAML			00 08 24.4	
	comp=Z,99µm,0.4s								
UESV	**Universidad de**	**1.09**	**325**		*eP*		**Pn**	**00 08 07.3**	**0.0**
UESV					*eS*		**Sn**	**00 08 21.5**	**-0.3**
UESV					IAML			00 08 24.4	
	comp=Z,99µm,0.4s								
COEG	**Centro de Oper**	**1.14**	**320**		*eP*		**Pn**	**00 08 07.6**	**-0.3**
COEG					*eS*		**Sn**	**00 08 22.6**	**-0.2**
COEG					IAML			00 08 26.3	
	comp=Z,107µm,0.2s								
COEG	**Centro de Oper**	**1.14**	**320**		*eP*		**Pn**	**00 08 07.6**	**-0.3**
COEG					*eS*		**Sn**	**00 08 22.6**	**-0.2**
COEG					IAML			00 08 26.3	
	comp=Z,107µm,0.2s								
PAVA	**Las Pavas**	**1.24**	**321**	⇓	*eP*		**Pn**	**00 08 09.4**	**0.0**
PAVA					*eS*		**Sn**	**00 08 25.7**	**+0.3**
PAVA	**Las Pavas**	**1.24**	**321**	⇓	*eP*		**Pn**	**00 08 09.4**	**0.0**
PAVA					*eS*		**Sn**	**00 08 25.7**	**+0.3**
LFRS	**El Faro**	**1.26**	**314**	⇑	*iP*		**Pn**	**00 08 09.0**	**-0.6**
LFRS	**El Faro**	**1.26**	**314**	⇑	*iP*		**Pn**	**00 08 09.0**	**-0.6**
LBRS	**Las Brisas**	**1.33**	**318**		*eP*		**Pn**	**00 08 10.7**	**+0.2**
LBRS	**Las Brisas**	**1.33**	**318**		*eP*		**Pn**	**00 08 10.7**	**+0.2**
AEIL	**Aeropuerto Ilo**	**1.35**	**315**	⇑	*eP*		**Pn**	**00 08 10.6**	**-0.2**
AEIL					IAML			00 08 30.4	
	comp=Z,124µm,0.2s								
AEIL					IAML			00 08 30.4	
	comp=Z,124µm,0.2s								
AEIL					IAML			00 08 30.4	
	comp=Z,124µm,0.2s								
AEIL	**Aeropuerto Ilo**	**1.35**	**315**	⇑	*eP*		**Pn**	**00 08 10.6**	**-0.2**
AEIL					*eS*		**Sn**	**00 08 27.4**	**-0.4**
AEIL					IAML			00 08 30.4	
	comp=Z,124µm,0.2s								
LALI	**Alcalda de L**	**1.37**	**303**		*eP*		**Pn**	**00 08 09.6**	**-1.3**
LALI					*eS*		**Sn**	**00 08 26.1**	**-2.2**
LALI	**Alcalda de L**	**1.37**	**303**		*eP*		**Pn**	**00 08 09.6**	**-1.3**
LALI					*eS*		**Sn**	**00 08 26.1**	**-2.2**
LFU	**La Fuente**	**1.38**	**317**	⇓	*eP*		**Pn**	**00 08 11.2**	**0.0**
LFU	**La Fuente**	**1.38**	**317**	⇓	*eP*		**Pn**	**00 08 11.2**	**0.0**
UDBS	**Universidad Do**	**1.39**	**314**	⇑	*eP*		**Pn**	**00 08 11.0**	**-0.2**
UDBS					*eS*		**Sn**	**00 08 28.6**	**-0.2**
UDBS					IAML			00 08 30.3	
	comp=Z,76µm,0.2s								
UDBS	**Universidad Do**	**1.39**	**314**	⇑	*eP*		**Pn**	**00 08 11.0**	**-0.2**
UDBS					*eS*		**Sn**	**00 08 28.6**	**-0.2**
UDBS					IAML			00 08 30.3	
	comp=Z,76µm,0.2s								
IGN	**Direccin Gen**	**1.40**	**314**		*eP*		**Pn**	**00 08 10.8**	**-0.5**
IGN					*eS*		**Sn**	**00 08 28.5**	**-0.5**
IGN	**Direccin Gen**	**1.40**	**314**		*eP*		**Pn**	**00 08 10.8**	**-0.5**
IGN					*eS*		**Sn**	**00 08 28.5**	**-0.5**
UTEC	**Universidad Te**	**1.41**	**313**		*eP*		**Pn**	**00 08 11.4**	**-0.2**
UTEC					IAML			00 08 31.8	
	comp=Z,59µm,0.2s								
UTEC	**Universidad Te**	**1.41**	**313**		*eP*		**Pn**	**00 08 11.4**	**-0.2**
UTEC					*eS*		**Sn**	**00 08 28.7**	**-0.6**
UTEC					IAML			00 08 31.8	
	comp=Z,59µm,0.2s								
SNET	**Serv Nac Est T**	**1.42**	**312**	⇑	*eP*		**Pn**	**00 08 11.1**	**-0.6**
SNET					*eS*		**Sn**	**00 08 28.7**	**-1.0**
SNET					IAML			00 08 33.7	
	comp=Z,57µm,0.3s								
SNET	**Serv Nac Est T**	**1.42**	**312**	⇑	*eP*		**Pn**	**00 08 11.1**	**-0.6**
SNET					*eS*		**Sn**	**00 08 28.7**	**-1.0**
SNET					IAML			00 08 33.7	
	comp=Z,57µm,0.3s								
SNET	**Serv Nac Est T**	**1.42**	**312**				**Pn**	**00 08 11.1**	**-0.6**
UESS	**Universidad de**	**1.42**	**313**	⇑	*eP*		**Pn**	**00 08 11.4**	**-0.3**
UESS					*eS*		**Sn**	**00 08 29.5**	**-0.1**
UESS	**Universidad de**	**1.42**	**313**	⇑	*eP*		**Pn**	**00 08 11.4**	**-0.3**
UESS					*eS*		**Sn**	**00 08 29.5**	**-0.1**
CPRS	**Casa Presidenc**	**1.43**	**311**	⇑	*eP*		**Pn**	**00 08 11.1**	**-0.7**
CPRS					*eS*		**Sn**	**00 08 28.7**	**-1.0**
ITCA	**Escuela Especi**	**1.45**	**310**		*eP*		**Pn**	**00 08 11.5**	**-0.6**
ITCA	**Escuela Especi**	**1.45**	**310**		*eP*		**Pn**	**00 08 11.5**	**-0.6**
BOQS	**Boqueron**	**1.49**	**312**	⇑	*iP*		**Pn**	**00 08 12.4**	**-0.3**
BOQS	**Boqueron**	**1.49**	**312**	⇑	*iP*		**Pn**	**00 08 12.4**	**-0.3**
PMON	**Piamonte**	**1.50**	**310**	⇓	*eP*		**Pn**	**00 08 12.4**	**-0.4**
PMON	**Piamonte**	**1.50**	**310**	⇓	*eP*		**Pn**	**00 08 12.4**	**-0.4**
TGUH	**Tegucigalpa,Un**	**1.56**	**33**			Pn	**Pn**	**00 08 15.2**	**+1.6**
TGUH						Sn	**Sn**	**00 08 35.9**	**+3.0**
TGUH	**Tegucigalpa,Un**	**1.56**	**33**		*eP*		**Pn**	**00 08 15.1**	**+1.5**
JAYA	**Jayaque - finc**	**1.57**	**306**	⇑	*eP*		**Pn**	**00 08 12.7**	**-1.0**
JAYA					*eS*		**Sn**	**00 08 31.9**	**-1.3**
JAYA					IAML			00 08 37.0	
	comp=Z,47µm,0.2s								
JAYA	**Jayaque - finc**	**1.57**	**306**	⇑	*eP*		**Pn**	**00 08 12.7**	**-1.0**
JAYA					*eS*		**Sn**	**00 08 31.9**	**-1.3**
JAYA					IAML			00 08 37.0	
	comp=Z,47µm,0.2s								
CEDA	**San Andres**	**1.62**	**311**	⇑	*iP*		**Pn**	**00 08 14.0**	**-0.3**
CEDA	**San Andres**	**1.62**	**311**	⇑	*iP*		**Pn**	**00 08 14.0**	**-0.3**
CEDA					*eS*		**Sn**	**00 08 32.8**	**-1.5**
LLGN	**La Laguna**	**1.62**	**331**		*eP*		**Pn**	**00 08 14.6**	**+0.3**
LLGN	**La Laguna**	**1.62**	**331**		*eP*		**Pn**	**00 08 14.6**	**+0.3**
TACO	**Tacachico**	**1.70**	**316**	⇓	*eP*		**Pn**	**00 08 15.4**	**0.0**
TACO	**Tacachico**	**1.70**	**316**	⇓	*eP*		**Pn**	**00 08 15.4**	**0.0**
TACO					*eS*		**Sn**	**00 08 35.9**	**-0.4**
CEVE	**Cerro Verde**	**1.81**	**307**		*eP*		**Pn**	**00 08 16.7**	**-0.4**
CEVE					IAML			00 08 47.2	
	comp=Z,78µm,0.5s								
CEVE	**Cerro Verde**	**1.81**	**307**		*eP*		**Pn**	**00 08 16.7**	**-0.4**
CEVE					*eS*		**Sn**	**00 08 38.0**	**-1.1**
CEVE					IAML			00 08 47.2	
	comp=Z,78µm,0.5s								
SBLS	**San Blas**	**1.81**	**307**		*eP*		**Pn**	**00 08 16.8**	**-0.3**
SBLS	**San Blas**	**1.81**	**307**		*eP*		**Pn**	**00 08 16.8**	**-0.3**
SNJE	**San Jose**	**1.82**	**308**		*eP*		**Pn**	**00 08 16.8**	**-0.3**
SNJE	**San Jose**	**1.82**	**308**		*eP*		**Pn**	**00 08 16.8**	**-0.3**
UNIC	**Universidad Ca**	**1.85**	**312**		*eP*		**Pn**	**00 08 17.4**	**0.0**
UNIC	**Universidad Ca**	**1.85**	**312**		*eP*		**Pn**	**00 08 17.4**	**0.0**
RTR	**El Retiro**	**1.86**	**308**		*eP*		**Pn**	**00 08 17.4**	**-0.3**
RTR	**El Retiro**	**1.86**	**308**		*eP*		**Pn**	**00 08 17.4**	**-0.3**
MTO3	**Montecristo**	**2.03**	**324**	⇓	*eP*		**Pn**	**00 08 20.3**	**+0.2**
MTO3	**Montecristo**	**2.03**	**324**	⇓	*eP*		**Pn**	**00 08 20.3**	**+0.2**
MTO3	**Montecristo**	**2.03**	**324**				**Pn**	**00 08 20.4**	**+0.3**
ESQI	**Esquipulas**	**2.15**	**327**	⇓	*eP*		**Pn**	**00 08 22.6**	**+1.0**
ESQI	**Esquipulas**	**2.15**	**327**				**Pn**	**00 08 22.6**	**+1.0**
MATN	**Matagalpa**	**2.17**	**85**				**Pn**	**00 08 22.9**	**+1.1**
BOAB	**BOACO BROADBAN**	**2.43**	**97**				**Pn**	**00 08 23.2**	**-2.1**
MRL	**Marmol**	**2.77**	**327**		*eP*		**Pn**	**00 08 32.1**	**+2.0**
NBG	**Las Nubes**	**2.83**	**311**		*eP*		**Pn**	**00 08 32.6**	**+1.7**
PCG	**Pacaya**	**2.91**	**305**		*eP*		**Pn**	**00 08 33.4**	**+1.4**
ACON	**Acoyapa**	**3.00**	**105**				**Pn**	**00 08 32.3**	**-0.7**
FUG	**Fuego 3**	**3.13**	**303**		*eP*		**Pn**	**00 08 36.0**	**+1.0**
APG	**El Apazote**	**3.19**	**315**		P		**Pn**	**00 08 36.7**	**+0.8**
	comp=Z,15nm,0.3s,baz=129,slow=7.6,SNR=81								
APG					Lg		Lg	00 09 31.4	
	comp=Z,95nm,0.3s,baz=104,slow=21,SNR=5.6								
BUAI	**Buenos Aires**	**3.31**	**124**		*eP*		**Pn**	**00 08 37.0**	**-0.3**
ORTG	**Ortega, Santa**	**3.53**	**132**				**Pn**	**00 08 40.8**	**+0.4**
COLC	**Colonia**	**3.54**	**125**		*eP*		**Pn**	**00 08 41.4**	**+0.9**
SAJU	**San Juanillo,**	**3.57**	**138**		*eP*		**Pn**	**00 08 40.9**	**0.0**
CUI	**Cuipilapa**	**3.57**	**125**		*eP*		**Pn**	**00 08 41.4**	**+0.4**
PLVR	**Palo Verde**	**3.62**	**131**		*eP*		**Pn**	**00 08 42.1**	**+0.4**
ACAL	**Aguas Claras**	**3.69**	**124**		*eP*		**Pn**	**00 08 44.0**	**+1.4**
ERG	**Entre ros, C**	**3.74**	**297**		*eP*		**Pn**	**00 08 45.3**	**+2.1**
ERG							*eS*	**Sn**	**00 09 30.7**	**+4.7**
ESPN	**Las Esperanzas**	**3.79**	**98**				**Pn**	**00 08 44.2**	**+0.4**
INDI	**Punta indio, G**	**3.85**	**138**		*eP*		**Pn**	**00 08 44.9**	**+0.2**
RTAL	**Retalhuleu**	**3.89**	**298**				**Pn**	**00 08 46.3**	**+1.1**
JTS	**Las Juntas de**	**3.96**	**128**		P		**Pn**	**00 08 45.4**	**-0.8**
	comp=Z,14nm,0.3s,baz=134,slow=2.9,SNR=68								
JTS					Lg		Lg	00 09 44.8	
	comp=Z,186nm,0.3s,baz=174,slow=23,SNR=10								
JTS	**Las Juntas de**	**3.96**	**128**	*i*	P		**Pn**	**00 08 49.3**	**+3.1**
JTS	**Las Juntas de**	**3.96**	**128**		P	n	**Pn**	**00 08 47.0**	**+0.8**
JTS	**Las Juntas de**	**3.96**	**128**		*eP*		Pn	00 08 53.8	+7.6
CEDE	**Laguna Cedeo**	**4.04**	**123**		*eP*		**Pn**	**00 08 49.1**	**+1.8**
ARE1	**Arenal 1**	**4.04**	**124**		*eP*		**Pn**	**00 08 49.3**	**+1.9**
HUEH	**Huehuetenango**	**4.15**	**309**				**Pn**	**00 08 50.5**	**+1.5**
COVE	**Coope Vega, Sa**	**4.17**	**118**		*eP*		**Pn**	**00 08 49.4**	**+0.3**
COVE	**Coope Vega, Sa**	**4.17**	**118**				**Pn**	**00 08 50.9**	**+1.8**
CAO2	**Cobano, Puntar**	**4.25**	**135**				**Pn**	**00 08 51.2**	**+1.0**
LAFE	**Finca La Fe, P**	**4.30**	**132**		*eP*		**Pn**	**00 08 51.9**	**+1.0**
SAN2	**San Ramn**	**4.45**	**126**		*eP*		**Pn**	**00 08 56.9**	**+3.8**
PETF	**Flores**	**4.48**	**338**				**Pn**	**00 08 55.9**	**+2.7**
HDC	**Heredia**	**4.79**	**124**				**Pn**	**00 08 59.1**	**+1.4**
OCM	**Ochomogo**	**4.98**	**124**		*eP*		**Pn**	**00 09 03.1**	**+2.8**
CVTR	**Volcan Turrial**	**5.07**	**122**		*eP*		**Pn**	**00 09 03.6**	**+1.8**
CCIG	**Comitan**	**5.23**	**313**				**Pn**	**00 09 05.8**	**+2.0**
CDM	**Cerro de Muert**	**5.33**	**126**		*eP*		**Pn**	**00 09 08.1**	**+2.6**
BATAN	**Batan**	**5.36**	**119**				**Pn**	**00 09 07.2**	**+1.9**
EDDO	**Dominical**	**5.44**	**129**		*eP*		**Pn**	**00 09 09.1**	**+2.6**
PEZE	**Perez Zeledon,**	**5.50**	**127**		*eP*		**Pn**	**00 09 09.9**	**+2.4**
PEZE	**Perez Zeledon,**	**5.50**	**127**		P	n	**Pn**	**00 09 09.8**	**+2.4**
DRK0	**Durika**	**5.92**	**125**		*eP*		**Pn**	**00 09 15.6**	**+2.4**
EDPN	**Palmar Norte**	**5.94**	**129**		*eP*		**Pn**	**00 09 15.3**	**+2.1**
EDBA	**Buenos Aires**	**5.95**	**126**		*eP*		**Pn**	**00 09 15.5**	**+2.0**
RIOS	**Rincon, Osa**	**6.06**	**131**		*eP*		**Pn**	**00 09 16.9**	**+1.9**
RIOS	**Rincon, Osa**	**6.06**	**131**				**Pn**	**00 09 16.0**	**+1.0**
POTG	**Potrero Grande**	**6.14**	**126**		*eP*		**Pn**	**00 09 18.3**	**+2.2**
LPLA	**Las Palmas La**	**6.24**	**126**		*eP*		**Pn**	**00 09 19.5**	**+1.9**
PTJ1	**Puerto Jimnez**	**6.33**	**131**		*eP*		**Pn**	**00 09 21.3**	**+2.7**
EDSV	**San Vito**	**6.40**	**127**		*eP*		**Pn**	**00 09 22.2**	**+2.5**
PRVC	**Isla de Provid**	**6.63**	**84**		*eP*		**Pn**	**00 09 21.0**	**-1.8**
BRU2	**Volcan**	**6.63**	**126**		*eP*		**Pn**	**00 09 24.9**	**+2.0**
TEIG	**Tepich**	**7.45**	**359**		P		Pn	00 09 28.5	-5.4
	comp=Z,1.0nm,0.3s,baz=316,slow=20,SNR=1.7								
TEIG	**Tepich**	**7.45**	**359**			Pn	**Pn**	**00 09 37.2**	**+3.4**
TEIG	**Tepich**	**7.45**	**359**		*eP*		**Pn**	**00 09 36.7**	**+2.8**
CMIG	**Matias Romero**	**7.82**	**304**		P		**Pn**	**00 09 39.9**	**+0.8**
	comp=Z,5.0nm,0.3s,baz=139,slow=9.5,SNR=31								
CMIG					S		**Sn**	**00 11 07.7**	**+1.4**
	comp=Z,14nm,0.3s,baz=78,slow=14,SNR=4.5								
BCIP	**Isla Barro Col**	**8.89**	**113**		P		**Pn**	**00 09 54.7**	**+1.0**
BCIP	**Isla Barro Col**	**8.89**	**113**		P	n	**Pn**	**00 09 54.7**	**+1.0**
FSCY	**Frank Sound, G**	**9.35**	**45**				**Pn**	**00 10 02.8**	**+2.9**
LCCY	**Blossom Villag**	**10.36**	**47**		P	n	**Pn**	**00 10 17.4**	**+3.7**
CBCY	**The Bluff, Cay**	**10.63**	**48**		P	n	**Pn**	**00 10 21.0**	**+3.5**
SOR	**Soroa**	**11.12**	**25**		P		**Pn**	**00 10 28.3**	**+4.1**
SOR	**Soroa**	**11.12**	**25**		P	n	**Pn**	**00 10 28.3**	**+4.1**
TLIG	**Tlapa**	**11.15**	**297**		P	n	**Pn**	**00 10 26.8**	**+2.1**
MTDJ	**Mount Denham**	**11.58**	**61**		P	n	**Pn**	**00 10 33.6**	**+3.1**
SJCC	**San Jacinto, C**	**13.02**	**101**		*eP*		**Pn**	**00 10 54.0**	**+3.9**
DBBC	**Dabeiba**	**13.05**	**115**		*eP*		**Pn**	**00 10 47.0**	**-3.6**
PAYG	**Puerto Ayora**	**13.50**	**189**		P	n	**Pn**	**00 10 57.5**	**+1.0**
PAYG	**Puerto Ayora**	**13.50**	**189**		*eP*		**Pn**	**00 10 59.7**	**+3.2**
ZARC	**Zaragoza, Cauc**	**14.07**	**110**		*eP*		**Pn**	**00 11 05.5**	**+1.3**
MOIG	**Morelia**	**14.30**	**301**				**Pn**	**00 11 09.1**	**+1.7**
SMLC	**San Martn de**	**14.36**	**104**		*eP*		**Pn**	**00 11 06.9**	**-1.1**
GTBY	**Guantanamo Bay**	**14.39**	**59**		P	n	**P**	**00 11 11.6**	**-2.0**
YOTC	**Yotoco, Valle**	**14.55**	**126**		*eP*		**Pn**	**00 11 09.9**	**-0.6**
NORC	**Norcasia**	**14.91**	**117**		*eP*		**Pn**	**00 11 15.5**	**+0.3**
CRJC	**Cerrejon, Guaj**	**15.03**	**95**		*eP*		**P**	**00 11 19.8**	**-1.0**
TOLC	**Tolima**	**15.03**	**122**		*eP*		**P**	**00 11 19.1**	**-2.0**
BBAC	**Balboa, Cauca**	**15.16**	**134**		*eP*		**P**	**00 11 20.7**	**-1.6**
OCAC	**Ocana**	**15.24**	**106**		*eP*		**Pn**	**00 11 19.8**	**+0.2**
ORTC	**Ortega, Tolima**	**15.47**	**123**		*eP*		**Pn**	**00 11 21.2**	**-1.2**
SOTA	**Rioblanco**	**15.54**	**132**		*eP*		**Pn**	**00 11 24.1**	**+0.4**
PCON	**Cinco Dias**	**15.56**	**131**		*eP*		**Pn**	**00 11 24.1**	**0.0**
SPBC	**San Pablo de B**	**15.56**	**116**		*eP*		**Pn**	**00 11 21.2**	**-2.4**
OTAV	**Otavalo**	**15.70**	**142**		P		**P**	**00 11 28.0**	**-0.6**
OTAV					pmax		pmax		
	comp=Z,31nm,1.1s								
OTAV	**Otavalo**	**15.70**	**142**		P		**P**	**00 11 28.0**	**-0.6**
OTAV	**Otavalo**	**15.70**	**142**		*eP*		**P**	**00 11 27.7**	**-0.9**
ROSC	**El Rosal**	**15.74**	**119**		P		**Pn**	**00 11 26.1**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=48,slow=21,SNR=3.6								
ROSC					S		**Sn**	**00 14 13.7**	**-6.4**
	comp=Z,1.0nm,0.3s,baz=243,slow=23,SNR=1.4								
ROSC					PcP		**PcP**	**00 16 23.9**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=174,slow=21,SNR=5.2								
ROSC					LR		LR	00 18 05.4	
	comp=Z,597nm,19.6s,baz=324,slow=40								
ROSC	**El Rosal**	**15.74**	**119**		P		**Pn**	**00 11 27.0**	**+0.8**
ROSC					pmax		pmax		
	comp=Z,77nm,1.2s								
ROSC	**El Rosal**	**15.74**	**119**				**Pn**	**00 11 27.0**	**+0.8**
ROSC	**El Rosal**	**15.74**	**119**		*eP*		**P**	**00 11 29.8**	**+0.8**
LGNH	**Logne**	**16.02**	**67**				**P**	**00 11 31.4**	**-0.1**
LGNH					IAmb		IAmb	00 11 52.2	
	comp=Z,154nm,1.2s								
BETC	**Betania**	**16.05**	**127**		*eP*		**P**	**00 11 35.2**	**+3.0**
PAMC	**Pamplona, Colo**	**16.12**	**108**		*eP*		**Pn**	**00 11 31.2**	**+0.2**
GARC	**Garzon, Huila**	**16.33**	**129**		*eP*		**Pn**	**00 11 31.3**	**-2.2**
RUSC	**La Rusia**	**16.33**	**113**		*eP*		**Pn**	**00 11 34.1**	**+0.4**
DWPF	**Disney Wildern**	**16.52**	**21**		P			00 11 39.6	
	baz=203								
DWPF	**Disney Wildern**	**16.52**	**21**		P		**P**	**00 11 37.5**	**+0.3**
DWPF					IAmb		IAmb	00 11 44.2	
	comp=Z,160nm,1.1s								
ZAIG	**Zacatecas**	**16.97**	**308**		P		**P**	**00 11 43.5**	**+1.1**
656A	**Willston**	**17.35**	**17**		P		**P**	**00 11 48.6**	**+2.4**
SDDR	**Presa de Saban**	**17.35**	**67**		P		**P**	**00 11 48.8**	**+2.3**
SDDR	**Presa de Saban**	**17.35**	**67**		*eP*		**P**	**00 11 47.0**	**+0.5**
SDV	**Santo Domingo**	**17.61**	**101**		P		**Pn**	**00 11 48.4**	**-0.9**
	comp=Z,2.4nm,0.3s,baz=267,slow=5.7,SNR=16								
SDV					PcP		**PcP**	**00 16 26.1**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=357,slow=0.9,SNR=6.8								
SDV					LR		LR	00 19 28.8	
	comp=Z,433nm,21.5s,baz=284,slow=41								
SDV	**Santo Domingo**	**17.61**	**101**		P		**Pn**	**00 11 49.0**	**-0.3**
SDV	**Santo Domingo**	**17.61**	**101**		*eP*		**Pn**	**00 11 47.0**	**-2.3**
SDV	**Santo Domingo**	**17.61**	**101**		*eP*		**Pn**	**00 11 47.7**	**-1.6**
MACC	**Macarena, Meta**	**17.64**	**125**		*eP*		**Pn**	**00 11 48.7**	**-0.7**
553A	**Crawfordville**	**17.70**	**11**		P		**P**	**00 11 53.9**	**+3.8**
553A					IAmb		IAmb	00 11 57.4	
	comp=Z,92nm,0.8s								
PTGC	**Puerto Gaitan,**	**17.95**	**117**		*eP*		**P**	**00 11 47.0**	**-6.0**
SC01	**Santiago de lo**	**17.99**	**66**		P		**Pn**	**00 11 54.7**	**+1.0**
SC01					IAmb		IAmb	00 12 04.6	
	comp=Z,83nm,0.7s								
BRAL	**Brewton**	**18.37**	**3**		P			00 12 01.9	
	baz=183								
833A	**Chaparral WMA,**	**18.73**	**328**		P			00 12 03.6	
	baz=144,SNR=41								
344A	**Westbrook Farm**	**18.78**	**353**		P		**Pn**	**00 12 04.0**	**+0.9**
342A	**Flagon Creek P**	**18.94**	**349**		P		**Pn**	**00 12 07.5**	**+2.4**
DR12	**Loma Pena Alta**	**19.02**	**69**		P		**Pn**	**00 12 07.5**	**+1.4**
TIGA	**Tifton**	**19.07**	**12**		P			00 12 09.4	
	baz=194,SNR=31								
TIGA	**Tifton**	**19.08**	**12**		P		**Pn**	**00 12 08.5**	**+1.8**
VBMS	**Vicksburg**	**19.51**	**354**		P			00 12 14.1	
	baz=173,SNR=12								
NATX	**Nacogdoches**	**19.86**	**343**		P		**Pn**	**00 12 15.8**	**-0.1**
NATX	**Nacogdoches**	**19.86**	**343**		P			00 12 17.3	
	baz=161,SNR=8.8								
435B	**Jarrell**	**19.96**	**336**		P		**Pn**	**00 12 16.2**	**-0.9**
435B					IAmb		IAmb	00 12 30.1	
	comp=Z,95nm,0.8s								
435B	**Jarrell**	**19.96**	**336**		P			00 12 17.4	
	baz=152,SNR=6.1								
LRAL	**Lakeview Retre**	**20.23**	**3**		P		Pn	00 12 19.7	-0.5
LRAL	**Lakeview Retre**	**20.23**	**3**		P			00 12 21.9	
	baz=183,SNR=

MSTX	**Muleshoe**	**24.98**	**330**	P			00 13 06.3	
	baz=144,SNR=37							
AMTX	**Amarillo**	**25.23**	**333**	P			00 13 09.3	
	baz=148							
T56A	**Rocky Mt**	**25.25**	**15**	P			00 13 09.4	
	baz=199							
BLA	**Blacksburg**	**25.33**	**15**	P		**P**	**00 13 10.3 +1.5**	
BLA				pmax		pmax		
	comp=Z,55nm,1.0s							
BLA	**Blacksburg**	**25.33**	**15**	P		**P**	**00 13 10.3 +1.5**	
BLA				IAmb		IAmb	00 13 29.2	
	comp=Z,55nm,0.9s							
BLA	**Blacksburg**	**25.33**	**15**	P			00 13 10.3	
	baz=198,SNR=7.9							
CCM	**Cathedral Cave**	**25.36**	**354**	P		**P**	**00 13 09.3 +0.3**	
CCM				pmax		pmax		
	comp=Z,43nm,0.8s							
CCM	**Cathedral Cave**	**25.36**	**354**	P		**P**	**00 13 09.3 +0.3**	
CCM				IAmb		IAmb	00 13 29.9	
	comp=Z,42nm,0.8s							
CCM	**Cathedral Cave**	**25.36**	**354**	P			00 13 09.4	
	baz=173							
WCI	**Wyandotte Cave**	**25.44**	**3**	P		**P**	**00 13 09.8 +0.1**	
WCI				pmax		pmax		
	comp=Z,46nm,0.9s							
WCI	**Wyandotte Cave**	**25.44**	**3**	P		**P**	**00 13 09.8 +0.1**	
WCI				IAmb		IAmb	00 13 30.0	
	comp=Z,46nm,0.9s							
WCI	**Wyandotte Cave**	**25.44**	**3**	P			00 13 10.2	
	baz=184							
CZSB	**Cruzeiro do Su**	**25.47**	**142**	*e*P		**P**	**00 13 12.3 +2.1**	
T58A	**Grand View Acr**	**25.60**	**18**	P			00 13 12.3	
	baz=202							
U60A	**Pendleton**	**25.61**	**21**	P			00 13 12.6	
	baz=205,SNR=5.6							
S54A	**Dingess, Beckl**	**25.69**	**13**	P		**P**	**00 13 12.9 +0.9**	
S54A				IAmb		IAmb	00 13 32.5	
	comp=Z,122nm,1.6s							
S54A	**Dingess, Beckl**	**25.69**	**13**	P			00 13 13.0	
	baz=195							
ANBD	**Bethesda, Anti**	**25.83**	**77**	*e*		**P**	**00 13 11.7 -1.8**	
GRGR	**Grenville**	**25.87**	**88**	*e*P		**P**	**00 13 14.3 +0.4**	
GRGR				*e*S		**pP**	**00 13 33.5 +4.2**	
S56A	**Natural Bridge**	**25.99**	**16**	P			00 13 16.5	
	baz=199							
DSLB	**Salisbury**	**26.04**	**81**	*e*		**P**	**00 13 14.6 -0.8**	
R53A	**Hurricane**	**26.07**	**11**	IAmb		IAmb	00 13 52.1	
	comp=Z,45nm,1.1s							
R54A	**Victor**	**26.12**	**13**	P			00 13 17.2	
	baz=196							
PCM	**Pelee Case Pet**	**26.23**	**82**	*e*P		**P**	**00 13 18.1 +0.9**	
PCM	**Pelee Case Pet**	**26.23**	**82**	*e*P		**P**	**00 13 18.5 +1.4**	
S57A	**Dark Hollow, R**	**26.23**	**17**	IAmb		IAmb	00 13 54.0	
	comp=Z,51nm,1.3s							
S57A	**Dark Hollow, R**	**26.23**	**17**	P			00 13 17.9	
	baz=200							
PML	**Morne Lenard**	**26.25**	**82**	*e*P		**P**	**00 13 17.9 +0.6**	
CXM	**Morne La Croix**	**26.27**	**82**	*e*P		**P**	**00 13 18.8 +1.2**	
SVN	**Savane Anatole**	**26.27**	**82**	*e*P		**P**	**00 13 18.6 +1.1**	
GBMF	**Grand Be**	**26.27**	**82**	*e*P		**P**	**00 13 18.2 +0.6**	
BAMF	**Morne Balai**	**26.29**	**82**	*e*P		**P**	**00 13 18.4 +0.7**	
T60A	**Surry**	**26.36**	**21**	P			00 13 20.3	
	baz=206							
S58A	**Poland Farm, P**	**26.36**	**18**	P			00 13 19.4	
	baz=202,SNR=5.2							
R55A	**Marlinton**	**26.42**	**14**	P			00 13 20.5	
	baz=198,SNR=6.5							
Q52A	**Bidwell**	**26.63**	**10**	IAmb		IAmb	00 13 41.5	
	comp=Z,66nm,0.9s							
Q53A	**Leroy**	**26.67**	**12**	P			00 13 22.0	
	baz=194							
121A	**Cookes Peak, D**	**26.69**	**321**	P		**P**	**00 13 22.6 +1.3**	
121A				IAmb		IAmb	00 13 26.6	
	comp=Z,33nm,0.9s							
121A	**Cookes Peak, D**	**26.69**	**321**	P			00 13 23.5	
	baz=133,SNR=20							
HSIG		**26.69**	**311**	P		**P**	**00 13 22.5 +1.3**	
R56A	**Bull Pasture M**	**26.72**	**15**	P			00 13 23.0	
	baz=199,SNR=6.6							
S59A	**Mechanicsville**	**26.73**	**19**	P			00 13 23.0	
	baz=204							
R58B	**Mineral**	**26.73**	**18**	P			00 13 23.0	
	baz=203,SNR=5.6							
R57A	**Stanardsville**	**26.85**	**17**	P			00 13 23.9	
	baz=201,SNR=9.2							
P49A	**Miami Univ. Ec**	**26.86**	**6**	P			00 13 22.5	
	baz=187							
S60A	**Water View**	**26.89**	**20**	P			00 13 24.7	
	baz=205							
NNA	**Nana**	**27.00**	**155**	P		**P**	**00 13 26.5 +2.4**	
	comp=Z,9.4nm,0.8s,baz=247,slow=15,SNR=2.4							
NNA	**Nana**	**27.00**	**155**	*i* P		**P**	**00 13 25.7 +1.6**	
NNA				pmax		pmax		
	comp=Z,36nm,1.1s							
R58A	**Rapidan**	**27.01**	**18**	P			00 13 25.2	
	baz=202							
P51A	**Williamsport**	**27.01**	**9**	IAmb		IAmb	00 14 06.3	
	comp=Z,56nm,1.1s							
CBN	**Corbin Frederi**	**27.11**	**19**	P			00 13 27.0	
	baz=203							
BNM	**Barren Site**	**27.15**	**325**	P		**P**	**00 13 27.7 +2.2**	
R59A	**King George, V**	**27.19**	**19**	P			00 13 27.5	
	baz=204,SNR=5.9							
R32A	**Long Quarter,**	**27.25**	**342**	IAmb		IAmb	00 13 31.0	
	comp=Z,24nm,0.8s							
P53A	**Whipple**	**27.30**	**11**	IAmb		IAmb	00 13 47.3	
	comp=Z,73nm,1.1s							
P52A	**Corning**	**27.31**	**10**	P			00 13 27.3	
	baz=193,SNR=7.4							
KSU1	**Kansas State U**	**27.31**	**346**	P			00 13 27.0	
	baz=162							
P52A	**Corning**	**27.31**	**10**	IAmb		IAmb	00 13 47.3	
	comp=Z,35nm,0.8s							
Q56A	**Snyder Ridge,**	**27.37**	**15**	IAmb		IAmb	00 13 55.3	
	comp=Z,58nm,1.2s							
Q56A	**Snyder Ridge,**	**27.37**	**15**	P			00 13 29.1	
	baz=199,SNR=6.8							
R60A	**Leonardtown, M**	**27.43**	**20**	P			00 13 29.8	
	baz=205							
SFIN	**Lafayette**	**27.55**	**2**	P			00 13 28.3	
	baz=182							
Q57A	**Strasburg**	**27.57**	**17**	P			00 13 30.4	
	baz=201							
ANMO	**Albuquerque**	**27.64**	**326**	P		**P**	**00 13 30.6 +0.8**	
	comp=Z,5.4nm,0.7s,baz=131,slow=9.4,SNR=15							
ANMO				PcP		**PcP**	**00 16 46.1 +0.2**	
	comp=Z,5.0nm,0.8s,baz=179,slow=12,SNR=4.7							
ANMO	**Albuquerque**	**27.64**	**326**	*ce*P		**P**	**00 13 31.7 +1.9**	
ANMO				pmax		pmax		
	comp=Z,16nm,1.8s							
ANMO	**Albuquerque**	**27.64**	**326**	P		**P**	**00 13 31.1 +1.3**	
ANMO	**Albuquerque**	**27.64**	**326**	P			00 13 32.5	
	baz=139							
Q58A	**Fox Den Farm,**	**27.70**	**18**	P			00 13 31.5	
	baz=202							
ACSO	**Alum Creek Sta**	**27.76**	**8**	P			00 13 31.2	
	baz=191,SNR=8.9							
MCWV	**Mont Chateau**	**27.79**	**14**	P			00 13 32.1	
	baz=198,SNR=5.4							
O52A	**Adamsville**	**27.83**	**10**	IAmb		IAmb	00 13 51.5	
	comp=Z,34nm,0.9s							
P56A	**Dayton Farm, R**	**27.90**	**15**	P			00 13 33.6	
	baz=200,SNR=7.8							
O53A	**New Philadelph**	**28.07**	**11**	IAmb		IAmb	00 13 53.8	
	comp=Z,46nm,1.1s							
O53A	**New Philadelph**	**28.07**	**11**	P			00 13 34.2	
	baz=194,SNR=6.2							
P57A	**Homestead Farm**	**28.10**	**17**	IAmb		IAmb	00 13 36.5	
	comp=Z,47nm,0.8s							
P57A	**Homestead Farm**	**28.10**	**17**	P			00 13 35.6	
	baz=201,SNR=15							
O54A	**Avella**	**28.18**	**13**	IAmb		IAmb	00 14 01.3	
	comp=Z,40nm,1.0s							
T25A	**Trinidad**	**28.33**	**332**	P			00 13 38.2	
	baz=145,SNR=16							
SDMD	**Soldier's Deli**	**28.38**	**19**	P		**P**	**00 13 36.9 +0.8**	
TUC	**Tucson**	**28.47**	**317**	P		**P**	**00 13 40.2 +3.1**	
TUC				pmax		pmax		
	comp=Z,16nm,0.9s							
TUC	**Tucson**	**28.47**	**317**	P		**P**	**00 13 40.2 +3.1**	
N53A	**Lisbon**	**28.68**	**12**	IAmb		IAmb	00 13 58.3	
	comp=Z,29nm,1.1s							
O56A	**Blue Knob Stat**	**28.69**	**15**	P			00 13 39.9	
	baz=200							
P59A	**Jarrettsville**	**28.69**	**19**	P			00 13 40.4	
	baz=204							
O57A	**Amberson**	**28.88**	**17**	P			00 13 42.0	
	baz=202							
N54A	**Moraine State**	**29.01**	**13**	P		**P**	**00 13 42.5 +0.8**	
N54A				IAmb		IAmb	00 13 59.0	
	comp=Z,30nm,0.8s							
N54A	**Moraine State**	**29.01**	**13**	P			00 13 42.5	
	baz=196,SNR=6.3							
O58A	**Lewisberry**	**29.01**	**18**	P			00 13 43.1	
	baz=203							
P60A	**Greenville**	**29.14**	**20**	IAmb		IAmb	00 13 44.9	
	comp=Z,25nm,0.8s							
P60A	**Greenville**	**29.14**	**20**	P			00 13 44.2	
	baz=206,SNR=5.5							
KSCO	**Kaye Shedlock'**	**29.15**	**336**	P			00 13 44.4	
	baz=150							
SSPA	**Standing Stone**	**29.21**	**16**	P			00 13 44.5	
	baz=201							
SSPA	**Standing Stone**	**29.21**	**16**	P		**P**	**00 13 44.6 +1.2**	
WUPA	**West Chester U**	**29.25**	**20**	P		**P**	**00 13 45.0 +1.2**	
WUPA				IAmb		IAmb	00 14 06.9	
	comp=Z,70nm,1.9s							
M53A	**WI Miller and**	**29.32**	**12**	P			00 13 45.2	
	baz=195							
N56A	**West Decatur**	**29.37**	**15**	P			00 13 46.2	
	baz=200,SNR=5.8							
O59A	**Robesonia**	**29.41**	**19**	P			00 13 47.0	
	baz=204,SNR=6.7							
N57A	**Milroy**	**29.41**	**17**	P			00 13 46.6	
	baz=201							
M54A	**Oil Creek Stat**	**29.60**	**13**	P		**P**	**00 13 47.6 +0.7**	
M54A				IAmb		IAmb	00 13 48.5	
	comp=Z,28nm,0.8s							
M54A	**Oil Creek Stat**	**29.60**	**13**	P			00 13 47.7	
	baz=197,SNR=6.3							
O60A	**Telford**	**29.67**	**20**	P			00 13 48.9	
	baz=206							
AAM	**Ann Arbor**	**29.71**	**7**	P			00 13 48.2	
	baz=189							
N58A	**Sunbury**	**29.73**	**18**	P			00 13 49.5	
	baz=203							
BGNE	**Belgrade**	**29.87**	**345**	P			00 13 50.7	
	baz=160							
L53A	**Girard**	**29.90**	**12**	P			00 13 50.6	
	baz=196,SNR=6.9							
M56A	**Emporium**	**29.93**	**15**	P			00 13 50.8	
	baz=200							
M56A	**Emporium**	**29.93**	**15**	IAmb		IAmb	00 14 11.2	
	comp=Z,26nm,0.9s							
S22A	**4UR Ranch, Cre**	**29.98**	**329**	P			00 13 52.5	
	baz=141,SNR=36							
M57A	**Sunshine Farm,**	**30.07**	**17**	P			00 13 52.4	
	baz=202,SNR=5.2							
M57A	**Sunshine Farm,**	**30.07**	**17**	IAmb		IAmb	00 14 08.9	
	comp=Z,32nm,0.8s							
N59A	**State Game Lan**	**30.09**	**19**	IAmb		IAmb	00 13 53.3	
	comp=Z,21nm,0.7s							
N59A	**State Game Lan**	**30.09**	**19**	P			00 13 52.9	
	baz=204,SNR=6.0							
ERPA	**Erie**	**30.11**	**12**	P			00 13 52.2	
	baz=196							
ERPA	**Erie**	**30.12**	**12**	IAmb		IAmb	00 14 11.6	
	comp=Z,39nm,1.0s							
JFWS	**Jewell Farm**	**30.12**	**357**	IAmb		IAmb	00 14 57.4	
	comp=Z,80nm,1.9s							
JFWS	**Jewell Farm**	**30.12**	**357**	P			00 13 51.4	
	baz=176							
Q24A	**Divide**	**30.16**	**333**	P			00 13 53.3	
	baz=146							
N60A	**Cedar Hill Far**	**30.27**	**20**	P			00 13 53.9	
	baz=206							
MVCO	**Mesa Verde**	**30.43**	**327**	IAmb		IAmb	00 14 13.8	
	comp=Z,37nm,1.4s							
MVCO	**Mesa Verde**	**30.43**	**327**	P			00 13 56.4	
	baz=138,SNR=8.5							
N61A	**South Mountain**	**30.43**	**21**	P			00 13 55.8	
	baz=207							
WVNY	**West Valley, N**	**30.70**	**14**	IAmb		IAmb	00 14 16.8	
	comp=Z,29nm,0.9s							
L56A	**Greenwood**	**30.70**	**16**	P			00 13 57.2	
	baz=200							
M59A	**Waymart**	**30.76**	**19**	P			00 13 58.7	
	baz=205,SNR=5.0							
L57A	**Andrews Acres**	**30.77**	**17**	P			00 13 57.8	
	baz=202							
M60A	**Port Jervis**	**30.83**	**20**	P			00 13 59.1	
	baz=206,SNR=5.6							
WUAZ	**Wupatki**	**30.89**	**321**	P			00 14 00.8	
	baz=132,SNR=9.4							
PTGA	**Pitinga**	**30.99**	**114**	P		**P**	**00 13 57.0 -2.5**	
	comp=Z,1.8nm,0.4s,baz=309,slow=11,SNR=8.1							
PTGA				PcP		**PcP**	**00 16 55.2 +0.7**	
	comp=Z,1.7nm,0.4s,baz=249,slow=0.6,SNR=4.1							
PTGA	**Pitinga**	**30.99**	**114**	P		**P**	**00 13 58.7 -0.8**	
PTGA	**Pitinga**	**30.99**	**114**	*e*P		**P**	**00 13 56.8 -2.7**	
I42A	**Draeger Farm,**	**31.05**	**359**	IAmb		IAmb	00 14 20.2	
	comp=Z,41nm,1.2s							
ISCO	**Idaho Springs**	**31.05**	**333**	P		**P**	**00 14 01.7 +1.5**	
ISCO				pmax		pmax		
	comp=Z,17nm,1.1s							
ISCO	**Idaho Springs**	**31.05**	**333**	P			00 14 01.9	
	baz=146,SNR=17							
L58A	**Harry Jones Me**	**31.09**	**18**	P			00 14 01.3	
	baz=204							
M61A	**Granite Spring**	**31.11**	**21**	P			00 14 01.5	
	baz=208,SNR=5.7							
BINY	**Binghamton**	**31.20**	**18**	P		**P**	**00 14 02.0 +1.0**	
BINY	**Binghamton**	**31.20**	**18**	P			00 14 01.9	
	baz=203							
ETMB	**Extrema**	**31.25**	**135**	*e*P		**P**	**00 14 02.4 +0.6**	
K56A	**Middlesex**	**31.29**	**15**	P			00 14 02.6	
	baz=200							
L59A	**Walton**	**31.48**	**19**	P		**P**	**00 14 04.6 +1.1**	
L59A	**Walton**	**31.48**	**19**	P			00 14 04.3	
	baz=205							
MACA	**Manaapuru-AM**	**31.51**	**118**	*e*P		**P**	**00 14 02.7 -1.4**	
K57A	**Scipio Center**	**31.54**	**16**	P			00 14 04.6	
	baz=202							
L60A	**Shokan**	**31.56**	**20**	P			00 14 05.6	
	baz=206							
KSCT	**Kent School, K**	**31.58**	**21**	P		**P**	**00 14 05.4 +1.0**	
ECSD	**EROS Data Cent**	**31.73**	**348**	P			00 14 05.3	
	baz=164,SNR=14							
K58A	**Earlville**	**31.81**	**18**	P			00 14 07.3	
	baz=204							
PDMC	**Parker Dam,Lak**	**31.91**	**317**	P			00 14 09.2	
	baz=126							
J56A	**Wolcott**	**31.95**	**16**	P			00 14 08.4	
	baz=201,SNR=6.4							
L61A	**Hillsdale 1, H**	**31.97**	**21**	P			00 14 08.9	
	baz=208							
N23A	**Red Feather La**	**32.10**	**334**	P			00 14 10.8	
	baz=146,SNR=5.4							
SWSC	**Sam W. Stewart**	**32.30**	**313**	P			00 14 10.9	
	baz=122							
J57A	**Williamstown**	**32.31**	**17**	P			00 14 11.2	
	baz=202							
BC3	**Big Chuckawall**	**32.44**	**314**	P			00 14 14.2	
	baz=124,SNR=7.9							
K61A	**Williamstown**	**32.49**	**21**	P			00 14 14.5	
	baz=208							
L61B	**Northampton**	**32.50**	**22**	P			00 14 13.5	
	baz=209							
IRM	**Iron Mountain**	**32.51**	**316**	P			00 14 14.7	
	baz=125							
O20A	**White River Ci**	**32.53**	**331**	P			00 14 14.9	
	baz=142,SNR=57							
SPMN	**Marine on St.**	**32.62**	**354**	P			00 14 13.1	
	baz=172,SNR=18							
H53A	**Bobcaygeon**	**32.76**	**13**	P			00 14 14.9	
	baz=197							
J59A	**Piesco**	**32.80**	**18**	P			00 14 15.7	
	baz=205							
SADO	**Sadowa**	**32.83**	**12**	IAmb		IAmb	00 14 33.9	
	comp=Z,15nm,0.8s							
SAML	**Samuel**	**32.85**	**130**	P		**P**	**00 14 15.3 -0.5**	
SAML				pmax		pmax		
	comp=Z,31nm,0.9s							
SAML	**Samuel**	**32.85**	**130**	P		**P**	**00 14 15.3 -0.5**	
SAML				IAmb		IAmb	00 14 16.2	
	comp=Z,31nm,0.8s							
SAML	**Samuel**	**32.85**	**130**	*e*P		**P**	**00 14 15.3 -0.5**	
I58A	**Old Forge**	**32.86**	**18**	P			00 14 16.4	
	baz=204							
SUSD	**Miller**	**32.92**	**346**	P			00 14 16.6	
	baz=160							
SUSD	**Miller**	**32.93**	**346**	P		**P**	**00 14 16.1 -0.1**	
PFO	**Pinyon Flats O**	**33.12**	**314**	*ce*P		**P**	**00 14 19.2 +1.0**	
GMRC	**Granite Mounta**	**33.21**	**316**	P			00 14 21.0	
	baz=125							
COWI	**Conover**	**33.26**	**359**	P		**P**	**00 14 18.3 -0.7**	
COWI				IAmb		IAmb	00 14 24.4	
	comp=Z,13nm,0.6s							
I59A	**Olmsteadville**	**33.29**	**19**	P			00 14 20.3	
	baz=206							
TMUT	**Trail Mountain**	**33.41**	**326**	IAmb		IAmb	00 14 42.6	
	comp=Z,36nm,1.8s							
H57A	**Richville**	**33.45**	**17**	P			00 14 22.0	
	baz=203							
J62A	**Henniker**	**33.49**	**22**	P			00 14 22.8	
	baz=210							
E43A	**Lone Tree Farm**	**33.54**	**1**	IAmb		IAmb	00 15 30.8	
	comp=Z,25nm,1.2s							
G54A	**Lake Saint Pet**	**33.65**	**13**	P			00 14 22.0	
	baz=198							
H58A	**Gabriels**	**33.76**	**18**	P			00 14 23.6	
	baz=205							
K22A	**Casper**	**33.80**	**335**	P			00 14 25.5	
	baz=146,SNR=8.9							
LONY	**Lake Ozonia**	**33.82**	**18**	P			00 14 24.3	
	baz=204							
E38A	**The Farm, Brul**	**33.88**	**356**	IAmb		IAmb	00 14 26.1	
	comp=Z,21nm,0.8s							
H59A	**Cadyville**	**34.11**	**19**	P			00 14 26.5	
	baz=206							
RSSD	**Black Hills**	**34.12**	**339**	P		**P**	**00 14 28.0 +1.2**	
RSSD				pmax		pmax		
	comp=Z,12nm,0.9s							
RSSD	**Black Hills**	**34.12**	**339**	P		**P**	**00 14 28.0 +1.2**	
RSSD				IAmb		IAmb	00 14 48.9	
	comp=Z,12nm,0.8s							
RSSD	**Black Hills**	**34.12**	**339**	P			00 14 28.3	
	baz=152							
MPU	**Maple Canyon**	**34.15**	**327**	IAmb		IAmb	00 14 44.9	
	comp=Z,32nm,1.4s							
ALGO	**Algonquin Park**	**34.19**	**13**	P			00 14 27.1	
	baz=198							
I62A	**Tamworth**	**34.23**	**22**	P			00 14 29.0	
	baz=210							
CTU	**Camp Tracy**	**34.70**	**328**	IAmb		IAmb	00 14 49.7	
	comp=Z,19nm,1.1s							
TPNV	**Topopah Spring**	**34.86**	**319**	P		**P**	**00 14 35.2 +2.0**	
TPNV				pmax		pmax		
	comp=Z,8.0nm,1.0s							
TPNV	**Topopah Spring**	**34.86**	**319**	P		**P**	**00 14 35.2 +2.0**	
TPNV	**Topopah Spring**	**34.86**	**319**	P			00 14 35.7	
	baz=127							
DUG	**Dugway, Tooele**	**34.92**	**326**	P			00 14 35.3	
	baz=135,SNR=6.7							
LPAZ	**La Paz**	**34.98**	**145**	P		**P**	**00 14 34.9 +0.1**	
	comp=Z,2.5nm,0.5s,baz=344,slow=6.2,SNR=16							
LPAZ				PcP		**PcP**	**00 17 07.9 +1.7**	
	comp=Z,1.8nm,0.8s,baz=344,slow=5.1,SNR=1.7							
LPAZ				LR		LR	00 29 38.0	
	comp=Z,527nm,21.2s,baz=310,slow=38							
LPAZ	**La Paz**	**34.98**	**145**	*e*P		**P**	**00 14 35.5 +0.6**	
LPAZ				pmax		pmax		
	comp=Z,3.0nm,0.5s							
LPAZ	**La Paz**	**34.98**	**145**	P		**P**	**00 14 35.5 +0.6**	
LPAZ	**La Paz**	**34.98**	**145**	*e*P		**P**	**00 14 35.0 +0.1**	
MPMC	**Manual Prospec**	**35.16**	**316**	P			00 14 37.5	
	baz=124							
PD31	**Pinedale Array**	**35.20**	**332**	P		**P**	**00 14 36.6 +0.4**	
PDAR	**Pinedale Array**	**35.20**	**332**	P		**P**	**00 14 36.9 +0.7**	
	comp=Z,8.9nm,0.8s,baz=128,slow=9.9,SNR=79							
PDAR				pP		**pP**	**00 14 51.7 -0.3**	
	comp=Z,10nm,0.9s,baz=182,slow=3.9,SNR=7.8							
PDAR				PcP		**PcP**	**00 17 05.2 -0.8**	
	comp=Z,2.5nm,0.7s,baz=140,slow=5.2,SNR=5.0							
PDAR				pPcP			00 17 23.1	
	comp=Z,3.0nm,0.8s,baz=139,slow=7.0,SNR=4.3							
PDAR				ScP		**ScP**	**00 20 48.8 +2.4**	
	comp=Z,1.2nm,0.9s,baz=115,slow=7.0,SNR=3.9							
PDAR				PKiKP		**PKiKP**	**00 24 26.9 -0.7**	
	comp=Z,0.3nm,0.6s,baz=64,slow=2.1,SNR=3.8							
PDAR				LR		LR	00 32 18.7	
	comp=Z,194nm,21.8s,baz=142,slow=42							
PDAR	**Pinedale Array**	**35.20**	**332**	P		**P**	**00 14 36.4 +0.2**	
EYMN	**Ely**	**35.21**	**356**	P			00 14 34.9	
	baz=174							
E56A	**St. Veronique**	**35.46**	**16**	P			00 14 39.1	
	baz=202							
SPUT	**South Promonto**	**35.52**	**328**	IAmb		IAmb	00 14 42.0	
	comp=Z,19nm,0.9s							
G62A	**West of Eustis**	**35.68**	**22**	P			00 14 41.1	
	baz=210							
D55A	**Sainte-Anne-du**	**35.79**	**15**	P			00 14 41.1	
	baz=201,SNR=5.2							
E58A	**La Victoria**	**35.80**	**18**	P			00 14 41.4	
	baz=205							
F60A	**Warwick**	**35.85**	**19**	P			00 14 41.0	
	baz=208							
PB16	**IPOC Station P**	**35.93**	**149**	P		**P**	**00 14 44.5 +1.5**	
PB16				IAmb		IAmb	00 14 45.6	
	comp=Z,21nm,0.8s							
HVU	**Hansel Valley**	**36.02**	**328**	IAmb		IAmb	00 14 48.5	
	comp=Z,13nm,0.7s							
AGMN	**Agassiz Nation**	**36.03**	**351**	P			00 14 42.5	
	baz=167,SNR=29							
H65A	**Eastbrook**	**36.10**	**24**	P			00 14 45.0	
	baz=214							
TPH	**Tonopah**	**36.15**	**319**	IAmb		IAmb	00 14 50.4	
	comp=Z,25nm,0.9s							
MDND	**Maddock**	**36.29**	**347**	P			00 14 45.6	
	baz=161,SNR=7.0							
SNOW	**Snow King Moun**	**36.29**	**332**	P		**P**	**00 14 46.7 +1.1**	
ITTB	**Itaituba**	**36.41**	**116**	*e*P		**P**	**00 14 43.6 -2.9**	
MNMC	**Minye Minye**	**36.56**	**150**	P		**P**	**00 14 49.1 +1.1**	
D58A	**Chemin du LacG**	**36.57**	**18**	P			00 14 48.6	
	baz=205,SNR=5.2							
F63A	**Nahmakanta, Br**	**36.61**	**23**	P			00 14 48.5	
	baz=212							
MALB	**Monte Alegre**	**36.62**	**111**	*e*P		**P**	**00 14 45.9 -2.5**	
PSGCX	**Pisagua**	**36.71**	**151**	P		**P**	**00 14 49.9 +0.8**	
PSGCX				IAmb		IAmb	00 14 51.0	
	comp=Z,42nm,1.4s							
LATQ	**La Tuque**	**36.86**	**17**	P		**P**	**00 14 50.8 +0.9**	
LATQ				IAmb		IAmb	00 14 51.3	
	comp=Z,12nm,0.8s							
LATQ	**La Tuque**	**36.86**	**17**	P			00 14 50.8	
	baz=205							
H17A	**Grant Village**	**36.94**	**333**	P			00 14 53.0	
	baz=142,SNR=15							
NV11	**Mina Array Sit**	**36.95**	**319**	P		**P**	**00 14 52.4 +1.3**	
RLMT	**Red Lodge**	**36.96**	**335**	P			00 14 52.6	
	baz=144,SNR=33							
D60A	**Saint Jean D'O**	**37.02**	**20**	P			00 14 51.9	
	baz=209							
F64A	**Sherman**	**37.03**	**23**	P			00 14 52.6	
	baz=213							
NVAR	**Mina Array Bea**	**37.04**	**319**	P		**P**	**00 14 53.5 +1.5**	
	comp=Z,4.2nm,0.7s,baz=133,slow=7.6,SNR=24							
NVAR				pP		**pP**	**00 15 08.1 +0.2**	
	comp=Z,8.9nm,0.9s,baz=132,slow=8.5,SNR=9.1							
NVAR				PcP		**PcP**	**00 17 12.2 +0.5**	
	comp=Z,16nm,0.7s,baz=135,slow=4.0,SNR=32							
NVAR				pPcP			00 17 30.7	
	comp=Z,15nm,1.0s,baz=137,

comp=Z,25nm,0.8s
ULM Lac du Bonnet 37.94 352 P **P** **00 14 57.9 -1.1**
DGMT Dagmar 38.04 343 P 00 15 01.1
baz=154,SNR=10
MCPB Macapa, AP 38.08 107 *eP* **P** **00 14 59.6 -1.2**
D63A Stockholm 38.11 22 P 00 15 01.3
baz=213
HLID Hailey 38.14 329 P 00 15 02.4
baz=136,SNR=37
HLID Hailey 38.15 329 P **P** **00 15 02.1 +0.9**
HLID IAmb IAmb 00 15 04.9
comp=Z,14nm,0.8s
BCYI Bear Canyon 38.19 330 P **P** **00 15 02.7 +1.1**
PB01 IPOC Station P 38.25 151 P **P** **00 15 03.0 +0.9**
PB01 IAmb IAmb 00 15 04.2
comp=Z,14nm,0.9s
MCMT McKenzie Canyo 38.31 331 P **P** **00 15 04.6 +2.0**
BOZ Bozeman (W) 38.34 333 P **P** **00 15 04.0 +1.2**
BOZ pmax pmax
comp=Z,27nm,0.8s
BOZ Bozeman (W) 38.34 333 P **P** **00 15 04.0 +1.2**
BOZ Bozeman (W) 38.34 333 P 00 15 04.4
baz=141,SNR=67
PB07 IPOC Station P 38.66 152 P **P** **00 15 06.4 +0.8**
PB09 IPOC Station P 39.01 151 P **P** **00 15 10.6 +2.0**
PB09 IAmb IAmb 00 15 11.8
comp=Z,33nm,1.0s
SIV San Ignacio 39.14 136 P **P** **00 15 09.1 -0.5**
comp=Z,73nm,0.7s,baz=322,slow=8.7,SNR=343
SIV PcP **PcP** **00 17 18.6 +0.4**
comp=Z,12nm,0.7s,baz=248,slow=2.4,SNR=5.3
EGMT Eagleton 39.53 337 P 00 15 13.9
baz=146,SNR=24
WVOR Wild Horse Val 39.67 324 P **P** **00 15 14.7 +0.8**
WVOR pmax pmax
comp=Z,12nm,0.9s
WVOR Wild Horse Val 39.67 324 P **P** **00 15 14.7 +0.8**
ORV Oroville 39.74 318 P **P** **00 15 15.6 +1.3**
ORV pmax pmax
comp=Z,4.0nm,0.8s
ORV Oroville 39.74 318 P **P** **00 15 15.6 +1.3**
CLDB Colider 39.77 125 *eP* **P** **00 15 13.7 -1.1**
LVC Limon Verde 39.87 152 P **P** **00 15 16.6 +0.7**
comp=Z,11nm,0.9s,baz=322,slow=8.9,SNR=8.0
LVC Limon Verde 39.87 152 P **P** **00 15 16.6 +0.7**
LVC pmax pmax
comp=Z,19nm,1.0s
LVC Limon Verde 39.87 152 P **P** **00 15 16.6 +0.7**
LVC IAmb IAmb 00 15 18.7
comp=Z,19nm,1.0s
PTLB Pontes e Lacer 40.10 133 *eP* **P** **00 15 16.6 -0.9**
J08A Circle Bar Ran 40.17 325 P **P** **00 15 18.5 +0.5**
MSO Missoula 40.32 332 P 00 15 20.0
baz=139,SNR=29
O03E Paynes Creek 40.33 319 P 00 15 19.9
baz=123
O02D Mt. Diablo Mer 40.91 318 P 00 15 24.6
baz=122
PB14 IPOC Station P 40.98 155 P **P** **00 15 26.0 +1.0**
PB14 IAmb IAmb 00 16 15.4
comp=Z,26nm,1.3s
M04C Macdoel 41.19 321 P 00 15 27.2
baz=125
M02C Callahan 41.60 320 P 00 15 30.3
baz=123
L04D Klamath Falls 41.72 321 P 00 15 31.7
baz=125
GO02 Mina Guanaco 41.79 154 P **P** **00 15 32.8 +1.1**
GO02 IAmb IAmb 00 15 34.7
comp=Z,38nm,1.2s
PINE Pine Mountain 41.84 324 P **P** **00 15 31.2 -0.6**
WALA Waterton Lakes 42.01 335 IAmb IAmb 00 15 34.7
comp=Z,21nm,0.9s
I04A Tendick Farm, 42.69 323 P 00 15 38.7
baz=126
NEW Newport 42.84 332 P 00 15 39.8
baz=136,SNR=10
D08A Wollman Farm, 42.86 329 P **P** **00 15 39.9 +0.1**
D08A IAmb IAmb 00 15 41.3
comp=Z,20nm,0.8s
G05D Wamic, OR 42.94 325 P 00 15 42.1
baz=128
I03D Drain, OR 43.19 322 P 00 15 43.5
baz=125
FFC Flin Flon 43.28 348 P **P** **00 15 43.4 +0.4**
FFC pmax pmax
comp=Z,13nm,0.8s
FFC Flin Flon 43.28 348 P **P** **00 15 43.4 +0.4**
H04D Lebanon 43.31 324 P 00 15 43.4
baz=126
F05D White Salmon 43.42 326 P 00 15 45.5
baz=129
AC02 Maricunga 43.46 155 P **P** **00 15 45.9 +0.5**
G03D McMinnville, O 44.02 324 P 00 15 50.3
baz=126
SNDB Serra Nova Dou 44.04 122 *eP* **P** **00 15 49.2 -0.5**
DRLN Deer Lake 44.31 29 P **P** **00 15 51.2 -0.1**
C06D Leavenworth 44.43 329 P 00 15 53.5
baz=131
PP1B Ponte de Pedra 44.58 132 *eP* **P** **00 15 53.4 -0.5**
B05A Bryant 45.27 328 P 00 15 58.8
baz=130,SNR=5.8
D03D Eldon 45.33 327 P 00 15 59.7
baz=128
SMTB Santa Maria do 45.64 116 *eP* **P** **00 15 59.2 -3.3**
ARAG Araguaiana, MT 45.72 127 *eP* **P** **00 16 01.8 -1.2**
A04D Lummi Island 45.87 328 P 00 16 04.1
baz=130,SNR=12
AQDB Aquidauana 45.90 136 *eP* **P** **00 16 04.0 -0.4**
ROSB Rosrio 46.38 107 *eP* **P** **00 16 05.8 -2.5**
CO03 El Pedregal 46.46 159 P **P** **00 16 09.7 +1.0**
CO03 IAmb IAmb 00 16 11.1
comp=Z,36nm,1.2s
PEXB Peixe 46.60 120 *eP* **P** **00 16 07.1 -2.9**
CO02 Combarbal 46.69 160 P **P** **00 16 11.6 +1.1**
H03N2 Juan Fernandez 46.75 169 T T 01 06 29.7
baz=348,slow=76,SNR=24
H03N1 Juan Fernandez 46.76 169 T T 01 06 30.2
baz=348,slow=76,SNR=26
H03N3 Juan Fernandez 46.77 169 T T 01 06 35.5
baz=348,slow=76,SNR=27
ZON Zonda 47.83 157 P **P** **00 16 20.3 +1.0**
ZON pmax pmax
comp=Z,47nm,1.3s
ZON Zonda 47.83 157 P **P** **00 16 20.3 +1.0**
VA03 San Esteban 48.27 160 P **P** **00 16 23.9 +1.2**
BDFB Brasilia 48.69 124 P **P** **00 16 23.6 -2.7**
comp=Z,5.7nm,0.5s,baz=288,slow=5.2,SNR=20
BDFB PcP **PcP** **00 17 50.9 0.0**
comp=Z,11nm,0.7s,baz=282,slow=4.8,SNR=8.0
BDFB LR LR 00 37 35.6
comp=Z,515nm,21.4s,baz=302,slow=37
BDFB Brasilia 48.69 124 P **P** **00 16 25.7 -0.6**
BDFB pmax pmax
comp=Z,11nm,0.7s
BDFB Brasilia 48.69 124 P **P** **00 16 25.7 -0.6**
BDFB IAmb IAmb 00 17 52.5
comp=Z,11nm,0.7s
MT05 Renca 48.78 161 P **P** **00 16 27.1 +0.4**
CPUP Villa Florida 49.05 143 P **P** **00 16 27.5 -1.2**
comp=Z,12nm,1.1s,baz=334,slow=8.9,SNR=18
CPUP PcP **PcP** **00 17 52.6 +0.9**
comp=Z,2.8nm,0.6s,baz=325,slow=2.8,SNR=4.3
CPUP LR LR 00 38 51.0
comp=Z,316nm,18.3s,baz=320,slow=38
CPUP Villa Florida 49.05 143 P **P** **00 16 27.5 -1.2**
CPUP pmax pmax
comp=Z,40nm,1.4s
CPUP Villa Florida 49.05 143 P **P** **00 16 27.5 -1.2**
CPUP Villa Florida 49.05 143 *eP* **P** **00 16 28.1 -0.7**
ITRB Iturama 49.22 130 *eP* **P** **00 16 29.1 -1.1**
SDBA SAO DESIDERIO 49.63 119 *eP* **P** **00 16 31.0 -2.5**
PCMB Pacaembu 49.75 133 *eP* **P** **00 16 33.4 -0.8**
IPMB Ipameri, GO 49.84 127 *eP* **P** **00 16 32.1 -2.9**
BO02 Sierra Bellavi 50.06 161 P **P** **00 16 36.6 +0.2**
BO02 IAmb IAmb 00 16 38.6
comp=Z,15nm,0.9s
NBMO Morrinhos-CE 50.36 105 *eP* **P** **00 16 36.7 -2.2**
PTGB Pitanga 51.24 137 *eP* **P** **00 16 44.1 -1.3**
BB19B Bebedouro 51.41 130 *eP* **P** **00 16 45.7 -1.0**
JANB Januaria 51.43 121 *eP* **P** **00 16 45.4 -1.6**
BI02 San Fabin de 51.65 163 P **P** **00 16 49.2 +1.0**
ITQB Itaqui 51.98 145 *eP* **P** **00 16 50.7 -0.1**
FRTB Fartura 52.06 133 *eP* **P** **00 16 50.7 -0.9**
NBCL Cascavel-CE 52.31 106 *eP* **P** **00 16 49.8 -3.7**

ITAB Concordia 52.91 139 *eP* **P** **00 16 57.1 -0.6**
RCLB Rio Claro- Sao 52.96 131 *eP* **P** **00 16 57.3 -0.9**
NBMA Muriti-CE 52.97 109 *eP* **P** **00 16 55.6 -2.9**
YKA Yellowknife Ar 53.16 345 P **P** **00 16 58.5 -0.5**
comp=Z,22nm,0.9s,baz=139,slow=8.0,SNR=126
YKA pP **pP** **00 17 14.2 -1.5**
comp=Z,22nm,0.9s,baz=147,slow=6.7,SNR=20
YKA PcP **PcP** **00 18 05.7 -0.7**
comp=Z,1.1nm,0.4s,baz=190,slow=3.1,SNR=4.8
YKA ScP **ScP** **00 21 59.2 +0.7**
comp=Z,1.0nm,0.7s,baz=143,slow=4.5,SNR=7.9
YKA LR LR 00 41 57.4
comp=Z,232nm,20.7s,baz=0.0,slow=39
TIJ01 Guaruva-PR 53.72 135 *eP* **P** **00 17 03.1 -0.7**
VAO Valinhos 53.73 131 *eP* **P** **00 17 02.9 -1.0**
SPB Sao Paulo 53.75 132 *eP* **P** **00 17 03.1 -0.8**
NBPA Parau_RN 53.93 107 *eP* **P** **00 17 03.4 -2.0**
BSCB Bom Sucesso 54.22 128 *eP* **P** **00 17 06.0 -1.5**
PET01 Itanhaem-SP 54.29 133 *eP* **P** **00 17 06.8 -1.0**
CPSB Cacapava Do Su 54.36 143 *eP* **P** **00 17 07.9 -0.4**
NBLI Livramento-PB 54.64 109 *eP* **P** **00 17 07.9 -2.8**
GDU01 Guandu, BA 54.84 117 *eP* **P** **00 17 10.9 -1.1**
PARB Paraibuna 54.92 131 *eP* **P** **00 17 12.4 -0.1**
RCBR Riachuelo 55.08 106 *eP* **P** **00 17 11.7 -2.2**
WRAK Wrangell Islan 55.19 332 P 00 17 14.8
baz=124
PLTB Pedras Altas 55.26 144 *eP* **P** **00 17 14.7 -0.1**
NBLA Lagarto - SE 55.26 113 *eP* **P** **00 17 14.0 -1.1**
NBIT Itapeh - BA 55.50 118 *eP* **P** **00 17 16.1 -0.6**
ESAR Angra dos Reis 55.62 130 *eP* **P** **00 17 16.1 -1.4**
PLCA Paso Flores 55.64 164 P **P** **00 17 18.3 +0.8**
comp=Z,17nm,1.0s,baz=339,slow=8.6,SNR=23
PLCA PcP **PcP** **00 18 17.1 +0.9**
comp=Z,6.6nm,1.0s,baz=16,slow=4.9,SNR=3.3
PLCA LR LR 00 37 19.5
comp=Z,184nm,19.0s,baz=7.0,slow=32
PLCA Paso Flores 55.64 164 P **P** **00 17 18.2 +0.8**
PLCA Paso Flores 55.64 164 *eP* **P** **00 17 18.5 +1.1**
TER01 Tubaro-SC 55.74 138 *eP* **P** **00 17 17.8 -0.4**
SJMB Sao Joao De Ma 55.84 123 *eP* **P** **00 17 17.6 -1.6**
MAN01 Angra dos Reis 55.89 129 *eP* **P** **00 17 18.2 -1.3**
TAOE Nuku Hiva Isla 55.95 250 *eT* T 01 16 42.3
comp=Z,85nm,0.2s
VAS01 Vassouras-RJ 55.96 128 *eP* **P** **00 17 19.7 -0.3**
NBAN Anadia - AL 56.12 111 *eP* **P** **00 17 17.0 -4.2**
NAN01 Guarapari, ES 56.29 122 *eP* **P** **00 17 20.4 -1.9**
LL01 San Ignacio de 56.72 166 P **P** **00 17 25.8 +0.9**
RIB01 Linhares ES 56.80 123 *eP* **P** **00 17 24.8 -1.1**
NBRF Rio Formoso - 56.80 109 *eP* **P** **00 17 23.5 -2.6**
CAM01 Campos-RJ 57.09 127 *eP* **P** **00 17 27.0 -1.0**
NUUK Nuuk 57.26 18 *i* P **P** **00 17 28.7 +0.2**
NUUK IAmb IAmb 00 17 29.0
comp=Z,24nm,0.9s
RKT Rikitea 58.07 232 *e*S **S** **00 25 38.7 +7.5**
comp=Z,638nm,28.8s
RKT *e*LR LR 00 34 46.0
comp=Z,700nm,29.2s
RKT Rikitea 58.07 232 *e*T T 01 19 36.8
comp=Z,9.8nm,0.3s
SKAG Skagway 58.20 334 P 00 17 35.7
baz=123
SFJD Kangerlussuaq 59.62 16 *i* P **P** **00 17 42.5 -2.4**
SFJD IAmb IAmb 00 17 44.8
comp=Z,7.5nm,0.9s
HYT Haines Junctio 59.84 335 IAmb IAmb 00 18 04.8
comp=Z,13nm,1.1s
PINM Pinnacle 60.67 333 P 00 17 52.9
baz=118
C36M Paulatuk 60.98 346 P 00 17 52.9
baz=139
TABL Table Mountain 61.22 333 IAmb IAmb 00 17 57.8
comp=Z,14nm,0.8s
LOGN Logan Glacier 61.34 334 IAmb IAmb 00 17 58.6
comp=Z,14nm,1.0s
CTGM Chitina Glacie 61.55 334 IAmb IAmb 00 17 59.5
comp=Z,10nm,0.8s
CTG Chitna Glacier 61.55 334 P 00 17 59.2
baz=117
BARN Barnard Glacie 61.73 334 IAmb IAmb 00 18 01.1
comp=Z,9.0nm,0.7s
RES Resolute Bay 62.05 358 IAmb IAmb 00 18 18.5
comp=Z,11nm,0.8s
CRQE Cirque 62.22 333 P 00 18 03.4
baz=116
ISOG Isortoq, Green 62.30 21 *i* P **P** **00 18 00.4 -2.7**
ISOG IAmb IAmb 00 18 02.2
comp=Z,26nm,0.7s
MCARA McCarthy VSAT 62.47 334 IAmb IAmb 00 18 06.0
comp=Z,17nm,0.8s
MCARA McCarthy VSAT 62.47 334 P 00 18 05.2
baz=116
VRDI Verde Repeater 62.59 333 IAmb IAmb 00 18 06.1
comp=Z,11nm,0.9s
BCAR Beaver Creek A 62.71 336 P **P** **00 18 06.2 +0.2**
L27K Beaver Creek, 62.73 336 IAmb IAmb 00 18 07.1
comp=Z,15nm,0.8s
L27K Beaver Creek, 62.73 336 P 00 18 06.2
baz=118
ANGG Ammassalik, Gr 62.81 21 *i* P **P** **00 18 04.3 -2.1**
ANGG IAmb IAmb 00 18 05.7
comp=Z,26nm,0.7s
ANGG Ammassalik, Gr 62.81 21 P **P** **00 18 05.5 -0.9**
GLB Gilahina Butte 62.83 334 IAmb IAmb 00 18 08.2
comp=Z,14nm,1.0s
BMRM Bremner River 62.99 333 IAmb IAmb 00 18 09.2
comp=Z,13nm,0.7s
BMRM Bremner River 62.99 333 P 00 18 08.4
baz=114,SNR=8.4
N25K Chitina, Valde 63.25 334 IAmb IAmb 00 18 11.1
comp=Z,15nm,0.7s
N25K Chitina, Valde 63.25 334 P 00 18 10.2
baz=114,SNR=20
K27K Chicken 63.28 337 IAmb IAmb 00 18 10.8
comp=Z,9.1nm,0.8s
K27K Chicken 63.28 337 P 00 18 09.9
baz=118
EGAK Eagle 63.29 337 P **P** **00 18 09.4 -0.3**
EGAK Eagle 63.29 337 P 00 18 09.0
baz=119,SNR=10
KLU Klutina 63.78 333 IAmb IAmb 00 18 14.2
comp=Z,13nm,0.8s
KLU Klutina 63.78 333 P 00 18 13.4
baz=113,SNR=14
DOT Dot Lake 63.89 336 IAmb IAmb 00 18 14.8
comp=Z,13nm,0.7s
SCRK Sand Creek 64.01 336 P 00 18 14.5
baz=116,SNR=6.8
M24K Tolsona, Glenn 64.13 334 IAmb IAmb 00 18 50.3
comp=Z,18nm,0.9s
M24K Tolsona, Glenn 64.13 334 P 00 18 15.7
baz=113,SNR=5.9
PAX Paxson 64.18 335 P **P** **00 18 15.5 -0.2**
PAX pmax pmax
comp=Z,7.0nm,0.7s
PAX Paxson 64.18 335 P **P** **00 18 15.5 -0.2**
PAX Paxson 64.18 335 P 00 18 15.3
comp=Z,7.8nm,0.8s
SCM Sheep Creek Mo 64.53 333 IAmb IAmb 00 18 18.7
comp=Z,14nm,0.8s
KNK Knik Glacier 64.88 333 P 00 18 19.9
baz=111
SML Sawmill 64.97 333 IAmb IAmb 00 18 37.8
comp=Z,16nm,1.0s
SML Sawmill 64.97 333 P 00 18 20.4
baz=111,SNR=5.0
WAT6 Susitna Watana 64.99 334 P 00 18 20.6
baz=112,SNR=9.2
PMR Palmer 65.25 333 P 00 18 22.4
baz=110
PRP Porcupine Dome 65.27 337 P 00 18 22.5
baz=115
RC01 Rabbit Creek A 65.35 332 P 00 18 23.0
baz=109,SNR=11
HDA Harding Lake 65.36 336 P 00 18 22.8
baz=113,SNR=20
HDA P 00 18 22.8
baz=113,SNR=20
BRSE Bradley Lake S 65.40 330 P 00 18 23.5
baz=108
IL31 65.49 336 P **P** **00 18 23.6 -0.4**
IL31 IAmb IAmb 00 18 41.8
comp=Z,12nm,0.8s
ILAR Eielson Array 65.49 336 P **P** **00 18 23.2 -0.8**
comp=Z,8.2nm,0.8s,baz=164,slow=4.6,SNR=72
ILAR pP **pP** **00 18 39.7 -1.5**
comp=Z,9.4nm,0.9s,baz=110,slow=4.5,SNR=11

ILAR LR LR 00 49 52.1
comp=Z,396nm,22.0s,baz=118,slow=39
WAT2 Susitna Watana 65.49 334 P 00 18 23.7
baz=111,SNR=26
KDAK Kodiak Island 65.76 328 *i* P **P** **00 18 26.1 +0.2**
KDAK pmax pmax
comp=Z,2.0nm,0.3s
KDAK Kodiak Island 65.76 328 P **P** **00 18 25.8 -0.1**
KDAK IAmb IAmb 00 18 33.0
comp=Z,50nm,1.9s
BMAR Burnt Mountain 65.77 339 P **P** **00 18 26.3 +0.3**
POKR Poker Plat Res 65.84 337 IAmb IAmb 00 18 26.8
comp=Z,10.0nm,0.8s
POKR Poker Plat Res 65.84 337 P 00 18 26.0
baz=113
COLA College 65.91 336 *i* P **P** **00 18 26.3 -0.4**
COLA pmax pmax
comp=Z,7.0nm,0.9s
COLA College 65.91 336 P 00 18 26.3
baz=113
TCOL CIGO, UAF Yank 65.91 336 P 00 18 26.3
baz=113
MCK McKinley 65.92 335 P 00 18 26.4
baz=111,SNR=13
SUA Susitna One 65.94 332 P 00 18 27.0
baz=108,SNR=8.3
CUT Chulitna 66.03 333 P 00 18 27.4
baz=109
NEA2 Nenana 66.28 336 P 00 18 28.2
baz=111,SNR=9.8
TRF Thorofare Moun 66.39 334 P 00 18 29.6
baz=110,SNR=11
SKT Skwentna 66.45 333 P 00 18 30.0
baz=108,SNR=8.4
SUMG Summit 66.48 15 *i* P **P** **00 18 29.4 -1.3**
SUMG Summit 66.48 15 P **P** **00 18 29.6 -1.2**
SUMG pmax pmax
comp=Z,18nm,1.0s
SUMG Summit 66.48 15 P **P** **00 18 29.6 -1.2**
SUMG IAmb IAmb 00 18 58.3
comp=Z,18nm,1.0s
SPCR Spurr Chakacha 66.53 332 P 00 18 30.5
baz=107
I23K Minto, Yukon-K 66.60 336 P **P** **00 18 30.9 -0.2**
I23K IAmb IAmb 00 18 48.7
comp=Z,24nm,1.1s
I23K Minto, Yukon-K 66.60 336 P 00 18 31.0
baz=111,SNR=18
BPAW Bear Paw Mtn. 66.90 335 P 00 18 32.4
baz=109,SNR=16
PPLA Purkeypile 67.03 333 P 00 18 33.4
baz=108,SNR=5.8
MLY Manley 67.11 336 IAmb IAmb 00 18 52.1
comp=Z,18nm,0.9s
MLY Manley 67.11 336 P 00 18 34.1
baz=110,SNR=22
NEEM North Greenlan 67.41 8 *i* P **P** **00 18 35.8 -0.7**
NEEM IAmb IAmb 00 18 36.5
comp=Z,15nm,0.8s
COLD Coldfoot 67.68 338 IAmb IAmb 00 18 57.0
comp=Z,17nm,0.9s
COLD Coldfoot 67.68 338 P 00 18 38.7
baz=111,SNR=22
PPT2 Papeete2 67.72 245 *e*LR LR 00 39 04.7
comp=Z,1µm,26.2s,baz=53
TOLK Toolik Lake Re 67.99 340 IAmb IAmb 00 18 58.5
comp=Z,12nm,0.9s
TOLK Toolik Lake Re 67.99 340 P 00 18 39.9
baz=112,SNR=11
EFI East Falkland 69.25 161 *i* P **P** **00 18 49.4 +1.5**
EFI pmax pmax
comp=Z,52nm,1.2s
TBI Tubuai 69.88 239 *e*LR LR 00 40 14.8
comp=Z,968nm,27.2s,baz=79
TBI Tubuai 69.88 239 *e*T T 01 34 19.3
comp=Z,8.0nm,0.2s
RDOG Red Dog Mine 72.58 338 P 00 19 08.2
baz=99
DAG Danmarks Havn 73.02 13 *i* P **P** **00 19 08.6 -1.8**
DAG IAmb IAmb 00 19 08.9
comp=Z,4.2nm,0.6s
DAG Danmarks Havn 73.02 13 P **P** **00 19 09.5 -0.9**
DAG pmax pmax
comp=Z,7.0nm,0.7s
ANM Nome 73.10 334 P 00 19 11.0
baz=96
TNA Tin City 74.26 335 P 00 19 18.3
baz=94
EKA Eskdalemuir Ar 76.78 36 P **P** **00 19 29.4 -3.2**
comp=Z,1.8nm,0.6s,baz=266,slow=5.8,SNR=13
EKA pP **pP** **00 19 46.8 -3.3**
comp=Z,2.9nm,0.8s,baz=271,slow=5.4,SNR=6.3
ESDC Sonseca Array 77.54 52 P **P** **00 19 34.7 -2.4**
comp=Z,1.2nm,0.6s,baz=286,slow=5.2,SNR=14
ESDC sP **pP** **00 19 54.4 -0.4**
comp=Z,4.4nm,1.0s,baz=287,slow=6.2,SNR=8.4
ESDC LR LR 00 47 59.4
comp=Z,217nm,21.4s,baz=265,slow=31
ESDC Sonseca Array 77.54 52 P **P** **00 19 35.2 -2.0**
ESBB Sonseca Array 77.54 52 P **P** **00 19 35.0 -2.1**
ESBB IAmb IAmb 00 19 53.8
comp=Z,32nm,2.0s
PMSA Palmer Station 79.41 170 *eP* **P** **00 19 47.3 +0.7**
KBS Kingsbay 79.52 11 *ce*P **P** **00 19 48.9 +1.7**
KBS pmax pmax
comp=Z,71nm,1.7s
SPITS Spitsbergen Ar 80.56 12 P **P** **00 19 52.1 -0.8**
comp=Z,4.3nm,0.8s,baz=186,slow=6.7,SNR=8.1
DBIC Dimbokro 82.03 85 LR LR 00 52 47.1
comp=Z,182nm,20.4s,baz=268,slow=33
NOA NORSAR Array B 83.44 29 P **P** **00 20 06.5 -1.9**
comp=Z,0.6nm,0.6s,baz=287,slow=5.0,SNR=5.2
NOA LR LR 00 53 29.5
comp=Z,138nm,21.6s,baz=285,slow=33
NOA NORSAR Array B 83.44 29 *eP* **P** **00 20 09.8 +1.5**
BILL Bilibino 84.01 339 *de*P **P** **00 20 10.4 -0.7**
BILL pmax pmax
comp=Z,18nm,1.1s
BILL Bilibino 84.01 339 P **P** **00 20 10.3 -0.7**
BILL IAmb IAmb 00 20 11.6
comp=Z,15nm,1.0s
HFS Hagfors 84.86 29 P **P** **00 20 12.5 -3.0**
comp=Z,3.7nm,0.9s,baz=222,slow=2.0,SNR=3.5
HFS sP **pP** **00 20 33.8 +0.6**
comp=Z,3.6nm,0.9s,baz=103,slow=4.7,SNR=3.3
ARCES ARCESS Array B 86.13 19 P **P** **00 20 19.9 -1.7**
comp=Z,1.3nm,0.6s,baz=289,slow=4.9,SNR=12
ARCES sP **pP** **00 20 42.0 +2.5**
comp=Z,3.4nm,0.8s,baz=316,slow=5.1,SNR=3.7
ARCES LR LR 00 57 39.8
comp=Z,132nm,22.0s,baz=295,slow=35
ARCES ARCESS Array B 86.13 19 *eP* **P** **00 20 22.1 +0.5**
ARCES pmax pmax
comp=Z,1.0nm,0.6s
DAVOX Davos/Dischmat 86.23 43 P **P** **00 20 20.3 -2.6**
comp=Z,1.8nm,0.7s,baz=314,slow=5.3,SNR=4.9
RETA Reutte 86.64 42 *eP* pP 00 20 44.6 +2.1
comp=Z,10.0nm,1.1s
TORD Torodi Ar. Bea 87.00 77 P **P** **00 20 23.6 -3.4**
comp=Z,0.4nm,0.5s,baz=302,slow=5.8,SNR=5.3
TORD LR LR 00 55 46.1
comp=Z,283nm,21.3s,baz=275,slow=33
CLL Collm 87.00 38 *i* P **P** **00 20 24.9 -1.4**
comp=Z,40nm,2.3s
CLL *e*pP **pP** **00 20 43.0 -1.1**
CLL *e*PP **PP** **00 23 54.0 +4.2**
CLL *e*SKKSac **S** **00 30 54.0 -6.0**
CLL *e*SP **SP** **00 32 00.0 -0.5**
CLL *e*PS **PS** **00 32 12.0 +2.9**
CLL *e*pPS 00 32 24.0
CLL *e*SS **SS** **00 36 42.0 -1.5**
CLL *e*SSS SSS 00 40 18.0
CLL *e*SSSS 00 43 18.0
CLL Collm 87.00 38 *i* P **P** **00 20 24.9 -1.4**
CLL *e*S **S** **00 30 54.0 -6.0**
CLL pmax pmax
comp=Z,40nm,2.3s
ABTA Abfaltersbach 87.99 43 *eP* pP 00 20 50.4 +1.3
comp=Z,7.2nm,1.1s
GERES GERESS Array B 88.15 40 P **P** **00 20 29.1 -2.8**
comp=Z,0.4nm,0.6s,baz=270,slow=4.0,SNR=4.2
GERES pP **pP** **00 20 46.3 -3.6**
comp=Z,0.4nm,0.7s,baz=160,slow=27,SNR=2.1
GERES LR LR 00 56 45.5
comp=Z,144nm,18.7s,baz=282,slow=34
GERES GERESS Array B 88.15 40 *eP* **P** **00 20 30.4 -1.6**
GERES GERESS Array B 88.15 40 P **P** **00 20 29.8 -2.1**

KEST	Kesra	88.62	54	LR	LR	00 54 58.6		
	comp=Z,92nm,21.0s,baz=286,slow=32							
MYKA	Terra Mystica	88.77	42	*e*P	pP	00 20 53.2	+0.4	
	comp=Z,2.8nm,0.6s							
MOA	Molln	88.81	41	*e*P	pP	00 20 54.0	+1.1	
	comp=Z,2.5nm,1.0s							
FINES	FINESS Array B	90.01	26	P	P	00 20 38.7	-1.5	
	comp=Z,2.5nm,1.0s,baz=289,slow=10.0,SNR=1.9							
FINES				LR	LR	00 58 58.8		
	comp=Z,105nm,21.4s,baz=328,slow=34							
SEY	Seymchan	91.42	337	*i* P	P	00 20 46.7	-0.1	
VALR	Valaam	92.06	25	*i* P	P	00 20 51.3	+1.5	
VALR				pmax	pmax			
	comp=Z,27nm,0.7s							
TIXI	Tiksi	92.23	349	⇓*i* P	P	00 20 48.9	-1.5	
OBN	Obninsk	98.04	28	*e*P	Pdif	00 21 18.5	+1.3	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
NRIK	Noril'sk	98.07	2	LR	LR	01 08 07.4		
	comp=Z,165nm,21.0s,baz=358,slow=37							
YAK	Yakutsk	99.80	343	*i* P	Pdif	00 21 25.6	+0.7	
YAK				pmax	pmax			
	comp=Z,7.0nm,0.5s							
BRTR	Keskin Array B	104.88	43	PKKPbc	PKKPbc	00 37 31.8	-0.1	
	comp=Z,0.7nm,0.9s,baz=54,slow=6.3,SNR=3.8							
MJA0	Matsu Arr-Jizo	114.34	320	*e*PKIKP	PKPdf	00 26 22.5	+1.6	
MJA0				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MJAR	Matsushiro Arr	114.36	320	PKP	PKiKP	00 26 19.2	-1.6	
	comp=Z,1.3nm,0.8s,baz=96,slow=1.6,SNR=4.6							
MJAR	Matsushiro Arr	114.36	320	*e*PKIKP	PKPdf	00 26 22.6	+1.7	
MJAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
SYO	Syowa Base	114.81	162	⇑*i* Pdiff	Pdif	00 22 34.4	+3.0	
KURBB	Kurchatov Arra	115.84	9	PKP	PKiKP	00 26 22.7	-0.6	
	comp=Z,0.9nm,0.8s,baz=346,slow=1.9,SNR=2.2							
BOSA	Boshof	116.42	116	PKP	PKPdf	00 26 25.1	-0.1	
	comp=Z,3.4nm,0.6s,baz=272,slow=3.0,SNR=11							
BOSA	Boshof	116.42	116	PKIKP	PKPdf	00 26 24.8	-0.3	
BOSA	Boshof	116.42	116		PKPdf	00 26 24.8	-0.3	
SONM	Songino Array	118.32	349	PKP	PKPdf	00 26 27.7	-0.6	
	comp=Z,1.4nm,0.6s,baz=332,slow=2.1,SNR=15							
SONM				pPKP	pPKPdf	00 26 46.3	-0.7	
	comp=Z,0.9nm,0.8s,baz=330,slow=3.0,SNR=3.9							
SONM				PKKPbc	PKKPbc	00 36 47.0	-1.0	
	comp=Z,0.8nm,1.1s,baz=198,slow=4.0,SNR=6.4							
SONM	Songino Array	118.32	349	*e*PKIKP	PKiKP	00 26 28.6	+0.2	
SONM				pmax	pmax			
	comp=Z,1.0nm,0.6s							
SONM	Songino Array	118.32	349		PKPdf	00 26 27.4	-0.9	
KSRS	Korea Array	119.67	327	PKP	PKiKP	00 26 31.2	+0.1	
	comp=Z,8.3nm,0.7s,baz=8.9,slow=1.5,SNR=31							
KSRS				pPKP	pPKPdf	00 26 48.7	-0.9	
	comp=Z,1.5nm,0.6s,baz=359,slow=0.9,SNR=3.0							
KSRS				SKP	SKPdf	00 30 03.5	+2.4	
	comp=Z,1.6nm,0.8s,baz=46,slow=1.8,SNR=6.6							
KSRS	Korea Array	119.67	327	*e*PKIKP	PKiKP	00 26 31.2	+0.1	
KSRS				pmax	pmax			
	comp=Z,9.0nm,0.7s							
MKAR	Makanchi Array	120.12	8	PKP	PKPdf	00 26 30.1	-1.6	
	comp=Z,0.4nm,0.5s,baz=312,slow=2.4,SNR=2.1							
MKAR				PKKPbc	PKKPbc	00 36 38.8	-2.5	
	comp=Z,0.6nm,0.8s,baz=153,slow=0.5,SNR=5.3							
MAW	Mawson	121.97	167	PKP	PKPdf	00 26 34.4	0.0	
	comp=Z,3.6nm,0.6s,baz=137,slow=9.4,SNR=6.7							
MAW	Mawson	121.97	167	PKIKP	PKiKP	00 26 34.8	+0.2	
MAW	Mawson	121.97	167		PKiKP	00 26 34.8	+0.2	
WMQ	Urumqi	123.58	4	*e*P	PKiKP	00 26 39.3	+0.5	
WMQ				pmax	pmax			
	comp=Z,580nm,4.9s							
HHC	Hu-ho-hao-te	123.65	342	*e*PKP	PKPdf	00 26 35.7	-3.1	
HHC				PP	PP	00 28 22.2	+2.0	
HHC				LR	LR			
	comp=Z,260nm,22.1s							
HHC				LR	LR			
	comp=Z,360nm,23.9s							
GTA	Gaotai	127.59	352	⇓PKP	PKPdf	00 26 43.7	-2.7	
GTA				sPKP		00 27 14.0		
GTA				LR	LR			
	comp=Z,85nm,21.8s							
GTA				LR	LR			
	comp=Z,97nm,19.3s							
GTA				LR	LR			
	comp=Z,140nm,21.4s							
NJ2	Nanjing	128.50	330	*e*PKP	PKPdf	00 26 48.4	+0.3	
LZH	Lanzhou	130.13	347	*e*PKP	PKiKP	00 26 52.5	+0.3	
STKA	Stephens Creek	130.67	239	PKP	PKPdf	00 26 52.6	+0.4	
	comp=Z,2.8nm,0.5s,baz=63,slow=3.6,SNR=8.0							
STKA	Stephens Creek	130.67	239	*e*PKIKP	PKiKP	00 26 53.3	+0.2	
STKA				pmax	pmax			
	comp=Z,3.0nm,0.5s							
STKA	Stephens Creek	130.67	239		PKiKP	00 26 52.9	-0.2	
XAN	Xi'an	130.73	341	PKP	PKiKP	00 26 53.1	-0.2	
XAN				LR	LR			
	comp=Z,310nm,23.9s							
XAN				LR	LR			
	comp=Z,280nm,24.6s							
XAN				LR	LR			
	comp=Z,420nm,25.0s							
XAN	Xi'an	130.73	341	PKIKP	PKPdf	00 26 52.8	+0.4	
XAN	Xi'an	130.73	341		PKPdf	00 26 52.8	+0.4	
WSAR	Wadi Sarin	131.66	42	PKP	PKPdf	00 26 52.6	-1.7	
	comp=Z,6.2nm,1.1s,baz=237,slow=5.2,SNR=4.9							
WSAR				SKPbc	SKPbc	00 30 14.6	0.0	
	comp=Z,7.2nm,0.9s,baz=314,slow=7.2,SNR=3.6							
WHN	Wuhan	131.83	334	PKP	PKPdf	00 26 54.2	-0.3	
SSLB	Suanglung	133.88	322	PKPdf	PKPdf	00 26 58.6	0.0	
CD2	Chengdu	135.12	345	PKP	PKPdf	00 26 59.2	-1.6	
ABPO	Ambohimpanom	136.71	104	PKIKP	PKiKP	00 27 06.0	+0.1	
ABPO	Ambohimpanom	136.71	104	PKPdf	PKiKP	00 27 06.0	+0.1	
GYA	Guiyang	138.46	340	*e*PKP	PKPdf	00 27 07.6	+0.4	
WR0	Warramunga Arr	138.51	254		PKPdf	00 27 08.1	+0.9	
WB0	Warramunga Arr	138.66	255	PKPdf	PKPdf	00 27 08.0	+0.5	
WRA	Warramunga Arr	138.70	254	PKhKP	PKPpre	00 26 59.4		
	comp=Z,1.4nm,0.8s,baz=105,slow=3.1,SNR=11							
WRA				PKP	PKiKP	00 27 08.8	-1.0	
	comp=Z,5.0nm,0.5s,baz=89,slow=2.2,SNR=22							
WRA				SKPbc	SKiKP	00 30 41.4	+0.9	
	comp=Z,0.9nm,0.8s,baz=90,slow=3.1,SNR=6.6							
WRA	Warramunga Arr	138.70	254	PKIKP	PKPdf	00 27 07.8	+0.3	
WRA	Warramunga Arr	138.70	254		PKPdf	00 27 07.8	+0.3	
AS31	Alice Springs	138.75	249		PKPdf	00 27 08.1	+0.5	
ASAR	Alice Springs	138.75	249	PKhKP	PKPpre	00 26 58.8		
	comp=Z,2.0nm,0.8s,baz=110,slow=1.9,SNR=20							
ASAR				PKP	PKPdf	00 27 08.6	+1.0	
	comp=Z,2.9nm,0.6s,baz=88,slow=1.6,SNR=14							
ASAR				SKPbc	SKiKP	00 30 41.4	+0.9	
	comp=Z,1.7nm,0.8s,baz=92,slow=2.2,SNR=8.0							
ASAR	Alice Springs	138.75	249	PKIKP	PKPdf	00 27 08.0	+0.4	
ASAR	Alice Springs	138.75	249		PKPdf	00 27 08.0	+0.4	
KMI	Kunming	140.90	344	PKP	PKPdf	00 27 11.8	0.0	
KMI				SKKS		00 36 55.9		
KMI				SS	SS	00 48 35.2	+2.6	
KMI				LR	LR			
	comp=Z,200nm,26.8s							
KMI				LR	LR			
	comp=Z,150nm,25.2s							
KMI				LR	LR			
	comp=Z,490nm,30.4s							
MTN	Manton Dam	141.73	265	PKPdf	PKPdf	00 27 12.3	-0.8	
SLVN	Son La	144.13	341		PKPdf	00 27 17.7	+0.4	
FITZ	Fitzroy Crossi	147.04	256	PKPdf	PKPbc	00 27 23.9	-0.5	
HYB	Hyderabad	147.28	24	*i* P	PKPdf	00 27 22.0	-0.8	
CHTO	Chiang Mai	147.88	347	PKIKP	PKPdf	00 27 24.2	+0.5	
CHTO	Chiang Mai	147.88	347	PKPdf	PKPdf	00 27 24.2	+0.5	
SOEI	Soe	148.09	272		PKiKP	00 27 28.8	-0.5	
MYLDM	Lahad Datu	148.10	302		PKPbc	00 27 27.1	-0.3	
TOLI2	Tolitoli	148.17	294		PKPbc	00 27 27.6	0.0	
CMAR	Chiang Mai Arr	148.22	347	PKPbc	PKPdf	00 27 24.8	+0.5	
	comp=Z,10nm,0.8s,baz=316,slow=2.3,SNR=32							
CMAR	Chiang Mai Arr	148.22	347		PKPdf	00 27 24.2	-0.1	
BATI	Baumata	148.74	271	PKPbc	PKiKP	00 27 31.2	+0.7	
	comp=Z,21nm,0.6s,baz=80,slow=0.9,SNR=5.1							
UBPT	Khong Chiam	149.07	334	PKPdf	PKPdf	00 27 26.8	+1.1	
NWAO	Narrogin (SRO)	149.31	225	PKP2	PKiKP	00 27 30.8	-0.4	
NWAO	Narrogin (SRO)	149.31	225		PKiKP	00 27 30.8	-0.4	
KKM	Kota Kinabalu	149.44	306	PKPdf	PKPdf	00 27 26.8	+0.3	
KKM				PKPbc	PKiKP	00 27 32.1	+0.1	
DLV	T Lat	150.44	325	PKPdf	PKPdf	00 27 29.2	+1.1	
DLV					PKiKP	00 27 34.6	+0.4	
KAPI	Kappang	151.42	283	PKPbc	PKiKP	00 27 36.6	+0.6	
	comp=Z,6.4nm,0.5s,baz=126,slow=3.3,SNR=8.4							
KAPI	Kappang	151.42	283	PKIKP	PKiKP	00 27 36.1	+0.1	
KAPI	Kappang	151.42	283		PKiKP	00 27 36.1	+0.1	
KSM	Kuching	156.88	306	PKPab	PKPab	00 28 07.6	+0.5	
PSI	Prapat	163.04	335	PKP	PKPdf	00 27 44.0	-0.2	
	comp=Z,15nm,0.8s,baz=0.1,slow=1.9,SNR=8.4							
PSI	Prapat	163.04	335	PKIKP	PKPdf	00 27 43.8	-0.4	
RPSI	Rantau Prapat	163.14	335		PKPdf	00 27 43.8	-0.4	
LEM	Lembang	163.41	289	PKP	PKPdf	00 27 44.9	+0.3	
	comp=Z,11nm,0.4s,baz=63,slow=6.8,SNR=5.1							

IDC ***05*** *00:16:34.0±1.8, 14°.07N×144°.56E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.2/57, mbtmp3.3/3 Error ellipse: s-maj=249.9km s-min=27.9km az=110.0*
NEIC ***05*** *00:16:50.5±0.5, 13°.8N±0°.1×144°.7E±0°.3, h141km±10km, mb4.1/7, Error ellipse: s-maj=46.8km s-min=12.5km az=111.0*

ISC 05 00:16:50.8±1.1, 13°.8N±0°.2×144°.9E±0°.4, h150km, n13, σ0 69/13, mb3.7/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.19	189		Pn	00 17 09.7	-1.4
WB0	Warramunga Arr	34.90	197	P	P	00 23 28.3	+0.1
WB0				IAmb	IAmb	00 23 39.1	
	comp=Z,4.2nm,1.2s						
WR0	Warramunga Arr	35.04	197	P	P	00 23 29.6	+0.3
WR0				IAmb	IAmb	00 23 47.0	
	comp=Z,7.1nm,1.5s						
WB2	Warramunga Arr	35.08	197	P	P	00 23 29.8	+0.1
WB2				IAmb	IAmb	00 23 32.0	
	comp=Z,3.7nm,1.1s						
WRA	Warramunga Arr	35.08	197	P	P	00 23 30.2	+0.4
	comp=Z,0.5nm,0.6s,baz=20,slow=9.1,SNR=8.2						
WRA	Warramunga Arr	35.08	197	P	P	00 23 29.6	-0.2
FITZ	Fitzroy Crossi	36.93	211	P	P	00 23 46.0	+0.5
FITZ				IAmb	IAmb	00 23 51.4	
	comp=Z,8.1nm,1.4s						
AS31	Alice Springs	38.73	196	P	P	00 24 00.8	+0.2
AS31				IAmb	IAmb	00 24 03.4	
	comp=Z,0.5nm,0.9s						
ASAR	Alice Springs	38.74	196	P	P	00 24 01.9	+1.2
	comp=Z,0.2nm,0.5s,baz=17,slow=13,SNR=8.2						
ASAR	Alice Springs	38.74	196	P	P	00 24 00.4	-0.2
BBOO	Buckleboo	47.09	190	P	P	00 25 08.0	+0.3
ZALV	Zalesovo Beam	61.49	324	P	P	00 26 51.6	+0.1
ILAR	Eielson Array	68.39	25	P	P	00 27 36.5	+0.6
	comp=Z,0.2nm,0.4s,baz=251,slow=5.7,SNR=4.4						

IDC ***05*** *00:21:52.2±2.4, 36°.95N×71°.80E, h99km±20km, mb3.5/19, mb1 3.7/24, mb1mx3.5/66, mbtmp4.0/24, Error ellipse: s-maj=18.6km s-min=12.6km az=9.0*
MOS ***05*** *00:21:55.7±1.0, 37°.30N×71°.79E, h135km, mb4.2/20, Error ellipse: s-maj=7.4km s-min=4.0km az=79.2*
NEIC ***05*** *00:21:57.0±1.4, 37°.28N±0°.06×71°.75E±0°.07, h128km±5km, mb4.2/19, Error ellipse: s-maj=9.6km s-min=8.5km az=160.0*
NNC ***05*** *00:21:57.3±3.0, 37°.38N×71°.60E, h130km±39km, mb3.8, mpv4.6, Error ellipse: s-maj=27.7km s-min=18.3km az=162.0*

ISC 05 00:21:57.3±0.4, 37°.15N±0°.04×71°.90E±0°.05, h150km, n207, σ25 22/222, mb4.0/36, 17C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	Garm	2.23	326	Pn	Pn	00 22 32.3	-3.0
CEP	Cherat	3.32	180	P	Pn	00 22 49.6	+0.7
CEP				S	Sn	00 23 29.0	+0.1
KBL	Kabul	3.49	223	PN	Pn	00 22 50.9	-0.3
KBL	Kabul	3.49	223	Pn	Pn	00 22 50.9	-0.3
NIL	Nilore	3.66	162	PN	Pn	00 22 55.0	+1.7
NIL	Nilore	3.66	162	Pn	Pn	00 22 55.0	+1.7
THW	Thamme Wali	4.35	182	P	Pn	00 23 02.4	+0.2
TAS	Tashkent	4.63	335	PN	Pn	00 23 02.8	-3.1
TAS	Tashkent	4.63	335	Pn	Pn	00 23 02.8	-3.1
AML	Almayashu	5.16	15	P	Pn	00 23 12.1	-1.1
	SNR=454						
IUG	Iuzhnay	5.20	344	*e*P	Pn	00 23 09.9	-3.5
	baz=346						
IUG	Iuzhnay	5.20	344	*e*PN	Pn	00 23 09.9	-3.5
SARP	Sargodha	5.25	173	P	Pn	00 23 13.8	-0.3
UCH	Uchtor	5.46	21	P	Pn	00 23 16.3	-0.9
	SNR=132						
THN	Thein Dam	5.65	145	*e*P	Pn	00 23 20.5	+1.1
THN				*e*P	Pn	00 23 20.5	+1.1
THN				*e*S	Sn	00 24 21.0	-2.6
THN				*e*S	Sn	00 24 21.0	-2.6
EKS2	Erkin-Say	5.69	14	P	Pn	00 23 19.0	-0.9
	SNR=52						
DZA	Taraz	5.75	356	*e*P	Pn	00 23 17.9	-2.9
	baz=357						
DZA	Taraz	5.75	356	*e*PN	Pn	00 23 17.8	-2.9
AAK	Ala-Archa	5.83	19	P	Pn	00 23 21.0	-0.8
	34nm,0.3s,baz=191,slow=6.7,SNR=789						
AAK				S	Sn	00 24 24.7	-3.2
	7.4nm,0.3s,baz=121,slow=19,SNR=14						
AAK	Ala-Archa	5.83	19	P	Pn	00 23 21.3	-0.5
	SNR=92						
AAK	Ala-Archa	5.83	19	⇑P	Pn	00 23 21.1	-0.8
	70nm,0.5s						
AAK				⇑S	Sn	00 24 24.2	-3.7
	84nm,0.6s						
AAK	Ala-Archa	5.83	19	*c i*PN	Pn	00 23 21.3	-0.5
AAK	Ala-Archa	5.83	19	Pn	Pn	00 23 21.2	-0.7
KBK	Karagaybulak	5.98	22	P	Pn	00 23 23.5	-0.3
	SNR=48						
KK31	Karatay Array	6.04	350	⇑P	Pn	00 23 22.6	-2.0
	21nm,0.2s,baz=175,slow=13,SNR=66						
KK31				⇑S	Sn	00 24 25.5	-7.3
	69nm,0.3s,baz=170,slow=22,SNR=22						
KK31	Karatay Array	6.04	350	PN	Pn	00 23 22.4	-2.1
KK31	Karatay Array	6.04	350	Pn	Pn	00 23 22.4	-2.1
KKAR	Karatay Array	6.04	350	PN	Pn	00 23 22.2	-2.3
KKAR	Karatay Array	6.04	350	Pn	Pn	00 23 22.6	-2.0
KKAR	Karatay Array	6.04	350	Pn	Pn	00 23 22.2	-2.3
ULHL	Ulahol	6.09	32	P	Pn	00 23 24.4	-0.9
	SNR=41						
CHMS	Chumysh	6.24	20	P	Pn	00 23 26.4	-0.8
	SNR=54						
TKM2	Tokmak 2	6.42	25	P	Pn	00 23 29.3	-0.5
	SNR=13						
TKM2	Tokmak 2	6.42	25	⇑P	Pn	00 23 28.8	-1.0
	62nm,0.6s						
TKM2				⇑S	Sn	00 24 40.5	-1.7
	19nm,0.7s						
TKM2	Tokmak 2	6.42	25	PN	Pn	00 23 28.8	-1.0
TKM2				S	Sn	00 24 40.5	-1.7
USP	Ospenovka	6.42	17	P	Pn	00 23 28.2	-1.5
	SNR=53						
SGDS	Sogindy	6.63	17	*e*P	Pn	00 23 30.0	-2.5
	5.9nm,0.6s,baz=18						
SGDS	Sogindy	6.63	17	*e*PN	Pn	00 23 29.9	-2.5
SGDS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BHK	Bhakra	6.83	146	*e*S	Sn	00 24 44.8	-7.0
TNSS	Tian-Shan	7.04	32	*e*P	Pn	00 23 36.1	-2.0
	baz=32						
TNSS	Tian-Shan	7.04	32	*e*PN	Pn	00 23 36.1	-2.0
AAA	Alma-Ata	7.16	31	*e*P	Pn	00 23 37.9	-1.6
	baz=31						
AAA	Alma-Ata	7.16	31	*e*PN	Pn	00 23 37.9	-1.6
MDOK	Medeo	7.18	32	*e*P	Pn	00 23 37.9	-2.0
	baz=32						
MDOK				*e*S	Sn	00 25 00.8	+0.5
	baz=32						
MDOK	Medeo	7.18	32	⇓P	Pn	00 23 39.0	-0.8
	comp=Z,12nm,0.5s						
MDOK	Medeo	7.18	32	*e*PN	Pn	00 23 37.8	-2.0
MDOK				*e*S	Sn	00 25 00.8	+0.5
SMLA	Simla	7.42	142	*e*P	Pn	00 23 42.8	-0.2
SMLA				*e*S	Sn	00 25 00.2	-5.7
SMLA				IAML		00 25 04.2	
	comp=E,295nm,0.3s						
SMLA				IAML		00 25 04.4	
	comp=N,226nm,0.3s						
KUU	Kurty	7.53	25	*e*P	Pn	00 23 41.9	-2.6
	comp=N,8.6nm,0.6s,baz=26						
KUU	Kurty	7.53	25	*e*PN	Pn	00 23 41.8	-2.6
KUU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SATY	Saty	7.72	38	*e*P	Pn	00 23 45.3	-1.8
	baz=38						
SATY	Saty	7.72	38	*e*PN	Pn	00 23 45.3	-1.8
BTLS	Baital	8.05	11	*e*P	Pn	00 23 48.6	-2.6
	baz=12						
BTLS	Baital	8.05	11	*e*PN	Pn	00 23 48.6	-2.6
UZB	Uzynbulak	8.10	40	*e*P	Pn	00 23 50.1	-2.0
	baz=40						
UZB	Uzynbulak	8.10	40	*e*PN	Pn	00 23 50.0	-2.0
KPKS	Kokpek	8.16	37	*e*P	Pn	00 23 50.9	-1.9
	comp=Z,12nm,0.8s,baz=37						
KPKS	Kokpek	8.16	37	*e*PN	Pn	00 23 50.9	-1.9
KPKS				pmax	pmax		
	comp=Z,12nm,0.8s						
HRA	Herat	8.32	254	Pn	Pn	00 23 53.5	-1.7
SHLS	Shalkode	8.33	42	*e*P	Pn	00 23 56.3	+1.0
	baz=43						
SHLS	Shalkode	8.33	42	*e*PN	Pn	00 23 56.2	+1.0
PDGK	Podgornoye	8.47	41	⇓P	Pn	00 23 55.0	-1.9
	comp=Z,3.7nm,0.5s						
PDGK	Podgornoye	8.47	41	PN	Pn	00 23 55.1	-1.9
DDI	Dehra Dun	8.52	141	*e*P	Pn	00 23 57.0	-0.7
DDI				*e*S	Sn	00 25 29.5	-3.0
DDI				IAML		00 25 32.1	
	comp=N,332nm,0.3s						
DDI				IAML		00 25 32.3	
	comp=E,253nm,0.3s						
TDK	Taldyqorghan	9.25	30	*e*P	Pn	00 24 05.2	-2.1
	comp=E,10nm,0.7s,baz=30						
TDK	Taldyqorghan	9.25	30	*e*P	Pn	00 24 05.2	-2.1
TDK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NDI	New Delhi	9.55	151	*e*P	Pn	00 24 13.0	+1.6
NDI				*e*S	Sn	00 25 50.0	-7.2
GEYT	Alibeck	10.98	278	P	Pn	00 24 24.6	-5.6
	comp=Z,8.2nm,0.3s,baz=96,slow=12,SNR=52						
GEYT				S	Sn	00 26 19.6	-12
	comp=Z,3.3nm,0.3s,baz=114,slow=36,SNR=3.5						
GEYT	Alibeck	10.98	278		Pn	00 24 25.4	-4.8
GYA0	ALIBECK ARRAY	10.98	278	P	Pn	00 24 24.9	-5.3
GYA0B	ALIBECK ARRAY	10.98	278	⇑P	Pn	00 24 24.9	-5.3
GYA0B	ALIBECK ARRAY	10.98	278	Pn	Pn	00 24 25.5	-4.7
MAKZ	Makanchi	12.21	35	⇓P	Pn	00 24 43.3	-2.9
	comp=Z,9.1nm,0.9s						
MAKZ	Makanchi	12.21	35	P	Pn	00 24 43.3	-2.9
MK31	Makanchi Array	12.34	35	*i* P	Pn	00 24 46.9	-1.0
MK31	Makanchi Array	12.34	35	Pn	Pn	00 24 46.7	-1.2
MKAR	Makanchi Array	12.34	35	P	Pn	00 24 46.0	-1.9
	comp=Z,0.3nm,0.3s,baz=219,slow=13,SNR=29						
MKAR	Makanchi Array	12.34	35	*e*P	Pn	00 24 46.9	-1.0
MKAR	Makanchi Array	12.34	35	Pn	Pn	00 24 46.6	-1.3
BRZS	Berezniki	12.84	2	*e*P	Pn	00 24 53.2	-1.2
	baz=2.7						
BRZS	Berezniki	12.84	2	*e*P	Pn	00 24 53.1	-1.2
PYUN	Piuthan	12.98	131	*e*P	Pn	00 24 54.2	-2.3
	comp=Z,106nm,0.3s						
DANN	Dangsing	13.28	128	*e*P	Pn	00 24 58.7	-1.7
	comp=Z,62nm,0.3s						
KOLN	Koldanda	13.59	130	*e*P	Pn	00 25 02.5	-1.8
	comp=Z,38nm,0.3s						
WMQ	Urumqi	13.73	56	P	P	00 25 07.6	-1.8
WMQ	Urumqi	13.73	56	Pn	P	00 25 07.6	-1.8
ZSN	Zaisan	14.05	39	*e*P	Pn	00 25 10.1	+0.3
	baz=39						
ZSN	Zaisan	14.05	39	*e*P	Pn	00 25 10.0	+0.3
GKN	Gorkha	14.07	127	*e*P	Pn	00 25 08.8	-1.5
	comp=Z,83nm,0.3s						
KURBB	Kurchatov Arra	14.28	17	P	Pn	00 25 08.5	-4.1
	comp=Z,0.1nm,0.3s,baz=210,slow=12,SNR=8.4						
KURBB	Kurchatov Arra	14.28	17	⇑P	P	00 25 15.0	-0.4
	comp=Z,11nm,0.5s						
KURBB	Kurchatov Arra	14.28	17	P	P	00 25 15.0	-0.4
SEM	Semipalatinsk	14.54	22	*e*P	P	00 25 17.3	-1.2
	comp=Z,5.6nm,0.7s,baz=22						
SEM	Semipalatinsk	14.54	22	*e*P	P	00 25 17.3	-1.2
SEM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KKN	Kakani	14.63	126	*e*P	Pn	00 25 15.5	-1.9
	comp=Z,47nm,0.4s						
DMN	Daman	14.65	127	*e*P	Pn	00 25 16.1	-1.5
	comp=Z,23nm,0.3s						
BHPL	Bhopal	14.66	160	*e*P	Pn	00 25 18.6	+1.1
BHPL				*e*S	Sn	00 27 48.8	-11
PKIN	Phulchoki	14.86	126	*e*P	Pn	00 25 18.5	-1.7
	comp=Z,43nm,0.4s						
PKI	Pulchoki	14.87	126	*e*P	Pn	00 25 19.1	-1.3
	comp=Z,27nm,0.3s						
AB31	Akbulak array	14.89	328	⇑P	Pn	00 25 17.9	-2.3
	comp=Z,2.8nm,0.3s,baz=134,slow=13,SNR=142						
AB31	Akbulak array	14.89	328	P	Pn	00 25 17.9	-2.3
ABKAR	Akbulak array	14.89	328

NCK pmax pmax
comp=Z,14nm,0.9s
KIV Kislovodsk 23.14 296 *eP* **P 00 26 46.8 -3.5**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,59nm,14.0s
KIRV Kirov 25.98 333 *ceP* **P 00 27 16.7 +0.9**
RAYN Ar Rayn 26.42 247 P P **00 27 22.4 +2.2**
RAYN pmax pmax
comp=Z,1.0nm,0.5s
RAYN Ar Rayn 26.42 247 P P **00 27 22.4 +2.2**
ANN Anapa 26.97 297 *eP* **P 00 27 19.8 -5.0**
ANN *e**PP pP 00 27 43.9 -13
ANN *eS* **S 00 31 47.6 -3.2**
SONM Songino Array 27.37 56 P **P 00 27 30.6 +2.1**
comp=Z,1.9nm,0.8s,baz=263,slow=8.5,SNR=11
ULN Ulaanbaatar 27.81 56 *ceP* **P 00 27 32.0 -0.5**
ULN pmax pmax
comp=Z,3.0nm,0.9s
PRGR Permogore 29.49 335 *eP* **P 00 27 46.3 -0.6**
PRGR pmax pmax
comp=Z,6.0nm,0.9s
OBN Obninsk 29.93 318 *eP* **P 00 27 48.9 -1.9**
OBN *e* 00 28 51.4
OBN *eS* **S 00 32 44.3 +7.3**
OBN pmax pmax
comp=Z,4.0nm,0.6s
BRTR Keskin Array B 29.93 287 P **P 00 27 51.8 +0.5**
comp=Z,0.4nm,0.7s,baz=114,slow=8.0,SNR=2.1
AKASG Malin Array Be 33.11 308 P **P 00 28 19.1 +0.3**
comp=Z,0.3nm,0.3s,baz=80,slow=6.8,SNR=2.2
NRIK Noril'sk 33.36 10 P **P 00 28 22.4 +1.6**
comp=Z,3.9nm,0.6s,baz=195,slow=4.9,SNR=14
NRIK Noril'sk 33.36 10 *eP* **P 00 28 22.5 +1.8**
NRIK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 33.36 10 P **P 00 28 22.1 +1.4**
NRIK IAmb IAmb 00 28 23.4
comp=Z,4.5nm,0.7s
MLR Muntele Rosu 35.10 298 P **P 00 28 38.5 +2.3**
comp=Z,1.5nm,0.7s,baz=103,slow=13
MLR Muntele Rosu 35.10 298 P **P 00 28 38.7 +2.5**
MLR pmax pmax
comp=Z,2.0nm,0.9s
MLR Muntele Rosu 35.10 298 P **P 00 28 38.7 +2.5**
MLR IAmb IAmb 00 28 43.2
comp=Z,2.4nm,0.9s
NACGM Naroch 35.26 315 *i* P **P 00 28 34.5 -2.8**
NACGM *i* P **P 00 28 34.5 -2.8**
NACGM *i* P **P 00 28 34.5 -2.8**
NACGM *i* Pb pP 00 28 40.2 -31
comp=Z,4.0nm,0.8s
NACGM *i* pP sP 00 28 59.1 -29
NACGM *i* PP PP 00 29 48.1 -12
NACGM *i* PPP PPP 00 30 00.8
NACGM *i* S **S 00 33 53.6 -6.1**
NACGM *i* sS **ScP 00 34 27.6 -8.5**
NACGM *i* SS SS 00 35 27.2 -69
NACGM *i* SSS SSS 00 36 36.1
BURAR Bucovina Array 35.55 302 P **P 00 28 40.4 +0.4**
BUR08 Bucovina Ar. S 35.56 302 P **P 00 28 41.1 +1.0**
BUR08 IAmb IAmb 00 28 56.5
comp=Z,6.1nm,1.4s
FIA1 FINESS Array S 37.35 325 P **P 00 28 55.4 +0.4**
FINES FINESS Array B 37.35 325 P **P 00 28 55.8 +0.8**
comp=Z,1.5nm,0.5s,baz=117,slow=9.0,SNR=14
FINES FINESS Array B 37.35 325 *eP* **P 00 28 56.1 +1.1**
FINES pmax pmax
comp=Z,2.0nm,0.5s
KEV Kevo 40.47 338 P **P 00 29 20.6 -0.1**
KEV pmax pmax
comp=Z,21nm,1.4s
KEV Kevo 40.47 338 P **P 00 29 20.6 -0.1**
ARA0 ARCESS Array S 40.83 337 *eP* **P 00 29 25.1 +1.4**
ARCES ARCESS Array B 40.83 337 P **P 00 29 24.8 +1.1**
comp=Z,1.3nm,0.3s,baz=118,slow=9.3,SNR=41
ARCES ARCESS Array B 40.83 337 *eP* **P 00 29 25.0 +1.3**
ARCES pmax pmax
comp=Z,1.0nm,0.3s
KTK1 Kautokeino 41.32 336 *eP* **P 00 29 28.9 +1.1**
HAMF Hammerfest 41.89 338 *eP* **P 00 29 34.1 +1.8**
JETT Jettan, Norway 42.46 336 *eP* **P 00 29 38.3 +1.3**
YAK Yakutsk 43.02 36 *ceP* **P 00 29 43.1 +1.6**
YAK pmax pmax
comp=Z,6.0nm,0.6s
GERES GERESS Array B 43.15 305 P **P 00 29 41.9 -1.1**
comp=Z,0.1nm,0.2s,baz=76,slow=9.2,SNR=2.1
CLL Collm 43.35 308 *eP* **P 00 29 43.0 -1.4**
CLL Collm 43.35 308 *eP* **P 00 29 43.0 -1.4**
MOR8 Moi Rana 43.61 330 *eP* **P 00 29 46.8 +0.6**
STEI Steigen 43.72 333 *eP* **P 00 29 49.6 +2.5**
KSRS Korea Array 43.98 72 P **P 00 29 52.0 +2.4**
comp=Z,0.6nm,0.5s,baz=296,slow=6.6,SNR=2.3
KSRS Korea Array 43.98 72 P **P 00 29 52.0 +2.4**
NC602 NORSAR Array S 44.12 322 *eP* **P 00 29 51.1 +0.7**
KLR Kul'dur 44.18 54 *i* P **P 00 29 51.5 +0.5**
KLR pmax pmax
comp=Z,1.0nm,1.0s
NB201 NORSAR Array S 44.26 323 P **P 00 29 52.1 +0.5**
NB2 NORSAR Subarra 44.30 323 P **P 00 29 52.3 +0.4**
baz=94,slow=7.9
NOA NORSAR Array B 44.30 323 P **P 00 29 52.3 +0.4**
comp=Z,1.6nm,0.8s,baz=95,slow=7.8,SNR=6.7
NOA NORSAR Array B 44.30 323 *eP* **P 00 29 52.6 +0.7**
NOA pmax pmax
comp=Z,1.0nm,0.7s
NSS Namsos 44.33 328 *eP* **P 00 29 54.0 +2.0**
LOF Lofoten 44.39 333 *eP* **P 00 29 53.0 +0.6**
TIXI Tiksi 44.90 22 *eP* **P 00 29 57.7 +1.3**
KONO Kongsberg 45.04 321 *eP* **P 00 29 58.5 +0.8**
USRK Ussuriysk Ar. 45.22 61 P **P 00 30 00.9 +1.6**
comp=Z,0.4nm,0.5s,baz=269,slow=8.2,SNR=2.0
USRK Ussuriysk Ar. 45.22 61 P **P 00 30 01.9 +2.6**
USRK Ussuriysk Ar. 45.22 61 P **P 00 30 01.9 +2.6**
SKAR Skarsla 45.71 322 *eP* **P 00 30 03.8 +0.7**
MOL Molde 46.12 325 *eP* **P 00 30 05.6 -0.5**
SPA0 Spitsbergen Ar 47.03 347 *eP* **P 00 30 15.3 +2.3**
SPITS Spitsbergen Ar 47.03 347 P **P 00 30 14.3 +1.3**
comp=Z,3.4nm,0.8s,baz=158,slow=16,SNR=1.1
MJAR Matsushiro Arr 52.04 69 P **P 00 30 51.8 +0.2**
comp=Z,1.8nm,1.0s,baz=305,slow=9.2,SNR=4.1
MJAR Matsushiro Arr 52.04 69 *eP* **P 00 30 54.0 +2.4**
MJAR pmax pmax
comp=Z,2.0nm,1.0s
MJA0 Matsu Arr-Jizo 52.07 69 *eP* **P 00 30 54.0 +2.2**
MJA0 pmax pmax
comp=Z,2.0nm,1.0s
BILL Bilibino 57.70 26 *eP* **P 00 31 33.4 +1.7**
BILL pmax pmax
comp=Z,2.0nm,1.1s
ESDC Sonseca Array 57.80 298 P **P 00 31 34.1 +1.2**
comp=Z,0.4nm,0.6s,baz=49,slow=7.2,SNR=7.1
SUMG Summit 60.68 341 P **P 00 31 54.1 +1.5**
SUMG pmax pmax
comp=Z,5.0nm,0.9s
SUMG Summit 60.68 341 P **P 00 31 54.1 +1.5**
TORD Torodi Ar. Bea 66.46 269 P **P 00 32 31.0 +0.1**
comp=Z,0.4nm,0.6s,baz=52,slow=5.3,SNR=2.7
TORD Torodi Ar. Bea 66.46 269 P **P 00 32 32.1 +1.2**
TOLK Toolik Lake Re 70.11 15 P **P 00 32 54.4 +1.5**
TOLK IAmb IAmb 00 32 54.9
comp=Z,2.5nm,0.5s
COLD Coldfoot 71.15 16 P **P 00 33 00.7 +1.6**
COLD IAmb IAmb 00 33 01.7
comp=Z,4.1nm,1.3s
IMAR Indian Mountai 71.33 18 P **P 00 33 01.3 +1.1**
BMAR Burnt Mountain 72.14 14 P **P 00 33 07.3 +2.3**
INK Inuvik 73.15 10 P **P 00 33 12.4 +1.5**
comp=Z,1.7nm,0.5s,baz=342,slow=5.7,SNR=17
ILAR Eielson Array 73.95 16 P **P 00 33 16.3 +0.6**
comp=Z,0.5nm,0.8s,baz=313,slow=4.2,SNR=7.1
DOT Dot Lake 75.55 16 P **P 00 33 26.2 +1.3**
BCAR Beaver Creek A 76.55 15 P **P 00 33 32.2 +1.5**
YKA Yellowknife Ar 80.56 3 P **P 00 33 53.8 +1.3**
comp=Z,1.3nm,0.5s,baz=354,slow=5.3,SNR=40
WRA Warramunga Arr 81.72 123 P **P 00 33 59.9 +0.6**
comp=Z,0.6nm,1.0s,baz=324,slow=4.8,SNR=2.1

NEIC ***05*** *00:31:56.7±2.4, 15°.2S±0°.2×177°.2W±0°.1, h29km±7km, mb4.4/10, Error ellipse: s-maj=26.6km s-min=11.5km az=148.0*

GCMT ***05*** *00:32:00.7±0.3, 15°.37S±0°.02×177°.10W±0°.02, h15km, MW4.9/78, Moment Tensor Solution.. s17,c17; s78,c107; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.39±.13; Mθθ-1.75±.11; Mφφ2.14±.09; Mrθ-0.40±.37; Mrφ1.52±.10; Mθφ1.70±.37; Best double couple: Mw3.00400×10¹⁶ NP1:ϕs65.00000°,δ55.00000°,λ-2.00000°. NP2: ϕs156.00000°,δ88.00000°,λ-145.00000°. Principal axes: T 3.2840, Plg23.0000°, Azm285.0000°; N -0.5590, Plg55.0000°, Azm159.0000°; P -2.7240, Plg26.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***05*** *00:32:00.3±5.8, 15°.13S×177°.54W, h40km±54km, mb3.7/8, mb1 4.0/9, mb1mx3.8/28, mbtmp3.9/9, ML4.9/1, MS4.0/14, Ms1 4.0/14, ms1mx3.8/25 Error ellipse: s-maj=96.0km s-min=24.1km az=149.0*

ISC 05 00:31:58.6±0.7, 15°.2S±0°.2×177°.4W±0°.2, h35km, n49, σ1s11/28, mb4.2/14, MS4.1/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.06**	**239**	P			**Pn**	**00 33 12.0**	**-0.2**
	1.7nm,0.3s,baz=84,slow=15,SNR=4.2								
MSVF				LR			LR	00 34 53.4	
	comp=Z,1μm,20.1s,baz=22,slow=35								
MSVF	**Nonsavu**	**5.06**	**239**				**Pn**	**00 33 12.3**	**+0.1**
AFI	**Afiamalu**	**5.58**	**78**	Pn			Pn	00 33 13.7	-5.6
KNTN	**Kanton**	**13.52**	**25**	Pn			**Pn**	**00 35 06.2**	**-1.8**
RAO	**Raoul Island**	**14.04**	**182**	LR			LR	00 40 07.9	
	comp=Z,464nm,18.9s,baz=52,slow=35								
DZM	**Mont Dzumac**	**16.78**	**243**	LR			LR	00 41 16.9	
	comp=Z,526nm,18.9s,baz=46,slow=33								
OUZ	**Omahuta**	**21.55**	**200**	P			**P**	**00 36 44.2**	**-0.9**
OUZ				IAmb			IAmb	00 36 51.5	
	comp=Z,13nm,1.0s								
HNR	**Honiara**	**22.84**	**282**	LR			LR	00 44 38.0	
	comp=Z,2μm,19.9s,baz=88,slow=33								
URZ	**Urewera**	**23.52**	**191**	LR			LR	00 44 28.4	
	comp=Z,409nm,20.5s,baz=31,slow=32								
URZ	**Urewera**	**23.52**	**191**	P			**P**	**00 37 04.3**	**-1.2**
URZ				IAmb			IAmb	00 37 06.2	
	comp=Z,13nm,1.2s								
PAE	**Paea**	**26.79**	**99**	*e*T			T	01 04 31.4	
	comp=Z,1.0nm,0.3s								
PPT2	**Papeete2**	**26.80**	**99**	*e*LR			LR	00 44 10.0	
	comp=Z,946nm,26.0s								
QRZ	**Quartz Range**	**27.04**	**197**	P			**P**	**00 37 36.9**	**-0.7**
TBI	**Tubuai**	**27.57**	**111**	*e*LR			LR	00 44 37.5	
	comp=Z,890nm,27.8s,baz=266								
TBI	**Tubuai**	**27.57**	**111**	*e*T			T	01 05 39.3	
	comp=Z,7.7nm,0.2s								
H11S2	**WAKE ISLAND Hy**	**36.92**	**334**	T			T	01 18 45.8	
	baz=156								
H11S3	**WAKE ISLAND Hy**	**36.93**	**334**	T			T	01 18 41.9	
	baz=156,slow=74,SNR=5.4								
TAOE	**Nuku Hiva Isla**	**36.93**	**85**	*e*LR			LR	00 48 47.7	
	comp=Z,584nm,29.1s								
H11S1	**WAKE ISLAND Hy**	**36.94**	**334**	T			T	01 18 41.1	
	baz=156,slow=74,SNR=4.3								
H11N3	**WAKE ISLAND Hy**	**37.94**	**336**	T			T	01 19 57.9	
	baz=156								
H11N1	**WAKE ISLAND Hy**	**37.94**	**335**	T			T	01 19 56.1	
	baz=156,SNR=5.5								
H11N2	**WAKE ISLAND Hy**	**37.95**	**336**	T			T	01 20 04.4	
	baz=156								
RKT	**Rikitea**	**40.74**	**108**	*e*LR			LR	00 50 46.9	
	comp=Z,574nm,27.0s								
RKT	**Rikitea**	**40.74**	**108**	*e*T			T	01 22 02.9	
	comp=Z,5.3nm,0.2s								
STKA	**Stephens Creek**	**40.84**	**239**	P			**P**	**00 39 38.5**	**+1.3**
	comp=Z,8.2nm,1.0s,baz=47,slow=5.4,SNR=3.9								
STKA	**Stephens Creek**	**40.84**	**239**	P			**P**	**00 39 37.6**	**+0.4**
BBOO	**Buckleboo**	**45.62**	**239**	P			**P**	**00 40 16.5**	**+0.7**
WB0	**Warramunga Arr**	**46.10**	**257**	P			**P**	**00 40 19.3**	**-0.4**
WB0				IAmb			IAmb	00 40 39.9	
	comp=Z,4.1nm,1.1s								
WRA	**Warramunga Arr**	**46.14**	**257**	P			**P**	**00 40 19.4**	**-0.7**
	comp=Z,0.7nm,1.0s,baz=110,slow=7.8,SNR=3.9								
WRA				LR			LR	00 58 55.4	
	comp=Z,122nm,19.0s,baz=110,slow=35								
WRA	**Warramunga Arr**	**46.14**	**257**	P			**P**	**00 40 18.9**	**-1.3**
AS31	**Alice Springs**	**46.52**	**252**	P			**P**	**00 40 22.4**	**-0.6**
AS31				IAmb			IAmb	00 40 29.1	
	comp=Z,1.4nm,0.6s								
ASAR	**Alice Springs**	**46.52**	**252**	P			**P**	**00 40 22.9**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=85,slow=8.4,SNR=31								
ASAR				LR			LR	00 58 25.4	
	comp=Z,270nm,19.2s,baz=98,slow=34								
ASAR	**Alice Springs**	**46.52**	**252**	P			**P**	**00 40 22.0**	**-1.1**
MTN	**Manton Dam**	**49.90**	**266**	P			**P**	**00 40 49.6**	**+0.4**
MTN				IAmb			IAmb	00 41 01.5	
	comp=Z,7.9nm,0.8s								
MJAR	**Matsushiro Arr**	**66.32**	**322**	LR			LR	01 09 15.9	
	comp=Z,30nm,20.3s,baz=55,slow=34								
KSRS	**Korea Array**	**73.32**	**317**	LR			LR	01 10 53.1	
	comp=Z,47nm,21.8s,baz=30,slow=32								
NVAR	**Mina Array Bea**	**76.78**	**44**	P			**P**	**00 43 49.1**	**+2.0**
	comp=Z,1.0nm,0.9s,baz=228,slow=10,SNR=3.7								
NVAR	**Mina Array Bea**	**76.78**	**44**	P			**P**	**00 43 45.3**	**-1.8**
IMAR	**Indian Mountai**	**82.82**	**10**	P			**P**	**00 44 19.5**	**+0.6**
IL31		**83.00**	**13**	P			**P**	**00 44 19.8**	**0.0**
IL31				IAmb			IAmb	00 44 29.3	
	comp=Z,9.8nm,1.5s								
ILAR	**Eielson Array**	**83.00**	**13**	P			**P**	**00 44 21.3**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=241,slow=5.1,SNR=9.3								
ILAR				LR			LR	01 14 52.8	
	comp=Z,82nm,20.6s,baz=247,slow=31								
ILAR	**Eielson Array**	**83.00**	**13**	P			**P**	**00 44 20.1**	**+0.2**
TXAR	**Lajitas Array**	**83.71**	**57**	P			**P**	**00 44 25.3**	**+0.8**
	comp=Z,1.2nm,1.0s,baz=212,slow=6.4,SNR=6.1								
TXAR				LR			LR	01 16 40.2	
	comp=Z,35nm,18.5s,baz=0.0,slow=32								
TXAR	**Lajitas Array**	**83.71**	**57**	P			**P**	**00 44 23.5**	**-1.0**
PDAR	**Pinedale Array**	**84.70**	**43**	P			**P**	**00 44 30.3**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=228,slow=1.8,SNR=3.9								
PDAR				LR			LR	01 14 56.9	
	comp=Z,47nm,20.0s,baz=298,slow=30								
YKA	**Yellowknife Ar**	**91.44**	**24**	P			**P**	**00 45 03.1**	**+2.3**
	comp=Z,0.5nm,1.1s,baz=236,slow=3.3,SNR=2.5								
YKA				LR			LR	01 20 07.6	
	comp=Z,164nm,20.2s,baz=0.0,slow=32								
ULM	**Lac du Bonnet**	**96.19**	**40**	LR			LR	01 21 37.5	
	comp=Z,70nm,20.8s,baz=344,slow=31								
BRTR	**Keskin Array B**	**143.47**	**318**	PKP			**PKPdf**	**00 51 29.8**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=90,slow=2.9,SNR=3.1								
GERES	**GERESS Array B**	**145.19**	**347**	PKPbc			**PKPbc**	**00 51 31.1**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=49,slow=4.4,SNR=2.1								

SEA ***05*** *01:19:12.6±2.2, 48°.31N±0°.01×121°.85W±0°.02, h0km±7km, ML2.7/37, ML2.5/28(NEIC), Error ellipse: s-maj=1.7km s-min=1.5km az=120.0*

NEIC 05 01:19:12.8±2.1, 48°.29N±0°.01×121°.87W±0°.01, h6km±6km, Error ellipse: s-maj=1.6km s-min=1.4km az=185.0, Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCW	**Jim Creek**	**0.10**	**201**				Pg	01 19 15.3	+0.3
B05A	**Bryant**	**0.15**	**260**				Pg	01 19 16.1	+0.2
B05A							Sg	01 19 18.7	+0.8
CMW	**Cultus Mountai**	**0.21**	**309**				Pg	01 19 17.0	+0.1
CMW							Sg	01 19 20.7	+0.9
RPW	**Rockport**	**0.29**	**57**				Pg	01 19 18.4	0.0
B06A	**Marblemount**	**0.34**	**49**	Pg			Pg	01 19 19.2	-0.3
B06A	**Marblemount**	**0.34**	**49**				Sg	01 19 24.2	+0.2
EVCC	**Everett Colleg**	**0.36**	**218**				Pg	01 19 20.6	+0.9
EVCC							Sb	01 19 27.5	0.0
MBPA	**Monroe Substat**	**0.39**	**181**				Pg	01 19 20.4	0.0
MBPA							Sg	01 19 25.9	+0.4
BEVT	**Boeing Everett**	**0.46**	**216**				Sb	01 19 30.0	-0.3
SWID	**South Whidbey**	**0.46**	**232**				Pg	01 19 22.3	+0.7
SWID							Sb	01 19 29.9	-0.4
BLH	**Bald Hill**	**0.47**	**193**				Pg	01 19 22.0	+0.2
MBW	**Mount Baker**	**0.49**	**358**				Pg	01 19 21.9	-0.4
MBW							Sg	01 19 28.9	+0.2
GPW	**Glacier Peak**	**0.52**	**109**				Pg	01 19 22.3	-0.6
EARN	**East Ridge Ele**	**0.56**	**191**				Pg	01 19 24.3	+0.7
EARN							Sb	01 19 33.3	0.0
SHUK	**Shuksan-Mt. Ba**	**0.58**	**13**				Pg	01 19 23.1	-0.8
SHUK							Sg	01 19 31.3	-0.2
TTW	**Tolt Reservoir**	**0.61**	**168**				Pg	01 19 24.1	-0.4
A04D	**Lummi Island**	**0.70**	**308**				Pg	01 19 26.2	0.0
A05A	**Maple Falls**	**0.72**	**349**				Pg	01 19 25.8	-0.9
A05A	**Maple Falls**	**0.72**	**349**				Sg	01 19 36.4	+0.4
A05A	**Maple Falls**	**0.72**	**349**	IAML				01 19 38.0	
	comp=E,207nm,0.4s								
A05A				IAML				01 19 39.5	
	comp=N,213nm,0.5s								
MCW	**Mount Constitu**	**0.75**	**302**				Pg	01 19 26.8	-0.3
C06D	**Leavenworth**	**0.75**	**119**				Pg	01 19 26.2	-1.0
SP2	**Seward Park 2**	**0.78**	**199**				Pb	01 19 28.8	+0.1
BLN	**Blyn Mountain**	**0.79**	**249**				Pg	01 19 27.4	-0.5
WRW	**Wenatchee Ridg**	**0.80**	**123**				Pg	01 19 27.0	-1.1
B013	**Quilcene**	**0.84**	**236**				Pg	01 19 28.2	-0.7
B013	**Quilcene**	**0.84**	**236**				Pg	01 19 28.2	-0.8
RATT	**Rattlesnake La**	**0.87**	**177**				Pg	01 19 28.7	-0.7
C04A	**Brinnon**	**0.94**	**232**				Pg	01 19 29.7	-1.0
C04A							Sg	01 19 42.5	-0.3
GMW	**Gold Mountain**	**0.96**	**220**				Pg	01 19 30.2	-1.0
GNW	**Green Mountain**	**0.97**	**222**				Pg	01 19 30.3	-1.1
GNW							Sg	01 19 43.6	-0.3
VGZ	**Gonzales**	**0.97**	**278**				Pg	01 19 31.0	-0.5
HDW	**Hoodsport**	**1.02**	**231**				Pg	01 19 31.1	-1.3
HDW							Sg	01 19 45.3	-0.3
SLFW	**Sugar Loaf**	**1.05**	**120**				Pg	01 19 31.7	-1.2
NLW	**Nelson Butte**	**1.05**	**101**				Pg	01 19 31.8	-1.1
GSM	**Grass Mountain**	**1.09**	**177**				Pg	01 19 32.7	-1.0
B011	**North Saanich**	**1.11**	**289**				Pg	01 19 32.3	-1.7
D05A	**Enumclaw**	**1.11**	**184**				Pg	01 19 32.7	-1.3
D05A				IAML				01 19 56.3	
	comp=N,70nm,0.8s								
PGC	**Sidney**	**1.11**	**289**				Pg	01 19 32.9	-1.2
PGC				IAML				01 19 48.8	
	comp=N,64nm,0.2s								
PGC				IAML				01 19 49.5	
	comp=E,70nm,0.3s								
D03D	**Eldon**	**1.11**	**228**				Pg	01 19 32.6	-1.5
B04A	**Port Angeles**	**1.12**	**258**				Pg	01 19 32.5	-1.6
B04A	**Port Angeles**	**1.12**	**258**				Pg	01 19 32.9	-1.2
ETW	**Entiat**	**1.24**	**123**				Pg	01 19 35.0	-1.6
LTY	**Liberty**	**1.31**	**141**				Pn	01 19 36.1	-1.7
LTY				IAML				01 19 54.9	
	comp=N,92nm,0.5s								
B941	**Kapowsin**	**1.33**	**190**				Pn	01 19 36.1	-1.7
TWW	**Teanaway**	**1.34**	**149**				Pn	01 19 37.6	-0.5
FMW	**Mount Fremont**	**1.37**	**174**				Pn	01 19 37.1	-1.6
OBSR	**Observation Ro**	**1.39**	**178**				Pn	01 19 37.8	-1.2
TBM	**Table Mountain**	**1.42**	**142**				Pn	01 19 38.5	-0.7
DHW2	**Dyer Hill 2**	**1.44**	**101**				Pn	01 19 39.1	-0.5
PANH	**Panhandle Gap,**	**1.44**	**174**				Pn	01 19 38.3	-1.4
OLQ	**Olympics--Lake**	**1.52**	**240**				Pn	01 19 40.4	0.0
LON	**Longmire**	**1.54**	**178**				Pn	01 19 40.0	-0.9
LON				IAML				01 20 00.3	
	comp=E,65nm,0.5s								
LON				IAML				01 20 00.8	
	comp=N,49nm,0.2s								
NLWA	**Neilton Lookou**	**1.62**	**237**				Pn	01 19 42.3	+0.4
NLWA				IAML				01 20 06.9	
	comp=N,37nm,1.1s								
EBG	**Ellensburg**	**1.64**	**147**				Pn	01 19 42.4	+0.2
NLLB	**Nanaimo Lost L**	**1.68**	**305**				Pn	01 19 42.1	-0.7
B08A	**Colville Reser**	**1.70**	**87**				Pn	01 19 43.4	+0.4
NAC	**Naches**	**1.71**	**155**				Pn	01 19 43.7	+0.4
LCW	**Lucas Creek**	**1.72**	**199**				Pn	01 19 42.9	-0.4
GLK	**Glacier Lake**	**1.74**	**174**				Pn	01 19 43.5	-0.1
E04D	**Cinebar**	**1.80**	**195**				Pn	01 19 44.8	+0.4
EPH	**Ephrata**	**1.80**	**121**				Pb	01 19 45.6	-0.6
PNT	**Penticton**	**1.81**	**55**				Pb	01 19 46.5	+0.1
SHB	**Sechelt**	**1.86**	**315**				Pn	01 19 44.4	-0.9
TDL	**Tradedollar La**	**1.96**	**187**				Pn	01 19 46.8	+0.2
WSLR	**Whistler**	**1.96**	**340**				Pn	01 19 46.9	+0.2
B201	**Coldwater, Mou**	**2.01**	**188**				Pn	01 19 47.6	+0.3
ERK	**Elk Rock**	**2.01**	**189**				Pn	01 19 47.5	+0.1
JRO	**Jston Ridge Ob**	**2.03**	**187**				Pn	01 19 48.9	+1.2
B202	**Windy Ridge, M**	**2.06**	**185**				Pn	01 19 48.4	+0.4
SOSW	**Source of Smit**	**2.06**	**185**				Pn	01 19 48.5	+0.5
BOLM	**Sugar Bowl**	**2.09**	**186**				Pb	01 19 50.1	-1.1
E03A	**Lebam**	**2.09**	**214**	Pn			Pn	01 19 48.4	0.0
E03A				IAML				01 20 19.9	
	comp=E,52nm,1.1s								
FHE	**Frenchman Hill**	**2.09**	**129**				Pb	01 19 50.7	-0.4
FL2	**Flat Top 2**	**2.12**	**189**				Pn	01 19 49.5	+0.6
SWF2	**Southwest Flan**	**2.13**	**186**				Pn	01 19 50.2	+1.2
B927	**Port Alberni**	**2.15**	**297**				Pn	01 19 50.0	+0.8
MDW	**Midway**	**2.21**	**139**				Pb	01 19 52.2	-0.9
E07A	**Sunnyside**	**2.21**	**141**				Pn	01 19 50.4	+0.4
E07A				IAML				01 20 23.3	
	comp=N,46nm,0.5s								
GBB	**Gable Butte**	**2.27**	**137**				Pb	01 19 53.4	-0.8
LOCW	**Locke Island**	**2.29**	**133**				Pb	01 19 54.0	-0.4
BENWA	**Benson Ranch**	**2.30**	**140**				Pb	01 19 54.0	-0.7
B023	**Clatskanie**	**2.33**	**201**				Pn	01 19 52.5	+0.9
D08A	**Wollman Farm,**	**2.35**	**121**	Pn			Pn	01 19 52.3	+0.4
RSW	**Rattlesnake Hi**	**2.45**	**140**				Pb	01 19 56.7	-0.7
C09A	**Chrisman Ranch**	**2.46**	**100**	Pn			Pn	01 19 53.7	+0.1
HAWA	**Hanford**	**2.48**	**139**				Pn	01 19 54.0	+0.2
NEW	**Newport**	**3.17**	**89**	Pn			Pn	01 20 03.6	+0.3
NEW				IAML				01 21 09.6	
	comp=N,8.5nm,4.2s								
NEW				IAML				01 21 45.1	
	comp=N,7.8nm,4.6s								
H04A	**Detroit Lake**	**3.62**	**184**	Pn			Pn	01 20 10.3	+0.9
H04A				IAML				01 22 28.7	
	comp=N,15nm,4.1s								

TEH ***05*** *01:21:39.5, 32°.84N×47°.48E, h5km, ML3.5*
ISN ***05*** *01:21:39.7±1.2, 32°.76N×47°.49E, h14km±7km, ML3.2*
THR ***05*** *01:21:40.9±0.4, 32°.93N×47°.39E, h14km±6km, ML3.4*

ISC 05 01:21:40.2±1.2, 32°.82N±0°.03×47°.46E±0°.03, h7km±12km, n35, σ1s96/38, 3C-2D, Iran-Iraq border region

| Code | Station Name | Δ° | AZ° | Phase | ID | Op | ISC |

IPIR				*e*			01 23 28.8	
	comp=Z,99nm,0.6s							
SHK1	**Shahrekord**	**2.94**	**99**	*e*Pn		**Pb**	**01 22 29.1**	**-3.9**
SHK1				*e*			01 22 37.3	
	comp=Z,99nm,0.8s							
IRAZ	**Razeghan**	**3.29**	**38**	*e*Pn		**Pn**	**01 22 34.5**	**+2.0**
QABG	**Abgarm-Qazvin**	**3.38**	**31**	*e*Pn		**Pn**	**01 22 34.2**	**+0.6**
QAM	**Ghamsar**	**3.46**	**73**	*e*Pn		**Pn**	**01 22 37.0**	**+2.2**
IGAR	**Gharneh**	**3.89**	**95**	*e*Pn		**Pn**	**01 22 41.9**	**+1.2**
KLNJ	**Kolanjah**	**3.96**	**116**	*e*Pn		**Pn**	**01 22 42.9**	**+1.2**
KLNJ				*e*			01 24 02.8	
	comp=Z,99nm,0.6s							
KRSH	**Karshahi**	**4.08**	**72**	*e*Pn		**Pn**	**01 22 45.3**	**+2.1**
ISFB	**Sefidab**	**4.28**	**68**	*e*Pn		**Pn**	**01 22 47.6**	**+1.8**
QALM	**Alamut, Qazvin**	**4.46**	**35**	*e*Pn		**Pn**	**01 22 50.1**	**+1.6**
MLR	**Muntele Rosu**	**20.86**	**314**	⇓P		Pn	01 26 28.7	+3.4
VOIR		**21.38**	**313**	⇑P		**P**	**01 26 30.1**	**+1.7**
BURAR	**Bucovina Array**	**22.40**	**318**	⇑P		P	01 26 51.6	+12
GZR	**Gura Zlata**	**22.80**	**311**	⇑P		**P**	**01 26 45.4**	**+1.9**
DRGR		**23.45**	**314**	⇓P		**P**	**01 26 52.0**	**+1.7**

NOU ***05*** *01:24:19.2, 14.˚09S×170.˚64E, h630km, mb4.2, Vanuatu Islands Region*
IDC ***05*** *01:24:22.1±1.5, 14.˚34S×170.˚29E, h614km±19km, mb3.0/9, mb1 3.3/10, mb1mx3.1/27, mbtmp4.0/10, Error ellipse: s-maj=25.5km s-min=15.6km az=143.0*
ISC 05 01:24:22.2±0.7, 14.˚3S±0.˚1×170.˚2E±0.˚1, h614km, n19, σ1§50/23, mb3.5/9, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.09**	**248**	P		**P**	**01 25 44.4**	**+1.4**
DVP	**Devils Point**	**3.89**	**209**	P		**P**	**01 25 48.7**	**+0.8**
LIFNC	**LIFOU**	**7.01**	**203**	P		**P**	**01 26 13.4**	**+0.6**
MARNC	**Mare, Loyalty**	**7.41**	**196**	P		**P**	**01 26 16.4**	**-0.1**
MSVF	**Nonsavu**	**8.29**	**115**	P		**P**	**01 26 25.0**	**+0.1**
	2.9nm,0.3s,baz=284,slow=13,SNR=9.4							
YATNC	**Mamie plateau,**	**8.31**	**202**	P		**P**	**01 26 25.9**	**+1.0**
KOUNC	**Koumac, New Ca**	**8.37**	**221**	P		**P**	**01 26 27.9**	**+2.5**
OUENC	**Ouen Island, N**	**8.66**	**201**	P		**P**	**01 26 29.6**	**+1.4**
ONTNC	**Ouen Toro**	**8.70**	**203**	P		**P**	**01 26 30.2**	**+1.7**
STKA	**Stephens Creek**	**31.43**	**231**	P		**P**	**01 29 56.5**	**+1.2**
	5.8nm,0.4s,baz=60,slow=8.6,SNR=24							
WRA	**Warramunga Arr**	**34.66**	**256**	P		**P**	**01 30 22.9**	**+0.3**
	0.5nm,0.4s,baz=83,slow=7.6,SNR=12							
WRA				S		**S**	**01 35 07.3**	**-3.3**
	0.2nm,0.6s,baz=78,slow=16,SNR=2.1							
WRA				ScP		**ScP**	**01 35 27.6**	**+0.8**
	0.6nm,0.9s,baz=91,slow=3.8,SNR=5.9							
ASAR	**Alice Springs**	**35.45**	**249**	P		**P**	**01 30 29.6**	**+0.5**
	2.1nm,0.4s,baz=77,slow=9.4,SNR=56							
ASAR				S		**S**	**01 35 19.3**	**-3.1**
	0.5nm,0.7s,baz=78,slow=16,SNR=5.6							
ASAR				ScP		**ScP**	**01 35 30.2**	**+0.6**
	0.7nm,0.6s,baz=92,slow=3.8,SNR=12							
MJAR	**Matsushiro Arr**	**58.90**	**330**	P		**P**	**01 33 23.7**	**-0.2**
	0.5nm,0.4s,baz=162,slow=6.1,SNR=1.9							
VNDA	**Vanda**	**63.35**	**182**	P		**P**	**01 33 51.2**	**-1.0**
	0.4nm,0.6s,baz=341,slow=9.0,SNR=2.1							
PETK	**Petropavlovsk-**	**68.00**	**352**	P		**P**	**01 34 23.2**	**+1.8**
	4.1nm,0.9s,baz=133,slow=6.1,SNR=1.6							
NVAR	**Mina Array Bea**	**84.88**	**48**	P		**P**	**01 35 52.7**	**-1.3**
	0.1nm,0.3s,baz=232,slow=5.6,SNR=2.7							
ILAR	**Eielson Array**	**85.29**	**17**	P		**P**	**01 35 54.0**	**-1.0**
	0.4nm,0.6s,baz=239,slow=5.0,SNR=7.8							
YKA	**Yellowknife Ar**	**95.90**	**27**	P		**P**	**01 36 44.1**	**0.0**
	0.3nm,1.0s,baz=261,slow=7.6,SNR=2.5							
ARCES	**ARCESS Array B**	**120.54**	**346**	PKP		**PKPdf**	**01 42 04.5**	**-0.2**
	1.1nm,0.9s,baz=57,slow=2.8,SNR=5.5							

TAP ***05*** *02:02:45.6, 24.˚46N×122.˚07E, h23km, ML3.6, C*
JMA ***05*** *02:02:45.5, 24.˚39N×122.˚11E, h29km±3km, M3.3*
ISC 05 02:02:44.6±1.0, 24.˚42N±0.˚02×122.˚15E±0.˚02, h15km±7km, n121, σ0§63/191, 5C-7D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.33**	**305**	*i* P		**Pb**	**02 02 51.8**	**-0.3**
	baz=308							
TWC				*e*S		**Sg**	**02 02 55.6**	**-0.5**
	baz=308							
EWUT	**Wuta**	**0.34**	**274**	⇓*i*P		**Pb**	**02 02 52.0**	**-0.2**
	baz=273							
EWUT				*e*S		**Sg**	**02 02 56.5**	**+0.2**
	baz=273							
ENA	**Nanau**	**0.37**	**271**	*e*P		**Pg**	**02 02 52.3**	**+0.2**
	baz=269							
ENA				*e*S		**Sg**	**02 02 57.3**	**+0.1**
	baz=269							
NDS	**Dongshan**	**0.45**	**299**	*e*P		**Pb**	**02 02 53.9**	**-0.2**
	baz=299							
NDS				*e*S		**Sg**	**02 02 59.1**	**-0.5**
	baz=299							
EGS		**0.47**	**335**	*e*P		**Pb**	**02 02 54.6**	**+0.1**
	baz=340							
EGS				*e*S		**Sb**	**02 03 00.5**	**-0.6**
	baz=340							
ILA	**Ilan**	**0.50**	**314**	*e*P		**Pb**	**02 02 55.1**	**+0.1**
	baz=314							
ILA				*e*S		**Sb**	**02 03 01.7**	**-0.4**
	baz=314							
NTC	**Toucheng**	**0.52**	**326**	*e*P		**Pb**	**02 02 55.4**	**0.0**
	baz=331							
NTC				*e*S		**Sg**	**02 03 01.1**	**-0.7**
	baz=331							
TWE	**Neicheng**	**0.53**	**305**	*i* P		**Pb**	**02 02 55.3**	**-0.3**
	baz=304							
TWE				*e*S		**Sg**	**02 03 01.2**	**-0.9**
	baz=304							
NACB	**Ninganchiao**	**0.56**	**244**	⇓*i*P		**Pb**	**02 02 55.8**	**-0.3**
	baz=240							
NACB				*e*S		**Sb**	**02 03 03.4**	**-0.4**
	baz=240							
ENTT	**Nioudou**	**0.57**	**293**	⇓*i*P		**Pb**	**02 02 56.1**	**-0.2**
	baz=292							
ENTT				*e*S		**Sg**	**02 03 03.2**	**-0.3**
	baz=292							
TWB1	**Santiao Chiao**	**0.60**	**346**	⇑*i*P		**Pb**	**02 02 57.2**	**+0.4**
	baz=343							
TWB1				*e*S		**Sg**	**02 03 04.4**	**-0.1**
	baz=343							
NDT	**Datong Townshi**	**0.60**	**288**	*i* P		**Pb**	**02 02 56.9**	**0.0**
	baz=287							
NDT				*e*S		**Sg**	**02 03 04.3**	**-0.3**
	baz=287							
TWD	**Chiawan**	**0.60**	**236**	*e*P		**Pb**	**02 02 57.0**	**+0.2**
	baz=231							
TWD				*e*S		**Sb**	**02 03 05.7**	**+0.5**
	baz=231							
TIPB	**Shuangxi**	**0.62**	**332**	⇑*i*P		**Pb**	**02 02 57.3**	**+0.1**
	baz=337							
TIPB				*e*S		**Sg**	**02 03 04.8**	**-0.3**
	baz=337							
ETLH	**Xiulin Townshi**	**0.64**	**251**	⇓*i*P		**Pb**	**02 02 57.4**	**-0.1**
	baz=250							
ETLH				*e*S		**Sb**	**02 03 07.3**	**+1.0**
	baz=250							
NNSB	**Datong**	**0.69**	**271**	⇓*i*P		**Pg**	**02 02 58.1**	**-0.2**
	baz=272							
NNSB				*e*S		**Sg**	**02 03 07.1**	**-0.3**
	baz=272							
NNSH	**Datong**	**0.69**	**271**	*e*P		**Pg**	**02 02 58.2**	**0.0**
	baz=270							
NNSH				*e*S		**Sg**	**02 03 07.2**	**-0.2**
	baz=270							
NNS	**Nan Shan**	**0.70**	**272**	*e*P		**Pg**	**02 02 58.2**	**-0.2**
	baz=273							
NNS				*e*S		**Sg**	**02 03 06.7**	**-1.0**
	baz=273							
NWF	**Wu-fen Shan**	**0.73**	**333**	*e*P		**Pb**	**02 02 59.4**	**+0.4**
	baz=328							
NWF				*e*S		**Sb**	**02 03 08.8**	**0.0**
	baz=328							
WFSB	**Wu-fen Shan**	**0.73**	**333**	⇑P		**Pb**	**02 02 59.4**	**+0.4**
	baz=328							
WFSB				*e*S		**Sg**	**02 03 08.3**	**-0.1**
	baz=328							
JYNG	**Yonagunijimaku**	**0.73**	**87**	P		**Pn**	**02 02 59.9**	**-0.4**
JYNG				*e*S		**Sn**	**02 03 10.1**	**-1.1**
YHNB	**Yeheng**	**0.74**	**290**	⇓*i*P		**Pb**	**02 02 59.3**	**0.0**
	baz=291							
YHNB				*e*S		**Sg**	**02 03 07.9**	**-1.1**
	baz=291							
TWA	**Mucha**	**0.76**	**318**	*e*P		**Pg**	**02 02 59.7**	**+0.4**
	baz=327							
TWA				*e*S		**Sb**	**02 03 09.0**	**-0.6**
	baz=327							
NSK	**Sanguang**	**0.76**	**290**	⇓*i*P		**Pg**	**02 02 59.5**	**0.0**
	baz=291							
NSK				*e*S		**Sg**	**02 03 08.2**	**-1.3**
	baz=291							
NHDH	**Xindian Distri**	**0.78**	**314**	*e*P		**Pn**	**02 03 00.5**	**-0.6**
	baz=320							
NHDH				*e*S		**Sb**	**02 03 09.3**	**-0.9**
	baz=320							
YOJ	**Yonaguni jima**	**0.79**	**87**	P		**Pn**	**02 03 00.8**	**-0.4**
YOJ				*e*S		**Sn**	**02 03 12.0**	**-0.7**
YOJ	**Yonaguni jima**	**0.79**	**87**	P		**Pn**	**02 03 00.8**	**-0.4**
	baz=82							
YOJ				*e*S		**Sg**	**02 03 11.4**	**+1.0**
	baz=82							
TNOU	**National Taiwa**	**0.80**	**335**	*e*P		**Pg**	**02 03 00.3**	**+0.2**
	baz=333							
TNOU				*e*S		**Sb**	**02 03 10.2**	**-0.7**
	baz=333							
TATO	**Taipei**	**0.81**	**313**	*e*P		**Pg**	**02 03 00.8**	**+0.3**
	baz=307							
TATO				*e*S		**Sb**	**02 03 10.1**	**-1.1**
	baz=307							
FUSS	**Fushou**	**0.84**	**258**	*e*P		**Pg**	**02 03 01.2**	**+0.2**
	baz=260							
FUSS				*e*S		**Sg**	**02 03 12.5**	**+0.4**
	baz=260							
TAP	**Taipei**	**0.85**	**317**	*e*P		**Pn**	**02 03 01.9**	**0.0**
	baz=319							
TAP				*e*S		**Sg**	**02 03 12.1**	**-0.1**
	baz=319							
WHF	**Hehuan Shan**	**0.85**	**251**	⇑*i*P		**Pg**	**02 03 01.2**	**0.0**
	baz=254							
WHF				*e*S		**Sg**	**02 03 13.0**	**+0.6**
	baz=254							
ESL	**Shilin**	**0.89**	**227**	P		**Pn**	**02 03 02.4**	**-0.1**
	baz=220							
ESL				*e*S		**Sn**	**02 03 15.1**	**0.0**
	baz=220							
YM01	**YM01**	**0.89**	**324**	*e*P		**Pg**	**02 03 02.1**	**+0.1**
	baz=327							
YM01				*e*S		**Sb**	**02 03 13.2**	**-0.3**
	baz=327							
NWRT	**Kuosheng**	**0.90**	**331**	*e*P		**Pb**	**02 03 01.5**	**-0.3**
	baz=334							
NWRT				*e*S		**Sb**	**02 03 13.2**	**-0.3**
	baz=334							
TWT	**Tachien**	**0.90**	**260**	*e*P		**Pn**	**02 03 02.9**	**0.0**
	baz=260							
TWT				*e*S		**Sn**	**02 03 15.2**	**-0.5**
	baz=260							
YM10	**YM10**	**0.90**	**324**	*e*P		**Pg**	**02 03 02.3**	**+0.1**
	baz=327							
YM10				*e*S		**Sb**	**02 03 13.5**	**-0.4**
	baz=327							
YM11	**YM11**	**0.91**	**325**	*e*P		**Pn**	**02 03 02.6**	**-0.2**
	baz=328							
YM11				*e*S		**Sg**	**02 03 14.5**	**+0.4**
	baz=328							
YM05	**YM05**	**0.91**	**325**	*e*P		**Pg**	**02 03 02.2**	**0.0**
	baz=327							
YM05				*e*S		**Sb**	**02 03 13.8**	**-0.3**
	baz=327							
TDCB	**Techi**	**0.92**	**260**	*e*P		**Pn**	**02 03 02.7**	**-0.3**
	baz=260							
TDCB				*e*S		**Sg**	**02 03 14.4**	**-0.1**
	baz=260							
YM04	**YM04**	**0.92**	**323**	⇑*i*P		**Pb**	**02 03 02.1**	**-0.1**
	baz=325							
YM04				*e*S		**Sb**	**02 03 13.6**	**-0.6**
	baz=325							
YM08	**YM08**	**0.92**	**327**	*i* P		**Pb**	**02 03 02.1**	**-0.1**
	baz=329							
YM08				*e*S		**Sb**	**02 03 13.8**	**-0.4**
	baz=329							
TWS1	**Kuangyinshan**	**0.95**	**316**	*e*P		**Pn**	**02 03 03.2**	**-0.1**
	baz=318							
TWS1				*e*S		**Sg**	**02 03 15.4**	**0.0**
	baz=318							
ANP	**Anpu**	**0.95**	**323**	*e*P		**Pb**	**02 03 02.5**	**-0.3**
	baz=326							
CHGB	**Renai**	**0.96**	**248**	*e*P		**Pn**	**02 03 03.4**	**-0.3**
	baz=252							
CHGB				*e*S		**Sn**	**02 03 18.1**	**+1.0**
	baz=252							
NTY	**Taoyuan**	**0.96**	**307**	*e*P		**Pn**	**02 03 04.0**	**+0.4**
	baz=303							
NTY				*e*S		**Sn**	**02 03 17.0**	**0.0**
	baz=303							
NTST	**Danshui**	**0.97**	**320**	*e*P		**Pn**	**02 03 04.6**	**+0.9**
	baz=322							
NTST				*e*S		**Sn**	**02 03 17.0**	**-0.2**
	baz=322							
TWY	**Chenhua**	**0.98**	**330**	*e*P		**Pn**	**02 03 03.4**	**-0.4**
	baz=333							
TWY				*e*S		**Sg**	**02 03 16.2**	**-0.4**
	baz=333							
EGFH	**Guangfu**	**0.99**	**221**	*e*P		**Pb**	**02 03 03.1**	**-0.4**
	baz=223							
NJD	**Zhudong**	**1.01**	**288**	*e*P		**Pg**	**02 03 05.5**	**+1.3**
	baz=288							
NJD				*e*S		**Sn**	**02 03 18.4**	**+0.2**
	baz=288							
NCU	**National Centr**	**1.03**	**302**	*e*P		**Pg**	**02 03 05.5**	**+0.9**
	baz=308							
NCU				*e*S		**Sn**	**02 03 19.7**	**+1.1**
	baz=308							
NCUH	**Zhongli**	**1.03**	**302**	*e*P		**Pg**	**02 03 05.1**	**+0.6**
	baz=308							
NCUH				*e*S		**Sn**	**02 03 19.0**	**+0.4**
	baz=308							
LIOB	**Emei**	**1.05**	**283**	*e*P		**Pg**	**02 03 05.5**	**+0.6**
	baz=281							
LIOB				*e*S		**Sn**	**02 03 18.9**	**-0.3**
	baz=281							
NSTT	**Nanjuang**	**1.06**	**282**	*e*P		**Pg**	**02 03 06.0**	**+0.9**
	baz=280							
NSTT				*e*S		**Sg**	**02 03 18.6**	**-0.5**
	baz=280							
HSN1	**Hsinchu**	**1.09**	**289**	*e*P		**Pg**	**02 03 05.6**	**0.0**
	baz=279							
HSN1				*e*S		**Sg**	**02 03 21.5**	**+1.7**
	baz=279							
WHP	**Taichung City**	**1.10**	**263**	*e*P		**Pg**	**02 03 06.7**	**+0.8**
	baz=266							
WHP				*e*S		**Sg**	**02 03 21.0**	**+0.7**
	baz=266							
SBCB	**Hsinchu**	**1.12**	**290**	*e*P		**Pg**	**02 03 06.4**	**+0.2**
	baz=289							
SBCB				*e*S		**Sg**	**02 03 22.7**	**+1.9**
	baz=289							
VWDT	**VWDT**	**1.13**	**234**	*e*P		**Pg**	**02 03 06.7**	**+0.2**
	baz=230							
VWDT				*e*S		**Sn**	**02 03 20.8**	**-0.3**
	baz=230							
HGSD	**Ruisui**	**1.14**	**216**	*e*P		**Pb**	**02 03 06.0**	**0.0**
	baz=196							
HSN	**Hsinchu**	**1.14**	**290**	*e*P		**Pg**	**02 03 06.8**	**+0.2**
	baz=291							
HSN				*e*S		**Sg**	**02 03 21.7**	**+0.4**
	baz=291							
WPL	**Puli Township**	**1.16**	**250**	*e*P		**Pg**	**02 03 07.4**	**+0.4**
	baz=233							
DPDB	**Guoxing**	**1.18**	**251**	*e*P		**Pg**	**02 03 08.0**	**+0.6**
	baz=235							
EHY	**Hungye**	**1.18**	**220**	*e*P		**Pn**	**02 03 06.4**	**-0.2**
	baz=213							
NMLH	**Miaoli**	**1.24**	**276**	*e*P		**Pg**	**02 03 09.0**	**+0.5**
	baz=274							
NMLH				*e*S		**Sg**	**02 03 26.1**	**+1.4**
	baz=274							
TWQ1	**Liyutan**	**1.25**	**267**	*e*P		**Pg**	**02 03 09.7**	**+1.0**
	baz=265							
TWQ1				*e*S		**Sg**	**02 03 25.1**	**-0.1**
	baz=265							
SMLT	**Sun Moon Lake**	**1.26**	**245**	*e*P		**Pg**	**02 03 09.3**	**+0.4**
	baz=229							
SMLT				*e*S		**Sg**	**02 03 26.0**	**+0.7**
	baz=229							
SSLB	**Suanglung**	**1.26**	**240**	*e*P		**Pg**	**02 03 08.3**	**-0.5**
	baz=225							
SSLB				*e*S		**Sg**	**02 03 25.6**	**+0.3**
	baz=225							
NSY	**Sanyi**	**1.26**	**270**	*e*P		**Pg**	**02 03 10.4**	**+1.5**
	baz=280							
TYC	**Yuchr**	**1.28**	**247**	*e*P		**Pg**	**02 03 09.3**	**0.0**
	baz=232							
YULB	**Yu-li**	**1.28**	**217**	*e*P		**Pn**	**02 03 07.7**	**-0.3**
	baz=210							
EYUL	**Yuli**	**1.31**	**215**	*e*P		**Pb**	**02 03 08.7**	**-0.1**
	baz=224							
TWF1	**Yuli**	**1.32**	**216**	*e*P		**Pn**	**02 03 08.3**	**-0.1**
	baz=226							
TCU	**Taichung**	**1.37**	**259**	*e*P		**Pg**	**02 03 11.4**	**+0.5**
	baz=256							
WDJ	**Dajia District**	**1.37**	**267**	*e*P		**Pg**	**02 03 11.1**	**0.0**
	baz=275							
WWF	**Wufeng**	**1.37**	**254**	*e*P		**Pg**	**02 03 11.5**	**+0.5**
	baz=251							
WHYT	**Xinyi Township**	**1.38**	**239**	*e*P		**Pg**	**02 03 11.1**	**-0.2**
	baz=224							
WJS	**Zhushan**	**1.43**	**246**	*e*P		**Pg**	**02 03 12.6**	**+0.6**
	baz=233							
WNT	**Mingjian**	**1.44**	**248**	*e*P		**Pg**	**02 03 12.5**	**+0.2**
	baz=244							
FULB	**Fuli**	**1.45**	**213**	*e*P		**Pn**	**02 03 09.8**	**-0.4**
	baz=192							
IRIF	**Iriomote-Funau**	**1.45**	**93**	P		**Pn**	**02 03 10.2**	**0.0**
IRIF				S		**Sn**	**02 03 28.9**	**0.0**
WCHH	**Zhanghua**	**1.49**	**257**	*e*P		**Pb**	**02 03 11.8**	**-0.2**
	baz=254							
ALS	**Alishan**	**1.52**	**234**	*e*P		**Pg**	**02 03 13.8**	**-0.2**
	baz=229							
HATJ	**Hateruma jima**	**1.56**	**103**	P		**Pn**	**02 03 12.1**	**+0.4**
HATJ				*e*S		**Sn**	**02 03 31.8**	**+0.2**
CHN5	**Tsauling**	**1.57**	**239**	*e*P		**Pg**	**02 03 14.6**	**-0.2**
	baz=235							
CHN5				*e*S		**Sg**	**02 03 34.9**	**-0.4**
	baz=235							
ELDTW	**Lidau**	**1.60**	**220**	*e*P		**Pb**	**02 03 14.4**	**+0.4**
	baz=201							
EDH	**Donghe**	**1.64**	**208**	*e*P		**Pn**	**02 03 11.4**	**-1.4**
	baz=189							
WDLH	**Douliu**	**1.64**	**244**	*e*P		**Pb**	**02 03 15.0**	**+0.5**
	baz=239							
JKRS	**Kuro-shima**	**1.71**	**96**	P		**Pn**	**02 03 14.4**	**+0.6**
JKRS				S		**Sn**	**02 03 35.6**	**+0.2**
WTK	**Tuku**	**1.76**	**246**	*e*P		**Pb**	**02 03 16.8**	**+0.2**
	baz=241							
CHN2	**Minshiung**	**1.77**	**240**	*e*P		**Pg**	**02 03 18.1**	**-0.4**
	baz=221							
STYH	**Taoyuan**	**1.77**	**226**	*e*P		**Pb**	**02 03 15.9**	**-0.7**
	baz=206							
LONT	**Longtian**	**1.77**	**212**	*e*P		**Pn**	**02 03 15.0**	**+0.3**
	baz=205							
TPUB	**Ta-pu**	**1.78**	**232**	*e*P		**Pb**	**02 03 17.2**	**+0.3**
	baz=212							
STYT	**Tauyuan**	**1.79**	**226**	*e*P		**Pb**	**02 03 16.1**	**-1.0**
	baz=206							
JIJ	**Ishigaki jima**	**1.82**	**91**	P		**Pn**	**02 03 15.1**	**-0.3**
JIJ				S		**Sn**	**02 03 36.6**	**-1.6**
CHY	**Chiayi**	**1.82**	**240**	*e*P		**Pb**	**02 03 18.2**	**+0.6**
	baz=234							
WTP	**Ta-pu**	**1.83**	**230**	*e*P		**Pb**	**02 03 17.6**	**-0.1**
	baz=208							
LDUT	**Ludao**	**1.85**	**200**	*e*P		**Pn**	**02 03 14.6**	**-1.1**
	baz=183							
TWGBT	**Beinan**	**1.87**	**212**	*e*P		**Pn**	**02 03 15.4**	**-0.7**
	baz=204							
TWG	**Pinlang**	**1.87**	**212**	*e*P		**Pn**	**02 03 15.0**	**-1.0**
	baz=204							
TWK	**Hsinying**	**1.90**	**233**	*e*P		**Pb**	**02 03 19.0**	**0.0**
	baz=227							
CHN1	**Nanshi**	**1.93**	**231**	*e*P		**Pb**	**02 03 20.0**	**+0.6**
	baz=224							
SGST	**Jiashian**	**1.96**	**227**	*e*P		**Pb**	**02 03 18.4**	**-1.5**
	baz=205							
JISG	**Ishigakijimahi**	**1.98**	**85**	P		**Pn**	**02 03 17.3**	**-0.2**
JISG				S		**Sn**	**02 03 41.1**	**-1.0**
ICHU	**Yijhu**	**2.01**	**239**	*e*P		**Pb**	**02 03 20.8**	**0.0**
	baz=215							
SCST	**Cishan**	**2.15**	**225**	*e*P		**Pb**	**02 03 23.3**	**+0.1**
	baz=218							
SSD	**Sandimen**	**2.17**	**220**	*e*P		**Pb**	**02 03 23.2**	**-0.3**
	baz=198							
TSMG	**Majia**	**2.19**	**219**	*e*P		**Pb**	**02 03 23.7**	**-0.3**
	baz=202							
MASBT	**Mashibuluo**	**2.27**	**218**	*e*P		**Pn**	**02 03 22.6**	**+1.1**
	baz=210							
JTJ	**Tarama**	**2.34**	**84**	P		**Pn**	**02 03 23.9**	**+1.4**
JTJ				*e*S		**Sn**	**02 03 51.0**	**+0.1**
EAST	**Anshuo**	**2.35**	**211**	*e*P		**Pn**	**02 03 23.2**	**+0.4**
	baz=203							
SSPT	**Xinbi**	**2.41**	**217**	*e*P		**Pb**	**02 03 26.4**	**-1.3**
	baz=197							
SCZT	**Fangliau**	**2.47**	**215**	*e*P		**Pb**	**02 03 27.5**	**-1.2**
	baz=195							
SLIU	**Shizi**	**2.52**	**210**	*e*P		**Pn**	**02 03 26.6**	**+1.6**
	baz=191							
PHUB	**P'eng-hu**	**2.52**	**250**	*e*P		**Pn**	**02 03 25.6**	**+0.6**
	baz=244							
WDGT	**Dungji**	**2.55**	**244**	*e*P		**Pn**	**02 03 25.7**	**+0.3**
	baz=238							
JIRB	**Irabujima**	**2.79**	**81**	P		**Pn**	**02 03 29.7**	**+1.1**
JIRB				*e*S		**Sn**	**02 04 01.7**	**-0.2**
PTMZ	**Houxiangcun**	**2.82**	**283**	*e*P		**Pn**	**02 03 29.2**	**+0.1**
	baz=281							
JIKM	**Ikemajima**	**2.87**	**79**	P		**Pn**	**02 03 31.1**	**+1.4**
JIKM				*e*S		**Sn**	**02 04 04.8**	**+0.8**
JMJ2	**Miyako jima3**	**2.92**	**83**	P		**Pn**	**02 03 32.1**	**+1.7**
XPSS	**Dashiqiu**	**3.06**	**325**	*e*P		**Pn**	**02 03 31.4**	**-1.0**
	baz=328							

NOU ***05*** *02:04:43.1, 13.˚92S×172.˚00W, h63km, MLv2.7, Samoa Islands*
IDC 05 02:04:27.9±8.4, 15.˚09S×174.˚03W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.5/24, mbtmp3.7/2, MS3.3/2, Ms1 3.3/2, ms1mx2.7/35, Error ellipse: s-maj=353.5km s-min=64.4km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.48**	**62**	P		Pn	02 04 54.5	-15
MSVF	**Nonsavu**	**8.04**	**250**	LR		LR	02 09 32.8	
	comp=Z,171nm,18.0s,baz=156,slow=38							
H11S2	**WAKE ISLAND Hy**	**38.39**	**330**	T		T	02 53 12.1	
	baz=149,slow=76,SNR=2.8							
**H

NTC	**Toucheng** baz=331	**0.51 325**	⇑*iP*	**Pb**	**02 10 21.3**	**0.0**
NTC	baz=331		*eS*	**Sg**	**02 10 27.5**	**-0.1**
TWE	**Neicheng** baz=303	**0.52 303**	⇓*iP*	**Pb**	**02 10 21.3**	**-0.3**
TWE	baz=303		*eS*	**Sg**	**02 10 27.7**	**-0.3**
NACB	**Ninganchiao** baz=240	**0.57 243**	⇓*iP*	**Pg**	**02 10 21.8**	**-0.1**
NACB	baz=240		*eS*	**Sg**	**02 10 29.7**	**+0.3**
ENTT	**Nioudou** baz=292	**0.57 291**	⇓*iP*	**Pg**	**02 10 22.0**	**+0.1**
ENTT	baz=292		*eS*	**Sg**	**02 10 28.7**	**-0.8**
TWB1	**Santiao Chiao** baz=343	**0.59 346**	⇑*iP*	**Pb**	**02 10 23.1**	**+0.4**
TWB1	baz=343		*eS*	**Sb**	**02 10 30.4**	**-0.5**
NDT	**Datong Townshi** baz=286	**0.60 286**	*eP*	**Pb**	**02 10 22.8**	**-0.2**
NDT	baz=286		*eS*	**Sg**	**02 10 30.2**	**-0.4**
TIPB	**Shuangxi** baz=337	**0.61 331**	⇑*iP*	**Pb**	**02 10 23.3**	**+0.2**
TIPB	baz=337		S	**Sg**	**02 10 30.8**	**0.0**
TWD	**Chiawan** baz=231	**0.61 235**	⇑*iP*	**Pg**	**02 10 23.1**	**+0.3**
TWD	baz=231		*eS*	**Sb**	**02 10 31.8**	**+0.2**
ETLH	**Xiulin Townshi** baz=250	**0.65 250**	*eP*	**Pg**	**02 10 23.4**	**0.0**
ETLH	baz=250		*eS*	**Sg**	**02 10 32.2**	**+0.1**
HWA	**Hwalien** baz=220	**0.67 228**	*eP*	**Pb**	**02 10 24.7**	**+0.6**
NNSB	**Datong** baz=272	**0.70 270**	*eP*	**Pg**	**02 10 24.0**	**-0.3**
NNSB	baz=272		*eS*	**Sg**	**02 10 33.2**	**-0.4**
NNSH	**Datong** baz=270	**0.70 270**	*eP*	**Pb**	**02 10 24.6**	**-0.1**
NNSH	baz=270		*eS*	**Sg**	**02 10 33.3**	**-0.3**
NNS	**Nan Shan** baz=273	**0.71 271**	*eP*	**Pg**	**02 10 24.5**	**0.0**
NNS	baz=273		*eS*	**Sg**	**02 10 33.0**	**-0.9**
NWF	**Wu-fen Shan** baz=328	**0.72 332**	*eP*	**Pb**	**02 10 25.6**	**+0.6**
NWF	baz=328		*eS*	**Sb**	**02 10 34.4**	**-0.3**
WFSB	**Wu-fen Shan** baz=328	**0.72 332**	*eP*	**Pb**	**02 10 25.2**	**+0.3**
WFSB	baz=328		*eS*	**Sb**	**02 10 34.9**	**+0.2**
JYNG	**Yonaguni jima**	**0.73 88**	P	**Pb**	**02 10 25.8**	**+0.8**
JYNG			S	**Sb**	**02 10 36.5**	**+1.7**
YHNB	**Yeheng** baz=291	**0.74 289**	⇓*iP*	**Pb**	**02 10 25.3**	**-0.1**
YHNB	baz=291		*eS*	**Sg**	**02 10 34.2**	**-0.7**
TWA	**Mucha** baz=327	**0.75 317**	*eP*	**Pb**	**02 10 25.8**	**+0.3**
TWA	baz=327		*eS*	**Sg**	**02 10 34.8**	**-0.4**
NSK	**Sanguang** baz=295	**0.76 289**	⇓*iP*	**Pg**	**02 10 25.4**	**-0.1**
NSK	baz=295		*eS*	**Sg**	**02 10 34.5**	**-1.0**
NHDH	**Xindian Distri** baz=320	**0.78 313**	*eP*	**Pn**	**02 10 26.6**	**-0.5**
NHDH	baz=320		*eS*	**Sg**	**02 10 35.6**	**-0.4**
YOJ	**Yonaguni jima**	**0.79 88**	P	**Pb**	**02 10 26.7**	**+0.6**
YOJ			*eS*	**Sb**	**02 10 37.6**	**+1.0**
YOJ	**Yonaguni jima** baz=82	**0.79 88**	*eP*	**Pg**	**02 10 26.1**	**+0.1**
YOJ	baz=82		*eS*	**Sb**	**02 10 38.0**	**+1.4**
TNOU	**National Taiwa** baz=333	**0.79 335**	*eP*	**Pb**	**02 10 26.3**	**+0.1**
TNOU	baz=333		*eS*	**Sb**	**02 10 36.5**	**-0.2**
TATO	**Taipei** baz=307	**0.81 312**	*eP*	**Pb**	**02 10 27.0**	**+0.5**
TATO	baz=307		*eS*	**Sg**	**02 10 36.1**	**-1.0**
TAP	**Taipei** baz=319	**0.84 316**	*eP*	**Pn**	**02 10 28.2**	**+0.2**
TAP	baz=319		*eS*	**Sb**	**02 10 38.6**	**+0.5**
FUSS	**Fushou** baz=260	**0.85 258**	*eP*	**Pb**	**02 10 27.5**	**+0.2**
FUSS	baz=260		*eS*	**Sb**	**02 10 38.5**	**0.0**
WHF	**Hehuan Shan** baz=254	**0.86 251**	*eP*	**Pg**	**02 10 27.2**	**-0.2**
WHF	baz=254		*eS*	**Sg**	**02 10 38.7**	**0.0**
YM01	**YM01** baz=327	**0.88 324**	*eP*	**Pb**	**02 10 27.9**	**+0.2**
YM01	baz=327		*eS*	**Sb**	**02 10 39.2**	**-0.3**
NWRT	**Kuosheng** baz=334	**0.89 330**	*eP*	**Pb**	**02 10 28.2**	**+0.4**
NWRT	baz=334		*eS*	**Sb**	**02 10 39.3**	**-0.1**
YM10	**YM10** baz=327	**0.90 324**	*eP*	**Pb**	**02 10 28.1**	**+0.1**
YM10	baz=327		*eS*	**Sg**	**02 10 39.5**	**-0.4**
YM11	**YM11** baz=328	**0.90 325**	*eP*	**Pg**	**02 10 28.0**	**-0.1**
YM11	baz=328		*eS*	**Sb**	**02 10 40.4**	**+0.5**
ESL	**Shilin** baz=220	**0.90 227**	*eP*	**Pb**	**02 10 28.3**	**+0.3**
ESL	baz=220		*eS*	**Sn**	**02 10 41.1**	**-0.5**
YM05	**YM05** baz=327	**0.90 324**	*eP*	**Pb**	**02 10 28.1**	**0.0**
YM05	baz=327		*eS*	**Sg**	**02 10 39.2**	**-0.7**
TWT	**Tachien** baz=255	**0.91 259**	*eP*	**Pn**	**02 10 28.8**	**-0.3**
YM04	**YM04** baz=325	**0.91 322**	*eP*	**Pb**	**02 10 28.2**	**0.0**
YM04	baz=325		*eS*	**Sg**	**02 10 39.7**	**-0.5**
YM08	**YM08** baz=329	**0.91 326**	*eP*	**Pg**	**02 10 27.6**	**-0.7**
YM08	baz=329		*eS*	**Sg**	**02 10 39.8**	**-0.4**
TDCB	**Techi** baz=260	**0.92 259**	*eP*	**Pg**	**02 10 28.3**	**-0.2**
TDCB	baz=260		*eS*	**Sb**	**02 10 40.7**	**+0.1**
TWS1	**Kuangyinshan** baz=318	**0.94 315**	*eP*	**Pn**	**02 10 29.7**	**+0.3**
TWS1	baz=318		*eS*	**Sn**	**02 10 42.3**	**-0.3**
NTY	**Taoyuan** baz=303	**0.96 306**	*eP*	**Pg**	**02 10 29.2**	**0.0**
NTY	baz=303		*eS*	**Sg**	**02 10 41.4**	**-0.4**
CHGB	**Renai** baz=244	**0.96 248**	P	**Pb**	**02 10 29.2**	**0.0**
CHGB	baz=244		*eS*	**Sb**	**02 10 42.3**	**+0.4**
NTST	**Danshui** baz=322	**0.97 319**	*eP*	**Pn**	**02 10 30.6**	**+0.8**
NTST	baz=322		*eS*	**Sn**	**02 10 43.1**	**-0.1**
TWY	**Chenhua** baz=333	**0.98 329**	*eP*	**Pg**	**02 10 29.6**	**0.0**
TWY	baz=333		*eS*	**Sb**	**02 10 41.9**	**-0.1**
EGFH	**Guangfu** baz=200	**1.01 221**	*eP*	**Pb**	**02 10 29.8**	**0.0**
NJD	**Zhudong** baz=288	**1.01 288**	*eP*	**Pb**	**02 10 29.9**	**0.0**
NJD	baz=288		*eS*	**Sn**	**02 10 44.3**	**-0.1**
NCUH	**Zhongli** baz=316	**1.03 301**	*eP*	**Pn**	**02 10 31.4**	**+0.9**
NCUH	baz=316		*eS*	**Sn**	**02 10 44.3**	**-0.4**
LIOB	**Emei** baz=281	**1.05 282**	P	**Pn**	**02 10 31.8**	**+0.8**
LIOB	baz=281		*eS*	**Sn**	**02 10 45.1**	**-0.3**
NSTT	**Nanjuang** baz=280	**1.06 281**	P	**Pn**	**02 10 31.9**	**+0.8**
NSTT	baz=280		*eS*	**Sb**	**02 10 44.6**	**0.0**
HSN1	**Hsinchu** baz=288	**1.08 289**	*eP*	**Pn**	**02 10 31.4**	**0.0**
WHP	**Taichung City** baz=266	**1.11 262**	*eP*	**Pg**	**02 10 32.8**	**+0.7**
WHP	baz=266		*eS*	**Sg**	**02 10 46.4**	**-0.2**
SBCB	**Hsinchu** baz=289	**1.12 289**	*eP*	**Pg**	**02 10 33.0**	**+0.7**
SBCB	baz=289		*eS*	**Sn**	**02 10 48.5**	**+1.5**
HSN	**Hsinchu** baz=291	**1.14 289**	*eP*	**Pg**	**02 10 33.4**	**+0.8**
VWDT	**VWDT** baz=229	**1.14 234**	*eP*	**Pn**	**02 10 32.4**	**+0.3**
VWDT	baz=229		*eS*	**Sg**	**02 10 47.5**	**-0.1**
HGSD	**Ruisui** baz=195	**1.15 215**	*eP*	**Pb**	**02 10 31.5**	**-0.7**
HGSD	baz=195		*eS*	**Sn**	**02 10 48.2**	**+0.5**
WPL	**Puli Township** baz=233	**1.17 249**	P	**Pg**	**02 10 33.6**	**+0.4**
DPDB	**Guoxing** baz=236	**1.19 251**	P	**Pg**	**02 10 33.8**	**+0.3**
EHY	**Hungye** baz=213	**1.19 220**	P	**Pn**	**02 10 32.2**	**-0.7**
NMLH	**Miaoli** baz=274	**1.24 275**	*eP*	**Pg**	**02 10 35.5**	**+0.9**
NMLH	baz=274		*eS*	**Sg**	**02 10 51.3**	**+0.5**
TWQ1	**Liyutan** baz=252	**1.26 266**	P	**Pg**	**02 10 35.7**	**+0.8**
NSY	**Sanyi** baz=267	**1.27 270**	*eP*	**Pg**	**02 10 35.8**	**+0.7**
SMLT	**Sun Moon Lake** baz=229	**1.27 245**	P	**Pg**	**02 10 35.6**	**+0.6**
SMLT	baz=229		*eS*	**Sg**	**02 10 53.1**	**+1.5**
SSLB	**Suanglung** baz=225	**1.27 240**	P	**Pb**	**02 10 34.8**	**+0.5**
SSLB	baz=225		*eS*	**Sg**	**02 10 51.6**	**0.0**
TYC	**Yuchr** baz=232	**1.29 246**	*eP*	**Pg**	**02 10 35.6**	**0.0**
YULB	**Yu-li** baz=209	**1.30 217**	P	**Pn**	**02 10 33.6**	**-0.7**
YULB	baz=209		*eS*	**Sg**	**02 10 52.5**	**0.0**
EYUL	**Yuli** baz=225	**1.32 215**	*eP*	**Pn**	**02 10 34.7**	**+0.1**
TWF1	**Yuli** baz=225	**1.33 216**	*eP*	**Pn**	**02 10 33.9**	**-0.8**
TCU	**Taichung** baz=255	**1.37 258**	*eP*	**Pg**	**02 10 37.4**	**+0.2**
WDJ	**Dajia District** baz=275	**1.38 267**	*eP*	**Pb**	**02 10 36.4**	**+0.2**
WWF	**Wufeng** baz=251	**1.38 254**	*eP*	**Pg**	**02 10 37.9**	**+0.6**
WHYT	**Xinyi Township** baz=224	**1.39 238**	*eP*	**Pg**	**02 10 37.2**	**-0.3**
WJS	**Zhushan** baz=241	**1.43 245**	*eP*	**Pg**	**02 10 38.7**	**+0.4**
YUS	**Yu-Shan** baz=224	**1.44 230**	*eP*	**Pb**	**02 10 37.6**	**0.0**
IRIF	**Iriomote-Funau**	**1.45 94**	P	**Pn**	**02 10 35.8**	**-0.5**
IRIF			S	**Sn**	**02 10 54.0**	**-1.0**
WNT	**Mingjian** baz=244	**1.45 248**	*eP*	**Pg**	**02 10 38.5**	**0.0**
FULB	**Fuli** baz=192	**1.46 213**	*eP*	**Pn**	**02 10 35.7**	**-0.9**
WCHH	**Zhanghua** baz=254	**1.49 257**	*eP*	**Pb**	**02 10 38.4**	**+0.2**
ALS	**Alisham** baz=228	**1.53 234**	*eP*	**Pb**	**02 10 39.2**	**+0.2**
CHN5	**Tsauling** baz=217	**1.58 239**	*eP*	**Pg**	**02 10 40.6**	**-0.5**
ELDTW	**Lidau** baz=201	**1.61 220**	*eP*	**Pn**	**02 10 38.5**	**-0.3**
EDH	**Donghe** baz=189	**1.65 208**	*eP*	**Pn**	**02 10 38.2**	**-0.9**
WDLH	**Douliu** baz=239	**1.65 244**	*eP*	**Pb**	**02 10 41.3**	**+0.6**
JKRS	**Kuro-shima**	**1.71 96**	P	**Pn**	**02 10 40.2**	**+0.3**
JKRS			S	**Sn**	**02 11 01.2**	**-0.3**
WTK	**Tuku** baz=240	**1.77 246**	*eP*	**Pb**	**02 10 43.1**	**+0.2**
CHN2	**Minshiung** baz=221	**1.77 240**	*eP*	**Pn**	**02 10 41.9**	**+1.0**
STYH	**Taoyuan** baz=206	**1.78 225**	*eP*	**Pn**	**02 10 41.9**	**+1.0**
LONT	**Longtian** baz=205	**1.78 212**	*eP*	**Pn**	**02 10 39.5**	**-1.6**
TPUB	**Ta-pu** baz=212	**1.79 231**	*eP*	**Pb**	**02 10 43.1**	**-0.1**
STYT	**Tauyuan** baz=206	**1.79 226**	*eP*	**Pb**	**02 10 43.9**	**+0.6**
JIJ	**Ishigaki jima**	**1.82 92**	P	**Pn**	**02 10 41.2**	**-0.3**
JIJ			*eS*	**Sn**	**02 11 02.6**	**-1.7**
WTP	**Ta-pu** baz=224	**1.84 230**	*eP*	**Pb**	**02 10 44.2**	**+0.2**
LDUT	**Ludao** baz=183	**1.86 200**	*eP*	**Pn**	**02 10 40.4**	**-1.6**
TWGBT	**Beinan** baz=205	**1.88 212**	*eP*	**Pn**	**02 10 41.3**	**-1.0**
TWG	**Pinlang** baz=205	**1.88 212**	*eP*	**Pn**	**02 10 41.3**	**-1.1**
TWK	**Hsinying** baz=227	**1.91 233**	*eP*	**Pb**	**02 10 45.0**	**-0.4**
SNST	**Tainan City** baz=225	**1.94 232**	*eP*	**Pb**	**02 10 44.8**	**-0.8**
CHN1	**Nanshi** baz=224	**1.94 230**	*eP*	**Pb**	**02 10 45.8**	**+0.1**
SGST	**Jiashian** baz=205	**1.97 227**	*eP*	**Pn**	**02 10 44.6**	**+1.0**
JISG	**Ishigakijimahi**	**1.98 85**	P	**Pn**	**02 10 43.3**	**-0.3**
JISG			*eS*	**Sn**	**02 11 07.0**	**-1.1**
SLGT	**Liugui** baz=218	**1.99 224**	*eP*	**Pb**	**02 10 46.3**	**-0.3**
SCST	**Cishan** baz=218	**2.16 225**	*eP*	**Pb**	**02 10 49.3**	**-0.3**
SSD	**Sandimen** baz=198	**2.18 220**	*eP*	**Pn**	**02 10 47.9**	**+1.5**
TSMG	**Majia** baz=202	**2.21 219**	*eP*	**Pb**	**02 10 49.3**	**-1.0**
MASBT	**Mashibuluo** baz=210	**2.29 218**	*eP*	**Pn**	**02 10 48.5**	**+0.6**
EAST	**Anshuo** baz=191	**2.37 211**	*eP*	**Pn**	**02 10 48.5**	**-0.5**
SSPT	**Xinbi** baz=197	**2.42 217**	*eP*	**Pb**	**02 10 53.1**	**-0.9**
SCZT	**Fangliau** baz=195	**2.49 215**	*eP*	**Pn**	**02 10 53.2**	**+2.5**
VWUC	**VWUC** baz=282	**2.52 283**	*eP*	**Pn**	**02 10 50.9**	**-0.2**
PNG	**Penghu** baz=246	**2.52 251**	*eP*	**Pn**	**02 10 50.6**	**-0.5**
PHUB	**P'eng-hu** baz=244	**2.53 249**	*eP*	**Pn**	**02 10 51.3**	**+0.1**
SLIU	**Shizi** baz=194	**2.53 210**	*eP*	**Pn**	**02 10 50.6**	**-0.7**
WDGT	**Dungji** baz=237	**2.56 243**	*eP*	**Pn**	**02 10 52.9**	**+1.3**
MATB	**Ma-tsu** baz=327	**2.63 311**	*eP*	**Pn**	**02 10 53.3**	**+0.7**
PTMZ	**Houxiangcun** baz=281	**2.82 283**	*eP*	**Pn**	**02 10 55.2**	**0.0**

IDC 05 02:22:23.6±2.7, 7°55S×118°67E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/27, mbtmp3.2/3, ML3.3/1, Error ellipse: s-maj=233.0km s-min=28.6km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.56**	**131**	P	P	02 26 53.2	-0.1
	0.1nm,0.3s,baz=308,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**21.70**	**139**	P	P	02 27 16.4	+0.1
	0.4nm,0.4s,baz=316,slow=8.8,SNR=16						
MKAR	**Makanchi Array**	**63.02**	**333**	P	P	02 32 52.5	0.0
	0.1nm,0.4s,baz=150,slow=4.6,SNR=2.0						

*NEIC **05** 03:27:47.7±1.5, 23°.72S±0°.08×179°.6W±0°.1, h514km±7km, mb4.2/15, Error ellipse: s-maj=19.9km s-min=11.7km az=78.0*
*NOU **05** 03:27:48.1, 23°.87S×179°.30W, h524km, mb4.5, South of Fiji Islands*
*IDC **05** 03:27:50.0±1.3, 23°.84S×179°.88W, h524km±14km, mb3.6/9, mb1 3.7/11, mb1mx3.4/35, mbtmp4.4/11, Error ellipse: s-maj=17.2km s-min=15.8km az=109.0*
ISC 05 03:27:47.7±0.5, 23°.93S±0°.06×179°.58W±0°.08, h512km, n65, σ1s 86/76, mb4.2/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.50**	**165**	P	**P**	**03 29 22.1**	**+2.4**
RAO	**Raoul Island**	**5.50**	**165**	P	**P**	**03 29 22.3**	**+2.6**
	64nm,0.3s,baz=288,slow=19,SNR=2.8						
RAO				S	**S**	**03 30 33.9**	**-1.3**
	38nm,0.3s,baz=287,slow=19,SNR=1.8						
GLKZ	**Green Lake**	**5.51**	**165**	P	**P**	**03 29 22.4**	**+2.6**
GLKZ				S	**S**	**03 30 34.0**	**-1.2**
MSVF	**Nonsavu**	**6.55**	**340**	P	**P**	**03 29 30.6**	**+0.5**
	0.9nm,0.3s,baz=158,slow=17,SNR=2.0						
MSVF	**Nonsavu**	**6.55**	**340**	P	**P**	**03 29 32.2**	**+2.1**
MARNC	**Mare, Loyalty**	**11.70**	**280**	P	**P**	**03 30 24.9**	**+1.8**
AFI	**Afiamalu**	**12.40**	**38**	P	**P**	**03 30 27.4**	**-3.2**
AFI	**Afiamalu**	**12.40**	**38**	P	**P**	**03 30 29.2**	**-1.4**
LIFNC	**LIFOU**	**12.60**	**282**	P	**P**	**03 30 34.7**	**+2.2**
OUZ	**Omahuta**	**12.72**	**206**	P	**P**	**03 30 35.8**	**+2.2**
OUZ	**Omahuta**	**12.72**	**206**	P	**P**	**03 30 36.9**	**+3.3**
DVP	**Devils Point** 122μm,1.0s	**12.99**	**296**	P	**P**	**03 30 39.6**	**+2.8**
DZM	**Mont Dzumac**	**13.01**	**275**	P	**P**	**03 30 38.8**	**+1.8**
	0.4nm,0.3s,baz=122,slow=19,SNR=2.3						
KUZ	**Kuaotunu**	**13.40**	**197**	P	**P**	**03 30 42.7**	**+1.9**
MXZ	**Matakaoa Point**	**13.71**	**187**	P	**P**	**03 30 46.7**	**+2.7**
HAZ	**Te Kaha**	**13.97**	**189**	P	**P**	**03 30 48.6**	**+1.9**
HAZ				S	**S**	**03 33 11.9**	**-2.5**
PKGZ	**Pakihiroa**	**14.06**	**188**	P	**P**	**03 30 49.9**	**+2.1**
RUGZ	**Raukumara Rang**	**14.19**	**189**	P	**P**	**03 30 50.5**	**+1.3**
RUGZ				S	**S**	**03 33 18.2**	**-0.6**
PUZ	**Puketiti**	**14.22**	**187**	P	**P**	**03 30 50.0**	**+0.6**
PUZ				S	**S**	**03 33 15.5**	**-3.7**
TOZ	**Tahuroa Road**	**14.39**	**196**	P	**P**	**03 30 52.9**	**+1.8**
TOZ				S	**S**	**03 33 20.9**	**-1.5**
KMRZ	**Kaimai**	**14.39**	**194**	P	**P**	**03 30 55.8**	**+4.6**
URZ	**Urewera**	**14.56**	**190**	P	**P**	**03 30 51.3**	**-1.7**
	1.9nm,0.3s,baz=301,slow=19,SNR=8.1						
URZ				S	**S**	**03 33 23.6**	**-2.1**
	0.4nm,0.3s,baz=128,slow=20,SNR=1.8						
URZ	**Urewera**	**14.56**	**190**	P	**P**	**03 30 55.0**	**+2.1**
URZ	**Urewera**	**14.56**	**190**	P	**P**	**03 30 51.9**	**-1.1**
URZ				S	**S**	**03 33 23.3**	**-2.5**
MWZ	**Matawai**	**14.57**	**189**	P	**P**	**03 30 53.5**	**+0.4**
MWZ				S	**S**	**03 33 25.7**	**-0.3**
RAGZ	**Rawiri**	**14.75**	**189**	P	P	03 31 00.5	+5.5
MUGZ	**Murupara**	**14.83**	**191**	P	**P**	**03 30 56.8**	**+1.0**
RIGZ	**Rimuhau**	**14.90**	**188**	P	**P**	**03 30 58.1**	**+1.5**
SANVU	**Saraoutou**	**15.03**	**302**	P	**P**	**03 31 00.9**	**+2.7**
MTHZ	**Maungataniwha**	**15.19**	**191**	P	**P**	**03 31 01.2**	**+1.6**
MTHZ				S	**S**	**03 33 34.5**	**-3.2**
RAHZ	**Arahi**	**15.21**	**190**	P	**P**	**03 31 01.9**	**+2.1**
RPZ	**Rata Peaks**	**21.19**	**199**	P	**P**	**03 31 57.7**	**+1.5**
	17nm,0.4s,baz=25,slow=0.5,SNR=23						
RPZ	**Rata Peaks**	**21.19**	**199**	P	**P**	**03 31 57.6**	**+1.3**
EIDS	**Eidsvold**	**26.68**	**261**	P	**P**	**03 32 44.2**	**-1.3**
EIDS				IAmb	IAmb	03 32 46.9	
	comp=Z,4.1nm,0.6s						
CTAO	**Charters Tower**	**31.86**	**270**	P	**P**	**03 33 31.2**	**+0.7**
TOO	**Toolangi**	**32.76**	**237**	P	**P**	**03 33 38.1**	**+0.1**
TOO				IAmb	IAmb	03 33 40.7	
	comp=Z,11nm,1.3s						
TAU	**Tasmania Unive**	**33.20**	**227**	P	**P**	**03 33 42.3**	**+0.8**
PMG	**Port Moresby**	**34.87**	**289**	P	**P**	**03 33 55.6**	**-0.4**
	comp=Z,14nm,0.5s,baz=98,slow=7.2,SNR=4.7						
PMG	**Port Moresby**	**34.87**	**289**	IAmb	IAmb	03 33 56.6	
	comp=Z,18nm,0.7s						
COEN	**Coen**	**36.50**	**279**	P	**P**	**03 34 09.2**	**-0.4**
AS31	**Alice Springs**	**42.41**	**261**		**P**	**03 34 57.1**	**-0.1**
ASAR	**Alice Springs**	**42.41**	**261**	P	**P**	**03 34 56.8**	**-0.4**
	comp=Z,3.3nm,0.5s,baz=93,slow=7.0,SNR=42						
ASAR				S	**S**	**03 40 39.0**	**-2.6**
	comp=Z,0.9nm,0.9s,baz=94,slow=15,SNR=6.1						
ASAR	**Alice Springs**	**42.41**	**261**	P	**P**	**03 34 55.6**	**-1.6**
WR0	**Warramunga Arr**	**42.60**	**266**	P	**P**	**03 34 58.0**	**-0.7**
WR0				IAmb	IAmb	03 34 58.3	
	comp=Z,6.7nm,0.5s						
WB2	**Warramunga Arr**	**42.78**	**266**	P	**P**	**03 34 59.5**	**-0.6**
WB0	**Warramunga Arr**	**42.78**	**266**	P	**P**	**03 34 59.5**	**-0.7**
WRA	**Warramunga Arr**	**42.79**	**266**	P	**P**	**03 34 59.6**	**-0.6**
	comp=Z,11nm,0.4s,baz=102,slow=8.5,SNR=323						
WRA				S	**S**	**03 40 41.9**	**-5.2**
	comp=Z,0.6nm,0.7s,baz=104,slow=13,SNR=4.6						
MTN	**Manton Dam**	**47.84**	**274**	P	**P**	**03 35 37.9**	**-1.0**
MTN				IAmb	IAmb	03 35 38.6	
	comp=Z,6.7nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.21**	**265**	P	**P**	**03 36 04.0**	**+0.3**
FITZ				IAmb	IAmb	03 36 05.2	
	comp=Z,5.4nm,0.7s						
VNDA	**Vanda**	**54.38**	**185**	P	**P**	**03 36 27.8**	**+2.3**
	comp=Z,0.6nm,0.8s,baz=18,slow=5.5,SNR=3.6						
TOLI2	**Tolitoli**	**62.96**	**284**		**P**	**03 37 22.4**	**-2.0**
TOLI2				IAmb	IAmb	03 37 25.8	
	comp=Z,8.8nm,0.7s						
MJAR	**Matsushiro Arr**	**72.14**	**325**	P	**P**	**03 38 19.6**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=154,slow=6.9,SNR=6.4						
KSRS	**Korea Array**	**78.52**	**320**	P	**P**	**03 38 55.6**	**0.0**
	comp=Z,0.9nm,0.7s,baz=134,slow=7.2,SNR=5.4						
GO07	**Milladeo Hill,**	**84.78**	**135**	P	**P**	**03 39 27.7**	**-0.1**
SEY	**Seymchan**	**89.38**	**348**	P	**P**	**03 39 48.9**	**0.0**
	comp=Z,0.5nm,0.5s,baz=78,slow=20,SNR=2.0						
CMAR	**Chiang Mai Arr**	**89.90**	**290**	P	**P**	**03 39 53.7**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=137,slow=4.0,SNR=5.8						
MKAR	**Makanchi Array**	**112.46**	**313**	PKiKP	**PKiKP**	**03 45 24.1**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=242,slow=2.7,SNR=4.6						
ARCES	**ARCESS Array B**	**131.99**	**348**	PKhKP	PKPpre	03 45 57.7	
	comp=Z,2.2nm,0.9s,baz=172,slow=1.8,SNR=2.4						
ARCES				PKP	**PKPdf**	**03 46 01.9**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=80,slow=1.0,SNR=8.4						
FINES	**FINESS Array B**	**138.60**	**342**	PKhKP	PKPpre	03 46 05.9	
	comp=Z,2.7nm,0.9s,baz=48,slow=2.1,SNR=4.4						
FINES				PKP	**PKPdf**	**03 46 14.6**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=64,slow=3.2,SNR=4.0						
FINES				SKPbc	**SKPbc**	**03 48 59.4**	**-1.4**
	comp=Z,2.0nm,1.1s,baz=29,slow=4.4,SNR=4.7						
AKASG	**Malin Array Be**	**145.20**	**328**	PKP	**PKPdf**	**03 46 26.4**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=45,slow=4.0,SNR=9.6						
AKBB	**Malin Array Si**	**145.20**	**328**	PKPdf	**PKPdf**	**03 46 26.3**	**-0.2**
BR131	**Keskin Array S**	**147.90**	**307**	PKPbc	**PKPdf**	**03 46 33.0**	**+1.5**
BRTR	**Keskin Array B**	**147.90**	**307**	PKPbc	**PKPbc**	**03 46 34.8**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=141,slow=5.6,SNR=6.0						
CLL	**Collm**	**150.99**	**344**	*i* PKPbc	**PKPbc**	**03 46 41.9**	**-0.3**
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**150.99**	**344**		**PKPbc**	**03 46 41.9**	**-0.3**

*JMA **05** 03:45:47.7±0.1, 37°.13N×140°.86E, h99km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs5.00000°, δ17.00000°, λ-66.00000°. NP2: φs160.00000°, δ74.00000°, λ-97.00000°. Principal axes: T Plg29.0000°, Azm256.0000°; N Plg7.0000°, Azm162.0000°; P Plg60.0000°, Azm60.0000°;*
JMA Felt II J1.
*NEIC **05** 03:45:47.7±1.3, 37°.11N±0°.03×140°.8E±0°.1, h100km±6km, mb4.1/7 Error ellipse: s-maj=12.4km s-min=3.7km az=99.0*
*NIED **05** 03:45:47.7, 37°.13N×140°.86E, h99km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-5.85; Mθθ1.12; Mφφ4.72; Mrθ0.52; Mθφ2.34; Mφr5.79; Fault plane solution: M08.25000×10¹⁴ NP1: φs192.00000°, δ68.00000°, λ-101.00000°. NP2: φs39.00000°, δ25.00000°, λ-65.00000°.*
*IDC **05** 03:45:47.9±0.6, 37°.04N×140°.82E, h100km±6km, mb3.5/15, mb1 3.7/21, mb1mx3.6/42, mbtmp3.9/21, MS2.5/2, Ms1 2.5/2, ms1mx2.2/35 Error ellipse: s-maj=14.2km s-min=9.2km az=100.0*

ISC 05 03:45:47.4±0.6, 37°06'N±0'04"×140°95'E±0'05, h100km±4km, n67, σ1°47/78, mb4.0/19, 1C-11D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.13**	**288**	⇓P	**Pn**	**03 46 01.6**	**+0.2**
ONAJ				S	**Sn**	**03 46 11.9**	**0.0**
JFK	**Kawauchi**	**0.31**	**349**	⇓P	**Pn**	**03 46 02.0**	**-0.1**
JFK				S	**Sn**	**03 46 12.2**	**-0.8**
JFFD	**Fukushimafurud**	**0.31**	**275**	⇓P	**Pn**	**03 46 02.2**	**+0.2**
JFFD				S	**Sn**	**03 46 12.4**	**-0.6**
JFT	**Otama**	**0.67**	**313**	⇓P	**Pn**	**03 46 04.0**	**-0.5**
JFT				S	**Sn**	**03 46 16.2**	**-1.1**
JMM	**Marumori**	**0.81**	**351**	⇓P	**Pn**	**03 46 05.3**	**-0.6**
JMM				S	**Sn**	**03 46 18.0**	**-1.7**
JMM	**Marumori**	**0.81**	**351**		**Pn**	**03 46 05.2**	**-0.6**
JYT	**Yasato**	**1.03**	**216**		**Pn**	**03 46 08.0**	**-0.1**
JFY	**Yanaizu**	**1.05**	**289**	⇓P	**Pn**	**03 46 07.8**	**-0.6**
JFY				eS	**Sn**	**03 46 23.0**	**-1.2**
JOU	**Okura**	**1.32**	**350**	⇓P	**Pn**	**03 46 11.1**	**-0.4**
JOU				S	**Sn**	**03 46 28.7**	**-1.0**
JYS	**Shirataka**	**1.35**	**329**	⇓P	**Pn**	**03 46 11.4**	**-0.4**
JYS				eS	**Sn**	**03 46 29.3**	**-1.0**
JAG	**Ashikaga**	**1.36**	**243**	⇓P	**Pn**	**03 46 12.0**	**+0.1**
JAG				eS	**Sn**	**03 46 29.7**	**-0.8**
JKT	**Katashina**	**1.39**	**258**	⇓P	**Pn**	**03 46 12.8**	**+0.4**
JIO	**Ouri**	**1.43**	**13**	⇓P	**Pn**	**03 46 12.0**	**-0.7**
JIO				S	**Sn**	**03 46 29.7**	**-2.2**
JNS	**Sasagawa**	**1.50**	**301**	P	**Pn**	**03 46 12.7**	**-0.9**
JNS				eS	**Sn**	**03 46 32.0**	**-1.5**
JMK	**Ichinoseki**	**1.90**	**6**	P	**Pn**	**03 46 17.9**	**-0.7**
JMK				S	**Sn**	**03 46 40.9**	**-1.5**
JYK	**Kaneyama**	**1.91**	**346**	⇑P	**Pn**	**03 46 18.4**	**-0.4**
JYK				eS	**Sn**	**03 46 41.8**	**-0.9**
JAW	**Awa shima**	**1.94**	**316**	P	**Pn**	**03 46 18.6**	**-0.5**
JAW				eS	**Sn**	**03 46 41.8**	**-1.5**
MJAR	**Matsushiro Arr**	**2.26**	**258**	P	**Pn**	**03 46 23.5**	**+0.2**
	1.6nm,0.3s,baz=88,slow=16,SNR=82						
MJAR				S	**Sn**	**03 46 47.1**	**-3.8**
	5.3nm,0.3s,baz=86,slow=16,SNR=11						
MJAR				LR	LR	03 47 07.3	
	comp=Z,97nm,18.9s,baz=80,slow=37						
MJAR	**Matsushiro Arr**	**2.26**	**258**	Pn	**Pn**	**03 46 23.0**	**-0.3**
MAJO	**Matsushiro**	**2.26**	**258**		**Pn**	**03 46 24.1**	**+0.8**
MAT	**Matsushiro**	**2.26**	**258**	P	**Pn**	**03 46 23.7**	**+0.4**
MAT				eS	**Sn**	**03 46 50.5**	**-0.4**
MJB9	**Matsu-Tunnel**	**2.26**	**258**	Pn	**Pn**	**03 46 23.3**	**0.0**
JSD	**Sado**	**2.35**	**295**		**Pn**	**03 46 23.1**	**-1.4**
JGF	**Kuroka**	**3.25**	**244**		**Pn**	**03 46 36.7**	**+0.3**
INU	**Inuyama**	**3.61**	**243**		**Pn**	**03 46 41.2**	**-0.1**
JHJ	**Hachijo jima 2**	**4.05**	**194**	P	**Pn**	**03 46 45.8**	**-1.4**
	7.9nm,0.3s,baz=306,slow=19,SNR=2.1						
JHJ				S	**Sn**	**03 47 32.8**	**-0.8**
	80nm,0.3s,baz=340,slow=23,SNR=16						
JWT	**Wachi**	**4.83**	**250**		**Pn**	**03 46 57.1**	**-0.6**
ASAJ	**Asahikawa**	**7.16**	**10**	P	**Pn**	**03 47 28.4**	**-0.9**
	0.8nm,0.3s,baz=204,slow=12,SNR=7.9						
ASAJ				S	**Sn**	**03 48 43.6**	**-5.4**
	1.0nm,0.3s,baz=241,slow=10.0,SNR=1.6						
USA0B	**Ussuriysk Arra**	**9.85**	**319**	Pn	**Pn**	**03 48 02.9**	**-3.1**
USRK	**Ussuriysk Ar.**	**9.85**	**319**	P	**Pn**	**03 48 05.4**	**-0.6**
	baz=130,slow=14,SNR=5.8						
JCJ	**Chichijima**	**9.99**	**174**	S	**Sn**	**03 49 51.2**	**-7.0**
	7.0nm,0.3s,baz=276,slow=19,SNR=2.1						
KSRS	**Korea Array**	**10.39**	**276**	P	**Pn**	**03 48 14.5**	**+1.2**
	0.3nm,0.3s,baz=90,slow=14,SNR=17						
KLR	**Kul'dur**	**13.88**	**334**	P	**Pn**	**03 49 00.2**	**+0.7**
	0.1nm,0.3s,baz=151,slow=10,SNR=2.8						
MA2	**Magadan**	**23.41**	**13**	LR	LR	03 59 45.6	
	comp=Z,14nm,19.4s,baz=138,slow=36						
SEY	**Seymchan**	**26.84**	**12**	P	**P**	**03 51 20.4**	**+2.3**
	1.5nm,0.8s,baz=204,slow=5.7,SNR=5.9						
SONM	**Songino Array**	**27.46**	**304**	P	**P**	**03 51 23.3**	**-0.7**
	1.5nm,0.5s,baz=107,slow=9.0,SNR=13						
SONM	**Songino Array**	**27.46**	**304**	IAmb	IAmb	03 51 24.5	
	comp=Z,3.5nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**28.48**	**120**	T	T	04 21 29.5	
	baz=313,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**28.49**	**120**	T	T	04 21 51.0	
	baz=313,slow=75,SNR=52						
H11N3	**WAKE ISLAND Hy**	**28.50**	**120**	T	T	04 21 30.1	
	baz=313,slow=75,SNR=2.3						
H11S1	**WAKE ISLAND Hy**	**29.19**	**122**	T	T	04 22 40.1	
	baz=314,slow=75,SNR=64						
H11S3	**WAKE ISLAND Hy**	**29.19**	**122**	T	T	04 22 38.1	
	baz=314,slow=75,SNR=51						
H11S2	**WAKE ISLAND Hy**	**29.20**	**122**	T	T	04 22 43.8	
	baz=314,slow=75,SNR=50						
ZAA0	**Zalesovo Array**	**41.62**	**312**	P	**P**	**03 53 23.4**	**-2.0**
ZAA0				IAmb	IAmb	03 53 25.4	
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**41.62**	**312**	P	**P**	**03 53 25.0**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=98,slow=6.8,SNR=12						
MK31	**Makanchi Array**	**43.79**	**302**	P	**P**	**03 53 42.6**	**-0.5**
MK31				IAmb	IAmb	03 53 43.8	
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**43.79**	**302**	P	**P**	**03 53 42.6**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=88,slow=10,SNR=25						
MAKZ	**Makanchi**	**44.00**	**302**	P	**P**	**03 53 44.7**	**0.0**
KDAK	**Kodiak Island**	**47.33**	**42**	P	**P**	**03 54 11.5**	**+0.8**
	comp=Z,6.0nm,1.0s,baz=294,slow=12,SNR=5.6						
ILAR	**Eielson Array**	**49.67**	**32**	P	**P**	**03 54 29.3**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=261,slow=5.7,SNR=12						
ILAR				pP	**pP**	**03 54 54.4**	**+2.0**
	comp=Z,0.5nm,0.8s,baz=274,slow=7.1,SNR=3.2						
BCAR	**Beaver Creek A**	**52.08**	**34**	P	**P**	**03 54 47.1**	**+0.3**
INK	**Inuvik**	**54.53**	**27**	P	**P**	**03 55 05.5**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=312,slow=7.2,SNR=5.9						
WRA	**Warramunga Arr**	**57.04**	**187**	P	**P**	**03 55 23.3**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=3.8,slow=7.2,SNR=29						
WRA				pP	**pP**	**03 55 48.2**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=2.9,slow=7.5,SNR=3.7						
ABKAR	**Akbulak array**	**57.64**	**310**	P	**P**	**03 55 26.3**	**-0.7**
ABKAR				IAmb	IAmb	03 55 30.6	
	comp=Z,1.2nm,0.7s						
AS31	**Alice Springs**	**60.77**	**187**	P	**P**	**03 55 49.1**	**+0.4**
ASAR	**Alice Springs**	**60.77**	**187**	P	**P**	**03 55 49.2**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=16,slow=6.0,SNR=7.3						
ASAR				pP	**pP**	**03 56 14.0**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=7.8,slow=6.5,SNR=4.7						
YKA	**Yellowknife Ar**	**63.97**	**30**	P	**P**	**03 56 09.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=300,slow=6.4,SNR=6.3						
FIA1	**FINESS Array S**	**68.61**	**332**	P	**P**	**03 56 39.9**	**+0.7**
FIA1				IAmb	IAmb	03 57 04.0	
	comp=Z,19nm,1.4s						
FINES	**FINESS Array B**	**68.61**	**332**	P	**P**	**03 56 39.5**	**+0.2**
	comp=Z,2.5nm,1.1s,baz=20,slow=6.1,SNR=3.6						
FINES				pP	**PcP**	**03 57 03.1**	**-0.4**
	comp=Z,2.6nm,0.8s,baz=54,slow=9.7,SNR=3.9						
AKASG	**Malin Array Be**	**74.05**	**322**	P	**P**	**03 57 12.6**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=42,slow=6.3,SNR=2.0						
NVAR	**Mina Array Bea**	**75.27**	**53**	P	**P**	**03 57 21.2**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=275,slow=5.8,SNR=4.7						
PDAR	**Pinedale Array**	**77.91**	**45**	P	**P**	**03 57 35.5**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=165,slow=2.9,SNR=4.2						
TXAR	**Lajitas Array**	**90.40**	**52**	P	**P**	**03 58 39.0**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=283,slow=3.2,SNR=8.9						
LPAZ	**La Paz**	**147.00**	**59**	PKPbc	**PKPbc**	**04 05 19.7**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=23,slow=3.2,SNR=4.6						
H03N2	**Juan Fernandez**	**147.40**	**96**	T	T	06 50 37.2	
	baz=291,slow=76,SNR=7.6						
H03N3	**Juan Fernandez**	**147.41**	**96**	T	T	06 50 37.4	
	baz=291,slow=76,SNR=8.3						
H03N1	**Juan Fernandez**	**147.41**	**96**	T	T	06 50 38.4	
	baz=291,slow=76,SNR=7.2						

*ISK **05** 03:57:15.3, 37°.44N×38°.73E, h3km, ML2.9/8*
*DDA **05** 03:57:15.6, 37°.43N×38°.74E, h16km±3km, ML3.0*

ISC 05 03:57:15.3±0.9, 37°43'N±0'03"×38°74'E±0'02", h6km±7km, n32, σ0°92/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.07**	**81**	PG	**Pg**	**03 57 17.0**	**-0.1**
URFA				SG	**Sg**	**03 57 18.5**	**+0.1**
SANL	**SANLIURFA_Merk**	**0.33**	**142**	*i* P	**Pb**	**03 57 23.2**	**-0.4**
SANL				*i* S	**Sg**	**03 57 27.3**	**+1.2**
SANL				IAML		03 57 31.0	
	comp=N,2μm,0.3s						
SANL				IAML		03 57 32.0	
	comp=E,3μm,0.4s						
MALT	**Malatya**	**0.92**	**345**	PG	**Pg**	**03 57 33.2**	**+0.3**
MALT				SG	**Sb**	**03 57 46.5**	**+0.3**
GZT	**Gaziantep**	**0.94**	**266**	*i* P	**Pb**	**03 57 33.8**	**-0.3**
GZT				*i* S	**Sb**	**03 57 47.5**	**+0.7**
GZT				IAML		03 57 50.0	
	comp=N,362nm,0.1s						
GZT				IAML		03 57 52.0	
	comp=E,444nm,0.7s						
AKCD	**Akcadag**	**1.08**	**324**	*i* P	**Pb**	**03 57 36.2**	**-0.2**
AKCD				IAML		03 57 53.0	
	comp=E,580nm,0.8s						
AKCD				IAML		03 57 54.0	
	comp=N,865nm,0.3s						
ELZG	**Elazig**	**1.08**	**10**	*i* P	**Pg**	**03 57 36.2**	**0.0**
ELZG				*i* S	**Sb**	**03 57 51.1**	**0.0**
ELZG				IAML		03 57 54.0	
	comp=N,225nm,0.4s						
ELZG				IAML		03 57 56.0	
	comp=E,355nm,0.3s						
DYBB	**Diyarbakir**	**1.23**	**64**	PN	**Pn**	**03 57 40.0**	**+0.9**
DYBB				SN	**Sn**	**03 57 57.4**	**+1.3**
GAZ	**Gaziantep**	**1.24**	**258**	PN	**Pn**	**03 57 39.9**	**+0.6**
GAZ				SN	**Sn**	**03 57 57.8**	**+1.4**
KHMN	**Narli-Kahraman**	**1.26**	**269**	PN	**Pg**	**03 57 39.8**	**+0.3**
MAZI	**Mazidag**	**1.36**	**88**	PN	**Pg**	**03 57 42.1**	**+0.6**
MAZI				SN	**Sn**	**03 58 01.0**	**+1.6**
HCB	**Kahramanmara**	**1.46**	**267**	*i* P	**Pn**	**03 57 41.6**	**-0.7**
HCB				*i* S	**Sn**	**03 58 00.1**	**-1.6**
KUZU	**Kuzuini**	**1.48**	**244**	*i* P	**Pg**	**03 57 43.8**	**+0.1**
KUZU				*i* S	**Sg**	**03 58 03.4**	**+0.5**
DARE	**Darende-Malaty**	**1.51**	**319**	PN	**Pb**	**03 57 43.9**	**+0.1**
DARE				SN	**Sg**	**03 58 05.3**	**+1.4**
KOVA	**Elazig, Kovanc**	**1.53**	**33**	*i* P	**Pb**	**03 57 43.8**	**-0.4**
KOVA				*i* S	**Sn**	**03 58 02.6**	**-1.0**
ELBS	**KAHRAMANMARAS**	**1.55**	**306**	*i* P	**Pn**	**03 57 43.5**	**-0.1**
ELBS				*i* S	**Sb**	**03 58 04.3**	**-0.1**
ELBS				IAML		03 58 07.0	
	comp=E,126nm,0.8s						
ELBS				IAML		03 58 10.0	
	comp=N,183nm,0.5s						
MARD	**Mardin**	**1.63**	**93**	*i* P	**Pn**	**03 57 44.8**	**+0.1**
MARD				*i* S	**Sg**	**03 58 07.5**	**-0.3**
MARD				IAML		03 58 12.0	
	comp=N,380nm,0.5s						
MARD				IAML		03 58 13.0	
	comp=E,331nm,0.4s						
HANI	**Diyarbakir_Han**	**1.64**	**53**	*i* P	**Pn**	**03 57 45.0**	**+0.1**
HANI				*i* S	**Sb**	**03 58 07.2**	**+0.2**
HANI				IAML		03 58 14.0	
	comp=E,172nm,0.9s						
KAMA	**Osmaniye**	**1.67**	**262**	*i* P	**Pn**	**03 57 45.0**	**-0.2**
KAMA				*i* S	**Sn**	**03 58 04.8**	**-2.2**
ARPR	**Arapgir-MALATY**	**1.69**	**349**	PN	**Pb**	**03 57 46.7**	**-0.2**
TNCL	**Tunceli-Merkez**	**1.80**	**20**	*i* P	**Pn**	**03 57 47.4**	**+0.4**
KEMA	**Kemaliye**	**1.85**	**354**	*i* P	**Pb**	**03 57 48.6**	**-1.0**
ANDN	**Andirin**	**1.91**	**275**	*i* P	**Pn**	**03 57 47.9**	**-0.6**
ANDN				IAML		03 58 22.0	
	comp=N,87nm,0.5s						
ILIC	**ilic-Erzincan**	**2.02**	**356**	PN	**Pn**	**03 57 51.1**	**+1.0**
BTMN	**Batman**	**2.06**	**76**	*i* P	**Pg**	**03 57 54.3**	**-0.6**
BTMN				IAML		03 58 30.0	
	comp=N,125nm,0.6s						
SARI	**SarD1z-Kayseri**	**2.08**	**299**	PN	**Pn**	**03 57 51.9**	**+1.0**
MIDY	**Mardin/Midyat-**	**2.12**	**90**	*i* P	**Pn**	**03 57 51.8**	**+0.4**
MIDY				*i* S	**Sb**	**03 58 20.6**	**-0.2**
MIDY				IAML		03 58 27.0	
	comp=N,118nm,0.4s						
MIDY				IAML		03 58 28.0	
	comp=E,132nm,0.4s						
CUKAN	**kangal_SIVAS**	**2.13**	**332**	*i* P	**Pb**	**03 57 53.1**	**-1.3**
CUKAN				*i* S	**Sn**	**03 58 17.7**	**-0.8**
BNGB	**Bingl**	**2.18**	**44**	PN	**Pn**	**03 57 53.5**	**+1.2**
CUALT	**Altinyayla-SIV**	**2.41**	**320**	*i* P	**Pn**	**03 57 57.0**	**+1.5**
MUSM	**Mu-Merkez**	**2.54**	**59**	*i* P	**Pn**	**03 57 57.5**	**+0.2**
CUZAR	**Zara_SIVAS**	**2.57**	**343**	*i* P	**Pn**	**03 57 56.0**	**-1.6**
SRTM	**Siirt_Merkez**	**2.59**	**77**	*i* P	**Pb**	**03 57 60.0**	**-2.2**
SRTM				*i* S	**Sb**	**03 58 34.9**	**+0.5**
SRTM				IAML		03 58 47.0	
	comp=E,84nm,0.5s						
SRTM				IAML		03 58 47.0	
	comp=N,133nm,0.8s						

*NOU **05** 04:08:27.2, 43°.67S×173°.03E, h9km, MLv3.9, Off E. Coast of S. Island, N.Z.*

WEL 05 04:08:27.7, 44°S±1°, 177°E±1°, h11km±1km, M3.9/19, ML4.0/19, MLv3.9/19, Error ellipse: s-maj=0.0km s-min=0.0km az=131.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.11**	**209**	P	Pb	04 08 31.9	0.0
MQZ				S	Sg	04 08 34.0	+1.5
OKCZ	**Okains Bay**	**0.27**	**115**	P	Pb	04 08 34.5	-0.1
OKCZ				S	Sb	04 08 39.4	+0.2
AKCZ	**Akaroa Harbour**	**0.29**	**153**	P	Pb	04 08 35.3	+0.2
AKCZ				S	Sb	04 08 40.0	0.0
AMCZ	**Amberley**	**0.44**	**353**	P	Pb	04 08 37.8	+0.3
AMCZ				S	Sb	04 08 43.8	-0.2
RACZ	**Rakaia**	**0.44**	**255**	P	Pb	04 08 38.5	+0.9
RACZ				S	Sb	04 08 45.0	+0.8
OXZ	**Oxford**	**0.58**	**299**	P	Pb	04 08 40.3	+0.4
OXZ				S	Sb	04 08 48.6	+0.5
GVZ	**Greta Valley S**	**0.68**	**19**	P	Pb	04 08 42.3	+0.6
GVZ				S	Sb	04 08 52.0	+0.9
WACZ	**Wakanui South**	**0.72**	**242**	P	Pb	04 08 43.9	0.0
WACZ				S	Sn	04 08 55.0	-0.1
MHCZ	**Mount Hutt**	**0.85**	**275**	P	Sn	04 08 45.8	+0.1
MHCZ				S	Sn	04 08 57.8	-0.3
LTZ	**Lake Taylor**	**0.89**	**338**	P	Pn	04 08 45.9	-0.4
LTZ				S	Sb	04 08 58.2	+1.0
ARCZ	**Arundel**	**1.17**	**253**	P	Pg	04 08 50.4	+0.1
ARCZ				S	Sn	04 09 07.2	+1.0
RPZ	**Rata Peaks**	**1.22**	**265**	P	Pg	04 08 51.3	+0.1
RPZ				S	Sn	04 09 08.0	+0.7
INZ	**Inchbonnie**	**1.29**	**313**	P	Pb	04 08 52.1	0.0
KHZ	**Kahutara**	**1.33**	**27**	P	Pn	04 08 51.4	-0.9
TMZ	**Timaru**	**1.46**	**238**	P	Pn	04 08 54.5	+0.3
WVZ	**Waitaha Valley**	**1.55**	**290**	P	Pb	04 08 56.3	-0.2
GCSZ	**Gaunt Creek Bo**	**1.77**	**279**	P	Pb	04 08 59.7	-0.5
THZ	**Tophouse**	**1.85**	**4**	P	Pn	04 08 59.1	-0.4
DSZ	**Denniston Nort**	**1.98**	**340**	P	Pn	04 09 01.7	+0.4
LBZ	**Lake Benmore**	**1.99**	**246**	P	Pn	04 09 02.2	+0.8
ODZ	**Otahua Downs**	**2.07**	**225**	P	Pn	04 09 02.7	+0.3
ODZ				S	Sg	04 09 35.6	+1.3
BSWZ	**Blackbirch Sta**	**2.08**	**24**	P	Pn	04 09 02.2	-0.3
FOZ	**Fox Glacier**	**2.12**	**271**	P	Pb	04 09 05.0	-1.1
FOZ				S	Sb	04 09 31.6	-0.9
CMWZ	**Cape Campbell**	**2.16**	**31**	P	Pn	04 09 03.6	-0.1
TUWZ	**Tuamarina**	**2.36**	**23**	P	Pn	04 09 05.7	-0.7
NNZ	**Nelson**	**2.44**	**12**	P	Pn	04 09 07.6	+0.1
TCW	**Tory Channel**	**2.66**	**26**	P	Pn	04 09 09.4	-1.2
BHW	**Baring Head**	**2.71**	**36**	P	Pn	04 09 10.2	-1.1
PLWZ	**Palliser**	**2.77**	**43**	P	Pn	04 09 10.7	-1.4
WEL	**Wellington**	**2.77**	**34**	P	Pn	04 09 11.1	-1.0
QRZ	**Quartz Range**	**2.79**	**357**	P	Pn	04 09 12.7	+0.4
MSWZ	**Moikau Station**	**2.88**	**41**	P	Pn	04 09 12.1	-1.5
MSWZ				S	Sn	04 09 45.1	-3.1
JCZ	**Jackson Bay**	**2.89**	**259**	P	Pn	04 09 15.3	+1.5
WKZ	**Wanaka**	**2.93**	**244**	P	Pn	04 09 15.2	+0.8
EAZ	**Earnscleugh**	**2.94**	**235**	P	Pn	04 09 15.0	+0.6
DUWZ	**D'Urville Isla**	**2.94**	**18**	P	Pn	04 09 14.5	0.0
CAW	**Cannon Point**	**3.04**	**36**	P	Pn	04 09 14.5	-1.3
TRWZ	**Traveller**	**3.11**	**46**	P	Pn	04 09 14.7	-2.1
KIW	**Kapiti Island**	**3.19**	**31**	P	Pn	04 09 16.8	-1.1
MTW	**Mount Morrison**	**3.20**	**41**	P	Pn	04 09 16.2	-1.8
TUZ	**Tuapeka**	**3.22**	**222**	P	Pn	04 09 19.2	+1.0
OGWZ	**Otaki Gorge**	**3.33**	**34**	P	Pn	04 09 18.4	-1.4
HOWZ	**Holdsworth Sta**	**3.41**	**38**	P	Pn	04 09 19.5	-1.4
TMWZ	**Te Maipa**	**3.43**	**44**	P	Pn	04 09 21.4	+0.2
MRZ	**Mangatainoka R**	**3.63**	**37**	P	Pn	04 09 22.2	-1.8
TIWZ	**Tintock**	**3.68**	**41**	P	Pn	04 09 24.1	-0.5
MLZ	**Mavora Lakes**	**3.74**	**240**	P	Pn	04 09 25.8	+0.4
SYZ	**Scrubby Hill**	**3.88**	**220**	P	Pn	04 09 28.5	+1.2
PRWZ	**Pori Road**	**3.89**	**39**	P	Pn	04 09 25.8	-1.7
BFZ	**Birch Farm**	**3.93**	**43**	P	Pn	04 09 25.8	-2.2
WHZ	**Wether Hill Ro**	**4.10**	**235**	P	Pn	04 09 30.6	+0.2
DVHZ	**Dannevirke**	**4.19**	**39**	P	Pn	04 09 29.5	-2.1
PREZ	**Palmer Road**	**4.40**	**15**	P	Pn	04 09 35.9	+1.4
KHZ	**Kahui Hut**	**4.42**	**13**	P	Pn	04 09 36.9	+1.1
NBEZ	**Newall Road No**	**4.42**	**12**	P	Pn	04 09 36.4	+1.6
NEZ	**North Egmont**	**4.46**	**14**	P	Pn	04 09 36.4	+1.1
PKE	**Pukeiti**	**4.51**	**13**	P	Pn	04 09 36.9	+0.8
APZ	**The Paps**	**4.64**	**224**	P	Pn	04 09 38.8	+1.0
MTVZ	**Mangateitei**	**4.70**	**27**	P	Pn	04 09 39.2	+0.5
VRZ	**Vera Road**	**4.74**	**20**	P	Pn	04 09 40.6	+1.5
MOVZ	**Moawhango**	**4.78**	**29**	P	Pn	04 09 39.2	-0.5
WNVZ	**Wahianoa**	**4.79**	**28**	P	Pn	04 09 40.0	-0.1
TRVZ	**Turoa**	**4.80**	**27**	P	Pn	04 09 40.9	+0.7
KRHZ	**Kereru**	**4.81**	**36**	P	Pn	04 09 38.7	-1.5
BHHZ	**Black Hill Sta**	**4.82**	**32**	P	Pn	04 09 39.1	-1.3
WHVZ	**Whangaehu Hut**	**4.83**	**27**	P	Pn	04 09 41.3	+0.7
FWVZ	**Far West T-bar**	**4.84**	**27**	P	Pn	04 09 41.3	+0.6
TUVZ	**Tukino**	**4.87**	**28**	P	Pn	04 09 40.9	-0.2
KAHZ	**Kahuranaki**	**4.92**	**41**	P	Pn	04 09 41.4	-0.2
NGZ	**Ngauruhoe**	**4.93**	**27**	P	Pn	04 09 41.9	0.0
OTVZ	**Oturere**	**4.96**	**27**	P	Pn	04 09 41.9	-0.5
TWVZ	**Taurewa**	**4.97**	**25**	P	Pn	04 09 42.5	0.0
WTVZ	**West Tongariro**	**4.98**	**27**	P	Pn	04 09 42.4	-0.2
ETVZ	**East Tongariro**	**5.00**	**28**	P	Pn	04 09 42.8	-0.1
KRVZ	**Karewarewa**	**5.02**	**27**	P	Pn	04 09 43.1	0.0
TMVZ	**Te Maari**	**5.02**	**28**	P	Pn	04 09 42.7	-0.4
KWHZ	**Kaweka Forest**	**5.02**	**35**	P	Pn	04 09 42.0	-1.1
BKZ	**Black Stump Fm**	**5.27**	**34**	P	Pn	04 09 44.9	-1.6
HIZ	**Hauiti**	**5.34**	**18**	P	Pn	04 09 47.3	-0.1
ARHZ	**Aropaoanui**	**5.40**	**38**	P	Pn	04 09 48.4	+0.2
MTHZ	**Maungataniwha**	**5.67**	**35**	P	Pn	04 09 50.7	-1.3
RTZ	**Ruatahuna**	**5.93**	**34**	P	Pn	04 09 54.4	-1.2
MUGZ	**Murupara**	**5.97**	**32**	P	Pn	04 09 54.1	-1.9
TOZ	**Tahuroa Road**	**6.24**	**21**	P	Pn	04 09 58.8	-0.9
URZ	**Urewera**	**6.29**	**33**	P	Pn	04 09 58.2	-2.3
MWZ	**Matawai**	**6.40**	**36**	P	Pn	04 09 59.5	-2.6
AWAZ	**Awhitu Peninsu**	**6.70**	**13**	P	Pn	04 10 06.3	+0.2
RUGZ	**Raukumara Rang**	**6.78**	**35**	P	Pn	04 10 04.8	-2.4
HAZ	**Te Kaha**	**7.00**	**35**	P	Pn	04 10 07.5	-2.7
MBAZ	**Motutapu North**	**7.03**	**14**	P	Pn	04 10 11.3	+0.7
WIAZ	**Waiheke Island**	**7.05**	**16**	P	Pn	04 10 11.1	+0.2

*INET **05** 04:24:02.2, 9°.54N×83°.70W, h12km, MW3.1*

UPA 05 04:24:02.4±1.7, 9°53N×83°73W, h9km±5km, MW4.0, 3C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK0	**Durika**	**0.55**	**119**	⇑*i*P	Pg	04 24 13.0	0.0
DRK0				*i* S	Sg	04 24 20.8	+0.6
HDC	**Heredia**	**0.61**	**321**	⇑*i*P	Pb	04 24 14.8	-0.5
HDC				eS	Sb	04 24 23.4	-0.6
BATAN	**Batan**	**0.67**	**31**	*i* P	Pb	04 24 15.9	-0.3
PTJ1	**Puerto Jimnez**	**1.07**	**157**	eP	Pg	04 24 21.4	-1.6
MLIR3	**Monte Lirio, C**	**1.15**	**129**	*i* P	Pb	04 24 24.0	-0.6
CNI2	**El Empalme, Bo**	**1.25**	**95**	⇑*i*P	Pn	04 24 24.6	-1.3
CNI2				*i* S	Sb	04 24 40.7	-1.6
BRU2	**Volcan**	**1.26**	**125**	*i* P	Pn	04 24 25.1	-1.2
BRU2				*i* S	Sb

NTC				S		Sg	04 34 40.7	-0.1
	baz=286							
TWB1	**Santiao Chiao**	**0.16**	**354**⇑	*i*P		**Pb**	04 34 38.8	-0.4
	baz=4.0							
TWB1				*i* S		**Sg**	04 34 41.3	+0.4
	baz=4.0							
TIPB	**Shuangxi**	**0.21**	**307**⇑	*i*P		**Pb**	04 34 39.5	-0.5
	baz=312							
TIPB				*i* S		**Sg**	04 34 42.4	+0.3
	baz=312							
ILA	**Ilan**	**0.25**	**251**	*i* P		**Pb**	04 34 40.0	-0.8
	baz=251							
ILA				*i* S		**Sg**	04 34 44.0	+0.8
	baz=251							
TWC	**Suao**	**0.28**	**211**⇑	*i*P		**Pg**	04 34 40.4	+0.3
	baz=208							
TWC				*i* S		**Sg**	04 34 43.7	-0.3
	baz=208							
NWF	**Wu-fen Shan**	**0.30**	**317**⇑	*i*P		**Pb**	04 34 41.6	-0.1
	baz=312							
NWF				*i* S		**Sb**	04 34 46.3	-0.4
	baz=312							
WFSB	**Wu-fen Shan**	**0.30**	**317**	⇑P		**Pb**	04 34 41.6	-0.1
	baz=321							
WFSB				S		**Sb**	04 34 46.4	-0.2
	baz=321							
TWE	**Neicheng**	**0.33**	**248**⇑	*i*P		**Pb**	04 34 41.4	-0.8
	baz=247							
TWE				*i* S		**Sg**	04 34 46.1	+0.4
	baz=247							
NDS	**Dongshan**	**0.34**	**231**	*i* P		**Pb**	04 34 41.6	-0.7
	baz=231							
TNOU	**National Taiwa**	**0.37**	**325**	P		**Pb**	04 34 42.8	0.0
	baz=319							
TNOU				S		**Sg**	04 34 47.0	+0.2
	baz=319							
TWA	**Mucha**	**0.41**	**289**	*i* P		**Pb**	04 34 43.2	-0.2
	baz=291							
TWA				*i* S		**Sb**	04 34 48.5	-1.1
	baz=291							
ENTT	**Nioudou**	**0.45**	**243**	*i* P		**Pb**	04 34 43.6	-0.6
	baz=243							
ENTT				*e*S		**Sb**	04 34 49.9	-1.0
	baz=243							
EWUT	**Wuta**	**0.45**	**208**	*i* P		**Pb**	04 34 43.8	-0.4
	baz=207							
NHDH	**Xindian Distri**	**0.45**	**285**	*i* P		**Pb**	04 34 44.2	0.0
	baz=277							
NHDH				*i* S		**Sb**	04 34 50.1	-0.8
	baz=277							
NWRT	**Kuosheng**	**0.47**	**318**	P		**Pb**	04 34 44.8	+0.2
	baz=320							
ENA	**Nanau**	**0.48**	**210**	*i* P		**Pb**	04 34 44.6	-0.1
	baz=215							
ENA				S		**Sb**	04 34 50.9	-0.8
	baz=215							
TATO	**Taipei**	**0.49**	**285**	P		**Pb**	04 34 44.7	-0.1
	baz=278							
TATO				S		**Sb**	04 34 51.0	-0.9
	baz=278							
TAP	**Taipei**	**0.49**	**293**	P		**Pg**	04 34 44.1	0.0
	baz=286							
TAP				S		**Sb**	04 34 51.7	-0.4
	baz=286							
YM01	**YM01**	**0.50**	**307**	P		**Pb**	04 34 45.5	+0.5
	baz=309							
YM11	**YM11**	**0.51**	**309**	P		**Pb**	04 34 45.9	+0.7
	baz=311							
YM08	**YM08**	**0.51**	**312**	P		**Pb**	04 34 45.4	+0.2
	baz=314							
YM10	**YM10**	**0.51**	**307**	P		**Pb**	04 34 44.8	-0.4
	baz=309							
YM05	**YM05**	**0.51**	**308**	P		**Pb**	04 34 45.7	+0.4
	baz=310							
NDT	**Datong Townshi**	**0.51**	**242**	*i* P		**Pb**	04 34 44.9	-0.4
	baz=242							
NDT				S		**Sg**	04 34 51.4	+0.2
	baz=242							
YM04	**YM04**	**0.53**	**306**	P		**Pb**	04 34 45.9	+0.4
	baz=307							
BACT	**New Taipei Cit**	**0.54**	**286**	*e*S		**Sb**	04 34 53.8	+0.6
	baz=277							
TWY	**Chenhua**	**0.56**	**319**	*i* P		**Pb**	04 34 46.8	+0.7
	baz=321							
TWS1	**Kuangyinshan**	**0.59**	**295**	*i* P		**Pn**	04 34 47.5	-1.0
	baz=297							
TWS1				S		**Sb**	04 34 56.1	+1.2
	baz=297							
NTST	**Danshui**	**0.60**	**302**	*i* P		**Pn**	04 34 47.7	-0.8
	baz=303							
NTST				S		**Sb**	04 34 55.5	+0.5
	baz=303							
YHNB	**Yeheng**	**0.60**	**253**	P		**Pg**	04 34 46.1	-0.1
	baz=264							
NSK	**Sanguang**	**0.61**	**254**	*i* P		**Pg**	04 34 46.3	-0.1
	baz=264							
NTY	**Taoyuan**	**0.66**	**283**	P		**Pn**	04 34 49.1	-0.4
	baz=275							
NTY				S		**Sb**	04 34 57.5	+0.6
	baz=275							
NNSB	**Datong**	**0.70**	**234**	P		**Pg**	04 34 47.9	-0.2
	baz=241							
NNSH	**Datong**	**0.70**	**234**	*i* P		**Pb**	04 34 48.4	-0.2
	baz=228							
NNS	**Nan Shan**	**0.71**	**235**	*i* P		**Pg**	04 34 48.1	-0.1
	baz=235							
NCU	**National Centr**	**0.76**	**279**	P		**Pn**	04 34 50.8	0.0
	baz=280							
NCU				S		**Sn**	04 35 01.7	-0.4
	baz=280							
NCUH	**Zhongli**	**0.76**	**279**	P		**Pn**	04 34 50.9	+0.1
	baz=280							
NCUH				S		**Sn**	04 35 01.6	-0.4
	baz=280							
NACB	**Ninganchiao**	**0.77**	**209**	P		**Pb**	04 34 49.4	-0.3
	baz=210							
NACB				S		**Sb**	04 34 59.8	-0.2
	baz=210							
PCYT	**Pengchaiyu**	**0.78**	**4**	*i* P		**Pn**	04 34 51.0	-0.1
	baz=5.0							
PCYT				S		**Sn**	04 35 02.8	+0.1
	baz=5.0							
ETLH	**Xiulin Townshi**	**0.80**	**217**	P		**Pb**	04 34 50.0	-0.2
	baz=217							
ETLH				S		**Sb**	04 35 01.2	+0.3
	baz=217							
NJD	**Zhudong**	**0.84**	**263**	P		**Pn**	04 34 52.3	+0.4
	baz=256							
TWD	**Chiawan**	**0.85**	**206**	*i* P		**Pb**	04 34 50.9	-0.1
	baz=197							
TWD				S		**Sb**	04 35 02.9	+0.6
	baz=197							
HSN1	**Hsinchu**	**0.90**	**266**	P		**Pn**	04 34 53.3	+0.6
	baz=258							
HSN1				S		**Sn**	04 35 05.9	+0.3
	baz=258							
FUSS	**Fushou**	**0.92**	**229**	*i* P		**Pb**	04 34 52.2	-0.1
	baz=230							
FUSS				S		**Sn**	04 35 06.1	-0.3
	baz=230							
LIOB	**Emei**	**0.92**	**258**	*i* P		**Pn**	04 34 53.3	+0.2
	baz=258							
LIOB				*e*S		**Sn**	04 35 05.3	-0.9
	baz=258							
SBCB	**Hsinchu**	**0.93**	**267**	P		**Pn**	04 34 54.4	+1.2
	baz=259							
SBCB				S		**Sn**	04 35 08.4	+2.1
	baz=259							
JYNG	**Yonagunijimaku**	**0.94**	**115**	P		**Pn**	04 34 53.7	+0.4
JYNG				*e*S		**Sn**	04 35 06.4	-0.2
NSTT	**Nanjuang**	**0.94**	**257**	P		**Pn**	04 34 54.0	+0.7
	baz=257							
NSTT				*e*S		**Sn**	04 35 05.8	-0.8
	baz=257							
TWT	**Tachien**	**0.96**	**232**	*i* P		**Pn**	04 34 53.8	0.0
	baz=225							
WHF	**Hehuan Shan**	**0.97**	**224**	*i* P		**Pg**	04 34 52.9	-0.3
	baz=225							
WHF				*e*S		**Sb**	04 35 06.3	0.0
	baz=225							
TDCB	**Techi**	**0.97**	**233**	P		**Pn**	04 34 53.5	-0.3
	baz=225							
YOJ	**Yonaguni jima**	**0.99**	**113**	P		**Pn**	04 34 54.6	+0.6
YOJ				S		**Sn**	04 35 07.9	+0.1
YOJ	**Yonaguni jima**	**0.99**	**113**	P		**Pn**	04 34 54.2	+0.2
	baz=113							
YOJ				S		**Sn**	04 35 08.6	+0.8
	baz=113							
CHGB	**Renai**	**1.09**	**224**	P		**Pb**	04 34 55.0	-0.3
	baz=213							
WHP	**Taichung City**	**1.12**	**240**	*i* P		**Pn**	04 34 56.7	+0.9
	baz=241							
NMLH	**Miaoli**	**1.15**	**255**	P		**Pg**	04 34 57.9	+1.4
	baz=255							
NMLH				*e*S		**Sn**	04 35 13.4	+1.6
	baz=255							
ESL	**Shilin**	**1.16**	**207**	P		**Pg**	04 34 56.5	-0.2
	baz=208							
NSY	**Sanyi**	**1.21**	**250**	P		**Pg**	04 34 58.6	+0.9
	baz=261							
NSY				*e*S		**Sn**	04 35 15.1	+1.7
	baz=261							
TWQ1	**Liyutan**	**1.23**	**246**	*i* P		**Pg**	04 34 59.3	+1.3
	baz=246							
TWQ1				S		**Sg**	04 35 15.4	+1.4
	baz=246							
DPDB	**Guoxing**	**1.28**	**231**	P		**Pg**	04 34 59.0	+0.1
	baz=240							
DPDB				*e*S		**Sg**	04 35 15.7	+0.2
	baz=240							
EGFH	**Guangfu**	**1.29**	**204**	P		**Pg**	04 34 59.0	-0.1
	baz=211							
WDJ	**Dajia District**	**1.34**	**248**	P		**Pg**	04 35 01.3	+1.1
	baz=266							
VWDT	**VWDT**	**1.34**	**216**	P		**Pg**	04 35 00.2	0.0
	baz=217							
SMLT	**Sun Moon Lake**	**1.39**	**227**	*i* P		**Pg**	04 35 01.5	+0.3
	baz=217							
TCU	**Taichung**	**1.40**	**240**	*e*P		**Pg**	04 35 02.1	+0.9
	baz=259							
TYC	**Yuchr**	**1.41**	**228**	*i* P		**Pg**	04 35 01.6	+0.2
	baz=221							
TYC				*e*S		**Sg**	04 35 19.2	-0.6
	baz=221							
SSLB	**Suanglung**	**1.43**	**223**	P		**Pn**	04 35 00.2	+0.2
	baz=215							
SSLB				*e*S		**Sg**	04 35 19.5	-0.9
	baz=215							
HGSD	**Ruisui**	**1.45**	**202**	P		**Pg**	04 35 02.1	-0.1
	baz=219							
WNT	**Mingjian**	**1.54**	**232**	P		**Pg**	04 35 04.0	0.0
	baz=220							
WNT				*e*S		**Sg**	04 35 25.8	+1.6
	baz=220							
WJS	**Zhushan**	**1.55**	**229**	*i* P		**Pg**	04 35 05.7	+1.5
	baz=248							
WJS				S		**Sg**	04 35 28.1	+3.8
	baz=248							
YULB	**Yu-li**	**1.59**	**204**	P		**Pg**	04 35 04.3	-0.6
	baz=206							
EYUL	**Yuli**	**1.62**	**203**	P		**Pn**	04 35 02.1	-0.5
	baz=216							
TWF1	**Yuli**	**1.62**	**204**	*i* P		**Pg**	04 35 04.9	-0.7
	baz=216							
IRIF	**Iriomote-Funau**	**1.65**	**108**	P		**Pb**	04 35 05.2	+0.6
ALS	**Alishan**	**1.73**	**220**	*i* P		**Pg**	04 35 07.8	+0.3
	baz=209							
ALS				S		**Sg**	04 35 30.6	+0.7
	baz=209							
CHN5	**Tsauling**	**1.74**	**225**	*i* P		**Pg**	04 35 08.1	+0.3
	baz=217							
FULB	**Fuli**	**1.77**	**202**	*i* P		**Pb**	04 35 07.2	+0.5
	baz=217							
WDLH	**Douliu**	**1.77**	**230**	P		**Pg**	04 35 08.8	+0.5
	baz=244							
WDLH				S		**Sg**	04 35 33.5	+2.2
	baz=244							
ELDTW	**Lidau**	**1.88**	**209**	*i* P		**Pg**	04 35 10.0	-0.5
	baz=211							
JKRS	**Kuro-shima**	**1.92**	**108**	P		**Pb**	04 35 08.6	-0.7
CHN4	**Tsaushan**	**1.97**	**221**	*i* P		**Pg**	04 35 12.0	-0.2
	baz=223							
CHN4				*e*S		**Sg**	04 35 37.8	-0.1
	baz=223							
TPUB	**Ta-pu**	**1.99**	**220**	P		**Pg**	04 35 12.2	-0.3
	baz=211							
TPUB				S		**Sg**	04 35 38.9	+0.5
	baz=211							
JIJ	**Ishigaki jima**	**2.00**	**103**	P		**Pb**	04 35 10.4	-0.3
STYH	**Taoyuan**	**2.01**	**214**	P		**Pb**	04 35 11.1	+0.2
	baz=208							
STYH				*e*S		**Sb**	04 35 36.9	+1.1
	baz=208							
STYT	**Tauyuan**	**2.03**	**215**	P		**Pb**	04 35 11.6	+0.4
	baz=207							
STYT				*e*S		**Sb**	04 35 37.8	+1.4
	baz=207							
WTP	**Ta-pu**	**2.04**	**219**	*i* P		**Pg**	04 35 12.4	-1.1
	baz=210							
WTP				*e*S		**Sg**	04 35 39.5	-0.5
	baz=210							
TWK	**Hsinying**	**2.10**	**222**	*i* P		**Pg**	04 35 13.8	-0.9
	baz=223							
TWK				*e*S		**Sg**	04 35 40.5	-1.4
	baz=223							
CHN1	**Nanshi**	**2.14**	**220**	P		**Pg**	04 35 14.0	-1.4
	baz=211							
CHN1				*e*S		**Sg**	04 35 41.7	-1.4
	baz=211							
SGST	**Jiashian**	**2.19**	**217**	P		**Pb**	04 35 12.5	-1.4
	baz=206							
TWG	**Pinlang**	**2.19**	**203**	*e*P		**Pb**	04 35 13.7	-0.2
	baz=206							
TWGBT	**Beinan**	**2.19**	**203**	*e*P		**Pb**	04 35 13.5	-0.4
	baz=206							
SLGT	**Liugui**	**2.23**	**214**	P		**Pb**	04 35 15.2	+0.7
	baz=208							
SLGT				*e*S		**Sg**	04 35 44.0	-2.0
	baz=208							
MATB	**Ma-tsu**	**2.27**	**305**	P		**Pn**	04 35 11.5	-0.1
	baz=302							
MATB				*e*S		**Sb**	04 35 41.1	-2.1
	baz=302							
MSUT	**Lienchiang**	**2.30**	**305**	*e*P		**Pn**	04 35 11.8	-0.2
	baz=304							
VWUC	**VWUC**	**2.33**	**274**	P		**Pn**	04 35 12.5	+0.1
	baz=272							
TSMG	**Majia**	**2.47**	**211**	*e*P		**Pb**	04 35 19.7	+1.0
	baz=215							
MASBT	**Mashibuluo**	**2.56**	**210**	P		**Pb**	04 35 19.5	-0.6
	baz=217							
MASBT				*e*S		**Sb**	04 35 53.1	+1.6
	baz=217							
PTMZ	**Houxiangcun**	**2.63**	**275**	*e*P		**Pb**	04 35 19.2	-2.1
	baz=272							
XPSS	**Dashiqiu**	**2.64**	**322**	P		**Pn**	04 35 17.1	+0.4
	baz=321							
LYJJ	**Jianjiangzhen**	**2.64**	**310**	*e*P		**Pn**	04 35 17.1	+0.4
	baz=310							
SLIU	**Shizi**	**2.84**	**203**	*e*P		**Pb**	04 35 22.3	-2.8
	baz=196							
MHZQ	**Yeshan**	**2.97**	**295**	P		**Pn**	04 35 22.5	+1.3
	baz=291							
MHZQ				*e*S		**Sb**	04 35 59.8	-3.5
	baz=291							

*BJI **05** 04:37:56.8±0.0, 24.°50N×122.°82E, h121km, mB4.4/9, mb4.1/17*
*NEIC **05** 04:37:57.6±1.2, 24.°57N±0.°07×122.°72E±0.°07, h106km±6km, mb4.2/19, Error ellipse: s-maj=10.3km s-min=8.6km az=169.0*
*JMA **05** 04:37:58.3±0.1, 24.°53N×122.°64E, h103km±2km, M3.5*
*TAP **05** 04:37:58.4, 24.°57N×122.°70E, h104km, ML4.7, B*
*IDC **05** 04:38:01.3±4.2, 24.°67N×122.°66E, h136km±40km, mb3.6/16, mb1 3.8/17, mb1mx3.6/39, mbtmp4.1/17, Error ellipse: s-maj=19.6km s-min=12.7km az=75.0*
ISC 05 04:37:57.9±0.6, 24.°56N±0.°03×122.°69E±0.°02, h105km±4km, n215, σ1s11/333, mb4.0/27, 35C-15D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.26**	**116**	P	**Pn**	**04 38 13.3**	**+0.5**
JYNG				S	**Sn**	**04 38 24.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.31**	**109**	P	**Pn**	**04 38 13.6**	**+0.5**
YOJ				S	**Sn**	**04 38 24.4**	**0.0**
YOJ	**Yonaguni jima**	**0.31**	**109**	*i* P	**Pn**	**04 38 13.5**	**+0.5**
	baz=114						
YOJ				S	**Sn**	**04 38 24.5**	**+0.2**
	baz=114						
YOJ	**Yonaguni jima**	**0.31**	**109**	Pn	**Pn**	**04 38 12.7**	**-0.3**
EGS		**0.74**	**292**	*e*P	**Pn**	**04 38 15.9**	**-0.2**
	baz=283						
TWC	**Suao**	**0.77**	**274**	*e*P	**Pn**	**04 38 16.5**	**+0.2**
	baz=274						
TWC				*e*S	**Sn**	**04 38 29.5**	**-0.7**
	baz=274						
TWB1	**Santiao Chiao**	**0.78**	**305**	*e*P	**Pn**	**04 38 16.8**	**+0.4**
	baz=302						
TWB1				*e*S	**Sn**	**04 38 29.9**	**-0.5**
	baz=302						
NTC	**Toucheng**	**0.83**	**290**	*e*P	**Pn**	**04 38 17.5**	**+0.6**
	baz=284						
NTC				*e*S	**Sn**	**04 38 31.2**	**-0.1**
	baz=284						
EWUT	**Wuta**	**0.84**	**262**	*e*P	**Pn**	**04 38 17.4**	**+0.4**
	baz=257						
EWUT				*e*S	**Sn**	**04 38 31.6**	**+0.2**
	baz=257						
ENA	**Nanau**	**0.88**	**261**	P	**Pn**	**04 38 17.9**	**+0.5**
	baz=257						
ENA				*e*S	**Sn**	**04 38 32.4**	**+0.4**
	baz=257						
ILA	**Ilan**	**0.88**	**283**	P	**Pn**	**04 38 18.2**	**+0.8**
	baz=277						
ILA				S	**Sn**	**04 38 32.5**	**+0.4**
	baz=277						
TIPB	**Shuangxi**	**0.88**	**298**⇓	*i*P	**Pn**	**04 38 18.2**	**+0.7**
	baz=295						
TIPB				*e*S	**Sn**	**04 38 32.0**	**-0.3**
	baz=295						
NDS	**Dongshan**	**0.89**	**275**	*e*P	**Pn**	**04 38 18.2**	**+0.7**
	baz=274						
NDS				*e*S	**Sn**	**04 38 31.9**	**-0.4**
	baz=274						
TWE	**Neicheng**	**0.94**	**280**	P	**Pn**	**04 38 18.8**	**+0.8**
	baz=277						
TWE				*e*S	**Sn**	**04 38 33.1**	**-0.1**
	baz=277						
NWF	**Wu-fen Shan**	**0.97**	**302**⇓	*i*P	**Pn**	**04 38 19.4**	**+1.0**
	baz=294						
NWF				*i* S	**Sn**	**04 38 34.4**	**+0.6**
	baz=294						
WFSB	**Wu-fen Shan**	**0.97**	**302**⇓	*i*P	**Pn**	**04 38 19.4**	**+1.1**
	baz=295						
WFSB				*i* S	**Sn**	**04 38 34.2**	**+0.5**
	baz=295						
IRIF	**Iriomote-Funau**	**0.97**	**103**	P	**Pn**	**04 38 19.2**	**+0.8**
IRIF				S	**Sn**	**04 38 34.3**	**+0.5**
TNOU	**National Taiwa**	**1.02**	**305**⇓	*i*P	**Pn**	**04 38 19.6**	**+0.8**
	baz=304						
TNOU				*e*S	**Sn**	**04 38 34.8**	**+0.2**
	baz=304						
ENTT	**Nioudou**	**1.03**	**274**	*e*P	**Pn**	**04 38 19.9**	**+1.0**
	baz=272						
ENTT				*e*S	**Sn**	**04 38 35.2**	**+0.3**
	baz=272						
NACB	**Ninganchiao**	**1.07**	**249**⇑	*i*P	**Pn**	**04 38 19.4**	**0.0**
	baz=242						
NACB				*e*S	**Sn**	**04 38 35.0**	**-0.7**
	baz=242						
NACB	**Ninganchiao**	**1.07**	**249**		**Pn**	**04 38 19.3**	**-0.1**
NDT	**Datong Townshi**	**1.07**	**272**	*i* P	**Pn**	**04 38 20.7**	**+1.2**
	baz=272						
NDT				*e*S	**Sn**	**04 38 36.5**	**+0.8**
	baz=272						
TWA	**Mucha**	**1.09**	**293**⇓	*i*P	**Pn**	**04 38 20.3**	**+0.7**
	baz=284						
TWA				*e*S	**Sn**	**04 38 35.6**	**-0.4**
	baz=284						
TWD	**Chiawan**	**1.11**	**244**⇑	*i*P	**Pn**	**04 38 20.0**	**+0.2**
	baz=238						
TWD				*e*S	**Sn**	**04 38 36.0**	**-0.4**
	baz=238						
NHDH	**Xindian Distri**	**1.13**	**291**	⇓P	**Pn**	**04 38 20.7**	**+0.7**
	baz=282						
NHDH				*e*S	**Sn**	**04 38 36.3**	**-0.5**
	baz=282						
NWRT	**Kuosheng**	**1.13**	**304**	*e*P	**Pn**	**04 38 20.9**	**+0.8**
	baz=297						
NWRT				*e*S	**Sn**	**04 38 36.7**	**-0.1**
	baz=297						
HATJ	**Hateruma jima**	**1.14**	**116**	P	**Pn**	**04 38 21.4**	**+1.3**
HATJ				S	**Sn**	**04 38 37.6**	**+0.7**
HWA	**Hwalien**	**1.15**	**240**⇑	*i*P	**Pn**	**04 38 20.8**	**+0.6**
	baz=238						
HWA				*e*S	**Sn**	**04 38 38.1**	**+0.9**
	baz=238						
ETLH	**Xiulin Townshi**	**1.16**	**252**	*e*P	**Pn**	**04 38 20.9**	**+0.5**
	baz=256						
ETLH				*e*S	**Sn**	**04 38 37.0**	**-0.5**
	baz=256						
TATO	**Taipei**	**1.17**	**291**	*e*P	**Pn**	**04 38 20.6**	**+0.2**
	baz=282						
TATO				*e*S	**Sn**	**04 38 36.4**	**-1.2**
	baz=282						
TATO	**Taipei**	**1.17**	**291**		**Pn**	**04 38 21.0**	**+0.5**
YM01	**YM01**	**1.17**	**300**⇓	*i*P	**Pn**	**04 38 21.3**	**+0.8**
	baz=290						
YM01				*e*S	**Sn**	**04 38 37.3**	**-0.4**
	baz=290						
TAP	**Taipei**	**1.18**	**294**	*e*P	**Pn**	**04 38 21.2**	**+0.7**
	baz=284						
TAP				*e*S	**Sn**	**04 38 37.6**	**-0.1**
	baz=284						
YM08	**YM08**	**1.18**	**302**⇓	*i*P	**Pn**	**04 38 21.2**	**+0.6**
	baz=296						
YM11	**YM11**	**1.18**	**301**	*e*P	**Pn**	**04 38 21.5**	**+0.9**
	baz=293						
YM10	**YM10**	**1.18**	**300**⇓	*i*P	**Pn**	**04 38 21.5**	**+0.8**
	baz=291						
YM10				*e*S	**Sn**	**04 38 37.9**	**-0.1**
	baz=291						
YM05	**YM05**	**1.18**	**301**⇓	*i*P	**Pn**	**04 38 21.5**	**+0.7**
	baz=291						
YM05				*e*S	**Sn**	**04 38 38.1**	**+0.1**
	baz=291						
NNSB	**Datong**	**1.20**	**264**	*e*P	**Pn**	**04 38 21.6**	**+0.6**
	baz=257						
NNSB				*e*S	**Sn**	**04 38 37.2**	**-1.2**
	baz=257						
NNSH	**Datong**	**1.20**	**264**	*e*P	**Pn**	**04 38 21.4**	**+0.5**
	baz=257						
NNSH				*e*S	**Sn**	**04 38 38.3**	**-0.1**
	baz=257						
PCYT	**Pengchaiyu**	**1.20**	**332**	*e*P	**Pn**	**04 38 22.1**	**+1.3**
	baz=332						
YHNB	**Yeheng**	**1.20**	**275**⇓	*i*P	**Pn**	**04 38 22.0**	**+1.1**
	baz=274						
YHNB				S	**Sn**	**04 38 38.4**	**0.0**
	baz=274						
YHNB	**Yeheng**	**1.20**	**275**	Pn	**Pn**	**04 38 21.6**	**+0.6**
YM04	**YM04**	**1.20**	**299**	P	**Pn**	**04 38 21.6**	**+0.7**
	baz=290						
YM04				*e*S	**Sn**	**04 38 37.8**	**-0.5**
	baz=290						
NNS	**Nan Shan**	**1.21**	**264**	*i* P	**Pn**	**04 38 21.6**	**+0.6**
	baz=257						
NNS				*e*S	**Sn**	**04 38 38.2**	**-0.3**
	baz=257						
BACT	**New Taipei Cit**	**1.21**	**291**	*e*P	**Pn**	**04 38 21.8**	**+0.8**
	baz=284						
NSK	**Sanguang**	**1.22**	**276**	*e*P	**Pn**	**04 38 22.1**	**+1.0**
	baz=274						
NSK				*e*S	**Sn**	**04 38 38.9**	**+0.2**
	baz=274						
TWY	**Chenhua**	**1.22**	**306**⇓	*i*P	**Pn**	**04 38 22.2**	**+1.2**
	baz=297						
TWY				*e*S	**Sn**	**04 38 39.1**	**+0.5**
	baz=297						
ANP	**Anpu**	**1.23**	**300**	*e*P	**Pn**	**04 38 21.7**	**+0.4**
	baz=291						
JKRS	**Kuro-shima**	**1.25**	**105**	P	**Pn**	**04 38 22.6**	**+1.2**
JKRS				S	**Sn**	**04 38 40.0**	**+0.9**
TWS1	**Kuangyinshan**	**1.27**	**295**	*e*P	**Pn**	**04 38 22.3**	**+0.7**
	baz=290						
TWS1				*e*S	**Sn**	**04 38 39.9**	**+0.2**
	baz=290						
NTST	**Danshui**	**1.28**	**298**	P	**Pn**	**04 38 22.8**	**+1.1**
	baz=291						
NTST				*e*S	**Sn**	**04 38 40.5**	**+0.8**
	baz=291						
NTY	**Taoyuan**	**1.34**	**289**	*e*P	**Pn**	**04 38 23.2**	**+0.8**
	baz=284						
NTY				*e*S	**Sn**	**04 38 41.8**	**+0.8**
	baz=284						
**JI

WHF	**Hehuan Shan**	**1.36 252**	⇑*i*P	**Pn**	**04 38 23.9**	**+0.7**
	baz=256						
WHF			*e*S	**Sn**	**04 38 41.9**	**-0.4**
	baz=256						
ESL	**Shilin**	**1.37 237**	⇑*i*P	**Pn**	**04 38 22.8**	**0.0**
	baz=235						
ESL			*e*S	**Sn**	**04 38 41.0**	**-0.7**
	baz=235						
TWT	**Tachien**	**1.41 258**	⇑*i*P	**Pn**	**04 38 24.9**	**+1.4**
	baz=254						
TWT			*e*S	**Sn**	**04 38 43.4**	**+0.5**
	baz=254						
NCU	**National Centr**	**1.43 287**	*e*P	**Pn**	**04 38 24.7**	**+1.2**
	baz=286						
NCU			S	**Sn**	**04 38 44.3**	**+1.4**
	baz=286						
NCUH	**Zhongli**	**1.43 287**	*e*P	**Pn**	**04 38 24.6**	**+1.2**
	baz=286						
NCUH			S	**Sn**	**04 38 43.8**	**+0.9**
	baz=286						
TDCB	**Techi**	**1.43 258**	⇑*i*P	**Pn**	**04 38 24.9**	**+1.2**
	baz=254						
TDCB			*e*S	**Sn**	**04 38 43.4**	**+0.2**
	baz=254						
EGFH	**Guangfu**	**1.46 233**	*e*P	**Pn**	**04 38 24.2**	**+0.3**
	baz=235						
EGFH			*e*S	**Sn**	**04 38 43.2**	**-0.3**
	baz=235						
NJD	**Zhudong**	**1.47 277**	*e*P	**Pn**	**04 38 25.2**	**+1.2**
	baz=271						
NJD			*e*S	**Sn**	**04 38 45.4**	**+1.6**
	baz=271						
CHGB	**Renai**	**1.47 250**	⇑*i*P	**Pn**	**04 38 25.2**	**+1.0**
	baz=243						
CHGB			*e*S	**Sn**	**04 38 44.2**	**0.0**
	baz=243						
JISG	**Ishigakijimahi**	**1.48 89**	P	**Pn**	**04 38 25.1**	**+1.0**
JISG			S	**Sn**	**04 38 44.1**	**+0.2**
LIOB	**Emei**	**1.53 273**	⇑*i*P	**Pn**	**04 38 25.9**	**+1.2**
	baz=272						
LIOB			*e*S	**Sn**	**04 38 45.8**	**+0.7**
	baz=272						
HSN1	**Hsinchu**	**1.54 278**	*e*P	**Pn**	**04 38 26.0**	**+1.2**
	baz=277						
HSN1			S	**Sn**	**04 38 46.2**	**+1.0**
	baz=277						
NSTT	**Nanjuang**	**1.54 273**	⇑P	**Pn**	**04 38 26.0**	**+1.2**
	baz=271						
NSTT			S	**Sn**	**04 38 45.8**	**+0.5**
	baz=271						
SBCB	**Hsinchu**	**1.57 279**	⇓*i*P	**Pn**	**04 38 26.3**	**+1.1**
	baz=277						
SBCB			S	**Sn**	**04 38 46.9**	**+0.9**
	baz=277						
HGSD	**Ruisui**	**1.57 228**	⇑*i*P	**Pn**	**04 38 25.7**	**+0.4**
	baz=225						
HGSD			*e*S	**Sn**	**04 38 46.3**	**+0.2**
	baz=225						
HSN	**Hsinchu**	**1.58 279**	*i* P	**Pn**	**04 38 26.1**	**+0.8**
	baz=279						
HSN			S	**Sn**	**04 38 46.5**	**+0.2**
	baz=279						
WHP	**Taichung City**	**1.61 260**	⇑*i*P	**Pn**	**04 38 27.8**	**+1.9**
	baz=257						
WHP			*e*S	**Sn**	**04 38 48.4**	**+1.3**
	baz=257						
VWDT	**VWDT**	**1.63 241**	⇑*i*P	**Pn**	**04 38 27.0**	**+1.0**
	baz=234						
VWDT			*e*S	**Sn**	**04 38 46.8**	**-0.5**
	baz=234						
EHY	**Hungye**	**1.64 230**	⇑*i*P	**Pn**	**04 38 26.0**	**0.0**
	baz=228						
EHY			*e*S	**Sn**	**04 38 46.4**	**-1.1**
	baz=228						
NJN	**Zhunan**	**1.66 274**	*e*P	**Pn**	**04 38 27.6**	**+1.3**
	baz=273						
NJN			*e*S	**Sn**	**04 38 48.7**	**+0.7**
	baz=273						
WPL	**Puli Township**	**1.67 251**	*e*P	**Pn**	**04 38 27.4**	**+0.8**
	baz=248						
WPL			*e*S	**Sn**	**04 38 49.1**	**+0.8**
	baz=248						
DPDB	**Guoxing**	**1.69 252**	⇑*i*P	**Pn**	**04 38 28.4**	**+1.6**
	baz=249						
DPDB			*e*S	**Sn**	**04 38 50.0**	**+1.2**
	baz=249						
YULB	**Yu-li**	**1.73 228**	⇑*i*P	**Pn**	**04 38 27.3**	**+0.1**
	baz=233						
YULB			*e*S	**Sn**	**04 38 48.9**	**-0.6**
	baz=233						
YULB	**Yu-li**	**1.73 228**	Pn	**Pn**	**04 38 27.0**	**-0.2**
NMLH	**Miaoli**	**1.73 270**	⇑*i*P	**Pn**	**04 38 28.5**	**+1.3**
	baz=260						
NMLH			*e*S	**Sn**	**04 38 50.0**	**+0.5**
	baz=260						
EYUL	**Yuli**	**1.74 226**	⇑*i*P	**Pn**	**04 38 28.0**	**+0.6**
	baz=233						
EYUL			*e*S	**Sn**	**04 38 49.1**	**-0.8**
	baz=233						
TWF1	**Yuli**	**1.75 227**	⇑*i*P	**Pn**	**04 38 27.8**	**+0.2**
	baz=233						
TWF1			*e*S	**Sn**	**04 38 49.4**	**-0.8**
	baz=233						
NSY	**Sanyi**	**1.76 266**	⇑*i*P	**Pn**	**04 38 29.1**	**+1.4**
	baz=264						
NSY			*e*S	**Sn**	**04 38 51.5**	**+1.2**
	baz=264						
SSLB	**Suanglung**	**1.76 244**	*e*P	**Pn**	**04 38 28.5**	**+0.8**
	baz=240						
SSLB			*e*S	**Sn**	**04 38 50.3**	**-0.1**
	baz=240						
SSLB	**Suanglung**	**1.76 244**	Pn	**Pn**	**04 38 28.0**	**+0.3**
SMLT	**Sun Moon Lake**	**1.77 248**	⇑*i*P	**Pn**	**04 38 29.0**	**+1.1**
	baz=241						
SMLT			*e*S	**Sn**	**04 38 51.4**	**+0.8**
	baz=241						
TYC	**Yuchr**	**1.80 249**	⇑*i*P	**Pn**	**04 38 29.3**	**+1.3**
	baz=242						
TYC			*e*S	**Sn**	**04 38 53.3**	**+2.2**
	baz=242						
JTJ	**Tarama**	**1.83 87**	P	**Pn**	**04 38 29.7**	**+1.2**
JTJ			S	**Sn**	**04 38 52.0**	**+0.2**
FULB	**Fuli**	**1.87 224**	⇑*i*P	**Pn**	**04 38 29.1**	**+0.1**
	baz=216						
FULB			*e*S	**Sn**	**04 38 52.6**	**-0.1**
	baz=216						
WDJ	**Dajia District**	**1.88 264**	*e*P	**Pn**	**04 38 30.1**	**+1.0**
	baz=262						
WDJ			*e*S	**Sn**	**04 38 53.7**	**+0.8**
	baz=262						
TCU	**Taichung**	**1.88 258**	*e*P	**Pn**	**04 38 30.3**	**+1.2**
	baz=265						
TCU			*e*S	**Sn**	**04 38 54.8**	**+1.8**
	baz=265						
WHYT	**Xinyi Township**	**1.89 243**	*e*P	**Pn**	**04 38 30.9**	**+1.6**
	baz=240						
WHYT			*e*S	**Sn**	**04 38 54.0**	**+0.8**
	baz=240						
WWF	**Wufeng**	**1.89 254**	*e*P	**Pn**	**04 38 30.8**	**+1.5**
	baz=263						
WWF			*e*S	**Sn**	**04 38 54.6**	**+1.5**
	baz=263						
CHKT	**Chengkung**	**1.90 220**	*e*P	**Pn**	**04 38 29.2**	**-0.1**
	baz=213						
CHKT			*e*S	**Sn**	**04 38 51.7**	**-1.6**
	baz=213						
YUS	**Yu-Shan**	**1.92 236**	*i* P	**Pn**	**04 38 30.9**	**+0.8**
	baz=230						
YUS			*e*S	**Sn**	**04 38 54.6**	**+0.1**
	baz=230						
WJS	**Zhushan**	**1.94 248**	⇑P	**Pn**	**04 38 31.8**	**+2.0**
	baz=239						
WJS			*e*S	**Sn**	**04 38 56.8**	**+2.5**
	baz=239						
WNT1	**Nantou City**	**1.95 251**	*e*P	**Pn**	**04 38 31.4**	**+1.5**
	baz=249						
WNT1			*e*S	**Sn**	**04 38 56.8**	**+2.4**
	baz=249						
WNT	**Mingjian**	**1.95 250**	*e*P	**Pn**	**04 38 31.5**	**+1.4**
	baz=248						
WNT			*e*S	**Sn**	**04 38 57.5**	**+2.9**
	baz=248						
WCHH	**Zhanghua**	**2.00 257**	*e*P	**Pn**	**04 38 31.7**	**+1.0**
	baz=262						
WCHH			*e*S	**Sn**	**04 38 56.2**	**+0.5**
	baz=262						
ALS	**Alishan**	**2.02 239**	⇑*i*P	**Pn**	**04 38 32.7**	**+1.5**
	baz=232						
ALS			*e*S	**Sn**	**04 38 58.2**	**+1.7**
	baz=232						
EDH	**Donghe**	**2.03 219**	⇑*i*P	**Pn**	**04 38 31.1**	**+0.1**
	baz=212						
EDH			*e*S	**Sn**	**04 38 55.4**	**-1.0**
	baz=212						
ELDTW	**Lidau**	**2.05 229**	⇑*i*P	**Pn**	**04 38 31.7**	**+0.2**
	baz=223						
ELDTW			*e*S	**Sn**	**04 38 56.5**	**-0.5**
	baz=223						
CHN5	**Tsauling**	**2.08 243**	⇑*i*P	**Pn**	**04 38 33.3**	**+1.6**
	baz=241						
CHN5			*e*S	**Sn**	**04 38 60.0**	**+2.4**
	baz=241						
WGK	**Gukeng**	**2.13 246**	*e*P	**Pn**	**04 38 34.4**	**+2.1**
	baz=244						
WGK			*e*S	**Sn**	**04 39 01.4**	**+2.7**
	baz=244						
WDLH	**Douliu**	**2.15 247**	*e*P	**Pn**	**04 38 34.1**	**+1.6**
	baz=255						
WDLH			*e*S	**Sn**	**04 39 03.0**	**+3.8**
	baz=255						
LONT	**Longtian**	**2.18 221**	⇑P	**Pn**	**04 38 33.3**	**+0.3**
	baz=219						
LONT			*e*S	**Sn**	**04 38 58.9**	**-1.0**
	baz=219						
LDUT	**Ludao**	**2.19 211**	⇓*i*P	**Pn**	**04 38 33.1**	**0.0**
	baz=207						
LDUT			*e*S	**Sn**	**04 38 58.4**	**-1.6**
	baz=207						
WRL	**Guolierlin Hig**	**2.21 253**	*e*P	**Pn**	**04 38 34.2**	**+0.8**
	baz=251						
WRL			*e*S	**Sn**	**04 39 00.4**	**-0.1**
	baz=251						
STYH	**Taoyuan**	**2.23 232**	⇑P	**Pn**	**04 38 35.3**	**+1.6**
	baz=226						
STYH			*e*S	**Sn**	**04 39 03.6**	**+2.5**
	baz=226						
STYT	**Tauyuan**	**2.25 232**	⇑*i*P	**Pn**	**04 38 35.5**	**+1.5**
	baz=226						
STYT			*e*S	**Sn**	**04 39 02.6**	**+1.0**
	baz=226						
TPUB	**Ta-pu**	**2.27 237**	P	**Pn**	**04 38 35.7**	**+1.6**
	baz=229						
TPUB			*e*S	**Sn**	**04 39 03.2**	**+1.3**
	baz=229						
TPUB	**Ta-pu**	**2.27 237**		**Pn**	**04 38 35.5**	**+1.4**
CHN4	**Tsaushan**	**2.27 238**	*e*P	**Pn**	**04 38 35.9**	**+1.8**
	baz=236						
CHN4			*e*S	**Sn**	**04 39 04.8**	**+2.9**
	baz=236						
CHN2	**Minshiung**	**2.27 244**	*e*P	**Pn**	**04 38 36.0**	**+1.9**
	baz=252						
CHN2			*e*S	**Sn**	**04 39 04.7**	**+2.8**
	baz=252						
JIRB	**Irabujima**	**2.27 83**	P	**Pn**	**04 38 35.3**	**+1.2**
JIRB			S	**Sn**	**04 39 01.9**	**-0.1**
WTK	**Tuku**	**2.28 248**	*e*P	**Pn**	**04 38 35.6**	**+1.4**
	baz=255						
WTK			*e*S	**Sn**	**04 39 04.1**	**+2.0**
	baz=255						
TWGBT	**Beinan**	**2.28 221**	⇑*i*P	**Pn**	**04 38 34.1**	**-0.1**
	baz=224						
TWGBT			*e*S	**Sn**	**04 39 00.0**	**-2.1**
	baz=224						
TWG	**Pinlang**	**2.28 221**	⇑P	**Pn**	**04 38 34.2**	**-0.2**
	baz=224						
TWG			*e*S	**Sn**	**04 39 00.8**	**-1.4**
	baz=224						
TWG	**Pinlang**	**2.28 221**		**Pn**	**04 38 33.6**	**-0.7**
WTCT	**Ta-ch'eng**	**2.31 253**	*e*P	**Pn**	**04 38 35.5**	**+0.9**
	baz=251						
WTCT			*e*S	**Sn**	**04 39 03.2**	**+0.5**
	baz=251						
WTP	**Ta-pu**	**2.31 236**	*e*P	**Pn**	**04 38 36.2**	**+1.5**
	baz=228						
WTP			*e*S	**Sn**	**04 39 04.5**	**+1.7**
	baz=228						
CHY	**Chiayi**	**2.33 243**	*e*P	**Pn**	**04 38 36.4**	**+1.5**
	baz=252						
CHY			*e*S	**Sn**	**04 39 05.9**	**+2.7**
	baz=252						
JIKM	**Ikemajima**	**2.35 81**	P	**Pn**	**04 38 36.7**	**+1.5**
JIKM			S	**Sn**	**04 39 04.3**	**+0.5**
JMJ	**Miyako jima 2**	**2.38 83**	*e*P	**Pn**	**04 38 36.5**	**+1.0**
	baz=85						
JMJ			*e*S	**Sn**	**04 39 05.3**	**+0.8**
	baz=85						
TWK	**Hsinying**	**2.39 238**	P	**Pn**	**04 38 37.5**	**+1.7**
	baz=235						
TWK			*e*S	**Sn**	**04 39 05.2**	**+0.4**
	baz=235						
JMJ2	**Miyako jima3**	**2.41 85**	P	**Pn**	**04 38 37.4**	**+1.5**
JMJ2			S	**Sn**	**04 39 05.6**	**+0.5**
CHN1	**Nanshi**	**2.41 236**	*e*P	**Pn**	**04 38 37.8**	**+1.8**
	baz=242						
CHN1			*e*S	**Sn**	**04 39 07.3**	**+2.2**
	baz=242						
SNST	**Tainan City**	**2.41 237**	*e*P	**Pn**	**04 38 37.5**	**+1.5**
	baz=235						
SGST	**Jiashian**	**2.43 233**	*e*P	**Pn**	**04 38 36.9**	**+0.7**
	baz=240						
SGST			*e*S	**Sn**	**04 39 05.5**	**-0.2**
	baz=240						
WSF	**Szhu**	**2.44 248**	*e*P	**Pn**	**04 38 37.1**	**+0.8**
	baz=254						
WSF			*e*S	**Sn**	**04 39 06.7**	**+0.9**
	baz=254						
SLGT	**Liugui**	**2.44 231**	*e*P	**Pn**	**04 38 38.5**	**+2.2**
	baz=229						
JOGS	**Gusukube**	**2.48 85**	S	**Sn**	**04 39 07.2**	**+0.4**
ECL	**Taimali**	**2.52 219**	*e*P	**Pn**	**04 38 37.1**	**-0.4**
	baz=218						
CHN8	**Yiju**	**2.57 242**	*e*P	**Pn**	**04 38 38.8**	**+0.7**
	baz=240						
CHN8			*e*S	**Sn**	**04 39 08.3**	**-0.6**
	baz=240						
CHN3	**Shinhua**	**2.59 236**	*e*P	**Pn**	**04 38 40.3**	**+2.0**
	baz=243						
SSD	**Sandimen**	**2.61 227**	*e*P	**Pn**	**04 38 40.1**	**+1.5**
	baz=224						
SSD			*e*S	**Sn**	**04 39 12.4**	**+2.5**
	baz=224						
SCST	**Cishan**	**2.62 231**	*e*P	**Pn**	**04 38 40.6**	**+1.9**
	baz=238						
TSMG	**Majia**	**2.63 226**	*e*P	**Pn**	**04 38 40.5**	**+1.6**
	baz=223						
TSMG			*e*S	**Sn**	**04 39 12.4**	**+1.9**
	baz=223						
SCLT	**Jiali**	**2.67 239**	*e*P	**Pn**	**04 38 40.7**	**+1.4**
	baz=238						
TWM1	**Shoushan**	**2.71 231**	*e*P	**Pn**	**04 38 42.4**	**+2.5**
	baz=239						
MASBT	**Mashibuluo**	**2.71 225**	*e*P	**Pn**	**04 38 41.2**	**+1.3**
	baz=233						
MASBT			*e*S	**Sn**	**04 39 13.2**	**+1.0**
	baz=233						
TAI1	**Yung-k'ang**	**2.72 237**	*e*P	**Pn**	**04 38 41.5**	**+1.5**
	baz=235						
LAY	**Lan-yu**	**2.72 203**	*e*P	**Pn**	**04 38 39.9**	**-0.2**
	baz=194						
LAY			*e*S	**Sn**	**04 39 10.7**	**-1.8**
	baz=194						
SGLT	**Jiouru**	**2.72 228**	*e*P	**Pn**	**04 38 42.4**	**+2.3**
	baz=226						
EAST	**Anshuo**	**2.75 218**	*e*P	**Pn**	**04 38 40.4**	**-0.1**
	baz=217						
SNJT	**Kaohsiung City**	**2.81 231**	*e*P	**Pn**	**04 38 42.8**	**+1.5**
	baz=240						
SSPT	**Xinbi**	**2.84 224**	*e*P	**Pn**	**04 38 43.4**	**+1.7**
	baz=232						
SCZT	**Fangliau**	**2.89 221**	*e*P	**Pn**	**04 38 43.4**	**+1.0**
	baz=215						
SLIU	**Shizi**	**2.91 217**	*e*P	**Pn**	**04 38 42.6**	**0.0**
	baz=218						
MATB	**Ma-tsu**	**2.94 303**	*e*P	**Pn**	**04 38 42.9**	**0.0**
	baz=302						
MSUT	**Lienchiang**	**2.97 303**	*e*P	**Pn**	**04 38 43.3**	**0.0**
	baz=303						
VWUC	**VWUC**	**2.98 279**	*e*P	**Pn**	**04 38 43.4**	**0.0**
	baz=278						
PNG	**Penghu**	**3.03 252**	*e*P	**Pn**	**04 38 42.5**	**-1.7**
	baz=250						
PHUB	**P'eng-hu**	**3.04 250**	*e*P	**Pn**	**04 38 43.9**	**-0.4**
	baz=249						
WLCH	**Liuqiu**	**3.06 224**	*e*P	**Pn**	**04 38 47.5**	**+3.0**
	baz=222						
WDGT	**Dungji**	**3.06 246**	*e*P	**Pn**	**04 38 45.1**	**+0.5**
	baz=244						
TWP	**Hsiaoliuchiu**	**3.07 225**	*e*P	**Pn**	**04 38 46.0**	**+1.2**
	baz=222						
HEN	**Hengchun**	**3.12 216**	*e*P	**Pn**	**04 38 46.5**	**+1.2**
	baz=207						
TWKBT	**Hengchun**	**3.13 214**	*e*P	**Pn**	**04 38 46.0**	**+0.5**
	baz=212						
TWK1	**Hengchun**	**3.13 214**	*e*P	**Pn**	**04 38 45.8**	**+0.2**
	baz=212						
XPSS	**Dashiqiu**	**3.26 317**	*e*P	**Pn**	**04 38 47.0**	**-0.2**
	baz=308						
VCHM	**Qimei**	**3.27 246**	*e*P	**Pn**	**04 38 47.1**	**-0.3**
	baz=237						
PTMZ	**Houxiangcun**	**3.28 279**	*e*P	**Pn**	**04 38 47.5**	**0.0**
	baz=278						
LYJJ	**Jianjiangzhen**	**3.30 307**	*e*P	**Pn**	**04 38 47.8**	**0.0**
	baz=307						
MHZQ	**Yeshan**	**3.65 296**	*e*P	**Pn**	**04 38 52.3**	**0.0**
	baz=295						
QZH	**Quanzhou**	**3.75 277**	⇑*i*P	**Pn**	**04 38 53.8**	**+0.1**
QZH			S	**Sn**	**04 39 33.8**	**-3.1**
QZH			smax	smax			
	comp=N,150nm,0.5s						
QZH			smax	smax			
	comp=E,100nm,0.4s						
KNM	**Kinmen**	**3.88 269**	*e*P	**Pn**	**04 38 57.3**	**+1.8**
	baz=268						
KNMB	**Chin-men Tao**	**3.92 269**	*e*P	**Pn**	**04 38 55.7**	**-0.4**
	baz=269						
KNMB	**Chin-men Tao**	**3.92 269**	Pn	**Pn**	**04 38 56.3**	**+0.3**
AXDP	**Jialang**	**4.30 275**	*e*P	**Pn**	**04 39 01.6**	**+0.3**
	baz=267						
ZPLA	**Ao Xicun**	**4.55 263**	*e*P	**Pn**	**04 39 04.7**	**+0.2**
	baz=262						
JOW	**Kunigami**	**5.52 65**	*e*P	**Pn**	**04 39 16.7**	**-1.0**
	baz=67						
JOW	**Kunigami**	**5.52 65**	Pn	**Pn**	**04 39 16.9**	**-0.8**
KSRS	**Korea Array**	**13.61 18**	P	**Pn**	**04 41 08.6**	**+2.2**
	0.6nm,0.3s,baz=198,slow=12,SNR=20						
KS19	**Wonju Array Si**	**13.63 18**	Pn	**Pn**	**04 41 07.3**	**+0.5**
KMI	**Kunming**	**18.12 276**	⇓P	**P**	**04 42 02.1**	**+0.1**
KMI			pP	pP	04 42 16.7	-5.0
KMI			pmax	pmax			
	comp=Z,7.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**18.72 333**	*e*P	**P**	**04 42 08.9**	**+0.6**
HHC			pmax	pmax			
	comp=Z,12nm,0.9s						
HHC			pmax	pmax			
	comp=Z,110nm,4.5s						
LZH	**Lanzhou**	**19.88 310**	*e*P	**Pn**	**04 42 22.7**	**-0.9**
LZH			pP	pP	04 42 43.9	+3.3
LZH			pmax	pmax			
	comp=Z,24nm,1.1s						
USRK	**Ussuriysk Ar.**	**21.01 19**	P	**P**	**04 42 32.8**	**-0.2**
	3.9nm,0.8s,baz=202,slow=11,SNR=6.9						
CMAR	**Chiang Mai Arr**	**22.90 259**	P	**P**	**04 42 53.9**	**+1.0**
	0.7nm,0.3s,baz=60,slow=8.7,SNR=5.5						
GTOI	**Gorontalo**	**23.79 179**	P	**P**	**04 43 00.5**	**-0.6**
	24nm,0.9s						
SBUM	**Sibu**	**24.20 206**	P	**P**	**04 43 05.6**	**+0.8**
SBUM			IAmb	IAmb	04 43 06.6		
	comp=Z,19nm,1.3s						
GTA	**Gaotai**	**24.31 313**	P	**P**	**04 43 06.5**	**+0.7**
GTA			pmax	pmax			
	comp=Z,3.0nm,0.9s						
ASAJ	**Asahikawa**	**25.39 35**	P	**P**	**04 43 14.6**	**-0.8**
	comp=Z,4.1nm,0.6s,baz=246,slow=7.4,SNR=5.2						
JKA	**Kamikawa-asahi**	**25.39 35**	P	**P**	**04 43 14.6**	**-0.8**
KLR	**Kul'dur**	**25.63 14**	P	**P**	**04 43 17.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=198,slow=9.6,SNR=4.6						
KSM	**Kuching**	**25.89 209**	P	**P**	**04 43 20.6**	**+0.5**
KSM			IAmb	IAmb	04 43 22.8		
	comp=Z,9.0nm,1.0s						
ULN	**Ulaanbaatar**	**26.35 336**	P	**P**	**04 43 23.6**	**-0.7**
SONM	**Songino Array**	**26.58 335**	P	**P**	**04 43 25.9**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=150,slow=9.1,SNR=22						
SONM	**Songino Array**	**26.58 335**	IAmb	IAmb	04 43 26.7		
	comp=Z,2.5nm,0.8s						
TLY	**Talaya**	**30.75 337**	P	**P**	**04 44 02.3**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=131,slow=20,SNR=5.1						
WMQ	**Urumqi**	**34.40 313**	*e*P	**P**	**04 44 36.9**	**+1.8**
MTN	**Manton Dam**	**38.08 167**	P	**P**	**04 45 06.0**	**-0.5**
MTN			IAmb	IAmb	04 45 06.7		
	comp=Z,3.1nm,0.7s						
MK31	**Makanchi Array**	**39.03 315**	P	**P**	**04 45 14.1**	**-0.2**
MK31			IAmb	IAmb	04 45 14.6		
	comp=Z,1.6nm,1.2s						
MKAR	**Makanchi Array**	**39.03 315**	P	**P**	**04 45 13.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=98,slow=8.8,SNR=7.1						
MKAR			PcP	**PcP**	**04 47 21.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=122,slow=1.9,SNR=2.8						
ZAA0	**Zalesovo Array**	**40.68 326**	P	**P**	**04 45 26.4**	**-1.4**
ZAA0			IAmb	IAmb	04 45 27.1		
	comp=Z,2.1nm,0.6s						
ZALV	**Zalesovo Beam**	**40.68 326**	P	**P**	**04 45 26.9**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=108,slow=7.8,SNR=8.1						
FITZ	**Fitzroy Crossi**	**42.50 176**	P	**P**	**04 45 43.0**	**+0.1**
FITZ			IAmb	IAmb	04 45 44.0		
	comp=Z,10nm,1.2s						
KURBB	**Kurchatov Arra**	**42.71 319**	P	**P**	**04 45 43.6**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=102,slow=9.3,SNR=7.9						
AAK	**Ala-Archa**	**43.37 307**	P	**P**	**04 45 49.7**	**-0.3**
WB0	**Warramunga Arr**	**45.51 164**	P	**P**	**04 46 07.3**	**+0.2**
WB0			IAmb	IAmb	04 46 08.5		
	comp=Z,10nm,1.3s						
WRAB	**Tennant Creek**	**45.66 165**	P	**P**	**04 46 08.5**	**+0.3**
WRA	**Warramunga Arr**	**45.67 165**	P	**P**	**04 46 08.9**	**+0.7**
	comp=Z,3.0nm,0.5s,baz=347,slow=8.9,SNR=54						
WRA	**Warramunga Arr**	**45.67 165**	IAmb	IAmb	04 46 09.9		
	comp=Z,0.3nm,0.8s						
WB2	**Warramunga Arr**	**45.67 165**	P	**P**	**04 46 09.3**	**+1.0**
WR0	**Warramunga Arr**	**45.73 164**	P	**P**	**04 46 09.1**	**+0.3**
BRVK	**Borovoye**	**48.33 320**	P	**P**	**04 46 27.8**	**-0.8**
BRVK			IAmb	IAmb	04 46 28.8		
	comp=Z,1.7nm,0.9s						
AS31	**Alice Springs**	**49.16 166**	P	**P**	**04 46 35.9**	**+0.6**
ASAR	**Alice Springs**	**49.16 166**	P	**P**	**04 46 36.3**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=349,slow=7.6,SNR=18						
ABKAR	**Akbulak array**	**54.16 314**	P	**P**	**04 47 11.8**	**-0.5**
ABKAR			IAmb	IAmb	04 47 12.7		
	comp=Z,1.7nm,0.9s						
ARCES	**ARCESS Array B**	**69.70 338**	P	**P**	**04 48 55.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=65,slow=5.8,SNR=6.2						
ARCES	**ARCESS Array B**	**69.70 338**	IAmb	IAmb	04 49 09.3		
	comp=Z,7.9nm,1.4s						
FINES	**FINESS Array B**	**71.81 330**	P	**P**	**04 49 08.2**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=53,slow=5.5,SNR=24						
NOA	**NORSAR Array B**	**78.53 332**	P	**P**	**04 49 46.1**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=62,slow=4.8,SNR=5.9						
YKA	**Yellowknife Ar**	**82.08 23**	P	**P**	**04 50 05.9**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=314,slow=4.6,SNR=24						
NVAR	**Mina Array Bea**	**95.22 44**	P	**P**	**04 51 11.0**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=292,slow=4.8,SNR=2.8						

*IDC **05** 04:43:19.6±1.2,23˚92S×67˚43W,h210km±20km,mb3.2/2, mb1 3.3/6,mb1mx3.2/26,mbtmp3.8/6,MS3.3/1,Ms1 3.3/1, ms1mx2.4/12,Error ellipse: s-maj=27.3km s-min=22.0km az=91.0*

*GUC **05** 04:43:19.3±0.5,24˚23S×67˚65W,h217km±7km,ML4.1*

ISC 05 04:43:18.4±0.8,24˚16S±0˚05×67˚53W±0˚10, h211km±13km,n24,σ1$40/35,7C-3D,Chile-Argentina border region

PB05				*i* S		**Sn**	**04 44 42.7**	**-0.9**
PB05				IAML			04 44 45.3	
	comp=E,199nm,0.2s							
PB09	**IPOC Station P**	**2.83**	**326**	*i* P		**Pn**	**04 44 08.3**	**+1.4**
PB09				*i* S		**Sn**	**04 44 45.7**	**+0.8**
PB09				IAML			04 44 46.5	
	comp=N,376nm,0.5s							
PB10	**IPOC Station P**	**2.85**	**282** ⇓	*i* P		**Pn**	**04 44 07.1**	**+0.2**
PB10				*i* S		**Sn**	**04 44 45.1**	**+0.3**
PB03	**IPOC Station P**	**2.94**	**315** ⇓	*i* P		**Pn**	**04 44 09.1**	**+1.0**
PB03				*i* S		**Sn**	**04 44 46.2**	**-0.7**
PB03				IAML			04 44 47.6	
	comp=E,309nm,0.1s							
PB04	**IPOC Station P**	**3.02**	**306**	*i* P		**Pn**	**04 44 10.1**	**+1.0**
PB04				*i* S		**Sn**	**04 44 48.1**	**-0.6**
PB04				IAML			04 44 51.8	
	comp=E,308nm,0.1s							
AC02	**Maricunga**	**3.03**	**208**	*i* P		**Pn**	**04 44 08.5**	**-1.0**
PB07	**IPOC Station P**	**3.25**	**318** ⇑	*i* P		**Pn**	**04 44 12.6**	**+0.7**
AC01	**Pan de Azucar**	**3.42**	**234**	*i* P		**Pn**	**04 44 12.4**	**-1.1**
PB01	**IPOC Station P**	**3.59**	**329**	*i* P		**Pn**	**04 44 16.2**	**+0.4**
GO03	**Copiap**	**4.20**	**215**	*e*P		**Pn**	**04 44 21.3**	**-1.8**
PB08	**IPOC Station P**	**4.28**	**339**	*e*P		**Pn**	**04 44 25.3**	**+0.8**
LPAZ	**La Paz**	**7.85**	**356**	P		**Pn**	**04 45 10.4**	**0.0**
	comp=E,3.8nm,0.3s,baz=167,slow=10,SNR=138							
LPAZ				S		**Sn**	**04 46 35.6**	**-4.1**
	baz=229,slow=11,SNR=0.9							
CPUP	**Villa Florida**	**9.48**	**105**	P		**Pn**	**04 45 33.5**	**+2.6**
	comp=E,0.2nm,0.3s,baz=284,slow=14,SNR=7.8							
SIV	**San Ignacio**	**10.14**	**38**	P		**Pn**	**04 45 35.7**	**-3.7**
	comp=E,0.7nm,0.3s,baz=230,slow=13,SNR=12							
PLCA	**Paso Flores**	**16.72**	**188**	P		**Pn**	**04 47 02.1**	**+1.3**
	comp=E,0.1nm,0.3s,baz=15,slow=14,SNR=3.1							
BDFB	**Brasilia**	**20.19**	**69**	P		**P**	**04 47 36.2**	**-1.2**
	comp=E,2.1nm,0.4s,baz=250,slow=7.0,SNR=6.6							
CMIG	**Matias Romero**	**48.93**	**324**	LR		LR	05 09 40.5	
	comp=E,29nm,19.6s,baz=134,slow=32							
TORD	**Torodi Ar. Bea**	**77.08**	**69**	P		**P**	**04 54 49.8**	**+0.9**
	comp=E,0.6nm,0.7s,baz=249,slow=5.7,SNR=2.7							

*ANF **05** 04:49:13.9±0.4, 36°.47N×97°.16W, h7km, ML3.5/11, Error ellipse: s-maj=4.1km s-min=3.3km az=159.0*
*TUL **05** 04:49:13.5±1.6, 36°.50N±0°.02×97°.15W±0°.06, h7km±7km, ML3.1, mb_Lg3.1/78(NEIC), Error ellipse: s-maj=6.6km s-min=0.5km az=70.0*
*NEIC **05** 04:49:13.5±1.1, 36°.50N±0°.02×97°.18W±0°.06, h2km±8km, Error ellipse: s-maj=7.1km s-min=1.1km az=71.0*
ISC 05 04:49:13.2±1.1, 36°.50N±0°.02×97°.17W±0°.02, h2km±11km, n96, σ0s57/87, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
QUOK	**Quay**	**0.49**	**131**			**Pg**	**04 49 23.2**	**+0.6**
QUOK				Sg		**Sg**	**04 49 28.9**	**-0.1**
KAN13	**South Haven SW**	**0.57**	**334**			**Pg**	**04 49 24.8**	**+0.5**
OK031	**S. Brethren Rd**	**0.60**	**154**			**Pg**	**04 49 24.9**	**+0.1**
OK031				Sg		**Sg**	**04 49 33.1**	**+0.5**
OK030	**Cody Creek RV**	**0.65**	**151**	Pg		**Pg**	**04 49 25.9**	**+0.3**
OK030				Sg		**Sg**	**04 49 34.4**	**+0.4**
CROK	**Carrier**	**0.66**	**271**	Pg		**Pg**	**04 49 26.3**	**+0.4**
CROK				Sg		**Sg**	**04 49 35.2**	**+0.7**
GC02	**Grant County #**	**0.66**	**303**			**Pg**	**04 49 26.1**	**+0.2**
T35A	**Sooner Cattle**	**0.67**	**51**			**Pg**	**04 49 26.0**	**-0.1**
T35B	**Sooner Cattle**	**0.67**	**51**	P		**Pg**	**04 49 26.3**	**+0.2**
	baz=231,SNR=138							
T35B				S		**Sg**	**04 49 35.2**	**+0.4**
	baz=231							
T35B	**Sooner Cattle**	**0.67**	**51**	P			04 49 26.3	
	baz=231,SNR=138							
T35B				S			04 49 35.2	
	baz=231							
KAN09	**Caldwell North**	**0.73**	**330**			**Pg**	**04 49 27.3**	**-0.1**
OK029	**Liberty Lake**	**0.74**	**199**			**Pg**	**04 49 27.5**	**+0.2**
KAN14	**Manchester OK**	**0.79**	**306**			**Pg**	**04 49 28.7**	**+0.3**
KAN01	**Argonia South**	**0.81**	**324**			**Pg**	**04 49 28.9**	**+0.1**
KAN05	**Bluff City Nor**	**0.83**	**317**			**Pg**	**04 49 29.1**	**-0.1**
OK032	**Salt Plains WL**	**0.90**	**290**			**Pg**	**04 49 30.6**	**+0.2**
BCOK	**Bluff Creek, N**	**0.91**	**203**			**Pg**	**04 49 30.6**	**-0.1**
OK025	**Westminster Rd**	**0.92**	**189**			**Pg**	**04 49 31.1**	**+0.2**
KAN10	**Anthony SW Sta**	**0.97**	**310**			**Pg**	**04 49 31.5**	**-0.4**
KAN08	**Anthony NE Sta**	**0.97**	**319**			**Pg**	**04 49 31.5**	**-0.4**
KAN12	**Harper NE Stat**	**1.04**	**320**			**Pg**	**04 49 33.1**	**-0.1**
OKCFA	**Oklahoma City**	**1.10**	**192**			**Pg**	**04 49 34.1**	**-0.3**
OKCFA	**Oklahoma City**	**1.10**	**192**	P		**Pg**	**04 49 34.4**	**+0.1**
	baz=13,SNR=12							
OKCFA				S		**Sb**	**04 49 49.4**	**-0.6**
	baz=13							
OKCFA	**Oklahoma City**	**1.10**	**192**	P			04 49 34.4	
	baz=13,SNR=12							
OKCFA				S			04 49 49.4	
	baz=13							
OKCSW	**OKLAHOMA CITY**	**1.11**	**192**			**Pg**	**04 49 34.4**	**-0.1**
FNO	**Franklin**	**1.25**	**189**			**Pn**	**04 49 37.2**	**-0.5**
TUL1	**Leonard**	**1.25**	**117**	P		**Pn**	**04 49 36.6**	**-1.2**
	baz=299,SNR=226							
TUL1				S		**Sg**	**04 49 53.4**	**-0.1**
	baz=299							
TUL1	**Leonard**	**1.25**	**117**	P			04 49 36.6	
	baz=299,SNR=226							
TUL1				S			04 49 53.4	
	baz=299							
U32A	**Winter Ranch,**	**1.48**	**266**			**Pb**	**04 49 41.2**	**-0.3**
U32A	**Winter Ranch,**	**1.48**	**266**	P		**Pn**	**04 49 41.1**	**0.0**
	baz=85,SNR=10							
U32A				S		**Sg**	**04 50 01.1**	**+0.2**
	baz=85							
U32A	**Winter Ranch,**	**1.48**	**266**	P			04 49 41.1	
	baz=85,SNR=10							
U32A				S			04 50 01.1	
	baz=85							
X34A	**Smith Ranch, M**	**1.97**	**196**	Pn		**Pn**	**04 49 48.2**	**+0.6**
WMOK	**Wichita Mounta**	**2.19**	**217**			**Pn**	**04 49 50.2**	**-0.6**
WMOK				IAmb_Lg			04 50 26.1	
	comp=Z,59nm,0.9s							
WMOK	**Wichita Mounta**	**2.19**	**217**	P		**Pn**	**04 49 51.4**	**+0.7**
	baz=36,SNR=29							
WMOK	**Wichita Mounta**	**2.19**	**217**	P			04 49 51.4	
	baz=36,SNR=29							
U38A	**Gravette**	**2.24**	**91**	Pn		**Pn**	**04 49 52.0**	**+0.6**
U38A	**Gravette**	**2.24**	**91**	P		**Pn**	**04 49 52.0**	**+0.6**
	baz=272,SNR=60							
U38A				S		**Sb**	**04 50 23.0**	**+0.3**
	baz=272							
U38A	**Gravette**	**2.24**	**91**	P			04 49 52.0	
	baz=272,SNR=60							
U38A				S			04 50 23.0	
	baz=272							
R32A	**Long Quarter,**	**2.28**	**328**	Pn		**Pn**	**04 49 52.6**	**+0.6**
R32A				IAmb_Lg			04 50 30.1	
	comp=Z,48nm,0.8s							
R32A	**Long Quarter,**	**2.28**	**328**	P		**Pb**	**04 49 53.5**	**-1.7**
	baz=147							
R32A				S		**Sn**	**04 50 21.7**	**+1.0**
	baz=147							
R32A	**Long Quarter,**	**2.28**	**328**	P			04 49 53.5	
	baz=147							
R32A				S			04 50 21.7	
	baz=147							
X37A	**Clayton**	**2.40**	**142**	Pn		**Pn**	**04 49 54.1**	**+0.6**
X37A	**Clayton**	**2.40**	**142**	P		**Pn**	**04 49 53.9**	**+0.4**
	baz=324,SNR=173							
X37A	**Clayton**	**2.40**	**142**	P			04 49 53.9	
	baz=324,SNR=173							
HHAR	**Hobbs**	**2.61**	**94**			**Pn**	**04 49 57.8**	**+1.3**
HHAR	**Hobbs**	**2.61**	**94**	P		**Pn**	**04 49 57.1**	**+0.6**
	baz=276							
HHAR	**Hobbs**	**2.61**	**94**	P			04 49 57.1	
	baz=276							
KSU1	**Kansas State U**	**2.64**	**9**			**Pn**	**04 49 57.2**	**+0.3**
KSU1				IAmb_Lg			04 50 38.3	
	comp=Z,42nm,0.8s							
W39A	**Magazine**	**3.04**	**114**			**Pn**	**04 50 03.1**	**+0.7**
W39A				IAmb_Lg			04 50 57.7	
	comp=Z,59nm,0.8s							
CBKS	**Cedar Bluff**	**3.09**	**319**	Pn		**Pn**	**04 50 03.5**	**+0.5**
Z35A	**Perchaven, San**	**3.16**	**181**	Pn		**Pn**	**04 50 04.2**	**+0.2**
S39A	**Bolivar**	**3.29**	**68**			**Pn**	**04 50 05.6**	**-0.3**
S39A	**Bolivar**	**3.29**	**68**	P		**Pn**	**04 50 05.9**	**0.0**
	baz=250,SNR=20							
S39A	**Bolivar**	**3.29**	**68**	P			04 50 05.9	
	baz=250,SNR=20							
U40A	**Yellville**	**3.48**	**91**	Pn		**Pn**	**04 50 08.7**	**+0.3**
U40A	**Yellville**	**3.48**	**91**	P		**Pn**	**04 50 08.3**	**-0.2**
	baz=274,SNR=47							
U40A				S		**Sn**	**04 50 50.2**	**0.0**
	baz=274							
U40A				S		**Sn**	**04 50 50.2**	**0.0**
	baz=274							
U40A	**Yellville**	**3.48**	**91**	P			04 50 08.3	
	baz=274,SNR=47							
U40A				P			04 50 08.3	
	baz=274,SNR=47							
U40A				S			04 50 50.2	
	baz=274							
U40A				S			04 50 50.2	
	baz=274							
MIAR	**Mount Ida**	**3.52**	**123**			**Pn**	**04 50 09.1**	**+0.2**
MIAR				IAmb_Lg			04 51 06.0	
	comp=Z,42nm,0.9s							
MIAR	**Mount Ida**	**3.52**	**123**	P		**Pn**	**04 50 09.0**	**+0.1**
	baz=305,SNR=15							
MIAR	**Mount Ida**	**3.52**	**123**	P			04 50 09.0	
	baz=305,SNR=15							
Z38A	**Mt. Pleasant**	**3.69**	**150**	Pn		**Pn**	**04 50 10.8**	**-0.5**
Z38A				IAmb_Lg			04 51 19.5	
	comp=Z,34nm,0.7s							
MGMO	**Mountain Grove**	**3.98**	**79**	Pn		**Pn**	**04 50 15.0**	**-0.3**
AMTX	**Amarillo**	**4.01**	**248**	Pn		**Pn**	**04 50 15.1**	**-0.7**
AMTX				IAmb_Lg			04 51 22.0	
	comp=Z,32nm,0.8s							
X40A	**Basin Creek Fa**	**4.06**	**118**			**Pn**	**04 50 16.5**	**+0.1**
X40A				IAmb_Lg			04 51 27.7	
	comp=Z,30nm,0.7s							
FCAR	**Ozark Folk Cen**	**4.12**	**97**	Pn		**Pn**	**04 50 18.2**	**+0.9**
FCAR				IAmb_Lg			04 51 22.5	
	comp=Z,36nm,0.7s							
WHAR	**Wooly Hollow**	**4.14**	**105**	Pn		**Pn**	**04 50 17.6**	**+0.1**
WHAR				IAmb_Lg			04 51 23.3	
	comp=Z,46nm,0.8s							
P38A	**Dawn**	**4.24**	**41**	Pn		**Pn**	**04 50 19.5**	**+0.6**
N33A	**J Bar K, Exete**	**4.24**	**357**	IAmb_Lg			04 51 38.3	
	comp=Z,60nm,1.0s							
R40A	**Maddies Statio**	**4.29**	**64**			**Pn**	**04 50 19.5**	**0.0**
R40A				IAmb_Lg			04 51 31.7	
	comp=Z,47nm,0.8s							
R40A	**Maddies Statio**	**4.29**	**64**	P		**Pn**	**04 50 19.6**	**0.0**
R40A	**Maddies Statio**	**4.29**	**64**	P			04 50 19.6	
	baz=247,SNR=23							
WLAR	**White Oak Lake**	**4.35**	**129**	Pn		**Pn**	**04 50 20.2**	**-0.1**
WLAR				IAmb_Lg			04 51 31.3	
	comp=Z,24nm,0.9s							
ABTX	**Abilene, Hawle**	**4.37**	**209**	Pn		**Pn**	**04 50 21.5**	**+0.8**
N35A	**Tabor**	**4.52**	**15**	Pn		**Pn**	**04 50 22.9**	**+0.2**
N35A						LR	04 51 36.5	
237A	**Washetta, Mont**	**4.62**	**166**	Pn		**Pn**	**04 50 24.1**	**0.0**
LCAR	**Lake Charles**	**4.87**	**93**	Pn		**Pn**	**04 50 28.3**	**+0.7**
LCAR				IAmb_Lg			04 51 48.3	
	comp=Z,35nm,0.7s							
BGNE	**Belgrade**	**4.96**	**351**			Lg	04 51 53.7	
CCM	**Cathedral Cave**	**4.97**	**70**	Pn		**Pn**	**04 50 29.5**	**+0.6**
KSCO	**Kaye Shedlock'**	**5.00**	**302**	Pn		**Pn**	**04 50 29.4**	**-0.1**
KSCO						LR	04 51 52.5	
P40A	**Paris**	**5.05**	**52**	Pn		**Pn**	**04 50 30.2**	**+0.2**
CCAR	**Cane Creek**	**5.11**	**119**	IAmb_Lg			04 52 06.9	
	comp=Z,26nm,1.0s							
NATX	**Nacogdoches**	**5.16**	**156**	IAmb_Lg			04 52 11.1	
	comp=Z,24nm,0.9s							
MSTX	**Muleshoe**	**5.24**	**243**	Pn		**Pn**	**04 50 33.0**	**+0.3**
N38A	**Joes South For**	**5.28**	**34**	Pn		**Pn**	**04 50 32.9**	**-0.3**
N38A				IAmb_Lg			04 52 15.6	
	comp=Z,30nm,0.8s							
PBMO	**Poplar Bluff**	**5.42**	**85**	Pn		**Pn**	**04 50 35.4**	**+0.2**
FVM	**French Village**	**5.58**	**73**	Pn		**Pn**	**04 50 36.7**	**-0.6**
FVM				IAmb_Lg			04 52 14.3	
	comp=Z,25nm,0.9s							
435B	**Jarrell**	**5.71**	**184**	IAmb_Lg			04 52 26.8	
	comp=Z,27nm,0.8s							
GNAR	**Gosnell**	**5.80**	**93**	Pn		**Pn**	**04 50 41.5**	**+1.2**
T25A	**Trinidad**	**5.85**	**278**	Pn		**Pn**	**04 50 41.9**	**+0.7**
T25A				IAmb_Lg			04 52 21.5	
	comp=Z,39nm,0.9s							
OGNE	**Ogallala**	**5.85**	**321**	Pn		**Pn**	**04 50 42.8**	**+1.8**
OGNE				IAmb_Lg			04 52 29.2	
	comp=Z,20nm,0.7s							
SCIA	**State Center**	**6.21**	**28**	IAmb_Lg			04 52 36.4	
	comp=Z,33nm,0.7s							
K31A	**O'Neill**	**6.24**	**349**	Pn		**Pn**	**04 50 46.4**	**0.0**
K31A				IAmb_Lg			04 52 38.9	
	comp=Z,36nm,0.8s							
JCT	**Junction City**	**6.39**	**201**	IAmb_Lg			04 52 51.5	
	comp=Z,27nm,0.9s							
S44A	**Carbondale**	**6.43**	**77**	IAmb_Lg			04 52 41.3	
	comp=Z,39nm,1.0s							
N41A	**Harden Midland**	**6.49**	**48**	IAmb_Lg			04 52 45.4	
	comp=Z,29nm,0.9s							
OXF	**Oxford**	**6.63**	**105**	Pn		**Pn**	**04 50 52.9**	**+1.2**
OXF				IAmb_Lg			04 52 45.4	
	comp=Z,32nm,0.9s							
Y45A	**Yeager Farm, C**	**6.77**	**111**	IAmb_Lg			04 52 54.3	
	comp=Z,27nm,0.8s							
P43A	**Skaggs, Pawnee**	**6.80**	**60**	Pn		**Pn**	**04 50 53.3**	**-0.7**
P43A				IAmb_Lg			04 52 48.0	
	comp=Z,29nm,0.9s							
K38A	**Parkersburg**	**7.02**	**28**	IAmb_Lg			04 52 57.6	
	comp=Z,20nm,0.7s							
L40A	**Anamosa**	**7.22**	**38**	Pn		**Pn**	**04 50 59.2**	**-0.6**
HDIL	**Hopedale**	**7.38**	**54**	IAmb_Lg			04 53 11.8	
	comp=Z,28nm,0.9s							
USIN	**University of**	**7.72**	**76**	IAmb_Lg			04 53 19.2	
	comp=Z,34nm,1.1s							
O44A	**Mansfield**	**7.75**	**59**	IAmb_Lg			04 53 24.4	
	comp=Z,15nm,0.8s							
T47A	**Sharon Grove**	**8.09**	**84**	IAmb_Lg			04 53 32.3	
	comp=Z,20nm,0.8s							
V48A	**Smith Brothers**	**8.40**	**92**	IAmb_Lg			04 53 37.6	
	comp=Z,11nm,0.8s							
P46A	**Rosedale**	**8.45**	**65**	IAmb_Lg			04 53 43.7	
	comp=Z,31nm,0.9s							
SFIN	**Lafayette**	**8.80**	**61**	IAmb_Lg			04 53 58.5	
	comp=Z,16nm,1.0s							
BLO	**Bloomington**	**8.83**	**69**	IAmb_Lg			04 53 50.0	
	comp=Z,23nm,0.8s							
U49A	**Red Boiling Sp**	**9.17**	**87**	IAmb_Lg			04 54 06.9	
	comp=Z,9.2nm,0.8s							
P48A	**Milroy**	**9.73**	**69**	IAmb_Lg			04 54 28.2	
	comp=Z,12nm,0.8s							

*THR **05** 05:03:57.7±0.3, 29°.12N×51°.29E, h7km±8km, ML3.5*
*TEH **05** 05:03:58.6, 29°.08N×51°.30E, h11km, ML3.3*
ISC 05 05:03:59.7±1.1, 29°.07N±0°.05×51°.29E±0°.06, h17km, n29, σ1s37/29, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AHBU	**AHRAM**	**0.21**	**180**	*e*Pn		**Pg**	**05 04 02.9**	**-1.7**
KAZ1	**Kazerun**	**0.63**	**29**	*e*Pg		**Pg**	**05 04 10.1**	**-2.0**
KAZ1				*e*			05 04 22.6	
	comp=Z,99nm,0.2s							
SHI	**Shiraz**	**1.21**	**62**	*e*Pg		**Pb**	**05 04 22.0**	**-0.2**
SHI				*e*			05 04 43.0	
	comp=Z,99nm,0.3s							
QIR1	**Qir**	**1.65**	**111**	*e*Pn		**Pb**	**05 04 29.7**	**+0.1**
ABEH	**Behbahan**	**1.77**	**330**	*e*Pn		**Pb**	**05 04 31.8**	**+0.1**
KLNJ	**Kolanjah**	**1.95**	**8**	*e*Pn		**Pb**	**05 04 34.1**	**-0.8**
JHRM	**Jahrom**	**2.08**	**105**	*e*Pn		**Pn**	**05 04 35.2**	**+1.3**
IRAM	**Ramesheh**	**2.88**	**19**	*e*Pn		**Pn**	**05 04 46.7**	**+1.6**
UMR	**Umm Al-Rimmam**	**3.16**	**280**	*e*P			05 04 50.0	
RDF	**Al-Radifah**	**3.28**	**268**	*e*P			05 04 52.2	
ISAD	**Sadrabad**	**3.50**	**36**	*e*Pn		**Pn**	**05 04 55.5**	**+1.9**
MIB	**Mutribah**	**3.52**	**283**	*e*P			05 04 55.1	
IPIR	**Pirpir**	**3.62**	**355**	*e*Pn		**Pn**	**05 04 57.1**	**+1.9**
IMEH	**Mehriz**	**3.69**	**50**	*e*Pn		**Pn**	**05 04 57.7**	**+1.6**
SHGR	**Shooshtar-Gavs**	**3.71**	**325**	IAML			05 06 06.9	
	comp=E,64nm,0.6s							
IZEF	**Zefreh**	**3.91**	**13**	*e*Pn		**Pn**	**05 05 00.5**	**+1.3**
NASN	**Na'in**	**3.94**	**19**	*e*Pn		**Pn**	**05 05 00.2**	**+0.6**
NASN				*e*S		**Sn**	**05 05 46.0**	**+0.5**
NASN	**Na'in**	**3.94**	**19**	*e*Pn		**Pn**	**05 05 00.2**	**+0.6**
IKLH	**Kolahrood**	**4.24**	**3**	*e*Pn		**Pn**	**05 05 05.6**	**+1.9**
QAM	**Ghamsar**	**4.68**	**1**	*e*Pn		**Pn**	**05 05 12.0**	**+2.3**
KHGB	**Koh Gabri**	**4.69**	**73**	*e*Pn		**Pn**	**05 05 11.2**	**+1.3**
KHGB				*e*			05 06 11.6	
	comp=Z,99nm,0.9s							
KHMZ	**Khomeyn**	**4.79**	**347**	*e*Pn		**Pn**	**05 05 12.1**	**+0.9**
KHMZ	**Khomeyn**	**4.79**	**347**	*e*Pn		**Pn**	**05 05 12.1**	**+0.9**
KRBR	**Kerman**	**4.85**	**78**	*e*Pn		**Pn**	**05 05 13.6**	**+1.4**
KRBR	**Kerman**	**4.85**	**78**	*e*Pn		**Pn**	**05 05 13.6**	**+1.4**
KRSH	**Karshahi**	**4.94**	**8**	*e*Pn		**Pn**	**05 05 14.5**	**+1.3**
IQOM	**Qom**	**5.76**	**358**	*e*Pn		**Pn**	**05 05 26.1**	**+1.5**
TPRV	**Parvadeh(Tabas**	**6.08**	**48**	*e*Pn		**Pn**	**05 05 29.7**	**+0.9**
DAMV	**Damavand**	**6.56**	**5**	*e*Pn		**Pn**	**05 05 36.5**	**+0.9**
DAMV	**Damavand**	**6.56**	**5**	*e*Pn		**Pn**	**05 05 36.5**	**+0.9**
TNSJ	**Nastanj**	**6.66**	**42**	*e*Pn		**Pn**	**05 05 38.0**	**+1.2**
TKDS	**Koohdasht(Taba**	**6.73**	**46**	*e*Pn		**Pn**	**05 05 38.8**	**+0.9**

*SNET **05** 05:04:02.1±1.4, 11°.84N×88°.14W, h35km±999km, ML3.0*
*IDC **05** 05:04:02.5±1.3, 12°.76N×87°.35W, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.5/36, mbtmp3.5/6, ML2.8/3, MS2.7/1, Ms1 2.7/1, ms1mx2.1/37, Error ellipse: s-maj=60.2km s-min=13.3km az=47.0*
*INET **05** 05:04:04.3, 12°.05N×87°.99W, h13km, MW3.4*
ISC 05 05:04:01.2±1.1, 12°.01N±0°.09×88°.11W±0°.09, h10km, n14, σ2s02/19, mb3.6/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CNCH	**Conchagua**	**1.28**	**12**	*e*P		**Pn**	**05 04 25.8**	**+0.4**
VSM	**San Miguel**	**1.41**	**353**	*e*P		**Pb**	**05 04 28.7**	**+0.8**
PACA	**Pacayal**	**1.46**	**352**	*e*P		**Pb**	**05 04 29.3**	**+0.7**
PACA				*e*S		**Sg**	**05 04 49.9**	**+1.6**
PACA				IAML			05 04 54.0	
	comp=Z,168nm,0.2s							
TECA	**Tecapa**	**1.52**	**345**	*e*P		**Pn**	**05 04 29.6**	**+0.9**
LFRS	**El Faro**	**1.85**	**330**	*e*P		**Pn**	**05 04 33.9**	**+0.7**
LFRS				*e*S		**Sn**	**05 04 57.5**	**+0.9**
LBRS	**Las Brisas**	**1.94**	**332**	*e*P		**Pn**	**05 04 35.8**	**+1.4**
TGUH	**Tegucigalpa,Un**	**2.19**	**22**	*e*P		**Pn**	**05 04 38.7**	**+0.9**
JTS	**Las Juntas de**	**3.54**	**119**	Pn		**Pn**	**05 04 56.8**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=249,slow=8.6,SNR=6.6							
JTS				Pg		**Pb**	**05 05 04.6**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=13,slow=9.0,SNR=7.4							
JTS				Sn		**Sn**	**05 05 38.9**	**+0.6**
	comp=Z,1.9nm,0.3s,baz=15,slow=18,SNR=3.7							
JTS				Lg		Lg	05 05 50.9	
	comp=Z,2.2nm,0.3s,baz=41,slow=19,SNR=3.5							
APG	**El Apazote**	**3.75**	**323**	Pn		**Pn**	**05 05 01.6**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=121,slow=18,SNR=1.9							
APG				Pg		**Pg**	**05 05 12.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=96,slow=22,SNR=4.9							
APG				Sn		**Sn**	**05 05 38.4**	**-5.4**
	comp=Z,0.4nm,0.3s,baz=158,slow=20,SNR=4.2							
CMIG	**Matias Romero**	**8.28**	**308**	Pn		**Pn**	**05 06 04.7**	**+3.3**
	comp=Z,0.3nm,0.3s,baz=143,slow=11,SNR=5.4							
TXAR	**Lajitas Array**	**22.51**	**322**	P		**P**	**05 09 03.1**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=135,slow=10,SNR=15							
TKL	**Tuckaleechee C**	**23.86**	**9**	LR		LR	05 17 41.7	
	comp=Z,18nm,19.7s,baz=160,slow=36							
ULM	**Lac du Bonnet**	**38.66**	**352**	P		**P**	**05 11 22.6**	**-2.3**
	comp=Z,1.8nm,0.5s,baz=166,slow=6.7,SNR=4.7							
YKA	**Yellowknife Ar**	**53.86**	**345**	P		**P**	**05 13 22.8**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=135,slow=8.3,SNR=11							

*IDC **05** 05:18:05.6±0.6, 31°.93S×57°.31E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.1/41, mbtmp4.2/14, ML4.2/1, MS3.4/12, Ms1 3.4/12, ms1mx3.1/35, Error ellipse: s-maj=20.6km s-min=16.2km az=19.0*
*NEIC **05** 05:18:06.9±1.4, 31°.85S±0°.06×57°.4E±0°.2, h10km±1km, mb4.5/16, Error ellipse: s-maj=22.7km s-min=9.5km az=263.0*
ISC 05 05:18:07.0±0.5, 31°.9S±0°.1×57°.3E±0°.1, h11km, n53, σ0s88/39, mb4.4/16, MS3.4/12, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ABPO	**Ambohimpanom**	**15.72**	**322**	Pn		**Pn**	**05 21 48.0**	**-0.6**
OPO	**Ambohidratompo**	**16.11**	**323**	Pn		**Pn**	**05 21 54.3**	**+0.5**
	0.8nm,0.3s,baz=137,slow=6.5,SNR=3.9							
OPO				Sn		Sn	05 24 41.6	-11
	0.6nm,0.3s,baz=207,slow=18,SNR=2.7							
BOSA	**Boshof**	**27.83**	**268**	P		**P**	**05 23 56.1**	**-0.5**
	2.0nm,0.7s,baz=89,slow=8.8,SNR=4.1	

comp=Z,0.2nm,0.3s,baz=215,slow=1.8,SNR=3.6

PLCA	**Paso Flores**	**93.15**	**217**	LR	LR	06 05 19.5	
	comp=Z,38nm,18.9s,baz=160,slow=30						
KSRS	**Korea Array**	**95.38**	**49**	LR	LR	06 13 40.0	
	comp=Z,11nm,18.8s,baz=190,slow=35						
NOA	**NORSAR Array B**	**99.93**	**339**	LR	LR	06 16 27.2	
	comp=Z,8.3nm,20.2s,baz=0.0,slow=35						
ILAR	**Eielson Array**	**143.87**	**17**	PKhKP	PKPpre	05 37 38.4	
	comp=Z,0.6nm,0.9s,baz=294,slow=3.7,SNR=7.0						
YKA	**Yellowknife Ar**	**148.96**	**353**	PKPbc	**PKPbc**	**05 37 54.4**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=8.0,slow=2.3,SNR=48						
ULM	**Lac du Bonnet**	**152.94**	**320**	PKPbc	**PKPbc**	**05 38 03.6**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=32,slow=3.5,SNR=7.0						
ULM	**Lac du Bonnet**	**152.94**	**320**	PKPdf	**PKPdf**	**05 37 53.8**	**-3.0**
ULM					**PKPbc**	**05 38 03.6**	**-0.3**

*ISN **05** 05:19:01.8±0.8, 32.96N×46.04E, h9km±999km, ML3.5*
*TEH **05** 05:19:02.7, 32.95N×46.02E, h16km, ML3.5*

ISC 05 05:19:03.4±0.9, 32.97N±0.05×46.05E±0.04, h10km, n22, σ0s87/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.17**	**323**	*e*Pg	**Pg**	**05 19 06.0**	**-1.1**
IBDR				*e*Sg	**Sg**	**05 19 08.0**	**-1.7**
IBDR				AML	AML	05 19 15.2	
	comp=N,8μm,0.7s						
IBDR				AML	AML	05 19 16.4	
	comp=E,9μm,0.5s						
DHL1	**Dehloran**	**1.07**	**105**	*e*Pg	**Pg**	**05 19 23.4**	**-0.7**
DHL1				*e*Sg	**Sn**	**05 19 39.0**	**-0.5**
IGHG	**Ghaleghazi**	**1.42**	**17**	*e*Pg	**Pb**	**05 19 30.8**	**+0.7**
IGHG				*e*		05 19 55.7	
	comp=Z,99nm,0.7s						
BHD	**Baghdad**	**1.44**	**282**	*e*Pn	**Pn**	**05 19 30.0**	**+0.5**
BHD				*e*Sn	**Sb**	**05 19 50.0**	**+1.4**
KCHF	**Cheshme Sefid,**	**1.54**	**32**	*e*Pg	**Pb**	**05 19 32.1**	**0.0**
KCHF				*e*		05 19 55.4	
	comp=Z,99nm,0.4s						
IKFM	**Kafar-mosalman**	**1.60**	**69**	*e*Pg	**Pb**	**05 19 32.9**	**-0.2**
IKFM				*e*		05 19 59.7	
	comp=Z,99nm,0.4s						
KER	**Kermanshah**	**1.67**	**32**	*e*Pg	**Pb**	**05 19 34.4**	**0.0**
IDHR	**Dehrash**	**1.74**	**9**	*e*Pg	**Pn**	**05 19 35.0**	**+1.0**
IDHR				*e*		05 20 07.8	
	comp=Z,99nm,0.4s						
IDOB	**Doab**	**1.95**	**65**	*e*Pn	**Pn**	**05 19 37.5**	**+0.7**
NSR	**Nassriya**	**1.96**	**178**	*e*Pn	**Pn**	**05 19 37.0**	**+0.3**
NSR				*e*Sn	**Sn**	**05 20 02.0**	**+0.7**
IKMR	**Kamar-syah**	**2.02**	**74**	*e*Pn	**Pn**	**05 19 38.3**	**+0.7**
IKMR				*e*		05 20 11.2	
	comp=Z,99nm,0.4s						
ILIN	**Lien**	**2.08**	**21**	*e*Pn	**Pb**	**05 19 41.1**	**-0.3**
IBZA	**Bozab**	**2.12**	**45**	*e*Pn	**Pn**	**05 19 39.8**	**+0.6**
IBZA				*e*		05 20 26.1	
	comp=Z,99nm,0.5s						
HSAM	**Samen**	**2.46**	**59**	*e*Pn	**Pn**	**05 19 44.8**	**+1.0**
HSAM				*e*		05 20 29.8	
	comp=Z,99nm,0.6s						
HAGD	**Aghdareh**	**3.16**	**53**	*e*Pn	**Pn**	**05 19 54.3**	**+0.8**
HAGD				*e*		05 20 02.0	
	comp=Z,99nm,0.5s						
IRAZ	**Razeghan**	**4.03**	**52**	*e*Pn	**Pn**	**05 20 06.4**	**+1.1**
IPIR	**Pirpir**	**4.08**	**93**	*e*		05 20 58.4	
	comp=Z,99nm,0.6s						
IPIR				*e*Pn	**Pn**	**05 20 06.8**	**+0.6**
IKLH	**Kolahrood**	**4.65**	**84**	*e*Pn	**Pn**	**05 20 15.2**	**+1.3**
IGAR	**Gharneh**	**5.08**	**95**	*e*Pn	**Pn**	**05 20 19.1**	**-0.8**
IGAR				*e*		05 21 19.2	
	comp=Z,99nm,0.3s						
KLNJ	**Kolanjah**	**5.10**	**111**	*e*Pn	**Pn**	**05 20 20.9**	**+0.7**
KRSH	**Karshahi**	**5.18**	**77**	*e*Pn	**Pn**	**05 20 21.4**	**+0.3**
ISFB	**Sefidab**	**5.34**	**73**	*e*Pn	**Pn**	**05 20 24.1**	**+0.8**

*GCG **05** 05:43:03.7±0.5, 12.52N×89.93W, h59km±94km, MD4.3*
*NEIC **05** 05:43:05.9±1.7, 12.76N±0.06×89.91W±0.06, h35km±2km, mb4.3/51, Md4.3(SNET), Error ellipse: s-maj=11.6km s-min=9.6km az=224.0*
*SNET **05** 05:43:05.7±1.4, 12.82N×89.87W, h19km±5km, ML4.3*
*INET **05** 05:43:06.8, 12.88N×89.91W, h15km, MW3.9*
*UCR **05** 05:43:07.2±1.4, 12.91N×89.87W, h20km±5km, ML4.2, mb4.3(NEIC)*
*IDC **05** 05:43:12.5±1.4, 13.45N×89.22W, h65km±12km, mb3.8/9, mb1 4.0/11, mb1mx3.6/43, mbtmp4.1/11, MS3.1/5, Ms1 3.1/5, ms1mx2.8/33, Error ellipse: s-maj=35.6km s-min=8.8km az=46.0*

ISC 05 05:43:08.7±1.2, 12.91N±0.06×89.79W±0.04, h49km±11km, n154, σ1s50/179, mb4.2/28, MS3.3/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.73**	**39**	*e*P	**Pn**	**05 43 21.7**	**-1.2**
LALI	**Alcalda de L**	**0.73**	**39**	*e*P	**Pn**	**05 43 21.7**	**-1.2**
JAYA	**Jayaque - finc**	**0.81**	**24**	*e*P	**Pn**	**05 43 22.6**	**-1.5**
JAYA				*e*S	**Sn**	**05 43 35.2**	**0.0**
JAYA				IAML		05 43 37.9	
	comp=Z,6μm,0.3s						
JAYA	**Jayaque - finc**	**0.81**	**24**	*e*P	**Pn**	**05 43 22.6**	**-1.5**
JAYA				*e*S	**Sn**	**05 43 35.2**	**0.0**
JAYA				IAML		05 43 37.9	
	comp=Z,6μm,0.3s						
PMON	**Piamonte**	**0.92**	**30**	*e*P	**Pn**	**05 43 24.4**	**-1.2**
PMON	**Piamonte**	**0.92**	**30**	*e*P	**Pn**	**05 43 24.4**	**-1.2**
CEVE	**Cerro Verde**	**0.93**	**10**	*e*P	**Pn**	**05 43 24.6**	**-1.2**
CEVE				*e*S	**Sn**	**05 43 40.0**	**+1.8**
CEVE				IAML		05 43 41.5	
	comp=Z,12μm,0.4s						
CEVE	**Cerro Verde**	**0.93**	**10**	*e*P	**Pn**	**05 43 24.6**	**-1.2**
CEVE				*e*S	**Sn**	**05 43 40.0**	**+1.8**
CEVE				IAML		05 43 41.5	
	comp=Z,12μm,0.4s						
SBLS	**San Blas**	**0.94**	**10**	*e*P	**Pn**	**05 43 24.9**	**-1.0**
SBLS	**San Blas**	**0.94**	**10**	*e*P	**Pn**	**05 43 24.9**	**-1.0**
SNET	**Serv Nac Est T**	**0.94**	**35**	*e*P	**Pn**	**05 43 24.8**	**-1.0**
SNET				*e*S	**Sn**	**05 43 39.3**	**+1.0**
SNET	**Serv Nac Est T**	**0.94**	**35**	*e*P	**Pn**	**05 43 24.8**	**-1.0**
SNET				*e*S	**Sn**	**05 43 39.3**	**+1.0**
SNET	**Serv Nac Est T**	**0.94**	**35**		**Pn**	**05 43 24.5**	**-1.3**
BOQS	**Boqueron**	**0.96**	**31**	*e*P	**Pn**	**05 43 25.2**	**-0.9**
BOQS	**Boqueron**	**0.96**	**31**	*e*P	**Pn**	**05 43 25.2**	**-0.9**
CEDA	**San Andres**	**0.97**	**23**	*e*P	**Pn**	**05 43 25.0**	**-1.1**
CEDA	**San Andres**	**0.97**	**23**	*e*P	**Pn**	**05 43 25.0**	**-1.1**
CEDA				*e*S	**Sn**	**05 43 41.2**	**+2.4**
SNJE	**San Jose**	**0.97**	**11**	*e*P	**Pn**	**05 43 25.1**	**-1.1**
SNJE	**San Jose**	**0.97**	**11**	*e*P	**Pn**	**05 43 25.1**	**-1.1**
UTEC	**Universidad Te**	**0.97**	**36**	*e*P	**Pn**	**05 43 26.0**	**-0.1**
UTEC	**Universidad Te**	**0.97**	**36**	*e*P	**Pn**	**05 43 26.0**	**-0.1**
UESS	**Universidad de**	**0.99**	**35**	*e*P	**Pn**	**05 43 25.9**	**-0.5**
UESS				*e*S	**Sn**	**05 43 40.9**	**+1.5**
UESS	**Universidad de**	**0.99**	**35**	*e*P	**Pn**	**05 43 25.9**	**-0.5**
UESS				*e*S	**Sn**	**05 43 40.9**	**+1.5**
RTR	**El Retiro**	**0.99**	**8**	*e*P	**Pn**	**05 43 26.0**	**-0.5**
RTR	**El Retiro**	**0.99**	**8**	*e*P	**Pn**	**05 43 26.0**	**-0.5**
LFRS	**El Faro**	**1.00**	**45**	*e*P	**Pn**	**05 43 25.7**	**-0.9**
LFRS	**El Faro**	**1.00**	**45**	*e*P	**Pn**	**05 43 25.7**	**-0.9**
AEIL	**Aeropuerto Ilo**	**1.02**	**40**	*e*P	**Pn**	**05 43 26.3**	**-0.5**
AEIL				*e*S	**Sn**	**05 43 41.3**	**+1.2**
AEIL				IAML		05 43 48.9	
	comp=Z,6μm,0.4s						
AEIL	**Aeropuerto Ilo**	**1.02**	**40**	*e*P	**Pn**	**05 43 26.3**	**-0.5**
AEIL				*e*S	**Sn**	**05 43 41.3**	**+1.2**
AEIL				IAML		05 43 48.9	
	comp=Z,6μm,0.4s						
LFU	**La Fuente**	**1.06**	**38**	*e*P	**Pn**	**05 43 27.0**	**-0.4**
LFU	**La Fuente**	**1.06**	**38**	*e*P	**Pn**	**05 43 27.0**	**-0.4**
LBRS	**Las Brisas**	**1.10**	**41**	*e*P	**Pn**	**05 43 27.4**	**-0.4**
LBRS	**Las Brisas**	**1.10**	**41**	*e*P	**Pn**	**05 43 27.4**	**-0.4**
COEG	**Centro de Oper**	**1.13**	**51**	*e*P	**Pn**	**05 43 27.5**	**-0.8**
COEG				*e*S	**Sn**	**05 43 45.4**	**+2.6**
COEG				IAML		05 43 55.7	
	comp=Z,3μm,0.4s						
COEG	**Centro de Oper**	**1.13**	**51**	*e*P	**Pn**	**05 43 27.5**	**-0.8**
COEG				*e*S	**Sn**	**05 43 45.4**	**+2.6**
COEG				IAML		05 43 55.7	
	comp=Z,3μm,0.4s						
TACO	**Tacachico**	**1.14**	**22**	*e*P	**Pn**	**05 43 27.5**	**-0.8**
TACO	**Tacachico**	**1.14**	**22**	*e*P	**Pn**	**05 43 27.5**	**-0.8**
PAVA	**Las Pavas**	**1.15**	**46**	*e*P	**Pn**	**05 43 28.4**	**-0.2**
PAVA				IAML		05 43 50.9	
	comp=Z,7μm,0.3s						
PAVA	**Las Pavas**	**1.15**	**46**	*e*P	**Pn**	**05 43 28.4**	**-0.2**
PAVA				IAML		05 43 50.9	
	comp=Z,7μm,0.3s						
ALJI	**Alcalda de J**	**1.26**	**71**	*e*P	**Pn**	**05 43 29.7**	**-0.2**
ALJI				*e*S	**Sn**	**05 43 47.4**	**+1.6**
ALJI	**Alcalda de J**	**1.26**	**71**	*e*P	**Pn**	**05 43 29.7**	**-0.2**
ALJI				*e*S	**Sn**	**05 43 47.4**	**+1.6**
TECA	**Tecapa**	**1.38**	**65**	*e*P	**Pn**	**05 43 32.2**	**+0.4**
TECA	**Tecapa**	**1.38**	**65**	*e*P	**Pn**	**05 43 32.2**	**+0.4**
PQSS	**Presa 15 de Se**	**1.39**	**59**	*e*P	**Pn**	**05 43 31.6**	**-0.1**
PQSS				*e*S	**Sn**	**05 43 51.5**	**+2.5**
MTO3	**Montecristo**	**1.54**	**16**	*e*P	**Pn**	**05 43 34.0**	**+0.1**
MTO3				*e*S	**Sn**	**05 43 56.2**	**+3.2**
MTO3	**Montecristo**	**1.54**	**16**	*e*P	**Pn**	**05 43 34.0**	**+0.1**
MTO3				*e*S	**Sn**	**05 43 56.2**	**+3.2**
MTO3	**Montecristo**	**1.54**	**16**		**Pn**	**05 43 33.5**	**-0.4**
MTO3				Sn	**Sn**	**05 43 54.9**	**+2.0**
PCG	**Pacaya**	**1.67**	**332**	*e*P	**Pn**	**05 43 36.3**	**+0.4**
PCG				*e*S	**Sn**	**05 44 00.9**	**+4.6**
ESQI	**Esquipulas**	**1.70**	**15**		**Pn**	**05 43 36.5**	**+0.5**
NBG	**Las Nubes**	**1.75**	**342**	*e*P	**Pn**	**05 43 37.7**	**+0.7**
NBG				*e*S	**Sn**	**05 44 02.8**	**+4.5**
CAHU	**Cacacuatique**	**1.76**	**61**	*e*P	**Pn**	**05 43 35.3**	**-1.7**
FAGO	**Alcalda de S**	**1.82**	**64**	*e*P	**Pn**	**05 43 38.0**	**+0.4**
FAGO				*e*S	**Sn**	**05 44 02.7**	**+3.3**
FAGO	**Alcalda de S**	**1.82**	**64**	*e*P	**Pn**	**05 43 38.0**	**+0.4**
FAGO				*e*S	**Sn**	**05 44 02.7**	**+3.3**
FUG	**Fuego 3**	**1.84**	**326**	*e*P	**Pn**	**05 43 37.3**	**-0.7**
FUG				*e*S	**Sn**	**05 44 03.9**	**+3.7**
MRL	**Marmol**	**2.16**	**3**	*e*P	**Pn**	**05 43 43.7**	**+1.2**
MRL				*e*S	**Sn**	**05 44 15.2**	**+7.0**
APG	**El Apazote**	**2.18**	**343**	P	**Pn**	**05 43 43.0**	**+0.2**
	comp=Z,35nm,0.3s,baz=140,slow=6.9,SNR=490						
APG				S	**Sn**	**05 44 08.0**	**-0.7**
	comp=Z,35nm,0.3s,baz=177,slow=18,SNR=12						
APG				LR	LR	05 44 21.6	
	comp=Z,76nm,20.6s,baz=132,slow=35						
ERG	**Entre ros, C**	**2.30**	**312**	*e*P	**Pn**	**05 43 44.0**	**-0.2**
ERG				*e*S	**Sn**	**05 44 12.1**	**+0.7**
RTAL	**Retalhuleu**	**2.45**	**311**		**Pn**	**05 43 44.0**	**-2.2**
CRIN	**San Cristobal**	**2.68**	**94**		**Pn**	**05 43 49.9**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.70**	**65**	Pn	**Pn**	**05 43 50.1**	**+0.2**
HUEH	**Huehuetenango**	**2.91**	**325**		**Pn**	**05 43 53.4**	**+0.5**
MATN	**Matagalpa**	**3.77**	**89**		**Pn**	**05 44 04.2**	**-0.3**
PETF	**Flores**	**3.98**	**359**		**Pn**	**05 44 06.5**	**-0.9**
CCIG	**Comitan**	**4.05**	**326**		**Pn**	**05 44 09.1**	**+0.8**
BOAB	**BOACO BROADBAN**	**4.05**	**96**		**Pn**	**05 44 05.8**	**-2.5**
ACON	**Acoyapa**	**4.61**	**101**	Pn	**Pn**	**05 44 14.4**	**-1.4**
SAJU	**San Juanillo,**	**4.90**	**125**	*e*P	**Pn**	**05 44 20.6**	**+0.8**
ORTG	**Ortega, Santa**	**4.94**	**120**		**Pn**	**05 44 20.0**	**-0.6**
PLVR	**Palo Verde**	**5.04**	**120**	*e*P	**Pn**	**05 44 22.6**	**+0.6**
INDI	**Punta indio, G**	**5.18**	**125**	*e*P	**Pn**	**05 44 24.7**	**+1.0**
ESPN	**Las Esperanzas**	**5.41**	**97**	Pn	**Pn**	**05 44 26.2**	**-0.7**
JTS	**Las Juntas de**	**5.41**	**118**	P	**Pn**	**05 44 28.8**	**+1.8**
	comp=Z,1.9nm,0.3s,baz=176,slow=22,SNR=15						
JTS				S	**Sn**	**05 45 27.9**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=340,slow=18,SNR=1.5						
JTS	**Las Juntas de**	**5.41**	**118**	*e*P	**Pn**	**05 44 28.7**	**+1.8**
JTS	**Las Juntas de**	**5.41**	**118**	Pn	**Pn**	**05 44 27.7**	**+0.8**
ARE1	**Arenal 1**	**5.53**	**116**	*e*P	**Pn**	**05 44 30.4**	**+1.8**
CAO2	**Cobano, Puntar**	**5.60**	**124**	Pn	**Pn**	**05 44 30.1**	**+0.5**
LAFE	**Finca La Fe, P**	**5.69**	**122**	*e*P	**Pn**	**05 44 31.7**	**+0.9**
COVE	**Coope Vega, Sa**	**5.71**	**112**	Pn	**Pn**	**05 44 32.6**	**+1.6**
CMIG	**Matias Romero**	**6.44**	**311**	P	**Pn**	**05 44 40.8**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=166,slow=11,SNR=14						
CMIG				S	Sn	05 46 01.0	+7.7
	comp=Z,3.0nm,0.3s,baz=84,slow=18,SNR=2.8						
CMIG				LR	LR	05 47 36.6	
	comp=Z,179nm,21.6s,baz=130,slow=40						
LCR2	**La Lucha 2**	**6.49**	**118**	*e*P	**Pn**	**05 44 45.2**	**+3.2**
PEZE	**Perez Zeledon,**	**6.95**	**120**	Pn	**Pn**	**05 44 50.8**	**+2.6**
TEIG	**Tepich**	**7.42**	**11**	P	**Pn**	**05 44 55.8**	**+1.4**
	comp=Z,6.9nm,0.3s,baz=192,slow=3.9,SNR=49						
TEIG	**Tepich**	**7.42**	**11**	Pn	**Pn**	**05 44 56.2**	**+1.8**
RIOS	**Rincon, Osa**	**7.45**	**124**		**Pn**	**05 44 57.0**	**+2.1**
LPLA	**Las Palmas La**	**7.70**	**119**	*e*P	**Pn**	**05 45 00.6**	**+2.2**
TLIG	**Tlapa**	**9.65**	**300**	Pn	**Pn**	**05 45 23.2**	**-1.9**
SOR	**Soroa**	**11.76**	**32**		**Pn**	05 45 59.2	+5.4
435B	**Jarrell**	**19.19**	**339**	P	**P**	**05 47 28.1**	**-0.3**
SDV	**Santo Domingo**	**19.23**	**100**	P	**P**	**05 47 27.7**	**-1.5**
	comp=Z,1.2nm,0.3s,baz=300,slow=6.2,SNR=6.5						
SDV				LR	LR	05 55 21.7	
	comp=Z,40nm,20.2s,baz=282,slow=39						
SDV	**Santo Domingo**	**19.23**	**100**	P	**P**	**05 47 28.1**	**-1.1**
SDV				IAmb	IAmb	05 47 31.4	
	comp=Z,7.9nm,0.7s						
WHTX	**Lake Whitney,**	**20.25**	**341**	P	**P**	**05 47 39.5**	**-0.5**
WHTX				IAmb	IAmb	05 47 55.6	
	comp=Z,8.9nm,0.8s						
TX32	**Lajitas Array**	**20.81**	**324**	P	**P**	**05 47 45.1**	**-1.1**
TXAR	**Lajitas Array**	**20.81**	**324**	P	Pn	05 47 48.6	-0.5
	comp=Z,2.8nm,0.7s,baz=148,slow=11,SNR=28						
TXAR	**Lajitas Array**	**20.81**	**324**	P	**P**	**05 47 45.4**	**-0.8**
TX31	**Lajitas Ar. Si**	**20.81**	**324**	P	**P**	**05 47 45.8**	**-0.4**
TX31				IAmb	IAmb	05 47 49.4	
	comp=Z,10nm,0.8s						
WLAR	**White Oak Lake**	**20.90**	**352**	P	**P**	**05 47 46.2**	**-0.8**
WLAR				IAmb	IAmb	05 48 05.2	
	comp=Z,13nm,0.8s						
Y49A	**Blount Mountai**	**21.08**	**8**	P	**P**	**05 47 49.0**	**+0.1**
GOGA	**Godfrey**	**21.21**	**15**	P	**P**	**05 47 50.6**	**+0.3**
X37A	**Clayton**	**22.17**	**348**	P	**P**	**05 47 60.0**	**-0.6**
X37A				IAmb	IAmb	05 48 20.9	
	comp=Z,19nm,1.4s						
WHAR	**Wooly Hollow**	**22.40**	**355**	P	**P**	**05 48 02.3**	**-0.7**
SWET	**Sewanee**	**22.48**	**8**	P	**P**	**05 48 03.8**	**-0.2**
SWET				IAmb	IAmb	05 48 31.1	
	comp=Z,14nm,1.5s						
JSC	**Jenkinsville**	**22.64**	**19**	P	**P**	**05 48 05.9**	**+0.2**
Y57A	**Sumter**	**22.69**	**21**	P	**P**	**05 48 05.7**	**-0.4**
V48A	**Smith Brothers**	**22.89**	**6**	P	**P**	**05 48 09.4**	**+1.2**
V48A				IAmb	IAmb	05 48 16.3	
	comp=Z,9.1nm,1.4s						
LCAR	**Lake Charles**	**23.09**	**357**	P	**P**	**05 48 10.1**	**-0.1**
WVT	**Waverly**	**23.19**	**4**	P	**P**	**05 48 11.6**	**+0.4**
WMOK	**Wichita Mounta**	**23.21**	**341**	P	**P**	**05 48 10.1**	**-1.4**
BIRD	**Birdtown, Kers**	**23.23**	**20**	P	**P**	**05 48 11.6**	**-0.1**
BIRD				IAmb	IAmb	05 48 30.2	
	comp=Z,28nm,1.4s						
FNO	**Franklin**	**23.29**	**344**	P	**P**	**05 48 12.3**	**0.0**
CLTN	**Cedars of Leba**	**23.29**	**7**	P	**P**	**05 48 12.4**	**+0.2**
CLTN				IAmb	IAmb	05 48 41.3	
	comp=Z,8.1nm,1.3s						
TKL	**Tuckaleechee C**	**23.29**	**12**	P	**P**	**05 48 08.9**	**-3.4**
	comp=Z,2.3nm,0.8s,baz=141,slow=16,SNR=1.6						
TKL				LR	LR	05 58 04.6	
	comp=Z,49nm,18.7s,baz=176,slow=39						
TKL	**Tuckaleechee C**	**23.29**	**12**	P	**P**	**05 48 12.0**	**-0.2**
TKL				IAmb	IAmb	05 48 36.0	
	comp=Z,16nm,1.5s						
V51A	**Loudon**	**23.32**	**11**	P	**P**	**05 48 13.0**	**+0.5**
V52A	**Sevierville**	**23.51**	**13**	P	**P**	**05 48 13.8**	**-0.5**
V52A				IAmb	IAmb	05 48 15.4	
	comp=Z,9.9nm,1.4s						
V53A	**Saluda**	**23.52**	**14**	P	**P**	**05 48 14.7**	**+0.2**
V53A				IAmb	IAmb	05 48 19.5	
	comp=Z,18nm,1.4s						
MNTX	**Cornudas Mount**	**23.56**	**325**	P	**P**	**05 48 12.9**	**-2.0**
HHAR	**Hobbs**	**23.57**	**352**	P	**P**	**05 48 14.6**	**-0.2**
HHAR				IAmb	IAmb	05 48 36.0	
	comp=Z,9.9nm,1.4s						
OK025	**Westminster Rd**	**23.58**	**344**	P	**P**	**05 48 14.1**	**-0.9**
OK025				IAmb	IAmb	05 48 15.8	
	comp=Z,12nm,0.8s						
BCOK	**Bluff Creek, N**	**23.72**	**344**	P	**P**	**05 48 16.1**	**-0.2**
PBMO	**Poplar Bluff**	**23.77**	**359**	P	**P**	**05 48 16.5**	**-0.2**
PBMO				IAmb	IAmb	05 48 35.6	
	comp=Z,13nm,1.4s						
U49A	**Red Boiling Sp**	**23.78**	**8**	P	**P**	**05 48 16.5**	**-0.3**
U49A				IAmb	IAmb	05 48 18.6	
	comp=Z,8.7nm,0.9s						
OK029	**Liberty Lake**	**23.81**	**344**	P	**P**	**05 48 16.6**	**-0.6**
W57A	**Gilead**	**23.85**	**20**	P	**P**	**05 48 16.9**	**-0.5**
W57A				IAmb	IAmb	05 48 45.6	
	comp=Z,11nm,1.1s						
T45A	**Paducah**	**24.03**	**2**	P	**P**	**05 48 17.3**	**-1.8**
T47A	**Sharon Grove**	**24.10**	**5**	P	**P**	**05 48 19.5**	**-0.2**
T47A				IAmb	IAmb	05 48 38.7	
	comp=Z,7.7nm,0.9s						
V58A	**Windy Hill, Pi**	**24.74**	**21**	P	**P**	**05 48 25.4**	**-0.1**
V58A				IAmb	IAmb	05 48 29.6	
	comp=Z,5.7nm,0.8s						
S39A	**Bolivar**	**24.88**	**353**	P	**P**	**05 48 25.4**	**-1.4**
S39A				IAmb	IAmb	05 48 29.1	
	comp=Z,4.4nm,0.6s						
CCM	**Cathedral Cave**	**25.07**	**357**	P	**P**	**05 48 29.3**	**+0.7**
CCM				IAmb	IAmb	05 48 30.5	
	comp=Z,11nm,1.2s						
M56A	**Emporium**	**30.22**	**17**	P	**P**	**05 49 14.3**	**-0.4**
I42A	**Draeger Farm,**	**30.88**	**1**	P	**P**	**05 49 19.7**	**-0.7**
I42A				IAmb	IAmb	05 49 21.4	
	comp=Z,12nm,1.2s						
WVNY	**West Valley, N**	**30.95**	**16**	P	**P**	**05 49 19.0**	**-2.2**
WVNY				IAmb	IAmb	05 49 22.4	
	comp=Z,14nm,1.4s						
ECSD	**EROS Data Cent**	**31.27**	**350**	P	**P**	**05 49 23.0**	**-0.9**
H43A	**Windswept, Lux**	**31.50**	**3**	P	**P**	**05 49 24.7**	**-1.1**
G45A	**Suttons Bay**	**32.21**	**6**	P	**P**	**05 49 31.3**	**-0.9**
SPMN	**Marine on St.**	**32.31**	**356**	P	**P**	**05 49 33.5**	**+0.5**
SPMN				IAmb	IAmb	05 49 35.4	
	comp=Z,4.6nm,0.6s						
SADO	**Sadowa**	**33.03**	**14**	P	**P**	**05 49 36.1**	**-3.2**
	comp=Z,2.5nm,0.7s,baz=239,slow=15,SNR=4.2						
SADO	**Sadowa**	**33.03**	**14**	IAmb	IAmb	05 49 56.3	
	comp=Z,7.0nm,1.1s						
COWI	**Conover**	**33.09**	**1**	P	**P**	**05 49 38.8**	**-1.0**
E43A	**Lone Tree Farm**	**33.44**	**4**	P	**P**	**05 49 41.9**	**-1.0**
PDAR	**Pinedale Array**	**34.32**	**334**	PcP	**PcP**	**05 52 27.2**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=116,slow=4.1,SNR=2.9						
REDW	**Red Top Meadow**	**35.36**	**333**	P	**P**	**05 50 00.7**	**+0.9**
REDW				IAmb	IAmb	05 50 02.9	
	comp=Z,4.5nm,1.2s						
AGMN	**Agassiz Nation**	**35.64**	**353**	P	**P**	**05 50 00.9**	**-0.9**
NVAR	**Mina Array Bea**	**35.87**	**320**	P	**P**	**05 50 06.8**	**+2.5**
	comp=Z,5.6nm,0.7s,baz=130,slow=6.9,SNR=38						
NVAR				PcP	**PcP**	**05 52 32.8**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=100,slow=3.7,SNR=3.0						
MCMT	**McKenzie Canyo**	**37.40**	**333**	P	**P**	**05 50 19.1**	**+1.9**
ULM	**Lac du Bonnet**	**37.57**	**354**	P	**P**	**05 50 15.5**	**-2.7**
	comp=Z,1.7nm,0.5s,baz=186,slow=8.6,SNR=5.8						
ULM				LR	LR	06 08 38.8	
	comp=Z,44nm,19.6s,baz=337,slow=41						
ULM	**Lac du Bonnet**	**37.57**	**354**		**P**	**05 50 16.0**	**-2.2**
ULM				IAmb	IAmb	05 50 19.4	
	comp=Z,7.8nm,1.3s						
SIV	**San Ignacio**	**40.39**	**135**	P	**P**	**05 50 43.6**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=335,slow=8.4,SNR=9.7						
YKA	**Yellowknife Ar**	**52.59**	**346**	P	**P**	**05 52 16.0**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=123,slow=9.1,SNR=44						
INK	**Inuvik**	**62.09**	**343**	P	**P**	**05 53 23.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=126,slow=6.8,SNR=2.1						
ARCES	**ARCESS Array B**	**86.49**	**19**	P	**P**	**05 55 44.6**	**-1.4**
	comp=Z,2.8nm,1.0s,baz=285,slow=4.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**88.54**	**77**	LR	LR	06 35 06.4	
	comp=Z,11nm,18.9s,baz=285,slow=35						
WRA	**Warramunga Arr**	**137.19**	**255**	PKP	**PKiKP**	**06 02 29.4**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=92,slow=3.3

MNBS				Lg	Lg	06 11 47.0		
	14nm,0.6s							
MK31	**Makanchi Array**	**5.35**	**345**	⇑Pg	Pb	06 10 45.9	+2.3	
	0.6nm,0.3s,baz=160,slow=16,SNR=4.8							
MK31				⇑Lg	Lg	06 12 00.4		
	3.5nm,0.5s,baz=153,slow=28							
ARXS	**Arharly**	**5.43**	**300**	Pg	Pb	06 10 48.0	+3.0	
	3.2nm,0.3s							
ARXS				Lg	Lg	06 12 01.6		
	10nm,0.7s							
MDOK	**Medeo**	**5.61**	**288**	Pg	Pg	06 10 54.0	-2.8	
	2.6nm,0.6s							
TNSS	**Tian-Shan**	**5.66**	**287**	Pg	Pb	06 10 51.3	+2.2	
	1.9nm,0.4s							
TNSS				Lg	Lg	06 12 06.7		
	5.4nm,0.8s							
KTBS	**Karatobe**	**6.01**	**293**	Pg	Pb	06 10 57.2	+2.2	
	0.9nm,0.4s							
KTBS				Lg	Lg	06 12 17.3		
	17nm,0.6s							

*IDC **05** 06:10:25.8±2.7,6°.33S×150°.74E,h0km,mb3.4/3, mb1 3.7/4,mb1mx3.5/25,mbtmp3.6/4,ML2.0/1,MS3.6/1, Ms1 3.6/1,ms1mx2.5/21,Error ellipse: s-maj=100.2km s-min=31.0km az=117.0*

ISC 05 06:10:32.1±2.2,6°.5S±0°.4×150°.6E±0°.5,h33km,n7,σ1§60/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.51**	**229**		**Pn**	**06 11 39.0**	**+0.8**
	5.3nm,0.3s,baz=3.1,slow=6.1,SNR=3.2						
PMG				Sn	**Sn**	06 12 28.9	-0.6
	7.9nm,0.3s,baz=117,slow=20,SNR=8.2						
WRA	**Warramunga Arr**	**20.73**	**228**	P	**P**	06 15 09.4	-0.7
	2.5nm,0.7s,baz=52,slow=11,SNR=25						
ASAR	**Alice Springs**	**23.48**	**221**	P	**P**	06 15 39.1	0.0
	0.6nm,0.6s,baz=49,slow=10.0,SNR=5.9						
RAR	**Rarotonga**	**50.12**	**112**	LR	LR	06 37 27.3	
	comp=Z,71nm,22.0s,baz=190,slow=32						
MKAR	**Makanchi Array**	**80.16**	**320**	P	**P**	**06 22 39.5**	**+0.3**
	0.1nm,0.4s,baz=112,slow=6.4,SNR=1.6						
GERES	**GERESS Array B**	**124.29**	**327**	PKP	**PKPdf**	**06 29 25.5**	**-2.4**
	0.3nm,0.6s,baz=58,slow=2.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**148.69**	**285**	PKPbc	**PKPbc**	**06 30 15.1**	**+1.8**
	0.6nm,0.6s,baz=54,slow=3.5,SNR=3.6						

*TEH **05** 06:25:00.0,29°.04N×51°.32E,h15km,ML4.0 THR **05** 06:25:00.4±0.3,29°.05N×51°.33E,h16km±6km,ML3.8 OMAN **05** 06:25:04.8,28°.59N×51°.36E,h10km,mb5.1/8,ml3.8/5, ms2.1/1*

ISC 05 06:25:00.6±1.2,29°.02N±0°.04×51°.34E±0°.05,h17km±8km, n75,σ1§53/89,1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.16**	**193**	*e*Pg	**Pg**	**06 25 04.8**	**0.0**
KAZ1	**Kazerun**	**0.66**	**24**	*e*Pg	**Pg**	**06 25 11.6**	**-2.1**
SHI	**Shiraz**	**1.20**	**59**	*e*Pg	**Pb**	**06 25 23.0**	**0.0**
QIR1	**Qir**	**1.59**	**109**	*e*Pg	**Pb**	**06 25 30.4**	**+0.7**
QIR1				*e*		06 26 05.1	
	comp=Z,99nm,0.4s						
ABEH	**Behbahan**	**1.84**	**329**	*e*Pn	**Pn**	**06 25 31.8**	**+0.4**
KLNJ	**Kolanjah**	**2.00**	**6**	*e*Pn	**Pn**	**06 25 35.2**	**+1.3**
JHRM	**Jahrom**	**2.03**	**104**	*e*Pn	**Pn**	**06 25 35.6**	**+1.4**
JHRM				*e*		06 26 14.8	
	comp=Z,99nm,0.4s						
LMD1	**Lamerd**	**2.33**	**136**	*e*Pn	**Pb**	**06 25 40.5**	**-1.6**
LMD1				*e*		06 26 27.3	
	comp=Z,99nm,0.6s						
IRAM	**Ramesheh**	**2.92**	**18**	*e*Pn	**Pn**	**06 25 48.6**	**+2.0**
LAR1	**LAR**	**3.00**	**116**	*e*	Sg	06 26 54.7	+18
	comp=Z,99nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.21**	**280**	*e*P		06 25 51.8	
RDF	**Al-Radifah**	**3.32**	**269**	*e*P		06 25 53.6	
SHK1	**Shahrekord**	**3.32**	**353**	*e*Pn	**Pn**	**06 25 53.3**	**+1.3**
IGAR	**Gharneh**	**3.43**	**10**	*e*Pn	**Pn**	**06 25 55.2**	**+1.7**
ISAD	**Sadrabad**	**3.53**	**35**	*e*Pn	**Pn**	**06 25 57.6**	**+2.7**
MIB	**Mutribah**	**3.57**	**284**	*e*P		06 25 56.5	
IPIR	**Pirpir**	**3.67**	**354**	*e*Pn	**Pn**	**06 25 58.9**	**+2.0**
IMEH	**Mehriz**	**3.69**	**49**	*e*Pn	**Pn**	**06 25 59.6**	**+2.5**
SHGR	**Shooshtar-Gavs**	**3.78**	**325**	*e*Pn	**Pn**	**06 25 59.7**	**+1.7**
SHGR				*e*S	**Sn**	**06 26 42.6**	**+0.5**
SHGR	**Shooshtar-Gavs**	**3.78**	**325**	*e*Pn	**Pn**	**06 25 59.7**	**+1.7**
IZEF	**Zefreh**	**3.96**	**12**	*e*Pn	**Pn**	**06 26 02.3**	**+1.5**
NASN	**Na'in**	**3.98**	**18**	*e*Pn	**Pn**	**06 26 02.6**	**+1.5**
NASN				*e*S	**Sn**	**06 26 48.2**	**+0.7**
NASN	**Na'in**	**3.98**	**18**	*e*Pn	**Pn**	**06 26 02.6**	**+1.5**
ICHK	**Chekchek**	**4.17**	**39**	*e*Pn	**Pn**	**06 26 05.3**	**+1.7**
GENO	**Geno**	**4.56**	**110**	*e*Pn	Pb	06 26 14.9	-5.4
ANAR	**Anarak**	**4.64**	**26**	*e*Pn	**Pn**	**06 26 11.5**	**+1.5**
KHGB	**Koh Gabri**	**4.67**	**72**	*e*Pn	**Pn**	**06 26 12.7**	**+2.1**
QAM	**Ghamsar**	**4.73**	**1**	*e*Pn	**Pn**	**06 26 12.6**	**+1.3**
NGRK	**Negar Kerman**	**4.75**	**81**	*e*Pn	**Pn**	**06 26 14.3**	**+2.5**
NGRK				*e*		06 26 15.4	
	comp=Z,99nm,0.4s						
KRBR	**Kerman**	**4.83**	**77**	*e*Pn	**Pn**	**06 26 14.7**	**+1.9**
KRBR	**Kerman**	**4.83**	**77**	*e*Pn	**Pn**	**06 26 14.7**	**+1.9**
TVBK	**TV Kerman**	**4.83**	**77**	*e*Pn	**Pn**	**06 26 16.0**	**+3.2**
TVBK				*e*		06 26 31.6	
	comp=Z,99nm,0.5s						
KHMZ	**Khomeyn**	**4.85**	**346**	*e*Pn	**Pn**	**06 26 14.6**	**+1.6**
KHMZ	**Khomeyn**	**4.85**	**346**	*e*Pn	**Pn**	**06 26 14.6**	**+1.6**
KRSH	**Karshahi**	**4.98**	**8**	*e*Pn	**Pn**	**06 26 15.7**	**+0.9**
SHME	**Shamm**	**5.19**	**124**	*e*Pn	**Pn**	**06 26 18.3**	**+0.8**
SHME	**Shamm**	**5.19**	**124**	⇓P	**Pn**	**06 26 18.7**	**+1.2**
SHME				S	**Sn**	**06 27 18.7**	**+1.7**
ISFB	**Sefidab**	**5.37**	**8**	*e*Pn	**Pn**	**06 26 21.4**	**+1.3**
BANOM	**Banah**	**5.38**	**124**	*e*Pn	**Pn**	**06 26 20.9**	**+0.8**
BANOM	**Banah**	**5.38**	**124**	P	**Pn**	**06 26 21.0**	**+0.8**
	SNR=14						
BANOM				S	**Sn**	**06 27 21.0**	**-0.8**
IKFM	**Kafar-mosalman**	**5.39**	**327**	*e*Pn	**Pn**	**06 26 22.6**	**+2.3**
NAZ	**Nazwa, Dubai**	**5.57**	**135**	*e*Pn	**Pn**	**06 26 24.9**	**+2.2**
NAZ	**Nazwa, Dubai**	**5.57**	**135**	P	**Pn**	**06 26 25.4**	**+2.7**
NAZ				S	**Sn**	**06 27 26.3**	**0.0**
ASAO	**Ashtian**	**5.62**	**349**	*e*Pn	**Pn**	**06 26 25.3**	**+1.6**
ASAO				IAML		06 27 30.6	
	comp=E,29nm,0.7s						
MASF	**Masafi**	**5.63**	**129**	P	**Pn**	**06 26 24.6**	**+1.1**
MASF				S	**Sn**	**06 27 27.7**	**-0.1**
MSFE	**Esma-Masafi**	**5.63**	**129**	*e*Pn	**Pn**	**06 26 24.5**	**+0.9**
ASUD	**Al Ashush, Dub**	**5.64**	**140**	*e*Pn	**Pn**	**06 26 25.6**	**+1.9**
ASUD	**Al Ashush, Dub**	**5.64**	**140**	P	**Pn**	**06 26 26.0**	**+2.2**
	SNR=8.3						
ASUD				S	**Sn**	**06 27 28.8**	**+0.6**
HSAM	**Samen**	**5.68**	**336**	*e*Pn	**Pn**	**06 26 26.0**	**+1.6**
FAQ	**Al Faqa, Dubai**	**5.71**	**137**	*e*Pn	**Pn**	**06 26 25.6**	**+1.0**
MZWR	**Madinat Zayed**	**5.71**	**156**	P	**Pn**	**06 26 27.4**	**+2.7**
MDH	**Madha**	**5.77**	**129**	S	**Sn**	**06 27 30.3**	**-1.0**
IQOM	**Qom**	**5.81**	**358**	*e*Pn	**Pn**	**06 26 26.8**	**+0.5**
UOSS	**Minazif**	**5.94**	**132**	*e*Pn	**Pn**	**06 26 28.7**	**+0.8**
UOSS	**Minazif**	**5.94**	**132**	P	**Pn**	**06 26 29.2**	**+1.4**
UOSS				S	**Sn**	**06 27 33.4**	**-2.2**
IVRN	**Varamin**	**5.97**	**3**	*e*Pn	**Pn**	**06 26 29.4**	**+1.1**
HATD	**Hatta, Dubai**	**5.98**	**133**	*e*Pn	**Pn**	**06 26 30.2**	**+1.8**
HATD	**Hatta, Dubai**	**5.98**	**133**	P	**Pn**	**06 26 29.9**	**+1.5**
HATD				S	**Sn**	**06 27 35.8**	**-0.7**
HAGD	**Aghdareh**	**6.08**	**343**	*e*Pn	**Pn**	**06 26 31.1**	**+1.2**
KBAM	**BAM**	**6.23**	**87**	*e*Pn	**Pn**	**06 26 35.0**	**+3.1**
IRAZ	**Razeghan**	**6.48**	**350**	*e*Pn	**Pn**	**06 26 36.6**	**+1.2**
DAMV	**Damavand**	**6.62**	**5**	*e*Pn	**Pn**	**06 26 38.9**	**+1.6**
DAMV	**Damavand**	**6.62**	**5**	*e*Pn	**Pn**	**06 26 38.9**	**+1.6**
TNSJ	**Nastanj**	**6.68**	**41**	*e*Pn	**Pn**	**06 26 39.7**	**+1.7**
SOHO	**SOHO**	**6.73**	**135**	P	**Pn**	**06 26 39.2**	**+0.5**
SOHO				S	**Sn**	**06 27 54.1**	**-0.9**
TKDS	**Koohdasht(Taba**	**6.75**	**46**	*e*Pn	**Pn**	**06 26 40.2**	**+1.2**
IANJ	**Anjilo**	**6.79**	**18**	*e*Pn	**Pn**	**06 26 40.6**	**+0.9**
IDHR	**Dehrash**	**7.06**	**325**	*e*Pn	**Pn**	**06 26 44.7**	**+1.4**
UMZA	**Um Al Zommool**	**7.16**	**150**	*e*Pn	**Pn**	**06 26 45.3**	**+0.7**
UMZA	**Um Al Zommool**	**7.16**	**150**	P	**Pn**	**06 26 45.8**	**+1.3**
UMZA				S	**Sn**	**06 28 03.5**	**-2.1**
ARQ	**Araqi**	**7.33**	**139**	P	**Pn**	**06 26 47.8**	**+0.9**
ARQ				S	**Sn**	**06 28 09.0**	**-0.8**
HOQ	**Hoqain**	**7.62**	**134**	P	**Pn**	**06 26 51.3**	**+0.4**
HOQ				P	**Pn**	**06 26 51.3**	**+0.4**
HOQ				S	**Sn**	**06 28 15.3**	**-1.5**
HOQ				S	**Sn**	**06 28 15.3**	**-1.5**
BSY	**Bisya**	**8.18**	**138**	P	**Pn**	**06 26 59.9**	**+1.3**
BSY				S	**Sn**	**06 28 29.6**	**-1.1**
	SNR=5.8						
MHTO	**MHTO**	**10.00**	**142**	P	**Pn**	**06 27 24.1**	**+0.5**
	SNR=8.2						
DOK	**Doka**	**10.66**	**166**	P	**Pn**	**06 27 32.3**	**-0.4**
	SNR=6.8						
WHFO	**Wadi Hawf**	**11.27**	**168**	P	**Pn**	**06 27 40.7**	**-0.3**
	SNR=9.8						
DMTO	**DMTO**	**11.73**	**163**	P	**Pn**	**06 27 46.7**	**-0.5**
	SNR=22						
ABTO	**Aybut**	**11.75**	**171**	P	**Pn**	**06 27 47.6**	**+0.1**
	SNR=13						

*NEIC **05** 06:33:47.8±0.9,17°.6S±0°.1×179°.0W±0°.2,h533km±10km, mb4.1/24,Error ellipse: s-maj=23.9km s-min=17.1km az=133.0*
*IDC **05** 06:33:48.4±1.4,17°.81S×178°.93W,h545km±14km,mb3.1/7, mb1 3.4/8,mb1mx3.1/34,mbtmp4.0/8,Error ellipse: s-maj=26.6km s-min=15.2km az=150.0*

ISC 05 06:33:47.7±0.6,17°.6S±0°.1×179°.0W±0°.1,h539km,n41, σ1§00/43,mb4.0/17,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.84**	**267**	P	**P**	**06 35 01.8**	**+0.9**
	4.0nm,0.3s,baz=128,slow=9.3,SNR=20						
MSVF	**Nonsavu**	**2.84**	**267**	P	**P**	**06 35 00.6**	**-0.4**
AFI	**Afiamalu**	**7.83**	**63**	P	**P**	**06 35 41.7**	**-1.9**
FUNA	**Funafuti**	**9.18**	**349**	P	**P**	**06 35 56.7**	**-0.5**
OUZ	**Omahuta**	**18.77**	**199**	P	**P**	**06 37 35.2**	**+2.2**
OUZ				IAmb	IAmb	06 37 36.5	
	comp=Z,5.2nm,0.8s						
URZ	**Urewera**	**20.88**	**189**	P	**P**	**06 37 49.6**	**-2.5**
	comp=Z,3.4nm,0.5s,baz=122,slow=23,SNR=9.9						
URZ	**Urewera**	**20.88**	**189**	P	**P**	**06 37 50.1**	**-2.0**
ARMA	**Armidale**	**29.64**	**239**	P	**P**	**06 39 09.9**	**+0.1**
ARMA				IAmb	IAmb	06 39 13.1	
	comp=Z,11nm,1.1s						
MLZ	**Mavora Lakes**	**29.73**	**199**	P	**P**	**06 39 10.4**	**+0.1**
CTAO	**Charters Tower**	**32.97**	**260**	P	**P**	**06 39 37.3**	**-1.1**
CTAO				IAmb	IAmb	06 39 49.3	
	comp=Z,5.4nm,1.2s						
CAN	**Canberra**	**33.47**	**232**	P	**P**	**06 39 42.0**	**-0.5**
COEN	**Coen**	**36.56**	**270**	P	**P**	**06 40 07.7**	**-0.8**
COEN				IAmb	IAmb	06 40 11.0	
	comp=Z,2.9nm,0.9s						
STKA	**Stephens Creek**	**38.31**	**241**	P	**P**	**06 40 23.4**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=88,slow=8.1,SNR=6.9						
STKA	**Stephens Creek**	**38.31**	**241**	P	**P**	**06 40 22.8**	**+0.2**
BBOO	**Buckleboo**	**43.09**	**241**	P	**P**	**06 41 00.9**	**+0.3**
WR0	**Warramunga Arr**	**43.97**	**259**	P	**P**	**06 41 07.5**	**-0.1**
WR0				IAmb	IAmb	06 41 14.3	
	comp=Z,6.2nm,1.4s						
WB0	**Warramunga Arr**	**44.12**	**260**	P	**P**	**06 41 08.3**	**-0.5**
WB0				IAmb	IAmb	06 41 09.6	
	comp=Z,7.8nm,1.4s						
WB2	**Warramunga Arr**	**44.15**	**259**	P	**P**	**06 41 09.0**	**+0.1**
WB2				IAmb	IAmb	06 41 11.1	
	comp=Z,5.5nm,1.4s						
WRA	**Warramunga Arr**	**44.16**	**259**	P	**P**	**06 41 09.1**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=97,slow=7.0,SNR=26						
WRA	**Warramunga Arr**	**44.16**	**259**	P	**P**	**06 41 09.0**	**-0.1**
AS31	**Alice Springs**	**44.36**	**254**	P	**P**	**06 41 11.1**	**+0.6**
AS31				IAmb	IAmb	06 41 11.9	
	comp=Z,4.5nm,0.5s						
ASAR	**Alice Springs**	**44.36**	**254**	P	**P**	**06 41 11.4**	**+0.8**
	comp=Z,12nm,0.5s,baz=89,slow=7.9,SNR=329						
ASAR				PcP	**PcP**	**06 42 43.7**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=105,slow=4.7,SNR=4.4						
ASAR				ScP	**ScP**	**06 45 43.8**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=89,slow=3.9,SNR=2.2						
ASAR				S	**S**	**06 47 03.5**	**-2.5**
	comp=Z,0.8nm,0.8s,baz=161,slow=8.2,SNR=7.8						
ASAR	**Alice Springs**	**44.36**	**254**	P	**P**	**06 41 11.1**	**+0.6**
FITZ	**Fitzroy Crossi**	**52.55**	**260**	P	**P**	**06 42 12.4**	**+1.0**
PSA00	**Pilbara Seismi**	**57.47**	**255**	P	**P**	**06 42 45.9**	**+0.1**
PSA00				IAmb	IAmb	06 42 47.6	
	comp=Z,21nm,1.4s						
QSPA	**South Pole Qui**	**72.47**	**180**	P	**P**	**06 44 20.2**	**+0.7**
SUA	**Susitna One**	**81.94**	**13**	P	**P**	**06 45 11.7**	**+0.8**
SUA				IAmb	IAmb	06 45 15.3	
	comp=Z,4.2nm,0.9s						
SCM	**Sheep Creek Mo**	**83.05**	**15**	P	**P**	**06 45 17.1**	**+0.7**
N25K	**Chitina, Valde**	**83.54**	**16**	P	**P**	**06 45 19.5**	**+0.7**
N25K				IAmb	IAmb	06 45 19.9	
	comp=Z,6.9nm,1.4s						
TRF	**Thorofare Moun**	**83.81**	**13**	P	**P**	**06 45 20.2**	**-0.1**
TRF				IAmb	IAmb	06 45 47.6	
	comp=Z,7.1nm,1.5s						
RND	**Reindeer**	**84.08**	**13**	P	**P**	**06 45 21.8**	**+0.3**
DOT	**Dot Lake**	**85.39**	**15**	P	**P**	**06 45 28.7**	**+0.9**
IMAR	**Indian Mountai**	**85.46**	**10**	P	**P**	**06 45 28.4**	**+0.3**
ILAR	**Eielson Array**	**85.70**	**13**	P	**P**	**06 45 28.6**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=222,slow=5.4,SNR=5.7						
TX31	**Lajitas Ar. Si**	**86.28**	**58**	P	**P**	**06 45 33.4**	**+0.4**
TXAR	**Lajitas Array**	**86.28**	**58**	P	**P**	**06 45 34.2**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=209,slow=6.9,SNR=5.5						
PRP	**Porcupine Dome**	**86.64**	**13**		pwP	06 47 35.1	+1.4
QLMT	**Earthquake Lak**	**87.23**	**41**	P	**P**	**06 45 38.1**	**+0.8**
PDAR	**Pinedale Array**	**87.49**	**44**	P	**P**	**06 45 38.0**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=192,slow=1.7,SNR=4.1						
CLL	**Collm**	**145.03**	**347**	*e*PKPbc	**PKPbc**	**06 52 25.0**	**+0.7**
GERES	**GERESS Array B**	**147.16**	**344**	PKPbc	**PKPbc**	**06 52 31.3**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=65,slow=4.7,SNR=3.0						

*IDC **05** 06:46:58.8±4.5,4°.80S×151°.22E,h210km±34km,mb3.4/10, mb1 3.4/11,mb1mx3.3/39,mbtmp3.9/11,MS3.2/4, Ms1 3.2/4,ms1mx2.9/19,Error ellipse: s-maj=55.7km s-min=16.3km az=95.0*

ISC 05 06:46:57.5±1.3,4°.8S±0°.1×151°.4E±0°.3,h200km,n15, σ1§14/13,mb3.6/10,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.22**	**222**	P	**Pn**	**06 48 28.5**	**+0.9**
	2.5nm,0.3s,baz=59,slow=18,SNR=2.0						
PMG				S	**Sn**	**06 49 38.9**	**-0.2**
	1.7nm,0.3s,baz=349,slow=20,SNR=4.9						
WRA	**Warramunga Arr**	**22.42**	**226**	P	**P**	**06 51 37.9**	**-1.9**
	0.6nm,0.7s,baz=52,slow=9.8,SNR=6.9						
WRA				LR	LR	07 00 30.5	
	comp=Z,52nm,19.9s,baz=225,slow=36						
DZM	**Mont Dzumac**	**22.58**	**141**	LR	LR	06 58 33.0	
	comp=Z,122nm,19.1s,baz=7.5,slow=31						
ASAR	**Alice Springs**	**25.23**	**220**	P	**P**	**06 52 04.4**	**-0.9**
	0.6nm,0.7s,baz=59,slow=8.9,SNR=12						
JCJ	**Chichijima**	**32.88**	**345**	LR	LR	07 05 01.3	
	comp=Z,30nm,19.1s,baz=212,slow=33						
MJAR	**Matsushiro Arr**	**42.88**	**344**	LR	LR	07 12 22.4	
	comp=Z,27nm,18.4s,baz=225,slow=36						
KSRS	**Korea Array**	**47.33**	**335**	P	**P**	**06 55 10.8**	**-0.4**
	0.5nm,0.4s,baz=151,slow=8.6,SNR=4.3						
USRK	**Ussuriysk Ar.**	**51.75**	**342**	P	**P**	**06 55 43.8**	**-0.8**
	1.4nm,0.8s,baz=154,slow=4.4,SNR=2.1						
KLR	**Kul'dur**	**56.41**	**345**	P	**P**	**06 56 17.4**	**-0.7**
	1.5nm,0.8s,baz=149,slow=8.6,SNR=5.6						
SONM	**Songino Array**	**65.53**	**328**	P	**P**	**06 57 21.5**	**+1.9**
	0.3nm,0.3s,baz=344,slow=26,SNR=1.4						
VNDA	**Vanda**	**72.93**	**178**	P	**P**	**06 58 05.0**	**+0.6**
	1.1nm,1.1s,baz=358,slow=4.4,SNR=3.7						
MKAR	**Makanchi Array**	**79.35**	**319**	P	**P**	**06 58 42.3**	**+1.1**
	2.3nm,0.9s,baz=111,slow=5.3,SNR=15						
ZALV	**Zalesovo Beam**	**80.32**	**327**	P	**P**	**06 58 46.5**	**+0.3**
	2.6nm,0.8s,baz=109,slow=5.7,SNR=12						
NRIK	**Noril'sk**	**85.46**	**341**	P	**P**	**06 59 11.6**	**-0.6**
	2.4nm,0.6s,baz=113,slow=4.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**148.93**	**288**	PKPbc	**PKPbc**	**07 06 21.9**	**-0.9**
	2.6nm,0.7s,baz=58,slow=2.1,SNR=14						

*NEIC **05** 06:55:00.6±2.4, 16°.07N±0°.04×98°.64W±0°.04,h10km±1km, mb4.9/310,Md4.8/112(MEX),Error ellipse: s-maj=7.2km s-min=5.6km az=220.0*
*IDC **05** 06:55:00.9±0.7,16°.25N×98°.44W,h0km,mb4.4/24, mb1 4.5/30,mb1mx4.4/51,mbtmp4.4/30,ML3.9/6,MS3.9/22, Ms1 3.9/22,ms1mx3.7/32,Error ellipse: s-maj=21.4km s-min=11.3km az=43.0*
*MEX **05** 06:55:02.2-3.3, 16°.00N×98°.68W,h16km±41km,MD4.8*
*GCMT **05** 06:55:05.8±0.4, 16°.19N±0°.02×98°.37W±0°.04,h21km±1km, MW4.8/77,Moment Tensor Solution. s22,c24; s77,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.89±.14; $M_{\theta\theta}$-1.52±.09; $M_{\phi\phi}$-0.37±.08; $M_{r\theta}$1.34±.13; $M_{\theta\phi}$0.49±.06; $M_{\phi r}$-0.30±.16; Best double couple: M_o2.26000×10^{16} NP1:ϕ_s294.00000°,δ27.00000°,λ97.00000°. NP2: ϕ_s106.00000°,δ64.00000°,λ86.00000°. Principal axes: T 2.3590, Plg71.0000°, Azm8.0000°; N -0.2000, Plg3.0000°, Azm107.0000°; P -2.1610, Plg19.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 06:55:01.7±1.3,16°.19N±0°.03×98°.59W±0°.03,h9km±8km, n565,σ1§41/600,mb4.9/151,MS3.9/18,3C,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.49**	**66**	⇑*e*P	**Pb**	**06 55 12.7**	**+0.1**
	baz=224,slow=16						
PNIG				*i* S	**Sb**	**06 55 20.9**	**+0.9**
PNIG	**Pinotepa**	**0.49**	**66**		**Pb**	**06 55 12.7**	**+0.1**
PNIG					**Sb**	**06 55 20.9**	**+0.9**
CRIG	**Cruz Grande**	**0.75**	**317**	*e*P	**Pg**	**06 55 15.7**	**-0.5**
CRIG				*e*S	**Sg**	**06 55 26.0**	**0.0**
YOIG	**Yosondua**	**1.20**	**56**	*e*P	**Pb**	**06 55 23.8**	**-1.2**
YOIG				*i* S	**Sg**	**06 55 40.2**	**-0.3**
TXIG	**Tlaxiaco**	**1.32**	**37**	*e*P	**Pn**	**06 55 25.8**	**-0.9**
TXIG				*e*S	**Sb**	**06 55 42.9**	**-1.2**
TLIG	**Tlapa**	**1.36**	**1**	*e*P	**Pn**	**06 55 26.5**	**-0.7**
TLIG				*i* S	**Sb**	**06 55 43.7**	**-1.5**
TLIG	**Tlapa**	**1.36**	**1**		**Pn**	**06 55 26.6**	**-0.6**
TLIG					**Sg**	**06 55 48.5**	**+2.8**
PEIG	**Puerto Escondi**	**1.40**	**98**	*e*P	**Pn**	**06 55 24.8**	**-2.7**
PEIG				*i* S	**Sn**	**06 55 42.1**	**-4.1**
ACP2	**Acapulco**	**1.41**	**299**	*e*P	**Pn**	**06 55 27.2**	**-0.5**
ACP2				*i* S	**Sn**	**06 55 44.9**	**-1.6**
ACP2	**Acapulco**	**1.41**	**299**		**Pn**	**06 55 27.2**	**-0.5**
ACP2					**Sn**	**06 55 44.9**	**-1.6**
HMTT	**Tlapaneco**	**1.60**	**1**	*i* P	**Pn**	**06 55 30.3**	**-0.1**
HMTT				*i* S	**Sn**	**06 55 47.3**	**-3.9**
HMTT	**Tlapaneco**	**1.60**	**1**		**Pn**	**06 55 30.3**	**-0.1**
HMTT					**Sn**	**06 55 47.3**	**-3.9**
FTIG	**Fresnillo de T**	**1.76**	**14**	*e*P	**Pn**	**06 55 32.3**	**-0.4**
FTIG				*e*S	**Sb**	**06 55 55.5**	**-1.2**
HLIG	**Huajuapan de L**	**1.80**	**25**	*e*P	**Pn**	**06 55 33.0**	**-0.1**
HLIG				*e*S	**Sn**	**06 55 55.6**	**-0.7**
CAIG	**El Cayaco**	**1.82**	**298**	*e*P	Pn	06 55 30.8	-2.4
CAIG				*e*S	**Sn**	**06 55 52.5**	**-4.0**
CAIG	**El Cayaco**	**1.82**	**298**		Pn	06 55 30.8	-2.4
CAIG					**Sn**	**06 55 52.5**	**-4.0**
MEIG	**Mezcala**	**1.98**	**331**	*e*P	**Pn**	**06 55 35.0**	**-0.6**
MEIG				*e*S	**Sn**	**06 55 58.8**	**-1.9**
MEIG	**Mezcala**	**1.98**	**331**		**Pn**	**06 55 35.0**	**-0.6**
MEIG					**Sn**	**06 55 58.8**	**-1.9**
VHO	**Vista Hermosa**	**1.99**	**64**	⇑*e*P	**Pn**	**06 55 35.2**	**-0.6**
	baz=236,slow=10						
VHO				*e*S	**Sn**	**06 55 59.5**	**-1.4**
PANG	**Puerto Angel**	**2.10**	**104**	*e*P	**Pn**	**06 55 34.1**	**-3.1**
PANG				*e*S	**Sn**	**06 56 00.6**	**-3.0**
PANG	**Puerto Angel**	**2.10**	**104**		**Pn**	**06 55 34.1**	**-3.1**
PANG					**Sn**	**06 56 00.6**	**-3.0**
PLIG	**Platanillo**	**2.35**	**339**	*e*P	**Pn**	**06 55 41.1**	**+0.3**
PLIG				*e*S	**Sn**	**06 56 08.7**	**-1.2**
PLIG	**Platanillo**	**2.35**	**339**		**Pn**	**06 55 41.1**	**+0.3**
PLIG					**Sn**	**06

833A	Chaparral WMA,	12.10	357	P			06 57 57.4	
	baz=174,SNR=5.6							
SLBS	Sierra La Lagu	13.01	307	Pn		Pn	06 58 07.8	+0.7
LPIG	La Paz	13.52	307	LR		LR	07 02 26.7	
	comp=Z,364nm,21.6s,baz=90,slow=33							
ACON	Acoyapa	13.68	106	Pn		Pn	06 58 16.6	+0.5
TX32	Lajitas Array	13.89	341			Pn	06 58 20.2	+1.2
TXAR	Lajitas Array	13.89	341	Pn		Pn	06 58 19.2	+0.2
	0.1nm,0.3s,baz=163,slow=14,SNR=24							
TXAR				LR		LR	07 03 42.5	
	comp=Z,460nm,19.2s,baz=0.0,slow=38							
TXAR	Lajitas Array	13.89	341			Pn	06 58 19.9	+0.9
TX31	Lajitas Ar. Si	13.89	341			Pn	06 58 20.2	+1.2
ORTG	Ortega, Santa	14.03	113			Pn	06 58 22.4	+1.4
JCT	Junction City	14.27	356			Pn	06 58 23.9	-0.2
JCT	Junction City	14.27	356	P			06 58 25.1	
	baz=174,SNR=16							
JTS	Las Juntas de	14.51	112	Pn		Pn	06 58 27.1	-0.5
	0.3nm,0.3s,baz=25,slow=14,SNR=2.0							
JTS	Las Juntas de	14.51	112	Pn		Pn	06 58 26.8	-0.8
435B	Jarrell	14.55	3	Pn		Pn	06 58 29.0	+0.9
435B	Jarrell	14.55	3	P			06 58 30.6	
	baz=182,SNR=7.6							
COVE	Coope Vega, Sa	14.83	110			Pn	06 58 31.0	-0.9
441A	DeRidder	15.31	18			Pn	06 58 35.9	-2.3
441A				IAmb		IAmb	06 58 44.7	
	comp=Z,88nm,0.9s							
HDC	Heredia	15.38	112			Pn	06 58 38.5	-0.9
HDC				IAmb		IAmb	06 58 50.4	
	comp=Z,91nm,1.2s							
WHTX	Lake Whitney,	15.76	4			Pn	06 58 43.5	-0.6
WHTX				IAmb		IAmb	06 58 50.1	
	comp=Z,125nm,1.0s							
WHTX	Lake Whitney,	15.76	4	P			06 58 43.6	
	baz=183,SNR=29							
NATX	Nacogdoches	15.91	12	P			06 58 49.9	
	baz=193,SNR=10							
NATX	Nacogdoches	15.91	12			Pn	06 58 45.0	-0.9
NATX				IAmb		IAmb	06 58 50.9	
	comp=Z,84nm,0.9s							
237A	Washetta, Mont	15.94	9			Pn	06 58 46.9	+0.5
PEZE	Perez Zeledon,	16.04	113	Pn		Pn	06 58 46.9	-0.9
SOR	Soroa	16.09	63	Pn		Pn	06 58 47.7	-0.6
342A	Flagon Creek P	16.16	20	Pn		Pn	06 58 47.8	-1.4
ABTX	Abilene, Hawle	16.39	357	P			06 58 56.3	
	baz=175,SNR=39							
ABTX	Abilene, Hawle	16.39	357			Pn	06 58 52.4	+0.2
ABTX				IAmb		IAmb	06 58 57.9	
	comp=Z,94nm,0.8s							
MNTX	Cornudas Mount	16.63	339	P			06 58 56.3	
	baz=155,SNR=33							
MNTX	Cornudas Mount	16.63	339			Pn	06 58 56.0	+0.8
GDL2	Guadalupe Moun	16.78	343	P		Pn	06 58 57.9	+0.7
344A	Westbrook Farm	16.80	24			Pn	06 58 55.9	-1.4
SRIG	Santa Rosalia	16.82	313			Pn	06 58 57.9	+0.4
HSIG		17.10	320	P		P	06 59 02.8	-0.2
Z35A	Perchaven, San	17.11	4	P		Pn	06 59 00.6	-0.6
346A	Big Creek Wild	17.27	27	P		Pn	06 59 00.6	-2.6
Z38A	Mt. Pleasant	17.31	10			Pn	06 59 02.4	-1.3
VBMS	Vicksburg	17.56	23			Pn	06 59 05.4	-1.5
VBMS				IAmb		IAmb	06 59 16.7	
	comp=Z,87nm,1.1s							
VBMS	Vicksburg	17.56	23	P			06 59 05.9	
	baz=206							
143A	Socs Landing,	17.68	20			Pn	06 59 07.7	-0.7
Z41A	Richland Creek	17.78	16	P			06 59 11.5	
	baz=198,SNR=12							
MSTX	Muleshoe	18.10	349			Pn	06 59 13.3	-0.4
MSTX	Muleshoe	18.10	349	P			06 59 14.3	
	baz=166,SNR=10							
WLAR	White Oak Lake	18.11	15			Pn	06 59 11.4	-2.3
WLAR				IAmb		IAmb	06 59 30.7	
	comp=Z,55nm,0.9s							
BRAL	Brewton	18.25	33	P			06 59 16.0	
	baz=218							
121A	Cookes Peak, D	18.28	335	P			06 59 18.4	
	baz=149,SNR=13							
121A	Cookes Peak, D	18.28	335	P		P	06 59 16.4	+0.3
X34A	Smith Ranch, M	18.35	2			Pn	06 59 15.4	-1.1
WMOK	Wichita Mounta	18.47	360	P		P	06 59 17.0	-1.0
WMOK	Wichita Mounta	18.47	360	P			06 59 17.3	
	baz=178,SNR=12							
146A	Union	18.52	26	P		P	06 59 15.7	-2.8
X37A	Clayton	18.55	8	P		P	06 59 18.3	-0.5
CCAR	Cane Creek	18.69	18	P		P	06 59 19.4	-1.0
CCAR				IAmb		IAmb	06 59 28.9	
	comp=Z,59nm,0.9s							
AMTX	Amarillo	18.82	352	P			06 59 22.5	
	baz=170							
AMTX	Amarillo	18.82	352	P		P	06 59 21.6	-0.3
MIAR	Mount Ida	18.82	13	P		P	06 59 19.7	-2.2
MIAR	Mount Ida	18.82	13	P			06 59 21.2	
	baz=194,SNR=22							
X40A	Basin Creek Fa	18.94	15	P		P	06 59 22.0	-1.1
X40A	Basin Creek Fa	18.94	15	P			06 59 23.5	
	baz=196,SNR=8.8							
FNO	Franklin	19.02	3	P		P	06 59 22.9	-1.1
OKCSW	OKLAHOMA CITY	19.16	3	P		P	06 59 25.8	+0.2
OKCFA	Oklahoma City	19.17	3	P		P	06 59 26.0	+0.3
BNM	Barren Site	19.29	339			Pn	06 59 28.5	+0.2
250A	Grady	19.30	33	P		P	06 59 26.7	-0.4
OK025	Westminster Rd	19.34	3	P		P	06 59 27.1	-0.5
OK025				IAmb		IAmb	06 59 28.7	
	comp=Z,38nm,0.7s							
Y45A	Yeager Farm, C	19.40	23	P		P	06 59 26.8	-1.4
BCOK	Bluff Creek, N	19.41	2	P		P	06 59 27.9	-0.3
W39A	Magazine	19.41	12	P		P	06 59 27.7	-0.5
W39A	Magazine	19.41	12	P			06 59 30.0	
	baz=193,SNR=25							
LENM	Lemitar	19.42	339	P		Pn	06 59 29.5	-0.3
Z47A	Carrollton	19.42	27	P		P	06 59 27.3	-1.2
TUC	Tucson	19.49	328	P		Pn	06 59 31.7	+1.2
TUC	Tucson	19.49	328	P			06 59 32.1	
	baz=141							
X43A	Marvell	19.52	19	P			06 59 30.3	
	baz=202							
OK029	Liberty Lake	19.55	3	P		P	06 59 29.8	-0.1
OK030	Cody Creek RV	19.72	4	P		P	06 59 31.2	-0.5
OK030				IAmb		IAmb	06 59 32.5	
	comp=Z,64nm,1.0s							
W41B	Gary Mavity, V	19.74	16	P			06 59 32.2	
	baz=198,SNR=12							
OK031	S. Brethren Rd	19.74	4	P		P	06 59 31.6	-0.3
OK031				IAmb		IAmb	06 59 32.8	
	comp=Z,67nm,0.9s							
LRAL	Lakeview Retre	19.78	30	P		P	06 59 31.3	-1.1
LRAL	Lakeview Retre	19.78	30	P			06 59 32.8	
	baz=214,SNR=14							
TUL1	Leonard	19.80	7	P			06 59 32.2	
	baz=187,SNR=30							
WHAR	Wooly Hollow	19.84	15	P		P	06 59 33.1	+0.1
WHAR				IAmb		IAmb	06 59 40.7	
	comp=Z,37nm,0.9s							
ANMO	Albuquerque	19.96	341	P			06 59 36.6	
	baz=156							
ANMO	Albuquerque	19.96	341	P		Pn	06 59 36.0	-0.3
	comp=Z,0.4nm,0.3s,baz=148,slow=12,SNR=58							
ANMO				LR		LR	07 07 51.6	
	comp=Z,1µm,18.2s,baz=155,slow=39							
ANMO	Albuquerque	19.96	341	P		Pn	06 59 35.9	-0.3
QUOK	Quay	19.97	4	P		P	06 59 34.1	-0.4
OXF	Oxford	20.02	23	P		P	06 59 35.1	+0.1
OXF				IAmb		IAmb	06 59 42.0	
	comp=Z,100nm,1.1s							
OXF	Oxford	20.02	23	P			06 59 35.1	
	baz=206,SNR=14							
U32A	Winter Ranch,	20.11	359	P		P	06 59 36.1	+0.1
U32A				IAmb		IAmb	06 59 37.7	
	comp=Z,82nm,0.9s							
CROK	Carrier	20.24	1	P		P	06 59 37.3	-0.1
214A	Organ Pipe Nat	20.33	323	P			06 59 41.3	
	baz=136,SNR=10							
214A	Organ Pipe Nat	20.33	323	P		Pn	06 59 40.6	+0.2
HHAR	Hobbs	20.43	11	P		P	06 59 38.2	-1.3
FCAR	Ozark Folk Cen	20.45	15	P		P	06 59 39.0	-0.6
FCAR				IAmb		IAmb	06 59 45.3	
	comp=Z,36nm,0.9s							
U38A	Gravette	20.51	10	P		P	06 59 39.4	-0.9
U38A				IAmb		IAmb	06 59 45.9	
	comp=Z,43nm,0.8s							
OK032	Salt Plains WL	20.53	1	P		P	06 59 40.1	-0.5
OK032				IAmb		IAmb	06 59 43.6	
	comp=Z,78nm,1.5s							
HBAR	Harrisburg	20.55	19	P		P	06 59 39.6	-1.0
HBAR				IAmb		IAmb	06 59 46.2	
	comp=Z,54nm,0.8s							
GC02	Grant County #	20.59	2	P		P	06 59 39.6	-1.6
152A	Waverly Hall	20.67	35	P		P	06 59 41.7	-0.3
W45A	Hickory Valley	20.68	22	P		P	06 59 42.2	0.0
KAN14	Manchester OK	20.69	1	P		P	06 59 41.8	-0.5
LPAR	Lepanto	20.70	19	P		P	06 59 42.6	+0.3
U40A	Yellville	20.72	13	P			06 59 42.4	
	baz=195,SNR=57							
U40A	Yellville	20.72	13	P		P	06 59 42.3	-0.3
U40A				IAmb		IAmb	06 59 48.0	
	comp=Z,93nm,1.0s							
T35A	Sooner Cattle	20.73	5	P		P	06 59 42.0	-0.6
T35A				IAmb		IAmb	06 59 43.0	
	comp=Z,68nm,0.8s							
Y49A	Blount Mountai	20.73	30	P		P	06 59 41.8	-1.0
Y49A				IAmb		IAmb	06 59 43.5	
	comp=Z,47nm,0.8s							
KAN13	South Haven SW	20.76	3	P		P	06 59 42.4	-0.6
KAN13				IAmb		IAmb	06 59 49.3	
	comp=Z,47nm,0.8s							
KAN05	Bluff City Nor	20.84	2	P		P	06 59 42.9	-1.0
KAN05				IAmb		IAmb	06 59 48.9	
	comp=Z,42nm,0.7s							
LCAR	Lake Charles	20.88	17	P		P	06 59 43.5	-0.8
LCAR				IAmb		IAmb	06 59 49.0	
	comp=Z,31nm,0.7s							
KAN09	Caldwell North	20.88	2	P		P	06 59 43.3	-1.0
KAN09				IAmb		IAmb	06 59 47.4	
	comp=Z,31nm,0.8s							
KAN01	Argonia South	20.89	2	P		P	06 59 43.4	-1.0
Z51A	Franklin	20.92	33	P		P	06 59 44.3	-0.4
X48A	Hartselle	20.93	28	P		P	06 59 44.1	-0.8
X48A				IAmb		IAmb	06 59 45.2	
	comp=Z,42nm,0.8s							
PLAL	Pickwick Lake	20.95	25	P		P	06 59 44.2	-0.9
KAN08	Anthony NE Sta	20.96	1	P		P	06 59 44.5	-0.6
KAN12	Harper NE Stat	21.03	1	P		P	06 59 45.9	-0.1
KAN12				IAmb		IAmb	06 59 51.6	
	comp=Z,49nm,1.2s							
HALT	Halls	21.30	21	P		P	06 59 49.0	+0.1
HALT				IAmb		IAmb	07 00 03.9	
	comp=Z,73nm,1.1s							
PEBM	Pemiscott Bayo	21.31	20	P		P	06 59 49.8	+0.8
LNXT	Lenox	21.42	21	P		P	06 59 51.2	+1.1
255A	Hazlehurst	21.45	40	P		P	06 59 49.5	-0.9
255A				IAmb		IAmb	07 00 18.5	
	comp=Z,36nm,1.0s							
T25A	Trinidad	21.49	347	P			06 59 52.8	
	baz=163,SNR=30							
T25A	Trinidad	21.49	347	P		P	06 59 52.2	+1.1
T25A				IAmb		IAmb	06 59 57.2	
	comp=Z,89nm,1.3s							
154A	Montrose	21.55	38	P		P	06 59 51.0	-0.5
154A				IAmb		IAmb	07 00 14.6	
	comp=Z,63nm,0.8s							
MGMO	Mountain Grove	21.62	14	P		P	06 59 52.1	-0.2
MGMO				IAmb		IAmb	06 59 57.4	
	comp=Z,51nm,0.9s							
GLAT	Glass	21.64	21	P		P	06 59 53.3	+0.8
FPAL	Fort Paine	21.67	30	P		P	06 59 52.4	-0.5
FPAL				IAmb		IAmb	06 59 53.7	
	comp=Z,38nm,0.8s							
PENMO	Penman	21.70	20	P		P	06 59 52.5	-0.5
PBMO	Poplar Bluff	21.75	18	P		P	06 59 53.4	-0.2
PARMO	Parma	21.85	19	P		P	06 59 54.5	-0.2
UTMT	University of	21.86	22	P		P	06 59 54.6	-0.2
HICK	Hickman	21.91	21	P		P	06 59 54.5	-0.8
S39A	Bolivar	21.92	11	P		P	06 59 54.4	-1.0
S39A				IAmb		IAmb	06 59 58.8	
	comp=Z,54nm,0.8s							
GOGA	Godfrey	21.92	36	P		P	06 59 54.5	-1.0
GOGA	Godfrey	21.92	36	P			06 59 54.7	
	baz=222,SNR=8.7							
Y52A	Lilburn	21.93	34	P		P	06 59 55.0	-0.6
Y52A				IAmb		IAmb	06 59 57.0	
	comp=Z,41nm,0.8s							
HENM	Henderson Moun	21.99	20	P		P	06 59 56.2	0.0
WVT	Waverly	22.05	24	P		P	06 59 56.0	-0.9
WVT	Waverly	22.05	24	P			06 59 55.8	
	baz=208							
X51A	Calhoun	22.07	31	P		P	06 59 56.6	-0.5
SWET	Sewanee	22.08	29	P		P	06 59 56.5	-0.7
SWET				IAmb		IAmb	06 59 57.4	
	comp=Z,59nm,0.8s							
V48A	Smith Brothers	22.12	26	P		P	06 59 56.5	-1.1
V48A				IAmb		IAmb	07 00 00.4	
	comp=Z,43nm,0.8s							
R32A	Long Quarter,	22.15	360	P		P	06 59 57.7	-0.2
R32A				IAmb		IAmb	07 00 01.7	
	comp=Z,55nm,1.0s							
ESJX	Sierra Juarez	22.28	318	P		P	07 00 00.2	+0.6
GLA	Glamis	22.30	322	P		P	07 00 02.2	+2.5
GLA				IAmb		IAmb	07 00 03.4	
	comp=Z,39nm,1.1s							
GLA	Glamis	22.30	322	P			07 00 02.6	
	baz=134,SNR=7.9							
W50A	Signal Mountai	22.35	30	P		P	06 59 59.5	-0.6
W50A				IAmb		IAmb	07 00 00.5	
	comp=Z,58nm,0.9s							
WUAZ	Wupatki	22.38	332	P			07 00 00.5	
	baz=145,SNR=31							
WUAZ	Wupatki	22.38	332	P		P	07 00 02.9	+2.3
WUAZ				IAmb		IAmb	07 00 06.2	
	comp=Z,57nm,0.9s							
T45A	Paducah	22.54	21	P		P	07 00 01.2	-0.9
CBKS	Cedar Bluff	22.56	358	P		P	07 00 02.1	-0.2
CBKS				IAmb		IAmb	07 00 09.2	
	comp=Z,36nm,0.9s							
CBKS	Cedar Bluff	22.56	358	P			07 00 04.4	
	baz=176							
GTBY	Guantanamo Bay	22.63	77	P		P	07 00 02.7	-0.5
CLTN	Cedars of Leba	22.63	27	P		P	07 00 02.5	-0.6
CLTN				IAmb		IAmb	07 00 06.1	
	comp=Z,40nm,1.0s							
S22A	4UR Ranch, Cre	22.67	343	P			07 00 05.6	
	baz=158,SNR=23							
MVCO	Mesa Verde	22.70	339	P			07 00 05.8	
	baz=153,SNR=50							
MVCO	Mesa Verde	22.70	339	P		P	07 00 04.9	+0.8
R40A	Maddies Stadio	22.71	13	P		P	07 00 03.1	-0.8
CCM	Cathedral Cave	22.72	15	P			07 00 03.2	
	baz=198							
CCM	Cathedral Cave	22.72	15	P		P	07 00 02.8	-1.2
CCM				IAmb		IAmb	07 00 09.6	
	comp=Z,68nm,1.1s							
PDMCI	Parker Dam,Lak	22.82	325	P			07 00 07.5	
	baz=137,SNR=7.2							
FVM	French Village	22.87	17	P		P	07 00 05.8	+0.1
FVM				IAmb		IAmb	07 00 07.5	
	comp=Z,60nm,1.1s							
KSU1	Kansas State U	22.89	4	P			07 00 05.6	
	baz=184							
KSU1	Kansas State U	22.89	4	P		P	07 00 05.3	-0.5
KSU1				IAmb		IAmb	07 00 12.3	
	comp=Z,26nm,0.7s							
CPCT	Cooper Cave	22.93	31	P		P	07 00 05.6	-0.7
CPCT				IAmb		IAmb	07 00 06.8	
	comp=Z,28nm,0.8s							
W52A	Murphy	22.95	32	P		P	07 00 06.3	-0.2
S44A	Carbondale	22.95	19	P		P	07 00 07.0	+0.5
SIUC	Southern Illin	22.98	19	P		P	07 00 07.4	+0.7
KSCO	Kaye Shedlock'	23.01	352	P		P	07 00 08.2	+1.0
KSCO	Kaye Shedlock'	23.01	352	P			07 00 08.3	
	baz=169,SNR=18							
T47A	Sharon Grove	23.08	24	P		P	07 00 07.9	+0.1
BC3	Big Chuckawall	23.10	322	P			07 00 10.6	
	baz=133,SNR=8.2							
MONP2	Monument Peak	23.17	319	P			07 00 11.1	
	baz=130							
HODGE	Hodges	23.20	36	P		P	07 00 08.2	-0.9
HODGE				IAmb		IAmb	07 00 10.2	
	comp=Z,32nm,0.9s							
U49A	Red Boiling Sp	23.22	27	P		P	07 00 08.1	-1.1
IRM	Iron Mountain	23.27	323	P			07 00 12.1	
	baz=135,SNR=14							
V51A	Loudon	23.30	30	P		P	07 00 09.3	-0.7
V51A				IAmb		IAmb	07 00 11.3	
	comp=Z,58nm,1.0s							
BG3	Lake Jocassee	23.40	34	P		P	07 00 10.2	-0.8
Q24A	Divide	23.40	347	P			07 00 12.8	
	baz=163,SNR=8.1							
TKL	Tuckaleechee C	23.47	32	P		P	07 00 10.9	-0.8
	comp=Z,8.3nm,0.7s,baz=195,slow=9.3,SNR=12							
TKL	Tuckaleechee C	23.47	32	P		P	07 00 11.4	-0.4
TKL				IAmb		IAmb	07 00 19.1	
	comp=Z,46nm,1.4s							
SLM	Saint Louis	23.54	17	P		P	07 00 11.7	-0.6
PV01	Paradox Valley	23.56	340	P		P	07 00 13.3	+0.4
PV01				IAmb		IAmb	07 00 17.3	
	comp=Z,30nm,1.0s							
BELC	Belle Mtn. Jos	23.66	322	P			07 00 16.1	
	baz=133,SNR=8.2							
PV13	Radium Mtn., P	23.66	340	P		P	07 00 14.0	0.0
PV13				IAmb		IAmb	07 00 16.6	
	comp=Z,23nm,0.8s							
PFO	Pinyon Flats O	23.67	320	P			07 00 15.8	
	baz=132							
PFO	Pinyon Flats O	23.67	320	P		P	07 00 14.8	+0.8
	comp=Z,3.8nm,0.8s,baz=124,slow=11,SNR=6.6							
PFO				LR		LR	07 09 56.2	
	comp=Z,369nm,19.0s,baz=138,slow=38							
PFO	Pinyon Flats O	23.67	320	P		P	07 00 15.0	+1.1
NHSC	New Hope	23.68	41	P		P	07 00 13.9	+0.1
NHSC	New Hope	23.68	41	P			07 00 15.0	
	baz=229							
PV02	Paradox Valley	23.68	340	P		P	07 00 15.9	+1.8
PV02				IAmb		IAmb	07 00 16.4	
	comp=Z,24nm,0.9s							
PV05	Paradox Valley	23.69	339	P		P	07 00 15.3	+1.1
PV05				IAmb		IAmb	07 00 16.3	
	comp=Z,23nm,0.9s							
V52A	Sevierville	23.70	32	P		P	07 00 12.6	-1.5
V52A				IAmb		IAmb	07 00 16.2	
	comp=Z,55nm,1.5s							
PV15	Paradox Valley	23.72	340	P		P	07 00 16.2	+1.8
PV15				IAmb		IAmb	07 00 17.8	
	comp=Z,45nm,0.9s							
USIN	University of	23.73	22	P		P	07 00 14.7	+0.4
PV03	Paradox Valley	23.76	340	P		P	07 00 15.8	+1.0
PV03				IAmb		IAmb	07 00 17.5	
	comp=Z,23nm,0.8s							
P38A	Dawn	23.76	10	P		P	07 00 13.7	-0.8
PV18	Skein Mesa, Pa	23.77	340	P		P	07 00 16.2	+1.2
PV18				IAmb		IAmb	07 00 17.5	
	comp=Z,22nm,0.8s							
PV12	Saucer Basin,	23.80	340	P		P	07 00 17.0	+1.7
PV12				IAmb		IAmb	07 00 18.2	
	comp=Z,40nm,0.8s							
PV11	David Mesa, Pa	23.81	340	P		P	07 00 16.1	+0.8
PV11				IAmb		IAmb	07 00 17.4	
	comp=Z,25nm,0.8s							
JSC	Jenkinsville	23.82	38	P		P	07 00 14.5	-0.6
PV17	East Wray Mesa	23.82	339	P		P	07 00 16.8	+1.4
PV17				IAmb		IAmb	07 00 17.4	
	comp=Z,28nm,0.9s							
PV16	Nyswonger Mesa	23.84	340	P		P	07 00 17.0	+1.4
PV16				IAmb		IAmb	07 00 17.6	
	comp=Z,23nm,0.9s							
PV19	Morning Glory	23.86	339	P		P	07 00 16.7	+0.9
PV19				IAmb		IAmb	07 00 17.8	
	comp=Z,22nm,0.9s							
PV07	Paradox Valley	23.86	340	P		P	07 00 17.3	+1.5
PV07				IAmb		IAmb	07 00 19.0	
	comp=Z,49nm,1.1s							
PV20	West Nyswonger	23.88	340	P		P	07 00 17.0	+1.1
PAULI	Pauline	23.88	36	P		P	07 00 15.1	-0.6
PV04	Paradox Valley	23.91	340	P		P	07 00 17.9	+1.7
PV04				IAmb		IAmb	07 00 18.5	
	comp=Z,33nm,0.9s							
PV14	Lion Creek, Pa	23.93	339	P		P	07 00 17.2	+0.7
PV10	Paradox Valley	23.93	339	P		P	07 00 15.6	-1.0
PV10				IAmb		IAmb	07 00 18.3	
	comp=Z,31nm,1.0s							
P40A	Paris	23.95	13	P		P	07 00 15.2	-1.1
V53A	Saluda	23.97	33	P		P	07 00 16.0	-0.7
V53A				IAmb		IAmb	07 00 27.6	
	comp=Z,19nm,0.9s							
PV22	Blue Mesa, Par	24.00	340	P		P	07 00 18.2	+1.1
PV22				IAmb		IAmb	07 00 19.4	
	comp=Z,24nm,1.1s							
GMRC	Granite Mounta	24.02	324	P			07 00 19.6	
	baz=135,SNR=12							
SMCO	Snowmass	24.05	344	P		P	07 00 18.3	+0.5
SMCO				IAmb		IAmb	07 00 21.2	
	comp=Z,49nm,1.1s							
T50A	Nancy	24.06	28	P		P	07 00 16.9	-0.6
T50A				IAmb		IAmb	07 00 19.2	
	comp=Z,48nm,0.9s							
MURC	Murrieta	24.12	319	P			07 00 21.1	
	baz=130							
Q44A	Meyer Farm, Va	24.14	19	P		P	07 00 17.1	-1.0
Y57A	Sumter	24.15	39	P		P	07 00 17.6	-0.7
Y57A				IAmb		IAmb	07 00 19.7	
	comp=Z,30nm,0.8s							
OLIL	Olney	24.27	20	P		P	07 00 18.6	-0.8
KNB	Kanab	24.27	331	P		P	07 00 21.7	+2.1
ISCO	Idaho Springs	24.31	347	P			07 00 21.6	
	baz=162,SNR=51							
ISCO	Idaho Springs	24.31	347	P		P	07 00 21.5	+1.5
ISCO				IAmb		IAmb	07 00 23.1	
	comp=Z,39nm,0.9s							
KMSC	Kings Mountain	24.39	36	P		P	07 00 20.0	-0.5
KMSC				IAmb		IAmb	07 00 27.1	
	comp=Z,37nm,1.3s							
KMSC	Kings Mountain	24.39	36	P			07 00 20.6	
	baz=223,SNR=6.3							
PKCU	Pink Cliffs	24.40	333	P		P	07 00 22.1	+1.1
HEC	Hector,Ludlow	24.44	323	P			07 00 23.8	
	baz=134							
LCMT	Little Creek M	24.47	331	P		P	07 00 21.8	+0.4
WCI	Wyandotte Cave	24.48	24	P			07 00 21.6	
	baz=209							
WCI	Wyandotte Cave	24.48	24	P		P	07 00 20.4	-0.9
N33A	J Bar K, Exete	24.48	2	P		P	07 00 21.9	+0.6
Y58A	Scranton	24.53	41	P		P	07 00 21.0	-0.8
BIRD	Birdtown, Kers	24.54	38	P		P	07 00 21.1	-0.7
BIRD				IAmb		IAmb	07 00 28.9	
	comp=Z,32n

HDIL Hopedale 25.59 17 P P 07 00 31.0 -0.3
PRN Pahroc Range 25.66 329 P P 07 00 33.9 +1.8
PHWY Pilot Hill 25.72 348 P P 07 00 32.6 -0.2
PHWY IAmb IAmb 07 00 36.7
comp=Z,27nm,0.9s
OSI Osito Audit: C 25.74 319 P P 07 00 35.7 +2.9
OSI IAmb IAmb 07 00 37.4
comp=Z,19nm,1.1s
L34A Svendsen Farm, 25.76 4 P P 07 00 32.1 -0.7
L34A IAmb IAmb 07 00 46.5
comp=Z,28nm,0.8s
P48A Milroy 25.88 24 P P 07 00 32.2 -1.8
FURC Furnace Creek, 25.91 325 P 07 00 36.8
baz=135
TPNV Topopah Spring 25.93 326 P P 07 00 34.7 +0.1
TPNV Topopah Spring 25.93 326 P 07 00 39.6
baz=137,SNR=6.7
MPMC Manual Prospec 25.97 323 P 07 00 37.0
baz=134,SNR=12
PSUT Pine Spring 25.98 332 P P 07 00 35.8 +0.6
SCIA State Center 26.04 9 P 07 00 36.4
baz=191,SNR=18
SCIA State Center 26.04 9 P P 07 00 35.3 -0.1
SFIN Lafayette 26.09 20 P 07 00 36.3
baz=205,SNR=5.6
SFIN Lafayette 26.09 20 P P 07 00 34.3 -1.5
RDMU Red Mountain 26.09 341 P P 07 00 37.4 +1.3
V58A Windy Hill, Pi 26.13 38 P P 07 00 35.6 -0.6
ARVC Arvin 26.14 320 P 07 00 41.3
baz=130
SDDR Presa de Saban 26.17 80 P P 07 00 36.1 -0.8
SDDR IAmb IAmb 07 00 40.6
comp=Z,18nm,0.8s
P49A Miami Univ. Ec 26.23 25 P 07 00 37.0
baz=211,SNR=12
P49A Miami Univ. Ec 26.23 25 P P 07 00 36.6 -0.4
ISA Isabella, Lake 26.28 321 P P 07 00 38.6 +0.9
ISA Isabella, Lake 26.28 321 P 07 00 40.3
baz=131
MPU Maple Canyon 26.32 337 P P 07 00 39.6 +1.5
K31A O'Neill 26.34 360 P P 07 00 38.0 -0.1
ROSC El Rosal 26.36 113 P P 07 00 41.5 +2.5
ROSC IAmb IAmb 07 00 48.7
comp=Z,33nm,1.4s
S54A Dingess, Beckl 26.38 32 P 07 00 38.0
baz=220
S54A Dingess, Beckl 26.38 32 P P 07 00 37.6 -0.9
S54A IAmb IAmb 07 00 49.5
comp=Z,18nm,0.8s
Q51A Peebles 26.38 27 P P 07 00 38.3 -0.2
BLA Blacksburg 26.40 34 P P 07 00 37.8 -0.9
BLA IAmb IAmb 07 00 51.5
comp=Z,28nm,0.9s
BLA Blacksburg 26.40 34 P 07 00 38.8
baz=222
NLU North Lily Min 26.43 336 P P 07 00 41.2 +2.0
NLU IAmb IAmb 07 00 42.6
comp=Z,23nm,1.0s
R53A Hurricane 26.47 30 P P 07 00 39.8 +0.4
RWWY Rawlins 26.47 345 P P 07 00 40.4 +0.8
RWWY IAmb IAmb 07 00 44.6
comp=Z,36nm,1.0s
T56A Rocky Mt 26.48 35 P 07 00 39.2
baz=223
CNNC Cliffs of the 26.50 40 P P 07 00 38.9 -0.7
CNNC Cliffs of the 26.50 40 P 07 00 39.7
baz=229
L40A Anamosa 26.55 12 P P 07 00 39.6 -0.3
L40A IAmb IAmb 07 00 41.2
comp=Z,35nm,0.8s
SPR3 Spring Creek 3 26.58 332 P P 07 00 41.4 +0.7
R11A Troy Canyon, C 26.66 329 P P 07 00 42.0 +0.8
M44A Midewin, Midew 26.71 18 P P 07 00 41.1 -0.3
JLU Jordanelle 26.76 338 P P 07 00 43.7 +1.5
VES Vestal, Richgr 26.77 321 P 07 00 44.7
baz=131
Q52A Bidwell 26.82 29 P P 07 00 42.2 -0.2
R54A Victor 26.83 32 P 07 00 42.6
baz=220
K38A Parkersburg 26.84 10 P P 07 00 41.3 -1.2
L42A Oliver, Polo 26.85 15 P P 07 00 42.3 -0.4
P51A Williamsport 26.88 27 P P 07 00 42.5 -0.5
DUG Dugway, Tooele 26.93 335 P P 07 00 45.0 +1.4
DUG Dugway, Tooele 26.93 335 P 07 00 46.1
baz=148,SNR=11
O49A Covington 26.94 25 P P 07 00 42.7 -0.8
CTU Camp Tracy 26.95 338 P P 07 00 42.7 -1.1
N47A Urbana 27.02 22 P P 07 00 42.0 -2.2
Q53A Leroy 27.09 30 P 07 00 45.0
baz=218
TIN Tinemaha, Big 27.10 324 P 07 00 48.0
baz=134
HQIL Hanson Quary C 27.15 18 P P 07 00 44.6 -0.7
TCUT Toone Canyon 27.20 338 P P 07 00 47.0 +0.8
TCUT IAmb IAmb 07 00 49.5
comp=Z,29nm,1.0s
S56A Natural Bridge 27.20 34 P 07 00 45.8
baz=223
K22A Casper 27.23 347 P P 07 00 47.0 +0.7
K22A IAmb IAmb 07 01 09.9
comp=Z,23nm,1.4s
K22A Casper 27.23 347 P 07 00 48.1
baz=162,SNR=6.0
T58A Grand View Acr 27.26 37 P 07 00 46.2
baz=226,SNR=5.8
TPH Tonopah 27.28 327 P P 07 00 47.3 +0.5
TPH IAmb IAmb 07 00 50.0
comp=Z,36nm,1.1s
R55A Marlinton 27.36 33 P P 07 00 46.2 -1.2
R55A Marlinton 27.36 33 P 07 00 47.5
baz=221
P52A Corning 27.42 28 P 07 00 47.1
baz=216
P52A Corning 27.42 28 P P 07 00 46.3 -1.6
L44A Lake County Fo 27.48 17 P P 07 00 47.8 -0.5
L44A Lake County Fo 27.48 17 P 07 00 48.6
baz=202
ECSD EROS Data Cent 27.50 3 P P 07 00 48.5 0.0
ECSD IAmb IAmb 07 00 50.9
comp=Z,20nm,1.2s
ECSD EROS Data Cent 27.50 3 P 07 00 48.7
baz=183,SNR=14
Q54A Coxs Mills 27.53 31 P P 07 00 47.9 -0.9
Q54A IAmb IAmb 07 00 53.4
comp=Z,49nm,1.4s
ACSO Alum Creek Sta 27.53 26 P P 07 00 47.6 -1.2
ACSO IAmb IAmb 07 00 50.6
comp=Z,27nm,0.8s
ACSO Alum Creek Sta 27.53 26 P 07 00 48.4
baz=214,SNR=10
JFWS Jewell Farm 27.57 13 P P 07 00 49.0 -0.2
JFWS Jewell Farm 27.57 13 P 07 00 49.2
baz=197,SNR=15
S57A Dark Hollow, R 27.60 35 P 07 00 49.8
baz=224
N49A Columbus Grove 27.62 24 P P 07 00 48.7 -0.9
N49A IAmb IAmb 07 00 53.5
comp=Z,29nm,1.4s
HWUT Hardware Ranch 27.69 339 P P 07 00 50.2 -0.2
U60A Pendleton 27.76 39 P 07 00 50.9
baz=229
L46A Eue Claire 27.82 20 P P 07 00 48.6 -2.8
R56A Bull Pasture M 27.82 34 P 07 00 52.1
baz=222
K43A Burlington 27.85 16 P P 07 00 50.9 -0.8
T59A Double "B" Far 27.85 38 P P 07 00 50.2 -1.5
T59A IAmb IAmb 07 01 05.0
comp=Z,31nm,1.4s
O52A Adamsville 27.95 28 P P 07 00 50.6 -2.0
O52A IAmb IAmb 07 01 00.4
comp=Z,23nm,0.8s
NV11 Mina Array Sit 28.04 326 P P 07 00 54.4 +0.8
NV11 IAmb IAmb 07 00 57.5
comp=Z,17nm,1.1s
I37A Lemond, Waseca 28.08 8 P P 07 00 52.7 -1.1
I37A IAmb IAmb 07 00 57.5
comp=Z,20nm,0.8s
BW06 Boulder Array 28.10 343 P 07 00 55.5
baz=156,SNR=18
LHV Little Huntoon 28.10 325 P P 07 00 54.6 +0.6
LHV IAmb IAmb 07 01 12.2
comp=Z,16nm,1.1s
BW06 Boulder Array 28.10 343 P P 07 00 54.8 +0.6
BW06 IAmb IAmb 07 01 00.6
comp=Z,20nm,1.1s
PD31 Pinedale Array 28.10 343 P P 07 00 54.9 +0.7
PD31 IAmb IAmb 07 01 00.6
comp=Z,18nm,1.1s
PDAR Pinedale Array 28.10 343 P P 07 00 55.3 +1.1
comp=Z,7.0nm,0.9s,baz=139,slow=7.9,SNR=44
PDAR LR LR 07 11 33.1
comp=Z,222nm,18.4s,baz=168,slow=35
PDAR Pinedale Array 28.10 343 P P 07 00 54.6 +0.4
NVAR Mina Array Bea 28.12 326 P P 07 00 56.8 +2.4
comp=Z,6.5nm,0.9s,baz=153,slow=10,SNR=27
NVAR LR LR 07 13 41.8
comp=Z,409nm,19.8s,baz=154,slow=40
NVAR Mina Array Bea 28.12 326 P P 07 00 56.4 +2.0
SUSD Miller 28.16 359 P P 07 00 54.7 +0.2
SUSD IAmb IAmb 07 01 00.5
comp=Z,18nm,0.8s
SDV Santo Domingo 28.22 102 P P 07 00 56.4 +1.0
comp=Z,3.8nm,0.4s,baz=301,slow=3.3,SNR=7.2
SDV LR LR 07 13 42.3
comp=Z,227nm,18.5s,baz=332,slow=40
SDV Santo Domingo 28.22 102 P P 07 00 54.7 -0.7
SDV Santo Domingo 28.22 102 eP P 07 00 56.6 +1.1
RSSD Black Hills 28.22 352 P P 07 00 54.7 -0.6
RSSD Black Hills 28.22 352 P 07 00 56.3
baz=168
HVU Hansel Valley 28.27 337 P P 07 00 55.9 +0.3
N51A Ashland 28.36 26 P P 07 00 55.7 -0.6
N51A IAmb IAmb 07 00 56.8
comp=Z,15nm,0.7s
ELK Elko 28.40 333 P P 07 00 57.9 +1.0
comp=Z,2.7nm,0.9s,baz=139,slow=5.7,SNR=9.0
ELK LR LR 07 13 23.6
comp=Z,933nm,18.5s,baz=160,slow=39
ELK Elko 28.40 333 P P 07 00 58.2 +1.3
Q56A Snyder Ridge, 28.41 33 P 07 00 57.1
baz=222
L48A N Adams 28.41 23 P P 07 00 56.0 -0.7
I40A Norwalk 28.43 12 P P 07 00 56.5 -0.3
I40A IAmb IAmb 07 00 59.9
comp=Z,12nm,0.8s
KVN Kaiserville 28.47 327 P P 07 00 57.5 0.0
M50A Fremont 28.49 25 P P 07 00 56.9 -0.4
M50A IAmb IAmb 07 01 01.5
comp=Z,36nm,1.4s
R58A Rapidan 28.51 35 P 07 00 57.6
baz=225
MCWV Mont Chateau 28.53 31 P P 07 00 57.3 -0.5
MCWV Mont Chateau 28.53 31 P 07 00 58.1
baz=220
M51A Elyria 28.78 26 P 07 00 59.4
baz=214
WAKR Walker 28.80 325 P P 07 01 00.9 +0.5
I42A Draeger Farm, 28.81 15 P P 07 00 59.7 -0.5
I42A IAmb IAmb 07 01 02.4
comp=Z,29nm,1.2s
S60A Water View 28.88 38 P 07 01 03.8
baz=228
N53A Lisbon 28.95 29 P P 07 01 00.6 -1.0
AAM Ann Arbor 29.01 23 P P 07 01 01.6 -0.4
AAM IAmb IAmb 07 01 03.1
comp=Z,20nm,0.9s
AAM Ann Arbor 29.01 23 P 07 01 01.7
baz=216
CMB Columbia Colle 29.01 323 P P 07 01 02.6 +0.5
YERR Yerington 29.03 326 P P 07 01 01.8 -0.6
REDW Red Top Meadow 29.03 341 P P 07 01 03.4 +1.0
REDW IAmb IAmb 07 01 07.8
comp=Z,15nm,1.1s
SNOW Snow King Moun 29.09 342 P P 07 01 04.8 +1.8
SNOW IAmb IAmb 07 01 11.4
comp=Z,23nm,0.9s
LOHW Long Hollow 29.18 342 P P 07 01 04.2 +0.4
PNTR Pine Nut 29.30 325 P P 07 01 04.4 -0.5
SPMN Marine on St. 29.35 8 P 07 01 05.2
baz=191,SNR=7.0
SPMN Marine on St. 29.35 8 P P 07 01 04.4 -0.6
SPMN IAmb IAmb 07 01 05.8
comp=Z,17nm,0.8s
J47A Sunmer 29.41 21 P P 07 01 03.8 -1.8
J47A IAmb IAmb 07 01 13.4
comp=Z,15nm,0.8s
N54A Moraine State 29.47 29 P 07 01 06.1
baz=218
M53A WI Miller and 29.53 28 P 07 01 06.2
baz=216
F33A 5 Mile Ranch, 29.62 3 P P 07 01 06.6 -0.8
FLWY Flagg Ranch 29.64 342 P P 07 01 07.5 -0.4
I45A Fountain 29.67 18 P P 07 01 07.5 -0.4
G40A Rib Lake 29.84 12 P P 07 01 08.8 -0.5
F36A Milaca 29.89 7 P P 07 01 09.6 -0.1
AFDM Forest Hills D 29.97 324 P P 07 01 09.9 -0.7
LKWY Lake 29.99 343 P P 07 01 09.0 -2.1
M54A Oil Creek Stat 30.05 29 P P 07 01 10.4 -0.9
M54A Oil Creek Stat 30.05 29 P 07 01 11.6
baz=218
L53A Girard 30.13 28 P 07 01 11.5
baz=217
RLMT Red Lodge 30.21 345 P 07 01 14.4
baz=158,SNR=13
RLMT Red Lodge 30.21 345 P P 07 01 13.2 +0.3
RLMT IAmb IAmb 07 01 15.7
comp=Z,13nm,1.0s
YNR Norris Junctio 30.21 343 P P 07 01 12.4 -0.6
YNE Yellowstone No 30.30 344 P P 07 01 14.6 +0.9
YHH Holmes Hill 30.33 343 P P 07 01 14.2 +0.2
E28A Huff 30.34 357 P P 07 01 13.8 0.0
ERPA Erie 30.38 28 P P 07 01 13.2 -1.0
ERPA Erie 30.38 28 P 07 01 13.7
baz=217
HLID Hailey 30.42 337 P 07 01 16.8
baz=148,SNR=7.0
HLID Hailey 30.42 337 P P 07 01 16.1 +1.3
ORV Oroville 30.68 324 P P 07 01 16.7 -0.2
BCYI Bear Canyon 30.71 339 P P 07 01 17.9 +0.6
F42A Maple Grove Fa 30.75 14 P P 07 01 16.6 -0.8
F42A IAmb IAmb 07 01 18.1
comp=Z,14nm,0.8s
G45A Suttons Bay 30.76 18 P P 07 01 16.8 -0.6
MFID Camas Ranch 30.85 335 P P 07 01 18.1 -0.4
GLMI Grayling 30.88 20 P P 07 01 17.8 -0.8
GLMI Grayling 30.88 20 P 07 01 18.8
baz=206
GCMT Greycliff 30.93 345 P P 07 01 18.9 -0.3
MCMT McKenzie Canyo 30.98 340 P P 07 01 18.8 -0.9
LAO LASA Array 31.06 350 P 07 01 21.4
baz=165
WVNY West Valley, N 31.25 29 P P 07 01 23.0 +1.2
WVNY IAmb IAmb 07 01 30.8
comp=Z,31nm,1.2s
BOZ Bozeman (W) 31.29 342 P 07 01 24.5
baz=154,SNR=12
BOZ Bozeman (W) 31.29 342 P P 07 01 24.1 +1.8
WVOR Wild Horse Val 31.29 331 P P 07 01 23.5 +1.1
WVOR IAmb IAmb 07 01 26.3
comp=Z,25nm,1.4s
I51A Listowel 31.31 25 P 07 01 21.7
baz=214
DLMT Dillon 31.37 341 P P 07 01 25.2 +2.2
DLMT IAmb IAmb 07 01 35.0
comp=Z,20nm,1.1s
MDND Maddock 31.58 359 P P 07 01 25.2 +0.5
MDND Maddock 31.58 359 P 07 01 25.8
baz=177,SNR=11
E43A Lone Tree Farm 31.61 15 P P 07 01 24.6 -0.3
E43A IAmb IAmb 07 01 25.6
comp=Z,22nm,0.9s
D41A Chassel 31.89 13 P P 07 01 27.3 -0.1
J08A Circle Bar Ran 31.94 332 P P 07 01 29.6 +1.5
J08A IAmb IAmb 07 01 31.3
comp=Z,25nm,1.1s
K56A Middlesex 32.08 30 P 07 01 29.7
baz=221,SNR=5.7
AGMN Agassiz Nation 32.10 3 P P 07 01 28.6 -0.6
AGMN Agassiz Nation 32.10 3 P 07 01 29.7
baz=184,SNR=13
EYMN Ely 32.20 9 P P 07 01 29.6 -0.6
EYMN IAmb IAmb 07 01 54.6
comp=Z,16nm,1.4s
B35A Bob, Littlefor 32.33 6 P P 07 01 31.1 -0.2
B35A IAmb IAmb 07 01 32.0
comp=Z,12nm,0.9s
L58A Harry Jones Me 32.34 33 P 07 01 31.5
baz=224
BINY Binghamton 32.38 32 P 07 01 31.5
baz=223
M04C Macdoel 32.41 327 P 07 01 34.3
baz=134
DGMT Dagmar 32.52 353 P P 07 01 32.0 -1.0
DGMT Dagmar 32.52 353 P 07 01 34.5
baz=169,SNR=5.9
BMO Blue Mountains 32.64 335 P P 07 01 34.9 +0.7
YBH Yreka Blue Hor 32.84 326 P P 07 01 36.5 +0.5
comp=Z,2.1nm,0.8s,baz=214,slow=1.7,SNR=6.5
YBH Yreka Blue Hor 32.84 326 P P 07 01 35.7 -0.2
M61A Granite Spring 32.95 36 P 07 01 36.9
baz=226
H53A Bobcaygeon 32.96 27 P 07 01 36.3
baz=217
L04D Klamath Falls 32.96 327 P 07 01 38.7
baz=134
I07A Izee 32.97 332 P P 07 01 38.0 +0.9
EGMT Eagleton 33.05 346 P P 07 01 38.8 +1.1
EGMT Eagleton 33.05 346 P 07 01 39.5
baz=159,SNR=5.4
MSO Missoula 33.10 341 P P 07 01 37.6 -0.6
MSO Missoula 33.10 341 P 07 01 39.8
baz=151
J57A Williamstown 33.26 31 P 07 01 39.1
baz=222
J57A Williamstown 33.26 31 P P 07 01 37.6 -1.8
J57A IAmb IAmb 07 01 40.8
comp=Z,24nm,1.0s
DELO Deloro Mine 33.34 28 P P 07 01 39.3 -0.8
DELO IAmb IAmb 07 01 44.4
comp=Z,13nm,1.0s
F10A Beach Ranch, E 33.53 336 P P 07 01 42.5 +0.6
F10A IAmb IAmb 07 01 47.4
comp=Z,23nm,1.0s
J04D Umpqua Nationa 33.59 328 P 07 01 44.6
baz=135
G08A Pilot Rock 33.68 334 P P 07 01 42.9 -0.4
G08A IAmb IAmb 07 01 45.6
comp=Z,13nm,1.0s
I58A Old Forge 33.97 31 P 07 01 44.9
baz=223
JTMT Jette 34.03 341 P P 07 01 46.7 +0.4
ULM Lac du Bonnet 34.04 3 P P 07 01 44.6 -1.6
comp=Z,9.3nm,0.8s,baz=180,slow=8.7,SNR=18
ULM LR LR 07 15 45.4
comp=Z,34nm,21.3s,baz=201,slow=37
ULM Lac du Bonnet 34.04 3 P P 07 01 45.6 -0.5
ULM IAmb IAmb 07 01 46.9
comp=Z,16nm,0.9s
K61A Williamstown 34.14 34 P 07 01 47.3
baz=227
H57A Richville 34.33 30 P 07 01 49.0
baz=222
E09A Wood Farm, Sta 34.34 336 P P 07 01 49.1 +0.3
H04A Detroit Lake 34.68 330 P P 07 01 51.1 -0.7
H04A IAmb IAmb 07 02 01.0
comp=Z,24nm,1.2s
CZSB Cruzeiro do Su 34.95 131 eP P 07 01 59.9 +5.4
WALA Waterton Lakes 35.09 342 P P 07 01 54.9 -0.5
F05D White Salmon 35.24 332 P 07 01 59.4
baz=139
NEW Newport 35.42 339 P 07 01 59.8
baz=147
NEW Newport 35.42 339 P P 07 01 57.9 -0.3
C09A Chrisman Ranch 35.45 337 P P 07 01 58.3 -0.1
C09A IAmb IAmb 07 02 01.3
comp=Z,14nm,0.9s
LTY Liberty 35.96 334 P P 07 02 03.5 +0.6
LTY IAmb IAmb 07 02 05.2
comp=Z,16nm,1.1s
TRQ Mont Tremblant 36.03 29 P P 07 02 02.5 -0.9
LON Longmire 36.06 333 P P 07 02 03.8 +0.1
D55A Sainte-Anne-du 36.23 27 P 07 02 05.4
baz=219
B08A Colville Reser 36.31 336 P P 07 02 06.2 +0.4
D05A Enumclaw 36.48 333 P P 07 02 09.0 +1.8
D05A IAmb IAmb 07 02 17.4
comp=Z,19nm,1.0s
D56A ZEC Mazanza, M 36.56 28 P 07 02 07.3
baz=220
D03D Eldon 37.23 332 P 07 02 15.2
baz=138
B05A Bryant 37.35 334 P 07 02 15.4
baz=140
D58A Chemin du LacG 37.45 29 P 07 02 15.5
baz=223
MATQ Matagami 37.55 22 P 07 02 15.9
baz=214
A04D Lummi Island 37.96 334 P 07 02 21.4
baz=140
FFC Flin Flon 38.55 357 P P 07 02 24.0 -0.6
FFC IAmb IAmb 07 02 26.3
comp=Z,27nm,1.2s
ETMB Extrema 41.17 127 eP P 07 02 51.5 +4.6
PTGA Pitinga 41.66 110 P P 07 02 50.2 -0.8
comp=Z,2.1nm,0.4s,baz=299,slow=6.0,SNR=7.4
PTGA Pitinga 41.66 110 IAmb IAmb 07 02 51.6
comp=Z,5.8nm,1.1s
PTGA Pitinga 41.66 110 eP P 07 02 51.0 0.0
MACA Manacapuru-AM 42.12 114 eP P 07 02 58.3 +3.5
FCC Fort Churchill 42.63 3 P P 07 02 57.2 -1.1
SAML Samuel 43.04 123 P P 07 02 59.7 -2.5
SAML Samuel 43.04 123 eP P 07 03 05.5 +3.3
LPAZ La Paz 44.10 136 LR LR 07 20 20.8
comp=Z,108nm,18.1s,baz=310,slow=34
LPAZ La Paz 44.10 136 eP P 07 03 16.5 +5.1
ITTB Itaituba 47.05 112 eP P 07 03 36.7 +2.5
YKA Yellowknife Ar 47.60 350 P P 07 03 38.1 +0.3
comp=Z,5.7nm,0.8s,baz=158,slow=7.7,SNR=38
YKA LR LR 07 24 53.5
comp=Z,149nm,18.6s,baz=0.0,slow=38
VILB Vilhena 47.74 125 eP P 07 03 43.3 +3.7
DLBC Dease Lake 48.17 338 P P 07 03 44.2 +1.8
comp=Z,6.4nm,0.9s,baz=160,slow=7.0,SNR=16
LVC Limon Verde 48.28 142 eP P 07 03 48.6 +4.5
MCPB Macapa, AP 48.76 105 eP P 07 03 47.9 +0.4
PTLB Pontes e Lacer 50.06 127 eP P 07 04 01.8 +4.6
H03N2 Juan Fernandez 52.80 159 T T 08 01 09.8
baz=337,slow=77,SNR=3959
H03N1 Juan Fernandez 52.81 159 T T 08 01 10.9
baz=337,slow=77,SNR=4637
H03N3 Juan Fernandez 52.82 159 T T 08 01 09.9
baz=337,slow=77,SNR=4231
PRPB Parauapebas 53.13 111 eP P 07 04 23.4 +3.0
CRQE Cirque 54.69 335 P 07 04 33.7
baz=124
MCARA McCarthy VSAT 55.02 336 P P 07 04 33.5 0.0
MCARA McCarthy VSAT 55.02 336 P 07 04 36.3
baz=124
BMRM Bremner River 55.43 335 P 07 04 38.7
baz=122
BCAR Beaver Creek A 55.55 338 P P 07 04 35.7 -1.6
L27K Beaver Creek, 55.56 338 P P 07 04 36.0 -1.4
L27K IAmb IAmb 07 04 40.5
comp=Z,11nm,1.4s
L27K Beaver Creek, 55.56 338 P 07 04 39.3
baz=126
AQDB Aquidauana 55.69 129 eP P 07 04 42.5 +3.6
N25K Chitina, Valde 55.78 335 P P 07 04 38.4 -0.7
N25K Chitina, Valde 55.78 335 P 07 04 41.7
baz=123
ARAG Araguaiana, MT 56.00 122 eP P 07 04 44.2 +3.0
MT05 Renca 56.02 152 P P 07 04 40.4 -0.6
K27K Chicken 56.24 339 P P 07 04 43.4 +1.3
K27K Chicken 56.24 339 P 07 04 44.4
baz=127,SNR=20
KLU Klutina 56.25 335 P P 07 04 42.8 +0.4
KLU Klutina 56.25 335 P 07 04 44.2
baz=121
SMTB Santa Maria do 56.28 113 eP P 07 04 43.4 +0.1
EGAK Eagle 56.38 340 P P 07 04 43.1 -0.1
EGAK IAmb IAmb 07 04 45.2
comp=Z,8.6nm,0.8s
EGAK Eagle 56.38 340 P 07 04 44.2
baz=128,SNR=10
INK Inuvik 56.62 345 P P 07 04 45.6 +0.8
comp=Z,8.6nm,0.8s,baz=123,slow=6.9,SNR=34
INK Inuvik 56.62 345 P P 07 04 44.8 0.0
INK IAmb IAmb 07 04 46.7
comp=Z,12nm,0.9s
DOT Dot Lake 56.72 338 P P 07 04 45.1 -0.6
DOT IAmb IAmb 07 04 48.7
comp=Z,20nm,1.2s
PAX Paxson 56.87 337 P 07 04 48.4
baz=122,SNR=6.8
SCRK Sand Creek 56.88 338 P 07 04 48.6
baz=125,SNR=12

PEXB	Peixe	57.14 116	*e*P		P	07 04 51.8	+2.5
WAT6	Susitna Watana	57.55 335	P			07 04 52.9	
	baz=120,SNR=8.3						
CNPM	China Poot	57.62 331	P		P	07 04 50.3	-1.7
CNPM			IAmb	IAmb		07 05 10.4	
	comp=Z,8.3nm,1.0s						
GHO	Glory Hole Cre	57.63 334	P		P	07 04 53.6	+1.5
PMR	Palmer	57.63 334	P			07 04 53.6	
	baz=118						
WAT2	Susitna Watana	58.08 336	P			07 04 56.6	
	baz=119,SNR=24						
HDA	Harding Lake	58.20 338	P			07 04 57.2	
	baz=122,SNR=10						
HDA			P			07 04 57.2	
	baz=122,SNR=10						
SUA	Susitna One	58.25 334	P		P	07 04 56.4	-0.2
SUA	Susitna One	58.25 334	P			07 04 58.3	
	baz=116,SNR=7.1						
CPUP	Villa Florida	58.27 136	P		P	07 04 58.8	+1.8
	comp=Z,2.6nm,1.0s,baz=338,slow=9.0,SNR=4.0						
CPUP	Villa Florida	58.27 136	*e*P		P	07 04 58.7	+1.6
PRP	Porcupine Dome	58.31 339	P		P	07 04 57.9	+1.0
PRP	Porcupine Dome	58.31 339	P			07 04 58.4	
	baz=124						
IL31		58.38 338	P		P	07 04 58.1	+0.9
IL31			IAmb	IAmb		07 04 59.6	
	comp=Z,18nm,1.1s						
ILAR	Eielson Array	58.38 338	P		P	07 04 58.0	+0.8
	comp=Z,6.5nm,1.0s,baz=137,slow=5.1,SNR=46						
ILAR			LR	LR		07 33 14.4	
	comp=Z,200nm,18.1s,baz=142,slow=39						
ILAR	Eielson Array	58.38 338	P		P	07 04 57.8	+0.5
RND	Reindeer	58.40 336	P		P	07 04 59.2	+1.6
CUT	Chulitna	58.49 335	P		P	07 04 58.9	+0.8
CUT	Chulitna	58.49 335	P			07 04 59.7	
	baz=117,SNR=7.1						
RES	Resolute Bay	58.54 1	P		P	07 04 57.9	-0.3
	comp=Z,2.0nm,0.7s,baz=191,slow=9.9,SNR=11						
RES	Resolute Bay	58.54 1	P		P	07 04 58.4	+0.2
MCK	McKinley	58.60 336	P		P	07 04 57.5	-1.4
MCK			IAmb	IAmb		07 05 01.2	
	comp=Z,13nm,1.0s						
MCK	McKinley	58.60 336	P			07 05 00.3	
	baz=119,SNR=7.8						
CCB	Clear Creek Bu	58.64 338	P		P	07 04 58.9	-0.2
WRH	Wood River Hil	58.66 337	P		P	07 04 59.1	-0.1
WRH			IAmb	IAmb		07 05 03.2	
	comp=Z,7.9nm,1.1s						
RSO	Redoubt South	58.70 332	P		P	07 05 00.1	+0.3
POKR	Poker Plat Res	58.76 338	P		P	07 04 59.3	-0.7
POKR	Poker Plat Res	58.76 338	P			07 05 00.3	
	baz=122						
COLA	College	58.78 338	P		P	07 04 60.0	0.0
COLA	College	58.78 338	P			07 05 01.7	
	baz=121						
TCOL	CIGO, UAF Yank	58.78 338	P		P	07 04 60.0	-0.1
TCOL			IAmb	IAmb		07 05 02.0	
	comp=Z,9.2nm,0.8s						
TCOL	CIGO, UAF Yank	58.78 338	P			07 05 01.6	
	baz=121						
FYU	Fort Yukon	58.81 340	P		P	07 04 59.8	-0.5
FYU			IAmb	IAmb		07 05 12.0	
	comp=Z,16nm,1.4s						
SKT	Skwentna	58.82 334	P		P	07 04 59.6	-0.9
SKT			IAmb	IAmb		07 05 02.7	
	comp=Z,11nm,0.9s						
SKT	Skwentna	58.82 334	P			07 05 01.9	
	baz=116,SNR=7.9						
MDM	Murphy Dome	58.96 338	P		P	07 05 01.0	-0.4
TRF	Thorofare Moun	58.99 336	P		P	07 05 02.1	+0.3
TRF	Thorofare Moun	58.99 336	P			07 05 02.9	
	baz=118,SNR=16						
BWN	Browne	59.02 337	P		P	07 05 00.7	-1.1
NEA2	Nenana	59.08 337	P		P	07 05 02.3	+0.2
NEA2	Nenana	59.08 337	P			07 05 03.7	
	baz=120						
BDFB	Brasilia	59.10 120	P		P	07 05 02.4	-0.7
	comp=Z,1.3nm,0.6s,baz=318,slow=11,SNR=2.6						
BMAR	Burnt Mountain	59.11 341	P		P	07 05 03.0	+0.6
KTH	Kantishna Hill	59.29 336	P		P	07 05 03.2	-0.5
KTH			IAmb	IAmb		07 05 05.6	
	comp=Z,8.8nm,0.8s						
ITRB	Iturama	59.33 125	*e*P		P	07 05 07.9	+3.3
I23K	Minto, Yukon-K	59.47 338	P		P	07 05 05.3	+0.5
I23K			IAmb	IAmb		07 05 06.8	
	comp=Z,15nm,0.9s						
I23K	Minto, Yukon-K	59.47 338	P			07 05 06.3	
	baz=120,SNR=13						
SFJD	Kangerlussuaq	59.49 20	*i* P		P	07 05 05.4	+0.4
SFJD			IAmb	IAmb		07 05 06.0	
	comp=Z,6.9nm,0.8s						
SFJD	Kangerlussuaq	59.49 20	P		P	07 05 04.1	-0.8
SFJD			IAmb	IAmb		07 05 06.4	
	comp=Z,13nm,0.9s						
PPLA	Purkeypile	59.50 335	P		P	07 05 05.8	+0.6
PPLA	Purkeypile	59.50 335	P			07 05 06.3	
	baz=116,SNR=5.9						
BPAW	Bear Paw Mtn.	59.57 336	P		P	07 05 05.4	-0.2
BPAW			IAmb	IAmb		07 05 06.9	
	comp=Z,9.4nm,1.0s						
BPAW	Bear Paw Mtn.	59.57 336	P			07 05 06.3	
	baz=118,SNR=7.6						
PCMB	Pacaembu	59.70 128	*e*P		P	07 05 10.6	+3.5
MLY	Manley	59.92 337	P		P	07 05 08.3	+0.2
MLY			IAmb	IAmb		07 05 10.3	
	comp=Z,13nm,1.0s						
MLY	Manley	59.92 337	P			07 05 09.4	
	baz=118,SNR=18						
SDBA	SAO DESIDERIO	60.22 115	*e*P		P	07 05 13.5	+2.6
SVW2	Sparrevohn	60.23 332	P		P	07 05 10.1	0.0
SVW2			IAmb	IAmb		07 05 11.7	
	comp=Z,13nm,1.0s						
PPT	Papeete	60.40 238	LR	LR		07 26 44.8	
	comp=Z,88nm,18.0s,baz=54,slow=31						
COLD	Coldfoot	60.82 340	P		P	07 05 14.7	+0.6
COLD			IAmb	IAmb		07 05 16.9	
	comp=Z,15nm,1.5s						
COLD	Coldfoot	60.82 340	P			07 05 15.7	
	baz=120,SNR=6.9						
PTGB	Pitanga	60.92 131	*e*P		P	07 05 19.5	+4.0
ITQB	Itaqui	60.97 138	*e*P		P	07 05 19.8	+4.1
TOLK	Toolik Lake Re	61.35 341	P		P	07 05 18.9	+1.2
TOLK	Toolik Lake Re	61.35 341	IAmb	IAmb		07 05 19.4	
	comp=Z,7.2nm,0.9s						
TOLK	Toolik Lake Re	61.35 341	P			07 05 18.9	
	baz=121,SNR=6.8						
IMAR	Indian Mountai	61.48 338	P		P	07 05 18.4	-0.1
BB19B	Bebedouro	61.51 125	*e*P		P	07 05 22.4	+2.9
JANB	Januaria	61.94 117	*e*P		P	07 05 22.7	+3.2
FRTB	Fartura	61.98 128	*e*P		P	07 05 25.8	+3.2
PLCA	Paso Flores	62.34 156	P		P	07 05 24.5	-0.2
	comp=Z,4.2nm,1.1s,baz=333,slow=10,SNR=2.9						
PLCA			LR	LR		07 25 57.6	
	comp=Z,74nm,20.6s,baz=344,slow=30						
PLCA	Paso Flores	62.34 156	*e*P		P	07 05 30.6	+5.9
ITAB	Concordia	62.41 133	*e*P		P	07 05 29.3	+3.9
CPSB	Cacapava Do Su	63.52 137	*e*P		P	07 05 37.0	+4.3
TIJ01	Guaruva-PR	63.52 130	*e*P		P	07 05 37.1	+4.2
NBMA	Muriti-CE	63.66 107	*e*P		P	07 05 35.4	+1.4
VAO	Valinhos	63.77 126	*e*P		P	07 05 37.7	+3.1
EUNU	Eureka	64.14 2	P		P	07 05 35.8	-0.3
PLTB	Pedras Altas	64.30 138	*e*P		P	07 05 41.5	+3.7
BSCB	Bom Sucesso	64.45 123	*e*P		P	07 05 41.9	+2.8
A21K	Barrow	64.77 342	P		P	07 05 39.2	-1.1
A21K			IAmb	IAmb		07 05 42.0	
	comp=Z,11nm,0.9s						
A21K	Barrow	64.77 342	P			07 05 41.2	
	baz=115						
NBTA	Tacaratu-PE	64.97 108	*e*P		P	07 05 43.6	+1.0
GDU01	Guandu, BA	65.46 114	*e*P		P	07 05 46.3	+0.6
ANM	Nome	65.57 334	P		P	07 05 46.1	+0.4
RDOG	Red Dog Mine	65.58 338	P		P	07 05 44.9	-0.8
RDOG			IAmb	IAmb		07 05 46.9	
	comp=Z,13nm,1.3s						
NEEM	North Greenlan	65.65 10	*i* P		P	07 05 46.6	+0.3
NEEM			IAmb	IAmb		07 05 47.1	
	comp=Z,19nm,0.9s						
RCBR	Riachuelo	65.76 104	P		P	07 05 45.2	-2.5
SUMG	Summit	65.90 17	*i* P		P	07 05 48.2	+0.1
SUMG			IAmb	IAmb		07 05 49.5	
	comp=Z,13nm,0.8s						
SUMG	Summit	65.90 17	P		P	07 05 47.3	-0.8
NBAN	Anadia - AL	66.81 108	*e*P		P	07 05 55.9	+1.5
TNA	Tin City	66.85 335	P		P	07 05 53.6	-0.2
TNA			IAmb	IAmb		07 05 56.2	
	comp=Z,11nm,1.1s						
TNA	Tin City	66.85 335	P			07 05 54.9	
	baz=102,SNR=5.2						
CAM01	Campos-RJ	67.38 122	*e*P		P	07 05 59.1	+1.3
DAG	Danmarks Havn	72.04 14	*i* P		P	07 06 25.5	-0.2
DAG			IAmb	IAmb		07 06 26.3	
	comp=Z,27nm,1.6s						
NOR	Nord	72.90 9	*i* P		P	07 06 31.0	+0.2
NOR			IAmb	IAmb		07 06 32.2	
	comp=Z,36nm,1.7s						
BILL	Bilibino	77.03 337	P		P	07 06 53.4	-1.5
BILL			IAmb	IAmb		07 06 57.1	
	comp=Z,26nm,1.5s						
SPITS	Spitsbergen Ar	79.19 11	P		P	07 07 07.0	+0.3
	comp=Z,10nm,1.0s,baz=234,slow=6.9,SNR=1.8						
ESDC	Sonseca Array	83.32 51	P		P	07 07 28.7	-0.7
	comp=Z,2.8nm,1.2s,baz=295,slow=5.3,SNR=9.6						
ESDC			LR	LR		07 42 11.7	
	comp=Z,50nm,19.2s,baz=320,slow=34						
ESDC	Sonseca Array	83.32 51	P		P	07 07 26.7	-2.8
SEY	Seymchan	84.08 334	P		P	07 07 32.8	0.0
	comp=Z,1.8nm,0.7s,baz=93,slow=4.7,SNR=8.8						
PET	Petropavlovsk	84.68 324	P		P	07 07 35.9	-0.1
PETK	Petropavlovsk-	85.19 324	LR	LR		07 45 43.8	
	comp=Z,56nm,18.8s,baz=68,slow=36						
NOA	NORSAR Array B	85.20 27	P		P	07 07 38.4	-0.1
	comp=Z,1.8nm,0.8s,baz=301,slow=5.0,SNR=7.2						
NOA			LR	LR		07 47 38.2	
	comp=Z,14nm,19.1s,baz=275,slow=37						
ARCES	ARCESS Array B	85.99 17	P		P	07 07 41.3	-1.0
	comp=Z,1.8nm,0.8s,baz=292,slow=7.4,SNR=2.5						
ARCES			LR	LR		07 50 41.7	
	comp=Z,42nm,18.3s,baz=350,slow=39						
ARCES	ARCESS Array B	85.99 17	P		P	07 07 41.7	-0.5
MA2	Magadan	86.20 331	P		P	07 07 43.8	+0.3
	comp=Z,2.4nm,0.5s,baz=120,slow=8.2,SNR=4.1						
ASCN	Ascension	86.70 99	P		P	07 07 44.7	-2.1
TIXI	Tiksi	86.73 346	P		P	07 07 45.6	-0.2
	comp=Z,1.5nm,0.8s,baz=34,slow=5.2,SNR=6.0						
TIXI	Tiksi	86.73 346	P		P	07 07 45.6	-0.2
TIXI			IAmb	IAmb		07 07 53.3	
	comp=Z,9.2nm,1.4s						
FINES	FINESS Array B	91.12 23	LR	LR		07 51 04.4	
	comp=Z,42nm,20.0s,baz=2.0,slow=37						
NRIK	Noril'sk	94.59 358	LR	LR		07 54 55.4	
	comp=Z,50nm,18.2s,baz=56,slow=38						
KLMR	Klimovskoe	96.23 19	*e*P		P	07 08 26.0	-4.3
KLMR			AMP			07 08 38.2	
	comp=Z,9.0nm,1.3s						
AKASG	Malin Array Be	99.25 31	LR	LR		07 58 27.9	
	comp=Z,22nm,18.2s,baz=310,slow=38						
STKA	Stephens Creek	123.51 242	PKP		PKiKP	07 14 01.8	+1.4
	comp=Z,1.8nm,0.7s,baz=54,slow=5.4,SNR=3.7						
WRA	Warramunga Arr	129.70 257	PKP		PKPdf	07 14 11.2	-1.1
	comp=Z,0.6nm,0.8s,baz=314,slow=22,SNR=3.9						
ASAR	Alice Springs	130.31 253	PKP		PKPdf	07 14 12.6	-0.9
	comp=Z,0.8nm,1.1s,baz=223,slow=38,SNR=2.8						
CMAR	Chiang Mai Arr	141.48 333	PKP		PKPdf	07 14 33.3	-1.1
	comp=Z,1.0nm,0.3s,baz=34,slow=48,SNR=1.3						

*IDC **05** 07:23:47.2±1.6, 12°.96N×119°.40E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.1/38, mbtmp3.2/3, Error ellipse: s-maj=33.7km s-min=25.3km az=104.0*

ISC 05 07:23:44.5±2.8, **14°.89N**±0°.07×**122°.7E**±0°.1, **h12**km±15km, **n8**, σ1°31/13, **mb3.0**/3, **4C**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GQP	Guinayangan	1.02	196	*i*P		*i*	Pn	07 24 06.0	+1.3
GQP						*i*	S	07 24 20.0	+0.9
LQP	Lukban	1.40	236	*i*P		*e*	Pg	07 24 11.1	-0.3
LQP						*e*	S	07 24 30.4	+0.8
TGY	Tagaytay City	1.91	246	Pn			Pg	07 24 20.6	-0.6
	102nm,0.3s,baz=259,slow=16,SNR=4.9								
TGY							Sn	07 24 46.2	+0.1
	208nm,0.3s,baz=193,slow=23,SNR=19								
PGP	Puerto Galera	2.21	232	*i*P		*e*	Pb	07 24 24.5	-0.1
PGP						*i*	S	07 24 50.9	-1.1
BCP	Baguio City	2.55	307	*i*P			Pn	07 24 27.1	+1.1
BCP						*i*	S	07 24 56.2	-0.8
WRA	Warramunga Arr	36.45	161	P			P	07 30 46.9	-2.7
	0.2nm,0.7s,baz=336,slow=10.0,SNR=2.5								
ASAR	Alice Springs	39.85	164	P			P	07 31 18.1	-0.2
	0.2nm,0.7s,baz=340,slow=8.1,SNR=2.3								
MKAR	Makanchi Array	46.28	322	P			P	07 32 11.2	+1.2
	0.3nm,0.7s,baz=130,slow=7.8,SNR=3.7								

IDC 05 07:36:06.0±16.0, **19°.96S**×**66°.37E**, **h0km**, **mb3.6**/5, **mb1 3.8**/5, **mb1mx3.5**/31, **mbtmp3.6**/5, **Error ellipse: s-maj=553.1km s-min=34.6km az=56.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.60	27	T		T	T	07 53 34.5	
	baz=204								
H08S2	Diego Garcia H	13.61	27	T		T	T	07 53 34.2	
	baz=204								
H08S3	Diego Garcia H	13.62	27	T		T	T	07 53 27.8	
	baz=204								
ASAR	Alice Springs	62.29	107	P		P	P	07 46 30.1	-0.4
	0.4nm,0.8s,baz=271,slow=6.1,SNR=12								
WRA	Warramunga Arr	63.45	103	P		P	P	07 46 38.0	-0.2
	0.3nm,0.6s,baz=258,slow=5.9,SNR=6.7								
MKAR	Makanchi Array	67.98	12	P		P	P	07 47 06.0	-0.8
	0.4nm,0.8s,baz=193,slow=2.5,SNR=4.0								
ZALV	Zalesovo Beam	75.30	11	P		P	P	07 47 50.8	+0.2
	0.5nm,0.5s,baz=200,slow=7.7,SNR=2.1								
MJAR	Matsushiro Arr	88.00	50	P		P	P	07 49 00.2	+2.0
	0.4nm,0.5s,baz=245,slow=5.2,SNR=2.1								

IDC 05 07:37:22.5±3.7, **19°.82S**×**67°.12E**, **h0km**, **mb3.5**/5, **mb1 3.6**/5, **mb1mx3.5**/34, **mbtmp3.5**/5, **MS3.9**/2, **Ms1 3.9**/2, **ms1mx3.0**/35, **Error ellipse: s-maj=137.9km s-min=32.8km az=46.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.16	24	T		T	T	07 54 42.3	
	baz=205,slow=75								
H08S2	Diego Garcia H	13.17	24	T		T	T	07 54 53.7	
	baz=205,slow=75								
H08S3	Diego Garcia H	13.19	24	T		T	T	07 54 50.2	
	baz=205,slow=75								
PALK	Pallekele	30.05	28	LR		LR	LR	07 52 42.5	
	comp=Z,74nm,20.6s,baz=321,slow=31								
ASAR	Alice Springs	61.65	107	P		P	P	07 47 42.9	+0.2
	0.5nm,1.0s,baz=248,slow=6.8,SNR=2.2								
WRA	Warramunga Arr	62.79	103	P		P	P	07 47 50.0	-0.4
	0.4nm,1.1s,baz=261,slow=5.9,SNR=2.4								
BRTR	Keskin Array B	66.98	332	P		P	P	07 48 17.1	-0.1
	0.3nm,0.5s,baz=152,slow=7.8,SNR=2.5								
MKAR	Makanchi Array	67.70	11	P		P	P	07 48 20.0	-1.5
	0.1nm,0.4s,baz=193,slow=4.4,SNR=1.9								
ZALV	Zalesovo Beam	75.03	11	P		P	P	07 49 07.4	+1.8
	0.5nm,0.4s,baz=205,slow=6.4,SNR=1.9								
SONM	Songino Array	75.99	26	P		P	P	07 49 15.1	+3.5
	0.2nm,0.3s,baz=202,slow=7.2,SNR=2.4								
JNU	Nakatsue	80.44	50	LR		LR	LR	08 23 47.7	
	comp=Z,182nm,19.6s,baz=265,slow=35								

IDC 05 07:39:01.7±1.6, **20°.70S**×**66°.41E**, **h0km**, **mb3.7**/7, **mb1 3.7**/7, **mb1mx3.6**/36, **mbtmp3.7**/7, **Error ellipse: s-maj=56.3km s-min=27.1km az=36.0, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	14.24	25	T		T	T	07 56 24.0	
	baz=205								
H08S2	Diego Garcia H	14.25	25	T		T	T	07 56 22.3	
	baz=205								
H08S3	Diego Garcia H	14.26	25	T		T	T	07 56 23.2	
	baz=205								
ASAR	Alice Springs	62.04	106	P		P	P	07 49 24.4	0.0
	0.4nm,0.6s,baz=264,slow=5.9,SNR=6.9								
WRA	Warramunga Arr	63.25	102	P		P	P	07 49 32.5	0.0
	0.3nm,0.6s,baz=261,slow=5.7,SNR=4.5								
BRTR	Keskin Array B	67.45	333	P		P	P	07 49 59.9	+0.5
	0.6nm,0.7s,baz=160,slow=10.0,SNR=2.0								
MKAR	Makanchi Array	68.69	12	P		P	P	07 50 06.7	-0.3
	0.5nm,0.8s,baz=201,slow=6.5,SNR=4.8								
TORD	Torodi Ar. Bea	71.94	292	P		P	P	07 50 27.3	-0.1
	0.4nm,0.7s,baz=189,slow=2.3,SNR=2.0								
ZALV	Zalesovo Beam	76.01	11	P		P	P	07 50 50.0	-0.4
	1.2nm,0.6s,baz=188,slow=7.3,SNR=5.8								
SONM	Songino Array	77.07	26	P		P	P	07 50 57.4	+0.7
	0.1nm,0.3s,baz=235,slow=5.2,SNR=3.8								

*IDC **05** 07:42:28.6±0.9, 19°.79S×66°.60E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.9/36, mbtmp4.0/10, MS3.5/2, Ms1 3.5/2, ms1mx3.0/25, Error ellipse: s-maj=32.6km s-min=21.9km az=51.0*

ISC 05 07:42:30.3±0.9, **19°.8S**±0°.2×**66°.5E**±0°.2, **h10**km, **n15**, σ1°16/10, **mb4.0**/10, **Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.35	26	T		T	T	07 59 59.2	
	baz=205,slow=75,SNR=17								
H08S2	Diego Garcia H	13.36	26	T		T	T	07 59 48.5	
	baz=205,slow=75,SNR=11								
H08S3	Diego Garcia H	13.37	26	T		T	T	07 59 59.9	
	baz=205,slow=75,SNR=20								
OPO	Ambohidratompo	18.32	270	LR		LR	LR	07 52 36.5	
	comp=Z,200nm,20.1s,baz=232,slow=33								
ASAR	Alice Springs	62.20	107	P		P	P	07 52 51.1	-1.4
	1.7nm,0.9s,baz=260,slow=6.3,SNR=16								
WRA	Warramunga Arr	63.34	103	P		P	P	07 52 59.3	-0.9
	2.8nm,1.0s,baz=262,slow=5.9,SNR=13								
BRTR	Keskin Array B	66.68	333	P		P	P	07 53 20.8	-0.7
	0.4nm,0.4s,baz=111,slow=7.0,SNR=2.7								
MKAR	Makanchi Array	67.75	12	P		P	P	07 53 28.9	+0.8
	0.9nm,0.9s,baz=186,slow=4.9,SNR=7.2								
QSPA	South Pole Qui	70.34	180	P		P	P	07 53 44.9	+0.7
	5.6nm,1.1s,baz=238,slow=7.8,SNR=6.0								
TORD	Torodi Ar. Bea	71.69	292	P		P	P	07 53 53.5	+0.5
	1.3nm,1.2s,baz=66,slow=3.7,SNR=4.2								
ZALV	Zalesovo Beam	75.08	11	P		P	P	07 54 12.2	+0.2
	0.6nm,0.4s,baz=214,slow=4.7,SNR=4.6								
SONM	Songino Array	76.19	26	P		P	P	07 54 20.0	+1.2
	0.6nm,0.8s,baz=221,slow=5.9,SNR=4.2								
AKASG	Malin Array Be	77.47	337	P		P	P	07 54 24.1	-1.7
	0.3nm,0.4s,baz=138,slow=4.5,SNR=1.3								
GERES	GERESS Array B	82.90	328	LR		LR	LR	08 30 58.7	
	comp=Z,17nm,21.0s,baz=96,slow=35								
MJAR	Matsushiro Arr	87.75	50	P		P	P	07 55 20.5	+0.8
	0.7nm,0.4s,baz=238,slow=7.0,SNR=2.7								

*IDC **05** 07:43:55.3±0.9, 20°.05S×66°.26E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/36, mbtmp3.8/8, MS3.8/3, Ms1 3.8/3, ms1mx3.2/24, Error ellipse: s-maj=35.4km s-min=22.0km az=48.0*

*GCMT **05** 07:44:00.0±0.3, 19°.87S±0°.04×66°.15E±0°.02, h24km, MW5.0/92, Moment Tensor Solution. s23,c24; s92,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=3.80±.20; $M_{\theta\theta}$1.32±.14; $M_{\phi\phi}$2.48±.13; $M_{r\theta}$0.52±.20; $M_{\theta\phi}$-0.94±.08; $M_{\phi r}$0.25±.17; Best double couple: $M_0$3.43600×10^{16} NP1:φs158.00000°, δ45.00000°, λ-80.00000°. NP2: φs324.00000°, δ46.00000°, λ-100.00000°. Principal axes: T 3.0020, Plg0.0000°, Azm61.0000°; N 0.8680, Plg7.0000°, Azm331.0000°; P -3.8700, Plg83.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 05 07:43:56.9±0.9, **20°.1S**±0°.2×**66°.3E**±0°.2, **h10**km, **n12**, σ0°36/8, **mb4.0**/8, **MS3.9**/3, **Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.73	27	T		T	T	08 01 16.8	
	baz=204,slow=75,SNR=8.1								
H08S2	Diego Garcia H	13.74	27	T		T	T	08 01 17.2	
	baz=204,slow=75,SNR=5.9								
H08S3	Diego Garcia H	13.75	27	T		T	T	08 01 16.2	
	baz=204,slow=75,SNR=7.3								
GEYT	Alibeck	58.18	352	LR		LR	LR	08 15 48.3	
	comp=Z,64nm,21.2s,baz=270,slow=33								
ASAR	Alice Springs	62.37	107	P		P	P	07 54 19.8	-0.5
	0.9nm,0.6s,baz=268,slow=5.9,SNR=15								
WRA	Warramunga Arr	63.54	103	P		P	P	07 54 28.2	+0.1
	0.8nm,0.7s,baz=260,slow=5.7,SNR=11								
BRTR	Keskin Array B	66.81	333	P		P	P	07 54 49.0	0.0
	0.9nm,0.7s,baz=168,slow=7.6,SNR=5.2								
MKAR	Makanchi Array	68.09	12	P		P	P	07 54 56.6	-0.2
	0.7nm,0.8s,baz=165,slow=5.0,SNR=4.8								
MKAR						LR	LR	08 22 25.5	
	comp=Z,74nm,20.6s,baz=220,slow=34								
QSPA	South Pole Qui	70.06	180	P		P	P	07 55 09.3	+0.2
	0.9nm,0.7s,baz=286,slow=3.5,SNR=6.1								
TORD	Torodi Ar. Bea	71.55	292	P		P	P	07 55 18.5	-0.2
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.2								
SONM	Songino Array	76.57	27	P		P	P	07 55 48.0	+0.4
	0.4nm,0.6s,baz=241,slow=4.9,SNR=4.0								
SONM						LR	LR	08 28 35.9	
	comp=Z,96nm,21.2s,baz=172,slow=35								
AKASG	Malin Array Be	77.63	337	P		P	P	07 55 53.4	+0.1
	0.8nm,0.6s,baz=148,slow=4.7,SNR=6.5								

*IDC **05** 07:59:37.0±2.1, 9°.05S×123°.78E, h0km, mb3.4/1, mb1 3.9/3, mb1mx3.4/34, mbtmp3.7/3, ML3.9/2, Error ellipse: s-maj=219.0km s-min=32.7km az=56.0*

*DJA **05** 07:59:49.9±0.4, 9°.5±4°×12°.4E±°, h78km±7km, M4.3/9, mb4.6/5, mb5.1/4, MLv4.1/9, Mw(mB)4.4/4*

**ISC 05 07:59:

JYAK	**Yakushimahirau**	**2.27**	**345**	P	**Pn**	**08 07 05.1**	**-0.7**
JYAK				*eS*	**Sn**	**08 07 30.9**	**-1.7**
JMTN	**Minamitane**	**2.37**	**354**	P	**Pn**	**08 07 06.2**	**-0.9**
JMTN				*eS*	**Sn**	**08 07 33.7**	**-1.2**
JOKE	**Okinoerabujima**	**2.40**	**254**	P	**Pn**	**08 07 06.5**	**-1.1**
JOKE				*eS*	**Sn**	**08 07 35.1**	**-0.7**
JKC	**Kuchinoerabu**	**2.57**	**341**	P	**Pn**	**08 07 09.1**	**-0.7**
JKC				*eS*	**Sn**	**08 07 38.5**	**-1.3**
JTN	**Tanegashima 3**	**2.62**	**356**	P	**Pn**	**08 07 09.7**	**-0.8**
JTN				*eS*	**Sn**	**08 07 39.4**	**-1.7**
JYRO	**Yoronjima**	**2.62**	**248**	P	**Pn**	**08 07 09.5**	**-1.0**
JYRO				*eS*	**Sn**	**08 07 39.6**	**-1.5**
JOW	**Kunigami**	**2.84**	**246**	P	**Pn**	**08 07 12.6**	**-1.0**
JIH	**Iheya**	**3.02**	**251**	P	**Pn**	**08 07 14.8**	**-1.2**
JIH				*eS*	**Sn**	**08 07 49.5**	**-1.4**
JNTH	**Nagotoyohara**	**3.19**	**242**	P	**Pn**	**08 07 17.2**	**-1.1**
JNTH				*eS*	**Sn**	**08 07 52.8**	**-2.3**
JNAR	**Kushima--Naru**	**3.48**	**1**	*eS*	**Sn**	**08 08 01.1**	**-1.3**
JSJ	**Shimokoshiki**	**3.85**	**341**	P	**Pn**	**08 07 25.9**	**-1.5**
JSJ				*eS*	**Sn**	**08 08 09.6**	**-1.8**
JTZ	**Takazaki**	**3.85**	**359**	P	**Pn**	**08 07 27.2**	**-0.4**
JTZ				*eS*	**Sn**	**08 08 10.7**	**-0.9**
WRA	**Warramunga Arr**	**47.79**	**176**	P	**P**	**08 15 06.1**	**+1.3**
	0.4nm,0.8s,baz=355,slow=8.6,SNR=5.4						
ASAR	**Alice Springs**	**51.47**	**177**	P	**P**	**08 15 35.4**	**+2.6**
	0.4nm,0.7s,baz=10,slow=13,SNR=10						
YKA	**Yellowknife Ar**	**75.78**	**26**	P	**P**	**08 18 13.7**	**+1.0**
	0.1nm,0.6s,baz=307,slow=5.2,SNR=2.7						

IDC 05 08:08:52.8±335.0, 58.73N×49.88E, h0km, Error ellipse: s-maj=154.5km s-min=65.0km az=141.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**9.58**	**147**	*i*		09 12 10.0	
	baz=343,slow=336,SNR=0.9						
I37NO	**I37NO**	**16.99**	**320**	*i*		09 51 30.0	
	baz=113,slow=320,SNR=0.9						
I34MN	**SONGINO INFRAS**	**34.51**	**83**	*i*		11 37 20.0	
	baz=310,slow=336,SNR=0.8						
I18DK	**QAANAAQ INFRAS**	**39.01**	**342**	*i*		12 07 50.0	
	baz=48,slow=338,SNR=1.0						
I53US	**FAIRBANKS INFR**	**55.99**	**9**	*i*		13 54 10.0	
	baz=354,slow=335,SNR=0.9						

IDC 05 08:24:39.1±25.0, 15.32S×175.01W, h237km±226km, mb3.5/3, mb1 3.8/3, mb1mx3.2/30, mbtmp4.1/3, Error ellipse: s-maj=317.7km s-min=51.8km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.35**	**257**	P	P	08 32 57.3	0.0
	0.8nm,0.6s,baz=91,slow=7.1,SNR=16						
ASAR	**Alice Springs**	**48.66**	**252**	P	P	08 32 59.5	-0.2
	4.1nm,0.4s,baz=89,slow=7.8,SNR=105						
ILAR	**Eielson Array**	**82.67**	**12**	P	P	08 36 35.6	0.0
	0.4nm,0.5s,baz=218,slow=5.3,SNR=8.3						
BRTR	**Keskin Array B**	**145.10**	**320**	PKPbc	PKPdf	08 43 47.9	-0.8
	0.7nm,0.8s,baz=49,slow=4.4,SNR=2.5						

*IDC **05** 08:32:47.1±0.7, 40.93S×91.01W, h0km, mb3.9/7, mb1 4.2/7, mb1mx4.0/29, mbtmp3.9/7, Error ellipse: s-maj=43.7km s-min=21.2km az=95.0*
*NEIC **05** 08:32:48.3±1.0, 41.05S±0.1×90.8W±0.2, h10km±1km, mb4.7/37, Error ellipse: s-maj=23.9km s-min=18.6km az=282.0*

ISC 05 08:32:48.4±0.6, 41.04S±0.09×90.8W±0.1, h10km, n66, σ0s69/56, mb4.6/26, MS4.7/4, 1C, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**11.86**	**56**	T	T	08 48 38.4	
	baz=230,slow=73,SNR=70						
H03S1	**Juan Fernandez**	**11.87**	**57**	T	T	08 48 41.2	
	baz=230,slow=73,SNR=70						
H03S3	**Juan Fernandez**	**11.88**	**56**	T	T	08 48 39.2	
	baz=230,slow=73,SNR=73						
H03N3	**Juan Fernandez**	**12.11**	**55**	T	T	08 48 53.6	
	baz=231,slow=71,SNR=85						
H03N2	**Juan Fernandez**	**12.12**	**55**	T	T	08 48 53.3	
	baz=231,slow=71,SNR=92						
H03N1	**Juan Fernandez**	**12.13**	**55**	T	T	08 48 53.9	
	baz=231,slow=71,SNR=116						
GO07	**Milladeo Hill,**	**12.90**	**105**	Pn	**Pn**	**08 35 51.2**	**-0.5**
LL01	**San Ignacio de**	**13.81**	**102**	Pn	**Pn**	**08 36 04.3**	**+0.2**
BI02	**San Fabin de**	**15.82**	**80**	Pn	**Pn**	**08 36 30.6**	**-0.8**
PMSA	**Palmer Station**	**28.31**	**156**	P	**P**	**08 38 41.8**	**0.0**
SIV	**San Ignacio**	**35.82**	**55**	P	**P**	**08 39 49.2**	**+1.0**
	0.4nm,0.8s,baz=262,slow=8.1,SNR=1.8						
SAML	**Samuel**	**40.25**	**45**	P	**P**	**08 40 25.7**	**+0.2**
RKT	**Rikitea**	**40.99**	**282**	*eLR*	LR	08 52 30.5	
	comp=Z,874nm,25.5s						
OTAV	**Otavalo**	**42.59**	**18**	P	**P**	**08 40 44.9**	**-0.3**
BDFB	**Brasilia**	**44.76**	**68**	P	**P**	**08 41 02.1**	**-0.3**
ROSC	**El Rosal**	**48.09**	**22**	P	**P**	**08 41 28.4**	**-0.4**
PTGA	**Pitinga**	**48.87**	**43**	P	**P**	**08 41 35.3**	**+0.9**
PTGA				IAmb	IAmb	08 41 45.6	
	comp=Z,8.6nm,1.3s						
QSPA	**South Pole Qui**	**49.19**	**180**	P	**P**	**08 41 37.7**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=153,slow=1.6,SNR=9.1						
QSPA	**South Pole Qui**	**49.19**	**180**	P	**P**	**08 41 36.3**	**-0.2**
TBI	**Tubuai**	**51.73**	**271**	*eLR*	LR	08 57 29.6	
	comp=Z,1μm,28.0s,baz=125						
SBA	**Scott Base**	**52.79**	**195**	P	**P**	**08 42 03.6**	**+0.4**
SBA				IAmb	IAmb	08 42 27.6	
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**53.89**	**195**	P	**P**	**08 42 11.7**	**+0.5**
	comp=Z,2.4nm,1.2s,baz=94,slow=6.6,SNR=3.8						
TAOE	**Nuku Hiva Isla**	**54.05**	**292**	*eLR*	LR	08 58 34.5	
	comp=Z,701nm,25.9s						
PPT2	**Papeete2**	**55.22**	**277**	*eLR*	LR	08 59 06.1	
	comp=Z,935nm,26.8s						
SYO	**Syowa Base**	**64.31**	**162**	*eP*	**P**	**08 43 21.6**	**-1.9**
MAW	**Mawson**	**69.86**	**170**	P	**P**	**08 43 59.4**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=225,slow=4.3,SNR=3.5						
MAW	**Mawson**	**69.86**	**170**	P	**P**	**08 43 58.7**	**-0.1**
TXAR	**Lajitas Array**	**71.03**	**348**	P	**P**	**08 44 05.5**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=163,slow=9.1,SNR=5.8						
TX31	**Lajitas Ar. Si**	**71.03**	**348**	P	**P**	**08 44 06.3**	**-0.1**
JCT	**Junction City**	**71.65**	**352**	P	**P**	**08 44 10.2**	**+0.1**
435B	**Jarrell**	**71.74**	**354**	P	**P**	**08 44 10.8**	**+0.3**
435B				IAmb	IAmb	08 44 18.6	
	comp=Z,9.6nm,1.2s						
342A	**Flagon Creek P**	**72.07**	**359**	P	**P**	**08 44 13.6**	**+1.1**
HSIG		**72.16**	**342**	P	**P**	**08 44 12.8**	**-0.4**
HSIG				IAmb	IAmb	08 44 25.6	
	comp=Z,7.7nm,1.4s						
WHTX	**Lake Whitney,**	**72.93**	**354**	P	**P**	**08 44 17.7**	**0.0**
WHTX				IAmb	IAmb	08 44 42.0	
	comp=Z,4.4nm,0.7s						
ABTX	**Abilene, Hawle**	**73.75**	**352**	P	**P**	**08 44 23.2**	**+0.7**
ABTX				IAmb	IAmb	08 44 29.8	
	comp=Z,10nm,1.4s						
TUC	**Tucson**	**75.28**	**343**	P	**P**	**08 44 31.9**	**+0.4**
MSTX	**Muleshoe**	**75.45**	**350**	P	**P**	**08 44 32.4**	**-0.1**
MSTX				IAmb	IAmb	08 44 33.2	
	comp=Z,8.0nm,1.1s						
OK030	**Cody Creek RV**	**76.79**	**355**	P	**P**	**08 44 40.4**	**+0.5**
ANMO	**Albuquerque**	**76.97**	**347**	P	**P**	**08 44 40.8**	**-0.4**
QUOK	**Quay**	**77.03**	**355**	P	**P**	**08 44 40.8**	**-0.5**
KAN05	**Bluff City Nor**	**78.04**	**354**	P	**P**	**08 44 47.4**	**+0.5**
WUAZ	**Wupatki**	**78.50**	**343**	P	**P**	**08 44 49.6**	**-0.1**
WUAZ				IAmb	IAmb	08 44 58.9	
	comp=Z,8.0nm,1.4s						
CCM	**Cathedral Cave**	**78.72**	**360**	P	**P**	**08 44 50.7**	**+0.1**
CCM				IAmb	IAmb	08 44 58.0	
	comp=Z,13nm,1.4s						
PV01	**Paradox Valley**	**80.45**	**346**	P	**P**	**08 45 00.6**	**+0.3**
PV01				IAmb	IAmb	08 45 01.7	
	comp=Z,7.5nm,1.2s						
PV13	**Radium Mtn., P**	**80.52**	**346**	P	**P**	**08 44 59.5**	**-1.2**
PV13				IAmb	IAmb	08 45 08.7	
	comp=Z,13nm,1.4s						
PV18	**Skein Mesa, Pa**	**80.62**	**346**	P	**P**	**08 45 00.7**	**-0.5**
PV18				IAmb	IAmb	08 45 08.3	
	comp=Z,11nm,1.5s						
PV15	**Paradox Valley**	**80.64**	**346**	P	**P**	**08 45 01.4**	**0.0**
PV15				IAmb	IAmb	08 45 09.6	
	comp=Z,8.8nm,1.2s						
NLU	**North Lily Min**	**82.91**	**344**	P	**P**	**08 45 13.5**	**+0.2**
NLU				IAmb	IAmb	08 45 15.9	
	comp=Z,10nm,1.4s						
NVAR	**Mina Array Bea**	**82.99**	**339**	P	**P**	**08 45 12.9**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=168,slow=4.6,SNR=2.3						
NVAR	**Mina Array Bea**	**82.99**	**339**	P	**P**	**08 45 11.3**	**-2.4**
KVN	**Kaiserville**	**83.51**	**339**	P	**P**	**08 45 15.9**	**-0.4**
KVN				IAmb	IAmb	08 45 24.0	
	comp=Z,8.6nm,1.5s						
BW06	**Boulder Array**	**85.13**	**346**	P	**P**	**08 45 24.3**	**-0.3**
PD31	**Pinedale Array**	**85.13**	**346**	P	**P**	**08 45 24.3**	**-0.2**
PDAR	**Pinedale Array**	**85.13**	**346**	P	**P**	**08 45 24.3**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=161,slow=5.8,SNR=13						
PDAR	**Pinedale Array**	**85.13**	**346**	P	**P**	**08 45 24.0**	**-0.5**
LOHW	**Long Hollow**	**86.14**	**346**	P	**P**	**08 45 28.9**	**-0.6**
LOHW				IAmb	IAmb	08 45 37.2	
	comp=Z,6.1nm,1.3s						
WVOR	**Wild Horse Val**	**86.82**	**340**	P	**P**	**08 45 31.8**	**-1.0**
WVOR				IAmb	IAmb	08 45 41.7	
	comp=Z,5.9nm,0.9s						
YHH	**Holmes Hill**	**87.32**	**346**	P	**P**	**08 45 35.1**	**-0.3**
YHH				IAmb	IAmb	08 45 43.9	
	comp=Z,8.3nm,1.2s						
BCYI	**Bear Canyon**	**87.36**	**344**	P	**P**	**08 45 34.6**	**-0.9**
YNE	**Yellowstone No**	**87.38**	**346**	P	**P**	**08 45 35.2**	**-0.4**
YNE				IAmb	IAmb	08 45 46.5	
	comp=Z,4.6nm,1.3s						
QLMT	**Earthquake Lak**	**87.47**	**345**	P	**P**	**08 45 36.1**	**+0.1**
KIRV	**Kirov**	**149.50**	**41**	PKPbc	**PKPbc**	**08 52 37.0**	**+0.1**
	comp=Z,5.9nm,0.5s,baz=252,slow=3.9,SNR=3.7						
BELG	**Belogornoye**	**149.73**	**54**	PKPbc	**PKPbc**	**08 52 37.2**	**-0.5**
	comp=Z,10nm,0.8s,baz=60,slow=3.6,SNR=6.5						
KSRS	**Korea Array**	**149.96**	**276**	PKPbc	**PKiKP**	**08 52 39.1**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=102,slow=3.3,SNR=6.1						
KURK	**Kurchatov**	**167.85**	**34**		**PKPab**	**08 54 01.5**	**+0.2**
KURBB	**Kurchatov Arra**	**167.88**	**34**	PKPab	**PKPab**	**08 54 01.5**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=316,slow=5.2,SNR=4.2						

*GCMT **05** 08:34:46.7±0.3, 40.97S±0.03×91.75W±0.02, h12km, MW4.9/91, Moment Tensor Solution. s39,c48; s91,c128; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.01±.09; Mθθ 0.14±.09; Mϕϕ 2.86±.08; Mrθ 1.37±.32; Mθϕ-0.30±.07; Mϕr 0.57±.28; Best double couple: M0 3.25600×10^16 NP1:ϕs335.00000°, δ44.00000°, λ-121.00000°. NP2: ϕs194.00000°, δ53.00000°, λ-64.00000°. Principal axes: T 2.9260, Plg5.0000°, Azm266.0000°; N 0.6520, Plg21.0000°, Azm358.0000°; P -3.5850, Plg69.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **05** 08:34:47.6±0.8, 40.91S×91.24W, h0km, mb4.0/7, mb1 4.2/8, mb1mx4.0/29, mbtmp3.9/8, ML3.2/1, MS4.3/3, Ms1 4.3/3, ms1mx3.8/16 Error ellipse: s-maj=36.6km s-min=22.3km az=96.0*
*NEIC **05** 08:34:48.7±1.2, 41.05S±0.1×91.27W±0.06, h10km±1km, mb4.7/74, Error ellipse: s-maj=19.3km s-min=5.4km az=159.0*

ISC 05 08:34:48.8±0.6, 40.97S±0.09×91.3W±0.1, h10km, n98, σ0s75/91, mb4.7/42, 1C, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.11**	**58**	T	T	08 50 41.4	
	baz=230,slow=73,SNR=265						
H03S1	**Juan Fernandez**	**12.12**	**58**	T	T	08 50 44.7	
	baz=230,slow=73,SNR=267						
H03S3	**Juan Fernandez**	**12.12**	**58**	T	T	08 50 41.7	
	baz=230,slow=73,SNR=377						
H03N3	**Juan Fernandez**	**12.35**	**57**	T	T	08 50 58.4	
	baz=231,slow=72,SNR=58						
H03N2	**Juan Fernandez**	**12.36**	**56**	T	T	08 50 53.7	
	baz=231,slow=72,SNR=1619						
H03N1	**Juan Fernandez**	**12.37**	**57**	T	T	08 50 53.7	
	baz=231,slow=72,SNR=1357						
GO07	**Milladeo Hill,**	**13.26**	**105**	Pn	**Pn**	**08 37 57.0**	**+0.1**
LL01	**San Ignacio de**	**14.16**	**102**	Pn	**Pn**	**08 38 09.9**	**+0.7**
PLCA	**Paso Flores**	**15.67**	**96**	Pn	**Pn**	**08 38 31.1**	**+1.5**
	0.0nm,0.3s,baz=235,slow=12,SNR=5.5						
PLCA				LR	LR	08 43 17.3	
	comp=Z,2μm,19.2s,baz=276,slow=32						
PLCA	**Paso Flores**	**15.67**	**96**		**Pn**	**08 38 27.9**	**-1.8**
BI02	**San Fabin de**	**16.15**	**81**		**Pn**	**08 38 36.9**	**+1.0**
GO09	**Cerro Castillo**	**16.63**	**135**		**P**	**08 38 43.3**	**-1.0**
GO09				IAmb	IAmb	08 38 57.2	
	comp=Z,88nm,1.6s						
RPN	**Rapa Nui**	**20.31**	**307**	LR	LR	08 44 54.6	
	comp=Z,1μm,18.9s,baz=132,slow=30						
PB14	**IPOC Station P**	**23.84**	**53**	P	**P**	**08 40 01.5**	**-1.0**
PB14				IAmb	IAmb	08 40 21.8	
	comp=Z,55nm,1.6s						
PB15	**IPOC Station P**	**25.46**	**53**	P	**P**	**08 40 16.4**	**-0.8**
PB07	**IPOC Station P**	**26.35**	**50**	P	**P**	**08 40 26.5**	**+1.3**
PB07				IAmb	IAmb	08 40 43.6	
	comp=Z,30nm,1.6s						
PB01	**IPOC Station P**	**27.12**	**49**	P	**P**	**08 40 33.5**	**+1.5**
PB01				IAmb	IAmb	08 40 51.7	
	comp=Z,31nm,1.6s						
PSGCX	**Pisagua**	**27.91**	**47**		**P**	**08 40 39.4**	**+0.2**
PSGCX				IAmb	IAmb	08 40 46.0	
	comp=Z,29nm,1.4s						
PB11	**IPOC Station P**	**28.04**	**48**	P	**P**	**08 40 40.1**	**-0.3**
CPUP	**Villa Florida**	**31.57**	**73**	P	**P**	**08 41 11.7**	**+0.2**
LPAZ	**La Paz**	**31.69**	**46**	P	**P**	**08 41 12.3**	**-1.0**
SIV	**San Ignacio**	**36.06**	**55**	P	**P**	**08 41 51.1**	**+0.5**
	comp=Z,1.9nm,1.0s,baz=231,slow=12,SNR=4.4						
HOPE	**Hope Point**	**38.26**	**129**	P	**P**	**08 42 08.7**	**-0.2**
SAML	**Samuel**	**40.44**	**46**	P	**P**	**08 42 28.8**	**+1.4**
OTAV	**Otavalo**	**42.63**	**19**		**P**	**08 42 43.9**	**-1.9**
BDFB	**Brasilia**	**45.05**	**69**	P	**P**	**08 43 04.6**	**-0.5**
ROSC	**El Rosal**	**48.15**	**23**	P	**P**	**08 43 29.9**	**+0.3**
PTGA	**Pitinga**	**49.05**	**43**	P	**P**	**08 43 36.7**	**+0.6**
PTGA				IAmb	IAmb	08 43 44.8	
	comp=Z,20nm,1.6s						
QSPA	**South Pole Qui**	**49.27**	**180**	P	**P**	**08 43 37.3**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=129,slow=4.0,SNR=2.4						
QSPA	**South Pole Qui**	**49.27**	**180**	P	**P**	**08 43 36.9**	**-0.5**
SBA	**Scott Base**	**52.77**	**195**	P	**P**	**08 44 03.6**	**+0.2**
SBA				IAmb	IAmb	08 44 03.9	
	comp=Z,26nm,1.6s						
SDV	**Santo Domingo**	**53.12**	**26**	P	**P**	**08 44 07.1**	**+0.2**
SDV				IAmb	IAmb	08 44 09.1	
	comp=Z,9.9nm,1.1s						
ESPN	**Las Esperanzas**	**53.28**	**8**	P	**P**	**08 44 06.9**	**-0.8**
VNDA	**Vanda**	**53.87**	**195**	P	**P**	**08 44 13.2**	**+1.8**
	comp=Z,3.1nm,1.0s,baz=146,slow=5.4,SNR=5.2						
VNDA				LR	LR	09 01 51.3	
	comp=Z,128nm,21.5s,baz=56,slow=30						
VNDA	**Vanda**	**53.87**	**195**	P	**P**	**08 44 11.1**	**-0.4**
VNDA				IAmb	IAmb	08 44 18.9	
	comp=Z,9.5nm,1.2s						
SYO	**Syowa Base**	**64.49**	**162**	*eP*	**P**	**08 45 25.5**	**+0.5**
HPIG		**68.87**	**346**	P	**P**	**08 45 54.4**	**+0.8**
MAW	**Mawson**	**69.99**	**170**	P	**P**	**08 45 59.3**	**-0.6**
	comp=Z,3.6nm,1.0s,baz=232,slow=12,SNR=2.3						
TX31	**Lajitas Ar. Si**	**70.88**	**349**	P	**P**	**08 46 05.7**	**-0.2**
TX32	**Lajitas Array**	**70.88**	**349**	P	**P**	**08 46 05.7**	**-0.2**
TX32				IAmb	IAmb	08 46 26.5	
	comp=Z,9.1nm,1.5s						
TXAR	**Lajitas Array**	**70.88**	**349**	P	**P**	**08 46 05.7**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=170,slow=9.6,SNR=5.0						
TXAR	**Lajitas Array**	**70.88**	**349**	P	**P**	**08 46 05.4**	**-0.5**
JCT	**Junction City**	**71.53**	**352**	P	**P**	**08 46 10.1**	**+0.4**
JCT				IAmb	IAmb	08 46 27.1	
	comp=Z,5.0nm,1.0s						
435B	**Jarrell**	**71.63**	**354**	P	**P**	**08 46 10.3**	**+0.1**
HSIG		**71.98**	**342**	P	**P**	**08 46 13.1**	**+0.7**
HSIG				IAmb	IAmb	08 46 21.8	
	comp=Z,11nm,1.6s						
344A	**Westbrook Farm**	**72.06**	**0**	P	**P**	**08 46 13.9**	**+1.2**
NATX	**Nacogdoches**	**72.43**	**357**	P	**P**	**08 46 15.5**	**+0.5**
LRAL	**Lakeview Retre**	**73.74**	**4**	P	**P**	**08 46 22.8**	**+0.1**
LRAL				IAmb	IAmb	08 46 30.1	
	comp=Z,12nm,1.4s						
TUC	**Tucson**	**75.11**	**343**	P	**P**	**08 46 31.2**	**+0.3**
TUC				IAmb	IAmb	08 46 52.3	
	comp=Z,6.7nm,1.1s						
214A	**Organ Pipe Nat**	**75.24**	**341**	P	**P**	**08 46 31.9**	**+0.4**
OKCFA	**Oklahoma City**	**76.22**	**355**	P	**P**	**08 46 38.1**	**+1.1**
OKCFA				IAmb	IAmb	08 46 44.4	
	comp=Z,11nm,1.0s						
BCOK	**Bluff Creek, N**	**76.47**	**355**	P	**P**	**08 46 38.9**	**+0.4**
FCAR	**Ozark Folk Cen**	**76.49**	**359**	P	**P**	**08 46 38.4**	**-0.1**
OK029	**Liberty Lake**	**76.60**	**355**	P	**P**	**08 46 40.0**	**+0.8**
109C	**Camp Elliot, M**	**77.26**	**338**	P	**P**	**08 46 42.9**	**0.0**
109C				IAmb	IAmb	08 47 07.8	
	comp=Z,10nm,1.1s						
T35A	**Sooner Cattle**	**77.66**	**356**	P	**P**	**08 46 45.1**	**0.0**
T35A				IAmb	IAmb	08 47 00.1	
	comp=Z,7.3nm,1.1s						
CCM	**Cathedral Cave**	**78.64**	**0**	P	**P**	**08 46 51.4**	**+0.9**
MVCO	**Mesa Verde**	**79.39**	**346**	P	**P**	**08 46 55.1**	**+0.1**
MVCO				IAmb	IAmb	08 47 03.3	
	comp=Z,12nm,1.6s						
KNB	**Kanab**	**80.08**	**343**		**P**	**08 46 58.5**	**-0.2**
PV01	**Paradox Valley**	**80.30**	**346**	P	**P**	**08 46 59.5**	**-0.4**
PV13	**Radium Mtn., P**	**80.37**	**346**	P	**P**	**08 47 00.5**	**+0.3**
PV13				IAmb	IAmb	08 47 21.6	
	comp=Z,11nm,1.4s						
PKCU	**Pink Cliffs**	**80.38**	**343**	P	**P**	**08 46 59.2**	**-1.2**
PKCU				IAmb	IAmb	08 47 08.5	
	comp=Z,8.3nm,1.0s						
PV02	**Paradox Valley**	**80.40**	**346**	P	**P**	**08 47 00.7**	**+0.3**
PV02				IAmb	IAmb	08 47 21.8	
	comp=Z,7.6nm,1.2s						
PV17	**East Wray Mesa**	**80.51**	**346**	P	**P**	**08 47 01.0**	**0.0**
PV17				IAmb	IAmb	08 47 21.4	
	comp=Z,10nm,1.4s						
CCUT	**Cedar City**	**80.72**	**342**	P	**P**	**08 47 02.3**	**+0.2**
Q16A	**Castle Valley**	**81.56**	**344**	P	**P**	**08 47 06.6**	**+0.1**
Q16A				IAmb	IAmb	08 47 23.5	
	comp=Z,13nm,1.6s						
TPH	**Tonopah**	**82.17**	**340**	P	**P**	**08 47 10.0**	**+0.2**
MPU	**Maple Canyon**	**82.71**	**344**	P	**P**	**08 47 12.6**	**+0.1**
MPU				IAmb	IAmb	08 47 21.0	
	comp=Z,11nm,1.3s						
NLU	**North Lily Min**	**82.74**	**344**	P	**P**	**08 47 12.7**	**-0.1**
NLU				IAmb	IAmb	08 47 16.3	
	comp=Z,14nm,1.5s						
NVAR	**Mina Array Bea**	**82.79**	**339**	P	**P**	**08 47 13.1**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=163,slow=6.5,SNR=2.3						
RDMU	**Red Mountain**	**82.85**	**346**	P	**P**	**08 47 13.8**	**+0.5**
RDMU				IAmb	IAmb	08 47 21.3	
	comp=Z,9.1nm,1.3s						
DUG	**Dugway, Tooele**	**83.13**	**344**	P	**P**	**08 47 14.9**	**+0.3**
DUG				IAmb	IAmb	08 47 23.9	
	comp=Z,8.4nm,1.3s						
K43A	**Burlington**	**83.33**	**2**	P	**P**	**08 47 15.8**	**+0.4**
K31A	**O'Neill**	**83.48**	**354**	P	**P**	**08 47 16.2**	**0.0**
PAHR	**Pah Rah Range**	**84.28**	**339**	P	**P**	**08 47 19.8**	**-0.8**
K22A	**Casper**	**84.37**	**349**	P	**P**	**08 47 21.4**	**+0.5**
ECSD	**EROS Data Cent**	**84.45**	**356**	P	**P**	**08 47 20.7**	**-0.5**
ECSD				IAmb	IAmb	08 47 20.9	
	comp=Z,9.3nm,1.4s						
HVU	**Hansel Valley**	**84.64**	**344**	P	**P**	**08 47 21.6**	**-0.7**
HVU				IAmb	IAmb	08 47 29.8	
	comp=Z,7.1nm,1.2s						
ORV	**Oroville**	**84.75**	**337**	P	**P**	**08 47 21.5**	**-1.2**
BW06	**Boulder Array**	**84.97**	**347**	P	**P**	**08 47 23.8**	**-0.3**
BW06				IAmb	IAmb	08 47 31.9	
	comp=Z,6.1nm,1.1s						
PD31	**Pinedale Array**	**84.97**	**347**	P	**P**	**08 47 24.1**	**0.0**
PD31				IAmb	IAmb	08 47 44.3	
	comp=Z,6.7nm,1.2s						
PDAR	**Pinedale Array**	**84.97**	**347**	P	**P**	**08 47 23.6**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=157,slow=5.0,SNR=6.4						
PDAR	**Pinedale Array**	**84.97**	**347**	P	**P**	**08 47 23.7**	**-0.4**
AHID	**Auburn Hatcher**	**85.25**	**345**	P	**P**	**08 47 24.9**	**-0.6**
AHID				IAmb	IAmb	08 47 41.6	
	comp=Z,3.8nm,0.8s						
ECR	**Eagle Creek**	**85.58**	**345**	P	**P**	**08 47 27.3**	**+0.2**
REDW	**Red Top Meadow**	**85.78**	**346**	P	**P**	**08 47 27.8**	**-0.3**
SNOW	**Snow King Moun**	**85.86**	**346**	P	**P**	**08 47 28.0**	**-0.6**
SNOW				IAmb	IAmb	08 47 39.2	
	comp=Z,6.8nm,1.4s						
FLWY	**Flagg Ranch**	**86.45**	**346**		**P**	**08 47 31.1**	**-0.3**
WVOR	**Wild Horse Val**	**86.63**	**340**	P	**P**	**08 47 30.5**	**-1.7**
WVOR				IAmb	IAmb	08 47 40.3	
	comp=Z,5.6nm,1.2s						
MFID	**Camas Ranch**	**86.87**	**342**	P	**P**	**08 47 33.7**	**+0.4**
YMR	**Madison River**	**87.07**	**346**	P	**P**	**08 47 33.1**	**-1.3**
YMR				IAmb	IAmb	08 47 47.0	
	comp=Z,14nm,1.7s						
YHH	**Holmes Hill**	**87.16**	**346**	P	**P**	**08 47 33.6**	**-1.3**

CTA **Charters Tower** **15.85 203** P **P** **08 39 17.5 -1.5**
CTA pmax pmax
comp=Z,49nm,1.9s
CTAO **Charters Tower** **15.85 203** P **Pn** **08 39 14.9 -1.0**
CTAO pmax pmax
comp=Z,54nm,1.1s
CTAO **Charters Tower** **15.85 203** Pn **Pn** **08 39 14.9 -1.0**
BAKI **Biak** **17.07 284** P **P** **08 39 36.7 +4.1**
comp=Z,2µmcomp=Z,164nm,1.2s
SANVU **Saraoutou** **17.39 126** P **P** **08 39 36.6 +0.4**
SANVU IAmb IAmb 08 39 36.9
comp=Z,196nm,1.0s
QIS **Mount Isa** **19.67 219** P **P** **08 40 02.0 +0.8**
baz=20,SNR=34
EIDS **Eidsvold** **19.88 184** P **P** **08 40 04.2 +0.8**
baz=20,SNR=8.2
EIDS **Eidsvold** **19.88 184** **P** **08 40 04.1 +0.7**
FAKI **Fak Fak** **20.52 276** P **P** **08 40 09.5 -1.0**
FAKI **Fak Fak** **20.52 276** P Pn 08 40 14.9 +1.9
KDU **Kakadu** **21.20 249** P **P** **08 40 16.9 -0.9**
baz=21,SNR=62
DZM **Mont Dzumac** **21.24 142** P **P** **08 40 18.7 +0.5**
comp=Z,96nm,1.1s,baz=21,slow=6.8,SNR=15
RMQ **Roma** **21.26 190** P **P** **08 40 19.3 +0.9**
baz=21,SNR=57
SAUI **Saumlaki** **21.38 262** P **P** **08 40 21.2 +1.5**
SAUI **Saumlaki** **21.38 262** P **P** **08 40 22.5 +2.8**
comp=Z,352nm,1.4s
SIJI **Sorong** **21.85 281** P **P** **08 40 24.2 -0.5**
comp=Z,15nm,0.6s,baz=88,slow=8.2,SNR=8.6
SWI **Sorong** **21.85 281** P **P** **08 40 26.1 +1.3**
SWI pmax pmax
comp=Z,148nm,1.1s
SWI **Sorong** **21.85 281** P **P** **08 40 30.3 +5.5**
comp=Z,2µmcomp=Z,149nm,1.1s
MTN **Manton Dam** **22.49 249** P **P** **08 40 32.4 +0.7**
baz=22,SNR=33
MTN **Manton Dam** **22.49 249** P **P** **08 40 30.1 -1.5**
MTN IAmb IAmb 08 40 40.6
comp=Z,146nm,0.9s
QLP **Quilpie** **22.52 200** P **P** **08 40 32.1 +0.3**
baz=23,SNR=9.0
BNDI **Bandanaira** **22.70 271** P **P** **08 40 37.0 +3.1**
comp=Z,5µmcomp=Z,339nm,1.1s
WB0 **Warramunga Arr** **22.79 230** P **P** **08 40 34.1 -0.7**
WB0 IAmb IAmb 08 41 00.8
comp=Z,108nm,0.9s
WR0 **Warramunga Arr** **22.79 229** P **P** **08 40 34.5 -0.4**
WR0 IAmb IAmb 08 40 47.5
comp=Z,90nm,0.9s
WRAB **Tennant Creek** **22.92 229***ce*P **P** **08 40 35.1 -1.0**
WRAB pmax pmax
comp=Z,79nm,1.0s
WRAB **Tennant Creek** **22.92 229** P **P** **08 40 35.4 -0.7**
WRAB IAmb IAmb 08 40 49.7
comp=Z,67nm,0.8s
WB2 **Warramunga Arr** **22.93 229** P **P** **08 40 35.5 -0.7**
WB2 IAmb IAmb 08 40 47.7
comp=Z,130nm,1.2s
WRA **Warramunga Arr** **22.93 229** P **P** **08 40 35.5 -0.8**
comp=Z,31nm,0.9s,baz=53,slow=9.6,SNR=100
WRA S **S** **08 44 41.9 -1.3**
comp=Z,10nm,1.0s,baz=51,slow=18,SNR=6.6
MSAI **Masohi** **23.77 274** P **P** **08 40 50.9 +6.5**
comp=Z,22µmcomp=Z,475nm,0.8s
ARMA **Armidale** **24.87 182** P **P** **08 40 53.1 -1.3**
baz=25,SNR=5.9
ARMA **Armidale** **24.87 182** P **P** **08 40 54.9 +0.5**
NLAI **Namlea** **25.59 274** P **P** **08 41 03.7 +2.7**
comp=Z,33nm,0.9s
AS31 **Alice Springs** **25.60 223** P **P** **08 41 01.2 +0.2**
ASAR **Alice Springs** **25.60 223** P **P** **08 41 00.7 -0.4**
comp=Z,21nm,1.0s,baz=55,slow=8.9,SNR=95
ASAR **Alice Springs** **25.60 223** P **P** **08 41 00.9 -0.1**
ASAR **Alice Springs** **25.60 223** P **P** **08 41 00.9 -0.1**
CMSA **Cobar Meteorol** **26.78 193** P **P** **08 41 10.7 -0.9**
baz=27,SNR=13
SANI **Sanana** **26.84 276** P **P** **08 41 15.4 +3.1**
comp=Z,723nmcomp=Z,92nm,0.8s
STKA **Stephens Creek** **28.28 200** P **P** **08 41 24.0 -0.9**
comp=Z,6.3nm,0.6s,baz=26,slow=12,SNR=20
STKA LR LR 08 53 13.1
comp=Z,796nm,18.3s,baz=9.7,slow=38
STKA **Stephens Creek** **28.28 200** P **P** **08 41 24.5 -0.5**
baz=28,SNR=6.8
STKA **Stephens Creek** **28.28 200**⇓*i*P **P** **08 41 23.2 -1.8**
SOEI **Soe** **28.48 260** P **P** **08 41 30.7 +3.6**
comp=Z,1µmcomp=Z,93nm,1.1s
BATI **Baumata** **29.12 259** P **P** **08 41 31.4 -1.3**
comp=Z,35nm,0.6s,baz=130,slow=3.1,SNR=4.6
BATI **Baumata** **29.12 259** P **P** **08 41 34.8 +2.1**
comp=Z,709nmcomp=Z,89nm,1.0s
FITZ **Fitzroy Crossi** **29.25 242** P **P** **08 41 33.1 -0.6**
baz=29,SNR=50
FITZ **Fitzroy Crossi** **29.25 242** P **P** **08 41 33.2 -0.5**
FITZ IAmb IAmb 08 41 50.0
comp=Z,68nm,1.1s
DDMP **Don Marcelino,** **29.26 293** *e*P **P** **08 41 31.8 -2.1**
CAN **Canberra** **29.93 186** P **P** **08 41 38.9 -0.8**
CAN pmax pmax
comp=Z,32nm,1.2s
CAN **Canberra** **29.93 186** P **P** **08 41 38.9 -0.8**
LUWI **Luwuk** **30.16 277** P **P** **08 41 41.6 -0.3**
LUWI IAmb IAmb 08 41 56.2
comp=Z,70nm,1.2s
LUWI **Luwuk** **30.16 277** P **P** **08 41 40.4 -1.5**
comp=Z,2µmcomp=Z,50nm,1.2s
GTOI **Gorontalo** **30.23 281** P **P** **08 41 44.0 +1.5**
comp=Z,23nm,0.9s
MMRI **Maumere** **30.37 262** P **P** **08 41 43.1 -0.6**
MMRI **Maumere** **30.37 262** P **P** **08 41 44.3 +0.5**
comp=Z,103nm,1.1s
WRKA **Warakurna** **30.44 228** P **P** **08 41 43.7 -0.6**
baz=30,SNR=16
SKMP **Bagumbayan, Su** **30.49 293** *e*P P 08 41 53.1 +8.3
HTT **Hallett** **30.65 203** P **P** **08 41 45.7 -0.4**
baz=31,SNR=9.8
EDFI **Ende, Flores** **30.92 262** P **P** **08 41 47.6 -1.1**
comp=Z,350nmcomp=Z,46nm,0.9s
MRSI **Marisa** **31.25 280** P **P** **08 41 51.9 +0.4**
comp=Z,18nm,0.9s
BBOO **Buckleboo** **31.34 208** P **P** **08 41 51.6 -0.4**
baz=31,SNR=6.6
BBOO **Buckleboo** **31.34 208** P **P** **08 41 51.5 -0.6**
MSLP **Maasin** **31.73 299** *e*P **P** **08 41 54.5 -1.2**
BASI **Baing, Sumba** **32.14 259** P **P** **08 42 02.5 +3.2**
comp=Z,2µmcomp=Z,177nm,1.2s
ARPS **Mount Arapiles** **32.73 196** P **P** **08 42 04.1 -0.1**
baz=33,SNR=12
KAPI **Kappang** **32.79 269** P **P** **08 42 04.5 -0.5**
KAPI pmax pmax
comp=Z,19nm,1.0s
KAPI **Kappang** **32.79 269** P **P** **08 42 04.5 -0.5**
TTSI **Tana Toraja** **32.85 273** P **P** **08 42 09.1 +3.5**
comp=Z,14nm,0.7s
CNOP **Candoni, Negro** **33.55 297** *e*P **P** **08 42 10.0 -1.7**
PLAI **Plampang** **34.78 262** P **P** **08 42 19.3 -3.1**
OUZ **Omahuta** **35.37 150** P **P** **08 42 29.3 +2.1**
OUZ IAmb IAmb 08 42 30.2
comp=Z,39nm,1.1s
CUYO **Cuyo Island** **35.42 297** *e*P **P** **08 42 27.8 -0.1**
PSA00 **Pilbara Seismi** **35.60 240** P **P** **08 42 28.3 -1.0**
PSA00 IAmb IAmb 08 42 40.6
comp=Z,32nm,0.9s
PSA00 **Pilbara Seismi** **35.60 240** P **P** **08 42 28.2 -1.2**
PSA00 IAmb IAmb 08 42 44.9
comp=Z,15nm,0.8s
JCNP **Jose Panganiba** **35.62 304** *e*P P 08 42 35.9 +6.5
TWSI **Taliwang, Sumb** **35.66 263** P **P** **08 42 29.4 -0.5**
comp=Z,24nm,1.3s
MYLDM **Lahad Datu** **35.72 287** P **P** **08 42 27.4 -3.0**
SJMP **San Jose** **36.06 300** *e*P **P** **08 42 34.2 +0.9**
LQP **Lukban** **36.49 302**⇑*e*P **P** **08 42 41.7 +4.5**
ENPP **El Nido** **36.99 297** *e*P **P** **08 42 41.0 -0.3**
LUBP **Lubang** **37.40 301** *e*P **P** **08 42 42.1 -2.6**
BATP **Bataraza** **37.53 292** *e*P **P** **08 42 45.2 -0.7**
SPMM **Sapulut** **37.54 285** P **P** **08 42 46.0 0.0**
TAU **Tasmania Unive** **37.62 186** P **P** **08 42 45.1 -1.1**
TAU pmax pmax
comp=Z,63nm,1.2s
TAU **Tasmania Unive** **37.62 186** P **P** **08 42 45.1 -1.1**
TAU IAmb IAmb 08 42 48.3
comp=Z,63nm,1.2s
BBKI **Banjar Baru** **37.77 271** P **P** **08 42 49.8 +1.9**
comp=Z,18nm,1.3s
KKM **Kota Kinabalu** **38.14 287** P **P** **08 42 48.7 -2.5**

KKM IAmb IAmb 08 42 58.4
comp=Z,44nm,1.0s
JAGI **Jajag, Banyuwa** **38.35 263** P P 08 42 58.9 +6.1
comp=Z,58nm,1.0s
KMBL **Kambalda** **38.71 224** P **P** **08 42 55.5 -0.1**
baz=39,SNR=6.4
URZ **Urewera** **39.51 149** P **P** **08 43 02.8 +0.7**
comp=Z,27nm,1.1s,baz=308,slow=16,SNR=4.7
JOW **Kunigami** **39.84 325** P **P** **08 43 03.4 -1.6**
JOW IAmb IAmb 08 43 15.4
comp=Z,50nm,1.1s
TUWZ **Tuamarina** **40.56 155** P **P** **08 43 11.7 +0.9**
SBUM **Sibu** **41.16 280** P **P** **08 43 17.0 +0.8**
RPZ **Rata Peaks** **41.42 160** P **P** **08 43 17.8 -0.1**
comp=Z,18nm,0.9s,baz=358,slow=3.6,SNR=6.5
WOJI **Wonogiri, Jawa** **41.53 264** P **P** **08 43 21.4 +2.2**
comp=Z,29nm,1.0s
KLBR **Kellerberrin** **41.78 227** P **P** **08 43 20.1 -0.9**
baz=42,SNR=5.9
MORW **Morawa** **41.85 232** P **P** **08 43 21.4 -0.3**
baz=42,SNR=5.6
MORW **Morawa** **41.85 232** P **P** **08 43 20.4 -1.2**
MORW IAmb IAmb 08 43 31.3
comp=Z,57nm,1.1s
YULB **Yu-li** **41.95 314** P **P** **08 43 20.5 -1.9**
SSLB **Suanglung** **42.44 314** P **P** **08 43 24.7 -1.8**
YHNB **Yeheng** **42.70 316** P **P** **08 43 27.9 -0.8**
YHNB IAmb IAmb 08 43 39.0
comp=Z,88nm,1.2s
KSM **Kuching** **42.87 278** P **P** **08 43 28.9 -1.2**
KSM **Kuching** **42.87 278** P **P** **08 43 30.0 -0.1**
MUN **Mundaring** **43.11 228** P **P** **08 43 31.7 -0.1**
baz=43,SNR=4.1
JNU **Nakatsue** **43.57 333** P **P** **08 43 35.1 -0.4**
MJAR **Matsushiro Arr** **43.90 343** P **P** **08 43 36.4 -1.7**
comp=Z,3.4nm,0.9s,baz=170,slow=7.2,SNR=7.6
MJAR PcP **PcP** **08 45 23.4 -0.2**
comp=Z,3.7nm,0.9s,baz=188,slow=4.2,SNR=4.6
MJAR LR LR 09 00 12.5
comp=Z,216nm,21.1s,baz=205,slow=34
MJAR **Matsushiro Arr** **43.90 343** P **P** **08 43 36.1 -2.0**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR **Matsushiro Arr** **43.90 343** P **P** **08 43 36.1 -2.0**
MAJO **Matsushiro** **43.90 343**⇑*e*P **P** **08 43 38.8 +0.7**
MAJO pmax pmax
comp=Z,8.0nm,1.1s
MAT **Matsushiro** **43.90 343** P **P** **08 43 35.0 -3.1**
QZH **Quanzhou** **44.84 314** P **P** **08 43 46.1 +0.3**
QZH pP **pP** **08 43 56.0 -1.2**
QZH S **S** **08 50 17.5 -2.9**
QZH LR LR
comp=Z,310nm,11.8s
TPI **Tanjungpandan** **44.98 272** P **P** **08 43 49.3 +2.2**
comp=Z,296nmcomp=Z,28nm,1.4s
JSD **Sado** **45.28 344** P **P** **08 43 48.2 -0.9**
SSE **Sheshan** **47.16 322** P **P** **08 44 02.0 -2.0**
SSE S **S** **08 50 52.7 -0.8**
SSE pmax pmax
comp=Z,9.0nm,0.6s
SSE pmax pmax
comp=Z,140nm,3.4s
SSE LR LR
comp=Z,250nm,17.8s
SSE LR LR
comp=Z,170nm,14.9s
DLV **T Lat** **47.21 292** P **P** **08 44 03.5 -1.3**
DLV IAmb IAmb 08 44 12.5
comp=Z,42nm,0.9s
TJN **Taejon** **47.88 332**⇓*e*P **P** **08 44 09.2 -0.2**
KASI **Kota Agung** **47.95 267** P **P** **08 44 13.1 +2.7**
comp=Z,36nm,0.9s
DSRI **Dabo** **48.27 274** P **P** **08 44 10.9 -1.9**
comp=Z,520nmcomp=Z,8.9nm,1.2s
LWLI **Liwa** **48.41 268** P **P** **08 44 15.3 +1.2**
comp=Z,5µmcomp=Z,45nm,0.8s
KSRS **Korea Array** **48.51 334** P **P** **08 44 13.2 -1.1**
comp=Z,4.1nm,0.9s,baz=148,slow=8.4,SNR=17
KSRS LR LR 09 03 55.1
comp=Z,167nm,18.9s,baz=170,slow=35
KSAR **Wonju Array Be** **48.52 334** P 08 44 07.7 -6.6
QIZ **Qiongzhong** **48.69 301** P **P** **08 44 15.2 -0.8**
QIZ S **S** **08 51 16.7 +1.2**
QIZ LR LR
comp=Z,160nm,9.2s
QIZ LR LR
comp=Z,300nm,13.8s
QIZ LR LR
comp=Z,200nm,14.1s
LHSI **Lahat** **49.01 270** P **P** **08 44 21.3 +2.8**
comp=Z,29nm,1.4s
INCN **Inchon** **49.12 332** P **P** **08 44 17.7 -1.3**
INCN pmax pmax
comp=Z,50nm,1.2s
INCN **Inchon** **49.12 332** P **P** **08 44 17.7 -1.3**
INCN IAmb IAmb 08 44 23.5
comp=Z,50nm,1.1s
NJ2 **Nanjing** **49.26 321** *e*P **P** **08 44 24.5 +4.4**
NJ2 sP **sP** **08 44 39.8 +3.3**
NJ2 pmax pmax
comp=Z,11nm,1.0s
MYKOM **Kota Tinggi** **49.29 277** P **P** **08 44 20.9 +0.2**
MYKOM IAmb IAmb 08 44 32.3
comp=Z,29nm,0.9s
JRMM **Jerantut** **50.99 279** P **P** **08 44 34.0 +0.4**
UBPT **Khong Chiam** **51.09 294** P P 08 44 43.7 +9.4
comp=Z,7.8nm,2.1s
UBPT **Khong Chiam** **51.09 294** P **P** **08 44 33.8 -0.4**
WHN **Wuhan** **51.23 317** ⇓P **P** **08 44 36.0 +0.9**
BKNI **Bangkinang** **51.88 275** P **P** **08 44 39.5 -0.8**
IPM **Ipoh** **52.52 280** P **P** **08 44 42.7 -2.3**
IPM **Ipoh** **52.52 280** P **P** **08 44 45.0 0.0**
DL2 **Dalian** **52.65 330** *e*P **P** **08 44 43.7 -1.8**
DL2 *e*S **S** **08 52 06.2 -3.7**
DL2 pmax pmax
comp=Z,25nm,0.8s
DL2 pmax pmax
comp=Z,110nm,3.8s
DL2 LR LR
comp=Z,380nm,18.7s
DL2 LR LR
comp=Z,310nm,16.2s
DL2 LR LR
comp=Z,420nm,18.2s
USA0B **Ussuriysk Arra** **52.81 341**⇑*e*P **P** **08 44 47.8 +1.3**
USRK **Ussuriysk Ar.** **52.81 341** P **P** **08 44 45.3 -1.2**
comp=Z,7.3nm,0.9s,baz=185,slow=9.0,SNR=6.5
USRK **Ussuriysk Ar.** **52.81 341** P **P** **08 44 45.5 -1.1**
USRK **Ussuriysk Ar.** **52.81 341** P **P** **08 44 45.5 -1.1**
YSS **Yuzh-Sakhalins** **52.90 351**⇓*e*P P 08 44 35.3 -12
YSS pmax pmax
comp=Z,20nm,1.4s
YSS pmax pmax
comp=Z,400nm,2.6s
YSS MLR MLR
comp=Z,300nm,13.0s
KULM **Kulim** **53.03 281** P **P** **08 44 49.0 +0.2**
TIA **Tai'an** **53.15 324** P **P** **08 44 45.0 -4.3**
TIA pmax pmax
comp=Z,7.0nm,1.8s
TIA LR LR
comp=Z,210nm,7.9s
TIA LR LR
comp=Z,280nm,14.9s
TIA LR LR
comp=Z,310nm,21.6s
MNSI **Mandailing Nat** **53.38 275** P **P** **08 44 51.1 -0.3**
comp=Z,32nm,1.3s
KHON **Khonkaen** **53.84 295** P P 08 45 04.0 +9.3
MDJ **Mudanjiang** **53.97 340** P **P** **08 44 54.6 -0.5**
MDJ pP pP 08 45 05.0 -2.1
MDJ sP pwP 08 45 09.6 -0.5
MDJ S **S** **08 52 32.8 +5.2**
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,98nm,3.5s
MDJ LR LR
comp=Z,220nm,27.1s
MDJ LR LR
comp=Z,280nm,25.6s
MDJ LR LR
comp=Z,290nm,32.7s
MDJ **Mudanjiang** **53.97 340** P **P** **08 44 54.1 -1.0**
NONG **Nongkai** **54.15 297** P **P** **08 44 57.0 +0.1**
comp=Z,52nm,0.8s

RPSI **Rantau Prapat** **54.29 277** P **P** **08 44 55.5 -2.5**
RPSI IAmb IAmb 08 45 07.1
comp=Z,30nm,1.2s
PSI **Prapat** **54.31 277** P **P** **08 44 55.5 -2.8**
PSI pmax pmax
comp=Z,30nm,1.2s
GYA **Guiyang** **54.68 308** *e*P **P** **08 45 02.1 +1.3**
GYA pmax pmax
comp=Z,9.0nm,0.6s
GYA LR LR
comp=Z,420nm,18.4s
SLVN **Son La** **54.71 301** P **P** **08 45 00.3 -0.7**
TSI **Tuntungan** **54.77 278** P **P** **08 45 04.0 +2.5**
comp=Z,9µmcomp=Z,73nm,1.0s
CN2 **Changchun** **54.83 336** *e*P **P** **08 45 06.1 +4.8**
GSI **Gunungsitoli** **55.44 275** P **P** **08 45 05.0 -1.4**
GSI **Gunungsitoli** **55.44 275** P **P** **08 45 05.6 -0.7**
comp=Z,2µmcomp=Z,55nm,1.4s
PHIT **Phitsanulok** **56.30 295** P P 08 45 20.0 +7.6
comp=Z,74nm,0.9s
BJT **Baijiatuau** **56.34 327** P **P** **08 45 11.0 -1.3**
BJT pmax pmax
comp=Z,5.0nm,0.8s
BJT **Baijiatuau** **56.34 327** P **P** **08 45 11.0 -1.3**
BJI **Beijing** **56.35 327** P **P** **08 45 13.4 +1.1**
BJI S **S** **08 53 01.9 +2.3**
BJI pmax pmax
comp=Z,6.0nm,0.7s
BJI LR LR
comp=Z,190nm,18.3s
BJI LR LR
comp=Z,190nm,16.1s
BJI LR LR
comp=Z,180nm,26.2s
UTTA **Uttaradit** **56.35 295** P **P** **08 45 13.9 +1.1**
comp=Z,23nm,0.8s
LHMI **Lhok Sumawe** **56.65 280** P **P** **08 45 13.5 -1.4**
XAN **Xi'an** **56.99 317** P **P** **08 45 16.5 -0.6**
XAN pmax pmax
comp=Z,16nm,1.0s
XAN pmax pmax
comp=Z,93nm,3.5s
XAN LR LR
comp=Z,360nm,19.9s
XAN LR LR
comp=Z,150nm,19.6s
XAN LR LR
comp=Z,470nm,22.0s
XAN **Xi'an** **56.99 317** P **P** **08 45 16.8 -0.4**
XAN pmax pmax
comp=Z,26nm,1.0s
XAN **Xi'an** **56.99 317** P **P** **08 45 16.8 -0.4**
XAN IAmb IAmb 08 45 28.1
comp=Z,26nm,1.0s
MLSI **Meulaboh, Aceh** **57.02 279** P **P** **08 45 17.2 -0.4**
comp=Z,112nm,1.5s
SUKH **Sukhothai** **57.10 295** P **P** **08 45 20.0 +1.9**
comp=Z,28nm,1.1s
KMI **Kunming** **57.24 304** ⇓P **P** **08 45 20.4 +1.2**
KMI pP pP 08 45 29.5 -1.7
KMI sP pwP 08 45 35.5 +0.6
KMI S **S** **08 53 12.6 +0.2**
KMI pmax pmax
comp=Z,17nm,0.8s
KMI pmax pmax
comp=Z,100nm,5.9s
KMI LR LR
comp=Z,210nm,18.8s
KMI LR LR
comp=Z,250nm,23.9s
KMI LR LR
comp=Z,380nm,22.6s
KLR **Kul'dur** **57.42 344** P **P** **08 45 19.6 -0.1**
comp=Z,6.1nm,0.8s,baz=173,slow=3.2,SNR=20
KLR **Kul'dur** **57.42 344***c i*P **P** **08 45 18.7 -1.0**
KLR pmax pmax
comp=Z,22nm,1.4s
LAMP **Lampang** **57.44 296** P **P** **08 45 22.2 +1.7**
comp=Z,28nm,0.7s
CM34 **Chiang Mai Arr** **57.98 296** P **P** **08 45 25.0 +0.7**
CM04 **Chiang Mai Arr** **57.98 296** P **P** **08 45 25.7 +1.4**
comp=Z,168nmcomp=Z,20nm,1.2s
CM09 **Chiang Mai Arr** **57.99 296** P **P** **08 45 26.1 +1.7**
comp=Z,165nmcomp=Z,22nm,1.0s
CM01 **Chiang Mai Arr** **58.01 296** P **P** **08 45 25.0 +0.5**
comp=Z,22nm,1.2s
CM05 **Chiang Mai Arr** **58.02 296** P **P** **08 45 25.0 +0.5**
comp=Z,158nmcomp=Z,19nm,1.1s
CM02 **Chiang Mai Arr** **58.02 296** P **P** **08 45 26.0 +1.4**
comp=Z,190nmcomp=Z,26nm,1.2s
CM31 **Chiang Mai Arr** **58.03 296** P **P** **08 45 26.0 +1.3**
CM31 **Chiang Mai Arr** **58.03 296** P **P** **08 45 25.3 +0.6**
CM31 IAmb IAmb 08 45 35.4
comp=Z,34nm,1.1s
CMAR **Chiang Mai Arr** **58.03 296** P **P** **08 45 24.9 +0.2**
comp=Z,6.3nm,0.7s,baz=117,slow=5.2,SNR=33
CMAR LR LR 09 10 54.6
comp=Z,144nm,18.1s,baz=152,slow=37
CMAR PKPPKP **P'P'df** **09 15 10.5 +2.6**
comp=Z,0.8nm,0.3s,baz=280,slow=5.4,SNR=2.0
CMAR **Chiang Mai Arr** **58.03 296***ce*P **P** **08 45 25.5 +0.8**
CMAR pmax pmax
comp=Z,6.0nm,0.7s
CMAR **Chiang Mai Arr** **58.03 296** P **P** **08 45 25.0 +0.4**
CM13 **Chiang Mai Arr** **58.06 296** P **P** **08 45 26.0 +1.2**
comp=Z,21nm,1.1s
CMMT **Chiang Mai** **58.15 296** P **P** **08 45 25.5 0.0**
comp=Z,12nm,1.2s
CM33 **Chiang Mai Arr** **58.15 296** P **P** **08 45 26.0 +0.5**
CHTO **Chiang Mai** **58.15 296** P **P** **08 45 25.4 -0.1**
CHTO pmax pmax
comp=Z,30nm,1.2s
CHTO **Chiang Mai** **58.15 296** P **P** **08 45 25.4 -0.1**
CHTO IAmb IAmb 08 45 35.8
comp=Z,30nm,1.1s
PETK **Petropavlovsk-** **58.48 4** P **P** **08 45 26.3 -0.8**
comp=Z,7.2nm,0.6s,baz=161,slow=5.4,SNR=17
PETK LR LR 09 08 21.8
comp=Z,116nm,19.6s,baz=182,slow=34
PETK **Petropavlovsk-** **58.48 4** P **P** **08 45 26.0 -1.1**
PETK **Petropavlovsk-** **58.48 4** P **P** **08 45 26.0 -1.1**
CD2 **Chengdu** **59.06 311**⇑*i*P **P** **08 45 31.6 0.0**
CD2 S **S** **08 53 36.4 +0.8**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,200nm,9.2s
CD2 LR LR
comp=Z,310nm,22.9s
CD2 LR LR
comp=Z,400nm,11.8s
CD2 LR LR
comp=Z,450nm,18.8s
HHC **Hu-ho-hao-te** **59.49 325** *e*P **P** **08 45 35.2 +0.7**
HHC pP pP 08 45 43.8 -2.5
HHC S **S** **08 53 41.6 +0.7**
HHC sS sS 08 53 59.6 -2.3
HHC pmax pmax
comp=Z,19nm,1.1s
HHC pmax pmax
comp=Z,140nm,4.7s
HHC LR LR
comp=Z,360nm,16.3s
HHC LR LR
comp=Z,380nm,17.5s
HHC LR LR
comp=Z,310nm,14.5s
HIA **Hailar** **61.56 336** P **P** **08 45 47.7 -0.7**
HIA pmax pmax
comp=Z,6.0nm,0.8s
HIA **Hailar** **61.56 336** P **P** **08 45 47.7 -0.7**
LZH **Lanzhou** **61.60 316** ⇓P **P** **08 45 50.0 +0.9**
LZH pP pP 08 45 58.6 -2.4
LZH sP pwP 08 46 03.8 -1.5
LZH sS sS 08 54 22.7 -5.7
LZH pmax pmax
comp=Z,29nm,1.0s
LZH LR LR
comp=Z,150nm,15.7s
LZH LR LR
comp=Z,310nm,18.4s
LZH LR LR
comp=Z,220nm,17.3s
ZEA **Zeya** **62.71 343** *e*P **P** **08 45 56.7 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,1.1s

MA2 Magadan 64.83 359 P **P** **08 46 09.3 -0.4**
comp=Z,12nm,0.6s,baz=164,slow=6.6,SNR=20
MA2 Magadan 64.83 359*c i* P **P** **08 46 08.9 -0.8**
MA2 pmax pmax
comp=Z,13nm,0.8s
MA2 Magadan 64.83 359 P **P** **08 46 09.2 -0.6**
MA2 lAmb lAmb 08 46 21.0
comp=Z,20nm,0.7s
GTA Gaotai 66.04 317 P **P** **08 46 18.8 +0.6**
GTA pP pP 08 46 29.8 -0.4
GTA sP pwP 08 46 34.8 +0.3
GTA S **S** **08 55 06.5 +3.3**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,88nm,5.1s
GTA LR LR
comp=Z,140nm,14.5s
GTA LR LR
comp=Z,160nm,15.6s
GTA LR LR
comp=Z,200nm,17.4s
ULN Ulaanbaatar 66.47 328*c i* P **P** **08 46 21.1 +0.3**
ULN pmax pmax
comp=Z,16nm,1.3s
ULN Ulaanbaatar 66.47 328 P **P** **08 46 20.5 -0.3**
SHL Shillong 66.52 301 P **P** **08 46 21.1 -0.5**
SHL pmax pmax
comp=Z,56nm,0.9s
SHL Shillong 66.52 301 P **P** **08 46 21.1 -0.5**
SONM Songino Array 66.79 328 P **P** **08 46 22.7 -0.1**
comp=Z,4.6nm,0.7s,baz=138,slow=4.7,SNR=40
SONM PKPPKP **P'P'df** **09 14 56.0 +4.5**
comp=Z,3.2nm,1.1s,baz=270,slow=1.5,SNR=9.1
SONM LR LR 09 16 12.0
comp=Z,121nm,19.0s,baz=124,slow=37
SEY Seymchan 68.18 360 P **P** **08 46 30.8 -0.2**
comp=Z,3.9nm,0.9s,baz=152,slow=3.1,SNR=7.8
SEY Seymchan 68.18 360⇓ *i* P **P** **08 46 31.2 +0.1**
LSA Lhasa 68.50 305 P **P** **08 46 35.1 +0.7**
LSA pmax pmax
comp=Z,26nm,1.0s
LSA Lhasa 68.50 305 P **P** **08 46 35.1 +0.7**
LSA lAmb lAmb 08 46 45.6
comp=Z,26nm,1.0s
YAK Yakutsk 69.57 349 P **P** **08 46 39.4 -0.4**
comp=Z,3.8nm,0.3s,baz=310,slow=4.7,SNR=5.6
YAK LR LR 09 15 08.8
comp=Z,99nm,21.0s,baz=105,slow=34
YAK Yakutsk 69.57 349*d i* P **P** **08 46 40.2 +0.5**
YAK pmax pmax
comp=Z,38nm,1.4s
YAK Yakutsk 69.57 349 P **P** **08 46 36.8 -2.9**
YAK lAmb lAmb 08 46 50.5
comp=Z,30nm,1.1s
ZAK Zakamensk 69.97 329 *e*P **P** **08 46 42.3 -0.3**
ZAK pmax pmax
comp=Z,16nm,1.3s
BOD Bodaibo 70.34 339 *e*P **P** **08 46 43.8 -0.8**
BOD pmax pmax
comp=Z,16nm,1.6s
TLY Talaya 70.56 330 P **P** **08 46 45.7 -0.4**
comp=Z,2.0nm,0.6s,baz=150,slow=3.8,SNR=5.7
TLY LR LR 09 19 00.7
comp=Z,113nm,18.0s,baz=124,slow=37
TLY Talaya 70.56 330*c i* P **P** **08 46 45.9 -0.2**
TLY pmax pmax
comp=Z,8.0nm,1.0s
TLY Talaya 70.56 330 P **P** **08 46 45.2 -0.9**
IRK Irkutsk 70.60 331 *e*P **P** **08 46 46.0 -0.3**
IRK pmax pmax
comp=Z,30nm,3.0s
TAPN Taplejung 70.63 301 *e*P **P** **08 46 47.9 +0.5**
ODAN Odare 70.76 301 *e*P **P** **08 46 48.5 +0.4**
comp=Z,84nm,1.0s
RAMN Ramite 71.46 301 *e*P **P** **08 46 52.5 +0.1**
comp=Z,7.9nm,0.5s
MOY Mondy 71.89 329 *e*P **P** **08 46 54.4 +0.1**
MOY pmax pmax
comp=Z,31nm,3.0s
JIRN Jiri 72.01 301 *e*P **P** **08 46 55.6 -0.2**
comp=Z,21nm,0.8s
VNDA Vanda 72.20 178 P **P** **08 46 55.2 -0.4**
comp=Z,3.6nm,0.9s,baz=336,slow=6.1,SNR=11
VNDA Vanda 72.20 178 P **P** **08 46 55.4 -0.2**
VNDA pmax pmax
comp=Z,11nm,1.2s
VNDA Vanda 72.20 178 P **P** **08 46 55.4 -0.2**
PKIN Phulchoki 72.66 301 *e*P **P** **08 46 59.5 -0.1**
comp=Z,9.9nm,0.6s
PYUN Piuthan 74.86 301 *e*P **P** **08 47 12.2 -0.2**
comp=Z,102nm,1.0s
WMQ Urumqi 76.12 317 P **P** **08 47 20.0 +0.9**
WMQ sP sP 08 47 36.5 +0.4
WMQ pmax pmax
comp=Z,45nm,0.7s
WMQ pmax pmax
comp=Z,240nm,4.1s
WMQ Urumqi 76.12 317 P **P** **08 47 19.5 +0.4**
WMQ pmax pmax
comp=Z,25nm,1.2s
WMQ Urumqi 76.12 317 P **P** **08 47 19.5 +0.4**
WMQ lAmb lAmb 08 47 21.1
comp=Z,25nm,1.2s
OHAK Old Harbor 76.17 27 P **P** **08 47 18.5 -0.5**
OHAK lAmb lAmb 08 47 30.0
comp=Z,43nm,1.0s
OHAK Old Harbor 76.17 27 P 08 47 19.2
baz=236
ANM Nome 76.42 17 P **P** **08 47 21.3 +1.0**
ANM pmax pmax
comp=Z,47nm,0.9s
ANM Nome 76.42 17 P **P** **08 47 21.2 +1.0**
ANM Nome 76.42 17 P 08 47 21.4
baz=223
TNA Tin City 76.44 16 P 08 47 21.1
baz=221
TNA Tin City 76.44 16 P **P** **08 47 20.4 +0.1**
TNA lAmb lAmb 08 47 31.4
comp=Z,29nm,0.9s
HYB Hyderabad 76.58 289 *i* P **P** **08 47 22.0 -0.2**
KDAK Kodiak Island 76.80 27 P 08 47 22.7
baz=237
KDAK Kodiak Island 76.80 27⇓ *i* P **P** **08 47 22.4 -0.1**
KDAK pmax pmax
comp=Z,38nm,1.1s
KDAK Kodiak Island 76.80 27 P **P** **08 47 22.4 -0.1**
KDAK lAmb lAmb 08 47 34.7
comp=Z,22nm,0.9s
SVW2 Sparrevohn 77.45 23 P **P** **08 47 26.8 +0.7**
SVW2 lAmb lAmb 08 47 38.3
comp=Z,22nm,0.8s
HOM Homer 78.24 25 P 08 47 31.4
baz=237
HOM Homer 78.24 25 P **P** **08 47 30.6 +0.1**
CNPM China Poot 78.34 26 P **P** **08 47 31.2 +0.1**
TIXI Tiksi 78.51 353 P **P** **08 47 31.3 -0.5**
comp=Z,7.2nm,0.9s,baz=119,slow=5.1,SNR=11
TIXI Tiksi 78.51 353⇑ *e*P **P** **08 47 30.9 -0.8**
TIXI Tiksi 78.51 353 P **P** **08 47 30.7 -1.1**
DGZ Jazzator, Alta 78.51 323*ce*P **P** **08 47 32.8 +0.3**
DGZ pmax pmax
comp=Z,26nm,1.2s
BRLK Bradley Lake 78.62 25 P **P** **08 47 32.0 -0.6**
BRLK lAmb lAmb 08 47 43.2
comp=Z,29nm,0.9s
BRSE Bradley Lake S 78.67 26 P 08 47 33.2
baz=238
SPCR Spurr Chakacha 78.85 24 P 08 47 33.9
baz=236
ZSN Zaisan 79.28 320 *e*P **P** **08 47 36.4 -0.2**
baz=320
ZSN *e*S **S** **08 57 35.0 +1.5**
baz=320
ZSN Zaisan 79.28 320 *e*P **P** **08 47 36.3 -0.2**
ZSN *e*S **S** **08 57 35.0 +1.5**
O22K Cooper Landing 79.49 25 P 08 47 37.8
baz=239
O22K Cooper Landing 79.49 25 P **P** **08 47 37.6 +0.3**
SKT Skwentna 79.55 23 P **P** **08 47 36.3 -1.5**
SKT Skwentna 79.55 23 P 08 47 36.5
baz=237,SNR=6.3
SUA Susitna One 79.59 24 P **P** **08 47 37.3 -0.8**
SUA lAmb lAmb 08 47 48.3
comp=Z,31nm,0.8s
SUA Susitna One 79.59 24 P 08 47 37.7
baz=238,SNR=7.4
RDOG Red Dog Mine 79.62 16 P 08 47 39.3
baz=225
RDOG Red Dog Mine 79.63 16 P **P** **08 47 39.0 +1.1**
DGAR Diego Garcia 79.64 263 P **P** **08 47 37.3 -1.9**
DGAR pmax pmax
comp=Z,77nm,1.0s
DGAR Diego Garcia 79.64 263 P **P** **08 47 37.3 -1.9**
RC01 Rabbit Creek A 79.80 25 P 08 47 39.2
baz=239,SNR=12
RC01 Rabbit Creek A 79.80 25 P **P** **08 47 39.0 -0.1**
PPLA Purkeypile 79.81 22 P **P** **08 47 39.1 -0.1**
PPLA lAmb lAmb 08 47 53.1
comp=Z,21nm,1.0s
PPLA Purkeypile 79.81 22 P 08 47 39.7
baz=236,SNR=7.2
PWL Port Wells 80.27 25 P **P** **08 47 41.7 +0.1**
CUT Chulitna 80.28 23 P 08 47 41.2
baz=238,SNR=10
CUT Chulitna 80.28 23 P **P** **08 47 41.0 -0.5**
CHUM Lake Minchumin 80.31 22 P 08 47 42.5
baz=236,SNR=26
PMR Palmer 80.31 24 P **P** **08 47 41.2 -0.6**
PMR pmax pmax
comp=Z,28nm,0.9s
PMR Palmer 80.31 24 P **P** **08 47 41.2 -0.6**
PMR lAmb lAmb 08 47 52.1
comp=Z,28nm,0.9s
PMR Palmer 80.31 24 P 08 47 41.9
baz=239,SNR=13
KNK Knik Glacier 80.50 25 P 08 47 43.1
baz=240
KTH Kantishna Hill 80.65 22 P **P** **08 47 42.8 -0.8**
KTH lAmb lAmb 08 47 54.1
comp=Z,39nm,1.0s
MK31 Makanchi Array 80.72 319*c i* P **P** **08 47 44.6 +0.2**
MK31 Makanchi Array 80.72 319 P **P** **08 47 44.6 +0.2**
MKAR Makanchi Array 80.72 319 P **P** **08 47 44.3 -0.1**
comp=Z,8.7nm,0.9s,baz=99,slow=7.5,SNR=68
MKAR PKPPKP **P'P'df** **09 14 32.1 +4.5**
comp=Z,0.9nm,1.1s,baz=267,slow=2.1,SNR=4.1
MKAR LR LR 09 23 16.9
comp=Z,146nm,19.8s,baz=93,slow=36
MKAR Makanchi Array 80.72 319*ce*P **P** **08 47 45.0 +0.6**
MKAR pmax pmax
comp=Z,11nm,1.0s
SML Sawmill 80.75 24 P 08 47 44.7
baz=240,SNR=14
GLI Glacier Island 80.81 25 P 08 47 45.0
baz=241
TRF Thorofare Moun 80.83 22 P **P** **08 47 44.0 -0.8**
TRF lAmb lAmb 08 47 55.6
comp=Z,25nm,0.9s
TRF Thorofare Moun 80.83 22 P 08 47 44.2
baz=238,SNR=9.7
BPAW Bear Paw Mtn. 80.92 22 P 08 47 44.6
baz=237,SNR=16
BPAW Bear Paw Mtn. 80.92 22 P **P** **08 47 44.4 -0.6**
BPAW lAmb lAmb 08 47 55.7
comp=Z,24nm,1.1s
MAKZ Makanchi 80.93 319 P **P** **08 47 45.5 0.0**
MAKZ pmax pmax
comp=Z,29nm,1.2s
MAKZ Makanchi 80.93 319 P **P** **08 47 45.5 0.0**
MAKZ lAmb lAmb 08 47 56.8
comp=Z,29nm,1.1s
IMAR Indian Mountai 81.02 19 P **P** **08 47 46.0 +0.5**
EYAK Cordova Ski Ar 81.23 26 P 08 47 47.6
baz=242
WAT2 Susitna Watana 81.23 23 P 08 47 46.6
baz=239,SNR=17
RND Reindeer 81.36 23 P **P** **08 47 47.0 -0.4**
RND pmax pmax
comp=Z,49nm,1.0s
RND Reindeer 81.36 23 P **P** **08 47 47.0 -0.4**
WAT6 Susitna Watana 81.38 24 P 08 47 47.8
baz=240,SNR=22
MCK McKinley 81.50 23 P **P** **08 47 47.7 -0.4**
MCK pmax pmax
comp=Z,84nm,1.0s
MCK McKinley 81.50 23 P **P** **08 47 47.6 -0.4**
MCK McKinley 81.50 23 P 08 47 47.7
baz=239,SNR=46
MLY Manley 81.52 21 P 08 47 48.4
baz=237,SNR=31
MLY Manley 81.52 21 P **P** **08 47 48.5 +0.2**
MLY lAmb lAmb 08 48 00.1
comp=Z,30nm,0.7s
BWN Browne 81.52 22 P **P** **08 47 47.5 -0.7**
SHLS Shalkode 81.59 315 *e*P **P** **08 47 47.6 -1.6**
comp=Z,9.2nm,1.0s,baz=315
SHLS Shalkode 81.59 315 *e*P **P** **08 47 47.6 -1.6**
SHLS pmax pmax
comp=Z,9.0nm,1.0s
KLU Klutina 81.60 25 P 08 47 49.6
baz=242,SNR=20
KLU Klutina 81.60 25 P **P** **08 47 48.4 -0.4**
ZAA0 Zalesovo Array 81.61 326 P **P** **08 47 47.9 -0.9**
ZALV Zalesovo Beam 81.61 326 P **P** **08 47 47.8 -1.1**
comp=Z,4.1nm,0.5s,baz=111,slow=5.4,SNR=28
ZALV LR LR 09 26 56.8
comp=Z,68nm,18.5s,baz=145,slow=38
ZALV Zalesovo Beam 81.61 326 *i* P **P** **08 47 48.5 -0.4**
ZALV pmax pmax
comp=Z,4.0nm,0.5s
ZALV Zalesovo Beam 81.61 326 P **P** **08 47 47.9 -0.9**
PDGK Podgornoye 81.62 315 P **P** **08 47 49.4 +0.1**
M24K Tolsona, Glenn 81.79 25 P 08 47 50.7
baz=242,SNR=8.6
NEA2 Nenana 81.89 22 P **P** **08 47 49.6 -0.5**
NEA2 lAmb lAmb 08 48 00.6
comp=Z,47nm,1.2s
NEA2 Nenana 81.89 22 P 08 47 49.6
baz=239,SNR=24
UZB Uzynbulak 81.90 315 *e*P **P** **08 47 50.5 -0.3**
comp=Z,11nm,1.3s,baz=315
UZB Uzynbulak 81.90 315 *e*P **P** **08 47 50.5 -0.3**
UZB pmax pmax
comp=Z,11nm,1.3s
BMRM Bremner River 81.93 26 P 08 47 51.0
baz=243,SNR=12
BMRM Bremner River 81.93 26 P **P** **08 47 50.1 -0.4**
BMRM lAmb lAmb 08 48 08.9
comp=Z,32nm,1.0s
I23K Minto, Yukon-K 82.08 21 P 08 47 51.0
baz=238,SNR=7.2
I23K Minto, Yukon-K 82.08 21 P **P** **08 47 50.7 -0.4**
I23K lAmb lAmb 08 48 02.9
comp=Z,16nm,0.8s
WRH Wood River Hil 82.19 22 P **P** **08 47 50.9 -0.8**
N25K Chitina, Valde 82.22 25 P 08 47 52.4
baz=243,SNR=13
KPKS Kokpek 82.22 315 *e*P **P** **08 47 52.0 -0.5**
comp=Z,12nm,1.4s,baz=315
KPKS Kokpek 82.22 315 *e*P **P** **08 47 52.0 -0.5**
KPKS pmax pmax
comp=Z,11nm,1.4s
N25K Chitina, Valde 82.22 25 P **P** **08 47 52.8 +0.8**
N25K lAmb lAmb 08 48 03.4
comp=Z,26nm,0.9s
SATY Saty 82.31 315 *e*P **P** **08 47 52.7 -0.3**
baz=315
SATY Saty 82.31 315 *e*P **P** **08 47 52.6 -0.4**
CCB Clear Creek Bu 82.39 22 P **P** **08 47 51.9 -0.8**
MDM Murphy Dome 82.39 22 P **P** **08 47 52.4 -0.4**
MDM lAmb lAmb 08 48 03.3
comp=Z,37nm,1.2s
CRQM Cirque 82.48 26 P **P** **08 47 54.5 +1.0**
TCOL CIGO, UAF Yank 82.48 22 P 08 47 52.8
baz=240,SNR=15
TCOL CIGO, UAF Yank 82.48 22 P **P** **08 47 52.6 -0.6**
PAX Paxson 82.48 24 P **P** **08 47 53.7 +0.3**
PAX pmax pmax
comp=Z,14nm,1.0s
PAX Paxson 82.48 24 P **P** **08 47 53.7 +0.3**
PAX Paxson 82.48 24 P 08 47 53.7
baz=242,SNR=8.2
COLA College 82.48 22 P 08 47 52.7
baz=240
GLB Gilahina Butte 82.48 26 P **P** **08 47 53.8 +0.5**
COLA College 82.48 22*c i* P **P** **08 47 52.2 -1.0**
COLA pmax pmax
comp=Z,51nm,1.2s
COLA College 82.48 22 P **P** **08 47 52.6 -0.6**
CRQE Cirque 82.50 26 P 08 47 53.9
baz=245
VRDI Verde Repeater 82.55 26 P **P** **08 47 54.3 +0.4**
VRDI lAmb lAmb 08 48 04.9
comp=Z,31nm,0.9s
HDA Harding Lake 82.59 22 P 08 47 53.2
baz=241,SNR=12
HDA P 08 47 53.2
baz=241,SNR=12
TGL Tana Glacier 82.62 27 P **P** **08 47 55.1 +0.9**
TGL lAmb lAmb 08 48 05.3
comp=Z,34nm,1.0s
POKR Poker Plat Res 82.76 22 P 08 47 54.3
baz=240
POKR Poker Plat Res 82.76 22 P **P** **08 47 54.0 -0.7**
POKR lAmb lAmb 08 47 55.0
comp=Z,36nm,1.4s
IL31 82.79 22 P **P** **08 47 53.6 -1.1**
IL31 lAmb lAmb 08 48 05.9
comp=Z,24nm,0.8s
ILAR Eielson Array 82.79 22 P **P** **08 47 53.6 -1.2**
comp=Z,13nm,0.9s,baz=254,slow=5.0,SNR=73
ILAR LR LR 09 22 26.1
comp=Z,243nm,19.1s,baz=248,slow=34
MCARA McCarthy VSAT 82.80 26 P **P** **08 47 54.4 -0.6**
MCARA McCarthy VSAT 82.80 26 P 08 47 54.4
baz=245
TDK Taldyqorghan 82.81 317 *e*P **P** **08 47 55.3 -0.1**
comp=Z,20nm,1.1s,baz=316
TDK Taldyqorghan 82.81 317 *e*P **P** **08 47 55.3 -0.1**
TDK pmax pmax
comp=Z,21nm,1.1s
COLD Coldfoot 82.89 19 P **P** **08 47 56.3 +0.9**
COLD lAmb lAmb 08 48 07.8
comp=Z,35nm,1.2s
COLD Coldfoot 82.89 19 P 08 47 56.3
baz=237,SNR=23
YAH Yahtse 82.94 27 P **P** **08 47 55.6 -0.4**
YAH lAmb lAmb 08 47 58.0
comp=Z,30nm,1.3s
GRNC Granite Creek 83.09 27 P **P** **08 47 56.8 +0.1**
GRNC lAmb lAmb 08 48 07.8
comp=Z,17nm,0.8s
SEM Semipalatinsk 83.11 322 *i* P **P** **08 47 55.4 -1.7**
baz=322
SEM Semipalatinsk 83.11 322 *i* P **P** **08 47 55.4 -1.7**
MENT Mentasta 83.18 24 P **P** **08 47 57.5 +0.5**
MENT lAmb lAmb 08 48 12.8
comp=Z,26nm,1.0s
TABL Table Mountain 83.25 27 P **P** **08 47 57.6 +0.1**
TABL lAmb lAmb 08 48 08.7
comp=Z,27nm,0.8s
KSH Kashi 83.25 311 P **P** **08 48 00.0 +2.0**
KSH pmax pmax
comp=Z,22nm,0.7s
BARN Barnard Glacie 83.26 27 P **P** **08 47 58.8 +1.2**
BARN lAmb lAmb 08 48 09.5
comp=Z,25nm,0.8s
MDOK Medeo 83.30 314 *e*P **P** **08 47 57.8 -0.4**
baz=314
MDOK Medeo 83.30 314 *e*P **P** **08 47 57.7 -0.4**
TNSS Tian-Shan 83.34 314 *e*P **P** **08 47 58.6 -0.1**
baz=314
TNSS Tian-Shan 83.34 314 *e*P **P** **08 47 58.6 -0.1**
DOT Dot Lake 83.36 24 P **P** **08 47 58.0 +0.2**
CTG Chitna Glacier 83.37 27 P 08 47 59.0
baz=246
CTGM Chitina Glacie 83.37 27 P **P** **08 47 58.9 +0.8**
AAA Alma-Ata 83.41 314 *e*P **P** **08 47 59.0 +0.4**
baz=314
AAA *e*S **S** **08 58 16.4 -0.3**
baz=314
AAA Alma-Ata 83.41 314 *e*P **P** **08 47 59.0 +0.4**
AAA *e*S **S** **08 58 16.3 -0.3**
A21K Barrow 83.45 15 P 08 47 58.8
baz=231,SNR=16
A21K Barrow 83.45 15 P **P** **08 47 58.3 +0.2**
LOGN Logan Glacier 83.46 27 P **P** **08 47 59.0 +0.4**
LOGN lAmb lAmb 08 48 00.5
comp=Z,27nm,1.2s
PCA Pinnacle 83.52 28 P **P** **08 47 59.1 +0.3**
PCA lAmb lAmb 08 48 16.7
comp=Z,22nm,1.0s
PINM Pinnacle 83.52 28 P 08 47 59.4
baz=247
SCRK Sand Creek 83.53 23 P 08 47 59.0
baz=244,SNR=19
SCRK Sand Creek 83.54 23 P **P** **08 47 59.0 +0.1**
SCRK lAmb lAmb 08 48 09.7
comp=Z,18nm,0.9s
PRP Porcupine Dome 83.66 22 P 08 47 57.2
baz=242
PRP Porcupine Dome 83.66 22 P **P** **08 47 57.1 -2.4**
BCPM Bancas Point 83.75 28 P **P** **08 48 00.4 +0.5**
BCPM lAmb lAmb 08 48 11.4
comp=Z,29nm,0.9s
TOLK Toolik Lake Re 83.86 18 P **P** **08 48 01.0 +0.7**
TOLK lAmb lAmb 08 48 12.4
comp=Z,34nm,1.0s
TOLK Toolik Lake Re 83.86 18 P 08 48 01.2
baz=238,SNR=18
KUU Kurty 83.97 315 *e*P **P** **08 48 00.8 -0.7**
baz=315
KUU Kurty 83.97 315 *e*P **P** **08 48 00.7 -0.7**
L27K Beaver Creek, 84.02 25 P 08 48 02.3
baz=246
L27K Beaver Creek, 84.02 25 P **P** **08 48 02.0 +0.7**
L27K lAmb lAmb 08 48 03.3
comp=Z,39nm,1.3s
KURBB Kurchatov Arra 84.22 322 P **P** **08 48 02.6 +0.1**
comp=Z,12nm,1.1s,baz=104,slow=4.1,SNR=33
KURBB PKPPKP **P'P'df** **09 14 24.3 +3.4**
comp=Z,0.2nm,0.3s,baz=289,slow=3.8,SNR=4.7
KURBB Kurchatov Arra 84.22 322 P **P** **08 48 01.4 -1.1**
NIL Nilore 84.23 304 P **P** **08 48 03.5 +0.5**
NIL pmax pmax
comp=Z,103nm,1.1s
NIL Nilore 84.23 304 P **P** **08 48 03.5 +0.5**
FYU Fort Yukon 84.26 21 P **P** **08 48 03.1 +0.8**
TKM2 Tokmak 2 84.28 314 P **P** **08 48 04.0 +0.8**
SNR=18
TKM2 Tokmak 2 84.28 314 *i* P **P** **08 48 03.4 +0.1**
TKM2 pmax pmax
comp=Z,56nm,1.1s
K27K Chicken 84.32 24 P 08 48 03.9
baz=245
K27K Chicken 84.32 24 P **P** **08 48 03.9 +1.2**
K27K lAmb lAmb 08 48 08.5
comp=Z,32nm,1.2s
QSPA South Pole Qui 84.53 180 P **P** **08 48 03.8 -0.1**
comp=Z,15nm,1.1s,baz=360,slow=1.6,SNR=18
QSPA South Pole Qui 84.53 180 P **P** **08 48 03.5 -0.5**
QSPA lAmb lAmb 08 48 20.9
comp=Z,19nm,1.0s
KBK Karagaybulak 84.69 314 P **P** **08 48 06.7 +1.4**
SNR=8.3
SIT Sitka 84.88 31 P 08 48 07.3
baz=252
BMAR Burnt Mountain 84.88 20 P **P** **08 48 05.9 +0.4**
CHMS Chumysh 84.90 314 P **P** **08 48 07.0 +0.8**
SNR=18
UCH Uchtor 84.91 313 P **P** **08 48 08.2 +1.4**
SNR=61
MAW Mawson 84.94 203 P **P** **08 48 05.8 +0.1**
comp=Z,7.0nm,1.0s,baz=96,slow=12,SNR=3.7
MAW Mawson 84.94 203 lAmb lAmb 08 48 10.2
comp=Z,7.1nm,1.4s
EGAK Eagle 84.99 23 P **P** **08 48 06.3 +0.3**
EGAK lAmb lAmb 08 48 17.4
comp=Z,29nm,0.9s
EGAK Eagle 84.99 23 P 08 48 06.8
baz=246
AAK Ala-Archa 85.01 314 P **P** **08 48 06.7 -0.2**

comp=Z,20nm,0.9s,baz=115,slow=4.3,SNR=40
AAK LR LR 09 26 51.8
comp=Z,217nm,20.0s,baz=98,slow=36
AAK Ala-Archa 85.01 314 P **P** **08 48 08.2 +1.4**
SNR=21
AAK Ala-Archa 85.01 314*c iP* **P** **08 48 07.8 +0.9**
AAK pmax pmax
comp=Z,108nm,0.9s
AAK Ala-Archa 85.01 314 P **P** **08 48 07.4 +0.5**
HYT Haines Junctio 85.05 27 P **P** **08 48 07.9 +1.3**
SGDS Sogindy 85.08 314 *eP* **P** **08 48 07.0 -0.1**
comp=Z,14nm,1.3s,baz=314
SGDS Sogindy 85.08 314 *eP* **P** **08 48 07.0 -0.1**
SGDS pmax pmax
comp=Z,15nm,1.3s
USP Ospenovka 85.14 314 P **P** **08 48 08.0 +0.6**
SNR=46
DAWY Dawson 85.42 24 P **P** **08 48 09.2 +0.9**
DAWY IAmb IAmb 08 48 10.7
comp=Z,38nm,1.3s
AML Almayashu 85.49 313 P **P** **08 48 10.9 +1.3**
SNR=90
EKS2 Erkin-Say 85.53 313 P **P** **08 48 11.0 +1.5**
SNR=25
SKAG Skagway 85.63 29 P **P** **08 48 10.8 +1.5**
SKAG Skagway 85.63 29 P 08 48 10.6
baz=252
BTLS Baital 85.83 316 *eP* **P** **08 48 10.1 -0.6**
comp=Z,14nm,1.3s,baz=316
BTLS Baital 85.83 316 *eP* **P** **08 48 10.1 -0.6**
BTLS pmax pmax
comp=Z,14nm,1.3s
WHY Whitehorse 86.22 28 P **P** **08 48 13.6 +1.2**
WHY IAmb IAmb 08 48 14.6
comp=Z,19nm,1.1s
NRIK Noril'sk 86.52 341 P **P** **08 48 12.7 -0.8**
comp=Z,14nm,0.5s,baz=106,slow=5.2,SNR=41
NRIK Noril'sk 86.52 341*c iP* **P** **08 48 13.0 -0.6**
NRIK pmax pmax
comp=Z,16nm,0.6s
NRIK Noril'sk 86.52 341 P **P** **08 48 13.3 -0.3**
NRIK IAmb IAmb 08 48 15.4
comp=Z,18nm,0.8s
DZA Taraz 87.35 313 *eP* **P** **08 48 18.0 -0.2**
comp=Z,9.2nm,0.6s,baz=313
DZA Taraz 87.35 313 *eP* **P** **08 48 18.0 -0.2**
DZA pmax pmax
comp=Z,9.0nm,0.6s
GAR Garm 87.47 309 P **P** **08 48 19.6 +0.5**
BRZS Berezniki 87.72 320 *i P* **P** **08 48 18.0 -1.8**
baz=320
BRZS Berezniki 87.72 320 *i P* **P** **08 48 18.0 -1.8**
KBL Kabul 87.82 305 P **P** **08 48 19.5 -1.4**
KBL pmax pmax
comp=Z,17nm,1.2s
KBL Kabul 87.82 305 P **P** **08 48 19.5 -1.4**
KBL IAmb IAmb 08 48 30.3
comp=Z,17nm,1.1s
KK31 Karatay Array 87.97 313 P **P** **08 48 21.3 +0.1**
KK31 Karatay Array 87.97 313 P **P** **08 48 21.0 -0.2**
KK31 IAmb IAmb 08 48 23.6
comp=Z,16nm,0.9s
KKAR Karatay Array 87.97 313 P **P** **08 48 21.0 -0.2**
KKAR pmax pmax
comp=Z,16nm,1.0s
KKAR Karatay Array 87.97 313 P **P** **08 48 21.0 -0.2**
KKAR IAmb IAmb 08 48 23.6
comp=Z,16nm,0.9s
DLBC Dease Lake 87.99 31 P **P** **08 48 21.9 +0.9**
IUG luzhnay 88.17 312 *eP* **P** **08 48 22.3 0.0**
baz=312
IUG luzhnay 88.17 312 *eP* **P** **08 48 22.2 0.0**
INK Inuvik 89.09 21 P **P** **08 48 25.7 -0.1**
INK pmax pmax
comp=Z,37nm,1.3s
INK Inuvik 89.09 21 P **P** **08 48 25.7 -0.1**
BVAR Borovoye Array 89.67 323 P **P** **08 48 27.9 -1.0**
comp=Z,13nm,0.8s,baz=134,slow=13,SNR=39
BRVK Borovoye 89.74 323*c iP* **P** **08 48 27.9 -1.3**
BRVK pmax pmax
comp=Z,17nm,1.0s
BRVK Borovoye 89.74 323 P **P** **08 48 28.2 -1.1**
BRVK IAmb IAmb 08 48 34.9
comp=Z,18nm,1.1s
J05D Fort Rock, OR 90.84 47 P 08 48 35.4
baz=263
PINE Pine Mountain 91.11 46 P **P** **08 48 35.3 -0.8**
PINE IAmb IAmb 08 48 57.2
comp=Z,10nm,1.0s
MOD Modoc Plateau 91.38 48 P **P** **08 48 37.9 +0.6**
MOD IAmb IAmb 08 48 51.4
comp=Z,14nm,1.5s
PAHR Pah Rah Range 91.85 50 P **P** **08 48 39.6 0.0**
PAHR IAmb IAmb 08 48 42.4
comp=Z,7.9nm,0.8s
I07A Izee 92.18 46 P **P** **08 48 40.5 -0.4**
I07A IAmb IAmb 08 49 09.2
comp=Z,10nm,1.1s
MWC Mount Wilson 92.42 56 P **P** **08 48 42.4 0.0**
MWC pmax pmax
comp=Z,14nm,1.1s
MWC Mount Wilson 92.42 56 P **P** **08 48 42.4 0.0**
MWC IAmb IAmb 08 48 44.9
comp=Z,14nm,1.1s
EDW2 Edwards Air Fo 92.52 55 P 08 48 43.8
baz=265
NVAR Mina Array Bea 92.57 52 P **P** **08 48 42.4 -0.6**
comp=Z,3.6nm,0.8s,baz=259,slow=5.9,SNR=13
NVAR LR LR 09 24 20.9
comp=Z,514nm,20.2s,baz=261,slow=32
CWC Cottonwood Cre 92.58 54 P 08 48 44.0
baz=265
C36M Paulatuk 92.67 21 P **P** **08 48 42.2 -0.3**
C36M IAmb IAmb 08 48 43.4
comp=Z,20nm,1.1s
C36M Paulatuk 92.67 21 P 08 48 42.4
baz=262
G08A Pilot Rock 92.67 45 IAmb IAmb 08 49 03.8
comp=Z,8.4nm,1.0s
NV11 Mina Array Sit 92.69 52 P **P** **08 48 43.4 -0.1**
KVN Kaiserville 92.78 51 P **P** **08 48 44.2 +0.2**
KVN pmax pmax
comp=Z,5.0nm,1.0s
KVN Kaiserville 92.78 51 P **P** **08 48 44.2 +0.2**
MPMC Manual Prospec 93.03 54 P 08 48 46.0
baz=266
SYO Syowa Base 93.03 199*‖eX* **P** **08 48 42.0 -2.2**
SYO Syowa Base 93.03 199*‖esP* sP 08 49 01.6 +1.1
E09A Wood Farm, Sta 93.34 44 P **P** **08 48 45.6 -0.5**
E09A IAmb IAmb 08 48 59.2
comp=Z,9.4nm,0.9s
HRA Herat 93.39 304 P **P** **08 48 45.3 -1.6**
TPH Tonopah 93.39 52 P **P** **08 48 47.3 +0.5**
TPH pmax pmax
comp=Z,31nm,1.2s
TPH Tonopah 93.39 52 P **P** **08 48 47.3 +0.5**
FURC Furnace Creek, 93.56 54 P 08 48 48.4
baz=266
BMO Blue Mountains 93.81 45 P **P** **08 48 48.0 -0.4**
BMO pmax pmax
comp=Z,16nm,1.5s
BMO Blue Mountains 93.81 45 P **P** **08 48 48.0 -0.4**
BMO IAmb IAmb 08 49 14.7
comp=Z,16nm,1.5s
SHOC Shoshone, Teco 94.00 54 P 08 48 50.7
baz=266
TPNV Topopah Spring 94.09 53 P 08 48 51.0
baz=266
BELC Belle Mtn. Jos 94.10 56 P 08 48 51.2
baz=266
NEW Newport 94.15 42 P 08 48 49.1
baz=267
NEW Newport 94.15 42 P **P** **08 48 49.0 -0.9**
NEW pmax pmax
comp=Z,11nm,1.2s
NEW Newport 94.15 42 P **P** **08 48 49.0 -0.9**
NEW IAmb IAmb 08 48 50.9
comp=Z,11nm,1.2s
GMRC Granite Mounta 94.43 56 P 08 48 52.7
baz=266
BC3 Big Chuckawall 94.53 57 P 08 48 53.6
baz=266
MFID Camas Ranch 94.78 47 P **P** **08 48 52.8 -0.2**
SHPR Sheep Range 94.94 54 P **P** **08 48 54.3 +0.4**
PRN Pahroc Range 95.07 53 P **P** **08 48 55.1 +0.7**
SPR3 Spring Creek 3 95.71 51 P **P** **08 48 57.6 +0.1**

ABKAR Akbulak array 95.86 319 P **P** **08 48 56.0 -1.6**
YKA Yellowknife Ar 96.04 28 P **P** **08 48 58.5 +0.4**
comp=Z,8.9nm,1.1s,baz=268,slow=4.3,SNR=52
YKA LR LR 09 28 42.4
comp=Z,300nm,20.0s,baz=0.0,slow=33
WALA Waterton Lakes 96.31 41 P **P** **08 48 60.0 +0.2**
WALA IAmb IAmb 08 49 13.3
comp=Z,15nm,1.1s
ARU Arti 96.77 326 P **P** **08 49 00.1 -1.4**
comp=Z,1.4nm,0.7s,baz=311,slow=4.6,SNR=5.8
ARU Arti 96.77 326*c iP* **P** **08 48 59.1 -2.4**
ARU 08 52 53.0
ARU S **SKSac** **08 59 32.9 -1.8**
ARU pmax pmax
comp=Z,8.0nm,1.1s
ARU Arti 96.77 326 P **P** **08 48 59.6 -1.9**
ARU IAmb IAmb 08 49 05.1
comp=Z,6.3nm,0.9s
AKTO Aktyubinsk 97.13 320 P **P** **08 49 02.1 -1.2**
comp=Z,2.0nm,0.9s,baz=92,slow=4.1,SNR=5.1
MTPU Mount Pierson 97.36 52 P Pdif 08 49 05.5 +0.3
PDAR Pinedale Array 99.37 48 PP **PP** **08 53 21.0 +3.5**
comp=Z,1.1nm,1.0s,baz=248,slow=7.4,SNR=4.2
PDAR LR LR 09 31 04.0
comp=Z,450nm,18.4s,baz=278,slow=34
VNA2 Neumayer--Watz 102.64 187 Pdiff **Pdif** **08 49 24.3 -3.2**
TXAR Lajitas Array 104.55 61 PKiKP **PKiKP** **08 53 52.9 -0.1**
comp=Z,0.9nm,1.1s,baz=242,slow=2.7,SNR=4.3
TXAR PKKPbc **PKKPdf** **09 05 32.6 -0.2**
comp=Z,0.5nm,0.9s,baz=153,slow=4.2,SNR=3.6
MAK Makhachkala 104.78 313 *eP* **Pdif** **08 49 37.1 -0.5**
MAK *e* 08 53 56.6
MAK *e* 09 00 14.2
MAK *eSS* SS 09 08 53.8 +6.3
MAK pmax pmax
comp=Z,148nm,1.5s
KLMR Klimovskoe 105.89 332 *eP* **Pdif** **08 49 35.9 -6.1**
KLMR pmax pmax
comp=Z,11nm,1.5s
KLMR Klimovskoe 105.89 332 *ePdif* **Pdif** **08 49 36.0 -6.1**
KLMR AMP 08 49 37.4
comp=Z,11nm,1.5s
FINES FINESS Array B 111.58 335 Pdiff **Pdif** **08 50 06.2 -1.1**
comp=Z,0.8nm,0.6s,baz=48,slow=2.8,SNR=4.8
NACGM Naroch 114.45 329 *i* PKP PKPdf 08 54 13.7 +3.1
NACGM *i* PKP PKPdf 08 54 13.7 +3.1
NACGM *i* PKP PKPdf 08 54 13.7 +3.1
NACGM *i* PP PP 08 55 49.4 +42
NACGM *i* SKP 08 57 40.3
NACGM *i* PPP PPP 08 59 02.8
NACGM *i* SKKS 09 02 52.3
NACGM *i* SSS SSS 09 17 39.1
NACGM *i* LQ LQ 09 31 48.0
NACGM *i* LR LR 09 40 49.2
AKASG Malin Array Be 114.94 324 PKP **PKiKP** **08 54 11.6 -0.1**
comp=Z,1.2nm,0.6s,baz=52,slow=2.3,SNR=7.3
AKASG Malin Array Be 114.94 324 *i* PKiKP **PKiKP** **08 54 11.3 -0.5**
AKASG Malin Array Be 114.94 324 **PKiKP** **08 54 11.2 -0.5**
BRTR Keskin Array B 115.63 312 PKP **PKiKP** **08 54 12.7 -1.0**
comp=Z,0.7nm,0.9s,baz=25,slow=3.3,SNR=4.2
NOA NORSAR Array B 117.47 340 PKP **PKiKP** **08 54 16.4 0.0**
comp=Z,0.8nm,0.7s,baz=47,slow=1.9,SNR=5.1
N49A Columbus Grove 118.29 46 **PKPdf** **08 54 17.9 -0.6**
PLCA Paso Flores 119.35 143 PKP **PKiKP** **08 54 21.6 +0.8**
comp=Z,1.3nm,0.8s,baz=267,slow=5.8,SNR=4.1
CRVS Cervenica-Dubn 120.23 325 *e* PKiKP 08 54 32.2 +10
NIE Niedzica 120.63 326 PKIKP **PKiKP** **08 54 24.3 +1.4**
M54A Oil Creek Stat 121.27 44 P 08 54 24.7
baz=293
BI02 San Fabin de 121.36 139 PKPdf **PKPdf** **08 54 24.1 -0.6**
MORC Moravsky Berou 121.94 327 *ePKP* **PKiKP** **08 54 26.6 +1.1**
MORC *e* 08 54 35.7
MORC Moravsky Berou 121.94 327 PKIKP **PKPdf** **08 54 25.1 -0.3**
MORC Moravsky Berou 121.94 327 PKPdf **PKPdf** **08 54 25.1 -0.3**
D56A ZEC Mazanza, M 121.95 36 P 08 54 25.6
baz=300
KRLC Kraliky 122.18 328 *e*PKIKP **PKiKP** **08 54 26.5 +0.5**
KRLC MLR MLR
comp=Z,200nm,16.9s
KRLC Kraliky 122.18 328 *e*PKPDF **PKiKP** **08 54 26.5 +0.5**
KRLC AMS AMS 09 48 30.0
comp=Z,200nm,16.9s
OSTC Ostas 122.19 329 *e*PKPDF **PKiKP** **08 54 26.4 +0.5**
OSTC *ep*PKP **pPKPdf** **08 54 36.2 -2.4**
JAVC Velka Javorina 122.39 326 *e*PKP **PKiKP** **08 54 27.1 +0.7**
P56A Dayton Farm, R 122.61 46 P 08 54 27.3
baz=292
VRAC Vranov 122.72 327 *e*PKP **PKiKP** **08 54 27.5 +0.5**
VRAC *e* 08 54 37.2
BO02 Sierra Bellavi 122.77 138 **PKiKP** **08 54 28.0 +0.4**
BSEG Bad Segeberg 122.82 335 *e*PKPdf **PKiKP** **08 54 28.4 +1.4**
baz=50,slow=2.0
MODS Modra-Piesok 122.87 326 *e*PKIKP **PKiKP** **08 54 28.7 +1.4**
MODS *e* 08 54 37.9
MODS Modra-Piesok 122.87 326 *e*PKP **PKiKP** **08 54 28.7 +1.4**
MODS *e* 08 54 37.9
KRUC Moravsky 122.97 327 *e*PKP **PKiKP** **08 54 27.6 +0.1**
KRUC *e* 08 54 37.5
N57A Milroy 123.03 44 P 08 54 27.6
baz=294
BRG Berggiesshubel 123.16 330 PKIKP **PKiKP** **08 54 28.5 +0.7**
BRG Berggiesshubel 123.16 330 *e*PKP **PKiKP** **08 54 28.2 +0.4**
BRG Amp 08 54 29.9
comp=Z,17nm,1.4s
BRG *ex* x 08 54 37.9
BRG Amp 08 54 39.4
comp=Z,13nm,1.2s
BRG Berggiesshubel 123.16 330 *e*PKPdf **PKiKP** **08 54 28.8 +1.0**
baz=50,slow=2.0
O57A Amberson 123.19 45 P 08 54 29.2
baz=294
TREC Trest 123.32 328 AMS AMS 09 48 00.0
comp=Z,300nm,21.9s
CLL Collm 123.34 331 *e*PKPdf **PKPdf** **08 54 28.0 +0.1**
CLL *i* pPKPdf **pPKPdf** **08 54 37.8 -2.9**
comp=Z,8.0nm,1.0s
CLL LmV 09 46 00.0
comp=Z,100nm,20.2s
CLL Collm 123.34 331 PKIKP **PKPdf** **08 54 27.8 -0.1**
CLL Collm 123.34 331 **PKPdf** **08 54 27.8 -0.1**
FBE Freiberg 123.42 330 *e*PKPdf **PKiKP** **08 54 29.6 +1.3**
baz=50,slow=2.0
FLTG Flechtingen 123.51 333 *e*PKPdf **PKiKP** **08 54 29.4 +1.0**
baz=50,slow=2.0
H58A Gabriels 123.61 39 P 08 54 29.1
baz=299
T58A Grand View Acr 123.78 49 P 08 54 30.1
baz=291
NRDL Niedersach Rie 123.91 333 *e*PKPdf **PKiKP** **08 54 30.7 +1.6**
baz=50,slow=2.0
CONA Conrad Observa 123.91 326 *eP* **PKiKP** **08 54 30.0 +0.5**
comp=Z,10nm,1.7s
K59A Cooperstown 123.96 41 P 08 54 28.8
baz=298
NEUB Neuenburg 124.00 331 *e*PKPdf **PKiKP** **08 54 30.7 +1.2**
baz=50,slow=2.0
SDMD Soldier's Deli 124.07 45 **PKiKP** **08 54 31.0 +1.0**
TANN Tannenbergstha 124.18 330 *e*PKPdf **PKiKP** **08 54 30.9 +1.0**
baz=50,slow=2.0
CKRC Cesky Krumlov 124.22 328 *e*PKPDF **PKiKP** **08 54 30.7 +0.7**
CKRC *ep*PKP **pPKPdf** **08 54 40.3 -2.2**
CKRC AMS AMS 09 49 10.0
comp=Z,200nm,22.1s
CLZ Clausthal 124.23 333 *e*PKPdf **PKiKP** **08 54 31.3 +1.4**
baz=50,slow=2.0
GUNZ Gunzen 124.28 330 *e*PKPdf **PKiKP** **08 54 31.3 +1.2**
baz=50,slow=2.0
WERN Wernitzgruen 124.30 330 *e*PKPdf **PKiKP** **08 54 31.3 +1.2**
baz=50,slow=2.0
KHC Kasperske Hory 124.42 329 *e*PKIKP **PKiKP** **08 54 30.7 +0.3**
KHC *e* 08 54 39.9
KHC MLR MLR
comp=Z,200nm,21.5s
KHC Kasperske Hory 124.42 329 *e*PKPDF **PKiKP** **08 54 30.7 +0.3**
KHC *ep*PKP **pPKPdf** **08 54 39.9 -3.0**
KHC AMS AMS 09 50 10.0
comp=Z,200nm,21.5s
KHC Kasperske Hory 124.42 329 PKPdf **PKiKP** **08 54 30.4 0.0**
MOX Moxa 124.44 331 *e*PKPdf **PKiKP** **08 54 30.3 0.0**
baz=50,slow=2.0
I60A Shoreham 124.45 39 P 08 54 31.1
baz=300
ARSA Arzberg 124.48 326 *eP* **PKiKP** **08 54 30.8 +0.3**
comp=Z,11nm,2.2s
GEC2 GERESS Array S 124.53 328 **PKiKP** **08 54 31.0 +0.3**

GEC2 GERESS Array S 124.53 328 *e*PKPdf **PKiKP** **08 54 31.4 +0.7**
baz=50,slow=2.0
GERES GERESS Array B 124.53 328 PKP **PKiKP** **08 54 30.9 +0.3**
comp=Z,1.8nm,0.6s,baz=73,slow=2.0,SNR=15
GERES GERESS Array B 124.53 328 PKIKP **PKiKP** **08 54 31.0 +0.3**
GTTG Gottingen 124.62 333 *e*PKPdf **PKiKP** **08 54 31.9 +1.3**
baz=50,slow=2.0
MANZ Manzenberg 124.63 330 *e*PKPdf **PKiKP** **08 54 31.9 +1.2**
baz=50,slow=2.0
O60A Telford 124.70 44 P 08 54 32.0
baz=296
E61A Lac Etchemin 124.77 35 P 08 54 31.5
baz=304
WET Wettzell 124.77 329 *e*PKPdf **PKiKP** **08 54 32.2 +1.1**
baz=50,slow=2.0
MOA Molln 124.83 327 *eP* **PKiKP** **08 54 31.4 +0.1**
comp=Z,5.2nm,1.2s
IBBN Ibbenburen 125.07 334 *e*PKPdf **PKiKP** **08 54 32.6 +1.1**
baz=50,slow=2.0
SOKA Soboth 125.08 325 *eP* **PKPdf** **08 54 31.1 -0.5**
comp=Z,1.6nm,0.8s
UBBA Unterbreizbach 125.09 332 *e*PKPdf **PKiKP** **08 54 32.7 +1.2**
baz=50,slow=2.0
GRF Grafenberg Arr 125.26 330 *e*PKPdf **PKiKP** **08 54 32.9 +0.9**
baz=50,slow=2.0
KASTN Kahler Asten 125.56 333 *e*PKPdf **PKiKP** **08 54 33.7 +1.1**
baz=50,slow=2.0
KBA Koelnbreinsper 125.79 327 *eP* **PKPdf** **08 54 32.9 0.0**
comp=Z,1.5nm,0.6s
BUG Bochum--Univer 125.90 334 *e*PKPdf **PKiKP** **08 54 32.4 +1.0**
baz=50,slow=2.0
TNS Taunus Mts 126.23 332 *e*PKPdf **PKiKP** **08 54 34.9 +0.9**
baz=50,slow=2.0
ABTA Abfaltersbach 126.44 327 *eP* **PKPdf** **08 54 34.2 +0.1**
comp=Z,3.2nm,0.8s
WATA Walderalm 126.58 328 *eP* **PKiKP** **08 54 35.0 +0.1**
comp=Z,2.0nm,0.6s
WTTA Wattenberg 126.59 328 *eP* **PKiKP** **08 54 35.3 +0.3**
comp=Z,4.0nm,0.7s
WTTA Wattenberg 126.59 328 PKIKP **PKiKP** **08 54 35.5 +0.5**
MOTA Moosalm 126.83 328 *eP* **PKPdf** **08 54 34.9 0.0**
comp=Z,2.3nm,0.5s
SQTA Sankt Quirin 126.85 328 *eP* **PKPdf** **08 54 35.1 +0.2**
comp=Z,6.6nm,0.8s
STU Stuttgart 126.86 331 *e*PKPdf **PKiKP** **08 54 36.1 +0.9**
baz=50,slow=2.0
BTNL Ternell 127.01 334 *d*PKP **PKPdf** **08 54 35.0 0.0**
BTNL *dx* x 08 54 40.8
BTNL *dp*PKP **pPKPdf** **08 54 45.1 -2.7**
MEM Membach 127.05 334 *d*PKP **PKiKP** **08 54 35.5 0.0**
MEM *dp*PKP **pPKPdf** **08 54 45.3 -2.5**
FETA Feichten 127.23 328 *eP* **PKiKP** **08 54 36.0 -0.2**
comp=Z,5.1nm,0.9s
BCLA Clavier 127.50 334 *d*PKP **PKPdf** **08 54 35.5 -0.4**
BCLA *dp*PKP **pPKPdf** **08 54 46.3 -2.4**
DAVA Damuels 127.50 329 *eP* **PKPdf** **08 54 36.0 -0.3**
comp=Z,9.9nm,1.1s
BFO Black Forest 127.58 331 *e*PKPdf **PKiKP** **08 54 37.0 +0.3**
baz=50,slow=2.0
WLF Walferdange 127.67 333 *d*PKP **PKiKP** **08 54 37.9 +1.1**
WLF *dp*PKP **pPKPdf** **08 54 47.2 -1.9**
WLF *ds*PKP 08 54 50.1
WLF Walferdange 127.67 333 *e*PKPdf **PKiKP** **08 54 38.5 +1.7**
baz=50,slow=2.0
BMRD Maredsous 127.81 334 *d*PKP **PKiKP** **08 54 37.9 +0.8**
BMRD *dx* x 08 54 42.3
BMRD *dp*PKP **pPKPdf** **08 54 46.9 -2.4**
BMRD *ds*PKP 08 54 50.2
SNF Seneffe 127.86 335 *dx* x 08 54 42.5
SNF *dp*PKP pPKPdf 08 54 47.1 -2.2
SNF *ds*PKP 08 54 50.8
DOU Dourbes 128.04 334 *d*PKP **PKiKP** **08 54 37.8 +0.3**
DOU *dx* x 08 54 43.2
DOU *dp*PKP **pPKPdf** **08 54 47.0 -2.7**
ECH Echery 128.23 331 PKIKP **PKiKP** **08 54 38.3 +0.3**
ECH Echery 128.23 331 PKPdf **PKiKP** **08 54 38.3 +0.3**
TUE Stuetta 128.31 328 PKPdf **PKiKP** **08 54 38.3 -0.2**
OTAV Otavalo 128.70 94 PKIKP **PKiKP** **08 54 41.1 +0.6**
OTAV Otavalo 128.70 94 PKPdf **PKiKP** **08 54 41.1 +0.6**
LVC Limon Verde 130.70 126 PKIKP **PKiKP** **08 54 45.7 +1.5**
LVC Limon Verde 130.70 126 **PKiKP** **08 54 45.7 +1.5**
PB01 IPOC Station P 130.98 124 **PKiKP** **08 54 44.9 +0.5**
ROSC El Rosal 133.20 88 PKP **PKPdf** **08 54 48.9 +0.7**
comp=Z,4.4nm,0.5s,baz=273,slow=22,SNR=4.5
LPAZ La Paz 134.22 119 PKP **PKPdf** **08 54 51.0 +0.6**
comp=Z,3.9nm,0.8s,baz=260,slow=1.7,SNR=10
LPAZ La Paz 134.22 119 PKIKP **PKiKP** **08 54 52.4 +0.6**
LPAZ La Paz 134.22 119 PKPdf **PKiKP** **08 54 52.4 +0.6**
SDV Santo Domingo 136.91 83 PKPdf **PKiKP** **08 54 56.0 -0.7**
CPUP Villa Florida 137.07 139 PKhKP PKPpre 08 54 48.1
comp=Z,2.5nm,1.1s,baz=254,slow=2.2,SNR=2.9
CPUP PKP **PKiKP** **08 54 55.8 -0.8**
comp=Z,5.3nm,0.9s,baz=209,slow=2.5,SNR=9.5
CPUP Villa Florida 137.07 139 PKIKP **PKPdf** **08 54 55.5 +0.8**
CPUP Villa Florida 137.07 139 PKPdf **PKPdf** **08 54 55.5 +0.8**
ESDC Sonseca Array 139.93 332 PKP **PKPdf** **08 54 59.8 +0.1**
comp=Z,0.4nm,0.6s,baz=38,slow=2.6,SNR=5.0
ESDC PP **PP** **08 57 54.6 -0.7**
comp=Z,1.3nm,1.0s,baz=38,slow=6.7,SNR=4.1
ESDC Sonseca Array 139.93 332 **PKPdf** **08 54 59.4 -0.2**
AQDB Aquidauana 142.05 134 *eP* **PKPdf** **08 55 04.8 +0.9**
FRTB Fartura 144.09 144 *eP* PKPbc 08 55 06.5 +1.0
PCMB Pacaembu 144.32 140 *eP* PKPbc 08 55 07.1 +0.9
PP1B Ponte de Pedra 144.44 131 *eP* **PKPdf** **08 55 08.0 -0.2**
PET01 Itanhaem-SP 144.63 147 *eP* **PKPab** **08 55 06.3 -0.6**
SPB Sao Paulo 145.10 147 **PKPdf** **08 55 09.9 +0.7**
SPB Sao Paulo 145.10 147 *eP* **PKPbc** **08 55 07.5 -1.2**
FDF Fort de France 145.49 72 PKP2 **PKPab** **08 55 10.7 +0.3**
FDF Fort de France 145.49 72 **PKPab** **08 55 10.7 +0.3**
SVB Belmont 145.67 74 PKPdf **PKPdf** **08 55 09.9 -0.4**
VAO Valinhos 145.83 147 *eP* **PKPbc** **08 55 10.9 -0.2**
RCLB Rio Claro- Sao 145.98 145 *eP* **PKPab** **08 55 11.9 -0.1**
PARB Paraibuna 146.28 149 *eP* **PKPdf** **08 55 11.8 +0.5**
TOSP Speyside 146.65 78 **PKPab** **08 55 14.8 0.0**
PTGA Pitinga 146.83 100 **PKPbc** **08 55 14.8 +0.5**
ESAR Angra dos Reis 147.14 150 *eP* **PKPdf** **08 55 13.7 +1.1**
CLDB Colider 147.35 120 *eP* **PKPbc** **08 55 14.6 -1.1**
MAN01 Angra dos Reis 147.51 151 *eP* **PKPdf** **08 55 14.6 +1.2**
VAS01 Vassouras-RJ 148.25 151 *eP* **PKPdf** **08 55 15.7 +1.2**
BSCB Bom Sucesso 148.64 147 *eP* **PKPdf** **08 55 16.4 +1.1**
DUB01 Friburgo-RJ 148.93 152 *eP* **PKPbc** **08 55 17.9 -1.8**
CAM01 Campos-RJ 149.48 153 *eP* **PKPdf** **08 55 17.7 +1.2**
TOA0 Torodi Ar. Sit 150.38 287 **PKPbc** **08 55 22.8 -0.6**
TORD Torodi Ar. Bea 150.38 287 PKPbc **PKPbc** **08 55 21.6 -1.8**
comp=Z,11nm,1.0s,baz=44,slow=2.3,SNR=29
BDFB Brasilia 150.70 136 PKPbc **PKPbc** **08 55 22.3 -1.9**
comp=Z,14nm,0.9s,baz=215,slow=0.4,SNR=15
BDFB Brasilia 150.70 136 PKIKP **PKPdf** **08 55 18.8 +0.1**
BDFB 08 55 25.4
BDFB Brasilia 150.70 136 **PKPdf** **08 55 18.8 +0.1**
BDFB PKPbc **PKiKP** **08 55 25.4 +0.5**
ALF01 Guarapari-ES 150.96 153 *eP* **PKPdf** **08 55 20.0 +1.2**
RIB01 Linhares ES 152.24 153 *eP* **PKPdf** **08 55 22.8 +1.9**
SJMB Sao Joao De Ma 152.40 151 *eP* **PKPdf** **08 55 22.7 +1.6**
NAN01 Guarapari, ES 153.64 152 *eP* **PKPdf** **08 55 24.2 +1.3**
PRPB Parauapebas 154.76 117 *eP* **PKPdf** **08 55 26.8 +2.2**
SMTB Santa Maria do 155.30 125 *eP* **PKPdf** **08 55 26.8 +1.5**
KIC Kosan Boka 157.52 273 *e*PKP1 **PKPab** **08 56 01.7 +1.5**
comp=Z,96nm,1.1s
DBIC Dimbokro 157.62 274 PKPab **PKPab** **08 56 00.4 -0.2**
comp=Z,5.7nm,0.9s,baz=51,slow=4.2,SNR=4.9
DBIC Dimbokro 157.62 274 PKP2 **PKPab** **08 56 00.8 +0.2**
DBIC Dimbokro 157.62 274 PKPab **PKPab** **08 56 00.8 +0.2**
TIC Toumodi 157.79 274 *e*PKP1 **PKPab** **08 56 01.7 +0.3**
LIC Lamto 157.80 273 *e*PKP1 **PKPab** **08 56 00.6 -0.8**
comp=Z,65nm,1.1s
ROSB Rosrio 161.29 116 *eP* **PKPdf** **08 55 33.8 +1.2**
NBMA Muriti-CE 162.91 138 *eP* **PKPdf** **08 55 35.9 +1.7**
NBMO Morrinhos-CE 164.61 124 *eP* **PKPdf** **08 55 36.9 +1.1**

IDC ***05*** *08:35:35.8±1.0, 40.95S×91.58W, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/28, mbtmp3.9/7, ML4.0/1 Error ellipse: s-maj=34.5km s-min=28.2km az=109.0*

ISC 05 08:35:37.0±1.0, 41.0S±0.2×91.5W±0.2, h10km, n10, σ1§05/10, mb3.9/6, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.87**	**96**	Pn	**Pn**		**08 39 19.3**	**-1.1**
	0.1nm,0.3s,baz=318,slow=16,SNR=6.3							
LPAZ	**La Paz**	**31.86**	**46**	P		**P**	**08 42 03.9**	**+0.9**
	2.1nm,0.9s,baz=137,slow=10.0,SNR=3.6							
SIV	**San Ignacio**	**36.24**	**56**	P		**P**	**08 42 41.4**	**+1.0**

1.0nm,0.9s,baz=258,slow=14,SNR=1.7
QSPA South Pole Qui 49.23 180 P P 08 44 25.6 +0.3
2.5nm,0.7s,baz=141,slow=1.8,SNR=5.9
TXAR Lajitas Array 70.88 349 P P 08 46 53.2 -0.9
0.6nm,0.8s,baz=168,slow=8.3,SNR=3.7
NVAR Mina Array Bea 82.76 339 P P 08 48 00.9 -0.1
0.3nm,0.4s,baz=169,slow=6.1,SNR=2.1
PDAR Pinedale Array 84.96 347 P P 08 48 11.8 -0.5
2.2nm,0.7s,baz=158,slow=5.7,SNR=7.1
KSRS Korea Array 149.42 276 PKPbc PKiKP 08 55 27.9 +0.7
1.9nm,0.9s,baz=121,slow=4.2,SNR=5.5
BELG Belogornoye 150.14 54 PKPbc PKPbc 08 55 26.0 -1.3
11nm,1.0s,baz=70,slow=0.4,SNR=1.7
KURBB Kurchatov Arra 168.15 32 PKPab PKPab 08 56 52.4 +1.2
1.7nm,1.0s,baz=318,slow=5.5,SNR=2.5

IDC 05 08:56:03.0±2.1, 5.32S×152.36E, h0km, mb3.6/3, mb1 4.0/4, mb1mx3.5/34, mbtmp3.7/4, ML1.7/1, Error ellipse: s-maj=123.2km s-min=27.6km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.57**	**232**	Pn	Pn	08 57 42.0	+1.1
	1.0nm,0.3s,baz=79,slow=5.5,SNR=6.1						
PMG				Sn	Sn	08 59 01.0	+4.4
	1.5nm,0.3s,baz=0.0,slow=17,SNR=2.1						
WRA	**Warramunga Arr**	**22.78**	**229**	P	P	09 01 07.2	-0.2
	2.0nm,0.7s,baz=55,slow=10.0,SNR=23						
ASAR	**Alice Springs**	**25.47**	**222**	P	P	09 01 33.0	-0.1
	0.5nm,0.5s,baz=54,slow=8.8,SNR=17						
ILAR	**Eielson Array**	**82.80**	**22**	P	P	09 08 29.5	+0.7
	0.4nm,0.7s,baz=242,slow=6.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**150.05**	**287**	PKPbc	PKPbc	09 15 55.6	-1.2
	0.2nm,0.5s,baz=60,slow=3.9,SNR=1.4						

IDC 05 09:03:58.5±29.0, 41.77S×88.03E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/45, mbtmp3.6/3, MS3.9/3, Ms1 3.9/3, ms1mx3.5/17, Error ellipse: s-maj=729.6km s-min=43.6km az=121.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**36.67**	**334**	T	T	09 50 17.5	
	baz=160,slow=76,SNR=31						
H08S1	**Diego Garcia H**	**36.68**	**334**	T	T	09 50 17.9	
	baz=160,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**36.69**	**334**	T	T	09 50 18.6	
	baz=160,slow=76,SNR=22						
ASAR	**Alice Springs**	**42.06**	**79**	P	P	09 11 52.1	0.0
	0.7nm,0.9s,baz=226,slow=7.1,SNR=5.3						
WRA	**Warramunga Arr**	**44.67**	**75**	P	P	09 12 12.9	-0.3
	1.2nm,1.0s,baz=227,slow=8.6,SNR=5.7						
WRA				LR	LR	09 29 21.9	
	comp=Z,179nm,19.1s,baz=115,slow=34						
VNDA	**Vanda**	**46.12**	**163**	P	P	09 12 23.9	-0.1
	0.3nm,0.4s,baz=270,slow=4.0,SNR=1.8						
VNDA				LR	LR	09 29 11.7	
	comp=Z,137nm,19.8s,baz=308,slow=33						
CMAR	**Chiang Mai Arr**	**60.77**	**12**	LR	LR	09 37 50.6	
	comp=Z,53nm,19.5s,baz=200,slow=33						

*IDC **05** 09:07:50.9±1.4, 27.98N×131.59E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.4/50, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=133.5km s-min=20.7km az=91.0*
*JMA **05** 09:07:51.8±0.1, 28.02N×131.17E, h84km±3km, M3.3*
ISC 05 09:07:52.7±2.8, 28.02N±0.03×131.17E±0.05, h23km±22km, n26, σ1s67/46, mb3.6/4, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**1.10**	**286**	P	Pn	09 08 12.7	0.0
JZK				S	Sb	09 08 27.5	+0.5
JAM	**Amami Oshima**	**1.44**	**286**	P	Pn	09 08 16.7	-0.7
JAM				eS	Sn	09 08 34.7	-0.8
JAMN	**Amaminishikomi**	**1.78**	**278**	P	Pn	09 08 21.2	-0.9
JAMN				S	Sn	09 08 43.2	-0.8
JTK	**Tokunoshima**	**1.98**	**264**	P	Pn	09 08 24.1	-0.8
JTK				eS	Sn	09 08 47.2	-1.8
JTAJ	**Takarajima**	**2.06**	**304**	P	Pn	09 08 25.1	-0.9
JTAJ				eS	Sn	09 08 49.9	-1.2
JKDJ	**Kitadaitoujima**	**2.07**	**177**	S	Sn	09 08 49.5	-1.6
JNN	**Nakanoshima**	**2.14**	**328**	P	Pn	09 08 26.4	-0.7
JNN				eS	Sn	09 08 51.7	-1.3
JMZ	**Minamidaito 2**	**2.19**	**179**	P	Pn	09 08 26.6	-1.2
JMZ				eS	Sn	09 08 51.9	-2.4
JYAK	**Yakushimahirau**	**2.28**	**345**	P	Pn	09 08 28.3	-0.7
JYAK				eS	Sn	09 08 54.4	-2.1
JMTN	**Minamitane**	**2.38**	**354**	P	Pn	09 08 29.3	-1.1
JMTN				eS	Sn	09 08 57.1	-1.8
JOKE	**Okinoerabujima**	**2.40**	**255**	P	Pn	09 08 29.8	-0.8
JOKE				eS	Sn	09 08 58.2	-1.1
JKC	**Kuchinoerabu**	**2.58**	**341**	P	Pn	09 08 32.2	-0.9
JKC				eS	Sn	09 09 01.7	-2.0
JYRO	**Yoronjima**	**2.61**	**248**	P	Pn	09 08 32.7	-0.9
JYRO				eS	Sn	09 09 02.3	-2.3
JTN	**Tanegashima 3**	**2.63**	**356**	P	Pn	09 08 32.6	-1.2
JTN				eS	Sn	09 09 02.6	-2.4
JOW	**Kunigami**	**2.83**	**246**	P	Pn	09 08 35.9	-0.7
JOW				eS	Sn	09 09 08.8	-1.3
JIH	**Iheya**	**3.01**	**252**	P	Pn	09 08 38.0	-1.0
JIH				eS	Sn	09 09 12.6	-1.8
JNTH	**Nagotoyohara**	**3.18**	**243**	P	Pn	09 08 40.2	-1.2
JNTH				eS	Sn	09 09 15.7	-2.9
JNAR	**Kushima--Naru**	**3.49**	**1**	eS	Sn	09 09 24.2	-2.1
JSU	**Suzuyama**	**3.53**	**350**	P	Pn	09 08 45.4	-0.8
JSU				eS	Sn	09 09 25.8	-1.4
JSJ	**Shimokoshiki**	**3.86**	**341**	P	Pn	09 08 49.0	-1.7
JSJ				eS	Sn	09 09 32.4	-2.9
JTZ	**Takazaki**	**3.87**	**359**	P	Pn	09 08 50.2	-0.6
JTZ				S	Sn	09 09 33.7	-1.9
JNU	**Nakatsue**	**5.09**	**357**	Pn	Pn	09 09 08.4	+0.8
	1.7nm,0.3s,baz=204,slow=11,SNR=5.8						
JNU				Sn	Sn	09 10 02.3	-3.5
	2.2nm,0.3s,baz=246,slow=23,SNR=2.9						
KLR	**Kul'dur**	**21.18**	**1**	P	P	09 12 39.9	+3.4
	0.6nm,0.4s,baz=196,slow=7.4,SNR=3.5						
WRA	**Warramunga Arr**	**47.78**	**176**	P	P	09 16 29.1	+0.7
	1.2nm,0.7s,baz=354,slow=8.6,SNR=11						
ASAR	**Alice Springs**	**51.46**	**177**	P	P	09 16 58.0	+1.6
	0.8nm,0.8s,baz=12,slow=10,SNR=20						
YKA	**Yellowknife Ar**	**75.79**	**26**	P	P	09 19 37.1	+0.6
	0.3nm,0.7s,baz=301,slow=5.2,SNR=5.3						

*IDC **05** 09:38:19.2±5.4, 24.26S×66.91W, h165km±45km, mb3.2/1, mb1 3.2/4, mb1mx3.1/22, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/7, Error ellipse: s-maj=75.2km s-min=36.7km az=163.0*
*GUC **05** 09:38:20.8±0.5, 24.24S×67.42W, h216km±8km, ML4.1*
ISC 05 09:38:19.5±1.1, 24.24S±0.06×67.2W±0.1, h198km±15km, n18, σ1s14/31, 8C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.23**	**316**	P	Pn	09 39 01.9	+1.1
	27nm,0.3s,baz=148,slow=7.1,SNR=400						
LVC				S	Sn	09 39 33.2	+0.5
	23nm,0.3s,baz=92,slow=7.6,SNR=15						
LVC	**Limon Verde**	**2.23**	**316**	*eP*	Pn	09 39 01.9	+1.1
LVC				*eS*	Sn	09 39 33.2	+0.5
PB15	**IPOC Station P**	**2.29**	**296**	⇑*iP*	Pn	09 39 02.5	+1.3
PB15				*i* S	Sn	09 39 33.9	+0.4
GO02	**Mina Guanaco**	**2.33**	**246**	⇑*iP*	Pn	09 39 02.6	+1.0
GO02				*i* S	Sn	09 39 35.0	+0.5
GO02				IAML		09 39 36.3	
	comp=N,1μm,0.3s						
PB06	**IPOC Station P**	**2.63**	**305**	⇑*iP*	Pn	09 39 06.1	+1.2
PB06				*i* S	Sn	09 39 39.9	-0.3
PB06				IAML		09 39 42.6	
	comp=E,564nm,0.1s						
PB14	**IPOC Station P**	**2.91**	**262**	*eP*	Pn	09 39 09.0	+0.7
PB14				*i* S	Sn	09 39 45.6	-0.7
PB05	**IPOC Station P**	**3.05**	**296**	⇑*iP*	Pn	09 39 10.6	+0.8
PB05				*i* S	Sn	09 39 47.8	-1.2
PB05				IAML		09 39 51.8	
	comp=N,125nm,0.4s						
AC02	**Maricunga**	**3.10**	**213**	⇓*iP*	Pn	09 39 11.7	+1.0
PB10	**IPOC Station P**	**3.12**	**283**	⇑*iP*	Pn	09 39 11.6	+1.1
PB10				*i* S	Sn	09 39 49.6	-0.6
PB10				IAML		09 39 53.1	
	comp=N,120nm,0.5s						
PB03	**IPOC Station P**	**3.18**	**313**	⇑*iP*	Pn	09 39 12.2	+0.8
PB03				*i* S	Sn	09 39 51.1	-0.7
PB03				IAML		09 39 55.0	
	comp=E,200nm,0.1s						
PB04	**IPOC Station P**	**3.28**	**305**	⇑*iP*	Pn	09 39 13.3	+0.8
PB04				*i* S	Sn	09 39 52.9	-1.0
PB04				IAML		09 39 56.3	
	comp=N,216nm,0.1s						
PB07	**IPOC Station P**	**3.49**	**315**	*eP*	Pn	09 39 16.0	+0.8
PB07				*i* S	Sn	09 39 57.2	-1.5
PB07				IAML		09 40 00.3	
	comp=N,190nm,0.2s						
AC01	**Pan de Azucar**	**3.59**	**237**	⇑*iP*	Pn	09 39 15.9	-0.2
AC01				*i* S	Sn	09 39 58.5	-2.1
AC01				IAML		09 39 59.7	
	comp=E,182nm,0.4s						
PB01	**IPOC Station P**	**3.80**	**326**	*eP*	Pn	09 39 19.0	+0.2
PB01				*i* S	Sn	09 40 03.9	-1.4
PB01				IAML		09 40 09.0	
	comp=E,120nm,0.3s						
LPAZ	**La Paz**	**7.95**	**354**	P	Pn	09 40 14.0	+1.2
	comp=E,0.5nm,0.3s,baz=160,slow=8.5,SNR=16						
SIV	**San Ignacio**	**10.04**	**36**	P	Pn	09 40 37.1	-2.3
	comp=E,0.1nm,0.3s,baz=238,slow=13,SNR=2.4						
SIV				LR	LR	09 44 10.9	
	comp=E,46nm,18.1s,baz=142,slow=36						
TORD	**Torodi Ar. Bea**	**76.86**	**69**	P	P	09 49 51.5	+1.3
	comp=E,0.3nm,0.4s,baz=248,slow=5.6,SNR=2.3						
MKAR	**Makanchi Array**	**146.84**	**40**	PKPbc	PKPab	09 57 40.9	+0.7
	comp=E,0.5nm,0.6s,baz=302,slow=3.3,SNR=5.9						

*IDC **05** 09:40:00.1±5.0, 37.68N×139.57E, h146km±33km, mb2.9/3, mb1 3.1/3, mb1mx2.8/36, mbtmp3.3/3, Error ellipse: s-maj=72.6km s-min=23.0km az=55.0*
*JMA **05** 09:40:03.4±0.1, 37.50N×139.11E, h161km±1km, M2.7*
ISC 05 09:40:03.3±1.0, 37.51N±0.07×139.08E±0.08, h164km±7km, n15, σ0s51/20, mb3.2/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIZZ	**Izumozaki**	**0.30**	**275**	P	Pn	09 40 26.0	+0.6
JIZZ				S	Sn	09 40 43.3	+1.0
JFY	**Yanaizu**	**0.51**	**101**	P	Pn	09 40 26.2	-0.1
JKT	**Katashina**	**0.75**	**170**	P	Pn	09 40 27.5	-0.3
JSD	**Sado**	**0.84**	**309**	P	Pn	09 40 27.9	-0.2
JSD				S	Sn	09 40 46.2	-1.1
JFT	**Otama**	**1.00**	**89**	P	Pn	09 40 29.3	-0.1
JAG	**Ashikaga**	**1.12**	**164**	P	Pn	09 40 30.0	-0.4
MAT	**Matsushiro**	**1.19**	**216**	P	Pn	09 40 31.2	+0.2
MAT				S	Sn	09 40 52.5	+0.2
MAT	**Matsushiro**	**1.19**	**216**	P	Pn	09 40 31.1	+0.1
MJAR	**Matsushiro Arr**	**1.19**	**216**	P	Pn	09 40 31.2	+0.2
	1.2nm,0.3s,baz=34,slow=8.7,SNR=82						
MJAR				S	Sn	09 40 52.5	+0.2
	0.2nm,0.3s,baz=48,slow=27,SNR=4.0						
JSZ	**Suzu**	**1.37**	**268**	P	Pn	09 40 32.5	-0.1
JRY	**Ryogami san**	**1.50**	**186**	P	Pn	09 40 33.7	-0.2
JRY				eS	Sn	09 40 56.8	-0.7
JYK	**Kaneyama**	**1.73**	**35**	P	Pn	09 40 36.4	+0.1
SONM	**Songino Array**	**25.98**	**304**	P	P	09 45 20.7	-0.1
	0.6nm,0.6s,baz=101,slow=9.2,SNR=4.3						
MKAR	**Makanchi Array**	**42.29**	**301**	P	P	09 47 40.1	-0.4
	0.3nm,0.8s,baz=66,slow=7.1,SNR=2.0						
WRA	**Warramunga Arr**	**57.32**	**185**	P	P	09 49 34.8	+0.7
	0.3nm,0.9s,baz=14,slow=7.0,SNR=2.1						

*BJI **05** 09:47:53.6±0.0, 2.43S×128.42E, h68km, mB4.9/27, mb5.0/49, Ms4.2/6, Ms7 3.9/5*
*NEIC **05** 09:47:56.5±1.2, 2.04S±0.07×128.11E±0.07, h49km±6km, mb4.8/56, Error ellipse: s-maj=10.6km s-min=8.5km az=48.0*
*DJA **05** 09:47:58.7±0.3, 2.2×12.8E±°, h39km±6km, M5.0/27, mb5.0/27, mB5.5/17, MLv5.1/18, Mw(mB)5.0/17, MwMwp5.7/1, Mwp5.8/1*
*IDC **05** 09:47:59.5±0.6, 2.06S±0.04×128.09E±0.04, h71km±4km, h71km:pP-P, n196, σ1s47/206, mb4.8/74, 4C-1D, Ceram Sea*
ISC 05 09:47:59.0±0.5, 2.06S±0.04×128.09E±0.04, h71km±4km, h71km:pP-P, n196, σ1s47/206, mb4.8/74, 4C-1D, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.53**	**220**	P	Pn	09 48 23.9	-0.5
NLAI				S	Sn	09 48 43.0	-0.5
MSAI	**Masohi**	**1.53**	**147**	P	Pn	09 48 24.9	+0.5
MSAI				S	Sn	09 48 45.7	+2.1
SANI	**Sanana**	**2.10**	**270**	P	Pn	09 48 28.7	-3.2
SANI				S	Sn	09 48 52.6	-4.5
TNTI	**Ternate**	**2.90**	**346**	Pn	Pn	09 48 40.4	-2.5
TNTI	**Ternate**	**2.90**	**346**	P	Pn	09 48 42.1	-0.8
BNDI	**Bandanaira**	**3.05**	**143**	P	Pn	09 48 45.6	+0.7
BNDI				S	Sn	09 49 21.6	+1.4
SWI	**Sorong**	**3.39**	**70**	P	Pn	09 48 49.1	-0.4
SIJI	**Sorong**	**3.39**	**70**	P	Pn	09 48 47.8	-1.8
	182nm,0.3s,baz=68,slow=23,SNR=224						
SIJI				S	Sn	09 49 27.6	-1.1
	117nm,0.3s,baz=148,slow=22,SNR=13						
SIJI				LR	LR	09 50 32.2	
	comp=Z,817nm,21.8s,baz=262,slow=46						
FAKI	**Fak Fak**	**4.25**	**102**	Pn	Pn	09 48 58.0	-3.2
FAKI	**Fak Fak**	**4.25**	**102**	P	Pn	09 48 59.6	-1.6
KMSI	**Cibinong**	**4.87**	**302**	P	Pn	09 49 11.2	+1.5
LUWI	**Luwuk**	**5.41**	**281**	Pn	Pn	09 49 14.5	-2.5
LUWI	**Luwuk**	**5.41**	**281**	P	Pn	09 49 15.0	-2.1
	3.1nm6μm292nm,0.6s						
KDI	**Kendari**	**5.78**	**251**	P	Pn	09 49 24.3	+2.2
KMPI	**Kaimana, Papua**	**5.83**	**106**	P	Pn	09 49 21.5	-1.4
	4.0m704nm,0.7s						
APSI	**Ampana**	**6.53**	**280**	P	Pn	09 49 31.7	-0.8
	7.8nm21μm2μm,0.6s						
MRSI	**Marisa**	**6.64**	**292**	P	Pn	09 49 31.7	-2.2
	1.2nm5μm266nm,0.6s						
SAUI	**Saumlaki**	**6.70**	**152**	Pn	Pn	09 49 32.1	-2.7
TOLI2	**Tolitoli**	**7.95**	**293**	Pn	Pn	09 49 49.1	-2.8
BNSI	**Bone**	**8.30**	**254**	P	Pn	09 49 59.4	+2.8
	3μm370nm,0.6s						
TTSI	**Tana Toraja**	**8.31**	**263**	P	Pn	09 49 58.4	+1.5
	2μm116nm,0.7s						
SPSI	**Sidrap Palu**	**8.52**	**257**	P	Pn	09 50 02.8	+3.2
	6μm492nm,0.9s						
SOEI	**Soe**	**8.54**	**206**	Pn	Pn	09 49 58.2	-1.8
SOEI	**Soe**	**8.54**	**206**	P	Pn	09 50 04.5	+4.5
	57nm,0.9s						
BKSI	**Bulukumba**	**8.58**	**248**	P	Pn	09 50 04.3	+3.8
	6μm482nm,0.5s						
KAPI	**Kappang**	**8.82**	**250**	P	Pn	09 50 05.3	+1.6
	54nm,0.3s,baz=50,slow=5.4,SNR=57						
KAPI	**Kappang**	**8.82**	**250**	Pn	Pn	09 50 02.0	-1.7
EDFI	**Ende, Flores**	**9.20**	**224**	P	Pn	09 50 10.4	+1.3
	24nm,0.7s						
BATI	**Baumata**	**9.21**	**208**	LR	LR	09 54 06.7	
	comp=Z,372nm,18.9s,baz=26,slow=40						
MTN	**Manton Dam**	**11.13**	**164**	Pn	Pn	09 50 33.5	-1.9
BKB	**Balikpapan**	**11.21**	**274**	Pn	Pn	09 50 34.7	-1.8
BKB	**Balikpapan**	**11.21**	**274**	P	Pn	09 50 36.3	-0.1
	4μm349nm,0.6s						
KBKI	**Kotabaru**	**11.97**	**264**	P	Pn	09 50 47.4	+0.6
	24nm,0.8s						
MYLDM	**Lahad Datu**	**11.97**	**307**	Pn	Pn	09 50 44.7	-2.1
GENI	**Genyem**	**12.09**	**93**	P	Pn	09 50 47.1	-1.3
	127nm,0.6s						
PLAI	**Plampang**	**12.26**	**236**	P	Pn	09 50 54.1	+3.3
JAY	**Jayapura**	**12.62**	**92**	P	Pn	09 50 54.1	-1.6
	4.4nm,0.3s,baz=228,slow=7.1,SNR=17						
JAY	**Jayapura**	**12.62**	**92**	P	Pn	09 50 55.9	+0.2
	29nm,0.9s						
MTKI	**Muara Teweh, K**	**13.23**	**275**	P	Pn	09 51 03.8	-0.1
	24nm,0.9s						
BBKI	**Banjar Baru**	**13.30**	**264**	P	Pn	09 51 03.2	-1.7
	5μm38nm,0.8s						
FITZ	**Fitzroy Crossi**	**16.12**	**188**		P	09 51 42.7	-0.6
KSM	**Kuching**	**18.12**	**281**	P	P	09 52 04.6	-0.9
WB0	**Warramunga Arr**	**18.65**	**161**	P	P	09 52 09.8	-1.5
WRAB	**Tennant Creek**	**18.79**	**161**	P	P	09 52 12.3	-0.6
WRA	**Warramunga Arr**	**18.80**	**161**	P	P	09 52 12.4	-0.5
	2.9nm,0.3s,baz=342,slow=13,SNR=139						
WRA				S	S	09 55 34.1	-8.8
	1.4nm,0.3s,baz=342,slow=20,SNR=7.4						
WRA				LR	LR	09 59 41.4	
	comp=Z,154nm,19.7s,baz=330,slow=37						
WRA	**Warramunga Arr**	**18.80**	**161**	P	P	09 52 11.6	-1.3
WB2	**Warramunga Arr**	**18.80**	**161**	P	P	09 52 11.7	-1.3
WR0	**Warramunga Arr**	**18.88**	**161**	P	P	09 52 12.5	-1.2
COEN	**Coen**	**19.03**	**129**		P	09 52 15.2	-0.3
COEN				IAmb	IAmb	09 52 18.2	
	comp=Z,33nm,0.9s						
PMG	**Port Moresby**	**20.32**	**112**	P	P	09 52 29.0	-0.5
	comp=Z,8.3nm,0.7s,baz=315,slow=4.3,SNR=1.6						
PMG	**Port Moresby**	**20.32**	**112**	P	P	09 52 27.9	-1.6
PMG				IAmb	IAmb	09 52 36.0	
	comp=Z,41nm,1.1s						
TPI	**Tanjungpandan**	**20.43**	**268**	P	Pn	09 52 32.6	-0.8
	comp=Z,423nmcomp=Z,40nm,0.8s						
PSA00	**Pilbara Seismi**	**20.99**	**202**	P	P	09 52 36.3	-0.4
AS31	**Alice Springs**	**22.21**	**166**	P	P	09 52 49.2	-0.5
ASAR	**Alice Springs**	**22.21**	**166**	P	P	09 52 50.0	+0.2
	comp=Z,18nm,0.7s,baz=344,slow=8.9,SNR=181						
ASAR				S	S	09 56 46.0	-4.0
	comp=Z,7.0nm,0.9s,baz=347,slow=21,SNR=13						
ASAR				LR	LR	10 02 38.7	
	comp=Z,112nm,21.0s,baz=350,slow=40						
ASAR	**Alice Springs**	**22.21**	**166**	P	P	09 52 49.5	-0.2
KLSI		**23.46**	**263**	P	P	09 53 05.8	+3.3
	comp=Z,7.8nm,0.9s						
DSRI	**Dabo**	**23.55**	**274**	P	P	09 53 07.2	+3.9
	comp=Z,984nmcomp=Z,8.5nm,0.5s						
RABL	**Rabaul**	**24.14**	**96**	P	P	09 53 07.9	-0.7
RABL				IAmb	IAmb	09 53 32.2	
	comp=Z,57nm,0.9s						
GIRL	**Giralia**	**24.49**	**212**	P	P	09 53 11.3	-0.3
MYKOM	**Kota Tinggi**	**24.53**	**279**	P	P	09 53 10.8	-1.3
MYKOM				IAmb	IAmb	09 53 16.6	
	comp=Z,23nm,0.9s						
CTAO	**Charters Tower**	**25.22**	**137**	P	P	09 53 18.3	-0.1
YULB	**Yu-li**	**26.15**	**346**	P	P	09 53 25.3	-1.4
YULB				IAmb	IAmb	09 53 48.2	
	comp=Z,29nm,1.4s						
TPUB	**Ta-pu**	**26.23**	**344**	P	P	09 53 27.6	+0.1
TPUB				IAmb	IAmb	09 53 31.9	
	comp=Z,25nm,0.8s						
SSLB	**Suanglung**	**26.61**	**345**	P	P	09 53 29.5	-1.4
SSLB				IAmb	IAmb	09 53 32.9	
	comp=Z,16nm,0.8s						
YHNB	**Yeheng**	**27.36**	**347**	P	P	09 53 36.9	-0.8
YHNB				IAmb	IAmb	09 53 43.4	
	comp=Z,45nm,1.4s						
PSI	**Prapat**	**29.55**	**279**	P	P	09 53 58.2	+0.8
	comp=Z,3.2nm,0.4s,baz=7.6,slow=0.3,SNR=3.7						
BBOO	**Buckleboo**	**31.50**	**167**	P	P	09 54 14.6	+0.4
BBOO				IAmb	IAmb	09 54 32.3	
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**32.28**	**158**	P	P	09 54 21.9	+0.8
	comp=Z,2.6nm,0.8s,baz=342,slow=7.2,SNR=5.5						
STKA				LR	LR	10 08 06.4	
	comp=Z,75nm,20.1s,baz=13,slow=37						
STKA	**Stephens Creek**	**32.28**	**158**	P	P	09 54 21.1	0.0
WHN	**Wuhan**	**34.97**	**339**	⇑P	P	09 54 45.7	+1.3
WHN				pP	pP	09 55 01.6	+0.1
WHN				pmax	pmax		
	comp=Z,94nm,1.3s						
NJ2	**Nanjing**	**35.03**	**346**	*eP*	P	09 54 46.7	+1.7
NJ2				pmax	pmax		
	comp=Z,13nm,0.9s						
ARMA	**Armidale**	**35.96**	**144**	P	P	09 54 52.4	-0.7
ARMA				IAmb	IAmb	09 55 07.6	
	comp=Z,11nm,1.1s						
JHS	**Saijyo**	**37.16**	**7**	P	P	09 55 02.3	-0.9
JWT	**Wachi**	**37.77**	**10**	P	P	09 55 07.5	-0.8
INU	**Inuyama**	**38.14**	**12**	P	P	09 55 10.1	-1.3
CAN	**Canberra**	**38.38**	**152**	P	P	09 55 12.7	-0.8
CAN				IAmb	IAmb	09 55 32.3	
	comp=Z,17nm,1.1s						
JGF	**Kuroka**	**38.45**	**12**	P	P	09 55 13.2	-0.9
JGF				IAmb	IAmb	09 55 39.0	
	comp=Z,25nm,1.2s						
KSAR	**Wonju Array Be**	**39.30**	**360**	P	P	09 55 20.8	-0.3
KSRS	**Korea Array**	**39.31**	**360**	P	P	09 55 21.4	+0.2
	comp=Z,8.6nm,0.9s,baz=176,slow=10,SNR=42						
KSRS				PcP	PcP	09 57 30.0	+1.4
	comp=Z,1.3nm,0.7s,baz=179,slow=3.5,SNR=6.6						
KSRS				LR	LR	10 10 07.1	
	comp=Z,42nm,21.4s,baz=180,slow=34						
KS19	**Wonju Array Si**	**39.36**	**360**	P	P	09 55 21.0	-0.5
KS19				IAmb	IAmb	09 55 23.2	
	comp=Z,11nm,0.9s						
MAJO	**Matsushiro**	**39.54**	**13**	P	P	09 55 22.0	-1.1
MAT	**Matsushiro**	**39.54**	**13**	P	P	09 55 22.5	-0.6
MJAR	**Matsushiro Arr**	**39.54**	**13**	P	P	09 55 22.8	-0.3
	comp=Z,9.1nm,0.6s,baz=188,slow=9.6,SNR=30						
MJAR				LR	LR	10 10 10.4	
	comp=Z,61nm,21.0s,baz=205,slow=34						
MJAR	**Matsushiro Arr**	**39.54**	**13**	P	P	09 55 21.9	-1.2
MJAR				IAmb	IAmb	09 55 24.6	
	comp=Z,6.1nm,0.7s						
CD2	**Chengdu**	**40.14**	**327**	P	P	09 55 28.6	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
XAN	**Xi'an**	**40.18**	**335**	P	P	09 55 28.6	+0.1
XAN				pP	pP	09 55 48.5	+2.8
XAN				pmax	pmax		
	comp=Z,29nm,0.8s						
XAN	**Xi'an**	**40.18**	**335**	P	P	09 55 27.7	-0.8
JSD	**Sado**	**40.99**	**12**	P	P	09 55 34.7	-0.3
JMM	**Marumori**	**41.43**	**15**	P	P	09 55 38.4	-0.2
JMM				IAmb	IAmb	09 55 43.2	
	comp=Z,25nm,0.8s						
SAIH	**SAIHA**	**42.04**	**307**	*eP*	P	09 55 45.7	+1.6
SAIH				IAmb	IAmb	09 55 47.2	

	comp=Z,50nm,0.5s							
PKI	**Pulchoki**	**50.52**	**309**	*e*P		**P**	**09 56 51.5**	**+0.7**
	comp=Z,16nm,0.5s							
PKIN	**Phulchoki**	**50.53**	**309**	*e*P		**P**	**09 56 51.4**	**+0.6**
	comp=Z,15nm,0.5s							
DMN	**Daman**	**50.77**	**309**	*e*P		**P**	**09 56 53.7**	**+1.1**
	comp=Z,43nm,0.8s							
KLR	**Kul'dur**	**51.18**	**3**	LR		LR	10 14 46.0	
	comp=Z,48nm,21.8s,baz=196,slow=31							
GKN	**Gorkha**	**51.33**	**309**	*e*P		**P**	**09 56 57.7**	**+1.1**
	comp=Z,47nm,0.6s							
KOLN	**Koldanda**	**52.03**	**308**	*e*P		**P**	**09 57 03.4**	**+1.5**
	comp=Z,102nm,0.8s							
ULN	**Ulaanbaatar**	**53.01**	**342**	P		**P**	**09 57 09.3**	**+0.6**
SONM	**Songino Array**	**53.18**	**342**	P		**P**	**09 57 10.1**	**+0.2**
	comp=Z,5.1nm,0.8s,baz=155,slow=7.5,SNR=33							
SONM				pP		**pP**	**09 57 27.5**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=150,slow=8.6,SNR=5.2							
SONM	**Songino Array**	**53.18**	**342**	P		**P**	**09 57 09.9**	**0.0**
SONM				IAmb		IAmb	09 57 11.7	
	comp=Z,6.7nm,1.0s							
BHPL	**Bhopal**	**55.34**	**300**	*e*P		**P**	**09 57 25.3**	**-0.7**
BHPL				IAmb		IAmb	09 57 26.1	
	comp=Z,13nm,0.9s							
TLY	**Talaya**	**57.42**	**342**	P		**P**	**09 57 40.5**	**+0.3**
TLY				IAmb		IAmb	09 57 42.9	
	comp=Z,4.9nm,0.9s							
BKZ	**Black Stump Fm**	**57.44**	**136**	P		**P**	**09 57 39.8**	**-0.9**
BKZ				IAmb		IAmb	09 58 04.1	
	comp=Z,7.3nm,0.8s							
URZ	**Urewera**	**57.46**	**135**	P		**P**	**09 57 39.8**	**-1.0**
WMQ	**Urumqi**	**58.24**	**327**	*e*P		**P**	**09 57 48.5**	**+2.3**
SMLA	**Simla**	**58.54**	**309**	*e*P		**P**	**09 57 49.5**	**+1.2**
PETK	**Petropavlovsk-**	**60.31**	**20**	P		**P**	**09 58 02.2**	**+2.1**
	comp=Z,4.5nm,0.7s,baz=187,slow=9.0,SNR=5.8							
PETK	**Petropavlovsk-**	**60.31**	**20**	P		**P**	**09 58 00.3**	**+0.1**
ZSN	**Zaisan**	**62.09**	**328**	*e*P		**P**	**09 58 12.5**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=328							
SHLS	**Shalkode**	**62.67**	**322**	*i* P		**P**	**09 58 15.3**	**-1.2**
	comp=Z,19nm,1.2s,baz=322							
UZB	**Uzynbulak**	**62.94**	**322**	*i* P		**P**	**09 58 18.9**	**+0.6**
	comp=Z,8.4nm,1.1s,baz=322							
MK31	**Makanchi Array**	**63.08**	**326**	P		**P**	**09 58 19.2**	**+0.2**
MKAR	**Makanchi Array**	**63.08**	**326**	P		**P**	**09 58 19.7**	**+0.7**
	comp=Z,17nm,0.7s,baz=124,slow=8.2,SNR=197							
MKAR				pP		**pP**	**09 58 36.9**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=117,slow=8.1,SNR=2.6							
MKAR	**Makanchi Array**	**63.08**	**326**	P		**P**	**09 58 19.4**	**+0.4**
MAKZ	**Makanchi**	**63.26**	**326**	P		**P**	**09 58 20.2**	**0.0**
SATY	**Saty**	**63.28**	**321**	*i* P		**P**	**09 58 21.3**	**+0.7**
	comp=Z,8.6nm,0.6s,baz=321							
KPKS	**Kokpek**	**63.32**	**322**	*e*P		**P**	**09 58 21.1**	**+0.4**
	comp=Z,10nm,0.8s,baz=322							
MA2	**Magadan**	**63.99**	**13**	P		**P**	**09 58 25.0**	**+0.3**
MDOK	**Medeo**	**64.18**	**321**	*i* P		**P**	**09 58 26.7**	**+0.2**
	baz=321							
TNSS	**Tian-Shan**	**64.18**	**321**	*e*P		**P**	**09 58 26.8**	**-0.1**
	baz=321							
AAA	**Alma-Ata**	**64.29**	**321**	*e*P		**P**	**09 58 28.0**	**+0.9**
	comp=Z,8.2nm,0.5s,baz=321							
TDK	**Taldyqorghan**	**64.30**	**323**	*e*P		**P**	**09 58 27.4**	**+0.3**
	comp=Z,10nm,0.9s,baz=323							
TKM2	**Tokmak 2**	**64.99**	**320**	P		**P**	**09 58 32.9**	**+1.0**
	SNR=6.9							
KUU	**Kurty**	**65.00**	**321**	*e*P		**P**	**09 58 31.9**	**+0.3**
	comp=Z,19nm,0.8s,baz=321							
UCH	**Uchtor**	**65.36**	**319**	P		**P**	**09 58 35.6**	**+1.0**
	SNR=12							
AAK	**Ala-Archa**	**65.57**	**319**	P		**P**	**09 58 35.8**	**+0.3**
AAK				IAmb		IAmb	09 58 37.8	
	comp=Z,5.4nm,1.0s							
AML	**Almayashu**	**65.86**	**318**	P		**P**	**09 58 39.1**	**+1.4**
	SNR=14							
USP	**Ospenovka**	**65.86**	**320**	P		**P**	**09 58 38.2**	**+0.9**
	SNR=16							
SGDS	**Sogindy**	**65.86**	**320**	*e*P		**P**	**09 58 37.0**	**-0.3**
	baz=320							
EKS2	**Erkin-Say**	**66.05**	**319**	P		**P**	**09 58 40.3**	**+1.7**
	SNR=8.3							
SEM	**Semipalatinsk**	**66.31**	**329**	*e*P		**P**	**09 58 39.4**	**-0.8**
	baz=329							
ZAA0	**Zalesovo Array**	**66.33**	**334**	P		**P**	**09 58 39.4**	**-0.6**
ZAA0				IAmb		IAmb	09 58 40.7	
	comp=Z,6.8nm,0.9s							
ZALV	**Zalesovo Beam**	**66.33**	**334**	P		**P**	**09 58 39.7**	**-0.3**
	comp=Z,5.2nm,0.8s,baz=107,slow=5.0,SNR=20							
ZALV	**Zalesovo Beam**	**66.33**	**334**	P		**P**	**09 58 39.2**	**-0.7**
GAR	**Garm**	**66.86**	**314**	P		**P**	**09 58 43.7**	**-0.1**
GAR				IAmb		IAmb	09 58 45.8	
	comp=Z,23nm,1.2s							
BTLS	**Baital**	**66.99**	**321**	*e*P		**P**	**09 58 44.3**	**-0.1**
	baz=322							
DZA	**Taraz**	**67.76**	**318**	*e*P		**P**	**09 58 49.6**	**+0.2**
	baz=318							
IUG	**Iuzhnay**	**68.32**	**317**	*i* P		**P**	**09 58 53.4**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=317							
KK31	**Karatay Array**	**68.40**	**318**	P		**P**	**09 58 53.8**	**+0.5**
KK31				IAmb		IAmb	09 58 54.8	
	comp=Z,7.6nm,1.1s							
KKAR	**Karatay Array**	**68.40**	**318**	P		**P**	**09 58 53.3**	**0.0**
KKAR				IAmb		IAmb	09 58 54.8	
	comp=Z,7.6nm,1.1s							
KKAR	**Karatay Array**	**68.40**	**318**	P		**P**	**09 58 52.8**	**-0.5**
BRZS	**Berezniki**	**70.18**	**326**	*e*P		**P**	**09 59 04.2**	**+0.1**
	comp=Z,7.3nm,1.1s,baz=326							
BRVK	**Borovoye**	**72.96**	**328**	P		**P**	**09 59 20.7**	**-0.1**
BRVK				IAmb		IAmb	09 59 22.3	
	comp=Z,12nm,1.0s							
TIXI	**Tiksi**	**73.58**	**0**	P		**P**	**09 59 23.4**	**-0.7**
SOCY	**Socotra**	**74.92**	**283**	P		**P**	**09 59 32.6**	**-0.5**
NRIK	**Noril'sk**	**76.34**	**346**	P		**P**	**09 59 41.1**	**+1.1**
	comp=Z,4.9nm,0.5s,baz=124,slow=4.9,SNR=8.8							
NRIK	**Noril'sk**	**76.34**	**346**	P		**P**	**09 59 40.4**	**+0.4**
NRIK				IAmb		IAmb	09 59 41.6	
	comp=Z,7.5nm,0.7s							
ABKAR	**Akbulak array**	**77.48**	**321**	P		**P**	**09 59 46.7**	**-0.1**
ABKAR	**Akbulak array**	**77.48**	**321**	P		**P**	**09 59 46.6**	**-0.2**
VNDA	**Vanda**	**77.55**	**173**	P		**P**	**09 59 48.8**	**+2.0**
	comp=Z,0.8nm,0.7s,baz=321,slow=3.5,SNR=5.9							
VNDA				LR		LR	10 35 17.6	
	comp=Z,38nm,18.2s,baz=323,slow=37							
VNDA	**Vanda**	**77.55**	**173**	P		**P**	**09 59 47.4**	**+0.7**
AKTO	**Aktyubinsk**	**79.02**	**322**	LR		LR	10 37 44.1	
	comp=Z,23nm,21.1s,baz=87,slow=38							
SVW2	**Sparrevohn**	**85.21**	**28**			**P**	**10 00 28.1**	**+0.6**
SVW2				IAmb		IAmb	10 00 30.5	
	comp=Z,4.8nm,0.8s							
OHAK	**Old Harbor**	**85.57**	**32**	P		**P**	**10 00 29.6**	**+0.3**
RSO	**Redoubt South**	**86.44**	**29**	P		**P**	**10 00 33.2**	**-0.6**
IMAR	**Indian Mountai**	**87.06**	**24**	P		**P**	**10 00 36.7**	**+0.2**
RND	**Reindeer**	**88.71**	**27**	P		**P**	**10 00 44.9**	**+0.4**
I23K	**Minto, Yukon-K**	**88.72**	**25**	P		**P**	**10 00 44.4**	**0.0**
I23K				IAmb		IAmb	10 00 47.3	
	comp=Z,7.4nm,1.2s							
MCK	**McKinley**	**88.72**	**26**	P		**P**	**10 00 44.8**	**+0.3**
CCB	**Clear Creek Bu**	**89.31**	**25**	P		**P**	**10 00 46.4**	**-0.8**
ILAR	**Eielson Array**	**89.72**	**25**	P		**P**	**10 00 49.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=250,slow=4.6,SNR=7.9							
ILAR	**Eielson Array**	**89.72**	**25**	P		**P**	**10 00 49.4**	**+0.3**
M24K	**Tolsona, Glenn**	**89.80**	**28**	P		**P**	**10 00 49.3**	**-0.4**
BCAR	**Beaver Creek A**	**91.88**	**27**	P		**P**	**10 00 59.1**	**-0.2**
CTGM	**Chitina Glacie**	**92.07**	**29**	P		**P**	**10 00 59.9**	**-0.4**
ARCES	**ARCESS Array B**	**96.31**	**340**	P		**P**	**10 01 18.9**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=73,slow=4.2,SNR=9.0							
ARCES				LR		LR	10 51 43.5	
	comp=Z,28nm,18.5s,baz=175,slow=40							
ARCES	**ARCESS Array B**	**96.31**	**340**	P		**P**	**10 01 19.4**	**0.0**
BURAR	**Bucovina Array**	**100.19**	**318**	Pdif		**Pdif**	**10 01 37.9**	**+0.5**
CRVS	**Cervenica-Dubn**	**102.44**	**320**	*e*PDIFF		**Pdif**	**10 01 47.8**	**+0.5**
MODS	**Modra-Piesok**	**105.27**	**320**	*e*PDIFF		**Pdif**	**10 02 00.8**	**+0.9**
TXAR	**Lajitas Array**	**123.89**	**56**	PKP		**PKiKP**	**10 06 52.2**	**+2.1**
	comp=Z,0.1nm,0.6s,baz=215,slow=1.1,SNR=2.3							
TXAR				pPKP		**pPKPdf**	**10 07 10.8**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=241,slow=2.6,SNR=3.5							
TORD	**Torodi Ar. Bea**	**125.85**	**285**	PKP		**PKiKP**	**10 06 54.3**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=58,slow=2.0,SNR=4.8							
TORD				pPKP		**pPKPdf**	**10 07 15.2**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=84,slow=1.4,SNR=4.6							
TORD	**Torodi Ar. Bea**	**125.85**	**285**	PKPdf		**PKiKP**	**10 06 54.2**	**0.0**
CPUP	**Villa Florida**	**151.30**	**170**	PKPbc		**PKiKP**	**10 07 47.4**	**+1.6**
	comp=Z,3.0nm,0.7s,baz=187,slow=1.9,SNR=9.2							
CPUP				pPKPbc		**sPKPdf**	**10 08 06.1**	**+0.8**
	comp=Z,4.5nm,0.7s,baz=336,slow=1.3,SNR=7.5							
CPUP	**Villa Florida**	**151.30**	**170**			**PKiKP**	**10 07 46.0**	**+0.3**

*IDC **05** 10:01:49.2±2.8, 37.°02S×179.°58E, h0km, mb4.1/2, mb1 4.4/3, mb1mx3.8/34, mbtmp4.1/3, ML3.9/1, Error ellipse: s-maj=81.5km s-min=31.6km az=143.0*
*WEL **05** 10:01:51.7±1.0, 38.°S±10.°×178.°0E±.°, h33km, M3.7/25, ML4.0/25, MLv3.7/25, Error ellipse: s-maj=0.0km s-min=0.0km az=172.5*
*NEIC **05** 10:01:54.8±0.7, 37.°63S±0.°09×179.°7E±0.°2, h53km±9km, mb4.1/9, Error ellipse: s-maj=18.3km s-min=11.5km az=70.0*

ISC 05 10:01:48.6±2.1, 37.°55S±0.°06×180.°00E±0.°08, h15km±10km, n84, σ1°07/103, mb4.0/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.28**	**257**	P	**Pg**	**10 02 13.4**	**+0.1**
WMGZ				S	**Sg**	**10 02 29.9**	**-0.1**
MXZ	**Matakaoa Point**	**1.34**	**269**	Pn	**Pn**	**10 02 13.4**	**+0.7**
MXZ	**Matakaoa Point**	**1.34**	**269**	P	**Pb**	**10 02 13.5**	**+0.1**
MXZ				S	**Sn**	**10 02 30.7**	**+0.4**
PUZ	**Puketiti**	**1.47**	**249**	P	**Pb**	**10 02 16.2**	**+0.5**
PUZ				S	**Sg**	**10 02 35.7**	**-0.4**
PKGZ	**Pakihiroa**	**1.56**	**257**	P	**Pb**	**10 02 17.0**	**-0.2**
PKGZ				S	**Sb**	**10 02 37.0**	**+0.3**
CNGZ	**Carnagh Statio**	**1.69**	**236**	P	**Pb**	**10 02 19.6**	**+0.2**
TWGZ	**Tauwhareparae**	**1.71**	**248**	P	**Pb**	**10 02 19.6**	**-0.2**
HAZ	**Te Kaha**	**1.77**	**263**	P	**Pb**	**10 02 20.0**	**-0.7**
HAZ				S	**Sb**	**10 02 42.3**	**-0.5**
RUGZ	**Raukumara Rang**	**1.89**	**257**	P	**Pn**	**10 02 21.5**	**+1.2**
TKGZ	**Te Karaka**	**1.92**	**242**	P	**Pn**	**10 02 21.9**	**+1.3**
MWZ	**Matawai**	**2.10**	**247**	P	**Pn**	**10 02 24.1**	**+0.8**
MWZ				S	**Sn**	**10 02 49.3**	**+0.1**
RIGZ	**Rimuhau**	**2.11**	**236**	P	**Pn**	**10 02 24.7**	**+1.4**
RIGZ				S	**Sb**	**10 02 51.0**	**-1.5**
PRGZ	**Paritu Road**	**2.16**	**230**	P	**Pn**	**10 02 25.3**	**+1.3**
RAGZ	**Rawiri**	**2.25**	**244**	P	**Pn**	**10 02 26.4**	**+1.1**
RAGZ				S	**Sn**	**10 02 53.1**	**+0.1**
MHAZ	**Mahia Peninsul**	**2.29**	**225**	P	**Pn**	**10 02 27.1**	**+1.2**
KNZ	**Kokohu**	**2.35**	**230**	P	**Pn**	**10 02 27.4**	**+0.8**
URZ	**Urewera**	**2.39**	**252**	Pn	**Pn**	**10 02 28.5**	**+1.3**
	28nm,0.3s,baz=117,slow=23,SNR=42						
URZ				Sn	**Sn**	**10 02 57.0**	**+0.8**
	14nm,0.3s,baz=251,slow=0.5,SNR=5.8						
URZ	**Urewera**	**2.39**	**252**	P	**Pn**	**10 02 28.9**	**+1.7**
WHRZ	**Whale Island**	**2.42**	**262**	P	**Pn**	**10 02 29.5**	**+1.9**
RTZ	**Ruatahuna**	**2.61**	**245**	P	**Pn**	**10 02 31.8**	**+1.6**
RTZ				S	**Sn**	**10 03 03.8**	**+2.1**
EDRZ	**Edgecumbe**	**2.64**	**257**	P	**Pn**	**10 02 32.1**	**+1.4**
MARZ	**Manawahe**	**2.67**	**260**	P	**Pn**	**10 02 32.2**	**+1.2**
MUGZ	**Murupara**	**2.71**	**249**	P	**Pn**	**10 02 32.8**	**+1.2**
OPRZ	**Ohinepanea**	**2.75**	**263**	P	**Pn**	**10 02 32.9**	**+0.8**
MTHZ	**Maungataniwha**	**2.81**	**241**	P	**Pn**	**10 02 34.2**	**+1.3**
TARZ	**Mount Tarawera**	**2.85**	**255**	P	**Pn**	**10 02 35.1**	**+1.5**
MKRZ	**Makatiti**	**2.86**	**257**	P	**Pb**	**10 02 38.0**	**-1.3**
RRRZ	**Republican Roa**	**2.86**	**253**	P	**Pn**	**10 02 35.4**	**+1.7**
ARHZ	**Aropaoanui**	**2.91**	**233**	P	**Pn**	**10 02 36.4**	**+2.1**
OMRZ	**Omania**	**2.92**	**258**	P	**Pn**	**10 02 35.9**	**+1.3**
NMHZ	**Naumai**	**2.95**	**237**	P	**Pn**	**10 02 36.3**	**+1.4**
NMHZ				S	**Sn**	**10 03 12.9**	**+2.8**
HLRZ	**Highlands Stat**	**2.97**	**255**	P	**Pb**	**10 02 42.7**	**+1.6**
PRRZ	**Plateau Road**	**3.00**	**250**	P	**Pn**	**10 02 36.7**	**+1.1**
KARZ	**Kaharoa**	**3.01**	**260**	P	**Pn**	**10 02 36.7**	**+1.0**
HRRZ	**Handcock Road**	**3.05**	**253**	P	**Pn**	**10 02 37.8**	**+1.4**
ALRZ	**Allen Road**	**3.06**	**250**	P	**Pn**	**10 02 37.6**	**+1.2**
HSRZ	**Hossack Road**	**3.06**	**254**	P	**Pn**	**10 02 38.2**	**+1.8**
BKZ	**Black Stump Fm**	**3.19**	**239**		**Pn**	**10 02 38.8**	**+0.5**
BKZ	**Black Stump Fm**	**3.19**	**239**	P	**Pn**	**10 02 39.4**	**+1.1**
MCHZ	**McNeill Hill**	**3.21**	**233**	P	**Pn**	**10 02 39.8**	**+1.4**
MCHZ				S	**Sn**	**10 03 16.8**	**+0.4**
KMRZ	**Kaimai**	**3.23**	**263**	P	**Pn**	**10 02 39.5**	**+0.7**
KAHZ	**Kahuranaki**	**3.32**	**226**	P	**Pn**	**10 02 40.7**	**+0.8**
HATZ	**Hinemaiaia**	**3.35**	**245**	P	**Pn**	**10 02 41.0**	**+0.5**
KWHZ	**Kaweka Forest**	**3.37**	**235**	P	**Pn**	**10 02 41.7**	**+0.9**
KWHZ				S	**Sn**	**10 03 20.3**	**-0.3**
PXZ	**Pawanui**	**3.48**	**224**	P	**Pn**	**10 02 41.9**	**-0.3**
KUZ	**Kuaotunu**	**3.51**	**282**	P	**Pn**	**10 02 42.8**	**+0.3**
KUZ				S	**Sn**	**10 03 20.6**	**-3.2**
KRHZ	**Kereru**	**3.53**	**233**	P	**Pn**	**10 02 43.5**	**+0.7**
KRHZ				S	**Sn**	**10 03 23.6**	**-0.8**
RITZ	**Rihia Road**	**3.56**	**245**	P	**Pn**	**10 02 45.5**	**+2.3**
TOZ	**Tahuroa Road**	**3.57**	**266**	P	**Pn**	**10 02 44.2**	**+0.7**
RATZ	**Rangitukua**	**3.58**	**247**	P	**Pn**	**10 02 45.1**	**+1.5**
BHHZ	**Black Hill Sta**	**3.64**	**237**	P	**Pn**	**10 02 45.1**	**+0.6**
BHHZ				S	**Sn**	**10 03 26.5**	**-0.8**
TMVZ	**Te Maari**	**3.72**	**244**	P	**Pn**	**10 02 46.2**	**+0.6**
ETVZ	**East Tongariro**	**3.73**	**243**	P	**Pn**	**10 02 46.3**	**+0.5**
WPHZ	**Waipukurau**	**3.75**	**227**	P	**Pn**	**10 02 46.4**	**+0.5**
WPHZ				S	**Sn**	**10 03 29.0**	**-0.6**
OTVZ	**Oturere**	**3.77**	**243**	P	**Pn**	**10 02 46.7**	**+0.5**
PRHZ	**Porangahau**	**3.77**	**223**	P	**Pn**	**10 02 45.5**	**-0.7**
PNHZ	**Pukenui**	**3.79**	**230**	P	**Pn**	**10 02 46.6**	**+0.1**
PNHZ				S	**Sn**	**10 03 29.5**	**-1.5**
WNVZ	**Wahianoa**	**3.88**	**241**	P	**Pn**	**10 02 48.5**	**+0.7**
DVHZ	**Dannevirke**	**4.06**	**226**	P	**Pn**	**10 02 50.1**	**0.0**
HIZ	**Hauiti**	**4.17**	**255**	Pn	**Pn**	**10 02 51.9**	**+0.2**
BFZ	**Birch Farm**	**4.28**	**222**	Pn	**Pn**	**10 02 53.8**	**+0.7**
OUZ	**Omahuta**	**5.66**	**292**		**Pn**	**10 03 13.5**	**+1.4**
QRZ	**Quartz Range**	**6.66**	**238**	Pn	**Pn**	**10 03 26.8**	**+0.9**
THZ	**Tophouse**	**6.90**	**230**	Pn	**Pn**	**10 03 29.4**	**+0.2**
KHZ	**Kahutara**	**6.94**	**224**	Pn	**Pn**	**10 03 30.4**	**+0.7**
LTZ	**Lake Taylor**	**7.89**	**226**	Pn	**Pn**	**10 03 42.8**	**0.0**
MQZ	**McQueen's Vall**	**8.30**	**220**	Pn	**Pn**	**10 03 48.5**	**+0.1**
RPZ	**Rata Peaks**	**9.17**	**225**	Pn	**Pn**	**10 04 00.6**	**+0.3**
EIDS	**Eidsvold**	**27.38**	**288**	P	**P**	**10 07 32.4**	**-0.9**
EIDS				IAmb	IAmb	10 07 49.1	
	comp=Z,8.5nm,1.4s						
COEN	**Coen**	**40.26**	**296**	P	**P**	**10 09 24.8**	**-0.2**
AS31	**Alice Springs**	**41.62**	**276**	P	**P**	**10 09 35.6**	**-0.6**
ASAR	**Alice Springs**	**41.62**	**276**	P	**P**	**10 09 36.4**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=121,slow=8.0,SNR=75						
ASAR	**Alice Springs**	**41.62**	**276**	P	**P**	**10 09 35.6**	**-0.6**
WR0	**Warramunga Arr**	**43.08**	**281**	P	**P**	**10 09 47.4**	**-0.8**
WR0				IAmb	IAmb	10 10 08.7	
	comp=Z,3.1nm,1.1s						
WB2	**Warramunga Arr**	**43.24**	**281**	P	**P**	**10 09 49.4**	**-0.1**
WB2				IAmb	IAmb	10 09 49.6	
	comp=Z,3.9nm,1.1s						
WRAB	**Tennant Creek**	**43.25**	**281**	P	**P**	**10 09 48.4**	**-1.1**
WRAB				IAmb	IAmb	10 09 49.5	
	comp=Z,3.4nm,1.1s						
WRA	**Warramunga Arr**	**43.25**	**281**	P	**P**	**10 09 49.1**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=120,slow=7.8,SNR=15						
WRA	**Warramunga Arr**	**43.25**	**281**	P	**P**	**10 09 49.0**	**-0.5**
WB0	**Warramunga Arr**	**43.30**	**281**	P	**P**	**10 09 49.7**	**-0.3**
WB0				IAmb	IAmb	10 09 51.5	
	comp=Z,4.3nm,1.1s						
MTN	**Manton Dam**	**49.91**	**286**	P	**P**	**10 10 41.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**51.10**	**277**	P	**P**	**10 10 50.4**	**-0.4**
ARCES	**ARCESS Array B**	**145.12**	**345**	PKP	**PKPdf**	**10 21 25.2**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=29,slow=2.1,SNR=4.0						
FINES	**FINESS Array B**	**151.07**	**334**	PKPbc	**PKiKP**	**10 21 41.3**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=22,slow=2.1,SNR=5.7						
FINES	**FINESS Array B**	**151.07**	**334**		**PKiKP**	**10 21 41.0**	**+0.4**
FINES				PKPab	**PKPab**	**10 21 47.8**	**+0.1**

*JMA **05** 10:15:09.7±0.2, 29.°92N×139.°44E, h459km, M3.9*
*IDC **05** 10:15:11.8±1.1, 29.°91N×138.°99E, h417km±13km, mb3.0/11, mb1 3.1/16, mb1mx2.9/48, mbtmp3.8/16, Error ellipse: s-maj=20.3km s-min=10.4km az=86.0*

ISC 05 10:15:11.7±0.7, 29.°97N±0.°07×139.°2E±0.°1, h421km, n34, σ1°79/41, mb3.4/10, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.18**	**9**	P	**P**	**10 16 19.7**	**+2.0**
JHJ	**Hachijo jima 2**	**3.19**	**9**	P	**P**	**10 16 19.6**	**+1.8**
	19nm,0.3s,baz=104,slow=22,SNR=9.5						
JHJ				S	**S**	**10 17 11.7**	**0.0**
	24nm,0.3s,baz=60,slow=23,SNR=7.9						
CBIJ	**Chichi jima**	**3.89**	**137**	P	**P**	**10 16 23.6**	**-0.4**
CBIJ				*e*S	**S**	**10 17 20.7**	**-2.1**
JCJ	**Chichijima**	**3.89**	**137**	P	**P**	**10 16 23.7**	**-0.3**
	8.5nm,0.3s,baz=351,slow=20,SNR=19						
JCJ				S	**S**	**10 17 21.2**	**-1.6**
	93nm,0.3s,baz=271,slow=21,SNR=30						
JMKN	**Mikurajimanish**	**3.93**	**5**	P	**P**	**10 16 25.5**	**+1.3**
JHH2	**Haha-jima-NKT2**	**4.24**	**141**	*e*S	**S**	**10 17 26.2**	**-2.5**
JIE	**Ise**	**4.89**	**335**	P	**P**	10 16 36.2	+2.9
JTNC	**Tanabenakahech**	**4.90**	**323**	P	**P**	**10 16 35.0**	**+1.5**
BSO1	**Boso 1**	**4.91**	**17**	P	**P**	**10 16 35.0**	**+2.1**
BSO3	**Boso 3**	**4.95**	**13**	P	**P**	**10 16 34.8**	**+1.2**
JOD2	**Odawara 2**	**5.28**	**359**	P	**P**	**10 16 38.5**	**+1.2**
JOD2				S	**S**	**10 17 47.0**	**-0.4**
JNY	**Yasuok**	**5.49**	**349**	P	**P**	**10 16 41.5**	**+2.0**
JEG	**Eigenji**	**5.67**	**336**	P	**P**	10 16 44.2	+2.9
JHU	**Hanno**	**5.87**	**1**	P	**P**	**10 16 43.7**	**+0.4**
JHU				S	**S**	**10 17 55.7**	**-2.8**
JRY	**Ryogami san**	**6.04**	**358**	P	**P**	**10 16 46.4**	**+1.3**
JRY				*e*S	**S**	**10 17 59.6**	**-2.2**
JYT	**Yasato**	**6.30**	**7**	P	**P**	**10 16 48.0**	**+0.1**
JYT				*e*S	**S**	**10 18 02.1**	**-4.7**
JAG	**Ashikaga**	**6.45**	**2**	P	**P**	**10 16 49.5**	**+0.1**
JAG				*e*S	**S**	**10 18 05.0**	**-4.7**
MJAR	**Matsushiro Arr**	**6.61**	**353**	P	**P**	**10 16 50.9**	**-0.8**
	0.2nm,0.3s,baz=263,slow=7.4,SNR=12						
MJAR				S	**S**	**10 18 11.3**	**-1.6**
	0.1nm,0.3s,baz=175,slow=26,SNR=4.2						
JHO	**Hitachi**	**6.73**	**9**	P	**P**	**10 16 53.0**	**+0.1**
JFK	**Kawauchi**	**7.51**	**10**	S	**S**	**10 18 28.8**	**-2.4**
JMK	**Ichinoseki**	**9.12**	**10**	P	**P**	**10 17 21.3**	**+2.3**
KSRS	**Korea Array**	**11.99**	**312**	P	**P**	**10 17 49.5**	**-1.1**
	0.2nm,0.3s,baz=130,slow=12,SNR=4.7						
USRK	**Ussuriysk Ar.**	**15.32**	**340**	P	**P**	**10 18 27.1**	**+0.5**
	baz=151,slow=9.7,SNR=6.2						
KLR	**Kul'dur**	**20.06**	**346**	P	**P**	**10 19 16.2**	**+1.2**
	0.7nm,0.4s,baz=173,slow=11,SNR=5.8						
PETK	**Petropavlovsk-**	**26.80**	**25**	P	**P**	**10 20 17.2**	**+1.7**
	4.5nm,1.1s,baz=236,slow=7.8,SNR=4.1						
SONM	**Songino Array**	**30.83**	**315**	P	**P**	**10 20 50.9**	**-0.3**
	0.4nm,0.4s,baz=125,slow=9.3,SNR=5.5						
MKAR	**Makanchi Array**	**46.63**	**308**	P	**P**	**10 22 59.0**	**-1.1**
	0.1nm,0.4s,baz=96,slow=7.8,SNR=4.5						
WRA	**Warramunga Arr**	**49.84**	**186**	P	**P**	**10 23 24.2**	**-0.3**
	1.0nm,0.3s,baz=1.5,slow=7.7,SNR=46						
ASAR	**Alice Springs**	**53.56**	**186**	P	**P**	**10 23 51.6**	**+0.1**
	0.8nm,0.4s,baz=14,slow=9.8,SNR=22						
ILAR	**Eielson Array**	**56.49**	**30**	P	**P**	**10 24 13.1**	**+1.4**
	0.3nm,0.

HHAR	**Hobbs**	**2.74**	**93**	Pn		**Pn**	**10 23 07.4**	**+0.9**
HHAR	**Hobbs**	**2.74**	**93**	P		**Pn**	**10 23 07.2**	**+0.7**
	baz=275,SNR=19							
HHAR	**Hobbs**	**2.74**	**93**	P			10 23 07.2	
	baz=275,SNR=19							
CBKS	**Cedar Bluff**	**3.02**	**322**			**Pn**	**10 23 10.3**	**-0.1**
CBKS	**Cedar Bluff**	**3.02**	**322**	P		**Pn**	**10 23 10.3**	**-0.1**
	baz=140							
CBKS	**Cedar Bluff**	**3.02**	**322**	P			10 23 10.3	
	baz=140							
Z35A	**Perchaven, San**	**3.13**	**179**	Pn		**Pn**	**10 23 11.9**	**+0.1**
Z35A	**Perchaven, San**	**3.13**	**179**	P		**Pn**	**10 23 12.2**	**+0.4**
	baz=359,SNR=8.4							
Z35A				S		**Sn**	**10 23 50.8**	**+1.2**
	baz=359							
Z35A	**Perchaven, San**	**3.13**	**179**	P			10 23 12.2	
	baz=359,SNR=8.4							
Z35A				S			10 23 50.8	
	baz=359							
W39A	**Magazine**	**3.15**	**113**			**Pn**	**10 23 13.0**	**+1.0**
W39A				IAmb_Lg			10 24 05.7	
	comp=Z,85nm,0.8s							
S39A	**Bolivar**	**3.43**	**68**	Pn		**Pn**	**10 23 16.5**	**+0.6**
S39A				IAmb_Lg			10 24 14.6	
	comp=Z,57nm,0.8s							
S39A	**Bolivar**	**3.43**	**68**	P		**Pn**	**10 23 16.4**	**+0.5**
	baz=250,SNR=41							
S39A	**Bolivar**	**3.43**	**68**	P			10 23 16.4	
	baz=250,SNR=41							
U40A	**Yellville**	**3.61**	**90**	Pn		**Pn**	**10 23 18.5**	**+0.1**
U40A				IAmb_Lg			10 24 16.0	
	comp=Z,35nm,0.8s							
U40A	**Yellville**	**3.61**	**90**	P		**Pn**	**10 23 18.4**	**-0.1**
	baz=273,SNR=71							
U40A	**Yellville**	**3.61**	**90**	P			10 23 18.4	
	baz=273,SNR=71							
U40A				P			10 23 18.4	
	baz=273,SNR=71							
MIAR	**Mount Ida**	**3.61**	**121**			**Pn**	**10 23 19.3**	**+0.9**
MIAR				IAmb_Lg			10 24 20.7	
	comp=Z,61nm,0.7s							
MIAR	**Mount Ida**	**3.61**	**121**	P		**Pn**	**10 23 18.9**	**+0.4**
	baz=303,SNR=19							
MIAR				S		**Sn**	**10 24 01.8**	**+0.3**
	baz=303							
MIAR	**Mount Ida**	**3.61**	**121**	P			10 23 18.9	
	baz=303,SNR=19							
MIAR				S			10 24 01.8	
	baz=303							
Z38A	**Mt. Pleasant**	**3.74**	**148**	Pn		**Pn**	**10 23 20.1**	**0.0**
AMTX	**Amarillo**	**3.88**	**247**	Pn		**Pn**	**10 23 22.9**	**+0.7**
AMTX				IAmb_Lg			10 24 25.9	
	comp=Z,33nm,0.9s							
MGMO	**Mountain Grove**	**4.12**	**79**			**Pn**	**10 23 24.8**	**-0.6**
X40A	**Basin Creek Fa**	**4.17**	**117**			**Pn**	**10 23 26.8**	**+0.8**
X40A				IAmb_Lg			10 24 37.2	
	comp=Z,53nm,0.8s							
X40A	**Basin Creek Fa**	**4.17**	**117**	P		**Pn**	**10 23 26.8**	**+0.8**
	baz=300,SNR=11							
X40A	**Basin Creek Fa**	**4.17**	**117**	P			10 23 26.8	
	baz=300,SNR=11							
X40A				P			10 23 26.8	
	baz=300,SNR=11							
FCAR	**Ozark Folk Cen**	**4.25**	**96**			**Pn**	**10 23 28.2**	**+1.0**
WHAR	**Wooly Hollow**	**4.26**	**105**			**Pn**	**10 23 28.1**	**+0.7**
WHAR				IAmb_Lg			10 24 44.3	
	comp=Z,49nm,0.8s							
ABTX	**Abilene, Hawle**	**4.28**	**207**			**Pn**	**10 23 27.1**	**-0.5**
P38A	**Dawn**	**4.35**	**42**			**Pn**	**10 23 29.0**	**+0.4**
R40A	**Maddies Statio**	**4.42**	**64**			**Pn**	**10 23 29.7**	**+0.1**
R40A	**Maddies Statio**	**4.42**	**64**	P		**Pn**	**10 23 29.7**	**+0.1**
	baz=247,SNR=22							
R40A	**Maddies Statio**	**4.42**	**64**	P			10 23 29.7	
	baz=247,SNR=22							
WLAR	**White Oak Lake**	**4.43**	**127**	Pn		**Pn**	**10 23 30.3**	**+0.6**
WLAR				IAmb_Lg			10 24 46.4	
	comp=Z,37nm,0.9s							
WHTX	**Lake Whitney,**	**4.47**	**181**			**Pn**	**10 23 30.8**	**+0.6**
WHTX	**Lake Whitney,**	**4.47**	**181**	P		**Pn**	**10 23 30.3**	**+0.1**
	baz=1.4,SNR=6.2							
WHTX	**Lake Whitney,**	**4.47**	**181**	P			10 23 30.3	
	baz=1.4,SNR=6.2							
N35A	**Tabor**	**4.58**	**16**			**Pn**	**10 23 32.5**	**+0.7**
237A	**Washetta, Mont**	**4.63**	**164**	Pn		**Pn**	**10 23 32.1**	**-0.3**
KSCO	**Kaye Shedlock'**	**4.91**	**303**			**Pn**	**10 23 36.4**	**0.0**
KSCO				IAmb_Lg			10 25 01.6	
	comp=Z,24nm,0.7s							
BGNE	**Belgrade**	**4.97**	**353**			**Pn**	**10 23 36.3**	**-0.9**
BGNE				IAmb_Lg			10 24 55.6	
	comp=Z,35nm,0.8s							
LCAR	**Lake Charles**	**5.01**	**93**	Pn		**Pn**	**10 23 38.6**	**+1.0**
LCAR				IAmb_Lg			10 25 00.1	
	comp=Z,24nm,0.9s							
MSTX	**Muleshoe**	**5.10**	**242**			**Pn**	**10 23 37.8**	**-1.3**
CCM	**Cathedral Cave**	**5.11**	**70**			**Pn**	**10 23 39.7**	**+0.7**
NATX	**Nacogdoches**	**5.19**	**154**	Pn		**Pn**	**10 23 40.0**	**-0.1**
NATX				IAmb_Lg			10 25 16.8	
	comp=Z,33nm,0.8s							
N38A	**Joes South For**	**5.38**	**35**			**Pn**	**10 23 42.1**	**-0.6**
HBAR	**Harrisburg**	**5.49**	**98**	Pn		**Pn**	**10 23 44.6**	**+0.5**
L34A	**Svendsen Farm,**	**5.54**	**7**			**Pn**	**10 23 46.1**	**+1.2**
PBMO	**Poplar Bluff**	**5.56**	**85**	Pn		**Pn**	**10 23 46.1**	**+0.9**
PBMO				IAmb_Lg			10 25 24.2	
	comp=Z,34nm,0.7s							
435B	**Jarrell**	**5.67**	**182**			**Pn**	**10 23 45.7**	**-1.1**
435B				IAmb_Lg			10 25 30.9	
	comp=Z,26nm,0.9s							
FVM	**French Village**	**5.71**	**73**	Pn		**Pn**	**10 23 46.7**	**-0.6**
FVM				IAmb_Lg			10 25 31.0	
	comp=Z,26nm,0.8s							
T25A	**Trinidad**	**5.72**	**279**			**Pn**	**10 23 47.9**	**+0.3**
OGNE	**Ogallala**	**5.79**	**322**	IAmb_Lg			10 25 29.4	
	comp=Z,36nm,0.8s							
SLM	**Saint Louis**	**6.04**	**67**	IAmb_Lg			10 25 35.3	
	comp=Z,35nm,0.7s							
PARMO	**Parma**	**6.10**	**86**	IAmb_Lg			10 25 42.2	
	comp=Z,37nm,0.7s							
PVMO	**Portageville**	**6.15**	**88**	IAmb_Lg			10 25 42.9	
	comp=Z,34nm,0.7s							
143A	**Socs Landing,**	**6.16**	**126**	IAmb_Lg			10 25 52.0	
	comp=Z,26nm,0.9s							
K31A	**O'Neill**	**6.25**	**350**			**Pn**	**10 23 53.8**	**-0.9**
SCIA	**State Center**	**6.30**	**29**			**Pn**	**10 23 55.5**	**+0.1**
JCT	**Junction City**	**6.32**	**200**			**Pn**	**10 23 55.8**	**+0.1**
S44A	**Carbondale**	**6.57**	**77**	IAmb_Lg			10 25 54.9	
	comp=Z,24nm,0.8s							
SIUC	**Southern Illin**	**6.60**	**77**	Pn		**Pn**	**10 23 59.3**	**-0.2**
SIUC				IAmb_Lg			10 25 51.2	
	comp=Z,20nm,0.9s							
N41A	**Harden Midland**	**6.61**	**48**			**Pn**	**10 24 00.7**	**+1.2**
N41A				IAmb_Lg			10 26 02.5	
	comp=Z,31nm,0.8s							
SDCO	**Great Sand Dun**	**6.65**	**283**	Pn		**Pn**	**10 23 59.8**	**-0.7**
OXF	**Oxford**	**6.75**	**104**	Pn		**Pn**	**10 24 00.3**	**-1.2**
OXF				IAmb_Lg			10 26 06.2	
	comp=Z,28nm,0.9s							
Y45A	**Yeager Farm, C**	**6.89**	**110**	IAmb_Lg			10 26 14.6	
	comp=Z,20nm,0.7s							
ECSD	**EROS Data Cent**	**7.28**	**4**			**Pn**	**10 24 09.1**	**+0.3**
ISCO	**Idaho Springs**	**7.33**	**300**			**Pn**	**10 24 09.3**	**-0.4**
HDIL	**Hopedale**	**7.51**	**55**	Pn		**Pn**	**10 24 11.3**	**-0.6**
ANMO	**Albuquerque**	**7.58**	**261**			**Pn**	**10 24 12.0**	**-1.1**
OLIL	**Olney**	**7.67**	**70**	Pn		**Pn**	**10 24 13.1**	**-1.0**
PLAL	**Pickwick Lake**	**7.67**	**98**	IAmb_Lg			10 26 37.0	
	comp=Z,14nm,0.9s							
WVT	**Waverly**	**7.68**	**90**	Pn		**Pn**	**10 24 13.7**	**-0.6**
BNM	**Barren Site**	**7.94**	**256**	Pn		**Pn**	**10 24 18.8**	**+0.6**
PHWY	**Pilot Hill**	**7.96**	**310**	Pn		**Pn**	**10 24 17.6**	**-0.9**
SUSD	**Miller**	**8.06**	**352**	IAmb_Lg			10 26 46.7	
	comp=Z,17nm,0.8s							
L42A	**Oliver, Polo**	**8.12**	**45**	IAmb_Lg			10 26 41.6	
	comp=Z,26nm,0.8s							
LENM	**Lemitar**	**8.21**	**257**	Pn		**Pn**	**10 24 21.8**	**0.0**
JFWS	**Jewell Farm**	**8.44**	**38**	Pn		**Pn**	**10 24 25.2**	**+0.5**
JFWS				IAmb_Lg			10 26 58.9	
	comp=Z,19nm,0.8s							
TX31	**Lajitas Ar. Si**	**8.88**	**219**	Pn		**Pn**	**10 24 31.4**	**+0.5**
TX32	**Lajitas Array**	**8.88**	**219**	Pn		**Pn**	**10 24 30.4**	**-0.6**
TXAR	**Lajitas Array**	**8.88**	**219**	Pn		**Pn**	**10 24 32.1**	**+1.1**
CLTN	**Cedars of Leba**	**8.89**	**89**	Pn		**Pn**	**10 24 31.6**	**+0.7**
SFIN	**Lafayette**	**8.93**	**61**	Pn		**Pn**	**10 24 31.7**	**+0.3**
SFIN				IAmb_Lg			10 27 13.4	
	comp=Z,18nm,0.8s							
WCI	**Wyandotte Cave**	**8.96**	**75**	IAmb_Lg			10 27 20.2	
	comp=Z,12nm,0.7s							
BLO	**Bloomington**	**8.97**	**69**	IAmb_Lg			10 27 15.6	
	comp=Z,20nm,0.8s							
I40A	**Norwalk**	**9.02**	**33**	IAmb_Lg			10 27 15.5	
	comp=Z,14nm,0.8s							
LRAL	**Lakeview Retre**	**9.17**	**109**	Pn		**Pn**	**10 24 34.3**	**-0.4**
RSSD	**Black Hills**	**9.20**	**328**	Pn		**Pn**	**10 24 35.7**	**+0.4**
L44A	**Lake County Fo**	**9.26**	**49**	Pn		**Pn**	**10 24 35.6**	**-0.4**
K43A	**Burlington**	**9.33**	**45**	IAmb_Lg			10 27 36.3	
	comp=Z,21nm,0.8s							
SPMN	**Marine on St.**	**9.39**	**20**	IAmb_Lg			10 27 25.2	
	comp=Z,15nm,1.1s							
K22A	**Casper**	**9.40**	**314**	IAmb_Lg			10 27 32.5	
	comp=Z,20nm,1.1s							
FPAL	**Fort Paine**	**9.75**	**98**	IAmb_Lg			10 27 35.1	
	comp=Z,11nm,0.9s							
W50A	**Signal Mountai**	**9.84**	**94**	IAmb_Lg			10 27 36.4	
	comp=Z,13nm,0.9s							
CPCT	**Cooper Cave**	**10.43**	**92**	Pn		**Pn**	**10 24 51.4**	**-0.6**

IDC 05 10:47:39.9±1.9, 6.76S×128.45E, h0km, mb4.1/1, mb1 4.0/3, mb1mx3.5/29, mbtmp3.8/3, ML3.8/2, Error ellipse: s-maj=111.7km s-min=30.0km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.30**	**157**	Pn	Pn	10 51 02.6	-1.2
	0.4nm,0.3s,baz=335,slow=13,SNR=22						
WRA				Sn	Sn	10 53 30.5	-13
	1.5nm,0.3s,baz=334,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.61**	**163**	P	P	10 51 47.6	-0.4
	0.3nm,0.3s,baz=344,slow=10,SNR=26						
ASAR				S	Sn	10 54 50.4	-13
	0.1nm,0.3s,baz=357,slow=29,SNR=3.0						
MKAR	**Makanchi Array**	**67.19**	**327**	P	P	10 58 35.9	0.0
	1.2nm,0.5s,baz=118,slow=8.2,SNR=15						

*IDC **05** 11:01:19.0±0.8, 21.09N×122.15E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/42, mbtmp3.7/10, ML3.5/1, MS3.2/8, Ms1 3.2/8, ms1mx2.9/43, Error ellipse: s-maj=29.8km s-min=16.5km az=72.0*
*TAP **05** 11:01:19.7, 21.08N×122.11E, h34km±1km, ML4.0, D*
*JMA **05** 11:01:22.9±0.6, 21.23N×122.01E, h58km, M4.0*
ISC 05 11:01:20.2±1.8, 21.21N±0.05×122.04E±0.03, h7km±11km, n134, σ1°48/192, mb3.7/8, MS3.2/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.94**	**331**	*i* P	**Pg**	**11 01 39.1**	**+0.8**
	baz=332						
LAY				S	**Sn**	**11 01 53.2**	**-0.4**
	baz=332						
TSEB	**Hengchuen, Pin**	**1.27**	**303**	P	**Pn**	**11 01 43.5**	**-0.8**
	baz=305						
TSEB				S	**Sb**	**11 02 01.2**	**+0.4**
	baz=305						
TWKBT	**Hengchun**	**1.36**	**303**	P	**Pn**	**11 01 44.2**	**-1.3**
	baz=306						
TWKBT				*e*S	**Sn**	**11 02 04.3**	**+0.6**
	baz=306						
TWK1	**Hengchun**	**1.36**	**303**	*i* P	**Pn**	**11 01 44.6**	**-1.0**
	baz=306						
TWK1				S	**Sb**	**11 02 04.0**	**+0.3**
	baz=306						
SNW	**Nanwan**	**1.42**	**302**	*e*S	**Sn**	**11 02 05.3**	**+0.1**
	baz=305						
HEN	**Hengchun**	**1.45**	**303**	*e*P	**Pn**	**11 01 45.5**	**-1.3**
	baz=306						
HEN				*e*S	**Sg**	**11 02 07.2**	**+0.3**
	baz=306						
SLIU	**Shizi**	**1.53**	**311**	P	**Pn**	**11 01 47.3**	**-0.6**
	baz=313						
SLIU				S	**Sn**	**11 02 08.7**	**+0.6**
	baz=313						
LDUT	**Ludao**	**1.55**	**340**	P	**Pn**	**11 01 47.3**	**-0.9**
	baz=340						
LDUT				S	**Sn**	**11 02 07.7**	**-0.8**
	baz=340						
TAW	**Tawu**	**1.56**	**317**	P	**Pn**	**11 01 47.6**	**-0.8**
	baz=319						
TAW				*i* S	**Sn**	**11 02 07.4**	**-1.4**
	baz=319						
EAST	**Anshuo**	**1.61**	**317**	P	**Pn**	**11 01 48.1**	**-1.0**
	baz=318						
EAST				S	**Sn**	**11 02 08.7**	**-1.4**
	baz=318						
ECL	**Taimali**	**1.71**	**324**	*i* P	**Pn**	**11 01 49.9**	**-0.5**
	baz=325						
ECL				S	**Sn**	**11 02 11.5**	**-1.0**
	baz=325						
SCZT	**Fangliau**	**1.76**	**312**	P	**Pn**	**11 01 50.9**	**-0.1**
	baz=324						
SCZT				S	**Sb**	**11 02 15.1**	**+0.1**
	baz=324						
TWGBT	**Beinan**	**1.83**	**331**	P	**Pn**	**11 01 52.7**	**+0.6**
	baz=318						
TWGBT				S	**Sn**	**11 02 15.5**	**-0.1**
	baz=318						
TWG	**Pinlang**	**1.84**	**331**	*i* P	**Pn**	**11 01 52.5**	**+0.3**
	baz=318						
TWG				S	**Sn**	**11 02 15.6**	**-0.1**
	baz=318						
SSPT	**Xinbi**	**1.87**	**313**	*e*P	**Pn**	**11 01 53.2**	**+0.7**
	baz=327						
SSPT				*e*S	**Sb**	**11 02 18.5**	**+0.3**
	baz=327						
EDH	**Donghe**	**1.89**	**339**	P	**Pn**	**11 01 52.0**	**-0.8**
	baz=349						
EDH				S	**Sn**	**11 02 15.9**	**-0.9**
	baz=349						
LONT	**Longtian**	**1.89**	**334**	P	**Pn**	**11 01 54.0**	**+1.2**
	baz=321						
LONT				*e*S	**Sn**	**11 02 17.1**	**+0.2**
	baz=321						
MASBT	**Mashibuluo**	**1.91**	**317**	P	**Pn**	**11 01 53.5**	**+0.3**
	baz=329						
TWP	**Hsiaoliuchiu**	**1.93**	**306**	S	**Sb**	**11 02 21.6**	**+1.7**
	baz=308						
TSMG	**Majia**	**1.98**	**319**	*e*P	**Pn**	**11 01 53.8**	**-0.3**
	baz=320						
TSMG				*e*S	**Sn**	**11 02 19.0**	**0.0**
	baz=320						
CHKT	**Chengkung**	**1.98**	**342**	*e*P	**Pn**	**11 01 53.2**	**-0.9**
	baz=351						
CHKT				S	**Sn**	**11 02 16.9**	**-2.3**
	baz=351						
SSD	**Sandimen**	**2.01**	**320**	P	**Pn**	**11 01 54.8**	**+0.2**
	baz=330						
SSD				S	**Sn**	**11 02 20.3**	**+0.3**
	baz=330						
FULB	**Fuli**	**2.10**	**341**	P	**Pn**	**11 01 55.3**	**-0.5**
	baz=352						
ELDTW	**Lidau**	**2.19**	**334**	P	**Pn**	**11 01 56.2**	**-0.9**
	baz=335						
ELDTW				S	**Sn**	**11 02 22.8**	**-1.6**
	baz=335						
SLGT	**Liugui**	**2.20**	**324**	P	**Pn**	**11 01 58.1**	**+1.0**
	baz=330						
SLGT				*e*S	**Sn**	**11 02 25.4**	**+0.9**
	baz=330						
TWM1	**Shoushan**	**2.20**	**317**	P	**Pb**	**11 01 59.9**	**-0.4**
	baz=329						
TWM1				S	**Sb**	**11 02 27.7**	**0.0**
	baz=329						
SCST	**Cishan**	**2.20**	**320**	*e*P	**Pn**	**11 01 59.2**	**+2.0**
	baz=321						
SCST				*e*S	**Sb**	**11 02 26.7**	**-1.1**
	baz=321						
EYUL	**Yuli**	**2.23**	**343**	*e*P	**Pn**	**11 01 57.4**	**-0.2**
	baz=352						
EYUL				*e*S	**Sn**	**11 02 25.2**	**-0.2**
	baz=352						
TWF1	**Yuli**	**2.24**	**342**	P	**Pn**	**11 01 57.4**	**-0.4**
	baz=352						
TWF1				S	**Sn**	**11 02 24.7**	**-1.0**
	baz=352						
STYH	**Taoyuan**	**2.28**	**329**	*e*P	**Pn**	**11 01 59.9**	**+1.8**
	baz=330						
STYH				*e*S	**Sn**	**11 02 26.7**	**+0.2**
	baz=330						
STYT	**Tauyuan**	**2.28**	**329**	P	**Pn**	**11 01 59.9**	**+1.6**
	baz=329						
STYT				*e*S	**Sn**	**11 02 27.2**	**+0.6**
	baz=329						
YULB	**Yu-li**	**2.28**	**343**	P	**Pn**	**11 01 58.7**	**+0.4**
	baz=352						
SGST	**Jiashian**	**2.30**	**324**	P	**Pn**	**11 01 59.9**	**+1.4**
	baz=325						
SGST				S	**Sb**	**11 02 31.1**	**+0.3**
	baz=325						
HGSD	**Ruisui**	**2.34**	**346**	P	**Pn**	**11 01 58.7**	**-0.4**
	baz=345						
EHY	**Hungye**	**2.38**	**344**	P	**Pn**	**11 01 59.9**	**+0.3**
	baz=353						
CHN1	**Nanshi**	**2.42**	**325**	*i* P	**Pb**	**11 02 03.3**	**-0.7**
	baz=325						
CHN1				*i* S	**Sb**	**11 02 34.7**	**+0.7**
	baz=325						
WTP	**Ta-pu**	**2.42**	**327**	P	**Pn**	**11 02 02.5**	**+2.3**
	baz=312						
WTP				S	**Sb**	**11 02 34.4**	**+0.3**
	baz=312						
TPUB	**Ta-pu**	**2.46**	**328**	P	**Pb**	**11 02 03.5**	**-1.2**
	baz=313						
TPUB				S	**Sb**	**11 02 33.7**	**-1.5**
	baz=313						
SNST	**Tainan City**	**2.46**	**325**	*e*P	**Pn**	**11 02 02.0**	**+1.3**
	baz=325						
SNST				*e*S	**Sb**	**11 02 34.2**	**-1.1**
	baz=325						
YUS	**Yu-Shan**	**2.48**	**336**	P	**Pn**	**11 02 02.5**	**+1.0**
	baz=336						
YUS				S	**Sn**	**11 02 32.9**	**+0.6**
	baz=336						
TWK	**Hsinying**	**2.50**	**325**	*i* P	**Pn**	**11 02 03.8**	**+2.4**
	baz=326						
TWK				S	**Sb**	**11 02 36.2**	**-0.3**
	baz=326						
EGFH	**Guangfu**	**2.51**	**347**	*e*P	**Pn**	**11 02 02.3**	**+0.8**
	baz=356						
EGFH				*e*S	**Sn**	**11 02 32.1**	**-0.2**
	baz=356						
CHN4	**Tsaushan**	**2.52**	**328**	P	**Pn**	**11 02 04.1**	**+2.5**
	baz=313						
CHN4				S	**Sb**	**11 02 35.7**	**-1.2**
	baz=313						
ALS	**Alishan**	**2.56**	**334**	*i* P	**Pn**	**11 02 04.8**	**+2.5**
	baz=334						
ALS				S	**Sn**	**11 02 34.4**	**+0.5**
	baz=334						
ESL	**Shilin**	**2.65**	**348**	P	**Pn**	**11 02 02.5**	**-0.9**
	baz=357						
VWDT	**VWDT**	**2.67**	**342**	P	**Pn**	**11 02 04.6**	**+1.0**
	baz=350						
CHN5	**Tasauling**	**2.69**	**332**	P	**Pb**	**11 02 07.7**	**-1.1**
	baz=318						
CHN5				*e*S	**Sn**	**11 02 39.1**	**+2.2**
	baz=318						
ICHU	**Yijhu**	**2.69**	**323**	*e*S	**Sb**	**11 02 40.1**	**-1.8**
	baz=324						
WHYT	**Xinyi Township**	**2.71**	**336**	P	**Pb**	**11 02 07.4**	**-1.6**
	baz=336						
WHYT				*e*S	**Sb**	**11 02 40.6**	**-1.9**
	baz=336						
CHY	**Chiayi**	**2.73**	**327**	*e*P	**Pn**	**11 02 05.9**	**+1.5**
	baz=328						
CHY				*e*S	**Sn**	**11 02 40.4**	**+2.8**
	baz=328						
SSLB	**Suanglung**	**2.76**	**339**	*e*P	**Pn**	**11 02 06.1**	**+1.3**
	baz=328						
WGK	**Gukeng**	**2.82**	**331**	*e*P	**Pn**	**11 02 06.9**	**+1.2**
	baz=317						
WDLH	**Douliu**	**2.83**	**331**	*e*P	**Pb**	**11 02 09.2**	**-1.9**
	baz=317						
SMLT	**Sun Moon Lake**	**2.86**	**339**	*i* P	**Pn**	**11 02 09.5**	**+3.1**
	baz=323						
SMLT				S	**Sn**	**11 02 44.0**	**+2.8**
	baz=323						
WJS	**Zhushan**	**2.87**	**335**	*e*P	**Pb**	**11 02 10.0**	**-1.8**
	baz=321						
TWD	**Chiawan**	**2.89**	**352**	P	**Pn**	**11 02 07.7**	**+1.1**
	baz=351						
TWD				*e*S	**Sn**	**11 02 41.4**	**-0.2**
	baz=351						
TYC	**Yuchr**	**2.90**	**338**	P	**Pn**	**11 02 09.5**	**+2.8**
	baz=322						
WNT	**Mingjian**	**2.94**	**335**	P	**Pn**	**11 02 09.7**	**+2.4**
	baz=320						
WNT				S	**Sn**	**11 02 46.3**	**+3.5**
	baz=320						
CHGB	**Renai**	**2.95**	**344**	P	**Pn**	**11 02 08.9**	**+1.3**
	baz=353						
WPL	**Puli Township**	**2.96**	**340**	P	**Pn**	**11 02 10.0**	**+2.3**
	baz=324						
WPL				*e*S	**Sn**	**11 02 46.8**	**+3.3**
	baz=324						
NACB	**Ninganchiao**	**2.98**	**352**	*e*P	**Pn**	**11 02 08.2**	**+0.3**
	baz=360						
NACB				*e*S	**Sn**	**11 02 41.1**	**-2.7**
	baz=360						
DPDB	**Guoxing**	**3.00**	**340**	P	**Pn**	**11 02 10.5**	**+2.4**
	baz=324						
DPDB				*e*S	**Sb**	**11 02 48.1**	**-2.6**
	baz=324						
WDGT	**Dungji**	**3.01**	**313**	P	**Pn**	**11 02 08.7**	**+0.5**
	baz=314						
WDGT				*e*S	**Sn**	**11 02 42.4**	**-2.0**
	baz=314						
WHF	**Hehuan Shan**	**3.01**	**346**	P	**Pn**	**11 02 09.7**	**+1.1**
	baz=346						
WHF				S	**Sn**	**11 02 45.5**	**+0.3**
	baz=346						
ETLH	**Xiulin Townshi**	**3.03**	**350**	*e*P	**Pn**	**11 02 08.7**	**+0.1**
	baz=358						
ETLH				*e*S	**Sn**	**11 02 45.0**	**-0.2**
	baz=358						
WTCT	**Ta-ch'eng**	**3.10**	**329**	P	**Pn**	**11 02 10.2**	**+0.7**
	baz=317						
FUSS	**Fushou**	**3.11**	**346**	P	**Pn**	**11 02 12.3**	**+2.4**
	baz=355						
VCHM	**Qimei**	**3.13**	**310**	P	**Pn**	**11 02 09.7**	**-0.2**
	baz=311						
TWT	**Tachien**	**3.13**	**345**	*e*P	**Pn**	**11 02 10.8**	**+0.6**
	baz=354						
TWT				S	**Sn**	**11 02 48.9**	**+0.9**
	baz=354						
TDCB	**Techi**	**3.14**	**345**	*e*P	**Pn**	**11 02 12.6**	**+2.4**
	baz=353						
ENA	**Nanau**	**3.22**	**355**	P	**Pn**	**11 02 12.0**	**+0.9**
	baz=354						
ENA				*e*S	**Sn**	**11 02 48.3**	**-1.4**
	baz=354						
WHP	**Taichung City**	**3.22**	**342**	P	**Pn**	**11 02 14.9**	**+3.7**
	baz=328						
WHP				*e*S	**Sb**	**11 02 55.5**	**-1.6**
	baz=328						
EWUT	**Wuta**	**3.23**	**356**	P	**Pn**	**11 02 12.6**	**+1.2**
	baz=355						
EWUT				*e*S	**Sn**	**11 02 48.3**	**-1.7**
	baz=355						
PHUB	**P'eng-hu**	**3.24**	**316**	P	**Pn**	**11 02 11.3**	**-0.1**
	baz=316						
PH

baz=351
NDS Dongshan 3.42 355 *eP* **Pn 11 02 15.4 +1.4**
baz=354
NDS *eS* **Sn 11 02 55.3 +0.5**
baz=354
ENTT Nioudou 3.44 353 *eP* **Pn 11 02 16.2 +1.9**
baz=2.0
ENTT *eS* **Sn 11 02 55.8 +0.5**
baz=2.0
IRIF Iriomote-Funau 3.48 26 P **Pn 11 02 16.3 +1.6**
IRIF *eS* **Sn 11 02 56.7 +0.5**
YHNB Yeheng 3.50 350 P **Pn 11 02 16.7 +1.6**
baz=359
YHNB *eS* **Sn 11 02 57.4 +0.6**
baz=359
NMLH Miaoli 3.51 341 *eP* **Pn 11 02 18.5 +3.3**
baz=327
NSK Sanguang 3.51 350 P **Pn 11 02 16.7 +1.5**
baz=358
TWE Neicheng 3.51 354 *eP* **Pn 11 02 16.9 +1.7**
baz=354
JKRS Kuro-shima 3.52 31 P **Pn 11 02 16.8 +1.5**
JKRS *eS* **Sn 11 02 57.1 -0.1**
NSTT Nanjuang 3.54 344 *eP* **Pn 11 02 19.8 +4.2**
baz=329
LIOB Emei 3.55 345 *eP* **Pn 11 02 19.2 +3.5**
baz=329
JIJ Ishigaki jima 3.69 31 P **Pn 11 02 18.4 +0.8**
JIJ *eS* **Sn 11 03 00.6 -0.8**
TIPB Shuangxi 3.75 357 *eP* **Pn 11 02 20.8 +2.3**
baz=5.0
YM01 YM01 3.94 354 *eP* **Pn 11 02 22.9 +1.7**
baz=353
JISG Ishigakijimahi 3.96 31 P **Pn 11 02 22.4 +1.1**
JISG S **Sn 11 03 07.0 -1.0**
YM05 YM05 3.96 354 *eP* **Pn 11 02 23.1 +1.7**
baz=353
JTJ Tarama 4.21 35 P **Pn 11 02 26.2 +1.5**
JTJ *eS* **Sn 11 03 13.5 -0.6**
VWUC VWUC 4.46 328 *eP* **Pn 11 02 29.0 +0.9**
baz=329
KNM Kinmen 4.61 315 *eP* **Pn 11 02 32.6 +2.3**
baz=314
JIRB Irabujima 4.62 38 *eS* **Sn 11 03 24.0 -0.2**
JMJ2 Miyako jima3 4.64 40 P **Pn 11 02 32.2 +1.5**
JMJ2 *eS* **Sn 11 03 24.4 -0.4**
PTMZ Houxiangcun 4.67 325 *eP* **Pn 11 02 31.6 +0.6**
baz=326
KNMB Chin-men Tao 4.67 315 *eP* **Pn 11 02 31.1 -0.1**
baz=315
JIKM Ikemajima 4.73 38 *eS* **Sn 11 03 27.7 +0.6**
ZPLA Ao Xicun 4.80 305 *eP* **Pn 11 02 32.4 -0.5**
baz=306
AXDP Jialang 5.25 315 *eP* **Pn 11 02 38.6 -0.5**
baz=316
MATB Ma-tsu 5.28 339 *eP* **Pn 11 02 40.6 +1.1**
baz=339
JIH Iheya 7.93 42 P **Pn 11 03 16.4 +0.5**
JOW Kunigami 7.99 44 P **Pn 11 03 18.8 +2.1**
JNU Nakatsue 14.23 32 LR LR 11 10 52.3
comp=Z,72nm,18.3s,baz=224,slow=40
KSRS Korea Array 16.98 16 Pn **P 11 05 20.5 +0.5**
0.2nm,0.3s,baz=198,slow=11,SNR=12
KSRS LR LR 11 11 07.3
comp=Z,39nm,19.9s,baz=216,slow=34
MJAR Matsushiro Arr 20.78 39 P **P 11 06 00.8 -1.1**
1.0nm,0.8s,baz=210,slow=13,SNR=4.3
CMAR Chiang Mai Arr 21.90 267 P **P 11 06 14.7 +0.7**
0.4nm,0.3s,baz=85,slow=11,SNR=1.2
CMAR LR LR 11 14 17.0
comp=Z,24nm,18.1s,baz=166,slow=35
ASAJ Asahikawa 28.51 32 LR LR 11 19 18.7
comp=Z,50nm,20.4s,baz=21,slow=38
KLR Kul'dur 29.01 13 LR LR 11 19 40.9
comp=Z,50nm,19.0s,baz=189,slow=38
SONM Songino Array 29.41 338 P **P 11 07 25.4 +1.1**
0.8nm,0.7s,baz=160,slow=9.2,SNR=5.7
MKAR Makanchi Array 41.04 318 P **P 11 09 05.7 +1.5**
1.2nm,0.5s,baz=111,slow=9.4,SNR=14
H11N1 WAKE ISLAND Hy 41.94 84 T T 11 54 04.2
baz=280,slow=75,SNR=174
H11N2 WAKE ISLAND Hy 41.95 84 T T 11 54 02.7
baz=280,slow=75,SNR=152
H11N3 WAKE ISLAND Hy 41.96 84 T T 11 54 03.2
baz=280,slow=75,SNR=136
H11S3 WAKE ISLAND Hy 41.98 86 T T 11 54 04.5
baz=282,slow=75,SNR=327
H11S1 WAKE ISLAND Hy 41.99 86 T T 11 54 05.9
baz=282,slow=75,SNR=504
H11S2 WAKE ISLAND Hy 42.00 86 T T 11 54 05.6
baz=282,slow=75,SNR=309
WRA Warramunga Arr 42.63 163 P **P 11 09 15.1 -2.3**
0.5nm,0.6s,baz=343,slow=9.1,SNR=9.3
ZALV Zalesovo Beam 43.17 328 P **P 11 09 21.9 +0.5**
1.0nm,0.4s,baz=124,slow=7.5,SNR=9.0
ZALV LR LR 11 28 58.8
comp=Z,33nm,18.7s,baz=132,slow=38
ASAR Alice Springs 46.08 165 P **P 11 09 43.8 -1.2**
0.3nm,0.3s,baz=346,slow=6.8,SNR=9.9
STKA Stephens Creek 56.01 160 P **P 11 10 59.4 -0.1**
1.3nm,0.8s,baz=340,slow=9.3,SNR=4.3
FINES FINESS Array B 74.41 330 LR LR 11 47 05.2
comp=Z,30nm,19.1s,baz=354,slow=37
NOA NORSAR Array B 81.22 333 LR LR 11 52 42.9
comp=Z,22nm,18.2s,baz=10.0,slow=38
YKA Yellowknife Ar 85.39 23 P **P 11 13 59.0 +1.0**
0.4nm,0.7s,baz=312,slow=4.2,SNR=8.1

*IDC **05** 11:23:57.9±4.0, 4°.84S×102°.27E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/34, mbtmp3.5/6, MS2.9/1, Ms1 2.9/1, ms1mx2.3/34, Error ellipse: s-maj=166.1km s-min=23.0km az=55.0*

ISC 05 11:24:04.0±4.0, 4°.8S±0°.6×102°.3E±0°.9, h44km, n7, σ0°37/7, mb3.5/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.35**	**352**	P	**P**	**11 29 08.3**	**-0.5**
	0.4nm,0.5s,baz=180,slow=10.0,SNR=4.0						
WRA	**Warramunga Arr**	**34.59**	**119**	P	**P**	**11 30 49.1**	**+0.1**
	0.2nm,0.5s,baz=302,slow=11,SNR=1.8						
ASAR	**Alice Springs**	**35.74**	**125**	P	**P**	**11 30 58.7**	**-0.2**
	0.1nm,0.5s,baz=296,slow=7.6,SNR=1.9						
SONM	**Songino Array**	**52.54**	**3**	P	**P**	**11 33 13.3**	**+0.2**
	0.5nm,0.7s,baz=179,slow=9.9,SNR=4.7						
MKAR	**Makanchi Array**	**54.35**	**343**	P	**P**	**11 33 26.6**	**+0.3**
	0.5nm,0.6s,baz=150,slow=9.2,SNR=5.8						
MKAR				LR	LR	11 58 20.3	
	comp=Z,11nm,21.2s,baz=20,slow=38						
ZALV	**Zalesovo Beam**	**60.35**	**348**	P	**P**	**11 34 08.1**	**-0.3**
	0.7nm,0.4s,baz=156,slow=6.2,SNR=3.6						
TXAR	**Lajitas Array**	**145.35**	**42**	PKPbc	**PKPab**	**11 43 38.3**	**+0.3**
	0.1nm,0.4s,baz=256,slow=0.8,SNR=5.4						

*INET **05** 11:33:09.7, 12°.93N×88°.76W, h34km, MW3.1*

SNET 05 11:33:08.9±1.1, 12°.92N×88°.79W, h53km±13km, ML3.5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.45**	**28**	*eP*	Pn	11 33 20.1	+0.2
ALJI				*eS*	Sn	11 33 28.4	+0.7
ALJI				IAML		11 33 31.5	
	comp=Z,2μm,0.2s						
TECA	**Tecapa**	**0.63**	**26**	*eP*	Pn	11 33 22.3	+0.1
LCY	**Lacayo**	**0.69**	**44**	*eP*	Pn	11 33 22.9	+0.1
COEG	**Centro de Oper**	**0.70**	**353**	*eP*	Pn	11 33 22.8	-0.1
COEG				*eS*	Sn	11 33 35.5	+0.5
PACA	**Pacayal**	**0.71**	**40**	*eP*	Pn	11 33 23.4	+0.4
PACA				*eS*	Sn	11 33 34.2	+1.0
PQSS	**Presa 15 de Se**	**0.73**	**18**	*eP*	Pn	11 33 23.5	+0.3
PQSS				*eS*	Sn	11 33 35.4	+1.8
PQSS				IAML		11 33 36.8	
	comp=Z,2μm,0.2s						
LFRS	**El Faro**	**0.75**	**339**	*eP*	Pn	11 33 23.6	+0.1
PAVA	**Las Pavas**	**0.80**	**349**	*eP*	Pn	11 33 24.4	+0.2
PAVA				*eS*	Sn	11 33 36.7	+1.3
PAVA				IAML		11 33 37.9	
	comp=Z,3μm,0.4s						
LBRS	**Las Brisas**	**0.85**	**343**	*eP*	Pn	11 33 25.4	+0.5
SNET	**Serv Nac Est T**	**0.88**	**330**	*eP*	Pn	11 33 25.3	+0.2
SNET				*eS*	Sn	11 33 37.5	+0.5
SNET				IAML		11 33 40.4	
	comp=Z,957nm,0.2s						
BOQS	**Boqueron**	**0.94**	**329**	*eP*	Pn	11 33 26.6	+0.5
LCND	**La Caada**	**0.95**	**66**	*eP*	Pn	11 33 26.0	-0.1
LCND				*eS*	Sn	11 33 39.4	+0.6
LCND				IAML		11 33 42.2	
	comp=Z,844nm,0.2s						
JAYA	**Jayaque - finc**	**0.97**	**319**	*eP*	Pn	11 33 27.3	+0.8
JAYA				*eS*	Sn	11 33 39.9	+0.5
JAYA				IAML		11 33 42.0	
	comp=Z,857nm,0.2s						
CNCH	**Conchagua**	**0.99**	**69**	*eP*	Pn	11 33 26.6	-0.1
FAGO	**Alcalda de S**	**1.01**	**41**	*eP*	Pn	11 33 26.8	-0.1
FAGO				*eS*	Sn	11 33 41.2	+1.0
CEDA	**San Andres**	**1.06**	**326**	*eP*	Pn	11 33 28.0	+0.5
CEDA				*eS*	Sn	11 33 41.7	+0.4

IDC 05 11:36:59.7±1.5, 7°.18S×154°.51E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/39, mbtmp3.7/4, ML4.4/1, Error ellipse: s-maj=50.3km s-min=27.4km az=147.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.83**	**113**	Pn	Pn	11 38 27.3	-0.1
	11nm,0.3s,baz=217,slow=6.1,SNR=4.6						
WRA	**Warramunga Arr**	**23.32**	**235**	P	P	11 42 09.9	+0.2
	0.4nm,0.4s,baz=66,slow=11,SNR=8.6						
ASAR	**Alice Springs**	**25.69**	**228**	P	P	11 42 31.6	-0.2
	0.2nm,0.4s,baz=59,slow=9.9,SNR=7.0						
ILAR	**Eielson Array**	**83.72**	**22**	P	P	11 49 30.3	0.0
	0.4nm,0.6s,baz=252,slow=4.9,SNR=6.3						

*IDC **05** 11:37:23.8±3.7, 9°.07S×110°.53E, h56km±38km, mb3.5/9, mb1 3.7/10, mb1mx3.5/37, mbtmp3.8/10, ML3.7/1, MS3.0/3, Ms1 3.1/3, ms1mx2.6/30, Error ellipse: s-maj=47.1km s-min=15.4km az=50.0*

ISC 05 11:37:23.4±1.1, 9°.1S±0°.2×110°.6E±0°.2, h51km, n12, σ0°83/11, mb3.9/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**3.68**	**307**	P	**Pn**	**11 38 17.8**	**-0.1**
	6.5nm,0.3s,baz=114,slow=9.9,SNR=6.6						
LEM				LR	LR	11 39 30.7	
	comp=Z,55nm,21.7s,baz=232,slow=35						
PSI	**Prapat**	**16.55**	**315**	LR	LR	11 47 54.1	
	comp=Z,126nm,18.5s,baz=260,slow=38						
WRA	**Warramunga Arr**	**25.38**	**118**	P	**P**	**11 42 45.6**	**-0.5**
	2.3nm,0.7s,baz=290,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.62**	**126**	P	**P**	**11 42 59.1**	**+1.8**
	0.7nm,0.6s,baz=298,slow=9.1,SNR=12						
CMAR	**Chiang Mai Arr**	**29.65**	**337**	LR	LR	11 55 55.5	
	comp=Z,34nm,18.5s,baz=179,slow=38						
STKA	**Stephens Creek**	**36.65**	**133**	P	**P**	**11 44 24.4**	**-0.7**
	0.8nm,0.5s,baz=314,slow=10,SNR=3.7						
KSRS	**Korea Array**	**49.03**	**18**	P	**P**	**11 46 06.0**	**+0.8**
	1.0nm,0.8s,baz=193,slow=7.9,SNR=7.0						
MJAR	**Matsushiro Arr**	**52.26**	**28**	P	**P**	**11 46 29.4**	**-0.3**
	1.1nm,0.9s,baz=196,slow=8.6,SNR=4.0						
SONM	**Songino Array**	**56.76**	**357**	P	**P**	**11 47 02.3**	**0.0**
	0.8nm,0.8s,baz=176,slow=7.0,SNR=6.4						
MKAR	**Makanchi Array**	**61.05**	**338**	P	**P**	**11 47 31.7**	**-0.3**
	0.5nm,0.4s,baz=148,slow=8.1,SNR=11						
MKAR				pP	**pP**	**11 47 45.7**	**+0.1**
	0.5nm,0.6s,baz=136,slow=7.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**66.44**	**344**	P	**P**	**11 48 06.5**	**-0.7**
	1.5nm,0.7s,baz=132,slow=2.2,SNR=6.6						
BRTR	**Keskin Array B**	**85.84**	**311**	P	**P**	**11 49 58.4**	**+0.4**
	0.5nm,0.6s,baz=56,slow=9.4,SNR=2.6						

TAP 05 12:01:37.2, 22°.17N×120°.86E, h8km, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIU	**Shizi**	**0.07**	**308**	*i* P	Pg	12 01 39.8	+0.6
	baz=308						
SLIU				*i* S	Sg	12 01 41.5	+0.9
	baz=308						
TAW	**Tawu**	**0.19**	**11**	*i* P	Pg	12 01 41.8	+0.7
	baz=13						
TAW				*i* S	Sg	12 01 45.6	+1.9
	baz=13						
HEN	**Hengchun**	**0.20**	**213**	*eP*	Pg	12 01 42.2	+0.9
	baz=211						
HEN				S	Sg	12 01 45.9	+1.8
	baz=211						
EAST	**Anshuo**	**0.21**	**358**	*i* P	Pg	12 01 42.0	+0.5
EAST				*i* S	Sg	12 01 46.1	+1.7
TWK1	**Hengchun**	**0.23**	**192**	P	Pg	12 01 42.9	+1.0
	baz=189						
TWKBT	**Hengchun**	**0.24**	**190**	P	Pg	12 01 43.0	+1.1
	baz=189						
TWKBT				*eS*	Sg	12 01 47.6	+2.4
	baz=189						
TSEB	**Hengchuen, Pin**	**0.28**	**171**	P	Pg	12 01 43.2	+0.5
	baz=180						
TSEB				S	Sb	12 01 48.2	-1.0
	baz=180						
SCZT	**Fangliau**	**0.29**	**312**	*i* P	Pb	12 01 44.0	-0.7
	baz=312						
SSPT	**Xinbi**	**0.41**	**319**	*eS*	Sb	12 01 53.0	0.0
	baz=319						
ECL	**Taimali**	**0.43**	**12**	P	Pb	12 01 47.2	+0.1
	baz=13						
ECL				S	Sb	12 01 54.1	+0.4
	baz=13						
WLCH	**Liuqiu**	**0.48**	**292**	*eS*	Sb	12 01 55.1	+0.1
	baz=291						
MASBT	**Mashibuluo**	**0.48**	**335**	P	Pb	12 01 47.3	-0.7
	baz=334						
MASBT				*eS*	Sb	12 01 55.3	0.0
	baz=334						
TWP	**Hsiaoliuchiu**	**0.49**	**291**	*eP*	Pb	12 01 47.9	-0.1
	baz=290						
TWP				*eS*	Sb	12 01 55.5	+0.1
	baz=290						
TSMG	**Majia**	**0.56**	**340**	*eP*	Pg	12 01 48.6	+0.5
	baz=339						
TSMG				*eS*	Sb	12 01 57.8	+0.2
	baz=339						
SSD	**Sandimen**	**0.61**	**340**	*eP*	Pg	12 01 49.4	+0.4
	baz=340						
SSD				*eS*	Sb	12 01 59.0	+0.2
	baz=340						
TTN	**Taitung**	**0.64**	**25**	*eP*	Pb	12 01 51.0	+0.4
	baz=25						
TTN				*eS*	Sb	12 02 00.5	+0.8
	baz=25						
KAU	**Kaohsiung**	**0.64**	**308**	*eP*	Pb	12 01 50.4	-0.3
	baz=308						
KAU				*eS*	Sb	12 01 60.0	+0.2
	baz=308						
SGLT	**Jiouru**	**0.64**	**328**	*eP*	Pb	12 01 50.7	0.0
	baz=328						
SGLT				*eS*	Sb	12 02 00.2	+0.4
	baz=328						
TWGBT	**Beinan**	**0.67**	**18**	*eS*	Sb	12 02 01.6	+0.9
	baz=17						
TWG	**Pinlang**	**0.67**	**17**	*eP*	Pb	12 01 51.2	0.0
	baz=17						
TWG				*eS*	Sb	12 02 01.5	+0.7
	baz=17						
SNJT	**Kaohsiung City**	**0.75**	**320**	*eP*	Pb	12 01 52.5	0.0
	baz=320						
SNJT				*eS*	Sb	12 02 03.3	+0.3
	baz=320						
LDUT	**Ludao**	**0.75**	**49**	*eP*	Pb	12 01 52.3	-0.3
	baz=48						
LDUT				*eS*	Sb	12 02 03.6	+0.6
	baz=48						
SCST	**Cishan**	**0.78**	**335**	*eP*	Pb	12 01 53.2	+0.1
	baz=334						
SCST				*eS*	Sb	12 02 04.8	+0.9
	baz=334						

TAP 05 12:01:42.3, 22°.19N×120°.88E, h9km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIU	**Shizi**	**0.08**	**290**	*i* P	Pg	12 01 45.3	+0.8
	baz=289						
SLIU				*i* S	Sg	12 01 46.8	+0.8
	baz=289						
TAW	**Tawu**	**0.17**	**5**	P	Pg	12 01 46.4	+0.5
	baz=7.0						
TAW				*i* S	Sg	12 01 49.9	+1.7
	baz=7.0						
EAST	**Anshuo**	**0.20**	**351**	P	Pg	12 01 47.1	+0.7
	baz=353						
EAST				S	Sg	12 01 50.8	+1.8
	baz=353						
HEN	**Hengchun**	**0.23**	**216**	*eP*	Pg	12 01 47.3	+0.5
	baz=214						
HEN				S	Sg	12 01 51.6	+1.7
	baz=214						
TWK1	**Hengchun**	**0.25**	**196**	P	Pg	12 01 47.7	+0.3
	baz=194						
TWK1				S	Sb	12 01 52.9	-0.7
	baz=194						
TWK1	**Hengchun**	**0.25**	**196**	S	Pg	12 01 47.3	-0.1
	baz=189						
TWKBT	**Hengchun**	**0.26**	**194**	P	Pg	12 01 48.2	+0.8
	baz=194						
TWKBT				S	Sb	12 01 53.5	-0.1
	baz=194						
SNW	**Nanwan**	**0.26**	**208**	*eS*	Sb	12 01 53.9	+0.2
	baz=208						
TSEB	**Hengchuen, Pin**	**0.29**	**176**	P	Pb	12 01 48.9	-0.7
	baz=184						
TSEB				S	Sb	12 01 53.9	-0.7
	baz=184						
SCZT	**Fangliau**	**0.30**	**307**	P	Pg	12 01 48.9	+0.6
	baz=307						
SCZT				*i* S	Sb	12 01 54.1	-0.9
	baz=307						
SCZT	**Fangliau**	**0.30**	**307**	*i* S	Pg	12 01 48.9	+0.6
	baz=312						
ECL	**Taimali**	**0.41**	**9**	P	Pg	12 01 50.9	+0.5
	baz=10.0						
ECL				*i* S	Sb	12 01 58.3	+0.1
	baz=10.0						
SSPT	**Xinbi**	**0.41**	**315**	*eP*	Pb	12 01 51.1	-0.7
	baz=315						
SSPT				*eS*	Sb	12 01 57.7	-0.5
	baz=315						
MASBT	**Mashibuluo**	**0.48**	**331**	P	Pb	12 01 52.8	-0.1
	baz=331						
MASBT				*eS*	Sb	12 02 00.6	+0.5
	baz=331						
TSMG	**Majia**	**0.56**	**337**	*eP*	Pb	12 01 54.1	-0.1
	baz=336						
SSD	**Sandimen**	**0.60**	**337**	P	Pb	12 01 55.0	0.0
	baz=338						
SSD				S	Sb	12 02 03.3	-0.3
	baz=338						
TTN	**Taitung**	**0.61**	**24**	*eS*	Sb	12 02 04.8	+0.8
	baz=24						
SGLT	**Jiouru**	**0.64**	**326**	*eP*	Pb	12 01 55.6	-0.1
	baz=326						
SGLT				*eS*	Sb	12 02 04.9	0.0
	baz=326						
TWGBT	**Beinan**	**0.65**	**16**	*eP*	Pb	12 01 55.9	0.0
	baz=16						
TWGBT				*eS*	Sb	12 02 05.0	-0.1
	baz=16						
TWG	**Pinlang**	**0.65**	**16**	*eP*	Pb	12 01 55.5	-0.4
	baz=16						
TWG				*eS*	Sb	12 02 04.9	-0.3
	baz=16						

IDC 05 12:06:54.0±2.2, 1°.57N×126°.20E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.1/32, mbtmp3.2/3, Error ellipse: s-maj=184.2km s-min=28.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.82**	**160**	P	P	12 11 57.5	-1.3
	0.4nm,0.4s,baz=338,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.18**	**164**	P	P	12 12 31.6	+1.1
	0.2nm,0.4s,baz=344,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	12 16 55.8	0.0
	0.1nm,0.4s,baz=123,slow=5.6,SNR=1.8						

*DJA **05** 12:22:12.2±0.4, 9°.3S×11°.0E±°, h10km, M4.2/11, mb4.1/5, mB4.9/3, MLv4.2/11, Mw(mB)4.2/3*

*IDC **05** 12:22:16.3±3.8, 8°.86S×110°.81E, h43km±38km, mb3.5/9, mb1 3.6/10, mb1mx3.4/44, mbtmp3.7/10, ML3.8/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/25, Error ellipse: s-maj=47.2km s-min=16.3km az=52.0*

ISC 05 12:22:12.4±1.2, 9°.54S±0°.10×110°.2E±0°.1, h35km, n19, σ1§46/18, mb3.7/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.65**	**12**	P	**Pn**	**12 22 37.4**	**-1.6**
UGM				S	**Sn**	**12 22 57.7**	**-1.4**
SMRI	**Semarang**	**2.49**	**6**	P	**Pn**	**12 22 52.2**	**+1.7**
SMRI				S	**Sn**	**12 23 23.3**	**+3.6**
LEM	**Lembang**	**3.71**	**317**	P	Pn	12 23 11.8	+4.4
	7.6nm,0.3s,baz=125,slow=12,SNR=4.9						
LEM				LR	LR	12 24 48.5	
	comp=Z,76nm,20.0s,baz=188,slow=41						
JAGI	**Jajag, Banyuwa**	**4.06**	**75**	P	**Pn**	**12 23 12.1**	**0.0**
ABJI	**Asem Bagus**	**4.36**	**67**	P	**Pn**	**12 23 16.3**	**0.0**
SRBI	**Singaraja**	**5.18**	**74**	P	**Pn**	**12 23 28.1**	**+0.7**
TWSI	**Taliwang, Sumb**	**6.66**	**84**	P	**Pn**	**12 23 47.8**	**-0.1**
	0.1nm446nm7.4nm,0.5s						
PLAI	**Plampang**	**7.53**	**85**	P	**Pn**	**12 23 59.7**	**-0.1**
	0.1nm20nm,1.1s						
BBKI	**Banjar Baru**	**7.61**	**38**	P	**Pn**	**12 24 00.9**	**0.0**
	0.2nm3μm9.5nm,0.6s						
WRA	**Warramunga Arr**	**25.51**	**117**	P	**P**	**12 27 38.6**	**+0.7**
	0.7nm,0.8s,baz=291,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.66**	**125**	P	**P**	**12 27 50.1**	**+1.9**
	0.5nm,0.7s,baz=298,slow=9.1,SNR=11						
SONM	**Songino Array**	**57.22**	**357**	P	**P**	**12 31 55.7**	**-0.6**
	0.5nm,0.7s,baz=170,slow=5.8,SNR=4.7						
MKAR	**Makanchi Array**	**61.36**	**339**	P	**P**	**12 32 24.9**	**+0.2**
	0.4nm,0.4s,baz=158,slow=9.3,SNR=7.3						
KLR	**Kul'dur**	**61.51**	**16**	P	**P**	**12 32 23.3**	**-2.4**
	0.9nm,0.6s,baz=194,slow=8.3,SNR=2.8						
KURBB	**Kurchatov Arra**	**65.93**	**339**	P	**P**	**12 32 54.7**	**-0.1**
	0.2nm,0.5s,baz=155,slow=6.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**66.80**	**344**	P	**P**	**12 32 59.7**	**-0.5**
	0.6nm,0.3s,baz=155,slow=4.4,SNR=2.6						
VNDA	**Vanda**	**72.91**	**170**	P	P	12 33 44.5	+6.9
	0.3nm,0.4s,baz=312,slow=8.0,SNR=3.6						
AKTO	**Aktyubinsk**	**74.92**	**328**	P	**P**	**12 33 50.5**	**+0.8**
	1.0nm,0.6s,baz=138,slow=0.9,SNR=4.9						
SPITS	**Spitsbergen Ar**	**100.06**	**348**	LR	LR	13 26 07.7	
	comp=Z,11nm,18.8s,baz=270,slow=38						

*IDC **05** 12:32:52.5±2.2, 20°.50S×178°.08W, h586km±21km, mb2.9/4, mb1 3.2/6, mb1mx2.9/26, mbtmp4.0/6, Error ellipse: s-maj=33.8km s-min=23.0km az=117.0*

ISC 05 12:32:53.3±1.3, 20°.5S±0°.2×178°.1W±0°.3, h600km, n9, σ1§25/10, mb3.5/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.52**	**306**	P	**P**	**12 34 21.6**	**-1.2**
	4.8nm,0.3s,baz=120,slow=22,SNR=19						
URZ	**Urewera**	**18.21**	**192**	P	**P**	**12 36 30.3**	**-0.3**
	1.3nm,0.3s,baz=303,slow=24,SNR=12						
ASAR	**Alice Springs**	**44.41**	**257**	P	**P**	**12 40 12.8**	**+0.3**
	1.3nm,0.7s,baz=93,slow=7.5,SNR=22						
ASAR				PcP	**PcP**	**12 41 44.2**	**+1.4**
	0.3nm,0.5s,baz=108,slow=3.6,SNR=7.1						
WRA	**Warramunga Arr**	**44.49**	**262**	P	**P**	**12 40 12.8**	**-0.3**
	0.7nm,0.4s,baz=97,slow=7.0,SNR=24						
KSRS	**Korea Array**	**76.78**	**319**	P	**P**	**12 43 45.6**	**+1.3**
	0.5nm,0.6s,baz=128,slow=6.0,SNR=5.0						
ILAR	**Eielson Array**	**88.31**	**13**	P	**P**	**12 44 41.6**	**0.0**
	0.4nm,0.6s,baz=214,slow=5.4,SNR=6.9						
AKASG	**Malin Array Be**	**142.93**	**331**	PKP	**PKPdf**	**12 51 17.2**	**-2.3**
	1.7nm,0.5s,baz=43,slow=4.7,SNR=6.5						
BRTR	**Keskin Array B**	**146.73**	**312**	PKPbc	**PKPbc**	**12 51 30.1**	**+0.8**
	0.7nm,0.6s,baz=126,slow=2.0,SNR=2.9						
GERES	**GERESS Array B**	**150.13**	**344**	PKPbc	**PKiKP**	**12 51 38.1**	**+0.2**
	0.6nm,0.8s,baz=46,slow=3.9,SNR=4.8						

*SNET **05** 12:37:26.6±1.3, 11°.93N×88°.16W, h17km±9km, ML3

INET ***05*** *12:37:28.4, 12°.03N×87°.95W, h8km, MW3.3*
ISC 05 12:37:25.4±1.6, 11°.9N±0°.1×88°.1W±0°.1, h10km, n17,
σ0ˢ73/20, mb3.5/3, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.38**	**10**	*eP*	**Pn**	**12 37 50.1**	**-0.6**
LCND	**La Caada**	**1.40**	**8**	*eP*	**Pn**	**12 37 50.6**	**-0.4**
LCND				*eS*	**Sn**	**12 38 09.7**	**+0.2**
LCND				*eS*	**Sg**	**12 38 10.9**	**+0.5**
LCND				IAML		12 38 15.9	
	comp=Z,374nm,0.4s						
RANC	**El Ranchito**	**1.52**	**353**	*eP*	**Pn**	**12 37 52.7**	**-0.2**
PACA	**Pacayal**	**1.56**	**351**	*eP*	**Pn**	**12 37 53.4**	**+0.1**
PACA				IAML		12 38 22.4	
	comp=Z,99nm,0.4s						
TECA	**Tecapa**	**1.62**	**346**	*eP*	**Pn**	**12 37 53.8**	**-0.4**
PQSS	**Presa 15 de Se**	**1.76**	**345**	*eP*	**Pn**	**12 37 55.9**	**0.0**
PQSS				*eS*	**Sn**	**12 38 17.6**	**-0.9**
FAGO	**Alcalda de S**	**1.77**	**359**	*eP*	**Pn**	**12 37 56.3**	**+0.2**
FAGO				*eS*	**Sn**	**12 38 19.1**	**+0.4**
COEG	**Centro de Oper**	**1.86**	**335**	IAML		12 38 28.2	
	comp=Z,146nm,0.3s						
LFRS	**El Faro**	**1.95**	**331**	*eP*	**Pn**	**12 37 58.4**	**-0.2**
LFRS				*eS*	**Sn**	**12 38 22.6**	**-0.6**
PMON	**Piamonte**	**2.15**	**326**	*eP*	**Pn**	**12 38 01.4**	**-0.1**
CEDA	**San Andres**	**2.27**	**326**	IAML		12 38 46.2	
	comp=Z,280nm,0.5s						
TGUH	**Tegucigalpa,Un**	**2.27**	**20**	*eP*	**Pn**	**12 38 03.1**	**0.0**
TACO	**Tacachico**	**2.39**	**329**	*eP*	**Pn**	**12 38 04.9**	**+0.3**
TXAR	**Lajitas Array**	**22.60**	**322**	P	**P**	**12 42 27.5**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=137,slow=11,SNR=17						
YKA	**Yellowknife Ar**	**53.96**	**345**	P	**P**	**12 46 47.2**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=134,slow=8.5,SNR=9.8						
ILAR	**Eielson Array**	**66.26**	**336**	P	**P**	**12 48 14.7**	**+1.2**
	comp=Z,0.2nm,0.7s,baz=97,slow=7.4,SNR=2.2						
CMAR	**Chiang Mai Arr**	**149.03**	**347**	PKPbc	**PKPbc**	**12 57 15.2**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=351,slow=2.9,SNR=2.0						

NEIC ***05*** *13:00:43.9±1.6, 9°.31S±0°.07×110°.32E±0°.07, h40km±3km, mb4.7/56, Error ellipse: s-maj=10.4km s-min=9.3km az=56.0*
BJI ***05*** *13:00:43.0±0.0, 9°.40S×110°.30E, h51km, mB5.0/26, mb4.8/40, Ms4.3/6, Ms7 3.9/6*
DJA ***05*** *13:00:45.0±0.3, 9°.5S±3°×11°.0E±°, h47km±4km, M4.7/22, mB5.2/10, mb4.7/22, MLv4.8/18, Mw(mB)4.5/10*
IDC ***05*** *13:00:46.3±2.3, 9°.06S×110°.58E, h48km±21km, mb4.3/17, mb1 4.4/20, mb1mx4.2/34, mbtmp4.5/20, ML4.4/3, MS3.5/12, Ms1 3.5/12, ms1mx3.3/32, Error ellipse: s-maj=21.2km s-min=11.7km az=52.0*
ISC 05 13:00:43.2±0.4, 9°.40S±0°.05×110°.34E±0°.06, h35km, n150,
σ1ˢ74/148, mb4.7/53, MS3.6/12, 3C-1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.49**	**7**	Pn	**Pn**	**13 01 07.0**	**-0.5**
UGM	**Wanagama**	**1.49**	**7**	P	**Pn**	**13 01 07.3**	**-0.2**
UGM				S	**Sn**	**13 01 28.4**	**+2.7**
SMRI	**Semarang**	**2.34**	**2**		**Pn**	**13 01 21.5**	**+2.4**
SMRI	**Semarang**	**2.34**	**2**	P	**Pn**	**13 01 21.8**	**+2.6**
LEM	**Lembang**	**3.71**	**313**	P	**Pn**	**13 01 42.4**	**+4.2**
	25nm,0.3s,baz=127,slow=9.7,SNR=33						
LEM				S	**Sn**	**13 02 23.4**	**+2.5**
	18nm,0.3s,baz=358,slow=17,SNR=4.2						
LEM				LR	LR	13 03 16.9	
	comp=Z,872nm,20.3s,baz=139,slow=41						
LEM	**Lembang**	**3.71**	**313**	P	**Pn**	**13 01 41.8**	**+3.6**
JAGI	**Jajag, Banyuwa**	**3.88**	**77**	Pn	**Pn**	**13 01 41.2**	**+0.8**
JAGI	**Jajag, Banyuwa**	**3.88**	**77**	P	**Pn**	**13 01 41.4**	**+1.1**
ABJI	**Asem Bagus**	**4.17**	**68**	P	**Pn**	**13 01 47.1**	**+2.8**
KMMI	**Kalianget**	**4.28**	**57**	P	**Pn**	**13 01 48.4**	**+2.5**
DBJI	**Dramaga**	**4.54**	**308**	P	**Pn**	**13 01 51.8**	**+2.3**
XMIS	**Christmas Isla**	**4.74**	**257**	Pn	**Pn**	**13 01 53.0**	**+0.7**
SRBI	**Singaraja**	**4.99**	**75**	P	**Pn**	**13 01 58.2**	**+2.6**
	0.9nm2µm168nm,0.8s						
TWSI	**Taliwang, Sumb**	**6.49**	**85**	P	**Pn**	**13 02 17.5**	**+1.2**
	0.2nm1µm42nm,0.5s						
TPI	**Tanjungpandan**	**7.12**	**338**	P	**Pn**	**13 02 28.2**	**+3.3**
	0.1nm21nm,1.0s						
KLSI		**7.27**	**310**	P	**Pn**	**13 02 29.7**	**+2.7**
	0.0nm8.4nm,1.5s						
PLAI	**Plampang**	**7.37**	**86**	P	**Pn**	**13 02 30.2**	**+1.9**
	0.5nm2µm142nm,0.7s						
BBKI	**Banjar Baru**	**7.40**	**37**	P	**Pn**	**13 02 32.6**	**+3.8**
	0.2nm37nm,0.9s						
PPBI	**Pangkal Pinang**	**8.32**	**330**	P	**Pn**	**13 02 44.5**	**+3.1**
PMBI	**Palembang**	**8.48**	**319**	Pn	**Pn**	**13 02 43.5**	**-0.1**
MTKI	**Muara Teweh, K**	**9.55**	**29**	P	**Pn**	13 03 03.7	+5.5
KSI	**Kapahiang**	**9.58**	**306**	P	**Pn**	**13 03 01.5**	**+2.7**
	4µm42nm,0.7s						
BASI	**Baing, Sumba**	**10.12**	**95**	P	**Pn**	**13 03 07.5**	**+1.4**
	39nm,1.1s						
KAPI	**Kappang**	**10.30**	**66**	P	**Pn**	**13 03 08.4**	**-0.2**
	1.5nm,0.3s,baz=239,slow=13,SNR=11						
KAPI				LR	LR	13 07 25.7	
	comp=Z,200nm,21.3s,baz=254,slow=40						
KAPI	**Kappang**	**10.30**	**66**	Pn	**Pn**	**13 03 09.3**	**+0.7**
BKSI	**Bulukumba**	**10.51**	**68**	P	**Pn**	**13 03 16.2**	**+4.7**
	32nm,0.8s						
BNSI	**Bone**	**10.89**	**64**	P	Pn	13 03 24.0	+7.3
EDFI	**Ende, Flores**	**11.23**	**88**	P	**Pn**	**13 03 23.0**	**+1.6**
	238nm13nm,0.6s						
MMRI	**Maumere**	**11.78**	**87**	Pn	**Pn**	**13 03 27.7**	**-1.1**
BATI	**Baumata**	**13.15**	**95**	P	**Pn**	**13 03 48.2**	**+0.5**
	5.6nm,0.3s,baz=10.0,slow=5.4,SNR=6.2						
GIRL	**Giralia**	**13.69**	**165**	Pn	**Pn**	**13 03 53.4**	**-1.5**
SOEI	**Soe**	**13.74**	**93**	Pn	**Pn**	**13 03 54.5**	**-1.2**
SOEI	**Soe**	**13.74**	**93**	P	**Pn**	**13 03 55.1**	**-0.6**
	28nm,0.8s						
LUWI	**Luwuk**	**14.90**	**57**	Pn	**Pn**	**13 04 11.9**	**+0.5**
LUWI	**Luwuk**	**14.90**	**57**	P	**P**	**13 04 18.3**	**+1.7**
MRSI	**Marisa**	**15.15**	**50**	P	**P**	**13 04 19.2**	**-0.3**
PSA00	**Pilbara Seismi**	**15.17**	**144**	Pn	**Pn**	**13 04 13.1**	**-1.9**
GTOI	**Gorontalo**	**16.08**	**52**	P	**P**	**13 04 28.5**	**-1.3**
	15nm,1.1s						
KKM	**Kota Kinabalu**	**16.42**	**21**	Pn	**Pn**	**13 04 30.5**	**-0.6**
GSI	**Gunungsitoli**	**16.57**	**309**	Pn	**Pn**	**13 04 28.7**	**-4.4**
MYLDM	**Lahad Datu**	**16.61**	**30**	Pn	**Pn**	**13 04 30.5**	**-3.0**
IPM	**Ipoh**	**16.62**	**326**	Pn	**Pn**	**13 04 33.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**17.18**	**122**	Pn	**Pn**	**13 04 40.9**	**+0.3**
SANI	**Sanana**	**17.19**	**66**	P	**P**	**13 04 42.2**	**+0.2**
	17nm,0.8s						
MTN	**Manton Dam**	**20.68**	**101**	P	**P**	**13 05 21.6**	**+1.2**
MTN				IAmb	IAmb	13 05 22.4	
	comp=Z,28nm,1.2s						
SIJI	**Sorong**	**22.48**	**69**	P	**P**	**13 05 37.8**	**-2.0**
	comp=Z,13nm,0.9s,baz=254,slow=10.0,SNR=3.7						
SIJI				LR	LR	13 16 36.8	
	comp=Z,39nm,19.2s,baz=289,slow=43						
FAKI	**Fak Fak**	**22.70**	**75**	P	**P**	**13 05 37.0**	**-5.1**
FAKI				IAmb	IAmb	13 05 57.2	
	comp=Z,45nm,1.2s						
NWAO	**Narrogin (SRO)**	**24.27**	**166**	P	**P**	**13 05 54.4**	**-2.7**
NWAO				IAmb	IAmb	13 06 06.3	
	comp=Z,53nm,1.5s						
WB0	**Warramunga Arr**	**25.42**	**117**	P	**P**	**13 06 08.3**	**+0.5**
WB0				IAmb	IAmb	13 06 11.3	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**25.44**	**117**	P	**P**	**13 06 08.9**	**+1.0**
	comp=Z,12nm,0.8s,baz=292,slow=11,SNR=83						
WRA				PcP	**PcP**	**13 09 41.7**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=307,slow=1.7,SNR=5.0						
WRA	**Warramunga Arr**	**25.44**	**117**	IAmb	IAmb	13 06 11.1	
	comp=Z,0.9nm,0.8s						
WRAB	**Tennant Creek**	**25.44**	**117**	P	**P**	**13 06 09.0**	**+1.0**
WRAB				IAmb	IAmb	13 06 11.6	
	comp=Z,16nm,0.8s						
WB2	**Warramunga Arr**	**25.45**	**117**	P	**P**	**13 06 08.4**	**+0.3**
WB2				IAmb	IAmb	13 06 11.6	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**25.62**	**117**	P	**P**	**13 06 10.5**	**+0.9**
WR0				IAmb	IAmb	13 06 13.1	
	comp=Z,16nm,0.8s						
AS31	**Alice Springs**	**26.61**	**125**	P	**P**	**13 06 19.2**	**+0.6**
ASAR	**Alice Springs**	**26.61**	**125**	P	**P**	**13 06 20.1**	**+1.5**
	comp=Z,6.2nm,0.7s,baz=301,slow=9.2,SNR=44						
ASAR				PcP	**PcP**	**13 09 44.7**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=326,slow=1.7,SNR=8.3						
ASAR				LR	LR	13 16 59.5	
	comp=Z,121nm,20.4s,baz=305,slow=37						
CMAR	**Chiang Mai Arr**	**29.88**	**338**	P	**P**	**13 06 46.0**	**-1.7**
	comp=Z,1.2nm,0.6s,baz=173,slow=8.7,SNR=8.4						
CMAR				PcP	**PcP**	**13 09 52.8**	**+2.5**
	comp=Z,0.6nm,0.5s,baz=181,slow=2.5,SNR=4.9						
CMAR				LR	LR	13 20 05.8	
	comp=Z,142nm,18.8s,baz=202,slow=39						
COEN	**Coen**	**32.45**	**101**	P	**P**	**13 07 11.3**	**+0.8**
BBOO	**Buckleboo**	**33.27**	**138**	P	**P**	**13 07 19.2**	**+1.8**
YULB	**Yu-li**	**34.31**	**18**	P	**P**	**13 07 27.0**	**+0.5**
YULB				IAmb	IAmb	13 07 50.4	
	comp=Z,22nm,1.4s						
SSLB	**Suanglung**	**34.58**	**17**	P	**P**	**13 07 28.3**	**-0.5**
SSLB				IAmb	IAmb	13 07 36.5	
	comp=Z,12nm,1.1s						
KMI	**Kunming**	**35.10**	**348**	⇓P	**P**	**13 07 35.9**	**+2.3**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CTAO	**Charters Tower**	**36.24**	**111**	P	**P**	**13 07 44.1**	**+0.8**
CTAO				IAmb	IAmb	13 08 00.9	
	comp=Z,9.3nm,1.4s						
STKA	**Stephens Creek**	**36.59**	**132**	P	**P**	**13 07 47.5**	**+1.4**
	comp=Z,5.3nm,0.7s,baz=306,slow=8.6,SNR=15						
STKA				LR	LR	13 22 47.4	
	comp=Z,98nm,21.0s,baz=296,slow=36						
STKA	**Stephens Creek**	**36.59**	**132**	P	**P**	**13 07 47.7**	**+1.6**
H08S2	**Diego Garcia H**	**37.46**	**270**	T	T	13 47 39.5	
	baz=95,slow=75,SNR=7.7						
H08S3	**Diego Garcia H**	**37.47**	**270**	T	T	13 47 39.9	
	baz=95,slow=75,SNR=5.6						
H08S1	**Diego Carcia H**	**37.48**	**270**	T	T	13 47 33.7	
	baz=95,slow=75,SNR=4.3						
JOW	**Kunigami**	**40.00**	**25**	P	**P**	**13 08 14.6**	**-0.2**
JOW				IAmb	IAmb	13 08 15.7	
	comp=Z,15nm,1.0s						
NJ2	**Nanjing**	**42.01**	**11**	*eP*	**P**	**13 08 31.2**	**0.0**
NJ2				pmax	pmax		
	comp=Z,13nm,0.8s						
XAN	**Xi'an**	**43.22**	**358**	P	**P**	**13 08 41.4**	**+0.3**
XAN				pP	sP	13 08 54.1	-0.2
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN	**Xi'an**	**43.22**	**358**	P	**P**	**13 08 39.3**	**-1.8**
XAN				IAmb	IAmb	13 08 41.8	
	comp=Z,6.9nm,0.8s						
JSU	**Suzuyama**	**45.01**	**25**	P	**P**	**13 08 53.3**	**-2.1**
JSU				IAmb	IAmb	13 08 56.0	
	comp=Z,9.0nm,0.8s						
LZH	**Lanzhou**	**45.65**	**353**	⇑P	**P**	**13 09 02.5**	**+1.9**
LZH				pP	pP	13 09 11.5	+1.4
LZH				sP	pwP	13 09 21.7	+7.6
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
JNU	**Nakatsue**	**46.59**	**24**	P	**P**	**13 09 06.6**	**-1.3**
JTU	**Tsushima**	**47.27**	**22**	P	**P**	**13 09 11.2**	**-2.0**
JHS	**Saijyo**	**49.13**	**25**	P	**P**	**13 09 26.6**	**-1.0**
KSRS	**Korea Array**	**49.43**	**18**	P	**P**	**13 09 28.7**	**-1.1**
	comp=Z,6.9nm,0.8s,baz=200,slow=8.2,SNR=39						
KS19	**Wonju Array Si**	**49.46**	**18**	P	**P**	**13 09 29.6**	**-0.4**
KS19				IAmb	IAmb	13 09 30.3	
	comp=Z,13nm,1.1s						
BJT	**Baijiatuan**	**49.46**	**6**	P	**P**	**13 09 29.4**	**-0.6**
BJT				IAmb	IAmb	13 09 37.5	
	comp=Z,5.9nm,0.8s						
GTA	**Gaotai**	**49.53**	**349**	P	**P**	**13 09 31.6**	**+0.9**
GTA				pP	pwP	13 09 43.4	-0.2
GTA				sP	sP	13 09 48.9	+4.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,65nm,4.8s						
GTA				LR	LR		
	comp=Z,70nm,13.5s						
GTA				LR	LR		
	comp=Z,100nm,14.2s						
GTA				LR	LR		
	comp=Z,99nm,15.3s						
HHC	**Hu-ho-hao-te**	**50.01**	**1**	*eP*	**P**	**13 09 35.1**	**+0.8**
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,65nm,4.5s						
JWT	**Wachi**	**50.36**	**27**	P	**P**	**13 09 35.7**	**-1.2**
INU	**Inuyama**	**51.15**	**28**	P	**P**	**13 09 40.4**	**-2.4**
INU				IAmb	IAmb	13 09 42.9	
	comp=Z,7.8nm,0.9s						
JGF	**Kuroka**	**51.51**	**28**	P	**P**	**13 09 43.1**	**-2.5**
MAJO	**Matsushiro**	**52.68**	**28**	P	**P**	**13 09 52.3**	**-1.9**
MAT	**Matsushiro**	**52.68**	**28**	P	**P**	**13 09 51.6**	**-2.6**
MJAR	**Matsushiro Arr**	**52.68**	**28**	P	**P**	**13 09 52.4**	**-1.8**
	comp=Z,11nm,0.8s,baz=199,slow=7.8,SNR=28						
MJAR				LR	LR	13 31 57.2	
	comp=Z,45nm,20.5s,baz=220,slow=36						
MJAR	**Matsushiro Arr**	**52.68**	**28**	P	**P**	**13 09 52.5**	**-1.8**
MJAR				IAmb	IAmb	13 09 53.5	
	comp=Z,3.5nm,0.7s						
CN2	**Changchun**	**54.70**	**13**	*eP*	**P**	**13 10 07.2**	**-1.7**
JMM	**Marumori**	**54.97**	**29**	P	**P**	**13 10 09.1**	**-1.9**
NIL	**Nilore**	**55.45**	**322**	P	**P**	**13 10 13.1**	**-1.4**
MDJ	**Mudanjiang**	**56.51**	**16**	P	**P**	**13 10 20.2**	**-1.6**
MDJ				IAmb	IAmb	13 10 21.7	
	comp=Z,8.0nm,0.8s						
WMQ	**Urumqi**	**56.82**	**341**	*eP*	**P**	**13 10 25.4**	**+1.2**
USA0B	**Ussuriysk Arra**	**56.84**	**18**	P	**P**	**13 10 23.0**	**-1.2**
USRK	**Ussuriysk Ar.**	**56.84**	**18**	P	**P**	**13 10 23.6**	**-0.7**
	comp=Z,13nm,0.8s,baz=205,slow=5.8,SNR=20						
ULN	**Ulaanbaatar**	**57.09**	**357**	P	**P**	**13 10 25.3**	**-0.8**
ULN				IAmb	IAmb	13 10 26.6	
	comp=Z,7.1nm,0.8s						
SONM	**Songino Array**	**57.09**	**357**	P	**P**	**13 10 25.8**	**-0.2**
	comp=Z,5.2nm,0.8s,baz=178,slow=7.9,SNR=34						
SONM				PcP	**PcP**	**13 11 21.4**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=177,slow=4.0,SNR=6.8						
SONM				LR	LR	13 36 35.5	
	comp=Z,42nm,18.1s,baz=187,slow=38						
SONM	**Songino Array**	**57.09**	**357**	IAmb	IAmb	13 10 26.7	
	comp=Z,3.9nm,0.7s						
MCQ	**Macquarie Isla**	**59.18**	**149**	P	**P**	**13 10 41.4**	**+0.9**
SHLS	**Shalkode**	**59.39**	**334**	*eP*	**P**	**13 10 41.1**	**-1.1**
	baz=334						
UZB	**Uzynbulak**	**59.58**	**334**	*eP*	**P**	**13 10 43.2**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=334						
SATY	**Saty**	**59.77**	**333**	*eP*	**P**	**13 10 44.6**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=333						
KPKS	**Kokpek**	**59.98**	**334**	*eP*	**P**	**13 10 46.0**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=334						
MDOK	**Medeo**	**60.47**	**333**	*eP*	**P**	**13 10 49.5**	**-0.2**
	baz=332						
ZSN	**Zaisan**	**60.96**	**340**	*eP*	**P**	**13 10 52.7**	**-0.1**
	baz=340						
AAK	**Ala-Archa**	**61.27**	**330**	P	**P**	**13 10 54.5**	**-0.7**
AAK				IAmb	IAmb	13 10 56.3	
	comp=Z,5.3nm,1.2s						
MK31	**Makanchi Array**	**61.29**	**338**	P	**P**	**13 10 54.4**	**-0.6**
MK31				IAmb	IAmb	13 10 55.8	
	comp=Z,4.1nm,0.8s						
MKAR	**Makanchi Array**	**61.29**	**338**	P	**P**	**13 10 55.0**	**0.0**
	comp=Z,5.0nm,0.6s,baz=147,slow=7.5,SNR=68						
MKAR				LR	LR	13 40 08.1	
	comp=Z,26nm,20.8s,baz=148,slow=39						
TDK	**Taldyqorghan**	**61.33**	**335**	*eP*	**P**	**13 10 55.2**	**-0.2**
	comp=Z,7.6nm,0.6s,baz=335						
KUU	**Kurty**	**61.36**	**333**	*eP*	**P**	**13 10 54.8**	**-0.8**
	comp=Z,6.7nm,0.7s,baz=332						
MAKZ	**Makanchi**	**61.41**	**338**	P	**P**	**13 10 55.2**	**-0.7**
SGDS	**Sogindy**	**61.82**	**331**	*eP*	**P**	**13 10 57.9**	**-0.8**
	baz=331						
LTZ	**Lake Taylor**	**63.15**	**133**	P	**P**	**13 11 08.9**	**+1.1**
IUG	**Iuzhnay**	**63.19**	**327**	*eP*	**P**	**13 11 07.9**	**-0.1**
	baz=327						
BTLS	**Baital**	**63.29**	**332**	*eP*	**P**	**13 11 08.8**	**+0.4**
	baz=332						
SEM	**Semipalatinsk**	**65.06**	**339**	*eP*	**P**	**13 11 19.1**	**-1.2**
	comp=Z,4.3nm,0.8s,baz=339						
BKZ	**Black Stump Fm**	**65.66**	**129**	P	**P**	**13 11 25.6**	**+1.4**
BKZ				IAmb	IAmb	13 11 27.4	
	comp=Z,12nm,1.2s						
MAW	**Mawson**	**66.08**	**198**	LR	LR	13 35 15.9	
	comp=Z,73nm,21.0s,baz=59,slow=31						
ZAA0	**Zalesovo Array**	**66.70**	**344**	P	**P**	**13 11 29.7**	**-0.7**
ZALV	**Zalesovo Beam**	**66.70**	**344**	P	**P**	**13 11 29.8**	**-0.7**
	comp=Z,11nm,0.8s,baz=144,slow=4.2,SNR=42						
BRZS	**Berezniki**	**67.64**	**335**	*eP*	**P**	**13 11 36.4**	**-0.1**
	comp=Z,2.4nm,1.1s,baz=335						
GEYT	**Alibeck**	**67.75**	**318**	P	**P**	**13 11 38.4**	**+0.9**
	comp=Z,3.0nm,0.6s,baz=146,slow=8.6,SNR=6.8						
GEYT	**Alibeck**	**67.75**	**318**	IAmb	IAmb	13 11 39.3	
	comp=Z,3.1nm,0.8s						
BRVK	**Borovoye**	**70.94**	**336**	P	**P**	**13 11 56.0**	**-0.8**
BRVK				IAmb	IAmb	13 11 57.8	
	comp=Z,8.3nm,1.1s						
VNDA	**Vanda**	**73.03**	**170**	P	**P**	**13 12 11.6**	**+2.5**
	comp=Z,1.2nm,0.8s,baz=313,slow=4.2,SNR=6.5						
VNDA	**Vanda**	**73.03**	**170**	P	**P**	**13 12 10.5**	**+1.5**
ABKAR	**Akbulak array**	**73.17**	**328**	P	**P**	**13 12 10.2**	**-0.1**
SBA	**Scott Base**	**74.09**	**169**	P	**P**	**13 12 18.5**	**+3.3**
SYO	**Syowa Base**	**74.42**	**201**	⇑*eP*	P	13 12 10.6	-6.7
SYO	**Syowa Base**	**74.42**	**201**	⇑*eX*	P	13 12 23.2	+5.9
MA2	**Magadan**	**75.96**	**20**	P	**P**	**13 12 26.5**	**+0.2**
MA2				IAmb	IAmb	13 12 28.2	
	comp=Z,11nm,1.2s						
ARU	**Arti**	**78.21**	**334**	P	**P**	**13 12 38.1**	**-0.8**
ARU				IAmb	IAmb	13 12 40.2	
	comp=Z,5.9nm,0.9s						
NRIK	**Noril'sk**	**80.14**	**352**	P	**P**	**13 12 48.8**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=109,slow=5.0,SNR=3.6						
NRIK	**Noril'sk**	**80.14**	**352**	IAmb	IAmb	13 12 55.4	
	comp=Z,5.1nm,1.1s						
KBZ	**Khabaz**	**80.64**	**317**	P	**P**	**13 12 53.2**	**+0.8**
	comp=Z,3.7nm,0.8s,baz=171,slow=2.1,SNR=7.2						
BOSA	**Boshof**	**81.28**	**242**	LR	LR	13 45 30.0	
	comp=Z,60nm,18.3s,baz=168,slow=33						
TIXI	**Tiksi**	**81.81**	**6**	P	**P**	**13 12 56.7**	**-1.4**
	comp=Z,5.5nm,0.9s,baz=157,slow=3.4,SNR=14						
TIXI	**Tiksi**	**81.81**	**6**	P	**P**	**13 12 56.9**	**-1.2**
TIXI				IAmb	IAmb	13 12 58.1	
	comp=Z,4.6nm,0.8s						
BRTR	**Keskin Array B**	**85.88**	**311**	P	**P**	**13 13 21.1**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=124,slow=6.9,SNR=16						
KLMR	**Klimovskoe**	**89.01**	**332**	*eP*	**P**	**13 13 31.0**	**-3.2**
KLMR				AMP		13 13 35.8	
	comp=Z,15nm,1.3s						
MNK	**Minsk**	**93.22**	**325**	*i* P	**P**	**13 13 51.8**	**-2.1**
	comp=E,4.0nm,2.2s						
MNK				*i* P	**P**	**13 13 51.8**	**-2.1**
	comp=N,11nm,0.7s						
MNK				*i* P	**P**	**13 13 51.8**	**-2.1**
	comp=Z,4.0nm,0.8s						
MNK				*i* pP	**sP**	**13 14 06.5**	**-1.2**
MNK				*i* PP	**PP**	**13 17 35.6**	**-2.2**
MNK				*i* PPP	PPP	13 19 35.8	
MNK				*i* S	**SKSac**	**13 24 23.2**	**-2.1**
MNK				*i* sS	**SKKSac**	**13 24 46.5**	**+2.1**
MNK				*i* PS	**PS**	**13 26 14.8**	**-0.8**
MNK				*i* SS	**SS**	**13 31 13.0**	**-1.6**
MNK				*i* SSS	SSS	13 34 52.8	
MNK				*i* LQ	LQ	13 50 05.0	
MNK				*i* LR	LR	13 53 49.7	
MNK				*i* LRM	MLR	13 54 42.4	
	comp=E,7.0nm,19.8s						
MNK				*i* LRM	MLR	13 54 46.9	
	comp=N,153nm,21.1s						
MNK				*i* LRM	MLR	13 55 07.3	
	comp=Z,58nm,11.2s						
ARCES	**ARCESS Array B**	**96.93**	**339**	LR	LR	14 02 12.1	
	comp=Z,20nm,21.0s,baz=110,slow=38						
YKA	**Yellowknife Ar**	**117.90**	**22**	PKP	**PKiKP**	**13 19 26.6**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=317,slow=1.5,SNR=9.8						
ELK	**Elko**	**129.07**	**44**	PKP	**PKiKP**	**13 19 50.3**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=150,slow=5.1,SNR=4.1						
PDAR	**Pinedale Array**	**131.85**	**39**	PKP	**PKiKP**	**13 19 54.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=298,slow=1.9,SNR=2.2						
TXAR	**Lajitas Array**	**142.50**	**53**	PKiKP	PKPpre	13 20 10.0	
	comp=Z,0.3nm,0.6s,baz=280,slow=2.1,SNR=6.7						
TXAR	**Lajitas Array**	**142.50**	**53**	PKPpre	PKPpre	13 20 09.5	
BDFB	**Brasilia**	**147.16**	**221**	PKPbc	**PKiKP**	**13 20 26.6**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=152,slow=1.6,SNR=7.7						
TKL	**Tuckaleechee C**	**150.87**	**24**	PKPbc	**PKPbc**	**13 20 32.6**	**0.0**
	comp=Z,6.1nm,0.8s,baz=160,slow=4.3,SNR=7.1						

IDC ***05*** *13:14:04.4±0.9, 84°.75N×99°.98E, h0km, mb3.6/7, mb1 3.9/10, mb1mx3.5/51, mbtmp3.7/10, ML3.4/3, MS3.0/16, Ms1 3.0/16, ms1mx2.8/55, Error ellipse: s-maj=26.7km s-min=18.9km az=135.0*
**ISC 05 13:14:05.5±0.9,

baz=11
ANVS ⇑*i*S **Sn** **13 21 11.1 -0.9**
baz=11
UCH **Uchtor** **2.96 323** ⇑*i*P **Pn** **13 20 36.0 -0.2**
baz=22
UCH ⇑*i*S **Sn** **13 21 11.9 -0.8**
baz=22
UCH **Uchtor** **2.96 323** P **Pn** **13 20 36.8 +0.6**
SNR=19
KBK **Karagaybulak** **3.14 333** ⇓*i*P **Pn** **13 20 38.4 0.0**
baz=32
KBK ⇓*i*S **Sn** **13 21 16.2 -0.5**
baz=32
KBK **Karagaybulak** **3.14 333** P **Pn** **13 20 39.1 +0.7**
SNR=7.3
TNSS **Tian-Shan** **3.15 0** *e*P **Pb** **13 20 42.8 -1.8**
20nm,0.4s
TNSS *e*S **Sb** **13 21 23.6 -0.1**
13nm,0.5s
TNSS **Tian-Shan** **3.15 0** Pg **Pb** **13 20 42.8 -1.8**
20nm,0.4s
TNSS Lg Lg 13 21 23.6
13nm,0.5s
IZV **Izvestkoviy** **3.16 356** *e*P **Pb** **13 20 43.2 -1.4**
9.1nm,0.3s
IZV *e*S **Sb** **13 21 24.7 +1.0**
25nm,0.5s
IZV **Izvestkoviy** **3.16 356** Pg **Pb** **13 20 43.2 -1.4**
9.1nm,0.3s
IZV Lg Lg 13 21 24.7
25nm,0.5s
TKM2 **Tokmak 2** **3.19 342** ⇑*e*P **Pn** **13 20 39.0 -0.1**
baz=42
TKM2 ⇑*i*S **Sn** **13 21 17.1 -0.9**
baz=42
TKM2 **Tokmak 2** **3.19 342** P **Pn** **13 20 39.3 +0.2**
SNR=12
TKM2 **Tokmak 2** **3.19 342** ⇑Pn **Pn** **13 20 39.1 0.0**
14nm,0.6s
TKM2 ⇑Lg Lg 13 21 23.2
12nm,0.5s
KST **Kastek** **3.24 348** *e*P **Pb** **13 20 44.9 -1.0**
19nm,0.4s
KST *e*S **Sb** **13 21 27.5 +1.6**
17nm,0.5s
KST **Kastek** **3.24 348** Pg **Pb** **13 20 44.9 -1.0**
19nm,0.4s
KST Lg Lg 13 21 27.5
17nm,0.5s
MTBS **Maitube** **3.27 354** *e*P **Pb** **13 20 44.7 -1.7**
9.1nm,0.3s
MTBS *e*S **Sb** **13 21 27.0 +0.3**
17nm,0.3s
MTBS **Maitube** **3.27 354** Pg **Pb** **13 20 44.7 -1.7**
9.1nm,0.3s
MTBS Lg Lg 13 21 27.0
17nm,0.3s
MDOK **Medeo** **3.28 2** *e*P **Pb** **13 20 44.7 -1.9**
11nm,0.4s
MDOK *e*S **Sb** **13 21 27.2 0.0**
20nm,0.5s
MDOK **Medeo** **3.28 2** ⇓Pg **Pb** **13 20 44.0 -2.7**
62nm,1.0s
MDOK ⇑Lg Lg 13 21 27.9
43nm,1.1s
MDOK **Medeo** **3.28 2** Pg **Pb** **13 20 44.7 -1.9**
11nm,0.4s
MDOK Lg Lg 13 21 27.2
20nm,0.5s
AAK **Ala-Archa** **3.30 327** ⇑*e*P **Pn** **13 20 40.3 -0.3**
baz=26
AAK ⇑*i*S **Sn** **13 21 19.8 -0.8**
baz=26
AAK **Ala-Archa** **3.30 327** P **Pn** **13 20 41.5 +1.0**
SNR=8.4
AAK **Ala-Archa** **3.30 327** ⇓Pn **Pn** **13 20 41.2 +0.7**
29nm,0.6s
AAK ⇑Lg Lg 13 21 26.8
29nm,0.6s
AML **Almayashu** **3.31 314** ⇑*i*P **Pn** **13 20 41.0 +0.1**
baz=12
AML ⇑*i*S **Sn** **13 21 20.7 -0.5**
baz=12
AML **Almayashu** **3.31 314** P **Pn** **13 20 42.0 +1.0**
SNR=20
ARSB **Arslanbob** **3.32 297** ⇑*i*P **Pn** **13 20 41.5 +0.7**
baz=95
ARSB ⇑*i*S **Sn** **13 21 21.4 +0.3**
baz=95
SATY **Saty** **3.37 19** *e*P **Pb** **13 20 46.6 -1.5**
8.7nm,0.3s
SATY *e*S **Sb** **13 21 30.1 +0.5**
30nm,0.3s
SATY **Saty** **3.37 19** Pg **Pb** **13 20 46.6 -1.5**
8.7nm,0.3s
SATY Lg Lg 13 21 30.2
30nm,0.3s
FRU1 **Bishkek** **3.39 330** ⇑*i*P **Pn** **13 20 42.5 +0.8**
baz=30
FRU1 ⇑*e*S **Sn** **13 21 22.6 -0.1**
baz=30
CHMS **Chumysh** **3.51 333** ⇑*e*P **Pn** **13 20 43.1 -0.2**
baz=32
CHMS ⇑*i*S **Sn** **13 21 24.8 -0.8**
baz=32
CHMS **Chumysh** **3.51 333** P **Pn** **13 20 43.9 +0.6**
SNR=5.9
UZB **Uzynbulak** **3.63 25** *e*P **Pb** **13 20 51.7 -0.8**
6.2nm,0.3s
UZB *e*S **Sb** **13 21 38.8 +1.7**
16nm,0.6s
UZB **Uzynbulak** **3.63 25** Pg **Pb** **13 20 51.7 -0.8**
6.2nm,0.3s
UZB Lg Lg 13 21 38.8
16nm,0.6s
EKS2 **Erkin-Say** **3.65 321** ⇓*i*P **Pn** **13 20 45.1 -0.2**
baz=20
EKS2 ⇓*i*S **Sn** **13 21 28.1 -0.9**
baz=20
SHLS **Shalkode** **3.79 29** *e*P **Pg** **13 20 59.1 -1.0**
13nm,0.2s
SHLS *e*S **Sg** **13 21 51.6 +2.4**
32nm,0.5s
SHLS **Shalkode** **3.79 29** Pg **Pg** **13 20 59.1 -1.0**
13nm,0.2s
SHLS Lg Lg 13 21 51.6
32nm,0.5s
KPKS **Kokpek** **3.82 20** *e*P **Pb** **13 20 54.2 -1.6**
12nm,0.2s
KPKS *e*S **Sb** **13 21 43.8 +1.2**
34nm,0.5s
KTBS **Karatobe** **3.83 357** *e*P **Pb** **13 20 54.0 -1.9**
9.7nm,0.3s
KTBS *e*S **Sb** **13 21 43.2 +0.3**
24nm,0.7s
KTBS **Karatobe** **3.83 357** Pg **Pb** **13 20 54.0 -1.9**
9.7nm,0.3s
KTBS Lg Lg 13 21 43.2
24nm,0.7s
USP **Ospenovka** **3.84 333** ⇓*e*P **Pn** **13 20 47.7 -0.1**
baz=32
USP ⇓*i*S **Sn** **13 21 32.5 -1.1**
baz=32
USP **Ospenovka** **3.84 333** P **Pb** **13 20 56.0 0.0**
SNR=6.3
KRBS **Karabastau** **3.92 347** *e*P **Pb** **13 20 56.7 -0.8**
10.0nm,0.3s
KRBS *e*S **Sb** **13 21 47.9 +2.3**
11nm,0.4s
KRBS **Karabastau** **3.92 347** Pg **Pb** **13 20 56.7 -0.8**
10.0nm,0.3s
KRBS Lg Lg 13 21 47.9
11nm,0.4s
PDGK **Podgornoye** **3.95 28** Pg **Pb** **13 20 57.2 -0.8**
2.5nm,0.3s
PDGK Lg Lg 13 21 48.5
11nm,0.6s
PDGK **Podgornoye** **3.95 28** ⇑Pg **Pb** **13 20 57.2 -0.8**
7.9nm,0.5s
PDGK ⇓Lg Lg 13 21 49.7
39nm,0.9s
KUU **Kurty** **4.03 354** *e*P **Pb** **13 20 57.8 -1.5**
5.0nm,0.4s
KUU *e*S **Sb** **13 21 49.6 +1.0**
17nm,0.6s
KUU **Kurty** **4.03 354** Pg **Pb** **13 20 57.8 -1.5**
5.0nm,0.4s
KUU Lg Lg 13 21 49.6
17nm,0.6s
MNAS **Manas** **4.22 309** ⇓*i*P **Pn** **13 20 53.7 +0.5**
baz=8.0
MNAS ⇓*e*S **Sn** **13 21 42.3 -1.0**
baz=8.0
MNBS **Baschi** **4.34 14** *e*P **Pb** **13 21 03.8 -0.8**
5.1nm,0.4s
MNBS *e*S **Sb** **13 22 00.1 +2.5**
15nm,0.2s
MNBS **Baschi** **4.34 14** Pg **Pb** **13 21 03.8 -0.8**
5.1nm,0.4s
MNBS Lg Lg 13 22 00.1
15nm,0.2s
ARXS **Arharly** **4.38 9** *e*P **Pb** **13 21 05.0 -0.4**
16nm,0.6s
ARXS *e*S **Sb** **13 22 02.0 +3.3**
14nm,0.3s
ARXS **Arharly** **4.38 9** Pg **Pb** **13 21 05.0 -0.4**
16nm,0.6s
ARXS Lg Lg 13 22 02.0
14nm,0.3s
DJR **Jarkent** **4.93 25** *e*P **Pb** **13 21 14.1 -0.7**
2.0nm,0.3s
DJR *e*S **Sb** **13 22 17.8 +3.1**
7.0nm,0.5s
DJR **Jarkent** **4.93 25** Pg **Pb** **13 21 14.1 -0.7**
2.0nm,0.3s
DJR Lg Lg 13 22 17.8
7.0nm,0.5s
KK31 **Karatay Array** **5.78 306** Pg **Pg** **13 21 38.2 -0.1**
0.6nm,0.4s,baz=116,slow=15,SNR=4.2
KK31 ⇑Lg Lg 13 22 45.9
2.4nm,0.6s,baz=121,slow=28

DJA ***05*** *13:49:56.6±0.5,9.˚S±4.×11.˚0E±.˚, h10km, M3.9/7, mb3.8/2, mB4.6/1, MLv4.0/7, Mw(mB)3.8/1*
IDC ***05*** *13:50:00.0±3.9,9.˚18S×110.˚51E, h56km±44km, mb3.4/7, mb1 3.5/8, mb1mx3.2/47, mbtmp3.6/8, ML3.7/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/21, Error ellipse: s-maj=76.7km s-min=17.8km az=47.0*
ISC 05 13:49:56.9±1.4,9.˚5S±0.˚1×110.˚3E±0.˚1, h35km, n14, σ1s39/14, mb3.7/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.55**	**8**	P	**Pn**	**13 50 21.4**	**-0.6**
UGM				S	**Sn**	**13 50 41.7**	**+0.8**
SMRI	**Semarang**	**2.39**	**3**	P	**Pn**	**13 50 35.4**	**+1.7**
LEM	**Lembang**	**3.73**	**314**	P	**Pn**	**13 50 54.8**	**+2.7**
	6.7nm,0.3s,baz=108,slow=13,SNR=5.6						
LEM				LR	LR	13 52 41.8	
	comp=Z,70nm,21.1s,baz=179,slow=44						
JAGI	**Jajag, Banyuwa**	**3.93**	**76**	P	**Pn**	**13 50 55.6**	**+0.8**
ABJI	**Asem Bagus**	**4.22**	**67**	P	**Pn**	**13 50 59.4**	**+0.6**
TWSI	**Taliwang, Sumb**	**6.54**	**84**	P	**Pn**	**13 51 31.9**	**+1.3**
WRA	**Warramunga Arr**	**25.45**	**117**	P	**P**	**13 55 22.3**	**+0.5**
	1.0nm,0.7s,baz=292,slow=11,SNR=8.6						
ASAR	**Alice Springs**	**26.61**	**125**	P	**P**	**13 55 33.6**	**+1.3**
	0.4nm,0.7s,baz=302,slow=9.0,SNR=7.0						
STKA	**Stephens Creek**	**36.58**	**132**	LR	LR	14 13 27.4	
	comp=Z,28nm,18.2s,baz=176,slow=38						
KSRS	**Korea Array**	**49.50**	**18**	P	**P**	**13 58 42.0**	**-2.0**
	0.8nm,0.7s,baz=202,slow=9.6,SNR=6.4						
SONM	**Songino Array**	**57.14**	**357**	P	**P**	**13 59 39.7**	**-0.4**
	0.4nm,0.6s,baz=175,slow=5.9,SNR=3.3						
MKAR	**Makanchi Array**	**61.32**	**338**	P	**P**	**14 00 09.0**	**0.0**
	0.3nm,0.4s,baz=146,slow=7.2,SNR=9.8						
KURBB	**Kurchatov Arra**	**65.89**	**338**	P	**P**	**14 00 38.5**	**-0.5**
	0.4nm,0.6s,baz=167,slow=5.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**66.75**	**344**	P	**P**	**14 00 43.4**	**-1.1**
	0.8nm,0.4s,baz=156,slow=5.7,SNR=5.7						

NEIC ***05*** *13:51:44.4±2.1,24.˚23S±0.˚06×66.˚9W±0.˚1, h179km±8km, Error ellipse: s-maj=14.3km s-min=7.4km az=74.0*
SJA ***05*** *13:51:45.5±0.6,24.˚18S×67.˚02W, h200km±4km, ML4.0, MW3.8*
VAO ***05*** *13:51:45.5±0.4,24.˚20S×67.˚29W, h229km±5km, mb4.0*
IDC ***05*** *13:51:45.2±1.4,24.˚20S×66.˚86W, h181km±11km, mb3.4/5, mb1 3.5/11, mb1mx3.4/33, mbtmp3.9/11, MS2.9/1, Ms1 2.9/1, ms1mx2.3/11, Error ellipse: s-maj=22.2km s-min=14.7km az=13.0*
GUC ***05*** *13:51:47.8±0.4,24.˚15S×67.˚41W, h228km±6km, ML4.4*
ISC 05 13:51:45.2±0.6,24.˚20S±0.˚04×67.˚05W±0.˚04, h196km±7km, n119, σ1s21/144, mb3.7/6, 5C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.50**	**111**	*e*P	**Pn**	**13 52 19.7**	**+0.9**
SLA				*e*S	**Sn**	**13 52 45.2**	**+0.4**
LVC	**Limon Verde**	**2.33**	**312**	P	**Pn**	**13 52 29.0**	**+1.6**
	30nm,0.3s,baz=135,slow=7.6,SNR=540						
LVC				S	**Sn**	**13 53 00.8**	**+0.6**
	75nm,0.3s,baz=266,slow=20,SNR=39						
LVC	**Limon Verde**	**2.33**	**312**	*e*P	**Pn**	**13 52 29.0**	**+1.6**
LVC				*e*S	**Sn**	**13 53 00.7**	**+0.6**
LVC	**Limon Verde**	**2.33**	**312**	P	**Pn**	**13 52 29.0**	**+1.6**
LVC	**Limon Verde**	**2.33**	**312**	*e*P	**Pn**	**13 52 29.1**	**+1.6**
LVC				*e*S	**Sn**	**13 53 00.8**	**+0.6**
LVC	**Limon Verde**	**2.33**	**312**	*e*P	**Pn**	**13 52 29.1**	**+1.6**
LVC				*e*S	**Sn**	**13 53 00.7**	**+0.6**
LVC				IAML		13 53 04.0	
	comp=Z,176nm,0.3s						
PB15	**IPOC Station P**	**2.43**	**293**	⇑*i*P	**Pn**	**13 52 30.2**	**+1.8**
PB15				*i* S	**Sn**	**13 53 01.7**	**-0.1**
PB15	**IPOC Station P**	**2.43**	**293**	P	**Pn**	**13 52 29.8**	**+1.4**
PB15	**IPOC Station P**	**2.43**	**293**	*e*P	**Pn**	**13 52 30.0**	**+1.7**
PB15				*e*S	**Sn**	**13 53 02.5**	**+0.7**
YJA	**Yavi**	**2.46**	**35**	*e*P	**Pn**	**13 52 30.1**	**+1.1**
YJA				*e*S	**Sn**	**13 53 03.4**	**+0.4**
GO02	**Mina Guanaco**	**2.50**	**247**	⇑*i*P	**Pn**	**13 52 30.6**	**+1.4**
GO02				*i* S	**Sn**	**13 53 04.6**	**+1.1**
GO02				IAML		13 53 08.8	
	comp=N,941nm,0.1s						
GO02	**Mina Guanaco**	**2.50**	**247**		**Pn**	**13 52 30.8**	**+1.5**
PB06	**IPOC Station P**	**2.75**	**302**	⇑*i*P	**Pn**	**13 52 33.5**	**+1.5**
PB06				*i* S	**Sn**	**13 53 07.9**	**-0.5**
PB06				IAML		13 53 10.9	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**2.75**	**302**	*e*P	**Pn**	**13 52 33.2**	**+1.2**
PB06	**IPOC Station P**	**2.75**	**302**	*e*P	**Pn**	**13 52 33.5**	**+1.5**
PB06				*e*S	**Sn**	**13 53 08.5**	**+0.1**
PB06				IAML		13 53 11.0	
	comp=Z,676nm,0.3s						
PB14	**IPOC Station P**	**3.09**	**261**	*e*P	**Pn**	**13 52 37.1**	**+1.1**
PB14				*e*S	**Sn**	**13 53 14.4**	**-1.2**
PB14	**IPOC Station P**	**3.09**	**261**	*e*P	**Pn**	**13 52 36.5**	**+0.5**
PB14	**IPOC Station P**	**3.09**	**261**	*e*P	**Pn**	**13 52 37.7**	**+1.7**
PB14				*e*S	**Sn**	**13 53 16.2**	**+0.5**
PB14				IAML		13 53 20.7	
	comp=Z,253nm,0.8s						
PB09	**IPOC Station P**	**3.13**	**319**	*e*P	**Pn**	**13 52 38.2**	**+1.7**
PB09				*i* S	**Sn**	**13 53 16.7**	**+0.3**
PB09				IAML		13 53 18.6	
	comp=N,412nm,0.5s						
PB09	**IPOC Station P**	**3.13**	**319**		**Pn**	**13 52 37.9**	**+1.5**
PB09	**IPOC Station P**	**3.13**	**319**	*e*P	**Pn**	**13 52 38.1**	**+1.6**
PB09				*e*S	**Sn**	**13 53 17.0**	**+0.5**
PB09				IAML		13 53 17.9	
	comp=Z,287nm,0.4s						
PB05	**IPOC Station P**	**3.19**	**294**	*e*P	**Pn**	**13 52 38.0**	**+0.9**
PB05				*e*S	**Sn**	**13 53 15.7**	**-1.9**
PB05				IAML		13 53 18.9	
	comp=N,377nm,0.4s						
PB05				IAML		13 53 21.7	
	comp=N,366nm,0.3s						
PB05	**IPOC Station P**	**3.19**	**294**	*e*P	**Pn**	**13 52 38.2**	**+1.1**
PB05				*e*S	**Sn**	**13 53 17.2**	**-0.4**
PB05				IAML		13 53 23.9	
	comp=Z,197nm,1.0s						
AC02	**Maricunga**	**3.23**	**215**	Pn	**Pn**	**13 52 39.4**	**+1.5**
PB10	**IPOC Station P**	**3.28**	**281**	*e*P	**Pn**	**13 52 38.4**	**+0.3**
PB10				*e*S	**Sn**	**13 53 17.4**	**-2.0**
PB10	**IPOC Station P**	**3.28**	**281**		**Pn**	**13 52 38.4**	**+0.3**
PB10	**IPOC Station P**	**3.28**	**281**	*e*P	**Pn**	**13 52 39.2**	**+1.1**
PB10				*e*S	**Sn**	**13 53 19.2**	**-0.1**
PB10				IAML		13 53 26.4	
	comp=Z,243nm,0.3s						
PB03	**IPOC Station P**	**3.28**	**310**	⇑*i*P	**Pn**	**13 52 39.3**	**+1.0**
PB03				*i* S	**Sn**	**13 53 18.7**	**-1.0**
PB03	**IPOC Station P**	**3.28**	**310**	*e*P	**Pn**	**13 52 39.3**	**+1.0**
PB03				*e*S	**Sn**	**13 53 19.1**	**-0.6**
PB03				IAML		13 53 25.1	
	comp=Z,602nm,0.2s						
PB04	**IPOC Station P**	**3.40**	**302**	*e*P	**Pn**	**13 52 40.7**	**+1.0**
PB04				*e*S	**Sn**	**13 53 20.7**	**-1.6**
PB04	**IPOC Station P**	**3.40**	**302**		**Pn**	**13 52 40.4**	**+0.6**
PB04	**IPOC Station P**	**3.40**	**302**	*e*P	**Pn**	**13 52 40.9**	**+1.2**
PB04				*e*S	**Sn**	**13 53 22.0**	**-0.3**
PB04				IAML		13 53 25.1	
	comp=Z,438nm,0.3s						
PB07	**IPOC Station P**	**3.59**	**313**	⇑*i*P	**Pn**	**13 52 42.8**	**+0.8**
PB07				*e*S	**Sn**	**13 53 24.3**	**-2.1**
PB07	**IPOC Station P**	**3.59**	**313**		**Pn**	**13 52 42.5**	**+0.4**
AC01	**Pan de Azucar**	**3.76**	**238**	Pn	**Pn**	**13 52 43.9**	**0.0**
PB01	**IPOC Station P**	**3.87**	**324**		**Pn**	**13 52 45.5**	**+0.1**
GO03	**Copiap**	**4.43**	**220**	Pn	**Pn**	**13 52 51.9**	**-0.5**
GO03	**Copiap**	**4.43**	**220**	*e*P	**Pn**	**13 52 52.6**	**+0.2**
GO03				*e*S	**Sn**	**13 53 44.4**	**-0.9**
PB08	**IPOC Station P**	**4.48**	**334**		**Pn**	**13 52 53.9**	**+0.5**
TA01	**Diego Aracena**	**4.63**	**321**	Pn	**Pn**	**13 52 55.0**	**+0.1**
ACLC	**CERRO LA CRUZ**	**5.21**	**179**	*e*P	**Pn**	**13 53 03.6**	**+1.2**
AC04	**Llanos de Chal**	**5.38**	**221**	Pn	**Pn**	**13 53 03.7**	**-0.8**
PSGCX	**Pisagua**	**5.40**	**327**	Pn	**Pn**	**13 53 03.2**	**-1.6**
AGUA	**GUANDACOL**	**5.42**	**193**	*e*P	**Pn**	**13 53 06.5**	**+1.5**
AGUA				*e*S	**Sn**	**13 54 10.9**	**+2.8**
AGUA				IAML		13 54 12.1	
	comp=Z,18nm,0.4s						
MNMC	**Minye Minye**	**5.57**	**334**	Pn	**Pn**	**13 53 06.8**	**-0.4**
LCO	**Las Campanas**	**5.80**	**214**	Pn	**Pn**	**13 53 09.4**	**-0.7**
ACDV	**Cuesta del Vie**	**6.23**	**197**	*e*P	**Pn**	**13 53 17.1**	**+1.6**
PB16	**IPOC Station P**	**6.27**	**338**		**Pn**	**13 53 16.6**	**+0.1**
AROD	**Rodeo**	**6.32**	**199**	*e*P	**Pn**	**13 53 18.8**	**+1.9**
ACCO	**Cerro Coronel**	**6.61**	**195**	*e*P	**Pn**	**13 53 21.9**	**+1.2**
ACCO				*e*S	**Sn**	**13 54 36.2**	**-0.1**
ACCO				IAML		13 54 37.0	
	comp=Z,13nm,1.9s						
GO04	**Tololo Observa**	**6.82**	**208**	Pn	**Pn**	**13 53 21.6**	**-1.7**
GO04	**Tololo Observa**	**6.82**	**208**	*e*P	**Pn**	**13 53 22.7**	**-0.7**
GO04				*e*S	**Sn**	**13 54 39.4**	**-1.7**
CO03	**El Pedregal**	**7.36**	**205**	Pn	**Pn**	**13 53 28.6**	**-1.6**
LPAZ	**La Paz**	**7.94**	**352**	P	**Pn**	**13 53 39.4**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=157,slow=9.0,SNR=16						
LPAZ				S	**Sn**	**13 55 06.6**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=288,slow=17,SNR=2.3						
LPAZ	**La Paz**	**7.94**	**352**	Pn	**Pn**	**13 53 38.3**	**-0.1**
AUSP	**Uspallata**	**8.26**	**194**	*e*P	**Pn**	**13 53 43.6**	**+1.5**
CPUP	**Villa Florida**	**9.05**	**106**	P	**Pn**	**13 53 50.0**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=258,slow=11,SNR=3.3						
VA03	**San Esteban**	**9.07**	**199**	Pn	**Pn**	**13 53 52.1**	**-0.4**
MT02	**Curacav**	**9.71**	**201**	Pn	**Pn**	**13 53 58.3**	**-2.5**
MT05	**Renca**	**9.71**	**199**	Pn	**Pn**	**13 53 59.4**	**-1.4**
SIV	**San Ignacio**	**9.91**	**36**	P	**Pn**	**13 54 01.6**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=225,slow=12,SNR=28						
BI02	**San Fabin de**	**12.94**	**195**	P	**Pn**	**13 54 42.5**	**+0.3**
PTGB	**Pitanga**	**13.66**	**95**	*e*P	**P**	**13 54 54.9**	**+1.3**
ITAB	**Concordia**	**13.78**	**106**	*e*P	**P**	**13 54 54.9**	**0.0**
PLTB	**Pedras Altas**	**14.06**	**125**	*e*P	**P**	**13 54 57.3**	**-0.6**
PCMB	**Pacaembu**	**14.78**	**83**	*e*P	**P**	**13 55 07.5**	**+1.5**
SAML	**Samuel**	**15.61**	**14**	*e*P	**Pn**	**13 55 14.8**	**-0.3**
FRTB	**Fartura**	**16.03**	**91**	*e*P	**P**	**13 55 20.3**	**+0.4**
ITRB	**Iturama**	**16.11**	**77**	*e*P	**Pn**	**13 55 22.1**	**+0.8**
TIJ01	**Guaruva-PR**	**16.43**	**98**	*e*P	**Pn**	**13 55 25.2**	**+0.1**
ARAG	**Araguaiana, MT**	**16.62**	**62**	*e*P	**Pn**	**13 55 27.9**	**+0.6**
TER01	**Tubaro-SC**	**16.63**	**109**	*e*P	**Pn**	**13 55 26.6**	**-0.7**
PLCA	**Paso Flores**	**16.75**	**189**	P	**Pn**	**13 55 28.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=349,slow=8.8,SNR=3.1						
PLCA	**Paso Flores**	**16.75**	**189**	IAmb	IAmb	13 55 37.2	
	comp=Z,3.0nm,0.7s						
PLCA	**Paso Flores**	**16.75**	**189**	*e*P	**P**	**13 55 24.6**	**-3.0**
CLDB	**Colider**	**17.04**	**41**	*e*P	**P**	**13 55 30.5**	**-0.4**
BB19B	**Bebedouro**	**17.38**	**83**	*e*P	**Pn**	**13 55 35.0**	**-1.4**
SPB	**Sao Paulo**	**17.95**	**92**	*e*P	**Pn**	**13 55 42.0**	**-1.0**
RCLB	**Rio Claro- Sao**	**18.02**	**88**	*e*P	**P**	**13 55 41.1**	**-0.5**
PET01	**Itanhaem-SP**	**18.04**	**94**	*e*P	**P**	**13 55 41.7**	**0.0**
VAO	**Valinhos**	**18.45**	**90**	*e*P	**P**	**13 55 45.7**	**-0.7**
IPMB	**Ipameri, GO**	**18.62**	**74**	*e*P	**P**	**13 55 48.2**	**0.0**
SNDB	**Serra Nova Dou**	**19.27**	**54**	*e*P	**P**	**13 55 54.4**	**-0.7**
PARB	**Paraibuna**	**19.63**	**92**	*e*P	**P**	**13 55 59.2**	**+0.1**
BDFB	**Brasilia**	**19.80**	**68**	P	**P**	**13 56 01.1**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=242,slow=11,SNR=18						
BDFB	**Brasilia**	**19.80**	**68**	P	**P**	**13 56 00.7**	**-0.4**
NPGB	**Novo Progresso**	**20.41**	**35**	*e*P	**P**	**13 56 05.1**	**-2.3**
ESAR	**Angra dos Reis**	**20.75**	**91**	*e*P	**P**	**13 56 13.3**	**-0.7**
BSCB	**Bom Sucesso**	**20.81**	**86**	*e*P	**P**	**13 56 11.0**	**-0.7**
PEXB	**Peixe**	**21.46**	**59**	*e*P	**P**	**13 56 17.5**	**-1.1**
VAS01	**Vassouras-RJ**	**21.77**	**90**	*e*P	**P**	**13 56 20.7**	**-0.9**
MACA	**Manacapuru-AM**	**21.80**	**17**	*e*P	**P**	**13 56 20.5**	**-1.4**
ITTB	**Itaituba**	**22.53**	**31**	*e*P	**P**	**13 56 27.6**	**-1.2**
DIAM	**Diamantina, MG**	**22.55**	**79**	*e*P	**P**	**13 56 28.9**	**-0.3**
JANB	**Januaria**	**23.24**	**71**	*e*P	**P**	**13 56 34.0**	**-1.3**
SDBA	**SAO DESIDERIO**	**24.03**	**65**	*e*P	**P**	**13 56 41.9**	**-0.6**
SMTB	**Santa Maria do**	**24.05**	**54**	*e*P	**P**	**13 56 42.0**	**-0.6**
PTGA	**Pitinga**	**24.32**	**17**	P	**P**	**13 56 46.0**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=72,slow=19,SNR=1.4						
PTGA	**Pitinga**	**24.32**	**17**	IAmb	IAmb	13 56 56.4	
	comp=Z,2.8nm,1.1s						
BOAV	**Boa Vista**	**27.19**	**14**	*e*P	**P**	**13 57 09.3**	**-1.5**
NBIT	**Itapeh - BA**	**27.56**	**76**	*e*P	**P**	**13 57 13.6**	**-0.5**
GDU01	**Guandu, BA**	**27.94**	**73**	*e*P	**P**	**13 57 16.7**	**-0.9**
NBLA	**Lagarto - SE**	**30.75**	**70**	*e*P	**P**	**13 57 40.9**	**-1.4**
NBTA	**Tacaratu-PE**	**31.46**	**66**	*e*P	**P**	**13 57 47.4**	**-1.2**
NBAN	**Anadia - AL**	**32.69**	**69**	*e*P	**P**	**13 57 57.8**	**-1.6**
SDV	**Santo Domingo**	**33.07**	**354**	LR	LR	14 14 43.9	
	comp=Z,22nm,19.8s,baz=84,slow=42						
NBLI	**Livramento-PB**	**33.33**	**65**	*e*P	**P**	**13 58 03.3**	**-1.7**
NBPA	**Parau_RN**	**34.11**	**62**	*e*P	**P**	**13 58 11.3**	**-0.3**
SNAA	**Sanae**	**59.18**	**161**	P	**P**	**14 01 26.9**	**+1.7**
SNAA				IAmb	IAmb	14 01 54.5	
	comp=Z,8.6nm,1.5s						
TXAR	**Lajitas Array**	**63.81**	**325**	P	**P**	**14 01 59.3**	**+2.5**
	comp=Z,0.3nm,0.7s,baz=162,slow=8.6,SNR=6.1						
ANMO	**Albuquerque**	**69.69**	**326**	P	**P**	**14 02 36.6**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=170,slow=12,SNR=4.1						
ANMO	**Albuquerque**	**69.69**	**326**	IAmb	IAmb	14 02 37.9	
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**76.68**	**69**	P	**P**	**14 03 15.1**	**0.0**
	comp=Z,0.5nm,0.4s,baz=260,slow=5.3,SNR=4.2						
YKA	**Yellowknife Ar**	**94.30**	**340**	P	**P**	**14 04 43.1**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=132,slow=5.2,SNR=9.7						
ASAR	**Alice Springs**	**128.26**	**205**	PKP	**PKiKP**	**14 10 30.6**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=139,slow=1.8,SNR=9.8						
WRA	**Warramunga Arr**	**131.43**	**207**	PKP	**PKiKP**	**14 10 37.1**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=160,slow=1.8,SNR=14						
ZALV	**Zalesovo Beam**	**143.59**	**28**	PKP	**PKPdf**	**14 10 56.3**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=320,slow=4.0,SNR=5.6						
MKAR	**Makanchi Array**	**146.71**	**40**	PKPbc	**PKPbc**	**14 11 04.4**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=292,slow=1.2,SNR=16						
KLR	**Kul'dur**	**150.99**	**334**	PKPbc	**PKiKP**	**14 11 15.9**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=180,slow=1.0,SNR=4.9						

ROM 05 13:58:28.8±0.1, 43.˚090N±0.˚004×13.˚310E±0.˚007, h19km, Md1.3/4, 1D, Error ellipse: s-maj=0.6km s-min=0.5km az=88.0, Central Italy

| Code | Station Name | Δ° | A

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZ	**Kirchzarten**	**0.15**	**211**	⇑Pg	Pg	13 58 33.2	-0.1
KIZ				⇑Pg	Pg	13 58 33.2	-0.1
	0.1nm,SNR=2.9						
KIZ				Sg	Sg	13 58 35.6	-0.2
KIZ	**Kirchzarten**	**0.15**	**211**	Pg	Pg	13 58 33.1	-0.2
KIZ	**Kirchzarten**	**0.15**	**211**	Pg	Pg	13 58 33.1	-0.2
FELD	**Feldberg im Sc**	**0.21**	**185**	Pg	Pg	13 58 34.0	-0.3
FELD				Pg	Pg	13 58 34.0	-0.3
	SNR=0.9						
FELD				Sg	Sg	13 58 37.3	-0.2
FELD	**Feldberg im Sc**	**0.21**	**185**	Sg	Sg	13 58 37.0	-0.5
FELD	**Feldberg im Sc**	**0.21**	**185**	Pg	Pg	13 58 34.0	-0.3
FELD	**Feldberg im Sc**	**0.21**	**185**	Sg	Sg	13 58 37.0	-0.5
BERGE	**Lenzkirch (DE)**	**0.23**	**155**	⇓Pg	Pg	13 58 34.2	-0.4
	SNR=1.2						
BERGE				⇓Pg	Pg	13 58 34.2	-0.4
BFO	**Black Forest**	**0.32**	**39**	⇑Pg	Pg	13 58 35.8	-0.2
	SNR=0.7						
BFO				⇑Pg	Pg	13 58 35.8	-0.2
METMA	**Mettma DE**	**0.40**	**158**	⇓Pg	Pg	13 58 37.1	-0.4
	SNR=0.6						
METMA				⇓Pg	Pg	13 58 37.1	-0.4
METMA				Sg	Sg	13 58 42.2	-0.7
OPP	**Oppenau**	**0.43**	**14**	Pg	Pg	13 58 37.9	-0.1
OPP				Sg	Sg	13 58 43.6	-0.3
SLE	**Schleitheim**	**0.44**	**136**	⇓Pg	Pg	13 58 37.9	-0.4
	SNR=0.9						
SLE				⇓Pg	Pg	13 58 37.9	-0.4
SLE	**Schleitheim**	**0.44**	**136**	Pg	Pg	13 58 37.9	-0.4
SLE	**Schleitheim**	**0.44**	**136**	Sg	Sg	13 58 43.8	-0.6
SLE	**Schleitheim**	**0.44**	**136**	Pg	Pg	13 58 37.9	-0.4
SLE	**Schleitheim**	**0.44**	**136**	Sg	Sg	13 58 43.8	-0.6
ACHB	**Acheberg**	**0.52**	**163**	Sg	Sg	13 58 46.2	-0.4
SULZ	**Cheisacher**	**0.56**	**174**	Pg	Pg	13 58 40.2	-0.2
SULZ				Pg	Pg	13 58 40.2	-0.2
	0.1nm,SNR=1.6						
SULZ				Sg	Sg	13 58 47.8	-0.1
SULZ	**Cheisacher**	**0.56**	**174**	Pg	Pg	13 58 40.2	-0.3
SULZ	**Cheisacher**	**0.56**	**174**	Pg	Pg	13 58 40.2	-0.3
WLS	**Welschbruch**	**0.56**	**306**	Pg	Pg	13 58 40.8	+0.3
WLS				Sg	Sg	13 58 48.3	+0.3
EMING	**Emmingen-Lipti**	**0.58**	**109**	Pg	Pg	13 58 40.5	-0.3
EMING				Pg	Pg	13 58 40.5	-0.3
	SNR=0.9						
ECH	**Echery**	**0.60**	**283**	Pg	Pg	13 58 41.3	+0.1
	SNR=0.8						
ECH				Pg	Pg	13 58 41.3	+0.1
ECH	**Echery**	**0.60**	**283**	Pg	Pg	13 58 41.3	0.0
ECH				Sg	Sg	13 58 49.3	+0.1
ECH	**Echery**	**0.60**	**283**	Pg	Pg	13 58 41.7	+0.1
ECH				Sg	Sg	13 58 49.4	+0.2
ECH	**Echery**	**0.60**	**283**	Pg	Pg	13 58 41.3	0.0
ECH				Sg	Sg	13 58 49.3	+0.1
CDF	**Champ du Feu**	**0.60**	**303**	*e*Pg	Pg	13 58 41.5	+0.2
CDF				*e*Sg	Sg	13 58 49.4	+0.1
	3.3nm,0.2s						
ROTHE	**Rothenfluh**	**0.61**	**187**	Pg	Pg	13 58 41.0	-0.4
ROTHE				Pg	Pg	13 58 41.0	-0.4
	SNR=0.8						
MOF	**Molkenrain**	**0.65**	**249**	Pg	Pg	13 58 42.3	+0.2
MOF	**Molkenrain**	**0.65**	**249**	Sg	Sb	13 58 51.1	-0.3
MOF	**Molkenrain**	**0.65**	**249**	Pg	Pg	13 58 42.3	+0.2
GUT	**Gutenstein**	**0.73**	**91**	Pg	Pg	13 58 43.2	-0.4
GUT	**Gutenstein**	**0.73**	**91**	Sg	Sg	13 58 52.4	-0.8
GUT	**Gutenstein**	**0.73**	**91**	Pg	Pg	13 58 43.2	-0.4
GUT	**Gutenstein**	**0.73**	**91**	Sg	Sg	13 58 52.4	-0.8
BALST	**Balsthal**	**0.78**	**197**	Sg	Sg	13 58 55.0	+0.1
BALST	**Balsthal**	**0.78**	**197**	Pg	Pg	13 58 44.3	-0.3
HINF	**Hinteralfeld**	**0.84**	**252**	*e*Pg	Pg	13 58 45.2	-0.5
HINF				*e*Sg	Sg	13 58 56.4	-0.3
	4.8nm,0.4s						
BOURR	**Bourrignon**	**0.88**	**218**	Pg	Pb	13 58 46.3	-0.1
	SNR=0.8						
BOURR				Pg	Pb	13 58 46.3	-0.1
BOURR	**Bourrignon**	**0.88**	**218**	Pg	Pb	13 58 46.4	0.0
BOURR	**Bourrignon**	**0.88**	**218**	Sg	Sb	13 58 58.6	+0.7
HAU	**Haudompre**	**1.13**	**267**	*e*Pg	Pn	13 58 50.6	+0.1
HAU				*e*Sn	Sb	13 59 03.6	-1.7
HAU				*e*Sg	Sg	13 59 05.6	-0.5
	6.9nm,0.3s						
PAGF	**Fort de Pagny**	**1.61**	**288**	*e*Pg	Pb	13 58 59.5	+0.6
PAGF				*e*Sg	Sg	13 59 20.4	-0.9
	2.4nm,0.2s						
CABF	**La Chapelle**	**1.98**	**223**	*e*Pg	Pg	13 59 06.7	-0.7
CABF				*e*Sg	Sg	13 59 32.1	-1.0
	0.4nm,0.2s						
SAVF	**Savonnieres en**	**2.01**	**286**	*e*Pg	Pg	13 59 07.7	-0.3
SAVF				*e*Sn	Sn	13 59 25.0	-2.8
SAVF				*e*Sg	Sg	13 59 32.9	-1.2
	1.2nm,0.3s						
MEZF	**Maizieres J'vi**	**2.03**	**283**	*e*Pg	Pb	13 59 07.2	+1.1
MEZF				*e*Sn	Sn	13 59 24.9	-3.4
MEZF				*e*Sg	Sg	13 59 33.9	-0.9
	0.7nm,0.2s,baz=104						
LOR	**Lormes**	**2.94**	**255**	*e*Pn	Pn	13 59 13.9	-1.7
LOR	**Lormes**	**2.94**	**255**	*e*Pg	Pg	13 59 24.4	-1.3
	baz=75						
LOR				*e*Sg	Sg	14 00 01.7	-2.0
	1.2nm,0.3s,baz=74						
SSF	**Saint Saulge**	**3.23**	**253**	*e*Pn	Pn	13 59 17.3	-2.3
SSF	**Saint Saulge**	**3.23**	**253**	*e*Pg	Pg	13 59 29.3	-2.0
SSF				*e*Sg	Sg	14 00 10.6	-2.5
	0.5nm,0.2s						

*NEIC **05** 14:10:36.5±0.6,5°.5S±0°.1×146°.4E±0°.2, h137km±13km, mb4.2/9, Error ellipse: s-maj=27.6km s-min=14.2km az=68.0*

*IDC **05** 14:10:40.2±4.4,5°.78S×145°.83E, h101km±30km, mb3.4/2, mb1 3.8/5, mb1mx3.3/37, mbtmp4.1/5, Error ellipse: s-maj=91.4km s-min=18.2km az=56.0*

ISC 05 14:10:35.5±1.4,5°.3S±0°.1×146°.4E±0°.2, h123km,n16, σ1°86/17, mb3.8/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.11**	**170**	P	**Pn**	**14 11 36.7**	**+0.1**
	5.7nm,0.3s,baz=339,slow=14,SNR=46						
PMG				S	**Sn**	**14 12 22.3**	**-1.7**
	16nm,0.3s,baz=181,slow=22,SNR=19						
JAY	**Jayapura**	**6.37**	**296**	P	**Pn**	**14 12 07.5**	**+0.5**
	2.4nm,0.3s,baz=141,slow=6.5,SNR=9.7						
COEN	**Coen**	**9.15**	**200**		**Pn**	**14 12 46.1**	**+1.5**
CTAO	**Charters Tower**	**14.67**	**181**	P	**P**	**14 14 03.1**	**+3.1**
WB0	**Warramunga Arr**	**18.53**	**218**	P	**P**	**14 14 41.0**	**-1.7**
WB0				IAmb	IAmb	14 14 44.9	
	comp=Z,8.7nm,1.2s						
WR0	**Warramunga Arr**	**18.58**	**217**	P	**P**	**14 14 41.8**	**-1.4**
WRAB	**Tennant Creek**	**18.68**	**218**	P	**P**	**14 14 42.8**	**-1.5**
WRAB				IAmb	IAmb	14 14 43.8	
	comp=Z,14nm,0.5s						
WB2	**Warramunga Arr**	**18.68**	**218**	P	**P**	**14 14 43.0**	**-1.4**
WB2				IAmb	IAmb	14 14 44.0	
	comp=Z,14nm,0.5s						
WRA	**Warramunga Arr**	**18.69**	**218**	P	**P**	**14 14 43.0**	**-1.4**
	comp=Z,3.0nm,0.3s,baz=38,slow=12,SNR=241						
AS31	**Alice Springs**	**21.86**	**212**	P	**P**	**14 15 16.9**	**-1.6**
ASAR	**Alice Springs**	**21.86**	**212**	P	**P**	**14 15 17.1**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=50,slow=8.3,SNR=58						
FITZ	**Fitzroy Crossi**	**23.95**	**236**	P	**P**	**14 15 36.5**	**-2.1**
FITZ				IAmb	IAmb	14 15 38.5	
	comp=Z,4.2nm,0.7s						
STKA	**Stephens Creek**	**26.79**	**189**	P	**P**	**14 16 06.4**	**+2.3**
	comp=Z,0.6nm,0.4s,baz=342,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**26.79**	**189**	P	**P**	**14 16 02.2**	**-1.9**
CAN	**Canberra**	**29.93**	**176**	P	**P**	**14 16 30.0**	**-2.0**
TIXI	**Tiksi**	**77.70**	**354**	P	**P**	**14 22 17.8**	**-0.3**
TIXI				IAmb	IAmb	14 22 28.2	
	comp=Z,4.2nm,1.4s						

*SEA **05** 14:19:48.6±1.1,45°.66N±0°.02×122°.78W±0°.04, h19km±2km, ML2.1/13, ML2.1/14(NEIC), Error ellipse: s-maj=4.1km s-min=3.0km az=132.0*

NEIC 05 14:19:47.6±2.2,45°.68N±0°.03×122°.77W±0°.03, h20km±4km, Error ellipse: s-maj=4.2km s-min=3.3km az=209.0, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSS	**Ross**	**0.08**	**105**		Pb	14 19 51.9	+0.5
ROSS					Sb	14 19 54.6	+0.6
HUBA	**Hudson Bay Hig**	**0.10**	**122**		Pb	14 19 52.0	+0.5
HUBA					Sb	14 19 54.9	+0.7
WPO	**West Portland**	**0.11**	**188**		Pb	14 19 51.9	+0.8
WPO					Sb	14 19 54.2	+0.7
KEEL	**Keeler**	**0.16**	**214**		Sb	14 19 55.9	+1.1
EYES	**Ewing Young ES**	**0.41**	**210**		Pb	14 19 56.3	+0.2
F04D	**Rainier, OR**	**0.43**	**337**		Pb	14 19 57.5	+0.8
F04D					Sn	14 20 04.5	-1.7
LVP	**Lakeview Peak**	**0.46**	**33**		Pb	14 19 57.8	+0.6
RVW	**Rose Valley**	**0.47**	**2**		Pb	14 19 57.7	+0.5
RVW					Sb	14 20 04.9	+1.1
B023	**Clatskanie**	**0.48**	**333**		Pb	14 19 57.9	+0.5
B023					Sb	14 20 05.3	+1.3
KMOR	**Kings Mountain**	**0.51**	**265**		Pb	14 19 57.9	-0.1
G04A	**Mulino**	**0.52**	**157**		Pb	14 19 57.9	-0.1
MTMW	**Mount Mitchell**	**0.52**	**48**		Pb	14 19 58.5	+0.4
B203	**Quarry, Mount**	**0.57**	**32**		Pb	14 19 59.5	+0.5
G03D	**McMinnville, O**	**0.59**	**217**		Pb	14 19 58.8	-0.4
FL2	**Flat Top 2**	**0.59**	**29**		Pb	14 19 60.0	+0.6
SWF2	**Southwest Flan**	**0.63**	**38**		Pb	14 20 00.7	+0.7
SHW	**Mount Saint He**	**0.63**	**36**		Pn	14 20 00.8	-0.8
JLK	**June Lake**	**0.63**	**43**		Pb	14 20 00.6	+0.5
HSR	**South Ridge**	**0.64**	**40**		Pn	14 20 01.1	-0.7
CDFW	**Cedar Flats**	**0.67**	**49**		Pb	14 20 01.2	+0.6
VALT	**Mount Saint He**	**0.67**	**37**		Pn	14 20 01.5	-0.7
ESD	**East Dome**	**0.67**	**40**		Pn	14 20 01.5	-0.7
STD	**Studebaker Rid**	**0.67**	**34**		Pb	14 20 01.4	+0.6
STD	**Studebaker Rid**	**0.67**	**34**		Pb	14 20 01.5	+0.7
BOLM	**Sugar Bowl**	**0.68**	**38**		Pn	14 20 01.7	-0.6
ERK	**Elk Rock**	**0.69**	**25**		Pb	14 20 01.4	+0.3
JRO	**Jston Ridge Ob**	**0.71**	**33**		Pb	14 20 01.9	+0.5
JRO					Sn	14 20 11.9	-1.1
B201	**Coldwater, Mou**	**0.71**	**29**		Pb	14 20 01.7	+0.2
SOSW	**Source of Smit**	**0.71**	**38**		Pb	14 20 02.0	+0.6
B202	**Windy Ridge, M**	**0.71**	**38**		Pb	14 20 01.8	+0.3
B202					Sb	14 20 11.8	+0.9
HIYU	**Hiyu Mountain**	**0.72**	**110**		Pb	14 20 02.1	+0.6
TDL	**Tradedollar La**	**0.77**	**30**		Pb	14 20 02.8	+0.3
TDH	**Tom, Dick, Har**	**0.79**	**119**		Pb	14 20 02.9	+0.1
BMW	**Boistfort Moun**	**0.85**	**338**		Pb	14 20 04.1	+0.2
E04D	**Cinebar**	**0.89**	**9**		Pn	14 20 05.1	+0.1
F05D	**White Salmon**	**0.94**	**77**		Pb	14 20 04.4	-0.8
ASR	**Mount Adams--S**	**0.94**	**60**		Pb	14 20 05.6	+0.2
LCW	**Lucas Creek**	**0.99**	**3**		Pb	14 20 06.3	+0.1
E03A	**Lebam**	**1.02**	**328**		Pb	14 20 06.6	-0.1
E03A	**Lebam**	**1.02**	**328**	IAML		14 20 21.1	
	comp=N,29nm,1.4s						
E03A				IAML		14 20 28.4	
	comp=E,37nm,1.9s						
H04A	**Detroit Lake**	**1.08**	**157**	Pn	Pb	14 20 06.8	-0.9
H04A				IAML		14 20 22.6	
	comp=E,59nm,0.3s						
H04D	**Lebanon**	**1.16**	**179**		Pn	14 20 08.6	-0.1
COR	**Corvallis**	**1.16**	**199**	Pn	Pn	14 20 08.2	-0.5
COR				IAML		14 20 49.2	
	comp=E,38nm,3.6s						
LON	**Longmire**	**1.26**	**32**		Pb	14 20 11.0	+0.3
LON	**Longmire**	**1.26**	**32**	IAML		14 20 18.0	
	comp=N,6.2nm,4.0s						
LON				IAML		14 20 30.7	
	comp=E,6.6nm,1.4s						
WPW	**White Pass**	**1.32**	**39**		Pb	14 20 12.3	+0.4
B941	**Kapowsin**	**1.36**	**16**		Pb	14 20 12.3	-0.1
OBSR	**Observation Ro**	**1.39**	**28**		Pb	14 20 13.4	+0.4
PANH	**Panhandle Gap,**	**1.41**	**33**		Pb	14 20 13.8	+0.3
BROR	**Big Rock Looko**	**1.43**	**171**		Pb	14 20 13.4	-0.2
FMW	**Mount Fremont**	**1.46**	**31**		Pb	14 20 15.1	+0.8
D05A	**Enumclaw**	**1.60**	**19**	Pn	Pb	14 20 16.4	-0.1
D05A				IAML		14 20 28.1	
	comp=E,14nm,4.1s						
D05A				IAML		14 20 56.8	
	comp=N,15nm,4.8s						
VIPM	**Ingram Point**	**1.92**	**127**		Pb	14 20 21.0	-1.1
PINE	**Pine Mountain**	**2.30**	**145**	Pn	Pn	14 20 23.6	-0.9
PINE				IAML		14 21 08.9	
	comp=E,14nm,4.6s						
PINE				IAML		14 21 51.8	
	comp=N,14nm,4.6s						
LOCW	**Locke Island**	**2.54**	**65**		Pb	14 20 36.2	+3.7
JCW	**Jim Creek**	**2.58**	**13**		Pb	14 20 32.2	-0.9
A05A	**Maple Falls**	**3.35**	**8**		Pb	14 20 49.0	+2.7
LTIM	**Timbered Crate**	**4.60**	**168**		Pb	14 21 09.0	+1.3
KRPM	**Rodgers**	**4.61**	**192**		Pn	14 20 56.5	+0.2

*IDC **05** 14:24:15.3±4.5,8°.85S×110°.75E, h58km±58km, mb3.2/5, mb1 3.3/6, mb1mx3.2/35, mbtmp3.5/6, ML3.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/11, Error ellipse: s-maj=109.7km s-min=19.9km az=47.0*

ISC 05 14:24:14.9±1.5,8°.7S±0°.3×110°.9E±0°.2, h50km, n7, σ0°59/6, mb3.5/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**3.73**	**300**	P	**Pn**	**14 25 10.0**	**-0.1**
	3.4nm,0.3s,baz=133,slow=13,SNR=4.6						
WRA	**Warramunga Arr**	**25.29**	**119**	P	**P**	**14 29 36.3**	**-0.7**
	0.6nm,0.8s,baz=292,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**26.59**	**127**	P	**P**	**14 29 49.2**	**+0.6**
	0.3nm,0.9s,baz=300,slow=8.9,SNR=4.8						
PMG	**Port Moresby**	**35.83**	**94**	LR	LR	14 47 58.2	
	comp=Z,16nm,19.1s,baz=58,slow=40						
SONM	**Songino Array**	**56.43**	**356**	P	**P**	**14 33 51.6**	**0.0**
	0.2nm,0.4s,baz=180,slow=8.4,SNR=3.6						
MKAR	**Makanchi Array**	**60.84**	**338**	P	**P**	**14 34 22.6**	**+0.5**
	0.3nm,0.5s,baz=148,slow=7.2,SNR=6.8						
ZALV	**Zalesovo Beam**	**66.19**	**344**	P	**P**	**14 34 57.0**	**-0.2**
	0.6nm,0.4s,baz=142,slow=4.7,SNR=4.1						

IDC 05 14:44:47.8±2.4,5°.29S×152°.61E, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.3/39, mbtmp3.4/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/19, Error ellipse: s-maj=159.5km s-min=31.4km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**21.39**	**143**	LR	LR	14 57 49.4	
	comp=Z,44nm,18.4s,baz=29,slow=36						
WRA	**Warramunga Arr**	**22.98**	**229**	P	P	14 49 53.9	-0.3
	0.8nm,0.7s,baz=54,slow=9.7,SNR=9.8						
ASAR	**Alice Springs**	**25.66**	**223**	P	P	14 50 19.6	+0.1
	0.3nm,0.4s,baz=54,slow=9.1,SNR=12						
KAPI	**Kappang**	**32.72**	**269**	LR	LR	15 07 43.5	
	comp=Z,38nm,18.4s,baz=262,slow=42						
ILAR	**Eielson Array**	**82.69**	**22**	P	P	14 57 13.3	+0.2
	0.3nm,0.9s,baz=238,slow=5.2,SNR=2.0						

IDC 05 14:45:55.0±4.7,8°.90S×110°.63E, h63km±65km, mb3.2/4, mb1 3.4/5, mb1mx3.1/42, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=160.2km s-min=19.9km az=46.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**3.62**	**304**	P	Pn	14 46 48.8	0.0
	4.3nm,0.3s,baz=349,slow=5.2,SNR=3.5						
WRA	**Warramunga Arr**	**25.42**	**118**	P	P	14 51 16.5	-0.5
	0.4nm,0.8s,baz=290,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**26.67**	**126**	P	P	14 51 28.8	+0.5
	0.5nm,0.7s,baz=304,slow=9.2,SNR=6.7						
MKAR	**Makanchi Array**	**60.93**	**338**	P	P	14 56 01.5	+0.1
	0.2nm,0.4s,baz=146,slow=7.5,SNR=8.7						
ZALV	**Zalesovo Beam**	**66.31**	**344**	P	P	14 56 36.4	-0.3
	0.5nm,0.3s,baz=139,slow=5.3,SNR=3.7						

*NNC **05** 14:46:25.0±1.6,42°.84N×78°.44E, h0km, mb2.4, mpv2.6, Error ellipse: s-maj=10.5km s-min=5.6km az=13.0*
*SOME **05** 14:46:26.2,42°.92N×78°.35E, h10km*
*KRNET **05** 14:46:26.3±0.1,42°.92N×78°.30E, h14km, mb2.3*

ISC 05 14:46:26.0±0.9,42°.92N±0°.03×78°.37E±0°.02, h13km±6km, n27, σ0°961/54, 9C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.15**	**12**	*e*P	**Pg**	**14 46 29.4**	**-0.4**
	baz=28						
SATY				*e*S	**Sg**	**14 46 32.2**	**-0.3**
	baz=28						
SATY	**Saty**	**0.15**	**12**	*e*P	**Pg**	**14 46 29.4**	**-0.4**
	8.8nm,0.1s						
SATY				*e*S	**Sg**	**14 46 32.2**	**-0.3**
	31nm,0.1s						
SATY	**Saty**	**0.15**	**12**	P	**Pg**	**14 46 29.4**	**-0.4**
	8.8nm,0.1s						
SATY				S	**Sg**	**14 46 32.2**	**-0.3**
	31nm,0.1s						
ZHN	**Zhinishke**	**0.26**	**11**	*e*P	**Pg**	**14 46 31.4**	**-0.1**
	baz=21						
ZHN				*e*S	**Sg**	**14 46 35.5**	**+0.2**
	baz=21						
ZHN	**Zhinishke**	**0.26**	**11**	*e*P	**Pg**	**14 46 31.4**	**-0.1**
	118nm,0.2s						
ZHN				*e*S	**Sg**	**14 46 35.5**	**+0.2**
	1.9nm,0.1s						
ZHN	**Zhinishke**	**0.26**	**11**	P	**Pg**	**14 46 31.4**	**-0.1**
	118nm,0.2s						
ZHN				S	**Sg**	**14 46 35.6**	**+0.2**
	1.9nm,0.1s						
PRZ	**Przheval'sk**	**0.43**	**177**	⇑*i*P	**Pg**	**14 46 35.2**	**+0.5**
	baz=70						
PRZ				⇑*i*S	**Sg**	**14 46 41.0**	**+0.5**
	baz=70						
ANVS	**Anan'yevo**	**0.53**	**256**	⇑*i*P	**Pg**	**14 46 36.1**	**-0.4**
	baz=55						
ANVS				⇑*i*S	**Sg**	**14 46 43.0**	**-0.6**
	baz=55						
PDGK	**Podgornoye**	**0.92**	**63**	P	**Pg**	**14 46 42.8**	**-1.1**
	0.2nm,0.1s						
PDGK				S	**Sg**	**14 46 55.0**	**-0.9**
	1.4nm,0.2s						
PDGK	**Podgornoye**	**0.92**	**63**	⇑P	**Pg**	**14 46 42.7**	**-1.1**
	0.3nm,0.5s						
PDGK				⇓S	**Sg**	**14 46 54.8**	**-1.1**
	4.1nm,1.1s						
TNSS	**Tian-Shan**	**1.05**	**277**	*e*P	**Pg**	**14 46 45.8**	**-0.5**
	baz=78						
TNSS				*e*S	**Sb**	**14 47 00.1**	**+0.1**
	baz=78						
TNSS	**Tian-Shan**	**1.05**	**277**	*e*P	**Pg**	**14 46 45.8**	**-0.5**
	1.1nm,0.2s						
TNSS				*e*S	**Sb**	**14 47 00.0**	**+0.1**
	1.0nm,0.2s						
MNBS	**Baschi**	**1.16**	**1**	*e*P	**Pb**	**14 46 48.3**	**+0.3**
	2.6nm,0.2s						
MNBS				*e*S	**Sn**	**14 47 04.5**	**+0.6**
	3.0nm,0.3s						
MNBS	**Baschi**	**1.16**	**1**	P	**Pb**	**14 46 48.3**	**+0.3**
	2.6nm,0.2s						
MNBS				S	**Sn**	**14 47 04.5**	**+0.6**
	3.0nm,0.3s						
KDJ	**Kajisay**	**1.18**	**229**	⇓*i*P	**Pb**	**14 46 48.0**	**-0.3**
	baz=26						
KDJ				⇓*i*S	**Sg**	**14 47 03.3**	**-0.7**
	baz=26						
IZV	**Izvestkoviy**	**1.29**	**276**	*e*P	**Pn**	**14 46 50.0**	**+0.1**
	baz=76						
IZV				*e*S	**Sn**	**14 47 07.7**	**+0.6**
	baz=76						
IZV	**Izvestkoviy**	**1.29**	**276**	*e*P	**Pn**	**14 46 50.0**	**+0.1**
	1.1nm,0.1s						
IZV				*e*S	**Sn**	**14 47 07.6**	**+0.6**
	1.8nm,0.2s						
KTBS	**Karatobe**	**1.46**	**304**	*e*P	**Pb**	**14 46 53.4**	**+0.3**
	baz=5.0						
KTBS				*e*S	**Sg**	**14 47 13.2**	**0.0**
	baz=5.0						
KTBS	**Karatobe**	**1.46**	**304**	*e*P	**Pb**	**14 46 53.4**	**+0.3**
	1.0nm,0.2s						
KTBS				*e*S	**Sg**	**14 47 13.2**	**0.0**
	3.4nm,0.2s						
KTBS	**Karatobe**	**1.46**	**304**	P	**Pb**	**14 46 53.4**	**+0.3**
	1.0nm,0.2s						
KTBS				S	**Sg**	**14 47 13.2**	**0.0**
	4.9nm,0.4s						
ULHL	**Ulahol**	**1.71**	**248**	⇓*i*P	**Pb**	**14 46 56.9**	**-0.4**
	baz=47						
ULHL				⇓*i*S	**Sb**	**14 47 19.7**	**+1.0**
	baz=47						
DJR	**Jarkent**	**1.75**	**36**	*e*P	**Pb**	**14 46 58.3**	**+0.3**
	2.3nm,0.2s						
DJR				*e*S	**Sg**	**14 47 21.9**	**-0.6**
	3.9nm,0.2s						
DJR	**Jarkent**	**1.75**	**36**	P	**Pb**	**14 46 58.3**	**+0.3**
	2.3nm,0.2s						
DJR				S	**Sg**	**14 47 21.9**	**-0.6**
	3.9nm,0.2s						
BOOM	**Boomskoye usch**	**1.84**	**257**	⇑*i*P	**Pb**	**14 46 59.4**	**-0.1**
	baz=57						
BOOM				⇑*i*S	**Sb**	**14 47 23.2**	**+0.7**
	baz=57						
TKM2	**Tokmak 2**	**2.03**	**271**	⇑*e*P	**Pg**	**14 47 04.1**	**-0.9**
	baz=71						
TKM2				⇑*i*S	**Sg**	**14 47 30.2**	**-1.2**
	baz=71						
KRBS	**Karabastau**	**2.11**	**293**	*e*P	**Pb**	**14 47 04.7**	**+0.5**
	baz=93						
KRBS				*e*S	**Sg**	**14 47 32.5**	**-1.4**
	baz=93						
KRBS	**Karabastau**	**2.11**	**293**	*e*P	**Pb**	**14 47 04.7**	**+0.5**
	0.5nm,0.4s						
KRBS				*e*S	**Sg**	**14 47 32.5**	**-1.4**
	1.2nm,0.2s						

IDC 05 14:51:21.1±18.0,5°.43S×129°.27E, h240km±184km, mb3.0/2, mb1 3.5/5, mb1mx3.0/37, mbtmp4.0/5, Error ellipse: s-maj=211.6km s-min=22.3km az=49.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**7.

BRCR	**Berchikul'**	**6.52**	**305**	Pg	Pg	15 02 09.6	+0.6
BRCR				Sg	Sg	15 03 37.0	+3.6

*IDC **05** 15:10:10.8±2.5,21°.58N×143°.17E, h302km±24km, mb3.3/16,mb1 3.4/17,mb1mx3.2/49,mbtmp4.0/17,Error ellipse: s-maj=18.7km s-min=10.4km az=82.0*
*NEIC **05** 15:10:10.3±1.2,21°.56N±0°.09×143°.2E±0°.1, h297km±7km, mb4.0/45,Error ellipse: s-maj=15.8km s-min=12.3km az=73.0*

ISC 05 15:10:11.6±0.5,21°.59N±0°.07×143°.2E±0°.1, h311km, n67, σ0s80/69, mb3.9/36, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.56**	**350**	P	**Pn**	**15 11 35.4**	**-0.6**
	5.5nm,0.3s,baz=127,slow=20,SNR=1.5						
JCJ				S	**S**	**15 12 41.1**	**-2.9**
	14nm,0.3s,baz=275,slow=23,SNR=11						
MAJO	**Matsushiro**	**15.52**	**345**	P	**P**	**15 13 32.9**	**-0.9**
MAJO				IAmb	IAmb	15 13 51.7	
	comp=Z,11nm,1.3s						
JMM	**Marumori**	**16.35**	**353**	P	**P**	**15 13 43.8**	**+1.0**
KSRS	**Korea Array**	**20.62**	**323**	P	**P**	**15 14 28.1**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=150,slow=9.4,SNR=5.7						
WAKE	**Wake Island**	**22.07**	**92**	P	**P**	**15 14 40.6**	**-0.9**
JKA	**Kamikawa-asahi**	**22.47**	**359**	P	**P**	**15 14 44.6**	**-0.2**
KLR	**Kul'dur**	**29.05**	**344**	P	**P**	**15 15 43.6**	**0.0**
	comp=Z,2.5nm,0.7s,baz=167,slow=7.9,SNR=9.9						
PMG	**Port Moresby**	**31.05**	**172**	P	**P**	**15 16 01.9**	**+0.4**
MTN	**Manton Dam**	**36.22**	**200**	P	**P**	**15 16 44.8**	**-1.1**
SONM	**Songino Array**	**39.44**	**321**	P	**P**	**15 17 14.0**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=116,slow=6.8,SNR=4.7						
WB0	**Warramunga Arr**	**42.01**	**192**	P	**P**	**15 17 32.8**	**-0.6**
WR0	**Warramunga Arr**	**42.16**	**192**	P	**P**	**15 17 34.0**	**-0.6**
WRAB	**Tennant Creek**	**42.17**	**192**	P	**P**	**15 17 34.3**	**-0.4**
WRAB				IAmb	IAmb	15 17 35.1	
	comp=Z,4.5nm,0.5s						
WB2	**Warramunga Arr**	**42.18**	**192**	P	**P**	**15 17 34.3**	**-0.5**
WB2				IAmb	IAmb	15 17 35.2	
	comp=Z,4.2nm,0.6s						
WRA	**Warramunga Arr**	**42.19**	**192**	P	**P**	**15 17 34.2**	**-0.6**
	comp=Z,3.2nm,0.6s,baz=13,slow=8.5,SNR=67						
FITZ	**Fitzroy Crossi**	**43.04**	**205**	P	**P**	**15 17 41.1**	**-0.6**
KULM	**Kulim**	**44.28**	**255**	P	**P**	**15 17 52.5**	**+0.9**
KULM				IAmb	IAmb	15 18 00.1	
	comp=Z,10nm,1.2s						
AS31	**Alice Springs**	**45.89**	**192**	P	**P**	**15 18 03.7**	**-0.3**
ASAR	**Alice Springs**	**45.89**	**192**	P	**P**	**15 18 03.5**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=16,slow=12,SNR=19						
BILL	**Bilibino**	**48.61**	**11**	P	**P**	**15 18 24.6**	**+0.4**
STKA	**Stephens Creek**	**53.19**	**182**	P	**P**	**15 18 57.5**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=22,slow=10,SNR=3.2						
STKA	**Stephens Creek**	**53.19**	**182**	P	**P**	**15 18 57.7**	**-0.8**
ZALV	**Zalesovo Beam**	**54.32**	**322**	P	**P**	**15 19 06.2**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=104,slow=6.3,SNR=4.1						
ZALV				PcP	**PcP**	**15 20 05.4**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=134,slow=4.0,SNR=4.1						
MKAR	**Makanchi Array**	**54.80**	**313**	P	**P**	**15 19 10.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=90,slow=8.9,SNR=6.3						
SVW2	**Sparrevohn**	**57.48**	**30**	P	**P**	**15 19 28.9**	**+0.3**
SVW2				IAmb	IAmb	15 19 43.4	
	comp=Z,9.5nm,1.4s						
KURK	**Kurchatov**	**57.58**	**317**	P	**P**	**15 19 29.6**	**+0.1**
KURBB	**Kurchatov Arra**	**57.63**	**317**	P	**P**	**15 19 29.6**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=94,slow=7.5,SNR=18						
BPAW	**Bear Paw Mtn.**	**60.24**	**27**	P	**P**	**15 19 48.3**	**+0.9**
BPAW				IAmb	IAmb	15 19 49.4	
	comp=Z,5.3nm,1.2s						
RC01	**Rabbit Creek A**	**60.25**	**31**	P	**P**	**15 19 47.7**	**+0.2**
A21K	**Barrow**	**60.29**	**19**	P	**P**	**15 19 48.1**	**+0.6**
A21K				IAmb	IAmb	15 20 09.9	
	comp=Z,7.7nm,1.4s						
MLY	**Manley**	**60.55**	**26**	P	**P**	**15 19 50.4**	**+0.9**
SML	**Sawmill**	**61.03**	**30**	P	**P**	**15 19 53.6**	**+0.8**
SML				IAmb	IAmb	15 20 20.8	
	comp=Z,9.4nm,1.3s						
RND	**Reindeer**	**61.04**	**28**	P	**P**	**15 19 53.0**	**+0.2**
RND				IAmb	IAmb	15 20 08.8	
	comp=Z,8.8nm,1.5s						
I23K	**Minto, Yukon-K**	**61.14**	**26**	P	**P**	**15 19 55.0**	**+1.7**
I23K				IAmb	IAmb	15 20 19.8	
	comp=Z,4.9nm,1.5s						
NEA2	**Nenana**	**61.16**	**27**	P	**P**	**15 19 54.2**	**+0.7**
NEA2				IAmb	IAmb	15 20 14.0	
	comp=Z,3.9nm,1.4s						
COLD	**Coldfoot**	**61.24**	**24**	P	**P**	**15 19 55.3**	**+1.3**
WRH	**Wood River Hil**	**61.55**	**27**	P	**P**	**15 19 56.5**	**+0.3**
MDM	**Murphy Dome**	**61.58**	**27**	P	**P**	**15 19 56.3**	**0.0**
MDM				IAmb	IAmb	15 20 15.1	
	comp=Z,5.6nm,1.4s						
TOLK	**Toolik Lake Re**	**61.80**	**23**	P	**P**	**15 19 59.1**	**+1.3**
TOLK				IAmb	IAmb	15 20 26.0	
	comp=Z,5.7nm,1.5s						
POKR	**Poker Plat Res**	**61.94**	**27**	P	**P**	**15 19 59.9**	**+1.2**
POKR				IAmb	IAmb	15 20 00.2	
	comp=Z,4.3nm,0.8s						
ILAR	**Eielson Array**	**62.11**	**27**	P	**P**	**15 19 59.2**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=262,slow=5.5,SNR=16						
KLU	**Klutina**	**62.13**	**31**	P	**P**	**15 20 01.0**	**+0.9**
KLU				IAmb	IAmb	15 20 18.8	
	comp=Z,7.1nm,1.2s						
PAX	**Paxson**	**62.50**	**29**	P	**P**	**15 20 03.1**	**+0.6**
PAX				IAmb	IAmb	15 20 08.0	
	comp=Z,6.0nm,1.4s						
BMRM	**Bremner River**	**62.72**	**32**	P	**P**	**15 20 05.1**	**+1.1**
BVAR	**Borovoye Array**	**62.78**	**320**	P	**P**	**15 20 03.7**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=142,slow=13,SNR=10						
BRVK	**Borovoye**	**62.84**	**320**	P	**P**	**15 20 04.8**	**0.0**
BRVK				IAmb	IAmb	15 20 23.3	
	comp=Z,2.6nm,0.7s						
FYU	**Fort Yukon**	**63.05**	**25**	P	**P**	**15 20 07.3**	**+1.4**
FYU				IAmb	IAmb	15 20 09.4	
	comp=Z,3.1nm,1.1s						
SCRK	**Sand Creek**	**63.27**	**28**	P	**P**	**15 20 07.0**	**-0.6**
SCRK				IAmb	IAmb	15 20 13.8	
	comp=Z,4.8nm,1.4s						
YAH	**Yahtse**	**64.09**	**32**	P	**P**	**15 20 13.4**	**+0.4**
DAWY	**Dawson**	**65.29**	**28**	P	**P**	**15 20 21.6**	**+1.1**
DAWY				IAmb	IAmb	15 20 34.7	
	comp=Z,3.4nm,1.4s						
BKZ	**Black Stump Fm**	**67.99**	**153**	P	**P**	**15 20 37.6**	**-0.2**
NNZ	**Nelson**	**68.47**	**156**	P	**P**	**15 20 40.4**	**-0.3**
SNZO	**South Karori**	**69.06**	**155**	P	**P**	**15 20 43.8**	**-0.4**
ARU	**Arti**	**69.37**	**324**	P	**P**	**15 20 45.5**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=75,slow=20,SNR=3.2						
ARU	**Arti**	**69.37**	**324**	P	**P**	**15 20 45.7**	**-0.3**
ARU				IAmb	IAmb	15 20 59.6	
	comp=Z,3.3nm,1.0s						
PLWZ	**Palliser**	**69.50**	**155**	P	**P**	**15 20 46.2**	**-0.7**
ABKAR	**Akbulak array**	**69.65**	**316**	P	**P**	**15 20 47.5**	**-0.4**
ABKAR				IAmb	IAmb	15 20 48.3	
	comp=Z,2.2nm,0.7s						
C36M	**Paulatuk**	**70.94**	**22**	P	**P**	**15 20 55.2**	**-0.1**
C36M				IAmb	IAmb	15 20 55.9	
	comp=Z,1.8nm,0.7s						
EUNU	**Eureka**	**75.19**	**8**	P	**P**	**15 21 20.2**	**+0.3**
YKA	**Yellowknife Ar**	**76.53**	**28**	P	**P**	**15 21 27.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=290,slow=5.3,SNR=17						
RES	**Resolute Bay**	**77.17**	**13**	P	**P**	**15 21 31.3**	**+0.4**
ARCES	**ARCESS Array B**	**79.03**	**342**	P	**P**	**15 21 41.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=72,slow=9.1,SNR=18						
NVAR	**Mina Array Bea**	**83.18**	**51**	P	**P**	**15 22 05.0**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=279,slow=3.9,SNR=5.7						
FINES	**FINESS Array B**	**83.29**	**334**	P	**P**	**15 22 02.8**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=70,slow=4.9,SNR=32						
PLCA	**Paso Flores**	**145.66**	**132**	PKPbc	**PKPab**	**15 29 15.1**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=243,slow=5.3,SNR=12						
PLCA	**Paso Flores**	**145.66**	**132**		**PKPbc**	**15 29 14.8**	**+0.5**
LPAZ	**La Paz**	**149.91**	**85**	PKPbc	**PKiKP**	**15 29 27.6**	**0.0**
	comp=Z,1.5nm,0.6s,baz=23,slow=1.2,SNR=7.1						

*IDC **05** 15:21:21.9±3.9,6°.85S×147°.95E, h69km±37km, mb3.5/5, mb1 3.8/7,mb1mx3.4/31,mbtmp3.8/7,ML4.0/1,MS3.2/8, Ms1 3.2/8,ms1mx3.0/22,Error ellipse: s-maj=63.6km s-min=22.8km az=101.0*

ISC 05 15:21:20.3±1.3,6°.6S±0°.1×147°.9E±0°.4, h51km, n13, σ2s06/10, mb3.8/5, MS3.1/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.86**	**196**	P	**Pn**	**15 22 02.4**	**-1.1**
	20nm,0.3s,baz=19,slow=6.2,SNR=73						
PMG				S	**Sn**	**15 22 40.5**	**+3.9**
	9.4nm,0.3s,baz=266,slow=20,SNR=6.3						
PMG	**Port Moresby**	**2.86**	**196**	P	**Pn**	**15 22 03.2**	**-0.3**
JAY	**Jayapura**	**8.29**	**299**	LR	LR	15 26 54.9	
	comp=Z,109nm,19.8s,baz=162,slow=40						
SIJI	**Sorong**	**17.59**	**288**	LR	LR	15 33 10.9	
	comp=Z,55nm,18.2s,baz=208,slow=40						
WRA	**Warramunga Arr**	**18.69**	**224**	P	**P**	**15 25 32.4**	**-2.2**
	0.5nm,0.3s,baz=52,slow=11,SNR=22						
ASAR	**Alice Springs**	**21.65**	**217**	P	**P**	**15 26 05.8**	**-0.9**
	3.2nm,0.6s,baz=52,slow=9.1,SNR=136						
ASAR				LR	LR	15 33 58.3	
	comp=Z,59nm,20.3s,baz=61,slow=35						
DZM	**Mont Dzumac**	**23.55**	**133**	LR	LR	15 34 00.6	
	comp=Z,50nm,21.5s,baz=14,slow=32						
STKA	**Stephens Creek**	**25.80**	**192**	P	**P**	**15 26 44.9**	**-1.8**
	2.6nm,0.8s,baz=360,slow=8.6,SNR=6.4						
STKA				LR	LR	15 38 04.9	
	comp=Z,108nm,18.2s,baz=25,slow=39						
MJAR	**Matsushiro Arr**	**43.91**	**349**	P	**P**	**15 29 22.9**	**+0.7**
	2.1nm,0.9s,baz=171,slow=7.9,SNR=5.9						
MJAR				LR	LR	15 47 15.7	
	comp=Z,35nm,18.9s,baz=65,slow=35						
KSRS	**Korea Array**	**47.68**	**338**	P	**P**	**15 29 53.7**	**+1.9**
	0.6nm,0.8s,baz=152,slow=8.1,SNR=2.7						
KSRS				LR	LR	15 48 47.1	
	comp=Z,15nm,20.1s,baz=142,slow=34						
SONM	**Songino Array**	**65.41**	**331**	LR	LR	16 00 06.3	
	comp=Z,17nm,20.4s,baz=120,slow=35						
ILAR	**Eielson Array**	**85.70**	**23**	P	**P**	**15 33 53.8**	**+0.3**
	0.3nm,0.7s,baz=246,slow=5.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**146.15**	**284**	PKPbc	**PKPdf**	**15 40 54.1**	**-0.9**
	1.0nm,1.0s,baz=94,slow=3.1,SNR=2.8						

IDC 05 15:31:50.6±3.5,5°.23S×153°.16E, h0km, mb3.1/3, mb1 3.4/4,mb1mx3.2/27,mbtmp3.3/4,ML1.3/1,Error ellipse: s-maj=120.9km s-min=35.1km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.26**	**235**	Pn	Pn	15 33 39.8	+1.9
	0.3nm,0.3s,baz=13,slow=18,SNR=1.9						
PMG				Sn	Sn	15 34 59.8	-1.3
	1.9nm,0.3s,baz=310,slow=9.4,SNR=8.6						
WRA	**Warramunga Arr**	**23.44**	**230**	P	P	15 37 00.9	-0.9
	0.3nm,0.8s,baz=53,slow=10,SNR=2.4						
ASAR	**Alice Springs**	**26.08**	**223**	P	P	15 37 26.4	+0.2
	0.3nm,0.8s,baz=60,slow=9.0,SNR=4.9						
MKAR	**Makanchi Array**	**80.88**	**319**	P	P	15 44 07.2	+0.4
	0.2nm,0.6s,baz=97,slow=4.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	**150.78**	**288**	PKPbc	PKPbc	15 51 45.1	-1.0
	0.4nm,0.6s,baz=79,slow=3.1,SNR=2.5						

*INET **05** 15:34:43.1,11°.99N×87°.99W, h30km, MW3.5*

IDC 05 15:34:42.9±2.1,13°.10N×87°.26W, h0km, mb3.6/3, mb1 3.8/4,mb1mx3.5/32,mbtmp3.6/4,ML2.9/2,Error ellipse: s-maj=74.5km s-min=28.2km az=49.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**3.59**	**141**	Pn	Pn	15 35 40.0	+0.2
	2.1nm,0.3s,baz=30,slow=16,SNR=5.7						
JTS				Sn	Sn	15 36 13.8	-9.2
	1.9nm,0.3s,baz=113,slow=22,SNR=2.3						
APG	**El Apazote**	**3.64**	**302**	Pn	Pn	15 35 41.0	+0.3
	0.4nm,0.3s,baz=48,slow=16,SNR=1.8						
TXAR	**Lajitas Array**	**22.20**	**319**	P	P	15 39 41.2	+0.1
	0.5nm,0.5s,baz=141,slow=11,SNR=12						
ULM	**Lac du Bonnet**	**37.72**	**351**	P	P	15 42 00.7	+0.6
	1.4nm,0.5s,baz=184,slow=6.6,SNR=4.5						
YKA	**Yellowknife Ar**	**53.04**	**345**	P	P	15 44 00.6	-0.9
	0.3nm,0.8s,baz=140,slow=8.1,SNR=5.7						

*TAP **05** 15:45:29.1,24°.00N×122°.38E, h13km±1km, ML3.1, D*
*JMA **05** 15:45:30.1±0.1,24°.02N×122°.39E, h26km±4km, M2.8*

ISC 05 15:45:29.3±1.1,23°.99N±0°.02×122°.39E±0°.02, h18km±3km, n87, σ0s55/151, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.69**	**48**	P	**Pb**	**15 45 42.8**	**+0.1**
JYNG				S	**Sb**	**15 45 51.5**	**-0.3**
EWUT	**Wuta**	**0.72**	**309**	P	**Pg**	**15 45 43.8**	**+0.3**
	baz=309						
EWUT				S	**Sg**	**15 45 53.7**	**+0.7**
	baz=309						
TWD	**Chiawan**	**0.73**	**277**	*e*P	**Pn**	**15 45 45.3**	**+0.7**
	baz=276						
TWD				S	**Sg**	**15 45 54.1**	**+0.7**
	baz=276						
ENA	**Nanau**	**0.73**	**307**	P	**Pg**	**15 45 44.2**	**+0.4**
	baz=306						
ENA				S	**Sn**	**15 45 54.8**	**-0.7**
	baz=306						
YOJ	**Yonaguni jima**	**0.74**	**50**	P	**Pb**	**15 45 43.8**	**+0.2**
YOJ				S	**Sb**	**15 45 53.0**	**-0.3**
YOJ	**Yonaguni jima**	**0.74**	**50**	P	**Pb**	**15 45 43.8**	**+0.2**
	baz=50						
YOJ				S	**Sb**	**15 45 53.1**	**-0.3**
	baz=50						
NACB	**Ninganchiao**	**0.75**	**284**	P	**Pg**	**15 45 44.3**	**+0.3**
	baz=283						
NACB				S	**Sg**	**15 45 54.1**	**+0.2**
	baz=283						
TWC	**Suao**	**0.79**	**322**	P	**Pb**	**15 45 44.6**	**+0.1**
	baz=322						
TWC				S	**Sb**	**15 45 54.5**	**-0.3**
	baz=322						
ETLH	**Xiulin Townshi**	**0.85**	**285**	P	**Pb**	**15 45 45.9**	**+0.2**
	baz=284						
ETLH				S	**Sb**	**15 45 56.3**	**-0.5**
	baz=284						
NDS	**Dongshan**	**0.89**	**316**	P	**Pg**	**15 45 46.6**	**0.0**
	baz=316						
NDS				S	**Sg**	**15 45 57.8**	**-0.5**
	baz=316						
ESL	**Shilin**	**0.89**	**259**	P	**Pb**	**15 45 46.0**	**-0.2**
	baz=257						
ESL				*e*S	**Sg**	**15 45 58.6**	**+0.1**
	baz=257						
ILA	**Ilan**	**0.97**	**323**	*e*S	**Sn**	**15 46 01.8**	**+0.5**
	baz=323						
TWE	**Neicheng**	**0.98**	**318**	P	**Pn**	**15 45 48.0**	**-0.1**
	baz=318						
TWE				*e*S	**Sn**	**15 46 01.5**	**0.0**
	baz=318						
ENTT	**Nioudou**	**0.99**	**311**	P	**Pn**	**15 45 48.3**	**0.0**
	baz=311						
ENTT				*e*S	**Sg**	**15 46 02.0**	**+0.4**
	baz=311						
NTC	**Toucheng**	**1.00**	**330**	P	**Pg**	**15 45 48.6**	**-0.1**
	baz=329						
NTC				S	**Sn**	**15 46 01.5**	**-0.5**
	baz=329						
NDT	**Datong Townshi**	**1.00**	**308**	P	**Pg**	**15 45 48.7**	**-0.1**
	baz=307						
NDT				*e*S	**Sg**	**15 46 02.4**	**+0.3**
	baz=307						
HGSD	**Ruisui**	**1.01**	**241**	P	**Pb**	**15 45 48.1**	**-0.2**
	baz=240						
HGSD				S	**Sb**	**15 46 01.0**	**-0.3**
	baz=240						
NNSB	**Datong**	**1.01**	**296**	↓*i*P	**Pb**	**15 45 48.6**	**+0.1**
	baz=295						
NNSB				*e*S	**Sn**	**15 46 02.1**	**-0.5**
	baz=295						
NNSH	**Datong**	**1.01**	**296**	P	**Pb**	**15 45 48.6**	**+0.1**
	baz=295						
NNSH				*e*S	**Sb**	**15 46 01.5**	**+0.1**
	baz=295						
NNS	**Nan Shan**	**1.03**	**296**	P	**Pb**	**15 45 48.8**	**+0.1**
	baz=295						
NNS				S	**Sn**	**15 46 02.5**	**-0.5**
	baz=295						
WHF	**Hehuan Shan**	**1.04**	**279**	*e*P	**Pn**	**15 45 49.4**	**+0.1**
	baz=278						
WHF				*e*S	**Sb**	**15 46 02.8**	**+0.4**
	baz=278						
FUSS	**Fushou**	**1.08**	**284**	P	**Pn**	**15 45 49.9**	**+0.2**
	baz=283						
FUSS				*e*S	**Sn**	**15 46 04.2**	**-0.1**
	baz=283						
TWB1	**Santiao Chiao**	**1.08**	**340**	P	**Pb**	**15 45 49.0**	**-0.4**
	baz=341						
TWB1				*e*S	**Sg**	**15 46 04.3**	**-0.1**
	baz=341						
EHY	**Hungye**	**1.09**	**244**	P	**Pn**	**15 45 49.3**	**-0.3**
	baz=242						
EHY				*e*S	**Sb**	**15 46 02.0**	**-1.5**
	baz=242						
TIPB	**Shuangxi**	**1.10**	**332**	P	**Pb**	**15 45 49.6**	**-0.3**
	baz=332						
TIPB				*i* S	**Sb**	**15 46 03.7**	**-0.2**
	baz=332						
CHGB	**Renai**	**1.11**	**274**	P	**Pn**	**15 45 50.1**	**-0.1**
	baz=273						
CHGB				*e*S	**Sb**	**15 46 04.6**	**+0.3**
	baz=273						
TWT	**Tachien**	**1.14**	**284**	P	**Pg**	**15 45 51.2**	**-0.2**
	baz=282						
YHNB	**Yeheng**	**1.14**	**306**	↓*i*P	**Pb**	**15 45 50.6**	**0.0**
	baz=306						
YHNB				*e*S	**Sg**	**15 46 06.2**	**-0.3**
	baz=306						
TDCB	**Techi**	**1.15**	**283**	*e*P	**Pb**	**15 45 51.0**	**+0.2**
	baz=282						
NSK	**Sanguang**	**1.16**	**306**	P	**Pb**	**15 45 50.8**	**-0.1**
	baz=306						
NSK				S	**Sn**	**15 46 05.7**	**-0.4**
	baz=306						
YULB	**Yu-li**	**1.16**	**239**	P	**Pn**	**15 45 50.6**	**-0.1**
	baz=238						
YULB				S	**Sb**	**15 46 05.2**	**-0.4**
	baz=238						
VWDT	**VWDT**	**1.17**	**259**	P	**Pb**	**15 45 51.0**	**+0.1**
	baz=258						
VWDT				S	**Sb**	**15 46 05.4**	**-0.2**
	baz=258						
EYUL	**Yuli**	**1.17**	**237**	P	**Pn**	**15 45 50.8**	**0.0**
	baz=236						
EYUL				*e*S	**Sb**	**15 46 05.4**	**-0.4**
	baz=236						
TWF1	**Yuli**	**1.18**	**238**	P	**Pn**	**15 45 50.9**	**-0.1**
	baz=236						
TWF1				S	**Sb**	**15 46 06.7**	**+0.4**
	baz=236						
NWF	**Wu-fen Shan**	**1.21**	**333**	P	**Pn**	**15 45 51.1**	**-0.2**
	baz=333						
NWF				S	**Sg**	**15 46 07.9**	**-0.7**
	baz=333						
WFSB	**Wu-fen Shan**	**1.21**	**333**	P	**Pn**	**15 45 51.0**	**-0.3**
	baz=333						
WFSB				S	**Sg**	**15 46 07.7**	**-0.9**
	baz=333						
TWA	**Mucha**	**1.23**	**324**	P	**Pn**	**15 45 51.7**	**+0.1**
	baz=323						
TWA				S	**Sg**	**15 46 08.8**	**-0.4**
	baz=323						
NHDH	**Xindian Distri**	**1.25**	**321**	S	**Sg**	**15 46 09.1**	**-0.7**
	baz=321						
IRIF	**Iriomote-Funau**	**1.27**	**74**	P	**Pn**	**15 45 52.6**	**+0.4**
IRIF				S	**Sn**	**15 46 08.8**	**0.0**
FULB	**Fuli**	**1.27**	**232**	P	**Pn**	**15 45 51.8**	**-0.5**
	baz=231						
TATO	**Taipei**	**1.28**	**320**	P	**Pb**	**15 45 52.7**	**-0.1**
	baz=320						
TATO				S	**Sb**	**15 46 09.4**	**+0.5**
	baz=320						
HATJ	**Hateruma jima**	**1.30**	**87**	P	**Pb**	**15 45 53.6**	**+0.4**
HATJ				*e*S	**Sb**	**15 46 09.7**	**+0.2**
SSLB	**Suanglung**	**1.33**	**262**	*e*P	**Pn**	**15 45 53.3**	**+0.4**
	baz=260						
DPDB	**Guoxing**	**1.34**	**272**	*e*P	**Pb**	**15 45 53.9**	**0.0**
	baz=271						
DPDB				*e*S	**Sb**	**15 46 11.1**	**+0.5**
	baz=271						
WHP	**Taichung City**	**1.35**	**283**	*e*P	**Pb**	**15 45 54.5**	**+0.4**
	baz=282						
WHP				*e*S	**Sg**	**15 46 12.9**	**-0.1**
	baz=282						
YM01	**YM01**	**1.37**	**327**	*e*P	**Pb**	**15 45 54.3**	**-0.1**
	baz=327						
YM01				*e*S	**Sg**	**15 46 12.8**	**-0.9**
	baz=327						
YM10	**YM10**	**1.38**	**327**	P	**Pb**	**15 45 54.5**	**-0.2**
	baz=327						
YM11	**YM11**	**1.39**	**328**	*e*P	**Pb**	**15 45 55.2**	**+0.5**
	baz=327						
YM05	**YM05**	**1.39**	**328**	*e*P	**Pb**	**15 45 55.0**	**+0.3**
	baz=327						
YM04	**YM04**	**1.39**	**326**	P	**Pb**	**15 45 54.8**	**0.0**
	baz=326						
YM04				*e*S	**Sg**	**15 46 13.7**	**-0.8**
	baz=326						
TYC	**Yuchr**	**1.40**	**267**	*e*P	**Pb**	**15 45 55.7**	**+0.7**
	baz=266						
LIOB	**Emei**	**1.41**	**298**	P	**Pb**	**15 45 55.5**	**+0.4**
	baz=297						
LIOB				*e*S	**Sb**	**15 46 13.6**	**+0.8**
	baz=297						
TWS1	**Kuangyinshan**	**1.42**	**322**	*e*S	**Sg**	**15 46 14.1**	**-1.1**
	baz=321						
NSTT	**Nanjuang**	**1.42**	**297**	P	**Pb**	**15 45 55.6**	**+0.5**
	baz=296						
NSTT				*e*S	**Sb**	**15 46 12.7**	**-0.2**
	baz=296						
EDH	**Donghe**	**1.42**	**225**	*e*P	**Pn**	**15 45 53.8**	**-0.4**
	baz=224						
ANP	**Anpu**	**1.43**	**327**	*e*P	**Pn**	**15 45 54.2**	**-0.2**
	baz=326						
TWY	**Chenhua**	**1.47**	**331**	P	**Pb**	**15 45 56.0**	**0.0**
	baz=331						
TWY				S	**Sg**	**15 46 15.5**	**-1.3**
	baz=331						
ELDTW	**Lidau**	**1.49**	**238**	*e*P	**Pn**	**15 45 54.9**	**-0.4**
	baz=237						
JKRS	**Kuro-shima**	**1.50**	**80**	P	**Pb**	**15 45 56.9**	**+0.2**
JKRS				S	**Sb**	**15 46 15.2**	**-0.2**
ALS	**Alishan**	**1.53**	**252**	P	**Pb**	**15 45 57.0**	**-0.3**
	baz=251						
NSY	**Sanyi**	**1.54**	**286**	*e*S	**Sg**	**15 46 18.2**	**-1.0**
	baz=285						
WNT	**Mingjian**	**1.56**	**266**	*e*S	**Sb**	**15 46 17.9**	**+0.8**
	baz=265						
LONT	**Longtian**	**1.58**	**227**	P	**

TWK				S		Sb	15 46 26.5	+0.1
	baz=247							
SGST	**Jiashian**	**1.89**	**242**	P		**Pb**	15 46 02.4	-0.8
	baz=240							
SGST				S		**Sb**	15 46 26.4	0.0
	baz=240							
ECL	**Taimali**	**1.91**	**224**	*e*P		**Pn**	15 46 00.2	-0.7
	baz=223							
SSD	**Sandimen**	**2.03**	**233**	*e*P		**Pb**	15 46 04.8	-0.9
	baz=232							
SSD				*e*S		**Sb**	15 46 30.5	-0.2
	baz=232							
TSMG	**Majia**	**2.05**	**232**	*e*P		**Pb**	15 46 05.5	-0.5
	baz=231							
TSMG				*e*S		**Sn**	15 46 29.5	+1.6
	baz=231							
MASBT	**Mashibuluo**	**2.12**	**230**	P		**Pn**	15 46 04.7	+0.9
	baz=229							
MASBT				S		**Sb**	15 46 32.5	-0.6
	baz=229							
EAST	**Anshuo**	**2.14**	**222**	*e*P		**Pn**	15 46 04.3	+0.2
	baz=221							
JTJ	**Tarama**	**2.21**	**72**	P		**Pn**	15 46 06.5	+1.5
JTJ				S		**Sn**	15 46 32.2	+0.3
SLIU	**Shizi**	**2.29**	**220**	P		**Pn**	15 46 06.1	-0.1
	baz=219							
WDGT	**Dungji**	**2.60**	**254**	*e*P		**Pn**	15 46 11.9	+1.4
	baz=253							
WDGT				*e*S		**Sn**	15 46 41.5	-0.1
	baz=253							
PHUB	**P'eng-hu**	**2.62**	**260**	S		**Sn**	15 46 42.9	+0.8
	baz=259							
PNG	**Penghu**	**2.63**	**261**	*e*P		**Pn**	15 46 12.2	+1.3
	baz=260							
PNG				*e*S		**Sn**	15 46 43.5	+1.3
	baz=260							

*JMA **05** 15:52:27.7±0.1,23°.95N×122°.40E,h20km±3km,M2.8*
*TAP **05** 15:52:28.2,23°.98N×122°.40E,h25km,ML3.4,D*
ISC 05 15:52:27.8±1.1**,23°.97N**±0°.02×**122°.40E**±0°.02**,h23**km±13km**,**
n126,σ**0°56/222,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.69**	**46**	P	**Pb**	**15 52 40.9**	**-0.3**
JYNG				S	**Sb**	**15 52 50.8**	**+0.5**
EWUT	**Wuta**	**0.73**	**310**	*i* P	**Pb**	**15 52 41.9**	**0.0**
	baz=309						
EWUT				S	**Sb**	15 52 51.6	+0.1
	baz=309						
TWD	**Chiawan**	**0.74**	**278**	*e*P	**Pb**	15 52 42.3	+0.3
	baz=278						
TWD				S	**Sb**	15 52 52.2	+0.5
	baz=278						
YOJ	**Yonaguni jima**	**0.74**	**49**	P	**Pb**	15 52 42.2	+0.1
YOJ				S	**Sb**	15 52 52.2	+0.4
YOJ	**Yonaguni jima**	**0.74**	**49**	*i* P	**Pb**	**15 52 42.0**	**0.0**
	baz=48						
YOJ				*i* S	**Sb**	15 52 51.4	-0.4
	baz=48						
ENA	**Nanau**	**0.75**	**307**	*i* P	**Pb**	15 52 42.3	+0.1
	baz=306						
ENA				*i* S	**Sb**	15 52 52.2	+0.2
	baz=306						
NACB	**Ninganchiao**	**0.76**	**285**	*i* P	**Pb**	**15 52 42.3**	**0.0**
	baz=284						
NACB				S	**Sb**	15 52 52.9	+0.6
	baz=284						
TWC	**Suao**	**0.81**	**322**	*i* P	**Pb**	15 52 42.7	-0.4
	baz=321						
TWC				*e*S	**Sb**	15 52 52.4	-1.2
	baz=321						
ETLH	**Xiulin Townshi**	**0.87**	**286**	*i* P	**Pb**	15 52 44.2	0.0
	baz=285						
ETLH				*i* S	**Sb**	15 52 55.7	+0.2
	baz=285						
ESL	**Shilin**	**0.90**	**260**	*i* P	**Pb**	15 52 45.0	+0.3
	baz=259						
ESL				S	**Sb**	15 52 56.5	+0.3
	baz=259						
NDS	**Dongshan**	**0.90**	**317**	P	**Pb**	15 52 44.9	+0.1
	baz=316						
NDS				*e*S	**Sb**	15 52 55.2	-1.2
	baz=316						
EGFH	**Guangfu**	**0.94**	**251**	*e*P	**Pn**	15 52 45.7	+0.1
	baz=250						
EGFH				*i* S	**Sb**	15 52 58.0	+0.6
	baz=250						
ILA	**Ilan**	**0.98**	**323**	*e*P	**Pb**	15 52 46.3	+0.1
	baz=323						
ILA				S	**Sb**	15 52 59.3	+0.5
	baz=323						
TWE	**Neicheng**	**1.00**	**318**	P	**Pn**	15 52 46.4	-0.1
	baz=318						
TWE				S	**Sb**	15 52 59.3	+0.1
	baz=318						
ENTT	**Nioudou**	**1.01**	**311**	P	**Pn**	15 52 46.5	-0.1
	baz=311						
ENTT				S	**Sb**	15 52 59.2	-0.2
	baz=311						
HGSD	**Ruisui**	**1.01**	**242**	P	**Pn**	15 52 46.1	-0.5
	baz=241						
HGSD				S	**Sb**	15 52 59.8	+0.3
	baz=241						
NTC	**Toucheng**	**1.02**	**330**	*e*P	**Pn**	15 52 46.8	+0.1
	baz=329						
NTC				S	**Sb**	15 52 59.8	+0.1
	baz=329						
NDT	**Datong Townshi**	**1.02**	**308**	*e*P	**Pn**	15 52 46.7	0.0
	baz=307						
NDT				S	**Sb**	15 53 00.2	+0.4
	baz=307						
NNSB	**Datong**	**1.03**	**296**	P	**Pn**	15 52 46.8	-0.2
	baz=295						
NNSB				S	**Sb**	15 53 00.3	+0.1
	baz=295						
NNSH	**Datong**	**1.03**	**296**	P	**Pn**	15 52 46.8	-0.2
	baz=295						
NNSH				S	**Sb**	15 53 00.2	0.0
	baz=295						
NNS	**Nan Shan**	**1.04**	**297**	P	**Pn**	15 52 47.0	-0.1
	baz=296						
NNS				S	**Sb**	15 53 00.3	-0.3
	baz=296						
WHF	**Hehuan Shan**	**1.05**	**280**	P	**Pn**	15 52 47.2	-0.4
	baz=279						
WHF				*e*S	**Sb**	15 53 00.9	-0.1
	baz=279						
FUSS	**Fushou**	**1.09**	**285**	P	**Pn**	15 52 47.8	-0.1
	baz=284						
FUSS				S	**Sb**	15 53 02.0	+0.1
	baz=284						
EHY	**Hungye**	**1.09**	**245**	P	**Pn**	15 52 47.7	0.0
	baz=244						
EHY				S	**Sb**	15 53 01.8	+0.1
	baz=244						
TWB1	**Santiao Chiao**	**1.09**	**340**	*e*P	**Pn**	15 52 47.8	0.0
	baz=340						
TWB1				S	**Sb**	15 53 01.8	-0.1
	baz=340						
CHGB	**Renai**	**1.12**	**275**	P	**Pn**	15 52 48.3	0.0
	baz=274						
CHGB				S	**Sb**	15 53 02.9	0.0
	baz=274						
TIPB	**Shuangxi**	**1.12**	**332**	P	**Pn**	15 52 48.0	-0.2
	baz=332						
TIPB				S	**Sb**	15 53 02.0	-0.7
	baz=332						
TWT	**Tachien**	**1.15**	**284**	P	**Pn**	15 52 49.1	+0.4
	baz=283						
TWT				S	**Sb**	15 53 04.0	+0.3
	baz=283						
YHNB	**Yeheng**	**1.16**	**307**	P	**Pn**	15 52 48.9	+0.2
	baz=306						
YHNB				S	**Sb**	15 53 03.8	-0.1
	baz=306						
YULB	**Yu-li**	**1.16**	**240**	P	**Pn**	15 52 48.6	-0.1
	baz=240						
YULB				S	**Sb**	15 53 03.4	-0.5
	baz=240						
TDCB	**Techi**	**1.17**	**284**	P	**Pn**	15 52 49.1	+0.2
	baz=283						
TDCB				S	**Sb**	15 53 03.5	-0.6
	baz=283						
EYUL	**Yuli**	**1.17**	**238**	P	**Pn**	15 52 48.9	+0.2
	baz=237						
EYUL				S	**Sb**	15 53 04.0	-0.1
	baz=237						
VWDT	**VWDT**	**1.17**	**259**	P	**Pb**	15 52 49.3	-0.1
	baz=259						
VWDT				S	**Sn**	15 53 03.9	-0.1
	baz=259						
NSK	**Sanguang**	**1.18**	**307**	P	**Pn**	15 52 49.0	+0.1
	baz=306						
NSK				S	**Sn**	15 53 04.1	-0.3
	baz=306						
TWF1	**Yuli**	**1.18**	**239**	P	**Pn**	15 52 49.0	+0.1
	baz=238						
TWF1				S	**Sn**	15 53 04.1	-0.3
	baz=238						
NWF	**Wu-fen Shan**	**1.23**	**333**	*e*P	**Pn**	15 52 49.4	-0.3
	baz=332						
NWF				*e*S	**Sn**	15 53 05.5	-0.1
	baz=332						
WFSB	**Wu-fen Shan**	**1.23**	**333**	*e*P	**Pn**	15 52 49.5	-0.1
	baz=332						
WFSB				*e*S	**Sn**	15 53 05.7	+0.2
	baz=332						
TWA	**Mucha**	**1.25**	**324**	*e*P	**Pn**	15 52 50.0	+0.2
	baz=323						
TWA				*e*S	**Sn**	15 53 06.0	+0.1
	baz=323						
NHDH	**Xindian Distri**	**1.27**	**321**	*e*P	**Pn**	15 52 50.8	+0.7
	baz=320						
NHDH				*e*S	**Sn**	15 53 06.5	+0.1
	baz=320						
IRIF	**Iriomote-Funau**	**1.27**	**73**	P	**Pb**	15 52 50.9	-0.1
IRIF				S	**Sb**	15 53 07.8	+0.8
FULB	**Fuli**	**1.27**	**233**	*e*P	**Pn**	15 52 49.9	-0.3
	baz=232						
FULB				*e*S	**Sn**	15 53 05.8	-0.9
	baz=232						
HATJ	**Hateruma jima**	**1.29**	**86**	P	**Pn**	15 52 50.7	+0.3
HATJ				*e*S	**Sn**	15 53 07.3	+0.3
TATO	**Taipei**	**1.30**	**320**	P	**Pn**	15 52 50.9	+0.3
	baz=320						
TATO				S	**Sn**	15 53 07.1	0.0
	baz=320						
TNOU	**National Taiwa**	**1.30**	**334**	*e*P	**Pn**	15 52 51.0	+0.4
	baz=333						
TNOU				*e*S	**Sn**	15 53 07.0	-0.3
	baz=333						
WPL	**Puli Township**	**1.32**	**272**	P	**Pn**	15 52 51.4	+0.5
	baz=271						
WPL				*e*S	**Sb**	15 53 08.3	0.0
	baz=271						
TAP1	**Taipei**	**1.32**	**323**	*e*S	**Sn**	15 53 07.8	-0.1
	baz=322						
SSLB	**Suanglung**	**1.33**	**262**	*e*P	**Pn**	15 52 51.4	+0.3
	baz=261						
SSLB				*e*S	**Sn**	15 53 08.1	-0.1
	baz=261						
DPDB	**Guoxing**	**1.35**	**273**	*e*P	**Pn**	15 52 51.9	+0.7
	baz=272						
DPDB				*e*S	**Sn**	15 53 08.7	+0.2
	baz=272						
WHP	**Taichung City**	**1.36**	**283**	*e*P	**Pn**	15 52 52.0	+0.5
	baz=282						
WHP				*e*S	**Sn**	15 53 09.2	+0.3
	baz=282						
WCS	**Beigang Elemen**	**1.36**	**274**	*e*P	**Pn**	15 52 52.0	+0.6
	baz=273						
WCS				*e*S	**Sn**	15 53 08.8	0.0
	baz=273						
SMLT	**Sun Moon Lake**	**1.37**	**267**	*e*P	**Pn**	15 52 52.4	+0.7
	baz=265						
SMLT				*e*S	**Sn**	15 53 09.0	-0.2
	baz=265						
YM01	**YM01**	**1.39**	**327**	P	**Pn**	15 52 52.5	+0.7
	baz=326						
YM01				*e*S	**Sn**	15 53 09.6	+0.1
	baz=326						
YM10	**YM10**	**1.40**	**327**	P	**Pn**	15 52 52.3	+0.3
	baz=326						
YM10				*e*S	**Sn**	15 53 09.5	-0.3
	baz=326						
YM11	**YM11**	**1.40**	**328**	P	**Pn**	15 52 52.3	+0.2
	baz=327						
YM11				*e*S	**Sn**	15 53 09.7	-0.2
	baz=327						
YM05	**YM05**	**1.41**	**328**	P	**Pn**	15 52 52.1	0.0
	baz=327						
YM05				*e*S	**Sn**	15 53 09.2	-0.7
	baz=327						
YUS	**Yu-Shan**	**1.41**	**250**	*e*P	**Pn**	15 52 52.7	+0.2
	baz=249						
YUS				*e*S	**Sn**	15 53 10.2	-0.4
	baz=249						
TYC	**Yuchr**	**1.41**	**267**	*e*P	**Pn**	15 52 52.7	+0.6
	baz=267						
TYC				*e*S	**Sn**	15 53 10.0	+0.1
	baz=267						
YM04	**YM04**	**1.41**	**326**	*e*P	**Pn**	15 52 52.5	+0.4
	baz=326						
YM04				*e*S	**Sn**	15 53 10.0	-0.1
	baz=326						
EDH	**Donghe**	**1.41**	**225**	*e*P	**Pn**	15 52 52.1	0.0
	baz=225						
EDH				*e*S	**Sn**	15 53 08.3	-1.8
	baz=225						
NJD	**Zhudong**	**1.41**	**303**	*e*S	**Sn**	15 53 09.9	-0.2
	baz=302						
YM08	**YM08**	**1.41**	**329**	*e*P	**Pn**	15 52 52.5	+0.3
	baz=328						
YM08				*e*S	**Sn**	15 53 09.7	-0.4
	baz=328						
LIOB	**Emei**	**1.43**	**298**	*e*P	**Pn**	15 52 52.8	+0.5
	baz=297						
LIOB				*e*S	**Sn**	15 53 10.6	+0.2
	baz=297						
NTY	**Taoyuan**	**1.43**	**316**	*e*S	**Sn**	15 53 10.6	+0.1
	baz=315						
NSTT	**Nanjuang**	**1.43**	**297**	*e*P	**Pb**	15 52 53.4	-0.4
	baz=297						
NSTT				*e*S	**Sn**	15 53 10.5	0.0
	baz=297						
TWS1	**Kuangyinshan**	**1.43**	**322**	*e*P	**Pn**	15 52 53.1	+0.7
	baz=321						
TWS1				*e*S	**Sn**	15 53 10.3	-0.2
	baz=321						
ANP	**Anpu**	**1.45**	**327**	*e*P	**Pn**	15 52 52.9	+0.2
	baz=326						
ANP				*e*S	**Sn**	15 53 10.7	-0.3
	baz=326						
NCU	**National Centr**	**1.48**	**312**	*e*S	**Sn**	15 53 11.5	-0.3
	baz=311						
NCUH	**Zhongli**	**1.48**	**312**	*e*P	**Pn**	15 52 53.7	+0.6
	baz=311						
NCUH				*e*S	**Sn**	15 53 11.7	-0.1
	baz=311						
TWY	**Chenhua**	**1.48**	**331**	*e*P	**Pn**	15 52 53.5	+0.4
	baz=330						
TWY				*e*S	**Sn**	15 53 11.7	-0.2
	baz=330						
ELDTW	**Lidau**	**1.49**	**239**	*e*P	**Pn**	15 52 53.5	+0.2
	baz=237						
ELDTW				*e*S	**Sn**	15 53 11.5	-0.6
	baz=237						
JKRS	**Kuro-shima**	**1.50**	**80**	P	**Pb**	15 52 54.5	-0.4
JKRS				*e*S	**Sb**	15 53 13.1	-0.4
SBCB	**Hsinchu**	**1.52**	**303**	*e*S	**Sn**	15 53 12.7	0.0
	baz=302						
TWQ1	**Liyutan**	**1.53**	**284**	*e*P	**Pn**	15 52 54.5	+0.7
	baz=283						
TWQ1				*e*S	**Sn**	15 53 13.1	+0.2
	baz=283						
ALS	**Alishan**	**1.53**	**253**	*e*S	**Sn**	15 53 12.8	-0.5
	baz=252						
WJS	**Zhushan**	**1.54**	**265**	*e*S	**Sn**	15 53 13.4	+0.3
	baz=264						
LDUT	**Ludao**	**1.55**	**214**	*e*P	**Pn**	15 52 53.3	-0.7
	baz=213						
LDUT				*e*S	**Sn**	15 53 10.9	-2.5
	baz=213						
WWF	**Wufeng**	**1.55**	**273**	*e*S	**Sn**	15 53 13.8	+0.2
	baz=272						
NSY	**Sanyi**	**1.56**	**287**	*e*S	**Sn**	15 53 13.6	0.0
	baz=286						
NMLH	**Miaoli**	**1.57**	**291**	*e*P	**Pn**	15 52 55.4	+1.1
	baz=290						
NMLH				*e*S	**Sn**	15 53 14.2	+0.3
	baz=290						
WNT	**Mingjian**	**1.57**	**267**	*e*S	**Sn**	15 53 13.8	-0.1
	baz=266						
WNT1	**Nantou City**	**1.57**	**268**	*e*S	**Sn**	15 53 14.4	+0.4
	baz=267						
LONT	**Longtian**	**1.58**	**228**	*e*P	**Pn**	15 52 54.4	0.0
	baz=227						
LONT				*e*S	**Sn**	15 53 13.9	-0.2
	baz=227						
TCU	**Taichung**	**1.58**	**277**	*e*S	**Sn**	15 53 14.4	+0.2
	baz=276						
NHW	**Xinwu Township**	**1.60**	**310**	*e*S	**Sn**	15 53 14.9	+0.1
	baz=309						
CHN5	**Tsauling**	**1.62**	**257**	*e*S	**Sn**	15 53 15.2	-0.1
	baz=256						
JIJ	**Ishigaki jima**	**1.64**	**76**	P	**Pn**	15 52 55.9	+0.6
JIJ				S	**Sn**	15 53 14.6	-1.1
WDJ	**Dajia District**	**1.65**	**283**	*e*P	**Pn**	15 52 56.0	+0.6
	baz=282						
WDJ				*e*S	**Sn**	15 53 15.9	+0.1
	baz=282						
TWGBT	**Beinan**	**1.67**	**227**	*e*P	**Pn**	15 52 55.4	-0.3
	baz=226						
TWGBT				*e*S	**Sn**	15 53 16.2	-0.2
	baz=226						
TWG	**Pinlang**	**1.67**	**227**	*e*P	**Pn**	15 52 55.8	+0.1
	baz=226						
TWG				*e*S	**Sn**	15 53 15.9	-0.6
	baz=226						
WCHH	**Zhanghua**	**1.68**	**274**	*e*P	**Pn**	15 52 56.6	+0.7
	baz=273						
WCHH				*e*S	**Sn**	15 53 16.9	+0.2
	baz=273						
STYH	**Taoyuan**	**1.69**	**242**	*e*P	**Pn**	15 52 56.7	+0.8
	baz=241						
STYH				*e*S	**Sn**	15 53 17.1	+0.2
	baz=241						
WGK	**Gukeng**	**1.70**	**261**	*e*S	**Sn**	15 53 17.3	0.0
	baz=260						
STYT	**Tauyuan**	**1.71**	**242**	P	**Pn**	15 52 57.2	+0.9
	baz=241						
STYT				*e*S	**Sn**	15 53 17.4	0.0
	baz=241						
TPUB	**Ta-pu**	**1.75**	**248**	*e*P	**Pn**	15 52 58.1	+1.3
	baz=247						
TPUB				*e*S	**Sn**	15 53 19.3	+0.8
	baz=247						
CHN4	**Tsaushan**	**1.77**	**250**	*e*S	**Sn**	15 53 19.6	+0.8
	baz=249						
WTP	**Ta-pu**	**1.79**	**246**	*e*P	**Pb**	15 52 58.8	-1.1
	baz=245						
WTP				*e*S	**Sn**	15 53 19.6	+0.2
	baz=245						
WRL	**Guolierlin Hig**	**1.85**	**268**	*e*S	**Sn**	15 53 21.1	+0.2
	baz=267						
JISG	**Ishigakijimahi**	**1.85**	**70**	P	**Pn**	15 52 58.0	-0.1
JISG				S	**Sn**	15 53 20.1	-0.7
WTK	**Tuku**	**1.86**	**262**	*e*S	**Sn**	15 53 21.0	-0.1
	baz=261						
CHY	**Chiayi**	**1.87**	**256**	*e*S	**Sn**	15 53 21.4	+0.2
	baz=255						
CHN1	**Nanshi**	**1.89**	**246**	*e*S	**Sn**	15 53 22.1	+0.3
	baz=245						
SGST	**Jiashian**	**1.89**	**242**	*e*P	**Pn**	15 52 59.9	+1.2
	baz=241						
SGST				*e*S	**Sn**	15 53 21.8	+0.1
	baz=241						
TWK	**Hsinying**	**1.89**	**248**	*e*P	**Pb**	15 53 00.5	-1.2
	baz=247						
TWK				*e*S	**Sn**	15 53 21.8	0.0
	baz=247						
ECL	**Taimali**	**1.91**	**224**	*e*S	**Sn**	15 53 22.2	0.0
	baz=223						
WTCT	**Ta-ch'eng**	**1.94**	**267**	*e*S	**Sn**	15 53 23.2	+0.2
	baz=266						
SSD	**Sandimen**	**2.03**	**233**	*e*P	**Pn**	15 53 01.2	+0.6
	baz=232						
SSD				*e*S	**Sn**	15 53 25.8	+0.5
	baz=232						
TSMG	**Majia**	**2.05**	**232**	*e*P	**Pn**	15 53 02.0	+1.1
	baz=231						
TSMG				*e*S	**Sn**	15 53 26.1	+0.4
	baz=231						
SCST	**Cishan**	**2.06**	**239**	*e*S	**Sn**	15 53 26.1	+0.2
	baz=238						
LAY	**Lan-yu**	**2.08**	**202**	*e*P	**Pn**	15 53 01.4	+0.1
	baz=201						
CHN8	**Yiju**	**2.10**	**253**	*e*S	**Sn**	15 53 27.1	+0.1
	baz=252						
MASBT	**Mashibuluo**	**2.11**	**230**	P	**Pn**	15 53 02.7	+0.9
	baz=230						
MASBT				*e*S	**Sn**	15 53 27.4	0.0
	baz=230						
EAST	**Anshuo**	**2.13**	**222**	*e*P	**Pn**	15 53 02.3	+0.2
	baz=221						
EAST				*e*S	**Sn**	15 53 27.7	-0.1
	baz=221						
SCLT	**Jiali**	**2.17**	**249**	*e*S	**Sn**	15 53 28.8	0.0
	baz=248						
JTJ	**Tarama**	**2.21**	**72**	*e*S	**Sn**	15 53 31.8	+2.2
SSPT	**Xinbi**	**2.24**	**229**	*e*P	**Pn**	15 53 05.3	+1.7
	baz=228						
SSPT				*e*S	**Sn**	15 53 30.6	+0.1
	baz=228						
SCZT	**Fangliau**	**2.28**	**226**	P	**Pn**	15 53 05.3	+1.2
	baz=225						
SCZT				*e*S	**Sn**	15 53 31.5	0.0
	baz=225						
SLIU	**Shizi**	**2.29**	**220**	P	**Pn**	15 53 04.6	+0.4
	baz=220						
HEN	**Hengchun**	**2.48**	**218**	*e*P	**Pn**	15 53 08.2	+1.3
	baz=217						
HEN				*e*S	**Sn**	15 53 36.5	0.0
	baz=217						
TWKBT	**Hengchun**	**2.50**	**216**	*e*P	**Pn**	15 53 08.0	+1.0
	baz=215						
TWKBT				*e*S	**Sn**	15 53 36.5	-0.3
	baz=215						
WDGT	**Dungji**	**2.61**	**255**	*e*P	**Pn**	15 53 09.9	+1.3
	baz=254						
WDGT				*e*S	**Sn**	15 53 39.5	-0.1
	baz=254						
PHUB	**P'eng-hu**	**2.63**	**261**	*e*P	**Pn**	15 53 09.9	+1.1
	baz=259						
PHUB				*e*S	**Sn**	15 53 39.8	-0.2
	baz=259						
PNG	**Penghu**	**2.63**	**262**	*e*P	**Pn**	15 53 10.0	+1.1
	baz=261						
PNG				*e*S	**Sn**	15 53 40.2	0.0
	baz=261						
VCHM	**Qimei**	**2.83**	**255**	*e*P	**Pn**	15 53 13.1	+1.5
	baz=254						
VCHM				*e*S	**Sn**	15 53 45.0	0.0
	baz=254						
VWUC	**VWUC**	**2.87**	**291**	*e*P	**Pn**	15 53 12.1	-0.1
	baz=290						
VWUC				*e*S	**Sn**	15 53 44.0	-2.0
	baz=290						
PTMZ	**Houxiangcun**	**3.17**	**290**	*e*P	**Pn**	15 53 15.9	-0.3
	baz=289						
XPSS	**Dashiqiu**	**3.56**	**326**	*e*P	**Pn**	15 53 20.9	-0.7
	baz=325						

*IDC **05** 16:39:09.4±1.0,9°.53N×57°.57E,h0km,mb3.9/10,*
mb1 4.0/10,mb1mx3.6/50,mbtmp3.9/10,MS3.0/5,
Ms1 3.0/5,ms1mx2.6/44,Error ellipse: s-maj=29.1km
s-min=20.7km az=21.0
*NEIC **05** 16:39:11.8±1.4,9°.6N±0°.1×57°.56E±0°.05,h16km±4km,*
mb4.2/10,Error ellipse: s-maj=20.2km s-min=5.2km
az=196.0
ISC 05 16:39:10.6±0.8**,9°.5N**±0°.1×**57°.6E**±0°.1**,h10**km**,n26,**
σ0°72/23,mb3.9/16,MS2.9/4,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**4.42**	**307**	Pn	**Pn**	**16 40 18.8**	**+0.9**
WSAR	**Wadi Sarin**	**13.69**	**4**	LR	LR	16 46 53.1	
	comp=Z,80nm,18.6s,baz=194,slow=34						
RAYN	**Ar Rayn**	**18.10**	**322**		**Pn**	**16 43 21.3**	**-1.1**
EIL	**Elat**	**29.16**	**317**	P	**P**	**16 45 12.8**	**+0.5**
	1.1nm,0.4s,baz=153,slow=14,SNR=3.6						
GNI	**Garni**	**32.58**	**342**	LR	LR	17 00 09.6	
	comp=Z,23nm,20.9s,baz=146,slow=39						
ABKAR	**Akbulak array**	**39.67**	**2**	P	**P**	**16 46 42.2**	**-0.6**
ABKAR				IAmb	IAmb	16 46 45.3	
	comp=Z,4.8nm,1.2s						
AKTO	**Aktyubinsk**	**40.80**	**0**	P	**P**	**16 46 52.3**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=171,slow=11,SNR=4.6						
AKTO				LR	LR	17 03 23.7	
	comp=Z,14nm,18.9s,baz=182,slow=36						

CMAR	**Chiang Mai Arr**	**41.02**	**73**	P		**P**	**16 46 55.4**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=264,slow=8.1,SNR=9.1							
ITM	**Ithomi**	**42.36**	**316**	P		**P**	**16 47 05.1**	**-0.1**
MAKZ	**Makanchi**	**42.58**	**25**	P		**P**	**16 47 06.5**	**-0.3**
MAKZ				IAmb		IAmb	16 47 07.2	
	comp=Z,1.6nm,0.7s							
MK31	**Makanchi Array**	**42.70**	**25**	P		**P**	**16 47 07.1**	**-0.6**
MKAR	**Makanchi Array**	**42.70**	**25**	P		**P**	**16 47 07.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=208,slow=9.6,SNR=12							
MKAR				LR		LR	17 05 08.2	
	comp=Z,17nm,21.1s,baz=232,slow=36							
AGG	**Agios Georgios**	**43.08**	**319**	P		**P**	**16 47 11.0**	**0.0**
AGG				IAmb		IAmb	16 47 37.5	
	comp=Z,8.7nm,1.2s							
SLVN	**Son La**	**46.01**	**70**	P		**P**	**16 47 33.9**	**-0.9**
SLVN				IAmb		IAmb	16 47 41.2	
	comp=Z,3.1nm,1.1s							
LBTB	**Lobatse**	**46.36**	**222**	P		**P**	**16 47 36.8**	**-0.7**
ARU	**Arti**	**46.81**	**1**	LR		LR	17 06 25.7	
	comp=Z,22nm,20.2s,baz=132,slow=35							
BUR08	**Bucovina Ar. S**	**46.82**	**330**	P		**P**	**16 47 40.7**	**-0.1**
BUR08				IAmb		IAmb	16 47 46.9	
	comp=Z,4.9nm,1.4s							
ZAA0	**Zalesovo Array**	**49.40**	**21**	P		**P**	**16 47 58.6**	**-1.8**
ZAA0				IAmb		IAmb	16 48 00.3	
	comp=Z,2.5nm,0.7s							
ZALV	**Zalesovo Beam**	**49.40**	**21**	P		**P**	**16 47 59.8**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=226,slow=7.8,SNR=14							
TORD	**Torodi Ar. Bea**	**54.83**	**279**	P		**P**	**16 48 41.2**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=80,slow=7.5,SNR=3.7							
SONM	**Songino Array**	**56.02**	**38**	P		**P**	**16 48 50.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=232,slow=3.6,SNR=4.4							
ESDC	**Sonseca Array**	**62.15**	**310**	P		**P**	**16 49 32.8**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=86,slow=5.7,SNR=9.1							
WRA	**Warramunga Arr**	**80.97**	**112**	P		**P**	**16 51 26.6**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=293,slow=4.5,SNR=8.2							
ASAR	**Alice Springs**	**81.47**	**116**	P		**P**	**16 51 29.1**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=290,slow=5.0,SNR=9.1							
PDAR	**Pinedale Array**	**126.66**	**348**	PKP		**PKiKP**	**16 58 15.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=52,slow=2.4,SNR=4.4							
TXAR	**Lajitas Array**	**137.36**	**336**	PKP		**PKPdf**	**16 58 36.0**	**+0.6**
	comp=Z,0.4nm,1.0s,baz=86,slow=3.9,SNR=3.4							

IDC 05 17:02:48.7±16.0, **9.39N**×**57.26E, h0**km, **mb3.6**/3, **mb1 3.7**/3, **mb1mx3.3**/32, **mbtmp3.6**/3, **MS3.9**/2, **Ms1 3.9**/2, **ms1mx2.8**/35, **Error ellipse: s-maj=326.8km s-min=53.4km az=38.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKTO	**Aktyubinsk**	**40.92**	**1**	P	P	17 10 32.5	-0.3
	baz=171,slow=12,SNR=1.3						
CMAR	**Chiang Mai Arr**	**41.36**	**73**	P	P	17 10 36.7	-0.2
	0.3nm,0.5s,baz=268,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**42.94**	**25**	P	P	17 10 49.2	-0.2
	0.4nm,0.6s,baz=209,slow=9.6,SNR=7.2						
ZALV	**Zalesovo Beam**	**49.62**	**21**	P	P	17 11 41.9	+0.1
	0.9nm,0.5s,baz=226,slow=8.0,SNR=6.5						
TLY	**Talaya**	**56.59**	**33**	LR	LR	17 38 56.4	
	comp=Z,28nm,18.2s,baz=356,slow=38						
JNU	**Nakatsue**	**71.23**	**58**	LR	LR	17 45 16.3	
	comp=Z,302nm,19.6s,baz=114,slow=36						

*JMA **05** 17:09:51.9±0.1,23.99N×122.39E, h29km±3km, M2.4*
*TAP **05** 17:09:52.0,24.02N×122.41E, h29km, ML2.8, D*
ISC 05 17:09:50.5**±1.1, **23.95N**±0.02×**122.41E**±0.02, **h12**km±9km, **n62**, σ0**s3**/106, **Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.70**	**44**	P	**Pb**	**17 10 04.9**	**+0.2**
JYNG				S	**Sg**	**17 10 13.6**	**+0.2**
TWD	**Chiawan**	**0.75**	**280**	*e*S	**Sb**	**17 10 15.8**	**0.0**
	baz=274						
YOJ	**Yonaguni jima**	**0.76**	**47**	P	**Pb**	**17 10 05.7**	**+0.1**
YOJ				S	**Sb**	**17 10 15.8**	**-0.1**
YOJ	**Yonaguni jima**	**0.76**	**47**	*i* P	**Pb**	**17 10 05.7**	**+0.1**
	baz=57						
YOJ				S	**Sg**	**17 10 14.9**	**-0.1**
	baz=57						
EWUT	**Wuta**	**0.76**	**311**	*e*P	**Pg**	**17 10 03.6**	**-1.5**
	baz=306						
EWUT				S	**Sb**	**17 10 16.2**	**+0.3**
	baz=306						
ENA	**Nanau**	**0.77**	**309**	P	**Pb**	**17 10 06.0**	**0.0**
	baz=312						
ENA				*e*S	**Sb**	**17 10 16.5**	**+0.1**
	baz=312						
NACB	**Ninganchiao**	**0.78**	**287**	*e*P	**Pb**	**17 10 06.1**	**+0.2**
	baz=267						
NACB				*e*S	**Sn**	**17 10 18.9**	**+0.1**
	baz=267						
TWC	**Suao**	**0.83**	**323**	*i* P	**Pg**	**17 10 06.4**	**-0.2**
	baz=319						
TWC				*e*S	**Sg**	**17 10 16.7**	**-0.8**
	baz=319						
ETLH	**Xiulin Townshi**	**0.88**	**287**	*e*P	**Pg**	**17 10 07.9**	**+0.3**
	baz=270						
ETLH				*e*S	**Sg**	**17 10 19.4**	**+0.3**
	baz=270						
ESL	**Shilin**	**0.90**	**262**	*e*P	**Pg**	**17 10 07.8**	**0.0**
	baz=248						
ESL				*e*S	**Sg**	**17 10 19.7**	**+0.1**
	baz=248						
NDS	**Dongshan**	**0.93**	**318**	P	**Pb**	**17 10 08.8**	**+0.2**
	baz=314						
NDS				*e*S	**Sb**	**17 10 20.9**	**0.0**
	baz=314						
HGSD	**Ruisui**	**1.01**	**244**	*i* P	**Pg**	**17 10 10.1**	**+0.2**
	baz=240						
HGSD				S	**Sg**	**17 10 23.2**	**+0.2**
	baz=240						
ILA	**Ilan**	**1.01**	**324**	*e*S	**Sb**	**17 10 23.7**	**+0.4**
	baz=321						
TWE	**Neicheng**	**1.02**	**319**	*i* P	**Pg**	**17 10 10.2**	**0.0**
	baz=316						
ENTT	**Nioudou**	**1.03**	**312**	*e*P	**Pb**	**17 10 10.7**	**+0.3**
	baz=295						
NDT	**Datong Townshi**	**1.04**	**309**	*i* P	**Pn**	**17 10 11.2**	**+0.2**
	baz=305						
NDT				*i* S	**Sb**	**17 10 24.5**	**+0.2**
	baz=305						
NNSH	**Datong**	**1.05**	**297**	P	**Pg**	**17 10 10.5**	**-0.2**
	baz=282						
NNSB	**Datong**	**1.05**	**297**	P	**Pg**	**17 10 10.4**	**-0.4**
	baz=293						
NNSB				*e*S	**Sb**	**17 10 24.8**	**+0.3**
	baz=293						
WHF	**Hehuan Shan**	**1.06**	**281**	*e*P	**Pb**	**17 10 11.5**	**+0.5**
	baz=263						
WHF				*e*S	**Sb**	**17 10 25.6**	**+0.5**
	baz=263						
NNS	**Nan Shan**	**1.06**	**298**	P	**Pb**	**17 10 10.6**	**-0.3**
	baz=293						
NNS				*e*S	**Sg**	**17 10 24.1**	**-0.7**
	baz=293						
EHY	**Hungye**	**1.08**	**246**	*i* P	**Pb**	**17 10 11.5**	**+0.3**
	baz=257						
EHY				S	**Sb**	**17 10 25.7**	**+0.4**
	baz=257						
FUSS	**Fushou**	**1.10**	**286**	*i* P	**Pb**	**17 10 11.9**	**+0.2**
	baz=282						
FUSS				S	**Sg**	**17 10 26.2**	**0.0**
	baz=282						
CHGB	**Renai**	**1.13**	**276**	*i* P	**Pb**	**17 10 12.2**	**+0.1**
	baz=272						
CHGB				S	**Sb**	**17 10 26.9**	**0.0**
	baz=272						
TIPB	**Shuangxi**	**1.15**	**333**	*i* P	**Pn**	**17 10 12.6**	**+0.1**
	baz=330						
TIPB				*e*S	**Sb**	**17 10 26.2**	**-1.1**
	baz=330						
YULB	**Yu-li**	**1.16**	**242**	*i* P	**Pb**	**17 10 12.5**	**+0.1**
	baz=227						
YULB				*i* S	**Sb**	**17 10 27.2**	**-0.2**
	baz=227						
EYUL	**Yuli**	**1.16**	**239**	*i* P	**Pb**	**17 10 12.6**	**+0.1**
	baz=236						
EYUL				*i* S	**Sb**	**17 10 27.7**	**+0.2**
	baz=236						
VWDT	**VWDT**	**1.17**	**261**	*e*P	**Pb**	**17 10 13.0**	**+0.3**
	baz=257						
VWDT				*e*S	**Sb**	**17 10 27.8**	**-0.1**
	baz=257						
TWF1	**Yuli**	**1.18**	**240**	*i* P	**Pn**	**17 10 12.7**	**-0.1**
	baz=236						
TWF1				*i* S	**Sb**	**17 10 28.2**	**+0.3**
	baz=236						
TDCB	**Techi**	**1.18**	**285**	P	**Pb**	**17 10 12.8**	**-0.1**
	baz=271						
YHNB	**Yeheng**	**1.19**	**308**	*i* P	**Pb**	**17 10 12.6**	**-0.4**
	baz=304						
NSK	**Sanguang**	**1.20**	**308**	P	**Pb**	**17 10 12.6**	**-0.6**
	baz=304						
FULB	**Fuli**	**1.26**	**234**	*e*P	**Pn**	**17 10 13.9**	**-0.1**
	baz=220						
FULB				*e*S	**Sb**	**17 10 30.6**	**+0.1**
	baz=220						
IRIF	**Iriomote-Funau**	**1.27**	**72**	P	**Pn**	**17 10 14.3**	**+0.2**
IRIF				*e*S	**Sb**	**17 10 30.6**	**-0.1**
TWA	**Mucha**	**1.27**	**324**	P	**Pb**	**17 10 14.8**	**+0.4**
	baz=321						
TWA				S	**Sb**	**17 10 30.7**	**-0.1**
	baz=321						
NHDH	**Xindian Distri**	**1.29**	**322**	P	**Pn**	**17 10 14.3**	**-0.1**
	baz=318						
NHDH				S	**Sn**	**17 10 31.8**	**+0.2**
	baz=318						
TATO	**Taipei**	**1.32**	**321**	*e*P	**Pn**	**17 10 15.1**	**+0.3**
	baz=303						
TATO				*e*S	**Sn**	**17 10 32.6**	**+0.2**
	baz=303						
SSLB	**Suanglung**	**1.34**	**264**	*e*P	**Pn**	**17 10 15.5**	**+0.5**
	baz=260						
DPDB	**Guoxing**	**1.35**	**274**	*e*P	**Pn**	**17 10 15.6**	**+0.3**
	baz=270						
WHP	**Taichung City**	**1.37**	**284**	P	**Pg**	**17 10 17.7**	**+0.8**
	baz=270						
WHP				*e*S	**Sg**	**17 10 35.6**	**+0.8**
	baz=270						
SMLT	**Sun Moon Lake**	**1.38**	**268**	*e*P	**Pn**	**17 10 16.4**	**+0.7**
	baz=264						
SMLT				*e*S	**Sb**	**17 10 33.3**	**-0.6**
	baz=264						
EDH	**Donghe**	**1.40**	**226**	*e*P	**Pn**	**17 10 15.9**	**+0.1**
	baz=215						
EDH				*e*S	**Sn**	**17 10 31.8**	**-2.5**
	baz=215						
TYC	**Yuchr**	**1.42**	**269**	*e*P	**Pb**	**17 10 17.5**	**+0.7**
	baz=265						
TYC				*e*S	**Sn**	**17 10 33.8**	**-0.9**
	baz=265						
YM01	**YM01**	**1.42**	**328**	*e*P	**Pn**	**17 10 15.7**	**-0.4**
	baz=325						
YM11	**YM11**	**1.43**	**328**	*e*P	**Pb**	**17 10 17.2**	**0.0**
	baz=325						
YM05	**YM05**	**1.44**	**328**	*e*P	**Pn**	**17 10 16.5**	**+0.1**
	baz=325						
YM04	**YM04**	**1.44**	**327**	*e*P	**Pn**	**17 10 16.8**	**+0.3**
	baz=324						
YM08	**YM08**	**1.44**	**329**	*e*P	**Pg**	**17 10 18.1**	**-0.1**
	baz=326						
LIOB	**Emei**	**1.45**	**299**	*e*P	**Pb**	**17 10 17.5**	**+0.1**
	baz=295						
NSTT	**Nanjuang**	**1.45**	**298**	*e*P	**Pb**	**17 10 17.6**	**+0.1**
	baz=295						
NSTT				*e*S	**Sn**	**17 10 35.9**	**+0.3**
	baz=295						
JKRS	**Kuro-shima**	**1.50**	**78**	P	**Pn**	**17 10 17.8**	**+0.6**
JKRS				*e*S	**Sb**	**17 10 37.1**	**0.0**
LDUT	**Ludao**	**1.53**	**214**	*i* P	**Pn**	**17 10 17.1**	**-0.6**
	baz=212						
LDUT				S	**Sn**	**17 10 35.1**	**-2.4**
	baz=212						
LONT	**Longtian**	**1.56**	**229**	*e*P	**Pn**	**17 10 17.9**	**-0.2**
	baz=239						
LONT				*e*S	**Sn**	**17 10 37.9**	**-0.4**
	baz=239						
JIJ	**Ishigaki jima**	**1.64**	**75**	P	**Pn**	**17 10 19.8**	**+0.6**
JIJ				S	**Sn**	**17 10 40.3**	**+0.1**
TWGBT	**Beinan**	**1.66**	**228**	*e*P	**Pn**	**17 10 19.4**	**0.0**
	baz=237						
TWG	**Pinlang**	**1.66**	**228**	*e*P	**Pn**	**17 10 19.7**	**+0.3**
	baz=237						
STYH	**Taoyuan**	**1.68**	**243**	*e*P	**Pn**	**17 10 20.7**	**+1.0**
	baz=231						
STYH				*e*S	**Sn**	**17 10 41.5**	**+0.3**
	baz=231						
TPUB	**Ta-pu**	**1.75**	**249**	P	**Pb**	**17 10 22.2**	**-0.4**
	baz=246						
TPUB				*e*S	**Sb**	**17 10 44.5**	**0.0**
	baz=246						
CHN4	**Tsaushan**	**1.76**	**251**	P	**Pb**	**17 10 23.4**	**+0.6**
	baz=248						
CHN4				*e*S	**Sb**	**17 10 45.5**	**+0.6**
	baz=248						
WTP	**Ta-pu**	**1.78**	**247**	P	**Pb**	**17 10 23.1**	**-0.1**
	baz=244						
WTP				*e*S	**Sb**	**17 10 45.6**	**+0.1**
	baz=244						
JISG	**Ishigakijimahi**	**1.85**	**69**	P	**Pn**	**17 10 22.4**	**+0.3**
JISG				*e*S	**Sn**	**17 10 45.5**	**0.0**
TWK	**Hsinying**	**1.88**	**249**	P	**Pb**	**17 10 24.8**	**-0.1**
	baz=246						
TWK				*e*S	**Sb**	**17 10 48.8**	**+0.3**
	baz=246						
MASBT	**Mashibuluo**	**2.10**	**231**	P	**Pn**	**17 10 26.5**	**+0.9**
	baz=224						
MASBT				*e*S	**Sb**	**17 10 55.1**	**+0.4**
	baz=224						

*IDC **05** 17:09:43.2±2.2,1.99N×127.40E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/31, mbtmp3.2/3, Error ellipse: s-maj=152.9km s-min=28.0km az=67.0*
*DJA **05** 17:09:52.4±1.1,2.7N±4.7×12.7E±1.0, h84km±14km, M3.3/7, MLv3.3/7*
ISC 05 17:09:54.1**±1.3, **1.74N**±0.09×**127.3E**±0.2, **h100**km, **n7**, σ1§**61**/8, **mb3.0**/3, **Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.96**	**176**	P	**Pn**	**17 10 12.8**	**-1.4**
TNTI				S	**Sn**	**17 10 28.1**	**-1.2**
SGSI	**Sangihe**	**2.62**	**318**	P	**Pn**	**17 10 33.5**	**-1.3**
KMSI	**Cibinong**	**3.51**	**251**	P	**Pn**	**17 10 46.2**	**-0.5**
SANI	**Sanana**	**3.98**	**199**	P	**Pn**	**17 10 52.6**	**-0.5**
WRA	**Warramunga Arr**	**22.63**	**163**	P	**P**	**17 14 47.0**	**+0.1**
	0.6nm,0.9s,baz=342,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**26.06**	**166**	P	**P**	**17 15 21.0**	**+2.6**
	0.4nm,0.9s,baz=347,slow=12,SNR=1.5						
MKAR	**Makanchi Array**	**59.50**	**326**	P	**P**	**17 19 47.6**	**+0.8**
	0.2nm,0.5s,baz=121,slow=7.8,SNR=4.1						

*IDC **05** 17:14:48.2±1.5,5.74S×152.96E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.7/42, mbtmp3.8/10, ML2.1/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/30, Error ellipse: s-maj=52.7km s-min=19.2km az=115.0*
*NEIC **05** 17:14:52.7±3.0,5.72S±0.09×153.2E±0.2, h38km±11km, mb4.1/9, Error ellipse: s-maj=23.1km s-min=11.7km az=109.0*
ISC 05 17:14:53.1**±1.0, **5.67S**±0.09×**153.1E**±0.2, **h35**km, **n25**, σ1§**56**/25, **mb3.9**/13, **New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.71**	**329**	Pn	**Pn**	**17 15 18.4**	**-2.1**
PMG	**Port Moresby**	**6.92**	**237**	Pn	**Pn**	**17 16 31.2**	**-0.9**
	2.4nm,0.3s,baz=49,slow=7.7,SNR=13						
PMG				Sn	**Sn**	**17 17 50.8**	**+1.2**
	4.2nm,0.3s,baz=39,slow=8.2,SNR=7.0						
PMG				LR	LR	17 19 07.0	
	comp=Z,68nm,19.8s,baz=68,slow=38						
PMG	**Port Moresby**	**6.92**	**237**	Pn	**Pn**	**17 16 32.4**	**+0.4**
HNR	**Honiara**	**7.79**	**119**	LR	LR	17 19 49.5	
	comp=Z,58nm,18.3s,baz=296,slow=38						
COEN	**Coen**	**12.74**	**229**	Pn	**Pn**	**17 17 53.9**	**+2.0**
CTAO	**Charters Tower**	**15.78**	**204**	P	**Pn**	**17 18 34.3**	**+1.4**
CTAO				IAmb	IAmb	17 18 38.6	
	comp=Z,5.8nm,1.1s						
MTN	**Manton Dam**	**22.76**	**250**	P	**P**	**17 19 54.2**	**+1.6**
WR0	**Warramunga Arr**	**22.93**	**230**	P	**P**	**17 19 55.1**	**+0.8**
WR0				IAmb	IAmb	17 19 56.0	
	comp=Z,7.9nm,1.1s						
WB0	**Warramunga Arr**	**22.93**	**231**	P	**P**	**17 19 54.7**	**+0.4**
WB0				IAmb	IAmb	17 19 58.7	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**23.06**	**230**	P	**P**	**17 19 56.0**	**+0.4**
WRAB				IAmb	IAmb	17 19 57.2	
	comp=Z,7.9nm,1.0s						
WB2	**Warramunga Arr**	**23.06**	**230**	P	**P**	**17 19 56.3**	**+0.6**
WRA	**Warramunga Arr**	**23.07**	**230**	P	**P**	**17 19 54.0**	**-1.8**
	comp=Z,6.9nm,1.0s,baz=54,slow=10,SNR=21						
AS31	**Alice Springs**	**25.69**	**224**	P	**P**	**17 20 19.4**	**-0.7**
ASAR	**Alice Springs**	**25.69**	**224**	P	**P**	**17 20 19.7**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=59,slow=9.7,SNR=26						
STKA	**Stephens Creek**	**28.19**	**201**	P	**P**	**17 20 41.0**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=38,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**28.19**	**201**	P	**P**	**17 20 38.8**	**-3.7**
FITZ	**Fitzroy Crossi**	**29.47**	**243**	P	**P**	**17 20 52.3**	**-1.8**
FITZ				IAmb	IAmb	17 21 14.0	
	comp=Z,7.0nm,1.1s						
MBWA	**Marble Bar**	**35.76**	**241**	P	**P**	**17 21 47.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**58.47**	**296**	P	**P**	**17 24 44.9**	**-1.2**
	comp=Z,0.8nm,1.0s,baz=90,slow=9.0,SNR=2.2						
PETK	**Petropavlovsk-**	**58.69**	**3**	P	**P**	**17 24 46.8**	**-0.2**
	comp=Z,4.4nm,0.8s,baz=172,slow=6.5,SNR=5.3						
SONM	**Songino Array**	**67.19**	**328**	P	**P**	**17 25 44.5**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=108,slow=6.3,SNR=2.0						
MKAR	**Makanchi Array**	**81.14**	**319**	P	**P**	**17 27 06.3**	**+1.2**
	comp=Z,0.1nm,0.5s,baz=104,slow=5.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**82.01**	**326**	P	**P**	**17 27 11.5**	**+2.0**
	comp=Z,0.3nm,0.4s,baz=128,slow=9.3,SNR=1.8						
ILAR	**Eielson Array**	**82.87**	**22**	P	**P**	**17 27 15.9**	**+2.1**
	comp=Z,0.3nm,0.9s,baz=251,slow=4.7,SNR=2.2						
TORD	**Torodi Ar. Bea**	**150.80**	**287**	PKPbc	**PKiKP**	**17 34 43.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=52,slow=2.4,SNR=2.1						

*IDC **05** 17:22:03.1±1.8,2.39N×127.23E, h0km, mb3.1/3, mb1 3.3/4, mb1mx3.1/42, mbtmp3.2/4, ML3.4/1, Error ellipse: s-maj=78.0km s-min=27.1km az=59.0*
*DJA **05** 17:22:07.9±1.0,3.5N±5.5×12.8E±1.1, h13km±7km, M3.9/7, mb4.4/3, mB4.6/1, MLv3.6/7, Mw(mB)3.8/1*
ISC 05 17:22:08.2**±1.3, **2.7N**±0.1×**127.9E**±0.1, **h35**km, **n9**, σ1§**48**/10, **mb3.0**/3, **Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.94**	**195**	P	**Pn**	**17 22 39.5**	**+0.8**
SGSI	**Sangihe**	**2.55**	**294**	P	**Pn**	**17 22 47.8**	**+0.7**
SIJI	**Sorong**	**4.88**	**136**	Pn	**Pn**	**17 23 21.4**	**+2.3**
	1.3nm,0.3s,baz=301,slow=23,SNR=11						
SIJI				Sn	**Sn**	**17 24 15.0**	**+0.5**
	0.9nm,0.3s,baz=183,slow=22,SNR=6.6						
SANI	**Sanana**	**5.04**	**202**	P	**Pn**	**17 23 21.1**	**-0.2**
GTOI	**Gorontalo**	**5.25**	**248**	P	**Pn**	**17 23 25.4**	**+1.2**
	0.1nm9.9nm,0.5s						
MRSI	**Marisa**	**6.30**	**250**	P	**Pn**	**17 23 39.7**	**+1.0**
WRA	**Warramunga Arr**	**23.34**	**164**	P	**P**	**17 27 11.1**	**-2.5**
	0.3nm,0.5s,baz=342,slow=10,SNR=2.2						
ASAR	**Alice Springs**	**26.82**	**168**	P	**P**	**17 27 45.4**	**0.0**
	0.2nm,0.7s,baz=346,slow=11,SNR=2.0						
MKAR	**Makanchi Array**	**59.08**	**325**	P	**P**	**17 32 04.4**	**-0.7**
	0.1nm,0.4s,baz=115,slow=6.8,SNR=2.2						

*DJA **05** 17:27:54.6±0.6,1.1S±2.2×12.0E±1.1, h34km±7km, M4.8/9, mb4.9/9, mB5.0/4, MLv4.9/8, Mw(mB)4.4/4*
*NEIC **05** 17:27:54.3±2.3,0.85S±0.06×120.37E±0.05, h37km±6km, mb4.5/12, Error ellipse: s-maj=8.7km s-min=7.6km az=179.0*
*BJI **05** 17:27:55.0±0.0,0.80S×120.50E, h50km, mB4.9/19, mb4.6/32, Ms4.0/5, Ms7 3.7/5*
*IDC **05** 17:27:56.6±2.5,0.81S×120.52E, h56km±25km, mb3.9/19, mb1 4.1/22, mb1mx3.8/48, mbtmp4.2/22, ML4.2/3, MS3.4/19, Ms1 3.4/19, ms1mx3.3/42, Error ellipse: s-maj=20.0km s-min=13.3km az=66.0*
ISC 05 17:27:56.0**±0.5, **0.83S**±0.05×**120.45E**±0.07, **h49**km, **n79**, σ1§**43**/72, **mb4.2**/37, **MS3.4**/16, **Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOLI2	**Tolitoli**	**1.96**	**10**		**Pn**	**17 28 25.4**	**-1.4**
LUWI	**Luwuk**	**2.33**	**95**	Pn	**Pn**	**17 28 31.8**	**0.0**
LUWI	**Luwuk**	**2.33**	**95**	P	**Pn**	**17 28 31.8**	**0.0**
GTOI	**Gorontalo**	**2.94**	**60**	P	**Pn**	**17 28 36.7**	**-3.6**
SPSI	**Sidrap Palu**	**3.18**	**192**	P	**Pn**	**17 28 42.8**	**-0.8**
SPSI				S	**Sn**	**17 29 21.0**	**+0.7**
BNSI	**Bone**	**3.56**	**186**	P	**Pn**	**17 28 48.6**	**-0.1**
BKB	**Balikpapan**	**3.58**	**263**	Pn	**Pn**	**17 28 45.5**	**-3.5**
BKB	**Balikpapan**	**3.58**	**263**	P	**Pn**	**17 28 45.3**	**-3.7**
KAPI	**Kappang**	**4.21**	**190**	P	**Pn**	**17 28 57.3**	**-0.3**
	24nm,0.3s,baz=345,slow=8.7,SNR=58						
KAPI				S	**Sn**	**17 29 47.0**	**+1.4**
	18nm,0.3s,baz=41,slow=23,SNR=7.2						
KAPI				LR	LR	17 30 36.3	
	comp=Z,1μm,18.6s,baz=9.5,slow=38						
KAPI	**Kappang**	**4.21**	**190**	Pn	**Pn**	**17 28 56.8**	**-0.9**
SANI	**Sanana**	**5.66**	**102**	P	**Pn**	**17 29 16.4**	**-1.2**
	0.3nm1μm90nm,0.7s						
MYLDM	**Lahad Datu**	**6.29**	**342**	Pn	**Pn**	**17 29 25.9**	**-0.2**
NLAI	**Namlea**	**7.06**	**110**	P	**Pn**	**17 29 37.7**	**+0.9**
	34nm,0.4s						
MMRI	**Maumere**	**7.95**	**167**	Pn	**Pn**	**17 29 47.7**	**-1.4**
KKM	**Kota Kinabalu**	**8.04**	**328**	Pn	**Pn**	**17 29 49.0**	**-1.2**
MSAI	**Masohi**	**8.83**	**107**	P	**Pn**	**17 29 59.9**	**-1.2**
SOEI	**Soe**	**9.64**	**157**	Pn	**Pn**	**17 30 10.1**	**-2.2**
SOEI	**Soe**	**9.64**	**157**	P	Pn	17 30 25.2	+13
BATI	**Baumata**	**9.84**	**161**	P	**Pn**	**17 30 16.3**	**+1.4**
	1.5nm,0.3s,baz=212,slow=1.8,SNR=9.5						
BATI				LR	LR	17 34 38.7	
	comp=Z,409nm,21.3s,baz=44,slow=41						
BATI	**Baumata**	**9.84**	**161**	P	**Pn**	**17 30 16.9**	**+1.9**
SWI	**Sorong**	**10.81**	**90**	P	Pn	17 30 39.3	+11
SIJI	**Sorong**	**10.81**	**90**	P	**Pn**	**17 30 28.6**	**+0.4**
	1.7nm,0.3s,baz=250,slow=17,SNR=8.1						
SIJI				LR	LR	17 35 33.7	
	comp=Z,208nm,21.0s,baz=221,slow=43						
FAKI	**Fak Fak**	**11.97**	**100**	Pn	**Pn**	**17 30 43.6**

comp=Z,28nm,18.1s,baz=250,slow=40
BJI Beijing 40.87 355 P **P** **17 35 34.3 +1.2**
BJI pmax pmax
comp=Z,11nm,0.8s
ODAN Odare 42.09 313 *eP* **P** **17 35 44.9 +1.2**
comp=Z,8.2nm,0.8s
TAPN Taplejung 42.15 314 *eP* **P** **17 35 43.8 -0.4**
comp=Z,8.6nm,0.8s
HHC Hu-ho-hao-te 42.27 350 *eP* **P** **17 35 45.3 +0.5**
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,67nm,6.6s
RAMN Ramite 42.72 313 *eP* **P** **17 35 50.2 +1.4**
JIRN Jiri 43.42 313 *eP* **P** **17 35 54.7 0.0**
comp=Z,2.8nm,0.3s
GUN Gumba 43.79 313 *eP* **P** **17 35 57.6 0.0**
comp=Z,12nm,0.6s
PKIN Phulchoki 43.95 313 *eP* **P** **17 35 58.3 -0.5**
comp=Z,6.2nm,0.7s
KKN Kakani 44.16 313 *eP* **P** **17 35 59.8 -0.6**
comp=Z,22nm,0.3s
GTA Gaotai 44.29 337 P **P** **17 36 03.7 +2.5**
GTA pmax pmax
comp=Z,2.0nm,1.2s
GKN Gorkha 44.75 313 *eP* **P** **17 36 03.8 -1.3**
comp=Z,2.2nm,0.3s
KOLN Koldanda 45.39 312 *eP* **P** **17 36 11.1 +0.9**
comp=Z,3.2nm,0.4s
MDJ Mudanjiang 45.98 9 P **P** **17 36 14.5 +0.3**
MDJ pmax pmax
comp=Z,14nm,0.6s
MDJ pmax pmax
comp=Z,120nm,5.3s
MDJ Mudanjiang 45.98 9 P **P** **17 36 14.6 +0.3**
MDJ IAmb IAmb 17 36 15.3
comp=Z,9.3nm,0.8s
USRK Ussuriysk Ar. 46.01 12 P **P** **17 36 13.9 -0.6**
comp=Z,1.7nm,0.6s,baz=179,slow=5.0,SNR=5.6
USRK LR LR 17 55 34.7
comp=Z,23nm,20.0s,baz=151,slow=36
PYUN Piuthan 46.02 312 *eP* **P** **17 36 15.6 +0.4**
comp=Z,8.1nm,0.5s
SONM Songino Array 50.00 348 P **P** **17 36 46.0 +0.5**
comp=Z,1.1nm,0.7s,baz=171,slow=9.3,SNR=8.9
SONM LR LR 18 01 33.1
comp=Z,33nm,18.0s,baz=160,slow=40
WMQ Urumqi 53.23 331 *eP* **P** **17 37 11.8 +2.2**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,100nm,3.7s
MKAR Makanchi Array 58.02 330 P **P** **17 37 44.2 +0.4**
comp=Z,1.7nm,0.8s,baz=133,slow=7.7,SNR=18
MKAR LR LR 18 06 34.9
comp=Z,26nm,19.2s,baz=118,slow=40
MAKZ Makanchi 58.19 330 **P** **17 37 43.9 -1.1**
MAKZ IAmb IAmb 17 37 49.6
comp=Z,4.5nm,1.3s
AAK Ala-Archa 59.79 322 P **P** **17 37 57.2 +0.7**
comp=Z,2.0nm,0.8s,baz=134,slow=3.0,SNR=8.7
ZALV Zalesovo Beam 62.05 337 P **P** **17 38 10.8 -0.5**
comp=Z,1.1nm,0.6s,baz=126,slow=7.5,SNR=4.6
ZALV LR LR 18 06 14.2
comp=Z,25nm,19.1s,baz=226,slow=37
YAK Yakutsk 63.09 5 P **P** **17 38 17.0 -1.1**
comp=Z,10nm,0.6s,baz=114,slow=4.9,SNR=4.1
YAK Yakutsk 63.09 5 P **P** **17 38 17.1 -1.0**
GEYT Alibeck 69.01 311 P **P** **17 38 57.4 +0.8**
comp=Z,1.5nm,0.5s,baz=16,slow=6.5,SNR=4.5
TIXI Tiksi 72.57 3 P **P** **17 39 15.8 -1.7**
comp=Z,4.2nm,0.8s,baz=279,slow=1.0,SNR=8.5
TIXI Tiksi 72.57 3 P **P** **17 39 16.1 -1.4**
TIXI IAmb IAmb 17 39 16.9
comp=Z,5.0nm,0.9s
NRIK Noril'sk 73.47 348 P **P** **17 39 22.4 -0.6**
comp=Z,1.2nm,0.5s,baz=123,slow=6.5,SNR=4.1
MAW Mawson 77.36 199 LR LR 18 12 31.4
comp=Z,34nm,18.3s,baz=40,slow=35
VNDA Vanda 79.79 172 LR LR 18 15 38.6
comp=Z,29nm,19.1s,baz=341,slow=36
KBZ Khabaz 81.59 314 P **P** **17 40 07.2 -1.5**
comp=Z,2.0nm,0.9s,baz=98,slow=4.2,SNR=4.3
KMBO Kilima Mbogo 83.19 269 P **P** **17 40 17.9 -0.2**
comp=Z,0.5nm,0.3s,baz=50,slow=9.5,SNR=4.2
BRTR Keskin Array B 88.07 310 P **P** **17 40 40.7 -1.0**
comp=Z,0.7nm,0.8s,baz=132,slow=5.5,SNR=5.5
ARCES ARCESS Array B 92.51 339 LR LR 18 27 21.5
comp=Z,15nm,18.3s,baz=5.0,slow=38
MLR Muntele Rosu 93.76 315 LR LR 18 30 13.7
comp=Z,16nm,19.2s,baz=94,slow=40
VRAC Vranov 99.65 320 LR LR 18 33 02.4
comp=Z,19nm,18.4s,baz=69,slow=39
NOA NORSAR Array B 99.96 332 LR LR 18 33 19.8
comp=Z,11nm,18.2s,baz=70,slow=39

*IDC **05** 17:37:38.3±2.4, 6.°72S×148.°04E, h98km±20km, mb3.5/3, mb1 3.7/5, mb1mx3.2/35, mbtmp3.9/5, MS3.0/3, Ms1 3.0/3, ms1mx2.7/24, Error ellipse: s-maj=61.1km s-min=18.2km az=111.0*
ISC 05 17:37:37.6±2.3, 6.°7S±0.°1×148.°1E±0.°5, h100km, n8, σ1§19/8, mb3.8/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.83**	**200**	P	**Pn**	**17 38 19.6**	**-1.5**
PMG	40nm,0.3s,baz=41,slow=4.0,SNR=11!			S	**Sn**	**17 38 55.9**	**+1.4**
PMG	50nm,0.3s,baz=4.4,slow=17,SNR=16			LR	LR	17 39 37.1	
HNR	comp=Z,216nm,19.2s,baz=96,slow=42 **Honiara**	**12.00**	**104**	LR	LR	17 44 23.0	
WRA	comp=Z,102nm,20.8s,baz=321,slow=34 **Warramunga Arr**	**18.75**	**224**	P	**P**	**17 41 48.0**	**-0.9**
WRA	0.6nm,0.3s,baz=51,slow=10,SNR=24			S	S	17 45 05.2	-12
ASAR	0.1nm,0.3s,baz=44,slow=23,SNR=3.7 **Alice Springs**	**21.69**	**218**	P	**P**	**17 42 20.4**	**-0.2**
ASAR	2.5nm,0.6s,baz=54,slow=8.6,SNR=49			S	**S**	**17 46 15.7**	**+0.6**
STKA	1.3nm,0.8s,baz=41,slow=21,SNR=5.2 **Stephens Creek**	**25.75**	**193**	P	**P**	**17 43 00.0**	**+1.0**
KSRS	3.1nm,0.8s,baz=355,slow=11,SNR=4.8 **Korea Array**	**47.84**	**338**	LR	LR	18 06 01.6	
MKAR	comp=Z,14nm,19.5s,baz=179,slow=36 **Makanchi Array**	**78.77**	**320**	P	**P**	**17 49 30.1**	**+0.7**
TORD	0.4nm,0.9s,baz=101,slow=6.9,SNR=3.1 **Torodi Ar. Bea**	**146.36**	**284**	PKPbc	**PKPab**	**17 57 08.5**	**-0.5**
	0.5nm,0.4s,baz=62,slow=3.5,SNR=5.6						

IDC 05 17:38:23.0±2.8, 38.°14N×87.°12E, h0km, mb3.3/1, mb1 3.6/3, mb1mx3.2/41, mbtmp3.5/3, ML3.1/2, Error ellipse: s-maj=169.2km s-min=20.8km az=67.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**9.36**	**339**	Pn	Pn	17 40 37.0	-2.1
MKAR	0.4nm,0.3s,baz=154,slow=14,SNR=20			Sn	Sn	17 42 20.4	-4.6
MKAR	0.3nm,0.3s,baz=158,slow=25,SNR=3.1			Lg	Lg	17 43 23.5	
ZALV	0.2nm,0.3s,baz=138,slow=27,SNR=3.7 **Zalesovo Beam**	**15.89**	**355**	Pn	Pn	17 42 08.9	+1.0
CMAR	0.2nm,0.3s,baz=170,slow=12,SNR=5.1 **Chiang Mai Arr**	**22.16**	**149**	P	P	17 43 20.8	+0.2
	0.6nm,0.4s,baz=335,slow=9.7,SNR=7.6						

*RSNC **05** 18:01:49.7±1.3, 10.°22N×72.°95W, h2km±6km, ML2.4*
*FUNV **05** 18:01:49.8, 10.°44N×72.°81W, h5km, MW3.2*
ISC 05 18:01:48.5±1.6, 10.°30N±0.°04×72.°87W±0.°04, h15km±14km, n11, σ1§38/20, 1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQV	**Machiques**	**0.41**	**126**	*i* P	**Pn**	**18 01 58.7**	**-1.2**
MCQV				*e* S	**Sn**	**18 02 05.8**	**-1.5**
CRJC	**Cerrejon, Guaj**	**0.72**	**359**	*e* P	**Pn**	**18 02 04.3**	**+0.2**
CRJC				*e* S	**Sn**	**18 02 14.9**	**-0.1**
CRJC	comp=Z,89nm,0.1s			*i*		18 02 17.6	
ARGC	**Ariguani, Magd**	**1.42**	**252**	*e* P	**Pn**	**18 02 13.2**	**-0.6**
ARGC	comp=Z,26nm,0.3s			*i*		18 02 35.0	
URIC	**Uribia, Colomb**	**1.64**	**32**	*e* P	**Pg**	**18 02 19.6**	**-0.6**
URIC				*e* S	**Sg**	**18 02 42.9**	**+1.3**
URIC	comp=Z,14nm,0.3s			*i*		18 02 46.0	
SMLC	**San Martn de**	**1.90**	**219**	*e* P	**Pn**	**18 02 18.7**	**-1.7**
SMLC				*e* S	**Sn**	**18 02 43.6**	**-0.4**
SMLC	comp=Z,55nm,0.1s			*i*		18 02 46.7	
OCAC	**Ocana**	**2.09**	**192**	*e* P	**Pn**	**18 02 24.2**	**+1.1**
OCAC				*e* S	**Sn**	**18 02 49.8**	**+0.8**
OCAC	comp=Z,68nm,0.2s			*i*		18 02 54.1	
SJCC	**San Jacinto, C**	**2.31**	**260**	*e* P	**Pn**	**18 02 26.4**	**+0.4**
SJCC				*e* S	**Sn**	**18 02 55.3**	**+1.2**
CAPV	**Capacho**	**2.48**	**167**	*e* P	**Pb**	**18 02 32.3**	**-0.6**
CAPV				*e* S	**Sb**	**18 03 03.1**	**-0.2**
SOCV	**Socops**	**2.82**	**135**	*e* P	**Pn**	**18 02 35.0**	**+1.9**
SOCV				*e* S	**Sn**	**18 03 09.5**	**+2.7**
PAMC	**Pamplona, Colo**	**2.94**	**177**	*e* P	**Pn**	**18 02 35.9**	**+0.8**
BAUV	**El Baul**	**4.95**	**105**	*e* P	**Pn**	**18 03 03.1**	**+0.7**
BAUV				*e* S	**Sn**	**18 03 57.0**	**-2.4**

*IDC **05** 18:03:59.0±5.0, 20.°15S×178.°24W, h546km±37km, mb2.6/4, mb1 3.0/5, mb1mx2.8/28, mbtmp3.5/5, Error ellipse: s-maj=126.5km s-min=23.9km az=149.0*
ISC 05 18:04:00.1±1.1, 19.°8S±0.°3×178.°4W±0.°2, h550km, n9, σ1§44/8, mb3.1/4, 1C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.95**	**300**	P	**P**	**18 05 22.6**	**+0.8**
ASAR	1.5nm,0.3s,baz=211,slow=9.8,SNR=5.2 **Alice Springs**	**44.34**	**256**	P	**P**	**18 11 21.4**	**-0.6**
WRA	0.5nm,0.6s,baz=95,slow=8.0,SNR=7.2 **Warramunga Arr**	**44.35**	**261**	P	**P**	**18 11 21.8**	**-0.4**
TXAR	0.2nm,0.4s,baz=96,slow=7.9,SNR=15 **Lajitas Array**	**86.97**	**58**	P	**P**	**18 15 47.2**	**-0.4**
SYO	0.1nm,0.6s,baz=216,slow=5.6,SNR=2.2 **Syowa Base**	**87.34**	**193!**	*e* P	**P**	**18 15 49.4**	**+1.0**
ILAR	**Eielson Array**	**87.70**	**13**	P	**P**	**18 15 50.8**	**+0.8**
AKASG	0.3nm,0.5s,baz=214,slow=6.0,SNR=5.2 **Malin Array Be**	**142.22**	**331**	PKP	**PKPdf**	**18 22 27.2**	**-2.7**
EKA	0.1nm,0.3s,baz=43,slow=4.1,SNR=4.2 **Eskdalemuir Ar**	**144.32**	**5**	PKP	PKPbc	18 22 34.1	+0.7
GERES	0.5nm,0.6s,baz=343,slow=2.6,SNR=3.7 **GERESS Array B**	**149.42**	**344**	PKPbc	**PKPbc**	**18 22 47.9**	**+0.4**
	0.1nm,0.3s,baz=20,slow=3.1,SNR=2.4						

*NEIC **05** 18:17:32.0±2.6, 16.°05N±0.°05×98.°51W±0.°04, h32km±11km, Error ellipse: s-maj=7.8km s-min=4.5km az=207.0*
*MEX **05** 18:17:31.9±1.0, 16.°03N×98.°70W, h16km, 999km, MD4.4*
ISC 05 18:17:27.3±1.7, 16.°00N±0.°07×98.°62W±0.°04, h4km±10km, n22, σ1§20/35, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.62**	**51**	*i* P	**Pn**	**18 17 42.1**	**-0.7**
PNIG				*i* S	**Sb**	**18 17 50.4**	**+0.7**
PNIG	**Pinotepa**	**0.62**	**51**		**Pn**	**18 17 42.1**	**-0.7**
PNIG					**Sb**	**18 17 50.4**	**+0.7**
CRIG	**Cruz Grande**	**0.88**	**326**	*e* P	**Pg**	**18 17 44.5**	**+0.2**
CRIG				*e* S	**Sg**	**18 17 54.6**	**-1.0**
YOIG	**Yosondua**	**1.34**	**50**	*e* P	**Pb**	**18 17 53.2**	**+0.1**
YOIG				*e* S	**Sb**	**18 18 09.8**	**-1.0**
PEIG	**Puerto Escondi**	**1.42**	**90**	*e* P	**Pg**	**18 17 54.6**	**0.0**
TXIG	**Tlaxiaco**	**1.49**	**33**	*e* P	**Pn**	**18 17 55.3**	**+0.1**
TXIG				*e* S	**Sn**	**18 18 12.9**	**-2.3**
TLIG	**Tlapa**	**1.56**	**2**	*e* P	**Pn**	**18 17 55.7**	**-0.2**
TLIG				*e* S	**Sn**	**18 18 13.7**	**-2.9**
TLIG	**Tlapa**	**1.56**	**2**		**Pn**	**18 17 55.7**	**-0.2**
TLIG					**Sn**	**18 18 15.7**	**-0.9**
CAIG	**El Cayaco**	**1.89**	**304**	*e* P	**Pn**	**18 17 59.0**	**-1.4**
CAIG	**El Cayaco**	**1.89**	**304**		**Pg**	**18 18 04.2**	**+0.6**
FTIG	**Fresnillo de T**	**1.96**	**14**	*e* P	**Pn**	**18 18 01.7**	**+0.3**
FTIG				*e* S	**Sn**	**18 18 27.6**	**+1.2**
HLIG	**Huajuapan de L**	**1.98**	**23**	*e* P	**Pn**	**18 18 02.9**	**+1.1**
HLIG				*e* S	**Sb**	**18 18 29.5**	**+0.3**
VHO	**Vista Hermosa**	**2.10**	**59**	*e* P	**Pn**	**18 18 04.8**	**+1.3**
VHO				*e* S	**Sg**	**18 18 35.2**	**+0.2**
PLIG	**Platanillo**	**2.52**	**341**	*e* P	**Pg**	**18 18 15.3**	**-0.4**
PLIG				*e* S	**Sb**	**18 18 47.3**	**+2.5**
PLIG	**Platanillo**	**2.52**	**341**		**Pg**	**18 18 15.3**	**-0.4**
PLIG					**Sb**	**18 18 47.3**	**+2.5**
TOIG	**Toxpalan**	**2.56**	**35**	*e* P	**Pb**	**18 18 12.6**	**-1.3**
TOIG				*e* S	**Sg**	**18 18 50.0**	**+0.3**
SRIG	**Santa Rosalia**	**16.93**	**314**	Pn	**P**	**18 21 27.1**	**0.0**
SRIG	comp=Z,7.6nm,0.5s			IAmb	IAmb	18 21 40.1	
U32A	**Winter Ranch,**	**20.30**	**359**	P	**P**	**18 22 05.2**	**+0.9**
214A	**Organ Pipe Nat**	**20.47**	**323**	P	**P**	**18 22 06.3**	**+0.2**
GC02	**Grant County #**	**20.78**	**2**	P	**P**	**18 22 08.4**	**-1.0**
T35A	**Sooner Cattle**	**20.92**	**5**	P	**P**	**18 22 12.2**	**+1.3**
T35A	comp=Z,5.0nm,0.9s			IAmb	IAmb	18 22 13.4	
GOGA	**Godfrey**	**22.09**	**36**	P	**P**	**18 22 24.3**	**+0.8**
GOGA	comp=Z,22nm,1.5s			IAmb	IAmb	18 22 35.5	

*DJA **05** 18:19:27.5±0.2, 8.°S±3.°×11.°9E±.°, h174km±4km, M4.3/20, mb4.4/16, mB4.8/7, MLv4.4/20, Mw(mB)4.1/7, MwMwp6.1/1, Mwp6.1/1*
*NEIC **05** 18:19:27.1±2.7, 8.°30S±0.°06×118.°77E±0.°08, h186km±4km, mb4.3/20, Error ellipse: s-maj=12.4km s-min=8.8km az=73.0*
*IDC **05** 18:19:28.2±2.1, 8.°17S×118.°82E, h188km±19km, mb3.6/12, mb1 3.7/16, mb1mx3.5/54, mbtmp4.2/16, Error ellipse: s-maj=29.4km s-min=10.1km az=67.0*
ISC 05 18:19:27.5±0.4, 8.°36S±0.°05×118.°81E±0.°05, h188km, n84, σ1§55/90, mb4.0/26, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.13**	**245**	P	**Pn**	**18 19 55.1**	**-1.9**
TWSI	**Taliwang, Sumb**	**1.95**	**259**	P	**Pn**	**18 20 03.0**	**-1.6**
WSI	**Waingapu**	**1.96**	**132**	P	**Pn**	**18 20 03.7**	**-1.0**
BASI	**Baing, Sumba**	**2.54**	**137**	P	**Pn**	**18 20 10.2**	**-0.9**
EDFI	**Ende, Flores**	**2.87**	**98**	P	**Pn**	**18 20 13.7**	**-1.4**
MMRI	**Maumere**	**3.40**	**95**		**Pn**	**18 20 20.5**	**-0.9**
MMRI	**Maumere**	**3.40**	**95**	P	**Pn**	**18 20 21.0**	**-0.4**
KAPI	**Kappang**	**3.45**	**16**	P	**Pn**	**18 20 21.8**	**-0.3**
KAPI	3.7nm,0.3s,baz=196,slow=7.6,SNR=14			S	**Sn**	**18 21 02.0**	**-2.7**
KAPI	2.5nm,0.3s,baz=30,slow=23,SNR=6.1 **Kappang**	**3.45**	**16**		**Pn**	**18 20 21.3**	**-0.7**
SRBI	**Singaraja**	**3.57**	**274**	P	**Pn**	**18 20 23.2**	**-0.3**
DNP	**Denpasar**	**3.58**	**265**	P	**Pn**	**18 20 24.2**	**+0.6**
BNSI	**Bone**	**4.13**	**18**	P	**Pn**	**18 20 31.4**	**+0.8**
SPSI	**Sidrap Palu**	**4.46**	**12**	P	**Pn**	**18 20 34.8**	**0.0**
ABJI	**Asem Bagus**	**4.57**	**277**	P	**Pn**	**18 20 37.1**	**+1.0**
JAGI	**Jajag, Banyuwa**	**4.61**	**268**	Pn	**Pn**	**18 20 35.0**	**-1.7**
JAGI	**Jajag, Banyuwa**	**4.61**	**268**	P	**Pn**	**18 20 34.2**	**-2.5**
KMMI	**Kalianget**	**4.97**	**285**	P	**Pn**	**18 20 43.1**	**+1.8**
BATI	**Baumata**	**5.13**	**111**	P	**Pn**	**18 20 43.9**	**+0.5**
BATI	55nm,0.3s,baz=308,slow=2.1,SNR=61			S	**Sn**	**18 21 39.2**	**-3.8**
BATI	156nm,0.3s,baz=327,slow=7.6,SNR=16 **Baumata**	**5.13**	**111**	P	**Pn**	**18 20 43.9**	**+0.5**
TTSI	1.7nm2µm115nm,0.7s **Tana Toraja**	**5.37**	**11**	P	**Pn**	**18 20 48.7**	**+2.2**
SOEI	0.1nm412nm34nm,1.0s **Soe**	**5.56**	**105**		**Pn**	**18 20 48.9**	**-0.2**
SOEI	**Soe**	**5.56**	**105**	P	**Pn**	**18 20 48.9**	**-0.2**
KBKI	2.8nm4µm214nm,0.8s **Kotabaru**	**5.67**	**332**	P	**Pn**	**18 20 50.8**	**+0.4**
BBKI	0.2nm524nm52nm,0.7s **Banjar Baru**	**6.26**	**321**	P	**Pn**	**18 20 59.5**	**+1.4**
MTKI	0.2nm33nm,1.1s **Muara Teweh, K**	**8.33**	**332**	P	**Pn**	**18 21 27.9**	**+2.7**
SANI	0.1nm11nm,0.5s **Sanana**	**9.50**	**49**	P	**Pn**	**18 21 42.0**	**+1.5**
CISI	40nm,1.2s **Cisompet, Garu**	**10.92**	**273**	Pn	**Pn**	**18 21 55.9**	**-3.1**
BNDI	**Bandanaira**	**11.66**	**72**	P	**P**	**18 22 16.1**	**+1.9**
FITZ	**Fitzroy Crossi**	**11.74**	**146**		**Pn**	**18 22 10.7**	**+1.2**
SAUI	**Saumlaki**	**12.37**	**89**	Pn	**Pn**	**18 22 15.3**	**-2.2**
MTN	**Manton Dam**	**12.90**	**111**		**Pn**	**18 22 23.9**	**-0.3**
FAKI	**Fak Fak**	**14.42**	**69**		**Pn**	**18 22 41.8**	**-1.4**
KLSI	3.1nm,0.7s	**14.46**	**284**	P	**Pn**	**18 22 42.6**	**-1.1**
SWI	**Sorong**	**14.46**	**60**	P	**Pn**	**18 22 42.3**	**-1.4**
SIJI	48nm,0.9s **Sorong**	**14.46**	**60**	P	**Pn**	**18 22 42.5**	**-1.3**
SIJI	3.0nm,0.3s,baz=241,slow=8.5,SNR=20			S	**S**	**18 25 27.3**	**+1.0**
KKM	0.5nm,0.3s,baz=85,slow=20,SNR=3.7 **Kota Kinabalu**	**14.54**	**350**	P	**P**	**18 22 46.7**	**+0.4**
SRPI	**Serui, Papua**	**18.51**	**71**	P	**P**	**18 23 30.2**	**+0.4**
WB0	100nm,0.7s **Warramunga Arr**	**18.88**	**129**	P	**P**	**18 23 34.6**	**+0.8**
WB0	comp=Z,11nm,0.8s			IAmb	IAmb	18 23 39.9	
WRA	**Warramunga Arr**	**18.94**	**129**	P	**P**	**18 23 35.5**	**+1.1**
WRA	comp=Z,1.9nm,0.3s,baz=303,slow=12,SNR=124			S	**S**	**18 26 58.6**	**-1.0**
WRAB	comp=Z,0.4nm,0.3s,baz=298,slow=21,SNR=8.0 **Tennant Creek**	**18.94**	**129**	P	**P**	**18 23 35.8**	**+1.4**
WB2	**Warramunga Arr**	**18.95**	**129**	P	**P**	**18 23 35.8**	**+1.3**
WB2	comp=Z,11nm,1.0s			IAmb	IAmb	18 23 40.7	
WR0	**Warramunga Arr**	**19.10**	**129**	P	**P**	**18 23 37.6**	**+1.4**
WR0	comp=Z,12nm,0.8s			IAmb	IAmb	18 23 42.9	
AS31	**Alice Springs**	**21.00**	**138**	P	**P**	**18 23 58.1**	**+1.7**
AS31	comp=Z,5.0nm,0.3s			IAmb	IAmb	18 24 00.2	
ASAR	**Alice Springs**	**21.00**	**138**	P	**P**	**18 23 58.0**	**+1.5**
ASAR	comp=Z,7.4nm,0.3s,baz=314,slow=9.0,SNR=228			S	**S**	**18 27 40.4**	**+0.8**
ASAR	comp=Z,3.5nm,0.7s,baz=324,slow=25,SNR=12			PcP	**PcP**	**18 27 56.0**	**0.0**
COEN	comp=Z,1.2nm,0.6s,baz=309,slow=1.4,SNR=5.9 **Coen**	**24.53**	**105**	P	**P**	**18 24 31.1**	**+1.0**
BBOO	**Buckleboo**	**29.11**	**149**	P	**P**	**18 25 13.0**	**+2.3**
STKA	**Stephens Creek**	**31.57**	**141**	P	**P**	**18 25 34.3**	**+1.9**
STKA	comp=Z,1.4nm,0.4s,baz=330,slow=9.4,SNR=11 **Stephens Creek**	**31.57**	**141**	P	**P**	**18 25 34.5**	**+2.2**
CMAR	**Chiang Mai Arr**	**33.08**	**324**	P	**P**	**18 25 46.1**	**+0.5**
JOW	comp=Z,0.5nm,0.4s,baz=155,slow=7.1,SNR=4.4 **Kunigami**	**36.16**	**14**	P	**P**	**18 26 10.8**	**-1.2**
TOO	**Toolangi**	**37.80**	**144**	P	**P**	**18 26 29.0**	**+3.3**
CAN	**Canberra**	**38.51**	**139**	P	**P**	**18 26 34.5**	**+2.8**
CAN	comp=Z,7.0nm,1.0s			IAmb	IAmb	18 26 36.2	
JTU	**Tsushima**	**43.81**	**13**	P	**P**	**18 27 14.2**	**-0.6**
JTU	comp=Z,6.2nm,1.1s			IAmb	IAmb	18 27 28.5	
KSRS	**Korea Array**	**46.36**	**10**	P	**P**	**18 27 34.6**	**-0.2**
ODAN	comp=Z,1.2nm,0.9s,baz=171,slow=8.9,SNR=5.0 **Odare**	**46.41**	**320**	*e* P	**P**	**18 27 35.0**	**-0.8**
TAPN	comp=Z,6.8nm,0.6s **Taplejung**	**46.55**	**321**	*e* P	**P**	**18 27 36.3**	**-0.6**
RAMN	comp=Z,10.0nm,0.5s **Ramite**	**46.98**	**319**	*e* P	**P**	**18 27 39.7**	**-0.5**
JIRN	comp=Z,6.4nm,0.6s **Jiri**	**47.73**	**320**	*e* P	**P**	**18 27 45.1**	**-1.0**
GUN	comp=Z,9.0nm,0.6s **Gumba**	**48.10**	**320**	*e* P	**P**	**18 27 48.2**	**-0.7**
PKI	comp=Z,8.7nm,0.7s **Pulchoki**	**48.18**	**319**	*e* P	**P**	**18 27 48.0**	**-1.5**
PKIN	**Phulchoki**	**48.19**	**319**	*e* P	**P**	**18 27 47.9**	**-1.6**
DMN	comp=Z,3.3nm,0.4s **Daman**	**48.40**	**319**	*e* P	**P**	**18 27 49.8**	**-1.3**
GKN	comp=Z,4.3nm,0.5s **Gorkha**	**48.97**	**319**	*e* P	**P**	**18 27 54.1**	**-1.2**
KOLN	comp=Z,5.3nm,0.3s **Koldanda**	**49.50**	**318**	*e* P	**P**	**18 27 58.0**	**-1.4**
PYUN	comp=Z,3.3nm,0.3s **Piuthan**	**50.12**	**318**	*e* P	**P**	**18 28 02.6**	**-1.5**
JMM	comp=Z,9.7nm,0.5s **Marumori**	**50.36**	**23**	P	**P**	**18 28 03.6**	**-1.8**
JMM	comp=Z,9.6nm,1.0s			IAmb	IAmb	18 28 17.1	
USA0B	**Ussuriysk Arra**	**53.65**	**12**	P	**P**	**18 28 27.9**	**-1.7**
USA0B	comp=Z,3.6nm,1.0s			IAmb	IAmb	18 28 40.6	
USRK	**Ussuriysk Ar.**	**53.65**	**12**	P	**P**	**18 28 29.1**	**-0.5**
SONM	comp=Z,1.2nm,0.4s,baz=199,slow=6.5,SNR=8.7 **Songino Array**	**57.02**	**350**	P	**P**	**18 28 53.8**	**+0.1**
RPZ	comp=Z,0.5nm,0.4s,baz=167,slow=8.9,SNR=5.8 **Rata Peaks**	**57.40**	**137**	P	**P**	**18 28 54.2**	**-2.2**
ODZ	**Otahua Downs**	**57.63**	**139**	P	**P**	**18 28 55.9**	**-2.2**
ODZ	comp=Z,7.9nm,1.0s			IAmb	IAmb	18 29 05.2	
MK31	**Makanchi Array**	**63.80**	**333**	P	**P**	**18 29 38.7**	**-0.9**
MKAR	**Makanchi Array**	**63.80**	**333**	P	**P**	**18 29 38.8**	**-0.8**
MAKZ	comp=Z,0.9nm,0.4s,baz=154,slow=7.3,SNR=20 **Makanchi**	**63.95**	**333**	P	**P**	**18 29 40.5**	**-0.1**
KURBB	**Kurchatov Arra**	**68.31**	**334**	P	**P**	**18 30 06.5**	**-1.7**
KURK	comp=Z,0.5nm,0.5s,baz=141,slow=5.5,SNR=6.1 **Kurchatov**	**68.34**	**334**	P	**P**	**18 30 06.5**	**-1.9**
ZAA0	**Zalesovo Array**	**68.38**	**339**	P	**P**	**18 30 06.9**	**-1.6**
ZALV	**Zalesovo Beam**	**68.38**	**339**	P	**P**	**18 30 07.0**	**-1.5**
VNDA	comp=Z,1.3nm,0.3s,baz=138,slow=5.0,SNR=9.3 **Vanda**	**72.65**	**171**	P	**P**	**18 30 37.1**	**+3.1**
SEY	comp=Z,0.8nm,0.5s,baz=310,slow=7.8,SNR=18 **Seymchan**	**75.59**	**15**	P	**P**	**18 30 52.2**	**+1.0**
TIXI	comp=Z,0.6nm,0.5s,baz=232,slow=12,SNR=9.2 **Tiksi**	**80.11**	**3**	P	**P**	**18 31 14.6**	**-1.4**
TIXI	comp=Z,1.6nm,0.6s,baz=145,slow=2.9,SNR=5.6 **Tiksi**	**80.11**	**3**	P	**P**	**18 31 14.7**	**-1.3**
TIXI	comp=Z,2.7nm,0.8s			IAmb	IAmb	18 31 15.3	
TORD	**Torodi Ar. Bea**	**118.16**	**280**	PKP	**PKPdf**	**18 37 53.2**	**0.0**
TKL	comp=Z,0.4nm,0.5s,baz=71,slow=1.6,SNR=3.8 **Tuckaleechee C**	**145.87**	**34**	PKPbc	**PKPdf**	**18 38 45.0**	**+0.7**
	comp=Z,3.0nm,0.5s,baz=153,slow=3.7,SNR=6.9						

*NEIC **05** 18:20:26.6±2.6, 9.°8S±0.°1×110.°5E±0.°1, h33km±4km, mb4.5/8, Error ellipse: s-maj=19.3km s-min=12.7km az=219.0*
*IDC **05** 18:20:30.3±14.0, 9.°66S×110.°50E, h51km±70km, mb3.8/11, mb1 3.9/12, mb1mx3.5/52, mbtmp4.1/12, ML3.6/1, MS3.1/5, Ms1 3.2/5, ms1mx2.8/40, Error ellipse: s-maj=182.4km s-min=38.2km az=174.0*
ISC 05 18:20:27.5±0.8, 9.°7S±0.°1×110.°61E±0.°09, h35km, n32, σ1§49/29, mb4.4/15, MS3.2/3, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.82**	**357**	Pn	**Pn**	**18 20 55.0**	**-1.4**
UGM	**Wanagama**	**1.82**	**357**	P	**Pn**	**18 20 54.9**	**-1

comp=Z,1.0nm,0.8s,baz=153,slow=4.9,SNR=7.7
KURK Kurchatov 66.31 338 P **P** **18 31 11.7 -0.6**
ZAA0 Zalesovo Array 67.11 344 P **P** **18 31 17.5 +0.3**
ZALV Zalesovo Beam 67.11 344 P **P** **18 31 17.7 +0.4**
comp=Z,2.3nm,0.7s,baz=143,slow=5.2,SNR=8.8
BVAR Borovoye Array 71.30 336 P **P** **18 31 43.9 +0.6**
comp=Z,1.3nm,0.8s,baz=143,slow=15,SNR=9.9
ABKAR Akbulak array 73.60 328 P **P** **18 31 57.0 -0.1**
ABKAR IAmb IAmb 18 31 59.2
comp=Z,7.8nm,1.4s
SEY Seymchan 79.23 18 P **P** **18 32 29.9 +1.2**
comp=Z,0.3nm,0.3s,baz=256,slow=18,SNR=4.3
LSZ Lusaka 80.24 256 LR LR 19 04 52.3
comp=Z,27nm,18.2s,baz=139,slow=33
TIXI Tiksi 82.12 6 P **P** **18 32 45.1 +1.1**
comp=Z,1.5nm,0.3s,baz=101,slow=0.9,SNR=2.3

*NEIC **05** 18:20:57.8±2.3, 16°.01N±0°.06×98°.69W±0°.06, h6km±3km, Error ellipse: s-maj=9.4km s-min=8.7km az=161.0*
*MEX **05** 18:20:59.9±1.8, 15°.95N×98°.67W, h16km±999km, MD4.6*
*IDC **05** 18:20:59.5±3.7, 16°.31N×98°.54W, h0km, mb4.0/6, mb1 4.2/11, mb1mx3.9/49, mbtmp4.0/11, ML3.7/5, MS3.6/16, Ms1 3.6/16, ms1mx3.4/33, Error ellipse: s-maj=79.5km s-min=22.3km az=21.0*
ISC 05 18:20:59.2±1.4, 16°.09N±0°.06×98°.68W±0°.03, h11km±8km, n91, σ1°68/91, mb4.3/15, MS3.6/14, 1C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.61**	**60**	*eP*			**Pg**	**18 21 11.0**	**-0.1**
	baz=228,slow=16								
PNIG				*i* S			**Sg**	**18 21 19.4**	**+0.2**
PNIG	**Pinotepa**	**0.61**	**60**				**Pg**	**18 21 11.0**	**-0.1**
PNIG							**Sg**	**18 21 19.4**	**+0.2**
CRIG	**Cruz Grande**	**0.78**	**326**	*eP*			**Pg**	**18 21 13.5**	**-0.7**
CRIG				*i* S			**Sg**	**18 21 23.8**	**-0.7**
TXIG	**Tlaxiaco**	**1.45**	**37**	*eP*			**Pn**	**18 21 24.0**	**-1.6**
TXIG				*eS*			**Sn**	**18 21 42.1**	**-2.6**
TLIG	**Tlapa**	**1.47**	**4**	*eP*			**Pn**	**18 21 24.5**	**-1.3**
TLIG				*eS*			**Sn**	**18 21 41.8**	**-3.2**
TLIG	**Tlapa**	**1.47**	**4**				**Sb**	**18 21 46.4**	**+1.0**
TLIG	**Tlapa**	**1.47**	**4**	Pn			**Pn**	**18 21 24.7**	**-1.0**
CAIG	**El Cayaco**	**1.80**	**302**	*eP*			**Pn**	**18 21 28.6**	**-1.5**
CAIG				*i* S			**Sn**	**18 21 50.1**	**-2.8**
CAIG	**El Cayaco**	**1.80**	**302**				**Pn**	**18 21 28.6**	**-1.5**
CAIG							**Sb**	**18 21 55.0**	**+0.4**
MEIG	**Mezcala**	**2.04**	**334**	*eP*			**Pn**	**18 21 32.0**	**-1.4**
MEIG				*i* S			**Sn**	**18 21 56.1**	**-2.8**
MEIG	**Mezcala**	**2.04**	**334**				**Pn**	**18 21 33.1**	**-0.4**
TOIG	**Toxpalan**	**2.52**	**37**	*eP*			**Pn**	**18 21 39.0**	**-1.2**
TOIG				*eS*			**Sn**	**18 22 09.3**	**-1.7**
ARIG	**Puente Sto Nin**	**2.70**	**324**	*i P*			**Pn**	**18 21 41.6**	**-0.9**
ARIG				*i* S			**Sn**	**18 22 14.3**	**-1.0**
ARIG	**Puente Sto Nin**	**2.70**	**324**				**Pb**	**18 21 46.5**	**-1.1**
MAVM	**Malinalco, Edo**	**2.96**	**345**	*eP*			**Pn**	**18 21 46.7**	**+0.4**
MAVM				*i* S			**Sb**	**18 22 26.3**	**-2.0**
MAVM	**Malinalco, Edo**	**2.96**	**345**				**Pn**	**18 21 47.8**	**+1.5**
PPM	**Popocatepetl**	**2.96**	**1**	*eP*			**Pn**	**18 21 49.0**	**+2.4**
PPM				*i* S			**Sn**	**18 22 19.7**	**-2.7**
AMVM	**AMECAMECA**	**3.03**	**358**	*eP*			**Pb**	**18 21 52.7**	**-0.6**
AMVM				*eS*			**Sn**	**18 22 22.9**	**-0.9**
AMVM	**AMECAMECA**	**3.03**	**358**				**Pb**	**18 21 52.7**	**-0.6**
ZIIG	**Zihuatanejo**	**3.07**	**300**	*eP*			**Pn**	**18 21 47.2**	**-0.3**
ZIIG				*eS*			**Sn**	**18 22 27.3**	**+3.1**
ZIIG	**Zihuatanejo**	**3.07**	**300**				**Pn**	**18 21 47.2**	**-0.3**
UNM	**Universidad Na**	**3.26**	**352**	*eP*			**Pb**	**18 21 58.0**	**+0.8**
UNM				*eS*			**Sn**	**18 22 32.5**	**+3.1**
UNM	**Universidad Na**	**3.26**	**352**	Pn			**Pn**	**18 21 50.3**	**-0.1**
CVM	**Colonia del Va**	**3.31**	**352**	*i* PG			**Pb**	**18 21 56.3**	**-1.7**
CVM				*eS*			**Sn**	**18 22 31.9**	**+1.6**
TOVM	**TOLUCA**	**3.32**	**343**	*eP*			**Pb**	**18 21 56.0**	**-2.3**
TOVM				*eS*			**Sn**	**18 22 30.4**	**-0.5**
TOVM	**TOLUCA**	**3.32**	**343**				**Pb**	**18 21 56.0**	**-2.3**
PTVM	**Pico Tres Padr**	**3.51**	**353**	*eP*			**Pn**	**18 21 53.7**	**-0.2**
PTVM				*e*				18 22 39.2	
PTVM	**Pico Tres Padr**	**3.51**	**353**				**Pn**	**18 21 53.7**	**-0.2**
ZUVM	**ZUMPANGO**	**3.74**	**354**	*i*			**Pb**	**18 22 06.0**	**+0.6**
ZUVM				*e*				18 22 45.6	
CMIG	**Matias Romero**	**3.77**	**74**	Pn			**Pn**	**18 21 55.9**	**-1.4**
	14nm,0.3s,baz=258,slow=11,SNR=42								
CMIG					Sn		**Sn**	**18 22 39.8**	**-1.9**
	23nm,0.3s,baz=256,slow=22,SNR=3.6								
CMIG					Lg		Lg	18 22 57.0	
	109nm,0.3s,baz=345,slow=20,SNR=11								
CMIG	**Matias Romero**	**3.77**	**74**	*e*			Pn	18 21 45.6	-12
CMIG				*e*				18 22 45.6	
ATVM	**ATLACOMULCO**	**3.82**	**343**	*e*			**Pb**	**18 22 05.2**	**-1.5**
ATVM				*e*				18 22 44.0	
ACIG	**Acambay**	**4.04**	**344**	*e*			**Pn**	**18 22 01.3**	**+0.3**
ACIG				*e*				18 22 55.4	
DEIG	**Demacu**	**4.21**	**355**	*e*			**Pn**	**18 22 04.4**	**+1.0**
DEIG				*e*				18 22 48.2	
MOIG	**Morelia**	**4.30**	**327**				**Pn**	**18 22 07.9**	**+3.2**
CCIG	**Comitan**	**6.29**	**87**	Pn			**Pn**	**18 22 32.4**	**+0.4**
APG	**El Apazote**	**7.99**	**97**	Pn			**Pn**	**18 22 56.4**	**+0.9**
	0.9nm,0.3s,baz=238,slow=4.7,SNR=8.5								
APG					Sn		**Sn**	**18 24 23.4**	**-2.6**
	0.8nm,0.3s,baz=36,slow=12,SNR=3.6								
APG					Lg		Lg	18 25 13.3	
	1.5nm,0.3s,baz=67,slow=22,SNR=3.6								
PETF	**Flores**	**8.49**	**83**	Pn			**Pn**	**18 23 01.5**	**-0.7**
MTO3	**Montecristo**	**9.15**	**99**	Pn			**Pn**	**18 23 09.7**	**-1.6**
TEIG	**Tepich**	**10.71**	**66**	Pn			**Pn**	**18 23 31.2**	**-1.3**
	4.0nm,0.3s,baz=258,slow=1.2,SNR=20								
TEIG					Sn		**Sn**	**18 25 25.2**	**-7.2**
	4.7nm,0.3s,baz=81,slow=21,SNR=7.8								
TEIG					LR		LR	18 27 44.9	
	comp=Z,353nm,19.4s,baz=276,slow=39								
H06E1	**SOCORRO T-PHASI**	**11.99**	**285**	T			T	18 35 56.4	
	SNR=538								
H06S1	**SOCORRO T**	**12.01**	**284**	T			T	18 35 58.2	
	SNR=40								
H06N1	**SOCORRO T-PHASI**	**12.06**	**285**	T			T	18 36 02.4	
	SNR=7.7								
TXAR	**Lajitas Array**	**13.96**	**342**	Pn			**Pn**	**18 24 18.3**	**+1.3**
	0.0nm,0.3s,baz=157,slow=16,SNR=8.1								
TXAR					Lg		Lg	18 28 21.4	
	0.0nm,0.3s,baz=164,slow=23,SNR=3.2								
TXAR					LR		LR	18 29 40.0	
	comp=Z,272nm,18.0s,baz=0.0,slow=38								
TX31	**Lajitas Ar. Si**	**13.96**	**342**	P			**P**	**18 24 28.0**	**+2.8**
TX32	**Lajitas Array**	**13.96**	**342**	P			**P**	**18 24 26.9**	**+1.7**
JTS	**Las Juntas de**	**14.55**	**112**	P			**P**	**18 24 32.9**	**+1.2**
ABTX	**Abilene, Hawle**	**16.49**	**357**				**Pn**	**18 24 50.4**	**-0.1**
ABTX					IAmb		IAmb	18 24 55.5	
	comp=Z,34nm,1.1s								
HSIG		**17.13**	**321**	Pn			**Pn**	**18 24 59.5**	**+0.9**
CPRX	**Cap Rock**	**17.51**	**345**				**Pn**	**18 25 02.9**	**-0.6**
MIAR	**Mount Ida**	**18.94**	**13**				**Pn**	**18 25 21.1**	**+0.3**
TUC	**Tucson**	**19.54**	**328**				**P**	**18 25 27.5**	**+0.7**
LRAL	**Lakeview Retre**	**19.91**	**30**	P			**P**	**18 25 31.6**	**+0.8**
ANMO	**Albuquerque**	**20.03**	**341**	P			Pn	18 25 33.8	-0.3
	comp=Z,0.2nm,0.3s,baz=150,slow=11,SNR=11								
U40A	**Yellville**	**20.84**	**13**	P			**P**	**18 25 41.3**	**+0.4**
U40A					IAmb		IAmb	18 25 46.3	
	comp=Z,19nm,1.1s								
Y49A	**Blount Mountai**	**20.86**	**30**	P			**P**	**18 25 40.8**	**-0.4**
PLAL	**Pickwick Lake**	**21.08**	**25**	P			**P**	**18 25 46.1**	**+2.6**
PLAL					IAmb		IAmb	18 25 53.3	
	comp=Z,35nm,1.3s								
PBMO	**Poplar Bluff**	**21.87**	**18**	P			**P**	**18 25 53.0**	**+1.0**
WVT	**Waverly**	**22.18**	**24**	P			**P**	**18 25 53.9**	**-1.4**
WVT					IAmb		IAmb	18 25 58.0	
	comp=Z,27nm,1.0s								
SWET	**Sewanee**	**22.21**	**29**	P			**P**	**18 25 55.3**	**-0.3**
SWET					IAmb		IAmb	18 25 58.9	
	comp=Z,18nm,1.2s								
WUAZ	**Wupatki**	**22.43**	**332**	P			**P**	**18 25 56.9**	**-1.4**
WUAZ					IAmb		IAmb	18 26 04.1	
	comp=Z,21nm,0.9s								
W50A	**Signal Mountai**	**22.48**	**30**	P			**P**	**18 25 56.6**	**-2.0**
W50A					IAmb		IAmb	18 25 59.4	
	comp=Z,18nm,1.1s								
CCM	**Cathedral Cave**	**22.84**	**15**	P			**P**	**18 26 02.5**	**+0.2**
CCM					IAmb		IAmb	18 26 07.9	
	comp=Z,14nm,1.1s								
T47A	**Sharon Grove**	**23.21**	**24**	P			**P**	**18 26 07.1**	**+0.9**
TKL	**Tuckaleechee C**	**23.60**	**32**	LR			LR	18 38 56.3	
	comp=Z,49nm,18.9s,baz=238,slow=46								
PFO	**Pinyon Flats O**	**23.70**	**321**	LR			LR	18 35 53.0	
	comp=Z,212nm,18.8s,baz=123,slow=38								

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PV03	**Paradox Valley**	**23.83**	**340**	P			**P**	**18 26 10.3**	**-2.2**
PV03					IAmb		IAmb	18 26 24.6	
	comp=Z,12nm,1.2s								
P40A	**Paris**	**24.07**	**13**	P			**P**	**18 26 14.7**	**+0.3**
WCI	**Wyandotte Cave**	**24.61**	**24**	P			**P**	**18 26 18.8**	**-0.6**
S51A	**Beattyville**	**25.27**	**29**	P			**P**	**18 26 25.5**	**+0.1**
NVAR	**Mina Array Bea**	**28.16**	**326**	P			**P**	**18 26 52.0**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=136,slow=9.1,SNR=7.2								
PDAR	**Pinedale Array**	**28.18**	**343**	P			**P**	**18 26 50.9**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=134,slow=8.4,SNR=13								
SDV	**Santo Domingo**	**28.28**	**101**	LR			LR	18 38 29.8	
	comp=Z,106nm,21.4s,baz=354,slow=37								
ELK	**Elko**	**28.46**	**333**	P			**P**	**18 26 56.9**	**+2.5**
	comp=Z,0.3nm,0.2s,baz=137,slow=3.7,SNR=3.7								
ELK					LR		LR	18 39 29.8	
	comp=Z,606nm,19.2s,baz=164,slow=39								
ATAH	**Atahualpa**	**30.59**	**137**	LR			LR	18 36 59.7	
	comp=Z,70nm,20.1s,baz=319,slow=31								
ULM	**Lac du Bonnet**	**34.15**	**3**	P			**P**	**18 27 44.1**	**0.0**
	comp=Z,2.3nm,0.7s,baz=252,slow=2.6,SNR=4.9								
ULM					LR		LR	18 41 52.7	
	comp=Z,61nm,18.7s,baz=100,slow=37								
RPN	**Rapa Nui**	**44.18**	**194**	LR			LR	18 42 43.3	
	comp=Z,87nm,19.1s,baz=78,slow=29								
YKA	**Yellowknife Ar**	**47.69**	**350**	P			**P**	**18 29 36.3**	**+0.8**
	comp=Z,1.2nm,0.9s,baz=158,slow=7.9,SNR=11								
H03N2	**Juan Fernandez**	**52.73**	**159**	T			T	19 27 02.3	
	baz=337,slow=77,SNR=587								
H03N1	**Juan Fernandez**	**52.74**	**159**	T			T	19 27 07.1	
	baz=337,slow=77,SNR=780								
H03N3	**Juan Fernandez**	**52.75**	**159**	T			T	19 27 05.0	
	baz=337,slow=77,SNR=992								
EGAK	**Eagle**	**56.45**	**340**	P			**P**	**18 30 41.6**	**+0.9**
EGAK					IAmb		IAmb	18 30 43.3	
	comp=Z,2.8nm,0.9s								
INK	**Inuvik**	**56.70**	**345**	LR			LR	18 58 11.2	
	comp=Z,126nm,19.9s,baz=104,slow=40								
INK	**Inuvik**	**56.70**	**345**	P			**P**	**18 30 43.5**	**+1.2**
INK					IAmb		IAmb	18 30 44.3	
	comp=Z,6.7nm,1.2s								
ILAR	**Eielson Array**	**58.44**	**338**	P			**P**	**18 30 55.7**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=140,slow=5.4,SNR=15								
PPT	**Papeete**	**60.28**	**238**	LR			LR	18 50 12.4	
	comp=Z,84nm,21.4s,baz=357,slow=29								
PLCA	**Paso Flores**	**62.27**	**156**	LR			LR	18 51 54.8	
	comp=Z,48nm,19.3s,baz=332,slow=30								
ESDC	**Sonseca Array**	**83.45**	**51**	LR			LR	19 08 10.5	
	comp=Z,34nm,19.2s,baz=285,slow=34								
NOA	**NORSAR Array B**	**85.33**	**27**	LR			LR	19 11 11.3	
	comp=Z,11nm,21.9s,baz=280,slow=35								
ARCES	**ARCESS Array B**	**86.11**	**17**	LR			LR	19 15 12.3	
	comp=Z,22nm,18.5s,baz=325,slow=38								
KEST	**Kesra**	**94.70**	**51**	LR			LR	19 12 45.1	
	comp=Z,28nm,20.7s,baz=284,slow=33								

*MEX **05** 18:29:45.1±2.4, 15°.95N×98°.70W, h16km±38km, MD4.6*
*NEIC **05** 18:29:46.9±2.2, 16°.19N±0°.06×98°.54W±0°.04, h24km±6km, Error ellipse: s-maj=8.7km s-min=5.0km az=200.0*
*IDC **05** 18:29:47.2±0.8, 16°.59N×98°.38W, h0km, mb4.3/17, mb1 4.4/23, mb1mx4.3/46, mbtmp4.3/23, ML3.9/6, MS3.6/4, Ms1 3.6/4, ms1mx3.1/32, Error ellipse: s-maj=23.7km s-min=11.4km az=53.0*
ISC 05 18:29:45.6±1.3, 16°.27N±0°.04×98°.57W±0°.02, h5km±8km, n164, σ1°94/198, mb4.7/42, 1C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.44**	**74**	*eP*			**Pb**	**18 29 56.0**	**0.0**
	baz=226,slow=14								
PNIG				*i* S			**Sb**	**18 30 04.7**	**+1.7**
PNIG	**Pinotepa**	**0.44**	**74**				**Pb**	**18 29 55.9**	**0.0**
PNIG							**Sb**	**18 30 04.7**	**+1.7**
CRIG	**Cruz Grande**	**0.71**	**311**	*eP*			**Pg**	**18 29 58.3**	**-0.9**
CRIG				*i* S			**Sg**	**18 30 08.4**	**0.0**
YOIG	**Yosondua**	**1.14**	**59**	*eP*			**Pb**	**18 30 07.2**	**-0.9**
YOIG				*eS*			**Sn**	**18 30 24.3**	**-0.6**
TXIG	**Tlaxiaco**	**1.24**	**38**	*eP*			**Pn**	**18 30 09.2**	**-0.8**
TXIG				*eS*			**Sn**	**18 30 26.1**	**-1.2**
TLIG	**Tlapa**	**1.28**	**0**	*eP*			**Pb**	**18 30 09.7**	**-0.7**
TLIG				*eS*			**Sn**	**18 30 26.9**	**-1.1**
TLIG	**Tlapa**	**1.28**	**0**				**Pb**	**18 30 09.7**	**-0.7**
TLIG							**Sn**	**18 30 26.9**	**-1.1**
ACP2	**Acapulco**	**1.39**	**296**	*eP*			**Pn**	**18 30 11.3**	**-0.5**
ACP2				*i* S			**Sn**	**18 30 29.6**	**-1.0**
ACP2	**Acapulco**	**1.39**	**296**				**Pn**	**18 30 11.3**	**-0.5**
ACP2							**Sn**	**18 30 29.6**	**-1.0**
PEIG	**Puerto Escondi**	**1.40**	**101**	*eP*			**Pn**	**18 30 08.4**	**-3.4**
PEIG				*eS*			**Sb**	**18 30 25.6**	**-4.8**
FTIG	**Fresnillo de T**	**1.68**	**14**	*eP*			**Pn**	**18 30 15.7**	**-0.2**
FTIG				*eS*			**Sb**	**18 30 37.0**	**-1.7**
HLIG	**Huajuapan de L**	**1.71**	**25**	*eP*			**Pn**	**18 30 16.1**	**-0.3**
HLIG				*i* S			**Sb**	**18 30 38.6**	**-1.2**
CAIG	**El Cayaco**	**1.80**	**296**	*eP*			**Pn**	**18 30 13.1**	**-4.2**
CAIG				*eS*			**Sn**	**18 30 36.4**	**-4.2**
CAIG	**El Cayaco**	**1.80**	**296**				**Pn**	**18 30 13.1**	**-4.2**
CAIG							**Sn**	**18 30 36.4**	**-4.2**
MEIG	**Mezcala**	**1.93**	**329**	*eP*			**Pn**	**18 30 17.7**	**-1.4**
MEIG				*eS*			**Sg**	**18 30 46.8**	**-0.7**
MEIG	**Mezcala**	**1.93**	**329**				**Pn**	**18 30 17.7**	**-1.4**
MEIG							**Sg**	**18 30 46.8**	**-0.7**
VHO	**Vista Hermosa**	**1.93**	**65**	*eP*			**Pn**	**18 30 18.4**	**-1.1**
VHO				*eS*			**Sn**	**18 30 43.1**	**-1.1**
OXBJ	**Oaxaca**	**1.94**	**66**	*eP*			**Pn**	**18 30 18.5**	**-1.0**
OXBJ				*eS*			**Sg**	**18 30 52.1**	**+4.1**
OXBJ	**Oaxaca**	**1.94**	**66**				**Pn**	**18 30 18.5**	**-1.0**
OXBJ							**Sg**	**18 30 52.1**	**+4.1**
PANG	**Puerto Angel**	**2.11**	**106**	*i P*			Pg	18 30 41.1	+15
PANG				*i* S			**Sg**	**18 30 57.9**	**+4.5**
PANG	**Puerto Angel**	**2.11**	**106**				**Sn**	**18 30 41.1**	**-7.1**
PLIG	**Platanillo**	**2.29**	**337**	*eP*			**Pn**	**18 30 22.9**	**-1.3**
PLIG				*i* S			**Sn**	**18 30 50.1**	**-2.7**
PLIG	**Platanillo**	**2.29**	**337**				**Pn**	**18 30 22.9**	**-1.3**
PLIG							**Sn**	**18 30 50.1**	**-2.7**
TOIG	**Toxpalan**	**2.32**	**38**	*eP*			**Pn**	**18 30 23.9**	**-0.7**
TOIG				*i* S			**Sb**	**18 30 54.1**	**-2.9**
ARIG	**Puente Sto Nin**	**2.62**	**320**	*eP*			**Pb**	**18 30 32.2**	**-0.9**
ARIG				*eS*			**Sb**	**18 31 04.9**	**-0.7**
ARIG	**Puente Sto Nin**	**2.62**	**320**				**Pb**	**18 30 32.2**	**-0.9**
ARIG							**Sb**	**18 31 04.9**	**-0.7**
PPM	**Popocatepetl**	**2.78**	**359**	*eP*			**Pn**	**18 30 32.8**	**+1.5**
PPM				*i* S			**Sg**	**18 31 13.5**	**-1.5**
MAVM	**Malinalco, Edo**	**2.81**	**342**	*eP*			**Pb**	**18 30 36.7**	**+0.2**
MAVM				*eS*			**Sn**	**18 31 07.2**	**+1.3**
MAVM	**Malinalco, Edo**	**2.81**	**342**				**Pb**	**18 30 36.7**	**+0.2**
AMVM	**AMECAMECA**	**2.85**	**356**	*eP*			**Pg**	**18 30 39.5**	**-0.8**
AMVM				*eS*			**Sb**	**18 31 10.9**	**-1.7**
AMVM	**AMECAMECA**	**2.85**	**356**				**Pg**	**18 30 39.5**	**-0.8**
ZIIG	**Zihuatanejo**	**3.07**	**296**	*eP*			**Pn**	**18 30 37.6**	**+2.8**
ZIIG				*eS*			**Sn**	**18 31 11.2**	**-0.8**
ZIIG	**Zihuatanejo**	**3.07**	**296**				**Pn**	**18 30 37.6**	**+2.8**
UNM	**Universidad Na**	**3.09**	**349**	*eP*			**Pb**	**18 30 41.9**	**+0.6**
UNM				*eS*			**Sb**	**18 31 16.3**	**-3.2**
CVM	**Colonia del Va**	**3.15**	**350**	*eP*			**Pb**	**18 30 42.3**	**+0.3**
CVM				*eS*			**Sb**	**18 31 20.2**	**-0.5**
TOVM	**TOLUCA**	**3.17**	**341**	*eP*			**Pb**	**18 30 41.8**	**-0.9**
TOVM				*eS*			**Sb**	**18 31 20.2**	**-1.7**
TOVM	**TOLUCA**	**3.17**	**341**				**Pb**	**18 30 41.8**	**-0.9**
PTVM	**Pico Tres Padr**	**3.34**	**351**	*eP*			**Pb**	**18 30 43.2**	**-2.3**
PTVM				*eS*			**Sb**	**18 31 26.2**	**-0.4**
PTVM	**Pico Tres Padr**	**3.34**	**351**				**Pb**	**18 30 43.2**	**-2.3**
ZUVM	**ZUMPANGO**	**3.57**	**352**	*eP*			**Pb**	**18 30 50.7**	**+1.3**
ZUVM				*eS*			**Sb**	**18 31 33.2**	**+0.1**
ZUVM	**ZUMPANGO**	**3.57**	**352**				**Pb**	**18 30 50.7**	**+1.3**
CMIG	**Matias Romero**	**3.63**	**77**	Pn			**Pn**	**18 30 41.0**	**-1.5**
	21nm,0.3s,baz=259,slow=11,SNR=222								
CMIG					Pg		**Pg**	**18 30 52.9**	**-2.3**
	25nm,0.3s,baz=258,slow=16,SNR=20								
CMIG					Sn		**Sn**	**18 31 23.8**	**-1.9**
	52nm,0.3s,baz=290,slow=12,SNR=7.5								
CMIG					Lg		Lg	18 31 44.2	
	84nm,0.3s,baz=73,slow=16,SNR=8.7								
CMIG	**Matias Romero**	**3.63**	**77**	*eP*			**Pn**	**18 30 40.8**	**-1.7**
CMIG				*eS*			**Sb**	**18 31 31.2**	**-3.5**
CMIG	**Matias Romero**	**3.63**	**77**				**Pn**	**18 30 40.8**	**-1.7**
ATVM	**ATLACOMULCO**	**3.67**	**341**	*eP*			**Pb**	**18 30 52.1**	**+0.8**
ATVM				*eS*			**Sn**	**18 31 27.9**	**+0.5**
ATVM	**ATLACOMULCO**	**3.67**	**341**				**Pb**	**18 30 52.1**	**+0.8**
ACIG	**Acambay**	**3.89**	**342**	*eP*			**Pn**	**18 30 43.9**	**-2.4**
ACIG				*i* S			**Sn**	**18 31 34.9**	**+2.3**
DEIG	**Demacu**	**4.03**	**354**	*eP*			**Pb**	**18 30 57.5**	**+0.2**
DEIG				*i* S			**Sb**	**18 31 44.9**	**-1.6**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOIG	**Morelia**	**4.20**	**324**				**Pn**	**18 30 53.4**	**+2.7**
PCIG		**5.18**	**96**	*eS*			**Sn**	**18 32 00.5**	**-3.6**
CCIG	**Comitan**	**6.18**	**89**				**Pn**	**18 31 18.9**	**+1.0**
ZAIG	**Zacatecas**	**7.48**	**330**	Pn			**Pn**	**18 31 35.2**	**-0.5**
APG	**El Apazote**	**7.91**	**98**	Pn			**Pn**	**18 31 41.5**	**-0.2**
	0.9nm,0.3s,baz=216,slow=17,SNR=4.0								
APG					Sn		**Sn**	**18 33 08.0**	**-3.8**
	2.4nm,0.3s,baz=239,slow=22,SNR=3.7								
APG					Lg		Lg	18 34 05.2	
	1.7nm,0.3s,baz=61,slow=19,SNR=5.0								
PETF	**Flores**	**8.37**	**84**				**Pn**	**18 31 46.3**	**-1.4**
TEIG	**Tepich**	**10.54**	**67**	Pn			**Pn**	**18 32 14.9**	**-2.5**
	3.5nm,0.3s,baz=273,slow=1.8,SNR=10								
TEIG					Sn		**Sn**	**18 34 10.8**	**-5.3**
	3.7nm,0.3s,baz=30,slow=22,SNR=7.2								
TEIG					LR		LR	18 36 29.8	
	comp=Z,216nm,21.1s,baz=264,slow=39								
TEIG	**Tepich**	**10.54**	**67**				**Pn**	**18 32 16.0**	**-1.5**
H06E1	**SOCORRO T-PHASI**	**12.04**	**284**	T			T	18 44 41.4	
	SNR=222								
H06S1	**SOCORRO T**	**12.07**	**284**	T			T	18 44 47.2	
	SNR=14								
LPIG	**La Paz**	**13.49**	**307**	LR			LR	18 37 09.2	
	comp=Z,194nm,18.5s,baz=36,slow=33								
TXAR	**Lajitas Array**	**13.82**	**341**	Pn			**Pn**	**18 33 04.0**	**+1.6**
	0.0nm,0.3s,baz=164,slow=15,SNR=18								
TXAR					Lg		Lg	18 37 04.9	
	0.0nm,0.3s,baz=157,slow=36,SNR=2.9								
TX31	**Lajitas Ar. Si**	**13.82**	**341**	Pn			**Pn**	**18 33 05.2**	**+2.8**
TX32	**Lajitas Array**	**13.82**	**341**	Pn			**Pn**	**18 33 05.2**	**+2.8**
JTS	**Las Juntas de**	**14.53**	**112**	Pn			**P**	**18 33 15.5**	**-3.3**
	1.2nm,0.3s,baz=9.5,slow=12,SNR=3.7								
WHTX	**Lake Whitney,**	**15.68**	**4**	P			**P**	**18 33 31.3**	**-0.2**
WHTX					IAmb		IAmb	18 33 33.1	
	comp=Z,70nm,1.1s								
ABTX	**Abilene, Hawle**	**16.31**	**357**	P			**P**	**18 33 39.6**	**+1.1**
ABTX					IAmb		IAmb	18 33 40.8	
	comp=Z,41nm,0.8s								
MNTX	**Cornudas Mount**	**16.56**	**339**				**Pn**	**18 33 38.7**	**0.0**
MSTX	**Muleshoe**	**18.02**	**349**	

SDV Santo Domingo 28.21 102 P **P** **18 35 40.7 +0.8**
comp=Z,5.3nm,0.7s,baz=346,slow=4.0,SNR=5.3
L48A N Adams 28.33 23 P **P** **18 35 40.0 -0.4**
ELK Elko 28.34 333 P **P** **18 35 42.0 +1.1**
comp=Z,1.5nm,0.9s,baz=138,slow=8.8,SNR=5.1
ATAH Atahualpa 30.66 138 P **P** **18 36 05.4 +3.6**
comp=Z,6.8nm,0.8s,baz=349,slow=3.4,SNR=4.0
E43A Lone Tree Farm 31.53 15 P **P** **18 36 07.8 -0.9**
E43A IAmb IAmb 18 36 09.1
comp=Z,10nm,0.8s
D41A Chassel 31.80 13 P **P** **18 36 10.1 -1.0**
SADO Sadowa 32.79 26 P **P** **18 36 18.2 -1.6**
comp=Z,3.7nm,0.7s,baz=258,slow=8.4,SNR=4.4
J57A Williamstown 33.18 31 P **P** **18 36 21.8 -1.4**
J57A IAmb IAmb 18 36 25.2
comp=Z,12nm,0.9s
ULM Lac du Bonnet 33.96 3 P **P** **18 36 28.4 -1.5**
comp=Z,5.3nm,0.8s,baz=187,slow=8.5,SNR=12
ULM Lac du Bonnet 33.96 3 P **P** **18 36 29.1 -0.9**
ULM IAmb IAmb 18 36 29.9
comp=Z,8.3nm,0.9s
PTGA Pitinga 41.67 110 P **P** **18 37 38.7 +3.1**
comp=Z,1.8nm,0.3s,baz=309,slow=9.4,SNR=4.9
FCC Fort Churchill 42.55 3 P **P** **18 37 40.9 -1.2**
LPAZ La Paz 44.14 136 P **P** **18 37 58.7 +2.5**
comp=Z,1.2nm,0.9s,baz=3.8,slow=11,SNR=3.7
YKA Yellowknife Ar 47.53 350 P **P** **18 38 21.1 -0.6**
comp=Z,1.8nm,0.8s,baz=158,slow=7.8,SNR=22
YKA PP **PP** **18 40 15.6 +2.6**
comp=Z,1.4nm,1.1s,baz=156,slow=10,SNR=4.1
LVC Limon Verde 48.34 142 P **P** **18 38 33.5 +4.6**
comp=Z,5.7nm,0.5s,baz=185,slow=21,SNR=6.7
H03N2 Juan Fernandez 52.87 159 T T 19 35 47.7
baz=337,slow=77,SNR=471
H03N1 Juan Fernandez 52.88 159 T T 19 35 49.0
baz=337,slow=77,SNR=675
H03N3 Juan Fernandez 52.89 159 T T 19 35 47.9
baz=337,slow=77,SNR=671
K27K Chicken 56.17 339 P **P** **18 39 24.6 -1.6**
INK Inuvik 56.55 345 P **P** **18 39 28.2 -0.6**
INK IAmb IAmb 18 39 29.6
comp=Z,8.4nm,0.9s
ILAR Eielson Array 58.31 338 P **P** **18 39 41.4 +0.1**
comp=Z,4.5nm,1.1s,baz=140,slow=4.9,SNR=23
MCK McKinley 58.53 336 P **P** **18 39 40.1 -2.8**
MCK IAmb IAmb 18 39 44.0
comp=Z,7.1nm,0.9s
BDFB Brasilia 59.12 120 P **P** **18 39 50.5 +2.7**
comp=Z,1.7nm,0.8s,baz=204,slow=3.1,SNR=3.3
KTH Kantishna Hill 59.22 336 P **P** **18 39 46.5 -1.2**
I23K Minto, Yukon-K 59.40 338 P **P** **18 39 48.4 -0.5**
MLY Manley 59.85 337 P **P** **18 39 51.1 -1.0**
MLY IAmb IAmb 18 39 53.1
comp=Z,6.7nm,0.9s
COLD Coldfoot 60.75 340 P **P** **18 39 56.9 -1.2**
PLCA Paso Flores 62.40 156 P **P** **18 40 12.1 +2.4**
comp=Z,3.2nm,0.9s,baz=337,slow=7.6,SNR=5.2
ESDC Sonseca Array 83.25 51 P **P** **18 42 12.9 -0.7**
comp=Z,0.9nm,0.8s,baz=318,slow=3.6,SNR=3.0
NOA NORSAR Array B 85.12 27 P **P** **18 42 22.0 -0.7**
comp=Z,0.6nm,0.7s,baz=302,slow=5.1,SNR=5.1

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*BJI **05** 18:35:46.0±0.0,21.°20S×178.°50W,h552km,mB5.0/12, mb4.8/26*
*NOU **05** 18:35:46.9,21.°20S×178.°40W,h559km,mb4.9,Fiji Islands Region*
*NEIC **05** 18:35:47.4±2.0,21.°2S±0.°1×178.°6W±0.°1,h556km±7km, mb4.8/91,Error ellipse: s-maj=19.1km s-min=15.0km az=121.0*
*IDC **05** 18:35:48.7±0.7,21.°20S×178.°64W,h566km±7km,mb4.1/25, mb1 4.3/28,mb1mx4.2/34,mbtmp5.0/28,Error ellipse: s-maj=11.9km s-min=9.3km az=140.0*
*BGR **05** 18:35:49.9±0.0,21.°16S×178.°55W,h573km±9km*
ISC 05 18:35:47.3±0.5,21.°31S±0.°05×178.°49W±0.°06, h561km±4km,h564km:pP-P,n468,σ1°41/501,mb4.8/95, 43C-24D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.83**	**317**	P		**P**	**18 37 16.9**	**+0.3**
	43nm,0.3s,baz=140,slow=3.4,SNR=135							
MSVF	**Nonsavu**	**4.83**	**317**	P		**P**	**18 37 16.9**	**+0.3**
RIZ	**Raoul Island**	**7.92**	**176**	P		**P**	**18 37 45.0**	**+0.6**
RIZ				S		**S**	**18 39 22.0**	**+1.5**
RAO	**Raoul Island**	**7.92**	**176**	P		**P**	**18 37 43.2**	**-1.3**
	130nm,0.3s,baz=112,slow=9.5,SNR=6.1							
RAO				S		**S**	**18 39 20.1**	**-0.6**
	156nm,0.3s,baz=96,slow=23,SNR=5.9							
RAO	**Raoul Island**	**7.92**	**176**	P		**P**	**18 37 44.6**	**+0.1**
GLKZ	**Green Lake**	**7.94**	**176**	P		**P**	**18 37 45.5**	**+0.9**
GLKZ				S		**S**	**18 39 14.9**	**-5.9**
AFI	**Afiamalu**	**9.75**	**42**	P		**P**	**18 37 59.7**	**-3.4**
AFI	**Afiamalu**	**9.75**	**42**	P		**P**	**18 38 00.7**	**-2.4**
MARNC	**Mare, Loyalty**	**12.56**	**267**	P		**P**	**18 38 31.6**	**-0.1**
DZM	**Mont Dzumac**	**14.02**	**264**	P		**P**	**18 38 45.6**	**-1.3**
	3.3nm,0.3s,baz=79,slow=19,SNR=26							
OUZ	**Omahuta**	**15.50**	**205**	P		**P**	**18 39 03.9**	**+2.5**
OUZ	**Omahuta**	**15.50**	**205**	P		**P**	**18 39 04.2**	**+2.8**
GRZ	**Great Barrier**	**15.79**	**198**	P		**P**	**18 39 06.3**	**+2.0**
WCZ	**Waipu Caves**	**15.86**	**202**	P		**P**	**18 39 07.6**	**+2.6**
KOUNC	**Koumac, New Ca**	**16.11**	**270**	P		**P**	**18 39 09.0**	**+1.5**
KUZ	**Kuaotunu**	**16.18**	**197**	P		**P**	**18 39 09.8**	**+1.8**
MXZ	**Matakaoa Point**	**16.43**	**189**	P		**P**	**18 39 10.1**	**-0.1**
WMGZ	**Waiomatatini S**	**16.67**	**189**	P		**P**	**18 39 14.3**	**+2.0**
HAZ	**Te Kaha**	**16.70**	**190**	P		**P**	**18 39 12.2**	**-0.4**
HAZ				S		**S**	**18 41 57.5**	**-2.5**
PKGZ	**Pakihiroa**	**16.79**	**189**	P		**P**	**18 39 13.1**	**-0.4**
PKGZ				S		**S**	**18 42 02.4**	**+0.8**
RUGZ	**Raukumara Rang**	**16.93**	**190**	P		**P**	**18 39 14.9**	**+0.1**
PUZ	**Puketiti**	**16.94**	**189**	P		**P**	**18 39 16.1**	**+1.2**
PUZ				S		**S**	**18 42 01.9**	**-2.0**
TGRZ	**Tauranga**	**16.98**	**194**	P		**P**	**18 39 18.1**	**+2.9**
TWGZ	**Tauwhareparae**	**17.08**	**189**	P		**P**	**18 39 18.2**	**+2.0**
TOZ	**Tahuroa Road**	**17.17**	**196**	P		**P**	**18 39 19.7**	**+2.9**
KARZ	**Kaharoa**	**17.26**	**194**	P		**P**	**18 39 21.3**	**+3.5**
MWZ	**Matawai**	**17.31**	**191**	P		**P**	**18 39 17.7**	**-0.5**
MWZ				S		**S**	**18 42 06.8**	**-3.2**
URZ	**Urewera**	**17.31**	**192**	P		**P**	**18 39 18.5**	**+0.4**
	6.3nm,0.3s,baz=300,slow=23,SNR=37							
URZ				S		**S**	**18 42 11.1**	**+1.2**
	1.8nm,0.3s,baz=162,slow=22,SNR=4.8							
URZ	**Urewera**	**17.31**	**192**	P		**P**	**18 39 16.8**	**-1.4**
OMRZ	**Omania**	**17.32**	**194**	P		**P**	**18 39 20.3**	**+2.0**
TKGZ	**Te Karaka**	**17.36**	**190**	P		**P**	**18 39 19.5**	**+0.9**
TARZ	**Mount Tarawera**	**17.41**	**193**	P		**P**	**18 39 21.4**	**+2.2**
RAGZ	**Rawiri**	**17.49**	**191**	P		**P**	**18 39 20.7**	**+0.8**
MUGZ	**Murupara**	**17.59**	**192**	P		**P**	**18 39 20.1**	**-0.7**
RIGZ	**Rimuhau**	**17.64**	**190**	P		**P**	**18 39 22.3**	**+1.1**
RTZ	**Ruatahuna**	**17.68**	**192**	P		**P**	**18 39 21.3**	**-0.4**
ALRZ	**Allen Road**	**17.76**	**193**	P		**P**	**18 39 23.3**	**+1.0**
SNGZ	**Shannon Statio**	**17.78**	**191**	P		**P**	**18 39 23.3**	**+0.8**
MTHZ	**Maungataniwha**	**17.94**	**192**	P		**P**	**18 39 24.2**	**+0.2**
HIZ	**Hauiti**	**18.08**	**197**	P		**P**	**18 39 29.1**	**+3.9**
BKZ	**Black Stump Fm**	**18.31**	**192**	P		**P**	**18 39 26.5**	**-0.9**
BKZ				IAmb	IAmb		18 39 37.4	
	comp=Z,19nm,0.6s							
KNTN	**Kanton**	**19.57**	**21**	P		**P**	**18 39 38.3**	**-0.8**
QRZ	**Quartz Range**	**20.89**	**199**	P		**P**	**18 39 52.2**	**+1.5**
QRZ				IAmb	IAmb		18 39 55.9	
	comp=Z,29nm,0.8s							
TUWZ	**Tuamarina**	**21.05**	**196**	P		**P**	**18 39 51.7**	**-0.5**
THZ	**Tophouse**	**21.64**	**198**	P		**P**	**18 39 58.1**	**+0.6**
LTZ	**Lake Taylor**	**22.77**	**198**	P		**P**	**18 40 07.1**	**-0.4**
LTZ				IAmb	IAmb		18 40 19.2	
	comp=Z,29nm,0.6s							
OXZ	**Oxford**	**23.33**	**198**	P		**P**	**18 40 12.2**	**-0.3**
RPZ	**Rata Peaks**	**23.98**	**199**	P		**P**	**18 40 20.1**	**+1.8**
	comp=Z,12nm,0.6s,baz=21,slow=1.7,SNR=9.9							
RPZ	**Rata Peaks**	**23.98**	**199**	P		**P**	**18 40 20.1**	**+1.8**
WHZ	**Wether Hill Ro**	**26.92**	**201**	P		**P**	**18 40 45.5**	**+1.4**
WHZ				IAmb	IAmb		18 40 47.3	
	comp=Z,33nm,0.7s							
EIDS	**Eidsvold**	**28.19**	**256**	P		**P**	**18 40 55.8**	**+0.2**
	baz=28,SNR=28							
EIDS	**Eidsvold**	**28.19**	**256**	P		**P**	**18 40 55.9**	**+0.3**
ARMA	**Armidale**	**28.30**	**245**	P		**P**	**18 40 58.0**	**+1.5**
	baz=28,SNR=33							
ARMA	**Armidale**	**28.30**	**245**	P		**P**	**18 40 58.1**	**+1.5**
ARMA				IAmb	IAmb		18 40 58.8	
	comp=Z,27nm,0.7s							
MGCD	**Mangrove Creek**	**29.40**	**240**	P		**P**	**18 41 07.6**	**+1.6**
	baz=30,SNR=22							
RMQ	**Roma**	**30.33**	**254**	P		**P**	**18 41 15.2**	**+1.1**
	baz=30,SNR=93							
CNB	**Canberra Magne**	**31.39**	**237**	P		**P**	**18 41 24.6**	**+1.5**
	baz=32,SNR=36							
CAN	**Canberra**	**31.68**	**237**	P		**P**	**18 41 26.4**	**+0.8**
CAN				IAmb	IAmb		18 41 27.6	
	comp=Z,22nm,0.9s							
CTAO	**Charters Tower**	**32.96**	**266**	P		**P**	**18 41 36.8**	**+0.2**
RABL	**Rabaul**	**33.19**	**297**	P		**P**	**18 41 37.8**	**-0.7**
RABL	**Rabaul**	**33.19**	**297**	P		**P**	**18 41 38.0**	**-0.5**
CMSA	**Cobar Meteorol**	**33.52**	**245**	P		**P**	**18 41 41.8**	**+0.7**
	baz=34,SNR=96							
QLP	**Quilpie**	**34.38**	**254**	P		**P**	**18 41 48.5**	**0.0**
	baz=35,SNR=4.5							
TOO	**Toolangi**	**35.05**	**234**	P		**P**	**18 41 54.9**	**+1.1**
	baz=35,SNR=7.6							
TOO	**Toolangi**	**35.05**	**234**	P		**P**	**18 41 55.0**	**+1.1**
TOO				IAmb	IAmb		18 41 55.8	
	comp=Z,22nm,0.9s							
PMG	**Port Moresby**	**35.09**	**284**	P		**P**	**18 41 54.1**	**-0.3**
	comp=Z,126nm,0.7s,baz=73,slow=6.4,SNR=80							
PMG	**Port Moresby**	**35.09**	**284**	P		**P**	**18 41 54.3**	**-0.1**
PMG	**Port Moresby**	**35.09**	**284**	P		**P**	**18 41 53.9**	**-0.5**
MTSU	**Mount Surprise**	**35.10**	**269**	P		**P**	**18 41 54.5**	**0.0**
	baz=35,SNR=140							
STKA	**Stephens Creek**	**37.03**	**245**	P		**P**	**18 42 11.1**	**+0.9**
	comp=Z,28nm,0.7s,baz=91,slow=10,SNR=46							
STKA				PcP		**PcP**	**18 44 16.8**	**+0.9**
	comp=Z,3.3nm,0.5s,baz=117,slow=2.3,SNR=2.8							
STKA	**Stephens Creek**	**37.03**	**245**	P		**P**	**18 42 11.0**	**+0.9**
	baz=37,SNR=54							
STKA	**Stephens Creek**	**37.03**	**245**	P		**P**	**18 42 11.1**	**+0.9**
COEN	**Coen**	**37.18**	**275**	P		**P**	**18 42 11.8**	**+0.1**
COEN				IAmb	IAmb		18 42 12.9	
	comp=Z,37nm,0.8s							
ARPS	**Mount Arapiles**	**37.66**	**237**	P		**P**	**18 42 16.0**	**+0.8**
	baz=38,SNR=4.6							
MANU	**Manus Island**	**38.37**	**295**	P		**P**	**18 42 20.9**	**-0.5**
QIS	**Mount Isa**	**39.06**	**263**	P		**P**	**18 42 26.2**	**-0.7**
	baz=39,SNR=16							
HTT	**Hallett**	**39.45**	**243**	P		**P**	**18 42 30.3**	**+0.4**
	baz=40,SNR=13							
BBOO	**Buckleboo**	**41.78**	**244**	P		**P**	**18 42 48.6**	**+0.2**
	baz=42,SNR=32							
WR0	**Warramunga Arr**	**43.85**	**263**	P		**P**	**18 43 03.8**	**-0.9**
WR0				IAmb	IAmb		18 43 05.5	
	comp=Z,26nm,0.5s							
JAY	**Jayapura**	**43.87**	**290**	P		**P**	**18 43 04.8**	**-0.2**
	comp=Z,144nm,0.6s,baz=144,slow=3.7,SNR=72							
AS31	**Alice Springs**	**43.89**	**258**	P		**P**	**18 43 04.9**	**-0.1**
AS31				IAmb	IAmb		18 43 05.6	
	comp=Z,23nm,0.7s							
ASAR	**Alice Springs**	**43.89**	**258**	P		**P**	**18 43 05.0**	**-0.1**
	comp=Z,81nm,0.6s,baz=92,slow=8.0,SNR=1705							
ASAR				PcP		**PcP**	**18 44 39.0**	**+0.4**
	comp=Z,10nm,0.6s,baz=102,slow=3.8,SNR=12							
ASAR				ScP		**ScP**	**18 47 38.6**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=109,slow=5.7,SNR=4.7							
ASAR				S		**S**	**18 48 53.2**	**-2.9**
	comp=Z,5.0nm,0.9s,baz=96,slow=15,SNR=17							
WB0	**Warramunga Arr**	**44.02**	**263**	P		**P**	**18 43 05.2**	**-0.8**
WB2	**Warramunga Arr**	**44.03**	**263**	P		**P**	**18 43 05.3**	**-0.8**
WRAB	**Tennant Creek**	**44.03**	**263**	P		**P**	**18 43 05.3**	**-0.8**
WRAB				IAmb	IAmb		18 43 06.2	
	comp=Z,48nm,0.9s							
WRA	**Warramunga Arr**	**44.04**	**263**	P		**P**	**18 43 05.3**	**-0.9**
	comp=Z,15nm,0.3s,baz=96,slow=7.6,SNR=1167							
WRA				PcP		**PcP**	**18 44 39.6**	**+0.4**
	comp=Z,7.6nm,1.0s,baz=95,slow=4.1,SNR=6.5							
WRA				S		**S**	**18 48 53.4**	**-4.9**
	comp=Z,2.7nm,0.9s,baz=102,slow=18,SNR=5.9							
GENI	**Genyem**	**44.31**	**289**	P		**P**	**18 43 08.2**	**-0.1**
	comp=Z,2μmcomp=Z,169nm,0.8s							
KDU	**Kakadu**	**47.51**	**272**	P		**P**	**18 43 32.0**	**-0.6**
	baz=48,SNR=48							
SRPI	**Serui, Papua**	**48.12**	**288**	P		**P**	**18 43 36.9**	**-0.2**
	comp=Z,1μmcomp=Z,80nm,0.7s							
MTN	**Manton Dam**	**48.72**	**271**	P		**P**	**18 43 40.6**	**-1.0**
	baz=49,SNR=42							
MTN	**Manton Dam**	**48.72**	**271**	P		**P**	**18 43 40.7**	**-0.8**
WRKA	**Warakurna**	**48.81**	**255**	P		**P**	**18 43 42.1**	**-0.1**
	baz=49,SNR=66							
FITZ	**Fitzroy Crossi**	**52.47**	**263**	P		**P**	**18 44 08.9**	**+0.1**
	baz=53,SNR=41							
FITZ	**Fitzroy Crossi**	**52.47**	**263**	P		**P**	**18 44 08.9**	**+0.1**
SIJI	**Sorong**	**53.01**	**286**	P		**P**	**18 44 12.5**	**-0.2**
	comp=Z,105nm,0.7s,baz=88,slow=5.4,SNR=93							
SWI	**Sorong**	**53.01**	**286**	P		**P**	**18 44 12.4**	**-0.3**
	comp=Z,1μmcomp=Z,189nm,0.9s							
KMBL	**Kambalda**	**53.81**	**246**	P		**P**	**18 44 18.1**	**-0.1**
	baz=54,SNR=5.1							
NLAI	**Namlea**	**55.80**	**281**	P		**P**	**18 44 31.4**	**-0.9**
	comp=Z,2μmcomp=Z,46nm,0.6s							
SOEI	**Soe**	**56.07**	**272**	P		**P**	**18 44 35.4**	**+1.0**
SOEI	**Soe**	**56.07**	**272**	P		**P**	**18 44 35.3**	**+1.0**
	comp=Z,2μmcomp=Z,189nm,0.8s							
BATI	**Baumata**	**56.49**	**272**	P		**P**	**18 44 38.3**	**+1.2**
	comp=Z,73nm,0.6s,baz=156,slow=3.5,SNR=19							
BATI	**Baumata**	**56.49**	**272**	P		**P**	**18 44 37.8**	**+0.7**
	comp=Z,59nm,0.7s							
SBA	**Scott Base**	**57.04**	**184**	P		**P**	**18 44 43.9**	**+4.2**
PSA00	**Pilbara Seismi**	**57.04**	**258**	P		**P**	**18 44 40.2**	**-0.5**
PSA00				IAmb	IAmb		18 44 41.3	
	comp=Z,60nm,0.9s							
VNDA	**Vanda**	**57.07**	**185**	P		**P**	**18 44 42.9**	**+2.9**
	comp=Z,0.9nm,0.8s,baz=348,slow=7.2,SNR=7.9							
VNDA				ScP		**ScP**	**18 48 35.0**	**+2.1**
	comp=Z,2.4nm,0.9s,baz=1.4,slow=3.3,SNR=7.6							
VNDA	**Vanda**	**57.07**	**185**	P		**P**	**18 44 43.5**	**+3.6**
TNTI	**Ternate**	**57.22**	**285**	P		**P**	**18 44 41.3**	**-0.8**
TNTI				IAmb	IAmb		18 44 42.8	
	comp=Z,41nm,0.9s							
TNTI	**Ternate**	**57.22**	**285**	P		**P**	**18 44 42.4**	**+0.3**
	comp=Z,588nmcomp=Z,52nm,0.9s							
SANI	**Sanana**	**57.29**	**282**	P		**P**	**18 44 41.8**	**-0.7**
	comp=Z,44nm,0.9s							
KLBR	**Kellerberrin**	**57.30**	**245**	P		**P**	**18 44 42.4**	**+0.1**
	baz=58,SNR=15							
NWAO	**Narrogin (SRO)**	**57.60**	**244**	P		**P**	**18 44 44.4**	**+0.1**
	baz=58,SNR=4.3							
BLDU	**Ballidu**	**58.31**	**246**	P		**P**	**18 44 49.2**	**0.0**
	baz=58,SNR=11							
MMRI	**Maumere**	**58.33**	**273**	P		**P**	**18 44 48.8**	**-0.7**
MMRI				IAmb	IAmb		18 44 49.8	
	comp=Z,118nm,1.2s							
MMRI	**Maumere**	**58.33**	**273**	P		**P**	**18 44 49.5**	**-0.1**
	comp=Z,939nmcomp=Z,83nm,0.8s							
MUN	**Mundaring**	**58.56**	**245**	P		**P**	**18 44 51.5**	**+0.7**
	baz=59,SNR=6.5							
EDFI	**Ende, Flores**	**58.80**	**273**	P		**P**	**18 44 52.2**	**-0.7**
	comp=Z,418nmcomp=Z,40nm,0.8s							
MORW	**Morawa**	**59.10**	**248**	P		**P**	**18 44 54.5**	**0.0**
	baz=59,SNR=11							
MORW	**Morawa**	**59.10**	**248**	P		**P**	**18 44 54.6**	**+0.1**
MORW				IAmb	IAmb		18 44 55.5	
	comp=Z,55nm,1.2s							
LUWI	**Luwuk**	**60.63**	**281**	P		**P**	**18 45 04.2**	**-0.7**
LUWI				IAmb	IAmb		18 45 06.1	
	comp=Z,86nm,1.2s							
LUWI	**Luwuk**	**60.63**	**281**	P		**P**	**18 45 05.3**	**+0.4**
	comp=Z,601nmcomp=Z,65nm,1.0s							
APSI	**Ampana**	**61.71**	**281**	P		**P**	**18 45 12.6**	**+0.6**
	comp=Z,316nmcomp=Z,43nm,0.9s							
BNSI	**Bone**	**61.80**	**277**	P		**P**	**18 45 13.0**	**+0.5**
	comp=Z,44nm,0.8s							
GIRL	**Giralia**	**61.89**	**255**	P		**P**	**18 45 14.4**	**+1.4**
	baz=62,SNR=10							
GIRL	**Giralia**	**61.89**	**255**	P		**P**	**18 45 14.4**	**+1.4**
KAPI	**Kappang**	**61.90**	**276**	P		**P**	**18 45 13.0**	**-0.2**
	comp=Z,7.9nm,0.8s,baz=155,slow=3.9,SNR=4.3							
MRSI	**Marisa**	**62.01**	**282**	P		**P**	**18 45 14.1**	**+0.2**
	comp=Z,24nm,0.6s							
SPSI	**Sidrap Palu**	**62.27**	**277**	P		**P**	**18 45 14.5**	**-1.1**
	comp=Z,27nm,0.9s							
PLAI	**Plampang**	**62.42**	**271**	P		**P**	**18 45 16.3**	**-0.3**
	comp=Z,830nmcomp=Z,102nm,1.0s							
TWSI	**Taliwang, Sumb**	**63.28**	**271**	P		**P**	**18 45 21.9**	**-0.2**
	comp=Z,1μmcomp=Z,47nm,0.9s							
TOLI2	**Tolitoli**	**63.33**	**283**	P		**P**	**18 45 22.1**	**-0.3**
TOLI2				IAmb	IAmb		18 45 24.3	
	comp=Z,20nm,0.6s							
JAGI	**Jajag, Banyuwa**	**65.92**	**270**	P		**P**	**18 45 37.4**	**-1.4**
BBKI	**Banjar Baru**	**67.02**	**275**	P		**P**	**18 45 46.3**	**+0.7**
	comp=Z,27nm,0.9s							
MTKI	**Muara Teweh, K**	**67.91**	**278**	P		**P**	**18 45 51.6**	**+0.6**
	comp=Z,11nm,0.8s							
SPMM	**Sapulut**	**68.73**	**284**	P		**P**	**18 45 52.0**	**-4.0**
MJAR	**Matsushiro Arr**	**70.59**	**324**	P		**P**	**18 46 06.0**	**-0.6**
	comp=Z,5.5nm,0.6s,baz=158,slow=6.0,SNR=20							
MAT	**Matsushiro**	**70.59**	**324**	P		**P**	**18 46 06.1**	**-0.5**
SBUM	**Sibu**	**71.69**	**280**	P		**P**	**18 46 14.0**	**+0.5**
JHS	**Saijyo**	**72.42**	**320**	P		**P**	**18 46 16.3**	**-1.0**
JHS				IAmb	IAmb		18 46 18.7	
	comp=Z,21nm,0.9s							
KSM	**Kuching**	**73.07**	**278**	P		**P**	**18 46 21.2**	**-0.3**
KSM				IAmb	IAmb		18 46 22.8	
	comp=Z,37nm,0.8s							
KSM	**Kuching**	**73.07**	**278**	P		**P**	**18 46 22.0**	**+0.5**
DBJI	**Dramaga**	**73.47**	**269**	P		**P**	**18 46 23.9**	**+0.1**
	comp=Z,2μmcomp=Z,21nm,0.5s							
YULB	**Yu-li**	**73.56**	**304**	IAmb	IAmb		18 46 23.6	
	comp=Z,13nm,0.6s							
NACB	**Ninganchiao**	**73.75**	**305**	IAmb	IAmb		18 46 24.8	
	comp=Z,26nm,0.7s							
SSLB	**Suanglung**	**74.04**	**304**	IAmb	IAmb		18 46 26.7	
	comp=Z,28nm,0.9s							
PPBI	**Pangkal Pinang**	**75.59**	**273**	P		**P**	**18 46 36.9**	**+1.3**
	comp=Z,24nm,1.3s							
KASI	**Kota Agung**	**75.93**	**270**	P		**P**	**18 46 36.8**	**-0.7**
	comp=Z,551nmcomp=Z,39nm,1.1s							
KLSI		**76.00**	**270**	P		**P**	**18 46 37.1**	**-0.8**
	comp=Z,4.4nm,1.1s							
LWLI	**Liwa**	**76.51**	**270**	P		**P**	**18 46 41.7**	**+0.8**
	comp=Z,32nm,0.7s							
PETK	**Petropavlovsk-**	**76.94**	**346**	P		**P**	**18 46 42.3**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=116,slow=6.8,SNR=18							
KSRS	**Korea Array**	**77.19**	**319**	P		**P**	**18 46 44.0**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=137,slow=6.4,SNR=9.8							
KSI	**Kapahiang**	**78.36**	**271**	P		**P**	**18 46 50.2**	**-0.6**
	comp=Z,79nm,0.8s							
MYKOM	**Kota Tinggi**	**79.16**	**276**	P		**P**	**18 46 56.0**	**+1.0**
USA0B	**Ussuriysk Arra**	**79.38**	**326**	P		**P**	**18 46 55.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**79.38**	**326**	P		**P**	**18 46 56.7**	**+1.3**
	comp=Z,11nm,0.8s,baz=118,slow=3.0,SNR=23							
JRMM	**Jerantut**	**81.22**	**278**	P		**P**	**18 47 06.0**	**+0.3**
BEKR	**Beckworth**	**81.48**	**41**	P		**P**	**18 47 07.7**	**+1.1**
RYN	**Ryan**	**81.90**	**43**	P		**P**	**18 47 09.2**	**+0.4**
NVAR	**Mina Array Bea**	**81.93**	**43**	P		**P**	**18 47 10.8**	**+1.8**
	comp=Z,4.8nm,0.7s,baz=222,slow=8.4,SNR=16							
PAHR	**Pah Rah Range**	**81.99**	**42**	P		**P**	**18 47 10.0**	**+0.8**
KVN	**Kaiserville**	**82.42**	**43**	P		**P**	**18 47 12.7**	**+1.2**
CN2	**Changchun**	**82.66**	**323**	*e*P		**P**	**18 47 12.6**	**+0.3**
CN2				pmax	pmax			
	comp=Z,20nm,1.2s							
MNSI	**Mandailing Nat**	**82.76**	**274**	P		**P**	**18 47 12.9**	**-0.6**
	comp=Z,43nm,0.8s							
IPM	**Ipoh**	**82.78**	**278**	P		**P**	**18 47 14.1**	**+0.5**
IPM	**Ipoh**	**82.78**	**278**	P		**P**	**18 47 14.0**	**+0.4**
K05A	**Summer Lake**	**82.88**	**39**	P		**P**	**18 47 15.4**	**+1.7**
KLR	**Kul'dur**	**82.99**	**330**	P		**P**	**18 47 14.5**	**+0.7**
	comp=Z,4.3nm,0.8s							
H04A	**Detroit Lake**	**83.35**	**37**	P		**P**	**18 47 17.1**	**+1.3**
H04A				IAmb	IAmb		18 47 18.2	
	comp=Z,38nm,1.6s							
KULM	**Kulim**	**83.43**	**278**	IAmb	IAmb		18 47 18.7	
	comp=Z,23nm,0.9s							
KULM	**Kulim**	**83.43**	**278**	P		**P**	**18 47 18.0**	**+1.2**
PINE	**Pine Mountain**	**83.50**	**38**	P		**P**	**18 47 18.3**	**+1.5**
PINE				IAmb	IAmb		18 47 20.0	
	comp=Z,17nm,0.9s							
BRLK	**Bradley Lake**	**83.88**	**14**	P		**P**	**18 47 17.6**	**-0.5**
BRLK				IAmb	IAmb		18 47 19.2	
	comp=Z,16nm,0.9s							
PSI	**Prapat**	**84.11**	**275**	P		**P**	**18 47 20.0**	**-0.4**
	comp=Z,17nm,0.8s,baz=179,slow=1.1,SNR=15							
RSO	**Redoubt South**	**84.12**	**12**	P		**P**	**18 47 18.5**	**-0.9**
MA2	**Magadan**	**84.44**	**345**	P		**P**	**18

comp=Z,1.6nm,0.8s,baz=206,slow=5.9,SNR=5.8
SONM Songino Array 96.06 319 P **P** 18 48 15.4 +0.3
comp=Z,0.4nm,0.5s,baz=75,slow=2.2,SNR=2.9
GTA Gaotai 97.13 309 *e*P **P** 18 48 20.8 +0.7
GTA pmax pmax
comp=Z,3.0nm,1.3s
YKA Yellowknife Ar 97.44 25 P **P** 18 48 21.2 +0.5
comp=Z,0.3nm,0.3s,baz=234,slow=4.8,SNR=7.0
YKA pP **pwP** 18 50 26.6 0.0
comp=Z,0.2nm,0.7s,baz=242,slow=4.0,SNR=3.6
ZALV Zalesovo Beam 110.83 321 PKiKP **PKiKP** 18 53 15.8 -0.9
comp=Z,2.1nm,0.6s,baz=143,slow=1.7,SNR=14
MKAR Makanchi Array 111.42 313 Pdiff **Pdif** 18 49 24.0 +0.7
comp=Z,0.4nm,0.8s,baz=98,slow=6.2,SNR=4.3
MKAR PKiKP **PKiKP** 18 53 17.2 -0.8
comp=Z,1.0nm,0.5s,baz=156,slow=0.5,SNR=21
MKAR PKKPbc **PKKPbc** 19 04 15.7 +0.2
comp=Z,0.4nm,0.8s,baz=249,slow=3.4,SNR=4.0
SHLS Shalkode 112.87 309 *e*PKiKP **PKiKP** 18 53 19.8 -1.3
baz=309
SATY Saty 113.62 309 *e*PKiKP **PKiKP** 18 53 21.8 -0.7
baz=309
KURBB Kurchatov Arra 114.32 317 PKP PKPdf 18 53 22.5 -0.9
comp=Z,2.5nm,0.7s,baz=95,slow=2.0,SNR=22
MDOK Medeo 114.62 309 *e*PKP PKPdf 18 53 23.5 -1.0
baz=309
AAK Ala-Archa 116.43 308 PKP **PKPdf** 18 53 27.1 -0.8
comp=Z,0.4nm,0.3s,baz=81,slow=1.0,SNR=6.0
BTLS Baital 116.95 311 *e*PKP **PKPdf** 18 53 28.0 -0.7
baz=311
NEEM North Greenlan 118.46 11 *i* P **PKPdf** 18 53 31.0 -0.1
DZA Taraz 118.78 308 *e*PKP **PKPdf** 18 53 31.6 -0.7
baz=308
BVAR Borovoye Array 119.40 320 PKP **PKPdf** 18 53 31.7 -1.4
comp=Z,3.2nm,0.4s,baz=161,slow=9.4,SNR=35
IUG luzhnay 119.70 307 *e*PKP **PKPdf** 18 53 33.4 -0.8
baz=307
SPITS Spitsbergen Ar 122.64 356 PKP **PKiKP** 18 53 38.9 -0.1
comp=Z,8.7nm,0.7s,baz=126,slow=8.3,SNR=13
DAG Danmarks Havn 123.58 5 *i* P **PKPdf** 18 53 39.9 -0.6
SUMG Summit 124.05 14 *i* P **PKPdf** 18 53 42.1 +0.1
ARU Arti 125.60 325 PKP **PKPdf** 18 53 44.6 -0.3
comp=Z,4.4nm,0.5s,baz=59,slow=2.8,SNR=23
ARU Arti 125.60 325 PKPdf **PKiKP** 18 53 45.1 -0.2
DBG Daneborg 125.69 7 *i* P **PKPdf** 18 53 44.8 +0.2
AKTO Aktyubinsk 127.36 318 PKP **PKPdf** 18 53 48.6 +0.1
comp=Z,4.3nm,0.7s,baz=104,slow=3.0,SNR=20
GEYT Alibeck 128.82 302 PKP **PKPdf** 18 53 51.8 +0.1
comp=Z,4.4nm,0.8s,baz=224,slow=5.6,SNR=10
SCO Scoresbysund 128.89 10 *i* P **PKiKP** 18 53 51.2 -0.3
HAMF Hammerfest 128.94 351 *e*PKPdf **PKPdf** 18 53 50.0 -0.9
SOCY Socotra 129.13 269 **PKiKP** 18 53 54.1 +0.4
KIRV Kirov 129.43 330 PKP **PKPdf** 18 53 51.9 -0.2
comp=Z,16nm,0.7s,baz=59,slow=5.3,SNR=5.9
ARA0 ARCESS Array S 129.63 349 *e*PKPdf **PKPdf** 18 53 52.5 +0.3
ARCES ARCESS Array B 129.63 349 PKP **PKPdf** 18 53 51.9 -0.3
comp=Z,3.8nm,0.5s,baz=60,slow=1.6,SNR=31
JETT Jettan, Norway 130.41 351 *e*PKPdf **PKiKP** 18 53 55.5 +0.8
KTK1 Kautokeino 130.47 350 *e*PKPdf **PKPdf** 18 53 54.1 +0.3
KLMR Klimovskoe 132.43 336 *e*PKPdf **PKPdf** 18 53 57.4 -0.3
KLMR AMP 18 53 59.5
comp=Z,25nm,1.4s
LOF Lofoten 132.58 354 *e*PKPdf **PKiKP** 18 53 58.7 -0.3
STEI Steigen 132.59 353 *e*PKPdf **PKPdf** 18 53 58.0 +0.2
BELG Belogornoye 132.97 323 PKP **PKPdf** 18 53 59.1 +0.1
comp=Z,32nm,0.8s,baz=43,slow=1.7,SNR=12
NSS Namsos 136.24 353 *e* **PKPdf** 18 53 59.1 -5.6
NSS *e*PKPdf **PKiKP** 18 54 06.1 -0.4
FINES FINESS Array B 136.41 343 PKhKP PKPpre 18 53 55.9
comp=Z,0.6nm,0.4s,baz=55,slow=3.0,SNR=7.0
FINES PKP **PKPdf** 18 54 05.2 +0.1
comp=Z,3.4nm,0.5s,baz=45,slow=2.4,SNR=11
FINES SKPbc **SKPbc** 18 56 47.0 +1.9
comp=Z,0.9nm,0.5s,baz=85,slow=2.3,SNR=5.4
KMBO Kilima Mbogo 138.56 242 PKP **PKiKP** 18 54 13.1 -0.1
comp=Z,0.6nm,0.3s,baz=19,slow=4.4,SNR=6.1
DOMB Dombas 138.96 355 *e*PKPdf **PKPdf** 18 54 10.3 +0.4
DOMB *e* PKPpre 18 54 00.2
MTSE Matsula 139.32 342 *e*P **PKiKP** 18 54 13.1 +0.1
FOO Floro 139.67 357 *e*PKPdf **PKPdf** 18 54 11.9 +0.9
NB2 NORSAR Subarra 139.72 353 PKPab **PKPdf** 18 54 03.6 -7.7
baz=16,slow=3.2
NOA NORSAR Array B 139.72 353 PKhKP PKPpre 18 54 03.3
comp=Z,2.0nm,0.6s,baz=16,slow=4.8,SNR=15
NOA PKP **PKiKP** 18 54 13.2 -0.7
comp=Z,0.5nm,0.4s,baz=22,slow=3.6,SNR=7.9
NC602 NORSAR Array S 139.98 352 *e* **PKPdf** 18 54 04.2 -7.5
NC602 *e*PKPdf **PKiKP** 18 54 11.9 -2.4
SUE Sulen 140.22 358 *e*PKPdf **PKPdf** 18 54 13.2 +1.1
SKAR Skarslia 140.37 355 *e*PKPdf **PKPdf** 18 54 12.1 -0.4
ASK Askoy 140.78 357 *e*PKPdf **PKPdf** 18 54 13.6 +0.5
BER Bergen 140.87 357 *e*PKPdf **PKPdf** 18 54 13.7 +0.4
IDID Didziasalis 141.13 337 *e*P **PKPdf** 18 54 08.8 -5.1
ODD1 Odda 141.26 356 *e* **PKPdf** 18 54 10.8 -3.3
ODD1 *e*PKPdf **PKiKP** 18 54 14.0 -3.0
KONO Kongsberg 141.27 353 *e* **PKPdf** 18 54 07.4 -6.6
KONO *e*PKPdf **PKiKP** 18 54 14.5 -2.4
IIGN Ignalina 141.29 338 *e*P **PKPdf** 18 54 09.6 -4.6
NACGM Naroch 141.44 337 *i* PKP **PKPdf** 18 54 10.0 -4.5
NACGM *i* PKP **PKPdf** 18 54 10.0 -4.5
NACGM *i* PKP **PKPdf** 18 54 10.0 -4.5
NACGM *i* pPKP **pPKPdf** 18 56 24.9 -0.7
NACGM *i* sPKP 18 57 23.1
NACGM *i* PPP PPP 18 59 53.0
NACGM *i* SKS SKSdf 19 00 11.3 -20
NACGM *i* SKKS SKKSac 19 03 06.5 -15
NACGM *i* SP 19 06 42.2
NACGM *i* PS 19 07 23.5
NACGM *i* SS SS 19 14 33.8 -36
NACGM *i* SSS SSS 19 22 07.0
BLS5 Blasjo 141.76 356 *e* **PKPdf** 18 54 11.2 -3.7
PABE Paberze 141.94 339 *e*P **PKPdf** 18 54 12.7 -2.6
PBUR Paburge 142.15 341 *e*P **PKPdf** 18 54 12.0 -3.6
HOMB Homborsund 142.73 354 *i* P **PKPdf** 18 54 14.6 -2.0
HOMB Homborsund 142.73 354 *e*PKPdf **PKPdf** 18 54 14.4 -2.3
SNART Snartemo 142.78 355 *i* P **PKPdf** 18 54 14.3 -2.4
SNART Snartemo 142.78 355 *e*PKPdf **PKPdf** 18 54 14.5 -2.3
BORU Boraas 142.79 350 *i* P **PKPdf** 18 54 13.5 -3.3
ONAU Onsala 143.16 351 *i* P PKPab 18 54 14.8 -0.5
SUW Suwalki 143.43 339 *e*PKP PKPbc 18 54 16.7 0.0
SUW Suwalki 143.43 339 *e*P PKPab 18 54 16.5 0.0
BLEU Blekinge 143.47 347 *i* P PKPab 18 54 15.9 -0.6
AKASG Malin Array Be 143.49 330 PKP PKPab 18 54 16.2 -0.6
comp=Z,20nm,0.4s,baz=42,slow=4.4,SNR=245
AKASG SKPbc **SKPbc** 18 57 04.5 +0.4
comp=Z,1.7nm,0.9s,baz=46,slow=1.9,SNR=4.6
AKBB Malin Array Si 143.49 330 PKPdf PKPab 18 54 16.4 -0.4
KAC Achnashellach 143.51 6 *e*P PKPab 18 54 15.9 -0.8
KPL Plockton 143.63 7 *e*P PKPab 18 54 16.8 -0.4
DEL Delary 143.71 348 *i* P PKPbc 18 54 17.0 -0.5
GOET G??ttrup 143.87 353 *i* P **PKPdf** 18 54 18.5 -0.1
GOET IAmb IAmb 18 54 18.9
comp=Z,49nm,0.8s
BJUU Bjuv 144.24 349 *i* P PKPbc 18 54 18.9 -0.2
DRUM Mains of Drumt 144.32 4 *e*P PKPbc 18 54 18.7 -0.6
MUD Monsted U'grnd 144.44 353 *i* P PKPbc 18 54 19.7 0.0
MUD IAmb IAmb 18 54 20.6
comp=Z,75nm,1.2s
LUNU Lund 144.58 348 *i* P PKPbc 18 54 20.3 +0.1
INVG Invergeldie, C 144.69 5 *e*P **PKPdf** 18 54 20.2 0.0
LAWE Loch Awe, Argy 144.72 7 *e*P **PKPdf** 18 54 20.1 -0.1
BSD Bornholm Skovb 144.77 347 *e*P **PKPdf** 18 54 20.5 +0.2
BSD Bornholm Skovb 144.77 347 *i* P **PKPdf** 18 54 20.2 0.0
BSD IAmb IAmb 18 54 21.2
comp=Z,128nm,1.7s
DIKM Dikmen 145.11 313 ⇓P **PKPab** 18 54 23.6 +0.2
SORM Soroca 145.65 328 ⇑P **PKPbc** 18 54 23.8 +0.2
BZK Bozkurt 145.82 315 ⇑P **PKPbc** 18 54 25.0 +0.8
ESK Eskdalemuir 145.86 5 *e*P **PKPbc** 18 54 23.3 -0.7
ESK Eskdalemuir 145.86 5 PKPdf **PKPbc** 18 54 24.6 +0.7
GKP Gorka Klasztor 145.89 343 *e*PKP **PKPbc** 18 54 24.7 +0.6
GKP Gorka Klasztor 145.89 343 *e*P **PKPbc** 18 54 24.4 +0.3
NEWG New Galloway 145.97 6 *e*P **PKPdf** 18 54 22.6 +0.3
BEL Belsk 146.04 338 *e*PKP **PKPbc** 18 54 25.4 +0.8
SKMB Sankelmark Bun 146.11 352 *e*PKPbc **PKPab** 18 54 26.0 -0.8
baz=17,slow=2.4
GAL1 Galloway 146.17 6 *e*P **PKPbc** 18 54 24.3 -0.5
MILM Milestii Mici 146.20 326 ⇑P **PKPbc** 18 54 25.4 +0.3
EDMD Edmundbyers 146.43 4 *e*P **PKPbc** 18 54 24.7 -0.8
LNIZ Loecknitz 146.43 346 *e*PKPbc **PKPbc** 18 54 26.5 +0.9
baz=17,slow=2.4
KESW Keswick, Cumbr 146.59 5 *e*P **PKPbc** 18 54 25.7 -0.3
BSEG Bad Segeberg 146.74 350 *e*PKPbc **PKPbc** 18 54 27.3 +0.9
baz=17,slow=2.4

IOMK Kirk Michael 146.78 7 *e*P **PKPbc** 18 54 26.3 -0.2
WIM Isle of Man 146.88 7 *e*P **PKPdf** 18 54 25.3 +1.4
VASR Vaslui 146.92 326 ⇓P **PKPbc** 18 54 27.8 +0.7
BR131 Keskin Array S 147.03 311 **PKPbc** 18 54 28.0 +0.1
BRTR Keskin Array B 147.03 311 PKPbc **PKPbc** 18 54 27.8 -0.1
comp=Z,12nm,0.7s,baz=135,slow=4.5,SNR=74
KWP Kalwaria Pacla 147.12 334 *e*PKP **PKPbc** 18 54 28.1 +0.5
PRAR RASCA 147.22 328 ⇑P **PKPbc** 18 54 27.8 -0.2
TLCR 147.29 323 ⇓P **PKPbc** 18 54 28.6 +0.5
HPK Haverah Park 147.32 3 *e*P **PKPbc** 18 54 27.4 -0.5
VARL Varlezi 147.37 325 ⇑P **PKiKP** 18 54 29.5 -0.4
RUE Ruedersdorf 147.47 346 *e*PKPbc **PKiKP** 18 54 29.2 -0.7
baz=17,slow=2.4
GHRR 147.50 326 ⇓P **PKiKP** 18 54 30.2 0.0
JURR Jurilovca 147.51 322 ⇓P **PKiKP** 18 54 29.7 -0.5
BURAR Bucovina Array 147.53 330 ⇓P **PKiKP** 18 54 29.8 -0.6
DSB Dublin 147.55 9 **PKPbc** 18 54 28.9 +0.4
ANTO Ankara 147.56 312 **PKPbc** 18 54 29.8 +0.7
BIZ Bicaz 147.58 328 ⇑P **PKiKP** 18 54 30.3 -0.1
WPS Cemaes, Angles 147.63 7 *e*P **PKPdf** 18 54 26.9 +1.8
CFR Carcaliu 147.67 324 ⇑P **PKPbc** 18 54 29.7 +0.6
TPGR Topolog 147.71 323 ⇑P **PKiKP** 18 54 30.2 -0.5
OJC Ojcow 147.74 338 *e*PKP **PKPbc** 18 54 29.7 +0.5
WLF1 Llynfaes 147.75 7 *e*P **PKPbc** 18 54 28.4 -0.6
YRC Rhoscolyn 147.77 7 *e*P **PKPbc** 18 54 28.7 -0.4
LBWR Ladybower, Pea 147.87 4 *e*P **PKPbc** 18 54 28.3 -1.1
ODBI Odobesti 147.88 325 ⇓P **PKiKP** 18 54 31.1 +0.1
VRI Vrincioaia 147.98 326 ⇑P **PKPbc** 18 54 30.3 +0.4
PLOR Ploistina 148.03 326 ⇓P **PKPbc** 18 54 30.1 -0.1
HARR Harsova 148.09 323 ⇓P **PKiKP** 18 54 31.0 -0.5
TLBR Topalu 148.11 323 ⇑P **PKiKP** 18 54 31.2 -0.3
MFTR Murfatlar 148.12 322 ⇑P **PKPbc** 18 54 30.8 +0.5
FLTG Flechtingen 148.13 349 *e*PKPbc **PKiKP** 18 54 30.7 -0.6
baz=17,slow=2.4
FLTG *e*PKPab **PKPab** 18 54 35.3 +0.2
baz=15,slow=4.3
FLTG *e*pPKPbc **pPKPab** 18 56 40.7 +0.8
NRDL Niedersach Rie 148.17 350 *e*PKPbc **PKiKP** 18 54 31.1 -0.3
baz=17,slow=2.4
NRDL *e*PKPab **PKPab** 18 54 35.6 +0.5
baz=15,slow=4.3
CRVS Cervenica-Dubn 148.19 335 *e*PKP **PKiKP** 18 54 31.4 -0.2
BISRR Bisoca 148.20 325 ⇑P **PKPbc** 18 54 31.1 +0.5
NIE Niedzica 148.22 336 *e*PKP **PKiKP** 18 54 31.7 +0.1
FOEL Foel Wylfa 148.27 5 *e*P **PKPbc** 18 54 29.5 -0.9
ARCR ARCALIA 148.32 330 ⇓P **PKiKP** 18 54 31.8 -0.1
KSP Ksiaz 148.32 342 *e*PKP **PKiKP** 18 54 31.6 -0.2
ASSE Asse, Remlinge 148.42 349 *e*PKPbc **PKiKP** 18 54 31.8 0.0
baz=17,slow=2.4
CWF Charnwood Fore 148.55 3 *e*P **PKPbc** 18 54 29.4 -1.7
ISR Istrita 148.57 325 ⇓P **PKiKP** 18 54 32.7 +0.2
OSTC Ostas 148.60 342 *e*PKPDF **PKPdf** 18 54 28.3 +1.4
OSTC ⇑*e*PKP **PKiKP** 18 54 32.5 +0.1
DOPR Dopca 148.60 327 ⇑P **PKiKP** 18 54 32.3 -0.3
CHVC Chvalec 148.62 342 ⇑*e*PKP **PKiKP** 18 54 32.1 -0.4
MLR Muntele Rosu 148.64 326 ⇓P **PKPbc** 18 54 32.0 +0.2
HLM1 Long Mynd 148.66 5 *e*P **PKPbc** 18 54 31.3 -0.1
IBBN Ibbenburen 148.68 353 *e*PKPbc **PKiKP** 18 54 32.4 -0.1
baz=17,slow=2.4
CLL Collm 148.74 346 ⇓*i*PKPbc **PKPbc** 18 54 32.1 +0.5
comp=Z,45nm,1.2s
CLL ⇑*i*PKPab **PKPab** 18 54 37.7 +0.1
comp=Z,15nm,0.8s
CLL *i* pPKPab **pPKPab** 18 56 44.7 +2.4
CLL Collm 148.74 346 *e*PKPbc **PKiKP** 18 54 32.4 -0.2
baz=17,slow=2.4
CLL *e*PKPab **PKPab** 18 54 38.0 +0.4
baz=15,slow=4.3
LANS Liptovska Anna 148.75 337 *e*PKP **PKiKP** 18 54 33.5 +0.7
LANS *e* 18 54 39.3
DPC Dobruska-Polom 148.75 342 ⇑*e*PKP **PKiKP** 18 54 32.7 -0.1
DPC *e*PKPAB **PKPab** 18 54 38.5 +0.7
CLZ Clausthal 148.75 349 *e*PKPbc **PKiKP** 18 54 32.9 +0.1
baz=17,slow=2.4
CLZ *e*PKPab **PKPab** 18 54 38.4 +0.7
baz=15,slow=4.3
LEHL Lehliu 148.84 324 ⇑P **PKiKP** 18 54 33.1 +0.1
KRLC Kraliky 148.86 341 ⇑*e*PKP **PKiKP** 18 54 32.8 -0.2
KRLC *e*PKPAB **PKPab** 18 54 38.9 +0.7
MORC Moravsky Berou 148.88 340 *e*PKP **PKiKP** 18 54 32.6 -0.4
MORC *e* 18 54 38.9
KECS Kecovo 148.91 335 *e*PKP **PKiKP** 18 54 33.5 +0.4
KECS *e* 18 54 39.3
BRG Berggiesshubel 148.92 345 ⇓*e*PKPf **PKPdf** 18 54 28.0 +0.7
BRG ⇑*i*PKP **PKiKP** 18 54 32.6 -0.4
BRG Amp 18 54 34.5
comp=Z,41nm,1.4s
BRG *i* PKPab **PKPab** 18 54 38.6 +0.2
BRG Amp 18 54 39.4
comp=Z,16nm,1.0s
BRG pPKP **pPKPab** 18 56 50.9 +7.8
BRG Amp 18 56 54.2
comp=Z,6.5nm,1.3s
BRG Berggiesshubel 148.92 345 *e*PKPbc **PKiKP** 18 54 33.1 +0.1
baz=17,slow=2.4
BRG *e*PKPab **PKPab** 18 54 39.0 +0.6
baz=15,slow=4.3
CJR Cluj-Napoca 148.94 330 ⇓P **PKiKP** 18 54 33.3 +0.1
CSS Mathiatis 148.96 303 **PKPbc** 18 54 32.9 +0.2
MDB Medias 148.98 328 ⇑P **PKiKP** 18 54 33.6 +0.3
FBE Freiberg 149.02 345 *e*PKPbc **PKiKP** 18 54 33.6 +0.4
baz=17,slow=2.4
FBE *e*PKPab **PKPab** 18 54 39.7 +0.9
baz=15,slow=4.3
PVCC Panska Ves 149.08 344 ⇑*e*PKP **PKiKP** 18 54 33.3 -0.1
NEUB Neuenburg 149.10 347 *e*PKPbc **PKiKP** 18 54 33.4 +0.1
baz=17,slow=2.4
NEUB *e*PKPab **PKPab** 18 54 39.6 +0.6
baz=15,slow=4.3
GTTG Gottingen 149.11 350 *e*PKPbc **PKiKP** 18 54 33.5 +0.1
baz=17,slow=2.4
VOIR 149.14 327 ⇑P **PKiKP** 18 54 33.5 -0.3
MCH1 Michaelchurch 149.17 5 *e*P **PKPbc** 18 54 31.8 -0.8
LEF Lefka 149.26 303 ⇓P **PKiKP** 18 54 33.8 -0.4
DRGR 149.30 331 ⇓P **PKPbc** 18 54 33.5 +0.3
ARR Arges 149.40 327 ⇑P **PKiKP** 18 54 35.0 +0.7
VYHS Vyhne 149.53 337 *e*PKP **PKiKP** 18 54 34.1 -0.3
VYHS *e* 18 54 41.9
PRA Prague 149.53 343 ⇑*e*PKP **PKiKP** 18 54 34.2 -0.1
PRU Pruhonice 149.58 343 ⇑*e*PKP **PKiKP** 18 54 34.2 -0.2
PRU *e*PKPAB **PKPab** 18 54 41.5 +0.4
VRAC Vranov 149.59 340 ⇑P **PKiKP** 18 54 34.8 +0.4
VRAC Vranov 149.59 340 *e*PKP **PKiKP** 18 54 34.2 -0.3
VRAC *e* 18 54 41.8
BUG Bochum--Univer 149.59 353 *e*PKPbc **PKiKP** 18 54 34.4 0.0
baz=17,slow=2.4
BUG *e*PKPab **PKPab** 18 54 41.2 +0.1
baz=15,slow=4.3
PSZ Piszkesteto 149.60 335 ⇑P **PKiKP** 18 54 34.7 +0.1
KOLL Kolacno 149.61 338 *e*PKP **PKiKP** 18 54 35.0 +0.5
KOLL *e* 18 54 42.2
JAVC Velka Javorina 149.63 339 *e*PKP **PKiKP** 18 54 35.6 +1.0
MOX Moxa 149.66 347 *e*PKPbc **PKPbc** 18 54 33.7 -0.2
baz=17,slow=2.4
KASTN Kahler Asten 149.68 351 *e*PKPbc **PKiKP** 18 54 34.8 +0.1
baz=17,slow=2.4
TANN Tannenbergstha 149.70 346 *e*PKPbc **PKiKP** 18 54 35.0 +0.2
baz=17,slow=2.4
PLN Plauen 149.70 346 *e*PKPbc **PKiKP** 18 54 34.9 +0.2
baz=17,slow=2.4
PLN *e*PKPab **PKPab** 18 54 42.2 +0.6
baz=15,slow=4.3
GUNZ Gunzen 149.77 346 *e*PKPbc **PKiKP** 18 54 35.3 +0.4
baz=17,slow=2.4
GUNZ *e*PKPab **PKPab** 18 54 42.9 +0.9
baz=15,slow=4.3
LOT Lotru 149.78 328 ⇑P **PKPbc** 18 54 34.5 0.0
HUMR Humele 149.80 326 ⇑P **PKPbc** 18 54 34.6 +0.3
UBBA Unterbreizbach 149.80 349 *e*PKPbc **PKiKP** 18 54 35.2 +0.5
baz=17,slow=2.4
WERN Wernitzgruen 149.84 346 *e*PKPbc **PKiKP** 18 54 35.6 +0.6
baz=17,slow=2.4
WERN *e*PKPab **PKPab** 18 54 43.2 +0.9
baz=15,slow=4.3
KRUC Moravsky 149.87 340 *e*PKP **PKPbc** 18 54 34.7 +0.3
KRUC *e* 18 54 43.0
NKC Novy Kostel 149.87 346 ⇑*e*PKP **PKiKP** 18 54 35.2 +0.2
NKC *e*PKPAB **PKPab** 18 54 42.3 -0.1
DEV Deva 149.88 329 ⇑P **PKiKP** 18 54 35.1 0.0
PBCC Pribram 150.00 344 *e*PKP **PKiKP** 18 54 35.3 0.0
HTL Hartland 150.00 8 *e*P **PKiKP** 18 54 34.9 -0.3
SMOL Smolenice 150.01 339 *e*PKP **PKiKP** 18 54 36.3 +0.9
SMOL *e* 18 54 44.2

SIRR Siria 150.17 331 ⇓P **PKiKP** 18 54 36.1 +0.3
ZIMR 150.17 324 ⇑P **PKiKP** 18 54 35.7 -0.1
MANZ Manzenberg 150.18 346 *e*PKPbc **PKiKP** 18 54 36.2 +0.5
baz=17,slow=2.4
MODS Modra-Piesok 150.18 339 *e*PKP **PKiKP** 18 54 36.0 +0.3
MODS *e* 18 54 45.1
SRO Srobarova 150.29 337 *e*PKP **PKiKP** 18 54 36.3 +0.4
SRO *e* 18 54 45.4
GZR Gura Zlata 150.30 329 ⇑P **PKiKP** 18 54 36.0 -0.1
ROTZ Rotzenmuhle 150.36 346 *e*PKPbc **PKiKP** 18 54 36.5 +0.4
baz=17,slow=2.4
VLAD Vladila 150.46 325 ⇓P **PKiKP** 18 54 37.3 +0.9
AHRW Bad Neuenahr-A 150.50 353 *e*PKPbc **PKiKP** 18 54 36.7 +0.4
baz=17,slow=2.4
KHC Kasperske Hory 150.62 344 *e*PKPDF **PKPdf** 18 54 30.7 +0.6
KHC ⇑*e*PKP **PKiKP** 18 54 36.5 -0.1
KHC *e*PKPAB **PKPab** 18 54 46.5 +0.9
SRE Strehaia 150.62 327 ⇓P **PKPbc** 18 54 36.1 -0.2
TNS Taunus Mts 150.63 351 *e*PKPbc **PKiKP** 18 54 37.8 +1.1
baz=17,slow=2.4
GRF Grafenberg Arr 150.65 347 *e*PKPbc **PKiKP** 18 54 37.2 +0.5
baz=17,slow=2.4
GRF *e*PKPab **PKPab** 18 54 46.7 +1.1
baz=15,slow=4.3
GRFO Grafenberg 150.65 347 **PKiKP** 18 54 36.8 +0.1
BZS Buzias 150.68 330 ⇓P **PKiKP** 18 54 36.8 -0.1
CKRC Cesky Krumlov 150.70 343 ⇑*e*PKP **PKiKP** 18 54 37.0 +0.2
PLVB Pleven 150.75 324 ⇓P **PKiKP** 18 54 37.4 +0.4
WET Wettzell 150.78 345 *e*PKPbc **PKiKP** 18 54 37.5 +0.5
baz=17,slow=2.4
WET *e*PKPab **PKPab** 18 54 47.2 +1.0
baz=15,slow=4.3
WET *e*pPKPbc **pPKPab** 18 56 51.2 +0.5
GEC2 GERESS Array S 150.85 343 *e*PKPbc **PKiKP** 18 54 37.5 +0.3
baz=17,slow=2.4
GERES GERESS Array B 150.85 343 PKP **PKPdf** 18 54 30.6 0.0
comp=Z,0.7nm,0.7s,baz=48,slow=2.0,SNR=5.1
GERES PKPbc **PKiKP** 18 54 37.1 -0.1
comp=Z,8.7nm,0.7s,baz=43,slow=2.4,SNR=67
HERR Herculane 150.85 329 ⇓P **PKiKP** 18 54 37.2 0.0
PUNG Punghina 151.03 327 ⇑P **PKiKP** 18 54 37.6 +0.1
CONA Conrad Observa 151.03 340 *i* P **PKiKP** 18 54 37.8 +0.2
comp=Z,12nm,0.6s,SNR=9.1
BANR Banloc 151.08 331 ⇑P **PKiKP** 18 54 38.7 +1.0
MDVR Moldovita 151.26 329 ⇑P **PKiKP** 18 54 38.1 -0.1
WLF Walferdange 151.47 354 *e*PKPbc **PKiKP** 18 54 39.4 +1.0
baz=17,slow=2.4
WLF *e*PKPab **PKPab** 18 54 50.0 +0.9
baz=15,slow=4.3
ALN Alexandroupoli 151.48 319 **PKPbc** 18 54 37.9 -0.4
MORH Mrgy, Hungar 151.49 335 ⇓P **PKiKP** 18 54 38.6 +0.1
MOA Molln 151.59 342 *i* P **PKPbc** 18 54 38.5 0.0
comp=Z,4.4nm,0.5s
ARSA Arzberg 151.74 340 *i* P **PKPbc** 18 54 38.7 -0.1
comp=Z,2.6nm,0.6s
FRGS Fruska Gora 151.85 332 ⇑P **PKiKP** 18 54 39.7 +0.4
STU Stuttgart 151.92 349 *e*PKPbc **PKiKP** 18 54 39.9 +0.6
baz=17,slow=2.4
STU *e*PKPab **PKPab** 18 54 51.4 +0.4
baz=15,slow=4.3
VTS Vitosha 152.02 324 ⇑P **PKiKP** 18 54 40.3 +0.4
FUR Furstenfeldbru 152.08 346 *e*PKPbc **PKiKP** 18 54 40.1 +0.5
baz=17,slow=2.4
FUR *e*PKPab **PKPab** 18 54 52.7 +1.0
baz=15,slow=4.3
SOKA Soboth 152.40 340 *i* P **PKPbc** 18 54 40.0 -0.3
comp=Z,6.5nm,0.9s
BFO Black Forest 152.49 350 **PKiKP** 18 54 41.1 +0.5
BFO Black Forest 152.49 350 *e*PKPbc **PKiKP** 18 54 40.9 +0.4
baz=17,slow=2.4
BFO *e*PKPab **PKPab** 18 54 53.8 +0.3
baz=15,slow=4.3
KBA Koelnbreinsper 152.56 342 *i* P **PKPbc** 18 54 40.5 -0.3
comp=Z,8.4nm,0.9s
WATA Walderalm 152.79 345 *i* P **PKPbc** 18 54 41.1 -0.1
comp=Z,14nm,1.1s
WTTA Wattenberg 152.84 345 *i* P **PKiKP** 18 54 41.5 0.0
comp=Z,19nm,0.9s
MYKA Terra Mystica 152.88 341 *i* P **PKPbc** 18 54 40.8 -0.6
comp=Z,4.0nm,0.5s
MOTA Moosalm 152.89 346 *i* P **PKiKP** 18 54 41.6 +0.1
comp=Z,9.0nm,0.8s
SQTA Sankt Quirin 152.98 345 *i* P **PKPbc** 18 54 41.6 0.0
comp=Z,9.3nm,0.9s
ABTA Abfaltersbach 153.09 343 *i* P **PKPbc** 18 54 41.4 -0.5
comp=Z,10nm,0.6s
DAVA Damuels 153.21 347 *i* P **PKiKP** 18 54 43.4 +1.2
comp=Z,11nm,1.1s
FETA Feichten 153.28 346 *i* P **PKiKP** 18 54 42.6 +0.2
comp=Z,10nm,0.9s
ESDC Sonseca Array 161.11 13 PKPab **PKPab** 18 55 30.8 -0.3
comp=Z,3.8nm,1.1s,baz=360,slow=4.4,SNR=8.4
LIC Lamto 163.72 156 *e*PKIKP **PKPdf** 18 54 47.5 +0.2
comp=Z,38nm,1.2s
KIC Kosan Boka 163.95 157 *e*PKIKP **PKPdf** 18 54 47.7 +0.2
comp=Z,9.0nm,0.8s
KEST Kesra 164.08 336 PKPab **PKPab** 18 55 44.2 -0.1
comp=Z,7.1nm,0.9s,baz=336,slow=12,SNR=5.5
TIC Toumodi 164.11 156 *e*PKIKP **PKPdf** 18 54 47.9 +0.3
DBIC Dimbokro 164.20 156 PKP **PKPdf** 18 54 47.7 0.0
comp=Z,4.2nm,0.8s,baz=191,slow=3.4,SNR=6.1
TORD Torodi Ar. Bea 171.88 181 PKP **PKPdf** 18 54 52.2 -0.5
comp=Z,2.8nm,0.9s,baz=331,slow=1.0,SNR=12
TORD PKPab **PKPab** 18 56 19.6 +0.6
comp=Z,1.3nm,0.8s,baz=183,slow=2.3,SNR=5.0

TAP 05 18:46:17.5, 23°.43N×120°.95E, h19$^{km}_{\pm 1}$, ML1.0, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ALS	**Alishan** baz=301	**0.16**	**301**	S	Sg		18 46 25.8	+0.3
ELDTW	**Lidau** baz=164	**0.25**	**166**	*e*P	Pg		18 46 24.1	+0.7
ELDTW				*e*S	Sg		18 46 28.6	+1.2
STYH	**Taoyuan** baz=211	**0.30**	**212**	*e*P	Pb		18 46 24.7	+0.4
YULB	**Yu-li** baz=96	**0.32**	**97**	*e*P	Pg		18 46 22.8	-1.7
YULB	**Yu-li**	**0.32**	**97**	P	Pg		18 46 22.9	-1.6
TPUB	**Ta-pu** baz=246	**0.32**	**246**	P	Pb		18 46 25.5	+0.7
TWF1	**Yuli** baz=103	**0.33**	**104**	*e*S	Sb		18 46 31.1	+1.4
EYUL	**Yuli** baz=103	**0.35**	**104**	*e*P	Pg		18 46 24.9	0.0
EYUL				*e*S	Sb		18 46 31.8	+1.5
SSLB	**Suanglung**	**0.35**	**0**	P	Pb		18 46 25.7	+0.4
SSLB				*e*S	Sg		18 46 28.9	-1.4
WTP	**Ta-pu** baz=238	**0.36**	**239**	*e*P	Pb		18 46 25.5	+0.1
VWDT	**VWDT** baz=28	**0.37**	**28**	*e*P	Pb		18 46 26.0	+0.5
HGSD	**Ruisui** baz=82	**0.44**	**82**	*e*S	Sb		18 46 33.6	+0.7
TWK	**Hsinying** baz=248	**0.46**	**249**	*e*P	Pg		18 46 26.2	-0.7

*ANF **05** 20:01:17.6±0.4, 43°.69N×105°.29W, h0^{km}, ML3.7/14, Error ellipse: s-maj=5.3km s-min=4.0km az=103.0, Hypocentre not reviewed by the ISC*
*IDC **05** 20:01:17.2±0.8, 44°.00N×105°.70W, h0^{km}, mb3.9/6, mb1 3.9/12, mb1mx3.6/57, mbtmp3.7/12, ML3.6/6, Error ellipse: s-maj=22.6km s-min=7.7km az=144.0*
*NEIC **05** 20:01:17.2±0.6, 43°.79N±0°.05×105°.28W±0°.04, h0^{km}±2^{km}, ML3.5/40, Error ellipse: s-maj=9

K22A S 20 02 03.6
baz=40
PHWY Pilot Hill 2.48 182 Pn Pn 20 01 58.8 +0.4
RWWY Rawlins 2.52 214 Pn **Pn 20 01 59.6 +0.8**
RWWY IAML 20 02 35.1
comp=N,285nm,0.9s
RWWY IAML 20 02 37.4
comp=N,263nm,0.9s
N23A Red Feather La 2.93 189 P 20 02 05.7
baz=9.6,SNR=86
N23A Sb 20 02 47.1
baz=9.6
LAO LASA Array 2.97 348 Pn **Pn 20 02 05.6 +0.7**
LAO IAML 20 02 50.2
comp=N,231nm,0.3s
LAO IAML 20 03 00.2
comp=N,269nm,0.7s
LAO LASA Array 2.97 348 P 20 02 05.6
baz=167
LAO S 20 02 49.1
baz=167
RLMT Red Lodge 3.13 297 Pn **Pn 20 02 08.2 +1.0**
RLMT IAML 20 03 07.4
comp=N,94nm,0.8s
RLMT Red Lodge 3.13 297 P 20 02 08.3
baz=115,SNR=35
BW06 Boulder Array 3.26 253 Pn 20 02 10.0 +0.9
BW06 IAML 20 02 59.8
comp=N,78nm,0.6s
PD31 Pinedale Array 3.26 253 Pn **Pn 20 02 09.9 +0.8**
PDAR Pinedale Array 3.26 253 Pn **Pn 20 02 09.9 +0.8**
comp=N,8.3nm,0.3s,baz=69,slow=16,SNR=143
PDAR Lg Lg 20 02 54.8
comp=N,16nm,0.3s,baz=254,slow=16,SNR=2.1
BW06 Boulder Array 3.26 253 P 20 02 10.0
baz=72,SNR=72
YNE Yellowstone No 3.58 292 Pn 20 02 14.3 +0.9
YNE IAML 20 03 13.6
comp=E,89nm,0.6s
YNE IAML 20 03 15.0
comp=N,82nm,0.6s
GCMT Greycliff 3.69 304 Pn 20 02 16.5 +1.7
OGNE Ogallala 3.74 138 Pn 20 02 16.5 +1.1
OGNE Ogallala 3.74 138 P 20 02 16.7
baz=320,SNR=12
H17A Grant Village 3.84 281 Pn 20 02 19.5 +2.5
H17A IAML 20 03 20.8
comp=N,54nm,0.6s
H17A Grant Village 3.84 281 P 20 02 19.4
baz=99,SNR=19
FLWY Flagg Ranch 3.90 276 Pn **Pn 20 02 18.9 +1.1**
FLWY IAML 20 03 28.2
comp=N,68nm,1.6s
SNOW Snow King Moun 3.96 267 Pn 20 02 20.4 +1.7
SNOW IAML 20 03 34.3
comp=N,56nm,1.1s
SNOW IAML 20 03 38.4
comp=N,63nm,0.7s
ISCO Idaho Springs 3.99 183 Pn **Pn 20 02 20.3 +1.2**
ISCO Idaho Springs 3.99 183 P 20 02 20.4
baz=3.5,SNR=15
REDW Red Top Meadow 4.05 266 Pn 20 02 21.2 +1.4
REDW IAML 20 03 28.4
comp=N,90nm,0.7s
REDW IAML 20 03 36.9
comp=N,52nm,0.7s
O20A White River Ci 4.25 212 Pn **Pn 20 02 23.6 +1.0**
O20A IAML 20 03 40.5
comp=N,58nm,0.9s
O20A IAML 20 03 49.2
comp=E,69nm,0.8s
O20A White River Ci 4.25 212 P 20 02 23.8
baz=31,SNR=15
E28A Huff 4.30 48 Pn 20 02 22.7 -0.4
DGMT Dagmar 4.75 9 Pn **Pn 20 02 31.2 +1.9**
DGMT Dagmar 4.75 9 P 20 02 32.0
baz=189
DGMT Sb 20 03 44.2
baz=189
BOZ Bozeman (W) 4.85 294 Pn 20 02 31.6 +0.7
BOZ IAML 20 03 53.7
comp=E,31nm,0.9s
BOZ Bozeman (W) 4.85 294 Pn 20 02 31.5
baz=111
BOZ Pb 20 02 44.7
baz=111,SNR=6.6
BOZ Sb 20 03 48.5
baz=111
HWUT Hardware Ranch 5.09 247 Pn 20 02 35.0 +0.8
HWUT IAML 20 04 09.7
comp=E,40nm,1.1s
HWUT IAML 20 04 13.6
comp=E,48nm,0.9s
KSCO Kaye Shedlock' 5.18 156 Pn **Pn 20 02 35.7 +0.4**
KSCO Kaye Shedlock' 5.18 156 Pn 20 02 35.8
baz=338,SNR=11
KSCO Pg 20 02 55.0
baz=338
EGMT Eagleton 5.25 325 Pn **Pn 20 02 36.6 +0.4**
EGMT Eagleton 5.25 325 P 20 02 36.8
baz=143
HRY Holter Researc 5.45 305 Pn 20 02 40.1 +1.1
LRM Limekiln Ridge 5.47 294 Pn 20 02 40.2 +0.8
PV22 Blue Mesa, Par 5.86 208 Pn 20 02 46.3 +1.6
ECSD EROS Data Cent 6.30 87 Pn 20 02 51.6 +1.0
ECSD EROS Data Cent 6.30 87 P 20 02 51.6
baz=273
Q16A Castle Valley 6.56 224 Pn **Pn 20 02 55.0 +0.7**
DUG Dugway, Tooele 6.64 240 Pn 20 02 56.0 +0.7
DUG Dugway, Tooele 6.64 240 P 20 02 56.1
baz=56,SNR=5.5
MSO Missoula 6.80 300 Pn **Pn 20 02 58.4 +0.8**
MSO Missoula 6.80 300 P 20 02 58.3
baz=114
ELK Elko 7.96 251 Pn **Pn 20 03 14.1 +0.5**
comp=E,0.6nm,0.3s,baz=71,slow=8.9,SNR=7.4
ULM Lac du Bonnet 9.13 42 Pn **Pn 20 03 28.2 -1.1**
comp=E,2.4nm,0.3s,baz=234,slow=11,SNR=30
ULM Pg 20 04 00.7
comp=E,1.0nm,0.3s,baz=222,slow=16,SNR=3.5
ULM Lg Lg 20 06 01.6
comp=E,0.4nm,0.3s,baz=133,slow=19,SNR=3.2
ULM Lac du Bonnet 9.13 42 Pn **Pn 20 03 28.3 -1.0**
NVAR Mina Array Bea 11.16 246 Pn **Pn 20 03 56.7 -0.8**
comp=E,0.1nm,0.3s,baz=60,slow=13,SNR=1.5
TXAR Lajitas Array 14.48 174 Pn **P 20 04 49.8 0.0**
comp=E,0.1nm,0.3s,baz=360,slow=10,SNR=4.5
YKA Yellowknife Ar 19.51 347 P **P 20 05 44.1 -0.9**
comp=E,0.2nm,0.3s,baz=161,slow=13,SNR=14
DLBC Dease Lake 21.17 322 P **P 20 06 02.0 -1.1**
comp=E,1.1nm,0.8s,baz=123,slow=5.4,SNR=3.5
FRB Frobisher Bay 28.88 33 P **P 20 07 17.4 +1.0**
comp=E,0.7nm,0.5s,baz=252,slow=20,SNR=3.6
ARCES ARCESS Array B 61.38 18 P **P 20 11 32.9 -0.8**
comp=E,5.4nm,1.1s,baz=317,slow=5.1,SNR=6.0
AKASG Malin Array Be 77.93 28 P **P 20 13 15.6 -0.4**
comp=E,0.1nm,0.3s,baz=322,slow=4.7,SNR=2.2
ZALV Zalesovo Beam 82.26 354 P **P 20 13 38.9 -0.4**
comp=E,0.8nm,0.6s,baz=3.4,slow=4.6,SNR=4.4
MKAR Makanchi Array 89.55 355 P **P 20 14 15.7 +0.1**
comp=E,0.7nm,0.6s,baz=10,slow=4.7,SNR=10.0

*IDC **05** 20:05:55.4±1.3,32˚.09N×50˚.40E,h0km,mb3.5/13,*
mb1 3.7/17,mb1mx3.6/44,mbtmp3.6/17,ML3.5/4,MS2.6/2,
Ms1 2.6/2,ms1mx2.1/43,Error ellipse: s-maj=27.0km
s-min=15.8km az=166.0
*TEH **05** 20:05:56.9,32˚.31N×50˚.48E,h12km,ML3.7*
*THR **05** 20:05:58.7±0.4,32˚.36N×50˚.47E,h14km±6km,ML3.6*
*OMAN **05** 20:06:03.2,32˚.12N×50˚.64E,h114km,mb4.9/21*
*DSN **05** 20:06:06.2±1.7,31˚.39N×50˚.41E,h10km,ML3.8/9,Error*
ellipse: s-maj=23.3km s-min=8.8km az=12.0

ISC 05 20:05:58.1±0.5,32˚.22N±0˚.03×50˚.49E±0˚.03,h16km,n110,
σ1§70/126,mb3.4/12,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SHK1	**Shahrekord**	**0.35**	**72**	*e*			20 06 12.9	
	comp=Z,99nm,0.2s							
SHK1				*e*Pg		**Pg**	**20 06 04.5**	**-1.0**
IPIR	**Pirpir**	**0.58**	**37**	*e*Sg		**Sg**	**20 06 15.7**	**-1.6**
IPIR				*e*Pg		**Pg**	**20 06 07.7**	**-1.9**
IPIR				*e*			20 06 17.4	
	comp=Z,99nm,0.5s							
IBRJ	**Brojen**	**0.73**	**115**	*e*Pg		**Pg**	**20 06 12.3**	**-0.1**
IBRJ				*e*			20 06 28.6	
	comp=Z,99nm,0.5s							
IGAR	**Gharneh**	**1.33**	**82**	*e*Pg		**Pn**	**20 06 22.0**	**-0.2**
IGAR				*e*			20 06 48.5	
	comp=Z,99nm,0.6s							
IKLH	**Kolahrood**	**1.43**	**40**	*e*Pg		**Pn**	**20 06 22.2**	**-1.4**
IKLH				*e*			20 06 51.5	
	comp=Z,99nm,0.6s							
SHGR	**Shooshtar-Gavs**	**1.43**	**266**	*e*Pg		**Pb**	**20 06 25.2**	**+0.8**
SHGR				*e*Sg		**Sg**	**20 06 44.2**	**-0.1**
SHGR				IAML			20 06 48.4	
	comp=E,926nm,0.6s							
SHGR				IAML			20 06 49.9	
	comp=N,842nm,0.4s							
SHGR	**Shooshtar-Gavs**	**1.43**	**266**	*e*Pg		**Pb**	**20 06 25.2**	**+0.8**
KLNJ	**Kolanjah**	**1.53**	**142**	*e*Pg		**Pg**	**20 06 28.9**	**+1.3**
KLNJ				*e*			20 06 59.2	
	comp=Z,99nm,0.5s							
ABEH	**Behbahan**	**1.63**	**187**	*e*Pg		**Pg**	**20 06 29.8**	**+0.4**
IRAM	**Ramesheh**	**1.66**	**104**	*e*Pn		**Pb**	**20 06 28.7**	**+0.3**
IRAM				*e*			20 06 31.9	
	comp=Z,99nm,0.6s							
IZEF	**Zefreh**	**1.70**	**66**	*e*Pn		**Pn**	**20 06 28.5**	**+1.2**
IZEF				*e*			20 06 31.1	
	comp=Z,99nm,0.3s							
QAM	**Ghamsar**	**1.73**	**27**	*e*Pg		**Pn**	**20 06 27.6**	**-0.1**
AHWZ	**Ahwaz**	**1.80**	**241**	*e*Pn		**Pb**	**20 06 31.4**	**+0.7**
NASN	**Na'in**	**2.04**	**73**	*e*Pn		**Pn**	**20 06 34.7**	**+2.6**
NASN	**Na'in**	**2.04**	**73**	*e*Pn		**Pn**	**20 06 34.7**	**+2.6**
IKMR	**Kamar-syah**	**2.19**	**307**	*e*Pn		**Pn**	**20 06 34.3**	**+0.5**
IKMR				*e*			20 07 13.4	
	comp=Z,99nm,0.3s							
KRSH	**Karshahi**	**2.23**	**38**	*e*Pn		**Pn**	**20 06 36.7**	**+2.2**
KRSH				*e*			20 06 40.5	
	comp=Z,99nm,0.5s							
ASAO	**Ashtian**	**2.35**	**351**	*e*Pn		**Pn**	**20 06 37.4**	**+1.1**
ASAO				*e*Sg		**Sn**	**20 07 08.5**	**+3.5**
ASAO				IAML			20 07 19.0	
	comp=N,274nm,0.5s							
ASAO				IAML			20 07 20.7	
	comp=E,220nm,0.4s							
ASAO	**Ashtian**	**2.35**	**351**	*e*Pn		**Pn**	**20 06 37.4**	**+1.1**
IDOB	**Doab**	**2.49**	**309**	*e*Pn		**Pn**	**20 06 38.7**	**+0.6**
HSAM	**Samen**	**2.54**	**322**	*e*Pn		**Pn**	**20 06 39.9**	**+1.1**
HSAM				*e*			20 06 41.4	
	comp=Z,99nm,0.4s							
IKFM	**Kafar-mosalman**	**2.57**	**301**	*e*Pn		**Pn**	**20 06 39.6**	**+0.5**
IKFM				*e*			20 07 27.3	
	comp=Z,99nm,0.8s							
ISFB	**Sefidab**	**2.58**	**34**	*e*Pn		**Pn**	**20 06 41.6**	**+2.3**
ISFB				*e*			20 07 18.8	
	comp=Z,99nm,0.6s							
ISAD	**Sadrabad**	**2.73**	**96**	*e*Pn		**Pn**	**20 06 44.5**	**+2.9**
ISAD				*e*			20 07 36.5	
	comp=Z,99nm,0.8s							
DHL1	**Dehloran**	**2.75**	**280**	*e*Pn		**Pn**	**20 06 41.8**	**+0.3**
HAGD	**Aghdareh**	**2.83**	**337**	*e*Pn		**Pn**	**20 06 43.9**	**+1.1**
HAGD				*e*			20 07 28.1	
	comp=Z,99nm,0.5s							
ANAR	**Anarak**	**2.90**	**70**	*e*Pn		**Pn**	**20 06 46.6**	**+2.9**
SHI	**Shiraz**	**3.11**	**145**	*e*Pn		**Pn**	**20 06 49.1**	**+2.5**
IBZA	**Bozab**	**3.14**	**316**	*e*Pn		**Pn**	**20 06 47.6**	**+0.5**
IBZA				*e*			20 07 28.2	
	comp=Z,99nm,0.6s							
IRAZ	**Razeghan**	**3.21**	**352**	*e*Pn		**Pn**	**20 06 48.4**	**+0.4**
IALM	**Almabolaq**	**3.27**	**324**	*e*Pn		**Pn**	**20 06 49.3**	**+0.4**
ICHK	**Chekchek**	**3.32**	**89**	*e*Pn		**Pn**	**20 06 52.4**	**+2.8**
IMHD	**Mahdasht**	**3.46**	**2**	*e*Pn		**Pn**	**20 06 52.6**	**+1.2**
YZKH	**Yazd**	**3.48**	**86**	*e*Pn		**Pn**	**20 06 54.7**	**+3.0**
YZKH	**Yazd**	**3.48**	**86**	*e*Pn		**Pn**	**20 06 54.7**	**+3.0**
KCHF	**Cheshme Sefid,**	**3.54**	**306**	*e*Pn		**Pn**	**20 06 52.7**	**+0.1**
KCHF				*e*			20 07 11.5	
	comp=Z,99nm,0.5s							
KER	**Kermanshah**	**3.54**	**308**	*e*Pn		**Pn**	**20 06 52.2**	**-0.3**
QABG	**Abgarm-Qazvin**	**3.56**	**348**	*e*Pn		**Pn**	**20 06 52.7**	**-0.2**
UMR	**Umm Al-Rimmam**	**3.57**	**223**	*e*P			20 06 54.6	
IMEH	**Mehriz**	**3.61**	**102**	*e*Pn		**Pn**	**20 06 56.7**	**+3.1**
MIB	**Mutribah**	**3.62**	**229**	*e*P			20 06 55.5	
SNGE	**Sanandaj**	**3.88**	**318**	IAML			20 07 43.3	
	comp=N,124nm,0.4s							
SNGE				IAML			20 07 45.8	
	comp=E,94nm,0.4s							
IGHG	**Ghaleghazi**	**3.90**	**304**	*e*Pn		**Pn**	**20 06 57.2**	**-0.3**
IGHG				*e*			20 08 19.6	
	comp=Z,99nm,0.8s							
ILIN	**Lien**	**3.99**	**313**	*e*Pn		**Pn**	**20 06 58.9**	**+0.2**
RDF	**Al-Radifah**	**4.15**	**218**	*e*P			20 07 02.6	
QALM	**Alamut, Qazvin**	**4.20**	**2**	*e*Pn		**Pn**	**20 07 02.6**	**+0.9**
IDHR	**Dehrash**	**4.22**	**307**	*e*Pn		**Pn**	**20 07 01.2**	**-0.8**
IDHR				*e*			20 07 54.9	
	comp=Z,99nm,0.3s							
IANJ	**Anjilo**	**4.32**	**40**	*e*Pn		**Pn**	**20 07 04.5**	**+1.2**
TPRV	**Parvadeh(Tabas**	**5.29**	**80**	*e*Pn		**Pn**	**20 07 19.4**	**+2.8**
KHGB	**Koh Gabri**	**5.45**	**108**	*e*Pn		**Pn**	**20 07 21.5**	**+2.7**
TKDS	**Koohdasht(Taba**	**5.75**	**74**	*e*Pn		**Pn**	**20 07 26.6**	**+2.7**
NGRK	**Negar Kerman**	**5.95**	**114**	*e*Pn		**Pn**	**20 07 29.4**	**+3.6**
IHRS	**Heris**	**6.70**	**336**	*e*Pn		**Pn**	**20 07 35.4**	**-0.7**
SBZV	**Sabzevar**	**7.21**	**53**	*e*Pn		**Pn**	**20 07 45.6**	**+2.6**
IKOO	**Kooshah**	**7.21**	**86**	*e*Pn		**Pn**	**20 07 46.7**	**+3.6**
SHME	**Shamm**	**7.89**	**140**	P		**Pn**	**20 07 52.3**	**+0.2**
SHME	**Shamm**	**7.89**	**140**	P		**Pn**	**20 07 53.5**	**+1.4**
BANOM	**Banah**	**8.08**	**140**	P		**Pn**	**20 07 55.3**	**+0.6**
BANOM				S		**Sn**	**20 09 22.5**	**-3.3**
BANOM	**Banah**	**8.08**	**140**	P		**Pn**	**20 07 56.0**	**+1.2**
	SNR=36							
BANOM				S		**Sn**	**20 09 24.8**	**-1.0**
IPAY	**Payeh**	**8.20**	**57**	*e*Pn		**Pn**	**20 07 58.2**	**+1.5**
MASF	**Masafi**	**8.45**	**142**	P		**Pn**	**20 08 00.6**	**+0.8**
	SNR=6.1							
MASF				S		**Sn**	**20 09 34.4**	**-0.4**
MSFE	**Esma-Masafi**	**8.46**	**143**	P		**Pn**	**20 08 00.3**	**+0.3**
MSFE				S		**Sn**	**20 09 30.2**	**-4.9**
GEYT	**Alibeck**	**8.46**	**46**	Pn		**Pn**	**20 08 03.3**	**+3.4**
	comp=Z,0.3nm,0.3s,baz=284,slow=7.5,SNR=9.4							
GEYT				Lg	Lg		20 10 30.3	
	comp=Z,1.4nm,0.3s,baz=149,slow=28,SNR=10							
NAZ	**Nazwa, Dubai**	**8.52**	**146**	P		**Pn**	**20 08 02.2**	**+1.4**
NAZ	**Nazwa, Dubai**	**8.52**	**146**	P		**Pn**	**20 08 02.4**	**+1.6**
	SNR=5.8							
MDH	**Madha**	**8.58**	**142**	P		**Pn**	**20 08 01.7**	**+0.2**
MDH	**Madha**	**8.58**	**142**	P		**Pn**	**20 08 02.0**	**+0.4**
ASUD	**Al Ashush, Dub**	**8.68**	**149**	P		**Pn**	**20 08 04.9**	**+1.8**
ASUD	**Al Ashush, Dub**	**8.68**	**149**	P		**Pn**	**20 08 05.1**	**+2.1**
	SNR=18							
FAQ	**Al Faqa, Dubai**	**8.70**	**148**	P		**Pn**	**20 08 04.4**	**+1.2**
FAQ	**Al Faqa, Dubai**	**8.70**	**148**	P		**Pn**	**20 08 05.3**	**+2.1**
	SNR=6.8							
FAQ				S		**Sn**	**20 09 39.3**	**-1.7**
UOSS	**Minazif**	**8.82**	**144**	P		**Pn**	**20 08 04.6**	**-0.3**
UOSS	**Minazif**	**8.82**	**144**	P		**Pn**	**20 08 05.5**	**+0.5**
UOSS				S		**Sn**	**20 09 41.4**	**-2.6**
HATD	**Hatta, Dubai**	**8.88**	**145**	P		**Pn**	**20 08 06.2**	**+0.4**
HATD	**Hatta, Dubai**	**8.88**	**145**	P		**Pn**	**20 08 06.9**	**+1.1**
HATD				S		**Sn**	**20 09 45.3**	**-0.3**
ASHO	**Ashiyiah**	**8.97**	**145**	*i* P		**Pn**	**20 08 08.0**	**+1.0**
	SNR=29							
ASHO	**Ashiyiah**	**8.97**	**145**	P		**Pn**	**20 08 07.8**	**+0.8**
	SNR=29							
ASHO				S		**Sn**	**20 09 46.0**	**-1.7**
ALNE	**Al Ain**	**9.37**	**149**	P		**Pn**	**20 08 13.8**	**+1.4**
SOHO	**SOHO**	**9.66**	**145**	*i* P		**Pn**	**20 08 15.7**	**-0.7**
	SNR=6.5							
SOHO	**SOHO**	**9.66**	**145**	P		**Pn**	**20 08 15.8**	**-0.7**
SOHO				S		**Sn**	**20 10 01.6**	**-3.1**
RAYN	**Ar Rayn**	**9.72**	**208**	P		**Pn**	**20 08 15.5**	**-1.8**
RAYN				*i* P			20 08 15.6	
	SNR=20							
ARQ	**Araqi**	**10.34**	**147**	P		**Pn**	**20 08 25.5**	**-0.3**
ARQ				S		**Sn**	**20 10 18.2**	**-3.1**
UMZA	**Um Al Zommool**	**10.34**	**155**	P		**Pn**	**20 08 26.9**	**+1.1**
UMZA				S		**Sn**	**20 10 19.6**	**-1.7**
HOQ	**Hoqain**	**10.51**	**143**	P		**Pn**	**20 08 28.6**	**+0.6**
HOQ				S		**Sn**	**20 10 24.8**	**-0.7**
BIDO	**Bidbid**	**10.99**	**140**	P		**Pn**	**20 08 35.4**	**+0.7**
BSY	**Bisya**	**11.16**	**146**	P		**Pn**	**20 08 38.2**	**+1.2**
BSY				S		**Sn**	**20 10 40.5**	**-1.1**
SMDO	**Samad**	**11.32**	**142**	P		**Pn**	**20 08 39.9**	**+0.6**
SMDO				S		**Sn**	**20 10 43.4**	**-2.2**
WSAR	**Wadi Sarin**	**11.49**	**139**	Pn		**Pn**	**20 08 40.2**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=358,slow=12,SNR=16							
JMDO	**Jabal Madar**	**11.92**	**144**	P		**Pn**	**20 08 47.6**	**+0.2**
WBK	**Wadi Bani Khal**	**12.18**	**140**	P		**Pn**	**20 08 50.0**	**-0.9**
	SNR=8.0							
MMAI	**Mount Meron Ar**	**12.74**	**278**	Pn		**Pn**	**20 08 56.9**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=90,slow=17,SNR=2.1							
JLN	**Jalan Bani Buh**	**12.79**	**139**	P		**Pn**	**20 08 58.5**	**-0.7**
MHTO	**MHTO**	**13.03**	**147**	P		**Pn**	**20 09 02.3**	**-0.3**
	SNR=8.0							
EIL	**Elat**	**13.57**	**263**	LR		LR	20 15 34.0	
	comp=Z,36nm,20.4s,baz=100,slow=43							
DOK	**Doka**	**13.94**	**166**	P		**Pn**	**20 09 14.3**	**-0.6**
	SNR=15							
DOK				S		**Sn**	**20 11 46.4**	**-3.1**
WHFO	**Wadi Hawf**	**14.55**	**167**	P		**Pn**	**20 09 21.9**	**-1.4**
	SNR=7.3							
DMTO	**DMTO**	**14.99**	**163**	P		**Pn**	**20 09 28.0**	**-1.4**
	SNR=16							
ABTO	**Aybut**	**15.02**	**170**	P		**Pn**	**20 09 29.0**	**-0.8**
	SNR=5.8							
RBK	**Rabkut**	**15.04**	**166**	P		**Pn**	**20 09 29.0**	**-1.0**
BRTR	**Keskin Array B**	**15.55**	**303**	Pn		**Pn**	**20 09 40.0**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=134,slow=14,SNR=6.0							
BRTR				LR	LR		20 17 10.5	
	comp=Z,13nm,19.7s,baz=117,slow=43							
BELG	**Belogornoye**	**20.27**	**355**	P		**P**	**20 10 34.1**	**+1.5**
	comp=Z,4.1nm,0.7s,baz=150,slow=8.1,SNR=2.7							
IDI	**Anoyia**	**21.48**	**285**	P		**P**	**20 10 46.8**	**+0.7**
	comp=Z,6.2nm,0.8s,baz=85,slow=12,SNR=5.6							
AAK	**Ala-Archa**	**21.65**	**54**	P		**P**	**20 10 50.7**	**+2.8**
	comp=Z,0.7nm,0.7s,baz=213,slow=17,SNR=2.0							
MLR	**Mumtele Rosu**	**23.14**	**312**	P		**P**	**20 11 05.4**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=184,slow=14,SNR=2.3							
AKASG	**Malin Array Be**	**24.24**	**326**	P		**P**	**20 11 13.8**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=136,slow=8.9,SNR=3.0							
BVAR	**Borovoye Array**	**25.27**	**29**	P		**P**	**20 11 23.5**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=205,slow=16,SNR=4.9							
MKAR	**Makanchi Array**	**28.30**	**50**	P		**P**	**20 11 51.6**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=250,slow=9.7,SNR=4.3							
GERES	**GERESS Array B**	**32.13**	**312**	P		**P**	**20 12 24.8**	**0.0**
	comp=Z,0.2nm,0.4s,baz=116,slow=9.1,SNR=5.5							
ZALV	**Zalesovo Beam**	**32.68**	**38**	P		**P**	**20 12 30.7**	**+1.4**
	comp=Z,0.4nm,0.4s,baz=249,slow=11,SNR=2.1							
FINES	**FINESS Array B**	**33.26**	**339**	P		**P**	**20 12 33.0**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=165,slow=12,SNR=3.0							
NOA	**NORSAR Array B**	**38.47**	**330**	P		**P**	**20 13 19.7**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=122,slow=8.3,SNR=2.0							
TORD	**Torodi Ar. Bea**	**48.40**	**259**	P		**P**	**20 14 38.8**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=54,slow=8.2,SNR=9.5							
YKA	**Yellowknife Ar**	**84.86**	**353**	P		**P**	**20 18 30.4**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=14,slow=5.4,SNR=3.9							

*NNC **05** 20:40:04.0±3.9,36˚.70N×70˚.00E,h0km,mb4.1,mpv3.8,*
Error ellipse: s-maj=36.4km s-min=29.7km az=139.0
*IDC **05** 20:40:09.6±5.3,36˚.66N×70˚.11E,h157km±38km,mb3.0/3,*
mb1 2.9/8,mb1mx2.7/57,mbtmp3.6/8,MS2.9/1,Ms1 2.9/1,
ms1mx2.2/18,Error ellipse: s-maj=71.1km s-min=20.2km
az=153.0

ISC 05 20:40:04.3±0.9,36˚.23N±0˚.07×70˚.43E±0˚.08,h150km,n32,
σ1§75/37,4C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.41**	**22**	P		**Pn**	**20 41 37.1**	**+0.3**
	SNR=42							
UCH	**Uchtor**	**6.77**	**27**	P		**Pn**	**20 41 42.5**	**+0.8**
	SNR=11							
KK31	**Karatay Array**	**6.86**	**0**	P		**Pn**	**20 41 41.2**	**-1.2**
	3.4nm,0.5s,baz=192,slow=17,SNR=36							
KK31				⇓S		**Sn**	**20 42 55.1**	**-4.3**
	4.8nm,0.6s,baz=195,slow=24,SNR=8.3							
EKS2	**Erkin-Say**	**6.92**	**21**	P		**Pn**	**20 41 43.4**	**0.0**
	SNR=8.2							
AAK	**Ala-Archa**	**7.13**	**25**	P		**Pn**	**20 41 47.1**	**+1.0**
	1.0nm,0.3s,baz=210,slow=8.8,SNR=47							
AAK				S		**Sn**	**20 43 05.4**	**-0.6**
	0.6nm,0.3s,baz=298,slow=21,SNR=9.2							
AAK	**Ala-Archa**	**7.13**	**25**	P		**Pn**	**20 41 46.3**	**+0.1**
	SNR=13							
AAK	**Ala-Archa**	**7.13**	**25**	⇑P		**Pn**	**20 41 46.1**	**0.0**
	4.7nm,0.6s							
AAK				⇑S		**Sn**	**20 43 06.8**	**+0.8**
	9.6nm,0.9s							
KBK	**Karagaybulak**	**7.30**	**27**	P		**Pn**	**20 41 49.8**	**+1.3**
	SNR=8.0							
CHMS	**Chumysh**	**7.53**	**25**	P		**Pn**	**20 41 52.4**	**+0.9**
	SNR=6.9							
USP	**Ospenovka**	**7.69**	**23**	P		**Pn**	**20 41 54.9**	**+1.3**
	SNR=7.1							
TKM2	**Tokmak 2**	**7.78**	**29**	P		**Pn**	**20 41 55.6**	**+0.7**
	SNR=6.6							
TKM2	**Tokmak 2**	**7.78**	**29**	⇓P		**Pn**	**20 41 55.1**	**+0.3**
	2.9nm,0.5s							
TKM2				⇑S		**Sn**	**20 43 21.8**	**+0.1**
	1.4nm,0.5s							
MDOK	**Medeo**	**8.59**	**34**	P		**Pn**	**20 42 07.9**	**+2.1**
	1.9nm,0.7s							
GEYT	**Alibeck**	**9.98**	**283**	P		**Pn**	**20 42 25.7**	**+1.6**
	0.5nm,0.3s,baz=104,slow=12,SNR=3.9							
PYUN	**Piuthan**	**13.37**	**124**	*e*P		**Pn**	**20 43 07.6**	**-0.8**
	4.5nm,0.3s							
PYUN				*e*S		**Sn**	**20 45 30.7**	**-5.8**
MKAR	**Makanchi Array**	**13.78**	**36**	P		**P**	**20 43 17.6**	**+0.7**
	0.1nm,0.3s,baz=219,slow=12,SNR=7.0							
KOLN	**Koldanda**	**13.99**	**123**	*e*P		**Pn**	**20 43 15.8**	**-0.6**
GKN	**Gorkha**	**14.56**	**120**	*e*P		**Pn**	**20 43 23.5**	**+0.1**
	6.2nm,0.3s							
AB31	**Akbulak array**	**15.10**	**333**	⇑P		**Pn**	**20 43 27.7**	**-2.2**
	1.3nm,0.4s,baz=147,slow=13,SNR=51							
KKN	**Kakani**	**15.14**	**120**	*e*P		**Pn**	**20 43 30.4**	**-0.3**
	1.9nm,0.2s							
PKIN	**Phulchoki**	**15.35**	**120**	*e*P		**Pn**	**20 43 33.6**	**+0.2**
	3.0nm,0.3s							
PKI	**Pulchoki**	**15.36**	**120**	*e*P		**Pn**	**20 43 34.0**	**+0.4**
GUN	**Gumba**	**15.49**	**118**	*e*P		**Pn**	**20 43 36.3**	**+1.1**
	2.5nm,0.2s							
KURBB	**Kurchatov Arra**	**15.52**	**20**	P		**Pn**	**20 43 34.4**	**-0.6**

Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}0.32; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-0.30; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.71; $M_{\phi r}$-0.78; Fault plane solution: $M_0$1.11000×10^{15} NP1: ϕ_s181.00000°,δ79.00000°,λ49.00000°. NP2:ϕ_s78.00000°, δ42.00000°,λ163.00000°.

*ASIES **05** 20:50:27.9,24.07N×121.52E,h27km,MW3.9*
*TAP **05** 20:50:27.4,24.06N×121.51E,h23km,ML4.4,B*
*IDC **05** 20:50:37.9±6.0,24.19N×121.47E,h119km±49km, mb3.6/13,mb1 3.7/14,mb1mx3.5/54,mbtmp4.0/14,Error ellipse: s-maj=42.9km s-min=20.5km az=156.0*

ISC 05 20:50:26.9±0.6,**24.04N**±0.01×**121.55E**±0.02,**h23**km±4km, **n200,**σ1š**21**/315,**mb4.0**/18,**9C-31D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=78	**0.06**	**48**	*i*P	⇓		**Pb**	**20 50 31.7**	**+0.6**
TWD				*i* S			**Sb**	**20 50 34.6**	**+0.8**
HWA	**Hwalien** baz=132	**0.08**	**142**	*i*P	⇓		**Pb**	**20 50 32.3**	**+1.2**
HWA				*i* S			**Sb**	**20 50 36.0**	**+2.0**
NACB	**Ninganchiao** baz=36	**0.14**	**17**	*i*P	⇓		**Pb**	**20 50 32.0**	**+0.3**
NACB				*i* S			**Sb**	**20 50 35.2**	**+0.3**
NACB	**Ninganchiao**	**0.14**	**17**				**Pb**	**20 50 31.2**	**-0.5**
ETLH	**Xiulin Townshi** baz=351	**0.17**	**339**	*i*P	⇑		**Pb**	**20 50 32.3**	**+0.1**
ETLH				S			**Sb**	**20 50 35.4**	**-0.4**
ESL	**Shilin** baz=199	**0.25**	**205**	*i*P	⇓		**Pb**	**20 50 33.2**	**+0.1**
ESL				*e*S			**Sb**	**20 50 37.3**	**+0.1**
WHF	**Hehuan Shan** baz=285	**0.28**	**291**	*i*P	⇑		**Pb**	**20 50 33.7**	**-0.2**
WHF				*e*S			**Sb**	**20 50 37.9**	**-0.6**
CHGB	**Renai** baz=265	**0.34**	**273**	*i*P	⇑		**Pb**	**20 50 34.8**	**+0.1**
CHGB				S			**Sb**	**20 50 39.5**	**-0.4**
FUSS	**Fushou** baz=312	**0.35**	**306**	*i*P	⇓		**Pb**	**20 50 34.9**	**+0.2**
FUSS				*e*S			**Sb**	**20 50 40.0**	**0.0**
EGFH	**Guangfu** baz=190	**0.39**	**197**	*e*P			**Pb**	**20 50 35.2**	**0.0**
EGFH				*e*S			**Sb**	**20 50 41.2**	**+0.4**
TWT	**Tachien** baz=300	**0.40**	**302**	*i*P	⇓		**Pb**	**20 50 35.9**	**+0.3**
TWT				*i* S			**Sb**	**20 50 41.3**	**-0.1**
NNSB	**Datong** baz=343	**0.41**	**338**	*i*P	⇓		**Pb**	**20 50 35.8**	**+0.1**
NNSB				*i* S			**Sb**	**20 50 41.3**	**-0.4**
NNSH	**Datong** baz=346	**0.41**	**338**	*i*P	⇓		**Pb**	**20 50 35.8**	**+0.1**
NNSH				S			**Sb**	**20 50 41.2**	**-0.5**
TDCB	**Techi** baz=301	**0.41**	**300**	*i*P	⇓		**Pb**	**20 50 35.9**	**+0.2**
TDCB				*i* S			**Sb**	**20 50 41.3**	**-0.5**
ENA	**Nanau** baz=38	**0.42**	**24**	*i*P	⇑		**Pb**	**20 50 35.9**	**+0.1**
ENA				*e*S			**Sb**	**20 50 42.0**	**+0.2**
NNS	**Nan Shan** baz=343	**0.43**	**338**	*i*P	⇓		**Pb**	**20 50 36.0**	**+0.1**
NNS				*i* S			**Sb**	**20 50 41.7**	**-0.4**
EWUT	**Wuta** baz=40	**0.45**	**27**	*e*P			**Pb**	**20 50 36.5**	**+0.2**
EWUT				*e*S			**Sb**	**20 50 42.6**	**0.0**
VWDT	**VWDT** baz=224	**0.47**	**233**	*i*P	⇑		**Pb**	**20 50 36.9**	**+0.3**
VWDT				*i* S			**Sb**	**20 50 43.4**	**+0.3**
WPL	**Puli Township** baz=258	**0.54**	**267**	*i* P			**Pb**	**20 50 37.9**	**+0.1**
WPL				*e*S			**Sb**	**20 50 44.5**	**-0.7**
NDT	**Datong Townshi** baz=1.0	**0.56**	**357**	*i*P	⇓		**Pb**	**20 50 38.1**	**+0.1**
NDT				*e*S			**Sb**	**20 50 45.3**	**-0.4**
HGSD	**Ruisui** baz=198	**0.56**	**192**	*e*P			**Pb**	**20 50 38.5**	**+0.4**
DPDB	**Guoxing** baz=261	**0.57**	**269**	*i*P	⇓		**Pb**	**20 50 38.4**	**+0.1**
DPDB				*e*S			**Sb**	**20 50 46.0**	**0.0**
EHY	**Hungye** baz=191	**0.57**	**201**	*e*P			**Pb**	**20 50 37.6**	**-0.8**
EHY				*e*S			**Sb**	**20 50 46.6**	**+0.5**
ENTT	**Nioudou** baz=6.0	**0.59**	**1**	*i*P	⇓		**Pb**	**20 50 38.9**	**+0.1**
ENTT				*e*S			**Sb**	**20 50 47.4**	**+0.7**
WHP	**Taichung City** baz=293	**0.60**	**293**	*i*P	⇓		**Pb**	**20 50 38.8**	**0.0**
WHP				*e*S			**Sb**	**20 50 46.7**	**-0.3**
SSLB	**Suanglung** baz=246	**0.60**	**245**	*i*P	⇑		**Pb**	**20 50 38.7**	**-0.1**
SSLB				*e*S			**Sb**	**20 50 44.9**	**-2.0**
SSLB	**Suanglung**	**0.60**	**245**				**Pb**	**20 50 38.7**	**-0.1**
NDS	**Dongshan** baz=24	**0.61**	**14**	*e*P			**Pb**	**20 50 39.4**	**+0.4**
NDS				*e*S			**Sb**	**20 50 47.3**	**+0.2**
SMLT	**Sun Moon Lake** baz=246	**0.62**	**255**	*i*P	⇑		**Pb**	**20 50 39.1**	**0.0**
SMLT				*e*S			**Sb**	**20 50 46.7**	**-0.7**
TWC	**Suao** baz=31	**0.63**	**26**	*i* P			**Pb**	**20 50 39.3**	**+0.1**
TWC				S			**Sb**	**20 50 48.8**	**+1.2**
YHNB	**Yeheng** baz=349	**0.64**	**346**	*i*P	⇓		**Pb**	**20 50 39.6**	**0.0**
YHNB				*e*S			**Sb**	**20 50 47.9**	**-0.3**
YHNB	**Yeheng**	**0.64**	**346**				**Pb**	**20 50 39.5**	**0.0**
TYC	**Yuchr** baz=250	**0.65**	**258**	*i* P			**Pb**	**20 50 39.5**	**-0.1**
TYC				*e*S			**Sb**	**20 50 47.5**	**-0.7**
NSK	**Sanguang** baz=348	**0.66**	**345**	*i*P	⇓		**Pb**	**20 50 39.7**	**0.0**
NSK				*e*S			**Sb**	**20 50 48.2**	**-0.3**
TWE	**Neicheng** baz=14	**0.68**	**9**	*i* P			**Pb**	**20 50 40.3**	**+0.1**
TWE				*e*S			**Sb**	**20 50 49.7**	**+0.5**
YULB	**Yu-li** baz=191	**0.69**	**200**	*e*P			**Pb**	**20 50 39.5**	**-0.7**
YULB				*e*S			**Sn**	**20 50 51.0**	**-0.1**
YULB	**Yu-li**	**0.69**	**200**				**Pb**	**20 50 39.2**	**-1.0**
EYUL	**Yuli** baz=193	**0.72**	**197**	*e*P			**Pb**	**20 50 41.7**	**+0.8**
EYUL				*e*S			**Sn**	**20 50 51.9**	**-0.2**
TWF1	**Yuli** baz=194	**0.72**	**199**	*e*P			**Pb**	**20 50 41.0**	**+0.1**
TWF1				*e*S			**Sn**	**20 50 52.0**	**-0.1**
WHYT	**Xinyi Township** baz=240	**0.72**	**242**	*e*P			**Pn**	**20 50 41.6**	**-0.2**
WHYT				*e*S			**Sn**	**20 50 52.6**	**+0.4**
ILA	**Ilan** baz=25	**0.74**	**14**	*e*P			**Pb**	**20 50 41.8**	**+0.6**
ILA				*e*S			**Sn**	**20 50 51.9**	**-0.7**
NSTT	**Nanjuang** baz=321	**0.77**	**320**	*i*P	⇓		**Pn**	**20 50 42.2**	**-0.2**
NSTT				*e*S			**Sb**	**20 50 51.8**	**0.0**
TWQ1	**Liyutan** baz=293	**0.77**	**293**	*i*P	⇓		**Pn**	**20 50 42.5**	**+0.1**
TWQ1				*e*S			**Sn**	**20 50 52.5**	**-0.8**
LIOB	**Emei** baz=322	**0.77**	**321**	*i*P	⇓		**Pn**	**20 50 42.4**	**-0.1**
LIOB				*e*S			**Sn**	**20 50 52.4**	**-0.9**
YUS	**Yu-Shan** baz=211	**0.78**	**225**	P			**Pb**	**20 50 42.3**	**+0.3**
YUS				*e*S			**Sb**	**20 50 51.8**	**-0.6**
WWF	**Wufeng** baz=268	**0.78**	**270**	*e*P			**Pn**	**20 50 43.1**	**+0.6**
WWF				S			**Sn**	**20 50 54.5**	**+1.1**
WJS	**Zhushan** baz=251	**0.78**	**254**	*e*P			**Pn**	**20 50 42.9**	**+0.3**
WJS				S			**Sn**	**20 50 54.1**	**+0.6**
TCU	**Taichung** baz=276	**0.81**	**278**	*i*P	⇓		**Pn**	**20 50 43.4**	**+0.6**
TCU				*e*S			**Sn**	**20 50 55.0**	**+0.9**
WNT1	**Nantou City** baz=258	**0.81**	**261**	*e*P			**Pn**	**20 50 43.4**	**+0.5**
WNT1				*e*S			**Sn**	**20 50 54.9**	**+0.8**
NJD	**Zhudong** baz=330	**0.81**	**329**	*i*P	⇓		**Pn**	**20 50 43.2**	**+0.3**
NJD				*e*S			**Sn**	**20 50 54.7**	**+0.5**
WNT	**Mingjian** baz=255	**0.81**	**259**	*i*P	⇓		**Pn**	**20 50 43.3**	**+0.4**
WNT				*e*S			**Sn**	**20 50 54.9**	**+0.7**
NSY	**Sanyi** baz=298	**0.81**	**297**	*i*P	⇓		**Pn**	**20 50 43.5**	**+0.6**
NSY				*e*S			**Sn**	**20 50 54.0**	**-0.2**
NTC	**Toucheng** baz=21	**0.85**	**17**	*e*P			**Pb**	**20 50 42.8**	**-0.2**
NTC				*e*S			**Sn**	**20 50 54.9**	**-0.3**
NMLH	**Miaoli** baz=306	**0.85**	**306**	*i*P	⇓		**Pn**	**20 50 44.3**	**+0.9**
NMLH				*e*S			**Sn**	**20 50 55.0**	**-0.2**
ALS	**Alishan** baz=223	**0.86**	**232**	*i* P			**Pn**	**20 50 44.0**	**+0.1**
ALS				*e*S			**Sb**	**20 50 55.3**	**+0.6**
FULB	**Fuli** baz=202	**0.87**	**196**	*e*P			**Pb**	**20 50 44.0**	**+0.6**
FULB				*e*S			**Sn**	**20 50 58.0**	**+2.2**
HSN1	**Hsinchu** baz=328	**0.88**	**327**	⇓P			**Pn**	**20 50 44.8**	**+0.9**
HSN1				*e*S			**Sn**	**20 50 56.9**	**+0.9**
WDJ	**Dajia District** baz=290	**0.89**	**290**	⇓P			**Pn**	**20 50 44.5**	**+0.6**
WDJ				*e*S			**Sn**	**20 50 57.1**	**+1.1**
NJN	**Zhunan** baz=317	**0.89**	**316**	*i*P	⇓		**Pn**	**20 50 45.0**	**+1.0**
NJN				*e*S			**Sn**	**20 50 57.5**	**+1.4**
SBCB	**Hsinchu** baz=327	**0.91**	**326**	*i*P	⇓		**Pn**	**20 50 45.2**	**+1.0**
SBCB				*e*S			**Sn**	**20 50 57.7**	**+1.1**
WCHH	**Zhanghua** baz=270	**0.91**	**273**	⇓P			**Pn**	**20 50 44.7**	**+0.5**
WCHH				*e*S			**Sn**	**20 50 57.4**	**+0.8**
CHN5	**Tsauling** baz=238	**0.91**	**241**	*e*P			**Pn**	**20 50 45.0**	**+0.6**
CHN5				*e*S			**Sn**	**20 50 57.5**	**+0.6**
NHDH	**Xindian Distri** baz=2.0	**0.92**	**359**	*e*P			**Pn**	**20 50 45.1**	**+0.7**
NHDH				*e*S			**Sn**	**20 50 57.1**	**+0.2**
HSN	**Hsinchu** baz=336	**0.92**	**325**	P			**Pn**	**20 50 45.6**	**+1.1**
HSN				*e*S			**Sn**	**20 50 58.2**	**+1.2**
TATO	**Taipei** baz=359	**0.93**	**357**	⇑P			**Pn**	**20 50 45.1**	**+0.5**
TATO				*e*S			**Sn**	**20 50 57.6**	**+0.4**
TATO	**Taipei**	**0.93**	**357**				**Pn**	**20 50 45.0**	**+0.5**
TWA	**Mucha**	**0.93**	**2**	*e*P			**Pn**	**20 50 45.0**	**+0.4**
TWA				*e*S			**Sn**	**20 50 57.8**	**+0.5**
CHKT	**Chengkung** baz=187	**0.95**	**190**	*e*P			**Pn**	**20 50 43.7**	**-1.2**
BACT	**New Taipei Cit** baz=2.0	**0.96**	**354**	*e*P			**Pb**	**20 50 46.0**	**+1.2**
BACT				*e*S			**Sn**	**20 50 59.4**	**+1.6**
TIPB	**Shuangxi** baz=19	**0.96**	**15**	*e*P			**Pn**	**20 50 45.0**	**0.0**
TIPB				*e*S			**Sn**	**20 50 57.8**	**-0.2**
WGK	**Gukeng** baz=246	**0.97**	**249**	*e*P			**Pb**	**20 50 46.2**	**+1.1**
WGK				*e*S			**Sn**	**20 50 59.9**	**+1.8**
ELDTW	**Lidau** baz=206	**0.98**	**210**	*e*P			**Pn**	**20 50 43.8**	**-1.6**
ELDTW				*e*S			**Sb**	**20 50 58.1**	**+0.2**
NCUH	**Zhongli** baz=342	**0.98**	**340**	⇓P			**Pb**	**20 50 46.4**	**+1.2**
NCUH				*e*S			**Sn**	**20 51 00.6**	**+2.1**
NTY	**Taoyuan** baz=349	**0.98**	**346**	*e*P			**Pb**	**20 50 46.5**	**+1.3**
NTY				*e*S			**Sn**	**20 50 59.8**	**+1.4**
NCU	**National Centr** baz=343	**0.98**	**340**	*e*P			**Pb**	**20 50 46.3**	**+1.1**
NCU				S			**Sn**	**20 51 00.8**	**+2.4**
WDLH	**Douliu** baz=246	**0.99**	**249**	*e*P			**Pb**	**20 50 46.1**	**+0.7**
WDLH				*e*S			**Sn**	**20 51 00.8**	**+2.1**
TAP	**Taipei** baz=1.0	**0.99**	**358**	*e*P			**Pb**	**20 50 46.1**	**+0.7**
TAP				*e*S			**Sn**	**20 51 00.3**	**+1.6**
TWB1	**Santiao Chiao** baz=26	**1.04**	**22**	*e*P			**Pb**	**20 50 46.8**	**+0.6**
TWB1				*e*S			**Sn**	**20 51 00.7**	**+0.8**
NWF	**Wu-fen Shan** baz=22	**1.04**	**12**	*e*P			**Pn**	**20 50 46.4**	**+0.1**
NWF				*e*S			**Sn**	**20 51 00.5**	**+0.4**
WFSB	**Wu-fen Shan** baz=21	**1.04**	**12**	*e*P			**Pn**	**20 50 46.4**	**+0.3**
WFSB				*e*S			**Sn**	**20 51 00.4**	**+0.3**
TWS1	**Kuangyinshan** baz=8.0	**1.06**	**354**	*e*P			**Pb**	**20 50 47.3**	**+0.7**
TWS1				*e*S			**Sn**	**20 51 02.9**	**+2.4**
WRL	**Guolierlin Hig** baz=261	**1.08**	**263**	*e*P			**Pb**	**20 50 48.2**	**+1.2**
WRL				*e*S			**Sn**	**20 51 03.3**	**+2.4**
EDH	**Donghe** baz=188	**1.09**	**192**	*e*P			**Pn**	**20 50 45.5**	**-1.2**
EDH				*e*S			**Sn**	**20 51 01.3**	**+0.2**
YM01	**YM01** baz=4.0	**1.10**	**1**	*e*P			**Pn**	**20 50 46.9**	**-0.1**
YM01				*e*S			**Sb**	**20 51 02.0**	**+0.8**
YM04	**YM04** baz=2.0	**1.11**	**359**	*e*P			**Pn**	**20 50 46.9**	**-0.1**
YM04				*e*S			**Sb**	**20 51 02.0**	**+0.6**
CHN2	**Minshiung** baz=240	**1.11**	**243**	*e*P			**Pb**	**20 50 49.0**	**+1.6**
CHN2				*e*S			**Sb**	**20 51 04.6**	**+3.2**
YM10	**YM10** baz=3.0	**1.11**	**1**	*e*P			**Pn**	**20 50 46.9**	**-0.2**
YM10				*e*S			**Sb**	**20 51 02.5**	**+1.0**
YM05	**YM05** baz=4.0	**1.12**	**1**	*e*P			**Pn**	**20 50 47.1**	**-0.1**
YM05				*e*S			**Sb**	**20 51 01.9**	**+0.1**
YM11	**YM11** baz=4.0	**1.12**	**1**	*e*P			**Pb**	**20 50 47.6**	**0.0**
WTK	**Tuku** baz=249	**1.12**	**252**	*e*P			**Pb**	**20 50 48.6**	**+1.0**
WTK				*e*S			**Sb**	**20 51 04.2**	**+2.4**
NTST	**Danshui** baz=10.0	**1.12**	**355**	P			**Pb**	**20 50 48.3**	**+0.7**
NTST				*e*S			**Sb**	**20 51 04.4**	**+2.6**
TNOU	**National Taiwa** baz=2.0	**1.12**	**10**	*e*P			**Pn**	**20 50 47.2**	**0.0**
TNOU				*e*S			**Sb**	**20 51 03.4**	**+1.5**
TPUB	**Ta-pu** baz=226	**1.12**	**229**	*e*P			**Pb**	**20 50 48.7**	**+1.0**
TPUB				*e*S			**Sb**	**20 51 05.5**	**+3.7**
TPUB	**Ta-pu**	**1.12**	**229**				**Pb**	**20 50 48.3**	**+0.7**
STYH	**Taoyuan** baz=208	**1.12**	**219**	P			**Pb**	**20 50 48.2**	**+0.6**
STYH				*e*S			**Sb**	**20 51 04.1**	**+2.4**
YM03	**YM03** baz=2.0	**1.13**	**360**	*e*P			**Pb**	**20 50 48.4**	**+0.6**
YM03				*e*S			**Sb**	**20 51 02.3**	**+0.1**
STYT	**Tauyuan** baz=208	**1.14**	**220**	P			**Pb**	**20 50 48.3**	**+0.4**
STYT				*e*S			**Sb**	**20 51 05.3**	**+2.9**
ANP	**Anpu** baz=2.0	**1.14**	**359**	*e*P			**Pb**	**20 50 48.2**	**+0.2**
ANP				*e*S			**Sb**	**20 51 04.0**	**+1.6**
YM08	**YM08** baz=5.0	**1.14**	**2**	*e*P			**Pn**	**20 50 46.9**	**-0.6**
YM08				*e*S			**Sb**	**20 51 03.4**	**+1.0**
NWRT	**Kuosheng** baz=21	**1.16**	**5**	*e*P			**Pb**	**20 50 49.5**	**+1.2**
NWRT				*e*S			**Sb**	**20 51 05.0**	**+2.0**
CHY	**Chiayi** baz=239	**1.17**	**242**	*e*P			**Pb**	**20 50 49.4**	**+1.1**
CHY				*e*S			**Sb**	**20 51 05.8**	**+2.8**
WTP	**Ta-pu** baz=209	**1.17**	**227**	*e*P			**Pb**	**20 50 49.8**	**+1.3**
LONT	**Longtian** baz=181	**1.20**	**199**	*e*P			**Pn**	**20 50 48.4**	**+0.2**
TWY	**Chenhua** baz=5.0	**1.23**	**2**	*e*P			**Pb**	**20 50 49.8**	**+0.3**
TWY				*e*S			**Sb**	**20 51 06.8**	**+1.9**
WMLT	**Mailiao** baz=257	**1.24**	**259**	*e*P			**Pb**	**20 50 50.4**	**+0.8**
WMLT				*e*S			**Sb**	**20 51 06.9**	**+1.8**
TWK	**Hsinying** baz=214	**1.24**	**232**	*i*P	⇑		**Pb**	**20 50 50.8**	**+1.0**
TWK				*e*S			**Sb**	**20 51 07.4**	**+2.0**
SNST	**Tainan City** baz=213	**1.27**	**230**	*e*P			**Pb**	**20 50 51.3**	**+1.2**
SNST				*e*S			**Sb**	**20 51 08.5**	**+2.6**
CHN1	**Nanshi** baz=224	**1.27**	**228**	P			**Pb**	**20 50 51.3**	**+1.2**
CHN1				*e*S			**Sb**	**20 51 08.8**	**+2.8**
WSF	**Szhu** baz=239	**1.28**	**252**	*e*P			**Pb**	**20 50 50.7**	**+0.3**
WSF				*e*S			**Sb**	**20 51 08.3**	**+2.0**
TWG	**Pinlang** baz=181	**1.29**	**200**	*e*P			**Pn**	**20 50 50.2**	**+0.7**
TWG	**Pinlang**	**1.29**	**200**				**Pn**	**20 50 47.7**	**-1.8**
TWGBT	**Beinan** baz=181	**1.29**	**200**	*e*P			**Pn**	**20 50 47.6**	**-2.0**
SGST	**Jiashian** baz=207	**1.30**	**223**	P			**Pb**	**20 50 50.8**	**+0.1**
SGST				*e*S			**Sb**	**20 51 08.8**	**+1.7**
SLGT	**Liugui** baz=214	**1.33**	**219**	*e*P			**Pb**	**20 50 51.3**	**+0.1**
JYNG	**Yonagunijimaku**	**1.34**	**72**	P			**Pn**	**20 50 50.8**	**+0.7**
JYNG				S			**Sn**	**20 51 08.1**	**+0.9**
LDUT	**Ludao** baz=168	**1.36**	**183**	*e*P			**Pn**	**20 50 50.1**	**-0.4**
YOJ	**Yonaguni jima**	**1.40**	**72**	P			**Pn**	**20 50 51.6**	**+0.7**
YOJ				S			**Sn**	**20 51 09.6**	**+0.9**
YOJ	**Yonaguni jima** baz=77	**1.40**	**72**	P			**Pn**	**20 50 51.6**	**+0.7**
YOJ				*e*S			**Sb**	**20 51 10.8**	**+1.0**
YOJ	**Yonaguni jima**	**1.40**	**72**				**Pn**	**20 50 51.8**	**+0.8**
CHN8	**Yiju** baz=223	**1.41**	**241**	*e*P			**Pb**	**20 50 53.1**	**+0.5**
CHN8				*e*S			**Sb**	**20 51 12.3**	**+2.2**
CHN3	**Shinhua** baz=222	**1.45**	**229**	*e*P			**Pb**	**20 50 55.6**	**+2.3**
SCST	**Cishan** baz=216	**1.51**	**220**	*e*P			**Pb**	**20 50 55.0**	**+0.8**
SCST				*e*S			**Sb**	**20 51 14.3**	**+1.5**
SCLT	**Jiali** baz=232	**1.51**	**236**	*e*P			**Pb**	**20 50 55.0**	**+0.7**
SCLT				*e*S			**Sb**	**20 51 15.5**	**+2.4**
ECL	**Taimali** baz=186	**1.54**	**201**	*e*P			**Pn**	**20 50 52.6**	**-0.3**
SSD	**Sandimen** baz=223	**1.54**	**213**	*e*P			**Pb**	**20 50 54.9**	**+0.1**
SSD				*e*S			**Sb**	**20 51 15.9**	**+2.0**
TSMG	**Majia** baz=223	**1.57**	**212**	*e*P			**Pb**	**20 50 55.5**	**+0.2**
TSMG				*e*S			**Sb**	**20 51 16.0**	**+1.3**
TWM1	**Shoushan** baz=214	**1.59**	**221**	*e*P			**Pb**	**20 50 57.6**	**+1.9**
SGLT	**Jiouru** baz=211	**1.63**	**217**	*e*P			**Pb**	**20 50 57.7**	**+1.4**
PCYT	**Pengchaiyu** baz=20	**1.65**	**17**	*e*P			**Pn**	**20 50 55.5**	**+1.0**
MASBT	**Mashibuluo** baz=207	**1.66**	**211**	*e*P			**Pn**	**20 50 55.0**	**+0.4**
TSPT	**Pingtung City** baz=210	**1.67**	**216**	*e*P			**Pb**	**20 50 57.1**	**+0.1**
SNJT	**Kaohsiung City** baz=214	**1.70**	**221**	*e*P			**Pb**	**20 50 58.3**	**+0.8**
EAST	**Anshuo** baz=185	**1.77**	**201**	*e*P			**Pb**	**20 50 59.4**	**+0.6**
TAW	**Tawu** baz=188	**1.78**	**200**	*e*P			**Pn**	**20 50 56.8**	**+0.5**
SSPT	**Xinbi** baz=206	**1.79**	**210**	*e*P			**Pb**	**20 50 59.8**	**+0.6**
SCZT	**Fangliau** baz=203	**1.87**	**207**	*e*P			**Pb**	**20 50 59.9**	**-0.5**
SCZT				*e*S			**Sb**	**20 51 23.1**	**-0.2**
PHUB	**P'eng-hu** baz=247	**1.89**	**254**	*e*P			**Pn**	**20 50 58.3**	**+0.6**
PNG	**Penghu** baz=249	**1.89**	**256**	*e*P			**Pn**	**20 50 58.2**	**+0.5**
WDGT	**Dungji** baz=239	**1.90**	**246**	*e*P			**Pn**	**20 50 59.1**	**+1.2**
SLIU	**Shizi** baz=186	**1.94**	**201**	*e*P			**Pb**	**20 51 02.1**	**+0.4**
LAY	**Lan-yu** baz=168	**1.99**	**180**	*e*P			**Pn**	**20 50 58.2**	**-1.0**
WLCH	**Liuqiu** baz=220	**2.00**	**213**	*e*P			**Pb**	**20 51 05.3**	**+2.7**
TWP	**Hsiaoliuchiu** baz=220	**2.01**	**213**	*e*P			**Pb**	**20 51 04.7**	**+1.9**

IRIF	**Iriomote-Funau**	**2.01**	**81**	P		**Pn**	**20 51 00.4**	**+1.0**
IRIF				S		**Sn**	**20 51 25.5**	**+1.6**
HATJ	**Hateruma jima**	**2.06**	**89**	P		**Pn**	**20 51 01.1**	**+1.0**
HATJ				S		**Sn**	**20 51 26.5**	**+1.4**
VCHM	**Qimei**	**2.11**	**247**	*eP*		**Pn**	**20 51 02.6**	**+1.7**
	baz=223							
VWUC	**VWUC**	**2.13**	**297**	*eP*		**Pn**	**20 51 00.5**	**-0.6**
	baz=298							
TWKBT	**Hengchun**	**2.20**	**198**	*eP*		**Pb**	**20 51 04.7**	**-1.3**
	baz=183							
JKRS	**Kuro-shima**	**2.25**	**85**	P		**Pn**	**20 51 04.2**	**+1.4**
JKRS				S		**Sn**	**20 51 31.1**	**+1.2**
JIJ	**Ishigaki jima**	**2.39**	**82**	P		**Pn**	**20 51 05.3**	**+0.7**
JIJ				S		**Sn**	**20 51 32.5**	**-0.7**
PTMZ	**Houxiangcun**	**2.43**	**295**	*eP*		**Pn**	**20 51 04.8**	**-0.3**
	baz=295							
MATB	**Ma-tsu**	**2.56**	**326**	*eP*		**Pn**	**20 51 06.4**	**-0.5**
	baz=330							
JISG	**Ishigakijimahi**	**2.58**	**77**	P		**Pn**	**20 51 07.7**	**+0.5**
JISG				S		**Sn**	**20 51 38.0**	**+0.2**
MSUT	**Lienchiang**	**2.58**	**325**	*eP*		**Pn**	**20 51 07.1**	**-0.2**
	baz=330							
QZH	**Quanzhou**	**2.84**	**289**	⇓*i*Pn		**Pn**	**20 51 10.6**	**-0.2**
QZH				Sn		**Sn**	**20 51 42.0**	**-2.3**
QZH				smax		smax		
	comp=N,330nm,0.2s							
QZH				smax		smax		
	comp=E,150nm,0.3s							
QZH				LR		LR		
	comp=N,490nm,7.7s							
QZH				LR		LR		
	comp=E,760nm,7.5s							
QZH				LR		LR		
	comp=Z,720nm,7.9s							
KNM	**Kinmen**	**2.87**	**278**	*eP*		**Pn**	**20 51 12.6**	**+1.3**
	baz=275							
KNMB	**Chin-men Tao**	**2.92**	**279**	*eP*		**Pn**	**20 51 11.1**	**-0.8**
	baz=277							
KNMB	**Chin-men Tao**	**2.92**	**279**			**Pn**	**20 51 11.4**	**-0.5**
JTJ	**Tarama**	**2.94**	**78**	S		**Sn**	**20 51 48.1**	**+1.4**
LYJJ	**Jianjiangzhen**	**2.98**	**327**	*eP*		**Pn**	**20 51 12.9**	**+0.2**
	baz=332							
MHZQ	**Yeshan**	**3.07**	**312**	*eP*		**Pn**	**20 51 13.6**	**-0.4**
	baz=314							
AXDP	**Jialang**	**3.37**	**285**	*eP*		**Pn**	**20 51 18.1**	**-0.1**
	baz=285							
JIRB	**Irabujima**	**3.39**	**76**	S		**Sn**	**20 52 00.1**	**+2.1**
ZPLA	**Ao Xicun**	**3.48**	**269**	*eP*		**Pn**	**20 51 19.4**	**-0.2**
	baz=265							
JIKM	**Ikemajima**	**3.48**	**75**	S		**Sn**	**20 52 02.4**	**+2.3**
JMJ	**Miyako jima 2**	**3.50**	**77**	*eP*		**Pn**	**20 51 20.9**	**+1.0**
	baz=79							
JMJ2	**Miyako jima3**	**3.51**	**78**	*eS*		**Sn**	**20 52 03.5**	**+2.5**
JOGS	**Gusukube**	**3.59**	**78**	S		**Sn**	**20 52 05.1**	**+2.3**
VDOS	**Pratas Island**	**5.56**	**234**	*eP*		**Pn**	**20 51 51.4**	**+3.2**
	baz=213							
JOW	**Kunigami**	**6.68**	**64**	Pn		**Pn**	**20 52 03.3**	**-0.4**
SSE	**Sheshan**	**7.03**	**357**	Pn		**Pn**	**20 52 08.7**	**+0.2**
WHN	**Wuhan**	**9.11**	**317**	P		**Pn**	**20 52 39.9**	**+3.0**
WHN				S		**Sn**	**20 54 23.4**	**+4.7**
WHN				LR		LR		
	comp=Z,940nm,13.2s							
KSRS	**Korea Array**	**14.44**	**21**	P		**P**	**20 53 55.1**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=200,slow=12,SNR=23							
KS19	**Wonju Array Si**	**14.47**	**21**	P		**P**	**20 53 56.4**	**-0.4**
XAN	**Xi'an**	**14.86**	**315**	P		**Pn**	**20 53 56.6**	**+1.0**
XAN				pP		P	20 54 03.8	+2.6
XAN				pmax		pmax		
	comp=Z,6.0nm,0.8s							
JCJ	**Chichijima**	**18.86**	**76**	P		**P**	**20 54 42.8**	**-2.7**
JCJ				IAmb		IAmb	20 54 45.8	
	comp=Z,78nm,1.0s							
CMAR	**Chiang Mai Arr**	**21.78**	**260**	P		**P**	**20 55 19.6**	**+2.3**
	comp=Z,2.0nm,0.8s,baz=59,slow=8.3,SNR=12							
GTA	**Gaotai**	**23.92**	**315**	P		**P**	**20 55 40.6**	**+1.3**
GTA				pP		pP	20 55 45.8	-0.9
GTA				sP		sP	20 55 48.6	-1.2
GTA				pmax		pmax		
	comp=Z,4.0nm,1.5s							
JEM	**Erimo**	**25.37**	**40**	P		**P**	**20 55 58.1**	**+5.8**
JEM				IAmb		IAmb	20 56 19.3	
	comp=Z,18nm,0.9s							
KLR	**Kul'dur**	**26.39**	**15**	P		**P**	**20 56 01.5**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=216,slow=4.8,SNR=7.1							
SONM	**Songino Array**	**26.63**	**337**	P		**P**	**20 56 04.4**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=159,slow=8.6,SNR=27							
KULM	**Kulim**	**27.43**	**230**	P		**P**	**20 56 07.8**	**-3.3**
KULM				IAmb		IAmb	20 56 28.4	
	comp=Z,8.8nm,1.1s							
FAKI	**Fak Fak**	**28.75**	**157**	P		**P**	**20 56 20.6**	**-2.3**
MKAR	**Makanchi Array**	**38.67**	**316**	P		**P**	**20 57 49.3**	**+0.5**
	comp=Z,4.7nm,0.7s,baz=107,slow=9.7,SNR=54							
MAKZ	**Makanchi**	**38.88**	**316**	P		**P**	**20 57 51.1**	**+0.6**
ZAA0	**Zalesovo Array**	**40.55**	**327**	P		**P**	**20 58 03.3**	**-0.9**
ZALV	**Zalesovo Beam**	**40.55**	**327**	P		**P**	**20 58 03.1**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=109,slow=7.3,SNR=10							
ABKAR	**Akbulak array**	**53.78**	**314**	P		**P**	**20 59 47.3**	**-0.2**
ABKAR				IAmb		IAmb	20 59 50.0	
	comp=Z,2.6nm,1.0s							
MDM	**Murphy Dome**	**68.58**	**27**	P		**P**	**21 01 27.8**	**+0.2**
RND	**Reindeer**	**68.61**	**29**	P		**P**	**21 01 27.2**	**-0.7**
WRH	**Wood River Hil**	**68.74**	**28**	P		**P**	**21 01 28.9**	**+0.3**
WRH				IAmb		IAmb	21 01 31.3	
	comp=Z,2.5nm,0.8s							
ILAR	**Eielson Array**	**69.19**	**27**	P		**P**	**21 01 30.7**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=281,slow=5.6,SNR=6.1							
FINES	**FINESS Array B**	**71.74**	**330**	P		**P**	**21 01 45.2**	**-1.8**
	comp=Z,1.6nm,0.9s,baz=34,slow=7.1,SNR=6.3							
CTGM	**Chitina Glacie**	**72.64**	**30**	P		**P**	**21 01 52.6**	**+0.1**
AKASG	**Malin Array Be**	**73.20**	**318**	P		**P**	**21 01 54.1**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=64,slow=5.5,SNR=1.7							
INK	**Inuvik**	**73.23**	**22**	P		**P**	**21 01 54.2**	**-1.5**
	comp=Z,2.2nm,1.0s,baz=300,slow=7.1,SNR=4.9							
BRTR	**Keskin Array B**	**73.53**	**307**	P		**P**	**21 01 58.1**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=78,slow=6.8,SNR=3.6							
NOA	**NORSAR Array B**	**78.50**	**332**	P		**P**	**21 02 24.3**	**-1.7**
	comp=Z,0.7nm,1.0s,baz=68,slow=4.8,SNR=1.2							
DLBC	**Dease Lake**	**78.90**	**31**	P		**P**	**21 02 29.0**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=257,slow=8.2,SNR=3.6							
YKA	**Yellowknife Ar**	**82.97**	**23**	P		**P**	**21 02 49.0**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=316,slow=4.6,SNR=9.8							

IDC ***05*** *20:51:38.7±0.3,5.5°S×152.6°E, h0km, mb5.1/37, mb1 5.2/39,mb1mx5.1/51,mbtmp5.1/39,ML3.0/2, MS4.8/32, Ms1 4.9/32,ms1mx4.7/42,Error ellipse: s-maj=11.9km s-min=9.8km az=80.0*

NEIC ***05*** *20:51:39.7±2.0,5.5°S±0.06°×152.7°E±0.08, h8km±1km, mb5.6/102,Ms_20 5.3/640,Mwb5.5/48,Mwc5.6(GCMT), Error ellipse: s-maj=13.4km s-min=9.9km az=71.0*

BJI ***05*** *20:51:41.7±0.0,5.27°S×153.05°E, h33km, mB5.4/79, mb5.0/83,Ms5.3/91,Ms7 5.1/85*

MOS ***05*** *20:51:41.1±1.2,5.45°S×152.70°E, h23km, mb5.6/44, MS5.0/16,Error ellipse: s-maj=9.3km s-min=6.0km az=114.5*

NEIC ***05*** *20:51:44.1,5.58°S×152.68°E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=1.49; Mθθ=1.28; Mφφ=-0.21; Mrθ=1.47; Mrφ=-0.37; Mθφ=0.13; Fault plane solution: M0=2.07000×10^17 NP1:φs=245.88000°, δ=22.81000°, λ=75.86000°. NP2:φs=81.17000°, δ=67.92000°, λ=95.87000°. Principal axes: T 2.1310, Pl67.0000°, Azm2.0000°; N -0.1251, Pl5.0000°, Azm259.0000°; P -2.0058, Pl23.0000°, Azm167.0000°;*

GCMT ***05*** *20:51:44.8±0.1,5.79°S±0.01×152.80°E±0.01, h12km, MW5.5/149, Moment Tensor Solution. s126,c215; s149,c285; Duration: 1*4 Moment tensor: Scale 10^17 Nm; Mrr=1.56±.02; Mθθ=1.28±.02; Mφφ=0.27±.02; Mrθ=1.80±.05; Mrφ=-0.56±.01; Mθφ=0.35±.05; Best double couple: M0=2.39700×10^17 NP1:φs=237.00000°, δ=21.00000°, λ=73.00000°. NP2:φs=76.00000°, δ=70.00000°, λ=97.00000°. Principal axes: T 2.4350, Pl64.0000°, Azm356.0000°; N -0.0720, Pl6.0000°, Azm253.0000°; P -2.3600, Pl25.0000°, Azm161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***05*** *20:51:44.6±0.7,6°S±3°×15°3E±°, h33km±8km, M5.4/30, mb5.4/30,mB5.8/25,MLv5.8/3,Mw(mB)5.4/25, MwMwp5.3/15,Mwp5.5/15*

NEIC ***05*** *20:51:45,5.80°S×152.85°E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=1.58; Mθθ-1.34; Mφφ-0.23; Mrθ2.07; Mrφ-0.55; Mθφ0.77; Fault plane solution: M0=2.71000×10^17 NP1:φs=246.00000°, δ=18.00000°, λ=87.00000°. NP2:φs=69.00000°, δ=72.00000°, λ=91.00000°. Principal axes: T 2.7156, Pl63.0000°, Azm341.0000°; N -0.0083, Pl1.0000°, Azm249.0000°; P -2.7073, Pl27.0000°, Azm158.0000°;*

ISC 05 20:51:44.9±0.3,5.56S±0.04×152.70E±0.04, h38km±2km, h39km; pP-P, n829, σ2s14/585, mb5.4/182, MS5.3/388, 114C-60D, Fault plane solution: NP1:φs=259.96790°, δ=44.46639°, λ=74.57699°. NP2:φs=101.10275°, δ=47.52526°, λ=104.62976°. Principal axes: T Pl79.1488°, Azm82.6652°; N Pl10.7364°, Azm271.1060°; P Pl1.5558°, Azm180.8110°; **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.46**	**339**	Pn	**Pn**	**20 52 08.3**	**-0.4**
RABL	**Rabaul**	**1.46**	**339**	P	**Pn**	**20 52 10.1**	**+1.4**
PMG	**Port Moresby**	**6.69**	**235**	Pn	**Pn**	**20 53 20.3**	**-0.4**
	13nm,0.3s,baz=22,slow=5.9,SNR=38						
PMG				Sn	**Sn**	**20 54 40.7**	**+5.0**
	20nm,0.3s,baz=54,slow=8.5,SNR=3.2						
PMG				LR	LR	20 55 25.6	
	comp=Z,5μm,20.6s,baz=32,slow=34						
PMG	**Port Moresby**	**6.69**	**235**	*d* iP	**Pn**	**20 53 19.8**	**-0.8**
PMG				pmax	pmax		
	comp=Z,231nm,0.8s						
PMG	**Port Moresby**	**6.69**	**235**	Pn	**Pn**	**20 53 20.4**	**-0.2**
PMG	**Port Moresby**	**6.69**	**235**	P	**Pn**	**20 53 20.5**	**-0.2**
HNR	**Honiara**	**8.15**	**119**	Pn	**Pn**	**20 53 40.0**	**-0.7**
	comp=Z,10nm,0.3s,baz=153,slow=12,SNR=8.3						
HNR				LR	LR	20 57 12.0	
	comp=Z,19μm,18.1s,baz=289,slow=41						
HNR	**Honiara**	**8.15**	**119**	P	**Pn**	**20 53 43.4**	**+2.6**
JAY	**Jayapura**	**12.34**	**284**	Pn	**Pn**	**20 54 36.8**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=302,slow=17,SNR=1.7						
COEN	**Coen**	**12.55**	**228**		**Pn**	**20 54 40.8**	**-0.2**
MMPI	**Merauke**	**12.56**	**256**	P	**Pn**	**20 54 43.1**	**+2.0**
GENI	**Genyem**	**12.84**	**283**	P	**Pn**	**20 54 47.8**	**+2.9**
	comp=Z,9μmcomp=Z,14μmcomp=Z,377nm,1.4s						
PATS	**Pohnpei**	**13.53**	**25**	P	**Pn**	**20 54 50.9**	**-3.5**
	baz=14,SNR=12						
PATS	**Pohnpei**	**13.53**	**25**	Pn	**Pn**	**20 54 50.4**	**-4.0**
MTSU	**Mount Surprise**	**14.94**	**213**	P	**Pn**	**20 55 12.6**	**-0.9**
	baz=15,SNR=144						
CTAO	**Charters Tower**	**15.74**	**203**	P	**Pn**	**20 55 22.9**	**-1.1**
CTAO	**Charters Tower**	**15.74**	**203**	Pn	**Pn**	**20 55 22.9**	**-1.1**
SRPI	**Serui, Papua**	**16.82**	**282**	P	**P**	**20 55 40.6**	**+1.1**
	comp=Z,5μmcomp=Z,4μmcomp=Z,173nm,1.1s						
SANVU	**Saraoutou**	**17.31**	**126**		**Pn**	**20 55 42.1**	**-1.6**
QIS	**Mount Isa**	**19.59**	**219**	P	**P**	**20 56 09.8**	**-0.2**
	baz=20,SNR=124						
EIDS	**Eidsvold**	**19.76**	**184**	P	**P**	**20 56 11.1**	**-0.6**
	baz=20,SNR=38						
EIDS	**Eidsvold**	**19.76**	**184**	P	**P**	**20 56 10.3**	**-1.4**
FAKI	**Fak Fak**	**20.56**	**276**	P	Pn	20 56 22.0	-0.9
	comp=Z,5μmcomp=Z,5μmcomp=Z,118nm,1.1s						
DZM	**Mont Dzumac**	**21.13**	**142**	P	**P**	**20 56 25.4**	**-1.3**
	comp=Z,49nm,1.1s,baz=341,slow=11,SNR=14						
DZM				LR	LR	21 03 28.4	
	comp=Z,4μm,20.4s,baz=326,slow=34						
RMQ	**Roma**	**21.15**	**190**	P	**P**	**20 56 26.7**	**0.0**
	baz=21,SNR=83						
KDU	**Kakadu**	**21.17**	**249**	P	**P**	**20 56 26.2**	**-0.9**
	baz=21,SNR=127						
SAUI	**Saumlaki**	**21.38**	**262**	P	**P**	**20 56 30.5**	**+1.1**
	comp=Z,6μmcomp=Z,9μmcomp=Z,375nm,1.3s						
SIJI	**Sorong**	**21.89**	**282**	P	**P**	**20 56 33.3**	**-1.6**
	comp=Z,26nm,0.8s,baz=81,slow=7.6,SNR=20						
SWI	**Sorong**	**21.90**	**282**	P	**P**		
SWI				pmax	pmax	**20 56 34.9**	**0.0**
	comp=Z,340nm,1.2s						
SWI	**Sorong**	**21.90**	**282**	P	**P**	**20 56 35.5**	**+0.6**
	comp=Z,3μmcomp=Z,3μmcomp=Z,340nm,1.2s						
QLP	**Quilpie**	**22.41**	**200**	P	**P**	**20 56 39.2**	**-1.1**
	baz=22,SNR=32						
MTN	**Manton Dam**	**22.47**	**250**	P	**P**	**20 56 40.7**	**-0.3**
	baz=22,SNR=7.7						
MTN	**Manton Dam**	**22.47**	**250**	P	**P**	**20 56 40.0**	**-1.0**
MTN				IAmb	IAmb	20 56 54.7	
	comp=Z,327nm,1.1s						
BNDI	**Bandanaira**	**22.73**	**272**	P	**P**	**20 56 45.2**	**+1.4**
	comp=Z,4μmcomp=Z,47μmcomp=Z,612nm,1.4s						
WR0	**Warramunga Arr**	**22.73**	**229**	P	**P**	**20 56 42.8**	**-1.0**
WR0				IAmb	IAmb	20 56 45.9	
	comp=Z,236nm,1.3s						
WRAB	**Tennant Creek**	**22.86**	**230**	*d* iP	**P**	**20 56 43.4**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,271nm,1.7s						
WB2	**Warramunga Arr**	**22.86**	**230**	P	**P**	**20 56 44.5**	**-0.7**
WB2				IAmb	IAmb	20 56 47.3	
	comp=Z,232nm,1.2s						
WRA	**Warramunga Arr**	**22.87**	**230**	P	**P**	**20 56 43.6**	**-1.6**
	comp=Z,125nm,1.1s,baz=54,slow=9.5,SNR=114						
WRA				LR	LR	21 05 27.4	
	comp=Z,1μm,21.8s,baz=30,slow=36						
ARMA	**Armidale**	**24.75**	**182**	P	**P**	**20 57 02.9**	**-0.2**
	baz=25,SNR=14						
ARMA	**Armidale**	**24.75**	**182**	P	**P**	**20 57 02.5**	**-0.5**
AS31	**Alice Springs**	**25.52**	**223**	P	**P**	**20 57 09.2**	**-1.0**
ASAR	**Alice Springs**	**25.53**	**223**	P	**P**	**20 57 09.2**	**-1.0**
	comp=Z,66nm,0.9s,baz=55,slow=8.8,SNR=159						
TNTI	**Ternate**	**26.06**	**283**	P	**P**	**20 57 18.4**	**+3.4**
	comp=Z,1μmcomp=Z,1μmcomp=Z,51nm,1.4s						
CMSA	**Cobar Meteorol**	**26.67**	**193**	P	**P**	**20 57 18.8**	**-1.5**
	baz=27,SNR=30						
SANI	**Sanana**	**26.87**	**276**	P	**P**	**20 57 23.7**	**+1.4**
	comp=Z,2μmcomp=Z,2μmcomp=Z,97nm,0.9s						
MGCD	**Mangrove Creek**	**27.55**	**183**	P	**P**	**20 57 28.0**	**-0.2**
	baz=28,SNR=4.4						
MSVF	**Nonsavu**	**27.58**	**118**	LR	LR	21 07 54.8	
	comp=Z,3μm,19.6s,baz=307,slow=35						
STKA	**Stephens Creek**	**28.17**	**200**	P	**P**	**20 57 31.6**	**-2.1**
	comp=Z,16nm,0.8s,baz=20,slow=10,SNR=27						
STKA				LR	LR	21 08 38.5	
	comp=Z,2μm,20.5s,baz=14,slow=36						
STKA	**Stephens Creek**	**28.17**	**200**	P	**P**	**20 57 31.9**	**-1.8**
	baz=28,SNR=20						
STKA	**Stephens Creek**	**28.17**	**200**	P	**P**	**20 57 31.9**	**-1.8**
SOEI	**Soe**	**28.47**	**260**	P	**P**	**20 57 37.3**	**+0.5**
	comp=Z,3μmcomp=Z,174nm,1.1s						
MNI	**Manado**	**28.68**	**283**	P	**P**	**20 57 38.5**	**0.0**
MNI				pmax	pmax		
	comp=Z,99nm,0.8s						
BATI	**Baumata**	**29.11**	**259**	P	**P**	**20 57 42.3**	**-0.1**
	comp=Z,117nm,0.9s,baz=186,slow=0.7,SNR=29						
BATI				LR	LR	21 11 36.5	
	comp=Z,6μm,21.6s,baz=110,slow=41						
BATI	**Baumata**	**29.11**	**259**	P	**P**	**20 57 45.4**	**+3.0**
	comp=Z,2μmcomp=Z,130nm,1.3s						
FITZ	**Fitzroy Crossi**	**29.21**	**242**	P	**P**	**20 57 42.1**	**-1.0**
	baz=29,SNR=74						
FITZ	**Fitzroy Crossi**	**29.21**	**242**	P	**P**	**20 57 42.4**	**-0.7**
FITZ				IAmb	IAmb	20 57 47.5	
	comp=Z,73nm,0.8s						
KMSI	**Cibinong**	**29.31**	**281**	P	**P**	**20 57 45.0**	**+0.8**
	comp=Z,142nm,0.9s						
CNB	**Canberra Magne**	**29.77**	**185**	P	**P**	**20 57 47.7**	**-0.4**
	baz=30,SNR=4.3						
LUWI	**Luwuk**	**30.20**	**277**	P	P	20 58 02.8	+11
GTOI	**Gorontalo**	**30.27**	**281**	P	**P**	**20 57 54.1**	**+1.4**
WRKA	**Warakurna**	**30.37**	**228**	P	**P**	**20 57 52.2**	**-1.3**
	baz=30,SNR=29						
MMRI	**Maumere**	**30.37**	**262**	P	**P**	**20 57 52.4**	**-1.2**
MMRI	**Maumere**	**30.37**	**262**	P	**P**	**20 57 52.9**	**-0.6**
	comp=Z,2μmcomp=Z,154nm,1.0s						
HTT	**Hallett**	**30.55**	**203**	P	**P**	**20 57 54.3**	**-0.6**
	baz=31,SNR=11						
BBOO	**Buckleboo**	**31.24**	**208**	P	**P**	**20 57 59.9**	**-1.0**
	baz=31,SNR=7.1						
BBOO	**Buckleboo**	**31.24**	**208**	P	**P**	**20 57 58.7**	**-2.3**
BBOO				IAmb	IAmb	20 58 00.4	
	comp=Z,83nm,1.2s						
BBOO				IAMs_20	IAMs_20	21 11 26.8	
	comp=Z,7μm,18.0s						
TOO	**Toolangi**	**32.54**	**191**	P	**P**	**20 58 12.2**	**-0.2**
	baz=33,SNR=5.9						
TOO	**Toolangi**	**32.54**	**191**	IAMs_20	IAMs_20	21 11 46.7	
	comp=Z,7μm,18.0s						
ARPS	**Mount Arapiles**	**32.62**	**196**	P	**P**	**20 58 12.3**	**-0.7**
	baz=33,SNR=7.8						
MBWA	**Marble Bar**	**35.51**	**241**	IAMs_20	IAMs_20	21 14 19.7	
	comp=Z,5μm,18.0s						
PSAC2	**Pilbara Seismi**	**35.51**	**240**	IAMs_20	IAMs_20	21 14 59.7	
	comp=Z,5μm,19.0s						
PSAD1	**Pilbara Seismi**	**35.53**	**240**	IAMs_20	IAMs_20	21 14 57.3	
	comp=Z,5μm,20.0s						
PSAB2	**Pilbara Seismi**	**35.54**	**240**	IAMs_20	IAMs_20	21 14 20.5	
	comp=Z,5μm,18.0s						
PSAA3	**Pilbara Seismi**	**35.55**	**240**	IAMs_20	IAMs_20	21 14 59.9	
	comp=Z,5μm,18.0s						
PSA00	**Pilbara Seismi**	**35.56**	**240**	P	**P**	**20 58 38.3**	**-0.5**
PSA00				IAmb	IAmb	20 58 39.7	
	comp=Z,138nm,1.2s						
PSA00				IAMs_20	IAMs_20	21 14 21.1	
	comp=Z,5μm,21.0s						
PSAB3	**Pilbara Seismi**	**35.56**	**240**	IAMs_20	IAMs_20	21 15 00.1	
	comp=Z,5μm,19.0s						
PSAC1	**Pilbara Seismi**	**35.58**	**240**	IAMs_20	IAMs_20	21 15 10.5	
	comp=Z,5μm,19.0s						
PSAD3	**Pilbara Seismi**	**35.64**	**240**	IAMs_20	IAMs_20	21 15 03.3	
	comp=Z,5μm,18.0s						
MYLDM	**Lahad Datu**	**35.77**	**287**	P	**P**	**20 58 41.2**	**+0.5**
MYLDM				IAmb	IAmb	20 58 58.3	
	comp=Z,121nm,1.0s						
TAU	**Tasmania Unive**	**37.50**	**186**	P	**P**	**20 58 56.1**	**+1.1**
TAU				pmax	pmax		
	comp=Z,149nm,1.5s						
TAU				MLR	MLR		
	comp=Z,4μm,22.0s						
TAU	**Tasmania Unive**	**37.50**	**186**	P	**P**	**20 58 56.1**	**+1.1**
TAU				IAmb	IAmb	20 58 57.7	
	comp=Z,149nm,1.5s						
TAU	**Tasmania Unive**	**37.50**	**186**	IAMs_20	IAMs_20	21 12 30.1	
	comp=Z,4μm,22.0s						
JAGI	**Jajag, Banyuwa**	**38.35**	**263**	P	**P**	**20 58 59.7**	**-2.9**
JAGI				IAmb	IAmb	20 59 11.7	
	comp=Z,88nm,1.0s						
KMBL	**Kambalda**	**38.64**	**225**	P	**P**	**20 59 04.2**	**-0.6**
	baz=39,SNR=9.4						
URZ	**Urewera**	**39.39**	**149**	P	**P**	**20 59 10.0**	**-1.0**
	comp=Z,22nm,0.8s,baz=310,slow=22,SNR=7.2						
JOW	**Kunigami**	**39.95**	**325**	P	**P**	**20 59 13.8**	**-1.9**
JOW				IAmb	IAmb	20 59 26.2	
	comp=Z,131nm,1.1s						
THZ	**Tophouse**	**40.30**	**156**	P	**P**	**20 59 18.8**	**+0.3**
BSWZ	**Blackbird Sta**	**40.66**	**155**	P	**P**	**20 59 20.2**	**-1.2**
FOZ	**Fox Glacier**	**40.72**	**161**	IAMs_20	IAMs_20	21 15 42.0	
	comp=Z,4μm,20.0s						
GIRL	**Giralia**	**40.81**	**242**	P	**P**	**20 59 23.3**	**+0.3**
	baz=41,SNR=3.7						
BFZ	**Birch Farm**	**40.85**	**152**	P	**P**	**20 59 20.9**	**-2.2**
LTZ	**Lake Taylor**	**40.93**	**158**	P	**P**	**20 59 22.6**	**-1.1**
LTZ				IAMs_20	IAMs_20	21 14 23.4	
	comp=Z,3μm,20.0s						
KHZ	**Kahutara**	**41.11**	**156**	IAMs_20	IAMs_20	21 13 56.1	
	comp=Z,4μm,21.0s						
RPZ	**Rata Peaks**	**41.30**	**160**	P	**P**	**20 59 25.4**	**-1.3**
	comp=Z,37nm,1.1s,baz=291,slow=2.8,SNR=8.0						
RPZ				LR	LR	21 14 43.5	
	comp=Z,4μm,20.8s,baz=357,slow=34						
OXZ	**Oxford**	**41.31**	**159**	IAMs_20	IAMs_20	21 14 34.5	
	comp=Z,3μm,19.0s						
KLBR	**Kellerberrin**	**41.72**	**227**	P	**P**	**20 59 28.7**	**-1.6**
	baz=42,SNR=8.8						
MORW	**Morawa**	**41.79**	**232**	P	**P**	**20 59 30.4**	**-0.5**
	baz=42,SNR=9.0						
MORW	**Morawa**	**41.79**	**232**	P	**P**	**20 59 29.2**	**-1.8**
PYZ	**Puysegur Point**	**42.23**	**166**	IAMs_20	IAMs_20	21 17 12.0	
	comp=Z,3μm,19.0s						
SSLB	**Suanglung**	**42.54**	**315**	P	**P**	**20 59 37.3**	**+0.2**
SSLB				IAMs_20	IAMs_20	21 14 41.8	
	comp=Z,3μm,19.0s						
NWAO	**Narrogin (SRO)**	**42.79**	**226**	IAMs_20	IAMs_20	21 18 20.4	
	comp=Z,3μm,20.0s						
JMN	**Monobe**	**42.94**	**337**	P	**P**	**20 59 39.4**	**-0.8**
MUN	**Mundaring**	**43.05**	**228**	P	**P**	**20 59 40.4**	**-0.8**
	baz=43,SNR=7.9						
JGF	**Kuroka**	**43.41**	**342**	P	**P**	**20 59 43.3**	**-0.6**
JNU	**Nakatsue**	**43.69**	**333**	P	**P**	**20 59 45.1**	**-1.2**
	comp=Z,83nm,1.0s,baz=128,slow=4.7						
JNU	**Nakatsue**	**43.69**	**333**	P		**20 59 45.4**	**-0.8**
JNU				IAmb	IAmb	20 59 55.8	
	comp=Z,148nm,1.0s						
JWT	**Wachi**	**43.76**	**339**	P	**P**	**20 59 44.8**	**-2.0**
MJAR	**Matsushiro Arr**	**44.02**	**343**	P	**P**	**20 59 45.8**	**-3.1**
	comp=Z,13nm,0.9s,baz=169,slow=8.6,SNR=28						
MJAR				PcP

YUK *i* SSS SSS 21 12 29.1
YUK MLR MLR
comp=Z,1μm,20.0s
JKA Kamikawa-asahi 50.28 351 P **P** **21 00 36.7 -0.7**
JKA IAmb IAmb 21 00 45.8
comp=Z,73nm,1.0s
ASAJ Asahikawa 50.28 351 P **P** **21 00 36.5 -0.9**
comp=Z,47nm,0.9s,baz=225,slow=15,SNR=12
ASAJ Asahikawa 50.28 351 P **P** **21 00 36.7 -0.8**
ASAJ pmax pmax
comp=Z,73nm,1.0s
ASAJ MLR MLR
comp=Z,2μm,21.0s
UBPT Khong Chiam 51.16 295 P **P** **21 00 46.1 +1.5**
comp=Z,412nmcomp=Z,15nm,1.0s
DL2 Dalian 52.77 330 P **P** **21 01 00.6 +4.4**
DL2 pmax pmax
comp=Z,68nm,1.2s
DL2 pmax pmax
comp=Z,1μm,3.6s
DL2 LR LR
comp=Z,1μm,22.5s
DL2 LR LR
comp=Z,2μm,16.7s
DL2 LR LR
comp=Z,2μm,23.0s
USA0B Ussuriysk Arra 52.93 341 *c i* P **P** **21 00 55.7 -1.6**
USRK Ussuriysk Ar. 52.93 341 P **P** **21 00 56.0 -1.2**
comp=Z,12nm,0.7s,baz=168,slow=8.7,SNR=23
USRK LR LR 21 19 53.4
comp=Z,695nm,22.0s,baz=157,slow=32
YSS Yuzh-Sakhalins 53.02 351 *e* P **P** **21 00 57.2 -0.7**
YSS *e* S **S** **21 08 22.8 -2.2**
YSS *e* 21 10 46.7
YSS *e* SS **SS** **21 12 08.0 +3.2**
YSS pmax pmax
comp=Z,40nm,0.8s
YSS pmax pmax
comp=Z,500nm,6.9s
TIA Tai'an 53.26 324 P **P** **21 00 58.9 -1.0**
TIA S **S** **21 08 28.9 +0.2**
TIA pmax pmax
comp=Z,28nm,1.9s
TIA pmax pmax
comp=Z,550nm,5.9s
TIA LR LR
comp=Z,830nm,18.6s
TIA LR LR
comp=Z,950nm,15.7s
TIA LR LR
comp=Z,1μm,29.4s
SRAK Srakaew 53.89 292 P P 21 01 15.8 +11
comp=Z,2μmcomp=Z,172nm,1.2s
KHON Khomkaen 53.91 295 P **P** **21 01 06.0 +1.0**
comp=Z,97nm,0.9s
MDJ Mudanjiang 54.09 340 P **P** **21 01 04.7 -1.1**
MDJ pP pP 21 01 15.3 -0.7
MDJ sP sP 21 01 19.7 -0.4
MDJ PcP **PcP** **21 02 08.0 -2.3**
MDJ PP **PP** **21 03 06.3 -1.4**
MDJ S **S** **21 08 43.7 +4.1**
MDJ sS sS 21 08 59.4 +1.3
MDJ ScS **ScS** **21 10 51.8 -0.3**
MDJ pmax pmax
comp=Z,24nm,1.1s
MDJ pmax pmax
comp=Z,500nm,4.2s
MDJ LR LR
comp=Z,870nm,17.1s
MDJ LR LR
comp=Z,810nm,15.7s
MDJ LR LR
comp=Z,1μm,17.1s
SNY Shenyang 54.13 333 ⇑P **P** **21 01 07.1 +1.0**
SNY S **S** **21 08 44.7 +4.5**
SNY pmax pmax
comp=Z,550nm,11.2s
SNY LR LR
comp=Z,1μm,16.1s
SNY LR LR
comp=Z,1μm,14.7s
SNY LR LR
comp=Z,1μm,23.1s
PSI Prapat 54.34 277 P **P** **21 01 07.2 -1.2**
comp=Z,24nm,1.1s,baz=179,slow=7.7,SNR=9.3
GYA Guiyang 54.77 308 ⇓P **P** **21 01 12.0 +0.7**
GYA pP pP 21 01 20.4 -0.7
GYA PcP **PcP** **21 02 09.9 -3.6**
GYA S **S** **21 08 50.6 +0.9**
GYA ScS **ScS** **21 10 58.8 +0.8**
GYA pmax pmax
comp=Z,8.0nm,1.0s
GYA pmax pmax
comp=Z,390nm,5.2s
GYA LR LR
comp=Z,730nm,19.0s
GYA LR LR
comp=Z,770nm,20.3s
GYA LR LR
comp=Z,1μm,16.6s
CN2 Changchun 54.94 336 *e* P **P** **21 01 10.8 -1.2**
CN2 *e* S **S** **21 08 53.8 +2.7**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,500nm,8.0s
CN2 LR LR
comp=Z,1μm,16.0s
CN2 LR LR
comp=Z,1μm,16.0s
CN2 LR LR
comp=Z,1μm,18.0s
GSI Gunungsitoli 55.47 275 P **P** **21 01 15.8 -0.5**
GSI IAmb IAmb 21 01 26.4
comp=Z,77nm,1.0s
PHIT Phitsanulok 56.37 295 P **P** **21 01 26.3 +3.6**
comp=Z,199nm,0.9s
UTTA Uttaradit 56.42 295 P **P** **21 01 24.2 +1.1**
comp=Z,707nmcomp=Z,105nm,1.0s
BJI Beijing 56.46 327 P **P** **21 01 22.1 -0.9**
BJI S **S** **21 09 12.5 +1.0**
BJI pmax pmax
comp=Z,5.0nm,1.3s
BJI pmax pmax
comp=Z,440nm,5.9s
BJI LR LR
comp=Z,1μm,18.7s
BJI LR LR
comp=Z,960nm,16.9s
BJI LR LR
comp=Z,1μm,36.7s
TYV Tymovskoe 56.86 352 *e* P **P** **21 01 24.9 -0.7**
TYV *e* S **S** **21 09 17.0 +0.7**
TYV pmax pmax
comp=Z,29nm,1.0s
TYV pmax pmax
comp=Z,700nm,6.2s
TYV smax smax
comp=E,900nm,7.2s
TYV smax smax
comp=E,13nm,1.4s
TIY Taiyuan 57.06 322 *e* P **P** **21 01 28.3 +0.9**
TIY S **S** **21 09 19.6 -0.1**
TIY pmax pmax
comp=E,430nm,8.3s
TIY LR LR
comp=E,1μm,16.3s
TIY LR LR
comp=E,670nm,13.7s
TIY LR LR
comp=E,1μm,18.8s
XAN Xi'an 57.10 317 P **P** **21 01 26.9 -0.8**
XAN pP pP 21 01 35.4 -2.2
XAN S **S** **21 09 21.1 +0.8**
XAN pmax pmax
comp=E,20nm,1.5s
XAN pmax pmax
comp=E,500nm,6.8s
XAN LR LR
comp=E,1μm,17.1s
XAN LR LR
comp=E,500nm,22.5s
XAN LR LR
comp=E,1μm,21.2s
XAN Xi'an 57.10 317 P **P** **21 01 25.1 -2.6**
XAN pmax pmax
comp=Z,87nm,1.2s
XAN MLR MLR
comp=Z,1μm,20.0s
XAN Xi'an 57.10 317 P **P** **21 01 25.1 -2.6**
XAN IAmb IAmb 21 01 39.6
comp=Z,87nm,1.2s
SUKH Sukhothai 57.17 295 P **P** **21 01 30.2 +1.8**
comp=Z,72nm,1.0s
KMI Kunming 57.32 304 ⇓P **P** **21 01 31.1 +1.4**
KMI pP pP 21 01 40.0 +0.4
KMI sP sP 21 01 44.3 -0.2
KMI S **S** **21 09 22.3 -1.6**
KMI pmax pmax
comp=Z,21nm,1.2s
KMI pmax pmax
comp=Z,560nm,8.5s
KMI LR LR
comp=Z,600nm,15.6s
KMI LR LR
comp=Z,770nm,16.9s
KMI LR LR
comp=Z,1μm,16.9s
UMPA Umpang Tak 57.48 293 P P 21 01 41.6 +11
comp=Z,46nm,1.0s
LAMP Lampang 57.51 296 P **P** **21 01 32.3 +1.5**
comp=Z,624nmcomp=Z,92nm,0.8s
KLR Kul'dur 57.54 344 P **P** **21 01 29.5 -0.9**
comp=Z,23nm,0.9s,baz=154,slow=3.5,SNR=32
KLR Kul'dur 57.54 344 *c i* P **P** **21 01 29.4 -1.0**
KLR pmax pmax
comp=Z,47nm,1.1s
PPT Papeete 57.60 107 LR LR 21 22 25.3
comp=Z,504nm,19.7s,baz=280,slow=32
PPT2 Papeete2 57.60 107 *e* S **S** **21 09 29.9 +2.4**
comp=Z,1μm,24.5s
PPT2 *e* LQ LQ 21 15 57.4
comp=Z,2μm,26.2s
PPT2 *e* LR LR 21 18 26.1
comp=Z,768nm,23.0s
CM35 Chiang Mai Arr 57.99 296 P **P** **21 01 34.0 -0.2**
CM36 Chiang Mai Arr 57.99 296 P **P** **21 01 35.0 +0.8**
CM34 Chiang Mai Arr 58.05 296 P **P** **21 01 35.0 +0.4**
CM04 Chiang Mai Arr 58.05 296 P **P** **21 01 36.3 +1.6**
comp=Z,426nmcomp=Z,62nm,1.0s
CM09 Chiang Mai Arr 58.06 296 P **P** **21 01 36.4 +1.7**
comp=Z,511nmcomp=Z,74nm,0.9s
CM01 Chiang Mai Arr 58.08 296 P **P** **21 01 36.0 +1.2**
comp=Z,438nmcomp=Z,61nm,1.0s
CM05 Chiang Mai Arr 58.09 296 P **P** **21 01 36.0 +1.1**
comp=Z,257nmcomp=Z,34nm,1.0s
CM02 Chiang Mai Arr 58.09 296 P **P** **21 01 36.5 +1.6**
comp=Z,409nmcomp=Z,59nm,1.0s
CM31 Chiang Mai Arr 58.10 296 P **P** **21 01 36.0 +1.0**
comp=Z,11μmcomp=Z,2μm,1.0s
CMAR Chiang Mai Arr 58.10 296 P **P** **21 01 35.1 +0.1**
comp=Z,14nm,0.9s,baz=110,slow=5.3,SNR=58
CMAR LR LR 21 25 24.6
comp=Z,343nm,19.9s,baz=147,slow=35
CMAR PKPPKP 21 31 19.5
comp=Z,0.7nm,0.4s,baz=302,slow=2.7,SNR=6.7
CM15 Chiang Mai Arr 58.12 296 P **P** **21 01 36.5 +1.4**
comp=Z,403nmcomp=Z,59nm,1.0s
CM13 Chiang Mai Arr 58.12 296 P **P** **21 01 36.0 +0.8**
comp=Z,379nmcomp=Z,55nm,1.0s
CMMT Chiang Mai 58.22 296 P **P** **21 01 35.6 -0.2**
comp=Z,272nmcomp=Z,19nm,1.1s
CM33 Chiang Mai Arr 58.22 296 P **P** **21 01 36.0 +0.2**
CHTO Chiang Mai 58.22 296 P **P** **21 01 36.6 +0.8**
CHTO pmax pmax
comp=Z,21nm,1.1s
CM32 Chiang Mai Arr 58.26 296 P **P** **21 01 37.0 +0.9**
TBI Tubuai 58.35 114 *e* S **S** **21 09 42.2 +5.3**
comp=Z,853nm,26.0s
TBI *e* LQ LQ 21 16 15.4
comp=Z,2μm,38.2s
TBI *e* LR LR 21 18 46.4
comp=Z,3μm,31.0s
PET Petropavlovsk 58.58 4 *e* P **P** **21 01 37.4 -0.2**
PET *e* 21 03 48.1
PET *e* S **S** **21 09 38.4 -0.4**
PET *e* 21 11 22.6
PET *e* SS **SS** **21 13 36.0 +3.8**
PET pmax pmax
comp=Z,1μm,9.6s
PET pmax pmax
comp=Z,110nm,1.1s
PET pmax pmax
comp=Z,500nm,12.8s
PEA0B Petropavlovsk- 58.60 4 *c* e P **P** **21 01 37.5 -0.2**
PEA0B Petropavlovsk- 58.60 4 P **P** **21 01 37.6 -0.2**
PETK Petropavlovsk- 58.60 4 P **P** **21 01 37.4 -0.4**
comp=Z,78nm,1.0s,baz=145,slow=5.4,SNR=34
PETK LR LR 21 23 01.9
comp=Z,808nm,21.6s,baz=201,slow=32
MHMT Maesarieng 58.93 295 P P 21 01 50.8 +10
CD2 Chengdu 59.15 311 ⇑ *i* P **P** **21 01 42.1 0.0**
CD2 pP pP 21 01 52.8 +0.7
CD2 sP pwP 21 01 58.4 +0.2
CD2 PcP **PcP** **21 02 32.4 +1.9**
CD2 S **S** **21 09 47.1 -0.1**
CD2 SS **SS** **21 13 43.2 +1.1**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,400nm,6.1s
CD2 LR LR
comp=Z,2μm,15.1s
CD2 LR LR
comp=Z,1μm,18.8s
CD2 LR LR
comp=Z,1μm,17.5s
NKL Nikolayevsk 59.37 352 *e* P **P** **21 01 41.0 -2.0**
NKL *e* S **S** **21 09 47.0 -2.0**
NKL *e* 21 11 25.4
NKL pmax pmax
comp=E,44nm,0.6s
NKL pmax pmax
comp=N,2.0nm,0.7s
NKL pmax pmax
comp=Z,45nm,1.3s
NKL smax smax
comp=E,202nm,3.3s
NKL smax smax
comp=N,2.0nm,1.0s
NKL MLR MLR
comp=E,2μm,15.0s
NKL MLR MLR
comp=N,42nm,14.0s
NKL MLR MLR
comp=Z,619nm,17.0s
HHC Hu-ho-hao-te 59.60 325 *e* P **P** **21 01 45.2 +0.1**
HHC sP pwP 21 02 04.6 +3.7
HHC S **S** **21 09 54.5 +1.7**
HHC sS pS 21 10 06.8 +1.5
HHC pmax pmax
comp=Z,31nm,0.9s
HHC pmax pmax
comp=Z,640nm,4.7s
HHC LR LR
comp=Z,1μm,16.1s
HHC LR LR
comp=Z,310nm,15.7s
HHC LR LR
comp=Z,1μm,17.7s
BTO Baotou 60.34 324 P **P** **21 01 49.8 -0.4**
BTO S **S** **21 09 54.0 -8.3**
BTO LR LR
comp=Z,4μm,15.9s
BTO LR LR
comp=Z,4μm,20.0s
LZH Lanzhou 61.70 316 ⇑P **P** **21 02 00.1 +0.5**
LZH pP pP 21 02 08.8 -1.0
LZH sP pwP 21 02 15.2 +0.1
LZH S **S** **21 10 18.8 -1.1**
LZH sS pS 21 10 35.0 +2.9
LZH SS **SS** **21 14 24.9 +2.7**
LZH pmax pmax
comp=Z,26nm,0.8s
LZH pmax pmax
comp=Z,580nm,8.1s
LZH LR LR
comp=Z,850nm,19.5s
LZH LR LR
comp=Z,860nm,19.5s
LZH LR LR
comp=Z,690nm,20.6s
ZEA Zeya 62.84 343 *e* P **P** **21 02 05.9 -0.7**
ZEA *e* S **S** **21 10 32.3 -0.9**
ZEA *e* 21 11 58.1
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA pmax pmax
comp=Z,200nm,4.2s
ZEA pmax pmax
comp=Z,200nm,7.2s
ZEA smax smax
comp=N,400nm,13.5s
ADK Adak 62.91 21 P **P** **21 02 05.9 -1.2**
ADK pmax pmax
comp=Z,177nm,1.3s
ADK Adak 62.91 21 P **P** **21 02 05.9 -1.2**
MOKO MOKOCHONG 64.62 302 *e* P **P** **21 02 18.8 -0.3**
MOKO IAmb IAmb 21 02 33.5
comp=Z,69nm,1.1s
SAIH SAIHA 64.67 298 *e* P **P** **21 02 19.1 -0.4**
DIBR DIBRUGARH 64.70 304 *e* P **P** **21 02 17.8 -1.7**
KOHI KOHIMA 64.76 302 *e* P **P** **21 02 18.8 -1.2**
KOHI IAmb IAmb 21 02 29.7
comp=Z,140nm,1.3s
MA2 Magadan 64.95 359 P **P** **21 02 19.5 -0.8**
comp=Z,34nm,0.8s,baz=151,slow=6.0,SNR=35
MA2 Magadan 64.95 359 *c i* P **P** **21 02 19.3 -1.1**
MA2 pmax pmax
comp=Z,62nm,1.3s
GTA Gaotai 66.14 318 ⇑P **P** **21 02 28.9 +0.2**
GTA pP pP 21 02 37.4 -1.6
GTA sP sP 21 02 40.9 -2.4
GTA S **S** **21 11 18.4 +3.6**
GTA pmax pmax
comp=Z,11nm,1.5s
GTA pmax pmax
comp=Z,410nm,6.4s
GTA LR LR
comp=Z,620nm,18.9s
GTA LR LR
comp=Z,510nm,16.0s
GTA LR LR
comp=Z,660nm,20.7s
CIT Chita 66.33 335 *e* P **P** **21 02 29.6 0.0**
CIT *e* 21 02 53.6
CIT pmax pmax
comp=Z,107nm,1.5s
ULN Ulaanbaatar 66.58 328 *c i* P **P** **21 02 31.7 +0.3**
ULN pmax pmax
comp=Z,22nm,1.0s
SHL Shillong 66.60 301 *e* P **P** **21 02 31.9 -0.1**
SHL IAmb IAmb 21 02 45.8
comp=Z,63nm,1.0s
TAOE Nuku Hiva Isla 66.64 97 *e* S **S** **21 11 27.2 +5.5**
comp=Z,407nm,28.2s
TAOE Nuku Hiva Isla 66.64 97 *e* LR LR 21 22 32.9
comp=Z,584nm,20.8s
SONM Songino Array 66.91 328 P **P** **21 02 33.2 -0.3**
comp=Z,25nm,1.2s,baz=134,slow=5.2,SNR=60
SONM LR LR 21 29 18.3
comp=Z,873nm,21.5s,baz=138,slow=34
SONM PKPPKP **P'P'df** **21 31 03.9 +2.7**
comp=Z,2.1nm,1.1s,baz=318,slow=2.0,SNR=8.7
GUWA GUWAHATI 66.97 301 *e* P **P** **21 02 34.0 -0.1**
GUWA AMP 21 02 38.6
comp=Z,185nm,0.3s
GUWA IAmb IAmb 21 02 44.2
comp=Z,34nm,0.9s
GUWA *e* S **S** **21 11 27.4 +2.4**
CASY Casey 67.26 197 IAMs_20 IAMs_20 21 31 58.8
comp=Z,1μm,18.0s
SEY Seymchan 68.30 360 LR LR 21 30 32.2
comp=Z,264nm,19.6s,baz=156,slow=34
SEY Seymchan 68.30 360 ‖ *e* P **P** **21 02 39.6 -2.1**
LSA Lhasa 68.58 305 P **P** **21 02 45.4 +0.6**
LSA pP **sP** **21 02 58.4 -0.9**
LSA S **S** **21 11 38.9 -6.3**
LSA pmax pmax
comp=Z,58nm,1.4s
LSA LR LR
comp=Z,540nm,18.5s
LSA LR LR
comp=Z,870nm,18.5s
LSA LR LR
comp=Z,1μm,14.2s
AKUT Akutan 68.86 25 P **P** **21 02 43.4 -2.0**
YAK Yakutsk 69.69 349 LR LR 21 31 03.3
comp=Z,412nm,21.2s,baz=130,slow=34
YAK Yakutsk 69.69 349 *c i* P **P** **21 02 49.8 -0.5**
YAK *e* * PP **pP** **21 02 57.5 -3.2**
YAK *e* 21 03 16.1
YAK *e* 21 05 30.7
YAK *e* S **S** **21 11 55.3 -0.8**
YAK *e* * SS **sS** **21 12 16.1 +1.2**
YAK *e* 21 12 46.1
YAK pmax pmax
comp=Z,56nm,1.1s
YAK pmax pmax
comp=N,20nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,127nm,2.7s
YAK pmax pmax
comp=N,78nm,2.7s
YAK pmax pmax
comp=E,49nm,2.8s
YAK smax smax
comp=E,153nm,3.6s
YAK smax smax
comp=N,595nm,5.6s
GTK Tadong 69.94 302 *e* P **P** **21 02 53.4 +0.6**
GTK IAmb IAmb 21 03 02.6
comp=Z,95nm,1.6s
ZAK Zakamensk 70.08 329 *e* P **P** **21 02 52.8 -0.4**
ZAK pmax pmax
comp=Z,49nm,1.0s
BOD Bodaibo 70.46 339 *e* P **P** **21 02 54.4 -0.8**
BOD pmax pmax
comp=Z,63nm,1.6s
TLY Talaya 70.68 330 LR LR 21 34 56.1
comp=Z,495nm,18.1s,baz=118,slow=37
TLY Talaya 70.68 330 *e* P **P** **21 02 57.2 +0.5**
TLY *e* S **S** **21 12 10.7 +2.5**
TLY *e* 21 12 59.3
TLY *e* SS **SS** **21 16 47.1 +6.3**
TLY pmax pmax
comp=Z,67nm,1.3s
TLY MLR MLR
comp=Z,1μm,14.0s
TAPN Taplejung 70.71 301 *e* P **P** **21 02 57.6 -0.1**
comp=Z,121nm,1.3s
IRK Irkutsk 70.71 331 *e* P **P** **21 02 56.2 -0.7**
IRK *e* 21 05 36.6
IRK pmax pmax
comp=Z,56nm,2.6s
ODAN Odare 70.84 301 *e* P **P** **21 02 58.4 0.0**
comp=Z,110nm,1.1s
RAMN Ramite 71.54 301 *e* P **P** **21 03 02.5 -0.2**
RKT Rikitea 71.60 112 *e* S **S** **21 12 22.8 +2.9**
comp=Z,586nm,26.0s
RKT Rikitea 71.60 112 *e* LR LR 21 24 49.0
comp=Z,2μm,32.0s
MOY Mondy 72.01 329 *e* P **P** **21 03 04.9 +0.1**
MOY pmax pmax
comp=Z,99nm,2.1s
VNDA Vanda 72.08 178 P **P** **21 03 03.5 -1.3**
comp=Z,5.6nm,0.9s,baz=327,slow=6.3,SNR=16
VNDA LR LR 21 32 08.8
comp=Z,559nm,18.2s,baz=358,slow=34
VNDA Vanda 72.08 178 P **P** **21 03 04.6 -0.1**
VNDA pmax pmax
comp=Z,26nm,1.4s
VNDA Vanda 72.08 178 P **P** **21 03 04.6 -0.1**
JIRN Jiri 72.09 301 *e* P **P** **21 03 06.0 -0.2**
comp=Z,75nm,1.1s
GUN Gumba 72.42 301 *e* P **P** **21 03 08.0 -0.1**
comp=Z,157nm,1.0s
SBA Scott Base 72.63 177 P **P** **21 03 09.7 +1.7**
PKI Pulchoki 72.73 301 *e* P **P** **21 03 09.8 -0.1**
comp=Z,44nm,1.1s
PKIN Phulchoki 72.74 301 *e* P **P** **21 03 09.4 -0.5**
comp=Z,66nm,1.3s
KKN Kakani 72.90 301 *e* P **P** **21 03 10.6 -0.2**
comp=Z,69nm,0.9s

PALK	**Pallekele**	**72.95**	**279**	P		**P**		**21 03 10.7**	**-0.4**
	comp=Z,4.2nm,0.6s,baz=210,slow=7.4,SNR=6.0								
DMN	**Daman**	**73.00**	**301**	*e*P		**P**		**21 03 11.5**	**+0.1**
	comp=Z,99nm,1.0s								
GKN	**Gorkha**	**73.50**	**301**	*e*P		**P**		**21 03 14.1**	**-0.2**
	comp=Z,121nm,1.0s								
BILL	**Bilibino**	**74.05**	**5**‖	*i*P		**P**		**21 03 15.6**	**-0.8**
BILL				*e*				21 06 01.6	
BILL				*i* S		**S**		**21 12 48.0**	**+1.9**
BILL				*i*				21 13 33.1	
BILL				pmax	pmax				
	comp=Z,150nm,1.0s								
GAMB	**Gambell**	**74.14**	**16**	IAMs_20	IAMs_20			21 35 31.8	
	comp=Z,2μm,22.0s								
GAMB	**Gambell**	**74.14**	**16**	P				21 03 17.6	
	baz=217								
KOLN	**Koldanda**	**74.33**	**301**	*e*P		**P**		**21 03 18.5**	**-0.7**
	comp=Z,89nm,0.9s								
PYUN	**Piuthan**	**74.93**	**301**	*e*P		**P**		**21 03 22.1**	**-0.6**
	comp=Z,110nm,0.8s								
SII	**Sitkinak Islan**	**75.49**	**27**	P				21 03 24.1	
	baz=235								
SII	**Sitkinak Islan**	**75.49**	**27**	IAMs_20	IAMs_20			21 43 15.0	
	comp=Z,1μm,18.0s								
WMQ	**Urumqi**	**76.22**	**318**	P		**P**		**21 03 29.8**	**+0.2**
WMQ				pP		pP		21 03 38.7	-1.3
WMQ				sP		PcP		21 03 42.8	+1.3
WMQ				S		**S**		**21 13 11.9**	**+0.6**
WMQ				pmax	pmax				
	comp=Z,42nm,1.5s								
WMQ				pmax	pmax				
	comp=Z,460nm,3.7s								
WMQ				LR	LR				
	comp=Z,560nm,14.9s								
WMQ				LR	LR				
	comp=Z,610nm,16.3s								
WMQ				LR	LR				
	comp=Z,1μm,18.9s								
OHAK	**Old Harbor**	**76.27**	**27**	P		**P**		**21 03 28.6**	**-0.8**
OHAK				IAmb	IAmb			21 03 32.5	
	comp=Z,42nm,0.9s								
OHAK	**Old Harbor**	**76.27**	**27**	P				21 03 28.3	
	baz=236								
ANM	**Nome**	**76.53**	**17**	P				21 03 31.2	
	baz=223								
ANM	**Nome**	**76.53**	**17**	P		**P**		**21 03 31.3**	**+0.5**
ANM				pmax	pmax				
	comp=Z,54nm,1.0s								
ANM				MLR	MLR				
	comp=Z,800nm,18.0s								
ANM	**Nome**	**76.53**	**17**	P		**P**		**21 03 31.2**	**+0.5**
ANM				IAmb	IAmb			21 03 34.4	
	comp=Z,54nm,1.0s								
TNA	**Tin City**	**76.55**	**16**	P		**P**		**21 03 30.5**	**-0.3**
TNA				IAmb	IAmb			21 03 34.1	
	comp=Z,40nm,1.1s								
TNA				IAMs_20	IAMs_20			21 34 45.6	
	comp=Z,2μm,20.0s								
TNA	**Tin City**	**76.55**	**16**	P				21 03 30.4	
	baz=220								
HYB	**Hyderabad**	**76.64**	**289**	*i* P		**P**		**21 03 32.0**	**-0.4**
HYB				*e*PcP		**pP**		**21 03 42.0**	**-0.4**
HYB	**Hyderabad**	**76.64**	**289**	*e*P		**P**		**21 03 32.0**	**-0.4**
HYB				IAmb	IAmb			21 03 42.7	
	comp=Z,24nm,0.8s								
KDAK	**Kodiak Island**	**76.90**	**27**	P		**P**		**21 03 31.8**	**-1.2**
	comp=Z,31nm,1.0s,baz=225,slow=3.0,SNR=8.8								
KDAK				LR	LR			21 32 32.8	
	comp=Z,806nm,20.7s,baz=253,slow=32								
KDAK	**Kodiak Island**	**76.90**	**27**‖	*e*P		**P**		**21 03 31.7**	**-1.2**
KDAK				pmax	pmax				
	comp=Z,53nm,1.0s								
KDAK	**Kodiak Island**	**76.90**	**27**	P		**P**		**21 03 32.2**	**-0.7**
KDAK				IAmb	IAmb			21 03 45.9	
	comp=Z,54nm,1.2s								
KDAK	**Kodiak Island**	**76.90**	**27**	IAMs_20	IAMs_20			21 32 10.2	
	comp=Z,1μm,20.0s								
KDAK	**Kodiak Island**	**76.90**	**27**	P				21 03 32.3	
	baz=236								
HOM	**Homer**	**78.34**	**25**	IAMs_20	IAMs_20			21 36 16.1	
	comp=Z,1μm,19.0s								
HOM	**Homer**	**78.34**	**25**	P				21 03 41.5	
	baz=237,SNR=5.1								
DGZ	**Jazzator, Alta**	**78.62**	**323***c*	*i* P		**P**		**21 03 42.9**	**-0.1**
DGZ				pmax	pmax				
	comp=Z,85nm,2.0s								
TIXI	**Tiksi**	**78.63**	**352**	LR	LR			21 37 58.4	
	comp=Z,253nm,19.2s,baz=110,slow=35								
TIXI	**Tiksi**	**78.63**	**352***c*	*i* P		**P**		**21 03 40.9**	**-1.4**
TIXI				pmax	pmax				
	comp=Z,149nm,1.3s								
TIXI	**Tiksi**	**78.63**	**352**	P		**P**		**21 03 42.0**	**-0.3**
BRLK	**Bradley Lake**	**78.72**	**25**	IAmb	IAmb			21 03 56.6	
	comp=Z,67nm,1.2s								
BRLK				IAMs_20	IAMs_20			21 36 55.9	
	comp=Z,1μm,19.0s								
BHPL	**Bhopal**	**78.75**	**295**	*e*P		**P**		**21 03 43.1**	**-1.0**
BHPL				IAmb	IAmb			21 03 54.9	
	comp=Z,34nm,0.8s								
BRSE	**Bradley Lake S**	**78.77**	**26**	P				21 03 42.8	
	baz=238								
SPCR	**Spurr Chakacha**	**78.95**	**24**	P				21 03 43.3	
	baz=236								
CAPN	**Captain Cook N**	**79.14**	**25**	P				21 03 46.1	
	baz=237,SNR=8.6								
ZSN	**Zaisan**	**79.38**	**320**	*e*P		**P**		**21 03 46.8**	**-0.2**
	comp=Z,27nm,1.8s,baz=320								
ZSN				*e*S		**S**		**21 13 45.8**	**+0.6**
	baz=320								
ZSN	**Zaisan**	**79.38**	**320**	*e*P		**P**		**21 03 46.8**	**-0.2**
ZSN				*e*S		**S**		**21 13 45.7**	**+0.6**
ZSN				pmax	pmax				
	comp=Z,27nm,1.8s								
O22K	**Cooper Landing**	**79.59**	**25**	IAMs_20	IAMs_20			21 34 40.4	
	comp=Z,1μm,20.0s								
O22K	**Cooper Landing**	**79.59**	**25**	P				21 03 47.8	
	baz=239,SNR=8.1								
DDI	**Dehra Dun**	**79.65**	**302**	*e*P		**P**		**21 03 49.6**	**+0.7**
DDI				IAmb	IAmb			21 04 01.7	
	comp=Z,112nm,1.1s								
SKT	**Skwentna**	**79.65**	**23**	P				21 03 46.1	
	baz=237,SNR=6.5								
SUA	**Susitna One**	**79.69**	**24**	P				21 03 47.2	
	baz=238,SNR=17								
SUA	**Susitna One**	**79.69**	**24**	IAmb	IAmb			21 03 60.0	
	comp=Z,46nm,0.8s								
SUA				IAMs_20	IAMs_20			21 34 23.9	
	comp=Z,1μm,20.0s								
RDOG	**Red Dog Mine**	**79.74**	**16**	IAMs_20	IAMs_20			21 37 24.8	
	comp=Z,4μm,19.0s								
RC01	**Rabbit Creek A**	**79.90**	**25**	IAMs_20	IAMs_20			21 45 30.6	
	comp=Z,972nm,18.0s								
RC01	**Rabbit Creek A**	**79.90**	**25**	P				21 03 48.4	
	baz=238,SNR=31								
PPLA	**Purkeypile**	**79.91**	**22**	P				21 03 49.0	
	baz=236,SNR=13								
PPLA	**Purkeypile**	**79.91**	**22**	IAMs_20	IAMs_20			21 35 58.7	
	comp=Z,1μm,20.0s								
PWL	**Port Wells**	**80.37**	**25**	IAMs_20	IAMs_20			21 45 54.0	
	comp=Z,2μm,18.0s								
CUT	**Chulitna**	**80.38**	**23**	P				21 03 51.1	
	baz=238,SNR=8.5								
PMR	**Palmer**	**80.41**	**24**	P				21 03 51.1	
	baz=239,SNR=35								
CHUM	**Lake Minchumin**	**80.42**	**22**	P				21 03 52.1	
	baz=236,SNR=60								
SMLA	**Simla**	**80.57**	**303**	*e*P		**P**		**21 03 53.2**	**-0.5**
SMLA				AMP				21 04 09.3	
	comp=Z,151nm,1.1s								
KNK	**Knik Glacier**	**80.60**	**25**	P				21 03 53.0	
	baz=240								
KNK	**Knik Glacier**	**80.60**	**25**	IAMs_20	IAMs_20			21 46 34.0	
	comp=Z,1μm,18.0s								
MNCY	**Minicoy**	**80.61**	**279**‖	*e*P		**P**		**21 03 54.7**	**+0.4**
MNCY				IAmb	IAmb			21 04 09.0	
	comp=Z,278nm,1.5s								
KTH	**Kantishna Hill**	**80.75**	**22**	IAmb	IAmb			21 03 55.1	
	comp=Z,80nm,1.2s								
MK31	**Makanchi Array**	**80.83**	**319***c*	*i* P		**P**		**21 03 54.7**	**-0.1**
MK31	**Makanchi Array**	**80.83**	**319**	P		**P**		**21 03 55.1**	**+0.3**
MK31				IAmb	IAmb			21 04 08.5	
	comp=Z,66nm,1.4s								
MKAR	**Makanchi Array**	**80.83**	**319**	P		**P**		**21 03 54.8**	**-0.1**
	comp=Z,13nm,0.9s,baz=100,slow=6.7,SNR=53								
MKAR				PKKPbc	**PKKPbc**			**21 22 40.9**	**+5.4**
	comp=Z,0.5nm,0.8s,baz=270,slow=1.1,SNR=4.8								
MKAR				PKPPKP	**P'P'df**			**21 30 40.5**	**+3.1**
	comp=Z,1.1nm,1.1s,baz=318,slow=1.9,SNR=6.1								
MKAR				LR	LR			21 41 06.6	
	comp=Z,457nm,18.8s,baz=100,slow=37								
MKAR	**Makanchi Array**	**80.83**	**319**	*i* P		**P**		**21 03 54.7**	**-0.1**
MKAR				pmax	pmax				
	comp=Z,14nm,0.9s								
SML	**Sawmill**	**80.85**	**24**	P				21 03 54.2	
	baz=240,SNR=50								
GLI	**Glacier Island**	**80.91**	**25**	IAmb	IAmb			21 03 58.1	
	comp=Z,69nm,1.0s								
GLI	**Glacier Island**	**80.91**	**25**	P				21 03 54.1	
	baz=241,SNR=9.7								
TRF	**Thorofare Moun**	**80.93**	**22**	P				21 03 53.6	
	baz=238,SNR=14								
TRF	**Thorofare Moun**	**80.94**	**22**	P		**P**		**21 03 54.0**	**-1.2**
TRF				IAMs_20	IAMs_20			21 35 30.8	
	comp=Z,1μm,20.0s								
BPAW	**Bear Paw Mtn.**	**81.03**	**22**	P		**P**		**21 03 55.3**	**-0.2**
BPAW				IAmb	IAmb			21 03 57.5	
	comp=Z,70nm,1.4s								
BPAW	**Bear Paw Mtn.**	**81.03**	**22**	P				21 03 54.0	
	baz=237,SNR=39								
MAKZ	**Makanchi**	**81.03**	**319**	P		**P**		**21 03 56.2**	**+0.3**
MAKZ				pmax	pmax				
	comp=Z,47nm,1.0s								
MAKZ				MLR	MLR				
	comp=Z,700nm,20.0s								
MAKZ	**Makanchi**	**81.03**	**319**	P		**P**		**21 03 56.2**	**+0.3**
MAKZ				IAmb	IAmb			21 04 08.9	
	comp=Z,47nm,1.0s								
FID	**Port Fidalgo**	**81.11**	**26**	IAmb	IAmb			21 04 09.6	
	comp=Z,61nm,1.1s								
FID				IAMs_20	IAMs_20			21 43 43.0	
	comp=Z,1μm,18.0s								
SCM	**Sheep Creek Mo**	**81.28**	**25**	IAMs_20	IAMs_20			21 46 53.9	
	comp=Z,1μm,18.0s								
EYAK	**Cordova Ski Ar**	**81.33**	**26**	P				21 03 56.5	
	baz=242								
WAT2	**Susitna Watana**	**81.34**	**23**	P				21 03 56.1	
	baz=239,SNR=42								
RND	**Reindeer**	**81.46**	**23**	IAMs_20	IAMs_20			21 34 29.6	
	comp=Z,1μm,22.0s								
WAT6	**Susitna Watana**	**81.48**	**24**	P				21 03 57.2	
	baz=240,SNR=46								
MCK	**McKinley**	**81.60**	**23**	P				21 03 57.2	
	baz=239,SNR=102								
MCK	**McKinley**	**81.60**	**23**	IAMs_20	IAMs_20			21 37 49.3	
	comp=Z,1μm,20.0s								
MLY	**Manley**	**81.62**	**21**	P				21 03 58.1	
	baz=237,SNR=69								
MLY	**Manley**	**81.62**	**21**	IAmb	IAmb			21 04 11.2	
	comp=Z,71nm,0.9s								
BWN	**Browne**	**81.63**	**22**	IAMs_20	IAMs_20			21 36 05.7	
	comp=Z,1μm,19.0s								
KAIM	**Kayak Island**	**81.64**	**27**	P				21 03 59.0	
	baz=244								
SHLS	**Shalkode**	**81.69**	**315**	*e*P		**P**		**21 03 58.2**	**-1.5**
	comp=Z,15nm,1.3s,baz=315								
SHLS				*e*S		**S**		**21 14 07.2**	**-2.5**
	baz=315								
SHLS	**Shalkode**	**81.69**	**315**	*e*P		**P**		**21 03 58.1**	**-1.5**
SHLS				*e*S		**S**		**21 14 07.2**	**-2.5**
SHLS				pmax	pmax				
	comp=Z,15nm,1.3s								
KLU	**Klutina**	**81.70**	**25**	P				21 03 59.0	
	baz=242,SNR=56								
PDGK	**Podgornoye**	**81.72**	**315**	*i* P		**P**		**21 03 59.5**	**-0.3**
PDGK				pmax	pmax				
	comp=Z,45nm,1.0s								
ZAA0	**Zalesovo Array**	**81.72**	**326**	P		**P**		**21 03 58.7**	**-0.6**
ZALV	**Zalesovo Beam**	**81.72**	**326**	P		**P**		**21 03 58.3**	**-1.0**
	comp=Z,16nm,0.8s,baz=104,slow=4.7,SNR=32								
ZALV				LR	LR			21 40 31.7	
	comp=Z,594nm,20.7s,baz=106,slow=36								
ZALV	**Zalesovo Beam**	**81.72**	**326**	*i* P		**P**		**21 03 58.2**	**-1.2**
ZALV				pmax	pmax				
	comp=Z,16nm,0.9s								
M24K	**Tolsona, Glenn**	**81.89**	**25**	IAMs_20	IAMs_20			21 36 05.1	
	comp=Z,1μm,21.0s								
M24K	**Tolsona, Glenn**	**81.89**	**25**	P				21 04 00.0	
	baz=242,SNR=36								
HMT	**Hamilton**	**81.90**	**27**	IAmb	IAmb			21 04 03.8	
	comp=Z,58nm,1.0s								
HMT				IAMs_20	IAMs_20			21 43 24.4	
	comp=Z,1μm,18.0s								
NEA2	**Nenana**	**82.00**	**22**	IAmb	IAmb			21 04 12.3	
	comp=Z,61nm,0.9s								
NEA2	**Nenana**	**82.00**	**22**	P				21 03 59.1	
	baz=239,SNR=65								
UZB	**Uzynbulak**	**82.00**	**315**	*e*P		**P**		**21 04 01.3**	**0.0**
	comp=Z,24nm,1.7s,baz=315								
UZB				*e*S		**S**		**21 14 13.5**	**+0.5**
	baz=315								
UZB	**Uzynbulak**	**82.00**	**315**	*e*P		**P**		**21 04 01.3**	**0.0**
UZB				*e*S		**S**		**21 14 13.5**	**+0.5**
UZB				pmax	pmax				
	comp=Z,24nm,1.7s								
BMRM	**Bremner River**	**82.03**	**26**	IAMs_20	IAMs_20			21 35 54.8	
	comp=Z,1μm,20.0s								
BMRM	**Bremner River**	**82.03**	**26**	P				21 04 00.4	
	baz=243								
I23K	**Minto, Yukon-K**	**82.18**	**21**	P				21 04 00.6	
	baz=238,SNR=13								
WRH	**Wood River Hil**	**82.30**	**22**	IAMs_20	IAMs_20			21 36 44.7	
	comp=Z,1μm,20.0s								
KPKS	**Kokpek**	**82.32**	**315**	*e*P		**P**		**21 04 02.1**	**-0.8**
	comp=Z,49nm,2.4s,baz=315								
KPKS				*e*S		**S**		**21 14 16.9**	**+0.7**
	baz=315								
KPKS	**Kokpek**	**82.32**	**315**	*e*P		**P**		**21 04 02.9**	**0.0**
KPKS				*e*S		**S**		**21 14 16.8**	**+0.7**
KPKS				pmax	pmax				
	comp=Z,49nm,2.4s								
N25K	**Chitina, Valde**	**82.32**	**25**	P				21 04 02.4	
	baz=243,SNR=27								
N25K	**Chitina, Valde**	**82.32**	**25**	IAmb	IAmb			21 04 16.8	
	comp=Z,58nm,1.1s								
SATY	**Saty**	**82.41**	**315**	*e*P		**P**		**21 04 03.6**	**+0.1**
	comp=Z,35nm,2.4s,baz=314								
SATY				*e*S		**S**		**21 14 18.1**	**+0.9**
	baz=314								
SATY	**Saty**	**82.41**	**315**	*e*P		**P**		**21 04 03.5**	**+0.1**
SATY				*e*S		**S**		**21 14 18.0**	**+0.9**
SATY				pmax	pmax				
	comp=Z,35nm,2.4s								
CCB	**Clear Creek Bu**	**82.49**	**22**	IAmb	IAmb			21 04 14.7	
	comp=Z,54nm,1.0s								
PAX	**Paxson**	**82.58**	**24**	P				21 04 02.8	
	baz=242,SNR=19								
TCOL	**CIGO, UAF Yank**	**82.58**	**22**	P				21 04 02.3	
	baz=240,SNR=13								
COLA	**College**	**82.59**	**22***c*	*i* P		**P**		**21 04 02.0**	**-1.6**
COLA				pmax	pmax				
	comp=Z,93nm,1.1s								
COLA	**College**	**82.59**	**22**	P				21 04 02.5	
	baz=240								
CRQE	**Cirque**	**82.60**	**26**	P				21 04 03.7	
	baz=245								
HDA	**Harding Lake**	**82.69**	**22**	IAMs_20	IAMs_20			21 37 07.3	
	comp=Z,1μm,19.0s								
HDA	**Harding Lake**	**82.69**	**22**	P				21 04 02.9	
	baz=241,SNR=29								
HDA				P				21 04 02.9	
	baz=241,SNR=29								
TGL	**Tana Glacier**	**82.72**	**27**	IAmb	IAmb			21 04 18.7	
	comp=Z,42nm,1.0s								
POKR	**Poker Plat Res**	**82.86**	**22**	P				21 04 04.3	
	baz=240,SNR=6.5								
ILAR	**Eielson Array**	**82.90**	**22**	P		**P**		**21 04 03.2**	**-2.0**
	comp=Z,40nm,1.1s,baz=251,slow=4.5,SNR=107								
ILAR				LR	LR			21 37 54.4	
	comp=Z,804nm,19.5s,baz=250,slow=34								
MCARA	**McCarthy VSAT**	**82.90**	**26**	P				21 04 05.3	
	baz=245								
MCARA	**McCarthy VSAT**	**82.90**	**26**	IAmb	IAmb			21 04 19.0	
	comp=Z,66nm,1.1s								
TDK	**Taldyqorghan**	**82.91**	**317**	*e*P		**P**		**21 04 06.0**	**+0.1**
	comp=Z,137nm,2.8s,baz=316								
TDK				*e*S		**S**		**21 14 22.9**	**+0.9**
	baz=316								
TDK	**Taldyqorghan**	**82.91**	**317**	*e*P		**P**		**21 04 05.9**	**+0.1**
TDK				*e*S		**S**		**21 14 22.9**	**+0.9**
TDK				pmax	pmax				
	comp=Z,137nm,2.8s								
COLD	**Coldfoot**	**83.00**	**19**	IAMs_20	IAMs_20			21 38 37.3	
	comp=Z,1μm,20.0s								
COLD	**Coldfoot**	**83.00**	**19**	P				21 04 06.0	
	baz=237,SNR=26								
YAH	**Yahtse**	**83.04**	**27**	IAmb	IAmb			21 04 20.2	
	comp=Z,36nm,1.0s								
YAH				IAMs_20	IAMs_20			21 44 22.5	
	comp=Z,1μm,18.0s								
SEM	**Semipalatinsk**	**83.21**	**322**	*e*P		**P**		**21 04 06.2**	**-1.3**
	comp=Z,47nm,2.6s,baz=322								
SEM				*e*S		**S**		**21 14 24.1**	**-1.1**
	baz=322								
SEM	**Semipalatinsk**	**83.21**	**322**	*e*P		**P**		**21 04 06.2**	**-1.3**
SEM				*e*S		**S**		**21 14 24.1**	**-1.1**
SEM				pmax	pmax				
	comp=Z,47nm,2.6s								
MENT	**Mentasta**	**83.28**	**24**	IAMs_20	IAMs_20			21 36 26.9	
	comp=Z,1μm,20.0s								
KSH	**Kashi**	**83.35**	**311**	P		**P**		**21 04 09.7**	**+1.4**
KSH				pP		pP		21 04 20.2	+1.2
KSH				S		**S**		**21 14 28.8**	**+2.0**
KSH				pmax	pmax				
	comp=Z,24nm,0.9s								
KSH				pmax	pmax				
	comp=Z,660nm,3.1s								
KSH				LR	LR				
	comp=Z,310nm,12.3s								
KSH				LR	LR				
	comp=Z,610nm,10.7s								
KSH				LR	LR				
	comp=Z,360nm,9.6s								
BARN	**Barnard Glacie**	**83.36**	**26**	IAmb	IAmb			21 04 11.8	
	comp=Z,52nm,1.0s								
MDOK	**Medeo**	**83.40**	**314**	*e*P		**P**		**21 04 08.9**	**+0.3**
	baz=314								
MDOK				*e*S		**S**		**21 14 27.5**	**+0.2**
	baz=314								
MDOK	**Medeo**	**83.40**	**314**	*e*P		**P**		**21 04 08.9**	**+0.3**
MDOK				*e*S		**S**		**21 14 27.4**	**+0.2**
TNSS	**Tian-Shan**	**83.44**	**314**	*e*P		**P**		**21 04 09.8**	**+0.7**
	baz=314								
TNSS	**Tian-Shan**	**83.44**	**314**	*e*P		**P**		**21 04 09.8**	**+0.7**
AAA	**Alma-Ata**	**83.50**	**314**	*e*P		**P**		**21 04 09.2**	**+0.1**
	baz=314								
AAA				*e*S		**S**		**21 14 28.0**	**-0.2**
	baz=314								
AAA	**Alma-Ata**	**83.50**	**314**	*e*P		**P**		**21 04 09.1**	**+0.1**
AAA				*e*S		**S**		**21 14 27.9**	**-0.2**
LOGN	**Logan Glacier**	**83.56**	**27**	IAmb	IAmb			21 04 24.3	
	comp=Z,32nm,1.0s								
A21K	**Barrow**	**83.56**	**15**	P				21 04 07.6	
	baz=231,SNR=9.0								
PCA	**Pinnacle**	**83.61**	**28**	IAMs_20	IAMs_20			21 45 51.9	
	comp=Z,1μm,18.0s								
PINM	**Pinnacle**	**83.62**	**28**	P				21 04 09.2	
	baz=247								
SCRK	**Sand Creek**	**83.64**	**23**	IAmb	IAmb			21 04 21.8	
	comp=Z,35nm,0.9s								
SCRK				IAMs_20	IAMs_20			21 44 28.2	
	comp=Z,1μm,19.0s								
SCRK	**Sand Creek**	**83.64**	**23**	P				21 04 08.6	
	baz=244,SNR=38								
PRP	**Porcupine Dome**	**83.76**	**22**	P				21 04 07.5	
	baz=242								
ULHL	**Ulahol**	**83.76**	**313**	P		**P**		**21 04 11.3**	**+0.8**
	SNR=12								
TOLK	**Toolik Lake Re**	**83.96**	**18**	P				21 04 10.8	
	baz=238,SNR=34								
KUU	**Kurty**	**84.07**	**315**	*e*P		**P**		**21 04 11.9**	**+0.1**
	comp=Z,105nm,1.2s,baz=315								
KUU				*e*S		**S**		**21 14 31.6**	**-2.2**
	baz=315								
KUU	**Kurty**	**84.07**	**315**	*e*P		**P**		**21 04 11.8**	**0.0**
KUU				*e*S		**S**		**21 14 31.5**	**-2.2**
KUU				pmax	pmax				
	comp=Z,105nm,1.2s								
L27K	**Beaver Creek,**	**84.12**	**25**	P				21 04 11.6	
	baz=246								
L27K	**Beaver Creek,**	**84.12**	**25**	IAMs_20	IAMs_20			21 43 25.0	
	comp=Z,931nm,18.0s								
NIL	**Nilore**	**84.31**	**305**	P		**P**		**21 04 12.8**	**-0.5**
NIL				pmax	pmax				
	comp=Z,127nm,0.9s								
NIL	**Nilore**	**84.31**	**305**	P		**P**		**21 04 12.8**	**-0.5**
FYU	**Fort Yukon**	**84.36**	**21**	IAmb	IAmb			21 04 25.9	
	comp=Z,55nm,1.1s								
TKM2	**Tokmak 2**	**84.38**	**314**	P		**P**		**21 04 14.2**	**+0.5**
	SNR=41								
TKM2	**Tokmak 2**	**84.38**	**314**	*i* P		**P**		**21 04 13.9**	**+0.2**
TKM2				pmax	pmax				
	comp=Z,112nm,1.2s								
QSPA	**South Pole Qui**	**84.41**	**180**	P		**P**		**21 04 12.0**	**-1.2**
	comp=Z,12nm,0.9s,baz=340,slow=1.4,SNR=44								
QSPA	**South Pole Qui**	**84.41**	**180**	P		**P**		**21 04 12.6**	**-0.6**
QSPA				IAmb	IAmb			21 04 24.9	
	comp=Z,26nm,0.9s								
K27K	**Chicken**	**84.42**	**24**	P				21 04 13.5	
	baz=245								
K27K	**Chicken**	**84.42**	**24**	IAMs_20	IAMs_20			21 35 50.0	
	comp=Z,1μm,20.0s								
KBK	**Karagaybulak**	**84.79**	**314**	P		**P**		**21 04 16.3**	**+0.6**
	SNR=51								
MAW	**Mawson**	**84.83**	**203**	P		**P**		**21 04 14.5**	**-0.6**
	comp=Z,4.0nm,0.6s,baz=98,slow=7.9,SNR=7.8								
MAW				LR	LR			21 38 10.8	
	comp=Z,955nm,21.9s,baz=72,slow=33								
MAW	**Mawson**	**84.83**	**203**	P		**P**		**21 04 13.9**	**-1.2**
MAW				pmax	pmax				
	comp=Z,4.0nm,1.1s								
MAW	**Mawson**	**84.83**	**203**	P		**P**		**21 04 13.9**	**-1.2**
SIT	**Sitka**	**84.97**	**31**	P				21 04 16.7	
	baz=252								
SIT	**Sitka**	**84.97**	**31**	IAMs_20	IAMs_20			21 38 02.0	
	comp=Z,1μm,20.0s						

comp=Z,16nm,0.9s,baz=313
DZA eS S 21 14 53.0 -14
baz=313
DZA Taraz 87.44 313 eP **P** **21 04 28.7 +0.1**
DZA eS S 21 14 53.0 -14
DZA pmax pmax
comp=Z,17nm,0.9s
BBB Bella Bella 87.76 37 LR LR 21 38 45.2
comp=Z,457nm,19.6s,baz=259,slow=32
BRZS Berezniki 87.83 320 eP **P** **21 04 29.0 -1.2**
baz=320
BRZS Berezniki 87.83 320 eP **P** **21 04 29.0 -1.2**
DLBC Dease Lake 88.08 31 P **P** **21 04 31.4 0.0**
comp=Z,19nm,1.2s,baz=247,slow=5.4,SNR=19
IUG luznay 88.27 312 eP **P** **21 04 32.6 0.0**
comp=Z,9.7nm,1.1s,baz=312
IUG eS S 21 14 58.1 -17
baz=312
IUG luznay 88.27 312 eP **P** **21 04 32.6 0.0**
IUG eS S 21 14 58.1 -17
IUG pmax pmax
comp=Z,10.0nm,1.1s
KRMB Red Mountain 88.72 48 IAMs_20 IAMs_20 21 43 47.2
comp=Z,1μm,18.0s
KHMM Horse Mountain 88.75 49 IAMs_20 IAMs_20 21 48 58.2
comp=Z,1μm,18.0s
MCCM Marconi Confer 89.02 52 IAMs_20 IAMs_20 21 37 11.6
comp=Z,2μm,20.0s
INK Inuvik 89.19 21 P **P** **21 04 35.6 -0.6**
comp=Z,72nm,1.2s,baz=238,slow=5.1,SNR=49
INK Inuvik 89.19 21 IAMs_20 IAMs_20 21 40 53.1
comp=Z,1μm,21.0s
HUMO Hull Mountain 89.57 47 IAMs_20 IAMs_20 21 42 05.8
comp=Z,1μm,18.0s
NLWA Neilton Lookou 89.61 42 IAMs_20 IAMs_20 21 43 53.6
comp=Z,1μm,20.0s
YBH Yreka Blue Hor 89.64 48 LR LR 21 37 34.5
comp=Z,1μm,20.4s,baz=268,slow=31
E03A Lebam 89.70 43 IAMs_20 IAMs_20 21 35 35.8
comp=Z,1μm,20.0s
BRVK Borovoye 89.85 323*c* iP **P** **21 04 38.5 -1.1**
BRVK pmax pmax
comp=Z,19nm,0.9s
BRVK Borovoye 89.85 323 P **P** **21 04 38.5 -1.1**
BRVK Borovoye 89.85 323 IAMs_20 IAMs_20 21 47 52.7
comp=Z,970nm,18.0s
SAO San Andreas Ge 89.98 53 IAMs_20 IAMs_20 21 40 14.0
comp=Z,1μm,19.0s
PGC Sidney 90.08 41 IAMs_20 IAMs_20 21 40 21.7
comp=Z,1μm,18.0s
I04A Tendick Farm, 90.13 46 P 21 04 42.1
baz=262
D03D Eldon 90.16 42 P 21 04 41.8
baz=262
ORV Oroville 90.27 50 IAMs_20 IAMs_20 21 37 44.5
comp=Z,909nm,21.0s
M04C Macdoel 90.29 48 P 21 04 44.9
baz=263
E04D Cinebar 90.38 43 P 21 04 42.5
baz=262
H04A Detroit Lake 90.40 45 IAMs_20 IAMs_20 21 46 38.6
comp=Z,1μm,18.0s
AFDM Forest Hills D 90.61 51 IAMs_20 IAMs_20 21 38 21.5
comp=Z,946nm,20.0s
D05A Enumclaw 90.86 43 IAMs_20 IAMs_20 21 36 36.4
comp=Z,1μm,22.0s
J05D Fort Rock, OR 90.91 47 P 21 04 45.6
baz=263
B05A Bryant 90.92 42 P 21 04 45.0
baz=263
A05A Maple Falls 91.02 41 IAMs_20 IAMs_20 21 43 52.6
comp=Z,1μm,19.0s
K05A Summer Lake 91.10 47 IAMs_20 IAMs_20 21 42 38.1
comp=Z,1μm,20.0s
BEKR Beckworth 91.18 50 IAMs_20 IAMs_20 21 40 13.6
comp=Z,1μm,20.0s
PINE Pine Mountain 91.18 46 IAMs_20 IAMs_20 21 41 52.3
comp=Z,1μm,20.0s
RUBR Rubicon Trail 91.25 51 IAMs_20 IAMs_20 21 38 12.5
comp=Z,1μm,20.0s
MOD Modoc Plateau 91.44 48 IAMs_20 IAMs_20 21 38 32.3
comp=Z,1μm,20.0s
VCNR Virginia City 91.67 51 IAMs_20 IAMs_20 21 42 10.5
comp=Z,1μm,20.0s
PNTR Pine Nut 91.69 51 IAMs_20 IAMs_20 21 38 57.0
comp=Z,1μm,19.0s
WAKR Walker 91.75 52 IAMs_20 IAMs_20 21 39 26.8
comp=Z,1μm,20.0s
LTY Liberty 91.76 43 IAMs_20 IAMs_20 21 41 01.3
comp=Z,962nm,20.0s
VES Vestal, Richgr 91.78 54 P 21 04 48.6
baz=264
PAHR Pah Rah Range 91.91 50 IAMs_20 IAMs_20 21 40 26.9
comp=Z,1μm,19.0s
OSI Osito Audit: C 91.95 56 IAMs_20 IAMs_20 21 41 33.5
comp=Z,1μm,19.0s
YERR Yerington 91.95 51 IAMs_20 IAMs_20 21 39 06.1
comp=Z,1μm,20.0s
F07A Phinny Hill Vi 92.12 44 IAMs_20 IAMs_20 21 48 28.1
comp=Z,1μm,19.0s
E07A Sunnyside 92.24 44 IAMs_20 IAMs_20 21 39 05.1
comp=Z,1μm,19.0s
I07A Izee 92.25 46 IAMs_20 IAMs_20 21 39 24.4
comp=Z,1μm,21.0s
ISA Isabella, Lake 92.25 55 IAMs_20 IAMs_20 21 39 36.3
comp=Z,1μm,20.0s
HAWA Hanford 92.44 44 IAMs_20 IAMs_20 21 39 12.5
comp=Z,1μm,20.0s
RYN Ryan 92.48 52 IAMs_20 IAMs_20 21 40 40.1
comp=Z,1μm,19.0s
NVAR Mina Array Bea 92.63 52 P **P** **21 04 53.0 -0.2**
comp=Z,2.2nm,0.7s,baz=266,slow=5.2,SNR=9.7
NVAR LR LR 21 41 00.6
comp=Z,1μm,19.2s,baz=272,slow=32
CWC Cottonwood Cre 92.64 54 P 21 04 53.7
baz=265
WVOR Wild Horse Val 92.73 48 IAMs_20 IAMs_20 21 39 25.3
comp=Z,1μm,20.0s
G08A Pilot Rock 92.74 45 IAMs_20 IAMs_20 21 39 38.5
comp=Z,1μm,20.0s
NV11 Mina Array Sit 92.75 52 IAMs_20 IAMs_20 21 40 48.2
comp=Z,1μm,19.0s
B08A Colville Reser 92.76 42 IAMs_20 IAMs_20 21 38 37.8
comp=Z,907nm,21.0s
C36M Paulatuk 92.77 21 P 21 04 52.0
baz=262
E08A Dider Farm, El 92.78 44 IAMs_20 IAMs_20 21 39 42.4
comp=Z,1μm,20.0s
SYO Syowa Base 92.92 199⇑ *e*P **P** **21 04 50.9 -2.7**
J08A Circle Bar Ran 92.92 47 IAMs_20 IAMs_20 21 47 22.4
comp=Z,1μm,19.0s
D08A Wollman Farm, 92.92 43 IAMs_20 IAMs_20 21 37 39.2
comp=Z,894nm,20.0s
MPMC Manual Prospec 93.08 54 P 21 04 56.4
baz=265
E09A Wood Farm, Sta 93.41 44 IAMs_20 IAMs_20 21 39 51.1
comp=Z,1μm,21.0s
C09A Chrisman Ranch 93.42 42 IAMs_20 IAMs_20 21 53 40.3
comp=Z,1μm,22.0s
BMO Blue Mountains 93.88 45 IAMs_20 IAMs_20 21 40 05.6
comp=Z,1μm,20.0s
HEC Hector,Ludlow 93.93 56 P 21 05 00.6
baz=266
F10A Beach Ranch, E 94.01 44 IAMs_20 IAMs_20 21 40 18.9
comp=Z,889nm,19.0s
ESJX Sierra Juarez 94.06 58 IAMs_20 IAMs_20 21 41 07.4
comp=Z,1μm,21.0s
NEW Newport 94.23 42 P **P** **21 04 59.3 -0.8**
comp=Z,5.7nm,1.0s,baz=256,slow=3.0,SNR=7.1
NEW LR LR 21 41 15.6
comp=Z,628nm,19.8s,baz=264,slow=32
NEW Newport 94.23 42 IAMs_20 IAMs_20 21 39 22.5
comp=Z,944nm,20.0s
NEW Newport 94.23 42 P 21 04 59.0
baz=266
GMRC Granite Mounta 94.48 56 P 21 05 02.3
baz=266
R11A Troy Canyon, C 94.76 52 IAMs_20 IAMs_20 21 43 20.4
comp=Z,1μm,20.0s
R11A Troy Canyon, C 94.76 52 P 21 05 02.6
baz=267
MFID Camas Ranch 94.85 47 IAMs_20 IAMs_20 21 45 57.5
comp=Z,1μm,18.0s
IRM Iron Mountain 94.87 56 P 21 05 04.0
baz=267
PRN Pahroc Range 95.13 53 IAMs_20 IAMs_20 21 55 20.3
comp=Z,959nm,18.0s
ELK Elko 95.15 50 P **P** **21 05 04.0 -0.8**
comp=Z,1.3nm,0.7s,baz=223,slow=6.1,SNR=4.4
ELK Elko 95.15 50 IAMs_20 IAMs_20 21 43 30.7
comp=Z,1μm,19.0s
SVE Sverdlovsk 95.74 326 eP **P** **21 05 05.2 -1.5**
SVE pmax pmax
comp=Z,22nm,1.3s
SPR3 Spring Creek 3 95.77 51 IAMs_20 IAMs_20 21 42 19.2
comp=Z,1μm,19.0s
HLID Hailey 95.89 47 IAMs_20 IAMs_20 21 45 43.9
comp=Z,1μm,19.0s
HLID Hailey 95.89 47 P 21 05 09.0
baz=268
AB31 Akbulak array 95.97 319 *i* P **P** **21 05 06.1 -1.9**
AB31 pmax pmax
comp=Z,10.0nm,1.0s
JTMT Jette 96.11 43 IAMs_20 IAMs_20 21 40 30.4
comp=Z,885nm,20.0s
YKA Yellowknife Ar 96.14 28 P **P** **21 05 07.7 -0.8**
comp=Z,11nm,1.0s,baz=267,slow=4.4,SNR=63
YKA PKKPbc **PKKPdf** **21 22 00.5 +1.7**
comp=Z,0.3nm,0.8s,baz=98,slow=2.8,SNR=3.8
YKA LR LR 21 47 56.7
comp=Z,471nm,18.2s,baz=0.0,slow=35
PIX Pinacate 96.15 59 IAMs_20 IAMs_20 21 42 22.8
comp=Z,961nm,19.0s
MSO Missoula 96.32 44 IAMs_20 IAMs_20 21 42 02.0
comp=Z,935nm,20.0s
WALA Waterton Lakes 96.39 41 IAMs_20 IAMs_20 21 44 20.6
comp=Z,1000nm,19.0s
ARU Arti 96.88 326*c* iP **P** **21 05 09.5 -2.4**
ARU 21 09 03.4
ARU S **SKSac** **21 15 43.3 -2.6**
ARU SS **SS** **21 23 09.6 +2.2**
ARU pmax pmax
comp=Z,22nm,1.2s
ARU MLR MLR
comp=Z,870nm,19.0s
ARU Arti 96.88 326 P **P** **21 05 10.2 -1.7**
ARU IAMs_20 IAMs_20 21 48 28.5
comp=Z,950nm,20.0s
DUG Dugway, Tooele 96.98 50 IAMs_20 IAMs_20 21 41 37.1
comp=Z,878nm,20.0s
GEYT Alibeck 96.99 307 P **P** **21 05 12.2 -0.7**
comp=Z,4.8nm,1.0s,baz=203,slow=7.2,SNR=9.9
GEYT LR LR 21 52 52.9
comp=Z,422nm,18.6s,baz=80,slow=38
BOZ Bozeman (W) 97.91 45 IAMs_20 IAMs_20 21 42 45.2
comp=Z,774nm,20.0s
BOZ Bozeman (W) 97.91 45 P 21 05 18.2
baz=270
HWUT Hardware Ranch 97.95 49 IAMs_20 IAMs_20 21 51 05.6
comp=Z,899nm,18.0s
AHID Auburn Hatcher 98.30 48 IAMs_20 IAMs_20 21 43 02.7
comp=Z,1μm,20.0s
TUC Tucson 98.45 58 IAMs_20 IAMs_20 21 46 48.6
comp=Z,1μm,18.0s
REDW Red Top Meadow 98.48 47 IAMs_20 IAMs_20 21 43 12.4
comp=Z,1μm,20.0s
SNOW Snow King Moun 98.55 47 IAMs_20 IAMs_20 21 43 04.3
comp=Z,1μm,20.0s
FLWY Flagg Ranch 98.58 46 IAMs_20 IAMs_20 21 47 44.1
comp=Z,874nm,19.0s
LOHW Long Hollow 98.66 47 IAMs_20 IAMs_20 21 47 17.1
comp=Z,960nm,19.0s
EGMT Eagleton 99.16 42 P 21 05 22.6
baz=272
W18A Petrified Fore 99.36 55 IAMs_20 IAMs_20 21 51 09.5
comp=Z,819nm,18.0s
BW06 Boulder Array 99.43 48 IAMs_20 IAMs_20 21 44 20.8
comp=Z,1μm,20.0s
PDAR Pinedale Array 99.43 48 P **Pdif** **21 05 23.2 -0.9**
comp=Z,1.6nm,1.1s,baz=259,slow=1.5,SNR=7.0
PDAR PP **PP** **21 09 30.3 +2.5**
comp=Z,2.2nm,1.0s,baz=268,slow=5.6,SNR=6.9
PDAR LR LR 21 44 42.7
comp=Z,800nm,19.9s,baz=274,slow=32
RLMT Red Lodge 99.58 45 IAMs_20 IAMs_20 21 43 50.5
comp=Z,868nm,20.0s
RLMT Red Lodge 99.58 45 P 21 05 24.6
baz=272
PV01 Paradox Valley 100.28 52 IAMs_20 IAMs_20 21 45 51.5
comp=Z,788nm,19.0s
O20A White River Ci 100.48 50 IAMs_20 IAMs_20 21 44 03.9
comp=Z,1μm,20.0s
EUNU Eureka 100.58 9 IAMs_20 IAMs_20 21 49 18.3
comp=Z,905nm,21.0s
121A Cookes Peak, D 100.98 58 IAMs_20 IAMs_20 21 48 18.8
comp=Z,946nm,18.0s
SMCO Snowmass 101.50 51 IAMs_20 IAMs_20 21 44 37.7
comp=Z,871nm,19.0s
LAO LASA Array 101.62 44 IAMs_20 IAMs_20 21 45 32.4
comp=Z,850nm,21.0s
KIRV Kirov 101.64 329⇓ *e*P **Pdif** **21 05 33.1 0.0**
K22A Casper 101.67 48 IAMs_20 IAMs_20 21 45 13.0
comp=Z,891nm,19.0s
ALE Alert 101.68 4 IAMs_20 IAMs_20 21 54 34.3
comp=Z,711nm,20.0s
Y22D IRIS PASSCAL I 101.69 56 IAMs_20 IAMs_20 21 48 50.3
comp=Z,797nm,18.0s
EPT El Paso 102.08 59 IAMs_20 IAMs_20 21 46 35.8
comp=Z,1μm,20.0s
ISCO Idaho Springs 102.52 51 IAMs_20 IAMs_20 21 47 39.7
comp=Z,966nm,19.0s
PRGR Permogore 102.95 332 eP **Pdif** **21 05 37.0 -1.9**
PRGR pmax pmax
comp=Z,17nm,1.1s
FFC Flin Flon 103.36 35 IAMs_20 IAMs_20 21 49 37.4
comp=Z,873nm,20.0s
RSSD Black Hills 103.37 46 IAMs_20 IAMs_20 21 49 41.9
comp=Z,1μm,19.0s
T25A Trinidad 103.61 53 IAMs_20 IAMs_20 21 48 57.9
comp=Z,1μm,19.0s
TXAR Lajitas Array 104.59 61 PKKP 21 21 44.6
comp=Z,0.5nm,0.8s,baz=99,slow=5.0,SNR=4.1
MAK Makhachkala 104.88 313 eP **Pdif** **21 05 48.2 +0.3**
MAK *e* 21 10 05.1
MAK *e*PPP PPP 21 12 17.8
MAK *e* 21 16 26.9
MAK *e* 21 17 11.2
MAK *e*PS PS 21 19 22.8 -0.2
MAK *e*SS SS 21 25 07.5 +8.3
MAK pmax pmax
comp=Z,87nm,1.1s
KSCO Kaye Shedlock' 104.88 51 IAMs_20 IAMs_20 21 48 47.3
comp=Z,1μm,20.0s
MSTX Muleshoe 105.14 56 IAMs_20 IAMs_20 21 51 07.5
comp=Z,845nm,18.0s
E28A Huff 105.42 43 IAMs_20 IAMs_20 21 48 01.9
comp=Z,884nm,20.0s
TULEG Thule 105.55 9 IAMs_20 IAMs_20 21 52 02.8
comp=Z,761nm,20.0s
KLMR Klimovskoe 106.00 332 eP **Pdif** **21 05 46.8 -5.7**
KLMR *e* 21 16 24.4
KLMR *e*PS PS 21 19 30.5 -3.4
KLMR *e*SS SS 21 25 12.7 -0.7
KLMR pmax pmax
comp=Z,25nm,1.5s
KLMR Klimovskoe 106.00 332 *e*Pdif **Pdif** **21 05 46.9 -5.6**
KLMR AMP 21 05 52.0
comp=Z,25nm,1.5s
KLMR *e*PP **PKiKP** **21 10 08.6 +4.1**
KLMR *e*SKSac **SKSac** **21 16 24.5 -5.0**
KLMR *e*SKSac **SKSac** **21 16 24.5 -5.0**
KLMR *e*PS **PS** **21 19 30.6 -3.3**
KLMR *e*PS **PS** **21 19 30.6 -3.3**
KLMR *e*PKKPab **PKKPdf** **21 21 41.5 +0.9**
KLMR *e*SS **SS** **21 25 12.7 -0.7**
KLMR *e*SS **SS** **21 25 12.7 -0.7**
KLMR LQ LQ 21 47 34.7
KLMR LQ LQ 21 47 34.7
KLMR LR LR 21 51 36.4
APA Apatity 106.00 340⇓ *i*P **Pdif** **21 05 52.8 +0.4**
APA pmax pmax
comp=Z,5.0nm,1.0s
SUSD Miller 106.95 45 IAMs_20 IAMs_20 21 48 30.5
comp=Z,1μm,20.0s
ZEI Tsey 107.53 313 eP **Pdif** **21 06 02.7 +2.7**
ZEI pmax pmax
comp=Z,13nm,1.5s
D32A Dogwood Acres, 107.81 42 IAMs_20 IAMs_20 21 53 47.0
comp=Z,804nm,20.0s
ABTX Abilene, Hawle 107.85 58 IAMs_20 IAMs_20 21 50 31.4
comp=Z,645nm,20.0s
R32A Long Quarter, 107.99 52 IAMs_20 IAMs_20 21 56 46.6
comp=Z,950nm,18.0s
BGNE Belgrade 108.00 48 IAMs_20 IAMs_20 22 02 20.6
comp=Z,734nm,19.0s
U32A Winter Ranch, 108.00 54 IAMs_20 IAMs_20 21 51 27.2
comp=Z,837nm,19.0s
AGMN Agassiz Nation 108.34 41 IAMs_20 IAMs_20 21 47 33.7
comp=Z,694nm,19.0s
WMOK Wichita Mounta 108.36 55 IAMs_20 IAMs_20 21 53 04.9
comp=Z,699nm,18.0s
MOS Moscow 108.53 327 eP **Pdif** **21 06 00.4 -3.5**
MOS *e* 21 10 32.9
MOS MLR MLR
comp=Z,700nm,19.0s
F33A 5 Mile Ranch, 108.56 44 IAMs_20 IAMs_20 21 49 53.9
comp=Z,792nm,20.0s
OK032 Salt Plains WL 108.59 53 IAMs_20 IAMs_20 21 52 13.6
comp=Z,719nm,19.0s
ECSD EROS Data Cent 108.74 46 IAMs_20 IAMs_20 21 49 33.8
comp=Z,865nm,20.0s
UNM Universidad Na 108.91 72 IAMs_20 IAMs_20 21 58 24.8
comp=Z,935nm,19.0s
X34A Smith Ranch, M 109.15 55 IAMs_20 IAMs_20 21 53 11.8
comp=Z,929nm,20.0s
OBN Obninsk 109.30 327 IAMs_20 IAMs_20 21 55 47.9
comp=Z,781nm,21.0s
OK029 Liberty Lake 109.32 54 IAMs_20 IAMs_20 21 50 26.0
comp=Z,902nm,19.0s
OK025 Westminster Rd 109.44 54 IAMs_20 IAMs_20 22 02 20.3
comp=Z,796nm,19.0s
B35A Bob, Littlefor 109.71 40 IAMs_20 IAMs_20 21 48 57.2
comp=Z,756nm,19.0s
735A Kenedy 109.73 61 IAMs_20 IAMs_20 21 54 03.7
comp=Z,999nm,19.0s
WHTX Lake Whitney, 109.75 58 IAMs_20 IAMs_20 21 52 34.9
comp=Z,895nm,19.0s
OK030 Cody Creek RV 109.84 54 IAMs_20 IAMs_20 22 03 08.9
comp=Z,912nm,18.0s
SOC Sochi 110.39 314 *i* PKIKP **PKiKP** **21 10 09.6 -3.7**
SOC *e* 21 10 45.1
SOC *e*SS SS 21 26 09.4 -4.4
SOC *e*SSS SSS 21 30 14.7
SOC MLR MLR
comp=Z,290nm,18.0s
F36A Milaca 110.44 43 IAMs_20 IAMs_20 21 53 02.7
comp=Z,786nm,19.0s
SPMN Marine on St. 111.09 44 IAMs_20 IAMs_20 21 59 48.8
comp=Z,878nm,19.0s
237A Washetta, Mont 111.14 58 IAMs_20 IAMs_20 21 52 52.7
comp=Z,913nm,19.0s
X37A Clayton 111.17 55 IAMs_20 IAMs_20 21 55 45.2
comp=Z,916nm,18.0s
EYMN Ely 111.26 40 IAMs_20 IAMs_20 21 49 54.9
comp=Z,637nm,19.0s
Z38A Mt. Pleasant 111.67 57 IAMs_20 IAMs_20 21 53 16.6
comp=Z,796nm,20.0s
U38A Gravette 111.68 53 IAMs_20 IAMs_20 22 00 29.6
comp=Z,697nm,18.0s
FINES FINESS Array B 111.69 335 Pdiff **Pdif** **21 06 16.5 -1.3**
comp=Z,1.5nm,0.8s,baz=90,slow=4.6,SNR=6.8
FINES PKiKP **PKiKP** **21 10 14.1 -1.1**
comp=Z,2.1nm,1.0s,baz=133,slow=5.9,SNR=1.7
K38A Parkersburg 111.71 46 IAMs_20 IAMs_20 21 56 05.5
comp=Z,789nm,19.0s
N38A Joes South For 111.77 48 IAMs_20 IAMs_20 21 57 59.3
comp=Z,937nm,18.0s
HHAR Hobbs 112.06 53 IAMs_20 IAMs_20 22 00 41.7
comp=Z,848nm,18.0s
NATX Nacogdoches 112.14 58 IAMs_20 IAMs_20 21 57 08.1
comp=Z,692nm,18.0s
W39A Magazine 112.37 54 IAMs_20 IAMs_20 22 07 14.8
comp=Z,752nm,18.0s
G40A Rib Lake 112.85 43 IAMs_20 IAMs_20 22 00 02.4
comp=Z,832nm,19.0s
U40A Yellville 112.92 53 IAMs_20 IAMs_20 22 01 16.2
comp=Z,726nm,19.0s
L40A Anamosa 112.96 47 IAMs_20 IAMs_20 21 58 11.7
comp=Z,669nm,19.0s
R40A Maddies Static 113.01 51 IAMs_20 IAMs_20 21 52 13.3
comp=Z,815nm,20.0s
WLAR White Oak Lake 113.16 56 IAMs_20 IAMs_20 21 57 35.8
comp=Z,732nm,19.0s
MGMO Mountain Grove 113.23 52 IAMs_20 IAMs_20 22 04 09.4
comp=Z,865nm,18.0s
COWI Conover 113.33 42 IAMs_20 IAMs_20 21 53 07.9
comp=Z,824nm,21.0s
N41A Harden Midland 113.55 48 IAMs_20 IAMs_20 21 52 26.4
comp=Z,1μm,20.0s
WHAR Wooly Hollow 113.56 54 IAMs_20 IAMs_20 22 03 58.3
comp=Z,657nm,18.0s
CCM Cathedral Cave 113.84 51 IAMs_20 IAMs_20 21 52 57.5
comp=Z,857nm,20.0s
MTSE Matsula 114.09 334 eP **PKiKP** **21 10 24.9 +5.2**
L42A Oliver, Polo 114.10 46 IAMs_20 IAMs_20 21 56 51.7
comp=Z,801nm,19.0s
F42A Maple Grove Fa 114.10 42 IAMs_20 IAMs_20 21 51 12.3
comp=Z,866nm,20.0s
I42A Draeger Farm, 114.12 44 IAMs_20 IAMs_20 21 53 03.1
comp=Z,951nm,20.0s
MNK Minsk 114.18 328 *i* PKP PKPdf 21 10 15.6 -4.5
comp=E,1.0nm,0.9s
MNK *i* PKP PKPdf 21 10 15.6 -4.5
comp=N,13nm,1.8s
MNK *i* PKP PKPdf 21 10 15.6 -4.5
comp=Z,6.0nm,1.5s
MNK *i* PP **PP** **21 11 10.7 -4.4**
MNK *i* PPP PPP 21 13 35.4
MNK *i* SKS **SKSdf** **21 17 25.1 -4.1**
MNK *i* PS PKKPbc 21 20 48.8 -14
MNK *i* SS **SS** **21 26 58.4 -4.7**
MNK *i* SSS SSS 21 31 15.5
MNK *i* LQ LQ 21 52 06.8
MNK *i* LR LR 21 57 48.2
MNK *i* LRM MLR 21 59 59.2
comp=E,63nm,24.9s
MNK *i* LRM MLR 22 00 03.6
comp=Z,634nm,22.4s
MNK *i* LRM MLR 22 00 11.9
comp=N,290nm,21.7s
LCAR Lake Charles 114.32 53 IAMs_20 IAMs_20 21 57 08.3
comp=Z,654nm,19.0s
IDID Didziasalis 114.39 329 eP PKiKP 21 10 31.5 +11
FVM French Village 114.49 51 IAMs_20 IAMs_20 21 53 49.6
comp=Z,920nm,20.0s
NACGM Naroch 114.56 329 *i* PKP PKPdf 21 10 25.8 +4.9
NACGM *i* PKP PKPdf 21 10 25.8 +4.9
NACGM *i* PKP PKPdf 21 10 25.8 +4.9
NACGM *i* PPP PPP 21 15 49.1
NACGM *i* SKS **SKSdf** **21 17 23.9 -6.1**
NACGM *i* SKKS 21 20 49.5
NACGM *i* SSS SSS 21 35 13.4
NACGM *i* LQ LQ 21 44 26.4
NACGM *i* LR LR 21 51 40.3
ISAL Salakas 114.58 330 eP PKPdf 21 10 31.3 +10
IIGN Ignalina 114.64 330 eP PKPdf 21 10 32.3 +11
E43A Lone Tree Farm 114.66 41 IAMs_20 IAMs_20 22 00 15.0
comp=Z,736nm,18.0s
H43A Windswept, Lux 114.74 43 IAMs_20 IAMs_20 21 58 41.3
comp=Z,858nm,19.0s
PBMO Poplar Bluff 114.75 52 IAMs_20 IAMs_20 21 51 49.6
comp=Z,763nm,21.0s
K43A Burlington 114.86 45 IAMs_20 IAMs_20 21 57 53.8
comp=Z,919nm,20.0s
AKASG Malin Array Be 115.05 324 PKP **PKiKP** **21 10 21.6 -0.2**
comp=Z,3.0nm,1.0s,baz=61,slow=2.4,SNR=7.3
AKASG PKKPbc **PKKPab** **21 21 06.4 +2.7**
comp=Z,0.1nm,0.2s,baz=262,slow=3.1,SNR=4.4
AKBB Malin Array Si 115.05 324⇑ *i* PKIKP **PKiKP** **21 10 21.2 -0.7**
LPAR Lepanto 115.09 53 IAMs_20 IAMs_20 21 57 42.8
comp=Z,650nm,20.0s
GNAR Gosnell 115.24 53 IAMs_20 IAMs_20 22 09 03.8
comp=Z,876nm,18.0s
PARMO Parma 115.30 52 IAMs_20 IAMs_20 21 51 55.3
comp=Z,684nm,20.0s
L44A Lake County Fo 115.31 46 IAMs_20 IAMs_20 21 58 07.7
comp=Z,938nm,19.0s
PEBM Pemiscott Bayo 115.33 53 IAMs_20 IAMs_20 21 54 00.2
comp=Z,710nm,20.0s
Q44A Meyer Farm, Va 115.36 49 IAMs_20 IAMs_20 21 56 23.4
comp=Z,941nm,19.0s
M44A Midewin, Midew 115.43 47 IAMs_20 IAMs_20 21 59 38.1
comp=Z,831nm,18.0s
PENMO Penman 115.45 52 IAMs_20 IAMs_20 21 57 57.1
comp=Z,676nm,18.0s
O44A Mansfield 115.45 48 IAMs_20 IAMs_20 21 53 55.8
comp=Z,963nm,21.0s
HQIL Hanson Quary C 115.46 46 IAMs_20 IAMs_20 21 59 48.6
comp=Z,770nm,19.0s
S44A Carbondale 115.46 51 IAMs_20 IAMs_20 21 58 47.3
comp=Z,794nm,19.0s
MET Memphis--Engin 115.48 54 IAMs_20 IAMs_20 21 57 25.3

comp=Z,886nm,18.0s
SIUC Southern Illin 115.48 51 IAMs_20 IAMs_20 21 58 47.5
comp=Z,803nm,20.0s
VBMS Vicksburg 115.55 57 IAMs_20 IAMs_20 21 55 26.4
comp=Z,961nm,20.0s
LNXT Lenox 115.63 53 IAMs_20 IAMs_20 21 54 08.0
comp=Z,786nm,20.0s
PABE Paberze 115.68 330 *e*P **PKPdf 21 10 30.5 +7.5**
BRTR Keskin Array B 115.72 312 PKP **PKPdf 21 10 22.3 -1.5**
comp=Z,1.0nm,1.0s,baz=121,slow=4.8,SNR=3.7
BRTR PKKPbc **PKKPab 21 21 06.2 +5.1**
comp=Z,0.6nm,0.8s,baz=233,slow=2.9,SNR=3.6
HICK Hickman 115.74 52 IAMs_20 IAMs_20 21 58 16.9
comp=Z,754nm,19.0s
HALT Halls 115.79 53 IAMs_20 IAMs_20 21 54 13.3
comp=Z,776nm,21.0s
G45A Suttons Bay 115.98 42 IAMs_20 IAMs_20 22 01 42.2
comp=Z,889nm,18.0s
Y45A Yeager Farm, C 116.05 55 IAMs_20 IAMs_20 21 54 22.4
comp=Z,726nm,20.0s
T45A Paducah 116.09 51 IAMs_20 IAMs_20 22 09 39.0
comp=Z,818nm,18.0s
HUEH Huehuetenango 116.32 76 IAMs_20 IAMs_20 21 54 11.3
comp=Z,782nm,20.0s
PBUR Paburge 116.39 332 *e*P **PKPdf 21 10 18.2 -6.2**
146A Union 116.69 56 IAMs_20 IAMs_20 21 56 33.4
comp=Z,790nm,20.0s
KIS Kishinev 116.74 320 *e*P **Pdif 21 06 52.0 +11**
KIS Kishinev 116.74 320 *e*PS PS 21 21 25.0 +8.0
KIS *e*LR LR 21 58 54.0
comp=Z,200nm,18.0s
KIS Kishinev 116.74 320 *e*P **Pdif 21 06 52.0 +11**
GLMI Grayling 116.75 42 IAMs_20 IAMs_20 22 01 41.5
comp=Z,832nm,18.0s
SUW Suwalki 116.84 329 *e*P **PKiKP 21 10 25.4 +0.1**
SUW Suwalki 116.84 329 IAMs_20 IAMs_20 22 06 30.9
comp=Z,664nm,18.0s
WVT Waverly 116.94 52 IAMs_20 IAMs_20 21 55 23.5
comp=Z,821nm,20.0s
J47A Sunmer 117.15 44 IAMs_20 IAMs_20 21 56 15.2
comp=Z,933nm,21.0s
N47A Urbana 117.28 47 IAMs_20 IAMs_20 21 56 41.9
comp=Z,726nm,19.0s
Z47A Carrollton 117.39 55 IAMs_20 IAMs_20 21 57 55.9
comp=Z,843nm,20.0s
NOA NORSAR Array B 117.58 340 PKP **PKPdf 21 10 26.2 -0.3**
comp=Z,1.5nm,0.9s,baz=46,slow=2.0,SNR=3.8
V48A Smith Brothers 117.82 52 IAMs_20 IAMs_20 21 55 51.0
comp=Z,637nm,20.0s
PETF Flores 117.83 74 IAMs_20 IAMs_20 21 54 18.4
comp=Z,835nm,19.0s
L48A N Adams 117.85 45 IAMs_20 IAMs_20 21 54 54.8
comp=Z,848nm,21.0s
X48A Hartselle 117.95 54 IAMs_20 IAMs_20 21 59 15.5
comp=Z,686nm,19.0s
LRAL Lakeview Retre 118.30 55 IAMs_20 IAMs_20 21 57 26.1
comp=Z,755nm,19.0s
N49A Columbus Grove 118.36 46 IAMs_20 IAMs_20 21 59 49.4
comp=Z,866nm,20.0s
P49A Miami Univ. Ec 118.40 48 IAMs_20 IAMs_20 22 06 14.7
comp=Z,852nm,18.0s
MTO3 Montecristo 118.41 77 IAMs_20 IAMs_20 21 58 19.9
comp=Z,812nm,19.0s
R49A Shelbyville 118.42 49 IAMs_20 IAMs_20 21 56 35.5
comp=Z,820nm,19.0s
SWET Sewanee 118.66 53 IAMs_20 IAMs_20 22 09 00.1
comp=Z,798nm,18.0s
BURAR Bucovina Array 118.72 322 ⇑P **PKiKP 21 10 35.7 +6.4**
NEHR Nehoiu 118.96 320 ⇓P PKiKP 21 10 37.7 +8.0
FPAL Fort Paine 119.08 53 IAMs_20 IAMs_20 22 00 27.4
comp=Z,782nm,19.0s
250A Grady 119.13 56 IAMs_20 IAMs_20 22 07 12.2
comp=Z,514nm,18.0s
KONO Kongsberg 119.15 340 IAMs_20 IAMs_20 22 03 37.0
comp=Z,815nm,22.0s
MLR Muntele Rosu 119.16 320 ⇑P **PKiKP 21 10 34.3 +4.1**
MLR Muntele Rosu 119.16 320 IAMs_20 IAMs_20 22 06 30.5
comp=Z,526nm,19.0s
PLCA Paso Flores 119.24 143 PKP **PKPdf 21 10 29.2 -1.3**
comp=Z,1.7nm,0.7s,baz=246,slow=2.2,SNR=6.4
PLCA PKKPbc **PKKPab 21 20 46.7 +0.1**
comp=Z,2.3nm,0.9s,baz=353,slow=4.0,SNR=5.1
KWP Kalwaria Pacla 119.28 325 IAMs_20 IAMs_20 22 06 05.8
comp=Z,620nm,20.0s
DOPR Dopca 119.32 320 ⇑P **PKiKP 21 10 37.8 +7.4**
ELL Elmali 119.36 309 IAMs_20 IAMs_20 22 09 34.8
comp=Z,725nm,21.0s
ACSO Alum Creek Sta 119.44 47 IAMs_20 IAMs_20 22 00 26.2
comp=Z,658nm,20.0s
Q51A Peebles 119.57 48 IAMs_20 IAMs_20 21 59 16.7
comp=Z,829nm,18.0s
P51A Williamsport 119.63 47 IAMs_20 IAMs_20 22 10 11.3
comp=Z,777nm,20.0s
N51A Ashland 119.65 46 IAMs_20 IAMs_20 21 56 09.5
comp=Z,769nm,20.0s
X51A Calhoun 119.67 53 IAMs_20 IAMs_20 21 59 26.1
comp=Z,606nm,20.0s
CPCT Cooper Cave 119.71 52 IAMs_20 IAMs_20 22 00 17.9
comp=Z,762nm,19.0s
Z51A Franklin 119.73 55 IAMs_20 IAMs_20 21 58 43.7
comp=Z,691nm,20.0s
ARR Arges 120.05 320 ⇓P **PKiKP 21 10 34.0 +2.1**
M52A Chesterland 120.15 45 IAMs_20 IAMs_20 21 56 44.6
comp=Z,904nm,20.0s
HUMR Humele 120.18 319 ⇓P **PKiKP 21 10 32.6 +0.5**
TKL Tuckaleechee C 120.24 52 IAMs_20 IAMs_20 22 09 25.9
comp=Z,684nm,18.0s
152A Waverly Hall 120.25 55 IAMs_20 IAMs_20 22 07 50.7
comp=Z,782nm,18.0s
P52A Corning 120.26 47 IAMs_20 IAMs_20 22 08 05.9
comp=Z,786nm,19.0s
CRVS Cervenica-Dubn 120.34 325 *e*PKIKP **PKiKP 21 10 34.4 +2.1**
CRVS Cervenica-Dubn 120.34 325 *e*PKP **PKiKP 21 10 34.4 +2.1**
SADO Sadowa 120.37 40 IAMs_20 IAMs_20 22 13 29.1
comp=Z,731nm,18.0s
Q52A Bidwell 120.38 48 IAMs_20 IAMs_20 21 58 29.2
comp=Z,833nm,20.0s
M53A WI Miller and 120.66 45 IAMs_20 IAMs_20 22 00 38.2
comp=Z,884nm,20.0s
O53A New Philadelph 120.71 46 IAMs_20 IAMs_20 22 11 48.7
comp=Z,727nm,18.0s
NIE Niedzica 120.74 326 PKIKP **PKiKP 21 10 34.7 +1.6**
P53A Whipple 120.85 47 IAMs_20 IAMs_20 22 00 12.5
comp=Z,881nm,20.0s
PLVB Pleven 120.89 318 ⇑P **PKiKP 21 10 35.3 +1.8**
GOGA Godfrey 121.09 54 IAMs_20 IAMs_20 22 08 01.7
comp=Z,828nm,18.0s
GZR Gura Zlata 121.22 321 ⇓P **PKiKP 21 10 34.8 +0.6**
RGN Rugen 121.22 334 IAMs_20 IAMs_20 22 06 42.4
comp=Z,787nm,20.0s
M54A Oil Creek Stat 121.34 44 IAMs_20 IAMs_20 21 56 51.1
comp=Z,906nm,20.0s
DELO Deloro Mine 121.46 40 IAMs_20 IAMs_20 22 11 14.9
comp=Z,705nm,20.0s
U54A Nelsons Funny 121.50 50 IAMs_20 IAMs_20 21 57 55.0
comp=Z,869nm,20.0s
PLVO Plevna 121.58 39 IAMs_20 IAMs_20 21 59 57.8
comp=Z,797nm,19.0s
OKC Ostrava-Krasne 121.70 327 AMS AMS 22 06 40.0
comp=Z,600nm,17.2s
MBAR Mbarara 121.72 266 IAMs_20 IAMs_20 22 03 51.3
comp=Z,603nm,19.0s
PSZ Piszkesteto 121.74 325 ⇑P **PKiKP 21 10 37.2 +2.0**
PSZ Piszkesteto 121.74 325 IAMs_20 IAMs_20 22 07 07.2
comp=Z,699nm,18.0s
HODGE Hodges 121.83 53 IAMs_20 IAMs_20 22 01 28.3
comp=Z,823nm,19.0s
BZS Buzias 121.84 321 ⇓P **PKPdf 21 10 34.6 -0.6**
PAULI Pauline 122.01 52 IAMs_20 IAMs_20 22 01 48.0
comp=Z,575nm,20.0s
VYHS Vyhne 122.05 326 *e*PKIKP **PKiKP 21 10 39.0 +3.3**
VYHS Vyhne 122.05 326 *e*PKP **PKiKP 21 10 39.0 +3.3**
MORC Moravsky Berou 122.06 327 *e*PKP **PKiKP 21 10 36.5 +0.8**
MORC Moravsky Berou 122.06 327 PKIKP **PKiKP 21 10 36.8 +1.1**
MORC Moravsky Berou 122.06 327 IAMs_20 IAMs_20 22 06 30.1
comp=Z,721nm,19.0s
PECO Prince Edward 122.12 41 IAMs_20 IAMs_20 22 11 27.4
comp=Z,860nm,19.0s
VTS Vitosha 122.13 318 ⇓P **PKPdf 21 10 35.1 -0.9**
ORTG Ortega, Santa 122.27 81 IAMs_20 IAMs_20 22 04 59.5
comp=Z,907nm,21.0s
KRLC Kraliky 122.29 328 *e*PKIKP **PKiKP 21 10 37.0 +0.9**
KRLC MLR MLR
comp=Z,700nm,17.7s
KRLC Kraliky 122.29 328 *e*PKPDF **PKiKP 21 10 37.0 +0.9**
KRLC AMS AMS 22 10 40.0
comp=Z,700nm,17.7s
OSTC Ostas 122.31 329 *e*PKP **PKiKP 21 10 37.1 +1.0**
OSTC AMS AMS 22 06 20.0
comp=Z,500nm,19.2s
M56A Emporium 122.37 44 IAMs_20 IAMs_20 22 02 38.3
comp=Z,874nm,20.0s
CHVC Chvalec 122.37 329 *e*PKPDF **PKiKP 21 10 40.8 +4.5**
CHVC *e*pPKP **pPKPdf 21 10 45.7 -1.0**
DPC Dobruska-Polom 122.37 328 *e*PKIKP **PKiKP 21 10 41.0 +4.7**
DPC MLR MLR
comp=Z,500nm,17.7s
DPC Dobruska-Polom 122.37 328 *e*PKPDF **PKiKP 21 10 41.0 +4.7**
DPC AMS AMS 22 06 20.0
comp=Z,500nm,17.7s
JAVC Velka Javorina 122.50 326 *e*PKP **PKiKP 21 10 38.4 +1.8**
J56A Wolcott 122.50 41 IAMs_20 IAMs_20 22 01 18.5
comp=Z,906nm,20.0s
Q56A Snyder Ridge, 122.61 47 IAMs_20 IAMs_20 22 02 01.9
comp=Z,738nm,19.0s
JSC Jenkinsville 122.61 53 IAMs_20 IAMs_20 22 01 52.8
comp=Z,507nm,19.0s
U56A King 122.65 50 IAMs_20 IAMs_20 22 14 10.6
comp=Z,768nm,19.0s
JTS Las Juntas de 122.77 81 IAMs_20 IAMs_20 22 06 41.7
comp=Z,519nm,18.0s
VRAC Vranov 122.83 327 *e*PKP **PKiKP 21 10 38.0 +0.8**
MODS Modra-Piesok 122.98 326 *e*PKIKP **PKiKP 21 10 40.8 +3.3**
MODS Modra-Piesok 122.98 326 *e*PKP **PKiKP 21 10 40.8 +3.3**
KRUC Moravsky 123.08 327 *e*PKP **PKiKP 21 10 38.0 +0.3**
KRUC Moravsky 123.08 327 PKIKP **PKiKP 21 10 38.7 +1.0**
BIRD Birdtown, Kers 123.13 52 IAMs_20 IAMs_20 22 13 22.5
comp=Z,808nm,18.0s
PVCC Panska Ves 123.17 329 AMS AMS 22 08 10.0
comp=Z,600nm,19.5s
FRGS Fruska Gora 123.18 322 ⇑P **PKiKP 21 10 39.5 +1.5**
BRG Berggiesshubel 123.27 330 *e*PKP **PKiKP 21 10 38.9 +0.9**
BRG Amp 21 10 43.2
comp=Z,12nm,1.2s
BRG Berggiesshubel 123.27 330 PP PP 21 12 23.0 +5.1
BRG Berggiesshubel 123.27 330 ⇑SKS **SKSdf 21 17 46.0 -0.7**
BRG Berggiesshubel 123.27 330 SP SP 21 22 01.0 -8.6
BRG Berggiesshubel 123.27 330 PS PS 21 22 12.0 -3.3
BRG Berggiesshubel 123.27 330 SS SS 21 29 12.0 +11
BRG Amp 22 11 06.0
comp=Z,0.9nm,18.0s
BRG Amp 22 11 10.0
comp=N,0.4nm,16.4s
BRG Amp 22 11 11.0
comp=E,0.6nm,17.6s
MORH Mrgy, Hungar 123.35 323 ⇓P **PKiKP 21 10 39.2 +0.9**
TREC Trest 123.43 328 *e*PKIKP **PKiKP 21 10 38.9 +0.5**
TREC Trest 123.43 328 *e*PKPDF **PKiKP 21 10 38.9 +0.5**
CLL Collm 123.46 331 *e*PKPdf **PKiKP 21 10 39.0 +0.7**
comp=Z,5.0nm,1.0s
CLL *i* 21 10 48.3
comp=Z,16nm,0.8s
CLL *i* 21 10 52.5
CLL *e*PP **PP 21 12 24.0 +4.9**
CLL *e*SKPdf **SKiKP 21 14 06.0 -5.4**
CLL *e*PPP PPP 21 14 48.0
CLL *e*PPPP 21 16 54.0
CLL *e*SKSac **SKSac 21 17 34.0 -3.0**
CLL *e*SKKSac **SKKSac 21 19 19.0 +3.6**
CLL *e*(PS) 21 22 01.0
CLL *e*PPS PPS 21 23 45.0
CLL *e* 21 28 36.0
CLL *e*SS **SS 21 29 10.0 +7.2**
CLL *e* 21 29 55.0
CLL *e*SSS SSS 21 33 42.0
CLL *e* 21 35 00.0
CLL *e*SSSS 21 37 30.0
CLL LmV 22 09 00.0
comp=Z,400nm,21.0s
CLL Collm 123.46 331 *e*PKIKP **PKiKP 21 10 39.0 +0.7**
CLL *i* 21 10 48.3
CLL *e* 21 12 24.0
CLL *e* 21 17 34.0
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL MLR MLR
comp=Z,400nm,21.0s
CLL Collm 123.46 331 IAMs_20 IAMs_20 22 15 00.9
comp=Z,506nm,19.0s
PRU Pruhonice 123.51 329 *e*PKIKP **PKiKP 21 10 42.7 +4.2**
PRU *e* 21 10 49.3
PRU *e* 21 12 23.5
PRU *e*PS **PS 21 22 10.9 -6.5**
PRU MLR MLR
comp=Z,700nm,20.6s
PRU Pruhonice 123.51 329 *e*PKPDF **PKiKP 21 10 42.7 +4.2**
PRU *e*pPKP **pPKPdf 21 10 49.3 +0.4**
PRU *e*PP **PP 21 12 23.5 +4.0**
PRU *e*SP SP 21 22 10.9 -0.8
PRU AMS AMS 22 08 00.0
comp=Z,700nm,20.6s
PRA Prague 123.52 329 AMS AMS 22 07 50.0
comp=Z,700nm,16.4s
HDC Heredia 123.59 82 IAMs_20 IAMs_20 22 01 50.7
comp=Z,609nm,20.0s
N58A Sunbury 123.64 44 IAMs_20 IAMs_20 22 03 36.1
comp=Z,839nm,19.0s
V58A Windy Hill, Pi 123.80 50 IAMs_20 IAMs_20 21 59 25.1
comp=Z,856nm,21.0s
FRNY Flat Rock 123.85 38 IAMs_20 IAMs_20 22 07 40.9
comp=Z,761nm,19.0s
PBCC Pribram 123.97 329 *e*PKP **PKiKP 21 10 39.9 +0.5**
CONA Conrad Observa 124.02 326 *e*P **PKiKP 21 10 39.9 +0.2**
comp=Z,17nm,2.2s
PEZE Perez Zeledon, 124.02 82 IAMs_20 IAMs_20 21 55 13.0
comp=Z,606nm,20.0s
SDMD Soldier's Deli 124.14 45 IAMs_20 IAMs_20 22 10 06.5
comp=Z,554nm,18.0s
L59A Walton 124.18 42 IAMs_20 IAMs_20 22 02 53.1
comp=Z,597nm,20.0s
MVL Millersville 124.25 45 IAMs_20 IAMs_20 21 58 45.1
comp=Z,815nm,21.0s
CKRC Cesky Krumlov 124.33 328 *e*pPKP **pPKPdf 21 10 50.8 +0.3**
CKRC *e*PS PS 21 22 18.6 -6.2
CKRC AMS AMS 22 11 40.0
comp=Z,600nm,18.7s
NKC Novy Kostel 124.42 330 *e*PKIKP **PKiKP 21 10 43.1 +2.8**
NKC Novy Kostel 124.42 330 *e*PKPDF **PKiKP 21 10 43.1 +2.8**
KHC Kasperske Hory 124.53 329 ⇓*i*PKIKP **PKiKP 21 10 40.8 +0.2**
KHC Kasperske Hory 124.53 329 *e*PKPDF **PKiKP 21 10 41.3 +0.7**
KHC *e*pPKP **pPKPdf 21 10 48.5 -2.4**
KHC *e*PP **PP 21 12 28.8 +2.3**
KHC AMS AMS 22 08 50.0
comp=Z,600nm,19.8s
KHC Kasperske Hory 124.53 329 IAMs_20 IAMs_20 22 09 10.5
comp=Z,583nm,18.0s
MOX Moxa 124.56 331 PKIKP **PKPdf 21 10 40.3 +0.1**
Y59A Loris 124.58 52 IAMs_20 IAMs_20 22 11 47.0
comp=Z,692nm,19.0s
GEC2 GERESS Array S 124.64 328 IAMs_20 IAMs_20 22 08 05.4
comp=Z,650nm,20.0s
GERES GERESS Array B 124.64 328 PKP **PKiKP 21 10 41.1 +0.3**
comp=Z,4.3nm,0.9s,baz=71,slow=1.5,SNR=16
WUPA West Chester U 124.80 44 IAMs_20 IAMs_20 22 01 39.6
comp=Z,576nm,20.0s
TRY Troy 124.83 41 IAMs_20 IAMs_20 21 59 35.1
comp=Z,834nm,20.0s
WET Wettzell 124.88 329 PKIKP **PKiKP 21 10 42.2 +0.9**
MOA Molln 124.94 327 *e*P **PKiKP 21 10 41.8 +0.4**
comp=Z,6.4nm,1.2s
Y60A Bolivia 125.09 52 IAMs_20 IAMs_20 21 59 51.5
comp=Z,747nm,21.0s
LBNH Lisbon 125.18 38 IAMs_20 IAMs_20 22 00 45.0
comp=Z,850nm,21.0s
SOKA Soboth 125.19 325 *e*P **PKiKP 21 10 42.0 -0.1**
comp=Z,10nm,1.4s
TRNY Table Rock, Ra 125.21 42 IAMs_20 IAMs_20 22 07 06.2
comp=Z,762nm,20.0s
HNH Hanover 125.23 39 IAMs_20 IAMs_20 22 06 52.4
comp=Z,731nm,18.0s
GRA1 Grafenberg Arr 125.37 330 IAMs_20 IAMs_20 22 07 23.5
comp=Z,557nm,20.0s
GRF Grafenberg Arr 125.37 330 *e*PKPdf **PKiKP 21 10 42.5 +0.3**
baz=49,slow=1.2
GRF *e*pPKPdf **pPKPdf 21 10 52.5 0.0**
baz=44,slow=1.2
GRFO Grafenberg 125.37 330 IAMs_20 IAMs_20 22 07 23.5
comp=Z,575nm,19.0s
V61A Roper 125.73 49 IAMs_20 IAMs_20 22 10 06.1
comp=Z,772nm,20.0s
KBA Koelnbreinsper 125.90 327 *e*P **PKiKP 21 10 44.4 +0.8**
comp=Z,7.9nm,1.1s
HRV Adam Dziewonsk 126.30 40 IAMs_20 IAMs_20 22 06 02.8
comp=Z,710nm,20.0s
ZOU Zoufplan 126.42 326 IAMs_20 IAMs_20 22 06 53.6
comp=Z,675nm,22.0s
TRI Trieste 126.47 325 IAMs_20 IAMs_20 22 09 54.3
comp=Z,625nm,20.0s
WES Weston 126.51 40 IAMs_20 IAMs_20 22 01 00.4
comp=Z,782nm,19.0s
ABTA Abfaltersbach 126.55 327 *e*P **PKPdf 21 10 44.4 +0.1**
comp=Z,8.7nm,1.2s
WATA Walderalm 126.69 328 *i* P **PKiKP 21 10 45.2 +0.1**
comp=Z,8.6nm,1.3s
WTTA Wattenberg 126.71 328 *e*P **PKiKP 21 10 45.5 +0.3**
comp=Z,31nm,1.6s
WTTA Wattenberg 126.71 328 PKIKP **PKiKP 21 10 45.6 +0.4**
MOTA Moosalm 126.94 328 *e*P **PKiKP 21 10 45.5 -0.1**
comp=Z,13nm,1.3s
SQTA Sankt Quirin 126.96 328 *e*P **PKiKP 21 10 46.2 +0.6**
comp=Z,14nm,1.1s
RETA Reutte 127.03 328 *e*P **PKiKP 21 10 45.8 +0.1**
comp=Z,6.1nm,0.9s
BTNL Ternell 127.13 334 *d*PKP **PKiKP 21 10 46.1 +0.4**
BTNL *dp*PKP **pPKPdf 21 10 55.9 +0.1**
MEM Membach 127.17 334 *d*PKP **PKiKP 21 10 45.6 -0.2**
MEM *dp*PKP **pPKPdf 21 10 55.7 -0.1**
FETA Feichten 127.34 328 *e*P **PKiKP 21 10 46.7 +0.3**
comp=Z,11nm,1.1s
BSTI Sart Tilman 127.38 334 *d*PKP **PKiKP 21 10 46.7 +0.6**
BSTI *dp*PKP **pPKPdf 21 10 56.1 -0.1**
SGRT San Giovanni R 127.45 320 IAMs_20 IAMs_20 22 11 49.7
comp=Z,542nm,18.0s
CTI Castel Tesino 127.45 327 IAMs_20 IAMs_20 22 08 27.0
comp=Z,685nm,20.0s
ATAH Atahualpa 127.48 103 PKP **PKiKP 21 10 48.6 +0.7**
comp=Z,4.5nm,0.7s,baz=198,slow=2.3,SNR=3.2
EMMW East Machias 127.58 35 IAMs_20 IAMs_20 22 03 42.3
comp=Z,778nm,20.0s
BCLA Clavier 127.61 334 *d*PKP **PKiKP 21 10 46.8 +0.2**
BCLA *dp*PKP **pPKPdf 21 10 56.4 -0.3**
DAVA Damuels 127.61 329 *e*P **PKiKP 21 10 46.9 -0.1**
comp=Z,22nm,1.0s
BFO Black Forest 127.70 331 IAMs_20 IAMs_20 22 16 11.0
comp=Z,551nm,18.0s
BGES Gesves 127.73 334 *dp*PKP pPKPdf 21 10 57.3 +0.4
WLF Walferdange 127.79 333 *d*PKP **PKiKP 21 10 48.3 +1.3**
WLF *ds*PKP 21 11 00.7
WLF Walferdange 127.79 333 IAMs_20 IAMs_20 22 12 25.1
comp=Z,646nm,20.0s
BMRD Maredsous 127.93 334 *d*PKP **PKPdf 21 10 46.5 -0.2**
BMRD *dp*PKP **pPKPdf 21 10 57.4 +0.1**
SNF Seneffe 127.98 335 *d*PKP **PKiKP 21 10 47.4 +0.1**
SNF *dp*PKP **pPKPdf 21 10 58.1 +0.7**
SNF *ds*PKP 21 11 01.9
DOU Dourbes 128.16 334 *d*PKP **PKiKP 21 10 48.5 +0.8**
NRCA Norcia 128.51 322 IAMs_20 IAMs_20 22 05 30.4
comp=Z,567nm,20.0s
MURB Monte Urbino 128.62 323 IAMs_20 IAMs_20 22 10 56.2
comp=Z,785nm,21.0s
OTAV Otavalo 128.67 94 IAMs_20 IAMs_20 22 00 39.4
comp=Z,487nm,18.0s
OTAV Otavalo 128.67 94 *e*P **PKiKP 21 10 52.5 +2.1**
VLC Villacollemand 129.32 325 IAMs_20 IAMs_20 22 09 54.6
comp=Z,638nm,20.0s
SENIN Lac Senin/Sane 129.55 329 IAMs_20 IAMs_20 22 15 41.2
comp=Z,538nm,20.0s
GBN Guysborough 130.40 31 IAMs_20 IAMs_20 22 08 25.4
comp=Z,810nm,20.0s
LVC Limon Verde 130.62 126 SKPbc **SKPab 21 14 19.4 +5.4**
comp=Z,7.7nm,1.1s,baz=280,slow=3.2,SNR=7.6
POPC Popayan, Colom 130.67 91 *e*P **PKPdf 21 10 52.5 -0.7**
SOTA Rioblanco 130.70 92 *e*P **PKiKP 21 10 55.8 +1.3**
BNI Bardonecchia 130.76 328 IAMs_20 IAMs_20 22 12 14.3
comp=Z,699nm,20.0s
PCON Cinco Dias 130.93 92 *e*P **PKiKP 21 10 57.3 +2.2**
YOTC Yotoco, Valle 131.12 90 *e*P **PKiKP 21 10 54.8 -0.1**
MARP Paez Belalcaza 131.42 91 *e*P **PKiKP 21 10 56.4 +0.7**
MOTC Monteria, Cord 131.94 83 *e*P **PKiKP 21 11 02.1 +5.7**
HELC Santa Helena 132.04 87 *e*P **PKPdf 21 10 55.4 -0.6**
ANIL Santa Ana 132.09 89 *e*P **PKiKP 21 10 57.1 0.0**
GUY2C Guyana, Caldas 132.16 88 *e*P **PKPdf 21 10 56.4 0.0**
RREF El Recreo 132.16 88 *e*P **PKPdf 21 10 56.8 +0.2**
ORTC Ortega, Tolima 132.20 90 *e*P **PKPdf 21 10 55.4 -0.5**
PTLC Puerto Leguiza 132.29 95 *e*P **PKiKP 21 11 04.3 +7.2**
SJCC San Jacinto, C 132.40 82 *e*P **PKiKP 21 11 05.1 +7.8**
NORC Norcasia 132.67 88 *e*P **PKPdf 21 10 56.9 +0.1**
ZARC Zaragoza, Cauc 132.73 85 *e*P **PKPdf 21 10 56.4 -0.5**
PTBC PUERTO BERRIO 133.11 86 *e*P **PKiKP 21 10 59.4 +0.6**
ROSC El Rosal 133.18 89 PKP **PKiKP 21 10 59.4 0.0**
comp=Z,3.9nm,0.4s,baz=126,slow=4.4,SNR=5.1
ROSC SKPbc **SKPab 21 14 28.9 +3.6**
comp=Z,22nm,1.2s,baz=147,slow=17,SNR=7.2
ROSC El Rosal 133.18 89 *e*P **PKiKP 21 11 00.1 +0.7**
MACC Macarena, Meta 133.45 92 *e*P **PKPdf 21 10 57.3 -0.9**
SPBC San Pablo de B 133.47 87 *e*P **PKPdf 21 10 57.7 -0.6**
SMLC San Martn de 133.51 83 *e*P **PKPdf 21 10 58.7 +0.4**
VILC Villavicencio, 133.76 90 *e*P **PKPdf 21 10 56.1 -2.9**
LPAZ La Paz 134.15 119 PKhKP PKPpre 21 10 53.2
comp=Z,0.7nm,0.6s,baz=147,slow=3.3,SNR=4.1
LPAZ PKP **PKiKP 21 11 01.6 +0.1**
comp=Z,2.5nm,0.7s,baz=341,slow=0.4,SNR=8.7
LPAZ SKPbc **SKiKP 21 14 32.6 -2.2**
comp=Z,8.1nm,1.1s,baz=191,slow=1.5,SNR=6.9
LPAZ La Paz 134.15 119 *e*P **PKiKP 21 11 01.1 -0.4**
OCAC Ocana 134.26 84 *e*P **PKPdf 21 10 59.2 -0.7**
RUSC La Rusia 134.46 87 *e*P **PKPdf 21 10 59.4 -1.3**
GUVC San Jose del G 134.70 92 *e*P **PKPdf 21 10 59.2 -1.4**
PAMC Pamplona, Colo 134.87 85 *e*P **PKPdf 21 10 57.3 -4.2**
KEST Kesra 134.88 317 PKP **PKiKP 21 11 01.3 -0.6**
comp=Z,5.7nm,1.0s,baz=297,slow=9.0,SNR=2.8
KEST SKPbc **SKPab 21 14 32.4 +0.7**
comp=Z,16nm,1.0s,baz=210,slow=1.5,SNR=5.9
PTGC Puerto Caitan, 135.32 90 *e*P **PKPdf 21 10 56.1 -5.7**
SC01 Santiago de Io 135.57 68 IAMs_20 IAMs_20 21 55 14.8
comp=Z,440nm,19.0s
SOCV Socops 136.70 84 *e*P **PKiKP 21 11 05.6 -0.4**
SDV Santo Domingo 136.91 83 PKP **PKiKP 21 11 06.2 -0.5**
comp=Z,11nm,1.0s,baz=2.2,slow=7.1,SNR=3.1
SDV SKPbc **SKPab 21 14 41.1 -0.3**
comp=Z,4.5nm,0.5s,baz=48,slow=12,SNR=6.6
SDV Santo Domingo 136.91 83 *e*P **PKPdf 21 11 04.4 -0.5**
CPUP Villa Florida 136.97 139 PKP **PKiKP 21 11 05.5 -0.8**
comp=Z,2.5nm,1.0s,baz=224,slow=8.6,SNR=3.2
PGAV Gavieira, Arco 139.98 338 *e*PKPdf **PKiKP 21 11 11.0 -1.1**
PGAV Gavieira, Arco 139.98 338 *e*LR LR 22 01 12.2
comp=Z,463nm,20.0s
ES09 SONSECA Array 140.01 332 IAMs_20 IAMs_20 22 10 48.3
comp=Z,595nm,22.0s
ES02 SONSECA Array 140.03 332 IAMs_20 IAMs_20 22 11 13.8
comp=Z,543nm,22.0s
ES10 SONSECA Array 140.03 331 IAMs_20 IAMs_20 22 12 06.8
comp=Z,448nm,21.0s
ES03 SONSECA Array 140.03 332 IAMs_20 IAMs_20 22 11 08.0
comp=Z,552nm,20.0s
ESDC Sonseca Array 140.04 332 PKP **PKPdf 21 11 09.8 0.0**
comp=Z,1.4nm,0.9s,baz=49,slow=2.0,SNR=7.2
ESDC PP **PP 21 14 06.5 +0.5**
comp=Z,2.8nm,1.1s,baz=28,slow=7.6,SNR=5.3
PCAB Cabril 140.11 337 *e*PKPdf **PKiKP 21 11 17.4 +5.1**
MVO Moncorvo 140.18 336 *e*PKPdf **PKPdf 21 11 10.4 +0.4**
MVO Moncorvo 140.18 336 *e*LR LR 22 00 53.4
comp=Z,488nm,20.0s
POLO Lamas de Olo 140.31 337 *e*PKPdf **PKPdf 21 11 08.9 -1.4**
SIV San Ignacio 140.31 123 PKhKP PKPpre 21 11 03.0
comp=Z,0.8nm,0.6s,baz=214,slow=6.8,SNR=4.1
SIV PKP **PKPdf 21 11 12.1 +1.3**
comp=Z,3.5nm,0.8s,baz=239,slow=3.3,SNR=11
PVIS Viseu 140.91 336 *e*PKPdf **PKPdf 21 11 09.6 -1.7**
MTE Manteigas 141.03 336 *e*PKPdf **PKiKP 21 11 14.8 +0.6**
MTE Manteigas 141.03 336 *e*LR LR 22 03 44.9
comp=Z,395nm,18.0s
SAML Samuel 141.44 112 *e*P **PKPdf 21 11 06.6 -6.3**
PCBR Castelo Branco 141.47 335 *e*PKPdf **PKPdf 21 11 13.4 +1.1**
PCAS Casmilo, Conde 141.71 336 *e*PKPdf **PKPdf 21 11 11.5 -1.2**
PMRV Marv??o 141.78 335 *e*PKPdf **PKiKP 21 11 11.3 -1.6**
PMRV Marv??o 141.78 335 *e*LR LR 22 00 03.6
PMTG Montargil 142.44 335 *e*PKPdf **PKPdf 21 11 10.6 -3.4**
PBAR Barrancos 142.67 333 *e*PKPdf **PKPdf 21 11 11.4 -3.0**
EVO Evora 142.80 335 *e*PKPdf **PKPdf 21 11 13.7 -1.0**
PNCL Nicolau / Gran 143.37 335 *e*PKPdf PKPbc 21 11 13.9 +1.1
MESJ Messejana 143.47 334 *e*PKPdf PKPbc 21 11 14.2 +1.1
PCVE Castro Verde 143.56 334 *e*PKPdf **PKiKP 21 11 21.1 +1.7**
PVAQ Vaqueiros 143.61 333 *e*PKPdf **PKiKP 21 11 20.8 +1.3**
PVAQ Vaqueiros 143.61 333 *e*LR LR 22 01 42.1
comp=Z,416nm,18.0s
PVAQ Vaqueiros 143.61 333 IAMs_20 IAMs_20 22 16 29.7

comp=Z,537nm,20.0s
PBDV Barranco-do-Ve 143.84 333 *e*PKPdf **PKiKP 21 11 18.8 -1.2**
MORF Marmelete 144.10 334 *e*PKPdf PKPbc 21 11 15.2 +0.2
PFVI Vila Bisbo 144.32 334 IAMs_20 IAMs_20 22 22 39.2
comp=Z,578nm,18.0s
MCLT Moule a Chique 145.90 74 IAMs_20 IAMs_20 22 22 59.4
comp=Z,640nm,21.0s
PTGA Pitinga 146.79 100 PKPbc **PKPbc 21 11 23.5 -0.6**
comp=Z,25nm,0.9s,baz=240,slow=3.9,SNR=37
PTGA Pitinga 146.79 100 PKPbc 21 11 23.4 -0.7
TOA0 Torodi Ar. Sit 150.43 287 PKPbc 21 11 31.8 -1.6
TORD Torodi Ar. Bea 150.43 287 PKPbc **PKPbc 21 11 33.0 -0.4**
comp=Z,13nm,0.9s,baz=49,slow=2.1,SNR=48
BDFB Brasilia 150.60 136 PKPbc **PKPbc 21 11 32.9 -1.1**
comp=Z,26nm,1.2s,baz=128,slow=2.6,SNR=15
MDP Montagnes des 154.77 90 PKPbc **PKiKP 21 11 43.9 +0.7**
comp=Z,21nm,0.9s,baz=74,slow=17,SNR=4.7
KIC Kosan Boka 157.54 273 *e*PKIKP **PKPab 21 12 10.7 +0.5**
comp=Z,18nm,0.7s
KIC Kosan Boka 157.54 273 *e*PKP1 PKPab 21 12 20.5 +10
comp=Z,46nm,0.9s
DBIC Dimbokro 157.65 274 PKPab **PKPab 21 12 10.9 +0.3**
comp=Z,5.9nm,0.8s,baz=56,slow=6.4,SNR=5.8
TIC Toumodi 157.81 274 *e*PKIKP **PKPab 21 12 10.8 -0.6**
TIC Toumodi 157.81 274 *e*PKP1 PKPab 21 12 21.7 +10
LIC Lamto 157.83 273 *e*PKIKP **PKPab 21 12 11.0 -0.4**
comp=Z,35nm,0.8s
LIC Lamto 157.83 273 *e*PKP1 PKPab 21 12 21.1 +10
comp=Z,55nm,1.0s

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*IDC **05** 21:01:53.0±1.4,5.°82S×153.°18E,h0km,mb3.7/7, mb1 3.9/8,mb1mx3.7/32,mbtmp3.7/8,ML2.0/1 Error ellipse: s-maj=60.7km s-min=21.7km az=121.0*
ISC 05 21:01:58.1±1.1,5.°9S±0.°2×153.°2E±0.°2,h33km,n9, σ0°76/10,mb3.7/7,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.95**	**239**	Pn	**Pn**	**21 03 37.6**	**0.0**
	1.6nm,0.3s,baz=84,slow=18,SNR=4.1						
PMG				Sn	**Sn**	**21 04 56.2**	**+0.6**
	2.8nm,0.3s,baz=87,slow=21,SNR=2.6						
WRA	**Warramunga Arr**	**23.07**	**231**	P	**P**	**21 07 00.9**	**-0.1**
	0.7nm,0.4s,baz=52,slow=9.8,SNR=7.3						
ASAR	**Alice Springs**	**25.66**	**224**	P	**P**	**21 07 24.1**	**-0.9**
	1.8nm,0.9s,baz=57,slow=9.4,SNR=10						
STKA	**Stephens Creek**	**28.06**	**201**	P	**P**	**21 07 46.8**	**+0.2**
	2.5nm,0.8s,baz=25,slow=4.1,SNR=3.8						
MKAR	**Makanchi Array**	**81.39**	**319**	P	**P**	**21 14 10.6**	**-1.2**
	0.1nm,0.5s,baz=107,slow=5.0,SNR=1.5						
ZALV	**Zalesovo Beam**	**82.26**	**326**	P	**P**	**21 14 16.9**	**+0.9**
	0.3nm,0.4s,baz=139,slow=9.5,SNR=1.7						
ILAR	**Eielson Array**	**82.99**	**22**	P	**P**	**21 14 19.6**	**-0.1**
	0.3nm,0.6s,baz=239,slow=8.1,SNR=4.3						
YKA	**Yellowknife Ar**	**96.18**	**28**	P	**P**	**21 15 23.1**	**+0.7**
	0.2nm,0.8s,baz=272,slow=4.9,SNR=1.7						
TORD	**Torodi Ar. Bea**	**151.01**	**287**	PKPbc	**PKPbc**	**21 21 48.1**	**-0.6**
	0.3nm,0.4s,baz=86,slow=2.4,SNR=4.4						

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*IDC **05** 21:21:55.8±1.9,5.°38S×152.°92E,h0km,mb4.0/11, mb1 4.1/12,mb1mx3.9/53,mbtmp4.0/12,ML1.6/1,Error ellipse: s-maj=73.3km s-min=18.6km az=120.0*
ISC 05 21:22:00.4±1.8,5.°5S±0.°3×153.°1E±0.°3,h37km,n13, σ0°92/14,mb3.9/11,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.06**	**237**	Pn	**Pn**	**21 23 40.2**	**-1.0**
	0.6nm,0.3s,baz=53,slow=15,SNR=1.8						
PMG				Sn	**Sn**	**21 25 01.5**	**+1.2**
	3.4nm,0.3s,baz=53,slow=20,SNR=13						
WRA	**Warramunga Arr**	**23.22**	**230**	P	**P**	**21 27 03.8**	**-0.6**
	2.4nm,0.7s,baz=54,slow=10.0,SNR=9.1						
ASAR	**Alice Springs**	**25.84**	**224**	P	**P**	**21 27 29.6**	**+0.9**
	1.5nm,0.9s,baz=57,slow=8.8,SNR=9.8						
PETK	**Petropavlovsk-**	**58.55**	**3**	P	**P**	**21 31 53.4**	**+0.3**
	3.3nm,0.6s,baz=158,slow=5.8,SNR=12						
MA2	**Magadan**	**64.93**	**359**	P	**P**	**21 32 36.6**	**+0.7**
	3.3nm,0.5s,baz=172,slow=5.0,SNR=10.0						
SONM	**Songino Array**	**67.11**	**328**	P	**P**	**21 32 50.9**	**+0.5**
	0.5nm,0.7s,baz=134,slow=6.0,SNR=2.6						
SEY	**Seymchan**	**68.27**	**360**	P	**P**	**21 32 57.7**	**+0.5**
	1.7nm,0.7s,baz=152,slow=2.6,SNR=6.4						
MKAR	**Makanchi Array**	**81.09**	**319**	P	**P**	**21 34 10.7**	**-1.2**
	0.3nm,0.5s,baz=103,slow=6.3,SNR=4.9						
ZALV	**Zalesovo Beam**	**81.94**	**326**	P	**P**	**21 34 14.7**	**-1.5**
	1.1nm,0.6s,baz=90,slow=5.9,SNR=5.6						
ILAR	**Eielson Array**	**82.71**	**22**	P	**P**	**21 34 20.0**	**0.0**
	0.8nm,1.1s,baz=254,slow=6.4,SNR=4.5						
KURBB	**Kurchatov Arra**	**84.57**	**322**	P	**P**	**21 34 30.3**	**+0.5**
	1.1nm,1.1s,baz=107,slow=4.7,SNR=3.1						
BVAR	**Borovoye Array**	**90.02**	**323**	P	**P**	**21 34 55.4**	**-0.7**
	0.8nm,0.8s,baz=134,slow=13,SNR=5.7						
TORD	**Torodi Ar. Bea**	**150.84**	**287**	PKPbc	**PKPbc**	**21 41 50.4**	**+0.3**
	0.6nm,0.4s,baz=80,slow=2.8,SNR=6.1						

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*IDC **05** 21:31:08.8±2.6,30.°15S×177.°27W,h0km,mb3.8/3, mb1 3.9/3,mb1mx3.7/28,mbtmp3.8/3,Error ellipse: s-maj=51.4km s-min=26.1km az=83.0*
ISC 05 21:31:12.3±2.4,30.°30S±0.°08×177.°2W±0.°3,h35km,n6, σ1°87/8,mb3.8/3,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.21**	**330**	Pn	**Pn**	**21 31 31.2**	**-1.5**
	21nm,0.3s,baz=92,slow=7.0,SNR=12						
RAO				Sn	**Sn**	**21 31 47.3**	**-0.6**
	622nm,0.3s,baz=106,slow=23,SNR=10.0						
URZ	**Urewera**	**9.22**	**209**	Pn	**Pn**	**21 33 20.8**	**-1.9**
	0.2nm,0.3s,baz=116,slow=22,SNR=1.7						
URZ				Sn	**Sn**	**21 35 04.5**	**-0.7**
	0.8nm,0.3s,baz=307,slow=23,SNR=2.1						
STKA	**Stephens Creek**	**35.16**	**257**	P	**P**	**21 38 05.6**	**+2.8**
	2.5nm,0.9s,baz=94,slow=19,SNR=1.8						
ASAR	**Alice Springs**	**43.79**	**266**	P	**P**	**21 39 16.5**	**+1.6**
	0.2nm,0.3s,baz=107,slow=7.4,SNR=5.5						
WRA	**Warramunga Arr**	**44.77**	**272**	P	**P**	**21 39 22.6**	**-0.2**
	0.5nm,0.3s,baz=111,slow=7.9,SNR=15						
FINES	**FINESS Array B**	**145.28**	**341**	PKPbc	**PKPdf**	**21 50 46.1**	**+0.5**
	1.4nm,0.7s,baz=60,slow=4.5,SNR=10						

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*NEIC **05** 21:31:13.1±1.0,43.°90N±0.°02×105.°39W±0.°04,h0km±2km, ML3.0/32,Error ellipse: s-maj=5.6km s-min=3.0km az=230.0*
*IDC **05** 21:31:13.4±2.1,43.°60N×105.°42W,h0km,mb1 3.4/3, mb1mx3.2/51,mbtmp3.2/3,ML3.3/3,Error ellipse: s-maj=45.9km s-min=9.2km az=151.0*
ISC 05 21:31:13.6±0.9,43.°88N±0.°05×105.°39W±0.°05,h0km,n28, σ1°18/30,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**76**	Pg	**Pb**	**21 31 33.6**	**-0.4**
RSSD				Sn	**Sn**	**21 31 49.7**	**-0.5**
K22A	**Casper**	**1.48**	**214**	Pn	**Pn**	**21 31 39.9**	**-1.9**
K22A					**Sn**	**21 32 01.7**	**-0.3**
K22A				IAML		21 32 06.4	
	comp=E,379nm,0.3s						
RWWY	**Rawlins**	**2.57**	**212**	Pn	**Pn**	**21 31 56.4**	**-0.4**
RWWY				IAML		21 32 32.1	
	comp=E,90nm,0.3s						
PHWY	**Pilot Hill**	**2.58**	**181**		**Pn**	**21 31 56.4**	**-0.5**
PHWY				Sn	**Sn**	**21 32 29.0**	**-0.1**
LAO	**LASA Array**	**2.87**	**348**	Pn	**Pn**	**21 31 59.2**	**-1.4**
LAO				IAML		21 32 58.9	
	comp=E,95nm,0.8s						
RLMT	**Red Lodge**	**3.04**	**295**	Pn	**Pn**	**21 32 02.2**	**-1.0**
RLMT				IAML		21 32 55.5	
	comp=E,43nm,0.3s						
RLMT				IAML		21 32 58.7	
	comp=E,38nm,0.3s						
PD31	**Pinedale Array**	**3.24**	**251**		**Pn**	**21 32 06.5**	**+0.5**
PDAR	**Pinedale Array**	**3.24**	**251**	Pn	**Pn**	**21 32 07.7**	**+1.8**
	comp=E,3.6nm,0.3s,baz=77,slow=16,SNR=15						
PDAR				Lg	Lg	21 32 50.8	
	comp=E,11nm,0.3s,baz=74,slow=30,SNR=7.8						
GCMT	**Greycliff**	**3.59**	**304**	Pn	**Pn**	**21 32 10.0**	**-0.7**
H17A	**Grant Village**	**3.77**	**280**	Pn	**Pn**	**21 32 12.0**	**-1.2**
H17A				IAML		21 33 18.0	
	comp=E,18nm,0.6s						
H17A				IAML		21 33 20.0	
	comp=N,16nm,0.9s						
LOHW	**Long Hollow**	**3.79**	**268**	Pn	**Pn**	**21 32 14.5**	**+1.0**
FLWY	**Flagg Ranch**	**3.84**	**275**	Pn	**Pn**	**21 32 13.6**	**-0.6**
FLWY				IAML		21 33 30.0	
	comp=N,20nm,1.2s						
FLWY				IAML		21 33 42.9	
	comp=N,17nm,2.0s						
OGNE	**Ogallala**	**3.84**	**139**		**Pn**	**21 32 13.9**	**-0.2**
SNOW	**Snow King Moun**	**3.92**	**266**	Pn	**Pn**	**21 32 14.8**	**-0.5**
SNOW				IAML		21 33 45.7	
	comp=N,22nm,1.1s						
SNOW				IAML		21 33 52.7	
	comp=N,19nm,1.4s						
YPP	**Pitchstone Pla**	**3.92**	**278**		**Pg**	**21 32 28.6**	**-0.2**
REDW	**Red Top Meadow**	**4.00**	**264**	Pn	**Pn**	**21 32 15.9**	**-0.5**
REDW				IAML		21 33 31.9	
	comp=N,23nm,0.7s						
REDW				IAML		21 33 34.1	
	comp=N,26nm,0.8s						
YHH	**Holmes Hill**	**4.02**	**285**		**Pg**	**21 32 29.9**	**-0.9**
ISCO	**Idaho Springs**	**4.08**	**182**		**Pn**	**21 32 17.4**	**-0.2**
ISCO				IAML		21 33 21.6	
	comp=N,13nm,1.1s						
O20A	**White River Ci**	**4.31**	**211**	Pn	**Pn**	**21 32 20.8**	**+0.3**
O20A				IAML		21 34 28.9	
	comp=N,24nm,3.4s						
ECR	**Eagle Creek**	**4.43**	**261**	Pn	**Pn**	**21 32 21.6**	**-0.7**
BOZ	**Bozeman (W)**	**4.77**	**293**	Pn	**Pn**	**21 32 25.0**	**-1.8**
BOZ				IAML		21 33 50.9	
	comp=N,9.8nm,1.1s						
KSCO	**Kaye Shedlock'**	**5.29**	**156**	Pn	**Pn**	**21 32 32.5**	**-1.5**
MCMT	**McKenzie Canyo**	**5.43**	**283**	Pn	**Pn**	**21 32 34.3**	**-1.8**
PV07	**Paradox Valley**	**5.97**	**205**	Pn	**Pn**	**21 32 43.6**	**+0.2**
PV14	**Lion Creek, Pa**	**6.15**	**208**	Pn	**Pn**	**21 32 44.9**	**-1.0**
I10CA	**LAC DU BONNET**	**8.98**	**42**	*i*		22 25 00.0	
	baz=224,slow=330,SNR=1.2						
ULM	**Lac du Bonnet**	**9.09**	**42**	Pn	**Pn**	**21 33 26.3**	**+0.4**
	comp=N,0.7nm,0.3s,baz=232,slow=12,SNR=8.0						
ULM				Pg		21 34 03.0	
	comp=N,0.3nm,0.3s,baz=226,slow=12,SNR=3.2						
ULM				Lg	Lg	21 35 59.9	
	comp=N,0.1nm,0.3s,baz=327,slow=18,SNR=1.8						
YKA	**Yellowknife Ar**	**19.41**	**347**	P	**Pn**	**21 35 45.5**	**+3.4**
	comp=N,0.1nm,0.3s,baz=162,slow=10,SNR=14						

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*IDC **05** 21:57:41.8±3.7,36.°18N×70.°41E,h0km,mb3.7/7, mb1 3.7/12,mb1mx3.4/49,mbtmp3.6/12,ML3.4/4,Error ellipse: s-maj=61.2km s-min=26.2km az=159.0*
*NNC **05** 21:57:53.5±4.6,37.°46N×69.°59E,h0km,mb4.1,mpv3.9, Error ellipse: s-maj=42.4km s-min=25.4km az=172.0*
ISC 05 21:57:53.3±1.8,37.°0N±0.°2×70.°0E±0.°1,h36km,n25, σ1°33/26,mb3.7/5,4C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.91**	**28**	P	**Pn**	**21 59 19.7**	**+1.0**
	SNR=31						
KK31	**Karatay Array**	**6.15**	**4**	Pn	**Pn**	**21 59 21.2**	**-0.3**
	1.7nm,0.2s,baz=186,slow=12,SNR=36						
KK31				⇓Sn	**Sn**	**22 00 30.2**	**-0.4**
	5.5nm,0.4s,baz=191,slow=24,SNR=3.6						
UCH	**Uchtor**	**6.32**	**32**	P	**Pn**	**21 59 25.5**	**+1.1**
	SNR=20						
EKS2	**Erkin-Say**	**6.40**	**26**	P	**Pn**	**21 59 27.0**	**+1.8**
	SNR=7.2						
AAK	**Ala-Archa**	**6.65**	**30**	P	**Pn**	**21 59 30.1**	**+1.4**
	SNR=25						
AAK	**Ala-Archa**	**6.65**	**30**	⇑Pn	**Pn**	**21 59 29.5**	**+0.9**
	9.1nm,0.6s						
AAK				⇑Sn	**Sn**	**22 00 43.8**	**+0.5**
	8.1nm,0.7s						
KBK	**Karagaybulak**	**6.86**	**32**	P	**Pn**	**21 59 33.8**	**+2.3**
	SNR=15						
CHMS	**Chumysh**	**7.06**	**30**	P	**Pn**	**21 59 35.3**	**+1.2**
	SNR=30						
USP	**Ospenovka**	**7.19**	**28**	P	**Pn**	**21 59 36.5**	**+0.6**
	SNR=18						
TKM2	**Tokmak 2**	**7.36**	**34**	P	**Pn**	**21 59 39.7**	**+1.4**
	SNR=9.4						
TKM2	**Tokmak 2**	**7.36**	**34**	⇑Pn	**Pn**	**21 59 38.6**	**+0.3**
	4.0nm,0.6s						
TKM2				⇓Sn	**Sn**	**22 01 00.3**	**-0.3**
	2.8nm,0.7s						
MDOK	**Medeo**	**8.23**	**39**	Pn	**Pn**	**21 59 51.4**	**+1.1**
	4.8nm,0.6s						
MDOK				Lg	Lg	22 02 10.8	
	4.6nm,0.8s						
GEYT	**Alibeck**	**9.47**	**279**	Pn	**Pn**	**22 00 07.5**	**+0.3**
	0.3nm,0.3s,baz=98,slow=11,SNR=1.7						
MKAR	**Makanchi Array**	**13.43**	**39**	Pn	**Pn**	**22 01 00.1**	**-1.1**
	0.0nm,0.3s,baz=230,slow=11,SNR=7.3						
AB31	**Akbulak array**	**14.28**	**332**	⇓Pn	Pn	22 01 07.0	-5.8
	0.3nm,0.3s,baz=170,slow=11,SNR=18						
AB31				⇑Sn	Sn	22 03 41.9	-7.9
	1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**14.97**	**22**	Pn	**Pn**	**22 01 18.1**	**-4.1**
	baz=230,slow=7.2						
AKTO	**Aktyubinsk**	**15.97**	**331**	Pn	**P**	**22 01 37.6**	**-0.7**
	0.3nm,0.3s,baz=149,slow=8.6,SNR=9.1						
BVAR	**Borovoye Array**	**16.06**	**1**	Pn	**Pn**	**22 01 36.3**	**0.0**
	0.3nm,0.3s,baz=187,slow=24,SNR=3.6						
ZALV	**Zalesovo Beam**	**19.86**	**27**	P	**P**	**22 02 19.4**	**-1.5**
	0.7nm,0.3s,baz=205,slow=9.4,SNR=6.0						
ARU	**Arti**	**20.93**	**342**	P	Pn	22 02 35.0	-0.3
	0.7nm,0.6s,baz=132,slow=8.8,SNR=5.3						
FINES	**FINESS Array B**	**36.63**	**326**	P	**P**	**22 04 56.6**	**+0.7**
	2.1nm,0.9s,baz=129,slow=13,SNR=2.1						
ARCES	**ARCESS Array B**	**40.40**	**338**	P	**P**	**22 05 27.7**	**+0.3**
	7.6nm,1.1s,baz=110,slow=9.8,SNR=2.7						
HFS	**Hagfors**	**42.19**	**322**	P	**P**	**22 05 42.0**	**-0.2**
	0.5nm,0.3s,baz=98,slow=11,SNR=7.8						
NOA	**NORSAR Array B**	**43.51**	**323**	P	**P**	**22 05 52.4**	**-0.6**
	0.2nm,0.3s,baz=115,slow=7.0,SNR=6.2						
YKA	**Yellowknife Ar**	**80.82**	**2**	P	**P**	**22 10 02.9**	**0.0**
	0.1nm,0.4s,baz=356,slow=5.4,SNR=3.6						

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*IDC **05** 21:59:24.7±7.9,34.°65N×22.°91E,h0km,mb3.5/2, mb1 3.4/3,mb1mx3.1/51,mbtmp3.4/3,ML2.8/1,Error ellipse: s-maj=285.2km s-min=114.7km az=155.0*
*ATH **05** 21:59:36.5,35.°30N×22.°97E,h15km±2km,ML3.1/7,Error ellipse: s-maj=2.7km s-min=1.0km az=39.0*
*THE **05** 21:59:36.2,35.°32N×22.°91E,h26km±1km,ML3.0/7,Error ellipse: s-maj=1.6km s-min=0.6km az=56.0*
ISC 05 21:59:35.8±2.0,35.°30N±0.°06×22.°96E±0.°08,h16km±11km, n23,σ0°91/37,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.59**	**96**	P	**Pg**	**21 59 47.8**	**+0.3**
KNDR				S	**Sb**	**21 59 56.6**	**+0.6**
ANKY	**Antikythira Is**	**0.63**	**26**	P	**Pg**	**21 59 48.3**	**+0.1**
ANKY				S	**Sb**	**21 59 57.5**	**+0.5**
ANKY				AML	AML	21 59 59.9	
	comp=N,3331µm,0.6s						
ANKY				AML	AML	22 00 03.1	
	comp=E,2285µm,0.8s						
ANKY	**Antikythira Is**	**0.63**	**26**	P	**Pg**	**21 59 47.9**	**-0.3**
ANKY				S	**Sb**	**21 59 57.6**	**+0.5**
	comp=E,1µm,0.7s						
IMMV	**Iera Moni Meta**	**0.85**	**79**	P	**Pb**	**21 59 52.0**	**-0.2**
IMMV				S	**Sg**	**22 00 03.7**	**+0.2**
IMMV				AML	AML	22 00 05.4	
	comp=E,5625µm,0.6s						
IMMV				AML	AML	22 00 08.2	
	comp=N,2984µm,1.0s						
IMMV	**Iera Moni Meta**	**0.85**	**79**	P	**Pb**	**21 59 52.0**	**-0.2**
IMMV				S	**Sb**	**22 00 04.3**	**+1.0**
	comp=N,2µm,0.8s						
KTHA	**Kythira Island**	**0.96**	**5**	P	**Pb**	**21 59 54.5**	**+0.4**
KTHA				S	**Sb**	**22 00 07.2**	**+0.6**
KTHA				AML	AML	22 00 10.3	
	comp=E,3202µm,0.9s						
KTHA				AML	AML	22 00 11.9	
	comp=N,930µm,0.8s						
KTHA	**Kythira Island**	**0.96**	**5**	P	**Pb**	**21 59 52.9**	**-1.2**
KTHA				S	**Sb**	**22 00 06.1**	**-0.5**
	comp=N,982nm,0.8s						
KTHR	**Kythira**	**0.96**	**2**	P	**Pb**	**21 59 52.4**	**-1.7**
KTHR				S	**Sb**	**22 00 05.8**	**-0.8**
	comp=N,625nm,0.3s						
VAM	**Vamos**	**1.02**	**84**	P	**Pb**	**21 59 54.8**	**-0.2**
VAM				S	**Sg**	**22 00 09.2**	**+0.4**
VAM				AML	AML	22 00 13.4	
	comp=N,2162µm,0.7s						
VAM				AML	AML	22 00 14.5	
	comp=E,2391µm,0.6s						
VAM	**Vamos**	**1.02**	**84**	P	**Pb**	**21 59 54.1**	**-0.9**
VAM				S	**Sb**	**22 00 08.6**	**+0.4**
	comp=E,1µm,0.6s						
GVD	**Gavdhos**	**1.03**	**116**	P	**Pb**	**21 59 55.9**	**+0.6**
GVD				S	**Sb**	**22 00 09.4**	**+0.9**
GVD				AML	AML	22 00 20.4	
	comp=E,2875µm,0.4s						
GVD				AML	AML	22 00 20.7	
	comp=N,2659µm,0.5s						
GVD	**Gavdhos**	**1.03**	**116**	P	**Pb**	**21 59 54.5**	**-0.8**
GVD				S	**Sb**	**22 00 08.7**	**+0.2**
	comp=N,950nm,0.4s						
GVDS	**Gavdos**	**1.03**	**116**	P	**Pb**	**21 59 54.4**	**-0.9**
GVDS				S	**Sb**	**22 00 09.2**	**+0.7**
	comp=N,560nm,0.5s						
PRNS	**Prines Rethymn**	**1.26**	**87**	P	**Pn**	**21 59 57.4**	**-1.4**
PRNS				S	**Sb**	**22 00 12.7**	**-2.5**
MNVA	**Monemvasia**	**1.39**	**2**	P	**Pb**	**22 00 01.7**	**+0.3**
VLI	**Veliai**	**1.42**	**359**	P	**Pn**	**22 00 01.7**	**+0.7**
VLI				S	**Sn**	**22 00 20.2**	**+0.8**
VLI				AML	AML	22 00 25.6	
	comp=E,1078µm,0.9s						
VLI				AML	AML	22 00 26.4	
	comp=N,665µm,0.9s						
SIVA	**Sivas**	**1.54**	**100**	P	**Pb**	**22 00 04.3**	**+0.3**
SIVA				S	**Sb**	**22 00 24.2**	**+1.0**
SIVA				AML	AML	22 00 44.8	
	comp=N,1132µm,0.7s						
SIVA				AML	AML	22 00 45.8	
	comp=E,1625µm,0.7s						
IDI	**Anoyia**	**1.57**	**90**	P	**Pn**	**22 00 02.5**	**-0.7**
MHLA	**Plaka, Milos I**	**1.87**	**39**	P	**Pn**	**22 00 08.7**	**+1.5**
KRND	**KRANIDI**	**2.09**	**4**	P	**Pb**	**22 00 13.1**	**-0.2**
BRTR	**Keskin Array B**	**9.56**	**59**	Pn	**Pn**	**22 01 51.6**	**-1.4**
	comp=E,0.1nm,0.3s,baz=236,slow=15,SNR=6.3						
MKAR	**Makanchi Array**	**45.20**	**56**	P	P	22 07 47.1	-4.9
	comp=E,0.3nm,0.5s,baz=272,slow=7.5,SNR=5.7						
ZALV	**Zalesovo Beam**	**46.21**	**46**	P	P	22 07 53.9	-5.9
	comp=E,0.4nm,0.4s,baz=273,slow=7.3,SNR=2.5						

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*IDC **05** 22:03:53.3±0.9,7.°10N×73.°33W,h129km±14km,mb3.1/3, mb1 3.4/5,mb1mx3.1/33,mbtmp3.6/5,MS3.1/1,Ms1 3.1/1, ms1mx2.8/14,Error ellipse: s-maj=25.6km s-min=8.0km az=130.0*
*RSNC **05** 22:03:54.9±1.7,6.°82N×73.°16W,h142km±7km,ML3.3, Mw3.6,Fault plane solution: NP1:φ=8.00000°,δ=56.00000°, λ=-176.00000°.*
ISC 05 22:03:53.4±0.9,6.°85N±0.°03×73.°12W±0.°03,h150km±6km, n45,σ1°64/85,mb3.4/3,9C-7D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**195**	⇑*i*P	**Pn**	**22 04 14.3**	**+0.1**
BARC				*e*S	**Sn**	**22 04 28.9**	**-1.0**
BARC				*i*		22 04 29.9	
	comp=Z,593nm,0.4s						
PAMC	**Pamplona, Colo**	**0.64**	**40**	⇓*i*P	**Pn**	**22 04 17.1**	**+1.0**
PAMC				*e*S	**Sn**	**22 04 33.5**	**+0.1**
PAMC				*i*		22 04 36.2	
	comp=Z,568nm,0.5s						
BRRC	**Barranca, Sant**	**0.65**	**294**	⇓*i*P	**Pn**	**22 04 16.2**	**+0.6**
BRRC				*e*S	**Sn**	**22 04 32.4**	**0.0**
BRRC				*i*		22 04 37.4	
	comp=Z,418nm,0.1s						
RUSC	**La Rusia**	**0.95**	**178**	⇑*e*P	**Pn**	**22 04 18.1**	**-0.2**
RUSC				*e*S	**Sn**	**22 04 36.4**	**-0.9**
RUSC				*i*		22 04 38.3	
	comp=Z,274nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	*e*P	**Pn**	**22 04 20.9**	**-0.7**
PTBC				*e*S	**Sn**	**22 04 41.6**	**-1.6**
PTBC				*i*		22 04 45.0	
	comp=Z,210nm,0.3s						
TAMC	**Tame, Arauca**	**1.38**	**107**	⇑*i*P	**Pn**	**22 04 22.6**	**+0.9**
TAMC				*i*		22 04 22.9	
	comp=Z,448nm,0.4s						
TAMC				*e*S	**Sn**	**22 04 43.6**	**+0.2**
OCAC	**Ocana**	**1.40**	**352**	⇓*i*P	**Pn**	**22 04 22.6**	**+0.5**
OCAC				*e*S	**Sn**	**22 04 44.1**	**0.0**
OCAC				*i*		22 04 49.7	
	comp=Z,692nm,0.2s						
SPBC	**San Pablo de B**	**1.52**	**219**	⇓*e*P	**Pn**	**22 04 23.2**	**-0.1**
SPBC				*e*S	**Sn**	**22 04 45.2**	**-1.0**
SPBC				*i*		22 04 51.0	
	comp=Z,281nm,0.5s						
ZARC	**Zaragoza, Cauc**	**1.84**	**290**	*e*P	**Pn**	**22 04 27.2**	**+0.5**
ZARC				*e*S	**Sn**	**22 04 52.8**	**+0.4**
ZARC				*i*		22 04 59.0	
	comp=Z,230nm,0.3s						
NORC	**Norcasia**	**2.16**	**234**	*e*P	**Pn**	**22 04 30.3**	**-0.2**
NORC				*e*S	**Sn**	**22 04 58.0**	**-1.0**
NORC				*i*		22 05 05.5	
	comp=Z,153nm,0.2s						
SMLC	**San Martn de**	**2.16**	**334**	*e*P	**Pn**	**22 04 30.4**	**0.0**
SMLC				*e*S	**Sn**	**22 04 58.7**	**-0.2**
SMLC				*i*		22 05 02.5	
	comp=Z,303nm,0.2s						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**22 04 34.1**	**+1.3**
	comp=Z,23nm,0.3s,baz=269,slow=16,SNR=27						
ROSC				S	**Sn**	**22 05 04.3**	**+1.2**
	comp=Z,36nm,0.3s,baz=279,slow=19,SNR=10						
ROSC				LR	LR	22 05 46.0	
	comp=Z,383nm,19.2s,baz=332,slow=46						
ROSC	**El Rosal**	**2.33**	**211**	*e*P	**Pn**	**

LCBC	**Los crdobas,**	**3.79**	**302**	*e*P	**Pn**	**22 04 51.3**	**+0.4**
LCBC				*e*S	**Sn**	**22 05 33.6**	**-2.0**
LCBC				*i*		22 05 46.0	
	comp=Z,41nm,0.4s						
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*e*P	**Pn**	**22 04 54.8**	**-0.9**
CRJC				*e*S	**Sn**	**22 05 42.0**	**-2.3**
CRJC				*i*		22 05 51.3	
	comp=Z,46nm,0.2s						
YOTC	**Yotoco, Valle**	**4.29**	**229**⇓	*e*P	**Pn**	**22 04 57.4**	**-0.2**
YOTC				*e*S	**Sn**	**22 05 46.7**	**-0.9**
GUVC	**San Jose del G**	**4.30**	**173**	*e*P	**Pn**	**22 04 56.8**	**-0.8**
GUVC				*e*S	**Sn**	**22 05 45.1**	**-2.6**
GUVC				*i*		22 05 50.4	
	comp=Z,112nm,0.3s						
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P	**Pn**	**22 04 59.3**	**+0.1**
SMRC				*e*S	**Sn**	**22 05 47.9**	**-2.7**
SMRC				*i*		22 05 52.0	
	comp=Z,24nm,0.4s						
MACC	**Macarena, Meta**	**4.73**	**189**	*e*P	**Pn**	**22 05 01.5**	**-1.8**
MACC				*e*S	**Sn**	**22 05 53.0**	**-4.8**
MACC				*i*		22 05 59.9	
	comp=Z,24nm,0.5s						
DABV	**Dabajuro**	**4.73**	**31**⇑	*i*P	**Pn**	**22 05 03.8**	**+0.5**
DABV				*e*S	**Sn**	**22 05 55.5**	**-2.3**
MARP	**Paez Belalcaza**	**4.88**	**216**	*e*P	**Pn**	**22 05 06.0**	**+0.5**
MARP				*e*S	**Sn**	**22 05 59.2**	**-2.5**
URIC	**Uribia, Colomb**	**4.95**	**13**	*e*P	**Pn**	**22 05 04.9**	**-1.2**
URIC				*e*S	**Sn**	**22 05 58.6**	**-4.3**
URIC				*i*		22 06 03.2	
	comp=Z,11nm,0.4s						
MALC	**Bahia Malaga**	**5.06**	**236**	*e*P	**Pn**	**22 05 09.2**	**+1.6**
MALC				*i*		22 05 11.8	
	comp=Z,19nm,0.7s						
MALC				*e*S	**Sn**	**22 06 07.8**	**+2.3**
GARC	**Garzon, Huila**	**5.20**	**207**	*e*P	**Pn**	**22 05 08.8**	**-0.9**
GARC				*e*S	**Sn**	**22 06 03.7**	**-5.6**
GARC				*i*		22 06 12.2	
	comp=Z,30nm,0.2s						
PCON	**Cinco Dias**	**5.55**	**216**⇓	*e*P	**Pn**	**22 05 15.9**	**+1.2**
PCON				*e*S	**Sn**	**22 06 18.5**	**+0.4**
PCON				*i*		22 06 29.4	
	comp=Z,8.3nm,0.4s						
SOTA	**Rioblanco**	**5.83**	**217**	*e*P	**Pn**	**22 05 19.5**	**+1.1**
SOTA				*i*		22 05 24.9	
	comp=Z,6.2nm,0.4s						
SOTA				*e*S	**Sn**	**22 06 21.9**	**-2.8**
SIV	**San Ignacio**	**25.63**	**152**	P	**P**	**22 09 14.0**	**+4.8**
	comp=Z,0.5nm,0.3s,baz=249,slow=22,SNR=4.5						
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**22 10 42.7**	**-1.3**
	comp=Z,0.1nm,0.5s,baz=135,slow=9.6,SNR=4.2						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**22 14 05.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=131,slow=6.9,SNR=9.4						

*IDC **05** 22:17:08.9±1.8,6.90S×129.30E,h136km±24km, mb2.7/1, mb1 3.4/5, mb1mx3.0/38, mbtmp3.8/5, Error ellipse: s-maj=28.9km s-min=13.9km az=121.0*

ISC 05 22:17:08.8±1.0,**6.98S**±0.08×**129.4E**±0.1,**h150**km,**n5,** σ1⁰**75/8, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.35**	**17**	P	**Pn**	**22 18 39.9**	**-0.3**
	2.1nm,0.3s,baz=212,slow=22,SNR=18						
SIJI				S	**Sn**	**22 19 51.1**	**-0.8**
	1.3nm,0.3s,baz=230,slow=22,SNR=6.5						
BATI	**Baumata**	**6.50**	**240**	P	**Pn**	**22 18 42.2**	**-0.1**
	6.8nm,0.3s,baz=37,slow=3.4,SNR=7.3						
BATI				S	**Sn**	**22 19 54.8**	**-0.8**
	8.7nm,0.3s,baz=141,slow=9.0,SNR=13						
WRA	**Warramunga Ar**	**13.75**	**160**	P	**Pn**	**22 20 17.8**	**+0.1**
	0.6nm,0.3s,baz=343,slow=14,SNR=22						
WRA				S	Sn	22 22 42.1	-7.9
	1.6nm,0.3s,baz=338,slow=21,SNR=13						
ASAR	**Alice Springs**	**17.15**	**166**	P	**Pn**	**22 21 02.5**	**+2.9**
	0.4nm,0.3s,baz=340,slow=9.8,SNR=28						
ASAR				S	**S**	**22 24 07.8**	**-2.2**
	0.6nm,0.3s,baz=314,slow=17,SNR=8.0						
MKAR	**Makanchi Array**	**67.88**	**327**	P	**P**	**22 27 51.8**	**+0.8**
	0.1nm,0.5s,baz=123,slow=7.0,SNR=2.2						

IDC 05 22:27:39.3±6.4,**49.92N×114.48W,h0**km,**mb1 3.4**/1, **mb1mx2.9**/33,**mbtmp3.0**/1,**ML3.1**/1,**Error ellipse: s-maj=89.9km s-min=45.3km az=60.0, British Columbia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I56US	**NEWPORT INFRAS**	**2.40**	**228**	*i*		22 41 00.0	
	baz=43,slow=328,SNR=4.0						
I10CA	**LAC DU BONNET**	**11.87**	**82**	*i*		23 36 50.0	
	baz=272,slow=341,SNR=0.7						
YKA	**Yellowknife Ar**	**12.61**	**360**	Pn	Pn	22 30 35.6	-4.1
	0.1nm,0.3s,baz=174,slow=13,SNR=7.7						
YKA				Lg	Lg	22 34 09.4	
	0.0nm,0.3s,baz=173,slow=27,SNR=2.5						

*IDC **05** 23:12:58.1±2.1,6.27S×153.04E,h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/41, mbtmp3.6/4, Error ellipse: s-maj=96.6km s-min=28.2km az=124.0*

ISC 05 23:13:02.6±1.8,**6.5S**±0.4×**153.3E**±0.3,**h35**km,**n6,** σ0⁰**63/6, mb3.5/4, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.71**	**245**	Sn	**Sn**	**23 15 54.2**	**+0.1**
	2.8nm,0.3s,baz=351,slow=21,SNR=5.6						
WRA	**Warramunga Ar**	**22.73**	**232**	P	**P**	**23 18 01.1**	**-0.6**
	0.8nm,0.8s,baz=54,slow=9.8,SNR=5.1						
ASAR	**Alice Springs**	**25.25**	**226**	P	**P**	**23 18 26.3**	**+0.7**
	0.8nm,0.8s,baz=54,slow=9.0,SNR=6.2						
MKAR	**Makanchi Array**	**81.95**	**319**	P	**P**	**23 25 19.0**	**+0.2**
	0.5nm,0.8s,baz=123,slow=4.5,SNR=5.1						
ILAR	**Eielson Array**	**83.58**	**22**	P	**P**	**23 25 26.9**	**+0.1**
	0.7nm,0.9s,baz=246,slow=6.2,SNR=6.3						
TORD	**Torodi Ar. Bea**	**151.28**	**285**	PKPbc	**PKPbc**	**23 32 53.0**	**-0.6**
	0.4nm,0.8s,baz=84,slow=3.0,SNR=1.4						

*HEL **05** 23:30:47.6, 67.75N×20.06E,h0km, ML1.9, Explosion*

UPP 05 23:30:48.5±0.0,**67.82N×20.20E,h0**km,**ML2.3, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	23 30 51.4	+0.2
KUA				S	Sg	23 30 53.5	+0.5
KUA	**Kurravaara**	**0.14**	**22**	*i* P	Pg	23 30 51.4	+0.2
KUA				*i* S	Sg	23 30 53.5	+0.5
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	23 30 53.1	+0.2
RATU	**Laukkuluspa**	**0.23**	**270**	*i* P	Pg	23 30 53.1	+0.2
NIKU	**Nikkaluokta**	**0.44**	**276**	P	Pg	23 30 57.0	0.0
NIKU	**Nikkaluokta**	**0.44**	**276**	*i* P	Pg	23 30 57.0	0.0
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 31 01.8	-0.3
LANU	**Lannavaara**	**0.71**	**71**	*i* P	Pg	23 31 01.8	-0.3
DUNU	**Dundret**	**0.72**	**168**	P	Pg	23 31 02.0	-0.2
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	23 31 02.0	-0.2
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	23 31 03.3	-0.1
MASU	**Masugnsbyn**	**0.78**	**117**	*i* P	Pg	23 31 03.3	-0.1
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pb	23 31 12.0	-0.2
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*PB	Pg	23 31 11.6	0.0
	baz=192						
KIF				MSG		23 31 27.8	
	comp=Z,11nm,0.2s						
KIF				*e*SB	Sb	23 31 28.2	-0.1
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 31 13.8	-1.2
PAJU				S	Sg	23 31 32.5	-0.4
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pg	23 31 13.5	-1.5
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 31 14.3	-1.3
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 31 14.6	-0.9
	baz=241						
HEF				MSG		23 31 33.0	
	comp=Z,8.1nm,0.2s						
HEF				*e*SN	Sn	23 31 37.6	+2.6
HARU	**Harads**	**1.70**	**169**	P	Pn	23 31 19.3	+0.1
HARU	**Harads**	**1.70**	**169**	*e*P	Pn	23 31 19.3	+0.1
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	23 31 30.1	+1.3
	baz=317						
TOF				MSG		23 31 57.8	
	comp=Z,5.5nm,0.2s						
TOF				*e*SG	Sb	23 32 01.8	-0.4
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pn	23 31 31.5	+1.8
SGF				*e*SG	Sb	23 32 04.3	+0.2
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	23 31 33.2	+1.9
RNF				*e*SB	Sb	23 32 06.8	-0.7
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*P	Pn	23 31 32.7	+1.1
	baz=229						
KEV	**Kevo**	**3.15**	**49**	*e*PG	Pb	23 31 45.2	0.0
	baz=231						
KEV				*e*S	Sn	23 32 18.1	+0.8
BURU	**Burvik**	**3.29**	**171**	*e*P	Pn	23 31 43.2	+2.0
BURU				*e*S	Sn	23 32 23.4	+2.5
OLKF	**Oulanka, Finla**	**3.91**	**108**	*e*PG	Pb	23 31 58.7	+0.6
MSF	**Maaselka**	**3.98**	**115**	*e*PG	Pb	23 32 01.0	+1.6
KU6	**Riekki**	**4.22**	**111**	*e*PG	Pb	23 32 04.2	+0.7
	baz=296						

UPP 05 23:30:56.1±0.2,**67.82N×20.22E,h0**km,**ML2.6, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.15**	**18**	P	Pg	23 30 59.2	+0.3
KUA				S	Sg	23 31 01.3	+0.5
RATU	**Laukkuluspa**	**0.24**	**272**	P	Pg	23 31 00.9	+0.3
PAJU	**Pajala**	**1.37**	**124**	P	Pg	23 31 21.5	-0.8

*IDC **06** 00:02:41.9±1.6,5.66S×153.06E,h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/29, mbtmp3.8/9, ML2.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/28, Error ellipse: s-maj=61.8km s-min=20.1km az=126.0*

ISC 06 00:02:47.2±1.5,**5.7S**±0.3×**153.1E**±0.3,**h37**km,**n11,** σ0⁰**64/11, mb3.7/8, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.95**	**238**	Pn	**Pn**	**00 04 26.3**	**-0.2**
	2.0nm,0.3s,baz=349,slow=6.9,SNR=4.2						
PMG				Sn	**Sn**	**00 05 45.0**	**+0.7**
	1.6nm,0.3s,baz=278,slow=22,SNR=6.0						
HNR	**Honiara**	**7.71**	**119**	LR	LR	00 07 48.5	
	comp=Z,54nm,21.4s,baz=329,slow=39						
WRA	**Warramunga Arr**	**23.09**	**231**	P	**P**	**00 07 49.5**	**-0.4**
	1.1nm,0.6s,baz=51,slow=10.0,SNR=9.5						
ASAR	**Alice Springs**	**25.70**	**224**	P	**P**	**00 08 13.2**	**-0.8**
	2.2nm,0.9s,baz=52,slow=9.0,SNR=12						
SONM	**Songino Array**	**67.27**	**328**	P	**P**	**00 13 38.3**	**+0.1**
	0.3nm,0.5s,baz=128,slow=6.7,SNR=2.8						
MKAR	**Makanchi Array**	**81.23**	**319**	P	**P**	**00 14 59.2**	**-0.2**
	0.3nm,0.5s,baz=111,slow=5.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**82.09**	**326**	P	**P**	**00 15 03.4**	**-0.4**
	0.4nm,0.6s,baz=94,slow=5.8,SNR=2.5						
ILAR	**Eielson Array**	**82.89**	**22**	P	**P**	**00 15 07.6**	**-0.1**
	0.6nm,0.8s,baz=244,slow=5.1,SNR=6.7						
NRIK	**Norilsk**	**86.94**	**341**	P	**P**	**00 15 27.5**	**-0.4**
	0.7nm,0.5s,baz=75,slow=3.9,SNR=3.8						
YKA	**Yellowknife Ar**	**96.09**	**28**	P	**P**	**00 16 11.3**	**+0.7**
	0.2nm,0.7s,baz=269,slow=4.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**150.88**	**287**	PKPbc	**PKiKP**	**00 22 38.5**	**+1.0**
	0.5nm,0.7s,baz=78,slow=2.7,SNR=4.3						

*ISK **06** 00:27:57.5, 37.10N×36.82E, h10km, ML2.9/23*
*DDA **06** 00:27:57.6, 37.10N×36.79E, h12km±1km, ML3.1*

ISC 06 00:27:58.2±0.9,**37.11N**±0.02×**36.81E**±0.02,**h9**km±7km, **n44,** σ0⁰**59/59, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMA	**Osmaniye**	**0.14**	**305**	*i* P	**Pg**	**00 28 01.5**	**+0.1**
KAMA				*i* S	**Sg**	**00 28 03.7**	**+0.1**
KAMA				IAML		00 28 04.0	
	comp=N,9μm,0.1s						
KAMA				IAML		00 28 04.0	
	comp=E,3μm,0.1s						
HCB	**Kahramanmara**	**0.25**	**18**	*i* P	**Pg**	**00 28 03.1**	**-0.2**
HCB				*i* S	**Sg**	**00 28 07.4**	**+0.7**
HCB				IAML		00 28 08.0	
	comp=N,2μm,0.2s						
GAZ	**Gaziantep**	**0.33**	**78**	PG	**Pg**	**00 28 04.3**	**-0.5**
GAZ				SG	**Sg**	**00 28 09.2**	**+0.1**
KUZU	**Kuzuini**	**0.40**	**147**	*i* P	**Pg**	**00 28 06.1**	**+0.1**
KUZU				IAML		00 28 11.0	
	comp=N,4μm,0.3s						
KUZU				IAML		00 28 11.0	
	comp=E,7μm,0.4s						
KUZU				*i* S	**Sg**	**00 28 11.6**	**+0.4**
KHMN	**Narli-Kahraman**	**0.40**	**44**	PG	**Pg**	**00 28 05.8**	**-0.2**
KHMN				SG	**Sg**	**00 28 11.9**	**+0.6**
KMRS	**Kahramanmaras**	**0.40**	**10**	PG	**Pg**	**00 28 06.1**	**-0.1**
KMRS				SG	**Sb**	**00 28 12.4**	**-1.5**
KAHM	**Kahramanmaras,**	**0.43**	**19**	*i* P	**Pg**	**00 28 06.3**	**-0.5**
KAHM				*i* S	**Sb**	**00 28 13.4**	**-1.3**
ANDN	**Andirin**	**0.60**	**322**	*i* P	**Pb**	**00 28 10.3**	**-0.7**
ANDN				*i* S	**Sg**	**00 28 18.1**	**+0.4**
GZT	**Gaziantep**	**0.65**	**67**	*i* P	**Pg**	**00 28 10.8**	**0.0**
GZT				*i* S	**Sg**	**00 28 19.8**	**+0.3**
GZT				IAML		00 28 24.0	
	comp=N,1μm,0.3s						
CEYT	**Ceyhan**	**0.85**	**264**	PG	**Pg**	**00 28 14.5**	**-0.2**
KOZT	**Kozan**	**0.87**	**296**	PG	**Pg**	**00 28 14.8**	**-0.1**
TAHT	**Tahtakopru-Hat**	**0.89**	**215**	PG	**Pg**	**00 28 14.9**	**-0.3**
KRTD	**Karatas-Adana**	**1.23**	**246**	PN	**Pg**	**00 28 21.4**	**-0.2**
ATAB	**Bozova**	**1.24**	**73**	*i* P	**Pg**	**00 28 21.9**	**-0.1**
ATAB				*i* S	**Sn**	**00 28 38.8**	**+0.2**
ATAB				IAML		00 28 39.0	
	comp=E,216nm,0.4s						
ELBS	**KAHRAMANMARAS**	**1.24**	**12**	*i* P	**Pg**	**00 28 23.1**	**+1.0**
ELBS				*i* S	**Sn**	**00 28 40.3**	**+1.5**
KRTS	**Karatas**	**1.27**	**246**	PN	**Pg**	**00 28 22.3**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.33**	**347**	PN	**Pn**	**00 28 22.9**	**-0.3**
KARA	**Karaisali**	**1.41**	**277**	PN	**Pn**	**00 28 23.6**	**-0.5**
AKCD	**Akcadag**	**1.48**	**36**	*i* P	**Pg**	**00 28 27.5**	**+0.9**
AKCD				*i* S	**Sg**	**00 28 46.1**	**+0.3**
YAHY	**KAYSERI_Yahyal**	**1.51**	**311**	*i* P	**Pb**	**00 28 26.6**	**+0.1**
CMRD	**Camardi-Nigde**	**1.55**	**291**	PN	**Pn**	**00 28 26.0**	**-0.1**
DARE	**Darende-Malaty**	**1.56**	**20**	PN	**Pn**	**00 28 25.9**	**-0.3**
DED	**Mersin**	**1.61**	**265**	*i* P	**Pn**	**00 28 26.9**	**0.0**
DED				*i* S	**Sb**	**00 28 48.5**	**-0.3**
URFA	**Urfa**	**1.64**	**78**	PN	**Pn**	**00 28 26.3**	**-1.0**
CUGUR	**Gurin_SVAS**	**1.66**	**13**	*i* P	**Pg**	**00 28 30.5**	**+0.5**
SANL	**SANLIURFA_Merk**	**1.74**	**87**	*i* P	**Pb**	**00 28 30.5**	**+0.1**
MALT	**Malatya**	**1.76**	**46**	PN	**Pn**	**00 28 28.8**	**-0.2**
NIDE	**Nigde/Merkez-G**	**1.84**	**300**	*i* P	**Pb**	**00 28 31.5**	**-0.7**
NIDE				*i* S	**Sb**	**00 28 55.8**	**+0.3**
NIDE				IAML		00 28 59.0	
	comp=E,89nm,0.3s						
NIDE				IAML		00 29 01.0	
	comp=N,67nm,0.3s						
MERS	**Mersin**	**1.85**	**263**	PN	**Pn**	**00 28 30.2**	**0.0**
BNN	**Bunyan**	**1.90**	**337**	PN	**Pn**	**00 28 31.1**	**+0.1**
KERG	**Konya-Eregli**	**2.16**	**279**	*i* P	**Pn**	**00 28 35.5**	**+0.9**
KERG				*i* S	**Sb**	**00 29 03.4**	**-1.2**
KIZK	**Mersin**	**2.23**	**255**	*i* P	**Pn**	**00 28 35.9**	**+0.5**
KIZK	**Mersin**	**2.23**	**255**	PN	**Pn**	**00 28 35.6**	**+0.3**
CUKAN	**kangal_SIVAS**	**2.27**	**13**	*i* P	**Pb**	**00 28 39.2**	**-0.2**
AVNS	**Nevsehir-Avano**	**2.30**	**318**	*i* P	**Pb**	**00 28 40.0**	**0.0**
CUSAR	**Sarkisla-SIVAS**	**2.35**	**349**	*i* P	**Pg**	**00 28 42.1**	**-1.1**
SILI	**Silifke-Mersin**	**2.43**	**253**	PN	**Pn**	**00 28 38.5**	**+0.4**
EREN	**Erenkoy**	**2.65**	**234**	PN	**Pn**	**00 28 41.5**	**+0.4**
IKL	**Isikli**	**2.66**	**252**	PN	**Pn**	**00 28 41.5**	**+0.3**
ILIC	**ilic-Erzincan**	**2.72**	**30**	PN	**Pn**	**00 28 42.6**	**+0.4**
DYBB	**Diyarbakir**	**2.78**	**71**	PN	**Pn**	**00 28 43.4**	**+0.4**
AKKU	**Akkuyu-Mersin**	**2.79**	**251**	PN	**Pn**	**00 28 43.6**	**+0.6**
SVSK	**Karacayir**	**2.81**	**3**	PN	**Pn**	**00 28 43.8**	**+0.5**
KRMN	**Karaman**	**2.83**	**272**	PN	**Pn**	**00 28 44.4**	**+0.6**

*IDC **06** 00:39:47.9±1.0,31.90S×57.34E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.5/51, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=44.5km s-min=26.7km az=54.0*

ISC 06 00:39:49.6±1.0,**31.9S**±0.2×**57.3E**±0.3,**h11**km,**n13,** σ0⁰**45/7, mb4.0/4, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**16.09**	**323**	Pn	**Pn**	**00 43 35.5**	**-0.5**
	0.3nm,0.3s,baz=107,slow=17,SNR=2.1						
H08S1	**Diego Carcia H**	**27.95**	**34**	T	T	01 14 58.9	
	baz=207,slow=75,SNR=6.3						
H08S2	**Diego Garcia H**	**27.96**	**34**	T	T	01 14 58.4	
	baz=207,slow=75,SNR=7.6						
H08S3	**Diego Garcia H**	**27.98**	**34**	T	T	01 15 00.0	
	baz=207,slow=75,SNR=19						
H01W2	**Cape Leeuwin H**	**47.01**	**110**	T	T	01 38 36.8	
	baz=256,slow=75,SNR=8.8						
H01W3	**Cape Leeuwin H**	**47.02**	**110**	T	T	01 38 32.8	
	baz=256,slow=75,SNR=7.9						
H01W1	**Cape Leeuwin H**	**47.03**	**110**	T	T	01 38 38.6	
	baz=256,slow=75,SNR=6.9						
QSPA	**South Pole Qui**	**58.29**	**180**	P	**P**	**00 49 44.2**	**+0.1**
	2.2nm,0.9s,baz=334,slow=0.8,SNR=8.5						
ASAR	**Alice Springs**	**67.02**	**104**	P	**P**	**00 50 42.9**	**-0.1**
	0.6nm,0.6s,baz=237,slow=5.4,SNR=8.7						
WRA	**Warramunga Arr**	**69.05**	**101**	P	**P**	**00 50 55.5**	**-0.2**
	0.8nm,0.8s,baz=243,slow=5.4,SNR=5.2						
BRTR	**Keskin Array B**	**74.55**	**341**	P	**P**	**00 51 29.1**	**+0.7**
	0.7nm,0.9s,baz=165,slow=6.0,SNR=4.6						
YKA	**Yellowknife Ar**	**148.93**	**353**	PKPbc	**PKPbc**	**00 59 36.5**	**-0.2**
	1.0nm,0.8s,baz=8.1,slow=2.4,SNR=15						
ULM	**Lac du Bonnet**	**152.91**	**320**	PKPbc	**PKiKP**	**00 59 46.5**	**-0.2**
	1.4nm,0.9s,baz=70,slow=4.0,SNR=3.6						

*IDC **06** 00:43:26.5±1.3,36.04N×29.00E, h0km, mb3.4/2, mb1 3.6/7, mb1mx3.3/43, mbtmp3.5/7, ML3.5/5, Error ellipse: s-maj=24.9km s-min=18.4km az=151.0*
*ISK **06** 00:43:28.7,36.28N×28.93E, h18km, ML3.6/32*
*NIC **06** 00:43:28.1±0.0,36.04N×29.01E, h5km±3km, Ml3.5/4*
*DDA **06** 00:43:28.9,36.22N×28.95E, h7km±1km, MW3.6*
*THE **06** 00:43:29.1,36.30N×28.94E, h0km±1km, ML3.0/2, Error ellipse: s-maj=1.2km s-min=0.7km az=183.0*

ISC 06 00:43:28.3±1.1,**36.19N**±0.03×**29.00E**±0.02,**h13**km±8km, **n83,** σ1⁰**25/104, 6C, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.45**	**9**	P	**Pg**	**00 43 36.8**	**-0.4**
FETY				S	**Sg**	**00 43 42.7**	**-0.5**
FETY	**Fethiye**	**0.45**	**9**	PG	**Pg**	**00 43 36.9**	**-0.3**
FETY				SG	**Sg**	**00 43 42.9**	**-0.3**
KSL	**Kastellorizon**	**0.47**	**95**	P	**Pn**	**00 43 40.3**	**-0.5**
KSL				S	**Sn**	**00 43 49.8**	**+0.8**
	3μm,0.6s						
KSL	**Kastellorizon**	**0.47**	**95**	⇑P	**Pb**	**00 43 38.9**	**+0.3**
AKAS	**Kas**	**0.49**	**85**	*i* P	**Pb**	**00 43 39.3**	**+0.4**
AKAS				IAML		00 43 51.0	
	comp=E,1μm,0.7s						
AKAS				*i* S	**Sn**	**00 43 51.4**	**+1.7**
AKAS				IAML		00 43 56.0	
	comp=N,2μm,0.5s						
AKAS	**Kas**	**0.49**	**85**	PG	**Pb**	**00 43 39.6**	**+0.7**
DALY	**Dalyan (Mula)**	**0.68**	**336**	*i* P	**Pg**	**00 43 41.3**	**-0.3**
DALY				*i* S	**Sg**	**00 43 50.4**	**-0.3**
DALY				IAML		00 43 53.0	
	comp=N,2μm,0.8s						
DALY				IAML		00 43 53.0	
	comp=E,1μm,0.7s						
DALY	**Dalyan (Mula)**	**0.68**	**336**	PG	**Pg**	**00 43 40.9**	**-0.7**
ARG	**Arkhangelos**	**0.71**	**272**	P	**Pg**	**00 43 42.6**	**+0.6**
ARG				S	**Sb**	**00 43 53.9**	**+1.8**
	comp=E,1μm,0.5s						
ARG	**Arkhangelos**	**0.71**	**272**	PG	**Pg**	**00 43 42.4**	**+0.3**
ARG	**Arkhangelos**	**0.71**	**272**	⇑P	**Pg**	**00 43 42.6**	**+0.6**
ARG				S	**Sb**	**00 43 54.2**	**+2.1**
TURN	**Turunc**	**0.84**	**314**	*i* P	**Pb**	**00 43 44.3**	**-0.5**
TURN				*i* S	**Sg**	**00 43 55.6**	**0.0**
TURN				IAML		00 43 59.0	
	comp=N,336nm,0.3s						
TURN	**Turunc**	**0.84**	**314**	PG	**Pb**	**00 43 43.7**	**-1.1**
ELL	**Elmali**	**0.92**	**53**	PG	**Pn**	**00 43 46.9**	**-0.2**
ELL	**Elmali**	**0.92**	**53**	P	**Pn**	**00 43 47.1**	**0.0**
ELL				S	**Sn**	**00 44 03.1**	**+2.9**
CAEL	**Denizli, Camel**	**0.96**	**15**	*i* P	**Pb**	**00 43 47.0**	**0.0**
CAEL				*i* S	**Sn**	**00 44 01.6**	**+0.3**
CAEL				IAML		00 44 06.0	
	comp=N,1μm,0.9s						
CAEL				IAML		00 44 14.0	
	comp=E,1μm,0.8s						
AKUM	**Antalya-Kumluc**	**1.09**	**83**	*i* P	**Pg**	**00 43 50.3**	**+0.9**
YER	**Yerkesik**	**1.10**	**329**	P	**Pb**	**00 43 48.9**	**-0.4**
YER				S	**Sg**	**00 44 04.3**	**+0.3**
YER	**Yerkesik**	**1.10**	**329**	PG	**Pb**	**00 43 48.7**	**-0.6**
GOLH	**Golhisar**	**1.14**	**23**	*i* P	**Pb**	**00 43 49.2**	**-0.7**
GOLH				*i* S	**Sn**	**00 44 06.5**	**+0.9**
GOLH				IAML		00 44 09.0	
	comp=N,1μm,0.9s						
GOLH				IAML		00 44 11.0	
	comp=E,261nm,0.6s						
MULA	**Mugla, Merkez-**	**1.19**	**333**	*i* P	**Pb**	**00 43 51.1**	**+0.3**
MULA				*i* S	**Sn**	**00 44 06.8**	**-0.2**

ALFC					AML	AML	00 44 53.0		
	comp=E,0.3nm,0.6s								
ALFC					AML	AML	00 44 53.3		
	comp=E,0.4nm,0.3s								
KONT	**Konya--Tatoy**	**3.21**	**56**	PN	**Pn**		**00 44 19.9**	**+1.5**	
NATA	**Nata**	**3.24**	**115**	P	**Pn**		**00 44 18.7**	**-0.1**	
TVSB	**Tavsanli**	**3.27**	**6**	PN	**Pn**		**00 44 18.8**	**-0.6**	
OSC1	**CSNet OBS 1**	**3.27**	**144**	P	**Pn**		**00 44 18.5**	**-0.8**	
OSC1				S	**Sn**		**00 44 58.4**	**+0.3**	
DKL	**Dikili**	**3.32**	**331**	PN	**Pn**		**00 44 20.0**	**+0.1**	
LADK	**Ladik-KONYA**	**3.35**	**52**	PN	**Pn**		**00 44 21.8**	**+1.3**	
IDI	**Anoyia**	**3.46**	**256**	Pn	**Pn**		**00 44 22.1**	**+0.1**	
	comp=E,1.9nm,0.3s,baz=72,slow=14,SNR=19								
IDI					Sn	**Sn**	**00 45 02.4**	**-0.5**	
	comp=E,3.1nm,0.3s,baz=335,slow=18,SNR=2.4								
IDI	**Anoyia**	**3.46**	**256**	P	**Pn**		**00 44 21.9**	**-0.1**	
SZAC	**Souni**	**3.48**	**113**	⇑P	**Pn**		**00 44 21.8**	**-0.4**	
CSS	**Mathiatis**	**3.74**	**108**	⇑P	**Pn**		**00 44 25.8**	**+0.1**	
ASGA	**Asgata**	**3.74**	**111**	P	**Pn**		**00 44 26.0**	**+0.3**	
MVOU	**Mavrovouni**	**3.95**	**106**	P	**Pn**		**00 44 29.6**	**+1.0**	
IMMV	**Iera Moni Meta**	**4.14**	**261**	P	**Pn**		**00 44 32.2**	**+0.9**	
BRTR	**Keskin Array B**	**5.09**	**45**	Pn	**Pn**		**00 44 47.0**	**+2.6**	
	comp=E,0.3nm,0.3s,baz=223,slow=14,SNR=13								
BRTR					Sn	**Sn**	**00 45 45.2**	**+2.2**	
	comp=E,0.6nm,0.3s,baz=212,slow=26,SNR=5.0								
MMAI	**Mount Meron Ar**	**6.16**	**119**	Pn	**Pn**		**00 44 58.2**	**-0.8**	
	comp=E,4.8nm,0.3s,baz=307,slow=13,SNR=50								
MMAI					Sn	**Sn**	**00 46 05.2**	**-4.1**	
	comp=E,5.7nm,0.3s,baz=312,slow=27,SNR=4.6								
EIL	**Elat**	**8.20**	**141**	Pn	**Pn**		**00 45 25.6**	**-1.5**	
	comp=E,1.5nm,0.3s,baz=346,slow=3.2,SNR=18								
EIL					Sn	**Sn**	**00 46 53.1**	**-6.5**	
	comp=E,1.6nm,0.3s,baz=280,slow=2.0,SNR=4.1								
MLR	**Muntele Rosu**	**9.57**	**347**	Pn	**Pn**		**00 45 49.6**	**+3.7**	
	comp=E,0.1nm,0.3s,baz=191,slow=10,SNR=2.1								
CRVS	**Cervenica-Dubn**	**13.85**	**339**	*e*PN	Pn		00 46 39.3	-5.0	
TORD	**Torodi Ar. Bea**	**33.58**	**234**	P	**P**		**00 50 06.8**	**-1.5**	
	comp=E,0.8nm,0.8s,baz=33,slow=9.0,SNR=3.0								
MKAR	**Makanchi Array**	**40.59**	**58**	P	**P**		**00 51 08.6**	**+1.0**	
	comp=E,0.2nm,0.8s,baz=279,slow=9.8,SNR=2.1								

*HLW **06** 00:43:39.5,35˚.27N×28˚.92E,h14km±10km,Md3.2,MI3.9*
*IDC **06** 00:43:42.1±1.3,36˚.08N×29˚.03E,h0km,mb3.6/2,*
mb1 3.8/8,mb1mx3.4/44,mbtmp3.7/8,ML3.7/6,Error
ellipse: s-maj=23.3km s-min=20.9km az=155.0
ISC 06 00:43:29.4±0.9,34˚.55N±0˙.06×29˚.20E±0˙.05,h10km,n15,
σ2°.21/16,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**3.62**	**283**	Pn			**Pg**	**00 44 38.3**	**-0.4**
	3.1nm,0.3s,baz=308,slow=9.0,SNR=12								
IDI				Sn			**Sb**	**00 45 17.5**	**-0.1**
	3.3nm,0.3s,baz=132,slow=14,SNR=5.7								
SLUM	**Salum**	**4.53**	**229**	P			**Pb**	**00 44 52.2**	**+3.2**
	baz=221								
SLUM				S			**Sb**	**00 45 45.6**	**+1.9**
	baz=221								
MMAI	**Mount Meron Ar**	**5.38**	**105**	Pn			**Pg**	**00 45 14.1**	**+1.6**
	8.9nm,0.3s,baz=307,slow=12,SNR=17								
MMAI				Sn			**Sg**	**00 46 21.5**	**-0.7**
	13nm,0.3s,baz=314,slow=28,SNR=9.8								
GLL	**Jalalah**	**5.39**	**156**	P			**Pg**	**00 45 09.9**	**-2.8**
	baz=156								
RYAN	**Fayoum**	**5.53**	**170**	P			**Pg**	**00 45 12.1**	**-3.1**
	baz=169								
SUZ	**Suez**	**5.61**	**146**	P			**Pg**	**00 45 13.0**	**-3.9**
	baz=147								
NBNS	**Bani Suef**	**6.17**	**163**	P			**Pb**	**00 45 20.1**	**+3.1**
	baz=162								
SWA2		**6.17**	**212**	P			**Pb**	**00 45 17.7**	**+0.7**
	baz=207								
SWA2				AMP				00 46 00.0	
	baz=207								
BRTR	**Keskin Array B**	**6.26**	**33**	Pn			**Pn**	**00 45 03.0**	**+1.0**
	1.0nm,0.3s,baz=229,slow=16,SNR=6.8								
BRTR							Sn	00 45 58.2	-15
	0.5nm,0.3s,baz=218,slow=15,SNR=3.9								
EIL	**Elat**	**6.88**	**133**	Pn			**Pg**	**00 45 41.9**	**+0.6**
	1.6nm,0.3s,baz=218,slow=7.8,SNR=9.6								
EIL					Sn		**Sg**	**00 47 09.6**	**-0.8**
	4.4nm,0.3s,baz=345,slow=7.8,SNR=7.5								
HFRF	**Wahat Farafira**	**7.42**	**186**	P			**Pb**	**00 45 37.3**	**-0.8**
	baz=184								
MLR	**Muntele Rosu**	**11.21**	**348**	Pn			Pn	00 46 03.9	-5.8
	0.3nm,0.3s,baz=189,slow=9.7,SNR=5.0								
GERES	**GERESS Array B**	**18.33**	**326**	P			**Pn**	**00 47 42.8**	**-1.0**
	0.1nm,0.3s,baz=152,slow=13,SNR=2.4								
TORD	**Torodi Ar. Bea**	**32.78**	**236**	P			P	00 50 23.0	+20
	0.6nm,0.6s,baz=33,slow=9.6,SNR=7.2								
MKAR	**Makanchi Array**	**41.34**	**56**	P			P	00 51 22.7	+7.3
	0.2nm,0.5s,baz=271,slow=6.6,SNR=3.6								

*SOME **06** 00:46:17.0,39˚.57N×73˚.03E,h0km*
*NNC **06** 00:46:23.9±9.1,39˚.01N×73˚.01E,h0km,mb3.2,mpv2.8,*
Error ellipse: s-maj=70.7km s-min=44.8km az=164.0
ISC 06 00:46:21.0±4.5,38˚.8N±0˙.3×72˚.92E±0˙.08,h10km,n6,
σ0°.80/12,2C-5D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**4.03**	**328**	*e*P			**Pn**	**00 47 22.6**	**-0.2**
	1.4nm,0.4s								
IUG				*e*S			**Sn**	**00 48 09.9**	**-0.3**
	22nm,0.3s								
AAK	**Ala-Archa**	**4.04**	**17**	⇓Pn			**Pn**	**00 47 24.4**	**+1.3**
	2.2nm,0.8s								
AAK				⇓Sn			**Sn**	**00 48 11.3**	**+0.7**
	8.2nm,0.5s								
TKM2	**Tokmak 2**	**4.62**	**25**	⇓Pn			**Pn**	**00 47 30.4**	**-0.6**
	0.9nm,0.7s								
TKM2				⇓Sn			**Sn**	**00 48 25.1**	**+0.3**
	3.8nm,0.8s								
TKM2				⇑Lg			Lg	00 48 45.5	
	3.5nm,0.9s								
KK31	**Karatay Array**	**4.70**	**338**	⇑Pn			**Pn**	**00 47 32.4**	**+0.4**
	0.6nm,0.2s,baz=139,slow=12,SNR=80								
KK31				⇓Sn			**Sn**	**00 48 26.3**	**-0.2**
	4.5nm,0.4s,baz=147,slow=22,SNR=9.1								
KST	**Kastek**	**4.85**	**27**	*e*P			**Pn**	**00 47 34.3**	**+0.2**
KST				*e*S			**Sn**	**00 48 29.4**	**-1.1**
DGS	**Degeres**	**4.96**	**25**	*e*P			**Pn**	**00 47 36.0**	**+0.4**
	1.3nm,0.5s								
DGS				*e*S			**Sn**	**00 48 31.9**	**-1.2**
	2.9nm,0.6s								

IDC 06 00:51:12.1±2.2,6˚.62S×130˚.00E,h0km,mb4.0/1,
mb1 3.9/3,mb1mx3.5/21,mbtmp3.8/3,ML3.9/2,Error
ellipse: s-maj=142.6km s-min=30.5km az=69.0,Banda
Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.90**	**163**	Pn			Pn	00 54 30.0	-0.6
	0.7nm,0.3s,baz=346,slow=12,SNR=20								
WRA					Sn		Sn	00 56 54.3	-11
	0.6nm,0.3s,baz=330,slow=21,SNR=5.1								
ASAR	**Alice Springs**	**17.36**	**168**	P			Pn	00 55 16.5	+0.5
	0.3nm,0.3s,baz=339,slow=8.8,SNR=14								
ASAR				S			Sn	00 58 19.5	-11
	0.2nm,0.3s,baz=349,slow=25,SNR=4.1								
MKAR	**Makanchi Array**	**67.91**	**327**	P			P	01 02 12.7	0.0
	0.6nm,0.4s,baz=119,slow=8.0,SNR=16								

*IDC **06** 00:59:22.4±0.6,17˚.52N×94˚.38W,h153km±6km,mb3.6/18,*
mb1 3.8/22,mb1mx3.7/48,mbtmp4.1/22,MS2.4/2,
Ms1 2.4/2,ms1mx2.2/34,Error ellipse: s-maj=18.2km
s-min=10.7km az=60.0
*NEIC **06** 00:59:22.2±2.0,17˚.55N±0˙.07×94˚.48W±0˙.06,h150km±4km,*
Error ellipse: s-maj=12.2km s-min=6.7km az=212.0
*MEX **06** 00:59:23.8±1.1,17˚.50N×94˚.57W,h152km±5km,MD4.4*
ISC 06 00:59:22.2±0.5,17˚.51N±0˙.05×94˚.50W±0˙.04,h154km±4km,
n268,σ1°.00/265,mb4.4/80,Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.53**	**8**	*i* P			**Pn**	**00 59 44.8**	**+0.6**
TUIG				*i* S			**Sn**	**00 59 59.6**	**-1.5**
TUIG	**Tuzandepetl**	**0.53**	**8**				**Pn**	**00 59 44.8**	**+0.6**
TUIG							**Sn**	**00 59 59.6**	**-1.5**
CMIG	**Matias Romero**	**0.55**	**222**	P			**Pn**	**00 59 44.0**	**-0.3**
	549nm,0.3s,baz=81,slow=2.2,SNR=4028								
CMIG					S		**Sn**	**00 59 59.3**	**-1.9**
	1μm,0.3s,baz=339,slow=23,SNR=23								
CMIG	**Matias Romero**	**0.55**	**222**	*e*P			**Pn**	**00 59 44.1**	**-0.3**
CMIG				*i* S			**Sn**	**01 00 00.1**	**-1.1**
CMIG	**Matias Romero**	**0.55**	**222**				**Pn**	**00 59 44.1**	**-0.3**
CMIG							**Sn**	**00 59 59.6**	**-1.6**
TGIG		**1.50**	**119**	*i* P			**Pn**	**00 59 53.0**	**+0.7**
TGIG				*i* S			**Sn**	**01 00 15.6**	**+0.4**
TGIG		**1.50**	**119**				**Pn**	**00 59 53.0**	**+0.7**
TGIG							**Sn**	**01 00 15.6**	**+0.4**
PCIG		**2.17**	**145**	*e*P			**Pn**	**01 00 00.3**	**+0.6**
PCIG				*i* S			**Sn**	**01 00 28.8**	**+0.3**
PCIG		**2.17**	**145**				**Pn**	**01 00 00.3**	**+0.6**
PCIG							**Sn**	**01 00 29.3**	**+0.8**
VHO	**Vista Hermosa**	**2.18**	**259**	*i* P			**Pn**	**00 59 59.1**	**-0.8**
VHO				*i* S			**Sn**	**01 00 27.6**	**-1.2**
TOIG	**Toxpalan**	**2.51**	**284**	*i* P			**Pn**	**01 00 03.6**	**-0.2**
TOIG				*i* S			**Sn**	**01 00 34.2**	**-1.7**
CCIG	**Comitan**	**2.57**	**118**	*i* P			**Pn**	**01 00 05.2**	**+0.6**
CCIG				*i* S			**Sn**	**01 00 38.1**	**+0.8**
CCIG	**Comitan**	**2.57**	**118**				**Sn**	**01 00 38.1**	**+0.8**
CCIG	**Comitan**	**2.57**	**118**	Pn			**Pn**	**01 00 04.8**	**+0.2**
TPIG	**Tehuac#an**	**2.87**	**289**	*i* P			**Pn**	**01 00 08.3**	**0.0**
TPIG				*i* S			**Sn**	**01 00 42.3**	**-1.7**
TPIG	**Tehuac#an**	**2.87**	**289**				**Pn**	**01 00 08.3**	**0.0**
TPIG							**Sn**	**01 00 42.3**	**-1.7**
YOIG	**Yosondua**	**2.98**	**258**	*i* P			**Pn**	**01 00 08.0**	**-1.9**
YOIG				*i* S			**Sn**	**01 00 45.0**	**-1.6**
HLIG	**Huajuapan de L**	**3.17**	**276**	*e*P			**Pn**	**01 00 11.3**	**-0.7**
HLIG				*i* S			**Sn**	**01 00 48.2**	**-2.4**
HUEH	**Huehuetenango**	**3.61**	**127**	Pn			**Pn**	**01 00 17.7**	**0.0**
TLIG	**Tlapa**	**3.88**	**271**	Pn			**Pn**	**01 00 20.6**	**-0.6**
RTAL	**Retalhuleu**	**4.01**	**137**	Pn			**Pn**	**01 00 23.1**	**+0.4**
PPM	**Popocatepetl**	**4.22**	**292**	*e*P			**Pn**	**01 00 27.2**	**+1.3**
PPM				*i* S			**Sn**	**01 01 17.2**	**+1.9**
PETF	**Flores**	**4.47**	**97**	Pn			**Pn**	**01 00 29.8**	**+1.1**
APG	**El Apazote**	**4.61**	**122**	P			**Pn**	**01 00 30.3**	**-0.5**
	3.1nm,0.3s,baz=319,slow=12,SNR=80								
APG					S		**Sn**	**01 01 19.2**	**-5.0**
	16nm,0.3s,baz=315,slow=15,SNR=14								
APG					LR		LR	01 02 28.9	
	comp=Z,320nm,21.6s,baz=273,slow=41								
UNM	**Universidad Na**	**4.80**	**293**	Pn			**Pn**	**01 00 34.7**	**+1.4**
PTVM	**Pico Tres Padr**	**4.84**	**296**	*i* P			**Pn**	**01 00 32.9**	**-1.0**
PTVM	**Pico Tres Padr**	**4.84**	**296**				**Pn**	**01 00 32.9**	**-1.0**
ZUVM	**ZUMPANGO**	**4.91**	**299**	*i* P			**Pn**	**01 00 34.2**	**-0.6**
ZUVM	**ZUMPANGO**	**4.91**	**299**				**Pn**	**01 00 34.2**	**-0.6**
MAVM	**Malinalco, Edo**	**4.96**	**288**	*i* P			**Pn**	**01 00 35.0**	**-0.4**
MAVM	**Malinalco, Edo**	**4.96**	**288**				**Pn**	**01 00 35.0**	**-0.4**
ATVM	**ATLACOMULCO**	**5.54**	**295**	*e*P			**Pn**	**01 00 42.9**	**-0.3**
ATVM	**ATLACOMULCO**	**5.54**	**295**				**Pn**	**01 00 42.9**	**-0.3**
ACIG	**Acambay**	**5.66**	**297**	*i* P			**Pn**	**01 00 46.2**	**+1.6**
ESQI	**Esquipulas**	**5.76**	**120**	Pn			**Pn**	**01 00 45.1**	**-0.8**
MTO3	**Montecristo**	**5.83**	**121**	Pn			**Pn**	**01 00 46.2**	**-0.7**
SNET	**Serv Nac Est T**	**6.34**	**126**	Pn			**Pn**	**01 00 53.7**	**+0.1**
TEIG	**Tepich**	**6.49**	**64**	P			**Pn**	**01 00 54.5**	**-0.9**
	20nm,0.3s,baz=275,slow=3.0,SNR=114								
TEIG					S		**Sn**	**01 02 07.1**	**-1.5**
	6.1nm,0.3s,baz=38,slow=19,SNR=5.8								
TEIG					LR		LR	01 04 05.1	
	comp=Z,53nm,19.4s,baz=106,slow=44								
TEIG	**Tepich**	**6.49**	**64**	*i* P			**Pn**	**01 00 54.8**	**-0.7**
TEIG				*i* S			**Sn**	**01 02 07.0**	**-1.5**
TEIG	**Tepich**	**6.49**	**64**	Pn			**Pn**	**01 00 54.7**	**-0.7**
MOIG	**Morelia**	**6.70**	**290**				**Pn**	**01 01 00.0**	**+1.5**
TGUH	**Tegucigalpa,Un**	**7.76**	**115**	Pn			**Pn**	**01 01 12.1**	**-0.4**
BOAB	**BOACO BROADBAN**	**9.90**	**119**	Pn			**Pn**	**01 01 40.9**	**-0.1**
ESPN	**Las Esperanzas**	**11.18**	**117**	Pn			**Pn**	**01 01 58.5**	**+0.7**
ORTG	**Ortega, Santa**	**11.29**	**128**	Pn			**Pn**	**01 02 00.1**	**+0.8**
833A	**Chaparral WMA,**	**11.67**	**338**	P				01 02 11.8	
	baz=156,SNR=7.1								
JTS	**Las Juntas de**	**11.72**	**126**	P			**Pn**	**01 02 04.5**	**-0.3**
	4.5nm,0.3s,baz=14,slow=19,SNR=16								
JTS	**Las Juntas de**	**11.72**	**126**	Pn			**Pn**	**01 02 05.0**	**+0.1**
SOR	**Soroa**	**12.00**	**62**				**Pn**	**01 02 07.6**	**-0.9**
441A	**DeRidder**	**13.24**	**5**				**Pn**	**01 02 24.4**	**+0.1**
PEZE	**Perez Zeledon,**	**13.26**	**126**				**Pn**	**01 02 22.2**	**-2.6**
435B	**Jarrell**	**13.51**	**349**	Pn			**Pn**	**01 02 28.8**	**+1.1**
435B	**Jarrell**	**13.51**	**349**	P				01 02 33.5	
	baz=167								
JCT	**Junction City**	**13.79**	**340**	Pn			**Pn**	**01 02 31.8**	**+0.5**
JCT	**Junction City**	**13.79**	**340**	P				01 02 36.5	
	baz=158,SNR=6.0								
RIOS	**Rincon, Osa**	**13.82**	**128**	P			**Pn**	**01 02 31.5**	**-0.2**
342A	**Flagon Creek P**	**13.95**	**8**	Pn			**Pn**	**01 02 32.9**	**-0.4**
CBCY	**The Bluff, Cay**	**14.15**	**79**	Pn			**Pn**	**01 02 35.7**	**-0.2**
NATX	**Nacogdoches**	**14.19**	**359**	Pn			**Pn**	**01 02 37.0**	**+0.7**
344A	**Westbrook Farm**	**14.30**	**13**				**Pn**	**01 02 37.9**	**+0.2**
TXAR	**Lajitas Array**	**14.46**	**326**	P			**Pn**	**01 02 41.2**	**+1.3**
	0.1nm,0.3s,baz=146,slow=13,SNR=10								
TXAR	**Lajitas Array**	**14.46**	**326**	Pn			**Pn**	**01 02 40.3**	**+0.5**
TX31	**Lajitas Ar. Si**	**14.46**	**326**				**Pn**	**01 02 39.5**	**-0.3**
TX32	**Lajitas Array**	**14.46**	**326**	Pn			**Pn**	**01 02 40.2**	**+0.3**
237A	**Washetta, Mont**	**14.48**	**356**				**Pn**	**01 02 40.9**	**+0.9**
346A	**Big Creek Wild**	**14.56**	**17**	Pn			**Pn**	**01 02 40.3**	**-0.6**
WHTX	**Lake Whitney,**	**14.67**	**350**				**Pn**	**01 02 42.9**	**+0.6**
WHTX	**Lake Whitney,**	**14.67**	**350**	P				01 02 46.0	
	baz=169								
061Z	**Ochoppi**	**15.12**	**54**				**P**	**01 02 48.9**	**-0.5**
553A	**Crawfordville**	**15.62**	**34**	Pn			**P**	**01 02 54.6**	**-0.3**
Z38A	**Mt. Pleasant**	**15.69**	**358**	P			**P**	**01 02 55.5**	**-0.2**
ABTX	**Abilene, Hawle**	**15.75**	**344**	P				01 02 57.6	
	baz=162,SNR=9.3								
ABTX	**Abilene, Hawle**	**15.75**	**344**	P			**P**	**01 02 56.7**	**+0.2**
ABTX						IAmb	IAmb	01 02 59.9	
	comp=Z,22nm,1.0s								
Z41A	**Richland Creek**	**15.76**	**5**	P				01 02 58.6	
	baz=186								
146A	**Union**	**15.85**	**17**	Pn			**Pn**	**01 02 56.1**	**-0.7**
146A						IAmb	IAmb	01 03 04.0	
	comp=Z,12nm,0.8s								
DWPF	**Disney Wildern**	**16.00**	**46**	P				01 02 59.3	
	baz=231								
656A	**Willston**	**16.11**	**41**	Pn			**Pn**	**01 02 59.8**	**-0.3**
060A	**Indiantown**	**16.15**	**52**	Pn			**Pn**	**01 02 59.5**	**-1.1**
250A	**Grady**	**16.22**	**26**	Pn			**Pn**	**01 03 00.1**	**-1.3**
250A						IAmb	IAmb	01 03 07.3	
	comp=Z,18nm,0.8s								
352A	**Blakely**	**16.40**	**30**				**P**	**01 03 03.6**	**0.0**
352A						IAmb	IAmb	01 03 16.4	
	comp=Z,13nm,0.9s								
CCAR	**Cane Creek**	**16.53**	**8**	P			**P**	**01 03 04.5**	**-0.4**
CCAR						IAmb	IAmb	01 03 08.1	
	comp=Z,15nm,0.7s								
Z47A	**Carrollton**	**16.66**	**19**	P			**Pn**	**01 03 06.8**	**+0.1**
LRAL	**Lakeview Retre**	**16.88**	**22**	P				01 03 09.8	
	baz=205								
LRAL	**Lakeview Retre**	**16.88**	**22**	P			**P**	**01 03 08.8**	**0.0**
LRAL						IAmb	IAmb	01 03 17.2	
	comp=Z,9.4nm,0.6s								
Y45A	**Yeager Farm, C**	**16.89**	**14**	P			**P**	**01 03 08.2**	**-0.7**
Y45A						IAmb	IAmb	01 03 18.6	
	comp=Z,14nm,0.6s								
X40A	**Basin Creek Fa**	**16.98**	**5**	P				01 03 11.2	
	baz=185								
X40A	**Basin Creek Fa**	**16.98**	**5**	P			**P**	**01 03 09.8**	**-0.1**
MIAR	**Mount Ida**	**16.99**	**3**	P			**Pn**	**01 03 10.9**	**+0.3**
MIAR						IAmb	IAmb	01 03 12.7	
	comp=Z,10nm,0.7s								
MIAR	**Mount Ida**	**16.99**	**3**	P				01 03 11.0	
	baz=183,SNR=10								
X37A	**Clayton**	**17.03**	**358**			IAmb	IAmb	01 03 14.8	
	comp=Z,16nm,0.8s								
GDL2	**Guadalupe Moun**	**17.14**	**330**	P			**Pn**	**01 03 14.4**	**+1.8**
MNTX	**Cornudas Mount**	**17.23**	**327**				**Pn**	**01 03 13.5**	**-0.1**
X34A	**Smith Ranch, M**	**17.28**	**351**	P			**Pn**	**01 03 14.5**	**+0.3**
X34A						IAmb	IAmb	01 03 30.3	
	comp=Z,20nm,0.8s								
152A	**Waverly Hall**	**17.49**	**28**	P			**Pn**	**01 03 16.2**	**-0.5**
OXF	**Oxford**	**17.54**	**14**	P			**Pn**	**01 03 16.9**	**-0.3**
OXF						IAmb	IAmb	01 03 27.3	
	comp=Z,15nm,0.6s								
OXF	**Oxford**	**17.54**	**14**	P				01 03 17.1	
	baz=196								
WMOK	**Wichita Mounta**	**17.58**	**348**	P				01 03 17.3	
	baz=166								
W39A	**Magazine**	**17.63**	**2**	P				01 03 18.3	
	baz=182,SNR=9.2								
W39A	**Magazine**	**17.63**	**2**			IAmb	IAmb	01 03 32.4	
	comp=Z,12nm,0.8s								
W41B	**Gary Mavity, V**	**17.71**	**6**	P				01 03 19.2	
	baz=187,SNR=5.5								
WHAR	**Wooly Hollow**	**17.82**	**6**	P			**Pn**	**01 03 20.2**	**-0.5**
WHAR						IAmb	IAmb	01 03 21.7	
	comp=Z,19nm,1.1s								
Y49A	**Blount Mountai**	**17.83**	**22**	P			**P**	**01 03 19.2**	**-0.1**
FNO	**Franklin**	**17.87**	**352**	P			**P**	**01 03 20.2**	**+0.5**
MSTX	**Muleshoe**	**17.99**	**337**	P				01 03 23.6	
	baz=154,SNR=5.8								
MSTX	**Muleshoe**	**18.00**	**337**	P			**P**	**01 03 21.3**	**0.0**
MSTX						IAmb	IAmb	01 03 25.1	
	comp=Z,12nm,0.8s								
OKCFA	**Oklahoma City**	**18.03**	**352**	P			**P**	**01 03 21.6**	**+0.1**
OK025	**Westminster Rd**	**18.18**	**353**	P			**P**	**01 03 23.0**	**-0.1**
BCOK	**Bluff Creek, N**	**18.29**	**352**	P			**P**	**01 03 24.7**	**+0.4**
PLAL	**Pickwick Lake**	**18.32**	**17**	P			**P**	**01 03 25.1**	**+0.4**
TUL1	**Leonard**	**18.37**	**357**	P				01 03 25.8	
	baz=176								
OK029	**Liberty Lake**	**18.41**	**352**	P			**P**	**01 03 25.7**	**+0.1**
LPAR	**Lepanto**	**18.41**	**11**	P			**P**	**01 03 26.0**	**+0.4**
AMTX	**Amarillo**	**18.45**	**341**	P			**P**	**01 03 27.2**	**+1.0**
AMTX	**Amarillo**	**18.45**	**341**	P				01 03 27.8	
	baz=158								
OK031	**S. Brethren Rd**	**18.49**	**354**	P			**P**	**01 03 26.6**	**+0.1**
GOGA	**Godfrey**	**18.69**	**30**	P			**P**	**01 03 29.7**	**+1.0**
GOGA						IAmb	IAmb	01 03 32.0	
	comp=Z,15nm,1.1s								
GOGA	**Godfrey**	**18.69**	**30**	P				01 03 29.8	
	baz=214								
HHAR	**Hobbs**	**18.71**	**1**	IAmb			IAmb	01 03 32.8	
	comp=Z,13nm,0.7s								
LCAR	**Lake Charles**	**18.73**	**8**	IAmb			IAmb	01 03 30.2	
	comp=Z,11nm,0.7s								
Y52A	**Lilburn**	**18.79**	**28**	IAmb			IAmb	01 03 31.0	
	comp=Z,14nm,0.7s								
U40A	**Yellville**	**18.83**	**4**	P				01 03 31.1	
	baz=185,SNR=24								
U40A	**Yellville**	**18.83**	**4**	P			**P**	**01 03 30.4**	**+0.1**
U32A	**Winter Ranch,**	**19.22**	**349**	P			**Pn**	**01 03 35.9**	**-1.1**
SWET	**Sewanee**	**19.22**	**22**	IAmb			IAmb	01 03 34.8	
	comp=Z,14nm,0.6s								
GLAT	**Glass**	**19.25**	**13**	P			**P**	**01 03 34.9**	**+0.1**
V48A	**Smith Brothers**	**19.40**	**19**	P			**P**	**01 03 35.9**	**-0.5**
T35A	**Sooner Cattle**	**19.42**	**355**	IAmb			IAmb	01 03 37.5	
	comp=Z,22nm,1.0s								
W50A	**Signal Mountai**	**19.43**	**23**	P			**P**	**01 03 35.8**	**-1.0**
W50A						IAmb	IAmb	01 03 36.8	
	comp=Z,14nm,0.7s								
WVT	**Waverly**	**19.47**	**16**	P			**P**	**01 03 37.3**	**+0.2**
WVT	**Waverly**	**19.47**	**16**	P				01 03 36.1	
	baz=199								
GC02	**Grant County #**	**19.50**	**352**	P			**P**	**01 03 37.4**	**0.0**
PBMO	**Poplar Bluff**	**19.53**	**10**	P			**P**	**01 03 38.0**	**+0.3**
PBMO						IAmb	IAmb	01 03 41.6	
	comp=Z,14nm,0.8s								
MGMO	**Mountain Grove**	**19.67**	**5**	P			**P**	**01 03 39.8**	**+0.

N38A	Joes South For	23.23	2	P		P	01 04 15.9	+0.3
T56A	Rocky Mt	23.26	30	P			01 04 15.2	
	baz=217							
N35A	Tabor	23.30	358	P		P	01 04 16.5	+0.3
S54A	Dingess, Beckl	23.30	27	P		P	01 04 15.3	-1.0
HDIL	Hopedale	23.41	10	P			01 04 17.3	
	baz=192							
HDIL	Hopedale	23.41	10	P		P	01 04 17.5	+0.3
HDIL				IAmb		IAmb	01 04 17.7	
	comp=Z,12nm,0.8s							
R53A	Hurricane	23.48	25	P		P	01 04 17.6	-0.3
P49A	Miami Univ. Ec	23.54	19	P		P	01 04 17.6	-0.8
Q51A	Peebles	23.55	22	P		P	01 04 18.1	-0.4
Q51A				IAmb		IAmb	01 04 18.5	
	comp=Z,8.6nm,0.8s							
SFIN	Lafayette	23.68	14	P		P	01 04 18.7	-1.0
SFIN				IAmb		IAmb	01 04 19.9	
	comp=Z,10nm,0.7s							
SFIN	Lafayette	23.68	14	P			01 04 18.7	
	baz=198							
S56A	Natural Bridge	24.00	30	P			01 04 21.6	
	baz=217							
P51A	Williamsport	24.05	22	IAmb		IAmb	01 04 23.9	
	comp=Z,11nm,0.7s							
ISCO	Idaho Springs	24.22	339	P		P	01 04 25.4	+0.4
ISCO	Idaho Springs	24.22	339	P			01 04 26.5	
	baz=153							
R55A	Marlinton	24.23	28	P		P	01 04 24.0	-0.8
R55A				IAmb		IAmb	01 04 26.5	
	comp=Z,10nm,0.8s							
R55A	Marlinton	24.23	28	P			01 04 23.9	
	baz=215							
U60A	Pendleton	24.33	36	P			01 04 24.8	
	baz=224							
SCIA	State Center	24.34	2	P			01 04 26.2	
	baz=183,SNR=7.5							
L34A	Svendsen Farm,	24.43	357	IAmb		IAmb	01 04 27.6	
	comp=Z,18nm,0.9s							
M44A	Midewin, Midew	24.44	12	P		P	01 04 26.5	-0.1
Q54A	Coxs Mills	24.50	26	P		P	01 04 26.3	-0.8
N47A	Urbana	24.50	16	P		P	01 04 26.7	-0.5
L40A	Anamosa	24.64	6	IAmb		IAmb	01 04 29.9	
	comp=Z,10nm,0.7s							
ACSO	Alum Creek Sta	24.74	21	P		P	01 04 28.1	-1.3
ACSO				IAmb		IAmb	01 04 39.2	
	comp=Z,16nm,1.1s							
L42A	Oliver, Polo	24.77	9	P		P	01 04 29.1	-0.5
L42A				IAmb		IAmb	01 04 31.0	
	comp=Z,17nm,0.9s							
JSRW	J. Sargeant Re	24.85	33	P		P	01 04 29.0	-1.4
N49A	Columbus Grove	24.97	19	P		P	01 04 30.1	-1.3
N49A				IAmb		IAmb	01 04 35.8	
	comp=Z,7.6nm,0.7s							
R58B	Mineral	25.06	32	P		P	01 04 30.9	-1.4
O52A	Adamsville	25.06	23	P		P	01 04 30.9	-1.3
Q56A	Snyder Ridge,	25.27	29	P		P	01 04 33.6	-0.6
Q56A				IAmb		IAmb	01 04 37.3	
	comp=Z,8.8nm,1.1s							
O53A	New Philadelph	25.41	24	P		P	01 04 34.5	-0.9
O53A				IAmb		IAmb	01 04 41.9	
	comp=Z,9.6nm,1.1s							
JFWS	Jewell Farm	25.58	7	P			01 04 36.6	
	baz=189							
K43A	Burlington	25.66	11	P		P	01 04 36.8	-0.8
L48A	N Adams	25.84	17	P		P	01 04 37.7	-1.6
N53A	Lisbon	26.04	24	P		P	01 04 40.0	-1.1
N53A				IAmb		IAmb	01 04 46.8	
	comp=Z,13nm,1.1s							
ECSD	EROS Data Cent	26.21	357	P			01 04 42.7	
	baz=175,SNR=6.2							
ECSD	EROS Data Cent	26.21	357	P		P	01 04 42.8	+0.2
ECSD				IAmb		IAmb	01 04 43.7	
	comp=Z,6.4nm,0.7s							
RWWY	Rawlins	26.45	338	P		P	01 04 45.6	+0.5
RWWY				IAmb		IAmb	01 04 45.7	
	comp=Z,6.6nm,1.0s							
N54A	Moraine State	26.51	25	P		P	01 04 43.8	-1.5
M53A	WI Miller and	26.64	24	P		P	01 04 45.2	-1.3
M53A				IAmb		IAmb	01 04 46.6	
	comp=Z,7.5nm,0.8s							
SDMD	Soldier's Deli	26.69	32	P		P	01 04 45.9	-1.0
I42A	Draeger Farm,	26.72	9	P		P	01 04 46.0	-1.2
I42A				IAmb		IAmb	01 04 47.5	
	comp=Z,8.4nm,0.9s							
CBYP	Canovanas	27.26	84	P		P	01 04 52.7	+0.4
CBYP				IAmb		IAmb	01 05 06.5	
	comp=Z,7.9nm,0.9s							
SPMN	Marine on St.	27.67	3	P			01 04 55.3	
	baz=183,SNR=6.5							
PDAR	Pinedale Array	28.25	336	P		P	01 05 02.1	+1.0
	comp=Z,0.2nm,0.5s,baz=158,slow=10,SNR=2.2							
F36A	Milaca	28.29	1	P		P	01 05 00.6	-0.5
F36A				IAmb		IAmb	01 05 01.2	
	comp=Z,5.1nm,0.6s							
BRNJ	Basking Ridge	28.79	33	P		P	01 05 04.2	-1.4
BRNJ				IAmb		IAmb	01 05 11.6	
	comp=Z,14nm,1.1s							
COWI	Conover	28.86	8	P		P	01 05 05.6	-0.5
COWI				IAmb		IAmb	01 05 11.9	
	comp=Z,5.1nm,1.1s							
MEDO	Medina	28.98	25	P		P	01 05 05.4	-1.8
E38A	The Farm, Brul	29.12	4	P		P	01 05 07.9	-0.5
E38A				IAmb		IAmb	01 05 08.7	
	comp=Z,8.0nm,0.7s							
REDW	Red Top Meadow	29.27	335	P		P	01 05 11.7	+1.6
E28A	Huff	29.44	351	P		P	01 05 11.8	+0.5
NVAR	Mina Array Bea	29.45	320	P		P	01 05 13.2	+1.4
	comp=Z,1.0nm,0.5s,baz=131,slow=8.4,SNR=4.3							
E43A	Lone Tree Farm	29.45	11	IAmb		IAmb	01 05 10.7	
	comp=Z,6.6nm,0.6s							
L59A	Walton	29.69	30	P		P	01 05 11.8	-1.8
L59A				IAmb		IAmb	01 05 22.6	
	comp=Z,8.6nm,1.0s							
J56A	Wolcott	29.73	27	P		P	01 05 12.4	-1.4
J56A				IAmb		IAmb	01 05 22.1	
	comp=Z,11nm,1.1s							
D41A	Chassel	29.88	8	P		P	01 05 14.1	-1.0
D41A				IAmb		IAmb	01 05 25.4	
	comp=Z,5.2nm,1.1s							
E46A	Sault Ste Mari	30.00	14	P		P	01 05 15.0	-1.2
SADO	Sadowa	30.08	22	P		P	01 05 15.2	-1.8
	comp=Z,1.9nm,0.4s,baz=241,slow=8.2,SNR=8.4							
SADO	Sadowa	30.08	22	P		P	01 05 14.9	-2.1
KSCT	Kent School, K	30.11	32	P		P	01 05 16.3	-1.0
KSCT				IAmb		IAmb	01 05 35.2	
	comp=Z,9.2nm,1.1s							
H53A	Bobcaygeon	30.12	23	P			01 05 15.8	
	baz=211							
RLMT	Red Lodge	30.18	339	P		P	01 05 19.1	+1.0
J57A	Williamstown	30.21	27	P		P	01 05 17.2	-0.8
J57A				IAmb		IAmb	01 05 17.3	
	comp=Z,7.1nm,1.0s							
PECO	Prince Edward	30.21	26	P		P	01 05 17.0	-1.1
PECO				IAmb		IAmb	01 05 31.8	
	comp=Z,11nm,1.1s							
DELO	Deloro Mine	30.44	24	P		P	01 05 19.2	-1.0
EYMN	Ely	30.46	4	P		P	01 05 19.2	-1.1
EYMN				IAmb		IAmb	01 05 19.9	
	comp=Z,5.7nm,0.6s							
EYMN	Ely	30.46	4	P			01 05 19.5	
	baz=186							
M63A	Gales Ferry	30.64	34	P		P	01 05 20.7	-1.1
M63A				IAmb		IAmb	01 05 30.5	
	comp=Z,12nm,1.1s							
AGMN	Agassiz Nation	30.73	358	P			01 05 22.3	
	baz=177,SNR=23							
B35A	Bob, Littlefor	30.78	1	P		P	01 05 22.4	-0.7
B35A				IAmb		IAmb	01 05 23.3	
	comp=Z,8.3nm,1.1s							
K61A	Williamstown	30.92	31	P			01 05 23.7	
	baz=222							
J59A	Piesco	30.92	29	P		P	01 05 23.0	-1.5
ULM	Lac du Bonnet	32.68	358	P		P	01 05 38.6	-1.1
	comp=Z,7.5nm,0.8s,baz=171,slow=11,SNR=13							
ULM	Lac du Bonnet	32.68	358	IAmb		IAmb	01 05 40.1	
	comp=Z,6.0nm,0.9s							
D55A	Sainte-Anne-du	33.36	24	P			01 05 44.3	
	baz=214							
E58A	La Victoria	33.73	27	P			01 05 47.8	
	baz=218							
G62A	West of Eustis	34.13	31	P		P	01 05 51.2	-1.1
G62A				IAmb		IAmb	01 05 52.6	
	comp=Z,8.0nm,0.8s							
MATQ	Matagami	34.93	19	P			01 05 57.6	
	baz=209							

G65A	Princeton	35.62	33	P		P	01 06 04.2	-0.9
G65A				IAmb		IAmb	01 06 09.4	
	comp=Z,13nm,1.1s							
C09A	Chrisman Ranch	35.95	332			PcP	01 08 32.7	+1.4
GGN	Saint George	35.95	34	P		P	01 06 06.5	-1.3
E63A	Oxbow	36.02	31	P		P	01 06 07.2	-1.2
E63A				IAmb		IAmb	01 06 10.7	
	comp=Z,13nm,1.1s							
PQI	Presque Isle	36.39	31	P		P	01 06 10.4	-1.2
PQI				IAmb		IAmb	01 06 15.3	
	comp=Z,6.6nm,1.1s							
LMN	Caledonia Moun	37.52	35	P		P	01 06 19.7	-1.4
LMN				IAmb		IAmb	01 06 32.4	
	comp=Z,12nm,1.1s							
FFC	Flin Flon	37.59	353	P		P	01 06 21.8	+0.2
FFC				IAmb		IAmb	01 06 22.5	
	comp=Z,4.3nm,0.8s							
BATG	Bathurst New B	37.79	32	P		P	01 06 21.9	-1.5
BATG				IAmb		IAmb	01 06 30.7	
	comp=Z,11nm,1.1s							
FCC	Fort Churchill	41.20	0	P		P	01 06 51.1	-0.2
LPAZ	La Paz	42.46	141	P		P	01 07 02.7	-0.2
	comp=Z,1.9nm,0.7s,baz=326,slow=6.9,SNR=12							
LPAZ	La Paz	42.46	141	P		P	01 07 02.7	-0.2
PB16	IPOC Station P	43.28	144	P		P	01 07 11.2	+1.8
MNMC	Minye Minye	43.87	145	P		P	01 07 15.1	+1.3
MNMC				IAmb		IAmb	01 07 16.6	
	comp=Z,7.6nm,0.9s							
PB07	IPOC Station P	45.84	147	P		P	01 07 30.2	+1.0
PB07				IAmb		IAmb	01 07 31.5	
	comp=Z,7.4nm,0.8s							
YKA	Yellowknife Ar	47.09	347	P		P	01 07 38.2	0.0
	comp=Z,1.8nm,0.8s,baz=151,slow=7.8,SNR=21							
YKA				pP		pP	01 08 14.4	+1.5
	comp=Z,1.2nm,0.8s,baz=151,slow=7.9,SNR=5.0							
DLBC	Dease Lake	48.49	336	P		P	01 07 50.0	+0.9
	comp=Z,1.9nm,0.8s,baz=130,slow=8.3,SNR=6.4							
DLBC	Dease Lake	48.49	336	P		P	01 07 51.4	+2.2
GO02	Mina Guanaco	48.86	150	P		P	01 07 53.3	+0.6
CO03	El Pedregal	53.24	154	P		P	01 08 26.0	+1.0
CO02	Combarbal	53.44	155	P		P	01 08 27.4	+0.9
CO02				IAmb		IAmb	01 08 28.6	
	comp=Z,8.0nm,0.9s							
CRQM	Cirque	55.24	333	P		P	01 08 37.0	-2.3
CRQM				IAmb		IAmb	01 08 48.8	
	comp=Z,4.2nm,1.1s							
BCAR	Beaver Creek A	55.88	336	P		P	01 08 44.7	+1.1
L27K	Beaver Creek,	55.89	336	P		P	01 08 44.8	+1.1
INK	Inuvik	56.42	344	P		P	01 08 47.6	+0.4
	comp=Z,1.6nm,0.6s,baz=115,slow=6.7,SNR=8.9							
INK				pP		pP	01 09 24.6	+1.5
	comp=Z,0.9nm,0.6s,baz=118,slow=9.0,SNR=2.9							
CPUP	Villa Florida	56.60	139	P		P	01 08 47.8	-1.4
SFJD	Kangerlussuaq	56.96	19	P		P	01 08 50.0	-1.0
SFJD				IAmb		IAmb	01 08 59.8	
	comp=Z,5.1nm,0.8s							
RES	Resolute Bay	57.19	360	P		P	01 08 51.9	-0.7
	comp=Z,1.8nm,0.7s,baz=195,slow=9.6,SNR=12							
IL31		58.69	337	P		P	01 09 03.7	+0.5
ILAR	Eielson Array	58.69	337	P		P	01 09 03.9	+0.7
	comp=Z,0.3nm,0.5s,baz=138,slow=5.1,SNR=6.2							
ILAR				pP		pP	01 09 40.9	+1.6
	comp=Z,0.4nm,0.7s,baz=163,slow=4.7,SNR=3.4							
ILAR	Eielson Array	58.69	337	P		P	01 09 04.1	+0.9
SUA	Susitna One	58.88	332	P		P	01 09 05.0	+0.3
SUA				IAmb		IAmb	01 09 08.2	
	comp=Z,2.9nm,0.8s							
BMAR	Burnt Mountain	59.19	340	P		P	01 09 08.1	+1.4
TRF	Thorofare Moun	59.46	334	P		P	01 09 10.1	+1.4
TRF	Thorofare Moun	59.46	334	P			01 09 09.4	
	baz=114							
KTH	Kantishna Hill	59.76	334	P		P	01 09 11.8	+1.1
PPLA	Purkeypile	60.04	333	P		P	01 09 13.9	+1.3
PPLA				IAmb		IAmb	01 09 16.8	
	comp=Z,5.1nm,1.2s							
MLY	Manley	60.28	336	P		P	01 09 14.4	+0.3
MLY	Manley	60.28	336	P			01 09 15.0	
	baz=114							
ANGG	Ammassalik, Gr	60.76	23	P		P	01 09 15.5	-1.8
PLCA	Paso Flores	62.07	160	P		P	01 09 27.6	+1.0
	comp=Z,1.5nm,1.0s,baz=326,slow=13,SNR=3.3							
EUNU	Eureka	62.70	2	P		P	01 09 30.8	+0.6
EUNU				IAmb		IAmb	01 09 31.3	
	comp=Z,6.1nm,0.8s							
SUMG	Summit	63.53	16	P		P	01 09 36.1	-0.1
ESDC	Sonseca Array	79.44	52	P		P	01 11 11.8	+0.1
	comp=Z,1.4nm,0.8s,baz=291,slow=5.6,SNR=14							
ESDC	Sonseca Array	79.44	52	P		P	01 11 12.1	+0.4
ESDC				IAmb		IAmb	01 11 13.6	
	comp=Z,9.9nm,1.1s							
NOA	NORSAR Array B	82.22	28	P		P	01 11 26.9	+1.0
	comp=Z,2.4nm,0.8s,baz=293,slow=5.3,SNR=11							
ARCES	ARCESS Array B	83.57	18	P		P	01 11 32.3	-0.4
	comp=Z,5.2nm,1.0s,baz=358,slow=3.6,SNR=5.4							
GERES	GERESS Array B	88.42	39	P		P	01 11 57.6	+0.6
	comp=Z,0.4nm,0.8s,baz=309,slow=4.8,SNR=3.5							
TORD	Torodi Ar. Bea	91.88	76	P		P	01 12 12.5	-1.1
	comp=Z,0.8nm,0.9s,baz=297,slow=6.3,SNR=3.3							
WRA	Warramunga Arr	133.81	259	PKP		PKPdf	01 18 21.8	+0.2
	comp=Z,0.8nm,0.7s,baz=69,slow=0.9,SNR=7.8							
ASAR	Alice Springs	134.44	254	PKP		PKPdf	01 18 23.6	+0.8
	comp=Z,5.0nm,0.3s,baz=91,slow=2.1,SNR=4.9							

*VIE **06** 01:26:23.9±0.2, 46.47N×10.25E, h8km±2km, ml1.4/11, Error ellipse: s-maj=1.2km s-min=1.0km az=1.0 10 km W of Bormio*
*ZUR **06** 01:26:23.9, 46.45N×10.25E, h7km±2km, MLh1.3/6, Error ellipse: s-maj=4.5km s-min=0.9km az=34.0*

ROM 06 01:26:23.6±0.1, 46.471N±0.009×10.25E±0.01, h9km, ML1.2/4, 8C, Error ellipse: s-maj=0.9km s-min=0.8km az=32.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRMO	Bormio	0.09	87	⇑Pg	Pg	01 26 26.5	+0.5
	0.1nm,SNR=6.1						
BRMO				Sg	Sg	01 26 27.7	0.0
BRMO	Bormio	0.09	87	P	Pg	01 26 26.4	+0.4
BRMO				S	Sg	01 26 27.7	-0.1
BRMO				AML	AML		
	comp=E,314μm,0.2s						
BRMO				AML	AML		
	comp=N,209μm,0.5s						
BORM	Bormio	0.09	91	P	Pg	01 26 26.5	+0.5
BORM				S	Sg	01 26 27.8	0.0
BERNI	Berninapass	0.17	250	⇑Pg	Pg	01 26 27.8	+0.6
BERNI				⇑Pg	Pg	01 26 27.8	+0.6
	comp=N,0.1nm,SNR=2.4						
BERNI	Berninapass	0.17	250	⇑P	Pg	01 26 27.9	+0.6
BERNI	Berninapass	0.17	250	⇑P	Pg	01 26 27.9	+0.6
BERNI				S	Sg	01 26 30.3	+0.5
BERNI				AML	AML		
	comp=E,110μm,0.6s						
BERNI				AML	AML		
	comp=N,85μm,1.0s						
MOSI	Grossmontoni	0.25	55	Pg	Pg	01 26 29.4	+0.7
MOSI				Pg	Pg	01 26 29.4	+0.7
	SNR=1.4						
MOSI	Grossmontoni	0.25	55	P	Pg	01 26 29.5	+0.7
MOSI				S	Sb	01 26 34.0	-1.1
MOSI				AML	AML		
	comp=E,77μm,0.4s						
MOSI				AML	AML		
	comp=N,78μm,0.8s						
SCEL	Celerina	0.27	278	Pg	Pg	01 26 29.9	+0.8
	comp=N,0.1nm,SNR=1.0						
SCEL				Pg	Pg	01 26 29.9	+0.8
CARE	Lago del Cares	0.31	98	⇑ePg	Pg	01 26 30.5	+0.6
CARE				eSg	Sg	01 26 34.5	+0.4
DAVOX	Davos/Dischmat	0.40	321	Pg	Pb	01 26 32.4	-0.6
DAVOX				Pg	Pb	01 26 32.4	-0.6
	SNR=0.5						
DAVOX				Sg	Sg	01 26 37.8	+1.0
DAVOX	Davos/Dischmat	0.40	321	P	Pb	01 26 32.5	-0.5
DAVOX				S	Sg	01 26 37.8	+1.0
MABI	Malga Bissina	0.46	156	Pg	Pb	01 26 33.2	-0.7
	SNR=0.9						
MABI				Pg	Pb	01 26 33.2	-0.7
MABI				Sg	Sg	01 26 38.8	+0.3
MABI	Malga Bissina	0.46	156	P	Pg	01 26 33.2	+0.7
MABI				S	Sg	01 26 38.7	+0.2
MABI				AML	AML		
	comp=E,58μm,0.1s						
MABI				AML	AML		
	comp=N,33μm,1.2s						
VDL	Val di Lei	0.55	272	Pg	Pg	01 26 34.5	+0.2
VDL				Pg	Pg	01 26 34.5	+0.2
	SNR=1.0						
TUE	Stuetta	0.62	270	Pg	Pg	01 26 35.9	+0.2
	SNR=1.0						
TUE				Pg	Pg	01 26 35.9	+0.2
TUE	Stuetta	0.62	270	P	Pg	01 26 35.8	+0.2
TUE				S	Sg	01 26 44.5	+0.7
FETA	Feichten	0.64	31	ePg	Pb	01 26 36.9	-0.2
	comp=N,0.2nm,0.1s						
FETA				eSg	Sb	01 26 45.8	-0.4
	comp=N,1.0nm,0.1s						
MAGA	Magasa	0.74	159	⇑P	Pb	01 26 38.5	-0.2
MAGA	Magasa	0.74	159	⇑P	Pb	01 26 38.5	-0.2
MAGA				S	Sb	01 26 49.0	0.0
DAVA	Damuels	0.85	343	ePg	Pb	01 26 40.9	+0.2
	comp=N,0.3nm,0.1s						
DAVA				eSg	Sb	01 26 52.6	+0.3
	comp=N,0.4nm,0.1s						
SQTA	Sankt Quirin	1.00	41	ePg	Pb	01 26 43.3	+0.1
	comp=N,0.3nm,0.1s						
SQTA				eSg	Sb	01 26 56.9	+0.5
	comp=N,0.5nm,0.1s						
MUGIO	Muggio	1.00	237	Pg	Pb	01 26 43.0	-0.1
	comp=N,0.1nm,SNR=1.6						
MOTA	Moosalm	1.05	34	ePg	Pn	01 26 44.6	-0.1
	comp=N,0.2nm,0.2s						
MOTA				eSg	Sn	01 26 59.0	-0.6
	comp=N,0.4nm,0.1s						
RETA	Reutte	1.08	19	ePg	Pn	01 26 45.1	+0.1
	comp=N,0.3nm,0.1s						
RETA				eSg	Sn	01 27 00.1	0.0
	comp=N,3.2nm,0.4s						
WTTA	Wattenberg	1.24	50	ePg	Pg	01 26 48.4	+1.0
	comp=N,0.1nm,0.1s						
WTTA				eSg	Sn	01 27 05.5	+1.3
	comp=N,1.3nm,0.3s						
WATA	Walderalm	1.26	46	ePg	Pg	01 26 47.7	0.0
	comp=N,0.3nm,0.2s						
WATA				eSg	Sn	01 27 05.5	+1.0
	comp=N,0.5nm,0.1s						
ABTA	Abfaltersbach	1.59	79	eSn	Sb	01 27 13.7	+0.4
	comp=N,0.5nm,0.2s						

*TEH **06** 01:26:30.4, 40.26N×45.10E, h8km, ML4.0*
*AZER **06** 01:26:30.6±0.3, 40.24N×45.09E, h3km±1km, ml3.8/30, Error ellipse: s-maj=3.5km s-min=2.4km az=270.0*
*ISK **06** 01:26:30.1, 40.17N×45.12E, h5km, ML3.8/17*
*NSSP **06** 01:26:30.8, 40.27N×45.15E, h12km, Ms3.6*
*MOS **06** 01:26:31.4±1.1, 40.10N×45.07E, h13km, mb4.2/7, Error ellipse: s-maj=5.8km s-min=3.2km az=93.8*
*IDC **06** 01:26:31.1±0.8, 40.23N×45.09E, h0km, mb3.6/10, mb1 3.6/18, mb1mx3.5/45, mbtmp3.5/18, ML2.6/7, MS2.9/9, Ms1 2.9/9, ms1mx2.7/36, Error ellipse: s-maj=14.7km s-min=4.9km az=154.0*
*BJI **06** 01:26:31.0±0.0, 40.20N×45.10E, h10km, mB4.8/4, mb4.4/8*
*DDA **06** 01:26:32.0, 40.33N×44.98E, h20km±9km, MW4.0*
*DRS **06** 01:26:33.0±0.0, 40.26N×44.73E, h20km*
*NEIC **06** 01:26:33.6±2.4, 40.24N±0.08×45.10E±0.09, h10km±1km, mb4.1/13, Error ellipse: s-maj=13.6km s-min=11.5km az=164.0*

ISC 06 01:26:31.3±1.0, 40.26N±0.01×45.14E±0.01, h1km±7km, n258, σ1.978/343, mb4.2/27, MS2.8/5, 29C-20D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GNI	Garni	0.32	251	Pg	Pg	01 26 36.9	-0.6
	baz=41,slow=9.1						
GNI				Lg	Lg	01 26 40.4	
	2μm,0.3s,baz=47,slow=0.9,SNR=37						
GNI				LR	LR	01 27 01.3	
	comp=Z,2μm,19.6s,baz=156,slow=109						
GNI	Garni	0.32	251	⇑iP	Pg	01 26 36.9	-0.6
GNI				⇓iS	Sg	01 26 42.0	+0.4
GNI	Garni	0.32	251	PG	Pg	01 26 37.1	-0.3
GNI	Garni	0.32	251	Pg	Pg	01 26 37.1	-0.3
GNI	Garni	0.32	251	ePg	Pg	01 26 36.9	-0.6
KAPZ	Kaputan	0.34	281	⇑iP	Pg	01 26 37.6	-0.3
KAPZ				⇓iS	Sg	01 26 43.1	+0.9
KAPZ	Kaputan	0.34	281	⇑iPG	Pg	01 26 37.5	-0.3
NRKZ	NAREK	0.45	235	⇑iP	Pg	01 26 39.2	-0.6
NRKZ				⇓iS	Sg	01 26 45.9	+0.3
GDB	GEDABAY	0.66	45	P	Pg	01 26 43.9	-0.1
	SNR=360						
GDB				S	Sb	01 26 54.8	-0.7
GDB	GEDABAY	0.66	45	ePg	Pg	01 26 43.9	-0.1
TASB	TASBURUN-IGDIR	0.74	249	PG	Pg	01 26 44.9	-0.6
TASB				SG	Sg	01 26 55.7	+0.6
TASB	TASBURUN-IGDIR	0.74	249	ePg	Pg	01 26 44.7	-0.8
ARUZ	Aruch	0.80	272	⇑iP	Pg	01 26 45.9	-0.7
ARUZ				⇓iS	Sg	01 26 56.9	-0.1
METS	Metsamor	0.82	263	⇑iP	Pg	01 26 45.3	-1.6
METS				⇓iS	Sg	01 26 55.9	-1.6
QZX	Qazax, Azerbai	0.82	13	P	Pg	01 26 47.2	+0.2
	SNR=59						
QZX				S	Sb	01 26 59.1	-0.9
QZX	Qazax, Azerbai	0.82	13	ePg	Pg	01 26 47.2	+0.2
SBZ	Shahbuz	0.92	159	P	Pg	01 26 48.1	-0.7
	SNR=77						
SBZ				S	Sb	01 27 01.4	-1.3
SBZ	Shahbuz	0.92	159	ePg	Pg	01 26 48.1	-0.7
SBZ				ePg	Pg	01 26 48.1	-0.7
STE	Stepanavan	0.94	322	⇑iP	Pg	01 26 49.1	-0.3
STE				⇑iS	Sb	01 27 03.2	-0.4
GANJ	Ganja	0.98	66	PG	Pg	01 26 49.5	-0.7
GANJ	Ganja	0.98	66	P	Pg	01 26 49.5	-0.7
	SNR=40						
GANJ				S	Sb	01 27 04.0	-0.7
GANJ	Ganja	0.98	66	ePg	Pg	01 26 49.5	-0.7
VNNZ	Vanand	1.02	262	⇑iP	Pg	01 26 49.8	-1.0
VNNZ				⇓iS	Sb	01 27 04.4	-1.1
VNNZ	Vanand	1.02	262	⇑iPG	Pg	01 26 49.8	-1.0
NAX	Nakhchivan	1.12	166	PG	Pb	01 26 52.1	-1.3
NAX

BGD S Sg 01 27 21.7 +0.8
KOTA Agri, Merkez-K 1.55 254 *i* P Pg 01 27 01.0 0.0
KOTA *i* S Sg 01 27 23.1 +2.0
KOTA IAML 01 27 28.0
comp=E,271nm,0.6s
BRDA Brd 1.56 89 Pn Pg 01 27 01.0 -0.3
SNR=20
BRDA Sn Sg 01 27 23.3 +1.8
BRDA Brd 1.56 89 *e*Pn Pg 01 27 00.9 -0.3
MNGR Mingechevir, A 1.57 70 PN Pg 01 27 01.3 -0.1
MNGR Mingechevir, A 1.57 70 Pn Pg 01 27 01.3 -0.1
SNR=44
MNGR Sn Sg 01 27 25.0 +3.2
IMRD Marand 1.60 164 *e*Pg Pn 01 27 00.1 -0.8
IMRD *e* 01 27 24.7
comp=Z,99nm,0.3s
AKH Akhalkalaki 1.70 313 PN Pb 01 27 02.5 -0.9
AKH S Sg 01 27 26.2 +0.3
AKH Akhalkalaki 1.70 313 PN Pb 01 27 02.7 -0.7
AKH Akhalkalaki 1.70 313 *e*Pn Pb 01 27 03.0 -0.4
VMUR Van-Muradiye 1.75 224 *i* P Pb 01 27 02.9 -1.4
VMUR *i* S Sg 01 27 29.0 +1.5
ZKTA Zakatala 1.78 39 PN Pb 01 27 04.0 -0.7
ZKTA Zakatala 1.78 39 Pn Pb 01 27 04.0 -0.7
SNR=110
ZKTA Sn Sg 01 27 31.2 +2.7
AGRB Hanur-Agry 1.78 248 PN Pn 01 27 02.7 -0.7
AGRB Hanur-Agry 1.78 248 *e*Pn Pn 01 27 02.7 -0.7
LGD Lagodekhi 1.79 28 PN Pb 01 27 03.9 -0.9
LGD Lagodekhi 1.79 28 Pn Pb 01 27 03.7 -1.1
LGD Sn Sg 01 27 30.0 +1.3
ZKT Zaqatala 1.81 39 *e*Pn Pb 01 27 04.0 -1.3
OZAP Van, Ozalp-Mer 1.82 209 *i* P Pg 01 27 05.8 -0.4
OZAP *i* S Sg 01 27 33.3 +3.5
OZAP IAML 01 27 48.0
comp=N,511nm,1.3s
OZAP IAML 01 28 04.0
comp=E,504nm,2.2s
SEKA Sheki 1.83 58 PN Pb 01 27 04.9 -0.7
SEKA Sheki 1.83 58 Pn Pb 01 27 05.0 -0.7
SNR=29
SEKA Sn Sg 01 27 31.5 +1.3
SEKA Sheki 1.83 58 *e*Pn Pb 01 27 04.9 -0.7
ERCV ERCIS-VAN 1.86 229 PN Pn 01 27 03.5 -0.9
QRD Qoradiz 1.86 115 Pn Pb 01 27 06.0 -0.1
SNR=43
QRD Sn Sb 01 27 29.6 -0.1
QRD Qoradiz 1.86 115 *e*Pn Pb 01 27 06.0 -0.1
BKRG Bakuriani 1.94 321 PN Pb 01 27 06.6 -0.9
BLQ Beylaqan 1.94 105 Pn Pb 01 27 06.3 -1.1
SNR=88
BLQ Sn Sg 01 27 32.9 -0.6
BLQ Beylaqan 1.94 105 *e*Pn Pb 01 27 06.3 -1.1
ZRD Zardab 1.95 89 Pn Pb 01 27 07.5 -0.1
SNR=54
ZRD Sn Sg 01 27 35.7 +1.8
ZRD Zardab 1.95 89 *e*Pn Pb 01 27 07.4 -0.1
EATA Eleskirt 2.07 260 *i* P Pb 01 27 08.8 -1.0
EATA *i* S Sg 01 27 45.5 +7.8
EATA IAML 01 27 51.0
comp=E,235nm,1.2s
EATA IAML 01 27 57.0
comp=N,252nm,1.1s
VANB Van 2.14 220 PN Pn 01 27 08.7 +0.5
SENK Senkaya-Erzuru 2.15 279 PN Pn 01 27 08.5 +0.1
ITBZ Tabriz 2.17 158 *e*Pn Pn 01 27 08.8 +0.1
QBL Gabala 2.17 71 Pn Pb 01 27 10.1 -1.2
SNR=32
QBL Sn Sg 01 27 40.8 -0.2
TVAN Van 2.19 218 *i* P Pg 01 27 12.5 -0.7
TVAN *i* S Sg 01 27 49.5 +8.0
TVAN IAML 01 27 52.0
comp=N,334nm,0.8s
TVAN IAML 01 27 55.0
comp=E,413nm,1.2s
EPOS Posof 2.21 305 *i* P Pn 01 27 09.4 +0.1
EPOS *i* S Sn 01 27 34.8 -2.4
EPOS IAML 01 27 57.0
comp=N,343nm,1.1s
GUDG Gudauri 2.26 348 PN Pb 01 27 12.3 -0.7
GUDG S Sg 01 27 43.6 -0.4
MLAZ Malazgirt-MUS 2.29 242 PN Pn 01 27 09.8 -0.5
ABS Abastumani 2.31 311 Pn Pb 01 27 14.0 +0.2
ABS S Sg 01 27 45.7 +0.2
AKT Akhty 2.32 57*c* *i*PN Pb 01 27 12.7 -1.2
AKT pmax pmax
comp=Z,200nm,0.6s
AKT Akhty 2.32 57 *e*Pn Pb 01 27 12.8 -1.2
comp=Z,202nm,0.8s
AKT *e*Sn Sg 01 27 45.2 -0.5
comp=Z,1μm,0.8s
KDMR Kurdemir 2.33 86 Pn Pb 01 27 12.1 -2.0
SNR=16
KDMR Sn Sb 01 27 43.4 0.0
ADCV BITLIS_Adilcev 2.36 233 *i* P Pb 01 27 12.7 -2.0
ADCV *i* S Sg 01 27 47.9 +0.8
ADCV IAML 01 27 55.0
comp=N,80nm,1.0s
ADCV IAML 01 27 58.0
comp=E,127nm,1.2s
BASK Baskale_VAN 2.37 202 *i* P Pg 01 27 15.7 -1.0
BASK *i* S Sg 01 27 49.7 +2.2
BASK IAML 01 27 56.0
comp=E,236nm,1.6s
BASK IAML 01 27 56.0
comp=N,154nm,1.3s
IML Ismayilli 2.38 76 Pn Pb 01 27 12.6 -2.4
SNR=12
IML Sn Sg 01 27 46.7 -1.1
PNSH Pansheti 2.41 351 PN Pb 01 27 14.1 -1.4
PNSH S Sg 01 27 49.4 +0.7
IHRS Heris 2.44 142 *e*Pn Pb 01 27 14.1 -1.9
IHRS *e* 01 27 18.5
comp=Z,99nm,0.7s
XNQ Khinaliq 2.46 67 Pn Pb 01 27 13.8 -2.6
SNR=49
XNQ Sn Sb 01 27 47.9 +0.6
HOMI Horasan 2.48 266 *i* P Pb 01 27 14.8 -2.0
HOMI *i* S Sg 01 27 52.4 +1.3
HOMI IAML 01 28 14.0
comp=E,400nm,1.3s
GEVA Gevas 2.52 220 *i* P Pb 01 27 16.3 -1.2
GEVA *i* S Sb 01 27 48.8 -0.3
GEVA IAML 01 28 08.0
comp=N,45nm,1.0s
GEVA IAML 01 28 24.0
comp=E,74nm,1.2s
GEVA Gevas 2.52 220 Pg Pb 01 27 17.2 -0.2
KOPR Koprukoy-ERZUR 2.53 265 PN Pn 01 27 13.7 0.0
GNBR Gunib 2.54 32*c* *i*PN Pb 01 27 16.8 -0.8
GNBR pmax pmax
comp=Z,78nm,0.6s
GNBR Gunib 2.54 32 *i* Pn Pb 01 27 16.9 -0.7
comp=Z,78nm,0.7s
GNBR *e*Sn Sg 01 27 52.5 -0.3
comp=Z,145nm,0.8s
AKDM Akdamar-Van 2.55 222 PN Pn 01 27 13.4 -0.5
TKB Tkibuli 2.64 323 Pn Pb 01 27 17.1 -2.3
TKB S Sg 01 27 54.6 -1.6
LACR Lac 2.65 346*d* *i*PN Pb 01 27 17.7 -1.8
LACR pmax pmax
comp=Z,139nm,0.3s
ONI Oni 2.65 332⇑ *e*PN Pb 01 27 17.6 -2.0
ONI pmax pmax
comp=Z,104nm,0.5s
URKR Urkarakh 2.68 44⇑ *i*PN Pb 01 27 18.1 -2.0
URKR *e*S Sg 01 27 56.8 -0.6
URKR pmax pmax
comp=Z,48nm,0.8s
URKR Urkarakh 2.68 44 *i* Pn Pb 01 27 18.1 -2.0
comp=Z,48nm,0.8s
URKR *e*Sn Sg 01 27 56.8 -0.6
comp=Z,64nm,0.7s
QSAR Qusar 2.68 61 Pn Pb 01 27 18.5 -1.6
SNR=14
QSAR Sn Sb 01 27 51.4 -2.1
PQL Pirkuli 2.69 77 Pn Pn 01 27 17.0 +1.2
SNR=10
PQL Sn Sb 01 27 52.1 -1.7
ZEI Tsey 2.69 340*d* *i*PN Pb 01 27 19.1 -1.3
ZEI pmax pmax
comp=Z,74nm,0.4s
GLBA Clilabad 2.71 111 Pn Pb 01 27 17.6 -2.9
SNR=40
GLBA Sn Sb 01 27 51.2 -2.9
DBAD Bademkaya 2.73 287 *i* P Pb 01 27 20.2 -0.7
DBAD *i* S Sg 01 27 56.5 -2.4
ARKR Arakani 2.73 30⇑ *i*PN Pb 01 27 18.8 -2.1
ARKR *e*S Sg 01 27 57.3 -1.7
ARKR pmax pmax
comp=Z,43nm,0.6s
ARKR Arakani 2.73 30 *i* Pn Pb 01 27 18.9 -2.1
comp=Z,43nm,0.6s
ARKR *e*Sn Sg 01 27 57.3 -1.7
comp=Z,39nm,0.4s
YRD Yardimli 2.75 118 Pn Pn 01 27 17.9 +1.3
SNR=133
YRD Sn Sb 01 27 53.4 -2.1
QUBA Quba, Azerbaij 2.77 66 Pn Pb 01 27 19.0 -2.7
SNR=13
QUBA Sn Sb 01 27 55.0 -1.1
DVE Vedeno 2.80 15*c* *i*PN Pb 01 27 20.8 -1.3
DVE pmax pmax
comp=Z,79nm,0.7s
KMGR Komgaron 2.81 356 *i* PN Pb 01 27 22.0 -0.2
KMGR pmax pmax
comp=Z,46nm,0.7s
VLKR Vladikavkaz 2.81 353 *e*PN Pb 01 27 22.5 +0.2
DBOC Borcka 2.85 294 *i* P Pb 01 27 23.5 +0.5
DBOC *i* S Sn 01 27 47.1 -5.8
DIGR Digorskoe uzhe 2.89 337*d* *i*PN Pb 01 27 20.7 -3.0
DIGR pmax pmax
comp=Z,30nm,0.6s
KRNR Karanay 2.89 27⇑ *i*PN Pb 01 27 21.3 -2.4
KRNR *e*S Sg 01 28 02.6 -1.6
KRNR pmax pmax
comp=Z,26nm,0.7s
KRNR Karanay 2.89 27 *i* Pn Pb 01 27 21.4 -2.4
comp=Z,26nm,0.7s
KRNR *e*Sn Sg 01 28 02.7 -1.6
comp=Z,26nm,0.5s
SGKR Sergokala 2.91 40⇑ *i*PN Pb 01 27 22.2 -1.7
SGKR *e*S Sg 01 28 02.2 -2.5
SGKR pmax pmax
comp=Z,57nm,0.8s
SGKR Sergokala 2.91 40 *i* Pn Pb 01 27 22.2 -1.7
comp=Z,57nm,0.8s
SGKR *e*Sn Sg 01 28 02.2 -2.5
comp=Z,135nm,1.0s
HAKT HAKKARI 2.92 203 *i* P Pb 01 27 22.1 -2.1
GBS Qobustan 2.92 83 Pn Pb 01 27 22.7 -1.5
SNR=12
GBS Sn Sb 01 27 59.2 -1.2
KORR Kora 2.94 345⇑ *e*PN Pb 01 27 24.6 +0.1
GURO Guroymak-BITLI 2.95 236 PN Pn 01 27 19.2 -0.1
LRK Lerik 2.96 122 Pn Pn 01 27 21.0 +1.5
SNR=82
LRK Sg Sg 01 28 04.4 -1.9
ATGJ Altiaghaj 2.96 77 Pn Pb 01 27 22.3 -2.5
ATGJ Sn Sb 01 27 59.7 -1.9
SIZA Siyzn 2.98 73 Pn Pb 01 27 22.7 -2.5
SIZA Sg Sg 01 28 06.0 -0.9
BLIS Bitlis-Merkez 2.98 233 *i* P Pb 01 27 26.0 +0.8
ALIB Äli-Bayra 2.98 94 Pn Pb 01 27 23.4 -1.8
SNR=3.8
ALIB Sg Sg 01 28 07.3 +0.2
GROC Groznyy 2.98 9*c* *i*PN Pb 01 27 23.8 -1.4
ARNR Ardon 2.99 348*de*PN Pb 01 27 23.3 -2.0
DBC Dubki 3.04 24⇑ *i*PN Pb 01 27 23.6 -2.6
DBC *e*S Sb 01 28 04.8 +1.0
DBC pmax pmax
comp=Z,46nm,0.6s
DBC Dubki 3.04 24 *i* Pn Pb 01 27 23.6 -2.6
comp=Z,46nm,0.6s
DBC *e*Sn Sb 01 28 04.8 +1.0
comp=Z,71nm,0.8s
VRTB Varto-Mus 3.04 250 *i* P Pb 01 27 26.2 -0.1
VRTB *i* S Sn 01 27 56.1 -1.6
VRTB Varto-Mus 3.04 250 PN Pn 01 27 20.7 0.0
ISRB Sarab 3.13 140 *e*Pn Pb 01 27 24.1 -3.7
ISRB *e* 01 28 19.1
comp=Z,99nm,0.7s
BTKR Batakoyurt 3.15 352⇓ *e*PN Pb 01 27 25.4 -2.6
LSNR Lesken 3.17 342*de*PN Pb 01 27 26.3 -2.2
MUSM Mu-Merkez 3.19 243 *i* P Pn 01 27 23.0 +0.2
LKRN Lenkeran, Azer 3.21 118 PN Pn 01 27 24.6 +1.8
LKRN Lenkeran, Azer 3.21 118 Pn Pn 01 27 24.6 +1.8
SNR=7.6
LKRN Sn Sb 01 28 06.1 -2.7
KRIK Erzurum-spir 3.22 273 *i* P Pb 01 27 26.7 -2.7
MAK Makhachkala 3.23 33 *e*PN Pb 01 27 26.6 -2.9
MAK *e* 01 27 35.2
MAK *e* 01 28 06.7
MAK *e* 01 28 14.3
MAK *e* 01 28 22.9
MAK pmax pmax
comp=Z,101nm,0.3s
MAK smax smax
comp=N,151nm,0.7s
MAK smax smax
comp=N,158nm,0.6s
MAK MLR MLR
comp=Z,336nm,7.0s
ECAT Cat-ERZURUM 3.27 260 *i* P Pb 01 27 29.5 -0.6
ECAT *i* S Pg 01 27 39.7 +5.8
KARO Karliova-Bingo 3.29 255 PN Pn 01 27 24.3 +0.2
ASTR Astara 3.30 120 Pn Pb 01 27 27.1 -3.5
SNR=12
ASTR Sn Sn 01 28 06.1 +2.2
CHOM Cayeli-Rize 3.43 286 PN Pn 01 27 27.1 +1.2
NCK Nalchik 3.44 341⇓ *e*PN Pb 01 27 29.2 -3.7
NEY Neytrino 3.49 330⇓ *e*PN Pn 01 27 29.2 +2.3
MAHB Mahabad 3.51 173 *e*Pn Pn 01 27 28.6 +1.5
KOPT Kop Dagi 3.56 268 *i* P Pg 01 27 40.8 +1.2
KOPT Kop Dagi 3.56 268 Pg Pg 01 27 37.5 -2.0
YEDI Yedisu-Bingol 3.63 258 PN Pn 01 27 29.3 +0.6
BNGB Bingl 3.67 251 PN Pn 01 27 29.7 +0.5
BAYB BAYBURT 3.73 272 *i* P Pb 01 27 35.7 -2.4
BAYB *i* S Sn 01 28 10.7 -4.2
BINT Bingol 3.85 250 PN Pn 01 27 29.7 -2.0
KBZ Khabaz 3.85 335 Pn Pn 01 27 34.1 +2.5
comp=Z,0.2nm,0.3s,baz=155,slow=11,SNR=13
KBZ Lg Lg 01 28 33.9
comp=Z,0.9nm,0.3s,baz=118,slow=19,SNR=5.9
KBZ Khabaz 3.85 335⇓ *e*PN Pn 01 27 34.4 +2.8
SHA1 Shidzhatmaz 3.94 333⇓ *e*PN Pn 01 27 36.5 +3.4
PYA1 Pyatigorsk 4.09 339⇓ *e*PN Pn 01 27 37.0 +2.0
KVAR Kislovodsk Arr 4.12 335 Pn Pn 01 27 37.8 +2.4
baz=86,slow=19,SNR=3.3
KIV Kislovodsk 4.12 335 *e*PN Pn 01 27 39.0 +3.6
KIV *e*S Sb 01 28 29.4 -5.6
KIV pmax pmax
comp=Z,47nm,1.1s
KIV Kislovodsk 4.12 335 PN Pn 01 27 37.7 +2.3
KIV Kislovodsk 4.12 335 Pn Pn 01 27 38.1 +2.6
MARD Mardin 4.50 231 Pn 01 27 43.2 +2.5
GOF Gofitskoye 5.04 343⇓ *e*PN Pg 01 28 09.3 +1.4
GOF pmax pmax
comp=Z,21nm,0.9s
SOC Sochi 5.23 311 *e*PN Pn 01 27 47.4 -3.2
SOC *e*SS Sb 01 29 08.7 +1.8
SOC MLR MLR
comp=Z,171nm,11.0s
ILIN Lien 5.52 164 *e*Pn Pn 01 27 55.9 +1.1
IDHR Dehrash 5.63 169 *e*Pn Pn 01 27 56.5 +0.1
QABG Abgarm-Qazvin 5.74 141 *e*Pn Pn 01 27 59.3 +1.5
QALM Alamut, Qazvin 5.77 130 *e*Pn Pn 01 27 58.2 -0.1
IANJ Anjilo 8.43 122 *e*Pn Pn 01 28 37.4 +2.7
BRTR Keskin Array B 8.84 270 Pn Pn 01 28 43.8 +3.5
comp=Z,0.0nm,0.3s,baz=91,slow=9.9,SNR=5.9
BRTR LR LR 01 31 50.2
comp=Z,33nm,20.2s,baz=81,slow=36
BRTR Keskin Array B 8.84 270 P Pn 01 28 42.1 +1.8
BRTR Keskin Array B 8.84 270 Pn 01 28 42.1 +1.8
GEYT Alibeck 10.36 99 Pn Pn 01 29 01.0 +0.1
comp=Z,0.1nm,0.3s,baz=352,slow=9.6,SNR=1.7
GEYT Alibeck 10.36 99 Pn Pn 01 29 04.0 +3.0
MMAI Mount Meron Ar 10.64 230 Pn Pn 01 29 05.4 +0.5
comp=Z,0.2nm,0.3s,baz=45,slow=11,SNR=1.2
IPAY Payeh 11.53 105 *e*Pn Pn 01 29 17.1 -0.1
BELG Belogornoye 12.26 7⇓ *e*P Pn 01 29 30.1 +3.2
BELG pmax pmax
comp=Z,1.0nm,0.8s
EIL Elat 13.45 221 LR LR 01 35 40.0
comp=Z,59nm,18.1s,baz=96,slow=41
AKTO Aktyubinsk 13.60 37 Pn Pn 01 29 44.4 -0.9
comp=Z,0.2nm,0.3s,baz=233,slow=11,SNR=21
ABKAR Akbulak array 13.82 44 Pn Pn 01 29 48.1 -0.2
MLR Muntele Rosu 15.00 297 LR LR 01 38 02.6
comp=Z,36nm,18.8s,baz=15,slow=46
AKASG Malin Array Be 15.25 318 Pn Pn 01 30 06.8 -0.8
comp=Z,0.4nm,0.3s,baz=125,slow=11,SNR=1.4
AKBB Malin Array Si 15.25 318⇓ *e*P P 01 30 09.1 -3.6
BURAR Bucovina Array 16.10 304 P P 01 30 23.1 +0.8
BURAR Bucovina Array 16.10 304 P P 01 30 23.1 +0.8
IDI Anoyia 16.75 259 LR LR 01 37 53.3
comp=Z,76nm,19.8s,baz=68,slow=41
MNK Minsk 18.35 327 *i* P P 01 30 46.1 -1.0
comp=E,1.0nm,0.9s
MNK *i* P P 01 30 46.1 -1.0
comp=N,6.0nm,0.9s
MNK *i* P P 01 30 46.1 -1.0
comp=Z,7.0nm,1.4s
MNK *i* PP PnPn 01 30 57.7 -0.4
MNK *i* PPP PPP 01 31 05.4
MNK *i* S Sn 01 34 10.8 -1.4
MNK *i* SS SnSn 01 34 28.4 +2.6
MNK *i* SSS SSS 01 34 41.2
MNK *i* PcP PcP 01 35 16.7 -1.5
MNK *i* LQ LQ 01 36 15.1
MNK *i* LR LR 01 37 22.6
MNK *i* LRM MLR 01 38 30.7
comp=N,103nm,14.3s
MNK *i* LRM MLR 01 38 33.2
comp=Z,48nm,18.8s
MNK *i* LRM MLR 01 38 43.1
comp=E,6.0nm,13.0s
ARU Arti 18.42 24 P P 01 30 46.3 -1.5
comp=E,0.0nm,0.3s,baz=127,slow=3.7,SNR=5.9
ARU Arti 18.42 24 P P 01 30 45.6 -2.2
ARU S Sn 01 34 11.1 -2.8
ARU Arti 18.42 24 P Pn 01 30 47.0 -0.7
KIRV Kirov 18.55 7⇑ *e*P Pn 01 30 49.6 +0.4
CHGR Chuyangaron 18.61 87 P Pn 01 30 52.0 +1.7
CHGR IAmb IAmb 01 30 53.8
comp=Z,11nm,1.0s
KK31 Karatay Array 19.14 73 P Pn 01 30 55.6 -1.1
KK31 pmax pmax
comp=Z,12nm,1.4s
KK31 Karatay Array 19.14 73 P Pn 01 30 55.6 -1.1
KK31 IAmb IAmb 01 30 57.5
comp=Z,12nm,1.4s
KKAR Karatay Array 19.14 73 P Pn 01 30 55.8 -0.9
KKAR Karatay Array 19.14 73 P Pn 01 30 55.8 -0.9
GAR Garm 19.42 86 P Pn 01 31 00.4 +0.3
GAR IAmb IAmb 01 31 08.8
comp=Z,11nm,1.0s
KLMR Klimovskoe 20.91 352 *e*P P 01 31 13.4 -1.5
KLMR pmax pmax
comp=Z,18nm,1.3s
KLMR Klimovskoe 20.91 352 *e*P P 01 31 13.4 -1.5
KLMR AMP 01 31 22.3
comp=Z,18nm,1.3s
BRVK Borovoye 21.36 45⇑ *i*P P 01 31 20.9 +1.1
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 21.36 45 P P 01 31 20.3 +0.5
BVAR Borovoye Array 21.40 45 P P 01 31 20.4 +0.2
comp=Z,1.3nm,0.8s,baz=193,slow=12,SNR=8.1
PRGR Permogore 21.41 1 *e*P P 01 31 19.6 -0.6
PRGR pmax pmax
comp=Z,9.0nm,0.7s
AAK Ala-Archa 22.09 74 P P 01 31 28.6 +0.7
comp=Z,0.5nm,0.5s,baz=225,slow=11,SNR=2.2
AAK LR LR 01 41 32.4
comp=Z,31nm,18.2s,baz=278,slow=41
AAK Ala-Archa 22.09 74⇓ *e*P P 01 31 30.2 +2.3
AAK pmax pmax
comp=Z,9.0nm,1.3s
GEC2 GERESS Array S 23.85 302 P P 01 31 47.3 +1.3
GEC2 IAmb IAmb 01 31 51.4
comp=Z,3.3nm,1.0s
GERES GERESS Array B 23.85 302 P P 01 31 47.1 +1.1
comp=Z,1.4nm,0.6s,baz=103,slow=9.6,SNR=16
GERES GERESS Array B 23.85 302 P P 01 31 46.7 +0.7
GERES GERESS Array B 23.85 302 P P 01 31 46.7 +0.7
ZOU Zoufplan 24.09 296 P P 01 31 49.4 +1.0
FIA1 FINESS Array S 24.21 338 P P 01 31 49.2 +0.2
FIA1 IAmb IAmb 01 32 02.7
comp=Z,7.7nm,1.1s
FINES FINESS Array B 24.21 338 P P 01 31 49.4 +0.3
comp=Z,1.3nm,0.7s,baz=157,slow=10,SNR=6.6
FINES FINESS Array B 24.21 338 P P 01 31 49.6 +0.6
CLL Collm 24.79 307 *i* P P 01 31 55.5 +1.0
comp=Z,5.0nm,1.1s
CLL Collm 24.79 307 *i* P P 01 31 55.5 +1.0
CLL pmax pmax
comp=Z,5.0nm,1.1s
CLL Collm 24.79 307 P P 01 31 55.4 +1.0
CLL IAmb IAmb 01 31 59.6
comp=Z,4.8nm,1.0s
WTTA Wattenberg 25.05 297 *e*P P 01 31 57.8 +0.7
comp=Z,7.9nm,1.1s
WATA Walderalm 25.09 298 *e*P P 01 31 56.0 -1.5
comp=Z,12nm,1.6s
SQTA Sankt Quirin 25.34 297 *e*P P 01 32 02.4 +2.8
comp=Z,6.1nm,0.8s
MOTA Moosalm 25.41 298 *e*P P 01 32 03.7 +3.3
comp=Z,6.3nm,1.0s
KURBB Kurchatov Array 25.42 55 P P 01 32 00.8 +0.6
comp=Z,1.4nm,0.7s,baz=264,slow=9.6,SNR=16
KURK Kurchatov 25.49 55 P P 01 32 00.8 0.0
FETA Feichten 25.65 297 *e*P P 01 32 02.4 -0.2
comp=Z,5.5nm,1.2s
RETA Reutte 25.66 298 *e*P P 01 32 02.7 +0.2
comp=Z,7.1nm,1.5s
DAVA Damuels 26.24 297 *e*P P 01 32 09.7 +1.8
comp=Z,8.1nm,1.1s
MK31 Makanchi Array 27.53 64⇓ *i*P P 01 32 21.1 +1.7
MK31 Makanchi Array 27.53 64 P P 01 32 21.4 +2.1
MKAR Makanchi Array 27.53 64 P P 01 32 20.9 +1.5
comp=Z,1.0nm,0.7s,baz=273,slow=7.0,SNR=12
MKAR LR LR 01 45 46.6
comp=Z,9.7nm,18.9s,baz=280,slow=42
MKAR Makanchi Array 27.53 64 P P 01 32 21.0 +1.7
NOA NORSAR Array B 29.38 326 LR LR 01 45 02.1
comp=Z,24nm,18.0s,baz=125,slow=38
KONO Kongsberg 29.45 323⇑ *e*P P 01 32 34.9 -1.4
KONO pmax pmax
comp=Z,26nm,1.8s
ZALV Zalesovo Beam 29.85 49 LR LR 01 46 41.8
comp=Z,24nm,19.3s,baz=180,slow=40
WMQ Urumqi 31.55 69 *e*P P 01 32 59.1 +4.0
EKA Eskdalemuir Ar 35.00 312 P P 01 33 24.8 -0.1
comp=Z,1.0nm,0.6s,baz=102,slow=9.0,SNR=12
ESK Eskdalemuir 35.02 312 P P 01 33 25.4 +0.3
ESK pmax pmax
comp=Z,16nm,1.5s
ESK Eskdalemuir 35.02 312 P P 01 33 25.4 +0.3
SONM Songino Array 43.65 59 P P 01 34 37.0 -0.4
comp=Z,0.3nm,0.5s,baz=296,slow=9.8,SNR=4.2
ULN Ulaanbaatar 44.07 59⇑ *i*P P 01 34 42.7 +1.8
ULN pmax pmax
comp=Z,3.0nm,0.8s
TOA0 Torodi Ar. Sit 46.62 247 P P 01 35 02.1 +0.9
TORD Torodi Ar. Bea 46.62 247 P P 01 34 59.7 -1.6
comp=Z,1.0nm,0.8s,baz=38,slow=7.5,SNR=4.5
HHC Hu-ho-hao-te 49.34 66 *e*P P 01 35 24.1 +1.9
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,110nm,5.9s
KMI Kunming 49.95 89⇑ P P 01 35 27.0 -0.1
KMI pP pP 01 35 29.8 +1.6
KMI pmax pmax
comp=Z,9.0nm,0.9s
CMAR Chiang Mai Arr 50.84 99 LR LR 02 01 14.8
comp=Z,12nm,19.4s,baz=50,slow=41
TOLK Toolik Lake Re 70.87 6 P P 01 37 51.0 +1.6
TOLK IAmb IAmb 01 38 00.2
comp=Z,3.3nm,1.4s
YKA Yellowknife Ar 76.31 350 P P 01 38 21.1 -0.3
comp=Z,1.0nm,0.8s,baz=14,slow=5.8,SNR=4.6
YKA Yellowknife Ar 76.31 350*ce*P P 01 38 24.1 +2.8

ANF ***06*** *01:33:45.2±0.3, 37.09N×98.05W, h7km, ML3.6/14, Error ellipse: s-maj=3.4km s-min=2.6km az=24.0*
NEIC ***06*** *01:33:45.5±1.4, 37.06N±0.03×98.02W±0.04, h7km±6km, mb_Lg3.0/55, Error ellipse: s-maj=5.9km s-min=1.7km az=133.0*
ISC 06 01:33:45.2±0.8,**37.08N**±0.02×**98.04W**±0.02,**h6**km±6km,

n96,σ0°65/99, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN10	**Anthony SW Sta**	**0.06**	**314**		**Pg**	**01 33 46.6**	**-0.2**
KAN10				Sg	**Sg**	01 33 47.9	-0.2
KAN05	**Bluff City Nor**	**0.14**	**79**		**Pg**	**01 33 48.1**	**0.0**
KAN05				Sg	**Sg**	01 33 50.3	+0.2
KAN14	**Manchester OK**	**0.14**	**154**		**Pg**	**01 33 48.2**	**+0.1**
KAN14				Sg	**Sg**	01 33 50.5	+0.4
KAN08	**Anthony NE Sta**	**0.15**	**21**		**Pg**	**01 33 48.3**	**-0.1**
KAN08				Sg	**Sg**	01 33 50.6	+0.1
KAN12	**Harper NE Stat**	**0.22**	**9**	Pg	**Pg**	**01 33 49.5**	**0.0**
KAN12				Sg	**Sg**	01 33 52.8	+0.3
KAN01	**Argonia South**	**0.24**	**72**	Pg	**Pg**	**01 33 49.8**	**-0.1**
KAN01				Sg	**Sg**	01 33 53.3	+0.3
GC02	**Grant County #**	**0.27**	**148**		**Pg**	**01 33 50.5**	**0.0**
GC02					**Sg**	**01 33 54.5**	**+0.3**
OK032	**Salt Plains WL**	**0.31**	**206**		**Pg**	**01 33 51.3**	**0.0**
OK032				Sg	**Sg**	01 33 55.9	+0.5
KAN09	**Caldwell North**	**0.34**	**81**		**Pg**	**01 33 51.8**	**-0.1**
KAN09				Sg	**Sg**	01 33 56.6	+0.2
KAN13	**South Haven SW**	**0.46**	**99**		**Pg**	**01 33 53.9**	**-0.2**
KAN13				Sg	**Sb**	**01 34 01.6**	**-1.1**
CROK	**Carrier**	**0.58**	**175**	Pg	**Pg**	01 33 56.3	-0.1
CROK				Sg	**Sg**	01 34 04.3	+0.4
U32A	**Winter Ranch,**	**1.04**	**228**		**Pg**	01 34 04.5	-0.7
U32A				Sg	**Sg**	01 34 18.6	-0.2
U32A	**Winter Ranch,** baz=49,SNR=21	**1.04**	**228**	P	**Pg**	**01 34 04.5**	**-0.7**
U32A				S	**Sb**	**01 34 19.1**	**-0.4**
U32A	**Winter Ranch,** baz=49,SNR=21	**1.04**	**228**	P		01 34 04.5	
U32A				S		01 34 19.1	
T35A	**Sooner Cattle**	**1.23**	**97**		**Pb**	**01 34 07.9**	**-1.0**
T35B	**Sooner Cattle** baz=277,SNR=172	**1.23**	**97**	P	**Pb**	**01 34 08.0**	**-1.0**
T35B				S	**Sg**	**01 34 24.0**	**-0.9**
T35B	**Sooner Cattle** baz=277,SNR=172	**1.23**	**97**	P		01 34 08.0	
T35B				S		01 34 24.0	
OK029	**Liberty Lake**	**1.37**	**160**		**Pb**	**01 34 11.2**	**0.0**
QUOK	**Quay**	**1.41**	**130**		**Pn**	**01 34 10.7**	**-0.6**
R32A	**Long Quarter,**	**1.44**	**339**		**Pn**	**01 34 11.6**	**-0.3**
R32A	**Long Quarter,** baz=158,SNR=70	**1.44**	**339**	P	**Pn**	**01 34 11.6**	**-0.3**
R32A				S	**Sn**	**01 34 30.4**	**-0.7**
R32A	**Long Quarter,** baz=158,SNR=70	**1.44**	**339**	P		01 34 11.6	
R32A				S		01 34 30.4	
BCOK	**Bluff Creek, N**	**1.47**	**166**	Pn	**Pn**	**01 34 11.9**	**-0.2**
OK031	**S. Brethren Rd**	**1.49**	**139**	Pn	**Pn**	**01 34 12.2**	**-0.2**
OK030	**Cody Creek RV**	**1.53**	**138**	Pn	**Pn**	**01 34 13.2**	**+0.1**
OK025	**Westminster Rd**	**1.60**	**159**		**Pn**	**01 34 14.1**	**+0.1**
OKCFA	**Oklahoma City** baz=344	**1.73**	**164**	S	**Sg**	**01 34 39.9**	**-0.9**
OKCFA	**Oklahoma City** baz=344	**1.73**	**164**	S		01 34 39.9	
TUL1	**Leonard** baz=303,SNR=14	**2.16**	**122**	P	**Pn**	**01 34 21.9**	**+0.3**
TUL1				S	**Sb**	**01 34 50.0**	**-1.6**
TUL1	**Leonard** baz=303,SNR=14	**2.16**	**122**	P		01 34 21.9	
TUL1				S		01 34 50.0	
CBKS	**Cedar Bluff**	**2.19**	**323**	Pn	**Pn**	**01 34 21.8**	**-0.3**
CBKS	**Cedar Bluff** baz=142,SNR=11	**2.19**	**323**	P	**Pn**	**01 34 22.3**	**+0.2**
CBKS				S	**Sb**	**01 34 51.4**	**-1.1**
CBKS	**Cedar Bluff** baz=142,SNR=11	**2.19**	**323**	P		01 34 22.3	
CBKS				S		01 34 51.4	
KSU1	**Kansas State U**	**2.31**	**29**	Pn	**Pn**	**01 34 24.4**	**+0.6**
KSU1	comp=Z,43nm,1.0s			IAmb_Lg		01 34 57.8	
KSU1	**Kansas State U** baz=209,SNR=13	**2.31**	**29**	P	**Pn**	**01 34 24.5**	**+0.6**
KSU1	**Kansas State U** baz=209,SNR=13	**2.31**	**29**	P		01 34 24.5	
WMOK	**Wichita Mounta**	**2.42**	**195**	Pn	**Pn**	**01 34 25.3**	**+0.1**
U38A	**Gravette**	**3.00**	**101**		**Pn**	**01 34 34.0**	**+0.7**
U38A	**Gravette** baz=283,SNR=27	**3.00**	**101**	P	**Pn**	**01 34 33.9**	**+0.6**
U38A	**Gravette** baz=283,SNR=27	**3.00**	**101**	P		01 34 33.9	
X37A	**Clayton**	**3.30**	**138**	Pn	**Pn**	**01 34 37.7**	**+0.3**
X37A	comp=Z,25nm,0.8s			IAmb_Lg		01 35 33.8	
X37A	**Clayton** baz=320,SNR=24	**3.30**	**138**	P	**Pn**	**01 34 37.9**	**+0.5**
X37A	**Clayton** baz=320,SNR=24	**3.30**	**138**	P		01 34 37.9	
HHAR	**Hobbs**	**3.39**	**102**	Pn	**Pn**	**01 34 39.1**	**+0.5**
HHAR	**Hobbs** baz=284,SNR=8.0	**3.39**	**102**	P	**Pn**	**01 34 39.4**	**+0.7**
HHAR	**Hobbs** baz=284,SNR=8.0	**3.39**	**102**	P		01 34 39.4	
AMTX	**Amarillo** comp=Z,30nm,0.8s	**3.68**	**234**	IAmb_Lg		01 35 47.1	
N33A	**J Bar K, Exete** comp=Z,27nm,1.0s	**3.68**	**7**	IAmb_Lg		01 35 45.7	
S39A	**Bolivar**	**3.81**	**79**		**Pn**	**01 34 44.8**	**+0.4**
S39A	**Bolivar** baz=262,SNR=20	**3.81**	**79**	P	**Pn**	**01 34 44.4**	**0.0**
S39A	**Bolivar** baz=262,SNR=20	**3.81**	**79**	P		01 34 44.4	
W39A	**Magazine**	**3.93**	**117**	Pn	**Pn**	**01 34 45.4**	**-0.6**
W39A	**Magazine** baz=300,SNR=6.1	**3.93**	**117**	P	**Pn**	**01 34 45.7**	**-0.2**
W39A				S	**Sn**	**01 35 33.2**	**+0.9**
W39A	**Magazine** baz=300,SNR=6.1	**3.93**	**117**	P		01 34 45.7	
W39A				S		01 35 33.2	
KSCO	**Kaye Shedlock'** comp=Z,19nm,0.8s	**4.10**	**299**	IAmb_Lg		01 36 05.8	
U40A	**Yellville**	**4.23**	**98**		**Pn**	**01 34 49.9**	**-0.3**
U40A	comp=Z,31nm,0.7s			IAmb_Lg		01 35 59.7	
U40A	**Yellville** baz=281,SNR=14	**4.23**	**98**	P	**Pn**	**01 34 50.2**	**0.0**
U40A	baz=281			S	**Sn**	**01 35 40.4**	**+0.5**
U40A	baz=281			S	**Sn**	**01 35 40.4**	**+0.5**
U40A	**Yellville** baz=281,SNR=14	**4.23**	**98**	P		01 34 50.2	
U40A	baz=281,SNR=14			P		01 34 50.2	
U40A	baz=281			S		01 35 40.4	
U40A	baz=281			S		01 35 40.4	
BGNE	**Belgrade**	**4.32**	**359**	Pn	**Pn**	**01 34 51.6**	**+0.2**
BGNE	comp=Z,30nm,0.9s			IAmb_Lg		01 36 15.9	
P38A	**Dawn**	**4.36**	**53**	Pn	**Pn**	**01 34 52.7**	**+0.8**
P38A	comp=Z,26nm,0.9s			IAmb_Lg		01 36 15.1	
MIAR	**Mount Ida**	**4.42**	**124**	Pn	**Pn**	**01 34 53.2**	**+0.4**
MIAR	comp=Z,26nm,0.9s			IAmb_Lg		01 36 12.6	
MIAR	**Mount Ida** baz=306,SNR=11	**4.42**	**124**	P	**Pn**	**01 34 53.6**	**+0.8**
MIAR	**Mount Ida** baz=306,SNR=11	**4.42**	**124**	P		01 34 53.6	
Z38A	**Mt. Pleasant**	**4.56**	**146**	Pn	**Pn**	**01 34 55.1**	**+0.4**
Z38A	comp=Z,39nm,0.8s			IAmb_Lg		01 36 15.6	
MGMO	**Mountain Grove**	**4.61**	**87**		**Pn**	**01 34 55.7**	**+0.3**
MGMO	comp=Z,17nm,0.9s			IAmb_Lg		01 36 20.0	
R40A	**Maddies Statio**	**4.74**	**73**	Pn	**Pn**	**01 34 56.9**	**-0.2**
R40A	**Maddies Statio** baz=257,SNR=21	**4.74**	**73**	P	**Pn**	**01 34 56.9**	**-0.2**
R40A	**Maddies Statio**	**4.74**	**73**	P		01 34 56.9	
	baz=257,SNR=21						
FCAR	**Ozark Folk Cen**	**4.91**	**102**	Pn	**Pn**	**01 35 00.1**	**+0.5**
OGNE	**Ogallala** comp=Z,35nm,0.8s	**4.95**	**322**	IAmb_Lg		01 36 33.4	
X40A	**Basin Creek Fa** comp=Z,27nm,0.8s	**4.96**	**120**	Pn	**Pn**	**01 35 00.3**	**+0.1**
X40A				IAmb_Lg		01 36 26.7	
X40A	**Basin Creek Fa** baz=303,SNR=7.1	**4.96**	**120**	P	**Pn**	**01 35 00.7**	**+0.5**
X40A	**Basin Creek Fa** baz=303,SNR=7.1	**4.96**	**120**	P		01 35 00.7	
X40A	baz=303,SNR=7.1			P		01 35 00.7	
WHAR	**Wooly Hollow**	**4.98**	**109**	Pn	**Pn**	**01 35 00.1**	**-0.4**
T25A	**Trinidad** comp=Z,15nm,0.7s	**5.09**	**273**	IAmb_Lg		01 36 30.8	
WLAR	**White Oak Lake** comp=Z,23nm,0.8s	**5.26**	**129**	IAmb_Lg		01 36 37.5	
N38A	**Joes South For**	**5.27**	**44**	Pn	**Pn**	**01 35 03.8**	**-0.6**
P40A	**Paris** comp=Z,18nm,0.7s	**5.31**	**61**	IAmb_Lg		01 36 37.4	
CCM	**Cathedral Cave**	**5.49**	**78**	Pn	**Pn**	**01 35 06.8**	**-0.6**
K31A	**O'Neill** comp=Z,33nm,0.9s	**5.56**	**355**	IAmb_Lg		01 36 54.2	
LCAR	**Lake Charles**	**5.63**	**98**	Pn	**Pn**	**01 35 09.6**	**+0.2**
SCIA	**State Center** comp=Z,23nm,0.9s	**6.09**	**36**	IAmb_Lg		01 37 01.1	
PBMO	**Poplar Bluff** comp=Z,14nm,0.8s	**6.11**	**91**	IAmb_Lg		01 37 11.4	
FVM	**French Village** comp=Z,12nm,0.9s	**6.12**	**79**	Pn	**Pn**	**01 35 15.3**	**-0.8**
FVM				IAmb_Lg		01 36 56.7	
SLM	**Saint Louis** comp=Z,23nm,1.0s	**6.37**	**74**	IAmb_Lg		01 37 04.7	
ISCO	**Idaho Springs**	**6.53**	**297**	Pn	**Pn**	**01 35 24.4**	**+2.3**
N41A	**Harden Midland**	**6.67**	**55**	Pn	**Pn**	**01 35 24.5**	**+0.8**
PVMO	**Portageville**	**6.73**	**93**	Pn	**Pn**	**01 35 25.4**	**+0.9**
ECSD	**EROS Data Cent**	**6.73**	**9**	Pn	**Pn**	**01 35 26.7**	**+2.1**
JCT	**Junction City** comp=Z,20nm,1.0s	**6.75**	**193**	Pn	**Pn**	**01 35 26.3**	**+1.5**
JCT				IAmb_Lg		01 37 33.5	
K38A	**Parkersburg** comp=Z,20nm,0.7s	**6.88**	**34**	IAmb_Lg		01 37 35.2	
S44A	**Carbondale**	**7.02**	**82**	Pn	**Pn**	**01 35 28.8**	**+0.3**
SIUC	**Southern Illin**	**7.05**	**82**	Pn	**Pn**	**01 35 28.3**	**-0.6**
PHWY	**Pilot Hill** comp=Z,16nm,0.8s	**7.13**	**308**	IAmb_Lg		01 37 33.3	
L40A	**Anamosa**	**7.24**	**45**	Pn	**Pn**	**01 35 32.7**	**+1.2**
Q44A	**Meyer Farm, Va**	**7.35**	**73**	Pn	**Pn**	**01 35 33.9**	**+0.8**
OXF	**Oxford**	**7.47**	**108**	Pn	**Pn**	**01 35 34.1**	**-0.5**
T45A	**Paducah** comp=Z,24nm,0.8s	**7.51**	**88**	IAmb_Lg		01 38 04.6	
O44A	**Mansfield** comp=Z,18nm,0.8s	**8.10**	**65**	IAmb_Lg		01 38 00.5	
L42A	**Oliver, Polo**	**8.12**	**50**	Pn	**Pn**	**01 35 43.4**	**-0.3**
WVT	**Waverly**	**8.27**	**94**	Pn	**Pn**	**01 35 44.6**	**-1.0**
JFWS	**Jewell Farm** comp=Z,18nm,0.7s	**8.35**	**43**	IAmb_Lg		01 38 22.8	
TX31	**Lajitas Ar. Si**	**9.05**	**213**	Pn	**Pn**	**01 35 56.3**	**-0.2**
TX32	**Lajitas Array**	**9.05**	**213**	Pn	**Pn**	**01 35 56.1**	**-0.3**
TXAR	**Lajitas Array**	**9.05**	**213**	Pn	**Pn**	**01 35 55.6**	**-0.8**
SFIN	**Lafayette** comp=Z,13nm,0.8s	**9.16**	**66**	IAmb_Lg		01 38 37.5	
BLO	**Bloomington** comp=Z,18nm,0.7s	**9.31**	**74**	Pn	**Pn**	**01 35 60.0**	**0.0**
BLO				IAmb_Lg		01 38 43.6	
U49A	**Red Boiling Sp**	**9.85**	**90**	Pn	**Pn**	**01 36 08.3**	**+1.0**
SWET	**Sewanee**	**9.97**	**97**	Pn	**Pn**	**01 36 09.3**	**+0.4**
CPCT	**Cooper Cave**	**11.04**	**94**	Pn	**Pn**	**01 36 23.8**	**+0.2**
V51A	**Loudon**	**11.10**	**93**	Pn	**Pn**	**01 36 24.5**	**+0.1**
V52A	**Sevierville**	**11.70**	**92**	Pn	**Pn**	**01 36 32.5**	**-0.2**

*IDC **06** 01:46:12.7±2.1,5.79S×153.13E,h0km,mb3.6/4, mb1 3.9/5,mb1mx3.6/33,mbtmp3.7/5,MS3.2/1,Ms1 3.2/1, ms1mx2.3/29,Error ellipse: s-maj=92.1km s-min=26.5km az=126.0*

ISC 06 01:46:17.0±1.8,6.0S±0.4×153.4E±0.3,h35km,n7,σ1°07/7, mb3.6/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** baz=14,slow=8.3,SNR=4.1	**6.99**	**241**	Pn	**Pn**	**01 47 55.8**	**-1.1**
PMG	1.4nm,0.3s,baz=284,slow=4.1,SNR=5.7			Sn	**Sn**	**01 49 16.4**	**+1.1**
WRA	**Warramunga Arr** 2.2nm,1.0s,baz=53,slow=9.8,SNR=6.7	**23.08**	**231**	P	**P**	**01 51 19.1**	**-0.6**
ASAR	**Alice Springs** 1.9nm,1.0s,baz=59,slow=9.0,SNR=9.6	**25.64**	**225**	P	**P**	**01 51 44.2**	**+0.7**
MSVF	**Nonsavu** comp=Z,51nm,21.9s,baz=124,slow=33	**26.79**	**118**	LR	LR	02 00 56.4	
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=95,slow=7.2,SNR=2.3	**81.60**	**319**	P	**P**	**01 58 31.5**	**0.0**
ILAR	**Eielson Array** 0.5nm,0.9s,baz=245,slow=5.8,SNR=3.4	**83.09**	**22**	P	**P**	**01 58 38.5**	**-0.2**
TORD	**Torodi Ar. Bea** 0.6nm,0.8s,baz=83,slow=2.8,SNR=2.6	**151.19**	**286**	PKPbc	**PKiKP**	**02 06 09.3**	**+1.1**

IDC 06 01:50:27.0±10.0,20.33S×177.81W,h535km±65km, mb3.2/2,mb1 3.3/3,mb1mx2.9/25,mbtmp4.0/3,Error ellipse: s-maj=237.1km s-min=39.5km az=143.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 0.9nm,0.3s,baz=201,slow=21,SNR=1.5	**4.69**	**303**	P	P	01 51 53.4	0.0
ASAR	**Alice Springs** 2.0nm,0.5s,baz=96,slow=7.6,SNR=32	**44.73**	**257**	P	P	01 57 53.0	+0.1
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=97,slow=7.6,SNR=21	**44.80**	**262**	P	P	01 57 53.0	-0.5
AKASG	**Malin Array Be** 0.4nm,0.5s,baz=44,slow=4.5,SNR=7.7	**142.95**	**331**	PKP	PKPdf	02 08 57.6	-2.0
BRTR	**Keskin Array B** 0.3nm,0.6s,baz=57,slow=5.3,SNR=3.6	**146.86**	**313**	PKPbc	PKPbc	02 09 10.0	+0.3

*DJA **06** 02:12:50.4±0.4,9°S±4°×11°0E±°,h10km,M4.7/10,mb4.5/7, mB5.0/2,MLv4.7/10,Mw(mB)4.3/2*
*NEIC **06** 02:12:53.7±2.5,9.30S±0.06×110.35E±0.06,h47km±5km, mb4.4/18,Error ellipse: s-maj=9.1km s-min=8.6km az=163.0*
*IDC **06** 02:12:57.1±2.7,9.09S×110.55E,h74km±23km,mb4.0/15, mb1 4.1/17,mb1mx4.0/34,mbtmp4.3/17,MS3.6/16, Ms1 3.6/16,ms1mx3.4/27,Error ellipse: s-maj=21.0km s-min=13.0km az=55.0*

ISC 06 02:12:52.2±0.5,9.40S±0.06×110.35E±0.07,h35km,n90, σ1°62/81,mb4.5/26,MS3.6/15,1D,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.49**	**7**	Pn	**Pn**	**02 13 15.4**	**-1.2**
UGM				Sn	**Sn**	**02 13 36.3**	**+1.5**
UGM	**Wanagama**	**1.49**	**7**	P	**Pn**	**02 13 15.6**	**-0.9**
SMRI	**Semarang**	**2.34**	**2**	Pn	**Pn**	**02 13 30.1**	**+1.8**
SMRI	**Semarang**	**2.34**	**2**	P	**Pn**	**02 13 30.4**	**+2.2**
SMRI				S	**Sn**	**02 13 59.6**	**+3.8**
CISI	**Cisompet, Garu**	**3.11**	**306**		**Pn**	**02 13 40.2**	**+1.4**
CISI	**Cisompet, Garu**	**3.11**	**306**	P	**Pn**	**02 13 40.6**	**+1.8**
LEM	**Lembang** 15nm,0.3s,baz=138,slow=10.0,SNR=24	**3.72**	**313**	P	**Pn**	**02 13 50.9**	**+3.5**
LEM	comp=Z,1μm,19.9s,baz=210,slow=40			LR	LR	02 15 25.5	
JAGI	**Jajag, Banyuwa**	**3.87**	**76**	Pn	**Pn**	**02 13 50.4**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.87**	**76**	P	**Pn**	**02 13 50.0**	**+0.7**
ABJI	**Asem Bagus**	**4.16**	**68**	P	**Pn**	**02 13 55.2**	**+2.0**
XMIS	**Christmas Isla**	**4.75**	**257**	Pn	**Pn**	**02 14 02.6**	**+1.2**
SRBI	**Singaraja**	**4.98**	**75**	P	**Pn**	**02 14 04.6**	**0.0**
TWSI	**Taliwang, Sumb** 0.3nm1μm42nm,0.8s	**6.49**	**85**	P	**Pn**	**02 14 26.4**	**+1.2**
PLAI	**Plampang** 0.5nm1μm94nm,0.7s	**7.36**	**86**	P	**Pn**	**02 14 38.3**	**+1.1**
BBKI	**Banjar Baru**	**7.40**	**37**	P	Pn	02 14 42.8	+5.0
KAPI	**Kapang** baz=245,slow=13,SNR=9.2	**10.29**	**66**	P	**Pn**	**02 15 19.4**	**+1.9**
KAPI	**Kappang**	**10.29**	**66**	Pn	**Pn**	**02 15 20.3**	**+2.7**
EDFI	**Ende, Flores** 11nm,0.8s	**11.22**	**88**	P	**Pn**	**02 15 29.1**	**-1.2**
GIRL	**Giralia**	**13.68**	**165**	Pn	**Pn**	**02 16 03.0**	**-0.9**
SOEI	**Soe**	**13.73**	**93**	P	P	02 16 22.8	+10
TOLI2	**Tolitoli**	**14.73**	**45**	P	**P**	**02 16 24.0**	**+0.2**
LUWI	**Luwuk**	**14.89**	**57**	P	**P**	**02 16 26.9**	**+1.3**
LUWI	**Luwuk**	**14.89**	**57**	P	**P**	**02 16 28.2**	**+2.6**
MRSI	**Marisa** 29nm,0.9s	**15.15**	**50**	P	**P**	**02 16 26.8**	**-1.7**
GTOI	**Gorontalo**	**16.07**	**52**	P	**Pn**	**02 16 36.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**17.17**	**122**	Pn	**Pn**	**02 16 49.6**	**+0.1**
MTN	**Manton Dam**	**20.68**	**101**	P	**P**	**02 17 30.3**	**+1.0**
MTN	comp=Z,29nm,1.2s			IAmb	IAmb	02 17 44.0	
SIJI	**Sorong** comp=Z,5.5nm,0.6s,baz=333,slow=15,SNR=4.0	**22.47**	**69**	P	**P**	**02 17 48.2**	**-0.5**
WB0	**Warramunga Arr** comp=Z,14nm,0.8s	**25.41**	**117**	P	**P**	**02 18 17.8**	**+1.1**
WB0				IAmb	IAmb	02 18 19.8	
WRA	**Warramunga Arr** comp=Z,9.5nm,0.9s,baz=290,slow=11,SNR=49	**25.43**	**117**	P	**P**	**02 18 17.8**	**+0.8**
WRA				LR	LR	02 30 03.7	
WRA	**Warramunga Arr** comp=Z,83nm,19.2s,baz=290,slow=40	**25.43**	**117**	P	**P**	**02 18 17.7**	**+0.8**
WB2	**Warramunga Arr** comp=Z,13nm,0.9s	**25.44**	**117**	P	**P**	**02 18 17.9**	**+0.9**
WB2				IAmb	IAmb	02 18 20.1	
WR0	**Warramunga Arr** comp=Z,14nm,0.9s	**25.61**	**117**	P	**P**	**02 18 20.2**	**+1.6**
WR0				IAmb	IAmb	02 18 21.6	
ASAR	**Alice Springs** comp=Z,4.5nm,0.8s,baz=298,slow=9.1,SNR=28	**26.60**	**125**	P	**P**	**02 18 28.5**	**+0.9**
ASAR	comp=Z,131nm,18.7s,baz=310,slow=39			LR	LR	02 30 16.1	
ASAR	**Alice Springs**	**26.60**	**125**	P	**P**	**02 18 30.4**	**+2.9**
AS31	**Alice Springs**	**26.60**	**125**	P	**P**	**02 18 27.2**	**-0.4**
CMAR	**Chiang Mai Arr** comp=Z,176nm,18.2s,baz=210,slow=39	**29.88**	**338**	LR	LR	02 32 13.8	
KMI	**Kunming**	**35.11**	**348**	‖P	**P**	**02 19 46.1**	**+3.4**
KMI				pP	pwP	02 19 55.6	-0.3
KMI				sP	sP	02 20 01.1	+5.4
KMI	comp=Z,12nm,0.5s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,3.0nm,0.7s,baz=334,slow=13,SNR=4.2	**36.58**	**132**	P	**P**	**02 19 56.0**	**+0.9**
STKA	comp=Z,120nm,18.6s,baz=323,slow=38			LR	LR	02 36 04.4	
STKA	**Stephens Creek**	**36.58**	**132**	P	**P**	**02 19 56.9**	**+1.8**
H08S2	**Diego Garcia H** baz=96,slow=74,SNR=1.7	**37.47**	**270**	T	T	03 00 16.7	
H08S3	**Diego Garcia H** baz=208,slow=74,SNR=6.7	**37.48**	**270**	T	T	02 59 56.2	
XAN	**Xi'an**	**43.22**	**358**	P	**P**	**02 20 49.3**	**-0.8**
XAN				pP	pwP	02 21 05.0	+1.6
XAN	comp=Z,5.0nm,1.2s			pmax	pmax		
LZH	**Lanzhou**	**45.66**	**353**	*e*P	**P**	**02 21 10.5**	**+0.8**
LZH				pP	pwP	02 21 24.8	+1.6
LZH				sP	sP	02 21 30.1	+7.2
LZH	comp=Z,19nm,1.0s			pmax	pmax		
JNU	**Nakatsue** comp=Z,5.9nm,0.9s,baz=231,slow=3.4,SNR=3.6	**46.59**	**24**	P	**P**	**02 21 13.6**	**-3.4**
HNR	**Honiara** comp=Z,55nm,19.3s,baz=266,slow=40	**48.89**	**94**	LR	LR	02 45 11.7	
KSAR	**Wonju Array Be**	**49.41**	**18**	P	**P**	**02 21 38.0**	**-0.6**
KSRS	**Korea Array** comp=Z,4.3nm,0.9s,baz=199,slow=8.1,SNR=10.0	**49.43**	**18**	P	**P**	**02 21 37.3**	**-1.5**
KSRS	comp=Z,18nm,19.8s,baz=189,slow=38			LR	LR	02 43 44.4	
HHC	**Hu-ho-hao-te**	**50.01**	**1**	*e*P	**P**	**02 21 45.5**	**+2.2**
HHC	comp=Z,9.0nm,1.0s			pmax	pmax		
HHC	comp=Z,120nm,5.7s			pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,5.2nm,0.8s,baz=198,slow=8.1,SNR=12	**52.67**	**28**	P	**P**	**02 22 00.2**	**-3.0**
MJAR	comp=Z,45nm,20.8s,baz=220,slow=36			LR	LR	02 44 26.2	
NIL	**Nilore**	**55.46**	**322**	P	**P**	**02 22 22.0**	**-1.7**
WMQ	**Urumqi**	**56.83**	**341**	*e*P	**P**	**02 22 35.0**	**+1.7**
USRK	**Ussuriysk Ar.** comp=Z,7.3nm,0.9s,baz=211,slow=4.9,SNR=12	**56.84**	**18**	P	**P**	**02 22 31.1**	**-2.2**
USRK	**Ussuriysk Ar.**	**56.84**	**18**	P	**P**	**02 22 32.0**	**-1.3**
SONM	**Songino Array** comp=Z,2.0nm,0.9s,baz=175,slow=7.1,SNR=14	**57.09**	**357**	P	**P**	**02 22 34.1**	**-1.0**
SONM	comp=Z,0.9nm,0.7s,baz=157,slow=4.8,SNR=3.7			PcP	**PcP**	**02 23 28.6**	**-1.1**
SONM	comp=Z,52nm,18.9s,baz=152,slow=38			LR	LR	02 48 32.9	
SONM	**Songino Array** comp=Z,3.4nm,1.2s	**57.09**	**357**	P	**P**	**02 22 33.7**	**-1.4**
SONM				IAmb	IAmb	02 22 35.2	
KBL	**Kabul**	**58.65**	**320**	P	**P**	**02 22 45.4**	**-1.1**
AAK	**Ala-Archa**	**61.27**	**330**	P	**P**	**02 23 03.7**	**-0.5**
AAK	comp=Z,4.0nm,1.2s			IAmb	IAmb	02 23 05.7	
MK31	**Makanchi Array**	**61.29**	**338**	P	**P**	**02 23 03.5**	**-0.6**
MK31	comp=Z,2.2nm,0.9s			IAmb	IAmb	02 23 04.8	
MKAR	**Makanchi Array** comp=Z,1.2nm,0.6s,baz=148,slow=7.3,SNR=16	**61.29**	**338**	P	**P**	**02 23 03.6**	**-0.5**
MKAR	**Makanchi Array**	**61.29**	**338**	P	**P**	**02 23 03.2**	**-0.9**
KLR	**Kul'dur** comp=Z,3.1nm,0.6s,baz=244,slow=5.4,SNR=11	**61.33**	**16**	P	**P**	**02 23 02.9**	**-1.4**
MAW	**Mawson** comp=Z,99nm,21.5s,baz=58,slow=31	**66.08**	**198**	LR	LR	02 46 56.3	
ZAA0	**Zalesovo Array**	**66.71**	**344**	P	**P**	**02 23 38.6**	**-0.9**
ZALV	**Zalesovo Beam** comp=Z,2.2nm,0.3s,baz=123,slow=5.5,SNR=19	**66.71**	**344**	P	**P**	**02 23 38.5**	**-1.0**
ZALV	comp=Z,37nm,18.6s,baz=173,slow=38			LR	LR	02 54 58.0	
GEYT	**Alibeck** comp=Z,36nm,18.4s,baz=50,slow=38	**67.76**	**318**	LR	LR	02 56 19.3	
GYA0B	**ALIBECK ARRAY**	**67.76**	**318**	P	**P**	**02 23 47.3**	**+0.7**
BRVK	**Borovoye**	**70.95**	**336**	P	**P**	**02 24 04.7**	**-1.3**
BRVK	comp=Z,3.4nm,0.8s			IAmb	IAmb	02 24 06.5	
VNDA	**Vanda** comp=Z,1.1nm,1.0s,baz=265,slow=5.3,SNR=4.8	**73.02**	**170**	P	**P**	**02 24 20.4**	**+2.4**
KMBO	**Kilima Mbogo** comp=Z,26nm,19.1s,baz=100,slow=31	**73.14**	**272**	LR	LR	02 50 46.2	
ABKAR	**Akbulak array**	**73.17**	**328**	P	**P**	**02 24 18.9**	**-0.5**
NRIK	**Noril'sk** comp=Z,25nm,18.9s,baz=135,slow=39	**80.15**	**352**	LR	LR	03 04 24.6	
QSPA	**South Pole Qui**	**80.60**	**180**	P	**P**	**02 25 03.1**	**+2.0**
KBZ	**Khabaz** comp=Z,2.5nm,1.0s,baz=124,slow=2.5,SNR=4.6	**80.65**	**317**	P	**P**	**02 25 02.2**	**+0.6**
TIXI	**Tiksi** comp=Z,5.1nm,1.1s	**81.81**	**6**	P	**P**	**02 25 05.5**	**-1.6**
TIXI				IAmb	IAmb	02 25 06.8	
BRTR	**Keskin Array B** comp=Z,1.7nm,1.1s,baz=103,slow=5.5,SNR=7.4	**85.89**	**311**	P	**P**	**02 25 27.7**	**-1.2**
KLMR	**Klimovskoe**	**89.02**	**332**	*e*P	**P**	**02 25 41.5**	**-1.8**
KLMR	comp=Z,14nm,1.3s			AM

baz=242
TWC *i* S **Sn** **02 16 20.8 -0.3**
baz=242
TIPB **Shuangxi** **0.46 293** *i* P **Pn** **02 16 10.8 -0.2**
baz=287
TIPB *e*S **Sn** **02 16 21.3 -0.1**
baz=287
ILA **Ilan** **0.49 267** *i* P **Pn** **02 16 11.2 0.0**
baz=258
ILA S **Sn** **02 16 22.1 +0.3**
baz=258
NWF **Wu-fen Shan** **0.54 301** P **Pn** **02 16 11.5 -0.2**
baz=292
NWF *e*S **Sn** **02 16 22.9 +0.2**
baz=292
WFSB **Wu-fen Shan** **0.54 301** P **Pn** **02 16 11.6 0.0**
baz=292
WFSB S **Sn** **02 16 22.6 +0.1**
baz=292
NDS **Dongshan** **0.55 253** P **Pn** **02 16 11.7 0.0**
baz=248
NDS S **Sn** **02 16 22.5 -0.1**
baz=248
TWE **Neicheng** **0.57 263** *e*P **Pn** **02 16 11.9 0.0**
baz=265
TWE *e*S **Sn** **02 16 23.0 +0.1**
baz=265
EWUT **Wuta** **0.58 233** P **Pn** **02 16 12.1 +0.1**
baz=231
EWUT *e*S **Sn** **02 16 23.4 +0.3**
baz=231
TNOU **National Taiwa** **0.59 307** *e*P **Pn** **02 16 11.7 -0.3**
baz=299
ENA **Nanau** **0.62 234** *e*P **Pn** **02 16 12.6 +0.3**
baz=231
ENA *e*S **Sn** **02 16 24.5 +0.7**
baz=231
TWA **Mucha** **0.67 286** P **Pn** **02 16 12.7 -0.1**
baz=284
TWA *e*S **Sn** **02 16 24.3 -0.3**
baz=284
ENTT **Nioudou** **0.68 257** *e*P **Pn** **02 16 13.3 +0.4**
baz=256
ENTT *e*S **Sn** **02 16 24.9 +0.2**
baz=256
NHDH **Xindian Distri** **0.71 284** *e*P **Pn** **02 16 12.8 -0.5**
baz=281
NHDH *e*S **Sn** **02 16 25.0 -0.3**
baz=281
NDT **Datong Townshi** **0.73 255** *e*P **Pn** **02 16 14.0 +0.5**
baz=255
NDT *e*S **Sn** **02 16 26.9 +1.2**
baz=255
YOJ **Yonaguni jima** **0.73 117** P **Pn** **02 16 13.5 0.0**
YOJ *e*S **Sn** **02 16 26.4 +0.7**
YOJ **Yonaguni jima** **0.73 117** P **Pn** **02 16 13.2 -0.2**
baz=125
YOJ *e*S **Sn** **02 16 26.1 +0.4**
baz=125
YM01 **YM01** **0.74 298** P **Pn** **02 16 13.5 -0.1**
baz=289
YM01 S **Sn** **02 16 25.7 -0.2**
baz=289
YM08 **YM08** **0.75 302** *e*S **Sn** **02 16 25.4 -0.7**
baz=299
TATO **Taipei** **0.75 284** *e*P **Pn** **02 16 13.0 -0.6**
baz=282
TATO *e*S **Sn** **02 16 25.1 -0.9**
baz=282
TAP **Taipei** **0.75 289** *e*S **Sn** **02 16 25.6 -0.4**
baz=287
YM10 **YM10** **0.75 299** *e*P **Pn** **02 16 13.4 -0.4**
baz=290
YM10 *e*S **Sn** **02 16 25.9 -0.3**
baz=290
YM05 **YM05** **0.75 299** P **Pn** **02 16 13.5 -0.3**
baz=290
YM05 *e*S **Sn** **02 16 26.0 -0.3**
baz=290
YM04 **YM04** **0.77 298** P **Pn** **02 16 13.7 -0.2**
baz=289
YM04 *e*S **Sn** **02 16 26.0 -0.5**
baz=289
TWY **Chenhua** **0.79 307** *e*P **Pn** **02 16 13.6 -0.4**
baz=299
TWY S **Sn** **02 16 27.1 +0.3**
baz=299
YHNB **Yeheng** **0.84 262** *e*P **Pn** **02 16 14.8 0.0**
baz=266
YHNB *e*S **Sn** **02 16 28.1 +0.2**
baz=266
TWS1 **Kuangyinshan** **0.85 291** *e*P **Pn** **02 16 14.5 -0.2**
baz=289
TWS1 *e*S **Sn** **02 16 27.8 -0.1**
baz=289
PCYT **Pengchaiyu** **0.85 347** *e*P **Pn** **02 16 14.9 +0.1**
baz=340
NSK **Sanguang** **0.86 262** P **Pn** **02 16 14.9 +0.1**
baz=266
NSK S **Sn** **02 16 28.4 +0.3**
baz=266
NACB **Ninganchiao** **0.89 226** *e*P **Pn** **02 16 14.6 -0.5**
baz=217
NACB *e*S **Sn** **02 16 28.4 -0.2**
baz=217
NNSB **Datong** **0.90 246** *e*P **Pn** **02 16 15.3 -0.1**
baz=236
NNSB *e*S **Sn** **02 16 29.4 +0.2**
baz=236
NNSH **Datong** **0.90 246** *e*P **Pn** **02 16 15.6 +0.2**
baz=237
NNSH *e*S **Sn** **02 16 29.6 +0.5**
baz=237
NNS **Nan Shan** **0.91 247** P **Pn** **02 16 15.8 +0.3**
baz=237
NNS *e*S **Sn** **02 16 29.5 +0.2**
baz=237
NTY **Taoyuan** **0.93 283** *e*S **Sn** **02 16 29.7 +0.3**
baz=285
ETLH **Xiulin Townshi** **0.94 232** *e*P **Pn** **02 16 15.6 -0.3**
baz=230
ETLH *e*S **Sn** **02 16 29.2 -0.7**
baz=230
TWD **Chiawan** **0.95 222** *e*P **Pn** **02 16 15.8 -0.1**
baz=214
TWD *e*S **Sn** **02 16 29.6 -0.3**
baz=214
NCU **National Centr** **1.02 280** *e*S **Sn** **02 16 32.2 +0.9**
baz=285
NCUH **Zhongli** **1.02 280** *e*P **Pn** **02 16 16.6 0.0**
baz=285
NCUH *e*S **Sn** **02 16 32.1 +0.8**
baz=285
NJD **Zhudong** **1.09 267** *e*S **Sn** **02 16 33.5 +0.6**
baz=265
FUSS **Fushou** **1.10 240** *e*P **Pn** **02 16 17.6 -0.2**
baz=234
FUSS *e*S **Sn** **02 16 31.9 -1.5**
baz=234
WHF **Hehuan Shan** **1.14 235** *e*P **Pn** **02 16 18.3 -0.2**
baz=229
WHF *e*S **Sn** **02 16 34.3 -0.2**
baz=229
TWT **Tachien** **1.15 242** *e*P **Pn** **02 16 19.0 +0.6**
baz=234
TWT *e*S **Sn** **02 16 34.8 +0.4**
baz=234
HSN1 **Hsinchu** **1.16 269** *e*P **Pn** **02 16 18.1 -0.1**
baz=267
HSN1 *e*S **Sn** **02 16 34.7 +0.5**
baz=267
TDCB **Techi** **1.16 243** *e*P **Pn** **02 16 18.8 +0.3**
baz=234
TDCB *e*S **Sn** **02 16 34.4 -0.3**
baz=234
LIOB **Emei** **1.17 263** *e*P **Pn** **02 16 18.3 -0.2**
baz=261
LIOB *e*S **Sn** **02 16 34.5 -0.1**
baz=261
NSTT **Nanjuang** **1.19 262** *e*P **Pn** **02 16 18.4 -0.2**
baz=260
NSTT *e*S **Sn** **02 16 34.6 -0.2**
baz=260
SBCB **Hsinchu** **1.19 270** *e*P **Pn** **02 16 18.6 0.0**
baz=268
SBCB *e*S **Sn** **02 16 34.8 -0.1**
baz=268
HSN **Hsinchu** **1.20 271** *e*S **Sn** **02 16 35.0 -0.2**

baz=261
CHGB **Renai** **1.25 235** *e*P **Pn** **02 16 19.8 +0.1**
baz=226
CHGB *e*S **Sn** **02 16 36.6 -0.1**
baz=226
WHP **Taichung City** **1.33 247** *e*P **Pn** **02 16 21.0 +0.5**
baz=246
WHP *e*S **Sn** **02 16 38.4 +0.2**
baz=246
IRIF **Iriomote-Funau** **1.39 109** P **Pn** **02 16 20.8 -0.3**
IRIF *e*S **Sn** **02 16 39.6 +0.3**
NMLH **Miaoli** **1.39 260** *e*S **Sn** **02 16 39.3 -0.1**
baz=258
NSY **Sanyi** **1.44 255** P **Pn** **02 16 21.8 -0.1**
baz=254
NSY *e*S **Sn** **02 16 40.9 +0.3**
baz=254
DPDB **Guoxing** **1.46 239** *e*P **Pn** **02 16 23.1 +1.1**
baz=232
DPDB *e*S **Sn** **02 16 41.6 +0.6**
baz=232
WCS **Beigang Elemen** **1.46 240** *e*P **Pn** **02 16 21.5 -0.5**
baz=247
WCS *e*S **Sn** **02 16 42.0 +1.2**
baz=247
VWDT **VWDT** **1.48 226** *e*P **Pn** **02 16 22.1 -0.2**
baz=218
VWDT *e*S **Sn** **02 16 41.2 -0.1**
baz=218
HGSD **Ruisui** **1.52 212** *e*P **Pn** **02 16 23.2 +0.4**
baz=220
HGSD *e*S **Sn** **02 16 43.1 +0.7**
baz=220
SMLT **Sun Moon Lake** **1.56 235** *e*P **Pn** **02 16 24.1 +0.6**
baz=233
SMLT *e*S **Sn** **02 16 45.2 +1.7**
baz=233
WDJ **Dajia District** **1.57 254** *e*S **Sn** **02 16 43.6 +0.2**
baz=253
SSLB **Suanglung** **1.58 231** *e*P **Pn** **02 16 24.2 +0.5**
baz=225
SSLB *e*S **Sn** **02 16 44.7 +1.0**
baz=225
TYC **Yuchr** **1.58 236** *e*P **Pn** **02 16 23.9 +0.3**
baz=231
TYC *e*S **Sn** **02 16 44.4 +0.7**
baz=231
WWF **Wufeng** **1.63 243** *e*S **Sn** **02 16 45.0 +0.1**
baz=251
JKRS **Kuro-shima** **1.66 109** P **Pn** **02 16 25.1 +0.5**
JKRS *e*S **Sn** **02 16 46.3 +0.7**
YULB **Yu-li** **1.67 213** *e*P **Pn** **02 16 23.6 -1.2**
baz=219
YULB *e*S **Sn** **02 16 46.1 +0.3**
baz=219
EYUL **Yuli** **1.69 212** *e*S **Sn** **02 16 46.7 +0.4**
baz=219
TWF1 **Yuli** **1.70 213** *e*P **Pn** **02 16 25.2 0.0**
baz=219
WJS **Zhushan** **1.72 236** *e*S **Sn** **02 16 47.4 +0.3**
baz=245
WNT **Mingjian** **1.73 238** *e*P **Pn** **02 16 25.6 +0.1**
baz=247
WNT *e*S **Sn** **02 16 47.1 0.0**
baz=247
JIJ **Ishigaki jima** **1.74 104** P **Pn** **02 16 25.5 -0.2**
JIJ *e*S **Sn** **02 16 46.9 -0.5**
FULB **Fuli** **1.83 210** *e*P **Pn** **02 16 27.0 +0.1**
baz=218
FULB *e*S **Sn** **02 16 49.0 -0.6**
baz=218
ALS **Alishan** **1.86 227** *e*P **Pn** **02 16 28.0 +0.4**
baz=217
ALS *e*S **Sn** **02 16 50.5 -0.3**
baz=217
CHN5 **Tsauling** **1.90 231** *e*P **Pn** **02 16 28.4 +0.6**
baz=241
CHN5 *e*S **Sn** **02 16 51.4 +0.2**
baz=241
WDLH **Douliu** **1.94 236** *e*P **Pn** **02 16 28.3 0.0**
baz=235
WDLH *e*S **Sn** **02 16 52.6 +0.4**
baz=235
WRL **Guolierlin Hig** **1.96 243** *e*S **Sn** **02 16 51.7 -0.9**
baz=250
ELDTW **Lidau** **1.98 216** *e*S **Sn** **02 16 51.6 -1.6**
baz=215
EDH **Donghe** **2.03 207** *e*S **Sn** **02 16 51.6 -2.6**
baz=215
TPUB **Ta-pu** **2.13 226** *e*P **Pn** **02 16 31.8 +1.0**
baz=237
TPUB *e*S **Sn** **02 16 57.2 +0.6**
baz=237
STYT **Tauyuan** **2.15 221** *e*P **Pn** **02 16 31.1 0.0**
baz=220
LONT **Longtian** **2.16 210** *e*S **Sn** **02 16 55.6 -1.8**
baz=208
TWK **Hsinying** **2.24 228** *e*S **Sn** **02 16 58.5 -0.9**
baz=216
CHN1 **Nanshi** **2.27 226** *e*P **Pn** **02 16 33.0 +0.2**
baz=225
CHN1 *e*S **Sn** **02 17 00.2 +0.1**
baz=225
MASBT **Mashibuluo** **2.65 215** *e*P **Pn** **02 16 38.0 +0.2**
baz=214

*IDC **06** 02:22:07.8±2.1,0.°70N×126.°19E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.4/30,mbtmp3.6/3,Error ellipse: s-maj=183.7km s-min=26.4km az=65.0*
*DJA **06** 02:22:14.7±0.6,1.°N±3.°×12.°7E±.°,h29km±6km,M3.5/7, MLv3.5/7*
ISC 06 02:22:13.2±1.4,**1.°0N**±0.°1×**126.°67E**±0.°10,**h39**km,**n7,**
σ1§**50**/**7,mb3.5**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.74**	**109**	P		**Pn**	**02 22 27.9**	**+0.8**
TNTI				S		**Sn**	**02 22 37.4**	**+0.2**
SANI	**Sanana**	**3.12**	**193**	P		**Pn**	**02 23 00.6**	**+0.7**
GTOI	**Gorontalo**	**3.68**	**264**	P		Pn	02 23 13.0	+5.4
NLAI	**Namlea**	**4.25**	**174**	P		**Pn**	**02 23 16.8**	**+1.4**
WRA	**Warramunga Arr**	**22.15**	**161**	P		**P**	**02 27 04.0**	**-1.8**
	1.1nm,0.5s,baz=338,slow=10,SNR=11							
ASAR	**Alice Springs**	**25.52**	**164**	P		**P**	**02 27 36.7**	**-1.6**
	0.6nm,0.4s,baz=346,slow=12,SNR=11							
MKAR	**Makanchi Array**	**59.75**	**326**	P		**P**	**02 32 14.5**	**+0.3**
	0.2nm,0.5s,baz=112,slow=8.0,SNR=4.5							

*DJA **06** 02:25:16.8±0.3,8.°S±3.°×12.°8E±.°,h196km±10km,M4.2/9, mb4.0/7,mB4.7/4,MLv4.3/9,Mw(mB)4.0/4*
*NEIC **06** 02:25:17.9±1.9,7.°5S±0.°1×128.°21E±0.°03,h171km±11km, mb4.0/5,Error ellipse: s-maj=17.4km s-min=2.4km az=165.0*
*IDC **06** 02:25:17.1±1.6,7.°56S×128.°22E,h166km±16km,mb3.6/3, mb1 3.9/7,mb1mx3.5/29,mbtmp4.4/7,Error ellipse: s-maj=25.1km s-min=14.0km az=127.0*
ISC 06 02:25:17.3±0.6,**7.°60S**±0.°06×**128.°23E**±0.°05,**h171**km,**n37,**
σ1§**48**/**44,mb3.9**/**7,1C,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.06**	**97**	Pn		**Pn**	**02 26 08.0**	**+1.7**
SAUI				Sn		**Sn**	**02 26 44.5**	**+0.1**
SAUI	**Saumlaki**	**3.06**	**97**	P		**Pn**	**02 26 08.0**	**+1.7**
SAUI				S		**Sn**	**02 26 44.4**	**0.0**
SOEI	**Soe**	**4.46**	**241**			**Pn**	**02 26 25.6**	**+1.4**
SOEI				Sn		**Sn**	**02 27 17.1**	**+0.5**
SOEI	**Soe**	**4.46**	**241**	P		**Pn**	**02 26 25.6**	**+1.4**
SOEI				S		**Sn**	**02 27 16.6**	**0.0**
NLAI	**Namlea**	**4.48**	**345**	P		**Pn**	**02 26 26.7**	**+2.4**
BATI	**Baumata**	**5.20**	**240**	P		**Pn**	**02 26 34.0**	**+0.3**
	24nm,0.3s,baz=311,slow=4.9,SNR=22							
BATI				S		**Sn**	**02 27 34.0**	**+0.2**
	32nm,0.3s,baz=332,slow=21,SNR=16							
BATI	**Baumata**	**5.20**	**240**	P		**Pn**	**02 26 33.9**	**+0.1**
	0.4nm1µm34nm,0.5s							
MTN	**Manton Dam**	**5.94**	**152**			**Pn**	**02 26 44.1**	**+0.6**
FAKI	**Fak Fak**	**6.13**	**41**			**Pn**	**02 26 44.9**	**-1.1**
FAKI	**Fak Fak**	**6.13**	**41**	P		**Pn**	**02 26 45.1**	**-0.9**
	0.1nm653nm10nm,0.6s							
EDFI	**Ende, Flores**	**6.57**	**260**	P		**Pn**	**02 26 51.4**	**-0.5**
	0.0nm3.0nm,0.8s							
SIJI	**Sorong**	**7.34**	**24**	P		**Pn**	**02 27 01.8**	**-0.2**
	3.6nm,0.3s,baz=26,slow=17,SNR=15							
SIJI				S		**Sn**	**02 28 23.2**	**-1.3**
	1.4nm,0.3s,baz=281,slow=23,SNR=3.7							
SWI	**Sorong**	**7.34**	**24**	P		**Pn**	**02 27 01.2**	**-0.8**
	0.1nm26nm,0.7s							
PLAI	**Plampang**	**10.42**	**263**	P		**Pn**	**02 27 41.3**	**-1.3**
	11nm,0.8s							
FITZ	**Fitzroy Crossi**	**10.73**	**193**	Pn		**Pn**	**02 27 44.7**	**-1.9**
WB0	**Warramunga Arr**	**13.49**	**154**	Pn		**Pn**	**02 28 20.2**	**-1.8**
WRA	**Warramunga Arr**	**13.62**	**155**	P		**Pn**	**02 28 22.6**	**-1.1**
	1.9nm,0.3s,baz=324,slow=14,SNR=39							
WRA				S		Sn	02 30 46.4	-8.8
	4.7nm,0.3s,baz=326,slow=24,SNR=12							
WRA	**Warramunga Arr**	**13.62**	**155**			**Pn**	**02 28 23.0**	**-0.7**
WB2	**Warramunga Arr**	**13.63**	**155**	Pn		**Pn**	**02 28 22.7**	**-1.1**
WR0	**Warramunga Arr**	**13.72**	**154**	Pn		**Pn**	**02 28 23.4**	**-1.6**
COEN	**Coen**	**15.98**	**115**			**P**	**02 28 54.9**	**+1.8**
PSA00	**Pilbara Seismi**	**16.08**	**209**	P		**P**	**02 28 54.1**	**+0.1**
PSA00				IAmb		IAmb	02 29 08.8	
	comp=Z,24nm,1.4s							
AS31	**Alice Springs**	**16.88**	**162**			**Pn**	**02 29 05.5**	**+1.9**
ASAR	**Alice Springs**	**16.88**	**162**	P		**P**	**02 29 04.8**	**+1.9**
	comp=Z,2.4nm,0.3s,baz=341,slow=11,SNR=135							
ASAR				S		**S**	**02 32 05.9**	**-4.3**
	comp=Z,1.2nm,0.3s,baz=313,slow=20,SNR=8.8							
ASAR	**Alice Springs**	**16.88**	**162**	P		**Pn**	**02 29 05.4**	**+1.7**
KMI	**Kunming**	**40.92**	**323**	⇑P		**P**	**02 32 44.8**	**+1.4**
KMI				pP		pwP	02 33 22.2	-2.5
KMI				pmax		pmax		
	comp=Z,7.0nm,0.5s							
HHC	**Hu-ho-hao-te**	**50.59**	**344**	*e*P		**P**	**02 34 00.9**	**+2.1**
HHC				pmax		pmax		
	comp=Z,13nm,0.9s							
HHC				pmax		pmax		
	comp=Z,160nm,4.7s							
WMQ	**Urumqi**	**62.96**	**328**	*e*P		**P**	**02 35 28.4**	**+2.6**
MK31	**Makanchi Array**	**67.78**	**328**	P		**P**	**02 35 57.1**	**+0.4**
MK31				IAmb		IAmb	02 36 04.6	
	comp=Z,1.8nm,1.4s							
MKAR	**Makanchi Array**	**67.78**	**328**	P		**P**	**02 35 56.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=118,slow=8.3,SNR=9.8							
MKAR	**Makanchi Array**	**67.78**	**328**	P		**P**	**02 35 57.1**	**+0.4**
MAKZ	**Makanchi**	**67.95**	**328**	P		**P**	**02 35 55.0**	**-2.8**
MAKZ				IAmb		IAmb	02 35 55.5	
	comp=Z,1.2nm,0.6s							
ZALV	**Zalesovo Beam**	**71.36**	**335**	P		**P**	**02 36 18.3**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=136,slow=4.3,SNR=9.3							
ZALV	**Zalesovo Beam**	**71.36**	**335**	P		**P**	**02 36 18.6**	**+0.2**
SEY	**Seymchan**	**72.73**	**11**	P		**P**	**02 36 26.4**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=233,slow=20,SNR=2.5							
GSTR	**Great Sitkin T**	**76.05**	**32**	P		**P**	**02 36 44.4**	**-1.4**
ABKAR	**Akbulak array**	**81.89**	**322**	P		**P**	**02 37 17.6**	**0.0**

*DJA **06** 02:35:17.8±0.9,9.°S±5.°×11.°0E±.°,h18km±9km,M4.5/16, mb4.4/6,mB4.9/5,MLv4.6/16,Mw(mB)4.2/5,MwMwp4.2/1, Mwp4.7/1*
*NEIC **06** 02:35:21.4±1.5,9.°31S±0.°07×110.°38E±0.°07,h49km±6km, mb4.2/15,Error ellipse: s-maj=10.8km s-min=9.7km az=191.0*
*IDC **06** 02:35:24.3±2.7,9.°11S×110.°54E,h75km±23km,mb4.0/15, mb1 4.1/17,mb1mx4.0/33,mbtmp4.3/17,MS3.5/7, Ms1 3.5/7,ms1mx3.0/38,Error ellipse: s-maj=25.8km s-min=13.1km az=47.0*
ISC 06 02:35:19.2±0.5,**9.°38S**±0.°06×**110.°34E**±0.°05,**h35**km,**n89,**
σ1§**50**/**89,mb4.4**/**23,MS3.4**/**5,1C,South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.47**	**7**			**Pn**	**02 35 42.9**	**-0.3**
UGM	**Wanagama**	**1.47**	**7**	P		**Pn**	**02 35 42.9**	**-0.3**
UGM				S		**Sn**	**02 35 56.4**	**-4.8**
SMRI	**Semarang**	**2.31**	**3**	Pn		Pn	02 35 57.4	+2.5
SMRI	**Semarang**	**2.31**	**3**	P		**Pn**	**02 35 56.4**	**+1.5**
SMRI				S		**Sn**	**02 36 26.2**	**+4.1**
CISI	**Cisompet, Garu**	**3.08**	**306**			**Pn**	**02 36 07.2**	**+1.7**
CISI	**Cisompet, Garu**	**3.08**	**306**	P		**Pn**	**02 36 06.8**	**+1.3**
CISI				S		**Sn**	**02 36 43.8**	**+2.7**
JCJI	**Jatiwangi**	**3.52**	**324**	P		**Pn**	**02 36 08.9**	**-2.6**
LEM	**Lembang**	**3.70**	**313**	P		Pn	02 36 18.8	+4.8
	22nm,0.3s,baz=127,slow=11,SNR=26							
LEM				S		Sn	02 37 04.5	+8.0
	10nm,0.3s,baz=82,slow=22,SNR=5.4							
LEM				LR		LR	02 37 53.1	
	comp=Z,471nm,20.2s,baz=180,slow=40							
LEM	**Lembang**	**3.70**	**313**	P		**Pn**	**02 36 15.6**	**+1.6**
JAGI	**Jajag, Banyuwa**	**3.88**	**77**	Pn		**Pn**	**02 36 18.2**	**+1.9**
JAGI	**Jajag, Banyuwa**	**3.88**	**77**	P		**Pn**	**02 36 16.0**	**-0.4**
JAGI				S		**Sn**	**02 37 01.6**	**+0.9**
ABJI	**Asem Bagus**	**4.16**	**68**	P		**Pn**	**02 36 20.4**	**+0.1**
ABJI				S		**Sn**	**02 37 10.6**	**+2.9**
KMMI	**Kalianget**	**4.27**	**58**	P		Pn	02 36 14.7	-7.1
KMMI				S		**Sn**	**02 37 11.7**	**+1.2**
DBJI	**Dramaga**	**4.53**	**308**	P		**Pn**	**02 36 26.2**	**+0.9**
XMIS	**Christmas Isla**	**4.74**	**256**	Pn		**Pn**	**02 36 28.7**	**+0.4**
SRBI	**Singaraja**	**4.99**	**75**	P		Pn	02 36 48.7	+17
TWSI	**Taliwang, Sumb**	**6.50**	**85**	P		**Pn**	**02 36 53.0**	**+0.6**
	0.2nm940nm513nm26nm,0.7s							
KASI	**Kota Agung**	**6.94**	**303**	P		**Pn**	**02 36 57.9**	**-0.6**
	0.2nm24nm,0.9s							
TPI	**Tanjungpandan**	**7.10**	**338**	P		**Pn**	**02 37 02.0**	**+1.4**
	0.1nm13nm,0.9s							
KLSI		**7.25**	**310**	P		**Pn**	**02 37 02.2**	**-0.6**
	0.0nm3.2nm,0.7s							
PLAI	**Plampang**	**7.37**	**86**	P		**Pn**	**02 37 03.9**	**-0.5**
	0.3nm2µm46nm,0.9s							
MNAI	**Manna**	**8.86**	**304**	Pn		**Pn**	**02 37 27.2**	**+2.3**
KAPI	**Kappang**	**10.30**	**66**	P		**Pn**	**02 37 46.9**	**+2.4**
	1.1nm,0.3s,baz=238,slow=15,SNR=4.8							
KAPI	**Kappang**	**10.30**	**66**	Pn		**Pn**	**02 37 46.5**	**+1.9**
GIRL	**Giralia**	**13.71**	**165**	Pn		**Pn**	**02 38 28.9**	**-2.3**
SOEI	**Soe**	**13.74**	**93**	Pn		**Pn**	**02 38 30.1**	**-1.7**
PSI	**Prapat**	**16.60**	**316**	LR		LR	02 46 18.5	
	comp=Z,166nm,20.4s,baz=168,slow=40							
FITZ	**Fitzroy Crossi**	**17.20**	**122**	Pn		**P**	**02 39 17.7**	**-0.5**
MTN	**Manton Dam**	**20.69**	**101**	P		Pn	02 39 57.3	-1.7
MTN				IAmb		IAmb	02 40 14.1	
	comp=Z,14nm,1.2s							
WB0	**Warramunga Arr**	**25.44**	**117**	P		**P**	**02 40 45.0**	**+1.0**
WB0				IAmb		IAmb	02 40 47.1	
	comp=Z,9.8nm,1.1s							
WRA	**Warramunga Arr**	**25.45**	**117**	P		**P**	**02 40 44.6**	**+0.5**
	comp=Z,5.2nm,0.8s,baz=290,slow=11,SNR=24							
WRA	**Warramunga Arr**	**25.45**	**117**	P		**P**	**02 40 45.1**	**+1.0**
WB2	**Warramunga Arr**	**25.46**	**117**	P		**P**	**02 40 44.9**	**+0.7**
WB2				IAmb		IAmb	02 40 47.4	
	comp=Z,5.0nm,0.9s							
WR0	**Warramunga Arr**	**25.63**	**117**	P		**P**	**02 40 46.8**	**+1.0**
ASAR	**Alice Springs**	**26.63**	**125**	P		**P**	**02 40 55.9**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=300,slow=9.0,SNR=19							
ASAR				PcP		**PcP**	**02 44 19.3**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=311,slow=1.1,SNR=4.5							
ASAR				LR		LR	02 52 52.5	
	comp=Z,61nm,18.1s,baz=320,slow=39							
ASAR	**Alice Springs**	**26.63**	**125**	P		**P**	**02 40 59.1**	**+4.4**
CMAR	**Chiang Mai Arr**	**29.86**	**338**	P		**P**	**02 41 23.1**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=171,slow=7.2,SNR=7.0							
CMAR				LR		LR	02 53 51.5	
	comp=Z,70nm,18.2s,baz=202,slow=37							
CMAR	**Chiang Mai Arr**	**29.86**	**338**	P		**P**	**02 41 24.1**	**+0.6**
KMI	**Kunming**	**35.08**	**348**	⇑P		**P**	**02 42 07.7**	**-1.7**
KMI				pmax		pmax		
	comp=Z,10.0nm,0.5s							
STKA	**Stephens Creek**	**36.61**	**132**	P		**P**	**02 42 23.4**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=303,slow=11,SNR=3.9							
STKA				LR		LR	02 57 10.2	
	comp=Z,67nm,21.5s,baz=287,slow=36							
STKA	**Stephens Creek**	**36.61**	**132**	P		**P**	**02 42 25.0**	**+2.7**
STKA				IAmb		IAmb	02 42 43.9	
	comp=Z,3.1nm,1.4s							
XAN	**Xi'an**	**43.20**	**358**	P		**P**	**02 43 16.4**	**-0.5**
XAN				pP		sP	02 43 28.6	-1.5
XAN				pmax		pmax		
	comp=Z,7.0nm,0.8s							
JHS	**Saijyo**	**49.12**	**25**	P		**P**	**02 44 02.2**	**-1.2**
KSAR	**Wonju Array Be**	**49.39**	**18**	P		**P**	**02 44 05.6**	**+0.1**
KSRS	**Korea Array**	**49.41**	**18**	P		**P**	**02 44 04.3**	**-1.3**
	comp=Z,4.2nm,0.8s,baz=204,slow=8.1,SNR=10							
GTA	**Gaotai**	**49.51**	**349**	*e*P		**P**	**02 44 07.2**	**+0.6**
GTA				pP		pwP	02 44 17.9	-2.2
GTA				sP		sP	02 44 21.6	+1.8
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							

HHC	**Hu-ho-hao-te**	**49.99**	**1**	*eP*		**P**	**02 44 12.0**	**+1.9**
HHC					pmax	pmax		
	comp=Z,17nm,1.0s							
HHC					pmax	pmax		
	comp=Z,110nm,5.3s							
MAT	**Matsushiro**	**52.66**	**28**	P		**P**	**02 44 27.7**	**-2.4**
MJAR	**Matsushiro Arr**	**52.66**	**28**	P		**P**	**02 44 27.2**	**-2.9**
	comp=Z,6.9nm,0.9s,baz=201,slow=7.8,SNR=12							
MJAR	**Matsushiro Arr**	**52.66**	**28**	P		**P**	**02 44 28.7**	**-1.4**
DZM	**Mont Dzumac**	**55.19**	**110**	LR		LR	03 11 30.7	
	comp=Z,45nm,18.3s,baz=214,slow=39							
WMQ	**Urumqi**	**56.80**	**341**	*eP*		**P**	**02 45 02.3**	**+2.2**
USRK	**Ussuriysk Ar.**	**56.82**	**18**	P		**P**	**02 44 59.1**	**-1.0**
	comp=Z,5.9nm,0.8s,baz=225,slow=7.5,SNR=15							
USRK	**Ussuriysk Ar.**	**56.82**	**18**	P		**P**	**02 44 59.4**	**-0.7**
SONM	**Songino Array**	**57.06**	**357**	P		**P**	**02 45 01.5**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=176,slow=7.7,SNR=18							
SONM				PcP		**PcP**	**02 45 56.6**	**0.0**
	comp=Z,1.2nm,0.8s,baz=164,slow=5.5,SNR=4.7							
SONM	**Songino Array**	**57.06**	**357**	P		**P**	**02 45 01.8**	**-0.1**
SONM				IAmb		IAmb	02 45 02.2	
	comp=Z,2.4nm,0.7s							
MK31	**Makanchi Array**	**61.26**	**338**	P		**P**	**02 45 30.7**	**-0.2**
MK31				IAmb		IAmb	02 45 31.8	
	comp=Z,2.9nm,0.9s							
MKAR	**Makanchi Array**	**61.26**	**338**	P		**P**	**02 45 30.6**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=148,slow=7.5,SNR=41							
KLR	**Kul'dur**	**61.31**	**16**	P		**P**	**02 45 29.8**	**-1.3**
	comp=Z,3.6nm,0.5s,baz=205,slow=4.6,SNR=19							
KKAR	**Karatay Array**	**63.59**	**328**	P		**P**	**02 45 46.9**	**+0.4**
URZ	**Urewera**	**66.04**	**128**	LR		LR	03 19 35.0	
	comp=Z,43nm,18.7s,baz=31,slow=40							
ZAA0	**Zalesovo Array**	**66.68**	**344**	P		**P**	**02 46 05.7**	**-0.7**
ZALV	**Zalesovo Beam**	**66.68**	**344**	P		**P**	**02 46 05.5**	**-0.8**
	comp=Z,4.1nm,0.4s,baz=140,slow=3.9,SNR=31							
ZALV	**Zalesovo Beam**	**66.68**	**344**	P		**P**	**02 46 05.6**	**-0.7**
GEYT	**Alibeck**	**67.73**	**318**	P		**P**	**02 46 13.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=106,slow=3.1,SNR=3.5							
GEYT	**Alibeck**	**67.73**	**318**	P		**P**	**02 46 14.0**	**+0.6**
GEYT				IAmb		IAmb	02 46 14.4	
	comp=Z,2.2nm,0.9s							
BRVK	**Borovoye**	**70.92**	**336**	P		**P**	**02 46 33.2**	**+0.4**
BRVK				IAmb		IAmb	02 46 33.3	
	comp=Z,3.7nm,1.0s							
ABKAR	**Akbulak array**	**73.15**	**328**	P		**P**	**02 46 46.4**	**+0.2**
KBZ	**Khabaz**	**80.62**	**317**	P		**P**	**02 47 27.6**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=128,slow=5.5,SNR=5.0							
TIXI	**Tiksi**	**81.79**	**6**	P		**P**	**02 47 32.5**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=170,slow=2.1,SNR=4.7							
TIXI	**Tiksi**	**81.79**	**6**	P		**P**	**02 47 33.4**	**-0.5**
TIXI				IAmb		IAmb	02 47 33.7	
	comp=Z,5.1nm,1.1s							
BR131	**Keskin Array S**	**85.87**	**311**	P		**P**	**02 47 57.9**	**+2.1**
BRTR	**Keskin Array B**	**85.87**	**311**	P		**P**	**02 47 56.7**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=135,slow=7.1,SNR=14							
KLMR	**Klimovskoe**	**88.99**	**332**	*eP*		**P**	**02 48 08.7**	**-1.4**
KLMR				AMP			02 48 09.4	
	comp=Z,9.0nm,1.1s							
YKA	**Yellowknife Ar**	**117.88**	**22**	PKP		**PKiKP**	**02 54 01.8**	**0.0**
	comp=Z,0.4nm,0.7s,baz=316,slow=1.3,SNR=6.8							
LONY	**Lake Ozonia**	**144.63**	**6**	PKPdf		**PKPdf**	**02 54 51.6**	**-0.8**
R40A	**Maddies Statio**	**144.76**	**32**			**PKPdf**	**02 54 52.1**	**-0.7**
P43A	**Skaggs, Pawnee**	**145.04**	**27**			**PKPdf**	**02 54 53.4**	**+0.1**
NCB	**Newcomb**	**145.31**	**6**			**PKPdf**	**02 54 54.3**	**+0.7**
CCM	**Cathedral Cave**	**145.46**	**31**			**PKPab**	**02 54 54.5**	**+0.3**
N47A	**Urbana**	**145.56**	**22**	PKPdf		**PKPab**	**02 54 54.7**	**+0.2**
MGMO	**Mountain Grove**	**145.61**	**33**	PKPdf		**PKPab**	**02 54 54.9**	**0.0**
P52A	**Corning**	**147.88**	**18**	PKPbc		**PKiKP**	**02 55 01.2**	**-1.7**
PAL	**Palisades**	**148.28**	**6**	PKPbc		**PKiKP**	**02 55 02.9**	**-0.7**
WVT	**Waverly**	**148.66**	**29**	PKPbc		**PKiKP**	**02 55 03.8**	**-0.9**
T50A	**Nancy**	**149.24**	**24**	PKPbc		**PKiKP**	**02 55 05.4**	**-0.4**
CLTN	**Cedars of Leba**	**149.39**	**27**	PKPbc		**PKiKP**	**02 55 05.7**	**-0.5**
V52A	**Sevierville**	**150.76**	**24**	PKPbc		**PKiKP**	**02 55 09.5**	**+0.4**
V53A	**Saluda**	**151.21**	**23**	PKPbc		**PKiKP**	**02 55 10.2**	**+0.1**

*IDC **06** 02:36:34.2±0.9, 52°.46N×169°.48W, h0km, mb3.7/12, mb1 4.0/14, mb1mx3.7/50, mbtmp3.7/14, ML3.2/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/37, Error ellipse: s-maj=25.5km s-min=17.3km az=173.0*

*NEIC **06** 02:36:36.5±2.1, 52°.67N±0°.05×169°.42W±0°.07, h10km±1km, mb3.9/30, ML3.8(AEIC), Error ellipse: s-maj=9.7km s-min=6.4km az=330.0*

*AEIC **06** 02:36:36±3.4, 52°.9N±0°.1×169°.52W±0°.09, h3km±3km, Error ellipse: s-maj=16.0km s-min=4.9km az=158.0*

ISC 06 02:36:35.9±1.8, 52°.66N±0°.09×169°.41W±0°.05, h5km±10km, n87, σ1§22/81, mb3.9/18, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.46**	**47**		**Pg**	**02 36 45.6**	**+0.8**
NIKH				Sg	**Sb**	**02 36 53.1**	**-0.5**
OKSO	**Okmok South**	**1.03**	**47**		**Pg**	**02 36 55.0**	**-0.7**
OKSO					**Sg**	**02 37 09.2**	**+0.2**
OKFG	**Magazine Ridge**	**1.18**	**50**		**Pg**	**02 36 57.4**	**-1.1**
OKFG					**Sg**	**02 37 13.5**	**-0.2**
MAPS	**Pakushin South**	**1.88**	**51**		**Pn**	**02 37 08.6**	**-0.1**
MGOD	**Makushin Gods**	**1.90**	**52**		**Pn**	**02 37 08.9**	**-0.1**
MSW	**Makushin Switc**	**2.02**	**50**		**Pn**	**02 37 10.0**	**-0.6**
MSW					**Sn**	**02 37 36.2**	**0.0**
MNAT	**Makushin Natee**	**2.05**	**52**		**Pn**	**02 37 10.3**	**-0.7**
AKMO	**Akutan Morgan**	**2.49**	**53**		**Pn**	**02 37 17.2**	**+0.2**
AKBBA	**Akutan Broad B**	**2.53**	**54**		**Pn**	**02 37 17.4**	**-0.3**
AKBBA					**Sn**	**02 37 50.4**	**+1.6**
AKLV	**Akutan Long Va**	**2.56**	**53**		**Pn**	**02 37 18.4**	**+0.4**
AKUT	**Akutan**	**2.63**	**54**	Pn	**Pn**	**02 37 20.0**	**+1.0**
KOFP	**Korovin Flat P**	**2.89**	**264**		**Pn**	**02 37 23.6**	**+0.9**
ATKA	**Atka Island**	**2.96**	**263**	Pn	**Pn**	**02 37 21.8**	**-1.7**
ATKA	**Atka Island**	**2.96**	**263**		**Sn**	**02 38 01.6**	**+2.2**
GSTR	**Great Sitkin T**	**4.11**	**265**	Pn	**Pn**	**02 37 38.9**	**-0.5**
GSMY	**Great Sitkin M**	**4.12**	**264**		**Pn**	**02 37 40.0**	**+0.5**
ADK	**Adak**	**4.54**	**263**	Pn	**Pn**	**02 37 44.5**	**-0.6**
SPIA	**Saint Paul Isl**	**4.55**	**354**	Pn	**Pn**	**02 37 45.2**	**-0.2**
OHAK	**Old Harbor**	**10.33**	**57**	Pn	**Pn**	**02 39 07.2**	**+2.6**
KDAK	**Kodiak Island**	**10.88**	**55**	Pn	**Pn**	**02 39 11.6**	**-0.6**
	0.4nm,0.3s,baz=234,slow=3.5,SNR=7.2						
KDAK				LR	LR	02 44 07.5	
	comp=Z,98nm,19.6s,baz=253,slow=41						
KDAK	**Kodiak Island**	**10.88**	**55**	Pn	**Pn**	**02 39 12.0**	**-0.1**
SUA	**Susitna One**	**13.40**	**42**	Pn	**Pn**	**02 39 49.0**	**+2.3**
RC01	**Rabbit Creek A**	**13.62**	**44**	Pn	**Pn**	**02 39 50.3**	**+0.8**
KTH	**Kantishna Hill**	**14.58**	**34**	P	**P**	**02 40 06.5**	**-2.8**
TRF	**Thorofare Moun**	**14.73**	**35**	P	**P**	**02 40 09.0**	**-2.2**
BPAW	**Bear Paw Mtn.**	**14.92**	**33**		**P**	**02 40 11.3**	**-1.7**
RAGM	**Ragged Mountai**	**15.61**	**51**	P	**Pn**	**02 40 18.8**	**+2.4**
MLY	**Manley**	**15.63**	**30**		**P**	**02 40 21.3**	**+0.4**
MLY				IAmb	IAmb	02 40 26.1	
	comp=Z,4.6nm,0.6s						
WRH	**Wood River Hil**	**16.13**	**35**	P	**Pn**	**02 40 23.8**	**+0.7**
I23K	**Minto, Yukon-K**	**16.14**	**31**	P	**Pn**	**02 40 25.3**	**+2.1**
I23K				IAmb	IAmb	02 40 30.0	
	comp=Z,9.6nm,1.1s						
CCB	**Clear Creek Bu**	**16.34**	**34**	P	**Pn**	**02 40 24.8**	**-0.9**
MDM	**Murphy Dome**	**16.38**	**33**	P	**Pn**	**02 40 27.8**	**+1.4**
ILAR	**Eielson Array**	**16.73**	**35**	Pn	**Pn**	**02 40 29.4**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=225,slow=11,SNR=12						
ILAR	**Eielson Array**	**16.73**	**35**	P	**Pn**	**02 40 31.7**	**+1.0**
GRNC	**Granite Creek**	**17.09**	**51**	P	**P**	**02 40 37.1**	**-0.2**
GRNC				IAmb	IAmb	02 40 43.4	
	comp=Z,14nm,1.4s						
TABL	**Table Mountain**	**17.31**	**52**		**P**	**02 40 39.7**	**0.0**
TABL				IAmb	IAmb	02 40 44.5	
	comp=Z,15nm,1.2s						
CTGM	**Chitina Glacie**	**17.35**	**50**	P	**Pn**	**02 40 40.0**	**+1.3**
LOGN	**Logan Glacier**	**17.47**	**51**	P	**Pn**	**02 40 41.3**	**+1.1**
BCAR	**Beaver Creek A**	**17.86**	**44**	P	**Pn**	**02 40 44.3**	**-0.6**
EGAK	**Eagle**	**18.83**	**39**	P	**P**	**02 40 56.9**	**+0.8**
BMAR	**Burnt Mountain**	**19.09**	**30**	P	**P**	**02 40 59.7**	**+0.6**
HYT	**Haines Junctio**	**19.14**	**52**	P	**Pn**	**02 41 01.0**	**+0.4**
BILL	**Bilibino**	**19.33**	**332**	P	**P**	**02 41 01.6**	**-0.1**
BILL				IAmb	IAmb	02 41 19.7	
	comp=Z,6.3nm,1.1s						
PETK	**Petropavlovsk-**	**19.76**	**284**	P	**P**	**02 41 06.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=90,slow=15,SNR=5.1						
PETK	**Petropavlovsk-**	**19.76**	**284**	P	**P**	**02 41 06.4**	**-0.1**
BESE	**Bessie Mountai**	**20.23**	**59**	P	**P**	**02 41 12.8**	**+1.2**
BESE				IAmb	IAmb	02 41 27.2	
	comp=Z,7.0nm,1.0s						
WHY	**Whitehorse**	**20.39**	**53**	P	Pn	02 41 15.6	+0.3
WHY				IAmb	IAmb	02 41 23.2	
	comp=Z,7.2nm,0.9s						
SEY	**Seymchan**	**22.45**	**312**	P	**P**	**02 41 36.9**	**+1.4**
	comp=Z,17nm,1.7s,baz=130,slow=2.8,SNR=5.4						
DLBC	**Dease Lake**	**22.76**	**60**	P	**P**	**02 41 41.0**	**+2.1**
	comp=Z,4.8nm,1.1s,baz=280,slow=13,SNR=4.8						
INK	**Inuvik**	**23.12**	**34**	P	**P**	**02 41 41.9**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=227,slow=10,SNR=5.8						
INK	**Inuvik**	**23.12**	**34**	P	**P**	**02 41 41.7**	**-0.6**
INK				IAmb	IAmb	02 41 51.7	
	comp=Z,2.7nm,0.9s						
YKA	**Yellowknife Ar**	**30.07**	**49**	P	**P**	**02 42 44.3**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=272,slow=7.9,SNR=3.3						
YKA				LR	LR	02 54 48.9	
	comp=Z,42nm,21.7s,baz=0.0,slow=36						
SAO	**San Andreas Ge**	**36.85**	**96**	P	**P**	**02 43 49.2**	**+4.2**
MCMT	**McKenzie Canyo**	**37.24**	**79**	P	**P**	**02 43 48.3**	**-0.2**
BOZ	**Bozeman (W)**	**37.56**	**77**	P	**P**	**02 43 51.0**	**0.0**
BOZ				IAmb	IAmb	02 43 56.8	
	comp=Z,2.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**37.66**	**218**	T	T	03 24 07.0	
	baz=24,slow=76,SNR=74						
H11N3	**WAKE ISLAND Hy**	**37.67**	**218**	T	T	03 24 15.2	
	baz=24,slow=76,SNR=118						
H11N1	**WAKE ISLAND Hy**	**37.68**	**218**	T	T	03 23 53.3	
	baz=24,slow=76,SNR=69						
NVAR	**Mina Array Bea**	**37.69**	**91**	P	**P**	**02 43 52.6**	**+0.3**
	comp=Z,0.3nm,0.2s,baz=298,slow=13,SNR=4.9						
YHL	**Hebgen Lake**	**38.23**	**78**	P	**P**	**02 43 57.0**	**+0.1**
YHL				IAmb	IAmb	02 44 02.5	
	comp=Z,2.2nm,0.6s						
YHH	**Holmes Hill**	**38.46**	**78**	P	**P**	**02 43 58.9**	**+0.1**
YHH				IAmb	IAmb	02 44 05.2	
	comp=Z,3.5nm,1.0s						
LKWY	**Lake**	**38.85**	**78**	P	**P**	**02 44 01.5**	**-0.6**
H11S1	**WAKE ISLAND Hy**	**38.86**	**218**	T	T	03 25 34.1	
	baz=23,slow=76,SNR=559						
H11S2	**WAKE ISLAND Hy**	**38.87**	**218**	T	T	03 25 13.5	
	baz=23,slow=76,SNR=340						
H11S3	**WAKE ISLAND Hy**	**38.87**	**218**	T	T	03 25 35.4	
	baz=23,slow=76,SNR=337						
BW06	**Boulder Array**	**40.37**	**79**	P	**P**	**02 44 15.0**	**+0.3**
BW06				IAmb	IAmb	02 44 20.2	
	comp=Z,2.4nm,1.0s						
PD31	**Pinedale Array**	**40.37**	**79**	P	**P**	**02 44 15.4**	**+0.7**
PD31				IAmb	IAmb	02 44 20.2	
	comp=Z,2.4nm,1.1s						
PDAR	**Pinedale Array**	**40.37**	**79**	P	**P**	**02 44 14.2**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=331,slow=5.8,SNR=6.6						
PDAR	**Pinedale Array**	**40.37**	**79**	P	**P**	**02 44 14.5**	**-0.2**
PV01	**Paradox Valley**	**43.80**	**84**	P	**P**	**02 44 42.8**	**0.0**
PV01				IAmb	IAmb	02 44 43.0	
	comp=Z,2.0nm,0.7s						
KSRS	**Korea Array**	**45.35**	**276**	LR	LR	03 02 27.2	
	comp=Z,14nm,21.1s,baz=40,slow=34						
MNTX	**Cornudas Mount**	**50.05**	**88**	P	**P**	**02 45 31.9**	**+0.5**
MNTX				IAmb	IAmb	02 45 37.3	
	comp=Z,1.6nm,0.8s						
P40A	**Paris**	**52.71**	**72**	P	**P**	**02 45 49.2**	**-2.0**
TX31	**Lajitas Ar. Si**	**52.77**	**89**	P	**P**	**02 45 51.5**	**-0.4**
TX32	**Lajitas Array**	**52.77**	**89**	P	**P**	**02 45 51.8**	**-0.1**
TXAR	**Lajitas Array**	**52.77**	**89**	P	**P**	**02 45 51.6**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=298,slow=5.6,SNR=23						
TXAR	**Lajitas Array**	**52.77**	**89**	P	**P**	**02 45 51.5**	**-0.3**
FINES	**FINESS Array B**	**65.58**	**352**	P	**P**	**02 47 20.9**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=17,slow=8.0,SNR=3.9						
FINES	**FINESS Array B**	**65.58**	**352**	P	**P**	**02 47 20.6**	**+0.6**
AKASG	**Malin Array Be**	**75.82**	**348**	P	**P**	**02 48 22.5**	**0.0**
	comp=Z,0.6nm,0.6s,baz=18,slow=5.9,SNR=2.6						
GERES	**GERESS Array B**	**78.84**	**358**	P	**P**	**02 48 40.1**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=352,slow=6.2,SNR=2.4						
WRA	**Warramunga Arr**	**87.17**	**232**	P	**P**	**02 49 19.9**	**-3.0**
	comp=Z,0.6nm,1.0s,baz=36,slow=6.2,SNR=2.8						
WRA	**Warramunga Arr**	**87.17**	**232**	P	**P**	**02 49 23.9**	**+1.0**
ASAR	**Alice Springs**	**90.56**	**230**	P	**P**	**02 49 37.0**	**-1.9**
	comp=Z,1.2nm,0.9s,baz=53,slow=4.9,SNR=6.6						
H03N2	**Juan Fernandez**	**116.06**	**111**	T	T	05 02 02.1	
	baz=322,slow=78,SNR=24						
H03N1	**Juan Fernandez**	**116.07**	**111**	T	T	05 02 03.5	
	baz=322,slow=78,SNR=32						
H03N3	**Juan Fernandez**	**116.07**	**111**	T	T	05 01 58.5	
	baz=322,slow=78,SNR=38						

*DJA **06** 02:51:48.1±0.4, 8°.S±4°×11°.8E±°, h195km±4km, M4.0/15, mb4.3/4, mB4.6/3, MLv3.9/15, Mw(mB)3.9/3*

*IDC **06** 02:51:49.1±5.9, 8°.11S×118°.05E, h218km±50km, mb3.0/3, mb1 3.1/5, mb1mx2.9/29, mbtmp3.5/5, Error ellipse: s-maj=99.1km s-min=13.9km az=59.0*

ISC 06 02:51:46.9±0.8, 8°.37S±0°.08×117°.93E±0°.05, h200km, n19, σ1§75/26, mb3.3/3, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.48**	**199**	P	**Pn**	**02 52 16.0**	**+2.0**
PLAI				S	**Sn**	**02 52 35.9**	**+0.8**
TWSI	**Taliwang, Sumb**	**1.10**	**251**	P	**Pn**	**02 52 19.2**	**+1.8**
TWSI				S	**Sn**	**02 52 42.8**	**+1.8**
SRBI	**Singaraja**	**2.71**	**276**	P	**Pn**	**02 52 35.3**	**+2.1**
SRBI				S	**Sn**	**02 53 10.7**	**+1.4**
BASI	**Baing, Sumba**	**3.19**	**125**	P	**Pn**	**02 52 40.2**	**+1.4**
BASI				S	**Sn**	**02 53 20.2**	**+0.7**
EDFI	**Ende, Flores**	**3.73**	**96**	P	**Pn**	**02 52 45.9**	**+0.3**
EDFI				S	**Sn**	**02 53 30.7**	**-0.8**
JAGI	**Jajag, Banyuwa**	**3.74**	**268**	P	**Pn**	**02 52 44.9**	**-0.7**
JAGI				S	**Sn**	**02 53 27.8**	**-3.7**
KAPI	**Kappang**	**3.79**	**29**	P	**Pn**	**02 52 47.1**	**+0.9**
	2.3nm,0.3s,baz=217,slow=7.8,SNR=8.2						
KMMI	**Kalianget**	**4.15**	**288**	P	**Pn**	**02 52 53.7**	**+3.1**
MMRI	**Maumere**	**4.26**	**94**	P	**Pn**	**02 52 52.1**	**0.0**
BNSI	**Bone**	**4.50**	**29**	P	**Pn**	**02 52 57.3**	**+2.3**
TTSI	**Tana Toraja**	**5.61**	**20**	P	**Pn**	**02 53 10.2**	**+0.9**
	0.1nm1μm15nm,0.8s						
BATI	**Baumata**	**5.94**	**108**	P	**Pn**	**02 53 14.9**	**+1.4**
	34nm,0.3s,baz=300,slow=3.9,SNR=13						
BATI				S	**Sn**	**02 54 22.6**	**+0.6**
	8.4nm,0.3s,baz=165,slow=22,SNR=1.8						
BATI	**Baumata**	**5.94**	**108**	P	**Pn**	**02 53 14.8**	**+1.3**
	0.3nm1μm78nm,0.7s						
SOEI	**Soe**	**6.40**	**103**	P	**Pn**	**02 53 20.4**	**+0.8**
	0.3nm1μm41nm,0.8s						
UGM	**Wanagama**	**7.35**	**273**	P	**Pn**	**02 53 32.6**	**+0.8**
WRA	**Warramunga Arr**	**19.61**	**128**	P	**Pn**	**02 56 02.4**	**-1.7**
	0.4nm,0.3s,baz=302,slow=12,SNR=18						
ASAR	**Alice Springs**	**21.57**	**137**	P	**P**	**02 56 23.2**	**+2.2**
	0.4nm,0.4s,baz=313,slow=9.1,SNR=14						
SONM	**Songino Array**	**56.89**	**351**	P	**P**	**03 01 10.0**	**-1.0**
	0.9nm,0.5s,baz=169,slow=8.7,SNR=5.9						
MKAR	**Makanchi Array**	**63.42**	**333**	P	**P**	**03 01 53.2**	**-2.1**
	0.2nm,0.4s,baz=157,slow=6.0,SNR=4.7						

IDC 06 03:00:12.3±25.0, 2°.34S×12°.08W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/35, mbtmp3.7/3, Error ellipse: s-maj=721.8km s-min=104.1km az=158.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**5.96**	**204**	T	T	03 07 26.6	
	baz=24,slow=74,SNR=108						
H10N1	**ASCENSION HYDR**	**5.97**	**204**	T	T	03 07 35.5	
	baz=24,slow=74,SNR=119						
H10N3	**ASCENSION HYDR**	**5.98**	**204**	T	T	03 07 31.2	
	baz=24,slow=74,SNR=75						
H10S2	**ASCENSION HYDR**	**7.06**	**201**	T	T	03 08 53.6	
	baz=198,slow=74,SNR=13						
H10S3	**ASCENSION HYDR**	**7.06**	**201**	T	T	03 08 55.5	
	baz=22,slow=74,SNR=13						
TORD	**Torodi Ar. Bea**	**20.58**	**41**	P	P	03 04 53.0	0.0
	0.8nm,0.6s,baz=223,slow=9.0,SNR=4.9						
GERES	**GERESS Array B**	**55.67**	**20**	P	P	03 09 50.4	0.0
	0.7nm,0.9s,baz=212,slow=7.4,SNR=3.7						
FINES	**FINESS Array B**	**70.00**	**18**	P	P	03 11 25.5	0.0
	2.0nm,1.0s,baz=225,slow=17,SNR=2.1						

*IDC **06** 03:03:00.5±4.8, 1°.79S×12°.24W, h0km, mb4.0/5, mb1 4.1/7, mb1mx3.7/39, mbtmp4.0/7, ML3.4/2, MS3.4/11, Ms1 3.4/11, ms1mx3.0/47, Error ellipse: s-maj=131.1km s-min=63.3km az=151.0*

ISC 06 03:03:02.8±4.0, 1°.7S±0°.7×12°.1W±0°.5, h10km, n20, σ0§45/7, mb4.2/4, MS3.3/10, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**6.49**	**201**	T	T	03 10 13.1	
	baz=25,slow=74,SNR=118						
H10N1	**ASCENSION HYDR**	**6.50**	**201**	T	T	03 10 14.1	
	baz=25,slow=74,SNR=71						
H10N3	**ASCENSION HYDR**	**6.50**	**201**	T	T	03 10 14.5	
	baz=25,slow=74,SNR=97						
H10S2	**ASCENSION HYDR**	**7.60**	**199**	T	T	03 11 36.0	
	baz=198,slow=74,SNR=16						
H10S3	**ASCENSION HYDR**	**7.60**	**199**	T	T	03 12 02.0	
	baz=22,slow=74,SNR=146						
DBIC	**Dimbokro**	**11.07**	**41**	Pn	**Pn**	**03 05 41.0**	**-0.2**
	0.1nm,0.3s,baz=204,slow=10.0,SNR=1.9						
DBIC				LR	LR	03 09 08.9	
	comp=Z,123nm,21.8s,baz=190,slow=33						
KOWA	**Kowa**	**18.02**	**26**	P	**P**	**03 07 14.4**	**+0.4**
	0.2nm,0.3s,baz=214,slow=12,SNR=11						
TORD	**Torodi Ar. Bea**	**20.18**	**42**	P	**P**	**03 07 37.9**	**+0.2**
	3.4nm,0.7s,baz=226,slow=11,SNR=15						
TORD				LR	LR	03 14 46.0	
	comp=Z,77nm,21.9s,baz=205,slow=35						
RCBR	**Riachuelo**	**24.05**	**260**	LR	LR	03 14 55.8	
	comp=Z,92nm,20.4s,baz=83,slow=30						
BDFB	**Brasilia**	**37.97**	**247**	LR	LR	03 22 50.9	
	comp=Z,55nm,21.2s,baz=99,slow=31						
KEST	**Kesra**	**42.33**	**26**	LR	LR	03 29 14.3	
	comp=Z,31nm,18.4s,baz=226,slow=37						
LBTB	**Lobatse**	**43.13**	**126**	LR	LR	03 25 40.6	
	comp=Z,62nm,18.9s,baz=288,slow=32						
SUR	**Sutherland**	**43.47**	**138**	LR	LR	03 27 47.1	
	comp=Z,62nm,19.1s,baz=306,slow=34						
KMBO	**Kilima Mbogo**	**49.38**	**90**	LR	LR	03 30 25.3	
	comp=Z,122nm,21.8s,baz=266,slow=33						
GERES	**GERESS Array B**	**55.13**	**21**	P	**P**	**03 12 35.5**	**+0.1**
	2.6nm,0.9s,baz=187,slow=5.4,SNR=14						
VRAC	**Vranov**	**56.57**	**22**	LR	LR	03 37 31.0	
	comp=Z,22nm,18.6s,baz=212,slow=36						
LPAZ	**La Paz**	**56.95**	**252**	LR	LR	03 36 56.3	
	comp=Z,37nm,19.7s,baz=86,slow=36						
BRTR	**Keskin Array B**	**58.77**	**40**	P	**P**	**03 13 01.8**	**+0.4**
	1.6nm,1.0s,baz=208,slow=4.2,SNR=7.5						
NOA	**NORSAR Array B**	**65.14**	**12**	P	**P**	**03 13 43.7**	**0.0**
	0.8nm,0.9s,baz=207,slow=6.6,SNR=2.8						
NOA				LR	LR	03 42 58.9	
	comp=Z,8.0nm,19.9s,baz=30,slow=37						
FINES	**FINESS Array B**	**69.45**	**19**	P	**P**	**03 14 10.3**	**-0.7**
	2.4nm,1.1s,baz=246,slow=5.9,SNR=1.6						

*IDC **06** 03:15:05.6±0.8, 59°.54S×25°.90W, h0km, mb4.1/7, mb1 4.2/7, mb1mx4.0/22, mbtmp4.0/7, ML5.1/1, MS3.5/9, Ms1 3.4/9, ms1mx3.3/17, Error ellipse: s-maj=31.2km s-min=19.5km az=66.0*

*NEIC **06** 03:15:15.9±2.6, 59°.7S±0°.2×25°.8W±0°.3, h79km±8km, mb4.5/17, Error ellipse: s-maj=26.5km s-min=13.0km az=219.0*

ISC 06 03:15:10.7±0.6, 59°.8S±0°.1×25°.7W±0°.1, h35km, n43, σ2§18/42, mb4.3/14, MS3.5/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.07**	**308**	Pn	Pn	03 17 10.5	+5.3
VNA1	**Neumayer--Stat**	**13.04**	**154**	P	**Pn**	**03 18 14.6**	**+1.5**
VNA1				S	**Sn**	**03 20 33.7**	**-3.0**
VNA3	**Neumayer Olymp**	**13.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**1.02**	**32**	*e*Pg	**Pb**	**03 24 25.5**	**-2.5**
KAZ1				*e*		03 24 52.3	
	comp=Z,99nm,0.4s						
SHI	**Shiraz**	**1.57**	**56**	*e*Pg	**Pn**	**03 24 38.0**	**+1.6**
SHI				*e*Sg	**Sn**	**03 24 57.9**	**+1.0**
SHI				*e*		03 25 02.1	
	comp=Z,99nm,0.6s						
QIR1	**Qir**	**1.80**	**99**	*e*Pn	**Pb**	**03 24 41.1**	**-0.2**
QIR1				*e*		03 24 54.4	
	comp=Z,99nm,0.0s						
ABEH	**Behbahan**	**1.95**	**340**	*e*Pn	**Pn**	**03 24 42.2**	**+0.8**
JHRM	**Jahrom**	**2.26**	**96**	*e*Pn	**Pb**	**03 24 49.8**	**+0.6**
JHRM				*e*		03 25 31.2	
	comp=Z,99nm,0.6s						
KLNJ	**Kolanjah**	**2.29**	**12**	*e*Pn	**Pn**	**03 24 47.4**	**+1.0**
LMD1	**Lamerd**	**2.37**	**126**	*e*Pn	**Pg**	**03 24 52.3**	**-1.3**
LMD1				*e*		03 25 33.4	
	comp=Z,99nm,0.3s						
QRN	**Al-Qurain**	**2.72**	**270**	*e*P		03 24 55.0	
UMR	**Umm Al-Rimmam**	**3.00**	**286**	*e*P		03 24 58.3	
RDF	**Al-Radifah**	**3.05**	**274**	*e*P		03 24 59.6	
IRAM	**Ramesheh**	**3.26**	**21**	*e*Pn	**Pn**	**03 25 01.8**	**+2.2**
MIB	**Mutribah**	**3.38**	**289**	*e*P		03 25 03.6	
IGAR	**Gharneh**	**3.74**	**13**	*e*Pn	**Pn**	**03 25 08.1**	**+1.9**
SHGR	**Shooshtar-Gavs**	**3.85**	**331**	*e*Pn	**Pn**	**03 25 09.8**	**+2.3**
SHGR				IAML		03 25 57.3	
	comp=N,128nm,0.5s						
SHGR	**Shooshtar-Gavs**	**3.85**	**331**	*e*Pn	**Pn**	**03 25 09.8**	**+2.3**
ISAD	**Sadrabad**	**3.90**	**36**	*e*Pn	**Pn**	**03 25 10.7**	**+2.3**
IPIR	**Pirpir**	**3.91**	**358**	*e*Pn	**Pn**	**03 25 10.7**	**+2.1**
IMEH	**Mehriz**	**4.07**	**49**	*e*Pn	**Pn**	**03 25 12.2**	**+1.4**
IZEF	**Zefreh**	**4.27**	**15**	*e*Pn	**Pn**	**03 25 15.2**	**+1.6**
NASN	**Na'in**	**4.31**	**20**	*e*Pn	**Pn**	**03 25 15.2**	**+1.1**
NASN	**Na'in**	**4.31**	**20**	*e*Pn	**Pn**	**03 25 15.2**	**+1.1**
ICHK	**Chekchek**	**4.54**	**39**	*e*Pn	**Pn**	**03 25 18.9**	**+1.7**
IKLH	**Kolahrood**	**4.57**	**6**	*e*Pn	**Pn**	**03 25 18.9**	**+1.3**
YZKH	**Yazd**	**4.75**	**40**	*e*Pn	**Pn**	**03 25 21.4**	**+1.4**
ANAR	**Anarak**	**4.99**	**27**	*e*Pn	**Pn**	**03 25 25.3**	**+2.0**
KHGB	**Koh Gabri**	**5.02**	**70**	*e*Pn	**Pn**	**03 25 25.0**	**+1.2**
KHMZ	**Khomeyn**	**5.04**	**350**	*e*Pn	**Pn**	**03 25 26.5**	**+2.4**
KHMZ	**Khomeyn**	**5.04**	**350**	*e*Pn	**Pn**	**03 25 26.5**	**+2.4**
KRBR	**Kerman**	**5.16**	**75**	*e*Pn	**Pn**	**03 25 27.6**	**+1.9**
KRBR	**Kerman**	**5.16**	**75**	*e*Pn	**Pn**	**03 25 27.6**	**+1.9**
KRSH	**Karshahi**	**5.28**	**10**	*e*Pn	**Pn**	**03 25 28.8**	**+1.5**
IDOB	**Doab**	**5.57**	**335**	*e*Pn	**Pn**	**03 25 33.0**	**+1.7**
ISFB	**Sefidab**	**5.67**	**10**	*e*Pn	**Pn**	**03 25 34.2**	**+1.6**
HSAM	**Samen**	**5.81**	**340**	*e*Pn	**Pn**	**03 25 36.0**	**+1.3**
ASAO	**Ashtian**	**5.83**	**352**	*e*Pn	**Pn**	**03 25 37.1**	**+2.1**
HAGD	**Aghdareh**	**6.25**	**346**	*e*Pn	**Pn**	**03 25 42.6**	**+1.9**
IBZA	**Bozab**	**6.30**	**335**	*e*Pn	**Pn**	**03 25 43.7**	**+2.3**
IALM	**Almabolaq**	**6.55**	**339**	*e*Pn	**Pn**	**03 25 45.6**	**+0.8**
IGHG	**Ghaleghazi**	**6.73**	**327**	*e*Pn	**Pn**	**03 25 49.1**	**+1.9**
ILIN	**Lien**	**7.04**	**332**	*e*Pn	**Pn**	**03 25 53.6**	**+2.0**
IDHR	**Dehrash**	**7.11**	**328**	*e*Pn	**Pn**	**03 25 53.1**	**+0.6**
WSAR	**Wadi Sarin**	**8.78**	**127**	Pn	**Pn**	**03 26 13.8**	**-1.4**
	comp=N,0.5nm,0.3s,baz=342,slow=8.0,SNR=10						
GEYT	**Alibeck**	**10.90**	**31**	LR	LR	03 31 38.0	
	comp=N,27nm,19.8s,baz=330,slow=42						
MMAI	**Mount Meron Ar**	**14.06**	**291**	LR	LR	03 33 51.3	
	comp=N,20nm,19.4s,baz=45,slow=42						
KBZ	**Khabaz**	**16.30**	**339**	Pn	**Pn**	**03 27 58.2**	**+1.1**
	comp=N,0.1nm,0.3s,baz=148,slow=8.8,SNR=6.9						
BRTR	**Keskin Array B**	**18.02**	**312**	P	**Pn**	**03 28 19.2**	**+0.3**
	comp=N,0.1nm,0.3s,baz=142,slow=12,SNR=4.4						
AKASG	**Malin Array Be**	**27.40**	**329**	P	**P**	**03 29 53.5**	**-0.2**
	comp=N,0.1nm,0.3s,baz=132,slow=7.5,SNR=2.5						
BVAR	**Borovoye Array**	**28.14**	**25**	P	**P**	**03 30 00.9**	**+0.6**
	comp=N,0.3nm,0.6s,baz=100,slow=1.7,SNR=3.7						
MKAR	**Makanchi Array**	**30.30**	**45**	P	**P**	**03 30 19.6**	**0.0**
	comp=N,0.1nm,0.3s,baz=241,slow=7.4,SNR=2.2						
FINES	**FINESS Array B**	**36.65**	**340**	P	**P**	**03 31 14.1**	**-0.5**
	comp=N,11nm,1.4s,baz=142,slow=11,SNR=6.7						
NOA	**NORSAR Array B**	**41.72**	**332**	P	**P**	**03 31 55.6**	**-1.4**
	comp=N,0.5nm,0.7s,baz=107,slow=9.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	**48.27**	**262**	P	**P**	**03 32 50.2**	**+0.5**
	comp=N,0.7nm,0.5s,baz=56,slow=8.3,SNR=6.4						
YKA	**Yellowknife Ar**	**88.33**	**353**	P	**P**	**03 36 58.8**	**-1.0**
	comp=N,0.5nm,0.9s,baz=8.5,slow=4.2,SNR=5.2						

JMA ***06*** *03:29:51.5±0.1, 41.97N×143.03E, h44km±1km, M3.7 Broadband fault plane solution: P waves. NP1: φs38.00000°, δ17.00000°, λ-79.00000°. NP2:φs206.00000°, δ73.00000°, λ-93.00000°. Principal axes: T Plg28.0000°, Azm299.0000°; N Plg3.0000°, Azm207.0000°; P Plg62.0000°, Azm111.0000°;*
JMA Felt I J1.
NIED ***06*** *03:29:51.5, 41.97N×143.03E, h44km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.68; Mθθ 1.10; Mφφ 0.58; Mrθ 1.63; Mθφ 0.64; Mφr 1.16; Fault plane solution: M0 2.57000×10¹⁴ NP1: φs235.00000°, δ71.00000°, λ-91.00000°. NP2:φs57.00000°, δ19.00000°, λ-88.00000°.*
IDC ***06*** *03:29:52.8±2.4, 42.01N×143.18E, h69km±21km, mb3.3/9, mb1 3.4/13, mb1mx3.2/56, mbtmp3.6/13, MS2.5/3, Ms1 2.6/3, ms1mx2.3/26 Error ellipse: s-maj=26.9km s-min=16.7km az=91.0*

ISC 06 03:29:50.8±1.0, 41°89N±0°08×143°10E±0°07, h46km±7km, n31, σ1s42/27, mb3.7/9, 2C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.14**	**19**	P	**Pn**	**03 29 58.4**	**+0.1**
JEM				*e*S	**Sn**	**03 30 03.7**	**+0.1**
JTHR	**Tokachihiroo**	**0.43**	**20**	⇓P	**Pn**	**03 30 00.8**	**-0.2**
JTHR				*e*S	**Sn**	**03 30 07.7**	**-0.5**
JNBK	**Urakawa-nobuka**	**0.47**	**327**	⇓P	**Pn**	**03 30 00.7**	**-0.7**
JNBK				*e*S	**Sn**	**03 30 08.1**	**-0.9**
JSHD	**Hidakashinhida**	**0.70**	**319**	⇓P	**Pn**	**03 30 04.1**	**-0.3**
JCH	**Churui**	**0.76**	**15**	⇓P	**Pn**	**03 30 04.9**	**-0.2**
JBT2	**Biratori 2**	**1.04**	**329**	⇑P	**Pn**	**03 30 08.8**	**-0.2**
JBT2				*e*S	**Sn**	**03 30 23.2**	**+0.7**
JIAM	**Iburiatsuma**	**1.14**	**311**	⇑P	**Pn**	**03 30 11.4**	**+1.1**
JOB	**Onbets**	**1.16**	**28**	⇓P	**Pn**	**03 30 11.7**	**+1.2**
JOB				*e*S	**Sn**	**03 30 27.4**	**+2.2**
ASAJ	**Asahikawa**	**2.26**	**351**	P	**Pn**	**03 30 26.9**	**+1.2**
	21nm,0.3s,baz=202,slow=15,SNR=98						
ASAJ				S	**Sn**	**03 30 53.4**	**+1.1**
	9.1nm,0.3s,baz=203,slow=14,SNR=6.3						
ASAJ				LR	LR	03 31 19.5	
	comp=Z,64nm,18.1s,baz=92,slow=40						
MJAR	**Matsushiro Arr**	**6.55**	**217**	P	**Pn**	**03 31 27.8**	**+3.3**
	0.1nm,0.3s,baz=40,slow=13,SNR=2.9						
USRK	**Ussuriysk Ar.**	**8.46**	**290**	P	**Pn**	**03 31 53.0**	**+2.3**
	baz=94,slow=16,SNR=3.7						
KLR	**Kul'dur**	**10.82**	**317**	P	**Pn**	**03 32 25.0**	**+2.1**
	0.1nm,0.3s,baz=129,slow=12,SNR=3.7						
KLR				LR	LR	03 36 50.3	
	comp=Z,35nm,21.1s,baz=294,slow=39						
SEY	**Seymchan**	**21.79**	**11**	P	**P**	**03 34 35.6**	**-2.8**
	0.9nm,0.8s,baz=214,slow=11,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**29.91**	**130**	T	T	04 07 15.6	
	baz=323,slow=75,SNR=39						
H11N1	**WAKE ISLAND Hy**	**29.92**	**130**	T	T	04 07 17.5	
	baz=323,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**29.93**	**130**	T	T	04 07 18.5	
	baz=323,slow=75,SNR=43						
H11S1	**WAKE ISLAND Hy**	**30.78**	**132**	T	T	04 08 29.1	
	baz=325,slow=76,SNR=43						
H11S3	**WAKE ISLAND Hy**	**30.78**	**132**	T	T	04 08 29.2	
	baz=325,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy**	**30.80**	**132**	T	T	04 08 30.4	
	baz=325,slow=76,SNR=42						
ZALV	**Zalesovo Beam**	**39.77**	**308**	P	**P**	**03 37 18.4**	**-0.5**
	0.9nm,0.5s,baz=108,slow=9.5,SNR=4.5						
MKAR	**Makanchi Array**	**42.82**	**298**	P	**P**	**03 37 42.9**	**-1.1**
	0.6nm,0.7s,baz=77,slow=8.4,SNR=5.4						
KURBB	**Kurchatov Arra**	**44.19**	**304**	P	**P**	**03 37 54.4**	**-0.5**
	0.6nm,0.4s,baz=77,slow=9.1,SNR=4.3						
ILAR	**Eielson Array**	**44.74**	**35**	P	**P**	**03 37 58.2**	**-1.0**
	0.2nm,0.5s,baz=253,slow=6.3,SNR=2.5						
BVAR	**Borovoye Array**	**48.38**	**310**	P	**P**	**03 38 27.3**	**-0.5**
	0.6nm,0.4s,baz=116,slow=13,SNR=5.1						
WRA	**Warramunga Arr**	**62.05**	**189**	P	**P**	**03 40 06.4**	**-0.1**
	0.5nm,0.4s,baz=6.4,slow=6.9,SNR=10						
FINES	**FINESS Array B**	**65.14**	**332**	P	**P**	**03 40 25.7**	**-0.8**
	0.5nm,0.5s,baz=38,slow=6.8,SNR=7.8						
ASAR	**Alice Springs**	**65.77**	**189**	P	**P**	**03 40 32.3**	**+1.3**
	0.4nm,0.7s,baz=19,slow=12,SNR=4.1						
NOA	**NORSAR Array B**	**70.22**	**337**	LR	LR	04 15 14.2	
	comp=Z,4.9nm,19.2s,baz=240,slow=39						
H03N2	**Juan Fernandez**	**145.96**	**90**	T	T	06 32 34.0	
	baz=300,slow=76,SNR=8.3						
H03N3	**Juan Fernandez**	**145.97**	**90**	T	T	06 32 35.0	
	baz=300,slow=76,SNR=10						
H03N1	**Juan Fernandez**	**145.97**	**90**	T	T	06 32 35.6	
	baz=300,slow=76,SNR=14						

IDC ***06*** *04:05:01.0±5.7, 36.18N×71.20E, h67km±44km, mb3.5/7, mb1 3.6/12, mb1mx3.3/41, mbtmp3.8/12, ML3.6/5, Error ellipse: s-maj=49.9km s-min=30.8km az=148.0*
NNC ***06*** *04:05:07.0±9.0, 36.66N×70.55E, h73km±203km, mb3.8, mpv4.1, Error ellipse: s-maj=68.0km s-min=57.1km az=167.0*

ISC 06 04:05:04.2±0.8, 36°32N±0°07×71°11E±0°07, h100km, n26, σ1s43/31, mb3.7/6, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.43**	**134**	*e*P	**Pn**	**04 06 23.0**	**+0.3**
THN				*e*S	**Sn**	**04 07 21.0**	**-2.8**
AML	**Almayashu**	**6.14**	**18**	P	**Pn**	**04 06 33.1**	**+0.4**
	SNR=40						
UCH	**Uchtor**	**6.47**	**23**	P	**Pn**	**04 06 37.5**	**+0.3**
	SNR=12						
EKS2	**Erkin-Say**	**6.66**	**17**	P	**Pn**	**04 06 40.3**	**+0.7**
	SNR=16						
KK31	**Karatay Array**	**6.80**	**356**	⇑P	**Pn**	**04 06 41.1**	**-0.1**
	10nm,0.4s,baz=178,slow=13,SNR=143						
KK31				⇑S	**Sn**	**04 07 54.2**	**-2.9**
	18nm,0.6s,baz=188,slow=24,SNR=13						
AAK	**Ala-Archa**	**6.83**	**21**	P	**Pn**	**04 06 41.8**	**0.0**
	5.1nm,0.3s,baz=170,slow=6.3,SNR=41						
AAK				S	**Sn**	**04 07 57.1**	**-1.1**
	1.7nm,0.3s,baz=307,slow=20,SNR=8.8						
AAK	**Ala-Archa**	**6.83**	**21**	P	**Pn**	**04 06 42.6**	**+0.7**
	SNR=15						
AAK	**Ala-Archa**	**6.83**	**21**	P	**Pn**	**04 06 42.2**	**+0.3**
	4.4nm,0.4s						
AAK				S	**Sn**	**04 07 57.3**	**-0.9**
	10nm,0.8s						
CHMS	**Chumysh**	**7.24**	**22**	P	**Pn**	**04 06 47.6**	**+0.3**
	SNR=5.1						
USP	**Ospenovka**	**7.42**	**20**	P	**Pn**	**04 06 50.1**	**+0.5**
	SNR=15						
TKM2	**Tokmak 2**	**7.45**	**26**	P	**Pn**	**04 06 50.0**	**-0.3**
	SNR=8.6						
TKM2	**Tokmak 2**	**7.45**	**26**	⇑P	**Pn**	**04 06 50.0**	**-0.3**
	4.6nm,0.6s						
TKM2				⇑S	**Sn**	**04 08 12.7**	**-0.6**
	3.2nm,0.8s						
GEYT	**Alibeck**	**10.50**	**283**	S	**Sn**	**04 09 23.3**	**-4.1**
	2.0nm,0.3s,baz=41,slow=28,SNR=5.9						
MKAR	**Makanchi Array**	**13.39**	**35**	P	**Pn**	**04 08 07.9**	**-2.2**
	0.0nm,0.3s,baz=229,slow=14,SNR=5.9						
KURBB	**Kurchatov Arra**	**15.27**	**18**	P	**Pn**	**04 08 35.1**	**+1.0**
	0.1nm,0.3s,baz=208,slow=10,SNR=15						
AB31	**Akbulak array**	**15.29**	**331**	⇑P	**Pn**	**04 08 32.7**	**-1.7**
	0.4nm,0.3s,baz=262,slow=36,SNR=18						
AB31				⇓S	Sn	04 11 12.9	-10
	1.3nm,0.5s,baz=152,slow=23,SNR=6.8						
BVAR	**Borovoye Array**	**16.72**	**358**	P	**Pn**	**04 08 51.8**	**-0.3**
	0.4nm,0.3s,baz=159,slow=21,SNR=4.6						
AKTO	**Aktyubinsk**	**16.99**	**330**	P	**Pn**	**04 08 54.9**	**-0.5**
	0.4nm,0.3s,baz=131,slow=9.1,SNR=7.2						
AKTO	**Aktyubinsk**	**16.99**	**330**	⇓P	**Pn**	**04 08 55.7**	**+0.3**
	3.8nm,0.9s						
AKTO				⇓S	Sn	04 11 52.6	-11
	3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**20.05**	**24**	P	**P**	**04 09 28.8**	**-0.3**
	3.3nm,0.3s,baz=223,slow=10.0,SNR=16						
AKASG	**Malin Array Be**	**33.13**	**309**	P	**P**	**04 11 32.2**	**+1.6**
	0.5nm,0.5s,baz=81,slow=6.7,SNR=6.9						
FINES	**FINESS Array B**	**37.69**	**326**	P	**P**	**04 12 10.3**	**+0.9**
	0.6nm,0.4s,baz=116,slow=9.8,SNR=8.0						
ARCES	**ARCESS Array B**	**41.35**	**338**	P	**P**	**04 12 41.1**	**+1.3**
	2.7nm,0.8s,baz=118,slow=8.9,SNR=11						
NOA	**NORSAR Array B**	**44.58**	**323**	P	**P**	**04 13 07.7**	**+1.7**
	0.5nm,0.5s,baz=94,slow=8.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**04 15 39.3**	**+0.3**
	0.6nm,0.5s,baz=48,slow=6.3,SNR=7.0						
YKA	**Yellowknife Ar**	**81.42**	**3**	P	**P**	**04 17 11.3**	**+1.7**
	0.2nm,0.6s,baz=355,slow=5.2,SNR=6.0						

IDC 06 04:38:14.6±3.2, 5.40S×152.26E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/25, mbtmp3.7/3, ML2.0/1, Error ellipse: s-maj=135.2km s-min=42.2km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.44**	**231**	Pn	Pn	04 39 50.3	-0.5
	2.1nm,0.3s,baz=53,slow=15,SNR=2.0						
PMG				Sn	Sn	04 41 07.8	+2.8
	1.7nm,0.3s,baz=285,slow=19,SNR=2.8						
WRA	**Warramunga Arr**	**22.65**	**229**	P	P	04 43 17.9	+0.3
	1.0nm,0.6s,baz=52,slow=9.8,SNR=15						
ASAR	**Alice Springs**	**25.35**	**222**	P	P	04 43 43.5	0.0
	1.2nm,0.7s,baz=62,slow=8.5,SNR=13						
TORD	**Torodi Ar. Bea**	**149.37**	**287**	PKPbc	PKPbc	04 58 07.7	-0.5
	0.5nm,0.9s,baz=51,slow=3.2,SNR=2.0						

IDC 06 04:54:34.9±2.4, 3.63N×31.88W, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.6/35, mbtmp4.1/5, ML4.3/1, MS3.3/16, Ms1 3.3/16, ms1mx3.2/37, Error ellipse: s-maj=71.0km s-min=34.3km az=130.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.22**	**203**	Pn	Pn	04 57 02.9	-0.1
	2.4nm,0.3s,baz=13,slow=16,SNR=37						
RCBR				Sn	Sn	04 58 52.0	-6.4
	1.1nm,0.3s,baz=273,slow=22,SNR=6.1						
RCBR				LR	LR	05 00 06.5	
	comp=Z,258nm,21.2s,baz=359,slow=32						
H10N3	**ASCENSION HYDR**	**20.74**	**123**	T	T	05 21 04.2	
	baz=303,slow=75,SNR=61						
H10N2	**ASCENSION HYDR**	**20.75**	**123**	T	T	05 21 04.5	
	baz=303,slow=75,SNR=61						
MDP	**Montagnes des**	**20.76**	**275**	LR	LR	05 05 10.2	
	comp=Z,27nm,20.2s,baz=90,slow=31						
H10N1	**ASCENSION HYDR**	**20.76**	**123**	T	T	05 21 05.7	
	baz=303,slow=75,SNR=61						
H10S3	**ASCENSION HYDR**	**21.23**	**126**	T	T	05 21 39.4	
	baz=304,slow=74,SNR=40						
H10S2	**ASCENSION HYDR**	**21.25**	**126**	T	T	05 21 41.1	
	baz=276,slow=74,SNR=20						
BDFB	**Brasilia**	**24.93**	**219**	LR	LR	05 08 45.5	
	comp=Z,63nm,21.5s,baz=144,slow=34						
DBIC	**Dimbokro**	**27.07**	**82**	P	P	05 00 19.9	+0.4
	4.8nm,0.9s,baz=270,slow=10,SNR=4.1						
DBIC				LR	LR	05 09 14.1	
	comp=Z,29nm,18.8s,baz=226,slow=32						
KOWA	**Kowa**	**29.51**	**67**	P	P	05 00 41.6	+0.4
	1.1nm,0.6s,baz=200,slow=6.2,SNR=4.3						
KOWA				LR	LR	05 11 09.0	
	comp=Z,104nm,18.4s,baz=221,slow=34						
TORD	**Torodi Ar. Bea**	**34.49**	**72**	P	P	05 01 24.3	-0.7
	1.8nm,0.7s,baz=266,slow=8.8,SNR=9.0						
TORD				LR	LR	05 13 08.8	
	comp=Z,58nm,20.4s,baz=260,slow=32						
CPUP	**Villa Florida**	**38.65**	**218**	LR	LR	05 17 31.0	
	comp=Z,79nm,20.5s,baz=56,slow=36						
LPAZ	**La Paz**	**40.94**	**240**	LR	LR	05 19 06.5	
	comp=Z,22nm,18.6s,baz=91,slow=36						
ESDC	**Sonseca Array**	**43.89**	**31**	LR	LR	05 19 26.6	
	comp=Z,24nm,18.1s,baz=205,slow=34						
KEST	**Kesra**	**49.66**	**45**	LR	LR	05 25 13.5	
	comp=Z,49nm,19.1s,baz=256,slow=37						
PLCA	**Paso Flores**	**56.55**	**215**	LR	LR	05 28 44.0	
	comp=Z,52nm,20.0s,baz=87,slow=36						
NOA	**NORSAR Array B**	**65.82**	**21**	LR	LR	05 30 37.4	
	comp=Z,15nm,19.9s,baz=5.0,slow=33						
AKASG	**Malin Array Be**	**69.19**	**37**	P	P	05 05 43.5	+0.1
	0.5nm,0.3s,baz=246,slow=7.2,SNR=5.3						
PDAR	**Pinedale Array**	**78.50**	**313**	LR	LR	05 39 51.9	
	comp=Z,17nm,19.0s,baz=116,slow=35						
ELK	**Elko**	**82.62**	**310**	LR	LR	05 41 48.3	
	comp=Z,20nm,18.2s,baz=141,slow=34						
NVAR	**Mina Array Bea**	**84.97**	**308**	LR	LR	05 44 11.8	
	comp=Z,25nm,18.1s,baz=268,slow=35						
YBH	**Yreka Blue Hor**	**88.23**	**312**	LR	LR	05 45 56.8	
	comp=Z,19nm,18.6s,baz=86,slow=35						

DNK ***06*** *04:58:31.8±0.3, 41.79N×149.93E, h15km, mb5.1*
BJI ***06*** *04:58:41.0±0.0, 42.99N×145.62E, h63km, mB4.9/22, mb4.6/46, Ms3.9/6, Ms7 3.7/6*
NEIC ***06*** *04:58:41.2±1.4, 42.96N±0.06×145.3E±0.1, h32km±4km, mb4.6/107, Error ellipse: s-maj=12.4km s-min=8.3km az=117.0*
MOS ***06*** *04:58:41.5±1.0, 42.97N×145.42E, h51km, mb4.7/43, Error ellipse: s-maj=6.8km s-min=4.6km az=106.3*
MOS Felt (II) at Goryachiy Plyazh, Yuzhno-Kuril'sk.
SKHL ***06*** *04:58:42.6±0.3, 43.00N×145.40E, h58km±2km, mb5.1/13*
NIED ***06*** *04:58:42.5, 42.98N×145.44E, h47km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr2.50; Mθθ-1.11; Mφφ-1.39; Mrθ 0.57; Mθφ-1.24; Mφr 2.78; Fault plane solution: M0 3.78000×10¹⁵ NP1:φs21.00000°, δ70.00000°, λ76.00000°. NP2:φs238.00000°, δ25.00000°, λ124.00000°.*
JMA ***06*** *04:58:42.5±0.1, 42.98N×145.43E, h47km±1km, M4.3*
JMA Felt III J1.
IDC ***06*** *04:58:44.3±2.0, 42.96N×145.37E, h61km±17km, mb4.0/23, mb1 4.2/30, mb1mx4.1/46, mbtmp4.3/30, MS3.4/25, Ms1 3.4/25, ms1mx3.2/50, Error ellipse: s-maj=15.0km s-min=11.3km az=146.0*

ISC 06 04:58:41.3±0.4, 42°90N±0°04×145°54E±0°04, h37km±1km, h37km:pP-P, n436, σ1s36/455, mb4.5/134, MS3.5/22, 42C-37D, Fault plane solution: NP1:φs19.44775°, δ48.34136°, λ97.64185°. NP2:φs188.03560°, δ42.22744°, λ81.49889°. Principal axes: T Plg83.5184°, Azm345.8542°; N Plg5.7019°, Azm194.3514°; P Plg3.0721°, Azm104.0444°; Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.33**	**303**	⇓P	**Pn**	**04 58 50.9**	**+1.3**
JKHN				*e*S	**Sn**	**04 58 56.2**	**-0.3**
NEM2	**Nemuro 2**	**0.48**	**18**	P	**Pn**	**04 58 52.7**	**+1.0**
NEM2				*e*S	**Sn**	**04 58 59.7**	**+0.8**
NMR	**Nemuro--Hokkai**	**0.49**	**16**	⇑*i*PN	**Pn**	**04 58 52.8**	**+1.1**
NMR				*i* S	**Sn**	**04 58 59.5**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.49**	**16**	*i* P	**Pn**	**04 58 52.7**	**+1.1**
NMR				*i* S	**Sn**	**04 58 59.9**	**+0.9**
AKK	**Akkeshi**	**0.53**	**283**	*i* P	**Pn**	**04 58 52.8**	**+0.4**
AKK				*i* S	**Sn**	**04 59 00.4**	**+0.4**
JAK	**Akkeshi**	**0.63**	**279**	⇓P	**Pn**	**04 58 54.0**	**+0.2**
JAK				*e*S	**Sn**	**04 59 02.6**	**0.0**
JNK	**Nakash**	**0.91**	**319**	⇓P	**Pn**	**04 58 57.3**	**-0.3**
JNK				*e*S	**Sn**	**04 59 07.6**	**-1.9**
JRA	**Rausu**	**1.08**	**344**	⇓P	**Pn**	**04 59 00.0**	**+0.1**
JRA				*e*S	**Sn**	**04 59 13.1**	**-0.5**
GRPR	**Tuman**	**1.10**	**9**	⇑*i*PN	**Pn**	**04 59 00.5**	**+0.3**
GRPR				*i* S	**Sn**	**04 59 13.3**	**-0.8**
GRPR				pmax	pmax		
	comp=N,347nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,766nm,0.2s						
GRPR				pmax	pmax		
	comp=E,215nm,0.1s						
GRPR				smax	smax		
	comp=E,45μm,0.6s						
GRPR				smax	smax		
	comp=N,26μm,0.3s						
GRPR	**Tuman**	**1.10**	**9**	*i* P	**Pn**	**04 59 00.5**	**+0.3**
GRPR				AMB	AMB	04 59 01.0	
	comp=N,350nm,0.2s						
GRPR				AMB	AMB	04 59 01.0	
	comp=N,220nm,0.2s						
GRPR				AMB	AMB	04 59 01.0	
	comp=N,770nm,0.2s						
GRPR				*i* S	**Sn**	**04 59 13.7**	**-0.4**
GRPR				A	A	04 59 14.0	
	comp=N,26μm,0.7s						
GRPR				A	A	04 59 14.0	
	comp=N,45μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**1.16**	**11**	*d* iPN	**Pn**	**04 59 01.0**	**+0.1**
YUK				*i* S	**Sn**	**04 59 13.7**	**-1.7**
YUK				pmax	pmax		
	comp=N,139nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,17μm,0.6s						
Y

YSS **Yuzh-Sakhalins** 4.51 335 Pn **Pn** 04 59 47.9 +1.0
YSS **Yuzh-Sakhalins** 4.51 335 eP **Pn** 04 59 48.0 +1.0
YSS AMB AMB 04 59 49.0
comp=N,30nm,0.7s
YSS eS **Sn** **05 00 36.0 -2.1**
YSS A A 05 00 36.8
comp=N,40nm,0.7s
YSS A A 05 00 36.8
comp=N,90nm,0.7s
JMM Marumori 6.20 217 Pn **Pn** **05 00 10.5 +0.2**
UGL Uglegorsk 6.63 340 ePN **Pn** **05 00 20.8 +4.7**
UGL eS **Sn** **05 01 37.8 +7.4**
UGL pmax pmax
comp=Z,70nm,0.9s
UGL Uglegorsk 6.63 340 eP **Pn** **05 00 17.6 +1.5**
UGL AMB AMB 05 00 18.5
comp=Z,60nm,0.5s
JSD Sado 7.38 231 Pn **Pn** **05 00 27.5 +1.1**
TYV Tymovskoe 8.20 347 ePN Pn 05 00 47.1 +9.4
TYV Tymovskoe 8.20 347 eP **Pn** **05 00 38.9 +1.2**
TYV AMB AMB 05 00 40.5
comp=Z,40nm,0.6s
MAJO Matsushiro 8.50 224 dePN **Pn** **05 00 42.8 +1.0**
MAJO pmax pmax
comp=Z,13nm,0.6s
MAJO Matsushiro 8.50 224 Pn **Pn** **05 00 42.5 +0.6**
MAT Matsushiro 8.50 224 P **Pn** **05 00 42.5 +0.7**
MAT eS **Sn** **05 02 17.7 +1.3**
MJAR Matsushiro Arr 8.50 224 P **Pn** **05 00 42.9 +1.1**
comp=Z,0.6nm,0.3s,baz=28,slow=13,SNR=20
MJAR Matsushiro Arr 8.50 224 **Pn** **05 00 41.9 0.0**
JGF Kuroka 9.66 224 Pn **Pn** **05 00 59.1 +1.3**
USA0B Ussuriysk Arra 9.93 282⇓ ePN **Pn** **05 01 04.5 +3.2**
USRK Ussuriysk Ar. 9.93 282 P **Pn** **05 01 02.1 +0.8**
baz=98,slow=13,SNR=8.1
USRK LR LR 05 04 53.5
comp=Z,156nm,18.8s,baz=46,slow=38
GRNR Gornyy 10.04 325 AMS AMS 05 05 12.0
comp=Z,400nm,14.0s
GRNR AMS AMS 05 05 12.0
comp=Z,500nm,14.0s
GRNR AMS AMS 05 05 12.0
comp=Z,200nm,14.0s
MSHR Mys Shultsa 10.59 273⇓ ePN **Pn** **05 01 14.0 +3.6**
MSHR pmax pmax
comp=Z,65nm,1.2s
SKR Severo-Kuril's 10.63 39 eP **Pn** **05 01 12.0 +1.2**
SKR AMB AMB 05 01 20.0
comp=Z,210nm,1.0s
NKL Nikolayevsk 10.76 344 i P **Pn** **05 01 13.8 +1.2**
NKL AMB AMB 05 01 17.0
comp=Z,50nm,0.8s
JHJ Hachijo jima 2 10.77 207 S **Sn** **05 03 05.3 -6.7**
comp=Z,36nm,0.3s,baz=255,slow=22,SNR=5.7
OKH Okha 10.79 352 eP **Pn** **05 01 15.2 +2.1**
OKH AMB AMB 05 01 15.7
comp=Z,50nm,0.5s
JWT Wachi 10.95 229 Pn **Pn** **05 01 18.2 +2.9**
KLR Kul'dur 11.47 308 P **Pn** **05 01 25.1 +2.7**
comp=Z,0.4nm,0.3s,baz=115,slow=16,SNR=16
KLR Kul'dur 11.47 308⇓ ePN **Pn** **05 01 25.8 +3.3**
KLR pmax pmax
comp=Z,9.0nm,0.9s
PAU Pauzhetka 11.48 38 eP **Pn** **05 01 23.6 +1.0**
PAU AMB AMB 05 01 27.5
comp=Z,90nm,0.7s
MDJ Mudanjiang 11.66 284 P **Pn** **05 01 27.2 +2.1**
MDJ pmax pmax
comp=Z,14nm,0.8s
MDJ pmax pmax
comp=Z,170nm,3.3s
PEA0B Petropavlovsk- 13.04 34 PN **P** **05 01 49.4 -4.2**
PEA0B Petropavlovsk- 13.04 34 Pn **P** **05 01 49.4 -4.2**
PETK Petropavlovsk- 13.04 34 P **Pn** **05 01 48.6 +4.8**
comp=Z,0.2nm,0.3s,baz=169,slow=8.1,SNR=3.9
PETK LR LR 05 07 32.1
comp=Z,84nm,19.4s,baz=193,slow=40
PETK Petropavlovsk- 13.04 34 PN **P** **05 01 49.4 -4.2**
PETK Petropavlovsk- 13.04 34 Pn **P** **05 01 49.4 -4.2**
EKMR Ekimchan 13.19 325 eP **Pn** **05 01 45.3 -0.6**
EKMR AMB AMB 05 01 57.0
comp=Z,10.0nm,0.7s
PET Petropavlovsk 13.38 36 eP **Pn** **05 01 48.4 -0.1**
PET AMB AMB 05 01 50.1
comp=Z,10.0nm,0.7s
KSRS Korea Array 14.52 254 P **Pn** **05 02 04.8 +0.7**
comp=Z,0.1nm,0.3s,baz=63,slow=12,SNR=3.1
KSRS LR LR 05 06 59.7
comp=Z,115nm,21.3s,baz=80,slow=34
BMKR Bomnak 16.09 323 eP **Pn** **05 02 23.3 -1.3**
ZEA Zeya 16.24 318 eP **Pn** **05 02 21.7 -4.8**
ZEA AMB AMB 05 02 22.1
comp=Z,20nm,0.5s
KROS Kirovskiy 16.78 320 eP **Pn** **05 02 30.2 -3.0**
KROS AMB AMB 05 02 37.0
comp=Z,4.0nm,0.6s
MA2 Magadan 17.00 9 P **Pn** **05 02 36.6 +0.6**
comp=Z,0.9nm,0.3s,baz=193,slow=4.9,SNR=4.1
MA2 LR LR 05 08 56.1
comp=Z,39nm,18.6s,baz=182,slow=36
MA2 Magadan 17.00 9⇓ eP **Pn** **05 02 35.8 -0.2**
MA2 pmax pmax
comp=Z,6.0nm,1.1s
MA2 Magadan 17.00 9 **P** **05 02 38.0 +0.4**
MA2 Magadan 17.00 9 eP **Pn** **05 02 35.8 -0.2**
SEY Seymchan 20.46 9 P **P** **05 03 15.0 -0.4**
comp=Z,1.1nm,0.3s,baz=187,slow=7.2,SNR=7.2
SEY Seymchan 20.46 9⇓ eP **P** **05 03 15.7 +0.3**
SEY Seymchan 20.46 9 eP **P** **05 03 15.7 +0.3**
JOW Kunigami 21.33 227 P **P** **05 03 25.8 +0.7**
JOW IAmb IAmb 05 03 27.7
comp=Z,32nm,0.9s
YAK Yakutsk 21.34 339 LR LR 05 12 00.2
comp=Z,49nm,19.4s,baz=90,slow=38
YAK Yakutsk 21.34 339 eP P 05 03 32.2 +7.3
YAK e 05 03 57.5
YAK eS Sn 05 07 26.6 -1.6
YAK e*SS sS 05 07 48.6 +16
YAK eSS SnSn 05 08 03.0 +20
YAK pmax pmax
comp=Z,10.0nm,0.8s
YAK Yakutsk 21.34 339 eP **P** **05 03 25.0 +0.1**
BJI Beijing 22.14 273 P **P** **05 03 32.8 -0.8**
BJI pmax pmax
comp=Z,11nm,0.9s
NJ2 Nanjing 23.69 252 eP **P** **05 03 48.5 -1.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
HHC Hu-ho-hao-te 25.29 277 eP **P** **05 04 04.4 +0.1**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,190nm,5.5s
ULN Ulaanbaatar 27.28 294⇑ eP **P** **05 04 21.8 -0.5**
ULN pmax pmax
comp=Z,7.0nm,1.3s
ULN Ulaanbaatar 27.28 294 P **P** **05 04 21.5 -0.8**
ULN Ulaanbaatar 27.28 294 eP **P** **05 04 21.8 -0.5**
BILL Bilibino 27.50 17⇓ eP **P** **05 04 23.2 -0.6**
BILL pmax pmax
comp=Z,5.0nm,1.9s
BILL Bilibino 27.50 17 eP **P** **05 04 23.2 -0.6**
WHN Wuhan 27.71 254 ⇓P **P** **05 04 27.0 +0.9**
WHN pmax pmax
comp=Z,36nm,1.0s
SONM Songino Array 27.73 294 P **P** **05 04 25.4 -0.9**
comp=Z,7.4nm,0.8s,baz=81,slow=8.3,SNR=41
SONM Songino Array 27.73 294 P **P** **05 04 25.6 -0.6**
SONM pmax pmax
comp=Z,5.0nm,0.8s
SONM Songino Array 27.73 294 P **P** **05 04 25.6 -0.6**
H11N2 WAKE ISLAND Hy 29.27 135 T T 05 35 39.9
baz=328,slow=76,SNR=5676
H11N1 WAKE ISLAND Hy 29.29 135 T T 05 35 40.9
baz=328,slow=76,SNR=4304
H11N3 WAKE ISLAND Hy 29.29 135 T T 05 35 28.9
baz=328,slow=76,SNR=4316
TLY Talaya 29.39 302 LR LR 05 17 28.2
comp=Z,79nm,20.0s,baz=92,slow=38
ZAK Zakamensk 29.63 299 eP **P** **05 04 42.5 -0.6**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
ZAK Zakamensk 29.63 299 eP **P** **05 04 42.5 -0.6**
XAN Xi'an 29.81 265 P **P** **05 04 49.0 +4.2**
XAN pP sP 05 05 03.1 +3.6
XAN sP pP 05 05 10.4 +15
XAN pmax pmax
comp=Z,15nm,1.0s
TIXI Tiksi 29.97 350⇓ eP **P** **05 04 45.2 -0.4**
TIXI Tiksi 29.97 350 eP **P** **05 04 45.2 -0.4**
H11S1 WAKE ISLAND Hy 30.20 137 T T 05 36 39.3
baz=329,slow=76
H11S3 WAKE ISLAND Hy 30.20 137 T T 05 36 38.8
baz=329,slow=76,SNR=7660
H11S2 WAKE ISLAND Hy 30.22 137 T T 05 36 39.2
baz=329,slow=76,SNR=7987
GTA Gaotai 34.28 280 P **P** **05 05 24.6 +0.6**
GTA pP pP 05 05 34.4 -0.1
GTA pmax pmax
comp=Z,2.0nm,0.9s
CD2 Chengdu 35.15 264 P **P** **05 05 31.8 +0.3**
CD2 pP pP 05 05 43.2 +1.2
CD2 pmax pmax
comp=Z,20nm,0.7s
KMI Kunming 39.19 257 ⇑P **P** **05 06 06.1 +0.1**
KMI pP pP 05 06 18.2 +1.6
KMI sP sP 05 06 25.8 +4.9
KMI pmax pmax
comp=Z,12nm,0.9s
NRIK Noril'sk 39.43 332 LR LR 05 23 08.0
comp=Z,48nm,18.6s,baz=113,slow=37
A21K Barrow 39.81 25 P **P** **05 06 10.1 -0.3**
DGZ Jazzator, Alta 39.83 301 ⇓ iP **P** **05 06 11.6 +0.5**
DGZ pmax pmax
comp=Z,5.0nm,1.2s
IMAR Indian Mountai 40.00 34 P **P** **05 06 12.4 +0.3**
OHAK Old Harbor 40.37 47 P **P** **05 06 16.3 +1.2**
PPLA Purkeypile 40.57 39 P **P** **05 06 18.5 +1.5**
PPLA IAmb IAmb 05 06 36.9
comp=Z,15nm,1.3s
ZAA0 Zalesovo Array 40.58 308 P **P** **05 06 15.9 -1.1**
ZALV Zalesovo Beam 40.58 308 P **P** **05 06 16.1 -0.8**
comp=Z,1.0nm,0.4s,baz=96,slow=11,SNR=5.5
ZALV PcP **PcP** **05 08 18.7 +0.2**
comp=Z,4.7nm,0.5s,baz=82,slow=3.1,SNR=15
ZALV LR LR 05 24 12.7
comp=Z,74nm,18.2s,baz=328,slow=38
ZALV Zalesovo Beam 40.58 308 P **P** **05 06 16.1 -0.8**
ZALV **PcP** **05 08 17.9 -0.6**
KDAK Kodiak Island 40.68 46 P **P** **05 06 19.2 +1.4**
comp=Z,3.8nm,0.6s,baz=201,slow=4.1,SNR=5.7
KDAK Kodiak Island 40.68 46 P **P** **05 06 18.3 +0.5**
KDAK IAmb IAmb 05 06 18.6
comp=Z,14nm,1.1s
HOM Homer 40.99 44 P **P** **05 06 21.9 +1.7**
KTH Kantishna Hill 41.14 38 P **P** **05 06 23.0 +1.4**
KTH IAmb IAmb 05 06 23.8
comp=Z,5.6nm,0.8s
CNPM China Poot 41.21 44 P **P** **05 06 23.1 +1.0**
CNPM IAmb IAmb 05 06 38.0
comp=Z,19nm,1.3s
MLY Manley 41.21 35 P **P** **05 06 23.8 +1.7**
SUA Susitna One 41.30 41 P **P** **05 06 23.9 +1.0**
WMQ Urumqi 41.32 292 eP **P** **05 06 24.5 +1.2**
WMQ pP pP 05 06 36.0 +2.1
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,98nm,4.7s
BRLK Bradley Lake 41.36 43 P **P** **05 06 24.6 +1.2**
BRLK IAmb IAmb 05 06 35.3
comp=Z,12nm,1.3s
TRF Thorofare Moun 41.42 38 P **P** **05 06 24.7 +0.7**
COLD Coldfoot 41.49 32 P **P** **05 06 24.9 +0.5**
I23K Minto, Yukon-K 41.80 35 P **P** **05 06 28.3 +1.5**
TOLK Toolik Lake Re 41.81 30 P **P** **05 06 27.4 +0.4**
NEA2 Nenana 41.93 36 P **P** **05 06 29.4 +1.4**
NEA2 IAmb IAmb 05 06 31.1
comp=Z,6.1nm,0.7s
MCK McKinley 42.02 37 P **P** **05 06 29.8 +1.1**
MCK pmax pmax
comp=Z,4.0nm,0.8s
MCK McKinley 42.02 37 P **P** **05 06 29.8 +1.1**
ZSN Zaisan 42.06 298 eP **P** **05 06 28.5 -0.8**
baz=298
ZSN Zaisan 42.06 298 eP **P** **05 06 28.5 -0.8**
RND Reindeer 42.07 38 P **P** **05 06 30.1 +0.9**
RND pmax pmax
comp=Z,4.0nm,0.8s
RND Reindeer 42.07 38 P **P** **05 06 30.1 +0.9**
MDM Murphy Dome 42.28 35 P **P** **05 06 32.0 +1.2**
WRH Wood River Hil 42.36 36 P **P** **05 06 32.7 +1.3**
SML Sawmill 42.42 40 P **P** **05 06 32.6 +0.5**
SML pmax pmax
comp=Z,10.0nm,0.9s
SML Sawmill 42.42 40 P **P** **05 06 32.6 +0.5**
SML IAmb IAmb 05 06 51.4
comp=Z,10nm,0.9s
TCOL CIGO, UAF Yank 42.44 35 P **P** **05 06 33.2 +1.1**
COLA College 42.45 35⇑ iP **P** **05 06 32.9 +0.8**
COLA pmax pmax
comp=Z,9.0nm,1.0s
COLA College 42.45 35 P **P** **05 06 32.7 +0.7**
CCB Clear Creek Bu 42.47 36 P **P** **05 06 32.6 +0.3**
POKR Poker Plat Res 42.61 35 P **P** **05 06 34.5 +1.0**
POKR IAmb IAmb 05 06 35.7
comp=Z,12nm,0.9s
IL31 42.86 36 P **P** **05 06 35.5 0.0**
IL31 IAmb IAmb 05 06 38.2
comp=Z,3.8nm,0.6s
ILAR Eielson Array 42.86 36 P **P** **05 06 36.2 +0.7**
comp=Z,1.3nm,0.4s,baz=256,slow=5.2,SNR=34
ILAR LR LR 05 26 56.1
comp=Z,23nm,18.1s,baz=186,slow=39
ILAR Eielson Array 42.86 36 P **P** **05 06 35.9 +0.4**
PRP Porcupine Dome 43.39 34 P **P** **05 06 41.0 +1.0**
PRP IAmb IAmb 05 06 41.9
comp=Z,9.0nm,0.6s
FYU Fort Yukon 43.45 33 P **P** **05 06 41.5 +1.3**
FYU IAmb IAmb 05 06 42.6
comp=Z,13nm,0.7s
MK31 Makanchi Array 43.94 298 c iP **P** **05 06 43.8 -0.7**
MK31 Makanchi Array 43.94 298 P **P** **05 06 43.4 -1.1**
MK31 IAmb IAmb 05 06 44.8
comp=Z,8.1nm,0.8s
MKAR Makanchi Array 43.94 298 P **P** **05 06 44.0 -0.5**
comp=Z,7.6nm,0.8s,baz=80,slow=8.9,SNR=68
MKAR PcP **PcP** **05 08 30.1 +0.2**
comp=Z,1.6nm,0.8s,baz=73,slow=4.2,SNR=4.4
MKAR LR LR 05 26 16.7
comp=Z,62nm,18.7s,baz=65,slow=38
MKAR Makanchi Array 43.94 298⇑ eP **P** **05 06 44.0 -0.5**
MKAR pmax pmax
comp=Z,8.0nm,0.8s
MKAR Makanchi Array 43.94 298 P **P** **05 06 42.5 -2.0**
SEM Semipalatinsk 44.13 303 eP **P** **05 06 44.2 -2.0**
baz=303
SEM Semipalatinsk 44.13 303 eP **P** **05 06 44.2 -2.0**
MAKZ Makanchi 44.14 298 P **P** **05 06 45.3 -0.8**
MAKZ pmax pmax
comp=Z,9.0nm,0.9s
MAKZ Makanchi 44.14 298 P **P** **05 06 45.3 -0.8**
MAKZ IAmb IAmb 05 06 46.5
comp=Z,8.7nm,0.8s
SCRK Sand Creek 44.19 37 P **P** **05 06 46.2 -0.1**
SCRK IAmb IAmb 05 06 49.5
comp=Z,3.5nm,0.7s
DOT Dot Lake 44.19 37 P **P** **05 06 46.0 -0.2**
VRDI Verde Repeater 44.82 40 P **P** **05 06 52.8 +1.3**
VRDI IAmb IAmb 05 07 05.8
comp=Z,6.0nm,1.4s
MCARA McCarthy VSAT 45.00 40 P **P** **05 06 54.8 +2.1**
MCARA IAmb IAmb 05 06 55.1
comp=Z,8.9nm,1.1s
K27K Chicken 45.01 36 P **P** **05 06 53.5 +0.7**
K27K IAmb IAmb 05 06 56.7
comp=Z,6.1nm,0.9s
CRQM Cirque 45.05 41 P **P** **05 06 54.4 +1.1**
CRQM IAmb IAmb 05 06 56.7
comp=Z,11nm,0.9s
TGL Tana Glacier 45.20 41 P **P** **05 06 55.6 +1.2**
TGL IAmb IAmb 05 06 56.6
comp=Z,10nm,1.4s
L27K Beaver Creek, 45.27 38 P **P** **05 06 56.6 +1.7**
L27K IAmb IAmb 05 06 57.3
comp=Z,7.2nm,0.8s
BCAR Beaver Creek A 45.29 38 P **P** **05 06 55.9 +0.9**
EGAK Eagle 45.30 35 P **P** **05 06 55.5 +0.4**
BARN Barnard Glacie 45.70 40 P **P** **05 06 59.9 +1.3**
BARN IAmb IAmb 05 07 01.7
comp=Z,5.1nm,1.1s
GRNC Granite Creek 45.73 41 P **P** **05 06 59.7 +1.0**
GRNC IAmb IAmb 05 07 02.2
comp=Z,7.3nm,1.0s
YAH Yahtse 45.80 41 P **P** **05 07 00.9 +1.6**
CTGM Chitina Glacie 45.88 41 P **P** **05 07 01.1 +1.3**
CTGM IAmb IAmb 05 07 02.9
comp=Z,7.1nm,1.0s
TABL Table Mountain 46.08 41 P **P** **05 07 02.5 +1.0**
TABL IAmb IAmb 05 07 21.8
comp=Z,4.9nm,0.7s
CMAR Chiang Mai Arr 46.16 253 P **P** **05 07 03.1 +0.7**
comp=Z,1.4nm,0.3s,baz=51,slow=7.4,SNR=8.7
CMAR LR LR 05 26 47.4
comp=Z,78nm,18.1s,baz=116,slow=37
CMAR Chiang Mai Arr 46.16 253 P **P** **05 07 01.9 -0.5**
DAWY Dawson 46.17 36 P **P** **05 07 02.7 +0.7**
TDK Taldyqorghan 47.11 297 eP **P** **05 07 09.0 -0.6**
comp=Z,16nm,0.8s,baz=297
TDK Taldyqorghan 47.11 297 eP **P** **05 07 09.0 -0.6**
TDK pmax pmax
comp=Z,16nm,0.8s
SHLS Shalkode 47.13 294 eP **P** **05 07 06.3 -3.6**
baz=294
SHLS Shalkode 47.13 294 eP **P** **05 07 06.3 -3.6**
UZB Uzynbulak 47.43 294 eP **P** **05 07 11.0 -1.2**
baz=294
UZB Uzynbulak 47.43 294 eP **P** **05 07 11.0 -1.2**
KPKS Kokpek 47.53 295 eP **P** **05 07 12.0 -0.9**
comp=Z,3.1nm,0.8s,baz=295
KPKS Kokpek 47.53 295 eP **P** **05 07 12.0 -0.9**
KPKS pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 47.72 30 P **P** **05 07 14.3 +0.4**
comp=Z,4.3nm,0.7s,baz=283,slow=5.6,SNR=30
INK Inuvik 47.72 30 P **P** **05 07 14.5 +0.6**
INK pmax pmax
comp=Z,8.0nm,1.2s
INK Inuvik 47.72 30 P **P** **05 07 14.4 +0.6**
INK IAmb IAmb 05 07 15.3
comp=Z,8.3nm,1.2s
HYT Haines Junctio 47.73 40 P **P** **05 07 16.1 +1.8**
SATY Saty 47.88 294 eP **P** **05 07 14.9 -0.8**
baz=294
SATY Saty 47.88 294 eP **P** **05 07 14.9 -0.8**
MDOK Medeo 48.74 295 eP **P** **05 07 21.4 -1.0**
baz=295
MDOK Medeo 48.74 295 eP **P** **05 07 21.4 -1.0**
TAPN Taplejung 48.86 271 eP **P** **05 07 24.5 +0.9**
TNSS Tian-Shan 48.86 295 eP **P** **05 07 23.2 -0.4**
baz=295
TNSS Tian-Shan 48.86 295 eP **P** **05 07 23.2 -0.4**
BRZS Berezniki 48.87 305 eP **P** **05 07 21.9 -1.2**
comp=Z,5.2nm,0.6s,baz=305
BRZS Berezniki 48.87 305 eP **P** **05 07 21.9 -1.2**
BRZS pmax pmax
comp=Z,5.0nm,0.6s
KUU Kurty 48.91 296 eP **P** **05 07 22.1 -1.4**
comp=Z,4.6nm,0.6s,baz=296
KUU Kurty 48.91 296 eP **P** **05 07 22.1 -1.4**
KUU pmax pmax
comp=Z,5.0nm,0.6s
WHY Whitehorse 49.02 40 P **P** **05 07 26.4 +2.2**
BRVK Borovoye 49.18 310⇓ eP **P** **05 07 25.1 -0.3**
BRVK pmax pmax
comp=Z,5.0nm,1.3s
BRVK Borovoye 49.18 310 P **P** **05 07 24.6 -0.8**
BRVK IAmb IAmb 05 07 25.7
comp=Z,8.8nm,1.4s
BRVK Borovoye 49.18 310 eP **P** **05 07 25.1 -0.3**
JIRN Jiri 49.80 272 eP **P** **05 07 30.6 -0.3**
GUN Gumba 49.89 273 eP **P** **05 07 31.4 -0.1**
comp=Z,13nm,0.4s
RAMN Ramite 49.90 271 eP **P** **05 07 31.4 -0.1**
comp=Z,13nm,0.6s
BTLS Baital 49.93 299 eP **P** **05 07 30.2 -1.1**
baz=298
BTLS Baital 49.93 299 eP **P** **05 07 30.1 -1.1**
SGDS Sogindy 50.22 296 eP **P** **05 07 32.9 -0.6**
comp=Z,2.9nm,0.8s,baz=296
SGDS Sogindy 50.22 296 eP **P** **05 07 32.9 -0.6**
SGDS pmax pmax
comp=Z,3.0nm,0.8s
PKIN Phulchoki 50.43 273 eP **P** **05 07 36.4 +0.8**
comp=Z,6.4nm,0.4s
AAK Ala-Archa 50.66 296 LR LR 05 31 24.5
comp=Z,40nm,18.1s,baz=20,slow=39
AAK Ala-Archa 50.66 296 P **P** **05 07 36.0 -1.0**
AAK pmax pmax
comp=Z,3.0nm,0.6s
AAK Ala-Archa 50.66 296 P **P** **05 07 36.0 -1.0**
AAK IAmb IAmb 05 07 37.0
comp=Z,2.5nm,0.6s
AAK Ala-Archa 50.66 296 eP **P** **05 07 36.0 -1.0**
C36M Paulatuk 50.77 27 P **P** **05 07 37.6 +0.4**
KOLN Koldanda 51.64 274 eP **P** **05 07 44.5 -0.1**
comp=Z,7.9nm,0.5s
DZA Taraz 52.63 297 eP **P** **05 07 50.8 -0.7**
baz=297
DZA Taraz 52.63 297 eP **P** **05 07 50.8 -0.7**
KK31 Karatay Array 53.07 298 P **P** **05 07 54.6 -0.2**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 53.07 298 P **P** **05 07 54.6 -0.2**
KK31 IAmb IAmb 05 07 54.9
comp=Z,5.3nm,0.8s
KKAR Karatay Array 53.07 298 P **P** **05 07 54.5 -0.3**
KKAR Karatay Array 53.07 298 P **P** **05 07 54.5 -0.3**
EUNU Eureka 53.90 10 P **P** **05 07 59.7 -0.7**
EUNU IAmb IAmb 05 08 07.1
comp=Z,2.8nm,0.6s
ARU Arti 54.16 317 LR LR 05 34 55.3
comp=Z,27nm,19.1s,baz=114,slow=40
ARU Arti 54.16 317 c iP **P** **05 08 01.1 -1.4**
ARU *PP **pP** **05 08 11.9 -1.6**
ARU 05 09 59.4
ARU S **S** **05 15 35.5 -1.1**
ARU SS **SKiKP** **05 19 13.1 +2.5**
ARU pmax pmax
comp=Z,5.0nm,1.1s
GAR Garm 55.17 293 P **P** **05 08 09.4 -0.8**
RES Resolute Bay 56.11 16 P **P** **05 08 15.9 -0.4**
RES pmax pmax
comp=Z,13nm,0.6s
RES Resolute Bay 56.11 16 P **P** **05 08 15.9 -0.4**
ABKAR Akbulak array 56.68 309 P **P** **05 08 20.5 -0.2**
MTN Manton Dam 57.02 197 P **P** **05 08 24.5 +1.1**
YKA Yellowknife Ar 57.15 33 P **P** **05 08 23.9 0.0**
comp=Z,6.0nm,0.5s,baz=302,slow=6.8,SNR=16
AKTO Aktyubinsk 57.20 311 LR LR 05 33 35.6
comp=Z,33nm,18.3s,baz=42,slow=37
KIRV Kirov 57.54 322 LR LR 05 33 50.3
comp=Z,25nm,19.3s,baz=10,slow=37
NEEM North Greenlan 59.48 4 i P **P** **05 08 39.5 -0.8**
ARCES ARCESS Array B 59.63 339 P **P** **05 08 40.6 -0.5**
comp=Z,3.7nm,0.9s,baz=50,slow=8.1,SNR=5.8
ARCES ARCESS Array B 59.63 339 P **P** **05 08 42.1 +1.0**
ARCES pmax pmax
comp=Z,13nm,1.3s
ARCES ARCESS Array B 59.63 339 P **P** **05 08 42.1 +1.0**
BELG Belogornoye 61.71 316 LR LR 05 38 47.9
comp=Z,57nm,18.5s,baz=111,slow=39
BELG Belogornoye 61.71 316 d iP **P** **05 08 55.2 -0.2**
BELG pmax pmax
comp=Z,3.0nm,0.8s
WB0 Warramunga Arr 63.20 192 P **P** **05 09 06.3 +0.7**
WB0 IAmb IAmb 05 09 15.0
comp=Z,8.7nm,1.5s
WR0 Warramunga Arr 63.36 192 P **P** **05 09 08.0 +1.3**
WRAB Tennant Creek 63.37 192 i P **P** **05 09 08.9 +2.1**
WRAB pmax pmax
comp=Z,3.0nm,1.1s
WB2 Warramunga Arr 63.38 192 P **P** **05 09 08.5 +1.7**
WB2 IAmb IAmb 05 09 15.6
comp=Z,12nm,1.4s
WRA Warramunga Arr 63.38 192 P **P** **05 09 06.6 -0.2**
comp=Z,0.8nm,0.7s,baz=15,slow=6.8,SNR=9.5
WRA Warramunga Arr 63.38 192 i P **P** **05 09 08.1 +1.2**
WRA pmax pmax
comp=Z,1.0nm,0.7s
FITZ Fitzroy Crossi 63.40 201 P **P** **05 09 08.8 +1.7**
FITZ IAmb IAmb 05 09 15.3
comp=Z,6.1nm,1.4s
NEW Newport 63.77 48 LR LR 05 41 40.5

comp=Z,24nm,18.2s,baz=76,slow=40
GEYT Alibeck 63.81 298 P **P** **05 09 07.8 -2.0**
comp=Z,2.7nm,0.5s,baz=357,slow=10,SNR=3.9
GEYT LR LR 05 39 17.1
comp=Z,106nm,18.3s,baz=65,slow=38
GEYT Alibeck 63.81 298 P **P** **05 09 08.9 -0.9**
PINE Pine Mountain 64.21 53 P **P** **05 09 14.8 +2.3**
PINE IAmb IAmb 05 09 28.6
comp=Z,7.2nm,1.5s
SUMG Summit 64.79 1 *i* P **P** **05 09 15.9 -0.1**
SUMG IAmb IAmb 05 09 16.5
comp=Z,15nm,0.6s
SUMG Summit 64.79 1 P **P** **05 09 16.2 +0.2**
SUMG pmax pmax
comp=Z,6.0nm,0.6s
SUMG Summit 64.79 1 P **P** **05 09 16.2 +0.2**
FIA1 FINESS Array S 65.09 333 P **P** **05 09 17.1 -0.5**
FINES FINESS Array B 65.09 333 P **P** **05 09 16.6 -1.0**
comp=Z,5.8nm,0.5s,baz=47,slow=7.4,SNR=72
FINES LR LR 05 39 07.2
comp=Z,38nm,18.3s,baz=32,slow=37
FINES FINESS Array B 65.09 333 *i* P **P** **05 09 17.2 -0.4**
FINES pmax pmax
comp=Z,6.0nm,0.5s
FINES FINESS Array B 65.09 333 P **P** **05 09 16.5 -1.1**
OBN Obninsk 65.30 323 *i* P **P** **05 09 17.8 -1.3**
OBN *i* 05 09 49.5
OBN pmax pmax
comp=Z,24nm,1.6s
OBN Obninsk 65.30 323 *i* P **P** **05 09 17.8 -1.3**
VRH Novokhopyorsk 65.37 318 *e*P **P** **05 09 18.3 -1.3**
VRH pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 65.83 320 *e*P **P** **05 09 21.5 -1.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 66.61 319 *e*P **P** **05 09 26.5 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSU Vasula 66.99 330 *e*P **P** **05 09 29.4 -0.4**
FFC Flin Flon 67.07 36 P **P** **05 09 30.7 +0.2**
FFC pmax pmax
comp=Z,4.0nm,0.9s
FFC Flin Flon 67.07 36 P **P** **05 09 30.7 +0.2**
FFC IAmb IAmb 05 09 32.1
comp=Z,3.8nm,0.8s
ASAR Alice Springs 67.10 192 P **P** **05 09 31.4 +0.4**
comp=Z,1.0nm,0.7s,baz=7.3,slow=5.9,SNR=12
ASAR Alice Springs 67.10 192 P **P** **05 09 32.4 +1.4**
ASAR Alice Springs 67.10 192 P **P** **05 09 32.4 +1.4**
MTSE Matsula 67.85 331 *e*P **P** **05 09 31.0 -4.3**
AAL Aland 68.04 334 *e*P **P** **05 09 36.0 -0.4**
ICESG Greenland Ices 68.26 2 *i* P **P** **05 09 37.6 -0.6**
ICESG IAmb IAmb 05 09 38.5
comp=Z,6.8nm,0.7s
BOZ Bozeman (W) 68.38 47 P **P** **05 09 40.0 +0.9**
BOZ pmax pmax
comp=Z,3.0nm,0.7s
BOZ Bozeman (W) 68.38 47 P **P** **05 09 40.0 +0.9**
BOZ IAmb IAmb 05 09 40.8
comp=Z,2.7nm,0.7s
NVAR Mina Array Bea 69.02 57 P **P** **05 09 44.9 +1.6**
comp=Z,1.4nm,0.7s,baz=288,slow=6.9,SNR=8.3
NVAR Mina Array Bea 69.02 57 P **P** **05 09 44.2 +0.9**
UPP Uppsala 69.04 335 *e*P **P** **05 09 42.1 -0.6**
NCK Nalchik 69.24 310⇓ *e*P **P** **05 09 45.8 +1.5**
NCK pmax pmax
comp=Z,19nm,0.4s
IDID Didziasalis 69.26 328 *e*P **P** **05 09 44.0 -0.2**
ISAL Salakas 69.31 328 *e*P **P** **05 09 44.0 -0.5**
YHH Holmes Hill 69.32 48 P **P** **05 09 45.2 +0.1**
MNK Minsk 69.39 326 *i* P **P** **05 09 44.5 -0.5**
comp=E,2.0nm,1.0s
MNK *i* P **P** **05 09 44.5 -0.5**
comp=N,15nm,0.8s
MNK *i* P **P** **05 09 44.5 -0.5**
comp=Z,16nm,0.8s
MNK *i* pP **pP** **05 09 55.8 -0.5**
MNK *i* PcP **PcP** **05 10 07.8 -0.5**
MNK *i* PP **PP** **05 12 17.6 -0.4**
MNK *i* PPP PPP 05 13 58.4
MNK *i* S **S** **05 18 46.8 -2.3**
MNK *i* sS **sS** **05 19 11.6 +4.1**
MNK *i* ScS **SKSac** **05 19 40.8 -1.2**
MNK *i* SS **SS** **05 23 15.3 -0.2**
MNK *i* SSS SSS 05 26 32.8
MNK *i* LQ LQ 05 35 28.1
MNK *i* LR LR 05 40 37.6
MNK *i* LRM MLR 05 42 46.0
comp=N,338nm,18.8s
MNK *i* LRM MLR 05 42 52.8
comp=E,15nm,20.3s
MNK *i* LRM MLR 05 42 58.6
comp=Z,40nm,16.6s
IIGN Ignalina 69.44 328 *e*P **P** **05 09 45.0 -0.3**
KIV Kislovodsk 69.45 311⇑P **P** **05 09 46.0 +0.3**
KIV Kislovodsk 69.45 311 *e*P **P** **05 09 46.3 +0.6**
KIV pmax pmax
comp=Z,45nm,1.0s
KIV MLR MLR
comp=Z,42nm,17.0s
KIV Kislovodsk 69.45 311 P **P** **05 09 46.1 +0.5**
KIV Kislovodsk 69.45 311 *e*P **P** **05 09 46.5 +0.8**
KBZ Khabaz 69.47 311 P **P** **05 09 46.1 +0.4**
comp=Z,8.4nm,0.8s,baz=65,slow=3.8,SNR=19
KBZ LR LR 05 43 39.6
comp=Z,25nm,19.4s,baz=35,slow=39
KBZ Khabaz 69.47 311*c* *i*P **P** **05 09 45.7 0.0**
KBZ pmax pmax
comp=Z,11nm,1.0s
KBZ Khabaz 69.47 311 *i* P **P** **05 09 45.7 0.0**
ZEI Tsey 69.52 310 *e*P **P** **05 09 43.4 -2.9**
ZEI pmax pmax
comp=Z,6.0nm,1.1s
NACGM Naroch 69.54 327 *i* P **P** **05 09 45.7 -0.2**
NACGM *i* P **P** **05 09 45.7 -0.2**
NACGM *i* P **P** **05 09 45.7 -0.2**
NACGM *i* PP **PP** **05 12 21.2 +1.9**
NACGM *i* PPP PPP 05 14 03.6
NACGM *i* S **S** **05 18 53.8 +2.9**
NACGM *i* PS PnS 05 19 58.1 +38
NACGM *i* SS SS 05 23 29.2 +11
NACGM *i* SSS SSS 05 26 24.4
NACGM *i* LQ LQ 05 36 52.6
NACGM *i* LR LR 05 41 14.7
H17A Grant Village 69.72 48 P **P** **05 09 49.8 +2.2**
H17A IAmb IAmb 05 09 51.1
comp=Z,2.9nm,0.9s
NC405 NORSAR Array S 69.76 338 P **P** **05 09 46.6 -0.7**
NC204 NORSAR Array S 69.89 339 P **P** **05 09 47.6 -0.5**
NB201 NORSAR Array S 69.93 338 P **P** **05 09 47.9 -0.4**
NOA NORSAR Array B 69.96 338 P **P** **05 09 47.7 -0.8**
comp=Z,5.0nm,0.7s,baz=35,slow=4.6,SNR=34
NOA LR LR 05 45 19.8
comp=Z,26nm,18.1s,baz=10.0,slow=40
PABE Paberze 70.19 329 *e*P **P** **05 09 49.3 -0.5**
NAO01 NORSAR Array S 70.21 338 P **P** **05 09 49.5 -0.4**
COCO West Island 70.62 231 *i* P **P** **05 09 53.0 0.0**
GNI Garni 70.73 307‖ *e*P **P** **05 09 55.7 +2.0**
GNI pmax pmax
comp=Z,6.0nm,0.9s
BW06 Boulder Array 71.35 49 P **P** **05 09 58.1 +0.6**
PD31 Pinedale Array 71.35 49 P **P** **05 09 58.2 +0.7**
PDAR Pinedale Array 71.35 49 P **P** **05 09 58.2 +0.7**
comp=Z,1.1nm,0.5s,baz=240,slow=1.4,SNR=16
AKASG Malin Array Be 71.56 323 P **P** **05 09 57.5 -0.8**
comp=Z,9.9nm,0.6s,baz=41,slow=6.0,SNR=41
AKBB Malin Array Si 71.56 323*c* *i*P **P** **05 09 57.3 -1.0**
AKBB pmax pmax
comp=Z,12nm,0.8s
AKBB Malin Array Si 71.56 323 P **P** **05 09 57.7 -0.6**
KIEV Kiev 71.57 323 P **P** **05 09 56.0 -2.4**
SUW Suwalki 71.61 328 *e*P **P** **05 10 00.8 +2.2**
SUW Suwalki 71.61 328 *e*P **P** **05 09 57.8 -0.7**
RDMU Red Mountain 72.81 50 P **P** **05 10 07.9 +1.7**
RDMU IAmb IAmb 05 10 08.2
comp=Z,3.3nm,0.7s
ULM Lac du Bonnet 72.88 36 P **P** **05 10 05.5 -0.6**
comp=Z,1.7nm,0.7s,baz=37,slow=5.4,SNR=3.7
ULM Lac du Bonnet 72.88 36 P **P** **05 10 05.6 -0.6**
ULM pmax pmax
comp=Z,3.0nm,0.8s
ULM Lac du Bonnet 72.88 36 P **P** **05 10 05.6 -0.6**
ULM IAmb IAmb 05 10 20.2
comp=Z,3.2nm,0.8s
SORM Soroca 73.82 322⇑P **P** **05 10 11.0 -0.7**
SORM Soroca 73.82 322 P **P** **05 10 11.0 -0.7**
BEL Belsk 74.22 328 *e*P **P** **05 10 14.2 +0.2**
KMPD K-Podol'skiy 74.35 323 P **P** **05 10 14.0 -0.8**
PV22 Blue Mesa, Par 74.62 52 P **P** **05 10 17.8 +0.9**
PV22 IAmb IAmb 05 10 18.7
comp=Z,5.2nm,1.1s
MARD Mardin 74.92 307 P **P** **05 10 19.3 +0.7**
KWP Kalwaria Pacla 75.15 326 *e*P **P** **05 10 19.6 +0.1**
KWP Kalwaria Pacla 75.15 326 P **P** **05 10 18.9 -0.6**
KWP pmax pmax
comp=Z,33nm,1.3s
KWP Kalwaria Pacla 75.15 326 P **P** **05 10 18.9 -0.6**
B35A Bob, Littlefor 75.23 36 P **P** **05 10 19.9 0.0**
B35A IAmb IAmb 05 10 20.3
comp=Z,4.8nm,0.8s
BUR08 Bucovina Ar. S 75.60 323 P **P** **05 10 22.4 +0.1**
BURAR Bucovina Array 75.61 323⇑P **P** **05 10 22.4 0.0**
BURAR Bucovina Array 75.61 323 P **P** **05 10 22.3 0.0**
BIZ Bicaz 75.72 322⇑P **P** **05 10 23.0 +0.2**
OJC Ojcow 75.87 327 *e*P **P** **05 10 23.7 +0.1**
OJC Ojcow 75.87 327 P **P** **05 10 23.8 +0.2**
OJC pmax pmax
comp=Z,20nm,1.0s
OJC Ojcow 75.87 327 P **P** **05 10 23.8 +0.2**
CFR Carcaliu 76.10 320⇑P **P** **05 10 24.4 -0.6**
CFR Carcaliu 76.10 320 P **P** **05 10 24.3 -0.6**
CRVS Cervenica-Dubn 76.23 326 *e*P **P** **05 10 25.7 0.0**
CRVS pmax pmax
comp=Z,6.0nm,0.9s
CRVS Cervenica-Dubn 76.23 326 *e*P **P** **05 10 25.7 0.0**
VRI Vrincioaia 76.25 321⇑P **P** **05 10 27.2 +1.4**
VRI Vrincioaia 76.25 321 P **P** **05 10 27.2 +1.4**
NIE Niedzica 76.30 327 *e*P **P** **05 10 27.2 +1.1**
EYMN Ely 76.51 35 P **P** **05 10 27.6 +0.4**
EYMN IAmb IAmb 05 10 28.4
comp=Z,5.8nm,0.9s
KSP Ksiaz 76.71 330 *e*P **P** **05 10 28.6 +0.2**
LANS Liptovska Anna 76.85 327 *e*P **P** **05 10 30.4 +1.2**
LANS pmax pmax
comp=Z,5.0nm,0.8s
LANS Liptovska Anna 76.85 327 *e*P **P** **05 10 30.4 +1.2**
OSTC Ostas 76.98 330 *e*P **P** **05 10 29.7 -0.2**
CHVC Chvalec 77.01 330 *e*P **P** **05 10 29.3 -0.8**
DPC Dobruska-Polom 77.10 329 *e*P **P** **05 10 29.0 -1.6**
DPC Dobruska-Polom 77.10 329 *e*P **P** **05 10 29.0 -1.6**
MORC Moravsky Berou 77.10 328 *e*P **P** **05 10 30.6 -0.1**
MORC Moravsky Berou 77.10 328 P **P** **05 10 30.8 +0.2**
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 77.10 328 P **P** **05 10 30.8 +0.2**
MORC IAmb IAmb 05 10 31.8
comp=Z,5.2nm,0.8s
KRLC Kraliky 77.15 329 *e*P **P** **05 10 30.7 -0.2**
KRLC *e* 05 10 48.3
KRLC Kraliky 77.15 329 *e*P **P** **05 10 30.7 -0.2**
KRLC *ex* x 05 10 48.3
BR131 Keskin Array S 77.27 313*ce*P **P** **05 10 31.7 -0.2**
BR131 Keskin Array S 77.27 313 P **P** **05 10 31.3 -0.6**
BR131 IAmb IAmb 05 10 32.2
comp=Z,2.9nm,0.7s
BRTR Keskin Array B 77.27 313 P **P** **05 10 31.6 -0.2**
comp=Z,2.0nm,0.7s,baz=80,slow=3.4,SNR=12
BRTR Keskin Array B 77.27 313 P **P** **05 10 31.5 -0.4**
VOIR 77.34 322⇑P **P** **05 10 30.9 -1.2**
VOIR 77.34 322 P **P** **05 10 32.5 +0.4**
VOIR pmax pmax
comp=Z,7.0nm,1.3s
DRGR 77.34 324⇑P **P** **05 10 32.0 -0.1**
DRGR 77.34 324 P **P** **05 10 32.0 -0.1**
ECSD EROS Data Cent 77.38 41 P **P** **05 10 32.5 +0.3**
CLL Collm 77.51 332 *i* P **P** **05 10 32.2 -0.6**
CLL *i* PcP **pP** **05 10 43.9 -0.3**
CLL *i* (sP) **sP** **05 10 49.3 +0.8**
CLL *e*PP **PP** **05 13 27.0 -0.1**
CLL Collm 77.51 332 *i* P **P** **05 10 32.2 -0.6**
CLL *i* 05 10 43.9
CLL *i* 05 10 49.3
CLL Collm 77.51 332 P **P** **05 10 33.1 +0.3**
CLL IAmb IAmb 05 10 33.6
comp=Z,10nm,1.0s
ARR Arges 77.58 322⇑P **P** **05 10 33.3 -0.2**
VYHS Vyhne 77.62 327 *e*P **P** **05 10 33.9 +0.3**
VYHS pmax pmax
comp=Z,7.0nm,1.1s
VYHS Vyhne 77.62 327 *e*P **P** **05 10 33.9 +0.3**
JAVC Velka Javorina 77.79 328 *e*P **P** **05 10 35.6 +1.1**
VRAC Vranov 77.85 329⇑P **P** **05 10 34.1 -0.7**
VRAC Vranov 77.85 329 *e*P **P** **05 10 34.8 0.0**
VRAC Vranov 77.85 329 P **P** **05 10 34.1 -0.7**
PRU Pruhonice 78.06 330 *e*P **P** **05 10 35.4 -0.5**
PRU *e* 05 10 47.5
PRU Pruhonice 78.06 330 *e*P **P** **05 10 35.4 -0.5**
PRU *ep*P **pP** **05 10 47.5 +0.2**
KRUC Moravsky 78.12 329 *e*P **P** **05 10 36.2 -0.1**
SMOL Smolenice 78.17 328 *e*P **P** **05 10 37.2 +0.6**
SMOL pmax pmax
comp=Z,5.0nm,1.3s
SMOL Smolenice 78.17 328 *e*P **P** **05 10 37.2 +0.6**
MODS Modra-Piesok 78.34 328 *e*P **P** **05 10 37.6 +0.1**
MODS pmax pmax
comp=Z,7.0nm,1.0s
MODS Modra-Piesok 78.34 328 *e*P **P** **05 10 37.6 +0.1**
SRO Srobarova 78.38 327 *e*P **P** **05 10 38.7 +1.0**
SRO Srobarova 78.38 327 *e*P **P** **05 10 38.7 +1.0**
GZR Gura Zlata 78.40 323⇑P **P** **05 10 36.4 -1.6**
PBCC Pribram 78.51 330 *e*P **P** **05 10 38.0 -0.4**
ESK Eskdalemuir 78.61 342 P **P** **05 10 39.0 +0.2**
ESK pmax pmax
comp=Z,6.0nm,1.1s
ESK Eskdalemuir 78.61 342 P **P** **05 10 39.0 +0.2**
ESK IAmb IAmb 05 10 44.5
comp=Z,5.5nm,1.1s
BZS Buzias 78.73 324⇑P **P** **05 10 39.5 -0.3**
BZS Buzias 78.73 324 P **P** **05 10 39.7 0.0**
BZS pmax pmax
comp=Z,4.0nm,0.9s
CKRC Cesky Krumlov 79.11 330 *e*P **P** **05 10 41.2 -0.6**
KHC Kasperske Hory 79.12 330*d* *i*P **P** **05 10 42.1 +0.3**
KHC pmax pmax
comp=Z,14nm,0.8s
KHC Kasperske Hory 79.12 330 *e*P **P** **05 10 41.5 -0.3**
KHC *ex* x 05 10 59.0
KHC Kasperske Hory 79.12 330 P **P** **05 10 41.8 0.0**
KHC IAmb IAmb 05 10 42.8
comp=Z,6.1nm,0.8s
CONA Conrad Observa 79.25 328 *e*P **P** **05 10 42.1 -0.6**
comp=Z,5.1nm,0.9s
GERES GERESS Array B 79.31 330 P **P** **05 10 42.8 -0.2**
comp=Z,1.2nm,0.7s,baz=32,slow=5.3,SNR=12
GERES LR LR 05 48 45.6
comp=Z,59nm,18.7s,baz=52,slow=38
GERES GERESS Array B 79.31 330 P **P** **05 10 42.6 -0.4**
MDVR Moldovita 79.35 323⇑P **P** **05 10 42.3 -0.8**
WET Wettzell 79.36 331 P **P** **05 10 43.7 +0.5**
WET pmax pmax
comp=Z,5.0nm,1.2s
MOA Molln 79.93 329 *e*P **P** **05 10 45.7 -0.5**
comp=Z,1.2nm,0.6s
VTS Vitosha 80.34 321⇓P **P** **05 10 48.0 -0.7**
VTS Vitosha 80.34 321 P **P** **05 10 49.5 +0.8**
VTS pmax pmax
comp=Z,7.0nm,0.8s
VTS Vitosha 80.34 321 P **P** **05 10 49.5 +0.8**
VTS IAmb IAmb 05 10 50.0
comp=Z,6.9nm,0.8s
SOKA Soboth 80.60 328 *e*P **P** **05 10 47.2 -2.8**
comp=Z,5.3nm,0.7s
DIVS Divibare 80.64 324 P **P** **05 10 50.2 -0.1**
DIVS IAmb IAmb 05 10 57.0
comp=Z,16nm,1.4s
KBA Koelnbreinsper 80.92 329 *e*P **P** **05 10 52.3 +0.5**
comp=Z,7.5nm,0.8s
RAR Rarotonga 81.24 130 LR LR 05 41 47.0
comp=Z,56nm,21.7s,baz=298,slow=32
WATA Walderalm 81.36 330 *e*P **P** **05 10 53.8 -0.3**
comp=Z,7.1nm,1.1s
WTTA Wattenberg 81.40 330 *e*P **P** **05 10 54.6 +0.3**
comp=Z,5.6nm,1.0s
ABTA Abfaltersbach 81.51 329 *e*P **P** **05 10 51.6 -3.2**
comp=Z,7.8nm,1.3s
MOTA Moosalm 81.52 331 *e*P **P** **05 10 54.5 -0.4**
comp=Z,10nm,1.2s
RETA Reutte 81.52 331 *e*P **P** **05 10 54.7 -0.1**
comp=Z,4.4nm,1.0s
SQTA Sankt Quirin 81.59 330 *e*P **P** **05 10 54.9 -0.4**
comp=Z,4.2nm,0.9s
DAVA Damuels 82.01 331 *e*P **P** **05 10 56.3 -1.2**
comp=Z,8.3nm,1.2s
PDG Podgorica 82.30 323 P **P** **05 10 58.7 -0.1**
P40A Paris 82.80 41 P **P** **05 11 02.0 +0.5**
P40A IAmb IAmb 05 11 02.4
comp=Z,3.6nm,0.6s
SOCY Socotra 82.95 280 P **P** **05 11 00.3 -2.5**
SOCY IAmb IAmb 05 11 01.8
comp=Z,6.2nm,0.9s
R40A Maddies Statio 83.65 42 P **P** **05 11 05.9 -0.1**
R40A IAmb IAmb 05 11 06.5
comp=Z,2.6nm,0.7s
SADO Sadowa 84.03 30 LR LR 05 51 03.8
comp=Z,16nm,19.3s,baz=192,slow=37
TX31 Lajitas Ar. Si 84.09 55 P **P** **05 11 09.6 +1.1**
TX31 IAmb IAmb 05 11 22.2
comp=Z,6.1nm,0.9s
TXAR Lajitas Array 84.10 55 P **P** **05 11 09.6 +1.1**
comp=Z,1.0nm,0.7s,baz=290,slow=4.0,SNR=13
L48A N Adams 84.31 35 P **P** **05 11 09.8 +0.6**
TRQ Mont Tremblant 84.38 27 P **P** **05 11 09.3 -0.4**
PLVO Plevna 84.55 29 P **P** **05 11 09.9 -0.6**
PLVO IAmb IAmb 05 11 28.5
comp=Z,6.7nm,1.0s
NRCA Norcia 84.56 327 P **P** **05 11 10.9 +0.3**
OSSC Osservatorio P 84.71 328 P **P** **05 11 10.8 -0.5**
QSPA South Pole Qui 132.64 180 PKPdf **PKiKP** **05 17 52.6 +0.6**
H03N2 Juan Fernandez 144.14 90 T T 07 59 06.8
baz=301,slow=77,SNR=52
H03N3 Juan Fernandez 144.15 90 T T 07 59 12.7
baz=301,slow=77,SNR=45
H03N1 Juan Fernandez 144.16 90 T T 07 59 05.0
baz=301,slow=77,SNR=54
LVC Limon Verde 145.00 66 PKIKP **PKPdf** **05 18 17.1 +1.9**
LVC Limon Verde 145.00 66 PKPdf **PKPdf** **05 18 17.1 +1.9**
PB14 IPOC Station P 145.33 70 PKPdf **PKPab** **05 18 17.4 +1.8**
GO02 Mina Guanaco 146.24 70 PKPbc **PKPab** **05 18 20.1 +1.1**
LCO Las Campanas 147.82 76 PKP2 **PKiKP** **05 18 23.8 -0.7**
LCO Las Campanas 147.82 76 **PKiKP** **05 18 23.8 -0.7**
GO04 Tololo Observa 148.40 78 **PKPbc** **05 18 24.7 +0.7**
MT02 Curacav 149.77 84 **PKPbc** **05 18 26.9 -0.2**
BDFB Brasilia 150.45 27 PKIKP **PKiKP** **05 18 29.8 -0.3**
BDFB Brasilia 150.45 27 **PKiKP** **05 18 29.8 -0.3**
BO02 Sierra Bellavi 150.75 86 **PKiKP** **05 18 30.7 +0.6**
BI02 San Fabin de 151.19 90 **PKiKP** **05 18 31.0 0.0**
PLCA Paso Flores 153.14 98 PKPbc **PKiKP** **05 18 34.9 0.0**
comp=Z,0.9nm,0.8s,baz=265,slow=2.5,SNR=9.7
PLCA Paso Flores 153.14 98 **PKiKP** **05 18 35.8 +0.9**

TEH **06** *05:18:11.9, 36˚.19N×54˚.09E, h8km, ML3.5*
THR **06** *05:18:13.0±0.5, 36˚.06N×54˚.10E, h14km±3km, ML3.3*
ISC 06 05:18:13.3±1.0, 36˚.18N±0˚.04×54˚.11E±0˚.03, h10km, n50, σ1§22/55, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.39**	**325**	*e*Pg		**Pg**	**Pg**	**05 18 19.9**	**-1.3**
IGLO				*e*Sg		**Sg**	**Sg**	**05 18 24.6**	**-1.8**
IANJ	**Anjilo**	**0.73**	**192**	*e*Pg		**Pg**	**Pg**	**05 18 26.7**	**-0.7**
IANJ				*e*				05 18 40.1	
comp=Z,99nm,0.2s									
ILAS	**Lasjerd**	**1.23**	**230**	*e*Pg			**Pb**	**05 18 34.9**	**-1.9**
ILAS				*e*				05 18 36.5	
comp=Z,99nm,0.2s									
IPRN	**Peran**	**1.43**	**273**	*e*Pg		**Pn**	**Pn**	**05 18 38.3**	**-1.2**
IMND	**Minoodasht**	**1.50**	**44**	*e*Pg		**Pn**	**Pn**	**05 18 39.8**	**-0.5**
SHRO	**Shahrood**	**1.55**	**96**	*e*Pg		**Pn**	**Pn**	**05 18 41.6**	**+0.4**
SHRO	**Shahrood**	**1.55**	**96**	*e*Pg		**Pn**	**Pn**	**05 18 41.6**	**+0.4**
DAMV	**Damavand**	**1.82**	**253**	*e*Pg		**Pn**	**Pn**	**05 18 45.2**	**+0.3**
DAMV				*e*Sg		**Sn**	**Sn**	**05 19 09.6**	**+1.4**
DAMV				IAML				05 19 17.9	
comp=E,252nm,0.3s									
DAMV	**Damavand**	**1.82**	**253**	*e*Pg		**Pn**	**Pn**	**05 18 45.3**	**+0.3**
IVRN	**Varamin**	**2.27**	**239**	*e*Pn		**Pn**	**Pn**	**05 18 51.8**	**+0.8**
ISFB	**Sefidab**	**2.38**	**220**	*e*Pn		**Pn**	**Pn**	**05 18 52.0**	**-0.5**
IHSB	**Hasanabad**	**2.42**	**253**	*e*Pn		**Pn**	**Pn**	**05 18 54.5**	**+1.5**
CHTH	**Charan**	**2.43**	**264**	*e*Pn		**Pn**	**Pn**	**05 18 54.4**	**+1.1**
CHTH	**Charan**	**2.43**	**264**	*e*Pn		**Pn**	**Pn**	**05 18 54.4**	**+1.1**
THKV	**Tehran--Karaj**	**2.63**	**265**	*e*Pn		**Pn**	**Pn**	**05 18 57.0**	**+1.0**
THKV				*e*Sg		**Sb**	**Sb**	**05 19 35.0**	**+2.0**
THKV				IAML				05 19 41.5	
comp=N,110nm,0.7s									
THKV	**Tehran--Karaj**	**2.63**	**265**	*e*Pn		**Pn**	**Pn**	**05 18 57.0**	**+1.0**
KRSH	**Karshahi**	**2.73**	**217**	*e*Pn		**Pn**	**Pn**	**05 18 57.2**	**-0.3**
QALM	**Alamut, Qazvin**	**2.81**	**276**	*e*Pn		**Pn**	**Pn**	**05 18 59.6**	**+1.1**
QALM				*e*				05 19 46.1	
comp=Z,99nm,0.5s									
IQOM	**Qom**	**2.81**	**243**	*e*Pn		**Pn**	**Pn**	**05 18 59.1**	**+0.5**
IMHD	**Mahdasht**	**2.83**	**261**	*e*Pn		**Pn**	**Pn**	**05 19 01.1**	**+2.3**
SBZV	**Sabzevar**	**2.84**	**85**	*e*Pn		**Pn**	**Pn**	**05 19 00.2**	**+1.2**
ANAR	**Anarak**	**3.00**	**186**	*e*Pn		**Pn**	**Pn**	**05 19 01.0**	**-0.1**
ANAR				*e*				05 19 11.9	
comp=Z,99nm,0.3s									
TNSJ	**Nastanj**	**3.02**	**136**	*e*Pn		**Pn**	**Pn**	**05 19 01.0**	**-0.3**
IGZV	**Ghazvin**	**3.15**	**275**	*e*Pn		**Pn**	**Pn**	**05 19 05.0**	**+1.8**
ISFR	**Sfrayin**	**3.25**	**73**	*e*Pn		**Pn**	**Pn**	**05 19 06.4**	**+1.7**
ISFR				*e*				05 20 01.5	
comp=Z,99nm,0.6s									
QAM	**Ghamsar**	**3.26**	**223**	*e*Pn		**Pn**	**Pn**	**05 19 04.3**	**-0.4**
IRAZ	**Razeghan**	**3.48**	**258**	*e*Pn		**Pn**	**Pn**	**05 19 08.7**	**+0.9**
IKLH	**Kolahrood**	**3.53**	**217**	*e*Pn		**Pn**	**Pn**	**05 19 08.4**	**-0.1**
IKLH				*e*				05 20 03.6	
comp=Z,99nm,0.4s									
NASN	**Na'in**	**3.54**	**198**	*e*Pn		**Pn**	**Pn**	**05 19 08.5**	**-0.2**
NASN				*e*Sg		**Sb**	**Sb**	**05 19 59.7**	**+0.3**
NASN	**Na'in**	**3.54**	**198**	*e*Pn		**Pn**	**Pn**	**05 19 08.5**	**-0.2**
TKDS	**Koohdasht(Taba**	**3.56**	**135**	*e*Pn		**Pn**	**Pn**	**05 19 09.6**	**+0.8**
TKDS				*e*				05 20 20.3	
comp=Z,99nm,0.6s									
IZEF	**Zefreh**	**3.59**	**205**	*e*Pn		**Pn**	**Pn**	**05 19 08.9**	**-0.4**
ASAO	**Ashtian**	**3.71**	**245**	*e*Pn		**Pn**	**Pn**	**05 19 11.2**	**+0.2**
ASAO				*e*Sg		**Sb**	**Sb**	**05 20 06.8**	**+2.5**
ASAO	**Ashtian**	**3.71**	**245**	*e*Pn		**Pn**	**Pn**	**05 19 11.2**	**+0.2**
IAKL	**Akhelmad**	**3.78**	**82**	*e*Pn		**Pn**	**Pn**	**05 19 13.3**	**+1.4**
TPRV	**Parvadeh(Tabas**	**3.80**	**145**	*e*Pn		**Pn**	**Pn**	**05 19 12.9**	**+0.9**
TPRV				*e*				05 20 29.9	
comp=Z,99nm,0.7s									
ICHK	**Chekchek**	**3.93**	**176**	*e*Pn		**Pn**	**Pn**	**05 19 14.7**	**+0.7**
IPAY	**Payeh**	**3.96**	**85**	*e*Pn		**Pn**	**Pn**	**05 19 14.8**	**+0.4**
IGAR	**Gharneh**	**4.14**	**205**	*e*Pn		**Pn**	**Pn**	**05 19 17.2**	**+0.4**
ISAD	**Sadrabad**	**4.27**	**185**	*e*Pn		**Pn**	**Pn**	**05 19 18.8**	**+0.1**
HAGD	**Aghdareh**	**4.27**	**253**	*e*Pn		**Pn**	**Pn**	**05 19 21.0**	**+2.3**
IPIR	**Pirpir**	**4.38**	**218**	*e*Pn		**Pn**	**Pn**	**05 19 22.4**	**+2.1**
IKRD	**Kardeh**	**4.40**	**81**	*e*Pn		**Pn**	**Pn**	**05 19 22.2**	**+1.8**
IRAM	**Ramesheh**	**4.59**	**199**	*e*Pn		**Pn**	**Pn**	**05 19 23.7**	**+0.7**
IMEH	**Mehriz**	**4.80**	**175**	*e*Pn		**Pn**	**Pn**	**05 19 26.0**	**+0.1**
AFRZ	**Afriz**	**4.88**	**123**	*e*Pn		**Pn**	**Pn**	**05 19 28.4**	**+1.4**
HSAM	**Samen**	**4.92**	**248**	*e*Pn		**Pn**	**Pn**	**05 19 29.8**	**+2.3**
IMON	**Monand**	**5.46**	**121**	*e*Pn		**Pn**	**Pn**	**05 19 37.1**	**+2.0**
IKOO	**Kooshah**	**5.52**	**131**	*e*Pn		**Pn**	**Pn**	**05 19 37.0**	**+1.2**
KLNJ	**Kolanjah**	**5.57**	**203**	*e*Pn		**Pn**	**Pn**	**05 19 37.5**	**+0.9**

IDC 06 05:26:32.1±3.2, 54˚.39N×86˚.99E, h0km, mb1 2.9/2, mb1mx2.8/49, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=30.2km s-min=18.5km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**252**	*i*				05 32 50.0	
baz=70,slow=315,SNR=1.4									
ZALV	**Zalesovo Beam**	**1.35**	**252**	Pg		Pg	Pg	05 26 56.0	-1.9
ZALV	1.9nm,0.3s,baz=70,slow=17,SNR=14			Lg		Lg	Lg	05 27 15.2	
ZALV	1.3nm,0.3s,baz=68,slow=25,SNR=8.0			Rg		Rg	Rg	05 27 24.4	
KURBB	3.7nm,0.6s,baz=69,slow=25,SNR=3.9 **Kurchatov Arra**	**6.40**	**237**	Pn		Pn	Pn	05 28 08.9	+1.4
MKAR	0.1nm,0.3s,baz=54,slow=14,SNR=12 **Makanchi Array**	**8.17**	**203**	Pn		Pn	Pn	05 28 32.4	+0.4
	0.1nm,0.3s,baz=26,slow=10,SNR=5.6								

WEL 06 05:33:06.3±0.7, 37˚S±4˚×17˚8E±˚, h125km±6km, M3.6/60, ML3.8/8, MLv3.6/60, Error ellipse: s-maj=0.0km s-min=0.0km az=64.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.75**	**139**	P	Pn	05 33 26.8	+0.3
MXZ				S	Sn	05 33 43.9	+2.0
HAZ	**Te Kaha**	**0.77**	**174**	P	Pn	05 33 26.6	0.0
HAZ				S	Sn	05 33 41.9	-0.1
PKGZ	**Pakihiroa**	**0.95**	**161**	P	Pn	05 33 29.0	+0.7
PKGZ				S	Sn	05 33 46.2	+1.2
RUGZ	**Raukumara Rang**	**0.97**	**181**	P	Pn	05 33 28.0	-0.6
WMGZ	**Waiomatatini S**	**1.01**	**145**	P	Pn	05 33 29.5	+0.7
WMGZ				S	Sn	05 33 47.6	+1.7
WHRZ	**Whale Island**	**1.03**	**213**	P	Pn	05 33 29.5	+0.5
PUZ	**Puketiti**	**1.17**	**157**	P	Pn	05 33 30.7	+0.2
PUZ				S	Sn	05 33 49.5	+0.7
MYRZ	**Mayor Island**	**1.19**	**256**	P	Pn	05 33 30.5	-0.2
TWGZ	**Tauwhareparae**	**1.21**	**169**	P	Pn	05 33 31.7	+0.9
TWGZ				S	Sn	05 33 51.0	+1.5
OPRZ	**Ohinepanea**	**1.24**	**226**	P	Pn	05 33 30.9	-0.2
MARZ	**Manawahe**	**1.28**	**219**	P	Pn	05 33 31.6	0.0
EDRZ	**Edgecumbe**	**1.34**	**214**	P	Pn	05 33 32.6	+0.3
MWZ	**Matawai**	**1.35**	**185**	P	Pn	05 33 32.4	+0.1
MWZ				S	Sn	05 33 52.5	+0.3
URZ	**Urewera**	**1.35**	**200**	P	Pn	05 33 32.2	0.0
URZ				S	Sn	05 33 51.8	-0.2
TGRZ	**Tauranga**	**1.35**	**237**	P	Pn	05 33 32.1	-0.2
TKGZ	**Te Karaka**	**1.45**	**175**	P	Pn	05 33 34.0	+0.5
TKGZ				S	Sn	05 33 54.4	+0.3
RAGZ	**Rawiri**	**1.52**	**188**	P	Pn	05 33 34.8	+0.5
RAGZ				S	Sn	05 33 56.8	+1.2
OMRZ	**Omania**	**1.53**	**223**	P	Pn	05 33 34.5	+0.1
KARZ	**Kaharoa**	**1.54**	**228**	P	Pn	05 33 34.6	+0.1
CNGZ	**Carnagh Statio**	**1.55**	**165**	P	Pn	05 33 35.0	+0.5
KUZ	**Kuaotunu**	**1.60**	**278**	P	Pn	05 33 34.4	-0.7
KMRZ	**Kaimai**	**1.63**	**238**	P	Pn	05 33 35.4	-0.1
RRRZ	**Republican Roa**	**1.64**	**214**	P	Pn	05 33 36.6	+0.9
MUGZ	**Murupara**	**1.65**	**206**	P	Pn	05 33 35.9	+0.1
MUGZ				S	Sn	05 33 58.1	-0.2
UTU	**Utuhina**	**1.68**	**225**	P	Pn	05 33 37.0	+0.9
RIGZ	**Rimuhau**	**1.71**	**178**	P	Pn	05 33 36.4	-0.2
RIGZ				S	Sn	05 33 59.8	+0.1
RTZ	**Ruatahuna**	**1.72**	**199**	P	Pn	05 33 36.3	-0.3
RTZ				S	Sn	05 33 59.7	-0.1
HSRZ	**Hossack Road**	**1.75**	**221**	P	Pn	05 33 37.9	+1.0
HRRZ	**Handcock Road**	**1.79**	**218**	P	Pn	05 33 38.0	+0.6
SNGZ	**Shannon Statio**	**1.81**	**189**	P	Pn	05 33 37.6	-0.1
SNGZ				S	Sn	05 34 02.5	+0.9
PRRZ	**Plateau Road**	**1.82**	**214**	P	Pn	05 33 38.2	+0.4
GRRZ	**Galatos Road**	**1.85**	**222**	P	Pn	05 33 38.7	+0.6
TOZ	**Tahuroa Road**	**1.89**	**246**	P	Pn	05 33 38.6	0.0
ALRZ	**Allen Road**	**1.91**	**214**	P	Pn	05 33 39.1	+0.4
PRGZ	**Paritu Road**	**1.94**	**175**	P	Pn	05 33 38.7	-0.5
GRZ	**Great Barrier**	**1.94**	**292**	P	Pn	05 33 38.5	-0.7
WPRZ	**Whakapapatarin**	**1.95**	**218**	P	Pn	05 33 40.0	+0.7
MTHZ	**Maungataniwha**	**1.98**	**200**	P	Pn	05 33 39.2	-0.5
RAHZ	**Arahi**	**1.98**	**194**	P	Pn	05 33 39.7	0.0
RAHZ				S	Sn	05 34 05.8	+0.4
KNZ	**Kokohu**	**2.03**	**180**	P	Pn	05 33 39.7	-0.5
WIAZ	**Waiheke Island**	**2.06**	**275**	P	Pn	05 33 40.5	-0.2
MRHZ	**Matea Rd**	**2.10**	**208**	P	Pn	05 33 41.1	-0.1
KUTZ	**Kaahu Road**	**2.10**	**224**	P	Pn	05 33 41.9	+0.7
WHHZ	**Waihua**	**2.11**	**190**	P	Pn	05 33 41.2	-0.1
WHHZ				S	Sn	05 34 08.5	+0.2
MHGZ	**Mahia Peninsul**	**2.17**	**175**	P	Pn	05 33 41.7	-0.3
TLZ	**Tolley Road**	**2.17**	**231**	P	Pn	05 33 42.5	+0.4
ETAZ	**East Tamaki Re**	**2.21**	**270**	P	Pn	05 33 42.8	+0.2
NMHZ	**Naumai**	**2.21**	**198**	P	Pn	05 33 42.9	+0.2
NMHZ				S	Sn	05 34 11.4	+0.7
MBAZ	**Motutapu North**	**2.25**	**275**	P	Pn	05 33 43.4	+0.4
HATZ	**Hinemaiaia**	**2.28**	**213**	P	Pn	05 33 43.1	-0.1
WATZ	**Wairara**	**2.31**	**221**	P	Pn	05 33 44.6	+0.7
ARHZ	**Aropaoanui**	**2.33**	**193**	P	Pn	05 33 43.7	-0.4
BKZ	**Black Stump Fm**	**2.37**	**203**	P	Pn	05 33 44.1	-0.5
RATZ	**Rangitukua**	**2.41**	**218**	P	Pn	05 33 45.7	+0.6
RITZ	**Rihia Road**	**2.45**	**216**	P	Pn	05 33 46.5	+0.8
KATZ	**Kakaramea**	**2.53**	**218**	P	Pn	05 33 47.2	+0.4
MCHZ	**McNeill Hill**	**2.57**	**197**	P	Pn	05 33 46.7	-0.5
KWHZ	**Kaweka Forest**	**2.63**	**202**	P	Pn	05 33 46.9	-1.0
TMVZ	**Te Maari**	**2.64**	**216**	P	Pn	05 33 48.1	0.0
ETVZ	**East Tongariro**	**2.65**	**215**	P	Pn	05 33 48.3	0.0
KRVZ	**Karewarewa**	**2.65**	**217**	P	Pn	05 33 48.6	+0.3
WTVZ	**West Tongariro**	**2.69**	**217**	P	Pn	05 33 49.1	+0.3
OTVZ	**Oturere**	**2.69**	**216**	P	Pn	05 33 48.9	0.0
CKHZ	**Cape Kidnapper**	**2.71**	**190**	P	Pn	05 33 47.7	-1.2
HIZ	**Hauiti**	**2.71**	**235**	P	Pn	05 33 49.9	+0.9
NGZ	**Ngauruhoe**	**2.72**	**215**	P	Pn	05 33 49.6	+0.3
TWVZ	**Taurewa**	**2.73**	**220**	P	Pn	05 33 49.7	+0.3
TUVZ	**Tukino**	**2.78**	**215**	P	Pn	05 33 50.4	+0.4
BHHZ	**Black Hill Sta**	**2.80**	**207**	P	Pn	05 33 49.0	-1.2
FWVZ	**Far West T-bar**	**2.82**	**216**	P	Pn	05 33 50.6	0.0
WHVZ	**Whangaehu Hut**	**2.82**	**215**	P	Pn	05 33 50.5	-0.1
KRHZ	**Kereru**	**2.84**	**201**	P	Pn	05 33 49.0	-1.7
MOVZ	**Moawhango**	**2.85**	**212**	P	Pn	05 33 49.6	-1.2
TRVZ	**Turoa**	**2.86**	**216**	P	Pn	05 33 51.6	+0.5
WNVZ	**Wahianoa**	**2.86**	**215**	P	Pn	05 33 50.3	-0.6
KAHZ	**Kahuranaki**	**2.87**	**193**	P	Pn	05 33 49.9	-1.2
PKVZ	**Pokaka**	**2.94**	**218**	P	Pn	05 33 52.1	0.0
MTVZ	**Mangateitei**	**2.96**	**215**	P	Pn	05 33 51.7	-0.5
PXZ	**Pawanui**	**3.10**	**192**	P	Pn	05 33 52.0	-2.0
PNHZ	**Pukenui**	**3.14**	**201**	P	Pn	05 33 52.3	-2.3
VRZ	**Vera Road**	**3.14**	**226**	P	Pn	05 33 56.0	+1.4
WPHZ	**Waipukurau**	**3.22**	**197**	P	Pn	05 33 53.5	-2.0
TSZ	**Takapari Road**	**3.35**	**205**	P	Pn	05 33 54.8	-2.5
PRHZ	**Porangahau**	**3.37**	**194**	P	Pn	05 33 55.3	-2.3
WAZ	**Wanganui**	**3.48**	**217**	P	Pn	05 33 58.4	-0.6
DVHZ	**Dannevirke**	**3.51**	**199**	P	Pn	05 33 56.6	-2.8
LREZ	**Lake Rotokare**	**3.57**	**225**	P	Pn	05 34 00.9	+0.7
ANWZ	**Angora Road**	**3.59**	**195**	P	Pn	05 33 58.1	-2.3
NEZ	**North Egmont**	**3.63**	**230**	P	Pn	05 34 02.8	+1.7
PKE	**Pukeiti**	**3.66**	**232**	P	Pn	05 34 02.4	+1.0
POWZ	**Post Office Ro**	**3.71**	**203**	P	Pn	05 33 59.4	-2.7
PRWZ	**Pori Road**	**3.80**	**200**	P	Pn	05 34 00.6	-2.7
BFZ	**Birch Farm**	**3.85**	**197**	P	Pn	05 34 00.8	-3.1
MRZ	**Mangatainoka R**	**4.02**	**204**	P	Pn	05 34 02.8	-3.3
TIWZ	**Tintock**	**4.03**	**200**	P	Pn	05 34 03.4	-3.0
CPWZ	**Castlepoint**	**4.08**	**196**	P	Pn	05 34 04.3	-2.6
HOWZ	**Holdsworth Sta**	**4.25**	**203**	P	Pn	05 34 05.5	-3.8
OGWZ	**Otaki Gorge**	**4.29**	**206**	P	Pn	05 34 06.4	-3.4
TMWZ	**Te Maipa**	**4.34**	**198**	P	Pn	05 34 06.9	-3.5
KIW	**Kapiti Island**	**4.43**	**208**	P	Pn	05 34 08.1	-3.5
MTW	**Mount Morrison**	**4.50**	**202**	P	Pn	05 34 08.4	-4.2
CAW	**Cannon Point**	**4.59**	**206**	P	Pn	05 34 09.7	-4.1
TRWZ	**Traveller**	**4.67**	**199**	P	Pn	05 34 10.7	-4.0
PAWZ	**Paruwai Farm**	**4.72**	**201**	P	Pn	05 34 11.1	-4.4
MSWZ	**Moikau Station**	**4.81**	**202**	P	Pn	05 34 12.2	-4.4
BHW	**Baring Head**	**4.92**	**206**	P	Pn	05 34 13.8	-4.4
PLWZ	**Palliser**	**4.95**	**202**	P	Pn	05 34 13.7	-4.8
TCW	**Tory Channel**	**4.98**	**211**	P	Pn	05 34 14.6	-4.3
TUWZ	**Tuamarina**	**5.30**	**212**	P	Pn	05 34 19.1	-4.1
NNZ	**Nelson**	**5.39**	**217**	P	Pn	05 34 20.6	-3.8
QRZ	**Quartz Range**	**5.55**	**225**	P	Pn	05 34 23.1	-3.5
BSWZ	**Blackbirch Sta**	**5.57**	**211**	P	Pn	05 34 22.3	-4.5
THZ	**Tophouse**	**6.04**	**216**	P	Pn	05 34 28.7	-4.6
KHZ	**Kahutara**	**6.29**	**209**	P	Pn	05 34 31.6	-4.9
GVZ	**Greta Valley S**	**6.96**	**209**	P	Pn	05 34 40.2	-5.4
INZ	**Inchbonnie**	**7.47**	**218**	P	Pn	05 34 47.6	-4.9
OKCZ	**Okains Bay**	**7.59**	**206**	P	Pn	05 34 48.6	-5.6
AKCZ	**Akaroa Harbour**	**7.78**	**206**	P	Pn	05 34 51.4	-5.2
ARCZ	**Arundel**	**8.54**	**213**	P	Pn	05 35 01.6	-5.3
TMZ	**Timaru**	**8.96**	**212**	P	Pn	05 35 06.8	-5.7
ODZ	**Otahua Downs**	**9.64**	**211**	P	Pn	05 35 15.3	-6.5
JCZ	**Jackson Bay**	**9.79**	**221**	P	Pn	05 35 24.9	+1.0

*FUNV **06** 05:39:35.4, 10.˙63N× 71.˙00W, h6ᵏᵐ, MW3.3*

ISC 06 05:39:35.0±1.8, 10.˙66N±0.˙04× 71.˙01W±0.˙03, h16ᵏᵐ±14ᵏᵐ, n12, σ1§13/22, Lake Maracaibo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	**Dabajuro**	**0.45**	**54**	*eP*	**Pb**	**05 39 44.7**	**+0.1**
DABV				*eS*	**Sb**	**05 39 51.8**	**+0.7**
SIQV	**Siquisique**	**1.18**	**90**	*eP*	**Pg**	**05 39 57.6**	**-0.3**
SIQV				*eS*	**Sn**	**05 40 12.2**	**-0.5**
CURV	**Curarigua**	**1.21**	**122**	*eP*	**Pn**	**05 39 57.4**	**-0.1**
CURV				*eS*	**Sb**	**05 40 12.9**	**-0.3**
URIC	**Uribia, Colomb**	**1.42**	**317**	*eP*	**Pn**	**05 39 59.1**	**-1.1**
URIC				*eS*	**Sn**	**05 40 17.8**	**-0.8**
URIC				*i*		05 40 19.2	
	comp=Z,117nm,0.2s						
MCQV	**Machiques**	**1.62**	**248**	*eP*	**Pn**	**05 40 03.3**	**+0.3**
MCQV				*eS*	**Sb**	**05 40 25.0**	**+0.2**
MONV	**Montecano**	**1.64**	**38**	*eP*	**Pn**	**05 40 03.9**	**+0.6**
MONV				*eS*	**Sb**	**05 40 26.5**	**+1.0**
SOCV	**Socops**	**2.37**	**176**	*eP*	**Pn**	**05 40 13.2**	**0.0**
SOCV				*eS*	**Sn**	**05 40 42.6**	**+0.6**
CAPV	**Capacho**	**3.06**	**205**	*eP*	**Pn**	**05 40 24.2**	**+1.2**
CAPV				*eS*	**Sn**	**05 40 58.9**	**-0.6**
OCAC	**Ocana**	**3.31**	**224**	*eS*	**Sb**	**05 41 11.3**	**-2.5**
OCAC				*i*		05 41 17.4	
	comp=Z,27nm,0.4s						
BAUV	**El Baul**	**3.38**	**120**	*eP*	**Pn**	**05 40 26.8**	**-0.4**
BAUV				*eS*	**Sn**	**05 41 06.7**	**-0.5**
SMLC	**San Martn de**	**3.54**	**239**	*eP*	**Pn**	**05 40 32.4**	**+3.0**
SMLC				*eS*	**Sb**	**05 41 19.3**	**-0.9**
PAMC	**Pamplona, Colo**	**3.70**	**207**	*eS*	**Sb**	**05 41 25.8**	**+0.7**
PAMC				*i*		05 41 41.5	
	comp=Z,3.3nm,0.7s						

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*ISN **06** 06:06:20.7±1.1, 33.˙09N× 46.˙10E, h14ᵏᵐ±4ᵏᵐ, ML3.5*
*TEH **06** 06:06:21.3, 32.˙96N× 45.˙95E, h20ᵏᵐ, ML3.3*

ISC 06 06:06:21.6±1.8, 32.˙97N±0.˙07× 46.˙03E±0.˙06, h4ᵏᵐ±17ᵏᵐ, n15, σ0§95/19, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.16**	**330**	*eP*	**Pg**	**06 06 24.6**	**-0.2**
	baz=100						
IBDR				*eSg*	**Sg**	**06 06 26.7**	**-0.3**
IBDR				AML	AML	06 06 31.1	
	comp=E,9μm,0.4s						
IBDR				AML	AML	06 06 34.1	
	comp=N,7μm,0.5s						
DHL1	**Dehloran**	**1.09**	**105**	*eP*	**Pn**	**06 06 43.8**	**+0.1**
DHL1				*eSg*	**Sn**	**06 06 59.9**	**+0.7**
BHD	**Baghdad**	**1.42**	**283**	*eP*	**Pg**	**06 06 49.0**	**+0.3**
BHD				*eSn*	**Sg**	**06 07 08.0**	**+0.9**
BHD				AML	AML	06 07 14.4	
	comp=E,782nm,0.4s						
IGHG	**Ghaleghazi**	**1.43**	**18**	*eP*	**Pg**	**06 06 48.7**	**-0.3**
IGHG				*eSg*	**Sg**	**06 07 10.2**	**+2.6**
IGHG				*e*		06 07 23.5	
	comp=Z,99nm,0.9s						
KCHF	**Cheshme Sefid,**	**1.55**	**33**	*eP*	**Pb**	**06 06 50.4**	**-0.6**
KCHF				*e*		06 07 13.9	
	comp=Z,99nm,0.9s						
IKFM	**Kafar-mosalman**	**1.62**	**70**	*eP*	**Pb**	**06 06 51.8**	**-0.3**
IKFM				*e*		06 07 21.8	
	comp=Z,99nm,0.9s						
KER	**Kermanshah**	**1.69**	**33**	*eP*	**Pb**	**06 06 52.5**	**-0.8**
IDHR	**Dehrash**	**1.75**	**10**	*eP*	**Pb**	**06 06 53.4**	**-1.0**
IDOB	**Doab**	**1.98**	**65**	*eP*	**Pn**	**06 06 56.1**	**+0.1**
IKMR	**Kamar-syah**	**2.05**	**74**	*eP*	**Pb**	**06 06 57.6**	**-1.7**
IKMR				*e*		06 07 37.6	
	comp=Z,99nm,0.9s						
ILIN	**Lien**	**2.10**	**22**	*eP*	**Pn**	**06 06 57.5**	**-0.2**
ILIN				*e*		06 07 41.7	
	comp=Z,99nm,1.0s						
IBZA	**Bozab**	**2.14**	**45**	*eP*	**Pn**	**06 06 58.4**	**+0.1**
IBZA				*e*		06 07 36.2	
	comp=Z,99nm,0.7s						
HSAM	**Samen**	**2.48**	**59**	*eP*	**Pn**	**06 07 02.9**	**-0.1**
IALM	**Almabolaq**	**2.59**	**43**	*eP*	**Pn**	**06 07 04.5**	**-0.1**
HAGD	**Aghdareh**	**3.18**	**54**	*eP*	**Pn**	**06 07 12.9**	**+0.3**
HAGD				*e*		06 08 05.9	
	comp=Z,99nm,0.6s						

*IDC **06** 06:06:47.0±0.8, 0.˚73N× 29.˚44W, h0ᵏᵐ, mb4.0/9, mb1 4.3/10, mb1mx3.9/43, mbtmp4.1/10, ML4.6/1, MS3.5/22, Ms1 3.5/22, ms1mx3.4/32, Error ellipse: s-maj=44.1km s-min=14.4km az=142.0*
*NEIC **06** 06:06:48.2±1.6, 0.˚7N±0.˚1× 29.˚42W±0.˚09, h10ᵏᵐ±1ᵏᵐ, mb4.7/16, Error ellipse: s-maj=25.7km s-min=4.1km az=142.0*

ISC 06 06:06:48.1±0.6, 0.˚8N±0.˚1× 29.˚46W±0.˚09, h10ᵏᵐ, n89, σ1§63/59, mb4.5/15, MS3.5/21, 1D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.17**	**224**	Pn	**Pn**	**06 08 58.7**	**-2.0**
	5.5nm,0.3s,baz=30,slow=14,SNR=88						
RCBR				Sn	Sn	06 10 30.9	-13
	1.4nm,0.3s,baz=308,slow=19,SNR=2.8						
RCBR				LR	LR	06 11 53.3	
	comp=Z,401nm,18.8s,baz=76,slow=33						
RCBR	**Riachuelo**	**9.17**	**224**		**Pn**	**06 08 58.9**	**-1.8**
RCBR	**Riachuelo**	**9.17**	**224**	*eP*	**Pn**	**06 08 58.5**	**-2.2**
NBPV	**Pedro Velho**	**9.20**	**219**	*eP*	**Pn**	**06 08 57.9**	**-3.1**
NBPA	**Parau_RN**	**10.01**	**230**	*eP*	Pn	06 09 08.1	-4.0
NBCL	**Cascavel-CE**	**10.12**	**241**	*eP*	Pn	06 09 09.4	-4.2
NBRF	**Rio Formoso -**	**10.94**	**211**	*eP*	**Pn**	**06 09 23.1**	**-1.8**
NBLI	**Livramento-PB**	**10.99**	**223**	*eP*	**Pn**	**06 09 23.4**	**-2.2**
NBMO	**Morrinhos-CE**	**11.32**	**249**	*eP*	Pn	06 09 25.5	-4.6
NBMA	**Muriti-CE**	**12.30**	**229**	*eP*	**Pn**	**06 09 40.9**	**-2.6**
NBAN	**Anadia - AL**	**12.38**	**213**	*eP*	**Pn**	**06 09 43.9**	**-0.7**
NBTA	**Tacaratu-PE**	**13.03**	**221**	*eP*	**Pn**	**06 09 52.2**	**-1.3**
NBLA	**Lagarto - SE**	**14.31**	**215**	*eP*	**Pn**	**06 10 10.1**	**-0.9**
ROSB	**Rosrio**	**15.10**	**256**	*eP*	**Pn**	**06 10 16.0**	**-5.8**
SACV	**Santiago Islan**	**15.26**	**22**	Pn	**Pn**	**06 10 23.7**	**-0.2**
H10N3	**ASCENSION HYDR**	**17.18**	**120**	T	T	06 28 41.4	
	baz=299,slow=75,SNR=568						
H10N2	**ASCENSION HYDR**	**17.19**	**120**	T	T	06 28 40.3	
	baz=299,slow=75,SNR=538						
H10N1	**ASCENSION HYDR**	**17.20**	**120**	T	T	06 28 40.8	
	baz=299,slow=75,SNR=1000						
ASCN	**Ascension**	**17.35**	**120**	Pn	**Pn**	**06 10 49.6**	**-1.1**
ASCN				IAmb	IAmb	06 10 57.5	
	comp=Z,84nm,1.1s						
GDU01	**Guandu, BA**	**17.53**	**215**	*eP*	**Pn**	**06 10 52.9**	**0.0**
H10S3	**ASCENSION HYDR**	**17.61**	**124**	T	T	06 29 14.8	
	baz=300,slow=74,SNR=155						
H10S2	**ASCENSION HYDR**	**17.63**	**123**	T	T	06 29 16.2	
	baz=280,slow=74,SNR=82						
NBIT	**Itapeh - BA**	**18.45**	**212**	*eP*	**Pn**	**06 11 05.8**	**+1.7**
TMAB	**Tom-Au,PA,Br**	**18.89**	**261**	*eP*	**P**	**06 11 08.0**	**-1.0**
SDBA	**SAO DESIDERIO**	**20.15**	**229**	*eP*	**P**	**06 11 22.4**	**-0.4**
SMTB	**Santa Maria do**	**20.43**	**242**	*eP*	**P**	**06 11 25.3**	**-0.6**
NAN01	**Guarapari, ES**	**21.25**	**209**	*eP*	**P**	**06 11 34.2**	**-0.5**
PRPB	**Parauapebas**	**21.46**	**251**	*eP*	**P**	**06 11 35.8**	**-1.1**
JANB	**Januaria**	**21.51**	**222**	*eP*	**P**	**06 11 36.7**	**-0.8**
SJMB	**Sao Joao De Ma**	**22.51**	**210**	*eP*	**P**	**06 11 50.9**	**+2.8**
MCPB	**Macapa, AP**	**22.63**	**267**	*eP*	**P**	**06 11 49.0**	**-0.5**
RIB01	**Linhares ES**	**22.65**	**208**	*eP*	**P**	**06 11 52.3**	**+2.7**
PEXB	**Peixe**	**22.66**	**235**	*eP*	**P**	**06 11 50.2**	**+0.4**
DIAM	**Diamantina, MG**	**23.53**	**216**	*eP*	**P**	**06 11 59.4**	**+0.5**
BDFB	**Brasilia**	**24.53**	**228**	P	**P**	**06 12 08.3**	**0.0**
	comp=Z,10nm,0.8s,baz=58,slow=9.2,SNR=19						
BDFB				LR	LR	06 20 44.4	
	comp=Z,166nm,19.9s,baz=53,slow=34						
BDFB	**Brasilia**	**24.53**	**228**	P	**P**	**06 12 07.9**	**-0.3**
BDFB				IAmb	IAmb	06 12 09.1	
	comp=Z,10.0nm,0.8s						
MALB	**Monte Alegre**	**24.94**	**264**	*eP*	**P**	**06 12 12.9**	**+1.0**
LIC	**Lamto**	**24.97**	**77**	*eP*	**P**	**06 12 07.3**	**-4.9**
	comp=Z,36nm,1.4s						
TIC	**Toumodi**	**25.07**	**76**	*eP*	P	06 12 06.2	-6.9
SNDB	**Serra Nova Dou**	**25.10**	**239**	*eP*	**P**	**06 12 13.8**	**+0.4**
DBIC	**Dimbokro**	**25.23**	**76**	P	**P**	**06 12 15.2**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=241,slow=13,SNR=4.5						
DBIC				LR	LR	06 20 16.7	
	comp=Z,84nm,19.5s,baz=234,slow=32						
DBIC	**Dimbokro**	**25.23**	**76**	IAmb	IAmb	06 12 23.5	
	comp=Z,15nm,1.0s						
KIC	**Kosan Boka**	**25.28**	**77**	*eP*	P	06 12 04.9	-10
	comp=Z,48nm,1.6s						
CAM01	**Campos-RJ**	**25.41**	**207**	*eP*	**P**	**06 12 18.5**	**+2.5**
IPMB	**Ipameri, GO**	**26.21**	**224**	*eP*	**P**	**06 12 25.1**	**+1.6**
BSCB	**Bom Sucesso**	**26.30**	**214**	*eP*	**P**	**06 12 25.3**	**+1.0**
ITTB	**Itaituba**	**26.74**	**259**	*eP*	**P**	**06 12 28.1**	**-0.1**
NPGB	**Novo Progresso**	**26.98**	**253**	*eP*	**P**	**06 12 30.4**	**0.0**
KOWA	**Kowa**	**28.62**	**60**	LR	LR	06 22 38.8	
	comp=Z,118nm,18.0s,baz=216,slow=33						
PTGA	**Pitinga**	**30.55**	**267**	LR	LR	06 23 28.6	
	comp=Z,81nm,18.3s,baz=86,slow=33						
BOAV	**Boa Vista**	**31.10**	**273**	*eP*	**P**	**06 13 08.3**	**+1.2**
TORD	**Torodi Ar. Bea**	**33.22**	**67**	P	**P**	**06 13 25.0**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=274,slow=5.5,SNR=3.7						
TORD				LR	LR	06 24 52.7	
	comp=Z,73nm,20.3s,baz=275,slow=33						
TORD	**Torodi Ar. Bea**	**33.22**	**67**	IAmb	IAmb	06 13 30.7	
	comp=Z,2.0nm,1.2s						
AQDB	**Aquidauana**	**33.24**	**229**	*eP*	**P**	**06 13 26.7**	**+0.9**
VILB	**Vilhena**	**33.39**	**245**	*eP*	**P**	**06 13 28.3**	**+1.1**
PTLB	**Pontes e Lacer**	**33.46**	**240**	*eP*	**P**	**06 13 28.1**	**+0.3**
SAML	**Samuel**	**34.95**	**253**	P	**P**	**06 13 41.6**	**+0.9**
SAML				IAmb	IAmb	06 13 42.3	
	comp=Z,7.7nm,1.1s						
SIV	**San Ignacio**	**35.37**	**241**	P	**P**	**06 13 45.1**	**+0.8**
	baz=93,slow=11						
SIV				LR	LR	06 27 44.7	
	comp=Z,322nm,18.0s,baz=106,slow=36						
CPUP	**Villa Florida**	**38.05**	**223**	P	**P**	**06 14 07.9**	**+0.9**
	comp=Z,5.6nm,1.0s,baz=80,slow=5.4,SNR=5.6						
CPUP				LR	LR	06 29 25.0	
	comp=Z,280nm,19.0s,baz=54,slow=36						
CPUP	**Villa Florida**	**38.05**	**223**	IAmb	IAmb	06 14 08.9	
	comp=Z,19nm,1.2s						
H09W1	**TRISTAN DA CUN**	**40.87**	**159**	T	T	06 58 17.5	
	SNR=7.7						
LPAZ	**La Paz**	**41.75**	**244**	P	**P**	**06 14 39.5**	**+0.9**
	comp=Z,5.6nm,0.8s,baz=80,slow=3.1,SNR=18						
LPAZ				LR	LR	06 31 09.0	
	comp=Z,68nm,21.6s,baz=80,slow=35						
LPAZ	**La Paz**	**41.75**	**244**	P	**P**	**06 14 40.1**	**+1.5**
LPAZ	**La Paz**	**41.75**	**244**	*eP*	**P**	**06 14 40.3**	**+1.7**
ROSC	**El Rosal**	**44.98**	**276**	LR	LR	06 32 35.9	
	comp=Z,113nm,21.5s,baz=61,slow=34						
ESDC	**Sonseca Array**	**45.18**	**28**	P	**P**	**06 15 06.3**	**+0.9**
	comp=Z,2.5nm,1.2s,baz=230,slow=8.7,SNR=6.2						
ESDC				LR	LR	06 31 19.9	
	comp=Z,21nm,21.6s,baz=190,slow=33						
ESDC	**Sonseca Array**	**45.18**	**28**	IAmb	IAmb	06 15 08.1	
	comp=Z,1.2nm,1.0s						
ESBB	**Sonseca Array**	**45.18**	**28**	P	**P**	**06 15 06.2**	**+0.8**
ESBB				IAmb	IAmb	06 15 17.2	
	comp=Z,7.9nm,1.2s						
PB07	**IPOC Station P**	**45.34**	**238**	P	**P**	**06 15 06.8**	**-0.2**
PB15	**IPOC Station P**	**45.62**	**236**	P	**P**	**06 15 08.8**	**-0.5**
GO02	**Mina Guanaco**	**46.59**	**234**	P	**P**	**06 15 17.5**	**+0.5**
GO03	**Copiap**	**48.24**	**231**	P	**P**	**06 15 30.2**	**+0.6**
GO03				IAmb	IAmb	06 15 59.6	
	comp=Z,6.8nm,0.8s						
KEST	**Kesra**	**50.09**	**42**	LR	LR	06 36 21.7	
	comp=Z,76nm,22.0s,baz=289,slow=35						
BI02	**San Fabin de**	**53.74**	**222**	P	**P**	**06 16 10.7**	**-0.1**
BI02				IAmb	IAmb	06 16 13.2	
	comp=Z,13nm

SVW2	Sparrevohn	78.09	23	P	P	07 08 53.4	+1.9
CNPM	China Poot	78.99	26	P	P	07 08 58.2	+1.8
BRLK	Bradley Lake	79.27	26	P	P	07 08 58.9	+0.9
RDOG	Red Dog Mine	80.22	16	P	P	07 09 04.5	+1.6
RDOG				IAmb	IAmb	07 09 05.3	
	comp=Z,8.0nm,0.6s						
PWL	Port Wells	80.92	25	P	P	07 09 07.9	+1.0
GHO	Glory Hole Cre	81.13	24	P	P	07 09 09.4	+1.3
GHO				IAmb	IAmb	07 09 09.8	
	comp=Z,7.3nm,0.8s						
KTH	Kantishna Hill	81.28	22	P	P	07 09 08.9	+0.1
KTH				IAmb	IAmb	07 09 10.6	
	comp=Z,8.1nm,0.9s						
SML	Sawmill	81.39	24	P	P	07 09 10.8	+1.4
TRF	Thorofare Moun	81.47	23	P	P	07 09 11.7	+1.8
TRF				IAmb	IAmb	07 09 12.7	
	comp=Z,5.8nm,0.8s						
IMAR	Indian Mountai	81.64	20	P	P	07 09 11.9	+1.3
ZALV	Zalesovo Beam	81.73	327	P	P	07 09 08.9	-2.3
	comp=Z,0.7nm,0.4s,baz=87,slow=5.6,SNR=4.3						
RND	Reindeer	81.99	23	P	P	07 09 13.0	+0.4
RND				IAmb	IAmb	07 09 14.2	
	comp=Z,9.0nm,0.8s						
MCK	McKinley	82.13	23	P	P	07 09 13.5	+0.3
MLY	Manley	82.14	21	P	P	07 09 14.3	+1.0
KLU	Klutina	82.25	25	P	P	07 09 15.3	+1.3
KLU				IAmb	IAmb	07 09 26.9	
	comp=Z,11nm,1.1s						
NEA2	Nenana	82.52	22	P	P	07 09 15.7	+0.5
NEA2				IAmb	IAmb	07 09 16.6	
	comp=Z,6.5nm,0.7s						
I23K	Minto, Yukon-K	82.70	21	P	P	07 09 17.0	+0.9
I23K				IAmb	IAmb	07 09 17.9	
	comp=Z,3.3nm,0.7s						
WRH	Wood River Hil	82.83	22	P	P	07 09 17.2	+0.4
WRH				IAmb	IAmb	07 09 28.3	
	comp=Z,6.5nm,1.0s						
CCB	Clear Creek Bu	83.02	22	P	P	07 09 18.0	+0.2
CCB				IAmb	IAmb	07 09 18.9	
	comp=Z,5.9nm,0.7s						
TCOL	CIGO, UAF Yank	83.11	22	P	P	07 09 18.8	+0.5
COLA	College	83.11	22	P	P	07 09 18.7	+0.5
GLB	Gilahina Butte	83.13	26	P	P	07 09 19.9	+1.4
GLB				IAmb	IAmb	07 09 31.2	
	comp=Z,7.0nm,1.0s						
IL31		83.42	22	P	P	07 09 19.8	0.0
ILAR	Eielson Array	83.42	22	P	P	07 09 19.8	-0.1
	comp=Z,6.9nm,0.7s,baz=247,slow=5.4,SNR=119						
ILAR	Eielson Array	83.42	22	P	P	07 09 20.0	+0.1
COLD	Coldfoot	83.51	19	P	P	07 09 21.5	+1.2
COLD				IAmb	IAmb	07 09 33.2	
	comp=Z,3.8nm,0.9s						
DOT	Dot Lake	84.00	24	P	P	07 09 23.9	+1.0
DOT				IAmb	IAmb	07 09 25.3	
	comp=Z,6.1nm,0.8s						
CTGM	Chitina Glacie	84.02	27	P	P	07 09 25.1	+1.8
CTGM				IAmb	IAmb	07 09 25.8	
	comp=Z,4.6nm,0.7s						
SCRK	Sand Creek	84.17	23	P	P	07 09 24.7	+0.8
KURBB	Kurchatov Arra	84.28	322	P	P	07 09 22.9	-1.7
	comp=Z,0.3nm,0.4s,baz=106,slow=4.1,SNR=6.7						
MAW	Mawson	84.30	203	P	P	07 09 24.3	-0.1
	comp=Z,4.1nm,1.1s,baz=63,slow=7.7,SNR=4.5						
MAW	Mawson	84.30	203	P	P	07 09 25.1	+0.7
TOLK	Toolik Lake Re	84.47	18	P	P	07 09 26.4	+1.2
TOLK				IAmb	IAmb	07 09 27.8	
	comp=Z,5.8nm,0.7s						
L27K	Beaver Creek,	84.66	25	P	P	07 09 28.1	+1.8
L27K				IAmb	IAmb	07 09 39.3	
	comp=Z,3.5nm,0.9s						
BCAR	Beaver Creek A	84.68	25	P	P	07 09 27.5	+1.1
K27K	Chicken	84.96	24	P	P	07 09 30.0	+2.3
K27K				IAmb	IAmb	07 09 41.2	
	comp=Z,6.6nm,1.1s						
AAK	Ala-Archa	84.97	314	P	P	07 09 27.2	-1.2
	comp=Z,2.0nm,0.7s,baz=180,slow=11,SNR=4.3						
AAK	Ala-Archa	84.97	314	P	P	07 09 27.8	-0.7
EGAK	Eagle	85.63	23	P	P	07 09 32.3	+1.3
EGAK				IAmb	IAmb	07 09 34.2	
	comp=Z,5.6nm,0.8s						
HYT	Haines Junctio	85.71	28	P	P	07 09 33.7	+2.0
HYT				IAmb	IAmb	07 09 36.2	
	comp=Z,6.5nm,0.9s						
DAWY	Dawson	86.06	24	P	P	07 09 35.1	+1.8
DAWY				IAmb	IAmb	07 09 46.5	
	comp=Z,3.3nm,0.9s						
WHY	Whitehorse	86.88	28	P	P	07 09 39.6	+2.2
CHGR	Chuyangaron	88.22	309	P	P	07 09 43.5	-0.9
BVAR	Borovoye Array	89.75	323	P	P	07 09 50.1	-1.0
	comp=Z,1.5nm,0.7s,baz=141,slow=15,SNR=13						
YKA	Yellowknife Ar	96.70	28	P	P	07 10 23.3	+0.4
	comp=Z,0.3nm,0.8s,baz=266,slow=4.6,SNR=7.1						
JLU	Jordanelle	98.66	50	P	P	07 10 32.4	-0.2
GERES	GERESS Array B	124.66	328	PKP	PKiKP	07 15 52.9	0.0
	comp=Z,0.3nm,0.6s,baz=90,slow=1.6,SNR=4.1						
GERES	GERESS Array B	124.66	328		PKiKP	07 15 53.0	+0.2
LPAZ	La Paz	134.43	120	PKP	PKiKP	07 16 14.4	+0.4
	comp=Z,1.2nm,0.9s,baz=193,slow=2.5,SNR=3.6						
LPAZ	La Paz	134.43	120		PKPdf	07 16 10.1	-2.5
TORD	Torodi Ar. Bea	150.03	286	PKPbc	PKPbc	07 16 43.1	-1.2
	comp=Z,2.4nm,0.7s,baz=74,slow=3.2,SNR=15						
TORD	Torodi Ar. Bea	150.03	286	PKPdf	PKPdf	07 16 37.5	-1.9
TORD					PKPbc	07 16 43.7	-0.7
TORD				PKPab	PKPab	07 16 49.8	-0.4
BDFB	Brasilia	150.70	137	PKPbc	PKiKP	07 16 46.5	-0.3
	comp=Z,3.0nm,0.7s,baz=271,slow=0.6,SNR=5.7						

IDC ***06*** *07:08:55.4±4.5,36°.22N×68°.91E,h0km,mb3.2/2, mb1 3.6/6,mb1mx3.3/46,mbtmp3.5/6,ML3.3/4, Error ellipse: s-maj=85.0km s-min=31.4km az=155.0*
NNC ***06*** *07:09:00.2±7.3,37°.10N×67°.47E,h8km±43km,mb3.7, mpv3.4,Error ellipse: s-maj=53.8km s-min=51.1km az=13.0*

ISC 06 07:08:56.8±2.2,36°.9N±0°.2×67°.4E±0°.1,h10km,n9, σ2§22/12,3C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.62	20	Pn	Pn	07 10 36.4	+2.2
	0.6nm,0.3s,baz=198,slow=10,SNR=5.8						
KK31				⇓Sn	Sn	07 11 51.3	+1.5
	1.8nm,0.4s						
KK31				⇑Lg	Lg	07 12 23.9	
	8.4nm,0.8s,baz=206,slow=28						
GEYT	Alibeck	7.45	281	Pn	Pb	07 11 04.7	-1.5
	0.5nm,0.3s,baz=107,slow=12,SNR=2.0						
AAK	Ala-Archa	7.90	42	Pn	Pn	07 10 52.5	+0.6
	0.6nm,0.3s,baz=216,slow=11,SNR=3.8						
AAK	Ala-Archa	7.90	42	Pn	Pn	07 10 52.6	+0.7
	1.4nm,0.6s						
AAK				⇑Sn	Sn	07 12 21.4	-0.1
	3.9nm,0.6s						
AAK				⇑Lg	Lg	07 13 05.2	
	5.3nm,0.8s						
TKM2	Tokmak 2	8.69	44	⇓Pn	Pn	07 11 03.6	+0.8
	1.3nm,0.7s						
TKM2				⇓Sn	Sn	07 12 39.9	-1.1
	1.9nm,0.7s						
MKAR	Makanchi Array	14.83	44	Pn	Pn	07 12 22.6	-3.9
	0.0nm,0.3s,baz=228,slow=13,SNR=4.8						
BVAR	Borovoye Array	16.24	6	Pn	P	07 12 47.8	-0.3
	0.3nm,0.3s,baz=209,slow=15,SNR=6.3						
ZALV	Zalesovo Beam	20.87	30	P	P	07 13 37.2	-1.6
	0.7nm,0.5s,baz=206,slow=13,SNR=2.0						
YKA	Yellowknife Ar	80.92	1	P	P	07 21 14.7	+3.8
	0.1nm,0.5s,baz=355,slow=5.1,SNR=4.8						

IDC 06 07:15:51.5±1.7,6°.80S×128°.73E,h0km,mb3.8/1, mb1 3.8/4,mb1mx3.6/31,mbtmp3.7/4,ML3.8/3,Error ellipse: s-maj=60.3km s-min=28.8km az=78.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.41	23	Pn	Pn	07 17 28.4	+1.1
	2.6nm,0.3s,baz=208,slow=22,SNR=16						
SIJI				Sn	Sn	07 18 31.9	-9.4
	2.7nm,0.3s,baz=293,slow=23,SNR=7.6						
WRA	Warramunga Arr	14.15	158	Pn	Pn	07 19 13.3	-0.1
	0.4nm,0.3s,baz=342,slow=12,SNR=12						
WRA				Sn	Sn	07 21 38.0	-13
	1.0nm,0.3s,baz=342,slow=21,SNR=14						
ASAR	Alice Springs	17.49	164	P	Pn	07 19 57.2	+0.2
	0.2nm,0.3s,baz=353,slow=13,SNR=12						
ASAR				S	Sn	07 23 02.0	-10
	0.3nm,0.3s,baz=346,slow=26,SNR=8.0						
MKAR	Makanchi Array	67.38	327	P	P	07 26 48.5	-0.2
	0.6nm,0.7s,baz=120,slow=8.3,SNR=7.0						

IDC ***06*** *07:25:37.8±8.0,18°.81S×70°.73W,h35km±40km,mb3.5/2, mb1 3.5/5,mb1mx3.3/29,mbtmp3.6/5,ML3.1/3,Error ellipse: s-maj=92.3km s-min=27.3km az=97.0*
GUC ***06*** *07:25:40.1±0.7,18°.79S×70°.51W,h75km±5km,ML3.5*

ISC 06 07:25:34.4±1.5,18°.86S±0°.04×70°.8W±0°.1,h10km,n20, σ1§87/26,4C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	Chacalluta	0.65	42	eP	Pn	07 25 52.5	+2.8
AP01				eS	Sn	07 26 01.9	+1.9
AP01				IAML		07 26 04.8	
	comp=E,4µm,0.4s						
PSGC	Pisagua	0.97	139	⇑iP	Pn	07 25 57.0	+2.8
PSGC				eS	Sn	07 26 09.5	+1.4
PSGC				IAML		07 26 12.9	
	comp=E,672nm,0.3s						
MNMC	Minye Minye	1.17	104	⇑iP	Pn	07 25 58.4	+1.3
MNMC				IAML		07 26 14.2	
	comp=N,2µm,0.3s						
PB11	IPOC Station P	1.40	130	⇑iP	Pg	07 26 02.0	+0.6
PB11				eS	Sb	07 26 18.6	-0.2
PB11				IAML		07 26 19.5	
	comp=E,3µm,0.3s						
TA01	Diego Aracena	1.79	161	eP	Pg	07 26 08.4	-0.4
TA01				IAML		07 26 31.4	
	comp=N,521nm,0.3s						
PB08	IPOC Station P	2.01	130	⇑iP	Pb	07 26 10.5	-0.8
PB08				eS	Sn	07 26 33.2	-0.8
PB08				IAML		07 26 34.3	
	comp=E,529nm,0.2s						
PB01	IPOC Station P	2.50	151	eP	Pn	07 26 17.0	+1.8
PB01				IAML		07 26 46.7	
	comp=E,236nm,0.4s						
PB07	IPOC Station P	2.98	163	eP	Pn	07 26 24.6	+2.7
PB07				IAML		07 26 59.3	
	comp=E,223nm,0.7s						
PB09	IPOC Station P	3.27	154	eP	Pn	07 26 28.6	+2.8
PB09				IAML		07 27 10.2	
	comp=E,103nm,0.5s						
PB03	IPOC Station P	3.32	163	eP	Pn	07 26 29.0	+2.4
PB03				IAML		07 27 09.9	
	comp=E,126nm,0.3s						
PB04	IPOC Station P	3.51	170	eP	Pn	07 26 31.3	+2.1
LPAZ	La Paz	3.61	45	Pn	Pn	07 26 32.6	+1.7
	comp=E,0.4nm,0.3s,baz=224,slow=4.9,SNR=20						
LPAZ				Pg	Pg	07 26 42.8	-0.8
	comp=E,0.7nm,0.3s,baz=270,slow=1.5,SNR=12						
PB06	IPOC Station P	3.99	164	eP	Pn	07 26 37.5	+1.7
PB05	IPOC Station P	4.01	172	eP	Pn	07 26 37.7	+1.6
LVC	Limon Verde	4.13	155	Pn	Pn	07 26 40.5	+2.6
	comp=E,2.0nm,0.3s,baz=353,slow=12,SNR=22						
LVC				Sn	Sn	07 27 26.4	0.0
	comp=E,6.2nm,0.3s,baz=93,slow=20,SNR=13						
PB15	IPOC Station P	4.50	164	eP	Pn	07 26 44.5	+1.7
PB10	IPOC Station P	4.64	177	eP	Pn	07 26 46.1	+1.6
SIV	San Ignacio	9.71	74	Pn	Pn	07 27 52.0	-2.3
	comp=E,0.5nm,0.3s,baz=271,slow=10,SNR=13						
BDFB	Brasilia	21.99	85	P	P	07 30 28.2	-0.8
	comp=E,0.9nm,0.4s,baz=244,slow=12,SNR=3.3						
TORD	Torodi Ar. Bea	78.18	72	P	P	07 37 33.4	-1.2
	comp=E,0.5nm,0.5s,baz=257,slow=4.9,SNR=5.2						

MAN ***06*** *07:41:24.7,4°.01N×125°.74E,h61km,mb5.1,ML4.0,MS4.1*
NEIC ***06*** *07:41:27.7±2.1,4°.36N±0°.04×126°.0E±0°.1,h157km±11km, mb4.5/13,Error ellipse: s-maj=15.2km s-min=6.2km az=93.0*
IDC ***06*** *07:41:27.1±3.4,4°.30N×125°.89E,h151km±34km,mb3.4/5, mb1 3.7/8,mb1mx3.3/60,mbtmp4.1/8,MS3.1/2,Ms1 3.1/2, ms1mx2.6/23,Error ellipse: s-maj=40.9km s-min=17.6km az=62.0*
DJA ***06*** *07:41:29.1±0.5,4°.N±4°×12°.6E±°,h133km±3km,M4.5/13, mb4.5/13,mB5.0/7,MLv4.5/13,Mw(mB)4.3/7*

ISC 06 07:41:27.4±0.6,4°.32N±0°.04×125°.96E±0°.07,h150km,n51, σ1§36/56,mb4.1/12,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	Sangihe	0.76	215	P	Pn	07 41 49.8	-0.6
SGSI				S	Sn	07 42 06.3	-1.5
DDMP	Don Marcelino,	1.79	352	eP	Pn	07 41 58.9	-1.3
DDMP				eS	Sn	07 42 23.0	-2.4
SKMP	Bagumbayan, Su	2.60	327	eP	Pn	07 42 08.1	-1.8
SKMP				eS	Sn	07 42 40.4	-2.3
MATI	Mati	2.63	6	eP	Pn	07 42 10.1	-0.1
DAV	Davao City (W)	2.76	352	Pn	Pn	07 42 13.0	+1.1
KCP	Kidapawan	2.81	342	⇓eP	Pn	07 42 12.0	-0.5
KCP				iS	Sn	07 42 47.6	+0.2
TNTI	Ternate	3.79	158	Pn	Pn	07 42 25.5	+0.5
TNTI	Ternate	3.79	158	P	Pn	07 42 22.9	-2.1
TNTI				S	Sn	07 43 07.4	-2.3
PAGZ	Pagadian	4.35	324	eP	Pn	07 42 31.1	-1.2
GTOI	Gorontalo	4.69	219	P	Pn	07 42 36.9	+0.1
GTOI				S	Sn	07 43 27.3	-3.6
GLSP	General Luna,	5.44	2	eP	Pn	07 42 46.0	-0.7
MRSI	Marisa	5.54	227	P	Pn	07 42 48.9	+0.9
	0.3nm74nm,0.9s						
TOLI2	Tolitoli	6.07	239	Pn	Pn	07 42 56.1	+0.9
LUWI	Luwuk	6.20	211	P	Pn	07 42 59.5	+2.7
LUWI	Luwuk	6.20	211	P	Pn	07 42 59.0	+2.1
	0.6nm154nm,0.7s						
SANI	Sanana	6.32	180	P	Pn	07 42 55.3	-3.2
	0.7nm6µm120nm,0.7s						
APSI	Ampana	6.75	220	P	Pn	07 43 06.1	+2.0
	0.2nm822nm79nm,1.2s						
SIJI	Sorong	7.39	134	P	Pn	07 43 12.8	+0.1
	1.9nm,0.3s,baz=239,slow=23,SNR=8.6						
MYLDM	Lahad Datu	7.48	277		Pn	07 43 15.7	+1.7
NLAI	Namlea	7.59	171	P	Pn	07 43 13.0	-2.4
	1.0nm3µm49nm,0.8s						
TTSI	Tana Toraja	9.54	220	P	Pn	07 43 42.4	+0.9
	1µm108nm,0.9s						
FAKI	Fak Fak	9.55	139	Pn	Pn	07 43 43.0	+1.4
FAKI	Fak Fak	9.55	139	P	Pn	07 43 42.2	+0.7
	26nm,1.3s						
SPSI	Sidrap Palu	10.29	217	P	Pn	07 43 51.1	-0.3
	27nm,0.8s						
KAPI	Kappang	11.15	214	P	Pn	07 44 01.3	-1.4
	baz=12,slow=11,SNR=7.7						
KAPI				LR	LR	07 48 15.8	
	comp=Z,27nm,21.2s,baz=61,slow=37						
KAPI	Kappang	11.15	214		Pn	07 44 02.8	+0.1
BBKI	Banjar Baru	13.53	235	P	Pn	07 44 34.7	+1.2
	34nm,1.0s						
SBUM	Sibu	13.84	263		P	07 44 41.4	+0.5
SOEI	Soe	14.08	187		P	07 44 44.8	+1.2
BATI	Baumata	14.61	189	P	Pn	07 44 47.4	+0.3
	7.1nm,0.3s,baz=254,slow=1.8,SNR=3.7						
BATI	Baumata	14.61	189	P	Pn	07 44 47.8	+0.7
	29nm,1.1s						
TWSI	Taliwang, Sumb	15.81	215	P	Pn	07 45 01.7	-0.3
FITZ	Fitzroy Crossi	22.27	181	P	P	07 46 11.8	-0.6
FITZ				IAmb	IAmb	07 46 14.2	
	comp=Z,14nm,0.9s						
WB0	Warramunga Arr	25.33	161	P	P	07 46 39.9	-0.6
WB0				IAmb	IAmb	07 46 42.5	
	comp=Z,6.2nm,0.3s						
WRA	Warramunga Arr	25.47	161	P	P	07 46 40.7	-1.1
	comp=Z,1.5nm,0.3s,baz=340,slow=10,SNR=23						
WB2	Warramunga Arr	25.48	161	P	P	07 46 41.1	-0.8
WB2				IAmb	IAmb	07 47 07.5	
	comp=Z,8.4nm,1.4s						
WR0	Warramunga Arr	25.55	161	P	P	07 46 42.2	-0.3
WR0				IAmb	IAmb	07 47 10.2	
	comp=Z,4.3nm,1.1s						
PSA00	Pilbara Seismi	26.42	193	P	P	07 46 49.6	-0.7
PSA00				IAmb	IAmb	07 46 50.8	
	comp=Z,18nm,0.9s						
AS31	Alice Springs	28.87	165	P	P	07 47 12.3	+0.1
ASAR	Alice Springs	28.87	165	P	P	07 47 12.0	-0.2
	comp=Z,0.7nm,0.5s,baz=340,slow=7.3,SNR=23						
ASAR	Alice Springs	28.87	165	P	P	07 47 12.2	+0.1
GIRL	Giralia	29.14	203	P	P	07 47 15.5	+1.0
KSRS	Korea Array	33.03	3	LR	LR	08 00 57.0	
	comp=Z,136nm,20.7s,baz=311,slow=35						
MORW	Morawa	34.53	195	P	P	07 48 00.8	-0.7
NWAO	Narrogin (SRO)	37.95	192	P	P	07 48 30.5	0.0
NWAO				IAmb	IAmb	07 48 53.4	
	comp=Z,21nm,1.2s						
BBOO	Buckleboo	38.15	166	P	P	07 48 32.8	+0.6
STKA	Stephens Creek	38.95	159	P	P	07 48 38.5	-0.4
	comp=Z,1.2nm,0.4s,baz=332,slow=11,SNR=3.6						
MKAR	Makanchi Array	56.64	325	P	P	07 50 54.1	-0.9
	comp=Z,0.2nm,0.4s,baz=121,slow=7.2,SNR=6.0						
KURBB	Kurchatov Arra	60.84	328	P	P	07 51 23.3	-0.5
	comp=Z,0.3nm,0.6s,baz=128,slow=6.2,SNR=4.8						
KURK	Kurchatov	60.84	328	P	P	07 51 23.3	-0.5
BKZ	Black Stump Fm	63.53	138	P	P	07 51 43.0	+0.9
BKZ				IAmb	IAmb	07 52 07.6	
	comp=Z,11nm,1.2s						

BJI ***06*** *07:47:22.2±0.0,53°.37N×108°.41E,h9km,mB4.7/36, mb4.5/47,Ms4.7/43,Ms7 4.5/40*
IDC ***06*** *07:47:23.9±0.4,53°.21N×108°.38E,h0km,mb4.3/33, mb1 4.5/40,mb1mx4.3/68,mbtmp4.3/40,ML3.7/6,MS3.5/21, Ms1 3.5/21,ms1mx3.4/38,Error ellipse: s-maj=11.2km s-min=8.0km az=151.0*
MOS ***06*** *07:47:24.0±1.1,53°.17N×108°.21E,h11km,mb4.7/43, MS3.9/10,Error ellipse: s-maj=5.4km s-min=4.5km az=70.6*
MOS Felt (IV) at Goryachinsk; (III-IV) at Ulan-Ude, Kharantsy; (III) at Angarsk, Irkutsk; (II-III) at Bargusin, Elantsy, Ust'-Barguzin; (II) at Magistral'niy, Onguryeny, Pivovarikha, Khomutovo.
NEIC ***06*** *07:47:25.6±1.7,53°.17N±0°.08×108°.3E±0°.1,h10km±1km, mb4.6/93,Error ellipse: s-maj=12.9km s-min=10.8km az=175.0*
BYKL ***06*** *07:47:25.7±0.1,53°.15N×108°.31E,h14km±2km, Mw4.4/8(IEC),#STATIONS PET MAJO INCN TATO ENH KIV ARU KONO FELT I=V MSK at Goryachinsk, IV at Ust-Barguzin, Kuytun, III-IV at Kharantsy, Barguzin, Ulan-Ude; III at Irkutsk, Angarsk; II-III at Yelantsy; II at Onguren, Khomutovo, Pivovarikha, Magistralniy.*

ISC 06 07:47:25.3±0.8,53°.16N±0°.02×108°.34E±0°.02,h10km±5km, n377,σ1§57/440,mb4.6/123,MS3.6/25,24C-22D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXMB	Maximikha	0.27	67	⇓iPg	Pg	07 47 31.4	+0.7
MXMB				eSg	Sg	07 47 35.2	+0.8
KELR	Kotokel	0.43	201	⇑iPg	Pg	07 47 33.4	-0.4
KELR				eSg	Sg	07 47 38.6	-0.8
OGRR	Ongureny	0.66	318	⇑iPg	Pb	07 47 39.0	+0.1
OGRR				Pmax		07 47 39.2	
	11µm,0.4s						
OGRR				eSg	Sb	07 47 47.9	-0.3
OGRR				Smax		07 47 48.2	
	18µm,0.4s						
OGRR	Ongureny	0.66	318	⇑iPG	Pb	07 47 39.0	+0.1
OGRR				i		07 47 48.1	
OGRR				pmax	pmax		
	comp=Z,9µm,0.4s						
OGRR				smax	smax		
	comp=N,15µm,0.6s						
SYVR	Suvo	1.11	63	⇑iPg	Pb	07 47 46.2	-0.5
	comp=N,389nm,0.8s						
SYVR				⇑iPg	Pb	07 47 46.2	-0.5
	comp=N,777nm,0.8s						
SYVR				⇑iPg	Pb	07 47 46.2	-0.5
	comp=N,926nm,0.8s						
SYVR				ePb	Pg	07 47 47.9	+1.2
SYVR				max		07 47 49.5	
	comp=N,3µm,0.4s						
SYVR				eSg	Sb	07 48 01.6	+0.3
SYVR				eSb	Sn	07 48 04.6	+2.1
SYVR				max		07 48 05.5	
	comp=N,41µm,0.4s						
SYVR	Suvo	1.11	63	⇑iPG	Pb	07 47 46.2	-0.5
SYVR				e		07 48 01.2	
SYVR				pmax	pmax		
	comp=Z,3µm,0.4s						
SYVR				smax	smax		
	comp=N,42µm,0.3s						
TRG	Tyrgan	1.27	252	⇓iPg	Pn	07 47 48.1	-1.1
	comp=N,4µm,0.4s						
TRG				⇓iPg	Pn	07 47 48.1	-1.1
	comp=N,7µm,0.4s						
TRG				⇑iPg	Pn	07 47 48.1	-1.1
	comp=N,6µm,0.4s						
TRG				Pmax		07 47 50.0	
	comp=N,2µm,0.2s						
TRG				eSg	Sb	07 48 04.9	-0.9
TRG				Smax		07 48 07.6	
	comp=N,35µm,0.2s						
TRG	Tyrgan	1.27	252	⇑iPG	Pn	07 47 48.1	-1.1
TRG				e		07 48 04.8	
TRG				pmax	pmax		
	comp=Z,3µm,0.4s						
TRG				smax	smax		
	comp=N,34µm,0.2s						
UUDB	Ulan-Yde	1.36	198	⇓iPg	Pn	07 47 50.0	-0.4
	comp=N,634nm,0.7s						
UUDB				⇓iPg	Pn	07 47 50.0	-0.4
	comp=N,507nm,0.7s						
UUDB				⇑iPg	Pn	07 47 50.0	-0.4
	comp=N,2µm,0.7s						
UUDB				ePb	Pg	07 47 51.3	-0.1
UUDB				max		07 47 51.5	
	comp=N,4µm,0.3s						
UUDB				eSg	Sb	07 48 07.9	-0.5
UUDB				Smax		07 48 12.0	
	comp=N,31µm,0.9s						
FFNB	Fofonovo	1.47	221	ePg	Pn	07 47 51.5	-0.5
FFNB				eSg	Sg	07 48 11.8	-0.8
KAB	Kabansk	1.51	223	ePg	Pn	07 47 52.5	0.0
KAB				Pmax		07 47 58.1	
	comp=N,6µm,0.6s						
KAB				eSg	Sg	07 48 13.2	-0.8
KAB				Smax		07 48 25.0	
	comp=N,53µm,1.0s						
KAB	Kabansk	1.51	223	⇓iPG	Pn	07 47 52.5	0.0
KAB				e		07 48 13.1	
KAB				pmax	pmax		
	comp=Z,6µm,1.1s						
KAB				smax	smax		
	comp=N,38µm,0.7s						
HRMR	Khuramsha	1.75	209	⇓iPn	Pn	07 47 56.2	+0.3
HRMR				ePg	Pb	07 47 57.2	-0.4
HRMR				Pmax		07 48 03.3	
	comp=N,13µm,0.6s						
HRM

IRK	**Irkutsk**	**2.64**	**251**	*e*PN	**Pn**	**07 48 07.3**	**-0.7**
IRK				*e*		07 48 11.8	
IRK				*e*S	**Sn**	**07 48 39.1**	**-1.0**
IRK				*e*		07 48 45.9	
IRK				pmax	pmax		
	comp=Z,1μm,0.6s						
IRK				smax	smax		
	comp=N,17μm,0.6s						
NIZ	**Nizh Angarsk**	**2.71**	**15**⇓	*i*Pn	**Pn**	**07 48 09.8**	**+0.7**
NIZ				*e*Pg	**Pb**	**07 48 14.1**	**+0.1**
NIZ				Pmax		07 48 23.4	
	comp=N,877nm,0.6s						
NIZ				*e*Sn	**Sn**	**07 48 42.5**	**+0.6**
NIZ				*e*Sg	**Sb**	**07 48 49.4**	**+2.1**
NIZ				Smax		07 48 51.0	
	comp=N,7μm,0.5s						
NIZ	**Nizh Angarsk**	**2.71**	**15**	*e*PN	**Pn**	**07 48 09.7**	**+0.7**
NIZ				*e*		07 48 15.5	
NIZ				*e*		07 48 49.1	
NIZ				pmax	pmax		
	comp=Z,869nm,0.4s						
NIZ				smax	smax		
	comp=N,7μm,0.5s						
IVK	**Ivanovka**	**2.76**	**242**⇓	*i*Pn	**Pn**	**07 48 09.6**	**0.0**
IVK				*e*Pg	**Pb**	**07 48 14.1**	**-0.6**
IVK				Pmax		07 48 15.2	
	comp=N,369nm,0.5s						
IVK				*e*Sn	**Sn**	**07 48 41.2**	**-1.8**
IVK				*e*Sg	**Sb**	**07 48 50.0**	**+1.4**
IVK				*e*		07 48 53.0	
IVK				Smax		07 48 53.3	
	comp=N,5μm,0.8s						
IVK	**Ivanovka**	**2.76**	**242**	*i*PN	**Pb**	**07 48 14.4**	**-0.3**
KMO	**Kumora**	**3.20**	**30**⇓	*i*Pn	**Pn**	**07 48 16.7**	**+1.0**
KMO				*e*Pg	**Pb**	**07 48 22.5**	**+0.2**
KMO				*e*		07 48 31.0	
KMO				max		07 48 34.5	
	comp=N,1μm,0.7s						
KMO				*e*Sg	**Sb**	**07 49 04.8**	**+3.5**
KMO				*e*		07 49 10.1	
KMO				max		07 49 10.7	
	comp=N,8μm,1.3s						
KMO	**Kumora**	**3.20**	**30**⇓	*i*PN	**Pn**	**07 48 16.6**	**+0.9**
KMO				*e*		07 48 22.5	
TLY	**Talaya**	**3.23**	**245**	Pn	**Pn**	**07 48 15.9**	**-0.3**
	comp=N,0.3nm,0.3s,baz=34,slow=7.9,SNR=107						
TLY				Pg	**Pb**	**07 48 23.7**	**+0.9**
	comp=N,1.4nm,0.3s,baz=35,slow=8.6,SNR=67						
TLY				Lg	Lg	07 49 04.2	
	comp=N,1.6nm,0.3s,baz=133,slow=17,SNR=14						
TLY	**Talaya**	**3.23**	**245**⇓	*i*Pn	**Pn**	**07 48 15.9**	**-0.3**
TLY				*e*Pg	**Pb**	**07 48 23.1**	**+0.3**
TLY				*e*PgPg	**Pg**	**07 48 28.9**	**+1.7**
TLY				max		07 48 30.9	
	comp=N,370nm,0.4s						
TLY				*e*Sg	**Sb**	**07 49 04.5**	**+2.2**
TLY				Smax		07 49 11.3	
	comp=N,3μm,0.7s						
TLY	**Talaya**	**3.23**	**245**	*d*iPN	**Pn**	**07 48 15.9**	**-0.3**
TLY				*e*		07 48 23.8	
TLY				*e*		07 49 05.3	
TLY				pmax	pmax		
	comp=Z,787nm,0.4s						
TLY				smax	smax		
	comp=E,4.0nm,0.4s						
TLY	**Talaya**	**3.23**	**245**	Pn	**Pn**	**07 48 15.8**	**-0.4**
CIT	**Chita**	**3.38**	**108**	*e*Pn	**Pn**	**07 48 18.4**	**+0.2**
CIT				*e*Pg	**Pb**	**07 48 25.9**	**+0.5**
CIT				Pmax		07 48 28.3	
	comp=E,3μm,0.4s						
CIT				*e*Sn	**Sn**	**07 48 58.4**	**0.0**
CIT				*e*Sg	**Sg**	**07 49 10.6**	**-3.2**
CIT				Smax		07 49 23.3	
	comp=E,12μm,1.1s						
CIT	**Chita**	**3.38**	**108**	*e*PN	**Pn**	**07 48 18.1**	**-0.1**
CIT				*e*		07 48 25.8	
CIT				*e*		07 49 11.8	
CIT				pmax	pmax		
	comp=Z,3μm,0.8s						
CIT				smax	smax		
	comp=N,12μm,1.0s						
YOA	**Uoyan**	**3.57**	**32**	*e*Pn	**Pn**	**07 48 22.3**	**+1.5**
YOA				*e*Pg	**Pb**	**07 48 30.4**	**+1.8**
YOA				*e*		07 48 37.0	
YOA				max		07 48 47.0	
	comp=N,4μm,1.4s						
YOA				*e*Sg	**Sg**	**07 49 17.2**	**-2.7**
YOA				Smax		07 49 26.5	
	comp=N,14μm,0.9s						
YOA	**Uoyan**	**3.57**	**32**	*e*PN	**Pb**	**07 48 31.3**	**+2.7**
YOA				*i*		07 49 18.5	
YOA				pmax	pmax		
	comp=Z,1μm,0.5s						
YOA				smax	smax		
	comp=N,13μm,1.0s						
ARS	**Arshan**	**3.82**	**253**	*e*Pn	**Pn**	**07 48 23.9**	**-0.3**
ARS				*e*Pg	**Pb**	**07 48 33.6**	**+0.8**
ARS				Pmax		07 48 41.7	
	comp=N,874nm,0.6s						
ARS				*e*		07 49 20.9	
ARS				*e*Sg	**Sb**	**07 49 22.8**	**+3.7**
ARS				Smax		07 49 25.8	
	comp=N,21μm,0.8s						
ARS	**Arshan**	**3.82**	**253**	*e*PN	**Pn**	**07 48 24.0**	**-0.3**
ARS				*e*		07 48 34.0	
ARS				*e*		07 49 23.3	
ARS				pmax	pmax		
	comp=Z,556nm,0.4s						
ARS				smax	smax		
	comp=N,20μm,0.7s						
UKT	**Uakit**	**3.88**	**51**⇓	*i*Pn	**Pn**	**07 48 25.9**	**+0.8**
UKT				*e*Pg	**Pb**	**07 48 35.1**	**+1.2**
UKT				*e*		07 48 39.1	
UKT				max		07 48 44.1	
	comp=N,825nm,1.0s						
UKT				*e*Sn	**Sn**	**07 49 10.0**	**-0.7**
UKT				*e*Sg	**Sg**	**07 49 27.1**	**-2.7**
UKT				Smax		07 49 33.9	
	comp=N,2μm,1.1s						
ZAK	**Zakamensk**	**4.20**	**230**	*e*Pn	**Pn**	**07 48 30.1**	**+0.6**
ZAK				*e*Pg	**Pb**	**07 48 41.2**	**+1.9**
ZAK				*e*		07 48 44.8	
ZAK				max		07 48 53.8	
	comp=N,196nm,0.7s						
ZAK				*e*Sg	**Sg**	**07 49 35.4**	**-4.6**
ZAK				Smax		07 49 47.3	
	comp=N,2μm,1.6s						
ZAK	**Zakamensk**	**4.20**	**230**	*e*PN	**Pn**	**07 48 30.1**	**+0.6**
ZAK				*e*		07 48 40.6	
ZAK				*e*		07 49 35.1	
ZAK				pmax	pmax		
	comp=Z,296nm,0.6s						
ZAK				smax	smax		
	comp=N,2μm,0.7s						
SVKR	**Severomuysk**	**4.24**	**44**	*e*Pn	**Pn**	**07 48 31.7**	**+1.7**
SVKR				*e*Pg	**Pb**	**07 48 41.9**	**+1.9**
SVKR				Pmax		07 48 51.2	
	comp=N,896nm,0.4s						
SVKR				*e*Sg	**Sg**	**07 49 38.3**	**-3.1**
SVKR				Smax		07 49 51.5	
	comp=N,6μm,0.9s						
KPC	**Khapcheranga**	**4.29**	**142**⇑	*i*PN	**Pn**	**07 48 30.1**	**-0.6**
KPC				*e*		07 48 41.8	
KPC				*e*S	**Sn**	**07 49 20.3**	**-0.5**
KPC				*e*		07 49 35.3	
KPC				pmax	pmax		
	comp=Z,718nm,0.7s						
KPC				smax	smax		
	comp=E,4μm,1.1s						
MOY	**Mondy**	**4.74**	**255**	*e*PN	**Pn**	**07 48 37.4**	**+0.5**
MOY				*e*		07 48 49.4	
MOY				*e*		07 49 50.3	
MOY				pmax	pmax		
	comp=Z,412nm,0.9s						
MOY				smax	smax		
	comp=N,5μm,1.1s						
ORL	**Orlik**	**5.21**	**267**	*e*Pn	**Pn**	**07 48 44.4**	**+1.0**
ORL				*e*		07 48 52.5	
ORL				max		07 48 54.8	
	comp=N,434nm,0.6s						
ORL				*e*		07 49 45.0	
ORL				*e*Sg	**Sg**	**07 50 06.2**	**-6.1**
ORL				Smax		07 50 09.5	
	comp=N,2μm,0.8s						
ORL	**Orlik**	**5.21**	**267**⇑	*i*PN	**Pn**	**07 48 44.4**	**+1.0**
ORL				*e*		07 49 00.4	
ORL				*e*		07 50 06.1	
ORL				pmax	pmax		
	comp=Z,374nm,0.6s						
ORL				smax	smax		
	comp=N,2μm,0.9s						
ULN	**Ulaanbaatar**	**5.37**	**189**	*ce*PN	**Pn**	**07 48 46.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,58nm,0.7s						
ULN	**Ulaanbaatar**	**5.37**	**189**	Pn	**Pn**	**07 48 46.4**	**+0.8**
NLYR	**Nelyaty**	**5.41**	**49**	*e*Pn	**Pn**	**07 48 46.6**	**+0.5**
NLYR				*e*Pg	**Pb**	**07 49 03.4**	**+3.5**
NLYR				Pmax		07 49 14.4	
	comp=Z,247nm,0.6s						
NLYR				*e*Sg	**Sg**	**07 50 13.4**	**-5.5**
NLYR				Smax		07 50 28.5	
	comp=Z,4μm,0.9s						
NLYR	**Nelyaty**	**5.41**	**49**	*e*PN	**Pn**	**07 48 46.5**	**+0.5**
NLYR				*e*		07 49 03.2	
NLYR				*e*		07 50 16.0	
NLYR				pmax	pmax		
	comp=Z,402nm,0.7s						
NLYR				smax	smax		
	comp=N,4μm,1.0s						
SONM	**Songino Array**	**5.47**	**194**	Pn	**Pn**	**07 48 47.8**	**+0.8**
	comp=N,6.8nm,0.3s,baz=7.0,slow=14,SNR=200						
SONM				Pg	**Pb**	**07 49 03.9**	**+2.8**
	comp=N,56nm,0.3s,baz=4.6,slow=17,SNR=18						
SONM				Lg	Lg	07 50 18.4	
	comp=N,138nm,0.3s,baz=6.1,slow=29,SNR=22						
SONM	**Songino Array**	**5.47**	**194**	PN	**Pn**	**07 48 47.7**	**+0.6**
SONM	**Songino Array**	**5.47**	**194**	Pn	**Pn**	**07 48 47.7**	**+0.6**
CRS	**Chara**	**6.83**	**53**	*e*Pn	**Pn**	**07 49 06.0**	**+0.5**
CRS				*e*Pg	Pb	07 49 29.4	+5.4
CRS				Pmax		07 49 52.2	
	comp=N,315nm,1.3s						
CRS				*e*Sg	**Sg**	**07 50 58.6**	**-5.7**
CRS				Smax		07 51 10.8	
	comp=N,3μm,1.4s						
CRS	**Chara**	**6.83**	**53**	*e*PN	**Pn**	**07 49 09.4**	**+3.9**
CRS				*e*		07 49 30.8	
CRS				*e*		07 50 57.4	
CRS				pmax	pmax		
	comp=Z,272nm,1.1s						
CRS				smax	smax		
	comp=E,3μm,1.3s						
TUP	**Tupik**	**7.00**	**75**	*e*Pn	**Pn**	**07 49 08.4**	**+0.5**
TUP				*e*Pg	**Pb**	**07 49 31.7**	**+4.7**
TUP				Pmax		07 49 41.0	
	comp=E,109nm,0.8s						
TUP				*e*Sg	**Sg**	**07 51 02.7**	**-7.1**
TUP				Smax		07 51 13.6	
	comp=E,4μm,1.4s						
TUP	**Tupik**	**7.00**	**75**⇑	*i*PN	**Pn**	**07 49 08.4**	**+0.5**
TUP				*e*		07 49 31.0	
TUP				*e*S	**Sn**	**07 50 26.7**	**-0.8**
TUP				*e*		07 51 01.6	
TUP				pmax	pmax		
	comp=Z,110nm,0.8s						
TUP				smax	smax		
	comp=N,4μm,1.4s						
KNGR	**Kungurtug, Tuv**	**7.17**	**253**	*e*	**Pn**	**07 49 12.4**	**+2.1**
KNGR				*e*		07 49 22.7	
KNGR				*e*Pg	**Pb**	**07 49 33.8**	**+3.9**
KNGR				*e*Sg	Sg	07 51 06.9	-8.4
KHNR	**Khani**	**7.67**	**56**	*e*Pn	**Pn**	**07 49 17.3**	**+0.2**
KHNR				*e*Pg	Pb	07 49 44.0	+5.6
KHNR				*e*Sg	Sg	07 51 23.3	-8.1
HIA	**Hailar**	**8.15**	**114**	PN	**Pn**	**07 49 22.4**	**-1.3**
HIA	**Hailar**	**8.15**	**114**	Pn	**Pn**	**07 49 22.4**	**-1.3**
YKLR	**Yuktali**	**8.41**	**61**	*e*Pn	**Pn**	**07 49 27.6**	**+0.4**
YKLR				*e*Pg	Pb	07 49 56.8	+5.8
YKLR				*e*Sg	Sg	07 51 46.3	-8.7
ARDR	**Aradan**	**9.04**	**272**	*e*Pn	**Pn**	**07 49 38.2**	**+2.3**
ARDR				*e*Pg		07 50 08.7	
ARDR				*e*Sg	Sn	07 52 04.1	+46
IENR	**Iengra**	**10.04**	**66**	*e*Sg	Sn	07 52 37.7	+55
CLNS	**Chul'man**	**10.20**	**62**	*e*Sg	Sn	07 52 42.7	+57
ZEA	**Zeya**	**11.29**	**79**	*e*P	Pn	07 50 11.9	+5.2
ZEA				*e*S	**Sn**	**07 52 16.6**	**+3.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZEA				smax	smax		
	comp=E,30nm,0.8s						
ZEA				MLR	MLR		
	comp=E,1μm,6.0s						
ZEA				MLR	MLR		
	comp=Z,1μm,7.0s						
HHC	**Hu-ho-hao-te**	**12.51**	**169**	*e*P	**Pn**	**07 50 25.4**	**+1.9**
HHC				sP		07 50 33.0	
HHC				S	**Sn**	**07 52 47.1**	**+4.2**
HHC				pmax	pmax		
	comp=Z,21nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=Z,2μm,9.0s						
HHC				LR	LR		
	comp=Z,690nm,8.1s						
HHC				LR	LR		
	comp=Z,2μm,8.7s						
BTO	**Baotou**	**12.61**	**174**	P	**Pn**	**07 50 24.3**	**-0.5**
DGZ	**Jazzator, Alta**	**13.48**	**264**	*i*P	**Pn**	**07 50 36.1**	**-0.6**
DGZ				MLR	MLR		
	comp=Z,665nm,11.0s						
ZAA0	**Zalesovo Array**	**13.99**	**283**	Pn	**Pn**	**07 50 43.2**	**-0.3**
ZALV	**Zalesovo Beam**	**13.99**	**283**	Pn	**Pn**	**07 50 43.2**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=90,slow=10,SNR=9.4						
ZALV				Lg	Lg	07 54 46.2	
	comp=Z,2.1nm,0.3s,baz=87,slow=26,SNR=6.0						
ZALV	**Zalesovo Beam**	**13.99**	**283**	*i*P	**Pn**	**07 50 43.2**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BJI	**Beijing**	**14.17**	**155**	P	**Pn**	**07 50 45.9**	**-0.1**
BJI				S	**Sn**	**07 53 25.0**	**+1.7**
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
BJI				LR	LR		
	comp=Z,830nm,5.1s						
BJI				LR	LR		
	comp=Z,2μm,4.8s						
BJT	**Baijiatuau**	**14.19**	**155**	P	**Pn**	**07 50 46.5**	**+0.2**
BJT	**Baijiatuau**	**14.19**	**155**		**Pn**	**07 50 46.5**	**+0.2**
YAK	**Yakutsk**	**14.42**	**44**	Lg	Lg	07 54 59.0	
	comp=Z,0.5nm,0.3s,baz=351,slow=22,SNR=7.9						
YAK	**Yakutsk**	**14.42**	**44**	*ce*P	**Pn**	**07 50 50.3**	**+1.0**
YAK				pmax	pmax		
	comp=Z,25nm,0.8s						
YAK				MLR	MLR		
	comp=Z,703nm,11.0s						
YAK	**Yakutsk**	**14.42**	**44**	Pn	**Pn**	**07 50 49.1**	**-0.2**
CN2	**Changchun**	**14.68**	**123**	*e*P	**P**	**07 50 56.7**	**-2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,90nm,4.0s						
CN2				LR	LR		
	comp=Z,1μm,8.0s						
CN2				LR	LR		
	comp=Z,1μm,8.0s						
CN2				LR	LR		
	comp=Z,2μm,9.0s						
GTA	**Gaotai**	**14.94**	**206**	P	**Pn**	**07 50 56.7**	**0.0**
GTA				pP	P	07 51 03.3	+1.0
GTA				sP		07 51 05.9	
GTA				S	**Sn**	**07 53 44.8**	**+2.5**
GTA				SS	**S**	**07 54 02.9**	**+2.6**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,91nm,5.6s						
GTA				LR	LR		
	comp=Z,1μm,9.5s						
GTA				LR	LR		
	comp=Z,1μm,12.0s						
GTA				LR	LR		
	comp=Z,1μm,9.8s						
KLR	**Kul'dur**	**15.17**	**96**	Pn	**Pn**	**07 50 58.3**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=300,slow=12,SNR=9.3						
KLR				Lg	Lg	07 55 24.0	
	comp=Z,0.9nm,0.3s,baz=48,slow=5.0,SNR=5.6						
KLR				LR	LR	07 57 35.1	
	comp=Z,157nm,20.6s,baz=282,slow=40						
KLR	**Kul'dur**	**15.17**	**96**	*ce*P	**P**	**07 51 03.2**	**-1.5**
KLR				MLR	MLR		
	comp=Z,749nm,11.0s						
ZSN	**Zaisan**	**16.01**	**259**	*e*P	**Pn**	**07 51 09.7**	**-0.9**
	baz=258						
ZSN	**Zaisan**	**16.01**	**259**	*e*P	**Pn**	**07 51 09.6**	**-0.9**
MDJ	**Mudanjiang**	**16.34**	**113**	P	**Pn**	**07 51 15.1**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,13nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,3.5s						
MDJ				LR	LR		
	comp=Z,2μm,8.2s						
MDJ				LR	LR		
	comp=Z,2μm,9.3s						
MDJ				LR	LR		
	comp=Z,3μm,8.5s						
WMQ	**Urumqi**	**16.52**	**244**	*e*P	**P**	**07 51 22.1**	**+2.4**
WMQ				pP	sP	07 51 26.4	+2.6
WMQ				sP	pP	07 51 29.5	+7.0
WMQ				pmax	pmax		
	comp=Z,75nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.7s						
WMQ				LR	LR		
	comp=Z,1μm,14.9s						
WMQ				LR	LR		
	comp=Z,420nm,20.7s						
WMQ				LR	LR		
	comp=Z,480nm,16.1s						
WMQ	**Urumqi**	**16.52**	**244**	P	**P**	**07 51 22.7**	**+3.0**
WMQ				pmax	pmax		
	comp=Z,45nm,0.9s						
LZH	**Lanzhou**	**17.36**	**192**	*e*P	**P**	**07 51 30.6**	**+1.4**
LZH				pP	sP	07 51 34.3	+1.0
LZH				sP	pP	07 51 36.5	+4.5
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				LR	LR		
	comp=Z,1μm,9.2s						
LZH				LR	LR		
	comp=Z,2μm,10.0s						
LZH				LR	LR		
	comp=Z,1μm,10.0s						
SEM	**Semipalatinsk**	**17.55**	**272**	*e*P	**Pn**	**07 51 26.8**	**-3.4**
	baz=272						
SEM	**Semipalatinsk**	**17.55**	**272**	*e*P	**Pn**	**07 51 26.7**	**-3.4**
MK31	**Makanchi Array**	**17.86**	**260**	*i*P	**Pn**	**07 51 32.1**	**-1.7**
MK31				pmax	pmax		
	comp=Z,13nm,0.6s						
MK31	**Makanchi Array**	**17.86**	**260**	Pn	**Pn**	**07 51 32.2**	**-1.7**
MKAR	**Makanchi Array**	**17.86**	**260**	P	**Pn**	**07 51 32.4**	**-1.5**
	comp=Z,1.1nm,0.3s,baz=67,slow=10,SNR=51						
MKAR				Lg	Lg	07 56 48.3	
	comp=Z,0.2nm,0.3s,baz=50,slow=18,SNR=6.3						
MKAR	**Makanchi Array**	**17.86**	**260**	Pn	**Pn**	**07 51 31.8**	**-2.0**
USRK	**Ussuriysk Ar.**	**17.94**	**110**	P	**P**	**07 51 35.5**	**+0.1**
	baz=157,slow=44,SNR=3.9						
USRK				Lg	Lg	07 56 48.5	
	baz=325,slow=22,SNR=4.6						
USRK				LR	LR	07 59 21.8	
	comp=Z,240nm,19.5s,baz=302,slow=40						
USRK	**Ussuriysk Ar.**	**17.94**	**110**	Pn	**Pn**	**07 51 32.6**	**-2.1**
MAKZ	**Makanchi**	**18.04**	**260**	P	**Pn**	**07 51 33.6**	**-2.4**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.8s						
MAKZ	**Makanchi**	**18.04**	**260**	Pn	**Pn**	**07 51 33.6**	**-2.4**
KURK	**Kurchatov**	**18.42**	**274**	P	**P**	**07 51 40.1**	**-0.5**
KURK	**Kurchatov**	**18.42**	**274**	P	**P**	**07 51 40.1**	**-0.5**
KURBB	**Kurchatov Arra**	**18.51**	**274**	P	**P**	**07 51 40.1**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=22						
KURBB				Lg	Lg	07 57 06.2	
	comp=Z,0.0nm,0.3s,baz=66,slow=34,SNR=5.7						
KURBB	**Kurchatov Arra**	**18.51**	**274**	P	**P**	**07 51 39.2**	**-2.3**
NRIK	**Noril'sk**	**18.88**	**337**	P	**P**	**07 51 41.6**	**-3.8**
	comp=Z,0.9nm,0.3s,baz=135,slow=12,SNR=8.8						
NRIK				S	Sn	07 55 04.0	-13
	comp=Z,2.7nm,0.3s,baz=210,slow=22,SNR=6.1						
NRIK				LR	LR	07 58 24.4	
	comp=Z,93nm,20.8s,baz=148,slow=35						
NRIK	**Noril'sk**	**18.88**	**337**	*i*P	**P**	**07 51 41.2**	**-4.3**
NRIK				pmax	pmax		
	comp=Z,21nm,0.8s						
NRIK				MLR	MLR		
	comp=Z,543nm,11.0s						
NRIK	**Noril'sk**	**18.88**	**337**	P	**P**	**07 51 41.7**	**-3.8**
NRIK				IAmb	IAmb	07 51 54.8	
	comp=Z,29nm,0.7s						
XAN	**Xi'an**	**19.12**	**179**	P	**Pn**	**07 51 51.5**	**+2.3**
XAN				pP	sP	07 51 57.4	+4.8
XAN				sP	pP	07 52 00.6	+9.3
XAN				S	**Sn**	**07 55 22.5**	**-0.9**
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,4.5s						
XAN				LR	LR		
	comp=Z,1μm,15.2s						
XAN				LR	LR		
	comp=Z,930nm,11.3s						
XAN	**Xi'an**	**19.12**	**179**	P	**Pn**	**07 51 50.0**	**+0.8**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi'an**	**19.12**	**179**		**P**	**07 51 47.2**	**-1.2**
TIXI	**Tiksi**	**20.63**	**18**	P	**P**	**07 52 04.0**	**-0.5**
	comp=Z,37nm,0.8s,baz=208,slow=5.7,SNR=90						
TIXI				LR	LR	07 59 12.6	
	comp=Z,104nm,20.1s,baz=257,slow=34						
TIXI	**Tiksi**	**20.63**	**18**	*d*iP	**P**	**07 52 03.6**	**-0.9**
TIXI	**Tiksi**	**20.63**	**18**	P	**P**	**07 52 03.8**	**-0.7**
KS19	**Wonju Array Si**	**20.72**	**131**	P	**P**	**07 52 06.4**	**+0.6**
KS19				IAmb	IAmb	07 52 16.1	
	comp=Z,33nm,1.2s						
KSAR	**Wonju Array Be**	**20.78**	**131**	P	**P**	**07 52 07.1**	**+0.7**
KSAR	**Wonju Array Be**	**20.78**	**131**	P	**P**	**07 52 07.1**	**+0.7**
KSRS	**Korea Array**	**20.78**	**131**	P	Pn	07 52 07.7	-1.2
	comp=Z,11nm,0.8s,baz=332,slow=10,SNR=24						
TDK	**Taldyqorghan**	**21.11**	**259**	*e*P	**P**	**07 52 09.8**	**-0.3**
	comp=Z,24nm,0.7s,baz=259						
TDK	**Taldyqorghan**	**21.11**	**259**	*e*P	**P**	**07 52 09.7**	**-0.3**
TDK				pmax	pmax		
	comp=Z,24nm,0.7s						
TYV	**Tymovskoe**	**21.13**	**82**	*e*P	**P**	**07 52 07.7**	**-2.4**
TYV				*e*S	**S**	**07 56 02.4**	**-2.6**
TYV				pmax	pmax		
	comp=Z,100nm,2.7s						
TYV				pmax	pmax		
	comp=Z,12nm,1.5s						
TYV				smax	smax		
	comp=N,11nm,1.0s						
TYV				smax	smax		
	comp=N,600nm,3.2s						
TJN	**Taejon**	**21.43**	**134**	*ce*P	**P**	**07 52 18.3**	**+4.9**
PDGK	**Podgornoye**	**21.45**	**254**	*i*P	**P**	**07 52 12.3**	**-1.4**
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SHLS	**Shalkode**	**21.57**	**254**	*e*P	**P**	**07 52 11.8**	**-3.2**
	comp=Z,32nm,0.6s,baz=253						
SHLS	**Shalkode**	**21.57**	**254**	*e*P	**P**	**07 52 11.8**	**-3.2**
SHLS				pmax	pmax		
	comp=Z,32nm,0.6s						
UZB	**Uzynbulak**	**21.83**	**255**	*e*P	**P**	**07 52 17.1**	**-0.7**
	baz=254						
UZB	**Uzynbulak**	**21.83**	**255**	*e*P	**P**	**07 52 17.1**	**-0.7**
KPKS	**Kokpek**	**21.83**	**256**	*e*P	**P**	**07 52 17.2**	**-0.7**
	comp=Z,15nm,0.9s,baz=255						
KPKS	**Kokpek**	**21.83**	**256**	P	**P**	**07 52 17.1**	**-0.7**
KPKS				pmax	pmax		
	comp=Z,15nm,0.9s						
SATY	**Saty**	**22.24**	**255**	*e*P	**P**	**07 52 21.8**	**-0.4**
	comp=Z,12nm,1.1s,baz=254						
SATY	**Saty**	**22.24**	**255**	*e*P	**P**	**07 52 21.8**	**-0.4**
SATY				pmax	pmax		
	comp=Z,12nm,1.1s						
BRZS	**Berezniki**	**22.25**	**276**	*e*P	**P**	**07 52 19.5**	**-2.7**
	comp=Z,6.0nm,0.5s,baz=276						
BRZS	**Berezniki**	**22.25**	**276**⇓	*e*P	**P**	**07 52 19.4**	**-2.7**
BRZS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2	**Nanjing**	**22.43**	**156**	*e*P	**P**	**07 52 25.2**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,7.

comp=Z,630nm,19.9s
CD2 Chengdu 22.48 190 P **P** **07 52 26.8 +2.0**
CD2 S **S** **07 56 29.7 -1.8**
CD2 PcS **PcS** **07 59 59.7 +2.1**
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,70nm,5.7s
CD2 LR LR
comp=Z,590nm,9.8s
CD2 LR LR
comp=Z,1μm,13.5s
CD2 LR LR
comp=Z,900nm,11.2s
BVAR Borovoye Array 22.62 285 P **P** **07 52 25.3 -0.7**
comp=Z,6.6nm,0.7s,baz=114,slow=17,SNR=40
BRVK Borovoye 22.67 285 *i* P **P** **07 52 24.4 -2.2**
BRVK pmax pmax
comp=Z,9.0nm,0.5s
BRVK Borovoye 22.67 285 P **P** **07 52 24.1 -2.5**
YSS Yuzh-Sakhalins 22.79 92 *e*P **P** **07 52 28.3 +0.4**
YSS *e*S **S** **07 56 32.0 -4.8**
YSS pmax pmax
comp=Z,30nm,1.4s
YSS MLR MLR
comp=E,500nm,14.0s
YSS MLR MLR
comp=Z,600nm,14.0s
KUU Kurty 22.96 259 *e*P **P** **07 52 28.1 -1.7**
baz=259
KUU Kurty 22.96 259 *e*P **P** **07 52 28.0 -1.7**
MDOK Medeo 22.97 257 *e*P **P** **07 52 29.1 -1.0**
baz=256
MDOK Medeo 22.97 257 *e*P **P** **07 52 29.0 -1.0**
AAA Alma-Ata 23.02 257 *e*P **P** **07 52 30.4 -0.1**
baz=256
AAA Alma-Ata 23.02 257 *e*P **P** **07 52 30.3 -0.1**
BTLS Baital 23.69 264 *e*P **P** **07 52 36.2 -0.8**
baz=263
BTLS Baital 23.69 264 *e*P **P** **07 52 36.2 -0.8**
TKM2 Tokmak 2 23.97 258 P **P** **07 52 40.5 +0.5**
SNR=6.9
TKM2 Tokmak 2 23.97 258 *i* P **P** **07 52 40.0 0.0**
TKM2 pmax pmax
comp=Z,8.0nm,0.7s
MA2 Magadan 24.02 58 P **P** **07 52 41.2 +1.2**
comp=Z,7.5nm,0.9s,baz=274,slow=8.6,SNR=8.0
MA2 LR LR 08 02 59.0
comp=Z,33nm,19.3s,baz=272,slow=39
MA2 Magadan 24.02 58 P **P** **07 52 41.8 +1.8**
MA2 pmax pmax
comp=Z,17nm,1.2s
MA2 Magadan 24.02 58 P **P** **07 52 41.8 +1.8**
MA2 IAmb IAmb 07 52 47.1
comp=Z,17nm,1.2s
SGDS Sogindy 24.23 260 *e*P **P** **07 52 42.1 -0.2**
comp=Z,12nm,1.5s,baz=260
SGDS Sogindy 24.23 260 *e*P **P** **07 52 42.0 -0.2**
SGDS pmax pmax
comp=Z,12nm,1.5s
USP Ospenovka 24.41 260 P **P** **07 52 44.5 +0.6**
SNR=11
SEY Seymchan 24.78 49 P **P** **07 52 47.6 +0.7**
comp=Z,1.5nm,0.5s,baz=252,slow=9.0,SNR=9.6
SEY LR LR 08 02 17.8
comp=Z,310nm,21.7s,baz=164,slow=36
SEY Seymchan 24.78 49 *i* P **P** **07 52 47.3 +0.4**
AAK Ala-Archa 24.79 259 P **P** **07 52 48.2 +0.8**
comp=Z,7.6nm,0.9s,baz=73,slow=6.6,SNR=18
AAK LR LR 08 02 53.7
comp=Z,123nm,20.9s,baz=31,slow=38
AAK Ala-Archa 24.79 259 P **P** **07 52 48.3 +0.9**
SNR=6.1
AAK Ala-Archa 24.79 259 *i* P **P** **07 52 46.4 -1.0**
AAK pmax pmax
comp=Z,19nm,0.8s
AAK Ala-Archa 24.79 259 P **P** **07 52 47.8 +0.4**
UCH Uchtor 25.02 258 P **P** **07 52 51.4 +1.5**
SNR=7.1
EKS2 Erkin-Say 25.20 259 P **P** **07 52 52.1 +1.1**
SNR=14
AML Almayashu 25.56 258 P **P** **07 52 55.6 +0.8**
SNR=8.3
DZA Taraz 26.51 262 *e*P **P** **07 53 02.6 -0.4**
comp=Z,8.4nm,0.6s,baz=262
DZA Taraz 26.51 262 *e*P **P** **07 53 02.5 -0.4**
DZA pmax pmax
comp=Z,8.0nm,0.6s
MJAR Matsushiro Arr 26.64 117 LR LR 08 04 08.1
comp=Z,111nm,18.9s,baz=320,slow=38
GYA Guiyang 26.70 183 ⇓P **P** **07 53 07.4 +2.6**
GYA pmax pmax
comp=Z,7.0nm,0.6s
KK31 Karatay Array 26.88 263 *i* P **P** **07 53 07.6 +1.4**
KK31 Karatay Array 26.88 263 P **P** **07 53 06.7 +0.5**
KKAR Karatay Array 26.88 263 P **P** **07 53 05.5 -0.7**
KKAR 07 53 06.2
KKAR Karatay Array 26.88 263 P **P** **07 53 06.2 0.0**
KKAR IAmb IAmb 07 53 10.1
comp=Z,8.1nm,0.8s
KKAR Karatay Array 26.88 263 P **P** **07 53 05.5 -0.7**
SVE Sverdlovsk 27.16 297 *e*P **P** **07 53 11.6 +3.0**
SVE pmax pmax
comp=Z,29nm,0.8s
ARU Arti 28.37 297 P **P** **07 53 20.5 +1.1**
comp=Z,1.6nm,0.2s,baz=293,slow=5.9,SNR=4.5
ARU LR LR 08 05 56.4
comp=Z,132nm,19.8s,baz=156,slow=39
ARU Arti 28.37 297 P **P** **07 53 18.4 -1.0**
ARU 07 54 05.2
ARU S **S** **07 58 07.0 +1.1**
ARU SS **SnSn** **07 59 24.5 +1.4**
ARU MLR MLR
comp=Z,194nm,15.0s
ARU Arti 28.37 297 P **P** **07 53 20.2 +0.8**
ARU IAmb IAmb 07 53 45.6
comp=Z,9.7nm,0.7s
PETK Petropavlovsk- 29.14 70 P **P** **07 53 26.9 +0.6**
comp=Z,1.9nm,0.7s,baz=300,slow=3.3,SNR=4.1
PETK LR LR 08 05 56.2
comp=Z,93nm,18.8s,baz=292,slow=38
GAR Garm 29.54 257 P **P** **07 53 30.2 +0.1**
GAR IAmb IAmb 07 53 31.0
comp=Z,8.8nm,0.6s
TAPN Taplejung 29.99 219 *e*P **P** **07 53 34.9 +0.6**
comp=Z,13nm,0.6s
AB31 Akbulak array 30.10 282 *e*P **P** **07 53 34.2 -0.6**
ABKAR Akbulak array 30.10 282 P **P** **07 53 34.2 -0.6**
GUN Gumba 30.20 222 *e*P **P** **07 53 37.5 +1.2**
comp=Z,10nm,0.6s
JIRN Jiri 30.30 222 *e*P **P** **07 53 38.3 +1.1**
comp=Z,24nm,0.7s
ODAN Odare 30.55 219 *e*P **P** **07 53 40.0 +0.8**
comp=Z,24nm,0.8s
GKN Gorkha 30.64 224 *e*P **P** **07 53 41.0 +1.1**
comp=Z,61nm,0.9s
BILL Bilibino 30.68 39 *ce*P **P** **07 53 41.0 +1.3**
BILL pmax pmax
comp=Z,19nm,2.5s
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 30.68 39 P **P** **07 53 41.0 +1.3**
BILL IAmb IAmb 07 53 47.1
comp=Z,7.4nm,1.0s
PKI Pulchoki 30.70 223 *e*P **P** **07 53 41.5 +0.9**
AKTO Aktyubinsk 30.72 286 P **P** **07 53 39.3 -1.0**
comp=Z,2.7nm,0.7s,baz=66,slow=11,SNR=7.2
AKTO Aktyubinsk 30.72 286 *i* P **P** **07 53 38.6 -1.7**
AKTO pmax pmax
comp=Z,3.0nm,0.8s
RAMN Ramite 30.77 220 *e*P **P** **07 53 41.4 +0.2**
comp=Z,13nm,0.8s
PYUN Piuthan 31.26 227 *e*P **P** **07 53 46.7 +1.3**
KOLN Koldanda 31.28 226 *e*P **P** **07 53 46.9 +1.3**
comp=Z,41nm,0.9s
KIRV Kirov 32.55 304 *ce*P **P** **07 53 54.8 -1.4**
PRGR Permogore 33.56 310 *e*P **P** **07 54 03.9 -1.1**
PRGR *e* 07 55 13.5
PRGR pmax pmax
comp=Z,11nm,0.6s
CHTO Chiang Mai 35.05 196 P **P** **07 54 18.3 0.0**
CHTO pmax pmax
comp=Z,5.0nm,0.7s
CHTO Chiang Mai 35.05 196 P **P** **07 54 18.3 0.0**
CHTO IAmb IAmb 07 54 19.3
comp=Z,4.7nm,0.7s
CMAR Chiang Mai Arr 35.40 196 P **P** **07 54 20.6 -0.8**
comp=Z,2.3nm,0.6s,baz=0.3,slow=8.9,SNR=15
CMAR LR LR 08 08 48.3
comp=Z,61nm,18.4s,baz=310,slow=36
CMAR Chiang Mai Arr 35.40 196 *i* P **P** **07 54 21.8 +0.5**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 35.40 196 P **P** **07 54 21.7 +0.4**
BELG Belogornoye 35.77 294 P **P** **07 54 23.5 -0.6**
comp=Z,12nm,1.1s,baz=74,slow=4.9,SNR=4.5
BELG Belogornoye 35.77 294 *i* P **P** **07 54 23.6 -0.6**
BELG pmax pmax
comp=Z,3.0nm,1.0s
KLMR Klimovskoe 36.61 310 *e*P **P** **07 54 28.5 -2.8**
KLMR pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 36.61 310 *e*P **P** **07 54 28.5 -2.8**
KLMR AMP 07 54 36.3
comp=Z,21nm,1.2s
HRA Herat 37.42 259 P **P** **07 54 38.3 -0.4**
GEYT Alibeck 37.50 267 P **P** **07 54 39.7 +0.5**
comp=Z,1.3nm,0.5s,baz=114,slow=3.7,SNR=3.6
GEYT LR LR 08 11 07.6
comp=Z,56nm,20.6s,baz=40,slow=38
GEYT Alibeck 37.50 267 IAmb IAmb 07 54 42.6
comp=Z,2.1nm,0.8s
GYA0B ALIBECK ARRAY 37.50 267 P **P** **07 54 37.7 -1.5**
SPA0 Spitsbergen Ar 39.02 341 P **P** **07 54 52.1 +0.6**
SPITS Spitsbergen Ar 39.02 341 P **P** **07 54 51.6 +0.1**
comp=Z,9.3nm,0.7s,baz=134,slow=16,SNR=5.9
ARCES ARCESS Array B 39.30 327 P **P** **07 54 51.9 -2.0**
comp=Z,33nm,1.4s,baz=70,slow=10,SNR=7.4
ARCES PcP **PcP** **07 57 02.1 -0.2**
comp=Z,5.0nm,0.9s,baz=48,slow=5.4,SNR=4.9
ARCES LR LR 08 17 20.9
comp=Z,35nm,18.1s,baz=45,slow=46
ARCES ARCESS Array B 39.30 327 IAmb IAmb 07 54 55.7
comp=Z,1.1nm,1.2s
OBN Obninsk 40.39 303 *i* P **P** **07 55 00.2 -2.8**
OBN *i* 07 56 36.2
OBN *i* 07 57 06.2
OBN *i* SS SS 08 04 04.2 -5.0
OBN pmax pmax
comp=Z,7.0nm,0.9s
FINES FINESS Array B 42.34 315 P **P** **07 55 17.8 -1.3**
comp=Z,2.7nm,0.4s,baz=68,slow=8.1,SNR=37
FINES LR LR 08 14 38.3
comp=Z,109nm,19.2s,baz=46,slow=39
FINES FINESS Array B 42.34 315 *i* P **P** **07 55 18.7 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.4s
FINES FINESS Array B 42.34 315 P **P** **07 55 18.3 -0.7**
KIV Kislovodsk 42.98 285 *e*P **P** **07 55 24.5 -0.1**
KIV pmax pmax
comp=Z,39nm,1.1s
KIV MLR MLR
comp=Z,107nm,16.0s
KIV Kislovodsk 42.98 285 P **P** **07 55 25.2 +0.5**
KIV IAmb IAmb 07 55 27.9
comp=Z,14nm,1.0s
KBZ Khabaz 43.00 285 P **P** **07 55 25.9 +1.4**
comp=Z,2.3nm,0.9s,baz=70,slow=4.6,SNR=4.4
KBZ Khabaz 43.00 285 *i* P **P** **07 55 22.6 -2.0**
KBZ pmax pmax
comp=Z,4.0nm,1.0s
SHA1 Shidzhatmaz 43.13 285 *i* P **P** **07 55 24.9 -1.1**
NEY Neytrino 43.39 284 *i* P **P** **07 55 27.8 -0.2**
NEY pmax pmax
comp=Z,4.0nm,0.9s
SOC Sochi 44.93 287 *e*P **P** **07 55 39.8 -0.3**
SOC *e* 07 57 22.7
SOC *e*PPP PPP 07 58 08.4
SOC *e*S **S** **08 02 19.2 +1.3**
SOC *e*SS **SS** **08 05 39.5 +0.6**
SOC *e*SSS SSS 08 06 23.1
SOC pmax pmax
comp=Z,8.0nm,0.6s
SOC MLR MLR
comp=Z,72nm,18.0s
MNK Minsk 45.03 306 *i* P P 07 55 35.8 -5.0
comp=E,3.0nm,1.0s
MNK *i* P P 07 55 35.8 -5.0
comp=N,17nm,0.7s
MNK *i* P P 07 55 35.8 -5.0
comp=Z,10.0nm,0.6s
MNK *i* PP **PcP** **07 57 20.4 -1.1**
MNK *i* PPP PPP 07 57 57.6
MNK *i* S **S** **08 02 13.3 -5.8**
MNK *i* SS **ScS** **08 05 35.9 -1.6**
MNK *i* SSS SSS 08 06 18.8
MNK *i* LQ LQ 08 11 04.7
MNK *i* LR LR 08 14 49.0
MNK *i* LRM MLR 08 16 23.8
comp=N,85nm,16.6s
MNK *i* LRM MLR 08 16 53.5
comp=E,26nm,16.6s
MNK *i* LRM MLR 08 16 54.2
comp=Z,149nm,15.9s
TOLK Toolik Lake Re 45.84 30 P **P** **07 55 47.1 0.0**
TOLK IAmb IAmb 07 55 48.6
comp=Z,5.8nm,0.8s
IMAR Indian Mountai 46.01 34 P **P** **07 55 49.2 +0.8**
DAG Danmarks Havn 46.09 345 P **P** **07 55 49.4 +0.5**
DAG pmax pmax
comp=Z,9.0nm,0.7s
COLD Coldfoot 46.46 32 P **P** **07 55 52.9 +0.9**
AKASG Malin Array Be 46.49 301 P **P** **07 55 51.5 -0.8**
comp=Z,2.9nm,0.5s,baz=49,slow=8.8,SNR=11
AKASG LR LR 08 17 20.3
comp=Z,104nm,19.4s,baz=50,slow=39
AKASG Malin Array Be 46.49 301 *i* P **P** **07 55 53.0 +0.7**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 46.49 301 P **P** **07 55 51.7 -0.6**
AKBB Malin Array Si 46.49 301 *ce*P **P** **07 55 52.3 0.0**
AKBB Malin Array Si 46.49 301 P **P** **07 55 51.8 -0.5**
AKBB IAmb IAmb 07 55 53.6
comp=Z,4.0nm,0.8s
EUNU Eureka 46.77 3 P **P** **07 55 55.0 +0.7**
EUNU IAmb IAmb 07 56 22.1
comp=Z,6.7nm,1.1s
MLY Manley 47.59 34 P **P** **07 56 02.3 +1.5**
MLY IAmb IAmb 07 56 20.9
comp=Z,5.5nm,1.4s
I23K Minto, Yukon-K 47.98 34 P **P** **07 56 05.4 +1.6**
I23K IAmb IAmb 07 56 11.7
comp=Z,9.8nm,1.2s
BPAW Bear Paw Mtn. 48.07 35 P **P** **07 56 06.0 +1.5**
BPAW IAmb IAmb 07 56 19.1
comp=Z,6.1nm,1.3s
BMAR Burnt Mountain 48.07 30 P **P** **07 56 05.6 +1.1**
MDM Murphy Dome 48.48 34 IAmb IAmb 07 56 11.3
comp=Z,4.3nm,0.8s
NOA NORSAR Array B 48.62 320 P **P** **07 56 08.3 -0.4**
comp=Z,1.7nm,0.8s,baz=53,slow=7.5,SNR=6.1
NOA LR LR 08 18 03.0
comp=Z,48nm,19.3s,baz=45,slow=38
CCB Clear Creek Bu 48.81 34 IAmb IAmb 07 56 12.0
comp=Z,5.3nm,0.8s
WRH Wood River Hil 48.83 34 P **P** **07 56 11.1 +0.7**
WRH IAmb IAmb 07 56 12.1
comp=Z,6.3nm,0.8s
PRP Porcupine Dome 49.01 32 P **P** **07 56 12.8 +1.0**
PRP IAmb IAmb 07 56 14.0
comp=Z,5.7nm,0.7s
MCK McKinley 49.01 35 P **P** **07 56 13.0 +1.3**
MCK pmax pmax
comp=Z,4.0nm,0.8s
MCK McKinley 49.01 35 P **P** **07 56 13.0 +1.3**
MCK IAmb IAmb 07 56 14.6
comp=Z,4.0nm,0.8s
IL31 49.04 33 P **P** **07 56 12.8 +0.9**
ILAR Eielson Array 49.04 33 P **P** **07 56 12.5 +0.5**
comp=Z,6.2nm,0.6s,baz=300,slow=6.2,SNR=75
ILAR Eielson Array 49.04 33 P **P** **07 56 12.3 +0.4**
RSO Redoubt South 49.66 40 P **P** **07 56 17.7 +0.6**
BIZ Bicaz 50.41 298 ⇑P **P** **07 56 23.1 +0.5**
BUR08 Bucovina Ar. S 50.44 299 P **P** **07 56 22.6 -0.4**
BUR08 IAmb IAmb 07 56 24.9
comp=Z,4.9nm,0.8s
BURAR Bucovina Array 50.45 299 ⇑P **P** **07 56 23.0 0.0**
BURAR Bucovina Array 50.45 299 P **P** **07 56 23.2 +0.2**
INK Inuvik 50.54 25 P **P** **07 56 23.7 +0.5**
INK pmax pmax
comp=Z,6.0nm,1.1s
INK Inuvik 50.54 25 P **P** **07 56 23.7 +0.5**
TULEG Thule 50.56 359 P **P** **07 56 23.1 -0.2**
TULEG IAmb IAmb 07 56 29.2
comp=Z,7.4nm,0.7s
DOT Dot Lake 50.71 33 P **P** **07 56 24.5 -0.2**
DOT IAmb IAmb 07 56 25.4
comp=Z,6.8nm,0.7s
PSI Prapat 50.80 192 P **P** **07 56 26.1 +0.2**
comp=Z,9.2nm,0.9s,baz=360,slow=3.3,SNR=7.1
EGAK Eagle 50.88 31 P **P** **07 56 26.6 +0.7**
EGAK IAmb IAmb 07 56 32.5
comp=Z,6.7nm,1.0s
BRTR Keskin Array B 50.89 287 P **P** **07 56 27.5 +1.0**
comp=Z,3.1nm,0.7s,baz=62,slow=6.7,SNR=9.5
BRTR Keskin Array B 50.89 287 P **P** **07 56 26.6 +0.1**
RPSI Rantau Prapat 50.90 192 P **P** **07 56 25.8 -0.8**
RPSI Rantau Prapat 50.90 192 P **P** **07 56 26.1 -0.4**
M24K Tolsona, Glenn 51.03 36 P **P** **07 56 27.6 +0.5**
K27K Chicken 51.10 32 P **P** **07 56 28.4 +0.8**
RES Resolute Bay 51.49 8 P **P** **07 56 30.5 +0.1**
RES pmax pmax
comp=Z,6.0nm,1.0s
RES Resolute Bay 51.49 8 P **P** **07 56 30.5 +0.1**
RES IAmb IAmb 07 56 31.4
comp=Z,5.6nm,0.9s
KLU Klutina 51.53 36 P **P** **07 56 31.9 +0.9**
KLU IAmb IAmb 07 56 32.8
comp=Z,13nm,1.2s
CRVS Cervenica-Dubn 51.57 303 *e*P **P** **07 56 33.1 +1.8**
CRVS Cervenica-Dubn 51.57 303 *e*P **P** **07 56 33.1 +1.8**
L27K Beaver Creek, 51.85 33 IAmb IAmb 07 56 40.3
comp=Z,10nm,1.4s
BCAR Beaver Creek A 51.86 33 P **P** **07 56 33.5 +0.2**
N25K Chitina, Valde 51.92 35 P **P** **07 56 34.9 +1.0**
N25K IAmb IAmb 07 56 36.0
comp=Z,7.4nm,0.8s
DAWY Dawson 51.92 31 P **P** **07 56 33.4 -0.4**
VOIR 51.94 297 ⇑P **P** **07 56 35.7 +1.5**
C36M Paulatuk 51.97 21 P **P** **07 56 32.8 -1.1**
C36M IAmb IAmb 07 56 34.1
comp=Z,9.8nm,1.0s
DRGR 52.29 300 ⇓P **P** **07 56 37.4 +0.6**
KSP Ksiaz 52.86 307 P **P** **07 56 41.6 +0.8**
KSP pmax pmax
comp=Z,11nm,1.4s
MORC Moravsky Berou 52.95 306 *e*P **P** **07 56 42.1 +0.4**
MORC Moravsky Berou 52.95 306 P **P** **07 56 42.0 +0.4**
MORC pmax pmax
comp=Z,4.0nm,1.2s
KRLC Kraliky 53.13 306 *e*P **P** **07 56 43.1 +0.2**
KRLC Kraliky 53.13 306 *e*P **P** **07 56 43.1 +0.2**
CHVC Chvalec 53.14 307 *e*P **P** **07 56 42.8 -0.2**
CHVC *ex* x 07 56 54.8
VYHS Vyhne 53.16 304 *e*P **P** **07 56 44.0 +0.9**
VYHS Vyhne 53.16 304 *e*P **P** **07 56 44.0 +0.9**
DPC Dobruska-Polom 53.17 307 *e*P **P** **07 56 43.6 +0.4**
DPC Dobruska-Polom 53.17 307 *e*P **P** **07 56 43.6 +0.4**
GZR Gura Zlata 53.17 299 ⇑P **P** **07 56 44.0 +0.7**
HERR Herculane 53.71 298 ⇓P **P** **07 56 47.5 +0.4**
VRAC Vranov 53.73 306 P **P** **07 56 48.4 +1.2**
comp=Z,1.4nm,0.5s,baz=154,slow=2.2,SNR=3.1
VRAC Vranov 53.73 306 *e*P **P** **07 56 47.3 0.0**
SMOL Smolenice 53.84 305 *e*P **P** **07 56 49.4 +1.2**
SMOL Smolenice 53.84 305 *e*P **P** **07 56 49.4 +1.2**
BRG Berggiesshubel 53.95 309 P **P** **07 56 49.5 +0.6**
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG Berggiesshubel 53.95 309 *e*P **P** **07 56 49.2 +0.3**
BRG Amp 07 56 54.9
comp=Z,19nm,1.6s
BRG Amp 08 23 09.0
comp=Z,0.3nm,14.6s
KRUC Moravsky 53.99 306 *e*P **P** **07 56 50.1 +0.9**
KRUC Moravsky 53.99 306 P **P** **07 56 49.0 -0.2**
KRUC pmax pmax
comp=Z,7.0nm,1.2s
CLL Collm 54.10 310 *e*P **P** **07 56 49.0 -0.9**
CLL *e*PcP **PcP** **07 57 52.0 -2.6**
CLL *e*S **S** **08 04 31.0 +4.9**
CLL *e*SS **SS** **08 08 06.0 -0.9**
CLL Collm 54.10 310 *e*P **P** **07 56 49.0 -0.9**
CLL *e*S **S** **08 04 31.0 +4.9**
MORH Mrgy, Hungar 54.78 302 ⇓P **P** **07 56 55.2 +0.3**
CONA Conrad Observa 55.02 305 *e*P **P** **07 56 52.8 -3.9**
comp=Z,6.9nm,1.7s
CKRC Cesky Krumlov 55.17 307 *e*P **P** **07 56 58.2 +0.4**
CKRC *ex* x 07 57 01.2
MOX Moxa 55.19 310 P **P** **07 56 57.6 -0.3**
MOX pmax pmax
comp=Z,8.0nm,1.4s
KHC Kasperske Hory 55.31 307 *e*P **P** **07 56 58.8 0.0**
KHC Kasperske Hory 55.31 307 *e*P **P** **07 56 58.8 0.0**
KHC Kasperske Hory 55.31 307 P **P** **07 56 57.6 -1.2**
KHC IAmb IAmb 07 57 04.5
comp=Z,11nm,1.3s
GEC2 GERESS Array S 55.44 307 P **P** **07 57 00.2 +0.4**
GEC2 IAmb IAmb 07 57 05.8
comp=Z,8.6nm,1.3s
GERES GERESS Array B 55.44 307 P **P** **07 56 59.9 +0.1**
comp=Z,1.0nm,0.7s,baz=51,slow=8.7,SNR=10
GERES GERESS Array B 55.44 307 P **P** **07 57 00.0 +0.1**
ARSA Arzberg 55.65 304 *e*P **P** **07 57 01.7 +0.4**
comp=Z,10nm,1.7s
MOA Molln 55.85 306 *e*P **P** **07 57 02.5 -0.2**
comp=Z,2.8nm,0.9s
SOKA Soboth 56.28 304 *e*P **P** **07 57 06.1 +0.2**
comp=Z,12nm,1.4s
OBKA Obir 56.64 304 *e*P **P** **07 57 08.0 -0.5**
comp=Z,6.8nm,0.8s
KBA Koelnbreinsper 56.84 306 *e*P **P** **07 57 09.6 -0.3**
comp=Z,4.7nm,0.8s
MYKA Terra Mystica 57.01 305 *e*P **P** **07 57 12.0 +1.0**
comp=Z,4.1nm,0.7s
ABTA Abfaltersbach 57.48 306 *e*P **P** **07 57 15.0 +0.6**
comp=Z,4.8nm,1.1s
WATA Walderalm 57.52 307 *e*P **P** **07 57 14.0 -0.7**
comp=Z,7.6nm,0.9s
WTTA Wattenberg 57.54 307 *e*P **P** **07 57 14.5 -0.4**
comp=Z,5.9nm,1.4s
MOTA Moosalm 57.74 307 *e*P **P** **07 57 12.3 -3.9**
comp=Z,13nm,1.6s
SQTA Sankt Quirin 57.77 307 *e*P **P** **07 57 12.9 -3.6**
comp=Z,8.9nm,1.3s
RETA Reutte 57.80 307 *e*P **P** **07 57 17.1 +0.5**
comp=Z,9.9nm,1.3s
JIS Juneau Island 57.86 34 IAmb IAmb 07 57 18.9
comp=Z,8.8nm,0.9s
EKA Eskdalemuir Ar 58.05 321 P **P** **07 57 18.6 +0.5**
comp=Z,6.5nm,0.7s,baz=50,slow=6.5,SNR=38
FETA Feichten 58.15 307 *e*P **P** **07 57 15.7 -3.5**
comp=Z,5.8nm,1.5s
DAVA Damuels 58.36 308 *e*P **P** **07 57 20.0 -0.7**
comp=Z,8.4nm,1.2s
DLBC Dease Lake 59.14 31 P **P** **07 57 26.7 +0.9**
YKA Yellowknife Ar 59.84 21 P **P** **07 57 29.9 -0.5**
comp=Z,3.7nm,0.8s,baz=331,slow=6.4,SNR=54
YKA Yellowknife Ar 59.84 21 *i* P **P** **07 57 29.8 -0.6**
YKA pmax pmax
comp=Z,4.0nm,0.8s
FCC Fort Churchill 66.96 12 P **P** **07 58 17.0 -0.6**
FCC pmax pmax
comp=Z,14nm,1.4s
FCC Fort Churchill 66.96 12 P **P** **07 58 16.9 -0.6**
FFC Flin Flon 69.59 18 P **P** **07 58 34.1 0.0**
FFC pmax pmax
comp=Z,10.0nm,1.5s
FFC Flin Flon 69.59 18 P **P** **07 58 34.1 0.0**
ESDC Sonseca Array 70.65 311 P **P** **07 58 42.0 +1.0**
comp=Z,4.4nm,0.8s,baz=28,slow=6.0,SNR=20
ESDC LR LR 08 32 19.4
comp=Z,12nm,20.2s,baz=10.0,slow=38
ESDC Sonseca Array 70.65 311 P **P** **07 58 41.7 +0.7**
ESDC IAmb IAmb 07 58 42.7
comp=Z,4.6nm,0.9s
B08A Colville Reser 71.07 31 P **P** **07 58 44.4 +1.0**
NEW Newport 71.83 30 P **P** **07 58 49.0 +1.0**
NEW pmax pmax
comp=Z,4.0nm,0.8s
NEW Newport 71.83 30 P **P** **07 58 49.0 +1.0**
NEW IAmb IAmb 07 58 49.7
comp=Z,3.7nm,0.8s
C09A Chrisman Ranch 71.89 31 P **P** **07 58 49.8 +1.4**
E07A Sunnyside 72.49 33 P **P** **07 58 52.1 +0.2**
F10A Beach Ranch, E 73.85 31 P **P** **07 59 01.8 +1.7**

MSO	**Missoula**	**74.07**	**29**	P	**P**	**07 59 02.2**	**+0.9**
MSO				IAmb	IAmb	07 59 03.3	
	comp=Z,7.5nm,1.1s						
PINE	**Pine Mountain**	**74.57**	**35**	P	**P**	**07 59 06.9**	**+2.5**
PINE				IAmb	IAmb	07 59 08.7	
	comp=Z,6.5nm,1.1s						
HRY	**Holter Researc**	**74.77**	**27**	P	**P**	**07 59 05.9**	**+0.4**
BMO	**Blue Mountains**	**74.83**	**32**	P	**P**	**07 59 06.7**	**+0.9**
BMO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BMO	**Blue Mountains**	**74.83**	**32**	P	**P**	**07 59 06.7**	**+0.9**
ULM	**Lac du Bonnet**	**74.96**	**16**	P	**P**	**07 59 06.0**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=358,slow=13,SNR=3.1						
ULM				LR	LR	08 33 37.1	
	comp=Z,31nm,20.4s,baz=352,slow=37						
ULM	**Lac du Bonnet**	**74.96**	**16**	IAmb	IAmb	07 59 06.1	
	comp=Z,6.0nm,1.2s						
J08A	**Circle Bar Ran**	**75.78**	**33**	IAmb	IAmb	07 59 13.9	
	comp=Z,5.0nm,0.8s						
WRA	**Warramunga Arr**	**76.20**	**155**	P	**P**	**07 59 13.2**	**-0.4**
	comp=Z,6.0nm,0.8s,baz=348,slow=5.3,SNR=6.6						
MOD	**Modoc Plateau**	**76.46**	**35**	IAmb	IAmb	07 59 22.6	
	comp=Z,7.4nm,1.2s						
YHL	**Hebgen Lake**	**76.66**	**28**	IAmb	IAmb	07 59 23.4	
	comp=Z,10nm,1.4s						
LKWY	**Lake**	**77.14**	**27**	P	**P**	**07 59 20.5**	**+1.3**
LKWY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LKWY	**Lake**	**77.14**	**27**	P	**P**	**07 59 20.5**	**+1.3**
YPP	**Pitchstone Pla**	**77.30**	**28**	P	**P**	**07 59 22.5**	**+2.4**
LOHW	**Long Hollow**	**77.96**	**28**	P	**P**	**07 59 24.8**	**+1.1**
SNOW	**Snow King Moun**	**78.06**	**28**	P	**P**	**07 59 24.5**	**+0.2**
PDAR	**Pinedale Array**	**79.03**	**27**	P	**P**	**07 59 29.1**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=51,slow=2.5,SNR=7.9						
PDAR				LR	LR	08 38 18.8	
	comp=Z,38nm,18.2s,baz=324,slow=39						
HWUT	**Hardware Ranch**	**79.53**	**29**	P	**P**	**07 59 32.5**	**+0.1**
HWUT				IAmb	IAmb	07 59 34.3	
	comp=Z,6.7nm,1.1s						
KMBO	**Kilima Mbogo**	**79.66**	**254**	*i* P	**P**	**07 59 34.2**	**+0.8**
KMBO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAR	**Alice Springs**	**79.67**	**156**	P	**P**	**07 59 33.0**	**+0.1**
	comp=Z,5.6nm,0.8s,baz=339,slow=5.3,SNR=14						
ASAR	**Alice Springs**	**79.67**	**156**	P	**P**	**07 59 33.0**	**+0.1**
NVAR	**Mina Array Bea**	**80.24**	**35**	P	**P**	**07 59 35.3**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=320,slow=4.4,SNR=6.8						
NVAR				LR	LR	08 40 42.3	
	comp=Z,45nm,20.1s,baz=276,slow=40						
ECSD	**EROS Data Cent**	**81.13**	**18**	IAmb	IAmb	07 59 41.3	
	comp=Z,7.4nm,1.1s						
KNB	**Kanab**	**83.35**	**32**	IAmb	IAmb	08 00 00.4	
	comp=Z,6.6nm,1.1s						
ANMO	**Albuquerque**	**87.19**	**28**	P	**P**	**08 00 13.3**	**+1.4**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ANMO	**Albuquerque**	**87.19**	**28**	P	**P**	**08 00 13.3**	**+1.4**
TORD	**Torodi Ar. Bea**	**89.29**	**291**	P	**P**	**08 00 21.1**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=24,slow=4.5,SNR=6.8						
TORD	**Torodi Ar. Bea**	**89.29**	**291**	P	**P**	**08 00 21.2**	**-0.7**
TORD				IAmb	IAmb	08 00 22.6	
	comp=Z,5.5nm,1.4s						
WMOK	**Wichita Mounta**	**89.34**	**22**	P	**P**	**08 00 22.4**	**+0.5**
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WMOK	**Wichita Mounta**	**89.34**	**22**	P	**P**	**08 00 22.4**	**+0.5**
WVT	**Waverly**	**89.97**	**13**	P	**P**	**08 00 24.7**	**-0.1**
WVT				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WVT	**Waverly**	**89.97**	**13**	P	**P**	**08 00 24.7**	**-0.1**
W45A	**Hickory Valley**	**90.74**	**14**	P	**P**	**08 00 28.4**	**+0.1**
TXAR	**Lajitas Array**	**93.25**	**28**	P	**P**	**08 00 40.8**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=14,slow=2.6,SNR=4.2						
DBIC	**Dimbokro**	**98.25**	**293**	LR	LR	08 49 04.5	
	comp=Z,16nm,18.2s,baz=72,slow=38						
LPAZ	**La Paz**	**143.10**	**354**	PKP	PKPbc	08 06 57.9	+0.7
	comp=Z,2.1nm,0.3s,baz=54,slow=5.0,SNR=19						
SNAA	**Sanae**	**145.71**	**212**	PKPdf	**PKPdf**	**08 07 02.2**	**-0.3**
VNA2	**Neumayer--Watz**	**147.13**	**213**	PKPdf	**PKPbc**	**08 07 06.7**	**-0.4**
VNA1	**Neumayer--Stat**	**147.41**	**214**	PKPdf	**PKPbc**	**08 07 07.6**	**-0.2**
VNA3	**Neumayer Olymp**	**147.88**	**212**	PKPdf	**PKPbc**	**08 07 08.6**	**-0.5**
CPUP	**Villa Florida**	**151.14**	**333**	PKPbc	**PKPbc**	**08 07 17.4**	**-1.0**
	comp=Z,5.3nm,0.8s,baz=15,slow=5.3,SNR=11						

IDC 06 07:48:43.1±959.0, 52.°77N×33.°19E, h0km, Error ellipse: s-maj=385.2km s-min=105.4km az=33.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.59**	**29**	*i*		08 18 50.0	
	baz=212,slow=330,SNR=1.0						
I31KZ	**AKTYUBINSK INF**	**15.68**	**89**	*i*		09 23 10.0	
	baz=289,slow=314,SNR=0.9						
I34MN	**SONGINO INFRAS**	**45.18**	**66**	*i*		12 24 50.0	
	baz=306,slow=331,SNR=0.9						

*IDC **06** 07:52:52.9±0.4, 8.°66S×159.°07E, h136km±4km, mb4.5/32, mb1 4.6/35, mb1mx4.6/42, mbtmp4.9/35, MS3.4/10, Ms1 3.5/10, ms1mx3.1/35, Error ellipse: s-maj=10.2km s-min=7.8km az=54.0*

*GCMT **06** 07:52:52.6±0.3, 8.°71S±0.°02×159.°23E±0.°02, h150km±3km, MW4.9/97, Moment Tensor Solution. s22,c24; s97,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.09; $M_{\theta\theta}$-1.08±.15; $M_{\phi\phi}$-1.17±.14; $M_{r\theta}$-0.32±.09; $M_{\theta\phi}$2.26±.11; $M_{\phi r}$-0.60±.10; Best double couple: M_o2.97400×10^{16} NP1:ϕ_s293.00000°, δ48.00000°, λ56.00000°. NP2: ϕ_s158.00000°, δ52.00000°, λ122.00000°. Principal axes: T 2.5550, Plg65.0000°, Azm131.0000°; N 0.8380, Plg25.0000°, Azm317.0000°; P -3.3930, Plg2.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **06** 07:52:53.6±1.8, 8.°73S±0.°08×159.°11E±0.°08, h141km±5km, mb4.9/213 Error ellipse: s-maj=11.9km s-min=10.8km az=72.0*

*BJI **06** 07:52:53.2±0.0, 8.°20S×159.°18E, h138km, mB5.1/28, mb5.1/53*

ISC 06 07:52:54.0±0.3, 8.°73S±0.°05×159.°10E±0.°06, h150km, n287, σ1°917/247, mb4.9/150, 48C-34D, Fault plane solution: NP1:ϕ_s155.80562°, δ68.12785°, λ124.89771°. **NP2:** ϕ_s273.91071°, δ40.43551°, λ35.05607°. **Principal axes:** T Plg53.2859°, Azm108.3917°; N Plg32.0684°, Azm321.2388°; P Plg15.9490°, Azm220.9243°;

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.09**	**130**	P	**Pn**	**07 53 17.8**	**-1.8**
	644nm,0.3s,baz=211,slow=1.8,SNR=197						
HNR				S	**Sn**	**07 53 36.8**	**-2.3**
	2μm,0.3s,baz=277,slow=20,SNR=29						
HNR				LR	LR	07 53 42.2	
	comp=Z,684nm,19.5s,baz=32,slow=42						
RABL	**Rabaul**	**8.24**	**303**	Pn	**Pn**	**07 54 49.0**	**-1.7**
SANVU	**Saraoutou**	**10.36**	**131**	Pn	**Pn**	**07 55 16.8**	**-2.0**
PMG	**Port Moresby**	**11.81**	**266**	P	**Pn**	**07 55 38.7**	**+0.8**
	0.3nm,0.3s,baz=71,slow=7.7,SNR=14						
PMG				LR	LR	07 59 30.0	
	comp=Z,201nm,20.3s,baz=92,slow=34						
PMG	**Port Moresby**	**11.81**	**266**	Pn	**Pn**	**07 55 37.9**	**-0.1**
DZM	**Mont Dzumac**	**15.03**	**153**	P	**P**	**07 56 19.8**	**-0.9**
	0.6nm,0.3s,baz=342,slow=10,SNR=7.3						
DZM				LR	LR	08 01 29.1	
	comp=Z,116nm,18.7s,baz=338,slow=34						
PATS	**Pohnpei**	**15.48**	**357**	Pn	**Pn**	**07 56 22.2**	**-2.4**
PATS				IAmb	IAmb	07 56 34.1	
	comp=Z,96nm,1.1s						
COEN	**Coen**	**16.45**	**250**	Pn	**Pn**	**07 56 39.6**	**+3.2**
CTAO	**Charters Tower**	**16.79**	**226**	Pn	**Pn**	**07 56 43.2**	**+2.8**
EIDS	**Eidsvold**	**18.23**	**204**	P	**P**	**07 56 55.4**	**-0.4**
JAY	**Jayapura**	**19.31**	**288**	P	**P**	**07 57 07.8**	**0.0**
	comp=Z,5.7nm,0.3s,baz=130,slow=4.6,SNR=18						
JAY	**Jayapura**	**19.31**	**288**	P	**P**	**07 57 07.4**	**-0.4**
	comp=Z,484nmcomp=Z,65nm,0.8s						
KWAJ	**Kwajalein Atol**	**19.37**	**26**	P	**Pn**	**07 57 11.7**	**+0.7**
GENI	**Genyem**	**19.80**	**287**	P	**P**	**07 57 12.4**	**-0.6**
	comp=Z,64nm,0.6s						
MSVF	**Nonsavu**	**20.48**	**118**	P	Pn	07 57 22.4	-1.8
	comp=Z,13nm,0.7s,baz=276,slow=17,SNR=4.4						
MSVF	**Nonsavu**	**20.48**	**118**	P	**P**	**07 57 21.5**	**+1.1**
ARMA	**Armidale**	**22.68**	**197**	P	**P**	**07 57 44.6**	**+1.6**
WR0	**Warramunga Arr**	**26.24**	**242**	P	**P**	**07 58 15.7**	**+0.4**
WR0				IAmb	IAmb	07 58 17.4	
	comp=Z,34nm,1.2s						
WB0	**Warramunga Arr**	**26.30**	**243**	P	**P**	**07 58 16.6**	**+0.7**
WB0				IAmb	IAmb	07 58 17.8	
	comp=Z,20nm,0.7s						
WB2	**Warramunga Arr**	**26.40**	**242**	P	**P**	**07 58 17.3**	**+0.5**
WB2				IAmb	IAmb	07 58 18.2	
	comp=Z,18nm,0.7s						
WRA	**Warramunga Arr**	**26.41**	**242**	P	**P**	**07 58 17.6**	**+0.6**
	comp=Z,28nm,0.8s,baz=68,slow=9.3,SNR=205						
WRA				PcP	**PcP**	**08 01 39.2**	**+0.6**
	comp=Z,4.0nm,0.8s,baz=62,slow=2.3,SNR=6.8						
WRA				S	**S**	**08 02 38.8**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=74,slow=16,SNR=5.2						
WRA				LR	LR	08 07 50.7	
	comp=Z,130nm,21.8s,baz=90,slow=34						
WRA	**Warramunga Arr**	**26.41**	**242**	P	**P**	**07 58 16.5**	**-0.4**
WRA					**PcP**	**08 01 38.9**	**+0.2**
MTN	**Manton Dam**	**27.77**	**259**	P	**P**	**07 58 29.2**	**+0.2**
CAN	**Canberra**	**28.04**	**198**	P	**P**	**07 58 30.8**	**-0.4**
STKA	**Stephens Creek**	**28.20**	**213**	P	**P**	**07 58 33.9**	**+1.3**
	comp=Z,4.6nm,0.3s,baz=34,slow=10,SNR=21						
STKA	**Stephens Creek**	**28.20**	**213**	P	**P**	**07 58 33.5**	**+0.9**
AS31	**Alice Springs**	**28.32**	**235**	P	**P**	**07 58 34.0**	**+0.1**
ASAR	**Alice Springs**	**28.32**	**235**	P	**P**	**07 58 33.8**	**-0.1**
	comp=Z,7.0nm,0.6s,baz=62,slow=9.4,SNR=154						
ASAR				PcP	**PcP**	**08 01 43.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=79,slow=1.9,SNR=4.1						
ASAR				S	**S**	**08 03 06.8**	**-2.6**
	comp=Z,2.1nm,1.1s,baz=66,slow=15,SNR=5.8						
ASAR				ScP	**ScP**	**08 05 11.7**	**+1.2**
	comp=Z,2.3nm,0.9s,baz=49,slow=3.6,SNR=9.3						
ASAR				LR	LR	08 09 25.9	
	comp=Z,81nm,21.8s,baz=48,slow=35						
ASAR	**Alice Springs**	**28.32**	**235**	P	**P**	**07 58 33.6**	**-0.3**
SIJI	**Sorong**	**28.80**	**284**	LR	LR	08 11 27.3	
	comp=Z,57nm,18.4s,baz=60,slow=39						
AFI	**Afiamalu**	**29.00**	**103**	P	**P**	**07 58 40.0**	**0.0**
TOO	**Toolangi**	**31.24**	**201**	P	**P**	**07 59 02.3**	**+2.8**
BBOO	**Buckleboo**	**32.07**	**218**	P	**P**	**07 59 07.9**	**+1.1**
URZ	**Urewera**	**33.58**	**154**	P	**P**	**07 59 21.4**	**+1.6**
	comp=Z,6.2nm,0.7s,baz=301,slow=19,SNR=2.9						
SANI	**Sanana**	**33.61**	**279**	P	**P**	**07 59 19.8**	**-0.6**
	comp=Z,606nmcomp=Z,13nm,0.7s						
FITZ	**Fitzroy Crossi**	**33.80**	**251**	P	**P**	**07 59 22.4**	**+0.4**
BKZ	**Black Stump Fm**	**34.08**	**156**	P	**P**	**07 59 24.4**	**+0.2**
BATI	**Baumata**	**34.98**	**265**	LR	LR	08 14 52.8	
	comp=Z,184nm,18.6s,baz=88,slow=38						
TUWZ	**Tuamarina**	**35.12**	**160**	P	**P**	**07 59 33.7**	**+0.7**
OXZ	**Oxford**	**36.27**	**164**	P	**P**	**07 59 43.3**	**+0.4**
OXZ				IAmb	IAmb	07 59 60.0	
	comp=Z,20nm,1.0s						
RPZ	**Rata Peaks**	**36.38**	**165**	P	**P**	**07 59 45.3**	**+1.5**
	comp=Z,50nm,1.1s,baz=354,slow=5.5,SNR=3.7						
RPZ	**Rata Peaks**	**36.38**	**165**	IAmb	IAmb	07 59 45.4	
	comp=Z,20nm,0.7s						
BSSI	**Bau Bau, Buton**	**38.36**	**271**	P	**P**	**08 00 00.3**	**-0.6**
	comp=Z,54nm,0.7s						
BNSI	**Bone**	**38.96**	**274**	P	**P**	**08 00 05.7**	**-0.2**
	comp=Z,49nm,0.9s						
KAPI	**Kappang**	**39.23**	**273**	P	**P**	**08 00 07.0**	**-1.1**
	comp=Z,28nm,1.0s,baz=68,slow=7.2						
KAPI	**Kappang**	**39.23**	**273**	P	**P**	**08 00 08.6**	**+0.5**
KAPI				IAmb	IAmb	08 00 09.2	
	comp=Z,22nm,0.8s						
SPSI	**Sidrap Palu**	**39.36**	**274**	P	**P**	**08 00 08.6**	**-0.6**
	comp=Z,2μmcomp=Z,20nm,1.0s						
TTSI	**Tana Toraja**	**39.46**	**276**	P	**P**	**08 00 09.9**	**-0.1**
	comp=Z,2μmcomp=Z,8.8nm,0.7s						
PSA00	**Pilbara Siesmi**	**39.86**	**247**	P	**P**	**08 00 13.0**	**-0.3**
PSA00				IAmb	IAmb	08 00 14.2	
	comp=Z,21nm,0.7s						
PLAI	**Plampang**	**40.83**	**267**	P	**P**	**08 00 20.3**	**-1.0**
	comp=Z,785nmcomp=Z,97nm,0.9s						
TWSI	**Taliwang, Sumb**	**41.71**	**267**	P	**P**	**08 00 26.2**	**-2.3**
JAGI	**Jajag, Banyuwa**	**44.42**	**267**	P	**P**	**08 00 49.1**	**-1.3**
JAGI	**Jajag, Banyuwa**	**44.42**	**267**	P	**P**	**08 00 48.4**	**-1.9**
	comp=Z,1μmcomp=Z,113nm,0.8s						
MORW	**Morawa**	**45.16**	**237**	P	**P**	**08 00 57.0**	**+1.0**
JMN	**Monobe**	**48.55**	**332**	P	**P**	**08 01 23.4**	**+1.2**
YULB	**Yu-li**	**48.85**	**312**	P	**P**	**08 01 25.2**	**+0.6**
YULB				IAmb	IAmb	08 01 27.6	
	comp=Z,22nm,0.9s						
MJAR	**Matsushiro Arr**	**49.13**	**338**	P	**P**	**08 01 25.9**	**-0.6**
	comp=Z,5.5nm,0.6s,baz=171,slow=8.8,SNR=15						
MJAR	**Matsushiro Arr**	**49.13**	**338**	P	**P**	**08 01 26.4**	**-0.1**
MAJO	**Matsushiro**	**49.13**	**338**	P	**P**	**08 01 26.5**	**0.0**
MAT	**Matsushiro**	**49.13**	**338**	P	**P**	**08 01 25.9**	**-0.6**
JWT	**Wachi**	**49.17**	**334**	P	**P**	**08 01 27.5**	**+0.7**
JWT				IAmb	IAmb	08 01 28.9	
	comp=Z,22nm,0.8s						
SSLB	**Suanglung**	**49.33**	**312**	P	**P**	**08 01 30.0**	**+1.7**
SSLB				IAmb	IAmb	08 01 30.2	
	comp=Z,16nm,0.8s						
JNU	**Nakatsue**	**49.54**	**329**	P	**P**	**08 01 29.1**	**-0.6**
	comp=Z,24nm,0.7s,baz=104,slow=3.8,SNR=10.0						
JNU	**Nakatsue**	**49.54**	**329**	P	**P**	**08 01 30.5**	**+0.8**
JNU				IAmb	IAmb	08 01 31.0	
	comp=Z,27nm,0.8s						
YHNB	**Yeheng**	**49.55**	**313**	P	**P**	**08 01 32.1**	**+2.1**
YHNB				IAmb	IAmb	08 01 36.5	
	comp=Z,19nm,0.9s						
CISI	**Cisompet, Garu**	**50.75**	**267**	P	**P**	**08 01 37.9**	**-1.4**
KSRS	**Korea Array**	**54.43**	**330**	P	**P**	**08 02 06.3**	**+0.6**
	comp=Z,11nm,0.8s,baz=144,slow=8.0,SNR=22						
KSAR	**Wonju Array Be**	**54.44**	**330**	P	**P**	**08 02 07.3**	**+1.5**
KS19	**Wonju Array Si**	**54.49**	**330**	P	**P**	**08 02 07.1**	**+0.9**
KS19				IAmb	IAmb	08 02 10.0	
	comp=Z,27nm,1.1s						
ASAJ	**Asahikawa**	**54.69**	**345**	P	**P**	**08 02 08.6**	**+1.1**
	comp=Z,8.8nm,0.7s,baz=307,slow=34,SNR=2.4						
ASAJ				LR	LR	08 23 18.3	
	comp=Z,39nm,19.0s,baz=148,slow=33						
NJ2	**Nanjing**	**55.87**	**318**	*e*P	**P**	**08 02 17.6**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,41nm,0.8s						
WHN	**Wuhan**	**58.03**	**314**	⇓P	**P**	**08 02 32.2**	**+0.7**
WHN				pmax	pmax		
	comp=Z,56nm,0.7s						
USA0B	**Ussuriysk Arra**	**58.12**	**337**	P	**P**	**08 02 32.7**	**+0.9**
USRK	**Ussuriysk Ar.**	**58.12**	**337**	P	**P**	**08 02 32.8**	**+1.0**
	comp=Z,14nm,0.9s,baz=134,slow=6.3,SNR=18						
USRK	**Ussuriysk Ar.**	**58.12**	**337**	P	**P**	**08 02 32.2**	**+0.4**
TIA	**Tai'an**	**59.63**	**321**	P	**P**	**08 02 42.5**	**+0.1**
PETK	**Petropavlovsk-**	**61.61**	**359**	P	**P**	**08 02 55.8**	**+0.3**
	comp=Z,14nm,0.7s,baz=152,slow=6.3,SNR=37						
PETK				LR	LR	08 26 17.7	
	comp=Z,46nm,21.7s,baz=162,slow=33						
PETK	**Petropavlovsk-**	**61.61**	**359**	P	**P**	**08 02 56.1**	**+0.6**
GYA	**Guiyang**	**61.74**	**306**	⇓P	**P**	**08 02 58.1**	**+1.0**
GYA				pmax	pmax		
	comp=Z,11nm,1.4s						
GSI	**Gunungsitoli**	**62.11**	**276**	P	**P**	**08 02 59.2**	**-0.4**
GSI				IAmb	IAmb	08 02 59.5	
	comp=Z,15nm,0.7s						
BJI	**Beijing**	**62.67**	**324**	P	**P**	**08 03 03.0**	**+0.2**
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
XAN	**Xi'an**	**63.79**	**315**	P	**P**	**08 03 10.4**	**0.0**
XAN				pP	pwP	08 03 46.9	-1.1
XAN				pmax	pmax		
	comp=Z,29nm,1.0s						
XAN	**Xi'an**	**63.79**	**315**	P	**P**	**08 03 11.1**	**+0.7**
KMI	**Kunming**	**64.36**	**303**	⇑P	**P**	**08 03 15.4**	**+0.9**
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
CMAR	**Chiang Mai Arr**	**65.20**	**295**	P	**P**	**08 03 19.8**	**0.0**
	comp=Z,1.3nm,0.3s,baz=130,slow=5.2,SNR=9.2						
CMAR				pP	**pP**	**08 03 54.0**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=239,slow=44,SNR=1.4						
CMAR				LR	LR	08 28 23.6	
	comp=Z,9.0nm,20.8s,baz=175,slow=33						
HHC	**Hu-ho-hao-te**	**65.92**	**322**	*e*P	**P**	**08 03 25.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
CD2	**Chengdu**	**66.04**	**309**	P	**P**	**08 03 25.8**	**+0.8**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				LR	LR		
	comp=Z,180nm,12.2s						
CD2				LR	LR		
	comp=Z,250nm,11.4s						
CASY	**Casey**	**66.26**	**199**	P	**P**	**08 03 26.3**	**+0.6**
CASY				IAmb	IAmb	08 03 27.4	
	comp=Z,14nm,0.9s						
HIA	**Hailar**	**67.25**	**333**	P	**P**	**08 03 33.2**	**+1.0**
NIKH	**Nikolski High**	**67.25**	**20**	P	**P**	**08 03 34.1**	**+2.0**
MA2	**Magadan**	**68.41**	**355**	P	**P**	**08 03 39.4**	**+0.1**
	comp=Z,16nm,0.8s,baz=147,slow=6.0,SNR=20						
MA2	**Magadan**	**68.41**	**355**	P	**P**	**08 03 39.3**	**+0.1**
MA2				IAmb	IAmb	08 03 39.9	
	comp=Z,21nm,0.9s						
LZH	**Lanzhou**	**68.41**	**314**	*e*P	**P**	**08 03 41.7**	**+1.7**
LZH				pP	pP	08 04 14.4	-1.2
LZH				sP	sP	08 04 28.3	-3.3
LZH				pmax	pmax		
	comp=Z,37nm,1.1s						
VNDA	**Vanda**	**68.78**	**179**	P	**P**	**08 03 42.3**	**+1.0**
	comp=Z,7.0nm,1.0s,baz=339,slow=6.2,SNR=31						
VNDA				pP	**pP**	**08 04 16.4**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=340,slow=7.1,SNR=2.7						
VNDA				LR	LR	08 28 48.4	
	comp=Z,37nm,20.7s,baz=354,slow=31						
VNDA	**Vanda**	**68.78**	**179**	P	**P**	**08 03 42.3**	**+1.0**
VNDA	**Vanda**	**68.78**	**179**	P	**P**	**08 03 42.7**	**+1.3**
SBA	**Scott Base**	**69.21**	**178**	P	**P**	**08 03 46.4**	**+2.4**
SEY	**Seymchan**	**71.64**	**357**	P	**P**	**08 03 58.5**	**-0.3**
	comp=Z,3.3nm,0.6s,baz=169,slow=6.8,SNR=9.7						
GTA	**Gaotai**	**72.80**	**316**	⇑P	**P**	**08 04 07.8**	**+1.4**
GTA				pP	pP	08 04 42.5	0.0
GTA				sP	sP	08 04 57.1	-1.2
GTA				pmax	pmax		
	comp=Z,15nm,0.8s						
SONM	**Songino Array**	**73.02**	**326**	P	**P**	**08 04 08.7**	**+1.1**
	comp=Z,27nm,0.7s,baz=138,slow=5.5,SNR=80						
SONM	**Songino Array**	**73.02**	**326**	P	**P**	**08 04 08.9**	**+1.3**
OHAK	**Old Harbor**	**76.35**	**24**	P		08 04 26.6	
	baz=229						
OHAK	**Old Harbor**	**76.35**	**24**	P	**P**	**08 04 26.9**	**+0.6**
TLY	**Talaya**	**76.65**	**328**	P	**P**	**08 04 29.3**	**+1.1**
TLY				IAmb	IAmb	08 04 29.9	
	comp=Z,21nm,0.9s						
BILL	**Bilibino**	**76.75**	**3**	P	**P**	**08 04 29.1**	**+0.7**
BILL				IAmb	IAmb	08 04 29.9	
	comp=Z,28nm,0.9s						
KDAK	**Kodiak Island**	**77.00**	**24**	P		08 04 30.3	
	baz=229						
KDAK	**Kodiak Island**	**77.01**	**24**	P	**P**	**08 04 30.4**	**+0.4**
	comp=Z,19nm,0.7s,baz=268,slow=5.3,SNR=11						
KDAK	**Kodiak Island**	**77.01**	**24**	P	**P**	**08 04 30.7**	**+0.7**
KDAK				IAmb	IAmb	08 04 31.3	
	comp=Z,16nm,0.8s						
ANM	**Nome**	**77.79**	**15**	P		08 04 35.0	
	baz=216						
SVW2	**Sparrevohn**	**78.12**	**21**	P	**P**	**08 04 37.7**	**+1.6**
SVW2				IAmb	IAmb	08 04 38.3	
	comp=Z,25nm,0.8s						
CNPM	**China Poot**	**78.67**	**23**	P	**P**	**08 04 39.6**	**+0.4**
BRLK	**Bradley Lake**	**78.96**	**23**	IAmb	IAmb	08 04 42.1	
	comp=Z,32nm,0.9s						
BRSE	**Bradley Lake S**	**79.00**	**23**	P		08 04 41.8	
	baz=231						
CAPN	**Captain Cook N**	**79.50**	**22**	P		08 04 45.3	
	baz=230						
O22K	**Cooper Landing**	**79.87**	**23**	P		08 04 46.4	
	baz=231						
SUA	**Susitna One**	**80.10**	**22**	P		08 04 46.9	
	baz=230,SNR=9.1						
SUA	**Susitna One**	**80.10**	**22**	IAmb	IAmb	08 04 48.3	
	comp=Z,19nm,0.6s						
SKT	**Skwentna**	**80.15**	**21**	P		08 04 46.0	
	baz=230						
RC01	**Rabbit Creek A**	**80.24**	**23**	P		08 04 48.1	
	baz=231						
RC01	**Rabbit Creek A**	**80.24**	**23**	IAmb	IAmb	08 04 48.9	
	comp=Z,43nm,1.1s						
PPLA	**Purkeypile**	**80.52**	**20**	P		08 04 49.2	
	baz=229						
PPLA	**Purkeypile**	**80.52**	**20**	P	**P**	**08 04 49.3**	**0.0**
PMR	**Palmer**	**80.78**	**22**	P		08 04 50.8	
	baz=232,SNR=17						
PMR	**Palmer**	**80.79**	**22**	IAmb	IAmb	08 04 51.7	
	comp=Z,29nm,0.8s						
CUT	**Chulitna**	**80.88**	**21**	P		08 04 50.8	
	baz=231,SNR=5.3						
CUT	**Chulitna**	**80.88**	**21**	IAmb	IAmb	08 04 51.6	
	comp=Z,23nm,0.8s						
KNK	**Knik Glacier**	**80.93**	**23**	IAmb	IAmb	08 04 52.4	
	comp=

	baz=233,SNR=21							
COLA	College	83.26	20	P			08 05 03.3	
	baz=233							
COLA	College	83.26	20	P		P	08 05 03.2	-0.2
HDA	Harding Lake	83.29	21	P			08 05 03.4	
	baz=234,SNR=25							
HDA				P			08 05 03.4	
	baz=234,SNR=25							
BARN	Barnard Glacie	83.44	25	IAmb		IAmb	08 05 07.2	
	comp=Z,15nm,0.8s							
CTG	Chitna Glacier	83.53	25	P			08 05 06.1	
	baz=239							
IL31		83.53	20	P		P	08 05 04.2	-0.6
IL31				IAmb		IAmb	08 05 06.0	
	comp=Z,24nm,1.1s							
ILAR	Eielson Array	83.53	20	P		P	08 05 04.1	-0.7
	comp=Z,10nm,0.5s,baz=248,slow=4.9,SNR=187							
CTGM	Chitina Glacie	83.53	25	IAmb		IAmb	08 05 06.9	
	comp=Z,20nm,0.9s							
POKR	Poker Plat Res	83.55	20	P			08 05 04.6	
	baz=233							
PINM	Pinnacle	83.55	26	P			08 05 05.9	
	baz=240,SNR=18							
LOGN	Logan Glacier	83.60	25	IAmb		IAmb	08 05 08.2	
	comp=Z,15nm,1.0s							
MENT	Mentasta	83.63	23	IAmb		IAmb	08 05 06.8	
	comp=Z,14nm,0.6s							
BCPM	Bancas Point	83.75	26	IAmb		IAmb	08 05 07.9	
	comp=Z,21nm,0.8s							
COLD	Coldfoot	83.98	18	P			08 05 08.2	
	baz=230,SNR=11							
COLD	Coldfoot	83.98	18	P		P	08 05 08.0	+1.0
SCRK	Sand Creek	84.10	22	P			08 05 08.6	
	baz=236,SNR=28							
SCRK	Sand Creek	84.10	22	P		P	08 05 08.5	+0.6
MAW	Mawson	84.37	203	P		P	08 05 09.7	+0.7
	comp=Z,10nm,0.8s,baz=92,slow=6.9,SNR=12							
MAW	Mawson	84.37	203	IAmb		IAmb	08 05 10.8	
	comp=Z,3.2nm,0.9s							
L27K	Beaver Creek,	84.42	23	P		P	08 05 10.6	+1.2
L27K				IAmb		IAmb	08 05 11.6	
	comp=Z,17nm,1.1s							
L27K	Beaver Creek,	84.42	23	P			08 05 10.6	
	baz=238							
SIT	Sitka	84.43	30	P			08 05 10.9	
	baz=245							
PRP	Porcupine Dome	84.43	20	P		P	08 05 08.3	-1.2
PRP	Porcupine Dome	84.43	20	P			08 05 10.8	
	baz=235							
BCAR	Beaver Creek A	84.44	23	P		P	08 05 10.0	+0.5
K27K	Chicken	84.84	22	IAmb		IAmb	08 05 14.2	
	comp=Z,18nm,1.1s							
K27K	Chicken	84.84	22	P			08 05 13.0	
	baz=238							
TOLK	Toolik Lake Re	85.07	17	P		P	08 05 13.5	+1.0
TOLK				IAmb		IAmb	08 05 14.5	
	comp=Z,20nm,0.8s							
TOLK	Toolik Lake Re	85.07	17	P			08 05 13.7	
	baz=231							
HYT	Haines Junctio	85.10	26	P		P	08 05 14.4	+1.4
A21K	Barrow	85.11	13	P			08 05 13.2	
	baz=224							
BESE	Bessie Mountai	85.31	29	IAmb		IAmb	08 05 16.1	
	comp=Z,12nm,0.8s							
SKAG	Skagway	85.46	28	P			08 05 16.2	
	baz=244,SNR=7.6							
SKAG	Skagway	85.46	28	IAmb		IAmb	08 05 19.8	
	comp=Z,17nm,0.9s							
EGAK	Eagle	85.57	22	P		P	08 05 16.1	+1.1
EGAK				IAmb		IAmb	08 05 17.1	
	comp=Z,22nm,0.8s							
EGAK	Eagle	85.57	22	P			08 05 16.1	
	baz=239,SNR=25							
WRAK	Wrangell Islan	85.67	31	P			08 05 16.3	
	baz=247,SNR=7.0							
WRAK	Wrangell Islan	85.67	31	P		P	08 05 15.8	+0.2
BMAR	Burnt Mountain	85.84	19	P		P	08 05 18.1	+1.7
ZSN	Zaisan	85.90	319	*e*P		P	08 05 16.8	-0.3
	baz=319							
WHY	Whitehorse	86.18	27	IAmb		IAmb	08 05 20.1	
	comp=Z,11nm,0.8s							
GDXM	Geysers	86.27	50	IAmb		IAmb	08 05 22.6	
	comp=Z,17nm,0.9s							
K02D	Willamette Mer	86.61	46	P			08 05 23.0	
	baz=255							
O02D	Mt. Diablo Mer	86.61	49	P			08 05 23.0	
	baz=256,SNR=8.6							
M02C	Callahan	86.86	47	P			08 05 23.8	
	baz=256							
N02D	Trinity Center	86.87	48	P			08 05 24.2	
	baz=256							
WDC	Whiskeytown Da	86.89	48	P		P	08 05 23.3	+1.2
WDC				IAmb		IAmb	08 05 25.5	
	comp=Z,22nm,1.4s							
YBH	Yreka Blue Hor	87.05	47	P		P	08 05 24.9	+2.0
YBH				IAmb		IAmb	08 05 26.4	
	comp=Z,32nm,1.4s							
HUMO	Hull Mountain	87.09	46	P		P	08 05 24.8	+1.8
HUMO				IAmb		IAmb	08 05 26.4	
	comp=Z,16nm,0.9s							
O03E	Paynes Creek	87.37	49	P			08 05 25.9	
	baz=256,SNR=6.7							
MK31	Makanchi Array	87.40	318	P		P	08 05 24.3	-0.1
MK31				IAmb		IAmb	08 05 25.2	
	comp=Z,9.0nm,0.7s							
MKAR	Makanchi Array	87.40	318	P		P	08 05 24.3	-0.1
	comp=Z,12nm,0.6s,baz=99,slow=6.1,SNR=109							
MKAR				pP		pP	08 05 57.7	-4.0
	comp=Z,1.2nm,0.6s,baz=92,slow=5.5,SNR=1.8							
ORV	Oroville	87.42	50	P		P	08 05 25.7	+1.1
ORV				IAmb		IAmb	08 05 26.8	
	comp=Z,10.0nm,0.9s							
L04D	Klamath Falls	87.46	47	P			08 05 26.7	
	baz=256							
DLBC	Dease Lake	87.58	30	P		P	08 05 26.0	+0.9
	comp=Z,5.7nm,0.9s,baz=253,slow=7.2,SNR=18							
MAKZ	Makanchi	87.61	318	P		P	08 05 25.4	0.0
MAKZ				IAmb		IAmb	08 05 26.3	
	comp=Z,9.7nm,0.8s							
AFDM	Forest Hills D	87.68	50	P		P	08 05 26.9	+0.9
AFDM				IAmb		IAmb	08 05 28.3	
	comp=Z,14nm,1.0s							
M04C	Macdoel	87.69	47	P			08 05 28.0	
	baz=256,SNR=6.0							
PKM	Mcpherson Peak	87.70	54	P			08 05 28.4	
	baz=258							
I04A	Tendick Farm,	87.77	45	P			08 05 27.0	
	baz=256							
J04D	Umpqua Nationa	87.85	46	P			08 05 28.9	
	baz=256							
ZALV	Zalesovo Beam	87.90	325	P		P	08 05 25.7	-0.9
	comp=Z,4.5nm,0.7s,baz=105,slow=5.0,SNR=14							
ZALV	Zalesovo Beam	87.90	325	P		P	08 05 25.4	-1.1
CMB	Columbia Colle	87.93	51	P		P	08 05 27.4	+0.3
K04D	Chiloquin, OR	87.96	46	P			08 05 29.6	
	baz=256							
BEKR	Beckworth	88.35	49	P		P	08 05 30.3	+1.1
BEKR				IAmb		IAmb	08 05 31.6	
	comp=Z,10nm,0.8s							
SHLS	Shalkode	88.44	314	*e*P		P	08 05 27.7	-1.8
	comp=Z,3.0nm,0.8s,baz=314							
SHLS				*e*S		SKSac	08 15 39.4	-5.3
	baz=314							
J05D	Fort Rock, OR	88.48	46	P			08 05 31.6	
	baz=257,SNR=9.4							
VES	Vestal, Richgr	88.48	54	P			08 05 30.8	
	baz=258							
ARVC	Arvin	88.54	54	P			08 05 31.9	
	baz=258,SNR=5.4							
K05A	Summer Lake	88.60	47	P		P	08 05 32.1	+1.7
I05D	Terrebonne, OR	88.65	45	P			08 05 31.7	
	baz=256,SNR=5.1							
UZB	Uzynbulak	88.75	314	*e*P		P	08 05 30.8	-0.2
	comp=Z,3.4nm,0.9s,baz=314							
PNTR	Pine Nut	88.76	50	IAmb		IAmb	08 05 34.0	
	comp=Z,13nm,0.8s							
WAKR	Walker	88.76	51	IAmb		IAmb	08 05 33.5	
	comp=Z,11nm,1.2s							
VCNR	Virginia City	88.76	50	IAmb		IAmb	08 05 33.9	
	comp=Z,9.8nm,0.9s							
DECC	Green Verdugo	88.77	55	P			08 05 33.1	
	baz=259							
PINE	Pine Mountain	88.81	45	P		P	08 05 33.0	+1.7
PINE				IAmb		IAmb	08 05 33.8	
	comp=Z,11nm,0.8s							
MOD	Modoc Plateau	88.84	47	IAmb		IAmb	08 05 34.1	
	comp=Z,11nm,0.9s							

G05D	Wamic, OR	88.88	44	P			08 05 33.4	
	baz=256							
ISA	Isabella, Lake	88.93	54	IAmb		IAmb	08 05 34.4	
	comp=Z,14nm,1.1s							
ISA	Isabella, Lake	88.93	54	P			08 05 33.7	
	baz=258,SNR=5.6							
MWC	Mount Wilson	88.99	55	P		P	08 05 33.8	+1.4
PAHR	Pah Rah Range	89.05	50	IAmb		IAmb	08 05 35.1	
	comp=Z,15nm,1.0s							
KPKS	Kokpek	89.06	314	*e*P		P	08 05 31.9	-0.5
	comp=Z,3.2nm,0.8s,baz=314							
EDW2	Edwards Air Fo	89.17	55	P			08 05 34.8	
	baz=259,SNR=13							
SATY	Saty	89.17	314	*e*P		P	08 05 32.6	-0.3
	comp=Z,3.3nm,0.8s,baz=314							
BFSC	Mount Baldy Ra	89.31	55	P			08 05 35.2	
	baz=259,SNR=6.9							
CWC	Cottonwood Cre	89.40	53	P			08 05 35.8	
	baz=259							
TIN	Tinemaha, Big	89.40	53	P			08 05 36.0	
	baz=259,SNR=6.8							
RYN	Ryan	89.48	51	IAmb		IAmb	08 05 37.3	
	comp=Z,18nm,1.1s							
109C	Camp Elliot, M	89.52	57	P			08 05 36.4	
	baz=259							
109C	Camp Elliot, M	89.52	57	P		P	08 05 34.1	-0.5
LRMC	Laurel Mtn Rad	89.53	54	P			08 05 37.1	
	baz=259,SNR=8.0							
MURC	Murrieta	89.57	56	P			08 05 36.6	
	baz=259							
NVAR	Mina Array Bea	89.61	51	P		P	08 05 36.9	+1.6
	comp=Z,15nm,1.0s,baz=244,slow=6.0,SNR=61							
NVAR	Mina Array Bea	89.61	51	P		P	08 05 36.5	+1.2
SEM	Semipalatinsk	89.63	321	*e*P		P	08 05 33.2	-1.8
	baz=321							
NV11	Mina Array Sit	89.73	51	P		P	08 05 36.2	+0.5
MPMC	Manual Prospec	89.80	54	P			08 05 37.8	
	baz=259,SNR=15							
TKX	Tecate	89.87	57	IAmb		IAmb	08 05 38.9	
	comp=Z,17nm,0.9s							
I07A	Izee	89.88	45	P		P	08 05 37.4	+1.1
I07A				IAmb		IAmb	08 05 38.5	
	comp=Z,13nm,0.9s							
INK	Inuvik	89.92	20	P		P	08 05 36.0	+0.3
	comp=Z,3.2nm,0.8s,baz=216,slow=5.5,SNR=14							
INK	Inuvik	89.92	20	P		P	08 05 36.0	+0.3
MONP2	Monument Peak	90.08	57	P			08 05 39.6	
	baz=260,SNR=8.6							
MDOK	Medeo	90.16	314	*e*P		P	08 05 37.3	-0.3
	baz=314							
MDOK				*e*S		SKSac	08 15 51.4	-3.4
	baz=314							
WVOR	Wild Horse Val	90.16	47	P		P	08 05 39.1	+1.5
WVOR				IAmb		IAmb	08 05 41.4	
	comp=Z,19nm,1.3s							
E07A	Sunnyside	90.17	43	P		P	08 05 38.1	+0.7
PFO	Pinyon Flats O	90.18	56	P			08 05 39.2	
	baz=260							
PFO	Pinyon Flats O	90.18	56	P		P	08 05 39.1	+1.2
PFO				IAmb		IAmb	08 05 40.4	
	comp=Z,18nm,1.1s							
TPFO	Pinon Flats	90.18	56	P			08 05 39.0	
	baz=260							
KSH	Kashi	90.23	310	P		P	08 05 39.7	+1.7
KSH				pmax		pmax		
	comp=Z,6.0nm,0.5s							
KSH				pmax		pmax		
	comp=Z,180nm,7.6s							
IKP	In-Ko-Pah, Jac	90.30	57	P			08 05 40.4	
	baz=260							
ESJX	Sierra Juarez	90.32	58	P		P	08 05 40.7	+2.1
HAWA	Hanford	90.35	43	P		P	08 05 38.9	+0.7
FURC	Furnace Creek,	90.37	53	P			08 05 40.4	
	baz=259							
J08A	Circle Bar Ran	90.46	46	IAmb		IAmb	08 05 41.3	
	comp=Z,13nm,0.8s							
HEC	Hector,Ludlow	90.50	55	P			08 05 41.1	
	baz=260,SNR=5.7							
G08A	Pilot Rock	90.51	44	IAmb		IAmb	08 05 41.2	
	comp=Z,11nm,1.0s							
SPX	San Pedro Mart	90.56	59	IAmb		IAmb	08 05 43.1	
	comp=Z,9.8nm,0.9s							
BELC	Belle Mtn. Jos	90.63	56	P			08 05 41.9	
	baz=260,SNR=12							
KURK	Kurchatov	90.72	321	P		P	08 05 39.4	-0.4
SHOC	Shoshone, Teco	90.73	54	P			08 05 42.0	
	baz=260,SNR=5.9							
KURBB	Kurbatov Arra	90.75	321	P		P	08 05 39.4	-0.6
	comp=Z,3.0nm,0.8s,baz=104,slow=3.5,SNR=20							
KURBB				pP		pP	08 06 14.7	-2.7
	comp=Z,0.6nm,0.6s,baz=96,slow=4.8,SNR=2.0							
KUU	Kurty	90.81	314	*e*P		P	08 05 39.7	-0.8
	comp=Z,10nm,0.7s,baz=314							
B08A	Colville Reser	90.90	41	P		P	08 05 40.8	0.0
B08A				IAmb		IAmb	08 05 41.8	
	comp=Z,8.2nm,1.1s							
TUQ	Turquoise Moun	90.94	54	P			08 05 43.2	
	baz=260							
TPNV	Topopah Spring	90.94	53	P			08 05 43.2	
	baz=260,SNR=11							
BC3	Big Chuckawall	91.01	56	P			08 05 43.8	
	baz=260,SNR=7.4							
GMRC	Granite Mounta	91.04	55	P			08 05 43.7	
	baz=260,SNR=6.9							
E09A	Wood Farm, Sta	91.31	43	IAmb		IAmb	08 05 44.5	
	comp=Z,12nm,1.2s							
IRM	Iron Mountain	91.35	56	P			08 05 45.1	
	baz=260,SNR=7.1							
GLA	Glamis	91.43	57	P			08 05 45.9	
	baz=260							
BMO	Blue Mountains	91.58	45	P		P	08 05 44.8	+0.7
R11A	Troy Canyon, C	91.70	52	P		P	08 05 46.5	+1.6
R11A				IAmb		IAmb	08 05 47.5	
	comp=Z,13nm,1.1s							
R11A	Troy Canyon, C	91.70	52	P			08 05 46.5	
	baz=260							
NRIK	Noril'sk	91.72	340	P		P	08 05 43.1	-0.9
	comp=Z,6.2nm,0.9s,baz=90,slow=4.5,SNR=6.9							
NRIK	Noril'sk	91.72	340	IAmb		IAmb	08 05 44.0	
	comp=Z,10nm,1.1s							
NEE2	Needles Airpor	91.88	55	P			08 05 48.2	
	baz=261							
AAK	Ala-Archa	91.90	313	P		P	08 05 46.7	+1.0
	comp=Z,1.7nm,0.4s,baz=117,slow=5.6,SNR=5.6							
AAK	Ala-Archa	91.90	313	IAmb		IAmb	08 05 55.4	
	comp=Z,1.9nm,0.7s							
SGDS	Sogindy	91.95	314	*e*P		P	08 05 44.9	-1.0
	baz=314							
PRN	Pahroc Range	91.96	53	P		P	08 05 48.0	+1.9
PDMCI	Parker Dam,Lak	92.19	56	P			08 05 49.6	
	baz=261							
NEW	Newport	92.33	42	P		P	08 05 47.3	-0.1
NEW	Newport	92.33	42	P			08 05 47.4	
	baz=260							
MFID	Camas Ranch	92.37	47	IAmb		IAmb	08 05 51.1	
	comp=Z,11nm,1.1s							
BTLS	Batal	92.63	315	*e*P		P	08 05 48.0	-0.9
	baz=315							
PSUT	Pine Spring	93.07	52	P		P	08 05 52.7	+1.4
PSUT				IAmb		IAmb	08 05 54.0	
	comp=Z,5.4nm,0.9s							
BELA	Belgrano 2	93.19	177	P		P	08 05 49.8	-1.0
BELA				IAmb		IAmb	08 05 51.3	
	comp=Z,7.1nm,1.0s							
CCUT	Cedar City	93.31	53	IAmb		IAmb	08 05 55.5	
	comp=Z,7.7nm,0.9s							
HLID	Hailey	93.41	47	P		P	08 05 53.9	+1.2
HLID	Hailey	93.41	47	P			08 05 54.2	
	baz=261,SNR=14							
C36M	Paulatuk	93.50	20	P			08 05 52.7	
	baz=255							
KNB	Kanab	93.66	53	IAmb		IAmb	08 05 57.1	
	comp=Z,7.4nm,1.1s							
DUG	Dugway, Tooele	94.11	50	P			08 05 57.6	
	baz=262							
MTPU	Mount Pierson	94.30	52	IAmb		IAmb	08 06 06.5	
	comp=Z,9.1nm,1.2s							
BRZS	Berezniki	94.32	320	*e*P		P	08 05 56.4	-0.1
	baz=320							
MSU	Marysvale	94.37	52	P		P	08 05 57.5	+0.2
NLU	North Lily Min	94.64	50	P		P	08 06 00.4	+1.9
NLU				IAmb		IAmb	08 06 01.2	
	comp=Z,13nm,1.2s							
TUC	Tucson	94.70	58	P		P	08 05 59.9	+1.2
TUC	Tucson	94.70	58	P			08 06 00.3	
	baz=263							
KKAR	Karatay Array	94.87	313	P		P	08 05 58.3	-0.9

DLMT	Dillon	94.95	45	P		P	08 05 58.8	-0.9
DLMT				IAmb		IAmb	08 06 03.5	
	comp=Z,6.1nm,0.9s							
CTU	Camp Tracy	94.98	50	P		P	08 06 00.1	+0.2
CTU				IAmb		IAmb	08 06 02.2	
	comp=Z,8.5nm,1.0s							
MPU	Maple Canyon	94.98	50	P		P	08 06 00.3	+0.3
MPU				IAmb		IAmb	08 06 02.7	
	comp=Z,8.3nm,1.2s							
TMUT	Trail Mountain	95.22	51	P		P	08 06 01.9	+0.7
TMUT				IAmb		IAmb	08 06 04.4	
	comp=Z,4.8nm,0.7s							
HWUT	Hardware Ranch	95.23	49	P		P	08 06 01.5	+0.5
HWUT				IAmb		IAmb	08 06 03.0	
	comp=Z,7.0nm,0.8s							
BOZ	Bozeman (W)	95.65	45	P		P	08 06 03.5	+0.6
BOZ				IAmb		IAmb	08 06 04.8	
	comp=Z,4.8nm,0.8s							
BOZ	Bozeman (W)	95.65	45	P			08 06 04.0	
	baz=263,SNR=8.6							
YHL	Hebgen Lake	95.88	46	P		P	08 06 05.6	+1.5
YHL				IAmb		IAmb	08 06 06.7	
	comp=Z,4.1nm,0.8s							
W18A	Petrified Fore	95.90	55	P			08 06 05.8	
	baz=264							
YKA	Yellowknife Ar	95.96	28	P		P	08 06 03.5	-0.2
	comp=Z,4.2nm,0.7s,baz=255,slow=4.4,SNR=67							
YMR	Madison River	96.02	46	P		P	08 06 05.1	+0.5
YMR				IAmb		IAmb	08 06 07.3	
	comp=Z,4.6nm,0.8s							
SNOW	Snow King Moun	96.04	47	P		P	08 06 06.0	+1.2
SNOW				IAmb		IAmb	08 06 07.1	
	comp=Z,4.0nm,0.9s							
YHH	Holmes Hill	96.11	46	P		P	08 06 06.4	+1.2
BVAR	Borovoye Array	96.13	323	P		P	08 06 03.3	-1.3
	comp=Z,3.0nm,0.8s,baz=133,slow=12,SNR=17							
BVAR				pP		pP	08 06 38.1	-4.1
	comp=Z,1.0nm,0.6s,baz=236,slow=6.8,SNR=2.6							
FLWY	Flagg Ranch	96.14	46	P		P	08 06 06.1	+0.9
FLWY				IAmb		IAmb	08 06 07.2	
	comp=Z,5.8nm,1.1s							
H17A	Grant Village	96.26	46	IAmb		IAmb	08 06 09.1	
	comp=Z,3.8nm,0.8s							
H17A	Grant Village	96.26	46	P			08 06 08.5	
	baz=264							
BW06	Boulder Array	96.84	48	P		P	08 06 08.6	+0.2
BW06				IAmb		IAmb	08 06 09.8	
	comp=Z,4.8nm,0.8s							
BW06	Boulder Array	96.84	48	P			08 06 08.9	
	baz=264							
PD31	Pinedale Array	96.84	48	P		P	08 06 08.5	+0.1
PD31				IAmb		IAmb	08 06 09.9	
	comp=Z,4.4nm,0.8s							
PDAR	Pinedale Array	96.84	48	P		P	08 06 09.2	+0.7
	comp=Z,4.2nm,0.8s,baz=246,slow=2.9,SNR=25							
PDAR	Pinedale Array	96.84	48	P		P	08 06 08.8	+0.4
121A	Cookes Peak, D	97.24	58	P			08 06 13.1	
	baz=264							
RLMT	Red Lodge	97.26	46	P			08 06 11.9	
	baz=265							
ANMO	Albuquerque	98.56	56	P		Pdif	08 06 17.2	+0.9
ANMO	Albuquerque	98.56	56	P			08 06 17.8	
	baz=265							
K22A	Casper	99.06	48			Pdif	08 06 18.9	+0.6
K22A				IAmb		IAmb	08 06 20.2	
	comp=Z,4.6nm,0.8s							
K22A	Casper	99.06	48	P			08 06 19.0	
	baz=266							
MNTX	Cornudas Mount	99.20	59	P			08 06 21.0	
	baz=265							
LAO	LASA Array	99.49	44	P			08 06 21.4	
	baz=267							
TXAR	Lajitas Array	100.50	62	P		Pdif	08 06 25.9	+0.9
	comp=Z,0.6nm,0.6s,baz=268,slow=3.8,SNR=10							
AKASG	Malin Array Be	121.30	325	PKP		PKPdf	08 11 28.4	-0.9
	comp=Z,2.1nm,0.6s,baz=61,slow=2.2,SNR=8.7							
AKASG	Malin Array Be	121.30	325			PKPdf	08 11 28.9	-0.4
BOSA	Boshof	122.02	228	PKP		PKPdf	08 11 31.5	-0.1
	comp=Z,4.0nm,0.8s,baz=76,slow=3.5,SNR=5.0							
BOSA	Boshof	122.02	228			PKiKP	08 11 31.9	+0.2
NOA	NORSAR Array B	122.63	342	PKP		PKPdf	08 11 31.1	-0.5
	comp=Z,1.0nm,0.7s,baz=44,slow=1.8,SNR=7.2							
LPAZ	La Paz	127.06	118	PKP		PKiKP	08 11 42.5	-0.2
	comp=Z,1.8nm,0.8s,baz=342,slow=4.4,SNR=4.6							
LPAZ	La Paz	127.06	118			PKPdf	08 11 41.6	-0.5
CKRC	Cesky Krumlov	130.32	330	*e*PKPDF		PKiKP	08 11 47.7	+0.2
KHC	Kasperske Hory	130.47	331	*e*PKPDF		PKPdf	08 11 47.0	0.0
GERES	GERESS Array B	130.60	330	PKP		PKPdf	08 11 46.8	-0.5
	comp=Z,1.1nm,0.7s,baz=70,slow=1.6,SNR=11							
GERES	GERESS Array B	130.60	330			PKPdf	08 11 46.9	-0.4
BDFB	Brasilia	143.84	132	PKP		PKPbc	08 12 10.7	+0.1
	comp=Z,5.0nm,0.6s,baz=219,slow=3.1,SNR=11							
PBRG	Braganca	144.76	342	*e*PKPdf		PKPdf	08 12 13.2	-0.2
PGAV	Gavieira, Arco	145.07	343	*e*PKPdf		PKPdf	08 12 14.5	+0.5
MVO	Moncorvo	145.44	341	*e*PKPab		PKPab	08 12 15.8	+0.6
POLO	Lamas de Olo	145.48	342	*e*PKPab		PKPab	08 12 16.1	+0.7
PVRL	Vila Real	145.55	342	*e*PKPab		PKPab	08 12 16.1	+0.5
ESDC	Sonseca Array	145.67	337	PKPbc		PKPbc	08 12 15.3	-0.3
	comp=Z,4.7nm,0.9s,baz=22,slow=3.1,SNR=17							
PVIS	Viseu	146.11	342	*e*PKPab		PKPab	08 12 17.7	0.0
MTE	Manteigas	146.29	341	*e*PKPab		PKPab	08 12 18.5	0.0
PCBR	Castelo Branco	146.78	341	*e*PKPab		PKPab	08 12 19.7	-0.6
PMRV	Marv??o	147.13	341	*e*PKPab		PKPbc	08 12 20.6	+0.8
PMTG	Montargil	147.72	341	*e*PKPab		PKPbc	08 12 21.8	+0.4
PBAR	Barrancos	148.13	339	*e*PKPab		PKPab	08 12 26.6	+0.9
EVO	Evora	148.14	341	*e*PKPbc		PKPbc	08 12 23.0	+0.5
PMAFR	Mafra	148.15	343	*e*PKPab		PKPab	08 12 27.0	+1.2
PNCL	Nicolau / Gran	148.69	341	*e*PKPbc		PKPbc	08 12 23.9	0.0
PCVE	Castro Verde	148.97	340	*e*PKPbc		PKiKP	08 12 25.7	-0.2
PVAQ	Vaqueiros	149.06	339	*e*PKPab		PKPab	08 12 30.5	+1.0
PTEO	Sao Teotonio	149.27	341	*e*PKPab		PKPab	08 12 31.4	+1.1
MORF	Marmelete	149.47	341	*e*PKPbc		PKiKP	08 12 26.9	-

*NNC **06** 08:19:51.5±3.1,49.91N×87.60E,h0km,mb3.4,mpv3.0, Error ellipse: s-maj=29.9km s-min=14.2km az=107.0*

ISC 06 08:19:45.6±0.9,**50.03N**±0.04×**88.06E**±0.03,**h10km**,**n21**, σ1=**96**/37,**9C-2D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CUR	**Chagan-Uzun**	**0.20**	**71**	Pg		**Pg**	**08 19 48.3**	**-1.6**
CUR				Sg		**Sg**	**08 19 52.2**	**-0.7**
CHBI	**Chibit, Altay**	**0.45**	**308**	Pg		**Pg**	**08 19 52.3**	**-2.1**
CHBI				Sg		**Sg**	**08 19 58.8**	**-1.6**
DGZ	**Jazzator, Alta**	**0.52**	**231**	Pg		Pg	08 19 51.9	-3.9
DGZ				Sg		**Sg**	**08 19 57.6**	**-5.1**
ULGR	**Ulagan, Altay**	**0.59**	**354**	Pg		**Pg**	**08 19 55.6**	**-1.5**
ULGR				Sg		**Sg**	**08 20 04.6**	**-0.4**
TEL	**Teeli**	**1.69**	**53**	Pg		**Pb**	**08 20 16.4**	**-0.4**
TEL				Sg		**Sg**	**08 20 39.1**	**-0.7**
ARTR	**Artybash**	**1.83**	**345**	Pg		**Pb**	**08 20 19.4**	**+0.2**
ARTR				Sg		**Sg**	**08 20 44.8**	**+0.3**
UKR	**Ust'-Kan**	**2.28**	**295**	Pg		**Pb**	**08 20 26.5**	**-0.5**
UKR				Sg		**Sb**	**08 20 56.4**	**+1.1**
GALT	**Gorno-Altaysk,**	**2.34**	**326**	Pg		**Pb**	**08 20 27.7**	**-0.2**
GALT				Sg		**Sg**	**08 21 00.6**	**-0.2**
TASR	**Tashtagol**	**2.73**	**358**	Pg		**Pb**	**08 20 34.2**	**-0.4**
TASR				Sg		**Sg**	**08 21 11.2**	**-2.1**
TBTR	**Tabat**	**3.34**	**29**	Pg		**Pb**	**08 20 42.0**	**-3.0**
TBTR				Sg		**Sg**	**08 21 28.5**	**-4.4**
DJO	**Djoy, Khakassi**	**3.39**	**35**	Pg		**Pb**	**08 20 47.1**	**+1.4**
DJO				Sg		**Sg**	**08 21 34.0**	**-0.4**
ELT	**Eltsovka**	**3.42**	**341**	Pg		**Pg**	**08 20 52.7**	**+1.5**
ELT				Sg		**Sg**	**08 21 32.5**	**-3.0**
DJOS	**Djoyskaya Sosn**	**3.47**	**36**	Sg		**Sg**	**08 21 37.2**	**+0.3**
CERR	**Cheremushki**	**3.52**	**35**	Sg		**Sg**	**08 21 37.5**	**-1.1**
ARDR	**Aradan**	**4.23**	**51**	Pn		Pn	08 20 44.7	-5.4
ARDR				Pg		**Pb**	**08 21 00.4**	**+0.4**
ARDR				Sg		**Sg**	**08 22 02.3**	**+1.1**
ZAA0	**Zalesovo Array**	**4.40**	**334**	⇑Pn		**Pb**	**08 21 01.3**	**-1.7**
	0.3nm,0.7s							
ZAA0				⇑Lg		Lg	08 22 11.5	
	3.5nm,1.2s							
SALR	**Pechorkino, Sa**	**4.62**	**343**	Sg		**Sg**	**08 22 13.9**	**0.0**
SHRR	**Shira**	**4.65**	**15**	Pg		**Pg**	**08 21 10.9**	**-3.6**
SHRR				Sg		**Sg**	**08 22 14.8**	**0.0**
MK31	**Makanchi Array**	**5.02**	**232**	⇑Pn		**Pn**	**08 21 02.6**	**+1.6**
	1.2nm,0.3s,baz=51,slow=13,SNR=183							
MK31				⇓Sn		**Sn**	**08 22 02.5**	**+3.4**
	1.0nm,0.4s,baz=58,slow=24,SNR=4.7							
MK31				⇑Lg		Lg	08 22 21.8	
	3.5nm,0.5s,baz=60,slow=32,SNR=7.9							
MAKZ	**Makanchi**	**5.18**	**234**	⇓Pn		**Pn**	**08 21 04.9**	**+1.8**
	3.2nm,0.6s							
MAKZ				⇑Sn		**Sn**	**08 22 04.3**	**+1.5**
	4.4nm,1.1s							
MAKZ				⇑Lg		Lg	08 22 25.5	
	12nm,1.1s							
KURBB	**Kurchatov Arra**	**6.13**	**279**	⇑Pn		**Pn**	**08 21 17.1**	**+1.0**
	1.3nm,0.4s							
KURBB				⇑Sn		**Sn**	**08 22 28.3**	**+2.1**
	3.5nm,0.5s							
KURBB				⇑Lg		Lg	08 22 53.9	
	12nm,0.9s							

IDC 06 08:25:40.2±2.7,**53.72N**×**86.90E**,**h0**km,**mb1 2.7**/2, **mb1mx2.6**/50,**mbtmp2.7**/2,**ML2.3**/2, **Error ellipse: s-maj=26.6km s-min=15.1km az=67.0**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.25**	**281**	*i*			08 32 21.4	
	baz=100,slow=324,SNR=3.0							
ZALV	**Zalesovo Beam**	**1.25**	**281**	Pg		Pg	08 26 03.5	-0.7
	0.8nm,0.3s,baz=98,slow=15,SNR=11							
ZALV				Lg		Lg	08 26 21.1	
	0.9nm,0.3s,baz=101,slow=30,SNR=6.5							
KURBB	**Kurchatov Arra**	**6.01**	**242**	Pn		Pn	08 27 10.8	+0.5
	0.0nm,0.3s,baz=58,slow=14,SNR=6.2							
MKAR	**Makanchi Array**	**7.54**	**205**	Pn		Pn	08 27 32.7	+1.4
	0.1nm,0.3s,baz=26,slow=14,SNR=7.8							

IDC 06 08:43:05.4±1.7,**4.13S**×**129.28E**,**h0**km,**mb3.5**/1, **mb1 3.8**/4,**mb1mx3.4**/42,**mbtmp3.6**/4,**ML3.3**/3,**Error ellipse: s-maj=51.9km s-min=25.2km az=92.0**, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**3.79**	**32**	Pn		Pn	08 44 06.2	+1.0
	4.0nm,0.3s,baz=240,slow=22,SNR=4.8							
SIJI				Sn		Sn	08 44 51.0	+0.4
	1.2nm,0.3s,baz=226,slow=22,SNR=1.6							
WRA	**Warramunga Arr**	**16.48**	**163**	Pn		Pn	08 46 57.5	-0.7
	0.1nm,0.3s,baz=349,slow=11,SNR=5.4							
ASAR	**Alice Springs**	**19.93**	**167**	P		P	08 47 39.4	+0.3
	0.2nm,0.3s,baz=350,slow=10,SNR=26							
MKAR	**Makanchi Array**	**65.45**	**326**	P		P	08 53 50.0	-0.3
	0.4nm,0.7s,baz=121,slow=5.4,SNR=2.5							

*IDC **06** 08:43:25.5±2.1,4.78S×103.09E,h0km,mb3.7/8, mb1 3.8/8,mb1mx3.6/50,mbtmp3.7/8,MS2.8/2,Ms1 2.8/2, ms1mx2.3/37,Error ellipse: s-maj=111.6km s-min=18.6km az=53.0*

*DJA **06** 08:43:33.1±0.6,5°S±4°×10°3E±°,h42km±22km,M3.6/7, MLv3.6/7*

ISC 06 08:43:32.5±1.9,**5.1S**±0.1×**103.0E**±0.1,**h58**km±15km,**n23**, σ1=**13**/21,**mb3.7**/8,**Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LWLI	**Liwa**	**1.10**	**86**	P		**Pn**	**08 43 51.9**	**0.0**
LWLI				S		**Sn**	**08 44 03.9**	**-2.3**
LHSI	**Lahat**	**1.38**	**24**	P		**Pn**	**08 43 56.1**	**+0.6**
LHSI				S		**Sn**	**08 44 13.6**	**+0.9**
KSI	**Kapahiang**	**1.48**	**346**	P		**Pn**	**08 43 57.1**	**+0.2**
KSI				S		**Sn**	**08 44 15.1**	**-0.2**
KASI	**Kota Agung**	**1.59**	**106**	P		**Pn**	**08 43 58.9**	**+0.5**
KASI				S		**Sn**	**08 44 16.8**	**-1.1**
KLSI		**1.81**	**77**	P		**Pn**	**08 44 02.1**	**+0.8**
KLSI				S		**Sn**	**08 44 23.9**	**+0.7**
MASI	**Maura Aman, Be**	**2.07**	**340**	P		**Pn**	**08 44 04.6**	**-0.3**
MASI				S		**Sn**	**08 44 30.9**	**+1.3**
PSI	**Prapat**	**8.82**	**333**	LR		LR	08 49 27.5	
	comp=Z,56nm,18.2s,baz=270,slow=42							
PALK	**Pallekele**	**25.38**	**299**	LR		LR	08 58 09.1	
	comp=Z,19nm,18.8s,baz=300,slow=35							
H08S2	**Diego Garcia H**	**30.38**	**264**	T		T	09 22 07.6	
	baz=88							
H08S3	**Diego Garcia H**	**30.39**	**264**	T		T	09 22 00.8	
	baz=88,SNR=3.2							
H08S1	**Diego Carcia H**	**30.40**	**264**	T		T	09 21 51.5	
	baz=88							
H01W3	**Cape Leeuwin H**	**31.40**	**162**	T		T	09 23 05.9	
H01W2	**Cape Leeuwin H**	**31.41**	**162**	T		T	09 23 05.8	
	baz=340,slow=74,SNR=3.6							
H01W1	**Cape Leeuwin H**	**31.41**	**162**	T		T	09 23 09.3	
	baz=164,slow=74,SNR=3.4							
WRA	**Warramunga Arr**	**33.91**	**119**	P		**P**	**08 50 10.4**	**+0.1**
	0.6nm,0.6s,baz=320,slow=10,SNR=10							
ASAR	**Alice Springs**	**35.06**	**125**	P		**P**	**08 50 21.1**	**+0.8**
	0.5nm,0.4s,baz=298,slow=7.8,SNR=12							
STKA	**Stephens Creek**	**44.90**	**131**	P		**P**	**08 51 43.6**	**+1.9**
	2.4nm,1.0s,baz=328,slow=9.5,SNR=1.2							
SONM	**Songino Array**	**52.79**	**3**	P		**P**	**08 52 40.6**	**-1.3**
	0.1nm,0.4s,baz=208,slow=8.4,SNR=4.2							
MKAR	**Makanchi Array**	**54.81**	**343**	P		**P**	**08 52 55.2**	**-1.4**
	0.5nm,0.6s,baz=134,slow=6.9,SNR=5.4							
KURBB	**Kurchatov Arra**	**59.35**	**342**	P		**P**	**08 53 27.5**	**-1.1**
	0.3nm,0.6s,baz=164,slow=7.0,SNR=2.1							
ZALV	**Zalesovo Beam**	**60.76**	**348**	P		**P**	**08 53 37.1**	**-1.1**
	0.6nm,0.3s,baz=158,slow=7.0,SNR=2.8							
FINES	**FINESS Array B**	**88.21**	**332**	P		**P**	**08 56 17.4**	**+0.3**
	0.4nm,0.7s,baz=74,slow=6.9,SNR=5.1							
TXAR	**Lajitas Array**	**145.13**	**43**	PKP		**PKPdf**	**09 03 04.4**	**0.0**
	0.4nm,0.7s,baz=285,slow=1.9,SNR=6.6							

*SOF **06** 08:50:10.7,42.45N×21.41E,h8km,MD3.7*

*PDG **06** 08:50:11.8±0.6,42.39N×21.42E,h11km,MD3.5/2, ML3.4/14,Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

*SKO **06** 08:50:12.0,42.38N×21.47E,h0km*

*IASPEI **06** 08:50:12.0±0.9,42.43N±0.02×21.42E±0.03,h12km±6km, Error ellipse: s-maj=4.0km s-min=3.2km az=132.9,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*THE **06** 08:50:12.0,42.41N×21.41E,h1km±8km,ML3.3/3,Error ellipse: s-maj=13.2km s-min=1.1km az=345.0*

*BEO **06** 08:50:12.9±0.2,42.41N×21.45E,h9km±2km,ML3.4/15*

*TIR **06** 08:50:12.8,42.29N×21.38E,h25km±1km,Md3.7,Ml3.6*

*NEIC **06** 08:50:13.0±2.9,42.40N±0.04×21.41E±0.07,h9km±7km, Error ellipse: s-maj=7.6km s-min=5.2km az=57.0*

*PRU **06** 08:50:14.1±0.0,42.22N×21.31E,h15km*

ISC 06 08:50:12.6±0.8,**42.41N**±0.02×**21.41E**±0.02,**h8**km±6km, **n196**,σ1=**33**/262,**31C-15D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GJIK	**Gjilan**	**0.06**	**18**	⇑*i*	Pg	**Pg**	**08 50 14.4**	**0.0**
GJIK				*i*	Sg	**Sg**	**08 50 16.1**	**+0.3**
SKO	**Skopje**	**0.44**	**177**	*e*	Pg	**Pg**	**08 50 20.5**	**-0.5**
SKO				*e*	Sg	**Sg**	**08 50 27.3**	**+0.5**
SKO	**Skopje**	**0.44**	**177**	P		**Pg**	**08 50 20.5**	**-0.5**
	baz=198							
SKO	**Skopje**	**0.44**	**177**	⇑*i*	Pg	**Pg**	**08 50 20.5**	**-0.5**
SKO				*i*	Sg	**Sg**	**08 50 26.3**	**-0.4**
BARS	**Barje**	**0.51**	**36**	*e*	Pg	**Pg**	**08 50 20.4**	**-2.0**
BARS				*e*	Sg	**Sg**	**08 50 28.9**	**-0.1**
BARS	**Barje**	**0.51**	**36**	*i*	Pg	**Pg**	**08 50 20.3**	**-2.0**
BARS				*i*	Sg	**Sg**	**08 50 27.8**	**-1.2**
PRZK	**Prizren**	**0.52**	**248**	⇓*i*	Pg	**Pg**	**08 50 22.3**	**-0.4**
PRZK				*i*	Sg	**Sg**	**08 50 29.6**	**0.0**
SMRK	**Smrekonice**	**0.58**	**323**	⇑*i*	Pg	**Pg**	**08 50 23.0**	**-0.8**
BOSS	**Bosilegrad**	**0.80**	**83**	*e*	Pg	**Pg**	**08 50 26.9**	**-1.0**
BOSS				*e*	Sg	**Sg**	**08 50 37.6**	**-0.6**
SELS	**Selova**	**0.84**	**345**	*e*	Pg	**Pg**	**08 50 27.5**	**-1.2**
SELS				*e*	Sg	**Sb**	**08 50 42.0**	**+1.2**
STIP	**Stip**	**0.92**	**141**	*i*	Pg	**Pg**	**08 50 29.6**	**-0.6**
STIP				*i*	Sg	**Sn**	**08 50 44.7**	**-0.4**
BCI	**Bajram Curri**	**1.00**	**268**	P		**Pg**	**08 50 31.4**	**-0.3**
	baz=275							
BCI				S		**Sb**	**08 50 46.2**	**+0.9**
	baz=275							
BCI				AMP				
	comp=E,7.2nm,0.7s,baz=275							
PHP	**Peshkopia**	**1.02**	**225**	P		**Pg**	**08 50 30.9**	**-1.3**
PHP				S		**Sg**	**08 50 44.8**	**-0.7**
PHP	**Peshkopia**	**1.02**	**225**	P		**Pg**	**08 50 30.8**	**-1.3**
	baz=230							
PVY	**Plav**	**1.09**	**280**	⇓*i*	Pg	**Pg**	**08 50 32.3**	**-1.2**
PVY				*i*	Sg	**Sn**	**08 50 49.4**	**-0.2**
PUK	**Puka**	**1.19**	**253**	P		**Pb**	**08 50 34.5**	**-0.8**
	baz=258							
PUK				S		**Sg**	**08 50 50.8**	**+0.1**
	baz=258							
PUK				AMP				
	comp=N,2.9nm,0.3s,baz=258							
BEY	**Berane**	**1.21**	**293**	*i*	Pn	**Pb**	**08 50 34.0**	**-1.8**
IVA	**Berane**	**1.21**	**293**	⇓*i*	Pg	**Pb**	**08 50 34.5**	**-1.3**
IVA				*i*	Sg	**Sn**	**08 50 53.5**	**+1.0**
BOVS	**Bovan**	**1.25**	**10**	*e*	Pg	**Pn**	**08 50 34.8**	**-1.4**
BOVS				*e*	Sg	**Sb**	**08 50 51.7**	**-0.8**
ZAPS	**Zavoj**	**1.25**	**46**	*e*	Pg	**Pn**	**08 50 35.3**	**-1.0**
ZAPS				*e*	Sg	**Sb**	**08 50 51.6**	**-1.0**
KKB	**Krupnik**	**1.35**	**113**	P		**Pn**	**08 50 37.8**	**-1.0**
VTS	**Vitosha**	**1.36**	**81**	Pn		**Pn**	**08 50 37.3**	**-0.7**
VTS	**Vitosha**	**1.36**	**81**	P		**Pn**	**08 50 37.5**	**-0.5**
VTS	**Vitosha**	**1.36**	**81**	⇓*i*	Pn	**Pn**	**08 50 37.6**	**-0.5**
VTS				*i*	Sg	**Sb**	**08 50 56.1**	**+0.1**
OHR	**Ohrid**	**1.38**	**200**	*i*	Pn	**Pn**	**08 50 37.1**	**-1.0**
OHR				*i*	Sn	**Sg**	**08 50 57.9**	**+1.2**
OHR				*e*	Lg	Lg	08 51 00.2	
	comp=E,982nm,0.7s							
OHR				*e*	Lg	Lg	08 51 00.6	
	comp=N,864nm,0.6s							
VAY	**Valandovo**	**1.39**	**141**	*e*	Pg	**Pn**	**08 50 37.3**	**-0.9**
VAY				*e*	Sg	**Sg**	**08 50 58.1**	**+0.9**
VAY	**Valandovo**	**1.39**	**141**	*i*	Pn	**Pn**	**08 50 37.0**	**-1.2**
VAY				*i*	Sn	**Sn**	**08 50 56.6**	**-0.1**
VAY				*e*	Lg	Lg	08 51 01.2	
	comp=N,841nm,1.2s							
VAY				*e*	Lg	Lg	08 51 01.4	
	comp=E,633nm,0.9s							
KOME	**Kolasin**	**1.47**	**288**	⇑*i*	Pg	**Pn**	**08 50 38.9**	**-0.5**
KOME				*i*	Sg	**Sg**	**08 51 01.3**	**+1.5**
IVAS	**Ivanjica**	**1.49**	**322**	*e*	Pg	**Pn**	**08 50 39.2**	**-0.5**
IVAS				*e*	Sg	**Sn**	**08 50 59.8**	**+0.5**
ZAGS	**Zajecar**	**1.53**	**23**	*e*	Pg	**Pn**	**08 50 40.2**	**+0.1**
ZAGS				*e*	Sg	**Sn**	**08 51 00.6**	**+0.5**
GRUS	**Gruza**	**1.56**	**341**	*e*	Pg	**Pn**	**08 50 40.9**	**+0.3**
GRUS				*e*	Sg	**Sg**	**08 51 03.0**	**+0.1**
TIR	**Tirane**	**1.57**	**228**	*e*	Pg	**Pb**	**08 50 41.3**	**-0.5**
TIR				*e*	Sg	**Sb**	**08 51 02.7**	**+0.1**
TIR	**Tirane**	**1.57**	**228**	⇑P		**Pb**	**08 50 41.3**	**-0.5**
TIR				⇑S		**Sb**	**08 51 02.2**	**+0.4**
TIR	**Tirane**	**1.57**	**228**			**Pg**	**08 50 42.7**	**+0.1**
TIR	**Tirane**	**1.57**	**228**	P		**Pb**	**08 50 41.5**	**-0.3**
	baz=231							
TIR				S		**Sn**	**08 51 01.0**	**-0.1**
	baz=231							
PDG	**Podgorica**	**1.60**	**272**	*e*	Pg	**Pn**	**08 50 41.7**	**+0.6**
PDG				*e*	Sg	**Sg**	**08 51 04.4**	**+0.5**
PDG	**Podgorica**	**1.60**	**272**	⇑P		**Pn**	**08 50 41.2**	**+0.2**
PDG				⇓S		**Sn**	**08 51 00.9**	**-1.0**
PDG	**Podgorica**	**1.60**	**272**	*e*	Pn	**Pn**	**08 50 41.5**	**+0.4**
PDG	**Podgorica**	**1.60**	**272**			**Pn**	**08 50 41.4**	**+0.4**
PDG	**Podgorica**	**1.60**	**272**	*i*	Pn	**Pn**	**08 50 41.6**	**+0.6**
TTG	**Podgorica**	**1.60**	**272**	⇓*i*	Pn	**Pn**	**08 50 41.3**	**+0.2**
TTG				*i*	Sn	**Sg**	**08 51 04.3**	**+0.4**
FNA	**Florina**	**1.62**	**181**	P		**Pn**	**08 50 41.1**	**-0.4**
FNA				S		**Sg**	**08 51 04.1**	**-0.6**
	comp=E,1μm,0.6s							
FNA	**Florina**	**1.62**	**181**	Pn		**Pn**	**08 50 41.1**	**-0.4**
FNA	**Florina**	**1.62**	**181**	P		**Pn**	**08 50 41.3**	**-0.2**
	baz=179							
FNA	**Florina**	**1.62**	**181**	*i*	Pn	**Pn**	**08 50 41.3**	**-0.2**
GRG	**Griva**	**1.63**	**153**	P		**Pn**	**08 50 41.0**	**-0.5**
GRG				S		**Sb**	**08 51 03.3**	**-0.2**
	comp=E,415nm,0.7s							
GRG	**Griva**	**1.63**	**153**	⇑*i*	Pn	**Pn**	**08 50 41.0**	**-0.5**
DRME	**Dracevica, Mon**	**1.67**	**263**	*e*	Pn	**Pb**	**08 50 43.1**	**-0.4**
DRME	**Dracevica, Mon**	**1.67**	**263**	⇑*i*	Pn	**Pn**	**08 50 42.3**	**+0.3**
DRME				*i*	Sn	**Sg**	**08 51 06.0**	**-0.1**
ULC	**Ulcinj**	**1.67**	**255**	⇑*i*	Pn	**Pn**	**08 50 42.3**	**+0.2**
ULC				*i*	Sn	**Sg**	**08 51 05.9**	**-0.4**
PLE	**Pljevlja**	**1.75**	**302**	⇓*i*	Pn	**Pn**	**08 50 43.4**	**+0.1**
PLE				*i*	Sn	**Sb**	**08 51 07.8**	**+0.7**
NKY	**Niksic**	**1.83**	**284**	⇑*i*	Pn	**Pn**	**08 50 44.5**	**+0.1**
NKY				*i*	Sn	**Sb**	**08 51 10.0**	**+0.5**
KBN	**Korca**	**1.84**	**195**	P		**Pn**	**08 50 44.6**	**+0.1**
KBN				S		**Sb**	**08 51 08.8**	**-1.0**
	comp=E,620nm,0.8s							
KBN	**Korca**	**1.84**	**195**	P		**Pn**	**08 50 44.3**	**-0.2**
	baz=196							
KBN				S		**Sn**	**08 51 08.5**	**+0.4**
	baz=196							
KBN				AMP				
	comp=N,2.6nm,0.8s,baz=196							
CEME	**Cevo**	**1.85**	**275**	⇑*i*	Pn	**Pn**	**08 50 44.9**	**+0.3**
CEME				*i*	Sn	**Sb**	**08 51 10.4**	**+0.4**
NKME	**Niksic**	**1.85**	**282**	⇓*i*	Pn	**Pn**	**08 50 44.9**	**+0.3**
NKME				*i*	Sn	**Sb**	**08 51 10.5**	**+0.5**
SVIS	**Svilajnac**	**1.86**	**356**	*e*	Pg	**Pb**	**08 50 47.4**	**+0.6**
SVIS				*e*	Sg	**Sg**	**08 51 13.2**	**+0.8**
BUM	**Brajici-Budva**	**1.87**	**268**	⇑*i*	Pn	**Pn**	**08 50 45.1**	**+0.2**
BUM				*i*	Sn	**Sb**	**08 51 10.9**	**+0.4**
MMB	**Musomiste**	**1.91**	**115**	P		**Pn**	**08 50 45.8**	**+0.4**
RUDO	**Rudo**	**1.93**	**310**	*e*	Pn	**Pn**	**08 50 44.9**	**-0.7**
TRUS	**Trudelj**	**1.96**	**338**	*e*	Pg	**Pb**	**08 50 48.9**	**+0.5**
TRUS				*e*	Sg	**Sg**	**08 51 16.7**	**+1.2**
DIVS	**Divibare**	**1.98**	**329**	*e*	Pn	**Pn**	**08 50 45.7**	**-0.8**
DIVS				*e*	Sg	**Sg**	**08 51 17.2**	**+0.9**
DIVS	**Divibare**	**1.98**	**329**	*e*	Pn	**Pn**	**08 50 45.5**	**-0.9**
DIVS	**Divibare**	**1.98**	**329**	Pn		**Pn**	**08 50 45.6**	**-0.9**
UPM	**Unac-Piva**	**2.01**	**294**	*e*	Pn	**Pn**	**08 50 47.2**	**+0.3**
UPM	**Unac-Piva**	**2.01**	**294**	⇓*i*	Pn	**Pn**	**08 50 47.0**	**+0.1**
UPM				*i*	Sn	**Sb**	**08 51 14.2**	**-0.4**
NEST	**Nestorio**	**2.01**	**188**	P		**Pn**	**08 50 47.1**	**+0.3**
KUBS	**Kucevo**	**2.01**	**5**	*e*	Pn	**Pn**	**08 50 47.7**	**+0.9**
KUBS				*e*	Sg	**Sb**	**08 51 16.2**	**+1.6**
PGB	**Panagyurishte**	**2.04**	**85**	P		**Pn**	**08 50 47.6**	**+0.3**
BBLS	**Lazi?i**	**2.07**	**315**	*e*	Pn	**Pn**	**08 50 47.1**	**-0.6**
BBLS	**Lazi?i**	**2.07**	**315**	*e*	Pn	**Pn**	**08 50 47.0**	**-0.6**
NVR	**Nevrokopi**	**2.11**	**119**	P		**Pn**	**08 50 47.7**	**-0.5**
KZN	**Kozani**	**2.12**	**173**	P		**Pn**	**08 50 48.1**	**-0.2**
THE	**Thessaloniki**	**2.12**	**146**	*e*	Pn	**Pn**	**08 50 47.4**	**-0.9**
SOH	**Sokhos**	**2.15**	**137**	P		**Pn**	**08 50 48.2**	**-0.6**
SOH	**Sokhos**	**2.15**	**137**	*i*	Pn	**Pn**	**08 50 48.0**	**-0.7**
HCY	**Herceg Novi**	**2.16**	**272**	*e*	Pn	**Pb**	**08 50 50.7**	**-1.2**
HCY	**Herceg Novi**	**2.16**	**272**	⇑*i*	Pn	**Pn**	**08 50 49.1**	**+0.3**
HCY				*i*	Sn	**Sb**	**08 51 17.9**	**-0.9**
BRY	**Bratogost**	**2.18**	**284**	*e*	Pn	**Pb**	**08 50 51.0**	**-1.3**
BRY	**Bratogost**	**2.18**	**284**	⇑*i*	Pn	**Pn**	**08 50 49.4**	**+0.2**
BRY				*i*	Sn	**Sb**	**08 51 18.4**	**-1.0**
HORT	**Hortiatis**	**2.21**	**144**	P		**Pn**	**08 50 49.0**	**-0.6**
TREB	**Trebinje**	**2.28**	**279**	*e*	Pn	**Pn**	**08 50 52.0**	**+1.5**
TREB	**Trebinje**	**2.28**	**279**	*e*	Pn	**Pn**	**08 50 51.8**	**+1.3**
LSK	**Leskovik**	**2.34**	**195**	P		**Pn**	**08 50 51.7**	**+0.4**
LSK	**Leskovik**	**2.34**	**195**	P		**Pn**	**08 50 51.8**	**+0.4**
	baz=196							
MDVR	**Moldovita**	**2.38**	**5**	⇓P		**Pb**	**08 50 55.2**	**-0.5**
MDVR				⇑S		**Sb**	**08 51 25.0**	**-0.2**
DJES	**Djerdap**	**2.40**	**19**	*e*	Pn	**Pn**	**08 50 52.2**	**+0.1**
DJES				*e*	Sg	**Sb**	**08 51 27.6**	**+2.0**
DJES	**Djerdap**	**2.40**	**19**	⇑P		**Pb**	**08 50 56.0**	**+0.1**
DJES	**Djerdap**	**2.40**	**19**			**Pb**	**08 50 56.0**	**+0.1**
LIT	**Litokhoron**	**2.44**	**160**	P		**Pn**	**08 50 52.3**	**-0.4**
LIT	**Litokhoron**	**2.44**	**160**			**Pn**	**08 50 52.2**	**-0.6**
KPRO	**Kipourio**	**2.45**	**181**	P		**Pn**	**08 50 53.3**	**+0.4**
HAPS	**Han Pijesak,Bl**	**2.46**	**314**	*e*	Pn	**Pn**	**08 50 52.9**	**-0.1**
HAPS	**Han Pijesak,Bl**	**2.46**	**314**	*e*	Pn	**Pn**	**08 51 51.5**	**-1.5**
PLD	**Plovdiv**	**2.46**	**96**	P		**Pn**	**08 50 53.2**	**+0.3**
TEKS	**Tekeris**	**2.54**	**328**	*e*	Pn	**Pn**	**08 50 53.8**	**-0.3**
TEKS				*e*	Sg	**Sg**	**08 51 34.6**	**+0.4**
TEKS	**Tekeris**	**2.54**	**328**	*e*	Pn	**Pn**	**08 50 53.5**	**-0.6**
PLG	**Polygyros**	**2.54**	**142**	P		**Pn**	**08 50 53.8**	**-0.3**
PLVB	**Pleven**	**2.55**	**66**	⇓P		**Pb**	**08 50 59.3**	**+0.8**
PLVB	**Pleven**	**2.55**	**66**			**Pb**	**08 50 59.3**	**+0.8**
RZN	**Rozhen**	**2.56**	**105**	P		**Pn**	**08 50 54.8**	**+0.3**
HERR	**Herculane**	**2.58**	**16**	⇑P		**Pb**	**08 50 58.1**	**-0.9**
SRE	**Strehaia**	**2.60**	**29**	⇑P		**Pb**	**08 50 59.3**	**-0.2**
SRE	**Strehaia**	**2.60**	**29**			**Pb**	**08 50 59.3**	**-0.2**
VLAD	**Vladila**	**2.70**	**53**	⇑P		**Pb**	**08 51 01.3**	**+0.1**
VLAD	**Vladila**	**2.70**	**53**			**Pb**	**08 51 01.3**	**+0.1**
KAVA	**Kavala**	**2.72**	**120**	P		**Pn**	**08 50 55.4**	**-1.1**
STON	**Ston**	**2.78**	**281**	*e*	Pn	**Pn**	**08 50 59.9**	**+2.6**
OUR	**Ouranopolis**	**2.83**	**136**	P		**Pn**	**08 50 57.7**	**-0.4**
THL	**Klokotos Trika**	**2.88**	**171**	P		**Pn**	**08 50 58.8**	**+0.1**
BANR	**Banloc**	**2.98**	**356**	⇑P		**Pn**	**08 51 02.9**	**+2.8**
BANR	**Banloc**	**2.98**	**356**			**Pn**	**08 51 02.9**	**+2.8**
FRGS	**Fruska Gora**	**2.98**	**338**	⇓P		**Pn**	**08 51 02.5**	**+2.3**
FRGS	**Fruska Gora**	**2.98**	**338**	*e*	Pn	**

SQTA	**Sankt Quirin**	**8.70**	**307**	*e*Pn	**Pn**	**08 52 20.9**	**+2.2**
	comp=N,1.6nm,0.3s						
MOTA	**Moosalm**	**8.82**	**308**	Pn	**Pn**	**08 52 21.9**	**+1.4**
	comp=N,1.7nm,0.3s,SNR=9.5						
MSSA	**Maissana**	**8.87**	**286**	Pn	**Pn**	**08 52 21.8**	**+0.7**
FETA	**Feichten**	**8.89**	**305**	Pn	**Pn**	**08 52 23.7**	**+2.3**
	comp=N,1.6nm,0.4s,SNR=4.7						
OSTC	**Ostas**	**8.90**	**338**	*e*Sn	**Sn**	**08 54 00.3**	**-1.5**
PRU	**Pruhonice**	**8.95**	**330**	*e*Sn	**Sn**	**08 54 00.4**	**-2.6**
BFO	**Black Forest**	**10.94**	**307**	Pn	**Pn**	**08 52 49.1**	**-0.2**
ECH	**Echery**	**11.59**	**305**	Pn	**Pn**	**08 52 57.4**	**-0.8**

*NNC **06** 08:54:44.1±3.0, 54°.35N×87°.14E, h0km, mb3.0, mpv2.8, Error ellipse: s-maj=26.6km s-min=14.6km az=9.0, Suspected Mining explosion.*

IDC 06 08:54:44.8±3.0, 54°.34N×87°.13E, h0km, mb1 2.9/2, mb1mx2.8/49, mbtmp2.9/2, ML2.7/2, 8C-3D, Error ellipse: s-maj=26.4km s-min=18.8km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**255**	*i*		09 01 20.0	
	baz=72,slow=316,SNR=2.4						
ZAA0	**Zalesovo Array**	**1.42**	**255**	⇑P	Pn	08 55 09.8	-2.0
	0.4nm,0.4s						
ZAA0				⇑S	Sg	08 55 30.2	-0.1
	1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**1.42**	**255**	Pg	Pn	08 55 09.9	-1.9
	2.9nm,0.3s,baz=72,slow=17,SNR=26						
ZALV				Lg	Lg	08 55 30.5	
	2.1nm,0.3s,baz=77,slow=33,SNR=8.4						
ZALV				Rg	Rg	08 55 39.6	
	2.1nm,0.3s,baz=71,slow=27,SNR=7.4						
KURBB	**Kurchatov Arra**	**6.44**	**238**	Pn	Pn	08 56 21.1	+0.3
	0.1nm,0.3s,baz=52,slow=14,SNR=7.3						
KURBB				Lg	Lg	08 58 09.4	
	0.0nm,0.3s,baz=57,slow=32,SNR=2.6						
KURBB	**Kurchatov Arra**	**6.44**	**238**	⇓Pn	Pn	08 56 22.4	+1.6
	1.0nm,0.4s						
KURBB				⇑Sn	Sn	08 57 32.5	-2.4
	1.3nm,0.4s						
KURBB				⇑Lg	Lg	08 58 07.2	
	3.2nm,1.1s						
MK31	**Makanchi Array**	**8.16**	**204**	⇑Pn	Pn	08 56 46.6	+2.2
	0.3nm,0.7s,baz=26,slow=12,SNR=2.6						
MK31				⇑Sn	Sn	08 58 18.9	+1.6
	0.1nm,0.5s						
MK31				⇑Lg	Lg	08 59 00.1	
	0.6nm,0.8s,baz=19,slow=23						
MKAR	**Makanchi Array**	**8.16**	**204**	Pn	Pn	08 56 46.1	+1.7
	0.1nm,0.3s,baz=27,slow=14,SNR=4.5						
MKAR				Sn	Sn	08 58 10.3	-7.0
	0.0nm,0.3s,baz=137,slow=44,SNR=2.4						
MKAR				Lg	Lg	08 59 03.6	
	baz=25,slow=26,SNR=2.3						
MAKZ	**Makanchi**	**8.22**	**206**	⇓Pn	Pn	08 56 45.3	+0.1
	0.8nm,0.8s						
MAKZ				⇑Sn	Sn	08 58 18.4	-0.4
	0.3nm,0.7s						
MAKZ				⇓Lg	Lg	08 59 07.2	
	0.2nm,0.6s						

*SKO **06** 09:07:11.1, 41°.47N×22°.68E, h24km*
*SOF **06** 09:07:12.0, 41°.46N×22°.74E, h11km, MD2.5*
*ATH **06** 09:07:12.6, 41°.46N×22°.71E, h8km±3km, ML1.9/5, Error ellipse: s-maj=4.2km s-min=1.5km az=157.0*
*BEO **06** 09:07:14.1±0.4, 41°.47N×22°.67E, h0km, ML2.1/7*

ISC 06 09:07:12.4±0.9, 41°.46N±0°.02×22°.71E±0°.02, h10km±8km, n34, σ0°89/52, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.17**	**216**	*e*Pg	**Pg**	**09 07 16.3**	**+0.2**
VAY				*e*Sg	**Sg**	**09 07 19.1**	**+0.5**
VAY	**Valandovo**	**0.17**	**216**	*i*Pg	**Pg**	**09 07 16.3**	**+0.2**
VAY				*e*Lg	Lg	09 07 19.2	
	comp=E,410nm,0.4s						
VAY				*i* Sg	**Sg**	**09 07 19.2**	**+0.5**
VAY				*e*Lg	Lg	09 07 19.4	
	comp=N,590nm,0.4s						
STIP	**Stip**	**0.45**	**301**	*i* Pg	**Pg**	**09 07 19.3**	**-2.0**
STIP				*i* Sg	**Sg**	**09 07 24.2**	**-3.1**
KKB	**Krupnik**	**0.49**	**35**	P	**Pg**	**09 07 21.8**	**-0.3**
GRG	**Griva**	**0.55**	**205**	P	**Pg**	**09 07 23.2**	**0.0**
GRG				AML	AML	09 07 31.6	
	comp=E,299μm,0.3s						
GRG				AML	AML	09 07 34.7	
	comp=N,230μm,0.2s						
GRG	**Griva**	**0.55**	**205**	*i* Pg	**Pg**	**09 07 23.0**	**-0.2**
GRG				*i* Sg	**Sg**	**09 07 31.0**	**+0.6**
MMB	**Musomiste**	**0.78**	**80**	P	**Pg**	**09 07 27.3**	**-0.1**
SOH	**Sokhos**	**0.81**	**142**	P	**Pg**	**09 07 27.7**	**-0.3**
SOH				S	**Sg**	**09 07 38.7**	**+0.2**
SOH				AML	AML	09 07 40.2	
	comp=E,358μm,0.3s						
SOH				AML	AML	09 07 41.5	
	comp=N,368μm,0.4s						
SOH	**Sokhos**	**0.81**	**142**	*i* Pg	**Pg**	**09 07 27.6**	**-0.3**
SOH				*i* Sg	**Sb**	**09 07 39.8**	**+0.2**
THE	**Thessaloniki**	**0.85**	**167**	P	**Pg**	**09 07 28.3**	**-0.5**
THE				AML	AML	09 07 41.0	
	comp=E,187μm,0.3s						
THE				AML	AML	09 07 43.7	
	comp=N,131μm,0.2s						
THE	**Thessaloniki**	**0.85**	**167**	*i* Pg	**Pg**	**09 07 28.4**	**-0.4**
THE				*i* Sg	**Sg**	**09 07 40.1**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**97**	P	**Pg**	**09 07 28.9**	**-0.5**
NVR				S	**Sg**	**09 07 41.1**	**+0.3**
NVR				AML	AML	09 07 44.8	
	comp=N,126μm,0.2s						
NVR				AML	AML	09 07 45.3	
	comp=E,161μm,0.2s						
HORT	**Hortiatis**	**0.91**	**161**	P	**Pg**	**09 07 29.5**	**-0.5**
HORT				AML	AML	09 07 44.0	
	comp=E,160μm,0.3s						
HORT				AML	AML	09 07 44.2	
	comp=N,127μm,0.3s						
BOSS	**Bosilegrad**	**1.05**	**351**	*e*Pg	**Pn**	**09 07 34.0**	**+0.8**
BOSS				*e*Sg	**Sg**	**09 07 46.1**	**-0.1**
FNA	**Florina**	**1.21**	**236**	P	**Pn**	**09 07 34.9**	**-0.6**
FNA	**Florina**	**1.21**	**236**	*e*Pg	**Pg**	**09 07 36.5**	**+0.8**
FNA				*e*Sg	**Sn**	**09 07 52.0**	**0.0**
FNA	**Florina**	**1.21**	**236**	*i* Pg	**Pn**	**09 07 35.3**	**-0.2**
FNA				*i* Sg	**Sb**	**09 07 51.3**	**+0.1**
VTS	**Vitosha**	**1.22**	**19**	*e*Pg	**Pg**	**09 07 36.3**	**+0.4**
VTS				*e*Sg	**Sb**	**09 07 51.2**	**-0.4**
VTS	**Vitosha**	**1.22**	**19**	P	**Pb**	**09 07 35.7**	**0.0**
VTS	**Vitosha**	**1.22**	**19**	*i* Pg	**Pn**	**09 07 35.2**	**-0.5**
VTS				*i* Sg	**Sb**	**09 07 51.3**	**-0.3**
PLG	**Polygyros**	**1.22**	**152**	P	**Pn**	**09 07 34.9**	**-0.8**
GJIK	**Gjilan**	**1.38**	**317**	*e*Pn	**Pn**	**09 07 37.2**	**-0.6**
GJIK				*i* Sg	**Sg**	**09 07 58.3**	**+1.6**
KAVA	**Kavala**	**1.44**	**108**	P	**Pb**	**09 07 39.1**	**-0.3**
OUR	**Ouranopolis**	**1.48**	**139**	P	**Pb**	**09 07 39.8**	**-0.3**
BARS	**Barje**	**1.51**	**334**	*e*Pg	**Pn**	**09 07 39.6**	**+0.1**
BARS				*e*Sg	**Sg**	**09 08 01.5**	**+0.6**
BARS	**Barje**	**1.51**	**334**	*e*Pn	**Pn**	**09 07 39.3**	**-0.2**
BARS				*i* Sg	**Sn**	**09 07 59.1**	**-0.2**
RZN	**Rozhen**	**1.53**	**81**	P	**Pg**	**09 07 42.0**	**+0.3**
PGB	**Panagyurishte**	**1.54**	**45**	P	**Pn**	**09 07 40.2**	**+0.2**
PAIG	**Paliouri**	**1.70**	**154**	P	**Pb**	**09 07 43.4**	**-0.4**
ZAPS	**Zavoj**	**1.81**	**358**	*e*Pg	**Pg**	**09 07 46.7**	**-0.5**
ZAPS				*e*Sg	**Sg**	**09 08 12.4**	**+1.7**
SELS	**Selova**	**2.11**	**327**	*e*Pg	**Pb**	**09 07 51.7**	**+0.8**
SELS				*e*Sg	**Sg**	**09 08 20.3**	**-0.1**
ZAGS	**Zajecar**	**2.38**	**352**	*e*Pn	**Pb**	**09 07 53.9**	**-1.4**
IVAS	**Ivanjica**	**2.83**	**319**	*e*Pn	**Pn**	**09 07 59.9**	**+2.1**
DIVS	**Divibare**	**3.31**	**324**	*e*Pn	**Pn**	**09 08 06.6**	**+2.3**

*NNC **06** 09:31:09.9±3.1, 53°.54N×88°.19E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=25.3km s-min=12.1km az=61.0, Suspected Mining explosion.*

IDC 06 09:31:11.1±3.0, 53°.65N×88°.00E, h0km, mb1 3.1/2, mb1mx2.9/54, mbtmp3.1/2, ML2.8/2, 5C-5D, Error ellipse: s-maj=25.0km s-min=15.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.91**	**280**	*i*		09 43 20.0	
	baz=96,slow=315,SNR=1.2						
ZAA0	**Zalesovo Array**	**1.91**	**280**	⇑Pn	Pn	09 31 45.1	+0.3
	1.1nm,0.6s						
ZAA0				⇓Sn	Sg	09 32 13.0	+0.7
	1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**1.91**	**280**	Pg	Pn	09 31 45.5	+0.7
	1.9nm,0.3s,baz=102,slow=17,SNR=20						
ZALV				Lg	Lg	09 32 11.7	
	4.1nm,0.3s,baz=109,slow=27,SNR=19						
KURBB	**Kurchatov Arra**	**6.57**	**246**	Pn	Pn	09 32 49.5	+0.7
	0.1nm,0.3s,baz=62,slow=14,SNR=6.0						
KURBB				Sn	Sn	09 34 04.1	-0.2
	baz=59,slow=25,SNR=2.1						
KURBB				Lg	Lg	09 34 36.5	
	0.0nm,0.3s,baz=61,slow=33,SNR=3.3						
KURBB	**Kurchatov Arra**	**6.57**	**246**	⇑Pn	Pn	09 32 48.2	-0.5
	1.3nm,0.5s						
KURBB				⇑Sn	Sn	09 34 02.8	-1.5
	3.3nm,0.6s						
KURBB				⇑Lg	Lg	09 34 40.6	
	5.5nm,0.7s						
MK31	**Makanchi Array**	**7.78**	**210**	⇓Pn	Pn	09 33 06.1	+0.7
	0.2nm,0.5s,baz=28,slow=13,SNR=11						
MK31				Sn	Sn	09 34 35.3	+1.2
	0.7nm,0.7s,baz=252,slow=44,SNR=4.2						
MK31				⇓Lg	Lg	09 35 16.6	
	0.7nm,0.7s,baz=22,slow=30,SNR=3.6						
MKAR	**Makanchi Array**	**7.78**	**210**	Pn	Pn	09 33 06.4	+1.0
	0.2nm,0.3s,baz=27,slow=14,SNR=11						
MKAR				Sn	Sn	09 34 34.7	+0.6
	0.1nm,0.3s,baz=29,slow=30,SNR=5.6						
MKAR				Lg	Lg	09 35 16.4	
	0.1nm,0.3s,baz=29,slow=29,SNR=1.8						
MAKZ	**Makanchi**	**7.86**	**212**	⇑Pn	Pn	09 33 02.7	-3.9
	0.3nm,0.4s						
MAKZ				⇓Sn	Sn	09 34 35.9	-0.2
	0.7nm,1.0s						
MAKZ				⇓Lg	Lg	09 35 17.3	
	1.2nm,0.9s						

IDC 06 09:35:21.4±3.4, 55°.56N×86°.30E, h0km, mb1 2.8/2, mb1mx2.8/52, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=26.9km s-min=25.2km az=40.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.82**	**209**	*i*		09 47 10.0	
	baz=23,slow=322,SNR=1.4						
ZALV	**Zalesovo Beam**	**1.82**	**209**	Pg	Pn	09 35 53.2	-0.8
	2.2nm,0.3s,baz=29,slow=17,SNR=17						
ZALV				Lg	Lg	09 36 19.3	
	2.6nm,0.3s,baz=31,slow=30,SNR=9.3						
KURBB	**Kurchatov Arra**	**6.80**	**227**	Pn	Pn	09 37 02.2	-0.1
	0.1nm,0.3s,baz=44,slow=14,SNR=4.3						
KURBB				Lg	Lg	09 39 00.2	
	0.0nm,0.3s,baz=44,slow=32,SNR=5.0						
MKAR	**Makanchi Array**	**9.12**	**198**	Pn	Pn	09 37 34.8	+0.5
	0.1nm,0.3s,baz=19,slow=12,SNR=4.2						
MKAR				Lg	Lg	09 40 11.0	
	0.1nm,0.3s,baz=29,slow=30,SNR=2.4						

IDC 06 09:43:57.9±4.0, 53°.67N×87°.95E, h0km, mb1 2.8/2, mb1mx2.7/44, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=39.9km s-min=18.3km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.88**	**280**	*i*		09 55 50.0	
	baz=97,slow=317,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.88**	**280**	Pg	Pn	09 44 32.0	+0.8
	1.2nm,0.3s,baz=100,slow=15,SNR=13						
ZALV				Lg	Lg	09 44 57.6	
	2.3nm,0.3s,baz=105,slow=28,SNR=9.8						
KURBB	**Kurchatov Arra**	**6.55**	**246**	Pn	Pn	09 45 35.8	+0.4
	0.1nm,0.3s,baz=61,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**7.78**	**210**	Pn	Pn	09 45 53.5	+1.3
	0.1nm,0.3s,baz=28,slow=13,SNR=5.8						

*NNC **06** 09:45:20.2±3.4, 53°.40N×89°.48E, h0km, mb3.3, mpv3.0, Error ellipse: s-maj=29.0km s-min=18.5km az=78.0, Suspected Mining explosion.*

IDC 06 09:45:04.0±3.5, 53°.50N×90°.84E, h0km, mb1 3.1/3, mb1mx3.0/48, mbtmp3.1/3, ML2.5/3, 8C-3D, Error ellipse: s-maj=28.4km s-min=24.0km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.60**	**280**	*i*		10 07 10.0	
	baz=92,slow=316,SNR=1.7						
ZAA0	**Zalesovo Array**	**3.60**	**280**	⇑Pn	Pb	09 46 05.6	-2.9
	1.4nm,0.8s						
ZAA0				⇑Lg	Lg	09 46 52.1	
	7.1nm,0.8s						
ZALV	**Zalesovo Beam**	**3.60**	**280**	Pn	Pn	09 46 02.2	+1.2
	0.6nm,0.3s,baz=99,slow=16,SNR=3.3						
ZALV				Lg	Lg	09 46 55.8	
	1.6nm,0.3s,baz=93,slow=26,SNR=8.6						
TLY	**Talaya**	**8.01**	**98**	Lg	Lg	09 49 03.4	
	0.0nm,0.3s,baz=72,slow=7.3,SNR=5.5						
KURBB	**Kurchatov Arra**	**8.11**	**254**	Pn	Pn	09 47 01.9	-1.0
	0.1nm,0.3s,baz=66,slow=14,SNR=4.2						
KURBB				Sn	Sn	09 48 35.4	+0.2
	0.1nm,0.3s,baz=69,slow=27,SNR=8.1						
KURBB				Lg	Lg	09 49 23.9	
	0.1nm,0.3s,baz=59,slow=32,SNR=6.9						
KURBB	**Kurchatov Arra**	**8.11**	**254**	⇑Pn	Pn	09 47 09.4	+6.5
	4.6nm,1.1s						
KURBB				⇑Sn	Sn	09 48 32.9	-2.3
	9.5nm,0.7s						
KURBB				⇑Lg	Lg	09 49 09.9	
	36nm,0.9s						
MK31	**Makanchi Array**	**8.66**	**223**	⇑Pn	Pn	09 47 19.1	+8.5
	0.2nm,0.3s,baz=41,slow=13,SNR=4.2						
MK31				⇑Sn	Sn	09 48 52.7	+3.8
	2.7nm,0.8s						
MK31				⇓Lg	Lg	09 49 35.7	
	6.0nm,1.2s,baz=48,slow=30,SNR=6.2						
MKAR	**Makanchi Array**	**8.66**	**223**	Pn	Pn	09 47 12.0	+1.5
	0.1nm,0.3s,baz=44,slow=12,SNR=4.1						
MKAR				Sn	Sn	09 48 46.3	-2.6
	0.1nm,0.3s,baz=40,slow=25,SNR=2.7						
MKAR				Lg	Lg	09 49 37.3	
	0.1nm,0.3s,baz=45,slow=29,SNR=1.7						
MAKZ	**Makanchi**	**8.78**	**224**	⇑Pn	Pn	09 47 22.6	+10
	0.6nm,0.7s						
MAKZ				⇓Sn	Sn	09 48 51.1	-0.6
	0.7nm,0.5s						
MAKZ				⇓Lg	Lg	09 49 40.0	
	6.7nm,1.3s						
SONM	**Songino Array**	**11.38**	**114**	Lg	Lg	09 50 57.2	
	0.1nm,0.3s,baz=301,slow=29,SNR=10.0						

IDC 06 10:02:57.4±3.1, 32°.87S×177°.41W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/38, mbtmp3.5/3, ML2.7/1, Error ellipse: s-maj=81.3km s-min=37.0km az=125.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.99**	**218**	Pn	Pn	10 04 40.8	-0.2
	0.1nm,0.3s,baz=121,slow=23,SNR=2.3						
URZ				Sn	Sn	10 06 00.2	-0.9
	0.1nm,0.3s,baz=124,slow=23,SNR=2.0						
ASAR	**Alice Springs**	**43.53**	**269**	P	P	10 11 03.7	+0.7
	0.2nm,0.3s,baz=108,slow=7.4,SNR=1.8						
WRA	**Warramunga Arr**	**44.74**	**274**	P	P	10 11 12.3	-0.4
	0.6nm,0.5s,baz=112,slow=7.7,SNR=6.6						
FINES	**FINESS Array B**	**147.62**	**339**	PKPbc	PKPbc	10 22 42.1	-0.9
	1.1nm,0.8s,baz=38,slow=3.9,SNR=8.6						

*IDC **06** 10:10:19.5±1.3, 63°.16N×151°.08W, h108km±14km, mb3.4/10, mb1 3.5/15, mb1mx3.3/56, mbtmp3.7/15, Error ellipse: s-maj=16.5km s-min=10.3km az=108.0*
*NEIC **06** 10:10:21.9±0.6, 63°.19N±0°.04×150°.75W±0°.07, h134km±3km, Error ellipse: s-maj=5.9km s-min=4.8km az=191.0*
*AEIC **06** 10:10:22±0.9, 63°.16N±0°.04×150°.68W±0°.08, h130km±5km, ML3.5, ML3.7/125(NEIC), Error ellipse: s-maj=6.1km s-min=5.5km az=182.0*

ISC 06 10:10:22.1±0.7, 63°.18N±0°.03×150°.76W±0°.04, h134km±5km, n171, σ0°879/162, mb3.6/10, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.35**	**38**		**Pn**	**10 10 41.2**	**+0.1**
TRF					**Sn**	**10 10 55.2**	**-0.3**
TRF	**Thorofare Moun**	**0.35**	**38**	IAML		10 10 56.4	
	comp=E,1μm,0.8s						
TRF				IAML		10 10 56.6	
	comp=N,1μm,0.8s						
TRF	**Thorofare Moun**	**0.35**	**38**	P		10 10 41.4	
	baz=214,SNR=971						
KTH	**Kantishna Hill**	**0.39**	**349**		**Pn**	**10 10 41.1**	**0.0**
KTH					**Sn**	**10 10 55.0**	**-0.7**
HUR	**Hurricane**	**0.55**	**111**		**Pn**	**10 10 41.7**	**-0.2**
HUR					**Sn**	**10 10 56.4**	**-0.5**
CAST	**Castle Rocks**	**0.65**	**293**		**Pn**	**10 10 42.3**	**-0.2**
CAST					**Sn**	**10 10 57.0**	**-1.0**
PPLA	**Purkeypile**	**0.71**	**247**		**Pn**	**10 10 43.2**	**+0.1**
PPLA					**Sn**	**10 10 58.7**	**-0.3**
PPLA	**Purkeypile**	**0.71**	**247**	P		10 10 43.3	
	baz=67,SNR=163						
CUT	**Chulitna**	**0.81**	**163**		**Pn**	**10 10 43.8**	**+0.1**
CUT					**Sn**	**10 10 59.9**	**-0.1**
CUT	**Chulitna**	**0.81**	**163**	IAML		10 11 07.3	
	comp=N,2μm,0.6s						
CUT	**Chulitna**	**0.81**	**163**	P		10 10 43.9	
	baz=345,SNR=77						
RND	**Reindeer**	**0.89**	**74**		**Pn**	**10 10 44.4**	**-0.1**
RND					**Sn**	**10 11 01.1**	**-0.4**
RND	**Reindeer**	**0.89**	**74**	IAML		10 11 01.9	
	comp=N,2μm,0.6s						
BPAW	**Bear Paw Mtn.**	**0.93**	**354**		**Pn**	**10 10 44.5**	**-0.2**
BPAW	**Bear Paw Mtn.**	**0.93**	**354**	P		10 10 44.7	
	baz=172,SNR=609						
WAT7	**Susitna Watana**	**0.94**	**111**		**Pn**	**10 10 44.6**	**-0.3**
CHUM	**Lake Minchumin**	**0.99**	**316**		**Pn**	**10 10 45.4**	**+0.1**
CHUM					**Sn**	**10 11 02.3**	**-0.6**
CHUM	**Lake Minchumin**	**0.99**	**316**	P		10 10 45.5	
	baz=134,SNR=397						
MCK	**McKinley**	**0.99**	**55**		**Pn**	**10 10 45.4**	**+0.1**
MCK					**Sn**	**10 11 02.1**	**-0.9**
MCK	**McKinley**	**0.99**	**55**	IAML		10 11 03.7	
	comp=E,929nm,0.5s						
MCK				IAML		10 11 04.1	
	comp=N,536nm,0.4s						
MCK	**McKinley**	**0.99**	**55**	P		10 10 45.4	
	baz=235,SNR=191						
WAT2	**Susitna Watana**	**1.01**	**101**		**Pn**	**10 10 45.2**	**-0.4**
WAT2	**Susitna Watana**	**1.01**	**101**	P		10 10 45.4	
	baz=283,SNR=231						
WAT1	**Susitna Watana**	**1.07**	**108**		**Pn**	**10 10 45.9**	**-0.2**
BWN	**Browne**	**1.16**	**29**		**Pn**	**10 10 47.4**	**+0.6**
BWN	**Browne**	**1.16**	**29**	IAML		10 11 06.4	
	comp=E,708nm,1.0s						
BWN				IAML		10 11 07.0	
	comp=N,669nm,0.7s						
SKT	**Skwentna**	**1.25**	**197**		**Pn**	**10 10 47.7**	**-0.1**
SKT					**Sn**	**10 11 07.4**	**0.0**
SKT	**Skwentna**	**1.25**	**197**	IAML		10 11 07.9	
	comp=E,851nm,0.5s						
SKT				IAML		10 11 08.9	
	comp=N,710nm,0.5s						
SKT	**Skwentna**	**1.25**	**197**	P		10 10 47.7	
	baz=17,SNR=50						
WAT6	**Susitna Watana**	**1.51**	**112**		**Pn**	**10 10 50.1**	**-0.6**
WAT6	**Susitna Watana**	**1.51**	**112**	P		10 10 50.2	
	baz=295,SNR=120						
NEA2	**Nenana**	**1.61**	**27**		**Pn**	**10 10 51.3**	**-0.3**
NEA2					**Sn**	**10 11 12.7**	**-1.5**
NEA2	**Nenana**	**1.61**	**27**	IAML		10 11 14.1	
	comp=E,299nm,0.6s						
NEA2				IAML		10 11 14.1	
	comp=N,311nm,1.0s						
NEA2	**Nenana**	**1.61**	**27**	P		10 10 51.3	
	baz=208,SNR=36						
GHO	**Glory Hole Cre**	**1.65**	**148**		**Pn**	**10 10 52.1**	**-0.1**
SUA	**Susitna One**	**1.72**	**180**		**Pn**	**10 10 53.5**	**+0.5**
SUA	**Susitna One**	**1.72**	**180**	P		10 10 53.8	
	baz=0.6,SNR=47						
STLK	**Strandline Lak**	**1.75**	**197**		**Pn**	**10 10 53.6**	**+0.2**
WRH	**Wood River Hil**	**1.76**	**41**		**Pn**	**10 10 53.2**	**-0.1**
PMR	**Palmer**	**1.76**	**154**		**Pn**	**10 10 52.8**	**-0.5**
PMR					**Sn**	**10 11 16.2**	**-1.1**
PMR	**Palmer**	**1.76**	**154**	IAML		10 11 16.9	
	comp=E,382nm,0.4s						
PMR				IAML		10 11 22.3	
	comp=N,531nm,0.6s						
PMR	**Palmer**	**1.76**	**154**	P		10 10 52.8	
	baz=336,SNR=58						
SML	**Sawmill**	**1.78**	**139**		**Pn**	**10 10 53.1**	**-0.6**
SML					**Sn**	**10 11 17.1**	**-0.6**
SML	**Sawmill**	**1.78**	**139**	IAML		10 11 18.0	
	comp=E,798nm,0.6s						
SML				IAML		10 11 18.5	
	comp=N,670nm,0.8s						
SML	**Sawmill**	**1.78**	**139**	P		10 10 53.1	
	baz=322,SNR=47						
MLY	**Manley**	**1.86**	**0**		**Pn**	**10 10 54.5**	**-0.1**
MLY					**Sn**	**10 11 18.0**	**-1.6**
MLY	**Manley**	**1.86**	**0**	P		10 10 54.6	
	baz=180,SNR=114						
CCB	**Clear Creek Bu**	**1.97**	**40**		**Pn**	**10 10 55.7**	**-0.1**
CRP	**Crater Peak**	**2.02**	**199**		**Pn**	**10 10 57.4**	**+0.7**
SPCP	**Crater Peak Br**	**2.02**	**199**		**Pn**	**10 10 57.4**	**+0.7**
SPCP					**Sn**	**10 11 22.6**	**-0.5**
FIS	**Fire Island**	**2.05**	**173**	Pn	**Pn**	**10 10 58.2**	**+1.3**
KNK	**Knik Glacier**	**2.07**	**148**		**Pn**	**10 10 56.7**	**-0.4**
KNK	**Knik Glacier**	**2.07**	**148**	IAML		10 11 31.6	
	comp=N,393nm,0.6s						
I23K	**Minto, Yukon-K**	**2.07**	**17**		**Pn**	**10 10 57.1**	**+0.1**
I23K	**Minto, Yukon-K**	**2.07**	**17**	P		10 10 57.2	
	baz=197,SNR=181						
SCM	**Sheep Creek Mo**	**2.09**	**129**		**Pn**	**10 10 56.6**	**-0.8**
SCM	**Sheep Creek Mo**	**2.09**	**129**	IAML		10 11 31.6	
	comp=E,437nm,0.9s						
SCM				IAML		10 11 34.3	
	comp=N,601nm,0.5s						
SPCR	**Spurr

PAX	Paxson	2.42	93	P			10 11 01.4	
	baz=277,SNR=174							
CAPN	Captain Cook N	2.42	185			Pn	10 11 03.3	+1.9
POKR	Poker Plat Res	2.44	35			Pn	10 11 01.8	+0.2
POKR						Sn	10 11 33.1	+1.2
POKR	Poker Plat Res	2.44	35	P			10 11 01.7	
	baz=218,SNR=24							
PWL	Port Wells	2.59	153			Pn	10 11 03.0	-0.5
PWL	Port Wells	2.59	153	IAML			10 11 35.9	
	comp=E,405nm,0.5s							
PS11	TAPS Pump St11	2.68	112			Pn	10 11 05.0	+0.4
PS11						Sn	10 11 37.2	-0.3
SLKM	Skilak Lake	2.69	174			Pn	10 11 04.7	-0.2
PS06	TAPS Pump Stn6	2.73	9			Pn	10 11 05.5	+0.3
PS06						Sn	10 11 37.9	-0.6
DFR	Drift River	2.75	200			Pn	10 11 05.8	+0.2
O22K	Cooper Landing	2.75	169			Pn	10 11 05.6	0.0
NCT	North Crescent	2.82	202			Pn	10 11 07.0	+0.5
KLU	Klutina	2.82	125			Pn	10 11 05.5	-1.1
KLU	Klutina	2.82	125	IAML			10 11 51.0	
	comp=N,282nm,0.9s							
KLU				IAML			10 11 53.9	
	comp=E,291nm,0.6s							
KLU	Klutina	2.82	125	P			10 11 05.6	
	baz=309,SNR=40							
GLI	Glacier Island	2.88	141			Pn	10 11 06.3	-1.0
GLI	Glacier Island	2.88	141	P			10 11 06.4	
	baz=325,SNR=6.8							
RSO	Redoubt South	2.88	200			Pn	10 11 08.4	+0.9
RED	Redoubt Volcan	2.93	200			Pn	10 11 08.2	+0.3
DOT	Dot Lake	3.05	78			Pn	10 11 09.0	-0.5
SVW2	Sparrevohn	3.08	229			Pn	10 11 09.8	0.0
IM03		3.10	337			Pn	10 11 10.0	0.0
IMAR	Indian Mountai	3.10	337			Pn	10 11 09.8	-0.2
DIV	Divide	3.11	129			Pn	10 11 08.9	-1.4
PS12	TAPS Pump St12	3.13	121			Pn	10 11 09.8	-0.7
SCRK	Sand Creek	3.13	72			Pn	10 11 10.1	-0.5
SCRK	Sand Creek	3.13	72	IAML			10 11 52.1	
	comp=N,273nm,0.8s							
SCRK				IAML			10 11 54.9	
	comp=E,136nm,0.6s							
SCRK	Sand Creek	3.14	72	P			10 11 10.5	
	baz=258,SNR=191							
FID	Port Fidalgo	3.16	138			Pn	10 11 09.8	-1.1
MENT	Mentasta	3.22	91			Pn	10 11 11.5	0.0
MENT	Mentasta	3.22	91	IAML			10 12 05.0	
	comp=E,212nm,0.5s							
MENT				IAML			10 12 08.3	
	comp=N,245nm,0.6s							
N25K	Chitina, Valde	3.27	116			Pn	10 11 11.9	-0.5
N25K	Chitina, Valde	3.27	116	IAML			10 12 05.9	
	comp=E,108nm,0.5s							
N25K				IAML			10 12 10.0	
	comp=N,164nm,0.6s							
N25K	Chitina, Valde	3.27	116	P			10 11 12.1	
	baz=302,SNR=45							
PRP	Porcupine Dome	3.27	42			Pn	10 11 12.1	-0.3
IVE	Iliamna Volcan	3.35	200			Pn	10 11 13.2	-0.2
BRLK	Bradley Lake	3.42	181			Pn	10 11 14.5	+0.2
BRLK	Bradley Lake	3.42	181	IAML			10 11 55.3	
	comp=N,158nm,0.6s							
BRLK				IAML			10 11 55.4	
	comp=E,73nm,0.6s							
BRSE	Bradley Lake S	3.45	180			Pn	10 11 14.1	-0.5
EYAK	Cordova Ski Ar	3.55	136			Pn	10 11 15.5	-0.4
HOM	Homer	3.56	187			Pn	10 11 16.3	+0.3
BMRM	Bremner River	3.65	125			Pn	10 11 15.8	-1.4
BMRM	Bremner River	3.65	125	IAML			10 12 21.2	
	comp=E,200nm,0.7s							
BMRM				IAML			10 12 21.3	
	comp=N,146nm,0.7s							
BMRM	Bremner River	3.65	125	P			10 11 16.2	
	baz=310,SNR=12							
PS05	TAPS Pump Stn5	3.65	1			Pn	10 11 17.6	+0.4
CNPM	China Poot	3.67	184			Pn	10 11 17.5	0.0
CNPM	China Poot	3.67	184	IAML			10 12 00.9	
	comp=N,156nm,0.5s							
GLB	Gilahina Butte	3.68	115			Pn	10 11 17.3	-0.4
GLB	Gilahina Butte	3.68	115	IAML			10 12 01.4	
	comp=E,149nm,0.4s							
GLB				IAML			10 12 01.7	
	comp=N,144nm,0.9s							
GOAT	Goat Mountain	3.87	130			Pn	10 11 19.2	-0.9
VRDI	Verde Repeater	3.94	116			Pn	10 11 20.5	-0.8
VRDI	Verde Repeater	3.94	116	IAML			10 12 26.9	
	comp=N,88nm,0.7s							
K27K	Chicken	3.97	74			Pn	10 11 21.1	-0.4
K27K	Chicken	3.97	74	IAML			10 12 11.9	
	comp=E,114nm,0.6s							
RAGM	Ragged Mountai	4.02	131			Pn	10 11 22.0	-0.2
MCARA	McCarthy VSAT	4.04	113			Pn	10 11 22.5	+0.1
MCARA	McCarthy VSAT	4.04	113	IAML			10 12 32.4	
	comp=N,124nm,0.7s							
MCARA				IAML			10 12 33.3	
	comp=E,156nm,0.7s							
L27K	Beaver Creek,	4.06	88			Pn	10 11 21.8	-0.8
COLD	Coldfoot	4.08	3			Pn	10 11 23.0	+0.2
COLD	Coldfoot	4.08	3	P			10 11 23.0	
	baz=183,SNR=24							
BC03		4.08	88			Pn	10 11 22.1	-0.7
BCAR	Beaver Creek A	4.08	88			Pn	10 11 21.8	-1.2
FYU	Fort Yukon	4.14	32	Pn		Pn	10 11 23.5	-0.1
FYU				IAML			10 12 15.5	
	comp=N,40nm,3.8s							
HMT	Hamilton	4.20	130			Pn	10 11 23.9	-0.7
MID	Middleton Isla	4.32	148			Pn	10 11 25.9	-0.2
MID	Middleton Isla	4.32	148	IAML			10 12 48.6	
	comp=E,118nm,1.1s							
MID				IAML			10 12 53.0	
	comp=N,95nm,1.1s							
CRQM	Cirque	4.34	121			Pn	10 11 26.0	-0.6
PTPK	Patty Peak	4.37	113			Pn	10 11 26.6	-0.3
NICHA	Nichawak Mount	4.38	129			Pn	10 11 26.2	-0.7
KAIM	Kayak Island	4.45	134			Pn	10 11 26.8	-1.0
TGL	Tana Glacier	4.46	119			Pn	10 11 27.1	-0.9
TGL	Tana Glacier	4.46	119	IAML			10 12 39.7	
	comp=N,99nm,1.0s							
KHIT	Khitrov Hills	4.50	124			Pn	10 11 27.5	-1.0
BALM	Baldy	4.50	115			Pn	10 11 27.8	-0.8
EGAK	Eagle	4.53	65			Pn	10 11 28.2	-0.6
EGAK	Eagle	4.53	65	IAML			10 12 37.0	
	comp=N,82nm,1.0s							
EGAK	Eagle	4.53	65	P			10 11 28.4	
	baz=253,SNR=53							
KIAG	Kiagna River	4.55	116			Pn	10 11 28.2	-1.1
GRIN	Grindle Hills	4.58	126			Pn	10 11 28.9	-0.7
BVCY	Beaver Creek	4.61	95			Pn	10 11 29.4	-0.5
BARN	Barnard Glacie	4.77	112			Pn	10 11 32.3	0.0
BARN	Barnard Glacie	4.77	112	IAML			10 12 48.7	
	comp=E,32nm,0.8s							
BARN				IAML			10 12 48.8	
	comp=N,33nm,0.7s							
YUK2	White River	4.81	102			Pn	10 11 32.8	+0.2
KULT	Kultieth River	4.82	124			Pn	10 11 32.5	-0.3
GRNC	Granite Creek	4.91	116			Pn	10 11 33.5	-0.6
GRNC	Granite Creek	4.91	116	IAML			10 12 55.1	
	comp=E,30nm,0.7s							
GRNC				IAML			10 12 55.7	
	comp=N,46nm,0.8s							
CTGM	Chitina Glacie	4.96	112			Pn	10 11 34.5	-0.2
BM03	Burnt Mountain	4.98	28			Pn	10 11 34.6	-0.3
YUK3	Moose Creek	4.98	102			Pn	10 11 35.3	+0.2
BMAR	Burnt Mountain	5.00	29			Pn	10 11 34.8	-0.3
YAH	Yahtse	5.13	119			Pn	10 11 36.4	-0.6
YAH	Yahtse	5.13	119	IAML			10 13 01.1	
	comp=N,47nm,1.1s							
YAH				IAML			10 13 05.3	
	comp=E,43nm,0.9s							
DAWY	Dawson	5.15	75			Pn	10 11 36.6	-0.6
DAWY	Dawson	5.15	75	IAML			10 12 52.4	
	comp=E,29nm,0.7s							
LOGN	Logan Glacier	5.17	113			Pn	10 11 36.9	-0.7
LOGN	Logan Glacier	5.17	113	IAML			10 13 03.7	
	comp=N,34nm,0.6s							
LOGN				IAML			10 13 06.0	
	comp=E,30nm,0.9s							
TABL	Table Mountain	5.32	117			Pn	10 11 38.7	-1.0
KDAK	Kodiak Island	5.49	190	P		Pn	10 11 39.0	-2.6
	comp=E,0.8nm,0.3s,baz=63,slow=9.2,SNR=31							
KDAK				S		Sn	10 12 38.6	-5.0
	comp=E,2.0nm,0.3s,baz=331,slow=23,SNR=12							
TOLK	Toolik Lake Re	5.51	5			Pn	10 11 42.3	+0.3
TOLK	Toolik Lake Re	5.51	5	P			10 11 43.5	
	baz=185,SNR=13							
SAMH	Samovar Hills	5.65	118			Pn	10 11 43.9	-0.1
PCA	Pinnacle	5.88	117			Pn	10 11 47.2	+0.3
PINM	Pinnacle	5.88	117	P			10 11 46.9	
	baz=306,SNR=24							
YUK4	Talbot Arm	5.95	103			Pn	10 11 48.0	0.0
BCPM	Bancas Point	6.22	116			Pn	10 11 51.1	-0.4
YUK6	Outpost Mounta	6.24	105			Pn	10 11 51.6	-0.4
HYT	Haines Junctio	6.67	105			Pn	10 11 57.4	-0.3
PLBC	Pleasant Camp	7.86	112			Pn	10 12 12.8	-0.6
WHY	Whitehorse	7.90	101			Pn	10 12 13.6	-0.5
INK	Inuvik	8.74	46	P		Pn	10 12 25.4	+0.1
	comp=E,0.1nm,0.3s,baz=234,slow=14,SNR=5.3							
INK				S		Sn	10 14 01.5	-0.4
	comp=E,0.1nm,0.3s,baz=225,slow=3.3,SNR=3.4							
BESE	Bessie Mountai	9.01	114			Pn	10 12 28.1	-0.9
JIS	Juneau Island	9.39	114			Pn	10 12 33.1	-0.9
DLBC	Dease Lake	11.16	106	P		Pn	10 12 57.5	-0.2
	comp=E,0.1nm,0.3s,baz=288,slow=7.0,SNR=3.0							
YKA	Yellowknife Ar	16.39	76	P		Pn	10 14 03.4	-0.6
	comp=E,0.1nm,0.3s,baz=279,slow=11,SNR=16							
RES	Resolute Bay	22.06	36	P		P	10 15 06.3	+0.8
	comp=E,0.4nm,0.3s,baz=248,slow=19,SNR=11							
SEY	Seymchan	25.05	295	P		P	10 15 32.9	-0.4
	comp=E,1.3nm,0.7s,baz=99,slow=5.5,SNR=6.5							
PDAR	Pinedale Array	31.32	111	P		P	10 16 30.6	+1.1
	comp=E,0.4nm,0.6s,baz=316,slow=4.1,SNR=4.6							
NVAR	Mina Array Bea	31.54	126	P		P	10 16 33.1	+1.6
	comp=E,0.7nm,0.6s,baz=144,slow=33,SNR=4.0							
SPITS	Spitsbergen Ar	38.66	4	P		P	10 17 32.0	+0.2
	comp=E,7.3nm,0.9s,baz=107,slow=4.5,SNR=5.4							
TXAR	Lajitas Array	45.25	116	P		P	10 18 27.2	+1.4
	comp=E,0.3nm,0.6s,baz=308,slow=4.1,SNR=3.6							
ARCES	ARCESS Array B	47.55	2	P		P	10 18 43.2	+0.1
	comp=E,2.7nm,0.8s,baz=13,slow=8.7,SNR=1.9							
BVAR	Borovoye Array	59.74	333	P		P	10 20 12.5	+0.4
	comp=E,0.4nm,0.4s,baz=114,slow=41,SNR=1.9							
MKAR	Makanchi Array	62.60	322	P		P	10 20 30.3	-1.2
	comp=E,0.3nm,0.5s,baz=38,slow=5.1,SNR=4.6							
AKASG	Malin Array Be	66.47	0	P		P	10 20 55.7	-0.8
	comp=E,0.4nm,0.4s,baz=359,slow=11,SNR=4.9							

*JMA **06** 10:21:42.9,24.80N×122.35E,h0km,M2.6*
*TAP **06** 10:21:43.0,24.93N×122.36E,h18km,ML2.8,C*
ISC 06 10:21:43.2±1.1,24.90N±0.03×122.37E±0.02,h19km±3km,
n61,σ0°71/112,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.36	287	P		Pb	10 21 50.7	-0.4
	baz=283							
TWB1				S		Sb	10 21 55.7	-0.7
	baz=283							
NTC	Toucheng	0.49	265	eP		Pb	10 21 53.6	+0.4
	baz=261							
TIPB	Shuangxi	0.50	278	P		Pb	10 21 53.2	-0.2
	baz=275							
TIPB				S		Sb	10 22 00.7	+0.4
	baz=275							
TWC	Suao	0.56	238	eP		Pg	10 21 53.7	-0.7
	baz=235							
TWC				eS		Sb	10 22 02.6	+0.8
	baz=235							
NWF	Wu-fen Shan	0.56	288	P		Pb	10 21 55.0	+0.6
	baz=284							
NWF				S		Sb	10 22 02.6	+0.6
	baz=284							
WFSB	Wu-fen Shan	0.56	288	P		Pb	10 21 55.0	+0.6
	baz=284							
WFSB				S		Sb	10 22 02.8	+0.9
	baz=284							
NDS	Dongshan	0.65	246	P		Pb	10 21 55.9	0.0
	baz=236							
NDS				eS		Sb	10 22 05.9	+1.3
	baz=236							
TWE	Neicheng	0.66	254	eP		Pb	10 21 56.0	-0.1
	baz=242							
TWE				eS		Sb	10 22 05.6	+0.7
	baz=242							
JYNG	Yonagunijimaku	0.69	130	P		Pb	10 21 56.0	-0.6
JYNG				S		Sb	10 22 05.3	-0.4
EWUT	Wuta	0.70	230	eP		Pb	10 21 56.4	-0.5
	baz=227							
EWUT				eS		Sg	10 22 06.6	0.0
	baz=227							
TWA	Mucha	0.72	276	eP		Pn	10 21 57.7	-0.7
	baz=273							
TWA				eS		Sg	10 22 06.8	-0.2
	baz=273							
YOJ	Yonaguni jima	0.73	127	P		Pb	10 21 56.7	-0.6
YOJ				eS		Sb	10 22 06.4	-0.5
YOJ	Yonaguni jima	0.73	127	eP		Pb	10 21 57.1	-0.2
	baz=118							
YOJ				eS		Sb	10 22 06.6	-0.3
	baz=118							
ENA	Nanau	0.74	231	eP		Pb	10 21 57.1	-0.4
	baz=228							
ENA				eS		Sg	10 22 07.6	-0.1
	baz=228							
YM08	YM08	0.76	292	eP		Pg	10 21 58.1	-0.1
	baz=289							
YM08				eS		Sg	10 22 08.4	0.0
	baz=289							
YM01	YM01	0.76	289	P		Pn	10 21 58.4	-0.6
	baz=286							
YM01				eS		Sn	10 22 09.0	-1.0
	baz=286							
YM11	YM11	0.77	290	eP		Pn	10 21 59.1	0.0
	baz=288							
YM11				eS		Sg	10 22 08.7	+0.2
	baz=288							
NHDH	Xindian Distri	0.77	275	eP		Pn	10 21 58.4	-0.6
	baz=272							
NHDH				eS		Sg	10 22 08.8	+0.2
	baz=272							
PCYT	Pengchaiyu	0.77	340	P		Pn	10 21 59.7	+0.6
	baz=339							
PCYT				S		Sg	10 22 08.6	-0.1
	baz=339							
YM05	YM05	0.77	290	eP		Pb	10 21 57.0	-1.1
	baz=274							
YM05				eS		Sg	10 22 08.9	+0.1
	baz=274							
ENTT	Nioudou	0.78	250	eP		Pg	10 21 58.3	-0.2
	baz=248							
ENTT				eS		Sg	10 22 08.8	0.0
	baz=248							
YM10	YM10	0.78	289	eP		Pn	10 21 58.5	-0.7
	baz=287							
YM10				eS		Sn	10 22 09.3	-1.0
	baz=287							
TWY	Chenhua	0.79	298	eP		Pn	10 21 59.5	+0.1
	baz=283							
TWY				eS		Sn	10 22 10.0	-0.6
	baz=283							
YM04	YM04	0.80	288	eP		Pg	10 21 58.7	-0.2
	baz=286							
YM04				eS		Sg	10 22 09.4	0.0
	baz=286							
TATO	Taipei	0.80	275	P		Pg	10 21 58.9	-0.1
	baz=273							
TATO				S		Sg	10 22 09.0	-0.6
	baz=273							
NDT	Datong Townshi	0.83	249	eP		Pg	10 21 59.4	-0.2
	baz=247							
NDT				eS		Sn	10 22 11.6	-0.1
	baz=247							
YHNB	Yeheng	0.93	256	P		Pb	10 22 00.8	0.0
	baz=268							
YHNB				eS		Sb	10 22 12.9	+0.1
	baz=268							
NSK	Sanguang	0.95	256	P		Pb	10 22 01.0	0.0
	baz=267							
NSK				eS		Sb	10 22 13.2	0.0
	baz=267							
NACB	Ninganchiao	1.01	224	eP		Pb	10 22 01.5	-0.7
	baz=222							
NACB				eS		Sb	10 22 14.2	-0.8
	baz=222							
NNSB	Datong	1.01	242	eP		Pb	10 22 02.1	-0.2
	baz=226							
NNSB				eS		Sb	10 22 15.2	0.0
	baz=226							
NNSH	Datong	1.01	242	eP		Pb	10 22 02.1	-0.1
	baz=226							
NNSH				eS		Sb	10 22 14.9	-0.3
	baz=226							
NNS	Nan Shan	1.02	243	eP		Pn	10 22 02.4	-0.1
	baz=227							
NNS				eS		Sb	10 22 15.5	+0.2
	baz=227							
ETLH	Xiulin Townshi	1.06	230	eP		Pb	10 22 02.5	-0.6
	baz=227							
ETLH				eS		Sb	10 22 16.3	-0.4
	baz=227							
TWD	Chiawan	1.08	221	eP		Pg	10 22 03.9	-0.3
	baz=227							
FUSS	Fushou	1.21	238	eP		Pn	10 22 05.5	+0.1
	baz=226							
FUSS				eS		Sn	10 22 21.9	+0.4
	baz=226							
LIOB	Emei	1.26	259	eP		Pg	10 22 07.3	-0.2
	baz=256							
WHF	Hehuan Shan	1.26	233	P		Pb	10 22 06.7	+0.1
	baz=231							
WHF				S		Sb	10 22 22.7	+0.1
	baz=231							
TWT	Tachien	1.26	239	eP		Pb	10 22 06.9	+0.3
	baz=237							
TWT				eS		Sg	10 22 23.7	-0.7
	baz=237							
NSTT	Nanjuang	1.27	258	eP		Pb	10 22 06.9	+0.3
	baz=255							
NSTT				eS		Sg	10 22 23.7	-0.9
	baz=255							
TDCB	Techi	1.28	240	P		Pb	10 22 06.7	-0.1
	baz=237							
TDCB				S		Sb	10 22 22.9	0.0
	baz=237							
IRIF	Iriomote-Funau	1.36	114	P		Pb	10 22 08.8	+0.7
IRIF				eS		Sg	10 22 26.7	-0.7
CHGB	Renai	1.37	233	eP		Pb	10 22 09.0	+0.5
	baz=230							
CHGB				eS		Sn	10 22 25.5	+0.2
	baz=230							
ESL	Shilin	1.38	218	eP		Pb	10 22 08.3	-0.2
	baz=199							
WHP	Taichung City	1.44	245	eP		Pg	10 22 10.5	-0.6
	baz=230							
WHP				eS		Sb	10 22 28.4	+1.0
	baz=230							
HATJ	Hateruma jima	1.56	122	S		Sb	10 22 32.0	+1.3
HGSD	Ruisui	1.65	212	eP		Pb	10 22 12.9	-0.1
	baz=197							
HGSD				eS		Sb	10 22 34.8	+1.4
	baz=197							
SMLT	Sun Moon Lake	1.68	233	eP		Pn	10 22 12.7	+1.0
	baz=231							
SMLT				eS		Sn	10 22 33.7	+0.9
	baz=231							
TYC	Yuchr	1.70	235	eP		Pn	10 22 12.7	+0.8
	baz=232							
TYC				eS		Sn	10 22 34.0	+1.0
	baz=232							
JIJ	Ishigaki jima	1.70	108	eS		Sb	10 22 35.1	+0.2
SSLB	Suanglung	1.70	230	P		Pb	10 22 13.8	-0.1
	baz=238							
SSLB				eS		Sb	10 22 35.1	+0.2
	baz=238							
YULB	Yu-li	1.79	213	eP		Pn	10 22 13.0	-0.2
	baz=212							
YULB				eS		Sn	10 22 34.8	-0.6
	baz=212							
TWF1	Yuli	1.83	213	eP		Pb	10 22 15.4	-0.7
	baz=211							
FULB	Fuli	1.96	210	eP		Pb	10 22 17.5	-0.8
	baz=194							
ALS	Alishan	1.99	226	eP		Pb	10 22 18.5	-0.5
	baz=208							
ALS				eS		Sb	10 22 43.1	-0.4
	baz=208							
CHN5	Tsauling	2.02	230	eP		Pb	10 22 19.0	-0.4
	baz=228							
CHN5				eS		Sb	10 22 45.0	+0.9
	baz=228							
ELDTW	Lidau	2.11	216	eP		Pb	10 22 19.7	-1.2
	baz=201							
CHN4	Tsaushan	2.24	227	eP		Pb	10 22 21.6	-1.5
	baz=210							
CHN4				eS		Sb	10 22 49.7	-0.8
	baz=210							
TPUB	Ta-pu	2.25	225	eP		Pn	10 22 20.9	+1.4
	baz=209							
TPUB				eS		Sb	10 22 49.9	-0.9
	baz=209							
WTP	Ta-pu	2.30	225	eP		Pb	10 22 22.6	-1.5
	baz=208							
WTP				eS		Sb	10 22 51.5	-0.7
	baz=208							
TWK	Hsinying	2.37	227	eP		Pn	10 22 23.2	+2.1
	baz=210							
TWK				eS		Sb	10 22 53.1	-1.0
	baz=210							
MASBT	Mashibuluo	2.78	215	eP		Pn	10 22 29.5	+2.8
	baz=214							

*IDC **06** 10:28:22.4±0.8,39.39S×45.99E,h0km,mb4.0/8,*
mb1 4.2/8,mb1mx3.8/32,mbtmp4.0/8,MS3.2/7,Ms1 3.2/7,
ms1mx2.9/33,Error ellipse: s-maj=40.8km s-min=21.4km
az=35.0
ISC 06 10:28:24.0±0.8,39.4S±0.2×46.0E±0.2,h10km,n17,
σ0°46/10,mb4.0/8,MS3.0/7,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BOSA	Boshof	20.22	296	LR		LR	10 39 31.9	
	comp=Z,57nm,18.4s,baz=168,slow=33							
LBTB	Lobatse	22.36	304	LR		LR	10 40 22.3	
	comp=Z,62nm,19.3s,baz=126,slow=32							
MATP	Matopo	24.15	317	P		P	10 33 39.9	-0.6
	1.4nm,0.7s,baz=232,slow=23,SNR=2.2							
MATP				LR		LR	10 42 11.5	
	comp=Z,26nm,21.3s,baz=208,slow=34							
LSZ	Lusaka	28.65	322	LR		LR	10 44 07.5	
	comp=Z,35nm,19.9s,baz=173,slow=33							
QSPA	South Pole Qui	50.79	180	P		P	10 37 23.8	-0.4
	2.0nm,1.0s,baz=90,slow=13,SNR=2.9							
H01W2	Cape Leeuwin H	53.35	108	T		T	11 35 18.4	
	baz=243,slow=75,SNR=29							
H01W3	Cape Leeuwin H	53.36	108	T		T	11 35 10.1	
	baz=243,slow=75,SNR=28							
H01W1	Cape Leeuwin H	53.37	108	T		T	11 35 17.3	
	baz=243,slow=75,SNR=26							
PALK	Pallekele	56.49	43	LR		LR	10 58 55.7	
	comp=Z,30nm,18.3s,baz=247,slow=32							
DBIC	Dimbokro	65.60	302	P		P	10 39 08.8	+0.6
	6.3nm,1.2s,baz=168,slow=9.3,SNR=2.6							
DBIC				LR		LR	11 05 09.6	
	comp=Z,22nm,19.3s,baz=147,slow=34							
TORD	Torodi Ar. Bea	66.58	312	P		P	10 39 14.7	+0.2
	1.1nm,0.8s,baz=133,slow=4.6,SNR=5.6							
ASAR	Alice Springs	73.86	107	P		P	10 39 59.4	+0.1
	1.0nm,0.8s,baz=231,slow=5.8,SNR=8.5							
STKA	Stephens Creek	74.47	119	P		P	10 40 02.9	+0.2
	2.3nm,0.8s,baz=233,slow=5.1,SNR=1.6							
CMAR	Chiang Mai Arr	75.89	51	P		P	10 40 10.5	-0.3
	1.5nm,0.3s,baz=234,slow=9.1,SNR=4.4							
CMAR				LR		LR	11 07 23.4	
	comp=Z,35nm,20.5s,baz=182,slow=31							
WRA	Warramunga Ar

5.6nm,0.3s,baz=127,slow=16,SNR=10
PMG Port Moresby 7.27 233 Pn 10 47 21.2 +1.4
PMG Sn 10 48 41.4 +0.4
HNR Honiara 8.09 123 LR LR 10 51 05.6
comp=Z,42nm,18.6s,baz=296,slow=40
PATS Pohnpei 12.94 24 Pn **Pn 10 48 37.5 +0.2**
FAKI Fak Fak 20.87 275 P **P 10 50 14.3 -0.4**
SIJI Sorong 22.16 280 P **P 10 50 27.7 -0.8**
12nm,0.5s,baz=104,slow=6.0,SNR=8.4
MTN Manton Dam 22.98 249 P **P 10 50 37.6 +0.4**
MTN IAmb IAmb 10 51 00.6
comp=Z,20nm,1.4s
WB0 Warramunga Arr 23.32 230 P **P 10 50 40.6 0.0**
WR0 Warramunga Arr 23.32 229 P **P 10 50 40.6 0.0**
WRAB Tennant Creek 23.45 229 P **P 10 50 41.7 -0.1**
WRAB IAmb IAmb 10 50 42.3
comp=Z,16nm,0.5s
WB2 Warramunga Arr 23.45 229 P **P 10 50 41.5 -0.3**
WB2 IAmb IAmb 10 50 48.5
comp=Z,7.7nm,1.2s
WRA Warramunga Arr 23.46 229 P **P 10 50 41.0 -1.0**
comp=Z,0.9nm,0.3s,baz=53,slow=9.8,SNR=11
WRA Warramunga Arr 23.46 229 P **P 10 50 41.2 -0.7**
ASAR Alice Springs 26.13 223 P **P 10 51 06.5 +0.1**
comp=Z,0.5nm,0.4s,baz=56,slow=8.7,SNR=14
RAO Raoul Island 36.50 135 LR LR 11 03 33.6
comp=Z,187nm,21.1s,baz=130,slow=29
CMAR Chiang Mai Arr 58.22 295 P **P 10 55 27.2 +0.7**
comp=Z,0.6nm,0.3s,baz=125,slow=5.6,SNR=5.9
MKAR Makanchi Array 80.69 319 P **P 10 57 45.6 +0.8**
comp=Z,0.3nm,0.5s,baz=98,slow=9.2,SNR=4.7
RND Reindeer 80.87 23 P **P 10 57 45.9 +0.5**
RND IAmb IAmb 10 57 48.0
comp=Z,9.1nm,0.8s
MCK McKinley 81.01 22 P **P 10 57 45.9 -0.1**
MCK IAmb IAmb 10 57 46.5
comp=Z,4.3nm,0.7s
BWN Browne 81.04 22 P **P 10 57 47.2 +1.1**
NEA2 Nenana 81.41 22 P **P 10 57 47.7 -0.4**
I23K Minto, Yukon-K 81.59 21 P **P 10 57 49.1 +0.1**
I23K IAmb IAmb 10 57 50.1
comp=Z,5.0nm,0.8s
MDM Murphy Dome 81.91 22 P **P 10 57 46.3 -4.5**
COLD Coldfoot 82.42 19 P **P 10 57 54.2 +0.8**
COLD IAmb IAmb 10 57 55.7
comp=Z,4.1nm,1.0s
QSPA South Pole Qui 84.89 180 P **P 10 58 06.3 0.0**
comp=Z,1.6nm,0.6s,baz=270,slow=0.7,SNR=17
QSPA South Pole Qui 84.89 180 IAmb IAmb 10 58 08.0
comp=Z,11nm,1.4s
TORD Torodi Ar. Bea 150.63 288 PKPbc **PKPbc 11 05 23.7 -0.8**
comp=Z,1.1nm,0.4s,baz=70,slow=2.1,SNR=12
TORD Torodi Ar. Bea 150.63 288 PKPbc PKPbc 11 05 23.2 -1.3
BDFB Brasilia 150.69 135 PKPbc **PKPbc 11 05 24.6 -0.2**
comp=Z,3.1nm,0.5s,baz=186,slow=8.4,SNR=4.7

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*IDC **06** 10:45:39.3±1.4,1°.62S×77°.68W,h176km±14km,mb4.0/18, mb1 4.1/24,mb1mx4.0/42,mbtmp4.4/24,Error ellipse: s-maj=13.7km s-min=9.1km az=59.0*
*IGQ **06** 10:45:40±0.4,2°.2°×7°.8W,°,h176km*
*VAO **06** 10:45:40.3±0.5,1°.54S×77°.54W,h166km±6km,mb4.3*
*NEIC **06** 10:45:41.1±1.5,1°.47S±0°.08×77°.56W±0°.10,h187km±6km, mb4.5/191,Error ellipse: s-maj=15.3km s-min=10.4km az=55.0*

ISC 06 10:45:39.1±0.5,1°.65S±0°.04×77°.81W±0°.05,h179km±4km, n325,σ1°22/308,mb4.5/108,1D,Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUYO	**Puyo, Santa Ro**	**0.27**	**306**	P	**Pn**	**10 46 03.0**	**-0.2**
PUYO				S	**Sn**	**10 46 21.0**	**-0.7**
APUY	**Puyo**	**0.27**	**316**	P	**Pn**	**10 46 03.0**	**-0.2**
APUY				S	**Sn**	**10 46 22.0**	**+0.3**
BULB	**Ulba Tungurahu**	**0.64**	**290**	P	**Pn**	**10 46 05.0**	**+0.1**
BULB				S	**Sn**	**10 46 25.0**	**+0.3**
BRUN	**Tungurahua Vol**	**0.65**	**291**	P	**Pn**	**10 46 05.0**	**+0.1**
BRUN				S	**Sn**	**10 46 26.0**	**+1.3**
PAT1	**Patacocha**	**0.65**	**283**	P	**Pn**	**10 46 04.0**	**-1.1**
RUN5	**Runtun**	**0.66**	**291**	P	**Pn**	**10 46 05.0**	**0.0**
ARRY	**Arrayan**	**0.66**	**283**	P	**Pn**	**10 46 05.0**	**0.0**
RETU	**Refugio**	**0.67**	**287**	P	**Pn**	**10 46 05.0**	**-0.3**
BMAS	**Trigal station**	**0.69**	**283**	P	**Pn**	**10 46 05.0**	**-0.2**
SANGA	**Volcan Sangay**	**0.69**	**235**	P	**Pn**	**10 46 05.0**	**-0.3**
JUI6	**Juive**	**0.70**	**289**	P	**Pn**	**10 46 04.0**	**-1.2**
BBIL	**Ulba Tungurahu**	**0.71**	**287**	P	**Pn**	**10 46 05.0**	**-0.3**
PIAT	**Ana Tenorio**	**0.80**	**325**	P	**Pn**	**10 46 06.0**	**+0.2**
PIAT				S	**Sn**	**10 46 25.0**	**-1.4**
IGUA	**Igualata**	**0.85**	**281**	P	**Pn**	**10 46 06.0**	**-0.4**
TAMH	**Tambohuasha Ch**	**0.98**	**276**	P	**Pn**	**10 46 08.0**	**+0.9**
CHSH	**Refugio Sur-Vo**	**1.07**	**278**	P	**Pn**	**10 46 08.0**	**0.0**
BMOR	**Cotopaxi Volca**	**1.12**	**325**	P	**Pn**	**10 46 09.0**	**+0.6**
BTAM	**Cotopaxi Volca**	**1.14**	**329**	P	**Pn**	**10 46 08.0**	**-0.5**
BREF	**Cotopaxi Volca**	**1.17**	**327**	P	**Pn**	**10 46 10.0**	**+1.2**
VC1	**Cotopaxi 1**	**1.17**	**329**	P	**Pn**	**10 46 09.0**	**+0.3**
ANTM	**Antisana-La Mi**	**1.19**	**339**	P	**Pn**	**10 46 09.0**	**+0.1**
CAMI	**Rancho Maria**	**1.20**	**324**	P	**Pn**	**10 46 09.0**	**+0.2**
ANTS	**Antisana-Sarah**	**1.21**	**342**	P	**Pn**	**10 46 09.0**	**-0.1**
ANTG	**Antisana-Guama**	**1.23**	**339**	P	**Pn**	**10 46 09.0**	**-0.2**
ANTI	**Antisana**	**1.25**	**344**	P	**Pn**	**10 46 09.0**	**-0.4**
ILLI	**Illinizas Sur**	**1.31**	**315**	P	**Pn**	**10 46 10.0**	**+0.1**
CONE	**Cono NE Rev Vo**	**1.58**	**6**	P	**Pn**	**10 46 12.0**	**-0.2**
GGPT	**Toaza - Volcan**	**1.64**	**330**	P	**Pn**	**10 46 12.0**	**-0.8**
BOSC	**San Juan Bosco**	**1.64**	**205**	P	**Pn**	**10 46 13.0**	**+0.4**
BOSC				S	**Sn**	**10 46 39.0**	**+0.5**
COHC	**Cochancay**	**1.66**	**241**	P	**Pn**	**10 46 12.0**	**-0.5**
COHC				S	**Sn**	**10 46 38.0**	**-0.4**
GGPC	**Guagua Pichinc**	**1.66**	**332**	P	**Pn**	**10 46 13.0**	**-0.3**
GGP	**Refugio Guagua**	**1.67**	**332**	P	**Pn**	**10 46 13.0**	**-0.3**
CAYR	**Refugio Cayamb**	**1.67**	**353**	P	**Pn**	**10 46 13.0**	**-0.4**
TERV	**Terraza Guagua**	**1.67**	**332**	P	**Pn**	**10 46 13.0**	**-0.3**
PINO	**Pino**	**1.69**	**332**	P	**Pn**	**10 46 13.0**	**-0.5**
ACUE	**Ecuador-Cuenca**	**1.70**	**223**	P	**Pn**	**10 46 14.0**	**+0.7**
ANGU	**Angureal**	**1.70**	**353**	P	**Pn**	**10 46 14.0**	**+0.3**
YANA	**Yana**	**1.71**	**333**	P	**Pn**	**10 46 13.0**	**-0.6**
CAYA	**Cayambe**	**1.72**	**354**	P	**Pn**	**10 46 14.0**	**+0.2**
PULU	**Pululahua**	**1.80**	**337**	P	**Pn**	**10 46 14.0**	**-0.5**
AMIL	**Milagro (Trans**	**1.85**	**255**	P	**Pn**	**10 46 13.0**	**-1.5**
IMBA	**Imbabura, San**	**1.96**	**348**	P	**Pn**	**10 46 17.0**	**+0.8**
OTAV	**Otavalo**	**1.99**	**341**		**Pn**	**10 46 16.2**	**-0.3**
OTAV	**Otavalo**	**1.99**	**341**	*eP*	**Pn**	**10 46 15.9**	**-0.5**
OTAV	**Otavalo**	**1.99**	**341**	P	**Pn**	**10 46 16.0**	**-0.5**
OTAV	**Otavalo**	**1.99**	**341**	*eP*	**Pn**	**10 46 16.2**	**-0.3**
CUSW	**Cuicocha Oeste**	**2.00**	**344**	P	**Pn**	**10 46 17.0**	**+0.4**
CUIC	**Cuicocha-Domo**	**2.02**	**344**	P	**Pn**	**10 46 16.0**	**-0.8**
YAHU	**Yahuarcocha**	**2.03**	**353**	P	**Pn**	**10 46 17.0**	**+0.1**
CUSE	**Cuicocha Este**	**2.03**	**343**	P	**Pn**	**10 46 17.0**	**0.0**
COTA	**Cotacachi**	**2.04**	**345**	P	**Pn**	**10 46 17.0**	**-0.2**
APR2	**Miler**	**2.07**	**326**	P	**Pn**	**10 46 17.0**	**-0.1**
URCU	**Urcuqui**	**2.13**	**348**	P	**Pn**	**10 46 18.0**	**0.0**
PAC1	**Pacto, Paraso**	**2.15**	**333**	P	**Pn**	**10 46 17.0**	**-0.9**
AGUAY	**Guayaquil**	**2.18**	**259**	P	**Pn**	**10 46 16.0**	**-2.1**
BV15	**Puerto Quito-O**	**2.29**	**322**	P	**Pn**	**10 46 18.0**	**-1.4**
LNGL	**El Angel-Carch**	**2.39**	**355**	P	**Pn**	**10 46 21.0**	**0.0**
FLF1	**Flavio Alfaro-**	**2.41**	**302**	P	**Pn**	**10 46 20.0**	**-0.8**
ATUL	**Tulcn**	**2.41**	**2**	P	**Pn**	**10 46 21.0**	**-0.1**
CHMA	**Chilma**	**2.51**	**354**	P	**Pn**	**10 46 22.0**	**-0.3**
MAG1	**Magdalena**	**2.52**	**309**	P	**Pn**	**10 46 21.0**	**-1.0**
ACH2	**Ecuador-Machal**	**2.56**	**231**	P	**Pn**	**10 46 20.0**	**-2.5**
CMBC	**Cumbal**	**2.58**	**360**	*eP*	**Pn**	**10 46 23.2**	**+0.1**
MORR	**Playas El Morr**	**2.71**	**249**	P	**Pn**	**10 46 23.0**	**-1.3**
JAMA	**Jama**	**2.77**	**300**	P	**Pn**	**10 46 23.0**	**-2.0**
CAB1	**Cabo Pasado-Ma**	**2.91**	**296**	P	**Pn**	**10 46 27.0**	**+0.4**
ARNL	**Arenillas**	**2.94**	**230**	P	**Pn**	**10 46 25.0**	**-2.0**
PPLP	**Puerto Lpez**	**2.97**	**272**	P	**Pn**	**10 46 25.0**	**-2.4**
GONZ	**Gonzanam**	**3.02**	**212**	P	**Pn**	**10 46 28.0**	**-0.4**
PTGL	**Punta Galera**	**3.29**	**317**	P	**Pn**	**10 46 30.0**	**-1.3**
MCRA	**Macar, Loja**	**3.45**	**218**	P	**Pn**	**10 46 32.0**	**-1.3**
PTLC	**Puerto Leguiza**	**3.51**	**59**	*eP*	**Pn**	**10 46 31.2**	**-2.9**
TUMC	**Tumaco**	**3.57**	**345**	*eP*	**Pn**	**10 46 33.3**	**-1.6**
SOTA	**Rioblanco**	**3.95**	**18**	*eP*	**Pn**	**10 46 40.2**	**+0.1**
PCON	**Cinco Dias**	**4.20**	**20**	*eP*	**Pn**	**10 46 43.7**	**+0.4**
POPC	**Popayan, Colom**	**4.32**	**15**	*eP*	**Pn**	**10 46 42.9**	**-1.6**
GARC	**Garzon, Huila**	**4.46**	**31**	*i/P*	**Pn**	**10 46 46.3**	**-0.1**
MARP	**Paez Belalcaza**	**4.83**	**23**	*eP*	**Pn**	**10 46 51.4**	**+0.1**
BETC	**Betania**	**4.91**	**29**	*eP*	**Pn**	**10 46 52.6**	**+0.5**
MACC	**Macarena, Meta**	**5.47**	**46**	*eP*	**Pn**	**10 46 58.2**	**-1.1**
ATAH	**Atahualpa**	**5.48**	**186**	P	**Pn**	**10 47 01.0**	**+1.3**
	24nm,0.3s,baz=15,slow=8.5,SNR=67						
ATAH				S	**Sn**	**10 48 00.7**	**-2.4**
	38nm,0.3s,baz=130,slow=22,SNR=20						
MALC	**Bahia Malaga**	**5.65**	**5**	*eP*	**Pn**	**10 46 57.3**	**-4.3**
ROSC	**El Rosal**	**7.33**	**28**	P	**Pn**	**10 47 23.4**	**-0.6**
	1.6nm,0.3s,baz=237,slow=17,SNR=1.3						
SOLC	**Bahia Solano**	**7.84**	**3**	*eP*	**Pn**	**10 47 27.9**	**-2.5**
CZSB	**Cruzeiro do Su**	**7.89**	**140**	*eP*	**Pn**	**10 47 30.9**	**-0.2**
SPBC	**San Pablo de B**	**8.16**	**27**	*eP*	**Pn**	**10 47 32.8**	**-1.9**
DBBC	**Dabeiba**	**8.76**	**10**	*eP*	**Pn**	**10 47 43.4**	**+0.8**
RUSC	**La Rusia**	**8.86**	**32**	*eP*	**Pn**	**10 47 44.8**	**+0.6**
BARC	**Barichara**	**9.40**	**29**	*eP*	**Pn**	**10 47 50.6**	**-0.6**
NNA	**Nana**	**10.31**	**175**	P	**Pn**	**10 48 03.6**	**+0.7**
	3.0nm,0.3s,baz=329,slow=10,SNR=6.3						
NNA				S	**Sn**	**10 49 49.9**	**-7.8**
	18nm,0.3s,baz=235,slow=18,SNR=9.6						
NNA	**Nana**	**10.31**	**175**		**Pn**	**10 48 06.0**	**+3.1**
BCIP	**Isla Barro Col**	**10.94**	**349**	Pn	**Pn**	**10 48 11.5**	**+0.5**
SMLC	**San Martn de**	**11.03**	**20**	*eP*	**Pn**	**10 48 09.4**	**-2.8**
SDV	**Santo Domingo**	**12.68**	**34**		**Pn**	**10 48 31.4**	**-2.2**
JTS	**Las Juntas de**	**13.83**	**329**	P	**P**	**10 48 51.7**	**+1.1**
	0.6nm,0.3s,baz=189,slow=6.0,SNR=8.0						
JTS	**Las Juntas de**	**13.83**	**329**	P	**P**	**10 48 50.9**	**+0.2**
ETMB	**Extrema**	**14.09**	**126**	*eP*	**Pn**	**10 48 49.3**	**-1.8**
ORTG	**Ortega, Santa**	**14.16**	**328**	P	**P**	**10 48 54.4**	**+0.1**
ESPN	**Las Esperanzas**	**15.20**	**335**	P	**P**	**10 49 07.8**	**+2.1**
ESPN				IAmb	IAmb	10 49 33.5	
	comp=Z,17nm,1.1s						
SAML	**Samuel**	**16.26**	**117**	P	**P**	**10 49 16.6**	**-0.9**
MACA	**Manacapuru-AM**	**17.17**	**95**	*eP*	**Pn**	**10 49 28.6**	**-0.2**
LPAZ	**La Paz**	**17.39**	**147**	P	**Pn**	**10 49 32.1**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=316,slow=5.9,SNR=30						
LPAZ	**La Paz**	**17.39**	**147**	P	**Pn**	**10 49 32.9**	**+1.1**
LPAZ				IAmb	IAmb	10 49 35.8	
	comp=Z,12nm,0.8s						
LPAZ	**La Paz**	**17.39**	**147**	*eP*	**Pn**	**10 49 32.3**	**+0.5**
PCRV	**Puerto La Cruz**	**17.61**	**48**	P	**Pn**	**10 49 33.7**	**-0.2**
	comp=Z,3.0nm,0.3s,baz=280,slow=0.4,SNR=9.8						
BOAV	**Boa Vista**	**17.74**	**77**	*eP*	**P**	**10 49 33.9**	**+0.1**
PTGA	**Pitinga**	**17.86**	**87**	P	**P**	**10 49 34.8**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=256,slow=12,SNR=6.3						
PTGA	**Pitinga**	**17.86**	**87**	*eP*	**P**	**10 49 33.5**	**-1.5**
MNMC	**Minye Minye**	**19.14**	**156**	P	**P**	**10 49 50.6**	**+1.4**
PSGCX	**Pisagua**	**19.35**	**158**		**Pn**	**10 49 53.6**	**-0.9**
PSGCX				IAmb	IAmb	10 49 57.5	
	comp=Z,16nm,0.9s						
MTO3	**Montecristo**	**19.63**	**325**	P	**P**	**10 49 55.7**	**+1.3**
MTO3				IAmb	IAmb	10 49 57.7	
	comp=Z,15nm,0.9s						
PB11	**IPOC Station P**	**19.68**	**157**	P	**P**	**10 49 56.0**	**+1.1**
ESQI	**Esquipulas**	**19.75**	**325**	P	**Pn**	**10 49 57.4**	**-1.7**
MTDJ	**Mount Denham**	**19.76**	**1**	P	**P**	**10 49 57.0**	**+1.4**
TA01	**Diego Aracena**	**20.22**	**159**	P	Pn	10 50 05.3	+0.6
TA01				IAmb	IAmb	10 50 08.3	
	comp=Z,20nm,1.1s						
PB08	**IPOC Station P**	**20.23**	**156**	P	Pn	10 50 03.5	-1.8
PB08				IAmb	IAmb	10 50 08.9	
	comp=Z,18nm,0.8s						
VILB	**Vilhena**	**20.74**	**124**	*eP*	**P**	**10 50 07.3**	**+1.2**
PB01	**IPOC Station P**	**20.91**	**158**	P	Pn	10 50 11.6	-1.9
PB01				IAmb	IAmb	10 50 17.3	
	comp=Z,8.6nm,0.6s						
PB07	**IPOC Station P**	**21.39**	**159**	P	**P**	**10 50 15.7**	**+2.5**
PB07				IAmb	IAmb	10 50 37.3	
	comp=Z,11nm,0.8s						
TOSP	**Speyside**	**21.46**	**53**	P	**P**	**10 50 12.2**	**-1.5**
GTBY	**Guantanamo Bay**	**21.61**	**7**	P	**P**	**10 50 14.7**	**-0.5**
PB09	**IPOC Station P**	**21.69**	**158**	P	**P**	**10 50 19.1**	**+2.9**
PB09				IAmb	IAmb	10 50 37.6	
	comp=Z,12nm,0.8s						
SIV	**San Ignacio**	**21.79**	**132**	P	**P**	**10 50 17.6**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=330,slow=9.5,SNR=13						
ITTB	**Itatuba**	**22.20**	**97**	*eP*	**P**	**10 50 20.9**	**-0.4**
LVC	**Limon Verde**	**22.55**	**158**	P	**P**	**10 50 26.1**	**+1.3**
	comp=Z,5.8nm,0.5s,baz=346,slow=6.5,SNR=15						
LVC	**Limon Verde**	**22.55**	**158**	P	**P**	**10 50 26.4**	**+1.6**
LVC				IAmb	IAmb	10 50 29.6	
	comp=Z,16nm,1.1s						
LVC	**Limon Verde**	**22.55**	**158**	*eP*	**P**	**10 50 27.4**	**+2.6**
PTLB	**Pontes e Lacer**	**22.96**	**128**	*eP*	**P**	**10 50 29.1**	**+1.0**
NPGB	**Novo Progresso**	**23.01**	**104**	*eP*	**P**	**10 50 28.1**	**-0.5**
MALB	**Monte Alegre**	**23.53**	**91**	*eP*	**P**	**10 50 33.6**	**+0.2**
CLDB	**Colider**	**23.70**	**114**	*eP*	**P**	**10 50 35.2**	**+0.3**
PB14	**IPOC Station P**	**23.93**	**163**	P	**P**	**10 50 39.0**	**+1.7**
PB14				IAmb	IAmb	10 50 42.6	
	comp=Z,15nm,1.1s						
TEIG	**Tepich**	**24.05**	**335**	P	**P**	**10 50 38.9**	**+1.0**
	comp=Z,6.1nm,0.3s,baz=21,slow=1.3,SNR=16						
GO02	**Mina Guanaco**	**24.68**	**162**	P	**P**	**10 50 44.8**	**+0.8**
GO02				IAmb	IAmb	10 51 10.6	
	comp=Z,16nm,1.1s						
CMIG	**Matias Romero**	**25.11**	**319**	P	**P**	**10 50 49.2**	**+1.5**
	comp=Z,3.4nm,0.5s,baz=118,slow=5.9,SNR=7.9						
MCPB	**Macapa, AP**	**25.78**	**87**	*eP*	**P**	**10 50 53.5**	**-0.3**
MDP	**Montagnes des**	**26.02**	**75**	P	**P**	**10 50 54.6**	**-1.4**
	comp=Z,4.6nm,0.4s,baz=254,slow=9.4,SNR=16						
SNDB	**Serra Nova Dou**	**28.22**	**113**	*eP*	**P**	**10 51 16.1**	**+0.5**
CO03	**El Pedregal**	**29.80**	**168**	P	**P**	**10 51 31.9**	**+2.5**
CO03				IAmb	IAmb	10 51 32.8	
	comp=Z,5.1nm,0.8s						
656A	**Willston**	**31.18**	**352**	P	**P**	**10 51 41.7**	**+0.3**
MT02	**Curacav**	**32.06**	**169**	P	**P**	**10 51 52.2**	**+3.1**
MT02				IAmb	IAmb	10 51 55.0	
	comp=Z,7.9nm,1.0s						
344A	**Westbrook Farm**	**35.14**	**341**	P	**P**	**10 52 16.1**	**+0.3**
GOGA	**Godfrey**	**35.28**	**352**	P		10 52 17.2	
	baz=170						
GOGA	**Godfrey**	**35.28**	**352**	P	**P**	**10 52 16.5**	**-0.5**
GOGA				IAmb	IAmb	10 52 17.6	
	comp=Z,18nm,1.4s						
LRAL	**Lakeview Retre**	**35.58**	**347**	P		10 52 19.7	
	baz=164,SNR=6.3						
LRAL	**Lakeview Retre**	**35.58**	**347**	P	**P**	**10 52 19.0**	**-0.5**
LRAL				IAmb	IAmb	10 52 20.4	
	comp=Z,8.1nm,0.8s						
JANB	**Januaria**	**35.64**	**114**	*eP*	**P**	**10 52 20.3**	**0.0**
JSC	**Jenkinsville**	**35.89**	**355**	P	**P**	**10 52 23.1**	**+1.0**
JSC				IAmb	IAmb	10 52 23.6	
	comp=Z,6.4nm,0.9s						
HODGE	**Hodges**	**35.94**	**354**	P	**P**	**10 52 23.1**	**+0.5**
HODGE				IAmb	IAmb	10 52 24.1	
	comp=Z,20nm,1.4s						
Y49A	**Blount Mountai**	**36.24**	**348**	P	**P**	**10 52 24.5**	**-0.7**
833A	**Chaparral WMA,**	**36.30**	**327**	P		10 52 27.7	
	baz=141						
W57A	**Gilead**	**36.67**	**357**	P	**P**	**10 52 28.7**	**0.0**
FPAL	**Fort Paine**	**36.74**	**349**	P	**P**	**10 52 29.3**	**-0.1**
FPAL				IAmb	IAmb	10 52 30.0	
	comp=Z,8.5nm,1.0s						
BG3	**Lake Jocassee**	**36.77**	**353**	P	**P**	**10 52 30.6**	**+1.0**
X48A	**Hartselle**	**36.95**	**347**	P	**P**	**10 52 30.7**	**-0.4**
X48A				IAmb	IAmb	10 52 31.4	
	comp=Z,7.2nm,0.9s						
Y45A	**Yeager Farm, C**	**37.02**	**344**	P	**P**	**10 52 32.0**	**+0.3**
V58A	**Windy Hill, Pi**	**37.27**	**358**	P	**P**	**10 52 34.4**	**+0.6**
V58A				IAmb	IAmb	10 52 35.1	
	comp=Z,13nm,0.8s						
V53A	**Saluda**	**37.42**	**353**	P	**P**	**10 52 35.1**	**0.0**
V53A				IAmb	IAmb	10 52 35.8	
	comp=Z,14nm,1.4s						
CPCT	**Cooper Cave**	**37.44**	**351**	P	**P**	**10 52 35.7**	**+0.5**
CPCT				IAmb	IAmb	10 52 35.8	
	comp=Z,8.6nm,0.6s						
V55A	**Taylorsville**	**37.45**	**355**	P	**P**	**10 52 35.5**	**+0.3**
V55A				IAmb	IAmb	10 52 36.4	
	comp=Z,7.3nm,0.8s						
SWET	**Sewanee**	**37.46**	**349**	P	**P**	**10 52 34.4**	**-1.0**
SWET				IAmb	IAmb	10 52 35.8	
	comp=Z,5.9nm,0.6s						
CCAR	**Cane Creek**	**37.74**	**341**	P	**P**	**10 52 37.6**	**-0.2**
V51A	**Loudon**	**37.76**	**351**	P	**P**	**10 52 37.6**	**-0.3**
V51A				IAmb	IAmb	10 52 38.6	
	comp=Z,6.2nm,0.7s						
NBMO	**Morrinhos-CE**	**37.76**	**93**	*eP*	**P**	**10 52 37.7**	**-0.6**
U56A	**King**	**37.88**	**357**	P		10 52 40.2	
	baz=175,SNR=14						
U56A	**King**	**37.88**	**357**	P	**P**	**10 52 39.9**	**+0.9**
V48A	**Smith Brothers**	**38.14**	**348**	P	**P**	**10 52 40.7**	**-0.4**
U54A	**Nelsons Funny**	**38.16**	**355**	P		10 52 42.3	
	baz=173						
JCT	**Junction City**	**38.22**	**328**	P		10 52 43.8	
	baz=142						
JCT	**Junction City**	**38.22**	**328**	P	**P**	**10 52 43.3**	**+1.4**
JCT				IAmb	IAmb	10 52 44.5	
	comp=Z,7.4nm,0.8s						
WHTX	**Lake Whitney,**	**38.30**	**333**	P		10 52 43.6	
	baz=147						
WHTX	**Lake Whitney,**	**38.30**	**333**	P	**P**	**10 52 42.9**	**+0.5**
WHTX				IAmb	IAmb	10 52 44.3	
	comp=Z,10nm,0.7s						
T58A	**Grand View Acr**	**38.41**	**359**	P		10 52 44.0	
	baz=178						
T59A	**Double "B" Far**	**38.43**	**0**	P	**P**	**10 52 43.9**	**+0.4**
T59A				IAmb	IAmb	10 52 45.0	
	comp=Z,21nm,1.3s						
T56A	**Rocky Mt**	**38.54**	**357**	P		10 52 45.3	
	baz=176						
X40A	**Basin Creek Fa**	**38.62**	**340**	P		10 52 45.9	
	baz=155						
U49A	**Red Boiling Sp**	**38.69**	**350**	P	**P**	**10 52 44.7**	**-0.9**
WVT	**Waverly**	**38.73**	**347**	P		10 52 44.8	
	baz=164						
WVT	**Waverly**	**38.73**	**347**	P	**P**	**10 52 44.8**	**-1.3**
WVT				IAmb	IAmb	10 52 45.2	
	comp=Z,7.3nm,0.6s						
BLA	**Blacksburg**	**38.74**	**357**	P		10 52 46.7	
	baz=175						
BLA	**Blacksburg**	**38.74**	**357**	P	**P**	**10 52 46.5**	**+0.3**
MIAR	**Mount Ida**	**38.93**	**339**	P		10 52 46.6	
	baz=154						
W41B	**Gary Mavity, V**	**39.05**	**341**	P		10 52 48.4	
	baz=156,SNR=5.9						
S56A	**Natural Bridge**	**39.17**	**358**	P		10 52 50.3	
	baz=177						
WHAR	**Wooly Hollow**	**39.17**	**341**	IAmb	IAmb	10 52 50.1	
	comp=Z,12nm,0.9s						
S57A	**Dark Hollow, R**	**39.23**	**359**	P	**P**	**10 52 50.9**	**+0.8**
S57A				IAmb	IAmb	10 52 51.2	
	comp=Z,8.7nm,0.8s						
S57A	**Dark Hollow, R**	**39.23**	**359**	P		10 52 50.8	
	baz=178						
S54A	**Dingess, Beckl**	**39.39**	**356**	P		10 52 52.2	
	baz=174						
T47A	**Sharon Grove**	**39.41**	**348**	IAmb	IAmb	10 52 51.5	
	comp=Z,9.7nm,0.6s						
PLCA	**Paso Flores**	**39.45**	**171**	P	**P**	**10 52 53.7**	**+1.7**
	comp=Z,5.5nm,0.9s,baz=342,slow=8.0,SNR=11						
PLCA	**Paso Flores**	**39.45**	**171**	P	**P**	**10 52 54.5**	**+2.5**
PLCA	**Paso Flores**	**39.45**	**171**	*eP*	**P**	**10 52 54.9**	**+2.9**
TXAR	**Lajitas Array**	**39.52**	**323**	P	**P**	**10 52 54.3**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=146,slow=8.6,SNR=24						
TXAR				PcP	**PcP**	**10 54 57.4**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=144,slow=6.0,SNR=6.0						
TXAR				ScP	**ScP**	**10 58 27.4**	**-1.3**
	comp=Z,0.4nm,0.9s,baz=115,slow=6.1,SNR=3.8						
TXAR	**Lajitas Array**	**39.52**	**323**	P	**P**	**10 52 54.0**	**+1.2**
TX31	**Lajitas Ar. Si**	**39.52**	**323**	P	**P**	**10 52 54.4**	**+1.6**
TX31				IAmb	IAmb	10 52 55.1	
	comp=Z,8.1nm,0.9s						
W39A	**Magazine**	**39.59**	**339**	P		10 52 53.8	
	baz=154,SNR=6.9						
W39A	**Magazine**	**39.59**	**339**	IAmb	IAmb	10 52 54.4	
	comp=Z,9.2nm,0.8s						
X37A	**Clayton**	**39.64**	**337**	P	**P**	**10 52 54.1**	**+0.5**
X37A				IAmb	IAmb	10 52 54.7	
	comp=Z,5.0nm,0.7s						
R59A	**King George, V**	**39.66**	**1**	P		10 52 55.4	
	baz=181						
GDU01	**Guandu, BA**	**39.66**	**110**	*eP*	**P**	**10 52 54.5**	**+0.5**
FCAR	**Ozark Folk Cen**	**39.67**	**342**	IAmb	IAmb	10 52 53.9	
	comp=Z,9.6nm,0.7s						
R54A	**Victor

OK032 **Salt Plains WL** 42.70 336 P P 10 53 18.5 0.0
M57A **Sunshine Farm,** 42.79 1 P 10 53 20.3
baz=181
M56A **Emporium** 42.94 360 P 10 53 21.0
baz=179,SNR=6.5
M53A **WI Miller and** 42.97 357 P 10 53 21.0
baz=175
M54A **Oil Creek Stat** 42.99 358 P 10 53 21.5
baz=177,SNR=5.8
M54A **Oil Creek Stat** 42.99 358 P P 10 53 21.2 +0.5
M59A **Waymart** 43.05 3 P 10 53 22.3
baz=183
M62A **Hamden** 43.12 5 P 10 53 22.6
baz=187
HDIL **Hopedale** 43.30 347 P 10 53 21.7
baz=163,SNR=12
L57A **Andrews Acres** 43.46 1 P 10 53 25.3
baz=181
L53A **Girard** 43.46 357 P 10 53 24.6
baz=176
ERPA **Erie** 43.61 358 P 10 53 25.8
baz=176
ERPA **Erie** 43.61 358 P P 10 53 25.0 -0.7
L61A **Hillsdale 1, H** 43.81 5 P 10 53 28.2
baz=186
KSU1 **Kansas State U** 44.09 339 P 10 53 29.7
baz=152
K57A **Scipio Center** 44.20 1 P 10 53 30.8
baz=182
K58A **Earlville** 44.26 2 P 10 53 31.3
baz=183
121A **Cookes Peak, D** 44.27 323 P 10 53 34.2
baz=134,SNR=6.0
R32A **Long Quarter,** 44.30 336 P P 10 53 31.5 +0.2
R32A IAmb IAmb 10 53 33.7
comp=Z,16nm,1.0s
J56A **Wolcott** 44.73 1 P 10 53 34.9
baz=181,SNR=6.6
J56A **Wolcott** 44.73 1 P P 10 53 33.9 -0.7
J56A IAmb IAmb 10 53 35.6
comp=Z,22nm,1.0s
J59A **Piesco** 45.01 3 P 10 53 37.5
baz=184
CBKS **Cedar Bluff** 45.05 336 P 10 53 38.8
baz=148,SNR=7.5
CBKS **Cedar Bluff** 45.05 336 P P 10 53 37.6 +0.4
J47A **Sunmer** 45.13 353 P P 10 53 36.0 -1.7
L40A **Anamosa** 45.18 346 IAmb IAmb 10 53 38.4
comp=Z,21nm,1.2s
I58A **Old Forge** 45.21 3 P 10 53 38.9
baz=184
ANMO **Albuquerque** 45.23 326 P P 10 53 40.9 +2.0
ANMO IAmb IAmb 10 53 41.9
comp=Z,15nm,0.7s
ANMO **Albuquerque** 45.23 326 P 10 53 41.1
baz=137
N35A **Tabor** 45.33 341 IAmb IAmb 10 53 39.2
comp=Z,18nm,0.8s
I51A **Listowel** 45.34 357 P 10 53 38.8
baz=175,SNR=7.8
I59A **Olmsteadville** 45.38 4 P 10 53 40.5
baz=185
PECO **Prince Edward** 45.39 1 P P 10 53 40.1 +0.4
PECO IAmb IAmb 10 53 40.5
comp=Z,19nm,1.1s
I57A **Carthage** 45.43 2 P 10 53 40.8
baz=183
I60A **Shoreham** 45.47 5 P 10 53 41.5
baz=186
SCIA **State Center** 45.55 344 P 10 53 40.5
baz=158
JFWS **Jewell Farm** 45.76 347 P 10 53 41.6
baz=162
JFWS **Jewell Farm** 45.76 347 P P 10 53 40.5 -2.2
T25A **Trinidad** 45.81 330 P P 10 53 44.6 +1.1
T25A **Trinidad** 45.81 330 P 10 53 45.6
baz=141
H57A **Richville** 45.96 2 P 10 53 44.7
baz=183
DELO **Deloro Mine** 45.97 0 P P 10 53 44.0 -0.3
DELO IAmb IAmb 10 53 45.6
comp=Z,10nm,0.9s
H58A **Gabriels** 45.98 4 P 10 53 44.7
baz=185
TUC **Tucson** 45.99 320 P 10 53 46.9
baz=130
TUC **Tucson** 45.99 320 P P 10 53 45.7 +1.0
H53A **Bobcaygeon** 46.03 359 P 10 53 44.7
baz=179
LONY **Lake Ozonia** 46.16 3 P 10 53 46.1
baz=184
SADO **Sadowa** 46.23 359 IAmb IAmb 10 53 46.7
comp=Z,21nm,1.4s
H59A **Cadyville** 46.24 4 P 10 53 47.0
baz=185
I42A **Draeger Farm,** 46.42 349 P P 10 53 46.6 -1.2
I42A IAmb IAmb 10 53 47.9
comp=Z,30nm,1.3s
KSCO **Kaye Shedlock**[r] 46.46 333 P 10 53 50.1
baz=144
PLVO **Plevna** 46.49 1 P P 10 53 47.8 -0.5
PLVO IAmb IAmb 10 53 49.4
comp=Z,15nm,0.9s
G57A **Newington** 46.62 3 P 10 53 49.7
baz=184
BGNE **Belgrade** 46.68 339 P 10 53 50.1
baz=151
G58A **Ormstown** 46.72 4 P 10 53 50.4
baz=185
G54A **Lake Saint Pet** 46.85 360 P 10 53 50.9
baz=179
214A **Organ Pipe Nat** 47.09 318 P P 10 53 54.5 +1.2
214A IAmb IAmb 10 53 56.5
comp=Z,7.4nm,0.7s
214A **Organ Pipe Nat** 47.09 318 P 10 53 55.6
baz=128,SNR=5.7
ALGO **Algonquin Park** 47.40 360 P 10 53 54.9
baz=179,SNR=5.3
S22A **4UR Ranch, Cre** 47.51 329 P 10 53 58.6
baz=139,SNR=6.0
OGNE **Ogallala** 47.79 335 P 10 54 00.2
baz=146
E58A **La Victoria** 47.99 4 P 10 54 00.0
baz=186
MVCO **Mesa Verde** 48.01 327 P 10 54 02.2
baz=136
E56A **St. Veronique** 48.06 3 P 10 54 00.6
baz=183,SNR=7.1
E46A **Sault Ste Mari** 48.16 354 P P 10 53 58.8 -2.4
E46A IAmb IAmb 10 54 00.7
comp=Z,9.3nm,0.6s
ECSD **EROS Data Cent** 48.23 342 P 10 54 01.0
baz=154,SNR=5.2
ECSD **EROS Data Cent** 48.23 342 P P 10 54 00.7 -1.1
ISCO **Idaho Springs** 48.48 331 P 10 54 05.7
baz=141
WUAZ **Wupatki** 48.48 323 P 10 54 06.8
baz=132
E43A **Lone Tree Farm** 48.51 352 IAmb IAmb 10 54 03.4
comp=Z,10nm,0.8s
D55A **Sainte-Anne-du** 48.51 2 P 10 54 04.0
baz=183,SNR=5.0
D56A **ZEC Mazanza, M** 48.57 3 P 10 54 04.3
baz=184
COWI **Conover** 48.59 349 P P 10 54 03.8 -0.8
LMN **Caledonia Moun** 48.68 12 P P 10 54 05.1 -0.1
LMN IAmb IAmb 10 54 26.1
comp=Z,20nm,1.4s
D58A **Chemin du LacG** 48.74 4 P 10 54 06.2
baz=186
PV02 **Paradox Valley** 48.87 327 P P 10 54 08.5 +1.4
PV02 IAmb IAmb 10 54 09.8
comp=Z,10nm,0.8s
PV13 **Radium Mtn., P** 48.88 327 P P 10 54 08.9 +1.8
PV13 IAmb IAmb 10 54 09.8
comp=Z,17nm,0.9s
PV03 **Paradox Valley** 48.96 327 IAmb IAmb 10 54 10.3
comp=Z,12nm,1.0s
PV05 **Paradox Valley** 48.97 327 IAmb IAmb 10 54 10.1
comp=Z,12nm,0.7s
PV18 **Skein Mesa, Pa** 48.99 327 P P 10 54 09.2 +1.2
PV18 IAmb IAmb 10 54 10.5
comp=Z,10nm,0.7s
LATQ **La Tuque** 49.03 5 P 10 54 08.4
baz=186,SNR=7.0
LATQ **La Tuque** 49.03 5 IAmb IAmb 10 54 09.2
comp=Z,9.0nm,0.6s

ESJX **Sierra Juarez** 49.25 316 P P 10 54 14.9 +5.0
N23A **Red Feather La** 49.49 332 P 10 54 13.3
baz=141
SRU **San Rafael Swe** 50.48 327 P P 10 54 20.4 +1.2
K22A **Casper** 51.14 333 P P 10 54 25.1 +1.1
K22A IAmb IAmb 10 54 26.0
comp=Z,14nm,1.4s
K22A **Casper** 51.14 333 P 10 54 25.3
baz=142
MATQ **Matagami** 51.21 0 P 10 54 23.2
baz=180
RSSD **Black Hills** 51.25 336 P 10 54 26.4
baz=145
RSSD **Black Hills** 51.25 336 P P 10 54 25.6 +0.7
RSSD IAmb IAmb 10 54 27.2
comp=Z,5.5nm,0.5s
BFSC **Mount Baldy Ra** 51.71 317 P 10 54 30.0
baz=125
E28A **Huff** 52.08 340 P P 10 54 31.5 +0.7
AGMN **Agassiz Nation** 52.17 345 P 10 54 31.1
baz=157,SNR=8.2
EDW2 **Edwards Air Fo** 52.30 318 P 10 54 34.6
baz=125
TPNV **Topopah Spring** 52.41 321 P 10 54 36.7
baz=128
DUG **Dugway, Tooele** 52.50 326 P 10 54 36.1
baz=133,SNR=7.0
SPR3 **Spring Creek 3** 52.56 324 P P 10 54 36.0 +1.2
MPMC **Manual Prospec** 52.66 319 P 10 54 36.9
baz=126
PD31 **Pinedale Array** 52.66 331 P P 10 54 35.7 +0.4
PDAR **Pinedale Array** 52.66 331 P P 10 54 35.7 +0.4
comp=Z,1.5nm,0.6s,baz=125,slow=7.8,SNR=8.2
PDAR PcP PcP 10 55 43.1 +0.3
comp=Z,0.7nm,0.5s,baz=129,slow=7.3,SNR=2.9
HWUT **Hardware Ranch** 52.82 328 IAmb IAmb 10 54 38.5
comp=Z,6.9nm,0.7s
R11A **Troy Canyon, C** 52.88 323 P 10 54 39.2
baz=130
CWC **Cottonwood Cre** 53.27 319 P 10 54 41.8
baz=126
VES **Vestal, Richgr** 53.58 318 P 10 54 44.8
baz=125
REDW **Red Top Meadow** 53.74 330 P P 10 54 44.3 +1.1
REDW IAmb IAmb 10 54 45.3
comp=Z,8.8nm,1.1s
SNOW **Snow King Moun** 53.76 331 IAmb IAmb 10 54 46.1
comp=Z,9.5nm,1.2s
ULM **Lac du Bonnet** 53.98 346 P P 10 54 43.5 -1.0
comp=Z,5.9nm,0.5s,baz=150,slow=7.8,SNR=12
ULM **Lac du Bonnet** 53.98 346 P P 10 54 43.3 -1.2
ULM IAmb IAmb 10 54 43.9
comp=Z,7.4nm,0.6s
FLWY **Flagg Ranch** 54.20 331 IAmb IAmb 10 54 48.9
comp=Z,8.5nm,0.9s
RLMT **Red Lodge** 54.31 333 P P 10 54 47.7 +0.4
RLMT **Red Lodge** 54.31 333 P 10 54 48.1
baz=140,SNR=5.4
H17A **Grant Village** 54.37 331 P 10 54 49.4
baz=138
YNE **Yellowstone No** 54.56 332 P P 10 54 50.1 +0.9
NVAR **Mina Array Bea** 54.60 321 P P 10 54 51.2 +1.7
comp=Z,1.2nm,0.5s,baz=126,slow=7.0,SNR=12
NVAR PcP sP 10 55 51.0 -0.4
comp=Z,0.7nm,0.7s,baz=123,slow=5.5,SNR=3.7
YMR **Madison River** 54.76 331 IAmb IAmb 10 54 53.4
comp=Z,5.4nm,0.7s
YHH **Holmes Hill** 54.79 332 P P 10 54 52.7 +1.8
KVN **Kaiserville** 54.85 322 P P 10 54 52.7 +1.4
YHB **Horse Butte** 54.93 331 IAmb IAmb 10 54 54.8
comp=Z,5.5nm,0.9s
DGMT **Dagmar** 54.93 339 P 10 54 52.9
baz=147
YHL **Hebgen Lake** 55.00 331 P P 10 54 54.3 +2.0
YHL IAmb IAmb 10 54 55.5
comp=Z,13nm,1.0s
QLMT **Earthquake Lak** 55.10 331 P P 10 54 54.7 +1.7
HLID **Hailey** 55.69 328 P 10 54 58.9
baz=134,SNR=6.5
HLID **Hailey** 55.69 328 P P 10 54 58.0 +0.8
BCYI **Bear Canyon** 55.70 330 P P 10 54 58.4 +1.1
BOZ **Bozeman (W)** 55.76 332 P 10 54 58.9
baz=137,SNR=8.9
BOZ **Bozeman (W)** 55.76 332 IAmb IAmb 10 54 59.8
comp=Z,6.5nm,0.8s
MCMT **McKenzie Canyo** 55.79 330 P P 10 54 59.0 +1.1
MFID **Camas Ranch** 56.34 327 P P 10 55 02.6 +0.9
MFID IAmb IAmb 10 55 04.5
comp=Z,8.6nm,0.8s
HRY **Holter Researc** 56.68 333 P P 10 55 05.1 +1.1
BEKR **Beckworth** 56.74 322 P P 10 55 05.6 +0.9
EGMT **Eagleton** 56.76 335 P 10 55 05.1
baz=140
EGMT **Eagleton** 56.76 335 P P 10 55 04.8 +0.3
WVOR **Wild Horse Val** 57.27 325 P P 10 55 09.7 +1.5
WVOR IAmb IAmb 10 55 10.7
comp=Z,10.0nm,1.2s
ORV **Oroville** 57.28 321 P P 10 55 10.3 +2.1
ORV IAmb IAmb 10 55 11.4
comp=Z,7.7nm,0.8s
MSO **Missoula** 57.76 331 P 10 55 13.1
baz=136
J08A **Circle Bar Ran** 57.77 326 IAmb IAmb 10 55 14.1
comp=Z,3.8nm,0.5s
O03E **Paynes Creek** 57.89 321 P 10 55 13.7
baz=125
MOD **Modoc Plateau** 57.92 323 P P 10 55 10.5 -2.4
I07A **Izee** 58.80 326 IAmb IAmb 10 55 21.8
comp=Z,5.3nm,0.6s
F10A **Beach Ranch, E** 58.80 329 IAmb IAmb 10 55 24.3
comp=Z,4.1nm,0.8s
G08A **Pilot Rock** 59.27 327 P P 10 55 23.5 +1.5
G08A IAmb IAmb 10 55 24.6
comp=Z,5.7nm,0.8s
J05D **Fort Rock, OR** 59.30 324 P 10 55 24.5
baz=127,SNR=5.4
L04D **Klamath Falls** 59.31 323 P 10 55 23.7
baz=125
PINE **Pine Mountain** 59.44 325 P P 10 55 24.0 +0.7
FFC **Flin Flon** 59.62 344 P P 10 55 24.4 +0.3
I05D **Terrebonne, OR** 60.00 325 P 10 55 29.1
baz=127
NEW **Newport** 60.30 331 P 10 55 29.9
baz=133
G05D **Wamic, OR** 60.53 326 P 10 55 33.1
baz=128
B08A **Colville Reser** 61.46 330 P P 10 55 37.8 +1.0
B08A IAmb IAmb 10 55 38.8
comp=Z,4.4nm,0.8s
FCC **Fort Churchill** 61.60 350 P P 10 55 36.7 -0.7
FCC IAmb IAmb 10 55 37.4
comp=Z,7.8nm,0.8s
YKA **Yellowknife Ar** 69.74 343 P P 10 56 29.3 -0.1
comp=Z,3.6nm,0.7s,baz=138,slow=6.3,SNR=91
LIC **Lamto** 73.08 83 eP P 10 56 49.6 -0.8
comp=Z,38nm,1.1s
TIC **Toumodi** 73.11 83 eP P 10 56 50.0 -0.7
DBIC **Dimbokro** 73.27 83 P P 10 56 51.2 -0.3
comp=Z,4.6nm,0.4s,baz=261,slow=4.1,SNR=26
DBIC **Dimbokro** 73.27 83 P P 10 56 50.4 -1.2
DBIC IAmb IAmb 10 56 52.1
comp=Z,11nm,0.9s
KIC **Kosan Boka** 73.37 83 eP P 10 56 51.8 -0.4
comp=Z,27nm,0.5s
KOWA **Kowa** 74.74 75 P P 10 56 59.6 -0.5
KOWA IAmb IAmb 10 57 00.7
comp=Z,9.1nm,0.8s
ICESG **Greenland Ices** 75.20 13 i P P 10 57 01.8 -0.2
ICESG IAmb IAmb 10 57 02.6
comp=Z,20nm,0.7s
C36M **Paulatuk** 77.39 345 P 10 57 13.0
baz=132
SUMG **Summit** 78.14 11 i P P 10 57 18.8 +0.3
SUMG IAmb IAmb 10 57 19.4
comp=Z,27nm,0.6s
ESDC **Sonseca Array** 78.67 49 P P 10 57 22.9 +1.2
comp=Z,0.9nm,1.0s,baz=262,slow=7.6,SNR=2.5
INK **Inuvik** 79.47 342 P P 10 57 26.3 +1.0
comp=Z,8.5nm,0.6s,baz=99,slow=4.8,SNR=37
INK **Inuvik** 79.47 342 IAmb IAmb 10 57 27.5
comp=Z,10nm,0.8s
L27K **Beaver Creek,** 79.98 335 P 10 57 29.2
baz=114
TORD **Torodi Ar. Bea** 80.16 76 P P 10 57 29.1 -1.0
comp=Z,2.0nm,0.4s,baz=283,slow=6.0,SNR=42
NEEM **North Greenlan** 80.37 6 i P P 10 57 31.1 +0.7

NEEM IAmb IAmb 10 57 31.9
comp=Z,18nm,0.4s
EGAK **Eagle** 80.43 337 P 10 57 31.9
baz=115,SNR=13
K27K **Chicken** 80.48 336 P 10 57 32.3
baz=114
SCRK **Sand Creek** 81.24 336 P 10 57 36.2
baz=112,SNR=5.5
WAT6 **Susitna Watana** 82.33 334 P 10 57 41.9
baz=108
PRP **Porcupine Dome** 82.42 337 P 10 57 42.3
baz=111
HDA **Harding Lake** 82.60 336 P 10 57 43.0
baz=109,SNR=6.5
HDA P 10 57 43.0
baz=109,SNR=6.5
ILAR **Eielson Array** 82.70 336 P P 10 57 43.0 +0.5
comp=Z,4.0nm,0.9s,baz=125,slow=3.9,SNR=31
ILAR PP PP 11 00 54.8 -0.1
comp=Z,0.6nm,0.8s,baz=105,slow=6.0,SNR=4.1
WAT2 **Susitna Watana** 82.83 334 P 10 57 43.2
baz=108
COLA **College** 83.12 336 P 10 57 45.8
baz=108
TCOL **CIGO, UAF Yank** 83.13 336 P 10 57 46.0
baz=108
MCK **McKinley** 83.21 335 P 10 57 45.3
baz=107
SUA **Susitna One** 83.36 332 P 10 57 47.1
baz=106
NEA2 **Nenana** 83.53 336 P 10 57 47.7
baz=107,SNR=5.6
TRF **Thorofare Moun** 83.71 334 P 10 57 48.8
baz=106
I23K **Minto, Yukon-K** 83.82 336 P 10 57 49.1
baz=107,SNR=6.7
SKT **Skwentna** 83.86 333 P 10 57 49.5
baz=105,SNR=5.8
BPAW **Bear Paw Mtn.** 84.19 335 P 10 57 50.9
baz=106,SNR=14
MLY **Manley** 84.34 336 P 10 57 51.8
baz=106,SNR=6.2
PPLA **Purkeypile** 84.39 334 P 10 57 52.1
baz=104
COLD **Coldfoot** 84.76 338 P 10 57 54.6
baz=107,SNR=6.0
DAG **Danmarks Havn** 84.83 11 i P P 10 57 53.0 -0.1
DAG IAmb IAmb 10 57 53.6
comp=Z,4.0nm,0.7s
TOLK **Toolik Lake Re** 84.96 340 P 10 57 54.8
baz=107
VNDA **Vanda** 94.69 191 P P 10 58 39.9 +0.4
comp=Z,0.4nm,0.7s,baz=106,slow=7.4,SNR=1.5
ARCES **ARCESS Array B** 96.19 20 P P 10 58 45.8 -0.7
comp=Z,5.1nm,0.9s,baz=264,slow=8.1,SNR=2.8
ARCES **ARCESS Array B** 96.19 20 IAmb IAmb 10 58 48.7
comp=Z,11nm,1.1s
ZALV **Zalesovo Beam** 125.95 13 PKP PKiKP 11 04 20.3 0.0
comp=Z,1.3nm,0.6s,baz=315,slow=0.6,SNR=5.6
ZALV **Zalesovo Beam** 125.95 13 PKiKP 11 04 20.2 -0.1
MKAR **Makanchi Array** 131.81 18 PKP PKPdf 11 04 31.4 +0.1
comp=Z,0.5nm,0.4s,baz=274,slow=3.0,SNR=8.0
SONM **Songino Array** 133.86 356 PKP PKPdf 11 04 35.5 +0.2
comp=Z,2.5nm,0.6s,baz=7.1,slow=1.8,SNR=5.0
HHC **Hu-ho-hao-te** 140.07 349 eP PKiKP 11 04 49.0 -0.4
ASAR **Alice Springs** 140.20 229 PKhKP PKPdf 11 04 42.1 -5.4
comp=Z,0.3nm,0.8s,baz=120,slow=2.9,SNR=2.5
ASAR SKP SKPbc 11 08 06.8 -0.2
comp=Z,0.4nm,0.8s,baz=150,slow=4.1,SNR=4.2
WRA **Warramunga Arr** 141.86 234 PKhKP PKPdf 11 04 47.0 -3.5
comp=Z,0.7nm,0.9s,baz=121,slow=2.3,SNR=3.0
WRA SKP SKPbc 11 08 12.2 +0.9
comp=Z,0.4nm,0.7s,baz=108,slow=3.2,SNR=2.6
LZH **Lanzhou** 145.71 358 ePKP PKPab 11 04 59.0 +0.8
LZH pPKP pPKPab 11 05 44.1 +0.1
LZH sPKP 11 06 01.4
NJ2 **Nanjing** 145.93 334 eP PKPab 11 04 58.8 -0.2
XAN **Xi'an** 147.17 350 PKPbc PKPbc 11 05 02.3 +0.4
PYUN **Piuthan** 147.93 33 eP PKPbc 11 05 05.1 +0.8
KOLN **Koldanda** 148.52 33 eP PKPbc 11 05 06.0 +0.2
comp=Z,17nm,0.8s
GKN **Gorkha** 148.88 31 eP PKiKP 11 05 07.6 -0.3
comp=Z,7.3nm,0.3s
KKN **Kakani** 149.38 30 eP PKiKP 11 05 09.4 +0.3
DMN **Daman** 149.44 31 eP PKiKP 11 05 08.9 -0.3
comp=Z,17nm,0.3s
GUN **Gumba** 149.58 29 eP PKiKP 11 05 09.7 +0.1
comp=Z,20nm,0.4s
PKIN **Phulchoki** 149.62 30 eP PKPbc 11 05 08.9 +0.3
comp=Z,17nm,0.5s
PKI **Pulchoki** 149.63 30 eP PKPbc 11 05 08.5 -0.2
comp=Z,16nm,0.6s
JIRN **Jiri** 149.94 29 eP PKiKP 11 05 10.0 -0.4
comp=Z,6.8nm,0.3s
RAMN **Ramite** 150.73 29 eP PKiKP 11 05 11.7 -0.2
comp=Z,19nm,0.5s
TAPN **Taplejung** 150.92 27 eP PKiKP 11 05 12.3 -0.1
comp=Z,16nm,0.5s
ODAN **Odare** 151.19 28 eP PKPbc 11 05 12.6 +0.3
comp=Z,20nm,0.4s
CMAR **Chiang Mai Arr** 163.00 11 PKPab PKPab 11 06 09.9 -1.4
comp=Z,1.3nm,0.4s,baz=330,slow=5.4,SNR=7.6

*IDC **06** 10:48:25.3±1.5,9.°12S×110.°53E,h0km,mb4.2/12,*
mb1 4.2/12,mb1mx4.0/45,mbtmp4.2/12,MS3.3/2,
Ms1 3.2/2,ms1mx2.7/24,Error ellipse: s-maj=53.8km
s-min=16.0km az=55.0
*DJA **06** 10:48:26.1±0.4, 10.°S±4.°×11.°E±.°, h10km,M4.5/12,*
mB5.5/3,mb4.4/6,MLv4.5/12,Mw(mB)5.0/3
*NEIC **06** 10:48:30.9±2.7,9.°37S±0.°07×110.°39E±0.°03,h47km±9km,*
mb4.1/14, Error ellipse: s-maj=10.3km s-min=3.7km
az=169.0

ISC 06 10:48:29.9±0.6,9.°34S±0.°07×110.°51E±0.°06,h35km,n47,
σ1s73/47,mb4.1/18,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.42**	**1**		**Pn**	**10 48 53.9**	**+0.6**
UGM	**Wanagama**	**1.42**	**1**	P	**Pn**	**10 48 53.7**	**+0.4**
UGM				S	**Sn**	**10 49 06.4**	**-4.4**
SMRI	**Semarang**	**2.28**	**358**		**Pn**	**10 49 08.3**	**+3.2**
SMRI	**Semarang**	**2.28**	**358**	P	**Pn**	**10 49 08.2**	**+3.2**
SMRI				S	Sn	10 49 39.4	+7.4
CISI	**Cisompet, Garu**	**3.20**	**303**		**Pn**	**10 49 18.2**	**+0.4**
CISI	**Cisompet, Garu**	**3.20**	**303**	P	**Pn**	**10 49 18.1**	**+0.3**
CISI				S	**Sn**	**10 49 56.6**	**+1.8**
JAGI	**Jajag, Banyuwa**	**3.70**	**77**		**Pn**	**10 49 27.6**	**+2.9**
JAGI	**Jajag, Banyuwa**	**3.70**	**77**	P	**Pn**	**10 49 26.7**	**+2.0**
JAGI				S	**Sn**	**10 50 08.1**	**+1.0**
LEM	**Lembang**	**3.80**	**311**	Pn	**Pn**	**10 49 28.5**	**+2.4**
	19nm,0.3s,baz=122,slow=11,SNR=16						
LEM				Sn	**Sn**	**10 50 11.8**	**+2.0**
	4.0nm,0.3s,baz=22,slow=20,SNR=1.5						
LEM				LR	LR	10 51 13.1	
	comp=Z,313nm,18.9s,baz=194,slow=46						
LEM	**Lembang**	**3.80**	**311**	P	**Pn**	**10 49 28.5**	**+2.4**
ABJI	**Asem Bagus**	**3.99**	**68**	P	**Pn**	**10 49 28.5**	**-0.1**
XMIS	**Christmas Isla**	**4.92**	**256**	Pn	**Pn**	**10 49 39.4**	**-2.0**
TWSI	**Taliwang, Sumb**	**6.33**	**85**	P	**Pn**	**10 49 59.6**	**-1.1**
	0.1nm594nm12nm,0.5s						
PLAI	**Plampang**	**7.20**	**86**	P	**Pn**	**10 50 13.1**	**+0.4**
	0.2nm24nm,0.9s						
PPBI	**Pangkal Pinang**	**8.35**	**328**	P	**Pn**	**10 50 31.3**	**+2.7**
	28μm22nm,0.9s						
GIRL	**Giralia**	**13.70**	**165**	Pn	**Pn**	**10 51 39.8**	**-2.0**
MTN	**Manton Dam**	**20.53**	**102**	P	**P**	**10 53 07.7**	**+2.2**
FAKI	**Fak Fak**	**22.53**	**75**	P	**P**	**10 53 26.6**	**-0.4**
FAKI				IAmb	IAmb	10 53 54.4	
	comp=Z,4.4nm,0.8s						
WB0	**Warramunga Arr**	**25.30**	**117**	P	**P**	**10 53 55.7**	**+2.3**
WB0				IAmb	IAmb	10 54 06.1	
	comp=Z,7.9nm,1.3s						
WRA	**Warramunga Arr**	**25.32**	**117**	P	**P**	**10 53 54.8**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=292,slow=11,SNR=15						
WRA	**Warramunga Arr**	**25.32**	**117**	P	**P**	**10 53 55.8**	**+2.3**
WB2	**Warramunga Arr**	**25.33**	**117**	P	**P**	**10 53 54.6**	**+1.0**
WB2				IAmb	IAmb	10 54 09.9	
	comp=Z,7.7nm,1.4s						
WR0	**Warramunga Arr**	**25.50**	**117**	P	**P**	**10 53 57.1**	**+1.9**
WR0				IAmb	IAmb	10 53 59.1	
	comp=Z,3.6nm,0.8s						
ASAR	**Alice Springs**	**26.51**	**125**	P	**P**	**10 54 05.8**	**+1.5**
	comp=Z,1.5nm,0.7s,baz=304,slow=9.0,SNR=19						
AS31	**Alice Springs**	**26.51**	**125**	P	**P**	**10 54 06.6**	**+2.2**

CMAR	**Chiang Mai Arr**	**29.89**	**338**	P		**P**	**10 54 33.6**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=168,slow=8.0,SNR=4.4							
COEN	**Coen**	**32.30**	**101**	P		**P**	**10 54 56.5**	**+0.6**
COEN				IAmb		IAmb	10 55 14.4	
	comp=Z,6.4nm,1.5s							
STKA	**Stephens Creek**	**36.51**	**132**	P		**P**	**10 55 33.8**	**+1.7**
	comp=Z,2.1nm,0.7s,baz=304,slow=5.6,SNR=5.5							
STKA				LR		LR	11 11 41.6	
	comp=Z,46nm,18.7s,baz=337,slow=38							
H08S2	**Diego Garcia H**	**37.62**	**270**	T		T	11 35 40.0	
	baz=96							
H08S3	**Diego Garcia H**	**37.63**	**270**	T		T	11 35 37.0	
	baz=96							
H08S1	**Diego Garcia H**	**37.64**	**270**	T		T	11 35 40.7	
	baz=96							
KSRS	**Korea Array**	**49.33**	**18**	P		**P**	**10 57 15.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=201,slow=6.7,SNR=4.5							
MJAR	**Matsushiro Arr**	**52.55**	**28**	P		**P**	**10 57 38.4**	**-1.6**
	comp=Z,1.9nm,0.6s,baz=210,slow=7.6,SNR=4.9							
MJAR	**Matsushiro Arr**	**52.55**	**28**	IAmb		IAmb	10 57 39.0	
	comp=Z,1.4nm,0.6s							
USRK	**Ussuriysk Ar.**	**56.74**	**18**	P		**P**	**10 58 09.4**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=205,slow=4.9,SNR=5.7							
SONM	**Songino Array**	**57.04**	**357**	P		**P**	**10 58 11.9**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=175,slow=7.4,SNR=13							
SONM				PcP		**PcP**	**10 59 07.4**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=176,slow=1.5,SNR=2.1							
SONM	**Songino Array**	**57.04**	**357**	P		**P**	**10 58 12.4**	**-0.1**
SONM				IAmb		IAmb	10 58 12.9	
	comp=Z,1.4nm,0.7s							
KLR	**Kul'dur**	**61.24**	**16**	P		**P**	**10 58 40.3**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=179,slow=4.2,SNR=11							
MK31	**Makanchi Array**	**61.30**	**338**	P		**P**	**10 58 41.0**	**-0.8**
MK31				IAmb		IAmb	10 58 43.5	
	comp=Z,1.3nm,0.8s							
MKAR	**Makanchi Array**	**61.30**	**338**	P		**P**	**10 58 41.4**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=145,slow=7.2,SNR=21							
MKAR	**Makanchi Array**	**61.30**	**338**	P		**P**	**10 58 40.9**	**-0.9**
ZALV	**Zalesovo Beam**	**66.70**	**344**	P		**P**	**10 59 16.0**	**-1.1**
	comp=Z,2.9nm,0.4s,baz=149,slow=3.6,SNR=16							
ZALV	**Zalesovo Beam**	**66.70**	**344**	P		**P**	**10 59 16.2**	**-0.8**
ABKAR	**Akbulak array**	**73.21**	**328**	P		**P**	**10 59 56.7**	**-0.6**
ABKAR	**Akbulak array**	**73.21**	**328**	P		**P**	**10 59 57.1**	**-0.1**
ABKAR				IAmb		IAmb	10 59 57.8	
	comp=Z,11nm,1.5s							
TIXI	**Tiksi**	**81.74**	**6**	P		**P**	**11 00 43.7**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=157,slow=3.0,SNR=4.0							
TIXI	**Tiksi**	**81.74**	**6**	IAmb		IAmb	11 00 44.4	
	comp=Z,5.5nm,1.4s							

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*IDC **06** 10:58:29.4±0.6, 1˚.78N×97˚.17W, h0^{km}, mb4.5/16, mb1 4.6/19, mb1mx4.5/41, mbtmp4.5/19, ML3.3/2, MS4.5/19, Ms1 4.5/19, ms1mx4.4/23, Error ellipse: s-maj=23.1km s-min=12.7km az=55.0*

*NEIC **06** 10:58:31.9±1.3, 1˚.91N±0˚.07×97˚.0W±0˚.1, h10^{km}±1^{km}, mb4.9/344, Error ellipse: s-maj=18.1km s-min=10.9km az=254.0*

*GCMT **06** 10:58:34.9±0.2, 2˚.14N±0˚.01×96˚.69W±0˚.02, h12^{km}, MW5.1/111, Moment Tensor Solution. s67,c90; s111,c175; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.76±.08; $M_{\theta\theta}$-4.41±.07; $M_{\phi\phi}$-0.35±.09; $M_{r\theta}$-2.28±.24; $M_{\theta\phi}$0.18±.07; $M_{\phi r}$-0.40±.31; Best double couple: M_o5.13700×10^{16} NP1:ϕ_s97.00000°, δ32.00000°, λ98.00000°. NP2:ϕ_s267.00000°, δ58.00000°, λ85.00000°. Principal axes: T 5.3280, Plg76.0000°, Azm162.0000°; N -0.3810, Plg4.0000°, Azm270.0000°; P -4.9470, Plg13.0000°, Azm1.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 10:58:31.4±0.4, 1˚.90N±0˚.06×96˚.99W±0˚.06, h10^{km}, n438, s^{19}04/358, mb4.9/186, MS4.5/21, 1C, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORTG	**Ortega, Santa**	**14.21**	**53**	Pn	**P**	**11 01 57.3**	**-3.1**
APG	**El Apazote**	**14.53**	**26**	Pn	**Pn**	**11 02 00.2**	**+2.9**
	0.1nm,0.3s,baz=181,slow=6.6,SNR=7.9						
APG				LR	LR	11 06 15.7	
	comp=Z,4μm,20.7s,baz=248,slow=32						
MTO3	**Montecristo**	**14.53**	**31**	Pn	**Pn**	**11 02 00.3**	**+3.0**
JTS	**Las Juntas de**	**14.58**	**55**	Pn	**P**	**11 02 01.4**	**-3.0**
	0.2nm,0.3s,baz=2.7,slow=17,SNR=4.1						
JTS				LR	LR	11 05 57.1	
	comp=Z,3μm,19.8s,baz=312,slow=30						
JTS	**Las Juntas de**	**14.58**	**55**	Pn	**Pn**	**11 02 00.1**	**+2.1**
ESQI	**Esquipulas**	**14.67**	**31**	Pn	**Pn**	**11 02 01.2**	**+1.9**
RIOS	**Rincon, Osa**	**15.02**	**63**	Pn	**Pn**	**11 02 04.8**	**+0.9**
CCIG	**Comitan**	**15.07**	**18**	Pn	**Pn**	**11 02 06.3**	**+1.6**
CCIG				IAmb	IAmb	11 02 14.6	
	comp=Z,73nm,1.2s						
HDC	**Heredia**	**15.12**	**57**	Pn	**Pn**	**11 02 05.9**	**+0.6**
PEZE	**Perez Zeledon,**	**15.19**	**60**	Pn	**Pn**	**11 02 07.2**	**+1.0**
PEZE				IAmb	IAmb	11 02 14.9	
	comp=Z,88nm,1.4s						
CMIG	**Matias Romero**	**15.23**	**8**	Pn	**Pn**	**11 02 09.3**	**+2.6**
	baz=158,slow=11,SNR=4.6						
CMIG				LR	LR	11 06 35.7	
	comp=Z,4μm,20.0s,baz=166,slow=32						
COVE	**Coope Vega, Sa**	**15.27**	**54**	Pn	**Pn**	**11 02 08.1**	**+0.9**
BOAB	**BOACO BROADBAN**	**15.35**	**46**		**Pn**	**11 02 09.8**	**+1.4**
ACON	**Acoyapa**	**15.40**	**49**	Pn	**Pn**	**11 02 11.4**	**+2.4**
TGUH	**Tegucigalpa,Un**	**15.43**	**38**	Pn	**Pn**	**11 02 11.3**	**+1.8**
TGUH					**Sn**	**11 05 01.1**	**+0.5**
MATN	**Matagalpa**	**15.50**	**44**		**P**	**11 02 13.6**	**-1.1**
MATN				IAmb	IAmb	11 02 18.4	
	comp=Z,52nm,1.0s						
MATN					**S**	**11 05 17.0**	**-1.1**
TLIG	**Tlapa**	**15.64**	**354**	P	**P**	**11 02 16.6**	**+0.3**
ESPN	**Las Esperanzas**	**16.21**	**50**	P	**Pn**	**11 02 21.2**	**+1.8**
ESPN				IAmb	IAmb	11 02 27.6	
	comp=Z,158nm,1.5s						
PETF	**Flores**	**16.48**	**25**	P	**Pn**	**11 02 22.2**	**-0.7**
UNM	**Universidad Na**	**17.45**	**353**	Pn	**Pn**	**11 02 35.3**	**0.0**
MOIG	**Morelia**	**18.14**	**347**		**Pn**	**11 02 44.6**	**+0.8**
OTAV	**Otavalo**	**18.61**	**95**	P	**P**	**11 02 48.8**	**-0.9**
OTAV	**Otavalo**	**18.61**	**95**	*eP*	**P**	**11 02 49.7**	**+0.1**
OTAV	**Otavalo**	**18.61**	**95**	*eP*	**Pn**	**11 02 51.7**	**+1.8**
SOLC	**Bahia Solano**	**20.00**	**77**	*eP*	**P**	**11 03 05.2**	**+0.8**
TEIG	**Tepich**	**20.10**	**24**	P	Pn	11 03 07.2	0.0
	comp=Z,43nm,1.2s,baz=210,slow=10,SNR=4.9						
POPC	**Popayan, Colom**	**20.31**	**88**	*eP*	**P**	**11 03 06.7**	**-1.4**
SOTA	**Rioblanco**	**20.37**	**89**	*eP*	**P**	**11 03 08.4**	**-0.6**
PCON	**Cinco Dias**	**20.59**	**88**	*eP*	**P**	**11 03 11.1**	**-0.3**
ATAH	**Atahualpa**	**20.62**	**116**	P	Pn	11 03 13.2	-0.5
	comp=Z,63nm,1.4s,baz=303,slow=13,SNR=15						
YOTC	**Yotoco, Valle**	**20.72**	**84**	*eP*	**P**	**11 03 12.1**	**-0.3**
MARP	**Paez Belalcaza**	**21.04**	**87**	*eP*	**P**	**11 03 16.7**	**+0.7**
CBOC	**Ciudad Bolivar**	**21.30**	**79**	*eP*	**P**	**11 03 19.1**	**+0.4**
DBBC	**Dabeiba**	**21.33**	**76**	*eP*	**P**	**11 03 19.9**	**+1.0**
ZAIG	**Zacatecas**	**21.44**	**346**	P	**P**	**11 03 23.1**	**+2.9**
ZAIG				IAmb	IAmb	11 03 26.6	
	comp=Z,85nm,1.3s						
H06E1	**SOCORRO T-PHAS**	**21.63**	**322**	T	T	11 25 30.7	
	SNR=122						
ORTC	**Ortega, Tolima**	**21.81**	**84**	*eP*	**P**	**11 03 24.0**	**0.0**
HELC	**Santa Helena**	**21.83**	**78**	*eP*	**P**	**11 03 20.8**	**-3.8**
GUY2C	**Guyana, Caldas**	**21.84**	**81**	*eP*	**P**	**11 03 24.7**	**0.0**
UREC	**San Jos de Ur**	**22.15**	**74**	*eP*	**P**	**11 03 27.8**	**+0.1**
PTLC	**Puerto Leguiza**	**22.26**	**94**	*eP*	**P**	**11 03 28.5**	**-0.3**
MOTC	**Monteria, Cord**	**22.30**	**71**	*eP*	**P**	**11 03 29.6**	**+0.4**
NORC	**Norcasia**	**22.37**	**80**	*eP*	**P**	**11 03 30.0**	**0.0**
ZARC	**Zaragoza, Cauc**	**22.74**	**75**	*eP*	**P**	**11 03 34.5**	**+0.5**
ROSC	**El Rosal**	**22.82**	**82**	P	**P**	**11 03 37.2**	**+2.0**
	comp=Z,21nm,0.8s,baz=131,slow=4.8,SNR=13						
ROSC				LR	LR	11 11 14.8	
	comp=Z,641nm,20.1s,baz=242,slow=33						
ROSC	**El Rosal**	**22.82**	**82**	P	**P**	**11 03 36.5**	**+1.3**
ROSC				IAmb	IAmb	11 03 47.7	
	comp=Z,48nm,1.1s						
ROSC	**El Rosal**	**22.82**	**82**	*eP*	**P**	**11 03 35.5**	**+0.4**
PTBC	**PUERTO BERRIO,**	**22.94**	**78**	*eP*	**P**	**11 03 34.6**	**-1.4**
BRRC	**Barranca, Sant**	**23.77**	**77**	*eP*	**P**	**11 03 45.1**	**+0.8**
SMLC	**San Martn de**	**23.82**	**72**	*eP*	**P**	**11 03 43.0**	**-1.8**
RUSC	**La Rusia**	**24.18**	**80**	*eP*	**P**	**11 03 49.1**	**+0.3**
BARC	**Barichara**	**24.19**	**78**	*eP*	**P**	**11 03 48.8**	**+0.2**
OCAC	**Ocana**	**24.39**	**74**	*eP*	**P**	**11 03 50.2**	**-0.2**
LPIG	**La Paz**	**25.55**	**331**	P	**P**	**11 04 01.2**	**+0.7**
	comp=Z,25nm,0.3s,baz=300,slow=3.5,SNR=4.2						
CZSB	**Cruzeiro do Su**	**26.05**	**112**	*eP*	**P**	**11 04 07.0**	**+1.8**
HPIG		**26.24**	**342**	P	**P**	**11 04 08.3**	**+1.3**
833A	**Chaparral WMA,**	**26.37**	**355**	P		11 04 10.5	
	baz=175,SNR=8.3						
SDV	**Santo Domingo**	**27.13**	**74**	P	**P**	**11 04 16.9**	**+1.8**
SDV				IAmb	IAmb	11 04 21.7	
	comp=Z,19nm,1.0s						
SDV	**Santo Domingo**	**27.13**	**74**	*eP*	**P**	**11 04 16.6**	**+1.4**
TXAR	**Lajitas Array**	**28.01**	**348**	P	**P**	**11 04 23.6**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=165,slow=10,SNR=21						
TXAR				PcP	**PcP**	**11 07 37.9**	**0.0**
	comp=Z,0.9nm,0.8s,baz=150,slow=5.2,SNR=6.4						
TXAR				LR	LR	11 14 29.7	
	comp=Z,2μm,18.3s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**28.01**	**348**	P	**P**	**11 04 24.0**	**+1.2**
TXAR				PcP	**PcP**	**11 07 37.8**	**0.0**
TX31	**Lajitas Ar. Si**	**28.01**	**348**	P	**P**	**11 04 23.0**	**+0.2**
TX32	**Lajitas Array**	**28.01**	**348**	P	**P**	**11 04 23.4**	**+0.6**
TX32				IAmb	IAmb	11 04 26.9	
	comp=Z,30nm,1.5s						
JCT	**Junction City**	**28.55**	**355**	P	**P**	**11 04 28.9**	**+1.4**
JCT				IAmb	IAmb	11 04 29.9	
	comp=Z,47nm,1.4s						
JCT	**Junction City**	**28.55**	**355**	P		11 04 29.5	
	baz=174,SNR=6.2						
435B	**Jarrell**	**28.73**	**359**	P	**P**	**11 04 29.9**	**+0.9**
WHTX	**Lake Whitney,**	**29.93**	**359**	P	**P**	**11 04 40.2**	**+0.5**
WHTX				IAmb	IAmb	11 04 41.9	
	comp=Z,32nm,1.3s						
WHTX	**Lake Whitney,**	**29.93**	**359**	P		11 04 41.3	
	baz=179						
237A	**Washetta, Mont**	**29.96**	**2**	P	**P**	**11 04 40.5**	**+0.5**
237A				IAmb	IAmb	11 04 54.3	
	comp=Z,17nm,1.0s						
344A	**Westbrook Farm**	**29.98**	**11**	P	**P**	**11 04 41.3**	**+1.1**
344A				IAmb	IAmb	11 04 44.2	
	comp=Z,20nm,1.1s						
ABTX	**Abilene, Hawle**	**30.66**	**356**	P	**P**	**11 04 46.0**	**-0.2**
ABTX				IAmb	IAmb	11 04 48.3	
	comp=Z,30nm,1.3s						
ABTX	**Abilene, Hawle**	**30.66**	**356**	P		11 04 47.6	
	baz=175						
MNTX	**Cornudas Mount**	**30.68**	**346**	P		11 04 47.1	
	baz=164,SNR=6.4						
MNTX	**Cornudas Mount**	**30.68**	**346**	P	**P**	**11 04 46.8**	**+0.5**
RPN	**Rapa Nui**	**31.22**	**202**	LR	LR	11 14 04.2	
	comp=Z,2μm,21.1s,baz=34,slow=30						
Z38A	**Mt. Pleasant**	**31.25**	**3**	P	**P**	**11 04 51.9**	**+0.5**
352A	**Blakely**	**31.55**	**20**	P	**P**	**11 04 54.9**	**+0.9**
250A	**Grady**	**31.58**	**18**	P	**P**	**11 04 55.4**	**+1.2**
WLAR	**White Oak Lake**	**31.83**	**6**	P	**P**	**11 04 57.1**	**+0.7**
121A	**Cookes Peak, D**	**32.11**	**343**	P		11 05 01.1	
	baz=160,SNR=8.5						
121A	**Cookes Peak, D**	**32.12**	**343**	P	**P**	**11 05 00.2**	**+1.0**
121A				IAmb	IAmb	11 05 02.2	
	comp=Z,19nm,1.1s						
CCAR	**Cane Creek**	**32.22**	**8**	P	**P**	**11 05 00.7**	**+0.9**
MSTX	**Muleshoe**	**32.35**	**351**	P		11 05 02.5	
	baz=169,SNR=8.3						
MSTX	**Muleshoe**	**32.36**	**351**	P	**P**	**11 05 01.9**	**+0.6**
LRAL	**Lakeview Retre**	**32.36**	**16**	P		11 05 02.8	
	baz=199						
LRAL	**Lakeview Retre**	**32.36**	**16**	P	**P**	**11 05 02.4**	**+1.3**
LRAL				IAmb	IAmb	11 05 04.0	
	comp=Z,22nm,1.4s						
X34A	**Smith Ranch, M**	**32.54**	**359**	P	**P**	**11 05 03.8**	**+1.1**
Y45A	**Yeager Farm, C**	**32.55**	**12**	P	**P**	**11 05 02.8**	**+0.1**
X37A	**Clayton**	**32.55**	**2**	P	**P**	**11 05 03.6**	**+0.8**
MIAR	**Mount Ida**	**32.63**	**5**	P		11 05 03.9	
	baz=186						
MIAR	**Mount Ida**	**32.63**	**5**	P	**P**	**11 05 02.6**	**-0.8**
MIAR				IAmb	IAmb	11 05 05.4	
	comp=Z,18nm,1.2s						
152A	**Waverly Hall**	**32.71**	**19**	P	**P**	**11 05 04.5**	**+0.4**
152A				IAmb	IAmb	11 05 06.3	
	comp=Z,18nm,0.9s						
WMOK	**Wichita Mounta**	**32.71**	**357**	P		11 05 05.1	
	baz=177						
WMOK	**Wichita Mounta**	**32.71**	**357**	P	**P**	**11 05 04.1**	**-0.1**
WMOK				IAmb	IAmb	11 05 05.9	
	comp=Z,17nm,1.5s						
ETMB	**Extrema**	**32.79**	**111**	*eP*	**P**	**11 05 05.3**	**+0.1**
TUC	**Tucson**	**32.91**	**338**	P	**P**	**11 05 05.4**	**-0.7**
TUC	**Tucson**	**32.91**	**338**	P		11 05 07.2	
	baz=154						
AMTX	**Amarillo**	**33.10**	**353**	P		11 05 09.6	
	baz=172						
AMTX	**Amarillo**	**33.10**	**353**	P	**P**	**11 05 08.0**	**+0.3**
Z51A	**Franklin**	**33.16**	**18**	IAmb	IAmb	11 05 10.2	
	comp=Z,27nm,1.2s						
FNO	**Franklin**	**33.19**	**359**	P	**P**	**11 05 08.8**	**+0.5**
W39A	**Magazine**	**33.26**	**5**	P		11 05 10.3	
	baz=186						
W39A	**Magazine**	**33.26**	**5**	IAmb	IAmb	11 05 11.5	
	comp=Z,33nm,1.5s						
BNM	**Barren Site**	**33.32**	**345**	P	**P**	**11 05 11.0**	**+1.2**
W41B	**Gary Mavity, V**	**33.40**	**7**	P		11 05 11.6	
	baz=189						
214A	**Organ Pipe Nat**	**33.41**	**335**	P	**P**	**11 05 11.1**	**+0.8**
214A	**Organ Pipe Nat**	**33.41**	**335**	P		11 05 10.5	
	baz=151						
WHAR	**Wooly Hollow**	**33.51**	**7**	P	**P**	**11 05 11.9**	**+0.8**
WHAR				IAmb	IAmb	11 05 13.2	
	comp=Z,31nm,1.3s						
BCOK	**Bluff Creek, N**	**33.59**	**359**	P	**P**	**11 05 12.7**	**+0.9**
X48A	**Hartselle**	**33.69**	**15**	IAmb	IAmb	11 05 14.5	
	comp=Z,28nm,1.2s						
LPAZ	**La Paz**	**33.76**	**123**	P	**P**	**11 05 14.6**	**+0.4**
	comp=Z,3.2nm,1.0s,baz=298,slow=3.8,SNR=8.5						
LPAZ	**La Paz**	**33.76**	**123**	*eP*	**P**	**11 05 15.4**	**+1.1**
LPAZ	**La Paz**	**33.76**	**123**	*eP*	**P**	**11 05 15.8**	**+1.5**
TUL1	**Leonard**	**33.85**	**2**	P		11 05 15.2	
	baz=182,SNR=5.3						
W45A	**Hickory Valley**	**33.87**	**12**	P	**P**	**11 05 15.2**	**+0.9**
PLAL	**Pickwick Lake**	**33.94**	**13**	IAmb	IAmb	11 05 17.7	
	comp=Z,29nm,1.3s						
PSGCX	**Pisagua**	**33.95**	**130**		pwP	11 05 21.9	+0.8
ANMO	**Albuquerque**	**34.04**	**346**	P	**P**	**11 05 17.4**	**+1.4**
ANMO				IAmb	IAmb	11 05 18.8	
	comp=Z,15nm,1.5s						
ANMO	**Albuquerque**	**34.04**	**346**	P		11 05 17.1	
	baz=163						
FCAR	**Ozark Folk Cen**	**34.12**	**7**	P	**P**	**11 05 16.8**	**+0.4**
FCAR				IAmb	IAmb	11 05 18.2	
	comp=Z,17nm,1.4s						
HHAR	**Hobbs**	**34.32**	**4**	P	**P**	**11 05 18.8**	**+0.5**
U32A	**Winter Ranch,**	**34.36**	**357**	P	**P**	**11 05 19.8**	**+1.2**
U32A				IAmb	IAmb	11 05 20.1	
	comp=Z,35nm,1.4s						
X51A	**Calhoun**	**34.41**	**18**	P	**P**	**11 05 19.1**	**+0.1**
CROK	**Carrier**	**34.44**	**359**	P	**P**	**11 05 19.6**	**+0.3**
U38A	**Gravette**	**34.45**	**4**	P	**P**	**11 05 19.3**	**0.0**
U38A				IAmb	IAmb	11 05 20.9	
	comp=Z,27nm,1.4s						
U40A	**Yellville**	**34.49**	**6**	P		11 05 20.6	
	baz=187						
U40A	**Yellville**	**34.50**	**6**	P	**P**	**11 05 20.5**	**+0.8**
U40A				IAmb	IAmb	11 05 21.6	
	comp=Z,26nm,1.4s						
GNAR	**Gosnell**	**34.50**	**10**	P	**P**	**11 05 21.4**	**+1.7**
SWET	**Sewanee**	**34.71**	**16**	IAmb	IAmb	11 05 23.6	
	comp=Z,34nm,1.4s						
OK032	**Salt Plains WL**	**34.75**	**358**	P	**P**	**11 05 22.9**	**+1.0**
T35A	**Sooner Cattle**	**34.84**	**1**	P	**P**	**11 05 22.9**	**+0.2**
T35A				IAmb	IAmb	11 05 24.4	
	comp=Z,32nm,1.3s						
W50A	**Signal Mountai**	**34.87**	**17**	IAmb	IAmb	11 05 24.8	
	comp=Z,30nm,1.4s						
V48A	**Smith Brothers**	**34.97**	**15**	P	**P**	**11 05 24.6**	**+0.9**
WVT	**Waverly**	**35.10**	**13**	P		11 05 25.5	
	baz=196						
WVT	**Waverly**	**35.10**	**13**	P	**P**	**11 05 25.0**	**+0.1**
W18A	**Petrified Fore**	**35.11**	**342**	P	**P**	**11 05 27.2**	**+1.9**
W18A				IAmb	IAmb	11 05 40.7	
	comp=Z,9.4nm,0.8s						
W52A	**Murphy**	**35.19**	**19**	IAmb	IAmb	11 05 28.3	
	comp=Z,30nm,1.4s						
GLA	**Glamis**	**35.22**	**334**	P	**P**	**11 05 26.1**	**0.0**
GLA				IAmb	IAmb	11 05 28.8	
	comp=Z,19nm,1.4s						
PBMO	**Poplar Bluff**	**35.23**	**9**	P	**P**	**11 05 26.6**	**+0.6**
PBMO				IAmb	IAmb	11 05 27.9	
	comp=Z,26nm,1.1s						
CPCT	**Cooper Cave**	**35.33**	**18**	IAmb	IAmb	11 05 29.1	
	comp=Z,26nm,1.2s						
MGMO	**Mountain Grove**	**35.35**	**7**	IAmb	IAmb	11 05 29.2	
	comp=Z,41nm,1.4s						
SAML	**Samuel**	**35.38**	**108**	P	**P**	**11 05 27.5**	**-0.1**
SAML				IAmb	IAmb	11 05 28.6	
	comp=Z,34nm,1.4s						
SAML	**Samuel**	**35.38**	**108**	*eP*	**P**	**11 05 27.8**	**+0.1**
JSC	**Jenkinsville**	**35.41**	**23**	IAmb	IAmb	11 05 29.7	
	comp=Z,27nm,1.4s						
BG3	**Lake Jocassee**	**35.43**	**20**	P	**P**	**11 05 28.7**	**+0.9**
BG3				IAmb	IAmb	11 05 30.4	
	comp=Z,33nm,1.5s						
Y57A	**Sumter**	**35.52**	**24**	P	**P**	**11 05 29.5**	**+0.9**
Y57A				IAmb	IAmb	11 05 30.6	
	comp=Z,22nm,1.0s						
PAULI	**Pauline**	**35.67**	**22**	P	**P**	**11 05 30.8**	**+0.9**
V51A	**Loudon**	**35.71**	**18**	P	**P**	**11 05 31.1**	**+0.9**
V51A				IAmb	IAmb	11 05 32.5	
	comp=Z,20nm,1.1s						
T25A	**Trinidad**	**35.72**	**350**	P	**P**	**11 05 32.1**	**+1.6**
T25A				IAmb	IAmb	11 05 33.6	
	comp=Z,37nm,1.4s						
T25A	**Trinidad**	**35.72**	**350**	P		11 05 32.6	
	baz=167,SNR=7.4						
TKL	**Tuckaleechee C**	**35.76**	**19**	P	**P**	**11 05 31.4**	**+0.8**
	comp=Z,12nm,1.1s,baz=174,slow=6.2,SNR=6.5						
TKL	**Tuckaleechee C**	**35.76**	**19**	P	**P**	**11 05 31.9**	**+1.3**
S39A	**Bolivar**	**35.77**	**5**	IAmb	IAmb	11 05 32.6	
	comp=Z,40nm,1.5s						
U49A	**Red Boiling Sp**	**35.97**	**15**	P	**P**	**11 05 32.7**	**+0.3**
U49A				IAmb	IAmb	11 05 34.2	
	comp=Z,25nm,1.2s						
V52A	**Sevierville**	**35.98**	**19**	IAmb	IAmb	11 05 34.7	
	comp=Z,21nm,1.2s						
PDMCI	**Parker Dam,Lak**	**35.99**	**335**	P		11 05 34.7	
	baz=150						
BC3	**Big Chuckawall**	**36.01**	**333**	P		11 05 35.1	
	baz=148						
WUAZ	**Wupatki**	**36.01**	**340**	P		11 05 35.4	
	baz=155						
WUAZ	**Wupatki**	**36.01**	**340**	IAmb	IAmb	11 05 39.8	
	comp=Z,18nm,1.4s						
PB10	**IPOC Station P**	**36.06**	**136**		pwP	11 05 40.1	+0.8
V53A	**Saluda**	**36.08**	**20**	P	**P**	**11 05 34.0**	**+0.5**
V53A				IAmb	IAmb	11 05 35.9	
	comp=Z,20nm,1.1s						
IRM	**Iron Mountain**	**36.29**	**334**	P		11 05 37.6	
	baz=149						
S44A	**Carbondale**	**36.32**	**10**	P	**P**	**11 05 36.0**	**+0.6**
CCM	**Cathedral Cave**	**36.36**	**8**	P		11 05 36.9	
	baz=190						
CCM	**Cathedral Cave**	**36.36**	**8**	P	**P**	**11 05 36.6**	**+0.9**
CCM				IAmb	IAmb	11 05 37.5	
	comp=Z,16nm,1.1s						
CCM				PcP	**PcP**	**11 08 00.9**	**+0.7**
FVM	**French Village**	**36.41**	**9**	P	**P**	**11 05 35.9**	**-0.3**
FVM				IAmb	IAmb	11 05 37.8	
	comp=Z,29nm,1.4s						
BOAV	**Boa Vista**	**36.45**	**89**	*eP*	**P**	**11 05 36.9**	**0.0**
MVCO	**Mesa Verde**	**36.70**	**345**	P		11 05 40.0	
	baz=161,SNR=8.6						
MVCO	**Mesa Verde**	**36.70**	**345**	P	**P**	**11 05 39.2**	**+0.3**
MVCO				IAmb	IAmb	11 05 41.6	
	comp=Z,32nm,1.4s						
S22A	**4UR Ranch, Cre**	**36.80**	**347**	P		11 05 42.4	
	baz=164,SNR=8.5						
USIN	**University of**	**36.90**	**12**	P	**P**	**11 05 40.8**	**+0.5**
KSU1	**Kansas State U**	**37.02**	**0**	P		11 05 42.6	
	baz=181						
KSU1	**Kansas State U**	**37.02**	**0**	P	**P**	**11 05 42.1**	**+0.8**
KSU1				IAmb	IAmb	11 05 43.4	
	comp=Z,44nm,1.4s						
PTGA	**Pitinga**	**37.11**	**94**	P	**P**	**11 05 43.1**	**+0.6**
PTGA	**Pitinga**	**37.11**	**94**	*eP*	**P**	**11 05 43.4**	**+0.8**
U54A	**Nelsons Funny**	**37.19**	**20**	P		11 05 44.1	
	baz=206,SNR=7.7						
U54A	**Nelsons Funny**	**37.20**	**20**	P	**P**	**11 05 43.8**	**+0.8**
KSCO	**Kaye Shedlock'**	**37.29**	**353**	P		11 05 46.1	
	baz=171,SNR=8.3						
WCI	**Wyandotte Cave**	**37.46**	**14**	P	**P**	**11 05 45.4**	**+0.3**

ISA Isabella, Lake 39.06 332 P P 11 05 59.2 +0.5
H03N2 Juan Fernandez 39.06 156 T T 11 47 31.1
baz=334,slow=77,SNR=291
H03N1 Juan Fernandez 39.08 156 T T 11 47 36.0
baz=334,slow=77,SNR=280
H03N3 Juan Fernandez 39.08 156 T T 11 47 28.9
baz=334,slow=77,SNR=287
HDIL Hopedale 39.10 9 P 11 06 00.5
baz=192,SNR=9.8
OGNE Ogallala 39.13 354 P 11 06 01.4
baz=172
OGNE Ogallala 39.13 354 P P 11 06 00.4 +1.1
OGNE IAmb IAmb 11 06 08.1
comp=Z,29nm,1.2s
U61A Possum Corner 39.18 27 P 11 06 01.3
baz=214
AC02 Maricunga 39.22 139 P P 11 06 01.5 +0.8
T59A Double "B" Far 39.23 25 P P 11 06 00.1 +0.1
T59A IAmb IAmb 11 06 02.1
comp=Z,49nm,1.2s
Q52A Bidwell 39.26 18 IAmb IAmb 11 06 02.3
comp=Z,29nm,1.0s
SFIN Lafayette 39.34 12 P 11 06 01.2
baz=196,SNR=5.5
SFIN Lafayette 39.34 12 IAmb IAmb 11 06 02.2
comp=Z,26nm,1.0s
BGNE Belgrade 39.34 359 P 11 06 02.3
baz=178
BGNE Belgrade 39.34 359 P P 11 06 01.4 +0.4
S57A Dark Hollow, R 39.35 23 P 11 06 01.7
baz=209
R55A Marlinton 39.37 21 P 11 06 03.2
baz=207
VILB Vilhena 39.38 113 eP P 11 06 02.4 +0.7
O20A White River Ci 39.40 346 P 11 06 03.0
baz=162
Q53A Leroy 39.41 19 P 11 06 03.3
baz=205,SNR=5.7
VES Vestal, Richgr 39.49 331 P 11 06 04.0
baz=144
P51A Williamsport 39.50 17 IAmb IAmb 11 06 03.9
comp=Z,39nm,1.2s
CWC Cottonwood Cre 39.51 333 P 11 06 04.8
baz=146
S58A Poland Farm, P 39.58 24 P P 11 06 03.5 +0.6
S58A IAmb IAmb 11 06 04.9
comp=Z,32nm,1.1s
S58A Poland Farm, P 39.58 24 P 11 06 04.4
baz=211,SNR=5.5
N23A Red Feather La 39.65 349 P 11 06 05.9
baz=166,SNR=5.1
SIV San Ignacio 39.70 118 P P 11 06 04.2 -0.1
comp=Z,13nm,1.2s,baz=307,slow=7.7,SNR=18
T60A Surry 39.73 26 P 11 06 05.8
baz=213
T60A Surry 39.73 26 P P 11 06 05.0 +0.9
R56A Bull Pasture M 39.74 22 P 11 06 05.8
baz=208
Q54A Coxs Mills 39.75 20 IAmb IAmb 11 06 06.5
comp=Z,28nm,1.0s
O49A Covington 39.80 15 P P 11 06 04.0 -0.8
O49A IAmb IAmb 11 06 06.0
comp=Z,34nm,1.1s
L34A Svendsen Farm, 39.89 1 P P 11 06 06.1 +0.6
L34A IAmb IAmb 11 06 07.1
comp=Z,25nm,1.0s
P52A Corning 39.92 18 IAmb IAmb 11 06 07.5
comp=Z,51nm,1.4s
P52A Corning 39.92 18 P 11 06 07.1
baz=204
R58B Mineral 39.95 24 IAmb IAmb 11 06 08.1
comp=Z,32nm,1.4s
R58B Mineral 39.95 24 P 11 06 07.3
baz=211
PHWY Pilot Hill 39.96 350 P P 11 06 07.1 +0.7
SCIA State Center 39.97 4 P 11 06 07.3
baz=186
SCIA State Center 39.97 4 P P 11 06 06.4 +0.3
SCIA IAmb IAmb 11 06 07.7
comp=Z,47nm,1.1s
R57A Stanardsville 39.98 23 P 11 06 07.6
baz=210
R11A Troy Canyon, C 40.07 337 P P 11 06 06.9 -0.3
RDMU Red Mountain 40.14 345 P P 11 06 08.3 +0.4
SPR3 Spring Creek 3 40.17 339 P P 11 06 09.3 +1.0
R58A Rapidan 40.19 23 P 11 06 09.5
baz=210
MPU Maple Canyon 40.20 342 P P 11 06 08.9 +0.6
NLU North Lily Min 40.28 342 P P 11 06 09.7 +0.7
L40A Anamosa 40.32 7 IAmb IAmb 11 06 10.6
comp=Z,31nm,1.1s
O52A Adamsville 40.45 18 P P 11 06 09.9 -0.2
O52A IAmb IAmb 11 06 12.1
comp=Z,38nm,1.1s
L42A Oliver, Polo 40.46 8 P P 11 06 09.9 -0.3
L42A IAmb IAmb 11 06 11.6
comp=Z,44nm,1.1s
TPH Tonopah 40.50 335 P P 11 06 11.5 +0.7
TPH IAmb IAmb 11 06 17.5
comp=Z,40nm,1.5s
K31A O'Neill 40.57 358 P P 11 06 11.6 +0.4
K31A IAmb IAmb 11 06 16.9
comp=Z,25nm,1.0s
RWWY Rawlins 40.66 348 P P 11 06 13.2 +1.0
DUG Dugway, Tooele 40.73 341 IAmb IAmb 11 06 15.9
comp=Z,25nm,1.4s
DUG Dugway, Tooele 40.73 341 P 11 06 14.6
baz=156,SNR=5.7
K38A Parkersburg 40.74 5 IAmb IAmb 11 06 13.6
comp=Z,47nm,1.1s
O53A New Philadelph 40.77 19 P 11 06 13.9
baz=205
O53A New Philadelph 40.77 19 P P 11 06 13.5 +0.7
O53A IAmb IAmb 11 06 14.5
comp=Z,34nm,1.4s
CTU Camp Tracy 40.86 343 P P 11 06 14.3 +0.6
P57A Homestead Farm 41.21 22 P 11 06 18.2
baz=210
P57A Homestead Farm 41.21 22 P P 11 06 17.8 +1.4
P57A IAmb IAmb 11 06 19.0
comp=Z,31nm,1.2s
PTLB Pontes e Lacer 41.22 116 eP P 11 06 17.2 +0.5
NVAR Mina Array Bea 41.26 334 P P 11 06 17.9 +0.8
comp=Z,1.4nm,0.8s,baz=162,slow=8.6,SNR=11
NVAR PcP PcP 11 08 16.6 +0.6
comp=Z,1.1nm,0.8s,baz=135,slow=3.6,SNR=6.2
NVAR Mina Array Bea 41.26 334 P P 11 06 17.8 +0.7
JFWS Jewell Farm 41.27 8 IAmb IAmb 11 06 18.1
comp=Z,19nm,0.8s
JFWS Jewell Farm 41.27 8 P 11 06 17.7
baz=190,SNR=5.8
N53A Lisbon 41.39 19 IAmb IAmb 11 06 19.7
comp=Z,23nm,1.1s
K22A Casper 41.46 349 P 11 06 19.2
baz=166
K22A Casper 41.46 349 P P 11 06 20.0 +1.4
M51A Elyria 41.46 17 P 11 06 18.7
baz=203
HWUT Hardware Ranch 41.65 344 P P 11 06 20.9 +0.7
HWUT IAmb IAmb 11 06 22.8
comp=Z,29nm,1.4s
ECSD EROS Data Cent 41.65 0 IAmb IAmb 11 06 21.4
comp=Z,35nm,1.1s
ECSD EROS Data Cent 41.65 0 P 11 06 20.1
baz=181,SNR=17
KVN Kaiserville 41.69 335 P P 11 06 20.0 -0.7
ITTB Itaituba 41.70 99 eP P 11 06 20.5 -0.3
N54A Moraine State 41.81 19 P 11 06 22.8
baz=206,SNR=5.6
N54A Moraine State 41.81 19 P P 11 06 21.6 +0.3
N54A IAmb IAmb 11 06 23.3
comp=Z,40nm,1.1s
WAKR Walker 41.82 333 P P 11 06 22.0 +0.3
M52A Chesterland 41.90 18 P P 11 06 21.8 -0.2
P59A Jarrettsville 41.94 24 P 11 06 24.0
baz=212
M53A WI Miller and 42.02 18 P 11 06 24.3
baz=205
M53A WI Miller and 42.02 18 IAmb IAmb 11 06 24.8
comp=Z,24nm,1.1s
ELK Elko 42.04 339 P P 11 06 23.4 -0.1
ELK PcP 11 08 19.0 +0.5
I37A Lemond, Waseca 42.05 4 P P 11 06 22.7 -0.6
I37A IAmb IAmb 11 06 24.4
comp=Z,38nm,1.4s
YERR Yerington 42.13 334 P P 11 06 25.3 +1.1

HVU Hansel Valley 42.16 342 P P 11 06 24.7 +0.3
HVU IAmb IAmb 11 06 27.0
comp=Z,23nm,1.1s
BW06 Boulder Array 42.21 346 P P 11 06 25.4 +0.6
PDAR Pinedale Array 42.21 346 P P 11 06 24.9 +0.1
comp=Z,2.5nm,0.8s,baz=152,slow=8.2,SNR=18
PDAR LR LR 11 23 31.4
comp=Z,1μm,19.1s,baz=179,slow=36
PDAR Pinedale Array 42.21 346 P P 11 06 24.3 -0.5
SSPA Standing Stone 42.26 22 P P 11 06 25.5 +0.5
SSPA IAmb IAmb 11 06 27.2
comp=Z,28nm,1.2s
SSPA Standing Stone 42.26 22 P 11 06 26.4
baz=209
MVL Millersville 42.30 24 IAmb IAmb 11 06 27.7
comp=Z,34nm,1.2s
PAGS Pennsylvania G 42.35 23 P P 11 06 25.4 -0.3
PAGS IAmb IAmb 11 06 28.6
comp=Z,22nm,1.2s
PNTR Pine Nut 42.37 334 P P 11 06 26.9 +0.7
PNTR IAmb IAmb 11 06 29.7
comp=Z,18nm,1.1s
SUSD Miller 42.40 358 P P 11 06 26.0 -0.1
SUSD IAmb IAmb 11 06 27.7
comp=Z,39nm,1.1s
M54A Oil Creek Stat 42.41 19 P P 11 06 26.5 +0.3
M54A IAmb IAmb 11 06 28.2
comp=Z,48nm,1.2s
M54A Oil Creek Stat 42.41 19 P 11 06 27.0
baz=206,SNR=5.3
I42A Draeger Farm, 42.42 9 IAmb IAmb 11 06 27.5
comp=Z,32nm,1.1s
N57A Milroy 42.49 22 P 11 06 28.0
baz=210
NPGB Novo Progresso 42.49 103 eP P 11 06 26.7 -0.6
RSSD Black Hills 42.50 352 P 11 06 28.7
baz=170
RSSD Black Hills 42.50 352 P P 11 06 27.6 +0.4
RSSD IAmb IAmb 11 06 29.6
comp=Z,32nm,1.5s
L53A Girard 42.62 18 P 11 06 28.8
baz=205
ERPA Erie 42.85 19 P 11 06 31.1
baz=205
ERPA Erie 42.85 19 P P 11 06 28.3 -1.4
ERPA IAmb IAmb 11 06 31.5
comp=Z,33nm,1.2s
AFDM Forest Hills D 42.88 332 P P 11 06 30.8 +0.7
MALB Monte Alegre 42.88 95 eP P 11 06 30.6 +0.1
M56A Emporium 42.90 21 P 11 06 31.5
baz=208,SNR=7.8
CLDB Colidor 42.90 108 eP P 11 06 29.8 -0.8
O60A Telford 42.96 24 P 11 06 32.3
baz=213
REDW Red Top Meadow 43.09 345 P P 11 06 32.3 +0.3
REDW IAmb IAmb 11 06 34.1
comp=Z,29nm,1.5s
M57A Sunshine Farm, 43.15 22 P 11 06 33.9
baz=210,SNR=5.3
M57A Sunshine Farm, 43.15 22 IAmb IAmb 11 06 34.4
comp=Z,36nm,1.1s
SNOW Snow King Moun 43.16 345 P P 11 06 33.2 +0.7
SPMN Marine on St. 43.30 4 P 11 06 34.1
baz=186,SNR=5.2
SPMN Marine on St. 43.30 4 IAmb IAmb 11 06 34.5
comp=Z,25nm,1.2s
N59A State Game Lan 43.32 24 P 11 06 34.9
baz=212
BEKR Beckworth 43.35 334 P P 11 06 35.2 +1.1
N60A Cedar Hill Far 43.55 24 P 11 06 37.0
baz=213
G40A Rib Lake 43.60 7 IAmb IAmb 11 06 35.9
comp=Z,26nm,1.5s
ORV Oroville 43.61 332 P P 11 06 37.7 +1.7
L56A Greenwood 43.69 21 P 11 06 38.2
baz=209
L56A Greenwood 43.69 21 IAmb IAmb 11 06 38.7
comp=Z,24nm,0.9s
L57A Andrews Acres 43.83 22 P 11 06 38.5
baz=210
ODNJ Ogdensburg 43.93 25 IAmb IAmb 11 06 40.5
comp=Z,25nm,1.0s
M59A Waymart 43.98 23 P 11 06 39.8
baz=212
H17A Grant Village 43.99 346 P P 11 06 40.5 +1.2
I51A Listowel 44.07 17 P 11 06 40.1
baz=203
LKWY Lake 44.11 346 P P 11 06 41.6 +1.4
M60A Port Jervis 44.13 24 P 11 06 40.9
baz=213,SNR=5.8
L58A Harry Jones Me 44.25 23 P 11 06 41.9
baz=211
K56A Middlesex 44.27 21 P 11 06 42.6
baz=209
HLID Hailey 44.28 342 P 11 06 42.6
baz=155,SNR=9.0
HLID Hailey 44.29 342 P P 11 06 42.7 +1.1
MEDO Medina 44.29 19 P P 11 06 41.7 +0.4
MEDO IAmb IAmb 11 06 43.1
comp=Z,31nm,1.1s
TAOE Nuku Hiva Isla 44.32 255 eT T 11 53 41.9
comp=Z,30nm,0.2s
J54A Appleton 44.33 19 IAmb IAmb 11 06 44.1
comp=Z,22nm,1.1s
BINY Binghamton 44.33 22 P 11 06 43.1
baz=211
YMR Madison River 44.34 346 P P 11 06 43.2 +1.1
RLMT Red Lodge 44.38 348 P 11 06 43.2
baz=162
YNE Yellowstone No 44.44 347 P P 11 06 43.2 +0.4
M61A Granite Spring 44.47 25 P 11 06 44.3
baz=214,SNR=6.6
YHB Horse Butte 44.48 346 P P 11 06 45.2 +2.1
YHB IAmb IAmb 11 06 46.1
comp=Z,16nm,1.4s
COWI Conover 44.55 8 IAmb IAmb 11 06 44.5
comp=Z,28nm,1.2s
RKT Rikitea 44.57 234 eLR LR 11 18 59.0
comp=Z,515nm,29.0s
RKT Rikitea 44.57 234 eT T 11 54 03.5
comp=Z,3.9nm,0.3s
K57A Scipio Center 44.59 22 P 11 06 44.8
baz=210
E28A Huff 44.61 356 P P 11 06 44.9 +1.0
QLMT Earthquake Lak 44.61 345 P P 11 06 44.8 +0.6
L59A Walton 44.69 23 P 11 06 46.0
baz=212,SNR=6.4
L60A Shokan 44.84 24 P 11 06 46.7
baz=213
J56A Wolcott 44.94 21 P 11 06 47.2
baz=209,SNR=6.6
K58A Earlville 44.94 22 P 11 06 47.1
baz=211,SNR=7.5
MCPB Macapa, AP 44.99 92 eP P 11 06 45.9 -1.5
MOD Modoc Plateau 45.00 335 P P 11 06 47.7 +0.5
D32A Dogwood Acres, 45.05 360 P P 11 06 46.5 -0.8
BI02 San Fabin de 45.22 151 P P 11 06 49.7 +0.7
BI02 IAmb IAmb 11 06 50.9
comp=Z,27nm,1.5s
K59A Cooperstown 45.26 23 P 11 06 50.5
baz=212
M63A Gales Ferry 45.30 27 P P 11 06 50.6 +1.2
M63A Gales Ferry 45.30 27 P 11 06 51.3
baz=216
LAO LASA Array 45.33 351 P 11 06 50.3
baz=167
J57A Williamstown 45.36 22 P 11 06 50.6
baz=210
BOZ Bozeman (W) 45.38 346 P 11 06 51.0
baz=159
DLMT Dillon 45.41 345 IAmb IAmb 11 06 52.8
comp=Z,16nm,1.4s
PECO Prince Edward 45.47 20 P P 11 06 51.6 +0.9
PECO IAmb IAmb 11 06 52.2
comp=Z,15nm,1.0s
H53A Bobcaygeon 45.51 18 P 11 06 52.2
baz=206
SADO Sadowa 45.51 18 IAmb IAmb 11 06 52.3
comp=Z,19nm,1.1s
DELO Deloro Mine 45.77 19 IAmb IAmb 11 06 54.6
comp=Z,19nm,1.1s
LRM Limekiln Ridge 45.80 345 P P 11 06 54.0 +0.4
K05A Summer Lake 45.92 335 P P 11 06 55.9 +1.3
K05A IAmb IAmb 11 07 06.7
comp=Z,21nm,1.3s
I57A Carthage 45.94 21 P 11 06 55.9
baz=210
J59A Piesco 45.97 23 P 11 06 55.9
baz=212
I58A Old Forge 45.99 22 P 11 06 56.0
baz=211
EYMN Ely 46.11 5 P 11 06 55.6
baz=188
EYMN Ely 46.11 5 P P 11 06 55.5 -0.2
AQDB Aquidauana 46.16 121 eP P 11 06 57.2 +0.6
AGMN Agassiz Nation 46.23 1 P 11 06 57.5
baz=182,SNR=9.5
ACCN Adirondack Com 46.24 24 P P 11 06 57.1 +0.3
L64A Middleborough 46.26 27 P 11 06 58.8
baz=218
G54A Lake Saint Pet 46.40 18 P 11 06 58.9
baz=207,SNR=5.6
PLVO Plevna 46.41 19 PcP 11 08 33.8 +0.8
HRY Holter Researc 46.47 346 P P 11 06 59.3 +0.6
H57A Richville 46.49 21 P 11 06 59.8
baz=210
J05D Fort Rock, OR 46.52 336 P 11 07 00.8
baz=146,SNR=6.4
I60A Shoreham 46.77 24 P 11 07 01.3
baz=213
DGMT Dagmar 46.80 353 P 11 07 02.0
baz=170
PINE Pine Mountain 46.83 336 IAmb IAmb 11 07 12.8
comp=Z,16nm,1.4s
ALGO Algonquin Park 46.91 18 P 11 07 02.5
baz=206
LONY Lake Ozonia 46.93 22 IAmb IAmb 11 07 03.2
comp=Z,17nm,1.3s
LONY Lake Ozonia 46.93 22 P 11 07 02.9
baz=211
K02D Willamette Mer 47.10 333 P 11 07 05.6
baz=142
MSO Missoula 47.12 344 P 11 07 04.2
baz=157
EGMT Eagleton 47.25 348 P 11 07 05.4
baz=163,SNR=5.9
EGMT Eagleton 47.25 348 P P 11 07 05.3 +0.6
EGMT IAmb IAmb 11 07 19.1
comp=Z,16nm,1.4s
H59A Cadyville 47.28 23 P 11 07 05.0
baz=212
SNDB Serra Nova Dou 47.45 108 eP P 11 07 05.7 -1.1
CPUP Villa Florida 47.48 129 P P 11 07 06.7 -0.1
comp=Z,7.4nm,1.1s,baz=308,slow=4.1,SNR=4.4
CPUP LR LR 11 26 09.9
comp=Z,249nm,21.2s,baz=308,slow=35
CPUP Villa Florida 47.48 129 IAmb IAmb 11 07 08.8
comp=Z,31nm,1.5s
CPUP Villa Florida 47.48 129 eP P 11 07 08.2 +1.4
FRNY Flat Rock 47.48 23 IAmb IAmb 11 07 08.1
comp=Z,16nm,1.1s
PRPB Parauapebas 47.78 100 eP P 11 07 08.6 -0.8
ARAG Araguaiana, MT 47.96 113 eP P 11 07 10.9 +0.2
H04A Detroit Lake 48.07 336 P P 11 07 11.8 +0.7
H04A IAmb IAmb 11 07 39.6
comp=Z,18nm,1.4s
E09A Wood Farm, Sta 48.12 340 IAmb IAmb 11 07 12.4
comp=Z,17nm,1.3s
ULM Lac du Bonnet 48.18 1 P P 11 07 11.2 -0.7
comp=Z,7.1nm,0.8s,baz=198,slow=8.1,SNR=8.4
ULM LR LR 11 27 34.6
comp=Z,430nm,20.1s,baz=182,slow=36
ULM Lac du Bonnet 48.18 1 IAmb IAmb 11 07 12.7
comp=Z,16nm,1.0s
F07A Phinny Hill Vi 48.21 339 IAmb IAmb 11 07 13.9
comp=Z,24nm,1.4s
HAWA Hanford 48.49 339 P P 11 07 15.0 +0.6
HAWA IAmb IAmb 11 07 16.4
comp=Z,18nm,1.4s
D55A Sainte-Anne-du 48.68 20 P 11 07 16.1
baz=209
E07A Sunnyside 48.75 339 IAmb IAmb 11 07 31.5
comp=Z,20nm,1.4s
F05D White Salmon 48.77 337 P 11 07 18.3
baz=147
PLCA Paso Flores 48.81 153 P P 11 07 16.2 -0.7
comp=Z,5.7nm,1.2s,baz=327,slow=6.0,SNR=4.2
PLCA LR LR 11 23 20.6
comp=Z,1μm,19.3s,baz=325,slow=31
PLCA Paso Flores 48.81 153 P P 11 07 19.1 +2.1
PLCA IAmb IAmb 11 07 41.8
comp=Z,12nm,1.4s
PLCA Paso Flores 48.81 153 eP P 11 07 18.5 +1.5
C09A Chrisman Ranch 49.29 341 P P 11 07 20.7 +0.3
C09A IAmb IAmb 11 07 22.1
comp=Z,13nm,1.2s
NEW Newport 49.34 342 P 11 07 21.8
baz=153
H65A Eastbrook 49.60 27 P 11 07 23.6
baz=219
LTY Liberty 49.64 339 IAmb IAmb 11 07 46.9
comp=Z,13nm,1.5s
D58A Chemin du LacG 49.66 21 P 11 07 24.4
baz=212
E04D Cinebar 49.76 337 P 11 07 25.6
baz=146
LATQ La Tuque 49.94 21 P 11 07 26.4
baz=212
B08A Colville Reser 50.12 341 P P 11 07 26.5 -0.3
B08A IAmb IAmb 11 07 39.8
comp=Z,15nm,1.5s
PEXB Peixe 50.33 107 eP P 11 07 29.3 +0.4
SMTB Santa Maria do 50.38 103 eP P 11 07 30.1 +0.7
PTGB Pitanga 50.96 124 eP P 11 07 34.5 +0.8
BDFB Brasilia 51.45 112 LR LR 11 28 11.8
comp=Z,384nm,21.8s,baz=288,slow=35
A05A Maple Falls 51.62 339 IAmb IAmb 11 07 39.4
comp=Z,19nm,1.2s
IPMB Ipameri, GO 51.93 115 eP P 11 07 40.5 -0.5
BB19B Bebedouro 52.62 118 eP P 11 07 45.9 -0.1
FFC Flin Flon 52.81 356 P P 11 07 46.8 0.0
FFC IAmb IAmb 11 07 49.1
comp=Z,18nm,1.4s
ROSB Rosrio 53.07 95 eP P 11 07 48.9 -0.5
SDBA SAO DESIDERIO 53.64 107 eP P 11 07 54.0 +0.3
JANB Januaria 54.77 110 eP P 11 08 01.1 -0.8
PPT Papeete 55.29 247 LR LR 11 25 39.2
comp=Z,138nm,20.9s,baz=60,slow=30
PPT2 Papeete2 55.30 247 eS S 11 15 49.3 -0.8
comp=Z,126nm,26.2s
PPT2 eLR LR 11 23 55.6
comp=Z,513nm,25.8s,baz=57
FCC Fort Churchill 56.75 2 IAmb IAmb 11 08 16.4
comp=Z,12nm,1.1s
TBI Tubuai 56.87 240 eS S 11 16 09.8 -0.9
comp=Z,270nm,28.0s
TBI eLR LR 11 24 38.2
comp=Z,311nm,26.8s,baz=63
NBMO Morrinhos-CE 57.16 95 eP P 11 08 18.4 -0.6
NBMA Muriti-CE 58.82 100 eP P 11 08 30.4 -0.4
NBTA Tacaratu-PE 59.72 102 eP P 11 08 37.1 +0.1
NBPA Parau_RN 60.28 98 eP P 11 08 41.1 +0.3
NBLI Livramento-PB 60.61 99 eP P 11 08 43.2 +0.1
RCBR Riachuelo 61.49 98 P P 11 08 49.4 +0.3
RCBR Riachuelo 61.49 98 eP P 11 08 49.6 +0.6
NBAN Anadia - AL 61.55 102 eP P 11 08 49.2 -0.2
YKA Yellowknife Ar 61.87 351 P P 11 08 49.8 -0.8
comp=Z,3.4nm,1.0s,baz=154,slow=7.0,SNR=32
YKA LR LR 11 35 28.5
comp=Z,800nm,18.1s,baz=0.0,slow=36
NBRF Rio Formoso - 62.55 101 eP P 11 08 56.5 +0.5
WHY Whitehorse 65.34 341 P P 11 09 13.7 -0.1
WHY IAmb IAmb 11 09 17.0
comp=Z,14nm,1.4s
HYT Haines Junctio 66.35 340 P P 11 09 21.6 +1.3
GRNC Granite Creek 67.82 338 P P 11 09 30.4 +0.6
GRNC IAmb IAmb 11 09 36.8
comp=Z,16nm,1.5s
BARN Barnard Glacie 68.00 338 P P 11 09 31.4 +0.5
BARN IAmb IAmb 11 09 37.1
comp=Z,15nm,1.4s
TGL Tana Glacier 68.24 338 P P 11 09 33.7 +1.4
MCARA McCarthy VSAT 68.72 338 P 11 09 36.4
baz=130
VRDI Verde Repeater 68.78 338 P P 11 09 36.8 +1.0
VRDI IAmb IAmb 11 09 46.8
comp=Z,9.9nm,1.1s
GLB Gilahina Butte 69.05 338 P P 11 09 37.7 +0.5
GLB IAmb IAmb 11 09 48.9
comp=Z,12nm,1.4s
BMRM Bremner River 69.06 337 P P 11 09 37.2 0.0
BMRM Bremner River 69.06 337 P 11 09 38.9

baz=128
BCAR Beaver Creek A 69.37 340 P **P** 11 09 38.1 -1.1
L27K Beaver Creek, 69.38 340 P **P** 11 09 39.8 +0.6
L27K IAmb IAmb 11 09 40.7
comp=Z,16nm,1.5s
L27K Beaver Creek, 69.38 340 P 11 09 40.1
baz=131
N25K Chitina, Valde 69.44 338 P 11 09 40.8
baz=128,SNR=5.6
N25K Chitina, Valde 69.45 338 P **P** 11 09 40.1 +0.4
C36M Paulatuk 69.72 350 P 11 09 41.5
baz=151,SNR=6.4
KLU Klutina 69.88 337 P **P** 11 09 42.6 +0.2
KLU IAmb IAmb 11 09 44.6
comp=Z,18nm,1.4s
KLU Klutina 69.88 337 P 11 09 43.7
baz=127
K27K Chicken 70.10 341 P **P** 11 09 44.4 +0.8
K27K Chicken 70.10 341 P 11 09 44.9
baz=131
EGAK Eagle 70.31 342 P **P** 11 09 45.5 +0.7
EGAK Eagle 70.31 342 P 11 09 45.4
baz=132,SNR=7.9
DOT Dot Lake 70.53 340 P **P** 11 09 45.0 -1.3
PAX Paxson 70.61 339 P **P** 11 09 47.7 +0.9
PAX IAmb IAmb 11 10 07.8
comp=Z,10nm,1.5s
SCRK Sand Creek 70.71 340 IAmb IAmb 11 09 55.0
comp=Z,9.6nm,1.3s
SCRK Sand Creek 70.71 340 P 11 09 48.0
baz=129,SNR=5.9
BRSE Bradley Lake S 70.87 334 P 11 09 47.9
baz=122
SML Sawmill 71.00 337 P 11 09 49.7
baz=124,SNR=6.5
PMR Palmer 71.20 336 P **P** 11 09 50.1 -0.2
PMR IAmb IAmb 11 09 56.8
comp=Z,15nm,1.4s
PMR Palmer 71.20 336 P 11 09 51.0
baz=124,SNR=6.0
WAT6 Susitna Watana 71.22 338 P 11 09 51.1
baz=125,SNR=8.3
WAT2 Susitna Watana 71.75 338 P 11 09 54.3
baz=125,SNR=7.7
SUA Susitna One 71.78 336 P 11 09 54.7
baz=122
SUA Susitna One 71.78 336 P **P** 11 09 54.7 +0.7
HDA Harding Lake 72.00 340 P 11 09 55.6
baz=127,SNR=7.6
HDA P 11 09 55.6
baz=127,SNR=7.6
CUT Chulitna 72.09 337 P 11 09 56.1
baz=123
PRP Porcupine Dome 72.19 341 P 11 09 56.9
baz=128
ILAR Eielson Array 72.20 340 P **P** 11 09 56.1 -0.2
comp=Z,5.0nm,0.8s,baz=148,slow=4.7,SNR=44
ILAR LR LR 11 42 30.0
comp=Z,591nm,18.4s,baz=123,slow=36
MCK McKinley 72.32 338 IAmb IAmb 11 09 59.8
comp=Z,15nm,1.2s
MCK McKinley 72.32 338 P 11 09 58.4
baz=124
SKT Skwentna 72.37 336 P 11 09 57.2
baz=122
SKT Skwentna 72.37 336 P **P** 11 09 57.4 0.0
SKT IAmb IAmb 11 10 07.8
comp=Z,12nm,1.3s
WRH Wood River Hil 72.44 339 IAmb IAmb 11 10 00.9
comp=Z,15nm,1.4s
COLA College 72.59 340 P **P** 11 10 00.5 +2.0
COLA IAmb IAmb 11 10 00.9
comp=Z,12nm,1.1s
TCOL CIGO, UAF Yank 72.59 340 IAmb IAmb 11 10 00.9
comp=Z,13nm,1.2s
TRF Thorofare Moun 72.67 338 P 11 09 59.0
baz=123
TRF Thorofare Moun 72.67 338 P **P** 11 09 59.2 -0.2
TRF IAmb IAmb 11 10 21.0
comp=Z,8.8nm,1.2s
RES Resolute Bay 72.71 1 P **P** 11 09 58.5 -0.7
RES IAmb IAmb 11 09 60.0
comp=Z,13nm,1.1s
FYU Fort Yukon 72.75 342 IAmb IAmb 11 10 18.8
comp=Z,21nm,1.4s
NEA2 Nenana 72.86 339 P 11 10 00.2
baz=124,SNR=15
KTH Kantishna Hill 72.96 338 IAmb IAmb 11 10 02.2
comp=Z,14nm,1.3s
BMAR Burnt Mountain 73.10 343 P **P** 11 10 01.8 +0.1
PPLA Purkeypile 73.11 337 P **P** 11 10 01.8 -0.1
PPLA Purkeypile 73.11 337 P 11 10 01.5
baz=121,SNR=10
I23K Minto, Yukon-K 73.27 340 P 11 10 03.0
baz=124,SNR=16
BPAW Bear Paw Mtn. 73.28 338 P 11 10 02.6
baz=122,SNR=7.0
BPAW Bear Paw Mtn. 73.28 338 IAmb IAmb 11 10 15.6
comp=Z,15nm,1.4s
CHUM Lake Minchumin 73.66 338 P 11 10 04.1
baz=121
MLY Manley 73.69 339 P **P** 11 10 05.0 -0.2
MLY Manley 73.69 339 P 11 10 05.1
baz=123,SNR=11
COLD Coldfoot 74.73 341 IAmb IAmb 11 10 13.0
comp=Z,18nm,1.5s
COLD Coldfoot 74.73 341 P 11 10 12.1
baz=124,SNR=13
IMAR Indian Mountai 75.27 339 P **P** 11 10 13.7 -0.5
TOLK Toolik Lake Re 75.33 342 P 11 10 15.5
baz=125,SNR=5.9
TOLK Toolik Lake Re 75.33 342 P **P** 11 10 14.5 -0.2
TOLK IAmb IAmb 11 10 16.7
comp=Z,23nm,1.5s
ICESG Greenland Ices 77.03 18 *i* P **P** 11 10 25.2 +0.5
ICESG IAmb IAmb 11 10 26.0
comp=Z,10nm,0.8s
EUNU Eureka 78.27 2 P **P** 11 10 31.6 +0.6
EUNU IAmb IAmb 11 10 32.8
comp=Z,11nm,1.0s
SUMG Summit 79.13 15 *i* P **P** 11 10 37.6 +1.2
SUMG IAmb IAmb 11 10 38.4
comp=Z,14nm,1.0s
NEEM North Greenlan 79.38 9 *i* P **P** 11 10 38.2 +0.7
NEEM IAmb IAmb 11 10 40.4
comp=Z,6.6nm,1.0s
RDOG Red Dog Mine 79.40 340 P 11 10 39.1
baz=112
RDOG Red Dog Mine 79.40 340 P **P** 11 10 38.1 +0.7
DAG Danmarks Havn 85.49 13 *i* P **P** 11 11 09.1 +0.1
DAG IAmb IAmb 11 11 10.1
comp=Z,2.8nm,1.3s
NOR Nord 86.71 8 *i* P **P** 11 11 15.2 +0.2
NOR IAmb IAmb 11 11 16.5
comp=Z,2.8nm,1.3s
PTEO Sao Teotonio 87.48 53 *e*P **P** 11 11 19.7 +0.1
comp=Z,47nm,1.7s
PCAS Casmilo, Conde 87.63 50 *e*P **P** 11 11 21.6 +1.3
comp=Z,70nm,1.6s
PGAV Gavieira, Arco 87.79 48 *e*P **P** 11 11 22.5 +1.3
PMTG Montargil 87.86 51 *e*P **P** 11 11 21.8 +0.4
comp=Z,28nm,1.8s
EVO Evora 88.03 52 *e*P **P** 11 11 23.2 +0.9
comp=Z,22nm,1.5s
PVIS Viseu 88.09 50 *e*P **P** 11 11 23.2 +0.6
POLO Lamas de Olo 88.15 49 *e*P **P** 11 11 24.4 +1.5
comp=Z,18nm,1.5s
PVAQ Vaqueiros 88.28 53 *e*P **P** 11 11 24.5 +1.0
PVAQ Vaqueiros 88.28 53 *e*LR LR 11 39 57.7
comp=Z,122nm,22.0s
MTE Manteigas 88.36 50 *e*P **P** 11 11 24.2 +0.3
comp=Z,31nm,1.5s
MTE Manteigas 88.36 50 *e*LR LR 11 40 31.3
comp=Z,109nm,20.0s
PCBR Castelo Branco 88.42 50 *e*P **P** 11 11 25.1 +1.0
comp=Z,46nm,1.6s
PMRV Marv??o 88.50 51 *e*LR LR 11 39 57.4
comp=Z,123nm,20.0s
MVO Moncorvo 88.73 49 *e*P **P** 11 11 26.5 +0.9
comp=Z,36nm,1.6s
ESDC Sonseca Array 91.14 50 P **P** 11 11 36.5 -0.4
comp=Z,1.7nm,0.9s,baz=298,slow=4.8,SNR=5.9
ESDC LR LR 11 45 16.2
comp=Z,128nm,21.8s,baz=275,slow=31
ESDC Sonseca Array 91.14 50 P **P** 11 11 37.7 +0.8
ESDC IAmb IAmb 11 11 40.4
comp=Z,9.5nm,1.2s

KOWA Kowa 92.41 75 P **P** 11 11 42.4 -0.8
VNDA Vanda 94.26 192 LR LR 11 44 56.6
comp=Z,178nm,21.5s,baz=100,slow=30
H11N3 WAKE ISLAND Hy 95.10 290 T T 12 57 22.7
baz=86,slow=75,SNR=130
H11N2 WAKE ISLAND Hy 95.11 290 T T 12 57 23.6
baz=86,slow=75,SNR=76
H11N1 WAKE ISLAND Hy 95.12 290 T T 12 57 24.1
baz=86,slow=75,SNR=101
H11S2 WAKE ISLAND Hy 95.38 289 T T 12 57 42.1
baz=86,slow=74,SNR=148
H11S1 WAKE ISLAND Hy 95.38 289 T T 12 57 42.4
baz=86,slow=74,SNR=169
H11S3 WAKE ISLAND Hy 95.39 289 T T 12 57 42.9
baz=86,slow=74,SNR=84
NOA NORSAR Array B 97.08 28 LR LR 11 52 47.7
comp=Z,132nm,21.7s,baz=300,slow=34
TORD Torodi Ar. Bea 98.03 77 PP **PP** 11 16 03.9 -4.0
comp=Z,3.3nm,1.3s,baz=269,slow=3.6,SNR=5.9
TORD LR LR 11 55 54.8
comp=Z,62nm,18.4s,baz=270,slow=35
ARCES ARCESS Array B 99.09 17 LR LR 11 56 51.6
comp=Z,203nm,20.3s,baz=315,slow=35
MNK Minsk 107.85 30 *i* P **Pdif** 11 12 50.9 -0.8
comp=E,1.0nm,0.6s
MNK *i* P **Pdif** 11 12 50.9 -0.8
comp=N,9.0nm,0.6s
MNK *i* P **Pdif** 11 12 50.9 -0.8
comp=Z,12nm,0.6s
MNK *i* PKP PKiKP 11 16 50.1 -9.0
MNK *i* PP **PP** 11 17 15.8 -4.2
MNK *i* PPP PPP 11 19 32.1
MNK *i* SKS SKSdf 11 23 56.9 -14
MNK *i* PS **PS** 11 26 39.8 -3.3
MNK *i* SS **SS** 11 32 28.9 -2.7
MNK *i* SSS SSS 11 36 31.6
MNK *i* LQ LQ 11 55 37.2
MNK *i* LR LR 12 00 13.7
MNK *i* LRM MLR 12 02 51.5
comp=Z,127nm,22.3s
MNK *i* LRM MLR 12 02 55.9
comp=E,20nm,22.9s
MNK *i* LRM MLR 12 02 59.7
comp=N,265nm,25.4s
ZALV Zalesovo Beam 124.32 359 PKP **PKPdf** 11 17 29.6 -1.0
comp=N,0.9nm,0.6s,baz=180,slow=0.6,SNR=5.2
ASAR Alice Springs 126.24 242 PKP **PKPdf** 11 17 34.5 -0.8
comp=N,1.5nm,0.9s,baz=104,slow=1.7,SNR=13
SONM Songino Array 126.42 341 PKP **PKPdf** 11 17 34.3 -0.7
comp=N,1.0nm,0.7s,baz=354,slow=1.7,SNR=8.6
SONM Songino Array 126.42 341 PKPdf **PKPdf** 11 17 34.8 -0.3
WRA Warramunga Arr 126.77 246 PKP **PKPdf** 11 17 35.6 -0.7
comp=N,2.0nm,0.9s,baz=96,slow=2.0,SNR=8.9
WRA Warramunga Arr 126.77 246 **PKPdf** 11 17 33.6 -2.7
HHC Hu-ho-hao-te 130.12 332 *e*PKP **PKPdf** 11 17 39.5 -2.8
MKAR Makanchi Array 131.50 1 PKP **PKPdf** 11 17 44.5 -0.1
comp=N,2.0nm,1.0s,baz=11,slow=1.2,SNR=9.6
NJ2 Nanjing 132.11 318 *e*PKP **PKPdf** 11 17 46.1 0.0
WMQ Urumqi 134.29 355 *e*PKP **PKPdf** 11 17 50.6 +0.6
GTA Gaotai 136.08 341 *e*PKP **PKiKP** 11 17 56.1 +0.9
XAN Xi'an 136.73 328 PKP **PKPdf** 11 17 54.7 -0.1
XAN LR LR
comp=N,260nm,17.3s
XAN LR LR
comp=N,360nm,20.6s
GYA Guiyang 143.71 323 PKP PKPab 11 18 04.9 +0.5
HOQ Hoqain 144.41 43 P **PKPab** 11 18 05.4 -1.6
SNR=9.0
BSY Bisya 144.88 44 P **PKPab** 11 18 07.4 -1.4
SNR=8.7
BIDO Bidbid 145.00 42 P **PKPab** 11 18 08.3 -0.8
SNR=12
ABTO Aybut 145.01 56 P **PKPab** 11 18 08.2 -1.2
SNR=7.8
WHFO Wadi Hawf 145.11 54 P **PKPbc** 11 18 08.2 -1.5
SNR=5.9
SMDO Samad 145.26 43 P **PKPbc** 11 18 09.0 -1.2
SNR=12
RBK Rabkut 145.68 55 P **PKPdf** 11 18 11.0 -0.2
WBK Wadi Bani Khal 146.19 43 P **PKPdf** 11 18 11.9 -0.1
KMI Kunming 147.02 326 ⇑PKPbc **PKPbc** 11 18 15.2 -0.4
CMAR Chiang Mai Arr 154.40 323 PKP **PKPdf** 11 18 24.6 -0.2
comp=N,0.6nm,0.3s,baz=321,slow=2.0,SNR=9.5
CMAR PKPbc **PKPbc** 11 18 32.8 -0.4
comp=N,1.4nm,0.6s,baz=340,slow=1.6,SNR=11
CMAR PKPab **PKPab** 11 18 46.9 -0.3
comp=N,0.8nm,0.3s,baz=336,slow=2.5,SNR=4.9
CMAR Chiang Mai Arr 154.40 323 **PKPdf** 11 18 24.0 -0.9

*DDA **06** 10:59:40.1,35°.20N×27°.53E,h21km±4km,ML3.0*
*ISK **06** 10:59:42.8,35°.34N×27°.63E,h7km,ML3.2/11*
*ATH **06** 10:59:42.3,35°.41N×27°.59E,h32km±4km,ML3.1/5, Error ellipse: s-maj=4.7km s-min=1.5km az=320.0*
ISC 06 10:59:41.6±1.5,35°.29N±0°.05×27°.62E±0°.03,h2km±11km, n54,σ1s35/79, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.46**	**305**	P	**Pg**	**10 59 50.3**	**-0.1**
KARP				S	**Sg**	**10 59 57.3**	**+0.9**
KARP				AML	AML	10 59 58.8	
	comp=E,8125μm,0.3s						
KARP				AML	AML	11 00 00.1	
	comp=N,7188μm,0.4s						
KARP	**Karpathos**	**0.46**	**305**	P	**Pg**	**10 59 50.9**	**+0.5**
ARG	**Arkhangelos**	**1.01**	**24**	P	**Pg**	**10 59 59.2**	**-1.9**
ARG				S	**Sg**	**11 00 11.6**	**-2.7**
ARG				AML	AML	11 00 25.8	
	comp=E,3441μm,0.9s						
ARG				AML	AML	11 00 30.2	
	comp=N,2088μm,0.6s						
ARG	**Arkhangelos**	**1.01**	**24**	P	**Pg**	**11 00 00.9**	**-0.2**
ARG	**Arkhangelos**	**1.01**	**24**	PG	**Pg**	**11 00 01.7**	**+0.6**
ARG				SG	**Sg**	**11 00 15.4**	**+1.1**
ZKR	**Zakros**	**1.16**	**262**	P	**Pb**	**11 00 03.3**	**-1.2**
ZKR				S	**Sb**	**11 00 18.2**	**-1.8**
ZKR				AML	AML	11 00 26.0	
	comp=N,857μm,0.7s						
ZKR				AML	AML	11 00 26.4	
	comp=E,1596μm,0.6s						
ZKR	**Zakros**	**1.16**	**262**	P	**Pb**	**11 00 03.6**	**-0.9**
ZKR				S	**Sn**	**11 00 23.3**	**+1.9**
STIA	**Sitia Lasithi**	**1.25**	**267**	P	**Pn**	**11 00 05.1**	**-1.1**
NIS1	**Nisyros Isl.**	**1.36**	**345**	P	**Pn**	**11 00 05.3**	**-2.4**
NIS1	**Nisyros Isl.**	**1.36**	**345**	PN	**Pn**	**11 00 08.1**	**+0.4**
NIS1				SN	**Sb**	**11 00 26.5**	**+0.7**
NISR	**Nisiros**	**1.38**	**343**	P	**Pn**	**11 00 05.7**	**-2.3**
TURN	**Turunc**	**1.57**	**19**	*i* P	**Pn**	**11 00 11.1**	**+0.6**
TURN				*i* S	**Sg**	**11 00 33.0**	**+0.9**
TURN				IAML		11 00 40.0	
	comp=N,191nm,1.0s						
TURN	**Turunc**	**1.57**	**19**	PN	**Pn**	**11 00 10.9**	**+0.4**
TURN				SN	**Sn**	**11 00 31.5**	**0.0**
NPS	**Neapolis**	**1.64**	**270**	P	**Pn**	**11 00 11.8**	**+0.2**
NPS				AML	AML	11 00 47.0	
	comp=E,1052μm,0.9s						
NPS				AML	AML	11 00 50.4	
	comp=N,833μm,0.9s						
NPS	**Neapolis**	**1.64**	**270**	P	**Pn**	**11 00 12.6**	**+1.0**
DALY	**Dalyan (Mula)**	**1.74**	**28**	*i* P	**Pn**	**11 00 13.8**	**+0.9**
DALY				*i* S	**Sg**	**11 00 39.7**	**+2.1**
DALY				IAML		11 00 46.0	
	comp=E,195nm,0.1s						
DALY				IAML		11 00 52.0	
	comp=N,143nm,0.6s						
DALY	**Dalyan (Mula)**	**1.74**	**28**	PN	**Pn**	**11 00 13.4**	**+0.5**
DALY				SN	**Sn**	**11 00 35.7**	**0.0**
BDRM	**Kayabasi**	**1.78**	**355**	*i* P	**Pn**	**11 00 13.0**	**-0.5**
BDRM				*i* S	**Sb**	**11 00 38.1**	**+0.3**
BDRM				IAML		11 00 47.0	
	comp=N,138nm,0.8s						
BDRM				IAML		11 00 50.0	
	comp=E,84nm,0.5s						
BODT	**Bodrum**	**1.79**	**352**	PN	**Pn**	**11 00 14.2**	**+0.6**
BODT				SN	**Sn**	**11 00 36.9**	**-0.1**
FETY	**Fethiye**	**1.79**	**41**	*i* P	**Pn**	**11 00 12.9**	**-0.8**
FETY				*i* S	**Sn**	**11 00 35.7**	**-1.4**
FETY	**Fethiye**	**1.79**	**41**	PN	**Pn**	**11 00 13.4**	**-0.3**
KSL	**Kastellorizon**	**1.81**	**61**	P	**Pn**	**11 00 13.8**	**-0.1**
AKAS	**Kas**	**1.87**	**59**	*i* P	**Pn**	**11 00 13.9**	**-0.9**
AKAS				*i* S	**Sb**	**11 00 40.4**	**-0.1**
AKAS				IAML		11 00 46.0	
	comp=N,106nm,0.6s						

AKAS Kas 1.87 59 PN **Pn** 11 00 14.9 +0.1
AKAS SN **Sn** 11 00 39.5 +0.4
YER Yerkesik 1.92 16 P **Pn** 11 00 16.6 +1.1
YER Yerkesik 1.92 16 PN **Pn** 11 00 16.0 +0.5
MULA Mugla, Merkez- 2.05 16 *i* P **Pb** 11 00 19.9 +0.3
MULA *i* S **Sb** 11 00 44.6 -0.9
SANT Santorini 2.06 302 P **Pn** 11 00 17.7 +0.3
THR8 Santorini-Mono 2.07 303 P **Pn** 11 00 17.2 -0.1
THR6 Thira Island, 2.10 301 P **Pn** 11 00 17.1 -0.8
THR6 Thira Island, 2.10 301 P **Pn** 11 00 17.7 -0.1
THR3 Thira Island, 2.12 302 P **Pn** 11 00 18.1 -0.1
SNT5 Nea Kammeni, S 2.12 302 P **Pn** 11 00 17.8 -0.4
IDI Anoyia 2.23 271 P **Pn** 11 00 21.5 +1.8
IDI AML AML 11 00 56.4
comp=E,206μm,0.5s
IDI AML AML 11 01 01.4
comp=N,244μm,0.7s
CAEL Denizli, Camel 2.29 36 *i* P **Pn** 11 00 20.5 -0.1
CAEL *i* S **Sb** 11 00 52.6 0.0
CAEL IAML 11 01 18.0
comp=E,179nm,0.6s
CAEL IAML 11 01 22.0
comp=N,220nm,0.9s
SIVA Sivas 2.32 264 P **Pn** 11 00 22.6 +1.8
ELL Elmali 2.36 51 PN **Pn** 11 00 22.4 +0.9
AYDN Tasoluk 2.38 5 *i* P **Pn** 11 00 22.5 +0.8
AYDN *i* S Sn 11 00 42.2 -9.4
AYDN IAML 11 01 09.0
comp=E,36nm,0.5s
TAVA DENIZLI_Tavas 2.41 25 *i* P **Pn** 11 00 23.2 +1.0
TAVA *i* S **Sg** 11 00 59.9 +0.8
AKUM Antalya-Kumluc 2.44 64 *i* P **Pn** 11 00 22.9 +0.4
AKUM *i* S **Sn** 11 00 54.4 +1.4
APE Apeiranthos 2.46 317 P **Pn** 11 00 22.8 0.0
SMG Samos 2.50 346 P **Pn** 11 00 23.0 -0.4
GOLH Golhisar 2.50 38 *i* P **Pn** 11 00 23.6 +0.2
GOLH *i* S **Sb** 11 00 57.9 -0.7
AYDB Zeytinkoy-Aydi 2.66 5 PN **Pn** 11 00 26.5 +0.8
KORT Korkueli 2.79 51 *i* P **Pn** 11 00 30.1 +2.5
KORT *i* S **Sb** 11 01 05.1 -2.0
KORT Korkueli 2.79 51 PN **Pn** 11 00 28.7 +1.2
BRDR BURDUR-Merkez 3.11 39 *i* P **Pn** 11 00 34.8 +3.0
BRDR IAML 11 01 38.0
comp=E,29nm,0.8s
KHAL Karahalli 3.42 25 *i* P **Pn** 11 00 37.2 +1.0
USAK Uak-Merkez 3.60 18 *i* P **Pn** 11 00 36.7 -1.8
KEPZ Antalya-Kepez 3.61 62 *i* P **Pn** 11 00 39.7 +1.1
KEPZ *i* S **Sn** 11 01 24.4 +2.6
GAZI Gazipasa 3.93 75 *i* P **Pn** 11 00 40.9 -2.2
GAZI *i* S **Sn** 11 01 28.4 -1.5
GAZI IAML 11 01 29.0
comp=N,28nm,0.8s
GAZI IAML 11 01 37.0
comp=E,30nm,0.5s
SEDI Konya, Seydise 3.98 56 *i* P **Pn** 11 00 46.5 +2.7
SEDI *i* S **Sn** 11 01 34.2 +3.2
SEDI IAML 11 01 37.0
comp=E,61nm,1.4s
SEDI IAML 11 01 40.0
comp=N,40nm,0.6s
YVAC Isparta, Yalva 4.16 43 *i* P **Pn** 11 00 46.7 +0.4
KKBE Karaman, Kazim 4.71 64 *i* P **Pn** 11 00 55.7 +1.8
KKBE *i* S **Sn** 11 01 45.6 -3.6

GUC 06 11:04:56.7±0.4,21°.18S×69°.74W,h18km±2km, ML2.9, 1C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.27**	**61**	⇑*i* P	Pg	11 05 02.7	-0.2
PB01				*e*S	Sg	11 05 06.5	-0.6
PB01				IAML		11 05 07.6	
	comp=E,5μm,0.2s						
PB07	**IPOC Station P**	**0.56**	**194**	⇓*i* P	Pg	11 05 07.0	-1.1
PB07				IAML		11 05 15.3	
	comp=E,1μm,0.2s						
TA01	**Diego Aracena**	**0.73**	**326**	*e*P	Pb	11 05 09.2	-1.8
TA01				*e*S	Sb	11 05 18.6	-2.0
TA01				IAML		11 05 19.4	
	comp=E,1μm,0.3s						
PB03	**IPOC Station P**	**0.87**	**181**	⇓*i* P	Pb	11 05 11.9	-1.4
PB03				*e*S	Sb	11 05 23.2	-1.5
PB03				IAML		11 05 23.5	
	comp=E,1μm,0.2s						
PB08	**IPOC Station P**	**1.17**	**28**	*e*P	Pn	11 05 16.9	-1.6
PB08				*e*S	Sb	11 05 32.6	-1.0
PB08				IAML		11 05 33.6	
	comp=E,305nm,0.3s						
PB04	**IPOC Station P**	**1.21**	**198**	⇓*i* P	Pn	11 05 17.1	-1.8
PB04				*e*S	Sb	11 05 32.8	-1.9
PB04				IAML		11 05 34.5	
	comp=N,687nm,0.1s						
PB11	**IPOC Station P**	**1.41**	**3**	*e*P	Pn	11 05 20.1	-1.6
PB11				*e*S	Sn	11 05 38.3	-1.5
PB11				IAML		11 05 39.3	
	comp=N,246nm,0.5s						
PB11	**IPOC Station P**	**1.41**	**3**	P	Pn	11 05 19.7	-2.0
PB06	**IPOC Station P**	**1.53**	**174**	*e*P	Pn	11 05 21.9	-1.4
PSGC	**Pisagua**	**1.61**	**347**	*e*P	Pn	11 05 23.1	-1.3
PSGC				IAML		11 05 44.8	
	comp=E,166nm,0.2s						
LVC	**Limon Verde**	**1.62**	**152**	*e*P	Pn	11 05 25.2	+0.4
LVC				*e*S	Sb	11 05 46.5	-0.2
PB05	**IPOC Station P**	**1.72**	**194**	*e*P	Pn	11 05 24.9	-1.0
PB05				IAML		11 05 49.9	
	comp=N,243nm,0.4s						
PB15	**IPOC Station P**	**2.04**	**173**	*e*P	Pn	11 05 30.3	0.0
PB15				*e*S	Sn	11 05 56.9	+1.4
MNMC	**Minye Minye**	**2.04**	**4**	*e*P	Pn	11 05 30.4	-0.1
MNMC				IAML		11 06 11.3	
	comp=N,221nm,0.3s						

IDC 06 11:17:38.7±5.1,7°.84S×149°.16E,h0km,mb3.0/2, mb1 3.2/3,mb1mx3.1/19,mbtmp3.1/3,ML3.4/1,Error ellipse: s-maj=144.6km s-min=35.8km az=108.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.73**	**229**	P	P	11 21 59.2	-0.1
	0.1nm,0.3s,baz=52,slow=9.8,SNR=2.1						
ASAR	**Alice Springs**	**21.49**	**221**	P	P	11 22 28.8	-0.5
	0.1nm,0.4s,baz=50,slow=8.9,SNR=6.0						
SONM	**Songino Array**	**67.04**	**330**	P	P	11 28 34.2	+0.3
	0.4nm,0.8s,baz=145,slow=5.3,SNR=2.6						

*SOME **06** 11:18:56.6,46°.23N×83°.02E,h5km*
*NNC **06** 11:18:56.0±2.0,46°.25N×83°.03E,h0km,mb3.5,mpv2.9, Error ellipse: s-maj=11.7km s-min=10.0km az=5.0*
ISC 06 11:18:55.9±1.8,46°.21N±0°.04×82°.97E±0°.07,h3km±15km, n17,σ1s67/29,4C-4D,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**0.75**	**322**	⇓P	**Pg**	**11 19 09.9**	**-0.4**
	1.1nm,0.3s,baz=123,slow=18,SNR=316						
MK31				⇑S	**Sb**	**11 19 21.1**	**-1.2**
	5.9nm,0.3s,baz=132,slow=26,SNR=10						
MKAR	**Makanchi Array**	**0.75**	**322**	P	**Pg**	**11 19 10.3**	**0.0**
MKAR				S	**Sb**	**11 19 21.5**	**-0.8**
MAKZ	**Makanchi**	**0.91**	**312**	P	**Pg**	**11 19 13.6**	**+0.3**
MAKZ				S	**Sg**	**11 19 24.9**	**-0.3**
MAKZ	**Makanchi**	**0.91**	**312**	⇓P	**Pg**	**11 19 12.9**	**-0.5**
	1.6nm,0.3s						
MAKZ				⇑S	**Sb**	**11 19 26.9**	**0.0**
	6.3nm,0.3s						
ZSN	**Zaisan**	**1.80**	**46**	*e*P	**Pn**	**11 19 26.6**	**-1.2**
	11nm,0.3s						
ZSN				*e*S	**Sn**	**11 19 47.7**	**-3.5**
	15nm,0.5s						
ZSN	**Zaisan**	**1.80**	**46**	P	**Pn**	**11 19 26.6**	**-1.2**
	11nm,0.3s						
ZSN				S	**Sn**	**11 19 47.7**	**-3.5**
	15nm,0.5s						
KTMS	**Ketmen**	**3.33**	**215**	*e*P	**Pb**	**11 19 57.9**	**+2.3**
	2.2nm,0.3s						
KTMS				*e*S	**Sg**	**11 20 41.2**	**-1.5**
	5.1nm,0.3s						
KTMS	**Ketmen**	**3.33**	**215**	Pg	**Pb**	**11 19 57.9**	**+2.3**
	2.2nm,0.3s						

KTMS					Lg		Lg	11 20 41.2	
	5.1nm,0.3s								
PDGK	**Podgornoye**	**3.80**	**222**	⇓	Pg		**Pb**	**11 20 04.7**	**+1.1**
	3.6nm,0.9s								
PDGK				⇑	Lg		Lg	11 20 55.8	
	9.2nm,0.7s								
MNBS	**Baschi**	**3.87**	**238**	*e*	P		**Pg**	**11 20 09.2**	**-0.8**
	3.8nm,0.3s								
MNBS				*e*	S		**Sg**	**11 21 00.4**	**+0.3**
	3.6nm,0.5s								
MNBS	**Baschi**	**3.87**	**238**		Pg		**Pg**	**11 20 09.2**	**-0.8**
	3.8nm,0.3s								
MNBS					Lg		Lg	11 21 00.4	
	3.6nm,0.5s								
DGZ	**Jazzator, Alta**	**4.61**	**39**		P		**Pn**	**11 20 06.9**	**+0.4**
DGZ					S		**Sn**	**11 21 02.4**	**+1.8**
UKR	**Ust'-Kan**	**4.88**	**14**		S		**Sn**	**11 21 09.8**	**+2.4**
CHBI	**Chibit, Altay**	**5.11**	**35**		P		**Pn**	**11 20 14.2**	**+1.0**
CHBI					S		**Sn**	**11 21 14.7**	**+1.9**
CUR	**Chagan-Uzun**	**5.30**	**41**		P		**Pn**	**11 20 15.6**	**-0.4**
CUR					S		**Sn**	**11 21 17.7**	**-0.1**
KURBB	**Kurchatov Arra**	**5.32**	**328**	⇑	Pn		**Pn**	**11 20 14.5**	**-1.6**
	1.1nm,0.8s								
KURBB				⇓	Lg		Lg	11 21 44.6	
	12nm,0.7s								
ULGR	**Ulagan, Altay**	**5.53**	**35**		P		**Pn**	**11 20 21.6**	**+2.5**
ULGR					S		**Sn**	**11 21 22.5**	**-0.7**

BJI ***06*** *11:37:27.6±0.0,24˚.35N×122˚.90E,h86km,mB4.6/30, mb4.4/53,Ms3.9/11,Ms7 3.7/12*

IDC ***06*** *11:37:30.9±0.6,24˚.62N×122˚.74E,h91km±5km,mb4.1/29, mb1 4.3/32,mb1mx4.2/41,mbtmp4.5/32,MS3.2/8, Ms1 3.3/8,ms1mx3.0/50,Error ellipse: s-maj=12.5km s-min=9.4km az=86.0*

NEIC ***06*** *11:37:30.2±1.4,24˚.51N±0˚.07×122˚.69E±0˚.07,h86km±5km, mb4.6/114,ML5.1(TAP),Error ellipse: s-maj=9.9km s-min=9.0km az=138.0*

JMA ***06*** *11:37:30.6±0.1,24˚.40N×122˚.67E,h80km±1km,M4.5*

JMA Felt I J1.

NIED ***06*** *11:37:30.6,24˚.40N×122˚.67E,h80km,MW4.6,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.02; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$-1.74; $M_{r\theta}$6.78; $M_{\theta\phi}$-1.22; $M_{\phi r}$-4.99; Fault plane solution: $M_0$8.47000×10^{15} NP1: ϕ_s128.00000°,δ87.00000°,λ87.00000°. NP2: ϕ_s352.00000°,δ4.00000°,λ134.00000°.*

TAP ***06*** *11:37:30.9,24˚.46N×122˚.70E,h79km,ML5.4,B*

ASIES ***06*** *11:37:31.3,24˚.40N×122˚.75E,h83km,MW4.4*

ISC 06 11:37:30.4±0.4,24˚47N±0˚.02×122˚72E±0˚.02,h88km±3km, h89km:pP-P,n427,σ1$47/569,mb4.5/113,11C-13D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.21**	**96**		P		**Pn**	**11 37 42.8**	**-0.5**
JYNG					S		**Sn**	**11 37 51.5**	**-1.3**
YOJ	**Yonaguni jima**	**0.27**	**92**		P		**Pn**	**11 37 43.1**	**-0.4**
YOJ					S		**Sn**	**11 37 51.8**	**-1.4**
YOJ	**Yonaguni jima**	**0.27**	**92**	⇓	*i*P		**Pn**	**11 37 43.2**	**-0.4**
	baz=88								
YOJ					*i* S		**Sn**	**11 37 52.0**	**-1.2**
	baz=88								
YOJ	**Yonaguni jima**	**0.27**	**92**				**Pn**	**11 37 43.1**	**-0.4**
TWC	**Suao**	**0.80**	**280**	⇑	*i*P		**Pn**	**11 37 47.4**	**-0.4**
	baz=286								
TWC					*i* S		**Sn**	**11 37 58.8**	**-2.0**
	baz=286								
TWB1	**Santiao Chiao**	**0.85**	**309**		*i* P		**Pn**	**11 37 48.1**	**-0.3**
	baz=310								
TWB1					S		**Sn**	**11 37 59.4**	**-2.3**
	baz=310								
EWUT	**Wuta**	**0.85**	**268**		*e*P		**Pn**	**11 37 48.1**	**-0.3**
	baz=269								
EWUT					*e*S		**Sn**	**11 38 01.0**	**-0.8**
	baz=269								
ENA	**Nanau**	**0.89**	**267**		*i* P		**Pn**	**11 37 48.7**	**0.0**
	baz=268								
ENA					*e*S		**Sn**	**11 38 01.5**	**-1.0**
	baz=268								
NTC	**Toucheng**	**0.89**	**295**		*i* P		**Pn**	**11 37 48.9**	**+0.1**
	baz=296								
NTC					S		**Sn**	**11 38 01.8**	**-0.8**
	baz=296								
NDS	**Dongshan**	**0.92**	**280**		*e*P		**Pn**	**11 37 49.1**	**0.0**
	baz=288								
NDS					*e*S		**Sn**	**11 38 01.6**	**-1.6**
	baz=288								
ILA	**Ilan**	**0.93**	**289**		P		**Pn**	**11 37 49.3**	**+0.1**
	baz=289								
ILA					*e*S		**Sn**	**11 38 02.7**	**-0.5**
	baz=289								
IRIF	**Iriomote-Funau**	**0.94**	**98**		P		**Pn**	**11 37 49.5**	**+0.2**
IRIF					S		**Sn**	**11 38 03.1**	**-0.3**
TIPB	**Shuangxi**	**0.95**	**302**		P		**Pn**	**11 37 49.5**	**0.0**
	baz=302								
TIPB					*e*S		**Sn**	**11 38 02.1**	**-1.7**
	baz=302								
TWE	**Neicheng**	**0.99**	**285**	⇑	*i*P		**Pn**	**11 37 50.0**	**+0.2**
	baz=285								
TWE					*e*S		**Sn**	**11 38 03.9**	**-0.5**
	baz=285								
NWF	**Wu-fen Shan**	**1.04**	**305**		*i* P		**Pn**	**11 37 50.8**	**+0.3**
	baz=299								
NWF					*e*S		**Sn**	**11 38 04.8**	**-0.9**
	baz=299								
WFSB	**Wu-fen Shan**	**1.04**	**305**		*i* P		**Pn**	**11 37 50.8**	**+0.4**
	baz=299								
WFSB					*e*S		**Sn**	**11 38 04.4**	**-1.1**
	baz=299								
ENTT	**Nioudou**	**1.06**	**279**		*e*P		**Pn**	**11 37 51.2**	**+0.5**
	baz=285								
ENTT					*e*S		**Sn**	**11 38 05.9**	**-0.1**
	baz=285								
NACB	**Ninganchiao**	**1.06**	**254**	⇑	*i*P		**Pn**	**11 37 50.1**	**-0.8**
	baz=245								
NACB					*e*S		**Sn**	**11 38 02.8**	**-3.3**
	baz=245								
NACB	**Ninganchiao**	**1.06**	**254**				**Pn**	**11 37 50.0**	**-0.8**
HATJ	**Hateruma jima**	**1.08**	**112**		P		**Pn**	**11 37 51.3**	**+0.4**
HATJ					S		**Sn**	**11 38 07.0**	**+0.7**
TNOU	**National Taiwa**	**1.09**	**308**		*e*P		**Pn**	**11 37 51.3**	**+0.2**
	baz=302								
TNOU					*e*S		**Sn**	**11 38 05.8**	**-0.7**
	baz=302								
TWD	**Chiawan**	**1.09**	**249**	⇑	*i*P		**Pn**	**11 37 50.4**	**-0.7**
	baz=249								
TWD					*e*S		**Sn**	**11 38 04.8**	**-1.8**
	baz=249								
NDT	**Datong Townshi**	**1.10**	**277**		P		**Pn**	**11 37 51.8**	**+0.5**
	baz=281								
NDT					S		**Sn**	**11 38 06.7**	**-0.2**
	baz=281								
HWA	**Hwalien**	**1.13**	**244**		*e*P		**Pn**	**11 37 51.1**	**-0.4**
	baz=244								
HWA					*e*S		**Sn**	**11 38 07.0**	**-0.3**
	baz=244								
ETLH	**Xiulin Townshi**	**1.16**	**257**	⇑	*i*P		**Pn**	**11 37 51.4**	**-0.5**
	baz=251								
ETLH					*e*S		**Sn**	**11 38 06.6**	**-1.5**
	baz=251								
NHDH	**Xindian Distri**	**1.19**	**295**		*e*P		**Pn**	**11 37 52.5**	**+0.3**
	baz=295								
NHDH					*e*S		**Sn**	**11 38 07.4**	**-1.2**
	baz=295								
JKRS	**Kuro-shima**	**1.20**	**101**		P		**Pn**	**11 37 53.0**	**+0.6**
JKRS					S		**Sn**	**11 38 09.9**	**+1.0**
NWRT	**Kuosheng**	**1.20**	**307**		*e*P		**Pn**	**11 37 52.5**	**0.0**
	baz=299								
NNSB	**Datong**	**1.22**	**268**		*e*P		**Pn**	**11 37 52.4**	**-0.3**
	baz=260								
NNSB					*e*S		**Sn**	**11 38 08.1**	**-1.4**
	baz=260								
NNSH	**Datong**	**1.22**	**268**		*e*P		**Pn**	**11 37 52.8**	**+0.1**
	baz=260								
NNSH					*e*S		**Sn**	**11 38 07.9**	**-1.6**
	baz=260								
TATO	**Taipei**	**1.22**	**294**		*e*P		**Pn**	**11 37 52.6**	**-0.1**
	baz=294								
TATO					*e*S		**Sn**	**11 38 07.5**	**-1.9**
	baz=294								
TATO	**Taipei**	**1.22**	**294**				**Pn**	**11 37 52.3**	**-0.4**
NNS	**Nan Shan**	**1.22**	**269**		*e*P		**Pn**	**11 37 52.9**	**+0.1**
	baz=261								
NNS					*e*S		**Sn**	**11 38 08.7**	**-1.0**
	baz=261								
YHNB	**Yeheng**	**1.23**	**279**		*e*P		**Pn**	**11 37 53.3**	**+0.4**
	baz=279								
YHNB					*e*S		**Sn**	**11 38 08.8**	**-1.0**
	baz=279								
YHNB	**Yeheng**	**1.23**	**279**				**Pn**	**11 37 51.8**	**-1.1**
YM01	**YM01**	**1.24**	**303**	⇓	*i*P		**Pn**	**11 37 53.2**	**+0.3**
	baz=296								
YM01					*e*S		**Sn**	**11 38 08.9**	**-0.9**
	baz=296								
YM11	**YM11**	**1.25**	**304**		*e*P		**Pn**	**11 37 53.3**	**+0.3**
	baz=296								
YM11					*e*S		**Sn**	**11 38 08.2**	**-1.8**
	baz=296								
YM08	**YM08**	**1.25**	**305**	⇓	*i*P		**Pn**	**11 37 53.1**	**+0.1**
	baz=298								
YM08					*e*S		**Sn**	**11 38 08.6**	**-1.3**
	baz=298								
YM10	**YM10**	**1.25**	**303**	⇓	*i*P		**Pn**	**11 37 53.4**	**+0.3**
	baz=296								
YM10					*e*S		**Sn**	**11 38 09.2**	**-0.9**
	baz=296								
YM05	**YM05**	**1.25**	**304**	⇓	*i*P		**Pn**	**11 37 53.3**	**+0.2**
	baz=297								
YM05					*e*S		**Sn**	**11 38 09.0**	**-1.1**
	baz=297								
NSK	**Sanguang**	**1.25**	**280**		*e*P		**Pn**	**11 37 53.5**	**+0.4**
	baz=279								
NSK					*e*S		**Sn**	**11 38 09.3**	**-0.8**
	baz=279								
YM04	**YM04**	**1.27**	**303**	⇓	*i*P		**Pn**	**11 37 53.5**	**+0.3**
	baz=294								
YM04					*e*S		**Sn**	**11 38 09.4**	**-1.0**
	baz=294								
BACT	**New Taipei Cit**	**1.27**	**295**		*e*P		**Pn**	**11 37 53.7**	**+0.4**
	baz=294								
TWY	**Chenhua**	**1.29**	**309**		*e*P		**Pn**	**11 37 54.3**	**+0.8**
	baz=302								
TWY					*e*S		**Sn**	**11 38 10.8**	**0.0**
	baz=302								
PCYT	**Pengchaiyu**	**1.29**	**333**		*e*P		**Pn**	**11 37 54.3**	**+0.8**
	baz=328								
ANP	**Anpu**	**1.30**	**303**		*e*P		**Pn**	**11 37 53.8**	**+0.1**
	baz=294								
JIJ	**Ishigaki jima**	**1.31**	**94**		P		**Pn**	**11 37 53.7**	**0.0**
JIJ					S		**Sn**	**11 38 10.4**	**-0.8**
TWS1	**Kuangyinshan**	**1.33**	**298**	⇓	*i*P		**Pn**	**11 37 54.5**	**+0.4**
	baz=298								
TWS1					*e*S		**Sn**	**11 38 11.6**	**-0.3**
	baz=298								
NTST	**Danshui**	**1.34**	**301**		*e*P		**Pn**	**11 37 54.8**	**+0.7**
	baz=294								
NTST					*e*S		**Sn**	**11 38 11.9**	**-0.1**
	baz=294								
ESL	**Shilin**	**1.34**	**241**	⇑	*i*P		**Pn**	**11 37 53.3**	**-0.9**
	baz=247								
ESL					*e*S		**Sn**	**11 38 09.7**	**-2.3**
	baz=247								
FUSS	**Fushou**	**1.36**	**261**		P		**Pn**	**11 37 54.8**	**+0.2**
	baz=260								
FUSS					*e*S		**Sn**	**11 38 12.5**	**-0.3**
	baz=260								
WHF	**Hehuan Shan**	**1.36**	**256**	⇑	*i*P		**Pn**	**11 37 54.5**	**-0.3**
	baz=256								
WHF					*e*S		**Sn**	**11 38 11.7**	**-1.4**
	baz=256								
NTY	**Taoyuan**	**1.39**	**292**		*e*P		**Pn**	**11 37 55.2**	**+0.5**
	baz=292								
NTY					*e*S		**Sn**	**11 38 12.8**	**-0.3**
	baz=292								
TWT	**Tachien**	**1.42**	**261**		*e*P		**Pn**	**11 37 56.4**	**+1.1**
	baz=261								
TWT					*e*S		**Sn**	**11 38 13.4**	**-0.6**
	baz=261								
EGFH	**Guangfu**	**1.42**	**236**		*e*P		**Pn**	**11 37 54.6**	**-0.6**
	baz=230								
EGFH					*e*S		**Sn**	**11 38 11.8**	**-2.0**
	baz=230								
TDCB	**Techi**	**1.44**	**262**		*e*P		**Pn**	**11 37 55.7**	**+0.2**
	baz=261								
TDCB					*e*S		**Sn**	**11 38 13.1**	**-1.2**
	baz=261								
JISG	**Ishigakijimahi**	**1.46**	**85**		P		**Pn**	**11 37 55.8**	**+0.2**
JISG					S		**Sn**	**11 38 14.1**	**-0.5**
CHGB	**Renai**	**1.47**	**254**	⇑	*i*P		**Pn**	**11 37 55.9**	**0.0**
	baz=246								
CHGB					*e*S		**Sn**	**11 38 13.0**	**-2.1**
	baz=246								
NCU	**National Centr**	**1.48**	**290**		*e*P		**Pn**	**11 37 56.3**	**+0.5**
	baz=296								
NCU					*e*S		**Sn**	**11 38 15.4**	**+0.4**
	baz=296								
NCUH	**Zhongli**	**1.48**	**290**		*e*P		**Pn**	**11 37 56.1**	**+0.2**
	baz=290								
NCUH					*e*S		**Sn**	**11 38 14.8**	**-0.2**
	baz=290								
NJD	**Zhudong**	**1.50**	**280**		*e*P		**Pn**	**11 37 56.9**	**+0.7**
	baz=280								
NJD					*e*S		**Sn**	**11 38 16.2**	**+0.6**
	baz=280								
HGSD	**Ruisui**	**1.53**	**231**	⇑	*i*P		**Pn**	**11 37 55.8**	**-0.7**
	baz=226								
HGSD					*e*S		**Sn**	**11 38 14.7**	**-1.6**
	baz=226								
LIOB	**Emei**	**1.56**	**277**		*e*P		**Pn**	**11 37 57.7**	**+0.9**
	baz=276								
LIOB					*e*S		**Sn**	**11 38 17.6**	**+0.8**
	baz=276								
NSTT	**Nanjuang**	**1.57**	**276**		*e*P		**Pn**	**11 37 58.0**	**+1.0**
	baz=276								
NSTT					*e*S		**Sn**	**11 38 17.0**	**-0.1**
	baz=276								
HSN1	**Hsinchu**	**1.57**	**281**		*e*P		**Pn**	**11 37 57.6**	**+0.6**
	baz=281								
HSN1					*e*S		**Sn**	**11 38 17.4**	**+0.2**
	baz=281								
EHY	**Hungye**	**1.60**	**233**		*e*P		**Pn**	**11 37 56.6**	**-0.7**
	baz=232								
EHY					*e*S		**Sn**	**11 38 16.5**	**-1.3**
	baz=232								
SBCB	**Hsinchu**	**1.61**	**282**		*e*P		**Pn**	**11 37 57.8**	**+0.3**
	baz=281								
SBCB					*e*S		**Sn**	**11 38 17.9**	**-0.1**
	baz=281								
HSN	**Hsinchu**	**1.62**	**282**		*e*P		**Pn**	**11 37 57.9**	**+0.2**
	baz=283								
WHP	**Taichung City**	**1.62**	**264**		*e*P		**Pn**	**11 37 59.2**	**+1.4**
	baz=263								
WHP					*e*S		**Sn**	**11 38 18.6**	**0.0**
	baz=263								
WPL	**Puli Township**	**1.67**	**254**		*e*P		**Pn**	**11 37 59.0**	**+0.7**
	baz=249								
WPL					*e*S		**Sn**	**11 38 18.8**	**-0.6**
	baz=249								
YULB	**Yu-li**	**1.69**	**231**		*e*P		**Pn**	**11 37 58.0**	**-0.6**
	baz=239								
YULB					*e*S		**Sn**	**11 38 17.3**	**-2.5**
	baz=239								
YULB	**Yu-li**	**1.69**	**231**		Pn		**Pn**	**11 37 57.7**	**-0.8**
DPDB	**Guoxing**	**1.69**	**255**		*e*P		**Pn**	**11 37 59.4**	**+0.8**
	baz=250								
DPDB					*e*S		**Sn**	**11 38 19.4**	**-0.6**
	baz=250								
NJN	**Zhunan**	**1.69**	**278**		*e*P		**Pn**	**11 37 59.7**	**+1.1**
	baz=277								
NJN					*e*S		**Sn**	**11 38 20.5**	**+0.6**
	baz=277								
EYUL	**Yuli**	**1.70**	**229**		P		**Pn**	**11 37 58.7**	**0.0**
	baz=224								
EYUL					*e*S		**Sn**	**11 38 18.9**	**-1.2**
	baz=224								
TWF1	**Yuli**	**1.71**	**230**		*e*P		**Pn**	**11 37 58.4**	**-0.5**
	baz=239								
TWF1					*e*S		**Sn**	**11 38 19.4**	**-1.0**
	baz=239								
SSLB	**Suanglung**	**1.75**	**247**		*e*P		**Pn**	**11 37 59.5**	**+0.2**
	baz=247								
SSLB	**Suanglung**	**1.75**	**247**		Pn		**Pn**	**11 37 59.1**	**-0.2**
NMLH	**Miaoli**	**1.75**	**273**		*e*P		**Pn**	**11 38 00.7**	**+1.3**
	baz=272								
NMLH					*e*S		**Sn**	**11 38 22.2**	**+0.8**
	baz=272								
SMLT	**Sun Moon Lake**	**1.76**	**251**		*e*P		**Pn**	**11 38 00.4**	**+0.8**
	baz=246								
SMLT					*e*S		**Sn**	**11 38 21.4**	**-0.3**
	baz=246								
TWQ1	**Liyutan**	**1.77**	**266**		*e*P		**Pn**	**11 38 00.6**	**+1.0**
	baz=276								
TWQ1					*e*S		**Sn**	**11 38 20.8**	**-1.1**
	baz=276								
NSY	**Sanyi**	**1.78**	**269**		*e*P		**Pn**	**11 38 00.9**	**+1.2**
	baz=268								
NSY					*e*S		**Sn**	**11 38 22.5**	**+0.5**
	baz=268								
TYC	**Yuchr**	**1.79**	**252**		P		**Pn**	**11 38 00.7**	**+0.9**
	baz=247								
TYC					*e*S		**Sn**	**11 38 21.6**	**-0.6**
	baz=247								
FULB	**Fuli**	**1.82**	**226**		P		**Pn**	**11 37 59.6**	**-0.6**
	baz=219								
FULB					*e*S		**Sn**	**11 38 21.1**	**-1.8**
	baz=219								
JTJ	**Tarama**	**1.82**	**84**		P		**Pn**	**11 38 00.8**	**+0.6**
JTJ					S		**Sn**	**11 38 23.1**	**+0.3**
CHKT	**Chengkung**	**1.84**	**222**		*e*P		**Pn**	**11 37 59.3**	**-1.2**
	baz=217								
CHKT					*e*S		**Sn**	**11 38 20.5**	**-2.9**
	baz=217								
WHYT	**Xinyi Township**	**1.87**	**246**		*e*P		**Pn**	**11 38 02.0**	**+1.1**
	baz=245								
WHYT					*e*S		**Sn**	**11 38 24.1**	**0.0**
	baz=245								
TCU	**Taichung**	**1.89**	**261**		*e*P		**Pn**	**11 38 02.3**	**+1.2**
	baz=271								
TCU					*e*S		**Sn**	**11 38 25.0**	**+0.5**
	baz=271								
WWF	**Wufeng**	**1.89**	**257**		*e*P		**Pn**	**11 38 02.5**	**+1.4**
	baz=269								
WWF					*e*S		**Sn**	**11 38 25.1**	**+0.6**
	baz=269								
WDJ	**Dajia District**	**1.90**	**267**		*e*P		**Pn**	**11 38 02.2**	**+1.0**
	baz=266								
WDJ					*e*S		**Sn**	**11 38 25.2**	**+0.5**
	baz=266								
WJS	**Zhushan**	**1.93**	**251**		*e*P		**Pn**	**11 38 03.4**	**+1.7**
	baz=247								
WJS					*e*S		**Sn**	**11 38 26.8**	**+1.4**
	baz=247								
WNT1	**Nantou City**	**1.94**	**254**		*e*P		**Pn**	**11 38 03.5**	**+1.7**
	baz=253								
WNT1					*e*S		**Sn**	**11 38 27.6**	**+1.8**
	baz=253								
WNT	**Mingjian**	**1.95**	**253**		*e*P		**Pn**	**11 38 03.7**	**+1.8**
	baz=252								
WNT					*e*S		**Sn**	**11 38 27.3**	**+1.5**
	baz=252								
EDH	**Donghe**	**1.98**	**221**		*e*P		**Pn**	**11 38 01.6**	**-0.7**
	baz=216								
EDH					*e*S		**Sn**	**11 38 24.1**	**-2.5**
	baz=216								
ALS	**Alishan**	**1.99**	**242**		*e*P		**Pn**	**11 38 03.9**	**+1.1**
	baz=234								
ALS					*e*S		**Sn**	**11 38 27.4**	**0.0**
	baz=234								
WCHH	**Zhanghua**	**2.01**	**259**		P		**Pn**	**11 38 03.6**	**+1.0**
	baz=267								
WCHH					*e*S		**Sn**	**11 38 27.6**	**+0.4**
	baz=267								
ELDTW	**Lidau**	**2.01**	**231**		*e*P		**Pn**	**11 38 02.5**	**-0.4**
	baz=225								
ELDTW					*e*S		**Sn**	**11 38 25.7**	**-1.9**
	baz=225								
CHN5	**Tsauling**	**2.06**	**245**		*e*P		**Pn**	**11 38 05.2**	**+1.7**
	baz=237								
CHN5					*e*S		**Sn**	**11 38 28.7**	**+0.1**
	baz=237								
WGK	**Gukeng**	**2.12**	**249**		*e*P		**Pn**	**11 38 06.0**	**+1.9**
	baz=248								
WGK					*e*S		**Sn**	**11 38 31.8**	**+1.9**
	baz=248								
LDUT	**Ludao**	**2.12**	**213**		*e*P		**Pn**	**11 38 03.2**	**-1.0**
	baz=216								
LDUT					*e*S		**Sn**	**11 38 27.2**	**-2.9**
	baz=216								
LONT	**Longtian**	**2.13**	**223**		*e*P		**Pn**	**11 38 03.8**	**-0.5**
	baz=230								
LONT					*e*S		**Sn**	**11 38 28.2**	**-2.0**
	baz=230								
WDLH	**Douliu**	**2.14**	**249**		*e*P		**Pn**	**11 38 06.5**	**+2.1**
	baz=261								
WDLH					*e*S		**Sn**	**11 38 32.8**	**+2.4**
	baz=261								
STYH	**Taoyuan**	**2.20**	**234**		*e*P		**Pn**	**11 38 06.1**	**+0.9**
	baz=229								
STYH					*e*S		**Sn**	**11 38 31.3**	**-0.5**
	baz=229								
WRL	**Guolierlin Hig**	**2.21**	**256**		*e*P		**Pn**	**11 38 06.7**	**+1.3**
	baz=263								
STYT	**Tauyuan**	**2.22**	**234**		*e*P		**Pn**	**11 38 06.4**	**+0.9**
	baz=229								
STYT					*e*S		**Sn**	**11 38 31.9**	**-0.4**
	baz=229								
TWGBT	**Beinan**	**2.23**	**223**		*e*P		**Pn**	**11 38 04.8**	**-0.8**
	baz=229								
TWGBT					*e*S		**Sn**	**11 38 30.3**	**-2.2**
	baz=229								
TWG	**Pinlang**	**2.23**	**223**		*e*P		**Pn**	**11 38 05.2**	**-0.4**
	baz=229								
TWG					*e*S		**Sn**	**11 38 30.1**	**-2.4**
	baz=229								
TWG	**Pinlang**	**2.23**	**223**				**Pn**	**11 38 04.7**	**-1.0**
TTN	**Taitung**	**2.23**	**220**		*e*P		**Pn**	**11 38 05.5**	**-0.2**
	baz=214								
TPUB	**Ta-pu**	**2.24**	**239**		*e*P		**Pn**	**11 38 07.3**	**+1.5**
	baz=238								
TPUB					*e*S		**Sn**	**11 38 34.3**	**+1.5**
	baz=238								
TPUB	**Ta-pu**	**2.24**	**239**				**Pn**	**11 38 05.0**	**-0.8**
CHN4	**Tsaushan**	**2.24**	**241**		*e*P		**Pn**	**11 38 07.8**	**+2.0**
	baz=233								
CHN4					*e*S		**Sn**	**11 38 34.7**	**+1.9**
	baz=233								
CHN2	**Minshiung**	**2.25**	**246**		*e*P		**Pn**	**11 38 08.0**	**+2.1**
	baz=238								
CHN2					*e*S		**Sn**	**11 38 35.5**	**+2.4**
	baz=238								
JIRB	**Irabujima**	**2.26**	**80**		P		**Pn**	**11 38 06.7**	**+0.6**
JIRB					S		**Sn**	**11 38 33.3**	**0.0**
WTK	**Tuku**	**2.27**	**250**		*e*P		**Pn**	**11 38 07.2**	**+1.1**
	baz=261								
WTK					*e*S		**Sn**	**11 38 35.0**	**+1.6**
	baz=261								
WTP	**Ta-pu**	**2.28**	**238**		*e*P		**Pn**	**11 38 07.8**	**+1.5**
	baz=237								
WTCT	**Ta-ch'eng**	**2.30**	**255**		*e*P		**Pn**	**11 38 06.2**	**-0.4**
	baz=254								
WTCT					*e*S		**Sn**	**11 38 34.0**	**-0.3**
	baz=254								
CHY	**Chiayi**	**2.31**	**246**		*e*P		**Pn**	**11 38 08.2**	**+1.5**
	baz=258								
CHY					*e*S		**Sn**	**11 38 35.8**	**+1.4**
	baz=258

CHN3 **Shinhua** 2.56 238 *e*P Pn 11 38 12.4 +2.3
baz=247
SSD **Sandimen** 2.57 228 *e*P Pn 11 38 11.3 +1.2
baz=227
SSD *e*S Sn 11 38 41.9 +1.2
baz=227
SCST **Cishan** 2.58 233 *e*P Pn 11 38 12.3 +2.1
baz=242
TSMG **Majia** 2.59 228 *e*P Pn 11 38 11.4 +0.9
baz=226
TSMG *e*S Sn 11 38 42.7 +1.6
baz=226
SCLT **Jiali** 2.65 241 *e*P Pn 11 38 12.5 +1.3
baz=240
LAY **Lan-yu** 2.65 204 *e*P Pn 11 38 09.8 -1.5
baz=203
MASBT **Mashibuluo** 2.66 226 *e*P Pn 11 38 12.3 +0.9
baz=225
MASBT *e*S Sn 11 38 42.2 -0.7
baz=225
TWM1 **Shoushan** 2.67 232 *e*P Pn 11 38 14.0 +2.5
baz=231
SGLT **Jiouru** 2.68 230 *e*P Pn 11 38 13.7 +2.0
baz=229
TAW **Tawu** 2.69 219 *e*P Pn 11 38 11.0 -0.8
baz=223
EAST **Anshuo** 2.70 220 *e*P Pn 11 38 11.3 -0.6
baz=219
TSPT **Pingtung City** 2.71 229 *e*P Pn 11 38 14.4 +2.3
baz=228
SNJT **Kaohsiung City** 2.77 232 *e*P Pn 11 38 14.8 +1.9
baz=231
SSPT **Xinbi** 2.79 225 *e*P Pn 11 38 14.7 +1.5
baz=236
SCZT **Fangliau** 2.84 223 *e*P Pn 11 38 15.0 +1.2
baz=221
SLIU **Shizi** 2.85 218 *e*P Pn 11 38 13.7 -0.4
baz=222
SLIU *e*S Sn 11 38 45.7 -1.8
baz=222
WLCH **Liuqiu** 3.01 226 *e*P Pn 11 38 20.2 +4.1
baz=236
MATB **Ma-tsu** 3.01 304 *e*P Pn 11 38 15.5 -0.6
baz=303
TWP **Hsiaoliuchiu** 3.02 226 *e*P Pn 11 38 19.1 +2.8
baz=225
PNG **Penghu** 3.03 253 *e*P Pn 11 38 16.0 -0.2
baz=252
PHUB **P'eng-hu** 3.03 252 *e*P Pn 11 38 15.9 -0.4
baz=251
MSUT **Lienchiang** 3.04 304 *e*P Pn 11 38 16.6 +0.2
baz=303
WDGT **Dungji** 3.05 247 *e*P Pn 11 38 17.0 +0.5
baz=246
HEN **Hengchun** 3.06 217 *e*P Pn 11 38 17.2 +0.5
baz=216
HEN *e*S Sn 11 38 50.9 -1.5
baz=216
TSEB **Hengchuen, Pin** 3.06 213 *e*P Pn 11 38 17.4 +0.7
baz=219
TWKBT **Hengchun** 3.07 215 *e*P Pn 11 38 16.9 0.0
baz=219
TWK1 **Hengchun** 3.07 215 *e*P Pn 11 38 17.4 +0.5
baz=220
SNW **Nanwan** 3.09 216 *e*P Pn 11 38 17.7 +0.6
baz=215
PTMZ **Houxiangcun** 3.32 281 *e*P Pn 11 38 19.9 -0.3
baz=270
XPSS **Dashiqiu** 3.34 318 *e*P Pn 11 38 20.2 -0.3
baz=316
LYJJ **Jianjiangzhen** 3.38 308 *e*P Pn 11 38 20.7 -0.3
baz=307
MHZQ **Yeshan** 3.71 297 *e*P Pn 11 38 24.9 -0.6
baz=295
QZH **Quanzhou** 3.78 278 ⇓*i*P Pn 11 38 26.1 -0.4
QZH S Sn 11 39 05.5 -4.4
QZH smax smax
comp=N,470nm,0.6s
QZH smax smax
comp=E,300nm,0.3s
KNM **Kinmen** 3.90 270 *e*P Pn 11 38 29.5 +1.4
baz=268
KNMB **Chin-men Tao** 3.94 271 *e*P Pn 11 38 28.1 -0.6
baz=269
KNMB **Chin-men Tao** 3.94 271 Pn Pn 11 38 27.9 -0.7
BBP **Basco** 4.07 190 *e*P Pn 11 38 28.7 -1.8
AXDP **Jialang** 4.34 277 *e*P Pn 11 38 34.0 0.0
baz=274
ZPLA **Ao Xicun** 4.57 264 *e*P Pn 11 38 36.7 -0.5
baz=271
JOW **Kunigami** 5.54 64 *e*P Pn 11 38 50.1 -0.3
baz=64
JOW **Kunigami** 5.54 64 Pn Pn 11 38 50.4 0.0
APYP **Conner** 6.72 192 *e*P Pn 11 39 06.9 +0.4
APYP *e*S Sn 11 40 20.0 -1.6
CVP **Callao Caves** 6.79 187 ⇓*e*P Pn 11 39 07.7 +0.2
CVP *i* S Sn 11 40 20.2 -3.1
SZP **Santa** 7.20 197 Pn 11 39 12.5 -0.6
JMZ **Minamidaito 2** 7.82 78 Pn 11 39 18.4 -3.1
NJ2 **Nanjing** 8.28 337 ⇓P Pn 11 39 28.1 +0.4
NJ2 S Sn 11 40 58.5 -1.1
NJ2 pmax pmax
comp=Z,26nm,0.7s
NJ2 smax smax
comp=N,52nm,0.8s
NJ2 smax smax
comp=E,47nm,1.0s
GZH **Guangzhou** 8.69 263 P Pn 11 39 29.6 -3.8
GZH S Sn 11 41 03.6 -6.2
GZH smax smax
comp=N,200nm,0.9s
GZH smax smax
comp=E,140nm,1.0s
WHN **Wuhan** 9.57 311 ⇓P Pn 11 39 54.5 +9.1
WHN S Sn 11 41 54.2 +23
WHN LR LR
comp=Z,1μm,4.7s
LQP **Lukban** 10.37 186 ⇑*e*P Pn 11 39 58.0 +1.6
JNU **Nakatsue** 11.20 38 P Pn 11 40 05.0 -2.6
comp=Z,0.5nm,0.3s,baz=34,slow=18,SNR=3.3
JNU **Nakatsue** 11.20 38 Pn 11 40 06.0 -1.5
JTU **Tsushima** 11.58 29 Pn 11 40 11.8 -0.8
QIZ **Qiongzhong** 13.13 248 P Pn 11 40 32.7 -0.8
QIZ S Sn 11 42 57.6 -0.2
QIZ LR LR
comp=Z,86nm,6.9s
QIZ LR LR
comp=Z,110nm,19.6s
QIZ LR LR
comp=Z,130nm,12.4s
KSAR **Wonju Array Be** 13.66 18 Pn 11 40 39.9 -0.5
KSRS **Korea Array** 13.69 18 P Pn 11 40 42.3 +1.6
comp=Z,2.6nm,0.3s,baz=196,slow=12,SNR=61
KSRS LR LR 11 45 44.2
comp=Z,92nm,20.5s,baz=212,slow=36
KS19 **Wonju Array Si** 13.71 18 Pn Pn 11 40 39.8 -1.3
JHS **Saijyo** 13.83 38 Pn Pn 11 40 43.5 +0.8
GYA **Guiyang** 14.63 281 ⇓P P 11 40 56.5 -0.6
GYA S Sn 11 43 38.1 +3.7
GYA pmax pmax
comp=Z,13nm,0.9s
GYA LR LR
comp=Z,160nm,3.8s
GYA LR LR
comp=Z,190nm,4.1s
GYA LR LR
comp=Z,100nm,4.6s
XAN **Xi'an** 15.34 312 P P 11 41 07.8 +3.0
XAN pP pP 11 41 16.0 -5.8
XAN pmax pmax
comp=Z,10.0nm,1.4s
XAN **Xi'an** 15.34 312 P P 11 41 04.6 -0.2
INU **Inuyama** 16.45 45 P P 11 41 17.4 +0.3
BJT **Baijiatuau** 16.45 342 P Pn 11 41 16.3 +0.5
BJI **Beijing** 16.47 342 P P 11 41 19.9 +2.7
BJI pmax pmax
comp=Z,17nm,0.9s
JHJ **Hachijo jima 2** 17.25 56 P P 11 41 28.8 +3.0
comp=Z,20nm,0.3s,baz=233,slow=7.6,SNR=7.3
JHJ2 **Mitsune** 17.27 56 P P 11 41 26.4 +0.3
SLVN **Son La** 17.61 264 P P 11 41 29.0 -1.0
JCJ **Chichijima** 17.73 77 P Pn 11 41 32.4 +0.8
comp=Z,9.2nm,0.3s,baz=303,slow=4.4,SNR=7.2
JCJ **Chichijima** 17.73 77 P Pn 11 41 32.0 +0.4
MAJO **Matsushiro** 17.94 44 P Pn 11 41 34.3 +0.2
MAT **Matsushiro** 17.94 44 P P 11 41 32.7 -0.8

MJAR **Matsushiro Arr** 17.94 44 P P 11 41 32.4 -1.1
comp=Z,0.2nm,0.3s,baz=236,slow=10.0,SNR=13
MJAR **Matsushiro Arr** 17.94 44 P P 11 41 32.4 -1.1
CD2 **Chengdu** 17.96 295 P Pn 11 41 34.8 +0.4
CD2 pmax pmax
comp=Z,30nm,0.8s
KMI **Kunming** 18.15 276 ⇑P Pn 11 41 39.9 +3.0
KMI pmax pmax
comp=Z,18nm,1.0s
DLV **T Lat** 18.36 230 P P 11 41 38.2 -0.3
DLV IAmb IAmb 11 41 43.1
comp=Z,26nm,1.0s
UBPT **Khong Chiam** 18.60 244 P Pn 11 41 44.5 +2.3
comp=Z,7.9nm,1.2s
UBPT **Khong Chiam** 18.60 244 P 11 41 40.0 -0.8
HHC **Hu-ho-hao-te** 18.81 333 *e*P Pn 11 41 45.6 +1.0
HHC pmax pmax
comp=Z,27nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.1s
NONG **Nongkai** 19.31 254 P Pn 11 41 55.4 +4.9
comp=Z,39nm,0.9s
KKM **Kota Kinabalu** 19.36 200 P P 11 41 49.1 -0.1
CN2 **Changchun** 19.41 6 *e*P Pn 11 41 50.7 -0.8
LZH **Lanzhou** 19.95 310 *e*P P 11 41 56.6 +1.0
LZH pP pP 11 42 13.9 +1.0
LZH sP sP 11 42 21.7 -2.4
LZH *e*S S 11 45 31.6 -3.8
LZH SS SnSn 11 46 08.1 +9.4
LZH pmax pmax
comp=Z,14nm,1.1s
LZH pmax pmax
comp=Z,97nm,4.6s
KHON **Khomkaen** 20.31 250 P Pn 11 42 02.8 +0.6
comp=Z,93nm,0.9s
JMM **Marumori** 20.39 45 P P 11 41 57.4 -2.8
JMM IAmb IAmb 11 42 12.2
comp=Z,20nm,0.9s
MDJ **Mudanjiang** 20.86 14 P P 11 42 05.7 +0.5
MDJ pmax pmax
comp=Z,14nm,1.0s
MDJ pmax pmax
comp=Z,150nm,2.8s
USA0B **Ussuriysk Arra** 21.09 19 P P 11 42 07.1 -0.5
USA0B IAmb IAmb 11 42 08.3
comp=Z,24nm,0.8s
USRK **Ussuriysk Ar.** 21.09 19 P P 11 42 06.5 -1.0
comp=Z,26nm,0.7s,baz=203,slow=10,SNR=49
USRK LR LR 11 50 09.2
comp=Z,43nm,22.0s,baz=147,slow=36
USRK **Ussuriysk Ar.** 21.09 19 P P 11 42 06.8 -0.8
PHIT **Phitsanulok** 22.05 255 P P 11 42 21.8 +3.7
comp=Z,109nm,1.0s
SRAK **Srakaew** 22.09 246 P P 11 42 16.2 -2.3
comp=Z,4μmcomp=Z,434nm,1.0s
LAMP **Lampang** 22.26 259 P P 11 42 24.5 +4.1
comp=Z,15nm,1.4s
JTM **Tenmabayashi** 22.37 39 P P 11 42 17.2 -4.0
CM34 **Chiang Mai Arr** 22.59 260 P P 11 42 26.0 +2.2
SUKH **Sukhothai** 22.63 257 P P 11 42 28.5 +4.3
comp=Z,14nm,1.1s
CM35 **Chiang Mai Arr** 22.64 260 P P 11 42 26.0 +1.6
CM36 **Chiang Mai Arr** 22.75 259 P P 11 42 27.0 +1.5
CM33 **Chiang Mai Arr** 22.78 260 P P 11 42 27.0 +1.2
CMMT **Chiang Mai** 22.78 260 P P 11 42 26.7 +0.8
comp=Z,6.7nm,1.6s
CHTO **Chiang Mai** 22.79 260 P P 11 42 25.3 -0.6
CHTO IAmb IAmb 11 42 29.6
comp=Z,23nm,1.4s
CM09 **Chiang Mai Arr** 22.86 259 P P 11 42 30.6 +4.0
comp=Z,53nmcomp=Z,5.8nm,0.8s
CM04 **Chiang Mai Arr** 22.89 259 P P 11 42 30.5 +3.6
comp=Z,52nmcomp=Z,5.4nm,0.8s
CM01 **Chiang Mai Arr** 22.90 259 P P 11 42 30.0 +3.0
comp=Z,162nmcomp=Z,7.6nm,0.4s
CM31 **Chiang Mai Arr** 22.90 259 P P 11 42 27.9 +0.9
CMAR **Chiang Mai Arr** 22.90 259 P P 11 42 28.3 +1.3
comp=Z,2.5nm,0.7s,baz=63,slow=7.8,SNR=20
CMAR LR LR 11 51 37.7
comp=Z,63nm,21.0s,baz=145,slow=37
CMAR **Chiang Mai Arr** 22.90 259 P P 11 42 26.6 -0.4
CM02 **Chiang Mai Arr** 22.91 259 P P 11 42 30.6 +3.5
comp=Z,5.3nm,0.8s
CM05 **Chiang Mai Arr** 22.92 259 P P 11 42 30.4 +3.3
comp=Z,37nmcomp=Z,4.3nm,1.1s
CM15 **Chiang Mai Arr** 22.92 259 P P 11 42 31.5 +4.3
comp=Z,8.3nm,0.6s
CM32 **Chiang Mai Arr** 22.93 260 P P 11 42 30.0 +2.8
CM13 **Chiang Mai Arr** 22.95 259 P P 11 42 30.9 +3.4
comp=Z,4.7nm,0.8s
UTHA **Uthaitani** 23.57 252 P P 11 42 37.3 +4.0
comp=Z,18nm,1.0s
GTOI **Gorontalo** 23.70 179 P P 11 42 33.4 -1.0
comp=Z,442nmcomp=Z,51nm,0.9s
KMSI **Cibinong** 23.79 177 P P 11 42 36.5 +1.3
comp=Z,59nm,0.5s
UMPA **Umpang Tak** 23.80 254 P P 11 42 39.9 +4.5
comp=Z,36nm,1.1s
MRSI **Marisa** 23.86 182 P P 11 42 37.8 +1.9
comp=Z,49nm,0.6s
MHMT **Maesarieng** 23.90 260 P P 11 42 39.9 +3.7
SBUM **Sibu** 24.13 206 P P 11 42 38.8 +0.6
SBUM IAmb IAmb 11 42 40.2
comp=Z,60nm,1.0s
SBUM **Sibu** 24.13 206 P P 11 42 39.0 +0.8
ERM **Erimo** 24.36 39 P P 11 42 38.9 -1.2
GTA **Gaotai** 24.39 313 ⇓P P 11 42 41.0 +0.4
GTA pmax pmax
comp=Z,11nm,1.1s
APSI **Ampana** 25.25 182 P P 11 42 47.0 -1.5
comp=Z,566nmcomp=Z,16nm,0.9s
ASAJ **Asahikawa** 25.45 35 P P 11 42 48.2 -1.8
comp=Z,8.9nm,0.3s,baz=245,slow=9.5,SNR=38
JKA **Kamikawa-asahi** 25.45 35 P P 11 42 48.4 -1.6
JKA IAmb IAmb 11 43 11.0
comp=Z,30nm,1.3s
KLR **Kul'dur** 25.71 14 P P 11 42 51.8 -0.5
comp=Z,6.7nm,0.7s,baz=220,slow=6.8,SNR=25
KLR PcP PcP 11 46 20.5 +0.3
comp=Z,0.4nm,0.4s,baz=220,slow=2.9,SNR=6.1
KSM **Kuching** 25.82 210 P P 11 42 53.2 -0.5
KSM IAmb IAmb 11 42 55.5
comp=Z,18nm,0.8s
KSM **Kuching** 25.82 210 P P 11 42 55.0 +1.4
MTKI **Muara Teweh, K** 26.38 198 P P 11 42 59.4 +0.8
ULN **Ulaanbaatar** 26.45 336 P P 11 42 58.7 -0.5
SIJI **Sorong** 26.52 161 P P 11 43 02.5 +2.6
comp=Z,4.2nm,0.5s,baz=157,slow=9.7,SNR=4.7
SANI **Sanana** 26.55 173 P P 11 42 59.9 -0.3
SONM **Songino Array** 26.67 335 P P 11 43 00.9 -0.3
comp=Z,14nm,0.8s,baz=150,slow=9.4,SNR=67
SONM pP pP 11 43 21.3 +0.5
comp=Z,5.1nm,0.9s,baz=153,slow=10.0,SNR=4.0
SONM ScP ScP 11 49 53.0 -1.9
comp=Z,0.7nm,0.8s,baz=165,slow=6.2,SNR=4.5
SONM **Songino Array** 26.67 335 P P 11 43 00.1 -1.1
SONM IAmb IAmb 11 43 02.0
comp=Z,11nm,0.8s
YSS **Yuzh-Sakhalins** 27.56 30 P P 11 43 09.8 +0.9
YSS IAmb IAmb 11 43 12.1
comp=Z,23nm,0.7s
NLAI **Namlea** 27.87 171 P P 11 43 17.9 +5.9
KULM **Kulim** 28.52 232 P P 11 43 19.0 +1.2
FAKI **Fak Fak** 28.76 160 P P 11 43 20.7 +0.8
IPM **Ipoh** 28.82 230 P P 11 43 21.0 +0.5
KAPI **Kappang** 29.45 186 LR LR 11 55 42.5
comp=Z,36nm,19.5s,baz=49,slow=37
PSI **Prapat** 31.48 230 P P 11 43 44.5 +0.3
comp=Z,7.6nm,0.7s,baz=2.0,slow=1.5,SNR=4.5
PSI LR LR 11 55 08.7
comp=Z,39nm,18.9s,baz=272,slow=33
LEM **Lembang** 34.42 207 P P 11 44 10.6 +0.8
comp=Z,30nm,0.8s,baz=321,slow=21,SNR=5.5
WMQ **Urumqi** 34.47 313 *e*P P 11 44 11.1 +1.2
WMQ pmax pmax
comp=Z,36nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.5s
ZSN **Zaisan** 37.73 317 *e*P P 11 44 36.7 -0.9
baz=317
ZSN *e*S S 11 50 21.4 -0.1
baz=317
MTN **Manton Dam** 37.99 167 P P 11 44 39.8 -0.1
MTN IAmb IAmb 11 44 40.5
comp=Z,22nm,1.4s
PETK **Petropavlovsk-** 38.85 33 P P 11 44 45.1 -1.7
comp=Z,1.7nm,0.6s,baz=172,slow=3.3,SNR=16
PETK LR LR 12 02 46.3
comp=Z,52nm,18.3s,baz=48,slow=39
MK31 **Makanchi Array** 39.11 315 P P 11 44 49.1 -0.1
MK31 IAmb IAmb 11 44 50.1
comp=Z,6.7nm,1.1s
MKAR **Makanchi Array** 39.11 315 P P 11 44 48.1 -1.1
comp=Z,3.9nm,0.6s,baz=100,slow=9.6,SNR=27
MKAR PcP PcP 11 46 57.2 0.0
comp=Z,2.4nm,0.7s,baz=103,slow=3.8,SNR=6.8
MKAR ScP ScP 11 50 37.4 -0.3
comp=Z,0.4nm,0.7s,baz=76,slow=6.1,SNR=3.0
MKAR **Makanchi Array** 39.11 315 P P 11 44 48.6 -0.5
MAKZ **Makanchi** 39.32 315 P P 11 44 50.5 -0.3
MAKZ IAmb IAmb 11 44 51.9
comp=Z,15nm,1.2s
SHLS **Shalkode** 39.97 309 *e*P P 11 44 54.2 -2.2
comp=Z,3.5nm,0.7s,baz=309
UZB **Uzynbulak** 40.28 309 *e*P P 11 44 59.3 +0.3
baz=308
UZB *e*S S 11 51 01.0 +0.9
baz=308
KPKS **Kokpek** 40.59 309 *e*P P 11 45 01.6 +0.1
baz=309
SATY **Saty** 40.70 308 *e*P P 11 45 02.8 +0.3
baz=308
SATY *e*S S 11 51 07.3 +1.0
baz=308
ZAA0 **Zalesovo Array** 40.77 326 P P 11 45 01.2 -1.5
ZAA0 IAmb IAmb 11 45 02.3
comp=Z,6.3nm,0.7s
ZALV **Zalesovo Beam** 40.77 326 P P 11 45 01.3 -1.4
comp=Z,7.8nm,0.7s,baz=108,slow=7.8,SNR=27
ZALV **Zalesovo Beam** 40.77 326 P P 11 45 01.6 -1.1
TDK **Taldyqorghan** 41.16 311 *e*P P 11 45 06.3 +0.3
comp=Z,18nm,0.7s,baz=311
H11S3 **WAKE ISLAND Hy** 41.22 89 T T 12 31 00.3
baz=283,slow=74,SNR=3.9
H11S1 **WAKE ISLAND Hy** 41.23 89 T T 12 31 00.3
baz=163,slow=74,SNR=4.7
H11S2 **WAKE ISLAND Hy** 41.23 89 T T 12 31 00.3
PMG **Port Moresby** 41.27 142 P P 11 45 07.9 +0.7
comp=Z,3.5nm,0.6s,baz=301,slow=5.9,SNR=2.5
MDOK **Medeo** 41.69 308 *e*P P 11 45 10.7 0.0
baz=308
SEM **Semipalatinsk** 41.70 320 *e*P P 11 45 09.3 -1.4
baz=319
TNSS **Tian-Shan** 41.74 308 *e*P P 11 45 12.0 +0.7
baz=308
AAA **Alma-Ata** 41.80 308 *e*P P 11 45 11.7 +0.3
baz=308
KUU **Kurty** 42.34 309 *e*P P 11 45 15.9 +0.1
comp=Z,6.9nm,0.6s,baz=309
KUU *e*S S 11 51 31.2 +0.8
baz=309
FITZ **Fitzroy Crossi** 42.41 176 P P 11 45 16.5 +0.1
FITZ IAmb IAmb 11 45 17.6
comp=Z,18nm,1.2s
COEN **Coen** 43.10 150 P P 11 45 23.5 +1.4
AAK **Ala-Archa** 43.45 307 P P 11 45 25.5 +0.7
SGDS **Sogindy** 43.48 308 *e*P P 11 45 24.5 -0.5
baz=308
BTLS **Baital** 44.18 310 *e*P P 11 45 30.2 -0.3
baz=310
WB0 **Warramunga Arr** 45.42 164 P P 11 45 40.9 +0.3
WB0 IAmb IAmb 11 45 42.5
comp=Z,9.0nm,0.8s
WRA **Warramunga Arr** 45.58 165 P P 11 45 42.9 +1.2
comp=Z,10nm,0.7s,baz=346,slow=8.8,SNR=62
WRA **Warramunga Arr** 45.58 165 P P 11 45 42.0 +0.2
WB2 **Warramunga Arr** 45.58 165 P P 11 45 42.6 +0.8
WB2 IAmb IAmb 11 45 43.9
comp=Z,16nm,0.9s
WR0 **Warramunga Arr** 45.64 164 P P 11 45 43.2 +0.9
DZA **Taraz** 45.79 307 *e*P P 11 45 43.6 +0.3
baz=307
BRZS **Berezniki** 46.18 317 *e*P P 11 45 45.4 -0.8
baz=316
GAR **Garm** 46.26 301 P P 11 45 47.2 0.0
GAR IAmb IAmb 11 45 49.6
comp=Z,8.6nm,0.6s
KK31 **Karatay Array** 46.41 307 P P 11 45 48.6 +0.4
KKAR **Karatay Array** 46.41 307 P P 11 45 48.6 +0.4
KKAR **Karatay Array** 46.41 307 P P 11 45 48.1 -0.1
TIXI **Tiksi** 47.34 3 P P 11 45 53.4 -1.5
TIXI IAmb IAmb 11 45 54.4
comp=Z,12nm,1.1s
BRVK **Borovoye** 48.41 320 P P 11 46 02.7 -0.8
BRVK IAmb IAmb 11 46 04.1
comp=Z,5.4nm,1.0s
AS31 **Alice Springs** 49.07 166 P P 11 46 10.2 +1.4
AS31 IAmb IAmb 11 46 12.2
comp=Z,2.3nm,0.5s
ASAR **Alice Springs** 49.07 166 P P 11 46 10.3 +1.4
comp=Z,3.2nm,0.6s,baz=19,slow=11,SNR=97
ASAR pP pP 11 46 30.5 +0.6
comp=Z,1.4nm,0.6s,baz=344,slow=7.4,SNR=3.3
ASAR **Alice Springs** 49.07 166 P P 11 46 09.7 +0.8
NRIK **Noril'sk** 49.49 344 P P 11 46 10.2 -1.4
comp=Z,8.4nm,1.0s,baz=116,slow=8.0,SNR=5.4
NRIK PcP PcP 11 47 32.1 -0.1
comp=Z,7.5nm,0.7s,baz=132,slow=4.6,SNR=6.6
NRIK **Noril'sk** 49.49 344 P P 11 46 10.1 -1.4
NRIK IAmb IAmb 11 46 11.0
comp=Z,6.5nm,0.8s
ABKAR **Akbulak array** 54.24 314 P P 11 46 46.6 -0.5
ABKAR **Akbulak array** 54.24 314 P P 11 46 47.1 0.0
ABKAR IAmb IAmb 11 46 48.0
comp=Z,5.9nm,0.9s
GEYT **Alibeck** 55.86 300 P P 11 46 59.4 +0.4
comp=Z,2.1nm,0.6s,baz=30,slow=6.8,SNR=2.1
GEYT **Alibeck** 55.86 300 P P 11 46 57.5 -1.5
BBOO **Buckleboo** 58.37 167 P P 11 47 17.2 +0.7
STKA **Stephens Creek** 58.87 161 P P 11 47 20.7 +0.7
comp=Z,3.1nm,1.0s,baz=4.8,slow=12,SNR=1.5
STKA **Stephens Creek** 58.87 161 P P 11 47 20.3 +0.3
IMAR **Indian Mountai** 65.30 27 P P 11 48 02.9 +0.2
TOO **Toolangi** 65.33 160 P P 11 48 03.1 0.0
TOO IAmb IAmb 11 48 19.7
comp=Z,17nm,1.3s
KLMR **Klimovskoe** 65.67 328 *e*P P 11 48 03.5 -1.6
KLMR AMP 11 48 07.0
comp=Z,13nm,1.2s
KLMR *es*P PcP 11 48 33.9 -1.9
PPLA **Purkeypile** 66.30 30 P P 11 48 10.0 +0.6
PPLA IAmb IAmb 11 48 11.6
comp=Z,5.5nm,0.8s
KBZ **Khabaz** 66.39 309 P P 11 48 10.8 +0.7
comp=Z,1.9nm,0.7s,baz=251,slow=0.5,SNR=4.8
COLD **Coldfoot** 66.58 25 P P 11 48 11.5 +0.7
TOLK **Toolik Lake Re** 66.63 24 P P 11 48 11.0 -0.2
MLY **Manley** 66.65 27 P P 11 48 12.1 +0.7
MLY IAmb IAmb 11 48 13.9
comp=Z,3.5nm,0.6s
BPAW **Bear Paw Mtn.** 66.67 29 P P 11 48 12.2 +0.6
BPAW IAmb IAmb 11 48 13.8
comp=Z,3.6nm,0.6s
KDAK **Kodiak Island** 66.86 35 P P 11 48 11.5 -1.3
TRF **Thorofare Moun** 67.08 29 P P 11 48 14.5 +0.2
TRF IAmb IAmb 11 48 24.8
comp=Z,5.8nm,1.2s
SUA **Susitna One** 67.18 31 P P 11 48 15.4 +0.5
SUA IAmb IAmb 11 48 43.6
comp=Z,7.8nm,0.8s
I23K **Minto, Yukon-K** 67.21 27 P P 11 48 15.6 +0.7
I23K IAmb IAmb 11 48 43.7
comp=Z,6.5nm,1.2s
CUT **Chulitna** 67.25 30 P P 11 48 14.6 -0.6
CUT IAmb IAmb 11 48 30.2
comp=Z,21nm,1.4s
NEA2 **Nenana** 67.42 28 P P 11 48 16.1 -0.2
NEA2 IAmb IAmb 11 48 18.7
comp=Z,5.0nm,0.6s
MDM **Murphy Dome** 67.72 27 P P 11 48 17.9 -0.3
MDM IAmb IAmb 11 48 46.7
comp=Z,6.5nm,1.2s
RND **Reindeer** 67.72 29 P P 11 48 18.2 0.0
RND IAmb IAmb 11 48 20.3
comp=Z,7.5nm,0.7s
PMR **Palmer** 67.92 31 P P 11 48 19.2 -0.2
PMR IAmb IAmb 11 48 22.7
comp=Z,5.5nm,1.2s
GHO **Glory Hole Cre** 67.99 31 P P 11 48 20.2 +0.3
GHO IAmb IAmb 11 48 47.4
comp=Z,12nm,1.2s
ILAR **Eielson Array** 68.32 27 P P 11 48 20.4 -1.5

comp=Z,0.6nm,0.5s,baz=269,slow=4.7,SNR=9.8
ILAR pP **pP** **11 48 44.9 +0.9**
comp=Z,1.0nm,0.8s,baz=286,slow=4.4,SNR=5.8
ILAR LR LR 12 20 31.2
comp=Z,23nm,18.3s,baz=338,slow=38
ILAR Eielson Array 68.32 27 P **P** **11 48 21.0 -0.8**
PWL Port Wells 68.44 32 P **P** **11 48 23.3 +0.6**
BMAR Burnt Mountain 68.69 24 P **P** **11 48 24.6 +0.4**
PRP Porcupine Dome 68.73 27 P **P** **11 48 24.8 +0.3**
SCRK Sand Creek 69.72 28 P **P** **11 48 30.8 0.0**
SCRK IAmb IAmb 11 48 54.5
comp=Z,6.7nm,1.2s
ARCES ARCESS Array B 69.79 338 P **P** **11 48 30.0 -0.9**
comp=Z,5.1nm,0.8s,baz=57,slow=4.5,SNR=8.1
ARCES pP **PcP** **11 48 52.1 -0.9**
comp=Z,2.3nm,0.6s,baz=63,slow=4.5,SNR=2.2
ARCES ARCESS Array B 69.79 338 P **P** **11 48 30.4 -0.5**
GLB Gilahina Butte 70.44 31 P **P** **11 48 36.0 +0.9**
K27K Chicken 70.52 28 P **P** **11 48 35.7 +0.2**
VRDI Verde Repeater 70.67 31 P **P** **11 48 36.8 +0.1**
EGAK Eagle 70.70 27 P **P** **11 48 36.6 +0.1**
MCARA McCarthy VSAT 70.82 31 P **P** **11 48 37.9 +0.6**
MCARA IAmb IAmb 11 49 00.4
comp=Z,9.6nm,1.1s
L27K Beaver Creek, 70.90 29 P **P** **11 48 37.5 -0.3**
L27K IAmb IAmb 11 48 39.1
comp=Z,9.3nm,1.5s
BCAR Beaver Creek A 70.91 29 P **P** **11 48 38.5 +0.6**
CRQM Cirque 70.94 31 P **P** **11 48 38.8 +0.5**
CRQM IAmb IAmb 11 48 49.0
comp=Z,7.1nm,1.1s
TGL Tana Glacier 71.09 31 P **P** **11 48 38.7 -0.3**
TGL IAmb IAmb 11 49 05.0
comp=Z,5.8nm,1.0s
BARN Barnard Glacie 71.55 31 P **P** **11 48 40.9 -1.1**
DAWY Dawson 71.64 27 P **P** **11 48 41.9 -0.4**
DAWY IAmb IAmb 11 48 43.0
comp=Z,8.4nm,1.4s
CTGM Chitina Glacie 71.73 31 P **P** **11 48 43.9 +0.9**
CTGM IAmb IAmb 11 48 46.4
comp=Z,4.2nm,0.7s
FIA1 FINESS Array S 71.90 330 P **P** **11 48 43.6 -0.2**
FIA1 IAmb IAmb 11 48 43.9
comp=Z,16nm,1.4s
FINES FINESS Array B 71.90 330 P **P** **11 48 43.0 -0.8**
comp=Z,4.2nm,0.4s,baz=60,slow=5.6,SNR=63
FINES FINESS Array B 71.90 330 P **P** **11 48 43.6 -0.2**
LOGN Logan Glacier 71.92 31 P **P** **11 48 44.4 +0.2**
LOGN IAmb IAmb 11 49 12.3
comp=Z,6.4nm,0.8s
INK Inuvik 72.43 22 LR LR 12 23 04.9
comp=Z,32nm,18.1s,baz=314,slow=38
INK Inuvik 72.43 22 P **P** **11 48 46.6 -0.2**
INK IAmb IAmb 11 48 49.2
comp=Z,4.3nm,0.8s
MNK Minsk 73.15 323 *i* P **P** **11 48 48.0 -3.4**
comp=E,3.0nm,0.8s
MNK *i* P **P** **11 48 48.0 -3.4**
comp=N,16nm,0.5s
MNK *i* P **P** **11 48 48.0 -3.4**
comp=Z,14nm,0.8s
MNK *i* PcP **PcP** **11 49 04.1 -3.4**
MNK *i* pP **pP** **11 49 09.0 -5.1**
MNK *i* PP **PP** **11 51 31.3 -3.6**
MNK *i* PPP PPP 11 53 16.2
MNK *i* S **S** **11 58 08.6 -3.4**
MNK *i* sS **SKSac** **11 58 45.9 -3.3**
MNK *i* ScS **SKKSac** **11 58 48.7 -0.7**
MNK *i* SS **SS** **12 02 52.7 -1.5**
MNK *i* SSS SSS 12 06 13.9
MNK *i* LR LR 12 21 53.8
MNK *i* LRM MLR 12 23 30.4
comp=E,6.0nm,15.2s
MNK *i* LRM MLR 12 23 30.4
comp=N,109nm,22.1s
MNK *i* LRM MLR 12 23 53.2
comp=Z,38nm,16.6s
HYT Haines Junctio 73.55 30 P **P** **11 48 54.8 +1.1**
AKASG Malin Array Be 73.58 319 P **P** **11 48 53.2 -0.7**
comp=Z,1.3nm,0.5s,baz=55,slow=6.9,SNR=4.8
BRTR Keskin Array B 74.12 307 P **P** **11 48 58.0 +0.5**
comp=Z,1.5nm,0.8s,baz=270,slow=33,SNR=4.2
BRTR pP **pP** **11 49 21.1 +0.9**
comp=Z,2.2nm,0.9s,baz=95,slow=6.7,SNR=4.4
BRTR Keskin Array B 74.12 307 P **P** **11 48 56.4 -1.2**
EUNU Eureka 74.50 5 P **P** **11 48 58.3 -0.5**
WHY Whitehorse 74.80 30 P **P** **11 49 02.4 +1.3**
WHY IAmb IAmb 11 49 03.3
comp=Z,7.5nm,1.4s
C36M Paulatuk 75.06 20 P **P** **11 49 01.9 -0.3**
C36M IAmb IAmb 11 49 04.1
comp=Z,13nm,1.4s
BURAR Bucovina Array 77.12 317 P **P** **11 49 14.1 -0.3**
KWP Kalwaria Pacla 77.88 319 P **P** **11 49 18.4 -0.1**
KWP IAmb IAmb 11 49 22.3
comp=Z,20nm,1.5s
DLBC Dease Lake 77.98 31 P **P** **11 49 18.4 -0.6**
RES Resolute Bay 78.15 10 P **P** **11 49 18.9 -0.6**
NC405 NORSAR Array S 78.37 332 P **P** **11 49 20.4 -0.6**
NC405 IAmb IAmb 11 49 22.1
comp=Z,14nm,0.7s
NOA NORSAR Array B 78.62 332 P **P** **11 49 21.8 -0.7**
comp=Z,1.8nm,0.5s,baz=53,slow=5.8,SNR=16
YKA Yellowknife Ar 82.16 23 P **P** **11 49 41.2 0.0**
comp=Z,3.0nm,0.7s,baz=309,slow=4.8,SNR=80
YKA pP **pP** **11 50 06.4 +2.2**
comp=Z,1.4nm,0.8s,baz=312,slow=4.7,SNR=3.9
CLL Collm 82.66 323 *eP* **P** **11 49 45.0 +0.9**
comp=Z,4.0nm,0.6s
CONA Conrad Observa 82.69 320 *eP* **P** **11 49 46.5 +2.0**
comp=Z,6.8nm,1.5s
ARSA Arzberg 83.22 319 *eP* **P** **11 49 47.3 +0.2**
comp=Z,3.7nm,1.2s
GERES GERESS Array B 83.50 321 P **P** **11 49 48.9 +0.2**
comp=Z,1.7nm,0.7s,baz=54,slow=6.8,SNR=9.4
GERES GERESS Array B 83.50 321 P **P** **11 49 48.4 -0.3**
ITM Ithomi 83.59 308 P **P** **11 49 49.1 -0.1**
MOA Molln 83.67 320 *eP* **P** **11 49 50.0 +0.6**
comp=Z,3.9nm,0.8s
OBKA Obir 84.16 319 *eP* **P** **11 49 53.4 +1.4**
comp=Z,16nm,1.3s
KBA Koelnbreinsper 84.60 320 *eP* **P** **11 49 54.1 -0.3**
comp=Z,3.3nm,0.6s
MYKA Terra Mystica 84.65 319 *eP* **P** **11 49 53.9 -0.5**
comp=Z,7.9nm,1.1s
ABTA Abfaltersbach 85.26 320 *eP* **P** **11 49 56.0 -1.5**
comp=Z,7.4nm,1.3s
WTTA Wattenberg 85.50 320 *eP* **P** **11 49 58.3 -0.6**
comp=Z,6.2nm,1.2s
B06A Marblemount 87.48 37 P **P** **11 50 08.8 +0.6**
D05A Enumclaw 87.95 38 P **P** **11 50 11.5 +0.9**
LTY Liberty 88.65 38 P **P** **11 50 14.0 0.0**
E07A Sunnyside 89.51 38 P **P** **11 50 19.5 +1.6**
C09A Chrisman Ranch 89.64 36 P **P** **11 50 19.9 +1.4**
D08A Wollman Farm, 89.73 37 P **P** **11 50 19.6 +0.7**
HAWA Hanford 89.79 38 P **P** **11 50 19.5 +0.3**
HUMO Hull Mountain 89.96 42 P **P** **11 50 21.7 +1.6**
NEW Newport 89.97 35 P **P** **11 50 20.7 +0.6**
E09A Wood Farm, Sta 90.49 37 P **P** **11 50 23.9 +1.5**
PINE Pine Mountain 90.50 40 P **P** **11 50 24.4 +1.6**
G08A Pilot Rock 90.77 38 P **P** **11 50 23.1 -0.9**
G08A IAmb IAmb 11 50 30.4
comp=Z,4.8nm,1.0s
WALA Waterton Lakes 91.11 33 P **P** **11 50 26.7 +1.2**
F10A Beach Ranch, E 91.32 37 P **P** **11 50 26.8 +0.3**
F10A IAmb IAmb 11 50 29.7
comp=Z,3.8nm,0.8s
FCC Fort Churchill 91.64 18 P **P** **11 50 27.2 -0.3**
BMO Blue Mountains 91.97 38 P **P** **11 50 30.2 +0.7**
MOD Modoc Plateau 91.98 42 P **P** **11 50 28.5 -1.2**
J08A Circle Bar Ran 92.20 40 P **P** **11 50 31.6 +1.0**
FFC Flin Flon 92.30 24 P **P** **11 50 30.6 -0.1**
MSO Missoula 92.55 35 P **P** **11 50 31.9 -0.2**
MSO IAmb IAmb 11 50 33.7
comp=Z,7.2nm,1.1s
BEKR Beckworth 93.13 43 P **P** **11 50 35.5 +0.4**
MFID Camas Ranch 93.69 39 P **P** **11 50 39.0 +1.5**
MFID IAmb IAmb 11 50 40.5
comp=Z,5.6nm,0.8s
HRY Holter Researc 93.71 34 P **P** **11 50 38.1 +0.6**
DLMT Dillon 94.21 36 P **P** **11 50 40.9 +1.0**
DLMT IAmb IAmb 11 50 42.0
comp=Z,5.1nm,0.8s
HLID Hailey 94.39 38 P **P** **11 50 41.9 +1.1**
HLID IAmb IAmb 11 50 44.0
comp=Z,3.9nm,0.8s
KVN Kaiserville 95.02 43 P **P** **11 50 44.2 +0.4**
KVN IAmb IAmb 11 50 45.6
comp=Z,2.7nm,1.0s
NVAR Mina Array Bea 95.27 44 P **P** **11 50 45.0 +0.1**
comp=Z,1.2nm,0.7s,baz=299,slow=5.0,SNR=14
NVAR Mina Array Bea 95.27 44 P **P** **11 50 44.1 -0.8**
TPH Tonopah 96.16 43 P **P** **11 50 50.0 +1.0**
PDAR Pinedale Array 97.58 36 P **P** **11 50 54.6 -0.7**
comp=Z,0.3nm,0.8s,baz=309,slow=7.3,SNR=3.9
ESDC Sonseca Array 99.10 321 P **Pdif** **11 51 00.3 -1.6**
comp=Z,0.2nm,0.3s,baz=43,slow=2.3,SNR=2.6

*INET **06** 11:41:22.3, 8.85N×82.91W, h6km, MW3.1*
UPA 06 11:41:22.2±0.9, 8.88N×82.82W, h19km±1km, MW3.9, 8C-2D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLIR3	**Monte Lirio, C**	**0.09**	**183**	⇑*iP*		Pg 11 41 26.7	+0.6
MLIR3				*eS*		Sg 11 41 29.6	+1.0
BRU2	**Volcan**	**0.15**	**125**	⇑*iP*		Pg 11 41 27.4	+0.6
BRU2				*eS*		Sg 11 41 31.4	+1.5
BC3P	**Paso Ancho**	**0.22**	**108**	⇑*iP*		Pg 11 41 28.1	+0.4
BC3P				*eS*		Sg 11 41 32.3	+0.9
CDITO	**Canoas**	**0.31**	**190**	⇑*iP*		Pb 11 41 29.2	0.0
CDITO				*eS*		Sb 11 41 34.6	+0.8
BCO2	**Palmira**	**0.33**	**119**	⇑*iP*		Pb 11 41 29.9	+0.3
BCO2				*eS*		Sb 11 41 36.0	+1.5
PTAR3	**Potrerillos Ar**	**0.37**	**120**	⇑*iP*		Pb 11 41 30.6	+0.3
PTAR3				*eS*		Sb 11 41 37.1	+1.3
BAGA3	**Bagala, Chiriq**	**0.50**	**145**	*eP*		Pg 11 41 32.2	-0.2
BAGA3				*eS*		Sg 11 41 39.2	-0.1
PSOM3	**Paja de Sombre**	**0.53**	**112**	⇑*iP*		Pb 11 41 32.7	-0.2
PSOM3				*eS*		Sb 11 41 40.7	+0.6
PTJ1	**Puerto Jimnez**	**0.59**	**234**	⇓*iP*		Pb 11 41 32.6	-1.2
PTJ1				*eS*		Sg 11 41 41.9	-0.1
CNI2	**El Empalme, Bo**	**0.64**	**33**	⇓*iP*		Pb 11 41 33.4	-1.3
CNI2				*eS*		Sb 11 41 42.6	-0.6
CHGR2	**Aguacate**	**0.67**	**85**	*eP*		Pb 11 41 33.6	-1.6
CHGR2				*eS*		Sg 11 41 44.6	+0.1
CHIR3	**Chiriqui UPA,**	**0.68**	**135**	⇑*iP*		Pb 11 41 35.3	-0.2
CHIR3				*eS*		Sn 11 41 46.1	-0.9
BATAN	**Batan**	**1.33**	**336**	*eP*		Pn 11 41 44.5	-1.3
BATAN				*eS*		Sn 11 42 02.1	-0.8
HDC	**Heredia**	**1.69**	**311**	*eP*		Pn 11 41 50.0	-0.9
HDC				*eS*		Sn 11 42 11.9	-0.2
GMAL	**Guarumal, Vera**	**1.92**	**125**	*eP*		Pn 11 41 53.7	-0.3
GMAL				*eS*		Sn 11 42 18.4	+0.8

NNC 06 11:43:16.1±1.3, 49.84N×81.03E, h0km, mb2.7, mpv2.4, 2C-3D, Error ellipse: s-maj=18.5km s-min=6.8km az=51.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**1.79**	**297**	⇓*iPn*		Pn 11 43 48.1	-0.1
	4.1nm,0.7s,baz=114,slow=17						
KURBB				⇓*iSn*		Sb 11 44 12.5	-0.1
	26nm,0.7s,baz=114,slow=29						
MAKZ	**Makanchi**	**3.10**	**168**	⇓*iPn*		Pn 11 44 06.6	+0.4
	1.4nm,0.8s						
MK31	**Makanchi Array**	**3.16**	**164**	⇑*iPn*		Pn 11 44 07.8	+0.7
	0.3nm,0.5s,baz=342,slow=11,SNR=4.3						
MK31				⇑*iLg*		Lg 11 44 55.4	
	2.6nm,0.5s,baz=103,slow=9.8,SNR=22						

IDC 06 11:52:36.5±2.1, 7.40S×128.25E, h159km±27km, mb2.8/1, mb1 3.1/5, mb1mx3.0/35, mbtmp3.6/5, MS3.1/1, Ms1 3.3/1, ms1mx2.5/10, Error ellipse: s-maj=28.1km s-min=21.1km az=127.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.32**	**238**	P		Pn 11 53 53.6	-0.7
	7.5nm,0.3s,baz=64,slow=4.0,SNR=5.7						
BATI				S		Sn 11 54 56.3	+1.0
	4.5nm,0.3s,baz=137,slow=5.8,SNR=2.3						
SIJI	**Sorong**	**7.15**	**25**	P		Pn 11 54 18.9	+0.2
	1.1nm,0.3s,baz=292,slow=9.3,SNR=4.0						
WRA	**Warramunga Arr**	**13.79**	**155**	P		Pn 11 55 44.6	-0.8
	0.2nm,0.3s,baz=329,slow=13,SNR=9.4						
WRA				S		Sn 11 58 08.5	-10
	0.4nm,0.3s,baz=333,slow=21,SNR=8.8						
ASAR	**Alice Springs**	**17.06**	**162**	P		Pn 11 56 25.7	+0.1
	0.2nm,0.3s,baz=341,slow=12,SNR=18						
CMAR	**Chiang Mai Arr**	**38.69**	**312**	LR	LR	12 18 50.1	
	comp=Z,28nm,18.8s,baz=45,slow=41						
MKAR	**Makanchi Array**	**67.62**	**328**	P	P	12 03 16.1	-0.1
	0.2nm,0.8s,baz=117,slow=8.6,SNR=1.5						

*DDA **06** 12:30:10.9, 38.55N×26.16E, h27km±1km, ML2.5*
*ATH **06** 12:30:13.3, 38.58N×26.21E, h16km±3km, ML2.9/3, Error ellipse: s-maj=3.3km s-min=1.5km az=268.0*
*ISK **06** 12:30:14.9, 38.54N×26.66E, h7km, ML2.8/12*
ISC 06 12:30:11.6±1.0, 38.56N±0.02×26.22E±0.03, h16km±8km, n33, σ0.84/56, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBN	**Karaburun**	**0.26**	**84**	PG	**Pb**	**12 30 17.9**	**-0.1**
URLA	**Izmir**	**0.36**	**124**	*i* P	**Pg**	**12 30 19.1**	**0.0**
URLA				*i* S	**Sg**	**12 30 24.1**	**0.0**
URLA	**Izmir**	**0.36**	**124**	PG	**Pg**	**12 30 18.9**	**-0.1**
URLA				SG	**Sg**	**12 30 22.5**	**-1.6**
ZEYE	**Izmir, Urla-Ze**	**0.40**	**145**	*i* P	**Pb**	**12 30 20.7**	**+0.4**
ZEYE				*i* S	**Sb**	**12 30 26.4**	**+0.3**
ZEYE				IAML		12 30 27.0	
	comp=N,660nm,0.4s						
ZEYE				IAML		12 30 27.0	
	comp=E,634nm,0.3s						
PSRA	**Psara**	**0.51**	**268**	P	**Pn**	**12 30 23.2**	**-1.1**
PSRA				S	**Sb**	**12 30 30.6**	**+1.1**
PRK	**Paraskevi**	**0.68**	**3**	P	**Pn**	**12 30 26.1**	**-0.5**
PRK				S	**Sn**	**12 30 35.8**	**-1.2**
PRK				AML	AML	12 30 38.3	
	comp=N,2291μm,0.3s						
PRK				AML	AML	12 30 38.3	
	comp=E,2637μm,0.4s						
SIGR	**SIGRI**	**0.70**	**336**	P	**Pb**	**12 30 25.6**	**+0.1**
SIGR				S	**Sb**	**12 30 36.1**	**+1.0**
SIGR				AML	AML	12 30 37.5	
	comp=N,1563μm,0.4s						
SIGR				AML	AML	12 30 37.7	
	comp=E,1842μm,0.4s						
DKL	**Dikili**	**0.74**	**46**	PG	**Pb**	**12 30 26.1**	**0.0**
DKL				SG	**Sg**	**12 30 34.7**	**-1.1**
ZEDA	**zmir-Bergama**	**0.78**	**59**	*i* P	**Pb**	**12 30 26.8**	**-0.1**
ZEDA				*i* S	**Sn**	**12 30 39.1**	**-0.3**
ZEDA				IAML		12 30 40.0	
	comp=N,279nm,0.4s						
ZEDA				IAML		12 30 40.0	
	comp=E,177nm,0.2s						
AYVA	**Ayvalik**	**0.83**	**26**	*i* P	**Pb**	**12 30 27.5**	**-0.2**
AYVA				*i* S	**Sg**	**12 30 39.3**	**+0.6**
AYVA				IAML		12 30 40.0	
	comp=N,180nm,0.5s						
KOCA	**Canakkale, Ayv**	**0.94**	**356**	*i* P	**Pg**	**12 30 29.8**	**0.0**
KOCA				*i* S	**Sg**	**12 30 42.5**	**+0.3**
KOCA				IAML		12 30 43.0	
	comp=N,171nm,0.9s						
KOCA				IAML		12 30 48.0	
	comp=E,140nm,0.8s						
SMG	**Samos**	**0.98**	**150**	P	**Pn**	**12 30 31.9**	**+1.1**
SMG				S	**Sn**	**12 30 45.5**	**+1.1**
SMG				AML	AML	12 30 46.9	
	comp=E,2624μm,0.5s						
SMG				AML	AML	12 30 47.4	
	comp=N,1560μm,0.3s						
BUHA	**Balikesir, Bur**	**1.15**	**35**	*i* P	**Pb**	**12 30 33.2**	**0.0**
BUHA				*i* S	**Sg**	**12 30 50.1**	**+1.3**
BUHA				IAML		12 30 54.0	
	comp=N,62nm,0.3s						
BUHA				IAML		12 30 54.0	
	comp=E,103nm,0.5s						
GCAM	**G?zelcaml?**	**1.18**	**137**	*i* P	**Pb**	**12 30 33.4**	**-0.1**
GCAM				*i* S	**Sg**	**12 30 49.7**	**0.0**
GCAM	**G?zelcaml?**	**1.18**	**137**	PG	**Pb**	**12 30 33.5**	**-0.1**
GCAM				SG	**Sb**	**12 30 47.1**	**-1.5**
BAYC	**CANAKKALE_Bayr**	**1.20**	**12**	*i* P	**Pn**	**12 30 33.7**	**-0.1**
BAYC				*i* S	**Sb**	**12 30 48.7**	**-0.6**
BAYC				IAML		12 30 52.0	
	comp=N,71nm,0.2s						
BAYC				IAML		12 30 52.0	
	comp=E,62nm,0.2s						
BOZC	**Bozcaada**	**1.28**	**354**	*i* P	**Pn**	**12 30 34.4**	**-0.5**
BOZC				*i* S	**Sn**	**12 30 51.8**	**0.0**
BOZC				IAML		12 30 55.0	
	comp=E,60nm,0.2s						
BOZC				IAML		12 31 00.0	
	comp=N,132nm,0.7s						
AKHS	**Akhisar**	**1.29**	**75**	*i* P	**Pg**	**12 30 38.2**	**+1.8**
AKHS				*i* S	**Sg**	**12 30 53.0**	**-0.3**
AKHS				IAML		12 30 55.0	
	comp=E,84nm,0.4s						
STEP	**BALIKESIR_Sava**	**1.42**	**55**	*i* P	**Pn**	**12 30 37.2**	**+0.3**
STEP				*i* S	**Sn**	**12 30 54.9**	**-0.4**
STEP				IAML		12 30 59.0	
	comp=N,90nm,0.7s						
STEP				IAML		12 31 01.0	
	comp=E,111nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**1.45**	**115**	PN	**Pb**	**12 30 37.9**	**-0.5**
AYDB				SN	**Sn**	**12 30 53.4**	**-2.8**
AYDN	**Tasoluk**	**1.59**	**124**	*i* P	**Pb**	**12 30 41.4**	**+0.7**
AYDN				*i* S	**Sg**	**12 31 03.3**	**+0.4**
BALY	**Balya**	**1.60**	**42**	*i* P	**Pb**	**12 30 41.0**	**+0.1**
BALY				*i* S	**Sg**	**12 31 02.5**	**-0.8**
BALY				IAML		12 31 10.0	
	comp=N,53nm,0.7s						
BALB	**Balikesir**	**1.68**	**50**	PN	**Pb**	**12 30 42.2**	**0.0**
MANT	**Manisa**	**1.84**	**92**	*i* P	**Pb**	**12 30 45.9**	**+0.9**
MANT				IAML		12 31 09.0	
	comp=N,28nm,1.3s						
MANT				*i* S	**Sb**	**12 31 09.1**	**+1.3**
MANT				IAML		12 31 12.0	
	comp=E,51nm,0.4s						
GELI	**Tayfur-Gelibol**	**1.84**	**6**	PN	**Pg**	**12 30 48.0**	**+1.0**
KRBG	**Karabiga-Canak**	**2.01**	**24**	PN	**Pb**	**12 30 48.8**	**+1.0**
DURS	**Dursunbey**	**2.04**	**59**	*i* P	**Pb**	**12 30 47.3**	**-1.1**
DURS				*i* S	**Sn**	**12 31 09.9**	**-0.6**
DURS				IAML		12 31 16.0	
	comp=N,46nm,0.5s						
DURS				IAML		12 31 18.0	
	comp=E,53nm,0.3s						
ERIK	**Erikli-Kesan**	**2.12**	**6**	PN	**Pg**	**12 30 51.8**	**-0.4**
EDC	**Edincik**	**2.19**	**35**	PN	**Pb**	**12 30 50.5**	**-0.4**
RKY	**Sarkoy-Tekirda**	**2.25**	**19**	PN	**Pb**	**12 30 52.6**	**+0.7**
MAR6	**Marsite Statio**	**2.29**	**20**	PN	**Pb**	**12 30 53.0**	**+0.5**
GZKV	**Gazikoy-Tekird**	**2.34**	**21**	PN	**Pb**	**12 30 53.8**	**+0.3**
MAR9	**Marsite Statio**	**2.35**	**29**	PN	**Pb**	**12 30 53.3**	**-0.3**

*IDC **06** 12:30:30.2±2.5, 5.46S×145.06E, h75km±25km, mb3.6/6, mb1 3.7/9, mb1mx3.5/36, mbtmp3.9/9, Error ellipse: s-maj=30.5km s-min=17.0km az=57.0*
ISC 06 12:30:29.6±0.9, 5.45S±0.1×145.1E±0.2, h68km, n10, σ1.29/11, mb4.0/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.44**	**153**	P	**Pn**	**12 31 36.0**	**+1.4**
	2.5nm,0.3s,baz=347,slow=5.0,SNR=9.7						
PMG				S	**Sn**	**12 32 24.8**	**-0.2**
	2.4nm,0.3s,baz=134,slow=23,SNR=2.1						
JAY	**Jayapura**	**5.27**	**303**	P	**Pn**	**12 31 47.8**	**+1.9**
	1.0nm,0.3s,baz=172,slow=12,SNR=6.0						
WRA	**Warramunga Arr**	**17.85**	**215**	P	**P**	**12 34 31.4**	**-1.9**
	0.2nm,0.3s,baz=41,slow=12,SNR=23						
ASAR	**Alice Springs**	**21.12**	**210**	P	**P**	**12 35 08.7**	**-0.3**
	6.6nm,0.8s,baz=33,slow=13,SNR=22						
CMAR	**Chiang Mai Arr**	**51.34**	**299**	P	**P**	**12 39 27.4**	**-0.1**
	0.8nm,0.3s,baz=120,slow=5.4,SNR=1.8						
PETK	**Petropavlovsk-**	**59.27**	**9**	P	**P**	**12 40 24.1**	**+0.1**
	1.1nm,0.7s,baz=170,slow=8.3,SNR=4.8						
MKAR	**Makanchi Array**	**75.87**	**321**	P	**P**	**12 42 08.1**	**-0.7**
	0.5nm,0.3s,baz=96,slow=8.3,SNR=12						
ZALV	**Zalesovo Beam**	**77.54**	**328**	P	**P**	**12 42 16.1**	**-1.8**
	0.6nm,0.4s,baz=142,slow=6.2,SNR=4.2						
BVAR	**Borovoye Array**	**85.21**	**324**	P	**P**	**12 42 58.3**	**-0.3**
	0.9nm,0.6s,baz=198,slow=9.3,SNR=5.1						
SIV	**San Ignacio**	**146.46**	**130**	PKPbc	**PKPab**	**12 50 05.1**	**0.0**
	1.2nm,0.5s,baz=218,slow=3.5,SNR=7.9						

*SNET **06** 12:43:01.3±1.2, 13.95N×90.45W, h28km±176km, ML2.8*
*GCG **06** 12:43:01.6±0.9, 13.67N×90.74W, h0km±72km, MD3.2*
ISC 06 12:42:59.7±3.6, 13.4N±0.2×90.5W±0.1, h35km, n9, σ1.45/13, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.98**	**356**	*eP*	**Pn**	**12 43 16.7**	**-0.5**
PCG				*eS*	**Sn**	**12 43 29.3**	**-0.6**
CEVE	**Cerro Verde**	**0.98**	**65**	*eP*	**Pn**	**12 43 16.9**	**-0.3**
CEVE				IAML		12 43 37.7	
	comp=Z,307nm,0.3s						
SBLS	**San Blas**	**0.98**	**64**	*eP*	**Pn**	**12 43 16.8**	**-0.4**
SBLS				*eS*	**Sn**	**12 43 29.3**	**-0.8**
FUG	**Fuego 3**	**1.07**	**344**	*eP*	**Pn**	**12 43 18.0**	**-0.4**
FUG				*eS*	**Sn**	**12 43 31.0**	**-1.2**
JAYA	**Jayaque - finc**	**1.08**	**77**	*eP*	**Pn**	**12 43 20.4**	**+1.8**
JAYA				IAML		12 43 34.5	
	comp=Z,250nm,0.2s						
NBG	**Las Nubes**	**1.18**	**9**	*eP*	**Pn**	**12 43 22.1**	**+2.1**
NBG				*eS*	**Sn**	**12 43 37.6**	**+2.5**
PMON	**Piamonte**	**1.23**	**76**	*eP*	**Pn**	**12 43 20.8**	**+0.4**
TACO	**Tacachico**	**1.28**	**64**	*eP*	**Pn**	**12 43 20.5**	**-0.6**
MTO3	**Montecristo**	**1.51**	**49**	*eP*	**Pn**	**12 43 22.5**	**-1.9**

*IDC **06** 12:49:49.3±6.0, 5.76S×152.72E, h58km±50km, mb3.5/9, mb1 3.7/10, mb1mx3.5/35, mbtmp3.8/10, ML2.0/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/21, Error ellipse: s-maj=51.4km s-min=26.7km az=113.0*
ISC 06 12:49:46.8±1.6, 5.75S±0.2×152.9E±0.2, h37km, n11, σ0.59/12, mb3.7/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.71**	**237**	P	**Pn**	**12 51 23.4**	**+0.5**
	1.9nm,0.3s,baz=65,slow=8.9,SNR=12						
PMG				S	**Sn**	**12 52 38.0**	**-0.1**
	2.7nm,0.3s,baz=10,slow=13,SNR=7.2						
PMG				LR	LR	12 54 00.3	
	comp=Z,47nm,20.5s,baz=130,slow=38						
SIJI	**Sorong**	**22.08**	**282**	P	**P**	**12 54 39.3**	**+0.4**
	3.4nm,0.7s,baz=98,slow=4.8,SNR=3.5						
WRA	**Warramunga Arr**	**22.87**	**230**	P	**P**	**12 54 47.0**	**-0.2**
	1.6nm,0.6s,baz=55,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.50**	**224**	P	**P**	**12 55 11.7**	**-0.2**
	1.8nm,0.7s,baz=55,slow=8.8,SNR=24						
PETK	**Petropavlovsk-**	**58.77**	**3**	P	**P**	**12 59 41.6**	**+0.6**
	2.4nm,0.9s,baz=171,slow=7.8,SNR=5.6						
SONM	**Songino Array**	**67.14**	**328**	P	**P**	**13 00 36.5**	**-0.5**
	0.3nm,0.6s,baz=134,slow=6.2,SNR=2.5						
MKAR	**Makanchi Array**	**81.06**	**319**	P	**P**	**13 01 58.3**	**+0.1**
	0.4nm,0.9s,baz=86,slow=5.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**81.96**	**326**	P	**P**	**13 02 02.1**	**-0.6**
	0.6nm,0.4s,baz=64,slow=6.8,SNR=2.8						
ILAR	**Eielson Array**	**

	comp=Z,3μm,0.3s						
TACO	**Tacachico**	**0.48**	**202**	*eP*	**Pb**	**12 52 32.6**	**-0.4**
UNIC	**Universidad Ca**	**0.57**	**221**	*eP*	**Pb**	**12 52 34.1**	**-0.5**
LBRS	**Las Brisas**	**0.69**	**170**	*eP*	**Pb**	**12 52 36.6**	**0.0**
BOQS	**Boqueron**	**0.69**	**189**	*eP*	**Pb**	**12 52 37.1**	**+0.4**
SNJE	**San Jose**	**0.69**	**218**	*eP*	**Pb**	**12 52 36.2**	**-0.5**
PMON	**Piamonte**	**0.71**	**192**	*eP*	**Pb**	**12 52 36.8**	**-0.3**
PMON				*eS*	**Sg**	**12 52 39.2**	**-5.8**
SBLS	**San Blas**	**0.72**	**218**	*eP*	**Pb**	**12 52 36.8**	**-0.5**
PAVA	**Las Pavas**	**0.73**	**162**	*eP*	**Pb**	**12 52 37.4**	**0.0**
PAVA				IAML		12 52 49.9	
	comp=Z,974nm,0.2s						
CEVE	**Cerro Verde**	**0.73**	**217**	*eP*	**Pb**	**12 52 37.4**	**-0.1**
CEVE				IAML		12 52 54.9	
	comp=Z,902nm,0.3s						
LFRS	**El Faro**	**0.80**	**173**	*eP*	**Pb**	**12 52 38.5**	**0.0**
LFRS				*eS*	**Sn**	**12 52 51.2**	**-1.3**
JAYA	**Jayaque - finc**	**0.81**	**200**	*eP*	**Pb**	**12 52 38.2**	**-0.5**
JAYA				*eS*	**Sn**	**12 52 51.3**	**-1.6**
JAYA				IAML		12 52 57.3	
	comp=Z,730nm,0.3s						
MRL	**Marmol**	**0.83**	**323**	*eP*	**Pg**	**12 52 36.1**	**-1.8**
MRL				*eS*	**Sg**	**12 52 47.4**	**-1.2**
COEG	**Centro de Oper**	**0.84**	**161**	*eP*	**Pg**	**12 52 38.7**	**+0.7**
COEG				IAML		12 52 55.3	
	comp=Z,700nm,0.3s						
UESV	**Universidad de**	**0.86**	**155**	*eP*	**Pg**	**12 52 39.1**	**+0.7**
UESV				IAML		12 52 59.0	
	comp=Z,599nm,0.3s						
PQSS	**Presa 15 de Se**	**0.98**	**143**	*eP*	**Pg**	**12 52 41.0**	**+0.2**
PQSS				IAML		12 52 59.8	
	comp=Z,435nm,0.2s						
TECA	**Tecapa**	**1.12**	**145**	*eP*	**Pg**	**12 52 43.7**	**+0.2**
TECA				*eS*	**Sn**	**12 53 00.6**	**-0.1**
NBG	**Las Nubes**	**1.16**	**279**	*eP*	**Pn**	**12 52 44.2**	**-1.1**
NBG				*eS*	**Sn**	**12 53 04.2**	**+2.5**
PACA	**Pacayal**	**1.25**	**139**	*eP*	**Pn**	**12 52 46.2**	**-0.2**
PACA				IAML		12 53 06.8	
	comp=Z,306nm,0.2s						
FAGO	**Alcalda de S**	**1.25**	**125**	*eP*	**Pn**	**12 52 44.9**	**-1.4**
LCY	**Lacayo**	**1.30**	**139**	*eP*	**Pn**	**12 52 46.8**	**-0.3**
PCG	**Pacaya**	**1.40**	**269**	*eP*	**Pg**	**12 52 49.2**	**+0.4**
PCG				*eS*	**Sn**	**12 53 12.8**	**+5.1**
FUG	**Fuego 3**	**1.62**	**271**	*eP*	**Pg**	**12 52 53.1**	**0.0**
FUG				*eS*	**Sg**	**12 53 16.7**	**+2.5**
LCND	**La Caada**	**1.66**	**131**	*eP*	**Pn**	**12 52 52.1**	**+0.2**
LCND				IAML		12 53 18.6	
	comp=Z,559nm,0.3s						
CNCH	**Conchagua**	**1.72**	**131**	*eP*	**Pn**	**12 52 53.3**	**+0.4**

IDC 06 13:02:28.7±2.0, 1°.79N×125°.85E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/47, mbtmp3.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/37, Error ellipse: s-maj=166.0km s-min=25.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**12.12**	**190**	LR	LR	13 11 52.0	
	comp=Z,85nm,18.2s,baz=288,slow=46						
WRA	**Warramunga Arr**	**23.15**	**159**	P	P	13 07 36.2	-0.8
	1.7nm,0.4s,baz=337,slow=10,SNR=22						
ASAR	**Alice Springs**	**26.49**	**163**	P	P	13 08 08.5	+0.5
	0.5nm,0.5s,baz=344,slow=8.0,SNR=27						
MKAR	**Makanchi Array**	**58.65**	**326**	P	P	13 12 27.9	0.0
	0.2nm,0.4s,baz=122,slow=7.8,SNR=4.9						

*IDC **06** 13:05:30.5±0.8, 50°.05N×78°.73E, h0km, mb3.7/2, mb1 3.6/6, mb1mx3.3/58, mbtmp3.4/6, ML3.0/4, Error ellipse: s-maj=11.3km s-min=7.0km az=71.0*

*NNC **06** 13:05:30.8±0.9, 50°.04N×78°.78E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=9.8km s-min=4.1km az=55.0, Suspected Mining explosion.*

ISC 06 13:05:30.7±0.8, 50°.13N±0°.05×78°.86E±0°.05, h0km, n14, σ1 97°77/19, 7C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.54**	**337**	Pg	**Pg**	**13 05 40.7**	**-0.2**
	5.4nm,0.3s,baz=167,slow=19,SNR=324						
KURBB				Lg	Lg	13 05 51.1	
	5.2nm,0.3s,baz=168,slow=31,SNR=15						
KURBB	**Kurchatov Arra**	**0.54**	**337**	↑P	**Pb**	**13 05 42.1**	**-0.8**
	27nm,0.2s						
KURBB				↑S	**Sb**	**13 05 51.3**	**0.0**
	33nm,0.3s						
SEM	**Semipalatinsk**	**0.94**	**72**	P	**Pn**	**13 05 50.6**	**-0.6**
	6.5nm,0.2s						
SEM				S	**Sn**	**13 06 04.3**	**-1.2**
	31nm,0.2s						
MAKZ	**Makanchi**	**3.92**	**147**	↑Pn	**Pn**	**13 06 31.9**	**-0.2**
	0.4nm,0.5s						
MAKZ				↓Pg	**Pb**	**13 06 39.7**	**-0.9**
	2.1nm,0.7s						
MAKZ				↓Lg	Lg	13 07 34.2	
	8.6nm,0.6s						
MK31	**Makanchi Array**	**4.04**	**144**	↑Pn	**Pn**	**13 06 34.5**	**+0.6**
	0.2nm,0.3s,baz=277,slow=6.9,SNR=90						
MK31				↓Pg	**Pb**	**13 06 41.8**	**-0.9**
	0.3nm,0.2s,baz=328,slow=16,SNR=7.3						
MK31				↑Lg	Lg	13 07 37.1	
	4.7nm,0.4s,baz=330,slow=28,SNR=8.1						
MKAR	**Makanchi Array**	**4.04**	**144**	Pn	**Pn**	**13 06 33.8**	**0.0**
	0.5nm,0.3s,baz=321,slow=10,SNR=128						
MKAR				Lg	Lg	13 07 34.6	
	1.7nm,0.3s,baz=342,slow=30,SNR=8.7						
ZSN	**Zaisan**	**4.79**	**122**	Pg	**Pb**	**13 06 58.2**	**+2.7**
	2.4nm,0.4s						
ZSN				Lg	Lg	13 08 00.0	
	6.8nm,0.7s						
ZALV	**Zalesovo Beam**	**5.31**	**42**	Pn	**Pn**	**13 06 54.4**	**+3.3**
	1.5nm,0.3s,baz=229,slow=14,SNR=18						
ZALV				Lg	Lg	13 08 24.4	
	0.3nm,0.3s,baz=234,slow=50,SNR=1.0						
I46RU	**ZALESOVO INFRA**	**5.31**	**42**	*i*		13 39 16.5	
	baz=228,slow=334,SNR=1.9						
BVAR	**Borovoye Array**	**6.02**	**302**	Pn	**Pn**	**13 07 01.3**	**+0.3**
	0.3nm,0.3s,baz=127,slow=20,SNR=4.8						
BVAR				Sn	**Sn**	**13 08 09.0**	**-1.5**
	0.4nm,0.3s,baz=260,slow=22,SNR=2.2						
BVAR				Lg	Lg	13 08 37.8	
	0.3nm,0.3s,baz=149,slow=29,SNR=2.1						
BRVK	**Borovoye**	**6.09**	**302**	↑Pn	**Pn**	**13 07 03.1**	**+1.2**
	0.7nm,0.6s						
BRVK				↓Sn	**Sn**	**13 08 16.6**	**+4.3**
	1.6nm,0.8s						
BRVK				↑Lg	Lg	13 08 44.2	
	1.9nm,0.8s						
AAK	**Ala-Archa**	**8.08**	**204**	Pn	**Pn**	**13 07 27.7**	**-1.6**
	0.5nm,0.3s,baz=48,slow=2.8,SNR=5.8						
ARCES	**ARCESS Array B**	**31.62**	**327**	P	**P**	**13 11 54.3**	**-0.5**
	2.1nm,0.8s,baz=99,slow=11,SNR=1.6						
NOA	**NORSAR Array B**	**38.02**	**313**	P	**P**	**13 12 48.7**	**-1.5**
	0.5nm,0.8s,baz=77,slow=7.3,SNR=1.4						

IDC 06 13:09:52.5±8.7, 5°.48S×152°.60E, h120km±60km, mb2.8/2, mb1 3.0/3, mb1mx2.8/36, mbtmp3.3/3, Error ellipse: s-maj=119.1km s-min=56.1km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.66**	**234**	P	Pn	13 11 27.6	-0.2
	0.7nm,0.3s,baz=26,slow=13,SNR=2.4						
PMG				S	Sn	13 12 44.0	+1.6
	1.1nm,0.3s,baz=68,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**22.86**	**229**	P	P	13 14 45.6	-0.2
	0.3nm,0.4s,baz=54,slow=9.7,SNR=5.9						
ASAR	**Alice Springs**	**25.52**	**223**	P	P	13 15 09.8	-0.4
	0.4nm,0.8s,baz=55,slow=9.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**150.32**	**287**	PKPbc	PKPbc	13 29 30.9	+0.1
	0.4nm,0.6s,baz=87,slow=4.0,SNR=2.7						

*PRU **06** 13:18:49.6±0.0, 46°.71N×7°.58E, h10km*

*STR **06** 13:18:50.8±0.2, 47°.2°×°, h14km±3km, MLv2.5/14, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*ZUR **06** 13:18:50.7, 46°.90N×7°.42E, h6km, MLh2.6/44, Error ellipse: s-maj=1.7km s-min=0.5km az=95.0*

*LDG **06** 13:18:51.0±0.0, 46°.89N×7°.41E, h6km, Md2.6/2, Ml2.9/35, Error ellipse: s-maj=0.6km s-min=0.5km az=101.0*

ISC 06 13:18:50.0±0.7, 46°.90N±0°.01×7°.40E±0°.01, h16km±4km, n188, σ1 13°/344, 56C-26D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBERN	**Bern, Kleine S**	**0.06**	**29**	↑Pg	**Pg**	**13 18 52.1**	**-0.9**
	5.9nm,SNR=1.3						
SBERN				Sg	**Sg**	**13 18 53.5**	**-1.6**
SBERN	**Bern, Kleine S**	**0.06**	**29**	↑Pg	**Pg**	**13 18 52.1**	**-0.9**
	5.9nm,SNR=1.3						
SBERN				Sg	**Sg**	**13 18 53.5**	**-1.6**
STAF	**Tafers**	**0.15**	**234**	↓Pg	**Pg**	**13 18 54.2**	**+0.2**
STAF				↓Pg	**Pg**	**13 18 54.2**	**+0.2**
	0.8nm,SNR=7.5						
STAF				Sg	**Sg**	**13 18 57.6**	**+0.8**
STAF	**Tafers**	**0.15**	**234**	↓Pg	**Pg**	**13 18 54.2**	**+0.2**
	0.8nm,SNR=7.5						
STAF				↓Pg	**Pg**	**13 18 54.2**	**+0.2**
STAF				Sg	**Sg**	**13 18 57.3**	**+0.5**
SCOU	**Cournillens**	**0.21**	**259**	↑Pg	**Pg**	**13 18 55.3**	**+0.5**
	0.5nm,SNR=4.5						
SCOU				↑Pg	**Pg**	**13 18 55.3**	**+0.5**
SCOU				Sg	**Sg**	**13 18 59.1**	**+1.1**
SCOU	**Cournillens**	**0.21**	**259**	↑Pg	**Pg**	**13 18 55.3**	**+0.5**
	0.5nm,SNR=4.5						
SCOU				↑Pg	**Pg**	**13 18 55.3**	**+0.5**
SCOU				Sg	**Sg**	**13 18 58.9**	**+0.8**
WIMIS	**Wimmis**	**0.28**	**146**	Pg	**Pg**	**13 18 56.2**	**+0.2**
WIMIS				Pg	**Pg**	**13 18 56.2**	**+0.2**
	0.2nm,SNR=8.2						
WIMIS				Sg	**Sb**	**13 19 00.9**	**-0.3**
WIMIS	**Wimmis**	**0.28**	**146**	Pg	**Pg**	**13 18 56.2**	**+0.2**
	0.2nm,SNR=8.2						
WIMIS				Pg	**Pg**	**13 18 56.2**	**+0.2**
TORNY	**Torny/Romont**	**0.33**	**248**	↑Pg	**Pb**	**13 18 57.6**	**+0.1**
	0.6nm,SNR=11						
TORNY				↑Pg	**Pb**	**13 18 57.6**	**+0.1**
TORNY				Sg	**Sb**	**13 19 02.8**	**+0.2**
TORNY	**Torny/Romont**	**0.33**	**248**	↑Pg	**Pb**	**13 18 57.6**	**+0.1**
	0.6nm,SNR=11						
TORNY				↑Pg	**Pb**	**13 18 57.6**	**+0.1**
TORNY				Sg	**Sb**	**13 19 02.8**	**+0.2**
TORNY	**Torny/Romont**	**0.33**	**248**	Pg	**Pb**	**13 18 57.7**	**+0.1**
BALST	**Balsthal**	**0.48**	**25**	↑Pg	**Pb**	**13 19 00.2**	**-0.1**
BALST				↑Pg	**Pb**	**13 19 00.2**	**-0.1**
	0.2nm,SNR=5.1						
BALST				Sg	**Sb**	**13 19 07.3**	**0.0**
BALST	**Balsthal**	**0.48**	**25**	↑Pg	**Pb**	**13 19 00.2**	**-0.1**
BALST				↑Pg	**Pb**	**13 19 00.2**	**-0.1**
	0.2nm,SNR=5.1						
BALST				Sg	**Sb**	**13 19 07.1**	**-0.1**
BALST	**Balsthal**	**0.48**	**25**	Pg	**Pb**	**13 19 00.2**	**-0.1**
MTI03	**Mont Terri (fr**	**0.50**	**342**	↓Pg	**Pb**	**13 19 00.8**	**+0.2**
MTI03				↓Pg	**Pb**	**13 19 00.8**	**+0.2**
	0.7nm,SNR=2.0						
MTI03				Sg	**Sb**	**13 19 08.2**	**+0.5**
MTI03	**Mont Terri (fr**	**0.50**	**342**	↓Pg	**Pb**	**13 19 00.8**	**+0.2**
	0.7nm,SNR=2.0						
MTI03				↓Pg	**Pb**	**13 19 00.8**	**+0.2**
MTI01	**Mont Terri (ME**	**0.51**	**342**	↓Pg	**Pb**	**13 19 00.9**	**+0.2**
	0.2nm,SNR=2.5						
MTI02	**Mont Terri, (H**	**0.51**	**342**	↓Pg	**Pb**	**13 19 00.9**	**+0.2**
	0.2nm,SNR=5.1						
MTI02				↓Pg	**Pb**	**13 19 00.9**	**+0.2**
BOURR	**Bourrignon**	**0.51**	**347**	Pg	**Pb**	**13 19 00.9**	**+0.2**
	0.3nm,SNR=5.7						
BOURR				Pg	**Pb**	**13 19 00.9**	**+0.2**
BOURR				Sg	**Sb**	**13 19 08.4**	**+0.4**
BOURR	**Bourrignon**	**0.51**	**347**	Pg	**Pb**	**13 19 00.9**	**+0.2**
	0.3nm,SNR=5.7						
BOURR				Pg	**Pb**	**13 19 00.9**	**+0.2**
BOURR				Sg	**Sb**	**13 19 08.3**	**+0.4**
BOURR	**Bourrignon**	**0.51**	**347**	Pg	**Pb**	**13 19 00.9**	**+0.2**
BOURR	**Bourrignon**	**0.51**	**347**	Pg	**Pb**	**13 19 00.9**	**+0.2**
LKBD	**Leukerbad**	**0.53**	**163**	Pg	**Pb**	**13 19 01.1**	**0.0**
	0.2nm,SNR=6.8						
LKBD				Pg	**Pb**	**13 19 01.1**	**0.0**
LKBD				Sg	**Sb**	**13 19 09.0**	**+0.4**
LKBD	**Leukerbad**	**0.53**	**163**	Pg	**Pb**	**13 19 01.1**	**0.0**
LKBD				Pg	**Pb**	**13 19 01.1**	**0.0**
	0.2nm,SNR=6.8						
HASLI	**Hasliberg/Brie**	**0.54**	**105**	Pg	**Pb**	**13 19 01.4**	**+0.2**
HASLI				Pg	**Pb**	**13 19 01.4**	**+0.2**
	0.7nm,SNR=19						
HASLI				Sg	**Sb**	**13 19 08.9**	**+0.2**
HASLI	**Hasliberg/Brie**	**0.54**	**105**	Pg	**Pb**	**13 19 01.4**	**+0.2**
	0.7nm,SNR=19						
HASLI				Pg	**Pb**	**13 19 01.4**	**+0.2**
HASLI				Sg	**Sb**	**13 19 08.9**	**+0.2**
SENIN	**Lac Senin/Sane**	**0.54**	**187**	↓Pg	**Pb**	**13 19 01.3**	**+0.1**
	0.3nm,SNR=6.8						
SENIN				↓Pg	**Pb**	**13 19 01.3**	**+0.1**
SENIN				Sg	**Sb**	**13 19 09.2**	**+0.4**
SENIN	**Lac Senin/Sane**	**0.54**	**187**	↓Pg	**Pb**	**13 19 01.3**	**+0.1**
	0.3nm,SNR=6.8						
SENIN				↓Pg	**Pb**	**13 19 01.3**	**+0.1**
SENIN				Sg	**Sb**	**13 19 09.2**	**+0.4**
DAGMA	**Lutertal, Dagm**	**0.54**	**51**	↑Pg	**Pb**	**13 19 01.3**	**+0.2**
DAGMA				↑Pg	**Pb**	**13 19 01.3**	**+0.2**
	0.9nm,SNR=19						
DAGMA	**Lutertal, Dagm**	**0.54**	**51**	↑Pg	**Pb**	**13 19 01.3**	**+0.2**
	0.9nm,SNR=19						
DAGMA				↑Pg	**Pb**	**13 19 01.3**	**+0.2**
LAUCH	**Lauchernalp**	**0.54**	**152**	Pg	**Pb**	**13 19 01.6**	**+0.2**
LAUCH				Pg	**Pb**	**13 19 01.6**	**+0.2**
	0.1nm,SNR=3.7						
LOMF	**Lomont**	**0.60**	**320**	Sg	**Sb**	**13 19 11.2**	**+0.7**
LOMF	**Lomont**	**0.60**	**320**	Pg	**Pb**	**13 19 02.7**	**+0.5**
LOMF	**Lomont**	**0.60**	**320**	Sg	**Sb**	**13 19 11.2**	**+0.7**
CHMF	**Charmoille**	**0.62**	**305**	↓Pg	**Pg**	**13 19 02.9**	**+0.7**
CHMF				↓Pg	**Pg**	**13 19 02.9**	**+0.7**
	0.3nm,SNR=5.3						
CHMF				Sg	**Sb**	**13 19 11.6**	**+0.5**
CHMF	**Charmoille**	**0.62**	**305**	↓Pg	**Pg**	**13 19 02.9**	**+0.7**
	0.3nm,SNR=5.3						
CHMF				↓Pg	**Pg**	**13 19 02.9**	**+0.7**
CHMF				Sg	**Sb**	**13 19 11.6**	**+0.5**
CHMF	**Charmoille**	**0.62**	**305**	Pg	**Pg**	**13 19 03.0**	**+0.7**
CHMF				Sg	**Sb**	**13 19 11.7**	**+0.5**
AIGLE	**Aigle**	**0.63**	**209**	↑Pg	**Pg**	**13 19 02.8**	**+0.4**
	0.3nm,SNR=7.1						
AIGLE				↑Pg	**Pg**	**13 19 02.8**	**+0.4**
AIGLE				Sg	**Sg**	**13 19 11.6**	**+0.7**
AIGLE	**Aigle**	**0.63**	**209**	↑Pg	**Pg**	**13 19 02.8**	**+0.4**
	0.3nm,SNR=7.1						
AIGLE				↑Pg	**Pg**	**13 19 02.8**	**+0.4**
BRANT	**Les Verrieres**	**0.64**	**274**	↑Pg	**Pb**	**13 19 03.4**	**+0.6**
	0.2nm,SNR=4.3						
BRANT				↑Pg	**Pb**	**13 19 03.4**	**+0.6**
BRANT				Sg	**Sb**	**13 19 12.7**	**+1.2**
BRANT	**Les Verrieres**	**0.64**	**274**	↑Pg	**Pb**	**13 19 03.4**	**+0.6**
	0.2nm,SNR=4.3						
BRANT				↑Pg	**Pb**	**13 19 03.4**	**+0.6**
BRANT				Sg	**Sb**	**13 19 12.7**	**+1.2**
BRANT	**Les Verrieres**	**0.64**	**274**	Pg	**Pb**	**13 19 03.5**	**+0.6**
SLUB	**Luzern Bramber**	**0.64**	**75**	Pg	**Pb**	**13 19 03.2**	**+0.2**
	0.2nm,SNR=2.0						
SLUB				Pg	**Pb**	**13 19 03.2**	**+0.2**
FIESA	**Fiescheralp**	**0.67**	**133**	↓Pg	**Pb**	**13 19 03.8**	**+0.2**
	0.2nm,SNR=4.4						
FIESA				↓Pg	**Pb**	**13 19 03.8**	**+0.2**
FIESA	**Fiescheralp**	**0.67**	**133**	↓Pg	**Pb**	**13 19 03.8**	**+0.2**
FIESA				↓Pg	**Pb**	**13 19 03.8**	**+0.2**
	0.2nm,SNR=4.4						
FIESA				Sg	**Sb**	**13 19 13.1**	**+0.4**
GRYON	**Gryon**	**0.68**	**197**	Pg	**Pg**	**13 19 03.7**	**+0.4**
	0.2nm,SNR=4.7						
GRYON				Pg	**Pg**	**13 19 03.7**	**+0.4**
GRYON	**Gryon**	**0.68**	**197**	Pg	**Pg**	**13 19 03.7**	**+0.4**
GRYON				Pg	**Pg**	**13 19 03.7**	**+0.4**
	0.2nm,SNR=4.7						
ROTHE	**Rothenfluh**	**0.68**	**31**	↑Pg	**Pb**	**13 19 03.8**	**+0.2**
	0.4nm,SNR=8.6						
ROTHE				↑Pg	**Pb**	**13 19 03.8**	**+0.2**
ROTHE	**Rothenfluh**	**0.68**	**31**	↑Pg	**Pb**	**13 19 03.8**	**+0.2**
ROTHE				↑Pg	**Pb**	**13 19 03.8**	**+0.2**
	0.4nm,SNR=8.6						
HAMIK	**Hmikon, Dlik**	**0.69**	**59**	Pg	**Pb**	**13 19 04.0**	**+0.3**
	0.9nm,SNR=1.4						
HAMIK				Pg	**Pb**	**13 19 04.0**	**+0.3**
HAMIK	**Hmikon, Dlik**	**0.69**	**59**	Pg	**Pb**	**13 19 04.0**	**+0.3**
HAMIK				Pg	**Pb**	**13 19 04.0**	**+0.3**
	0.9nm,SNR=1.4						
VANNI	**Vissoie, Val d**	**0.70**	**169**	Pg	**Pb**	**13 19 04.4**	**+0.4**
VANNI				Pg	**Pb**	**13 19 04.4**	**+0.4**
	0.1nm,SNR=2.2						
BNALP	**Bannalp**	**0.70**	**92**	↑Pg	**Pb**	**13 19 04.3**	**+0.2**
BNALP				↑Pg	**Pb**	**13 19 04.3**	**+0.2**
	0.2nm,SNR=3.4						
BNALP	**Bannalp**	**0.70**	**92**	↑Pg	**Pb**	**13 19 04.3**	**+0.2**
	0.2nm,SNR=3.4						
BNALP				↑Pg	**Pb**	**13 19 04.3**	**+0.2**
BNALP	**Bannalp**	**0.70**	**92**	↑P	**Pb**	**13 19 04.3**	**+0.2**
BNALP				S	**Sb**	**13 19 14.1**	**+0.5**
BNALP				AML	AML		
	comp=E,157μm,0.2s						
BNALP				AML	AML		
	comp=N,150μm,1.5s						
BNALP				AML	AML		
	comp=N,150μm,1.5s						
BNALP				AML	AML		
	comp=E,157μm,0.3s						
BNALP	**Bannalp**	**0.70**	**92**	S	**Sb**	**13 19 14.1**	**+0.5**
BNALP	**Bannalp**	**0.70**	**92**	S	**Sb**	**13 19 15.0**	**+1.4**
GRIMS	**Grimsel Gerste**	**0.71**	**116**	Pg	**Pb**	**13 19 04.4**	**+0.3**
GRIMS				Pg	**Pb**	**13 19 04.4**	**+0.3**
	comp=E,0.1nm,SNR=3.3						
GRIMS	**Grimsel Gerste**	**0.71**	**116**	Pg	**Pb**	**13 19 04.4**	**+0.3**
	comp=E,0.1nm,SNR=3.3						
GRIMS				Pg	**Pb**	**13 19 04.4**	**+0.3**
EMBD	**Embd, Matterta**	**0.74**	**156**	↓Pg	**Pb**	**13 19 05.0**	**+0.4**
	comp=E,0.1nm,SNR=2.0						
EMBD				↓Pg	**Pb**	**13 19 05.0**	**+0.4**
EMBD	**Embd, Matterta**	**0.74**	**156**	Pg	**Pb**	**13 19 05.0**	**+0.4**
SIMPL	**Simplonpass**	**0.78**	**147**	Pg	**Pb**	**13 19 05.9**	**+0.4**
SIMPL				Pg	**Pb**	**13 19 05.9**	**+0.4**
	comp=E,0.1nm,SNR=2.9						
SIMPL	**Simplonpass**	**0.78**	**147**	Pg	**Pb**	**13 19 05.9**	**+0.4**
	comp=E,0.1nm,SNR=2.9						
SIMPL				Pg	**Pb**	**13 19 05.9**	**+0.4**
SULZ	**Cheisacher**	**0.80**	**37**	↑Pg	**Pb**	**13 19 06.0**	**+0.4**
SULZ				↑Pg	**Pb**	**13 19 06.0**	**+0.4**
	comp=E,0.4nm,SNR=9.0						
SULZ	**Cheisacher**	**0.80**	**37**	↑Pg	**Pb**	**13 19 06.0**	**+0.4**
SULZ				↑Pg	**Pb**	**13 19 06.0**	**+0.4**
	comp=E,0.4nm,SNR=9.0						
SULZ	**Cheisacher**	**0.80**	**37**	Sg	**Sb**	**13 19 16.7**	**+0.5**
SULZ	**Cheisacher**	**0.80**	**37**	Pg	**Pb**	**13 19 06.0**	**+0.4**
SALAN	**Lac Salanfe**	**0.81**	**202**	Pg	**Pg**	**13 19 06.0**	**+0.3**
	comp=E,0.3nm,SNR=4.5						
SALAN				Pg	**Pg**	**13 19 06.0**	**+0.3**
DIX	**Grande Dixence**	**0.81**	**180**	↑Pg	**Pb**	**13 19 06.5**	**+0.5**
DIX				↑Pg	**Pb**	**13 19 06.5**	**+0.5**
	comp=E,0.1nm,SNR=3.3						
DIX	**Grande Dixence**	**0.81**	**180**	↑Pg	**Pb**	**13 19 06.5**	**+0.5**
	comp=E,0.1nm,SNR=3.3						
DIX				↑Pg	**Pb**	**13 19 06.5**	**+0.5**
DIX	**Grande Dixence**	**0.81**	**180**	↑P	**Pb**	**13 19 06.5**	**+0.5**
DIX	**Grande Dixence**	**0.81**	**180**	↑P	**Pb**	**13 19 06.5**	**+0.5**
DIX				S	**Sb**	**13 19 17.2**	**+0.3**
DIX				AML	AML		
	comp=N,82μm,0.5s						
DIX				AML	AML		
	comp=E,96μm,1.1s						
DIX	**Grande Dixence**	**0.81**	**180**	S	**Sb**	**13 19 17.2**	**+0.3**
MUO	**Muotathal**	**0.85**	**85**	Pg	**Pb**	**13 19 07.1**	**+0.5**
MUO				Pg	**Pb**	**13 19 07.1**	**+0.5**
	comp=E,0.2nm,SNR=4.2						
EWZT2	**Wettswil, ZR**	**0.87**	**59**	Pg	**Pb**	**13 19 07.3**	**+0.6**
EWZT2				Pg	**Pb**	**13 19 07.3**	**+0.6**
	comp=E,0.6nm,SNR=2.7						
ACHB	**Acheberg**	**0.91**	**40**	Pg	**Pb**	**13 19 07.8**	**+0.4**
	comp=E,0.4nm,SNR=11						
ACHB				Pg	**Pb**	**13 19 07.8**	**+0.4**
BOBI	**Bbikon, Wasse**	**0.91**	**44**	↑Pg	**Pb**	**13 19 08.2**	**+0.6**
BOBI				↑Pg	**Pb**	**13 19 08.2**	**+0.6**
	comp=E,0.4nm,SNR=1.0						
BOBI	**Bbikon, Wasse**	**0.91**	**44**	↑Pg	**Pb**	**13 19 08.2**	**+0.6**
	comp=E,0.4nm,SNR=1.0						
BOBI				↑Pg	**Pb**	**13 19 08.2**	**+0.6**
MMK	**Mattmark**	**0.93**	**155**	Pg	**Pb**	**13 19 08.5**	**+0.6**
MMK				Pg	**Pb**	**13 19 08.5**	**+0.6**
	comp=E,0.1nm,SNR=3.2						
MMK	**Mattmark**	**0.93**	**155**	↓P	**Pb**	**13 19 08.5**	**+0.6**
MMK				AML	AML		
	comp=E,58μm,1.6s						
MMK				AML	AML		
	comp=N,69μm,0.4s						
MMK				AML	AML		
	comp=E,58μm,1.6s						
MMK				AML	AML		
	comp=N,69μm

LPL	**La Plagne**	**1.46**	**199**	*e*Pg		**Pg**	13 19 18.4	**+0.4**
LPL				*e*Sg		**Sg**	13 19 37.8	**+0.8**
	comp=E,18nm,0.3s							
LPG	**La Plagne**	**1.47**	**198**	*e*Pg		**Pg**	13 19 18.5	**+0.2**
LPG				*e*Sg		**Sg**	13 19 38.3	**+0.9**
	comp=E,21nm,0.2s							
MUGIO	**Muggio**	**1.50**	**130**	⇑P		**Pg**	13 19 18.9	**+0.1**
MUGIO				AML		AML		
	comp=E,67µm,1.3s							
MUGIO				AML		AML		
	comp=N,94µm,0.4s							
CDF	**Champ du Feu**	**1.52**	**357**	*e*Pn		**Pn**	13 19 17.2	**+0.5**
CDF	**Champ du Feu**	**1.52**	**357**	*e*Pg		**Pg**	13 19 19.4	**+0.1**
CDF				*e*Sg		**Sg**	13 19 39.0	**-0.1**
	comp=N,69nm,0.3s							
OG35	**Corcelles**	**1.52**	**237**	Pg		**Pg**	13 19 19.6	**+0.3**
GUT	**Gutenstein**	**1.66**	**44**	Sn		**Sg**	13 19 43.2	**-0.1**
GUT	**Gutenstein**	**1.66**	**44**	Pn		**Pn**	13 19 18.5	**0.0**
GUT				Pg		**Pg**	13 19 21.8	**0.0**
DAVOX	**Davos/Dischmat**	**1.71**	**93**	P		**Pg**	13 19 22.5	**-0.3**
DAVOX				S		**Sg**	13 19 45.8	**+0.7**
DAVA	**Damuels**	**1.74**	**76**	*e*Pg		**Pg**	13 19 23.4	**0.0**
	comp=N,2.0nm,0.2s,SNR=6.1							
DAVA				*e*Sn		**Sb**	13 19 44.2	**+0.8**
	comp=N,13nm,0.3s							
OGSM	**Saint Maurice**	**1.75**	**223**	Pn		**Pn**	13 19 21.5	**+1.7**
OGSM				Pg		**Pg**	13 19 24.3	**+0.7**
RSP	**Reno Superiore**	**1.75**	**183**	P		**Pg**	13 19 23.8	**+0.1**
RSP	**Reno Superiore**	**1.75**	**183**	P		**Pg**	13 19 23.7	**+0.1**
RSP				AML		AML		
	comp=E,62µm,0.7s							
RSP				AML		AML		
	comp=N,66µm,0.5s							
PAGF	**Fort de Pagny**	**2.01**	**326**	*e*Pg		**Pg**	13 19 28.5	**-0.1**
	baz=145							
PAGF				*e*Sg		**Sg**	13 19 54.1	**-0.5**
	comp=N,17nm,0.2s							
SFTF	**Sexfontaines**	**2.07**	**310**	*e*Pg		**Pg**	13 19 29.6	**-0.1**
	baz=129							
SFTF				*e*Sg		**Sg**	13 19 56.2	**-0.3**
	comp=N,21nm,0.4s							
EUCT	**Pavia**	**2.08**	**144**	P		**Pg**	13 19 29.2	**-0.7**
MBDF	**Montbardon**	**2.21**	**192**	*e*Pg		**Pg**	13 19 32.3	**-0.2**
MBDF				*e*Sg		**Sg**	13 20 01.2	**0.0**
	comp=N,23nm,0.5s							
ORIF	**Oris-en-Rattie**	**2.24**	**209**	*e*Pg		**Pg**	13 19 32.8	**-0.3**
ORIF				*e*Sg		**Sg**	13 20 01.7	**-0.4**
	comp=N,18nm,0.3s							
MEZF	**Maizieres J'vi**	**2.26**	**316**	*e*Pg		**Pg**	13 19 33.3	**0.0**
	baz=137							
MEZF				*e*Sg		**Sg**	13 20 01.9	**-0.7**
	comp=N,13nm,0.3s							
FETA	**Feichten**	**2.29**	**86**	*e*Pg		**Pg**	13 19 33.6	**-0.3**
	comp=N,1.4nm,0.2s							
FETA				*e*Sn		**Sg**	13 20 02.1	**-1.4**
	comp=N,2.3nm,0.3s							
SAVF	**Savonnieres en**	**2.31**	**319**	*e*Pg		**Pg**	13 19 34.0	**-0.2**
	baz=140							
SAVF				*e*Sg		**Sg**	13 20 03.7	**-0.4**
	comp=N,9.5nm,0.3s							
RETA	**Reutte**	**2.37**	**74**	*e*Pg		**Pb**	13 19 33.2	**+0.9**
	comp=N,2.3nm,0.2s							
RETA				*e*Sg		**Sg**	13 20 03.9	**-2.2**
	comp=N,1.5nm,0.1s							
LOR	**Lormes**	**2.45**	**280**	*e*Pg		**Pg**	13 19 36.4	**-0.5**
	baz=100							
LOR				*e*Sg		**Sb**	13 20 06.7	**+3.1**
	comp=N,29nm,0.3s							
SMF	**Signal de Mont**	**2.46**	**265**	*e*Pg		**Pg**	13 19 37.0	**-0.1**
SMF				*e*Sn		**Sn**	13 19 58.8	**-0.4**
SMF				*e*Sg		**Sb**	13 20 07.4	**+3.5**
	comp=N,15nm,0.2s							
MOTA	**Moosalm**	**2.57**	**79**	*e*Pn		**Pn**	13 19 32.7	**+1.6**
	comp=N,0.7nm,0.1s,SNR=4.6							
MOTA				*e*Sn		**Sn**	13 20 04.6	**+2.4**
	comp=N,2.3nm,0.2s							
SQTA	**Sankt Quirin**	**2.62**	**81**	*e*Pn		**Pn**	13 19 33.3	**+1.4**
SQTA				*e*Sn		**Sn**	13 20 06.6	**+3.1**
	comp=N,4.2nm,0.3s							
SSF	**Saint Saulge**	**2.67**	**275**	*e*Pg		**Pg**	13 19 40.7	**-0.5**
SSF				*e*Sg		**Sg**	13 20 14.1	**-1.7**
	comp=N,18nm,0.5s							
AVF	**Avril sur Loir**	**2.78**	**269**	*e*Pn		**Pn**	13 19 36.0	**+2.1**
AVF	**Avril sur Loir**	**2.78**	**269**	*e*Pg		**Pg**	13 19 42.7	**-0.6**
AVF				*e*Sg		**Sg**	13 20 18.1	**-1.2**
	comp=N,6.6nm,0.3s							
VIVF	**Saint-Julien-l**	**2.79**	**224**	*e*Pn		**Pn**	13 19 34.4	**+0.3**
VIVF	**Saint-Julien-l**	**2.79**	**224**	*e*Pg		**Pg**	13 19 42.7	**-0.8**
VIVF				*e*Sn		**Sn**	13 20 07.0	**-0.5**
VIVF				*e*Sg		**Sg**	13 20 18.7	**-0.9**
	comp=N,12nm,0.3s							
WATA	**Walderalm**	**2.89**	**80**	*e*Pn		**Pn**	13 19 37.1	**+1.6**
	comp=N,0.5nm,0.1s							
WATA				*e*Sg		**Sn**	13 20 11.6	**+1.6**
	comp=N,0.8nm,0.1s							
WTTA	**Wattenberg**	**2.92**	**81**	*e*Pn		**Pn**	13 19 37.5	**+1.5**
WTTA				*e*Sn		**Sg**	13 20 21.6	**-2.2**
	comp=N,6.5nm,0.3s							
SBF	**Sospel**	**3.03**	**180**	*e*Pg		**Pg**	13 19 47.2	**-0.9**
SBF				*e*Sn		**Sn**	13 20 10.9	**-2.6**
SBF				*e*Sg		**Sg**	13 20 26.3	**-1.1**
	comp=N,13nm,0.5s							
BGF	**Bois d'Agland**	**3.15**	**266**	*e*Pn		**Pn**	13 19 39.6	**+0.6**
BGF	**Bois d'Agland**	**3.15**	**266**	*e*Pg		**Pg**	13 19 49.4	**-0.9**
BGF				*e*Sg		**Sg**	13 20 30.1	**-1.0**
	comp=N,20nm,0.3s							
SMRF	**Simiane la Rot**	**3.19**	**204**	*e*Pg		**Pg**	13 19 51.1	**0.0**
SMRF				*e*Sn		**Sn**	13 20 16.0	**-1.3**
SMRF				*e*Sg		**Sg**	13 20 31.6	**-0.8**
	comp=N,2.2nm,0.3s							
RISI	**Rein**	**3.21**	**87**	P		**Pn**	13 19 43.5	**+3.5**
RISI				AML		AML		
	comp=E,32µm,1.3s							
RISI				AML		AML		
	comp=N,55µm,0.6s							
HYF	**Humbligny**	**3.27**	**278**	*e*Pn		**Pn**	13 19 40.9	**+0.2**
HYF	**Humbligny**	**3.27**	**278**	*e*Pg		**Pg**	13 19 52.1	**-0.6**
HYF				*e*Sg		**Sg**	13 20 33.7	**-1.4**
FRF	**La Foret Royal**	**3.38**	**189**	*e*Pg		**Pb**	13 19 51.9	**+2.4**
FRF				*e*Sn		**Sn**	13 20 20.1	**-1.8**
FRF				*e*Sg		**Sg**	13 20 36.9	**-1.5**
	comp=N,28nm,1.0s							
ABTA	**Abfaltersbach**	**3.51**	**91**	*e*Pg		**Pn**	13 19 48.3	**+4.2**
	comp=N,0.2nm,0.1s							
ABTA				*e*Sn		**Sn**	13 20 28.0	**+2.6**
	comp=N,0.3nm,0.1s							
LMR	**La Mourre**	**3.62**	**190**	*e*Pg		**Pg**	13 19 57.6	**-1.7**
LMR				*e*Sn		**Sn**	13 20 27.3	**-0.5**
	comp=N,1.3nm,0.3s							
LMR				*e*Sg		**Sg**	13 20 44.3	**-1.8**
	comp=N,0.8nm,0.2s							
TCF	**Toulx Ste Croi**	**3.63**	**262**	*e*Pn		**Pn**	13 19 45.9	**+0.3**
TCF	**Toulx Ste Croi**	**3.63**	**262**	*e*Pg		**Pg**	13 19 58.8	**-0.7**
TCF				*e*Sg		**Sg**	13 20 45.1	**-1.4**
	comp=N,2.2nm,0.2s							
GIVF	**Givet**	**3.64**	**333**	*e*Pn		**Pn**	13 19 46.6	**+0.9**
GIVF				*e*Sn		**Sn**	13 20 26.1	**-2.2**
GIVF				*e*Sg		**Sg**	13 20 45.7	**-1.1**
	comp=N,4.8nm,0.4s							
LASF	**Ste Croix**	**3.76**	**223**	*e*Pn		**Pn**	13 19 47.8	**+0.4**
LASF	**Ste Croix**	**3.76**	**223**	*e*Pg		**Pg**	13 20 00.6	**-1.5**
LASF				*e*Sn		**Sn**	13 20 29.9	**-1.5**
LASF				*e*Sg		**Sg**	13 20 49.3	**-1.5**
	comp=N,3.9nm,0.3s							
BAIF	**Baives**	**3.81**	**327**	*e*Pn		**Pn**	13 19 48.0	**-0.1**
BAIF	**Baives**	**3.81**	**327**	*e*Pg		**Pg**	13 20 01.6	**-1.4**
BAIF				*e*Sn		**Sn**	13 20 30.4	**-2.2**
BAIF				*e*Sg		**Sg**	13 20 50.4	**-2.0**
	comp=N,2.8nm,0.3s							
CAF	**Calviac**	**4.21**	**244**	*e*Pg		**Pg**	13 20 09.1	**-1.6**
CAF				*e*Sg		**Sg**	13 21 03.0	**-2.2**
	comp=N,3.4nm,0.4s							
RJF	**Les Rejaudoux**	**4.39**	**251**	*e*Pg		**Pg**	13 20 11.9	**-2.2**
RJF				*e*Sg		**Sg**	13 21 08.9	**-2.0**
	comp=N,2.6nm,0.3s							
KHC	**Kasperske Hory**	**4.71**	**59**	*e*PN		**Pn**	13 20 00.5	**0.0**
KHC				*e*PG		**Pb**	13 20 13.9	**+1.6**
KHC				*e*SN		**Sn**	13 20 52.7	**-2.1**
KHC				*e*SG		**Sg**	13 21 19.2	**-2.0**
	comp=N,9.6nm,1.3s							
NKC	**Novy Kostel**	**4.73**	**43**	*e*SG		**Sg**	13 21 21.6	**-0.2**
MOA	**Molln**	**4.76**	**76**	*e*Pg		**Pb**	13 20 15.1	**+1.9**
	comp=N,0.3nm,0.2s							
MOA				*e*Sg		**Sn**	13 20 53.6	**-2.4**
	comp=N,0.2nm,0.1s							

APEC	**Apecchio**	**4.87**	**131**	P		**Pb**	13 20 11.2	**-3.7**
APEC	**Apecchio**	**4.87**	**131**	P		**Pb**	13 20 11.2	**-3.7**
APEC	**Apecchio**	**4.87**	**131**	P		**Pb**	13 20 11.2	**-3.7**
CKRC	**Cesky Krumlov**	**5.04**	**65**	*e*PN		**Pn**	13 20 05.1	**+0.2**
CKRC				*e*SN		**Sn**	13 21 00.1	**-2.7**
CKRC				*e*SG		**Sg**	13 21 28.9	**-2.6**
MTLF	**Montolieu**	**5.11**	**228**	*e*Pn		**Pn**	13 20 05.8	**-0.1**
MTLF	**Montolieu**	**5.11**	**228**	*e*Pg		**Pg**	13 20 25.5	**-2.3**
MTLF				*e*Sg		**Sg**	13 21 31.1	**-2.7**
	comp=N,2.5nm,0.3s							
LDF	**La Druitiere**	**5.35**	**291**	*e*Pg		**Pg**	13 20 30.6	**-1.8**
LDF				*e*Sg		**Sg**	13 21 38.6	**-3.1**
	comp=N,2.7nm,0.3s							
MDAR	**Monte D'Aria**	**5.50**	**130**	P		**Pb**	13 20 26.3	**+0.5**
FLN	**La Foliniere**	**5.63**	**292**	*e*Pn		**Pn**	13 20 13.0	**0.0**
FLN	**La Foliniere**	**5.63**	**292**	*e*Pg		**Pg**	13 20 36.4	**-1.3**
FLN				*e*Sn		**Sn**	13 21 14.4	**-2.9**
FLN				*e*Sg		**Sg**	13 21 47.4	**-3.1**
	comp=N,1.7nm,0.3s							
PRU	**Pruhonice**	**5.67**	**54**	*e*SG		**Sg**	13 21 49.9	**-2.0**
	comp=N,3.3nm,0.8s							
CLL	**Collm**	**5.75**	**38**	*e*Sg		**Sg**	13 21 58.0	**+3.6**
CONA	**Conrad Observa**	**5.84**	**77**	*e*Pn		**Pn**	13 20 17.3	**+1.3**
CONA				*e*Sn		**Sn**	13 21 19.4	**-3.2**
	comp=N,1.1nm,0.5s							
BRG	**Berggiesshubel**	**5.87**	**45**	Sg		**Sg**	13 22 02.6	**+4.3**
BRG				Amp			13 22 03.8	
	comp=Z,3.1nm,0.9s							
VIVA	**Pratoni del Vi**	**6.42**	**141**	P		**Pn**	13 20 25.5	**+1.4**

*KRSC **06** 13:33:43.7±2.9, 48°.29N×155°.98E, h60^{km}±25^{km}, ML4.4*
*MOS **06** 13:33:43.6±0.8, 48°.28N×156°.34E, h67^{km}, mb4.1/1, Error ellipse: s-maj=22.8km s-min=4.3km az=73.0*
*SKHL **06** 13:33:44.2±0.7, 48°.30N×155°.40E, h108^{km}±5^{km}, mb4.4/3, msha5.2/4*
*IDC **06** 13:33:48.2±2.7, 48°.78N×154°.53E, h136^{km}±23^{km}, mb3.1/7, mb1 3.3/9, mb1mx3.1/44, mbtmp3.6/9, Error ellipse: s-maj=32.4km s-min=16.8km az=142.0*

ISC 06 13:33:44.7±0.9, **48.42N**±0.1°×**155.15E**±0.1°, **h100**^{km}, **n87**, σ1^{s}**69**/93, **mb3.4**/7, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.35**	**15**	PN		**Pn**	**13 34 22.1**	**+0.4**
SKR	**Severo-Kuril's**	**2.35**	**15**	*e*P		**Pn**	**13 34 22.1**	**+0.4**
SKR	**Severo-Kuril's**	**2.35**	**15**	*e*P		**Pn**	**13 34 22.2**	**+0.5**
SKR				AMB		AMB	13 34 22.5	
	110nm,0.7s							
SKR				*e*S		**Sn**	**13 34 50.9**	**+0.8**
SKR				A		A	13 34 52.5	
	320nm,0.5s							
SKR				A		A	13 34 52.5	
	400nm,0.5s							
ALID	**Alaid**	**2.46**	**6**	PN		**Pn**	**13 34 22.5**	**-0.9**
ALID	**Alaid**	**2.46**	**6**	*e*P		**Pn**	**13 34 22.5**	**-0.9**
PAU	**Pauzhetka**	**3.23**	**19**	PN		**Pn**	**13 34 35.0**	**+1.6**
PAU				S		**Sn**	**13 35 13.6**	**+2.5**
PAU	**Pauzhetka**	**3.23**	**19**	*e*P		**Pn**	**13 34 35.0**	**+1.6**
PAU				*e*S		**Sn**	**13 35 13.6**	**+2.5**
PAU	**Pauzhetka**	**3.23**	**19**	*e*P		**Pn**	**13 34 35.0**	**+1.6**
PAU				AMB		AMB	13 34 36.6	
	30nm,0.6s							
PAU				*e*S		**Sn**	**13 35 13.2**	**+2.1**
PAU				A		A	13 35 24.3	
	150nm,0.5s							
PAU				A		A	13 35 24.3	
	130nm,0.5s							
KDTR	**Khodutka, Kamc**	**3.88**	**28**	PN		**Pn**	**13 34 42.6**	**+0.5**
KDTR				S		**Sn**	**13 35 26.3**	**-0.3**
KDTR	**Khodutka, Kamc**	**3.88**	**28**	*e*P		**Pn**	**13 34 42.6**	**+0.5**
KDTR				*e*S		**Sn**	**13 35 26.3**	**-0.3**
ASAK	**Asacha**	**4.34**	**23**	PN		**Pn**	**13 34 50.2**	**+1.8**
ASAK	**Asacha**	**4.34**	**23**	*e*P		**Pn**	**13 34 50.2**	**+1.8**
MTVR	**Mutnovka**	**4.50**	**24**	PN		**Pn**	**13 34 52.4**	**+1.7**
MTVR	**Mutnovka**	**4.50**	**24**	*e*P		**Pn**	**13 34 52.4**	**+1.7**
GRL	**Gorelyy**	**4.53**	**23**	PN		**Pn**	**13 34 53.0**	**+1.9**
GRL	**Gorelyy**	**4.53**	**23**	*e*P		**Pn**	**13 34 53.0**	**+1.9**
RUS	**Russkaya**	**4.55**	**27**	PN		**Pn**	**13 34 51.8**	**+0.5**
RUS				S		**Sn**	**13 35 41.7**	**-1.3**
RUS	**Russkaya**	**4.55**	**27**	*e*P		**Pn**	**13 34 51.8**	**+0.5**
RUS				*e*S		**Sn**	**13 35 41.7**	**-1.3**
RUS	**Russkaya**	**4.55**	**27**	*e*P		**Pn**	**13 34 51.8**	**+0.5**
RUS				*e*S		**Sn**	**13 35 41.7**	**-1.3**
APC	**Apacha**	**4.68**	**15**	PN		**Pn**	**13 34 53.7**	**+0.7**
APC	**Apacha**	**4.68**	**15**	*e*P		**Pn**	**13 34 53.7**	**+0.7**
KRMR	**Karymshinskiy**	**4.80**	**22**	PN		**Pn**	**13 34 56.5**	**+1.9**
KRMR	**Karymshinskiy**	**4.80**	**22**	*e*P		**Pn**	**13 34 56.5**	**+1.9**
PETK	**Petropavlovsk-**	**4.96**	**18**	P		**Pn**	**13 34 58.4**	**+1.6**
	2.5nm,0.3s,baz=183,slow=11,SNR=84							
PETK				S		**Sn**	**13 35 53.5**	**+0.6**
	baz=216,slow=27,SNR=1.1							
PET	**Petropavlovsk**	**5.11**	**24**	*e*PN		**Pn**	**13 35 00.2**	**+1.4**
PET				*e*S		**Sn**	**13 35 57.7**	**+1.1**
PET				smax		smax		
	comp=N,42nm,0.5s							
PET				smax		smax		
	comp=E,45nm,0.6s							
PET	**Petropavlovsk**	**5.11**	**24**	*e*P		**Pn**	**13 35 00.3**	**+1.4**
PET	**Petropavlovsk**	**5.11**	**24**	*e*P		**Pn**	**13 35 00.2**	**+1.4**
PET				AMB		AMB	13 35 02.9	
	comp=E,20nm,0.7s							
PET				*e*S		**Sn**	**13 35 57.1**	**+0.5**
PET				A		A	13 36 16.6	
	comp=E,40nm,0.6s							
PET				A		A	13 36 16.6	
	comp=E,50nm,0.6s							
DALK	**Dalny**	**5.15**	**25**	PN		**Pn**	**13 35 00.5**	**+1.2**
DALK	**Dalny**	**5.15**	**25**	*e*P		**Pn**	**13 35 00.5**	**+1.2**
UGLR	**Uglovaya**	**5.33**	**25**	PN		**Pn**	**13 35 03.8**	**+1.9**
UGLR	**Uglovaya**	**5.33**	**25**	*e*P		**Pn**	**13 35 03.8**	**+1.9**
KOK	**Koryaka**	**5.35**	**23**	PN		**Pn**	**13 35 04.5**	**+2.3**
KOK	**Koryaka**	**5.35**	**23**	*e*P		**Pn**	**13 35 04.5**	**+2.3**
KOK	**Koryaka**	**5.35**	**23**	*e*P		**Pn**	**13 35 04.5**	**+2.3**
AVH	**Avacha**	**5.35**	**24**	PN		**Pn**	**13 35 04.7**	**+2.5**
AVH	**Avacha**	**5.35**	**24**	*e*P		**Pn**	**13 35 04.7**	**+2.5**
SMAR	**Somma**	**5.37**	**24**	PN		**Pn**	**13 35 04.4**	**+1.9**
SMAR	**Somma**	**5.37**	**24**	*e*P		**Pn**	**13 35 04.4**	**+1.9**
KRER	**Koryakskii**	**5.39**	**24**	PN		**Pn**	**13 35 05.3**	**+2.5**
KRER	**Koryakskii**	**5.39**	**24**	*e*P		**Pn**	**13 35 05.3**	**+2.5**
SDLR	**Sedlovina**	**5.40**	**25**	PN		**Pn**	**13 35 04.3**	**+1.4**
SDLR	**Sedlovina**	**5.40**	**25**	*e*P		**Pn**	**13 35 04.3**	**+1.4**
KRX	**Arik**	**5.41**	**23**	PN		**Pn**	**13 35 05.0**	**+1.9**
KRX	**Arik**	**5.41**	**23**	*e*P		**Pn**	**13 35 05.0**	**+1.9**
NLC	**Nalytchevo**	**5.45**	**28**	PN		**Pn**	**13 35 03.7**	**+0.4**
NLC	**Nalytchevo**	**5.45**	**28**	*e*P		**Pn**	**13 35 03.7**	**+0.4**
NLC	**Nalytchevo**	**5.45**	**28**	*e*P		**Pn**	**13 35 03.7**	**+0.4**
GNL	**Ganaly**	**5.56**	**17**	PN		**Pn**	**13 35 06.4**	**+1.3**
GNL	**Ganaly**	**5.56**	**17**	*e*P		**Pn**	**13 35 06.4**	**+1.3**
SPN	**Mys Shipunski**	**5.61**	**32**	PN		**Pn**	**13 35 06.5**	**+0.9**
SPN	**Mys Shipunski**	**5.61**	**32**	*e*P		**Pn**	**13 35 06.5**	**+0.9**
SPN	**Mys Shipunski**	**5.61**	**32**	*e*P		**Pn**	**13 35 06.5**	**+0.9**
KUR	**Kuril'sk**	**5.93**	**240**	PN		**Pn**	**13 35 12.3**	**+2.3**
KUR				*e*S		**Sn**	**13 36 15.1**	**-1.4**
KUR				smax		smax		
	comp=E,16nm,0.4s							
KUR				smax		smax		
	comp=N,20nm,0.6s							
KUR	**Kuril'sk**	**5.93**	**240**	*e*P		**Pn**	**13 35 11.3**	**+1.3**
KUR				*e*S		**Sn**	**13 36 17.2**	**+0.7**
KUR				A		A	13 36 21.6	
	comp=N,20nm,0.6s							
KUR				A		A	13 36 21.6	
	comp=N,20nm,0.6s							
MKZ	**Mys Kozlova**	**7.38**	**31**	PN		**Pn**	**13 35 30.2**	**+0.6**
MKZ	**Mys Kozlova**	**7.38**	**31**	*e*P		**Pn**	**13 35 30.2**	**+0.6**
MKZ	**Mys Kozlova**	**7.38**	**31**	*e*P		**Pn**	**13 35 30.2**	**+0.6**
KZV	**Kizimen**	**7.42**	**24**	PN		**Pn**	**13 35 32.9**	**+2.6**
KZV	**Kizimen**	**7.42**	**24**	*e*P		**Pn**	**13 35 32.9**	**+2.6**
TUMD	**Tumrok D**	**7.53**	**24**	*e*P		**Pn**	**13 35 33.6**	**+2.0**
TUMR	**Tumrok**	**7.53**	**22**	PN		**Pn**	**13 35 36.4**	**+4.6**
TUMR	**Tumrok**	**7.53**	**22**	*e*P		**Pn**	**13 35 36.4**	**+4.6**
GRPR	**Tuman**	**7.87**	**239**	PN		**Pn**	**13 35 37.0**	**+0.7**
RUSJ	**Misakicho**	**8.11**	**241**	*e*PN		**Pn**	**13 35 42.2**	**+2.6**
RUSJ				S		**Sn**	**13 37 11.7**	**+2.2**
NMR	**Nemuro--Hokkai**	**8.29**	**236**	*e*PN		Pn	13 35 37.5	-4.5
KBTR	**Krutoberegovo**	**9.10**	**28**	PN		**Pn**	**13 35 52.6**	**-0.3**
KBTR	**Krutoberegovo**	**9.10**	**28**	*e*P		**Pn**	**13 35 52.6**	**-0.3**
KBG	**Krutoberegovo**	**9.10**	**28**	PN		**Pn**	**13 35 54.5**	**+1.6**
KBG	**Krutoberegovo**	**9.10**	**28**	*e*P		**Pn**	**13 35 54.5**	**+1.6**
KBG	**Krutoberegovo**	**9.10**	**28**	*e*P		**Pn**	**13 35 54.5**	**+1.6**

JKA	**Kamikawa-asahi**	**9.70**	**248**	*e*P		**Pn**	**13 36 00.6**	**-0.6**
ASAJ	**Asahikawa**	**9.70**	**248**	P		**Pn**	**13 36 00.6**	**-0.6**
	comp=N,0.4nm,0.3s,baz=231,slow=33,SNR=2.0							
EKMR	**Ekimchan**	**14.78**	**297**	*e*P		**Pn**	**13 37 08.5**	**0.0**
EKMR				AMB		AMB	13 37 08.9	
	comp=N,10.0nm,0.6s							
KLR	**Kul'dur**	**15.42**	**282**	P		**Pn**	**13 37 15.7**	**-0.9**
	comp=N,0.4nm,0.3s,baz=67,slow=10,SNR=9.2							
H11N2	**WAKE ISLAND Hy**	**30.16**	**158**	T		T	14 11 49.2	
	baz=343,slow=76,SNR=15							
H11N1	**WAKE ISLAND Hy**	**30.17**	**158**	T		T	14 11 45.8	
	baz=343,slow=76,SNR=21							
H11N3	**WAKE ISLAND Hy**	**30.17**	**158**	T		T	14 11 50.6	
	baz=343,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**31.28**	**159**	T		T	14 13 22.4	
	baz=344,slow=76,SNR=50							
H11S3	**WAKE ISLAND Hy**	**31.29**	**159**	T		T	14 13 26.7	
	baz=344,slow=76,SNR=49							
H11S2	**WAKE ISLAND Hy**	**31.30**	**159**	T		T	14 13 24.3	
	baz=344,slow=76,SNR=49							
SONM	**Songino Array**	**32.11**	**288**	P		P	13 39 57.8	-4.5
	comp=N,0.3nm,0.4s,baz=64,slow=9.8,SNR=2.0							
MKAR	**Makanchi Array**	**47.41**	**297**	P		P	13 42 03.9	-4.9
	comp=N,0.3nm,0.5s,baz=70,slow=9.0,SNR=6.3							
YKA	**Yellowknife Ar**	**48.76**	**38**	P		**P**	**13 42 19.5**	**+0.7**
	comp=N,0.2nm,0.9s,baz=302,slow=20,SNR=2.1							
CMAR	**Chiang Mai Arr**	**54.10**	**257**	P		**P**	**13 42 57.8**	**-1.5**
	comp=N,0.6nm,0.3s,baz=32,slow=8.3,SNR=4.4							
FINES	**FINESS Array B**	**63.10**	**335**	P		**P**	**13 43 57.1**	**-4.0**
	comp=N,1.5nm,1.0s,baz=10,slow=8.5,SNR=1.4							
ASAR	**Alice Springs**	**74.25**	**200**	P		**P**	**13 45 11.1**	**+0.5**
	comp=N,0.2nm,0.7s,baz=7.9,slow=5.5,SNR=1.4							
TXAR	**Lajitas Array**	**75.48**	**62**	P		**P**	**13 45 17.6**	**-0.4**
	comp=N,0.1nm,0.3s,baz=336,slow=2.0,SNR=2.0							

*IDC **06** 14:03:50.6±0.6, 15°.63N×147°.89E, h0^{km}, mb4.1/20, mb1 4.3/21, mb1mx4.1/53, mbtmp4.2/21, ML4.7/1, MS3.1/5, Ms1 3.2/5, ms1mx2.8/32, Error ellipse: s-maj=21.4km s-min=12.7km az=92.0*
*NEIC **06** 14:03:53.4±1.7, 15°.57N±0°.08×147°.89E±0°.10, h18^{km}±4^{km}, mb4.5/52, Error ellipse: s-maj=13.8km s-min=11.5km az=96.0*

ISC 06 14:03:55.1±0.5, **15.68N**±0°.06×**147.79E**±0°.09, **h29**^{km}, **n95**, σ1^{s}**27**/90, **mb4.4**/43, **MS3.1**/5, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ANA2	**Anatahan**	**2.10**	**288**		Pn	**Pn**	**14 04 30.5**	**+2.2**
GUMO	**Guam**	**3.51**	**234**		Pn	**Pn**	**14 04 47.9**	**+0.3**
JCJ	**Chichijima**	**12.49**	**336**		Pn	**Pn**	**14 06 49.4**	**-1.6**
	3.9nm,0.3s,baz=256,slow=19,SNR=1.6							
JCJ					Sn	**Sn**	**14 09 03.8**	**-5

GSI					IAmb	IAmb	14 13 21.6			
	comp=Z,12nm,1.2s									
BILL	**Bilibino**	**53.66**	**9**	P	**P**		**14 13 14.8**	**+1.1**		
BILL					IAmb	IAmb	14 13 27.6			
	comp=Z,4.9nm,1.1s									
TNA	**Tin City**	**57.92**	**20**	P	**P**		**14 13 42.6**	**-1.6**		
ZAA0	**Zalesovo Array**	**61.61**	**323**	P	**P**		**14 14 11.9**	**+2.1**		
ZALV	**Zalesovo Beam**	**61.61**	**323**	P	**P**		**14 14 11.6**	**+1.7**		
	comp=Z,0.6nm,0.4s,baz=111,slow=8.1,SNR=5.1									
ZALV	**Zalesovo Beam**	**61.61**	**323**	P	**P**		**14 14 11.9**	**+2.0**		
MK31	**Makanchi Array**	**61.99**	**315**	P	**P**		**14 14 14.9**	**+2.3**		
MKAR	**Makanchi Array**	**61.99**	**315**	P	**P**		**14 14 14.0**	**+1.4**		
	comp=Z,0.8nm,0.4s,baz=88,slow=8.3,SNR=22									
MKAR	**Makanchi Array**	**61.99**	**315**	P	**P**		**14 14 14.7**	**+2.1**		
MAKZ	**Makanchi**	**62.20**	**315**	P	**P**		**14 14 15.5**	**+1.5**		
MAKZ					IAmb	IAmb	14 14 28.1			
	comp=Z,2.9nm,0.9s									
PPLA	**Purkeypile**	**62.66**	**27**	P	**P**		**14 14 16.5**	**-0.5**		
IMAR	**Indian Mountai**	**63.17**	**23**	P	**P**		**14 14 20.8**	**+0.7**		
KTH	**Kantishna Hill**	**63.42**	**26**	P	**P**		**14 14 22.1**	**+0.2**		
BPAW	**Bear Paw Mtn.**	**63.58**	**25**	P	**P**		**14 14 22.5**	**-0.3**		
BPAW					IAmb	IAmb	14 14 37.1			
	comp=Z,6.3nm,1.3s									
TRF	**Thorofare Moun**	**63.66**	**26**	P	**P**		**14 14 22.9**	**-0.8**		
KURK	**Kurchatov**	**64.84**	**319**	P	**P**		**14 14 32.8**	**+1.5**		
KURBB	**Kurchatov Arra**	**64.89**	**319**	P	**P**		**14 14 32.8**	**+1.1**		
	comp=Z,3.0nm,0.4s,baz=96,slow=7.4,SNR=48									
WRH	**Wood River Hil**	**64.90**	**26**	P	**P**		**14 14 31.4**	**0.0**		
WRH					IAmb	IAmb	14 14 32.5			
	comp=Z,3.2nm,1.2s									
ILAR	**Eielson Array**	**65.48**	**25**	P	**P**		**14 14 34.5**	**-0.8**		
	comp=Z,1.1nm,1.0s,baz=256,slow=5.3,SNR=6.1									
VRDI	**Verde Repeater**	**66.14**	**30**	P	**P**		**14 14 40.9**	**+0.9**		
CRQM	**Cirque**	**66.24**	**30**	P	**P**		**14 14 41.2**	**+0.7**		
DOT	**Dot Lake**	**66.40**	**27**	P	**P**		**14 14 41.9**	**+0.7**		
MCARA	**McCarthy VSAT**	**66.41**	**29**	P	**P**		**14 14 41.3**	**0.0**		
MCARA					IAmb	IAmb	14 14 57.8			
	comp=Z,4.4nm,1.0s									
SCRK	**Sand Creek**	**66.50**	**27**	P	**P**		**14 14 42.4**	**+0.4**		
FYU	**Fort Yukon**	**66.62**	**24**	P	**P**		**14 14 42.1**	**-0.4**		
BARN	**Barnard Glacie**	**67.00**	**30**	P	**P**		**14 14 45.5**	**+0.2**		
BARN					IAmb	IAmb	14 15 04.1			
	comp=Z,7.8nm,1.4s									
BMAR	**Burnt Mountain**	**67.09**	**23**	P	**P**		**14 14 46.5**	**+1.0**		
BCAR	**Beaver Creek A**	**67.29**	**28**	P	**P**		**14 14 47.5**	**+0.5**		
EGAK	**Eagle**	**67.87**	**26**	P	**P**		**14 14 50.1**	**-0.3**		
DAWY	**Dawson**	**68.51**	**27**	P	**P**		**14 14 55.1**	**+0.6**		
HYT	**Haines Junctio**	**68.98**	**30**	P	**P**		**14 14 58.8**	**+1.1**		
HYT					IAmb	IAmb	14 15 14.4			
	comp=Z,4.1nm,1.0s									
KKAR	**Karatay Array**	**70.23**	**311**	P	**P**		**14 15 07.2**	**+1.6**		
INK	**Inuvik**	**71.36**	**23**	P	**P**		**14 15 12.1**	**+0.2**		
	comp=Z,1.1nm,0.6s,baz=283,slow=4.5,SNR=5.2									
INK	**Inuvik**	**71.36**	**23**	P	**P**		**14 15 12.4**	**+0.5**		
INK					IAmb	IAmb	14 15 20.4			
	comp=Z,4.5nm,1.4s									
C36M	**Paulatuk**	**74.80**	**22**	P	**P**		**14 15 30.6**	**-1.6**		
C36M					IAmb	IAmb	14 15 39.4			
	comp=Z,4.9nm,1.4s									
ABKAR	**Akbulak array**	**76.90**	**318**	P	**P**		**14 15 46.2**	**+1.6**		
KRMB	**Red Mountain**	**78.53**	**50**	P	**P**		**14 15 54.8**	**+0.7**		
YKA	**Yellowknife Ar**	**79.71**	**28**	P	**P**		**14 15 60.0**	**+0.1**		
	comp=Z,0.5nm,0.5s,baz=286,slow=5.2,SNR=10									
NVAR	**Mina Array Bea**	**83.42**	**52**	P	**P**		**14 16 20.8**	**+0.5**		
	comp=Z,0.5nm,0.6s,baz=270,slow=5.4,SNR=5.5									
ARCES	**ARCESS Array B**	**85.95**	**343**	P	**P**		**14 16 32.2**	**0.0**		
	comp=Z,2.6nm,0.8s,baz=41,slow=6.0,SNR=1.3									
FINES	**FINESS Array B**	**90.44**	**336**	P	**P**		**14 16 52.7**	**-1.0**		
	comp=Z,1.2nm,0.5s,baz=57,slow=5.1,SNR=16									
LVC	**Limon Verde**	**144.72**	**107**	PKP	**PKPdf**		**14 23 29.5**	**-0.8**		
	comp=Z,2.8nm,0.6s,baz=267,slow=3.6,SNR=3.7									
DBIC	**Dimbokro**	**144.97**	**307**	PKPbc	**PKPab**		**14 23 30.3**	**+0.5**		
	comp=Z,2.7nm,0.4s,baz=70,slow=4.3,SNR=9.0									
LPAZ	**La Paz**	**145.49**	**96**	PKPbc	**PKPab**		**14 23 32.7**	**+0.3**		
	comp=Z,1.2nm,0.4s,baz=19,slow=5.0,SNR=7.8									

*NEIC **06** 14:06:07.0±0.9, 15°.16S±0°.08×173°.2W±0°.2, h10km±2km, mb4.7/8, Error ellipse: s-maj=36.6km s-min=13.2km az=88.0*

*IDC **06** 14:06:14.6±60.0, 15°.77S×174°.22W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/45, mbtmp3.9/3, Error ellipse: s-maj=1140.0km s-min=204.6km az=78.0*

ISC 06 14:06:07.2±4.5, 15°.2S±0°.2×173°.2W±0°.7, h10km, n12, σ0$58/11, mb4.3/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTZ	**Lake Taylor**	**30.24**	**202**	P	**P**	**14 12 18.3**	**+0.1**
KWAJ	**Kwajalein Atol**	**30.46**	**320**	P	**P**	**14 12 20.3**	**0.0**
STKA	**Stephens Creek**	**44.33**	**240**	P	**P**	**14 14 17.5**	**-0.2**
	3.1nm,1.0s,baz=68,slow=3.1,SNR=1.5						
STKA	**Stephens Creek**	**44.33**	**240**	IAmb	IAmb	14 14 43.6	
	comp=Z,12nm,2.0s						
BBOO	**Buckleboo**	**49.11**	**240**	P	**P**	**14 14 54.9**	**-0.2**
WR0	**Warramunga Arr**	**49.90**	**257**	P	**P**	**14 15 02.5**	**+1.1**
WR0				IAmb	IAmb	14 15 17.4	
	comp=Z,19nm,1.8s						
WB0	**Warramunga Arr**	**50.05**	**257**	P	**P**	**14 15 03.2**	**+0.6**
WB2	**Warramunga Arr**	**50.08**	**257**	P	**P**	**14 15 02.1**	**-0.6**
WB2				IAmb	IAmb	14 16 15.3	
	comp=Z,22nm,1.9s						
WRA	**Warramunga Arr**	**50.09**	**257**	P	**P**	**14 15 02.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=96,slow=7.0,SNR=4.7						
AS31	**Alice Springs**	**50.38**	**252**	P	**P**	**14 15 05.2**	**+0.2**
ASAR	**Alice Springs**	**50.38**	**252**	P	**P**	**14 15 05.3**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=88,slow=8.4,SNR=38						
ASAR	**Alice Springs**	**50.38**	**252**	P	**P**	**14 15 04.4**	**-0.6**

IDC 06 14:13:28.8±1.9, 27°.64N×87°.02E, h0km, mb3.9/4, mb1 3.8/5, mb1mx3.3/45, mbtmp3.7/5, ML3.2/1, Error ellipse: s-maj=132.6km s-min=25.7km az=60.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.48**	**350**	P	P	14 17 57.2	0.0
	0.1nm,0.3s,baz=168,slow=11,SNR=4.1						
KURBB	**Kurchatov Arra**	**23.84**	**347**	P	P	14 18 43.5	0.0
	0.7nm,0.6s,baz=168,slow=9.5,SNR=4.9						
FINES	**FINESS Array B**	**52.28**	**328**	P	P	14 22 41.6	0.0
	2.2nm,1.0s,baz=111,slow=11,SNR=5.1						
ARCES	**ARCESS Array B**	**54.49**	**338**	P	P	14 22 57.7	-0.1
	5.2nm,1.0s,baz=102,slow=6.8,SNR=5.1						
ASAR	**Alice Springs**	**68.18**	**134**	P	P	14 24 31.2	0.0
	0.3nm,0.7s,baz=318,slow=5.9,SNR=5.9						

*NOU **06** 15:03:25.2, 43°.86S×172°.99E, h0km, MLv4.0, South Island, New Zealand*

WEL 06 15:03:27.8, 44°.5S±1°×17°.3E±°, h13km±1km, M3.8/12, ML4.0/12, MLv3.8/12, Error ellipse: s-maj=0.0km s-min=0.0km az=127.4, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.10**	**158**	P	Pg	15 03 31.8	+1.1
MQZ				S	Sg	15 03 33.8	+1.0
AKCZ	**Akaroa Harbour**	**0.34**	**139**	P	Pb	15 03 36.1	+0.4
AKCZ				S	Sb	15 03 41.4	+0.3
OKCZ	**Okains Bay**	**0.35**	**108**	P	Pb	15 03 36.2	+0.3
OKCZ				S	Sb	15 03 41.6	+0.3
RACZ	**Rakaia**	**0.35**	**252**	P	Pb	15 03 36.8	+0.8
RACZ				S	Sb	15 03 42.4	+0.9
AMCZ	**Amberley**	**0.44**	**5**	P	Pb	15 03 37.8	+0.3
OXZ	**Oxford**	**0.51**	**305**	P	Pb	15 03 38.6	+0.1
OXZ				S	Sb	15 03 46.1	+0.3
WACZ	**Wakanui South**	**0.64**	**239**	P	Pn	15 03 42.4	-0.2
WACZ				S	Sn	15 03 51.6	-1.1
GVZ	**Greta Valley S**	**0.72**	**26**	P	Pb	15 03 42.8	+0.5
MHCZ	**Mount Hutt**	**0.76**	**276**	P	Pn	15 03 44.1	-0.2
MHCZ				S	Sn	15 03 55.0	-0.7
LTZ	**Lake Taylor**	**0.87**	**344**	P	Pb	15 03 45.3	+0.4
LTZ				S	Sb	15 03 57.3	+0.9
ARCZ	**Arundel**	**1.08**	**252**	P	Pn	15 03 49.1	+0.3
RPZ	**Rata Peaks**	**1.13**	**265**	P	Pg	15 03 49.9	+0.3
INZ	**Inchbonnie**	**1.23**	**316**	P	Pg	15 03 52.0	+0.5
TMZ	**Timaru**	**1.38**	**236**	P	Pb	15 03 53.5	0.0
KHZ	**Kahutara**	**1.38**	**30**	P	Pn	15 03 52.2	-0.6
WVZ	**Waitaha Valley**	**1.47**	**291**	P	Pg	15 03 55.9	0.0
GCSZ	**Gaunt Creek Bo**	**1.69**	**280**	P	Pg	15 03 59.4	-0.7
THZ	**Tophouse**	**1.87**	**7**	P	Pn	15 03 59.2	-0.3
LBZ	**Lake Benmore**	**1.91**	**245**	P	Pb	15 04 01.4	-1.0
DSZ	**Denniston Nort**	**1.96**	**342**	P	Pb	15 04 03.1	-0.3
ODZ	**Otahua Downs**	**2.00**	**224**	P	Pn	15 04 01.9	+0.5
FOZ	**Fox Glacier**	**2.03**	**271**	P	Pb	15 04 03.9	-0.6
BSWZ	**Blackbirch Sta**	**2.12**	**27**	P	Pn	15 04 02.7	-0.2
TUWZ	**Tuamarina**	**2.40**	**25**	P	Pn	15 04 06.3	-0.5
NNZ	**Nelson**	**2.47**	**14**	P	Pn	15 04 07.9	+0.2
HHSZ	**Highcliff Hill**	**2.68**	**212**	P	Pn	15 04 11.3	+0.6
TCW	**Tory Channel**	**2.71**	**28**	P	Pn	15 04 12.6	+1.6
QRZ	**Quartz Range**	**2.79**	**359**	P	Pn	15 04 14.4	+2.2
JCZ	**Jackson Bay**	**2.80**	**259**	P	Pb	15 04 16.1	-1.6
WEL	**Wellington**	**2.83**	**35**	P	Pn	15 04 11.8	-0.9
WKZ	**Wanaka**	**2.85**	**244**	P	Pn	15 04 14.7	+1.7
EAZ	**Earnscleugh**	**2.86**	**235**	P	Pn	15 04 13.7	+0.6
MSWZ	**Moikau Station**	**2.94**	**43**	P	Pn	15 04 13.1	-1.2
DUWZ	**D'Urville Isla**	**2.98**	**20**	P	Pb	15 04 19.4	-1.3
TUZ	**Tuapeka**	**3.15**	**221**	P	Pn	15 04 17.7	+0.5
TRWZ	**Traveller**	**3.18**	**47**	P	Pn	15 04 16.4	-1.1
OGWZ	**Otaki Gorge**	**3.39**	**35**	P	Pn	15 04 19.5	-0.9
MLZ	**Mavora Lakes**	**3.65**	**240**	P	Pn	15 04 25.1	+1.0
MRZ	**Mangatainoka R**	**3.69**	**38**	P	Pn	15 04 23.5	-1.1
SYZ	**Scrubby Hill**	**3.81**	**219**	P	Pn	15 04 27.4	+1.2
BFZ	**Birch Farm**	**3.99**	**44**	P	Pn	15 04 26.9	-1.8
WHZ	**Wether Hill Ro**	**4.02**	**234**	P	Pn	15 04 31.1	+2.0
NBEZ	**Newall Road No**	**4.45**	**13**	P	Pn	15 04 37.0	+2.1
VRZ	**Vera Road**	**4.77**	**21**	P	Pn	15 04 41.2	+1.8
WNVZ	**Wahianoa**	**4.84**	**29**	P	Pn	15 04 41.8	+1.3
BHHZ	**Black Hill Sta**	**4.87**	**33**	P	Pn	15 04 41.1	+0.2
NGZ	**Ngauruhoe**	**4.98**	**28**	P	Pn	15 04 45.0	+2.6
KAHZ	**Kahuranaki**	**4.98**	**41**	P	Pn	15 04 42.6	+0.3
WTVZ	**West Tongariro**	**5.03**	**28**	P	Pn	15 04 43.6	+0.6
TMVZ	**Te Maari**	**5.07**	**28**	P	Pn	15 04 44.6	+1.0
BKZ	**Black Stump Fm**	**5.32**	**35**	P	Pn	15 04 46.2	-0.8
HIZ	**Hauiti**	**5.38**	**19**	P	Pn	15 04 47.5	-0.2
TLZ	**Tolley Road**	**5.73**	**24**	P	Pn	15 04 56.8	+4.1
URZ	**Urewera**	**6.35**	**34**	P	Pn	15 04 59.3	-1.8

*SNET **06** 15:16:43.5±0.8, 14°.43N×89°.30W, h6km±5km, ML3.1*
*GCG **06** 15:16:44.5±0.6, 14°.55N×89°.34W, h1km±37km, MD3.6*

ISC 06 15:16:43.1±1.1, 14°.46N±0°.03×89°.22W±0°.04, h8km±8km, n23, σ0°47/31, 5C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTO3	**Montecristo**	**0.15**	**248**	*i* P	**Pg**	**15 16 46.2**	**-0.2**
MTO3				*e* S	**Sg**	**15 16 48.1**	**-0.5**
MTO3				IAML		15 16 49.1	
	comp=Z,12µm,0.1s						
ESQI	**Esquipulas**	**0.16**	**311**	*i* P	**Pg**	**15 16 46.9**	**+0.4**
ESQI				IAML		15 16 47.1	
	comp=Z,12µm,0.1s						
ESQI				*e* S	**Sg**	**15 16 49.5**	**+0.7**
LLGN	**La Laguna**	**0.40**	**138**	*e* P	**Pb**	**15 16 52.2**	**-0.2**
LLGN				*e* S	**Sb**	**15 16 59.1**	**+0.3**
LLGN				IAML		15 16 59.7	
	comp=Z,2µm,0.2s						
TACO	**Tacachico**	**0.50**	**195**	*e* P	**Pg**	**15 16 52.9**	**+0.1**
TACO				*e* S	**Sg**	**15 16 59.9**	**+0.5**
UNIC	**Universidad Ca**	**0.57**	**214**	*e* P	**Pg**	**15 16 53.7**	**-0.4**
UNIC				IAML		15 17 01.8	
	comp=Z,637nm,0.3s						
RTR	**El Retiro**	**0.69**	**217**	*i* P	**Pg**	**15 16 56.3**	**-0.2**
SNJE	**San Jose**	**0.69**	**213**	*e* P	**Pg**	**15 16 56.0**	**-0.5**
SBLS	**San Blas**	**0.73**	**213**	*i* P	**Pg**	**15 16 56.7**	**-0.5**
LBRS	**Las Brisas**	**0.73**	**167**	*e* P	**Pb**	**15 16 57.9**	**-0.4**
CEVE	**Cerro Verde**	**0.74**	**212**	*e* P	**Pg**	**15 16 56.9**	**-0.5**
PMON	**Piamonte**	**0.74**	**187**	*e* P	**Pg**	**15 16 57.6**	**+0.2**
MRL	**Marmol**	**0.77**	**324**	*e* P	**Pg**	**15 16 57.5**	**-0.5**
MRL	**Marmol**	**0.77**	**324**	*e* P	**Pb**	**15 16 58.5**	**-0.4**
MRL				*e* S	**Sb**	**15 17 08.9**	**-0.8**
PAVA	**Las Pavas**	**0.79**	**160**	*i* P	**Pb**	**15 16 58.9**	**-0.3**
PAVA				IAML		15 17 11.7	
	comp=Z,1µm,0.4s						
JAYA	**Jayaque - finc**	**0.83**	**196**	*i* P	**Pg**	**15 16 58.6**	**-0.4**
JAYA				IAML		15 17 10.5	
	comp=Z,564nm,0.2s						
LFRS	**El Faro**	**0.84**	**170**	*e* P	**Pg**	**15 16 59.5**	**+0.2**
LFRS				*e* S	**Sb**	**15 17 11.7**	**+0.1**
COEG	**Centro de Oper**	**0.89**	**158**	*i* P	**Pb**	**15 17 00.7**	**-0.2**
COEG				IAML		15 17 15.9	
	comp=Z,944nm,0.3s						
NBG	**Las Nubes**	**1.10**	**277**	*e* P	**Pg**	**15 17 03.8**	**-0.4**
NBG				*e* S	**Sb**	**15 17 19.8**	**+0.6**
TECA	**Tecapa**	**1.18**	**144**	*e* P	**Pn**	**15 17 06.3**	**+0.1**
FAGO	**Alcalda de S**	**1.32**	**125**	*e* P	**Pg**	**15 17 08.2**	**-0.3**
FAGO				IAML		15 17 30.1	
	comp=Z,250nm,0.4s						
PCG	**Pacaya**	**1.35**	**267**	*e* P	**Pn**	**15 17 08.4**	**-0.1**
FUG	**Fuego 3**	**1.57**	**270**	*e* P	**Pn**	**15 17 12.0**	**+0.5**
FUG				*e* S	**Sn**	**15 17 33.1**	**+0.9**
LCND	**La Caada**	**1.72**	**131**	*e* P	**Pb**	**15 17 14.4**	**-0.7**

*IDC **06** 15:30:22.6±0.7, 36°.82N×97°.89W, h0km, mb3.8/4, mb1 4.1/11, mb1mx3.7/58, mbtmp3.9/11, ML3.7/7, MS3.3/12, Ms1 3.3/12, ms1mx3.0/56, Error ellipse: s-maj=11.0km s-min=9.6km az=135.0*

*ANF **06** 15:30:23.2±0.4, 36°.64N×97°.66W, h1km±3km, ML4.9/22, Error ellipse: s-maj=2.4km s-min=2.1km az=140.0*

*TUL **06** 15:30:23.6±1.2, 36°.63N±0°.02×97°.66W±0°.03, h5km±5km, ML4.1, mb_Lg4.2/148(NEIC), Mwr3.9/56(NEIC), Error ellipse: s-maj=4.1km s-min=1.6km az=63.0*

*NEIC **06** 15:30:23.6, 36°.63N×97°.66W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.25; $M_{\theta\theta}$6.77; $M_{\phi\phi}$-6.52; $M_{r\theta}$3.56; $M_{r\phi}$-5.94; $M_{\theta\phi}$-1.20; Fault plane solution: $M_0$9.68000×10^{14} NP1:ϕ_s157.62000°, δ75.58000°, λ13.27000°. NP2:ϕ_s64.26000°, δ77.16000°, λ165.20000°. Principal axes: T 10.3646, Plg19.0000°, Azm21.0000°; N -1.5714, Plg71.0000°, Azm204.0000°; P -8.7932, Plg1.0000°, Azm111.0000°;*

*NEIC **06** 15:30:23.6±1.1, 36°.62N±0°.02×97°.64W±0°.05, h6km±4km Error ellipse: s-maj=5.9km s-min=1.5km az=67.0*

ISC 06 15:30:23.6±0.9, 36°.64N±0°.02×97°.63W±0°.02, h12km±6km, n182, σ1$29/169, MS3.5/3, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.28**	**320**		**Pg**	**15 30 29.4**	**-0.1**
GC02				S	**Sg**	**15 30 33.0**	**-0.4**
CROK	**Carrier**	**0.31**	**245**		**Pg**	**15 30 29.6**	**-0.4**
CROK				S	**Sg**	**15 30 33.7**	**-0.5**
KAN13	**South Haven SW**	**0.40**	**18**		**Pg**	**15 30 31.9**	**+0.4**
KAN14	**Manchester OK**	**0.42**	**321**		**Pg**	**15 30 31.9**	**0.0**
KAN14				S	**Sg**	**15 30 36.8**	**-0.7**
OK032	**Salt Plains WL**	**0.49**	**290**		**Pg**	**15 30 33.1**	**-0.3**
OK032				S	**Sg**	**15 30 39.5**	**-0.4**
KAN09	**Caldwell North**	**0.50**	**1**		**Pg**	**15 30 33.7**	**+0.2**
KAN09				S	**Sg**	**15 30 40.5**	**+0.4**
KAN05	**Bluff City Nor**	**0.51**	**338**		**Pg**	**15 30 33.7**	**+0.1**
KAN05				S	**Sg**	**15 30 40.1**	**-0.3**
KAN01	**Argonia South**	**0.53**	**349**		**Pg**	**15 30 34.1**	**+0.1**
KAN01				S	**Sg**	**15 30 41.3**	**+0.3**
KAN10	**Anthony SW Sta**	**0.61**	**323**		**Pg**	**15 30 35.5**	**-0.1**
KAN10				S	**Sg**	**15 30 43.7**	**0.0**
KAN08	**Anthony NE Sta**	**0.65**	**335**		**Pg**	**15 30 36.3**	**0.0**
KAN08				S	**Sg**	**15 30 44.7**	**-0.2**
KAN12	**Harper NE Stat**	**0.72**	**336**		**Pg**	**15 30 37.6**	**-0.1**
KAN12				S	**Sg**	**15 30 47.2**	**0.0**
OK029	**Liberty Lake**	**0.85**	**170**		**Pg**	**15 30 39.8**	**-0.3**
OK029				S	**Sg**	**15 30 50.1**	**-1.1**
QUOK	**Quay**	**0.88**	**122**		**Pg**	**15 30 40.6**	**0.0**
OK031	**S. Brethren Rd**	**0.94**	**136**		**Pg**	**15 30 41.5**	**-0.2**
OK031				S	**Sg**	**15 30 53.5**	**-0.3**
T35A	**Sooner Cattle**	**0.94**	**72**		**Pg**	**15 30 42.0**	**+0.1**
T35A				S	**Sg**	**15 30 54.2**	**+0.1**
T35B	**Sooner Cattle** baz=253,SNR=458	**0.94**	**72**	P	**Pg**	**15 30 41.9**	**+0.1**
T35B	baz=253			S	**Sb**	**15 30 54.7**	**+0.3**
T35B	**Sooner Cattle** baz=253,SNR=458	**0.94**	**72**	P		15 30 41.9	
T35B	baz=253			S		15 30 54.7	
BCOK	**Bluff Creek, N**	**0.98**	**179**		**Pb**	**15 30 42.0**	**-0.5**
BCOK				IAmb_Lg		15 30 54.1	
	comp=Z,1µm,0.9s						
OK030	**Cody Creek RV**	**0.98**	**136**		**Pb**	**15 30 42.4**	**-0.2**
OK030				Sg	**Sg**	**15 30 55.2**	**-0.2**
OK009	**Oakdale Elemen**	**1.06**	**171**	Pg	**Pb**	**15 30 43.8**	**-0.2**
OK025	**Westminster Rd**	**1.08**	**167**		**Pb**	**15 30 44.0**	**-0.3**
U32A	**Winter Ranch,**	**1.13**	**257**		**Pb**	**15 30 44.4**	**-0.8**
U32A	**Winter Ranch,** baz=76	**1.13**	**257**	S	**Sb**	**15 30 59.6**	**-0.2**
U32A	**Winter Ranch,** baz=76	**1.13**	**257**	S		15 30 59.6	
OKCFA	**Oklahoma City**	**1.23**	**173**	Pg	**Pn**	**15 30 46.5**	**-0.1**
OKCFA	**Oklahoma City** baz=352,SNR=19	**1.23**	**173**	P	**Pn**	**15 30 46.5**	**-0.1**
OKCFA	baz=352			S	**Sg**	**15 31 03.1**	**-0.1**
OKCFA	**Oklahoma City** baz=352,SNR=19	**1.23**	**173**	P		15 30 46.5	
OKCFA	baz=352			S		15 31 03.1	
OKCSW	**OKLAHOMA CITY**	**1.24**	**173**	Pg	**Pn**	**15 30 46.6**	**-0.1**
FNO	**Franklin**	**1.39**	**172**		**Pb**	**15 30 49.8**	**+0.3**
TUL1	**Leonard** baz=296,SNR=265	**1.65**	**115**	P	**Pb**	**15 30 53.8**	**-0.2**
TUL1	baz=296			S	**Sg**	**15 31 16.3**	**-0.6**
TUL1	**Leonard** baz=296,SNR=470	**1.65**	**115**	P		15 30 53.8	
TUL1	baz=296			S		15 31 16.4	
TUL1	**Leonard** baz=296,SNR=265	**1.65**	**115**	P		15 30 53.8	
TUL1	baz=296			S		15 31 16.3	
R32A	**Long Quarter,**	**1.98**	**335**	Pn	**Pb**	**15 30 58.5**	**-1.1**
R32A	**Long Quarter,** baz=155,SNR=86	**1.98**	**335**	P	**Pb**	**15 30 58.8**	**-0.8**
R32A	baz=155			S	**Sb**	**15 31 23.4**	**-0.8**
R32A	**Long Quarter,** baz=155,SNR=86	**1.98**	**335**	P		15 30 58.8	
R32A	baz=155			S		15 31 23.4	
WMOK	**Wichita Mounta**	**2.11**	**207**		**Pn**	**15 30 59.8**	**+1.0**
WMOK	comp=Z,2µm,0.9s			IAmb_Lg		15 31 30.8	
WMOK	**Wichita Mounta** baz=25,SNR=582	**2.11**	**207**	P	**Pn**	**15 30 59.9**	**+1.1**
WMOK	baz=25			S	**Sb**	**15 31 27.4**	**-0.6**
WMOK	**Wichita Mounta** baz=25,SNR=966	**2.11**	**207**	P		15 30 59.8	
WMOK	baz=25			S		15 31 27.5	
WMOK	**Wichita Mounta** baz=25,SNR=582	**2.11**	**207**	P		15 30 59.9	
WMOK	baz=25			S		15 31 27.4	
KSU1	**Kansas State U**	**2.59**	**18**	Pn	**Pn**	**15 31 06.9**	**+1.6**
KSU1	**Kansas State U** baz=199,SNR=77	**2.59**	**18**	P	**Pn**	**15 31 07.0**	**+1.6**
KSU1	**Kansas State U** baz=199,SNR=296	**2.59**	**18**	P		15 31 07.0	
KSU1	**Kansas State U** baz=199,SNR=77	**2.59**	**18**	P		15 31 07.0	
U38A	**Gravette**	**2.62**	**93**		**Pn**	**15 31 07.0**	**+1.2**
U38A	**Gravette** baz=275,SNR=106	**2.62**	**93**	P	**Pn**	**15 31 07.7**	**+1.9**
U38A	**Gravette** baz=275,SNR=106	**2.62**	**93**	P		15 31 07.7	
CBKS	**Cedar Bluff** comp=Z,476nm,0.8s	**2.74**	**323**	IAmb_Lg		15 31 57.1	
CBKS	**Cedar Bluff** baz=142	**2.74**	**323**	Sb	**Sb**	**15 31 48.1**	**+2.0**
CBKS	**Cedar Bluff** baz=142	**2.74**	**323**	Sb		15 31 49.3	
CBKS	**Cedar Bluff** baz=142	**2.74**	**323**	Sb		15 31 48.1	
X37A	**Clayton**	**2.75**	**137**	Pn	**Pn**	**15 31 08.6**	**+1.1**
X37A	comp=Z,812nm,0.8s			IAmb_Lg		15 31 54.1	
X37A	**Clayton** baz=318,SNR=50	**2.75**	**137**	P	**Pn**	**15 31 09.3**	**+1.7**
X37A	**Clayton** baz=318,SNR=50	**2.75**	**137**	P		15 31 09.3	
HHAR	**Hobbs**	**3.00**	**96**		**Pn**	**15 31 12.3**	**+1.3**
HHAR	comp=Z,444nm,0.7s			IAmb_Lg		15 31 59.6	
HHAR	**Hobbs** baz=278,SNR=28	**3.00**	**96**	P	**Pn**	**15 31 12.7**	**+1.8**
HHAR	**Hobbs** baz=278,SNR=28	**3.00

N33A IAmb_Lg 15 32 35.0
comp=Z,311nm,0.8s
ABTX Abilene, Hawle 4.33 203 Pn Pn 15 31 29.3 0.0
ABTX IAmb_Lg 15 32 42.6
comp=Z,338nm,0.8s
ABTX Abilene, Hawle 4.33 203 P Pn 15 31 29.9 +0.5
baz=22
ABTX Abilene, Hawle 4.33 203 P 15 31 29.9
baz=22
ABTX Abilene, Hawle 4.33 203 P 15 31 29.9
baz=22
MGMO Mountain Grove 4.33 82 Pn 15 31 30.7 +1.4
MGMO IAmb_Lg 15 32 42.3
comp=Z,878nm,0.8s
P38A Dawn 4.40 46 Pn Pn 15 31 31.4 +1.1
P38A IAmb_Lg 15 32 53.0
comp=Z,480nm,0.8s
P38A Dawn 4.40 46 P Pn 15 31 31.2 +1.0
baz=229,SNR=15
P38A Dawn 4.40 46 P 15 31 31.2
baz=229,SNR=15
X40A Basin Creek Fa 4.46 117 Pn 15 31 32.4 +1.4
X40A IAmb_Lg 15 32 45.7
comp=Z,432nm,0.7s
X40A Basin Creek Fa 4.46 117 P Pn 15 31 32.7 +1.6
baz=300,SNR=16
X40A Basin Creek Fa 4.46 117 Pn 15 31 32.5
baz=300,SNR=16
X40A Pb 15 31 43.0
baz=300
X40A Basin Creek Fa 4.46 117 P 15 31 32.7
baz=300,SNR=16
X40A P 15 31 32.7
baz=300,SNR=16
N35A Tabor 4.50 20 Pn 15 31 32.8 +1.3
N35A Tabor 4.50 20 P Pn 15 31 33.0 +1.5
baz=201,SNR=20
N35A Tabor 4.50 20 P 15 31 33.0
baz=201,SNR=20
FCAR Ozark Folk Cen 4.51 98 Pn 15 31 32.9 +1.1
FCAR IAmb_Lg 15 32 47.3
comp=Z,419nm,0.7s
WHAR Wooly Hollow 4.54 106 Pn Pn 15 31 33.0 +0.8
WHAR IAmb_Lg 15 32 49.0
comp=Z,475nm,0.8s
R40A Maddies Statio 4.58 67 Pn Pn 15 31 33.8 +1.2
R40A IAmb_Lg 15 33 00.0
comp=Z,832nm,0.8s
R40A Maddies Statio 4.58 67 P Pn 15 31 34.1 +1.5
baz=250,SNR=43
R40A Maddies Statio 4.58 67 P 15 31 34.1
baz=250,SNR=43
W41B Gary Mavity, V 4.61 107 P 15 31 34.4
baz=290,SNR=19
W41B Sb 15 32 47.2
baz=290
KSCO Kaye Shedlock' 4.61 302 Pn Pn 15 31 33.9 +0.7
KSCO IAmb_Lg 15 32 57.3
comp=Z,406nm,0.9s
KSCO Kaye Shedlock' 4.61 302 P 15 31 34.8
baz=120,SNR=21
KSCO Sb 15 32 47.8
baz=120
WHTX Lake Whitney, 4.63 178 Pn Pn 15 31 34.3 +0.8
WHTX IAmb_Lg 15 33 02.6
comp=Z,228nm,1.1s
WHTX Lake Whitney, 4.63 178 P Pn 15 31 34.5 +1.0
baz=358,SNR=16
WHTX Lake Whitney, 4.63 178 Pn 15 31 34.5
baz=358,SNR=6.4
WHTX Pb 15 31 46.1
baz=358
WHTX Sb 15 32 44.7
baz=358
WHTX Lake Whitney, 4.63 178 P 15 31 34.5
baz=358,SNR=16
WLAR White Oak Lake 4.73 127 Pn Pn 15 31 36.0 +1.2
WLAR IAmb_Lg 15 32 59.1
comp=Z,462nm,0.9s
BGNE Belgrade 4.78 355 Pn Pn 15 31 36.0 +0.5
BGNE IAmb_Lg 15 33 03.0
comp=Z,848nm,0.8s
BGNE Belgrade 4.78 355 P 15 31 36.4
baz=175,SNR=17
BGNE Sb 15 32 53.6
baz=175
237A Washetta, Mont 4.86 161 Pn Pn 15 31 37.1 +0.5
237A IAmb_Lg 15 33 10.7
comp=Z,540nm,0.9s
MSTX Muleshoe 4.97 239 IAmb_Lg 15 33 07.8
comp=Z,207nm,0.8s
MSTX Muleshoe 4.97 239 P 15 31 39.1
baz=56
MSTX Sb 15 32 56.3
baz=56
Z41A Richland Creek 5.20 129 S 15 32 40.8
baz=312
LCAR Lake Charles 5.26 94 Pn 15 31 42.9 +0.9
LCAR IAmb_Lg 15 33 12.9
comp=Z,487nm,0.7s
P40A Paris 5.27 55 Pn 15 31 43.0 +0.9
P40A IAmb_Lg 15 33 19.4
comp=Z,767nm,1.0s
CCM Cathedral Cave 5.28 73 Pn Pn 15 31 43.2 +0.9
CCM Cathedral Cave 5.28 73 P 15 31 43.4
baz=256
CCM Sn 15 32 43.8
baz=256
CCM Sb 15 33 05.7
baz=256
N38A Joes South For 5.39 38 Pn 15 31 44.7 +0.9
N38A IAmb_Lg 15 33 15.6
comp=Z,719nm,0.8s
L34A Svendsen Farm, 5.41 10 Pn Pn 15 31 44.7 +0.6
L34A IAmb_Lg 15 33 24.8
comp=Z,670nm,0.8s
NATX Nacogdoches 5.45 152 IAmb_Lg 15 33 25.2
comp=Z,293nm,0.8s
T25A Trinidad 5.46 277 Pn Pn 15 31 45.2 +0.3
T25A IAmb_Lg 15 33 20.1
comp=Z,430nm,0.9s
T25A Trinidad 5.46 277 P 15 31 45.8
baz=93,SNR=34
T25A Sb 15 33 12.2
baz=93
OGNE Ogallala 5.51 323 Pn Pn 15 31 46.0 +0.5
OGNE IAmb_Lg 15 33 26.0
comp=Z,668nm,0.9s
OGNE Ogallala 5.51 323 P 15 31 47.8
baz=140,SNR=6.4
OGNE Sb 15 33 15.0
baz=140
CCAR Cane Creek 5.51 118 IAmb_Lg 15 33 30.4
comp=Z,210nm,0.8s
435B Jarrell 5.84 180 Pn Pn 15 31 50.2 +0.2
435B IAmb_Lg 15 33 41.8
comp=Z,406nm,0.9s
435B Jarrell 5.84 180 P 15 31 50.3
baz=359
FVM French Village 5.90 75 Pn Pn 15 31 51.7 +0.8
K31A O'Neill 6.04 352 Pn Pn 15 31 53.4 +0.6
GNAR Gosnell 6.19 94 Pn Pn 15 31 55.6 +0.9
SLM Saint Louis 6.20 69 IAmb_Lg 15 33 43.5
comp=Z,573nm,0.7s
SCIA State Center 6.28 32 Pn 15 31 57.1 +1.1
SCIA State Center 6.28 32 P 15 31 57.8
baz=214
Q24A Divide 6.39 294 P 15 31 58.5
baz=109,SNR=8.4
PVMO Portageville 6.39 90 IAmb_Lg 15 33 49.4
comp=Z,579nm,0.9s
JCT Junction City 6.40 197 P 15 31 58.0
baz=16
JCT Junction City 6.40 197 Pn Pn 15 31 57.7 -0.1
JCT IAmb_Lg 15 33 52.7
comp=Z,602nm,1.1s
MET Memphis--Engin 6.43 101 IAmb_Lg 15 33 53.3
comp=Z,368nm,0.7s
143A Socs Landing, 6.46 126 IAmb_Lg 15 34 04.9
comp=Z,264nm,0.9s
LNXT Lenox 6.59 92 Pn Pn 15 32 01.4 +1.1
N41A Harden Midland 6.68 50 Pn Pn 15 32 02.5 +1.0
HALT Halls 6.74 94 IAmb_Lg 15 34 07.2
comp=Z,570nm,0.7s
S44A Carbondale 6.77 79 Pn 15 32 03.8 +1.0
S44A Carbondale 6.77 79 P Pn 15 32 03.7 +0.9
baz=264,SNR=8.4
S44A Carbondale 6.77 79 P 15 32 03.7
baz=264,SNR=8.4
342A Flagon Creek P 6.85 138 IAmb_Lg 15 34 01.9
comp=Z,170nm,1.1s
441A DeRidder 6.94 146 IAmb_Lg 15 34 19.0
comp=Z,137nm,1.1s
W45A Hickory Valley 7.01 100 Pn 15 32 07.6 +1.5
W45A IAmb_Lg 15 34 08.7
comp=Z,487nm,0.7s
OXF Oxford 7.03 105 Pn Pn 15 32 06.7 +0.4
OXF IAmb_Lg 15 34 12.4
comp=Z,276nm,0.8s
OXF Oxford 7.03 105 P 15 32 06.6
baz=290,SNR=8.2
OXF S 15 33 27.0
baz=290
ISCO Idaho Springs 7.03 299 Pn Pn 15 32 07.2 +0.5
ISCO Idaho Springs 7.03 299 P 15 32 07.6
baz=114,SNR=18
K38A Parkersburg 7.08 30 Pn 15 32 07.9 +0.9
ECSD EROS Data Cent 7.13 6 Pn Pn 15 32 07.4 -0.4
ECSD IAmb_Lg 15 34 13.8
comp=Z,142nm,0.9s
ECSD EROS Data Cent 7.13 6 P Pn 15 32 07.4 -0.4
baz=187,SNR=23
ECSD EROS Data Cent 7.13 6 P 15 32 07.5
baz=187,SNR=19
ECSD EROS Data Cent 7.13 6 P 15 32 07.4
baz=187,SNR=23
Y45A Yeager Farm, C 7.17 110 IAmb_Lg 15 34 23.6
comp=Z,220nm,0.8s
L40A Anamosa 7.35 41 Pn 15 32 11.2 +0.5
L40A IAmb_Lg 15 34 21.9
comp=Z,369nm,0.8s
ANMO Albuquerque 7.37 259 Pn Pn 15 32 07.2 -4.0
comp=Z,0.2nm,0.3s,baz=71,slow=16,SNR=1.8
ANMO Pg **Pb 15 32 33.5 +2.0**
comp=Z,0.7nm,0.3s,baz=70,slow=10,SNR=8.6
ANMO Lg 15 34 08.8
comp=Z,2.0nm,0.3s,baz=10,slow=12,SNR=4.8
ANMO LR LR 15 34 41.9
comp=Z,22nm,19.5s,baz=74,slow=36
ANMO Albuquerque 7.37 259 Sb 15 34 10.5
baz=74
HDIL Hopedale 7.61 57 Pn 15 32 14.8 +0.5
HDIL Hopedale 7.61 57 P 15 32 16.3
baz=242,SNR=5.8
PHWY Pilot Hill 7.67 310 Pn Pn 15 32 15.8 +0.4
PHWY IAmb_Lg 15 34 30.1
comp=Z,171nm,0.8s
BNM Barren Site 7.75 254 Pn Pn 15 32 16.6 +0.1
735A Kenedy 7.76 181 IAmb_Lg 15 34 46.4
comp=Z,171nm,0.9s
SMCO Snowmass 7.81 292 Pn Pn 15 32 17.5 +0.1
SUSD Miller 7.86 353 Pn Pn 15 32 18.2 +0.4
SUSD IAmb_Lg 15 34 47.1
comp=Z,344nm,0.9s
WVT Waverly 7.92 91 Pn 15 32 19.4 +0.8
WVT IAmb_Lg 15 34 48.3
comp=Z,246nm,1.1s
PLAL Pickwick Lake 7.94 99 Pn 15 32 19.4 +0.6
PLAL IAmb_Lg 15 34 42.4
comp=Z,121nm,0.8s
Y22D IRIS PASSCAL I 8.01 254 IAmb_Lg 15 34 52.2
comp=Z,440nm,0.9s
I37A Lemond, Waseca 8.05 22 IAmb_Lg 15 34 49.5
comp=Z,205nm,1.0s
USIN University of 8.05 78 IAmb_Lg 15 34 56.9
comp=Z,432nm,0.8s
MNTX Cornudas Mount 8.09 235 Pn Pn 15 32 21.4 +0.5
MNTX Cornudas Mount 8.09 235 P 15 32 21.9
baz=50,SNR=5.4
L42A Oliver, Polo 8.18 47 Pn 15 32 23.0 +1.0
T47A Sharon Grove 8.45 84 Pn 15 32 26.9 +1.1
T47A IAmb_Lg 15 34 57.3
comp=Z,317nm,1.0s
JFWS Jewell Farm 8.46 40 Pn Pn 15 32 25.9 -0.1
JFWS IAmb_Lg 15 34 55.5
comp=Z,263nm,0.7s
JFWS Jewell Farm 8.46 40 P Pn 15 32 25.7 -0.3
baz=225,SNR=7.5
JFWS Jewell Farm 8.46 40 P 15 32 26.3
baz=225,SNR=17
JFWS Jewell Farm 8.46 40 P 15 32 25.7
baz=225,SNR=7.5
MVCO Mesa Verde 8.72 277 Pg 15 33 05.1
baz=90
P46A Rosedale 8.74 67 Pn Pn 15 32 31.0 +1.2
V48A Smith Brothers 8.79 93 IAmb_Lg 15 35 02.2
comp=Z,145nm,0.8s
M44A Midewin, Midew 8.84 55 Pn Pn 15 32 31.9 +0.7
TX31 Lajitas Ar. Si 8.87 217 Pn Pn 15 32 30.6 -1.0
TX32 Lajitas Array 8.87 217 Pn Pn 15 32 30.9 -0.8
TXAR Lajitas Array 8.87 217 Pn Pn 15 32 31.1 -0.6
comp=Z,0.7nm,0.3s,baz=40,slow=11,SNR=23
TXAR Pg Pg 15 33 01.6 -12
comp=Z,1.1nm,0.3s,baz=34,slow=13,SNR=4.4
TXAR Lg Lg 15 34 56.0
comp=Z,1.6nm,0.3s,baz=40,slow=28,SNR=1.9
TXAR Lajitas Array 8.87 217 Pn 15 32 29.8 -1.9
X48A Hartselle 8.90 101 IAmb_Lg 15 35 04.3
comp=Z,164nm,0.9s
RSSD Black Hills 8.93 329 IAmb_Lg 15 35 14.2
comp=Z,350nm,1.2s
PV07 Paradox Valley 8.93 285 Pn Pn 15 32 32.4 -0.2
PV02 Paradox Valley 8.97 283 IAmb_Lg 15 35 23.4
comp=Z,101nm,1.2s
RWWY Rawlins 8.99 307 IAmb_Lg 15 35 13.2
comp=Z,179nm,0.9s
I40A Norwalk 9.01 34 Pn Pn 15 32 33.6 +0.1
I40A IAmb_Lg 15 35 09.4
comp=Z,128nm,0.8s
SFIN Lafayette 9.06 62 Pn Pn 15 32 35.5 +1.3
PV11 David Mesa, Pa 9.09 284 IAmb_Lg 15 35 25.9
comp=Z,124nm,1.2s
K22A Casper 9.11 314 IAmb_Lg 15 35 32.6
comp=Z,335nm,1.1s
PV04 Paradox Valley 9.13 284 IAmb_Lg 15 35 21.3
comp=Z,90nm,1.1s
CLTN Cedars of Leba 9.13 90 IAmb_Lg 15 35 25.4
comp=Z,212nm,1.0s
WCI Wyandotte Cave 9.16 77 Pn Pn 15 32 36.5 +0.9
WCI IAmb_Lg 15 35 16.8
comp=Z,360nm,0.9s
F33A 5 Mile Ranch, 9.25 6 IAmb_Lg 15 35 26.8
comp=Z,92nm,0.9s
121A Cookes Peak, D 9.32 247 IAmb_Lg 15 35 24.7
comp=Z,198nm,1.1s
SPMN Marine on St. 9.32 22 IAmb_Lg 15 35 30.1
comp=Z,86nm,0.8s
U49A Red Boiling Sp 9.54 87 IAmb_Lg 15 35 30.1
comp=Z,191nm,1.0s
Y49A Blount Mountai 9.59 104 IAmb_Lg 15 35 37.8
comp=Z,117nm,1.0s
SWET Sewanee 9.60 95 IAmb_Lg 15 35 40.0
comp=Z,120nm,0.8s
I42A Draeger Farm, 9.84 40 IAmb_Lg 15 35 48.9
comp=Z,139nm,0.8s
CPCT Cooper Cave 10.68 92 Pn 15 32 57.1 +0.7
R50A Paris 10.71 77 Pn Pn 15 32 57.2 +0.5
V51A Loudon 10.76 90 Pn Pn 15 32 58.5 +1.0
PDAR Pinedale Array 11.04 307 Pn Pn 15 32 58.2 -3.3
comp=Z,0.2nm,0.3s,baz=76,slow=18,SNR=6.5
PDAR Pg 15 33 41.6
comp=Z,0.8nm,0.3s,baz=113,slow=14,SNR=7.9
PDAR Lg Lg 15 35 54.7
comp=Z,1.1nm,0.3s,baz=103,slow=31,SNR=3.4
PDAR LR LR 15 37 39.8
comp=Z,198nm,18.4s,baz=104,slow=41
TKL Tuckaleechee C 11.25 91 Pn Pn 15 33 05.0 +0.8
comp=Z,1.3nm,0.3s,baz=227,slow=8.5,SNR=9.6
TKL Sn **Sn 15 35 06.0 -3.9**
comp=Z,1.7nm,0.3s,baz=259,slow=6.7,SNR=2.1
TKL Lg Lg 15 36 16.5
comp=Z,4.9nm,0.3s,baz=11,slow=20,SNR=20
TKL LR LR 15 37 34.6
comp=Z,131nm,18.4s,baz=303,slow=38
S51A Beattyville 11.25 81 Pn Pn 15 33 04.9 +0.7
COWI Conover 11.40 31 Pn 15 33 06.2 0.0
L48A N Adams 11.52 59 Pn Pn 15 33 07.1 -0.7
B35A Bob, Littlefor 12.06 13 Pn 15 33 13.3 -1.9
EYMN Ely 12.18 20 Pn Pn 15 33 14.3 -2.5
EYMN Ely 12.18 20 P 15 33 14.3
baz=204
G45A Suttons Bay 12.35 43 Pn 15 33 18.3 -0.9
E43A Lone Tree Farm 12.57 36 Pn 15 33 19.6 -2.5
N51A Ashland 12.65 66 Pn 15 33 23.5 +0.2
ULM Lac du Bonnet 13.67 5 Pn Pn 15 33 31.6 -5.5
comp=Z,0.7nm,0.3s,baz=189,slow=13,SNR=8.0
ULM Sn Sn 15 35 52.2 -17
comp=Z,0.6nm,0.3s,baz=222,slow=18,SNR=2.0
ULM Lg Lg 15 37 20.5
comp=Z,1.3nm,0.3s,baz=90,slow=20,SNR=1.4
ULM LR LR 15 38 59.1
comp=Z,168nm,18.5s,baz=118,slow=38
E46A Sault Ste Mari 13.92 42 Pn 15 33 38.9 -1.7
R55A Marlinton 14.01 78 Pn **Pn 15 33 40.6 -1.3**
ELK Elko 14.35 292 LR LR 15 39 43.0
comp=Z,125nm,19.4s,baz=86,slow=40
PFO Pinyon Flats O 15.70 264 LR LR 15 39 31.5
comp=Z,60nm,18.2s,baz=310,slow=35
SADO Sadowa 16.18 54 Pn **Pn 15 34 08.4 -2.4**
comp=Z,0.3nm,0.3s,baz=259,slow=19,SNR=1.7
SADO Sn **Sn 15 37 04.5 -5.6**
comp=Z,0.6nm,0.3s,baz=267,slow=17,SNR=2.1
SADO Lg Lg 15 38 46.0
comp=Z,1.0nm,0.3s,baz=2.2,slow=22,SNR=8.7
SADO LR LR 15 40 27.6
comp=Z,99nm,18.7s,baz=310,slow=37
NVAR Mina Array Bea 16.50 282 LR LR 15 40 58.5
comp=Z,149nm,18.0s,baz=118,slow=39
LPIG La Paz 16.58 225 LR LR 15 41 05.0
comp=Z,114nm,20.4s,baz=9.0,slow=39
TEIG Tepich 18.28 151 P **P 15 34 42.2 +4.9**
comp=Z,0.3nm,0.3s,baz=350,slow=17,SNR=1.4
TEIG S **Sn 15 37 57.6 -3.7**
comp=Z,0.5nm,0.3s,baz=288,slow=20,SNR=2.1
CMIG Matias Romero 19.62 172 P **Pn 15 34 56.2 +2.9**
comp=Z,0.1nm,0.3s,baz=356,slow=14,SNR=1.9
YBH Yreka Blue Hor 20.07 292 LR LR 15 42 43.4
comp=Z,62nm,18.4s,baz=84,slow=37
YKA Yellowknife Ar 27.94 343 P **P 15 36 13.5 +0.1**
comp=Z,0.3nm,0.9s,baz=144,slow=9.5,SNR=3.0
ILAR Eielson Array 40.38 330 P **P 15 38 01.3 +0.3**
comp=Z,0.5nm,0.7s,baz=106,slow=6.7,SNR=6.4
EKA Eskdalemuir Ar 63.14 40 P **P 15 40 51.1 +0.1**
comp=Z,0.6nm,0.5s,baz=297,slow=6.3,SNR=6.2
ARCES ARCESS Array B 66.33 19 P **P 15 41 12.1 +0.6**
comp=Z,7.1nm,1.0s,baz=310,slow=7.0,SNR=2.7
ARCES LR LR 16 09 13.4
comp=Z,38nm,20.2s,baz=295,slow=35
NOA NORSAR Array B 66.89 30 LR LR 16 08 57.2
comp=Z,29nm,20.2s,baz=295,slow=35

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*JMA **06** 15:48:03.5,39.76N×141.85E,h58km±1km,M3.6*
Broadband fault plane solution: P waves. NP1: φs155.00000°,δ32.00000°,λ47.00000°. NP2:φs22.00000°, δ67.00000°,λ113.00000°. Principal axes: T Plg61.0000°, Azm326.0000°; N Plg21.0000°, Azm193.0000°; P Plg19.0000°, Azm95.0000°;
JMA Felt I J1.
*IDC **06** 15:48:05.2±2.7,39.76N×141.77E,h76km±23km,mb3.4/7, mb1 3.4/10,mb1mx3.1/69,mbtmp3.6/10,MS3.5/2, Ms1 3.5/2,ms1mx2.4/38 Error ellipse: s-maj=34.4km s-min=21.5km az=102.0*
ISC 06 15:48:03.4±0.9,39.77N±0.03×141.92E±0.07,h61km±6km, n31,σ1s40/36,mb3.7/7,4C-8D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.18**	**346**	⇑P		**Pn**	**15 48 12.7**	**-0.1**
JTH				S		**Sn**	**15 48 19.2**	**-0.4**
MIYJ	**Miyakonagasawa**	**0.20**	**202**	⇑P		**Pn**	**15 48 12.8**	**-0.1**
MIYJ				S		**Sn**	**15 48 19.1**	**-0.7**
JKEN	**Kujiedanarisaw**	**0.47**	**340**	⇓P		**Pn**	**15 48 14.8**	**-0.2**
JKEN				S		**Sn**	**15 48 23.0**	**-0.5**
JKZ	**Kuzumaki**	**0.50**	**296**	⇓P		**Pn**	**15 48 15.1**	**-0.4**
JKZ				S		**Sn**	**15 48 23.1**	**-1.2**
JOM	**Ohasama**	**0.56**	**239**	⇓P		**Pn**	**15 48 15.4**	**-0.7**
JOM				S		**Sn**	**15 48 23.9**	**-1.5**
JANG	**Nango**	**0.68**	**333**	⇓P		**Pn**	**15 48 17.0**	**-0.4**
JANG				S		**Sn**	**15 48 27.0**	**-0.7**
OFUJ	**Ofunato**	**0.71**	**196**	⇑P		**Pn**	**15 48 17.5**	**-0.3**
OFUJ				S		**Sn**	**15 48 27.4**	**-1.0**
JMK	**Ichinoseki**	**0.98**	**214**	⇓P		**Pn**	**15 48 20.5**	**-0.6**
JMK				*e*S		**Sn**	**15 48 32.9**	**-1.4**
JRG	**Rokugo**	**1.06**	**250**	⇓P		**Pn**	**15 48 21.4**	**-0.8**
JRG				*e*S		**Sn**	**15 48 34.4**	**-1.8**
JAH	**Hinai**	**1.07**	**294**	⇓P		**Pn**	**15 48 21.8**	**-0.6**
JAH				S		**Sn**	**15 48 36.0**	**-0.4**
JTM	**Tenmabayashi**	**1.21**	**328**	⇓P		**Pn**	**15 48 23.8**	**-0.4**
JTM				S		**Sn**	**15 48 39.1**	**-0.6**
JIO	**Ouri**	**1.38**	**199**	⇑P		**Pn**	**15 48 26.0**	**-0.5**
JIO				S		**Sn**	**15 48 42.7**	**-1.1**
MJAR	**Matsushiro Arr**	**4.35**	**223**	P		**Pn**	**15 49 08.2**	**+1.3**
	0.1nm,0.3s,baz=175,slow=19,SNR=5.5							
ASAJ	**Asahikawa**	**4.38**	**6**	P		**Pn**	**15 49 08.7**	**+1.4**
	0.7nm,0.3s,baz=212,slow=17,SNR=9.3							
ASAJ				S		**Sn**	**15 49 52.3**	**-4.6**
	0.7nm,0.3s,baz=60,slow=20,SNR=2.0							
USRK	**Ussuriysk Ar.**	**8.62**	**304**	P		**Pn**	**15 50 05.9**	**+0.6**
	baz=112,slow=15,SNR=2.4							
KSRS	**Korea Array**	**11.19**	**263**	P		**Pn**	**15 50 44.8**	**+4.3**
	0.2nm,0.3s,baz=72,slow=13,SNR=2.0							
SEY	**Seymchan**	**24.04**	**12**	P		**P**	**15 53 13.7**	**+1.3**
	1.4nm,0.8s,baz=193,slow=7.3,SNR=6.6							
H11N2	**WAKE ISLAND Hy**	**29.31**	**126**	T		T	16 24 36.4	
	baz=318,slow=75,SNR=86							
H11N1	**WAKE ISLAND Hy**	**29.32**	**126**	T		T	16 24 39.1	
	baz=318,slow=75,SNR=78							
H11N3	**WAKE ISLAND Hy**	**29.33**	**126**	T		T	16 24 40.6	
	baz=318,slow=75,SNR=70							
H11S1	**WAKE ISLAND Hy**	**30.11**	**128**	T		T	16 25 39.6	
	baz=319,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hy**	**30.11**	**128**	T		T	16 25 45.4	
	baz=319,slow=76,SNR=18							
H11S2	**WAKE ISLAND Hy**	**30.13**	**128**	T		T	16 25 38.2	
	baz=319,slow=76,SNR=10							
ZALV	**Zalesovo Beam**	**40.41**	**310**	P		**P**	**15 55 34.8**	**-0.6**
	1.5nm,0.5s,baz=95,slow=8.2,SNR=7.0							
MKAR	**Makanchi Array**	**43.05**	**300**	P		**P**	**15 55 56.5**	**-0.6**
	0.8nm,0.6s,baz=85,slow=10,SNR=11							
KURBB	**Kurchatov Arra**	**44.68**	**306**	P		**P**	**15 56 09.3**	**-0.7**
	1.1nm,0.4s,baz=79,slow=8.5,SNR=5.4							
BATI	**Baumata**	**52.53**	**203**	LR		LR	16 26 14.6	
	comp=Z,52nm,18.1s,baz=22,slow=44							
LEM	**Lembang**	**56.15**	**222**	LR		LR	16 22 02.6	
	comp=Z,42nm,21.5s,baz=44,slow=36							
ASAR	**Alice Springs**	**63.55**	**188**	P		**P**	**15 58 27.1**	**-0.4**
	0.3nm,1.0s,baz=4.8,slow=6.4,SNR=1.4							
FINES	**FINESS Array B**	**66.59**	**332**	P		**P**	**15 58 46.7**	**-0.1**
	1.0nm,0.7s,baz=19,slow=4.7,SNR=3.8							
AKASG	**Malin Array Be**	**72.39**	**322**	P		**P**	**15 59 22.4**	**-0.3**
	0.2nm,0.3s,baz=47,slow=5.4,SNR=2.1							

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*TRN **06** 15:54:05.0,18.84N×65.03W,h40km,M3.9(RSPR)*
*NEIC **06** 15:54:05.8±0.4,18.9N±0.1×65.01W±0.06,h39km±63km, Error ellipse: s-maj=18.1km s-min=8.4km az=177.0*
*RSPR **06** 15:54:06.7,18.96N×65.01W,h38km±5km*
ISC 06 15:54:04.8±2.1,18.9N±0.1×65.02W±0.05,h25km,n30, σ0s29/34,3C-8D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.64**	**143**	⇓*e*P		**Pn**	**15 54 18.6**	**+0.3**
TBVI				*e*S		**Sn**	**15 54 27.5**	**-0.2**
TBVI	**Tortola**	**0.64**	**143**	⇓*e*P		**Pn**	**15 54 18.6**	**+0.3**
TBVI	**Tortola**	**0.64**	**143**			**Pn**	**15 54 18.6**	**+0.3**
TBVI						**Sn**	**15 54 27.5**	**-0.2**
CUPR	**Culebra, Puert**	**0.67**	**202**	⇓*e*P		**Pn**	**15 54 18.8**	**+0.2**
CUPR	**Culebra, Puert**	**0.67**	**202**	*e*S		**Sn**	**15 54 28.6**	**+0.3**
CUPR	**Culebra, Puert**	**0.67**	**202**			**Pn**	**15 54 18.8**	**+0.2**
CUPR						**Sn**	**15 54 28.6**	**+0.3**
CUPR	**Culebra, Puert**	**0.67**	**202**	IAML			15 54 29.3	
	comp=E,303nm,0.6s							
CUPR				IAML			15 54 29.8	
	comp=N,288nm,0.5s							
CBYP	**Canovanas**	**1.03**	**230**	⇑*e*P		**Pb**	**15 54 23.7**	**-0.2**
CBYP				*e*S		**Sn**	**15 54 37.3**	**0.0**
CBYP	**Canovanas**	**1.03**	**230**	⇑*e*P		**Pb**	**15 54 23.7**	**-0.2**
CBYP	**Canovanas**	**1.03**	**230**			**Pb**	**15 54 23.7**	**-0.2**
CBYP						**Sn**	**15 54 37.3**	**0.0**
CBYP	**Canovanas**	**1.03**	**230**	IAML			15 54 42.0	
	comp=E,423nm,0.2s							
GCPR	**Guaynabo City**	**1.18**	**238**	⇑*e*P		**Pb**	**15 54 26.0**	**-0.5**
GCPR	**Guaynabo City**	**1.18**	**238**	*e*S		**Sn**	**15 54 40.8**	**-0.2**
GCPR	**Guaynabo City**	**1.18**	**238**			**Pb**	**15 54 26.0**	**-0.5**
GCPR	**Guaynabo City**	**1.18**	**238**			**Sn**	**15 54 40.8**	**-0.2**

GCPR	**Guaynabo City**	**1.18**	**238**	IAML			15 54 34.7
	comp=E,52nm,0.6s						
PDPR	**Patillas Dam,**	**1.31**	**226**‖	*eP*		**Pn**	**15 54 28.0 +0.4**
PDPR	**Patillas Dam,**	**1.31**	**226**	*eS*		**Sn**	**15 54 44.3 0.0**
PDPR	**Patillas Dam,**	**1.31**	**226**			**Pn**	**15 54 28.0 +0.4**
PDPR						**Sn**	**15 54 44.3 0.0**
PDPR	**Patillas Dam,**	**1.31**	**226**	IAML			15 54 44.9
	comp=E,104nm,0.5s						
EMPR	**Esperanza - Ma**	**1.50**	**253**	*eS*		**Sn**	**15 54 49.3 +0.5**
EMPR	**Esperanza - Ma**	**1.50**	**253**			**Sn**	**15 54 49.3 +0.5**
CELP	**Cerrillos**	**1.71**	**240**‖	*eP*		**Pn**	**15 54 53.8 +0.3**
CELP				*eS*		**Sn**	**15 54 53.8 -0.2**
CELP	**Cerrillos**	**1.71**	**240**‖	*eP*		**Pn**	**15 54 33.2 +0.3**
CELP	**Cerrillos**	**1.71**	**240**			**Pn**	**15 54 33.2 +0.3**
CELP						**Sn**	**15 54 53.8 -0.2**
AOPR	**Arecibo Observ**	**1.74**	**251**‖	*eP*		**Pn**	**15 54 33.6 +0.2**
AOPR				*eS*		**Sn**	**15 54 54.9 0.0**
AOPR	**Arecibo Observ**	**1.74**	**251**‖	*eP*		**Pn**	**15 54 33.6 +0.2**
AOPR	**Arecibo Observ**	**1.74**	**251**			**Pn**	**15 54 33.6 +0.2**
AOPR				IAML			15 55 05.1
	comp=E,251nm,0.3s						
AOPR	**Arecibo Observ**	**1.74**	**251**			**Sn**	**15 54 54.9 0.0**
AOPR	**Arecibo Observ**	**1.74**	**251**	IAML			15 54 48.8
	comp=N,164nm,0.3s						

*DJA **06** 16:09:47.8±0.2,0°N±2″×12°6E±°,h41km±4km,M4.6/19, mb4.7/16,mB5.0/7,MLv4.8/19,Mw(mB)4.2/7*
*NEIC **06** 16:09:47.9±2.2,0.°28N±0.°07×125.°50E±0.°06,h67km±1km, mb4.7/59,Error ellipse: s-maj=10.5km s-min=8.1km az=180.0*
*IDC **06** 16:09:47.1±2.0,0.°32N×125.°43E,h54km±19km,mb4.1/18, mb1 4.2/21,mb1mx4.1/41,mbtmp4.4/21,ML4.0/3,MS3.2/9, Ms1 3.2/9,ms1mx3.0/38,Error ellipse: s-maj=14.2km s-min=11.1km az=85.0*
*BJI **06** 16:09:48.3±0.0,0.°30N×125.°50E,h73km,mB4.9/16, mb4.5/28,Ms4.2/2*

ISC 06 16:09:48.6±0.3,0.°26N±0.°05×125.°52E±0.°04,h73km,n136, σ1s24/141,mb4.5/58,2C-1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMSI	**Cibinong**	**1.57**	**282**	P		**Pn**	**16 10 12.1**	**-2.5**
KMSI				S		**Sn**	**16 10 30.6**	**-3.6**
TNTI	**Ternate**	**1.92**	**74**			**Pn**	**16 10 18.5**	**-0.8**
TNTI	**Ternate**	**1.92**	**74**	P		**Pn**	**16 10 18.7**	**-0.6**
TNTI				S		**Sn**	**16 10 41.0**	**-1.6**
SANI	**Sanana**	**2.34**	**168**	P		**Pn**	**16 10 22.5**	**-2.4**
GTOI	**Gorontalo**	**2.53**	**279**	P		**Pn**	**16 10 29.2**	**+1.7**
GTOI				S		**Sn**	**16 11 00.3**	**+2.9**
LUWI	**Luwuk**	**3.03**	**245**	Pn		**Pn**	**16 10 34.8**	**+0.5**
LUWI	**Luwuk**	**3.03**	**245**	P		**Pn**	**16 10 35.6**	**+1.3**
SGSI	**Sangihe**	**3.41**	**0**	P		**Pn**	**16 10 36.7**	**-2.8**
MRSI	**Marisa**	**3.58**	**274**	P		**Pn**	**16 10 40.3**	**-1.5**
NLAI	**Namlea**	**3.81**	**155**	P		**Pn**	**16 10 44.0**	**-1.0**
APSI	**Ampana**	**4.04**	**253**	P		**Pn**	**16 10 47.6**	**-0.4**
TOLI2	**Tolitoli**	**4.81**	**280**	Pn		**Pn**	**16 10 57.3**	**-1.3**
SWI	**Sorong**	**5.85**	**101**	P		**Pn**	**16 11 12.7**	**-0.1**
	0.1nm23nm,0.6s							
SIJI	**Sorong**	**5.86**	**101**	P		**Pn**	**16 11 13.9**	**+0.9**
	3.7nm,0.3s,baz=314,slow=23,SNR=17							
SIJI				S		**Sn**	**16 12 19.7**	**+0.9**
	1.1nm,0.3s,baz=121,slow=19,SNR=1.5							
BNDI	**Bandanaira**	**6.46**	**137**	P		**Pn**	**16 11 20.8**	**-0.4**
	0.8nm3µm135nm,0.5s							
TTSI	**Tana Toraja**	**6.57**	**240**	P		**Pn**	**16 11 21.7**	**-1.0**
	0.4nm1µm97nm,0.6s							
KCP	**Kidapawan**	**6.72**	**356**↑	*eP*		**Pn**	**16 11 26.7**	**+1.9**
SPSI	**Sidrap Palu**	**7.11**	**234**	P		**Pn**	**16 11 28.4**	**-1.6**
BNSI	**Bone**	**7.11**	**229**	P		**Pn**	**16 11 28.7**	**-1.4**
	0.2nm822nm53nm,0.7s							
FAKI	**Fak Fak**	**7.43**	**115**	Pn		**Pn**	**16 11 33.0**	**-1.5**
KAPI	**Kappang**	**7.78**	**228**	P		**Pn**	**16 11 38.6**	**-0.6**
	5.5nm,0.3s,baz=70,slow=2.6,SNR=11							
KAPI				S		**Sn**	**16 13 04.8**	**-1.1**
	5.3nm,0.3s,baz=176,slow=16,SNR=4.0							
KAPI				LR		LR	16 15 09.1	
	comp=Z,172nm,20.2s,baz=43,slow=42							
KAPI	**Kappang**	**7.78**	**228**	Pn		**Pn**	**16 11 39.1**	**-0.1**
MYLDM	**Lahad Datu**	**8.54**	**305**	Pn		**Pn**	**16 11 50.6**	**+0.9**
BKB	**Balikpapan**	**8.75**	**260**	Pn		**Pn**	**16 11 51.1**	**-1.3**
MMRI	**Maumere**	**9.42**	**200**	Pn		**Pn**	**16 12 02.0**	**+0.4**
SAUI	**Saumlaki**	**10.01**	**145**	Pn		**Pn**	**16 12 09.2**	**-0.5**
SOEI	**Soe**	**10.02**	**187**	Pn		**Pn**	**16 12 08.3**	**-1.6**
SOEI	**Soe**	**10.02**	**187**	P		Pn	16 12 16.8	+6.8
BATI	**Baumata**	**10.55**	**190**	P		**Pn**	**16 12 17.4**	**+0.3**
	0.4nm,0.3s,baz=27,slow=6.8,SNR=1.2							
BATI				LR		LR	16 17 00.5	
	comp=Z,212nm,21.0s,baz=19,slow=41							
KKM	**Kota Kinabalu**	**10.92**	**302**	Pn		**Pn**	**16 12 21.0**	**-1.2**
MTN	**Manton Dam**	**14.16**	**157**	Pn		**Pn**	**16 13 05.2**	**-0.5**
JAGI	**Jajag, Banyuwa**	**14.26**	**232**	P		**P**	**16 13 11.2**	**-1.0**
KSM	**Kuching**	**15.25**	**275**	P		**P**	**16 13 23.0**	**-0.3**
KSM				IAmb		IAmb	16 13 24.4	
	comp=Z,26nm,0.6s							
UGM	**Wanagama**	**17.01**	**241**	P		**P**	**16 13 43.0**	**+0.2**
UGM				IAmb		IAmb	16 14 11.9	
	comp=Z,75nm,1.5s							
FITZ	**Fitzroy Crossi**	**18.24**	**180**	P		**P**	**16 13 56.1**	**-0.1**
CISI	**Cisompet, Garu**	**19.28**	**246**	P		**P**	**16 14 06.8**	**-1.0**
CISI				IAmb		IAmb	16 14 14.6	
	comp=Z,28nm,0.7s							
CISI	**Cisompet, Garu**	**19.28**	**246**	P		**Pn**	**16 14 13.9**	**+4.4**
	comp=Z,43nm,0.8s							
DLV	**T Lat**	**20.51**	**305**	P		**P**	**16 14 21.0**	**-0.3**
DLV				IAmb		IAmb	16 14 26.6	
	comp=Z,30nm,1.3s							
MYKOM	**Kota Tinggi**	**21.71**	**274**	P		**P**	**16 14 34.4**	**+0.4**
WB0	**Warramunga Arr**	**21.72**	**157**	P		**P**	**16 14 33.1**	**-0.9**
WRA	**Warramunga Arr**	**21.86**	**157**	P		**P**	**16 14 34.8**	**-0.7**
	comp=Z,35nm,0.7s,baz=337,slow=9.8,SNR=51							
WRA				PcP		**PcP**	**16 18 33.6**	**+0.8**
	comp=Z,1.0nm,0.4s,baz=333,slow=1.9,SNR=5.7							
WRA	**Warramunga Arr**	**21.86**	**157**	P		**P**	**16 14 32.9**	**-2.6**
WB2	**Warramunga Arr**	**21.86**	**157**	P		**P**	**16 14 34.3**	**-1.1**
WR0	**Warramunga Arr**	**21.95**	**157**	P		**P**	**16 14 35.3**	**-1.1**
WR0				IAmb		IAmb	16 14 39.1	
	comp=Z,18nm,0.8s							
PSA00	**Pilbara Seismi**	**22.39**	**194**	P		**P**	**16 14 40.7**	**-0.5**
PSA00				IAmb		IAmb	16 14 42.5	
	comp=Z,21nm,0.6s							
PSA00	**Pilbara Seismi**	**22.39**	**194**	P		**P**	**16 14 40.5**	**-0.7**
COEN	**Coen**	**22.48**	**130**	P		**P**	**16 14 41.4**	**-0.8**
TPUB	**Ta-pu**	**23.39**	**349**	P		**P**	**16 14 48.4**	**-2.9**
TPUB				IAmb		IAmb	16 14 53.7	
	comp=Z,24nm,0.9s							
QIZ	**Qiongzhong**	**24.18**	**321**	P		**P**	**16 14 57.1**	**-1.3**
QIZ				IAmb		IAmb	16 15 20.4	
	comp=Z,24nm,1.3s							
YOJ	**Yonaguni jima**	**24.19**	**354**	P		**P**	**16 14 57.1**	**-1.2**
IPM	**Ipoh**	**24.82**	**280**	P		**P**	**16 15 03.3**	**-1.0**
AS31	**Alice Springs**	**25.14**	**162**	P		**P**	**16 15 07.2**	**+0.1**
ASAR	**Alice Springs**	**25.14**	**162**	P		**P**	**16 15 07.8**	**+0.8**
	comp=Z,9.7nm,0.6s,baz=338,slow=6.8,SNR=296							
ASAR				PcP		**PcP**	**16 18 40.9**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=350,slow=2.1,SNR=17							
GIRL	**Giralia**	**25.27**	**205**	P		**P**	**16 15 08.8**	**+0.6**
GIRL				IAmb		IAmb	16 15 38.1	
	comp=Z,65nm,1.3s							
PSI	**Prapat**	**26.70**	**276**	LR		LR	16 26 43.4	
	comp=Z,64nm,19.0s,baz=92,slow=38							
GSI	**Gunungsitoli**	**27.96**	**272**	P		**P**	**16 15 32.5**	**-0.1**
MORW	**Morawa**	**30.53**	**196**	P		**P**	**16 15 55.0**	**-0.2**
MORW				IAmb		IAmb	16 16 05.4	
	comp=Z,36nm,1.5s							
CMAR	**Chiang Mai Arr**	**31.75**	**306**	P		**P**	**16 16 05.4**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=123,slow=7.7,SNR=6.5							
CMAR				PcP		**PcP**	**16 18 56.9**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=151,slow=2.1,SNR=5.2							
CMAR				LR		LR	16 28 59.7	
	comp=Z,41nm,20.0s,baz=181,slow=36							
CHTO	**Chiang Mai**	**31.94**	**307**	P		**P**	**16 16 06.8**	**-1.0**
NJ2	**Nanjing**	**32.25**	**349**	*eP*		**P**	**16 16 12.4**	**+2.2**
NJ2				pmax		pmax		
	comp=Z,4.0nm,0.5s							
NWAO	**Narrogin (SRO)**	**33.92**	**193**	P		**P**	**16 16 24.9**	**+0.2**
NWAO				IAmb		IAmb	16 16 25.9	
	comp=Z,9.0nm,0.8s							
BBOO	**Buckleboo**	**34.36**	**164**	P		**P**	**16 16 28.9**	**+0.2**
STKA	**Stephens Creek**	**35.40**	**156**	P		**P**	**16 16 38.7**	**+1.1**
	comp=Z,12nm,0.8s,baz=338,slow=8.1,SNR=16							
STKA				PcP		**PcP**	**16 19 07.3**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=341,slow=5.7,SNR=4.5							
STKA	**Stephens Creek**	**35.40**	**156**	P		**P**	**16 16 38.4**	**+0.8**
JWT	**Wachi**	**36.05**	**14**	P		**P**	**16 16 42.9**	**-0.2**
INU	**Inuyama**	**36.52**	**16**	P		**P**	**16 16 47.1**	**-0.1**
INU				IAmb		IAmb	16 17 13.7	
	comp=Z,23nm,1.4s							
JGF	**Kuroka**	**36.86**	**16**	P		**P**	**16 16 50.5**	**+0.4**
JGF				IAmb		IAmb	16 17 10.2	
	comp=Z,17nm,1.1s							
XAN	**Xi'an**	**37.04**	**337**	P		**P**	**16 16 50.5**	**-1.1**
XAN				pmax		pmax		
	comp=Z,3.0nm,0.8s							
KSRS	**Korea Array**	**37.08**	**3**	P		**P**	**16 16 51.8**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=182,slow=10,SNR=4.8							
KSRS				LR		LR	16 31 42.3	
	comp=Z,27nm,21.0s,baz=195,slow=36							
MAJO	**Matsushiro**	**37.98**	**17**	P		**P**	**16 16 58.2**	**-1.3**
MAJO				IAmb		IAmb	16 17 25.7	
	comp=Z,14nm,1.3s							
MAT	**Matsushiro**	**37.98**	**17**	P		**P**	**16 16 58.9**	**-0.6**
MJAR	**Matsushiro Arr**	**37.98**	**17**	P		**P**	**16 16 58.4**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=182,slow=9.9,SNR=6.3							
MJAR				LR		LR	16 32 21.3	
	comp=Z,8.9nm,20.5s,baz=190,slow=36							
ARMA	**Armidale**	**39.34**	**143**	P		**P**	**16 17 12.1**	**+1.0**
ARMA				IAmb		IAmb	16 17 19.6	
	comp=Z,24nm,1.4s							
JSD	**Sado**	**39.39**	**16**	P		**P**	**16 17 11.2**	**0.0**
JMM	**Marumori**	**39.99**	**19**	P		**P**	**16 17 16.7**	**+0.4**
CAN	**Canberra**	**41.63**	**151**	P		**P**	**16 17 31.6**	**+1.8**
TOO	**Toolangi**	**41.92**	**156**	P		**P**	**16 17 34.1**	**+2.0**
TOO				IAmb		IAmb	16 17 45.3	
	comp=Z,26nm,1.5s							
HHC	**Hu-ho-hao-te**	**42.35**	**344**	*eP*		**P**	**16 17 35.7**	**0.0**
HHC				pmax		pmax		
	comp=Z,12nm,0.9s							
HHC				pmax		pmax		
	comp=Z,100nm,5.6s							
JTM	**Tenmabayashi**	**42.75**	**17**	P		**P**	**16 17 38.4**	**-0.4**
USA0B	**Ussuriysk Arra**	**44.13**	**7**	P		**P**	**16 17 49.7**	**-0.1**
USA0B				IAmb		IAmb	16 18 00.5	
	comp=Z,11nm,1.2s							
USRK	**Ussuriysk Ar.**	**44.13**	**7**	P		**P**	**16 17 50.2**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=190,slow=7.5,SNR=15							
TAPN	**Taplejung**	**45.19**	**310**	*eP*		**P**	**16 17 58.8**	**-0.1**
	comp=Z,9.2nm,0.5s							
ODAN	**Odare**	**45.19**	**309**	*eP*		**P**	**16 17 59.7**	**+0.8**
	comp=Z,10nm,0.7s							
GTA	**Gaotai**	**45.51**	**332**	⇑P		**P**	**16 18 02.6**	**+1.6**
GTA				pP		pP	16 18 18.0	-0.5
GTA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,64nm,4.9s							
GTA				LR		LR		
	comp=Z,90nm,15.3s							
GTA				LR		LR		
	comp=Z,72nm,15.6s							
RAMN	**Ramite**	**45.85**	**309**	*eP*		**P**	**16 18 04.4**	**+0.3**
	comp=Z,11nm,0.6s							
ASAJ	**Asahikawa**	**46.25**	**17**	P		**P**	**16 18 07.6**	**+1.0**
	comp=Z,5.6nm,0.4s,baz=236,slow=9.2,SNR=15							
JKA	**Kamikawa-asahi**	**46.25**	**17**	P		**P**	**16 18 06.2**	**-0.4**
JIRN	**Jiri**	**46.51**	**309**	*eP*		**P**	**16 18 09.2**	**-0.3**
	comp=Z,12nm,0.7s							
GUN	**Gumba**	**46.88**	**309**	*eP*		**P**	**16 18 11.9**	**-0.4**
	comp=Z,15nm,0.5s							
PKI	**Pulchoki**	**47.08**	**309**	*eP*		**P**	**16 18 13.6**	**-0.2**
	comp=Z,4.9nm,0.6s							
PKIN	**Phulchoki**	**47.09**	**309**	*eP*		**P**	**16 18 14.3**	**+0.4**
	comp=Z,6.3nm,0.5s							
KKN	**Kakani**	**47.28**	**309**	*eP*		**P**	**16 18 15.3**	**0.0**
	comp=Z,13nm,0.9s							
DMN	**Daman**	**47.33**	**309**	*eP*		**P**	**16 18 16.1**	**+0.4**
	comp=Z,22nm,1.0s							
GKN	**Gorkha**	**47.88**	**309**	*eP*		**P**	**16 18 20.0**	**+0.1**
	comp=Z,11nm,0.8s							
KOLN	**Koldanda**	**48.59**	**308**	*eP*		**P**	**16 18 25.7**	**+0.3**
	comp=Z,19nm,0.6s							
PYUN	**Piuthan**	**49.22**	**308**	*eP*		**P**	**16 18 29.9**	**-0.3**
	comp=Z,29nm,0.5s							
SONM	**Songino Array**	**50.22**	**343**	P		**P**	**16 18 37.3**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=155,slow=7.4,SNR=5.3							
SONM				LR		LR	16 41 09.8	
	comp=Z,34nm,19.7s,baz=76,slow=38							
SONM	**Songino Array**	**50.22**	**343**	P		**P**	**16 18 37.5**	**+0.2**
WMQ	**Urumqi**	**54.91**	**327**	*eP*		**P**	**16 19 13.8**	**+1.8**
PEA0B	**Petropavlovsk-**	**59.09**	**22**	P		**P**	**16 19 42.3**	**+1.1**
PETK	**Petropavlovsk-**	**59.09**	**22**	P		**P**	**16 19 42.2**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=169,slow=3.7,SNR=11							
MK31	**Makanchi Array**	**59.74**	**327**	P		**P**	**16 19 44.4**	**-1.6**
MKAR	**Makanchi Array**	**59.74**	**327**	P		**P**	**16 19 44.6**	**-1.3**
	comp=Z,1.5nm,0.4s,baz=121,slow=8.4,SNR=26							
MKAR				LR		LR	16 47 09.4	
	comp=Z,32nm,18.6s,baz=73,slow=38							
MAKZ	**Makanchi**	**59.92**	**327**	P		**P**	**16 19 45.9**	**-1.3**
MAKZ				IAmb		IAmb	16 19 50.8	
	comp=Z,1.9nm,0.5s							
BKZ	**Black Stump Fm**	**60.88**	**136**	P		**P**	**16 19 53.5**	**-0.3**
YAK	**Yakutsk**	**61.70**	**2**	P		**P**	**16 19 58.7**	**-0.1**
ZALV	**Zalesovo Beam**	**63.15**	**334**	P		**P**	**16 20 07.0**	**-1.7**
	comp=Z,1.7nm,0.6s,baz=119,slow=7.1,SNR=3.8							
GAR	**Garm**	**63.42**	**314**	P		**P**	**16 20 09.4**	**-1.6**
GAR				IAmb		IAmb	16 20 13.9	
	comp=Z,6.3nm,0.5s							
CASY	**Casey**	**67.25**	**187**	P		**P**	**16 20 34.1**	**-0.8**
CASY				IAmb		IAmb	16 20 41.9	
	comp=Z,23nm,1.5s							
BRVK	**Borovoye**	**69.65**	**328**	P		**P**	**16 20 48.7**	**-1.6**
TIXI	**Tiksi**	**71.31**	**1**	P		**P**	**16 20 59.0**	**-1.0**
TIXI				IAmb		IAmb	16 21 24.8	
	comp=Z,6.2nm,1.4s							
SOCY	**Socotra**	**71.90**	**283**	P		**P**	**16 21 01.6**	**-3.1**
SOCY				IAmb		IAmb	16 21 20.1	
	comp=Z,6.5nm,1.1s							
NRIK	**Noril'sk**	**73.50**	**347**	P		**P**	**16 21 13.3**	**+0.2**
	comp=Z,3.8nm,0.4s,baz=122,slow=6.6,SNR=10.0							
NRIK	**Noril'sk**	**73.50**	**347**	P		**P**	**16 21 13.0**	**-0.1**
NRIK				IAmb		IAmb	16 21 17.8	
	comp=Z,4.8nm,0.7s							
ABKAR	**Akbulak array**	**74.08**	**322**	P		**P**	**16 21 15.8**	**-1.0**
ABKAR	**Akbulak array**	**74.08**	**322**	P		**P**	**16 21 15.9**	**-1.0**
ARU	**Arti**	**77.22**	**328**	P		**P**	**16 21 34.4**	**-0.2**
ARU				IAmb		IAmb	16 21 37.5	
	comp=Z,3.4nm,0.8s							
ABPO	**Ambohimpanom**	**79.01**	**251**	P		**P**	**16 21 45.6**	**+0.1**
ABPO				IAmb		IAmb	16 22 14.3	
	comp=Z,5.9nm,1.1s							
VNDA	**Vanda**	**80.16**	**172**	P		**P**	**16 21 51.4**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=311,slow=7.3,SNR=9.6							
VNDA				LR		LR	16 57 52.3	
	comp=Z,17nm,18.6s,baz=321,slow=36							
MLY	**Manley**	**87.12**	**25**	P		**P**	**16 22 26.8**	**+0.5**
MLY				IAmb		IAmb	16 22 28.0	
	comp=Z,3.2nm,0.8s							
I23K	**Minto, Yukon-K**	**87.71**	**25**	P		**P**	**16 22 29.8**	**+0.7**
I23K				IAmb		IAmb	16 22 30.9	
	comp=Z,2.7nm,0.7s							
KLMR	**Klimovskoe**	**87.82**	**331**	*eP*		**P**	**16 22 32.6**	**+3.0**
KLMR				AMP			16 22 35.8	
	comp=Z,14nm,1.3s							
KMBO	**Kilima Mbogo**	**88.27**	**269**	P		**P**	**16 22 34.5**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=56,slow=6.8,SNR=9.6							
ILAR	**Eielson Array**	**88.74**	**25**	P		**P**	**16 22 33.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=240,slow=5.1,SNR=13							
SYO	**Syowa Base**	**88.77**	**201**‖	*eX*		P	16 22 45.6	+12
BMAR	**Burnt Mountain**	**89.73**	**23**	P		**P**	**16 22 40.2**	**+1.6**
K27K	**Chicken**	**90.83**	**26**	P		**P**	**16 22 43.7**	**0.0**
K27K				IAmb		IAmb	16 22 50.1	
	comp=Z,6.4nm,1.4s							
ARCES	**ARCESS Array B**	**93.27**	**340**	P		**P**	**16 22 53.5**	**-1.4**
	comp=Z,4.2nm,0.9s,baz=79,slow=4.7,SNR=4.2							
ARCES	**ARCESS Array B**	**93.27**	**340**	IAmb		IAmb	16 22 56.2	
	comp=Z,14nm,1.2s							
FINES	**FINESS Array B**	**94.30**	**332**	P		**P**	**16 23 00.6**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=101,slow=7.2,SNR=1.9							
WHY	**Whitehorse**	**94.49**	**29**	P		**P**	**16 23 02.0**	**+1.2**
WHY				IAmb		IAmb	16 23 03.7	
	comp=Z,3.2nm,0.8s							
CRVS	**Cervenica-Dubn**	**99.03**	**320**	*eP*	DIFF	**Pdif**	**16 23 22.6**	**+1.1**
TORD	**Torodi Ar. Bea**	**122.77**	**286**	PKP		**PKPdf**	**16 28 37.0**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=59,slow=2.1,SNR=9.2							
TORD	**Torodi Ar. Bea**	**122.77**	**286**			**PKPdf**	**16 28 37.3**	**+0.1**
TXAR	**Lajitas Array**	**124.65**	**53**	PKP		**PKiKP**	**16 28 42.1**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=188,slow=1.1,SNR=9.3							
CPUP	**Villa Florida**	**153.93**	**174**	PKPbc		**PKiKP**	**16 29 42.1**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=172,slow=1.2,SNR=4.1							

IDC 06 16:14:37.9±2.8,3.°25N×125.°50E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.4/39,mbtmp3.4/3,Error ellipse: s-maj=292.1km s-min=29.7km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.63**	**160**	P		P	16 20 00.1	-0.2
	0.3nm,0.3s,baz=339,slow=9.7,SNR=5.4							
ASAR	**Alice Springs**	**27.98**	**163**	P		P	16 20 30.8	+0.2
	0.2nm,0.5s,baz=337,slow=7.4,SNR=4.1							
MKAR	**Makanchi Array**	**57.26**	**326**	P		P	16 24 27.3	-0.1
	0.4nm,0.9s,baz=111,slow=7.9,SNR=2.8							

*JMA **06** 16:15:06.7±0.1,42.°99N×145.°43E,h47km±1km,M2.9*
*SKHL **06** 16:15:07.5±0.3,43.°00N×145.°40E,h41km±2km,mb4.0/1*

ISC 06 16:15:06.2±2.4,43.°0N±0.°1×145.°48E±0.°08,h47km±13km, n12,σ0s49/23,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKHN	**Kushirohamanak**	**0.26**	**296**	P		**Pn**	**16 15 14.9**	**+0.2**
JKHN				*eS*		**Sn**	**16 15 20.4**	**-0.3**
NEM2	**Nemuro 2**	**0.44**	**26**	P		**Pn**	**16 15 16.8**	**+0.2**
NEM2				*eS*		**Sn**	**16 15 23.8**	**-0.1**
NMR	**Nemuro--Hokkai**	**0.44**	**25**	*i* P		**Pn**	**16 15 16.9**	**+0.3**
NMR				*i* S		**Sn**	**16 15 23.9**	**0.0**
JAK	**Akkeshi**	**0.57**	**273**	P		**Pn**	**16 15 18.1**	**-0.1**
JAK				*eS*		**Sn**	**16 15 26.6**	**-0.1**
JNK	**Nakash**	**0.83**	**318**	P		**Pn**	**16 15 21.3**	**-0.2**
JNK				*eS*		**Sn**	**16 15 31.6**	**-1.1**
JNSB	**Nemuroshibetsu**	**0.88**	**337**	P		**Pn**	**16 15 22.3**	**+0.1**
JNSB				*eS*		**Sn**	**16 15 34.2**	**+0.3**
JRA	**Rausu**	**1.00**	**345**	P		**Pn**	**16 15 24.2**	**+0.3**
JRA				*eS*		**Sn**	**16 15 37.4**	**+0.5**
GRPR	**Tuman**	**1.05**	**12**	*eP*		**Pn**	**16 15 24.7**	**+0.2**
GRPR				*i* S		**Sn**	**16 15 37.0**	**-0.9**
GRPR				A		A	16 15 38.0	
	590nm,0.4s							
GRPR				A		A	16 15 38.0	
	700nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**1.10**	**15**	*eP*		**Pn**	**16 15 25.3**	**+0.1**
YUK				*i* S		**Sn**	**16 15 38.5**	**-0.8**
YUK				A		A	16 15 39.0	
	210nm,0.2s							
YUK				A		A	16 15 39.0	
	350nm,0.2s							
JOB	**Onbets**	**1.21**	**267**	P		**Pn**	**16 15 26.7**	**+0.1**
JOB				*eS*		**Sn**	**16 15 41.7**	**-0.1**
JAR	**Ashorobuto**	**1.29**	**285**	P		**Pn**	**16 15 28.0**	**+0.2**
JAR				*eS*		**Sn**	**16 15 43.9**	**0.0**
JTKR	**Abashiri--Toko**	**1.52**	**312**	P		**Pn**	**16 15 31.7**	**+0.8**

*IDC **06** 16:24:00.3±1.4,1.°25N×126.°86E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.4/32,mbtmp3.5/4,Error ellipse: s-maj=136.8km s-min=21.5km az=68.0*
*DJA **06** 16:24:08.1±0.6,1.°1N±4.4×12.°7E±°,h52km±15km,M3.3/7, MLv3.3/7*

ISC 06 16:24:10.5±1.1,1.°2N±0.°1×127.°3E±0.°3,h100km,n6, σ2s06/7,Halmahera

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

P17A				IAML		16 37 46.2			
	comp=E,89nm,0.7s								
MPU	**Maple Canyon**	**2.79**	**236**	Pn	**Pn**	**16 37 03.8**	**+0.2**		
SPUT	**South Promonto**	**2.89**	**265**	Pn	**Pn**	**16 37 05.6**	**+0.7**		
SPUT				IAML		16 37 53.8			
	comp=N,80nm,0.4s								
SPUT				IAML		16 37 58.0			
	comp=E,70nm,1.0s								
SRU	**San Rafael Swe**	**2.90**	**211**		**Pn**	**16 37 06.1**	**+1.1**		
ISCO	**Idaho Springs**	**2.93**	**128**		**Pn**	**16 37 07.3**	**+1.8**		
TMUT	**Trail Mountain**	**3.05**	**221**		**Pn**	**16 37 09.0**	**+1.8**		
PV22	**Blue Mesa, Par**	**3.09**	**182**		**Pn**	**16 37 09.2**	**+1.5**		
PV22				IAML		16 37 57.4			
	comp=N,106nm,0.7s								
YPP	**Pitchstone Pla**	**3.09**	**330**		**Pn**	**16 37 08.7**	**+0.9**		
YPP				IAML		16 38 07.5			
	comp=N,49nm,3.3s								
NLU	**North Lily Min**	**3.11**	**239**	Pn	**Pn**	**16 37 07.5**	**-0.4**		
HVU	**Hansel Valley**	**3.11**	**274**		**Pn**	**16 37 09.3**	**+1.4**		
HVU				IAML		16 38 01.9			
	comp=E,62nm,0.4s								
HVU				IAML		16 38 02.6			
	comp=N,64nm,0.8s								
H17A	**Grant Village**	**3.12**	**333**		**Pn**	**16 37 11.0**	**+2.9**		
H17A				IAML		16 38 00.1			
	comp=N,33nm,0.3s								
H17A				IAML		16 38 05.1			
	comp=E,32nm,2.7s								
PV07	**Paradox Valley**	**3.18**	**180**		**Pn**	**16 37 10.8**	**+1.8**		
PV07				IAML		16 37 59.9			
	comp=N,54nm,0.7s								
PV07				IAML		16 38 24.3			
	comp=E,64nm,1.2s								
PV04	**Paradox Valley**	**3.24**	**184**	Pn	**Pn**	**16 37 11.4**	**+1.8**		
PV14	**Lion Creek, Pa**	**3.26**	**186**	Pn	**Pn**	**16 37 12.2**	**+2.0**		
PV15	**Paradox Valley**	**3.28**	**178**		**Pn**	**16 37 12.6**	**+2.2**		
PV20	**West Nyswonger**	**3.29**	**185**	Pn	**Pn**	**16 37 12.1**	**+1.6**		
YMP	**Mirror Lake Pl**	**3.31**	**341**		**Pn**	**16 37 14.6**	**+3.9**		
YMP				IAML		16 38 13.2			
	comp=N,39nm,2.8s								
YMP				IAML		16 39 04.4			
	comp=E,39nm,3.4s								
PV16	**Nyswonger Mesa**	**3.32**	**184**		**Pn**	**16 37 13.2**	**+2.4**		
PV19	**Morning Glory**	**3.32**	**185**	Pn	**Pn**	**16 37 13.0**	**+2.1**		
PV19				IAML		16 38 09.7			
	comp=N,51nm,0.7s								
PV19				IAML		16 38 25.5			
	comp=E,64nm,0.8s								
PV11	**David Mesa, Pa**	**3.33**	**183**		**Pn**	**16 37 13.0**	**+2.1**		
Q16A	**Castle Valley**	**3.33**	**217**	Pn	**Pn**	**16 37 11.8**	**+0.8**		
Q16A				IAML		16 38 08.1			
	comp=N,54nm,0.7s								
Q16A				IAML		16 38 08.8			
	comp=E,66nm,0.8s								
PV18	**Skein Mesa, Pa**	**3.38**	**184**	Pn	**Pn**	**16 37 13.9**	**+2.2**		
PV18				IAML		16 38 19.5			
	comp=E,60nm,1.5s								
PV18				IAML		16 38 28.8			
	comp=N,46nm,0.8s								
BGU	**Big Grassy Mou**	**3.39**	**260**	Pn	**Pn**	**16 37 12.2**	**+0.4**		
PV02	**Paradox Valley**	**3.42**	**181**		**Pn**	**16 37 13.4**	**+1.2**		
PV02				IAML		16 38 28.7			
	comp=E,77nm,1.4s								
PV13	**Radium Mtn., P**	**3.47**	**183**	Pn	**Pn**	**16 37 14.7**	**+1.8**		
PV13				IAML		16 38 29.3			
	comp=N,49nm,1.4s								
PV13				IAML		16 38 29.5			
	comp=E,76nm,1.0s								
DUG	**Dugway, Tooele**	**3.48**	**247**	Pn	**Pn**	**16 37 13.6**	**+0.6**		
DUG				IAML		16 38 15.2			
	comp=E,26nm,2.9s								
PV01	**Paradox Valley**	**3.49**	**179**	Pn	**Pn**	**16 37 15.3**	**+2.2**		
PV01				IAML		16 38 10.4			
	comp=N,38nm,0.7s								
PV01				IAML		16 38 16.5			
	comp=E,40nm,0.6s								
YMR	**Madison River**	**3.49**	**331**	Pn	**Pn**	**16 37 14.0**	**+0.8**		
YMR				IAML		16 38 23.5			
	comp=E,40nm,3.1s								
YMR				IAML		16 38 39.4			
	comp=N,37nm,1.1s								
RLMT	**Red Lodge**	**3.53**	**353**	Pn	**Pn**	**16 37 16.4**	**+2.7**		
RLMT				IAML		16 38 11.6			
	comp=N,29nm,0.3s								
RLMT				IAML		16 38 16.2			
	comp=N,39nm,3.4s								
YNE	**Yellowstone No**	**3.53**	**344**		**Pn**	**16 37 15.4**	**+1.7**		
YNE				IAML		16 38 09.1			
	comp=E,35nm,0.3s								
YNE				IAML		16 38 13.9			
	comp=N,28nm,0.4s								
YHH	**Holmes Hill**	**3.56**	**334**		**Pn**	**16 37 15.7**	**+1.5**		
PV05	**Paradox Valley**	**3.56**	**186**		**Pn**	**16 37 15.3**	**+1.1**		
YHL	**Hebgen Lake**	**3.73**	**331**		**Pn**	**16 37 18.1**	**+1.6**		
YHL				IAML		16 38 30.4			
	comp=E,19nm,2.0s								
QLMT	**Earthquake Lak**	**3.80**	**328**	Pn	**Pn**	**16 37 20.0**	**+2.5**		
GCMT	**Greycliff**	**4.23**	**350**		**Pn**	**16 37 27.0**	**+3.7**		
MVCO	**Mesa Verde**	**4.41**	**179**	Pn	**Pn**	**16 37 28.0**	**+2.2**		
MVCO				IAML		16 38 43.1			
	comp=E,36nm,0.8s								
PSUT	**Pine Spring**	**5.06**	**234**	Pn	**Pn**	**16 37 36.5**	**+1.7**		
PSUT				IAML		16 39 07.2			
	comp=N,7.5nm,3.0s								
PSUT				IAML		16 39 22.3			
	comp=E,7.5nm,3.3s								
SPR3	**Spring Creek 3**	**5.09**	**241**	Pn	**Pn**	**16 37 37.6**	**+2.3**		
NVAR	**Mina Array Bea**	**8.08**	**250**	Pn	**Pn**	**16 38 18.3**	**+2.0**		
	comp=E,0.1nm,0.3s,baz=64,slow=9.4,SNR=2.1								
YKA	**Yellowknife Ar**	**21.20**	**352**	P	**P**	**16 41 01.9**	**-2.5**		
	comp=E,0.1nm,0.4s,baz=158,slow=11,SNR=5.3								

*IDC **06** 16:42:29.1±0.5,35˚.40N×27˚.50E,h0km,mb4.1/26, mb1 4.2/38,mb1mx4.1/49,mbtmp4.1/38,ML3.6/10, MS3.4/20,Ms1 3.4/20,ms1mx3.2/50,Error ellipse: s-maj=13.4km s-min=8.6km az=161.0*

*MOS **06** 16:42:29.9±1.3, 35˚.23N×27˚.56E,h17km,mb4.5/25,Error ellipse: s-maj=4.6km s-min=3.1km az=100.4*

*ISK **06** 16:42:30.4, 35˚.28N×27˚.63E, h8km, ML4.3/30*

*NIC **06** 16:42:30.2±0.0,35˚.29N×27˚.62E, h4km±1km, Ml4.4/5*

*NEIC **06** 16:42:31.6±1.5,35˚.30N±0˚.06×27˚.58E±0˚.05,h17km±4km, mb4.5/62,ML4.3(ATH),Error ellipse: s-maj=9.1km s-min=5.0km az=193.0*

*ATH **06** 16:42:32.7,35˚.31N×27˚.51E,h29km±7km,ML4.3/3,Error ellipse: s-maj=8.7km s-min=2.1km az=327.0*

*THE **06** 16:42:32.4,35˚.31N×27˚.54E,h4km±2km,ML4.2/5,Error ellipse: s-maj=2.9km s-min=1.1km az=324.0*

*HLW **06** 16:42:34.0,35˚.03N×27˚.77E,h10km±17km,Md3.9,Ml4.3*

*MED_RC **06** 16:42:35.0±0.6, 35˚.31N×27˚.57E,h22km±4km, MW4.5/10, Moment Tensor Solution.Mantle waves: s10,c13; Duration: 1ꬱ0 Moment tensor: Scale 10¹⁵Nm; Mrr3.44±1.86; Mθθ-6.30±1.04; Mϕϕ2.86±.98; Mrθ1.09±1.01; Mθϕ3.28±1.14; Mϕr2.79±.87; Best double couple: M07.02000×10¹⁵ NP1:ϕs324.00000°,δ60.00000°, λ148.00000°. NP2:ϕs72.00000°,δ62.00000°,λ34.00000°. Principal axes: T 6.6800, Plg43.0000°, Azm289.0000°; N 0.6800, Plg47.0000°, Azm106.0000°; P -7.3600, Plg1.0000°, Azm198.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*DDA **06** 16:42:36.0,35˚.46N×27˚.54E,h41km±34km,MW4.3*

ISC 06 16:42:33.1±0.5,35˚.32N±0˚.03×27˚.54E±0˚.02,h27km±3km, n482,σ1ꬱ86/531,mb4.4/79,MS3.5/14,27C-10D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.38**	**307**	P	**Pb**	**16 42 40.2**	**-1.3**
KARP				S	**Sb**	**16 42 47.1**	**-0.3**
KARP				AML	AML	16 42 48.7	
KARP				AML	AML	16 42 48.8	
KARP	**Karpathos**	**0.38**	**307**	P	**Pb**	**16 42 39.9**	**-1.7**
KARP				S	**Sb**	**16 42 47.0**	**-0.3**
	67μm,0.3s						
KARP	**Karpathos**	**0.38**	**307**	PG	**Pb**	**16 42 40.0**	**-1.7**
KARP				SG	**Sb**	**16 42 46.9**	**-0.4**
KARP	**Karpathos**	**0.38**	**307**		**Pb**	**16 42 39.8**	**-1.7**
KARP					**Sb**	**16 42 45.9**	**-1.4**
KARP	**Karpathos**	**0.38**	**307**	⇑P	**Pb**	**16 42 39.8**	**-1.8**
KARP				S	**Sb**	**16 42 47.3**	**-0.1**
KARP				AML	AML	16 42 48.2	
	125nm,0.3s						
KARP				AML	AML	16 42 48.2	
	125nm,0.3s						
KARP				AML	AML	16 42 48.2	
	147nm,0.3s						
KARP				AML	AML	16 42 48.2	
	147nm,0.3s						
ARG	**Arkhangelos**	**1.02**	**28**	P	**Pn**	**16 42 50.6**	**-1.0**
ARG				S	**Sn**	**16 43 06.5**	**+1.5**
ARG				AML	AML	16 43 14.9	
	comp=N,21854μm,1.0s						
ARG				AML	AML	16 43 15.3	
	comp=E,26112μm,1.1s						
ARG	**Arkhangelos**	**1.02**	**28**	P	**Pn**	**16 42 50.6**	**-1.0**
ARG				S	**Sn**	**16 43 06.5**	**+1.5**
	comp=E,12μm,1.0s						
ARG	**Arkhangelos**	**1.02**	**28**	P	**Pn**	**16 42 50.6**	**-1.0**
ARG				S	**Sn**	**16 43 06.5**	**+1.5**
ARG	**Arkhangelos**	**1.02**	**28**	PG	**Pn**	**16 42 50.4**	**-1.2**
ARG	**Arkhangelos**	**1.02**	**28**	⇑P	**Pn**	**16 42 49.6**	**-2.1**
ZKR	**Zakros**	**1.10**	**260**	P	**Pb**	**16 42 52.9**	**-0.6**
ZKR				AML	AML	16 43 16.2	
	comp=N,21284μm,0.5s						
ZKR				AML	AML	16 43 16.8	
	comp=E,37029μm,0.9s						
ZKR	**Zakros**	**1.10**	**260**	P	**Pn**	**16 42 52.4**	**-0.3**
ZKR				S	**Sb**	**16 43 08.1**	**+0.7**
	comp=E,14μm,0.8s						
ZKR	**Zakros**	**1.10**	**260**	PN	**Pb**	**16 42 52.9**	**-0.6**
ZKR	**Zakros**	**1.10**	**260**	P	**Pn**	**16 42 52.2**	**-0.5**
ZKR				S	**Sb**	**16 43 07.9**	**+0.5**
ZKR				AML	AML	16 43 14.8	
	comp=E,21nm,0.5s						
ZKR				AML	AML	16 43 14.8	
	comp=E,21nm,0.5s						
ZKR				AML	AML	16 43 15.2	
	comp=E,36nm,0.9s						
ZKR				AML	AML	16 43 15.2	
	comp=E,36nm,0.9s						
STIA	**Sitia Lasithi**	**1.19**	**265**	P	**Pn**	**16 42 53.8**	**-0.1**
STIA				S	**Sb**	**16 43 10.9**	**+1.0**
NIS1	**Nisyros Isl.**	**1.32**	**347**	P	**Pb**	**16 42 56.4**	**-0.8**
NIS1	**Nisyros Isl.**	**1.32**	**347**	PN	**Pn**	**16 42 56.2**	**+0.5**
NISR	**Nisiros**	**1.33**	**346**	P	**Pb**	**16 42 57.0**	**-0.4**
NISR	**Nisiros**	**1.33**	**346**	P	**Pn**	**16 42 55.8**	**-0.1**
NISR				S	**Sb**	**16 43 14.9**	**+0.8**
	comp=E,8μm,1.1s						
KOSK	**Kos Island**	**1.50**	**343**	PN	**Pb**	**16 42 59.1**	**-1.2**
FRMA	**Ierapetra Chan**	**1.51**	**259**	P	**Pn**	**16 42 58.4**	**+0.1**
FRMA				S	**Sn**	**16 43 15.8**	**-1.2**
	comp=E,3μm,0.7s						
TURN	**Turunc**	**1.57**	**21**	*i* P	**Pb**	**16 43 00.1**	**-1.2**
TURN				*i* S	**Sb**	**16 43 20.3**	**-0.4**
TURN	**Turunc**	**1.57**	**21**	PN	**Pn**	**16 42 59.6**	**+0.5**
NPS	**Neapolis**	**1.57**	**269**	P	**Pb**	**16 43 01.4**	**-0.1**
NPS	**Neapolis**	**1.57**	**269**	P	**Pb**	**16 43 01.4**	**-0.1**
BDRM	**Kayabasi**	**1.75**	**358**	*i* P	**Pn**	**16 43 02.4**	**+0.7**
BDRM				*i* S	**Sn**	**16 43 21.2**	**-1.9**
DALY	**Dalyan (Mula)**	**1.75**	**31**	PN	**Pn**	**16 43 01.9**	**+0.3**
BODT	**Bodrum**	**1.75**	**354**	P	**Pn**	**16 43 02.0**	**+0.3**
BODT	**Bodrum**	**1.75**	**354**	PN	**Pn**	**16 43 02.5**	**+0.8**
FETY	**Fethiye**	**1.82**	**43**	P	**Pn**	**16 43 02.3**	**-0.3**
FETY				S	**Sn**	**16 43 26.3**	**+1.5**
FETY	**Fethiye**	**1.82**	**43**	PN	**Pn**	**16 43 02.4**	**-0.2**
KSL	**Kastellorizon**	**1.86**	**63**	P	**Pb**	**16 43 04.6**	**-1.8**
KSL	**Kastellorizon**	**1.86**	**63**	⇑P	**Pn**	**16 43 02.5**	**-0.7**
YER	**Yerkesik**	**1.91**	**18**	P	**Pb**	**16 43 05.5**	**-1.8**
YER	**Yerkesik**	**1.91**	**18**	P	**Pb**	**16 43 05.5**	**-1.8**
YER	**Yerkesik**	**1.91**	**18**	PN	**Pn**	**16 43 04.3**	**+0.3**
AKAS	**Kas**	**1.92**	**61**	*i* P	**Pn**	**16 43 03.7**	**-0.4**
AKAS				*i* S	Sn	16 43 18.0	-9.3
AKAS	**Kas**	**1.92**	**61**	PN	**Pn**	**16 43 03.5**	**-0.6**
AKAS	**Kas**	**1.92**	**61**		**Pn**	**16 43 03.5**	**-0.8**
SANT	**Santorini**	**1.99**	**303**	P	**Pb**	**16 43 06.9**	**-1.7**
SANT				S	**Sb**	**16 43 32.2**	**-0.7**
SANT	**Santorini**	**1.99**	**303**	P	**Pn**	**16 43 05.6**	**+0.7**
SANT				⇑S	**Sb**	**16 43 33.4**	**+0.4**
SANT	**Santorini**	**1.99**	**303**	*i* P	**Pn**	**16 43 06.5**	**+1.5**
SANT				*i* S	**Sn**	**16 43 24.3**	**-4.8**
SANT	**Santorini**	**1.99**	**303**	PN	**Pn**	**16 43 06.3**	**+1.3**
SANT	**Santorini**	**1.99**	**303**		**Pn**	**16 43 06.1**	**+1.1**
HRKL	**Herakleio**	**1.99**	**271**	PN	**Pb**	**16 43 06.4**	**-2.2**
MULA	**Mugla, Merkez-**	**2.04**	**18**	*i* P	**Pb**	**16 43 07.6**	**-1.8**
MULA				*i* S	**Sb**	**16 43 32.9**	**-1.5**
THT2	**Imerovigli**	**2.05**	**304**	PN	**Pn**	**16 43 07.2**	**+1.4**
DDIM	**Aydin, Didim**	**2.15**	**354**	*i* P	**Pb**	**16 43 09.6**	**-1.7**
DDIM				*i* S	**Sb**	**16 43 30.2**	**-2.8**
IDI	**Anoyia**	**2.16**	**270**	Pg	**Pb**	**16 43 09.2**	**-2.4**
	comp=E,42nm,0.3s,baz=79,slow=16,SNR=95						
IDI				Lg	Lg	16 43 38.1	
	comp=E,62nm,0.3s,baz=255,slow=19,SNR=2.2						
IDI	**Anoyia**	**2.16**	**270**	P	**Pb**	**16 43 10.1**	**-1.5**
IDI	**Anoyia**	**2.16**	**270**	⇑P	**Pn**	**16 43 05.3**	**-2.1**
IDI				⇓S	**Sn**	**16 43 33.6**	**+0.2**
IDI	**Anoyia**	**2.16**	**270**	PN	**Pn**	**16 43 08.9**	**+1.5**
IDI	**Anoyia**	**2.16**	**270**		**Pb**	**16 43 09.5**	**-2.1**
SIVA	**Sivas**	**2.25**	**263**	P	**Pb**	**16 43 12.0**	**-1.1**
CAEL	**Denizli, Camel**	**2.31**	**38**	*i* P	**Pn**	**16 43 10.9**	**+1.4**
CAEL				*i* S	**Sn**	**16 43 36.0**	**-1.1**
AYDN	**Tasoluk**	**2.36**	**7**	*i* P	**Pn**	**16 43 11.4**	**+1.3**
AYDN				*i* S	**Sn**	**16 43 34.0**	**-4.1**
APE	**Apeiranthos**	**2.39**	**318**	P	**Pn**	**16 43 12.1**	**+1.6**
APE				⇓S	**Sb**	**16 43 43.4**	**-1.0**
APE	**Apeiranthos**	**2.39**	**318**	*i* P	**Pn**	**16 43 11.3**	**+0.8**
APE				*i* S	**Sn**	**16 43 30.6**	**-8.2**
APE	**Apeiranthos**	**2.39**	**318**	*e*P	**Pn**	**16 43 12.0**	**+1.6**
APE	**Apeiranthos**	**2.39**	**318**	PN	**Pn**	**16 43 11.9**	**+1.4**
APE	**Apeiranthos**	**2.39**	**318**	⇑P	**Pn**	**16 43 11.6**	**+1.1**
APE				S	**Sb**	**16 43 42.5**	**-1.9**
GCAM	**G?zelcaml?**	**2.39**	**354**	*i* P	**Pn**	**16 43 11.7**	**+1.3**
GCAM				*i* S	**Sn**	**16 43 35.4**	**-3.5**
GCAM	**G?zelcaml?**	**2.39**	**354**	PN	**Pn**	**16 43 11.8**	**+1.3**
ELL	**Elmali**	**2.40**	**53**	P	**Pn**	**16 43 11.8**	**+1.1**
ELL	**Elmali**	**2.40**	**53**	PN	**Pn**	**16 43 10.5**	**-0.2**
ELL	**Elmali**	**2.40**	**53**	Pn	**Pn**	**16 43 11.8**	**+1.1**
AKUM	**Antalya-Kumluc**	**2.49**	**65**	*i* P	**Pn**	**16 43 12.4**	**+0.5**
AKUM				*i* S	**Sn**	**16 43 36.4**	**-4.9**
GOLH	**Golhisar**	**2.52**	**40**	*i* P	**Pn**	**16 43 14.2**	**+1.9**
GOLH				*i* S	**Sn**	**16 43 38.2**	**-4.1**
AYDB	**Zeytinkoy-Aydi**	**2.64**	**6**	PN	**Pn**	**16 43 14.9**	**+0.9**
VAM	**Vamos**	**2.73**	**273**	P	**Pb**	**16 43 18.7**	**-2.5**
VAM	**Vamos**	**2.73**	**273**	P	**Pb**	**16 43 18.7**	**-2.5**
DGB	**zmir**	**2.78**	**349**	*i* S	**Sn**	**16 43 46.7**	**-1.8**
KORT	**Korkueli**	**2.83**	**53**	*i* P	**Pn**	**16 43 18.9**	**+2.3**
KORT				*i* S	**Sn**	**16 43 43.6**	**-6.4**
KORT	**Korkueli**	**2.83**	**53**	PN	**Pn**	**16 43 16.9**	**+0.2**
GVDS	**Gavdos**	**2.87**	**262**	PN	**Pn**	**16 43 18.9**	**+1.9**
GVD	**Gavdhos**	**2.87**	**261**	PN	**Pn**	**16 43 18.7**	**+1.7**
IMMV	**Iera Moni Meta**	**2.91**	**274**	P	**Pb**	**16 43 21.6**	**-2.6**
IMMV	**Iera Moni Meta**	**2.91**	**274**	PN	**Pn**	**16 43 19.6**	**+2.0**
ANTB	**Antalya**	**2.98**	**57**	PN	**Pn**	**16 43 18.7**	**+0.2**
BRDR	**BURDUR-Merkez**	**3.13**	**40**	*i* P	**Pn**	**16 43 21.9**	**+1.2**
BRDR				*i* S	**Sb**	**16 44 02.1**	**-3.7**
URLA	**Izmir**	**3.13**	**346**	*i* P	**Pn**	**16 43 18.3**	**-2.4**
URLA				*i* S	**Sn**	**16 43 50.3**	**-6.9**
URLA	**Izmir**	**3.13**	**346**	PN	**Pn**	**16 43 21.1**	**+0.4**
KNDR	**Palaiochora Ch**	**3.15**	**270**	PN	**Pn**	**16 43 23.6**	**+2.7**
BUCA	**Burdur, Bucak-**	**3.16**	**50**	*i* P	**Pn**	**16 43 23.5**	**+2.4**
BUCA				*i* S	**Sn**	**16 43 54.6**	**-3.4**
BCA	**Bucak**	**3.26**	**48**	PN	**Pn**	**16 43 23.1**	**+0.5**
MANT	**Manisa**	**3.27**	**14**	*i* P	**Pn**	**16 43 24.1**	**+1.3**
MANT				*i* S	**Sn**	**16 43 57.0**	**-3.9**
MANT	**Manisa**	**3.27**	**14**		**Pn**	**16 43 23.7**	**+0.9**
BASM	**Basmaki-Afyon**	**3.29**	**37**	PN	**Pn**	**16 43 23.5**	**+0.5**
KULA	**Kula-Manisa**	**3.32**	**15**	PN	**Pn**	**16 43 24.3**	**+1.0**
KHAL	**Karahalli**	**3.43**	**27**	*i* P	**Pn**	**16 43 24.4**	**-0.5**
KHAL				*i* S	**Sn**	**16 44 00.1**	**-4.6**
ISP	**Isparta**	**3.47**	**43**	P	**Pn**	**16 43 26.1**	**+0.7**
ISP	**Isparta**	**3.47**	**43**	PN	**Pn**	**16 43 25.9**	**+0.5**
ISP	**Isparta**	**3.47**	**43**		**Pn**	**16 43 26.1**	**+0.7**
AKHS	**Akhisar**	**3.56**	**3**	*i* P	**Pn**	**16 43 27.7**	**+1.1**
AKHS				*i* S	**Sn**	**16 44 07.9**	**0.0**
OSC1	**CSNet OBS 1**	**3.58**	**119**	P	**Pn**	**16 43 25.6**	**-1.2**
OSC1				S	**Sn**	**16 44 09.5**	**+1.2**
USAK	**Uak-Merkez**	**3.59**	**19**	*i* P	**Pn**	**16 43 27.7**	**+0.6**
KZIL	**AFYON_Kizioren**	**3.60**	**35**	*i* P	**Pn**	**16 43 27.9**	**+0.6**
ZEDA	**zmir-Bergama**	**3.66**	**354**	*i* P	**Pn**	**16 43 29.2**	**+1.3**
ZEDA				*i* S	**Sn**	**16 44 10.3**	**+0.1**
KTHA	**Kythira Island**	**3.76**	**286**	PN	**Pn**	**16 43 31.6**	**+2.3**
DKL	**Dikili**	**3.78**	**353**	PN	**Pn**	**16 43 30.8**	**+1.2**
ALAN	**Alanya-ANTALYA**	**3.85**	**70**	PN	**Pn**	**16 43 31.1**	**+0.5**
SIMA	**Simav-Kutahya**	**3.93**	**17**	PN	**Pn**	**16 43 31.6**	**-0.2**
AKMS	**Akamas**	**3.94**	**93**	P	**Pn**	**16 43 30.4**	**-1.4**
AKMS				S	**Sn**	**16 44 18.1**	**+0.9**
AKMS				AML	AML	16 44 20.5	
	comp=E,1.5nm,0.5s						
AKMS				AML	AML	16 44 20.5	
	comp=E,1.5nm,0.5s						
AKMS				AML	AML	16 44 20.8	
	comp=E,1.6nm,0.8s						
AKMS				AML	AML	16 44 20.8	
	comp=E,1.6nm,0.8s						
GAZI	**Gazipasa**	**3.99**	**75**	PN	**Pn**	**16 43 32.3**	**-0.2**
GEDZ	**Gediz**	**4.01**	**21**	PN	**Pn**	**16 43 34.1**	**+1.3**
SHUT	**Suhut-Afyon**	**4.03**	**36**	PN	**Pn**	**16 43 33.3**	**+0.1**
ATH	**Athens Observa**	**4.06**	**312**	P	**Pb**	**16 43 39.8**	**-4.0**
GDZ	**Gediz**	**4.07**	**22**	*i* P	**Pn**	**16 43 32.8**	**-1.0**
GDZ				*i* S	Sn	16 44 11.7	-8.9
SIGR	**SIGRI**	**4.11**	**341**	PN	**Pn**	**16 43 35.8**	**+1.7**
ALFC	**Alefka**	**4.15**	**91**	P	**Pn**	**16 43 33.2**	**-1.4**
ALFC				S	**Sn**	**16 44 23.1**	**+0.8**
ALFC				AML	AML	16 44 23.5	
	comp=E,1.8nm,0.6s						
ALFC				AML	AML	16 44 23.5	
	comp=E,1.8nm,0.6s						
ALFC				AML	AML	16 44 25.4	
	comp=E,1.3nm,0.5s						
ALFC				AML	AML	16 44 25.4	
	comp=E,1.3nm,0.5s						
NATA	**Nata**	**4.16**	**96**	P	**Pn**	**16 43 34.6**	**-0.2**
NATA				S	**Sn**	**16 44 22.3**	**-0.4**
SLUM	**Salum**	**4.28**	**208**	P	**Pn**	**16 43 36.8**	**+0.4**
	baz=212						
BALB	**Balikesir**	**4.33**	**4**	PN	**Pn**	**16 43 38.7**	**+1.7**
DURS	**Dursunbey**	**4.34**	**10**	*i* P	**Pn**	**16 43 38.5**	**+1.1**
DURS				*i* S	**Sn**	**16 44 20.8**	**-6.3**
LEF	**Lefka**	**4.39**	**91**	P	**Pn**	**16 43 36.3**	**-1.6**
LEF				⇓S	**Sn**	**16 44 27.7**	**-0.5**
TVSB	**Tavsanli**	**4.40**	**20**	PN	**Pn**	**16 43 38.2**	**0.0**
BALY	**Balya**	**4.42**	**1**	*i* P	**Pn**	**16 43 38.9**	**+0.5**
SZAC	**Souni**	**4.42**	**96**	P	**Pn**	**16 43 37.4**	**-1.0**
OSC2	**CSNet OBS 4**	**4.51**	**118**	P	**Pn**	**16 43 38.9**	**-0.8**
OSC2				S	**Sn**	**16 44 32.5**	**+1.3**
ANDZ	**Kutahya, Merke**	**4.59**	**23**	*i* P	**Pn**	**16 43 41.2**	**+0.5**
ASGA	**Asgata**	**4.72**	**95**	P	**Pn**	**16 43 41.3**	**-1.2**
CSS	**Mathiatis**	**4.76**	**93**		**Pn**	**16 43 42.2**	**-0.9**
CSS	**Mathiatis**	**4.76**	**93**	⇑P	**Pn**	**16 43 42.2**	**-0.9**
CSS				AML	AML	16 44 41.0	
	comp=E,0.3nm,0.5s						
CSS				AML	AML	16 44 43.4	
	comp=E,0.2nm,0.7s						
ITM	**Ithomi**	**4.90**	**294**	Pn	**Pn**	**16 43 47.6**	**+2.6**
MVOU	**Mavrovouni**	**5.00**	**92**	⇑P	**Pn**	**16 43 45.3**	**-1.0**
AGG	**Agios Georgios**	**5.56**	**313**	P	**Pn**	**16 43 57.4**	**+3.3**
AGG	**Agios Georgios**	**5.56**	**313**	Pn	**Pn**	**16 43 57.4**	**+3.3**
ALN	**Alexandroupoli**	**5.70**	**349**	P	**Pn**	**16 43 55.7**	**-0.2**
ALN	**Alexandroupoli**	**5.70**	**349**	Pn	**Pn**	**16 43 55.7**	**-0.2**
MDUB	**Mudurnu**	**5.91**	**28**	Pn	**Pn**	**16 43 58.3**	**-0.5**
ANTO	**Ankara**	**6.17**	**41**	P	**Pn**	**16 44 04.6**	**+2.1**
ANTO	**Ankara**	**6.17**	**41**	P	**Pn**	**16 44 03.5**	**+1.0**
ANTO	**Ankara**	**6.17**	**41**	Pn	**Pn**	**16 44 03.5**	**+1.0**
LIT	**Litokhoron**	**6.23**	**322**	P	**Pn**	**16 44 04.1**	**+0.8**
LIT	**Litokhoron**	**6.23**	**322**	Pn	**Pn**	**16 44 04.1**	**+0.8**
SWA2		**6.30**	**197**	P	**Pn**	**16 44 03.1**	**-1.1**
	baz=200						
KOT	**Kottamia**	**6.48**	**145**	AMP		16 45 00.0	
	baz=144						
BR131	**Keskin Array S**	**6.55**	**46**	P	**Pn**	**16 44 07.9**	**+0.2**
BR131	**Keskin Array S**	**6.55**	**46**	Pn	**Pn**	**16 44 07.9**	**+0.2**
BRTR	**Keskin Array B**	**6.55**	**46**	Pn	**Pn**

SOC *e* 16 47 48.8
SOC MLR MLR
comp=Z,276nm,14.0s
CHVG Ch'k'valeri 13.50 52 ⇑P **Pn** **16 45 44.3 +1.5**
UZH Uzhgorod 13.86 345 *eP* **P** **16 45 57.1 +1.5**
UZH *eS* Sn 16 48 31.1 +11
UZH MLR MLR
comp=N,80nm,13.0s
UZH MLR MLR
comp=E,200nm,13.0s
UZH MLR MLR
comp=Z,60nm,13.0s
AKH Akhalkalaki 13.91 59 ⇑P **Pn** **16 45 49.4 +0.9**
NEY Neytrino 14.17 51 *i* P **Pn** **16 45 54.5 +2.5**
CRVS Cervenica-Dubn 14.30 344 *eP* **P** **16 46 02.0 +1.5**
CRVS Cervenica-Dubn 14.30 344 *eP* **P** **16 46 02.0 +1.5**
GNI Garni 14.44 65 Pn **Pn** **16 45 58.1 +2.3**
comp=Z,0.2nm,0.3s,baz=68,slow=13,SNR=3.3
GNI LR LR 16 51 43.4
comp=Z,67nm,20.3s,baz=284,slow=38
GNI Garni 14.44 65 *i* P **Pn** **16 45 58.2 +2.4**
GNI Garni 14.44 65 **Pn** **16 45 53.7 -2.1**
KIV Kislovodsk 14.50 49 *eP* **Pn** **16 45 58.4 +1.9**
KIV pmax pmax
comp=Z,55nm,1.1s
KIV MLR MLR
comp=Z,124nm,13.0s
KIV Kislovodsk 14.50 49 **P** **16 46 03.4 +0.5**
KVAR Kislovodsk Arr 14.51 49 Pn **P** **16 46 00.7 -2.3**
baz=274,slow=13,SNR=3.3
KBZ Khabaz 14.51 50 Pn **Pn** **16 45 58.9 +2.3**
comp=Z,0.0nm,0.3s,baz=258,slow=6.1,SNR=4.8
KBZ LR LR 16 52 22.1
comp=Z,127nm,19.4s,baz=193,slow=41
KBZ Khabaz 14.51 50 *i* P **Pn** **16 45 57.5 +0.9**
KBZ pmax pmax
comp=Z,18nm,0.9s
ZEI Tsey 14.73 55 *eP* **Pn** **16 46 00.1 +0.4**
ZEI pmax pmax
comp=Z,13nm,0.7s
SOKA Soboth 14.74 324 Pn **Pn** **16 46 01.5 +1.7**
comp=Z,4.9nm,0.7s,SNR=4.5
NAX Nakhchivan 14.81 70 P **P** **16 46 07.3 +0.9**
KEST Kesra 14.82 277 Pn **Pn** **16 45 59.8 -1.1**
comp=Z,0.1nm,0.3s,baz=64,slow=5.3,SNR=3.2
KEST Kesra 14.82 277 P **P** **16 46 07.5 +1.0**
OBKA Obir 14.86 323 *ePn* **Pn** **16 46 03.2 +1.9**
comp=Z,9.3nm,1.4s
ARSA Arzberg 14.94 327 *ePn* **Pn** **16 46 04.3 +2.0**
comp=Z,5.3nm,0.7s
VSL Villasalto 15.02 291 P **P** **16 46 10.5 +1.9**
VSL IAmb IAmb 16 46 17.8
comp=Z,50nm,1.2s
LANS Liptovska Anna 15.05 339 *eP* **P** **16 46 15.6 +6.7**
NIE Niedzica 15.06 342 *eP* **P** **16 46 10.2 +1.1**
NIE Niedzica 15.06 342 P **P** **16 46 10.2 +1.1**
NIE pmax pmax
comp=Z,6.0nm,1.6s
MODS Modra-Piesok 15.10 333 *eP* **P** **16 46 15.0 +5.5**
CONA Conrad Observa 15.31 329 *ePn* **Pn** **16 46 08.6 +1.4**
comp=Z,3.4nm,1.1s
MYKA Terra Mystica 15.40 321 *ePn* **Pn** **16 46 09.6 +1.2**
comp=Z,4.9nm,0.9s
AKASG Malin Array Be 15.43 4 Pn **Pn** **16 46 07.2 -1.5**
baz=193,slow=1,SNR=0.8
AKBB Malin Array Si 15.43 4 P **P** **16 46 14.2 +1.2**
AKBB pmax pmax
comp=Z,4.0nm,0.6s
AKBB Malin Array Si 15.43 4 P **P** **16 46 14.2 +1.2**
TEOL Teolo 15.69 315 Pn **Pn** **16 46 13.6 +1.4**
TEOL IAmb IAmb 16 46 27.2
comp=Z,18nm,0.7s
ZOU Zoufplan 15.69 320 Pn **Pn** **16 46 12.6 +0.1**
ZOU IAmb IAmb 16 46 18.2
comp=Z,33nm,1.4s
GANJ Ganja 15.73 65 P **P** **16 46 17.6 +1.1**
KBA Koelnbreinsper 15.85 322 *ePn* **Pn** **16 46 15.0 +0.6**
comp=Z,19nm,1.1s
KBA Koelnbreinsper 15.85 322 P **P** **16 46 16.2 -1.8**
KBA pmax pmax
comp=Z,23nm,1.1s
OJC Ojcow 15.93 342 *eP* **P** **16 46 19.2 +0.6**
OJC Ojcow 15.93 342 P **P** **16 46 17.1 -1.5**
OJC pmax pmax
comp=Z,19nm,0.9s
OJC Ojcow 15.93 342 P **P** **16 46 17.1 -1.5**
OJC IAmb IAmb 16 46 26.9
comp=Z,19nm,0.9s
MOA Molln 15.95 326 *ePn* **Pn** **16 46 16.4 +0.9**
comp=Z,12nm,1.9s
LGD Lagodekhi 16.00 60 P **P** **16 46 21.4 +1.9**
KRUC Moravsky 16.00 333 P **P** **16 46 19.3 -0.1**
KRUC pmax pmax
comp=Z,8.0nm,1.4s
OKC Ostrava-Krasne 16.05 338 AMS AMS 16 55 00.0
comp=Z,400nm,13.0s
ABTA Abfaltersbach 16.06 320 *ePn* **Pn** **16 46 17.4 +0.4**
comp=Z,5.7nm,0.8s
CTI Castel Tesino 16.10 317 P **Pn** **16 46 17.0 -0.5**
CTI pmax pmax
comp=Z,32nm,1.4s
CTI Castel Tesino 16.10 317 Pn **Pn** **16 46 17.0 -0.5**
CTI IAmb IAmb 16 46 22.1
comp=Z,32nm,1.4s
VRAC Vranov 16.13 333 Pn **Pn** **16 46 12.0 -5.9**
comp=Z,0.9nm,0.3s,baz=184,slow=14,SNR=5.9
VRAC LR LR 16 53 41.3
comp=Z,140nm,18.1s,baz=142,slow=42
VRAC Vranov 16.13 333 P **P** **16 46 22.1 +1.2**
VRAC pmax pmax
comp=Z,7.0nm,0.8s
GROC Groznyy 16.17 55 *eP* **Pn** **16 46 19.1 +0.8**
GROC S **Sn** **16 49 18.6 +1.9**
GROC pmax pmax
comp=Z,16nm,0.7s
MORC Moravsky Berou 16.20 336 P **P** **16 46 23.0 +1.4**
MORC pmax pmax
comp=Z,7.0nm,1.2s
ZKTA Zakatala 16.21 61 P **P** **16 46 24.3 +2.5**
MNGR Mingechevir, A 16.33 65 P **P** **16 46 25.1 +2.0**
MSSA Maissana 16.48 308 Pn **Pn** **16 46 22.8 +0.5**
SALO Salr 16.50 314 **P** **16 46 24.9 -0.2**
SALO IAmb IAmb 16 46 44.0
comp=Z,53nm,0.9s
SEKA Sheki 16.51 63 P **P** **16 46 27.9 +2.7**
CKRC Cesky Krumlov 16.65 328 *eP* **P** **16 46 25.9 -0.8**
KRLC Kraliky 16.71 335 *eP* **P** **16 46 27.7 +0.4**
KRLC Kraliky 16.71 335 *eP* **P** **16 46 27.7 +0.4**
WTTA Wattenberg 16.85 320 Pn **P** **16 46 28.4 -0.7**
comp=Z,25nm,1.5s,SNR=7.3
WTTA Wattenberg 16.85 320 P **P** **16 46 29.9 +0.8**
WTTA pmax pmax
comp=Z,17nm,1.3s
WATA Walderalm 16.93 320 Pn **P** **16 46 29.6 -0.3**
comp=Z,27nm,1.1s,SNR=8.6
GEC2 GERESS Array S 16.94 327 **P** **16 46 29.3 -0.6**
GERES GERESS Array B 16.94 327 Pn **Pn** **16 46 28.1 0.0**
comp=Z,0.2nm,0.3s,baz=132,slow=13,SNR=16
GERES LR LR 16 53 23.7
comp=Z,102nm,20.0s,baz=136,slow=39
GERES GERESS Array B 16.94 327 P **P** **16 46 29.9 0.0**
SQTA Sankt Quirin 17.05 319 *ePn* **Pn** **16 46 29.9 +0.3**
comp=Z,7.4nm,0.7s
DPC Dobruska-Polom 17.10 335 *eP* **P** **16 46 31.3 -0.3**
DPC MLR MLR
comp=Z,300nm,10.7s
DPC Dobruska-Polom 17.10 335 *eP* **P** **16 46 31.3 -0.3**
DPC *ex* x 16 46 41.9
DPC AMS AMS 16 54 10.0
comp=Z,300nm,10.7s
MOTA Moosalm 17.18 319 Pn **Pn** **16 46 31.4 +0.1**
comp=Z,14nm,1.3s,SNR=7.1
FETA Feichten 17.19 318 Pn **P** **16 46 33.0 +0.3**
comp=Z,30nm,1.3s,SNR=13
KHC Kasperske Hory 17.21 328 *c iP* **P** **16 46 32.1 -0.8**
KHC pmax pmax
comp=Z,36nm,1.1s
KHC Kasperske Hory 17.21 328 *eP* **P** **16 46 32.0 -0.8**
KHC *ex* x 16 46 39.8
KHC AMS AMS 16 54 00.0
comp=Z,400nm,12.7s
KHC Kasperske Hory 17.21 328 **P** **16 46 32.5 -0.3**
BEL Belsk 17.21 346 *eP* **P** **16 46 34.7 +2.0**
BEL Belsk 17.21 346 P **P** **16 46 33.6 +0.9**
BEL pmax pmax
comp=Z,62nm,1.3s
MAK Makhachkala 17.25 58 *eP* **Pn** **16 46 31.5 -0.4**
MAK *eS* **Sn** **16 49 42.6 -0.3**
MAK pmax pmax
comp=Z,130nm,0.9s
MAK MLR MLR
comp=Z,104nm,15.0s
LKRN Lenkeran, Azer 17.30 72 P **P** **16 46 36.0 +2.2**
OSTC Ostas 17.31 335 *eP* **P** **16 46 34.6 +0.7**
UPC Upice 17.34 335 AMS AMS 16 54 00.0
comp=Z,200nm,10.6s
CHVC Chvalec 17.39 335 *eP* **P** **16 46 36.8 +2.0**
CHVC *ex* x 16 46 50.9
PBCC Pribram 17.45 330 *eP* **P** **16 46 38.0 +2.5**
RETA Reutte 17.45 319 *ePn* **Pn** **16 46 34.1 -0.5**
comp=Z,13nm,1.6s
PRU Pruhonice 17.46 331 *eP* **P** **16 46 35.7 +0.1**
PRU MLR MLR
comp=Z,300nm,12.9s
PRU Pruhonice 17.46 331 *eP* **P** **16 46 35.7 +0.1**
PRU AMS AMS 16 54 00.0
comp=Z,300nm,12.9s
DAVOX Davos/Dischmat 17.52 316 P **Pn** **16 46 34.3 -1.2**
comp=Z,0.1nm,0.3s,baz=135,slow=5.7,SNR=2.7
DAVOX LR LR 16 53 53.7
comp=Z,186nm,19.2s,baz=262,slow=39
KSP Ksiaz 17.52 336 *eP* **Pn** **16 46 34.7 -0.6**
KSP Ksiaz 17.52 336 P **P** **16 46 38.1 +1.8**
KSP pmax pmax
comp=Z,8.0nm,1.3s
WET Wettzell 17.53 327 P **P** **16 46 36.0 -0.3**
WET pmax pmax
comp=Z,12nm,1.1s
PRA Prague 17.57 331 AMS AMS 16 54 00.0
comp=Z,300nm,8.8s
TUE Stuetta 17.66 315 **P** **16 46 39.5 +1.5**
SBF Sospel 17.66 305 *eP* **Pn** **16 46 37.0 -0.1**
SBF pmax pmax
comp=Z,24nm,0.8s
DAVA Damuels 17.81 318 *ePn* **Pn** **16 46 39.2 +0.1**
comp=Z,7.7nm,0.8s
PVCC Panska Ves 17.88 332 P **P** **16 46 42.1 +1.9**
PVCC pmax pmax
comp=Z,5.0nm,1.0s
VSR Storozhevoye 17.97 24 *eP* **P** **16 46 41.3 +0.1**
VSR pmax pmax
comp=Z,20nm,0.8s
FRF La Foret Royal 18.08 303 *eP* **Pn** **16 46 41.7 -0.6**
FRF pmax pmax
comp=Z,60nm,1.4s
LMR La Mourre 18.10 303 *eP* **P** **16 46 43.1 +0.4**
LMR pmax pmax
comp=Z,14nm,0.9s
BRG Berggiesshubel 18.40 332 *eP* **Pn** **16 46 51.1 +5.0**
BRG Amp 16 46 54.0
comp=Z,4.0nm,1.1s
BRG *ex* x 16 47 02.5
BRG Amp 16 47 05.5
comp=Z,4.9nm,1.2s
MBDF Montbardon 18.43 307 *eP* **P** **16 46 46.3 -0.2**
MBDF pmax pmax
comp=Z,6.0nm,0.6s
NKC Novy Kostel 18.52 328 AMS AMS 16 55 10.0
comp=Z,300nm,14.2s
BNI Bardonecchia 18.62 308 P **Pn** **16 46 49.9 +0.9**
BNI pmax pmax
comp=Z,5.0nm,0.7s
BNI Bardonecchia 18.62 308 **Pn** **16 46 49.9 +0.9**
LPG La Plagne 18.76 309 *eP* **P** **16 46 50.1 -0.2**
LPG pmax pmax
comp=Z,9.0nm,0.7s
LPL La Plagne 18.78 309 *eP* **P** **16 46 50.2 -0.2**
LPL pmax pmax
comp=Z,8.0nm,0.7s
SENIN Lac Senin/Sane 18.82 312 P **Pn** **16 46 51.0 -0.4**
SENIN IAmb IAmb 16 47 07.8
comp=Z,18nm,1.1s
SLE Schleitheim 18.86 317 P **P** **16 46 51.0 0.0**
SLE pmax pmax
comp=Z,12nm,1.0s
VRH Novokhopyorsk 18.89 28 *eP* **Pn** **16 46 51.7 -0.3**
VRH pmax pmax
comp=Z,30nm,0.6s
SUW Suwalki 18.94 352 *eP* **Pn** **16 46 52.8 +0.1**
SUW Suwalki 18.94 352 P **Pn** **16 46 52.7 +0.1**
SUW pmax pmax
comp=Z,18nm,0.8s
LPSR Galich'ya Gora 19.09 22 *eP* **Pn** **16 46 53.8 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
ORIF Oris-en-Rattie 19.09 307 *eP* **Pn** **16 46 55.8 +1.2**
ORIF pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.11 331 *eP* **P** **16 46 54.0 +0.3**
comp=Z,8.0nm,1.0s
CLL *i* pP **sP** **16 47 05.4 +1.5**
CLL *es*P pwP 16 47 11.0 +10
CLL *eS* **Sn** **16 50 18.0 -10**
CLL LmH 16 53 00.0
comp=N,100nm,18.7s
CLL LmH 16 53 00.0
comp=E,300nm,19.5s
CLL Collm 19.11 331 *eP* **P** **16 46 54.0 +0.3**
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL Collm 19.11 331 P **P** **16 46 52.4 -1.2**
MOX Moxa 19.18 328 P **P** **16 46 54.9 +0.4**
MOX pmax pmax
comp=Z,11nm,1.5s
MNK Minsk 19.19 1 *i* P **P** **16 46 53.1 -1.4**
comp=E,4.0nm,1.3s
MNK *i* P **P** **16 46 53.1 -1.4**
comp=N,32nm,1.2s
MNK *i* P **P** **16 46 53.1 -1.4**
comp=Z,17nm,0.8s
MNK *i* S **Sn** **16 50 29.4 -0.2**
MNK *i* SS **SnSn** **16 50 44.5 +0.7**
MNK *i* LQ LQ 16 52 31.5
MNK *i* LR LR 16 53 49.5
MNK *i* LRM MLR 16 55 06.8
comp=Z,77nm,16.3s
MNK *i* LRM MLR 16 55 18.4
comp=E,11nm,15.6s
MNK *i* LRM MLR 16 55 32.1
comp=N,53nm,14.2s
MNK *i* ScS **ScS** **16 58 26.6 -5.9**
BFO Black Forest 19.27 318 P **P** **16 46 54.8 -0.7**
BFO pmax pmax
comp=Z,4.0nm,0.7s
BFO Black Forest 19.27 318 **P** **16 46 54.8 -0.7**
GKP Gorka Klasztor 19.37 341 *eP* **Pn** **16 46 57.7 0.0**
GKP Gorka Klasztor 19.37 341 *eP* **Pn** **16 46 57.2 -0.5**
GKP Gorka Klasztor 19.37 341 P **Pn** **16 46 58.0 +0.3**
GKP pmax pmax
comp=Z,74nm,0.8s
RAYN Ar Rayn 19.54 122 P **Pn** **16 46 59.0 -1.0**
RAYN pmax pmax
comp=Z,9.0nm,1.2s
RAYN Ar Rayn 19.54 122 **Pn** **16 46 59.0 -1.0**
NACGM Naroch 19.59 359 *i* P **Pn** **16 47 05.5 +5.0**
NACGM *i* P **sP** **16 47 06.9 -2.3**
NACGM *i* P **sP** **16 47 06.9 -2.3**
NACGM *i* pP pP 16 47 14.9 +9.0
NACGM *i* PP **PnPn** **16 47 22.5 +8.4**
NACGM *i* S **Sn** **16 50 49.9 +10**
NACGM *i* sS pS 16 51 32.7 +37
NACGM *i* SS 16 52 04.1
NACGM *i* LQ LQ 16 53 02.2
NACGM *i* LR LR 16 54 29.8
CABF La Chapelle 19.67 312 *eP* **P** **16 46 59.6 -0.4**
CABF pmax pmax
comp=Z,9.0nm,0.6s
HINF Hinteralfeld 19.81 315 *eP* **Pn** **16 47 02.9 -0.2**
HINF pmax pmax
comp=Z,5.0nm,0.9s
VIVF Saint-Julien-l 19.86 306 *eP* **P** **16 47 01.7 -0.3**
VIVF pmax pmax
comp=Z,11nm,0.8s
IDID Didziasalis 20.01 359 *eP* Pn 16 47 04.6 -0.7
IIGN Ignalina 20.06 358 *eP* Pn 16 47 05.1 -0.8
HAU Haudompre 20.20 315 *eP* **P** **16 47 06.1 +0.4**
HAU pmax pmax
comp=Z,5.0nm,0.6s
PABE Paberze 20.34 354 *eP* Pn 16 47 08.1 -1.1
PABE IAmb IAmb 16 47 11.7
comp=Z,16nm,0.6s
OBN Obninsk 20.76 15 P **P** **16 47 11.3 -0.3**
comp=Z,2.3nm,0.4s,baz=174,slow=20,SNR=3.7
OBN LR LR 16 55 23.5
comp=Z,16nm,18.6s,baz=195,slow=37
OBN Obninsk 20.76 15 ⇑*i*P **P** **16 47 10.8 -0.8**
OBN *i* *PP **sP** **16 47 22.3 +0.4**
OBN pmax pmax
comp=Z,19nm,1.0s
OBN MLR MLR
comp=Z,68nm,16.0s
PBUR Paburge 21.06 351 *eP* **P** **16 47 15.2 +0.3**
PBUR IAmb IAmb 16 47 21.9
comp=Z,22nm,0.6s
LOR Lormes 21.33 311 *eP* **P** **16 47 17.9 0.0**
LOR pmax pmax
comp=Z,9.0nm,0.6s
AVF Avril sur Loir 21.45 310 *eP* **P** **16 47 19.2 +0.1**
AVF pmax pmax
comp=Z,8.0nm,0.8s
MOS Moscow 21.57 16 *eP* **P** **16 47 20.7 +0.4**
MOS *eS* **S** **16 51 15.1 -2.7**
MOS pmax pmax
comp=Z,33nm,0.8s
CAF Calviac 21.64 304 *eP* **P** **16 47 22.9 +1.7**
CAF pmax pmax
comp=Z,17nm,1.3s
MEM Membach 21.83 321 *dP* **P** **16 47 26.0 +2.8**
MEM *d*PnPn **PnPn** **16 47 43.0 -1.8**
BCLA Clavier 22.09 320 *dpP* pP 16 47 29.3 -3.5
RJF Les Rejaudoux 22.12 305 *eP* **P** **16 47 27.2 +0.8**
RJF pmax pmax
comp=Z,7.0nm,0.7s
BELG Belogornoye 22.27 34 P **P** **16 47 27.2 -0.6**
comp=Z,12nm,0.6s,baz=33,slow=1.8,SNR=12
BELG Belogornoye 22.27 34 *i* P **P** **16 47 26.8 -1.0**
BELG pmax pmax
comp=Z,4.0nm,0.9s
TAM Tamanrasset 22.88 243 P **P** **16 47 35.1 +0.4**
TAM pmax pmax
comp=Z,5.0nm,0.8s
TAM Tamanrasset 22.88 243 P **P** **16 47 35.1 +0.4**
MTSE Matsula 23.54 355 *eP* **P** **16 47 44.2 +3.4**
FLN La Foliniere 24.60 312 *eP* **P** **16 47 49.9 -1.0**
FLN pmax pmax
comp=Z,13nm,0.7s
GEYT Alibeck 24.63 75 P **P** **16 47 51.9 +0.6**
comp=Z,1.6nm,0.4s,baz=256,slow=11,SNR=3.1
GEYT Alibeck 24.63 75 P **P** **16 47 51.6 +0.3**
GRR Gorron 24.70 311 *eP* **P** **16 47 50.9 -0.8**
GRR pmax pmax
comp=Z,9.0nm,0.6s
ESBB Sonseca Array 25.30 289 P **P** **16 47 57.3 0.0**
ESBB IAmb IAmb 16 47 59.3
comp=Z,12nm,0.8s
ESDC Sonseca Array 25.30 289 P **P** **16 47 57.1 -0.2**
comp=Z,10nm,0.7s,baz=80,slow=9.5,SNR=42
ESDC Sonseca Array 25.30 289 P **P** **16 47 56.3 -1.0**
ESDC IAmb IAmb 16 47 58.9
comp=Z,19nm,1.2s
AAL Aland 25.36 351 *eP* **P** **16 47 57.5 0.0**
UPP Uppsala 25.39 348 *eP* **P** **16 47 56.3 -1.6**
PAB San Pablo 25.59 289 P **P** **16 47 59.6 -0.5**
PAB pmax pmax
comp=Z,8.0nm,0.8s
PAB San Pablo 25.59 289 P **P** **16 47 59.6 -0.5**
PAB IAmb IAmb 16 48 01.4
comp=Z,7.5nm,0.8s
SGMF Saint Gilles 25.71 309 *eP* **P** **16 48 02.8 +1.9**
SGMF pmax pmax
comp=Z,11nm,0.8s
QUIF Quistinic 25.99 308 *eP* **P** **16 48 02.5 -1.0**
QUIF pmax pmax
comp=Z,25nm,1.0s
FINES FINESS Array B 26.16 358 P **P** **16 48 03.9 -1.0**
comp=Z,2.4nm,0.7s,baz=166,slow=9.5,SNR=11
FINES LR LR 16 58 56.1
comp=Z,73nm,20.8s,baz=190,slow=38
FINES FINESS Array B 26.16 358 *i* P **P** **16 48 04.8 -0.1**
FINES pmax pmax
comp=Z,2.0nm,0.7s
FINES FINESS Array B 26.16 358 P **P** **16 48 04.0 -0.9**
FIA1 FINESS Array S 26.16 358 P **P** **16 48 03.9 -1.0**
FIA1 IAmb IAmb 16 48 10.4
comp=Z,9.0nm,1.1s
ROSF Rostrenen 26.19 309 *eP* **P** **16 48 04.0 -1.3**
ROSF pmax pmax
comp=Z,11nm,0.7s
MDT Midelt 26.68 274 LR LR 16 59 40.8
comp=Z,60nm,20.1s,baz=354,slow=39
KLMR Klimovskoe 26.69 13 *eP* **P** **16 48 07.4 -2.2**
KLMR pmax pmax
comp=Z,17nm,1.3s
KLMR Klimovskoe 26.69 13 *eP* **P** **16 48 07.4 -2.2**
KLMR AMP 16 48 10.0
comp=Z,17nm,1.3s
AKTO Aktyubinsk 26.73 46 P **P** **16 48 09.9 -0.2**
comp=Z,6.9nm,0.7s,baz=253,slow=7.7,SNR=15
NC602 NORSAR Array S 27.44 343 P **P** **16 48 15.4 -1.0**
ABKAR Akbulak array 27.48 50 P **P** **16 48 14.6 -2.3**
ABKAR IAmb IAmb 16 48 39.8
comp=Z,9.1nm,1.5s
MVO Moncorvo 27.65 293 *eP* **P** **16 48 18.3 -0.3**
NAO01 NORSAR Array S 27.69 342 P **P** **16 48 17.5 -1.2**
NC405 NORSAR Array S 27.73 343 P **P** **16 48 17.5 -1.5**
PBAR Barrancos 27.76 286 *eP* **P** **16 48 19.4 -0.1**
NOA NORSAR Array B 27.78 343 P **P** **16 48 17.6 -2.0**
comp=Z,2.3nm,0.9s,baz=145,slow=9.3,SNR=5.0
NOA LR LR 17 01 36.0
comp=Z,82nm,18.4s,baz=155,slow=41
PMRV Marv??o 27.95 289 *eP* **P** **16 48 20.8 -0.4**
NC204 NORSAR Array S 28.10 343 P **P** **16 48 22.6 +0.3**
PESTR Estremoz 28.14 288 P **P** **16 48 22.1 -0.8**
PVIS Viseu 28.30 292 *eP* **P** **16 48 24.7 +0.3**
PVAQ Vaqueiros 28.37 285 *eP* **P** **16 48 24.1 -0.8**
PVAQ Vaqueiros 28.37 285 P **P** **16 48 23.6 -1.3**
PCAB Cabril 28.41 294 *eP* **P** **16 48 25.5 +0.2**
EKA Eskdalemuir Ar 29.06 323 P **P** **16 48 28.6 -2.2**
comp=Z,0.3nm,0.4s,baz=125,slow=12,SNR=2.0
WSAR Wadi Sarin 29.55 106 P **P** **16 48 33.4 -2.2**
comp=Z,1.2nm,0.5s,baz=288,slow=9.6,SNR=1.3
ARU Arti 29.79 35 P **P** **16 48 37.1 -0.3**
comp=Z,0.3nm,0.4s,baz=263,slow=6.3,SNR=3.2
ARU LR LR 17 01 24.3
comp=Z,64nm,21.5s,baz=238,slow=38
TOA0 Torodi Ar. Sit 32.11 233 P **P** **16 48 58.1 -0.1**
TOA0 IAmb IAmb 16 48 59.5
comp=Z,8.5nm,0.9s
TORD Torodi Ar. Bea 32.11 233 P **P** **16 48 58.4 +0.2**
comp=Z,6.3nm,0.8s,baz=35,slow=9.7,SNR=37
TORD PcP **PcP** **16 51 47.2 +0.1**
comp=Z,0.9nm,0.8s,baz=89,slow=1.3,SNR=3.6
SOCY Socotra 33.22 127 P **P** **16 49 05.3 -2.6**
SOCY IAmb IAmb 16 49 08.0
comp=Z,13nm,1.3s
ARCES ARCESS Array B 34.29 359 P **P** **16 49 15.5 -1.2**
comp=Z,1.1nm,0.5s,baz=172,slow=8.4,SNR=9.9
BRVK Borovoye 34.78 46 *i* P **P** **16 49 21.3 +0.2**
BRVK pmax pmax
comp=Z,1.0nm,1.0s
KOWA Kowa 35.10 242 P **P** **16 49 24.2 0.0**
comp=Z,1.8nm,0.7s,baz=38,slow=12,SNR=6.3
KOWA Kowa 35.10 242 IAmb IAmb 16 49 25.1
comp=Z,4.2nm,1.1s
AAK Ala-Archa 36.84 64 P **P** **16 49 41.1 +2.0**
comp=Z,1.8nm,0.7s,baz=269,slow=10,SNR=8.0
AAK Ala-Archa 36.84 64 *ceP* **P** **16 49 39.4 +0.3**
AAK pmax pmax
comp=Z,21nm,1.3s
AAK Ala-Archa 36.84 64 P **P** **16 49 39.3 +0.3**
AAK IAmb IAmb 16 49 45.6
comp=Z,6.3nm,1.1s
KMBO Kilima Mbogo 37.38 164 LR LR 17 06 59.2
comp=Z,91nm,18.6s,baz=292,slow=39
NIL Nilore 37.47 79 P **P** **16 49 44.4 +0.1**
NIL pmax pmax
comp=Z,8.0nm,0.8s
NIL Nilore 37.47 79 P **P** **16 49 44.4 +0.1**
NIL IAmb IAmb 16 49 51.3
comp=Z,7.5nm,0.8s
KURBB Kurchatov Arra 39.51 51 P **P** **16 50 01.7 +0.5**
comp=Z,2.2nm,0.7s,baz=271,slow=8.5,SNR=17
KURBB PcP **PcP** **16 52 09.4 +0.9**
comp=Z,1.6nm,0.9s,baz=272,slow=4.1,SNR=4.9
KURK Kurchatov 39.57 51 P **P** **16 50 01.7 -0.1**

KURK							16 52 09.4	
KURK	**Kurchatov**	**39.57**	**51**	P		**P**	**16 50 01.7**	**-0.1**
KURK						**PcP**	**16 52 09.4**	**+0.7**
DBIC	**Dimbokro**	**41.21**	**234**	P		**P**	**16 50 15.9**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=16,slow=11,SNR=5.6							
DBIC				LR		LR	17 10 42.6	
	comp=Z,84nm,18.7s,baz=18,slow=41							
DBIC	**Dimbokro**	**41.21**	**234**	P		**P**	**16 50 16.1**	**+0.5**
DBIC				IAmb		IAmb	16 50 26.3	
	comp=Z,13nm,1.4s							
TIC	**Toumodi**	**41.33**	**234**	*e*PKP1		**P**	**16 50 16.1**	**-0.6**
KIC	**Kosan Boka**	**41.36**	**233**	*e*PKP1		**P**	**16 50 16.5**	**-0.4**
	comp=Z,18nm,1.0s							
LIC	**Lamto**	**41.65**	**234**	*e*PKP1		**P**	**16 50 15.7**	**-3.6**
	comp=Z,13nm,0.9s							
MK31	**Makanchi Array**	**42.06**	**57**	P		**P**	**16 50 22.5**	**+0.1**
MK31				pmax		pmax		
	comp=Z,6.0nm,1.5s							
MK31	**Makanchi Array**	**42.06**	**57**	P		**P**	**16 50 22.5**	**+0.1**
MKAR	**Makanchi Array**	**42.06**	**57**	P		**P**	**16 50 22.3**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=280,slow=6.5,SNR=24							
MKAR				LR		LR	17 09 12.5	
	comp=Z,44nm,19.9s,baz=270,slow=38							
MKAR	**Makanchi Array**	**42.06**	**57**	P		**P**	**16 50 22.5**	**0.0**
SPA0	**Spitsbergen Ar**	**43.23**	**357**	P		**P**	**16 50 32.5**	**+1.0**
ZALV	**Zalesovo Beam**	**43.49**	**46**	P		**P**	**16 50 33.3**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=254,slow=8.6,SNR=6.9							
ZALV				LR		LR	17 10 49.1	
	comp=Z,42nm,21.2s,baz=188,slow=39							
ZALV	**Zalesovo Beam**	**43.49**	**46**	*i* P		**P**	**16 50 33.9**	**+0.1**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**43.49**	**46**	P		**P**	**16 50 33.4**	**-0.4**
DGZ	**Jazzator, Alta**	**45.25**	**52**	*i* P		**P**	**16 50 46.6**	**-1.6**
DGZ				pmax		pmax		
	comp=Z,7.0nm,2.4s							
WMQ	**Urumqi**	**46.24**	**60**	*e*P		**P**	**16 50 57.9**	**+1.9**
NRIK	**Noril'sk**	**46.92**	**25**	P		**P**	**16 51 01.0**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=234,slow=6.2,SNR=8.1							
NRIK	**Noril'sk**	**46.92**	**25**	*ce*P		**P**	**16 51 01.4**	**+0.6**
NRIK				pmax		pmax		
	comp=Z,12nm,2.3s							
NRIK	**Noril'sk**	**46.92**	**25**	P		**P**	**16 51 02.0**	**+1.2**
NRIK				IAmb		IAmb	16 51 07.2	
	comp=Z,5.9nm,1.1s							
PYUN	**Piuthan**	**47.21**	**83**	*e*P		**P**	**16 51 05.1**	**+1.2**
KOLN	**Koldanda**	**47.83**	**83**	*e*P		**P**	**16 51 09.5**	**+0.7**
	comp=Z,47nm,1.2s							
GKN	**Gorkha**	**48.58**	**82**	*e*P		**P**	**16 51 15.1**	**+0.6**
DMN	**Daman**	**49.12**	**82**	*e*P		**P**	**16 51 20.2**	**+1.4**
KKN	**Kakani**	**49.19**	**82**	*e*P		**P**	**16 51 20.8**	**+1.6**
PKIN	**Phulchoki**	**49.37**	**82**	*e*P		**P**	**16 51 21.4**	**+0.7**
PKI	**Pulchoki**	**49.38**	**82**	*e*P		**P**	**16 51 21.1**	**+0.3**
	comp=Z,26nm,1.0s							
GUN	**Gumba**	**49.62**	**81**	*e*P		**P**	**16 51 23.8**	**+1.1**
	comp=Z,31nm,1.0s							
JIRN	**Jiri**	**49.98**	**82**	*e*P		**P**	**16 51 26.6**	**+1.2**
	comp=Z,17nm,1.1s							
RAMN	**Ramite**	**50.60**	**82**	*e*P		**P**	**16 51 30.4**	**+0.4**
	comp=Z,17nm,1.1s							
ODAN	**Odare**	**51.28**	**82**	*e*P		**P**	**16 51 36.5**	**+1.4**
TAPN	**Taplejung**	**51.33**	**81**	*e*P		**P**	**16 51 37.3**	**+1.7**
	comp=Z,17nm,1.1s							
NRS	**Narsarsuaq**	**51.72**	**324**	P		**P**	**16 51 37.4**	**-0.1**
NRS				pmax		pmax		
	comp=Z,106nm,1.5s							
NRS	**Narsarsuaq**	**51.72**	**324**	P		**P**	**16 51 37.4**	**-0.1**
ZAK	**Zakamensk**	**55.18**	**49**	*e*P		**P**	**16 52 04.2**	**+0.9**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.3s							
GTA	**Gaotai**	**56.17**	**63**	⇑P		**P**	**16 52 11.0**	**+0.4**
GTA				pP		pP	16 52 15.7	-2.9
GTA				sP		sP	16 52 18.4	-3.3
GTA				pmax		pmax		
	comp=Z,1.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,1.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,41nm,6.0s							
GTA				LR		LR		
	comp=N,95nm,16.7s							
GTA				LR		LR		
	comp=E,80nm,16.7s							
GTA				LR		LR		
	comp=Z,82nm,17.1s							
SONM	**Songino Array**	**57.88**	**51**	P		**P**	**16 52 23.9**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=304,slow=9.7,SNR=5.2							
ULN	**Ulaanbaatar**	**58.29**	**51**	*ce*P		**P**	**16 52 27.0**	**+1.5**
ULN				pmax		pmax		
	comp=Z,3.0nm,1.7s							
EUNU	**Eureka**	**59.40**	**349**	P		**P**	**16 52 32.5**	**-0.1**
EUNU				IAmb		IAmb	16 52 55.1	
	comp=Z,3.9nm,1.3s							
LBTB	**Lobatse**	**60.03**	**182**	P		**P**	**16 52 37.4**	**-0.2**
LBTB				pmax		pmax		
	comp=Z,5.0nm,0.9s							
LBTB	**Lobatse**	**60.03**	**182**	P		**P**	**16 52 37.4**	**-0.2**
LBTB				IAmb		IAmb	16 52 39.8	
	comp=Z,5.3nm,0.8s							
TIXI	**Tiksi**	**60.33**	**21**	*ce*P		**P**	**16 52 38.0**	**-1.0**
TIXI				pmax		pmax		
	comp=Z,47nm,2.5s							
TIXI	**Tiksi**	**60.33**	**21**	P		**P**	**16 52 39.0**	**0.0**
TIXI				IAmb		IAmb	16 52 40.4	
	comp=Z,2.8nm,0.9s							
LZH	**Lanzhou**	**60.38**	**65**	*e*P		**P**	**16 52 40.9**	**+0.8**
LZH				pP		pP	16 52 45.4	-2.7
LZH				sP		sP	16 52 48.2	-3.0
LZH				pmax		pmax		
	comp=Z,17nm,1.0s							
BOSA	**Boshof**	**63.62**	**182**	P		**P**	**16 53 03.0**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=26,slow=4.3,SNR=3.7							
BOSA				LR		LR	17 24 45.2	
	comp=Z,49nm,18.2s,baz=349,slow=40							
BOSA	**Boshof**	**63.62**	**182**	P		**P**	**16 53 03.0**	**+1.3**
BOSA	**Boshof**	**63.62**	**182**	P		**P**	**16 53 03.0**	**+1.3**
HHC	**Hu-ho-hao-te**	**63.93**	**57**	*e*P		**P**	**16 53 05.6**	**+1.8**
HHC				pmax		pmax		
	comp=Z,7.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,72nm,6.8s							
CMAR	**Chiang Mai Arr**	**64.62**	**85**	P		**P**	**16 53 08.9**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=301,slow=8.1,SNR=13							
CMAR	**Chiang Mai Arr**	**64.62**	**85**	*i* P		**P**	**16 53 09.6**	**+1.1**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**64.62**	**85**	P		**P**	**16 53 07.4**	**-1.1**
SUR	**Sutherland**	**67.64**	**186**	P		**P**	**16 53 29.2**	**+1.6**
E63A	**Oxbow**	**69.09**	**313**	P		**P**	**16 53 37.2**	**+0.7**
F64A	**Sherman**	**69.33**	**312**	P		**P**	**16 53 38.2**	**+0.3**
F63A	**Nahmakanta, Br**	**69.86**	**312**	P		**P**	**16 53 41.6**	**+0.2**
KLR	**Kul'dur**	**72.36**	**42**	*ce*P		**P**	**16 53 57.0**	**+0.6**
KLR				pmax		pmax		
	comp=Z,6.0nm,1.1s							
BILL	**Bilibino**	**72.42**	**15**	*i* P		**P**	**16 53 55.2**	**-1.2**
BILL				pmax		pmax		
	comp=Z,6.0nm,1.7s							
FRNY	**Flat Rock**	**73.02**	**313**	P		**P**	**16 54 00.9**	**+0.5**
NJ2	**Nanjing**	**73.26**	**62**	*e*P		**P**	**16 54 02.1**	**+0.1**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
VLDQ	**Val d'Or**	**73.42**	**318**	P		**P**	**16 54 04.0**	**+1.3**
VLDQ				IAmb		IAmb	16 54 06.1	
	comp=Z,5.0nm,1.0s							
C36M	**Paulatuk**	**73.57**	**350**	P		**P**	**16 54 01.7**	**-1.4**
C36M				IAmb		IAmb	16 54 08.3	
	comp=Z,2.3nm,0.8s							
FCC	**Fort Churchill**	**74.47**	**333**	P		**P**	**16 54 07.9**	**-0.7**
FCC				pmax		pmax		
	comp=Z,13nm,1.5s							
FCC	**Fort Churchill**	**74.47**	**333**	P		**P**	**16 54 07.9**	**-0.7**
FCC				IAmb		IAmb	16 54 08.4	
	comp=Z,13nm,1.5s							
MA2	**Magadan**	**74.50**	**26**	*ce*P		**P**	**16 54 08.5**	**-0.3**
MA2				pmax		pmax		
	comp=Z,7.0nm,1.3s							
MA2	**Magadan**	**74.50**	**26**	P		**P**	**16 54 08.7**	**-0.1**
MA2				IAmb		IAmb	16 54 11.1	
	comp=Z,5.0nm,0.9s							
USA0B	**Ussuriysk Arra**	**75.34**	**46**	*i* P		**P**	**16 54 13.1**	**-0.8**
USA0B	**Ussuriysk Arra**	**75.34**	**46**	P		**P**	**16 54 13.9**	**0.0**
USRK	**Ussuriysk Ar.**	**75.34**	**46**	P		**P**	**16 54 14.3**	**+0.4**
	comp=Z,5.9nm,0.7s,baz=272,slow=4.7,SNR=18							
USRK	**Ussuriysk Ar.**	**75.34**	**46**	P		**P**	**16 54 14.1**	**+0.1**
USRK	**Ussuriysk Ar.**	**75.34**	**46**	P		**P**	**16 54 14.1**	**+0.1**
INK	**Inuvik**	**75.72**	**353**	P		**P**	**16 54 15.1**	**-0.5**
INK				pmax		pmax		
	comp=Z,6.0nm,1.4s							
INK	**Inuvik**	**75.72**	**353**	P		**P**	**16 54 15.1**	**-0.5**
INK				IAmb		IAmb	16 54 24.0	
	comp=Z,6.3nm,1.4s							
TOLK	**Toolik Lake Re**	**76.33**	**359**	P		**P**	**16 54 19.3**	**0.0**
KSAR	**Wonju Array Be**	**76.62**	**54**	P		**P**	**16 54 20.7**	**-0.6**
KSAR	**Wonju Array Be**	**76.62**	**54**	P		**P**	**16 54 20.7**	**-0.6**
KSRS	**Korea Array**	**76.64**	**54**	P		**P**	**16 54 21.0**	**-0.4**
	comp=Z,3.7nm,1.0s,baz=292,slow=4.7,SNR=4.9							
KSRS				LR		LR	17 32 00.2	
	comp=Z,49nm,18.8s,baz=310,slow=39							
BMAR	**Burnt Mountain**	**77.40**	**357**	P		**P**	**16 54 25.8**	**+0.5**
COLD	**Coldfoot**	**77.76**	**359**	P		**P**	**16 54 27.3**	**0.0**
COLD				IAmb		IAmb	16 54 29.5	
	comp=Z,4.2nm,1.2s							
YKA	**Yellowknife Ar**	**77.88**	**343**	P		**P**	**16 54 27.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=33,slow=5.2,SNR=11							
YKA	**Yellowknife Ar**	**77.88**	**343**	*i* P		**P**	**16 54 27.0**	**-1.0**
YKA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
E46A	**Sault Ste Mari**	**78.20**	**319**	P		**P**	**16 54 30.6**	**+0.5**
Q56A	**Snyder Ridge,**	**79.76**	**311**	P		**P**	**16 54 39.5**	**+0.8**
Q56A				IAmb		IAmb	16 54 48.0	
	comp=Z,11nm,1.1s							
ILAR	**Eielson Array**	**80.15**	**358**	P		**P**	**16 54 39.9**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=351,slow=4.2,SNR=5.2							
FFC	**Flin Flon**	**80.39**	**333**	P		**P**	**16 54 41.4**	**-0.5**
FFC				pmax		pmax		
	comp=Z,13nm,1.5s							
FFC	**Flin Flon**	**80.39**	**333**	P		**P**	**16 54 41.4**	**-0.5**
FFC				IAmb		IAmb	16 54 42.2	
	comp=Z,13nm,1.4s							
WRH	**Wood River Hil**	**80.48**	**358**	P		**P**	**16 54 41.8**	**-0.4**
WRH				IAmb		IAmb	16 54 47.7	
	comp=Z,4.5nm,0.9s							
ULM	**Lac du Bonnet**	**81.25**	**327**	P		**P**	**16 54 45.5**	**-1.0**
	comp=Z,2.4nm,0.8s,baz=16,slow=9.8,SNR=3.8							
PETK	**Petropavlovsk-**	**81.89**	**28**	LR		LR	17 35 55.3	
	comp=Z,40nm,18.6s,baz=329,slow=39							
MJAR	**Matsushiro Arr**	**83.76**	**49**	P		**P**	**16 55 01.2**	**+1.3**
	comp=Z,3.8nm,1.1s,baz=306,slow=5.0,SNR=4.6							
MJAR	**Matsushiro Arr**	**83.76**	**49**	IAmb		IAmb	16 55 08.3	
	comp=Z,1.7nm,0.9s							
BDFB	**Brasilia**	**87.57**	**249**	LR		LR	17 35 20.4	
	comp=Z,52nm,18.6s,baz=138,slow=36							
ASAR	**Alice Springs**	**116.17**	**101**	PKP		**PKiKP**	**17 01 14.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=323,slow=1.6,SNR=4.6							

NNC 06 16:42:38.3±4.7, 37°.96N×71°.81E, h0^{km}, mb3.6, mpv3.2, 1C-5D, Error ellipse: s-maj=36.0km s-min=29.9km az=175.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**5.11**	**23**	⇓P	Pn	16 43 56.3	+0.1
	2.2nm,0.6s						
AAK				⇑S	Sn	16 44 56.1	+0.2
	3.5nm,0.5s						
KK31	**Karatay Array**	**5.23**	**350**	⇓P	Pn	16 43 59.0	+1.2
	1.6nm,0.3s,baz=173,slow=13,SNR=41						
KK31				⇓S	Sn	16 44 59.7	+0.8
	2.4nm,0.4s,baz=170,slow=21,SNR=14						
TKM2	**Tokmak 2**	**5.74**	**29**	⇓P	Pn	16 44 03.3	-1.6
	1.0nm,0.6s						
TKM2				⇓S	Sn	16 45 14.4	+2.8
	1.2nm,0.7s						

*SOME **06** 17:17:18.0, 41°.55N×84°.10E, h0^{km}*
*NNC **06** 17:17:23.4±8.1, 41°.46N×83°.56E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=55.9km s-min=26.9km az=139.0*
ISC 06 17:17:31.9±2.9, 41°.7N±0°.1×83°.54E±0°.1, h10^{km}, n11, σ1§87/21, 4C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.92**	**307**	*e*P	**Pn**	**17 18 20.4**	**+2.0**
	2.6nm,0.2s						
KTMS				*e*S	**Sg**	**17 19 04.0**	**-1.5**
	9.0nm,0.5s						
SHLS	**Shalkode**	**3.34**	**297**	*e*P	**Pn**	**17 18 25.0**	**+0.8**
	5.7nm,0.3s						
SHLS				*e*S	**Sb**	**17 19 12.8**	**+0.8**
	53nm,0.6s						
PDGK	**Podgornoye**	**3.40**	**300**	Pg	**Pb**	**17 18 29.6**	**-2.5**
	2.3nm,0.4s						
PDGK				Lg	Lg	17 19 14.8	
	17nm,0.8s						
UZB	**Uzynbulak**	**3.63**	**295**	*e*P	**Pb**	**17 18 35.1**	**-1.1**
	3.4nm,0.4s						
UZB				*e*S	**Sg**	**17 19 29.8**	**+1.3**
	11nm,0.7s						
DJR	**Jarkent**	**3.79**	**315**	*e*P	**Pb**	**17 18 38.6**	**-0.2**
	1.7nm,0.6s						
DJR				*e*S	**Sg**	**17 19 35.4**	**+1.9**
	5.3nm,0.6s						
KPKS	**Kokpek**	**3.98**	**298**	*e*P	**Pb**	**17 18 40.7**	**-1.5**
	7.0nm,0.3s						
KPKS				*e*S	**Sg**	**17 19 39.1**	**-0.7**
	20nm,0.6s						
SATY	**Saty**	**4.03**	**291**	*e*P	**Pb**	**17 18 41.9**	**-1.0**
	2.2nm,0.4s						
SATY				*e*S	**Sg**	**17 19 41.8**	**+0.6**
	13nm,0.7s						
MNBS	**Baschi**	**4.45**	**304**	*e*P	**Pb**	**17 18 47.7**	**-2.4**
	1.3nm,0.5s						
MNBS				*e*S	**Sg**	**17 19 51.3**	**-3.3**
	8.7nm,0.5s						
MDOK	**Medeo**	**5.01**	**289**	*e*P	**Pb**	**17 18 58.9**	**-0.9**
	1.3nm,0.5s						
MDOK				*e*S	**Sg**	**17 20 11.1**	**-1.7**
	6.0nm,0.7s						
MK31	**Makanchi Array**	**5.15**	**350**	Pg	**Pb**	**17 19 01.3**	**-0.7**
	0.2nm,0.5s,baz=176,slow=13,SNR=4.7						
MK31				Sn	**Sn**	**17 19 50.1**	**+1.7**
	0.7nm,0.5s,baz=164,slow=17,SNR=5.1						
MK31				⇑Lg	Lg	17 20 15.9	
	3.4nm,0.6s,baz=167,slow=28,SNR=4.2						
MAKZ	**Makanchi**	**5.21**	**348**	⇑Pg	**Pb**	**17 18 59.4**	**-3.6**
	0.3nm,0.6s						
MAKZ				⇑Sn	**Sn**	**17 19 51.2**	**+1.3**
	1.6nm,0.7s						
MAKZ				⇑Lg	Lg	17 20 19.6	
	4.1nm,1.1s						

*IDC **06** 17:19:53.2±1.2, 9°.34S×125°.37E, h0^{km}, mb4.0/4, mb1 4.3/7, mb1mx4.0/25, mbtmp4.2/7, ML4.4/3, Error ellipse: s-maj=32.0km s-min=25.2km az=71.0*
*NEIC **06** 17:19:58.7±2.0, 9°.65S±0°.06×125°.2E±0°.1, h57^{km}±10^{km}, mb4.1/10, Error ellipse: s-maj=16.8km s-min=2.3km az=61.0*
*DJA **06** 17:19:59.6±1.2, 10°S±5°×12°5E±°, h16^{km}±10^{km}, M4.5/7, mb4.5/6, mB4.9/2, MLv4.4/7, Mw(mB)4.2/2*
ISC 06 17:19:57.4±0.6, 9°.64S±0°.07×125°.32E±0°.06, h35^{km}, n44, σ2§24/44, mb4.1/9, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.04**	**264**		**Pn**	**17 20 15.5**	**-0.1**
SOEI	**Soe**	**1.04**	**264**	P	**Pn**	**17 20 15.5**	**-0.1**
SOEI				S	**Sn**	**17 20 29.2**	**+0.2**
BATI	**Baumata**	**1.72**	**251**	P	**Pn**	**17 20 27.0**	**+2.1**
	41nm,0.3s,baz=48,slow=1.9,SNR=43						
BATI				Sn	**Sn**	**17 20 48.5**	**+2.8**
	78nm,0.3s,baz=164,slow=17,SNR=6.2						
BATI	**Baumata**	**1.72**	**251**	P	**Pn**	**17 20 26.9**	**+2.1**
BATI				S	**Sn**	**17 20 48.4**	**+2.7**
MMRI	**Maumere**	**3.20**	**288**		**Pn**	**17 20 45.2**	**0.0**
MMRI	**Maumere**	**3.20**	**288**	P	**Pn**	**17 20 45.8**	**+0.6**
BASI	**Baing, Sumba**	**4.70**	**263**	P	**Pn**	**17 21 07.4**	**+1.5**
MTN	**Manton Dam**	**6.53**	**120**	Pn	Pn	17 21 37.7	+6.7
BNSI	**Bone**	**7.34**	**315**	P	**Pn**	**17 21 44.8**	**+2.7**
	0.1nm44nm,1.1s						
PLAI	**Plampang**	**7.49**	**276**	P	**Pn**	**17 21 44.3**	**+0.1**
	0.1nm744nm32nm,0.6s						
SANI	**Sanana**	**7.57**	**5**	P	Pn	17 21 50.0	+4.7
	0.1nm14nm,0.9s						
TWSI	**Taliwang, Sumb**	**8.38**	**275**	P	**Pn**	**17 21 54.4**	**-2.0**
FITZ	**Fitzroy Crossi**	**8.41**	**178**	Pn	**Pn**	**17 22 00.4**	**+3.6**
APSI	**Ampana**	**9.41**	**337**	P	Pn	17 22 16.1	+5.6
FAKI	**Fak Fak**	**9.59**	**46**	Pn	Pn	17 22 19.5	+6.4
JAGI	**Jajag, Banyuwa**	**11.09**	**275**	Pn	Pn	17 22 28.2	-5.3
WB0	**Warramunga Arr**	**13.35**	**140**	Pn	**Pn**	**17 23 05.9**	**+1.5**
WRA	**Warramunga Ar**	**13.45**	**141**	Pn	**Pn**	**17 23 07.2**	**+1.4**
	1.9nm,0.3s,baz=323,slow=13,SNR=76						
WRA				Sn	**Sn**	**17 25 30.6**	**-3.4**
	0.6nm,0.3s,baz=306,slow=22,SNR=6.9						
WRA	**Warramunga Ar**	**13.45**	**141**		**Pn**	**17 23 07.7**	**+1.9**
WB2	**Warramunga Ar**	**13.45**	**141**	Pn	**Pn**	**17 23 07.6**	**+1.7**
WR0	**Warramunga Ar**	**13.59**	**140**	Pn	**Pn**	**17 23 08.9**	**+1.2**
AS31	**Alice Springs**	**16.18**	**151**	P	**Pn**	**17 23 44.6**	**+2.4**
ASAR	**Alice Springs**	**16.18**	**151**	Pn	**Pn**	**17 23 44.6**	**+2.4**
	1.0nm,0.3s,baz=318,slow=11,SNR=87						
ASAR				Sn	**Sn**	**17 26 35.4**	**-5.3**
	0.3nm,0.3s,baz=333,slow=24,SNR=4.4						
ASAR	**Alice Springs**	**16.18**	**151**	Pn	**Pn**	**17 23 43.8**	**+1.5**
CISI	**Cisompet, Garu**	**17.43**	**275**	P	**Pn**	**17 23 52.0**	**-6.0**
CISI				IAmb	IAmb	17 23 59.4	
	comp=Z,32nm,0.7s						
SBUM	**Sibu**	**17.73**	**312**		**P**	**17 24 01.1**	**-1.1**
LEM	**Lembang**	**17.74**	**278**	P	**Pn**	**17 24 01.3**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=348,slow=23,SNR=4.6						
COEN	**Coen**	**18.00**	**106**	P	**P**	**17 24 08.2**	**+3.0**
COEN				IAmb	IAmb	17 24 16.7	
	comp=Z,12nm,1.5s						
LHI	**Lord Howe Isla**	**38.11**	**130**	P	**P**	**17 27 11.0**	**-2.2**
CMAR	**Chiang Mai Arr**	**38.17**	**317**	P	**P**	**17 27 13.2**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=143,slow=7.1,SNR=14						
CHTO	**Chiang Mai**	**38.42**	**317**	P	**P**	**17 27 13.0**	**-2.9**
CHTO				IAmb	IAmb	17 27 16.3	
	comp=Z,1.9nm,0.9s						
HHC	**Hu-ho-hao-te**	**51.82**	**347**	*e*P	**P**	**17 29 05.1**	**+3.1**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
SONM	**Songino Array**	**59.64**	**345**	P	**P**	**17 29 57.9**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=162,slow=6.2,SNR=5.2						
WMQ	**Urumqi**	**63.22**	**330**	*e*P	**P**	**17 30 23.1**	**+0.8**
NIL	**Nilore**	**65.55**	**314**	P	**P**	**17 30 37.3**	**-0.5**
MK31	**Makanchi Array**	**68.02**	**330**	P	**P**	**17 30 53.5**	**+0.4**
MK31				IAmb	IAmb	17 30 54.3	
	comp=Z,2.3nm,1.0s						
MKAR	**Makanchi Array**	**68.02**	**330**	P	**P**	**17 30 53.1**	**0.0**
	comp=Z,2.0nm,0.8s,baz=138,slow=7.8,SNR=18						
MKAR	**Makanchi Array**	**68.02**	**330**	P	**P**	**17 30 52.4**	**-0.7**
AAK	**Ala-Archa**	**69.67**	**322**	P	**P**	**17 31 04.4**	**+0.7**
AAK				IAmb	IAmb	17 31 05.4	
	comp=Z,1.7nm,0.8s						
ZAA0	**Zalesovo Array**	**72.00**	**336**	P	**P**	**17 31 15.4**	**-2.0**
ZAA0				IAmb	IAmb	17 31 17.3	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**72.00**	**336**	P	**P**	**17 31 16.1**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=123,slow=5.5,SNR=6.9						
ZALV	**Zalesovo Beam**	**72.00**	**336**	P	**P**	**17 31 15.7**	**-1.7**
TORD	**Torodi Ar. Bea**	**124.71**	**279**	PKP	**PKiKP**	**17 38 57.1**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=80,slow=2.0,SNR=2.1						
CPUP	**Villa Florida**	**144.15**	**176**	PKP	**PKPdf**	**17 39 32.0**	**+1.8**
	comp=Z,1.9nm,0.8s,baz=162,slow=6.4,SNR=3.4						

*IDC **06** 17:42:12.7±1.3, 6°.09S×103°.45E, h0^{km}, mb4.1/11, mb1 4.2/12, mb1mx3.9/44, mbtmp4.1/12, ML3.7/1, MS2.9/4, Ms1 2.9/4, ms1mx2.6/39, Error ellipse: s-maj=44.4km s-min=14.9km az=46.0*
*NEIC **06** 17:42:15.4±1.3, 6°.2S±0°.1×103°.4E±0°.1, h23^{km}±6^{km}, mb4.1/15, Error ellipse: s-maj=18.1km s-min=10.0km az=225.0*
*DJA **06** 17:42:16.4±0.4, 6°S±4°×10°4E±°, h10^{km}, M4.2/10, MLv4.2/10*
ISC 06 17:42:13.3±0.6, 6°.22S±0°.06×103°.45E±0°.05, h10^{km}, n51, σ1§64/52, mb4.0/17, MS2.9/3, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.25**	**57**	P	**Pb**	**17 42 36.0**	**-1.0**
KASI				S	**Sb**	**17 42 49.4**	**-3.8**
LWLI	**Liwa**	**1.34**	**27**	P	**Pg**	**17 42 38.3**	**-0.8**
BLSI	**Bandar Lampung**	**1.98**	**65**	P	**Pb**	**17 42 49.2**	**-0.3**
BLSI				S	**Sn**	**17 43 11.2**	**-0.6**
KLSI		**1.98**	**40**	P	**Pb**	**17 42 48.3**	**-1.2**
KLSI				S	**Sg**	**17 43 18.2**	**+1.0**
LHSI	**Lahat**	**2.38**	**2**	P	**Pb**	**17 42 55.3**	**-0.9**
KSI	**Kapahiang**	**2.69**	**342**	P	**Pb**	**17 42 59.6**	**-2.0**
DBJI	**Dramaga**	**3.30**	**96**	P	**Pn**	**17 43 07.4**	**+2.3**
CBJI	**Citeko**	**3.39**	**94**	P	**Pn**	**17 43 09.6**	**+3.3**
LEM	**Lembang**	**4.19**	**99**	Pn	**P

ZALV				LR	LR	18 22 07.9		
	comp=Z,20nm,18.4s,baz=254,slow=39							
ZALV	**Zalesovo Beam**	**61.96**	**348**	P	**P**	**17 52 32.8**	**-0.4**	
ABKAR	**Akbulak array**	**66.97**	**331**	P	**P**	**17 53 06.5**	**+0.3**	
MLZ	**Mavora Lakes**	**67.91**	**137**	P	**P**	**17 53 12.7**	**+0.4**	
KBZ	**Khabaz**	**73.72**	**319**	P	**P**	**17 53 48.8**	**+1.2**	
	comp=Z,1.9nm,0.9s,baz=215,slow=4.8,SNR=4.6							
FINES	**FINESS Array B**	**89.42**	**332**	P	**P**	**17 55 10.5**	**+0.3**	
	comp=Z,1.8nm,1.0s,baz=98,slow=5.8,SNR=1.5							
TXAR	**Lajitas Array**	**145.60**	**45**	PKPbc	**PKPab**	**18 01 54.0**	**+0.8**	
	comp=Z,0.7nm,0.6s,baz=298,slow=0.8,SNR=10							

IDC 06 17:51:46.4±2.0, 9°39S×125°33E, h0km, mb3.4/1, mb1 3.7/3, mb1mx3.4/34, mbtmp3.5/3, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/18, Error ellipse: s-maj=34.0km s-min=30.2km az=170.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**1.83**	**244**	Pn	Pb	17 52 20.3	-0.5
	6.3nm,0.3s,baz=130,slow=3.5,SNR=9.3						
BATI				Sn	Sn	17 52 42.3	-0.8
	13nm,0.3s,baz=357,slow=23,SNR=7.6						
WRA	**Warramunga Arr**	**13.63**	**141**	Pn	Pn	17 55 01.0	-0.2
	0.4nm,0.3s,baz=315,slow=15,SNR=15						
WRA				Sn	Sn	17 57 25.7	-7.9
	0.2nm,0.3s,baz=318,slow=25,SNR=4.6						
ASAR	**Alice Springs**	**16.40**	**151**	Pn	Pn	17 55 37.9	-0.2
	0.2nm,0.3s,baz=321,slow=11,SNR=16						
ASAR				Sn	Sn	17 58 32.1	-8.7
	0.1nm,0.3s,baz=323,slow=20,SNR=5.8						
PMG	**Port Moresby**	**21.54**	**92**	LR	LR	18 05 48.8	
	comp=Z,40nm,18.2s,baz=318,slow=39						
MKAR	**Makanchi Array**	**67.80**	**330**	P	P	18 02 46.0	-0.2
	0.4nm,0.9s,baz=133,slow=7.1,SNR=3.4						

*IDC **06** 17:52:51.9±7.9, 24°24S×177°44W, h152km±67km, mb4.1/13, mb1 4.2/14, mb1mx3.8/41, mbtmp4.5/14, Error ellipse: s-maj=32.1km s-min=15.3km az=64.0*
*NEIC **06** 17:52:56.6±1.8, 24°5S±0°1×177°7W±0°2, h193km±7km, mb4.6/41, Error ellipse: s-maj=23.0km s-min=15.3km az=90.0*
ISC 06 17:52:51.8±0.5, 24°28S±0°06×177°5W±0°1, h153km, n107, σ1s69/105, mb4.5/25, 3C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.96**	**184**	S	**Sn**	**17 55 03.4**	**+1.7**
	76nm,0.3s,baz=64,slow=20,SNR=2.7						
RAO	**Raoul Island**	**4.96**	**184**	Pn	**Pn**	**17 54 07.6**	**+2.9**
URZ	**Urewera**	**14.66**	**197**	P	**Pn**	**17 56 11.9**	**+0.1**
	4.8nm,0.3s,baz=301,slow=23,SNR=29						
URZ				S	Sn	17 58 39.3	-15
	2.3nm,0.3s,baz=112,slow=20,SNR=3.6						
URZ	**Urewera**	**14.66**	**197**		**Pn**	**17 56 11.3**	**-0.6**
DZM	**Mont Dzumac**	**14.91**	**275**	P	P	17 56 23.2	+6.2
	1.0nm,0.3s,baz=102,slow=15,SNR=11						
HIZ	**Hauiti**	**15.60**	**203**	Pn	**Pn**	**17 56 19.0**	**-4.4**
BKZ	**Black Stump Fm**	**15.68**	**197**	Pn	**Pn**	**17 56 20.5**	**-3.9**
BKZ				IAmb	IAmb	17 56 25.3	
	comp=Z,26nm,1.4s						
MSWZ	**Moikau Station**	**18.12**	**198**	P	**P**	**17 56 48.1**	**-3.9**
TCW	**Tory Channel**	**18.22**	**200**	P	**P**	**17 56 49.9**	**-3.2**
PLWZ	**Palliser**	**18.26**	**198**	P	**P**	**17 56 51.2**	**-2.5**
PLWZ	**Palliser**	**18.26**	**198**	P	**Pn**	**17 56 57.3**	**+1.9**
QRZ	**Quartz Range**	**18.48**	**204**	P	**P**	**17 56 53.3**	**-2.7**
QRZ	**Quartz Range**	**18.48**	**204**	P	**Pn**	**17 56 59.1**	**+1.1**
NNZ	**Nelson**	**18.52**	**202**	P	**P**	**17 56 53.5**	**-2.9**
NNZ	**Nelson**	**18.52**	**202**	P	**P**	**17 56 53.6**	**-2.8**
TUWZ	**Tuamarina**	**18.52**	**201**	P	**Pn**	**17 56 58.8**	**+0.3**
BSWZ	**Blackbirch Sta**	**18.80**	**200**	P	**P**	**17 56 56.3**	**-3.2**
THZ	**Tophouse**	**19.17**	**202**	P	**P**	**17 57 00.2**	**-3.3**
THZ				IAmb	IAmb	17 57 21.4	
	comp=Z,55nm,1.3s						
THZ	**Tophouse**	**19.17**	**202**	P	**P**	**17 57 01.1**	**-2.4**
KHZ	**Kahutara**	**19.54**	**200**	P	**P**	**17 57 03.4**	**-4.1**
KHZ				IAmb	IAmb	17 57 07.4	
	comp=Z,54nm,1.5s						
KHZ	**Kahutara**	**19.54**	**200**	P	**P**	**17 57 05.1**	**-2.4**
GVZ	**Greta Valley S**	**20.20**	**200**	P	**P**	**17 57 14.8**	**+0.2**
LTZ	**Lake Taylor**	**20.29**	**202**	P	**P**	**17 57 12.3**	**-3.3**
LTZ				IAmb	IAmb	17 57 13.8	
	comp=Z,46nm,1.3s						
LTZ	**Lake Taylor**	**20.29**	**202**	P	**P**	**17 57 14.8**	**-0.8**
OXZ	**Oxford**	**20.85**	**202**	P	**P**	**17 57 18.8**	**-2.7**
OXZ				IAmb	IAmb	17 57 21.8	
	comp=Z,16nm,0.8s						
OXZ	**Oxford**	**20.85**	**202**	P	**P**	**17 57 19.5**	**-2.0**
MQZ	**McQueen's Vall**	**20.99**	**200**	P	**P**	**17 57 21.5**	**-1.4**
MQZ				IAmb	IAmb	17 57 22.4	
	comp=Z,36nm,1.1s						
MQZ	**McQueen's Vall**	**20.99**	**200**	P	**P**	**17 57 22.4**	**-0.5**
RPZ	**Rata Peaks**	**21.53**	**203**	P	**P**	**17 57 27.1**	**-1.8**
FOZ	**Fox Glacier**	**21.84**	**205**	P	**P**	**17 57 30.4**	**-1.7**
LBZ	**Lake Benmore**	**22.43**	**204**	P	**P**	**17 57 35.0**	**-2.9**
ODZ	**Otahua Downs**	**22.84**	**202**	P	**P**	**17 57 38.6**	**-3.1**
ODZ				IAmb	IAmb	17 57 51.3	
	comp=Z,20nm,1.2s						
WKZ	**Wanaka**	**23.24**	**205**	P	**P**	**17 57 42.7**	**-2.7**
MLZ	**Mavora Lakes**	**24.04**	**205**	P	**P**	**17 57 51.2**	**-1.4**
DCZ	**Deep Cove**	**24.51**	**207**	P	**P**	**17 57 56.1**	**-0.7**
DCZ				IAmb	IAmb	17 58 24.9	
	comp=Z,26nm,1.1s						
WHZ	**Wether Hill Ro**	**24.54**	**205**	P	**P**	**17 57 55.6**	**-1.6**
WHZ				IAmb	IAmb	17 57 57.2	
	comp=Z,32nm,1.4s						
ARMA	**Armidale**	**28.02**	**251**	P	**P**	**17 58 31.6**	**+2.8**
ARMA				IAmb	IAmb	17 58 32.9	
	comp=Z,14nm,0.8s						
EIDS	**Eidsvold**	**28.49**	**261**	P	**P**	**17 58 33.8**	**+1.0**
CTAO	**Charters Tower**	**33.74**	**270**	P	**P**	**17 59 20.7**	**+1.7**
STKA	**Stephens Creek**	**36.69**	**249**	P	**P**	**17 59 45.6**	**+1.5**
	comp=Z,3.6nm,0.4s,baz=98,slow=11,SNR=31						
STKA	**Stephens Creek**	**36.69**	**249**	P	**P**	**17 59 44.5**	**+0.4**
PMG	**Port Moresby**	**36.77**	**288**	P	**P**	**17 59 46.0**	**+1.1**
	comp=Z,15nm,0.9s,baz=80,slow=5.2,SNR=7.1						
PMG	**Port Moresby**	**36.77**	**288**	P	**P**	**17 59 44.8**	**-0.1**
PMG				IAmb	IAmb	17 59 47.0	
	comp=Z,12nm,0.8s						
COEN	**Coen**	**38.41**	**278**	P	**P**	**17 59 58.8**	**+0.1**
COEN				IAmb	IAmb	18 00 02.9	
	comp=Z,17nm,1.4s						
BBOO	**Buckleboo**	**41.38**	**247**	P	**P**	**18 00 23.0**	**-0.1**
BBOO				IAmb	IAmb	18 00 51.9	
	comp=Z,54nm,1.4s						
AS31	**Alice Springs**	**44.21**	**260**	P	**P**	**18 00 46.5**	**+0.5**
ASAR	**Alice Springs**	**44.21**	**260**	P	**P**	**18 00 46.8**	**+0.9**
	comp=Z,4.5nm,0.3s,baz=95,slow=7.4,SNR=142						
ASAR				PcP	**PcP**	**18 02 28.1**	**0.0**
	comp=Z,2.0nm,0.8s,baz=99,slow=3.5,SNR=7.6						
ASAR	**Alice Springs**	**44.21**	**260**	P	**P**	**18 00 46.3**	**+0.3**
WR0	**Warramunga Arr**	**44.45**	**266**	P	**P**	**18 00 47.5**	**-0.4**
WB2	**Warramunga Arr**	**44.63**	**266**	P	**P**	**18 00 49.2**	**-0.1**
WB0	**Warramunga Arr**	**44.64**	**266**	P	**P**	**18 00 49.1**	**-0.3**
WB0				IAmb	IAmb	18 00 51.5	
	comp=Z,7.7nm,0.6s						
WRA	**Warramunga Arr**	**44.64**	**266**	P	**P**	**18 00 49.2**	**-0.2**
	comp=Z,4.4nm,0.5s,baz=103,slow=8.0,SNR=38						
WRA				PcP	**PcP**	**18 02 30.1**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=103,slow=3.6,SNR=8.4						
WRA	**Warramunga Arr**	**44.64**	**266**	P	**P**	**18 00 48.9**	**-0.5**
MTN	**Manton Dam**	**49.74**	**274**	P	**P**	**18 01 28.2**	**-0.7**
MTN				IAmb	IAmb	18 01 35.6	
	comp=Z,15nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.06**	**265**	P	**P**	**18 01 53.9**	**+0.3**
SBA	**Scott Base**	**54.14**	**184**	P	**P**	**18 02 02.3**	**+1.8**
VNDA	**Vanda**	**54.20**	**185**	P	**P**	**18 02 01.9**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=348,slow=6.4,SNR=7.3						
VNDA	**Vanda**	**54.20**	**185**	P	**P**	**18 02 01.8**	**+0.8**
SlJl	**Sorong**	**54.71**	**287**	P	**P**	**18 02 05.7**	**0.0**
	comp=Z,7.5nm,0.7s,baz=360,slow=17,SNR=9.3						
SOEI	**Soe**	**57.13**	**274**	P	**P**	**18 02 23.1**	**+0.1**
SOEI				IAmb	IAmb	18 02 41.5	
	comp=Z,6.6nm,0.8s						
MORW	**Morawa**	**58.87**	**250**	P	**P**	**18 02 34.3**	**-0.5**
MORW				IAmb	IAmb	18 02 50.7	
	comp=Z,17nm,1.2s						
CASY	**Casey**	**60.76**	**206**	P	**P**	**18 02 44.7**	**-2.3**
CASY				IAmb	IAmb	18 02 48.3	
	comp=Z,20nm,1.1s						
GIRL	**Giralia**	**62.03**	**256**	P	**P**	**18 02 56.5**	**+0.2**
QSPA	**South Pole Qui**	**65.80**	**180**	P	**P**	**18 03 21.0**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=353,slow=0.9,SNR=28						
QSPA	**South Pole Qui**	**65.80**	**180**	P	**P**	**18 03 20.9**	**+0.5**
QSPA				IAmb	IAmb	18 03 23.3	
	comp=Z,8.7nm,1.2s						
KSM	**Kuching**	**74.40**	**279**	P	**P**	**18 04 12.6**	**-0.9**
JNU	**Nakatsue**	**75.33**	**317**	P	**P**	**18 04 18.3**	**-0.1**
	comp=Z,16nm,1.1s,baz=141,slow=6.5,SNR=2.9						
BELA	**Belgrano 2**	**75.77**	**172**	P	**P**	**18 04 19.6**	**-0.6**
BELA				IAmb	IAmb	18 04 20.3	
	comp=Z,5.0nm,0.7s						
MAW	**Mawson**	**78.17**	**200**	P	**P**	**18 04 34.4**	**+0.6**
	comp=Z,3.9nm,0.5s,baz=142,slow=4.6,SNR=21						
MAW	**Mawson**	**78.17**	**200**	P	**P**	**18 04 34.5**	**+0.8**
H03S2	**Juan Fernandez**	**83.50**	**124**	T	T	19 36 36.1	
	baz=244,slow=75,SNR=5.3						
H03S1	**Juan Fernandez**	**83.51**	**124**	T	T	19 37 02.8	
	baz=244,slow=75,SNR=5.9						
H03S3	**Juan Fernandez**	**83.52**	**124**	T	T	19 36 33.6	
	baz=244,slow=75,SNR=4.8						
H03N3	**Juan Fernandez**	**83.66**	**124**	T	T	19 37 00.5	
	baz=250,slow=73,SNR=7.3						
H03N2	**Juan Fernandez**	**83.66**	**124**	T	T	19 37 02.0	
	baz=250,slow=73,SNR=4.0						
H03N1	**Juan Fernandez**	**83.68**	**124**	T	T	19 37 14.1	
	baz=250,slow=73,SNR=3.9						
SNAA	**Sanae**	**84.23**	**178**	P	**P**	**18 05 04.2**	**-1.7**
VNA3	**Neumayer Olymp**	**84.35**	**176**	P	**P**	**18 05 05.2**	**-1.2**
VNA2	**Neumayer--Watz**	**84.80**	**177**	P	**P**	**18 05 08.3**	**-0.2**
VNA1	**Neumayer--Stat**	**85.02**	**176**	P	**P**	**18 05 08.3**	**-1.4**
MA2	**Magadan**	**87.53**	**344**	P	**P**	**18 05 21.8**	**0.0**
	comp=Z,1.7nm,0.7s,baz=174,slow=5.6,SNR=6.9						
MA2	**Magadan**	**87.53**	**344**	P	**P**	**18 05 22.4**	**+0.6**
MA2				IAmb	IAmb	18 05 46.3	
	comp=Z,8.0nm,1.4s						
SEY	**Seymchan**	**90.14**	**347**	P	**P**	**18 05 34.9**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=151,slow=5.8,SNR=22						
SDCO	**Great Sand Dun**	**91.49**	**49**	P	**P**	**18 05 43.2**	**+1.9**
CMAR	**Chiang Mai Arr**	**91.79**	**289**	P	**P**	**18 05 44.5**	**+1.7**
	comp=Z,1.1nm,1.0s,baz=148,slow=2.0,SNR=6.5						
CMAR	**Chiang Mai Arr**	**91.79**	**289**	P	**P**	**18 05 42.4**	**-0.4**
ILAR	**Eielson Array**	**91.89**	**13**	P	**P**	**18 05 42.6**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=225,slow=4.7,SNR=2.3						
MKAR	**Makanchi Array**	**114.08**	**352**	PKiKP	PKPdf	18 11 11.7	-1.1
	comp=Z,0.3nm,0.5s,baz=155,slow=0.4,SNR=6.7						
ARCES	**ARCESS Array B**	**132.70**	**349**	PKP	**PKPdf**	**18 11 47.7**	**0.0**
	comp=Z,1.3nm,0.4s,baz=13,slow=1.6,SNR=14						
ARCES	**ARCESS Array B**	**132.70**	**349**		**PKPdf**	**18 11 47.5**	**-0.1**
FINES	**FINESS Array B**	**139.51**	**343**	PKhKP	PKPpre	18 11 51.9	
	comp=Z,1.4nm,0.9s,baz=64,slow=4.4,SNR=3.7						
FINES				PKP	**PKPdf**	**18 12 01.5**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=48,slow=2.8,SNR=8.3						
FINES	**FINESS Array B**	**139.51**	**343**		PKPpre	18 11 51.8	
NOA	**NORSAR Array B**	**142.77**	**353**	PKP	**PKPdf**	**18 12 06.2**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=13,slow=3.8,SNR=2.0						
AKASG	**Malin Array Be**	**146.50**	**329**	PKPbc	**PKPbc**	**18 12 14.2**	**-0.5**
	comp=Z,4.6nm,0.4s,baz=45,slow=4.4,SNR=22						
AKASG	**Malin Array Be**	**146.50**	**329**		**PKPdf**	**18 12 13.1**	**-0.1**
BRTR	**Keskin Array B**	**149.61**	**308**	PKPbc	**PKPbc**	**18 12 23.0**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=305,slow=37,SNR=2.2						
OSTC	**Ostas**	**151.69**	**341**	*e*PKP	**PKPbc**	**18 12 27.9**	**-0.1**
OSTC				*e*PKPAB	**PKPab**	**18 12 35.4**	**-1.8**
CLL	**Collm**	**151.83**	**346**	*i* PKPbc	**PKiKP**	**18 12 28.5**	**0.0**
	comp=Z,7.0nm,0.9s						
DPC	**Dobruska-Polom**	**151.84**	**341**	*e*PKP	**PKiKP**	**18 12 28.6**	**-0.1**
DPC				*e*PKPAB	**PKPab**	**18 12 35.3**	**-2.6**
KRLC	**Kraliky**	**151.95**	**340**	*e*PKP	**PKiKP**	**18 12 29.0**	**+0.1**
KRLC				*e*PKPAB	**PKPab**	**18 12 36.1**	**-2.3**
KHC	**Kasperske Hory**	**153.71**	**343**	*e*PKPAB	**PKPab**	**18 12 46.9**	**+1.1**
GERES	**GERESS Array B**	**153.94**	**343**	PKPbc	**PKPbc**	**18 12 32.8**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=15,slow=4.1,SNR=1.9						
GERES				PKPab	**PKPab**	**18 12 46.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=354,slow=4.9,SNR=2.7						
CONA	**Conrad Observa**	**154.12**	**339**	*e*P	**PKPbc**	**18 12 32.3**	**-1.2**
	comp=Z,2.8nm,0.8s						
RETA	**Reutte**	**155.92**	**346**	*e*P	**PKPdf**	**18 12 26.1**	**-1.6**
	comp=Z,2.6nm,1.0s						
MYKA	**Terra Mystica**	**155.97**	**341**	*e*P	**PKPdf**	**18 12 28.2**	**+0.4**
	comp=Z,4.4nm,1.1s						
MOTA	**Moosalm**	**155.98**	**345**	*e*P	**PKPdf**	**18 12 29.0**	**+1.1**
	comp=Z,4.5nm,1.3s						
TORD	**Torodi Ar. Bea**	**168.90**	**176**	PKP	**PKPdf**	**18 12 39.6**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=285,slow=2.0,SNR=2.8						
TORD				PKPab	**PKPab**	**18 13 52.2**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=190,slow=3.4,SNR=2.4						

*NEIC **06** 17:58:06.5±3.3, 31°22N±0°06×115°90W±0°03, h7km±7km, Error ellipse: s-maj=9.1km s-min=2.6km az=200.0*
*ECX **06** 17:58:07.1±0.8, 31°22N×115°89W, h6km±6km, MD3.3, ML3.5, Fault plane solution: NP1:φ=3.00000°, δ=38.00000°, λ=-42.00000°.*
*PAS **06** 17:58:07.1±2.9, 31°23N±0°05×115°89W±0°04, h12km±6km, Error ellipse: s-maj=7.6km s-min=3.3km az=205.0*
*MEX **06** 17:58:07.5±1.0, 31°13N×115°90W, h7km±13km, MD3.9*
*ANF **06** 17:58:08.1±1.8, 31°33N×115°95W, h12km, ML3.3/7, Error ellipse: s-maj=11.7km s-min=9.1km az=177.0, Hypocentre not reviewed by the ISC*
ISC 06 17:58:02.3±1.6, 31°06N±0°05×116°00W±0°03, h3km±10km, n84, σ1s35/100, 5C-5D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVX	**San Vicente**	**0.34**	**322**	⇑*i*P	**Pn**	**17 58 13.1**	**-1.0**
SVX				*e*S	**Sb**	**17 58 17.4**	**+0.5**
VTX	**Valle De La Tr**	**0.38**	**29**	⇑*i*P	**Pb**	**17 58 11.1**	**-0.7**
VTX				*e*S	**Sg**	**17 58 13.9**	**-0.8**
SPIG	**San Pedro Mart**	**0.46**	**91**	⇓*e*P	**Pn**	**17 58 14.8**	**-1.3**
	baz=283,slow=16						
SPIG				*e*S	**Sb**	**17 58 19.9**	**-0.7**
SPIG	**San Pedro Mart**	**0.46**	**91**		**Pn**	**17 58 14.8**	**-1.3**
SPIG					**Sb**	**17 58 19.9**	**-0.7**
SPIG	**San Pedro Mart**	**0.46**	**91**	*e*P	**Pb**	**17 58 14.5**	**+1.3**
SPIG				*e*S	**Sb**	**17 58 20.2**	**-0.4**
SPX	**San Pedro Mart**	**0.46**	**92**		**Pn**	**17 58 14.8**	**-1.3**
SPX					**Sb**	**17 58 20.2**	**-0.4**
SPX	**San Pedro Mart**	**0.46**	**92**	IAML		17 58 20.8	
	comp=E,1μm,0.2s						
SPX				IAML		17 58 21.2	
	comp=N,3μm,0.5s						
SPX	**San Pedro Mart**	**0.46**	**92**	⇓*i*P	**Pn**	**17 58 14.8**	**-1.3**
SPX				*e*S	**Sb**	**17 58 20.1**	**-0.4**
SPX				IAML		17 58 21.3	
	comp=N,4μm,0.6s						
SPX				⇑*e*		17 58 21.3	
SJX	**San Joaquin**	**0.71**	**3**	*e*P	**Pn**	**17 58 21.1**	**+2.0**
SJX				*e*S	**Sn**	**17 58 31.6**	**+1.1**
SJX				IAML		17 58 32.3	
	comp=N,3μm,0.1s						
SJX				⇑*e*		17 58 32.3	
ECBX	**El Chinero**	**0.92**	**63**	⇑*i*P	**Pb**	**17 58 20.4**	**-0.4**
ECBX				*e*S	**Sg**	**17 58 30.3**	**-1.4**
ESJX	**Sierra Juarez**	**0.95**	**3**		**Pb**	**17 58 21.2**	**-0.2**
ESJX					**Sg**	**17 58 31.7**	**-1.0**
ESJX	**Sierra Juarez**	**0.95**	**3**	IAML		17 58 32.3	
	comp=N,2μm,0.1s						
ESJX				IAML		17 58 32.3	
	comp=E,2μm,0.2s						
CCX	**Cicese**	**0.99**	**325**		**Pn**	**17 58 23.7**	**+0.7**
CCX					**Sn**	**17 58 36.2**	**-1.3**
CCX	**Cicese**	**0.99**	**325**	IAML		17 58 38.1	
	comp=E,2μm,0.3s						
CCX	**Cicese**	**0.99**	**325**	⇓*i*P	**Pn**	**17 58 23.7**	**+0.7**
CCX				*i* S	**Sn**	**17 58 36.2**	**-1.3**
SFX	**San Felipe**	**0.99**	**91**		**Pn**	**17 58 23.9**	**+0.9**
SFX					**Sb**	**17 58 35.4**	**0.0**
SFX	**San Felipe**	**0.99**	**91**	IAML		17 58 37.2	
	comp=N,1μm,0.6s						
SFX				IAML		17 58 37.3	
	comp=E,1μm,0.2s						
SFX	**San Felipe**	**0.99**	**91**	*e*P	**Pn**	**17 58 23.9**	**+0.9**
SFX				*e*S	**Sn**	**17 58 36.3**	**-1.2**
CBX	**Cerro Bola**	**1.37**	**336**		**Pg**	**17 58 29.1**	**+0.5**
CBX					**Sn**	**17 58 45.7**	**-1.5**
CBX	**Cerro Bola**	**1.37**	**336**	IAML		17 58 49.5	
	comp=E,489nm,0.3s						
CBX				IAML		17 58 49.8	
	comp=N,406nm,0.4s						
CBX	**Cerro Bola**	**1.37**	**336**	⇓*e*P	**Pg**	**17 58 29.1**	**+0.5**
CBX				*e*S	**Sn**	**17 58 45.9**	**-1.4**
CBX				⇓*e*		17 58 49.5	
CBX				IAML		17 58 49.5	
	comp=E,949nm,0.3s						
CPBX	**Cerro Prieto**	**1.48**	**23**		**Pg**	**17 58 31.5**	**+0.8**
TJIG	**Tijuana**	**1.49**	**338**	*e*P	**Pg**	**17 58 30.8**	**0.0**
TJIG				*e*S	**Sn**	**17 58 48.1**	**-1.7**
TJIG	**Tijuana**	**1.49**	**338**		**Pg**	**17 58 30.8**	**0.0**
TJIG					**Sn**	**17 58 48.1**	**-1.7**
MBIG	**Mexicali**	**1.51**	**27**	*i* P	**Pg**	**17 58 33.0**	**+1.7**
MBIG				*e*S	**Sg**	**17 58 51.4**	**+0.5**
MBIG	**Mexicali**	**1.51**	**27**		**Sg**	**17 58 51.4**	**+0.5**
RMX	**La Rumorosa**	**1.54**	**358**		**Pb**	**17 58 31.1**	**-0.5**
RMX					**Sn**	**17 58 48.1**	**-3.3**
RMX	**La Rumorosa**	**1.54**	**358**	IAML		17 58 54.4	
	comp=E,857nm,0.9s						
RMX				IAML		17 58 54.4	
	comp=N,660nm,0.6s						
RMX	**La Rumorosa**	**1.54**	**358**	*e*P	**Pb**	**17 58 30.9**	**-0.7**
RMX				*e*S	**Sn**	**17 58 48.1**	**-3.3**
YUH	**Yuha Desert**	**1.59**	**2**		**Pg**	**17 58 32.3**	**-0.5**
YUH					**Sn**	**17 58 50.2**	**-2.1**
IKP	**In-Ko-Pah, Jac**	**1.59**	**357**		**Pg**	**17 58 32.9**	**+0.1**
IKP					**Sb**	**17 58 50.9**	**-2.0**
IKP	**In-Ko-Pah, Jac**	**1.59**	**357**	P		17 58 32.8	
	baz=172,SNR=77						
IKP				S		17 58 50.9	
	baz=172						
TKX	**Tecate**	**1.59**	**341**		**Sn**	**17 58 50.9**	**-1.6**
TKX	**Tecate**	**1.59**	**341**		**Pb**	**17 58 32.4**	**0.0**
TKX	**Tecate**	**1.59**	**341**	IAML		17 58 52.1	
	comp=N,848nm,0.1s						
TKX				IAML		17 58 52.2	
	comp=E,1μm,0.2s						
SGL	**Mount Signal**	**1.61**	**8**		**Pg**	**17 58 32.6**	**-0.4**
SGL					**Sb**	**17 58 51.5**	**-1.7**
TJX	**Tijuana**	**1.70**	**329**		**Pg**	**17 58 35.3**	**+0.3**
BAR	**Barrett**	**1.72**	**341**		**Pb**	**17 58 34.3**	**-0.1**
BAR					**Sn**	**17 58 54.3**	**-1.2**
BAR	**Barrett**	**1.72**	**341**	IAML		17 59 00.1	
	comp=N,582nm,0.2s						
BAR	**Barrett**	**1.72**	**341**	*e*P	**Pb**	**17 58 34.4**	**-0.1**
OLP	**Otay Lakes Par**	**1.74**	**333**		**Pb**	**17 58 34.6**	**-0.1**
OLP	**Otay Lakes Par**	**1.74**	**333**	*e*P	**Pg**	**17 58 35.5**	**-0.1**
CRR	**Carrizo Plain**	**1.83**	**1**		**Pg**	**17 58 37.1**	**-0.2**
CBKC	**Canebrake**	**1.85**	**354**		**Pg**	**17 58 37.6**	**-0.1**
SDRC	**San Diego Road**	**1.85**	**335**		**Pg**	**17 58 37.3**	**-0.5**
SDRC	**San Diego Road**	**1.85**	**335**	*e*P	**Pb**	**17 58 37.2**	**+0.4**
MONP2	**Monument Peak**	**1.86**	**349**		**Pg**	**17 58 38.1**	**0.0**
MONP2	**Monument Peak**	**1.86**	**349**	P		17 58 37.2	
	baz=164,SNR=39						
MONP2				S		17 58 59.3	
	baz=164						
SWSC	**Sam W. Stewart**	**1.89**	**5**	P		17 58 38.0	
	baz=182,SNR=36						
SWSC				S		17 59 00.7	
	baz=182						
SWSC	**Sam W. Stewart**	**1.89**	**5**		**Pg**	**17 58 38.7**	**+0.2**
EML	**El Monte Cty P**	**1.96**	**339**		**Pb**	**17 58 38.6**	**-0.1**
109C	**Camp Elliot, M**	**2.05**	**333**		**Pb**	**17 58 40.1**	**-0.1**
109C	**Camp Elliot, M**	**2.05**	**333**	P		17 58 40.2	
	baz=148,SNR=8.2						
109C				S		17 59 04.8	
	baz=148						
CPE	**Camp Elliot**	**2.05**	**333**		**Pb**	**17 58 40.4**	**+0.2**
HWB	**Hans Werner Br**	**2.13**	**338**		**Pb**	**17 58 41.7**	**+0.3**
MATG	**Mataguay Scout**	**2.21**	**346**		**Pb**	**17 58 42.7**	**-0.1**
GLA	**Glamis**	**2.23**	**26**		**Pn**	**17 58 40.5**	**+0.4**
GLA				IAML		17 59 13.6	
	comp=N,139nm,0.5s						
GLA				IAML		17 59 21.9	
	comp=E,160nm,0.8s						
GLA	**Glamis**	**2.23**	**26**	P		17 58 42.2	
	baz=206,SNR=24						

BRBB				*e*S		**Sn**	**18 21 01.6**	**-3.0**
BRBA	**Barentsburg A**	**4.85**	**123**	*e*P		**Pn**	**18 20 10.0**	**+0.8**
BRBA				*e*S		**Sn**	**18 21 01.9**	**-3.4**
BRBA				IAML			18 21 18.5	
	comp=Z,6.0nm,0.3s							
SPA0	**Spitsbergen Ar**	**5.04**	**118**	*e*P		**Pn**	**18 20 11.3**	**-0.5**
SPA0				*e*S		**Sn**	**18 21 04.9**	**-5.1**
SPA0				IAML			18 21 13.1	
	comp=Z,3.9nm,0.8s							
SPA0	**Spitsbergen Ar**	**5.04**	**118**	*e*P		**Pn**	**18 20 11.2**	**-0.7**
SPA0				*e*S		**Sn**	**18 21 06.2**	**-3.8**
SPITS	**Spitsbergen Ar**	**5.04**	**118**	Pn		**Pn**	**18 20 12.0**	**+0.2**
	baz=316,slow=2.3,SNR=574							
SPITS				Sn		**Sn**	**18 21 06.3**	**-3.6**
	baz=206,slow=5.6,SNR=0.8							
DAG	**Danmarks Havn**	**5.22**	**214**	*e*		**Pn**	**18 20 14.6**	**+0.3**
	baz=28,slow=14							
DAG				*i* P		**Pn**	**18 20 15.5**	**+1.2**
DAG				*i* S		**Sn**	**18 21 12.2**	**-2.2**
DAG				IAML			18 21 18.4	
	comp=Z,36nm,0.4s							
DAG	**Danmarks Havn**	**5.22**	**214**	*e*		**Pn**	**18 20 14.6**	**+0.3**
	baz=28,slow=14							
DAG				*i* P		**Pn**	**18 20 15.5**	**+1.2**
DAG				*i* S		**Sn**	**18 21 12.2**	**-2.2**
DAG				IAML			18 21 18.4	
	comp=Z,36nm,0.4s							
HSPB	**Hornsund (broa**	**5.89**	**127**	*e*P		**Pn**	**18 20 23.7**	**+0.2**
HSPB				*e*S		**Sn**	**18 21 25.9**	**-5.0**
HSPB				IAML			18 21 31.8	
	comp=Z,3.6nm,0.7s							
HSPB	**Hornsund (broa**	**5.89**	**127**	*e*P		**Pn**	**18 20 23.5**	**+0.1**
HSPB				*e*S		**Sn**	**18 21 28.5**	**-2.3**
DBG	**Daneborg**	**7.69**	**211**	*i* P		**Pn**	**18 20 48.9**	**+0.7**
DBG				*i* S		**Sn**	**18 22 10.6**	**-4.6**
DBG				IAML			18 22 19.2	
	comp=Z,19nm,0.3s							
DBG	**Daneborg**	**7.69**	**211**	*i* P		**Pn**	**18 20 48.9**	**+0.7**
DBG				*i* S		**Sn**	**18 22 10.6**	**-4.6**
DBG				IAML			18 22 19.2	
	comp=Z,19nm,0.3s							
ZFI	**Zemlya Franca-**	**8.05**	**67**	*e*P		**Pn**	**18 20 50.1**	**-2.9**
ZFI				*e*S		Sn	18 22 11.9	-12
SUMG	**Summit**	**11.22**	**237**	*i* P		**Pn**	**18 21 37.0**	**+0.1**
SUMG	**Summit**	**11.22**	**237**	*i* P		**Pn**	**18 21 37.0**	**+0.1**
RES	**Resolute Bay**	**17.53**	**298**	P		**Pn**	**18 22 55.5**	**-4.8**
	comp=Z,0.1nm,0.3s,baz=14,slow=16,SNR=6.7							
RES				S		Sn	18 25 58.6	-16
	comp=Z,0.1nm,0.3s,baz=252,slow=16,SNR=2.1							
NOA	**NORSAR Array B**	**20.96**	**157**	P		Pn	18 23 41.5	-0.1
	comp=Z,0.7nm,0.8s,baz=346,slow=9.5,SNR=3.6							
FINES	**FINESS Array B**	**21.78**	**137**	P		**P**	**18 23 50.6**	**+2.8**
	comp=Z,2.0nm,0.8s,baz=302,slow=11,SNR=3.5							
NRIK	**Noril'sk**	**22.91**	**66**	P		**P**	**18 24 02.2**	**+2.5**
	comp=Z,1.1nm,0.4s,baz=50,slow=4.6,SNR=2.1							
NRIK				LR		LR	18 34 16.0	
	comp=Z,85nm,18.3s,baz=354,slow=40							
FRB	**Frobisher Bay**	**23.64**	**261**	P		**P**	**18 24 06.0**	**-1.1**
	comp=Z,2.7nm,1.0s,baz=19,slow=11,SNR=3.6							
YKA	**Yellowknife Ar**	**31.48**	**303**	P		**P**	**18 25 18.2**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=28,slow=9.4,SNR=4.5							
AKASG	**Malin Array Be**	**32.69**	**138**	P		**P**	**18 25 29.8**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=353,slow=9.5,SNR=5.2							
ULM	**Lac du Bonnet**	**40.74**	**280**	P		**P**	**18 26 38.0**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=10,slow=6.0,SNR=3.7							
MKAR	**Makanchi Array**	**43.79**	**83**	P		**P**	**18 27 03.5**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=336,slow=8.5,SNR=3.8							
SONM	**Songino Array**	**46.20**	**60**	P		**P**	**18 27 22.8**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=358,slow=4.8,SNR=2.2							
SONM				LR		LR	18 49 13.6	
	comp=Z,46nm,18.4s,baz=344,slow=39							
NVAR	**Mina Array Bea**	**55.50**	**298**	P		**P**	**18 28 31.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=12,slow=4.9,SNR=2.2							
TXAR	**Lajitas Array**	**62.39**	**283**	P		**P**	**18 29 19.9**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=27,slow=3.9,SNR=6.4							
TORD	**Torodi Ar. Bea**	**68.33**	**172**	P		**P**	**18 29 58.9**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=3.6,slow=5.6,SNR=4.8							

IDC 06 18:27:18.4±8.7,5°26S×150°41E,h75km±62km, mb2.8/2, mb1 3.2/3, mb1mx2.9/30, mbtmp3.2/3, ML1.5/1, Error ellipse: s-maj=131.6km s-min=56.9km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.23**	**218**	P		Pn	18 28 34.2	0.0
	1.0nm,0.3s,baz=50,slow=16,SNR=8.5							
PMG				S		Sn	18 29 34.2	+1.0
	2.9nm,0.3s,baz=151,slow=20,SNR=7.3							
WRA	**Warramunga Arr**	**21.39**	**226**	P		P	18 32 00.2	0.0
	0.6nm,0.6s,baz=51,slow=10,SNR=6.9							
ASAR	**Alice Springs**	**24.25**	**219**	P		P	18 32 28.2	-0.4
	0.4nm,0.7s,baz=52,slow=8.6,SNR=8.8							
TORD	**Torodi Ar. Bea**	**148.16**	**286**	PKPbc		PKPbc	18 46 56.6	-0.2
	0.3nm,0.5s,baz=70,slow=2.2,SNR=2.5							

*SKO **06** 18:28:01.8,41°.29N×22°.66E, h15km*
*SOF **06** 18:28:20.2,41°.26N×22°.67E, h5km, MD2.8*
*ATH **06** 18:28:21.6,41°.28N×22°.70E, h12km±4km, ML2.4/5, Error ellipse: s-maj=4.4km s-min=1.1km az=157.0*
*THE **06** 18:28:22.3,41°.24N×22°.75E, h2km±1km, ML2.2/12, Error ellipse: s-maj=1.4km s-min=0.6km az=178.0*
*BEO **06** 18:28:23.4±0.3,41°.34N×22°.55E, h4km±3km, ML2.2/7*
ISC 06 18:28:21.6±0.9,41°.28N±0°.02×22°.70E±0°.02, h6km±7km, n47, σ0967/76, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**292**	*e*Pg		**Pg**	**18 28 23.8**	**0.0**
VAY				*e*Sg		**Sg**	**18 28 25.6**	**+0.2**
VAY	**Valandovo**	**0.10**	**292**	*i*Pg		**Pg**	**18 28 23.9**	**0.0**
VAY				*i* Sg		**Sg**	**18 28 25.7**	**+0.3**
VAY				*e*Lg		Lg	18 28 25.8	
	comp=N,2μm,0.2s							
GRG	**Griva**	**0.39**	**214**	P		**Pg**	**18 28 29.0**	**-0.2**
GRG				S		**Sg**	**18 28 35.0**	**+0.6**
GRG				AML		AML	18 28 35.3	
	comp=E,1848μm,0.2s							
GRG				AML		AML	18 28 35.8	
	comp=N,3194μm,0.4s							
GRG	**Griva**	**0.39**	**214**	P		**Pg**	**18 28 29.0**	**-0.2**
GRG				S		**Sg**	**18 28 34.8**	**+0.4**
	comp=N,1μm,0.3s							
STIP	**Stip**	**0.56**	**317**	*i*Pg		**Pg**	**18 28 31.1**	**-1.4**
STIP				*i* Sg		**Sg**	**18 28 39.6**	**-0.1**
STIP				*e*Lg		Lg	18 28 39.9	
	comp=N,146nm,0.3s							
KKB	**Krupnik**	**0.65**	**26**	*i* Pg		**Pg**	**18 28 33.8**	**-0.4**
SOH	**Sokhos**	**0.68**	**133**	P		**Pg**	**18 28 34.1**	**-0.5**
SOH				S		**Sg**	**18 28 43.5**	**+0.1**
SOH				AML		AML	18 28 45.6	
	comp=E,1173μm,0.4s							
SOH				AML		AML	18 28 46.6	
	comp=N,1068μm,0.4s							
SOH	**Sokhos**	**0.68**	**133**	P		**Pg**	**18 28 34.0**	**-0.6**
SOH				S		**Sg**	**18 28 42.1**	**-1.4**
	comp=N,442nm,0.4s							
THE	**Thessaloniki**	**0.68**	**162**	P		**Pg**	**18 28 34.3**	**-0.4**
THE				AML		AML	18 28 44.5	
	comp=E,612μm,0.4s							
THE				AML		AML	18 28 46.6	
	comp=N,443μm,0.4s							
THE	**Thessaloniki**	**0.68**	**162**	P		**Pg**	**18 28 34.2**	**-0.5**
HORT	**Hortiatis**	**0.75**	**156**	P		**Pg**	**18 28 35.7**	**-0.3**
HORT				S		**Sg**	**18 28 45.5**	**-0.2**
HORT				AML		AML	18 28 46.1	
	comp=E,380μm,0.5s							
HORT				AML		AML	18 28 51.2	
	comp=N,284μm,0.5s							
HORT	**Hortiatis**	**0.75**	**156**	P		**Pg**	**18 28 35.5**	**-0.5**
HORT				S		**Sg**	**18 28 46.0**	**+0.3**
	comp=N,165nm,0.5s							
MMB	**Musomiste**	**0.83**	**68**	*i* Pg		**Pg**	**18 28 37.3**	**-0.3**
NVR	**Nevrokopi**	**0.88**	**85**	P		**Pg**	**18 28 38.1**	**-0.4**
NVR				S		**Sg**	**18 28 50.4**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**85**	P		**Pg**	**18 28 38.2**	**-0.4**
NVR				S		**Sg**	**18 28 50.3**	**+0.4**
	comp=N,132nm,0.4s							
PLG	**Polygyros**	**1.07**	**148**	P		**Pg**	**18 28 41.6**	**-0.5**
PLG				AML		AML	18 28 59.1	
	comp=E,411μm,0.6s							
PLG				AML		AML	18 29 01.5	
	comp=N,271μm,0.4s							
PLG	**Polygyros**	**1.07**	**148**	P		**Pg**	**18 28 41.5**	**-0.6**
PLG				S		**Sg**	**18 28 55.7**	**-0.3**
	comp=N,185nm,0.6s							
FNA	**Florina**	**1.11**	**244**	P		**Pg**	**18 28 42.0**	**-0.9**
FNA	**Florina**	**1.11**	**244**	P		**Pn**	**18 28 43.5**	**-0.2**
FNA				S		**Sn**	**18 29 00.1**	**+0.7**
	comp=N,105nm,0.7s							
FNA	**Florina**	**1.11**	**244**	*e*Pg		**Pg**	**18 28 42.3**	**-0.7**
FNA				*e*Sg		**Sg**	**18 28 57.0**	**-0.4**
LIT	**Litokhoron**	**1.19**	**188**	P		**Pg**	**18 28 44.0**	**-0.4**
LIT				S		**Sn**	**18 29 01.0**	**-0.2**
	comp=N,65nm,0.3s							
KZN	**Kozani**	**1.20**	**216**	P		**Pg**	**18 28 43.7**	**-0.9**
KZN	**Kozani**	**1.20**	**216**	P		**Pn**	**18 28 45.0**	**+0.1**
KZN				S		**Sn**	**18 29 02.5**	**+1.0**
	comp=N,108nm,0.6s							
BOSS	**Bosilegrad**	**1.22**	**353**	*e*Pg		**Pg**	**18 28 44.5**	**-0.6**
BOSS				*e*Sg		**Sg**	**18 28 59.9**	**-1.0**
OUR	**Ouranopolis**	**1.36**	**134**	P		**Pn**	**18 28 47.3**	**+0.3**
OUR				S		**Sb**	**18 29 04.8**	**-0.2**
	comp=N,120nm,0.5s							
VTS	**Vitosha**	**1.39**	**17**	*e*Pg		**Pn**	**18 28 47.4**	**-0.3**
VTS				*e*Sg		**Sb**	**18 29 06.3**	**+0.1**
VTS	**Vitosha**	**1.39**	**17**	P		**Pn**	**18 28 47.4**	**-0.3**
KAVA	**Kavala**	**1.40**	**101**	P		**Pn**	**18 28 47.5**	**-0.1**
KAVA				S		**Sb**	**18 29 06.6**	**+0.3**
	comp=N,150nm,0.5s							
OHR	**Ohrid**	**1.44**	**264**	*i* Pg		**Pg**	**18 28 49.0**	**-0.2**
OHR				*i* Sg		**Sg**	**18 29 07.4**	**-0.5**
GJIK	**Gjilan**	**1.51**	**322**	*i* Pg		**Pb**	**18 28 49.6**	**-0.4**
GJIK				*i* Sg		**Sg**	**18 29 12.0**	**+2.0**
NEST	**Nestorio**	**1.52**	**236**	P		**Pn**	**18 28 49.5**	**+0.2**
NEST				S		**Sg**	**18 29 10.9**	**+0.5**
	comp=N,48nm,0.6s							
PAIG	**Paliouri**	**1.55**	**151**	P		**Pn**	**18 28 49.8**	**+0.2**
PAIG				S		**Sb**	**18 29 10.6**	**+0.2**
RZN	**Rozhen**	**1.57**	**74**	P		**Pb**	**18 28 51.2**	**+0.1**
BARS	**Barje**	**1.67**	**337**	*e*Pg		**Pn**	**18 28 50.4**	**-0.9**
BARS				*e*Sg		**Sn**	**18 29 13.1**	**+0.2**
BARS	**Barje**	**1.67**	**337**	*i* Pn		**Pn**	**18 28 50.3**	**-1.0**
BARS				*i* Sn		**Sn**	**18 29 13.2**	**+0.2**
PRZK	**Prizren**	**1.72**	**303**	*i* Pn		**Pb**	**18 28 52.8**	**-0.7**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pg		**Pb**	**18 28 59.1**	**+0.9**
ZAPS				*e*Sg		**Sg**	**18 29 24.7**	**-0.8**
SMRK	**Smrekonice**	**2.06**	**321**	*i* Pn		**Pn**	**18 28 57.2**	**+0.5**
RDO	**Rodhopi**	**2.15**	**93**	P		**Pn**	**18 28 58.2**	**+0.3**
RDO				S		**Sn**	**18 29 25.5**	**+0.7**
MPEP	**Malo Peshtene**	**2.21**	**20**	P		**Pb**	**18 29 00.8**	**-1.1**
SELS	**Selova**	**2.26**	**329**	*e*Pn		**Pn**	**18 29 00.3**	**+0.8**
BLKB	**Belogradchik**	**2.34**	**360**	*e*Pn		**Pn**	**18 29 01.2**	**+0.6**
LIA	**Limnos Island**	**2.35**	**125**	P		**Pn**	**18 29 00.3**	**-0.3**
LIA				S		**Sn**	**18 29 31.2**	**+1.5**
	comp=N,175nm,2.0s							
ZAGS	**Zajecar**	**2.55**	**352**	*e*Pn		**Pn**	**18 29 05.2**	**+1.8**
IVAS	**Ivanjica**	**2.97**	**321**	*e*Pn		**Pn**	**18 29 09.2**	**0.0**
GRUS	**Gruza**	**2.99**	**331**	*e*Pn		**Pn**	**18 29 10.4**	**+1.0**
DIVS	**Divibare**	**3.45**	**326**	*e*Pn		**Pn**	**18 29 15.9**	**+0.1**

IDC 06 18:36:34.4±2.1,0°47N×125°96E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/32, mbtmp3.4/3, Error ellipse: s-maj=167.7km s-min=27.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.89**	**158**	P		P	18 41 28.8	-0.4
	0.9nm,0.3s,baz=338,slow=9.9,SNR=14							
ASAR	**Alice Springs**	**25.20**	**163**	P		P	18 42 02.6	+0.6
	0.4nm,0.6s,baz=340,slow=7.4,SNR=13							
MKAR	**Makanchi Array**	**59.81**	**327**	P		P	18 46 41.1	-0.4
	0.2nm,0.5s,baz=116,slow=6.7,SNR=2.7							

*IDC **06** 19:24:15.7±1.6,5°.12S×152°.93E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/35, mbtmp3.5/5, ML1.6/1, MS4.0/1, Ms1 4.0/1, ms1mx2.6/26, Error ellipse: s-maj=35.1km s-min=30.1km az=131.0*
ISC 06 19:24:20.9±1.4,5°.2S±0°.2×153°.0E±0°.2, h35km, n7, σ1943/7, mb3.3/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.09**	**234**	Pn		**Pn**	**19 26 00.6**	**-1.7**
	0.6nm,0.3s,baz=303,slow=18,SNR=1.8							
PMG				Sn		**Sn**	**19 27 23.2**	**+1.5**
	2.5nm,0.3s,baz=29,slow=23,SNR=6.6							
DZM	**Mont Dzumac**	**21.25**	**143**	P		**P**	**19 29 04.5**	**+0.2**
	2.8nm,0.5s,baz=325,slow=16,SNR=6.3							
WRA	**Warramunga Arr**	**23.28**	**229**	P		**P**	**19 29 25.5**	**-0.3**
	0.5nm,0.4s,baz=53,slow=9.8,SNR=10							
ASAR	**Alice Springs**	**25.95**	**223**	P		**P**	**19 29 51.6**	**+1.3**
	0.3nm,0.5s,baz=56,slow=9.2,SNR=9.2							
JNU	**Nakatsue**	**43.50**	**333**	LR		LR	19 48 37.1	
	comp=Z,172nm,20.8s,baz=286,slow=34							
MKAR	**Makanchi Array**	**80.73**	**319**	P		**P**	**19 36 31.6**	**+0.8**
	0.1nm,0.4s,baz=106,slow=5.1,SNR=2.0							
TORD	**Torodi Ar. Bea**	**150.57**	**288**	PKPbc		**PKPbc**	**19 44 09.3**	**-0.9**
	0.8nm,0.7s,baz=37,slow=3.2,SNR=5.2							

*ISK **06** 19:24:42.9,38°.46N×26°.47E, h9km, ML2.8/20*
*DDA **06** 19:24:43.4,38°.48N×26°.52E, h9km±4km, ML2.6*
ISC 06 19:24:42.5±0.9,38°.48N±0°.02×26°.50E±0°.04, h18km±5km, n32, σ2814/47, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KRBN	**Karaburun**	**0.12**	**21**	PG		**Pg**	**19 24 46.5**	**+0.1**
KRBN				SG		**Sg**	**19 24 49.2**	**+0.2**
URLA	**Izmir**	**0.14**	**147**	*i* P		**Pg**	**19 24 46.2**	**-0.3**
URLA				*i* S		**Sg**	**19 24 47.2**	**-2.2**
URLA	**Izmir**	**0.14**	**147**	PG		**Pg**	**19 24 46.3**	**-0.3**
URLA				SG		**Sg**	**19 24 48.9**	**-0.5**
ZEYE	**Izmir, Urla-Ze**	**0.24**	**179**	*i* P		**Pg**	**19 24 48.6**	**+0.6**
ZEYE				*i* S		**Sg**	**19 24 51.6**	**-0.1**
ZEYE				IAML			19 24 54.0	
	comp=N,1μm,0.2s							
FOCM	**Foa**	**0.30**	**38**	PG		**Pg**	**19 24 49.6**	**+0.7**
FOCM				SG		**Sb**	**19 24 54.6**	**+0.7**
DGB	**zmir**	**0.52**	**144**	*i* P		**Pb**	**19 24 54.1**	**+1.0**
DGB				*i* S		**Sg**	**19 24 59.0**	**-1.0**
ZEDA	**zmir-Bergama**	**0.67**	**43**	*i* P		**Pg**	**19 24 56.2**	**+0.6**
ZEDA				*i* S		**Sg**	**19 25 04.6**	**+0.2**
DKL	**Dikili**	**0.67**	**28**	PG		**Pb**	**19 24 56.8**	**+1.1**
AYVA	**Ayvalik**	**0.84**	**10**	*i* P		**Pb**	**19 25 00.0**	**+1.4**
AYVA				*i* S		**Sg**	**19 25 09.1**	**-0.9**
AYVA				IAML			19 25 14.0	
	comp=E,216nm,0.5s							
SIGR	**SIGRI**	**0.89**	**326**	PG		**Pb**	**19 25 00.6**	**+1.3**
GCAM	**G?zelcaml?**	**0.97**	**143**	*i* P		**Pn**	**19 25 02.5**	**+1.3**
GCAM				*i* S		**Sg**	**19 25 10.3**	**-3.8**
GCAM				IAML			19 25 16.0	
	comp=N,166nm,0.9s							
GCAM	**G?zelcaml?**	**0.97**	**143**	PG		**Pb**	**19 25 02.1**	**+1.3**
KOCA	**Canakkale, Ayv**	**1.06**	**345**	*i* P		**Pg**	**19 25 02.0**	**-1.1**
KOCA				*i* S		**Sg**	**19 25 12.9**	**-4.0**
KOCA				IAML			19 25 20.0	
	comp=N,182nm,0.3s							
KOCA				IAML			19 25 22.0	
	comp=E,181nm,0.6s							
AKHS	**Akhisar**	**1.10**	**68**	*i* P		**Pn**	**19 25 05.1**	**+2.0**
AKHS				*i* S		**Sg**	**19 25 13.7**	**-4.7**
BUHA	**Balikesir, Bur**	**1.12**	**24**	*i* P		**Pg**	**19 25 04.5**	**+0.4**
BUHA				*i* S		**Sg**	**19 25 15.1**	**-3.7**
BUHA				IAML			19 25 24.0	
	comp=N,151nm,0.4s							
BUHA				IAML			19 25 24.0	
	comp=E,162nm,0.4s							
AYDB	**Zeytinkoy-Aydi**	**1.22**	**115**	PN		**Pg**	**19 25 07.1**	**+1.0**
BAYC	**CANAKKALE_Bayr**	**1.26**	**2**	*i* P		**Pn**	**19 25 06.7**	**+1.4**
BAYC				*i* S		**Sb**	**19 25 18.9**	**-2.8**
EZN	**Ezine**	**1.35**	**354**	PN		**Pb**	**19 25 08.7**	**+1.4**
AYDN	**Tasoluk**	**1.36**	**126**	*i* P		**Pg**	**19 25 10.3**	**+1.6**
AYDN				*i* S		**Sb**	**19 25 20.9**	**-3.7**
BOZC	**Bozcaada**	**1.40**	**346**	PN		**Pn**	**19 25 08.9**	**+1.7**
BALY	**Balya**	**1.53**	**34**	*i* P		**Pg**	**19 25 13.4**	**+1.4**
BALY				*i* S		**Sn**	**19 25 25.2**	**-3.4**
BALY				IAML			19 25 37.0	
	comp=E,63nm,0.3s							
BALY				IAML			19 25 38.0	
	comp=N,82nm,0.3s							
BALB	**Balikesir**	**1.58**	**42**	PN		**Pb**	**19 25 12.3**	**+1.1**
APE	**Apeiranthos**	**1.60**	**209**	PN		**Pn**	**19 25 11.7**	**+1.7**
KULA	**Kula-Manisa**	**1.70**	**88**	PN		**Pn**	**19 25 13.6**	**+2.3**
LPK	**Lapseki**	**1.90**	**6**	PN		**Pn**	**19 25 16.3**	**+2.2**
GELI	**Tayfur-Gelibol**	**1.92**	**359**	PN		**Pn**	**19 25 16.9**	**+2.7**
KRBG	**Karabiga-Canak**	**2.01**	**18**	PN		**Pn**	**19 25 18.2**	**+2.7**
ERIK	**Erikli-Kesan**	**2.19**	**0**	PN		**Pn**	**19 25 20.5**	**+2.5**
RKY	**Sarkoy-Tekirda**	**2.27**	**13**	PN		**Pn**	**19 25 21.9**	**+2.8**
ENEZ	**Enez**	**2.27**	**353**	PN		**Pn**	**19 25 21.5**	**+2.4**
MRMT	**Marmara Adasi**	**2.29**	**21**	PN		**Pn**	**19 25 22.3**	**+2.9**
KCTX	**Karacabey (Bur**	**2.29**	**38**	PN		**Pn**	**19 25 21.9**	**+2.4**

*IDC **06** 19:33:01.8±20.0, 15°.28S×174°.97W, h243km±205km, mb3.6/9, mb1 3.9/9, mb1mx3.6/39, mbtmp4.2/9, Error ellipse: s-maj=63.4km s-min=31.9km az=168.0*
*NEIC **06** 19:33:02.8±0.7, 15°.1S±0°.4×175°.2W±0°.2, h250km±9km, mb4.0/11, Error ellipse: s-maj=62.0km s-min=13.4km az=151.0*
*NOU **06** 19:33:45.4, 13°.93S×172°.51W, h66km, MLv2.9, Samoa Islands*
ISC 06 19:33:02.8±0.9, 15°.1S±0°.3×175°.1W±0°.2, h250km, n27, σ0852/27, mb3.9/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.46**	**70**			**Pn**	**19 34 00.7**	**+0.2**
AFI	**Afiamalu**	**3.46**	**70**	P		**Pn**	**19 34 01.2**	**+0.7**
STKA	**Stephens Creek**	**42.74**	**239**	P		**P**	**19 40 35.8**	**-0.1**
	4.7nm,1.0s,baz=92,slow=6.3,SNR=6.5							
STKA	**Stephens Creek**	**42.74**	**239**	P		**P**	**19 40 35.7**	**-0.1**
BBOO	**Buckleboo**	**47.52**	**239**	P		**P**	**19 41 13.3**	**-0.1**
BBOO				IAmb		IAmb	19 41 41.0	
	comp=Z,22nm,1.2s							
WR0	**Warramunga Arr**	**48.10**	**257**	P		**P**	**19 41 16.8**	**-1.2**
WR0				IAmb		IAmb	19 41 37.9	
	comp=Z,7.7nm,1.5s							
WB0	**Warramunga Arr**	**48.25**	**257**	P		**P**	**19 41 18.9**	**-0.2**
WB0				IAmb		IAmb	19 41 20.5	
	comp=Z,5.3nm,0.8s							
WB2	**Warramunga Arr**	**48.28**	**257**	P		**P**	**19 41 18.9**	**-0.5**
WB2				IAmb		IAmb	19 41 21.1	
	comp=Z,4.1nm,0.7s							
WRA	**Warramunga Arr**	**48.29**	**257**	P		**P**	**19 41 19.3**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=89,slow=7.0,SNR=35							
WRA	**Warramunga Arr**	**48.29**	**257**	P		**P**	**19 41 19.2**	**-0.2**
AS31	**Alice Springs**	**48.61**	**252**	P		**P**	**19 41 22.0**	**+0.1**
AS31				IAmb		IAmb	19 41 23.7	
	comp=Z,6.8nm,0.8s							
ASAR	**Alice Springs**	**48.62**	**252**	P		**P**	**19 41 22.1**	**+0.3**
	comp=Z,20nm,0.6s,baz=86,slow=8.2,SNR=298							
ASAR	**Alice Springs**	**48.62**	**252**	P		**P**	**19 41 21.6**	**-0.3**
MTN	**Manton Dam**	**52.10**	**265**	P		**P**	**19 41 48.0**	**0.0**
MTN				IAmb		IAmb	19 41 49.8	
	comp=Z,13nm,1.2s							
SIJI	**Sorong**	**54.77**	**280**	P		**P**	**19 42 08.9**	**+1.5**
	comp=Z,9.7nm,0.6s,baz=79,slow=7.2,SNR=11							
FITZ	**Fitzroy Crossi**	**56.64**	**258**	P		**P**	**19 42 20.5**	**0.0**
FITZ				IAmb		IAmb	19 42 35.2	
	comp=Z,6.0nm,1.4s							
PSA00	**Pilbara Seismi**	**61.69**	**253**	P		**P**	**19 42 54.5**	**-0.5**
NVAR	**Mina Array Bea**	**75.25**	**43**	P		**P**	**19 44 18.8**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=228,slow=9.9,SNR=5.7							
NVAR	**Mina Array Bea**	**75.25**	**43**	P		**P**	**19 44 18.6**	**0.0**
TPH	**Tonopah**	**75.77**	**44**	P		**P**	**19 44 21.7**	**+0.1**
TXAR	**Lajitas Array**	**81.85**	**57**	P		**P**	**19 44 55.0**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=208,slow=6.9,SNR=4.7							
ILAR	**Eielson Array**	**82.51**	**12**	P		**P**	**19 44 56.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=214,slow=5.1,SNR=4.9							
PDAR	**Pinedale Array**	**83.18**	**42**	P		**P**	**19 45 01.2**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=199,slow=3.5,SNR=16							
PDAR	**Pinedale Array**	**83.18**	**42**	P		**P**	**19 45 00.8**	**-0.6**
YKA	**Yellowknife Ar**	**90.52**	**24**	P		**P**	**19 45

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.16**	**232**	Pn	Pn	19 48 08.3	+1.7
	0.9nm,0.3s,baz=33,slow=17,SNR=5.8						
PMG				Sn	Sn	19 49 10.2	-7.7
	1.3nm,0.3s,baz=162,slow=8.7,SNR=2.7						
WRA	**Warramunga Arr**	**22.37**	**229**	P	P	19 51 34.8	+0.4
	0.9nm,0.5s,baz=53,slow=9.8,SNR=10						
ASAR	**Alice Springs**	**25.06**	**222**	P	P	19 51 59.8	-0.9
	0.7nm,0.7s,baz=54,slow=9.4,SNR=9.4						
ILAR	**Eielson Array**	**83.19**	**22**	P	P	19 59 02.8	+0.6
	0.3nm,0.6s,baz=252,slow=5.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**149.87**	**286**	PKPbc	PKPbc	20 06 26.9	-0.7
	1.2nm,0.7s,baz=75,slow=3.2,SNR=6.4						

*IASPEI **06** 20:23:54.6±0.8, 42.4°N±0.0°×21.4°E±0.0°,02, h13km±5km, Error ellipse: s-maj=3.9km s-min=3.1km az=178.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*SKO **06** 20:23:54.9, 42.4°N×21.4°E, h10km*
*BEO **06** 20:23:55.3±0.3, 42.4°N×21.4°E, h10km±3km, ML3.0/13*
*PDG **06** 20:23:55.0±0.3, 42.4°N×21.4°E, h13km, ML3.0/10, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*TIR **06** 20:23:56.0, 42.3°N×21.3°E, h23km±19km, Md3.0, Ml2.9*
*SOF **06** 20:23:55.3, 42.4°N×21.5°E, h11km, MD3.2*
*PRU **06** 20:23:59.4±0.0, 42.6°N×21.6°E, h0km*

ISC 06 20:23:54.5±0.9, 42°42'N±0'.02×21°.50E±0'.02, h10km±6km, n107, σ1§33/167, 26C-16D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GJIK	**Gjilan**	**0.07**	**309**	⇑*i* Pg	**Pg**	**20 23 57.5**	**+0.7**
GJIK				*i* Sg	**Sg**	**20 23 59.2**	**+0.8**
BARS	**Barje**	**0.46**	**30**	*e*Pg	**Pb**	**20 24 03.3**	**-1.4**
BARS				*e*Sg	**Sb**	**20 24 11.2**	**-0.3**
BARS	**Barje**	**0.46**	**30**	⇓*i* Pg	**Pb**	**20 24 03.5**	**-1.2**
BARS				*i* Sg	**Sb**	**20 24 10.8**	**-0.8**
PRZK	**Prizren**	**0.59**	**249**	⇓*i* Pg	**Pg**	**20 24 05.3**	**-0.7**
PRZK				*i* Sg	**Sg**	**20 24 12.4**	**-1.4**
BOSS	**Bosilegrad**	**0.73**	**84**	*e*Pg	**Pn**	**20 24 09.7**	**-1.1**
BOSS				*e*Sg	**Sb**	**20 24 19.8**	**+0.5**
SELS	**Selova**	**0.85**	**341**	*e*Pg	**Pb**	**20 24 10.6**	**-0.7**
SELS				*e*Sg	**Sb**	**20 24 22.6**	**-0.2**
STIP	**Stip**	**0.89**	**145**	⇓*i* Pg	**Pn**	**20 24 12.6**	**-0.4**
STIP				*i* Sg	**Sn**	**20 24 27.8**	**+1.8**
STIP				*e*Lg	Lg	20 24 29.1	
	comp=N,68nm,0.3s						
BCI	**Bajram Curri**	**1.06**	**268**	P	**Pg**	**20 24 14.0**	**-1.0**
	baz=275						
BCI				S	**Sg**	**20 24 28.0**	**-0.9**
	baz=275						
BCI				AMP			
	comp=E,2.0nm,0.5s,baz=275						
PHP	**Peshkopia**	**1.08**	**227**	P	**Pg**	**20 24 13.5**	**-1.8**
	baz=228						
PHP				S	**Sg**	**20 24 26.7**	**-2.6**
	baz=228						
PHP				AMP			
	comp=N,1.1nm,0.4s,baz=228						
PVY	**Plav**	**1.16**	**279**	⇓*i* Pg	**Pg**	**20 24 15.5**	**-1.2**
PVY				*i* Sg	**Sg**	**20 24 31.8**	**+0.1**
ZAPS	**Zavoj**	**1.19**	**44**	*e*Pg	**Pn**	**20 24 17.4**	**+0.2**
ZAPS				*e*Sg	**Sn**	**20 24 33.8**	**+0.3**
BOVS	**Bovan**	**1.22**	**7**	*e*Pg	**Pn**	**20 24 17.6**	**0.0**
BOVS				*e*Sg	**Sn**	**20 24 34.3**	**+0.1**
BOVS	**Bovan**	**1.22**	**7**	⇑P	**Pn**	**20 24 19.0**	**+1.4**
BOVS				⇓S	**Sn**	**20 24 36.3**	**+2.0**
PUK	**Puka**	**1.25**	**253**	P	**Pg**	**20 24 17.4**	**-1.2**
	baz=257						
PUK				S	**Sg**	**20 24 32.7**	**-2.2**
	baz=257						
PUK				AMP			
	comp=E,1.1nm,0.5s,baz=257						
BEY	**Berane**	**1.27**	**291**	*i* Pg	**Pg**	**20 24 16.9**	**-2.0**
IVA	**Berane**	**1.27**	**291**	⇓*i* Pg	**Pg**	**20 24 17.5**	**-1.4**
IVA				*i* Sg	**Sb**	**20 24 35.9**	**+0.9**
VTS	**Vitosha**	**1.29**	**81**	*e*Pg	**Pn**	**20 24 20.5**	**+1.7**
VTS				*e*Sg	**Sn**	**20 24 38.4**	**+2.2**
VTS	**Vitosha**	**1.29**	**81**	⇓P	**Pn**	**20 24 20.5**	**+1.7**
VTS				⇓S	**Sn**	**20 24 39.3**	**+3.0**
VTS	**Vitosha**	**1.29**	**81**	Pg	**Pn**	**20 24 20.4**	**+1.7**
KKB	**Krupnik**	**1.30**	**115**	P	**Pn**	**20 24 20.7**	**+2.0**
VAY	**Valandovo**	**1.36**	**144**	*e*Pg	**Pb**	**20 24 19.8**	**-0.2**
VAY				*e*Sg	**Sn**	**20 24 39.4**	**+1.9**
VAY	**Valandovo**	**1.36**	**144**	*i* Pn	**Pb**	**20 24 19.6**	**-0.4**
VAY				*i* Sn	**Sn**	**20 24 39.7**	**+2.2**
VAY				*e*Lg	Lg	20 24 46.2	
	comp=E,145nm,0.8s						
OHR	**Ohrid**	**1.41**	**202**	*i* Pn	**Pg**	**20 24 20.7**	**-0.9**
OHR				*i* Sn	**Sn**	**20 24 40.0**	**+1.1**
OHR				*e*Lg	Lg	20 24 41.7	
	comp=E,308nm,0.9s						
BLKB	**Belogradchik**	**1.48**	**35**	⇓S	**Sn**	**20 24 44.3**	**+3.7**
ZAGS	**Zajecar**	**1.49**	**21**	*e*Pg	**Pg**	**20 24 23.2**	**+0.1**
ZAGS				*e*Sg	**Sn**	**20 24 42.5**	**+1.7**
IVAS	**Ivanjica**	**1.52**	**320**	*e*Pg	**Pb**	**20 24 22.4**	**-0.4**
IVAS				*e*Sg	**Sg**	**20 24 42.6**	**-0.9**
KOME	**Kolasin**	**1.53**	**287**	*e*Pg	**Pb**	**20 24 22.8**	**-0.2**
GRUS	**Gruza**	**1.58**	**339**	*e*Pg	**Pn**	**20 24 22.7**	**+0.2**
GRUS				*e*Sg	**Sn**	**20 24 43.3**	**+0.3**
TIR	**Tirane**	**1.63**	**229**	*e*Pn	**Pn**	**20 24 23.7**	**+0.5**
TIR	**Tirane**	**1.63**	**229**	⇑P	**Pb**	**20 24 24.0**	**-0.6**
TIR	**Tirane**	**1.63**	**229**	*i* Pn	**Pg**	**20 24 27.4**	**+1.7**
FNA	**Florina**	**1.64**	**183**	P	**Pb**	**20 24 24.4**	**-0.5**
	baz=178						
FNA				S	**Sg**	**20 24 46.1**	**-1.1**
	baz=178						
PDG	**Podgorica**	**1.67**	**271**	⇑P	**Pb**	**20 24 24.7**	**-0.6**
PDG				⇑S	**Sn**	**20 24 46.1**	**+1.0**
PDG	**Podgorica**	**1.67**	**271**	*e*Pn	**Pn**	**20 24 23.9**	**+0.2**
PDG	**Podgorica**	**1.67**	**271**	*i* Pn	**Pn**	**20 24 24.5**	**+0.8**
PDG				*i* Sn	**Sn**	**20 24 46.0**	**+0.9**
TTG	**Podgorica**	**1.67**	**271**	⇑*i* Pn	**Pn**	**20 24 24.1**	**+0.4**
TTG				*i* Sn	**Sb**	**20 24 46.7**	**+0.5**
DRME	**Dracevica, Mon**	**1.74**	**263**	*e*Pn	**Pb**	**20 24 26.1**	**-0.4**
DRME	**Dracevica, Mon**	**1.74**	**263**	⇑*i* Pn	**Pn**	**20 24 25.2**	**+0.5**
DRME				*i* Sn	**Sn**	**20 24 48.5**	**+1.6**
ULC	**Ulcinj**	**1.74**	**256**	⇑*i* Pn	**Pn**	**20 24 25.2**	**+0.4**
ULC				*i* Sn	**Sn**	**20 24 48.7**	**+1.7**
PLE	**Pljevlja**	**1.80**	**301**	⇑*i* Pn	**Pn**	**20 24 26.2**	**+0.5**
PLE				*i* Sn	**Sb**	**20 24 50.4**	**+0.1**
MMB	**Musomiste**	**1.85**	**116**	P	**Pg**	**20 24 29.8**	**-0.2**
SVIS	**Svilajnac**	**1.86**	**354**	*e*Pg	**Pb**	**20 24 28.1**	**-0.4**
SVIS				*e*Sg	**Sg**	**20 24 52.4**	**-1.7**
MPEP	**Malo Peshtene**	**1.89**	**60**	P	**Pg**	**20 24 28.7**	**-2.0**
MPEP	**Malo Peshtene**	**1.89**	**60**	Pg	**Pg**	**20 24 32.7**	**+2.0**
NKME	**Niksic**	**1.92**	**281**	⇓*i* Pn	**Pn**	**20 24 27.5**	**+0.3**
NKME				*i* Sn	**Sn**	**20 24 52.9**	**+1.5**
CEME	**Cevo**	**1.92**	**275**	⇑*i* Pn	**Pn**	**20 24 27.6**	**+0.3**
CEME				*i* Sn	**Sn**	**20 24 52.9**	**+1.4**
BUM	**Brajici-Budva**	**1.94**	**267**	⇑*i* Pn	**Pn**	**20 24 27.9**	**+0.4**
BUM				*i* Sn	**Sn**	**20 24 53.4**	**+1.4**
RUDO	**Rudo**	**1.97**	**308**	*e*Pn	**Pn**	**20 24 27.2**	**-0.7**
TRUS	**Trudelj**	**1.97**	**336**	*e*Pg	**Pb**	**20 24 29.5**	**-1.0**
TRUS				*e*Sg	**Sg**	**20 24 56.6**	**-1.3**
PGB	**Panagyurishte**	**1.97**	**85**	P	**Pg**	**20 24 30.7**	**-1.6**
KUBS	**Kucevo**	**1.99**	**4**	*e*Pn	**Pn**	**20 24 28.1**	**-0.2**
KUBS				*e*Sg	**Sg**	**20 24 58.8**	**+0.2**
DIVS	**Divibare**	**2.01**	**327**	*e*Pn	**Pn**	**20 24 28.9**	**+0.4**
DIVS				*e*Sg	**Sg**	**20 24 57.5**	**-1.5**
DIVS	**Divibare**	**2.01**	**327**	*e*Pn	**Pn**	**20 24 28.4**	**-0.1**
UPM	**Unac-Piva**	**2.07**	**293**	*e*Pn	**Pb**	**20 24 31.7**	**-0.5**
UPM	**Unac-Piva**	**2.07**	**293**	⇑*i* Pn	**Pn**	**20 24 29.8**	**+0.4**
UPM				*i* Sn	**Sn**	**20 24 56.7**	**+1.4**
BBLS	**Lazići**	**2.11**	**314**	*e*Pn	**Pn**	**20 24 29.8**	**-0.1**
BBLS				*e*Sg	**Sb**	**20 25 00.4**	**+1.3**
BBLS	**Lazići**	**2.11**	**314**	*e*Pn	**Pn**	**20 24 29.4**	**-0.5**
PUNG	**Punghina**	**2.13**	**29**	⇓P	**Pn**	**20 24 32.4**	**-0.7**
PUNG				⇓S	**Sb**	**20 24 59.1**	**-0.5**
HCY	**Herceg Novi**	**2.23**	**272**	*e*Pn	**Pb**	**20 24 33.7**	**-1.1**
BRY	**Bratogost**	**2.24**	**283**	*e*Pn	**Pn**	**20 24 32.0**	**+0.2**
BRY				*i* Sn	**Sn**	**20 25 00.8**	**+1.3**
TREB	**Trebinje**	**2.35**	**278**	*e*Pn	**Pn**	**20 24 34.6**	**+1.5**
MDVR	**Moldovita**	**2.37**	**4**	⇑P	**Pb**	**20 24 35.8**	**-1.4**
LSK	**Leskovik**	**2.37**	**197**	P	**Pn**	**20 24 34.4**	**+0.9**
	baz=195						
PLD	**Plovdiv**	**2.40**	**97**	P	**Pg**	**20 24 40.1**	**-0.3**
PLVB	**Pleven**	**2.48**	**66**	⇑P	**Pb**	**20 24 37.8**	**-1.4**
PLVB				⇓S	**Sb**	**20 25 10.3**	**+0.5**
HAPS	**Han Pijesak,Bl**	**2.50**	**313**	*e*Pn	**Pn**	**20 24 34.5**	**-0.9**
HAPS	**Han Pijesak,Bl**	**2.50**	**313**	*e*Pn	**Pn**	**20 24 34.4**	**-0.9**
RZN	**Rozhen**	**2.50**	**106**	P	**Pb**	**20 24 37.9**	**-1.7**
HERR	**Herculane**	**2.55**	**15**	⇑P	**Pb**	**20 24 37.7**	**-2.6**
HERR				⇑S	**Sb**	**20 25 09.8**	**-1.9**
SRE	**Strehaia**	**2.56**	**28**	⇓P	**Pb**	**20 24 38.5**	**-1.9**
TEKS	**Tekeris**	**2.57**	**327**	*e*Pn	**Pn**	**20 24 36.4**	**+0.2**
TEKS				*e*Sg	**Sg**	**20 25 16.0**	**-1.0**
TEKS	**Tekeris**	**2.57**	**327**	*e*Pn	**Pn**	**20 24 36.2**	**0.0**
VLAD	**Vladila**	**2.64**	**52**	⇑P	**Pb**	**20 24 39.2**	**-2.7**
VLAD				⇓S	**Sb**	**20 25 12.7**	**-1.7**
PVL	**Pavlikeni**	**2.93**	**73**	P	**Pg**	**20 24 50.7**	**+0.1**
BANR	**Banloc**	**2.97**	**355**	⇓P	**Pn**	**20 24 43.4**	**+1.7**
BANR				⇑S	**Sn**	**20 25 19.1**	**+1.7**
FRGS	**Fruska Gora**	**3.00**	**336**	*e*Pn	**Pn**	**20 24 42.6**	**+0.5**
FRGS	**Fruska Gora**	**3.00**	**336**	⇓P	**Pn**	**20 24 42.5**	**+0.5**
FRGS	**Fruska Gora**	**3.00**	**336**	*e*Pn	**Pn**	**20 24 42.4**	**+0.3**
GZR	**Gura Zlata**	**3.11**	**17**	⇑P	**Pn**	**20 24 44.6**	**+1.0**
BZS	**Buzias**	**3.20**	**1**	⇑P	**Pn**	**20 24 45.2**	**+0.4**
LOT	**Lotru**	**3.44**	**28**	⇑P	**Pn**	**20 24 49.9**	**+1.7**
ARR	**Arges**	**3.71**	**36**	⇑P	**Pn**	**20 24 54.4**	**+2.4**
BLY	**Banja Luka**	**3.91**	**308**	*e*Pn	**Pn**	**20 24 54.4**	**-0.1**
MORH	**Mrgy, Hungar**	**4.31**	**333**	⇑P	**Pn**	**20 25 00.4**	**+0.3**
MORH	**Mrgy, Hungar**	**4.31**	**333**	*e*Pn	**Pn**	**20 25 00.1**	**0.0**
DRGR		**4.45**	**11**	⇑P	**Pn**	**20 25 03.5**	**+1.3**
CRES	**Cresnjev**	**5.53**	**310**	*e*Pn	**Pn**	**20 25 16.7**	**-0.1**
PSZ	**Piszkesteto**	**5.61**	**349**	⇓P	**Pn**	**20 25 19.1**	**+1.0**
SRO	**Srobarova**	**5.84**	**338**	*e*SN	**Sn**	**20 26 31.9**	**+3.7**
SRO				*e*LG	Lg	20 26 55.9	
CEY	**Cerknica**	**6.08**	**305**	*e*Pn	**Pn**	**20 25 24.6**	**+0.2**
SOKA	**Soboth**	**6.28**	**315**	*e*Pn	**Pn**	**20 25 27.9**	**+0.7**
	comp=E,0.5nm,0.2s						
SOKA				*e*Sn	**Sn**	**20 26 40.7**	**+1.6**
	comp=E,0.8nm,0.4s						
VYHS	**Vyhne**	**6.36**	**344**	*e*PN	**Pn**	**20 25 30.4**	**+2.2**
VYHS				*e*SN	**Sn**	**20 26 40.8**	**0.0**
ARSA	**Arzberg**	**6.43**	**321**	*i* Pn	**Pn**	**20 25 30.5**	**+1.2**
	comp=E,2.3nm,0.3s						
ARSA				*e*Sn	**Sn**	**20 26 44.2**	**+1.5**
	comp=E,1.1nm,0.5s						
OBKA	**Obir**	**6.44**	**312**	*e*Pn	**Pn**	**20 25 30.5**	**+1.1**
	comp=E,1.3nm,0.3s						
OBKA				*e*Sn	**Sn**	**20 26 43.3**	**+0.3**
	comp=E,1.7nm,0.5s						
MODS	**Modra-Piesok**	**6.65**	**335**	*e*PN	**Pn**	**20 25 36.1**	**+3.8**
MODS				*e*SN	**Sn**	**20 26 47.1**	**-1.0**
MODS				*e*LG	Lg	20 26 50.5	
CONA	**Conrad Observa**	**6.80**	**326**	*e*Pn	**Pn**	**20 25 35.7**	**+1.4**
	comp=E,0.1nm,0.2s						
CONA				*e*Sn	**Sn**	**20 26 53.0**	**+1.3**
	comp=E,1.5nm,0.6s						
MYKA	**Terra Mystica**	**7.02**	**310**	*e*Pn	**Pn**	**20 25 38.1**	**+0.8**
	comp=E,0.7nm,0.3s						
MYKA				*e*Sn	**Sn**	**20 26 57.9**	**+0.7**
	comp=E,0.6nm,0.3s						
KBA	**Koelnbreinsper**	**7.44**	**312**	*e*Pn	**Pn**	**20 25 44.5**	**+1.2**
	comp=E,1.1nm,0.1s						
KBA				*e*Sn	**Sn**	**20 27 08.8**	**+1.0**
	comp=E,0.7nm,0.1s						
MOA	**Molln**	**7.46**	**319**	*e*Sn	**Sn**	**20 27 09.0**	**+1.1**
	comp=E,0.4nm,0.3s						
ABTA	**Abfaltersbach**	**7.74**	**307**	*e*Pn	**Pn**	**20 25 48.1**	**+0.8**
	comp=E,1.7nm,0.5s						
ABTA				*e*Sn	**Sn**	**20 27 17.4**	**+2.5**
	comp=E,1.4nm,0.7s						
WTTA	**Wattenberg**	**8.52**	**308**	*e*Pn	**Pn**	**20 25 58.6**	**+0.6**
	comp=E,1.4nm,0.2s						
WTTA				*e*Sn	**Sn**	**20 27 33.7**	**-0.5**
	comp=E,0.9nm,0.4s						
WATA	**Walderalm**	**8.59**	**308**	*e*Pn	**Pn**	**20 26 00.2**	**+1.2**
	comp=E,0.8nm,0.3s						
KHC	**Kasperske Hory**	**8.70**	**323**	*e*PN	**Pn**	**20 26 03.2**	**+2.9**
SQTA	**Sankt Quirin**	**8.75**	**307**	*e*Pn	**Pn**	**20 26 01.2**	**+0.1**
	comp=E,2.4nm,0.3s						
SQTA				*e*Sn	**Sn**	**20 27 41.8**	**+2.0**
	comp=E,0.2nm,0.2s						
MOTA	**Moosalm**	**8.87**	**307**	*e*Pn	**Pn**	**20 26 04.6**	**+1.8**
	comp=E,0.4nm,0.2s						
MOTA				*e*Sn	**Sn**	**20 27 42.8**	**-0.1**
	comp=E,0.1nm,0.2s						
FETA	**Feichten**	**8.94**	**305**	*e*Pn	**Pn**	**20 26 04.3**	**+0.5**
	comp=E,0.5nm,0.4s						
FETA				*e*Sn	**Sn**	**20 27 46.4**	**+1.8**
	comp=E,0.4nm,0.5s						
RETA	**Reutte**	**9.14**	**307**	*e*Pn	**Pn**	**20 26 08.4**	**+1.9**
	comp=E,0.3nm,0.2s						
RETA				*e*Sn	**Sn**	**20 27 50.7**	**+1.2**
	comp=E,0.2nm,0.3s						

*IDC **06** 20:33:05.8±2.5, 43.0°N×105.0°W, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/61, mbtmp3.7/7, ML3.4/2, Error ellipse: s-maj=58.7km s-min=8.2km az=159.0*
*NEIC **06** 20:33:10.4±1.8, 43.7°N±0.0°×105.2°W±0.0°,04, h0km±2km, ML3.3/62, Error ellipse: s-maj=9.4km s-min=4.0km az=157.0*

ISC 06 20:33:09.6±0.8, 43°72'N±0'.05×105°20'W±0'.05, h0km, n57, σ1§29/58, mb4.0/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**64**	Pg	**Pb**	**20 33 28.5**	**-0.2**
K22A	**Casper**	**1.44**	**223**		**Pn**	**20 33 36.4**	**-0.8**
K22A				IAML		20 34 00.8	
	comp=E,331nm,0.3s						
K22A				IAML		20 34 08.9	
	comp=N,404nm,0.3s						
PHWY	**Pilot Hill**	**2.43**	**185**		**Pn**	**20 33 52.2**	**+1.4**
RWWY	**Rawlins**	**2.52**	**217**		**Pn**	**20 33 53.1**	**+1.1**
RWWY				IAML		20 34 31.4	
	comp=N,160nm,0.7s						
RWWY				IAML		20 34 34.3	
	comp=N,115nm,0.7s						
LAO	**LASA Array**	**3.05**	**347**		**Pn**	**20 33 58.8**	**-0.4**
RLMT	**Red Lodge**	**3.23**	**297**		**Pn**	**20 34 01.5**	**-0.2**
RLMT				IAML		20 34 58.0	
	comp=N,79nm,0.7s						
RLMT				IAML		20 34 59.6	
	comp=N,49nm,0.4s						
BW06	**Boulder Array**	**3.32**	**255**		**Pn**	**20 34 03.8**	**+0.8**
BW06				IAML		20 34 54.4	
	comp=N,41nm,0.4s						
BW06				IAML		20 34 55.8	
	comp=N,34nm,0.3s						
PD31	**Pinedale Array**	**3.32**	**255**		**Pn**	**20 34 03.3**	**+0.2**
PDAR	**Pinedale Array**	**3.32**	**255**	Pn	**Pn**	**20 34 03.3**	**+0.2**
	comp=N,3.1nm,0.3s,baz=69,slow=16,SNR=52						
PDAR				Pg	**Pb**	**20 34 08.9**	**-0.6**
	comp=N,14nm,0.3s,baz=69,slow=19,SNR=24						
PDAR				Lg	Lg	20 34 49.1	
	comp=N,9.9nm,0.3s,baz=76,slow=32,SNR=6.7						
PDAR	**Pinedale Array**	**3.32**	**255**		**Pn**	**20 34 03.1**	**+0.1**
OGNE	**Ogallala**	**3.63**	**139**		**Pn**	**20 34 08.6**	**+1.5**
YNE	**Yellowstone No**	**3.68**	**292**		**Pn**	**20 34 07.6**	**-0.3**
YNE				IAML		20 35 06.6	
	comp=N,64nm,0.7s						
YNE				IAML		20 35 12.4	
	comp=E,44nm,0.7s						
YMP	**Mirror Lake Pl**	**3.71**	**288**		**Pn**	**20 34 08.6**	**+0.2**
YMP				IAML		20 35 05.0	
	comp=E,77nm,0.7s						
YMP				IAML		20 35 16.6	
	comp=N,74nm,0.6s						
GCMT	**Greycliff**	**3.79**	**305**		**Pn**	**20 34 09.4**	**-0.1**
LOHW	**Long Hollow**	**3.92**	**270**		**Pn**	**20 34 12.0**	**+0.7**
ISCO	**Idaho Springs**	**3.93**	**185**		**Pn**	**20 34 13.2**	**+1.7**
H17A	**Grant Village**	**3.93**	**282**		**Pn**	**20 34 11.9**	**+0.5**
FLWY	**Flagg Ranch**	**3.99**	**277**		**Pn**	**20 34 12.6**	**+0.4**
FLWY				IAML		20 35 23.0	
	comp=N,38nm,2.2s						
FLWY				IAML		20 35 34.4	
	comp=N,37nm,1.4s						
SNOW	**Snow King Moun**	**4.04**	**268**	Pn	**Pn**	**20 34 13.6**	**+0.6**
SNOW				IAML		20 35 27.7	
	comp=N,39nm,0.8s						
SNOW				IAML		20 36 52.0	
	comp=N,59nm,0.3s						
YNR	**Norris Junctio**	**4.06**	**286**		**Pn**	**20 34 13.7**	**+0.5**
YPP	**Pitchstone Pla**	**4.08**	**280**		**Pn**	**20 34 13.7**	**+0.2**
REDW	**Red Top Meadow**	**4.12**	**267**		**Pn**	**20 34 15.1**	**+1.0**
REDW				IAML		20 35 28.3	
	comp=N,46nm,1.4s						
REDW				IAML		20 35 31.7	
	comp=N,42nm,0.9s						
YHH	**Holmes Hill**	**4.20**	**287**		**Pn**	**20 34 15.6**	**+0.5**
YMR	**Madison River**	**4.25**	**285**	Pn	**Pn**	**20 34 17.3**	**+1.5**
YMR				IAML		20 35 32.6	
	comp=E,28nm,1.4s						
YMR				IAML		20 35 41.2	
	comp=N,31nm,0.9s						
E28A	**Huff**	**4.28**	**47**		**Pn**	**20 34 15.7**	**-0.2**
AHID	**Auburn Hatcher**	**4.42**	**260**		**Pn**	**20 34 16.8**	**-1.2**
AHID				IAML		20 35 44.1	
	comp=E,29nm,0.9s						
YHB	**Horse Butte**	**4.43**	**286**		**Pn**	**20 34 17.5**	**-0.7**
YHB				IAML		20 36 02.8	
	comp=N,16nm,2.6s						
YHL	**Hebgen Lake**	**4.44**	**287**		**Pn**	**20 34 18.1**	**-0.4**
YHL				IAML		20 35 34.8	
	comp=N,26nm,1.0s						
YHL				IAML		20 35 40.7	
	comp=E,26nm,1.3s						
RDMU	**Red Mountain**	**4.52**	**227**		**Pn**	**20 34 19.2**	**-0.4**
RDMU				IAML		20 35 39.1	
	comp=E,20nm,1.1s						
RDMU				IAML		20 35 46.2	
	comp=N,21nm,0.8s						
ECR	**Eagle Creek**	**4.55**	**264**		**Pb**	**20 34 30.9**	**+0.6**
SUSD	**Miller**	**4.56**	**79**		**Pn**	**20 34 21.5**	**+1.8**
SMCO	**Snowmass**	**4.73**	**197**	Pn	**Pn**	**20 34 21.7**	**-0.8**
SMCO				IAML		20 35 49.8	
	comp=N,28nm,0.9s						
SMCO				IAML		20 35 59.5	
	comp=N,23nm,1.7s						
DGMT	**Dagmar**	**4.80**	**8**	Pn	**Pn**	**20 34 23.9**	**+0.8**
BOZ	**Bozeman (W)**	**4.96**	**294**		**Pn**	**20 34 27.7**	**+2.3**
BOZ				IAML		20 35 47.8	
	comp=N,17nm,0.8s						
BOZ				IAML		20 35 50.0	
	comp=N,14nm,0.9s						
HWUT	**Hardware Ranch**	**5.15**	**248**		**Pn**	**20 34 29.3**	**+1.2**
HWUT				IAML		20 36 08.6	
	comp=N,18nm,0.9s						
HWUT				IAML		20 36 09.8	
	comp=N,21nm,0.9s						
TCUT	**Toone Canyon**	**5.28**	**243**	Pn	**Pn**	**20 34 31.3**	**+1.3**
EGMT	**Eagleton**	**5.35**	**325**		**Pn**	**20 34 30.9**	**+0.2**
DLMT	**Dillon**	**5.54**	**290**		**Pn**	**20 34 32.1**	**-1.2**
HRY	**Holter Researc**	**5.56**	**305**		**Pn**	**20 34 32.2**	**-1.4**
LRM	**Limekiln Ridge**	**5.57**	**295**	Pn	**Pn**	**20 34 33.9**	**-0.1**
MCMT	**McKenzie Canyo**	**5.60**	**284**		**Pn**	**20 34 31.6**	**-2.8**
PV07	**Paradox Valley**	**5.89**	**207**	Pn	**Pn**	**20 34 36.5**	**-1.7**
HVU	**Hansel Valley**	**5.91**	**253**	Pn	**Pn**	**20 34 38.3**	**-0.2**
P17A	**Butcher Ranch,**	**5.94**	**226**		**Pn**	**20 34 39.6**	**+0.7**
PV20	**West Nyswonger**	**6.08**	**209**	Pn	**Pn**	**20 34 40.2**	**-0.7**
PV11	**David Mesa, Pa**	**6.09**	**208**	Pn	**Pn**	**20 34 42.7**	**+1.7**
PV16	**Nyswonger Mesa**	**6.09**	**209**	Pn	**Pn**	**20 34 43.3**	**+2.2**
ECSD	**EROS Data Cent**	**6.22**	**87**	Pn	**Pn**	**20 34 38.5**	**-4.2**
TMUT	**Trail Mountain**	**6.31**	**228**		**Pn**	**20 34 43.2**	**-1.0**
F33A	**5 Mile Ranch,**	**6.68**	**68**	Pn	**Pn**	**20 34 47.4**	**-1.6**
AGMN	**Agassiz Nation**	**7.95**	**52**	Pn	**Pn**	**20 35 08.5**	**+2.2**
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn	**Pn**	**20 35 21.3**	**-1.1**
	comp=N,1.0nm,0.3s,baz=232,slow=12,SNR=11						
ULM				Pg		20 35 56.9	
	comp=N,1.5nm,0.3s,baz=214,slow=14,SNR=7.0						
ULM				Lg	Lg	20 37 51.2	
	comp=N,0.5nm,0.3s,baz=127,slow=20,SNR=2.0						
YKA	**Yellowknife Ar**	**19.59**	**347**	P	**Pn**	**20 37 43.4**	**+3.1**
	comp=N,0.3nm,0.5s,baz=154,slow=8.7,SNR=5.4						
ARCES	**ARCESS Array B**	**61.42**	**18**	P	**P**	**20 43 26.8**	**-0.2**
	comp=N,

222nm,0.5s
KOUNC **Koumac, New Ca 6.08 210** P **Pn 20 58 05.8 +1.3**
MARNC **Mare, Loyalty 6.20 175** P **Pn 20 58 04.8 -1.3**
YATNC **Mamie plateau, 6.78 185** P **Pn 20 58 14.3 +0.3**
DZM **Mont Dzumac 6.84 188** P **Pn 20 58 14.6 -0.3**
38nm,0.3s,baz=20,slow=15,SNR=162
DZM S **Sn 20 59 26.7 -4.7**
2.5nm,0.3s,baz=315,slow=20,SNR=1.1
ONTNC **Ouen Toro 7.07 188** P **Pn 20 58 19.7 +1.8**
OUENC **Ouen Island, N 7.14 185** P **Pn 20 58 20.7 +1.9**
PINNC **Pines Island, 7.30 180** P **Pn 20 58 21.7 +0.6**
HNR **Honiara 9.39 307** P **Pn 20 58 50.5 +1.2**
13nm,0.3s,baz=180,slow=17,SNR=8.3
HNR **Honiara 9.39 307** **Pn 20 58 47.4 -1.8**
BKZ **Black Stump Fm 25.08 163** P **P 21 01 51.2 +1.1**
BKZ IAmb IAmb 21 01 55.6
comp=Z,41nm,1.8s
STKA **Stephens Creek 28.82 230** P **P 21 02 24.0 +0.4**
comp=Z,1.4nm,0.5s,baz=56,slow=9.4,SNR=8.6
STKA PcP **PcP 21 05 31.0 +0.6**
comp=Z,1.6nm,0.7s,baz=68,slow=5.4,SNR=3.8
WB0 **Warramunga Arr 31.86 257** P **P 21 02 49.7 -0.8**
WB0 IAmb IAmb 21 04 03.0
comp=Z,14nm,1.6s
WRA **Warramunga Arr 31.92 257** P **P 21 02 50.1 -1.0**
comp=Z,0.8nm,0.5s,baz=86,slow=8.9,SNR=12
AS31 **Alice Springs 32.69 250** P **P 21 02 57.3 -0.6**
ASAR **Alice Springs 32.70 250** P **P 21 02 57.4 -0.5**
comp=Z,3.9nm,0.7s,baz=79,slow=9.0,SNR=43
ASAR pP **pP 21 03 23.0 -2.1**
comp=Z,1.9nm,0.7s,baz=81,slow=9.4,SNR=4.7
ASAR PcP **PcP 21 05 41.0 +0.1**
comp=Z,0.3nm,0.6s,baz=77,slow=1.4,SNR=1.7
BBOO **Buckleboo 33.43 233** P **P 21 03 05.1 +1.0**
XMAS **Kiritimati 38.71 67** P **P 21 03 48.6 -0.6**
FITZ **Fitzroy Crossi 40.14 260** P **P 21 04 01.7 +0.6**
FITZ IAmb IAmb 21 04 44.1
comp=Z,12nm,1.5s
PSA00 **Pilbara Seismi 45.51 255** P **P 21 04 44.6 +0.2**
PSA00 IAmb IAmb 21 06 30.3
comp=Z,64nm,1.8s
NWAO **Narrogin (SRO) 48.67 239** P **P 21 05 08.6 -0.2**
MWH **Moku'aweowe 50.11 48** P **P 21 05 18.8 -1.6**
MJAR **Matsushiro Arr 58.49 332** P **P 21 06 20.2 0.0**
comp=Z,1.0nm,0.4s,baz=171,slow=8.5,SNR=2.5
JHS **Saijyo 59.71 328** P **P 21 06 29.5 +0.8**
SSLB **Suanglung 59.80 310** P **P 21 06 29.7 +0.2**
VNDA **Vanda 62.33 181** P **P 21 06 46.5 +0.8**
comp=Z,0.6nm,0.6s,baz=2.8,slow=4.9,SNR=5.9
VNDA **Vanda 62.33 181** P **P 21 06 46.4 +0.6**
VNDA IAmb IAmb 21 09 03.1
comp=Z,8.5nm,1.7s
SBA **Scott Base 62.60 180** P **P 21 06 49.3 +1.8**
SBA IAmb IAmb 21 07 26.5
comp=Z,16nm,1.7s
USA0B **Ussuriysk Arra 67.47 333** P **P 21 07 18.8 -0.7**
USA0B IAmb IAmb 21 09 42.3
comp=Z,50nm,1.9s
USRK **Ussuriysk Ar. 67.47 333** P **P 21 07 21.3 +1.9**
comp=Z,0.8nm,0.3s,baz=136,slow=5.2,SNR=7.6
USRK **Ussuriysk Ar. 67.47 333** P **P 21 07 18.6 -0.8**
PETK **Petropavlovsk- 68.62 354** P **P 21 07 27.5 +1.1**
comp=Z,2.4nm,0.7s,baz=124,slow=9.3,SNR=4.8
QSPA **South Pole Qui 74.76 180** P **P 21 08 03.8 +0.5**
CMAR **Chiang Mai Arr 75.38 294** P **P 21 08 08.9 +1.4**
comp=Z,1.0nm,0.8s,baz=114,slow=4.7,SNR=5.0
CMAR **Chiang Mai Arr 75.38 294** P **P 21 08 06.8 -0.8**
CHTO **Chiang Mai 75.51 294** P **P 21 08 06.5 -1.7**
MA2 **Magadan 75.81 351** P **P 21 08 09.6 +0.5**
comp=Z,2.7nm,0.6s,baz=172,slow=4.4,SNR=6.8
MA2 **Magadan 75.81 351** IAmb IAmb 21 08 26.4
comp=Z,21nm,1.9s
SEY **Seymchan 78.84 353** P **P 21 08 26.9 +1.0**
comp=Z,2.1nm,0.6s,baz=192,slow=5.8,SNR=18
MAW **Mawson 81.47 202** P **P 21 08 42.4 +2.3**
comp=Z,1.6nm,0.7s,baz=83,slow=15,SNR=2.1
MAW **Mawson 81.47 202** P **P 21 08 39.9 -0.2**
YAK **Yakutsk 82.61 343** P **P 21 08 47.0 +1.1**
comp=Z,3.1nm,0.3s,baz=61,slow=3.4,SNR=7.3
YAK **Yakutsk 82.61 343** P **P 21 08 47.2 +1.3**
YAK IAmb IAmb 21 08 48.1
comp=Z,13nm,0.8s
ULN **Ulaanbaatar 82.70 324** P **P 21 08 48.7 +1.7**
ULN IAmb IAmb 21 08 49.3
comp=Z,4.2nm,0.9s
SONM **Songino Array 83.06 324** P **P 21 08 50.1 +1.2**
comp=Z,1.3nm,0.6s,baz=134,slow=6.2,SNR=17
SONM **Songino Array 83.06 324** P **P 21 08 49.9 +1.0**
ILAR **Eielson Array 86.97 18** P **P 21 09 06.9 -0.9**
comp=Z,0.4nm,0.5s,baz=236,slow=4.7,SNR=5.5
NVAR **Mina Array Bea 87.45 49** P **P 21 09 12.3 +1.3**
comp=Z,0.1nm,0.3s,baz=242,slow=7.1,SNR=2.8
SYO **Syowa Base 88.25 197**⇓*eP* **P 21 09 13.2 -0.8**
SYO **Syowa Base 88.25 197**⇓*ep*P pP 21 09 43.8 -1.8
TIXI **Tiksi 90.54 349** P **P 21 09 24.3 -0.2**
comp=Z,0.4nm,0.3s,baz=120,slow=8.1,SNR=1.6
F10A **Beach Ranch, E 90.94 42** P **P 21 09 29.0 +2.0**
F10A IAmb IAmb 21 11 21.5
comp=Z,6.5nm,0.8s
SNAA **Sanae 93.02 183** P **P 21 09 35.8 -0.5**
VNA3 **Neumayer Olymp 93.68 181** P **P 21 09 38.6 -0.6**
VNA2 **Neumayer--Watz 93.95 182** P **P 21 09 40.0 -0.4**
baz=189,slow=4.3
VNA1 **Neumayer--Stat 94.25 181** P **P 21 09 41.1 -0.6**
MK31 **Makanchi Array 97.75 316** P Pdif 21 09 59.4 +1.2
MK31 IAmb IAmb 21 10 00.3
comp=Z,5.6nm,1.9s
MKAR **Makanchi Array 97.75 316** P Pdif 21 09 58.8 +0.7
comp=Z,0.8nm,0.6s,baz=96,slow=5.5,SNR=11
YKA **Yellowknife Ar 97.92 27** P **P 21 09 58.3 -0.1**
comp=Z,0.4nm,0.7s,baz=252,slow=4.5,SNR=5.8
ZALV **Zalesovo Beam 97.96 324** P Pdif 21 09 59.0 +0.2
comp=Z,0.9nm,0.5s,baz=100,slow=3.5,SNR=5.9
ARCES **ARCESS Array B 120.83 345** PKP **PKiKP 21 15 14.1 0.0**
comp=Z,10.0nm,1.1s,baz=48,slow=1.0,SNR=13
FINES **FINESS Array B 126.31 338** PKP **PKPdf 21 15 24.6 -0.1**
comp=Z,1.5nm,0.9s,baz=350,slow=2.3,SNR=4.6
KMBO **Kilima Mbogo 128.20 256** PKP **PKiKP 21 15 31.5 +0.8**
comp=Z,0.3nm,0.3s,baz=108,slow=9.6,SNR=1.9
GERES **GERESS Array B 140.23 333** PKhKP PKPpre 21 15 46.8
comp=Z,0.2nm,0.4s,baz=33,slow=5.9,SNR=1.8
GERES PKP **PKiKP 21 15 52.8 -1.0**
comp=Z,0.2nm,0.4s,baz=40,slow=1.7,SNR=2.1
ABTA **Abfaltersbach 142.32 332** *eP* **PKPdf 21 15 52.1 -3.1**
comp=Z,6.5nm,1.5s
WTTA **Wattenberg 142.33 333** *eP* **PKPdf 21 15 53.9 -1.3**
comp=Z,1.4nm,0.5s
MOTA **Moosalm 142.50 333** *eP* **PKPdf 21 15 53.7 -1.8**
comp=Z,2.5nm,1.1s
FETA **Feichten 142.91 333** *eP* **PKPdf 21 15 54.2 -2.1**
comp=Z,1.7nm,0.6s
DAVA **Damuels 143.06 334** *eP* PKPbc 21 15 54.5 +0.8
comp=Z,1.7nm,0.5s
KEST **Kesra 151.77 320** PKPbc **PKiKP 21 16 18.1 +0.1**
comp=Z,3.9nm,0.8s,baz=145,slow=7.4,SNR=4.5
TORD **Torodi Ar. Bea 166.08 263** PKP **PKPdf 21 16 28.4 +0.1**
comp=Z,0.5nm,0.7s,baz=25,slow=1.2,SNR=3.1
TORD PKPab **PKPab 21 17 29.6 +0.1**
comp=Z,0.2nm,0.6s,baz=112,slow=4.9,SNR=2.7

*IDC **06** 21:19:32.3±1.1, 23°.58S×13°.50W, h0km, mb4.1/6, mb1 4.0/6, mb1mx3.8/26, mbtmp4.1/6, MS3.5/10, Ms1 3.5/10, ms1mx3.2/24, Error ellipse: s-maj=32.6km s-min=24.9km az=93.0*
*NEIC **06** 21:19:35.0±1.6, 23°.61S±0°.07×13°.3W±0°.2, h10km±1km, mb4.4/11, Error ellipse: s-maj=24.9km s-min=11.2km az=101.0*
ISC 06 21:19:34.7±0.7, 23°.6S±0°.1×13°.4W±0°.1, h10km, n24, σ1s20/17, mb4.2/11, MS3.4/10, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**31.20**	**16**	P	**P**	**21 25 53.0**	**-1.3**
	1.5nm,0.7s,baz=180,slow=7.1,SNR=1.6						
DBIC	**Dimbokro**	**31.20**	**16**	P	**P**	**21 25 53.2**	**-1.1**
DBIC				IAmb	IAmb	21 26 05.0	
	comp=Z,9.4nm,1.4s						
BDFB	**Brasilia**	**33.52**	**277**	P	**P**	**21 26 12.5**	**-2.4**
	comp=Z,1.6nm,0.6s,baz=139,slow=11,SNR=2.0						
BDFB				LR	LR	21 37 40.1	
	comp=Z,141nm,21.1s,baz=127,slow=33						
BOSA	**Boshof**	**34.93**	**107**	P	**P**	**21 26 26.9**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=252,slow=9.6,SNR=3.6						
BOSA				LR	LR	21 37 54.8	
	comp=Z,81nm,20.1s,baz=270,slow=31						
BOSA	**Boshof**	**34.93**	**107**	P	**P**	**21 26 27.4**	**+0.3**
KOWA	**Kowa**	**38.93**	**14**	P	**P**	**21 27 02.2**	**+1.3**
KOWA				IAmb	IAmb	21 27 09.1	
	comp=Z,4.5nm,0.8s						
TOA0	**Torodi Ar. Sit**	**39.36**	**24**	P	**P**	**21 27 05.0**	**+0.4**
TOA0				IAmb	IAmb	21 27 05.8	
	comp=Z,7.1nm,1.1s						
TORD	**Torodi Ar. Bea**	**39.36**	**24**	P	**P**	**21 27 04.7**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=203,slow=9.0,SNR=34						
TORD				LR	LR	21 40 00.5	
	comp=Z,61nm,20.4s,baz=235,slow=31						
TORD	**Torodi Ar. Bea**	**39.36**	**24**	P	**P**	**21 27 04.9**	**+0.4**
CPUP	**Villa Florida**	**39.82**	**257**	LR	LR	21 40 31.7	
	comp=Z,63nm,20.3s,baz=78,slow=32						
SAML	**Samuel**	**49.74**	**278**	P	**P**	**21 28 29.9**	**+2.3**
SAML				IAmb	IAmb	21 28 36.7	
	comp=Z,5.6nm,1.1s						
AC02	**Maricunga**	**50.23**	**254**	P	**P**	**21 28 33.2**	**+1.4**
AC02				IAmb	IAmb	21 28 33.6	
	comp=Z,4.1nm,1.0s						
PLCA	**Paso Flores**	**50.48**	**236**	LR	LR	21 46 22.0	
	comp=Z,48nm,21.4s,baz=128,slow=32						
GO04	**Tololo Observa**	**51.21**	**249**	P	**P**	**21 28 39.0**	**+0.1**
GO04				IAmb	IAmb	21 28 46.2	
	comp=Z,5.3nm,0.9s						
CO02	**Combarbal**	**51.26**	**248**	P	**P**	**21 28 38.1**	**-1.0**
LPAZ	**La Paz**	**51.75**	**267**	LR	LR	21 49 40.6	
	comp=Z,24nm,18.2s,baz=113,slow=35						
KMBO	**Kilima Mbogo**	**53.85**	**73**	LR	LR	21 48 52.0	
	comp=Z,37nm,20.6s,baz=93,slow=33						
MAW	**Mawson**	**63.18**	**155**	P	**P**	**21 30 01.5**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=288,slow=8.4,SNR=2.4						
MAW	**Mawson**	**63.18**	**155**	P	**P**	**21 30 02.5**	**-0.1**
ESDC	**Sonseca Array**	**63.54**	**8**	LR	LR	21 54 01.6	
	comp=Z,28nm,20.2s,baz=95,slow=33						
QSPA	**South Pole Qui**	**66.62**	**180**	P	**P**	**21 30 25.5**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=210,slow=2.9,SNR=1.9						
QSPA	**South Pole Qui**	**66.62**	**180**	P	**P**	**21 30 25.9**	**+0.6**
QSPA				IAmb	IAmb	21 30 37.1	
	comp=Z,4.7nm,1.2s						
BRTR	**Keskin Array B**	**76.74**	**35**	LR	LR	22 05 17.6	
	comp=Z,14nm,18.7s,baz=318,slow=36						
CMIG	**Matias Romero**	**89.25**	**289**	LR	LR	22 11 11.9	
	comp=Z,34nm,21.2s,baz=32,slow=35						

IDC 06 21:39:07.9±4.6, 3°.03N×96°.58E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/27, mbtmp3.3/3, Error ellipse: s-maj=175.2km s-min=33.3km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**26.27**	**246**	T	T	22 11 09.7	
	baz=67						
H08S3	**Diego Garcia H**	**26.27**	**246**	T	T	22 11 19.5	
	baz=67						
H08S1	**Diego Carcia H**	**26.29**	**246**	T	T	22 11 08.0	
	baz=67						
H01W3	**Cape Leeuwin H**	**41.16**	**158**	T	T	22 30 13.5	
	baz=332,slow=76,SNR=6.8						
H01W2	**Cape Leeuwin H**	**41.17**	**158**	T	T	22 30 13.5	
	baz=332,slow=76,SNR=8.0						
H01W1	**Cape Leeuwin H**	**41.18**	**158**	T	T	22 30 19.0	
	baz=332,slow=76,SNR=5.8						
WRA	**Warramunga Arr**	**43.54**	**123**	P	P	21 47 13.6	-0.2
	0.4nm,0.8s,baz=303,slow=9.1,SNR=1.8						
MKAR	**Makanchi Array**	**45.33**	**346**	P	P	21 47 27.4	-0.3
	0.4nm,0.5s,baz=162,slow=8.0,SNR=8.8						
SONM	**Songino Array**	**45.43**	**9**	P	P	21 47 29.0	+0.3
	0.1nm,0.5s,baz=204,slow=7.8,SNR=1.5						

*ATH **06** 21:50:23.7, 38°.13N×20°.40E, h11km±1km, ML2.9/12, Error ellipse: s-maj=1.5km s-min=0.8km az=239.0*
*THE **06** 21:50:23.9, 38°.15N×20°.41E, h10km, ML2.9/13, Error ellipse: s-maj=0.9km s-min=0.4km az=256.0*
*IDC **06** 21:50:24.7±13.0, 38°.60N×20°.79E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.2/41, mbtmp3.4/4, ML3.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/32, Error ellipse: s-maj=244.1km s-min=34.1km az=35.0*
ISC 06 21:50:23.6±0.8, 38°.15N±0°.02×20°.41E±0°.03, h14km±4km, n57, σ0s53/83, mb3.7/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXRA	**Lixouri, Kepha**	**0.06**	**21**	P	**Pg**	**21 50 26.2**	**0.0**
LXRA				S	**Sg**	**21 50 28.1**	**+0.1**
ARGA	**Argostoli. Kep**	**0.06**	**60**	P	**Pg**	**21 50 26.1**	**-0.1**
ARGA				S	**Sg**	**21 50 27.6**	**-0.5**
KEF3	**Kipouria, Keph**	**0.08**	**320**	P	**Pg**	**21 50 26.4**	**-0.1**
KEF3				S	**Sg**	**21 50 28.1**	**-0.2**
KEF3	**Kipouria, Keph**	**0.08**	**320**	P	**Pg**	**21 50 26.3**	**-0.1**
DMLN	**Damoulianata-K**	**0.10**	**343**	P	**Pg**	**21 50 26.7**	**-0.1**
DMLN				S	**Sg**	**21 50 28.9**	**+0.1**
DMLN	**Damoulianata-K**	**0.10**	**343**	P	**Pg**	**21 50 26.6**	**-0.1**
DMLN				S	**Sg**	**21 50 28.9**	**+0.1**
	35μm,0.4s						
KEF4	**Livadi, Kephal**	**0.11**	**6**	P	**Pg**	**21 50 26.8**	**0.0**
KEF4				S	**Sg**	**21 50 29.0**	**0.0**
KEF4	**Livadi, Kephal**	**0.11**	**6**	P	**Pg**	**21 50 26.8**	**0.0**
KEF5	**Kardakata, Kep**	**0.14**	**19**	P	**Pg**	**21 50 27.2**	**-0.1**
KEF5				S	**Sg**	**21 50 29.7**	**0.0**
KEF5	**Kardakata, Kep**	**0.14**	**19**	P	**Pg**	**21 50 27.1**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.14**	**103**	P	**Pg**	**21 50 27.2**	**0.0**
PSDA				S	**Sg**	**21 50 29.7**	**0.0**
PSDA	**Pessada-Kefalo**	**0.14**	**103**	P	**Pg**	**21 50 27.2**	**0.0**
PSDA				S	**Sg**	**21 50 29.9**	**+0.3**
	3μm,0.2s						
VLS	**Valsamata**	**0.14**	**77**	P	**Pg**	**21 50 27.2**	**-0.1**
VLS				S	**Sg**	**21 50 29.7**	**-0.1**
VLS				AML	AML	21 50 30.2	
	comp=N,26541μm,0.1s						
VLS				AML	AML	21 50 30.3	
	comp=E,24582μm,0.1s						
VLS	**Valsamata**	**0.14**	**77**	P	**Pg**	**21 50 27.1**	**-0.1**
VLS				S	**Sg**	**21 50 29.8**	**-0.1**
	comp=E,14μm,0.1s						
VLMS	**Volimes, Zakyn**	**0.33**	**143**	P	**Pg**	**21 50 30.5**	**+0.1**
VLMS				S	**Sg**	**21 50 35.6**	**+0.5**
VLMS				AML	AML	21 50 40.6	
	comp=E,6633μm,0.4s						
VLMS				AML	AML	21 50 41.8	
	comp=N,9140μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.33**	**143**	P	**Pg**	**21 50 30.5**	**+0.1**
VLMS				S	**Sg**	**21 50 35.4**	**+0.4**
	comp=N,4μm,0.3s						
EVGI	**Lefkada island**	**0.51**	**22**	P	**Pg**	**21 50 33.5**	**-0.2**
EVGI				S	**Sb**	**21 50 41.8**	**0.0**
EVGI	**Lefkada island**	**0.51**	**22**	P	**Pg**	**21 50 33.5**	**-0.2**
EVGI				S	**Sg**	**21 50 41.0**	**+0.4**
	comp=N,612nm,0.2s						
LTHK	**Lithakia**	**0.55**	**142**	P	**Pg**	**21 50 34.2**	**-0.1**
LTHK				AML	AML	21 50 48.1	
	comp=N,3142μm,0.3s						
LTHK				AML	AML	21 50 53.6	
	comp=E,2282μm,0.5s						
LTHK	**Lithakia**	**0.55**	**142**	P	**Pg**	**21 50 34.3**	**-0.1**
LTHK				S	**Sg**	**21 50 42.6**	**+0.9**
	comp=E,1μm,0.8s						
DRAG	**Dragano-Lefkad**	**0.55**	**13**	P	**Pg**	**21 50 34.1**	**-0.3**
DRAG				S	**Sb**	**21 50 43.1**	**+0.1**
DRAG	**Dragano-Lefkad**	**0.55**	**13**	P	**Pg**	**21 50 34.2**	**-0.3**
DRAG				S	**Sb**	**21 50 42.9**	**0.0**
	comp=E,4μm,0.4s						
NYDR	**Nydri-Lefkada**	**0.61**	**22**	P	**Pg**	**21 50 35.2**	**-0.4**
NYDR				S	**Sg**	**21 50 44.3**	**+0.6**
NYDR	**Nydri-Lefkada**	**0.61**	**22**	P	**Pg**	**21 50 35.1**	**-0.4**
NYDR				S	**Sg**	**21 50 44.5**	**+0.9**
	comp=E,958nm,0.5s						
LKD2	**Lefkada island**	**0.67**	**17**	P	**Pg**	**21 50 36.5**	**-0.2**
LKD2				AML	AML	21 50 57.0	
	comp=N,1664μm,0.6s						
LKD2				AML	AML	21 51 01.6	
	comp=E,1518μm,0.6s						
LKD2	**Lefkada island**	**0.67**	**17**	P	**Pg**	**21 50 36.7**	**0.0**
LKD2				S	**Sb**	**21 50 47.0**	**+0.6**
	comp=E,580nm,0.7s						
TSLK	**Tsoukalades, L**	**0.70**	**16**	P	**Pb**	**21 50 38.1**	**+0.4**
TSLK				AML	AML	21 50 54.9	
	comp=E,1943μm,0.7s						
TSLK				AML	AML	21 50 55.4	
	comp=N,2983μm,0.6s						
TSLK	**Tsoukalades, L**	**0.70**	**16**	P	**Pg**	**21 50 36.7**	**-0.6**
PDO	**Prodromos**	**0.76**	**53**	P	**Pg**	**21 50 38.0**	**-0.3**
PDO				S	**Sb**	**21 50 49.2**	**+0.4**
PDO				AML	AML	21 50 57.6	
	comp=E,3033μm,0.5s						
PDO				AML	AML	21 50 57.6	
	comp=N,2343μm,0.4s						
PDO	**Prodromos**	**0.76**	**53**	P	**Pg**	**21 50 38.0**	**-0.3**
PDO				S	**Sb**	**21 50 49.3**	**+0.5**
	comp=N,2μm,0.5s						
RLS	**Riolos of Patr**	**0.84**	**96**	P	**Pg**	**21 50 39.3**	**-0.4**
RLS				AML	AML	21 50 55.8	
	comp=E,1036μm,0.8s						
RLS				AML	AML	21 51 04.1	
	comp=N,927μm,0.4s						
RLS	**Riolos of Patr**	**0.84**	**96**	P	**Pg**	**21 50 39.4**	**-0.4**
RLS				S	**Sb**	**21 50 51.7**	**+0.6**
	comp=N,475nm,0.8s						
PVO	**Paravola**	**0.99**	**61**	P	**Pg**	**21 50 42.6**	**-0.2**
PVO	**Paravola**	**0.99**	**61**	P	**Pg**	**21 50 42.6**	**-0.2**
DRO	**Drossia**	**1.04**	**100**	P	**Pg**	**21 50 43.1**	**-0.7**
DRO				AML	AML	21 51 10.4	
	comp=N,1554μm,0.7s						
DRO				AML	AML	21 51 12.6	
	comp=E,1990μm,0.4s						
DRO	**Drossia**	**1.04**	**100**	P	**Pg**	**21 50 43.2**	**-0.5**
DRO				S	**Sn**	**21 50 59.1**	**+0.8**
	comp=E,892nm,0.5s						
LAKA	**Lakka**	**1.24**	**85**	P	**Pn**	**21 50 46.3**	**-0.3**
LAKA				S	**Sn**	**21 51 04.3**	**+1.2**
TRIZ	**Trizonia**	**1.33**	**80**	P	**Pn**	**21 50 47.2**	**-0.5**
EVR	**Evrytania**	**1.34**	**54**	P	**Pb**	**21 50 49.2**	**+0.6**
EVR				AML	AML	21 51 24.5	
	comp=E,573μm,0.8s						
EVR				AML	AML	21 51 24.6	
	comp=N,530μm,1.0s						
KLV	**Kalavryta, Ach**	**1.38**	**94**	P	**Pn**	**21 50 48.7**	**+0.2**
KLV				AML	AML	21 51 22.1	
	comp=E,334μm,0.9s						
KLV				AML	AML	21 51 27.8	
	comp=N,282μm,0.6s						
KLV	**Kalavryta, Ach**	**1.38**	**94**	P	**Pn**	**21 50 48.8**	**+0.3**
KLV				S	**Sg**	**21 51 08.0**	**0.0**
	comp=N,158nm,0.8s						
KALE	**Kalithea**	**1.38**	**79**	P	**Pn**	**21 50 48.3**	**-0.3**
IGT	**Igoumenitsa**	**1.39**	**358**	P	**Pn**	**21 50 49.2**	**+0.6**
ITM	**Ithomi**	**1.54**	**128**	P	**Pb**	**21 50 52.2**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.60**	**57**	P	**Pg**	**21 50 54.2**	**-0.2**
MAKR				AML	AML	21 51 27.6	
	comp=E,913μm,0.8s						
MAKR				AML	AML	21 51 28.1	
	comp=N,955μm,0.9s						
KEK	**Kerkira**	**1.64**	**343**	P	**Pn**	**21 50 52.9**	**+0.8**
AGG	**Agios Georgios**	**1.74**	**59**	P	**Pb**	**21 50 56.5**	**+1.1**
AGG				AML	AML	21 51 30.6	
	comp=N,434μm,0.7s						
AGG				AML	AML	21 51 32.0	
	comp=E,423μm,0.8s						
AXAR	**Agios Charalam**	**1.87**	**70**	P	**Pb**	**21 50 58.3**	**+0.7**
THL	**Klokotos Trika**	**1.89**	**41**	P	**Pb**	**21 50 57.7**	**-0.2**
KPRO	**Kipourio**	**1.95**	**22**	P	**Pb**	**21 50 59.9**	**+0.9**
ATAL	**Atalanti**	**2.12**	**74**	P	**Pn**	**21 51 00.7**	**+2.0**
VIL2	**Platees**	**2.25**	**87**	P	**Pb**	**21 51 03.2**	**-0.9**
GERES	**GERESS Array B**	**11.75**	**338**	Pn	**Pn**	**21 53 10.6**	**-0.2**
	comp=E,0.1nm,0.3s,baz=147,slow=11,SNR=1.1						
FINES	**FINESS Array B**	**23.59**	**7**	P	**P**	**21 55 32.1**	**-1.5**
	comp=E,1.8nm,0.8s,baz=186,slow=11,SNR=6.5						
GEYT	**Alibeck**	**29.57**	**79**	LR	LR	22 11 33.7	
	comp=E,40nm,18.4s,baz=345,slow=44						
MKAR	**Makanchi Array**	**45.39**	**58**	P	**P**	**21 58 40.7**	**-0.9**
	comp=E,0.2nm,0.6s,baz=284,slow=7.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**21 58 43.6**	**-0.9**
	comp=E,0.5nm,0.4s,baz=270,slow=6.6,SNR=2.8						

*IDC **06** 22:20:35.3±1.0, 6°.70N×73°.02W, h168km±14km, mb3.3/4, mb1 3.7/7, mb1mx3.3/36, mbtmp3.9/7, MS3.2/1, Ms1 3.1/1, ms1mx2.3/24, Error ellipse: s-maj=34.2km s-min=14.3km az=133.0*
*NEIC **06** 22:20:35.6±1.7, 6°.6N±0°.1×72°.8W±0°.1, h170km±7km, mb4.2/14, Error ellipse: s-maj=25.6km s-min=12.4km az=135.0*
*RSNC **06** 22:20:36.1±0.9, 6°.83N×73°.15W, h151km±4km, ML3.7, Mw3.9, Fault plane solution: NP1:φs123.00000°, δ80.00000°, λ-142.00000°.*
ISC 06 22:20:35.7±0.6, 6°.83N±0°.03×73°.12W±0°.04, h155km±5km, n63, σ1s57/96, mb4.2/10, 5C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRRC	**Barranca, Sant**	**0.65**	**295**⇓	*iP*	**Pn**	**22 20 58.3**	**-0.2**
BRRC				*eS*	**Sn**	**22 21 15.3**	**-0.6**
BRRC				*i*		22 21 19.3	
	comp=Z,684nm,0.4s						
PAMC	**Pamplona, Colo**	**0.66**	**39**⇑	*iP*	**Pn**	**22 20 59.3**	**+0.2**
PAMC				*eS*	**Sn**	**22 21 16.1**	**-0.8**
PAMC				*i*		22 21 19.8	
	comp=Z,787nm,0.5s						
RUSC	**La Rusia**	**0.93**	**178**⇓	*iP*	**Pn**	**22 21 00.4**	**-0.6**
RUSC				*eS*	**Sn**	**22 21 18.9**	**-1.5**
RUSC				*i*		22 21 20.6	
	comp=Z,593nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.36**	**258**	*eP*	**Pn**	**22 21 02.9**	**-1.4**
PTBC				*eS*	**Sn**	**22 21 24.2**	**-2.0**
PTBC				*i*		22 21 31.6	
	comp=Z,414nm,0.4s						
TAMC	**Tame, Arauca**	**1.37**	**106**⇑	*iP*	**Pn**	**22 21 04.9**	**+0.5**
TAMC				*i*		22 21 25.9	
	comp=Z,370nm,0.4s						
TAMC				*eS*	**Sn**	**22 21 26.4**	**-0.1**
OCAC	**Ocana**	**1.42**	**352**⇑	*iP*	**Pn**	**22 21 04.6**	**-0.5**
OCAC				*eS*	**Sn**	**22 21 26.6**	**-1.0**
OCAC				*i*		22 21 35.2	
	comp=Z,1μm,0.5s						
SPBC	**San Pablo de B**	**1.50**	**219**⇓	*eP*	**Pn**	**22 21 05.4**	**-0.4**
SPBC				*eS*	**Sn**	**22 21 28.2**	**-0.8**
SPBC				*i*		22 21 34.4	
	comp=Z,820nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.85**	**291**	*eP*	**Pn**	**22 21 08.8**	**-0.7**
ZARC				*eS*	**Sn**	**22 21 33.7**	**-1.7**
ZARC				*i*		22 21 39.9	
	comp=Z,614nm,0.6s						
NORC	**Norcasia**	**2.15**	**234**⇑	*iP*	**Pn**	**22 21 12.3**	**-0.7**
NORC				*eS*	**Sn**	**22 21 40.4**	**-1.2**

CBOC				*i*			22 22 11.6	
	comp=Z,92nm,0.5s							
DBBC	**Dabeiba**	**3.08**	**274**	⇑*iP*		**Pn**	**22 21 23.9**	**-0.4**
DBBC				*eS*		**Sn**	**22 22 00.5**	**-1.5**
MOTC	**Monteria, Cord**	**3.18**	**308**	*eP*		**Pn**	**22 21 23.7**	**-1.9**
MOTC				*eS*		**Sn**	**22 22 02.7**	**-1.6**
MOTC				*i*			22 22 04.4	
	comp=Z,122nm,0.3s							
SDV	**Santo Domingo**	**3.20**	**50**	P		**Pn**	**22 21 25.8**	**-0.3**
	comp=Z,81nm,0.3s,baz=235,slow=13,SNR=112							
SDV				S		**Sn**	**22 22 02.4**	**-2.6**
	comp=Z,14nm,0.3s,baz=249,slow=22,SNR=14							
SDV	**Santo Domingo**	**3.20**	**50**			**Pn**	**22 21 26.0**	**0.0**
ANIL	**Santa Ana**	**3.25**	**225**	*eP*		**Pn**	**22 21 26.3**	**-0.5**
ANIL				*eS*		**Sn**	**22 22 06.2**	**0.0**
ANIL				*i*			22 22 16.6	
	comp=Z,87nm,0.3s							
ORTC	**Ortega, Tolima**	**3.59**	**216**	*eP*		**Pn**	**22 21 30.8**	**-0.1**
ORTC				*eS*		**Sn**	**22 22 13.3**	**-0.4**
ORTC				*i*			22 22 20.4	
	comp=Z,184nm,0.4s							
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*		**Pn**	**22 21 30.2**	**-1.8**
SJCC				*eS*		**Sn**	**22 22 11.5**	**-4.1**
SJCC				*i*			22 22 20.6	
	comp=Z,81nm,0.5s							
LCBC	**Los crdobas,**	**3.80**	**302**	*eP*		**Pn**	**22 21 36.5**	**+3.0**
LCBC				*eS*		**Sn**	**22 22 16.9**	**-1.6**
YOTC	**Yotoco, Valle**	**4.28**	**229**	*eP*		**Pn**	**22 21 39.0**	**-0.9**
YOTC				*eS*		**Sn**	**22 22 28.8**	**-1.0**
GUVC	**San Jose del G**	**4.28**	**173**	*eP*		**Pn**	**22 21 39.3**	**-0.6**
GUVC				*eS*		**Sn**	**22 22 29.4**	**-0.4**
GUVC				*i*			22 22 32.2	
	comp=Z,144nm,0.4s							
SMRC	**Santa Marta, M**	**4.45**	**346**	*eP*		**Pn**	**22 21 41.7**	**-0.3**
SMRC				*eS*		**Sn**	**22 22 29.2**	**-4.4**
SMRC				*i*			22 22 34.0	
	comp=Z,64nm,0.3s							
MACC	**Macarena, Meta**	**4.71**	**189**	⇓*iP*		**Pn**	**22 21 43.4**	**-2.1**
MACC				*eS*		**Sn**	**22 22 33.7**	**-6.1**
MACC				*i*			22 22 40.9	
	comp=Z,81nm,0.8s							
BETC	**Betania**	**4.72**	**209**	*eP*		**Pn**	**22 21 44.7**	**-1.0**
BETC				*eS*		**Sn**	**22 22 38.3**	**-2.0**
MARP	**Paez Belalcaza**	**4.86**	**216**	*eP*		**Pn**	**22 21 47.0**	**-0.7**
MARP				*eS*		**Sn**	**22 22 42.9**	**-1.0**
MALC	**Bahia Malaga**	**5.04**	**237**	*eP*		**Pn**	**22 21 48.8**	**-1.1**
MALC				*eS*		**Sn**	**22 22 46.4**	**-1.3**
MALC				*i*			22 23 02.7	
	comp=Z,24nm,0.5s							
GARC	**Garzon, Huila**	**5.18**	**207**	*eP*		**Pn**	**22 21 50.5**	**-1.4**
GARC				*eS*		**Sn**	**22 22 46.3**	**-5.1**
GARC				*i*			22 22 50.5	
	comp=Z,75nm,0.3s							
PCON	**Cinco Dias**	**5.54**	**216**	*eP*		**Pn**	**22 21 57.5**	**+0.5**
PCON				*eS*		**Sn**	**22 22 59.4**	**-0.8**
PCON				*i*			22 23 03.0	
	comp=Z,24nm,0.5s							
SOTA	**Rioblanco**	**5.81**	**217**	*eP*		**Pn**	**22 21 59.9**	**-0.6**
BCIP	**Isla Barro Col**	**7.05**	**290**	Pn		Pn	22 22 21.5	+5.0
PCRV	**Puerto La Cruz**	**9.03**	**68**	P		**Pn**	**22 22 42.6**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=243,slow=6.8,SNR=1.9							
BANI	**BANI**	**11.81**	**13**	Pn		**Pn**	**22 23 22.6**	**+3.1**
MTDJ	**Mount Denham**	**12.12**	**340**	Pn		**Pn**	**22 23 26.6**	**+3.0**
GTBY	**Guantanamo Bay**	**13.17**	**352**	Pn		**P**	**22 23 40.3**	**-0.9**
WVT	**Waverly**	**32.13**	**337**	P		**P**	**22 26 49.3**	**+0.8**
WVT				IAmb		IAmb	22 26 50.3	
	comp=Z,6.6nm,1.2s							
WHAR	**Wooly Hollow**	**33.36**	**331**	P		**P**	**22 26 59.6**	**+0.4**
WHAR				IAmb		IAmb	22 27 06.0	
	comp=Z,4.3nm,1.2s							
BDFB	**Brasilia**	**33.42**	**132**	LR		LR	22 39 52.2	
	comp=Z,36nm,19.4s,baz=263,slow=35							
U40A	**Yellville**	**34.49**	**331**	P		**P**	**22 27 09.7**	**+0.7**
U40A				IAmb		IAmb	22 27 10.1	
	comp=Z,3.9nm,0.7s							
CCM	**Cathedral Cave**	**35.17**	**335**	P		**P**	**22 27 15.2**	**+0.5**
CCM				IAmb		IAmb	22 27 15.7	
	comp=Z,4.8nm,0.7s							
SFIN	**Lafayette**	**35.68**	**342**	P		**P**	**22 27 20.0**	**+0.9**
SFIN				IAmb		IAmb	22 27 24.0	
	comp=Z,9.6nm,1.2s							
TXAR	**Lajitas Array**	**36.46**	**312**	P		**P**	**22 27 25.7**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=116,slow=8.2,SNR=3.5							
TXAR	**Lajitas Array**	**36.46**	**312**	P		**P**	**22 27 26.4**	**+0.4**
E46A	**Sault Ste Mari**	**40.56**	**348**	P		**P**	**22 28 00.9**	**+1.1**
BATG	**Bathurst New B**	**40.76**	**7**	P		**P**	**22 28 01.9**	**+0.5**
EYMN	**Ely**	**43.87**	**342**	P		**P**	**22 28 26.4**	**-0.2**
MTPU	**Mount Pierson**	**47.06**	**317**	P		**P**	**22 28 54.4**	**+2.1**
ULM	**Lac du Bonnet**	**47.28**	**340**	P		**P**	**22 28 52.4**	**-1.0**
	comp=Z,2.3nm,0.5s,baz=148,slow=6.9,SNR=5.1							
ULM	**Lac du Bonnet**	**47.28**	**340**	P		**P**	**22 28 52.9**	**-0.5**
ULM				IAmb		IAmb	22 28 53.7	
	comp=Z,2.7nm,0.7s							
PDAR	**Pinedale Array**	**48.08**	**324**	P		**P**	**22 28 59.0**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=113,slow=9.2,SNR=3.0							
FFC	**Flin Flon**	**53.08**	**340**	P		**P**	**22 29 36.6**	**-0.4**
YKA	**Yellowknife Ar**	**63.26**	**340**	P		**P**	**22 30 47.0**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=130,slow=7.0,SNR=21							
INK	**Inuvik**	**73.03**	**340**	P		**P**	**22 31 48.6**	**+0.3**
PPLA	**Purkeypile**	**78.98**	**333**	P		**P**	**22 32 22.1**	**-0.2**
PPLA				IAmb		IAmb	22 32 36.5	
	comp=Z,8.4nm,1.3s							
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc		**PKPdf**	**22 40 02.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=110,slow=4.0,SNR=1.9							
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc		**PKPbc**	**22 40 08.4**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=101,slow=2.5,SNR=2.0							

*IDC **06** 22:24:50.9±0.8, 5°.39S×152°.83E, h0km, mb4.0/18, mb1 4.1/19, mb1mx4.0/50, mbtmp4.0/19, ML2.1/1, MS3.1/2, Ms1 3.2, ms1mx2.6/30, Error ellipse: s-maj=24.4km s-min=16.6km az=114.0*

*NEIC **06** 22:24:52.6±2.0, 5°.5S±0°.1×152°.9E±0°.2, h10km±1km, mb4.2/12, Error ellipse: s-maj=29.0km s-min=16.2km az=67.0*

ISC 06 22:24:56.7±0.6, 5°.44S±0°.07×152°.9E±0°.1, h37km, n52, σ0ˢ66/52, mb4.2/28, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul**	**1.42**	**331**			**Pn**	**22 25 20.3**	**+0.4**
PMG	**Port Moresby**	**6.89**	**235**	Pn		**Pn**	**22 26 34.9**	**-0.3**
	2.1nm,0.3s,baz=45,slow=11,SNR=1.6							
PMG				Sn		**Sn**	**22 27 52.8**	**+0.4**
	2.7nm,0.3s,baz=24,slow=20,SNR=2.3							
HNR	**Honiara**	**8.07**	**120**	LR		LR	22 29 42.4	
	comp=Z,73nm,19.0s,baz=291,slow=36							
EIDS	**Eidsvold**	**19.89**	**185**			**Pn**	**22 29 26.5**	**-0.3**
DZM	**Mont Dzumac**	**21.12**	**143**	P		**P**	**22 29 39.0**	**+0.5**
	2.5nm,0.6s,baz=280,slow=11,SNR=1.4							
DZM				LR		LR	22 37 07.8	
	comp=Z,66nm,18.2s,baz=248,slow=35							
SIJI	**Sorong**	**22.03**	**281**	P		**P**	**22 29 47.9**	**-0.3**
	3.4nm,0.4s,baz=78,slow=14,SNR=2.0							
WB0	**Warramunga Arr**	**22.93**	**230**	P		**P**	**22 29 59.5**	**+1.7**
WB0				IAmb		IAmb	22 29 59.8	
	comp=Z,9.3nm,0.9s							
WR0	**Warramunga Arr**	**22.93**	**229**	P		**P**	**22 29 57.4**	**-0.4**
WR0				IAmb		IAmb	22 29 59.2	
	comp=Z,14nm,1.1s							
WB2	**Warramunga Arr**	**23.07**	**230**	P		**P**	**22 29 58.9**	**-0.2**
WB2				IAmb		IAmb	22 30 14.3	
	comp=Z,7.6nm,0.8s							
WRA	**Warramunga Arr**	**23.07**	**230**	P		**P**	**22 29 58.0**	**-1.2**
	comp=Z,6.8nm,0.9s,baz=54,slow=10.0,SNR=24							
WRA	**Warramunga Arr**	**23.07**	**230**	P		**P**	**22 29 59.9**	**+0.7**
ASAR	**Alice Springs**	**25.73**	**223**	P		**P**	**22 30 23.4**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=60,slow=8.2,SNR=17							
ASAR	**Alice Springs**	**25.73**	**223**	P		**P**	**22 30 25.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**29.41**	**242**	P		**P**	**22 30 56.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**58.20**	**296**	P		**P**	**22 34 47.3**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=114,slow=5.3,SNR=9.0							
CMAR	**Chiang Mai Arr**	**58.20**	**296**	P		**P**	**22 34 47.8**	**+0.2**
PETK	**Petropavlovsk-**	**58.47**	**3**	P		**P**	**22 34 49.0**	**+0.3**
	comp=Z,4.3nm,0.9s,baz=169,slow=2.2,SNR=2.2							
SONM	**Songino Array**	**66.89**	**328**	P		**P**	**22 35 45.2**	**0.0**
	comp=Z,0.7nm,0.8s,baz=94,slow=1.7,SNR=4.2							
SONM	**Songino Array**	**66.89**	**328**	P		**P**	**22 35 45.7**	**+0.5**
SONM				IAmb		IAmb	22 35 47.4	
	comp=Z,1.0nm,1.0s							
SEY	**Seymchan**	**68.18**	**360**	P		**P**	**22 35 53.4**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=154,slow=10,SNR=4.0							
TAPN	**Taplejung**	**70.78**	**301**	*eP*		**P**	**22 36 10.5**	**+0.4**
ODAN	**Odare**	**70.92**	**301**	*eP*		**P**	**22 36 11.4**	**+0.6**
JIRN	**Jiri**	**72.17**	**301**	*eP*		**P**	**22 36 19.1**	**+0.6**
VNDA	**Vanda**	**72.19**	**178**	P		**P**	**22 36 17.4**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=340,slow=5.1,SNR=2.3							
GUN	**Gumba**	**72.50**	**301**	*eP*		**P**	**22 36 21.1**	**+0.6**
	comp=Z,13nm,0.8s							
PKI	**Pulchoki**	**72.81**	**301**	*eP*		**P**	**22 36 22.5**	**+0.2**
DMN	**Daman**	**73.08**	**301**	*eP*		**P**	**22 36 24.1**	**+0.3**
	comp=Z,15nm,0.9s							
GKN	**Gorkha**	**73.58**	**301**	*eP*		**P**	**22 36 27.0**	**+0.3**
	comp=Z,12nm,0.9s							
KOLN	**Koldanda**	**74.41**	**301**	*eP*		**P**	**22 36 31.8**	**+0.2**
	comp=Z,9.6nm,0.9s							
PYUN	**Piuthan**	**75.01**	**301**	*eP*		**P**	**22 36 35.1**	**0.0**
	comp=Z,14nm,0.9s							
TIXI	**Tiksi**	**78.53**	**352**	P		**P**	**22 36 52.5**	**-1.2**
	comp=Z,1.5nm,0.3s,baz=107,slow=17,SNR=4.3							
MK31	**Makanchi Array**	**80.84**	**319**	P		**P**	**22 37 06.3**	**-0.5**
MKAR	**Makanchi Array**	**80.84**	**319**	P		**P**	**22 37 06.3**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=106,slow=4.4,SNR=7.7							
MKAR	**Makanchi Array**	**80.84**	**319**	P		**P**	**22 37 07.1**	**+0.3**
IMAR	**Indian Mountai**	**80.96**	**19**	P		**P**	**22 37 07.2**	**+0.2**
MAKZ	**Makanchi**	**81.05**	**319**	P		**P**	**22 37 07.7**	**-0.2**
MAKZ				IAmb		IAmb	22 37 10.3	
	comp=Z,1.5nm,0.8s							
ZALV	**Zalesovo Beam**	**81.71**	**326**	P		**P**	**22 37 10.3**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=107,slow=5.1,SNR=5.9							
ILAR	**Eielson Array**	**82.72**	**22**	P		**P**	**22 37 15.1**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=250,slow=5.3,SNR=3.1							
KURK	**Kurchatov**	**84.31**	**322**	P		**P**	**22 37 24.2**	**-0.5**
KURBB	**Kurchatov Arra**	**84.33**	**322**	P		**P**	**22 37 24.2**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=99,slow=4.7,SNR=4.7							
NIL	**Nilore**	**84.38**	**304**	P		**P**	**22 37 26.3**	**+0.7**
QSPA	**South Pole Qui**	**84.53**	**180**	P		**P**	**22 37 26.2**	**+0.5**
QSPA				IAmb		IAmb	22 37 46.0	
	comp=Z,1.8nm,0.8s							
BMAR	**Burnt Mountain**	**84.82**	**20**	P		**P**	**22 37 26.4**	**-0.7**
AAK	**Ala-Archa**	**85.15**	**314**	P		**P**	**22 37 29.9**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=66,slow=1.2,SNR=12							
AAK	**Ala-Archa**	**85.15**	**314**	P		**P**	**22 37 29.3**	**-0.1**
INK	**Inuvik**	**89.03**	**21**	P		**P**	**22 37 47.7**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=270,slow=3.0,SNR=3.4							
INK	**Inuvik**	**89.03**	**21**	P		**P**	**22 37 46.4**	**-0.9**
BVAR	**Borovoye Array**	**89.78**	**323**	P		**P**	**22 37 50.2**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=121,slow=14,SNR=6.5							
YKA	**Yellowknife Ar**	**95.96**	**28**	P		**P**	**22 38 20.0**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=281,slow=4.4,SNR=2.8							
GERES	**GERESS Array B**	**124.62**	**328**	PKP		**PKPdf**	**22 43 52.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=112,slow=4.4,SNR=2.5							
TORD	**Torodi Ar. Bea**	**150.56**	**287**	PKPbc		**PKPbc**	**22 44 45.0**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=70,slow=1.7,SNR=7.7							
TORD	**Torodi Ar. Bea**	**150.56**	**287**			**PKPbc**	**22 44 44.3**	**-1.3**

*IDC **06** 22:26:20.8±1.6, 37°.96N×91°.09E, h0km, mb3.6/2, mb1 3.5/5, mb1mx3.2/63, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=53.6km s-min=26.5km az=54.0*

*NNC **06** 22:27:13.2±5.0, 40°.95N×87°.62E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=46.8km s-min=45.4km az=131.0*

ISC 06 22:26:21.7±1.2, 38°.4N±0°.1×91°.4E±0°.1, h10km, n9, σ1ˢ69/10, 4C-2D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PDGK	**Podgornoye**	**10.27**	**302**	⇑Pn		**Pn**	**22 28 50.6**	**+1.5**
	2.7nm,1.1s							
PDGK				⇑Lg		Lg	22 30 42.9	
	10nm,0.7s							
MK31	**Makanchi Array**	**10.73**	**324**	⇑Pn		**Pn**	**22 28 57.8**	**+2.4**
	1.1nm,0.4s,baz=134,slow=14,SNR=62							
MK31				⇓Lg		Lg	22 30 53.9	
	3.0nm,0.5s,baz=135,slow=24,SNR=12							
MKAR	**Makanchi Array**	**10.73**	**324**	Pn		**Pn**	**22 28 57.3**	**+1.8**
	0.9nm,0.3s,baz=133,slow=14,SNR=47							
MKAR				Sn		**Sn**	**22 30 53.8**	**-1.8**
	0.8nm,0.3s,baz=139,slow=26,SNR=9.1							
MAKZ	**Makanchi**	**10.89**	**324**	⇑Pn		**Pn**	**22 28 59.2**	**+1.6**
	1.9nm,1.2s							
MAKZ				⇓Lg		Lg	22 30 57.8	
	3.5nm,0.8s							
MDOK	**Medeo**	**11.86**	**298**	Pn		**Pn**	**22 29 11.3**	**+0.3**
	4.6nm,0.8s							
MDOK				Lg		Lg	22 31 31.3	
	2.6nm,0.8s							
SONM	**Songino Array**	**14.44**	**44**	Pn		**P**	**22 29 53.0**	**-0.1**
	0.1nm,0.3s,baz=234,slow=12,SNR=4.2							
SONM				Lg		Lg	22 33 58.2	
	0.1nm,0.3s,baz=233,slow=28,SNR=2.9							
KURBB	**Kurchatov Arra**	**15.25**	**327**	Pn		**Pn**	**22 29 55.4**	**-1.6**
	0.0nm,0.3s,baz=134,slow=13,SNR=1.7							
ASAR	**Alice Springs**	**73.49**	**140**	P		**P**	**22 37 54.4**	**-0.2**
	0.2nm,0.4s,baz=336,slow=6.3,SNR=1.2							
TORD	**Torodi Ar. Bea**	**81.72**	**280**	P		**P**	**22 38 40.4**	**-0.4**
	0.2nm,0.4s,baz=51,slow=3.9,SNR=2.1							

IDC 06 22:27:54.1±3.9, 5°.34S×153°.17E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/48, mbtmp3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/26, Error ellipse: s-maj=166.4km s-min=52.8km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**7.20**	**236**	Sn		Sn	22 30 59.7	-3.7
	2.5nm,0.3s,baz=87,slow=18,SNR=1.7							
WRA	**Warramunga Arr**	**23.38**	**230**	P		P	22 33 04.2	-0.5
	1.2nm,0.4s,baz=55,slow=9.8,SNR=6.0							
ASAR	**Alice Springs**	**26.01**	**224**	P		P	22 33 29.2	+0.2
	0.7nm,0.5s,baz=58,slow=9.6,SNR=6.0							
ASAR				LR		LR	22 42 31.0	
	comp=Z,64nm,21.9s,baz=64,slow=34							
TORD	**Torodi Ar. Bea**	**150.82**	**287**	PKPbc		PKPbc	22 47 49.6	-0.1
	0.5nm,0.8s,baz=68,slow=4.4,SNR=2.6							

*IDC **06** 22:32:00.7±1.9, 0°.01S×97°.73E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.6/53, mbtmp3.8/7, ML4.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/32, Error ellipse: s-maj=59.7km s-min=20.8km az=63.0*

ISC 06 22:32:05.8±1.7, 0°.1N±0°.2×97°.9E±0°.3, h30km, n16, σ0ˢ57/9, mb3.9/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSI	**Prapat**	**2.85**	**21**	Pn		**Pn**	**22 32 48.9**	**-0.5**
	0.7nm,0.3s,baz=180,slow=16,SNR=1.5							
LEM	**Lembang**	**11.88**	**126**	LR		LR	22 38 59.8	
	comp=Z,5nm,19.1s,baz=268,slow=35							
CMAR	**Chiang Mai Arr**	**18.26**	**3**	P		**Pn**	**22 36 17.5**	**+0.4**
	0.6nm,0.3s,baz=190,slow=12,SNR=1.4							
H08S2	**Diego Garcia H**	**26.50**	**253**	T		T	23 04 52.4	
	baz=74,slow=76,SNR=72							
H08S3	**Diego Garcia H**	**26.50**	**253**	T		T	23 04 52.8	
	baz=74,slow=76,SNR=455							
H08S1	**Diego Carcia H**	**26.51**	**253**	T		T	23 04 53.8	
	baz=74,slow=76,SNR=31							
H01W3	**Cape Leeuwin H**	**37.97**	**158**	T		T	23 19 27.4	
	baz=334,slow=76,SNR=6.7							
H01W2	**Cape Leeuwin H**	**37.99**	**158**	T		T	23 19 28.7	
	baz=334,slow=6.0,SNR=6.0							
H01W1	**Cape Leeuwin H**	**37.99**	**158**	T		T	23 19 28.7	
	baz=334,slow=76,SNR=5.9							
WRA	**Warramunga Arr**	**40.86**	**121**	P		**P**	**22 39 45.4**	**+0.1**
	0.7nm,0.7s,baz=300,slow=8.9,SNR=5.9							
ASAR	**Alice Springs**	**42.17**	**127**	P		**P**	**22 39 56.3**	**+0.2**
	0.4nm,0.4s,baz=296,slow=6.7,SNR=5.8							
KSRS	**Korea Array**	**46.34**	**33**	P		**P**	**22 40 29.5**	**+0.3**
	1.8nm,0.8s,baz=213,slow=6.7,SNR=3.2							
SONM	**Songino Array**	**48.10**	**8**	P		**P**	**22 40 43.5**	**+0.5**
	0.3nm,0.3s,baz=180,slow=6.5,SNR=5.9							
MKAR	**Makanchi Array**	**48.47**	**346**	P		**P**	**22 40 45.6**	**0.0**
	1.6nm,0.7s,baz=157,slow=8.3,SNR=18							
ZALV	**Zalesovo Beam**	**54.74**	**351**	P		**P**	**22 41 32.2**	**-0.2**
	1.3nm,0.4s,baz=165,slow=6.1,SNR=6.3							
TXAR	**Lajitas Array**	**144.19**	**33**	PKP		**PKPdf**	**22 51 38.7**	**-1.0**
	0.1nm,0.5s,baz=325,slow=1.1,SNR=2.3							

*IDC **06** 22:41:47.5±10.0, 12°.53N×56°.93E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/34, mbtmp3.6/5, ML3.7/1, MS3.3/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=346.4km s-min=35.4km az=82.0*

*OMAN **06** 22:41:52.7, 12°.61N×58°.20E, h33km, ms2.5/9*

ISC 06 22:41:57.8±1.2, 12°.9N±0°.1×58°.0E±0°.1, h35km, n22, σ1ˢ29/19, mb3.6/4, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SOCY	**Socotra**	**3.95**	**260**	P		**Pn**	**22 42 53.4**	**-2.7**
	SNR=258							
SHAO	**Shalim**	**5.54**	**336**	P		**Pn**	**22 43 17.5**	**-0.3**
	SNR=16							
DMTO	**DMTO**	**5.58**	**329**	P		**Pn**	**22 43 18.6**	**+0.3**
	SNR=16							
DOK	**Doka**	**6.75**	**327**	P		**Pn**	**22 43 35.3**	**+0.9**
DQM	**DQM**	**6.97**	**357**	P		**Pn**	**22 43 37.9**	**+0.4**
MHTO	**MHTO**	**8.01**	**0**	P		**Pn**	**22 43 51.0**	**-0.8**
	SNR=16							
JLN	**Jalan Bani Buh**	**9.27**	**8**	P		**Pn**	**22 44 06.9**	**-2.2**
	SNR=9.7							
JMDO	**Jabal Madar**	**9.39**	**1**	P		**Pn**	**22 44 11.1**	**+0.4**
	SNR=11							
WBK	**Wadi Bani Khal**	**9.67**	**6**	P		**Pn**	**22 44 13.7**	**-0.9**
	SNR=27							
BSY	**Bisya**	**9.79**	**356**	P		**Pn**	**22 44 17.7**	**+1.6**
SMDO	**Samad**	**10.07**	**0**	P		**Pn**	**22 44 20.5**	**+0.4**
	SNR=7.1							
WSAR	**Wadi Sarin**	**10.27**	**3**	Pn		**Pn**	**22 44 22.6**	**-0.3**
	0.6nm,0.3s,baz=213,slow=13,SNR=20							
WSAR				Sn		**Sn**	**22 46 15.2**	**-1.6**
	0.1nm,0.3s,baz=114,slow=20,SNR=1.8							
BIDO	**Bidbid**	**10.53**	**1**	P		**Pn**	**22 44 25.4**	**-1.0**
HOQ	**Hoqain**	**10.61**	**357**	P		**Pn**	**22 44 28.2**	**+0.7**
ZALV	**Zalesovo Beam**	**46.09**	**22**	P		**P**	**22 50 19.3**	**+1.0**
	0.4nm,0.5s,baz=224,slow=8.1,SNR=2.0							
BOSA	**Boshof**	**52.02**	**217**	LR		LR	23 10 53.7	
	comp=Z,28nm,19.6s,baz=348,slow=34							
SONM	**Songino Array**	**53.12**	**39**	P		**P**	**22 51 13.9**	**+1.7**
	0.3nm,0.8s,baz=246,slow=6.1,SNR=2.3							
H01W3	**Cape Leeuwin H**	**71.36**	**134**	T		T	00 10 51.8	
	baz=302,slow=76,SNR=5.0							
H01W2	**Cape Leeuwin H**	**71.37**	**134**	T		T	00 10 48.0	
	baz=302,slow=76,SNR=4.9							
H01W1	**Cape Leeuwin H**	**71.38**	**134**	T		T	00 10 49.9	
	baz=302,slow=76,SNR=4.1							
WRA	**Warramunga Arr**	**81.92**	**113**	P		**P**	**22 54 13.7**	**-0.7**
	0.4nm,0.4s,baz=293,slow=4.3,SNR=2.8							
ASAR	**Alice Springs**	**82.62**	**116**	P		**P**	**22 54 17.1**	**-1.0**
	0.4nm,0.6s,baz=282,slow=4.6,SNR=4.1							

IDC 06 22:42:07.0±1.7, 5°.69S×128°.94E, h290km±22km, mb3.1/1, mb1 3.3/4, mb1mx3.0/26, mbtmp3.9/4, Error ellipse: s-maj=32.7km s-min=18.5km az=88.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**5.32**	**26**	P		Pn	22 43 28.2	+0.2
	3.4nm,0.3s,baz=238,slow=22,SNR=21							
SIJI				S		S	22 44 29.5	-3.5
	4.2nm,0.3s,baz=251,slow=23,SNR=12							
BATI	**Baumata**	**6.89**	**229**	P		Pn	22 43 46.6	-0.3
	29nm,0.3s,baz=81,slow=2.8,SNR=19							
BATI				S		S	22 45 04.4	-3.2
	4.7nm,0.3s,baz=36,slow=6.3,SNR=1.9							
WRA	**Warramunga Arr**	**15.11**	**160**	P		P	22 45 25.6	-0.3
	0.7nm,0.3s,baz=340,slow=12,SNR=16							
WRA				S		S	22 48 05.5	-5.6
	0.1nm,0.3s,baz=336,slow=23,SNR=4.2							
ASAR	**Alice Springs**	**18.50**	**166**	P		P	22 46 03.0	+0.3
	0.4nm,0.3s,baz=345,sl

HHC					pmax	pmax			
	comp=Z,78nm,6.5s								
SONM	**Songino Array**	**56.63**	**350**	*P*	**P**		**23 27 25.3**	**-0.7**	
	comp=Z,1.1nm,0.9s,baz=157,slow=7.8,SNR=6.5								
WMQ	**Urumqi**	**58.59**	**334**	*eP*	**P**		**23 27 41.7**	**+2.0**	
MKAR	**Makanchi Array**	**63.28**	**333**	P	**P**		**23 28 10.8**	**-0.7**	
	comp=Z,1.0nm,0.9s,baz=148,slow=7.0,SNR=6.5								
ZALV	**Zalesovo Beam**	**67.90**	**339**	P	**P**		**23 28 39.4**	**-1.8**	
	comp=Z,1.8nm,0.7s,baz=134,slow=6.4,SNR=6.8								
MAW	**Mawson**	**69.84**	**200**	P	**P**		**23 28 53.2**	**+0.1**	
	comp=Z,1.7nm,0.8s,baz=35,slow=9.2,SNR=2.0								
VNDA	**Vanda**	**73.02**	**171**	P	**P**		**23 29 12.5**	**+0.3**	
	comp=Z,0.3nm,0.5s,baz=315,slow=7.1,SNR=2.3								
MLR	**Muntele Rosu**	**97.28**	**315**	LR	LR		00 22 57.4		
	comp=Z,132nm,20.2s,baz=13,slow=40								

*IDC **06** 23:24:25.3±3.6,21˙07S×70˙40W,h0km,mb3.8/1, mb1 3.5/2,mb1mx3.3/33,mbtmp3.5/2,ML2.9/1,Error ellipse: s-maj=143.6km s-min=47.3km az=106.0*
*GUC **06** 23:24:30.1±0.6,20˙02S×70˙94W,h21km±4km,ML3.3*

ISC 06 23:24:28.0±2.1,20˙07S±0˙04×70˙94W±0˙09,h10km±10km, n19,σ1°26/26,2C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
TA01	**Diego Aracena**	**0.87**	**125**	⇓*iP*	**Pg**		**23 24 45.4**	**+0.7**
TA01				*i* S	**Sg**		**23 24 56.9**	**+0.8**
TA01				IAML			23 24 58.9	
	comp=N,1μm,0.5s							
PSGC	**Pisagua**	**0.90**	**59**	⇓*iP*	**Pg**		**23 24 44.8**	**-0.5**
PSGC				*i* S	**Sg**		**23 24 55.9**	**-1.2**
PB11	**IPOC Station P**	**1.24**	**76**	⇓*iP*	**Pn**		**23 24 50.6**	**-1.1**
PB11				*i* S	**Sb**		**23 25 06.7**	**-1.2**
PB11				IAML			23 25 07.8	
	comp=N,1μm,0.5s							
MNMC	**Minye Minye**	**1.57**	**54**	*eP*	**Pn**		**23 24 56.2**	**-0.1**
MNMC				*eS*	**Sn**		**23 25 16.7**	**-0.1**
PB01	**IPOC Station P**	**1.67**	**126**	*eP*	**Pn**		**23 24 58.0**	**+0.5**
PB01				*eS*	**Sn**		**23 25 19.9**	**+0.8**
PB01				IAML			23 25 24.7	
	comp=E,460nm,0.5s							
PB08	**IPOC Station P**	**1.68**	**93**	⇑*iP*	**Pn**		**23 24 57.7**	**-0.2**
PB08				*i* S	**Sn**		**23 25 19.9**	**+0.2**
PB08				IAML			23 25 25.8	
	comp=N,618nm,0.5s							
PB07	**IPOC Station P**	**1.92**	**149**	*eP*	**Pn**		**23 25 01.1**	**0.0**
PB07				*eS*	**Sb**		**23 25 27.3**	**-0.2**
PB07				IAML			23 25 35.2	
	comp=E,351nm,0.6s							
PB16	**IPOC Station P**	**2.19**	**38**	*eP*	**Pn**		**23 25 06.2**	**+1.1**
PB16				*eS*	**Sn**		**23 25 34.5**	**+2.0**
PB16				IAML			23 25 44.0	
	comp=E,201nm,0.5s							
PB03	**IPOC Station P**	**2.26**	**151**	*eP*	**Pn**		**23 25 06.7**	**+0.9**
PB03				*i* S	**Sn**		**23 25 35.5**	**+1.7**
PB03				IAML			23 25 50.1	
	comp=E,195nm,0.7s							
PB09	**IPOC Station P**	**2.34**	**138**	⇑*iP*	**Pn**		**23 25 08.0**	**+1.2**
PB09				*i* S	**Sb**		**23 25 39.9**	**+0.4**
PB09				IAML			23 25 47.6	
	comp=E,492nm,0.7s							
PB04	**IPOC Station P**	**2.37**	**162**	*i* P	**Pn**		**23 25 06.8**	**-0.5**
PB05	**IPOC Station P**	**2.86**	**166**	*i* P	**Pn**		**23 25 13.1**	**-0.8**
PB06	**IPOC Station P**	**2.92**	**154**	*i* P	**Pn**		**23 25 14.4**	**-0.4**
LPAZ	**La Paz**	**4.61**	**36**	Pn	Pb		23 25 44.6	-4.8
	comp=E,0.2nm,0.3s,baz=194,slow=9.7,SNR=2.8							
LPAZ					Sn		**Sb**	**23 26 48.9**	**+3.6**
	baz=172,slow=19,SNR=1.2								
H03N1	**Juan Fernandez**	**15.10**	**206**	T	T		23 43 40.2		
	baz=32,slow=72,SNR=21								
H03N2	**Juan Fernandez**	**15.10**	**207**	T	T		23 43 41.8		
	baz=32,slow=72,SNR=13								
H03N3	**Juan Fernandez**	**15.11**	**206**	T	T		23 43 47.7		
	baz=32,slow=72,SNR=13								
TORD	**Torodi Ar. Bea**	**78.68**	**71**	P	**P**		**23 36 29.1**	**-2.0**	
	comp=E,0.7nm,0.8s,baz=247,slow=5.8,SNR=3.0								
MKAR	**Makanchi Array**	**145.53**	**33**	PKPbc	**PKPdf**		**23 44 06.5**	**-0.1**	
	comp=E,0.4nm,0.6s,baz=321,slow=1.8,SNR=5.3								

IDC 06 23:30:02.8±2.4,1˚61S×133˚64E,h0km,mb3.1/2, mb1 3.4/4,mb1mx3.3/27,mbtmp3.2/4,ML3.0/2,Error ellipse: s-maj=51.9km s-min=23.8km az=52.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
SIJI	**Sorong**	**2.48**	**287**	Pn	Pn		23 30 43.4	-1.2
	0.9nm,0.3s,baz=119,slow=19,SNR=1.7							
SIJI					Pg		Pb	23 30 48.7	+0.3
	6.4nm,0.3s,baz=88,slow=18,SNR=9.2								
SIJI					Sn		Sn	23 31 10.8	-4.8
	2.5nm,0.3s,baz=148,slow=23,SNR=1.9								
SIJI					Lg		Lg	23 31 16.9	
	2.0nm,0.3s,baz=169,slow=23,SNR=1.8								
WRA	**Warramunga Arr**	**18.24**	**178**	P	Pn		23 34 17.2	-0.4
	0.1nm,0.3s,baz=357,slow=12,SNR=2.9								
ASAR	**Alice Springs**	**21.93**	**179**	P	P		23 34 58.4	+0.3
	0.4nm,0.5s,baz=6.9,slow=12,SNR=4.4								
MKAR	**Makanchi Array**	**65.87**	**324**	P	P		23 40 50.6	+0.1
	0.2nm,0.7s,baz=124,slow=7.2,SNR=2.1								

DJA 06 23:41:52.3±1.2,8˚S±7˚×117˚4E±˚,h83km±10km,M2.2/5, MLv2.2/5,Bali region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.26**	**175**	P	Pn		23 42 06.4	+1.6
JAGI				S	Sn		23 42 15.8	+1.9
ABJI	**Asem Bagus**	**0.42**	**14**	P	Pn		23 42 07.5	+1.7
ABJI				S	Sn		23 42 21.8	+6.1
SRBI	**Singaraja**	**1.08**	**83**	P	Pn		23 42 11.7	-0.8
KMMI	**Kalianget**	**1.16**	**352**	P	Pn		23 42 13.2	-0.3
NLAI	**Namlea**	**13.81**	**70**	P	Pn		23 45 02.4	-2.2

*BJI **06** 23:44:36.5±0.0,0˚70N×68˚20E,h10km,mB5.1/9, mb4.6/19*
*IDC **06** 23:44:41.5±0.5,1˚64N×67˚82E,h0km,mb4.2/25, mb1 4.3/26,mb1mx4.1/65,mbtmp4.3/26,ML4.5/1,MS3.7/23, Ms1 3.7/23,ms1mx3.6/34,Error ellipse: s-maj=16.2km s-min=13.2km az=6.0*
*NEIC **06** 23:44:42.5±2.1,1˚55N±0˚06×67˚98E±0˚09,h10km±1km, mb4.5/30,Error ellipse: s-maj=16.4km s-min=9.3km az=254.0*
*GCMT **06** 23:44:45.5±0.3,1˚58N±0˚03×67˚77E±0˚03,h17km±1km, MW4.8/88,Moment Tensor Solution. s25,c29; s88,c116; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.99±.14; $M_{\theta\theta}$=1.40±.10; $M_{\phi\phi}$=0.59±.10; $M_{r\theta}$=0.15±.24; $M_{r\phi}$=1.08±.07; $M_{\theta\phi}$=0.22±.26; Best double couple: M=2.08800×10^{16} NP1:ϕs=243.00000°,δ46.00000°,λ-79.00000°. NP2: ϕs=47.00000°,δ46.00000°,λ-101.00000°. Principal axes: T 2.1500, Plg0.0000°, Azm145.0000°; N -0.1190, Plg8.0000°, Azm55.0000°; P -2.0260, Plg82.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 06 23:44:42.7±0.4,1˚59N±0˚07×67˚96E±0˚06,h10km,n107, σ1°40/93,mb4.5/60,MS3.7/22,1D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
MNCI	**Minicoy**	**8.36**	**37**	Pn	**Pn**		**23 46 44.7**	**+0.5**
DGAR	**Diego Garcia**	**10.00**	**153**	Pn	**Pn**		**23 47 04.8**	**-1.8**
PALK	**Pallekele**	**13.89**	**66**	Pn	**Pn**		**23 48 03.0**	**+3.1**
	2.2nm,0.3s,baz=341,slow=11,SNR=2.1							
PALK					Sn		**Sn**	**23 50 28.9**	**-5.5**
	0.4nm,0.3s,baz=291,slow=19,SNR=2.1							
PALK					LR		LR	23 52 19.7	
	comp=Z,145nm,19.1s,baz=350,slow=33								
PALK	**Pallekele**	**13.89**	**66**	Pn	**Pn**		**23 47 58.4**	**-1.5**	
SOCY	**Socotra**	**17.40**	**308**		**P**		**23 48 48.6**	**+1.3**	
WSAR	**Wadi Sarin**	**23.35**	**338**	LR	LR		23 57 00.7		
	comp=Z,309nm,21.3s,baz=167,slow=32								
UOSS	**Minazif**	**25.85**	**335**	P	**P**		**23 50 13.9**	**-0.7**	
UOSS					IAmb	IAmb	23 50 18.8		
	comp=Z,8.5nm,1.2s								
ATD	**Arta Tunnel**	**26.80**	**293**	P	**P**		**23 50 21.2**	**-2.3**	
ATD					IAmb	IAmb	23 50 27.0		
	comp=Z,11nm,1.1s								

RAYN	**Ar Rayn**	**30.81**	**317**	P	**P**		**23 50 59.5**	**+0.5**	
KMBO	**Kilima Mbogo**	**30.83**	**265**	P	**P**		**23 50 59.3**	**-0.2**	
	comp=Z,0.7nm,0.5s,baz=78,slow=13,SNR=3.8								
PSI	**Prapat**	**30.96**	**87**	P	**P**		**23 51 04.0**	**+3.4**	
	comp=Z,4.6nm,0.7s,baz=358,slow=0.2,SNR=7.0								
PSI					LR		LR	00 01 34.1	
	comp=Z,140nm,19.3s,baz=269,slow=33								
MNSI	**Mandailing Nat**	**31.62**	**91**	P	P		23 51 10.9	+4.7	
	comp=Z,2μmcomp=Z,18nm,1.1s								
NIL	**Nilore**	**32.28**	**8**	P	**P**		**23 51 13.2**	**+1.4**	
KBL	**Kabul**	**32.80**	**2**	P	**P**		**23 51 16.6**	**+0.1**	
KBL					IAmb	IAmb	23 51 21.9		
	comp=Z,6.5nm,1.2s								
KULM	**Kulim**	**32.83**	**83**	P	**P**		**23 51 16.9**	**+0.1**	
KULM					IAmb	IAmb	23 51 20.0		
	comp=Z,8.4nm,0.9s								
CMAR	**Chiang Mai Arr**	**34.70**	**59**	P	**P**		**23 51 35.0**	**+1.9**	
	comp=Z,1.3nm,0.4s,baz=242,slow=9.8,SNR=13								
CMAR					LR		LR	00 05 38.5	
	comp=Z,38nm,18.6s,baz=326,slow=36								
CHTO	**Chiang Mai**	**34.85**	**59**	P	**P**		**23 51 34.0**	**-0.4**	
CHGR	**Chuyangaron**	**36.91**	**2**	P	**P**		**23 51 55.8**	**+3.9**	
KLSI		**37.26**	**100**	P	**P**		**23 51 58.5**	**+3.4**	
GEYT	**Alibeck**	**37.28**	**347**	LR	LR		00 06 33.6		
	comp=Z,198nm,21.4s,baz=190,slow=35								
MBAR	**Mbarara**	**37.28**	**267**	P	**P**		**23 51 55.6**	**0.0**	
	comp=Z,2.0nm,0.2s,baz=125,slow=3.0,SNR=6.6								
MBAR	**Mbarara**	**37.28**	**267**	P	**P**		**23 51 55.4**	**-0.2**	
MBAR					IAmb	IAmb	23 51 58.4		
	comp=Z,7.1nm,0.9s								
GAR	**Garm**	**37.30**	**3**	P	**P**		**23 51 56.2**	**+1.0**	
GAR					IAmb	IAmb	23 51 60.0		
	comp=Z,22nm,1.5s								
KMI	**Kunming**	**40.89**	**52**	⇓P	**P**		**23 52 22.7**	**-3.0**	
KMI					pmax	pmax			
	comp=Z,8.0nm,0.5s								
AAK	**Ala-Archa**	**41.28**	**7**	P	**P**		**23 52 30.8**	**+2.3**	
	comp=Z,1.5nm,0.8s,baz=195,slow=11,SNR=5.5								
AAK	**Ala-Archa**	**41.28**	**7**	P	**P**		**23 52 29.3**	**+0.8**	
KKAR	**Karatay Array**	**41.40**	**3**	P	**P**		**23 52 31.2**	**+1.9**	
EIL	**Elat**	**42.00**	**315**	LR	LR		00 08 01.2		
	comp=Z,129nm,21.1s,baz=118,slow=33								
LSZ	**Lusaka**	**42.76**	**245**	P	**P**		**23 52 41.0**	**+0.2**	
	comp=Z,3.0nm,0.9s,baz=68,slow=8.6,SNR=6.1								
LSZ					PcP		**PcP**	**23 54 32.1**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=164,slow=1.1,SNR=7.2								
LSZ	**Lusaka**	**42.76**	**245**	P	**P**		**23 52 41.1**	**+0.2**	
MARD	**Mardin**	**43.48**	**328**	P	**P**		**23 52 47.0**	**+0.5**	
MARD					IAmb	IAmb	23 52 50.9		
	comp=Z,11nm,1.3s								
GNI	**Garni**	**43.79**	**334**	P	**P**		**23 52 50.0**	**+0.9**	
GNI					IAmb	IAmb	23 52 52.9		
	comp=Z,10nm,0.8s								
SBUM	**Sibu**	**44.24**	**88**	P	**P**		**23 52 52.5**	**-0.2**	
SBUM					IAmb	IAmb	23 52 56.3		
	comp=Z,7.4nm,1.3s								
GYA	**Guiyang**	**44.64**	**53**	P	**P**		**23 52 57.4**	**+1.4**	
GYA					pmax	pmax			
	comp=Z,7.0nm,0.8s								
GAZ	**Gaziantep**	**45.35**	**325**	P	**P**		**23 53 02.2**	**+0.8**	
GAZ					IAmb	IAmb	23 53 05.7		
	comp=Z,4.2nm,0.9s								
WMQ	**Urumqi**	**45.57**	**20**	*eP*	**P**		**23 53 03.4**	**+0.4**	
WMQ					pP	pwP	23 53 08.2	-1.9	
WMQ					pmax	pmax			
	comp=Z,16nm,0.7s								
WMQ					pmax	pmax			
	comp=Z,130nm,4.7s								
KOPT	**Kop Dagi**	**45.67**	**330**	P	**P**		**23 53 04.2**	**+0.1**	
KOPT					IAmb	IAmb	23 53 08.1		
	comp=Z,6.8nm,1.2s								
MAKZ	**Makanchi**	**46.67**	**13**	P	**P**		**23 53 11.9**	**+0.4**	
MAKZ					IAmb	IAmb	23 53 15.6		
	comp=Z,6.5nm,1.5s								
MKAR	**Makanchi Array**	**46.73**	**14**	P	**P**		**23 53 11.3**	**-0.7**	
	comp=Z,1.2nm,0.9s,baz=187,slow=5.9,SNR=8.1								
MKAR	**Makanchi Array**	**46.73**	**14**	P	**P**		**23 53 12.1**	**+0.1**	
KBZ	**Khabaz**	**47.52**	**335**	LR	LR		00 13 05.8		
	comp=Z,44nm,19.9s,baz=138,slow=36								
ABKAR	**Akbulak array**	**47.98**	**353**	P	**P**		**23 53 22.2**	**+0.5**	
ABKAR	**Akbulak array**	**47.98**	**353**	P	**P**		**23 53 22.9**	**+1.2**	
ABKAR					IAmb	IAmb	23 53 26.3		
	comp=Z,7.0nm,0.9s								
BRTR	**Keskin Array B**	**49.14**	**325**	P	**P**		**23 53 30.4**	**-0.6**	
	comp=Z,1.4nm,0.7s,baz=140,slow=7.9,SNR=5.4								
AKTO	**Aktyubinsk**	**49.40**	**352**	P	**P**		**23 53 33.1**	**+0.5**	
	comp=Z,4.0nm,0.8s,baz=132,slow=6.6,SNR=7.4								
KURBB	**Kurchatov Arra**	**49.67**	**9**	P	**P**		**23 53 34.6**	**0.0**	
	comp=Z,3.3nm,1.1s,baz=205,slow=7.8,SNR=9.7								
KURK	**Kurchatov**	**49.77**	**9**	P	**P**		**23 53 34.6**	**-0.8**	
XAN	**Xi'an**	**50.04**	**45**	P	**P**		**23 53 38.4**	**+0.5**	
XAN					pmax	pmax			
	comp=Z,7.0nm,1.0s								
BOSA	**Boshof**	**50.75**	**230**	LR	LR		00 12 17.4		
	comp=Z,52nm,18.9s,baz=358,slow=33								
ZAA0	**Zalesovo Array**	**54.00**	**12**	IAmb	IAmb		23 54 09.8		
	comp=Z,7.3nm,1.2s								
ZALV	**Zalesovo Beam**	**54.00**	**12**	P	**P**		**23 54 06.7**	**-0.2**	
	comp=Z,3.2nm,0.8s,baz=214,slow=6.9,SNR=11								
ZALV					LR		LR	00 17 11.9	
	comp=Z,51nm,21.1s,baz=202,slow=36								
H01W3	**Cape Leeuwin H**	**56.40**	**135**	T	T		00 55 21.1		
	baz=301,slow=75,SNR=243								
H01W2	**Cape Leeuwin H**	**56.41**	**135**	T	T		00 55 20.7		
	baz=301,slow=75,SNR=231								
H01W1	**Cape Leeuwin H**	**56.42**	**135**	T	T		00 55 21.5		
	baz=301,slow=75,SNR=269								
NJ2	**Nanjing**	**56.63**	**52**	*eP*	**P**		**23 54 23.2**	**-3.1**	
NJ2					pmax	pmax			
	comp=Z,14nm,0.5s								
SONM	**Songino Array**	**56.77**	**30**	P	**P**		**23 54 28.0**	**+0.7**	
	comp=Z,2.0nm,1.0s,baz=224,slow=6.0,SNR=5.6								
SONM					LR		LR	00 19 28.3	
	comp=Z,43nm,18.9s,baz=255,slow=37								
SONM	**Songino Array**	**56.77**	**30**	P	**P**		**23 54 26.0**	**-1.3**	
NWAO	**Narrogin (SRO)**	**57.75**	**131**	P	**P**		**23 54 35.1**	**+0.9**	
	comp=Z,12nm,1.0s,baz=258,slow=7.4,SNR=2.7								
NWAO	**Narrogin (SRO)**	**57.75**	**131**	P	**P**		**23 54 33.5**	**-0.8**	
OJC	**Ojcow**	**63.29**	**328**	P	**P**		**23 55 10.2**	**-1.5**	
OJC					IAmb	IAmb	23 55 17.2		
	comp=Z,7.4nm,1.4s								
JAVC	**Velka Javorina**	**63.74**	**325**	*eP*	**P**		**23 55 15.0**	**+0.2**	
SUW	**Suwalki**	**63.83**	**332**	P	**P**		**23 55 14.3**	**-0.9**	
KEST	**Kesra**	**63.92**	**309**	LR	LR		00 23 12.9		
	comp=Z,76nm,18.0s,baz=296,slow=36								
ARSA	**Arzberg**	**64.19**	**323**	*eP*	**P**		**23 55 18.0**	**+0.2**	
	comp=Z,4.5nm,1.1s								
SOKA	**Soboth**	**64.22**	**322**	*eP*	**P**		**23 55 19.8**	**+1.8**	
	comp=Z,4.9nm,1.3s								
MORC	**Moravsky Berou**	**64.28**	**326**	*eP*	**P**		**23 55 18.1**	**-0.3**	
MORC	**Moravsky Berou**	**64.28**	**326**	P	**P**		**23 55 17.7**	**-0.7**	
MORC					IAmb	IAmb	23 55 19.8		
	comp=Z,5.0nm,1.2s								
KRUC	**Moravsky**	**64.57**	**325**	*eP*	**P**		**23 55 19.2**	**-1.0**	
VRAC	**Vranov**	**64.58**	**326**	P	**P**		**23 55 19.3**	**-1.0**	
	comp=Z,0.9nm,0.4s,baz=74,slow=3.9,SNR=3.5								
VRAC					LR		LR	00 23 18.2	
	comp=Z,76nm,18.8s,baz=106,slow=36								
VRAC	**Vranov**	**64.58**	**326**	*eP*	**P**		**23 55 19.8**	**-0.5**	
MYKA	**Terra Mystica**	**65.06**	**322**	*eP*	**P**		**23 55 24.0**	**+0.5**	
	comp=Z,7.2nm,1.4s								
MOA	**Molln**	**65.23**	**323**	*eP*	**P**		**23 55 23.6**	**-1.0**	
	comp=Z,5.8nm,1.7s								
KBA	**Koelnbreinsper**	**65.44**	**322**	*eP*	**P**		**23 55 25.5**	**-0.6**	
	comp=Z,4.2nm,1.5s								
ABTA	**Abfaltersbach**	**65.81**	**322**	*eP*	**P**		**23 55 25.5**	**-2.8**	
	comp=Z,5.0nm,1.0s								
GERES	**GERESS Array B**	**66.02**	**324**	LR	LR		00 23 46.5		
	comp=Z,49nm,21.9s,baz=98,slow=36								
TORD	**Torodi Ar. Bea**	**66.54**	**284**	P	**P**		**23 55 33.3**	**-0.3**	
	comp=Z,0.8nm,1.0s,baz=82,slow=6.8,SNR=3.5								
SQTA	**Sankt Quirin**	**66.81**	**322**	*eP*	**P**		**23 55 33.3**	**-1.6**	
	comp=Z,6.2nm,1.6s								
MOTA	**Moosalm**	**66.93**	**322**	*eP*	**P**		**23 55 34.7**	**-1.0**	
	comp=Z,6.9nm,1.5s								
FETA	**Feichten**	**67.03**	**321**	*eP*	**P**		**23 55 36.7**	**+0.3**	
	comp=Z,5.2nm,1.3s								
RETA	**Reutte**	**67.20**	**322**	*eP*	**P**		**23 55 37.0**	**-0.3**	
	comp=Z,4.1nm,1.7s								
DAVOX	**Davos/Dischmat**	**67.47**	**321**	P	**P**		**23 55 37.6**	**-1.5**	
	comp=Z,2.0nm,0.6s,baz=133,slow=14,SNR=8.1								
DAVOX					LR		LR	00 24 51.4	
	comp=Z,67nm,21.9s,baz=77,slow=36								
FINES	**FINESS Array B**	**67.56**	**340**	LR	LR		00 26 58.1		
	comp=Z,75nm,21.2s,baz=122,slow=38								
CLL	**Collm**	**67.56**	**326**	*eP*	**P**		**23 55 40.0**	**+0.6**	

	comp=Z,35nm,2.2s								
DAVA	**Damuels**	**67.67**	**321**	*eP*	**P**		**23 55 39.0**	**-1.4**	
	comp=Z,4.2nm,0.8s								
WRA	**Warramunga Arr**	**68.44**	**112**	P	**P**		**23 55 46.6**	**+1.1**	
	comp=Z,2.7nm,0.9s,baz=290,slow=6.0,SNR=7.8								
WRA					LR		LR	00 24 02.4	
	comp=Z,38nm,19.2s,baz=200,slow=34								
WRA	**Warramunga Arr**	**68.44**	**112**	P	**P**		**23 55 45.3**	**-0.3**	
ASAR	**Alice Springs**	**68.74**	**116**	P	**P**		**23 55 47.9**	**+0.6**	
	comp=Z,0.9nm,0.7s,baz=290,slow=6.7,SNR=9.2								
ASAR					LR		LR	00 24 53.0	
	comp=Z,45nm,18.6s,baz=303,slow=35								
ASAR	**Alice Springs**	**68.74**	**116**	P	**P**		**23 55 47.6**	**+0.2**	
NRIK	**Noril'sk**	**68.90**	**7**	P	**P**		**23 55 48.1**	**+0.7**	
	comp=Z,0.7nm,0.4s,baz=196,slow=2.9,SNR=1.7								
BFO	**Black Forest**	**69.04**	**322**	P	**P**		**23 55 48.2**	**-0.6**	
MAW	**Mawson**	**69.14**	**182**	LR	LR		00 18 27.9		
	comp=Z,89nm,19.5s,baz=63,slow=29								
KIC	**Kosan Boka**	**72.64**	**276**	*eP*	**P**		**23 56 10.5**	**-0.8**	
	comp=Z,13nm,0.9s								
DBIC	**Dimbokro**	**72.75**	**276**	P	**P**		**23 56 11.6**	**-0.4**	
	comp=Z,3.5nm,0.7s,baz=85,slow=6.8,SNR=5.7								
TIC	**Toumodi**	**72.92**	**276**	*eP*	**P**		**23 56 12.0**	**-1.0**	
LIC	**Lamto**	**72.92**	**276**	*eP*	**P**		**23 56 12.9**	**-0.1**	
	comp=Z,21nm,1.3s								
NOA	**NORSAR Array B**	**73.09**	**335**	LR	LR		00 29 37.6		
	comp=Z,51nm,20.9s,baz=115,slow=37								
MJAR	**Matsushiro Arr**	**73.24**	**52**	LR	LR		00 31 39.9		
	comp=Z,13nm,18.6s,baz=70,slow=38								
ARCES	**ARCESS Array B**	**73.43**	**346**	P	**P**		**23 56 15.5**	**+0.6**	
	comp=Z,4.8nm,0.9s,baz=120,slow=5.4,SNR=3.5								
ARCES					LR		LR	00 31 16.8	
	comp=Z,59nm,18.2s,baz=140,slow=38								
ESDC	**Sonseca Array**	**75.11**	**311**	P	**P**		**23 56 23.7**	**-1.7**	
	comp=Z,2.4nm,1.2s,baz=91,slow=5.9,SNR=5.4								
ESDC					LR		LR	00 28 20.8	
	comp=Z,21nm,21.4s,baz=15,slow=35								
STKA	**Stephens Creek**	**76.99**	**123**	P	**P**		**23 56 36.6**	**+0.4**	
	comp=Z,6.1nm,1.1s,baz=291,slow=8.6,SNR=3.9								
TIXI	**Tiksi**	**79.62**	**16**	P	**P**		**23 56 49.5**	**-0.4**	
	comp=Z,2.7nm,0.9s,baz=232,slow=1.6,SNR=5.0								
TIXI	**Tiksi**	**79.62**	**16**	P	**P**		**23 56 48.9**	**-1.0**	
TIXI					IAmb	IAmb	23 56 53.1		
	comp=Z,5.2nm,1.1s								
SEY	**Seymchan**	**86.04**	**27**	P	**P**		**23 57 23.6**	**+0.2**	
	comp=Z,5.9nm,0.3s,baz=284,slow=17,SNR=24								
BORG	**Borgarnes**	**88.27**	**335**	LR	LR		00 39 03.2		
	comp=Z,77nm,18.9s,baz=159,slow=37								
VNDA	**Vanda**	**92.39**	**167**	P	**P**		**23 57 53.7**	**+0.6**	
	comp=Z,0.8nm,0.7s,baz=278,slow=5.3,SNR=5.0								
PDAR	**Pinedale Array**	**135.79**	**357**	PKP	**PKPdf**		**00 04 03.5**	**-0.9**	
	comp=Z,0.3nm,0.6s,baz=86,slow=4.6,SNR=3.7								
TXAR	**Lajitas Array**	**148.22**	**346**	PKP	**PKPdf**		**00 04 26.5**	**-0.2**	
	comp=Z,4.3nm,0.8s,baz=81,slow=1.2,SNR=27								
TXAR					PKPbc		**PKPbc**	**00 04 30.1**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=58,slow=2.7,SNR=44								

*IDC **06** 23:49:46.9±2.0,39˚67N×52˚63E,h0km,mb3.4/2, mb1 3.8/10,mb1mx3.5/55,mbtmp3.8/10,ML3.1/4,Error ellipse: s-maj=30.3km s-min=16.5km az=168.0*
*THR **06** 23:49:48.6±0.4,39˚72N×52˚62E,h15km,ML4.2*
*TEH **06** 23:49:48.4,39˚67N×52˚60E,h10km,ML3.9*

**ISC 06 23:49:48.9±0.8,39˚72N±0˚06×52˚66E±0˚05,h10km,n71, σ1°79/72

AB31	**Akbulak array**	**10.85**	**26**	⇑Pn		**Pn**		**23 52 25.8**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=198,slow=12,SNR=16								
AB31				Sn		Sn		23 54 14.7	-11
	comp=Z,2.2nm,0.3s,baz=202,slow=23,SNR=16								
AKTO	**Aktyubinsk**	**11.36**	**18**	Pn		**Pn**		**23 52 29.1**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=200,slow=11,SNR=7.6								
AKTO				Sn		Sn		23 54 26.1	-12
	comp=Z,1.2nm,0.3s,baz=292,slow=21,SNR=14								
AKTO	**Aktyubinsk**	**11.36**	**18**	⇑Pn		**Pn**		**23 52 35.0**	**+3.9**
	comp=Z,2.5nm,0.9s								
AKTO				⇓Sn		Sn		23 54 30.5	-7.5
	comp=Z,6.4nm,0.6s								
BELG	**Belogornoye**	**13.14**	**346**	Pn		**Pn**		**23 52 53.2**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=223,slow=19,SNR=4.2								
BELG				Sn		Sn		23 55 09.6	-12
	comp=Z,0.7nm,0.3s,baz=112,slow=19,SNR=2.3								
ARU	**Arti**	**17.17**	**11**	P		**Pn**		**23 53 48.5**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=203,slow=15,SNR=4.9								
ARU				S		Sn		23 56 46.9	-13
	comp=Z,0.0nm,0.3s,baz=276,slow=23,SNR=4.9								
KIRV	**Kirov**	**19.00**	**355**	P		**P**		**23 54 09.8**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=164,slow=3.0,SNR=5.3								
AKASG	**Malin Array Be**	**19.74**	**312**	P		**P**		**23 54 17.4**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=112,slow=12,SNR=2.9								
KURBB	**Kurchatov Arra**	**21.14**	**50**	P		**P**		**23 54 32.1**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=255,slow=10,SNR=2.0								
FINES	**FINESS Array B**	**27.17**	**332**	P		**P**		**23 55 30.9**	**-1.2**
	comp=Z,2.8nm,1.0s,baz=138,slow=11,SNR=4.9								

*HEL **07** 00:08:58.3,67.°80N×20.°42E,h0km,ML1.7,Explosion*
UPP 07 00:08:56.9±0.3,67.°84N×20.°20E,h0km,ML2.3, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOVU	**Salmi**	**0.39**	**358**	P		Pg	00 09 04.4	+0.1
KOVU				S		Sg	00 09 09.4	+0.1
KOVU	**Salmi**	**0.39**	**358**	*i* P		Pg	00 09 04.4	+0.1
KOVU				*i* S		Sg	00 09 09.4	+0.1
DUNU	**Dundret**	**0.73**	**169**	S		Sg	00 09 20.5	+0.1
DUNU	**Dundret**	**0.73**	**169**	*i* S		Sg	00 09 20.5	+0.1
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P		Pn	00 09 22.3	+1.6
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*PN		Pn	00 09 21.1	+0.3
KIF				*e*S		Sg	00 09 35.4	+0.2
KIF				MSG			00 09 36.4	
	comp=Z,7.2nm,0.2s							
PAJU	**Pajala**	**1.39**	**125**	P		Pg	00 09 22.6	-0.8
PAJU	**Pajala**	**1.39**	**125**	*e*PN		Pg	00 09 22.7	-0.8
PAJU				*e*SN		Sg	00 09 41.1	-0.3
HEF	**Hetta**	**1.42**	**65**	*e*P		Pn	00 09 23.5	-0.4
HEF	**Hetta**	**1.42**	**65**	MSG			00 09 39.3	
	comp=Z,3.8nm,0.2s							
HEF				*e*SN		Sg	00 09 41.5	-0.8
TOF	**Tornio**	**2.40**	**136**	*e*PB		Pb	00 09 39.2	-1.6
TOF				MSG			00 10 06.7	
	comp=Z,3.4nm,0.2s							
TOF				*e*SG		Sb	00 10 10.1	-0.8
SGF	**Sodankyl**	**2.45**	**96**	*e*PG		Pb	00 09 40.8	-0.9
SGF				*e*SG		Sb	00 10 10.6	-1.9
RNF	**Rovaniemi**	**2.58**	**116**	*e*PG		Pb	00 09 42.4	-1.5
RNF				*e*SB		Sn	00 10 13.2	+1.5
KEV	**Kevo**	**3.13**	**49**	*e*S		Sn	00 10 26.9	+1.4
KEV				MSG			00 10 29.2	
	comp=Z,2.0nm,0.2s							

UPP 07 00:09:28.2±0.2,67.°83N×20.°21E,h0km,ML2.4, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**21**	P		Pg	00 09 31.1	+0.2
KUA				S		Sg	00 09 33.0	+0.3
RATU	**Laukkuluspa**	**0.23**	**270**	P		Pg	00 09 32.8	+0.2
KOVU	**Salmi**	**0.40**	**358**	P		Pg	00 09 36.0	+0.1
NIKU	**Nikkaluokta**	**0.45**	**276**	P		Pg	00 09 36.8	+0.1
DUNU	**Dundret**	**0.72**	**169**	S		Sg	00 09 52.0	+0.8

*SJA **07** 00:40:30.4±0.5,22.°99S×68.°32W,h149km±4km,ML4.0, MW4.0*
*NEIC **07** 00:40:31.8±1.9,22.°97S±0.°04×68.°3W±0.°1,h134km±6km, Error ellipse: s-maj=14.4km s-min=5.9km az=88.0*
*IDC **07** 00:40:31.7±1.0,22.°89S×68.°04W,h122km±9km,mb3.8/11, mb1 3.9/15,mb1mx3.8/29,mbtmp4.2/15,Error ellipse: s-maj=17.2km s-min=15.3km az=83.0*
*VAO **07** 00:40:31.3±0.6,22.°89S×68.°35W,h139km,mb4.6*
*GUC **07** 00:40:32.1±0.6,22.°96S×68.°37W,h147km±4km,ML4.0*
ISC 07 00:40:31.7±0.6,22.°95S±0.°03×68.°28W±0.°04,h136km±5km, n141,σ1°46/176,mb4.3/22,1C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**0.67**	**300**	P		**Pn**	**00 40 53.1**	**0.0**
	386nm,0.3s,baz=139,slow=5.3,SNR=3323							
LVC				S		**Sn**	**00 41 08.1**	**-1.0**
	2µm,0.3s,baz=287,slow=19,SNR=49							
LVC	**Limon Verde**	**0.67**	**300**	*e*P		**Pn**	**00 40 53.1**	**0.0**
LVC				*e*S		**Sn**	**00 41 08.2**	**-0.9**
LVC	**Limon Verde**	**0.67**	**300**			**Pn**	**00 40 52.9**	**-0.1**
LVC				Sn		**Sn**	**00 41 08.6**	**-0.5**
LVC	**Limon Verde**	**0.67**	**300**	*e*P		**Pn**	**00 40 53.0**	**0.0**
LVC	**Limon Verde**	**0.67**	**300**	*e*P		**Pn**	**00 40 53.1**	**0.0**
LVC				*e*S		**Sn**	**00 41 09.2**	**+0.1**
LVC				IAML			00 41 09.3	
	comp=Z,2µm,0.5s							
PB15	**IPOC Station P**	**1.12**	**257**	*e*P		**Pn**	**00 40 56.8**	**+0.1**
PB15				*i* S		**Sn**	**00 41 15.7**	**+0.2**
PB15	**IPOC Station P**	**1.12**	**257**			**Pn**	**00 40 56.8**	**+0.1**
PB15				Sn		**Sn**	**00 41 15.7**	**+0.2**
PB15	**IPOC Station P**	**1.12**	**257**	*e*P		**Pn**	**00 40 56.8**	**+0.2**
PB15				*e*S		**Sn**	**00 41 16.1**	**+0.6**
PB06	**IPOC Station P**	**1.21**	**281**	*e*P		**Pn**	**00 40 57.8**	**+0.3**
PB06				*i* S		**Sn**	**00 41 17.1**	**+0.1**
PB06				IAML			00 41 20.5	
	comp=N,4µm,0.4s							
PB06	**IPOC Station P**	**1.21**	**281**			**Pn**	**00 40 57.6**	**+0.2**
PB06				Sn		**Sn**	**00 41 17.3**	**+0.3**
PB06	**IPOC Station P**	**1.21**	**281**	*e*P		**Pn**	**00 40 57.6**	**+0.2**
PB06				*e*S		**Sn**	**00 41 17.6**	**+0.7**
PB06				IAML			00 41 20.5	
	comp=Z,2µm,0.1s							
PB09	**IPOC Station P**	**1.45**	**322**	*e*P		**Pn**	**00 41 00.9**	**+0.9**
PB09				*i* S		**Sn**	**00 41 22.4**	**+0.9**
PB09				IAML			00 41 24.5	
	comp=N,2µm,0.5s							
PB09	**IPOC Station P**	**1.45**	**322**			**Pn**	**00 41 00.6**	**+0.6**
PB09				Sn		**Sn**	**00 41 21.8**	**+0.3**
PB09	**IPOC Station P**	**1.45**	**322**	*e*P		**Pn**	**00 40 58.9**	**-1.1**
PB09				*e*S		**Sn**	**00 41 22.8**	**+1.3**
PB09				IAML			00 41 28.4	
	comp=Z,1µm,0.6s							
PB03	**IPOC Station P**	**1.63**	**303**	*e*P		**Pn**	**00 41 02.3**	**+0.3**
PB03				*i* S		**Sn**	**00 41 24.6**	**-0.3**
PB03				IAML			00 41 26.0	
	comp=N,2µm,0.4s							
PB03	**IPOC Station P**	**1.63**	**303**	*e*P		**Pn**	**00 41 02.2**	**+0.3**
PB03				*e*S		**Sn**	**00 41 25.2**	**+0.3**
PB03				IAML			00 41 25.9	
	comp=Z,2µm,0.5s							
PB05	**IPOC Station P**	**1.77**	**273**	*e*P		**Pn**	**00 41 03.4**	**-0.1**
PB05				*i* S		**Sn**	**00 41 26.9**	**-0.9**
PB05				IAML			00 41 30.4	
	comp=E,1µm,0.6s							
PB05	**IPOC Station P**	**1.77**	**273**	*e*P		**Pn**	**00 41 03.4**	**-0.1**
PB05				*e*S		**Sn**	**00 41 27.5**	**-0.3**
PB05				IAML			00 41 46.7	
	comp=Z,622nm,0.4s							
PB04	**IPOC Station P**	**1.83**	**289**	*e*P		**Pn**	**00 41 04.5**	**+0.2**
PB04				*i* S		**Sn**	**00 41 28.8**	**-0.3**
PB04				IAML			00 41 30.7	
	comp=N,2µm,0.7s							
PB04	**IPOC Station P**	**1.83**	**289**			**Pn**	**00 41 04.5**	**+0.2**
PB04				Sn		**Sn**	**00 41 29.5**	**+0.5**
PB04	**IPOC Station P**	**1.83**	**289**	*e*P		**Pn**	**00 41 04.4**	**+0.2**
PB04				*e*S		**Sn**	**00 41 29.1**	**0.0**
PB04				IAML			00 41 29.8	
	comp=Z,837nm,0.2s							
PB07	**IPOC Station P**	**1.92**	**309**	*e*P		**Pn**	**00 41 05.7**	**+0.4**
PB07				*i* S		**Sn**	**00 41 30.6**	**-0.4**
PB07				IAML			00 41 33.3	
	comp=E,2µm,0.7s							
PB07	**IPOC Station P**	**1.92**	**309**			**Pn**	**00 41 05.7**	**+0.4**
PB07				Sn		**Sn**	**00 41 31.6**	**+0.7**
PB07	**IPOC Station P**	**1.92**	**309**	*e*S		**Sn**	**00 41 31.5**	**+0.5**
PB07				IAML			00 41 33.6	
	comp=E,1µm,0.4s							
PB10	**IPOC Station P**	**2.16**	**255**	*e*P		**Pn**	**00 41 07.7**	**-0.4**
PB10				*i* S		**Sn**	**00 41 35.3**	**-0.6**
PB10				IAML			00 41 44.3	
	comp=E,658nm,0.4s							
PB10	**IPOC Station P**	**2.16**	**255**	Pn		**Pn**	**00 41 07.6**	**-0.4**
PB10				Sn		**Sn**	**00 41 34.5**	**-1.3**
PB10	**IPOC Station P**	**2.16**	**255**	*e*P		**Pn**	**00 41 07.7**	**-0.4**
PB10				*e*S		**Sn**	**00 41 35.4**	**-0.5**
PB10				IAML			00 41 42.8	
	comp=Z,565nm,0.8s							
PB01	**IPOC Station P**	**2.21**	**329**	*e*P		**Pn**	**00 41 08.9**	**+0.2**
PB01				*i* S		**Sn**	**00 41 37.2**	**+0.3**
PB01	**IPOC Station P**	**2.21**	**329**	Pn		**Pn**	**00 41 09.0**	**+0.2**
PB01				Sn		**Sn**	**00 41 37.9**	**+0.9**
PB01	**IPOC Station P**	**2.21**	**329**	*e*S		**Sn**	**00 41 37.3**	**+0.3**
PB01				IAML			00 41 40.4	
	comp=Z,801nm,0.5s							
GO02	**Mina Guanaco**	**2.50**	**208**	*e*P		**Pn**	**00 41 12.0**	**-0.5**
GO02				*i* S		**Sn**	**00 41 42.6**	**-1.3**
GO02	**Mina Guanaco**	**2.50**	**208**	Pn		**Pn**	**00 41 12.3**	**-0.3**
GO02				Sn		**Sn**	**00 41 43.0**	**-0.9**
PB14	**IPOC Station P**	**2.56**	**229**	⇑*i*P		**Pn**	**00 41 12.6**	**-0.6**
PB14				*e*S		**Sn**	**00 41 41.9**	**-3.3**
PB14				IAML			00 41 44.5	
	comp=E,440nm,0.5s							
PB14	**IPOC Station P**	**2.56**	**229**	Pn		**Pn**	**00 41 12.6**	**-0.6**
PB14				Sn		**Sn**	**00 41 41.9**	**-3.3**
PB14	**IPOC Station P**	**2.56**	**229**	*e*P		**Pn**	**00 41 12.6**	**-0.6**
PB14				*e*S		**Sn**	**00 41 42.2**	**-3.0**
PB14				IAML			00 41 49.3	
	comp=Z,724nm,0.3s							
YJA	**Yavi**	**2.67**	**74**	*e*P		**Pn**	**00 41 16.0**	**+1.1**
YJA				*e*S		**Sn**	**00 41 50.8**	**+2.8**
PB08	**IPOC Station P**	**2.91**	**344**	*e*P		**Pn**	**00 41 18.9**	**+1.0**
PB08	**IPOC Station P**	**2.91**	**344**			**Pn**	**00 41 18.9**	**+1.0**
PB08				Sn		**Sn**	**00 41 52.8**	**-0.6**
PB08	**IPOC Station P**	**2.91**	**344**	*e*P		Pn	00 41 06.3	-12
PB08				IAML			00 41 57.0	
	comp=Z,152nm,0.5s							
TA01	**Diego Aracena**	**2.96**	**323**	*e*P		**Pn**	**00 41 18.1**	**0.0**
TA01	**Diego Aracena**	**2.96**	**323**	Pn		**Pn**	**00 41 18.3**	**+0.2**
TA01				Sn		**Sn**	**00 41 49.4**	**-4.4**
SLA	**San Lorenzo**	**3.09**	**125**	*e*P		**Pn**	**00 41 21.0**	**+1.0**
PB11	**IPOC Station P**	**3.42**	**338**	*e*P		**Pn**	**00 41 23.8**	**-0.5**
PB11	**IPOC Station P**	**3.42**	**338**			**Pn**	**00 41 23.8**	**-0.5**
PB11				Sn		**Sn**	**00 41 58.1**	**-6.8**
PB11	**IPOC Station P**	**3.42**	**338**	*e*S		**Sn**	**00 42 04.3**	**-0.6**
PB11				IAML			00 42 36.4	
	comp=Z,181nm,1.2s							
PSGCX	**Pisagua**	**3.75**	**332**	Pn		**Pn**	**00 41 28.6**	**0.0**
PSGCX				Sn		Sn	00 42 02.5	-10
FSA	**Cafayete**	**3.78**	**147**	*e*P		**Pn**	**00 41 28.8**	**-0.1**
AC01	**Pan de Azucar**	**3.81**	**213**	Pn		**Pn**	**00 41 27.4**	**-1.9**
AC01				Sn		Sn	00 42 03.0	-11
AC02	**Maricunga**	**3.94**	**191**	Pn		**Pn**	**00 41 31.0**	**-0.4**
MNMC	**Minye Minye**	**4.00**	**342**	Pn		**Pn**	**00 41 30.8**	**-1.1**
PB16	**IPOC Station P**	**4.74**	**346**			**Pn**	**00 41 42.0**	**0.0**
GO03	**Copiap**	**4.95**	**201**	*e*P		**Pn**	**00 41 41.5**	**-2.8**
VCA	**Vinchina**	**5.76**	**179**	*e*P		**Pn**	**00 41 54.7**	**-0.5**
VCA				IAML			00 43 10.9	
	comp=Z,28nm,0.7s							
AC04	**Llanos de Chal**	**5.80**	**205**	Pn		**Pn**	**00 41 51.7**	**-3.9**
LCO	**Las Campanas**	**6.41**	**199**	Pn		**Pn**	**00 42 00.2**	**-3.9**
AGUA	**GUANDACOL**	**6.51**	**182**	*e*P		**Pn**	**00 42 04.0**	**-1.3**
AGUA				IAML			00 43 18.9	
	comp=Z,50nm,0.4s							
ACLC	**CERRO LA CRUZ**	**6.56**	**170**	*e*P		**Pn**	**00 42 05.1**	**-0.8**
ACLC				IAML			00 43 22.2	
	comp=Z,14nm,0.7s							
LPAZ	**La Paz**	**6.63**	**1**	P		**Pn**	**00 42 08.2**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=202,slow=5.2,SNR=12							
LPAZ				S		**Sn**	**00 43 14.1**	**-8.0**
	comp=Z,0.7nm,0.3s,baz=162,slow=12,SNR=4.6							
LPAZ	**La Paz**	**6.63**	**1**	Pn		**Pn**	**00 42 05.7**	**-1.8**
LPAZ	**La Paz**	**6.63**	**1**	*e*P		**Pn**	**00 42 06.6**	**-0.9**
AROD	**Rodeo**	**7.26**	**188**	*e*P		**Pn**	**00 42 14.0**	**-1.6**
GO04	**Tololo Observa**	**7.53**	**197**	Pn		**Pn**	**00 42 14.9**	**-4.2**
SIV	**San Ignacio**	**9.71**	**46**	P		**Pn**	**00 42 44.2**	**-3.9**
	comp=Z,16nm,0.3s,baz=243,slow=11,SNR=126							
SIV				S		Sn	00 44 25.4	-10
	comp=Z,2.4nm,0.3s,baz=127,slow=20,SNR=9.2							
VA03	**San Esteban**	**9.98**	**191**	Pn		**Pn**	**00 42 50.6**	**-1.1**
CPUP	**Villa Florida**	**10.52**	**111**	P		**Pn**	**00 42 56.2**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=287,slow=12,SNR=6.4							
MT02	**Curacav**	**10.57**	**193**	Pn		**Pn**	**00 42 59.4**	**-0.1**
AQDB	**Aquidauana**	**11.99**	**80**	Pn		**Pn**	**00 43 17.7**	**-0.2**
BO02	**Sierra Bellavi**	**12.00**	**190**	Pn		**Pn**	**00 43 19.2**	**+0.8**
VILB	**Vilhena**	**12.57**	**39**	*e*P		**Pn**	**00 43 24.7**	**-1.2**
PP1B	**Ponte de Pedra**	**13.65**	**69**	*e*P		**Pn**	**00 43 40.8**	**+0.8**
BI02	**San Fabin de**	**13.91**	**190**	Pn		**Pn**	**00 43 42.8**	**-0.2**
SAML	**Samuel**	**14.76**	**20**	Pn		**Pn**	**00 43 52.4**	**-1.5**
PTGB	**Pitanga**	**14.95**	**100**	*e*P		**P**	**00 43 58.0**	**-0.5**
CPSB	**Cacapava Do Su**	**15.19**	**122**	*e*P		**P**	**00 44 00.1**	**-0.9**
ITAB	**Concordia**	**15.24**	**110**	*e*P		**P**	**00 44 00.4**	**-1.1**
PCMB	**Pacaembu**	**15.81**	**88**	*e*P		**P**	**00 44 08.5**	**+0.5**
CLDB	**Colider**	**16.93**	**47**	*e*P		**P**	**00 44 19.7**	**-0.6**
ITRB	**Iturama**	**17.01**	**82**	*e*P		**Pn**	**00 44 21.9**	**+0.3**
ARAG	**Araguaiana, MT**	**17.13**	**68**	*e*P		**Pn**	**00 44 22.5**	**-0.5**
FRTB	**Fartura**	**17.22**	**95**	*e*P		**P**	**00 44 23.1**	**-0.4**
PLCA	**Paso Flores**	**17.83**	**186**	P		**Pn**	**00 44 31.3**	**0.0**
	comp=Z,2.0nm,0.3s,baz=324,slow=8.4,SNR=3.7							
PLCA	**Paso Flores**	**17.83**	**186**	IAmb		IAmb	00 44 37.7	
	comp=Z,2.5nm,0.8s							
BB19B	**Bebedouro**	**18.42**	**88**	*e*P		**P**	**00 44 36.5**	**-0.2**
IPMB	**Ipameri, GO**	**19.44**	**79**	*e*P		**P**	**00 44 47.2**	**-0.6**
SNDB	**Serra Nova Dou**	**19.52**	**59**	*e*P		**P**	**00 44 47.1**	**-1.5**
VAO	**Valinhos**	**19.63**	**94**	*e*P		**P**	**00 44 49.2**	**-0.7**
LL01	**San Ignacio de**	**19.68**	**189**	P		**P**	**00 44 49.5**	**-0.5**
LL01				IAmb		IAmb	00 44 54.0	
	comp=Z,5.3nm,0.6s							
NPGB	**Novo Progresso**	**20.12**	**40**	*e*P		**P**	**00 44 53.7**	**-1.5**
BDFB	**Brasilia**	**20.45**	**73**	P		**P**	**00 44 57.5**	**-1.3**
	comp=Z,11nm,0.4s,baz=248,slow=12,SNR=27							
BDFB	**Brasilia**	**20.45**	**73**	P		**P**	**00 44 57.9**	**-1.0**
GO07	**Milladeo Hill,**	**20.60**	**191**	*e*P		**P**	**00 44 59.9**	**-0.1**
MACA	**Manacapuru-AM**	**21.01**	**22**	*e*P		**P**	**00 45 04.0**	**-0.6**
PEXB	**Peixe**	**21.87**	**64**	*e*P		**P**	**00 45 12.4**	**-1.4**
BSCB	**Bom Sucesso**	**21.89**	**89**	*e*P		**P**	**00 45 14.0**	**-0.1**
ITTB	**Itaituba**	**22.11**	**35**	*e*P		**P**	**00 45 14.2**	**-2.0**
PTGA	**Pitinga**	**23.52**	**21**	P		**P**	**00 45 29.2**	**-0.4**
	comp=Z,4.5nm,0.5s,baz=204,slow=15,SNR=14							
PTGA	**Pitinga**	**23.52**	**21**	P		**P**	**00 45 29.3**	**-0.3**
PTGA				IAmb		IAmb	00 45 32.8	
	comp=Z,5.2nm,0.7s							
PTGA	**Pitinga**	**23.52**	**21**	*e*P		**P**	**00 45 29.6**	**-0.1**
JANB	**Januaria**	**23.96**	**75**	*e*P		**P**	**00 45 32.8**	**-1.0**
SMTB	**Santa Maria do**	**24.29**	**88**	*e*P		**P**	**00 45 37.0**	**+0.3**
PRPB	**Paraupebas**	**24.40**	**50**	*e*P		**P**	**00 45 37.4**	**-0.3**
SDBA	**SAO DESIDERIO**	**24.58**	**69**	*e*P		**P**	**00 45 38.8**	**-0.6**
MALB	**Monte Alegre**	**25.00**	**35**	*e*P		**P**	**00 45 41.7**	**-1.3**
RIB01	**Linhares ES**	**26.25**	**87**	*e*P		**P**	**00 45 53.4**	**-0.9**
NAN01	**Guarapari, ES**	**26.85**	**84**	*e*P		**P**	**00 45 59.0**	**-0.8**
GDU01	**Guandu, BA**	**28.71**	**76**	*e*P		**P**	**00 46 15.7**	**-0.7**
NBLA	**Lagarto - SE**	**31.42**	**73**	*e*P		**P**	**00 46 39.1**	**-1.2**
V58A	**Windy Hill, Pi**	**59.32**	**350**	P		**P**	**00 50 20.8**	**+1.6**
V58A				IAmb		IAmb	00 50 29.4	
	comp=Z,4.7nm,0.9s							
V55A	**Taylorsville**	**59.75**	**348**	P		**P**	**00 50 23.6**	**+1.4**
X48A	**Hartselle**	**59.81**	**342**	P		**P**	**00 50 22.9**	**+0.3**
X48A				IAmb		IAmb	00 50 24.2	
	comp=Z,3.4nm,0.6s							
V53A	**Saluda**	**59.91**	**346**	P		**P**	**00 50 24.2**	**+0.9**
V53A				IAmb		IAmb	00 50 25.5	
	comp=Z,4.6nm,1.1s							
W50A	**Signal Mountai**	**60.05**	**344**	P		**P**	**00 50 25.5**	**+1.2**
W50A				IAmb		IAmb	00 50 26.0	
	comp=Z,2.5nm,0.8s							
CPCT	**Cooper Cave**	**60.09**	**345**	P		**P**	**00 50 25.3**	**+0.8**
CPCT				IAmb		IAmb	00 50 32.8	
	comp=Z,3.7nm,1.1s							
TKL	**Tuckaleechee C**	**60.11**	**345**	P		**P**	**00 50 25.3**	**+0.7**
TKL				IAmb		IAmb	00 50 27.1	
	comp=Z,5.5nm,1.0s							
SWET	**Sewanee**	**60.22**	**343**	P		**P**	**00 50 26.1**	**+0.6**
V52A	**Sevierville**	**60.24**	**346**	P		**P**	**00 50 26.1**	**+0.5**
V52A				IAmb		IAmb	00 50 27.6	
	comp=Z,3.3nm,0.8s							
SNAA	**Sanae**	**60.72**	**161**	P		**P**	**00 50 29.1**	**+0.6**
SNAA				IAmb		IAmb	00 50 35.4	
	comp=Z,1.4nm,0.6s							
U49A	**Red Boiling Sp**	**61.41**	**344**	P		**P**	**00 50 33.6**	**+0.2**
U49A				IAmb		IAmb	00 50 34.8	
	comp=Z,2.1nm,0.6s							
WVT	**Waverly**	**61.60**	**342**	P		**P**	**00 50 35.2**	**+0.5**
WVT				IAmb		IAmb	00 50 35.9	
	comp=Z,3.4nm,0.7s							
R55A	**Marlinton**	**61.92**	**349**	P		**P**	**00 50 38.8**	**+1.9**
R55A				IAmb		IAmb	00 50 52.9	
	comp=Z,3.6nm,0.9s							
TXAR	**Lajitas Array**	**62.15**	**325**	P		**P**	**00 50 40.7**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=156,slow=7.9,SNR=2.4							
GLAT	**Glass**	**62.16**	**341**	P		**P**	**00 50 39.7**	**+1.3**
QSPA	**South Pole Qui**	**67.25**	**180**	P		**P**	**00 51 13.3**	**+2.0**
	comp=Z,4.7nm,0.5s,baz=193,slow=2.2,SNR=13							
QSPA	**South Pole Qui**	**67.25**	**180**	P		**P**	**00 51 12.7**	**+1.4**
DBIC	**Dimbokro**	**68.60**	**73**	P		**P**	**00 51 21.0**	**+0.6**
	comp=Z,3.7nm,0.8s,baz=215,slow=6.6,SNR=4.4							
DBIC	**Dimbokro**	**68.60**	**73**	IAmb		IAmb	00 51 30.7	
	comp=Z,4.0nm,0.9s							
CCUT	**Cedar City**	**73.62**	**324**	P		**P**	**00 51 48.6**	**-1.8**
PDAR	**Pinedale Array**	**75.65**	**330**	P		**P**	**00 52 04.0**	**+1.9**
	comp=Z,0.4nm,0.6s,baz=125,slow=7.8,SNR=4.2							
PDAR	**Pinedale Array**	**75.65**	**330**	P		**P**	**00 52 00.8**	**-1.3**
ULM	**Lac du Bonnet**	**76.87**	**342**	P		**P**	**00 52 09.6**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=150,slow=6.1,SNR=6.9							
ULM	**Lac du Bonnet**	**76.87**	**342**	P		**P**	**00 52 08.6**	**+0.1**
NVAR	**Mina Array Bea**	**76.99**	**322**	P		**P**	**00 52 12.3**	**+2.6**
	comp=Z,0.2nm,0.4s,baz=134,slow=5.2,SNR=1.9							
TORD	**Torodi Ar. Bea**	**77.30**	**70**	P		**P**	**00 52 12.2**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=256,slow=5.2,SNR=14							
TORD				pP		**pP**	**00 52 46.4**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=253,slow=5.5,SNR=2.5							
TORD	**Torodi Ar. Bea**	**77.30**	**70**	P		**P**	**00 52 11.2**	**-0.4**
PAHR	**Pah Rah Range**	**78.48**	**322**	P		**P**	**00 52 18.3**	**+0.5**
PAHR				IAmb		IAmb	00 52 21.9	
	comp=Z,5.3nm,0.9s							
HLID	**Hailey**	**78.58**	**328**	P		**P**	**00 52 17.0**	**-1.3**
MAW	**Mawson**	**82.78**	**163**	P		**P**	**00 52 42.0**	**+1.8**
	comp=Z,4.9nm,0.9s,baz=194,slow=5.1,SNR=6.2							
MAW	**Mawson**	**82.78**	**163**	P		**P**	**00 52 40.5**	**+0.3**
YKA	**Yellowknife Ar**	**92.74**	**340**	P		**P**	**00 53 29.5**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=133,slow=4.7,SNR=21							
ZALV	**Zalesovo Beam**	**143.00**	**26**	PKP		**PKPdf**	**00 59 48.3**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=316,slow=4.0,SNR=6.2							
MKAR	**Makanchi Array**	**146.44**	**38**	PKPbc		**PKPbc**	**00 59 56.8**	**0.0**
	comp=Z,1.4nm,0.7s,baz=317,slow=2.3,SNR=14							

*BJI **07** 00:46:15.3±0.0,15.°27S×173.°26W,h10km,mB6.2/

MARNC **Mare, Loyalty** 18.70 248 P Pn 00 50 37.7 0.0
SANVU **Saraoutou** 18.77 267 P Pn 00 50 39.5 +1.0
SANVU IAmb IAmb 00 50 55.0
comp=Z,560nm,1.0s
SANVU **Saraoutou** 18.77 267 ⇑P Pn 00 50 39.0 +0.5
SANVU **Saraoutou** 18.77 267 P Pn 00 50 39.7 +1.2
LIFNC **LIFOU** 19.24 251 P Pn 00 50 44.7 +0.5
PINNC **Pines Island,** 19.55 245 P Pn 00 50 48.1 +0.2
YATNC **Mamie plateau,** 19.88 247 P Pn 00 50 52.7 +0.9
OUENC **Ouen Island, N** 20.02 246 P P 00 50 52.0 +0.4
DZM **Mont Dzumac** 20.28 248 P P 00 50 53.8 -0.7
comp=Z,45nm,0.6s,baz=101,slow=17,SNR=37
DZM LR LR 00 57 40.9
comp=Z,118µm,20.1s,baz=88,slow=34
ONTNC **Ouen Toro** 20.34 247 P Pn 00 50 56.3 -0.9
KOUNC **Koumac, New Ca** 21.90 253 ⇑P P 00 51 11.2 -0.7
KOUNC **Koumac, New Ca** 21.90 253 P P 00 51 14.2 +2.3
NFK **Norfolk Island** 22.02 229 P P 00 51 12.1 -1.0
baz=22,SNR=7.1
NFK **Norfolk Island** 22.02 229 ⇑P P 00 51 13.3 +0.3
NFK **Norfolk Island** 22.02 229 P P 00 51 14.8 +1.7
PAE **Paea** 22.89 99 *eP* P 00 51 22.5 +0.1
comp=Z,132nm,1.4s
PAE **Paea** 22.89 99 *eT* T 01 14 41.6
comp=Z,30nm,0.3s
PPT **Papeete** 22.89 99 P P 00 51 23.9 +1.4
comp=Z,420nm,1.2s,baz=255,slow=4.9,SNR=17
PPT LR LR 00 57 45.6
comp=Z,9µm,20.1s,baz=266,slow=30
PPT2 **Papeete2** 22.89 99 *eP* P 00 51 22.9 +0.3
comp=Z,588nm,1.4s
PPT2 *eS* S 00 55 27.3 -3.2
comp=Z,6µm,23.0s
PPT2 *eLQ* LQ 00 55 55.3
comp=Z,71µm,37.0s
PPT2 *eLR* LR 00 56 42.2
comp=Z,51µm,26.0s,baz=277
PPT2 **Papeete2** 22.89 99 *eT* T 01 14 29.7
comp=Z,70nm,0.4s
PPTF **Pamatai, Papee** 22.90 99 P P 00 51 22.2 -0.5
PPTF IAmb IAmb 00 51 29.3
comp=Z,246nm,1.1s
PPTF **Pamatai, Papee** 22.90 99 ⇓P P 00 51 23.4 +0.8
OUZ **Omahuta** 23.01 208 P P 00 51 25.7 +2.2
OUZ IAMs_20 IAMs_20 00 58 28.2
comp=Z,162µm,21.0s
OUZ **Omahuta** 23.01 208 P P 00 51 25.0 +1.5
OUZ **Omahuta** 23.01 208 ⇑P P 00 51 22.4 -1.1
GRZ **Great Barrier** 23.11 204 P P 00 51 25.5 +1.1
GRZ **Great Barrier** 23.11 204 P P 00 51 26.0 +1.6
WCZ **Waipu Caves** 23.29 206 P P 00 51 27.3 +1.0
MXZ **Matakaoa Point** 23.34 197 P P 00 51 28.7 +1.8
MXZ IAMs_20 IAMs_20 01 00 11.7
comp=Z,115µm,18.0s
MXZ **Matakaoa Point** 23.34 197 P P 00 51 27.8 +0.9
MXZ **Matakaoa Point** 23.34 197 P P 00 51 27.7 +0.9
XMAS **Kiritimati** 23.35 44 P P 00 51 25.7 -1.4
XMAS IAmb IAmb 00 51 36.4
comp=Z,269nm,0.9s
XMAS **Kiritimati** 23.35 44 IAMs_20 IAMs_20 00 57 59.0
comp=Z,110µm,20.0s
XMAS **Kiritimati** 23.35 44 ⇓P P 00 51 27.0 -0.2
XMAS ⇑S S 00 55 43.0 +4.9
XMAS **Kiritimati** 23.35 44 P P 00 51 28.1 +1.0
WMGZ **Waiomatatini S** 23.55 197 P P 00 51 31.8 +2.9
MYRZ **Mayor Island** 23.73 201 P P 00 51 33.9 +3.3
PUZ **Puketiti** 23.84 197 P P 00 51 37.0 +5.4
TBI **Tubuai** 23.87 113 *eP* P 00 51 32.7 +0.7
comp=Z,391nm,0.9s
TBI *eS* S 00 55 43.7 -2.6
comp=Z,3µm,27.5s
TBI *eLQ* LQ 00 56 23.9
comp=Z,54µm,27.0s
TBI *eLR* LR 00 57 15.5
comp=Z,12µm,31.2s
TBI **Tubuai** 23.87 113 *eT* T 01 15 35.5
comp=Z,138nm,0.3s
RUGZ **Raukumara Rang** 23.90 198 P P 00 51 33.9 +1.6
RUGZ S S 00 55 51.7 +4.9
TWGZ **Tauwhareparae** 24.01 197 P P 00 51 36.6 +3.3
TWGZ S S 00 55 54.0 +5.7
WHRZ **Whale Island** 24.01 199 P P 00 51 37.5 +4.2
TGRZ **Tauranga** 24.13 201 P P 00 51 37.5 +3.1
OPRZ **Ohinepanea** 24.14 200 P P 00 51 37.9 +3.6
CNGZ **Carnagh Statio** 24.23 196 P P 00 51 38.0 +2.7
MWZ **Matawai** 24.29 198 P P 00 51 37.9 +2.1
MWZ S S 00 55 59.5 +6.7
TKGZ **Te Karaka** 24.29 197 P P 00 51 37.0 +1.2
MEH **Mehetia** 24.34 99 *eP* P 00 51 36.5 0.0
comp=Z,110nm,1.2s
MEH **Mehetia** 24.34 99 *eT* T 01 16 32.7
comp=Z,42nm,0.2s
URZ **Urewera** 24.34 198 P P 00 51 35.0 -1.2
comp=Z,65nm,0.4s,baz=40,slow=5.6,SNR=27
URZ S S 00 55 58.6 +5.0
comp=Z,17nm,0.7s,baz=113,slow=22,SNR=2.3
URZ LR LR 00 59 56.2
comp=Z,112µm,19.7s,baz=30,slow=34
URZ **Urewera** 24.34 198 P P 00 51 34.9 -1.3
URZ IAmb IAmb 00 51 47.8
comp=Z,189nm,0.7s
URZ IAMs_20 IAMs_20 00 59 35.2
comp=Z,127µm,21.0s
URZ **Urewera** 24.34 198 P P 00 51 35.3 -1.0
URZ S S 00 55 59.5 +5.9
URZ **Urewera** 24.34 198 ⇑P P 00 51 33.1 -3.1
KMRZ **Kaimai** 24.35 201 P P 00 51 39.7 +3.4
TOZ **Tahuroa Road** 24.40 202 P P 00 51 39.1 +2.3
OMRZ **Omania** 24.44 200 P P 00 51 39.6 +2.5
RAGZ **Rawiri** 24.47 198 P P 00 51 40.9 +3.4
TARZ **Mount Tarawera** 24.51 200 P P 00 51 41.6 +3.7
RIGZ **Rimuhau** 24.57 197 P P 00 51 42.7 +4.4
HLRZ **Highlands Stat** 24.58 200 P P 00 51 43.8 +5.3
MUGZ **Murupara** 24.65 199 P P 00 51 40.3 +1.3
HSRZ **Hossack Road** 24.66 200 P P 00 51 42.7 +3.5
RTZ **Ruatahuna** 24.71 198 P P 00 51 42.0 +2.3
HRRZ **Handcock Road** 24.72 200 P P 00 51 41.6 +1.9
PRGZ **Paritu Road** 24.73 197 P P 00 51 43.6 +3.8
SNGZ **Shannon Statio** 24.76 198 P P 00 51 42.4 +2.4
PRRZ **Plateau Road** 24.79 199 P P 00 51 40.9 +0.6
ALRZ **Allen Road** 24.86 200 P P 00 51 43.1 +2.1
KNZ **Kokohu** 24.88 197 P P 00 51 48.5 +7.4
MHGZ **Mahia Peninsul** 24.94 196 P P 00 51 44.8 +3.1
RAHZ **Arahi** 24.95 198 P P 00 51 42.7 +0.9
KUTZ **Kaahu Road** 24.97 200 P P 00 51 45.1 +3.2
WHHZ **Waihua** 25.06 198 P P 00 51 46.3 +3.6
NMHZ **Naumai** 25.21 198 P P 00 51 46.5 +2.4
ARHZ **Aropaoanui** 25.30 198 P P 00 51 47.8 +2.8
RATZ **Rangitukua** 25.32 200 P P 00 51 46.9 +1.7
HIZ **Hauiti** 25.33 202 P P 00 51 45.3 +0.1
HIZ IAMs_20 IAMs_20 01 00 07.3
comp=Z,128µm,22.0s
HIZ **Hauiti** 25.33 202 P P 00 51 48.4 +3.3
BKZ **Black Stump Fm** 25.36 199 P P 00 51 44.8 -0.8
BKZ **Black Stump Fm** 25.36 199 P P 00 51 46.1 +0.5
KATZ **Kakaramea** 25.45 200 P P 00 51 49.9 +3.4
MCHZ **McNeill Hill** 25.56 198 P P 00 51 48.9 +1.6
TMVZ **Te Maari** 25.57 200 P P 00 51 47.1 -0.4
KRVZ **Karewarewa** 25.57 200 P P 00 51 49.2 +1.7
ETVZ **East Tongariro** 25.59 200 P P 00 51 47.4 -0.3
WTVZ **West Tongariro** 25.61 200 P P 00 51 48.0 +0.2
TWVZ **Taurewa** 25.62 201 P P 00 51 47.8 -0.2
KWHZ **Kaweka Forest** 25.62 199 P P 00 51 48.3 +0.3
KWHZ S S 00 56 29.6 +15
OTVZ **Oturere** 25.63 200 P P 00 51 49.5 +1.4
CKHZ **Cape Kidnapper** 25.64 197 P P 00 51 51.1 +3.1
NGZ **Ngauruhoe** 25.66 200 P P 00 51 49.1 +0.7
TUVZ **Tukino** 25.73 200 P P 00 51 48.8 -0.2
FWVZ **Far West T-bar** 25.75 200 P P 00 51 49.4 +0.1
WHVZ **Whangaehu Hut** 25.76 200 P P 00 51 50.5 +1.2
TRVZ **Turoa** 25.79 200 P P 00 51 50.4 +0.8
BHHZ **Black Hill Sta** 25.80 199 P P 00 51 48.6 -0.9
WNVZ **Wahianoa** 25.80 200 P P 00 51 49.3 -0.3
MOVZ **Moawhango** 25.82 200 P P 00 51 50.0 +0.3
KAHZ **Kahuranaki** 25.83 197 P P 00 51 52.0 +2.2
KRHZ **Kereru** 25.84 198 P P 00 51 49.8 0.0
VRZ **Vera Road** 25.90 202 P P 00 51 54.7 +4.3
PXZ **Pawanui** 26.05 197 P P 00 51 53.4 +1.7
PXZ S S 00 56 32.7 +12
PNHZ **Pukenui** 26.14 198 P P 00 51 53.2 +0.6
WPHZ **Waipukurau** 26.21 198 P P 00 51 55.7 +2.6
PKE **Pukeiti** 26.25 203 P P 00 51 56.3 +2.8
NEZ **North Egmont** 26.27 202 P P 00 51 58.2 +4.4

KHEZ **Kahui Hut** 26.32 203 P P 00 51 58.5 +4.2
TSZ **Takapari Road** 26.35 199 P P 00 51 55.1 +0.7
NMEZ **Namu Road** 26.48 203 P P 00 52 00.3 +4.7
DVHZ **Dannevirke** 26.50 198 P P 00 51 58.2 +2.3
ANWZ **Angora Road** 26.56 198 P P 00 52 00.5 +4.2
POWZ **Post Office Ro** 26.71 199 P P 00 52 02.9 +5.2
HNR **Honiara** 26.73 280 LR LR 01 01 06.3
comp=Z,23µm,21.0s,baz=132,slow=33
BFZ **Birch Farm** 26.83 198 P P 00 51 58.1 -0.7
BFZ IAmb IAmb 00 52 03.8
comp=Z,263nm,1.0s
BFZ IAMs_20 IAMs_20 01 01 28.9
comp=Z,105µm,21.0s
BFZ **Birch Farm** 26.83 198 P P 00 51 59.8 +1.0
MRZ **Mangatainoka R** 27.01 199 P P 00 51 59.6 -0.8
OGWZ **Otaki Gorge** 27.29 199 P P 00 52 02.2 -0.6
MSWZ **Moikau Station** 27.80 199 P P 00 52 06.4 -1.1
SNZO **South Karori** 27.88 200 P P 00 52 07.6 -0.6
SNZO IAmb IAmb 00 52 20.6
comp=Z,108nm,0.7s
SNZO **South Karori** 27.88 200 IAMs_20 IAMs_20 01 03 10.8
comp=Z,88µm,19.0s
BHW **Baring Head** 27.92 199 P P 00 52 07.0 -1.4
QRZ **Quartz Range** 28.21 203 P P 00 52 11.0 -0.1
QRZ IAmb IAmb 00 52 15.2
comp=Z,174nm,0.9s
QRZ IAMs_20 IAMs_20 01 01 57.7
comp=Z,81µm,20.0s
NNZ **Nelson** 28.25 201 P P 00 52 11.1 -0.3
NNZ IAmb IAmb 00 52 16.6
comp=Z,152nm,0.9s
NNZ IAMs_20 IAMs_20 01 03 36.5
comp=Z,63µm,20.0s
CMWZ **Cape Campbell** 28.43 200 P P 00 52 13.1 -0.1
THZ **Tophouse** 28.89 202 IAMs_20 IAMs_20 01 02 20.7
comp=Z,116µm,22.0s
KHZ **Kahutara** 29.25 200 P P 00 52 19.3 -1.0
KHZ IAmb IAmb 00 52 30.3
comp=Z,100nm,0.8s
KHZ IAMs_20 IAMs_20 01 04 03.2
comp=Z,60µm,20.0s
KHZ **Kahutara** 29.25 200 ⇑P P 00 52 19.2 -1.2
LHI **Lord Howe Isla** 29.89 233 P P 00 52 24.0 -2.2
LHI IAmb IAmb 00 52 39.4
comp=Z,223nm,1.1s
LTZ **Lake Taylor** 30.01 201 IAmb IAmb 00 52 41.4
comp=Z,140nm,0.8s
LTZ IAMs_20 IAMs_20 01 03 06.3
comp=Z,123µm,22.0s
KWAJ **Kwajalein Atol** 30.52 321 P P 00 52 30.8 -1.1
KWAJ pmax pmax
comp=Z,254nm,0.9s
KWAJ **Kwajalein Atol** 30.52 321 P P 00 52 30.8 -1.1
KWAJ IAmb IAmb 00 52 34.2
comp=Z,254nm,0.9s
OXZ **Oxford** 30.57 201 IAmb IAmb 00 52 36.6
comp=Z,173nm,0.7s
OXZ IAMs_20 IAMs_20 01 03 35.1
comp=Z,90µm,21.0s
MQZ **McQueen's Vall** 30.70 200 P P 00 52 30.6 -2.5
MQZ IAMs_20 IAMs_20 01 03 34.4
comp=Z,57µm,21.0s
RPZ **Rata Peaks** 31.26 202 P P 00 52 36.5 -1.6
comp=Z,30nm,0.5s,baz=34,slow=2.8,SNR=14
RPZ LR LR 01 04 58.9
comp=Z,101µm,19.1s,baz=40,slow=36
RPZ **Rata Peaks** 31.26 202 P P 00 52 37.3 -0.9
RPZ IAmb IAmb 00 52 46.4
comp=Z,85nm,0.7s
RPZ IAMs_20 IAMs_20 01 04 47.4
comp=Z,95µm,18.0s
FOZ **Fox Glacier** 31.57 204 IAmb IAmb 00 52 43.1
comp=Z,211nm,1.0s
FOZ IAMs_20 IAMs_20 01 04 21.6
comp=Z,51µm,20.0s
JOHN **Johnston Islan** 32.09 7 P P 00 52 43.9 -1.6
JOHN **Johnston Islan** 32.09 7 IAMs_20 IAMs_20 01 02 11.2
comp=Z,61µm,21.0s
LBZ **Lake Benmore** 32.16 202 IAMs_20 IAMs_20 01 05 15.1
comp=Z,88µm,19.0s
ODZ **Otahua Downs** 32.56 201 IAMs_20 IAMs_20 01 04 55.7
comp=Z,69µm,20.0s
ODZ **Otahua Downs** 32.56 201 ⇓P P 00 52 50.1 +0.5
WKZ **Wanaka** 32.97 203 IAmb IAmb 00 53 05.0
comp=Z,87nm,0.9s
WKZ IAMs_20 IAMs_20 01 07 24.7
comp=Z,53µm,19.0s
TAOE **Nuku Hiva Isla** 33.05 83 *eP* P 00 52 54.0 -0.3
comp=Z,816nm,1.4s
TAOE *eS* S 00 58 11.6 +0.1
comp=Z,15µm,27.4s
TAOE *eLR* LR 01 01 30.2
comp=Z,81µm,25.4s,baz=255
TAOE **Nuku Hiva Isla** 33.05 83 *eT* T 01 27 21.8
comp=Z,574nm,0.2s
TAOE **Nuku Hiva Isla** 33.05 83 P P 00 52 52.2 -2.1
TAOE **Nuku Hiva Isla** 33.05 83 P P 00 52 54.3 0.0
MLZ **Mavora Lakes** 33.77 204 IAmb IAmb 00 53 03.1
comp=Z,179nm,0.9s
MLZ IAMs_20 IAMs_20 01 07 58.8
comp=Z,50µm,18.0s
EIDS **Eidsvold** 34.73 248 P P 00 53 06.4 -2.2
baz=35,SNR=17
EIDS **Eidsvold** 34.73 248 IAMs_20 IAMs_20 01 05 00.9
comp=Z,48µm,21.0s
EIDS **Eidsvold** 34.73 248 ⇑P P 00 53 05.9 -2.8
PYZ **Puysegur Point** 35.00 204 P P 00 53 09.2 -1.5
PYZ IAmb IAmb 00 53 21.2
comp=Z,138nm,1.0s
PYZ IAMs_20 IAMs_20 01 08 15.3
comp=Z,46µm,20.0s
ARMA **Armidale** 35.43 239 P P 00 53 13.3 -1.5
baz=36,SNR=7.9
ARMA **Armidale** 35.43 239 IAmb IAmb 00 53 17.9
comp=Z,77nm,0.7s
ARMA **Armidale** 35.43 239 ⇑P P 00 53 13.3 -1.5
MGCD **Mangrove Creek** 36.74 235 P P 00 53 25.1 -0.7
baz=37,SNR=33
RIV **Riverview** 36.92 234 P P 00 53 26.1 -1.2
baz=37,SNR=3.4
RKT **Rikitea** 36.95 108 *eP* P 00 53 29.0 +1.2
comp=Z,313nm,1.3s
RKT *eLQ* LQ 01 01 54.4
comp=Z,21µm,24.8s
RKT *eLR* LR 01 03 22.9
comp=Z,21µm,25.5s
RKT **Rikitea** 36.95 108 *eT* T 01 32 11.4
comp=Z,109nm,0.3s
RMQ **Roma** 36.98 246 P P 00 53 27.0 -0.9
baz=37,SNR=32
KHU **Kahuku** 38.54 27 P P 00 53 38.2 -3.2
KHU pmax pmax
comp=Z,227nm,1.2s
KHU **Kahuku** 38.54 27 P P 00 53 38.1 -3.2
KHU IAmb IAmb 00 53 51.7
comp=Z,228nm,1.2s
AIN **Ainahou** 38.72 28 P P 00 53 40.2 -2.6
AIN IAmb IAmb 00 53 49.2
comp=Z,108nm,0.9s
CTA **Charters Tower** 38.72 257 S S 00 59 42.6 +4.6
comp=Z,13nm,1.2s,baz=82,slow=7.9,SNR=3.9
CTA LR LR 01 07 12.5
comp=Z,31µm,21.8s,baz=88,slow=32
CTAO **Charters Tower** 38.72 257 P P 00 53 40.7 -2.1
CTAO pmax pmax
comp=Z,31nm,0.8s
CTAO **Charters Tower** 38.72 257 P P 00 53 40.7 -2.1
CTAO **Charters Tower** 38.72 257 ⇑P P 00 53 40.6 -2.1
HLP **Hilina Pali** 38.72 28 P P 00 53 42.3 -0.4
KHLU **Kahalu`u** 38.72 27 P P 00 53 42.2 -0.5
MWH **Moku'aweowe** 38.76 27 P P 00 53 41.9 -1.6
MWH IAmb IAmb 00 53 53.5
comp=Z,290nm,1.2s
SDHHI **Sand Hill** 38.81 28 P P 00 53 38.8 -4.7
MLOA **Mauna Loa Obse** 38.81 27 P P 00 53 41.3 -2.6
MLOA IAmb IAmb 00 53 52.1
comp=Z,265nm,1.2s
WRMHI **West Rim** 38.82 28 P P 00 53 43.0 -0.6
RIM **Rim** 38.82 28 P P 00 53 43.3 -0.3
KKO **Keanakako`i** 38.83 28 P 00 53 43.8 +0.1
PUH **Pauahi** 38.83 28 P P 00 53 43.5 -0.1
NPH **North Pit** 38.83 28 P P 00 53 41.7 -2.0
UWE **Uwekahuna** 38.83 28 P P 00 53 42.9 -0.9
CNB **Canberra Magne** 38.84 232 P P 00 53 42.7 -0.9
baz=39,SNR=35
UWB **Uwekahuna B** 38.84 28 P P 00 53 43.8 0.0

HATHI **Halema'uma'u T** 38.85 28 P P 00 53 44.2 +0.4
SBLHI **Steaming Bluff** 38.85 28 P P 00 53 44.2 +0.4
MLH **Mauna Loa** 38.86 28 P P 00 53 42.6 -1.4
RSD **Rainshed** 38.88 28 P P 00 53 43.6 -0.5
STCH **Steam Cracks** 38.88 28 P P 00 53 44.5 +0.4
JCUZ **Jacuzzi** 38.89 28 P P 00 53 45.1 +1.0
NPOC **North of Pu'u** 38.89 28 P P 00 53 44.7 +0.6
HMH **Humu'ula Sheep** 38.91 27 P P 00 53 45.7 +1.1
H11S2 **WAKE ISLAND Hy** 38.94 329 T T 01 34 18.8
baz=142,slow=74
H11S3 **WAKE ISLAND Hy** 38.95 329 T T 01 34 23.2
baz=142
H11S1 **WAKE ISLAND Hy** 38.96 329 T T 01 34 23.8
baz=142,slow=74
PMG **Port Moresby** 38.99 274 LR LR 01 09 18.6
comp=Z,15µm,18.3s,baz=76,slow=36
PMG **Port Moresby** 38.99 274 *ceP* P 00 53 44.3 -0.8
PMG pmax pmax
comp=Z,222nm,2.5s
PMG MLR MLR
comp=Z,15µm,17.0s
PMG **Port Moresby** 38.99 274 P P 00 53 45.6 +0.5
PMG **Port Moresby** 38.99 274 ⇑P P 00 53 45.0 -0.1
PMG **Port Moresby** 38.99 274 P P 00 53 47.4 +2.3
POHA **Pohakuloa** 39.02 27 P P 00 53 46.3 +0.9
POHA IAmb IAmb 00 54 03.0
comp=Z,244nm,0.9s
POHA **Pohakuloa** 39.02 27 IAMs_20 IAMs_20 01 05 52.8
comp=Z,43µm,20.0s
POHA **Pohakuloa** 39.02 27 ⇓P P 00 53 46.0 +0.6
CAN **Canberra** 39.12 232 P P 00 53 44.6 -1.4
CAN pmax pmax
comp=Z,340nm,1.6s
CAN **Canberra** 39.12 232 ⇑P P 00 53 44.5 -1.4
YNG **Young** 39.23 234 P P 00 53 46.1 -0.8
baz=39,SNR=13
HON **Honolulu** 39.42 23 P P 00 53 48.1 -0.3
HON pmax pmax
comp=Z,360nm,1.1s
HON **Honolulu** 39.42 23 P P 00 53 48.0 -0.3
KIP **Kipapa** 39.50 23 *ceP* P 00 53 49.1 0.0
KIP pmax pmax
comp=Z,1µm,2.5s
KIP MLR MLR
comp=Z,10µm,16.0s
KIP **Kipapa** 39.50 23 P P 00 53 48.4 -0.7
KIP IAmb IAmb 00 53 56.5
comp=Z,191nm,1.1s
KIP **Kipapa** 39.50 23 IAMs_20 IAMs_20 01 05 34.1
comp=Z,37µm,21.0s
HLK **Haleakala** 39.60 26 P P 00 53 49.5 -0.8
HLK IAMs_20 IAMs_20 01 05 49.7
comp=Z,41µm,21.0s
WAKE **Wake Island** 39.64 330 P P 00 53 49.3 -1.0
WAKE **Wake Island** 39.64 330 ⇑P P 00 53 50.6 +0.4
H11N3 **WAKE ISLAND Hy** 39.89 330 T T 01 36 16.0
baz=150,slow=76,SNR=15
H11N1 **WAKE ISLAND Hy** 39.89 330 T T 01 36 13.3
baz=150,slow=76,SNR=16
H11N2 **WAKE ISLAND Hy** 39.91 330 T T 01 36 19.9
baz=150,slow=76,SNR=10
MTSU **Mount Surprise** 40.59 260 P P 00 53 57.3 -1.0
baz=41,SNR=278
CMSA **Cobar Meteorol** 40.64 239 P P 00 53 57.3 -1.3
baz=41,SNR=24
QLP **Quilpie** 41.00 247 P P 00 54 00.3 -1.3
baz=41,SNR=14
QLP **Quilpie** 41.00 247 ⇑P P 00 53 59.4 -2.2
COEN **Coen** 42.05 266 P P 00 54 09.7 -0.6
COEN **Coen** 42.05 266 ⇑P P 00 54 09.8 -0.6
TOO **Toolangi** 42.55 231 P P 00 54 13.3 -1.0
baz=43,SNR=19
TOO **Toolangi** 42.55 231 P P 00 54 12.9 -1.3
TOO pmax pmax
comp=Z,259nm,1.0s
TOO **Toolangi** 42.55 231 P P 00 54 12.9 -1.3
TOO IAmb IAmb 00 54 16.4
comp=Z,259nm,0.9s
TOO IAMs_20 IAMs_20 01 08 28.6
comp=Z,50µm,21.0s
TOO **Toolangi** 42.55 231 ⇑P P 00 54 12.7 -1.5
TAU **Tasmania Unive** 43.41 223 P P 00 54 20.2 -0.8
TAU pmax pmax
comp=Z,47nm,1.0s
TAU **Tasmania Unive** 43.41 223 P P 00 54 20.2 -0.8
TAU **Tasmania Unive** 43.41 223 IAMs_20 IAMs_20 01 08 53.1
comp=Z,60µm,20.0s
MIDW **Midway** 43.47 355 P P 00 54 21.9 +0.3
MIDW IAmb IAmb 00 54 26.2
comp=Z,153nm,1.1s
MIDW IAMs_20 IAMs_20 01 08 33.5
comp=Z,39µm,20.0s
STKA **Stephens Creek** 44.12 240 P P 00 54 26.0 -0.9
comp=Z,82nm,0.5s,baz=81,slow=8.9,SNR=144
STKA LR LR 01 10 17.8
comp=Z,34µm,22.0s,baz=88,slow=33
STKA PKKP **PKKPdf** 01 17 50.2 +1.5
comp=Z,4.8nm,1.0s,baz=289,slow=11,SNR=3.3
STKA **Stephens Creek** 44.12 240 P P 00 54 25.6 -1.3
baz=44,SNR=52
STKA **Stephens Creek** 44.12 240 *ci*P P 00 54 25.3 -1.6
STKA **Stephens Creek** 44.12 240 P P 00 54 25.6 -1.3
MCQ **Macquarie Isla** 44.62 203 P P 00 54 31.5 +1.0
MCQ pmax pmax
comp=Z,84nm,0.8s
MCQ MLR MLR
comp=Z,36µm,18.0s
MCQ **Macquarie Isla** 44.62 203 P P 00 54 31.4 +1.0
MCQ IAmb IAmb 00 54 36.0
comp=Z,84nm,0.8s
MCQ IAMs_20 IAMs_20 01 13 17.8
comp=Z,36µm,18.0s
QIS **Mount Isa** 44.95 256 P P 00 54 31.8 -1.9
baz=45,SNR=20
ARPS **Mount Arapiles** 45.08 233 P P 00 54 33.4 -1.1
baz=45,SNR=37
HTT **Hallett** 46.63 238 P P 00 54 45.4 -1.5
baz=47,SNR=50
HTT **Hallett** 46.63 238 ⇑P P 00 54 45.5 -1.4
JAY **Jayapura** 47.04 281 P P 00 54 51.4 +1.1
JAY pmax pmax
comp=Z,112nm,2.3s
JAY **Jayapura** 47.04 281 P P 00 54 51.9 +1.6
comp=Z,2µmcomp=Z,71nm,2.1s
GENI **Genyem** 47.52 281 P P 00 55 00.0 +6.0
comp=Z,10µmcomp=Z,8µmcomp=Z,372nm,2.2s
BBOO **Buckleboo** 48.90 240 P P 00 55 02.8 -1.6
baz=49,SNR=46
BBOO **Buckleboo** 48.90 240 IAMs_20 IAMs_20 01 13 03.4
comp=Z,34µm,22.0s
WR0 **Warramunga Arr** 49.73 257 IAmb IAmb 00 55 28.1
comp=Z,56nm,0.8s
WR0 IAMs_20 IAMs_20 01 13 56.0
comp=Z,26µm,22.0s
WR9 **Warramunga Arr** 49.75 257 IAMs_20 IAMs_20 01 13 56.6
comp=Z,25µm,21.0s
WR8 **Warramunga Arr** 49.77 257 IAMs_20 IAMs_20 01 13 57.0
comp=Z,27µm,22.0s
WR7 **Warramunga Arr** 49.79 257 IAMs_20 IAMs_20 01 13 57.6
comp=Z,26µm,22.0s
WR6 **Warramunga Arr** 49.81 257 IAMs_20 IAMs_20 01 13 59.1
comp=Z,26µm,22.0s
WB0 **Warramunga Arr** 49.88 257 IAMs_20 IAMs_20 01 14 00.9
comp=Z,27µm,22.0s
WB9 **Warramunga Arr** 49.89 257 IAMs_20 IAMs_20 01 14 01.1
comp=Z,27µm,22.0s
WB8 **Warramunga Arr** 49.89 257 IAMs_20 IAMs_20 01 14 01.2
comp=Z,26µm,22.0s
WB2 **Warramunga Arr** 49.91 257 IAMs_20 IAMs_20 01 14 00.7
comp=Z,26µm,22.0s
WRAB **Tennant Creek** 49.91 257 *ceP* P 00 55 10.1 -2.2
WRAB pmax pmax
comp=Z,243nm,1.7s
WRAB MLR MLR
comp=Z,13µm,18.0s
WRAB **Tennant Creek** 49.91 257 P P 00 55 10.8 -1.5
WRAB IAmb IAmb 00 55 25.0
comp=Z,103nm,0.8s
WRAB **Tennant Creek** 49.91 257 ⇑P P 00 55 09.8 -2.5
WB1 **Warramunga Ar.** 49.91 257 IAMs_20 IAMs_20 01 14 01.8
comp=Z,25µm,21.0s
WC4 **Warramunga Arr** 49.92 257 IAMs_20 IAMs_20 01 14 02.0
comp=Z,28µm,22.0s
WRA **Warramunga Arr** 49.92 257 P P 00 55 10.1 -2.3
comp=Z,52nm,0.5s,baz=91,slow=6.9,SNR=123
WRA S S 01 02 16.9 -4.1

comp=Z,2.3nm,0.9s,baz=91,slow=12,SNR=3.7
WRA LR LR 01 16 21.1
comp=Z,12µm,18.6s,baz=95,slow=36
WRA Warramunga Arr 49.92 257 P P 00 55 09.7 -2.7
AS31 Alice Springs 50.19 252 IAmb IAmb 00 55 16.6
comp=Z,49nm,0.6s
ASAR Alice Springs 50.19 252 P P 00 55 12.6 -1.9
comp=Z,117nm,0.5s,baz=87,slow=7.3,SNR=706
ASAR S S **01 02 18.4 -6.3**
comp=Z,2.8nm,0.9s,baz=87,slow=15,SNR=5.7
ASAR LR LR 01 14 45.3
comp=Z,72µm,21.8s,baz=92,slow=34
ASAR PKP2ab 01 26 54.2
comp=Z,1.8nm,0.9s,baz=286,slow=3.4,SNR=2.6
KDU Kakadu 52.54 266 P P 00 55 30.3 -1.7
baz=52,SNR=72
KDU Kakadu 52.54 266 ⇑P P 00 55 30.4 -1.7
MTN Manton Dam 53.80 265 P P 00 55 39.4 -1.9
baz=54,SNR=40
MTN Manton Dam 53.80 265 ⇑P P 00 55 39.4 -1.9
SAUI Saumlaki 54.59 271 P P 00 55 50.6 +3.4
comp=Z,13µmcomp=Z,224nm,1.6s
FAKI Fak Fak 54.97 277 ⇑P P 00 55 48.4 -1.5
FAKI Fak Fak 54.97 277 P P 00 55 51.9 +2.0
comp=Z,9µmcomp=Z,3µmcomp=Z,64nm,0.9s
WRKA Warakurna 55.27 250 P P 00 55 50.3 -1.8
baz=55,SNR=94
WRKA Warakurna 55.27 250 ⇑P P 00 55 50.3 -1.8
FORT Forrest 55.50 243 P P 00 55 51.7 -1.8
baz=56,SNR=27
FORT Forrest 55.50 243 ⇑P P 00 55 51.2 -2.3
SWI Sorong 56.52 279 P P 00 56 01.5 +0.5
comp=Z,8µmcomp=Z,5µmcomp=Z,315nm,1.0s
BNDI Bandanaira 56.78 275 ⇑P P 00 56 01.7 -1.2
FITZ Fitzroy Crossi 58.28 258 P P 00 56 13.2 -0.2
baz=58,SNR=51
NLAI Namlea 59.82 275 P P 00 56 25.6 +1.5
comp=Z,3µmcomp=Z,112nm,1.3s
RPN Rapa Nui 60.26 113 P P 00 56 27.5 +0.6
comp=Z,193nm,1.1s,baz=312,slow=5.4,SNR=9.9
RPN LR LR 01 16 51.2
comp=Z,3µm,18.0s,baz=274,slow=30
RPN Rapa Nui 60.26 113 P P 00 56 27.9 +1.0
RPN pmax pmax
comp=Z,127nm,1.1s
RPN Rapa Nui 60.26 113 P P 00 56 27.9 +1.0
RPN IAmb IAmb 00 56 36.0
comp=Z,127nm,1.1s
JCJ Chichijima 60.35 314 LR LR 01 17 26.8
comp=Z,12µm,21.5s,baz=135,slow=31
JCJ Chichijima 60.35 314 P P 00 56 27.2 -0.2
JCJ IAmb IAmb 00 56 41.4
comp=Z,103nm,1.0s
TNTI Ternate 60.72 280 P P 00 56 41.5 +11
KMBL Kambalda 60.81 242 P P 00 56 28.4 -2.2
baz=61,SNR=22
SOEI Soe 60.99 267 ⇑P P 00 56 32.1 -0.2
SOEI Soe 60.99 267 P P 00 56 33.6 +1.3
comp=Z,15µmcomp=Z,5µmcomp=Z,429nm,0.8s
SANI Sanana 61.21 276 ⇑P P 00 56 31.8 -1.9
SANI Sanana 61.21 276 P P 00 56 34.0 +0.4
comp=Z,8µmcomp=Z,3µmcomp=Z,94nm,1.5s
BATI Baumata 61.48 267 P P 00 56 38.3 +2.8
PSAD2 Pilbara Seismi 63.17 253 IAms_20 IAms_20 01 24 53.2
comp=Z,30µm,19.0s
PSAC2 Pilbara Seismi 63.23 253 IAms_20 IAms_20 01 24 45.9
comp=Z,29µm,18.0s
PSAB2 Pilbara Seismi 63.27 253 IAms_20 IAms_20 01 24 46.8
comp=Z,29µm,18.0s
PSAB3 Pilbara Seismi 63.27 253 IAms_20 IAms_20 01 24 46.9
comp=Z,28µm,18.0s
PSAA3 Pilbara Seismi 63.27 253 IAms_20 IAms_20 01 24 46.9
comp=Z,28µm,18.0s
PSA00 Pilbara Seismi 63.28 253 P P 00 56 46.9 -0.6
PSA00 IAmb IAmb 00 57 05.5
comp=Z,111nm,1.1s
PSA00 IAMs_20 IAMs_20 01 24 38.2
comp=Z,27µm,19.0s
PSA00 Pilbara Seismi 63.28 253 P P 00 56 44.8 -2.6
PSA00 IAmb IAmb 00 56 47.5
comp=Z,36nm,0.8s
PSAA2 Pilbara Seismi 63.28 253 IAMs_20 IAMs_20 01 24 39.2
comp=Z,28µm,19.0s
PSAA1 Pilbara Seismi 63.29 253 IAMs_20 IAMs_20 01 24 39.4
comp=Z,29µm,19.0s
PSAC3 Pilbara Seismi 63.29 253 IAMs_20 IAMs_20 01 22 56.5
comp=Z,26µm,20.0s
PSAB1 Pilbara Seismi 63.30 253 IAMs_20 IAMs_20 01 22 56.8
comp=Z,26µm,20.0s
PSAD1 Pilbara Seismi 63.31 253 IAMs_20 IAMs_20 01 24 48.9
comp=Z,32µm,18.0s
SBA Scott Base 63.32 185 P P 00 56 49.4 +2.7
SBA Scott Base 63.32 185 P P 00 56 49.4 +2.7
PSAC1 Pilbara Seismi 63.32 253 IAMs_20 IAMs_20 01 24 40.2
comp=Z,31µm,19.0s
PSAD3 Pilbara Seismi 63.34 253 IAMs_20 IAMs_20 01 22 57.6
comp=Z,27µm,20.0s
MBWA Marble Bar 63.44 254 IAMs_20 IAMs_20 01 24 55.3
comp=Z,30µm,18.0s
MBWA Marble Bar 63.44 254 P P 00 56 48.7 +0.2
MBWA P P **00 56 48.7 +0.2**
MBWA Marble Bar 63.44 254 ⇑P P 00 56 46.5 -2.0
VNDA Vanda 63.45 186 P P 00 56 49.5 +2.0
comp=Z,56nm,1.0s,baz=8.4,slow=6.8,SNR=108
VNDA LR LR 01 19 10.7
comp=Z,6µm,21.5s,baz=22,slow=31
VNDA PKP2bc 01 25 49.6
comp=Z,1.9nm,1.1s,baz=252,slow=5.6,SNR=9.0
VNDA Vanda 63.45 186 P P 00 56 49.5 +2.0
VNDA IAmb IAmb 00 57 03.2
comp=Z,65nm,1.0s
DDMP Don Marcelino, 64.02 285 *e*P P **00 56 51.7 -0.6**
KLBR Kellerberrin 64.32 242 P P 00 56 53.0 -1.1
baz=64,SNR=87
LUWI Luwuk 64.58 276 ⇑P P 00 56 55.4 -0.7
NWAO Narrogin (SRO) 64.70 241 P P 00 56 56.0 -0.6
baz=65,SNR=22
NWAO Narrogin (SRO) 64.70 241 P P 00 56 56.0 -0.6
NWAO pmax pmax
comp=Z,142nm,1.1s
NWAO Narrogin (SRO) 64.70 241 P P 00 56 56.0 -0.6
NWAO IAmb IAmb 00 56 58.5
comp=Z,142nm,1.1s
NWAO Narrogin (SRO) 64.70 241 IAMs_20 IAMs_20 01 22 23.9
comp=Z,27µm,22.0s
NWAO Narrogin (SRO) 64.70 241 P P 00 56 56.3 -0.3
NWAO P P **00 56 56.3 -0.3**
KCP Kidapawan 64.91 285⇓ *e*P P **00 57 00.4 +2.1**
GLSP General Luna, 64.95 289 *e*P P **00 56 56.6 -1.8**
BUTP Butuan 65.12 288 *e*P P **00 57 00.0 +0.5**
SKMP Bagumbayan, Su 65.25 285 *e*P P **00 57 01.3 +0.9**
BLDU Ballidu 65.27 243 P P 00 56 59.6 -0.8
baz=65,SNR=21
MUN Mundaring 65.62 242 P P 00 57 02.8 +0.3
baz=66,SNR=19
MORW Morawa 65.97 245 P P 00 57 04.5 -0.4
baz=66,SNR=7.1
MORW Morawa 65.97 245 P P 00 57 04.0 -0.9
MORW IAmb IAmb 00 57 07.4
comp=Z,70nm,1.1s
MORW IAMs_20 IAMs_20 01 26 27.4
comp=Z,25µm,18.0s
MORW Morawa 65.97 245 ⇑P P 00 57 03.4 -1.4
MSLP Maasin 66.24 289 *e*P P **00 57 06.9 +0.1**
KAPI Kappang 66.44 271 P P 00 57 07.6 -0.5
KAPI pmax pmax
comp=Z,46nm,0.9s
KAPI Kappang 66.44 271 P P 00 57 07.6 -0.5
KAPI IAmb IAmb 00 57 20.6
comp=Z,46nm,0.9s
KAPI Kappang 66.44 271 P P 00 57 09.4 +1.3
KAPI P P **00 57 09.4 +1.3**
KAPI Kappang 66.44 271 ⇑P P 00 57 07.1 -1.0
PAGZ Pagadian 66.79 286 *e*P P **00 57 09.3 -0.9**
OCLP Ormoc 66.81 289 *e*P P **00 57 12.4 +2.1**
ADK Adak 67.00 358 P P 00 57 10.9 +0.1
ADK pmax pmax
comp=Z,96nm,1.1s
ADK Adak 67.00 358 P P 00 57 10.9 +0.1
ADK IAmb IAmb 00 57 29.2
comp=Z,96nm,1.1s
ADK Adak 67.00 358 IAMs_20 IAMs_20 01 19 55.1
comp=Z,23µm,21.0s
TOLI2 Tolitoli 67.10 278 P P 00 57 11.3 -1.0
H01W1 Cape Leeuwin H 67.17 238 P P 00 57 13.8 +1.7
baz=108,slow=8.4,SNR=14
H01W3 Cape Leeuwin H 67.18 238 P P 00 57 16.3 +4.1
baz=108,slow=8.4,SNR=8.1
H01W2 Cape Leeuwin H 67.18 238 P P 00 57 14.7 +2.5
baz=108,slow=8.4,SNR=6.8
ATKA Atka Island 67.26 359 P P 00 57 12.8 +0.4
ATKA Atka Island 67.26 359 ⇑P P 00 57 12.3 -0.1
JYT Yasato 67.50 321 IAmb IAmb 00 57 21.6
comp=Z,104nm,0.9s
JYT IAMs_20 IAMs_20 01 21 57.2
comp=Z,15µm,20.0s
NIKH Nikolski High 68.13 3 P 00 57 17.3
baz=184
NIKH S 01 06 19.6
baz=184
CNOP Candoni, Negro 68.17 287 *e*P P **00 57 18.4 -0.5**
JMM Marumori 68.22 322 P P 00 57 19.2 +0.4
JMM IAmb IAmb 00 57 25.3
comp=Z,57nm,0.9s
JMM IAMs_20 IAMs_20 01 21 56.0
comp=Z,21µm,21.0s
JMM Marumori 68.22 322 ⇑P P 00 57 30.6 +12
GIRL Giralia 68.31 251 P P 00 57 19.1 -0.6
baz=68,SNR=12
GIRL Giralia 68.31 251 P P 00 57 21.1 +1.3
GIRL Giralia 68.31 251 ⇑P P 00 57 19.9 +0.1
GUIM Jordan 68.50 288 *e*P P 00 57 35.1 +14
SMY Shemya 68.65 352 P P 00 57 20.2 -0.9
SMY pmax pmax
comp=Z,185nm,1.1s
SMY Shemya 68.65 352 P P 00 57 20.2 -0.9
SMY IAMs_20 IAMs_20 01 20 02.2
comp=Z,38µm,22.0s
JGF Kuroka 68.88 319 IAmb IAmb 00 57 36.3
comp=Z,58nm,1.1s
JGF Kuroka 68.88 319⇓ P P **00 57 23.9 +0.8**
JGF ⇓P *s*P **00 57 35.4 -0.1**
MJAR Matsushiro Arr 68.93 320 P P 00 57 22.8 -0.5
comp=Z,20nm,0.9s,baz=156,slow=5.9,SNR=14
MJAR LR LR 01 21 57.1
comp=Z,13µm,21.9s,baz=130,slow=31
MAJO Matsushiro 68.93 320 *i* P P **00 57 23.1 -0.3**
MAJO pmax pmax
comp=Z,36nm,1.0s
MAJO MLR MLR
comp=Z,3µm,19.0s
MAJO Matsushiro 68.93 320 P P 00 57 24.7 +1.3
MAJO Matsushiro 68.93 320 IAMs_20 IAMs_20 01 21 02.2
comp=Z,16µm,22.0s
MAT Matsushiro 68.93 320 P P 00 57 23.0 -0.4
MAT S S **01 06 28.4 +2.5**
AKUT Akutan 69.49 5 P P 00 57 26.4 +0.1
ERM Erimo 69.75 327 *i* P P **00 57 27.9 -0.3**
ERM pmax pmax
comp=Z,165nm,2.0s
ERM MLR MLR
comp=Z,6µm,19.0s
ERM Erimo 69.75 327 IAMs_20 IAMs_20 01 21 44.7
comp=Z,16µm,22.0s
JEM Erimo 69.75 327 IAMs_20 IAMs_20 01 22 10.6
comp=Z,16µm,21.0s
JCNP Jose Panganiba 69.75 292 *e*P P **00 57 30.0 +1.2**
YUK Yuzh-Kuril'sk 69.84 330 *e*P P **00 57 27.9 -0.8**
YUK *e* 00 57 50.9
YUK *e* 01 00 08.6
YUK *i* S S **01 06 37.5 +1.4**
YUK pmax pmax
comp=Z,347nm,1.2s
YUK pmax pmax
comp=Z,811nm,2.2s
JSD Sado 69.85 321 P P 00 57 29.6 +0.6
JSD IAmb IAmb 00 57 32.9
comp=Z,67nm,0.9s
JSD Sado 69.85 321 ⇑P P 00 57 30.4 +1.5
JSD ⇑P **pwP 00 57 40.1 -0.6**
JTM Tenmabayashi 70.03 325 IAmb IAmb 00 57 32.3
comp=Z,120nm,1.0s
JTM Tenmabayashi 70.03 325 ⇑P P 00 57 31.4 +1.5
JTM ⇑P **pwP 00 57 41.9 +0.1**
JMN Monobe 70.06 315 ⇑P P 00 57 32.5 +2.1
H06S1 SOCORRO T 70.12 63 P P 00 57 32.8 +1.8
H06S1 T T 02 13 56.3
SNR=33
H06N1 SOCORRO T-PHAS 70.15 63 P P 00 57 32.2 +1.0
H06E1 SOCORRO T-PHAS 70.17 63 P P 00 57 32.2 +0.8
FALS False Pass 70.42 6 P 00 57 30.9
baz=190
SNCC San Nicolas Is 70.49 46 P 00 57 33.9
baz=236,SNR=9.2
SNCC S 01 06 48.8
baz=236
SNCC San Nicolas Is 70.49 46 P P 00 57 33.9 +0.9
SNCC IAmb IAmb 00 57 39.1
comp=Z,90nm,0.9s
CASY Casey 70.49 205 P P 00 57 32.5 0.0
CASY IAmb IAmb 00 57 35.7
comp=Z,154nm,1.1s
CASY Casey 70.49 205 IAMs_20 IAMs_20 01 24 29.8
comp=Z,13µm,20.0s
CASY Casey 70.49 205 ⇑P P 00 57 32.4 -0.1
JOW Kunigami 70.50 306 ⇑P pP 00 57 46.8 +4.4
MYLDM Lahad Datu 70.50 281 ⇑P P 00 57 34.4 +0.9
MYLDM ⇑P **pP 00 57 41.4 -1.1**
LQP Lukban 70.73 291⇑ *e*P P **00 57 37.9 +2.8**
SCZ2 Santa Cruz Isl 70.83 45 P 00 57 36.1
baz=235,SNR=10
SCZ2 S 01 06 53.5
baz=235
SKR Severo-Kuril's 70.99 340 *e*P P 00 57 30.0 -5.6
SKR *e*S **S 01 06 45.3 -4.0**
SKR pmax pmax
comp=Z,2µm,9.6s
SKR MLR MLR
comp=Z,3µm,18.0s
JAGI Jajag, Banyuwa 71.02 266 P P 00 57 36.3 -0.3
JAGI Jajag, Banyuwa 71.02 266 ⇑P P 00 57 34.0 -2.7
SCI2 San Clemente I 71.02 47 P 00 57 37.0
baz=236,SNR=12
SCI2 S 01 06 53.8
baz=236
SBC Santa Barbara 71.03 45 P 00 57 37.0
baz=235
SBC S 01 06 54.7
baz=235
MCCM Marconi Confer 71.17 40 P P 00 57 37.2 +0.2
MCCM IAmb IAmb 00 57 42.8
comp=Z,73nm,0.9s
MCCM IAMs_20 IAMs_20 01 21 57.9
comp=Z,32µm,20.0s
MCCM Marconi Confer 71.17 40⇓ P P **00 57 37.7 +0.7**
BUSP Coron 71.18 289 *e*P P **00 57 39.7 +2.2**
PKM Mcpherson Peak 71.22 44 P 00 57 38.4
baz=235,SNR=38
PKM S 01 06 55.5
baz=235
JEW Eniwo 71.22 327 P P 00 57 38.1 +0.9
JEW Eniwo 71.22 327⇓ P P **00 57 39.5 +2.3**
JSU Suzuyama 71.24 311 P P 00 57 37.6 0.0
JSU Suzuyama 71.24 311 ⇑P pP 00 57 50.8 +4.1
SAO San Andreas Ge 71.24 42 IAmb IAmb 00 57 54.3
comp=Z,76nm,1.0s
SAO IAMs_20 IAMs_20 01 20 38.7
comp=Z,36µm,22.0s
SAO San Andreas Ge 71.24 42⇓ P P **00 57 38.0 +0.5**
SDPT Sand Point 71.25 8 P 00 57 36.2
baz=193,SNR=8.6
SDPT S 01 06 51.5
baz=193
SDPT Sand Point 71.25 8 IAMs_20 IAMs_20 01 21 34.9
comp=Z,21µm,21.0s
JHS Saijyo 71.30 316 P P 00 57 38.3 +0.4
JHS IAmb IAmb 00 57 40.7
comp=Z,109nm,1.1s
JHS Saijyo 71.30 316 ⇑P P 00 57 39.2 +1.3
SMMC Simmler 71.34 44 P 00 57 39.1
baz=235,SNR=34
SMMC S 01 06 58.4
baz=235
CIS Catalina Islan 71.35 46 P 00 57 38.5
baz=236,SNR=15
CIS S 01 06 57.6
baz=236
QVP Quezon City--P 71.40 291 *e*P P **00 57 41.2 +2.4**
JKA Kamikawa-asahi 71.52 328 IAmb IAmb 00 57 41.9
comp=Z,94nm,1.0s
MACP Maragondon, Ca 71.52 291 *e*P P **00 57 41.4 +1.8**
HOPS Hopland Field 71.58 39 IAMs_20 IAMs_20 01 21 31.6
comp=Z,34µm,20.0s
FMP Fort Macarthur 71.60 46 P 00 57 40.2
baz=236
FMP S 01 07 00.3
baz=236
ENPP El Nido 71.61 288 *e*P P **00 57 39.4 -0.7**
KCPM Cahto Peak 71.71 38 IAmb IAmb 00 57 54.1
comp=Z,97nm,1.1s
CCX Cicese 71.76 48 P P 00 57 41.3 +0.6
CCX IAmb IAmb 00 57 53.8
comp=Z,65nm,1.1s
OSI Osito Audit: C 71.81 45 P 00 57 41.6
baz=236,SNR=9.3
OSI S 01 07 03.0
baz=236
TJX Tijuana 71.82 48 P P 00 57 41.8 +0.7
CVP Callao Caves 71.85 295⇓ *e*P P **00 57 44.3 +2.8**
DECC Green Verdugo 71.87 46 P 00 57 41.6
baz=236,SNR=10
DECC S 01 07 03.8
baz=236
PASC Pasadena Art C 71.93 46 IAmb IAmb 00 57 47.1
comp=Z,79nm,1.0s
109C Camp Elliot, M 71.99 47 P 00 57 42.6
baz=237,SNR=22
109C S 01 07 04.8
baz=237
109C Camp Elliot, M 71.99 47 IAMs_20 IAMs_20 01 21 41.0
comp=Z,32µm,20.0s
ARVC Arvin 72.02 45 P 00 57 42.6
baz=236,SNR=27
ARVC S 01 07 05.1
baz=236
JCC Jacoby Creek, 72.16 37 IAmb IAmb 00 57 45.1
comp=Z,168nm,1.1s
JCC IAMs_20 IAMs_20 01 23 07.9
comp=Z,29µm,20.0s
PET Petropavlovsk 72.24 343 *d* iP **P 00 57 42.2 -0.9**
PET *i* 01 00 25.5
PET *e*S **S 01 07 02.6 -1.0**
PET *e*PPS PPS 01 07 43.8
PET *e*SS **SS 01 11 46.7 +4.5**
PET *e*SSS SSS 01 14 57.7
PET pmax pmax
comp=Z,146nm,2.1s
PET pmax pmax
comp=Z,6µm,7.3s
PET pmax pmax
comp=Z,5µm,10.3s
PET pmax pmax
comp=Z,2µm,10.2s
PET MLR MLR
comp=Z,10µm,19.0s
PET Petropavlovsk 72.24 343 P P 00 57 43.8 +0.8
VES Vestal, Richgr 72.25 44 P 00 57 43.9
baz=235,SNR=93
VES S 01 07 08.0
baz=235
SPIA Saint Paul Isl 72.28 2 P 00 57 43.2
baz=183
SPIA Saint Paul Isl 72.29 2 IAMs_20 IAMs_20 01 22 44.7
comp=Z,14µm,22.0s
BATP Bataraza 72.31 285 *e*P P **00 57 43.6 -0.8**
MURC Murrieta 72.31 47 P 00 57 44.4
baz=237,SNR=57
MURC S 01 07 10.1
baz=237
VOG Valley Oaks Go 72.33 43 P 00 57 44.0
baz=235,SNR=5.2
VOG S 01 07 07.7
baz=235
BFSC Mount Baldy Ra 72.33 46 P 00 57 44.2
baz=237,SNR=53
BFSC S 01 07 08.0
baz=237
ESJX Sierra Juarez 72.35 49 IAmb IAmb 00 57 50.2
comp=Z,61nm,1.0s
KHMM Horse Mountain 72.37 37 IAMs_20 IAMs_20 01 22 27.5
comp=Z,33µm,20.0s
EDW2 Edwards Air Fo 72.45 45 P 00 57 45.5
baz=236,SNR=140
EDW2 S 01 07 09.1
baz=236
MONP2 Monument Peak 72.48 48 P 00 57 45.7
baz=238,SNR=83
MONP2 S 01 07 10.3
baz=238
O02D Mt. Diablo Mer 72.49 38 P 00 57 46.3
baz=231,SNR=55
O02D S 01 07 10.2
baz=231
ISA Isabella, Lake 72.56 44 P 00 57 46.3
baz=236,SNR=152
ISA S 01 07 10.9
baz=236
IKP In-Ko-Pah, Jac 72.57 48 P 00 57 46.4
baz=238,SNR=59
IKP S 01 07 10.9
baz=238
PEA0B Petropavlovsk- 72.59 342 *ce*P **P 00 57 43.5 -1.7**
PETK Petropavlovsk- 72.59 342 P P 00 57 45.1 -0.1
comp=Z,61nm,0.8s,baz=126,slow=7.8,SNR=50
PETK LR LR 01 25 09.6
comp=Z,6µm,21.1s,baz=154,slow=32
PETK Petropavlovsk- 72.59 342 P P 00 57 44.8 -0.4
SFX San Felipe 72.66 50 IAmb IAmb 00 57 50.6
comp=Z,109nm,1.2s
CMB Columbia Colle 72.67 41 IAMs_20 IAMs_20 01 22 15.6
comp=Z,25µm,20.0s
PFO Pinyon Flats O 72.83 47 P 00 57 47.6
baz=238,SNR=62
PFO S 01 07 14.7
baz=238
PFO Pinyon Flats O 72.83 47 *d* iP **P 00 57 46.6 -0.7**
PFO pmax pmax
comp=Z,248nm,1.3s
PFO MLR MLR
comp=Z,13µm,16.0s
PFO Pinyon Flats O 72.83 47 P P 00 57 47.5 +0.3
PFO IAmb IAmb 00 57 52.1
comp=Z,148nm,1.1s
TPFO Pinon Flats 72.83 47 P 00 57 47.8
baz=238
TPFO S 01 07 14.7
baz=238
SRIG Santa Rosalia 72.85 55 IAmb IAmb 00 57 56.3
comp=Z,75nm,1.1s
AFDM Forest Hills D 72.85 40 IAMs_20 IAMs_20 01 22 40.2
comp=Z,26µm,20.0s
BBRC Big Bear Solar 72.86 46 P 00 57 48.0
baz=237
BBRC S 01 07 14.8
baz=237
ORV Oroville 72.89 39 IAMs_20 IAMs_20 01 22 23.2
comp=Z,19µm,20.0s
WDC Whiskeytown Da 72.89 38 ⇑P P 00 57 47.5 +0.2
WDC ⇓P P **00 57 47.9 +0.6**
KKM Kota Kinabalu 72.93 281 P P 00 57 49.1 +0.9
SWSC Sam W. Stewart 72.95 48 P 00 57 48.0
baz=238,SNR=27
SWSC S 01 07 16.8
baz=238
LRMC Laurel Mtn Rad 73.00 45 P 00 57 48.9
baz=236,SNR=8.1
LRMC S 01 07 16.8
baz=236
CPBX Cerro Prieto 73.03 49 IAmb IAmb 00 58 03.2
comp=Z,115nm,1.2s
N02D Trinity Center 73.04 38 P 00 57 49.4
baz=231,SNR=70
N02D S 01 07 16.4
baz=231
SLBS Sierra La Lagu 73.07 59 P P 00 57 49.5 +0.7
SLBS Sierra La Lagu 73.07 59 IAMs_20 IAMs_20 01 22 37.4
comp=Z,19µm,20.0s
SLBS Sierra La Lagu 73.07 59⇓ P **P 00 57 49.2 +0.4**
RRX Edison Barstow 73.14 46 P 00 57 49.2
baz=237,SNR=20
RRX S 01 07 17.6
baz=237
O03E Paynes Creek 73.16 39 P 00 57 49.2
baz=232,SNR=85
O03E S 01 07 16.8
baz=232
M02C Callahan 73.21 37 P 00 57 50.5
baz=231,SNR=59

M02C S 01 07 18.2
baz=231
CWC Cottonwood Cre 73.26 44 P 00 57 50.2
baz=236
CWC S 01 07 19.5
baz=236
L02E Cave Junction 73.27 36 P 00 57 50.6
baz=230,SNR=20
L02E S 01 07 21.1
baz=230
BELC Belle Mtn. Jos 73.36 47 P 00 57 51.0
baz=238,SNR=76
BELC S 01 07 20.4
baz=238
SII Sitkinak Islan 73.40 11 P 00 57 49.2
baz=199
RUBR Rubicon Trail 73.42 41 IAmb IAmb 00 58 01.9
comp=Z,130nm,1.1s
RUBR IAMs_20 IAMs_20 01 23 18.4
comp=Z,33µm,20.0s
MLAC Mammoth, Mammo 73.44 42 P 00 57 51.7
baz=235,SNR=11
MLAC S 01 07 21.7
baz=235
YSS Yuzh-Sakhalins 73.46 330 *e*P **P** **00 57 50.5 0.0**
YSS *e**SP **pwP** **00 58 02.2 0.0**
YSS *e* 01 00 30.8
YSS *e*S **SKiKP** **01 07 20.6 +1.5**
YSS *e* 01 08 02.0
YSS pmax pmax
comp=Z,1µm,7.8s
YSS pmax pmax
comp=Z,140nm,1.0s
YSS Yuzh-Sakhalins 73.46 330 P **P** **00 57 51.1 +0.6**
YSS IAmb IAmb 00 57 53.0
comp=Z,153nm,1.0s
YSS Yuzh-Sakhalins 73.46 330 ⇑P **P** **00 57 51.4 +0.9**
TIN Tinemaha, Big 73.51 43 P 00 57 51.9
baz=236,SNR=12
TIN S 01 07 21.7
baz=236
YBH Yreka Blue Hor 73.51 37 IAMs_20 IAMs_20 01 22 12.6
comp=Z,31µm,21.0s
WAKR Walker 73.56 41 IAmb IAmb 00 57 57.7
comp=Z,105nm,1.1s
BC3 Big Chuckawall 73.57 47 P 00 57 52.3
baz=238,SNR=97
BC3 S 01 07 23.4
baz=238
HEC Hector,Ludlow 73.57 46 P 00 57 51.6
baz=237,SNR=186
HEC S 01 07 20.9
baz=237
K02D Willamette Mer 73.57 36 P 00 57 52.3
baz=230,SNR=38
K02D S 01 07 24.1
baz=230
GLA Glamis 73.70 48 P 00 57 52.9
baz=239,SNR=121
GLA S 01 07 22.0
baz=239
J01E Myrtle Point 73.72 35 P 00 57 52.8
baz=230,SNR=25
J01E S 01 07 25.0
baz=230
BEKR Beckworth 73.78 40 IAmb IAmb 00 58 01.0
comp=Z,60nm,0.9s
BEKR IAMs_20 IAMs_20 01 22 28.8
comp=Z,24µm,21.0s
PNTR Pine Nut 73.79 41 IAmb IAmb 00 57 58.6
comp=Z,145nm,0.9s
VCNR Virginia City 73.88 41 IAmb IAmb 00 58 03.7
comp=Z,90nm,1.2s
VCNR IAMs_20 IAMs_20 01 23 42.6
comp=Z,31µm,20.0s
HUMO Hull Mountain 73.92 36 IAmb IAmb 00 58 00.6
comp=Z,160nm,1.1s
HUMO IAMs_20 IAMs_20 01 22 35.4
comp=Z,27µm,21.0s
HUMO Hull Mountain 73.92 36 ⇑P **P** **00 57 53.2 -0.1**
HUMO ⇓P **P** **00 57 54.4 +1.1**
PIX Pinacate 73.95 50 IAmb IAmb 00 57 57.1
comp=Z,123nm,1.0s
YERR Yerington 73.96 41 IAmb IAmb 00 58 00.3
comp=Z,90nm,1.1s
GMRC Granite Mounta 74.02 46 P 00 57 54.6
baz=238,SNR=168
GMRC S 01 07 26.8
baz=238
IRM Iron Mountain 74.05 47 P 00 57 55.0
baz=238,SNR=179
IRM S 01 07 27.3
baz=238
L04D Klamath Falls 74.05 37 P 00 57 54.8
baz=231,SNR=82
L04D S 01 07 28.3
baz=231
M04C Macdoel 74.05 37 P 00 57 55.2
baz=232,SNR=66
M04C S 01 07 28.3
baz=232
FURC Furnace Creek, 74.09 44 P 00 57 55.1
baz=237,SNR=21
FURC S 01 07 28.4
baz=237
TUQ Turquoise Moun 74.18 46 P 00 57 55.7
baz=238,SNR=35
TUQ S 01 07 30.0
baz=238
SHOC Shoshone, Teco 74.19 45 P 00 57 55.4
baz=237,SNR=23
SHOC S 01 07 30.0
baz=237
OHAK Old Harbor 74.19 11 P 00 57 54.2
baz=200,SNR=13
OHAK S 01 07 27.4
baz=200
OHAK Old Harbor 74.19 11 IAmb IAmb 00 58 01.3
comp=Z,111nm,1.2s
OHAK IAMs_20 IAMs_20 01 22 50.6
comp=Z,33µm,21.0s
RYN Ryan 74.21 42 IAmb IAmb 00 58 00.8
comp=Z,99nm,1.0s
RYN IAMs_20 IAMs_20 01 22 24.3
comp=Z,34µm,22.0s
NVAR Mina Array Bea 74.24 42 P **P** **00 57 55.9 +0.3**
comp=Z,92nm,0.9s,baz=228,slow=8.9,SNR=220
NVAR LR LR 01 22 50.4
comp=Z,38µm,21.7s,baz=250,slow=30
NVAR Mina Array Bea 74.24 42 P **P** **00 57 54.1 -1.4**
PAHR Pah Rah Range 74.29 40 IAmb IAmb 00 58 04.7
comp=Z,68nm,1.1s
PAHR IAMs_20 IAMs_20 01 24 06.4
comp=Z,27µm,20.0s
I02D Swisshome 74.38 35 P 00 57 56.9
baz=230,SNR=15
I02D S 01 07 33.6
baz=230
I03D Drain, OR 74.39 35 P 00 57 56.8
baz=230,SNR=55
I03D S 01 07 33.3
baz=230
K04D Chiloquin, OR 74.62 37 P 00 57 58.2
baz=232,SNR=27
K04D S 01 07 33.5
baz=232
214A Organ Pipe Nat 74.62 50 P 00 57 58.3
baz=240,SNR=142
214A S 01 07 35.5
baz=240
UGM Wanagama 74.64 266 IAmb IAmb 00 58 13.6
comp=Z,117nm,0.8s
QSPA South Pole Qui 74.71 180 P **P** **00 57 58.9 +1.2**
comp=Z,94nm,0.7s,baz=41,slow=0.7,SNR=140
QSPA S **S** **01 07 34.3 +2.6**
comp=Z,1.5nm,0.9s,baz=90,slow=22,SNR=6.8
QSPA South Pole Qui 74.71 180 P **P** **00 57 59.2 +1.5**
QSPA IAmb IAmb 00 58 06.0
comp=Z,119nm,1.0s
QSPA South Pole Qui 74.71 180 IAMs_20 IAMs_20 01 32 41.7
comp=Z,18µm,18.0s
KVN Kaiserville 74.72 42 IAmb IAmb 00 58 03.3
comp=Z,135nm,1.1s
KVN IAMs_20 IAMs_20 01 22 38.8
comp=Z,34µm,22.0s
NEE2 Needles Airpor 74.74 47 P 00 57 58.9
baz=239,SNR=15
NEE2 S 01 07 35.8
baz=239
TPNV Topopah Spring 74.77 44 IAmb IAmb 00 58 12.0
comp=Z,109nm,1.1s
TPNV Topopah Spring 74.77 44 ⇓P **P** **00 57 59.0 +0.4**
TPNV Topopah Spring 74.77 44 P 00 57 59.1
baz=237,SNR=138
TPNV S 01 07 36.8
baz=237
J04D Umpqua Nationa 74.80 36 P 00 57 59.6
baz=231,SNR=31
J04D S 01 07 36.8
baz=231
PDMCI Parker Dam,Lak 74.83 47 P 00 57 59.6
baz=239,SNR=142
PDMCI S 01 07 36.7
baz=239
KDAK Kodiak Island 74.85 11 P 00 57 58.3
baz=201
KDAK S 01 07 35.3
baz=201
KDAK Kodiak Island 74.85 11 *d* P **P** **00 57 57.8 -0.5**
KDAK pmax pmax
comp=Z,463nm,1.4s
KDAK MLR MLR
comp=Z,12µm,17.0s
KDAK Kodiak Island 74.85 11 P **P** **00 57 58.8 +0.5**
KDAK IAmb IAmb 00 58 04.6
comp=Z,107nm,1.1s
KDAK Kodiak Island 74.85 11 IAMs_20 IAMs_20 01 23 10.0
comp=Z,34µm,22.0s
SMRI Semarang 74.92 267 IAmb IAmb 00 58 04.3
comp=Z,111nm,0.8s
I04A Tendick Farm, 74.98 36 P 00 57 60.0
baz=231,SNR=69
I04A S 01 07 38.5
baz=231
COR Corvallis 74.99 35 P **P** **00 58 00.4 +0.9**
COR pmax pmax
comp=Z,195nm,1.2s
COR Corvallis 74.99 35 P **P** **00 58 00.4 +0.9**
COR IAmb IAmb 00 58 14.5
comp=Z,196nm,1.1s
COR Corvallis 74.99 35 IAMs_20 IAMs_20 01 22 43.7
comp=Z,27µm,22.0s
COR Corvallis 74.99 35 ⇓P **P** **00 58 00.4 +0.9**
MOD Modoc Plateau 75.03 38 IAMs_20 IAMs_20 01 24 05.9
comp=Z,32µm,20.0s
TPUB Ta-pu 75.11 300 IAmb IAmb 00 58 04.7
comp=Z,100nm,1.0s
K05A Summer Lake 75.19 37 IAMs_20 IAMs_20 01 24 30.9
comp=Z,32µm,20.0s
H04D Lebanon 75.26 35 P 00 58 01.8
baz=230,SNR=54
H04D S 01 07 42.0
baz=230
J05D Fort Rock, OR 75.33 37 P 00 58 02.6
baz=232,SNR=263
J05D S 01 07 42.0
baz=232
G03D McMinnville, O 75.41 34 P 00 58 02.8
baz=230,SNR=42
G03D S 01 07 42.5
baz=230
H04A Detroit Lake 75.67 35 IAMs_20 IAMs_20 01 23 05.6
comp=Z,25µm,22.0s
SBUM Sibu 75.68 277 P **P** **00 58 03.7 -0.4**
SBUM Sibu 75.68 277 P **P** **00 58 04.0 -0.1**
PINE Pine Mountain 75.81 36 IAMs_20 IAMs_20 01 25 09.5
comp=Z,23µm,20.0s
PRN Pahroc Range 75.82 44 IAmb IAmb 00 58 12.5
comp=Z,117nm,1.2s
PRN Pahroc Range 75.82 44 ⇓P **P** **00 58 05.3 +0.7**
PRN ⇓P **P** **00 58 05.5 +0.9**
I05D Terrebonne, OR 75.92 36 P 00 58 05.6
baz=232,SNR=127
I05D S 01 07 47.6
baz=232
R11A Troy Canyon, C 75.97 43 P 00 58 05.9
baz=237,SNR=256
R11A S 01 07 49.2
baz=237
R11A Troy Canyon, C 75.97 43 IAmb IAmb 00 58 16.1
comp=Z,76nm,1.1s
F04D Rainier, OR 76.11 33 P 00 58 06.9
baz=230,SNR=18
F04D S 01 07 52.4
baz=230
E03A Lebam 76.12 33 IAmb IAmb 00 58 10.0
comp=Z,151nm,1.0s
E03A IAMs_20 IAMs_20 01 23 54.5
comp=Z,17µm,21.0s
KSRS Korea Array 76.16 316 P **P** **00 58 07.8 +1.6**
comp=Z,15nm,0.8s,baz=126,slow=6.7,SNR=23
KSRS LR LR 01 25 54.0
comp=Z,5µm,21.9s,baz=110,slow=31
KSAR Wonju Array Be 76.18 315 P **P** **00 58 07.3 +0.9**
KSAR Wonju Array Be 76.18 315 P **P** **00 58 07.3 +0.9**
KS19 Wonju Array Si 76.22 316 P **P** **00 58 06.5 -0.2**
TUC Tucson 76.30 51 P 00 58 08.5
baz=242
TUC S 01 07 53.9
baz=242
TUC Tucson 76.30 51 P **P** **00 58 08.1 +0.7**
TUC pmax pmax
comp=Z,178nm,1.1s
TUC Tucson 76.30 51 P **P** **00 58 08.1 +0.7**
TUC IAmb IAmb 00 58 13.3
comp=Z,178nm,1.1s
TUC Tucson 76.30 51 IAMs_20 IAMs_20 01 23 53.4
comp=Z,25µm,20.0s
TUC Tucson 76.30 51 ⇓P **P** **00 58 08.0 +0.7**
TYV Tymovskoe 76.32 333 *e*P **P** **00 58 05.1 -1.8**
TYV *e*S **S** **01 07 49.8 +0.2**
TYV pmax pmax
comp=Z,79nm,1.1s
TYV pmax pmax
comp=Z,700nm,3.1s
TYV smax smax
comp=E,8.0nm,0.6s
TYV smax smax
comp=E,4µm,4.4s
WVOR Wild Horse Val 76.34 38 ⇓P **P** **00 58 07.8 +0.4**
G05D Wamic, OR 76.50 35 P 00 58 08.7
baz=231,SNR=85
G05D S 01 07 53.9
baz=231
NLWA Neilton Lookou 76.52 32 IAmb IAmb 00 58 15.1
comp=Z,95nm,1.1s
NLWA IAMs_20 IAMs_20 01 23 24.2
comp=Z,16µm,22.0s
NLWA Neilton Lookou 76.52 32 ⇑P **P** **00 58 08.8 +0.6**
E04D Cinebar 76.65 33 P 00 58 09.9
baz=230,SNR=140
E04D S 01 07 57.3
baz=230
CNPM China Poot 76.73 11 IAmb IAmb 00 58 17.3
comp=Z,103nm,1.0s
DIB Dawson Inlet, 76.76 24 IAmb IAmb 00 58 12.4
comp=Z,101nm,1.2s
DIB IAMs_20 IAMs_20 01 23 25.4
comp=Z,23µm,22.0s
H02S1 DAWSON INLET T 76.76 24 P **P** **00 58 08.9 -0.4**
HOM Homer 76.78 11 P 00 58 09.4
baz=201
HOM S 01 07 56.2
baz=201
HOM Homer 76.78 11 IAMs_20 IAMs_20 01 25 49.0
comp=Z,26µm,20.0s
I07A Izee 76.81 37 IAmb IAmb 00 58 17.2
comp=Z,114nm,0.9s
I07A IAMs_20 IAMs_20 01 25 03.0
comp=Z,26µm,20.0s
F05D White Salmon 76.82 34 P 00 58 10.4
baz=231,SNR=81
F05D S 01 07 58.3
baz=231
LCMT Little Creek M 76.85 45 IAmb IAmb 00 58 16.3
comp=Z,89nm,1.1s
MSHR Mys Shultsa 76.92 321 *i* P **P** **00 58 09.9 -0.6**
MSHR pmax pmax
comp=Z,48nm,1.0s
MSHR MLR MLR
comp=Z,2µm,18.0s
D04E Lakebay 76.94 33 P 00 58 11.8
baz=230,SNR=27
D04E S 01 08 02.3
baz=230
J08A Circle Bar Ran 76.98 38 IAmb IAmb 00 58 15.1
comp=Z,136nm,0.9s
J08A IAMs_20 IAMs_20 01 25 40.5
comp=Z,27µm,20.0s
D03D Eldon 77.01 32 P 00 58 11.6
baz=230,SNR=99
D03D S 01 08 02.0
baz=230
BRLK Bradley Lake 77.02 11 P **P** **00 58 10.9 +0.2**
BRLK IAmb IAmb 00 58 16.0
comp=Z,106nm,1.0s
BRLK IAMs_20 IAMs_20 01 24 51.0
comp=Z,32µm,21.0s
BRSE Bradley Lake S 77.03 12 P 00 58 10.8
baz=202
BRSE S 01 07 58.7
baz=202
INCN Inchon 77.05 315 P **P** **00 58 11.5 +0.1**
INCN pmax pmax
comp=Z,93nm,1.0s
INCN Inchon 77.05 315 P **P** **00 58 11.5 +0.1**
INCN IAmb IAmb 00 58 25.0
comp=Z,93nm,1.0s
KNB Kanab 77.14 46 IAmb IAmb 00 58 26.1
comp=Z,141nm,1.2s
SPR3 Spring Creek 3 77.15 43 IAmb IAmb 00 58 19.0
comp=Z,121nm,1.2s
KSM Kuching 77.24 275 IAmb IAmb 00 58 17.1
comp=Z,93nm,1.1s
KSM Kuching 77.24 275 P **P** **00 58 14.0 +1.0**
CISI Cisompet, Garu 77.33 266 IAmb IAmb 00 58 16.2
comp=Z,102nm,0.9s
CISI Cisompet, Garu 77.33 266 ⇑P **P** **00 58 11.2 -2.4**
D05A Enumclaw 77.36 33 IAMs_20 IAMs_20 01 24 44.4
comp=Z,13µm,21.0s
USA0B Ussuriysk Arra 77.37 323 *d* P **P** **00 58 12.6 -0.4**
USA0B Ussuriysk Arra 77.37 323 P **P** **00 58 14.7 +1.7**
USA0B IAMs_20 IAMs_20 01 25 14.0
comp=Z,18µm,22.0s
USRK Ussuriysk Ar. 77.37 323 P **P** **00 58 14.7 +1.7**
comp=Z,16nm,1.0s,baz=116,slow=5.2,SNR=22
USRK LR LR 01 25 47.2
comp=Z,15µm,21.9s,baz=113,slow=31
USRK Ussuriysk Ar. 77.37 323 P **P** **00 58 14.5 +1.5**
WUAZ Wupatki 77.41 48 P 00 58 14.7
baz=241,SNR=91
WUAZ S 01 08 08.7
baz=241
WUAZ Wupatki 77.41 48 IAMs_20 IAMs_20 01 25 10.6
comp=Z,24µm,20.0s
WUAZ Wupatki 77.41 48 ⇓P **P** **00 58 14.5 +0.9**
QZH Quanzhou 77.48 300 ⇑P **P** **00 58 13.7 -0.3**
QZH S **S** **01 08 04.3 +1.1**
QZH pmax pmax
comp=Z,3µm,7.1s
QZH LR LR
comp=Z,3µm,23.2s
QZH LR LR
comp=Z,5µm,32.7s
SVW2 Sparrevohn 77.49 9 IAMs_20 IAMs_20 01 24 47.0
comp=Z,17µm,22.0s
ELK Elko 77.49 41 IAmb IAmb 00 58 21.5
comp=Z,111nm,1.1s
ELK IAMs_20 IAMs_20 01 24 28.5
comp=Z,25µm,22.0s
PGC Sidney 77.55 31 IAmb IAmb 00 58 20.4
comp=Z,78nm,0.9s
Q23K Middleton Isla 77.67 14 P 00 58 14.5
baz=206
F07A Phinny Hill Vi 77.67 35 IAmb IAmb 00 58 18.4
comp=Z,92nm,0.9s
F07A IAMs_20 IAMs_20 01 24 41.6
comp=Z,23µm,21.0s
Q23K Middleton Isla 77.67 14 IAMs_20 IAMs_20 01 25 18.5
comp=Z,21µm,20.0s
BBB Bella Bella 77.80 27 IAMs_20 IAMs_20 01 26 00.9
comp=Z,18µm,20.0s
BBB Bella Bella 77.80 27 ⇓P **P** **00 58 15.2 0.0**
BBB ⇑P **P** **00 58 15.9 +0.7**
G08A Pilot Rock 77.85 36 IAMs_20 IAMs_20 01 24 28.3
comp=Z,24µm,22.0s
CAPN Captain Cook N 77.90 11 P 00 58 16.7
baz=202
CAPN S 01 08 09.9
baz=202
O22K Cooper Landing 77.91 12 P 00 58 15.3
baz=203
O22K S 01 08 06.9
baz=203
O22K Cooper Landing 77.91 12 IAmb IAmb 00 58 28.8
comp=Z,174nm,1.1s
O22K IAMs_20 IAMs_20 01 25 27.9
comp=Z,24µm,21.0s
HPIG 77.95 58 IAmb IAmb 00 58 20.9
comp=Z,149nm,1.1s
SSE Sheshan 77.97 307 P **P** **00 58 17.2 +0.6**
SSE S **S** **01 08 10.8 +2.5**
SSE pmax pmax
comp=Z,18nm,0.7s
SSE pmax pmax
comp=Z,700nm,4.7s
SSE LR LR
comp=Z,1µm,20.6s
SSE LR LR
comp=Z,850nm,22.6s
A04D Lummi Island 77.97 32 P 00 58 16.8
baz=230,SNR=46
A04D S 01 08 09.6
baz=230
B05A Bryant 77.99 32 P 00 58 16.8
baz=230,SNR=83
B05A S 01 08 10.0
baz=230
MTPU Mount Pierson 78.10 45 IAmb IAmb 00 58 27.7
comp=Z,88nm,1.1s
E07A Sunnyside 78.11 35 IAmb IAmb 00 58 21.2
comp=Z,107nm,0.8s
E07A IAMs_20 IAMs_20 01 24 43.3
comp=Z,21µm,22.0s
SPCR Spurr Chakacha 78.12 10 P 00 58 15.8
baz=201,SNR=26
SPCR S 01 08 08.5
baz=201
HAWA Hanford 78.19 35 IAmb IAmb 00 58 24.4
comp=Z,119nm,1.1s
HAWA IAMs_20 IAMs_20 01 24 45.6
comp=Z,25µm,22.0s
HAWA Hanford 78.19 35 ⇓P **P** **00 58 17.6 +0.1**
TCRU Three Creeks R 78.20 44 IAmb IAmb 00 58 24.7
comp=Z,146nm,1.1s
CRAG Craig 78.26 22 P 00 58 18.3
baz=219,SNR=27
CRAG S 01 08 14.6
baz=219
CRAG Craig 78.26 22 IAmb IAmb 00 58 24.6
comp=Z,104nm,1.2s
CRAG IAMs_20 IAMs_20 01 25 43.0
comp=Z,22µm,20.0s
CRAG Craig 78.26 22 ⇓P **P** **00 58 18.1 +0.5**
CRAG ⇑P **P** **00 58 18.7 +1.0**
W18A Petrified Fore 78.39 49 P 00 58 19.9
baz=242,SNR=123
W18A S 01 08 16.8
baz=242
W18A Petrified Fore 78.39 49 IAmb IAmb 00 58 30.7
comp=Z,87nm,1.1s
C06D Leavenworth 78.40 33 P 00 58 18.5
baz=231,SNR=8.6
C06D S 01 08 13.4
baz=231
FIS Fire Island 78.43 11 IAMs_20 IAMs_20 01 25 15.6
comp=Z,21µm,22.0s
B06A Marblemount 78.47 32 IAmb IAmb 00 58 22.9
comp=Z,89nm,1.0s
B06A IAMs_20 IAMs_20 01 28 49.6
comp=Z,15µm,19.0s
RC01 Rabbit Creek A 78.47 11 P 00 58 18.4
baz=203,SNR=26
RC01 S 01 08 13.3
baz=203
RC01 Rabbit Creek A 78.47 11 IAmb IAmb 00 58 30.9
comp=Z,109nm,1.2s
RC01 IAMs_20 IAMs_20 01 26 59.7
comp=Z,18µm,20.0s
E08A Dider Farm, El 78.51 35 IAmb IAmb 00 58 25.3
comp=Z,138nm,1.2s
E08A IAMs_20 IAMs_20 01 25 27.8

comp=Z,21µm,20.0s
PWL Port Wells 78.53 12 IAmb IAmb 00 58 31.0
comp=Z,98nm,1.0s
PWL IAMs_20 IAMs_20 01 26 54.2
comp=Z,24µm,20.0s
BMO Blue Mountains 78.54 37 IAmb IAmb 00 58 23.2
comp=Z,75nm,0.8s
BMO IAMs_20 IAMs_20 01 25 47.9
comp=Z,22µm,20.0s
KAIM Kayak Island 78.56 14 P 00 58 19.4
baz=208
KAIM Kayak Island 78.56 14 IAMs_20 IAMs_20 01 25 45.2
comp=Z,29µm,20.0s
MFID Camas Ranch 78.60 39 IAmb IAmb 00 58 23.7
comp=Z,111nm,0.9s
MFID IAMs_20 IAMs_20 01 26 08.7
comp=Z,19µm,20.0s
SUA Susitna One 78.62 11 P 00 58 18.9
baz=202,SNR=15
SUA S 01 08 15.7
baz=202
SUA Susitna One 78.63 11 IAmb IAmb 00 58 27.7
comp=Z,125nm,1.1s
121A Cookes Peak, D 78.66 52 P 00 58 22.0
baz=244,SNR=272
121A S 01 08 20.0
baz=244
XMIS Christmas Isla 78.71 262 IAMs_20 IAMs_20 01 36 15.7
comp=Z,12µm,18.0s
SIT Sitka 78.74 20 P 00 58 20.5
baz=217,SNR=11
SIT S 01 08 17.7
baz=217
SIT Sitka 78.74 20 IAMs_20 IAMs_20 01 24 35.8
comp=Z,21µm,22.0s
DUG Dugway, Tooele 78.77 43 P 00 58 21.4
baz=239,SNR=231
DUG S 01 08 21.5
baz=239
DUG Dugway, Tooele 78.77 43 IAmb IAmb 00 58 24.9
comp=Z,150nm,1.1s
DUG IAMs_20 IAMs_20 01 25 54.4
comp=Z,30µm,21.0s
EYAK Cordova Ski Ar 78.81 13 P 00 58 20.1
baz=207
EYAK S 01 08 16.7
baz=207
GLI Glacier Island 78.81 13 P 00 58 20.0
baz=206,SNR=22
GLI S 01 08 16.7
baz=206
GLI Glacier Island 78.81 13 IAmb IAmb 00 58 32.4
comp=Z,126nm,1.0s
NKL Nikolayevsk 78.81 334 *e*P **P** **00 58 19.4 -1.4**
NKL *e* 00 58 33.0
NKL *e* 01 01 25.1
NKL *e*S **S** **01 08 14.4 -2.0**
NKL pmax pmax
comp=E,322nm,0.9s
NKL pmax pmax
comp=N,71nm,0.6s
NKL pmax pmax
comp=Z,55nm,1.3s
NKL pmax pmax
comp=Z,235nm,3.8s
NKL smax smax
comp=E,226nm,0.8s
FID Port Fidalgo 78.83 13 IAmb IAmb 00 58 25.3
comp=Z,69nm,1.1s
SUCK Suckling Hills 78.85 15 IAmb IAmb 00 58 27.6
comp=Z,162nm,1.2s
GAMB Gambell 78.87 1 P 00 58 21.4
baz=182,SNR=10
GAMB S 01 08 19.8
baz=182
GAMB Gambell 78.87 1 IAmb IAmb 00 58 34.2
comp=Z,114nm,1.2s
GAMB IAMs_20 IAMs_20 01 29 05.8
comp=Z,13µm,20.0s
RAGM Ragged Mountai 78.91 14 IAmb IAmb 00 58 29.9
comp=Z,78nm,1.0s
D08A Wollman Farm, 78.93 35 IAMs_20 IAMs_20 01 25 07.8
comp=Z,21µm,22.0s
HMT Hamilton 78.96 14 IAmb IAmb 00 58 29.0
comp=Z,111nm,1.2s
SKT Skwentna 78.97 10 P 00 58 20.2
baz=201
SKT S 01 08 16.1
baz=201
MOIG Morelia 79.00 66 IAmb IAmb 00 58 33.1
comp=Z,59nm,0.9s
BGLC Bering Glacier 79.01 15 P 00 58 22.4
baz=209
BGU Big Grassy Mou 79.01 42 IAmb IAmb 00 58 30.2
comp=Z,127nm,1.2s
KNK Knik Glacier 79.01 12 P 00 58 21.5
baz=204
KNK S 01 08 19.7
baz=204
MDJ Mudanjiang 79.01 322 P **P** **00 58 23.2 +1.1**
MDJ S **S** **01 08 24.5 +5.5**
MDJ ScS **ScS** **01 08 44.2 +2.1**
MDJ pmax pmax
comp=Z,38nm,2.3s
MDJ pmax pmax
comp=Z,1µm,3.3s
MDJ LR LR
comp=Z,7µm,21.8s
MDJ LR LR
comp=Z,11µm,21.9s
MDJ LR LR
comp=Z,22µm,22.1s
MDJ Mudanjiang 79.01 322 **PcP** **00 58 31.6 +1.1**
MDJ IAMs_20 IAMs_20 01 26 25.5
comp=Z,18µm,22.0s
E09A Wood Farm, Sta 79.03 35 IAmb IAmb 00 58 26.3
comp=Z,77nm,1.0s
E09A IAMs_20 IAMs_20 01 25 11.6
comp=Z,20µm,22.0s
PMR Palmer 79.05 12 P 00 58 21.5
baz=204,SNR=50
PMR S 01 08 20.6
baz=204
PMR Palmer 79.05 12 IAmb IAmb 00 58 26.6
comp=Z,71nm,1.1s
PMR IAMs_20 IAMs_20 01 27 16.0
comp=Z,16µm,21.0s
GRNR Gornyy 79.12 330⇑ *i*P **P** **00 58 23.0 +0.4**
GRNR *e*S **S** **01 08 26.1 +6.2**
GRNR pmax pmax
comp=Z,40nm,1.1s
GRNR smax smax
comp=E,4.0nm,1.0s
Q16A Castle Valley 79.22 45 IAmb IAmb 00 58 35.5
comp=Z,111nm,1.1s
F10A Beach Ranch, E 79.23 36 IAmb IAmb 00 58 32.9
comp=Z,82nm,0.9s
F10A IAMs_20 IAMs_20 01 25 34.9
comp=Z,23µm,22.0s
GHO Glory Hole Cre 79.25 12 IAmb IAmb 00 58 39.0
comp=Z,152nm,1.1s
GHO IAMs_20 IAMs_20 01 26 31.4
comp=Z,15µm,21.0s
WRAK Wrangell Islan 79.27 22 P 00 58 23.5
baz=220,SNR=67
WRAK S 01 08 25.0
baz=220
WRAK Wrangell Islan 79.27 22 IAmb IAmb 00 58 30.4
comp=Z,65nm,1.1s
WRAK Wrangell Islan 79.27 22 IAMs_20 IAMs_20 01 26 23.5
comp=Z,18µm,20.0s
EPT El Paso 79.30 53 IAMs_20 IAMs_20 01 25 46.9
comp=Z,17µm,20.0s
SML Sawmill 79.40 12 P 00 58 23.3
baz=204,SNR=31
SML S 01 08 24.0
baz=204
BMRM Bremner River 79.44 14 P 00 58 23.9
baz=208,SNR=103
BMRM S 01 08 23.1
baz=208
MPU Maple Canyon 79.46 43 IAmb IAmb 00 58 33.2
comp=Z,161nm,1.2s
B08A Colville Reser 79.49 33 IAmb IAmb 00 58 30.6
comp=Z,100nm,1.1s
HLID Hailey 79.54 39 P 00 58 26.1
baz=237,SNR=614
HLID S 01 08 27.2
baz=237
HLID Hailey 79.54 39 IAMs_20 IAMs_20 01 26 27.6
comp=Z,18µm,21.0s
SPUT South Promonto 79.58 42 IAmb IAmb 00 58 31.9
comp=Z,139nm,1.2s
CUT Chulitna 79.58 11 P 00 58 24.2
baz=202,SNR=60
CUT S 01 08 23.9
baz=202
CRQM Cirque 79.60 15 IAmb IAmb 00 58 32.5
comp=Z,186nm,1.1s
CRQE Cirque 79.61 15 P 00 58 25.0
baz=210
CRQE S 01 08 25.8
baz=210
KLU Klutina 79.61 13 P 00 58 24.7
baz=207,SNR=35
KLU S 01 08 25.5
baz=207
HVU Hansel Valley 79.62 41 IAmb IAmb 00 58 32.5
comp=Z,94nm,0.8s
SCM Sheep Creek Mo 79.62 12 IAmb IAmb 00 58 37.3
comp=Z,151nm,1.1s
SCM IAMs_20 IAMs_20 01 25 56.2
comp=Z,23µm,22.0s
TGL Tana Glacier 79.68 15 IAmb IAmb 00 58 38.4
comp=Z,197nm,1.2s
PPLA Purkeypile 79.72 10 P 00 58 23.5
baz=201,SNR=11
PPLA S 01 08 23.1
baz=201
PPLA Purkeypile 79.72 10 IAMs_20 IAMs_20 01 27 33.8
comp=Z,22µm,20.0s
C09A Chrisman Ranch 79.72 34 IAMs_20 IAMs_20 01 25 30.9
comp=Z,17µm,22.0s
CTU Camp Tracy 79.72 43 IAmb IAmb 00 58 30.9
comp=Z,139nm,1.0s
SRU San Rafael Swe 79.75 45 IAmb IAmb 00 58 31.2
comp=Z,139nm,1.1s
PINM Pinnacle 79.77 16 P 00 58 25.8
baz=212,SNR=16
PINM S 01 08 28.1
baz=212
P17A Butcher Ranch, 79.79 44 IAmb IAmb 00 58 34.6
comp=Z,189nm,1.2s
BCPM Bancas Point 79.82 16 IAmb IAmb 00 58 31.4
comp=Z,110nm,1.2s
TABL Table Mountain 79.83 16 IAmb IAmb 00 58 32.2
comp=Z,209nm,1.2s
JLU Jordanelle 79.88 43 IAmb IAmb 00 58 34.5
comp=Z,102nm,1.0s
ANM Nome 79.89 3 P 00 58 27.1
baz=188,SNR=14
ANM S 01 08 31.5
baz=188
ANM Nome 79.89 3 IAMs_20 IAMs_20 01 29 37.5
comp=Z,14µm,20.0s
VRDI Verde Repeater 79.94 14 IAMs_20 IAMs_20 01 26 51.5
comp=Z,25µm,20.0s
Y22D IRIS PASSCAL I 79.99 51 IAMs_20 IAMs_20 01 26 13.0
comp=Z,22µm,21.0s
Y22D IRIS PASSCAL I 79.99 51 P 00 58 29.2
baz=244,SNR=12
N25K Chitina, Valde 80.01 13 P 00 58 27.1
baz=208,SNR=73
N25K S 01 08 29.1
baz=208
N25K Chitina, Valde 80.01 13 IAmb IAmb 00 58 30.9
comp=Z,131nm,1.0s
JIS Juneau Island 80.02 20 IAMs_20 IAMs_20 01 26 58.6
comp=Z,27µm,20.0s
GLB Gilahina Butte 80.04 14 IAmb IAmb 00 58 33.8
comp=Z,70nm,1.0s
GLB IAMs_20 IAMs_20 01 25 52.2
comp=Z,25µm,22.0s
BESE Bessie Mountai 80.11 19 IAmb IAmb 00 58 40.4
comp=Z,108nm,1.1s
BESE IAMs_20 IAMs_20 01 26 09.9
comp=Z,27µm,20.0s
M24K Tolsona, Glenn 80.11 13 P 00 58 28.1
baz=206,SNR=47
M24K S 01 08 33.0
baz=206
M24K Tolsona, Glenn 80.11 13 IAMs_20 IAMs_20 01 27 22.1
comp=Z,20µm,20.0s
MA2 Magadan 80.12 342 *ce*P **P** **00 58 27.3 -0.5**
MA2 pmax pmax
comp=Z,249nm,2.5s
MA2 MLR MLR
comp=Z,3µm,18.0s
MA2 Magadan 80.12 342 P **P** **00 58 27.2 -0.6**
MA2 Magadan 80.12 342⇓ P **P** **00 58 27.3 -0.5**
MA2 ⇓P **P** **00 58 27.3 -0.5**
MNTX Cornudas Mount 80.14 53 IAMs_20 IAMs_20 01 27 41.1
comp=Z,16µm,20.0s
MNTX Cornudas Mount 80.14 53 P 00 58 29.3
baz=245,SNR=532
MNTX S 01 08 35.1
baz=245
MCARA McCarthy VSAT 80.17 14 P 00 58 27.8
baz=210
MCARA S 01 08 31.1
baz=210
MCARA McCarthy VSAT 80.18 14 IAmb IAmb 00 58 36.5
comp=Z,103nm,1.0s
MCARA IAMs_20 IAMs_20 01 25 32.8
comp=Z,26µm,22.0s
NJ2 Nanjing 80.18 307 *e*P **P** **00 58 29.6 +0.9**
NJ2 pP **PcP** **00 58 33.5 -2.4**
NJ2 sP **pP** **00 58 38.2 +0.3**
NJ2 S **S** **01 08 34.2 +2.4**
NJ2 sS **pS** **01 08 41.7 -1.4**
NJ2 pmax pmax
comp=Z,41nm,0.9s
NJ2 pmax pmax
comp=Z,7µm,5.2s
NJ2 LR LR
comp=Z,4µm,23.7s
NJ2 LR LR
comp=Z,5µm,24.6s
NJ2 LR LR
comp=Z,11µm,23.7s
LOGN Logan Glacier 80.19 15 IAmb IAmb 00 58 34.6
comp=Z,169nm,1.2s
WAT6 Susitna Watana 80.22 12 P 00 58 28.3
baz=205,SNR=87
WAT6 S 01 08 31.7
baz=205
CTG Chitna Glacier 80.23 15 P 00 58 28.4
baz=211
CTG S 01 08 32.8
baz=211
CTGM Chitina Glacie 80.23 15 IAmb IAmb 00 58 39.0
comp=Z,82nm,1.0s
PV05 Paradox Valley 80.24 46 IAmb IAmb 00 58 42.9
comp=Z,187nm,1.2s
MVCO Mesa Verde 80.25 47 IAMs_20 IAMs_20 01 27 50.9
comp=Z,28µm,20.0s
MVCO Mesa Verde 80.25 47 P 00 58 30.0
baz=242,SNR=63
MVCO S 01 08 36.5
baz=242
HWUT Hardware Ranch 80.31 42 IAmb IAmb 00 58 38.1
comp=Z,103nm,1.1s
WAT2 Susitna Watana 80.41 11 P 00 58 28.9
baz=204
WAT2 S 01 08 33.1
baz=204
PV19 Morning Glory 80.43 46 IAmb IAmb 00 58 36.4
comp=Z,108nm,1.0s
PV14 Lion Creek, Pa 80.43 46 IAmb IAmb 00 58 34.3
comp=Z,179nm,1.2s
PV17 East Wray Mesa 80.43 46 IAmb IAmb 00 58 37.2
comp=Z,93nm,0.9s
PV13 Radium Mtn., P 80.47 46 IAmb IAmb 00 58 46.3
comp=Z,175nm,1.2s
PV03 Paradox Valley 80.50 46 IAmb IAmb 00 58 35.3
comp=Z,124nm,1.1s
KLR Kul'dur 80.50 327 *ce*P **P** **00 58 30.4 +0.3**
KLR pmax pmax
comp=Z,43nm,1.2s
KLR MLR MLR
comp=Z,4µm,19.0s
PV04 Paradox Valley 80.52 46 IAmb IAmb 00 58 45.1
comp=Z,192nm,1.1s
TXAR Lajitas Array 80.53 56 P **P** **00 58 32.3 +1.5**
comp=Z,248nm,1.1s,baz=218,slow=3.8,SNR=417
TXAR S **S** **01 08 41.0 +5.1**
comp=Z,0.1nm,0.6s,baz=216,slow=4.5,SNR=1.3
TXAR PKPPKP 01 25 18.0
comp=Z,0.2nm,0.9s,baz=132,slow=3.8,SNR=2.0
TXAR Lajitas Array 80.53 56 P **P** **00 58 30.1 -0.8**
KTH Kantishna Hill 80.54 10 IAMs_20 IAMs_20 01 26 36.5
comp=Z,32µm,22.0s
TRF Thorofare Moun 80.55 10 P 00 58 29.6
baz=202,SNR=75
TRF S 01 08 33.9
baz=202
TRF Thorofare Moun 80.55 10 IAmb IAmb 00 58 45.7
comp=Z,191nm,1.2s
PV02 Paradox Valley 80.55 46 IAmb IAmb 00 58 36.6
comp=Z,169nm,1.1s
NEW Newport 80.62 34 P 00 58 30.4
baz=234,SNR=88
NEW S 01 08 35.4
baz=234
NEW Newport 80.62 34 IAmb IAmb 00 58 33.5
comp=Z,76nm,1.1s
NEW Newport 80.62 34 IAMs_20 IAMs_20 01 25 46.9
comp=Z,17µm,22.0s
CHUM Lake Minchumin 80.62 9 S 01 08 35.4
baz=200
PV01 Paradox Valley 80.63 46 IAmb IAmb 00 58 35.6
comp=Z,187nm,1.2s
SKAG Skagway 80.66 19 IAmb IAmb 00 58 39.0
comp=Z,177nm,1.2s
SKAG Skagway 80.66 19 P 00 58 31.4
baz=217,SNR=19
SKAG S 01 08 38.8
baz=217
UNM Universidad Na 80.66 67 IAMs_20 IAMs_20 01 25 48.2
comp=Z,24µm,21.0s
UNM Universidad Na 80.66 67⇓P **P** **00 58 33.2 +1.3**
ANMO Albuquerque 80.71 50*ce*P **P** **00 58 32.4 +0.6**
ANMO pmax pmax
comp=Z,1µm,2.5s
ANMO MLR MLR
comp=Z,6µm,15.0s
ANMO Albuquerque 80.71 50 P **P** **00 58 32.5 +0.7**
ANMO IAmb IAmb 00 58 39.1
comp=Z,112nm,1.1s
ANMO Albuquerque 80.71 50 IAMs_20 IAMs_20 01 26 36.1
comp=Z,23µm,21.0s
ANMO Albuquerque 80.71 50⇓P **P** **00 58 32.4 +0.7**
ANMO ⇓P **P** **00 58 32.5 +0.7**
ANMO Albuquerque 80.71 50 P 00 58 32.9
baz=244
ANMO S 01 08 40.4
baz=244
PV07 Paradox Valley 80.72 46 IAmb IAmb 00 58 44.8
comp=Z,96nm,1.0s
TNA Tin City 80.76 2 P 00 58 31.6
baz=185,SNR=16
TNA S 01 08 42.1
baz=185
TNA Tin City 80.76 2 IAmb IAmb 00 58 43.7
comp=Z,127nm,1.2s
RND Reindeer 80.77 11 IAmb IAmb 00 58 47.4
comp=Z,73nm,1.0s
PV15 Paradox Valley 80.79 46 IAmb IAmb 00 58 36.0
comp=Z,90nm,0.9s
PAX Paxson 81.03 12 P 00 58 31.8
baz=207,SNR=23
PAX S 01 08 39.3
baz=207
PAX Paxson 81.03 12 IAMs_20 IAMs_20 01 26 39.4
comp=Z,30µm,22.0s
BPAW Bear Paw Mtn. 81.04 10 P 00 58 31.3
baz=202,SNR=52
BPAW S 01 08 37.2
baz=202
BPAW Bear Paw Mtn. 81.04 10 IAMs_20 IAMs_20 01 27 01.7
comp=Z,17µm,22.0s
MCK McKinley 81.05 11 P 00 58 32.3
baz=204,SNR=149
MCK S 01 08 39.1
baz=204
CN2 Changchun 81.08 320 *e*P **P** **00 58 34.0 +0.7**
CN2 *es*P pP 00 58 43.0 +0.5
CN2 *e*S **S** **01 08 41.7 +0.9**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,900nm,4.0s
CN2 LR LR
comp=Z,3µm,22.0s
CN2 LR LR
comp=Z,7µm,22.0s
CN2 LR LR
comp=Z,7µm,23.0s
HYT Haines Junctio 81.13 17 IAmb IAmb 00 58 41.9
comp=Z,116nm,1.2s
DL2 Dalian 81.18 314⇑ *i*P **P** **00 58 35.0 +1.1**
DL2 S **S** **01 08 46.8 +4.8**
DL2 SS **SS** **01 13 58.2 +0.1**
DL2 pmax pmax
comp=Z,63nm,1.4s
DL2 pmax pmax
comp=Z,5µm,7.7s
DL2 LR LR
comp=Z,2µm,21.4s
DL2 LR LR
comp=Z,4µm,22.8s
DL2 LR LR
comp=Z,6µm,27.1s
AHID Auburn Hatcher 81.19 41 IAmb IAmb 00 58 42.3
comp=Z,176nm,1.1s
AHID IAMs_20 IAMs_20 01 26 35.3
comp=Z,17µm,22.0s
GZH Guangzhou 81.23 297 P **P** **00 58 34.6 +0.1**
GZH S **S** **01 08 45.1 +2.0**
GZH pmax pmax
comp=Z,2µm,6.3s
GZH LR LR
comp=Z,3µm,19.2s
GZH LR LR
comp=Z,3µm,25.5s
GZH LR LR
comp=Z,6µm,26.0s
SNY Shenyang 81.27 318⇑P **P** **00 58 37.1 +2.8**
SNY S **SKSac** **01 08 51.5 +0.1**
SNY pmax pmax
comp=Z,57nm,2.2s
SNY pmax pmax
comp=Z,850nm,3.8s
SNY LR LR
comp=Z,3µm,21.2s
SNY LR LR
comp=Z,3µm,24.4s
SNY LR LR
comp=Z,7µm,24.6s
PMBI Palembang 81.42 269⇑P **P** **00 58 35.9 +0.1**
MSO Missoula 81.59 37 P 00 58 35.7
baz=237,SNR=304
MSO S 01 08 46.0
baz=237
MSO Missoula 81.59 37 IAmb IAmb 00 58 43.3
comp=Z,171nm,1.1s
MSO IAMs_20 IAMs_20 01 27 11.7
comp=Z,27µm,21.0s
DLMT Dillon 81.60 38 P **P** **00 58 36.3 +0.1**
DLMT IAmb IAmb 00 58 43.1
comp=Z,202nm,1.1s
DLMT IAMs_20 IAMs_20 01 28 48.1
comp=Z,27µm,20.0s
DLBC Dease Lake 81.62 21 IAMs_20 IAMs_20 01 26 26.9
comp=Z,19µm,21.0s
REDW Red Top Meadow 81.65 41 IAmb IAmb 00 58 41.7
comp=Z,118nm,1.1s
REDW IAMs_20 IAMs_20 01 29 02.4
comp=Z,12µm,20.0s
S22A 4UR Ranch, Cre 81.68 47 P 00 58 38.2
baz=243,SNR=224
S22A S 01 08 52.2
baz=243
SNOW Snow King Moun 81.76 41 IAmb IAmb 00 58 46.3
comp=Z,136nm,1.1s
SNOW IAMs_20 IAMs_20 01 29 15.3
comp=Z,15µm,20.0s
O20A White River Ci 81.79 45 IAmb IAmb 00 58 52.1
comp=Z,85nm,1.1s
O20A White River Ci 81.79 45 P 00 58 38.1
baz=242,SNR=94
O20A S 01 08 50.3
baz=242

NEA2 Nenana 81.82 10 P 00 58 35.8
baz=204,SNR=34
NEA2 S 01 08 46.1
baz=204
NEA2 Nenana 81.82 10 IAmb IAmb 00 58 41.1
comp=Z,76nm,0.9s
WRH Wood River Hil 81.88 11 IAmb IAmb 00 58 49.7
comp=Z,158nm,1.1s
JTMT Jette 81.90 36 IAmb IAmb 00 58 43.3
comp=Z,102nm,1.2s
JTMT IAMs_20 IAMs_20 01 27 04.6
comp=Z,17µm,22.0s
L27K Beaver Creek, 81.91 14 IAMs_20 IAMs_20 01 27 36.7
comp=Z,27µm,21.0s
BCAR Beaver Creek A 81.93 14 P **P** **00 58 36.5 -0.9**
LOHW Long Hollow 81.93 41 IAmb IAmb 00 58 43.7
comp=Z,107nm,1.1s
LOHW IAMs_20 IAMs_20 01 29 29.9
comp=Z,13µm,20.0s
DOT Dot Lake 81.93 13 IAmb IAmb 00 58 41.1
comp=Z,131nm,1.0s
MLY Manley 81.94 9 P 00 58 36.4
baz=202,SNR=86
MLY S 01 08 47.9
baz=202
MLY Manley 81.94 9 IAmb IAmb 00 58 41.5
comp=Z,142nm,1.1s
MLY IAMs_20 IAMs_20 01 29 48.7
comp=Z,11µm,20.0s
HDA Harding Lake 82.03 11 P 00 58 37.4
baz=206,SNR=78
HDA P 00 58 37.4
baz=206,SNR=78
HDA S 01 08 49.4
baz=206
HDA S 01 08 49.4
baz=206
HDA Harding Lake 82.03 11 IAMs_20 IAMs_20 01 27 27.9
comp=Z,16µm,22.0s
FLWY Flagg Ranch 82.10 40 IAMs_20 IAMs_20 01 27 06.5
comp=Z,14µm,22.0s
BW06 Boulder Array 82.18 42 IAmb IAmb 00 58 46.6
comp=Z,90nm,0.9s
BW06 Boulder Array 82.18 42 P 00 58 39.4
baz=241,SNR=61
BW06 S 01 08 54.2
baz=241
PD31 Pinedale Array 82.18 42 IAmb IAmb 00 58 46.6
comp=Z,90nm,1.0s
PDAR Pinedale Array 82.18 42 P **P** **00 58 39.2 -0.2**
comp=Z,98nm,0.9s,baz=209,slow=3.1,SNR=286
PDAR S **S** **01 08 52.6 -0.1**
comp=Z,0.2nm,0.6s,baz=334,slow=6.0,SNR=1.7
PDAR PKKPbc PKKPbc 01 17 21.3 +12
comp=Z,0.9nm,0.9s,baz=72,slow=5.8,SNR=5.1
PDAR PKPPKP 01 25 16.1
comp=Z,0.2nm,0.4s,baz=111,slow=3.3,SNR=4.2
PDAR LR LR 01 29 33.1
comp=Z,25µm,19.5s,baz=232,slow=32
PDAR Pinedale Array 82.18 42 P **P** **00 58 39.1 -0.4**
SCRK Sand Creek 82.23 13 P 00 58 38.9
baz=208,SNR=141
SCRK S 01 08 53.8
baz=208
SCRK Sand Creek 82.24 13 IAmb IAmb 00 58 43.0
comp=Z,78nm,0.9s
I23K Minto, Yukon-K 82.28 10 P 00 58 38.6
baz=203,SNR=123
I23K S 01 08 52.2
baz=203
I23K Minto, Yukon-K 82.28 10 IAmb IAmb 00 58 46.8
comp=Z,123nm,1.1s
TCOL CIGO, UAF Yank 82.28 11 P 00 58 38.6
baz=205,SNR=44
TCOL S 01 08 52.2
baz=205
COLA College 82.29 11 P 00 58 38.9
baz=205
COLA College 82.29 11 *d i* P **P** **00 58 38.3 -0.9**
COLA pmax pmax
comp=Z,198nm,0.9s
COLA MLR MLR
comp=Z,4µm,17.0s
COLA College 82.29 11 P **P** **00 58 38.6 -0.6**
COLA College 82.29 11 ⇓P **P** **00 58 38.5 -0.7**
COLA ⇓P **P** **00 58 38.6 -0.6**
MDM Murphy Dome 82.30 10 IAmb IAmb 00 58 53.9
comp=Z,108nm,1.0s
BOZ Bozeman (W) 82.30 39 P 00 58 40.6
baz=239,SNR=458
BOZ S 01 08 55.2
baz=239
BOZ Bozeman (W) 82.30 39 IAmb IAmb 00 58 56.4
comp=Z,83nm,1.1s
BOZ IAMs_20 IAMs_20 01 28 39.7
comp=Z,26µm,20.0s
H17A Grant Village 82.34 40 P 00 58 41.7
baz=240,SNR=201
H17A S 01 08 59.1
baz=240
H17A Grant Village 82.34 40 IAmb IAmb 00 58 49.0
comp=Z,96nm,1.1s
H17A IAMs_20 IAMs_20 01 27 26.3
comp=Z,14µm,21.0s
YHH Holmes Hill 82.36 40 IAmb IAmb 00 58 45.9
comp=Z,104nm,1.1s
IL31 82.37 11 IAmb IAmb 00 58 45.9
comp=Z,77nm,1.1s
ILAR Eielson Array 82.37 11 P **P** **00 58 38.8 -0.8**
comp=Z,30nm,0.7s,baz=216,slow=5.2,SNR=94
ILAR PKPPKP 01 25 12.8
comp=Z,0.8nm,1.1s,baz=272,slow=3.3,SNR=5.0
ILAR LR LR 01 28 24.7
comp=Z,13µm,21.9s,baz=214,slow=31
ILAR Eielson Array 82.37 11 P **P** **00 58 38.9 -0.7**
SEY Seymchan 82.47 345 *d i* P **P** **00 58 39.9 -0.3**
LKWY Lake 82.53 40 IAMs_20 IAMs_20 01 30 29.8
comp=Z,18µm,19.0s
YUF Upper Falls 82.54 40 IAmb IAmb 00 58 46.4
comp=Z,84nm,1.0s
POKR Poker Plat Res 82.58 11 P 00 58 40.5
baz=205,SNR=76
POKR S 01 08 55.3
baz=205
SDCO Great Sand Dun 82.62 48 S 01 09 02.3
baz=244
K27K Chicken 82.69 13 P 00 58 41.7
baz=210,SNR=116
K27K S 01 08 59.9
baz=210
K27K Chicken 82.69 13 IAMs_20 IAMs_20 01 28 33.4
comp=Z,27µm,21.0s
YMP Mirror Lake Pl 82.77 40 P **P** **00 58 43.4 +0.8**
MNAI Manna 82.80 267 ⇑P **P** **00 58 41.9 -1.2**
MNAI ⇑P **PcP** **00 58 46.3 -1.6**
WALA Waterton Lakes 82.83 35 IAmb IAmb 00 58 46.2
comp=Z,112nm,1.1s
WALA IAMs_20 IAMs_20 01 27 50.0
comp=Z,18µm,21.0s
QIZ Qiongzhong 82.94 292 P **P** **00 58 43.6 0.0**
QIZ PP **PP** **01 01 54.2 -0.4**
QIZ S **S** **01 09 03.5 +2.6**
QIZ SS **SS** **01 14 28.5 +3.5**
QIZ pmax pmax
comp=Z,1µm,7.2s
QIZ LR LR
comp=Z,460nm,34.3s
QIZ LR LR
comp=Z,3µm,24.3s
QIZ LR LR
comp=Z,4µm,27.1s
MSTX Muleshoe 83.07 52 P 00 58 44.6
baz=246,SNR=350
MSTX S 01 09 04.6
baz=246
WHN Wuhan 83.11 304 ⇑P **P** **00 58 46.3 +2.1**
WHN S **S** **01 09 03.0 +0.8**
WHN pmax pmax
comp=Z,770nm,2.7s
WHN LR LR
comp=Z,12µm,26.4s
WHN LR LR
comp=Z,5µm,18.7s
WHN LR LR
comp=Z,10µm,23.2s
T25A Trinidad 83.15 49 IAmb IAmb 00 58 52.7
comp=Z,79nm,1.1s
T25A IAMs_20 IAMs_20 01 28 16.6
comp=Z,17µm,21.0s
T25A Trinidad 83.15 49 P 00 58 45.0
baz=245,SNR=202
T25A S 01 09 07.3
baz=245
RWWY Rawlins 83.20 44 IAmb IAmb 00 58 56.5
comp=Z,120nm,1.1s
TIA Tai'an 83.22 310 P **P** **00 58 45.6 +0.9**
TIA S **SKSac** **01 09 06.4 +1.6**
TIA pmax pmax
comp=Z,29nm,1.5s
TIA pmax pmax
comp=Z,4µm,8.0s
TIA LR LR
comp=Z,2µm,19.6s
TIA LR LR
comp=Z,4µm,23.0s
TIA LR LR
comp=Z,6µm,23.5s
PRP Porcupine Dome 83.30 11 P 00 58 44.5
baz=207
PRP S 01 09 04.5
baz=207
PRP Porcupine Dome 83.30 11 IAMs_20 IAMs_20 01 33 51.4
comp=Z,12µm,19.0s
DAWY Dawson 83.34 14 IAmb IAmb 00 58 48.8
comp=Z,111nm,0.9s
Q24A Divide 83.40 47 P 00 58 46.5
baz=244,SNR=445
Q24A S 01 09 08.6
baz=244
ISCO Idaho Springs 83.44 46 P 00 58 46.7
baz=244,SNR=267
ISCO S 01 09 08.4
baz=244
ISCO Idaho Springs 83.44 46 IAmb IAmb 00 58 54.9
comp=Z,94nm,1.1s
ISCO IAMs_20 IAMs_20 01 29 59.2
comp=Z,24µm,20.0s
RDOG Red Dog Mine 83.50 4 P 00 58 46.1
baz=190
RDOG S 01 09 10.0
baz=190
RDOG Red Dog Mine 83.50 4 IAmb IAmb 00 59 00.7
comp=Z,74nm,1.1s
RDOG IAMs_20 IAMs_20 01 28 42.9
comp=Z,12µm,21.0s
RLMT Red Lodge 83.51 40 P 00 58 47.0
baz=241,SNR=310
RLMT S 01 09 08.8
baz=241
RLMT Red Lodge 83.51 40 IAMs_20 IAMs_20 01 30 59.6
comp=Z,11µm,20.0s
MYKOM Kota Tinggi 83.54 274 P **P** **00 58 47.0 +0.1**
EGAK Eagle 83.54 13 P 00 58 45.8
baz=211,SNR=85
EGAK S 01 09 09.0
baz=211
EGAK Eagle 83.55 13 IAmb IAmb 00 58 49.9
comp=Z,86nm,1.1s
833A Chaparral WMA, 83.61 58 P 00 58 47.2
baz=249,SNR=22
833A S 01 09 08.4
baz=249
N23A Red Feather La 83.70 45 P 00 58 48.1
baz=244,SNR=181
N23A S 01 09 11.2
baz=244
CMIG Matias Romero 83.80 70 S **SKKSac** **01 09 16.6 +2.4**
baz=106,slow=16
BELA Belgrano 2 84.05 172 IAmb IAmb 00 59 02.5
comp=Z,45nm,1.0s
JCT Junction City 84.06 56 P 00 58 49.1
baz=248,SNR=39
JCT S 01 09 14.0
baz=248
JCT Junction City 84.06 56 IAMs_20 IAMs_20 01 29 38.4
comp=Z,19µm,20.0s
JCT Junction City 84.06 56 ⇓P **P** **00 58 49.0 -0.3**
COLD Coldfoot 84.07 9 P 00 58 49.0
baz=202,SNR=145
COLD S 01 09 14.3
baz=202
COLD Coldfoot 84.07 9 IAmb IAmb 00 59 01.7
comp=Z,122nm,1.2s
COLD IAMs_20 IAMs_20 01 31 07.9
comp=Z,12µm,20.0s
K22A Casper 84.10 43 IAmb IAmb 00 59 04.6
comp=Z,48nm,0.9s
K22A IAMs_20 IAMs_20 01 29 20.0
comp=Z,21µm,21.0s
K22A Casper 84.10 43 P 00 58 49.3
baz=243,SNR=148
K22A S 01 09 13.6
baz=243
PHWY Pilot Hill 84.21 45 IAMs_20 IAMs_20 01 28 40.3
comp=Z,23µm,21.0s
AMTX Amarillo 84.26 52 P 00 58 50.4
baz=247
AMTX S 01 09 15.8
baz=247
AMTX Amarillo 84.26 52 IAMs_20 IAMs_20 01 28 58.1
comp=Z,20µm,20.0s
FYU Fort Yukon 84.29 11 IAmb IAmb 00 59 04.5
comp=Z,44nm,1.0s
FYU IAMs_20 IAMs_20 01 28 49.6
comp=Z,24µm,22.0s
BILL Bilibino 84.45 352 *ce* P **P** **00 58 49.9 -0.4**
BILL pmax pmax
comp=Z,347nm,2.5s
BILL MLR MLR
comp=Z,2µm,17.0s
BILL Bilibino 84.45 352 P **P** **00 58 49.9 -0.4**
BILL IAmb IAmb 00 59 02.1
comp=Z,97nm,1.1s
BILL IAMs_20 IAMs_20 01 32 06.0
comp=Z,18µm,20.0s
KVTX Kingsville 84.58 60 P **P** **00 58 52.6 +0.8**
KVTX IAmb IAmb 00 59 10.1
comp=Z,30nm,0.6s
KVTX Kingsville 84.58 60 ⇓P **P** **00 58 53.6 +1.8**
EGMT Eagleton 84.64 37 IAMs_20 IAMs_20 01 30 22.4
comp=Z,24µm,20.0s
EGMT Eagleton 84.64 37 P 00 58 51.9
baz=240,SNR=162
EGMT S 01 09 18.7
baz=240
GO09 Cerro Castillo 84.90 142 P **P** **00 58 54.4 +1.3**
GO09 IAmb IAmb 00 59 05.2
comp=Z,43nm,1.1s
ABTX Abilene, Hawle 84.97 54 P 00 58 54.0
baz=248,SNR=275
ABTX S 01 09 23.5
baz=248
GO10 Punta Arenas 85.06 144 P **P** **00 58 54.9 +1.0**
GO10 IAmb IAmb 00 58 59.9
comp=Z,116nm,1.1s
735A Kenedy 85.11 58 P **P** **00 58 55.6 +1.2**
735A IAmb IAmb 00 59 12.2
comp=Z,74nm,0.9s
H03S2 Juan Fernandez 85.19 124 T T 02 33 38.1
baz=251,slow=74,SNR=64
H03S1 Juan Fernandez 85.20 124 T T 02 33 35.0
baz=251,slow=74,SNR=43
H03S3 Juan Fernandez 85.20 124 T T 02 33 37.4
baz=251,slow=74,SNR=46
KSCO Kaye Shedlock' 85.21 48 P 00 58 55.0
baz=246,SNR=47
KSCO S 01 09 25.8
baz=246
H03N2 Juan Fernandez 85.28 123 T T 02 33 29.0
baz=255
H03N3 Juan Fernandez 85.29 123 T T 02 33 38.6
baz=255
H03N1 Juan Fernandez 85.30 123 T T 02 33 30.5
baz=255
ZEA Zeya 85.40 329 *e* P **P** **00 58 55.4 +0.1**
ZEA *e* S **SKSac** **01 09 17.9 -0.1**
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=N,20nm,1.3s
ZEA pmax pmax
comp=Z,30nm,1.2s
ZEA pmax pmax
comp=E,700nm,7.7s
ZEA pmax pmax
comp=N,800nm,6.2s
ZEA pmax pmax
comp=Z,2µm,7.3s
ZEA smax smax
comp=N,1µm,11.8s
ZEA smax smax
comp=E,3µm,12.2s
BJT Baijiatuau 85.47 313 P **P** **00 58 56.9 +0.9**
BJT pmax pmax
comp=Z,74nm,1.2s
BJT Baijiatuau 85.47 313 P **P** **00 58 56.9 +0.9**
BJT IAmb IAmb 00 59 06.9
comp=Z,74nm,1.2s
BJI Beijing 85.47 313 P **P** **00 58 56.3 +0.3**
BJI S **S** **01 09 31.1 +5.7**
BJI pmax pmax
comp=Z,25nm,2.2s
BJI pmax pmax
comp=Z,1µm,3.7s
BJI LR LR
comp=Z,2µm,20.6s
BJI LR LR
comp=Z,2µm,22.8s
BJI LR LR
comp=Z,5µm,25.5s
TOLK Toolik Lake Re 85.47 9 P 00 58 55.9
baz=203,SNR=100
TOLK S 01 09 28.0
baz=203
TOLK Toolik Lake Re 85.47 9 IAmb IAmb 00 59 00.5
comp=Z,83nm,1.0s
TOLK IAMs_20 IAMs_20 01 34 08.0
comp=Z,13µm,20.0s
435B Jarrell 85.95 57 P 00 58 59.2
baz=250,SNR=31
435B S 01 09 32.4
baz=250
435B Jarrell 85.95 57 IAmb IAmb 00 59 18.9
comp=Z,53nm,1.1s
435B IAMs_20 IAMs_20 01 30 06.5
comp=Z,17µm,20.0s
CCIG Comitan 86.07 72 IAmb IAmb 00 59 05.4
comp=Z,105nm,1.1s
LAO LASA Array 86.12 39 IAMs_20 IAMs_20 01 29 56.7
comp=Z,11µm,22.0s
LAO LASA Array 86.12 39 P 00 59 00.1
baz=243,SNR=59
LAO S 01 09 34.9
baz=243
RSSD Black Hills 86.37 42 P 00 59 00.2
baz=245
RSSD S 01 09 36.8
baz=245
RSSD Black Hills 86.37 42 P **P** **00 58 59.9 -0.8**
RSSD pmax pmax
comp=Z,58nm,1.1s
RSSD Black Hills 86.37 42 P **P** **00 58 59.9 -0.8**
RSSD IAmb IAmb 00 59 11.2
comp=Z,58nm,1.1s
RSSD Black Hills 86.37 42 IAMs_20 IAMs_20 01 31 34.2
comp=Z,13µm,20.0s
OGNE Ogallala 86.40 46 IAMs_20 IAMs_20 01 29 56.6
comp=Z,19µm,21.0s
OGNE Ogallala 86.40 46 P 00 59 00.3
baz=246,SNR=9.2
OGNE S 01 09 39.1
baz=246
WMOK Wichita Mounta 86.41 53 P 00 59 00.4
baz=249,SNR=102
WMOK Wichita Mounta 86.42 53 IAmb IAmb 00 59 15.3
comp=Z,51nm,1.1s
WMOK Wichita Mounta 86.42 53 IAMs_20 IAMs_20 01 29 33.3
comp=Z,13µm,21.0s
WHTX Lake Whitney, 86.48 56 P 00 59 01.6
baz=250,SNR=81
WHTX S 01 09 36.8
baz=250
WHTX Lake Whitney, 86.48 56 IAmb IAmb 00 59 12.8
comp=Z,80nm,1.1s
GO07 Milladeo Hill, 86.54 134 P **P** **00 59 03.1 +1.7**
COCO West Island 86.68 258 IAMs_20 IAMs_20 01 37 09.0
comp=Z,12µm,21.0s
U32A Winter Ranch, 86.84 51 IAMs_20 IAMs_20 01 29 38.5
comp=Z,27µm,22.0s
IPM Ipoh 86.98 275 IAmb IAmb 00 59 08.6
comp=Z,59nm,0.8s
IPM Ipoh 86.98 275 P **P** **00 59 05.0 +0.9**
HKT Hockley 87.10 58 *d i* P **P** **00 59 04.4 +0.2**
HKT pmax pmax
comp=Z,224nm,1.6s
HKT Hockley 87.10 58 P **P** **00 59 04.9 +0.7**
HKT Hockley 87.10 58 IAMs_20 IAMs_20 01 30 20.8
comp=Z,16µm,21.0s
HIA Hailar 87.18 323 IAMs_20 IAMs_20 01 31 52.7
comp=Z,13µm,22.0s
A21K Barrow 87.20 5 P 00 59 03.4
baz=196
A21K S 01 09 42.3
baz=196
A21K Barrow 87.20 5 IAMs_20 IAMs_20 01 31 57.7
comp=Z,16µm,21.0s
CBKS Cedar Bluff 87.20 49 IAMs_20 IAMs_20 01 31 43.9
comp=Z,14µm,20.0s
CBKS Cedar Bluff 87.20 49 P 00 59 04.0
baz=248,SNR=18
CBKS S 01 09 44.5
baz=248
TIY Taiyuan 87.26 310 *e* P **P** **00 59 06.5 +1.5**
TIY pP **pP** **00 59 14.8 +0.6**
TIY sP **pwP** **00 59 17.3 +0.1**
TIY sS **sS** **01 09 53.3 -4.9**
TIY pmax pmax
comp=Z,78nm,1.0s
TIY pmax pmax
comp=Z,820nm,6.1s
TIY LR LR
comp=Z,2µm,17.4s
TIY LR LR
comp=Z,3µm,20.3s
TIY LR LR
comp=Z,6µm,23.7s
KULM Kulim 87.55 276 P **P** **00 59 06.2 -0.6**
KULM IAmb IAmb 00 59 11.7
comp=Z,37nm,1.1s
KULM Kulim 87.55 276 P **P** **00 59 06.0 -0.8**
BCOK Bluff Creek, N 87.64 52 IAmb IAmb 00 59 19.4
comp=Z,78nm,0.9s
LL01 San Ignacio de 87.65 133 P **P** **00 59 08.8 +2.1**
LL01 IAmb IAmb 00 59 16.7
comp=Z,47nm,1.1s
OKCFA Oklahoma City 87.67 52 P **P** **00 59 07.7 +0.7**
OKCFA IAmb IAmb 00 59 15.3
comp=Z,72nm,0.9s
OKCFA IAMs_20 IAMs_20 01 30 31.3
comp=Z,14µm,22.0s
237A Washetta, Mont 87.80 56 IAMs_20 IAMs_20 01 33 09.8
comp=Z,15µm,19.0s
OK029 Liberty Lake 87.81 52 IAmb IAmb 00 59 19.6
comp=Z,30nm,0.9s
OK029 IAMs_20 IAMs_20 01 30 50.0
comp=Z,19µm,22.0s
OK025 Westminster Rd 87.82 52 P **P** **00 59 07.7 0.0**
OK025 IAmb IAmb 00 59 18.4
comp=Z,55nm,1.1s
OK025 IAMs_20 IAMs_20 01 30 49.4
comp=Z,15µm,21.0s
GC02 Grant County # 87.87 51 P **P** **00 59 07.6 -0.2**
MAW Mawson 87.87 199 P **P** **00 59 08.0 +0.8**
comp=Z,45nm,0.6s,baz=129,slow=6.5,SNR=80
MAW LR LR 01 36 07.1
comp=Z,27µm,19.8s,baz=119,slow=34
MAW Mawson 87.87 199 P **P** **00 59 08.1 +0.8**
baz=88,SNR=91
KAN08 Anthony NE Sta 87.92 51 P **P** **00 59 08.8 +0.7**
GYA Guiyang 88.07 298 ⇓P **P** **00 59 10.8 +1.6**
GYA PP **PP** **01 02 34.0 -2.3**
GYA SKS **SKSac** **01 09 34.4 -1.6**
GYA S **S** **01 09 54.4 +3.0**
GYA pmax pmax
comp=Z,15nm,1.2s
GYA pmax pmax
comp=Z,1µm,7.9s
GYA LR LR
comp=Z,2µm,24.5s
GYA LR LR
comp=Z,1µm,23.2s
GYA LR LR

comp=Z,2µm,26.2s
MTO3 Montecristo 88.10 75 P **P** **00 59 10.3 +0.6**
MTO3 IAmb IAmb 00 59 22.0
comp=Z,41nm,1.2s
DGMT Dagmar 88.14 38 P 00 59 09.3
DGMT S 01 09 54.2
baz=244,SNR=14
baz=244
ESQI Esquipulas 88.16 74 P **P** **00 59 10.4 +0.7**
ESQI IAmb IAmb 00 59 25.1
comp=Z,48nm,1.1s
INK Inuvik 88.19 14 PKPPKP PKPPKPdf 01 25 00.8
comp=Z,0.5nm,0.6s,baz=162,slow=3.2,SNR=2.6
INK Inuvik 88.19 14 IAmb IAmb 00 59 25.3
comp=Z,39nm,1.1s
INK IAMs_20 IAMs_20 01 31 02.7
comp=Z,25µm,21.0s
KAN13 South Haven SW 88.22 51 P **P** **00 59 09.4 -0.1**
OK031 S. Brethren Rd 88.33 52 P **P** **00 59 10.0 0.0**
OK031 IAMs_20 IAMs_20 01 31 25.9
comp=Z,19µm,21.0s
PETF Flores 88.33 72 P **P** **00 59 10.3 -0.2**
PETF IAmb IAmb 00 59 16.1
comp=Z,37nm,1.0s
OK030 Cody Creek RV 88.36 52 P **P** **00 59 10.5 +0.3**
OK030 IAmb IAmb 00 59 15.2
comp=Z,73nm,1.2s
OK030 IAMs_20 IAMs_20 01 31 27.8
comp=Z,18µm,22.0s
NATX Nacogdoches 88.64 57 IAMs_20 IAMs_20 01 32 50.6
comp=Z,18µm,20.0s
NATX Nacogdoches 88.64 57 P 00 59 12.4
baz=251,SNR=35
NATX S 01 09 58.6
baz=251
XAN Xi'an 88.65 306 P **P** **00 59 11.6 -0.1**
XAN SKS **SKSac** **01 09 37.2 -1.8**
XAN S **S** **01 09 54.5 -2.0**
XAN sS ScS 01 10 01.8 -0.1
XAN pmax pmax
comp=Z,55nm,2.1s
XAN pmax pmax
comp=Z,3µm,6.7s
XAN LR LR
comp=Z,3µm,20.6s
XAN LR LR
comp=Z,3µm,20.6s
XAN LR LR
comp=Z,5µm,21.7s
XAN Xi'an 88.65 306 P **P** **00 59 11.8 +0.1**
XAN pmax pmax
comp=Z,33nm,1.1s
XAN Xi'an 88.65 306 P **P** **00 59 11.8 +0.1**
XAN IAmb IAmb 00 59 17.5
comp=Z,33nm,1.1s
Z38A Mt. Pleasant 88.87 55 P **P** **00 59 13.3 +0.7**
Z38A IAmb IAmb 00 59 28.1
comp=Z,56nm,1.1s
T35A Sooner Cattle 88.91 51 IAmb IAmb 00 59 15.4
comp=Z,98nm,1.1s
BI03 Tigo 88.94 128 P **P** **00 59 14.4 +1.4**
BI03 IAmb IAmb 00 59 16.4
comp=Z,69nm,1.1s
SLVN Son La 88.95 292 P **P** **00 59 13.4 0.0**
X37A Clayton 89.00 54 IAMs_20 IAMs_20 01 32 37.8
comp=Z,17µm,20.0s
HHC Hu-ho-hao-te 89.03 313 *e*P **P** **00 59 13.6 +0.2**
HHC sP pP 00 59 23.0 +0.3
HHC S **S** **01 09 58.3 -1.6**
HHC sS ScS 01 10 06.7 +1.7
HHC SS **SS** **01 15 57.2 +3.3**
HHC pmax pmax
comp=Z,69nm,1.8s
HHC pmax pmax
comp=Z,750nm,6.6s
HHC LR LR
comp=Z,1µm,21.3s
HHC LR LR
comp=Z,3µm,19.9s
HHC LR LR
comp=Z,4µm,21.5s
YAK Yakutsk 89.08 337 *e*P **P** **00 59 11.2 -1.7**
YAK *e* 01 02 37.7
YAK *e*S **SKSac** **01 09 37.7 -2.4**
YAK *e**SS **SKKSac** **01 09 52.7 +0.8**
YAK *e*SP **SP** **01 11 05.3 +1.9**
YAK pmax pmax
comp=Z,55nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,21nm,1.5s
YAK pmax pmax
comp=Z,930nm,6.3s
YAK pmax pmax
comp=N,205nm,3.3s
YAK pmax pmax
comp=E,413nm,6.8s
YAK smax smax
comp=N,173nm,3.8s
YAK smax smax
comp=E,289nm,4.2s
TUL1 Leonard 89.11 52 P 00 59 13.5
baz=250,SNR=23
TUL1 S 01 10 02.3
baz=250
BGNE Belgrade 89.29 47 P **P** **00 59 14.4 -0.1**
BGNE Belgrade 89.29 47 P 00 59 14.4
baz=249,SNR=10
BGNE S 01 10 02.8
baz=249
PLCA Paso Flores 89.51 132 P **P** **00 59 17.8 +2.0**
comp=E,18nm,1.0s,baz=239,slow=5.5,SNR=28
PLCA LR LR 01 30 46.5
comp=E,6µm,20.7s,baz=243,slow=30
PLCA Paso Flores 89.51 132 P **P** **00 59 17.1 +1.4**
PLCA pmax pmax
comp=Z,2.0nm,0.6s
PLCA Paso Flores 89.51 132 P **P** **00 59 17.1 +1.4**
441A DeRidder 89.52 58 P **P** **00 59 17.4 +1.7**
441A IAmb IAmb 00 59 21.2
comp=Z,66nm,1.0s
E28A Huff 89.53 41 P **P** **00 59 14.8 -0.7**
E28A IAMs_20 IAMs_20 01 34 14.5
comp=Z,23µm,20.0s
KSU1 Kansas State U 89.58 49 P 00 59 15.7
baz=250,SNR=13
KSU1 S 01 10 06.0
baz=250
KSU1 Kansas State U 89.58 49 IAmb IAmb 00 59 19.7
comp=Z,88nm,1.0s
KRAB Krabi 89.72 279 P **P** **00 59 21.3 +4.2**
comp=Z,335nm,0.8s
SUSD Miller 89.85 44 P **P** **00 59 16.4 -0.6**
SUSD IAmb IAmb 00 59 28.3
comp=Z,43nm,1.0s
SUSD Miller 89.85 44 P 00 59 16.1
baz=248
SUSD S 01 10 07.3
baz=248
TGUH Tegucigalpa,Un 89.95 76 P **P** **00 59 19.1 +0.9**
TGUH IAmb IAmb 00 59 34.9
comp=Z,62nm,1.1s
TGUH IAMs_20 IAMs_20 01 29 57.1
comp=Z,12µm,21.0s
YKA Yellowknife Ar 90.02 23 P **P** **00 59 16.7 -0.6**
comp=Z,16nm,0.8s,baz=235,slow=4.7,SNR=114
YKA PKKPbc **PKKPdf** **01 16 48.9 +1.5**
comp=Z,0.1nm,0.4s,baz=356,slow=4.1,SNR=5.9
YKA PKPPKP 01 24 58.4
comp=Z,0.9nm,1.2s,baz=69,slow=3.8,SNR=4.3
YKA LR LR 01 32 42.2
comp=Z,24µm,20.9s,baz=0.0,slow=31
BTO Baotou 90.04 312 P **P** **00 59 19.6 +1.5**
BTO pmax pmax
comp=Z,170nm,2.0s
BTO LR LR
comp=Z,8µm,23.1s
BTO LR LR
comp=Z,11µm,24.5s
SAJU San Juanillo, 90.36 80 *e*P **P** **00 59 20.7 +0.7**
U38A Gravette 90.36 52 IAmb IAmb 00 59 23.1
comp=Z,39nm,1.1s
MIAR Mount Ida 90.39 54 P 00 59 19.7
baz=252,SNR=40
MIAR S 01 10 13.1
baz=252
MIAR Mount Ida 90.39 54 IAMs_20 IAMs_20 01 34 54.5
comp=Z,18µm,20.0s
W39A Magazine 90.43 54 P 00 59 20.0
baz=252,SNR=28
W39A S 01 10 13.6
baz=252
WLAR White Oak Lake 90.49 55 P **P** **00 59 20.9 +0.7**
PHET Kaeng Krachan 90.56 283 P **P** **00 59 25.0 +4.1**
comp=Z,811nmcomp=Z,39nm,1.0s
Z41A Richland Creek 90.60 56 P 00 59 21.3
baz=252,SNR=14
Z41A S 01 10 15.1
baz=252
ORTG Ortega, Santa 90.68 80 P **P** **00 59 22.1 +0.5**
ORTG IAMs_20 IAMs_20 01 30 10.4
comp=Z,12µm,20.0s
MDND Maddock 90.70 40 P 00 59 20.1
baz=248,SNR=8.1
MDND S 01 10 17.6
baz=248
MDND Maddock 90.70 40 IAmb IAmb 00 59 35.5
comp=Z,53nm,1.1s
MDND IAMs_20 IAMs_20 01 35 31.6
comp=Z,13µm,20.0s
TEIG Tepich 90.70 69 PKKPbc PKKPbc 01 16 47.3 -0.4
comp=Z,7.0nm,0.8s,baz=63,slow=4.5,SNR=1.8
TEIG Tepich 90.70 69 P **P** **00 59 22.5 +1.0**
TEIG Tepich 90.70 69 **PcP** **PcP** **00 59 22.8 +0.2**
TEIG IAMs_20 IAMs_20 01 31 29.4
comp=Z,7µm,22.0s
L34A Svendsen Farm, 90.73 47 P **P** **00 59 20.6 -0.6**
L34A IAmb IAmb 00 59 25.6
comp=Z,44nm,0.9s
N35A Tabor 90.88 48 P **P** **00 59 21.5 -0.3**
N35A IAmb IAmb 00 59 29.7
comp=Z,55nm,1.1s
X40A Basin Creek Fa 90.95 55 IAMs_20 IAMs_20 01 35 11.5
comp=Z,15µm,20.0s
X40A Basin Creek Fa 90.95 55 P 00 59 22.3
baz=252,SNR=25
X40A S 01 10 16.0
baz=252
BOAB BOACO BROADBAN 91.03 77 P **P** **00 59 23.8 +0.6**
BOAB IAmb IAmb 00 59 29.4
comp=Z,74nm,1.0s
LAFE Finca La Fe, P 91.05 80 *e*P **P** **00 59 23.9 +0.7**
KMI Kunming 91.06 296 ⇑P **P** **00 59 23.9 +0.6**
KMI pP PcP 00 59 28.1 +3.8
KMI sP pP 00 59 29.2 -3.4
KMI PP **PP** **01 02 59.9 -0.4**
KMI SKS **SKSac** **01 09 48.9 -4.9**
KMI S **S** **01 10 19.5 0.0**
KMI sS pS 01 10 28.8 -2.8
KMI pmax pmax
comp=Z,7.0nm,0.7s
KMI pmax pmax
comp=Z,830nm,5.2s
KMI LR LR
comp=Z,1µm,19.3s
KMI LR LR
comp=Z,2µm,24.7s
KMI LR LR
comp=Z,3µm,28.4s
JTS Las Juntas de 91.14 80 *d*iP **P** **00 59 24.8 +1.1**
JTS pmax pmax
comp=Z,177nm,1.2s
JTS MLR MLR
comp=Z,3µm,16.0s
JTS Las Juntas de 91.14 80 *e*P **P** **00 59 24.7 +1.1**
JTS Las Juntas de 91.14 80 P **P** **00 59 25.0 +1.3**
JTS Las Juntas de 91.14 80 IAMs_20 IAMs_20 01 30 00.7
comp=Z,14µm,21.0s
ECSD EROS Data Cent 91.17 45 IAmb IAmb 00 59 29.2
comp=Z,47nm,1.1s
ECSD EROS Data Cent 91.17 45 P 00 59 22.0
baz=250,SNR=39
C36M Paulatuk 91.28 16 P 00 59 22.3
baz=227,SNR=57
C36M S 01 10 18.7
baz=227
BO02 Sierra Bellavi 91.33 127 IAmb IAmb 00 59 27.7
ACON Acoyapa 91.37 78 P **P** **00 59 25.5 +0.8**
SRDT SRDT 91.41 284 P P 00 59 17.5 -7.4
comp=Z,16nm,1.0s
UTHA Uthaitani 91.43 286 P **P** **00 59 28.5 +3.5**
comp=Z,458nmcomp=Z,56nm,0.9s
U40A Yellville 91.51 53 IAMs_20 IAMs_20 01 34 15.1
comp=Z,10µm,21.0s
U40A Yellville 91.51 53 P 00 59 24.4
baz=252,SNR=53
SRA1 San Ramn 91.53 80 *e*P **P** **00 59 27.3 +1.7**
143A Socs Landing, 91.56 57 P **P** **00 59 26.0 +0.8**
143A IAmb IAmb 00 59 45.9
comp=Z,33nm,0.8s
MT02 Curacav 91.57 125 P **P** **00 59 26.0 +0.6**
MT02 IAmb IAmb 00 59 35.0
comp=Z,61nm,1.1s
CCAR Cane Creek 91.62 55 P **P** **00 59 25.8 +0.4**
CCAR IAmb IAmb 00 59 36.9
comp=Z,67nm,1.1s
W41B Gary Mavity, V 91.62 54 P 00 59 25.5
baz=252,SNR=72
W41B S 01 10 25.8
baz=252
COVE Coope Vega, Sa 91.77 79 *e*P **P** **00 59 26.3 -0.3**
COVE Coope Vega, Sa 91.77 79 IAMs_20 IAMs_20 01 30 23.5
comp=Z,13µm,22.0s
CD2 Chengdu 91.83 301 P **P** **00 59 27.1 +0.5**
CD2 PP **PP** **01 03 05.2 -0.9**
CD2 SKS **SKSac** **01 09 56.5 -1.1**
CD2 S **ScS** **01 10 28.1 -0.4**
CD2 sS pS 01 10 35.5 -2.6
CD2 SS **SS** **01 16 38.3 +3.6**
CD2 pmax pmax
comp=Z,10.0nm,1.1s
CD2 pmax pmax
comp=Z,1µm,9.2s
CD2 LR LR
comp=Z,5µm,24.7s
CD2 LR LR
comp=Z,6µm,22.2s
CD2 LR LR
comp=Z,5µm,22.4s
HDC Heredia 91.86 80 *e*P **P** **00 59 28.4 +1.2**
HDC Heredia 91.86 80 IAMs_20 IAMs_20 01 30 26.2
comp=Z,10µm,21.0s
LCR2 La Lucha 2 91.90 80 *e*P **P** **00 59 28.0 +0.5**
CIT Chita 91.92 324 *e*P **P** **00 59 27.6 +1.1**
CIT pmax pmax
comp=Z,150nm,3.5s
PEL Peldehue 91.96 125 P **P** **00 59 29.3 +2.0**
OCM Ochomogo 91.98 80 *e*P **P** **00 59 29.1 +1.3**
P38A Dawn 92.01 50 IAmb IAmb 00 59 38.6
comp=Z,28nm,0.8s
FFC Flin Flon 92.02 33 P **P** **00 59 25.8 -1.0**
FFC pmax pmax
comp=Z,20nm,1.1s
FFC Flin Flon 92.02 33 P **P** **00 59 25.8 -1.0**
FFC Flin Flon 92.02 33 IAMs_20 IAMs_20 01 34 36.0
comp=Z,12µm,20.0s
RIMA Rio Macho 92.04 80 *e*P **P** **00 59 28.8 +0.7**
CDM Cerro de Muert 92.08 81 *e*P **P** **00 59 29.5 +1.0**
D32A Dogwood Acres, 92.08 42 IAMs_20 IAMs_20 01 36 06.1
comp=Z,20µm,20.0s
RIOS Rincon, Osa 92.09 82 *e*P **P** **00 59 28.8 +0.7**
RIOS Rincon, Osa 92.09 82 P **P** **00 59 29.5 +1.4**
RIOS IAmb IAmb 00 59 45.3
comp=Z,58nm,1.2s
RIOS IAMs_20 IAMs_20 01 29 48.1
comp=Z,11µm,22.0s
F33A 5 Mile Ranch, 92.10 43 IAmb IAmb 00 59 33.9
comp=Z,36nm,0.9s
PEZE Perez Zeledon, 92.11 81 *e*P **P** **00 59 28.6 +0.3**
PEZE Perez Zeledon, 92.11 81 P **P** **00 59 29.5 +1.2**
PEZE IAmb IAmb 00 59 34.8
comp=Z,31nm,1.2s
PEZE IAMs_20 IAMs_20 01 30 10.6
comp=Z,10µm,22.0s
VBMS Vicksburg 92.13 57 P **P** **00 59 29.2 +1.3**
VBMS IAMs_20 IAMs_20 01 35 11.1
comp=Z,11µm,21.0s
VBMS Vicksburg 92.13 57 P 00 59 28.6
baz=253,SNR=7.6
VBMS S 01 10 32.5
baz=253
UMPA Umpang Tak 92.14 286 P **P** **00 59 32.5 +4.2**
MGMO Mountain Grove 92.20 52 IAmb IAmb 00 59 42.8
comp=Z,48nm,1.0s
CVTR Volcan Turrial 92.20 80 *e*P **P** **00 59 30.1 +0.9**
ESPN Las Esperanzas 92.25 78 IAMs_20 IAMs_20 01 31 31.1
comp=Z,14µm,20.0s
CO02 Combarbal 92.36 123 P **P** **00 59 31.1 +1.9**
X43A Marvell 92.50 55 P 00 59 30.2
baz=253,SNR=7.7
CM36 Chiang Mai Arr 92.53 288 P **P** **00 59 33.0 +3.0**
N38A Joes South For 92.59 48 IAmb IAmb 00 59 46.8
comp=Z,62nm,1.1s
CM01 Chiang Mai Arr 92.63 288 P **P** **00 59 34.0 +3.5**
comp=Z,22nm,1.0s
CM02 Chiang Mai Arr 92.64 288 P **P** **00 59 34.0 +3.4**
comp=Z,140nmcomp=Z,20nm,0.9s
CM31 Chiang Mai Arr 92.65 288 P **P** **00 59 32.2 +1.6**
CMAR Chiang Mai Arr 92.65 288 P **P** **00 59 31.1 +0.5**
comp=Z,16nm,0.9s,baz=99,slow=2.5,SNR=32
CMAR PKKPbc **PKKPbc** **01 16 43.9 +1.2**
comp=Z,2.5nm,0.8s,baz=284,slow=4.4,SNR=8.4
CMAR LR LR 01 35 58.9
comp=Z,2µm,21.8s,baz=148,slow=32
CMAR Chiang Mai Arr 92.65 288 P **P** **00 59 31.9 +1.3**
CMAR Chiang Mai Arr 92.65 288 P **P** **00 59 31.9 +1.3**
SYO Syowa Base 92.67 191 ⇑*i*P **P** **00 59 29.6 -0.1**
SYO Syowa Base 92.67 191 ⇑*e*PcP **PcP** **00 59 32.0 +1.6**
SYO Syowa Base 92.67 191 ⇑*i*pP pP 00 59 39.1 0.0
SYO Syowa Base 92.67 191 ⇑*e*sP sP 00 59 44.6 +2.1
CM13 Chiang Mai Arr 92.68 288 P **P** **00 59 34.4 +3.7**
comp=Z,125nmcomp=Z,17nm,0.9s
CMMT Chiang Mai 92.74 289 P **P** **00 59 33.0 +2.0**
comp=Z,575nmcomp=Z,9.5nm,0.8s
CHTO Chiang Mai 92.75 289 P **P** **00 59 31.7 +0.7**
CHTO pmax pmax
comp=Z,13nm,0.9s
CHTO Chiang Mai 92.75 289 P **P** **00 59 31.6 +0.7**
CHTO Chiang Mai 92.75 289 P **P** **00 59 33.9 +2.9**
CHTO P **P** **00 59 33.9 +2.9**
346A Big Creek Wild 92.76 58 P **P** **00 59 31.8 +1.0**
346A IAmb IAmb 00 59 45.2
comp=Z,33nm,0.8s
BRU2 Volcan 92.90 82 *e*P **P** **00 59 34.0 +1.9**
EFI East Falkland 92.91 146 IAMs_20 IAMs_20 01 32 42.3
comp=Z,11µm,21.0s
VNA3 Neumayer Olymp 92.91 175 P **P** **00 59 31.7 +0.9**
SCIA State Center 92.94 47 P 00 59 31.1
baz=252,SNR=14
SCIA S 01 10 36.3
baz=252
SCIA State Center 92.94 47 IAmb IAmb 00 59 42.8
comp=Z,20nm,0.7s
SNAA Sanae 92.97 177 P **P** **00 59 31.8 +0.7**
SNAA Sanae 92.97 177 *ce*P **P** **00 59 31.5 +0.4**
SNAA pmax pmax
comp=Z,74nm,1.3s
SNAA Sanae 92.97 177 IAmb IAmb 00 59 38.4
comp=Z,60nm,1.1s
SNAA IAMs_20 IAMs_20 01 34 50.8
comp=Z,12µm,22.0s
P40A Paris 93.07 50 IAmb IAmb 00 59 35.1
comp=Z,52nm,1.0s
AGMN Agassiz Nation 93.20 41 P 00 59 31.1
baz=251,SNR=48
AGMN S 01 10 35.4
baz=251
LZH Lanzhou 93.24 306 *e*P **P** **00 59 35.4 +2.3**
LZH pP pP 00 59 39.0 -3.4
LZH sP pwP 00 59 42.0 -3.4
LZH PP **PP** **01 03 17.6 +0.4**
LZH SKS **SKSac** **01 10 00.7 -4.8**
LZH *e*S **ScS** **01 10 41.9 +1.6**
LZH SS **SS** **01 16 50.8 -4.1**
LZH pmax pmax
comp=Z,40nm,1.1s
LZH pmax pmax
comp=Z,460nm,4.1s
LZH LR LR
comp=Z,1µm,15.5s
LZH LR LR
comp=Z,3µm,16.0s
LZH LR LR
comp=Z,3µm,19.0s
CCM Cathedral Cave 93.24 52 P **P** **00 59 31.8 -1.0**
CCM pmax pmax
comp=Z,20nm,1.2s
CCM Cathedral Cave 93.24 52 P **P** **00 59 31.8 -1.0**
CCM Cathedral Cave 93.24 52 IAMs_20 IAMs_20 01 34 19.9
comp=Z,15µm,20.0s
CCM Cathedral Cave 93.24 52 P 00 59 31.9
baz=253
CCM S 01 10 35.8
baz=253
LPAR Lepanto 93.27 54 P **P** **00 59 33.0 0.0**
AC04 Llanos de Chal 93.28 120 P **P** **00 59 34.8 +1.4**
AC04 IAmb IAmb 00 59 37.2
comp=Z,69nm,1.1s
LCO Las Campanas 93.33 121 P **P** **00 59 35.8 +1.8**
LCO pmax pmax
comp=Z,147nm,1.0s
LCO Las Campanas 93.33 121 P **P** **00 59 35.8 +1.8**
Y45A Yeager Farm, C 93.38 56 IAmb IAmb 00 59 50.5
comp=Z,40nm,1.1s
VNA2 Neumayer--Watz 93.41 175 P **P** **00 59 34.3 +1.2**
baz=172,slow=3.4
146A Union 93.44 57 IAmb IAmb 00 59 53.0
comp=Z,29nm,0.8s
I37A Lemond, Waseca 93.46 45 IAmb IAmb 00 59 43.9
comp=Z,39nm,1.1s
K38A Parkersburg 93.48 47 IAmb IAmb 00 59 45.9
comp=Z,38nm,1.1s
VNA1 Neumayer--Stat 93.61 175 P **P** **00 59 35.1 +1.2**
OXF Oxford 93.67 55 P 00 59 34.6
baz=254,SNR=28
OXF S 01 10 44.0
baz=254
OXF Oxford 93.67 55 IAMs_20 IAMs_20 01 36 08.4
comp=Z,21µm,20.0s
PEBM Pemiscott Bayo 93.75 54 P **P** **00 59 36.0 +0.7**
FVM French Village 93.84 52 IAmb IAmb 00 59 41.2
comp=Z,52nm,1.1s
ULM Lac du Bonnet 93.84 39 P **P** **00 59 33.9 -1.4**
comp=Z,21nm,0.8s,baz=253,slow=5.1,SNR=60
ULM PP **PP** **01 03 18.7 -2.7**
comp=Z,14nm,1.2s,baz=262,slow=7.3,SNR=8.4
ULM LR LR 01 36 50.2
comp=Z,32µm,19.4s,baz=249,slow=32
ULM Lac du Bonnet 93.84 39 *d*iP **P** **00 59 33.6 -1.7**
BOD Bodaibo 93.91 329 *e*P **P** **00 59 35.5 +0.1**
BOD pmax pmax
comp=Z,36nm,1.9s
F36A Milaca 93.94 44 IAmb IAmb 00 59 40.9
comp=Z,36nm,1.0s
PARMO Parma 93.99 53 P **P** **00 59 36.4 0.0**
PENMO Penman 94.03 53 P **P** **00 59 37.2 +0.7**
LNXT Lenox 94.04 54 P **P** **00 59 37.7 +1.1**
HALT Halls 94.10 54 P **P** **00 59 37.6 +0.7**
ZON Zonda 94.11 124 IAmb IAmb 00 59 40.7
comp=Z,50nm,1.2s
SLM Saint Louis 94.17 51 IAmb IAmb 00 59 44.3
comp=Z,19nm,0.7s
GO03 Copiap 94.19 120 P **P** **00 59 39.0 +1.3**
GO03 IAmb IAmb 00 59 41.0
comp=Z,30nm,1.1s
HENM Henderson Moun 94.22 53 P **P** **00 59 37.7 +0.3**
SPMN Marine on St. 94.23 44 P 00 59 36.5
baz=253,SNR=23
SPMN S 01 10 46.7
baz=253
SPMN Marine on St. 94.23 44 IAmb IAmb 00 59 43.5
comp=Z,49nm,1.1s
N41A Harden Midland 94.29 49 IAmb IAmb 00 59 49.5
comp=Z,51nm,0.9s
AC01 Pan de Azucar 94.36 118 P **P** **00 59 38.2 -0.2**
ULN Ulaanbaatar 94.43 318 *ce*P **P** **00 59 38.0 -0.3**
ULN pmax pmax
comp=Z,40nm,2.6s
ULN MLR MLR
comp=Z,2µm,19.0s
ULN Ulaanbaatar 94.43 318 P **P** **00 59 38.9 +0.6**
B35A Bob, Littlefor 94.58 41 IAmb IAmb 00 59 41.4
comp=Z,55nm,1.1s
B35A IAMs_20 IAMs_20 01 37 05.2
comp=Z,20µm,20.0s
UTMT University of 94.59 54 P **P** **00 59 39.5 +0.4**
SIUC Southern Illin 94.69 52 IAmb IAmb 00 59 48.8

BRAL **Brewton** **94.69** **59** P **P** **00 59 41.5 +1.9**
BRAL **Brewton** **94.69** **59** P 00 59 40.1
baz=255,SNR=6.6
BRAL S 01 10 54.2
baz=255
PAF **Port-aux-Franc** **94.72 216** IAMs_20 IAMs_20 01 35 03.1
comp=Z,17µm,22.0s
OTAV **Otavalo** **94.77** **91** P **P** **00 59 41.1 0.0**
OTAV pmax pmax
comp=Z,5.0nm,1.0s
OTAV **Otavalo** **94.77** **91** P **P** **00 59 41.1 0.0**
OTAV **Otavalo** **94.77** **91** *e*P P 00 59 35.5 -5.6
SONM **Songino Array** **94.84 318** P **P** **00 59 40.3 +0.2**
comp=Z,2.6nm,0.8s,baz=106,slow=2.9,SNR=16
SONM PP **PP** **01 03 34.9 +5.5**
comp=Z,2.3nm,1.0s,baz=117,slow=8.5,SNR=4.2
SONM LR LR 01 37 36.6
comp=Z,3µm,21.4s,baz=96,slow=32
SONM **Songino Array** **94.84 318** P **P** **00 59 39.9 -0.2**
PLAL **Pickwick Lake** **94.85** **55** IAMs_20 IAMs_20 01 36 06.7
comp=Z,12µm,20.0s
TIXI **Tiksi** **94.96 344** *ce*P **P** **00 59 39.5 -0.5**
TIXI pmax pmax
comp=Z,215nm,2.5s
TIXI **Tiksi** **94.96 344** P **P** **00 59 39.1 -0.8**
TIXI IAmb IAmb 00 59 46.9
comp=Z,34nm,1.1s
TIXI IAMs_20 IAMs_20 01 38 11.1
comp=Z,9µm,21.0s
P43A **Skaggs, Pawnee** **94.98** **50** IAmb IAmb 00 59 51.8
comp=Z,39nm,0.8s
PB14 **IPOC Station P** **95.03 117** P **P** **00 59 41.8 0.0**
PB14 IAmb IAmb 00 59 45.1
comp=Z,42nm,1.1s
Q44A **Meyer Farm, Va** **95.16** **51** IAmb IAmb 01 00 00.2
comp=Z,45nm,1.1s
LRAL **Lakeview Retre** **95.21** **57** P 00 59 41.4
baz=255,SNR=9.0
LRAL S 01 10 55.9
baz=255
LRAL **Lakeview Retre** **95.21** **57** IAMs_20 IAMs_20 01 37 34.7
comp=Z,9µm,21.0s
JFWS **Jewell Farm** **95.34** **47** P 00 59 41.3
baz=254,SNR=28
JFWS S 01 10 54.3
baz=254
JFWS **Jewell Farm** **95.34** **47** IAmb IAmb 00 59 55.7
comp=Z,63nm,1.1s
WVT **Waverly** **95.34** **54** P 00 59 42.2
baz=255
WVT S 01 10 57.2
baz=255
WVT **Waverly** **95.34** **54** P **P** **00 59 42.5 0.0**
WVT pmax pmax
comp=Z,5.0nm,0.8s
WVT **Waverly** **95.34** **54** P **P** **00 59 42.5 0.0**
WVT **Waverly** **95.34** **54** IAMs_20 IAMs_20 01 36 32.7
comp=Z,19µm,20.0s
I40A **Norwalk** **95.35** **46** IAmb IAmb 00 59 53.9
comp=Z,26nm,1.0s
AC02 **Maricunga** **95.37 120** P **P** **00 59 44.5 +0.9**
HDIL **Hopedale** **95.39** **50** P 00 59 41.9
baz=255,SNR=16
HDIL S 01 10 54.9
baz=255
HDIL **Hopedale** **95.39** **50** IAmb IAmb 00 59 56.1
comp=Z,52nm,1.1s
L42A **Oliver, Polo** **95.50** **48** IAmb IAmb 00 59 54.6
comp=Z,31nm,0.9s
GO02 **Mina Guanaco** **95.54 118** P **P** **00 59 44.2 0.0**
451A **Vernon** **95.64** **60** P **P** **00 59 44.9 +0.9**
451A IAmb IAmb 00 59 46.2
comp=Z,66nm,1.1s
EYMN **Ely** **95.88** **42** IAmb IAmb 00 59 49.0
comp=Z,58nm,1.1s
EYMN **Ely** **95.88** **42** IAMs_20 IAMs_20 01 37 19.2
comp=Z,17µm,20.0s
EYMN **Ely** **95.88** **42** P 00 59 43.2
baz=254,SNR=13
EYMN S 01 11 02.3
baz=254
T47A **Sharon Grove** **96.12** **53** IAmb IAmb 00 59 51.3
comp=Z,64nm,1.1s
PB15 **IPOC Station P** **96.30 116** IAmb IAmb 00 59 51.3
comp=Z,28nm,1.0s
PB06 **IPOC Station P** **96.38 116** IAmb IAmb 00 59 54.4
comp=Z,29nm,1.1s
PB07 **IPOC Station P** **96.43 114** IAmb IAmb 00 59 54.2
comp=Z,24nm,1.1s
M44A **Midewin, Midew** **96.52** **49** IAmb IAmb 00 59 56.8
comp=Z,28nm,1.1s
I42A **Draeger Farm,** **96.53** **46** IAmb IAmb 00 59 50.6
comp=Z,50nm,1.1s
SWET **Sewanee** **96.61** **55** IAmb IAmb 01 00 03.3
comp=Z,24nm,1.1s
K43A **Burlington** **96.64** **48** IAmb IAmb 01 00 05.9
comp=Z,44nm,1.1s
FPAL **Fort Paine** **96.70** **56** IAmb IAmb 00 59 49.2
comp=Z,29nm,1.1s
HQIL **Hanson Quary C** **96.76** **49** IAmb IAmb 00 59 58.6
comp=Z,44nm,1.0s
HQIL IAMs_20 IAMs_20 01 38 32.8
comp=Z,10µm,19.0s
L44A **Lake County Fo** **96.81** **48** IAmb IAmb 00 59 52.0
comp=Z,52nm,1.0s
L44A IAMs_20 IAMs_20 01 39 00.2
comp=Z,9µm,19.0s
L44A **Lake County Fo** **96.81** **48** P 00 59 48.4
baz=256
L44A S 01 11 07.6
baz=256
COWI **Conover** **96.94** **44** IAmb IAmb 01 00 03.2
comp=Z,62nm,1.1s
SFIN **Lafayette** **96.96** **50** P 00 59 49.4
baz=256,SNR=19
SFIN S 01 11 09.3
baz=256
LVC **Limon Verde** **96.99 116** PP **PP** **01 03 46.2 -0.4**
comp=Z,2.3nm,0.8s,baz=258,slow=4.6,SNR=1.7
LVC **Limon Verde** **96.99 116** P **P** **00 59 52.5 +1.6**
LVC pmax pmax
comp=Z,17nm,1.1s
LVC **Limon Verde** **96.99 116** P **P** **00 59 52.5 +1.6**
U49A **Red Boiling Sp** **97.04** **54** IAmb IAmb 00 59 57.0
comp=Z,30nm,1.1s
U49A IAMs_20 IAMs_20 01 38 23.3
comp=Z,20µm,20.0s
PIZC **Pizarro, Choco** **97.05** **87** *e*P Pdif 01 00 01.6 +11
WCI **Wyandotte Cave** **97.05** **52** P 00 59 49.2
baz=256
WCI S 01 11 10.8
baz=256
WCI **Wyandotte Cave** **97.05** **52** P **P** **00 59 49.6 -0.7**
WCI pmax pmax
comp=Z,7.0nm,0.9s
WCI **Wyandotte Cave** **97.05** **52** P **P** **00 59 49.6 -0.7**
BLO **Bloomington** **97.10** **51** IAmb IAmb 00 59 50.7
comp=Z,28nm,1.1s
GTA **Gaotai** **97.19 309** ⇑P **P** **00 59 50.8 -0.3**
GTA pP Pdif 00 59 55.4 +4.2
GTA sP pP 00 59 57.9 -2.4
GTA PP **PP** **01 03 52.0 +4.2**
GTA SKS **SKSac** **01 10 22.5 -3.8**
GTA S **ScS** **01 11 14.1 +1.1**
GTA sS pS 01 11 21.4 -3.1
GTA pmax pmax
comp=Z,7.0nm,1.6s
GTA pmax pmax
comp=Z,330nm,7.6s
GTA LR LR
comp=Z,2µm,22.2s
GTA LR LR
comp=Z,5µm,20.7s
GTA LR LR
comp=Z,7µm,21.5s
PB11 **IPOC Station P** **97.27 113** IAmb IAmb 00 59 55.1
comp=Z,37nm,1.1s
PCON **Cinco Dias** **97.30** **90** *e*P **P** **00 59 51.8 -0.9**
X51A **Calhoun** **97.31** **56** IAmb IAmb 01 00 06.2
comp=Z,23nm,1.1s
FCC **Fort Churchill** **97.50** **31** IAmb IAmb 01 00 00.2
comp=Z,45nm,1.1s
ZAK **Zakamensk** **97.51 320** *e*P Pdif 00 59 52.5 +0.2
ZAK pmax pmax
comp=Z,10.0nm,1.2s
MNMC **Minye Minye** **97.53 112** P Pdif 00 59 53.9 +0.5
MNMC IAmb IAmb 00 59 56.8
comp=Z,30nm,1.1s
F42A **Maple Grove Fa** **97.54** **45** P **P** **00 59 51.6 -0.7**
F42A IAmb IAmb 00 59 55.1
comp=Z,25nm,0.8s
TLY **Talaya** **97.62 321** *d i*P Pdif 00 59 53.4 +0.8
TLY *e*S **SKSac** **01 10 27.8 +0.1**
TLY *e* 01 11 14.1
TLY *e* 01 12 44.3
TLY *e*PPS PPS 01 13 27.7
TLY *e*SS **SS** **01 17 53.0 -3.2**
TLY *e*SSS SSS 01 21 34.6
TLY pmax pmax
comp=Z,35nm,1.4s
TLY MLR MLR
comp=Z,8µm,16.0s
TIGA **Tifton** **97.63** **60** IAmb IAmb 00 59 54.7
comp=Z,34nm,1.0s
TIGA **Tifton** **97.63** **60** P 00 59 53.3
baz=257
TIGA S 01 11 14.5
baz=257
Y52A **Lilburn** **97.79** **57** IAmb IAmb 00 59 56.6
comp=Z,33nm,1.1s
MARP **Paez Belalcaza** **97.86** **89** *e*P Pdif 00 59 58.4 +3.4
PB16 **IPOC Station P** **97.87 111** P Pdif 00 59 55.7 +0.5
T50A **Nancy** **97.89** **54** P **P** **00 59 53.1 -1.0**
L46A **Eue Claire** **97.94** **49** P **P** **00 59 53.5 -0.7**
L46A IAmb IAmb 01 00 12.3
comp=Z,23nm,1.0s
P48A **Milroy** **98.00** **51** IAmb IAmb 01 00 00.6
comp=Z,34nm,1.1s
V51A **Loudon** **98.00** **55** IAmb IAmb 00 59 57.5
comp=Z,40nm,1.1s
N47A **Urbana** **98.12** **50** IAmb IAmb 00 59 57.6
comp=Z,29nm,1.1s
GOGA **Godfrey** **98.17** **58** IAMs_20 IAMs_20 01 41 56.2
comp=Z,9µm,20.0s
GOGA **Godfrey** **98.17** **58** P 00 59 55.3
baz=257,SNR=5.8
GOGA S 01 11 22.5
baz=257
PTLC **Puerto Leguiza** **98.28** **92** *e*P **P** **00 59 54.4 -2.1**
E43A **Lone Tree Farm** **98.45** **44** IAmb IAmb 01 00 01.6
comp=Z,51nm,1.1s
P49A **Miami Univ. Ec** **98.55** **51** Pdiff 00 59 56.2
baz=257
P49A S 01 11 24.5
baz=257
P49A **Miami Univ. Ec** **98.55** **51** IAMs_20 IAMs_20 01 37 28.4
comp=Z,18µm,22.0s
255A **Hazlehurst** **98.66** **59** Pdif 00 59 57.7 +0.1
DWPF **Disney Wildern** **98.71** **63** Pdiff 00 59 57.6
baz=257
DWPF S 01 11 25.9
baz=257
TZTN **Tazewell** **98.80** **55** Pdiff 00 59 56.7
baz=258
ORTC **Ortega, Tolima** **98.82** **88** *e*P Pdif 01 00 04.9 +6.0
BG3 **Lake Jocassee** **98.95** **56** P **P** **00 59 58.3 -0.6**
S51A **Beattyville** **99.00** **53** IAmb IAmb 01 00 03.1
comp=Z,25nm,1.1s
GUY2C **Guyana, Caldas** **99.03** **87** *e*P **Pdif** **01 00 06.5 +6.2**
G45A **Suttons Bay** **99.07** **46** IAmb IAmb 01 00 04.4
comp=Z,46nm,0.9s
HELC **Santa Helena** **99.12** **86** *e*P **Pdif** **01 00 06.5 +5.9**
N49A **Columbus Grove** **99.25** **50** IAmb IAmb 01 00 04.1
comp=Z,32nm,1.1s
HODGE **Hodges** **99.33** **57** P **Pdif** **01 00 01.4 +0.8**
Q51A **Peebles** **99.48** **52** IAmb IAmb 01 00 06.4
comp=Z,25nm,0.9s
UREC **San Jos de Ur** **99.50** **85** *e*P **Pdif** **00 59 57.5 -4.3**
NORC **Norcasia** **99.60** **87** *e*P **Pdif** **01 00 11.4 +9.1**
MOTC **Monteria, Cord** **99.62** **84** *e*P **Pdif** **01 00 09.8 +7.4**
GLMI **Grayling** **99.75** **46** Pdiff 01 00 01.6
baz=258
GLMI **Grayling** **99.75** **46** IAmb IAmb 01 00 07.8
comp=Z,34nm,0.9s
GLMI IAMs_20 IAMs_20 01 40 34.7
comp=Z,19µm,19.0s
LPAZ **La Paz** **99.77 110** P **Pdif** **01 00 05.8 +2.0**
comp=Z,3.6nm,0.9s,baz=275,slow=3.2,SNR=6.6
LPAZ PP **PP** **01 04 11.4 +3.1**
comp=Z,5.6nm,1.2s,baz=212,slow=7.1,SNR=4.1
LPAZ LR LR 01 37 26.8
comp=Z,2µm,20.6s,baz=258,slow=31
LPAZ **La Paz** **99.77 110** P **Pdif** **01 00 04.2 +0.4**
LPAZ pmax pmax
comp=Z,13nm,1.2s
LPAZ **La Paz** **99.77 110** Pdif **Pdif** **01 00 04.2 +0.4**
AAM **Ann Arbor** **99.92** **49** Pdiff 01 00 02.8
baz=258
AAM **Ann Arbor** **99.92** **49** IAMs_20 IAMs_20 01 39 10.4
comp=Z,12µm,21.0s
ROSC **El Rosal** **99.94** **88** PP **PP** **01 04 09.1 -0.6**
comp=Z,4.6nm,0.4s,baz=170,slow=7.9,SNR=4.3
ROSC **El Rosal** **99.94** **88** IAMs_20 IAMs_20 01 35 02.6
comp=Z,9µm,22.0s
ROSC **El Rosal** **99.94** **88** *e*P **Pdif** **01 00 14.2 +10**
ACSO **Alum Creek Sta** **100.00** **51** IAMs_20 IAMs_20 01 38 41.8
comp=Z,19µm,21.0s
ACSO **Alum Creek Sta** **100.00** **51** Pdiff 01 00 02.9
baz=258
ZARC **Zaragoza, Cauc** **100.08** **85** *e*P **Pdif** **01 00 13.6 +9.1**
U54A **Nelsons Funny** **100.15** **55** Pdiff 01 00 04.1
baz=258
U54A **Nelsons Funny** **100.15** **55** IAMs_20 IAMs_20 01 40 57.1
comp=Z,18µm,20.0s
PTBC **PUERTO BERRIO** **100.24** **86** *e*P **Pdif** **01 00 04.3 -0.8**
KMSC **Kings Mountain** **100.27** **56** Pdiff 01 00 04.1
baz=258
SJCC **San Jacinto, C** **100.36** **83** *e*P **Pdif** **01 00 12.6 +6.9**
SPBC **San Pablo de B** **100.39** **87** *e*P Pdif 01 00 24.3 +18
P52A **Corning** **100.52** **52** Pdiff 01 00 05.0
baz=259
S54A **Dingess, Beckl** **100.80** **54** Pdiff 01 00 06.6
baz=259
S54A **Dingess, Beckl** **100.80** **54** IAMs_20 IAMs_20 01 38 35.2
comp=Z,17µm,22.0s
NHSC **New Hope** **100.81** **59** IAMs_20 IAMs_20 01 41 23.9
comp=Z,10µm,21.0s
NHSC **New Hope** **100.81** **59** Pdiff 01 00 06.4
baz=259
M51A **Elyria** **100.81** **50** Pdiff 01 00 06.5
baz=259
Q53A **Leroy** **100.84** **53** Pdiff 01 00 06.7
baz=259
R54A **Victor** **101.12** **53** Pdiff 01 00 08.2
baz=259
SMLC **San Martn de** **101.16** **84** *e*P **Pdif** **01 00 10.9 +1.7**
U56A **King** **101.26** **55** Pdiff 01 00 09.3
baz=259
U56A **King** **101.26** **55** IAMs_20 IAMs_20 01 39 29.4
comp=Z,18µm,21.0s
O53A **New Philadelph** **101.33** **51** Pdiff 01 00 08.6
baz=260
O53A **New Philadelph** **101.33** **51** IAMs_20 IAMs_20 01 39 34.1
comp=Z,21µm,22.0s
BLA **Blacksburg** **101.39** **54** Pdiff 01 00 09.7
baz=259
RUSC **La Rusia** **101.40** **87** *e*P **Pdif** **01 00 12.6 +1.7**
HOPE **Hope Point** **101.53 156** IAMs_20 IAMs_20 01 51 56.3
comp=Z,7µm,18.0s
SMRC **Santa Marta, M** **101.56** **82** *e*P **Pdif** **01 00 24.1 +13**
T56A **Rocky Mt** **101.66** **55** Pdiff 01 00 10.9
baz=260
R55A **Marlinton** **101.81** **53** Pdiff 01 00 11.0
baz=260
M53A **WI Miller and** **101.94** **50** Pdiff 01 00 11.5
baz=260
I51A **Listowel** **102.09** **48** Pdiff 01 00 12.4
baz=260
S56A **Natural Bridge** **102.14** **54** Pdiff 01 00 12.6
baz=260
MCWV **Mont Chateau** **102.26** **52** Pdiff 01 00 12.8
baz=260
MCWV **Mont Chateau** **102.26** **52** IAMs_20 IAMs_20 01 39 42.8
comp=Z,14µm,22.0s
L53A **Girard** **102.34** **50** Pdiff 01 00 13.2
baz=260
N54A **Moraine State** **102.37** **51** Pdiff 01 00 13.3
baz=260
R56A **Bull Pasture M** **102.39** **53** Pdiff 01 00 14.1
baz=260
ERPA **Erie** **102.56** **50** Pdiff 01 00 14.2
baz=261
S57A **Dark Hollow, R** **102.63** **54** Pdiff 01 00 14.5
baz=260
S57A **Dark Hollow, R** **102.63** **54** IAMs_20 IAMs_20 01 41 10.7
comp=Z,15µm,20.0s
Q56A **Snyder Ridge,** **102.66** **53** IAMs_20 IAMs_20 01 39 12.4
comp=Z,19µm,22.0s
Q56A **Snyder Ridge,** **102.66** **53** Pdiff 01 00 14.7
baz=260
M54A **Oil Creek Stat** **102.70** **50** Pdiff 01 00 14.7
baz=261
T58A **Grand View Acr** **102.83** **55** Pdiff 01 00 15.4
baz=260
P56A **Dayton Farm, R** **103.01** **52** Pdiff 01 00 16.3
baz=261
R57A **Stanardsville** **103.06** **54** Pdiff 01 00 16.6
baz=261
CNNC **Cliffs of the** **103.06** **57** IAMs_20 IAMs_20 01 41 31.4
comp=Z,16µm,20.0s
CNNC **Cliffs of the** **103.06** **57** Pdiff 01 00 16.8
baz=260
Q57A **Strasburg** **103.26** **53** Pdiff 01 00 17.6
baz=261
S58A **Poland Farm, P** **103.31** **54** IAMs_20 IAMs_20 01 41 39.8
comp=Z,17µm,21.0s
S58A **Poland Farm, P** **103.31** **54** Pdiff 01 00 18.0
baz=261
O56A **Blue Knob Stat** **103.33** **52** Pdiff 01 00 17.9
baz=261
O56A **Blue Knob Stat** **103.33** **52** IAMs_20 IAMs_20 01 41 08.0
comp=Z,18µm,20.0s
R58A **Rapidan** **103.46** **54** Pdiff 01 00 17.9
baz=261
R58B **Mineral** **103.50** **54** Pdiff 01 00 18.4
baz=261
N56A **West Decatur** **103.63** **51** Pdiff 01 00 18.9
baz=262
P57A **Homestead Farm** **103.63** **52** Pdiff 01 00 19.2
baz=261
M56A **Emporium** **103.80** **50** Pdiff 01 00 20.5
baz=262
Q58A **Fox Den Farm,** **103.81** **53** Pdiff 01 00 19.3
baz=261
U60A **Pendleton** **103.84** **56** Pdiff 01 00 20.3
baz=261
SSPA **Standing Stone** **103.90** **51** Pdiff 01 00 20.4
baz=262
S59A **Mechanicsville** **103.93** **54** Pdiff 01 00 20.2
baz=261
CBN **Corbin Frederi** **103.94** **54** IAMs_20 IAMs_20 01 40 52.2
comp=Z,20µm,22.0s
CBN **Corbin Frederi** **103.94** **54** Pdiff 01 00 20.4
baz=261
H53A **Bobcaygeon** **103.94** **47** Pdiff 01 00 20.6
baz=262
O57A **Amberson** **104.03** **52** Pdiff 01 00 21.0
baz=262
R59A **King George, V** **104.14** **54** Pdiff 01 00 21.0
baz=262
N57A **Milroy** **104.17** **51** Pdiff 01 00 21.6
baz=262
T60A **Surry** **104.28** **55** IAMs_20 IAMs_20 01 43 43.4
comp=Z,18µm,20.0s
L56A **Greenwood** **104.35** **50** Pdiff 01 00 22.7
baz=262
U61A **Possum Corner** **104.39** **56** IAMs_20 IAMs_20 01 41 43.3
comp=Z,15µm,20.0s
U61A **Possum Corner** **104.39** **56** Pdiff 01 00 22.6
baz=262
G54A **Lake Saint Pet** **104.40** **46** Pdiff 01 00 22.5
baz=263
EUNU **Eureka** **104.47** **10** IAMs_20 IAMs_20 01 45 41.8
comp=Z,15µm,20.0s
SDV **Santo Domingo** **104.48** **85** *e*P **Pdif** **01 00 15.9 -8.3**
ALGO **Algonquin Park** **104.50** **46** Pdiff 01 00 22.9
baz=263
O58A **Lewisberry** **104.56** **52** Pdiff 01 00 23.4
baz=262
M57A **Sunshine Farm,** **104.57** **51** Pdiff 01 00 23.6
baz=262
Q59A **Harwood** **104.59** **53** Pdiff 01 00 23.9
baz=262
K56A **Middlesex** **104.60** **49** Pdiff 01 00 23.6
baz=263
V62A **Hyde County Ai** **104.67** **57** IAMs_20 IAMs_20 01 40 49.0
comp=Z,15µm,22.0s
TAPN **Taplejung** **104.70 295** *e*P **PKKPbc** **01 16 10.0 +0.4**
N58A **Sunbury** **104.81** **51** Pdiff 01 00 24.5
baz=262
L57A **Andrews Acres** **104.86** **50** Pdiff 01 00 24.7
baz=263
P59A **Jarrettsville** **104.86** **53** Pdiff 01 00 24.6
baz=262
ODAN **Odare** **104.89 294** *e*P **PKKPbc** **01 16 09.2 +0.3**
J56A **Wolcott** **105.01** **49** Pdiff 01 00 25.5
baz=263
K57A **Scipio Center** **105.19** **49** Pdiff 01 00 26.2
baz=263
MATQ **Matagami** **105.20** **42** Pdiff 01 00 26.1
baz=264
CPUP **Villa Florida** **105.29 123** Pdiff **Pdif** **01 00 28.6 +1.2**
comp=Z,5.5nm,1.0s,baz=253,slow=7.8,SNR=4.6
CPUP PP **PKiKP** **01 04 39.1 -2.3**
comp=Z,0.7nm,0.4s,baz=276,slow=9.2,SNR=1.6
P60A **Greenville** **105.50** **52** Pdiff 01 00 27.2
baz=263
BINY **Binghamton** **105.52** **50** Pdiff 01 00 27.8
baz=263
N59A **State Game Lan** **105.53** **51** Pdiff 01 00 27.3
baz=263
L58A **Harry Jones Me** **105.60** **50** Pdiff 01 00 28.1
baz=263
RAMN **Ramite** **105.61 294** *e*P **PKKPbc** **01 16 07.9 +1.1**
J57A **Williamstown** **105.65** **49** Pdiff 01 00 28.1
baz=264
O60A **Telford** **105.73** **52** Pdiff 01 00 28.7
baz=263
K58A **Earlville** **105.83** **49** Pdiff 01 00 29.0
baz=264
M59A **Waymart** **105.86** **51** Pdiff 01 00 29.0
baz=264
E55A **Montcerf-Lytto** **105.93** **45** Pdiff 01 00 29.1
baz=264
I57A **Carthage** **105.95** **48** Pdiff 01 00 29.2
baz=264
SDDR **Presa de Saban** **106.00** **74** IAMs_20 IAMs_20 01 39 12.1
comp=Z,19µm,21.0s
N60A **Cedar Hill Far** **106.03** **51** Pdiff 01 00 29.8
baz=264
JIRN **Jiri** **106.08 295** *e*P **PKKPbc** **01 16 05.7 +0.2**
H57A **Richville** **106.20** **48** Pdiff 01 00 30.3
baz=264
L59A **Walton** **106.22** **50** Pdiff 01 00 30.6
baz=264
L59A **Walton** **106.22** **50** IAMs_20 IAMs_20 01 42 32.2
comp=Z,16µm,20.0s
SIV **San Ignacio** **106.24 112** PKiKP **PKiKP** **01 04 42.9 -0.6**
comp=Z,2.0nm,1.2s,baz=209,slow=11,SNR=3.3
SIV PP **PP** **01 04 55.5 -0.6**
comp=Z,7.0nm,1.2s,baz=262,slow=10,SNR=8.1
CRZF **Crozet Islands** **106.29 211** IAMs_20 IAMs_20 01 40 41.7
comp=Z,7µm,21.0s
O61A **Allentown** **106.36** **52** Pdiff 01 00 31.0
baz=264
D55A **Sainte-Anne-du** **106.38** **45** Pdiff 01 00 31.0
baz=265
GUN **Gumba** **106.39 295** *e*P **PKKPbc** **01 16 03.8 -0.7**
K59A **Cooperstown** **106.42** **49** Pdiff 01 00 31.5
baz=264
I58A **Old Forge** **106.42** **48** Pdiff 01 00 31.2
baz=264
M60A **Port Jervis** **106.44** **51** Pdiff 01 00 31.3
baz=264
G57A **Newington** **106.55** **47** Pdiff 01 00 31.9
baz=265
E56A **St. Veronique** **106.64** **45** Pdiff 01 00 32.4
baz=265
J59A **Piesco** **106.74** **49** Pdiff 01 00 32.9
baz=265
PKI **Pulchoki** **106.75 295** *e*P **PKKPbc** **01 16 02.8 -0.6**
PKIN **Phulchoki** **106.76 295** *e*P **PKKPbc** **01 16 02.7 -0.6**
LONY **Lake Ozonia** **106.79** **47** Pdiff 01 00 33.2
baz=265
L60A **Shokan** **106.80** **50** Pdiff 01 00 33.3
baz=264
F57A **Harrington** **106.81** **46** Pdiff 01 00 32.7
baz=265
D56A **ZEC Mazanza, M** **106.87** **45** Pdiff 01 00 33.1
baz=266
WMQ **Urumqi** **106.87 312** *e*Pdif **Pdif** **01 00 35.3 +1.3**

WMQ PP **PP** **01 05 04.6 +4.2**
WMQ S **Sdif** **01 12 33.1 -0.4**
WMQ SS **SS** **01 20 07.3 +2.7**
WMQ AMB AMB
comp=Z,1μm,6.3s
WMQ LR LR
comp=Z,2μm,20.1s
WMQ LR LR
comp=Z,3μm,22.9s
WMQ LR LR
comp=Z,6μm,23.5s
KKN Kakani 106.90 295 *e*P **PKKPbc** **01 16 02.4 -0.4**
PAL Palisades 106.94 51 Pdiff 01 00 33.6
baz=264
DMN Daman 107.02 295 *e*P **PKKPbc** **01 16 03.2 +0.7**
H58A Gabriels 107.06 48 Pdiff 01 00 34.6
baz=265
M61A Granite Spring 107.08 51 Pdiff 01 00 34.3
baz=264
K60A Five Rivers En 107.11 50 Pdiff 01 00 34.4
baz=265
G58A Ormstown 107.21 47 Pdiff 01 00 34.6
baz=266
I59A Olmsteadville 107.22 48 Pdiff 01 00 35.0
baz=265
PALK Pallekele 107.23 273 PKiKP **PKiKP** **01 04 46.0 +0.6**
comp=Z,4.2nm,0.9s,baz=352,slow=7.1,SNR=1.8
PALK Pallekele 107.23 273 IAMs_20 IAMs_20 01 51 25.2
comp=Z,7μm,20.0s
L61A Hillsdale 1, H 107.32 50 Pdiff 01 00 35.3
baz=265
H59A Cadyville 107.42 48 Pdiff 01 00 35.9
baz=266
F58A St-Lin Laurent 107.43 46 Pdiff 01 00 35.8
baz=266
NRIK Noril'sk 107.45 338 Pdiff **Pdif** **01 00 36.6 +0.7**
comp=Z,0.8nm,0.4s,baz=60,slow=4.4,SNR=2.3
NRIK PKiKP **PKiKP** **01 04 44.9 +0.7**
comp=Z,4.1nm,1.1s,baz=59,slow=2.0,SNR=3.9
NRIK PP **PP** **01 05 02.1 -1.6**
comp=Z,2.0nm,0.8s,baz=79,slow=7.7,SNR=6.2
GKN Gorkha 107.49 295 *e*P **PKKPbc** **01 16 00.5 -0.4**
J60A Lant Hill Farm 107.51 49 Pdiff 01 00 35.3
baz=265
K61A Williamstown 107.57 50 Pdiff 01 00 37.2
baz=265
I60A Shoreham 107.65 48 Pdiff 01 00 37.2
baz=266
M62A Hamden 107.74 51 Pdiff 01 00 37.5
baz=265
ALE Alert 107.81 7 IAMs_20 IAMs_20 01 47 39.2
comp=Z,12μm,20.0s
G59A Clarenceville 107.82 47 Pdiff 01 00 37.3
baz=266
E58A La Victoria 107.84 46 Pdiff 01 00 37.7
baz=266
L61B Northampton 107.99 50 Pdiff 01 00 37.8
baz=266
H60A Morristown 108.12 48 Pdiff 01 00 38.9
baz=266
J61A Chester 108.15 49 Pdiff 01 00 39.6
baz=266
F59A Saint Guilaume 108.15 46 Pdiff 01 00 39.1
baz=267
K62A Royalston 108.33 50 Pdiff 01 00 40.2
baz=266
KOLN Koldanda 108.37 295 *e*P **PKKPbc** **01 15 57.4 -0.8**
M63A Gales Ferry 108.38 51 Pdiff 01 00 40.1
baz=266
G60A Masonville 108.42 47 Pdiff 01 00 40.3
baz=267
LBNH Lisbon 108.66 48 Pdiff 01 00 41.6
baz=267
H61A Lyndonville 108.67 48 Pdiff 01 00 40.6
baz=267
J62A Henniker 108.68 49 Pdiff 01 00 41.4
baz=266
F60A Warwick 108.73 46 Pdiff 01 00 40.8
baz=267
L63A North Scituate 108.74 51 Pdiff 01 00 41.9
baz=266
HRV Adam Dziewonsk 108.82 50 Pdiff 01 00 42.3
baz=266
K63A Dunstable 108.85 50 Pdiff 01 00 42.4
baz=266
D59A Saint-Raymond 108.86 45 Pdiff 01 00 41.8
baz=268
G61A St-Isidore-de- 109.00 47 Pdiff 01 00 42.9
baz=267
M64A Tiverton 109.01 51 Pdiff 01 00 43.1
baz=266
I62A Tamworth 109.06 48 Pdiff 01 00 43.7
baz=267
ZSN Zaisan 109.08 315 *e*PKiKP **PKiKP** **01 04 46.6 -1.3**
baz=315
E60A Ste Agathe de 109.10 46 Pdiff 01 00 42.7
baz=268
ZALV Zalesovo Beam 109.21 322 Pdiff **Pdif** **01 00 44.7 +0.6**
comp=Z,0.5nm,0.2s,baz=90,slow=1.5,SNR=4.8
ZALV PKiKP **PKiKP** **01 04 47.7 -0.2**
comp=Z,1.9nm,0.6s,baz=58,slow=1.5,SNR=8.1
ZALV PP **PP** **01 05 16.7 -0.3**
comp=Z,3.3nm,0.9s,baz=82,slow=3.1,SNR=4.3
ZALV PKKPbc **PKKPbc** **01 15 54.0 -2.0**
comp=Z,0.6nm,0.5s,baz=242,slow=3.2,SNR=3.5
J63A Strafford 109.22 49 Pdiff 01 00 44.4
baz=267
H62A Milan 109.23 48 Pdiff 01 00 44.3
baz=267
L64A Middleborough 109.31 51 Pdiff 01 00 44.5
baz=267
F61A St Evariste 109.40 46 Pdiff 01 00 44.5
baz=268
M65A Busby, Falmout 109.44 51 Pdiff 01 00 44.5
baz=267
D60A Saint Jean D'O 109.48 45 Pdiff 01 00 45.1
baz=268
I63A Otisfield 109.61 48 Pdiff 01 00 46.3
baz=268
G62A West of Eustis 109.70 47 IAMs_20 IAMs_20 01 47 04.1
comp=Z,16μm,19.0s
G62A West of Eustis 109.70 47 Pdiff 01 00 46.5
baz=268
E61A Lac Etchemin 109.77 46 Pdiff 01 00 46.7
baz=268
D61A St Aubert, Com 109.99 45 Pdiff 01 00 47.6
baz=269
H63A New Sharon 110.03 48 Pdiff 01 00 47.6
baz=268
I64A Boothbay 110.29 48 Pdiff 01 00 48.5
baz=268
G63A Kingsbury 110.34 47 Pdiff 01 00 48.5
baz=268
PKME Peaks-Kenny Pk 110.58 47 IAMs_20 IAMs_20 01 46 18.3
comp=Z,12μm,20.0s
PKME Peaks-Kenny Pk 110.58 47 Pdiff 01 00 50.1
baz=269
H64A Troy 110.61 48 Pdiff 01 00 50.2
baz=269
F63A Nahmakanta, Br 110.72 47 IAMs_20 IAMs_20 01 44 30.0
comp=Z,11μm,22.0s
F63A Nahmakanta, Br 110.72 47 Pdiff 01 00 50.7
baz=269
MK31 Makanchi Array 110.83 315 *i* PKiKP **PKiKP** **01 04 51.1 -0.1**
MKAR Makanchi Array 110.83 315 Pdiff **Pdif** **01 00 51.8 +0.3**
comp=Z,0.4nm,0.8s,baz=79,slow=3.1,SNR=1.9
MKAR PKiKP **PKiKP** **01 04 50.6 -0.6**
comp=Z,2.1nm,0.6s,baz=125,slow=1.1,SNR=13
MKAR PKKPbc **PKKPbc** **01 15 49.5 -1.1**
comp=Z,1.2nm,0.9s,baz=255,slow=3.3,SNR=5.4
MKAR PKKPab **PKKPab** **01 15 59.6 +0.8**
comp=Z,3.0nm,1.0s,baz=262,slow=3.7,SNR=8.2
MKAR PKKP **PKKPdf** **01 16 14.6 +6.0**
comp=Z,0.8nm,0.8s,baz=264,slow=4.9,SNR=3.8
G64A Maxfield 110.95 47 Pdiff 01 00 51.3
baz=269
DGAR Diego Garcia 111.02 256 IAMs_20 IAMs_20 01 53 22.2
comp=Z,7μm,18.0s
MAKZ Makanchi 111.04 315 PKiKP **PKiKP** **01 04 49.3 -2.3**
E63A Oxbow 111.20 46 Pdiff 01 00 52.2
baz=270
F64A Sherman 111.24 46 Pdiff 01 00 53.1
baz=270
F64A Sherman 111.25 46 IAMs_20 IAMs_20 01 47 42.9
comp=Z,13μm,21.0s
H65A Eastbrook 111.31 48 Pdiff 01 00 53.1
baz=269
D63A Stockholm 111.41 45 Pdiff 01 00 54.0
baz=270
E64A Bridgewater 111.61 46 Pdiff 01 00 54.8
baz=270
NEEM North Greenlan 111.66 11 ⇓ *i*P **PKiKP** **01 04 52.5 +0.2**
NEEM *i* 01 05 23.8
NEEM IAMs_20 IAMs_20 01 46 58.0
comp=Z,21μm,21.5s
G65A Princeton 111.80 47 Pdiff 01 00 55.3
baz=270
G65A Princeton 111.80 47 IAMs_20 IAMs_20 01 46 24.6
comp=Z,17μm,21.0s
H66A Whiting 111.97 48 Pdiff 01 00 55.6
baz=270
SEM Semipalatinsk 112.11 319 *e*PP **PP** **01 05 35.3 -3.1**
baz=318
SEM *e*SP SP 01 15 08.4 +0.9
baz=318
SEM LR LR 01 43 21.6
comp=Z,2μm,23.7s,baz=318
KURK Kurchatov 113.13 319 *i* PKiKP **PKiKP** **01 04 54.9 -0.5**
KURBB Kurchatov Arra 113.20 319 PKiKP **PKiKP** **01 04 54.9 -0.6**
comp=Z,2.6nm,0.7s,baz=93,slow=1.8,SNR=25
KURBB PP **PP** **01 05 44.3 -1.5**
comp=Z,3.2nm,1.1s,baz=86,slow=6.8,SNR=6.9
KURBB PKKPbc **PKKPbc** **01 15 42.4 -0.4**
comp=Z,1.5nm,0.8s,baz=263,slow=4.2,SNR=14
KURBB Kurchatov Arra 113.20 319 PKiKP **PKiKP** **01 04 53.0 -2.5**
TDK Taldyqorghan 113.56 313 LR LR 01 45 17.1
comp=Z,4μm,23.2s,baz=313
BBSR BB Station 113.64 61 IAMs_20 IAMs_20 01 49 36.1
comp=Z,8μm,20.0s
MDOK Medeo 114.59 311 *e*PKP PKPdf 01 04 56.6 -2.1
baz=311
MDOK LR LR 01 46 57.8
comp=Z,1μm,20.6s,baz=311
MDOK Medeo 114.59 311 *e*PKiKP PKPdf 01 04 56.5 -2.2
MNCI Minicoy 114.83 272 IAMs_20 IAMs_20 01 57 02.6
comp=Z,6μm,19.0s
KUU Kurty 115.08 312 *e*PKP **PKiKP** **01 04 56.9 -2.5**
baz=312
KUU *e*PP **PP** **01 05 56.2 -3.2**
baz=312
KUU *e*SP SP 01 15 33.7 -1.2
baz=312
KUU Kurty 115.08 312 *e*PKiKP **PKiKP** **01 04 56.9 -2.5**
KUU *e* 01 05 56.1
KUU *e*SP SP 01 15 33.7 -1.2
KSH Kashi 115.49 307 PKP **PKiKP** **01 05 02.8 +2.4**
KSH PP PP 01 06 11.2 +8.7
KSH SS SS 01 22 06.1 +6.2
KSH AMB AMB
comp=Z,1μm,6.4s
KSH LR LR
comp=Z,3μm,22.8s
KSH LR LR
comp=Z,2μm,17.1s
KSH LR LR
comp=Z,2μm,19.6s
BBGH Gun Hill 116.00 83 IAMs_20 IAMs_20 01 45 26.7
comp=Z,9μm,22.0s
KBS Kingsbay 116.33 359 *i* P **PKiKP** **01 05 01.7 +0.9**
KBS IAmb IAmb 01 05 02.4
comp=Z,39nm,0.9s
KBS IAMs_20 IAMs_20 01 44 28.8
comp=Z,15μm,25.1s
AAK Ala-Archa 116.49 310 PKP **PKPdf** **01 05 01.5 -0.9**
comp=Z,0.7nm,0.5s,baz=143,slow=5.1,SNR=3.1
AAK PKKPbc **PKKPbc** **01 15 31.9 +0.5**
comp=Z,5.9nm,1.1s,baz=217,slow=3.9,SNR=9.2
AAK Ala-Archa 116.49 310 PKiKP **PKiKP** **01 05 03.7 +1.4**
AAK Ala-Archa 116.49 310 *c* *i*PKiKP **PKPdf** **01 05 02.0 -0.3**
AAK pmax pmax
comp=Z,15nm,1.7s
AAK MLR MLR
comp=Z,7μm,19.0s
AAK Ala-Archa 116.49 310 **PKiKP** **01 05 03.2 +0.9**
BTLS Baital 116.64 313 *e*PKP **PKPdf** **01 05 00.4 -2.0**
baz=313
BTLS *e*PP **PP** **01 06 07.3 -2.9**
baz=313
BTLS Baital 116.64 313 *e*PKiKP **PKPdf** **01 05 00.3 -2.0**
BTLS *e* 01 06 07.3
SPITS Spitsbergen Ar 116.95 358 PKP **PKPdf** **01 05 01.6 -0.5**
comp=Z,16nm,0.8s,baz=113,slow=7.4,SNR=7.3
BRZS Berezniki 117.00 319 *e*PKP **PKPdf** **01 05 01.3 -1.6**
baz=319
BRZS Berezniki 117.00 319 *e*PKiKP **PKPdf** **01 05 01.3 -1.6**
DAG Danmarks Havn 117.17 6 *i* P **PKPdf** **01 05 01.7 -0.8**
DAG IAmb IAmb 01 05 03.0
comp=Z,6.3nm,1.0s
DAG *i* 01 06 08.8
DAG IAMs_20 IAMs_20 01 49 12.5
comp=Z,11μm,22.9s
DAG Danmarks Havn 117.17 6 *i* PKiKP **PKPdf** **01 05 01.6 -0.8**
DAG pmax pmax
comp=Z,6.0nm,1.0s
DAG MLR MLR
comp=Z,11μm,23.0s
BDFB Brasilia 117.84 117 PKP **PKPdf** **01 05 04.8 -0.8**
comp=Z,20nm,0.9s,baz=209,slow=1.8,SNR=7.1
BVAR Borovoye Array 117.87 322 PKP **PKPdf** **01 05 03.3 -1.1**
comp=Z,3.5nm,0.6s,baz=203,slow=7.2,SNR=17
BRVK Borovoye 117.93 322 *i* PKiKP **PKPdf** **01 05 03.6 -0.9**
BRVK Borovoye 117.93 322 PKPdf **PKPdf** **01 05 04.5 -0.1**
BRVK Borovoye 117.93 322 IAMs_20 IAMs_20 01 56 06.8
comp=Z,7μm,20.0s
DZA Taraz 118.79 311 *e*PKP **PKPdf** **01 05 04.7 -1.9**
baz=311
DZA Taraz 118.79 311 *e*PKiKP **PKPdf** **01 05 04.6 -1.9**
DBG Daneborg 119.15 8 *i* P **PKPdf** **01 05 06.1 -0.2**
DBG IAmb IAmb 01 05 08.0
comp=Z,11nm,0.9s
DBG IAMs_20 IAMs_20 02 00 47.8
comp=Z,10μm,18.3s
KK31 Karatay Array 119.37 311 *i* PKiKP **PKPdf** **01 05 06.9 -0.8**
IUG luzhnay 119.83 310 *e*PKP **PKPdf** **01 05 06.9 -1.8**
baz=310
IUG *e*PP **PP** **01 06 29.8 -2.8**
baz=310
IUG luzhnay 119.83 310 *e*PKiKP **PKPdf** **01 05 06.9 -1.8**
IUG *e* 01 06 29.8
GAR Garm 119.89 306 IAMs_20 IAMs_20 02 07 15.9
comp=Z,6μm,21.0s
CHGR Chuyangaron 120.82 306 IAMs_20 IAMs_20 01 55 02.6
comp=Z,8μm,21.0s
KBL Kabul 121.17 301 PKiKP **PKiKP** **01 05 12.2 +0.4**
KBL MLR MLR
comp=Z,2μm,22.0s
KBL Kabul 121.17 301 PKPdf **PKiKP** **01 05 12.2 +0.4**
KBL Kabul 121.17 301 P **PKiKP** **01 05 14.1 +2.3**
SNR=15
ANGG Ammassalik, Gr 121.72 20 IAMs_20 IAMs_20 01 49 49.7
comp=Z,14μm,22.0s
SVE Sverdlovsk 122.11 328 *c* *i*PKiKP **PKiKP** **01 05 14.4 +1.8**
SVE pmax pmax
comp=Z,33nm,1.5s
SCO Scoresbysund 122.16 11 PKiKP **PKiKP** **01 05 12.8 +0.5**
SCO MLR MLR
comp=Z,12μm,20.0s
SCO Scoresbysund 122.16 11 PKPdf **PKiKP** **01 05 12.8 +0.5**
SCO IAMs_20 IAMs_20 01 55 10.1
comp=Z,12μm,20.0s
ARU Arti 123.32 328 PKP **PKPdf** **01 05 14.5 -0.3**
comp=Z,4.7nm,0.7s,baz=104,slow=1.8,SNR=10
ARU PP **PP** **01 06 54.0 -1.5**
comp=Z,4.0nm,1.0s,baz=58,slow=7.6,SNR=4.1
ARU PKKPbc **PKKPbc** **01 15 05.1 -1.2**
comp=Z,1.0nm,0.7s,baz=199,slow=8.0,SNR=6.4
ARU Arti 123.32 328 PKPdf **PKPdf** **01 05 14.6 -0.3**
ARU IAMs_20 IAMs_20 01 54 39.3
comp=Z,7μm,22.0s
KEV Kevo 124.15 352 PKiKP **PKiKP** **01 05 16.2 -0.1**
KEV MLR MLR
comp=Z,8μm,21.0s
KEV Kevo 124.15 352 PKPdf **PKiKP** **01 05 16.2 -0.1**
KEV IAMs_20 IAMs_20 01 56 47.7
comp=Z,8μm,21.0s
LVZ Lovozero 124.45 348 *i* PKiKP **PKPdf** **01 05 16.6 -0.1**
LVZ Lovozero 124.45 348 **PKPdf** **01 05 16.2 -0.5**
LVZ IAMs_20 IAMs_20 01 59 34.3
comp=Z,10μm,20.0s
ARCES ARCESS Array B 124.56 352 PKP **PKPdf** **01 05 16.6 -0.3**
comp=Z,35nm,0.9s,baz=351,slow=0.7,SNR=32
ARCES ARCESS Array B 124.56 352 PKiKP **PKPdf** **01 05 16.7 -0.1**
ARCES ARCESS Array B 124.56 352 **PKPdf** **01 05 16.7 -0.1**
APA Apatity 124.99 348 ⇑ *i*PKiKP **PKPdf** **01 05 15.2 -2.5**
APA *i* 01 07 12.0
APA *i* 01 12 20.0
APA *i* 01 16 57.0
APA pmax pmax
comp=Z,19nm,0.9s
AB31 Akbulak array 125.21 320 *i* PKiKP **PKPdf** **01 05 17.4 -1.2**
ABKAR Akbulak array 125.21 320 PKPdf **PKPdf** **01 05 18.2 -0.4**
AKTO Aktyubinsk 125.97 322 PKP **PKPdf** **01 05 19.9 -0.2**
comp=Z,5.8nm,0.9s,baz=65,slow=2.7,SNR=12
PRGR Permogore 126.10 338 *e*PKiKP **PKPdf** **01 05 18.7 -1.2**
PRGR pmax pmax
comp=Z,36nm,0.9s
KIRV Kirov 126.51 334 *i* PKiKP **PKPdf** **01 05 20.5 -0.3**
ABPO Ambohimpanom 127.47 231 PKiKP **PKiKP** **01 05 25.8 +1.1**
ABPO Ambohimpanom 127.47 231 PKPdf **PKiKP** **01 05 25.8 +1.1**
KLMR Klimovskoe 128.75 340 *e*PKiKP **PKPdf** **01 05 23.7 -1.3**
KLMR *e* 01 12 23.9
KLMR *e*SS SS 01 24 47.2 +0.7
KLMR pmax pmax
comp=Z,112nm,1.4s
KLMR MLR MLR
comp=Z,6μm,22.0s
KLMR Klimovskoe 128.75 340 *e*PKPdf **PKPdf** **01 05 23.7 -1.3**
KLMR AMP 01 05 30.8
comp=Z,112nm,1.4s
KLMR *e*SKSac **SKSac** **01 12 24.0 -6.6**
KLMR *e*SKSac **SKSac** **01 12 24.0 -6.6**
KLMR *e*SKKSac **SKKSac** **01 14 23.0 -3.3**
KLMR *e*SKKSac **SKKSac** **01 14 23.0 -3.3**
KLMR *e*SKKPbc **SKKPbc** **01 18 35.7 -1.3**
KLMR *e*SS **SS** **01 24 47.3 +0.8**
KLMR *e*SS **SS** **01 24 47.3 +0.8**
KLMR LQ LQ 01 50 21.6
KLMR LQ LQ 01 50 21.6
KLMR LR LR 01 53 08.5
KLMR AMP 02 01 57.4
comp=Z,6μm,21.8s
GEYT Alibeck 129.52 307 PKP **PKiKP** **01 05 27.7 -0.3**
comp=Z,5.5nm,0.9s,baz=331,slow=8.5,SNR=10
GEYT Alibeck 129.52 307 **PKiKP** **01 05 27.9 -0.2**
GYA0B ALIBECK ARRAY 129.52 307 IAMs_20 IAMs_20 02 13 14.6
comp=Z,6μm,21.0s
JLN Jalan Bani Buh 129.79 286 P **PKiKP** **01 05 30.0 +1.0**
SNR=5.4
WSAR Wadi Sarin 130.54 288 PKP **PKPdf** **01 05 29.4 -0.2**
comp=Z,2.7nm,0.8s,baz=160,slow=6.4,SNR=5.3
WSAR SKPbc **SKPbc** **01 08 52.1 +1.0**
comp=Z,5.8nm,1.1s,baz=153,slow=6.8,SNR=2.5
SUR Sutherland 130.66 196 P **PKiKP** **01 05 31.0 +0.2**
BELG Belogornoye 130.86 328 PKP **PKPdf** **01 05 29.6 +0.3**
comp=Z,20nm,0.7s,baz=359,slow=0.8,SNR=13
BELG PP **PP** **01 07 40.9 -4.4**
comp=Z,13nm,1.1s,baz=198,slow=3.2,SNR=1.7
BELG SKPbc **SKPab** **01 08 56.0 +4.6**
comp=Z,11nm,0.9s,baz=177,slow=23,SNR=5.9
BELG Belogornoye 130.86 328 *e*PKiKP **PKPdf** **01 05 28.8 -0.5**
JMDG Jabal Madar 131.01 286 P **PKiKP** **01 05 31.9 +0.5**
SMDO Samad 131.07 287 P **PKiKP** **01 05 33.7 +2.0**
SNR=8.8
MHTO MHTO 131.09 285 P **PKiKP** **01 05 33.2 +1.6**
DQM DQM 131.44 283 P **PKiKP** **01 05 36.3 +3.9**
FINES FINESS Array B 131.90 348 PKhKP PKPpre 01 05 19.2
comp=Z,3.2nm,0.9s,baz=81,slow=1.9,SNR=11
FINES PKP **PKPdf** **01 05 31.4 +0.5**
comp=Z,14nm,0.8s,baz=82,slow=4.0,SNR=22
FINES SKPbc **SKPab** **01 08 57.2 +1.7**
comp=Z,1.7nm,0.8s,baz=7.0,slow=13,SNR=1.4
FINES FINESS Array B 131.90 348 PKPdf **PKPdf** **01 05 31.2 +0.2**
SOHO SOHO 132.46 289 *i* PKPdf **PKPdf** **01 05 32.2 -1.0**
SNR=10
SOHO SOHO 132.46 289 P **PKiKP** **01 05 33.9 -0.4**
BANOM Banah 132.61 291 P **PKiKP** **01 05 34.6 0.0**
MDH Madha 132.64 290 *i* PKPdf **PKPdf** **01 05 32.4 -1.1**
SNR=8.1
UOSS Minazif 132.74 290 *i* PKPdf **PKPdf** **01 05 31.9 -1.9**
SNR=8.8
UOSS Minazif 132.74 290 PKPdf **PKPdf** **01 05 34.1 +0.4**
UOSS Minazif 132.74 290 P **PKiKP** **01 05 34.7 -0.2**
SHME Shamm 132.75 291 *i* PKPdf **PKPdf** **01 05 33.2 -0.5**
SNR=5.8
SHME Shamm 132.75 291 P **PKiKP** **01 05 38.2 +3.4**
BOSA Boshof 132.75 202 PKhKP PKPpre 01 05 25.2
comp=Z,0.8nm,0.5s,baz=218,slow=3.3,SNR=0.8
BOSA PKP **PKiKP** **01 05 34.5 -0.6**
comp=Z,11nm,1.1s,baz=124,slow=2.8,SNR=6.3
BOSA SKPbc **SKPab** **01 09 02.1 +1.6**
comp=Z,6.2nm,1.0s,baz=153,slow=9.0,SNR=2.8
MASF Masafi 132.76 290 P **PKiKP** **01 05 36.4 +1.5**
MSFE Esma-Masafi 132.76 290 *i* PKiKP **PKiKP** **01 05 34.7 -0.3**
SNR=6.9
HATD Hatta, Dubai 132.81 290 *i* PKiKP **PKiKP** **01 05 34.7 -0.3**
SNR=9.2
HATD Hatta, Dubai 132.81 290 P **PKiKP** **01 05 35.0 0.0**
SNR=7.8
ASHO Ashiyiah 132.88 290 PKPdf **PKPdf** **01 05 33.1 -0.9**
RCBR Riachuelo 132.88 113 SKPbc **SKPab** **01 09 02.7 +1.3**
comp=Z,6.3nm,1.0s,baz=314,slow=2.6,SNR=5.7
RCBR Riachuelo 132.88 113 PKiKP **PKPdf** **01 05 34.6 +0.2**
RCBR Riachuelo 132.88 113 PKPdf **PKPdf** **01 05 34.6 +0.2**
ALNE Al Ain 133.17 289 PKiKP **PKiKP** **01 05 37.4 +1.6**
ALNE Al Ain 133.17 289 P **PKiKP** **01 05 38.9 +3.2**
MOS Moscow 133.21 336 *i* PKiKP **PKPdf** **01 05 34.0 +0.4**
MOS *e* 01 08 05.8
MOS *e*PPP PPP 01 10 55.7
MOS pmax pmax
comp=Z,110nm,2.3s
NAZ Nazwa, Dubai 133.23 290 P **PKiKP** **01 05 37.0 +1.2**
FAQ Al Faqa, Dubai 133.30 290 PKPdf **PKPdf** **01 05 33.4 -1.4**
ASUD Al Ashush, Dub 133.54 289 PKPdf **PKPdf** **01 05 34.0 -1.2**
ASUD Al Ashush, Dub 133.54 289 P **PKiKP** **01 05 38.2 +1.7**
DMTO DMTO 133.75 280 P **PKiKP** **01 05 37.2 +0.2**
AJN Ajban 133.85 289 PKPdf **PKPdf** **01 05 33.1 -2.7**
SOCY Socotra 134.00 272 PKPdf **PKiKP** **01 05 37.5 -0.2**
SOCY IAMs_20 IAMs_20 01 59 06.9
comp=Z,5μm,21.0s
SOCY Socotra 134.00 272 P **PKiKP** **01 05 40.3 +2.5**
SNR=11
OBN Obninsk 134.08 337 ⇑ *e*PKiKP **PKPdf** **01 05 35.1 -0.2**
OBN *e* 01 08 10.2
OBN *e*PPP PPP 01 11 04.0
OBN pmax pmax
comp=Z,162nm,2.6s
OBN Obninsk 134.08 337 PKPdf **PKPdf** **01 05 35.7 +0.4**
OBN IAMs_20 IAMs_20 02 05 29.4
comp=Z,7μm,21.0s
NB2 NORSAR Subarra 134.24 357 PKPdf **PKPdf** **01 05 36.0 +0.5**
baz=14,slow=1.8
NOA NORSAR Array B 134.24 357 PKP **PKPdf** **01 05 35.1 -0.4**
comp=Z,7.6nm,0.9s,baz=13,slow=4.0,SNR=16
NOA PP **PP** **01 08 11.3 +4.9**
comp=Z,4.4nm,1.1s,baz=5.3,slow=5.8,SNR=3.5
VSU Vasula 134.42 345 *e*P **PKiKP** **01 05 36.9 -0.3**
VSU Vasula 134.42 345 *i* PKiKP **PKPdf** **01 05 36.2 +0.4**
VRH Novokhopyorsk 134.52 330 *i* PKiKP **PKPdf** **01 05 36.4 +0.2**
VRH *e* 01 08 06.2
VRH *e*SS SS 01 25 55.5 -1.9
VRH pmax pmax
comp=Z,40nm,1.6s
DOK Doka 134.59 281 P **PKiKP** **01 05 39.7 +1.0**
MTSE Matsula 134.86 347 *e*P **PKPdf** **01 05 37.2 +0.6**
LPSR Galich'ya Gora 134.90 333 *i* PKiKP **PKPdf** **01 05 37.6 +0.7**
LPSR *e* 01 08 07.1
LPSR *e*SS SS 01 26 00.3 -1.5
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR MLR MLR
comp=Z,6μm,19.0s
ABTO Aybut 135.29 279 P **PKiKP** **01 05 41.8 +1.5**
VORR Voronezh 135.41 331 *e*PKiKP **PKPdf** **01 05 35.0 -2.9**
VORR pmax pmax
comp=Z,300nm,2.6s
MAK Makhachkala 135.59 317 *e*P **Pdif** **01 02 33.0 -8.6**
MAK pmax pmax
comp=Z,237nm,1.4s
KONO Kongsberg 135.71 358 IAMs_20 IAMs_20 02 05 35.7
comp=Z,8μm,21.0s
VSR Storozhevoye 135.74 331 *i* PKiKP **PKPdf** **01 05 38.9 +0.4**
VSR *e* 01 08 15.7
VSR *e*SS SS 01 26 11.7 -0.2
VSR pmax pmax
comp=Z,40nm,1.4s
GROC Groznyy 136.60 318 *e*PKiKP **PKiKP** **01 05 41.9 -0.2**
GROC *e* 01 08 18.9
GROC pmax pmax

comp=Z,23nm,1.1s
ISAL Salakas 137.14 344 *e*P **PKiKP** **01 05 46.3 +3.5**
IDID Didziasalis 137.20 343 *e*P **PKiKP** **01 05 42.5 -0.4**
IIGN Ignalina 137.31 344 *e*P **PKiKP** **01 05 45.6 +2.4**
GOF Gofitskoye 137.39 322 ⇓*e*PKIKP **PKiKP** **01 05 45.9 +2.2**
GOF pmax pmax
comp=Z,25nm,0.7s
NACGM Naroch 137.54 343 *i* PKP PKPpre 01 05 34.1
NACGM *i* PKP PKPpre 01 05 34.1
NACGM *i* PKP PKPpre 01 05 34.1
NACGM *i* PP PP 01 08 17.2 -10
NACGM *i* PPP PPP 01 11 15.6
NACGM *i* SKS **SKSdf** **01 12 42.7 -7.5**
NACGM *i* SKKS SKKSac 01 15 00.4 -20
NACGM *i* PS PS 01 18 23.9 -32
NACGM *i* PS PS 01 18 23.9 -32
NACGM *i* SS **SS** **01 26 22.7 -10**
NACGM *i* SSS SSS 01 31 27.2
NACGM *i* LQ LQ 01 48 12.3
NACGM *i* LR LR 01 54 56.2
MNK Minsk 137.57 342 ⇓*e*PKIKP PKiKP 01 05 56.0 +12
MNK *e* 01 08 34.0
MNK *e*PPP PPP 01 11 32.0
MNK *e*SS SS 01 26 32.0 -1.2
MNK pmax pmax
comp=Z,150nm,1.0s
MNK Minsk 137.57 342 *i* PKP **PKPdf** **01 05 42.1 +0.3**
comp=E,3.0nm,0.9s
MNK *i* PKP **PKPdf** **01 05 42.1 +0.3**
comp=N,19nm,0.8s
MNK *i* PKP **PKPdf** **01 05 42.1 +0.3**
comp=Z,45nm,0.9s
MNK *i* PP **PP** **01 08 28.3 +0.8**
MNK *i* PPP PPP 01 11 28.0
MNK *i* SKS SKSdf 01 13 05.7 +15
MNK *i* SKKS **SKKSdf** **01 22 19.9 -8.2**
MNK *i* SS **SS** **01 26 38.1 +5.0**
MNK *i* SSS SSS 01 31 28.1
MNK *i* LQ LQ 01 58 38.4
MNK *i* LR LR 02 06 49.6
MNK *i* LRM MLR 02 07 22.2
comp=E,416nm,23.1s
MNK *i* LRM MLR 02 08 32.8
comp=Z,5µm,19.0s
MNK *i* LRM MLR 02 08 38.2
comp=N,5µm,16.3s
PBUR Paburge 137.74 347 *e*P PKPpre 01 05 31.6
PABE Paberze 137.75 345 *e*P PKPpre 01 05 32.5
NCK Nalchik 137.86 319 *i* PKIKP **PKiKP** **01 05 44.7 0.0**
ZEI Tsey 138.02 318 *i* PKIKP **PKPdf** **01 05 41.9 -1.4**
ZEI pmax pmax
comp=Z,7.0nm,1.0s
LAWE Loch Awe, Argy 138.13 10 *e*P **PKPdf** **01 05 39.5 -3.3**
KBZ Khabaz 138.18 320 PKhKP PKPpre 01 05 36.0
comp=Z,2.3nm,0.9s,baz=135,slow=7.1,SNR=3.7
KBZ PP **PP** **01 08 31.0 -1.0**
comp=Z,2.6nm,0.9s,baz=64,slow=12,SNR=2.2
KVAR Kislovodsk Arr 138.19 320 PKP **PKPdf** **01 05 43.2 -0.2**
comp=Z,5.6nm,1.1s,baz=153,slow=2.3,SNR=2.9
KVAR PP **PP** **01 08 28.9 -3.3**
comp=Z,3.7nm,0.9s,baz=87,slow=22,SNR=1.8
KIV Kislovodsk 138.19 320 *i* PKiKP **PKiKP** **01 05 45.2 -0.3**
SNR=6.5
KIV Kislovodsk 138.19 320 *i* PKIKP **PKPdf** **01 05 40.0 -3.4**
KIV *e* 01 12 48.2
KIV *e*SS SS 01 26 36.5 -5.5
KIV *e*SSS SSS 01 31 46.6
KIV pmax pmax
comp=Z,18nm,1.1s
KIV MLR MLR
comp=Z,18µm,24.0s
KIV Kislovodsk 138.19 320 IAMs_20 IAMs_20 02 11 35.3
comp=Z,5µm,20.0s
MATP Matopo 138.49 212 PKhKP PKPpre 01 05 33.4
comp=Z,2.3nm,0.4s,baz=151,slow=3.7,SNR=16
MATP PP **PP** **01 08 35.0 +1.4**
comp=Z,5.2nm,1.0s,baz=145,slow=7.6,SNR=3.0
NEY Neytrino 138.54 319 *i* PKIKP **PKPdf** **01 05 45.1 +0.9**
GNI Garni 138.67 314 PKP **PKPdf** **01 05 43.7 -0.9**
comp=Z,7.4nm,1.2s,baz=243,slow=3.9,SNR=5.4
GNI Garni 138.67 314 PKPdf **PKPdf** **01 05 44.8 +0.3**
GNI Garni 138.67 314 PKIKP **PKPdf** **01 05 45.4 +0.9**
GNI MLR MLR
comp=Z,5µm,22.0s
GNI Garni 138.67 314 **PKPdf** **01 05 45.4 +0.9**
GNI Garni 138.67 314 IAMs_20 IAMs_20 02 07 29.4
comp=Z,5µm,22.0s
AKH Akhalkalaki 138.95 317 ⇑P **PKPdf** **01 05 44.1 -0.9**
SUW Suwalki 139.30 345 *e*PKP **PKiKP** **01 05 46.3 -1.0**
SUW *e*PP PP 01 08 46.0 +7.8
SUW Suwalki 139.30 345 *e*P **PKPdf** **01 05 41.8 -3.2**
SUW Suwalki 139.30 345 PKIKP **PKiKP** **01 05 46.8 -0.5**
SUW MLR MLR
comp=Z,8µm,21.0s
SUW Suwalki 139.30 345 PKPdf **PKiKP** **01 05 46.8 -0.5**
SUW IAMs_20 IAMs_20 02 05 50.0
comp=Z,8µm,21.0s
SOC Sochi 140.20 322 *e*PKHKP PKPpre 01 05 39.8
SOC *i* 01 05 45.6
SOC *e* 01 08 40.0
SOC *e*PPP PPP 01 11 52.1
SOC *e* 01 12 59.5
SOC *e*SSS SSS 01 32 21.7
SOC MLR MLR
comp=Z,7µm,21.0s
AKASG Malin Array Be 140.31 338 PKhKP PKPpre 01 05 40.0
comp=Z,3.4nm,0.6s,baz=36,slow=3.8,SNR=11
AKASG SKKPbc SKKPbc 01 17 49.2 -4.3
comp=Z,0.5nm,0.4s,baz=232,slow=6.6,SNR=4.3
AKASG Malin Array Be 140.31 338 PKHKP PKPpre 01 05 41.3
AKASG 01 05 48.2
AKASG Malin Array Be 140.31 338 PKPpre 01 05 41.2
AKASG PKPdf **PKPdf** **01 05 48.2 +1.2**
AKBB Malin Array Si 140.31 338 IAMs_20 IAMs_20 02 07 37.9
comp=Z,11µm,22.0s
RGN Rugen 140.53 354 IAMs_20 IAMs_20 02 05 42.6
comp=Z,8µm,22.0s
GEVA Gevas 140.65 313 IAMs_20 IAMs_20 02 07 39.9
comp=Z,5µm,22.0s
ANN Anapa 140.79 325 *i* PKIKP **PKPdf** **01 05 49.1 +1.1**
ANN *e* 01 05 53.6
ANN *e* 01 08 48.2
ANN *e*PPP PPP 01 12 00.9
ANN *e*SS SS 01 27 08.8 -3.1
ANN pmax pmax
comp=Z,58nm,1.0s
ANN pmax pmax
comp=N,45nm,1.1s
ANN pmax pmax
comp=E,23nm,0.9s
ANN MLR MLR
comp=N,9µm,21.0s
ANN MLR MLR
comp=Z,5µm,20.0s
ANN MLR MLR
comp=E,4µm,19.0s
HPK Haverah Park 140.92 8 *e*P **PKPdf** **01 05 42.8 -5.2**
WME Myndd Eilian 141.05 10 *e*P **PKPdf** **01 05 44.5 -3.7**
KIMO Ikongo 141.07 230 *i* P PKPdf 01 05 41.0 -8.6
WLF1 Llynfaes 141.14 11 *e*P **PKPdf** **01 05 41.8 -6.6**
KURU Muhukuru 141.16 229 *i* P **PKPdf** **01 05 42.9 -6.8**
HLG Helgoland 141.22 359 *e*PP PP 01 08 56.2 +6.5
GKP Gorka Klasztor 141.24 350 *e*PKPdf **PKPdf** **01 05 47.5 -1.1**
GKP Gorka Klasztor 141.24 350 *e*P **PKPdf** **01 05 45.9 -2.6**
BSEG Bad Segeberg 141.38 357 *e*PP PP 01 08 57.4 +6.7
LBWR Ladybower, Pea 141.45 8 *e*P **PKPdf** **01 05 48.3 -0.6**
ROSA Rosais 141.51 46 *e*PKP **PKPdf** **01 05 48.5 -1.0**
PGRA Graciosa 141.54 45 *e*PKP **PKPdf** **01 05 50.3 +0.7**
MBAM Mbamba Bay 141.61 228 *i* P **PKPdf** **01 05 43.6 -6.9**
KOPT Kop Dagi 141.61 316 IAMs_20 IAMs_20 02 10 11.7
comp=Z,6µm,22.0s
LIGA Liganga 141.66 229 *i* P **PKPdf** **01 05 44.6 -6.0**
BANG Mbangamawe 141.74 230 *i* P PKPdf 01 05 42.3 -8.5
ZINI Mgazini 141.74 230 *i* P PKPdf 01 05 39.8 -11
TIRI Matiri 141.87 229 *i* P PKPdf 01 05 39.6 -11
BEL Belsk 141.88 346 *e*PKP **PKiKP** **01 05 55.4 +2.7**
BEL *e*PP PP 01 09 04.6 +11
MKIL Mkili 141.94 228 *i* P PKPdf 01 05 41.7 -9.4
HLM1 Long Mynd 142.14 10 *e*P **PKPdf** **01 05 48.8 -1.5**
PAGU Agualva, Azore 142.22 45 *e*PKP **PKPdf** **01 05 50.1 -0.7**
WINO Wino 142.23 230 *i* P PKPdf 01 05 43.3 -8.4
BUMI Ibumi 142.26 230 *i* P **PKPdf** **01 05 44.6 -7.2**
WACR West Acre 142.39 6 *e*P **PKPdf** **01 05 48.2 -2.4**

NIND Nindi 142.51 229 *i* P PKPdf 01 05 43.3 -8.9
RUE Ruedersdorf 142.51 353 *e*PP PP 01 09 04.7 +7.1
MFRI Mfriga 142.52 231 *i* P PKPdf 01 05 44.3 -8.0
RAYN Ar Rayn 142.57 289 *i* PKPdf **PKPdf** **01 05 46.8 -5.1**
SNR=16
RAYN Ar Rayn 142.57 289 IAMs_20 IAMs_20 02 13 48.6
comp=Z,5µm,21.0s
MCH1 Michaelchurch 142.62 10 *e*P **PKPdf** **01 05 47.7 -3.3**
SORM Soroca 142.72 336 ⇑P **PKPdf** **01 05 48.2 -3.1**
SORM Soroca 142.72 336 ⇑PKIKP **PKPdf** **01 05 48.2 -3.1**
KIDE Kidegembe 142.75 231 *i* P PKPdf 01 05 44.1 -8.6
UNDA Madunda 142.78 229 *i* P **PKPdf** **01 05 48.8 -4.0**
LVV L'vov 142.82 341 *e*PKIKP **PKPdf** **01 05 50.2 -1.3**
LVV *e* 01 12 52.8
LVV MLR MLR
comp=Z,7µm,23.0s
NRDL Niedersach Rie 142.83 357 *e*PP PP 01 09 05.7 +6.3
TOLA Matola 142.87 230 *i* P **PKPdf** **01 05 49.8 -3.2**
LSZ Lusaka 142.88 216 PKhKP **PKPdf** **01 05 48.3 -4.5**
comp=Z,12nm,0.7s,baz=166,slow=4.5,SNR=20
LSZ PP **PP** **01 08 59.7 -1.1**
comp=Z,3.7nm,1.0s,baz=174,slow=9.6,SNR=4.4
LSZ Lusaka 142.88 216 PKHKP **PKPdf** **01 05 48.2 -4.5**
LSZ MLR MLR
comp=Z,13µm,18.0s
LSZ Lusaka 142.88 216 **PKPdf** **01 05 48.2 -4.6**
LSZ Lusaka 142.88 216 *i* P **PKPdf** **01 05 46.7 -6.1**
FLTG Flechtingen 142.91 355 *e*PKPbc **PKPdf** **01 05 48.3 -3.2**
baz=5.7,slow=3.4
FLTG *e*PP **PP** **01 09 05.8 +5.8**
IBBN Ibbenburen 143.11 359 *e*PKPbc PKPbc 01 05 49.3 +0.5
baz=5.7,slow=3.4
ASSE Asse, Remlinge 143.16 356 *e*PKPbc PKPbc 01 05 49.6 +0.8
baz=5.7,slow=3.4
ASSE *e*PP **PP** **01 09 07.9 +6.5**
KIPE Kipengere 143.18 230 *i* P PKPab 01 05 47.1 -2.0
BAKO Makambako 143.20 231 *i* P PKPab 01 05 46.4 -2.8
UKWA Ukwama 143.23 230 *i* P PKPab 01 05 46.9 -2.5
KWP Kalwaria Pacla 143.38 342 *e*PKP PKPbc 01 05 49.4 -0.3
KWP *e*PP **PP** **01 09 09.1 +6.0**
KWP Kalwaria Pacla 143.38 342 IAMs_20 IAMs_20 02 15 47.5
comp=Z,7µm,21.0s
KIS Kishinev 143.44 334 *e*PKP PKPab 01 05 47.0 -1.9
comp=Z,700nm,6.9s
KIS Kishinev 143.44 334 *e*PKHKP PKPab 01 05 47.0 -1.9
KIS pmax pmax
comp=Z,700nm,6.9s
MAKE Makete 143.44 230 *i* P PKPab 01 05 47.6 -2.6
CLZ Clausthal 143.46 356 *e*PKPbc PKPbc 01 05 50.8 +0.9
baz=5.7,slow=3.4
CLZ *e*PP **PP** **01 09 10.1 +6.6**
GAWA Igawa 143.56 231 *i* P PKPab 01 05 48.8 -1.6
OJC Ojcow 143.61 346 *e*PKP PKPbc 01 05 49.9 -0.4
OJC *e*PKPdf **PKPdf** **01 05 54.0 +1.1**
OJC *e*PP PP 01 09 13.4 +9.0
PSET Sete Cidades 143.68 46 *e*PKP **PKPdf** **01 05 53.0 -0.4**
ISOK Kyela 143.72 229 *i* P PKPab 01 05 50.5 -0.6
NKAL Nkalisi 143.73 230 *i* P PKPab 01 05 49.1 -2.1
KSP Ksiaz 143.74 350 *e*PKP PKPbc 01 05 50.6 0.0
KSP *e*PP **PP** **01 09 07.8 +2.7**
CLL Collm 143.76 353 *e*PKPdf PKPab 01 05 50.0 +0.1
comp=Z,88nm,1.2s
CLL *e*PP **PP** **01 09 04.0 -1.1**
CLL *e*PPP PPP 01 12 12.0
CLL *e*SKKSac SKKSac 01 15 54.0 -2.3
CLL *e*PSKS 01 19 21.0
CLL *e*PPPrev 01 20 32.0
CLL *e*PPS PPS 01 21 41.0
CLL *e*SS **SS** **01 27 36.0 -9.1**
CLL *e* 01 29 42.0
CLL *e* 01 31 00.0
CLL *e*SSS SSS 01 33 18.0
CLL *e* 01 34 36.0
CLL *e*SSSS 01 37 30.0
CLL *e* 01 42 30.0
CLL LmH 02 10 00.0
comp=N,6µm,21.1s
CLL LmH 02 10 00.0
comp=E,5µm,20.9s
CLL LmV 02 12 00.0
comp=Z,9µm,19.8s
CLL Collm 143.76 353 *e*PKIKP PKPab 01 05 50.0 +0.1
CLL *e* 01 09 04.0
CLL pmax pmax
comp=Z,88nm,1.2s
CLL MLR MLR
comp=Z,9µm,19.8s
CLL Collm 143.76 353 PKPdf **PKiKP** **01 05 55.3 -1.2**
CLL IAMs_20 IAMs_20 02 12 43.5
comp=Z,9µm,20.0s
CLL Collm 143.76 353 *e*PKPbc PKPbc 01 05 51.6 +0.9
baz=5.7,slow=3.4
CLL *e*PP **PP** **01 09 11.3 +6.1**
GTTG Gottingen 143.78 357 *e*PKPbc PKPbc 01 05 51.9 +1.2
baz=5.7,slow=3.4
GTTG *e*PP **PP** **01 09 11.5 +6.2**
CHML Chimala 143.78 230 *i* P PKPab 01 05 49.9 -1.5
CMLA Cha da Macela 143.84 46 *e*PKP **PKPdf** **01 05 54.1 +0.4**
CMLA Cha da Macela 143.84 46 IAMs_20 IAMs_20 02 03 57.6
comp=Z,10µm,20.0s
MZUN Kiwira 143.94 229 *i* P PKPbc 01 05 52.3 -0.2
BUG Bochum--Univer 143.98 359 *e*PKPbc PKPbc 01 05 52.2 +0.9
baz=5.7,slow=3.4
NEUB Neuenburg 143.98 355 *e*PKPbc **PKPdf** **01 05 52.5 -1.0**
baz=5.7,slow=3.4
NEUB *e*PP **PP** **01 09 12.5 +6.0**
ILOM Ilombo 143.99 229 *i* P PKPab 01 05 51.7 -0.5
ITUM Tunduma 144.02 229 *i* P **PKPab** **01 05 50.1 -2.1**
CHVC Chvalec 144.03 350 *e*PKP **PKPab** **01 05 51.1 +0.1**
CHVC *e*PP **PP** **01 09 11.6 +4.8**
CHVC AMS AMS 02 08 00.0
comp=Z,10µm,21.9s
OSTC Ostas 144.03 350 *e*PKP PKPbc 01 05 51.6 0.0
OSTC *e*PP **PP** **01 09 08.7 +1.8**
OSTC AMS AMS 02 08 20.0
comp=Z,10µm,21.9s
BRG Berggiesshubel 144.07 352 *e*PKP **PKPab** **01 05 51.2 0.0**
BRG Amp 01 05 56.8
comp=Z,272nm,2.2s
BRG *ex* x 01 06 19.1
BRG Amp 01 06 23.0
comp=Z,25nm,1.0s
BRG *ex* x 01 07 03.8
BRG Amp 01 07 05.7
comp=Z,146nm,1.8s
BRG Berggiesshubel 144.07 352 PP PP 01 09 07.0 0.0
BRG Berggiesshubel 144.07 352 *e*PKPbc **PKPdf** **01 05 52.8 -0.8**
baz=5.7,slow=3.4
FBE Freiberg 144.10 353 *e*PKPbc **PKPdf** **01 05 53.2 -0.4**
baz=5.7,slow=3.4
DODT Dodoma, Tanzan 144.11 236 *i* P **PKPab** **01 05 51.8 -0.8**
UPC Upice 144.11 350 *e*PKIKP PKPbc 01 05 51.8 0.0
UPC MLR MLR
comp=Z,10µm,21.5s
UPC Upice 144.11 350 *e*PKP PKPbc 01 05 51.8 0.0
UPC AMS AMS 02 08 20.0
comp=Z,10µm,21.5s
JILO Lwanjilo 144.19 230 *i* P **PKPab** **01 05 52.5 -0.5**
KASTN Kahler Asten 144.20 358 *e*PKPbc **PKPdf** **01 05 53.3 -0.6**
baz=5.7,slow=3.4
DPC Dobruska-Polom 144.21 349 *e*PKIKP **PKPab** **01 05 51.9 +0.1**
DPC MLR MLR
comp=Z,11µm,23.7s
DPC Dobruska-Polom 144.21 349 *e*PKP **PKPab** **01 05 51.9 +0.1**
DPC *e*PP PP 01 08 58.6 -9.4
DPC AMS AMS 02 05 30.0
comp=Z,11µm,23.7s
NIE Niedzica 144.23 345 *e*PKP PKPbc 01 05 52.2 -0.1
NIE *e*PKiKP **PKiKP** **01 05 56.8 -0.8**
NIE *e*PP **PP** **01 09 13.9 +5.7**
PDHT Panda Hill 144.26 229 *i* P PKPbc 01 05 53.8 +0.3
PVCC Panska Ves 144.32 351 *e*PKIKP PKPbc 01 05 52.4 0.0
PVCC *e* 01 09 13.1
PVCC MLR MLR
comp=Z,12µm,22.2s
PVCC Panska Ves 144.32 351 *e*PKP PKPbc 01 05 52.4 0.0
PVCC *e*PP **PP** **01 09 13.1 +4.6**
PVCC AMS AMS 02 08 10.0
comp=Z,12µm,22.2s
KIBK Kibwezi 144.33 243 P PKPbc 01 05 54.4 +0.7
SNR=59
BURAR Bucovina Array 144.33 338 ⇓P **PKPdf** **01 05 54.1 -0.3**
BURAR Bucovina Array 144.33 338 ⇓PKIKP **PKPdf** **01 05 54.1 -0.3**
OKC Ostrava-Krasne 144.34 347 *e*PKIKP **PKPdf** **01 05 53.7 -0.5**

OKC MLR MLR
comp=Z,10µm,23.4s
OKC MLR MLR
comp=Z,16µm,0.2s
OKC Ostrava-Krasne 144.34 347 *e*PKP **PKPdf** **01 05 53.7 -0.5**
OKC *e*PP **PP** **01 09 03.0 -5.7**
OKC AMS AMS 02 04 50.0
comp=Z,10µm,23.4s
KRLC Kraliky 144.39 349 *e*PKIKP **PKPab** **01 05 52.0 -0.4**
KRLC *e* 01 09 17.4
KRLC MLR MLR
comp=Z,10µm,22.8s
KRLC Kraliky 144.39 349 *e*PKP **PKPab** **01 05 52.0 -0.4**
KRLC *e*PP PP 01 09 17.4 +8.3
KRLC AMS AMS 02 06 10.0
comp=Z,10µm,22.8s
CRVS Cervenica-Dubn 144.39 343 *e*PKIKP PKPbc 01 05 52.9 +0.2
CRVS Cervenica-Dubn 144.39 343 *e*PKP PKPbc 01 05 52.9 +0.2
UZH Uzhgorod 144.40 342 ⇓*i*PKHKP **PKPab** **01 05 49.9 -2.5**
UZH *e* 01 05 52.5
UZH *i* 01 05 54.6
UZH *e* 01 09 07.0
UZH *i* SS SS 01 27 58.4 +5.6
UBBA Unterbreizbach 144.51 356 *e*PKPbc **PKPdf** **01 05 54.0 -0.2**
baz=5.7,slow=3.4
MORC Moravsky Berou 144.53 348 ⇓*i*PKP **PKPab** **01 05 52.9 -0.1**
MORC Moravsky Berou 144.53 348 IAMs_20 IAMs_20 02 11 36.0
comp=Z,9µm,21.0s
PSMN Pico do Norte, 144.53 47 *e*PKP PKPbc 01 05 53.9 +0.3
MOX Moxa 144.56 355 *e*L L 02 13 11.7
comp=Z,11µm,20.0s
BIZ Bicaz 144.57 337 ⇑P **PKPdf** **01 05 54.8 +0.1**
UCC Uccle 144.58 3 *d*PKPdf **PKPab** **01 05 52.9 -0.1**
BEBN Eben Emael 144.62 1 *d*PKPdf **PKPab** **01 05 53.0 -0.2**
ATD Arta Tunnel 144.63 268 IAMs_20 IAMs_20 02 06 59.6
comp=Z,7µm,20.0s
ATD Arta Tunnel 144.63 268 *i* P **PKPab** **01 05 53.5 -0.9**
PLN Plauen 144.66 354 *e*PKPbc **PKPdf** **01 05 55.1 +0.4**
baz=5.7,slow=3.4
LANS Liptovska Anna 144.69 345 *e*PKIKP **PKPdf** **01 05 54.8 -0.1**
LANS Liptovska Anna 144.69 345 *e*PKP **PKPdf** **01 05 54.8 -0.1**
TANN Tannenbergstha 144.70 354 *e*PKPbc **PKPdf** **01 05 55.3 +0.4**
baz=5.7,slow=3.4
TANN *e*PP **PP** **01 09 17.4 +6.6**
LOSI Makongolosi 144.71 230 *i* P **PKPab** **01 05 53.0 -1.7**
GUNZ Gunzen 144.76 354 *e*PKPbc **PKPdf** **01 05 55.8 +0.8**
baz=5.7,slow=3.4
GUNZ *e*PP **PP** **01 09 17.8 +6.6**
GHRR 144.78 335 ⇓P **PKPdf** **01 05 56.3 +1.2**
PRA Prague 144.79 351 *e*PKIKP PKPbc 01 05 54.2 +0.3
PRA *e* 01 09 20.3
PRA MLR MLR
comp=Z,10µm,22.3s
PRA Prague 144.79 351 *e*PKP PKPbc 01 05 54.2 +0.3
PRA *ex* x 01 09 20.3
PRA AMS AMS 02 08 30.0
comp=Z,10µm,22.3s
MEM Membach 144.81 1 *d*PKPdf **PKPab** **01 05 53.6 -0.2**
MEM *dx* x 01 05 56.5
BSTI Sart Tilman 144.83 1 *d*PKPdf **PKPab** **01 05 53.2 -0.8**
BSTI *dx* x 01 05 56.3
WERN Wernitzgruen 144.83 354 *e*PKPbc **PKPdf** **01 05 55.9 +0.8**
baz=5.7,slow=3.4
BTNL Ternell 144.84 1 *d*PKPdf **PKPab** **01 05 53.8 -0.2**
BTNL *dx* x 01 05 56.7
PRU Pruhonice 144.85 351 *e*PKIKP **PKPab** **01 05 53.5 -0.6**
PRU *e* 01 09 21.7
PRU MLR MLR
comp=Z,12µm,20.9s
PRU Pruhonice 144.85 351 *e*PKP **PKPab** **01 05 53.5 -0.6**
PRU *e*PP PP 01 09 21.7 +10
PRU AMS AMS 02 09 00.0
comp=Z,12µm,20.9s
TLCR 144.87 332 ⇑P **PKPdf** **01 05 55.5 +0.3**
TLCR 144.87 332 ⇑PKIKP **PKPdf** **01 05 55.5 +0.3**
SNF Seneffe 144.87 3 *d*PKPdf **PKPab** **01 05 53.9 -0.1**
SNF *dx* x 01 05 56.4
BMR Baia Mare 144.87 340 ⇑P PKPbc 01 05 54.6 +0.3
BMR Baia Mare 144.87 340 ⇑PKIKP PKPbc 01 05 54.6 +0.3
NKC Novy Kostel 144.88 354 *e*PKIKP **PKPab** **01 05 54.0 -0.2**
NKC MLR MLR
comp=Z,9µm,21.8s
NKC Novy Kostel 144.88 354 *e*PKP **PKPab** **01 05 54.0 -0.2**
NKC *e*PP PP 01 09 00.1 -12
NKC AMS AMS 02 07 10.0
comp=Z,9µm,21.8s
AHRW Bad Neuenahr-A 144.88 360 *e*PKPbc **PKPdf** **01 05 55.8 +0.7**
baz=5.7,slow=3.4
BCLA Clavier 144.99 2 *d*PKPdf **PKPab** **01 05 53.9 -0.7**
BCLA *dx* x 01 05 58.8
BGES Gesves 145.02 2 *d*PKPdf **PKPbc** **01 05 54.1 -0.6**
BGES *dx* x 01 05 57.1
KECS Kecovo 145.04 344 *e*PKIKP **PKPab** **01 05 55.1 +0.3**
KECS Kecovo 145.04 344 *e*PKP **PKPab** **01 05 55.1 +0.3**
BHOU Houvegnez 145.07 1 *d*PKPdf **PKPab** **01 05 54.9 0.0**
ARCR ARCALIA 145.09 339 ⇑P **PKPdf** **01 05 55.8 +0.2**
BMRD Maredsous 145.09 2 *d*PKPdf **PKPbc** **01 05 54.6 -0.2**
BMRD *dx* x 01 05 55.7
BMRD *dx* x 01 05 57.6
PETR Petresti 145.12 335 ⇓P **PKiKP** **01 05 57.7 -1.8**
MANZ Manzenberg 145.16 354 *e*PKPbc **PKPdf** **01 05 56.9 +1.3**
baz=5.7,slow=3.4
MANZ *ep*PKPbc sPKPab 01 06 07.5 -0.4
MANZ *es*PKPbc **sPKPdf** **01 06 13.0 +4.7**
VRAC Vranov 145.16 349 ⇑P **PKPdf** **01 05 55.8 +0.2**
VRAC Vranov 145.16 349 ⇓*i*PKP **PKPbc** **01 05 55.2 0.0**
VRAC Vranov 145.16 349 ⇑PKIKP **PKPdf** **01 05 55.8 +0.2**
ODBI Odobesti 145.16 335 ⇑P **PKPdf** **01 05 57.4 +1.7**
CFR Carcaliu 145.17 333 ⇑P **PKPbc** **01 05 54.8 -0.5**
CFR Carcaliu 145.17 333 ⇑PKIKP **PKPbc** **01 05 54.8 -0.5**
TNS Taunus Mts 145.18 358 *e*PKPbc **PKPdf** **01 05 56.8 +1.1**
baz=5.7,slow=3.4
TNS *ep*PKPbc sPKPab 01 06 07.4 -0.5
TNS *es*PKPab **sPKPdf** **01 06 12.9 +4.5**
CEL Carei 145.19 341 ⇑P **PKPdf** **01 05 54.8 -0.5**
VRI Vrincioaia 145.21 335 ⇑P **PKPdf** **01 05 55.8 0.0**
VRI Vrincioaia 145.21 335 ⇑PKIKP **PKPdf** **01 05 55.8 0.0**
PBCC Pribram 145.22 352 *e*PKP **PKPbc** **01 05 55.0 -0.4**
RCHB Rochefort 145.25 2 *d*PKPdf **PKPbc** **01 05 54.9 -0.5**
PLOR Plostina 145.26 335 ⇑P **PKPab** **01 05 55.9 +0.1**
PLOR Plostina 145.26 335 ⇑PKIKP **PKPab** **01 05 55.9 +0.1**
ILGA Ilgaz 145.27 323 IAMs_20 IAMs_20 02 16 49.0
comp=Z,6µm,20.0s
GAZ Gaziantep 145.27 315 IAMs_20 IAMs_20 02 19 02.0
comp=Z,5µm,22.0s
DOU Dourbes 145.29 2 *d*PKPdf **PKPbc** **01 05 55.4 -0.1**
DOU *dx* x 01 06 00.3
TPGR Topolog 145.30 332 ⇓P **PKPdf** **01 05 56.7 +0.7**
ROTZ Rotzenmuhle 145.37 354 *e*PKPbc **PKPab** **01 05 57.8 +1.8**
baz=5.7,slow=3.4
ROTZ *ep*PKPbc sPKPab 01 06 08.3 -0.3
ROTZ *es*PKPbc **sPKPdf** **01 06 13.7 +5.0**
JAVC Velka Javorina 145.37 347 ⇓*i*PKP **PKPab** **01 05 57.1 +1.0**
TREC Trest 145.37 350 *e*PKIKP **PKPbc** **01 05 55.7 -0.2**
TREC *e* 01 09 18.9
TREC MLR MLR
comp=Z,11µm,21.2s
TREC Trest 145.37 350 *e*PKP **PKPbc** **01 05 55.7 -0.2**
TREC *e*PP **PP** **01 09 18.9 +4.0**
TREC AMS AMS 02 07 50.0
comp=Z,11µm,21.2s
JLP Les Platons 145.43 10 *e*P **PKPbc** **01 05 55.8 -0.2**
KRUC Moravsky 145.43 349 ⇓*i*PKP **PKPbc** **01 05 55.9 -0.1**
JVM Valle D.L. Mar 145.44 10 *e*P **PKPbc** **01 05 55.3 -0.7**
VYHS Vyhne 145.45 346 *e*PKIKP **PKPab** **01 05 56.4 +0.1**
VYHS Vyhne 145.45 346 *e*PKP **PKPab** **01 05 56.4 +0.1**
JSA Saint Aubin 145.47 10 *e*P **PKPdf** **01 05 54.8 -1.3**
JQE Queens East 145.49 10 *e*P **PKPdf** **01 05 55.9 -0.2**
MILB Miltenberg 145.53 357 *e*PKPbc **PKPab** **01 05 58.2 +1.6**
baz=5.7,slow=3.4
MILB *es*PKPbc sPKPab 01 06 14.2 +4.9
GRA1 Grafenberg Arr 145.54 355 IAMs_20 IAMs_20 02 14 09.0
comp=Z,8µm,21.0s
GRF Grafenberg Arr 145.54 355 *e*PKPbc **PKPab** **01 05 58.3 +1.7**
baz=5.7,slow=3.4
GRF *es*PKPbc sPKPab 01 06 14.4 +5.1
GRF *eL* L 02 14 10.1
comp=Z,8µm,20.4s
GRFO Grafenberg 145.54 355 PKIKP **PKPab** **01 05 56.7 +0.1**
GRFO Grafenberg 145.54 355 **PKPab** **01 05 56.7 +0.1**
GRFO IAMs_20 IAMs_20 02 14 10.0
comp=Z,8µm,20.0s
KMBO Kilima Mbogo 145.62 244 PKPbc **PKPab** **01 05 58.4 +0.1**

comp=Z,34nm,0.9s,baz=103,slow=3.8,SNR=97
KMBO PP **PP** **01 09 19.5 +1.1**
comp=Z,0.7nm,0.3s,baz=45,slow=13,SNR=8.2
LTVH Ltavrtes, Hu 145.63 342 ⇑P **PKPab** **01 05 57.5 +0.5**
DOPR Dopca 145.66 337 ⇓P **PKPab** **01 05 57.8 +0.6**
CJR Cluj-Napoca 145.67 339 ⇑P **PKPab** **01 05 57.5 +0.2**
CJR Cluj-Napoca 145.67 339 ⇑PKIKP **PKPab** **01 05 57.5 +0.2**
TLBR Topalu 145.71 332 ⇑P **PKPab** **01 05 58.5 +1.1**
PSZ Piszkesteto 145.72 344 ⇑P **PKPab** **01 05 57.6 +0.2**
PSZ Piszkesteto 145.72 344 ⇑PKIKP **PKPab** **01 05 57.6 +0.2**
PSZ Piszkesteto 145.72 344 IAMs_20 IAMs_20 02 18 08.0
comp=Z,5µm,20.0s
NEHR Nehoiu 145.75 335 ⇓P **PKPab** **01 05 58.0 +0.4**
SMOL Smolenice 145.75 347 *e*PKIKP **PKPab** **01 05 57.9 +0.5**
SMOL Smolenice 145.75 347 *e*PKP **PKPab** **01 05 57.9 +0.5**
WLF Walferdange 145.76 1 *d*PKPdf **PKPab** **01 05 57.4 -0.1**
WLF Walferdange 145.76 1 *e*PKPbc **PKiKP** **01 05 59.2 -1.5**
baz=5.7,slow=3.4
WLF *es*PKPbc sPKPab 01 06 15.3 +5.2
MFTR Murfatlar 145.82 332 ⇑P **PKPab** **01 05 57.8 0.0**
KHC Kasperske Hory 145.82 352 *e*PKP2 **PKPbc** **01 05 57.3 0.0**
KHC *e* 01 09 21.9
KHC MLR MLR
comp=Z,13µm,24.0s
KHC Kasperske Hory 145.82 352 *e*PKP **PKPbc** **01 05 57.3 0.0**
KHC *ep*PKP **sPKPdf** **01 06 08.5 -1.0**
KHC *e*PP **PP** **01 09 21.9 +4.3**
KHC AMS AMS 02 06 00.0
comp=Z,13µm,24.0s
MLR Muntele Rosu 145.84 336 PKPbc **PKPab** **01 05 58.0 0.0**
comp=Z,102nm,0.9s,baz=172,slow=3.6,SNR=49
MLR Muntele Rosu 145.84 336 ⇓P **PKPab** **01 05 58.4 +0.4**
CVDA Cernavoda 145.88 332 ⇓P **PKiKP** **01 05 59.6 -1.5**
PGOR Pogoanele 145.88 334 ⇓P **PKPab** **01 05 59.5 +1.5**
ISR Istrita 145.90 335 ⇑P **PKPab** **01 05 58.2 0.0**
ISR Istrita 145.90 335 ⇑PKP2 **PKPab** **01 05 58.2 0.0**
DRGR 145.90 340 ⇓P **PKPbc** **01 05 57.6 -0.1**
DRGR 145.90 340 ⇓PKP2 **PKPbc** **01 05 57.6 -0.1**
WET Wettzell 145.90 353 *e*PKPbc **PKPab** **01 05 59.5 +1.4**
baz=5.7,slow=3.4
WET *ep*PKPbc sPKPbc 01 06 10.2 -0.1
WET *es*PKPbc sPKPab 01 06 15.8 +5.0
MODS Modra-Piesok 145.91 347 *e*PKP2 **PKPab** **01 05 58.1 0.0**
MODS Modra-Piesok 145.91 347 *e*PKP **PKPab** **01 05 58.0 0.0**
AMRR Amara 145.97 333 ⇓P **PKPab** **01 05 59.3 +0.9**
AMRR Amara 145.97 333 ⇓PKP2 **PKPab** **01 05 59.3 +0.9**
CKRC Cesky Krumlov 146.02 351 *e*PKP **PKPbc** **01 05 57.6 -0.3**
CKRC *e*PP **PP** **01 09 23.2 +4.5**
GEC2 GERESS Array S 146.09 352 *e*PKPbc **PKPab** **01 05 60.0 +1.2**
baz=5.7,slow=3.4
GEC2 *ep*PKPbc sPKPbc 01 06 10.5 -0.5
GEC2 *es*PKPbc sPKPab 01 06 16.0 +4.5
GERES GERESS Array B 146.09 352 PKPbc **PKPbc** **01 05 58.0 -0.2**
comp=Z,102nm,1.0s,baz=29,slow=3.0,SNR=178
GERES GERESS Array B 146.09 352 PKP2 **PKPdf** **01 05 57.3 0.0**
GERES GERESS Array B 146.09 352 **PKPdf** **01 05 57.3 0.0**
BRTR Keskin Array B 146.15 321 PKPbc **PKPbc** **01 05 58.8 0.0**
comp=Z,69nm,0.7s,baz=127,slow=3.2,SNR=78
BRTR Keskin Array B 146.15 321 **PKPdf** **01 05 57.4 -0.4**
SRO Srobarova 146.21 346 *e*PKP2 **PKiKP** **01 06 00.5 -1.2**
SRO Srobarova 146.21 346 *e*PKP **PKiKP** **01 06 00.5 -1.2**
VOIR 146.23 336 ⇑P **PKPab** **01 05 59.7 +0.2**
VOIR 146.23 336 ⇑PKP2 **PKPab** **01 05 59.7 +0.2**
SULR 146.37 334 ⇓P **PKiKP** **01 06 01.6 -0.5**
ARR Arges 146.45 337 ⇑P **PKPab** **01 06 00.7 +0.4**
ANTO Ankara 146.56 322 PKP2 **PKPab** **01 06 00.9 0.0**
ANTO Ankara 146.56 322 **PKPab** **01 06 00.9 0.0**
SHEL Horse Pasture 146.58 158 IAMs_20 IAMs_20 02 07 19.9
comp=Z,5µm,19.0s
BR231 Keskin MP Arra 146.59 322 **PKPab** **01 06 01.5 +0.4**
STU Stuttgart 146.59 357 *e*PKPbc **PKPab** **01 06 01.4 +0.8**
baz=5.7,slow=3.4
STU *ep*PKPbc sPKPbc 01 06 12.4 +0.1
STU *es*PKPab sPKPab 01 06 17.8 +4.4
CONA Conrad Observa 146.62 349 *i* P **PKPbc** **01 05 60.0 +0.1**
comp=Z,172nm,1.2s,SNR=94
CONA *eS* **SKPbc** **01 09 32.9 -3.6**
comp=Z,19nm,1.4s
CONA *eP* **PKKPdf** **01 15 00.5 +0.8**
comp=Z,6.4nm,1.7s
DEV Deva 146.63 339 ⇑P **PKPbc** **01 06 00.3 +0.5**
DEV Deva 146.63 339 ⇑PKP2 **PKPbc** **01 06 00.3 +0.5**
LOT Lotru 146.70 338 ⇑P **PKPbc** **01 05 59.8 -0.4**
SIRR Siria 146.70 341 ⇑P **PKPbc** **01 06 00.6 +0.5**
AMBH Ambrzfalva 146.92 342 ⇓P **PKPab** **01 06 02.1 +0.1**
MOA Molln 146.97 351 *i* P **PKPbc** **01 06 00.9 +0.1**
comp=Z,131nm,1.2s,SNR=74
HUMR Humele 147.02 336 ⇓P **PKPbc** **01 06 01.1 +0.1**
FUR Furstenfeldbru 147.04 354 *e*PKPbc **PKPab** **01 06 02.9 +0.5**
baz=5.7,slow=3.4
BFO Black Forest 147.07 358 PKP2 **PKPdf** **01 05 59.8 +0.9**
BFO MLR MLR
comp=Z,9µm,20.0s
BFO Black Forest 147.07 358 PKPdf **PKPdf** **01 05 59.8 +0.9**
BFO IAMs_20 IAMs_20 02 09 11.3
comp=Z,9µm,20.0s
BFO Black Forest 147.07 358 *e*PKPbc **PKPab** **01 06 02.8 +0.2**
baz=5.7,slow=3.4
GZR Gura Zlata 147.10 339 ⇑P **PKPbc** **01 06 01.3 +0.1**
GZR Gura Zlata 147.10 339 ⇑PKP2 **PKPbc** **01 06 01.3 +0.1**
ECH Echery 147.21 359 IAMs_20 IAMs_20 02 09 41.9
comp=Z,9µm,20.0s
BZS Buzias 147.30 340 ⇑P **PKPbc** **01 06 02.1 +0.4**
BZS Buzias 147.30 340 ⇑PKP2 **PKPbc** **01 06 02.1 +0.4**
ARSA Arzberg 147.34 349 *i* P **PKPbc** **01 06 00.6 -1.2**
comp=Z,79nm,1.0s,SNR=44
ZIMR 147.58 334 ⇑P **PKiKP** **01 06 03.8 -0.8**
ZIMR 147.58 334 ⇑PKP2 **PKiKP** **01 06 03.8 -0.8**
HWQ Hawqa 147.59 311 *e*P **PKPbc** **01 06 02.5 -0.6**
MORH Mrgy, Hungar 147.62 344 ⇑P **PKPdf** **01 05 59.8 0.0**
MORH Mrgy, Hungar 147.62 344 *e*P **PKPdf** **01 05 59.8 0.0**
UBR Ueberruh 147.62 356 *e*PKPbc **PKiKP** **01 06 04.2 -0.5**
baz=5.7,slow=3.4
BANR Banloc 147.66 341 ⇓P **PKiKP** **01 06 04.3 -0.4**
HERR Herculane 147.68 339 ⇓P **PKPbc** **01 06 02.7 -0.1**
VLAD Vladila 147.69 336 ⇑P **PKPbc** **01 06 03.5 +0.7**
RETA Reutte 147.76 355 *i* P **PKPdf** **01 06 01.6 +1.4**
comp=Z,261nm,1.7s,SNR=73
RETA *eS* **SKPbc** **01 09 32.5 -6.5**
comp=Z,53nm,2.6s
DJES Djerdap 147.83 339 ⇓P **PKPab** **01 06 07.7 +2.1**
BEHE Becsehely 147.83 347 ⇑P **PKPbc** **01 06 03.6 +0.5**
WATA Walderalm 147.84 354 *i* P **PKPdf** **01 06 01.6 +1.2**
comp=Z,159nm,1.6s,SNR=82
WATA *eS* **SKPbc** **01 09 34.1 -5.1**
comp=Z,46nm,1.6s
ISK Istanbul-Kandi 147.84 327 P **PKPdf** **01 05 59.5 -0.9**
KBA Koelnbreinsper 147.87 351 *i* P **PKPdf** **01 06 01.4 +0.9**
comp=Z,51nm,0.8s,SNR=31
KBA *eS* **SKPbc** **01 09 34.5 -4.8**
comp=Z,48nm,1.5s
KBA Koelnbreinsper 147.87 351 PKP2 **PKPbc** **01 06 03.4 0.0**
MOTA Moosalm 147.87 354 *i* P **PKPdf** **01 06 01.8 +1.3**
comp=Z,104nm,1.0s,SNR=79
MOTA *eS* **SKPbc** **01 09 33.9 -5.4**
comp=Z,38nm,1.6s
WTTA Wattenberg 147.90 354 *i* P **PKPbc** **01 06 02.0 -1.5**
comp=Z,128nm,1.0s,SNR=62
WTTA *eS* **SKPbc** **01 09 31.1 -8.4**
comp=Z,58nm,1.7s
WTTA Wattenberg 147.90 354 PKP2 **PKPbc** **01 06 02.0 -1.5**
KOGS Kog 147.96 347 *i* PKPdf **PKPdf** **01 06 01.1 +0.6**
KOGS *i* 01 06 04.2
KOGS *e* 01 09 41.1
KOGS *e* 01 12 54.7
KOGS *e* 01 20 08.8
KOGS *e* 01 22 42.0
KOGS *eS* SS 01 28 33.1 0.0
BHL Bhannes 147.98 311 *eP* **PKPdf** **01 06 00.9 -0.1**
SOKA Soboth 147.98 349 *i* P **PKPbc** **01 06 03.3 -0.4**
comp=Z,143nm,1.1s,SNR=58
SOKA *eS* **SKPbc** **01 09 31.9 -7.6**
comp=Z,24nm,1.5s
SQTA Sankt Quirin 147.99 354 *i* P **PKPdf** **01 06 01.9 +1.3**
comp=Z,107nm,1.1s,SNR=58
SQTA *eS* **SKPbc** **01 09 32.1 -7.4**
comp=Z,38nm,1.9s
MDVR Moldovita 148.00 340 ⇓P **PKiKP** **01 06 05.4 -0.1**
PERS Pernice 148.00 349 *i* PKPdf **PKPdf** **01 06 01.1 +0.6**
PERS *i* 01 06 04.4
PUNG Punghina 148.01 338 ⇓P **PKiKP** **01 06 04.9 -0.6**
DAVA Damuels 148.03 356 *i* P **PKPdf** **01 06 02.2 +1.4**
comp=Z,165nm,1.0s,SNR=83
DAVA *eS* **SKPbc** **01 09 32.8 -6.8**
comp=Z,23nm,1.4s
DAVA *eP* **PKKPdf** **01 14 53.0 -4.0**
comp=Z,8.8nm,1.4s
FURI Furi 148.08 262 **PKPdf** **01 06 03.1 +1.1**
FURI Furi 148.08 262 IAMs_20 IAMs_20 02 08 00.2
comp=Z,7µm,21.0s
FURI Furi 148.08 262 *i* P **PKPbc** **01 06 04.1 -1.1**
BAIL Bailesti 148.08 337 ⇓P **PKiKP** **01 06 05.6 0.0**
PLVB Pleven 148.11 335 ⇓P **PKiKP** **01 06 05.1 -0.6**
QRWL Qaraoun 148.12 310 *eP* **PKPdf** **01 06 02.7 +1.5**
DQRL Deir Qamar 148.13 310 *eP* **PKPbc** **01 06 03.5 -0.9**
FETA Feichten 148.23 355 *i* P **PKPdf** **01 06 01.8 +0.8**
comp=Z,80nm,1.0s,SNR=57
FETA *eS* **SKPbc** **01 09 33.4 -6.7**
comp=Z,52nm,1.9s
OBKA Obir 148.23 350 *i* P **PKPbc** **01 06 03.3 -1.0**
comp=Z,47nm,1.1s,SNR=16
MYKA Terra Mystica 148.26 351 *i* P **PKPbc** **01 06 03.4 -1.0**
comp=Z,37nm,0.8s,SNR=31
MYKA *eP* **PKKPdf** **01 14 54.7 -1.7**
comp=Z,6.3nm,1.2s
FRGS Fruska Gora 148.27 342 ⇑P **PKPbc** **01 06 04.7 +0.3**
FRGS Fruska Gora 148.27 342 ⇑P **PKPdf** **01 06 01.6 +0.6**
ABTA Abfaltersbach 148.31 352 *i* P **PKPdf** **01 06 01.1 0.0**
comp=Z,119nm,0.9s,SNR=56
EDRB Edirne 148.40 331 P **PKPdf** **01 06 01.7 +0.4**
MMAI Mount Meron Ar 148.58 309 PKPbc **PKiKP** **01 06 06.5 -0.7**
comp=Z,40nm,0.9s,baz=59,slow=5.3,SNR=45
CRES Cresnjev 148.72 348 *eP* **PKPdf** **01 06 02.6 +0.9**
H10N3 ASCENSION HYDR 148.85 136 PKPbc **PKPbc** **01 06 06.7 +0.4**
H10N1 ASCENSION HYDR 148.86 136 PKPbc **PKPbc** **01 06 06.8 +0.4**
H10N2 ASCENSION HYDR 148.87 136 PKPbc **PKPbc** **01 06 06.8 +0.3**
ASCN Ascension 148.88 137 PKPdf **PKPdf** **01 06 03.5 +0.6**
ASCN **PKiKP** **01 06 08.3 +0.1**
ASCN IAMs_20 IAMs_20 02 13 56.8
comp=Z,4µm,20.0s
TUE Stuetta 148.88 356 PKPbc **PKiKP** **01 06 07.5 0.0**
TEKS Tekeris 148.90 342 *eP* **PKPdf** **01 06 03.3 +1.2**
CEY Cerknica 149.00 349 ⇑P **PKPdf** **01 06 02.3 +0.1**
BOVS Bovan 149.01 339 ⇑P **PKPbc** **01 06 06.7 +0.4**
BOJS Bojanci 149.07 348 *i* PKPdf **PKPdf** **01 06 03.5 +1.2**
BOJS *e* 01 16 28.1
CTI Castel Tesino 149.10 353 PKP2 **PKiKP** **01 06 07.9 0.0**
CTI Castel Tesino 149.10 353 PKPbc **PKiKP** **01 06 07.8 0.0**
CTI IAMs_20 IAMs_20 02 15 56.3
comp=Z,10µm,20.0s
CSS Mathiatis 149.10 314 PKPdf **PKPdf** **01 06 02.7 0.0**
CSS PKPbc **PKiKP** **01 06 09.0 +0.9**
CSS IAMs_20 IAMs_20 02 25 19.5
comp=Z,6µm,20.0s
TRI Trieste 149.14 350 PKP2 **PKiKP** **01 06 07.9 +0.1**
TRI Trieste 149.14 350 PKPbc **PKiKP** **01 06 07.9 +0.1**
DIVS Divibare 149.17 341 ⇑P **PKPdf** **01 06 02.9 +0.3**
DIVS Divibare 149.17 341 PKPbc **PKiKP** **01 06 08.4 +0.4**
MRAK Mrakovica 149.18 346 *eP* **PKiKP** **01 06 08.7 +0.7**
ISP Isparta 149.24 321 PKP2 **PKiKP** **01 06 08.5 +0.1**
ISP Isparta 149.24 321 **PKiKP** **01 06 08.5 +0.1**
ISP Isparta 149.24 321 IAMs_20 IAMs_20 02 26 45.2
comp=Z,6µm,20.0s
PRIJ Prijedor 149.26 346 *eP* **PKPdf** **01 06 04.4 +1.8**
VTS Vitosha 149.31 336 ⇑P **PKiKP** **01 06 08.7 +0.3**
VTS Vitosha 149.31 336 ⇑PKP2 **PKiKP** **01 06 08.7 +0.3**
VTS Vitosha 149.31 336 IAMs_20 IAMs_20 02 12 00.4
comp=Z,7µm,22.0s
LEF Lefka 149.32 315 ⇑P **PKiKP** **01 06 08.1 -0.4**
BLY Banja Luka 149.36 345 ⇑P **PKPdf** **01 06 03.7 +1.0**
ALN Alexandroupoli 149.47 330 P **PKPdf** **01 06 02.8 -0.2**
ALN Alexandroupoli 149.47 330 IAMs_20 IAMs_20 02 24 02.7
comp=Z,6µm,20.0s
HAPS Han Pijesak,Bl 149.50 342 ⇑P **PKPbc** **01 06 06.9 -0.7**
RDO Rodhopi 149.52 331 P PKPdf 01 05 53.7 -9.4
ENEZ Enez 149.54 330 P **PKPbc** **01 06 08.1 +0.4**
BBLS Lazići 149.56 342 ⇑P **PKPdf** **01 06 04.4 +1.2**
SALO Salr 149.64 355 **PKPbc** **01 06 07.8 -0.1**
MGRS Mrkonjic Grad 149.69 345 *eP* **PKPbc** **01 06 08.3 +0.3**
TEOL Teolo 149.78 353 **PKPdf** **01 06 04.5 +1.1**
TEOL PKPbc **PKiKP** **01 06 08.9 -0.2**
TEOL IAMs_20 IAMs_20 02 11 38.2
comp=Z,10µm,20.0s
RUDO Rudo 149.80 341 *eP* **PKPbc** **01 06 06.0 -2.3**
KULA Kula-Manisa 149.86 324 P **PKPbc** **01 06 09.1 +0.4**
MANT Manisa 149.94 324 **PKPbc** **01 06 09.3 +0.2**
PLE Pljevlja 150.05 341 ⇑PKP **PKPbc** **01 06 09.1 +0.1**
SSB Saint Sauveur 150.10 3 PKP2 **PKiKP** **01 06 10.7 +0.9**
SSB Saint Sauveur 150.10 3 PKPdf **PKPdf** **01 06 04.6 +0.7**
SSB PKPbc **PKiKP** **01 06 10.7 +0.9**
KAVA Kavala 150.10 332 P **PKiKP** **01 06 09.6 -0.3**
NVR Novirokopi 150.10 333 P **PKiKP** **01 06 09.0 -2.1**
EZN Ezine 150.16 329 P **PKPbc** **01 06 09.3 +0.1**
IVA Berane 150.30 340 ⇓PKP **PKPbc** **01 06 09.6 0.0**
UPM Unac-Piva 150.32 342 *eP* **PKPbc** **01 06 09.2 -0.6**
UPM Unac-Piva 150.32 342 ⇑PKP **PKPbc** **01 06 09.9 +0.1**
THAS Thassos island 150.32 332 P **PKPbc** **01 06 07.3 -2.3**
EIL Elat 150.33 304 PKP **PKPdf** **01 06 04.7 -0.1**
comp=Z,13nm,1.2s,baz=42,slow=1.5,SNR=7.4
EIL PKPbc **PKPbc** **01 06 09.1 -0.9**
comp=Z,34nm,0.9s,baz=352,slow=2.6,SNR=23
SRS Serrai 150.41 334 P **PKPbc** **01 06 09.3 -0.5**
KOME Kolasin 150.44 341 ⇑PKP **PKPbc** **01 06 10.0 0.0**
PGAV Gavieira, Arco 150.50 23 *e*PKPdf **PKPbc** **01 06 08.1 -2.0**
PGAV Gavieira, Arco 150.50 23 *e*SS SS 01 29 08.4 +6.3
PGAV Gavieira, Arco 150.50 23 *e*LR LR 01 56 13.6
comp=Z,19µm,20.0s
STIP Stip 150.51 336 *i* P **PKiKP** **01 06 10.4 -0.3**
NKY Niksic 150.64 341 ⇓PKP **PKiKP** **01 06 11.0 -0.1**
MQOL MQOL 150.65 285 *i* P 01 06 05.4
MQOL *i* 01 06 27.5
baz=227,slow=12
MQOL *i* S 01 13 09.6
VAY Valandovo 150.67 335 *i* P **PKiKP** **01 06 11.0 -0.1**
NKME Niksic 150.70 341 ⇓PKP **PKPbc** **01 06 09.9 -0.6**
BRY Bratogost 150.70 342 *eP* **PKPbc** **01 06 09.5 -1.1**
BRY Bratogost 150.70 342 ⇓PKP **PKPbc** **01 06 10.0 -0.6**
SACV Santiago Islan 150.79 87 **PKiKP** **01 06 11.8 -0.3**
SACV Santiago Islan 150.79 87 IAMs_20 IAMs_20 02 14 25.0
comp=Z,5µm,20.0s
PCAB Cabril 150.81 23 *e*PKPbc **PKiKP** **01 06 11.4 0.0**
OUR Ouranopolis 150.88 332 P **PKPbc** **01 06 11.2 +0.3**
KSL Kastellorizon 150.88 320 P **PKPbc** **01 06 09.6 -1.5**
PDG Podgorica 150.91 341 ⇓P **PKiKP** **01 06 12.3 +0.7**
PDG Podgorica 150.91 341 *eP* **PKPdf** **01 06 06.6 +1.4**
PDG Podgorica 150.91 341 IAMs_20 IAMs_20 02 10 59.8
comp=Z,8µm,21.0s
TTG Podgorica 150.91 341 ⇑PKP **PKPbc** **01 06 10.9 0.0**
CEME Cevo 150.91 341 ⇑PKP **PKPbc** **01 06 10.7 -0.3**
TREB Trebinje 150.93 342 *eP* **PKPbc** **01 06 09.2 -1.8**
MSSA Maissana 151.01 356 IAMs_20 IAMs_20 02 11 13.8
comp=Z,10µm,21.0s
GRG Griva 151.04 335 P **PKPbc** **01 06 11.1 -0.3**
HORT Hortiatis 151.05 334 P **PKPbc** **01 06 10.8 -0.6**
PTO Porto 151.08 24 *e*PKPbc **PKiKP** **01 06 12.1 +0.2**
PLG Polygyros 151.08 333 P **PKPbc** **01 06 09.3 -2.2**
BUM Brajici-Budva 151.14 341 ⇓PKP **PKPbc** **01 06 11.1 -0.5**
DRME Dracevica, Mon 151.15 340 *eP* **PKPbc** **01 06 09.2 -2.3**
DRME Dracevica, Mon 151.15 340 ⇑PKP **PKiKP** **01 06 12.0 -0.1**
PHP Peshkopia 151.17 338 P **PKPdf** **01 06 04.5 -1.3**
POLO Lamas de Olo 151.19 23 *e*PKPbc **PKiKP** **01 06 12.7 +0.4**
PBRG Braganca 151.19 21 *e*PKPbc **PKiKP** **01 06 12.7 +0.5**
PBRG Braganca 151.19 21 *e*PKPab **PKPab** **01 06 19.9 +0.4**
PBRG Braganca 151.19 21 *e*PP PP 01 10 02.0 +13
PVRL Vila Real 151.30 23 *e*PKPbc **PKiKP** **01 06 12.5 0.0**
PVRL Vila Real 151.30 23 *e*PKPab **PKPab** **01 06 22.9 +3.0**
ULC Ulcinj 151.33 340 ⇓PKP **PKPbc** **01 06 09.9 -2.1**
MBAR Mbarara 151.42 238 PKP **PKPdf** **01 06 06.7 -0.5**
comp=Z,2.6nm,0.2s,baz=71,slow=5.9,SNR=7.5
MBAR PKPbc **PKiKP** **01 06 13.6 -0.1**
comp=Z,2.8nm,0.2s,baz=79,slow=4.1,SNR=26
MBAR Mbarara 151.42 238 **PKPdf** **01 06 07.6 +0.5**
MBAR **PKPbc** **01 06 13.4 +0.2**
MBAR Mbarara 151.42 238 *i* P **PKPdf** **01 06 07.2 +0.1**
OHR Ohrid 151.54 337 *i* P **PKiKP** **01 06 13.5 +0.5**
FNA Florina 151.60 336 P **PKPbc** **01 06 11.6 -1.1**
MVO Moncorvo 151.66 22 *e*PKPdf **PKPdf** **01 06 07.9 +1.4**
MVO Moncorvo 151.66 22 *e*PKPbc **PKiKP** **01 06 14.4 +1.2**
MVO Moncorvo 151.66 22 *e*PKPab **PKPab** **01 06 25.1 +3.7**
MVO Moncorvo 151.66 22 *e*PP PP 01 09 57.3 +5.5
MVO Moncorvo 151.66 22 *e*LR LR 01 57 10.3
comp=Z,14µm,20.0s
PVIS Viseu 151.72 24 *e*PKPdf **PKPdf** **01 06 08.9 +2.3**
PVIS Viseu 151.72 24 *e*PKPbc **PKiKP** **01 06 13.9 +0.6**
PVIS Viseu 151.72 24 *e*PKPbc **PKiKP** **01 06 14.0 +0.6**
PVIS Viseu 151.72 24 *e*PKPab **PKPab** **01 06 22.3 +0.6**
MURB Monte Urbino 151.72 351 PKPbc **PKiKP** **01 06 13.5 +0.2**
LIT Litokhoron 151.72 334 P **PKPdf** **01 06 07.2 +0.6**
LIT Litokhoron 151.72 334 PKPbc **PKiKP** **01 06 14.9 +1.5**
COI Coimbra 151.94 25 PKIKP **PKPdf** **01 06 08.1 +1.2**
COI Coimbra 151.94 25 *e*PKPbc **PKiKP** **01 06 14.6 +0.9**
COI Coimbra 151.94 25 *e*PKPab **PKPab** **01 06 25.6 +3.0**
COI Coimbra 151.94 25 *e*PP PP 01 09 55.3 +1.9
COI Coimbra 151.94 25 PKPdf **PKPdf** **01 06 08.1 +1.2**
KBN Korca 151.97 337 P **PKPdf** **01 06 08.4 +1.4**
PCAS Casmilo, Conde 152.04 25 *e*PKPbc **PKiKP** **01 06 14.3 +0.3**
PCAS Casmilo, Conde 152.04 25 *e*PKPab **PKPab** **01 06 25.0 +2.0**
PCAS Casmilo, Conde 152.04 25 *e*PP PP 01 10 03.2 +9.2
NEST Nestorio 152.04 336 P **PKiKP** **01 06 15.2 +1.1**
MTE Manteigas 152.13 24 *e*PKPbc **PKiKP** **01 06 14.5 +0.3**
MTE Manteigas 152.13 24 *e*PKPab **PKPab** **01 06 25.3 +1.9**
MTE Manteigas 152.13 24 *e*PP PP 01 09 57.0 +2.5
MTE Manteigas 152.13 24 *e*LR LR 01 57 23.3
comp=Z,18µm,22.0s
MTE Manteigas 152.13 24 PKPbc **PKiKP** **01 06 14.9 +0.7**
KYMI Kymi, Euboea I 152.17 330 P **PKiKP** **01 06 17.4 +3.1**
PENT Pentalofos 152.20 336 P **PKiKP** **01 06 14.7 +0.3**
PMOZ Porto Moniz, M 152.22 47 *e*PKPab **PKPab** **01 06 26.8 +2.6**
PMOZ Porto Moniz, M 152.22 47 *e*PP PP 01 10 00.0 +4.0
PMOZ Porto Moniz, M 152.22 47 *e*LR LR 01 57 20.6
comp=Z,9µm,22.0s
KPRO Kipourio 152.31 335 P **PKPdf** **01 06 06.9 -0.7**
PSBE So Bento 152.37 26 *e*PKPbc **PKiKP** **01 06 15.3 +0.6**
PSBE So Bento 152.37 26 *e*PKPab **PKPab** **01 06 26.3 +1.9**
PSBE So Bento 152.37 26 *e*PP PP 01 09 58.3 +2.4
THL Klokotos Trika 152.37 334 P **PKPdf** **01 06 07.2 -0.3**
CASP Castiglione de 152.40 353 PKPdf **PKPdf** **01 06 08.8 +1.3**
LSK Leskovik 152.45 336 P **PKiKP** **01 06 15.3 +0.4**
AQU L'Aquila 152.46 349 PKIKP **PKPdf** **01 06 08.3 +0.6**
AQU L'Aquila 152.46 349 *eP* **PKPbc** **01 06 13.6 -1.0**
AQU L'Aquila 152.46 349 PKPdf **PKPdf** **01 06 08.3 +0.6**
AQU IAMs_20 IAMs_20 02 18 48.7
comp=Z,7µm,20.0s
LATE Laterza 152.46 352 PKPdf **PKPdf** **01 06 10.2 +2.5**
LATE IAMs_20 IAMs_20 02 12 47.4
comp=Z,4µm,21.0s
KARY Karystos 152.47 329 P **PKPdf** **01 06 04.8 -3.0**
SGRT San Giovanni R 152.53 345 IAMs_20 IAMs_20 02 19 20.1
comp=Z,6µm,20.0s
FUL Funchal 152.53 47 *e*PKPab **PKPab** **01 06 25.5 +0.2**
PMAFR Mafra 152.61 28 *e*PKPbc **PKPbc** **01 06 14.9 -0.1**
PCBR Castelo Branco 152.63 24 *e*PKPdf **PKPdf** **01 06 10.3 +2.4**
PCBR Castelo Branco 152.63 24 *e*PKPab **PKPab** **01 06 29.1 +3.6**
ATAL Atalanti 152.64 331 P **PKiKP** **01 06 15.3 +0.1**
PMPST Porto Santo, M 152.68 46 *e*PKPbc **PKiKP** **01 06 16.1 +0.6**
PMPST Porto Santo, M 152.68 46 *e*PKPab **PKPab** **01 06 28.6 +2.6**
LKR Lokris 152.68 331 P **PKPbc** **01 06 14.3 -0.8**
AGG Agios Georgios 152.68 333 P **PKPbc** **01 06 15.2 +0.1**
AGG Agios Georgios 152.68 333 PKPbc **PKiKP** **01 06 16.7 +1.4**
PMPS Porto Santo 152.69 46 *e*PKPab **PKPab** **01 06 28.4 +2.4**
AXAR Agios Charalam 152.74 332 P **PKPdf** **01 06 05.5 -2.7**
KARP Karpathos 152.76 321 IAMs_20 IAMs_20 02 29 40.7
comp=Z,4µm,21.0s
MAKR Makrakomi, Fth 152.78 333 P PKPdf 01 05 58.1 -10
PMST Lisbon--Monsan 152.84 28 *e*PKPbc **PKiKP** **01 06 17.0 +1.4**
LIS Lisbon 152.87 28 *e*PKPdf **PKPdf** **01 06 08.4 +0.1**
LIS IAMs_20 IAMs_20 02 07 35.6
comp=Z,23µm,21.7s
LIS Lisbon 152.87 28 *e*PKIKP **PKPdf** **01 06 08.4 +0.1**
LIS Lisbon 152.87 28 *e*PKPbc **PKiKP** **01 06 16.9 +1.2**
PMTG Montargil 152.98 26 *e*PKPbc **PKiKP** **01 06 16.7 +0.8**
PMTG Montargil 152.98 26 *e*PKPab **PKPab** **01 06 29.6 +2.6**
PMTG Montargil 152.98 26 *e*PP PP 01 10 01.9 +2.6
EVR Evrytania 153.00 333 P **PKPbc** **01 06 15.7 -0.2**
PMRV Marv??o 153.02 24 *e*PKPdf **PKPdf** **01 06 10.3 +1.8**
PMRV Marv??o 153.02 24 *e*PKPab **PKPab** **01 06 28.1 +0.9**
PMRV Marv??o 153.02 24 *e*PP PP 01 10 08.4 +8.8
PMRV Marv??o 153.02 24 *e*LR LR 01 57 20.6
comp=Z,12µm,20.0s
SANT Santorini 153.17 325 IAMs_20 IAMs_20 02 21 20.9
comp=Z,7µm,20.0s
KALE Kalithea 153.28 332 P **PKiKP** **01 06 16.7 0.0**
SERG Sergoula 153.30 332 P **PKiKP** **01 06 17.6 +0.9**
PESTR Estremoz 153.42 25 *e*PKPdf **PKPdf** **01 06 11.4 +2.3**
PESTR Estremoz 153.42 25 *e*PKPbc **PKiKP** **01 06 22.3 +5.4**
PESTR Estremoz 153.42 25 *e*PKPab **PKPab** **01 06 27.4 -1.4**
PESTR Estremoz 153.42 25 *e*PP PP 01 10 04.8 +3.0
PESTR Estremoz 153.42 25 PKPdf **PKPdf** **01 06 08.4 -0.7**
PESTR PKPbc **PKiKP** **01 06 17.4 +0.5**
PESTR PKPab **PKPab** **01 06 28.1 -0.7**
PESTR IAMs_20 IAMs_20 02 10 29.4
comp=Z,5µm,20.0s
LAKA Lakka 153.48 332 P **PKiKP** **01 06 18.9 +1.9**
EVO Evora 153.52 26 PKP **PKPdf** **01 06 11.3 +2.0**
EVO Evora 153.52 26 *e*PKPdf **PKPdf** **01 06 11.6 +2.3**
EVO Evora 153.52 26 *e*PKPab **PKPab** **01 06 29.5 +0.2**
PDO Prodromos 153.53 334 P **PKiKP** **01 06 18.3 +1.2**
UCM Universidad Co 153.66 17 PKP **PKPdf** **01 06 11.4 +1.9**
UCM Universidad Co 153.66 17 PP PP 01 10 17.6 +15
DRO Drossia 153.84 332 P **PKiKP** **01 06 18.1 +0.3**
ES18 SONSECA Array 154.00 19 IAMs_20 IAMs_20 02 08 28.4
comp=Z,7µm,22.0s
ES17 SONSECA Array 154.00 19 IAMs_20 IAMs_20 02 08 27.5
comp=Z,8µm,22.0s
MESJ Messejana 154.00 28 *e*PKPdf **PKPdf** **01 06 09.9 -0.1**
MESJ *e*SS SS 01 29 44.5 +3.9
MESJ IAMs_20 IAMs_20 02 08 47.0
comp=Z,16µm,13.5s
MESJ Messejana 154.00 28 *e*PKIKP **PKPdf** **01 06 09.9 -0.1**
MESJ *e*SS SS 01 29 44.5 +3.8
PBEJ Beja 154.00 27 *e*PKPdf **PKPdf** **01 06 12.8 +2.8**
ES16 SONSECA Array 154.01 19 IAMs_20 IAMs_20 02 08 26.6
comp=Z,8µm,22.0s
PTEO Sao Teotonio 154.01 29 *e*PKPbc **PKiKP** **01 06 24.0 +5.9**
PTEO Sao Teotonio 154.01 29 *e*PKPab **PKPab** **01 06 32.9 +1.5**
ES07 SONSECA Array 154.02 19 IAMs_20 IAMs_20 02 08 28.9
comp=Z,7µm,22.0s
PAB San Pablo 154.02 20 PKIKP **PKPdf** **01 06 10.9 +0.8**
PAB San Pablo 154.02 20 PKPdf **PKPdf** **01 06 10.9 +0.8**
PAB San Pablo 154.02 20 IAMs_20 IAMs_20 02 10 21.1
comp=Z,6µm,20.0s
ES08 SONSECA Array 154.02 19 IAMs_20 IAMs_20 02 08 29.0
comp=Z,7µm,22.0s
ES19 SONSECA Array 154.02 19 IAMs

MORF	**Marmelete**	**154.24**	**29**	*e*PKIKP	**PKPdf**	**01 06 10.6**	**+0.2**
MORF				*e*SS	SS	01 29 47.1	+3.6
PCVE	**Castro Verde**	**154.25**	**28**	*e*PKPdf	**PKPdf**	**01 06 12.4**	**+2.1**
PCVE	**Castro Verde**	**154.25**	**28**	*e*PKPab	**PKPab**	**01 06 33.3**	**+0.9**
IDI	**Anoyia**	**154.27**	**324**	PKP	**PKPdf**	**01 06 10.2**	**-0.3**
	comp=Z,10.0nm,0.9s,baz=76,slow=6.9,SNR=1.6						
IDI				PKPbc	**pPKPdf**	**01 06 19.8**	**-0.2**
	comp=Z,18nm,0.9s,baz=313,slow=2.0,SNR=3.3						
IDI	**Anoyia**	**154.27**	**324**	IAMs_20	IAMs_20	02 19 50.2	
	comp=Z,5μm,22.0s						
PFVI	**Vila Bisbo**	**154.30**	**29**	*e*PKPbc	**PKiKP**	**01 06 24.1**	**+5.4**
ITM	**Ithomi**	**154.37**	**331**	IAMs_20	IAMs_20	02 18 01.3	
	comp=Z,8μm,21.0s						
PVAQ	**Vaqueiros**	**154.59**	**27**	*e*PKPdf	**PKPdf**	**01 06 13.7**	**+2.9**
PVAQ	**Vaqueiros**	**154.59**	**27**	*e*PKPbc	**PKiKP**	**01 06 23.3**	**+4.0**
PVAQ	**Vaqueiros**	**154.59**	**27**	*e*LR	LR	01 57 59.6	
	comp=Z,10μm,20.0s						
PBDV	**Barranco-do-Ve**	**154.62**	**28**	*e*PKPab	**PKPab**	**01 06 32.2**	**-1.8**
TIP	**Timpagrande**	**154.65**	**341**	PKPab	**PKPab**	**01 06 37.1**	**+3.0**
TIP				IAMs_20	IAMs_20	02 15 14.7	
	comp=Z,9μm,22.0s						
MAHO	**Mahon**	**155.44**	**4**	PKP	**PKPdf**	**01 06 07.3**	**-4.6**
MAHO	**Mahon**	**155.44**	**4**	PP	PP	01 10 12.9	+0.2
CEL	**Celeste**	**155.76**	**342**	IAMs_20	IAMs_20	02 17 26.9	
	comp=Z,7μm,20.0s						
SFS	**San Fernando**	**156.03**	**26**	PKP	**PKPdf**	**01 06 15.6**	**+2.8**
SFS	**San Fernando**	**156.03**	**26**	PP	PP	01 10 25.7	+9.3
EMAL	**Malaga-Limoner**	**156.49**	**23**	PKP	**PKPdf**	**01 06 15.3**	**+1.9**
EMAL	**Malaga-Limoner**	**156.49**	**23**	PP	PP	01 10 31.6	+13
CART	**Cartagena**	**156.82**	**16**	PKP	**PKPdf**	**01 06 10.4**	**-3.3**
CART	**Cartagena**	**156.82**	**16**	PP	PP	01 10 30.7	+10
CEU	**Ceuta**	**156.87**	**26**	PKP	**PKPdf**	**01 06 19.4**	**+5.5**
CEU	**Ceuta**	**156.87**	**26**	PP	PP	01 10 35.6	+15
MBO	**M'Bour**	**157.15**	**89**	IAMs_20	IAMs_20	02 15 32.9	
	comp=Z,7μm,20.0s						
RAFF	**Raffo Rosso**	**157.15**	**344**	IAMs_20	IAMs_20	02 15 24.7	
	comp=Z,9μm,21.0s						
PVLZ	**Peæn de**	**157.93**	**25**	PKP	**PKPdf**	**01 06 22.0**	**+6.8**
PVLZ	**Peæn de**	**157.93**	**25**	PP	PP	01 10 27.1	+0.3
AVE	**Averroes**	**158.03**	**33**	PKP	**PKPdf**	**01 06 14.0**	**-1.4**
AVE	**Averroes**	**158.03**	**33**	PP	PP	01 10 39.4	+12
IFR	**Ifrane**	**158.99**	**28**	PKP	**PKPdf**	**01 06 16.6**	**-0.3**
IFR	**Ifrane**	**158.99**	**28**	PP	PP	01 10 45.7	+13
KEST	**Kesra**	**159.55**	**354**	PKP	**PKPdf**	**01 06 17.1**	**-0.2**
	comp=Z,11nm,1.1s,baz=212,slow=6.9,SNR=4.8						
KEST				PKPab	**PKPab**	**01 06 55.5**	**+0.3**
	comp=Z,24nm,1.0s,baz=357,slow=3.7,SNR=9.5						
KEST				PP	**PP**	**01 10 40.9**	**+5.5**
	comp=Z,7.9nm,1.2s,baz=358,slow=1.3,SNR=3.5						
KEST	**Kesra**	**159.55**	**354**	PKPab	**PKPab**	**01 06 56.6**	**+1.4**
MDT	**Midelt**	**159.81**	**28**	PKP	**PKPdf**	**01 06 18.9**	**+1.2**
	comp=Z,12nm,0.9s,baz=57,slow=1.2,SNR=20						
MDT				PKPab	**PKPab**	**01 06 58.2**	**+1.6**
	comp=Z,26nm,1.0s,baz=5.7,slow=3.7,SNR=7.5						
MDT				PP	**PP**	**01 10 38.2**	**+0.8**
	comp=Z,4.7nm,1.1s,baz=21,slow=0.9,SNR=2.7						
LIC	**Lamto**	**165.38**	**127**	*e*PKIKP	**PKPdf**	**01 06 22.8**	**-0.8**
	comp=Z,233nm,2.0s						
LIC	**Lamto**	**165.38**	**127**	*e*P	**PKPab**	**01 07 22.3**	**+0.8**
	comp=Z,213nm,1.2s						
TIC	**Toumodi**	**165.65**	**126**	*e*PKIKP	**PKPdf**	**01 06 23.1**	**-0.7**
TIC	**Toumodi**	**165.65**	**126**	*e*P	**PKPab**	**01 07 23.6**	**+0.9**
KIC	**Kosan Boka**	**165.69**	**127**	*e*PKIKP	**PKPdf**	**01 06 23.1**	**-0.7**
	comp=Z,73nm,1.2s						
KIC	**Kosan Boka**	**165.69**	**127**	*e*P	**PKPab**	**01 07 23.8**	**+1.0**
	comp=Z,126nm,1.0s						
DBIC	**Dimbokro**	**165.79**	**126**	PKP	**PKPdf**	**01 06 23.3**	**-0.6**
	comp=Z,13nm,0.9s,baz=175,slow=1.4,SNR=16						
DBIC				PKPab	**PKPab**	**01 07 23.8**	**+0.5**
	comp=Z,50nm,1.0s,baz=211,slow=5.2,SNR=14						
DBIC				PP	**PP**	**01 11 11.0**	**+1.0**
	comp=Z,6.4nm,1.0s,baz=208,slow=7.7,SNR=5.1						
KOWA	**Kowa**	**169.64**	**93**	PKP	**PKPdf**	**01 06 25.6**	**-0.9**
	comp=Z,12nm,0.9s,baz=187,slow=0.3,SNR=29						
KOWA				PKPab	**PKPab**	**01 07 40.4**	**0.0**
	comp=Z,21nm,0.9s,baz=267,slow=2.8,SNR=9.5						
KOWA				PP	**PP**	**01 11 31.6**	**+1.0**
	comp=Z,8.2nm,1.1s,baz=223,slow=4.0,SNR=3.9						
KOWA	**Kowa**	**169.64**	**93**		**PKPdf**	**01 06 25.7**	**-0.8**
KOWA				PKPab	**PKPab**	**01 07 40.9**	**+0.5**
TOA0	**Torodi Ar. Sit**	**174.71**	**114**	PKPab	**PKPab**	**01 08 03.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**174.71**	**114**	PKP	**PKPdf**	**01 06 27.7**	**-1.1**
	comp=Z,7.5nm,0.9s,baz=336,slow=1.8,SNR=29						
TORD				PKPab	**PKPab**	**01 08 03.0**	**+0.1**
	comp=Z,20nm,0.9s,baz=267,slow=4.6,SNR=12						
TORD				PP	**PP**	**01 11 54.4**	**-0.9**
	comp=Z,7.7nm,1.1s,baz=286,slow=2.4,SNR=6.8						

*KRNET **07** 00:50:26.2±0.1,39.°72N×77.°58E,mb3.1*
*SOME **07** 00:50:27.4,40.00N×77.°28E,h10km*
*NNC **07** 00:50:28.4±1.3,39.°98N×77.°39E,h0km,mb3.7,mpv3.4,*
Error ellipse: s-maj=8.6km s-min=6.2km az=172.0
ISC 07 00:50:29.5±1.8,39.°78N±0.°08×77.°43E±0.°05,h10km,n50,
σ1§69/80,29C-7D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**2.36**	**355**	⇑	*i*	P	**Pn**	**00 51 08.0**	**-0.4**
	baz=53								
KDJ				⇑	*i*	S	**Sn**	**00 51 38.2**	**+0.7**
	baz=53								
ULHL	**Ulahol**	**2.62**	**340**	⇑	*i*	P	**Pn**	**00 51 11.8**	**-0.3**
	baz=39								
ULHL				⇑	*i*	S	**Sn**	**00 51 45.6**	**+1.4**
	baz=39								
PRZ	**Przheval'sk**	**2.80**	**15**	⇓	*i*	P	**Pn**	**00 51 14.0**	**-0.5**
	baz=12								
PRZ				⇓	*i*	S	**Sn**	**00 51 48.3**	**-0.2**
	baz=12								
BOOM	**Boomskoye usch**	**2.93**	**338**	⇑	*e*	P	**Pn**	**00 51 16.0**	**-0.4**
	baz=36								
BOOM				⇑	*i*	S	**Sn**	**00 51 52.8**	**+1.1**
	baz=36								
ANVS	**Anan'yevo**	**3.01**	**3**	⇑	*i*	P	**Pn**	**00 51 16.8**	**-0.6**
	baz=1.0								
ANVS				⇑	*i*	S	**Sn**	**00 51 53.7**	**+0.1**
	baz=1.0								
SFK	**Sufi-Kurgan**	**3.03**	**276**	⇑	*i*	P	**Pn**	**00 51 17.7**	**0.0**
	baz=77								
SFK				⇑	*i*	S	**Sn**	**00 51 55.3**	**+1.1**
	baz=77								
ARLS	**Aral**	**3.14**	**312**	⇑	*i*	P	**Pn**	**00 51 19.0**	**-0.2**
	baz=12								
ARLS				⇑	*i*	S	**Sn**	**00 51 58.3**	**+1.4**
	baz=12								
UCH	**Uchtor**	**3.29**	**319**	⇑	*i*	P	**Pn**	**00 51 21.3**	**-0.3**
	baz=18								
UCH				⇑	*i*	S	**Sn**	**00 52 02.1**	**+1.1**
	baz=18								
IZV	**Izvestkoviy**	**3.31**	**350**	*e*	P		**Pb**	**00 51 26.1**	**-2.4**
	6.6nm,0.6s								
IZV				*e*	S		**Sb**	**00 52 07.8**	**-1.1**
	38nm,0.6s								
IZV	**Izvestkoviy**	**3.31**	**350**	Pg			**Pb**	**00 51 26.1**	**-2.4**
	6.6nm,0.6s								
IZV				Lg			Lg	00 52 07.8	
	38nm,0.6s								
SATY	**Saty**	**3.36**	**12**	*e*	P		**Pb**	**00 51 27.5**	**-1.8**
	8.7nm,0.7s								
SATY				*e*	S		**Sb**	**00 52 09.9**	**-0.3**
	23nm,0.5s								
SATY	**Saty**	**3.36**	**12**	Pg			**Pb**	**00 51 27.5**	**-1.8**
	8.9nm,0.9s								
SATY				Lg			Lg	00 52 09.9	
	23nm,0.5s								
MDOK	**Medeo**	**3.39**	**355**	*e*	P		**Pn**	**00 51 26.9**	**+4.3**
	12nm,0.5s								
MDOK				*e*	S		**Sb**	**00 52 09.2**	**-2.0**
	40nm,0.5s								
MDOK	**Medeo**	**3.39**	**355**	⇑	Pg		**Pn**	**00 51 26.6**	**+3.9**
	9.2nm,0.5s								
MDOK				Lg			Lg	00 52 09.5	
	39nm,0.9s								
MDOK	**Medeo**	**3.39**	**355**	Pg			**Pn**	**00 51 27.0**	**+4.3**
MDOK				Lg			Lg	00 52 09.5	
	40nm,0.6s								
TKM2	**Tokmak 2**	**3.43**	**337**	⇑	*i*	P	**Pn**	**00 51 23.2**	**0.0**
	baz=36								
TKM2				⇑	*i*	S	**Sn**	**00 52 04.7**	**+0.7**
	baz=36								
TKM2	**Tokmak 2**	**3.43**	**337**	⇓	Pg		**Pn**	**00 51 26.2**	**+3.0**
	5.7nm,1.1s								
TKM2				⇓	Lg		Lg	00 52 11.0	
	8.1nm,0.5s								
KBK	**Karagaybulak**	**3.43**	**328**	⇑	*i*	P	**Pn**	**00 51 23.4**	**+0.2**
	baz=27								
KBK				⇑	*i*	S	**Sn**	**00 52 05.2**	**+1.2**
	baz=27								
KST	**Kastek**	**3.44**	**342**	*e*	P		**Pb**	**00 51 29.1**	**-1.6**
	5.5nm,0.4s								
KST				*e*	S		**Sb**	**00 52 12.7**	**+0.1**
	10nm,0.4s								
KST	**Kastek**	**3.44**	**342**	Pg			**Pb**	**00 51 29.0**	**-1.6**
	5.5nm,0.4s								
KST				Lg			Lg	00 52 12.7	
	10nm,0.4s								
KOTS	**Kotyrbulak**	**3.46**	**356**	*e*	P		**Pb**	**00 51 28.8**	**-2.1**
	23nm,0.5s								
KOTS				*e*	S		**Sb**	**00 52 12.5**	**-0.7**
	28nm,0.6s								
KOTS	**Kotyrbulak**	**3.46**	**356**	Pg			**Pb**	**00 51 28.8**	**-2.1**
	23nm,0.5s								
KOTS				Lg			Lg	00 52 12.5	
	28nm,0.6s								
UZB	**Uzynbulak**	**3.57**	**19**	*e*	P		**Pb**	**00 51 30.6**	**-2.2**
	6.4nm,0.7s								
UZB				*e*	S		**Sb**	**00 52 15.3**	**-1.0**
	18nm,1.0s								
UZB	**Uzynbulak**	**3.57**	**19**	Pg			**Pb**	**00 51 30.6**	**-2.2**
	6.4nm,0.7s								
UZB				Lg			Lg	00 52 15.3	
	18nm,1.0s								
AAK	**Ala-Archa**	**3.61**	**323**	⇑	Pg		**Pn**	**00 51 28.9**	**+3.2**
	7.2nm,0.4s								
AAK				⇑	Lg		Lg	00 52 17.5	
	29nm,1.1s								
AML	**Almayashu**	**3.68**	**311**	⇑	*e*	P	**Pn**	**00 51 27.1**	**+0.3**
	baz=11								
AML				⇑	*i*	S	**Sn**	**00 52 11.6**	**+1.2**
	baz=11								
DGS	**Degeres**	**3.68**	**341**	*e*	P		**Pb**	**00 51 32.7**	**-2.0**
	5.0nm,0.5s								
DGS				*e*	S		**Sb**	**00 52 19.2**	**-0.1**
	16nm,0.6s								
DGS	**Degeres**	**3.68**	**341**	Pg			**Pb**	**00 51 32.7**	**-2.0**
	5.0nm,0.5s								
DGS				Lg			Lg	00 52 19.2	
	16nm,0.6s								
SHLS	**Shalkode**	**3.71**	**24**	*e*	P		**Pb**	**00 51 35.5**	**+0.4**
	7.7nm,0.4s								
SHLS				*e*	S		**Sb**	**00 52 23.8**	**+3.7**
	16nm,0.6s								
SHLS	**Shalkode**	**3.71**	**24**	Pg			**Pb**	**00 51 35.6**	**+0.4**
	7.7nm,0.4s								
SHLS				Lg			Lg	00 52 23.8	
	16nm,0.6s								
CHMS	**Chumysh**	**3.80**	**329**	⇑	*i*	P	**Pn**	**00 51 28.2**	**+0.1**
	baz=28								
CHMS				⇑	*i*	S	**Sn**	**00 52 13.7**	**+0.9**
	baz=28								
KPKS	**Kokpek**	**3.80**	**14**	*e*	P		**Pb**	**00 51 34.8**	**-2.0**
	9.9nm,0.4s								
KPKS				*e*	S		**Sb**	**00 52 22.7**	**-0.2**
	28nm,0.5s								
PDGK	**Podgornoye**	**3.87**	**23**	⇓	Pg		**Pb**	**00 51 34.7**	**-3.3**
	7.5nm,0.9s								
PDGK				⇓	Lg		Lg	00 52 24.2	
	24nm,0.8s								
KTBS	**Karatobe**	**3.97**	**352**	*e*	P		**Pb**	**00 51 37.8**	**-1.8**
	4.2nm,0.6s								
KTBS				*e*	S		**Sb**	**00 52 27.7**	**0.0**
	48nm,0.6s								
KTBS	**Karatobe**	**3.97**	**352**	Pg			**Pb**	**00 51 37.8**	**-1.8**
	4.2nm,0.6s								
KTBS				Lg			Lg	00 52 27.7	
	48nm,0.6s								
EKS2	**Erkin-Say**	**3.98**	**317**	⇑	*e*	P	**Pn**	**00 51 31.0**	**+0.2**
	baz=17								
EKS2				⇑	*e*	S	**Sn**	**00 52 18.0**	**+0.4**
	baz=17								
USP	**Ospenovka**	**4.12**	**329**	⇑	*e*	P	**Pn**	**00 51 32.9**	**+0.3**
	baz=28								
USP				⇑	*i*	S	**Sn**	**00 52 21.6**	**+0.8**
	baz=28								
KRBS	**Karabastau**	**4.13**	**342**	*e*	P		**Pb**	**00 51 40.8**	**-1.5**
	3.6nm,0.7s								
KRBS				*e*	S		**Sb**	**00 52 32.9**	**+0.6**
	11nm,0.6s								
KRBS	**Karabastau**	**4.13**	**342**	Pg			**Pb**	**00 51 40.8**	**-1.5**
	3.6nm,0.7s								
KRBS				Lg			Lg	00 52 32.9	
	11nm,0.6s								
KUU	**Kurty**	**4.19**	**349**	*e*	P		**Pb**	**00 51 41.3**	**-2.0**
	2.9nm,0.7s								
KUU				*e*	S		**Sb**	**00 52 34.2**	**+0.2**
	16nm,1.0s								
KUU	**Kurty**	**4.19**	**349**	Pg			**Pb**	**00 51 41.3**	**-2.0**
	2.9nm,0.7s								
KUU				Lg			Lg	00 52 34.2	
	16nm,1.0s								
KTMS	**Ketmen**	**4.27**	**30**	*e*	P		**Pb**	**00 51 42.8**	**-2.0**
	2.2nm,0.2s								
KTMS				*e*	S		**Sb**	**00 52 36.2**	**-0.1**
	14nm,0.6s								
KTMS	**Ketmen**	**4.27**	**30**	Pg			**Pb**	**00 51 42.8**	**-2.0**
	2.2nm,0.2s								
KTMS				Lg			Lg	00 52 36.2	
	14nm,0.6s								
MNBS	**Baschi**	**4.36**	**9**	*e*	P		**Pb**	**00 51 44.1**	**-2.2**
	3.4nm,0.4s								
MNBS				*e*	S		**Sb**	**00 52 39.1**	**+0.2**
	15nm,0.5s								
MNBS	**Baschi**	**4.36**	**9**	Pg			**Pb**	**00 51 44.1**	**-2.2**
	3.4nm,0.4s								
MNBS				Lg			Lg	00 52 39.1	
	15nm,0.5s								
ARXS	**Arharly**	**4.44**	**4**	*e*	P		**Pb**	**00 51 46.4**	**-1.3**
	7.1nm,0.6s								
ARXS				*e*	S		**Sb**	**00 52 42.8**	**+1.5**
	9.0nm,0.4s								
ARXS	**Arharly**	**4.44**	**4**	Pg			**Pb**	**00 51 46.4**	**-1.3**
	7.1nm,0.6s								
ARXS				Lg			Lg	00 52 42.8	
	9.0nm,0.4s								
DJR	**Jarkent**	**4.88**	**20**	*e*	P		**Pb**	**00 51 53.9**	**-1.2**
	2.2nm,0.7s								
DJR				*e*	S		**Sb**	**00 52 55.5**	**+1.7**
	7.5nm,0.7s								
DJR	**Jarkent**	**4.88**	**20**	Pg			**Pb**	**00 51 53.9**	**-1.2**
	2.2nm,0.7s								
DJR				Lg			Lg	00 52 55.5	
	7.5nm,0.7s								
KK31	**Karatay Array**	**6.17**	**305**	⇓	Pg		**Pb**	**00 52 16.6**	**-0.4**
	0.3nm,0.3s,baz=116,slow=16,SNR=5.9								
KK31					Lg		Lg	00 53 38.7	
	0.8nm,0.5s,baz=122,slow=28,SNR=4.0								

WEL 07 00:50:44.9,39.°5N±2.°×17.°5E±.°,h16km±1km,M1.5/6,ML0.9/6,
MLv1.5/6,Error ellipse: s-maj=0.0km s-min=0.0km
az=61.0,North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TRVZ	**Turoa**	**0.07**	**84**		P		Pg	00 50 48.6	+0.2
TRVZ					S		Sg	00 50 51.2	+0.5
FWVZ	**Far West T-bar**	**0.09**	**56**		P		Pg	00 50 48.8	+0.3
FWVZ					S		Sg	00 50 51.7	+0.8
WHVZ	**Whangaehu Hut**	**0.10**	**77**		P		Pb	00 50 49.0	+0.3
WNVZ	**Wahianoa**	**0.11**	**101**		P		Pb	00 50 49.0	+0.2
WNVZ					S		Sb	00 50 51.9	+0.5
WTVZ	**West Tongariro**	**0.22**	**28**		P		Pb	00 50 50.5	-0.1
WTVZ					S		Sb	00 50 54.7	+0.4
TWVZ	**Taurewa**	**0.24**	**356**		P		Pg	00 50 50.3	0.0
ETVZ	**East Tongariro**	**0.26**	**49**		P		Pn	00 50 54.2	0.0
ETVZ					S		Sb	00 50 56.4	+0.8
TMVZ	**Te Maari**	**0.27**	**45**		S		Sg	00 50 52.8	-2.2
TMVZ					P		Pn	00 50 53.3	-1.1
ARHZ	**Aropaoanui**	**1.20**	**88**		P		Pg	00 51 11.2	+3.1
ANWZ	**Angora Road**	**1.39**	**146**		P		Pb	00 51 10.5	-0.1
HOWZ	**Holdsworth Sta**	**1.59**	**178**		P		Pb	00 51 13.9	0.0

*IDC **07** 01:06:30.2±0.9,19.°92S×70.°70W,h0km,mb4.0/12,*
mb1 4.2/14,mb1mx4.1/32,mbtmp4.1/14,ML4.0/2,MS3.9/2,
Ms1 3.9/2,ms1mx3.6/21,Error ellipse: s-maj=25.1km
s-min=19.0km az=34.0
*NEIC **07** 01:06:32±1.9,20.°06S±0.°03×70.°85W±0.°05,h19km±1km,*
Error ellipse: s-maj=7.2km s-min=4.3km az=92.0
*GUC **07** 01:06:33.4±0.6,20.°01S×70.°90W,h33km±2km,ML4.4*
*NEIC **07** 01:06:33,20.°01S×70.°90W,h19km,Moment Tensor*

Solution. Moment tensor: Scale 10¹⁵Nm; Mrr2.34;
Mθθ-0.02; Mϕϕ-2.32; Mrθ0.85; Mrϕ0.33; Mθϕ-1.06; Fault
plane solution: M₀2.72000×10¹⁵ NP1:φ₁157.87000°,
δ59.78000°,λ75.28000°. NP2:φ₂5.43000°,δ33.31000°,
λ113.56000°. Principal axes: T 2.7813, Plg71.0000°,
Azm34.0000°; N -0.1298, Plg13.0000°, Azm165.0000°; P
-2.6516, Plg14.0000°, Azm259.0000°;
*VAO **07** 01:06:50.0±0.9,19.°71S×69.°78W,h132km±8km,mb4.3*
ISC 07 01:06:31.6±2.5,20.°02S±0.°02×70.°83W±0.°04,h20km±13km,
n90,σ1§59/97,mb4.2/12,3C-3D,Near coast of northern
Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.79**	**58**	⇓	*i*	P	**Pn**	**01 06 47.5**	**-0.1**
PSGC					*i*	S	**Sn**	**01 06 58.8**	**-0.2**
PSGCX	**Pisagua**	**0.79**	**58**				**Pn**	**01 06 47.6**	**-0.1**
PSGCX							**Sn**	**01 06 59.1**	**+0.1**
TA01	**Diego Aracena**	**0.81**	**131**	⇓	*i*	P	**Pn**	**01 06 48.2**	**+0.3**
TA01					*i*	S	**Sn**	**01 06 59.5**	**+0.1**
TA01	**Diego Aracena**	**0.81**	**131**				**Pn**	**01 06 48.2**	**+0.3**
TA01							**Sn**	**01 06 59.4**	**+0.1**
PB11	**IPOC Station P**	**1.14**	**77**	⇓	*i*	P	**Pb**	**01 06 53.4**	**+0.7**
PB11					*i*	S	**Sn**	**01 07 09.4**	**+1.8**
PB11						IAML		01 07 11.0	
	comp=E,12μm,0.5s								
PB11	**IPOC Station P**	**1.14**	**77**			Pn	**Pb**	**01 06 53.3**	**+0.7**
PB11						Sn	**Sn**	**01 07 09.1**	**+1.6**
MNMC	**Minye Minye**	**1.47**	**53**	⇑	*i*	P	**Pb**	**01 06 58.8**	**+0.5**
MNMC					*i*	S	**Sb**	**01 07 18.2**	**+1.6**
MNMC						IAML		01 07 26.2	
	comp=N,17μm,0.7s								
MNMC	**Minye Minye**	**1.47**	**53**			Pn	**Pb**	**01 06 59.1**	**+0.7**
MNMC						Sn	**Sb**	**01 07 18.4**	**+1.7**
PB08	**IPOC Station P**	**1.58**	**95**	*e*	P		**Pb**	**01 07 00.3**	**-0.1**
PB08					*i*	S	**Sb**	**01 07 21.8**	**+1.7**
PB08						IAML		01 07 24.1	
	comp=N,7μm,0.4s								
PB08	**IPOC Station P**	**1.58**	**95**			Pn	**Pb**	**01 06 59.7**	**-0.7**
PB08						Sn	**Sn**	**01 07 18.0**	**-0.9**
PB01	**IPOC Station P**	**1.62**	**129**	⇑	*i*	P	**Pb**	**01 07 00.5**	**-0.4**
PB01					*i*	S	**Sb**	**01 07 22.0**	**+1.2**
PB01						IAML		01 07 27.5	
	comp=N,6μm,0.3s								
PB01	**IPOC Station P**	**1.62**	**129**			Pn	**Pb**	**01 07 00.6**	**-0.2**
AP01	**Chacalluta**	**1.71**	**16**	*e*	P		**Pn**	**01 07 01.2**	**+1.0**
AP01					*i*	S	**Sb**	**01 07 22.8**	**-0.5**
AP01						IAML		01 07 37.2	
	comp=E,9μm,0.6s								
AP01	**Chacalluta**	**1.71**	**16**			Pn	**Pb**	**01 07 02.1**	**-0.2**
PB07	**IPOC Station P**	**1.91**	**153**	*e*	P		**Pn**	**01 07 03.2**	**0.0**
PB07					*i*	S	**Sb**	**01 07 30.8**	**+1.4**
PB07						IAML		01 07 37.7	
	comp=E,4μm,0.6s								
PB07	**IPOC Station P**	**1.91**	**153**			Pn	**Pn**	**01 07 04.1**	**+0.9**
PB16	**IPOC Station P**	**2.10**	**37**	*e*	P		**Pn**	**01 07 07.6**	**+1.5**
PB16					*e*	S	**Sb**	**01 07 35.3**	**+0.2**
PB16	**IPOC Station P**	**2.10**	**37**			Pn	**Pb**	**01 07 07.7**	**-1.6**
PB03	**IPOC Station P**	**2.25**	**154**	*e*	P		**Pn**	**01 07 08.6**	**+0.7**
PB03					*e*	S	**Sb**	**01 07 40.1**	**+0.9**
PB03						IAML		01 07 52.9	
	comp=E,2μm,0.4s								
PB09	**IPOC Station P**	**2.31**	**140**	⇑	*i*	P	**Pb**	**01 07 10.7**	**-1.9**
PB09					*i*	S	**Sb**	**01 07 39.8**	**-1.0**
PB09						IAML		01 07 51.0	
	comp=E,4μm,0.6s								
PB09	**IPOC Station P**	**2.31**	**140**			Pn	**Pn**	**01 07 09.8**	**+1.2**
PB04	**IPOC Station P**	**2.38**	**165**	*e*	P		**Pn**	**01 07 09.8**	**+0.1**
PB04					*i*	S	**Sn**	**01 07 37.0**	**-1.5**
PB04						IAML		01 07 53.0	
	comp=E,2μm,0.5s								
PB04	**IPOC Station P**	**2.38**	**165**			Pn	**Pn**	**01 07 09.9**	**+0.1**
PB06	**IPOC Station P**	**2.92**	**156**			Pn	**Pn**	**01 07 17.0**	**0.0**
LVC	**Limon Verde**	**3.14**	**145**			Pn	**Pn**	**01 07 22.4**	**+2.2**
	comp=E,11nm,0.3s,baz=310,slow=9.4,SNR=7.1								
LVC						Sn	**Sb**	**01 08 07.0**	**+2.2**
	comp=E,140nm,0.3s,baz=111,slow=9.6,SNR=14								
LVC	**Limon Verde**	**3.14**	**145**			Pn	**Pn**	**01 07 20.7**	**+0.5**
PB15	**IPOC Station P**	**3.41**	**158**			Pn	**Pn**	**01 07 24.3**	**+0.5**
PB10	**IPOC Station P**	**3.48**	**176**			Pn	**Pn**	**01 07 24.5**	**-0.1**
LPAZ	**La Paz**	**4.52**	**35**			Pn	**

TORD					IAmb	IAmb	01 18 33.0	
	comp=Z,5.7nm,0.9s							
ESDC	**Sonseca Array**	**86.06**	**45**	P		**P**	**01 19 12.2**	**+1.2**
	comp=Z,1.6nm,1.0s,baz=224,slow=5.4,SNR=4.4							
YKA	**Yellowknife Ar**	**89.21**	**341**	P		**P**	**01 19 26.5**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=137,slow=5.4,SNR=12							
H11S2	**WAKE ISLAND Hy**	**25.89**	**279**	T		T	03 44 59.8	
	baz=98,slow=74							
H11S1	**WAKE ISLAND Hy**	**25.90**	**279**	T		T	03 44 57.2	
	baz=98,slow=74							
H11S3	**WAKE ISLAND Hy**	**25.91**	**279**	T		T	03 44 57.6	
	baz=98,slow=74							
H11N3	**WAKE ISLAND Hy**	**25.94**	**280**	T		T	03 45 02.2	
H11N2	**WAKE ISLAND Hy**	**25.96**	**280**	T		T	03 45 02.2	
H11N1	**WAKE ISLAND Hy**	**25.96**	**280**	T		T	03 45 02.2	
ZALV	**Zalesovo Beam**	**141.34**	**23**	PKhkP		**PKPdf**	**01 25 58.8**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=336,slow=3.2,SNR=4.9							
MKAR	**Makanchi Array**	**145.44**	**33**	PKPbc		**PKPab**	**01 26 09.4**	**+1.0**
	comp=Z,5.6nm,0.8s,baz=324,slow=4.1,SNR=37							
MKAR	**Makanchi Array**	**145.44**	**33**	PKPdf		**PKPab**	**01 26 09.2**	**+0.8**
USRK	**Ussuriysk Ar.**	**149.30**	**327**	PKPbc		**PKiKP**	**01 26 20.7**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=60,slow=5.8,SNR=4.0							
SONM	**Songino Array**	**152.17**	**4**	PKPbc		**PKiKP**	**01 26 27.3**	**+1.1**
	comp=Z,1.5nm,0.8s,baz=339,slow=2.7,SNR=8.8							
SONM	**Songino Array**	**152.17**	**4**	PKPdf		**PKPdf**	**01 26 19.8**	**+0.6**

*INET **07** 01:07:27.1, 14.˚46N×89.˚18W, h0km, MW3.2*
*SNET **07** 01:07:28.0±1.1, 14.˚51N×89.˚18W, h5km, ML3.5*
*GCG **07** 01:07:30.0±0.6, 14.˚71N×89.˚25W, h0km±146km, MD3.7*

ISC 07 01:07:27.6±1.6, 14.˚52N±0.˚05×89.˚11W±0.˚05, h7km±10km, n17, σ0.45 s/29, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESQI	**Esquipulas**	**0.23**	**279**	⇑*iP*		**Pg**		**01 07 32.3**	**+0.1**
ESQI				*eS*		**Sg**		**01 07 35.8**	**+0.4**
MTO3	**Montecristo**	**0.27**	**243**	*eP*		**Pg**		**01 07 33.2**	**+0.1**
MTO3				*eS*		**Sg**		**01 07 37.0**	**+0.2**
TACO	**Tacachico**	**0.60**	**204**	*eP*		**Pg**		**01 07 39.3**	**+0.1**
TACO				*eS*		**Sb**		**01 07 47.8**	**-1.2**
CEDA	**San Andres**	**0.77**	**201**	*eP*		**Pg**		**01 07 42.5**	**+0.1**
CEDA				*eS*		**Sb**		**01 07 53.6**	**-0.3**
CEDA				IAML				01 08 03.4	
	comp=Z,2μm,0.3s								
MRL	**Marmol**	**0.79**	**315**	*eP*		**Pg**		**01 07 42.8**	**0.0**
BOQS	**Boqueron**	**0.80**	**192**	*eP*		**Pg**		**01 07 43.2**	**+0.2**
SNJE	**San Jose**	**0.81**	**217**	*eP*		**Pg**		**01 07 43.3**	**+0.1**
SNJE				*eS*		**Sb**		**01 07 55.2**	**-0.1**
RTR	**El Retiro**	**0.81**	**220**	*eP*		**Pb**		**01 07 43.7**	**-0.4**
PAVA	**Las Pavas**	**0.82**	**168**	*eP*		**Pg**		**01 07 43.2**	**-0.2**
PAVA				*eS*		**Sb**		**01 07 55.8**	**+0.2**
PAVA				IAML				01 07 59.2	
	comp=Z,2μm,0.5s								
SBLS	**San Blas**	**0.84**	**216**	*eP*		**Pb**		**01 07 44.2**	**-0.5**
SBLS				*eS*		**Sb**		**01 07 56.2**	**-0.1**
CEVE	**Cerro Verde**	**0.85**	**216**	*eP*		**Pg**		**01 07 44.2**	**+0.1**
CEVE				*eS*		**Sb**		**01 07 57.2**	**+0.6**
CEVE				IAML				01 08 02.0	
	comp=Z,2μm,0.2s								
LFRS	**El Faro**	**0.90**	**177**	*eP*		**Pg**		**01 07 44.8**	**-0.1**
COEG	**Centro de Oper**	**0.92**	**166**	*eP*		**Pg**		**01 07 45.3**	**-0.1**
COEG				IAML				01 08 06.0	
	comp=Z,2μm,0.2s								
JAYA	**Jayaque - finc**	**0.92**	**201**	*eP*		**Pg**		**01 07 45.4**	**0.0**
JAYA				*eS*		**Sb**		**01 07 58.2**	**-0.4**
JAYA				IAML				01 08 03.0	
	comp=Z,2μm,0.2s								
NBG	**Las Nubes**	**1.20**	**273**	*eP*		**Pn**		**01 07 51.1**	**0.0**
NBG				*eS*		**Sn**		**01 08 08.1**	**+0.4**
ALJI	**Alcalda de J**	**1.30**	**156**	*eP*		**Pn**		**01 07 52.0**	**-0.2**
ALJI				*eS*		**Sn**		**01 08 11.0**	**+1.2**
ALJI				IAML				01 08 14.9	
	comp=Z,791nm,0.4s								
FUG	**Fuego 3**	**1.68**	**268**	*eP*		**Pg**		**01 07 59.5**	**-0.4**
FUG				*eS*		**Sg**		**01 08 22.1**	**+0.4**

*IDC **07** 01:16:31.2±2.1, 15.˚05S×173.˚78W, h0km, mb3.9/7, mb1 4.2/8, mb1mx4.0/30, mbtmp3.9/8, ML4.9/1, Error ellipse: s-maj=128.5km s-min=19.8km az=146.0*
*NOU **07** 01:16:32.7, 15.˚09S×173.˚15W, h105km, MLv4.7, Tonga Islands*

ISC 07 01:16:33.5±0.7, 15.˚3S±0.˚1×173.˚5W±0.˚1, h30km, n26, σ1.9 s/92/20, mb3.9/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.12**	**51**	P		**Pn**		**01 17 02.6**	**-4.4**
NIUE	**Niue**	**5.10**	**139**	P		**Pn**		**01 17 45.8**	**-2.1**
MSVF	**Nonsavu**	**8.49**	**252**	Pn		**Pn**		**01 18 31.7**	**-2.8**
	0.5nm,0.3s,baz=339,slow=23,SNR=2.7								
H11S2	**WAKE ISLAND Hy**	**38.80**	**329**	T		T		02 05 21.7	
	baz=154,slow=74								
H11S3	**WAKE ISLAND Hy**	**38.81**	**329**	T		T		02 05 18.2	
	baz=154								
H11S1	**WAKE ISLAND Hy**	**38.82**	**329**	T		T		02 05 23.5	
	baz=154,slow=74								
H11N3	**WAKE ISLAND Hy**	**39.75**	**330**	T		T		02 06 35.3	
	baz=150,slow=76,SNR=3.6								
H11N1	**WAKE ISLAND Hy**	**39.75**	**330**	T		T		02 06 35.9	
	baz=150,slow=76,SNR=9.8								
H11N2	**WAKE ISLAND Hy**	**39.76**	**330**	T		T		02 06 34.1	
	baz=150,slow=76,SNR=4.1								
STKA	**Stephens Creek**	**44.04**	**240**	P		**P**		**01 24 39.1**	**+0.3**
	2.6nm,0.7s,baz=79,slow=8.2,SNR=3.9								
WRA	**Warramunga Arr**	**49.80**	**257**	P		**P**		**01 25 24.8**	**+0.8**
	1.2nm,0.7s,baz=92,slow=6.9,SNR=11								
ASAR	**Alice Springs**	**50.08**	**252**	P		**P**		**01 25 26.9**	**+0.8**
	3.8nm,0.6s,baz=88,slow=8.1,SNR=49								
NVAR	**Mina Array Bea**	**74.27**	**42**	P		**P**		**01 28 11.3**	**+3.1**
	1.1nm,0.8s,baz=224,slow=7.1,SNR=5.9								
PDAR	**Pinedale Array**	**82.21**	**42**	P		**P**		**01 28 54.5**	**+2.4**
	0.5nm,0.8s,baz=226,slow=5.6,SNR=3.5								
ILAR	**Eielson Array**	**82.32**	**11**	P		**P**		**01 28 53.0**	**+1.2**
	0.6nm,0.7s,baz=225,slow=7.0,SNR=5.1								
YKA	**Yellowknife Ar**	**90.00**	**23**	P		**P**		**01 29 32.1**	**+2.4**
	0.3nm,0.9s,baz=231,slow=3.9,SNR=2.1								
GERES	**GERESS Array B**	**145.99**	**352**	PKPbc		**PKiKP**		**01 36 11.9**	**-1.9**
	0.4nm,0.8s,baz=43,slow=1.7,SNR=3.9								
CONA	**Conrad Observa**	**146.51**	**349**	*eP*		**PKiKP**		**01 36 15.0**	**+0.1**
	4.7nm,1.1s								
MOA	**Molln**	**146.87**	**350**	*eP*		**PKPdf**		**01 36 10.6**	**-0.5**
	4.6nm,1.2s								
WTTA	**Wattenberg**	**147.80**	**353**	*eP*		**PKPab**		**01 36 18.3**	**+0.2**
	2.7nm,0.7s								
SOKA	**Soboth**	**147.87**	**349**	*eP*		**PKPab**		**01 36 18.7**	**+0.3**
	7.1nm,1.3s								
SQTA	**Sankt Quirin**	**147.89**	**354**	*eP*		**PKPab**		**01 36 18.7**	**+0.3**
	6.4nm,1.3s								
DAVA	**Damuels**	**147.94**	**356**	*eP*		**PKPab**		**01 36 18.8**	**+0.1**
	5.7nm,1.2s								
OBKA	**Obir**	**148.12**	**349**	*eP*		**PKPbc**		**01 36 16.3**	**-0.3**
	11nm,1.4s								
FETA	**Feichten**	**148.13**	**355**	*eP*		**PKiKP**		**01 36 17.1**	**-1.3**
	5.0nm,1.2s								
MYKA	**Terra Mystica**	**148.16**	**351**	*eP*		**PKiKP**		**01 36 17.3**	**-1.0**
	12nm,1.6s								

*NEIC **07** 02:06:01.5±0.7, 16.˚40S±0.˚08×174.˚4W±0.˚1, h139km±8km, mb4.2/36, Error ellipse: s-maj=15.1km s-min=12.1km az=98.0*
*NOU **07** 02:06:07.3, 16.˚17S×173.˚63W, h247km, MLv5.1, Tonga Islands*
*IDC **07** 02:06:09.4±3.5, 16.˚61S×174.˚42W, h210km±32km, mb3.8/17, mb1 4.0/18, mb1mx3.9/37, mbtmp4.3/18, Error ellipse: s-maj=22.5km s-min=14.8km az=147.0*

ISC 07 02:06:02.6±0.4, 16.˚39S±0.˚07×174.˚33W±0.˚07, h150km, n100, σ1.9 s/33/99, mb4.2/35, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.49**	**45**			**Pn**		**02 06 58.4**	**+2.1**
AFI						Sn		**02 07 35.9**	**-1.9**
AFI	**Afiamalu**	**3.49**	**45**	P		**Pn**		**02 06 58.3**	**+2.1**
NIUE	**Niue**	**4.98**	**123**	Pn		**Pn**		**02 07 17.4**	**+1.8**
NIUE				Sn		**Sn**		**02 08 12.0**	**-0.7**
NIUE	**Niue**	**4.98**	**123**	P		**Pn**		**02 07 17.3**	**+1.6**
MSVF	**Nonsavu**	**7.41**	**258**	P		Pn		02 07 55.0	+6.8
	0.5nm,0.3s,baz=125,slow=18,SNR=6.0								
PINNC	**Pines Island,**	**18.25**	**247**	P		**Pn**		**02 10 11.5**	**+5.1**
URZ	**Urewera**	**23.05**	**197**	P		**P**		**02 10 52.4**	**-2.3**
	5.3nm,0.3s,baz=128,slow=20,SNR=3.6								
URZ	**Urewera**	**23.05**	**197**	P		**P**		**02 10 54.1**	**-0.6**
BKZ	**Black Stump Fm**	**24.07**	**198**	P		**P**		**02 11 03.5**	**-0.6**
BKZ					IAmb	IAmb		02 11 08.7	
	comp=Z,6.9nm,1.0s								
THZ	**Tophouse**	**27.57**	**201**	P		**P**		**02 11 35.3**	**-0.3**
LTZ	**Lake Taylor**	**28.69**	**201**	P		**P**		**02 11 45.2**	**-0.3**
RPZ	**Rata Peaks**	**29.94**	**202**	P		**P**		**02 11 56.6**	**+0.2**
	comp=Z,5.8nm,0.7s,baz=42,slow=14,SNR=1.3								
RPZ	**Rata Peaks**	**29.94**	**202**	P		**P**		**02 11 55.9**	**-0.6**
MLZ	**Mavora Lakes**	**32.43**	**203**	P		**P**		**02 12 18.0**	**-0.4**
WHZ	**Wether Hill Ro**	**32.94**	**203**	P		**P**		**02 12 22.7**	**0.0**
ARMA	**Armidale**	**34.07**	**240**	P		**P**		**02 12 33.4**	**+0.5**
ARMA					IAmb	IAmb		02 12 45.4	
	comp=Z,3.6nm,0.9s								
TAOE	**Nuku Hiva Isla**	**34.15**	**82**	P		P		02 12 23.7	-10
H11N3	**WAKE ISLAND Hy**	**40.34**	**332**	T		T		02 55 20.4	
	baz=154								
H11N1	**WAKE ISLAND Hy**	**40.34**	**332**	T		T		02 55 22.3	
	baz=154								
H11N2	**WAKE ISLAND Hy**	**40.36**	**332**	T		T		02 55 22.2	
	baz=154								
COEN	**Coen**	**41.03**	**267**	P		**P**		**02 13 31.9**	**+0.4**
COEN					IAmb	IAmb		02 13 39.9	
	comp=Z,4.8nm,1.1s								
STKA	**Stephens Creek**	**42.77**	**241**	P		**P**		**02 13 45.0**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=74,slow=7.4,SNR=2.0								
WR0	**Warramunga Arr**	**48.56**	**258**	P		**P**		**02 14 30.9**	**-0.2**
WB0	**Warramunga Arr**	**48.72**	**258**	P		**P**		**02 14 31.8**	**-0.5**
WB0					IAmb	IAmb		02 14 42.4	
	comp=Z,5.5nm,1.1s								
WB2	**Warramunga Ar**	**48.74**	**258**	P		**P**		**02 14 30.9**	**-1.5**
WB2					IAmb	IAmb		02 14 43.6	
	comp=Z,4.0nm,1.1s								
WRA	**Warramunga Arr**	**48.75**	**258**	P		**P**		**02 14 31.9**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=96,slow=6.3,SNR=14								
WRA	**Warramunga Arr**	**48.75**	**258**	P		**P**		**02 14 31.3**	**-1.2**
ASAR	**Alice Springs**	**48.96**	**253**	P		**P**		**02 14 33.1**	**-0.9**
	comp=Z,2.7nm,0.4s,baz=90,slow=7.7,SNR=26								
ASAR					pP		**sP**	**02 15 17.9**	**-6.0**
	comp=Z,1.8nm,0.8s,baz=83,slow=8.9,SNR=2.1								
ASAR	**Alice Springs**	**48.96**	**253**	P		**P**		**02 14 33.0**	**-1.1**
SIJI	**Sorong**	**55.74**	**280**	P		**P**		**02 15 25.8**	**+1.5**
	comp=Z,8.8nm,0.5s,baz=61,slow=12,SNR=4.1								
PETK	**Petropavlovsk-**	**73.30**	**343**	P		**P**		**02 17 18.0**	**+0.6**
	comp=Z,7.3nm,0.7s,baz=134,slow=8.5,SNR=6.5								
NVAR	**Mina Array Bea**	**75.66**	**42**	P		**P**		**02 17 33.2**	**+1.6**
	comp=Z,2.9nm,0.8s,baz=227,slow=9.6,SNR=22								
NVAR					pP		**sP**	**02 18 19.5**	**-4.7**
	comp=Z,0.5nm,0.8s,baz=256,slow=6.0,SNR=2.4								
NVAR	**Mina Array Bea**	**75.66**	**42**	P		**P**		**02 17 32.4**	**+0.8**
KVN	**Kaiserville**	**76.14**	**42**	P		**P**		**02 17 35.0**	**+0.7**
TPH	**Tonopah**	**76.16**	**43**	P		**P**		**02 17 35.2**	**+0.8**
KSRS	**Korea Array**	**76.24**	**316**	P		**P**		**02 17 34.8**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=103,slow=5.3,SNR=2.6								
SHPR	**Sheep Range**	**76.69**	**45**	P		**P**		**02 17 37.4**	**0.0**
SHPR					IAmb	IAmb		02 17 40.0	
	comp=Z,3.7nm,0.9s								
PRN	**Pahroc Range**	**77.24**	**45**	P		**P**		**02 17 40.9**	**+0.4**
PRN					IAmb	IAmb		02 17 43.2	
	comp=Z,6.4nm,1.1s								
USRK	**Ussuriysk Ar.**	**77.64**	**324**	P		**P**		**02 17 42.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=145,slow=3.5,SNR=2.8								
KNB	**Kanab**	**78.56**	**46**	P		**P**		**02 17 48.0**	**+0.2**
KNB					IAmb	IAmb		02 17 50.4	
	comp=Z,3.8nm,0.8s								
SPR3	**Spring Creek 3**	**78.56**	**44**	P		**P**		**02 17 48.3**	**+0.3**
PSUT	**Pine Spring**	**78.64**	**44**	P		**P**		**02 17 48.5**	**+0.3**
ELK	**Elko**	**78.91**	**42**	P		**P**		**02 17 50.1**	**+0.3**
ELK					IAmb	IAmb		02 17 51.6	
	comp=Z,3.2nm,1.0s								
BMO	**Blue Mountains**	**79.95**	**37**	P		**P**		**02 17 55.8**	**+0.7**
HLID	**Hailey**	**80.95**	**40**	P		**P**		**02 18 00.8**	**+0.2**
HLID					IAmb	IAmb		02 18 02.9	
	comp=Z,3.5nm,1.1s								
TCUT	**Toone Canyon**	**81.58**	**43**	P		**P**		**02 18 04.6**	**+0.6**
TXAR	**Lajitas Array**	**81.90**	**56**	P		**P**		**02 18 07.6**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=235,slow=6.3,SNR=7.4								
TXAR	**Lajitas Array**	**81.90**	**56**	P		**P**		**02 18 06.3**	**+0.5**
PV01	**Paradox Valley**	**82.05**	**47**	P		**P**		**02 18 06.7**	**+0.2**
PV01					IAmb	IAmb		02 18 08.5	
	comp=Z,3.1nm,0.7s								
ANMO	**Albuquerque**	**82.12**	**50**	P		**P**		**02 18 07.8**	**+0.9**
REDW	**Red Top Meadow**	**83.06**	**41**	P		**P**		**02 18 12.3**	**+0.6**
REDW					IAmb	IAmb		02 18 14.3	
	comp=Z,3.4nm,0.9s								
WRH	**Wood River Hil**	**83.09**	**11**	P		**P**		**02 18 11.3**	**+0.3**
WRH					IAmb	IAmb		02 18 18.8	
	comp=Z,4.7nm,1.2s								
CCB	**Clear Creek Bu**	**83.30**	**11**	P		**P**		**02 18 12.3**	**+0.3**
CCB					IAmb	IAmb		02 18 12.5	
	comp=Z,3.1nm,0.6s								
MDM	**Murphy Dome**	**83.50**	**11**	P		**P**		**02 18 13.6**	**+0.5**
MDM					IAmb	IAmb		02 18 15.0	
	comp=Z,2.7nm,1.0s								
IL31		**83.58**	**11**	P		**P**		**02 18 13.7**	**+0.2**
ILAR	**Eielson Array**	**83.58**	**11**	P		**P**		**02 18 13.7**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=223,slow=5.8,SNR=29								
PDAR	**Pinedale Array**	**83.59**	**42**	P		**P**		**02 18 15.1**	**+0.7**
	comp=Z,3.3nm,0.6s,baz=210,slow=3.5,SNR=34								
SMCO	**Snowmass**	**83.64**	**46**	P		**P**		**02 18 15.3**	**+0.4**
BOZ	**Bozeman (W)**	**83.72**	**39**	P		**P**		**02 18 15.6**	**+0.8**
BOZ					IAmb	IAmb		02 18 16.9	
	comp=Z,3.6nm,1.0s								
HRY	**Holter Researc**	**84.17**	**38**	P		**P**		**02 18 17.6**	**+0.5**
PRP	**Porcupine Dome**	**84.51**	**12**	P		**P**		**02 18 18.8**	**+0.4**
PRP					IAmb	IAmb		02 18 21.2	
	comp=Z,2.9nm,0.8s								
DAWY	**Dawson**	**84.60**	**15**	P		**P**		**02 18 19.1**	**+0.4**
DAWY					IAmb	IAmb		02 18 20.1	
	comp=Z,3.0nm,0.7s								
CMIG	**Matias Romero**	**85.05**	**71**	P		**P**		**02 18 23.3**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=259,slow=5.2,SNR=5.1								
YKA	**Yellowknife Ar**	**91.36**	**24**	P		**P**		**02 18 50.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=234,slow=4.5,SNR=8.5								
CMAR	**Chiang Mai Arr**	**92.08**	**289**	P		**P**		**02 18 55.5**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=106,slow=2.6,SNR=6.0								
SONM	**Songino Array**	**94.98**	**318**	P		**P**		**02 19 09.6**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=134,slow=8.3,SNR=2.8								
SONM	**Songino Array**	**94.98**	**318**	P		**P**		**02 19 08.1**	**-0.1**
ARCES	**ARCESS Array B**	**125.45**	**352**	PKP		**PKiKP**		**02 24 45.4**	**-0.2**
	comp=Z,3.9nm,0.9s,baz=48,slow=1.8,SNR=6.0								
FINES	**FINESS Array B**	**132.70**	**347**	PKP		**PKiKP**		**02 25 00.2**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=355,slow=2.7,SNR=7.3								
CLL	**Collm**	**144.67**	**352**	*e*PKPdf		**PKPdf**		**02 25 21.0**	**-0.3**
OSTC	**Ostas**	**144.87**	**348**	*e*PKP		**PKPdf**		**02 25 21.8**	**+0.1**
CHVC	**Chvalec**	**144.87**	**348**	*e*PKP		**PKPdf**		**02 25 21.6**	**-0.1**
DPC	**Dobruska-Polom**	**145.05**	**348**	*e*PKP		**PKPdf**		**02 25 22.5**	**+0.4**
PVCC	**Panska Ves**	**145.20**	**350**	*e*PKP		**PKPab**		**02 25 22.6**	**+0.2**
KRLC	**Kraliky**	**145.22**	**347**	*e*PKP		**PKPab**		**02 25 22.8**	**+0.3**
MORC	**Moravsky Berou**	**145.33**	**346**	*e*PKP		**PKPab**		**02 25 23.5**	**+0.5**
PRU	**Pruhonice**	**145.72**	**350**	*e*PKP		**PKPab**		**02 25 24.3**	**-0.1**
NKC	**Novy Kostel**	**145.80**	**352**	*e*PKP		**PKPab**		**02 25 24.8**	**+0.1**
VRAC	**Vranov**	**146.09**	**347**	*e*PKP		**PKPab**		**02 25 25.3**	**-0.1**
JAVC	**Velka Javorina**	**146.16**	**346**	*e*PKP		**PKiKP**		**02 25 26.8**	**-1.5**
TREC	**Trest**	**146.22**	**348**	*e*PKP		**PKPab**		**02 25 25.9**	**-0.4**
KRUC	**Moravsky**	**146.26**	**347**	*e*PKP		**PKPab**		**02 25 25.8**	**-0.6**
BRTR	**Keskin Array B**	**146.34**	**319**	PKPbc		**PKPab**		**02 25 26.6**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=100,slow=1.8,SNR=8.4								
KHC	**Kasperske Hory**	**146.71**	**351**	*e*PKP		**PKPab**		**02 25 27.0**	**-1.3**
CKRC	**Cesky Krumlov**	**146.89**	**350**	*e*PKP		**PKPab**		**02 25 28.0**	**-1.0**
GERES	**GERESS Array B**	**146.97**	**350**	PKPbc		**PKPab**		**02 25 28.1**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=32,slow=3.5,SNR=8.7								
CONA	**Conrad Observa**	**147.44**	**347**	*eP*		**PKiKP**		**02 25 29.6**	**-1.4**
	comp=Z,2.7nm,0.9s								
MOA	**Molln**	**147.84**	**349**	*eP*		**PKiKP**		**02 25 30.6**	**-1.2**
	comp=Z,5.0nm,1.1s								
RETA	**Reutte**	**148.70**	**353**	*eP*		**PKiKP**		**02 25 32.7**	**-0.9**
	comp=Z,6.3nm,2.1s								
KBA	**Koelnbreinsper**	**148.74**	**350**	*eP*		**PKPbc**		**02 25 30.3**	**-2.2**
	comp=Z,4.2nm,1.0s								
WATA	**Walderalm**	**148.75**	**352**	*eP*		**PKiKP**		**02 25 32.7**	**-1.2**
	comp=Z,0.9nm,0.5s								
MOTA	**Moosalm**	**148.80**	**353**	*eP*		**PKPbc**		**02 25 30.8**	**-1.8**
	comp=Z,4.6nm,1.2s								
SOKA	**Soboth**	**148.81**	**348**	*eP*		**PKiKP**		**02 25 33.2**	**-0.7**
	comp=Z,3.4nm,0.9s								
WTTA	**Wattenberg**	**148.82**	**352**	*eP*		**PKiKP**		**02 25 32.8**	**-1.2**
	comp=Z,2.7nm,0.5s								
SQTA	**Sankt Quirin**	**148.91**	**353**	*eP*		**PKPbc**		**02 25 29.9**	**-2.9**
	comp=Z,5.7nm,1.1s								
DAVA	**Damuels**	**148.99**	**354**	*eP*		**PKiKP**		**02 25 33.8**	**-0.6**
	comp=Z,8.3nm,1.2s								
MYKA	**Terra Mystica**	**149.12**	**349**	*eP*		**PKPbc**		**02 25 32.8**	**-0.5**
	comp=Z,5.0nm,1.0s								
FETA	**Feichten**	**149.17**	**353**	*eP*		**PKiKP**		**02 25 34.6**	**-0.1**
	comp=Z,5.6nm,1.1s								
ABTA	**Abfaltersbach**	**149.20**	**351**	*eP*		**PKPbc**		**02 25 32.8**	**-0.8**
	comp=Z,4.7nm,0.8s								
ESDC	**Sonseca Array**	**155.32**	**18**	PKPab		**PKPab**		**02 26 04.7**	**+0.5**
	comp=Z,1.5nm,1.1s,baz=231,slow=28,SNR=4.7								

*IDC **07** 01:11:24.6±0.7, 6.˚67N×72.˚91W, h168km±10km, mb3.3/5, mb1 3.7/8, mb1mx3.3/31, mbtmp3.9/8, Error ellipse: s-maj=29.1km s-min=7.8km az=135.0*
*RSNC **07** 02:11:25.8±1.1, 6.˚83N×73.˚13W, h153km±4km, ML3.7, Mw3.8, Fault plane solution: NP1:φs140.00000°, δ10.00000°, λ160.00000°.*

ISC 07 02:11:24.9±0.7, 6.˚85N±0.˚03×73.˚08W±0.˚04, h158km±5km, n43, σ1.9 s/78/75, mb3.4/5, 5C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**202**	⇓*eP*		**Pn**		**02 11 46.4**	**-0.3**
BARC				*eS*		**Sn**		**02 12 02.2**	**-1.1**
BARC				*i*				02 12 03.7	
	comp=Z,905nm,0.3s								
PAMC	**Pamplona, Colo**	**0.62**	**38**	*eP*		**Pn**		**02 11 48.8**	**+0.4**
PAMC				⇑*iP*				02 11 49.2	
PAMC				*eS*		**Sn**		**02 12 06.3**	**0.0**
PAMC				*i*				02 12 08.3	
	comp=Z,796nm,0.2s								
BRRC	**Barranca, Sant**	**0.68**	**292**	⇓*iP*		**Pn**		**02 11 48.3**	**+0.1**
BRRC				⇑*eP*				02 11 48.4	
BRRC				*eS*		**Sn**		**02 12 05.6**	**-0.3**
BRRC				*i*				02 12 07.7	
	comp=Z,480nm,0.2s								
RUSC	**La Rusia**	**0.95**	**180**	⇓*iP*		**Pn**		**02 11 50.2**	**-0.5**
RUSC				*eP*		**Pn**		**02 11 50.2**	**-0.5**
RUSC				*eS*		**Sn**		**02 12 08.9**	**-1.5**
RUSC				*i*				02 12 10.1	
	comp=Z,327nm,0.4s								
OCAC	**Ocana**	**1.40**	**350**	⇑*eP*		**Pn**		**02 11 54.4**	**+0.1**
OCAC				*eS*		**Sn**		**02 12 16.5**	**-0.4**
OCAC				*i*				02 12 22.5	
	comp=Z,1μm,0.1s								
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	*eP*		**Pn**		**02 11 53.0**	**-1.1**
PTBC				*eS*		**Sn**		**02 12 14.7**	**-1.9**
PTBC				*i*				02 12 20.2	
	comp=Z,796nm,0.2s								
SPBC	**San Pablo de B**

n210,σ1ᵍ51/274,mb4.0/14,11C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGA	**Argostoli. Kep**	**0.05**	**57**	P	**Pg**	**02 39 43.9**	**-0.4**
LXRA	**Lixouri, Kepha**	**0.05**	**10**	P	**Pg**	**02 39 44.0**	**-0.2**
LXRA				S	**Sg**	**02 39 45.9**	**-0.4**
ARG2	**Argostoli**	**0.06**	**60**	P	**Pg**	**02 39 44.0**	**-0.3**
ARG2				S	**Sg**	**02 39 45.8**	**-0.6**
	327μm,0.2s						
KEF3	**Kipouria, Keph**	**0.08**	**311**	P	**Pg**	**02 39 44.2**	**-0.3**
KEF3				S	**Sg**	**02 39 46.2**	**-0.5**
KEF3	**Kipouria, Keph**	**0.08**	**311**	P	**Pg**	**02 39 44.2**	**-0.3**
KEF3				S	**Sg**	**02 39 45.8**	**-0.9**
DMLN	**Damoulianata-K**	**0.10**	**335**	P	**Pg**	**02 39 44.5**	**-0.2**
DMLN				S	**Sg**	**02 39 46.4**	**-0.6**
DMLN	**Damoulianata-K**	**0.10**	**335**	P	**Pg**	**02 39 44.5**	**-0.2**
DMLN				S	**Sg**	**02 39 46.4**	**-0.6**
KEF4	**Livadi, Kephal**	**0.11**	**359**	P	**Pg**	**02 39 44.6**	**-0.1**
KEF4				S	**Sb**	**02 39 47.2**	**-0.1**
KEF4	**Livadi, Kephal**	**0.11**	**359**	P	**Pg**	**02 39 44.6**	**-0.1**
KEF4				S	**Sb**	**02 39 47.1**	**-0.1**
PSDA	**Pessada-Kefalo**	**0.13**	**106**	P	**Pg**	**02 39 45.0**	**0.0**
PSDA				S	**Sg**	**02 39 47.5**	**0.0**
PSDA	**Pessada-Kefalo**	**0.13**	**106**	P	**Pg**	**02 39 45.0**	**0.0**
PSDA				S	**Sg**	**02 39 47.5**	**0.0**
KEF5	**Kardakata, Kep**	**0.13**	**15**	P	**Pg**	**02 39 45.0**	**-0.1**
KEF5				S	**Sg**	**02 39 47.5**	**-0.1**
KEF5	**Kardakata, Kep**	**0.13**	**15**	P	**Pg**	**02 39 44.9**	**-0.1**
KEF5				S	**Sg**	**02 39 47.6**	**-0.1**
VLS	**Valsamata**	**0.13**	**78**	P	**Pg**	**02 39 44.9**	**-0.2**
VLS				S	**Sg**	**02 39 47.4**	**-0.2**
VLS				AML	AML	02 39 47.7	
VLS				AML	AML	02 39 47.8	
VLS	**Valsamata**	**0.13**	**78**	P	**Pg**	**02 39 44.9**	**-0.2**
VLS				S	**Sg**	**02 39 47.3**	**-0.4**
	160μm,0.1s						
VSK1	**VASILIKIADES**	**0.28**	**23**	P	**Pb**	**02 39 47.7**	**-0.1**
VSK1				S	**Sb**	**02 39 52.2**	**0.0**
	81μm,0.3s						
FSK	**Fiskardo**	**0.33**	**19**	P	**Pb**	**02 39 48.2**	**-0.3**
FSK				S	**Sb**	**02 39 53.7**	**+0.2**
FSK				AML	AML	02 39 54.1	
FSK				AML	AML	02 39 54.2	
FSK	**Fiskardo**	**0.33**	**19**	P	**Pb**	**02 39 48.2**	**-0.3**
FSK				S	**Sb**	**02 39 53.3**	**-0.2**
	67μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.33**	**145**	P	**Pg**	**02 39 48.3**	**+0.2**
VLMS				S	**Sb**	**02 39 53.6**	**0.0**
VLMS				AML	AML	02 39 55.0	
	comp=E,25548μm,0.3s						
VLMS				AML	AML	02 40 02.0	
	comp=N,35338μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.33**	**145**	P	**Pg**	**02 39 48.3**	**+0.2**
VLMS				S	**Sb**	**02 39 53.7**	**0.0**
EVGI	**Lefkada island**	**0.50**	**21**	P	**Pg**	**02 39 51.2**	**0.0**
EVGI				S	**Sb**	**02 39 59.3**	**+0.7**
EVGI	**Lefkada island**	**0.50**	**21**	P	**Pg**	**02 39 51.3**	**0.0**
EVGI				S	**Sb**	**02 39 59.5**	**+0.9**
	comp=N,7μm,0.2s						
ZAK2	**Zakynthos**	**0.52**	**134**	P	**Pg**	**02 39 50.6**	**-0.9**
ZAK2				S	**Sb**	**02 39 59.4**	**+0.4**
	comp=N,33μm,0.6s						
DRAG	**Dragano-Lefkad**	**0.55**	**12**	P	**Pg**	**02 39 52.1**	**0.0**
DRAG				S	**Sb**	**02 40 00.5**	**+0.6**
DRAG	**Dragano-Lefkad**	**0.55**	**12**	P	**Pg**	**02 39 51.7**	**-0.3**
DRAG				S	**Sb**	**02 40 00.4**	**+0.6**
	comp=N,37μm,0.4s						
LTHK	**Lithakia**	**0.55**	**143**	P	**Pg**	**02 39 51.7**	**-0.3**
LTHK				AML	AML	02 40 06.2	
	comp=E,10821μm,0.4s						
LTHK				AML	AML	02 40 08.8	
	comp=N,10470μm,0.6s						
LTHK	**Lithakia**	**0.55**	**143**	P	**Pg**	**02 39 51.8**	**-0.2**
LTHK				S	**Sb**	**02 40 00.6**	**+0.8**
NYDR	**Nydri-Lefkada**	**0.60**	**21**	P	**Pg**	**02 39 52.9**	**-0.1**
NYDR				S	**Sb**	**02 40 02.4**	**+1.0**
NYDR	**Nydri-Lefkada**	**0.60**	**21**	P	**Pg**	**02 39 52.9**	**-0.1**
NYDR				S	**Sb**	**02 40 02.5**	**+1.1**
	comp=N,8μm,0.3s						
VTN	**Vitineika**	**0.64**	**111**	P	**Pb**	**02 39 54.1**	**+0.2**
AST1	**Astakos**	**0.65**	**53**	P	**Pb**	**02 39 54.0**	**-0.1**
AST1				S	**Sn**	**02 40 04.7**	**-0.8**
	comp=N,19μm,0.3s						
LKD2	**Lefkada island**	**0.66**	**16**	P	**Pg**	**02 39 53.9**	**-0.3**
LKD2				AML	AML	02 40 11.8	
	comp=E,9425μm,0.2s						
LKD2				AML	AML	02 40 15.3	
	comp=N,13346μm,0.4s						
LKD2	**Lefkada island**	**0.66**	**16**	P	**Pg**	**02 39 53.9**	**-0.3**
LKD2				S	**Sb**	**02 40 03.1**	**-0.1**
	comp=N,6μm,0.4s						
TSLK	**Tsoukalades, L**	**0.70**	**15**	P	**Pg**	**02 39 54.7**	**-0.1**
TSLK				AML	AML	02 40 11.9	
	comp=E,12443μm,0.7s						
TSLK				AML	AML	02 40 13.1	
	comp=N,19134μm,0.6s						
TSLK	**Tsoukalades, L**	**0.70**	**15**	P	**Pg**	**02 39 54.7**	**-0.1**
TSLK				S	**Sb**	**02 40 04.7**	**+0.5**
	comp=N,8μm,0.4s						
PDO	**Prodromos**	**0.74**	**53**	P	**Pb**	**02 39 55.8**	**+0.1**
PDO				AML	AML	02 40 12.2	
	comp=N,15891μm,0.3s						
PDO				AML	AML	02 40 15.9	
	comp=E,17157μm,0.4s						
PDO	**Prodromos**	**0.74**	**53**	P	**Pb**	**02 39 55.8**	**+0.1**
PDO				S	**Sn**	**02 40 07.7**	**-0.1**
	comp=E,14μm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**96**	P	**Pb**	**02 39 56.9**	**-0.1**
RLS				AML	AML	02 40 15.6	
	comp=N,4903μm,0.8s						
RLS				AML	AML	02 40 18.4	
	comp=E,6708μm,0.4s						
RLS	**Riolos of Patr**	**0.83**	**96**	P	**Pb**	**02 39 57.0**	**-0.1**
PVO	**Paravola**	**0.98**	**61**	P	**Pn**	**02 40 00.4**	**+0.2**
PVO				AML	AML	02 40 17.0	
	comp=E,23435μm,0.3s						
PVO				AML	AML	02 40 17.1	
	comp=N,13116μm,0.3s						
PVO	**Paravola**	**0.98**	**61**	P	**Pn**	**02 40 00.5**	**+0.4**
PVO				S	**Sn**	**02 40 15.6**	**+1.9**
	comp=N,9μm,0.4s						
DRO	**Drossia**	**1.03**	**101**	P	**Pn**	**02 40 00.9**	**0.0**
DRO				AML	AML	02 40 24.2	
	comp=E,9747μm,0.7s						
DRO				AML	AML	02 40 34.6	
	comp=N,12408μm,0.6s						
DRO	**Drossia**	**1.03**	**101**	P	**Pn**	**02 40 00.8**	**0.0**
LAKA	**Lakka**	**1.23**	**85**	P	**Pb**	**02 40 04.1**	**+0.2**
LAKA				AML	AML	02 40 28.9	
	comp=E,15226μm,0.8s						
LAKA				AML	AML	02 40 30.1	
	comp=N,10107μm,0.6s						
LAKA	**Lakka**	**1.23**	**85**	P	**Pb**	**02 40 04.2**	**+0.3**
LAKA				S	**Sg**	**02 40 23.2**	**+2.3**
	comp=N,6μm,0.7s						
TRIZ	**Trizonia**	**1.31**	**80**	P	**Pb**	**02 40 05.4**	**+0.1**
TRIZ	**Trizonia**	**1.31**	**80**	P	**Pb**	**02 40 05.3**	**0.0**
EVR	**Evrytania**	**1.33**	**54**	P	**Pb**	**02 40 05.6**	**0.0**
EVR				AML	AML	02 40 35.8	
	comp=N,2677μm,0.5s						
EVR				AML	AML	02 40 36.0	
	comp=E,2064μm,1.1s						
EVR	**Evrytania**	**1.33**	**54**	P	**Pb**	**02 40 05.7**	**0.0**
ALIK	**Aliki, Aigiali**	**1.33**	**85**	P	**Pb**	**02 40 05.9**	**+0.3**
KLV	**Kalavryta, Ach**	**1.36**	**94**	P	**Pb**	**02 40 06.3**	**0.0**
KLV				AML	AML	02 40 29.9	
	comp=N,1271μm,0.4s						
KLV				AML	AML	02 40 40.7	
	comp=E,2247μm,1.0s						
KLV	**Kalavryta, Ach**	**1.36**	**94**	P	**Pb**	**02 40 06.7**	**+0.4**
KALE	**Kalithea**	**1.37**	**79**	P	**Pb**	**02 40 06.3**	**-0.1**
KALE				AML	AML	02 40 38.0	
	comp=E,2647μm,0.4s						
KALE				AML	AML	02 40 40.4	
	comp=N,3700μm,0.9s						
KALE	**Kalithea**	**1.37**	**79**	P	**Pb**	**02 40 06.3**	**-0.1**
IGT	**Igoumenitsa**	**1.38**	**357**	P	**Pb**	**02 40 07.0**	**+0.4**
IGT				AML	AML	02 40 31.0	
	comp=N,1857μm,0.3s						
IGT				AML	AML	02 40 34.9	
	comp=E,3431μm,0.5s						
IGT	**Igoumenitsa**	**1.38**	**357**	P	**Pb**	**02 40 06.9**	**+0.4**
IGT	**Igoumenitsa**	**1.38**	**357**	*e*Pg	**Pg**	**02 40 07.5**	**-0.3**
IGT				*e*Sg	**Sg**	**02 40 26.7**	**+0.9**
ITM	**Ithomi**	**1.54**	**129**	P	**Pb**	**02 40 09.6**	**+0.5**
ITM				AML	AML	02 40 38.1	
	comp=E,1279μm,0.7s						
ITM				AML	AML	02 40 38.5	
	comp=N,1474μm,0.6s						
ITM	**Ithomi**	**1.54**	**129**	P	**Pb**	**02 40 09.6**	**+0.5**
ITM	**Ithomi**	**1.54**	**129**	Pn	**Pb**	**02 40 09.3**	**+0.2**
ITM				Sn	**Sb**	**02 40 28.2**	**-0.1**
JAN	**Janina**	**1.54**	**12**	P	**Pg**	**02 40 10.3**	**-0.4**
JAN				AML	AML	02 40 40.2	
	comp=N,2127μm,0.4s						
JAN				AML	AML	02 40 43.4	
	comp=E,2608μm,0.4s						
JAN	**Janina**	**1.54**	**12**	P	**Pg**	**02 40 10.4**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.59**	**57**	P	**Pg**	**02 40 11.3**	**-0.5**
MAKR				AML	AML	02 40 44.7	
	comp=E,2643μm,0.5s						
MAKR				AML	AML	02 40 49.9	
	comp=N,1648μm,0.6s						
KEK	**Kerkira**	**1.64**	**343**	P	**Pb**	**02 40 10.4**	**-0.5**
KEK				AML	AML	02 40 44.7	
	comp=E,1800μm,0.3s						
KEK				AML	AML	02 40 44.7	
	comp=N,1774μm,0.4s						
KEK	**Kerkira**	**1.64**	**343**	P	**Pb**	**02 40 10.5**	**-0.3**
AGG	**Agios Georgios**	**1.73**	**59**	P	**Pg**	**02 40 14.2**	**-0.2**
AGG				AML	AML	02 40 48.3	
	comp=N,2283μm,1.1s						
AGG				AML	AML	02 40 49.7	
	comp=E,2804μm,0.7s						
AGG	**Agios Georgios**	**1.73**	**59**	P	**Pb**	**02 40 13.3**	**+0.9**
AGG	**Agios Georgios**	**1.73**	**59**	Pn	**Pn**	**02 40 11.4**	**+0.9**
SRN	**Sarande**	**1.76**	**349**	P	**Pb**	**02 40 12.8**	**-0.1**
THAL	**Thalero**	**1.77**	**93**	P	**Pg**	**02 40 14.2**	**-0.9**
AXAR	**Agios Charalam**	**1.86**	**70**	P	**Pg**	**02 40 16.1**	**-0.7**
AXAR				AML	AML	02 40 53.3	
	comp=N,4565μm,0.6s						
AXAR				AML	AML	02 40 55.4	
	comp=E,5106μm,0.9s						
THL	**Klokotos Trika**	**1.88**	**41**	P	**Pb**	**02 40 15.9**	**+0.9**
THL				AML	AML	02 40 51.8	
	comp=E,2058μm,0.5s						
THL				AML	AML	02 40 53.0	
	comp=N,1780μm,0.6s						
LKR	**Lokris**	**2.08**	**75**	P	**Pb**	**02 40 18.2**	**-0.2**
LKR	**Lokris**	**2.08**	**75**	P	**Pb**	**02 40 18.3**	**-0.2**
ATAL	**Atalanti**	**2.11**	**74**	P	**Pb**	**02 40 18.6**	**-0.3**
VIL2	**Platees**	**2.24**	**88**	P	**Pb**	**02 40 20.4**	**-0.8**
KZN	**Kozani**	**2.39**	**25**	P	**Pb**	**02 40 22.5**	**-1.3**
SCTE	**Santa Cesarea**	**2.45**	**322**	Pn	**Pn**	**02 40 21.2**	**+0.8**
NEO	**Neokhori**	**2.47**	**61**	P	**Pb**	**02 40 23.6**	**-1.5**
LIT	**Litokhoron**	**2.52**	**39**	P	**Pb**	**02 40 24.3**	**-1.7**
LIT	**Litokhoron**	**2.52**	**39**	Pn	**Pn**	**02 40 22.6**	**+1.2**
ATH	**Athens Observa**	**2.60**	**93**	P	**Pb**	**02 40 25.1**	**-2.2**
ATHU	**Athens Univers**	**2.66**	**93**	P	**Pn**	**02 40 25.4**	**+2.3**
FNA	**Florina**	**2.73**	**15**	P	**Pn**	**02 40 26.8**	**+2.5**
FNA	**Florina**	**2.73**	**15**	*e*Pn	**Pn**	**02 40 26.6**	**+2.3**
FNA				*e*Sn	**Sb**	**02 41 02.5**	**+0.3**
FNA	**Florina**	**2.73**	**15**		**Pn**	**02 40 25.1**	**+0.9**
DION	**Dionisos Attik**	**2.77**	**90**	P	**Pn**	**02 40 27.3**	**+2.6**
OHR	**Ohrid**	**2.97**	**5**	*i* Pn	**Pb**	**02 40 30.7**	**-2.9**
TIP	**Timpagrande**	**3.05**	**291**	⇑P	**Pn**	**02 40 29.8**	**+1.2**
TIP				⇑S	**Sn**	**02 41 05.4**	**+0.6**
TIP	**Timpagrande**	**3.05**	**291**	Pn	**Pn**	**02 40 28.9**	**+0.3**
TIR	**Tirane**	**3.22**	**352**	⇑P	**Pn**	**02 40 32.3**	**+1.3**
TIR	**Tirane**	**3.22**	**352**	Pn	**Pn**	**02 40 31.9**	**+0.9**
CEL	**Celeste**	**3.57**	**273**	Pn	**Pn**	**02 40 36.2**	**+0.4**
VAY	**Valandovo**	**3.57**	**27**	*e*Pn	**Pn**	**02 40 38.1**	**+2.3**
VAY	**Valandovo**	**3.57**	**27**	*i* Pn	**Pn**	**02 40 38.1**	**+2.3**
STIP	**Stip**	**3.79**	**20**	*i* Pn	**Pn**	**02 40 42.8**	**+4.0**
MATE	**Matera**	**3.81**	**312**	⇑P	**Pn**	**02 40 39.4**	**+0.4**
DRME	**Dracevica, Mon**	**4.14**	**347**	*e*Pn	**Pn**	**02 40 44.5**	**+0.9**
PDG	**Podgorica**	**4.37**	**349**	⇓P	**Pn**	**02 40 47.4**	**+0.7**
PDG				⇑S	**Sn**	**02 41 39.1**	**+2.0**
PDG	**Podgorica**	**4.37**	**349**	*e*Pn	**Pn**	**02 40 46.4**	**-0.3**
PDG	**Podgorica**	**4.37**	**349**	Pn	**Pn**	**02 40 46.7**	**0.0**
HCY	**Herceg Novi**	**4.54**	**342**	*e*Pn	**Pn**	**02 40 48.9**	**-0.2**
IDI	**Anoyia**	**4.58**	**127**	Pn	**Pn**	**02 40 53.1**	**+3.4**
	comp=N,0.4nm,0.3s,baz=287,slow=7.7,SNR=13						
IDI				Sn	**Sn**	**02 41 44.5**	**+1.8**
	comp=N,4.0nm,0.3s,baz=136,slow=23,SNR=23						
IDI	**Anoyia**	**4.58**	**127**		**Pn**	**02 40 50.4**	**+0.7**
BOSS	**Bosilegrad**	**4.62**	**19**	*e*Pn	**Pn**	**02 40 52.2**	**+2.1**
BARS	**Barje**	**4.78**	**12**	*e*Pn	**Pn**	**02 40 52.8**	**+0.4**
VAE	**Valguarnera**	**4.81**	**264**	Pn	**Pn**	**02 40 55.0**	**+2.1**
	comp=N,1.7nm,0.3s,baz=160,slow=15,SNR=1.8						
VAE				Sn	**Sn**	**02 41 49.5**	**+1.3**
	comp=N,1.7nm,0.3s,baz=18,slow=17,SNR=1.7						
TREB	**Trebinje**	**4.83**	**342**	*e*Pn	**Pn**	**02 40 52.2**	**-0.8**
TREB				*e*Sn	**Sn**	**02 41 46.5**	**-2.1**
TREB	**Trebinje**	**4.83**	**342**	*e*Pn	**Pn**	**02 40 52.4**	**-0.6**
RAFF	**Raffo Rosso**	**4.90**	**261**	Pn	**Pn**	**02 40 53.1**	**-0.9**
VTS	**Vitosha**	**4.95**	**25**	*e*Pn	**Pn**	**02 40 57.2**	**+2.3**
VTS				*e*Sn	**Sn**	**02 41 54.5**	**+2.7**
VTS	**Vitosha**	**4.95**	**25**	⇓P	**Pn**	**02 40 54.9**	**+0.1**
VTS	**Vitosha**	**4.95**	**25**	Pn	**Pn**	**02 40 55.5**	**+0.7**
BRY	**Bratogost**	**4.96**	**344**	*e*Pn	**Pn**	**02 40 54.0**	**-1.0**
SGRT	**San Giovanni R**	**5.09**	**316**	Pn	**Pn**	**02 40 57.7**	**+1.0**
SGRT					**Sn**	**02 41 54.2**	**-0.9**
SELS	**Selova**	**5.09**	**6**	*e*Pn	**Pn**	**02 40 57.2**	**+0.5**
ALN	**Alexandroupoli**	**5.14**	**56**	Pn	**Pn**	**02 40 58.8**	**+1.6**
UPM	**Unac-Piva**	**5.18**	**348**	*e*Pn	**Pn**	**02 40 57.5**	**-0.5**
PAOL	**Paolisi**	**5.36**	**304**	Pn	**Pn**	**02 41 00.9**	**+0.5**
ZAPS	**Zavoj**	**5.39**	**17**	Pn	**Pn**	**02 41 03.0**	**+2.3**
IVAS	**Ivanjica**	**5.42**	**358**	Pn	**Pn**	**02 41 01.4**	**+0.1**
IVAS				*e*Sn	**Sn**	**02 42 02.9**	**-0.4**
RUDO	**Rudo**	**5.52**	**352**	*e*Pn	**Pn**	**02 41 02.5**	**0.0**
CORL	**Corleone**	**5.63**	**270**	Pn	**Pn**	**02 41 04.3**	**+0.2**
BLKB	**Belogradchik**	**5.73**	**17**	*e*Pn	**Pn**	**02 41 07.6**	**+2.2**
BLKB				*e*Sn	**Sn**	**02 42 11.4**	**+0.7**
GRUS	**Gruza**	**5.74**	**2**	*e*Pn	**Pn**	**02 41 05.5**	**0.0**
GRUS				*e*Sn	**Sn**	**02 42 11.3**	**+0.4**
BBLS	**Lazići**	**5.76**	**353**	*e*Pn	**Pn**	**02 41 06.7**	**+0.8**
BBLS				*e*Sn	**Sn**	**02 42 11.1**	**-0.6**
BBLS	**Lazići**	**5.76**	**353**	*e*Pn	**Pn**	**02 41 05.3**	**-0.6**
DIVS	**Divibare**	**5.95**	**357**	*e*Pn	**Pn**	**02 41 08.9**	**+0.4**
DIVS				*e*Sn	**Sn**	**02 42 14.0**	**-2.3**
DIVS	**Divibare**	**5.95**	**357**	*e*Pn	**Pn**	**02 41 07.5**	**-1.0**
DIVS	**Divibare**	**5.95**	**357**	Pn	**Pn**	**02 41 09.0**	**+0.5**
HAPS	**Han Pijesak,Bl**	**6.03**	**350**	*e*Pn	**Pn**	**02 41 09.0**	**-0.7**
PLVE	**Pleven**	**6.12**	**30**	⇓P	**Pn**	**02 41 10.1**	**-0.7**
INTR	**Introdacqua**	**6.31**	**310**	Pn	**Pn**	**02 41 13.8**	**+0.3**
TEKS	**Tekeris**	**6.43**	**354**	*e*Pn	**Pn**	**02 41 13.6**	**-1.4**
MGRS	**Mrkonjic Grad**	**6.75**	**339**	*e*Pn	**Pn**	**02 41 20.3**	**+0.9**
HERR	**Herculane**	**6.89**	**12**	⇓P	**Pn**	**02 41 21.2**	**-0.1**
FRGS	**Fruska Gora**	**7.02**	**356**	*e*Sn	**Sn**	**02 42 40.7**	**-1.8**
FRGS	**Fruska Gora**	**7.02**	**356**	⇑P	**Pn**	**02 41 23.1**	**0.0**
FRGS	**Fruska Gora**	**7.02**	**356**	*e*Pn	Pn	02 41 18.3	-4.8
BLY	**Banja Luka**	**7.03**	**341**	*e*Pn	**Pn**	**02 41 22.4**	**-0.8**
GZR	**Gura Zlata**	**7.45**	**13**	⇓P	**Pn**	**02 41 29.0**	**0.0**
BZS	**Buzias**	**7.51**	**6**	⇑P	**Pn**	**02 41 29.9**	**+0.1**
MURB	**Monte Urbino**	**7.88**	**313**	Pn	**Pn**	**02 41 35.9**	**+0.9**
VOIR		**8.06**	**24**	⇑P	**Pn**	**02 41 38.1**	**+0.7**
MORH	**Mrgy, Hungar**	**8.17**	**351**	⇑P	**Pn**	**02 41 39.1**	**+0.3**
MORH	**Mrgy, Hungar**	**8.17**	**351**	*e*Pn	**Pn**	**02 41 37.4**	**-1.4**
MLR	**Muntele Rosu**	**8.41**	**28**	Pn	**Pn**	**02 41 43.0**	**+0.7**
	comp=N,0.1nm,0.3s,baz=164,slow=19,SNR=1.8						
MLR	**Muntele Rosu**	**8.41**	**28**	⇑P	**Pn**	**02 41 41.9**	**-0.4**
CRES	**Cresnjev**	**8.51**	**336**	*e*Pn	**Pn**	**02 41 43.4**	**-0.2**
CEY	**Cerknica**	**8.80**	**331**	*e*Pn	**Pn**	**02 41 47.7**	**+0.2**
PLOR	**Plostina**	**8.98**	**29**	⇑P	**Pn**	**02 41 49.2**	**-0.9**
VRI	**Vrincioaia**	**9.02**	**29**	⇓P	**Pn**	**02 41 50.1**	**-0.5**
TRI	**Trieste**	**9.04**	**329**	Pn	**Pn**	**02 41 51.0**	**+0.3**
KEST	**Kesra**	**9.19**	**258**	Pn	**Pn**	**02 41 53.7**	**+0.7**
	comp=N,0.2nm,0.3s,baz=47,slow=10,SNR=5.1						
KEST				Sn	**Sn**	**02 43 34.8**	**-1.3**
	comp=N,0.1nm,0.3s,baz=89,slow=16,SNR=1.4						
KEST	**Kesra**	**9.19**	**258**		**Pn**	**02 41 53.6**	**+0.6**
SOKA	**Soboth**	**9.41**	**337**	*e*Pn	**Pn**	**02 41 55.6**	**-0.3**
	comp=N,2.0nm,0.3s,SNR=13						
OBKA	**Obir**	**9.42**	**334**	*e*Pn	**Pn**	**02 41 56.8**	**+0.7**
	comp=N,4.7nm,0.4s,SNR=9.2						
OBKA				*e*Sn	**Sn**	**02 43 38.6**	**-3.0**
	comp=N,14nm,0.8s						
ARSA	**Arzberg**	**9.78**	**340**	*e*Pn	**Pn**	**02 42 01.3**	**+0.3**
	comp=N,1.7nm,0.3s						
MYKA	**Terra Mystica**	**9.84**	**332**	*e*Pn	**Pn**	**02 42 03.0**	**+1.1**
	comp=N,1.4nm,0.5s						
ZOU	**Zoufplan**	**10.04**	**329**	Pn	**Pn**	**02 42 04.9**	**+0.1**
CTI	**Castel Tesino**	**10.23**	**323**		**Pn**	**02 42 07.4**	**+0.1**
CONA	**Conrad Observa**	**10.33**	**343**	*e*Pn	**Pn**	**02 42 10.5**	**+2.0**
	comp=N,0.3nm,0.2s						
KBA	**Koelnbreinsper**	**10.33**	**332**	*e*Pn	**Pn**	**02 42 09.3**	**+0.6**
	comp=N,2.2nm,0.5s						
KBA				*e*Sn	**Sn**	**02 44 00.1**	**-4.0**
	comp=N,2.7nm,0.4s						
ABTA	**Abfaltersbach**	**10.39**	**328**	*e*Pn	**Pn**	**02 42 09.5**	**+0.2**
	comp=N,1.8nm,0.4s						
BRTR	**Keskin Array B**	**10.41**	**77**	Pn	Pn	02 42 14.8	+5.0
	comp=N,0.1nm,0.3s,baz=259,slow=23,SNR=1.6						
MOA	**Molln**	**10.69**	**337**	*e*Pn	**Pn**	**02 42 14.1**	**+0.8**
	comp=N,3.4nm,0.3s						
WTTA	**Wattenberg**	**11.16**	**327**	Pn	**Pn**	**02 42 22.1**	**+2.0**
	comp=N,3.0nm,0.4s,SNR=6.1						
WATA	**Walderalm**	**11.24**	**328**	Pn	**Pn**	**02 42 22.4**	**+1.2**
	comp=N,3.8nm,0.5s,SNR=5.4						
SQTA	**Sankt Quirin**	**11.31**	**326**	*e*Pn	**Pn**	**02 42 24.0**	**+1.9**
	comp=N,2.6nm,0.8s						
FETA	**Feichten**	**11.38**	**324**	*e*Pn	**Pn**	**02 42 24.4**	**+1.4**
	comp=N,4.1nm,1.4s						
MOTA	**Moosalm**	**11.45**	**326**	*e*Pn	**Pn**	**02 42 26.0**	**+2.0**
	comp=N,1.1nm,0.3s						
DAVOX	**Davos/Dischmat**	**11.61**	**321**	Pn	**Pn**	**02 42 26.8**	**+0.6**
	baz=145,slow=18						
DAVOX				Sn	**Sn**	**02 44 27.9**	**-7.6**
	baz=191,slow=19						
TUE	**Stuetta**	**11.67**	**319**	Pn	**Pn**	**02 42 27.4**	**+0.3**
RETA	**Reutte**	**11.71**	**326**	*e*Pn	**Pn**	**02 42 30.9**	**+3.4**
	comp=N,7.0nm,1.7s						
GERES	**GERESS Array B**	**11.75**	**338**	Pn	**Pn**	**02 42 27.6**	**-0.4**
	comp=N,0.4nm,0.3s,baz=155,slow=14,SNR=11						
GERES				Sn	**Sn**	**02 44 31.9**	**-6.8**
	comp=N,0.5nm,0.3s,baz=155,slow=24,SNR=6.4						
DAVA	**Damuels**	**11.97**	**323**	*e*Pn	**Pn**	**02 42 34.1**	**+3.1**
	comp=N,0.8nm,0.3s						
KHC	**Kasperske Hory**	**12.04**	**338**	*e*PN	**Pn**	**02 42 33.0**	**+1.1**
KHC				*e*SN	**Sn**	**02 44 39.6**	**-6.1**
SENIN	**Lac Senin/Sane**	**12.71**	**314**	Pn	**Pn**	**02 42 42.1**	**+0.9**
SENIN					**Sn**	**02 44 58.6**	**-3.8**
MMAI	**Mount Meron Ar**	**13.22**	**108**	Pn	**Pn**	**02 42 48.4**	**+0.2**
	comp=N,0.4nm,0.3s,baz=296,slow=17,SNR=2.0						
MMAI				Sn	**Sn**	**02 45 08.2**	**-6.6**
	comp=N,0.8nm,0.3s,baz=259,slow=29,SNR=2.2						
AKASG	**Malin Array Be**	**14.02**	**24**	Pn	**Pn**	**02 42 59.3**	**+0.4**
	comp=N,0.6nm,0.3s,baz=210,slow=11,SNR=2.7						
CLL	**Collm**	**14.16**	**341**	*e*PP	**P**	**02 43 11.0**	**+2.7**
EIL	**Elat**	**14.72**	**121**	Pn	**Pn**	**02 43 06.4**	**-2.1**
	comp=N,0.2nm,0.3s,baz=0.0,slow=9.1,SNR=1.2						
EIL				Sn	**Sn**	**02 45 42.4**	**-8.8**
	comp=N,0.3nm,0.3s,baz=66,slow=13,SNR=1.7						
GKP	**Gorka Klasztor**	**15.28**	**353**	*e*P	**P**	**02 43 23.6**	**+2.9**
MNK	**Minsk**	**17.13**	**15**	*i* P	**Pn**	**02 43 38.3**	**-1.2**
	comp=E,3.0nm,1.2s						
MNK				*i* P	**Pn**	**02 43 38.3**	**-1.2**
	comp=N,11nm,1.2s						
MNK				*i* P	**Pn**	**02 43 38.3**	**-1.2**
	comp=Z,12nm,0.8s						
MNK				*i* PP	**sP**	**02 43 48.0**	**-0.2**
MNK				*i* S	**S

98nm,0.3s
SATY Saty 3.08 275 *e*P **Pg** **02 57 56.4 -1.8**
2.6nm,0.1s
SATY *e*S **Sg** **02 58 41.2 +3.1**
37nm,0.1s
SATY Saty 3.08 275 Pg **Pg** **02 57 56.4 -1.8**
2.6nm,0.1s
SATY Lg Lg 02 58 41.2
37nm,0.1s
MNBS Baschi 3.29 293 *e*P **Pb** **02 57 59.1 +1.5**
5.4nm,0.1s
MNBS *e*S **Sg** **02 58 45.9 +1.1**
46nm,0.3s
MNBS Baschi 3.29 293 Pg **Pb** **02 57 59.2 +1.5**
7.0nm,0.2s
MNBS Lg Lg 02 58 45.9
46nm,0.3s
ARXS Arharly 3.72 293 *e*P **Pb** **02 58 04.9 -0.2**
12nm,0.3s
ARXS *e*S **Sg** **02 58 56.0 -2.7**
10nm,0.5s
MK31 Makanchi Array 3.94 357 ⇓Pn **Pn** **02 58 00.3 +0.6**
0.2nm,0.2s,baz=179,slow=16,SNR=59
MK31 ⇑Pg **Pb** **02 58 08.2 -0.5**
2.1nm,0.3s,baz=178,slow=17,SNR=39
MK31 ⇑Lg Lg 02 59 00.5
4.1nm,0.5s,baz=177,slow=27,SNR=3.6
MAKZ Makanchi 3.97 354 ⇑Pn **Pn** **02 57 60.0 -0.2**
0.5nm,0.5s
MAKZ ⇑Pg **Pb** **02 58 09.7 +0.4**
4.0nm,0.6s
MAKZ ⇑Sn **Sn** **02 58 50.1 +3.3**
3.9nm,0.8s
KOTS Kotyrbulak 4.04 277 *e*P **Pg** **02 58 13.8 -2.7**
4.3nm,0.3s
KOTS *e*S **Sg** **02 59 10.9 +2.2**
14nm,0.4s
KOTS Kotyrbulak 4.04 277 Pg **Pg** **02 58 13.7 -2.8**
7.9nm,0.3s
KOTS Lg Lg 02 59 10.9
11nm,0.4s
MDOK Medeo 4.08 276 *e*P **Pb** **02 58 12.9 +1.7**
1.5nm,0.3s
MDOK *e*S **Sg** **02 59 10.3 +0.2**
5.8nm,0.5s
MDOK Medeo 4.08 276 Pg **Pg** **02 58 17.0 -0.3**
2.7nm,0.6s
MDOK Lg Lg 02 59 15.6
7.3nm,0.6s
MDOK Medeo 4.08 276 Pg **Pb** **02 58 12.9 +1.7**
2.5nm,0.3s
MDOK Lg Lg 02 59 10.4
6.9nm,0.8s
KST Kastek 4.87 274 *e*P **Pb** **02 58 27.2 +2.5**
3.0nm,0.5s
KST *e*S **Sg** **02 59 35.1 -0.4**
4.9nm,0.4s
KST Kastek 4.87 274 Pg **Pb** **02 58 27.2 +2.5**
3.0nm,0.5s
KST Lg Lg 02 59 35.1
4.9nm,0.4s
DGS Degeres 5.01 277 *e*P **Pb** **02 58 29.8 +2.7**
2.1nm,0.4s
DGS *e*S **Sg** **02 59 39.0 -1.1**
6.2nm,0.6s
DGS Degeres 5.01 277 Pg **Pb** **02 58 29.8 +2.7**
2.1nm,0.4s
DGS Lg Lg 02 59 39.0
6.2nm,0.6s
TKM2 Tokmak 2 5.14 273 ⇑Pg **Pg** **02 58 33.8 -3.8**
1.2nm,0.5s
TKM2 ⇓Lg Lg 02 59 46.1
2.2nm,0.6s

*IDC **07** 03:13:37.4±1.9,30°.35S×177°.72W,h0km,mb3.9/3,*
mb1 4.1/3,mb1mx3.7/30,mbtmp3.9/3,Error ellipse:
s-maj=45.4km s-min=26.7km az=107.0
ISC 07 03:13:41.5±1.9,**30°.29S**±0°.09×**177°.7W**±0°.3,**h33**km,**n13,**
σ1§**29**/8,**mb4.0**/3,**Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.05**	**351**	Pn	**Pb**	**03 14 00.5**	**-0.6**
	99nm,0.3s,baz=7.3,slow=18,SNR=10						
RAO				Sn	**Sn**	**03 14 12.6**	**-0.7**
	202nm,0.3s,baz=84,slow=18,SNR=7.5						
URZ	**Urewera**	**9.02**	**207**	Sn	**Sn**	**03 17 27.6**	**-2.1**
	0.9nm,0.3s,baz=130,slow=22,SNR=3.7						
STKA	**Stephens Creek**	**34.72**	**257**	P	**P**	**03 20 29.6**	**+1.0**
	2.6nm,0.9s,baz=79,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**43.34**	**267**	P	**P**	**03 21 42.0**	**+1.3**
	0.3nm,0.4s,baz=102,slow=7.5,SNR=5.5						
WRA	**Warramunga Arr**	**44.32**	**272**	P	**P**	**03 21 48.8**	**+0.1**
	1.1nm,0.5s,baz=111,slow=7.6,SNR=16						
H03S2	**Juan Fernandez**	**80.34**	**123**	T	T	04 55 21.0	
	baz=241						
H03S1	**Juan Fernandez**	**80.35**	**123**	T	T	04 55 22.6	
	baz=241						
H03S3	**Juan Fernandez**	**80.35**	**123**	T	T	04 55 28.6	
	baz=241						
H03N3	**Juan Fernandez**	**80.53**	**123**	T	T	04 55 22.6	
	baz=236						
H03N2	**Juan Fernandez**	**80.53**	**123**	T	T	04 55 24.5	
	baz=236						
H03N1	**Juan Fernandez**	**80.54**	**123**	T	T	04 55 24.1	
	baz=236						
FINES	**FINESS Array B**	**145.12**	**340**	PKPbc	**PKPdf**	**03 33 14.6**	**-0.2**
	1.4nm,0.5s,baz=42,slow=2.7,SNR=11						
TORD	**Torodi Ar. Bea**	**162.93**	**178**	PKPab	**PKPab**	**03 34 30.8**	**+0.6**
	0.4nm,0.8s,baz=156,slow=4.2,SNR=2.2						

*IDC **07** 03:26:23.9±0.8,32°.30N×142°.46E,h0km,mb3.7/11,*
mb1 3.9/15,mb1mx3.7/52,mbtmp3.7/15,ML3.6/4,Error
ellipse: s-maj=22.3km s-min=18.7km az=79.0
*JMA **07** 03:26:30.2±0.3,32°.50N×142°.18E,h60km,M4.3*
ISC 07 03:26:28.8±0.7,**32°.32N**±0°.08×**142°.33E**±0°.09,**h35**km,**n23,**
σ1§**19**/26,**mb3.7**/11,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.29**	**291**	Pn	**Pn**	**03 27 03.9**	**-0.2**
	29nm,0.3s,baz=306,slow=20,SNR=26						
JHJ				Sn	**Sn**	**03 27 29.4**	**-1.6**
	44nm,0.3s,baz=315,slow=23,SNR=7.2						
BSO1	**Boso 1**	**2.58**	**334**	P	**Pn**	**03 27 07.5**	**-0.1**
BSO3	**Boso 3**	**2.90**	**329**	P	**Pn**	**03 27 12.7**	**+0.4**
JHU	**Hanno**	**4.33**	**325**	P	**Pn**	**03 27 32.5**	**+0.3**
JHO	**Hitachi**	**4.52**	**342**	P	**Pn**	**03 27 33.8**	**-0.9**
JRY	**Ryogami san**	**4.65**	**323**	P	**Pn**	**03 27 36.9**	**+0.3**
JRY				*e*S	**Sn**	**03 28 27.1**	**-2.3**
JAG	**Ashikaga**	**4.73**	**331**	P	**Pn**	**03 27 37.7**	**0.0**
JCJ	**Chichijima**	**5.21**	**181**	Pn	**Pn**	**03 27 43.0**	**-1.3**
	2.6nm,0.3s,baz=12,slow=18,SNR=9.4						
JCJ				Sn	Sn	03 28 36.4	-6.8
	1.3nm,0.3s,baz=285,slow=21,SNR=1.3						
MJAR	**Matsushiro Arr**	**5.41**	**322**	Pn	**Pn**	**03 27 46.8**	**-0.3**
	0.4nm,0.3s,baz=28,slow=12,SNR=12						
MAT	**Matsushiro**	**5.42**	**322**	P	**Pn**	**03 27 47.2**	**+0.1**
MAT				S	**Sn**	**03 28 46.5**	**-1.7**
JFT	**Otama**	**5.43**	**343**	P	**Pn**	**03 27 46.8**	**-0.5**
ASAJ	**Asahikawa**	**11.78**	**1**	Pn	**Pn**	**03 29 11.2**	**-3.0**
	0.9nm,0.3s,baz=275,slow=11,SNR=5.6						
ZALV	**Zalesovo Beam**	**45.73**	**316**	P	**P**	**03 34 47.6**	**+1.2**
	0.3nm,0.3s,baz=84,slow=14,SNR=1.5						
MKAR	**Makanchi Array**	**47.38**	**306**	P	**P**	**03 35 01.4**	**+2.0**
	0.6nm,0.7s,baz=93,slow=9.5,SNR=7.2						
WRA	**Warramunga Arr**	**52.53**	**189**	P	**P**	**03 35 38.3**	**-0.4**
	1.1nm,1.0s,baz=7.8,slow=8.0,SNR=3.9						
ASAR	**Alice Springs**	**56.26**	**189**	P	**P**	**03 36 06.0**	**+0.2**
	0.2nm,0.6s,baz=8.7,slow=8.0,SNR=1.5						
INK	**Inuvik**	**58.26**	**26**	P	**P**	**03 36 20.1**	**+0.7**
	0.7nm,0.6s,baz=61,slow=2.6,SNR=3.8						
AKTO	**Aktyubinsk**	**62.44**	**314**	P	**P**	**03 36 48.9**	**+0.7**
	0.8nm,0.6s,baz=83,slow=14,SNR=3.8						
YKA	**Yellowknife Ar**	**67.51**	**29**	P	**P**	**03 37 20.2**	**-0.8**
	0.3nm,0.6s,baz=295,slow=6.3,SNR=7.9						
FINES	**FINESS Array B**	**73.34**	**333**	P	**P**	**03 37 57.1**	**+0.6**
	1.7nm,0.8s,baz=46,slow=8.1,SNR=4.1						
NVAR	**Mina Array Bea**	**77.22**	**53**	P	**P**	**03 38 20.8**	**+1.1**
	0.3nm,0.7s,baz=252,slow=3.0,SNR=3.6						
PDAR	**Pinedale Array**	**80.43**	**45**	P	**P**	**03 38 38.2**	**+0.9**
	0.3nm,0.8s,baz=297,slow=4.0,SNR=2.3						
TXAR	**Lajitas Array**	**92.37**	**53**	P	**P**	**03 39 36.5**	**+0.4**
	0.4nm,0.8s,baz=301,slow=1.9,SNR=4.2						

*IDC **07** 03:28:39.3±1.2,27°.07N×140°.22E,h444km±11km,*
mb3.2/15,mb1 3.3/17,mb1mx3.1/52,mbtmp4.0/17,Error
ellipse: s-maj=21.2km s-min=16.2km az=34.0
*JMA **07** 03:28:41.8±0.1,27°.50N×141°.06E,h441km±2km,M4.8*
ISC 07 03:28:39.6±0.7,**27°.1N**±0°.1×**140°.4E**±0°.1,**h450**km,**n26,**
σ1§**59**/29,**mb3.4**/15,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.55**	**91**	P	**P**	**03 29 37.7**	**-0.2**
CBIJ				S	**S**	**03 30 21.8**	**-3.3**
JCJ	**Chichijima**	**1.55**	**91**	P	**P**	**03 29 37.8**	**-0.1**
	61nm,0.3s,baz=284,slow=22,SNR=48						
JCJ				S	**S**	**03 30 21.8**	**-3.3**
	32nm,0.3s,baz=66,slow=23,SNR=6.6						
JHH2	**Haha-jima-NKT2**	**1.62**	**107**	P	**P**	**03 29 38.7**	**+0.4**
JHJ	**Hachijo jima 2**	**6.00**	**355**	P	**P**	**03 30 14.0**	**+0.2**
	18nm,0.3s,baz=66,slow=22,SNR=8.6						
JHJ				S	**S**	**03 31 26.8**	**-4.1**
	6.1nm,0.3s,baz=238,slow=24,SNR=1.8						
TK02	**Tokai 2**	**7.18**	**342**	P	**P**	**03 30 27.9**	**+2.0**
JIE	**Ise**	**7.92**	**337**	P	**P**	**03 30 36.3**	**+2.2**
JKN2	**Miekihoku**	**7.95**	**334**	P	**P**	**03 30 36.6**	**+2.3**
JNU	**Nakatsue**	**10.21**	**308**	P	**P**	**03 30 57.9**	**-1.2**
	0.4nm,0.3s,baz=74,slow=20,SNR=1.3						
WRA	**Warramunga Arr**	**47.16**	**188**	P	**P**	**03 36 29.4**	**-0.7**
	0.4nm,0.7s,baz=2.9,slow=8.0,SNR=1.4						
ZALV	**Zalesovo Beam**	**48.45**	**319**	P	**P**	**03 36 38.8**	**-0.6**
	0.5nm,0.4s,baz=117,slow=8.3,SNR=1.9						
MKAR	**Makanchi Array**	**49.26**	**310**	P	**P**	**03 36 45.1**	**-0.5**
	0.4nm,0.4s,baz=67,slow=9.3,SNR=5.5						
KURBB	**Kurchatov Arra**	**51.91**	**314**	P	**P**	**03 37 04.4**	**-0.6**
	2.0nm,0.6s,baz=91,slow=8.1,SNR=17						
NRIK	**Noril'sk**	**52.06**	**339**	P	**P**	**03 37 05.8**	**0.0**
	1.6nm,0.4s,baz=146,slow=11,SNR=2.1						
BVAR	**Borovoye Array**	**56.97**	**317**	P	**P**	**03 37 39.5**	**-1.3**
	0.8nm,0.5s,baz=135,slow=17,SNR=6.3						
ILAR	**Eielson Array**	**58.43**	**29**	P	**P**	**03 37 51.0**	**+0.5**
	0.3nm,0.6s,baz=255,slow=5.2,SNR=5.0						
INK	**Inuvik**	**63.55**	**24**	P	**P**	**03 38 25.6**	**+0.8**
	0.4nm,0.4s,baz=297,slow=10.0,SNR=1.6						
SPITS	**Spitsbergen Ar**	**70.08**	**350**	P	**P**	**03 39 06.1**	**+1.4**
	7.9nm,1.0s,baz=111,slow=7.9,SNR=6.2						
YKA	**Yellowknife Ar**	**72.85**	**28**	P	**P**	**03 39 22.2**	**+1.0**
	0.6nm,0.6s,baz=297,slow=5.6,SNR=13						
ARCES	**ARCESS Array B**	**73.00**	**341**	P	**P**	**03 39 22.5**	**+0.5**
	5.1nm,1.0s,baz=20,slow=3.9,SNR=7.4						
FINES	**FINESS Array B**	**77.23**	**333**	P	**P**	**03 39 45.6**	**-0.2**
	2.2nm,0.4s,baz=68,slow=5.7,SNR=28						
AKASG	**Malin Array Be**	**81.67**	**323**	P	**P**	**03 40 09.0**	**-0.6**
	0.6nm,0.4s,baz=55,slow=4.1,SNR=2.3						
NVAR	**Mina Array Bea**	**81.71**	**51**	P	**P**	**03 40 12.0**	**+1.6**
	0.4nm,0.6s,baz=294,slow=7.0,SNR=4.4						
NOA	**NORSAR Array B**	**83.00**	**338**	P	**P**	**03 40 15.6**	**-0.7**
	0.3nm,0.4s,baz=36,slow=5.3,SNR=5.8						
TORD	**Torodi Ar. Bea**	**123.38**	**310**	PKP	**PKPdf**	**03 46 44.8**	**-0.6**
	0.4nm,0.8s,baz=6.8,slow=1.6,SNR=2.1						
PLCA	**Paso Flores**	**151.09**	**126**	PKPbc	**PKiKP**	**03 47 41.7**	**+0.3**
	0.4nm,0.6s,baz=63,slow=3.1,SNR=5.2						
LPAZ	**La Paz**	**151.41**	**74**	PKPbc	**PKiKP**	**03 47 44.3**	**+0.9**
	0.6nm,0.4s,baz=337,slow=1.2,SNR=2.8						

*JMA **07** 03:30:38.7±0.1,37°.26N×142°.58E,h7km±2km,M4.4*
*IDC **07** 03:30:40.3±0.6,37°.22N×142°.53E,h0km,mb4.1/22,*
mb1 4.2/27,mb1mx4.1/53,mbtmp4.1/27,ML3.5/5,Error
ellipse: s-maj=16.1km s-min=14.0km az=127.0
*NEIC **07** 03:30:43.9±1.4,37°.29N±0°.05×142°.45E±0°.10,h23km±5km,*
mb4.3/9,Error ellipse: s-maj=10.9km s-min=7.8km
az=96.0
ISC 07 03:30:41.3±4.4,**37°.29N**±0°.04×**142°.48E**±0°.05,**h7**km±27km,
n80,σ1§**29**/87,**mb4.2**/25,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**1.28**	**274**	P	**Pn**	**03 31 04.0**	**-1.7**
JFK				S	**Sb**	**03 31 22.2**	**-0.3**
JIKH	**Ishinomakikobu**	**1.30**	**322**	P	**Pn**	**03 31 04.0**	**-1.9**
JIKH				S	**Sb**	**03 31 22.2**	**-0.8**
JMST	**Minamisoumatoc**	**1.34**	**289**	P	**Pn**	**03 31 04.5**	**-1.9**
JMST				S	**Sb**	**03 31 23.7**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.36**	**263**	P	**Pn**	**03 31 04.9**	**-1.8**
ONAJ				S	**Sb**	**03 31 24.5**	**-0.1**
JMM	**Marumori**	**1.46**	**294**	P	**Pn**	**03 31 06.5**	**-1.6**
JMM				S	**Sn**	**03 31 26.2**	**-1.3**
JMM	**Marumori**	**1.46**	**294**	Pn	**Pn**	**03 31 06.0**	**-2.1**
JMM				Sn	**Sn**	**03 31 26.4**	**-1.0**
JIO	**Ouri**	**1.47**	**323**	P	**Pn**	**03 31 06.6**	**-1.6**
JIO				S	**Sn**	**03 31 26.4**	**-1.3**
JFT	**Otama**	**1.72**	**278**	P	**Pn**	**03 31 11.3**	**-0.4**
JFT				S	**Sn**	**03 31 34.3**	**+0.3**
JOU	**Okura**	**1.80**	**307**	P	**Pn**	**03 31 12.0**	**-0.7**
JOU				S	**Sn**	**03 31 36.1**	**+0.3**
JMK	**Ichinoseki**	**1.94**	**329**	P	**Pn**	**03 31 13.7**	**-0.9**
JYT	**Yasato**	**2.12**	**241**		**Pn**	**03 31 17.3**	**+0.2**
JYT				Sn	**Sn**	**03 31 44.1**	**+0.4**
JYS	**Shirataka**	**2.13**	**297**	S	**Sn**	**03 31 44.5**	**+0.5**
JFY	**Yanaizu**	**2.22**	**274**	P	**Pn**	**03 31 18.0**	**-0.5**
JFY				S	**Sn**	**03 31 46.5**	**+0.3**
JYK	**Kaneyama**	**2.34**	**315**	P	**Pn**	**03 31 19.4**	**-0.7**
JOM	**Ohasama**	**2.37**	**337**	P	**Pn**	**03 31 19.8**	**-0.8**
JAG	**Ashikaga**	**2.58**	**251**	P	**Pn**	**03 31 22.8**	**-0.6**
JSD	**Sado**	**3.43**	**284**	Pn	**Pn**	**03 31 35.3**	**+0.1**
JSD				Sn	**Sn**	**03 32 15.3**	**-0.8**
MJAR	**Matsushiro Arr**	**3.50**	**259**	Pn	**Pn**	**03 31 37.2**	**+1.0**
	1.5nm,0.3s,baz=85,slow=15,SNR=33						
MJAR				Sn	**Sn**	**03 32 18.3**	**+0.3**
	1.3nm,0.3s,baz=66,slow=13,SNR=5.5						
MJAR	**Matsushiro Arr**	**3.50**	**259**		**Pn**	**03 31 36.7**	**+0.5**
MAJO	**Matsushiro**	**3.51**	**259**	Pn	**Pn**	**03 31 37.2**	**+1.0**
MAT	**Matsushiro**	**3.51**	**259**	P	**Pn**	**03 31 36.9**	**+0.7**
MAT				*e*S	**Sn**	**03 32 18.9**	**+0.9**
JTM	**Tenmabayashi**	**3.66**	**343**	Pn	**Pn**	**03 31 40.4**	**+2.0**
JGF	**Kuroka**	**4.46**	**249**	Pn	**Pn**	**03 31 49.7**	**+0.3**
JHJ	**Hachijo jima 2**	**4.71**	**209**	Pn	**Pn**	**03 31 52.8**	**0.0**
	10.0nm,0.3s,baz=255,slow=19,SNR=1.4						
JHJ				Sn	**Sn**	**03 32 42.0**	**-5.6**
	baz=62,slow=23,SNR=0.8						
INU	**Inuyama**	**4.82**	**248**		**Pn**	**03 31 54.1**	**-0.1**
JWT	**Wachi**	**6.06**	**253**		**Pn**	**03 32 12.1**	**+0.8**
ASAJ	**Asahikawa**	**6.82**	**1**	Pn	**Pn**	**03 32 20.8**	**-1.0**
	1.4nm,0.3s,baz=170,slow=12,SNR=1.8						
ASAJ				Sn	**Sn**	**03 33 36.1**	**-3.5**
	0.8nm,0.3s,baz=272,slow=25,SNR=1.7						
JCJ	**Chichijima**	**10.16**	**182**	Pn	**Pn**	**03 33 05.2**	**-2.4**
	3.0nm,0.3s,baz=294,slow=20,SNR=1.5						
JCJ				Sn	Sn	03 34 51.0	-11
	3.7nm,0.3s,baz=252,slow=15,SNR=1.7						
USRK	**Ussuriysk Ar.**	**10.53**	**314**	Pn	**Pn**	**03 33 14.4**	**+1.8**
	baz=133,slow=14,SNR=11						
USRK	**Ussuriysk Ar.**	**10.53**	**314**	Pn	**Pn**	**03 33 13.5**	**+0.9**
MA2	**Msadan**	**22.94**	**11**	P	**P**	**03 35 45.4**	**-0.3**
	4.1nm,0.5s,baz=183,slow=10,SNR=4.9						
SEY	**Seymchan**	**26.38**	**10**	P	**P**	**03 36 19.4**	**+1.4**
	5.6nm,0.8s,baz=196,slow=8.7,SNR=9.4						
H11N2	**WAKE ISLAND Hy**	**27.55**	**123**	T	T	04 05 24.1	
	baz=315,slow=75,SNR=499						
H11N1	**WAKE ISLAND Hy**	**27.56**	**123**	T	T	04 05 19.6	
	baz=315,slow=75,SNR=366						
H11N3	**WAKE ISLAND Hy**	**27.57**	**123**	T	T	04 05 19.6	
	baz=315,slow=75,SNR=303						
H11S1	**WAKE ISLAND Hy**	**28.29**	**125**	T	T	04 06 13.5	
	baz=317,slow=76,SNR=416						
H11S3	**WAKE ISLAND Hy**	**28.29**	**125**	T	T	04 06 19.7	
	baz=317,slow=76,SNR=381						
H11S2	**WAKE ISLAND Hy**	**28.31**	**125**	T	T	04 06 16.6	
	baz=317,slow=76,SNR=268						
SONM	**Songino Array**	**28.36**	**303**	P	**P**	**03 36 37.7**	**+1.8**
	3.2nm,0.8s,baz=120,slow=8.2,SNR=1.4						
ZALV	**Zalesovo Beam**	**42.38**	**312**	P	**P**	**03 38 36.6**	**+0.7**
	1.6nm,0.6s,baz=89,slow=6.4,SNR=5.6						
ZALV	**Zalesovo Beam**	**42.38**	**312**	P	**P**	**03 38 36.1**	**+0.1**
MK31	**Makanchi Array**	**44.71**	**302**	P	**P**	**03 38 55.4**	**+0.4**
MK31				IAmb	IAmb	03 39 04.2	
	comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**44.71**	**302**	P	**P**	**03 38 54.9**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=89,slow=9.9,SNR=11						
KURK	**Kurchatov**	**46.45**	**308**	P	**P**	**03 39 09.5**	**+0.9**
KURBB	**Kurchatov Arra**	**46.52**	**308**	P	**P**	**03 39 09.5**	**+0.4**
	comp=Z,2.9nm,0.5s,baz=82,slow=8.1,SNR=12						
ILAR	**Eielson Array**	**48.82**	**32**	P	**P**	**03 39 27.2**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=266,slow=6.2,SNR=12						
BCAR	**Beaver Creek A**	**51.20**	**34**	P	**P**	**03 39 45.9**	**+0.9**
INK	**Inuvik**	**53.77**	**27**	P	**P**	**03 40 04.6**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=330,slow=7.0,SNR=5.6						
INK	**Inuvik**	**53.77**	**27**	P	**P**	**03 40 04.2**	**+0.4**
ARU	**Arti**	**56.73**	**319**	P	**P**	**03 40 25.7**	**+0.2**
	comp=Z,0.9nm,0.2s,baz=94,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	**57.44**	**189**	P	**P**	**03 40 30.3**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=7.0,slow=7.3,SNR=5.0						
WRA	**Warramunga Arr**	**57.44**	**189**	P	**P**	**03 40 29.2**	**-1.5**
ABKAR	**Akbulak array**	**58.43**	**310**	P	**P**	**03 40 37.4**	**-0.1**
AKTO	**Aktyubinsk**	**59.14**	**312**	P	**P**	**03 40 43.8**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=107,slow=9.0,SNR=3.8						
ASAR	**Alice Springs**	**61.16**	**189**	P	**P**	**03 40 55.7**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=14,slow=7.4,SNR=7.5						
ASAR	**Alice Springs**	**61.16**	**189**	P	**P**	**03 40 55.9**	**-0.6**
RES	**Resolute Bay**	**62.14**	**15**	P	**P**	**03 41 02.5**	**0.0**
	comp=Z,2.7nm,0.9s,baz=304,slow=6.2,SNR=10						
RES	**Resolute Bay**	**62.14**	**15**	P	**P**	**03 41 03.1**	**+0.6**
RES				IAmb	IAmb	03 41 05.3	
	comp=Z,2.4nm,1.1s						
YKA	**Yellowknife Ar**	**63.16**	**30**	P	**P**	**03 41 09.4**	**0.0**
	comp=Z,0.7nm,0.8s,baz=296,slow=6.4,SNR=11						
ARCES	**ARCESS Array B**	**64.06**	**340**	P	**P**	**03 41 14.9**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=14,slow=5.7,SNR=5.8						
FINES	**FINESS Array B**	**68.98**	**333**	P	**P**	**03 41 47.2**	**+0.3**
	comp=Z,5.6nm,1.0s,baz=46,slow=14,SNR=4.6						
FINES	**FINESS Array B**	**68.98**	**333**	P	**P**	**03 41 47.4**	**+0.5**
FFC	**Flin Flon**	**73.03**	**33**	P	**P**	**03 42 11.5**	**-0.1**
FFC				IAmb	IAmb	03 42 12.8	
	comp=Z,3.9nm,0.9s						
NVAR	**Mina Array Bea**	**74.15**	**54**	P	**P**	**03 42 20.1**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=283,slow=5.2,SNR=6.6						
NVAR	**Mina Array Bea**	**74.15**	**54**	P	**P**	**03 42 17.3**	**-1.5**
NOA	**NORSAR Array B**	**74.28**	**338**	P	**P**	**03 42 21.4**	**+2.6**
	comp=Z,1.0nm,0.8s,baz=40,slow=5.8,SNR=2.9						
AKASG	**Malin Array Be**	**74.62**	**323**	P	**P**	**03 42 20.2**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=46,slow=5.9,SNR=5.3						
H17A	**Grant Village**	**75.29**	**45**	P	**P**	**03 42 24.9**	**-0.4**
H17A				IAmb	IAmb	03 42 28.9	
	comp=Z,3.0nm,0.8s						
PD31	**Pinedale Array**	**76.88**	**46**	P	**P**	**03 42 34.1**	**-0.3**
PD31				IAmb	IAmb	03 42 50.5	
	comp=Z,2.7nm,1.1s						
PDAR	**Pinedale Array**	**76.88**	**46**	P	**P**	**03 42 34.1**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=251,slow=1.9,SNR=11						
PDAR	**Pinedale Array**	**76.88**	**46**	P	**P**	**03 42 33.6**	**-0.8**
SRU	**San Rafael Swe**	**78.60**	**49**	P	**P**	**03 42 43.6**	**-0.4**
PV17	**East Wray Mesa**	**80.07**	**49**	P	**P**	**03 42 51.5**	**-0.6**
GERES	**GERESS Array B**	**82.94**	**329**	P	**P**	**03 43 07.0**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=53,slow=5.2,SNR=4.3						
TXAR	**Lajitas Array**	**89.29**	**53**	P	**P**	**03 43 39.2**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=295,slow=3.1,SNR=10						
LPAZ	**La Paz**	**145.83**	**61**	PKPbc	**PKPab**	**03 50 22.6**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=5.8,slow=4.1,SNR=8.0						
H03N2	**Juan Fernandez**	**146.20**	**96**	T	T	06 33 42.5	
	baz=291,slow=76,SNR=7.7						
H03N3	**Juan Fernandez**	**146.21**	**96**	T	T	06 33 45.7	
	baz=291,slow=76,SNR=8.5						
H03N1	**Juan Fernandez**	**146.22**	**96**	T	T	06 33 47.5	
	baz=291,slow=76,SNR=7.6						
PLCA	**Paso Flores**	**154.19**	**108**	PKPab	**PKPab**	**03 50 51.9**	**-3.9**
	comp=Z,0.8nm,0.6s,baz=250,slow=14,SNR=6.3						

*IDC **07** 03:32:49.7±0.9,36°.55N×33°.67W,h0km,mb4.1/16,*
mb1 4.3/16,mb1mx4.0/58,mbtmp4.1/16,MS3.9/5,
Ms1 3.9/5,ms1mx3.4/59,Error ellipse: s-maj=27.5km
s-min=16.9km az=176.0
ISC 07 03:32:51.5±0.8,**36.6N**±0°.1×**33.6W**±0°.1,**h10**km,**n24,**
σ1§**11**/19,**mb4.0**/17,**MS3.9**/5,**Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H07S1	**FLORES T-PHASE**	**3.34**	**34**	Pn	**Pn**	**03 33 42.3**	**-1.5**
H07N1	**FLORES T-PHASE**	**3.64**	**32**	Pn	**Pn**	**03 33 46.3**	**-1.6**
ESDC	**Sonseca Array**	**23.47**	**73**	P	**P**	**03 37 59.6**	**-1.6**
	2.6nm,1.2s,baz=270,slow=7.4,SNR=6.8						
EKA	**Eskdalemuir Ar**	**27.91**	**38**	P	**P**	**03 38 41.6**	**+0.2**
	3.8nm,1.1s,baz=262,slow=5.0,SNR=4.5						
SADO	**Sadowa**	**35.08**	**298**	LR	LR	03 53 52.1	
	comp=Z,140nm,19.4s,baz=97,slow=36						
GERES	**GERESS Array B**	**36.27**	**55**	LR	LR	03 52 22.5	
	comp=Z,168nm,20.0s,baz=337,slow=32						
TORD

RTZ	Ruatahuna	0.95	358	P	Pn	03 42 02.4 +0.3
TSZ	Takapari Road	0.96	239	P	Pn	03 42 02.1 -0.1
TSZ				S	Sb	03 42 15.7 +0.2
DVHZ	Dannevirke	0.99	222	P	Pn	03 42 02.5 -0.1
DVHZ				S	Sb	03 42 16.5 +0.2
HATZ	Hinemaiaia	0.99	312	P	Pb	03 42 03.3 -0.2
ANWZ	Angora Road	0.99	205	P	Pb	03 42 03.2 -0.4
MOVZ	Moawhango	1.00	279	P	Pb	03 42 03.4 -0.4
RIGZ	Rimuhau	1.03	34	P	Pn	03 42 03.2 0.0
RITZ	Rihia Road	1.08	302	P	Pb	03 42 05.2 +0.1
MUGZ	Murupara	1.10	349	P	Pn	03 42 04.6 +0.5
TUVZ	Tukino	1.10	285	P	Pb	03 42 05.6 0.0
ETVZ	East Tongariro	1.11	292	P	Pb	03 42 05.2 -0.5
RAGZ	Rawiri	1.11	16	P	Pn	03 42 04.5 +0.2
TMVZ	Te Maari	1.12	293	P	Pb	03 42 05.3 -0.5
OTVZ	Oturere	1.13	290	P	Pb	03 42 05.5 -0.5
WNVZ	Wahianoa	1.13	282	P	Pb	03 42 06.0 -0.1
ALRZ	Allen Road	1.13	332	P	Pb	03 42 05.4 -0.6
WHVZ	Whangaehu Hut	1.15	284	P	Pb	03 42 06.1 -0.3
DRZ	Dome Shelter	1.17	284	P	Pb	03 42 06.7 -0.1
NGZ	Ngauruhoe	1.17	289	P	Pb	03 42 06.0 -0.7
PRRZ	Plateau Road	1.17	335	P	Pb	03 42 05.9 -0.7
KRVZ	Karewarewa	1.17	293	P	Pb	03 42 06.1 -0.7
TRVZ	Turoa	1.18	282	P	Pb	03 42 06.2 -0.6
FWVZ	Far West T-bar	1.19	285	P	Pn	03 42 06.1 +0.7
KATZ	Kakaramea	1.19	299	P	Pb	03 42 06.3 -0.7
RATZ	Rangitukua	1.20	305	P	Pn	03 42 06.3 +0.8
WTVZ	West Tongariro	1.20	291	P	Pb	03 42 06.6 -0.6
MTVZ	Mangateitei	1.22	278	P	Pb	03 42 07.2 -0.3
WHTZ	Whakaora	1.22	317	P	Pb	03 42 07.7 +0.2
WPRZ	Whakapapatarin	1.24	327	P	Pb	03 42 08.2 +0.4
BFZ	Birch Farm	1.27	208	P	Pn	03 42 06.4 0.0
POWZ	Post Office Ro	1.27	229	P	Pn	03 42 06.7 +0.2
PRWZ	Pori Road	1.28	219	P	Pn	03 42 06.9 +0.3
MWZ	Matawai	1.29	18	P	Pn	03 42 06.5 -0.2
RRRZ	Republican Roa	1.29	342	P	Pb	03 42 08.3 -0.3
TKGZ	Te Karaka	1.29	30	P	Pn	03 42 06.4 -0.3
URZ	Urewera	1.30	3	P	Pn	03 42 06.9 0.0
HRRZ	Handcock Road	1.31	333	P	Pb	03 42 08.0 -0.9
WATZ	Wairara	1.32	310	P	Pn	03 42 08.2 +1.0
TWVZ	Taurewa	1.33	291	P	Pn	03 42 07.9 +0.6
PKVZ	Pokaka	1.33	281	P	Pb	03 42 08.8 -0.5
TARZ	Mount Tarawera	1.39	343	P	Pb	03 42 10.1 -0.2
HSRZ	Hossack Road	1.39	334	P	Pb	03 42 09.9 -0.4
HLRZ	Highlands Stat	1.41	338	P	Pb	03 42 11.4 +0.7
CNGZ	Carnagh Statio	1.42	41	P	Pn	03 42 08.9 +0.5
KUTZ	Kaahu Road	1.43	318	P	Pb	03 42 09.8 -1.1
OMRZ	Omania	1.54	340	P	Pb	03 42 13.5 +0.6
MRZ	Mangatainoka R	1.56	225	P	Pn	03 42 10.0 -0.4
WAZ	Wanganui	1.59	262	P	Pb	03 42 12.5 -1.1
RUGZ	Raukumara Rang	1.67	18	P	Pn	03 42 11.9 -0.1
WHRZ	Whale Island	1.71	359	P	Pn	03 42 12.9 +0.4
OPRZ	Ohinepanea	1.76	348	P	Pn	03 42 14.0 +1.0
TMWZ	Te Maipa	1.77	209	P	Pn	03 42 12.5 -0.8
PKGZ	Pakihiroa	1.86	26	P	Pn	03 42 14.2 -0.4
OGWZ	Otaki Gorge	1.90	228	P	Pn	03 42 14.4 -0.7
HAZ	Te Kaha	1.90	18	P	Pn	03 42 14.8 -0.2
MTW	Mount Morrison	1.98	216	P	Pn	03 42 15.1 -1.0
HIZ	Hauiti	1.99	301	P	Pn	03 42 17.0 +0.7
LREZ	Lake Rotokare	2.04	272	P	Pb	03 42 22.3 +1.1
WMGZ	Waiomatatini S	2.05	32	P	Pn	03 42 16.5 -0.6
KIW	Kapiti Island	2.08	231	P	Pn	03 42 17.0 -0.6
CAW	Cannon Point	2.15	224	P	Pn	03 42 17.3 -1.2
PAWZ	Paruwai Farm	2.19	213	P	Pn	03 42 17.6 -1.5
MXZ	Matakaoa Point	2.23	27	P	Pn	03 42 19.6 0.0
NEZ	North Egmont	2.29	276	P	Pb	03 42 24.0 -1.6
MSWZ	Moikau Station	2.29	216	P	Pn	03 42 19.1 -1.5
KHEZ	Kahui Hut	2.32	276	P	Pb	03 42 24.2 -2.5
PKE	Pukeiti	2.39	278	P	Pb	03 42 25.0 -2.2
PLWZ	Palliser	2.42	213	P	Pn	03 42 20.8 -1.5
TCW	Tory Channel	2.67	231	P	Pn	03 42 24.4 -1.3
THZ	Tophouse	3.83	234	P	Pn	03 42 40.6 -1.1
KHZ	Kahutara	3.89	222	P	Pn	03 42 40.7 -1.6
LTZ	Lake Taylor	4.82	227	P	Pn	03 42 53.5 -1.7
CTZ	Chatham Island	6.33	133	P	Pn	03 43 16.1 +0.2

*NOU **07** 03:47:47.4, 14°.02S×172°.09W, h72km, MLv2.8, Samoa Islands*
IDC 07 03:47:35.2±7.9, 15°.06S×174°.16W, h0km, mb4.1/2, mb1 4.4/2, mb1mx3.6/54, mbtmp4.1/2, Error ellipse: s-maj=335.0km s-min=60.4km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.58	64	P	Pn	03 48 00.5	-18
H11S2	WAKE ISLAND Hy	38.30	330	T	T	04 36 42.9	
	baz=149,slow=74						
H11S3	WAKE ISLAND Hy	38.31	330	T	T	04 36 33.5	
	baz=149,slow=74						
H11S1	WAKE ISLAND Hy	38.31	330	T	T	04 36 37.4	
	baz=149						
H11N3	WAKE ISLAND Hy	39.25	331	T	T	04 37 50.2	
	baz=154,slow=76,SNR=4.5						
H11N1	WAKE ISLAND Hy	39.26	331	T	T	04 37 50.5	
	baz=154,slow=76,SNR=3.5						
H11N2	WAKE ISLAND Hy	39.27	331	T	T	04 37 52.0	
	baz=154,slow=76,SNR=3.9						
WRA	Warramunga Arr	49.20	257	P	P	03 56 25.6	-0.1
	1.3nm,0.6s,baz=91,slow=6.9,SNR=18						
ASAR	Alice Springs	49.52	252	P	P	03 56 27.9	-0.2
	2.3nm,0.6s,baz=88,slow=8.3,SNR=32						
BRTR	Keskin Array B	145.43	321	PKPbc	PKPbc	04 07 14.8	-0.8
	1.9nm,0.7s,baz=149,slow=2.6,SNR=6.6						

*ANF **07** 03:52:17.4±0.3, 36°.34N×97°.82W, h6km, ML3.6/9, Error ellipse: s-maj=3.5km s-min=2.8km az=174.0*
*TUL **07** 03:52:17.1±1.7, 36°.370N±0°.008×97°.83W±0°.03, h6km±7km, ML3.1, mb_Lg3.0/87(NEIC), Error ellipse: s-maj=3.1km s-min=1.1km az=95.0*
*NEIC **07** 03:52:17.2±1.2, 36°.36N±0°.02×97°.84W±0°.04, h4km±7km, Error ellipse: s-maj=5.4km s-min=1.9km az=69.0*
ISC 07 03:52:17.1±1.1, 36°.36N±0°.02×97°.84W±0°.02, h6km±11km, n95, σ0°84/84, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	Carrier	0.19	321		Pg	03 52 21.2	+0.3
CROK				Sg	Sg	03 52 24.0	+0.6
GC02	Grant County #	0.49	358	Pg	Pg	03 52 26.7	+0.1
GC02				Sg	Sg	03 52 33.3	+0.3
OK032	Salt Plains WL	0.54	326		Pg	03 52 27.5	0.0
OK032				Sg	Sg	03 52 34.9	+0.5
KAN14	Manchester OK	0.60	350		Pg	03 52 28.7	-0.1
KAN14				Sg	Sg	03 52 36.9	+0.2
OK029	Liberty Lake	0.64	151		Pg	03 52 29.4	0.0
KAN13	South Haven SW	0.71	24		Pg	03 52 30.7	-0.1
KAN13				Sg	Sg	03 52 40.2	+0.1
BCOK	Bluff Creek, N	0.72	165		Pg	03 52 31.0	-0.1
KAN05	Bluff City Nor	0.75	358		Pg	03 52 31.4	-0.1
KAN05				Sg	Sg	03 52 41.4	+0.1
KAN10	Anthony SW Sta	0.79	345	Pg	Pg	03 52 31.9	-0.4
KAN10				Sg	Sg	03 52 42.7	+0.1
KAN09	Caldwell North	0.79	13		Pg	03 52 32.2	-0.2
KAN09				Sg	Sg	03 52 42.8	+0.1
KAN01	Argonia South	0.80	4		Pg	03 52 32.2	-0.2
KAN01				Sg	Sg	03 52 42.8	0.0
KAN08	Anthony NE Sta	0.87	353		Pg	03 52 33.5	-0.4
KAN08				Sg	Sg	03 52 45.3	+0.1
OK025	Westminster Rd	0.88	152		Pg	03 52 33.8	-0.2
OK031	S. Brethren Rd	0.90	116		Pg	03 52 34.3	-0.2
OK031				Sg	Sg	03 52 46.2	0.0
QUOK	Quay	0.93	101		Pg	03 52 34.6	-0.4
QUOK				Sg	Sg	03 52 47.0	0.0
U32A	Winter Ranch,	0.94	272		Pg	03 52 34.9	-0.3
U32A	Winter Ranch,	0.94	272	P	Pg	03 52 34.9	-0.3
	baz=90						
U32A				S	Sb	03 52 48.3	-0.4
	baz=90						
U32A	Winter Ranch,	0.94	272	P		03 52 34.9	
	baz=90						
U32A				S		03 52 48.3	
	baz=90						
KAN12	Harper NE Stat	0.94	352		Pg	03 52 34.8	-0.5
KAN12				Sg	Sg	03 52 47.4	-0.2
OK030	Cody Creek RV	0.95	117	Pg	Pg	03 52 35.0	-0.4
OK030				Sg	Sg	03 52 48.0	+0.2
OKCFA	Oklahoma City	0.99	162		Pg	03 52 35.7	-0.5
OKCFA	Oklahoma City	0.99	162	P	Pg	03 52 35.9	-0.2
	baz=342						
OKCFA	Oklahoma City	0.99	162	P		03 52 35.9	
	baz=342						
OKCSW	OKLAHOMA CITY	1.01	161		Pg	03 52 36.1	-0.3
FNO	Franklin	1.16	162		Pg	03 52 39.3	0.0
T35A	Sooner Cattle	1.20	62		Pg	03 52 39.6	-0.6
T35B	Sooner Cattle	1.20	62	P	Pg	03 52 39.5	-0.7
	baz=243						
T35B				S	Sg	03 52 55.5	-0.2
	baz=243						
T35B	Sooner Cattle	1.20	62	P		03 52 39.5	
	baz=243						
T35B				S		03 52 55.5	
	baz=243						
TUL1	Leonard	1.71	105	P	Pn	03 52 47.7	+0.1
	baz=286						
TUL1				S	Sb	03 53 10.3	-0.6
	baz=286						
TUL1	Leonard	1.71	105	P		03 52 47.7	
	baz=286						
TUL1				S		03 53 10.3	
	baz=286						
X34A	Smith Ranch, M	1.75	180		Pb	03 52 49.2	-0.5
X34A				IAmb_Lg		03 53 15.5	
	comp=Z,100nm,0.8s						
WMOK	Wichita Mounta	1.79	206		Pn	03 52 48.8	+0.1
WMOK	Wichita Mounta	1.79	206	P	Pn	03 52 49.1	+0.4
	baz=25						
WMOK				S	Sb	03 53 13.0	-0.2
	baz=25						
WMOK	Wichita Mounta	1.79	206	P		03 52 49.1	
	baz=25						
WMOK				S		03 53 13.0	
	baz=25						
R32A	Long Quarter,	2.17	342		Pb	03 52 55.7	-1.2
R32A	Long Quarter,	2.17	342	P	Pb	03 52 55.7	-1.2
	baz=161						
R32A				S	Sb	03 53 24.0	-0.2
	baz=161						
R32A	Long Quarter,	2.17	342	P		03 52 55.7	
	baz=161						
R32A				S		03 53 24.0	
	baz=161						
X37A	Clayton	2.68	131		Pn	03 53 01.6	+0.7
X37A	Clayton	2.68	131	P	Pn	03 53 01.6	+0.7
	baz=312						
X37A	Clayton	2.68	131	P		03 53 01.6	
	baz=312						
U38A	Gravette	2.79	87		Pn	03 53 03.3	+1.0
U38A				IAmb_Lg		03 53 53.2	
	comp=Z,39nm,0.8s						
CBKS	Cedar Bluff	2.88	329	Pn	Pn	03 53 04.7	+1.1
CBKS	Cedar Bluff	2.88	329	P	Pn	03 53 04.3	+0.7
	baz=148						
CBKS	Cedar Bluff	2.88	329	P		03 53 04.3	
	baz=148						
KSU1	Kansas State U	2.90	19	Pn	Pn	03 53 05.0	+1.0
KSU1	Kansas State U	2.90	19	P	Pn	03 53 05.1	+1.1
	baz=200						
KSU1	Kansas State U	2.90	19	P		03 53 05.1	
	baz=200						
HHAR	Hobbs	3.15	90	Pn	Pn	03 53 08.6	+1.3
AMTX	Amarillo	3.46	246	IAmb_Lg		03 54 08.6	
	comp=Z,38nm,0.7s						
W39A	Magazine	3.49	108	Pn	Pn	03 53 14.4	+2.3
W39A				IAmb_Lg		03 54 12.7	
	comp=Z,41nm,0.8s						
S39A	Bolivar	3.85	68	Pn	Pn	03 53 18.5	+1.6
Z38A	Mt. Pleasant	3.88	142	Pn	Pn	03 53 17.8	+0.5
MIAR	Mount Ida	3.92	116	Pn	Pn	03 53 19.0	+1.1
MIAR				IAmb_Lg		03 54 27.3	
	comp=Z,40nm,0.8s						
MIAR	Mount Ida	3.92	116	P	Pn	03 53 18.7	+0.8
	baz=299						
MIAR	Mount Ida	3.92	116	P		03 53 18.7	
	baz=299						
ABTX	Abilene, Hawle	4.01	202	Pn	Pn	03 53 20.6	+1.4
ABTX				IAmb_Lg		03 54 26.1	
	comp=Z,40nm,1.1s						
U40A	Yellville	4.02	89	Pn	Pn	03 53 21.7	+2.4
WHTX	Lake Whitney,	4.37	176	Pn	Pn	03 53 25.3	+1.2
N33A	J Bar K, Exete	4.38	4	Pn	Pn	03 53 23.7	-0.6
X40A	Basin Creek Fa	4.49	113	Pn	Pn	03 53 27.6	+1.8
X40A				IAmb_Lg		03 54 47.9	
	comp=Z,30nm,0.7s						
MGMO	Mountain Grove	4.54	78	Pn	Pn	03 53 27.1	+0.7
MGMO				IAmb_Lg		03 54 43.3	
	comp=Z,26nm,0.8s						
KSCO	Kaye Shedlock'	4.63	306	IAmb_Lg		03 54 53.1	
	comp=Z,22nm,0.8s						
WHAR	Wooly Hollow	4.63	102	Pn	Pn	03 53 28.8	+1.1
WHAR				IAmb_Lg		03 54 54.1	
	comp=Z,31nm,0.7s						
FCAR	Ozark Folk Cen	4.65	94	IAmb_Lg		03 54 43.4	
	comp=Z,27nm,0.9s						
237A	Washetta, Mont	4.66	158	Pn	Pn	03 53 27.8	-0.3
WLAR	White Oak Lake	4.71	123	Pn	Pn	03 53 30.4	+1.7
WLAR				IAmb_Lg		03 54 59.7	
	comp=Z,20nm,0.8s						
P38A	Dawn	4.71	45	Pn	Pn	03 53 29.9	+1.2
P38A				IAmb_Lg		03 54 49.6	
	comp=Z,25nm,0.8s						
N35A	Tabor	4.81	20	Pn	Pn	03 53 31.2	+1.1
R40A	Maddies Statio	4.84	65	Pn	Pn	03 53 31.6	+1.0
BGNE	Belgrade	5.05	357		Pn	03 53 33.1	-0.4
BGNE				IAmb_Lg		03 54 55.4	
	comp=Z,35nm,0.7s						
T25A	Trinidad	5.34	280	Pn	Pn	03 53 38.8	+1.2
T25A				IAmb_Lg		03 55 06.5	
	comp=Z,20nm,0.8s						
LCAR	Lake Charles	5.41	91	Pn	Pn	03 53 39.6	+1.3
CCM	Cathedral Cave	5.53	70	Pn	Pn	03 53 41.8	+1.8
CCM				IAmb_Lg		03 55 18.5	
	comp=Z,19nm,0.8s						
CCAR	Cane Creek	5.53	114	IAmb_Lg		03 55 22.8	
	comp=Z,28nm,0.8s						
P40A	Paris	5.56	54	IAmb_Lg		03 55 14.6	
	comp=Z,36nm,0.8s						
435B	Jarrell	5.57	178	IAmb_Lg		03 55 29.1	
	comp=Z,21nm,0.8s						
OGNE	Ogallala	5.63	326	Pn	Pn	03 53 43.0	+1.4
OGNE				IAmb_Lg		03 55 28.5	
	comp=Z,33nm,0.8s						
N38A	Joes South For	5.71	38	Pn	Pn	03 53 42.6	+0.1
PBMO	Poplar Bluff	5.98	84	IAmb_Lg		03 55 26.4	
	comp=Z,33nm,0.9s						
JCT	Junction City	6.09	196	Pn	Pn	03 53 48.2	+0.5
FVM	French Village	6.13	72	Pn	Pn	03 53 49.1	+0.7
FVM				IAmb_Lg		03 55 34.0	
	comp=Z,20nm,0.8s						
LPAR	Lepanto	6.16	95	IAmb_Lg		03 55 47.8	
	comp=Z,31nm,0.7s						
K31A	O'Neill	6.29	354	Pn	Pn	03 53 50.7	+0.1
143A	Socs Landing,	6.44	123	IAmb_Lg		03 55 54.7	
	comp=Z,31nm,1.0s						
SLM	Saint Louis	6.46	67	IAmb_Lg		03 55 40.2	
	comp=Z,27nm,1.1s						
N41A	Harden Midland	6.98	49	IAmb_Lg		03 56 02.6	
	comp=Z,20nm,0.7s						
SIUC	Southern Illin	7.03	76	IAmb_Lg		03 56 02.3	
	comp=Z,18nm,0.7s						
ISCO	Idaho Springs	7.03	302	IAmb_Lg		03 56 01.1	
	comp=Z,13nm,0.8s						
OXF	Oxford	7.12	103	IAmb_Lg		03 56 08.8	
	comp=Z,25nm,1.1s						
VBMS	Vicksburg	7.33	122	IAmb_Lg		03 56 05.6	
	comp=Z,13nm,1.0s						
P43A	Skaggs, Pawnee	7.34	61	IAmb_Lg		03 56 22.4	
	comp=Z,23nm,0.8s						
T45A	Paducah	7.42	82	IAmb_Lg		03 56 25.6	
	comp=Z,26nm,0.8s						
L40A	Anamosa	7.67	40	IAmb_Lg		03 56 29.6	
	comp=Z,16nm,0.8s						
PHWY	Pilot Hill	7.73	312	IAmb_Lg		03 56 32.2	
	comp=Z,12nm,0.8s						
PLAL	Pickwick Lake	8.06	97	IAmb_Lg		03 56 36.1	
	comp=Z,10nm,1.0s						
OLIL	Olney	8.09	70	IAmb_Lg		03 56 48.2	
	comp=Z,20nm,1.1s						
SUSD	Miller	8.12	354	IAmb_Lg		03 56 40.4	
	comp=Z,15nm,0.9s						
O44A	Mansfield	8.29	60	IAmb_Lg		03 56 46.3	
	comp=Z,18nm,0.8s						
I37A	Lemond, Wasseca	8.36	23	IAmb_Lg		03 56 49.2	
	comp=Z,22nm,1.0s						
L42A	Oliver, Polo	8.48	46	IAmb_Lg		03 56 56.6	
	comp=Z,22nm,0.9s						
T47A	Sharon Grove	8.64	83	IAmb_Lg		03 57 09.3	
	comp=Z,12nm,0.9s						
JFWS	Jewell Farm	8.78	39	IAmb_Lg		03 57 01.0	
	comp=Z,19nm,0.7s						
SFIN	Lafayette	9.34	61	IAmb_Lg		03 57 10.8	
	comp=Z,11nm,0.8s						
WCI	Wyandotte Cave	9.39	75	IAmb_Lg		03 57 19.0	
	comp=Z,9.6nm,0.9s						
BLO	Bloomington	9.39	69	IAmb_Lg		03 57 14.6	
	comp=Z,14nm,0.8s						

*MAN **07** 03:59:45.9, 6°.62N×126°.21E, h36km, MS3.6*
*IDC **07** 03:59:47.4±3.2, 6°.80N×126°.17E, h50km±27km, mb3.6/5, mb1 3.7/5, mb1mx3.4/38, mbtmp3.8/5, Error ellipse: s-maj=72.2km s-min=20.5km az=64.0*
ISC 07 03:59:46.7±2.9, 6°.66N±0°.05×126°.16E±0°.07, h32km±23km, n12, σ1°61/18, mb3.7/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.30	18	eP	Pn	03 59 54.5	-0.4
MATI				eS	Sn	04 00 03.0	+2.8
DAV	Davao City (W)	0.71	305	P	Pn	04 00 01.3	+0.8
	1μm,0.3s,baz=90,slow=5.1,SNR=84						
DAV				S	Sn	04 00 11.7	+1.4
	423nm,0.3s,baz=87,slow=15,SNR=7.2						
DDMP	Don Marcelino,	0.71	219	eP	Pn	04 00 00.9	+0.4
DDMP				eS	Sn	04 00 14.0	+3.6
SKMP	Bagumbayan, Su	1.62	265	eP	Pn	04 00 12.4	-0.5
SKMP				eS	Sn	04 00 33.9	+1.2
BUTP	Butuan	2.36	347	eP	Pn	04 00 24.7	+1.5
BUTP				eS	Sb	04 00 56.4	-0.8
PAGZ	Pagadian	3.00	293	eP	Pn	04 00 32.1	+0.1
GLSP	General Luna,	3.10	359	eP	Pn	04 00 34.6	+1.1
FITZ	Fitzroy Crossi	24.61	181	P	P	04 05 04.6	+0.4
	0.9nm,0.4s,baz=354,slow=8.9,SNR=12						
WRA	Warramunga Arr	27.63	163	P	P	04 05 31.5	-0.1
	0.5nm,0.5s,baz=344,slow=10,SNR=2.7						
ASAR	Alice Springs	31.07	166	P	P	04 06 02.3	+0.1
	0.8nm,0.6s,baz=342,slow=7.2,SNR=11						
ASAR				PcP	PcP	04 08 55.8	-1.6
	0.4nm,0.5s,baz=351,slow=1.9,SNR=5.0						
STKA	Stephens Creek	41.05	160	P	P	04 07 27.1	-0.2
	1.7nm,0.6s,baz=349,slow=8.8,SNR=4.8						
MKAR	Makanchi Array	54.85	324	P	P	04 09 12.0	-2.0
	0.3nm,0.5s,baz=122,slow=8.1,SNR=6.7						

*IDC **07** 04:14:44.4±1.1, 5°.02S×152°.60E, h0km, mb4.1/11, mb1 4.3/13, mb1mx4.0/50, mbtmp4.1/13, ML3.0/2, Error ellipse: s-maj=45.6km s-min=17.0km az=124.0*
*NEIC **07** 04:14:48.7±1.3, 5°.24S±0°.06×152°.80E±0°.03, h35km±2km, mb4.3/8, Error ellipse: s-maj=10.8km s-min=3.3km az=159.0*
*DJA **07** 04:14:51.0±0.8, 5°.S±4"×15°.3E±°, h87km±7km, M4.6/7, mB5.6/3, mb4.3/7, MLv4.7/3, Mw(mB)5.2/3*
ISC 07 04:14:51.4±0.8, 5°.18S±0°.07×152°.6E±0°.1, h55km, n34, σ0°86/37, mb4.2/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.06	337	Pn	Pn	04 15 09.7	-0.5
RABL				Sn	Sn	04 15 24.6	+0.5
RABL	Rabaul	1.06	337	P	Pn	04 15 11.6	+1.4
PMG	Port Moresby	6.83	232	Pn	Pn	04 16 28.4	-0.6
	2.4nm,0.3s,baz=42,slow=6.6,SNR=6.2						
PMG				Sn	Sn	04 17 45.3	0.0
	7.5nm,0.3s,baz=130,slow=21,SNR=10						
PMG	Port Moresby	6.83	232		Pn	04 16 28.0	-0.9
PMG					Sn	04 17 46.2	+0.9
PMG	Port Moresby	6.83	232	P	Pn	04 16 30.1	+1.1
CTA	Charters Tower	16.05	202	Pn	Pn	04 18 33.3	-0.4
	0.2nm,0.3s,baz=15,slow=13,SNR=1.7						
WB0	Warramunga Arr	22.89	229	P	P	04 19 50.9	+0.2
WR0	Warramunga Arr	22.89	228	P	P	04 19 51.4	+0.7
WB2	Warramunga Arr	23.02	229	P	P	04 19 53.3	+1.3
WB2				IAmb	IAmb	04 20 05.5	
	comp=Z,5.3nm,0.9s						
WRA	Warramunga Arr	23.03	229	P	P	04 19 53.1	+1.0
	comp=Z,0.6nm,0.4s,baz=52,slow=9.9,SNR=9.9						
ASAR	Alice Springs	25.73	223	P	P	04 20 18.4	+1.4
	comp=Z,0.9nm,0.5s,baz=59,slow=8.9,SNR=12						
ASAR	Alice Springs	25.73	223	P	P	04 20 17.5	+0.6
FITZ	Fitzroy Crossi	29.29	242	P	P	04 20 48.9	+0.1
	comp=Z,2.4nm,0.7s,baz=50,slow=9.0,SNR=6.8						
LUWI	Luwuk	30.04	277	P	P	04 20 54.9	-0.6
JCJ	Chichijima	33.62	343	P	P	04 21 24.1	-2.7
KKM	Kota Kinabalu	37.98	287	P	P	04 22 05.3	+0.8
KKM				IAmb	IAmb	04 22 13.4	
	comp=Z,6.0nm,0.8s						
CMAR	Chiang Mai Arr	57.84	295	P	P	04 24 37.2	-0.7
	comp=Z,1.3nm,0.4s,baz=128,slow=5.8,SNR=6.4						
PETK	Petropavlovsk-	58.23	4	P	P	04 24 40.4	+0.4
	comp=Z,1.6nm,0.4s,baz=171,slow=10,SNR=2.1						
SONM	Songino Array	66.53	328	P	P	04 25 36.0	+0.4
	comp=Z,0.4nm,0.5s,baz=130,slow=2.3,SNR=3.6						
SONM	Songino Array	66.53	328	P	P	04 25 35.4	-0.3
ZALV	Zalesovo Beam	81.34	326	P	P	04 27 02.6	+0.6
	comp=Z,0.9nm,0.4s,baz=88,slow=6.4,SNR=5.9						
ZALV	Zalesovo Beam	81.34	326	P	P	04 27 02.2	+0.2
NEA2	Nenana	81.69	22	P	P	04 27 04.0	+0.4
NEA2				IAmb	IAmb	04 27 04.3	
	comp=Z,4.4nm,1.0s						
ILAR	Eielson Array	82.59	22	P	P	04 27 07.8	-0.5
	comp=Z,1.6nm,0.8s,baz=258,slow=5.2,SNR=15						
NRIK

baz=314
MUVC eSg Sg 04 16 43.5 -0.5
17nm,0.1s,baz=314
PRU Pruhonice 1.12 243 ePG Pg 04 16 30.6 -1.2
PRU eSG Sg 04 16 45.8 -0.5
comp=Z,20nm,0.2s
PRA Prague 1.14 248 ePG Pg 04 16 31.4 -0.9
PRA eSG Sg 04 16 47.5 +0.4
comp=Z,16nm,0.3s
MORC Moravsky Berou 1.19 127 ePG Pg 04 16 32.4 -0.8
MORC eSG Sg 04 16 48.0 -0.7
MORC Moravsky Berou 1.19 127 ePg Pg 04 16 32.4 -0.8
baz=309
MORC eSg Sg 04 16 48.0 -0.7
25nm,0.3s,baz=309
LOSC Losov 1.22 136 ePg Pg 04 16 33.1 -0.6
baz=318
LOSC eSg Sg 04 16 48.9 -0.6
15nm,0.2s,baz=318
VRAC Vranov 1.25 164 ePG Pg 04 16 33.4 -0.9
VRAC eSG Sg 04 16 49.9 -0.6
VRAC Vranov 1.25 164 ePg Pg 04 16 33.3 -1.0
baz=345
VRAC eSg Sg 04 16 49.9 -0.6
9.2nm,0.2s,baz=345
KRUC Moravsky 1.46 172 ePG Pn 04 16 37.0 -0.7
KRUC eSG Sb 04 16 56.4 -0.8
KRUC Moravsky 1.46 172 ePg Pn 04 16 37.0 -0.7
baz=352
KRUC eSg Sb 04 16 56.3 -0.9
9.1nm,0.2s,baz=352
PBCC Pribram 1.58 239 ePG Pn 04 16 39.1 -0.1
PBCC eSG Sn 04 16 59.5 -0.6
comp=Z,5.2nm,0.6s
CKRC Cesky Krumlov 2.05 215 eSG Sb 04 17 14.5 +0.5
CLL Collm 2.10 293 ePg Pb 04 16 49.0 -0.2
CLL eSg Sb 04 17 15.0 -0.7
comp=Z,5.0nm,0.7s
KHC Kasperske Hory 2.13 231 ePN Pn 04 16 45.8 -1.1
KHC ePG Pb 04 16 48.7 -0.9
KHC eSN Sn 04 17 12.7 -1.1
KHC eSG Sb 04 17 17.1 +0.7
comp=Z,6.9nm,0.3s
MODS Modra-Piesok 2.28 159 eSG Sg 04 17 23.7 +0.2
NKC Novy Kostel 2.34 265 ePG Pb 04 16 53.3 +0.1
NKC eSG Sb 04 17 24.0 +1.4
comp=Z,4.8nm,0.6s
LANS Liptovska Anna 2.58 121 eSG Sg 04 17 31.9 -1.4
CONA Conrad Observa 2.59 183 ePn Pn 04 16 52.6 -0.7
comp=Z,0.2nm,0.1s
CONA eSg Sg 04 17 33.2 -0.3
comp=Z,1.8nm,0.2s
MOA Molln 2.92 205 ePn Pn 04 16 56.9 -0.8
comp=Z,0.2nm,0.2s
MOA eSn Sn 04 17 34.3 +1.1
comp=Z,0.5nm,0.2s
ARSA Arzberg 3.28 187 ePn Pn 04 17 02.1 -0.6
ARSA eSn Sn 04 17 43.1 +0.8
comp=Z,0.3nm,0.3s
KIJV Kijevo 6.51 178 Sg Sg 04 19 35.8 -3.6
MORI Morici 6.65 182 Sg Sg 04 19 45.8 +1.9
ZIRJ Zirje 6.87 183 Sg Sg 04 19 51.6 +0.8
RICI Ricice 7.05 174 Sg Sg 04 19 59.8 +2.9

*IPEC **07** 04:17:29.6±0.1,50°.53N×16°.07E,h8km,ML2.4/9,Error ellipse: s-maj=0.5km s-min=0.4km az=65.0*
*VIE **07** 04:17:29.0±0.4,50°.50N×16°.07E,h0km,mb2.3/1,ml2.6/7, Error ellipse: s-maj=2.7km s-min=2.5km az=127.0 77 km ESE of Liberec Suspected Mining induced.*
*PRU **07** 04:17:30.2±0.0,50°.51N×16°.08E,h2km,Hronov-felt In Rtyne, Upice, Suchovrsice, Svatonovice*
ISC 07 04:17:29.4±0.8,50°.50N±0°.02×16°.07E±0°.02,h0km,n40, σ0s76/73,Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
UPC	**Upice**	**0.04**	**276**	*e*PG		**Pg**		**04 17 31.5**	**+1.4**
UPC				*e*SG		**Sg**		**04 17 32.7**	**+2.1**
comp=Z,2μm,0.2s									
CHVC	**Chvalec**	**0.09**	**354**	*e*PG		**Pg**		**04 17 31.3**	**+0.2**
CHVC				*e*SG		**Sg**		**04 17 32.8**	**+0.6**
comp=Z,559nm,0.4s									
OSTC	**Ostas**	**0.11**	**60**	*e*PG		**Pg**		**04 17 32.1**	**+0.6**
OSTC				*e*SG		**Sg**		**04 17 33.0**	**+0.1**
comp=Z,2μm,0.2s									
DPC	**Dobruska-Polom**	**0.22**	**133**	*e*PG		**Pg**		**04 17 34.3**	**+0.6**
DPC				*e*SG		**Sg**		**04 17 37.5**	**+0.9**
comp=Z,44nm,0.2s									
KSP	**Ksiaz**	**0.37**	**23**	*i* Pg		**Pg**		**04 17 36.3**	**-0.2**
KSP				*e*Sg		**Sg**		**04 17 40.6**	**-0.7**
KRLC	**Kraliky**	**0.63**	**133**	*e*PG		**Pg**		**04 17 42.0**	**+0.6**
KRLC				*e*SG		**Sg**		**04 17 49.9**	**+0.4**
comp=Z,26nm,0.4s									
LIPC	**Lipinka**	**0.91**	**136**	*e*Pg		**Pg**		**04 17 47.4**	**+0.5**
baz=318									
LIPC				*e*Sg		**Sg**		**04 17 59.1**	**+0.4**
95nm,0.2s,baz=318									
ANAC	**Anensky vrch**	**0.94**	**117**	*e*Pg		**Pg**		**04 17 47.8**	**+0.3**
baz=299									
ANAC				*e*Sg		**Sg**		**04 17 59.9**	**+0.2**
51nm,0.2s,baz=299									
PVCC	**Panska Ves**	**0.96**	**272**	*e*PG		**Pg**		**04 17 47.8**	**0.0**
PVCC				*e*SG		**Sb**		**04 18 01.5**	**-0.6**
comp=Z,97nm,0.2s									
MUVC	**Mutkov**	**1.05**	**132**	*e*Pg		**Pg**		**04 17 49.6**	**+0.1**
baz=314									
MUVC				*e*Sg		**Sg**		**04 18 03.2**	**+0.1**
48nm,0.2s,baz=314									
PRU	**Pruhonice**	**1.11**	**243**	*e*PG		**Pg**		**04 17 50.5**	**-0.1**
PRU				*e*SG		**Sg**		**04 18 05.4**	**+0.4**
comp=Z,49nm,0.2s									
PRA	**Prague**	**1.14**	**248**	*e*PG		**Pg**		**04 17 51.3**	**+0.1**
PRA				*e*SG		**Sb**		**04 18 07.2**	**0.0**
comp=Z,21nm,0.4s									
MORC	**Moravsky Berou**	**1.20**	**127**	*e*PG		**Pg**		**04 17 52.0**	**-0.4**
MORC				*e*SG		**Sg**		**04 18 08.0**	**+0.2**
MORC	**Moravsky Berou**	**1.20**	**127**	*e*Pg		**Pg**		**04 17 51.9**	**-0.4**
baz=309									
MORC				*e*Sg		**Sg**		**04 18 08.0**	**+0.2**
69nm,0.4s,baz=309									
LOSC	**Losov**	**1.22**	**136**	*e*Pg		**Pg**		**04 17 52.7**	**-0.1**
baz=318									
LOSC				*e*Sg		**Sg**		**04 18 08.8**	**+0.3**
55nm,0.3s,baz=318									
VRAC	**Vranov**	**1.24**	**164**	*e*PG		**Pg**		**04 17 53.2**	**0.0**
VRAC				*e*SG		**Sb**		**04 18 09.9**	**-0.4**
VRAC	**Vranov**	**1.24**	**164**	*e*Pg		**Pg**		**04 17 53.1**	**-0.1**
baz=345									
VRAC				*e*Sg		**Sb**		**04 18 09.8**	**-0.5**
27nm,0.1s,baz=345									
TREC	**Trest**	**1.27**	**197**	*e*PG		**Pg**		**04 17 53.6**	**-0.1**
TREC				*e*SG		**Sg**		**04 18 10.4**	**+0.3**
comp=Z,35nm,0.3s									
KRUC	**Moravsky**	**1.46**	**172**	*e*PG		**Pn**		**04 17 56.6**	**-0.5**
KRUC				*e*SG		**Sg**		**04 18 16.0**	**-0.2**
KRUC	**Moravsky**	**1.46**	**172**	*e*Pg		**Pn**		**04 17 56.5**	**-0.5**
baz=352									
KRUC				*e*Sg		**Sg**		**04 18 16.0**	**-0.2**
28nm,0.2s,baz=352									
OKC	**Ostrava-Krasne**	**1.49**	**116**	*e*SG		**Sb**		**04 18 17.5**	**0.0**
comp=Z,16nm,0.2s									
PBCC	**Pribram**	**1.57**	**239**	*e*PG		**Pb**		**04 17 58.9**	**-0.4**
PBCC				*e*SG		**Sg**		**04 18 19.6**	**-0.1**
JAVC	**Velka Javorina**	**1.95**	**147**	*e*PG		**Pn**		**04 18 03.2**	**-0.6**
JAVC				*e*SG		**Sg**		**04 18 32.7**	**+0.7**
CKRC	**Cesky Krumlov**	**2.04**	**215**	*e*PG		**Pb**		**04 18 07.7**	**+0.4**
CKRC				*e*SG		**Sg**		**04 18 34.4**	**-0.4**
CLL	**Collm**	**2.10**	**294**	*e*Pg		**Pb**		**04 18 08.0**	**-0.4**
CLL				*e*				04 18 13.0	
CLL				*e*Sg		**Sb**		**04 18 35.0**	**0.0**
comp=Z,16nm,0.3s									
KHC	**Kasperske Hory**	**2.12**	**231**	*e*PN		**Pn**		**04 18 05.8**	**-0.3**
KHC				*e*PG		**Pb**		**04 18 08.3**	**-0.4**
KHC				*e*SN		**Sn**		**04 18 32.6**	**-0.6**
KHC				*e*SG		**Sg**		**04 18 36.9**	**-0.6**
comp=Z,12nm,0.3s									
MODS	**Modra-Piesok**	**2.27**	**159**	*e*SG		**Sg**		**04 18 41.7**	**-0.7**
NKC	**Novy Kostel**	**2.33**	**265**	*e*PG		**Pb**		**04 18 12.1**	**-0.3**
NKC				*e*SG		**Sg**		**04 18 44.1**	**-0.3**
comp=Z,10nm,0.3s									
OJC	**Ojcow**	**2.41**	**95**	*e*P		**Pb**		**04 18 13.7**	**+0.1**
OJC				*e*S		**Sb**		**04 18 44.7**	**+0.9**
CONA	**Conrad Observa**	**2.58**	**183**	*e*Pn		**Pn**		**04 18 12.3**	**-0.2**
comp=Z,0.3nm,0.1s									
CONA				*e*Sn		**Sn**		**04 18 45.2**	**+0.5**
comp=Z,0.5nm,0.1s									
LANS	**Liptovska Anna**	**2.58**	**120**	*e*SG		**Sg**		**04 18 51.1**	**-1.3**
VYHS	**Vyhne**	**2.70**	**137**	*e*SG		**Sg**		**04 18 57.0**	**+0.8**
MOA	**Molln**	**2.91**	**205**	*e*Pn		**Pn**		**04 18 16.8**	**-0.2**
comp=Z,0.1nm,0.1s									
MOA				*e*Sn		**Sn**		**04 18 53.4**	**+0.8**
comp=Z,0.4nm,0.1s									
ARSA	**Arzberg**	**3.28**	**187**	*e*Pn		**Pn**		**04 18 20.7**	**-1.3**
comp=Z,0.1nm,0.1s									
ARSA				*e*Sg		**Sg**		**04 19 15.4**	**+0.8**
comp=Z,1.9nm,0.3s									
KBA	**Koelnbreinsper**	**3.87**	**209**	*e*Sn		**Sn**		**04 19 17.3**	**+0.7**
comp=Z,0.6nm,0.1s									
WTTA	**Wattenberg**	**4.37**	**224**	*e*Pn		**Pn**		**04 18 36.7**	**-0.5**
comp=Z,0.1nm,0.1s									
WTTA				*e*Sn		**Sn**		**04 19 29.1**	**+0.3**
comp=Z,0.5nm,0.2s									
KIJV	**Kijevo**	**6.51**	**178**	*e*Pg		**Pg**		**04 19 31.3**	**-2.7**
MORI	**Morici**	**6.64**	**182**	*e*Pg		**Pg**		**04 19 37.9**	**+1.2**
ZIRJ	**Zirje**	**6.86**	**183**	*e*Pg		**Pg**		**04 19 41.9**	**+1.1**
RICI	**Ricice**	**7.05**	**174**	*e*Pg		**Pg**		**04 19 47.1**	**+2.7**

*TIF **07** 04:20:49.9,42°.54N×43°.53E,h15km*
*NORS **07** 04:20:50.5±0.0,42°.51N×43°.54E,h7km,MPVA3.8*
*DDA **07** 04:20:56.4,42°.10N×43°.17E,h7km±6km,ML2.5*
ISC 07 04:20:50.0±0.8,42°.47N±0°.02×43°.50E±0°.02,h12km±6km, n35,σ1s37/69,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.13**	**344**	P		**Pg**		**04 20 53.4**	**+0.1**
ONI				S		**Sg**		**04 20 55.6**	**-0.1**
ONI	**Oni**	**0.13**	**344**	*i* Pg		**Pg**		**04 20 53.4**	**+0.1**
ONI				*e*Sg		**Sg**		**04 20 55.6**	**0.0**
TKB	**Tkibuli**	**0.39**	**253**	P		**Pb**		**04 20 59.4**	**+0.5**
TKB				S		**Sb**		**04 21 06.1**	**+1.2**
DIGR	**Digorskoe uzhe**	**0.44**	**8**	*i* Pg		**Pg**		**04 20 57.8**	**-0.9**
DIGR				*e*Sg		**Sg**		**04 21 03.5**	**-1.1**
ZEI	**Tsey**	**0.44**	**42**	*i* Pg		**Pg**		**04 20 58.0**	**-0.7**
ZEI				*e*Sg		**Sg**		**04 21 03.6**	**-0.9**
LACR	**Lac**	**0.69**	**58**	*i* Pg		**Pg**		**04 21 02.7**	**-0.7**
LACR				*e*Sg		**Sg**		**04 21 11.7**	**-0.8**
BKRG	**Bakuriani**	**0.70**	**179**	P		**Pb**		**04 21 05.5**	**+1.2**
BKRG				S		**Sn**		**04 21 16.7**	**-0.2**
GUDG	**Gudauri**	**0.72**	**90**	P		**Pb**		**04 21 04.6**	**-0.1**
GUDG				S		**Sg**		**04 21 13.9**	**+0.4**
KORR	**Kora**	**0.75**	**34**	*i* Pg		**Pg**		**04 21 04.2**	**-0.3**
KORR				*e*Sg		**Sb**		**04 21 15.0**	**-0.2**
MTEO	**Meteo**	**0.79**	**74**	P		**Pg**		**04 21 05.0**	**-0.4**
MTEO				S		**Sg**		**04 21 16.0**	**+0.1**
PNSH	**Pansheti**	**0.84**	**78**	P		**Pg**		**04 21 05.7**	**-0.5**
PNSH				S		**Sb**		**04 21 18.7**	**+0.7**
LSNR	**Lesken**	**0.85**	**16**	*i* Pg		**Pg**		**04 21 05.8**	**-0.6**
LSNR				*e*Sg		**Sb**		**04 21 18.0**	**-0.1**
ABS	**Abastumani**	**0.87**	**216**	P		**Pb**		**04 21 08.2**	**+1.0**
ABS				S		**Sn**		**04 21 21.9**	**+0.8**
BRNG	**Burnasheti**	**0.88**	**164**	P		**Pn**		**04 21 08.8**	**+0.4**
BRNG				S		**Sn**		**04 21 22.9**	**+1.7**
ARNR	**Ardon**	**0.92**	**39**	*e*Pg		**Pg**		**04 21 07.8**	**+0.1**
ARNR				*e*Sg		**Sn**		**04 21 21.2**	**-0.8**
NEY	**Neytrino**	**0.97**	**324**	*e*Pg		**Pg**		**04 21 08.9**	**+0.2**
NEY				*e*Sg		**Sg**		**04 21 20.9**	**-0.5**
STDR	**Stavd-Durt**	**0.99**	**24**	*i* Pg		**Pn**		**04 21 09.8**	**0.0**
STDR				*e*Sg		**Sn**		**04 21 24.5**	**+0.7**
TRLG	**Trialeti**	**1.03**	**154**	P		**Pn**		**04 21 10.9**	**+0.5**
TRLG				S		**Sn**		**04 21 26.4**	**+1.6**
NCK	**Nalchik**	**1.03**	**4**	*e*Pg		**Pb**		**04 21 10.0**	**+0.1**
NCK				*e*Sg		**Sb**		**04 21 24.1**	**+0.7**
VLKR	**Vladikavkaz**	**1.04**	**56**	*e*Pg		**Pn**		**04 21 10.6**	**+0.1**
VLKR				*e*Sg		**Sn**		**04 21 26.1**	**+1.0**
AKH	**Akhalkalaki**	**1.05**	**180**	P		**Pn**		**04 21 11.8**	**+1.0**
AKH				S		**Sn**		**04 21 27.4**	**+1.9**
CHVG	**Ch'k'valeri**	**1.08**	**284**	P		**Pg**		**04 21 11.2**	**+0.5**
CHVG				S		**Sn**		**04 21 26.1**	**+0.2**
EPOS	**Posof**	**1.12**	**211**	*i* P		**Pb**		**04 21 11.3**	**-0.1**
EPOS				*i* S		**Sb**		**04 21 21.3**	**-4.7**
BTKR	**Batakoyurt**	**1.19**	**40**	*i* Pg		**Pg**		**04 21 14.0**	**+1.2**
BTKR				*e*Sg		**Sn**		**04 21 29.3**	**+0.7**
BGD	**Bogdanovka**	**1.20**	**176**	P		**Pg**		**04 21 14.6**	**+1.5**
BGD				S		**Sn**		**04 21 32.2**	**+3.0**
BTNK	**Botanikuri**	**1.24**	**129**	P		**Pg**		**04 21 14.5**	**+0.7**
BTNK	**Botanikuri**	**1.24**	**129**	*i* P		**Pg**		**04 21 14.3**	**+0.4**
BTNK				*i* S		**Sb**		**04 21 25.8**	**-3.6**
BTNK				IAML				04 21 34.0	
comp=E,92nm,0.1s									
DMNI	**Dmanisi**	**1.25**	**155**	P		**Pb**		**04 21 14.2**	**+0.6**
DMNI				S		**Sn**		**04 21 31.7**	**+1.5**
KBTC	**Kuba-Taba**	**1.35**	**357**	*e*Pg		**Pb**		**04 21 15.6**	**+0.2**
KBTC				*e*Sg		**Sg**		**04 21 34.3**	**+0.8**
SHA1	**Shidzhatmaz**	**1.41**	**334**	*e*Pg		**Pb**		**04 21 16.9**	**+0.5**
SHA1				*e*Sg		**Sn**		**04 21 35.0**	**+0.5**
DBOC	**Borcka**	**1.77**	**231**	*i* P		**Pb**		**04 21 22.5**	**+0.1**
DBOC				*i* S		**Sn**		**04 21 40.7**	**-2.3**
DBOC				IAML				04 21 48.0	
comp=E,97nm,0.3s									
EAK	**Akyaka**	**1.78**	**177**	*i* P		**Pb**		**04 21 22.3**	**-0.4**
EAK				*i* S		**Sn**		**04 21 38.3**	**-5.1**
DBAD	**Bademkaya**	**1.98**	**224**	*i* P		**Pb**		**04 21 26.5**	**+0.5**
DBAD				*i* S		**Sn**		**04 21 47.1**	**-1.1**
DBAD				IAML				04 21 56.0	
comp=N,115nm,0.6s									
DBAD				IAML				04 21 57.0	
comp=E,113nm,0.5s									
DIGO	**Kars**	**2.05**	**183**	*i* P		**Pb**		**04 21 27.9**	**+0.5**
DIGO				*i* S		**Sn**		**04 21 47.3**	**-2.9**
LGD	**Lagodekhi**	**2.13**	**106**	P		**Pb**		**04 21 30.0**	**+1.4**
LGD				S		**Sg**		**04 21 57.5**	**-1.0**

*JMA **07** 04:32:08.9±0.1,23°.77N×122°.48E,h12km,M2.9*
*TAP **07** 04:32:09.9,23°.80N×122°.54E,h30km,ML3.5,D*
ISC 07 04:32:09.5±1.2,23°.77N±0°.03×122°.51E±0°.03,h26km±14km, n93,σ0s93/123,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.82**	**33**	P		**Pb**		**04 32 25.1**	**-0.1**
YOJ	**Yonaguni jima**	**0.82**	**33**	*i* P		**Pn**		**04 32 25.0**	**-0.5**
baz=92									
HWA	**Hwalien**	**0.86**	**284**	*e*P		**Pn**		**04 32 25.7**	**-0.2**
baz=268									
TWD	**Chiawan**	**0.90**	**290**	P		**Pn**		**04 32 25.6**	**-0.8**
baz=273									
TWD				*e*S		**Sn**		**04 32 37.2**	**-1.4**
baz=273									
NACB	**Ninganchiao**	**0.93**	**296**	*e*P		**Pn**		**04 32 26.0**	**-1.0**
baz=291									
NACB				*e*S		**Sn**		**04 32 38.2**	**-1.3**
baz=291									
EWUT	**Wuta**	**0.95**	**315**	P		**Pn**		**04 32 27.1**	**-0.1**
baz=310									
EWUT				*e*S		**Sb**		**04 32 40.1**	**+0.6**
baz=310									
ENA	**Nanau**	**0.96**	**313**	P		**Pn**		**04 32 27.4**	**0.0**
baz=310									
ESL	**Shilin**	**0.99**	**273**	P		**Pn**		**04 32 26.7**	**-1.1**
baz=269									
EGFH	**Guangfu**	**1.00**	**264**	*e*P		**Pn**		**04 32 28.3**	**+0.4**
baz=261									
TWC	**Suao**	**1.03**	**324**	P		**Pn**		**04 32 28.2**	**-0.1**
baz=320									
TWC				*e*S		**Sb**		**04 32 42.9**	**+1.0**
baz=320									
HGSD	**Ruisui**	**1.04**	**255**	P		**Pn**		**04 32 27.6**	**-0.9**
baz=251									
HGSD				*e*S		**Sn**		**04 32 40.8**	**-1.3**
baz=251									
ETLH	**Xiulin Townshi**	**1.04**	**295**	*e*P		**Pn**		**04 32 27.8**	**-0.7**
baz=291									
EHY	**Hungye**	**1.12**	**257**	*e*P		**Pn**		**04 32 29.4**	**-0.3**
baz=252									
EHY				*e*S		**Sn**		**04 32 43.9**	**-0.4**
baz=252									
NDS	**Dongshan**	**1.13**	**320**	*e*P		**Pb**		**04 32 30.1**	**-0.3**
baz=317									
EYUL	**Yuli**	**1.18**	**249**	*e*P		**Pn**		**04 32 31.0**	**+0.6**
baz=245									
EYUL				*e*S		**Sn**		**04 32 45.4**	**-0.2**
baz=245									
YULB	**Yu-li**	**1.18**	**252**	P		**Pn**		**04 32 30.3**	**-0.1**
baz=247									
YULB				*e*S		**Sn**		**04 32 45.2**	**-0.4**
baz=247									
TWF1	**Yuli**	**1.19**	**250**	*e*P		**Pn**		**04 32 30.7**	**+0.1**
baz=245									
TWF1				*e*S		**Sn**		**04 32 45.8**	**-0.2**
baz=245									
WHF	**Hehuan Shan**	**1.20**	**288**	*e*P		**Pn**		**04 32 30.7**	**-0.4**
baz=271									
WHF				*e*S		**Sn**		**04 32 46.1**	**-0.7**
baz=271									
HATJ	**Hateruma jima**	**1.22**	**76**	P		**Pb**		**04 32 31.9**	**0.0**
TWE	**Neicheng**	**1.22**	**321**	*e*P		**Pb**		**04 32 31.7**	**-0.3**
baz=318									
ENTT	**Nioudou**	**1.22**	**315**	*e*P		**Pn**		**04 32 31.4**	**+0.4**
baz=297									
ENTT				*e*S		**Sb**		**04 32 47.3**	**-0.1**
baz=297									
NNSB	**Datong**	**1.22**	**303**	*e*P		**Pn**		**04 32 31.1**	**0.0**
baz=289									
NNSH	**Datong**	**1.22**	**303**	*e*P		**Pn**		**04 32 31.2**	**+0.1**
baz=289									
NDT	**Datong Townshi**	**1.23**	**312**	*e*P		**Pn**		**04 32 31.6**	**+0.4**
baz=309									
NNS	**Nan Shan**	**1.24**	**303**	P		**Pn**		**04 32 31.4**	**+0.1**
baz=290									
IRIF	**Iriomote-Funau**	**1.25**	**63**	P		**Pb**		**04 32 32.7**	**+0.3**
IRIF				S		**Sb**		**04 32 49.1**	**+1.1**
NTC	**Toucheng**	**1.25**	**330**	P		**Pb**		**04 32 31.9**	**-0.6**
baz=325									
NTC				*e*S		**Sb**		**04 32 48.0**	**-0.1**
baz=325									
CHKT	**Chengkung**	**1.25**	**238**	*e*P		**Pn**		**04 32 30.6**	**-0.8**
baz=224									
CHKT				*e*S		**Sn**		**04 32 45.6**	**-1.8**
baz=224									
FUSS	**Fushou**	**1.25**	**292**	*e*P		**Pn**		**04 32 31.6**	**-0.1**
baz=287									
FUSS				*e*S		**Sn**		**04 32 47.9**	**0.0**
baz=287									
FULB	**Fuli**	**1.26**	**243**	*e*P		**Pn**		**04 32 31.0**	**-0.5**
baz=229									
FULB				*e*S		**Sn**		**04 32 47.0**	**-0.6**
baz=229									
VWDT	**VWDT**	**1.26**	**270**	P		**Pn**		**04 32 31.6**	**+0.1**
baz=264									
VWDT				*e*S		**Sn**		**04 32 47.2**	**-0.4**
baz=264									
CHGB	**Renai**	**1.26**	**283**	*e*P		**Pn**		**04 32 31.7**	**0.0**
baz=269									
CHGB				*e*S		**Sn**		**04 32 48.3**	**+0.3**
baz=269									
TWB1	**Santiao Chiao**	**1.32**	**339**	*e*P		**Pn**		**04 32 32.3**	**-0.1**
baz=336									
TDCB	**Techi**	**1.33**	**291**	*e*P		**Pn**		**04 32 33.0**	**+0.4**
baz=278									
TIPB	**Shuangxi**	**1.35**	**332**	*e*P		**Pn**		**04 32 33.3**	**+0.5**
baz=328									
TIPB				*e*S		**Sb**		**04 32 52.5**	**+1.4**
baz=328									
EDH	**Donghe**	**1.37**	**235**	P		**Pn**		**04 32 32.1**	**-0.9**
baz=222									
EDH				*e*S		**Sn**		**04 32 48.5**	**-1.8**
baz=222									
YHNB	**Yeheng**	**1.37**	**311**	*e*P		**Pn**		**04 32 33.6**	**+0.5**
baz=307									
NSK	**Sanguang**	**1.39**	**311**	*e*P		**Pn**		**04 32 33.8**	**+0.4**
baz=307									
SSLB	**Suanglung**	**1.43**	**271**	P		**Pn**		**04 32 33.8**	**-0.1**
baz=268									
JKRS	**Kuro-shima**	**1.44**	**71**	P		**Pb**		**04 32 36.2**	**+0.4**
WPL	**Puli Township**	**1.45**	**280**	*e*P		**Pn**		**04 32 34.8**	**+0.7**
baz=276									
LDUT	**Ludao**	**1.46**	**222**	*e*P		**Pn**		**04 32 33.1**	**-1.1**
baz=220									
NWF	**Wu-fen Shan**	**1.46**	**333**	*e*P		**Pn**		**04 32 34.8**	**+0.5**
baz=330									
WFSB	**Wu-fen Shan**	**1.46**	**333**	*e*P		**Pn**		**04 32 34.8**	**+0.5**
baz=330									
YUS	**Yu-Shan**	**1.46**	**259**	*e*P		**Pn**		**04 32 35.0**	**+0.3**
baz=254									
YUS				*e*S		**Sn**		**04 32 53.2**	**0.0**
baz=254									
TWA	**Mucha**	**1.47**	**325**	*e*P		**Pb**		**04 32 35.9**	**-0.4**
baz=339									
DPDB	**Guoxing**	**1.48**	**281**	*e*P		**Pn**		**04 32 35.3**	**+0.8**
baz=277									
SMLT	**Sun Moon Lake**	**1.48**	**275**	*e*P		**Pn**		**04 32 35.1**	**+0.5**
baz=269									
SMLT				*e*S		**Sn**		**04 32 54.0**	**+0.7**
baz=269									
ELDTW	**Lidau**	**1.49**	**247**	*e*P		**Pn**		**04 32 35.3**	**+0.5**
baz=245									
WHP	**Taichung City**	**1.52**	**290**	*e*P		**Pb**		**04 32 37.0**	**-0.2**
baz=276									
TATO	**Taipei**	**1.52**	**322**	*e*P		**Pb**		**04 32 36.7**	**-0.4**
baz=319									
TYC	**Yuchr**	**1.52**	**275**	*e*P		**Pn**		**04 32 35.6**	**+0.5**
baz=270									
TYC				*e*S		**Sn**		**04 32 54.7**	**+0.6**
baz=270									
LONT	**Longtian**	**1.54**	**236**	*e*P		**Pn**		**04 32 35.5**	**+0.2**
baz=226									
ALS	**Alishan**	**1.59**	**261**	*e*P		**Pn**		**04 32 37.2**	**+0.9**
baz=258									
JIJ	**Ishigaki jima**	**1.60**	**68**	*e*S		**Sb**		**04 32 56.8**	**-1.5**
YM01	**YM01**	**1.62**	**328**	*e*P		**Pb**		**04 32 37.8**	**-1.0**
baz=341									
LIOB	**Emei**	**1.62**	**303**	*e*P		**Pn**		**04 32 38.3**	**-0.5**
baz=299									
TWGBT	**Beinan**	**1.62**	**235**	*e

baz=259
LAY Lan-yu 1.94 207 *e*P **Pn 04 32 41.1 +0.3**
baz=207
WTK Tuku 1.95 268 *e*P **Pb 04 32 43.9 -0.5**
baz=264
WRL Guolierlin Hig 1.96 274 *e*P **Pb 04 32 43.4 -1.2**
baz=260
SSD Sandimen 2.01 240 *e*P **Pb 04 32 44.8 -0.6**
baz=231
TSMG Majia 2.02 239 *e*P **Pn 04 32 44.1 +2.2**
baz=230
EAST Anshuo 2.06 228 *e*P **Pn 04 32 44.0 +1.3**
baz=235
MASBT Mashibuluo 2.08 237 *e*P **Pn 04 32 43.9 +1.1**
baz=228
ICHU Yijhu 2.09 259 *e*P **Pn 04 32 45.3 +2.4**
baz=256
SSPT Xinbi 2.20 235 *e*P **Pb 04 32 47.8 -0.9**
baz=227
SLIU Shizi 2.21 226 *e*P **Pn 04 32 45.0 +0.4**
baz=232
TWKBT Hengchun 2.41 221 *e*P **Pn 04 32 49.1 +1.8**
baz=220
TWK1 Hengchun 2.41 221 *e*P **Pn 04 32 50.0 +2.7**
baz=220

IDC ***07*** *04:33:20.1±5.5, 4°.93S×154°.89E, h88km±52km, mb3.6/6, mb1 3.8/8, mb1mx3.5/46, mbtmp4.0/8, ML3.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/26, Error ellipse: s-maj=36.7km s-min=29.2km az=142.0*

ISC 07 04:33:14.8±1.0, **4°.8S**±0°.2×**155°.1E**±0°.2, **h35**km, **n15, σ1f70/8, mb3.9**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**9.11**	**239**	P		**Pn**	**04 35 25.7**	**+1.8**
	3.6nm,0.3s,baz=74,slow=12,SNR=3.6							
CTA	**Charters Tower**	**17.50**	**209**	P		**Pn**	**04 37 16.0**	**-0.2**
	0.1nm,0.3s,baz=41,slow=16,SNR=5.1							
DZM	**Mont Dzumac**	**20.45**	**148**	P		**P**	**04 37 49.8**	**+0.3**
	7.2nm,0.9s,baz=324,slow=19,SNR=2.1							
WRA	**Warramunga Arr**	**25.21**	**231**	P		**P**	**04 38 35.8**	**-1.7**
	2.1nm,0.6s,baz=56,slow=9.8,SNR=17							
H11S3	**WAKE ISLAND Hy**	**25.78**	**26**	T		T	05 06 29.5	
	baz=206,slow=73,SNR=5.9							
H11S2	**WAKE ISLAND Hy**	**25.78**	**26**	T		T	05 06 26.7	
	baz=206,slow=73,SNR=2.8							
H11S1	**WAKE ISLAND Hy**	**25.80**	**26**	T		T	05 06 29.9	
	baz=206,slow=73,SNR=5.0							
MSVF	**Nonsavu**	**25.93**	**122**	LR		LR	04 47 51.8	
	comp=Z,74nm,20.5s,baz=231,slow=34							
H11N1	**WAKE ISLAND Hy**	**26.95**	**25**	T		T	05 07 57.4	
	baz=205							
H11N3	**WAKE ISLAND Hy**	**26.96**	**25**	T		T	05 07 57.2	
	baz=205							
H11N2	**WAKE ISLAND Hy**	**26.96**	**25**	T		T	05 08 01.3	
	baz=205							
ASAR	**Alice Springs**	**27.75**	**225**	P		**P**	**04 38 58.1**	**-2.3**
	0.2nm,0.3s,baz=56,slow=9.3,SNR=2.3							
ILAR	**Eielson Array**	**81.27**	**22**	P		**P**	**04 45 26.9**	**-0.1**
	0.6nm,0.8s,baz=236,slow=5.7,SNR=9.3							
BVAR	**Borovoye Array**	**90.56**	**323**	P		**P**	**04 46 12.2**	**-1.0**
	0.4nm,0.7s,baz=99,slow=8.9,SNR=4.6							
YKA	**Yellowknife Ar**	**94.33**	**28**	P		**P**	**04 46 31.8**	**+1.3**
	0.6nm,0.7s,baz=264,slow=4.2,SNR=12							

NEIC ***07*** *04:41:50.9±1.2, 32°.87N±0°.08×83°.41E±0°.07, h12km±4km, mb4.8/86, Error ellipse: s-maj=11.7km s-min=8.0km az=201.0*

MOS ***07*** *04:41:50.6±1.3, 32°.99N×83°.48E, h21km, mb4.9/43, MS4.6/16, Error ellipse: s-maj=6.4km s-min=3.2km az=113.2*

BJI ***07*** *04:41:51.6±0.0, 33°.06N×83°.34E, h10km, mB5.0/34, mb4.7/45, Ms4.9/47, Ms7 4.7/39*

NDI ***07*** *04:41:51.1±4.3, 33°.10N×83°.52E, h10km, ML4.4, mb4.8(NEIC)*

IDC ***07*** *04:41:51.8±2.6, 32°.90N×83°.43E, h19km±16km, mb4.3/33, mb1 4.5/36, mb1mx4.4/42, mbtmp4.5/36, ML3.8/3, MS4.4/37, Ms1 4.4/37, ms1mx4.4/39, Error ellipse: s-maj=12.2km s-min=10.5km az=31.0*

GCMT ***07*** *04:41:53.8±0.2, 32°.88N±0°.01×83°.52E±0°.01, h25km, MW5.2/133, Moment Tensor Solution. s53,c56; s133,c226; Duration: 0 Moment tensor: Scale 10^17 Nm; Mrr0.08±.02; Mθθ-0.75±.01; Mφφ0.66±.01; Mrθ0.19±.03; Mθφ-0.03±.01; Mφr-0.05±.03; Best double couple: M0 0.73200×10^17 NP1:φs223.00000°, δ77.00000°, λ-5.00000°. NP2:φs314.00000°, δ86.00000°, λ-167.00000°. Principal axes: T 0.6750, Plg6.0000°, Azm88.0000°; N 0.1140, Plg77.0000°, Azm333.0000°; P -0.7890, Plg12.0000°, Azm179.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 04:41:51.7±1.2, **32°.97N**±0°.03×**83°.44E**±0°.03, **h16**km±7km, **n473, σ1f70/504, mb4.8**/143, **MS4.6**/64, **43C-23D, Fault plane solution: NP1:**φs296.31174°, δ67.73881°, λ170.53403°. **NP2:**φs29.92591°, δ81.24533°, λ22.53794°. **Principal axes:** T Plg22.0551°, Azm255.1232°; N Plg65.9043°, Azm50.0672°; P Plg9.2213°, Azm161.3520°;

Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PYUN	**Piuthan**	**4.87**	**185**	*e*Pn		**Pn**	**04 43 05.1**	**+0.6**
PYUN				*e*Sn		**Sn**	**04 44 02.9**	**+2.3**
	2μm,0.8s							
GKN	**Gorkha**	**5.05**	**168**	*e*Pn		**Pn**	**04 43 08.7**	**+1.7**
GKN				*e*Sn		**Sn**	**04 44 07.9**	**+2.7**
	362nm,0.4s							
KOLN	**Koldanda**	**5.18**	**178**	*e*Pn		**Pn**	**04 43 10.0**	**+1.2**
KOLN				*e*Sn		**Sn**	**04 44 10.8**	**+2.4**
	321nm,0.4s							
DDI	**Dehra Dun**	**5.29**	**242**	*e*P		**Pn**	**04 43 12.0**	**+1.8**
DDI				*e*S		**Sn**	**04 44 16.4**	**+5.4**
KKN	**Kakani**	**5.40**	**162**	*e*Pn		**Pn**	**04 43 12.3**	**+0.5**
KKN				*e*Sn		**Sn**	**04 44 17.0**	**+3.2**
	526nm,0.9s							
GUN	**Gumba**	**5.46**	**157**	*e*Pn		**Pn**	**04 43 14.7**	**+1.9**
DMN	**Daman**	**5.53**	**164**	*e*Pn		**Pn**	**04 43 15.1**	**+1.4**
SMLA	**Simla**	**5.63**	**253**	*e*P		**Pn**	**04 43 17.2**	**+2.4**
SMLA				AMP			04 43 21.1	
	comp=Z,805nm,0.5s							
SMLA				*e*S		**Sn**	**04 44 21.1**	**+2.0**
PKIN	**Phulchoki**	**5.63**	**162**	*e*Pn		**Pn**	**04 43 16.6**	**+1.5**
PKIN				*e*Sn		**Sn**	**04 44 23.3**	**+3.7**
	comp=Z,997nm,0.9s							
PKI	**Pulchoki**	**5.64**	**162**	*e*Pn		**Pn**	**04 43 16.5**	**+1.2**
PKI				*e*Sn		**Sn**	**04 44 23.2**	**+3.3**
	comp=Z,2μm,1.4s							
JIRN	**Jiri**	**5.80**	**155**	*e*Pn		**Pn**	**04 43 18.9**	**+1.4**
JIRN				*e*Sn		**Sn**	**04 44 26.7**	**+2.8**
	comp=Z,168nm,0.4s							
BHK	**Bhakra**	**6.15**	**257**	*e*P		**Pn**	**04 43 20.4**	**-1.5**
BHK				*ex*		x	04 44 34.0	
RAMN	**Ramite**	**6.59**	**155**	*e*Pn		**Pn**	**04 43 29.0**	**+0.7**
RAMN				*e*Sn		**Sn**	**04 44 44.4**	**+1.1**
	comp=Z,493nm,0.4s							
TAPN	**Taplejung**	**6.71**	**145**	*e*Pn		**Pn**	**04 43 31.3**	**+1.4**
TAPN				*e*Sn		**Sn**	**04 44 47.7**	**+1.5**
	comp=Z,855nm,0.9s							
NDI	**New Delhi**	**6.84**	**233**	*e*P		Pn	04 43 37.0	+5.5
NDI				*ex*		x	04 44 53.0	
ODAN	**Odare**	**6.99**	**150**	*e*Pn		**Pn**	**04 43 34.2**	**+0.6**
ODAN				*e*Sn		**Sn**	**04 44 54.3**	**+1.4**
	comp=Z,241nm,0.3s							
GTK	**Tadong**	**7.19**	**140**	*e*P		**Pn**	**04 43 36.9**	**+0.5**
GTK				IAmb		IAmb	04 43 44.6	
	comp=Z,48nm,0.6s							
GTK				*e*S		**Sn**	**04 44 56.7**	**-1.0**
GTK				IAML			04 45 01.8	
	comp=N,139nm,0.5s							
GTK				IAML			04 45 01.9	
	comp=E,143nm,0.4s							
LSA	**Lhasa**	**7.36**	**114**	Pn		**Pn**	**04 43 42.3**	**+3.4**
LSA				Sn		**Sn**	**04 45 11.3**	**+8.9**
LSA				LR		LR		
	comp=E,5μm,7.5s							
LSA				LR		LR		
	comp=E,6μm,5.7s							
LSA	**Lhasa**	**7.36**	**114**	P		**Pn**	**04 43 39.4**	**+0.4**
LSA							04 45 03.4	
LSA	**Lhasa**	**7.36**	**114**	Pn		**Pn**	**04 43 39.4**	**+0.4**
LSA				Sn		**Sn**	**04 45 03.4**	**+1.1**
NIL	**Nilore**	**8.55**	**277**	P		**Pn**	**04 43 55.2**	**+0.3**
NIL	**Nilore**	**8.55**	**277**	Pn		**Pn**	**04 43 55.2**	**+0.3**
KSH	**Kashi**	**8.89**	**319**	P		Pn	04 44 05.7	+6.1
BOK	**Bokaro**	**9.39**	**166**	*e*P		**Pn**	**04 44 05.6**	**-0.8**
BOK				*e*S		**Sn**	**04 45 47.4**	**-4.3**
BOK				IAML			04 45 56.9	
	comp=E,120nm,0.9s							
CEP	**Cherat**	**9.68**	**278**	P		**Pn**	**04 44 10.9**	**+0.4**
GUWA	**GUWAHATI**	**9.86**	**131**	*e*P		**Pn**	**04 44 12.5**	**-0.3**
GUWA				*e*S		Sn	04 45 53.5	-10
GUWA				IAML			04 46 03.2	
	comp=E,136nm,1.0s							
GUWA				AMP			04 48 19.7	
GUWA				AMP			04 51 04.8	
AJM	**Ajmer**	**10.01**	**232**	*e*P		**Pn**	**04 44 15.0**	**+0.1**
AJM				*ex*		x	04 46 07.0	
SHL	**Shillong**	**10.42**	**133**	P		**Pn**	**04 44 17.7**	**-3.1**
SHL	**Shillong**	**10.42**	**133**	*e*P		**Pn**	**04 44 18.8**	**-2.0**
SHL				*e*S		Sn	04 46 08.9	-8.5
SHL	**Shillong**	**10.42**	**133**	Pn		**Pn**	**04 44 17.7**	**-3.1**
ZIRO	**ZIRO**	**10.51**	**118**	*e*P		**Pn**	**04 44 22.0**	**+0.1**
ZIRO				IAML			04 46 20.5	
	comp=N,347nm,0.8s							
ZIRO				IAML			04 46 20.6	
	comp=E,358nm,0.6s							
SHLS	**Shalkode**	**10.64**	**344**	*e*P		**Pn**	**04 44 21.9**	**-1.7**
	comp=E,59nm,0.9s,baz=345							
SHLS	**Shalkode**	**10.64**	**344**	*e*P		**Pn**	**04 44 21.9**	**-1.7**
SHLS				pmax		pmax		
	comp=Z,59nm,0.9s							
UZB	**Uzynbulak**	**10.74**	**342**	*e*P		**Pn**	**04 44 24.9**	**-0.1**
	comp=Z,42nm,1.2s,baz=342							
UZB	**Uzynbulak**	**10.74**	**342**	*e*P		**Pn**	**04 44 24.9**	**-0.1**
UZB				pmax		pmax		
	comp=Z,42nm,1.2s							
PDGK	**Podgornoye**	**10.80**	**344**	P		**Pn**	**04 44 27.6**	**+1.8**
SATY	**Saty**	**10.83**	**340**	*e*P		**Pn**	**04 44 26.1**	**-0.1**
	baz=339							
SATY	**Saty**	**10.83**	**340**	*e*P		**Pn**	**04 44 26.0**	**-0.1**
ULHL	**Ulahol**	**10.87**	**330**	P		**Pn**	**04 44 30.6**	**+3.7**
	SNR=36							
BHPL	**Bhopal**	**11.04**	**210**	*e*P		**Pn**	**04 44 27.7**	**-1.4**
BHPL				IAmb		IAmb	04 44 32.9	
	comp=Z,33nm,0.6s							
BHPL				*e*S		Sn	04 46 24.8	-7.6
KPKS	**Kokpek**	**11.13**	**342**	*e*P		**Pn**	**04 44 29.9**	**-0.3**
	comp=Z,64nm,1.0s,baz=341							
KPKS	**Kokpek**	**11.13**	**342**	*e*P		**Pn**	**04 44 29.9**	**-0.3**
KPKS				pmax		pmax		
	comp=Z,64nm,1.0s							
TNSS	**Tian-Shan**	**11.28**	**335**	*e*P		**Pn**	**04 44 32.5**	**-0.1**
	baz=334							
TNSS	**Tian-Shan**	**11.28**	**335**	*e*P		**Pn**	**04 44 32.5**	**-0.1**
WMQ	**Urumqi**	**11.34**	**16**	*e*P		**Pn**	**04 44 35.0**	**+1.9**
WMQ				pP			04 44 41.4	
WMQ				sP			04 44 44.4	
WMQ				pmax		pmax		
	comp=Z,48nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,370nm,4.1s							
WMQ				LR		LR		
	comp=Z,5μm,13.1s							
WMQ				LR		LR		
	comp=Z,6μm,17.1s							
WMQ	**Urumqi**	**11.34**	**16**	P		**Pn**	**04 44 34.0**	**+0.9**
WMQ	**Urumqi**	**11.34**	**16**	Pn		**Pn**	**04 44 34.0**	**+0.9**
MDOK	**Medeo**	**11.35**	**336**	*e*P		**Pn**	**04 44 33.4**	**0.0**
	baz=335							
MDOK	**Medeo**	**11.35**	**336**	*e*P		**Pn**	**04 44 33.3**	**0.0**
AAA	**Alma-Ata**	**11.44**	**335**	*e*P		**Pn**	**04 44 34.3**	**-0.2**
	baz=335							
AAA				LR		LR	04 48 35.8	
	comp=Z,773nm,11.9s,baz=335							
AAA	**Alma-Ata**	**11.44**	**335**	*e*P		**Pn**	**04 44 34.3**	**-0.2**
AAA				MLR		MLR		
	comp=Z,773nm,12.0s							
UCH	**Uchtor**	**11.63**	**325**	P		**Pn**	**04 44 39.9**	**+2.3**
	SNR=44							
MOKO	**MOKOCHONG**	**11.69**	**122**	*e*P		**Pn**	**04 44 36.4**	**-1.6**
MOKO				IAmb		IAmb	04 44 42.8	
	comp=Z,70nm,0.5s							
MOKO				*e*S		**Sn**	**04 46 41.3**	**-7.0**
TKM2	**Tokmak 2**	**11.70**	**330**	P		**Pn**	**04 44 40.8**	**+2.6**
	SNR=25							
TKM2	**Tokmak 2**	**11.70**	**330**	*i* P		**Pn**	**04 44 40.5**	**+2.3**
TKM2				pmax		pmax		
	comp=Z,89nm,1.4s							
KOHI	**KOHIMA**	**11.78**	**125**	*e*P		**Pn**	**04 44 37.5**	**-1.8**
KOHI				IAmb		IAmb	04 44 41.9	
	comp=Z,97nm,0.8s							
KOHI				IAML			04 46 47.6	
	comp=E,134nm,0.8s							
AAK	**Ala-Archa**	**11.96**	**326**	Pn		**Pn**	**04 44 44.0**	**+2.3**
	comp=E,0.2nm,0.3s,baz=150,slow=12,SNR=17							
AAK				Lg		Lg	04 48 09.3	
	comp=E,0.1nm,0.3s,baz=278,slow=16,SNR=2.1							
AAK	**Ala-Archa**	**11.96**	**326**	P		**Pn**	**04 44 46.0**	**+4.3**
	SNR=10.0							
AAK	**Ala-Archa**	**11.96**	**326**	*i* P		**Pn**	**04 44 44.5**	**+2.8**
AAK				pmax		pmax		
	comp=Z,46nm,1.3s							
AAK	**Ala-Archa**	**11.96**	**326**	Pn		**Pn**	**04 44 44.0**	**+2.3**
AML	**Almayashu**	**11.97**	**323**	P		**Pn**	**04 44 44.7**	**+2.7**
	SNR=38							
KBL	**Kabul**	**12.08**	**281**	P		**Pn**	**04 44 42.6**	**-0.9**
KBL							04 46 54.2	
KBL	**Kabul**	**12.08**	**281**	Pn		**Pn**	**04 44 42.5**	**-0.9**
KBL				Sn		**Sn**	**04 46 54.2**	**-3.8**
KBL	**Kabul**	**12.08**	**281**	P		**Pn**	**04 44 44.2**	**+0.7**
	SNR=53							
GAR	**Garm**	**12.21**	**303**			**Pn**	**04 44 43.5**	**-1.6**
KUU	**Kurty**	**12.24**	**335**	*e*P		**Pn**	**04 44 45.3**	**-0.2**
	comp=Z,13nm,1.2s,baz=334							
KUU				LR		LR	04 49 18.6	
	comp=Z,540nm,8.7s,baz=334							
KUU	**Kurty**	**12.24**	**335**	*e*P		**Pn**	**04 44 45.2**	**-0.2**
KUU				pmax		pmax		
	comp=Z,13nm,1.2s							
KUU				MLR		MLR		
	comp=Z,540nm,9.0s							
IMP	**Imphal**	**12.26**	**129**	*e*P		**Pn**	**04 44 46.3**	**+0.5**
IMP				IAmb		IAmb	04 44 48.9	
	comp=Z,62nm,0.7s							
IMP				AMP			05 02 21.0	
EKS2	**Erkin-Say**	**12.32**	**325**	P		Pn	04 44 51.6	+5.0
	SNR=10							
SGDS	**Sogindy**	**12.54**	**329**	*e*P		**Pn**	**04 44 50.1**	**+0.5**
	baz=329							
SGDS				LR		LR	04 49 38.3	
	comp=Z,411nm,8.6s,baz=329							
SGDS	**Sogindy**	**12.54**	**329**	*e*P		**Pn**	**04 44 50.1**	**+0.5**
SGDS				MLR		MLR		
	comp=Z,411nm,9.0s							
TDK	**Taldyqorghan**	**12.63**	**343**	*e*P		**Pn**	**04 44 51.0**	**+0.2**
	baz=343							
TDK				LR		LR	04 49 40.7	
	comp=Z,882nm,10.3s,baz=343							
TDK	**Taldyqorghan**	**12.63**	**343**	*e*P		**Pn**	**04 44 50.9**	**+0.2**
TDK				MLR		MLR		
	comp=Z,882nm,10.0s							
SAIH	**SAIHA**	**13.42**	**139**	*e*P		**Pn**	**04 45 00.2**	**-1.5**
SAIH				IAmb		IAmb	04 45 05.8	
	comp=Z,72nm,0.8s							
DZA	**Taraz**	**13.75**	**320**	*e*P		**Pn**	**04 45 06.7**	**+0.7**
	baz=319							
DZA	**Taraz**	**13.75**	**320**	*e*P		**Pn**	**04 45 06.7**	**+0.7**
MK31	**Makanchi Array**	**13.84**	**357**	*i* P		**Pn**	**04 45 06.5**	**-0.7**
MK31				pmax		pmax		
	comp=Z,126nm,0.9s							
MK31	**Makanchi Array**	**13.84**	**357**	Pn		**Pn**	**04 45 07.5**	**+0.3**
MKAR	**Makanchi Array**	**13.84**	**357**	Pn		**Pn**	**04 45 06.4**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=178,slow=13,SNR=145							
MKAR				LR		LR	04 51 35.1	
	comp=Z,2μm,20.0s,baz=164,slow=42							
MKAR	**Makanchi Array**	**13.84**	**357**	P		**Pn**	**04 45 07.0**	**-0.2**
MKAR	**Makanchi Array**	**13.84**	**357**			**Pn**	**04 45 07.0**	**-0.2**
MAKZ	**Makanchi**	**13.87**	**356**	P		**Pn**	**04 45 08.0**	**+0.4**
MAKZ	**Makanchi**	**13.87**	**356**	Pn		**Pn**	**04 45 08.0**	**+0.4**
TAS	**Tashkent**	**14.02**	**311**	P		**Pn**	**04 45 09.4**	**-0.2**
TAS	**Tashkent**	**14.02**	**311**	Pn		**Pn**	**04 45 09.4**	**-0.2**
IUG	**luzhnay**	**14.02**	**315**	*e*P		**Pn**	**04 45 08.9**	**-1.0**
	comp=Z,13nm,0.8s,baz=314							
IUG	**luzhnay**	**14.02**	**315**	*e*P		**Pn**	**04 45 08.8**	**-1.0**
IUG				pmax		pmax		
	comp=Z,13nm,0.8s							
BTLS	**Baital**	**14.08**	**332**	*e*P		**Pn**	**04 45 10.6**	**+0.1**
	baz=331							
BTLS	**Baital**	**14.08**	**332**	*e*P		**Pn**	**04 45 10.6**	**+0.1**
KK31	**Karatay Array**	**14.34**	**319**	*e*P		**Pn**	**04 45 15.3**	**+1.2**
KK31	**Karatay Array**	**14.34**	**319**	Pn		**Pn**	**04 45 12.7**	**-1.4**
KKAR	**Karatay Array**	**14.34**	**319**	P		**Pn**	**04 45 12.9**	**-1.2**
KKAR	**Karatay Array**	**14.34**	**319**	Pn		**Pn**	**04 45 13.0**	**-1.1**
KKAR	**Karatay Array**	**14.34**	**319**	Pn		**Pn**	**04 45 12.9**	**-1.2**
CHM	**Chimkent**	**14.38**	**314**	*e*P		**Pn**	**04 45 14.7**	**+0.1**
	baz=314							
CHM	**Chimkent**	**14.38**	**314**	*e*P		**Pn**	**04 45 14.7**	**+0.1**
ZSN	**Zaisan**	**14.51**	**4**	*e*P		**Pn**	**04 45 14.6**	**-1.7**
	baz=3.4							
ZSN	**Zaisan**	**14.51**	**4**	*e*P		**Pn**	**04 45 14.6**	**-1.7**
GTA	**Gaotai**	**14.70**	**59**	⇓P		**Pn**	**04 45 18.9**	**-0.2**
GTA				pP		P	04 45 22.9	-2.3
GTA				sP			04 45 25.9	
GTA				S		**Sn**	**04 47 57.9**	**-3.8**
GTA				SS		**S**	**04 48 18.1**	**-2.4**
GTA				pmax		pmax		
	comp=Z,7.0nm,1.4s							
GTA				pmax		pmax		
	comp=Z,84nm,6.4s							
GTA				LR		LR		
	comp=Z,4μm,16.0s							
GTA				LR		LR		
	comp=Z,3μm,14.5s							
HYB	**Hyderabad**	**16.10**	**197**	*i* P		Pn	04 45 31.0	-6.5
	comp=Z,200nm,1.2s							
HYB				*es*P		**P**	**04 45 41.0**	**+0.2**
HYB				*e*S		**Sn**	**04 48 36.0**	**+0.2**
DGZ	**Jazzator, Alta**	**16.98**	**9**	*d* iP		**Pn**	**04 45 48.3**	**-0.4**
LZH	**Lanzhou**	**17.10**	**74**	*e*P		**Pn**	**04 45 49.8**	**-0.5**
LZH				pP		P	04 45 53.5	+1.5
LZH				sP		pP	04 45 56.5	-1.2
LZH				sS		S	04 49 06.2	-3.5
LZH				pmax		pmax		
	comp=Z,17nm,1.3s							
LZH				pmax		pmax		
	comp=Z,270nm,4.3s							
LZH				LR		LR		
	comp=Z,2μm,9.8s							
LZH				LR		LR		
	comp=Z,1μm,10.8s							
SEM	**Semipalatinsk**	**17.59**	**353**	*e*P		**Pn**	**04 45 55.6**	**-0.7**
	baz=353							
SEM	**Semipalatinsk**	**17.59**	**353**	*e*P		**Pn**	**04 45 55.6**	**-0.7**
HRA	**Herat**	**17.70**	**280**	Pn		**Pn**	**04 45 56.7**	**-1.0**
KURBB	**Kurchatov Arra**	**18.01**	**350**	P		**Pn**	**04 46 00.3**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=170,slow=11,SNR=65							
KURBB				ScP		**ScP**	**04 54 09.7**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=177,slow=2.8,SNR=5.5							
KURK	**Kurchatov**	**18.09**	**350**	P		**Pn**	**04 46 00.3**	**-1.9**
KURK	**Kurchatov**	**18.09**	**350**	P		**Pn**	**04 46 00.3**	**-1.9**
KMI	**Kunming**	**18.58**	**110**	⇑P		**P**	**04 46 08.1**	**-0.3**
KMI				pP		pP	04 46 12.4	-1.8
KMI				sP		sP	04 46 17.0	+0.2
KMI				S		**Sn**	**04 49 36.6**	**+0.4**
KMI				sS		sS	04 49 47.6	-1.5
KMI				pmax		pmax		
	comp=Z,33nm,1.2s							
KMI				pmax		pmax		
	comp=Z,700nm,3.5s							
KMI				LR		LR		
	comp=Z,2μm,14.3s							
KMI				LR		LR		
	comp=Z,2μm,13.6s							
KMI				LR		LR		
	comp=Z,1μm,14.7s							
KMI	**Kunming**	**18.58**	**110**	P		**P**	**04 46 07.9**	**-0.5**
KMI				pmax		pmax		
	comp=Z,130nm,1.2s							
KMI	**Kunming**	**18.58**	**110**	P		**P**	**04 46 07.9**	**-0.5**
KMI				IAmb		IAmb	04 46 15.6	
	comp=Z,130nm,1.2s							
BRZS	**Berezniki**	**18.78**	**338**	*e*P		**P**	**04 46 08.9**	**-1.3**
	baz=338							
BRZS	**Berezniki**	**18.78**	**338**	*e*P		**P**	**04 46 08.9**	**-1.3**
MHMT	**Maesarieng**	**19.66**	**135**	P		**P**	**04 46 19.2**	**-0.8**
	comp=Z,109nm,0.8s							
CM33	**Chiang Mai Arr**	**19.79**	**132**	P		**P**	**04 46 20.0**	**-1.5**
CHTO	**Chiang Mai**	**19.80**	**132**	P		**P**	**04 46 20.3**	**-1.2**
CHTO				pmax		pmax		
	comp=Z,41nm,1.2s							
CHTO	**Chiang Mai**	**19.80**	**132**	P		**P**	**04 46 20.3**	**-1.2**
CHTO				IAmb		IAmb	04 46 32.0	
	comp=Z,41nm,1.1s							
CHTO	**Chiang Mai**	**19.80**	**132**	P		**P**	**04 46 21.1**	**-0.4**
CMMT	**Chiang Mai**	**19.80**	**132**	P		**P**	**04 46 20.0**	**-1.6**
	comp=Z,400nmcomp=Z,16nm,1.1s							
CM32	**Chiang Mai Arr**	**19.85**	**132**	P		**P**	**04 46 22.0**	**-0.2**
CM34	**Chiang Mai Arr**	**19.90**	**131**	P		**P**	**04 46 23.0**	**+0.4**
CM35	**Chiang Mai Arr**	**20.03**	**131**	P		**P**	**04 46 23.0**	**-1.1**
CM15	**Chiang Mai Arr**	**20.05**	**132**	P		Pn	04 46 25.9	-0.2
	comp=Z,594nmcomp=Z,23nm,0.7s							
CM31	**Chiang Mai Arr**	**20.06**	**132**	P		Pn	04 46 28.0	+1.8
	comp=Z,1μm,0.7s							
CM31	**Chiang Mai Arr**	**20.06**	**132**	P		**P**	**04 46 23.5**	**-0.9**
CM31				IAmb		IAmb	04 46 41.2	
	comp=Z,33nm,0.8s							
CMAR	**Chiang Mai Arr**	**20.06**	**132**	P		**P**	**04 46 23.9**	**-0.5**
	comp=Z,8.5nm,0.7s,baz=312,slow=10,SNR=30							
CMAR				ScP		**ScP**	**04 54 13.1**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=306,slow=3.1,SNR=1.5							
CMAR				LR		LR	04 54 32.2	
	comp=Z,2μm,19.3s,baz=359,slow=38							
CMAR	**Chiang Mai Arr**	**20.06**	**132**	*i* P		**P**	**04 46 24.2**	**-0.2**
CMAR				pmax		pmax		
	comp=Z,9.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**20.06**	**132**	P		**P**	**04 46 23.4**	**-1.0**
CM13	**Chiang Mai Arr**	**20.07**	**132**	P		**P**	**04 46 24.6**	**+0.1

XAN sP pP 04 46 49.1 +5.8
XAN S Sn 04 50 38.7 -1.9
XAN SS SnSn 04 51 15.6 +20
XAN pmax pmax
comp=Z,52nm,1.5s
XAN pmax pmax
comp=Z,430nm,3.7s
XAN LR LR
comp=N,3µm,17.3s
XAN LR LR
comp=E,840nm,15.2s
XAN LR LR
comp=Z,3µm,20.1s
XAN Xi'an 21.27 80 P **P 04 46 36.1 -1.3**
XAN pmax pmax
comp=Z,32nm,0.9s
XAN Xi'an 21.27 80 P **P 04 46 36.1 -1.3**
XAN IAmb IAmb 04 46 53.8
comp=Z,32nm,0.9s
SLVN Son La 21.54 117 P **P 04 46 40.2 -0.3**
SLVN IAmb IAmb 04 46 50.7
comp=Z,52nm,1.1s
UTTA Uttaradit 21.61 130 P **P 04 46 41.3 +0.2**
comp=Z,458nmcomp=Z,53nm,0.7s
UMPA Umpang Tak 21.75 136 P **P 04 46 44.4 +1.7**
comp=Z,5µmcomp=Z,140nm,0.9s
PHIT Phitsanulok 21.93 132 P **P 04 46 45.4 +0.8**
comp=Z,5µmcomp=Z,203nm,1.0s
BVAR Borovoye Array 22.14 339 P **P 04 46 46.2 -0.4**
comp=Z,3.5nm,0.7s,baz=150,slow=19,SNR=10
BRVK Borovoye 22.20 339 *i* P **P 04 46 48.9 +1.7**
BRVK pmax pmax
comp=Z,47nm,1.2s
BRVK Borovoye 22.20 339 P **P 04 46 47.8 +0.6**
BRVK IAmb IAmb 04 46 58.8
comp=Z,51nm,1.1s
BTO Baotou 22.56 63 *e*P **P 04 46 50.3 -1.0**
BTO S S 04 50 47.0 -11
UTHA Uthaitani 22.61 136 P **P 04 46 52.0 +0.2**
comp=Z,894nmcomp=Z,104nm,1.0s
MOY Mondy 22.65 29 *e*P **P 04 46 53.2 +1.0**
MOY pmax pmax
comp=Z,70nm,1.8s
ZAK Zakamensk 22.74 34 *e*P **P 04 46 53.4 +0.3**
ZAK pmax pmax
comp=Z,12nm,1.1s
SONM Songino Array 22.82 43 P **P 04 46 54.9 +0.9**
comp=Z,17nm,1.0s,baz=233,slow=7.8,SNR=71
SONM PcP **PcP 04 50 43.3 -1.7**
comp=Z,0.4nm,0.5s,baz=228,slow=1.7,SNR=1.5
SONM ScP **ScP 04 54 20.9 -1.2**
comp=Z,1.4nm,1.2s,baz=249,slow=2.8,SNR=3.3
SONM LR LR 04 55 47.5
comp=Z,1µm,19.5s,baz=235,slow=36
SONM Songino Array 22.82 43 P **P 04 46 54.5 +0.5**
SONM **PcP 04 50 46.0 +1.0**
ULN Ulaanbaatar 23.21 43*ce*P **P 04 46 58.4 +0.3**
ULN pmax pmax
comp=Z,19nm,1.0s
ULN Ulaanbaatar 23.21 43 P **P 04 46 56.9 -1.2**
SRDT SRDT 23.39 139 P **P 04 47 01.8 +1.8**
comp=Z,36nm,1.3s
TLY Talaya 23.80 32 P **P 04 47 04.9 +1.3**
comp=Z,1.1nm,0.3s,baz=238,slow=15,SNR=3.8
TLY LR LR 04 57 10.1
comp=Z,780nm,20.8s,baz=226,slow=38
TLY Talaya 23.80 32 *e*P **P 04 47 05.5 +1.8**
TLY *e*S **S 04 51 20.2 +1.6**
TLY pmax pmax
comp=Z,18nm,1.3s
TLY MLR MLR
comp=Z,2µm,18.0s
TLY Talaya 23.80 32 P **P 04 47 04.7 +1.0**
TLY Talaya 23.80 32 P P 04 46 50.2 -14
JLN Jalan Bani Buh 23.82 249 P **P 04 47 06.8 +2.8**
SNR=7.3
JLN P **P 04 47 06.8 +2.8**
SNR=7.3
WSAR Wadi Sarin 23.88 252 P **P 04 47 04.6 -0.1**
comp=Z,4.5nm,0.5s,baz=63,slow=2.0,SNR=7.2
WSAR LR LR 04 57 17.1
comp=Z,645nm,20.8s,baz=98,slow=39
CHAI Chaiyaphum 23.89 131 P **P 04 47 05.0 +0.2**
comp=Z,749nmcomp=Z,74nm,1.2s
AB31 Akbulak array 23.90 320 *i* P **P 04 47 05.2 +0.6**
ABKAR Akbulak array 23.90 320 P **P 04 47 05.1 +0.5**
ABKAR IAmb IAmb 04 47 09.3
comp=Z,12nm,0.7s
ABKAR Akbulak array 23.90 320 P **P 04 47 05.3 +0.7**
WBK Wadi Bani Khal 23.93 251 P **P 04 47 07.9 +2.7**
KHON Khomkaen 24.11 129 P **P 04 47 09.7 +2.9**
comp=Z,76nm,0.7s
BANOM Banah 24.61 261 P **P 04 47 13.9 +2.5**
BANOM P **P 04 47 13.9 +2.5**
JMDO Jabal Madar 24.74 251 P **P 04 47 15.8 +3.2**
SNR=5.3
JMDO P **P 04 47 15.8 +3.2**
SNR=5.3
PHET Kaeng Krachan 24.85 140 P **P 04 47 16.5 +2.9**
comp=Z,790nmcomp=Z,60nm,0.9s
UOSS Minazif 25.08 258 P **P 04 47 15.9 +0.2**
UOSS IAmb IAmb 04 47 31.3
comp=Z,19nm,1.1s
UOSS **S 04 51 38.0 -1.7**
SRAK Srakaew 25.36 134 P **P 04 47 24.1 +5.8**
comp=Z,3µmcomp=Z,487nm,0.9s
PATY Pattaya 25.53 137 P **P 04 47 25.0 +5.3**
comp=Z,74nm,0.9s
AKTO Aktyubinsk 25.59 321 P **P 04 47 20.6 +0.6**
comp=Z,8.8nm,0.7s,baz=117,slow=9.0,SNR=26
AKTO LR LR 04 58 19.2
comp=Z,2µm,19.1s,baz=131,slow=38
PALK Pallekele 25.69 186 P **P 04 47 19.9 -1.4**
comp=Z,7.6nm,0.9s,baz=179,slow=3.3,SNR=6.3
PALK LR LR 04 58 50.5
comp=Z,357nm,19.0s,baz=101,slow=40
PALK Pallekele 25.69 186 P **P 04 47 19.9 -1.4**
PALK IAmb IAmb 04 47 32.8
comp=Z,22nm,1.1s
ALNE Al Ain 25.84 257 P **P 04 47 25.5 +3.0**
SNR=8.2
ALNE P **P 04 47 25.5 +3.0**
SNR=8.2
WHN Wuhan 26.35 87 ⇓P **P 04 47 26.2 -0.9**
WHN LR LR
comp=Z,3µm,13.7s
WHN LR LR
comp=Z,3µm,15.7s
BJT Baijiatuau 27.13 66 P **P 04 47 32.3 -1.8**
BJT pmax pmax
comp=Z,12nm,1.0s
BJT Baijiatuau 27.13 66 P **P 04 47 32.3 -1.8**
QIZ Qiongzhong 27.40 114 P **P 04 47 39.6 +3.0**
QIZ S **S 04 52 23.4 +7.0**
QIZ LR LR
comp=Z,2µm,21.0s
QIZ LR LR
comp=Z,1µm,20.2s
QIZ LR LR
comp=Z,810nm,14.0s
KRAB Krabi 28.62 146 P **P 04 47 48.3 +0.7**
ARU Arti 29.07 331 P **P 04 47 51.6 +0.4**
comp=Z,1.5nm,0.2s,baz=155,slow=5.8,SNR=5.4
ARU LR LR 05 00 34.3
comp=Z,708nm,21.9s,baz=128,slow=38
ARU Arti 29.07 331*c i*P **P 04 47 50.0 -1.2**
ARU 04 48 40.2
ARU S **S 04 52 43.0 +1.0**
ARU SS **SnSn 04 54 04.1 -1.8**
ARU pmax pmax
comp=Z,11nm,1.8s
ARU MLR MLR
comp=Z,929nm,16.0s
BSI Banda Aceh 29.48 155 P P 04 48 03.5 +8.3
NJ2 Nanjing 29.80 82 *e*P **P 04 48 01.2 +3.3**
NJ2 pmax pmax
comp=Z,11nm,0.6s
NJ2 LR LR
comp=Z,2µm,12.3s
NJ2 LR LR
comp=Z,2µm,9.9s
NJ2 LR LR
comp=Z,2µm,10.0s
MAK Makhachkala 29.84 300 *e*P **P 04 47 54.2 -3.9**
MAK *e* 04 48 49.5
MAK *e*S **S 04 52 50.0 -4.3**
MAK pmax pmax
comp=Z,337nm,1.7s
MAK MLR MLR
comp=Z,2µm,14.0s
GROC Groznyy 31.11 300 *e*P P 04 48 05.4 -4.0
GROC *e* 04 49 08.9
GROC *e* 04 51 02.6
GROC *e*S **S 04 53 14.2 -0.1**
GROC *e*SS **SnSn 04 54 59.0 +3.2**
GROC pmax pmax
comp=Z,21nm,0.5s
GROC pmax pmax
comp=Z,52nm,1.1s
GROC MLR MLR
comp=Z,327nm,8.0s
GNI Garni 31.71 294 *i* P **P 04 48 16.0 +1.1**
GNI pmax pmax
comp=Z,28nm,1.1s
GNI Garni 31.71 294 P **P 04 48 13.3 -1.6**
GUDG Gudauri 32.01 299 P P 04 48 23.7 +6.1
BELG Belogornoye 32.25 318 *i* P **P 04 48 19.7 +0.4**
BELG pmax pmax
comp=Z,4.0nm,1.0s
BOD Bodaibo 32.34 31 *e*P **P 04 48 20.5 +0.5**
BOD pmax pmax
comp=Z,6.0nm,1.7s
ZEI Tsey 32.45 299 *e*P P 04 48 26.5 +5.0
ZEI pmax pmax
comp=Z,9.0nm,1.2s
AKH Akhalkalaki 32.68 297 P P 04 48 29.0 +5.5
NCK Nalchik 32.74 300 *i* P **P 04 48 25.8 +2.1**
NCK pmax pmax
comp=Z,17nm,1.0s
ONI Oni 32.77 299 P P 04 48 29.6 +5.5
KBZ Khabaz 33.26 301 P **P 04 48 28.4 +0.1**
comp=Z,4.8nm,0.9s,baz=118,slow=2.3,SNR=8.2
KBZ LR LR 05 04 36.8
comp=Z,805nm,18.6s,baz=88,slow=41
KBZ Khabaz 33.26 301*ce*P **P 04 48 30.2 +2.0**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
PSI Prapat 33.34 151 P **P 04 48 28.4 -0.9**
PSI pmax pmax
comp=Z,5.0nm,1.1s
RPSI Rantau Prapat 33.43 151 P **P 04 48 28.4 -1.5**
KIV Kislovodsk 33.43 301 *e*P **P 04 48 29.6 -0.3**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,1µm,15.0s
SOCY Socotra 33.97 239 P **P 04 48 32.6 -2.2**
SOCY IAmb IAmb 04 48 33.3
comp=Z,9.8nm,1.1s
GSI Gunungsitoli 34.19 154 P **P 04 48 35.7 -0.8**
GSI Gunungsitoli 34.19 154 P **P 04 48 35.9 -0.6**
comp=Z,28nm,0.9s
KIRV Kirov 34.28 329*ce*P **P 04 48 36.4 -0.5**
CN2 Changchun 34.33 59 *e*P **P 04 48 40.4 +2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
RAYN Ar Rayn 34.56 264 P **P 04 48 39.1 -0.7**
RAYN pmax pmax
comp=Z,9.0nm,1.2s
RAYN Ar Rayn 34.56 264 P **P 04 48 39.1 -0.7**
MARD Mardin 34.94 289 P **P 04 48 42.2 -0.8**
MARD IAmb IAmb 04 48 56.8
comp=Z,11nm,1.2s
VRH Novokhopyorsk 35.34 314 *e*P **P 04 48 47.0 +0.9**
VRH pmax pmax
comp=Z,10.0nm,0.6s
VRH MLR MLR
comp=Z,1µm,15.0s
SOC Sochi 35.56 300 *e*P **P 04 48 47.7 -0.4**
SOC *e* 04 50 11.0
SOC *e*S **S 04 54 25.1 +1.9**
SOC *e*SS **SnSn 04 56 40.3 -3.4**
SOC MLR MLR
comp=Z,754nm,15.0s
KSRS Korea Array 36.37 70 P **P 04 48 54.0 -1.1**
comp=Z,3.4nm,0.6s,baz=276,slow=9.2,SNR=7.6
KSRS LR LR 05 05 18.7
comp=Z,617nm,18.6s,baz=287,slow=39
NRIK Noril'sk 36.50 2 P **P 04 48 54.7 -1.1**
comp=Z,8.7nm,0.9s,baz=164,slow=6.6,SNR=13
NRIK LR LR 05 05 40.9
comp=Z,925nm,18.5s,baz=180,slow=39
NRIK Noril'sk 36.50 2*ce*P **P 04 48 56.4 +0.6**
NRIK pmax pmax
comp=Z,20nm,1.3s
NRIK Noril'sk 36.50 2 P **P 04 48 56.6 +0.8**
NRIK IAmb IAmb 04 48 57.3
comp=Z,10.0nm,0.9s
MALT Malatya 36.69 291 P **P 04 49 01.3 +3.3**
VORD Divnogorie 36.77 313 *e*P **P 04 48 58.7 +0.3**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 36.90 313 *e*P **P 04 48 59.5 0.0**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR MLR MLR
comp=Z,480nm,11.0s
ZEA Zeya 37.25 43 *e*P **P 04 49 05.5 +3.1**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=E,900nm,13.0s
ZEA MLR MLR
comp=Z,1µm,12.0s
LPSR Galich'ya Gora 37.36 315 *e*P **P 04 49 04.2 +0.8**
LPSR pmax pmax
comp=Z,20nm,1.0s
LPSR MLR MLR
comp=Z,440nm,9.0s
PRGR Permogore 37.53 331 *e*P **P 04 49 04.4 -0.3**
PRGR pmax pmax
comp=Z,7.0nm,0.5s
MOS Moscow 38.92 320 *e*P **P 04 49 19.0 +2.5**
MOS pmax pmax
comp=Z,44nm,0.8s
USRK Ussuriysk Ar. 39.06 59 P **P 04 49 17.2 -0.6**
comp=Z,1.9nm,0.6s,baz=274,slow=7.1,SNR=6.3
USRK LR LR 05 06 14.4
comp=Z,900nm,19.0s,baz=265,slow=37
USRK Ussuriysk Ar. 39.06 59 P **P 04 49 18.1 +0.2**
KLR Kul'dur 39.15 51*ce*P **P 04 49 19.3 +0.7**
KLR pmax pmax
comp=Z,18nm,2.5s
OBN Obninsk 39.33 319⇓*e*P **P 04 49 21.0 +1.1**
OBN *e* 04 50 52.7
OBN *e*S S 04 55 12.0 -8.3
OBN pmax pmax
comp=Z,42nm,1.3s
OBN MLR MLR
comp=Z,358nm,18.0s
KLMR Klimovskoe 39.76 328 *e*P **P 04 49 22.5 -0.9**
KLMR *e* 04 50 53.9
KLMR *e* 04 51 29.6
KLMR pmax pmax
comp=Z,30nm,1.4s
KLMR Klimovskoe 39.76 328 *e*P **P 04 49 22.6 -0.9**
KLMR AMP 04 49 25.6
comp=Z,30nm,1.4s
KLMR *e*PP **PP 04 50 53.9 -0.8**
KLMR *e*PcP **PcP 04 51 29.6 +0.1**
KLMR LQ LQ 05 02 38.3
KLMR LQ LQ 05 02 38.3
KLMR LR LR 05 05 25.2
BR131 Keskin Array S 40.25 294 *i* P **P 04 49 30.5 +2.5**
BRTR Keskin Array B 40.25 294 P **P 04 49 28.2 +0.2**
comp=Z,1.8nm,0.8s,baz=112,slow=8.1,SNR=5.5
BRTR LR LR 05 09 06.7
comp=Z,466nm,18.3s,baz=66,slow=41
BRTR Keskin Array B 40.25 294 P **P 04 49 27.6 -0.4**
BRTR Keskin Array B 40.25 294 P **P 04 49 27.6 -0.4**
KSI Kapahiang 40.69 150 P **P 04 49 31.0 -0.7**
KSI pmax pmax
comp=Z,69nm,0.5s
KSI Kapahiang 40.69 150 P **P 04 49 30.2 -1.5**
comp=Z,69nm,0.5s
MYLDM Lahad Datu 42.79 123 P **P 04 49 46.9 -1.9**
AKASG Malin Array Be 43.06 311 P **P 04 49 49.6 -1.1**
comp=Z,0.8nm,0.4s,baz=80,slow=7.4,SNR=8.3
AKASG PP **PP 04 51 30.1 -0.5**
comp=Z,3.5nm,0.8s,baz=78,slow=9.4,SNR=4.6
AKASG LR LR 05 10 26.5
comp=Z,1µm,19.9s,baz=75,slow=40
AKASG Malin Array Be 43.06 311 *i* P **P 04 49 52.7 +2.0**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 43.06 311 P **P 04 49 51.4 +0.7**
AKASG **PP 04 51 30.8 +0.2**
AKBB Malin Array Si 43.06 311*ce*P **P 04 49 51.9 +1.2**
AKBB Malin Array Si 43.06 311 P **P 04 49 50.8 +0.1**
SORM Soroca 43.58 307 ⇑P **P 04 49 57.6 +2.7**
SORM Soroca 43.58 307 ⇑P **P 04 49 57.6 +2.7**
ELL Elmali 43.62 291 P **P 04 49 55.8 +0.3**
ELL Elmali 43.62 291 P **P 04 49 55.8 +0.3**
JOF Joensuu 44.13 329 P **P 04 50 00.3 +1.2**
JOF pmax pmax
comp=Z,19nm,1.1s
MNK Minsk 44.17 316 *i* P **P 04 50 00.4 +0.8**
comp=E,2.0nm,0.8s
MNK *i* P **P 04 50 00.4 +0.8**
comp=N,10.0nm,0.8s
MNK *i* P **P 04 50 00.4 +0.8**
comp=Z,17nm,0.8s
MNK *i* PP **PP 04 51 43.5 +1.1**
MNK *i* PcP **PcP 04 51 44.9 +0.7**
MNK *i* PPP PPP 04 52 19.0
MNK *i* S **S 04 56 33.3 +1.4**
MNK *i* SS SS 04 59 38.8 -11
MNK *i* ScS **ScS 04 59 50.6 -6.8**
MNK *i* SSS SSS 05 00 23.5
MNK *i* LQ LQ 05 05 41.7
MNK *i* LR LR 05 09 02.0
MNK *i* LRM MLR 05 11 13.9
comp=N,318nm,16.3s
MNK *i* LRM MLR 05 11 20.3
comp=Z,528nm,16.3s
MNK *i* LRM MLR 05 11 21.9
comp=E,35nm,16.3s
MJAR Matsushiro Arr 44.64 69 P **P 04 50 03.5 -0.1**
comp=E,4.6nm,0.8s,baz=292,slow=8.8,SNR=6.1
MJAR LR LR 05 08 40.0
comp=E,153nm,20.1s,baz=310,slow=36
MJAR Matsushiro Arr 44.64 69 P **P 04 50 03.2 -0.4**
MJAR pmax pmax
comp=Z,3.0nm,0.8s
MJAR Matsushiro Arr 44.64 69 P **P 04 50 03.1 -0.4**
VRI Vrincioaia 44.78 304 ⇑P P 04 50 12.1 +7.6
VRI Vrincioaia 44.78 304 ⇑P P 04 50 12.1 +7.5
PLOR Plostina 44.83 304 ⇑P **P 04 50 08.3 +3.3**
PLOR Plostina 44.83 304 ⇑P **P 04 50 08.3 +3.3**
NACGM Naroch 44.85 317 *i* P **P 04 50 06.5 +1.5**
NACGM *i* P **P 04 50 06.5 +1.5**
NACGM *i* P **P 04 50 06.5 +1.5**
NACGM *i* PP PcP 04 51 32.7 -14
NACGM *i* PPP PPP 04 52 44.6
NACGM *i* S **S 04 56 46.3 +4.6**
NACGM *i* SS **ScS 05 00 02.1 +0.5**
NACGM *i* SSS SSS 05 00 56.7
NACGM *i* LQ LQ 05 06 37.4
NACGM *i* LR LR 05 09 21.3
IDID Didziasalis 44.91 317 *e*P **P 04 50 07.0 +1.6**
IIGN Ignalina 45.21 317 *e*P **P 04 50 09.6 +1.8**
ISAL Salakas 45.28 318 *e*P **P 04 50 10.3 +1.9**
VSU Vasula 45.31 322 *e*P **P 04 50 09.8 +1.3**
MLR Muntele Rosu 45.35 304 ⇑P **P 04 50 12.8 +3.4**
MLR Muntele Rosu 45.35 304 P **P 04 50 09.3 0.0**
MLR pmax pmax
comp=Z,34nm,1.0s
MLR Muntele Rosu 45.35 304 P **P 04 50 09.3 0.0**
TIXI Tiksi 45.53 18 P **P 04 50 10.1 -0.1**
comp=Z,2.8nm,0.4s,baz=169,slow=0.8,SNR=8.0
TIXI Tiksi 45.53 18*ce*P **P 04 50 09.7 -0.4**
TIXI pmax pmax
comp=Z,43nm,1.7s
TIXI Tiksi 45.53 18 P **P 04 50 10.6 +0.5**
TIXI IAmb IAmb 04 50 17.7
comp=Z,9.8nm,1.0s
DOPR Dopca 45.70 304 ⇑P **P 04 50 14.9 +3.0**
BURAR Bucovina Array 45.71 307 ⇑P **P 04 50 15.0 +3.0**
BURAR Bucovina Array 45.71 307 ⇑P **P 04 50 15.0 +3.0**
BURAR Bucovina Array 45.71 307 P **P 04 50 11.3 -0.7**
UGL Uglegorsk 45.91 51 *e*P **P 04 50 11.0 -2.5**
UGL *e*S **S 04 56 56.6 -0.6**
UGL MLR MLR
comp=E,3µm,14.0s
FIA1 FINESS Array S 46.15 326 P **P 04 50 15.8 +0.7**
FINES FINESS Array B 46.15 326 P **P 04 50 15.6 +0.4**
comp=E,9.7nm,0.7s,baz=105,slow=8.0,SNR=15
FINES LR LR 05 10 15.8
comp=E,1µm,20.6s,baz=101,slow=37
FINES FINESS Array B 46.15 326 P **P 04 50 16.0 +0.8**
ARCR ARCALIA 46.33 306 ⇑P **P 04 50 21.1 +4.3**
LVV L'vov 46.39 310 *e*P **P 04 50 19.7 +2.4**
PABE Paberze 46.50 318 *e*P **P 04 50 19.4 +1.5**
MTSE Matsula 46.86 322 *e*P **P 04 50 21.1 +0.4**
SUW Suwalki 46.90 315 *e*P **P 04 50 23.1 +2.0**
SUW Suwalki 46.90 315 P **P 04 50 21.4 +0.3**
SUW pmax pmax
comp=Z,19nm,0.8s
SUW Suwalki 46.90 315 P **P 04 50 21.4 +0.3**
DRGR 47.47 306 ⇑P **P 04 50 29.4 +3.5**
DRGR 47.47 306 ⇑P **P 04 50 29.4 +3.5**
BZS Buzias 48.36 304 ⇑P **P 04 50 36.3 +3.6**
BZS Buzias 48.36 304 ⇑P **P 04 50 36.3 +3.6**
ARA0 ARCESS Array S 48.40 337 *e*P **P 04 50 33.7 +1.1**
ARCES ARCESS Array B 48.40 337 P **P 04 50 32.1 -0.5**
comp=Z,9.8nm,0.7s,baz=91,slow=7.3,SNR=24
ARCES PcP **PcP 04 51 59.1 +0.3**
comp=Z,1.6nm,0.8s,baz=104,slow=3.8,SNR=0.9
ARCES LR LR 05 12 24.7
comp=Z,597nm,19.0s,baz=125,slow=38
ARCES ARCESS Array B 48.40 337 P **P 04 50 33.6 +1.0**
MRSI Marisa 48.52 124 P **P 04 50 34.7 +0.5**
comp=Z,27nm,1.0s
KTK1 Kautokeino 49.02 336 *e*P **P 04 50 38.5 +1.1**
APSI Ampana 49.32 125 P **P 04 50 41.7 +1.4**
comp=Z,774nmcomp=Z,15nm,1.1s
HAMF Hammerfest 49.32 338 *e*P **P 04 50 41.3 +1.6**
TTSI Tana Toraja 49.66 129 P **P 04 50 43.6 +0.6**
comp=Z,1µmcomp=Z,18nm,1.1s
FRGS Fruska Gora 49.69 304 ⇑P **P 04 50 46.1 +3.2**
UPP Uppsala 50.10 323 *e*P **P 04 50 47.6 +1.9**
JETT Jettan, Norway 50.13 336 *e*P **P 04 50 47.7 +1.8**
OKC Ostrava-Krasne 50.19 310 AMS AMS 05 13 40.0
comp=Z,700nm,22.7s
SPSI Sidrap Palu 50.33 130 P **P 04 50 48.2 +0.2**
comp=Z,12nm,1.4s
MORH Mrgy, Hungar 50.33 305 ⇑P **P 04 50 50.4 +2.7**
MORC Moravsky Berou 50.59 310 *e*P **P 04 50 52.5 +2.9**
MORC Moravsky Berou 50.59 310 P **P 04 50 50.1 +0.5**
MORC pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 50.59 310 P **P 04 50 50.1 +0.5**
MORC IAmb IAmb 04 50 56.1
comp=Z,6.9nm,1.0s
MA2 Magadan 50.87 37*ce*P **P 04 50 52.4 +0.8**
MA2 pmax pmax
comp=Z,20nm,1.7s
KRLC Kraliky 51.04 310 *e*P **P 04 50 55.6 +2.5**
KRLC MLR MLR
comp=Z,700nm,17.5s
KRLC Kraliky 51.04 310 *e*P **P 04 50 55.6 +2.5**
KRLC AMS AMS 05 12 30.0
comp=Z,700nm,17.5s
DPC Dobruska-Polom 51.30 311 *e*P **P 04 50 57.1 +2.1**
DPC MLR MLR
comp=Z,800nm,15.7s
DPC Dobruska-Polom 51.30 311 *e*P **P 04 50 57.1 +2.1**
DPC AMS AMS 05 14 20.0
comp=Z,800nm,15.7s
OSTC Ostas 51.34 311 AMS AMS 05 14 20.0
comp=Z,700nm,15.6s
CHVC Chvalec 51.44 311 *e*P **P 04 50 59.0 +3.0**
CHVC AMS AMS 05 14 30.0
comp=Z,800nm,16.4s
UPC Upice 51.47 311 AMS AMS 05 14 30.0
comp=Z,900nm,15.8s
FAUS Fauske 51.65 333 *e*P **P 04 50 59.3 +2.1**
SEY Seymchan 51.70 33 *i* P **P 04 50 58.2 +0.5**
STEI Steigen 51.73 333 *e*P **P 04 50 59.5 +1.7**
BJO1 Bjornoya 51.74 342 *e*P **P 04 50 59.7 +1.8**
MOR8 Moi Rana 51.88 331 *e*P **P 04 51 00.1 +1.0**
CONA Conrad Observa 51.94 308 *e*P **P 04 51 02.6 +2.7**
comp=Z,7.3nm,0.9s

TREC Trest 51.98 310 AMS AMS 05 13 10.0
comp=Z,700nm,16.7s
NBB05 Inndyr 52.11 332 *e*P **P** **04 51 02.5 +1.8**
NBB30 Finnes 52.22 332 *e*P **P** **04 51 03.4 +1.9**
ARSA Arzberg 52.28 307 *e*P **P** **04 51 02.6 +0.2**
comp=Z,1.9nm,0.5s
LOF Lofoten 52.38 334 *e*P **P** **04 51 04.4 +1.7**
PVCC Panska Ves 52.38 311 AMS AMS 05 14 50.0
comp=Z,700nm,19.1s
STOK Stokkvaagen 52.47 331 *e*P **P** **04 51 05.5 +2.2**
PRU Pruhonice 52.48 311 AMS AMS 05 15 10.0
comp=Z,1μm,18.3s
PRA Prague 52.54 311 AMS AMS 05 15 10.0
comp=Z,900nm,19.6s
SOKA Soboth 52.71 306 *e*P **P** **04 51 07.5 +1.8**
comp=Z,8.5nm,0.8s
BRG Berggiesshubel 52.73 312 *e*P **P** **04 51 07.4 +1.8**
BRG Amp 04 51 10.6
comp=Z,7.2nm,1.0s
BRG *ex* x 04 51 14.7
BRG Amp 04 51 15.5
comp=E,6.1nm,0.7s
BRG Amp 05 12 10.0
comp=E,0.7nm,17.5s
BRG Amp 05 12 20.0
comp=N,2.9nm,23.6s
BRG Amp 05 15 28.0
comp=Z,1.3nm,17.4s
NSS Namsos 52.85 329 *e*P **P** **04 51 08.1 +1.8**
MOA Molln 53.01 308 *e*P **P** **04 51 09.9 +2.1**
comp=Z,9.7nm,1.1s
NC405 NORSAR Array S 53.02 325 P **P** **04 51 08.2 +0.6**
OBKA Obir 53.07 306 *e*P **P** **04 51 09.6 +1.3**
comp=Z,9.1nm,1.9s
NC602 NORSAR Array S 53.13 324 *e*P **P** **04 51 10.5 +2.2**
SANI Sanana 53.16 122 P **P** **04 51 08.3 -0.8**
comp=Z,26nm,1.1s
GEC2 GERESS Array S 53.21 309 P **P** **04 51 09.8 +0.5**
GERES GERESS Array B 53.21 309 P **P** **04 51 09.6 +0.3**
comp=Z,3.8nm,0.9s,baz=86,slow=6.8,SNR=19
GERES LR LR 05 15 57.9
comp=Z,423nm,19.8s,baz=81,slow=38
GERES GERESS Array B 53.21 309 P **P** **04 51 09.8 +0.5**
KHC Kasperske Hory 53.24 310 *e*P **P** **04 51 09.7 +0.3**
KHC MLR MLR
comp=Z,700nm,22.2s
KHC Kasperske Hory 53.24 310 *e*P **P** **04 51 09.7 +0.3**
KHC AMS AMS 05 13 40.0
comp=Z,700nm,22.2s
KHC Kasperske Hory 53.24 310 P **P** **04 51 10.0 +0.6**
CLL Collm 53.25 312 *e*(P) **P** **04 51 12.0 +2.6**
CLL *e* 04 51 26.0
CLL *e* 05 03 18.0
CLL LmV 05 15 00.0
comp=Z,1μm,20.0s
CLL Collm 53.25 312 *e*P **P** **04 51 12.0 +2.6**
CLL *e* 04 51 26.0
CLL MLR MLR
comp=Z,1μm,20.0s
NB2 NORSAR Subarra 53.27 325 P **P** **04 51 09.1 -0.4**
baz=87,slow=7.4
NOA NORSAR Array B 53.27 325 P **P** **04 51 09.2 -0.2**
comp=Z,12nm,1.0s,baz=86,slow=7.2,SNR=11
NOA LR LR 05 14 47.0
comp=Z,739nm,19.4s,baz=105,slow=37
SPA0 Spitsbergen Ar 53.31 346 *e*P **P** **04 51 10.5 +1.0**
NAO01 NORSAR Array S 53.44 324 P **P** **04 51 11.2 +0.6**
NC204 NORSAR Array S 53.48 325 P **P** **04 51 11.1 +0.1**
TBLU Trondheim 53.63 327 *e*P **P** **04 51 13.2 +1.2**
MYKA Terra Mystica 53.66 307 *e*P **P** **04 51 13.5 +0.9**
comp=Z,4.1nm,1.0s
NKC Novy Kostel 53.77 311 AMS AMS 05 15 40.0
comp=Z,1μm,21.2s
KBA Koelnbreinsper 53.77 307 *e*P **P** **04 51 16.3 +2.7**
comp=Z,2.7nm,1.0s
KONO Kongsberg 54.17 323 *e*P **P** **04 51 17.8 +1.8**
DOMB Dombas 54.24 326 *e*P **P** **04 51 18.4 +1.9**
ABTA Abfaltersbach 54.40 307 *e*P **P** **04 51 19.5 +1.5**
comp=Z,4.5nm,1.1s
SKAR Skarslia 54.72 324 *e*P **P** **04 51 22.1 +2.0**
WTTA Wattenberg 54.88 308 *e*P **P** **04 51 23.0 +1.4**
comp=Z,6.3nm,0.9s
WATA Walderalm 54.90 308 *e*P **P** **04 51 21.5 -0.2**
comp=Z,5.5nm,0.8s
MOL Molde 54.91 327 *e*P **P** **04 51 23.2 +1.9**
KMBO Kilima Mbogo 55.16 242 P **P** **04 51 23.3 -0.8**
comp=Z,2.1nm,0.7s,baz=36,slow=9.6,SNR=6.4
KMBO LR LR 05 14 01.8
comp=Z,273nm,18.3s,baz=42,slow=35
KMBO Kilima Mbogo 55.16 242 *i* P **P** **04 51 24.5 +0.4**
KMBO pmax pmax
comp=Z,2.0nm,0.7s
SQTA Sankt Quirin 55.17 308 *e*P **P** **04 51 24.6 +1.0**
MURB Monte Urbino 55.20 303 P **P** **04 51 26.0 +2.1**
MOTA Moosalm 55.21 308 *e*P **P** **04 51 25.0 +1.1**
comp=Z,1.1nm,1.0s
PETK Petropavlovsk- 55.28 45 LR LR 05 16 22.2
comp=Z,577nm,18.6s,baz=282,slow=37
TEOL Teolo 55.28 305 P **P** **04 51 23.4 -0.9**
RETA Reutte 55.41 308 *e*P **P** **04 51 26.4 +1.2**
comp=Z,8.8nm,1.3s
FETA Feichten 55.53 308 *e*P **P** **04 51 27.1 +0.8**
comp=Z,10nm,1.2s
BLS5 Blasjo 55.79 323 *e*P **P** **04 51 30.0 +2.3**
DAVA Damuels 56.03 308 *e*P **P** **04 51 30.7 +0.8**
comp=Z,14nm,1.1s
OSSC Osservatorio P 56.04 303 P **P** **04 51 30.2 +0.4**
OSSC IAmb IAmb 04 51 40.9
comp=Z,17nm,1.1s
SIJI Sorong 56.21 117 LR LR 05 17 38.4
comp=Z,80nm,21.8s,baz=202,slow=38
BILL Bilibino 57.23 26‖ *e*P **P** **04 51 39.5 +1.6**
BILL *e* 04 53 50.2
BILL *e*S **S** **04 59 34.7 +2.0**
BILL pmax pmax
comp=Z,10.0nm,1.3s
BILL MLR MLR
comp=Z,344nm,18.0s
BILL Bilibino 57.23 26 P **P** **04 51 39.3 +1.5**
BILL IAmb IAmb 04 51 45.7
comp=Z,6.6nm,0.8s
SOEI Soe 57.60 130 P **P** **04 51 41.6 +0.3**
comp=Z,42nm,0.8s
SENIN Lac Senin/Sane 57.98 308 P **P** **04 51 43.7 -0.1**
SENIN IAmb IAmb 04 51 48.6
comp=Z,8.8nm,0.9s
FAKI Fak Fak 58.30 118 P **P** **04 51 46.3 +0.2**
BNI Bardonecchia 58.77 306 P **P** **04 51 49.2 0.0**
BNI pmax pmax
comp=Z,11nm,1.0s
BNI Bardonecchia 58.77 306 P **P** **04 51 49.2 0.0**
BNI IAmb IAmb 04 51 59.0
comp=Z,11nm,1.0s
NOR Nord 59.07 350 *i* P **P** **04 51 50.4 -0.2**
NOR IAmb IAmb 04 51 51.6
comp=Z,2.4nm,0.7s
NOR Nord 59.07 350 *i* P **P** **04 51 50.3 -0.2**
NOR pmax pmax
comp=Z,2.0nm,0.7s
MBAR Mbarara 59.75 247 *ce*P **P** **04 51 57.6 +1.2**
MBAR pmax pmax
comp=Z,10.0nm,1.7s
KEST Kesra 59.84 295 P **P** **04 51 55.5 -1.2**
comp=Z,12nm,1.4s,baz=236,slow=22,SNR=1.5
KEST LR LR 05 21 23.8
comp=Z,337nm,20.2s,baz=348,slow=40
DAG Danmarks Havn 60.89 345 *i* P **P** **04 52 02.7 -0.4**
DAG IAmb IAmb 04 52 04.0
comp=Z,1.6nm,0.8s
DAG Danmarks Havn 60.89 345 *i* P **P** **04 52 02.7 -0.4**
DAG pmax pmax
comp=Z,2.0nm,0.8s
EDMD Edmundbyers 61.27 319 *e*P **P** **04 52 06.0 0.0**
EDMD IAmb IAmb 04 52 10.6
comp=Z,57nm,1.5s
KESW Keswick, Cumbr 61.97 319 *e*P **P** **04 52 11.6 +0.8**
KESW IAmb IAmb 04 52 14.8
comp=Z,22nm,1.0s
DBG Daneborg 62.15 343 *i* P **P** **04 52 11.7 0.0**
DBG IAmb IAmb 04 52 13.0
comp=Z,2.0nm,0.9s
HLM1 Long Mynd 62.50 317 *e*P **P** **04 52 14.7 +0.3**
HLM1 IAmb IAmb 04 52 18.5
comp=Z,18nm,1.1s
FOEL Foel Wylfa 62.57 317 *e*P **P** **04 52 14.6 -0.2**
FOEL IAmb IAmb 04 52 17.5
comp=Z,36nm,1.0s
MCH1 Michaelchurch 62.74 316 IAmb IAmb 04 52 16.6
comp=Z,24nm,1.3s
MCH1 *e*P **P** **04 52 16.6 +0.7**
LLW Llanuwychllyn 62.85 317 *e*P **P** **04 52 17.3 +0.6**
IOMK Kirk Michael 62.89 319 *e*P **P** **04 52 18.0 +1.1**
IOMK IAmb IAmb 04 52 20.6
comp=Z,25nm,1.1s
WLF1 Llynfaes 63.12 318 *e*P **P** **04 52 19.5 +1.2**
WLF1 IAmb IAmb 04 52 22.4
comp=Z,32nm,1.0s
GENI Genyem 64.13 112 P **P** **04 52 25.3 -0.3**
comp=Z,30nm,0.7s
NEEM North Greenlan 66.45 350 *i* P **P** **04 52 39.9 -0.2**
NEEM IAmb IAmb 04 52 41.5
comp=Z,9.2nm,0.9s
EUNU Eureka 67.08 358 P **P** **04 52 44.7 +0.9**
EUNU IAmb IAmb 04 52 45.5
comp=Z,8.2nm,0.9s
SUMG Summit 67.50 344 *i* P **P** **04 52 47.6 +0.5**
SUMG Summit 67.50 344 *i* P **P** **04 52 47.5 +0.5**
ESDC Sonseca Array 68.05 304 P **P** **04 52 50.1 -0.5**
comp=Z,2.2nm,0.9s,baz=58,slow=6.1,SNR=9.4
ESDC LR LR 05 27 21.3
comp=Z,272nm,18.2s,baz=30,slow=40
ESDC Sonseca Array 68.05 304 P **P** **04 52 49.6 -1.0**
ESDC IAmb IAmb 04 52 52.8
comp=Z,4.4nm,1.0s
ANM Nome 69.07 26 P **P** **04 52 56.7 +0.2**
ANM pmax pmax
comp=Z,10.0nm,0.8s
ANM Nome 69.07 26 P **P** **04 52 56.7 +0.2**
ICESG Greenland Ices 70.08 341 *e*P **P** **04 53 03.2 +0.2**
TOLK Toolik Lake Re 71.42 18 P **P** **04 53 11.9 +1.0**
WB0 Warramunga Arr 71.54 130 P **P** **04 53 11.9 -0.3**
WB0 IAmb IAmb 04 53 19.0
comp=Z,11nm,0.8s
WRA Warramunga Arr 71.63 130 P **P** **04 53 12.4 -0.4**
comp=Z,5.1nm,0.5s,baz=326,slow=6.0,SNR=32
WRA LR LR 05 29 58.3
comp=Z,77nm,18.9s,baz=265,slow=40
WRA Warramunga Arr 71.63 130 P **P** **04 53 12.1 -0.6**
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 71.63 130 P **P** **04 53 12.1 -0.6**
WRAB Tennant Creek 71.63 130 *ce*P **P** **04 53 12.9 +0.2**
WRAB pmax pmax
comp=Z,33nm,1.3s
WB2 Warramunga Arr 71.64 130 P **P** **04 53 12.5 -0.3**
WR0 Warramunga Arr 71.77 130 P **P** **04 53 13.3 -0.3**
WR0 IAmb IAmb 04 53 20.4
comp=Z,8.2nm,0.9s
COLD Coldfoot 72.25 19 P **P** **04 53 16.9 +1.1**
COLD IAmb IAmb 04 53 17.8
comp=Z,8.9nm,1.0s
BMAR Burnt Mountain 73.59 17 P **P** **04 53 25.4 +1.6**
MLY Manley 73.65 21 P **P** **04 53 24.6 +0.4**
MLY IAmb IAmb 04 53 26.9
comp=Z,11nm,1.0s
I23K Minto, Yukon-K 73.98 20 P **P** **04 53 26.9 +0.9**
I23K IAmb IAmb 04 53 28.9
comp=Z,11nm,1.1s
AS31 Alice Springs 74.07 133 P **P** **04 53 27.1 -0.1**
ASAR Alice Springs 74.07 133 P **P** **04 53 26.8 -0.4**
comp=Z,3.7nm,0.6s,baz=319,slow=6.1,SNR=33
ASAR LR LR 05 29 04.9
comp=Z,65nm,19.3s,baz=296,slow=38
ASAR Alice Springs 74.07 133 P **P** **04 53 26.1 -1.1**
ASAR Alice Springs 74.07 133 P **P** **04 53 26.1 -1.1**
BPAW Bear Paw Mtn. 74.23 22 P **P** **04 53 28.2 +0.6**
BPAW IAmb IAmb 04 53 30.4
comp=Z,12nm,1.0s
NEA2 Nenana 74.46 21 P **P** **04 53 29.9 +1.0**
POKR Poker Plat Res 74.56 20 P **P** **04 53 30.4 +0.9**
POKR IAmb IAmb 04 53 31.6
comp=Z,17nm,1.1s
TCOL CIGO, UAF Yank 74.61 20 P **P** **04 53 30.4 +0.6**
COLA College 74.62 20 *c* *i*P **P** **04 53 30.3 +0.6**
COLA pmax pmax
comp=Z,19nm,1.0s
KTH Kantishna Hill 74.64 22 P **P** **04 53 30.5 +0.5**
KTH IAmb IAmb 04 53 33.0
comp=Z,15nm,1.0s
PPLA Purkeypile 74.69 23 P **P** **04 53 31.0 +0.5**
PPLA IAmb IAmb 04 53 37.6
comp=Z,17nm,1.0s
CCB Clear Creek Bu 74.80 20 P **P** **04 53 31.4 +0.6**
ILAR Eielson Array 74.97 20 P **P** **04 53 32.1 +0.3**
comp=Z,10.0nm,1.0s,baz=306,slow=4.8,SNR=36
ILAR PP **PP** **04 56 15.0 -4.0**
comp=Z,0.7nm,0.9s,baz=317,slow=6.5,SNR=2.3
ILAR LR LR 05 29 02.9
comp=Z,284nm,19.2s,baz=334,slow=38
ILAR Eielson Array 74.97 20 P **P** **04 53 31.9 0.0**
ILAR Eielson Array 74.97 20 P **P** **04 53 31.9 0.0**
INK Inuvik 75.34 13 P **P** **04 53 34.4 +0.5**
INK pmax pmax
comp=Z,6.0nm,1.2s
INK Inuvik 75.34 13 P **P** **04 53 34.4 +0.5**
INK IAmb IAmb 04 53 51.4
comp=Z,6.3nm,1.1s
SKT Skwentna 75.55 24 P **P** **04 53 35.4 +0.1**
C36M Paulatuk 76.01 10 P **P** **04 53 37.5 -0.1**
C36M IAmb IAmb 04 53 38.4
comp=Z,8.9nm,0.9s
TOA0 Torodi Ar. Sit 76.11 277 P **P** **04 53 38.5 -0.7**
TORD Torodi Ar. Bea 76.11 277 P **P** **04 53 37.8 -1.4**
comp=Z,1.5nm,0.5s,baz=46,slow=5.1,SNR=13
TORD LR LR 05 31 48.2
comp=Z,249nm,18.6s,baz=130,slow=39
TORD Torodi Ar. Bea 76.11 277 P **P** **04 53 38.5 -0.7**
EGAK Eagle 76.53 18 P **P** **04 53 41.4 +0.6**
EGAK IAmb IAmb 04 53 41.9
comp=Z,4.8nm,0.8s
SML Sawmill 76.73 23 P **P** **04 53 42.9 +0.9**
K27K Chicken 76.89 19 P **P** **04 53 43.6 +0.9**
K27K IAmb IAmb 04 53 45.2
comp=Z,11nm,1.1s
DAWY Dawson 77.57 18 P **P** **04 53 46.6 0.0**
L27K Beaver Creek, 77.72 19 P **P** **04 53 48.1 +0.6**
L27K IAmb IAmb 04 53 50.6
comp=Z,6.7nm,1.1s
BCAR Beaver Creek A 77.73 19 P **P** **04 53 48.5 +0.9**
N25K Chitina, Valde 78.05 21 P **P** **04 53 50.4 +0.9**
BARN Barnard Glacie 79.36 21 P **P** **04 53 56.9 +0.1**
BARN IAmb IAmb 04 54 00.5
comp=Z,10nm,1.1s
CTAO Charters Tower 79.86 122 P **P** **04 53 59.6 -0.2**
CTAO pmax pmax
comp=Z,10.0nm,1.1s
CTAO Charters Tower 79.86 122 P **P** **04 53 59.6 -0.2**
CTAO IAmb IAmb 04 54 10.5
comp=Z,10nm,1.1s
KOWA Kowa 80.16 281 P **P** **04 54 01.4 -0.3**
KOWA IAmb IAmb 04 54 12.3
comp=Z,7.9nm,1.0s
HYT Haines Junctio 80.74 19 P **P** **04 54 04.7 +0.5**
HYT IAmb IAmb 04 54 06.0
comp=Z,6.0nm,0.8s
BOSA Boshof 82.43 229 P **P** **04 54 12.2 -1.3**
comp=Z,6.1nm,1.1s,baz=153,slow=12,SNR=2.7
BOSA LR LR 05 27 10.6
comp=Z,84nm,20.1s,baz=60,slow=33
YKA Yellowknife Ar 83.77 8 P **P** **04 54 19.6 -0.2**
comp=Z,3.6nm,0.8s,baz=342,slow=4.8,SNR=61
YKA LR LR 05 35 30.8
comp=Z,149nm,20.1s,baz=0.0,slow=38
STKA Stephens Creek 84.68 133 P **P** **04 54 23.2 -1.6**
comp=Z,1.5nm,0.4s,baz=319,slow=4.5,SNR=5.8
STKA LR LR 05 37 04.0
comp=Z,99nm,19.1s,baz=298,slow=39
STKA Stephens Creek 84.68 133 P **P** **04 54 24.3 -0.5**
DLBC Dease Lake 84.74 17 P **P** **04 54 25.6 +0.6**
DLBC IAmb IAmb 04 54 39.6
comp=Z,4.7nm,1.1s
DBIC Dimbokro 84.99 275 P **P** **04 54 26.2 -0.6**
comp=Z,3.4nm,0.9s,baz=351,slow=12,SNR=3.7
DBIC LR LR 05 36 05.5
comp=Z,379nm,18.4s,baz=28,slow=38
BBB Bella Bella 90.82 19 LR LR 05 39 01.9
comp=Z,179nm,19.4s,baz=322,slow=38
FFC Flin Flon 92.54 3 P **P** **04 55 02.6 +0.5**
FFC pmax pmax
comp=Z,5.0nm,1.1s
FFC IAmb IAmb 04 55 08.8
comp=Z,5.4nm,1.1s
NEW Newport 97.06 14 LR LR 05 43 05.7
comp=Z,223nm,20.7s,baz=332,slow=38
ULM Lac du Bonnet 97.15 360 LR LR 05 42 36.4
comp=Z,298nm,21.0s,baz=0.5,slow=38
TXAR Lajitas Array 117.67 7 PKP **PKPdf** **05 00 37.9 +0.2**
comp=Z,0.5nm,0.8s,baz=225,slow=1.2,SNR=5.9
TXAR Lajitas Array 117.67 7 PKIKP **PKPdf** **05 00 37.5 -0.1**
TXAR Lajitas Array 117.67 7 **PKPdf** **05 00 37.5 -0.1**
CPUP Villa Florida 145.41 271 PKPbc **PKPbc** **05 01 28.1 -1.2**
comp=Z,5.3nm,0.9s,baz=53,slow=4.9,SNR=7.7
LPAZ La Paz 149.42 296 PKPbc **PKPbc** **05 01 40.4 -1.0**
comp=Z,2.7nm,0.9s,baz=84,slow=4.7,SNR=5.2

ATH ***07*** *04:48:27.9, 38.75N×23.46E, h15km±2km, ML2.3/5 Error ellipse: s-maj=2.5km s-min=0.8km az=340.0*

THE 07 04:48:27.8, 38.75N×23.46E, h12km±1km, ML2.2/11, Error ellipse: s-maj=1.3km s-min=0.4km az=139.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMIA	**Simia**	**0.23**	**304**	P	Pg	04 48 32.9	+0.1
SMIA				S	Sg	04 48 36.7	+0.4
SMIA				AML	AML	04 48 36.9	
	comp=E,4482μm,0.5s						
SMIA				AML	AML	04 48 37.6	
	comp=N,5529μm,0.4s						
SMIA	**Simia**	**0.23**	**304**	P	Pg	04 48 32.9	+0.1
SMIA				S	Sg	04 48 36.3	0.0
	comp=N,3μm,0.4s						
ATAL	**Atalanti**	**0.35**	**261**	P	Pg	04 48 34.6	-0.2
ATAL				S	Sg	04 48 40.2	+0.7
ATAL				AML	AML	04 48 41.6	
	comp=E,555μm,0.2s						
ATAL				AML	AML	04 48 41.6	
	comp=N,555μm,0.1s						
ATAL	**Atalanti**	**0.35**	**261**	P	Pg	04 48 34.5	-0.3
ATAL				S	Sg	04 48 40.2	+0.7
	comp=N,280nm,0.1s						
LKR	**Lokris**	**0.37**	**255**	P	Pg	04 48 34.8	-0.4
LKR				S	Sg	04 48 40.7	+0.4
LKR				AML	AML	04 48 42.1	
	comp=E,848μm,0.2s						
LKR				AML	AML	04 48 42.9	
	comp=N,965μm,0.2s						
LKR	**Lokris**	**0.37**	**255**	P	Pg	04 48 34.9	-0.4
LKR				S	Sg	04 48 40.9	+0.7
	comp=N,460nm,0.2s						
EREA	**Eretria**	**0.49**	**131**	P	Pg	04 48 37.7	+0.2
EREA				S	Sb	04 48 44.8	-0.7
EREA				AML	AML	04 48 45.9	
	comp=N,1144μm,0.4s						
EREA				AML	AML	04 48 46.9	
	comp=E,1898μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.52**	**103**	P	Pg	04 48 37.3	-0.6
KYMI				S	Sg	04 48 45.2	+0.4
KYMI	**Kymi, Euboea I**	**0.52**	**103**	P	Pg	04 48 37.3	-0.6
KYMI				S	Sg	04 48 44.9	+0.1
	comp=E,338nm,0.3s						
VIL2	**Platees**	**0.56**	**196**	P	Pg	04 48 38.8	+0.2
VIL2				S	Sb	04 48 48.5	+1.2
NEO	**Neokhori**	**0.59**	**342**	P	Pg	04 48 39.2	-0.2
NEO				S	Sb	04 48 47.9	-0.5
NEO				AML	AML	04 48 51.8	
	comp=N,859μm,0.3s						
NEO				AML	AML	04 48 51.9	
	comp=E,595μm,0.2s						
NEO	**Neokhori**	**0.59**	**342**	P	Pg	04 48 39.2	-0.1
NEO				S	Sg	04 48 47.7	+0.6
	comp=E,360nm,0.3s						
VILL	**Villia**	**0.59**	**191**	P	Pg	04 48 38.9	-0.5
VILL				S	Sb	04 48 48.2	-0.2
	comp=E,350nm,0.5s						
AXAR	**Agios Charalam**	**0.62**	**272**	P	Pb	04 48 40.7	0.0
AXAR	**Agios Charalam**	**0.62**	**272**	P	Pg	04 48 40.0	0.0
AXAR				S	Sg	04 48 48.7	+0.4
	comp=E,230nm,0.2s						
DION	**Dionisos Attik**	**0.77**	**151**	P	Pg	04 48 42.3	-0.3
DION	**Dionisos Attik**	**0.77**	**151**	P	Pg	04 48 42.3	-0.3
DION				S	Sb	04 48 53.9	+0.5
	comp=E,658nm,0.3s						
PTL	**Penteli**	**0.77**	**155**	P	Pg	04 48 42.7	+0.1
PTL				S	Sb	04 48 53.5	+0.1
ATHU	**Athens Univers**	**0.82**	**162**	P	Pg	04 48 43.4	-0.3
ATHU				S	Sb	04 48 55.4	+0.4
ATHU	**Athens Univers**	**0.82**	**162**	P	Pg	04 48 43.7	0.0
ATHU				S	Sb	04 48 55.1	+0.2
	comp=E,102nm,0.3s						
SKY	**Skiros Island**	**0.86**	**81**	P	Pg	04 48 44.1	-0.4
SKY				S	Sn	04 48 57.2	-1.0
	comp=E,395nm,0.2s						
AGG	**Agios Georgios**	**0.92**	**288**	P	Pg	04 48 45.2	-0.4
AGG				S	Sb	04 48 58.8	+0.9
	comp=E,62nm,0.5s						
KARY	**Karystos**	**1.05**	**133**	P	Pb	04 48 47.3	-0.5
KALE	**Kalithea**	**1.09**	**251**	P	Pb	04 48 47.3	-1.3
KALE	**Kalithea**	**1.09**	**251**	P	Pb	04 48 47.3	-1.3

IDC ***07*** *05:17:03.0±2.6, 2.79N×128.65E, h222km±26km, mb3.6/16, mb1 3.7/16, mb1mx3.5/41, mbtmp4.1/16, Error ellipse: s-maj=25.1km s-min=9.9km az=82.0*

ISC 07 05:17:00.6±0.7, 2.8N±0.1×128.6E±0.2, h200km, n16, σ1°35/17, mb4.0/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.99**	**188**	P	**P**	**05 21 28.8**	**+0.2**
	2.8nm,0.6s,baz=20,slow=11,SNR=15						
WRA	**Warramunga Arr**	**23.29**	**166**	P	**P**	**05 21 50.9**	**+0.1**
	2.2nm,0.3s,baz=344,slow=10,SNR=40						
ASAR	**Alice Springs**	**26.81**	**169**	P	**P**	**05 22 22.7**	**+0.1**
	1.1nm,0.3s,baz=356,slow=7.6,SNR=19						
ASAR				ScP	**ScP**	**05 28 57.1**	**-4.4**
	0.4nm,0.8s,baz=327,slow=2.3,SNR=4.6						
CMAR	**Chiang Mai Arr**	**32.98**	**300**	P	**P**	**05 23 16.5**	**-0.5**
	1.4nm,0.3s,baz=122,slow=8.6,SNR=4.4						
KSRS	**Korea Array**	**34.48**	**359**	P	**P**	**05 23 29.8**	**+0.2**
	1.3nm,0.5s,baz=180,slow=10,SNR=2.2						
MJAR	**Matsushiro Arr**	**34.71**	**14**	P	**P**	**05 23 30.5**	**-1.1**
	3.5nm,0.6s,baz=191,slow=9.5,SNR=5.0						
STKA	**Stephens Creek**	**36.63**	**161**	P	**P**	**05 23 48.6**	**+0.7**
	1.3nm,0.4s,baz=337,slow=7.6,SNR=4.8						
USRK	**Ussuriysk Ar.**	**41.32**	**4**	P	**P**	**05 24 27.2**	**+0.5**
	1.4nm,0.6s,baz=187,slow=7.8,SNR=3.2						
SONM	**Songino Array**	**48.79**	**340**	P	**P**	**05 25 25.9**	**+0.3**
	0.5nm,0.5s,baz=149,slow=7.7,SNR=4.6						
PETK	**Petropavlovsk-**	**55.58**	**21**	P	**P**	**05 26 16.1**	**+0.8**
	5.5nm,1.0s,baz=189,slow=5.3,SNR=6.0						
MKAR	**Makanchi Array**	**59.40**	**325**	P	**P**	**05 26 43.0**	**+0.9**
	1.0nm,0.4s,baz=121,slow=8.5,SNR=15						
ZALV	**Zalesovo Beam**	**62.27**	**332**	P	**P**	**05 27 01.1**	**-0.2**
	0.6nm,0.3s,baz=130,slow=8.3,SNR=2.7						
TIXI	**Tiksi**	**68.74**	**0**	P	**P**	**05 27 42.6**	**+0.2**
	1.6nm,0.4s,baz=297,slow=1.9,SNR=3.1						
ILAR	**Eielson Array**	**85.11**	**25**	P	**P**	**05 29 14.0**	**+0.2**
	0.3nm,0.9s,baz=258,slow=4.9,SNR=2.2						
KMBO	**Kilima Mbogo**	**91.44**	**269**	P	**P**	**05 29 46.2**	**+0.9**
	1.0nm,0.3s,baz=45,slow=17,SNR=2.7						
ARCES	**ARCESS Array B**	**91.96**	**340**	P	**P**	**05 29 44.8**	**-1.4**
	2.6nm,0.9s,baz=91,slow=6.3,SNR=4.2						

IDC ***07*** *05:59:49.2±1.4, 36.45N×33.08W, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.5/54, mbtmp3.6/7, MS3.3/4, Ms1 3.3/4, ms1mx2.9/43, Error ellipse: s-maj=40.7km s-min=31.0km az=135.0*

ISC 07 05:59:51.0±1.4, 36.4N±0.2×33.2W±0.2, h10km, n11, σ1°26/8, mb3.6/7, MS3.3/4, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H07S1	**FLORES T-PHASE**	**3.36**	**27**	Pn	**Pn**	**06 00 44.0**	**+0.5**
	SNR=9.1						
NOA	**NORSAR Array B**	**37.18**	**34**	LR	LR	06 20 39.1	
	comp=Z,16nm,18.1s,baz=285,slow=34						
DBIC	**Dimbokro**	**39.34**	**132**	LR	LR	06 22 26.6	
	comp=Z,39nm,19.2s,baz=325,slow=35						
YKA	**Yellowknife Ar**	**54.59**	**326**	P	**P**	**06 09 19.7**	**+0.5**
	1.3nm,1.1s,baz=82,slow=7.3,SNR=8.6						
PDAR	**Pinedale Array**	**57.32**	**302**	P	**P**	**06 09 38.6**	**-0.8**
	0.2nm,0.5s,baz=72,slow=9.0,SNR=4.6						

PDAR LR LR 06 34 07.3
comp=Z,28nm,18.9s,baz=115,slow=36
CMIG Matias Romero 57.42 268 LR LR 06 34 46.6
comp=Z,50nm,18.2s,baz=114,slow=36
TXAR Lajitas Array 58.43 285 P **P** **06 09 46.0 -1.1**
0.5nm,0.9s,baz=80,slow=5.6,SNR=3.2
LPAZ La Paz 61.94 219 P **P** **06 10 12.8 +1.0**
2.1nm,1.0s,baz=35,slow=7.4,SNR=5.0
ILAR Eielson Array 66.73 335 P **P** **06 10 43.2 +1.3**
0.6nm,1.1s,baz=43,slow=5.4,SNR=4.1
KURBB **Kurchatov Arra 74.61 38** P **P** **06 11 28.7 -1.5**
0.2nm,0.5s,baz=310,slow=6.0,SNR=1.6
MKAR Makanchi Array 79.00 39 P **P** **06 11 54.3 -0.8**
0.1nm,0.4s,baz=311,slow=5.5,SNR=1.5

IDC 07 06:04:27.3±2.5, 53°.99N×86°.35E, h0km, mb1 2.9/2, mb1mx2.9/57, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=20.1km s-min=12.6km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.91**	**268**	*i*		06 09 30.0	
	baz=91,slow=321,SNR=2.2						
ZALV	**Zalesovo Beam**	**0.91**	**268**	Pg	Pg	06 04 43.5	-1.2
	0.9nm,0.3s,baz=86,slow=18,SNR=12						
ZALV				Lg	Lg	06 04 57.9	
	0.8nm,0.3s,baz=83,slow=23,SNR=5.0						
ZALV				Rg	Rg	06 05 02.8	
	3.1nm,0.4s,baz=79,slow=30,SNR=8.4						
KURBB	**Kurchatov Arra**	**5.87**	**238**	Pn	Pn	06 05 56.4	+1.1
	0.1nm,0.3s,baz=54,slow=13,SNR=5.3						
KURBB				Lg	Lg	06 07 34.0	
	0.1nm,0.3s,baz=53,slow=34,SNR=3.5						
MKAR	**Makanchi Array**	**7.66**	**201**	Pn	Pn	06 06 20.9	+0.9
	0.2nm,0.3s,baz=25,slow=14,SNR=5.4						
MKAR				Lg	Lg	06 08 33.7	
	0.1nm,0.3s,baz=14,slow=37,SNR=1.5						

*IDC **07** 06:06:03.2±4.3, 24°.34S×179°.80E, h517km±46km, mb3.1/6, mb1 3.3/8, mb1mx3.1/39, mbtmp4.1/8, Error ellipse: s-maj=34.3km s-min=22.9km az=32.0*
ISC 07 06:06:03.1±1.1, 24°.4S±0°.2×179°.9E±0°.2, h517km, n10, σ0°.68/10, mb3.7/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.55**	**278**	P	**P**	**06 08 48.4**	**+0.8**
	0.5nm,0.3s,baz=65,slow=12,SNR=3.8						
URZ	**Urewera**	**13.98**	**189**	P	**P**	**06 09 01.7**	**-0.5**
	0.6nm,0.3s,baz=113,slow=23,SNR=2.5						
STKA	**Stephens Creek**	**34.41**	**249**	P	**P**	**06 12 07.0**	**0.0**
	1.1nm,0.4s,baz=94,slow=8.7,SNR=5.4						
ASAR	**Alice Springs**	**41.82**	**261**	P	**P**	**06 13 07.3**	**-0.2**
	0.7nm,0.5s,baz=93,slow=7.4,SNR=11						
WRA	**Warramunga Arr**	**42.24**	**267**	P	**P**	**06 13 10.1**	**-0.8**
	1.9nm,0.5s,baz=102,slow=8.3,SNR=30						
FITZ	**Fitzroy Crossi**	**50.66**	**266**	P	**P**	**06 14 14.5**	**-0.2**
	1.9nm,0.6s,baz=108,slow=8.6,SNR=2.6						
QSPA	**South Pole Qui**	**65.66**	**180**	P	**P**	**06 15 56.8**	**+1.1**
	1.6nm,0.7s,baz=13,slow=7.3,SNR=10						
TXAR	**Lajitas Array**	**90.82**	**58**	P	**P**	**06 18 11.3**	**-0.1**
	0.4nm,0.7s,baz=219,slow=5.4,SNR=6.0						
ARCES	**ARCESS Array B**	**132.38**	**348**	PKP	**PKPdf**	**06 24 17.3**	**-0.3**
	3.6nm,0.9s,baz=55,slow=3.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	**168.64**	**189**	PKPab	**PKPab**	**06 26 24.0**	**-0.5**
	0.4nm,1.0s,baz=197,slow=2.4,SNR=1.6						

IDC 07 06:11:57.5±1.1, 19°.17N×120°.68E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/53, mbtmp3.7/5, MS3.1/1, Ms1 3.1/1, ms1mx2.4/34, Error ellipse: s-maj=67.7km s-min=22.9km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**30.87**	**341**	LR	LR	06 30 35.1	
	comp=Z,31nm,19.6s,baz=18,slow=36						
WRA	**Warramunga Arr**	**41.12**	**160**	P	P	06 19 43.4	-0.1
	1.7nm,0.8s,baz=341,slow=8.8,SNR=8.1						
MKAR	**Makanchi Array**	**41.73**	**320**	P	P	06 19 48.1	-0.2
	0.3nm,0.6s,baz=108,slow=9.3,SNR=3.9						
ASAR	**Alice Springs**	**44.49**	**163**	P	P	06 20 10.6	-0.2
	0.5nm,0.4s,baz=338,slow=7.1,SNR=2.6						
KURBB	**Kurchatov Arra**	**45.73**	**323**	P	P	06 20 20.3	-0.1
	0.6nm,0.3s,baz=122,slow=7.8,SNR=3.2						
ILAR	**Eielson Array**	**73.88**	**26**	P	P	06 23 34.1	+0.1
	0.4nm,1.1s,baz=264,slow=5.1,SNR=1.6						

IDC 07 06:15:00.1±2.9, 30°.23S×138°.50E, h0km, mb1 3.6/4, mb1mx3.4/33, mbtmp3.4/4, ML3.4/4, Error ellipse: s-maj=88.0km s-min=14.9km az=43.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.12**	**122**	Pn	Pn	06 15 50.2	-0.4
	1.5nm,0.3s,baz=298,slow=11,SNR=14						
STKA				Pg	Pg	06 15 58.4	-1.6
	5.6nm,0.3s,baz=295,slow=15,SNR=18						
STKA				Sn	Sn	06 16 28.9	+0.3
	4.1nm,0.3s,baz=314,slow=13,SNR=5.0						
STKA				Lg	Lg	06 16 38.4	
	5.8nm,0.3s,baz=24,slow=14,SNR=4.0						
ASAR	**Alice Springs**	**7.72**	**327**	Pn	Pn	06 16 54.6	+0.7
	0.5nm,0.3s,baz=151,slow=12,SNR=25						
ASAR				Sn	Sn	06 18 18.8	-3.3
	0.0nm,0.3s,baz=152,slow=22,SNR=2.0						
ASAR				Lg	Lg	06 19 11.7	
	baz=154,slow=25,SNR=1.2						
WRA	**Warramunga Arr**	**10.92**	**339**	Pn	Pn	06 17 38.9	+1.2
	0.4nm,0.3s,baz=155,slow=13,SNR=18						
WRA				Sn	Sn	06 19 39.1	-1.5
	0.2nm,0.3s,baz=131,slow=10,SNR=3.5						
FITZ	**Fitzroy Crossi**	**16.82**	**313**	Pn	Pn	06 18 55.2	-2.0
	0.1nm,0.3s,baz=141,slow=10,SNR=1.5						

*IDC **07** 06:24:16.1±1.3, 11°.67N×85°.76W, h0km, mb3.3/3, mb1 3.6/5, mb1mx3.5/34, mbtmp3.3/5, ML3.1/2, Error ellipse: s-maj=69.8km s-min=16.8km az=54.0*
*UCR **07** 06:24:17.6±1.9, 10°.87N×86°.52W, h10km, MW4.3*
*INET **07** 06:24:19.1, 10°.88N×86°.45W, h10km, MW3.9*
ISC 07 06:24:14.9±0.9, 10°.60N±0°.09×86°.58W±0°.06, h10km, n29, σ1s50/32, mb3.3/3, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAJU	**San Juanillo,**	**1.00**	**122**	*eP*	**Pn**	**06 24 36.5**	**+1.5**
GUAI	**GUAI**	**1.10**	**107**	*i* P	**Pn**	**06 24 38.1**	**+1.8**
BUEV	**Buena Vista**	**1.17**	**80**	*i* P	**Pb**	**06 24 36.3**	**-1.0**
GB1A	**Borinquen Arri**	**1.18**	**79**	*i* P	**Pg**	**06 24 37.4**	**-0.2**
GB1A				*i* S	**Sn**	**06 24 53.6**	**-0.2**
GPS2	**Hotel Rincn d**	**1.21**	**83**	*i* P	**Pg**	**06 24 38.1**	**-0.1**
PLVR	**Palo Verde**	**1.23**	**101**	*eP*	**Pg**	**06 24 38.5**	**-0.1**
PLVR				*eS*	**Sn**	**06 24 57.6**	**+2.4**
BUAI	**Buenos Aires**	**1.25**	**77**	*i* P	**Pb**	**06 24 38.6**	**-0.1**
GUAB	**Guayabo de Bag**	**1.33**	**85**	*i* P	**Pg**	**06 24 40.1**	**-0.4**
COLC	**Colonia**	**1.35**	**87**	*i* P	**Pb**	**06 24 40.2**	**-0.2**
HORNC	**Hornillas**	**1.38**	**85**	*i* P	**Pn**	**06 24 40.1**	**-0.2**
CUI	**Cuipilapa**	**1.39**	**87**	*i* P	**Pb**	**06 24 40.8**	**-0.3**
PTEN	**Parque Tenorio**	**1.57**	**86**	*i* P	**Pb**	**06 24 43.9**	**-0.2**
JTS	**Las Juntas de**	**1.63**	**101**	P	**Pg**	**06 24 45.3**	**-0.8**
	29nm,0.3s,baz=19,slow=17,SNR=47						
JTS				Sn	**Sg**	**06 25 07.6**	**+0.3**
	18nm,0.3s,baz=71,slow=2.1,SNR=6.8						
JTS	**Las Juntas de**	**1.63**	**101**	*eP*	**Pg**	**06 24 45.7**	**-0.4**
CASO	**Castillo**	**1.82**	**95**	*i* P	**Pg**	**06 24 48.9**	**-1.0**
ARE1	**Arenal 1**	**1.83**	**94**	⇑*iP*	**Pg**	**06 24 49.3**	**-0.8**
CEDE	**Laguna Cedeo**	**1.84**	**93**	*i* P	**Pb**	**06 24 48.8**	**-0.1**
COVE	**Coope Vega, Sa**	**2.14**	**87**	*eP*	**Pb**	**06 24 52.5**	**-1.3**
HDC	**Heredia**	**2.49**	**103**	*eP*	**Pb**	**06 25 00.1**	**+0.2**
LCR2	**La Lucha 2**	**2.67**	**108**	*eP*	**Pb**	**06 25 02.4**	**-0.6**
RIMA	**Rio Macho**	**2.79**	**107**	*eP*	**Pb**	**06 25 04.3**	**-0.8**
CDM	**Cerro de Muert**	**2.96**	**110**	*eP*	**Pb**	**06 25 07.4**	**-0.6**
RIOS	**Rincon, Osa**	**3.56**	**122**	*eP*	**Pb**	**06 25 14.8**	**-3.2**
APG	**El Apaste**	**5.72**	**320**	Pn	**Pn**	**06 25 41.6**	**+0.4**
	0.3nm,0.3s,baz=135,slow=2.9,SNR=2.8						
CMIG	**Matias Romero**	**10.33**	**310**	Pn	**Pn**	**06 26 45.9**	**+2.6**
	0.3nm,0.3s,baz=122,slow=8.5,SNR=4.7						
CMIG				Sn	**Sn**	**06 28 43.0**	**+3.8**
	0.1nm,0.3s,baz=30,slow=6.5,SNR=1.7						
TXAR	**Lajitas Array**	**24.55**	**322**	P	**P**	**06 29 35.2**	**+0.1**
	0.7nm,0.8s,baz=140,slow=9.7,SNR=8.6						
H06E1	**SOCORRO T-PHAS**	**24.89**	**292**	T	T	06 55 26.1	
	SNR=6.6						
PDAR	**Pinedale Array**	**37.80**	**332**	P	**P**	**06 31 29.9**	**-1.9**
	0.2nm,0.4s,baz=125,slow=11,SNR=2.0						
YKA	**Yellowknife Ar**	**55.62**	**345**	P	**P**	**06 33 47.2**	**-3.5**
	0.2nm,0.7s,baz=142,slow=7.0,SNR=4.4						

*NEIC **07** 06:34:34.5±1.5, 58°.92S×26°.2W±0°.2, h137km±7km, mb4.3/19, Error ellipse: s-maj=19.9km s-min=12.3km az=201.0*
*IDC **07** 06:34:34.1±0.6, 58°.89S×26°.35W, h132km±5km, mb3.9/7, mb1 4.0/8, mb1mx3.7/22, mbtmp4.3/8, Error ellipse: s-maj=22.6km s-min=13.5km az=88.0*
ISC 07 06:34:27.9±0.5, 58°.92S±0°.08×26°.1W±0°.1, h70km, n38, σ3s32/42, mb4.5/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.38**	**304**	Pn	Pn	06 36 19.2	+6.4
VNA1	**Neumayer--Stat**	**13.92**	**155**	P	**P**	**06 37 47.7**	**+0.3**
VNA3	**Neumayer Olymp**	**14.09**	**158**	P	**P**	**06 37 49.4**	**0.0**
VNA2	**Neumayer--Watz**	**14.32**	**155**	P	**P**	**06 37 52.7**	**+0.8**
	baz=311,slow=14						
SNAA	**Sanae**	**15.89**	**153**	P	**P**	**06 38 10.9**	**+1.6**
SNAA	**Sanae**	**15.89**	**153**	P	**P**	**06 38 10.6**	**+1.3**
	1.1nm,0.3s,baz=319,slow=10,SNR=20						
SNAA				S	**Sn**	**06 40 54.5**	**-7.5**
	0.4nm,0.3s,baz=213,slow=22,SNR=3.1						
SNAA	**Sanae**	**15.89**	**153**	P	**P**	**06 38 10.8**	**+1.5**
SNAA				IAmb	IAmb	06 38 12.9	
	comp=Z,11nm,0.8s						
BELA	**Belgrano 2**	**19.26**	**185**	P	**Pn**	**06 38 47.0**	**-1.0**
BELA				IAmb	IAmb	06 38 51.5	
	comp=Z,8.5nm,1.0s						
EFI	**East Falkland**	**19.45**	**278**	P	**Pn**	**06 38 49.3**	**-1.0**
QSPA	**South Pole Qui**	**31.32**	**180**	P	**P**	**06 40 41.9**	**+0.6**
	comp=Z,4.1nm,0.5s,baz=213,slow=1.8,SNR=50						
QSPA				pP	**sP**	**06 41 11.3**	**+6.2**
	comp=Z,1.6nm,0.6s,baz=205,slow=5.1,SNR=2.0						
QSPA	**South Pole Qui**	**31.32**	**180**	P	**P**	**06 40 41.3**	**0.0**
QSPA				IAmb	IAmb	06 40 42.4	
	comp=Z,5.8nm,0.7s						
PLCA	**Paso Flores**	**33.17**	**283**	P	**P**	**06 40 57.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=163,slow=5.4,SNR=3.5						
PEL	**Peldehue**	**39.19**	**291**	P	**P**	**06 41 48.8**	**0.0**
MT02	**Curacav**	**39.31**	**291**	P	**P**	**06 41 49.2**	**-0.6**
MT02				IAmb	IAmb	06 41 50.0	
	comp=Z,12nm,1.4s						
CO03	**El Pedregal**	**41.08**	**293**	P	**P**	**06 42 04.8**	**+0.2**
CO03				IAmb	IAmb	06 42 07.5	
	comp=Z,6.5nm,1.4s						
AC04	**Llanos de Chal**	**43.47**	**295**	P	**P**	**06 42 23.9**	**0.0**
AC04				IAmb	IAmb	06 42 43.3	
	comp=Z,9.5nm,1.1s						
AC02	**Maricunga**	**43.73**	**298**	P	**P**	**06 42 26.8**	**+0.2**
VNDA	**Vanda**	**43.73**	**182**	P	**P**	**06 42 25.9**	**+0.5**
	comp=Z,3.4nm,0.6s,baz=184,slow=6.9,SNR=24						
VNDA				pP	**sP**	**06 42 56.2**	**+6.4**
	comp=Z,1.2nm,0.7s,baz=146,slow=6.0,SNR=3.3						
VNDA	**Vanda**	**43.73**	**182**	P	**P**	**06 42 26.4**	**+1.0**
VNDA				IAmb	IAmb	06 42 27.0	
	comp=Z,3.8nm,0.8s						
GO02	**Mina Guanaco**	**45.38**	**299**	P	**P**	**06 42 38.1**	**-1.4**
GO02				IAmb	IAmb	06 42 49.4	
	comp=Z,11nm,1.4s						
LVC	**Limon Verde**	**47.28**	**301**	P	**P**	**06 42 53.8**	**-0.7**
PB07	**IPOC Station P**	**48.49**	**301**	P	**P**	**06 43 02.4**	**-1.2**
MNMC	**Minye Minye**	**50.64**	**303**	P	**P**	**06 43 19.5**	**-0.6**
MNMC				IAmb	IAmb	06 43 20.7	
	comp=Z,4.6nm,0.7s						
CASY	**Casey**	**51.00**	**159**	P	**P**	**06 43 22.6**	**+0.7**
CASY				IAmb	IAmb	06 43 23.9	
	comp=Z,10.0nm,1.4s						
H10N1	**ASCENSION HYDR**	**51.72**	**15**	T	T	07 39 21.6	
	baz=198						
H10N3	**ASCENSION HYDR**	**51.73**	**15**	T	T	07 39 34.3	
	baz=198,slow=74						
H10N2	**ASCENSION HYDR**	**51.74**	**15**	T	T	07 39 23.4	
	baz=198,slow=74						
LPAZ	**La Paz**	**52.54**	**306**	P	**P**	**06 43 33.5**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=94,slow=5.8,SNR=9.5						
LPAZ				pP	**sP**	**06 44 03.0**	**+3.5**
	comp=Z,0.6nm,0.6s,baz=153,slow=2.3,SNR=1.8						
LPAZ	**La Paz**	**52.54**	**306**	P	**P**	**06 43 33.8**	**-0.9**
DBIC	**Dimbokro**	**67.56**	**23**	P	**P**	**06 45 16.3**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=168,slow=5.4,SNR=6.5						
DBIC				pP	**PcP**	**06 45 48.8**	**+5.4**
	comp=Z,3.8nm,1.1s,baz=150,slow=6.4,SNR=1.9						
TOA0	**Torodi Ar. Sit**	**75.29**	**28**	P	**P**	**06 46 03.7**	**+0.5**
TOA0				IAmb	IAmb	06 46 04.6	
	comp=Z,3.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.29**	**28**	P	**P**	**06 46 03.6**	**+0.4**
	comp=Z,3.4nm,0.6s,baz=198,slow=6.2,SNR=23						
TORD				pP	**sP**	**06 46 35.2**	**+6.5**
	comp=Z,1.3nm,0.6s,baz=195,slow=6.6,SNR=3.2						
ASAR	**Alice Springs**	**96.07**	**162**	P	**P**	**06 47 45.8**	**-1.8**
	comp=Z,1.1nm,0.6s,baz=182,slow=4.0,SNR=14						
ARCES	**ARCESS Array B**	**133.38**	**22**	PKP	**PKPdf**	**06 53 32.2**	**-1.9**
	comp=Z,2.1nm,0.8s,baz=224,slow=2.5,SNR=1.7						
ARCES				SKPbc	**SKPbc**	**06 56 47.0**	**-8.9**
	comp=Z,2.8nm,0.9s,baz=207,slow=1.0,SNR=5.0						
YKA	**Yellowknife Ar**	**138.67**	**315**	PKP	**PKPdf**	**06 53 41.6**	**-2.5**
	comp=Z,0.2nm,0.5s,baz=124,slow=2.6,SNR=6.0						
YKA				SKP	**SKPbc**	**06 57 02.7**	**-10**
	comp=Z,0.2nm,0.7s,baz=128,slow=2.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**143.03**	**67**	PKP	PKPbc	06 53 50.0	+0.7
	comp=Z,0.4nm,0.3s,baz=250,slow=4.3,SNR=2.3						
SONM	**Songino Array**	**150.20**	**91**	PKPbc	**PKPbc**	**06 54 08.1**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=226,slow=3.5,SNR=3.1						
SONM				pPKPbc	**sPKPab**	**06 54 42.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=259,slow=3.7,SNR=1.5						
ILAR	**Eielson Array**	**152.41**	**307**	PKPbc	**PKPbc**	**06 54 12.3**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=126,slow=6.3,SNR=4.9						

*IDC **07** 07:19:20.9±1.1, 23°.15N×121°.02E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.5/27, mbtmp3.4/6, MS2.7/2, Ms1 2.8/2, ms1mx2.5/22, Error ellipse: s-maj=71.4km s-min=22.4km az=67.0*
*JMA **07** 07:19:23.3±0.1, 23°.10N×120°.92E, h0km, M3.8*
*ASIES **07** 07:19:23.2, 23°.05N×120°.91E, h13km, MW3.7*
*TAP **07** 07:19:23.8, 23°.06N×120°.91E, h6km, ML4.1, C*
ISC 07 07:19:23.9±0.7, 23°.08N±0°.01×120°.92E±0°.01, h14km±4km, n151, σ1s16/244, mb3.4/6, 24C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.14**	**40**	*i* P	**Pg**	**07 19 27.5**	**-0.2**
	baz=40						
ELDTW				*i* S	**Sg**	**07 19 29.7**	**-0.5**
	baz=40						
STYH	**Taoyuan**	**0.16**	**303**	⇑*iP*	**Pg**	**07 19 27.9**	**+0.1**
	baz=313						
STYH				*i* S	**Sg**	**07 19 30.3**	**-0.2**
	baz=313						
STYT	**Tauyuan**	**0.17**	**298**	*i* P	**Pg**	**07 19 27.8**	**-0.3**
	baz=308						
STYT				S	**Sg**	**07 19 30.3**	**-0.6**
	baz=308						
LONT	**Longtian**	**0.26**	**132**	⇑*iP*	**Pb**	**07 19 29.7**	**-0.7**
	baz=128						
LONT				*i* S	**Sg**	**07 19 33.8**	**+0.6**
	baz=128						
SLGT	**Liugui**	**0.27**	**251**	⇑*iP*	**Pg**	**07 19 29.6**	**0.0**
	baz=255						
SLGT				*i* S	**Sg**	**07 19 33.4**	**-0.1**
	baz=255						
TWG	**Pinlang**	**0.29**	**152**	⇓*iP*	**Pg**	**07 19 30.2**	**+0.2**
	baz=147						
TWG				*i* S	**Sg**	**07 19 34.3**	**+0.1**
	baz=147						
TWGBT	**Beinan**	**0.30**	**151**	⇓*iP*	**Pg**	**07 19 30.2**	**+0.1**
	baz=147						
TWGBT				*i* S	**Sg**	**07 19 34.4**	**0.0**
	baz=147						
SGST	**Jiashian**	**0.31**	**270**	⇑*iP*	**Pg**	**07 19 29.9**	**-0.5**
	baz=274						
SGST				*eS*	**Sg**	**07 19 35.0**	**+0.3**
	baz=274						
WTP	**Ta-pu**	**0.33**	**300**	⇑*iP*	**Pb**	**07 19 31.4**	**-0.1**
	baz=305						
WTP				S	**Sb**	**07 19 36.5**	**-0.2**
	baz=305						
TPUB	**Ta-pu**	**0.34**	**309**	⇑*iP*	**Pb**	**07 19 31.8**	**0.0**
	baz=313						
TPUB				*i* S	**Sb**	**07 19 37.2**	**+0.1**
	baz=313						
FULB	**Fuli**	**0.36**	**71**	⇑*iP*	**Pb**	**07 19 32.4**	**+0.3**
	baz=68						
FULB				*i* S	**Sb**	**07 19 38.2**	**+0.6**
	baz=68						
EDH	**Donghe**	**0.37**	**107**	⇑*iP*	**Pb**	**07 19 32.4**	**+0.2**
	baz=112						
EDH				*eS*	**Sb**	**07 19 38.9**	**+1.1**
	baz=112						
CHN1	**Nanshi**	**0.38**	**286**	⇑*iP*	**Pb**	**07 19 32.6**	**+0.3**
	baz=290						
CHN1				*eS*	**Sb**	**07 19 37.6**	**-0.4**
	baz=290						
TTN	**Taitung**	**0.39**	**147**	*eP*	**Pg**	**07 19 31.9**	**+0.3**
	baz=144						
TTN				*eS*	**Sb**	**07 19 39.2**	**+0.9**
	baz=144						
CHN4	**Tsaushan**	**0.40**	**312**	⇑*iP*	**Pb**	**07 19 33.1**	**+0.3**
	baz=325						
CHN4				*eS*	**Sb**	**07 19 39.7**	**+0.9**
	baz=325						
YUS	**Yu-Shan**	**0.41**	**4**	⇑*iP*	**Pb**	**07 19 32.5**	**-0.6**
	baz=15						
YUS				*eS*	**Sb**	**07 19 37.9**	**-1.5**
	baz=15						
CHKT	**Chengkung**	**0.41**	**88**	⇑*iP*	**Pb**	**07 19 33.6**	**+0.7**
	baz=85						
CHKT				*eS*	**Sb**	**07 19 40.3**	**+1.4**
	baz=85						
SNST	**Tainan City**	**0.41**	**289**	⇑P	**Pb**	**07 19 33.6**	**+0.7**
	baz=293						
SNST				*eS*	**Sb**	**07 19 40.8**	**+1.7**
	baz=293						
SSD	**Sandimen**	**0.43**	**219**	⇑*iP*	**Pg**	**07 19 31.9**	**-0.5**
	baz=218						
SSD				*i* S	**Sg**	**07 19 37.1**	**-1.1**
	baz=218						
SCST	**Cishan**	**0.44**	**244**	⇑P	**Pb**	**07 19 33.3**	**0.0**
	baz=246						
SCST				*eS*	**Sb**	**07 19 39.4**	**-0.4**
	baz=246						
TWF1	**Yuli**	**0.44**	**52**	⇑*iP*	**Pb**	**07 19 33.1**	**-0.3**
	baz=51						
TWF1				S	**Sg**	**07 19 38.3**	**-0.3**
	baz=51						
TWK	**Hsinying**	**0.44**	**295**	⇑*iP*	**Pb**	**07 19 33.9**	**+0.5**
	baz=299						
TWK				*eS*	**Sb**	**07 19 40.8**	**+1.0**
	baz=299						
ALS	**Alishan**	**0.44**	**346**	*i* P	**Pb**	**07 19 33.3**	**-0.2**
	baz=348						
ALS				*eS*	**Sb**	**07 19 39.8**	**-0.4**
	baz=348						
EYUL	**Yuli**	**0.45**	**54**	⇑P	**Pb**	**07 19 33.5**	**-0.1**
	baz=52						
EYUL				*eS*	**Sb**	**07 19 39.0**	**-1.1**
	baz=52						
TSMG	**Majia**	**0.45**	**214**	⇑*eP*	**Pg**	**07 19 32.3**	**-0.6**
	baz=214						
TSMG				S	**Sg**	**07 19 37.7**	**-1.3**
	baz=214						
YULB	**Yu-li**	**0.46**	**48**	⇑*iP*	**Pb**	**07 19 33.3**	**-0.6**
	baz=46						
YULB				*i* S	**Sg**	**07 19 39.2**	**-0.2**
	baz=46						
ECL	**Taimali**	**0.48**	**176**	*eP*	**Pg**	**07 19 33.1**	**-0.3**
	baz=174						
ECL				*eS*	**Sg**	**07 19 39.0**	**-0.9**
	baz=174						
CHN3	**Shinhua**	**0.51**	**269**	⇑*eP*	**Pn**	**07 19 36.7**	**0.0**
	baz=272						
CHN3				*eS*	**Sn**	**07 19 45.1**	**-0.2**
	baz=272						
TWM1	**Shoushan**	**0.53**	**241**	*eP*	**Pb**	**07 19 36.0**	**+1.1**
	baz=241						
SGLT	**Jiouru**	**0.53**	**228**	*eP*	**Pb**	**07 19 34.8**	**-0.1**
	baz=222						
SGLT				*eS*	**Sb**	**07 19 42.9**	**+0.5**
	baz=222						
MASBT	**Mashibuluo**	**0.54**	**210**	⇑*iP*	**Pg**	**07 19 33.8**	**-0.6**
	baz=206						
MASBT				*eS*	**Sg**	**07 19 40.2**	**-1.5**
	baz=206						
CHN5	**Tsauling**	**0.56**	**337**	⇓*iP*	**Pb**	**07 19 36.0**	**+0.5**
	baz=349						
CHN5				*eS*	**Sb**	**07 19 44.6**	**+1.2**
	baz=349						
EHY	**Hungye**	**0.56**	**41**	*eP*	**Pb**	**07 19 35.1**	**-0.4**
	baz=40						
EHY				*eS*	**Sb**	**07 19 42.5**	**-0.9**
	baz=40						
TSPT	**Pingtung City**	**0.56**	**224**	*eP*	**Pb**	**07 19 35.7**	**+0.2**
	baz=221						
WHYT	**Xinyi Township**	**0.61**	**354**	*eP*	**Pb**	**07 19 36.7**	**+0.3**
	baz=2.0						
WHYT				*eS*	**Sb**	**07 19 45.3**	**+0.3**
	baz=2.0						
CHY	**Chiayi**	**0.62**	**312**	*eP*	**Pn**	**07 19 37.5**	**-0.6**
	baz=315						
CHY				*eS*	**Sn**	**07 19 48.2**	**+0.4**
	baz=315						
HGSD	**Ruisui**	**0.62**	**48**	⇑*iP*	**Pb**	**07 19 36.7**	**+0.3**
	baz=40						
HGSD				S	**Sn**	**07 19 46.9**	**-0.9**
	baz=40						
SNJT	**Kaohsiung City**	**0.63**	**239**	*eP*	**Pn**	**07 19 39.2**	**+0.8**
	baz=235						
SNJT				*eS*	**Sn**	**07 19 49.5**	**+1.3**
	baz=235						
TAI1	**Yung-k'ang**

SMLT	**Sun Moon Lake**	**0.80**	**359**	P		**Pb**	07 19 40.2	+0.6
	baz=9.0							
SMLT				*eS*		**Sn**	07 19 52.5	-0.1
	baz=9.0							
WNT	**Mingjian**	**0.82**	**345**	*eP*		**Pn**	07 19 41.5	+0.5
	baz=345							
WNT				*eS*		**Sn**	07 19 54.3	+1.4
	baz=345							
WSF	**Szhu**	**0.85**	**311**	*eP*		**Pn**	07 19 41.4	0.0
	baz=312							
WSF				*eS*		**Sn**	07 19 55.2	+1.7
	baz=312							
WNT1	**Nantou City**	**0.85**	**345**	*eP*		**Pn**	07 19 42.0	+0.6
	baz=344							
WNT1				*eS*		**Sn**	07 19 55.6	+1.9
	baz=344							
ESL	**Shilin**	**0.87**	**33**	*eP*		**Pb**	07 19 40.7	0.0
	baz=39							
ESL				*eS*		**Sb**	07 19 53.2	+1.0
	baz=39							
SLIU	**Shizi**	**0.87**	**187**	*eP*		**Pg**	07 19 40.4	-0.3
	baz=180							
SLIU				*eS*		**Sg**	07 19 52.5	+0.4
	baz=180							
WLCH	**Liuqiu**	**0.88**	**215**	*eP*		**Pn**	07 19 45.0	+3.2
	baz=214							
WLCH				*eS*		**Sn**	07 19 57.3	+2.9
	baz=214							
TWP	**Hsiaoliuchiu**	**0.90**	**215**	*eP*		**Pn**	07 19 45.1	+3.1
	baz=214							
WPL	**Puli Township**	**0.93**	**2**	*eP*		**Pn**	07 19 42.1	-0.3
	baz=10.0							
WPL				*eS*		**Sn**	07 19 56.6	+1.1
	baz=10.0							
DPDB	**Guoxing**	**0.95**	**0**	*eP*		**Pn**	07 19 43.0	+0.2
	baz=9.0							
DPDB				*eS*		**Sn**	07 19 57.0	+0.9
	baz=9.0							
WRL	**Guolierlin Hig**	**0.96**	**329**	*eS*		**Sn**	07 19 58.6	+2.3
	baz=329							
WMLT	**Mailiao**	**0.96**	**318**	*eP*		**Pn**	07 19 43.6	+0.6
	baz=319							
WMLT				*eS*		**Sn**	07 19 57.8	+1.4
	baz=319							
WTCT	**Ta-ch'eng**	**0.97**	**323**	*eP*		**Pn**	07 19 44.4	+1.3
	baz=324							
WTCT				*eS*		**Sn**	07 19 58.7	+2.0
	baz=324							
WWF	**Wufeng**	**0.98**	**348**	*eP*		**Pn**	07 19 44.0	+0.8
	baz=347							
WWF				*eS*		**Sn**	07 19 59.1	+2.3
	baz=347							
CHGB	**Renai**	**1.00**	**13**	*eP*		**Pb**	07 19 42.8	-0.3
	baz=16							
TCU	**Taichung**	**1.08**	**348**	P		**Pn**	07 19 46.6	+2.0
	baz=347							
TCU				*eS*		**Sn**	07 20 01.9	+2.5
	baz=347							
HEN	**Hengchun**	**1.08**	**189**	*eP*		**Pn**	07 19 45.5	+1.0
	baz=171							
HWA	**Hwalien**	**1.09**	**35**	*eP*		**Pn**	07 19 46.2	+1.5
	baz=43							
HWA				*eS*		**Sn**	07 20 01.4	+1.9
	baz=43							
WHF	**Hehuan Shan**	**1.10**	**17**	*eP*		**Pb**	07 19 44.7	-0.3
	baz=7.0							
WHF				*eS*		**Sn**	07 20 02.3	+1.8
	baz=7.0							
TWK1	**Hengchun**	**1.14**	**185**	*eP*		**Pn**	07 19 46.2	+0.9
	baz=183							
TWKBT	**Hengchun**	**1.14**	**185**	*eP*		**Pb**	07 19 45.9	+0.5
	baz=185							
TWKBT				*eS*		**Sg**	07 20 00.7	-0.1
	baz=185							
TWD	**Chiawan**	**1.17**	**32**	*eP*		**Pb**	07 19 45.7	-0.2
	baz=49							
WDGT	**Dungji**	**1.17**	**279**	*eP*		**Pn**	07 19 46.5	+0.7
	baz=282							
WDGT				*eS*		**Sn**	07 20 02.8	+1.2
	baz=282							
TSEB	**Hengchuen, Pin**	**1.18**	**181**	*eP*		**Pn**	07 19 46.9	+1.0
	baz=187							
TDCB	**Techi**	**1.19**	**11**	*eP*		**Pn**	07 19 47.2	+1.1
	baz=20							
TDCB				*eS*		**Sn**	07 20 04.5	+2.3
	baz=20							
LAY	**Lan-yu**	**1.19**	**151**	*eP*		**Pg**	07 19 44.1	-2.7
	baz=148							
WHP	**Taichung City**	**1.19**	**1**	*eP*		**Pn**	07 19 47.8	+1.6
	baz=8.0							
WHP				*eS*		**Sn**	07 20 05.8	+3.6
	baz=8.0							
FUSS	**Fushou**	**1.20**	**14**	*eP*		**Pb**	07 19 46.4	-0.1
	baz=12							
FUSS				*eS*		**Sn**	07 20 04.6	+2.0
	baz=12							
ETLH	**Xiulin Townshi**	**1.23**	**25**	*eP*		**Pn**	07 19 47.3	+0.5
	baz=34							
ETLH				*eS*		**Sn**	07 20 04.8	+1.6
	baz=34							
NACB	**Ninganchiao**	**1.25**	**29**	*eP*		**Pg**	07 19 46.8	-1.2
	baz=41							
NACB				*eS*		**Sn**	07 20 04.5	+1.0
	baz=41							
WDJ	**Dajia District**	**1.29**	**349**	*eP*		**Pg**	07 19 49.8	+1.1
	baz=346							
WDJ				*eS*		**Sn**	07 20 08.9	+4.5
	baz=346							
PHUB	**P'eng-hu**	**1.31**	**289**	P		**Pn**	07 19 48.1	+0.4
	baz=292							
PHUB				*eS*		**Sn**	07 20 05.7	+0.7
	baz=292							
NSY	**Sanyi**	**1.34**	**354**	*eP*		**Pg**	07 19 50.9	+1.3
	baz=351							
NSY				*eS*		**Sn**	07 20 09.9	+4.2
	baz=351							
PNG	**Penghu**	**1.34**	**291**	*eP*		**Pg**	07 19 49.1	-0.7
	baz=294							
PNG				*eS*		**Sn**	07 20 07.0	+1.1
	baz=294							
NNSB	**Datong**	**1.41**	**17**	*eP*		**Pg**	07 19 50.1	-0.8
	baz=16							
NNSB				*eS*		**Sn**	07 20 11.3	+3.8
	baz=16							
NNSH	**Datong**	**1.41**	**17**	*eP*		**Pg**	07 19 50.5	-0.4
	baz=9.0							
NNSH				*eS*		**Sn**	07 20 10.8	+3.2
	baz=9.0							
NNS	**Nan Shan**	**1.41**	**17**	P		**Pg**	07 19 50.8	-0.3
	baz=15							
NNS				*eS*		**Sn**	07 20 10.5	+2.7
	baz=15							
NMLH	**Miaoli**	**1.45**	**355**	*eP*		**Pg**	07 19 51.9	+0.1
	baz=352							
NMLH				*eS*		**Sg**	07 20 13.7	+3.0
	baz=352							
ENA	**Nanau**	**1.54**	**29**	*eP*		**Pb**	07 19 51.7	-0.4
	baz=24							
ENA				*eS*		**Sg**	07 20 12.5	-0.9
	baz=24							
NSTT	**Nanjuang**	**1.54**	**3**	*eP*		**Pg**	07 19 53.4	-0.2
	baz=349							
NSTT				*eS*		**Sg**	07 20 15.4	+1.8
	baz=349							
LIOB	**Emei**	**1.56**	**3**	*eP*		**Pg**	07 19 53.5	-0.3
	baz=346							
EWUT	**Wuta**	**1.57**	**30**	*eP*		**Pn**	07 19 51.7	+0.5
	baz=45							
NDT	**Datong Townshi**	**1.61**	**20**	*eP*		**Pg**	07 19 54.3	-0.5
	baz=25							
NDT				*eS*		**Sg**	07 20 15.7	0.0
	baz=25							
YHNB	**Yeheng**	**1.64**	**15**	*eP*		**Pg**	07 19 54.6	-0.6
	baz=9.0							
YHNB				*eS*		**Sg**	07 20 16.6	0.0
	baz=9.0							
NSK	**Sanguang**	**1.64**	**14**	*eP*		**Pg**	07 19 55.5	+0.1
	baz=9.0							
NSK				*eS*		**Sg**	07 20 17.5	+0.9
	baz=9.0							
HSN1	**Hsinchu**	**1.69**	**3**	*eP*		**Pg**	07 19 55.9	-0.5
	baz=6.0							
NDS	**Dongshan**	**1.71**	**25**	*eP*		**Pg**	07 19 56.5	-0.2
	baz=36							
NDS				*eS*		**Sg**	07 20 18.0	-0.9
	baz=36							
TWC	**Suao**	**1.74**	**29**	*eP*		**Pg**	07 19 56.0	-1.3
	baz=24							
TWC				*eS*		**Sg**	07 20 18.1	-1.8
	baz=24							
TWE	**Neicheng**	**1.77**	**23**	*eP*		**Pg**	07 19 57.6	-0.2
	baz=32							
TWE				*eS*		**Sg**	07 20 21.8	+1.0
	baz=32							
ILA	**Ilan**	**1.84**	**24**	*eP*		**Pg**	07 19 58.1	-1.0
	baz=41							
NCUH	**Zhongli**	**1.89**	**7**	*eP*		**Pg**	07 20 00.8	+0.6
	baz=9.0							
NTC	**Toucheng**	**1.95**	**25**	*eP*		**Pg**	07 20 01.0	-0.3
	baz=34							
NTC				*eS*		**Sg**	07 20 25.0	-1.7
	baz=34							
NHDH	**Xindian Distri**	**1.95**	**16**	*eP*		**Pg**	07 20 00.8	-0.6
	baz=11							
NHDH				*eS*		**Sg**	07 20 26.8	+0.1
	baz=11							
TAP	**Taipei**	**2.02**	**15**	*eP*		**Pg**	07 20 02.1	-0.5
	baz=17							
TIPB	**Shuangxi**	**2.06**	**24**	*eP*		**Pg**	07 20 01.6	-1.7
	baz=33							
TIPB				*eS*		**Sg**	07 20 29.3	-0.7
	baz=33							
TWS1	**Kuangyinshan**	**2.06**	**13**	*eP*		**Pg**	07 20 02.7	-0.7
	baz=14							
NTST	**Danshui**	**2.13**	**13**	*eP*		**Pg**	07 20 03.9	-0.8
	baz=15							
NWF	**Wu-fen Shan**	**2.13**	**21**	*eP*		**Pb**	07 20 01.9	-0.4
	baz=40							
WFSB	**Wu-fen Shan**	**2.13**	**21**	*eP*		**Pb**	07 20 01.8	-0.4
	baz=40							
YM04	**YM04**	**2.14**	**15**	*eP*		**Pb**	07 20 01.7	-0.6
	baz=1.0							
YM01	**YM01**	**2.14**	**16**	*eP*		**Pb**	07 20 02.0	-0.4
	baz=18							
YM10	**YM10**	**2.15**	**16**	*eP*		**Pb**	07 20 01.9	-0.6
	baz=18							
TWB1	**Santiao Chiao**	**2.15**	**27**	*eP*		**Pb**	07 20 03.0	+0.4
	baz=41							
YM11	**YM11**	**2.16**	**16**	*eP*		**Pb**	07 20 02.5	-0.2
	baz=18							
YM03	**YM03**	**2.16**	**15**	*eP*		**Pg**	07 20 04.3	-1.0
	baz=17							
ANP	**Anpu**	**2.17**	**15**	*eP*		**Pb**	07 20 03.0	+0.1
	baz=16							
YM08	**YM08**	**2.18**	**16**	*eP*		**Pb**	07 20 02.0	-1.2
	baz=18							
TNOU	**National Taiwa**	**2.20**	**21**	*eP*		**Pg**	07 20 06.4	+0.3
	baz=39							
VWUC	**VWUC**	**2.33**	**325**	*eP*		**Pn**	07 20 02.0	+0.3
	baz=329							
YOJ	**Yonaguni jima**	**2.36**	**54**	P		**Pn**	07 20 03.1	+1.0
YOJ				*eS*		**Sn**	07 20 33.1	+2.3
YOJ	**Yonaguni jima**	**2.36**	**54**	*eP*		**Pn**	07 20 03.2	+1.1
	baz=55							
PTMZ	**Houxiangcun**	**2.55**	**320**	*eP*		**Pn**	07 20 05.3	+0.6
	baz=325							
KNM	**Kinmen**	**2.64**	**301**	*eP*		**Pb**	07 20 08.7	-2.2
	baz=303							
KNMB	**Chin-men Tao**	**2.70**	**301**	*eP*		**Pn**	07 20 07.1	+0.3
	baz=305							
HATJ	**Hateruma jima**	**2.82**	**69**	P		**Pn**	07 20 10.0	+1.5
HATJ				*eS*		**Sn**	07 20 42.3	+0.1
QZH	**Quanzhou**	**2.82**	**311**	*ePn*		**Pn**	07 20 09.0	+0.5
QZH				Sn		**Sn**	07 20 42.4	+0.1
QZH				smax	smax			
	comp=N,160nm,0.5s							
QZH				smax	smax			
	comp=E,91nm,0.4s							
IRIF	**Iriomote-Funau**	**2.86**	**64**	P		**Pn**	07 20 10.7	+1.7
IRIF				S		**Sn**	07 20 44.4	+1.1
ZPLA	**Ao Xicun**	**3.03**	**287**	*eP*		**Pn**	07 20 12.9	+1.6
	baz=290							
JKRS	**Kuro-shima**	**3.06**	**67**	P		**Pn**	07 20 12.9	+1.2
JKRS				*eS*		**Sn**	07 20 49.2	+1.1
MATB	**Ma-tsu**	**3.18**	**344**	*eP*		**Pn**	07 20 13.9	+0.4
	baz=347							
MSUT	**Lienchiang**	**3.21**	**344**	*eP*		**Pn**	07 20 14.5	+0.8
	baz=347							
JIJ	**Ishigaki jima**	**3.22**	**66**	P		**Pn**	07 20 14.9	+1.0
JIJ				*eS*		**Sn**	07 20 51.7	-0.4
AXDP	**Jialang**	**3.25**	**304**	*eP*		**Pn**	07 20 14.8	+0.4
	baz=308							
JISG	**Ishigakijimahi**	**3.45**	**64**	P		**Pn**	07 20 17.5	+0.4
JISG				S		**Sn**	07 20 57.1	-0.6
MHZQ	**Yeshan**	**3.46**	**331**	*eP*		**Pn**	07 20 18.3	+1.0
	baz=336							
XPSS	**Dashiqiu**	**3.89**	**350**	*eP*		**Pn**	07 20 23.8	+0.6
	baz=354							
XAN	**Xi'an**	**15.16**	**319**	P		**Pn**	07 22 58.6	+1.0
XAN				pmax	pmax			
	comp=Z,6.0nm,2.4s							
MJAR	**Matsushiro Arr**	**20.08**	**44**	LR		LR	07 31 20.5	
	comp=Z,20nm,21.2s,baz=200,slow=36							
CMAR	**Chiang Mai Arr**	**21.05**	**261**	LR		LR	07 32 27.5	
	comp=Z,23nm,18.1s,baz=22,slow=37							
SONM	**Songino Array**	**27.29**	**338**	P		**P**	07 25 05.6	-2.4
	comp=Z,0.2nm,0.4s,baz=143,slow=10.0,SNR=1.6							
MKAR	**Makanchi Array**	**38.97**	**317**	P		**P**	07 26 49.4	-0.1
	comp=Z,0.3nm,0.7s,baz=119,slow=8.4,SNR=2.9							
ZALV	**Zalesovo Beam**	**41.04**	**328**	P		**P**	07 27 05.9	-0.7
	comp=Z,1.2nm,0.7s,baz=114,slow=7.0,SNR=5.1							
H11N1	**WAKE ISLAND Hy**	**42.80**	**85**	T		T	08 12 34.3	
	baz=283,slow=75,SNR=5.2							
H11N2	**WAKE ISLAND Hy**	**42.80**	**85**	T		T	08 12 37.9	
	baz=283,slow=75,SNR=6.5							
H11N3	**WAKE ISLAND Hy**	**42.82**	**85**	T		T	08 12 42.4	
	baz=283,slow=75,SNR=7.0							
WRA	**Warramunga Arr**	**44.72**	**162**	P		**P**	07 27 35.7	-1.1
	comp=Z,0.4nm,0.7s,baz=343,slow=8.4,SNR=3.1							
ASAR	**Alice Springs**	**48.15**	**164**	P		**P**	07 28 03.5	-0.2
	comp=Z,0.3nm,0.6s,baz=338,slow=6.8,SNR=2.4							
YKA	**Yellowknife Ar**	**84.07**	**23**	P		**P**	07 31 53.2	-0.7
	comp=Z,0.1nm,0.5s,baz=312,slow=4.5,SNR=6.5							

*IDC **07** 07:37:59.3±1.1,21°.46S×68°.19W,h118km±14km,mb3.2/2, mb1 3.3/5,mb1mx3.2/42,mbtmp3.6/5,Error ellipse: s-maj=40.4km s-min=17.1km az=113.0*

*GUC **07** 07:38:00.1±0.6,21°.39S×68°.51W,h126km±4km,ML3.5*

ISC 07 07:37:59.2±0.9,21°.36S±0°.04×68°.45W±0°.08,h121km±9km, n18,σ1s89/33,10C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.86**	**239**	*i*P		**Pn**	**07 38 20.7**	**+0.5**
PB09				*i* S		**Sn**	**07 38 37.1**	**+1.0**
PB01	**IPOC Station P**	**1.02**	**288**	*i*P		**Pn**	**07 38 21.6**	**0.0**
PB01				*i* S		**Sn**	**07 38 38.4**	**-0.2**
LVC	**Limon Verde**	**1.32**	**199**	P		**Pn**	**07 38 25.2**	**+0.2**
	23nm,0.3s,baz=26,slow=9.1,SNR=333							
LVC				S		**Sn**	**07 38 44.2**	**-0.5**
	32nm,0.3s,baz=212,slow=20,SNR=49							
PB08	**IPOC Station P**	**1.38**	**331**	*i*P		**Pn**	**07 38 27.0**	**+1.2**
PB08				*i* S		**Sn**	**07 38 47.5**	**+1.6**
PB07	**IPOC Station P**	**1.39**	**254**	*i*P		**Pn**	**07 38 25.6**	**0.0**
PB07				*i* S		**Sn**	**07 38 45.4**	**-0.3**
PB07				IAML			07 38 47.3	
	comp=N,738nm,0.2s							
PB03	**IPOC Station P**	**1.39**	**240**	*i*P		**Pn**	**07 38 25.7**	**+0.1**
PB03				*e*S		**Sn**	**07 38 45.3**	**-0.5**
PB03				IAML			07 38 47.9	
	comp=E,664nm,0.5s							
PB06	**IPOC Station P**	**1.70**	**218**	*i*P		**Pn**	**07 38 29.4**	**+0.1**
PB06				*i* S		**Sn**	**07 38 51.3**	**-0.8**
PB06				IAML			07 38 53.0	
	comp=E,464nm,0.1s							
TA01	**Diego Aracena**	**1.80**	**296**	*i*P		**Pn**	**07 38 30.3**	**0.0**
TA01				*i* S		**Sn**	**07 38 53.4**	**-0.6**
TA01				IAML			07 38 54.9	
	comp=E,648nm,0.2s							
PB04	**IPOC Station P**	**1.85**	**238**	*i*P		**Pn**	**07 38 30.7**	**-0.4**
PB04				*i* S		**Sn**	**07 38 54.5**	**-0.9**
PB04				IAML			07 39 01.5	
	comp=E,353nm,0.2s							
PB11	**IPOC Station P**	**1.95**	**324**	*i*P		**Pn**	**07 38 32.6**	**+0.2**
PB11				*i* S		**Sn**	**07 38 57.9**	**+0.3**
PB11				IAML			07 39 00.1	
	comp=E,438nm,0.4s							
PB15	**IPOC Station P**	**2.07**	**207**	*i*P		**Pn**	**07 38 34.2**	**+0.4**
PB15				*i* S		**Sn**	**07 39 00.1**	**-0.2**
PSGC	**Pisagua**	**2.35**	**318**	*i*P		**Pn**	**07 38 36.8**	**-0.5**
PSGC				*i* S		**Sn**	**07 39 05.6**	**-0.9**
MNMC	**Minye Minye**	**2.46**	**334**	*i*P		**Pn**	**07 38 39.7**	**+0.8**
MNMC				*i* S		**Sn**	**07 39 10.0**	**+0.7**
MNMC				IAML			07 39 15.5	
	comp=E,373nm,0.3s							
LPAZ	**La Paz**	**5.05**	**3**	P		**Pn**	**07 39 15.8**	**+2.3**
	comp=E,0.8nm,0.3s,baz=186,slow=6.0,SNR=21							
LPAZ				S		**Sn**	**07 40 17.2**	**+5.9**
	comp=E,0.1nm,0.3s,baz=296,slow=8.0,SNR=1.4							
SIV	**San Ignacio**	**8.80**	**54**	P		**Pn**	**07 40 00.6**	**-3.0**
	comp=E,1.3nm,0.3s,baz=245,slow=11,SNR=36							
SIV				S		**Sn**	**07 41 34.4**	**-6.6**
	comp=E,0.1nm,0.3s,baz=76,slow=20,SNR=2.1							
PLCA	**Paso Flores**	**19.40**	**185**	P		**P**	**07 42 15.9**	**+0.1**
	comp=E,0.0nm,0.3s,baz=0.0,slow=15,SNR=1.7							
TORD	**Torodi Ar. Bea**	**76.91**	**70**	P		**P**	**07 49 38.2**	**-0.5**
	comp=E,0.5nm,0.5s,baz=255,slow=5.5,SNR=5.2							
YKA	**Yellowknife Ar**	**91.20**	**340**	P		**P**	**07 50 50.7**	**+0.6**
	comp=E,0.1nm,0.5s,baz=129,slow=5.0,SNR=4.1							

*IDC **07** 07:50:04.1±8.1,51°.48N×179°.33E,h0km,mb3.2/4, mb1 3.8/5,mb1mx3.4/59,mbtmp3.5/5,ML4.1/1,Error ellipse: s-maj=159.2km s-min=70.4km az=90.0*

*NEIC **07** 07:50:26.5±0.3,52°.1N±0°.2×179°.8E±0°.1,h185km±9km, Error ellipse: s-maj=30.0km s-min=10.3km az=172.0*

*AEIC **07** 07:50:27.3±1.1,52°.1N±0°.3×179°.86E±0°.08,h183km±6km, ML3.1,Error ellipse: s-maj=24.7km s-min=5.2km az=190.0*

ISC 07 07:50:27.3±1.1,52°.1N±0°.3×179°.86E±0°.08,h175km±13km, n14,σ0s79/14,mb3.0/4,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**0.23**	**209**			**Pn**	**07 50 50.9**	**+0.2**
CESW	**Semis' Southwe**	**0.28**	**222**			**Pn**	**07 50 51.1**	**+0.3**
AMKA	**Amchitka**	**0.81**	**206**			**Pn**	**07 50 53.1**	**0.0**
LSPA	**Little Sitkin**	**0.81**	**260**			**Pn**	**07 50 53.7**	**+0.6**
TASE	**Tanaga Southea**	**1.33**	**101**			**Pn**	**07 50 57.6**	**+0.4**
ADK	**Adak**	**2.15**	**95**	Pn		**Pn**	**07 51 05.7**	**+0.1**
SMY	**Shemya**	**3.58**	**282**	Pn		**Pn**	**07 51 22.1**	**-0.8**
ATKA	**Atka Island**	**3.66**	**86**	Pn		**Pn**	**07 51 24.2**	**+0.4**
NIKH	**Nikolski High**	**6.94**	**78**	Pn		**Pn**	**07 52 06.3**	**-0.1**
KDAK	**Kodiak Island**	**16.75**	**59**	P		**P**	**07 54 08.7**	**-2.0**
	0.7nm,0.3s,baz=259,slow=5.2,SNR=7.6							
ILAR	**Eielson Array**	**21.21**	**40**	P		**P**	**07 54 58.8**	**-0.1**
	0.3nm,0.5s,baz=260,slow=11,SNR=5.6							
YKA	**Yellowknife Ar**	**35.34**	**47**	P		**P**	**07 57 05.7**	**+0.4**
	0.1nm,0.4s,baz=280,slow=10,SNR=8.0							
PDAR	**Pinedale Array**	**46.88**	**72**	P		**P**	**07 58 39.5**	**-0.4**
	0.3nm,0.4s,baz=336,slow=4.2,SNR=2.7							
TXAR	**Lajitas Array**	**59.36**	**81**	P		**P**	**08 00 11.8**	**+0.8**
	0.1nm,0.5s,baz=310,slow=5.6,SNR=1.8							

*BJI **07** 08:05:58.5±0.0,56°.72N×114°.06E,h5km,mB4.5/7, mb4.1/13,ML4.9/1,Ms4.4/6,Ms7 4.0/3*

*MOS **07** 08:06:03.8±1.7,56°.14N×113°.81E,h5km,mb4.4/4,Error ellipse: s-maj=8.5km s-min=6.1km az=68.9*

*BYKL **07** 08:06:05.7±0.2,56°.14N×113°.74E,h7km±3km, Mw4.3/7(IEC), #STATIONS MA2 PET MAJO ENH KMI WMQ KEV*

*IDC **07** 08:06:06.0±1.1,56°.22N×113°.79E,h0km,mb3.7/7, mb1 3.9/11,mb1mx3.6/51,mbtmp3.8/11,ML3.5/4,MS3.4/22, Ms1 3.4/22,ms1mx3.2/54,Error ellipse: s-maj=25.4km s-min=18.2km az=160.0*

ISC 07 08:06:06.1±0.4,56°.16N±0°.03×113°.80E±0°.02,h10km,n104, σ2s71/145,mb3.8/10,MS3.3/15,14C-18D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.14**	**254**	⇓*i*Pg		**Pg**	**08 06 07.6**	**-1.8**
SVKR				Pmax			08 06 08.2	
	32μm,0.1s							
SVKR				*e*Sg		**Sg**	**08 06 09.7**	**-2.0**
SVKR				Smax			08 06 10.1	
	176μm,0.6s							
SVKR	**Severomuysk**	**0.14**	**254**	⇓*i*PG		**Pg**	**08 06 07.6**	**-1.8**
SVKR				*e*S		**Sg**	**08 06 09.0**	**-2.7**
UKT	**Uakit**	**0.68**	**189**	⇑*i*Pg		**Pg**	**08 06 17.2**	**-2.0**
UKT				Pmax			08 06 20.0	
	1μm,0.8s							
UKT				*e*Sg		**Sg**	**08 06 26.1**	**-1.9**
UKT				Smax			08 06 34.5	
	5μm,1.1s							
UKT	**Uakit**	**0.68**	**189**	⇑*i*PG		**Pg**	**08 06 17.1**	**-2.1**
UKT				*e*			08 06 26.9	
UKT				pmax	pmax			
	comp=Z,96nm,0.1s							
UKT				smax	smax			
	comp=N,4μm,0.6s							
NLYR	**Nelyaty**	**1.11**	**72**	⇑*i*Pg		**Pb**	**08 06 25.9**	**-1.5**
NLYR				*e*Pb		**Pn**	**08 06 28.4**	**+0.7**
NLYR				max			08 06 28.9	
	comp=N,2μm,0.3s							
NLYR				*e*			08 06 31.6	
NLYR				*e*Sg		**Sg**	**08 06 41.5**	**-0.4**
NLYR				*e*Sb		**Sn**	**08 06 45.6**	**+2.5**
NLYR				max			08 06 47.0	
	comp=N,8μm,1.2s							
NLYR	**Nelyaty**	**1.11**	**72**	⇑*i*PG		**Pb**	**08 06 25.9**	**-1.5**
NLYR				*e*			08 06 41.2	
NLYR				pmax	pmax			
	comp=Z,2μm,0.3s							
NLYR				smax	smax			
	comp=N,8μm,1.2s							
YOA	**Uoyan**	**1.16**	**270**	*e*Pg		**Pb**	**08 06 26.5**	**-1.8**
YOA				*e*Pb		**Pn**	**08 06 28.9**	**+0.4**
YOA				max			08 06 30.2	
	comp=N,2μm,0.3s							
YOA				*e*Sg		**Sb**	**08 06 42.6**	**-0.9**
YOA				*e*Sb		**Sn**	**08 06 46.8**	**+2.4**
YOA				max			08 06 50.3	
	comp=N,14μm,0.6s							
YOA	**Uoyan**	**1.16**	**270**	⇓*i*PG		**Pb**	**08 06 26.5**	**-1.8**
YOA				*i*			08 06 42.4	
YOA				pmax	pmax			
	comp=Z,1μm,0.3s							
YOA				smax	smax			
	comp=N,14μm,0.6s							
KMO	**Kumora**	**1.49**	**261**	⇓*i*Pg		**Pn**	**08 06 31.9**	**-1.0**
KMO				Pmax			08 06 36.0	
	comp=N,2μm,

NIZ eSg Sb 08 07 21.2 +1.4
NIZ Smax 08 07 23.1
comp=N,4μm,0.8s
NIZ Nizh Angarsk 2.43 263 ⇓*i*PN Pn 08 06 46.2 +0.4
NIZ *e* 08 06 48.8
NIZ *e*S Sn 08 07 14.5 -1.0
NIZ *e* 08 07 21.4
NIZ pmax pmax
comp=Z,579nm,0.8s
NIZ smax smax
comp=N,3μm,1.0s
CRS Chara 2.58 71 *e*Pn Pn 08 06 49.0 +1.0
CRS *e*Pg Pb 08 06 53.2 +0.7
CRS Pmax 08 06 55.0
comp=N,1μm,1.1s
CRS *e*PgPg PbPb 08 07 00.1 +4.4
CRS *e*Sg Sb 08 07 27.0 +2.7
CRS Smax 08 07 36.5
comp=N,2μm,1.8s
CRS Chara 2.58 71 ⇓*i*PN Pn 08 06 48.9 +1.0
CRS *e* 08 06 52.8
CRS *e* 08 07 26.5
CRS pmax pmax
comp=Z,1μm,0.7s
CRS smax smax
comp=E,2μm,1.1s
SYVR Suvo 3.33 223 *e*Pn Pn 08 06 58.3 +0.1
SYVR *e* 08 07 00.5
SYVR *e*Pg Pb 08 07 05.1 -0.1
SYVR Pmax 08 07 09.6
comp=E,201nm,1.0s
SYVR *e*Sn Sn 08 07 37.7 -0.1
SYVR *e*Sg Sb 08 07 47.6 +1.9
SYVR *e*SgSg Sg 08 07 56.9 +4.0
SYVR max 08 08 00.2
comp=E,4μm,1.8s
SYVR Suvo 3.33 223 *e*PN Pn 08 06 58.3 +0.1
SYVR *e* 08 07 05.2
SYVR *e* 08 07 47.4
SYVR pmax pmax
comp=Z,211nm,0.8s
SYVR smax smax
comp=N,4μm,1.7s
VTMR Vitim 3.36 349 *e*Pn Pn 08 06 59.1 +0.5
VTMR *e* 08 07 06.8
VTMR *e*Sn Sn 08 07 39.0 +0.5
VTMR *e*Sg Sb 08 07 49.4 +2.8
KHNR Khani 3.50 75 *e*Pn Pn 08 07 01.1 +0.5
KHNR *e*Pg Pb 08 07 08.3 +0.1
KHNR *e*Sn Sn 08 07 41.7 -0.4
KHNR *e*Sg Sb 08 07 54.3 +3.5
TUP Tupik 3.92 114 ⇓*i*PN Pn 08 07 06.4 +0.1
TUP *e*Pg Pb 08 07 16.4 +1.1
TUP Pmax 08 07 23.0
comp=N,90nm,0.5s
TUP *e*Sn Sn 08 07 51.7 -0.7
TUP *e*Sg Sg 08 08 07.9 -4.0
TUP *e* 08 08 12.0
TUP max 08 08 17.1
comp=N,1μm,1.1s
TUP Tupik 3.92 114 ⇓*i*PN Pn 08 07 06.4 +0.1
TUP *e* 08 07 16.3
TUP *e*S Sn 08 07 51.3 -1.1
TUP *e* 08 08 07.7
TUP pmax pmax
comp=Z,85nm,0.4s
TUP smax smax
comp=N,629nm,1.0s
MXMB Maximikha 4.12 227 *e*Pn Pn 08 07 08.0 -1.1
MXMB *e*Pg Pb 08 07 19.2 +0.5
MXMB *e*Sn Sn 08 07 55.6 -1.8
MXMB *e*Sg Sb 08 08 12.1 +3.5
CIT Chita 4.15 182 *e*Pg Pb 08 07 18.9 -0.2
CIT Smax 08 07 19.6
comp=N,832nm,0.4s
CIT Pmax 08 07 21.1
comp=N,277nm,0.8s
CIT *e*Sg Sb 08 08 12.9 +3.7
CIT Chita 4.15 182 *e*PN Pn 08 07 05.5 -4.0
OGRR Ongureny 4.38 237 *e*Pn Pn 08 07 13.8 +1.2
OGRR *e*Pg Pb 08 07 23.8 +0.7
OGRR Pmax 08 07 27.6
comp=N,131nm,0.9s
OGRR *e*Sn Sn 08 08 03.3 -0.4
OGRR *e*Sg Sb 08 08 20.5 +4.6
OGRR Smax 08 08 27.6
comp=N,959nm,1.7s
OGRR Ongureny 4.38 237 *e*PN Pn 08 07 13.5 +0.9
OGRR *e* 08 07 24.5
OGRR *e* 08 08 19.1
OGRR pmax pmax
comp=Z,132nm,1.7s
OGRR smax smax
comp=N,946nm,1.9s
YKLR Yuktali 4.39 81 *e*Pn Pn 08 07 13.2 +0.5
YKLR *e*Pg Pb 08 07 25.0 +1.8
YKLR *e*Sg Sg 08 08 23.4 -3.4
KELR Kotokel 4.77 227 *e*Pn Pn 08 07 17.6 -0.3
KELR *e*Pg Pb 08 07 30.2 +0.5
KELR *e*Sg Sb 08 08 31.7 +4.6
ZRHB Zarechye 5.30 230 *e*Pg Pb 08 07 40.9 +2.1
ZRHB Pmax 08 07 51.0
comp=N,117nm,0.8s
ZRHB *e*Sg Sg 08 08 49.7 -6.6
ZRHB Smax 08 09 13.0
comp=N,3μm,1.4s
TRG Tyrgan 5.52 235 *e* Pn 08 07 31.4 +3.1
TRG *e*Pg Pb 08 07 43.4 +0.9
TRG Pmax 08 07 51.5
comp=N,73nm,1.4s
TRG *e*Sg Sb 08 08 54.7 +5.9
TRG Smax 08 09 07.4
comp=N,626nm,1.9s
FFNB Fofonovo 5.84 228 *e*Pn Pn 08 07 33.9 +1.2
FFNB *e*Pg Pb 08 07 50.5 +2.6
FFNB *e*Sg Sg 08 09 05.7 -7.6
KAB Kabansk 5.88 229 *e*Sg Sg 08 09 07.3 -7.4
KAB Smax 08 09 36.8
comp=N,2μm,1.6s
HRMR Khuramsha 6.08 225 *e*Pg Pb 08 07 55.1 +3.1
HRMR Pmax 08 08 02.6
comp=N,127nm,0.6s
HRMR *e*Sn Sn 08 08 42.6 -2.9
HRMR *e*Sg Sg 08 09 14.2 -6.9
HRMR Smax 08 09 24.5
comp=N,3μm,0.8s
IENR Iengra 6.17 85 *e*Sg Sg 08 09 17.1 -7.0
CLNS Chul'man 6.18 79 *e*Pn Pn 08 07 39.0 +1.6
CLNS *e*Pg Pb 08 07 58.1 +4.3
CLNS *e*Sg Sg 08 09 19.0 -5.3
BGT Bolshoye Golou 6.43 234 *e*Sg Pb 08 08 01.1 +3.1
BGT *e*Sg Sg 08 09 24.0 -8.3
BGT Smax 08 09 31.8
comp=N,314nm,0.8s
KPC Khapcheranga 6.52 188 *e*Pn Pn 08 07 40.6 -1.5
KPC *e*Pg Pb 08 08 03.5 +3.9
KPC Pmax 08 08 05.9
comp=N,27nm,0.7s
KPC *e*Sg Sg 08 09 28.1 -7.1
KPC Smax 08 09 36.7
comp=N,700nm,1.7s
KPC Khapcheranga 6.52 188 *e*PN Pn 08 07 41.0 -1.1
KPC *e* 08 08 02.2
KPC *e* 08 09 28.2
KPC pmax pmax
comp=Z,291nm,0.2s
KPC smax smax
comp=E,3μm,0.8s
IRK Irkutsk 6.83 239 *e*Sg Sb 08 09 35.2 +8.9
IRK Smax 08 09 50.7
comp=E,832nm,1.2s
IRK Irkutsk 6.83 239 *e*PG Pb 08 08 08.5 +3.7
IRK *e* 08 09 35.8
IRK pmax pmax
comp=Z,125nm,0.1s
IRK smax smax
comp=E,801nm,1.1s
IVK Ivanovka 7.05 236 *e*Pn Pn 08 07 49.7 +0.5
IVK *e*Pg Pb 08 08 10.9 +2.4
IVK Pmax 08 08 17.9
comp=E,27nm,1.2s
IVK *e*Sg Sb 08 09 40.6 +8.0
IVK Smax 08 09 47.8
comp=E,371nm,1.8s
TLY Talaya 7.49 237 *e*Pg Pb 08 08 12.8 -3.2
comp=E,0.0nm,0.3s,baz=215,slow=23,SNR=2.0
TLY Lg Lg 08 09 55.0
comp=E,0.1nm,0.3s,baz=281,slow=15,SNR=13
TLY LR LR 08 10 32.7
comp=E,190nm,19.8s,baz=42,slow=36
TLY Talaya 7.49 237 *e*Pn Pn 08 07 56.2 +0.9
TLY *e*Pg Pb 08 08 19.4 +3.5
TLY Pmax 08 08 26.4
comp=E,22nm,0.7s
TLY *e*Sn Sn 08 09 16.9 -3.3
TLY *e* 08 09 53.1
TLY *e*Sg Sb 08 09 55.1 +10
TLY Smax 08 10 04.3
comp=E,270nm,1.0s
TLY Talaya 7.49 237 *e*PG Pb 08 08 19.5 +3.5
TLY *e* 08 09 54.2
TLY pmax pmax
comp=Z,33nm,0.5s
HIA Hailar 7.78 150 *ce*PN Pn 08 07 58.0 -1.4
ARS Arshan 7.93 242 *e* Pb 08 08 30.2 +6.7
ARS max 08 08 38.0
comp=Z,37nm,0.5s
ARS *e*Sg Sb 08 10 08.1 +10
ARS Smax 08 10 13.1
comp=Z,829nm,0.8s
ARS Arshan 7.93 242 *e*PG Pb 08 08 30.2 +6.7
ARS *e* 08 10 07.0
ARS pmax pmax
comp=Z,38nm,0.5s
ARS smax smax
comp=E,828nm,0.8s
ZEA Zeya 8.11 102 *e*PN Pn 08 08 05.1 +1.3
ZEA *e* 08 08 32.4
ZEA *e*S Sn 08 09 36.0 +0.5
ZEA pmax pmax
comp=Z,10.0nm,0.4s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA smax smax
comp=N,190nm,0.9s
ZEA smax smax
comp=E,100nm,1.9s
ZEA MLR MLR
comp=E,400nm,5.0s
ZEA MLR MLR
comp=Z,300nm,5.0s
ZAK Zakamensk 8.55 232 *e*Pg Pg 08 08 39.0 -11
ZAK Pmax 08 08 45.2
comp=Z,11nm,0.5s
ZAK *e*Sg Sg 08 10 29.7 -11
ZAK Smax 08 11 17.3
comp=Z,398nm,1.8s
ZAK Zakamensk 8.55 232 *e*PN Pn 08 08 14.9 +4.9
ZAK *e* 08 08 42.4
ZAK *e* 08 10 27.7
ZAK pmax pmax
comp=Z,7.0nm,0.2s
ZAK smax smax
comp=N,310nm,0.9s
MOY Mondy 8.79 245 *e*Pn Pn 08 08 13.5 +0.2
MOY *e* 08 08 26.8
MOY max 08 08 29.4
comp=N,54nm,1.5s
MOY Smax 08 08 43.8
comp=N,472nm,1.8s
MOY *e* 08 10 10.1
MOY *e*Sg Sg 08 10 35.4 -13
MOY Mondy 8.79 245 *e*PN Pn 08 08 13.5 +0.2
MOY *e* 08 08 41.6
MOY *i* 08 10 42.9
ORL Orlik 8.94 252 *e*Pn Pn 08 08 14.4 -0.9
ORL max 08 09 02.3
comp=N,32nm,1.2s
ORL *e*Sn Sn 08 09 52.2 -3.8
ORL *e*Sg Sg 08 10 39.7 -13
ORL Smax 08 10 58.1
comp=N,207nm,1.6s
ORL Orlik 8.94 252 *e*PN Pn 08 08 14.8 -0.5
ORL *e* 08 08 45.3
ORL *e* 08 10 40.0
ORL pmax pmax
comp=Z,38nm,1.0s
ORL smax smax
comp=N,206nm,1.8s
ULN Ulaanbaatar 9.28 209 ⇑*e*P Pn 08 08 22.5 +2.5
SONM Songino Array 9.50 212 Pn Pn 08 08 23.5 +0.5
comp=N,0.4nm,0.3s,baz=20,slow=14,SNR=9.0
SONM Lg Lg 08 11 01.8
comp=N,7.5nm,0.3s,baz=39,slow=19,SNR=7.1
SONM LR LR 08 11 32.2
comp=N,54nm,18.9s,baz=38,slow=34
YAK Yakutsk 10.05 48 Lg Lg 08 11 13.8
comp=N,0.3nm,0.3s,baz=345,slow=23,SNR=10
YAK LR LR 08 12 22.8
comp=N,70nm,20.9s,baz=270,slow=38
YAK Yakutsk 10.05 48 *de*P Pn 08 08 28.8 -1.5
KRAR Krasnoyarsk 11.69 278 ⇓*e*P Pn 08 08 51.9 -0.8
KLR Kul'dur 12.88 115 Pn Pn 08 09 10.1 +1.0
comp=N,0.3nm,0.3s,baz=316,slow=15,SNR=4.9
KLR Lg Lg 08 12 50.2
comp=N,0.2nm,0.3s,baz=53,slow=10.0,SNR=8.5
KLR LR LR 08 13 41.6
comp=N,81nm,18.8s,baz=345,slow=35
KLR Kul'dur 12.88 115 ⇓*e*P Pn 08 09 08.5 -0.6
KLR pmax pmax
comp=Z,1.0nm,0.7s
USA0B Ussuriysk Arra 16.63 128 ⇑*e*P Pn 08 09 59.3 +0.2
USRK Ussuriysk Ar. 16.63 128 Lg Lg 08 14 49.9
baz=337,slow=29,SNR=6.1
ZALV Zalesovo Beam 16.70 275 Pn Pn 08 09 59.4 -0.5
comp=Z,0.2nm,0.3s,baz=83,slow=16,SNR=4.7
ZALV Lg Lg 08 14 47.1
baz=71,slow=31,SNR=1.8
ZALV LR LR 08 16 47.9
comp=Z,172nm,19.7s,baz=60,slow=38
ZALV Zalesovo Beam 16.70 275 *i*P P 08 10 02.2 0.0
ZALV pmax pmax
comp=Z,1.0nm,0.3s
TIXI Tiksi 16.81 17 Pn Pn 08 09 57.6 -3.6
comp=Z,0.9nm,0.3s,baz=179,slow=9.6,SNR=7.8
TIXI Sn Sn 08 12 53.0 -15
comp=Z,0.5nm,0.3s,baz=348,slow=20,SNR=7.5
TIXI Lg Lg 08 14 57.9
comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=3.6
TIXI LR LR 08 16 54.8
comp=Z,91nm,18.3s,baz=203,slow=39
TIXI Tiksi 16.81 17 ⇓*e*P Pn 08 09 57.7 -3.5
TIXI pmax pmax
comp=Z,42nm,1.0s
DGZ Jazzator, Alta 17.09 259 ⇓*e*P Pn 08 10 04.4 -0.7
DGZ pmax pmax
comp=Z,1.0nm,0.7s
NRIK Noril'sk 17.64 329 Pn Pn 08 10 09.9 -1.7
comp=Z,0.6nm,0.3s,baz=120,slow=12,SNR=6.7
NRIK LR LR 08 17 36.5
comp=Z,87nm,20.2s,baz=136,slow=39
NRIK Noril'sk 17.64 329 ⇓*e*P Pn 08 10 09.1 -2.5
MA2 Magadan 19.78 65 LR LR 08 17 31.4
comp=Z,56nm,18.2s,baz=270,slow=35
MA2 Magadan 19.78 65 ⇑*e*P Pn 08 10 39.9 +2.2
MA2 pmax pmax
comp=Z,10.0nm,1.5s
SEY Seymchan 20.43 55 P Pn 08 10 45.7 +0.5
comp=Z,0.4nm,0.3s,baz=84,slow=23,SNR=2.2
SEY Lg Lg 08 16 43.7
comp=Z,1.2nm,0.6s,baz=309,slow=10,SNR=5.3
SEY Seymchan 20.43 55 ⇑*e*P Pn 08 10 45.6 +0.4
KSRS Korea Array 20.98 147 LR LR 08 19 43.1
comp=Z,98nm,18.1s,baz=355,slow=39
KURK Kurchatov 21.49 270 P P 08 10 57.6 +3.0
MK31 Makanchi Array 21.57 258 *d*iP P 08 10 55.7 +0.1
MKAR Makanchi Array 21.57 258 P P 08 10 56.1 +0.4
comp=Z,4.1nm,0.9s,baz=58,slow=7.9,SNR=16
MKAR LR LR 08 19 36.4
comp=Z,280nm,21.0s,baz=50,slow=38
KURBB Kurchatov Arra 21.58 270 P P 08 10 57.6 +2.0
comp=Z,8.8nm,0.9s,baz=66,slow=12,SNR=16
ASAJ Asahikawa 21.86 111 LR LR 08 19 25.7
comp=Z,63nm,18.1s,baz=237,slow=36
XAN Xi'an 22.37 191 P P 08 11 06.1 +1.8
XAN pP sP 08 11 12.1 +3.2
XAN pmax pmax
comp=Z,5.0nm,1.7s
BVAR Borovoye Array 25.04 281 P P 08 11 31.7 +1.7
comp=Z,2.1nm,0.9s,baz=97,slow=12,SNR=11
BRVK Borovoye 25.08 281 ⇓*e*P P 08 11 31.7 +1.2
BRVK pmax pmax
comp=Z,7.0nm,1.2s
PETK Petropavlovsk- 25.27 78 LR LR 08 21 33.8
comp=Z,100nm,20.1s,baz=294,slow=37
AAK Ala-Archa 28.50 258 LR LR 08 23 47.2
comp=Z,241nm,18.8s,baz=64,slow=37
AAK Ala-Archa 28.50 258 ⇑*e*P P 08 12 03.2 +1.7
AAK pmax pmax
comp=Z,8.0nm,1.6s
JHJ Hachijo jima 2 29.21 131 LR LR 08 23 46.2
comp=Z,63nm,19.4s,baz=66,slow=36
ARU Arti 29.96 294 LR LR 08 25 41.5
comp=Z,80nm,18.4s,baz=112,slow=39
ARU Arti 29.96 294 ⇑*e*P P 08 12 12.0 -2.1
ARU pmax pmax
comp=Z,26nm,4.0s
JOW Kunigami 31.11 154 LR LR 08 26 13.0
comp=Z,102nm,18.0s,baz=330,slow=39
CMAR Chiang Mai Arr 39.27 203 LR LR 08 31 24.2
comp=Z,46nm,18.4s,baz=50,slow=39
GEYT Alibeck 40.82 268 LR LR 08 32 02.7
comp=Z,41nm,21.2s,baz=215,slow=38
FINES FINESS Array B 42.48 315 P P 08 14 03.3 +2.5
comp=Z,0.8nm,0.6s,baz=69,slow=7.6,SNR=4.1
KIV Kislovodsk 45.25 286 *e*P P 08 14 21.5 -1.9
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,125nm,16.0s
KBZ Khabaz 45.28 285 LR LR 08 34 33.2
comp=Z,45nm,19.1s,baz=27,slow=38
AKASG Malin Array Be 47.68 301 *ce*P P 08 14 43.9 +1.6
AKASG pmax pmax
comp=Z,1.0nm,0.5s
NOA NORSAR Array B 48.34 321 LR LR 08 35 59.4
comp=Z,45nm,19.9s,baz=10.0,slow=37
BRTR Keskin Array B 53.04 288 LR LR 08 42 39.9
comp=Z,28nm,18.6s,baz=38,slow=41
YKA Yellowknife Ar 55.83 25 P P 08 15 42.9 -0.1
comp=Z,0.7nm,0.7s,baz=332,slow=6.6,SNR=12
YKA LR LR 08 43 24.0
comp=Z,25nm,18.2s,baz=0.0,slow=40
YKA Yellowknife Ar 55.83 25 *ce*P P 08 15 46.0 +3.0
YKA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 77.77 160 P P 08 18 05.5 +2.4
comp=Z,0.5nm,0.7s,baz=352,slow=6.5,SNR=2.5

WEL 07 08:08:11.5±0.8, 35.5°S±12.2°×177.9°E±1.9°, h287km±10km, M3.8/31, mB4.5/3, ML3.6/7, MLv3.9/31, Mw(mB)3.7/3, Error ellipse: s-maj=0.0km s-min=0.0km az=120.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.88**	**197**	P	Pn	08 09 04.2	-0.8
MXZ				S	S	08 09 46.1	-1.5
WMGZ	**Waiomatatini S**	**3.10**	**194**	P	Pn	08 09 08.5	+1.3
HAZ	**Te Kaha**	**3.20**	**203**	P	Pn	08 09 07.7	-0.5
HAZ				S	S	08 09 52.7	-1.0
PKGZ	**Pakihiroa**	**3.24**	**198**	P	Pn	08 09 08.3	-0.5
PUZ	**Puketiti**	**3.38**	**195**	P	Pn	08 09 10.8	+0.6
PUZ				S	S	08 09 56.6	-0.4
RUGZ	**Raukumara Rang**	**3.43**	**203**	P	Pn	08 09 10.5	-0.3
RUGZ				S	S	08 09 55.3	-2.9
TWGZ	**Tauwhareparae**	**3.54**	**198**	P	Pn	08 09 13.1	+1.2
TWGZ				S	S	08 10 01.7	+1.4
CNGZ	**Carnagh Statio**	**3.78**	**194**	P	Pn	08 09 15.9	+1.5
MWZ	**Matawai**	**3.81**	**202**	P	Pn	08 09 14.8	-0.1
MWZ				S	S	08 10 04.9	-0.7
TKGZ	**Te Karaka**	**3.82**	**198**	P	Pn	08 09 15.3	+0.4
TKGZ				S	S	08 10 06.8	+1.2
URZ	**Urewera**	**3.89**	**207**	P	Pn	08 09 15.5	-0.1
URZ				S	S	08 10 06.6	-0.4
RIGZ	**Rimuhau**	**4.09**	**198**	P	Pn	08 09 18.9	+0.9
MUGZ	**Murupara**	**4.21**	**209**	P	Pn	08 09 19.5	+0.2
MUGZ				S	S	08 10 15.8	+2.2
SNGZ	**Shannon Statio**	**4.28**	**202**	P	Pn	08 09 20.4	+0.3
KNZ	**Kokohu**	**4.42**	**197**	P	Pn	08 09 22.0	+0.4
MHGZ	**Mahia Peninsul**	**4.49**	**194**	P	Pn	08 09 23.7	+1.3
MTHZ	**Maungataniwha**	**4.51**	**206**	P	Pn	08 09 22.8	0.0
MRHZ	**Matea Rd**	**4.66**	**209**	P	Pn	08 09 24.3	-0.1
ARHZ	**Aropaoanui**	**4.83**	**202**	P	Pn	08 09 26.8	+0.4
BKZ	**Black Stump Fm**	**4.92**	**207**	P	Pn	08 09 27.6	+0.1
BKZ				S	S	08 10 30.5	+2.1
HIZ	**Hauiti**	**5.17**	**223**	P	Pn	08 09 32.8	+2.5
TMVZ	**Te Maari**	**5.20**	**213**	P	Pn	08 09 31.0	+0.1
ETVZ	**East Tongariro**	**5.21**	**213**	P	Pn	08 09 31.4	+0.4
OTVZ	**Otupere**	**5.25**	**213**	P	Pn	08 09 31.8	+0.2
SNVZ	**South Ngauruho**	**5.28**	**213**	P	Pn	08 09 32.2	+0.3
KAHZ	**Kahuranaki**	**5.35**	**201**	P	Pn	08 09 33.2	+0.5
KAHZ				S	S	08 10 41.2	+3.4
BHHZ	**Black Hill Sta**	**5.36**	**208**	P	Pn	08 09 32.4	-0.3
KRHZ	**Kereru**	**5.38**	**205**	P	Pn	08 09 32.8	-0.1
KRHZ				S	S	08 10 40.7	+2.4
PXZ	**Pawanui**	**5.58**	**200**	P	Pn	08 09 35.2	0.0
PNHZ	**Pukenui**	**5.68**	**205**	P	Pn	08 09 36.2	-0.3
PRHZ	**Porangahau**	**5.86**	**201**	P	Pn	08 09 38.7	+0.1
TSZ	**Takapari Road**	**5.89**	**206**	P	Pn	08 09 38.8	-0.3
BFZ	**Birch Farm**	**6.36**	**202**	P	Pn	08 09 44.4	-0.3
BFZ				S	S	08 11 00.5	+0.8
MRZ	**Mangatainoka R**	**6.56**	**206**	P	Pn	08 09 46.4	-0.8
MRZ				S	S	08 11 02.1	-2.2
HOWZ	**Holdsworth Sta**	**6.79**	**205**	P	Pn	08 09 48.8	-1.2
HOWZ				S	S	08 11 09.7	+0.3
OGWZ	**Otaki Gorge**	**6.85**	**208**	P	Pn	08 09 49.8	-0.9
KIW	**Kapiti Island**	**6.99**	**209**	P	Pn	08 09 51.0	-1.3
MTW	**Mount Morrison**	**7.03**	**204**	P	Pn	08 09 51.5	-1.3
CAW	**Cannon Point**	**7.14**	**207**	P	Pn	08 09 53.1	-1.1
PLWZ	**Palliser**	**7.48**	**204**	P	Pn	08 09 57.3	-1.1
TUWZ	**Tuamarina**	**7.86**	**211**	P	Pn	08 10 01.5	-1.6

*IDC **07** 08:22:49.3±8.1, 6.6°60S×129.8°81E, h122km±81km, mb3.7/4, mb1 3.7/7, mb1mx3.4/42, mbtmp4.1/7, Error ellipse: s-maj=61.5km s-min=25.5km az=45.0*

ISC 07 08:22:52.1±1.4, 6.9°S±0.1°×129.9°E±0.1°, h150km, n8, σ2.3 3.3/9, mb4.1/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.99**	**241**	P	Pn	08 24 35.6	+3.5
	3.4nm,0.3s,baz=285,slow=11,SNR=2.2						
BATI				S	**Sn**	**08 25 51.4**	**+0.8**
	22nm,0.3s,baz=6.5,slow=21,SNR=7.7						
FITZ	**Fitzroy Crossi**	**11.91**	**200**	P	**Pn**	**08 25 38.1**	**+0.9**
	0.4nm,0.3s,baz=24,slow=8.2,SNR=23						
FITZ				S	**Sn**	**08 27 44.8**	**-4.1**
	1.0nm,0.3s,baz=104,slow=22,SNR=7.5						
WRA	**Warramunga Arr**	**13.70**	**162**	P	**Pn**	**08 26 00.6**	**+0.4**
	0.7nm,0.3s,baz=348,slow=13,SNR=34						
WRA				S	Sn	08 28 26.7	-5.3
	1.6nm,0.3s,baz=342,slow=21,SNR=8.0						
ASAR	**Alice Springs**	**17.14**	**167**	P	**Pn**	**08 26 45.6**	**+2.8**
	0.7nm,0.3s,baz=348,slow=10.0,SNR=39						
ASAR				S	**S**	**08 29 52.7**	**-0.5**
	0.4nm,0.3s,baz=356,slow=27,SNR=4.9						
CTA	**Charters Tower**	**20.61**	**131**	P	Pn	08 27 22.9	-0.9
	2.8nm,0.5s,baz=316,slow=12,SNR=8.2						
STKA	**Stephens Creek**	**27.18**	**158**	P	**P**	**08 28 23.1**	**+1.4**
	1.7nm,0.3s,baz=329,slow=8.2,SNR=9.4						
MKAR	**Makanchi Array**	**68.06**	**327**	P	**P**	**08 33 34.2**	**-1.2**
	1.7nm,0.4s,baz=120,slow=8.0,SNR=30						
KURBB	**Kurchatov Arra**	**72.34**	**329**	P	**P**	**08 33 59.8**	**-1.6**
	0.3nm,0.4s,baz=127,slow=4.8,SNR=4.6						

KRSC 07 08:43:01.2±1.8, 49.42N×156.98E, h7km±36km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.38**	**337**	*e*P	Pn	08 43 25.8	-1.0
SKR				*e*S	Sb	08 43 43.4	-1.7
PAU	**Pauzhetka**	**2.05**	**357**	*e*P	Pb	08 43 38.2	-0.6
PAU				*e*S	Sb	08 44 04.3	-0.1
KDTR	**Khodutka, Kamc**	**2.49**	**16**	*e*P	Pb	08 43 44.5	-1.7
KDTR				*e*S	Sb	08 44 16.5	-0.6
ASAK	**Asacha**	**3.02**	**11**	*e*P	Pn	08 43 52.0	+2.5
MTVR	**Mutnovka**	**3.16**	**13**	*e*P	Pn	08 43 54.1	+2.7
MTVR				*e*S	Sb	08 44 33.1	-3.4

RUS	**Russkaya**	**3.17**	**17**	*eP*	Pn	08 43 53.4	+2.0
RUS				*eS*	Sn	08 44 32.4	+3.0
GRL	**Gorelyy**	**3.21**	**12**	*eP*	Pn	08 43 55.0	+2.9
GRL				*eS*	Sb	08 44 34.9	-3.0
KRMR	**Karymshinskiy**	**3.49**	**12**	*eP*	Pb	08 44 00.3	-3.0
DALK	**Dalny**	**3.78**	**16**	*eP*	Pn	08 44 02.0	+2.1
DALK				*eS*	Sn	08 44 48.5	+4.0
UGLR	**Uglovaya**	**3.97**	**16**	*eP*	Pn	08 44 05.5	+3.0
AVH	**Avacha**	**4.00**	**15**	*eP*	Pn	08 44 06.6	+3.6
KOK	**Koryaka**	**4.01**	**14**	*eP*	Pn	08 44 06.9	+3.8
SMAR	**Somma**	**4.01**	**16**	*eP*	Pn	08 44 07.6	+4.4
KRER	**Koryakskii**	**4.04**	**15**	*eP*	Pn	08 44 07.3	+3.7
SDLR	**Sedlovina**	**4.04**	**16**	*eP*	Pn	08 44 05.9	+2.3
KRX	**Arik**	**4.08**	**14**	*eP*	Pn	08 44 07.1	+3.0
KZV	**Kizimen**	**6.05**	**18**	*eP*	Pn	08 44 36.7	+5.5

*IDC **07** 08:47:07.0±3.0, 53°60N×87°92E, h0km, mb1 3.0/2, mb1mx2.9/69, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=26.6km s-min=15.9km az=60.0*
*NNC **07** 08:47:10.3±9.3, 53°49N×87°49E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=78.1km s-min=34.4km az=61.0, Suspected Mining explosion.*
ISC 07 08:47:08.3±3.9, 53°6N±0°1×87°7E±0°2, h0km, n7, σ1s65/9, 3C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.71**	**282**	*i*		08 59 00.0	
	baz=99,slow=318,SNR=1.0						
ZAA0	**Zalesovo Array**	**1.71**	**282**	⇑Pg	**Pn**	**08 47 39.5**	**+0.1**
	0.3nm,0.2s						
ZAA0				⇓Lg	Lg	08 48 04.9	
	2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**1.71**	**282**	Pn	**Pb**	**08 47 40.0**	**-0.6**
	1.5nm,0.3s,baz=104,slow=14,SNR=17						
ZALV				Lg	Lg	08 48 06.4	
	3.7nm,0.3s,baz=108,slow=31,SNR=18						
KURBB	**Kurchatov Arra**	**6.37**	**246**	Pn	**Pn**	**08 48 44.4**	**+1.2**
	0.1nm,0.3s,baz=63,slow=15,SNR=7.0						
KURBB				Lg	Lg	08 50 32.7	
	0.1nm,0.3s,baz=59,slow=35,SNR=3.4						
KURBB	**Kurchatov Arra**	**6.37**	**246**	⇓Pn	**Pn**	**08 48 44.0**	**+0.8**
	1.2nm,0.5s						
KURBB				⇓Sn	**Sn**	**08 49 57.4**	**+0.8**
	3.5nm,0.5s						
MK31	**Makanchi Array**	**7.65**	**209**	Pn	**Pn**	**08 49 02.0**	**+1.2**
	0.4nm,0.7s,baz=25,slow=12,SNR=7.8						
MK31				⇑Sn	**Sn**	**08 50 24.8**	**-3.4**
	0.7nm,0.7s						
MK31				⇑Lg	Lg	08 51 10.1	
	1.6nm,0.8s,baz=17,slow=30						
MKAR	**Makanchi Array**	**7.65**	**209**	Pn	**Pn**	**08 49 01.4**	**+0.6**
	0.2nm,0.3s,baz=27,slow=13,SNR=8.9						
MKAR				Sn	**Sn**	**08 50 28.9**	**+0.7**
	0.1nm,0.3s,baz=30,slow=26,SNR=6.8						
MKAR				Lg	Lg	08 51 09.3	
	0.1nm,0.3s,baz=26,slow=23,SNR=2.4						

IDC 07 08:48:03.3±1.7, 33°17N×39°29W, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.5/66, mbtmp3.5/6, MS3.4/10, Ms1 3.4/10, ms1mx3.1/29, Error ellipse: s-maj=64.5km s-min=26.6km az=15.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJG	**San Juan**	**28.37**	**245**	LR	LR	09 05 47.4	
	comp=Z,12nm,18.2s,baz=55,slow=38						
MDT	**Midelt**	**29.02**	**81**	LR	LR	09 02 41.9	
	comp=Z,72nm,19.2s,baz=293,slow=30						
TORD	**Torodi Ar. Bea**	**42.28**	**108**	P	P	08 55 58.8	0.0
	0.2nm,0.4s,baz=312,slow=6.2,SNR=2.1						
TORD				LR	LR	09 11 59.5	
	comp=Z,62nm,19.2s,baz=320,slow=34						
NOA	**NORSAR Array B**	**42.67**	**34**	LR	LR	09 11 06.4	
	comp=Z,12nm,18.1s,baz=320,slow=32						
ULM	**Lac du Bonnet**	**44.44**	**310**	LR	LR	09 13 24.2	
	comp=Z,59nm,21.4s,baz=27,slow=34						
H10N2	**ASCENSION HYDR**	**47.10**	**145**	T	T	09 46 46.5	
	baz=331,slow=75,SNR=27						
H10N3	**ASCENSION HYDR**	**47.11**	**145**	T	T	09 46 46.8	
	baz=331,slow=75,SNR=26						
H10N1	**ASCENSION HYDR**	**47.12**	**145**	T	T	09 46 47.9	
	baz=331,slow=75,SNR=35						
TXAR	**Lajitas Array**	**54.40**	**284**	P	P	08 57 33.1	+0.7
	0.3nm,0.8s,baz=106,slow=6.0,SNR=3.9						
TXAR				LR	LR	09 19 22.5	
	comp=Z,49nm,19.2s,baz=0.0,slow=34						
YKA	**Yellowknife Ar**	**54.48**	**327**	P	P	08 57 32.6	+0.3
	0.2nm,0.6s,baz=96,slow=7.6,SNR=8.1						
PDAR	**Pinedale Array**	**54.77**	**302**	P	P	08 57 34.1	-0.9
	0.9nm,0.8s,baz=87,slow=9.6,SNR=7.2						
PDAR				LR	LR	09 20 21.0	
	comp=Z,30nm,18.1s,baz=66,slow=35						
INK	**Inuvik**	**61.15**	**335**	LR	LR	09 22 51.7	
	comp=Z,38nm,19.1s,baz=50,slow=34						
NVAR	**Mina Array Bea**	**62.45**	**300**	LR	LR	09 24 12.7	
	comp=Z,50nm,20.4s,baz=338,slow=35						
KMBO	**Kilima Mbogo**	**79.37**	**98**	LR	LR	09 34 37.0	
	comp=Z,70nm,18.2s,baz=88,slow=35						
KURBB	**Kurchatov Arra**	**80.19**	**35**	P	P	09 00 15.2	-0.2
	0.4nm,0.8s,baz=311,slow=5.8,SNR=4.2						
MKAR	**Makanchi Array**	**84.61**	**36**	P	P	09 00 38.6	-0.1
	0.4nm,0.9s,baz=347,slow=5.9,SNR=2.9						

*IDC **07** 08:51:35.4±0.6, 60°31S×27°43W, h0km, mb4.3/10, mb1 4.4/11, mb1mx4.3/29, mbtmp4.3/11, ML4.4/1, MS3.6/12, Ms1 3.5/12, ms1mx3.5/23, Error ellipse: s-maj=24.7km s-min=17.2km az=71.0*
*NEIC **07** 08:51:41.1±1.2, 60°4S±0°1×27°3W±0°3, h40km±6km, mb4.5/13, Error ellipse: s-maj=22.0km s-min=11.8km az=51.0*
ISC 07 08:51:37.0±0.5, 60°41S±0°08×27°20W±0°10, h10km, n45, σ1s04/42, mb4.4/13, MS3.5/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.93**	**317**	Pn	**Pn**	**08 53 34.2**	**+2.0**
VNA1	**Neumayer--Stat**	**12.84**	**151**	P	**Pn**	**08 54 38.5**	**-0.8**
VNA3	**Neumayer Olymp**	**12.95**	**154**	P	**Pn**	**08 54 39.2**	**-1.6**
VNA2	**Neumayer--Watz**	**13.24**	**151**	P	**Pn**	**08 54 43.7**	**-1.1**
	baz=318,slow=16						
SNAA	**Sanae**	**14.85**	**149**	P	**Pn**	**08 55 05.5**	**-1.3**
SNAA	**Sanae**	**14.85**	**149**	Pn	**Pn**	**08 55 06.1**	**-0.7**
	1.7nm,0.3s,baz=318,slow=13,SNR=19						
SNAA				Sn	Sn	08 57 41.2	-10
	0.2nm,0.3s,baz=6.6,slow=12,SNR=2.9						
SNAA				LR	LR	08 59 38.5	
	comp=Z,163nm,19.1s,baz=8.0,slow=32						
SNAA	**Sanae**	**14.85**	**149**		**Pn**	**08 55 07.1**	**+0.3**
PMSA	**Palmer Station**	**17.33**	**240**	P	**P**	**08 55 40.2**	**+0.1**
PMSA				IAmb	IAmb	08 55 59.0	
	comp=Z,35nm,1.1s						
BELA	**Belgrano 2**	**17.72**	**185**	P	**P**	**08 55 45.8**	**+1.5**
QSPA	**South Pole Qui**	**29.83**	**180**	P	**P**	**08 57 45.7**	**+1.7**
	comp=Z,12nm,1.0s,baz=212,slow=1.1,SNR=19						
QSPA	**South Pole Qui**	**29.83**	**180**	P	**P**	**08 57 43.9**	**-0.1**
PLCA	**Paso Flores**	**33.01**	**287**	P	**P**	**08 58 11.7**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=143,slow=18,SNR=1.6						
PLCA				LR	LR	09 09 43.7	
	comp=Z,55nm,19.4s,baz=145,slow=33						
PLCA	**Paso Flores**	**33.01**	**287**	P	**P**	**08 58 12.1**	**0.0**
MAW	**Mawson**	**36.71**	**140**	P	**P**	**08 58 43.8**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=244,slow=12,SNR=3.6						
MAW				LR	LR	09 13 08.7	
	comp=Z,86nm,18.1s,baz=240,slow=35						
MT02	**Curacav**	**39.35**	**294**	P	**P**	**08 59 05.9**	**-0.4**
MT02				IAmb	IAmb	08 59 21.5	
	comp=Z,9.1nm,1.1s						
CPUP	**Villa Florida**	**39.81**	**315**	P	**P**	**08 59 09.0**	**-1.1**
	comp=Z,3.7nm,0.8s,baz=218,slow=7.4,SNR=5.0						
CPUP				LR	LR	09 14 31.6	
	comp=Z,72nm,20.3s,baz=196,slow=35						
CPUP	**Villa Florida**	**39.81**	**315**	P	**P**	**08 59 09.7**	**-0.4**
CPUP				IAmb	IAmb	08 59 19.4	
	comp=Z,6.6nm,0.9s						
VNDA	**Vanda**	**42.20**	**183**	P	**P**	**08 59 30.7**	**+1.4**
	comp=Z,3.7nm,0.8s,baz=177,slow=7.4,SNR=19						
VNDA				LR	LR	09 15 21.9	
	comp=Z,87nm,19.1s,baz=188,slow=34						
VNDA	**Vanda**	**42.20**	**183**	P	**P**	**08 59 29.8**	**+0.5**
AC04	**Llanos de Chal**	**43.62**	**298**	P	**P**	**08 59 40.5**	**-0.8**
AC04				IAmb	IAmb	08 59 54.3	
	comp=Z,14nm,1.3s						
GO02	**Mina Guanaco**	**45.63**	**301**	P	**P**	**08 59 57.5**	**-0.3**
GO02				IAmb	IAmb	09 00 13.2	
	comp=Z,8.6nm,0.8s						
BDFB	**Brasilia**	**47.19**	**332**	LR	LR	09 18 35.4	
	comp=Z,36nm,19.0s,baz=52,slow=34						
BOSA	**Boshof**	**47.19**	**72**	P	**P**	**09 00 11.2**	**+1.4**
	comp=Z,3.0nm,0.8s,baz=81,slow=12,SNR=2.7						
BOSA				LR	LR	09 15 31.9	
	comp=Z,45nm,21.5s,baz=199,slow=30						
LPAZ	**La Paz**	**52.98**	**308**	P	**P**	**09 00 53.5**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=114,slow=7.0,SNR=2.4						
LPAZ				LR	LR	09 25 25.5	
	comp=Z,34nm,19.2s,baz=134,slow=38						
LPAZ	**La Paz**	**52.98**	**308**	P	**P**	**09 00 53.2**	**-1.2**
LPAZ				IAmb	IAmb	09 01 08.3	
	comp=Z,6.7nm,1.4s						
LSZ	**Lusaka**	**60.04**	**66**	P	**P**	**09 01 44.0**	**-0.1**
RPN	**Rapa Nui**	**62.98**	**262**	LR	LR	09 22 24.1	
	comp=Z,31nm,21.5s,baz=144,slow=29						
DBIC	**Dimbokro**	**69.16**	**24**	P	**P**	**09 02 43.5**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=180,slow=11,SNR=3.8						
DBIC				LR	LR	09 25 31.2	
	comp=Z,79nm,21.0s,baz=128,slow=30						
TOA0	**Torodi Ar. Sit**	**76.88**	**29**	P	**P**	**09 03 29.2**	**+0.2**
TORD	**Torodi Ar. Bea**	**76.88**	**29**	P	**P**	**09 03 29.6**	**+0.5**
	comp=Z,2.9nm,0.5s,baz=199,slow=6.1,SNR=24						
TORD				LR	LR	09 31 58.0	
	comp=Z,43nm,19.3s,baz=270,slow=32						
TORD	**Torodi Ar. Bea**	**76.88**	**29**	P	**P**	**09 03 29.2**	**+0.2**
TORD				IAmb	IAmb	09 03 39.0	
	comp=Z,5.4nm,1.0s						
PPT	**Papeete**	**89.60**	**234**	LR	LR	09 38 03.2	
	comp=Z,59nm,20.4s,baz=200,slow=31						
ASAR	**Alice Springs**	**94.82**	**163**	P	**P**	**09 04 59.0**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=193,slow=4.2,SNR=9.8						
ASAR	**Alice Springs**	**94.82**	**163**	P	**P**	**09 04 57.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**123.44**	**113**	PKP	**PKiKP**	**09 10 35.0**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=237,slow=3.1,SNR=5.3						
CMAR	**Chiang Mai Arr**	**123.44**	**113**		**PKPdf**	**09 10 34.1**	**0.0**
FINES	**FINESS Array B**	**128.23**	**29**	PKP	**PKPdf**	**09 10 41.7**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=158,slow=4.1,SNR=7.2						
FINES	**FINESS Array B**	**128.23**	**29**		**PKPdf**	**09 10 41.1**	**-0.8**
YKA	**Yellowknife Ar**	**139.33**	**315**	PKP	**PKPdf**	**09 10 59.9**	**-2.8**
	comp=Z,0.8nm,0.8s,baz=131,slow=2.5,SNR=12						
ZALV	**Zalesovo Beam**	**144.12**	**69**	PKP	**PKPab**	**09 11 08.8**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=261,slow=3.9,SNR=5.6						
INK	**Inuvik**	**149.07**	**316**	PKPbc	**PKPdf**	**09 11 20.9**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=186,slow=4.1,SNR=9.0						
INK	**Inuvik**	**149.07**	**316**		**PKPdf**	**09 11 20.2**	**+0.9**
SONM	**Songino Array**	**150.70**	**94**	PKPbc	**PKPbc**	**09 11 28.5**	**+0.1**
	comp=Z,2.9nm,0.9s,baz=228,slow=1.8,SNR=16						
NRIK	**Noril'sk**	**152.30**	**44**	PKPbc	**PKPbc**	**09 11 30.1**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=133,slow=5.7,SNR=2.0						
ILAR	**Eielson Array**	**152.84**	**305**	PKPbc	**PKPbc**	**09 11 30.8**	**-1.7**
	comp=Z,1.8nm,0.9s,baz=272,slow=0.7,SNR=10						

NNC 07 09:04:31.0±0.8, 50°30N×73°33E, h0km, mb3.6, mpv3.3, 4C-2D, Error ellipse: s-maj=8.6km s-min=5.4km az=52.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**3.34**	**82**	⇑Pg	Pb	09 05 32.4	+1.3
	3.5nm,0.6s,baz=270,slow=17						
KURBB				⇑Lg	Lg	09 06 16.2	
	45nm,0.7s						
BRVK	**Borovoye**	**3.35**	**327**	⇑Pg	Pb	09 05 32.4	+1.1
	4.1nm,1.0s						
BRVK				⇑Lg	Lg	09 06 16.8	
	20nm,0.7s						
BTLS	**Baital**	**5.28**	**174**	Pg	Pb	09 06 07.4	+3.3
	1.8nm,0.2s						
BTLS				Lg	Lg	09 07 16.7	
	4.0nm,0.6s						
MAKZ	**Makanchi**	**6.72**	**118**	⇓Lg	Lg	09 08 03.7	
	5.6nm,0.8s						
KUU	**Kurty**	**6.73**	**161**	Pg	Pb	09 06 33.7	+4.9
KUU				Lg	Lg	09 08 03.1	
MK31	**Makanchi Array**	**6.91**	**117**	⇓Lg	Lg	09 08 11.5	
	5.7nm,1.0s,baz=310,slow=27,SNR=7.8						
KST	**Kastek**	**7.48**	**165**	Pg	Pg	09 06 48.0	-6.2
	1.9nm,0.6s						
KST				Lg	Lg	09 08 25.9	
	3.9nm,0.5s						

*SKO **07** 09:25:29.6, 41°49N×20°32E, h15km*
*PDG **07** 09:25:29.8±0.1, 41°50N×20°24E, h6km, ML2.6/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*TIR **07** 09:25:29.2, 41°48N×20°31E, h13km±1km, Md2.6, Ml2.4*
ISC 07 09:25:29.8±1.0, 41°48N±0°03×20°31E±0°03, h14km±7km, n26, σ1s04/47, 4C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.22**	**27**	P	**Pg**	**09 25 34.7**	**0.0**
	baz=25						
PHP				S	**Sg**	**09 25 38.0**	**-0.1**
	baz=25						
PHP				AMP			
	comp=N,3.9nm,1.0s,baz=25						
TIR	**Tirane**	**0.36**	**248**	P	**Pg**	**09 25 37.2**	**+0.2**
	baz=249						
TIR				S	**Sg**	**09 25 42.4**	**+0.4**
	baz=249						
TIR				AMP			
	comp=N,1.5nm,1.0s,baz=249						
TIR	**Tirane**	**0.36**	**248**	*i* Pg	**Pg**	**09 25 37.3**	**+0.2**
OHR	**Ohrid**	**0.53**	**135**	⇓*i* Pg	**Pb**	**09 25 40.3**	**-0.5**
OHR				*i* Sg	**Sb**	**09 25 48.1**	**-0.2**
OHR				*e*Lg	Lg	09 25 48.8	
	comp=E,49nm,0.5s						
OHR				*e*Lg	Lg	09 25 49.6	
	comp=N,58nm,0.3s						
PUK	**Puka**	**0.64**	**331**	P	**Pg**	**09 25 41.9**	**-0.4**
	baz=331						
PUK				S	**Sb**	**09 25 52.1**	**+0.5**
	baz=331						
PUK				AMP			
	comp=N,0.8nm,1.0s,baz=331						
BCI	**Bajram Curri**	**0.90**	**349**	P	**Pg**	**09 25 46.8**	**-0.4**
	baz=349						
ULC	**Ulcinj**	**0.93**	**301**	⇑*i* Pg	**Pb**	**09 25 46.1**	**-1.6**
ULC				*i* Sg	**Sb**	**09 26 00.1**	**+0.2**
SKO	**Skopje**	**0.98**	**60**	*i* Sg	**Sn**	**09 26 02.6**	**-0.2**
FNA	**Florina**	**1.07**	**131**	P	**Pn**	**09 25 50.2**	**-0.1**
	baz=130						
FNA				S	**Sn**	**09 26 05.5**	**+0.4**
	baz=130						
FNA	**Florina**	**1.07**	**131**	*i* Pg	**Pn**	**09 25 50.3**	**-0.1**
FNA				*i* Sg	**Sn**	**09 26 06.3**	**+1.2**
DRME	**Dracevica, Mon**	**1.09**	**310**	⇑*i* Pg	**Pb**	**09 25 49.2**	**-1.3**
DRME				*i* Sg	**Sn**	**09 26 05.8**	**+0.1**
PVY	**Plav**	**1.14**	**347**	*e*Pg	**Pb**	**09 25 50.4**	**-0.9**
PVY				*i* Sg	**Sn**	**09 26 08.1**	**+1.1**
PDG	**Podgorica**	**1.23**	**321**	*i* Pg	**Pn**	**09 25 52.4**	**-0.2**
PDG				*i* Sg	**Sg**	**09 26 10.5**	**+1.1**
TTG	**Podgorica**	**1.23**	**321**	⇓*i* Pg	**Pn**	**09 25 51.7**	**-0.8**
TTG				*i* Sg	**Sg**	**09 26 10.5**	**+1.1**
GJIK	**Gjilan**	**1.29**	**40**	*i* Pg	**Pg**	**09 25 54.0**	**-0.5**
BUM	**Brajici-Budva**	**1.33**	**308**	⇓*i* Pg	**Pn**	**09 25 53.5**	**-0.6**
BUM				*i* Sg	**Sg**	**09 26 13.8**	**+1.0**
BEY	**Berane**	**1.42**	**348**	*i* Pn	**Pg**	**09 25 57.9**	**+0.8**
IVA	**Berane**	**1.42**	**348**	⇑*i* Pg	**Pb**	**09 25 55.5**	**-0.6**
IVA				*i* Sg	**Sg**	**09 26 17.4**	**+1.8**
CEME	**Cevo**	**1.48**	**316**	⇓*i* Pg	**Pn**	**09 25 56.2**	**+0.1**
CEME				*i* Sg	**Sg**	**09 26 18.8**	**+1.2**
KOME	**Kolasin**	**1.49**	**337**	⇓*i* Pg	**Pb**	**09 25 56.6**	**-0.6**
KOME				*i* Sg	**Sg**	**09 26 19.4**	**+1.7**
NKME	**Niksic**	**1.63**	**322**	⇓*i* Pn	**Pb**	**09 25 59.0**	**-0.7**
NKME				*i* Sn	**Sg**	**09 26 23.0**	**+0.7**
HCY	**Herceg Novi**	**1.66**	**306**	⇓*i* Pn	**Pb**	**09 25 59.3**	**-0.8**
HCY				*i* Sn	**Sg**	**09 26 23.6**	**+0.4**
BRY	**Bratogost**	**1.93**	**318**	*e*Pn	**Pb**	**09 26 03.7**	**-1.2**
BRY				*i* Sn	**Sg**	**09 26 30.3**	**-1.6**
UPM	**Unac-Piva**	**2.01**	**329**	⇑*i* Pn	**Pb**	**09 26 04.9**	**-1.3**
UPM				*i* Sn	**Sb**	**09 26 32.4**	**+1.3**
STON	**Ston**	**2.38**	**306**	*e*Pn	**Pn**	**09 26 09.3**	**+0.9**
STON				Sn	**Sb**	**09 26 41.1**	**-0.6**
RICI	**Ricice**	**3.09**	**312**	*e*Pn	**Pn**	**09 26 20.0**	**+1.8**
RICI				Sn	**Sb**	**09 26 58.9**	**-3.2**

IDC 07 09:25:45.1±29.0, 23°87S×177°47W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/37, mbtmp4.1/4, Error ellipse: s-maj=545.2km s-min=137.1km az=92.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.88**	**248**	P	P	09 32 55.1	-0.4
	1.6nm,0.5s,baz=93,slow=10,SNR=12						
ASAR	**Alice Springs**	**44.32**	**260**	P	P	09 33 57.0	-0.3
	1.2nm,0.5s,baz=90,slow=7.9,SNR=19						
WRA	**Warramunga Arr**	**44.72**	**265**	P	P	09 34 00.7	+0.2
	2.0nm,0.5s,baz=104,slow=7.8,SNR=32						
FITZ	**Fitzroy Crossi**	**53.14**	**265**	P	P	09 35 05.2	+0.1
	1.7nm,0.6s,baz=84,slow=9.2,SNR=2.5						

*IDC **07** 09:26:48.9±2.7, 53°57N×87°83E, h0km, mb1 3.6/2, mb1mx2.2/48, mbtmp3.6/2, ML3.2/2, Error ellipse: s-maj=25.0km s-min=15.0km az=63.0*
NNC 07 09:26:48.9±1.6, 53°56N×87°82E, h0km, mb3.5, mpv3.1, 8C-3D, Error ellipse: s-maj=12.7km s-min=5.8km az=55.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.82**	**284**	⇑P	Pn	09 27 20.9	-0.6
	1.1nm,0.3s						
ZAA0				⇑S	Sb	09 27 46.0	-0.5
	11nm,0.9s						
ZALV	**Zalesovo Beam**	**1.82**	**284**	Pn	Pn	09 27 20.9	-0.5
	6.4nm,0.3s,baz=99,slow=16,SNR=67						
ZALV				Lg	Lg	09 27 46.5	
	7.9nm,0.3s,baz=99,slow=23,SNR=16						
I46RU	**ZALESOVO INFRA**	**1.82**	**284**	*i*		09 38 44.9	
	baz=98,slow=317,SNR=3.3						
KURBB	**Kurchatov Arra**	**6.44**	**247**	Pn	Pn	09 28 25.8	+1.0
	0.4nm,0.3s,baz=62,slow=14,SNR=16						
KURBB				Lg	Lg	09 30 13.1	
	0.1nm,0.3s,baz=64,slow=33,SNR=8.8						
KURBB	**Kurchatov Arra**	**6.44**	**247**	⇓Pn	Pn	09 28 25.4	+0.6
	4.4nm,0.4s						
KURBB				⇑Sn	Sn	09 29 40.5	+1.7
	6.0nm,0.5s						
KURBB				⇑Lg	Lg	09 30 10.7	
	24nm,1.2s						
MK31	**Makanchi Array**	**7.64**	**210**	⇑Pn	Pn	09 28 42.5	+1.0
	0.4nm,0.4s,baz=29,slow=13,SNR=22						
MK31				⇑Sn	Sn	09 30 08.9	+0.2
	1.1nm,0.7s,baz=34,slow=22,SNR=4.5						
MK31				⇑Lg	Lg	09 30 52.1	
	5.0nm,1.0s						
MKAR	**Makanchi Array**	**7.64**	**210**	Pn	Pn	09 28 43.0	+1.6
	0.5nm,0.3s,baz=28,slow=13,SNR=23						
MKAR				Sn	Sn	09 30 08.5	-0.2
	0.2nm,0.3s,baz=30,slow=24,SNR=8.8						
MKAR				Lg	Lg	09 30 49.0	
	0.2nm,0.3s,baz=32,slow=31,SNR=5.9						
MAKZ	**Makanchi**	**7.73**	**211**	⇑Pn	Pn	09 28 43.8	+1.2
	1.0nm,0.6s						
MAKZ				⇓Sn	Sn	09 30 11.4	+0.6
	2.9nm,1.2s						
MAKZ				⇓Lg	Lg	09 30 53.7	
	5.9nm,1.2s						

IDC 07 09:29:00.1±3.7, 53°76N×88°20E, h0km, mb1 3.1/3, mb1mx3.0/51, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=35.4km s-min=20.9km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**2.01**	**277**	*i*		09 41 50.0	
	baz=91,slow=314,SNR=2.8						
ZALV	**Zalesovo Beam**	**2.01**	**277**	Pn	Pn	09 29 35.2	0.0
	2.3nm,0.3s,baz=92,slow=18,SNR=5.3						
ZALV				Lg	Lg	09 30 03.7	
	5.0nm,0.3s,baz=98,slow=27,SNR=8.3						
KURBB	**Kurchatov Arra**	**6.72**	**246**	Pn	Pn	09 30 40.5	+0.6
	0.2nm,0.3s,baz=59,slow=14,SNR=4.5						
MKAR	**Makanchi Array**	**7.93**	**211**	Pn	Pn	09 30 57.4	+0.9
	0.2nm,0.3s,baz=27,slow=13,SNR=2.9						

IDC 07 09:30:42.0±3.1, 53°54N×87°82E, h0km, mb1 3.0/2, mb1mx2.9/52, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=27.3km s-min=17.9km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.83**	**284**	*i*		09 42 50.0	
	baz=99,slow=317,SNR=2.4						
ZALV	**Zalesovo Beam**	**1.83**	**284**	Pn	Pn	09 31 14.4	-0.2
	1.3nm,0.3s,baz=103,slow=16,SNR=10						
ZALV				Lg	Lg	09 31 40.0	
	5.0nm,0.3s,baz=105,slow=25,SNR=8.0						
KURBB	**Kurchatov Arra**	**6.43**	**247**	Pn	Pn	09 32 18.3	+0.5
	0.1nm,0.3s,baz=61,slow=14,SNR=3.2						

PLAI Plampang 14.91 217 P P 09 38 53.7 -0.7
1µm170nm,0.8s
JAY Jayapura 14.94 112 Pn P 09 38 54.6 -0.2
1.5nm,0.3s,baz=333,slow=7.0,SNR=4.9
JAY LR LR 09 43 48.0
comp=Z,396nm,21.0s,baz=316,slow=34
TWSI Taliwang, Sumb 15.40 220 P P 09 38 59.1 -0.7
57nm,1.2s
SRBI Singaraja 16.07 226 P P 09 39 08.0 +0.7
1µm210nm,0.8s
MTN Manton Dam 16.41 165 P Pn 09 39 06.5 -2.7
baz=16,SNR=35
MTN Manton Dam 16.41 165 Pn Pn 09 39 06.4 -2.8
MTN IAmb IAmb 09 39 13.5
comp=Z,31nm,0.5s
KSM Kuching 16.60 265 P 09 39 12.6 -0.6
KDU Kakadu 16.66 161 P Pn 09 39 09.8 -2.4
baz=16,SNR=11
TPI Tanjungpandan 20.05 253 P Pn 09 39 53.7 +0.4
comp=Z,28nm,1.2s
TPUB Ta-pu 20.95 344 P P 09 39 58.0 -2.7
TPUB IAmb IAmb 09 40 04.0
comp=Z,40nm,0.8s
FITZ Fitzroy Crossi 21.11 183 P P 09 40 02.0 -0.3
comp=Z,14nm,0.5s,baz=10,slow=9.2,SNR=74
FITZ LR LR 09 50 32.9
comp=Z,56nm,18.1s,baz=37,slow=44
FITZ Fitzroy Crossi 21.11 183 P P 09 40 01.9 -0.5
baz=21,SNR=27
FITZ Fitzroy Crossi 21.11 183 P P 09 40 01.9 -0.5
FITZ IAmb IAmb 09 40 02.9
comp=Z,37nm,1.3s
SSLB Suanglung 21.33 345 P P 09 40 03.6 -1.2
SSLB IAmb IAmb 09 40 26.7
comp=Z,22nm,0.9s
NACB Ninganchiao 21.55 347 P P 09 40 04.1 -3.0
NACB IAmb IAmb 09 40 27.6
comp=Z,27nm,1.0s
LEM Lembang 21.58 243 P P 09 40 11.7 +4.0
comp=Z,22nm,0.6s,baz=300,slow=22,SNR=5.4
LEM LR LR 09 51 10.8
comp=Z,280nm,18.7s,baz=55,slow=44
CBJI Citeko 22.09 245 P P 09 40 30.8 +18
QIZ Qiongzhong 22.95 315 P P 09 40 21.1 -1.0
QIZ S S 09 44 28.7 +0.9
QIZ LR LR
comp=N,240nm,10.7s
QIZ LR LR
comp=E,160nm,13.7s
QIZ LR LR
comp=Z,230nm,11.3s
KLSI 23.42 251 P P 09 40 28.4 +1.8
comp=Z,9.7nm,1.1s
COEN Coen 23.45 137 P P 09 40 25.1 -1.9
JOW Kunigami 23.63 3 LR LR 09 49 34.2
comp=Z,72nm,21.1s,baz=172,slow=36
PMG Port Moresby 23.75 122 LR LR 09 50 29.2
comp=Z,159nm,19.5s,baz=268,slow=38
WB0 Warramunga Arr 23.91 162 P P 09 40 29.6 -1.5
WRAB Tennant Creek 24.06 162 P P 09 40 31.1 -1.3
WRA Warramunga Arr 24.06 162 P P 09 40 31.2 -1.2
comp=Z,12nm,0.4s,baz=338,slow=11,SNR=278
WRA PcP PcP 09 44 14.0 +1.2
comp=Z,0.8nm,0.4s,baz=338,slow=2.5,SNR=3.4
WRA S S 09 44 46.5 +0.7
comp=Z,2.0nm,0.8s,baz=333,slow=20,SNR=7.1
WRA LR LR 09 51 29.5
comp=Z,126nm,19.9s,baz=195,slow=40
WRA Warramunga Arr 24.06 162 P P 09 40 29.8 -2.6
WB2 Warramunga Arr 24.07 162 P P 09 40 31.2 -1.3
WC3 Warramunga Arr 24.09 162 P P 09 40 32.1 -0.6
baz=24
WR0 Warramunga Arr 24.14 162 P P 09 40 31.9 -1.3
WR0 IAmb IAmb 09 40 41.5
comp=Z,15nm,0.7s
PSA00 Pilbara Seismi 25.47 195 P P 09 40 45.7 +0.5
PSA00 IAmb IAmb 09 40 46.8
comp=Z,23nm,0.9s
PSA00 Pilbara Seismi 25.47 195 P P 09 40 45.7 +0.5
QIS Mount Isa 26.64 153 P P 09 40 55.1 -0.8
baz=26,SNR=5.0
AS31 Alice Springs 27.49 166 P P 09 41 02.2 -1.3
ASAR Alice Springs 27.49 166 P P 09 41 02.7 -0.8
comp=Z,2.6nm,0.5s,baz=342,slow=6.9,SNR=53
ASAR PcP PcP 09 44 21.9 +1.2
comp=Z,1.7nm,0.6s,baz=341,slow=1.9,SNR=8.1
ASAR S S 09 45 42.9 +2.8
comp=Z,0.4nm,0.9s,baz=350,slow=21,SNR=2.4
ASAR Alice Springs 27.49 166 P P 09 41 02.3 -1.1
ASAR PcP 09 44 20.5 -0.2
ASPA Alice Springs 27.49 166 P P 09 41 02.6 -0.9
baz=27
PSI Prapat 27.89 270 LR LR 09 53 29.4
comp=Z,212nm,19.3s,baz=90,slow=39
JCJ Chichijima 28.01 30 LR LR 09 50 19.5
comp=Z,101nm,21.4s,baz=226,slow=32
WRKA Warakurna 28.01 177 P P 09 41 08.1 0.0
baz=28,SNR=8.2
NJ2 Nanjing 29.75 346 eP P 09 41 24.5 +1.0
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
CTA Charters Tower 29.91 141 P P 09 41 26.7 +1.7
comp=Z,7.8nm,1.2s,baz=91,slow=6.2,SNR=3.1
JNU Nakatsue 30.09 7 LR LR 09 56 36.7
comp=Z,91nm,18.7s,baz=209,slow=43
CMAR Chiang Mai Arr 31.29 301 P P 09 41 36.8 -0.4
comp=Z,1.9nm,0.4s,baz=114,slow=6.7,SNR=8.3
CMAR LR LR 09 55 28.5
comp=Z,64nm,21.0s,baz=120,slow=39
JHJ Hachijo jima 2 32.22 21 LR LR 09 55 11.9
comp=Z,266nm,18.9s,baz=209,slow=37
MORW Morawa 33.63 197 P P 09 41 58.2 +0.6
baz=33,SNR=9.0
MORW Morawa 33.63 197 P P 09 41 56.8 -0.7
MORW IAmb IAmb 09 42 21.1
comp=Z,18nm,1.4s
FORT Forrest 33.72 178 P P 09 41 58.0 -0.2
baz=33,SNR=17
FORT Forrest 33.72 178 P P 09 41 58.0 -0.2
KSAR Wonju Array Be 34.18 1 P P 09 42 01.8 -0.5
KSRS Korea Array 34.19 2 P P 09 42 00.2 -2.1
comp=Z,2.1nm,0.8s,baz=319,slow=53,SNR=3.8
KSRS LR LR 09 57 57.9
comp=Z,40nm,18.7s,baz=170,slow=40
KMBL Kambalda 34.61 187 P P 09 42 06.4 +0.4
baz=34,SNR=9.2
MJAR Matsushiro Arr 34.88 16 LR LR 09 54 49.5
comp=Z,149nm,21.0s,baz=195,slow=34
BLDU Ballidu 34.90 195 P P 09 42 09.6 +1.1
baz=35,SNR=5.9
XAN Xi'an 35.02 334 P P 09 42 08.2 -1.4
XAN pP pP 09 42 23.7 -0.5
XAN sP sP 09 42 31.4 +0.3
BBOO Buckleboo 36.77 167 P P 09 42 24.3 -0.2
baz=36,SNR=32
BBOO Buckleboo 36.77 167 P P 09 42 24.4 -0.2
EIDS Eidsvold 36.80 142 P P 09 42 23.6 -1.2
baz=36
EIDS Eidsvold 36.80 142 P P 09 42 23.6 -1.2
EIDS IAmb IAmb 09 42 24.4
comp=Z,5.2nm,0.7s
NWAO Narrogin (SRO) 36.98 194 P P 09 42 25.2 -1.1
NWAO Narrogin (SRO) 36.98 194 P P 09 42 25.2 -1.1
STKA Stephens Creek 37.51 159 P P 09 42 30.6 -0.2
comp=Z,20nm,0.7s,baz=334,slow=9.0,SNR=47
STKA PcP PcP 09 44 49.5 +1.5
comp=Z,3.4nm,0.5s,baz=348,slow=4.0,SNR=3.9
STKA LR LR 10 00 32.1
comp=Z,128nm,18.2s,baz=17,slow=40
STKA Stephens Creek 37.51 159 P P 09 42 30.6 -0.2
baz=37,SNR=35
STKA Stephens Creek 37.51 159 P P 09 42 30.5 -0.3
BJT Baijiatuau 37.99 347 P P 09 42 35.5 +0.7
BJT IAmb IAmb 09 42 39.1
comp=Z,16nm,1.1s
BJI Beijing 38.01 347 P P 09 42 35.4 +0.5
BJI sP sP 09 42 59.4 +2.7
BJI S S 09 48 27.6 +4.7
BJI pmax pmax
comp=Z,12nm,1.2s
BJI pmax pmax
comp=Z,69nm,3.5s
HTT Hallett 38.09 164 P P 09 42 36.1 +0.3
baz=38,SNR=6.7
CMSA Cobar Meteorol 38.84 154 P P 09 42 42.4 +0.4
baz=38,SNR=12

LZH Lanzhou 39.09 330 eP P 09 42 43.7 -0.6
LZH pP pP 09 42 54.8 -4.3
LZH sP pwP 09 42 59.6 -2.2
LZH pmax pmax
comp=Z,14nm,1.1s
HHC Hu-ho-hao-te 40.02 342 eP P 09 42 53.3 +1.5
HHC pmax pmax
comp=Z,16nm,0.6s
HHC pmax pmax
comp=Z,110nm,7.6s
SHL Shillong 40.34 307 P P 09 42 54.0 -0.8
SHL IAmb IAmb 09 42 55.2
comp=Z,14nm,0.8s
ARMA Armidale 40.89 146 P P 09 42 59.2 0.0
baz=40,SNR=11
ARMA Armidale 40.89 146 P P 09 42 59.0 -0.2
ARMA IAmb IAmb 09 43 25.7
comp=Z,29nm,1.4s
USRK Ussuriysk Ar. 41.17 6 P P 09 43 01.0 -0.1
comp=Z,8nm,0.8s,baz=189,slow=8.4,SNR=4.5
MDJ Mudanjiang 41.41 3 P P 09 43 03.1 0.0
MDJ pP pP 09 43 20.0 +1.8
MDJ sP sP 09 43 27.5 +2.4
MDJ S S 09 49 15.9 +2.3
MDJ sS sS 09 49 43.3 +4.2
MDJ ScS ScS 09 52 55.9 -5.3
MDJ pmax pmax
comp=Z,8.0nm,1.0s
MDJ pmax pmax
comp=Z,110nm,3.3s
MDJ LR LR
comp=N,200nm,4.3s
MDJ LR LR
comp=E,130nm,5.3s
MDJ LR LR
comp=Z,190nm,4.8s
H11S3 WAKE ISLAND Hy 41.88 66 T T 10 27 49.4
baz=248,slow=74
H11S1 WAKE ISLAND Hy 41.89 66 T T 10 27 46.0
baz=248
H11S2 WAKE ISLAND Hy 41.89 66 T T 10 27 46.7
baz=248,slow=74
ARPS Mount Arapiles 42.06 162 P P 09 43 09.1 +0.6
baz=42,SNR=16
ASAJ Asahikawa 43.15 17 P P 09 43 17.8 +0.6
comp=Z,10.0nm,0.9s,baz=219,slow=7.6,SNR=2.4
ASAJ LR LR 09 59 42.0
comp=Z,111nm,21.6s,baz=358,slow=34
JKA Kamikawa-asahi 43.15 17 P P 09 43 17.7 +0.5
JKA IAmb IAmb 09 43 36.7
comp=Z,29nm,1.3s
CAN Canberra 43.51 153 P P 09 43 21.5 +1.2
GTA Gaotai 43.69 329 eP P 09 43 17.7 -4.1
GTA pP pP 09 43 22.8 -14
GTA sP pwP 09 43 25.8 -14
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,30nm,7.1s
GTA LR LR
comp=N,97nm,17.8s
GTA LR LR
comp=E,150nm,20.0s
GTA LR LR
comp=Z,250nm,19.6s
TOO Toolangi 44.02 159 P P 09 43 25.5 +1.1
TOO IAmb IAmb 09 43 45.4
comp=Z,23nm,1.2s
YSS Yuzh-Sakhalins 45.81 15 P P 09 43 37.2 -1.2
PALK Pallekele 46.12 277 LR LR 10 05 41.3
comp=Z,105nm,19.0s,baz=205,slow=40
KLR Kul'dur 46.14 4 P P 09 43 40.6 -0.4
comp=Z,2.8nm,0.9s,baz=207,slow=6.8,SNR=6.9
ULN Ulaanbaatar 47.74 342 P P 09 43 52.3 -1.4
ULN IAmb IAmb 09 43 57.7
comp=Z,8.4nm,1.1s
SONM Songino Array 47.92 342 P P 09 43 55.2 +0.1
comp=Z,0.9nm,0.4s,baz=153,slow=8.0,SNR=11
SONM PcP PcP 09 45 23.8 +1.1
comp=Z,0.7nm,0.6s,baz=183,slow=2.5,SNR=2.8
SONM LR LR 10 07 01.0
comp=Z,79nm,20.3s,baz=120,slow=40
SONM Songino Array 47.92 342 P P 09 43 54.1 -1.0
WMQ Urumqi 53.30 325 eP P 09 44 35.3 -0.3
WMQ sP sP 09 44 59.1 +1.4
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,78nm,4.3s
PETK Petropavlovsk- 55.96 22 P P 09 44 55.3 +0.7
comp=Z,13nm,0.9s,baz=185,slow=3.2,SNR=7.9
SHLS Shalkode 57.90 321 eP P 09 45 05.9 -2.8
baz=321
MK31 Makanchi Array 58.13 325 P P 09 45 09.6 -0.5
MK31 IAmb IAmb 09 45 13.3
comp=Z,4.4nm,0.8s
MKAR Makanchi Array 58.13 325 P P 09 45 09.8 -0.4
comp=Z,4.9nm,0.7s,baz=119,slow=8.1,SNR=27
MKAR LR LR 10 11 46.0
comp=Z,83nm,20.4s,baz=114,slow=38
MKAR Makanchi Array 58.13 325 P P 09 45 09.2 -0.9
MAKZ Makanchi 58.31 325 P P 09 45 10.8 -0.6
MAKZ IAmb IAmb 09 45 14.6
comp=Z,7.8nm,0.9s
NIL Nilore 58.40 308 P P 09 45 11.8 -0.5
SATY Saty 58.52 320 eP P 09 45 12.4 -0.7
comp=Z,3.7nm,0.8s,baz=320
KPKS Kokpek 58.54 321 eP P 09 45 12.1 -1.0
baz=320
MA2 Magadan 59.27 14 LR LR 10 07 24.6
comp=Z,31nm,21.8s,baz=224,slow=33
MDOK Medeo 59.45 320 eP P 09 45 18.6 -0.9
baz=320
TNSS Tian-Shan 59.45 319 eP P 09 45 19.0 -0.9
baz=319
TDK Taldyqorghan 59.47 322 eP P 09 45 18.6 -0.9
baz=322
AAA Alma-Ata 59.55 320 eP P 09 45 19.1 -1.1
baz=320
KUU Kurty 60.24 320 eP P 09 45 23.5 -1.3
comp=Z,4.5nm,0.9s,baz=320
SGDS Sogindy 61.15 319 eP P 09 45 30.8 -0.3
baz=319
RPZ Rata Peaks 61.19 145 LR LR 10 12 38.1
comp=Z,90nm,20.1s,baz=337,slow=37
ZAA0 Zalesovo Array 61.19 333 P P 09 45 29.9 -1.0
ZAA0 IAmb IAmb 09 45 35.6
comp=Z,3.8nm,0.8s
ZALV Zalesovo Beam 61.19 333 P P 09 45 30.4 -0.5
comp=Z,3.4nm,0.8s,baz=111,slow=6.2,SNR=9.0
ZALV LR LR 10 13 45.1
comp=Z,42nm,20.2s,baz=129,slow=38
ZALV Zalesovo Beam 61.19 333 P P 09 45 30.1 -0.9
SEM Semipalatinsk 61.29 328 eP P 09 45 31.6 -0.4
baz=328
BTLS Baital 62.22 320 eP P 09 45 37.5 -0.6
baz=320
GAR Garm 62.43 313 P P 09 45 39.1 -0.6
GAR IAmb IAmb 09 45 43.5
comp=Z,9.5nm,1.1s
DZA Taraz 63.13 317 eP P 09 45 42.7 -1.5
baz=317
IUG Iuzhnay 63.74 316 eP P 09 45 47.6 -0.8
baz=316
KK31 Karatay Array 63.76 317 P P 09 45 47.7 -0.7
KKAR Karatay Array 63.76 317 P P 09 45 47.7 -0.7
KKAR Karatay Array 63.76 317 P P 09 45 47.5 -0.9
BRZS Berezniki 65.26 325 eP P 09 45 57.1 -0.9
baz=325
BRVK Borovoye 67.97 327 P P 09 46 14.4 -0.8
BRVK IAmb IAmb 09 46 16.0
comp=Z,4.4nm,0.8s
TIXI Tiksi 68.46 1 P P 09 46 17.2 -0.7
TIXI IAmb IAmb 09 46 18.4
comp=Z,6.9nm,0.9s
NRIK Noril'sk 71.06 346 P P 09 46 34.6 +0.7
comp=Z,5.9nm,0.7s,baz=127,slow=6.3,SNR=12
NRIK Noril'sk 71.06 346 P P 09 46 34.5 +0.5
NRIK IAmb IAmb 09 46 35.2
comp=Z,7.4nm,0.8s
ABKAR Akbulak array 72.70 321 P P 09 46 43.6 -0.5
ARU Arti 75.52 328 P P 09 46 59.6 -0.9
ARU IAmb IAmb 09 47 03.3
comp=Z,8.7nm,0.8s
VNDA Vanda 82.80 173 P P 09 47 41.0 +1.3
comp=Z,3.2nm,0.7s,baz=317,slow=4.9,SNR=17

VNDA Vanda 82.80 173 P P 09 47 40.9 +1.1
MAW Mawson 83.22 200 P P 09 47 42.1 +0.1
comp=Z,3.1nm,0.8s,baz=257,slow=16,SNR=3.6
MAW Mawson 83.22 200 IAmb IAmb 09 47 44.0
comp=Z,1.6nm,1.1s
KBZ Khabaz 83.49 313 LR LR 10 30 04.9
comp=Z,45nm,19.7s,baz=64,slow=39
MLY Manley 83.99 25 P P 09 47 46.9 +0.7
MLY IAmb IAmb 09 47 48.1
comp=Z,4.3nm,0.8s
COLD Coldfoot 84.42 23 P P 09 47 50.0 +1.8
COLD IAmb IAmb 09 47 51.3
comp=Z,5.9nm,0.9s
TOLK Toolik Lake Re 84.78 21 P P 09 47 51.6 +1.5
TOLK IAmb IAmb 09 47 53.1
comp=Z,8.1nm,1.1s
ILAR Eielson Array 85.61 25 P P 09 47 54.2 -0.1
comp=Z,0.5nm,0.6s,baz=253,slow=4.9,SNR=5.9
KLMR Klimovskoe 86.00 331 eP P 09 47 55.6 -0.7
KLMR AMP 09 48 02.3
comp=Z,13nm,1.1s
BMAR Burnt Mountain 86.60 23 P P 09 47 59.0 -0.2
BRTR Keskin Array B 90.50 310 P P 09 48 20.4 +2.0
comp=Z,2.0nm,0.8s,baz=103,slow=5.3,SNR=4.5
BRTR LR LR 10 33 23.0
comp=Z,18nm,19.9s,baz=50,slow=39
ARCES ARCESS Array B 91.07 340 P P 09 48 19.4 -0.8
comp=Z,7.7nm,1.1s,baz=81,slow=5.8,SNR=4.9
ARCES LR LR 10 33 21.6
comp=Z,48nm,19.2s,baz=290,slow=38
ARCES ARCESS Array B 91.07 340 IAmb IAmb 09 48 25.8
comp=Z,17nm,1.4s
SYO Syowa Base 91.89 201⇑ ePcP PcP 09 48 29.0 +4.3
FINES FINESS Array B 92.43 332 P P 09 48 28.0 +1.4
comp=Z,1.3nm,0.7s,baz=58,slow=3.6,SNR=4.4
NOA NORSAR Array B 99.39 334 LR LR 10 38 12.1
comp=Z,60nm,19.0s,baz=65,slow=38
YKA Yellowknife Ar 100.01 24 P Pdif 09 49 01.2 +0.2
comp=Z,0.3nm,0.8s,baz=294,slow=3.8,SNR=3.6
TXAR Lajitas Array 121.88 53 PKP PKiKP 09 54 12.2 +1.1
comp=Z,0.7nm,0.7s,baz=261,slow=1.0,SNR=9.5
TORD Torodi Ar. Bea 123.22 288 PKP PKiKP 09 54 14.7 +0.7
comp=Z,2.7nm,0.7s,baz=40,slow=2.3,SNR=15
TORD Torodi Ar. Bea 123.22 288 PKiKP 09 54 14.5 +0.6

*ISK **07** 09:46:16.4, 35°.99N×24°.72E, h24km, ML3.2/19*
*ATH **07** 09:46:16.2, 35°.93N×24°.69E, h66km±6km, ML3.4/7, Error ellipse: s-maj=6.5km s-min=1.2km az=165.0*
*HLW **07** 09:46:18.8, 35°.41N×25°.27E, h10km±10km, Md3.7, Ml3.7*
*THE **07** 09:46:18.0, 35°.92N×24°.71E, h68km±2km, ML3.4/17, Error ellipse: s-maj=2.0km s-min=0.5km az=136.0*
*IDC **07** 09:46:20.6±4.5, 36°.19N×24°.52E, h119km±45km, mb3.3/4, mb1 3.3/5, mb1mx2.9/50, mbtmp3.6/5, MS3.4/2, Ms1 3.4/2, ms1mx2.6/17, Error ellipse: s-maj=55.8km s-min=24.1km az=139.0*

ISC 07 09:46:16.6±0.8, **35°.92N**±0°.03×**24°.72E**±0°.03, **h73**km±7km, **n99**, σ1s**28**/124, **mb3.4**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRNS	**Prines Rethymn**	**0.58**	**198**	P	**Pn**	**09 46 31.5**	**+1.0**
PRNS				S	**Sn**	**09 46 42.2**	**+1.5**
IDI	**Anoyia**	**0.64**	**167**	P	**Pn**	**09 46 32.0**	**+0.7**
IDI				S	**Sn**	**09 46 42.0**	**-0.1**
IDI				AML	AML	09 46 42.8	
	comp=E,3547µm,0.1s						
IDI				AML	AML	09 46 43.0	
	comp=N,4767µm,0.2s						
IDI	**Anoyia**	**0.64**	**167**	P	**Pn**	**09 46 31.9**	**+0.7**
IDI				S	**Sn**	**09 46 42.7**	**+0.6**
	comp=N,2µm,0.2s						
IDI	**Anoyia**	**0.64**	**167**	PG	**Pn**	**09 46 31.5**	**+0.2**
IDI				SG	**Sn**	**09 46 42.0**	**-0.1**
VAM	**Vamos**	**0.66**	**220**	P	**Pn**	**09 46 32.3**	**+0.9**
VAM				S	**Sn**	**09 46 43.0**	**+0.7**
VAM				AML	AML	09 46 44.1	
	comp=N,11009µm,0.4s						
VAM				AML	AML	09 46 45.4	
	comp=E,7394µm,0.2s						
VAM	**Vamos**	**0.66**	**220**	P	**Pn**	**09 46 32.3**	**+0.9**
VAM				S	**Sn**	**09 46 42.9**	**+0.7**
	comp=E,5µm,0.3s						
IACM	**Heraklion**	**0.68**	**155**	P	**Pn**	**09 46 31.9**	**+0.4**
IACM				S	**Sn**	**09 46 42.6**	**+0.1**
	comp=E,5µm,0.2s						
KSTL	**Kastelli Herak**	**0.68**	**155**	P	**Pn**	**09 46 34.7**	**+3.2**
KSTL				S	**Sn**	**09 46 47.0**	**+4.5**
THR9	**Santorini-Faro**	**0.68**	**49**	P	**Pn**	**09 46 32.2**	**+0.7**
THR9	**Santorini-Faro**	**0.68**	**49**	P	**Pn**	**09 46 32.4**	**+0.8**
HRKL	**Herakleio**	**0.68**	**152**	P	**Pn**	**09 46 32.4**	**+0.8**
HRKL				S	**Sn**	**09 46 42.9**	**+0.3**
	comp=E,2µm,0.3s						
HRKL	**Herakleio**	**0.68**	**152**	PG	**Pn**	**09 46 31.9**	**+0.3**
HRKL				SG	**Sn**	**09 46 42.6**	**0.0**
THR6	**Thira Island,**	**0.70**	**51**	P	**Pn**	**09 46 32.7**	**+0.9**
THR5	**Thira Island,**	**0.71**	**45**	P	**Pn**	**09 46 32.7**	**+0.8**
SAP3	**Santorini-Thir**	**0.73**	**44**	P	**Pn**	**09 46 32.8**	**+0.6**
SAP3	**Santorini-Thir**	**0.73**	**44**	P	**Pn**	**09 46 32.7**	**+0.6**
SAP3				S	**Sn**	**09 46 43.7**	**+0.2**
	comp=E,12µm,0.3s						
SNT5	**Nea Kammeni, S**	**0.73**	**48**	P	**Pn**	**09 46 33.0**	**+0.8**
SNT5	**Nea Kammeni, S**	**0.73**	**48**	P	**Pn**	**09 46 33.0**	**+0.8**
SNT5				S	**Sn**	**09 46 44.0**	**+0.4**
	comp=E,5µm,0.2s						
THR3	**Thira Island,**	**0.74**	**48**	P	**Pn**	**09 46 33.1**	**+0.8**
THR3	**Thira Island,**	**0.74**	**48**	P	**Pn**	**09 46 33.0**	**+0.8**
IMMV	**Iera Moni Meta**	**0.75**	**233**	P	**Pn**	**09 46 33.2**	**+0.8**
IMMV				S	**Sn**	**09 46 44.0**	**0.0**
IMMV				AML	AML	09 46 48.9	
	comp=N,3884µm,0.4s						
IMMV				AML	AML	09 46 49.9	
	comp=E,4486µm,0.3s						
IMMV	**Iera Moni Meta**	**0.75**	**233**	P	**Pn**	**09 46 33.2**	**+0.8**
IMMV				S	**Sn**	**09 46 43.7**	**-0.3**
	comp=E,2µm,0.4s						
IMMV	**Iera Moni Meta**	**0.75**	**233**	PG	**Pn**	**09 46 32.9**	**+0.5**
IMMV				SG	**Sn**	**09 46 44.4**	**+0.4**
SANT	**Santorini**	**0.75**	**53**	P	**Pn**	**09 46 33.0**	**+0.6**
SANT				AML	AML	09 46 47.0	
	comp=E,7040µm,0.4s						
SANT				AML	AML	09 46 47.8	
	comp=N,2052µm,0.3s						
SANT	**Santorini**	**0.75**	**53**	P	**Pn**	**09 46 33.0**	**+0.6**
SANT				S	**Sn**	**09 46 44.6**	**+0.5**
	comp=N,2µm,0.4s						
SNT1	**Gialos, Santor**	**0.76**	**49**	P	**Pn**	**09 46 33.1**	**+0.7**
SNT1	**Gialos, Santor**	**0.76**	**49**	P	**Pn**	**09 46 33.0**	**+0.6**
SNT1				S	**Sn**	**09 46 44.5**	**+0.3**
	comp=N,1µm,0.4s						
SAP4	**Santorini-Oia**	**0.77**	**43**	P	**Pn**	**09 46 33.3**	**+0.7**
SAP4	**Santorini-Oia**	**0.77**	**43**	P	**Pn**	**09 46 33.2**	**+0.7**
SAP4				S	**Sn**	**09 46 45.1**	**+0.8**
	comp=N,5µm,0.2s						
THT2	**Imerovigli**	**0.77**	**48**	PG	**Pn**	**09 46 31.6**	**-1.0**
THR8	**Santorini-Mono**	**0.79**	**51**	P	**Pn**	**09 46 33.3**	**+0.6**
THR8	**Santorini-Mono**	**0.79**	**51**	P	**Pn**	**09 46 33.3**	**+0.6**
MHLO	**Agia Marina, M**	**0.81**	**342**	P	**Pn**	**09 46 33.8**	**+0.7**
MHLO				S	**Sn**	**09 46 45.8**	**+0.6**
MHLO				AML	AML	09 46 47.6	
	comp=E,8990µm,0.5s						
MHLO				AML	AML	09 46 49.6	
	comp=N,9126µm,0.4s						
MHLO	**Agia Marina, M**	**0.81**	**342**	P	**Pn**	**09 46 33.6**	**+0.5**
MHLO				S	**Sn**	**09 46 46.1**	**+0.9**
	comp=N,4µm,0.3s						
MHLA	**Plaka, Milos I**	**0.86**	**344**	P	**Pn**	**09 46 34.4**	**+0.8**
NPS	**Neapolis**	**0.98**	**132**	P	**Pn**	**09 46 35.6**	**+0.5**
NPS				AML	AML	09 46 51.9	
	comp=E,3264µm,0.4s						
NPS				AML	AML	09 46 52.5	
	comp=N,2931µm,0.5s						
NPS	**Neapolis**	**0.98**	**132**	P	**Pn**	**09 46 35.2**	**+0.1**
NPS				S	**Sn**	**09 46 48.8**	**0.0**
	comp=N,1µm,0.3s						
KNDR	**Palaiochora Ch**	**1.08**	**231**	PN	**Pn**	**09 46 37.9**	**+1.6**
ANKY	**Antikythira Is**	**1.15**	**268**	P	**Pn**	**09 46 37.7**	**+0.5**
ANKY				AML	AML	09 46 54.4	
	comp=E,1775µm,0.3s						
ANKY				AML	AML	09 46 55.1	
	comp=N,2135µm,0.3s						
ANKY	**Antikythira Is**	**1.15**	**268**	P	**Pn**	**09 46 37.7**	**+0.5**
ANKY				S	**Sn**	**09 46 52.4**	**-0.2**
	comp=N,978nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVDS	**Gavdos**	**1.19**	**206**	P	**Pn**	**09 46 39.6**	**+1.9**
GVDS	**Gavdos**	**1.19**	**206**	PN	**Pn**	**09 46 39.5**	**+1.9**
GVD	**Gavdhos**	**1.19**	**206**	PN	**Pn**	**09 46 39.2**	**+1.5**
FRMA	**Ierapetra Chan**	**1.23**	**137**	P	**Pn**	**09 46 40.4**	**+2.3**
FRMA				S	**Sn**	**09 46 57.1**	**+2.9**
	comp=N,195nm,0.4s						
APE	**Apeiranthos**	**1.32**	**29**	P	**Pn**	**09 46 39.5**	**0.0**
APE	**Apeiranthos**	**1.32**	**29**	PN	**Pn**	**09 46 39.2**	**-0.3**
APE				SN	**Sn**	**09 46 55.5**	**-1.1**
STIA	**Sitia Lasithi**	**1.33**	**122**	P	**Pn**	**09 46 40.4**	**+0.9**
STIA				S	**Sn**	**09 46 56.9**	**+0.3**
KTHA	**Kythira Island**	**1.38**	**285**	P	**Pn**	**09 46 40.8**	**+0.6**
KTHA	**Kythira Island**	**1.38**	**285**	P	**Pn**	**09 46 40.6**	**+0.4**
KTHA				S	**Sn**	**09 46 58.4**	**+0.5**
KTHA	**Kythira Island**	**1.38**	**285**	PN	**Pn**	**09 46 40.8**	**+0.6**
KTHR	**Kythira**	**1.43**	**284**	P	**Pn**	**09 46 41.4**	**+0.6**
KTHR				S	**Sn**	**09 46 59.8**	**+0.8**
	comp=N,552nm,0.3s						
ZKR	**Zakros**	**1.46**	**123**	P	**Pn**	**09 46 42.3**	**+1.1**
ZKR	**Zakros**	**1.46**	**123**	P	**Pn**	**09 46 42.3**	**+1.1**
ZKR				S	**Sn**	**09 47 00.6**	**+0.8**
ZKR	**Zakros**	**1.46**	**123**	PN	**Pn**	**09 46 42.5**	**+1.3**
MNVA	**Monemvasia**	**1.56**	**300**	P	**Pn**	**09 46 43.5**	**+1.0**
VLI	**Veliai**	**1.65**	**300**	P	**Pn**	**09 46 44.1**	**+0.5**
VLI	**Veliai**	**1.65**	**300**	P	**Pn**	**09 46 44.1**	**+0.5**
KRND	**KRANIDI**	**1.93**	**320**	P	**Pn**	**09 46 48.5**	**+1.1**
KRND				S	**Sn**	**09 47 11.9**	**+1.1**
	comp=N,398nm,0.3s						
KOSK	**Kos Island**	**2.01**	**65**	PN	**Pn**	**09 46 49.3**	**+0.9**
KARP	**Karpathos**	**2.02**	**100**	P	**Pn**	**09 46 49.2**	**+0.5**
KARP	**Karpathos**	**2.02**	**100**	PN	**Pn**	**09 46 49.7**	**+1.0**
NIS1	**Nisyros Isl.**	**2.10**	**70**	PN	**Pn**	**09 46 50.7**	**+0.9**
DION	**Dionisos Attik**	**2.25**	**344**	P	**Pn**	**09 46 53.0**	**+1.3**
VLX	**Vlachokerasia**	**2.37**	**308**	P	**Pn**	**09 46 54.5**	**+1.0**
VLX				S	**Sn**	**09 47 21.8**	**+0.1**
	comp=N,385nm,0.5s						
BODT	**Bodrum**	**2.38**	**61**	PN	**Pn**	**09 46 54.6**	**+1.1**
LTK	**Loutraki**	**2.53**	**327**	P	**Pn**	**09 46 56.7**	**+1.2**
ITM	**Ithomi**	**2.58**	**300**	PN	**Pn**	**09 46 57.5**	**+1.4**
PYL	**PYLOS**	**2.59**	**293**	P	**Pn**	**09 46 56.9**	**+0.6**
CHOS	**Chios island**	**2.69**	**23**	PN	**Pn**	**09 46 58.3**	**+0.6**
ARG	**Arkhangelos**	**2.78**	**83**	P	**Pn**	**09 47 00.0**	**+1.1**
ARG	**Arkhangelos**	**2.78**	**83**	PN	**Pn**	**09 46 59.9**	**+1.1**
URLA	**Izmir**	**2.86**	**31**	PN	**Pn**	**09 47 01.1**	**+1.1**
AMT	**Artemida-Makis**	**2.91**	**305**	P	**Pn**	**09 47 02.6**	**+2.0**
TURN	**Turunc**	**2.97**	**72**	PN	**Pn**	**09 47 03.0**	**+1.5**
DSF	**Desfina**	**3.04**	**326**	P	**Pn**	**09 47 03.6**	**+1.1**
LKR	**Lokris**	**3.05**	**334**	P	**Pn**	**09 47 03.8**	**+1.2**
YER	**Yerkesik**	**3.12**	**66**	PN	**Pn**	**09 47 05.1**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**3.25**	**51**	PN	**Pn**	**09 47 06.7**	**+1.3**
DALY	**Dalyan (Mula)**	**3.30**	**73**	PN	**Pn**	**09 47 07.7**	**+1.8**
FETY	**Fethiye**	**3.60**	**77**	PN	**Pn**	**09 47 12.1**	**+2.0**
AGG	**Agios Georgios**	**3.63**	**329**	PN	**Pn**	**09 47 12.2**	**+1.7**
ELL	**Elmali**	**4.27**	**77**	PN	**Pn**	**09 47 21.6**	**+2.3**
SLUM	**Salum**	**4.43**	**175**	S	Sn	09 48 02.5	-9.2
	baz=181						
SLUM				AMP		09 48 00.0	
	baz=181						
OUR	**Ouranopolis**	**4.45**	**353**	PN	**Pn**	**09 47 22.8**	**+1.2**
KORT	**Korkueli**	**4.67**	**75**	PN	**Pn**	**09 47 27.3**	**+2.6**
HORT	**Hortiatis**	**4.84**	**345**	PN	**Pn**	**09 47 29.2**	**+2.1**
SWA2		**6.68**	**174**	P	**Pn**	**09 47 50.4**	**-1.8**
	baz=178						
SWA2				AMP		09 48 00.0	
	baz=178						
SWA2				S	Sn	09 48 57.9	-8.9
	baz=178						
BRTR	**Keskin Array B**	**8.02**	**59**	P	**Pn**	**09 48 14.4**	**+4.0**
	comp=N,0.3nm,0.3s,baz=236,slow=15,SNR=7.0						
RYAN	**Fayoum**	**8.27**	**144**	P	**Pn**	**09 48 11.2**	**-2.7**
	baz=144						
HSAF	**As Saff**	**8.52**	**136**	P	Pn	09 48 13.7	-3.6
	baz=135						
GLL	**Jalalah**	**8.64**	**135**	P	**Pn**	**09 48 15.7**	**-3.3**
	baz=135						
SUZ	**Suez**	**9.12**	**129**	P	**Pn**	**09 48 22.6**	**-2.9**
	baz=129						
HDK1	**Dakhla**	**11.10**	**157**	P	**Pn**	**09 48 50.7**	**-1.8**
	baz=159						
ARU	**Arti**	**30.67**	**37**	LR	LR	10 05 08.2	
	comp=N,34nm,20.0s,baz=187,slow=37						
TORD	**Torodi Ar. Bea**	**30.71**	**228**	P	**P**	**09 52 25.0**	**+0.2**
	comp=N,0.5nm,0.6s,baz=31,slow=8.7,SNR=3.4						
ARCES	**ARCESS Array B**	**33.68**	**0**	P	P	09 52 47.1	-3.1
	comp=N,2.7nm,0.9s,baz=190,slow=10.0,SNR=2.1						
KURBB	**Kurchatov Arra**	**40.93**	**52**	P	**P**	**09 53 50.8**	**-0.9**
	comp=N,0.2nm,0.4s,baz=272,slow=9.0,SNR=5.1						
MKAR	**Makanchi Array**	**43.66**	**57**	P	**P**	**09 54 13.2**	**-0.8**
	comp=N,0.2nm,0.4s,baz=277,slow=7.2,SNR=5.3						
YKA	**Yellowknife Ar**	**76.62**	**342**	LR	LR	10 33 36.3	
	comp=N,35nm,18.1s,baz=0.0,slow=37						

*NEIC **07** 10:01:28.6±1.4, 17.6S±0.2×178.83W±0.07, h568km±10km, mb4.2/9, Error ellipse: s-maj=22.9km s-min=9.4km az=177.0*
*IDC **07** 10:01:28.4±1.7, 17.83S×178.75W, h564km±19km, mb3.0/8, mb1 3.3/10, mb1mx3.1/44, mbtmp3.9/10, Error ellipse: s-maj=34.2km s-min=16.8km az=146.0*

ISC 07 10:01:27.5±0.7, 17.7S±0.1×178.8W±0.1, h550km, n23, σ1§13/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.05**	**268**	P	**P**	**10 02 45.2**	**+2.3**
	2.3nm,0.3s,baz=116,slow=3.4,SNR=14						
MSVF	**Nonsavu**	**3.05**	**268**	P	**P**	**10 02 45.5**	**+2.6**
AFI	**Afiamalu**	**7.68**	**62**	P	**P**	**10 03 21.9**	**-0.3**
RAO	**Raoul Island**	**11.56**	**176**	P	**P**	**10 04 02.2**	**+0.9**
DZM	**Mont Dzumac**	**14.60**	**250**	P	**P**	**10 04 33.0**	**+0.1**
	0.3nm,0.3s,baz=81,slow=19,SNR=2.1						
URZ	**Urewera**	**20.84**	**189**	P	**P**	**10 05 28.9**	**-2.0**
	7.7nm,1.0s,baz=123,slow=23,SNR=1.8						
URZ	**Urewera**	**20.84**	**189**	P	**P**	**10 05 31.3**	**+0.4**
ARMA	**Armidale**	**29.78**	**239**	P	**P**	**10 06 50.7**	**+0.5**
ARMA				IAmb	IAmb	10 06 55.5	
	comp=Z,20nm,1.3s						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**10 08 02.7**	**0.0**
	comp=Z,1.1nm,0.4s,baz=89,slow=8.8,SNR=6.9						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**10 08 01.1**	**-1.7**
BBOO	**Buckleboo**	**43.24**	**241**	P	**P**	**10 08 40.7**	**+0.1**
WR0	**Warramunga Arr**	**44.16**	**259**	P	**P**	**10 08 46.5**	**-1.5**
WR0				IAmb	IAmb	10 08 59.0	
	comp=Z,12nm,1.5s						
WB0	**Warramunga Arr**	**44.32**	**260**	P	**P**	**10 08 49.1**	**-0.1**
WB0				IAmb	IAmb	10 09 00.3	
	comp=Z,6.5nm,1.4s						
WB2	**Warramunga Arr**	**44.34**	**259**	P	**P**	**10 08 48.7**	**-0.7**
WB2				IAmb	IAmb	10 08 49.7	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**44.35**	**259**	P	**P**	**10 08 48.6**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=98,slow=6.9,SNR=16						
AS31	**Alice Springs**	**44.54**	**254**	P	**P**	**10 08 50.7**	**-0.2**
ASAR	**Alice Springs**	**44.54**	**254**	P	**P**	**10 08 50.6**	**-0.3**
	comp=Z,5.2nm,0.5s,baz=90,slow=7.9,SNR=139						
ASAR				PcP	**PcP**	**10 10 21.6**	**-0.6**
	comp=Z,0.2nm,0.8s,baz=101,slow=3.6,SNR=1.5						
MORW	**Morawa**	**60.28**	**246**	P	**P**	**10 10 42.8**	**-0.7**
MORW				IAmb	IAmb	10 11 06.3	
	comp=Z,21nm,1.4s						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**10 12 38.1**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=227,slow=6.1,SNR=3.8						
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**10 13 07.3**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=222,slow=4.8,SNR=4.4						
TXAR	**Lajitas Array**	**86.14**	**58**	P	**P**	**10 13 11.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=220,slow=7.0,SNR=6.8						
PDAR	**Pinedale Array**	**87.40**	**44**	P	**P**	**10 13 16.4**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=211,slow=4.9,SNR=3.9						
GERES	**GERESS Array B**	**147.29**	**345**	PKPbc	**PKPbc**	**10 20 08.9**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=35,slow=3.3,SNR=6.4						

*IDC **07** 10:05:57.8±1.4, 7.28S×156.66E, h0km, mb4.1/9, mb1 4.3/9, mb1mx3.9/42, mbtmp4.1/9, MS3.2/6, Ms1 3.3/6, ms1mx2.8/32, Error ellipse: s-maj=49.2km s-min=24.4km az=122.0*
*NEIC **07** 10:06:00.0±2.2, 7.1S±0.1×156.38E±0.08, h10km±1km, mb4.5/7, Error ellipse: s-maj=23.8km s-min=7.2km az=30.0*

ISC 07 10:06:00.4±0.6, 7.22S±0.10×156.4E±0.1, h10km, n34, σ1§14/26, mb4.4/14, MS3.2/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.15**	**122**	Pn	**Pn**	**10 07 03.5**	**-0.3**
RABL	**Rabaul**	**5.17**	**305**	Pn	**Pn**	**10 07 16.1**	**-1.8**
PMG	**Port Moresby**	**9.38**	**256**	LR	LR	10 11 58.5	
	comp=Z,88nm,18.5s,baz=88,slow=37						
PATS	**Pohnpei**	**14.10**	**8**	Pn	**Pn**	**10 09 22.2**	**+1.9**
WR0	**Warramunga Arr**	**24.68**	**237**	P	**P**	**10 11 23.7**	**+2.0**
WR0				IAmb	IAmb	10 11 25.0	
	comp=Z,12nm,0.9s						
WB0	**Warramunga Arr**	**24.71**	**238**	P	**P**	**10 11 22.9**	**+0.8**
WB0				IAmb	IAmb	10 11 25.3	
	comp=Z,9.7nm,0.9s						
WB2	**Warramunga Arr**	**24.83**	**237**	P	**P**	**10 11 24.7**	**+1.6**
WB2				IAmb	IAmb	10 11 26.4	
	comp=Z,9.5nm,0.8s						
WRA	**Warramunga Arr**	**24.84**	**237**	P	**P**	**10 11 24.2**	**+1.0**
	comp=Z,6.6nm,0.7s,baz=63,slow=9.4,SNR=60						
WRA				PcP	**PcP**	**10 14 59.0**	**-0.5**
	comp=Z,0.9nm,1.0s,baz=61,slow=2.7,SNR=2.9						
WRA	**Warramunga Arr**	**24.84**	**237**	P	**P**	**10 11 24.0**	**+0.8**
AS31	**Alice Springs**	**27.07**	**230**	P	**P**	**10 11 44.0**	**+0.6**
ASAR	**Alice Springs**	**27.07**	**230**	P	**P**	**10 11 44.0**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=58,slow=10,SNR=24						
ASAR				PcP	**PcP**	**10 15 03.7**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=73,slow=2.9,SNR=5.3						
ASAR				LR	LR	10 21 54.4	
	comp=Z,38nm,18.3s,baz=74,slow=35						
ASAR	**Alice Springs**	**27.07**	**230**	P	**P**	**10 11 43.5**	**+0.1**
H11S3	**WAKE ISLAND Hy**	**27.50**	**22**	T	T	10 40 15.9	
	baz=202,slow=75,SNR=1167						
H11S2	**WAKE ISLAND Hy**	**27.50**	**22**	T	T	10 40 15.3	
	baz=202,slow=75,SNR=833						
H11S1	**WAKE ISLAND Hy**	**27.52**	**22**	T	T	10 40 17.3	
	baz=202,slow=75,SNR=468						
STKA	**Stephens Creek**	**28.14**	**207**	LR	LR	10 22 16.0	
	comp=Z,55nm,18.4s,baz=29,slow=35						
H11N1	**WAKE ISLAND Hy**	**28.70**	**21**	T	T	10 41 48.3	
	baz=203,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**28.71**	**21**	T	T	10 41 46.8	
	baz=203,slow=76,SNR=64						
H11N2	**WAKE ISLAND Hy**	**28.71**	**21**	T	T	10 41 49.7	
	baz=203,slow=76,SNR=26						
BBOO	**Buckleboo**	**31.70**	**214**	P	**P**	**10 12 24.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**31.83**	**247**	LR	LR	10 24 30.8	
	comp=Z,44nm,19.9s,baz=59,slow=35						
FITZ	**Fitzroy Crossi**	**31.83**	**247**	P	**P**	**10 12 25.2**	**-0.5**
SOEI	**Soe**	**31.86**	**263**	P	**P**	**10 12 27.1**	**+1.0**
SOEI				IAmb	IAmb	10 12 28.1	
	comp=Z,10nm,0.5s						
BATI	**Baumata**	**32.47**	**262**	LR	LR	10 26 27.4	
	comp=Z,64nm,18.5s,baz=130,slow=38						
BKZ	**Black Stump Fm**	**36.59**	**153**	P	**P**	**10 13 07.0**	**+0.3**
BKZ				IAmb	IAmb	10 13 27.1	
	comp=Z,9.7nm,1.2s						
CMAR	**Chiang Mai Arr**	**62.13**	**295**	P	**P**	**10 16 23.2**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=115,slow=5.0,SNR=14						
SONM	**Songino Array**	**70.28**	**327**	P	**P**	**10 17 15.2**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=133,slow=6.2,SNR=5.3						
ILAR	**Eielson Array**	**83.08**	**21**	P	**P**	**10 18 24.9**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=248,slow=5.4,SNR=2.0						
ILAR				LR	LR	10 47 55.9	
	comp=Z,20nm,21.0s,baz=125,slow=30						
MKAR	**Makanchi Array**	**84.49**	**318**	P	**P**	**10 18 33.9**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=99,slow=6.4,SNR=36						
ZALV	**Zalesovo Beam**	**85.14**	**326**	P	**P**	**10 18 35.9**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=102,slow=6.8,SNR=4.0						
KURK	**Kurchatov**	**87.87**	**322**	P	**P**	**10 18 48.6**	**-1.5**
KURBB	**Kurchatov Arra**	**87.90**	**321**	P	**P**	**10 18 48.6**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=96,slow=3.7,SNR=1.7						
YKA	**Yellowknife Ar**	**95.89**	**28**	P	**P**	**10 19 26.9**	**-0.2**
	comp=Z,0.1nm,0.6s,baz=264,slow=4.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	**154.42**	**285**	PKPbc	**PKPbc**	**10 26 00.9**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=59,slow=2.4,SNR=5.4						

IDC 07 10:21:27.8±2.3, 5.52S×129.19E, h326km±32km, mb3.0/1, mb1 3.1/5, mb1mx2.8/35, mbtmp3.8/5, Error ellipse: s-maj=55.6km s-min=13.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.06**	**24**	P	Pn	10 22 47.8	+0.6
	2.1nm,0.3s,baz=54,slow=2.4,SNR=23						
SIJI				S	S	10 23 50.7	-0.4
	2.3nm,0.3s,baz=61,slow=23,SNR=9.9						
FITZ	**Fitzroy Crossi**	**12.97**	**195**	P	P	10 24 19.5	-1.8
	0.2nm,0.3s,baz=22,slow=12,SNR=6.5						
WRA	**Warramunga Arr**	**15.19**	**161**	P	Pn	10 24 46.9	-0.8
	0.3nm,0.3s,baz=339,slow=11,SNR=19						
ASAR	**Alice Springs**	**18.61**	**166**	P	P	10 25 23.6	+1.0
	0.7nm,0.3s,baz=342,slow=11,SNR=65						
ASAR				S	S	10 28 37.2	-0.2
	0.1nm,0.3s,baz=346,slow=18,SNR=8.1						
MKAR	**Makanchi Array**	**66.55**	**327**	P	P	10 31 43.6	0.0
	0.3nm,0.4s,baz=117,slow=7.6,SNR=6.8						

*NNC **07** 10:22:36.0±0.9, 43.62N×69.73E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=5.8km s-min=4.0km az=82.0, Suspected Mining explosion.*
*SOME **07** 10:22:35.7, 43.62N×69.63E*
*KRNET **07** 10:22:36.0±0.1, 43.65N×69.56E, mb3.2*

ISC 07 10:22:39.7±2.0, 43.49N±0.07×69.76E±0.09, h0km, n22, σ1§87/34, 19C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.67**	**125**	⇓P	**Pg**	**10 22 50.6**	**-2.0**
	2.8nm,0.5s,baz=316,slow=17,SNR=152						
KK31				⇓S	**Sg**	**10 23 01.8**	**+0.5**
	96nm,0.8s,baz=310,slow=28,SNR=149						
DZA	**Taraz**	**1.30**	**117**	*e*P	**Pg**	**10 23 03.9**	**-0.7**
	baz=20						
DZA				*e*S	**Sn**	**10 23 24.5**	**+1.3**
	baz=20						
IUG	**Iuzhnay**	**1.36**	**171**	*e*P	**Pg**	**10 23 04.9**	**-0.8**
	baz=67						
IUG				*e*S	**Sn**	**10 23 26.5**	**+1.7**
	baz=67						
TRKS	**Terek-Say**	**2.21**	**152**	⇑*i*P	**Pb**	**10 23 19.2**	**-1.4**
	baz=51						
TRKS				⇑*i*S	**Sg**	**10 23 52.4**	**+1.7**
	baz=51						
MNAS	**Manas**	**2.25**	**115**	⇑*i*P	**Pn**	**10 23 19.2**	**+0.8**
	baz=17						
MNAS				⇑*i*S	**Sg**	**10 23 51.5**	**-0.5**
	baz=17						
EKS2	**Erkin-Say**	**3.06**	**104**	⇑*i*P	**Pn**	**10 23 30.1**	**+0.6**
	baz=6.0						
EKS2				⇑*i*S	**Sb**	**10 24 11.1**	**-1.9**
	baz=6.0						
AML	**Almayashu**	**3.20**	**114**	⇑*e*P	**Pn**	**10 23 32.6**	**+1.0**
	baz=15						
AML				⇑*i*S	**Sb**	**10 24 14.9**	**-2.4**
	baz=15						
ARSB	**Arslanbob**	**3.22**	**131**	⇑*i*P	**Pn**	**10 23 32.9**	**+1.2**
	baz=31						
ARSB				⇑*i*S	**Sb**	**10 24 15.4**	**-2.3**
	baz=31						
BTLS	**Baital**	**3.45**	**62**	Pg	**Pb**	**10 23 40.5**	**-1.2**
	14nm,0.5s						
BTLS				Lg	Lg	10 24 27.6	
USP	**Ospenovka**	**3.46**	**92**	⇑*i*P	**Pn**	**10 23 35.3**	**+0.3**
	baz=94						
USP				⇑*i*S	**Sn**	**10 24 19.4**	**+2.7**
	baz=94						
SGDS	**Sogindy**	**3.55**	**89**	Pg	**Pb**	**10 23 41.2**	**-2.2**
	2.7nm,0.3s						
SGDS				Lg	Lg	10 24 28.3	
	11nm,0.5s						
AAK	**Ala-Archa**	**3.57**	**102**	⇑*i*P	**Pn**	**10 23 37.4**	**+0.8**
	baz=4.0						
AAK				⇑*i*S	**Sn**	**10 24 22.9**	**+3.3**
	baz=4.0						
AAK	**Ala-Archa**	**3.57**	**102**	⇓Pg	**Pb**	**10 23 41.5**	**-2.4**
	3.6nm,0.5s						
AAK				⇑Lg	Lg	10 24 31.8	
	8.3nm,0.5s						
UCH	**Uchtor**	**3.72**	**108**	⇑*e*P	**Pn**	**10 23 39.8**	**+1.0**
	baz=10.0						
UCH				⇑*i*S	**Sn**	**10 24 27.5**	**+4.0**
	baz=10.0						
ARLS	**Aral**	**3.74**	**114**	⇑*i*P	**Pn**	**10 23 40.0**	**+1.2**
	baz=15						
ARLS				⇑*i*S	**Sn**	**10 24 28.0**	**+4.4**
	baz=15						
KRBS	**Karabastau**	**4.30**	**85**	Pg	**Pb**	**10 23 54.7**	**-1.6**
	4.4nm,0.6s						
KRBS				Lg	Lg	10 24 51.5	
	9.4nm,0.5s						
TKM2	**Tokmak 2**	**4.31**	**96**	⇓Pg	**Pb**	**10 23 54.9**	**-1.6**
	2.4nm,0.8s						
TKM2				⇓Lg	Lg	10 24 52.9	
	4.8nm,0.4s						
DGS	**Degeres**	**4.39**	**91**	Pg	**Pb**	**10 23 57.2**	**-0.6**
	2.7nm,0.5s						
DGS				Lg	Lg	10 24 55.9	
	14nm,0.6s						
KST	**Kastek**	**4.55**	**93**	Pg	**Pb**	**10 24 00.1**	**-0.5**
	4.4nm,0.6s						
KST				Lg	Lg	10 25 00.9	
	11nm,0.5s						
KUU	**Kurty**	**4.79**	**83**	Pg	**Pb**	**10 24 03.8**	**-0.8**
	1.4nm,0.1s						
KUU				Lg	Lg	10 25 07.3	
	9.9nm,0.8s						
IZV	**Izvestkoviy**	**5.03**	**93**	Pg	**Pb**	**10 24 08.9**	**+0.3**
	0.7nm,0.1s						
IZV				Lg	Lg	10 25 16.3	
	14nm,0.5s						
KTBS	**Karatobe**	**5.03**	**85**	Pg	**Pb**	**10 24 08.8**	**+0.1**
	2.9nm,0.6s						
KTBS				Lg	Lg	10 25 15.3	
	9.6nm,0.8s						

JMA 07 11:07:24.6, 35.64N×136.94E, h5km±1km, M2.7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYTA	**Yamagatataniai**	**0.17**	**255**	P	Pg	11 07 28.1	+0.1
JYTA				S	Sg	11 07 30.6	+0.3
JICN	**Ichinomiyachia**	**0.35**	**193**	P	Pg	11 07 31.7	+0.4
JICN				S	Sg	11 07 36.3	+0.5
MAT	**Matsushiro**	**1.36**	**48**	P	Pn	11 07 50.5	+0.1
MAT				S	Sb	11 08 08.2	-0.2

*NEIC **07** 11:26:15.5±0.8, 6.0S±0.1×127.92E±0.10, h383km±10km, mb4.3/10, Error ellipse: s-maj=16.0km s-min=12.8km az=137.0*
*DJA **07** 11:26:16.2±0.4, 6.3S×127.8E±°, h367km±6km, M4.4/9, mB4.8/5, mb4.3/9, MLv4.7/9, Mw(mB)4.0/5*
*IDC **07** 11:26:16.2±1.3, 6.03S×127.95E, h380km±15km, mb3.5/6, mb1 3.8/11, mb1mx3.4/40, mbtmp4.5/11, Error ellipse: s-maj=27.4km s-min=12.8km az=79.0*

ISC 07 11:26:15.4±0.5, 5.96S±0.05×127.95E±0.06, h383km, n50, σ1§46/61, mb4.0/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.42**	**54**	P	**Pn**	**11 27 12.3**	**-0.4**
BNDI				S	**S**	**11 28 00.0**	**+1.1**
MSAI	**Masohi**	**2.77**	**21**	S	**S**	**11 28 00.2**	**-3.7**
NLAI	**Namlea**	**2.83**	**343**	P	**Pn**	**11 27 16.5**	**+0.6**
SAUI	**Saumlaki**	**3.89**	**121**		**Pn**	**11 27 26.6**	**+1.2**
SAUI				S	**S**	**11 28 20.3**	**-1.7**
SAUI	**Saumlaki**	**3.89**	**121**	P	**Pn**	**11 27 26.1**	**+0.7**
SANI	**Sanana**	**4.34**	**333**	P	**Pn**	**11 27 29.0**	**-0.9**
SANI				S	**S**	**11 28 26.5**	**-3.7**
FAKI	**Fak Fak**	**5.24**	**55**	Pn	**Pn**	**11 27 39.4**	**+0.1**
FAKI				S	**S**	**11 28 43.6**	**-3.7**
FAKI	**Fak Fak**	**5.24**	**55**	P	**Pn**	**11 27 39.2**	**-0.1**
	1.9nm2µm177nm,0.7s						
SOEI	**Soe**	**5.25**	**224**	Pn	**Pn**	**11 27 39.1**	**-0.3**
SOEI				S	**S**	**11 28 44.8**	**-2.8**
SOEI	**Soe**	**5.25**	**224**	P	**Pn**	**11 27 39.6**	**+0.2**
	1.2nm1µm149nm,0.7s						
BATI	**Baumata**	**5.98**	**225**	P	**Pn**	**11 27 48.0**	**+0.6**
	24nm,0.3s,baz=0.3,slow=1.9,SNR=21						
BATI				S	**S**	**11 28 59.1**	**-3.0**
	31nm,0.3s,baz=248,slow=23,SNR=20						
BATI	**Baumata**	**5.98**	**225**	P	**Pn**	**11 27 47.5**	**+0.2**
SIJI	**Sorong**	**6.04**	**33**	P	**Pn**	**11 27 48.4**	**+0.4**
	20nm,0.3s,baz=200,slow=9.9,SNR=56						
SIJI				S	**S**	**11 29 00.0**	**-3.3**
	9.6nm,0.3s,baz=252,slow=14,SNR=5.0						
SWI	**Sorong**	**6.04**	**33**	P	**Pn**	**11 27 48.5**	**+0.5**
MMRI	**Maumere**	**6.26**	**244**	Pn	**Pn**	**11 27 50.0**	**-0.3**
MMRI	**Maumere**	**6.26**	**244**	P	**Pn**	**11 27 51.1**	**+0.8**
	0.2nm34nm,0.9s						
LUWI	**Luwuk**	**7.11**	**313**		**Pn**	**11 27 59.9**	**0.0**
LUWI	**Luwuk**	**7.11**	**313**	P	**Pn**	**11 28 00.0**	**0.0**
	0.1nm1µm30nm,0.7s						
MTN	**Manton Dam**	**7.53**	**156**		**Pn**	**11 28 04.9**	**+0.1**
APSI	**Ampana**	**8.04**	**308**	P	**Pn**	**11 28 09.4**	**-1.2**
	0.0nm6.6nm,0.8s						
SPSI	**Sidrap Palu**	**8.38**	**283**	P	**Pn**	**11 28 14.3**	**-0.3**
	7.5nm,0.5s						
BASI	**Baing, Sumba**	**8.44**	**239**	P	**Pn**	**11 28 15.2**	**0.0**
	54nm,0.6s						
MRSI	**Marisa**	**8.76**	**317**	P	**Pn**	**11 28 19.0**	**-0.1**
	26nm,0.7s						
SGSI	**Sangihe**	**9.88**	**346**	P	**Pn**	**11 28 31.7**	**-0.4**
PLAI	**

Error ellipse: s-maj=8.2km s-min=5.4km az=113.0
*GUC **07** 11:32:09.5±0.6, 36°.18S×72°.17W, h62km±6km, ML4.7*
*IDC **07** 11:32:09.3±2.1, 36°.12S×72°.02W, h55km±19km, mb4.1/10, mb1 4.2/13, mb1mx4.0/26, mbtmp4.3/13, ML4.2/3, MS3.0/3, Ms1 3.0/3, ms1mx2.8/22, Error ellipse: s-maj=21.3km s-min=14.2km az=84.0*

ISC 07 11:32:09.3±0.7, 36°.13S±0°.03×72°.31W±0°.03, h59km±6km, n98, σ1§39/129, mb4.5/16, 5C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BI03	**Tigo**	**0.92**	**219**		*eP*		**Pn**	**11 32 26.9**	**+0.7**
BI03					*eS*		**Sn**	**11 32 40.0**	**+1.3**
BI03					IAML			11 32 42.3	
	comp=N,26μm,0.5s								
BI03	**Tigo**	**0.92**	**219**				**Pn**	**11 32 26.9**	**+0.7**
BI03				Sn			**Sn**	**11 32 40.1**	**+1.4**
BI02	**San Fabin de**	**0.99**	**123**	⇑	*iP*		**Pn**	**11 32 25.7**	**-1.5**
BI02					*eS*		**Sn**	**11 32 37.8**	**-2.7**
BI02	**San Fabin de**	**0.99**	**123**				**Pn**	**11 32 25.7**	**-1.5**
BI02				Sn			**Sn**	**11 32 38.0**	**-2.5**
LAJA	**Laja**	**1.19**	**196**		*eP*		**Pn**	**11 32 30.1**	**+0.3**
LAJA					*eS*		**Sn**	**11 32 45.1**	**0.0**
BO03	**Pichilemu**	**1.66**	**10**	⇑	*iP*		**Pn**	**11 32 36.4**	**+0.3**
BO03					*i* S		**Sn**	**11 32 56.9**	**+0.6**
BO02	**Sierra Bellavi**	**1.83**	**43**	⇑	*iP*		**Pn**	**11 32 38.3**	**-0.1**
BO02					*i* S		**Sn**	**11 32 59.8**	**-0.8**
BO02					IAML			11 33 03.8	
	comp=N,12μm,0.3s								
BO02	**Sierra Bellavi**	**1.83**	**43**				**Pn**	**11 32 38.4**	**-0.1**
BO02				Sn			**Sn**	**11 33 00.4**	**-0.2**
EDS3	**Malargue**	**2.39**	**82**	*eP*			**Pn**	**11 32 47.1**	**+0.9**
PUMA	**Malargue**	**2.41**	**76**	*eP*			**Pn**	**11 32 42.8**	**-3.5**
COIS	**El Sosneado**	**2.44**	**66**	*eP*			**Pn**	**11 32 46.5**	**-0.2**
COIS					*eS*		**Sn**	**11 33 18.4**	**+3.1**
VA05	**Santo Domingo**	**2.53**	**13**	⇑	*iP*		**Pn**	**11 32 47.4**	**-0.6**
MT09	**Talagante**	**2.59**	**25**	⇓	*iP*		**Pn**	**11 32 48.9**	**0.0**
MT09					*eS*		**Sn**	**11 33 19.4**	**+0.1**
MT09					IAML			11 33 28.5	
	comp=N,4μm,0.3s								
LAMA	**Las Malvinas**	**2.79**	**66**	*eP*			**Pn**	**11 32 52.7**	**+1.1**
LAMA					*eS*		**Sn**	**11 33 27.1**	**+2.9**
LMEL	**Las Melosas**	**2.86**	**38**	*iP*			**Pn**	**11 32 52.5**	**-0.1**
LMEL					*i* S		**Sn**	**11 33 27.7**	**-0.2**
LMEL					IAML			11 33 36.9	
	comp=N,2μm,0.2s								
MT03	**Universidad Ad**	**3.02**	**30**	*eP*			**Pn**	**11 32 55.3**	**+0.6**
MT05	**Renca**	**3.02**	**26**	*iP*			**Pn**	**11 32 54.9**	**+0.2**
MT05					*i* S		**Sn**	**11 33 29.3**	**-0.5**
MT05					IAML			11 33 45.2	
	comp=E,3μm,0.3s								
MT05	**Renca**	**3.02**	**26**				**Pn**	**11 32 55.0**	**+0.2**
MT02	**Curacav**	**3.02**	**19**	⇑	*iP*		**Pn**	**11 32 54.5**	**-0.2**
MT02					*i* S		**Sn**	**11 33 28.6**	**-1.1**
MT02					IAML			11 33 41.2	
	comp=N,1μm,0.3s								
MT02	**Curacav**	**3.02**	**19**				**Pn**	**11 32 54.6**	**-0.2**
PEL	**Peldehue**	**3.27**	**25**	*i* P			**Pn**	**11 32 58.2**	**+0.1**
PEL					*i* S		**Sn**	**11 33 35.8**	**0.0**
PEL					IAML			11 33 52.4	
	comp=N,2μm,0.5s								
PEL	**Peldehue**	**3.27**	**25**	Pn			**Pn**	**11 32 58.2**	**+0.1**
PEL				Sn			**Sn**	**11 33 36.7**	**+0.9**
PEL	**Peldehue**	**3.27**	**25**	*eP*			**Pn**	**11 32 58.6**	**+0.5**
PEL					*eS*		**Sn**	**11 33 37.6**	**+1.8**
VA03	**San Esteban**	**3.66**	**24**	*eP*			**Pn**	**11 33 03.5**	**0.0**
VA03					*eS*		**Sn**	**11 33 45.4**	**-0.1**
VA03	**San Esteban**	**3.66**	**24**				**Pn**	**11 33 03.5**	**0.0**
AAGR	**Agrelo**	**4.18**	**44**	*eP*			**Pn**	**11 33 11.9**	**+1.3**
AAGR					IAML			11 34 29.4	
	comp=Z,92nm,0.7s								
ARCO	**CERRO ARCO**	**4.31**	**41**	*eP*			**Pn**	**11 33 13.8**	**+1.4**
ARCO					IAML			11 34 22.9	
	comp=Z,99nm,0.5s								
AUSP	**Uspallata**	**4.59**	**33**	*eP*			**Pn**	**11 33 17.6**	**+1.2**
LL04	**Puerto Octay**	**4.77**	**181**	*i* P			**Pn**	**11 33 18.3**	**-0.3**
PLCA	**Paso Flores**	**4.80**	**164**	P			**Pn**	**11 33 19.9**	**+0.9**
	comp=Z,6.2nm,0.3s,baz=329,slow=11,SNR=187								
PLCA				S			Sn	11 34 23.4	+10
	comp=Z,1.5nm,0.3s,baz=251,slow=19,SNR=1.5								
PLCA				LR			LR	11 35 27.4	
	comp=Z,101nm,21.7s,baz=314,slow=42								
RTLS	**Leoncito**	**4.99**	**31**	*eP*			**Pn**	**11 33 23.1**	**+1.1**
RTLS					*eS*		**Sn**	**11 34 21.3**	**+2.8**
RTLS					IAML			11 34 22.9	
	comp=Z,224nm,0.6s								
CO03	**El Pedregal**	**5.45**	**15**				**Pn**	**11 33 27.7**	**-0.3**
CO03				Sn			**Sn**	**11 34 28.3**	**-1.1**
ZON	**Zonda**	**5.48**	**34**	Pn			**Pn**	**11 33 28.2**	**-0.2**
ZON				Sn			**Sn**	**11 34 30.3**	**+0.2**
ZON	**Zonda**	**5.48**	**34**	*eP*			**Pn**	**11 33 29.5**	**+1.1**
ZON					*eS*		**Sn**	**11 34 31.2**	**+1.1**
ZON					IAML			11 34 51.8	
	comp=Z,66nm,0.4s								
RTLL	**Cerro Villicun**	**5.76**	**35**	*eP*			**Pn**	**11 33 32.6**	**+0.4**
RTLL					*eS*		**Sn**	**11 34 37.6**	**+0.7**
RTLL					IAML			11 34 49.0	
	comp=Z,113nm,0.5s								
H03S1	**Juan Fernandez**	**5.88**	**291**	P			**Pn**	**11 33 34.5**	**+1.0**
	baz=78,slow=14,SNR=36								
H03S1				S			**Sn**	**11 34 36.2**	**-3.2**
	baz=307,slow=75,SNR=2.7								
H03S1				T			T	11 39 19.6	
	baz=113,slow=76,SNR=394								
H03S3	**Juan Fernandez**	**5.89**	**291**	P			**Pn**	**11 33 34.5**	**+0.8**
	baz=78,slow=14,SNR=52								
H03S3				S			**Sn**	**11 34 36.2**	**-3.5**
	baz=307,slow=75,SNR=5.0								
H03S3				T			T	11 39 19.6	
	baz=113,slow=76,SNR=612								
H03S2	**Juan Fernandez**	**5.89**	**291**	P			**Pn**	**11 33 34.5**	**+0.7**
	baz=78,slow=14,SNR=47								
H03S2				S			**Sn**	**11 34 36.2**	**-3.7**
	baz=307,slow=75,SNR=4.6								
H03S2				T			T	11 39 21.5	
	baz=113,slow=76,SNR=472								
H03N1	**Juan Fernandez**	**6.06**	**294**	P			**Pn**	**11 33 38.1**	**+2.0**
	baz=136,slow=24,SNR=105								
H03N1				S			**Sn**	**11 34 41.4**	**-2.5**
	baz=215,slow=72,SNR=4.4								
H03N3	**Juan Fernandez**	**6.06**	**294**	P			**Pn**	**11 33 38.1**	**+2.0**
	baz=136,slow=24,SNR=74								
H03N3				S			**Sn**	**11 34 41.4**	**-2.6**
	baz=215,slow=72,SNR=4.8								
GO04	**Tololo Observa**	**6.08**	**12**	Pn			**Pn**	**11 33 36.0**	**-0.7**
H03N2	**Juan Fernandez**	**6.08**	**294**	P			**Pn**	**11 33 38.1**	**+1.8**
	baz=136,slow=24,SNR=59								
H03N2				S			**Sn**	**11 34 41.4**	**-2.8**
	baz=215,slow=72,SNR=3.6								
LL01	**San Ignacio de**	**6.24**	**181**				**Pn**	**11 33 38.2**	**-0.5**
GO07	**Milladeo Hill,**	**7.05**	**188**				**Pn**	**11 33 49.0**	**-0.8**
LCO	**Las Campanas**	**7.23**	**11**	Pn			**Pn**	**11 33 51.3**	**-1.2**
AC04	**Llanos de Chal**	**7.97**	**8**	Pn			**Pn**	**11 34 00.9**	**-1.6**
GO03	**Copiap**	**8.69**	**12**				**Pn**	**11 34 10.8**	**-1.6**
AC02	**Maricunga**	**9.66**	**17**	Pn			**Pn**	**11 34 24.2**	**-1.8**
AC01	**Pan de Azucar**	**10.06**	**9**	Pn			**Pn**	**11 34 27.5**	**-3.6**
GO02	**Mina Guanaco**	**11.18**	**13**	Pn			**Pn**	**11 34 42.7**	**-4.0**
PB14	**IPOC Station P**	**11.59**	**9**	Pn			**Pn**	**11 34 48.7**	**-3.5**
PB10	**IPOC Station P**	**12.67**	**7**	Pn			**Pn**	**11 35 07.0**	**+0.3**
LVC	**Limon Verde**	**13.79**	**13**	P			**Pn**	**11 35 22.0**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=220,slow=12,SNR=2.4								
PB09	**IPOC Station P**	**14.53**	**11**	Pn			**Pn**	**11 35 31.1**	**-0.8**
CPUP	**Villa Florida**	**16.09**	**57**	P			**Pn**	**11 35 50.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=188,slow=9.9,SNR=2.8								
CPUP				LR			LR	11 42 05.0	
	comp=Z,90nm,18.4s,baz=228,slow=38								
LPAZ	**La Paz**	**20.11**	**12**	P			**P**	**11 36 39.3**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=172,slow=3.9,SNR=8.1								
LPAZ	**La Paz**	**20.11**	**12**	P			**P**	**11 36 37.8**	**-1.2**
SIV	**San Ignacio**	**22.42**	**29**	P			**P**	**11 37 01.9**	**-1.3**
	comp=Z,10nm,0.7s,baz=217,slow=11,SNR=39								
BELA	**Belgrano 2**	**44.83**	**169**	P			**P**	**11 40 17.6**	**+0.7**
BELA					IAmb		IAmb	11 40 18.6	
	comp=Z,8.1nm,1.2s								
VNA3	**Neumayer Olymp**	**47.48**	**157**	P			**P**	**11 40 38.0**	**+0.1**
VNA2	**Neumayer--Watz**	**48.14**	**156**	P			**P**	**11 40 43.1**	**+0.1**
	baz=284,slow=8.6								
SNAA	**Sanae**	**49.70**	**157**	P			**P**	**11 40 55.0**	**0.0**
SNAA	**Sanae**	**49.70**	**157**	P			**P**	**11 40 54.8**	**-0.2**
	comp=Z,6.0nm,0.9s,baz=308,slow=8.3,SNR=9.3								
SNAA	**Sanae**	**49.70**	**157**	P			**P**	**11 40 54.7**	**-0.3**
SNAA					IAmb		IAmb	11 40 55.9	
	comp=Z,8.1nm,1.0s								
MATN	**Matagalpa**	**50.46**	**343**	P			**P**	**11 41 01.4**	**+0.1**
QSPA	**South Pole Qui**	**54.11**	**180**	P			**P**	**11 41 28.9**	**+0.9**
	comp=Z,6.2nm,0.8s,baz=316,slow=1.6,SNR=50								
QSPA	**South Pole Qui**	**54.11**	**180**	P			**P**	**11 41 29.1**	**+1.1**
QSPA					IAmb		IAmb	11 41 29.3	
	comp=Z,6.1nm,0.8s								
MAW	**Mawson**	**71.20**	**163**	P			**P**	**11 43 20.7**	**-0.8**
	comp=Z,4.9nm,1.0s,baz=207,slow=11,SNR=4.6								
Y45A	**Yeager Farm, C**	**71.47**	**345**	P			**P**	**11 43 23.9**	**+0.5**
TXAR	**Lajitas Array**	**71.49**	**331**	P			**P**	**11 43 25.2**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=149,slow=8.4,SNR=11								
TXAR					pP		**pP**	**11 43 41.2**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=154,slow=9.1,SNR=22								
TX31	**Lajitas Ar. Si**	**71.49**	**331**	P			**P**	**11 43 25.0**	**+1.3**
TX32	**Lajitas Array**	**71.49**	**331**	P			**P**	**11 43 24.7**	**+1.0**
TX32					IAmb		IAmb	11 43 41.8	
	comp=Z,2.2nm,0.6s								
MNTX	**Cornudas Mount**	**74.26**	**331**	P			**P**	**11 43 40.7**	**+0.7**
LIC	**Lamto**	**75.66**	**71**	*eP*			**P**	**11 43 47.4**	**-1.1**
	comp=Z,20nm,0.6s								
TIC	**Toumodi**	**75.94**	**71**	*eP*			**P**	**11 43 49.3**	**-0.8**
KIC	**Kosan Boka**	**75.97**	**71**	*eP*			**P**	**11 43 49.5**	**-0.8**
	comp=Z,19nm,0.5s								
DBIC	**Dimbokro**	**76.08**	**71**	P			**P**	**11 43 50.1**	**-0.8**
	comp=Z,6.2nm,0.6s,baz=200,slow=5.6,SNR=13								
DBIC	**Dimbokro**	**76.08**	**71**	P			**P**	**11 43 50.4**	**-0.5**
DBIC					IAmb		IAmb	11 43 51.0	
	comp=Z,7.6nm,0.7s								
BOSA	**Boshof**	**79.28**	**117**	P			**P**	**11 44 07.8**	**-0.9**
	comp=Z,11nm,1.0s,baz=230,slow=4.5,SNR=13								
BOSA	**Boshof**	**79.28**	**117**	P			**P**	**11 44 08.1**	**-0.7**
KOWA	**Kowa**	**81.72**	**65**	P			**P**	**11 44 21.8**	**+0.1**
KOWA					IAmb		IAmb	11 44 22.2	
	comp=Z,5.0nm,0.7s								
TOA0	**Torodi Ar. Sit**	**85.14**	**70**	P			**P**	**11 44 39.1**	**-0.3**
TOA0					IAmb		IAmb	11 44 39.5	
	comp=Z,4.1nm,0.9s								
TORD	**Torodi Ar. Bea**	**85.14**	**70**	P			**P**	**11 44 38.0**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=250,slow=4.5,SNR=10								
TORD	**Torodi Ar. Bea**	**85.14**	**70**	P			**P**	**11 44 39.1**	**-0.2**
TORD					IAmb		IAmb	11 44 39.4	
	comp=Z,2.8nm,0.8s								
NVAR	**Mina Array Bea**	**85.51**	**325**	P			**P**	**11 44 42.8**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=141,slow=5.8,SNR=2.7								
NVAR					pP		**pP**	**11 44 58.9**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=157,slow=6.5,SNR=6.2								
ULM	**Lac du Bonnet**	**88.50**	**345**	pP			pP	11 45 11.5	-0.1
	comp=Z,1.8nm,0.7s,baz=185,slow=6.4,SNR=3.0								
LSZ	**Lusaka**	**89.35**	**108**	LR			LR	12 18 58.4	
	comp=Z,8.1nm,21.0s,baz=338,slow=32								
SEY	**Seymchan**	**141.75**	**329**	PKP			**PKPdf**	**11 51 33.9**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=74,slow=21,SNR=4.5								
NRIK	**Noril'sk**	**144.94**	**12**	PKP			**PKPab**	**11 51 38.2**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=82,slow=1.9,SNR=4.8								
RPSI	**Rantau Prapat**	**145.75**	**164**				**PKPbc**	**11 51 42.0**	**-0.2**
PSI	**Prapat**	**145.86**	**164**	PKPbc			**PKPdf**	**11 51 42.0**	**-0.1**
	comp=Z,4.8nm,0.4s,baz=359,slow=2.5,SNR=6.0								
BVAR	**Borovoye Array**	**148.96**	**45**	PKPbc			**PKPbc**	**11 51 50.1**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=188,slow=9.7,SNR=12								
AAK	**Ala-Archa**	**153.65**	**66**	PKPbc			**PKiKP**	**11 52 01.8**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=124,slow=6.9,SNR=6.0								
KURBB	**Kurchatov Arra**	**154.54**	**46**	PKPbc			**PKPbc**	**11 52 02.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=293,slow=2.9,SNR=6.7								
KURBB					PKPab		**PKPab**	**11 52 17.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=288,slow=5.0,SNR=9.3								
KURK	**Kurchatov**	**154.55**	**46**				**PKPbc**	**11 52 02.1**	**-0.6**
MKAR	**Makanchi Array**	**158.28**	**53**	PKP			**PKPdf**	**11 51 59.2**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=298,slow=2.6,SNR=3.8								
MKAR					PKPab		**PKPab**	**11 52 31.5**	**-2.4**
	comp=Z,0.8nm,0.8s,baz=293,slow=3.7,SNR=6.9								
SONM	**Songino Array**	**168.27**	**4**	PKPab			**PKPab**	**11 53 18.8**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=356,slow=7.9,SNR=2.2								
SONM	**Songino Array**	**168.27**	**4**	PKPdf			**PKPdf**	**11 52 08.6**	**-0.3**

*NEIC **07** 11:33:38.2, 35°.32N×140°.47E, h21km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; M_{rr}2.05; $M_{\theta\theta}$-1.61; $M_{\phi\phi}$-0.43; $M_{r\theta}$1.87; $M_{\theta\phi}$-1.03; $M_{\phi r}$1.62; Fault plane solution: $M_0$3.27000×10¹⁴ NP1:φ249.20000°, δ21.12000°, λ106.51000°. NP2:φ51.57000°, δ69.79000°, λ83.74000°. Principal axes: T 3.2032, Plg65.0000°, Azm311.0000°; N 0.1209, Plg6.0000°, Azm54.0000°; P -3.3241, Plg25.0000°, Azm146.0000°;*

*NEIC **07** 11:33:39.7±1.3, 35°.35N±0°.04×140°.46E±0°.08, h20km±5km, mb4.2/13, Mwr3.6/10 Error ellipse: s-maj=10.0km s-min=6.0km az=93.0*

*JMA **07** 11:33:40.6±0.2, 35°.42N×140°.36E, h31km±2km, M3.5 Broadband fault plane solution: P waves. NP1: φ±268.00000°, δ26.00000°, λ96.00000°. NP2:φ±81.00000°, δ64.00000°, λ87.00000°. Principal axes: T Plg71.0000°, Azm344.0000°; N Plg3.0000°, Azm82.0000°; P Plg19.0000°, Azm173.0000°;*

JMA Felt III J1.

*NIED **07** 11:33:40.7, 35°.42N×140°.36E, h31km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}1.57; $M_{\theta\theta}$-2.67; $M_{\phi\phi}$1.10; $M_{r\theta}$3.41; $M_{\theta\phi}$-0.80; $M_{\phi r}$3.02; Fault plane solution: $M_0$5.16000×10¹⁴ NP1:φ±50.00000°, δ80.00000°, λ71.00000°. NP2:φ±293.00000°, δ22.00000°, λ151.00000°.*

*IDC **07** 11:33:42.0±3.1, 35°.32N×140°.26E, h36km±26km, mb3.4/6, mb1 3.7/10, mb1mx3.3/55, mbtmp3.8/10, ML3.3/3, MS2.8/5, Ms1 2.8/5, ms1mx2.5/51 Error ellipse: s-maj=33.2km s-min=14.8km az=77.0*

ISC 07 11:33:41.2±0.9, 35°.38N±0°.03×140°.39E±0°.06, h33km±2km, n56, σ0§95/51, mb4.1/13, MS2.9/3, 2C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.16**	**285**		P		**Pb**	**11 33 46.5**	**-0.9**
JCN					S		**Sb**	**11 33 51.0**	**-0.7**
KTR	**Katsuura**	**0.24**	**195**	⇑	P		**Pn**	**11 33 47.5**	**-0.4**
JKUC	**kamogawauchiur**	**0.27**	**216**	⇑	P		**Pn**	**11 33 47.7**	**-0.8**
JKUC					S		**Sb**	**11 33 53.0**	**-0.5**
JSMT	**Sammumatsuo**	**0.27**	**10**	⇓	P		**Pb**	**11 33 47.6**	**-1.0**
JSMT					S		**Sn**	**11 33 52.2**	**-0.6**
BSO4	**Boso 4**	**0.39**	**187**		P		**Pn**	**11 33 50.3**	**-0.1**
BSO4					*eX*			11 33 59.7	
BSO3	**Boso 3**	**0.58**	**170**	⇓	P		**Pb**	**11 33 53.1**	**+0.2**
JYT	**Yasato**	**0.86**	**349**	⇓	P		**Pn**	**11 33 55.5**	**-1.5**
JYT					S		**Sn**	**11 34 06.7**	**-1.7**
JYT	**Yasato**	**0.86**	**349**				**Pn**	**11 33 55.6**	**-1.3**
JYT					Sg		**Sn**	**11 34 08.4**	**0.0**
JSG	**Sagara**	**1.94**	**249**		Pn		**Pn**	**11 34 12.1**	**+0.4**
MJAR	**Matsushiro Arr**	**2.12**	**304**		Pn		**Pn**	**11 34 15.0**	**+0.7**
	1.9nm,0.3s,baz=130,slow=18,SNR=22								
MAJO	**Matsushiro**	**2.12**	**304**				**Pn**	**11 34 15.1**	**+0.9**
MAT	**Matsushiro**	**2.12**	**304**		P		**Pn**	**11 34 15.0**	**+0.7**
MAT					S		**Sb**	**11 34 43.7**	**-1.2**
MJB9	**Matsu-Tunnel**	**2.12**	**304**		Pn		**Pn**	**11 34 14.5**	**+0.2**
JHJ	**Hachijo jima 2**	**2.31**	**193**		Pn		**Pn**	**11 34 16.2**	**-0.6**
	166nm,0.3s,baz=127,slow=23,SNR=42								
JHJ					Sn		**Sn**	**11 34 42.5**	**-1.6**
	111nm,0.3s,baz=81,slow=21,SNR=13								
JHJ2	**Mitsune**	**2.31**	**192**		Pn		**Pn**	**11 34 16.2**	**-0.6**
JGF	**Kuroka**	**2.49**	**276**				**Pn**	**11 34 20.8**	**+1.5**
JMM	**Marumori**	**2.51**	**7**				**Pn**	**11 34 19.9**	**+0.4**
INU	**Inuyama**	**2.76**	**270**				**Pn**	**11 34 22.9**	**-0.1**
JSD	**Sado**	**3.16**	**328**				**Pn**	**11 34 29.6**	**+1.1**
JWT	**Wachi**	**4.08**	**270**		Pn		**Pn**	**11 34 41.9**	**+0.6**
JTM	**Tenmabayashi**	**5.43**	**5**		Pn		**Pn**	**11 35 01.0**	**+1.3**
JCJ	**Chichijima**	**8.40**	**169**		Pn		**Pn**	**11 35 39.5**	**-1.0**
	8.5nm,0.3s,baz=55,slow=21,SNR=2.5								
JCJ	**Chichijima**	**8.40**	**169**				**Pn**	**11 35 39.0**	**-1.5**
ASAJ	**Asahikawa**	**8.89**	**10**		Pn		**Pn**	**11 35 48.1**	**+0.9**
	0.3nm,0.3s,baz=206,slow=18,SNR=1.6								
KSRS	**Korea Array**	**10.26**	**285**		LR		LR	11 39 58.1	
	comp=Z,69nm,18.5s,baz=92,slow=37								
USRK	**Ussuriysk Ar.**	**10.92**	**326**		LR		LR	11 40 10.3	
	comp=Z,44nm,18.6s,baz=89,slow=36								
KLR	**Kul'dur**	**15.23**	**338**		LR		LR	11 42 35.2	
	comp=Z,35nm,20.1s,baz=158,slow=35								
MA2	**Magadan**	**25.14**	**12**		LR		LR	11 49 51.2	
	comp=Z,17nm,19.7s,baz=302,slow=38								
SONM	**Songino Array**	**28.07**	**307**		LR		LR	11 51 17.0	
	comp=Z,26nm,18.4s,baz=42,slow=38								
H11N2	**WAKE ISLAND Hy**	**28.08**	**117**		T		T	12 08 45.8	
	baz=309,slow=75,SNR=88								
H11N1	**WAKE ISLAND Hy**	**28.08**	**117**		T		T	12 08 48.0	
	baz=309,slow=75,SNR=58								
H11N3	**WAKE ISLAND Hy**	**28.09**	**117**		T		T	12 08 47.1	
	baz=309,slow=75,SNR=74								
H11S3	**WAKE ISLAND Hy**	**28.72**	**119**		T		T	12 09 30.7	
	baz=311,slow=75,SNR=33								
H11S1	**WAKE ISLAND Hy**	**28.72**	**119**		T		T	12 09 30.7	
	baz=311,slow=75,SNR=66								
H11S2	**WAKE ISLAND Hy**	**28.73**	**119**		T		T	12 09 34.5	
	baz=311,slow=75,SNR=33								
ZALV	**Zalesovo Beam**	**42.44**	**314**		P		**P**	**11 41 32.7**	**+0.1**
	0.5nm,0.3s,baz=81,slow=9.2,SNR=4.0								
KSM	**Kuching**	**43.81**	**226**		P		**P**	**11 41 46.0**	**+2.0**
KSM					IAmb		IAmb	11 41 50.3	
	comp=Z,7.1nm,1.1s								
MK31	**Makanchi Array**	**44.32**	**303**		P		**P**	**11 41 48.8**	**+0.9**
MKAR	**Makanchi Array**	**44.32**	**303**		P		**P**	**11 41 47.1**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=88,slow=10,SNR=5.6								
KURBB	**Kurchatov Arra**	**46.39**	**309**		P		**P**	**11 42 03.7**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=86,slow=8.2,SNR=7.1								
RSO	**Redoubt South**	**48.72**	**37**		P		**P**	**11 42 22.6**	**+0.3**
BWN	**Browne**	**50.23**	**32**		P		**P**	**11 42 34.5**	**+0.9**
PMR	**Palmer**	**50.45**	**36**		P		**P**	**11 42 35.5**	**+0.2**
MCK	**McKinley**	**50.47**	**33**		P		**P**	**11 42 35.9**	**+0.5**
MCK					IAmb		IAmb	11 42 40.1	
	comp=Z,1.6nm,0.3s								
RND	**Reindeer**	**50.51**	**33**		P		**P**	**11 42 36.0**	**+0.2**
RND					IAmb		IAmb	11 42 41.6	
	comp=Z,2.8nm,1.2s								
GHO	**Glory Hole Cre**	**50.54**	**36**		P		**P**	**11 42 37.3**	**+1.2**
GHO					IAmb		IAmb	11 42 44.9	
	comp=Z,2.2nm,0.7s								
AAK	**Ala-Archa**	**50.56**	**299**		LR		LR	12 04 24.6	
	comp=Z,412nm,21.0s,baz=129,slow=36								
SML	**Sawmill**	**50.82**	**35**		P		**P**	**11 42 39.1**	**+1.0**
ILAR	**Eielson Array**	**51.34**	**32**		P		**P**	**11 42 43.5**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=275,slow=6.8,SNR=2.8								
WB0	**Warramunga Arr**	**55.13**	**187**		P		**P**	**11 43 10.2**	**-0.1**
WB0					IAmb		IAmb	11 43 16.8	
	comp=Z,1.9nm,0.8s								
WR0	**Warramunga Arr**	**55.31**	**187**		P		**P**	**11 43 10.7**	**-0.8**
WR0					IAmb		IAmb	11 43 18.8	
	comp=Z,1.1nm,0.7s								
WB2	**Warramunga Arr**	**55.31**	**187**		P		**P**	**11 43 12.4**	**+0.8**
WB2					IAmb		IAmb	11 43 15.8	
	comp=Z,2.7nm,1.1s								
WRA	**Warramunga Arr**	**55.31**	**187**		P		**P**	**11 43 11.2**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=2.2,slow=6.1,SNR=14								
ABKAR	**Akbulak array**	**58.38**	**311**		P		**P**	**11 43 33.0**	**-0.1**
AS31	**Alice Springs**

I34MN SONGINO INFRAS 37.43 69 *i* 15 27 10.0
baz=292,slow=328,SNR=0.7

*IDC **07** 11:52:29.1±2.5,5.°32S×153.°00E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/47, mbtmp3.8/4, Error ellipse: s-maj=54.4km s-min=37.8km az=6.0*

ISC 07 11:52:34.0±2.0,5.°3S±0.°3×153.°1E±0.°2, h37km, n6, σ0=89/7, mb3.7/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.16**	**235**	Pn	**Pn**	**11 54 17.4**	**+1.2**
	1.2nm,0.3s,baz=316,slow=15,SNR=2.2						
PMG				Sn	**Sn**	**11 55 36.0**	**-0.3**
	1.5nm,0.3s,baz=165,slow=22,SNR=2.6						
DZM	**Mont Dzumac**	**21.10**	**143**	P	**P**	**11 57 15.8**	**+0.2**
	6.2nm,1.0s,baz=342,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	**23.34**	**230**	P	**P**	**11 57 38.3**	**-0.9**
	0.6nm,0.3s,baz=54,slow=9.8,SNR=11						
ASAR	**Alice Springs**	**25.98**	**223**	P	**P**	**11 58 02.8**	**-0.7**
	0.2nm,0.4s,baz=56,slow=9.3,SNR=10						
FITZ	**Fitzroy Crossi**	**29.68**	**242**	P	**P**	**11 58 36.1**	**-0.4**
	1.5nm,0.6s,baz=65,slow=7.6,SNR=5.7						
TORD	**Torodi Ar. Bea**	**150.73**	**287**	PKPbc	**PKiKP**	**12 12 24.3**	**+0.2**
	0.6nm,0.7s,baz=58,slow=2.5,SNR=3.0						

*IDC **07** 11:52:58.7±1.4,2.°81N×126.°20E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/59, mbtmp3.7/6, ML3.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/43, Error ellipse: s-maj=66.7km s-min=22.1km az=64.0*

ISC 07 11:53:03.4±1.4,3.°0N±0.°2×126.°6E±0.°2, h35km, n6, σ1=40/7, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.02**	**129**	Pn	**Pn**	**11 54 31.8**	**+1.8**
	0.7nm,0.3s,baz=226,slow=22,SNR=1.9						
SIJI				Sn	**Sn**	**11 55 35.7**	**-2.1**
	0.4nm,0.3s,baz=233,slow=24,SNR=1.4						
SIJI				LR	LR	11 57 06.9	
	comp=Z,76nm,19.1s,baz=358,slow=40						
FITZ	**Fitzroy Crossi**	**20.95**	**183**	P	**P**	**11 57 43.2**	**-0.3**
	1.2nm,0.5s,baz=15,slow=9.5,SNR=7.3						
WRA	**Warramunga Arr**	**24.00**	**162**	P	**P**	**11 58 14.8**	**-0.2**
	1.1nm,0.5s,baz=337,slow=11,SNR=12						
ASAR	**Alice Springs**	**27.41**	**165**	P	**P**	**11 58 45.9**	**0.0**
	0.2nm,0.4s,baz=341,slow=7.7,SNR=5.7						
STKA	**Stephens Creek**	**37.46**	**159**	P	**P**	**12 00 13.8**	**+0.2**
	1.5nm,0.6s,baz=344,slow=8.2,SNR=3.9						
MKAR	**Makanchi Array**	**58.11**	**326**	P	**P**	**12 02 53.0**	**-0.6**
	0.6nm,0.6s,baz=122,slow=7.2,SNR=7.5						

*ISK **07** 11:57:40.6,38.°49N×26.°52E, h2km, ML2.5/17*
*DDA **07** 11:57:40.9,38.°49N×26.°50E, h3km±3km, ML2.2*
*THE **07** 11:57:43.5,38.°46N×26.°32E, h31km±9km, ML2.3/3, Error ellipse: s-maj=15.0km s-min=0.7km az=255.0*
*ATH **07** 11:57:45.4,38.°29N×26.°28E, h16km±8km, ML2.2/3, Error ellipse: s-maj=16.6km s-min=1.4km az=241.0*

ISC 07 11:57:41.7±1.1,38.°50N±0.°02×26.°56E±0.°03, h1km±11km, n32, σ0=99/49, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBN	**Karaburun**	**0.09**	**358**	PG	**Pg**	**11 57 43.2**	**-0.3**
KRBN				SG	**Sg**	**11 57 45.1**	**+0.4**
URLA	**Izmir**	**0.14**	**168**	*i* P	**Pg**	**11 57 43.8**	**-0.7**
URLA				*i* S	**Sg**	**11 57 47.3**	**+1.0**
URLA	**Izmir**	**0.14**	**168**	PG	**Pg**	**11 57 44.1**	**-0.4**
URLA				SG	**Sg**	**11 57 47.1**	**+0.7**
FOCM	**Foa**	**0.25**	**33**	PG	**Pg**	**11 57 46.7**	**+0.2**
ZEYE	**Izmir, Urla-Ze**	**0.27**	**189**	*i* P	**Pg**	**11 57 47.0**	**+0.2**
ZEYE				*i* S	**Sg**	**11 57 51.9**	**+1.6**
ZEYE				IAML		11 57 54.0	
	comp=N,577nm,0.3s						
CHOS	**Chios island**	**0.41**	**254**	P	**Pg**	**11 57 49.6**	**0.0**
CHOS				S	**Sg**	**11 57 54.1**	**-0.8**
CHOS				AML	AML	11 57 56.2	
	comp=N,799μm,0.2s						
CHOS				AML	AML	11 57 56.9	
	comp=E,1073μm,0.3s						
CHOS	**Chios island**	**0.41**	**254**	P	**Pg**	**11 57 49.6**	**0.0**
CHOS				S	**Sg**	**11 57 54.9**	**0.0**
	comp=E,468nm,0.2s						
CHOS	**Chios island**	**0.41**	**254**	PG	**Pg**	**11 57 49.3**	**-0.3**
CHOS				SG	**Sg**	**11 57 54.9**	**0.0**
ZEDA	**zmir-Bergama**	**0.62**	**41**	*i* P	**Pg**	**11 57 53.4**	**-0.1**
ZEDA				*i* S	**Sg**	**11 58 04.0**	**+2.5**
DKL	**Dikili**	**0.63**	**25**	PG	**Pg**	**11 57 53.9**	**+0.1**
PRK	**Paraskevi**	**0.78**	**343**	P	**Pb**	**11 57 57.7**	**-0.3**
PRK				S	**Sb**	**11 58 08.4**	**-0.7**
	comp=E,300nm,0.6s						
PSRA	**Psara**	**0.78**	**273**	P	**Pg**	**11 57 57.4**	**+0.7**
AYVA	**Ayvalik**	**0.81**	**7**	*i* P	**Pb**	**11 57 57.1**	**-1.5**
AYVA				*i* S	**Sb**	**11 58 08.9**	**-1.1**
AYVA				IAML		11 58 11.0	
	comp=N,93nm,0.2s						
SMG	**Samos**	**0.82**	**164**	P	**Pb**	**11 57 58.7**	**-0.1**
SMG				S	**Sb**	**11 58 10.0**	**-0.3**
SMG				AML	AML	11 58 12.7	
	comp=E,654μm,0.3s						
SMG				AML	AML	11 58 13.5	
	comp=N,647μm,0.3s						
SMG	**Samos**	**0.82**	**164**	P	**Pb**	**11 57 58.9**	**+0.1**
SMG				S	**Sb**	**11 58 10.1**	**-0.3**
	comp=N,328nm,0.3s						
SIGR	**SIGRI**	**0.90**	**322**	P	**Pn**	**11 58 03.9**	**+2.4**
SIGR				S	**Sn**	**11 58 16.3**	**+1.2**
SIGR				AML	AML	11 58 19.1	
	comp=N,273μm,0.2s						
SIGR				AML	AML	11 58 19.1	
	comp=E,261μm,0.3s						
AKHS	**Akhisar**	**1.05**	**69**	*i* P	**Pb**	**11 58 01.9**	**-0.8**
AKHS				*i* S	**Sb**	**11 58 17.6**	**+0.5**
BUHA	**Balikesir, Bur**	**1.08**	**22**	*i* P	**Pb**	**11 58 01.9**	**-1.2**
BUHA				*i* S	**Sb**	**11 58 18.7**	**+1.0**
BUHA				IAML		11 58 20.0	
	comp=N,37nm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.19**	**117**	PN	**Pn**	**11 58 04.5**	**-1.1**
BAYC	**CANAKKALE_Bayr**	**1.24**	**360**	*i* P	**Pn**	**11 58 03.5**	**-2.6**
BAYC				*i* S	**Sb**	**11 58 20.6**	**-1.7**
BAYC				IAML		11 58 23.0	
	comp=N,35nm,0.2s						
STEP	**BALIKESIR_Sava**	**1.26**	**46**	*i* P	**Pn**	**11 58 04.7**	**-1.8**
STEP				*i* S	**Sb**	**11 58 23.9**	**+0.9**
STEP				IAML		11 58 26.0	
	comp=N,136nm,0.9s						
EZN	**Ezine**	**1.33**	**352**	PN	**Pn**	**11 58 07.3**	**-0.2**
BOZC	**Bozcaada**	**1.39**	**344**	PN	**Pn**	**11 58 08.1**	**-0.2**
BALB	**Balikesir**	**1.53**	**42**	PN	**Pn**	**11 58 10.5**	**+0.3**
BODT	**Bodrum**	**1.56**	**157**	PN	**Pn**	**11 58 10.5**	**0.0**
APE	**Apeiranthos**	**1.65**	**210**	PN	**Pn**	**11 58 11.1**	**-0.7**
LPK	**Lapseki**	**1.87**	**5**	PN	**Pn**	**11 58 15.1**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.89**	**358**	PN	**Pn**	**11 58 15.2**	**0.0**
ERIK	**Erikli-Kesan**	**2.17**	**359**	PN	**Pn**	**11 58 19.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.23**	**12**	PN	**Pn**	**11 58 20.1**	**+0.2**
KCTX	**Karacabey (Bur**	**2.25**	**38**	PN	**Pn**	**11 58 20.3**	**+0.3**
MRMT	**Marmara Adasi**	**2.25**	**21**	PN	**Pn**	**11 58 20.3**	**+0.2**

*IDC **07** 12:10:57.3±0.7,1.°60S×135.°47E, h0km, mb4.1/9, mb1 4.3/14, mb1mx4.0/50, mbtmp4.2/14, ML3.3/4, MS3.5/12, Ms1 3.5/12, ms1mx3.3/31, Error ellipse: s-maj=17.5km s-min=12.2km az=66.0*
*DJA **07** 12:10:58.4±0.3,2.°3S±5.°×13.°6E±.°, h10km, M4.4/5, mb4.3/5, MLv4.5/5*
*NEIC **07** 12:11:00.7±2.3,1.°65S±0.°09×135.°53E±0.°06, h28km±5km, mb4.3/17, Error ellipse: s-maj=13.6km s-min=9.0km az=195.0*

ISC 07 12:11:01.4±0.5,1.°66S±0.°06×135.°54E±0.°04, h35km, n58, σ2=20/59, mb4.2/13, MS3.4/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	**0.73**	**51**	P	**Pn**	**12 11 11.3**	**-3.9**
SRPI	**Serui, Papua**	**0.73**	**107**	P	**Pn**	**12 11 13.6**	**-1.6**
SRPI				S	**Sn**	**12 11 25.1**	**0.0**
FAKI	**Fak Fak**	**3.52**	**249**	Pn	**Pn**	**12 11 53.5**	**-0.2**
FAKI				Sn	**Sn**	**12 12 34.0**	**-0.2**
FAKI	**Fak Fak**	**3.52**	**249**	P	**Pn**	**12 11 53.8**	**+0.1**
SIJI	**Sorong**	**4.35**	**280**	Pn	**Pn**	**12 12 05.4**	**+0.4**
	2.2nm,0.3s,baz=119,slow=23,SNR=4.7						
SIJI				Sn	**Sn**	**12 12 55.1**	**+0.5**
	4.4nm,0.3s,baz=107,slow=13,SNR=4.4						
SIJI				Lg	Lg	12 13 13.7	
	6.6nm,0.3s,baz=294,slow=9.2,SNR=8.9						
SIJI				LR	LR	12 13 48.9	
	comp=Z,1μm,18.3s,baz=80,slow=40						
SWI	**Sorong**	**4.36**	**280**	P	**Pn**	**12 12 04.9**	**-0.2**
GENI	**Genyem**	**4.71**	**101**	P	**Pn**	**12 12 10.9**	**+0.9**
JAY	**Jayapura**	**5.23**	**99**	Pn	**Pn**	**12 12 17.4**	**+0.3**
	1.6nm,0.3s,baz=4.7,slow=15,SNR=2.5						
JAY				Sn	**Sn**	**12 13 16.4**	**+0.2**
	1.6nm,0.3s,baz=18,slow=11,SNR=3.6						
JAY	**Jayapura**	**5.23**	**99**	P	**Pn**	**12 12 17.8**	**+0.6**
	21nm,1.2s						
BNDI	**Bandanaira**	**6.31**	**243**	P	**Pn**	**12 12 30.1**	**-1.9**
	1.0nm105nm,1.2s						
SAUI	**Saumlaki**	**7.57**	**214**	Pn	**Pn**	**12 12 47.5**	**-1.9**
MTN	**Manton Dam**	**11.94**	**201**		**Pn**	**12 13 49.6**	**+0.3**
SOEI	**Soe**	**13.80**	**234**		**Pn**	**12 14 14.4**	**-0.3**
PMG	**Port Moresby**	**13.88**	**124**	Pn	**Pn**	**12 14 15.7**	**-0.1**
	0.7nm,0.3s,baz=294,slow=19,SNR=1.5						
PMG				LR	LR	12 21 07.3	
	comp=Z,424nm,18.9s,baz=262,slow=44						
PMG	**Port Moresby**	**13.88**	**124**	Pn	**Pn**	**12 14 15.1**	**-0.7**
COEN	**Coen**	**14.36**	**149**	Pn	**Pn**	**12 14 22.6**	**+0.2**
BATI	**Baumata**	**14.54**	**234**	Pn	**Pn**	**12 14 23.8**	**-1.0**
	4.3nm,0.3s,baz=76,slow=17,SNR=2.6						
BATI				Sn	**Sn**	**12 17 02.7**	**-2.3**
	3.5nm,0.3s,baz=222,slow=7.7,SNR=2.7						
RABL	**Rabaul**	**16.79**	**99**	Pn	**Pn**	**12 14 53.3**	**-0.6**
WB0	**Warramunga Arr**	**18.04**	**184**	P	**Pn**	**12 15 07.2**	**-2.2**
WRAB	**Tennant Creek**	**18.20**	**184**	P	**P**	**12 15 10.4**	**-1.0**
WB2	**Warramunga Arr**	**18.21**	**184**	P	**P**	**12 15 10.6**	**-0.9**
WB2				IAmb	IAmb	12 15 18.0	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**18.21**	**184**	P	**P**	**12 15 09.6**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=6.7,slow=12,SNR=30						
WRA				S	**Sn**	**12 18 25.7**	**-8.3**
	comp=Z,0.2nm,0.3s,baz=356,slow=24,SNR=3.9						
WRA				LR	LR	12 22 43.4	
	comp=Z,168nm,21.8s,baz=345,slow=39						
WR0	**Warramunga Arr**	**18.22**	**183**	P	**P**	**12 15 10.6**	**-1.1**
WR0				IAmb	IAmb	12 15 20.8	
	comp=Z,62nm,1.8s						
MYLDM	**Lahad Datu**	**18.33**	**292**	P	**P**	**12 15 09.6**	**-3.2**
MYLDM				IAmb	IAmb	12 15 33.6	
	comp=Z,30nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.01**	**210**	P	**P**	**12 15 21.0**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=38,slow=12,SNR=12						
FITZ				S	**Sn**	**12 18 44.3**	**-9.0**
	comp=Z,0.2nm,0.3s,baz=202,slow=6.8,SNR=3.0						
FITZ	**Fitzroy Crossi**	**19.01**	**210**	P	**Pn**	**12 15 22.4**	**+1.1**
CTA	**Charters Tower**	**21.10**	**151**	P	**P**	**12 15 45.9**	**+2.8**
	comp=Z,6.4nm,0.8s,baz=329,slow=12,SNR=14						
CTAO	**Charters Tower**	**21.10**	**151**	P	**P**	**12 15 46.1**	**+3.1**
CTAO				IAmb	IAmb	12 15 51.1	
	comp=Z,16nm,1.2s						
AS31	**Alice Springs**	**21.94**	**184**	P	**P**	**12 15 53.8**	**+1.8**
AS31				IAmb	IAmb	12 16 02.6	
	comp=Z,10nm,0.9s						
ASAR	**Alice Springs**	**21.94**	**184**	P	**P**	**12 15 54.1**	**+2.0**
	comp=Z,39nm,1.0s,baz=10,slow=12,SNR=186						
ASAR				S	**S**	**12 19 56.5**	**+4.0**
	comp=Z,2.0nm,0.9s,baz=8.4,slow=27,SNR=5.6						
ASAR				LR	LR	12 25 07.7	
	comp=Z,144nm,20.6s,baz=6.5,slow=39						
ASAR	**Alice Springs**	**21.94**	**184**		**P**	**12 15 53.3**	**+1.3**
HNR	**Honiara**	**25.47**	**109**	LR	LR	12 26 16.3	
	comp=Z,104nm,21.4s,baz=67,slow=36						
EIDS	**Eidsvold**	**27.93**	**149**	P	**P**	**12 16 49.7**	**+1.1**
STKA	**Stephens Creek**	**30.60**	**170**	P	**P**	**12 17 12.3**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=333,slow=9.4,SNR=7.5						
NWAO	**Narrogin (SRO)**	**35.55**	**207**	P	**P**	**12 17 55.7**	**+0.4**
MJAR	**Matsushiro Arr**	**38.08**	**3**	LR	LR	12 32 40.0	
	comp=Z,36nm,20.1s,baz=160,slow=34						
KSRS	**Korea Array**	**39.55**	**350**	LR	LR	12 34 49.8	
	comp=Z,36nm,18.0s,baz=174,slow=36						
CMAR	**Chiang Mai Arr**	**41.18**	**301**	P	**P**	**12 18 43.7**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=123,slow=6.7,SNR=2.3						
CMAR				LR	LR	12 36 18.8	
	comp=Z,18nm,18.8s,baz=95,slow=37						
MK31	**Makanchi Array**	**67.04**	**323**	P	**P**	**12 21 50.1**	**-1.0**
MK31				IAmb	IAmb	12 21 57.7	
	comp=Z,3.6nm,1.1s						
MKAR	**Makanchi Array**	**67.04**	**323**	P	**P**	**12 21 51.6**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=106,slow=7.7,SNR=6.6						
MKAR	**Makanchi Array**	**67.04**	**323**	P	**P**	**12 21 51.3**	**+0.2**
MAKZ	**Makanchi**	**67.24**	**323**	P	**P**	**12 21 52.5**	**+0.1**
ZALV	**Zalesovo Beam**	**69.46**	**331**	LR	LR	12 52 33.3	
	comp=Z,28nm,20.8s,baz=79,slow=36						
AAK	**Ala-Archa**	**70.27**	**317**	LR	LR	12 54 23.9	
	comp=Z,35nm,21.1s,baz=102,slow=37						
KURK	**Kurchatov**	**71.06**	**326**	P	**P**	**12 22 16.0**	**+0.2**
KURBB	**Kurchatov Arra**	**71.06**	**326**	P	**P**	**12 22 16.0**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=119,slow=5.6,SNR=4.1						
KK31	**Karatay Array**	**73.17**	**316**	P	**P**	**12 22 29.4**	**+0.6**
KK31				IAmb	IAmb	12 22 35.1	
	comp=Z,2.5nm,0.8s						
KKAR	**Karatay Array**	**73.17**	**316**	P	**P**	**12 22 28.0**	**-0.8**
KKAR				IAmb	IAmb	12 22 35.1	
	comp=Z,2.5nm,0.8s						
BVAR	**Borovoye Array**	**76.66**	**326**	P	**P**	**12 22 48.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=94,slow=2.0,SNR=4.2						
VNDA	**Vanda**	**77.12**	**174**	P	**P**	**12 22 52.8**	**+1.9**
	comp=Z,1.4nm,0.7s,baz=314,slow=5.9,SNR=9.1						
VNDA	**Vanda**	**77.12**	**174**	P	**P**	**12 22 53.5**	**+2.7**
VNDA				IAmb	IAmb	12 22 54.0	
	comp=Z,2.9nm,0.9s						
GEYT	**Alibeck**	**81.11**	**309**	LR	LR	13 00 31.1	
	comp=Z,24nm,20.8s,baz=130,slow=37						
ILAR	**Eielson Array**	**86.20**	**25**	P	**P**	**12 23 38.5**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=263,slow=4.9,SNR=11						
ARCES	**ARCESS Array B**	**98.47**	**340**	LR	LR	13 10 38.4	
	comp=Z,31nm,21.8s,baz=270,slow=36						
ATAH	**Atahualpa**	**145.03**	**105**	PKPbc	**PKPdf**	**12 30 38.6**	**+1.9**
	comp=Z,6.3nm,0.8s,baz=274,slow=4.2,SNR=3.9						
LVC	**Limon Verde**	**146.08**	**137**	PKPbc	**PKiKP**	**12 30 42.4**	**0.0**
	comp=Z,3.4nm,0.7s,baz=245,slow=5.8,SNR=4.2						
CPUP	**Villa Florida**	**149.52**	**157**	PKPbc	**PKiKP**	**12 30 49.3**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=196,slow=1.9,SNR=6.6						
LPAZ	**La Paz**	**150.60**	**128**	PKPbc	**PKiKP**	**12 30 54.0**	**+1.8**
	comp=Z,4.3nm,0.8s,baz=236,slow=2.4,SNR=13						

*IDC **07** 12:13:33.7±2.0,32.°51N×48.°70E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.6/48, mbtmp3.9/11, ML3.9/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/43, Error ellipse: s-maj=43.4km s-min=23.2km az=164.0*
*THR **07** 12:13:34.0±0.4,32.°37N×48.°69E, h14km±7km, ML3.6*
*TEH **07** 12:13:34.2,32.°38N×48.°86E, h7km, ML3.7*

ISC 07 12:13:34.8±0.7,32.°35N±0.°04×48.°82E±0.°04, h10km, n57, σ1=39/56, mb3.8/9, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.24**	**184**	*e*Pg	**Pg**	**12 13 39.8**	**+0.2**
SHGR				*e*Sg	**Sg**	**12 13 44.3**	**+1.4**
SHGR	**Shooshtar-Gavs**	**0.24**	**184**	*e*Pg	**Pg**	**12 13 39.8**	**+0.2**
AHWZ	**Ahwaz**	**1.02**	**189**	*e*Pg	**Pg**	**12 13 54.4**	**-0.1**
IKMR	**Kamar-syah**	**1.23**	**342**	*e*Pg	**Pn**	**12 13 57.4**	**-0.6**
IKMR				*e*Sg	**Sb**	**12 14 13.8**	**-0.2**
IKMR				*e*		12 14 20.3	
	comp=Z,99nm,0.3s						
DHL1	**Dehloran**	**1.34**	**285**	*e*Pg	**Pn**	**12 14 00.8**	**+1.2**
IKFM	**Kafar-mosalman**	**1.43**	**325**	*e*Pg	**Pn**	**12 14 02.0**	**+1.2**
IDOB	**Doab**	**1.54**	**340**	*e*Pg	**Pn**	**12 14 04.1**	**+1.6**
KHMZ	**Khomeyn**	**1.69**	**34**	*e*Pg	**Pn**	**12 14 05.9**	**+1.3**
KHMZ	**Khomeyn**	**1.69**	**34**	*e*Pg	**Pn**	**12 14 05.9**	**+1.3**
SHK1	**Shahrekord**	**1.75**	**90**	*e*Pg	**Pn**	**12 14 07.1**	**+1.7**
IPIR	**Pirpir**	**1.78**	**78**	*e*		12 14 35.5	
	comp=Z,99nm,0.6s						
IPIR				*e*Pg	**Pb**	**12 14 08.2**	**+0.5**
HSAM	**Samen**	**1.87**	**354**	*e*Pg	**Pn**	**12 14 09.0**	**+1.9**
ABEH	**Behbahan**	**2.13**	**145**	*e*Pn	**Pb**	**12 14 12.6**	**-0.8**
IBZA	**Bozab**	**2.27**	**339**	*e*Pn	**Pn**	**12 14 14.0**	**+1.4**
IBZA				*e*		12 14 54.1	
	comp=Z,99nm,0.4s						
ASAO	**Ashtian**	**2.42**	**24**	*e*Pn	**Pn**	**12 14 15.8**	**+1.2**
ASAO				IAML		12 15 04.4	
	comp=N,269nm,0.7s						
ASAO	**Ashtian**	**2.42**	**24**	*e*Pn	**Pn**	**12 14 15.8**	**+1.2**
KCHF	**Cheshme Sefid,**	**2.44**	**323**	*e*Pn	**Pn**	**12 14 17.0**	**+2.2**
KCHF				*e*		12 14 56.4	
	comp=Z,99nm,0.4s						
KER	**Kermanshah**	**2.48**	**326**	*e*Pn	**Pn**	**12 14 17.5**	**+2.2**
HAGD	**Aghdareh**	**2.48**	**6**	*e*Pn	**Pn**	**12 14 17.9**	**+2.4**
HAGD				*e*		12 15 02.7	
	comp=Z,99nm,0.6s						
IKLH	**Kolahrood**	**2.52**	**67**	*e*Pn	**Pn**	**12 14 16.4**	**+0.4**
IALM	**Almabolaq**	**2.57**	**348**	*e*Pn	**Pn**	**12 14 18.8**	**+2.1**
QAM	**Ghamsar**	**2.61**	**57**	*e*Pn	**Pn**	**12 14 18.4**	**+1.1**
KLNJ	**Kolanjah**	**2.71**	**119**	*e*Pn	**Pn**	**12 14 19.6**	**+0.9**
KLNJ				*e*		12 15 30.3	
	comp=Z,99nm,1.0s						
IGAR	**Gharneh**	**2.73**	**88**	*e*Pn	**Pn**	**12 14 20.3**	**+1.5**
IGAR				*e*		12 15 08.9	
	comp=Z,99nm,0.8s						
IGHG	**Ghaleghazi**	**2.73**	**317**	*e*Pn	**Pn**	**12 14 20.8**	**+1.8**
IGHG				*e*		12 15 23.6	
	comp=Z,99nm,1.0s						
MIB	**Mutribah**	**2.83**	**207**	*e*P		12 14 21.5	
ILIN	**Lien**	**3.00**	**329**	*e*Pn	**Pn**	**12 14 25.1**	**+2.5**
ILIN				*e*		12 15 14.8	
	comp=Z,99nm,0.4s						
IZEF	**Zefreh**	**3.01**	**79**	*e*Pn	**Pn**	**12 14 24.4**	**+1.6**
IZEF				*e*		12 15 17.8	
	comp=Z,99nm,0.9s						
IRAM	**Ramesheh**	**3.07**	**99**	*e*Pn	**Pn**	**12 14 24.7**	**+1.2**
IDHR	**Dehrash**	**3.11**	**320**	*e*Pn	**Pn**	**12 14 25.5**	**+1.4**
IQOM	**Qom**	**3.12**	**36**	*e*Pn	**Pn**	**12 14 25.6**	**+1.3**
IRAZ	**Razeghan**	**3.19**	**16**	*e*Pn	**Pn**	**12 14 27.3**	**+2.1**
KRSH	**Karshahi**	**3.22**	**59**	*e*Pn	**Pn**	**12 14 27.1**	**+1.6**
QABG	**Abgarm-Qazvin**	**3.41**	**10**	*e*Pn	**Pn**	**12 14 28.2**	**-0.1**
ISFB	**Sefidab**	**3.49**	**54**	*e*Pn	**Pn**	**12 14 30.9**	**+1.7**
RDF	**Al-Radifah**	**3.58**	**198**	*e*P		12 14 31.5	
IVRN	**Varamin**	**3.58**	**42**	*e*Pn	**Pn**	**12 14 32.9**	**+2.4**
ANAR	**Anarak**	**4.22**	**77**	*e*Pn	**Pn**	**12 14 40.5**	**+1.2**
QALM	**Alamut, Qazvin**	**4.35**	**20**	*e*Pn	**Pn**	**12 14 41.6**	**+0.5**
ICHK	**Chekchek**	**4.73**	**90**	*e*Pn	**Pn**	**12 14 47.9**	**+1.5**
IPRN	**Peran**	**4.86**	**36**	*e*Pn	**Pn**	**12 14 48.9**	**+0.9**
IANJ	**Anjilo**	**5.25**	**52**	*e*Pn	**Pn**	**12 14 54.3**	**+0.7**
IGLO	**Ghaloghah**	**5.86**	**44**	*e*Pn	**Pn**	**12 15 03.8**	**+1.9**
TPRV	**Parvadeh(Tabas**	**6.66**	**82**	*e*Pn	**Pn**	**12 15 14.0**	**+1.2**
TKDS	**Koohdasht(Taba**	**7.09**	**77**	*e*Pn	**Pn**	**12 15 19.6**	**+0.9**
MMAI	**Mount Meron Ar**	**11.33**	**277**	LR	LR	12 20 57.7	
	comp=Z,27nm,19.7s,baz=295,slow=40						
EIL	**Elat**	**12.20**	**261**	LR	LR	12 21 59.3	
	comp=Z,28nm,19.9s,baz=106,slow=42						
AKTO	**Aktyubinsk**	**19.32**	**18**	P	**P**	**12 17 59.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=197,slow=13,SNR=5.9						
BELG	**Belogornoye**	**20.05**	**358**	P	**P**	**12 18 07.9**	**0.0**
	comp=Z,0.8nm,0.3s,baz=26,slow=1.1,SNR=5.6						
AAK	**Ala-Archa**	**22.73**	**56**	LR	LR	12 28 52.9	
	comp=Z,49nm,18.6s,baz=270,slow=40						
BVAR	**Borovoye Array**	**25.86**	**31**	P	**P**	**12 19 06.4**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=237,slow=19,SNR=4.7						
KURBB	**Kurchatov Arra**	**28.51**	**41**	P	**P**	**12 19 30.6**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=244,slow=9.5,SNR=8.1						
MKAR	**Makanchi Array**	**29.30**	**51**	P	**P**	**12 19 38.0**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=246,slow=7.5,SNR=13						
FINES	**FINESS Array B**	**32.64**	**340**	P	**P**	**12 20 05.4**	**-1.1**
	comp=Z,2.7nm,0.8s,baz=151,slow=8.7,SNR=9.0						
ZALV	**Zalesovo Beam**	**33.46**	**39**	P	**P**	**12 20 12.9**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=253,slow=9.0,SNR=5.8						
HFS	**Hagfors**	**36.15**	**331**	P	**P**	**12 20 35.6**	**-1.4**
	comp=Z,3.6nm,0.7s,baz=116,slow=10,SNR=7.6						
NOA	**NORSAR Array B**	**37.67**	**331**	P	**P**	**12 20 48.2**	**-1.7**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibobu**	**2.42**	**292**	P	Pn	13 18 21.4	+1.9
JIKH				eS	Sn	13 18 50.0	+2.2
JIO	**Ouri**	**2.55**	**294**	P	Pn	13 18 23.4	+2.0
JIO				eS	Sn	13 18 53.3	+2.1
JKMT	**Kesennumamotoy**	**2.62**	**302**	P	Pn	13 18 24.1	+1.7
JKMT				S	Sn	13 18 55.1	+2.1
OFUJ	**Ofunato**	**2.65**	**309**	P	Pn	13 18 24.3	+1.6
OFUJ				eS	Sn	13 18 54.8	+1.3
JMK	**Ichinoseki**	**2.87**	**302**	P	Pn	13 18 28.1	+2.4
JOM	**Ohasama**	**3.12**	**311**	P	Pn	13 18 32.1	+2.9
JOM				S	Sn	13 19 07.9	+2.7
JFT	**Otama**	**3.17**	**272**	P	Pn	13 18 32.6	+2.7
JFT				S	Sn	13 19 09.4	+2.9
JRY	**Ryogami san**	**4.58**	**253**	P	Pn	13 18 50.3	+1.0
JRY				eS	Sn	13 19 40.7	-0.6
JOD2	**Odawara 2**	**4.75**	**244**	P	Pn	13 18 52.2	+0.5
JKB	**Kayabe**	**5.11**	**331**	P	Pn	13 18 58.6	+2.1
JCH	**Churui**	**5.21**	**352**	P	Pn	13 18 57.4	-0.5
JCH				eS	Sn	13 19 53.1	-3.6
NEM2	**Nemuro 2**	**6.01**	**10**	P	Pn	13 19 05.8	-3.0
NEM2				eS	Sn	13 20 09.1	-7.2
JTKR	**Abashiri--Toko**	**6.52**	**357**	P	Pn	13 19 14.9	-1.0
JTKR				eS	Sn	13 20 24.2	-4.8

IDC 07 13:23:48.9±2.6, 6°54S×153°43E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/31, mbtmp3.7/4, ML1.7/1, Error ellipse: s-maj=102.0km s-min=40.7km az=142.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.83**	**245**	Pn	Pn	13 25 32.5	+2.1
	0.9nm,0.3s,baz=69,slow=14,SNR=2.3						
PMG				Sn	Sn	13 26 49.7	+0.9
	2.3nm,0.3s,baz=112,slow=20,SNR=6.7						
WRA	**Warramunga Arr**	**22.82**	**232**	P	P	13 28 54.6	+0.9
	1.8nm,0.9s,baz=57,slow=9.7,SNR=6.0						
ASAR	**Alice Springs**	**25.34**	**226**	P	P	13 29 17.1	-0.6
	0.6nm,0.6s,baz=59,slow=9.3,SNR=11						
FITZ	**Fitzroy Crossi**	**29.42**	**244**	P	P	13 29 53.0	-1.4
	0.8nm,0.5s,baz=46,slow=8.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**151.41**	**285**	PKPbc	PKiKP	13 43 46.4	+0.1
	0.4nm,0.5s,baz=76,slow=2.0,SNR=4.0						

*NEIC **07** 13:36:19.6±1.0, 22°.9S±0°.1×176°.6W±0°.2, h96km±11km, mb4.5/17, Error ellipse: s-maj=30.5km s-min=13.9km az=109.0*
*IDC **07** 13:36:29.5±4.4, 22°.84S×176°.72W, h180km±39km, mb3.6/4, mb1 3.8/6, mb1mx3.4/31, mbtmp4.2/6, Error ellipse: s-maj=40.1km s-min=24.8km az=146.0*
ISC 07 13:36:28.9±3.3, 23°.3S±0°.1×177°.0W±0°.4, h150km, n42, σ2§22/41, mb4.3/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.98**	**188**	P	Pn	13 38 03.5	+8.1
GLKZ				S	Sn	13 39 15.1	+12
MSVF	**Nonsavu**	**7.25**	**319**	P	**Pn**	**13 38 11.0**	**-1.5**
	1.1nm,0.3s,baz=250,slow=20,SNR=4.6						
NIUE	**Niue**	**7.81**	**59**	Pn	Pn	13 38 05.8	-14
AFI	**Afiamalu**	**10.57**	**29**	Pn	Pn	13 38 37.5	-19
WCZ	**Waipu Caves**	**14.66**	**209**	P	P	13 39 58.1	+6.9
URZ	**Urewera**	**15.73**	**197**	P	**P**	**13 40 05.9**	**+2.8**
	4.2nm,0.3s,baz=303,slow=24,SNR=28						
URZ				S	**S**	**13 42 56.7**	**-1.9**
	1.2nm,0.3s,baz=289,slow=23,SNR=2.5						
URZ	**Urewera**	**15.73**	**197**	P	**P**	**13 40 03.3**	**+0.2**
URZ				IAmb	IAmb	13 40 07.7	
	comp=Z,15nm,0.9s						
BKZ	**Black Stump Fm**	**16.75**	**198**	P	**Pn**	**13 40 14.2**	**-0.5**
BFZ	**Birch Farm**	**18.23**	**197**	P	**Pn**	**13 40 31.2**	**-1.1**
BFZ				IAmb	IAmb	13 40 45.4	
	comp=Z,74nm,1.4s						
MRZ	**Mangatainoka R**	**18.40**	**198**	P	**Pn**	**13 40 33.7**	**-0.6**
MRZ				S	**S**	**13 43 48.5**	**-6.2**
HOWZ	**Holdsworth Sta**	**18.64**	**198**	P	**Pn**	**13 40 36.5**	**-0.6**
OGWZ	**Otaki Gorge**	**18.66**	**199**	P	**Pn**	**13 40 35.7**	**-1.7**
OGWZ				S	**S**	**13 43 55.5**	**-4.4**
MSWZ	**Moikau Station**	**19.19**	**198**	P	**Pn**	**13 40 41.1**	**-2.5**
QRZ	**Quartz Range**	**19.57**	**204**	P	**Pn**	**13 40 49.7**	**+1.7**
NNZ	**Nelson**	**19.60**	**202**	P	**Pn**	**13 40 44.9**	**-3.5**
NNZ	**Nelson**	**19.60**	**202**	P	**Pn**	**13 40 46.6**	**-1.8**
NNZ				S	**S**	**13 44 17.5**	**-0.9**
TUWZ	**Tuamarina**	**19.60**	**201**	P	**Pn**	**13 40 45.8**	**-2.6**
TUWZ				S	**S**	**13 44 17.5**	**-0.9**
THZ	**Tophouse**	**20.25**	**202**	P	Pn	13 40 53.2	-2.8
THZ				IAmb	IAmb	13 41 02.9	
	comp=Z,28nm,1.3s						
THZ	**Tophouse**	**20.25**	**202**	P	Pn	13 40 53.8	-2.3
THZ				S	**S**	**13 44 33.2**	**+1.8**
KHZ	**Kahutara**	**20.62**	**200**	P	Pn	13 40 58.2	-2.2
KHZ				S	**S**	**13 44 37.6**	**-1.0**
GVZ	**Greta Valley S**	**21.28**	**201**	P	**P**	**13 41 08.2**	**+4.7**
LTZ	**Lake Taylor**	**21.37**	**202**	P	**P**	**13 41 08.5**	**+4.0**
LTZ				S	**S**	**13 44 55.0**	**+2.5**
INZ	**Inchbonnie**	**21.62**	**204**	P	**P**	**13 41 10.6**	**+3.6**
RPZ	**Rata Peaks**	**22.62**	**203**	P	**P**	**13 41 17.6**	**+0.6**
LBZ	**Lake Benmore**	**23.51**	**204**	P	**P**	**13 41 26.1**	**+0.9**
LBZ				IAmb	IAmb	13 41 41.2	
	comp=Z,27nm,1.5s						
WKZ	**Wanaka**	**24.33**	**205**	P	**P**	**13 41 34.1**	**+1.5**
CTAO	**Charters Tower**	**34.26**	**268**	P	**P**	**13 43 01.4**	**+0.5**
CTAO				IAmb	IAmb	13 43 06.7	
	comp=Z,7.8nm,1.1s						
STKA	**Stephens Creek**	**37.52**	**248**	P	**P**	**13 43 30.6**	**+2.2**
	comp=Z,2.2nm,0.5s,baz=86,slow=11,SNR=13						
STKA	**Stephens Creek**	**37.52**	**248**	IAmb	IAmb	13 43 32.7	
	comp=Z,2.7nm,1.5s						
BBOO	**Buckleboo**	**42.23**	**246**	P	**P**	**13 44 08.2**	**+0.9**
BBOO				IAmb	IAmb	13 44 21.3	
	comp=Z,16nm,1.3s						
AS31	**Alice Springs**	**44.87**	**259**	P	**P**	**13 44 27.9**	**-0.7**
ASAR	**Alice Springs**	**44.87**	**259**	P	**P**	**13 44 28.4**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=91,slow=8.7,SNR=57						
ASAR	**Alice Springs**	**44.87**	**259**	P	**P**	**13 44 28.0**	**-0.7**
WR0	**Warramunga Arr**	**45.04**	**265**	P	**P**	**13 44 28.8**	**-1.1**
WR0				IAmb	IAmb	13 44 44.4	
	comp=Z,12nm,1.5s						
WB2	**Warramunga Arr**	**45.21**	**265**	P	**P**	**13 44 30.4**	**-0.9**
WB0	**Warramunga Arr**	**45.22**	**265**	P	**P**	**13 44 30.2**	**-1.1**
WB0				IAmb	IAmb	13 44 30.8	
	comp=Z,3.3nm,0.5s						
WRA	**Warramunga Arr**	**45.22**	**265**	P	**P**	**13 44 30.6**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=96,slow=8.5,SNR=54						
WRA	**Warramunga Arr**	**45.22**	**265**	P	**P**	**13 44 30.0**	**-1.4**
FORT	**Forrest**	**49.12**	**249**	P	**P**	**13 45 01.4**	**0.0**
FITZ	**Fitzroy Crossi**	**53.65**	**264**	P	**P**	**13 45 34.9**	**-0.3**
FITZ				IAmb	IAmb	13 45 58.9	
	comp=Z,8.0nm,1.4s						
MORW	**Morawa**	**59.68**	**249**	P	**P**	**13 46 17.8**	**+0.1**
TXAR	**Lajitas Array**	**87.78**	**57**	P	P	13 48 56.5	-4.8
	comp=Z,0.7nm,0.9s,baz=210,slow=6.7,SNR=7.0						

*IDC **07** 13:55:01.9±1.5, 1°.56S×135°.45E, h0km, mb3.6/2, mb1 3.9/6, mb1mx3.6/35, mbtmp3.7/6, ML3.6/4, Error ellipse: s-maj=27.6km s-min=17.1km az=25.0*
ISC 07 13:55:05.9±0.9, 1°.7S±0°.1×135°.42E±0°.07, h21km, n6, σ1§47/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.23**	**281**	Pn	**Pn**	**13 56 09.3**	**+0.2**
	2.7nm,0.3s,baz=58,slow=19,SNR=8.8						
SIJI				Pg	**Pb**	**13 56 19.7**	**+0.1**
	2.4nm,0.3s,baz=149,slow=22,SNR=5.5						
SIJI				Sn	**Sn**	**13 56 59.7**	**+1.7**
	1.9nm,0.3s,baz=287,slow=23,SNR=1.5						
SIJI				Lg	Lg	13 57 15.0	
	2.4nm,0.3s,baz=343,slow=23,SNR=1.8						
JAY	**Jayapura**	**5.35**	**99**	Pn	**Pn**	**13 56 24.2**	**-0.4**
	0.5nm,0.3s,baz=252,slow=16,SNR=1.5						
JAY				Sn	**Sn**	**13 57 27.8**	**+2.2**
	0.5nm,0.3s,baz=81,slow=23,SNR=1.9						
WRA	**Warramunga Arr**	**18.18**	**183**	P	**Pn**	**13 59 15.7**	**-1.5**
	0.3nm,0.3s,baz=4.9,slow=12,SNR=15						
FITZ	**Fitzroy Crossi**	**18.93**	**210**	P	**P**	**13 59 26.2**	**+0.7**
	0.2nm,0.3s,baz=34,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**21.90**	**184**	P	**P**	**13 59 58.2**	**+0.3**
	2.7nm,0.6s,baz=8.8,slow=11,SNR=52						
MKAR	**Makanchi Array**	**66.99**	**323**	P	**P**	**14 05 55.8**	**-1.5**
	0.2nm,0.5s,baz=112,slow=6.4,SNR=5.8						

*UPA **07** 14:00:19.9±3.2, 5°.57N×76°.62W, h10km±23km, MW4.7*
*NEIC **07** 14:00:20.3±1.6, 5°.46N±0°.07×76°.57W±0°.08, h90km±7km, mb4.5/34, Error ellipse: s-maj=11.7km s-min=9.6km az=57.0*
*RSNC **07** 14:00:21.5±1.3, 5°.50N×76°.51W, h76km±7km, ML4.1, Mw4.3, Fault plane solution: NP1:φ=54.00000°, δ=90.00000°, λ=17.00000°.*
*VAO **07** 14:00:21.3±0.6, 5°.25N×76°.30W, h76km±5km, mb4.6*
*IDC **07** 14:00:21.9±1.6, 5°.47N×76°.45W, h103km±15km, mb3.8/10, mb1 4.1/16, mb1mx3.8/35, mbtmp4.4/16, MS3.2/4, Ms1 3.2/4, ms1mx2.8/27, Error ellipse: s-maj=18.1km s-min=11.4km az=54.0*
ISC 07 14:00:19.8±0.6, 5°.49N±0°.02×76°.52W±0°.03, h86km±6km, n178, σ1§29/220, mb4.3/26, 11C-6D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBOC	**Ciudad Bolivar**	**0.63**	**53**	⇓*iP*	**Pn**	**14 00 35.7**	**+0.2**
CBOC				*eS*	**Sn**	**14 00 47.3**	**+0.2**
CBOC				*i*		14 00 50.1	
	comp=Z,13μm,0.6s						
PIZC	**Pizarro, Choco**	**0.99**	**238**	⇑*iP*	**Pn**	**14 00 39.7**	**+0.6**
PIZC				*eS*	**Sn**	**14 00 55.5**	**+1.9**
PIZC				*i*		14 01 04.8	
	comp=Z,9μm,0.4s						
SOLC	**Bahia Solano**	**1.15**	**310**	⇑*iP*	**Pn**	**14 00 40.6**	**-0.5**
SOLC				*eS*	**Sn**	**14 00 56.9**	**-0.1**
SOLC				*i*		14 01 01.6	
	comp=Z,4μm,0.4s						
GUY2C	**Guyana, Caldas**	**1.18**	**103**	⇑*iP*	**Pn**	**14 00 41.9**	**0.0**
GUY2C				*eS*	**Sn**	**14 00 58.7**	**+0.4**
GUY2C				*i*		14 01 00.5	
	comp=Z,4μm,0.5s						
HELC	**Santa Helena**	**1.21**	**55**	*eP*	**Pn**	**14 00 42.1**	**0.0**
HELC				*eS*	**Sn**	**14 00 59.3**	**+0.5**
HELC	**Santa Helena**	**1.21**	**55**	*eP*	**Pn**	**14 00 41.8**	**-0.4**
HELC				*eS*	**Sn**	**14 00 58.6**	**-0.2**
HELC				*i*		14 01 00.4	
	comp=Z,4μm,0.6s						
RREF	**El Recreo**	**1.30**	**116**	*eS*	**Sn**	**14 01 02.3**	**+1.0**
ANIL	**Santa Ana**	**1.49**	**132**	⇑*iP*	**Pn**	**14 00 45.7**	**+0.2**
ANIL				*eS*	**Sn**	**14 01 05.3**	**+0.4**
ANIL				*i*		14 01 12.7	
	comp=Z,715nm,0.3s						
YOTC	**Yotoco, Valle**	**1.50**	**173**	⇓*iP*	**Pn**	**14 00 44.5**	**-1.1**
YOTC				*eS*	**Sn**	**14 01 02.7**	**-2.3**
YOTC				*i*		14 01 03.8	
	comp=Z,2μm,0.4s						
DBBC	**Dabeiba**	**1.55**	**11**	⇓*iP*	**Pn**	**14 00 47.1**	**+1.0**
DBBC				*eS*	**Sn**	**14 01 06.5**	**+0.4**
NORC	**Norcasia**	**1.64**	**87**	⇑*iP*	**Pn**	**14 00 48.0**	**+0.7**
NORC				*eS*	**Sn**	**14 01 09.1**	**+1.0**
NORC				*i*		14 01 10.8	
	comp=Z,2μm,0.4s						
MALC	**Bahia Malaga**	**1.68**	**209**	*eP*	**Pn**	**14 00 48.3**	**+0.6**
MALC				*eS*	**Sn**	**14 01 10.5**	**+1.7**
MALC				*i*		14 01 24.9	
	comp=Z,1μm,0.6s						
ORTC	**Ortega, Tolima**	**2.02**	**141**	⇑*iP*	**Pn**	**14 00 53.0**	**+0.8**
ORTC				*eS*	**Sn**	**14 01 17.6**	**+0.8**
ORTC				*i*		14 01 20.4	
	comp=Z,1μm,0.4s						
PTAC	**Punta Ardita,**	**2.09**	**322**	⇓*iP*	**Pn**	**14 00 52.4**	**-0.8**
PTAC				*eS*	**Sn**	**14 01 15.7**	**-2.8**
ROSC	**El Rosal**	**2.28**	**106**	P	**Pn**	**14 00 58.4**	**+2.4**
	comp=Z,289nm,0.3s,baz=293,slow=13,SNR=143						
ROSC				LR	LR	14 01 49.2	
	comp=Z,456nm,19.5s,baz=268,slow=40						
ROSC	**El Rosal**	**2.28**	**106**	Pn	**Pn**	**14 00 58.3**	**+2.3**
ROSC	**El Rosal**	**2.28**	**106**	⇑*iP*	**Pn**	**14 00 58.4**	**+2.4**
PTBC	**PUERTO BERRIO,**	**2.30**	**63**	⇑*iP*	**Pn**	**14 00 56.7**	**+0.7**
PTBC				*eS*	**Sn**	**14 01 24.9**	**+1.3**
PTBC				*i*		14 01 42.8	
	comp=Z,613nm,0.5s						
SPBC	**San Pablo de B**	**2.44**	**86**	⇑*iP*	**Pn**	**14 00 59.1**	**+1.3**
SPBC				*eS*	**Sn**	**14 01 26.8**	**-0.2**
SPBC				*i*		14 01 35.1	
	comp=Z,386nm,0.5s						
UREC	**San Jos de Ur**	**2.45**	**23**	*eP*	**Pn**	**14 00 58.8**	**+0.8**
UREC				*eS*	**Sn**	**14 01 28.4**	**+1.2**
ZARC	**Zaragoza, Cauc**	**2.59**	**40**	*eP*	**Pn**	**14 01 31.0**	**+0.9**
ZARC				*eS*	**Sn**	**14 01 31.0**	**+0.6**
ZARC				*i*		14 01 34.9	
	comp=Z,2μm,0.6s						
MARP	**Paez Belalcaza**	**2.69**	**168**	⇓*eP*	**Pn**	**14 01 02.8**	**+1.4**
MARP				*eS*	**Sn**	**14 01 34.6**	**+1.4**
MARP				*i*		14 01 42.6	
	comp=Z,288nm,0.5s						
POPC	**Popayan, Colom**	**2.93**	**183**	*eP*	**Pn**	**14 01 05.2**	**+0.6**
POPC				*eS*	**Sn**	**14 01 38.7**	**-0.3**
POPC				*i*		14 01 43.8	
	comp=Z,399nm,0.4s						
BETC	**Betania**	**2.99**	**159**	*eP*	**Pn**	**14 01 06.1**	**+0.9**
BETC				*eS*	**Sn**	**14 01 39.9**	**-0.2**
VILC	**Villavicencio,**	**3.13**	**116**	*eP*	**Pn**	**14 01 09.8**	**+2.6**
PCON	**Cinco Dias**	**3.14**	**178**	⇓*eP*	**Pn**	**14 01 09.6**	**+1.8**
PCON				*eS*	**Sn**	**14 01 45.5**	**+0.9**
PCON				*i*		14 01 52.2	
	comp=Z,724nm,0.4s						
BRRC	**Barranca, Sant**	**3.22**	**60**	⇑*iP*	**Pn**	**14 01 09.3**	**+1.0**
BRRC				*eS*	**Sn**	**14 01 47.1**	**+1.4**
BRRC				*i*		14 01 54.3	
	comp=Z,291nm,0.3s						
SOTA	**Rioblanco**	**3.33**	**182**	*eP*	**Pn**	**14 01 11.5**	**+1.2**
SOTA				*eS*	**Sn**	**14 01 50.9**	**+1.8**
SOTA				*i*		14 02 02.6	
	comp=Z,633nm,0.5s						
MONA	**Monteria**	**3.37**	**15**	*eP*	**Pn**	**14 01 10.8**	**+0.4**
MONA				*eS*	**Sn**	**14 01 52.1**	**+2.7**
MOTC	**Monteria, Cord**	**3.38**	**14**	*eP*	**Pn**	**14 01 10.7**	**+0.3**
UPD2	**Meteti**	**3.38**	**334**	*eP*	**Pn**	**14 01 11.7**	**+1.2**
UPD2				*eS*	**Sn**	**14 01 49.7**	**+0.1**
GARC	**Garzon, Huila**	**3.43**	**163**	*eP*	**Pn**	**14 01 12.1**	**+0.6**
GARC				*eS*	**Sn**	**14 01 52.5**	**+1.3**
GARC				*i*		14 01 54.8	
	comp=Z,686nm,0.3s						
RUSC	**La Rusia**	**3.44**	**83**	*eP*	**Pn**	**14 01 13.1**	**+1.4**
RUSC				*eS*	**Sn**	**14 01 53.8**	**+2.0**
RUSC				*i*		14 02 11.4	
	comp=Z,164nm,0.6s						
OCAC	**Ocana**	**4.19**	**49**	*eP*	**Pn**	**14 01 22.8**	**+1.2**
OCAC				*eS*	**Sn**	**14 02 10.3**	**+0.8**
PAMC	**Pamplona, Colo**	**4.22**	**64**	*eP*	**Pn**	**14 01 23.5**	**+1.2**
PAMC				*eS*	**Sn**	**14 02 11.5**	**+0.9**
PAMC				*i*		14 02 19.3	
	comp=Z,181nm,0.5s						
AZU	**Azuero**	**4.38**	**302**	⇑*iP*	**Pn**	**14 01 23.8**	**-0.2**
AZU				*eS*	**Sn**	**14 02 10.9**	**-3.0**
TABO3	**Taboga, Panama**	**4.46**	**318**	*eP*	**Pn**	**14 01 24.2**	**-0.9**
TABO3				*eS*	**Sn**	**14 02 13.8**	**-1.9**
CHPO	**Chepo, Panama**	**4.47**	**325**	*eP*	**Pn**	**14 01 24.5**	**-0.8**
CHPO				*eS*	**Sn**	**14 02 14.1**	**-2.1**
PTGC	**Puerto Gaitan,**	**4.55**	**106**	*eP*	**Pn**	**14 01 27.4**	**+1.0**
SJCC	**San Jacinto, C**	**4.58**	**17**	*eP*	**Pn**	**14 01 28.2**	**+1.4**
UPA	**Univ. de Panam**	**4.58**	**319**	*eP*	**Pn**	**14 01 25.7**	**-1.1**
UPA				*eS*	**Sn**	**14 02 17.0**	**-1.8**
CACAO	**El Cacao, Vera**	**4.69**	**293**	*eP*	**Pn**	**14 01 27.6**	**-0.7**
CACAO				*eS*	**Sn**	**14 02 17.8**	**-3.7**
VTON	**El Valle, Cocl**	**4.73**	**311**	*eP*	**Pn**	**14 01 29.1**	**+0.3**
VTON				*eS*	**Sn**	**14 02 22.8**	**+0.3**
PNME	**Penonome**	**4.81**	**308**	*eP*	**Pn**	**14 01 30.7**	**+0.8**
PNME				*eS*	**Sn**	**14 02 25.0**	**+0.5**
GUVC	**San Jose del G**	**4.86**	**127**	*eP*	**Pn**	**14 01 31.8**	**+1.2**
GUVC				*eS*	**Sn**	**14 02 25.2**	**-0.4**
BCIP	**Isla Barro Col**	**4.92**	**318**	Pn	**Pn**	**14 01 30.2**	**-1.2**
GMAL	**Guarumal, Vera**	**5.20**	**296**	*eP*	**Pn**	**14 01 36.1**	**+0.9**
GMAL				*eS*	**Sn**	**14 02 34.8**	**+0.9**
PTLC	**Puerto Leguiza**	**5.55**	**162**	*eP*	Pn	14 01 45.2	+5.2
PTLC				*eS*	**Sn**	**14 02 49.8**	**+7.2**
OTAV	**Otavalo**	**5.56**	**200**	Pn	**Pn**	**14 01 39.2**	**-1.4**
OTAV	**Otavalo**	**5.56**	**200**	*eP*	**Pn**	**14 01 39.9**	**-0.7**
OTAV				*eS*	**Sn**	**14 02 41.5**	**-1.9**
SDV	**Santo Domingo**	**6.74**	**60**	P	**Pn**	**14 01 57.3**	**+0.9**
	comp=Z,38nm,0.3s,baz=253,slow=8.1,SNR=34						
SDV				S	**Sn**	**14 03 10.7**	**-1.2**
	comp=Z,24nm,0.3s,baz=3.3,slow=17,SNR=11						
SDV	**Santo Domingo**	**6.74**	**60**	Pn	**Pn**	**14 01 56.8**	**+0.4**
SDV	**Santo Domingo**	**6.74**	**60**	*eP*	**Pn**	**14 01 57.1**	**+0.7**
SDV				*eS*	**Sn**	**14 03 10.4**	**-1.6**
SDV				*i*		14 03 12.9	
	comp=Z,64nm,0.5s						
SDV	**Santo Domingo**	**6.74**	**60**	*eP*	**Pn**	**14 01 57.3**	**+0.9**
BRU2	**Volcan**	**6.95**	**299**	*eP*	**Pn**	**14 02 00.7**	**+1.4**
BRU2				*eS*	**Sn**	**14 03 17.2**	**+0.3**
RIOS	**Rincon, Osa**	**7.64**	**295**		**Pn**	**14 02 09.8**	**+1.3**
DRK0	**Durika**	**7.65**	**300**	*eP*	**Pn**	**14 02 11.2**	**+2.4**
DRK0				*eS*	**Sn**	**14 03 31.8**	**-2.4**
PEZE	**Perez Zeledon,**	**8.09**	**299**	Pn	**Pn**	**14 02 16.2**	**+1.5**
CAO2	**Cobano, Puntar**	**9.48**	**297**	Pn	**Pn**	**14 02 34.2**	**+0.6**
JTS	**Las Juntas de**	**9.62**	**300**	P	**Pn**	**14 02 38.5**	**+3.0**
	comp=Z,2.7nm,0.3s,baz=155,slow=7.3,SNR=12						
JTS				S	**Sn**	**14 04 25.1**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=170,slow=17,SNR=1.8						
JTS				LR	LR	14 06 36.2	
	comp=Z,115nm,21.5s,baz=190,slow=39						
JTS	**Las Juntas de**	**9.62**	**300**	Pn	**Pn**	**14 02 33.4**	**-2.2**
ESPN	**Las Esperanzas**	**10.17**	**311**	Pn	**Pn**	**14 02 43.5**	**+0.5**
ACON	**Acoyapa**	**10.71**	**308**	Pn	**Pn**	**14 02 50.3**	**-0.1**
PCRV	**Puerto La Cruz**	**12.66**	**68**	P	**Pn**	**14 03 16.0**	**-0.8**
	comp=Z,2.4nm,0.3s,baz=188,slow=6.8,SNR=5.6						
ATAH	**Atahualpa**	**12.68**	**189**	P	**Pn**	**14 03 18.6**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=334,slow=9.8,SNR=4.2						
PLCV	**Puerto La Cruz**	**12.70**	**68**		**Pn**	**14 03 16.0**	**-1.3**
MTDJ	**Mount Denham**	**12.70**	**356**	Pn	**Pn**	**14 03 17.6**	**+0.2**
SDDR	**Presa de Saban**	**14.35**	**20**		**P**	**14 03 43.0**	**-0.5**
DR12	**Loma Pena Alta**	**14.94**	**27**		**Pn**	**14 03 47.0**	**+0.4**
SJG	**San Juan**	**16.12**	**38**	P	**P**	**14 04 03.4**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=219,slow=14,SNR=5.7						
SJG	**San Juan**	**16.12**	**38**	IAmb	IAmb	14 04 29.5	
	comp=Z,16nm,0.8s						
BOAV	**Boa Vista**	**16.25**	**100**	*eP*	**Pn**	**14 04 00.3**	**-2.8**
CBYP	**Canovanas**	**16.43**	**38**	P	**P**	**14 04 07.3**	**+0.7**
CBYP				IAmb	IAmb	14 04 13.7	
	comp=Z,23nm,0.6s						
CUPR	**Culebra, Puert**	**16.81**	**40**	P	**P**	**14 04 11.9**	**+1.1**
SVB	**Belmont**	**16.92**	**62**	P	**P**	**14 04 12.4**	**+0.3**
PTGA	**Pitinga**	**17.64**	**110**	P	**P**	**14 04 18.3**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=314,slow=9.7,SNR=15						
PTGA	**Pitinga**	**17.64**	**110**	P	**P**	**14 04 18.0**	**-2.1**
PTGA	**Pitinga**	**17.64**	**110**	*eP*	**P**	**14 04 16.9**	**-3.2**
MACA	**Manacapuru-AM**	**18.00**	**118**	*eP*	**P**	**14 04 22.7**	**-1.2**
ETMB	**Extrema**	**18.34**	**146**	*eP*	**P**	**14 04 27.6**	**-0.1**
SAML	**Samuel**	**19.55**	**137**	*eP*	**P**	**14 04 40.1**	**-0.9**
ITTB	**Itaituba**	**22.95**	**115**	*eP*	**P**	**14 05 17.2**	**0.0**
LPAZ	**La Paz**	**23.17**	**159**	P	**P**	**14 05 19.4**	**-0.6**
	comp=Z,4.3nm,0.4s,baz=330,slow=5.8,SNR=15						
LPAZ	**La Paz**	**23.17**	**159**	P	**P**	**14 05 19.1**	**-0.8**
LPAZ	**La Paz**	**23.17**	**159**	*eP*	**P**	**14 05 18.1**	**-1.9**
MALB	**Monte Alegre**	**23.39**	**108**	*eP*	**P**	**14 05 21.8**	**+0.4**
MDP	**Montagnes des**	**23.78**	**90**	P	**P**	**14 05 24.7**	**-0.1**
	comp=Z,13nm,0.7s,baz=269,slow=9.4,SNR=4.0						
VILB	**Vilhena**	**24.46**	**139**	*eP*	**P**	**14 05 28.5**	**-2.6**
NPGB	**Novo Progresso**	**24.51**	**120**	*eP*	**P**	**14 05 31.0**	**-0.5**
PB16	**IPOC Station P**	**24.66**	**164**	P	**P**	**14 05 33.0**	**-0.4**
MCPB	**Macapa, AP**	**25.11**	**103**	*eP*	**P**	**14 05 37.9**	**+0.9**
PSGCX	**Pisagua**	**25.71**	**166**	P	**P**	**14 05 42.3**	**-0.1**
PSGCX				IAmb	IAmb	14 05 49.5	
	comp=Z,28nm,1.2s						
PB11	**IPOC Station P**	**25.98**	**165**	P	**P**	**14 05 44.2**	**-0.7**
PB11				IAmb	IAmb	14 05 46.9	
	comp=Z,22nm,0.9s						
SIV	**San Ignacio**	**26.25**	**145**	P	**P**	**14 05 46.2**	**-1.0**
	comp=Z,3.0nm,0.5s,baz=333,slow=11,SNR=19						
CLDB	**Colider**	**26.26**	**128**	*eP*	**P**	**14 05 47.2**	**-0.2**
TA01	**Diego Aracena**	**26.63

NVAR PcP **PcP** **14 10 26.0 +0.9**
comp=Z,0.8nm,0.6s,baz=128,slow=6.1,SNR=4.6
YKA **Yellowknife Ar** **63.39 341** P **P** **14 10 39.9 -0.1**
comp=Z,0.8nm,0.7s,baz=132,slow=7.2,SNR=19
SUMG **Summit** **70.93 11** P **P** **14 11 28.9 +0.9**
KOWA **Kowa** **71.73 77** P **P** **14 11 34.2 +0.7**
KOWA IAmb IAmb 14 11 35.0
comp=Z,3.1nm,0.7s
INK **Inuvik** **73.16 341** P **P** **14 11 40.9 0.0**
INK IAmb IAmb 14 11 52.4
comp=Z,6.6nm,1.5s
IL31 **76.75 335** P **P** **14 12 01.8 +0.2**
ILAR **Eielson Array** **76.75 335** P **P** **14 12 02.0 +0.3**
comp=Z,0.7nm,0.8s,baz=159,slow=3.8,SNR=4.7
ILAR **Eielson Array** **76.75 335** P **P** **14 12 01.4 -0.3**
TORD **Torodi Ar. Bea** **77.32 78** P **P** **14 12 06.1 +0.3**
comp=Z,0.6nm,0.5s,baz=282,slow=6.1,SNR=4.5
TORD **Torodi Ar. Bea** **77.32 78** P **P** **14 12 05.8 0.0**
VNA3 **Neumayer Olymp** **87.89 163** P **P** **14 12 58.6 -0.9**
VNA1 **Neumayer--Stat** **88.09 162** P **P** **14 13 00.2 -0.2**
VNA2 **Neumayer--Watz** **88.46 162** P **P** **14 13 01.7 -0.5**
baz=311,slow=5.5
SNAA **Sanae** **90.09 162** P **P** **14 13 08.8 -1.1**
SNAA **Sanae** **90.09 162** P **P** **14 13 09.8 -0.1**
comp=Z,2.3nm,0.6s,baz=273,slow=3.8,SNR=12
SNAA **Sanae** **90.09 162** IAmb IAmb 14 13 10.4
comp=Z,13nm,1.5s
MKAR **Makanchi Array** **124.66 18** PKP **PKPdf** **14 19 09.1 -0.7**
comp=Z,0.1nm,0.5s,baz=267,slow=2.9,SNR=2.8
ASAR **Alice Springs** **145.59 235** PKPbc **PKPdf** **14 19 48.9 -0.2**
comp=Z,8.0nm,0.6s,baz=117,slow=4.1,SNR=214
ASAR **Alice Springs** **145.59 235** **PKPdf** **14 19 48.4 -0.8**
WRA **Warramunga Arr** **146.74 242** PKPbc **PKPdf** **14 19 51.3 +0.2**
comp=Z,4.8nm,0.8s,baz=107,slow=3.8,SNR=17
FITZ **Fitzroy Crossi** **154.99 238** PKPbc **PKPbc** **14 20 11.9 -0.7**
comp=Z,1.8nm,0.6s,baz=154,slow=3.8,SNR=6.9
FITZ PKPab **pPKPdf** **14 20 28.1 +0.2**
comp=Z,3.5nm,0.9s,baz=200,slow=5.5,SNR=4.3

*IDC **07** 14:17:01.3±0.8, 1°.52S×135°.53E, h0km, mb4.1/8, mb1 4.3/13,mb1mx4.1/35,mbtmp4.2/13,ML3.9/5,MS3.0/4, Ms1 3.0/4,ms1mx2.8/29, Error ellipse: s-maj=20.3km s-min=14.0km az=34.0*
*DJA **07** 14:17:02.8±0.3,2°.5S±5°×13°.6E±°, h52km±7km, M4.5/7, mb4.5/5,MLv4.5/7*
*NEIC **07** 14:17:04.7±1.4, 1°.6S±0°.1×135°.50E±0°.10, h25km±4km, mb4.1/15, Error ellipse: s-maj=17.7km s-min=12.3km az=216.0*

ISC 07 14:17:03.8±0.5,**1°.67S**±0°.05×**135°.56E**±0°.03,**h21**km,**n63,**
σ1§**96**/71,**mb4.5**/19,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.70**	**107**	P	**Pb**	**14 17 17.6**	**+0.2**
SRPI				S	**Sn**	**14 17 29.2**	**+0.4**
BAKI	**Biak**	**0.72**	**49**	P	**Pb**	**14 17 15.6**	**-2.1**
BAKI				S	**Sb**	**14 17 25.0**	**-2.1**
FAKI	**Fak Fak**	**3.54**	**249**	Pn	**Pn**	**14 17 57.4**	**-0.1**
FAKI	**Fak Fak**	**3.54**	**249**	P	**Pn**	**14 17 57.2**	**-0.4**
FAKI				S	**Sn**	**14 18 34.8**	**-4.0**
SIJI	**Sorong**	**4.37**	**280**	Pn	**Pn**	**14 18 08.6**	**-0.4**
	2.8nm,0.3s,baz=83,slow=16,SNR=10						
SIJI				Pg	**Pb**	**14 18 20.8**	**+0.9**
	2.7nm,0.3s,baz=69,slow=10,SNR=10						
SIJI				Sn	**Sn**	**14 19 00.4**	**+1.0**
	3.0nm,0.3s,baz=86,slow=13,SNR=5.5						
SIJI				Lg	Lg	14 19 15.1	
	2.6nm,0.3s,baz=224,slow=22,SNR=5.6						
SIJI				LR	LR	14 20 28.5	
	comp=Z,99nm,18.4s,baz=358,slow=48						
SWI	**Sorong**	**4.38**	**280**	P	**Pn**	**14 18 09.0**	**-0.1**
SWI				S	**Sn**	**14 19 00.0**	**+0.5**
GENI	**Genyem**	**4.69**	**101**	P	**Pn**	**14 18 08.9**	**-4.5**
GENI				S	**Sn**	**14 19 02.8**	**-4.5**
JAY	**Jayapura**	**5.21**	**99**	Pn	**Pn**	**14 18 21.7**	**+1.2**
	0.9nm,0.3s,baz=127,slow=20,SNR=2.1						
JAY				Sn	**Sn**	**14 19 22.1**	**+2.1**
	1.6nm,0.3s,baz=112,slow=19,SNR=1.5						
MTN	**Manton Dam**	**11.94**	**201**		**Pn**	**14 19 53.5**	**+0.6**
DAV	**Davao City (W)**	**13.21**	**311**	LR	LR	14 24 57.3	
	comp=Z,62nm,21.3s,baz=154,slow=36						
SOEI	**Soe**	**13.81**	**234**	Pn	**Pn**	**14 20 17.4**	**-1.2**
SOEI	**Soe**	**13.81**	**234**	P	**Pn**	**14 20 18.0**	**-0.6**
	27nm,0.7s						
APSI	**Ampana**	**13.93**	**273**	P	**Pn**	**14 20 20.0**	**-0.2**
	21nm,1.1s						
COEN	**Coen**	**14.35**	**149**	Pn	**Pn**	**14 20 26.4**	**+0.6**
BATI	**Baumata**	**14.55**	**234**	Pn	**Pn**	**14 20 29.1**	**+0.4**
	2.2nm,0.3s,baz=122,slow=2.8,SNR=10						
BATI	**Baumata**	**14.55**	**234**	P	**Pn**	**14 20 26.8**	**-1.9**
	56nm,0.7s						
TOLI2	**Tolitoli**	**15.04**	**280**	Pn	**Pn**	**14 20 37.2**	**+2.0**
BNSI	**Bone**	**15.67**	**260**	P	**Pn**	**14 20 38.9**	**-4.6**
WB0	**Warramunga Arr**	**18.03**	**184**	Pn	**Pn**	**14 21 12.5**	**-0.7**
WB0				IAmb	IAmb	14 21 15.9	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**18.19**	**184**		**Pn**	**14 21 15.1**	**-0.2**
WRAB				IAmb	IAmb	14 21 19.5	
	comp=Z,15nm,1.0s						
WB2	**Warramunga Arr**	**18.20**	**184**	Pn	**Pn**	**14 21 14.7**	**-0.7**
WB2				IAmb	IAmb	14 21 19.5	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**18.20**	**184**	P	**P**	**14 21 17.0**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=5.0,slow=12,SNR=30						
WRA				S	Sn	14 24 26.0	-12
	comp=Z,0.5nm,0.3s,baz=1.6,slow=24,SNR=7.7						
WRA	**Warramunga Arr**	**18.20**	**184**		**P**	**14 21 16.0**	**+0.5**
WR0	**Warramunga Arr**	**18.21**	**183**		**Pn**	**14 21 15.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.02**	**210**	P	**Pn**	**14 21 26.5**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=8.2						
FITZ				S	**Sn**	**14 24 47.9**	**-10**
	comp=Z,0.2nm,0.3s,baz=146,slow=10,SNR=5.3						
FITZ	**Fitzroy Crossi**	**19.02**	**210**		**Pn**	**14 21 24.8**	**-0.4**
FITZ				IAmb	IAmb	14 21 40.9	
	comp=Z,5.6nm,0.8s						
CTA	**Charters Tower**	**21.08**	**151**	P	**P**	**14 21 49.8**	**+2.9**
	comp=Z,1.9nm,0.6s,baz=333,slow=12,SNR=2.0						
CTAO	**Charters Tower**	**21.08**	**151**	P	**P**	**14 21 50.5**	**+3.5**
CTAO				IAmb	IAmb	14 21 58.0	
	comp=Z,6.5nm,1.1s						
AS31	**Alice Springs**	**21.93**	**184**	P	**P**	**14 21 57.7**	**+1.7**
AS31				IAmb	IAmb	14 21 59.8	
	comp=Z,10nm,1.0s						
ASAR	**Alice Springs**	**21.93**	**184**	P	**P**	**14 21 58.2**	**+2.2**
	comp=Z,23nm,0.8s,baz=9.8,slow=11,SNR=119						
ASAR				S	**S**	**14 25 57.6**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=4.0,slow=28,SNR=5.3						
ASAR	**Alice Springs**	**21.93**	**184**	P	**P**	**14 21 57.4**	**+1.4**
PSA00	**Pilbara Seismi**	**25.02**	**217**	P	**P**	**14 22 27.2**	**+0.7**
FORT	**Forrest**	**29.82**	**193**	P	**P**	**14 23 10.8**	**+1.4**
STKA	**Stephens Creek**	**30.58**	**170**	P	**P**	**14 23 17.8**	**+1.6**
	comp=Z,2.0nm,0.7s,baz=357,slow=9.3,SNR=3.4						
BBOO	**Buckleboo**	**30.98**	**179**	P	**P**	**14 23 20.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**41.20**	**301**	P	**P**	**14 24 47.1**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=119,slow=8.2,SNR=5.0						
CMAR				LR	LR	14 42 53.8	
	comp=Z,14nm,18.2s,baz=202,slow=38						
HHC	**Hu-ho-hao-te**	**47.63**	**335**	*eP*	**P**	**14 25 38.7**	**+0.1**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,7.6s						
TAPN	**Taplejung**	**54.31**	**306**	*eP*	**P**	**14 26 28.8**	**-0.6**
	comp=Z,8.6nm,0.8s						
ODAN	**Odare**	**54.37**	**305**	*eP*	**P**	**14 26 30.0**	**+0.3**
	comp=Z,15nm,0.7s						
RAMN	**Ramite**	**55.06**	**305**	*eP*	**P**	**14 26 34.8**	**+0.1**
	comp=Z,12nm,0.7s						
SONM	**Songino Array**	**55.48**	**337**	LR	LR	14 49 34.4	
	comp=Z,33nm,19.9s,baz=97,slow=35						
JIRN	**Jiri**	**55.67**	**305**	*eP*	**P**	**14 26 39.4**	**+0.1**
	comp=Z,6.2nm,0.6s						
GUN	**Gumba**	**56.02**	**306**	*eP*	**P**	**14 26 41.6**	**-0.2**
	comp=Z,9.2nm,0.7s						
PKI	**Pulchoki**	**56.27**	**305**	*eP*	**P**	**14 26 43.4**	**-0.2**
PKIN	**Phulchoki**	**56.29**	**305**	*eP*	**P**	**14 26 43.3**	**-0.3**
KKN	**Kakani**	**56.46**	**305**	*eP*	**P**	**14 26 44.8**	**0.0**
DMN	**Daman**	**56.54**	**305**	*eP*	**P**	**14 26 45.7**	**+0.4**
GKN	**Gorkha**	**57.07**	**305**	*eP*	**P**	**14 26 48.8**	**-0.2**
KOLN	**Koldanda**	**57.84**	**304**	*eP*	**P**	**14 26 54.6**	**+0.1**
	comp=Z,20nm,0.9s						
PYUN	**Piuthan**	**58.46**	**305**	*eP*	**P**	**14 26 59.1**	**+0.3**
	comp=Z,26nm,0.6s						

WMQ **Urumqi** **62.26 323** *eP* **P** **14 27 26.8 +2.4**
MK31 **Makanchi Array** **67.06 323** P **P** **14 27 55.3 -0.3**
MK31 IAmb IAmb 14 28 04.6
comp=Z,1.9nm,1.2s
MKAR **Makanchi Array** **67.06 323** P **P** **14 27 55.9 +0.2**
comp=Z,1.3nm,0.6s,baz=113,slow=7.9,SNR=23
MAKZ **Makanchi** **67.26 323** P **P** **14 27 56.7 -0.2**
MAKZ IAmb IAmb 14 27 58.7
comp=Z,8.3nm,1.4s
KKAR **Karatay Array** **73.19 316** P **P** **14 28 32.9 -0.4**
GEYT **Alibeck** **81.14 309** P **P** **14 29 19.4 +1.3**
comp=Z,2.4nm,0.6s,baz=197,slow=4.5,SNR=4.6
GEYT **Alibeck** **81.14 309** P **P** **14 29 19.0 +0.9**
GEYT IAmb IAmb 14 29 20.2
comp=Z,2.7nm,0.8s
ILAR **Eielson Array** **86.20 25** P **P** **14 29 42.7 -0.7**
comp=Z,0.8nm,0.9s,baz=261,slow=5.1,SNR=5.4
QSPA **South Pole Qui** **88.27 180** P **P** **14 29 54.8 +1.2**
comp=Z,3.5nm,1.0s,baz=321,slow=3.4,SNR=6.0
TORD **Torodi Ar. Bea** **132.95 286** PKP **PKiKP** **14 36 19.3 -0.5**
comp=Z,0.7nm,0.6s,baz=82,slow=1.9,SNR=6.2
TORD **Torodi Ar. Bea** **132.95 286** **PKPdf** **14 36 16.2 -2.4**
CPUP **Villa Florida** **149.51 157** PKPbc **PKiKP** **14 36 53.3 -0.2**
comp=Z,4.4nm,1.0s,baz=257,slow=1.5,SNR=5.0
LPAZ **La Paz** **150.57 128** PKPbc **PKiKP** **14 36 57.3 +0.6**
comp=Z,2.8nm,0.8s,baz=243,slow=2.3,SNR=6.6

*IDC **07** 14:27:32.9±0.8, 59°.29S×25°.84W, h0km, mb4.3/5, mb1 4.4/6,mb1mx4.0/24,mbtmp4.3/6,ML4.8/1,MS3.1/6, Ms1 3.1/6,ms1mx3.0/20, Error ellipse: s-maj=35.6km s-min=22.2km az=85.0*
*NEIC **07** 14:27:34.3±1.7, 59°.4S±0°.1×25°.9W±0°.2, h10km±1km, mb4.4/20, Error ellipse: s-maj=25.3km s-min=14.2km az=43.0*

ISC 07 14:27:34.1±0.7,**59°.3S**±0°.1×**25°.9W**±0°.1,**h10**km,**n45,**
σ0§**89**/35,**mb4.4**/12,**MS3.2**/4,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.71**	**306**	Pn	**Pn**	**14 29 24.4**	**-1.9**
HOPE					Pb	14 29 38.7	-9.0
VNA1	**Neumayer--Stat**	**13.50**	**154**	P	**Pn**	**14 30 45.1**	**-0.3**
VNA3	**Neumayer Olymp**	**13.67**	**158**	P	**Pn**	**14 30 47.0**	**-0.7**
VNA2	**Neumayer--Watz**	**13.90**	**154**	P	**Pn**	**14 30 49.5**	**-1.4**
	baz=316,slow=15						
SNAA	**Sanae**	**15.47**	**152**	P	**Pn**	**14 31 11.5**	**-0.6**
SNAA	**Sanae**	**15.47**	**152**	Pn	**Pn**	**14 31 11.5**	**-0.6**
	4.3nm,0.3s,baz=309,slow=15,SNR=139						
SNAA				Sn	Sn	14 33 46.8	-17
	0.3nm,0.3s,baz=280,slow=18,SNR=2.4						
SNAA				LR	LR	14 35 11.4	
	comp=Z,59nm,21.2s,baz=176,slow=30						
SNAA	**Sanae**	**15.47**	**152**		**Pn**	**14 31 11.4**	**-0.8**
SNAA				IAmb	IAmb	14 31 13.0	
	comp=Z,14nm,0.5s						
PMSA	**Palmer Station**	**18.48**	**237**	LR	LR	14 36 50.3	
	comp=Z,51nm,20.4s,baz=114,slow=30						
BELA	**Belgrano 2**	**18.86**	**186**	P	**Pn**	**14 31 54.1**	**-0.4**
EFI	**East Falkland**	**19.61**	**279**	Pn	**Pn**	**14 32 04.3**	**+0.6**
GO09	**Cerro Castillo**	**27.15**	**267**	P	**P**	**14 33 16.6**	**-0.5**
GO09				IAmb	IAmb	14 33 41.2	
	comp=Z,16nm,1.1s						
QSPA	**South Pole Qui**	**30.92**	**180**	P	**P**	**14 33 51.8**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=241,slow=0.8,SNR=42						
PLCA	**Paso Flores**	**33.37**	**284**	P	**P**	**14 34 13.2**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=166,slow=9.4,SNR=4.4						
PLCA				LR	LR	14 47 12.3	
	comp=Z,18nm,19.0s,baz=158,slow=35						
PLCA	**Paso Flores**	**33.37**	**284**	IAmb	IAmb	14 34 17.0	
	comp=Z,3.8nm,0.9s						
BI02	**San Fabin de**	**36.88**	**287**	P	**P**	**14 34 42.7**	**+0.1**
BI02				IAmb	IAmb	14 34 56.2	
	comp=Z,7.1nm,1.4s						
CPUP	**Villa Florida**	**39.53**	**313**	LR	LR	14 50 52.9	
	comp=Z,23nm,19.8s,baz=200,slow=35						
MT02	**Curacav**	**39.56**	**291**	P	**P**	**14 35 05.3**	**+0.2**
MT02				IAmb	IAmb	14 35 08.8	
	comp=Z,7.8nm,0.7s						
CO03	**El Pedregal**	**41.34**	**293**	P	**P**	**14 35 20.7**	**+0.7**
VNDA	**Vanda**	**43.32**	**182**	P	**P**	**14 35 36.9**	**+1.4**
	comp=Z,1.3nm,0.6s,baz=186,slow=6.8,SNR=12						
VNDA	**Vanda**	**43.32**	**182**	P	**P**	**14 35 36.8**	**+1.4**
AC04	**Llanos de Chal**	**43.74**	**295**	P	**P**	**14 35 40.4**	**+1.1**
AC04				IAmb	IAmb	14 35 43.5	
	comp=Z,8.6nm,0.8s						
AC02	**Maricunga**	**44.02**	**298**	P	**P**	**14 35 42.5**	**+0.3**
AC02				IAmb	IAmb	14 35 46.8	
	comp=Z,4.9nm,0.8s						
GO02	**Mina Guanaco**	**45.67**	**299**	P	**P**	**14 35 55.5**	**+0.3**
BOSA	**Boshof**	**46.21**	**71**	LR	LR	14 52 00.4	
	comp=Z,35nm,18.4s,baz=176,slow=32						
PB07	**IPOC Station P**	**48.79**	**301**	P	**P**	**14 36 20.4**	**+1.1**
CASY	**Casey**	**50.58**	**159**	P	**P**	**14 36 32.2**	**-0.1**
CASY				IAmb	IAmb	14 36 36.7	
	comp=Z,4.3nm,1.0s						
MNMC	**Minye Minye**	**50.95**	**303**	P	**P**	**14 36 37.1**	**+1.1**
H10S2	**ASCENSION HYDR**	**50.97**	**14**	T	T	15 31 12.2	
	baz=33,slow=74,SNR=4.7						
H10S3	**ASCENSION HYDR**	**50.98**	**14**	T	T	15 31 12.1	
	baz=187,slow=74,SNR=9.0						
H10N1	**ASCENSION HYDR**	**52.09**	**14**	T	T	15 32 36.1	
	baz=186,slow=75,SNR=5.2						
H10N3	**ASCENSION HYDR**	**52.09**	**14**	T	T	15 32 35.9	
	baz=186,slow=75,SNR=9.1						
H10N2	**ASCENSION HYDR**	**52.11**	**14**	T	T	15 32 38.0	
	baz=186,slow=75,SNR=5.6						
LPAZ	**La Paz**	**52.86**	**306**	P	**P**	**14 36 51.4**	**+0.8**
LPAZ				IAmb	IAmb	14 36 58.5	
	comp=Z,3.0nm,0.8s						
DBIC	**Dimbokro**	**67.89**	**23**	LR	LR	15 00 30.4	
	comp=Z,26nm,19.8s,baz=83,slow=29						
TOA0	**Torodi Ar. Sit**	**75.60**	**28**	P	**P**	**14 39 19.8**	**+0.9**
TOA0				IAmb	IAmb	14 39 20.9	
	comp=Z,3.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.60**	**28**	P	**P**	**14 39 20.1**	**+1.3**
	comp=Z,2.6nm,0.6s,baz=196,slow=6.4,SNR=16						
TORD	**Torodi Ar. Bea**	**75.60**	**28**	P	**P**	**14 39 19.7**	**+0.8**
TORD				IAmb	IAmb	14 39 20.9	
	comp=Z,2.2nm,0.7s						
QRZ	**Quartz Range**	**79.05**	**194**	P	**P**	**14 39 37.6**	**-0.4**
ASAR	**Alice Springs**	**95.65**	**161**	P	**P**	**14 40 59.1**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=183,slow=3.8,SNR=18						
ASAR	**Alice Springs**	**95.65**	**161**	P	**P**	**14 40 58.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**123.23**	**111**	PKP	**PKPdf**	**14 46 30.5**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=262,slow=4.6,SNR=4.3						
YKA	**Yellowknife Ar**	**139.04**	**315**	PKP	**PKPdf**	**14 46 58.8**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=126,slow=2.6,SNR=26						
INK	**Inuvik**	**148.74**	**317**	PKPbc	**PKPbc**	**14 47 19.0**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=39,slow=3.7,SNR=8.4						
SONM	**Songino Array**	**150.08**	**91**	PKPbc	**PKPbc**	**14 47 23.9**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=245,slow=2.1,SNR=14						
ILAR	**Eielson Array**	**152.74**	**307**	PKPbc	**PKPbc**	**14 47 28.7**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=314,slow=1.3,SNR=4.9						

*IDC **07** 14:49:58.1±1.1, 1°.51S×135°.52E, h0km, mb3.7/3, mb1 4.0/8,mb1mx3.7/51,mbtmp3.8/8,ML3.7/5, Error ellipse: s-maj=23.3km s-min=19.8km az=27.0*

ISC 07 14:50:01.2±0.9,**1°.5S**±0°.1×**135°.45E**±0°.10,**h21**km,**n10,**
σ1§**47**/10,**mb3.8**/4,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.23**	**279**	Pn	**Pn**	**14 51 05.0**	**+0.5**
	2.4nm,0.3s,baz=97,slow=15,SNR=4.7						
SIJI				Lg	Lg	14 52 14.9	
	2.3nm,0.3s,baz=213,slow=18,SNR=4.3						
JAY	**Jayapura**	**5.35**	**101**	Pn	**Pn**	**14 51 18.6**	**-1.3**
	0.5nm,0.3s,baz=240,slow=20,SNR=2.2						
BATI	**Baumata**	**14.55**	**233**	Pn	**Pn**	**14 53 24.5**	**-1.6**
	1.2nm,0.3s,baz=80,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**18.34**	**183**	P	**Pn**	**14 54 14.0**	**-0.5**
	0.3nm,0.3s,baz=6.1,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**19.09**	**210**	P	**P**	**14 54 22.9**	**+0.3**
	0.1nm,0.3s,baz=26,slow=13,SNR=2.4						
CTA	**Charters Tower**	**21.27**	**151**	P	**P**	**14 54 49.5**	**+3.1**
	2.2nm,0.6s,baz=330,slow=11,SNR=7.1						
ASAR	**Alice Springs**	**22.07**	**184**	P	**P**	**14 54 55.0**	**+0.1**
	3.4nm,0.7s,baz=8.2,slow=12,SNR=63						
MKAR	**Makanchi Array**	**66.87**	**323**	P	**P**	**15 00 52.5**	**+0.7**
	0.5nm,0.6s,baz=108,slow=7.7,SNR=10						
ILAR	**Eielson Array**	**86.11**	**25**	P	**P**	**15 02 40.0**	**-0.4**
	0.3nm,0.8s,baz=243,slow=4.0,SNR=2.3						
LPAZ	**La Paz**	**150.76**	**128**	PKPbc	**PKiKP**	**15 09 54.6**	**+0.1**
	1.0nm,0.6s,baz=246,slow=5.3,SNR=4.1						

*IDC **07** 14:54:41.7±1.4, 43°.20N×126°.42W, h0km, mb3.9/5, mb1 4.0/13,mb1mx3.8/64,mbtmp3.9/13,ML3.6/8,MS3.6/23, Ms1 3.6/23,ms1mx3.5/43, Error ellipse: s-maj=24.6km s-min=10.2km az=46.0*
*ANF **07** 14:54:43.4±1.2, 43°.10N×126°.40W, h9km±17km, ML3.8/21, Error ellipse: s-maj=16.9km s-min=4.2km az=82.0, Hypocentre not reviewed by the ISC*
*NEIC **07** 14:54:43.9±1.9, 43°.17N±0°.04×126°.35W±0°.09, h10km±2km, mb4.5/39, Error ellipse: s-maj=12.1km s-min=4.8km az=290.0*

ISC 07 14:54:44.5±0.8,**43°.18N**±0°.08×**126°.41W**±0°.09,**h14**km,
n147,σ1§**02**/129,**mb4.4**/19,**MS3.6**/16,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J01E	**Myrtle Point**	**1.81**	**90**	P		**14 55 13.5**	
	baz=270,SNR=71						
J01E				S		14 55 38.5	
	baz=270						
K02D	**Willamette Mer**	**2.07**	**103**	P		14 55 17.1	
	baz=284,SNR=134						
K02D				S		14 55 44.3	
	baz=284						
I02D	**Swisshome**	**2.07**	**63**	P		14 55 17.6	
	baz=242,SNR=31						
I02D				S		14 55 45.5	
	baz=242						
I03D	**Drain, OR**	**2.29**	**76**	P		14 55 20.6	
	baz=257,SNR=76						
I03D				S		14 55 50.3	
	baz=257						
L02E	**Cave Junction**	**2.31**	**115**	P		14 55 20.5	
	baz=297,SNR=24						
L02E				S		14 55 49.2	
	baz=297						
HUMO	**Hull Mountain**	**2.60**	**102**		**Pn**	**14 55 24.7**	**-1.5**
COR	**Corvallis**	**2.65**	**57**		**Pn**	**14 55 25.2**	**-1.5**
JCC	**Jacoby Creek,**	**2.95**	**142**	Pn	**Pn**	**14 55 29.7**	**-1.3**
I04A	**Tendick Farm,**	**2.97**	**77**	P		14 55 31.1	
	baz=258,SNR=67						
I04A				S		14 56 08.1	
	baz=258						
H04D	**Lebanon**	**2.97**	**62**	P		14 55 31.1	
	baz=243,SNR=42						
H04D				S		14 56 08.4	
	baz=243						
G03D	**McMinnville, O**	**3.04**	**47**	P		14 55 31.7	
	baz=228,SNR=32						
G03D				S		14 56 10.1	
	baz=228						
KHMM	**Horse Mountain**	**3.05**	**138**		**Pn**	**14 55 29.7**	**-2.8**
YBH	**Yreka Blue Hor**	**3.09**	**117**	Pn	**Pn**	**14 55 32.8**	**-0.3**
	2.6nm,0.3s,baz=305,slow=12,SNR=62						
YBH				Sn	**Sn**	**14 56 11.0**	**+1.1**
	1.8nm,0.3s,baz=112,slow=16,SNR=2.2						
YBH	**Yreka Blue Hor**	**3.09**	**117**		**Pn**	**14 55 32.5**	**-0.5**
J04D	**Umpqua Nationa**	**3.14**	**87**	P		14 55 34.4	
	baz=270,SNR=38						
L04D	**Klamath Falls**	**3.17**	**106**	P		14 55 33.6	
	baz=289,SNR=56						
M02C	**Callahan**	**3.19**	**123**	P		14 55 33.1	
	baz=306						
H04A	**Detroit Lake**	**3.40**	**62**		**Pn**	**14 55 37.0**	**-0.2**
K04D	**Chiloquin, OR**	**3.46**	**98**	S		14 56 20.7	
	baz=280						
N02D	**Trinity Center**	**3.53**	**127**	P		14 55 37.8	
	baz=310						
M04C	**Macdoel**	**3.66**	**111**	P		14 55 39.8	
	baz=294,SNR=14						
F04D	**Rainier, OR**	**3.78**	**39**	P		14 55 42.8	
	baz=220,SNR=8.0						
F04D				S		14 56 29.7	
	baz=220						
J05D	**Fort Rock, OR**	**3.78**	**87**	P		14 55 42.2	
	baz=270,SNR=42						
I05D	**Terrebonne, OR**	**3.85**	**71**	P		14 55 43.4	
	baz=253,SNR=16						
WDC	**Whiskeytown Da**	**3.88**	**131**		**Pn**	**14 55 42.4**	**-1.4**
E03A	**Lebam**	**3.92**	**30**		**Pn**	**14 55 43.1**	**-1.2**
PINE	**Pine Mountain**	**4.02**	**79**		**Pn**	**14 55 45.0**	**-0.9**
K05A	**Summer Lake**	**4.07**	**95**		**Pn**	**14 55 46.5**	**-0.1**
KCPM	**Cahto Peak**	**4.09**	**148**	Pn	**Pn**	**14 55 45.7**	**-1.0**
G05D	**Wamic, OR**	**4.20**	**59**	P		14 55 48.6	
	baz=241,SNR=26						
E04D	**Cinebar**	**4.34**	**38**	P		14 55 49.9	
	baz=219,SNR=15						
E04D				S		14 56 42.2	
	baz=219						
F05D	**White Salmon**	**4.45**	**51**	P		14 55 52.3	
	baz=233,SNR=73						
F05D				S		14 56 46.4	
	baz=233						
NLWA	**Neilton Lookou**	**4.57**	**22**		**Pn**	**14 55 52.6**	**-0.7**
MOD	**Modoc Plateau**	**4.69**	**104**	Pn	**Pn**	**14 55 52.5**	**-2.5**
LON	**Longmire**	**4.83**	**41**		**Pn**	**14 55 57.2**	**+0.3**
HOPS	**Hopland Field**	**4.88**	**148**	P

MCMT **McKenzie Canyo** 9.91 76 Pn **Pn** 14 57 07.0 +0.4
TPNV **Topopah Spring** 9.96 125 Pn **Pn** 14 57 08.1 +0.7
BGU **Big Grassy Mou** 10.20 98 Pn **Pn** 14 57 10.5 -0.2
LRM **Limekiln Ridge** 10.31 70 Pn **Pn** 14 57 11.8 -0.5
OSI **Osito Audit: C** 10.44 143 Pn **Pn** 14 57 15.0 +1.2
WALA **Waterton Lakes** 10.47 52 Pn **Pn** 14 57 14.3 0.0
EDW2 **Edwards Air Fo** 10.55 139 P 14 57 15.6
baz=325
DUG **Dugway, Tooele** 10.60 102 Pn **Pn** 14 57 15.9 -0.1
DUG **Dugway, Tooele** 10.60 102 P 14 57 16.2
baz=291
BOZ **Bozeman (W)** 10.85 72 Pn **Pn** 14 57 19.4 0.0
BOZ **Bozeman (W)** 10.85 72 P 14 57 20.2
baz=262
ECR **Eagle Creek** 10.99 86 Pn **Pn** 14 57 20.6 -0.9
YHB **Horse Butte** 11.08 77 Pn **Pn** 14 57 21.7 -1.0
YHL **Hebgen Lake** 11.09 76 Pn **Pn** 14 57 24.9 +2.0
YHH **Holmes Hill** 11.32 77 Pn **Pn** 14 57 23.6 -2.5
REDW **Red Top Meadow** 11.35 84 Pn **Pn** 14 57 25.0 -1.4
CCUT **Cedar City** 11.43 115 Pn **Pn** 14 57 28.0 +0.5
LKWY **Lake** 11.64 78 Pn **Pn** 14 57 30.8 +0.4
MSU **Marysvale** 11.74 109 Pn **Pn** 14 57 32.1 +0.3
TMUT **Trail Mountain** 12.08 104 Pn **Pn** 14 57 36.2 -0.3
PFO **Pinyon Flats O** 12.33 138 LR LR 15 02 32.4
comp=Z,428nm,18.1s,baz=318,slow=38
BW06 **Boulder Array** 12.35 86 Pn **Pn** 14 57 40.7 +0.6
BW06 **Boulder Array** 12.35 86 P 14 57 40.6
baz=278
PD31 **Pinedale Array** 12.35 86 Pn **Pn** 14 57 40.8 +0.7
PDAR **Pinedale Array** 12.35 86 Pn **Pn** 14 57 42.0 +1.9
0.1nm,0.3s,baz=280,slow=12,SNR=16
PDAR LR LR 15 02 55.1
comp=Z,648nm,18.9s,baz=275,slow=40
PDAR **Pinedale Array** 12.35 86 Pn **Pn** 14 57 41.1 +1.0
RLMT **Red Lodge** 12.46 75 Pn **Pn** 14 57 40.6 -1.0
RLMT **Red Lodge** 12.46 75 P 14 57 42.4
baz=267
EGMT **Eagleton** 12.62 62 Pn **Pn** 14 57 43.0 -0.6
EGMT **Eagleton** 12.62 62 P 14 57 43.2
baz=253
W18A **Petrified Fore** 15.22 116 P **P** 14 58 23.4 -0.7
W18A IAmb IAmb 14 58 33.9
comp=Z,17nm,1.1s
DLBC **Dease Lake** 15.44 353 Pn **Pn** 14 58 22.3 +0.5
comp=Z,0.2nm,0.3s,baz=134,slow=6.1,SNR=3.2
DLBC LR LR 15 03 35.3
comp=Z,225nm,19.1s,baz=144,slow=35
DLBC **Dease Lake** 15.44 353 P **P** 14 58 27.9 +1.5
JIS **Juneau Island** 15.91 344 P **P** 14 58 32.2 +0.8
DGMT **Dagmar** 16.34 63 P **P** 14 58 36.6 +0.3
DGMT IAmb IAmb 14 58 40.4
comp=Z,51nm,1.1s
ANMO **Albuquerque** 17.51 111 P **Pn** 14 58 48.9 +0.5
comp=Z,0.1nm,0.3s,baz=311,slow=10.0,SNR=8.6
ANMO LR LR 15 05 06.6
comp=Z,67nm,21.4s,baz=300,slow=36
ANMO **Albuquerque** 17.51 111 P **Pn** 14 58 49.7 +1.3
T25A **Trinidad** 17.84 102 P **Pn** 14 58 52.6 +0.1
BNM **Barren Site** 17.85 114 P **Pn** 14 58 53.5 +0.8
E28A **Huff** 18.51 71 P **P** 14 59 00.6 +0.4
FFC **Flin Flon** 19.65 46 P **P** 14 59 12.6 -0.1
FFC IAmb IAmb 14 59 14.4
comp=Z,18nm,1.1s
BERG **Berg Lake** 20.17 335 P Pn 14 59 20.7 +0.5
K31A **O'Neill** 20.23 82 P **P** 14 59 19.0 -0.2
YKA **Yellowknife Ar** 20.55 16 P **P** 14 59 22.2 -0.2
comp=Z,4.3nm,1.0s,baz=203,slow=11,SNR=33
YKA LR LR 15 07 04.4
comp=Z,128nm,18.5s,baz=0.0,slow=36
CBKS **Cedar Bluff** 20.56 93 P **P** 14 59 23.2 +0.5
AMTX **Amarillo** 20.86 105 P **P** 14 59 26.8 +0.6
AMTX IAmb IAmb 14 59 30.8
comp=Z,29nm,1.2s
BGNE **Belgrade** 20.94 85 P **P** 14 59 27.1 +0.2
BGNE IAmb IAmb 14 59 30.3
comp=Z,30nm,1.0s
R32A **Long Quarter,** 21.45 93 P **P** 14 59 31.8 -0.6
ECSD **EROS Data Cent** 21.58 78 P **P** 14 59 33.1 -0.6
ECSD IAmb IAmb 14 59 36.7
comp=Z,17nm,1.1s
AGMN **Agassiz Nation** 21.84 66 P **P** 14 59 34.8 -1.6
AGMN IAmb IAmb 14 59 42.0
comp=Z,23nm,0.9s
BCAR **Beaver Creek A** 21.84 341 P **P** 14 59 35.9 -0.4
KDAK **Kodiak Island** 21.96 321 LR LR 15 06 01.9
comp=Z,257nm,18.5s,baz=155,slow=31
ULM **Lac du Bonnet** 21.98 61 P **P** 14 59 38.4 +0.5
comp=Z,9.0nm,1.1s,baz=268,slow=12,SNR=12
ULM LR LR 15 08 40.1
comp=Z,339nm,18.2s,baz=282,slow=38
ULM **Lac du Bonnet** 21.98 61 P **P** 14 59 37.6 -0.4
ULM IAmb IAmb 14 59 40.2
comp=Z,28nm,1.4s
U32A **Winter Ranch,** 22.07 99 P **P** 14 59 38.6 -0.4
DAWY **Dawson** 22.20 345 P **P** 14 59 39.3 -1.0
DAWY IAmb IAmb 14 59 43.8
comp=Z,21nm,1.4s
KAN08 **Anthony NE Sta** 22.45 96 P **P** 14 59 42.7 -0.4
KNK **Knik Glacier** 22.50 332 P **P** 14 59 44.6 +1.3
K27K **Chicken** 22.73 342 P **P** 14 59 45.7 -0.1
K27K IAmb IAmb 14 59 49.5
comp=Z,16nm,1.3s
TX31 **Lajitas Ar. Si** 22.87 120 P **P** 14 59 47.7 +0.1
TX31 IAmb IAmb 15 00 12.1
comp=Z,25nm,1.2s
TX32 **Lajitas Array** 22.87 120 P **P** 14 59 46.8 -0.8
TXAR **Lajitas Array** 22.87 120 P **P** 14 59 50.1 +2.5
comp=Z,1.7nm,1.0s,baz=300,slow=8.4,SNR=12
TXAR LR LR 15 10 30.1
comp=Z,52nm,18.6s,baz=0.0,slow=41
TXAR **Lajitas Array** 22.87 120 P **P** 14 59 47.9 +0.3
N35A **Tabor** 22.91 85 P **P** 14 59 46.7 -1.2
WMOK **Wichita Mounta** 23.00 102 P **P** 14 59 48.3 -0.6
WMOK IAmb IAmb 14 59 53.4
comp=Z,14nm,1.1s
LPIG **La Paz** 23.20 140 LR LR 15 08 15.4
comp=Z,145nm,20.2s,baz=330,slow=35
OK029 **Liberty Lake** 23.45 99 P **P** 14 59 52.4 -1.0
RSO **Redoubt South** 23.50 327 P **P** 14 59 54.1 +0.2
ABTX **Abilene, Hawle** 23.51 108 P **P** 14 59 53.0 -1.1
ABTX IAmb IAmb 15 00 07.7
comp=Z,18nm,1.4s
T35A **Sooner Cattle** 23.64 95 P **P** 14 59 54.0 -1.4
T35A IAmb IAmb 14 59 59.9
comp=Z,16nm,1.1s
ILAR **Eielson Array** 24.53 339 P **P** 15 00 02.2 -1.1
comp=Z,1.9nm,0.9s,baz=153,slow=8.8,SNR=17
ILAR LR LR 15 08 10.2
comp=Z,126nm,20.2s,baz=156,slow=33
ILAR **Eielson Array** 24.53 339 P **P** 15 00 02.8 -0.5
WRH **Wood River Hil** 24.62 337 P **P** 15 00 04.4 +0.2
PPLA **Purkeypile** 24.79 332 P **P** 15 00 04.9 -1.0
NEA2 **Nenana** 24.99 337 P **P** 15 00 07.2 -0.3
NEA2 IAmb IAmb 15 00 09.4
comp=Z,12nm,1.1s
BPAW **Bear Paw Mtn.** 25.21 335 P **P** 15 00 09.2 -0.3
BPAW IAmb IAmb 15 00 11.6
comp=Z,11nm,1.1s
FCC **Fort Churchill** 25.30 41 P **P** 15 00 10.2 -0.1
U38A **Gravette** 25.40 94 P **P** 15 00 10.4 -1.0
U38A IAmb IAmb 15 00 14.7
comp=Z,14nm,1.0s
INK **Inuvik** 25.46 354 P **P** 15 00 10.7 -1.0
comp=Z,1.8nm,1.1s,baz=138,slow=12,SNR=3.8
INK LR LR 15 09 51.2
comp=Z,234nm,20.0s,baz=144,slow=36
X37A **Clayton** 25.52 99 P **P** 15 00 11.5 -1.1
X37A IAmb IAmb 15 00 21.4
comp=Z,12nm,1.0s
W39A **Magazine** 26.39 97 P **P** 15 00 18.5 -1.9
U40A **Yellville** 26.55 93 P **P** 15 00 20.5 -1.4
U40A IAmb IAmb 15 00 28.2
comp=Z,12nm,1.4s
RES **Resolute Bay** 34.60 14 LR LR 15 14 42.2
comp=Z,59nm,20.8s,baz=42,slow=35
FRB **Frobisher Bay** 38.39 37 LR LR 15 18 01.3
comp=Z,70nm,18.1s,baz=311,slow=36
PETK **Petropavlovsk-** 49.35 310 P **P** 15 03 30.8 -2.3
comp=Z,3.8nm,0.9s,baz=67,slow=11,SNR=4.1
H11N3 **WAKE ISLAND Hy** 59.91 269 T T 16 09 27.3
baz=51,slow=75,SNR=452
H11N2 **WAKE ISLAND Hy** 59.91 269 T T 16 09 27.4
baz=51,slow=75,SNR=292
H11N1 **WAKE ISLAND Hy** 59.92 269 T T 16 09 28.6
baz=51,slow=75,SNR=235
H11S1 **WAKE ISLAND Hy** 60.82 268 T T 16 10 34.9
baz=50,slow=75,SNR=1861
H11S2 **WAKE ISLAND Hy** 60.83 268 T T 16 10 35.6
baz=50,slow=75,SNR=1198
H11S3 **WAKE ISLAND Hy** 60.84 268 T T 16 10 28.9
baz=50,slow=75,SNR=1091
SONM **Songino Array** 78.12 327 LR LR 15 39 54.8
comp=Z,35nm,21.9s,baz=34,slow=35
ZALV **Zalesovo Beam** 79.61 342 LR LR 15 44 33.8
comp=Z,23nm,18.2s,baz=46,slow=38
HHC **Hu-ho-hao-te** 81.37 319 *e*P **P** 15 07 01.8 +1.0
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,130nm,6.6s
ESDC **Sonseca Array** 82.49 41 LR LR 15 39 54.3
comp=Z,40nm,20.7s,baz=340,slow=33
AKASG **Malin Array Be** 84.11 15 LR LR 15 44 19.4
comp=Z,42nm,18.1s,baz=305,slow=35
MKAR **Makanchi Array** 86.87 341 LR LR 15 50 19.9
comp=Z,24nm,19.3s,baz=5.0,slow=38
WMQ **Urumqi** 88.16 336 *e*P **P** 15 07 36.5 +1.6
BDFB **Brasilia** 92.34 109 LR LR 15 52 10.4
comp=Z,35nm,21.2s,baz=302,slow=37
GEYT **Alibeck** 99.16 356 LR LR 15 58 08.3
comp=Z,30nm,18.0s,baz=10.0,slow=38

*NNC **07** 15:12:22.5±0.2, 43.˙34N×77.˙83E, h0km, mb3.0, mpv3.3,*
Error ellipse: s-maj=3.5km s-min=1.3km az=173.0
*KRNET **07** 15:12:23.1±0.1, 43.˙35N×77.˙82E, h19km, mb3.0*
*SOME **07** 15:12:24.0, 43.˙35N×77.˙82E, h20km*

ISC 07 15:12:23.3±0.9, 43.˙34N±0.˙02×77.˙79E±0.˙01, h15km±8km, n76, σ1s68/139, 32C-13D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
ZHN	**Zhinishke**	**0.50**	**110**	*e*P		**Pg**	**15 12 32.7**	**-0.7**
ZHN	baz=12			*e*S		**Sg**	**15 12 39.0**	**-1.1**
ZHN	**Zhinishke**	**0.50**	**110**	*e*P		**Pg**	**15 12 32.7**	**-0.7**
ZHN	2.0nm,0.1s			*e*S		**Sg**	**15 12 39.0**	**-1.1**
ZHN	**Zhinishke**	**0.50**	**110**	P		**Pg**	**15 12 32.6**	**-0.7**
ZHN	14nm,0.2s 2.4nm,0.2s			S		**Sg**	**15 12 38.7**	**-1.4**
KOTS	**Kotyrbulak**	**0.51**	**258**	⇑*e*P		**Pg**	**15 12 34.0**	**+0.6**
KOTS	baz=58			⇑*e*S		**Sb**	**15 12 41.2**	**0.0**
KOTS	**Kotyrbulak**	**0.51**	**258**	⇑*e*P		**Pg**	**15 12 34.0**	**+0.6**
KOTS	177nm,0.2s			*e*S		**Sb**	**15 12 41.2**	**0.0**
KOTS	**Kotyrbulak**	**0.51**	**258**	P		**Pg**	**15 12 33.9**	**+0.6**
KOTS	204nm,0.4s 177nm,0.2s			S		**Sb**	**15 12 41.0**	**-0.3**
SATY	**Saty**	**0.53**	**122**	⇑*e*P		**Pg**	**15 12 33.4**	**-0.5**
SATY	baz=24			⇑*e*S		**Sg**	**15 12 40.2**	**-0.8**
SATY	**Saty**	**0.53**	**122**	⇑*e*P		**Pg**	**15 12 33.4**	**-0.5**
SATY	baz=24 27nm,0.1s			*e*S		**Sg**	**15 12 40.2**	**-0.8**
SATY	**Saty**	**0.53**	**122**	P		**Pg**	**15 12 33.4**	**-0.5**
SATY	294nm,0.1s 32nm,0.1s			S		**Sg**	**15 12 40.1**	**-1.0**
ANVS	**Anan'yevo**	**0.57**	**189**	⇑*i*P		**Pb**	**15 12 34.2**	**-0.8**
ANVS	baz=91			⇑*i*S		**Sb**	**15 12 41.6**	**-1.4**
MDOK	**Medeo**	**0.57**	**252**	*e*P		**Pb**	**15 12 34.7**	**-0.4**
MDOK	baz=52			*e*S		**Sb**	**15 12 42.4**	**-0.7**
MDOK	**Medeo**	**0.57**	**252**	*e*P		**Pb**	**15 12 34.7**	**-0.4**
MDOK	9.0nm,0.3s 41nm,0.3s			*e*S		**Sb**	**15 12 42.4**	**-0.7**
MDOK	**Medeo**	**0.57**	**252**	⇑P		**Pb**	**15 12 34.7**	**-0.4**
MDOK	6.9nm,0.5s 9.8nm,0.3s			⇓S		**Sb**	**15 12 42.6**	**-0.4**
MDOK	**Medeo**	**0.57**	**252**	Pg		**Pb**	**15 12 34.7**	**-0.4**
MDOK	9.0nm,0.3s 41nm,0.3s			Lg		Lg	15 12 42.3	
AAA	**Alma-Ata**	**0.65**	**258**	*e*P		**Pg**	**15 12 36.9**	**+0.8**
AAA	36nm,0.1s 44nm,0.1s			*e*S		**Sg**	**15 12 46.1**	**+1.4**
AAA	**Alma-Ata**	**0.65**	**258**	P		**Pg**	**15 12 36.9**	**+0.8**
AAA	36nm,0.1s 44nm,0.1s			S		**Sg**	**15 12 46.1**	**+1.4**
KPKS	**Kokpek**	**0.66**	**79**	*e*P		**Pb**	**15 12 35.7**	**-0.9**
KPKS	baz=79			*e*S		**Sb**	**15 12 44.1**	**-1.6**
KPKS	**Kokpek**	**0.66**	**79**	*e*P		**Pb**	**15 12 35.7**	**-0.9**
KPKS	72nm,0.1s 111nm,0.3s			*e*S		**Sb**	**15 12 44.1**	**-1.6**
ARXS	**Arharly**	**0.87**	**2**	*e*P		**Pg**	**15 12 39.8**	**-0.4**
ARXS	35nm,0.2s 32nm,0.2s			*e*S		**Sg**	**15 12 51.2**	**-0.4**
ARXS	**Arharly**	**0.87**	**2**	P		**Pg**	**15 12 39.8**	**-0.4**
ARXS	35nm,0.2s 32nm,0.2s			S		**Sg**	**15 12 51.2**	**-0.4**
KTBS	**Karatobe**	**0.89**	**295**	*e*P		**Pg**	**15 12 40.4**	**0.0**
KTBS	baz=94			*e*S		**Sg**	**15 12 52.2**	**+0.1**
KTBS	**Karatobe**	**0.89**	**295**	*e*P		**Pg**	**15 12 40.4**	**0.0**
KTBS	18nm,0.2s 75nm,0.4s			*e*S		**Sg**	**15 12 52.2**	**+0.1**
KTBS	**Karatobe**	**0.89**	**295**	P		**Pg**	**15 12 40.4**	**0.0**
KTBS	18nm,0.2s 75nm,0.4s			S		**Sg**	**15 12 52.2**	**+0.1**
IZV	**Izvestkoviy**	**0.91**	**251**	*e*P		**Pg**	**15 12 41.0**	**0.0**
IZV	baz=51			*e*S		**Sb**	**15 12 53.2**	**+0.3**
IZV	**Izvestkoviy**	**0.91**	**251**	*e*P		**Pg**	**15 12 41.0**	**0.0**
IZV	12nm,0.1s 30nm,0.1s			*e*S		**Sb**	**15 12 53.2**	**+0.3**
IZV	**Izvestkoviy**	**0.91**	**251**	P		**Pg**	**15 12 41.0**	**0.0**
IZV	12nm,0.1s 30nm,0.1s			S		**Sb**	**15 12 53.2**	**+0.3**
UZB	**Uzynbulak**	**0.92**	**102**	*e*P		**Pb**	**15 12 40.2**	**-0.9**
UZB	baz=2.0			*e*S		**Sb**	**15 12 51.7**	**-1.5**
UZB	**Uzynbulak**	**0.92**	**102**	*e*P		**Pb**	**15 12 40.2**	**-0.9**
UZB	52nm,0.2s 64nm,0.2s			*e*S		**Sb**	**15 12 51.7**	**-1.5**
UZB	**Uzynbulak**	**0.92**	**102**	P		**Pb**	**15 12 40.2**	**-0.9**
UZB	52nm,0.2s 64nm,0.2s			S		**Sb**	**15 12 51.7**	**-1.5**
PRZ	**Przheval'sk**	**0.97**	**152**	⇓*i*P		**Pb**	**15 12 41.2**	**-0.7**
PRZ	baz=53			⇓*i*S		**Sg**	**15 12 54.7**	**-0.1**
MTBS	**Maitube**	**1.02**	**258**	*e*P		**Pn**	**15 12 42.8**	**-0.2**
MTBS	baz=58			*e*S		**Sn**	**15 12 56.3**	**-0.8**
MTBS	**Maitube**	**1.02**	**258**	*e*P		**Pn**	**15 12 42.8**	**-0.2**
MTBS	11nm,0.2s 37nm,0.2s			*e*S		**Sn**	**15 12 56.4**	**-0.8**
MTBS	**Maitube**	**1.02**	**258**	P		**Pn**	**15 12 42.8**	**-0.2**
MTBS	11nm,0.2s			S		**Sn**	**15 12 56.4**	**-0.8**
KUU	**Kurty**	**1.19**	**298**	*e*P		**Pb**	**15 12 45.7**	**+0.2**
KUU	37nm,0.2s baz=97			*e*S		**Sn**	**15 13 01.3**	**0.0**
KUU	**Kurty**	**1.19**	**298**	*e*P		**Pb**	**15 12 45.7**	**+0.2**
KUU	baz=97 5.7nm,0.1s			*e*S		**Sn**	**15 13 01.3**	**0.0**
KUU	**Kurty**	**1.19**	**298**	P		**Pb**	**15 12 45.7**	**+0.2**
KUU	45nm,0.2s 5.7nm,0.1s			S		**Sn**	**15 13 01.3**	**0.0**
SHLS	**Shalkode**	**1.24**	**98**	*e*P		**Pg**	**15 12 51.3**	**+4.2**
SHLS	baz=97			*e*S		**Sg**	**15 13 11.0**	**+7.7**
SHLS	**Shalkode**	**1.24**	**98**	*e*P		**Pg**	**15 12 51.3**	**+4.2**
SHLS	18nm,0.1s 22nm,0.2s			*e*S		**Sg**	**15 13 11.0**	**+7.7**
SHLS	**Shalkode**	**1.24**	**98**	P		**Pg**	**15 12 51.3**	**+4.2**
SHLS	18nm,0.1s 22nm,0.2s			S		**Sg**	**15 13 11.0**	**+7.7**
PDGK	**Podgornoye**	**1.24**	**90**	⇓P		**Pn**	**15 12 43.5**	**-2.7**
PDGK	3.2nm,0.4s 4.1nm,0.3s			⇑S		**Sn**	**15 13 01.5**	**-1.3**
KDJ	**Kajisay**	**1.29**	**200**	⇑*i*P		**Pb**	**15 12 47.5**	**+0.1**
KDJ	baz=1.0 baz=1.0			⇑*i*S		**Sg**	**15 13 04.6**	**-0.5**
KST	**Kastek**	**1.37**	**258**	*e*P		**Pb**	**15 12 48.9**	**+0.2**
KST	baz=58			*e*S		**Sb**	**15 13 06.8**	**+0.8**
KST	**Kastek**	**1.37**	**258**	*e*P		**Pb**	**15 12 48.9**	**+0.2**
KST	24nm,0.2s 21nm,0.3s			*e*S		**Sb**	**15 13 06.8**	**+0.8**
KST	**Kastek**	**1.37**	**258**	P		**Pb**	**15 12 48.9**	**+0.2**
KST	24nm,0.2s 21nm,0.3s			S		**Sb**	**15 13 06.8**	**+0.8**
DGS	**Degeres**	**1.48**	**267**	*e*P		**Pb**	**15 12 50.5**	**+0.1**
DGS	baz=67			*e*S		**Sb**	**15 13 09.5**	**+0.4**
DGS	**Degeres**	**1.48**	**267**	*e*P		**Pb**	**15 12 50.5**	**+0.1**
DGS	baz=67 16nm,0.3s 37nm,0.3s			*e*S		**Sb**	**15 13 09.5**	**+0.4**
DGS	**Degeres**	**1.48**	**267**	P		**Pb**	**15 12 50.5**	**+0.1**
DGS	16nm,0.3s 37nm,0.3s			S		**Sb**	**15 13 09.5**	**+0.4**
KRBS	**Karabastau**	**1.58**	**284**	*e*P		**Pb**	**15 12 52.3**	**+0.1**
KRBS	baz=83			*e*S		**Sb**	**15 13 12.6**	**+0.6**
KRBS	**Karabastau**	**1.58**	**284**	*e*P		**Pb**	**15 12 52.3**	**+0.1**
KRBS	8.6nm,0.1s 48nm,0.3s			*e*S		**Sb**	**15 13 12.6**	**+0.6**
KRBS	**Karabastau**	**1.58**	**284**	P		**Pb**	**15 12 52.3**	**+0.1**
KRBS	8.6nm,0.1s 48nm,0.3s			S		**Sb**	**15 13 12.6**	**+0.6**
ULHL	**Ulahol**	**1.58**	**227**	⇑*i*P		**Pb**	**15 12 52.9**	**+0.5**
ULHL	baz=27			⇑*i*S		**Sb**	**15 13 13.0**	**+0.8**
ULHL	**Ulahol**	**1.58**	**227**	P		**Pb**	**15 12 52.9**	**+0.5**
BOOM	**Boomskoye usch**	**1.60**	**238**	⇓*i*P		**Pg**	**15 12 53.5**	**-0.6**
BOOM	SNR=15 baz=39			⇓*i*S		**Sg**	**15 13 14.3**	**-0.7**
TKM2	**Tokmak 2**	**1.66**	**256**	P		**Pb**	**15 12 53.9**	**+0.2**
TKM2	SNR=7.8 1.5nm,0.3s 12nm,0.3s			⇑P		**Pb**	**15 12 53.9**	**+0.2**
TDK	**Taldyqorghan**	**1.72**	**15**	*e*P		**Pg**	**15 12 55.4**	**-0.8**
TDK	30nm,0.3s 91nm,0.5s			*e*S		**Sg**	**15 13 18.0**	**-0.5**
TDK	**Taldyqorghan**	**1.72**	**15**	P		**Pg**	**15 12 55.4**	**-0.8**
TDK	30nm,0.3s 91nm,0.5s			S		**Sg**	**15 13 18.0**	**-0.5**
DJR	**Jarkent**	**1.75**	**55**	*e*P		**Pg**	**15 12 55.4**	**-1.5**
DJR	5.6nm,0.1s 39nm,0.4s			*e*S		**Sg**	**15 13 18.0**	**-1.7**
DJR	**Jarkent**	**1.75**	**55**	P		**Pb**	**15 12 54.8**	**-0.4**
DJR	5.6nm,0.1s 39nm,0.4s			S		**Sb**	**15 13 16.9**	**-0.1**
KBK	**Karagaybulak**	**2.19**	**253**	⇑*i*P		**Pb**	**15 13 02.3**	**-0.5**
KBK	baz=53			⇑*i*S		**Sb**	**15 13 30.5**	**+0.7**
KBK	**Karagaybulak**	**2.19**	**253**	P		**Pb**	**15 13 03.6**	**+0.8**
CHMS	**Chumysh**	**2.25**	**262**	⇓*i*P		**Pb**	**15 13 02.8**	**-0.8**
CHMS	SNR=12 baz=62			⇓*i*S		**Sb**	**15 13 31.7**	**+0.5**
SGDS	**Sogindy**	**2.31**	**274**	Pg		**Pb**	**15 13 04.6**	**0.0**
SGDS	2.1nm,0.3s 11nm,0.2s			Lg		Lg	15 13 33.8	
USP	**Ospenovka**	**2.40**	**269**	⇑*i*P		**Pb**	**15 13 05.0**	**-1.2**
USP	baz=69			⇑*i*S		**Sb**	**15 13 35.1**	**-0.6**
USP	**Ospenovka**	**2.40**	**269**	P		**Pb**	**15 13 06.2**	**0.0**
AAK	SNR=9.1 **Ala-Archa**	**2.52**	**255**	⇑*i*P		**Pb**	**15 13 06.9**	**-1.4**
AAK	baz=55			⇑*i*S		**Sb**	**15 13 38.3**	**-0.8**
AAK	**Ala-Archa**	**2.52**	**255**	⇓Pg		**Pb**	**15 13 08.8**	**+0.5**
AAK	1.1nm,0.3s 4.8nm,0.5s			⇓Lg		Lg	15 13 42.5	
UCH	**Uchtor**	**2.66**	**246**	⇑*i*P		**Pb**	**15 13 08.9**	**-1.9**
UCH	baz=46			⇑*i*S		**Sb**	**15 13 41.6**	**-1.8**
UCH	**Uchtor**	**2.66**	**246**	P		**Pb**	**15 13 11.7**	**+0.9**
ARLS	SNR=6.3 **Aral**	**2.96**	**241**	⇑*e*P		**Pb**	**15 13 12.7**	**-3.0**
ARLS	baz=41			⇑*i*S		**Sb**	**15 13 48.4**	**-3.3**
EKS2	**Erkin-Say**	**3.02**	**258**	⇑*i*P		**Pb**	**15 13 14.0**	**-2.8**
EKS2	baz=58			⇑*i*S		**Sb**	**15 13 50.6**	**-2.9**
EKS2	**Erkin-Say**	**3.02**	**258**	P		**Sg**	**15 13 59.7**	**-0.6**
AML	**Almayashu**	**3.25**	**250**	⇑*i*P		**Pb**	**15 13 17.3**	**-3.6**
AML	SNR=6.2 baz=50			⇑*i*S		**Sn**	**15 13 55.4**	**+2.7**
MAKZ	**Makanchi**	**4.56**	**39**	⇓Lg		Lg	15 14 46.5	
MK31	0.6nm,0.6s **Makanchi Array**	**4.70**	**41**	⇑Pn		**Pn**	**15 13 36.7**	**+3.1**
MK31	0.2nm,0.5s,baz=220,slow=14,SNR=3.1 0.5nm,0.3s,baz=219,slow=29,SNR=9.5			⇑Lg		Lg	15 14 50.7	
KK31	**Karatay Array**	**5.32**	**270**	⇑Pg		**Pb**	**15 13 59.0**	**+3.1**
KK31	0.2nm,0.3s 0.3nm,0.3s,baz=80,slow=30,SNR=5.1			⇓Lg		Lg	15 15 12.7	

*NEIC **07** 15:18:20.5±2.2, 2.˙32N±0.˙08×99.˙00E±0.˙08, h141km±6km,*
mb4.3/14, Error ellipse: s-maj=15.5km s-min=4.8km
az=136.0
*IDC **07** 15:18:20.8±1.4, 2.˙33N×99.˙02E, h137km±3km, mb3.5/6,*
mb1 3.6/7, mb1mx3.2/33, mbtmp3.9/7, MS3.3/1, Ms1 3.2/1,
ms1mx2.5/27, Error ellipse: s-maj=72.4km s-min=15.1km

az=58.0

*DJA **07** 15:18:22.5±0.5,2°N±2°×9°9E±°,h129km±5km,M3.5/7, MLv3.5/7*

ISC 07 15:18:21.0±0.6,**2°34N**±0°05×**98°94E**±0°06,**h150**km,**n39,** σ1**02**/42,**mb4.0**/14,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	**Rantau Prapat**	**0.36**	**357**		**Pn**	**15 18 41.7**	**0.0**
RPSI	**Rantau Prapat**	**0.36**	**357**	Pn	**Pn**	**15 18 41.6**	**-0.1**
PSI	**Prapat**	**0.46**	**358**	P	**Pn**	**15 18 41.7**	**-0.6**
	55nm,0.3s,baz=180,slow=9.1,SNR=78						
PSI				S	**Sn**	**15 18 56.4**	**-2.2**
	27nm,0.3s,baz=180,slow=19,SNR=101						
TSI	**Tuntungan**	**1.22**	**342**	P	**Pn**	**15 18 48.0**	**+0.3**
TSI				S	**Sn**	**15 19 06.1**	**-2.1**
MNSI	**Mandailing Nat**	**1.66**	**157**	P	**Pn**	**15 18 53.2**	**+0.9**
MNSI				S	**Sn**	**15 19 16.8**	**+0.5**
GSI	**Gunungsitoli**	**1.71**	**233**	Pn	**Pn**	**15 18 53.2**	**+0.4**
GSI	**Gunungsitoli**	**1.71**	**233**	P	**Pn**	**15 18 53.4**	**+0.6**
TPTI		**1.98**	**298**	P	**Pn**	**15 18 56.0**	**+0.1**
TPTI				S	**Sn**	**15 19 21.2**	**-1.6**
IPM	**Ipoh**	**2.98**	**44**		**Pn**	**15 19 08.3**	**+0.2**
KULM	**Kulim**	**3.39**	**30**	Pn	**Pn**	**15 19 13.3**	**-0.1**
LHMI	**Lhok Sumawe**	**3.49**	**325**	P	**Pn**	**15 19 15.2**	**+0.5**
LHMI				S	**Sn**	**15 19 55.7**	**-0.7**
DLV	**T Lat**	**13.44**	**44**	P	**P**	**15 21 31.1**	**+0.9**
UGM	**Wanagama**	**15.40**	**131**	P	**Pn**	**15 21 49.2**	**-1.4**
CMAR	**Chiang Mai Arr**	**16.02**	**0**	P	**P**	**15 22 00.4**	**+1.8**
	0.2nm,0.3s,baz=190,slow=11,SNR=5.7						
JAGI	**Jajag, Banyuwa**	**18.58**	**125**		**P**	**15 22 26.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**33.23**	**129**	P	**P**	**15 24 44.6**	**+0.7**
NWAO	**Narrogin (SRO)**	**39.11**	**155**	P	**P**	**15 25 31.3**	**-2.5**
NWAO				IAmb	IAmb	15 25 56.5	
	comp=Z,31nm,1.3s						
WB0	**Warramunga Arr**	**41.15**	**124**	P	**P**	**15 25 51.3**	**+0.4**
WB0				IAmb	IAmb	15 26 11.9	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**41.19**	**124**	P	**P**	**15 25 51.6**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=301,slow=9.0,SNR=13						
WRA	**Warramunga Arr**	**41.19**	**124**	P	**P**	**15 25 50.8**	**-0.4**
WB2	**Warramunga Arr**	**41.20**	**124**	P	**P**	**15 25 50.6**	**-0.7**
WB2				IAmb	IAmb	15 26 07.4	
	comp=Z,6.9nm,1.2s						
WR0	**Warramunga Arr**	**41.37**	**124**	P	**P**	**15 25 52.2**	**-0.4**
WR0				IAmb	IAmb	15 25 55.8	
	comp=Z,6.4nm,1.3s						
AS31	**Alice Springs**	**42.73**	**129**	P	**P**	**15 26 03.5**	**-0.1**
ASAR	**Alice Springs**	**42.73**	**129**	P	**P**	**15 26 04.0**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=300,slow=7.4,SNR=19						
ASAR				ScP	**ScP**	**15 31 31.0**	**+1.3**
	comp=Z,0.2nm,0.8s,baz=300,slow=4.8,SNR=4.5						
FORT	**Forrest**	**43.06**	**142**	P	**P**	**15 26 05.0**	**-1.2**
FORT				IAmb	IAmb	15 26 11.5	
	comp=Z,21nm,1.0s						
SONM	**Songino Array**	**45.78**	**7**	P	**P**	**15 26 28.8**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=189,slow=9.8,SNR=3.8						
SONM	**Songino Array**	**45.78**	**7**	IAmb	IAmb	15 26 36.2	
	comp=Z,1.3nm,1.4s						
MK31	**Makanchi Array**	**46.59**	**344**	P	**P**	**15 26 34.8**	**+0.8**
MK31				IAmb	IAmb	15 26 35.5	
	comp=Z,1.9nm,1.2s						
MKAR	**Makanchi Array**	**46.59**	**344**	P	**P**	**15 26 35.1**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=157,slow=9.0,SNR=16						
MKAR	**Makanchi Array**	**46.59**	**344**	P	**P**	**15 26 34.5**	**+0.6**
ZAA0	**Zalesovo Array**	**52.74**	**350**	P	**P**	**15 27 20.6**	**+0.5**
ZAA0				IAmb	IAmb	15 27 21.9	
	comp=Z,3.9nm,1.2s						
ZALV	**Zalesovo Beam**	**52.74**	**350**	P	**P**	**15 27 21.3**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=162,slow=7.7,SNR=8.4						
ZALV	**Zalesovo Beam**	**52.74**	**350**	P	**P**	**15 27 19.9**	**-0.3**
STKA	**Stephens Creek**	**52.85**	**134**	LR	LR	15 52 26.5	
	comp=Z,29nm,18.9s,baz=26,slow=39						
JEM	**Erimo**	**55.90**	**39**	P	P	15 27 50.6	+7.3
ABKAR	**Akbulak array**	**57.36**	**331**	P	**P**	**15 27 52.2**	**-1.2**
TIXI	**Tiksi**	**71.78**	**10**	P	**P**	**15 29 27.0**	**+0.4**
TIXI				IAmb	IAmb	15 29 28.4	
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**79.81**	**332**	P	**P**	**15 30 13.6**	**+1.3**
	comp=Z,2.7nm,1.0s,baz=114,slow=6.7,SNR=1.8						
FINES	**FINESS Array B**	**79.81**	**332**	P	**P**	**15 30 13.1**	**+0.8**

WEL 07 15:23:44.0±1.0,**34°S**±20°×**18°0E**±4°,1,**h289**km±25km, **M3.8**/11,**mB5.0**/2,**ML3.8**/8,**MLv3.8**/11,**Mw(mB)4.3**/2, **Error ellipse: s-maj=0.1km s-min=0.0km az=114.3, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.90**	**195**	P	Pn	15 24 48.5	+0.2
WMGZ	**Waiomatatini S**	**4.12**	**193**	P	Pn	15 24 51.1	+0.3
WMGZ				S	S	15 25 46.0	+1.7
HAZ	**Te Kaha**	**4.21**	**200**	P	Pn	15 24 52.2	+0.3
HAZ				S	S	15 25 46.2	-0.1
PKGZ	**Pakihiroa**	**4.26**	**196**	P	Pn	15 24 52.6	+0.1
PKGZ				S	S	15 25 47.5	+0.2
PUZ	**Puketiti**	**4.40**	**194**	P	Pn	15 24 53.3	-0.8
PUZ				S	S	15 25 47.9	-2.2
RUGZ	**Raukumara Rang**	**4.44**	**200**	P	Pn	15 24 54.6	0.0
RUGZ				S	S	15 25 50.0	-1.1
TWGZ	**Tauwhareparae**	**4.56**	**196**	S	S	15 25 55.3	+1.8
OPRZ	**Ohinepanea**	**4.73**	**211**	P	Pn	15 25 04.0	+6.2
MWZ	**Matawai**	**4.82**	**200**	P	Pn	15 24 59.2	+0.3
MWZ				S	S	15 25 59.7	+0.6
TKGZ	**Te Karaka**	**4.84**	**197**	P	Pn	15 24 58.5	-0.5
TKGZ				S	S	15 25 59.4	+0.1
URZ	**Urewera**	**4.88**	**204**	P	Pn	15 24 59.3	-0.3
URZ				S	S	15 26 00.9	+0.6
RIZ	**Raoul Island**	**5.01**	**26**	P	Pn	15 25 01.7	+0.4
MUGZ	**Murupara**	**5.20**	**205**	P	Pn	15 25 03.0	-0.3
RTZ	**Ruatahuna**	**5.25**	**203**	P	Pn	15 25 03.1	-0.9
ARHZ	**Aropaoanui**	**5.84**	**200**	P	Pn	15 25 10.8	-0.1
ARHZ				S	S	15 26 23.3	+2.5

*IDC **07** 15:40:48.3±1.7,1°05S×136°39E,h0km,mb3.8/2, mb1 4.0/6,mb1mx3.7/33,mbtmp3.9/6,ML3.4/4,MS2.7/2, Ms1 2.7/2,ms1mx2.4/32,Error ellipse: s-maj=38.2km s-min=27.2km az=80.0*

*NEIC **07** 15:40:52.2±1.3,1°14S±0°09×136°5E±0°1,h31km±8km, mb3.8/8,Error ellipse: s-maj=18.6km s-min=13.2km az=77.0.*

*DJA **07** 15:40:54.0±1.2,1°S±6°×13°6E±°,h20km±4km,M4.0/3, MLv4.0/3*

ISC 07 15:40:51.4±0.9,**1°16S**±0°08×**136°41E**±0°05,**h25**km,**n21,** σ1**27**/24,**mb3.9**/4,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**0.31**	**264**	P	**Pb**	**15 40 58.9**	**+0.4**
BAKI				S	**Sb**	**15 41 04.0**	**+0.6**
SRPI	**Serui, Papua**	**0.73**	**194**	P	**Pb**	**15 41 05.6**	**+0.2**
SRPI				S	**Sb**	**15 41 16.2**	**+1.2**
JAY	**Jayapura**	**4.50**	**107**	Pn	**Pn**	**15 41 59.0**	**+1.0**
	0.5nm,0.3s,baz=228,slow=12,SNR=2.9						
JAY				Sn	**Sn**	**15 42 47.8**	**-1.7**
	0.4nm,0.3s,baz=126,slow=19,SNR=2.0						
JAY				LR	LR	15 43 50.3	
	comp=Z,49nm,21.3s,baz=230,slow=40						
FAKI	**Fak Fak**	**4.51**	**247**		**Pn**	**15 41 58.5**	**+0.3**
FAKI	**Fak Fak**	**4.51**	**247**	P	**Pn**	**15 41 58.8**	**+0.6**
FAKI				S	**Sn**	**15 42 17.2**	**-2.7**
MTN	**Manton Dam**	**12.73**	**204**	Pn	**Pn**	**15 43 50.2**	**-0.8**
PMG	**Port Moresby**	**13.47**	**128**	LR	LR	15 49 50.1	
	comp=Z,64nm,19.0s,baz=15,slow=40						
BATI	**Baumata**	**15.54**	**234**	Pn	**Pn**	**15 44 30.9**	**+1.8**
	0.5nm,0.3s,baz=16,slow=19,SNR=1.4						
WB0	**Warramunga Arr**	**18.60**	**186**	Pn	**Pn**	**15 45 09.2**	**+1.8**
WB0				IAmb	IAmb	15 45 33.0	
	comp=Z,6.2nm,1.2s						
WR0	**Warramunga Arr**	**18.77**	**185**	P	**P**	**15 45 09.3**	**+0.4**
WB2	**Warramunga Arr**	**18.78**	**186**	P	**Pn**	**15 45 09.7**	**+0.2**
WB2				IAmb	IAmb	15 45 16.7	
	comp=Z,8.2nm,1.4s						
WRA	**Warramunga Arr**	**18.78**	**186**	P	**Pn**	**15 45 10.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=4.9,slow=12,SNR=15						
WRA	**Warramunga Arr**	**18.78**	**186**	P	**P**	**15 45 08.4**	**-0.6**
MYLDM	**Lahad Datu**	**18.97**	**290**	P	**Pn**	**15 45 12.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**19.88**	**212**	P	**Pn**	**15 45 22.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=34,slow=10,SNR=2.8						
AS31	**Alice Springs**	**22.50**	**186**	P	**P**	**15 45 50.2**	**+0.9**
AS31				IAmb	IAmb	15 45 51.9	
	comp=Z,2.3nm,0.6s						
ASAR	**Alice Springs**	**22.51**	**186**	P	**P**	**15 45 50.4**	**+1.1**
	comp=Z,3.7nm,0.5s,baz=12,slow=12,SNR=114						
ASAR	**Alice Springs**	**22.51**	**186**	P	**P**	**15 45 49.9**	**+0.6**
MKAR	**Makanchi Array**	**67.17**	**323**	P	**P**	**15 51 43.4**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=106,slow=7.7,SNR=4.4						
MAKZ	**Makanchi**	**67.37**	**323**	P	**P**	**15 51 44.8**	**+0.2**
MAKZ				IAmb	IAmb	15 51 45.4	
	comp=Z,0.7nm,0.8s						
SBA	**Scott Base**	**78.32**	**174**	P	**P**	**15 52 45.9**	**-3.0**

WEL 07 15:44:15.0±1.2,**33°S**±25°×**18°0W**±4°5,**h385**km±29km, **M4.2**/11,**mB4.1/2**,**ML4.2**/8,**MLv4.2**/11,**Mw(mB)3.1**/2, **Error ellipse: s-maj=0.1km s-min=0.0km az=116.5, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.41**	**195**	P	Pn	15 45 43.4	+2.9
WMGZ				S	S	15 46 50.5	+0.4
HAZ	**Te Kaha**	**5.51**	**201**	P	Pn	15 45 42.5	+0.9
HAZ				S	S	15 46 52.4	+0.3
PKGZ	**Pakihiroa**	**5.56**	**198**	P	Pn	15 45 42.8	+0.7
PKGZ				S	S	15 46 51.8	-1.2
PUZ	**Puketiti**	**5.69**	**196**	P	Pn	15 45 44.9	+1.3
RUGZ	**Raukumara Rang**	**5.74**	**201**	P	Pn	15 45 44.8	+0.6
RUGZ				S	S	15 46 54.3	-2.5
MWZ	**Matawai**	**6.12**	**200**	P	Pn	15 45 48.4	0.0
MWZ				S	S	15 47 06.3	+1.9
TKGZ	**Te Karaka**	**6.13**	**198**	P	Pn	15 45 43.3	-5.1
TKGZ				S	S	15 47 05.6	+1.1
URZ	**Urewera**	**6.19**	**203**	P	Pn	15 45 48.6	-0.4
URZ				S	S	15 47 07.0	+1.4
MUGZ	**Murupara**	**6.50**	**205**	P	P	15 45 53.4	0.0
MUGZ				S	S	15 47 12.2	+0.1
RTZ	**Ruatahuna**	**6.55**	**203**	P	Pn	15 45 52.4	-0.8
RTZ				S	S	15 47 12.2	-1.1
ARHZ	**Aropaoanui**	**7.14**	**201**	P	P	15 46 00.4	-0.2
ARHZ				S	S	15 47 27.2	+1.9
BKZ	**Black Stump Fm**	**7.21**	**204**	P	Pn	15 46 00.5	-0.1
BKZ				S	S	15 47 28.3	+1.4
PXZ	**Pawanui**	**7.89**	**199**	P	Pn	15 46 06.8	-1.5
PXZ				S	S	15 47 41.3	+0.2

IDC 07 15:58:21.5±1.9,**3.72N**×**127.46E**,**h0**km,**mb3.5**/4, **mb1 3.8**/4,**mb1mx3.5**/38,**mbtmp3.6**/4,**Error ellipse: s-maj=112.6km s-min=24.2km az=69.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.75**	**185**	P	P	16 03 15.8	+0.9
	3.3nm,1.2s,baz=7.0,slow=12,SNR=1.9						
WRA	**Warramunga Arr**	**24.47**	**164**	P	P	16 03 42.2	-0.3
	1.0nm,0.4s,baz=343,slow=10,SNR=14						
ASAR	**Alice Springs**	**27.94**	**167**	P	P	16 04 13.6	-0.2
	0.2nm,0.4s,baz=342,slow=8.0,SNR=11						
MKAR	**Makanchi Array**	**57.98**	**325**	P	P	16 08 16.0	-0.1
	0.2nm,0.4s,baz=125,slow=6.1,SNR=7.3						

*IDC **07** 16:19:55.8±1.8,6°81S×129°56E,h134km±20km,mb3.6/4, mb1 3.8/10,mb1mx3.5/36,mbtmp4.2/10,Error ellipse: s-maj=18.0km s-min=15.6km az=85.0*

*DJA **07** 16:19:56.9±0.4,7°S±3°×13°0E±°,h148km±11km,M4.6/9, mB5.0/5,mb4.6/7,MLv4.7/9,Mw(mB)4.3/5*

*NEIC **07** 16:19:57.8±1.5,6°72S±0°08×129°68E±0°07,h155km±12km, mb4.0/6,Error ellipse: s-maj=13.3km s-min=9.0km az=144.0*

ISC 07 16:19:56.7±0.6,**6°72S**±0°05×**129°66E**±0°05,**h150**km,**n34,** σ2**08**/40,**mb3.9**/5,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.06**	**128**	Pn	**Pn**	**16 20 35.3**	**+2.9**
SAUI	**Saumlaki**	**2.06**	**128**	P	**Pn**	**16 20 35.5**	**+3.0**
SAUI				S	**Sn**	**16 20 58.8**	**-1.2**
FAKI	**Fak Fak**	**4.58**	**34**	Pn	**Pn**	**16 21 05.1**	**+0.5**
FAKI	**Fak Fak**	**4.58**	**34**	P	**Pn**	**16 21 05.3**	**+0.7**
FAKI				S	**Sn**	**16 21 55.5**	**-1.9**
SIJI	**Sorong**	**6.03**	**16**	P	**Pn**	**16 21 24.6**	**+0.7**
	3.6nm,0.3s,baz=192,slow=20,SNR=32						
SIJI				S	**Sn**	**16 22 28.6**	**-3.5**
	10nm,0.3s,baz=211,slow=19,SNR=7.4						
SWI	**Sorong**	**6.04**	**15**	P	**Pn**	**16 21 24.1**	**+0.2**
	0.5nm693nm20nm,0.5s						
SWI				S	**Sn**	**16 22 28.6**	**-3.6**
	0.5nm693nm20nm,0.5s						
SOEI	**Soe**	**6.13**	**240**	Pn	**Pn**	**16 21 27.7**	**+2.4**
SOEI	**Soe**	**6.13**	**240**	P	**Pn**	**16 21 27.6**	**+2.4**
	0.4nm77nm,0.8s						
SOEI				S	**Sn**	**16 22 34.2**	**-0.3**
	0.4nm77nm,0.8s						
MTN	**Manton Dam**	**6.25**	**167**	Pn	**Pn**	**16 21 27.0**	**+0.1**
BATI	**Baumata**	**6.87**	**239**	P	Pn	16 21 30.9	-4.1
	36nm,0.3s,baz=7.2,slow=2.0,SNR=73						
BATI				S	**Sn**	**16 22 50.0**	**-2.0**
	3.2nm,0.3s,baz=90,slow=6.1,SNR=1.3						
BATI	**Baumata**	**6.87**	**239**	P	Pn	16 21 30.7	-4.3
	0.5nm2µm86nm,0.6s						
BATI				S	**Sn**	**16 22 52.7**	**+0.6**
	0.5nm2µm86nm,0.6s						
MMRI	**Maumere**	**7.59**	**255**		**Pn**	**16 21 44.8**	**0.0**
MMRI	**Maumere**	**7.59**	**255**	P	**Pn**	**16 21 45.5**	**+0.8**
	0.1nm17nm,1.0s						
JAY	**Jayapura**	**11.78**	**70**	P	**Pn**	**16 22 41.8**	**+1.6**
	0.7nm,0.3s,baz=210,slow=14,SNR=1.1						
FITZ	**Fitzroy Crossi**	**11.97**	**199**	P	**Pn**	**16 22 40.8**	**-1.8**
	0.5nm,0.3s,baz=19,slow=12,SNR=39						
FITZ				S	Sn	16 24 46.3	-8.6
	2.5nm,0.3s,baz=89,slow=16,SNR=9.2						
WRAB	**Tennant Creek**	**13.90**	**161**	Pn	**Pn**	**16 23 04.8**	**-2.6**
WRA	**Warramunga Arr**	**13.91**	**161**	P	**Pn**	**16 23 04.8**	**-2.7**
	1.4nm,0.3s,baz=340,slow=13,SNR=40						
WRA				S	Sn	16 25 31.3	-10
	1.0nm,0.3s,baz=333,slow=22,SNR=4.9						
WRA	**Warramunga Arr**	**13.91**	**161**	Pn	**Pn**	**16 23 04.4**	**-3.1**
WB2	**Warramunga Arr**	**13.91**	**161**	Pn	**Pn**	**16 23 04.3**	**-3.3**
WR0	**Warramunga Arr**	**13.99**	**161**	Pn	**Pn**	**16 23 05.5**	**-3.0**
COEN	**Coen**	**15.11**	**119**		**Pn**	**16 23 23.8**	**+1.2**
COEN				IAmb	IAmb	16 23 42.1	
	comp=Z,9.8nm,1.4s						
AS31	**Alice Springs**	**17.33**	**167**		**P**	**16 23 49.5**	**+0.7**
AS31				IAmb	IAmb	16 23 51.2	
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**17.34**	**167**	P	**P**	**16 23 49.4**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=342,slow=9.0,SNR=279						
ASAR				S	**S**	**16 26 56.8**	**-5.0**
	comp=Z,0.5nm,0.3s,baz=314,slow=15,SNR=4.9						
PSA00	**Pilbara Seismi**	**17.55**	**212**		**P**	**16 23 51.9**	**+0.8**
CTA	**Charters Tower**	**20.88**	**131**	P	**P**	**16 24 28.2**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=278,slow=4.4,SNR=3.2						
STKA	**Stephens Creek**	**27.40**	**158**	P	**P**	**16 25 28.5**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=341,slow=8.1,SNR=9.0						
STKA	**Stephens Creek**	**27.40**	**158**	P	**P**	**16 25 28.2**	**0.0**
HHC	**Hu-ho-hao-te**	**50.18**	**342**	*e*P	**P**	**16 28 39.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
WMQ	**Urumqi**	**62.98**	**327**	*e*P	**P**	**16 30 10.1**	**+2.6**
MK31	**Makanchi Array**	**67.81**	**327**	P	**P**	**16 30 39.6**	**+1.1**
MK31				IAmb	IAmb	16 31 01.9	
	comp=Z,2.3nm,1.4s						
MKAR	**Makanchi Array**	**67.81**	**327**	P	**P**	**16 30 39.6**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=117,slow=7.9,SNR=14						
MKAR	**Makanchi Array**	**67.81**	**327**	P	**P**	**16 30 39.3**	**+0.8**
MAKZ	**Makanchi**	**67.99**	**327**	P	**P**	**16 30 40.8**	**+1.2**
MAKZ				IAmb	IAmb	16 30 41.4	
	comp=Z,1.3nm,0.5s						
ZALV	**Zalesovo Beam**	**71.19**	**334**	P	**P**	**16 30 59.6**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=134,slow=6.6,SNR=2.8						

DJA 07 16:26:21.6±0.3,**9°S**±2°×**11°9E**±°,**h57**km±12km,**M4.0**/13, **mb3.9**/3,**MLv4.0**/13,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**1.13**	**302**	P	Pn	16 26 41.0	-0.3
PLAI				S	Sn	16 26 56.2	+0.2
BASI	**Baing, Sumba**	**1.96**	**114**	P	Pn	16 26 52.5	-0.1
TWSI	**Taliwang, Sumb**	**1.97**	**290**	P	Pn	16 26 52.8	+0.2
TWSI				S	Sn	16 27 16.8	+0.6
MMRI	**Maumere**	**3.53**	**77**	P	Pn	16 27 14.0	0.0
MMRI				S	Sn	16 27 55.3	+0.7
DNP	**Denpasar**	**3.58**	**282**	S	Sn	16 27 56.1	+0.5
BSSI	**Bau Bau, Buton**	**3.69**	**28**	P	Pn	16 27 16.3	+0.1
BSSI				S	Sn	16 27 57.8	-0.7
SRBI	**Singaraja**	**3.74**	**291**	P	Pn	16 27 17.1	+0.2
SRBI				S	Sn	16 28 00.6	+0.9
JAGI	**Jajag, Banyuwa**	**4.64**	**281**	P	Pn	16 27 27.5	-1.7
JAGI				S	Sn	16 28 22.6	+0.7
BATI	**Baumata**	**4.90**	**99**	P	Pn	16 27 31.6	-1.2
BATI				S	Sn	16 28 28.7	+0.4
BNSI	**Bone**	**5.17**	**15**	P	Pn	16 27 39.0	+2.5
	0.1nm17nm,0.8s						
BNSI				S	Sn	16 28 37.1	+2.1
	0.1nm17nm,0.8s						
SOEI	**Soe**	**5.45**	**94**	P	Pn	16 27 40.5	+0.1
	0.1nm14nm,1.1s						
SPSI	**Sidrap Palu**	**5.52**	**11**	P	Pn	16 27 42.0	+0.7
SPSI				S	Sn	16 28 45.3	+1.8

*DDA **07** 16:32:31.9,39°76N×26°09E,h13km±2km,ML2.5*

*ISK **07** 16:32:31.7,39°77N×26°07E,h5km,ML2.6/19*

*ATH **07** 16:32:35.6,39°91N×25°89E,h10km±31km,ML2.1/2,Error ellipse: s-maj=31.6km s-min=1.7km az=0.0*

*THE **07** 16:32:35.6,39°89N×25°92E,h7km±4km,ML1.9/6,Error ellipse: s-maj=4.4km s-min=0.8km az=268.0*

ISC 07 16:32:32.7±0.8,**39°83N**±0°02×**26°13E**±0°02,**h9**km±6km, **n57,**σ1**926**/82,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.06**	**285**	*i* P	**Pg**	**16 32 34.3**	**-0.3**
BOZC				*i* S	**Sg**	**16 32 35.0**	**-1.0**
BOZC				IAML		16 32 36.0	
	comp=N,2µm,0.3s						
BOZC				IAML		16 32 36.0	
	comp=E,1µm,0.2s						
BOZC	**Bozcaada**	**0.06**	**285**	PG	**Pg**	**16 32 34.0**	**-0.6**
ECEA	**Canakkale, Ece**	**0.22**	**9**	*i* P	**Pg**	**16 32 38.6**	**+1.5**
ECEA				IAML		16 32 43.0	
	comp=N,714nm,0.3s						
ECEA				*i* S	**Sg**	**16 32 43.3**	**+3.1**
ECEA				IAML		16 32 44.0	
	comp=E,411nm,0.5s						
KOCA	**Canakkale, Ayv**	**0.32**	**179**	*i* P	**Pg**	**16 32 38.0**	**-1.1**
KOCA				*i* S	**Sg**	**16 32 41.7**	**-1.7**
BAYC	**CANAKKALE_Bayr**	**0.33**	**105**	*i* P	**Pg**	**16 32 39.5**	**+0.3**
BAYC				*i* S	**Sg**	**16 32 44.2**	**+0.5**
GOKA	**anakkale-Gk**	**0.40**	**335**	*i* P	**Pg**	**16 32 40.7**	**+0.2**
GOKA				*i* S	**Sg**	**16 32 46.8**	**+0.9**
GOKA				IAML		16 32 48.0	
	comp=E,376nm,0.4s						
GADA	**Gvkgeada**	**0.41**	**334**	P	**Pg**	**16 32 41.1**	**+0.5**
GADA				S	**Sg**	**16 32 46.8**	**+0.8**
	comp=E,218nm,0.5s						
GADA	**Gvkgeada**	**0.41**	**334**	PG	**Pg**	**16 32 41.2**	**+0.6**
PRK	**Paraskevi**	**0.59**	**169**	P	**Pg**	**16 32 44.2**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.63**	**25**	PG	**Pb**	**16 32 45.8**	**-0.1**
GELI				SG	**Sn**	**16 32 56.1**	**-2.0**
SIGR	**SIGRI**	**0.65**	**199**	P	**Pb**	**16 32 49.3**	**+3.1**
SIGR				S	**Sg**	**16 32 58.0**	**+4.3**
SIGR				AML	AML	16 33 00.2	
	comp=N,708µm,0.4s						
SIGR				AML	AML	16 33 00.2	
	comp=E,484µm,0.3s						
SIGR	**SIGRI**	**0.65**	**199**	P	**Pb**	**16 32 49.3**	**+3.1**
SIGR				S	**Sg**	**16 32 58.3**	**+4.6**
	comp=E,305nm,0.3s						
AYVA	**Ayvalik**	**0.68**	**140**	*i* P	**Pg**	**16 32 45.5**	**-0.2**
AYVA				*i* S	**Sg**	**16 32 53.4**	**-1.1**
LPK	**Lapseki**	**0.73**	**41**	PG	**Pb**	**16 32 47.4**	**-0.2**
LIA	**Limnos Island**	**0.73**	**276**	P	**Pg**	**16 32 45.8**	**-1.0**
LIA				S	**Sg**	**16 32 53.5**	**-2.8**
LIA				AML	AML	16 33 00.1	
	comp=N,393µm,0.5s						
LIA				AML	AML	16 33 00.2	
	comp=E,256µm,0.4s						
LIA	**Limnos Island**	**0.73**	**276**	P	**Pg**	**16 32 45.8**	**-1.0**
LIA				S	**Sg**	**16 32 55.0**	**-1.3**
	comp=E,160nm,0.4s						
SMTH	**Samothraki Isl**	**0.79**	**325**	P	**Pg**	**16 32 48.1**	**+0.1**
SMTH	**Samothraki Isl**	**0.79**	**325**	P	**Pg**	**16 32 48.0**	**+0.1**
SMTH				S	**Sb**	**16 32 59.8**	**+0.3**
	comp=E,70nm,0.4s						
BUHA	**Balikesir, Bur**	**0.80**	**114**	*i* P	**Pg**	**16 32 47.8**	**-0.3**
BUHA				*i* S	**Sg**	**16 32 59.5**	**+1.0**
CAVK	**Edirne/Enez-Ca**	**0.86**	**2**	*

mb4.7/35, Error ellipse: s-maj=11.2km s-min=9.0km az=138.0
*IDC **07** 16:37:54.6±3.8, 4.°84S×152.°57E, h71km±34km, mb3.9/15, mb1 4.0/17, mb1mx3.8/44, mbtmp4.2/17, ML3.0/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/38, Error ellipse: s-maj=21.4km s-min=15.3km az=84.0*
ISC 07 16:37:52.8±0.5, **4.73S**±0.°06×**152.°52E**±0.°08, **h58km, n61, σ1°12/58, mb4.5/31, MS2.8/3, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.64**	**326**		**Pn**	**16 38 07.1**	**+0.9**
MANU	**Manus Island**	**5.79**	**297**	Pn	**Pn**	**16 39 17.2**	**+1.0**
PMG	**Port Moresby**	**7.06**	**229**	P	**Pn**	**16 39 35.8**	**+2.3**
	3.0nm,0.3s,baz=22,slow=11,SNR=9.1						
PMG				S	**Sn**	**16 40 53.4**	**+0.9**
	2.0nm,0.3s,baz=338,slow=19,SNR=2.7						
PMG				LR	LR	16 42 31.2	
	comp=Z,108nm,18.8s,baz=84,slow=39						
PMG	**Port Moresby**	**7.06**	**229**		**Pn**	**16 39 34.8**	**+1.2**
PATS	**Pohnpei**	**12.86**	**27**	Pn	**Pn**	**16 40 52.6**	**-0.3**
CTA	**Charters Tower**	**16.44**	**201**	P	**P**	**16 41 41.4**	**-0.3**
	0.2nm,0.3s,baz=23,slow=14,SNR=1.5						
KWAJ	**Kwajalein Atol**	**20.18**	**48**	Pn	Pn	16 42 24.3	-0.7
EIDS	**Eidsvold**	**20.57**	**184**	P	**P**	**16 42 26.8**	**-0.1**
DZM	**Mont Dzumac**	**21.89**	**143**	P	**P**	**16 42 41.0**	**-0.2**
	3.1nm,0.6s,baz=303,slow=17,SNR=5.8						
WB0	**Warramunga Arr**	**23.14**	**228**	P	**P**	**16 42 53.4**	**-0.9**
WB0				IAmb	IAmb	16 42 55.7	
	comp=Z,15nm,1.3s						
WR0	**Warramunga Arr**	**23.15**	**228**	P	**P**	**16 42 53.9**	**-0.5**
WR0				IAmb	IAmb	16 42 55.3	
	comp=Z,7.5nm,0.9s						
WRAB	**Tennant Creek**	**23.27**	**228**	P	**P**	**16 42 55.2**	**-0.4**
WRAB				IAmb	IAmb	16 42 56.1	
	comp=Z,19nm,0.9s						
WB2	**Warramunga Arr**	**23.27**	**228**	P	**P**	**16 42 55.2**	**-0.4**
WB2				IAmb	IAmb	16 42 57.1	
	comp=Z,9.1nm,0.7s						
WRA	**Warramunga Arr**	**23.28**	**228**	P	**P**	**16 42 55.5**	**-0.2**
	comp=Z,5.4nm,0.5s,baz=51,slow=10,SNR=78						
WRA	**Warramunga Arr**	**23.28**	**228**	P	**P**	**16 42 53.4**	**-2.3**
AS31	**Alice Springs**	**26.01**	**222**	P	**P**	**16 43 20.1**	**-0.5**
ASAR	**Alice Springs**	**26.02**	**222**	P	**P**	**16 43 20.5**	**-0.1**
	comp=Z,4.4nm,0.5s,baz=54,slow=9.1,SNR=160						
ASAR	**Alice Springs**	**26.02**	**222**	P	**P**	**16 43 19.8**	**-0.8**
LHI	**Lord Howe Isla**	**27.35**	**168**	P	**P**	**16 43 32.2**	**-0.2**
STKA	**Stephens Creek**	**28.89**	**199**	P	**P**	**16 43 45.3**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=12,slow=13,SNR=7.1						
STKA				LR	LR	16 55 14.1	
	comp=Z,48nm,19.2s,baz=25,slow=36						
FITZ	**Fitzroy Crossi**	**29.45**	**241**	P	**P**	**16 43 51.0**	**-0.2**
	comp=Z,6.8nm,0.4s,baz=47,slow=7.0,SNR=48						
FITZ	**Fitzroy Crossi**	**29.45**	**241**	P	**P**	**16 43 50.7**	**-0.6**
FITZ				IAmb	IAmb	16 43 51.3	
	comp=Z,7.6nm,0.5s						
BBOO	**Buckleboo**	**31.89**	**207**	P	**P**	**16 44 12.6**	**-0.2**
BBOO				IAmb	IAmb	16 44 14.4	
	comp=Z,33nm,1.4s						
TOLI2	**Tolitoli**	**32.23**	**280**	P	**P**	**16 44 17.4**	**+1.5**
TOLI2				IAmb	IAmb	16 44 31.9	
	comp=Z,4.9nm,0.7s						
JCJ	**Chichijima**	**33.18**	**343**	LR	LR	16 57 22.7	
	comp=Z,11nm,19.5s,baz=116,slow=35						
FORT	**Forrest**	**34.67**	**219**	P	**P**	**16 44 36.6**	**-0.3**
BKB	**Balikpapan**	**35.73**	**274**	P	**P**	**16 44 46.5**	**+0.2**
PSA00	**Pilbara Seismi**	**35.83**	**239**	P	**P**	**16 44 45.5**	**-1.6**
PSA00				IAmb	IAmb	16 45 01.7	
	comp=Z,37nm,1.5s						
BKZ	**Black Stump Fm**	**40.58**	**151**	P	**P**	**16 45 27.3**	**+0.5**
BKZ				IAmb	IAmb	16 45 44.0	
	comp=Z,19nm,1.5s						
TUWZ	**Tuamarina**	**41.27**	**155**	P	**P**	**16 45 32.9**	**+0.6**
LTZ	**Lake Taylor**	**41.76**	**158**	P	**P**	**16 45 37.1**	**+0.7**
LTZ				IAmb	IAmb	16 45 54.2	
	comp=Z,16nm,1.1s						
KHZ	**Kahutara**	**41.93**	**157**	P	**P**	**16 45 38.0**	**+0.2**
KHZ				IAmb	IAmb	16 45 50.8	
	comp=Z,38nm,1.2s						
YHNB	**Yeheng**	**42.09**	**315**	P	**P**	**16 45 37.5**	**-1.9**
RPZ	**Rata Peaks**	**42.13**	**160**	P	**P**	**16 45 40.0**	**+0.5**
	comp=Z,9.5nm,0.8s,baz=336,slow=5.7,SNR=2.4						
RPZ	**Rata Peaks**	**42.13**	**160**	P	**P**	**16 45 38.2**	**-1.2**
RPZ				IAmb	IAmb	16 45 58.3	
	comp=Z,43nm,1.3s						
MORW	**Morawa**	**42.17**	**231**	P	**P**	**16 45 38.8**	**-1.2**
MORW				IAmb	IAmb	16 45 39.6	
	comp=Z,17nm,1.4s						
LBZ	**Lake Benmore**	**42.44**	**161**	P	**P**	**16 45 42.0**	**+0.1**
LBZ				IAmb	IAmb	16 45 52.6	
	comp=Z,37nm,1.4s						
MQZ	**McQueen's Vall**	**42.70**	**158**	P	**P**	**16 45 44.7**	**+0.8**
MQZ				IAmb	IAmb	16 46 12.3	
	comp=Z,43nm,1.3s						
JNU	**Nakatsue**	**42.87**	**333**	P	**P**	**16 45 47.2**	**+1.6**
	comp=Z,9.6nm,0.7s,baz=87,slow=9.1,SNR=6.0						
JNU	**Nakatsue**	**42.87**	**333**	IAmb	IAmb	16 46 09.9	
	comp=Z,28nm,1.2s						
MJAR	**Matsushiro Arr**	**43.18**	**343**	P	**P**	**16 45 49.3**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=163,slow=13,SNR=2.4						
MJAR				LR	LR	17 03 31.9	
	comp=Z,11nm,19.1s,baz=280,slow=36						
MJAR	**Matsushiro Arr**	**43.18**	**343**	P	**P**	**16 45 46.4**	**-1.6**
DLV	**T Lat**	**46.81**	**291**	P	**P**	**16 46 18.0**	**+0.6**
DLV				IAmb	IAmb	16 46 27.2	
	comp=Z,17nm,1.2s						
IPM	**Ipoh**	**52.24**	**279**	P	**P**	**16 46 54.5**	**-4.2**
IPM				IAmb	IAmb	16 46 57.0	
	comp=Z,4.7nm,1.0s						
HON	**Honolulu**	**54.96**	**60**	P	**P**	**16 47 19.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**57.59**	**295**	P	**P**	**16 47 39.2**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=119,slow=6.2,SNR=6.8						
PETK	**Petropavlovsk-**	**57.79**	**4**	P	**P**	**16 47 38.5**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=153,slow=6.5,SNR=9.7						
MA2	**Magadan**	**64.12**	**359**	P	**P**	**16 48 20.6**	**-0.1**
MA2				IAmb	IAmb	16 48 45.9	
	comp=Z,12nm,1.3s						
SDPT	**Sand Point**	**71.28**	**26**	P	**P**	**16 49 05.3**	**-0.6**
VNDA	**Vanda**	**72.91**	**178**	P	**P**	**16 49 15.4**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=311,slow=5.9,SNR=5.5						
VNDA	**Vanda**	**72.91**	**178**	IAmb	IAmb	16 49 17.5	
	comp=Z,1.1nm,0.9s						
BILL	**Bilibino**	**73.25**	**5**	P	**P**	**16 49 17.3**	**-0.1**
SBA	**Scott Base**	**73.46**	**177**	P	**P**	**16 49 18.8**	**+0.2**
SUA	**Susitna One**	**79.01**	**24**	P	**P**	**16 49 50.1**	**-0.3**
MKAR	**Makanchi Array**	**80.09**	**319**	P	**P**	**16 49 58.0**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=95,slow=8.3,SNR=8.3						
ZALV	**Zalesovo Beam**	**80.94**	**326**	P	**P**	**16 50 02.4**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=112,slow=5.7,SNR=9.9						
ZALV	**Zalesovo Beam**	**80.94**	**326**	P	**P**	**16 50 01.9**	**+1.1**
ILAR	**Eielson Array**	**82.20**	**22**	P	**P**	**16 50 06.6**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=247,slow=5.9,SNR=7.2						
YKA	**Yellowknife Ar**	**95.49**	**28**	P	**P**	**16 51 11.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=269,slow=4.2,SNR=5.6						
TORD	**Torodi Ar. Bea**	**150.02**	**288**	PKPbc	**PKPbc**	**16 57 37.8**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=73,slow=2.6,SNR=8.9						
TORD	**Torodi Ar. Bea**	**150.02**	**288**		**PKPbc**	**16 57 37.1**	**-0.8**

*MAN **07** 16:42:31.1, 6.°43N×126.°20E, h24km, MS3.3*
*IDC **07** 16:42:32.3±1.6, 6.°45N×126.°10E, h80km±13km, mb3.3/4, mb1 3.6/5, mb1mx3.2/40, mbtmp3.7/5, Error ellipse: s-maj=82.8km s-min=19.3km az=61.0*
ISC 07 16:42:30.3±1.6, **6.°37N**±0.°05×**126.°23E**±0.°06, **h30**km±14km, **n14, σ2°14/21, mb3.5/4, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.58**	**2**	*e*P	**Pb**	**16 42 41.0**	**-1.0**
MATI				*e*S	**Sn**	**16 42 50.7**	**-0.3**
DDMP	**Don Marcelino,**	**0.58**	**243**	*e*P	**Pn**	**16 42 43.4**	**+0.8**
DDMP				*e*S	**Sn**	**16 42 54.5**	**+3.4**
DAV	**Davao City (W)**	**0.95**	**317**	P	**Pn**	**16 42 49.0**	**+1.3**
	146nm,0.3s,baz=91,slow=4.4,SNR=31						
DAV				S	**Sn**	**16 43 02.7**	**+2.4**
	95nm,0.3s,baz=225,slow=22,SNR=16						
DAV				LR	LR	16 43 03.7	
	comp=Z,78nm,19.0s,baz=316,slow=39						
KCP	**Kidapawan**	**1.30**	**299**	⇓*i*P	**Pn**	**16 42 52.5**	**-0.1**
KCP				*i* S	**Sb**	**16 43 09.8**	**-0.9**
SKMP	**Bagumbayan, Su**	**1.69**	**275**	*e*P	**Pn**	**16 42 57.5**	**-0.2**
SKMP				*e*S	**Sn**	**16 43 18.8**	**+0.5**
CGP	**Cagayan de Oro**	**2.58**	**324**	⇓*e*P	**Pn**	**16 43 11.7**	**+1.7**
CGP				*e*S	**Sb**	**16 43 45.4**	**-1.8**
BUTP	**Butuan**	**2.66**	**347**	*e*P	**Pn**	**16 43 13.2**	**+2.1**
BUTP				*e*S	**Sb**	**16 43 53.5**	**+4.0**
PAGZ	**Pagadian**	**3.19**	**298**	*e*P	**Pn**	**16 43 18.2**	**-0.3**
GLSP	**General Luna,**	**3.40**	**358**	*e*P	**Pn**	**16 43 22.5**	**+1.2**
GLSP				*e*S	**Sn**	**16 43 58.3**	**-2.3**
SIJI	**Sorong**	**8.77**	**145**	P	**Pn**	**16 44 38.4**	**+3.2**
	2.0nm,0.3s,baz=327,slow=22,SNR=4.4						
FITZ	**Fitzroy Crossi**	**24.32**	**181**	P	**P**	**16 47 43.7**	**-1.8**
	2.2nm,0.5s,baz=5.0,slow=8.6,SNR=2.7						
WRA	**Warramunga Arr**	**27.33**	**163**	P	**P**	**16 48 11.1**	**-1.7**
	0.3nm,0.3s,baz=342,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**30.77**	**166**	P	**P**	**16 48 41.1**	**-2.3**
	0.5nm,0.6s,baz=336,slow=6.6,SNR=11						
MKAR	**Makanchi Array**	**55.13**	**324**	P	P	16 51 55.2	-4.7
	0.3nm,0.5s,baz=114,slow=5.3,SNR=4.0						

*ISU **07** 16:45:39, 41.°33N×68.°63E, h5km*
*SOME **07** 16:45:40.4, 41.°32N×68.°70E, h5km*
*NNC **07** 16:45:41.3±2.8, 41.°46N×68.°55E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=25.9km s-min=11.7km az=17.0*
ISC 07 16:45:38.4±1.3, **41.°38N**±0.°04×**68.°64E**±0.°03, **h2km**±11km, **n23, σ1°68/41, 7C-2D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YNGY	**Yangiyul**	**0.40**	**132**	*e*P	**Pg**	**16 45 46.0**	**-0.1**
YNGY				*e*S	**Sg**	**16 45 52.0**	**+0.6**
TAS	**Tashkent**	**0.49**	**96**	*e*P	**Pb**	**16 45 49.0**	**-0.8**
TAS				*e*S	**Sg**	**16 45 56.0**	**+1.7**
CHMG	**Chimgan**	**1.04**	**80**	*e*P	**Pg**	**16 45 59.0**	**+0.6**
CHMG				*e*S	**Sg**	**16 46 13.0**	**+1.1**
CHMG				*e*S	**Sn**	**16 46 17.0**	**+1.6**
CHM	**Chimkent**	**1.18**	**37**	*e*P	**Pn**	**16 46 04.1**	**+2.2**
	31nm,0.2s						
CHM				*e*S	**Sn**	**16 46 21.1**	**+2.5**
	404nm,0.2s						
IUG	**Iuzhnay**	**1.29**	**53**	*e*P	**Pb**	**16 46 05.3**	**+1.8**
	67nm,0.3s						
IUG				*e*S	**Sn**	**16 46 23.6**	**+2.1**
	571nm,0.7s						
BRLS	**Borolday**	**1.87**	**28**	*e*P	**Pn**	**16 46 10.8**	**-0.7**
	26nm,0.3s						
BRLS				*e*S	**Sn**	**16 46 33.0**	**-2.7**
	190nm,0.4s						
MINT	**Mingtut**	**1.99**	**117**	*e*P	**Pg**	**16 46 16.0**	**-0.5**
MINT				*e*S	**Sg**	**16 46 42.0**	**-0.3**
BTK	**Batken**	**2.12**	**128**	*i* P	**Pb**	**16 46 17.0**	**-0.5**
BTK				*i* S	**Sg**	**16 46 46.0**	**-0.4**
KK31	**Karatay Array**	**2.21**	**38**	⇑Pn	**Pg**	**16 46 21.0**	**+0.2**
	2.3nm,0.3s,baz=218,slow=13,SNR=11						
KK31				⇑Lg	Lg	16 46 50.5	
	8.6nm,0.2s,baz=220,slow=26,SNR=22						
AGL	**Agalyk**	**2.29**	**216**	*e*P	**Pb**	**16 46 20.0**	**-0.5**
AGL				*e*S	**Sg**	**16 46 55.0**	**+2.9**
NUT	**Nurota**	**2.39**	**251**	*e*P	**Pb**	**16 46 21.0**	**-1.1**
NUT				*e*S	**Sb**	**16 46 52.0**	**-0.1**
DZA	**Taraz**	**2.51**	**52**	*e*P	**Pg**	**16 46 26.5**	**0.0**
	55nm,0.1s						
DZA				*e*S	**Sg**	**16 46 59.8**	**+0.9**
	131nm,0.2s						
MRKS	**Merke**	**3.68**	**67**	*e*P	**Pg**	**16 46 48.4**	**-0.4**
	0.9nm,0.5s						
MRKS				*e*S	**Sg**	**16 47 37.6**	**+1.2**
	2.9nm,0.5s						
AAK	**Ala-Archa**	**4.54**	**72**	⇑Pg	**Pg**	**16 47 05.0**	**-0.3**
AAK				⇑Lg	Lg	16 48 06.8	
	10nm,0.7s						
TKM2	**Tokmak 2**	**5.39**	**71**	⇓Pg	**Pg**	**16 47 19.5**	**-2.2**
	3.2nm,0.9s						
TKM2				⇑Lg	Lg	16 48 32.5	
	8.9nm,0.8s						
KST	**Kastek**	**5.69**	**71**	*e*P	**Pg**	**16 47 25.0**	**-2.3**
	2.2nm,0.3s						
KST				*e*S	**Sg**	**16 48 39.1**	**-1.8**
	12nm,0.6s						
KST	**Kastek**	**5.69**	**71**	Pg	**Pg**	**16 47 23.8**	**-3.5**
	2.2nm,0.3s						
KST				Lg	Lg	16 48 37.9	
	12nm,0.6s						
MTBS	**Maitube**	**6.04**	**71**	*e*P	**Pg**	**16 47 31.4**	**-2.6**
	1.0nm,0.1s						
MTBS				*e*S	**Sg**	**16 48 50.6**	**-1.7**
	3.9nm,0.2s						
MTBS	**Maitube**	**6.04**	**71**	Pg	**Pg**	**16 47 31.4**	**-2.6**
	1.0nm,0.1s						
MTBS				Lg	Lg	16 48 50.6	
	3.9nm,0.2s						
KUU	**Kurty**	**6.21**	**64**	*e*P	**Pg**	**16 47 35.5**	**-1.8**
	1.4nm,0.4s						
KUU				*e*S	**Sg**	**16 48 57.6**	**-0.1**
	8.6nm,0.5s						
KUU	**Kurty**	**6.21**	**64**	Pg	**Pg**	**16 47 35.5**	**-1.8**
	1.4nm,0.4s						
KUU				Lg	Lg	16 48 57.6	
	8.6nm,0.5s						
AB31	**Akbulak array**	**9.97**	**325**	Pn	**Pn**	**16 48 03.2**	**+0.6**
	0.7nm,0.6s,baz=141,slow=14,SNR=16						
AB31				⇑Sn	**Sn**	**16 49 53.6**	**-1.4**
	0.6nm,0.4s,baz=155,slow=23,SNR=3.5						
AKTO	**Aktyubinsk**	**11.68**	**324**	⇓Pn	**Pn**	**16 48 27.0**	**+1.0**
	1.1nm,0.7s						
AKTO				⇑Sn	**Sn**	**16 50 35.0**	**-1.9**
	4.4nm,1.3s						

*MOS **07** 17:07:21.4±1.0, 36.°48N×71.°31E, h61km, mb4.8/16, Error ellipse: s-maj=6.1km s-min=3.8km az=85.9*
*IDC **07** 17:07:21.2±2.6, 36.°29N×71.°29E, h58km±23km, mb3.9/25, mb1 4.1/30, mb1mx3.9/50, mbtmp4.3/30, ML4.7/4, MS3.0/12, Ms1 3.0/12, ms1mx2.8/50, Error ellipse: s-maj=15.6km s-min=11.4km az=1.0*
*NNC **07** 17:07:22.4±4.5, 36.°73N×70.°55E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=44.1km s-min=22.4km az=162.0*
*BJI **07** 17:07:22.7±0.0, 36.°51N×71.°25E, h79km, mB4.7/19, mb4.5/29, Ms4.0/8, Ms7 3.7/6*
*NEIC **07** 17:07:24.2, 36.°50N×71.°32E, h80km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.77; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$-0.70; $M_{r\theta}$-0.08; $M_{\theta\phi}$-0.90; $M_{\phi r}$-0.60; Fault plane solution: $M_0$1.89000×10^{15} NP1:ϕ_s218.63000°, δ53.22000°, λ74.84000°. NP2:ϕ_s62.98000°, δ39.37000°, λ109.28000°. Principal axes: T 1.9134, Plg76.0000°, Azm79.0000°; N -0.0507, Plg12.0000°, Azm228.0000°; P -1.8627, Plg7.0000°, Azm319.0000°;*
*NEIC **07** 17:07:24.5±2.6, 36.°53N±0.°06×71.°28E±0.°08, h79km±5km, mb4.6/43, Mwr4.1/15 Error ellipse: s-maj=10.1km s-min=7.4km az=59.0*
ISC 07 17:07:25.4±0.3, **36.°45N**±0.°04×**71.°31E**±0.°04, **h100km, n249, σ2°43/266, mb4.5/60, 23C-24D, Fault plane solution: NP1:ϕ_s112.73048°, δ29.58793°, λ148.89269°. NP2: ϕ_s230.41769°, δ75.22068°, λ64.07324°. Principal axes:** T Plg52.6817°, Azm109.7562°; N Plg25.0088°, Azm237.4872°; P Plg25.7547°, Azm340.4934°;

Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.65**	**225**	PN	**Pn**	**17 08 07.2**	**+0.4**
KBL	**Kabul**	**2.65**	**225**	Pn	**Pn**	**17 08 07.2**	**+0.4**
GAR	**Garm**	**2.66**	**343**		**Pn**	**17 08 05.6**	**-1.2**
CEP	**Cherat**	**2.67**	**169**	P	**Pn**	**17 08 07.8**	**+0.9**
CEP				S	**Sn**	**17 08 41.0**	**+2.2**
NIL	**Nilore**	**3.22**	**150**	PN	**Pn**	**17 08 15.3**	**+1.1**
NIL	**Nilore**	**3.22**	**150**	Pn	**Pn**	**17 08 15.2**	**+1.1**
THW	**Thamme Wali**	**3.67**	**174**	P	**Pn**	**17 08 19.6**	**-0.6**
SARP	**Sargodha**	**4.66**	**166**	P	**Pn**	**17 08 32.3**	**-1.2**
KSH	**Kashi**	**4.79**	**49**	P	**Pn**	**17 08 31.5**	**-3.9**
KSH				S	Sn	17 09 20.5	-9.3
TAS	**Tashkent**	**5.11**	**343**	PN	**Pn**	**17 08 38.4**	**-1.2**
TAS	**Tashkent**	**5.11**	**343**	Pn	**Pn**	**17 08 38.4**	**-1.2**
THN	**Thein Dam**	**5.42**	**136**	*e*P	**Pn**	**17 08 45.0**	**+1.2**
THN				*e*S	**Sn**	**17 09 44.5**	**-0.3**
IUG	**Iuzhnay**	**5.77**	**351**	*e*P	**Pn**	**17 08 46.0**	**-2.7**
	9.1nm,0.6s,baz=351						
IUG				*e*S	**Sn**	**17 09 48.4**	**-5.1**
	baz=351						
IUG	**Iuzhnay**	**5.77**	**351**	*e*PN	**Pn**	**17 08 46.0**	**-2.7**
IUG				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AML	**Almayashu**	**5.96**	**17**	P	**Pn**	**17 08 51.3**	**-0.3**
	SNR=141						
UCH	**Uchtor**	**6.28**	**22**	P	**Pn**	**17 08 56.1**	**+0.2**
	SNR=16						
DZA	**Taraz**	**6.43**	**0**	*e*P	**Pn**	**17 08 55.1**	**-2.4**
	comp=Z,54nm,0.7s,baz=0.5						
DZA				*e*S	**Sn**	**17 10 06.0**	**-3.5**
	baz=0.5						
DZA	**Taraz**	**6.43**	**0**	*e*PN	**Pn**	**17 08 55.1**	**-2.4**
DZA				pmax	pmax		
	comp=Z,54nm,0.7s						
EKS2	**Erkin-Say**	**6.49**	**16**	P	**Pn**	**17 08 58.4**	**0.0**
	SNR=179						
BHK	**Bhakra**	**6.58**	**138**	*e*P	**Pn**	**17 08 55.2**	**-4.4**
BHK				*ex*	x	17 10 04.0	
AAK	**Ala-Archa**	**6.65**	**21**	P	**Pn**	**17 09 00.6**	**-0.1**
	comp=Z,20nm,0.3s,baz=190,slow=6.3,SNR=411						
AAK				S	**Sn**	**17 10 15.0**	**0.0**
	comp=Z,3.7nm,0.3s,baz=305,slow=19,SNR=3.9						
AAK	**Ala-Archa**	**6.65**	**21**	P	**Pn**	**17 09 00.5**	**-0.1**
	SNR=100						
AAK	**Ala-Archa**	**6.65**	**21**	*de*PN	**Pn**	**17 09 00.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,230nm,0.8s						
AAK	**Ala-Archa**	**6.65**	**21**	Pn	**Pn**	**17 09 00.0**	**-0.6**
BRLS	**Borolday**	**6.67**	**351**	*e*S	Sn	17 10 05.2	-10
	baz=349						
KK31	**Karatay Array**	**6.67**	**355**	P	**Pn**	**17 08 59.5**	**-1.2**
	comp=Z,14nm,0.3s,baz=186,slow=14,SNR=240						
KK31				⇑S	**Sn**	**17 10 11.7**	**-3.5**
	comp=Z,18nm,0.4s,baz=190,slow=27						
KK31	**Karatay Array**	**6.67**	**355**	PN	**Pn**	**17 08 59.1**	**-1.7**
KK31	**Karatay Array**	**6.67**	**355**	Pn	**Pn**	**17 08 59.1**	**-1.7**
KKAR	**Karatay Array**	**6.67**	**355**	PN	**Pn**	**17 08 59.1**	**-1.7**
KKAR	**Karatay Array**	**6.67**	**355**	Pn	**Pn**	**17 08 59.2**	**-1.5**
KKAR	**Karatay Array**	**6.67**	**355**	Pn	**Pn**	**17 08 59.1**	**-1.7**
KBK	**Karagaybulak**	**6.80**	**23**	P	**Pn**	**17 09 02.9**	**+0.2**
	SNR=47						
CHMS	**Chumysh**	**7.06**	**21**	P	**Pn**	**17 09 06.2**	**+0.1**
	SNR=11						
SMLA	**Simla**	**7.21**	**136**	*e*P	**Pn**	**17 09 06.2**	**-1.9**
SMLA				*e*S	**Sn**	**17 10 22.9**	**-5.5**
SMLA				IAML		17 10 27.9	
	comp=N,348nm,0.4s						
SMLA				IAML		17 10 30.1	
	comp=E,408nm,0.6s						
USP	**Ospenovka**	**7.24**	**19**	P	**Pn**	**17 09 08.8**	**+0.3**
	SNR=17						
TKM2	**Tokmak 2**	**7.26**	**26**	P	**Pn**	**17 09 09.1**	**+0.1**
	SNR=34						
TKM2	**Tokmak 2**	**7.26**	**26**	⇑P	**Pn**	**17 09 08.6**	**-0.3**
	comp=E,29nm,0.6s						
TKM2				⇑S	**Sn**	**17 10 34.7**	**+4.9**
	comp=E,15nm,0.8s						
TKM2	**Tokmak 2**	**7.26**	**26**	P	**Pn**	**17 09 08.6**	**-0.3**
TKM2				S	**Sn**	**17 10 34.7**	**+4.9**
SGDS	**Sogindy**	**7.44**	**19**	*e*P	**Pn**	**17 09 09.1**	**-2.3**
	comp=E,9.4nm,0.5s,baz=20						
SGDS	**Sogindy**	**7.44**	**19**	*e*P	**Pn**	**17 09 09.0**	**-2.3**
SGDS				pmax	pmax		
	comp=Z,9.0nm,0.5s						
HRA	**Herat**	**7.68**	**257**	Pn	Pn	17 09 12.0	-2.7
TNSS	**Tian-Shan**	**7.88**	**32**	*e*P	**Pn**	**17 09 16.9**	**-0.7**
	baz=33						
TNSS	**Tian-Shan**	**7.88**	**32**	*e*P	**Pn**	**17 09 16.8**	**-0.7**
AAA	**Alma-Ata**	**8.01**	**31**	*e*P	**Pn**	**17 09 18.1**	**-0.9**
	comp=Z,22nm,0.9s,baz=32						
AAA				*e*S	**Sn**	**17 10 46.2**	**-1.8**
	baz=32						
AAA	**Alma-Ata**	**8.01**	**31**	*e*P	**Pn**	**17 09 18.1**	**-0.9**
AAA				*e*S	**Sn**	**17 10 46.1**	**-1.8**
AAA				pmax	pmax		
	comp=Z,22nm,0.9s						
MDOK	**Medeo**	**8.03**	**32**	*e*P	**Pn**	**17 09 17.9**	**-1.5**
	baz=33						
MDOK				*e*S	**Sn**	**17 10 46.2**	**-2.3**
	baz=33						
MDOK	**Medeo**	**8.03**	**32**	⇑P	**Pn**	**17 09 20.2**	**+0.8**
	comp=Z,14nm,0.8s						
MDOK				S	Sn	17 10 56.9	+8.5
	comp=Z,19nm,0.8s						
MDOK	**Medeo**	**8.03**	**32**	*e*P	**Pn**	**17 09 17.8**	**-1.5**
MDOK				*e*S	**Sn**	**17 10 46.1**	**-2.3**
DDI	**Dehra Dun**	**8.32**	**135**	*e*P	**Pn**	**17 09 24.0**	**+0.7**
DDI				*e*S	**Sn**	**17 10 51.5**	**-4.0**
DDI				IAML		17 10 56.0	
	comp=N,422nm,0.4s						
DDI				IAML		17 10 56.4	
	comp=E,246nm,0.6s						
KUU	**Kurty**	**8.37**	**26**	*e*P	**Pn**	**17 09 21.2**	**-2.6**
	comp=E,14nm,0.8s,baz=27			

ZSN	**Zaisan**	**14.89**	**38**	*eP*		**Pn**	**17 10 50.3**	**-0.4**
GUN	**Gumba**	**14.98**	**121**	*eP*		**Pn**	**17 10 47.6**	**-4.6**
KURBB	**Kurchatov Arra**	**15.09**	**18**	P		**Pn**	**17 10 48.9**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=13							
KURK	**Kurchatov**	**15.20**	**18**	P		**Pn**	**17 10 48.9**	**-5.5**
KURK	**Kurchatov**	**15.20**	**18**	P		**Pn**	**17 10 48.9**	**-5.5**
AB31	**Akbulak array**	**15.24**	**331**	⇑P		**Pn**	**17 10 51.2**	**-3.8**
	comp=Z,12nm,0.7s,baz=144,slow=12,SNR=174							
AB31				⇑S		**Sn**	**17 13 37.7**	**-5.6**
	comp=Z,2.1nm,0.4s,baz=131,slow=26,SNR=4.1							
AB31	**Akbulak array**	**15.24**	**331**	P		**Pn**	**17 10 51.2**	**-3.8**
AB31				S		**Sn**	**17 13 37.7**	**-5.6**
ABKAR	**Akbulak array**	**15.24**	**331**	Pn		**Pn**	**17 10 51.2**	**-3.8**
ABKAR				IAmb	IAmb		17 11 02.4	
	comp=Z,13nm,0.7s							
ABKAR	**Akbulak array**	**15.24**	**331**	Pn		**Pn**	**17 10 51.1**	**-4.0**
JIRN	**Jiri**	**15.35**	**121**	*eP*		**Pn**	**17 10 52.6**	**-4.3**
	comp=Z,40nm,0.4s							
SEM	**Semipalatinsk**	**15.37**	**22**	*eP*		**Pn**	**17 10 56.4**	**-0.5**
	baz=22							
SEM	**Semipalatinsk**	**15.37**	**22**	*eP*		**Pn**	**17 10 56.3**	**-0.5**
RAMN	**Ramite**	**16.08**	**122**	*eP*		**Pn**	**17 11 01.6**	**-4.3**
	comp=Z,29nm,0.5s							
BVAR	**Borovoye Array**	**16.58**	**358**	P		**Pn**	**17 11 10.0**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=200,slow=17,SNR=18							
TAPN	**Taplejung**	**16.61**	**118**	*eP*		**Pn**	**17 11 08.6**	**-3.9**
BRVK	**Borovoye**	**16.62**	**358**	*ceP*		**Pn**	**17 11 09.7**	**-2.4**
BRVK				pmax	pmax			
	comp=Z,11nm,0.8s							
BRVK	**Borovoye**	**16.62**	**358**			**Pn**	**17 11 09.0**	**-3.1**
ODAN	**Odare**	**16.68**	**120**	*eP*		**Pn**	**17 11 09.0**	**-4.4**
	comp=Z,29nm,0.6s							
AKTO	**Aktyubinsk**	**16.95**	**330**	P		**Pn**	**17 11 14.7**	**-1.4**
	comp=Z,3.4nm,0.3s,baz=130,slow=15,SNR=42							
AKTO				S		**Sn**	**17 14 15.2**	**-9.0**
	comp=Z,0.2nm,0.3s,baz=236,slow=18,SNR=2.1							
AKTO				LR	LR		17 18 10.7	
	comp=Z,47nm,21.1s,baz=121,slow=38							
AKTO	**Aktyubinsk**	**16.95**	**330**	⇓P		**Pn**	**17 11 14.1**	**-2.1**
	comp=Z,32nm,0.8s							
AKTO				⇓S		**Sn**	**17 14 19.8**	**-4.4**
	comp=Z,8.0nm,0.8s							
UOSS	**Minazif**	**17.30**	**233**	P		**P**	**17 11 18.4**	**-2.2**
DGZ	**Jazzator, Alta**	**17.67**	**36**	⇓*iP*		**P**	**17 11 23.6**	**-1.1**
DGZ				pmax	pmax			
	comp=Z,5.0nm,0.6s							
LSA	**Lhasa**	**17.93**	**106**	P		**Pn**	**17 11 27.2**	**-1.5**
LSA				pmax	pmax			
	comp=Z,5.0nm,0.6s							
LSA	**Lhasa**	**17.93**	**106**	P		**Pn**	**17 11 27.2**	**-1.5**
LKRN	**Lenkeran, Azer**	**17.99**	**284**	P		**P**	**17 11 27.6**	**-0.5**
SEKA	**Sheki**	**19.35**	**292**	P		**P**	**17 11 44.7**	**+1.7**
MNGR	**Mingechevir, A**	**19.39**	**290**	P		**P**	**17 11 45.2**	**+1.8**
ZKTA	**Zakatala**	**19.83**	**293**	P		**P**	**17 11 49.9**	**+1.7**
ZAA0	**Zalesovo Array**	**19.86**	**24**	P		**P**	**17 11 47.6**	**-0.7**
ZAA0				IAmb	IAmb		17 11 49.5	
	comp=Z,14nm,0.7s							
ZALV	**Zalesovo Beam**	**19.86**	**24**	P		**P**	**17 11 48.2**	**-0.1**
	comp=Z,19nm,0.8s,baz=227,slow=10,SNR=58							
ZALV	**Zalesovo Beam**	**19.86**	**24**	P		**P**	**17 11 47.7**	**-0.6**
GANJ	**Ganja**	**19.96**	**290**	P		**P**	**17 11 51.2**	**+1.6**
HYB	**Hyderabad**	**20.02**	**159**	*i* P		**P**	**17 11 50.0**	**-0.4**
HYB				*e*S		Sn	17 15 43.0	+4.5
LGD	**Lagodekhi**	**20.14**	**293**	P		**P**	**17 11 53.3**	**+1.8**
DDFL	**Dedoflistskaro**	**20.18**	**292**	P		**P**	**17 11 54.7**	**+2.6**
NAX	**Nakhchivan**	**20.55**	**285**	P		**P**	**17 11 57.1**	**+1.1**
SHL	**Shillong**	**20.67**	**116**	P		**P**	**17 11 57.3**	**-0.2**
SHL				pmax	pmax			
	comp=Z,40nm,1.4s							
SHL	**Shillong**	**20.67**	**116**	P		**P**	**17 11 57.3**	**-0.2**
SHL				IAmb	IAmb		17 12 18.5	
	comp=Z,40nm,1.4s							
GNI	**Garni**	**21.14**	**288**	P		**P**	**17 12 02.5**	**+0.1**
	comp=Z,5.9nm,0.5s,baz=140,slow=8.4,SNR=4.3							
GNI	**Garni**	**21.14**	**288**	*ceP*		**P**	**17 12 03.6**	**+1.1**
GNI				pmax	pmax			
	comp=Z,25nm,1.0s							
GNI	**Garni**	**21.14**	**288**	P		**P**	**17 12 03.2**	**+0.7**
GNI				IAmb	IAmb		17 12 12.8	
	comp=Z,19nm,0.9s							
BTNK	**Botanikuri**	**21.19**	**292**	P		**P**	**17 12 05.0**	**+2.1**
SVE	**Sverdlovsk**	**21.61**	**344**	⇓*eP*		**P**	**17 12 07.2**	**+0.2**
SVE				pmax	pmax			
	comp=Z,16nm,0.7s							
ARU	**Arti**	**21.76**	**341**	P		**P**	**17 12 09.3**	**+0.7**
	comp=Z,5.7nm,0.5s,baz=160,slow=6.9,SNR=14							
ARU				LR	LR		17 21 53.3	
	comp=Z,30nm,19.5s,baz=190,slow=40							
ARU	**Arti**	**21.76**	**341**	*c iP*		**P**	**17 12 08.8**	**+0.2**
ARU				*PP		**pP**	**17 12 25.5**	**-3.3**
ARU							17 12 32.2	
ARU				S		**S**	**17 16 05.6**	**+2.3**
ARU				SS		**SnSn**	**17 16 41.9**	**+4.7**
ARU				pmax	pmax			
	comp=Z,14nm,0.9s							
ARU	**Arti**	**21.76**	**341**	P		**P**	**17 12 07.1**	**-1.5**
ARU				IAmb	IAmb		17 12 14.9	
	comp=Z,24nm,0.8s							
NCK	**Nalchik**	**22.30**	**297**	*i* P		**P**	**17 12 17.7**	**+3.1**
NCK				pmax	pmax			
	comp=Z,24nm,0.6s							
GTA	**Gaotai**	**22.64**	**74**	⇑P		**P**	**17 12 20.7**	**+2.5**
GTA				pmax	pmax			
	comp=Z,21nm,0.9s							
GTA				pmax	pmax			
	comp=Z,110nm,5.3s							
GTA				LR	LR			
	comp=Z,86nm,10.9s							
GTA				LR	LR			
	comp=Z,93nm,10.9s							
GTA				LR	LR			
	comp=Z,89nm,12.7s							
KBZ	**Khabaz**	**22.84**	**297**	P		**P**	**17 12 19.9**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=172,slow=7.1,SNR=5.5							
KBZ	**Khabaz**	**22.84**	**297**	⇑*eP*		**P**	**17 12 18.7**	**-1.3**
KBZ				pmax	pmax			
	comp=Z,9.0nm,0.9s							
KIV	**Kislovodsk**	**23.03**	**298**	*eP*		**P**	**17 12 23.0**	**+1.0**
KIV				pmax	pmax			
	comp=Z,28nm,0.9s							
KIV				MLR	MLR			
	comp=Z,118nm,14.0s							
KIV	**Kislovodsk**	**23.03**	**298**	P		**P**	**17 12 23.3**	**+1.4**
KIV				IAmb	IAmb		17 12 58.9	
	comp=Z,10nm,0.6s							
BELG	**Belogornoye**	**23.08**	**321**	P		**P**	**17 12 22.6**	**+0.4**
	comp=Z,12nm,0.6s,baz=195,slow=2.5,SNR=11							
BELG	**Belogornoye**	**23.08**	**321**	⇓*eP*		**P**	**17 12 21.7**	**-0.5**
BELG				pmax	pmax			
	comp=Z,7.0nm,1.1s							
RAYN	**Ar Rayn**	**25.71**	**247**	P		**P**	**17 12 46.5**	**0.0**
RAYN				pmax	pmax			
	comp=Z,4.0nm,1.0s							
RAYN	**Ar Rayn**	**25.71**	**247**	P		**P**	**17 12 46.5**	**0.0**
VRH	**Novokhopyorsk**	**25.72**	**314**	*eP*		**P**	**17 12 47.7**	**+1.5**
VRH				pmax	pmax			
	comp=Z,10.0nm,0.6s							
KIRV	**Kirov**	**26.39**	**334**	P		**P**	**17 12 53.9**	**+1.7**
	comp=Z,16nm,0.6s,baz=137,slow=12,SNR=6.1							
KIRV				LR	LR		17 24 53.2	
	comp=Z,12nm,18.3s,baz=167,slow=40							
KIRV	**Kirov**	**26.39**	**334**	⇑*eP*		**P**	**17 12 53.7**	**+1.6**
VSR	**Storozhevoye**	**27.21**	**313**	*eP*		**P**	**17 12 59.7**	**+0.1**
VSR				pmax	pmax			
	comp=Z,10.0nm,1.3s							
SONM	**Songino Array**	**28.16**	**55**	P		**P**	**17 13 09.3**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=261,slow=8.7,SNR=5.2							
SONM	**Songino Array**	**28.16**	**55**	P		**P**	**17 13 09.6**	**+1.3**
SONM				pmax	pmax			
	comp=Z,3.0nm,1.7s							
SONM	**Songino Array**	**28.16**	**55**	P		**P**	**17 13 09.6**	**+1.3**
BRTR	**Keskin Array B**	**29.68**	**288**	P		**P**	**17 13 22.5**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=88,slow=10,SNR=2.5							
PRGR	**Permogore**	**29.92**	**335**	*eP*		**P**	**17 13 23.1**	**-0.4**
PRGR				pmax	pmax			
	comp=Z,12nm,0.8s							
OBN	**Obninsk**	**30.13**	**319**	⇑*iP*		**P**	**17 13 27.6**	**+2.1**
OBN				*i* *PP		**pP**	**17 13 45.1**	**-3.3**
OBN				*e*			17 14 27.7	
OBN				*e*S		**S**	**17 18 23.8**	**+7.0**
OBN				*e*SS		**SS**	**17 20 30.2**	**+1.3**
OBN				pmax	pmax			
	comp=Z,7.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**30.22**	**119**	P		**P**	**17 13 26.1**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=303,slow=7.9,SNR=7.3							
CMAR				LR	LR		17 27 47.0	
	comp=Z,16nm,18.1s,baz=290,slow=41							
CMAR	**Chiang Mai Arr**	**30.22**	**119**	P		**P**	**17 13 28.1**	**+1.5**
CMAR	**Chiang Mai Arr**	**30.22**	**119**	P		**P**	**17 13 28.1**	**+1.5**
PALK	**Pallekele**	**30.29**	**161**	LR		LR	17 25 00.2	
	comp=Z,37nm,21.6s,baz=111,slow=35							
HHC	**Hu-ho-hao-te**	**31.55**	**70**	*eP*		**P**	**17 13 40.8**	**+2.5**
HHC				pmax	pmax			
	comp=Z,21nm,0.6s							
HHC				pmax	pmax			
	comp=Z,84nm,6.6s							
KLMR	**Klimovskoe**	**31.64**	**331**	*eP*		**P**	**17 13 38.3**	**-0.4**
KLMR				*e*			17 14 43.8	
KLMR				pmax	pmax			
	comp=Z,11nm,1.0s							
KLMR	**Klimovskoe**	**31.64**	**331**	*eP*		**P**	**17 13 38.4**	**-0.3**
KLMR				AMP			17 13 42.6	
	comp=Z,11nm,1.0s							
KLMR				*ePP		**PnPn**	**17 14 43.8**	**-2.5**
AKASG	**Malin Array Be**	**33.17**	**309**	P		**P**	**17 13 53.2**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=82,slow=7.0,SNR=14							
AKASG	**Malin Array Be**	**33.17**	**309**	P		**P**	**17 13 53.7**	**+1.5**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.9s							
AKASG	**Malin Array Be**	**33.17**	**309**	P		**P**	**17 13 53.7**	**+1.5**
AKBB	**Malin Array Si**	**33.17**	**309**	⇑*eP*		**P**	**17 13 52.9**	**+0.8**
AKBB	**Malin Array Si**	**33.17**	**309**	P		**P**	**17 13 52.8**	**+0.6**
AKBB				IAmb	IAmb		17 14 18.4	
	comp=Z,28nm,1.6s							
NRIK	**Noril'sk**	**34.13**	**10**	P		**P**	**17 14 01.6**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=219,slow=9.8,SNR=3.8							
NRIK	**Noril'sk**	**34.13**	**10**	⇓*eP*		**P**	**17 14 02.1**	**+1.8**
NRIK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
NRIK	**Noril'sk**	**34.13**	**10**	IAmb	IAmb		17 14 40.1	
	comp=Z,3.6nm,0.9s							
NACGM	**Naroch**	**35.42**	**316**	*i* P		**P**	**17 14 13.6**	**+2.1**
NACGM				*i* P		**P**	**17 14 13.6**	**+2.1**
NACGM				*i* P		**P**	**17 14 13.6**	**+2.1**
NACGM				*i* pP		**pP**	**17 14 32.4**	**-2.6**
NACGM				*i* sP		**sP**	**17 14 42.0**	**-4.9**
NACGM				*i* PP		**PnPn**	**17 15 23.7**	**-10**
NACGM				*i* S		S	17 19 27.5	-11
NACGM				*i* sS		ScP	17 19 58.3	-17
NACGM				*i* SS		SnSn	17 21 38.0	-30
NACGM				*i* LQ		LQ	17 24 08.2	
NACGM				*i* LR		LR	17 27 06.8	
BURAR	**Bucovina Array**	**35.52**	**303**	P		**P**	**17 14 14.1**	**+1.5**
BURAR	**Bucovina Array**	**35.52**	**303**	P		**P**	**17 14 14.1**	**+1.5**
BUR08	**Bucovina Ar. S**	**35.53**	**303**	P		**P**	**17 14 14.3**	**+1.5**
BUR08				IAmb	IAmb		17 14 45.6	
	comp=Z,16nm,1.5s							
IDID	**Didziasalis**	**35.54**	**316**	*eP*		**P**	**17 14 14.4**	**+1.9**
IIGN	**Ignalina**	**35.83**	**316**	*eP*		**P**	**17 14 17.3**	**+2.2**
ISAL	**Salakas**	**35.94**	**317**	*eP*		**P**	**17 14 17.8**	**+1.8**
VSU	**Vasula**	**36.38**	**322**	*eP*		**P**	**17 14 21.2**	**+1.6**
PABE	**Paberze**	**37.12**	**316**	*eP*		**P**	**17 14 27.8**	**+1.8**
IDI	**Anoyia**	**37.35**	**282**	P		**P**	**17 14 29.7**	**+1.4**
LVZ	**Lovozero**	**37.59**	**338**	P		**P**	**17 14 31.3**	**+1.4**
LVZ				pmax	pmax			
	comp=Z,71nm,1.7s							
LVZ	**Lovozero**	**37.59**	**338**	P		**P**	**17 14 31.3**	**+1.4**
FIA1	**FINESS Array S**	**37.66**	**326**	P		**P**	**17 14 31.8**	**+1.3**
FIA1				IAmb	IAmb		17 14 58.9	
	comp=Z,16nm,1.2s							
FINES	**FINESS Array B**	**37.66**	**326**	P		**P**	**17 14 31.8**	**+1.3**
	comp=Z,4.4nm,0.5s,baz=120,slow=9.1,SNR=32							
MTSE	**Matsula**	**37.91**	**321**	*eP*		**P**	**17 14 33.4**	**+0.8**
NJ2	**Nanjing**	**39.24**	**82**	*eP*		**P**	**17 14 44.8**	**+0.7**
NJ2				pmax	pmax			
	comp=Z,3.0nm,0.5s							
MORC	**Moravsky Berou**	**40.59**	**307**	*eP*		**P**	**17 14 56.8**	**+1.7**
KEV	**Kevo**	**40.94**	**338**	P		**P**	**17 14 58.8**	**+1.2**
KEV				pmax	pmax			
	comp=Z,71nm,1.7s							
KEV	**Kevo**	**40.94**	**338**	P		**P**	**17 14 58.8**	**+1.2**
VRAC	**Vranov**	**41.23**	**306**	*eP*		**P**	**17 15 03.6**	**+3.3**
ARCES	**ARCESS Array B**	**41.28**	**338**	P		**P**	**17 15 01.9**	**+1.5**
	comp=Z,9.3nm,0.7s,baz=112,slow=8.0,SNR=22							
ARCES				LR	LR		17 31 37.8	
	comp=Z,51nm,18.7s,baz=285,slow=35							
ARCES	**ARCESS Array B**	**41.28**	**338**	P		**P**	**17 15 02.0**	**+1.5**
ARCES	**ARCESS Array B**	**41.28**	**338**	IAmb	IAmb		17 15 04.3	
	comp=Z,8.7nm,0.7s							
GSI	**Gunungsitoli**	**42.59**	**139**	P		**P**	**17 15 13.5**	**+1.7**
GSI				IAmb	IAmb		17 15 14.3	
	comp=Z,40nm,1.7s							
BRG	**Berggiesshubel**	**42.85**	**308**	*eP*		**P**	**17 15 15.8**	**+2.3**
BRG				Amp			17 15 17.5	
	comp=Z,4.3nm,0.9s							
DEL	**Delary**	**42.87**	**317**	*i* P		**P**	**17 15 15.0**	**+1.5**
GERES	**GERESS Array B**	**43.16**	**305**	P		**P**	**17 15 16.7**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=64,slow=9.1,SNR=4.6							
CLL	**Collm**	**43.41**	**309**	e(P)		**P**	**17 15 21.0**	**+3.0**
CLL	**Collm**	**43.41**	**309**	*eP*		**P**	**17 15 21.0**	**+3.0**
YAK	**Yakutsk**	**43.86**	**35**	⇑*eP*		**P**	**17 15 22.6**	**+1.2**
YAK				pmax	pmax			
	comp=Z,6.0nm,0.8s							
NC405	**NORSAR Array S**	**44.33**	**323**	P		**P**	**17 15 26.2**	**+1.0**
NC602	**NORSAR Array S**	**44.38**	**323**	P		**P**	**17 15 25.2**	**-0.3**
NC303	**NORSAR Array S**	**44.51**	**323**	P		**P**	**17 15 27.3**	**+0.7**
NC303				IAmb	IAmb		17 15 46.0	
	comp=Z,37nm,1.4s							
NB201	**NORSAR Array S**	**44.53**	**323**	P		**P**	**17 15 27.9**	**+1.1**
NOA	**NORSAR Array B**	**44.57**	**323**	P		**P**	**17 15 28.1**	**+0.9**
	comp=Z,5.9nm,0.5s,baz=96,slow=7.7,SNR=29							
NOA				LR	LR		17 33 57.2	
	comp=Z,13nm,21.2s,baz=280,slow=36							
KSRS	**Korea Array**	**44.66**	**71**	P		**P**	**17 15 29.2**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=272,slow=6.9,SNR=4.6							
NAO01	**NORSAR Array S**	**44.71**	**323**	P		**P**	**17 15 28.6**	**+0.5**
NBO00	**NORSAR Array S**	**44.78**	**323**	P		**P**	**17 15 29.3**	**+0.6**
NBO00				IAmb	IAmb		17 15 30.1	
	comp=Z,12nm,0.8s							
NC204	**NORSAR Array S**	**44.80**	**323**	P		**P**	**17 15 30.0**	**+1.0**
KLR	**Kul'dur**	**44.97**	**54**	P		**P**	**17 15 31.4**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=238,slow=7.6,SNR=4.5							
KLR				LR	LR		17 34 44.0	
	comp=Z,26nm,19.6s,baz=6.0,slow=36							
KONO	**Kongsberg**	**45.28**	**321**	P		**P**	**17 15 33.5**	**+0.8**
KONO				pmax	pmax			
	comp=Z,40nm,1.5s							
KONO	**Kongsberg**	**45.28**	**321**	P		**P**	**17 15 33.5**	**+0.8**
TIXI	**Tiksi**	**45.73**	**22**	P		**P**	**17 15 36.5**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=277,slow=7.4,SNR=16							
TIXI	**Tiksi**	**45.73**	**22**	*eP*		**P**	**17 15 36.4**	**+0.4**
TIXI				pmax	pmax			
	comp=Z,43nm,2.5s							
TIXI	**Tiksi**	**45.73**	**22**	P		**P**	**17 15 36.2**	**+0.2**
SPA0	**Spitsbergen Ar**	**47.59**	**347**	P		**P**	**17 15 53.8**	**+3.2**
SPA0				IAmb	IAmb		17 15 55.8	
	comp=Z,16nm,1.1s							
SENIN	**Lac Senin/Sane**	**47.82**	**303**	P		**P**	**17 15 54.4**	**+1.4**
SENIN				IAmb	IAmb		17 16 28.7	
	comp=Z,4.8nm,1.1s							
KBS	**Kingsbay**	**48.71**	**347**	P		**P**	**17 16 02.8**	**+3.7**
KBS				pmax	pmax			
	comp=Z,69nm,1.7s							
KBS	**Kingsbay**	**48.71**	**347**	P		**P**	**17 16 02.8**	**+3.7**
ASAJ	**Asahikawa**	**53.37**	**58**	LR	LR		17 40 56.6	
	comp=Z,38nm,18.2s,baz=172,slow=38							
DAG	**Danmarks Havn**	**54.84**	**344**	*i* P		**P**	**17 16 46.9**	**+2.1**
DAG				IAmb	IAmb		17 16 48.3	
	comp=Z,8.8nm,0.7s							
DAG	**Danmarks Havn**	**54.84**	**344**	*i* P		**P**	**17 16 46.8**	**+2.1**
DAG				pmax	pmax			
	comp=Z,9.0nm,0.7s							
LEM	**Lembang**	**54.88**	**134**	LR	LR		17 42 22.1	
	comp=Z,26nm,18.1s,baz=68,slow=38							
DBG	**Daneborg**	**55.71**	**341**	*i* P		**P**	**17 16 53.9**	**+3.0**
DBG				IAmb	IAmb		17 16 55.0	
	comp=Z,2.9nm,0.6s							
TOLI2	**Tolitoli**	**57.64**	**116**	P		**P**	**17 17 06.9**	**+1.4**
TOLI2				IAmb	IAmb		17 17 31.9	
	comp=Z,5.9nm,1.0s							
NEEM	**North Greenlan**	**61.13**	**348**	*i* P		**P**	**17 17 31.7**	**+2.7**
NEEM				IAmb	IAmb		17 17 32.3	
	comp=Z,3.4nm,0.9s							
SUMG	**Summit**	**61.19**	**341**	*i* P		**P**	**17 17 33.2**	**+3.7**
SUMG				IAmb	IAmb		17 17 33.6	
	comp=Z,21nm,0.7s							
SUMG	**Summit**	**61.19**	**341**	*i* P		**P**	**17 17 33.1**	**+3.7**
SUMG				pmax	pmax			
	comp=Z,21nm,0.7s							
SUMG	**Summit**	**61.19**	**341**	P		**P**	**17 17 33.5**	**+4.0**
SUMG				IAmb	IAmb		17 17 33.9	
	comp=Z,9.6nm,0.8s							
TOA0	**Torodi Ar. Sit**	**65.96**	**269**	P		**P**	**17 18 00.6**	**-0.7**
TORD	**Torodi Ar. Bea**	**65.96**	**269**	P		**P**	**17 18 00.7**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=47,slow=6.3,SNR=15							
TORD	**Torodi Ar. Bea**	**65.96**	**269**	P		**P**	**17 18 00.0**	**-1.3**
SOEI	**Soe**	**67.72**	**122**	P		**P**	**17 18 13.0**	**+0.5**
SOEI				IAmb	IAmb		17 18 47.5	
	comp=Z,7.5nm,0.9s							
TOLK	**Toolik Lake Re**	**70.91**	**15**	P		**P**	**17 18 32.1**	**+0.8**
TOLK				IAmb	IAmb		17 18 33.5	
	comp=Z,3.3nm,0.8s							
INK	**Inuvik**	**73.91**	**9**	P		**P**	**17 18 50.7**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=2.8,slow=5.1,SNR=7.7							
INK	**Inuvik**	**73.91**	**9**	P		**P**	**17 18 50.3**	**+1.2**
INK				IAmb	IAmb		17 19 23.7	
	comp=Z,5.8nm,1.3s							
COLA	**College**	**74.45**	**16**	⇑*eP*		**P**	**17 18 54.3**	**+2.0**
COLA				pmax	pmax			
	comp=Z,26nm,2.9s							
ILAR	**Eielson Array**	**74.76**	**16**	P		**P**	**17 18 55.2**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=330,slow=5.9,SNR=5.7							
LBTB	**Lobatse**	**74.81**	**222**	P		**P**	**17 18 56.5**	**+1.6**
LBTB				pmax	pmax			
	comp=Z,35nm,1.8s							
LBTB	**Lobatse**	**74.81**	**222**	P		**P**	**17 18 56.5**	**+1.6**
LBTB				IAmb	IAmb		17 19 22.7	
	comp=Z,35nm,1.8s							
KTH	**Kantishna Hill**	**74.83**	**18**	P		**P**	**17 18 55.1**	**+0.5**
KTH				IAmb	IAmb		17 19 27.6	
	comp=Z,37nm,1.8s							
SML	**Sawmill**	**76.95**	**18**	P		**P**	**17 19 08.8**	**+2.1**
SML				pmax	pmax			
	comp=Z,37nm,1.4s							
BOSA	**Boshof**	**77.87**	**220**	P		**P**	**17 19 12.8**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=52,slow=5.6,SNR=7.6							
YKA	**Yellowknife Ar**	**81.28**	**3**	P		**P**	**17 19 31.5**	**+1.4**
	comp=Z,2.2nm,0.8s,baz=351,slow=5.1,SNR=45							
WRA	**Warramunga Arr**	**81.76**	**122**	P		**P**	**17 19 33.0**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=324,slow=4.9,SNR=9.0							
WRA	**Warramunga Arr**	**81.76**	**122**	P		**P**	**17 19 33.0**	**-0.3**
WRA	**Warramunga Arr**	**81.76**	**122**	IAmb	IAmb		17 19 38.9	
	comp=Z,0.2nm,0.5s							
ASAR	**Alice Springs**	**84.03**	**125**	P		**P**	**17 19 44.8**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=310,slow=5.1,SNR=14							
PLCA	**Paso Flores**	**150.04**	**250**	PKPbc		**PKPbc**	**17 27 04.5**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=162,slow=3.2,SNR=4.7							

HEL ***07*** *17:12:17.5±0.0, 67.19N×20.67E, h1km, ML1.5, ML2.5(UPP), Confirmed Induced event*
BER ***07*** *17:12:18.4±1.7, 67.11N×20.79E, h1km, ML1.3, Confirmed Induced event*

UPP 07 17:12:16.6±0.1, 67.18N×20.66E, h0km, ML2.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.77**	**328**	P		P	Pg	17 12 31.1	-0.2
RATU				S		S	Sg	17 12 41.6	+0.3
RATU	**Laukkuluspa**	**0.77**	**328**	*i* P		P	Pg	17 12 31.1	-0.2
RATU				*i* S		S	Sg	17 12 41.6	+0.3
KUA	**Kurravaara**	**0.79**	**351**	P		P	Pg	17 12 31.4	-0.3
KUA	**Kurravaara**	**0.79**	**351**	*i* P		P	Pg	17 12 31.4	-0.3
NIKU	**Nikkaluokta**	**0.93**	**319**	P		P	Pg	17 12 34.2	-0.3
NIKU	**Nikkaluokta**	**0.93**	**319**	*eP*		P	Pg	17 12 34.2	-0.3
PAJU	**Pajala**	**0.97**	**98**	P		P	Pg	17 12 34.9	-0.3
PAJU	**Pajala**	**0.97**	**98**	*eP*		P	Pg	17 12 34.7	-0.5
PAJU				*e*S		S	Sg	17 12 47.4	-0.4
LANU	**Lannavaara**	**1.02**	**30**	P		P	Pg	17 12 35.6	-0.5
LANU	**Lannavaara**	**1.02**	**30**	*eP*		P	Pg	17 12 35.4

KAN09 Caldwell North 0.80 354 Pg **Pg** **17 25 27.5 -0.3**
KAN09 Sg **Sb** **17 25 38.5 -0.7**
KAN05 Bluff City Nor 0.82 340 **Pg** **17 25 27.8 -0.3**
KAN05 Sg **Sg** **17 25 39.0 +0.1**
KAN01 Argonia South 0.84 347 **Pg** **17 25 28.1 -0.3**
KAN01 Sg **Sg** **17 25 39.6 +0.2**
KAN10 Anthony SW Sta 0.91 330 **Pg** **17 25 29.3 -0.5**
KAN10 Sg **Sg** **17 25 41.6 -0.1**
OKCFA Oklahoma City 0.92 177 **Pg** **17 25 29.3 -0.7**
OKCFA Sg **Sg** **17 25 41.5 -0.4**
OKCFA Oklahoma City 0.92 177 P **Pg** **17 25 29.2 -0.7**
baz=356,SNR=11
OKCFA S **Sg** **17 25 41.7 -0.2**
baz=356
OKCFA Oklahoma City 0.92 177 P 17 25 29.2
baz=356,SNR=11
OKCFA S 17 25 41.7
baz=356
OKCSW OKLAHOMA CITY 0.93 176 **Pg** **17 25 29.4 -0.7**
OKCSW Sg **Sg** **17 25 41.9 -0.3**
KAN08 Anthony NE Sta 0.96 338 **Pg** **17 25 30.3 -0.5**
KAN08 Sg **Sg** **17 25 43.2 -0.1**
T35A Sooner Cattle 0.99 54 **Pg** **17 25 31.0 -0.4**
T35A Sg **Sg** **17 25 43.9 -0.4**
T35B Sooner Cattle 0.99 54 P **Pg** **17 25 31.0 -0.4**
baz=234,SNR=442
T35B S **Sg** **17 25 44.0 -0.3**
baz=234
T35B Sooner Cattle 0.99 54 P 17 25 31.0
baz=234,SNR=442
T35B S 17 25 44.0
baz=234
KAN12 Harper NE Stat 1.03 338 **Pg** **17 25 31.6 -0.6**
KAN12 Sg **Sb** **17 25 45.5 -0.4**
FNO Franklin 1.08 175 **Pg** **17 25 32.7 -0.3**
FNO Sg **Sg** **17 25 47.3 +0.2**
U32A Winter Ranch, 1.20 273 **Pg** **17 25 34.0 -1.3**
U32A Sg **Sg** **17 25 50.3 -0.6**
U32A Winter Ranch, 1.20 273 P **Pg** **17 25 34.0 -1.3**
baz=92,SNR=102
U32A S **Sg** **17 25 50.4 -0.5**
baz=92
U32A Winter Ranch, 1.20 273 P 17 25 34.0
baz=92,SNR=102
U32A S 17 25 50.4
baz=92
TUL1 Leonard 1.46 106 P **Pn** **17 25 38.4 -0.3**
baz=287,SNR=137
TUL1 S **Sn** **17 25 58.3 +0.5**
baz=287
TUL1 Leonard 1.46 106 P 17 25 38.2
baz=287,SNR=130
TUL1 S 17 25 58.4
baz=287
TUL1 Leonard 1.46 106 P 17 25 38.4
baz=287,SNR=137
TUL1 S 17 25 58.3
baz=287
X34A Smith Ranch, M 1.75 189 **Pn** **17 25 43.6 +1.0**
X34A IAmb_Lg 17 26 11.2
comp=Z,469nm,0.7s
WMOK Wichita Mounta 1.90 213 **Pn** **17 25 45.0 +0.2**
WMOK IAmb_Lg 17 26 12.5
comp=Z,265nm,0.8s
WMOK Wichita Mounta 1.90 213 P **Pn** **17 25 45.1 +0.4**
baz=32,SNR=396
WMOK Wichita Mounta 1.90 213 P 17 25 45.2
baz=32
WMOK S 17 26 10.8
baz=32
WMOK Wichita Mounta 1.90 213 P 17 25 45.1
baz=32,SNR=396
R32A Long Quarter, 2.29 336 Pn **Pn** **17 25 51.0 +0.8**
R32A IAmb_Lg 17 26 30.5
comp=Z,269nm,0.9s
R32A Long Quarter, 2.29 336 P **Pn** **17 25 50.5 +0.4**
baz=155
R32A S **Sn** **17 26 19.5 +1.1**
baz=155
R32A Long Quarter, 2.29 336 P 17 25 50.5
baz=155
R32A S 17 26 19.5
baz=155
X37A Clayton 2.47 134 **Pn** **17 25 53.2 +0.7**
X37A Clayton 2.47 134 P **Pn** **17 25 53.4 +0.8**
baz=315,SNR=108
X37A Clayton 2.47 134 P 17 25 53.4
baz=315,SNR=108
U38A Gravette 2.53 87 **Pn** **17 25 54.1 +0.8**
U38A Gravette 2.53 87 P **Pn** **17 25 54.0 +0.6**
baz=268,SNR=33
U38A Gravette 2.53 87 P 17 25 54.0
baz=268,SNR=33
KSU1 Kansas State U 2.85 14 Pn **Pn** **17 25 58.7 +0.8**
KSU1 Kansas State U 2.85 14 P 17 25 58.3
baz=195
HHAR Hobbs 2.89 90 **Pn** **17 25 59.1 +0.8**
Z35A Perchaven, San 3.00 176 S 17 26 37.5
baz=356
Z35A Perchaven, San 3.01 176 Pn **Pn** **17 26 00.8 +0.8**
Z35A Perchaven, San 3.01 176 S **Sn** **17 26 37.5 +1.5**
baz=356
CBKS Cedar Bluff 3.04 325 **Pn** **17 26 01.0 +0.5**
CBKS Cedar Bluff 3.04 325 P **Pn** **17 26 00.9 +0.5**
baz=144,SNR=12
CBKS Cedar Bluff 3.04 325 P 17 26 00.8
baz=144
CBKS Sb 17 26 46.0
baz=144
CBKS Cedar Bluff 3.04 325 P 17 26 00.9
baz=144,SNR=12
W39A Magazine 3.24 109 **Pn** **17 26 03.9 +0.7**
W39A IAmb_Lg 17 27 01.2
comp=Z,236nm,0.8s
W39A Magazine 3.24 109 P **Pn** **17 26 03.8 +0.6**
baz=292
W39A Magazine 3.24 109 P 17 26 03.7
baz=292,SNR=21
W39A Sb 17 26 52.0
baz=292
W39A Magazine 3.24 109 P 17 26 03.8
baz=292
S39A Bolivar 3.62 67 **Pn** **17 26 09.1 +0.8**
S39A IAmb_Lg 17 27 10.1
comp=Z,355nm,1.1s
S39A Bolivar 3.62 67 P **Pn** **17 26 09.2 +0.8**
baz=249,SNR=30
S39A Bolivar 3.62 67 P 17 26 09.2
baz=249,SNR=30
MIAR Mount Ida 3.68 118 Pn **Pn** **17 26 10.2 +1.0**
MIAR Mount Ida 3.68 118 P **Pn** **17 26 10.0 +0.9**
baz=300,SNR=59
MIAR Mount Ida 3.68 118 P 17 26 10.1
baz=300,SNR=58
MIAR S 17 26 53.8
baz=300
MIAR Mount Ida 3.68 118 P 17 26 10.0
baz=300,SNR=59
AMTX Amarillo 3.69 248 **Pn** **17 26 09.7 +0.2**
AMTX IAmb_Lg 17 27 12.9
comp=Z,377nm,0.9s
AMTX Amarillo 3.69 248 P 17 26 10.5
baz=66
AMTX Sb 17 27 06.2
baz=66
Z38A Mt. Pleasant 3.71 145 **Pn** **17 26 09.9 +0.3**
Z38A IAmb_Lg 17 27 14.5
comp=Z,210nm,0.8s
U40A Yellville 3.76 88 **Pn** **17 26 10.1 -0.2**
U40A IAmb_Lg 17 27 11.0
comp=Z,258nm,0.7s
U40A Yellville 3.76 88 P **Pn** **17 26 10.2 -0.2**
baz=271
U40A Yellville 3.76 88 P 17 26 10.2
baz=271,SNR=9.7
U40A S 17 26 54.9
baz=271
U40A Yellville 3.76 88 P 17 26 10.2
baz=271
U40A P 17 26 10.2
baz=271
ABTX Abilene, Hawle 4.10 206 **Pn** **17 26 13.9 -1.1**
ABTX Abilene, Hawle 4.10 206 Sb 17 27 17.8
baz=25
X40A Basin Creek Fa 4.25 114 **Pn** **17 26 17.9 +1.0**
X40A IAmb_Lg 17 27 28.2
comp=Z,154nm,0.9s
X40A Basin Creek Fa 4.25 114 P **Pn** **17 26 18.0 +1.1**
baz=297,SNR=14
X40A Basin Creek Fa 4.25 114 P 17 26 18.0
baz=297,SNR=16
X40A Basin Creek Fa 4.25 114 P 17 26 18.0
baz=297,SNR=14
X40A P 17 26 18.0
baz=297,SNR=14
MGMO Mountain Grove 4.29 77 Pn **Pn** **17 26 18.4 +0.8**
MGMO IAmb_Lg 17 27 27.8
comp=Z,275nm,1.2s
WHTX Lake Whitney, 4.33 179 **Pn** **17 26 18.1 -0.1**
WHTX Lake Whitney, 4.33 179 P **Pn** **17 26 18.3 +0.1**
baz=359,SNR=9.9
WHTX Lake Whitney, 4.33 179 P 17 26 18.7
baz=359
WHTX S 17 27 09.4
baz=359
WHTX Lake Whitney, 4.33 179 P 17 26 18.3
baz=359,SNR=9.9
WHAR Wooly Hollow 4.37 102 Pn **Pn** **17 26 18.5 -0.3**
WHAR IAmb_Lg 17 27 32.4
comp=Z,190nm,0.9s
FCAR Ozark Folk Cen 4.39 94 **Pn** **17 26 19.3 +0.4**
FCAR IAmb_Lg 17 27 31.0
comp=Z,185nm,0.9s
N33A J Bar K, Exete 4.40 1 Pn **Pn** **17 26 18.7 -0.4**
N33A IAmb_Lg 17 27 43.4
comp=Z,190nm,0.9s
W41B Gary Mavity, V 4.44 104 P 17 26 20.3
baz=287,SNR=7.1
W41B Sb 17 27 27.2
baz=287
WLAR White Oak Lake 4.48 125 Pn **Pn** **17 26 20.8 +0.7**
WLAR IAmb_Lg 17 27 35.3
comp=Z,103nm,1.0s
P38A Dawn 4.55 43 **Pn** **17 26 21.3 +0.1**
P38A IAmb_Lg 17 27 38.8
comp=Z,98nm,0.7s
237A Washetta, Mont 4.55 161 Pn **Pn** **17 26 20.9 -0.3**
237A IAmb_Lg 17 27 46.3
comp=Z,103nm,0.8s
R40A Maddies Statio 4.62 63 **Pn** **17 26 22.7 +0.6**
R40A Maddies Statio 4.62 63 P **Pn** **17 26 22.6 +0.5**
baz=246,SNR=29
R40A Maddies Statio 4.62 63 P 17 26 22.6
baz=246,SNR=29
N35A Tabor 4.75 17 **Pn** **17 26 23.5 -0.5**
KSCO Kaye Shedlock' 4.86 305 **Pn** **17 26 24.8 -0.7**
KSCO Kaye Shedlock' 4.86 305 P 17 26 25.4
baz=122
MSTX Muleshoe 4.91 243 **Pn** **17 26 25.7 -0.5**
MSTX Muleshoe 4.91 243 P 17 26 26.7
baz=60
Z41A Richland Creek 4.95 127 P **Pn** **17 26 26.7 +0.1**
baz=310
Z41A Richland Creek 4.95 127 P 17 26 26.7
baz=310
Z41A S 17 27 23.5
baz=310
Z41A Richland Creek 4.95 127 P 17 26 26.7
baz=310
Z41A P 17 26 26.7
baz=310
BGNE Belgrade 5.09 355 **Pn** **17 26 29.1 +0.5**
BGNE Belgrade 5.09 355 P 17 26 28.6
baz=174
BGNE S 17 27 26.8
baz=174
NATX Nacogdoches 5.14 152 IAmb_Lg 17 28 05.3
comp=Z,132nm,0.9s
LCAR Lake Charles 5.15 91 **Pn** **17 26 29.1 -0.3**
LCAR IAmb_Lg 17 27 57.7
comp=Z,139nm,0.9s
CCAR Cane Creek 5.29 115 IAmb_Lg 17 28 06.7
comp=Z,101nm,0.9s
CCM Cathedral Cave 5.29 69 **Pn** **17 26 31.8 +0.5**
CCM Cathedral Cave 5.29 69 P 17 26 31.8
baz=253
P40A Paris 5.37 52 **Pn** **17 26 32.6 +0.2**
P40A IAmb_Lg 17 28 07.4
comp=Z,143nm,0.9s
435B Jarrell 5.54 181 Pn **Pn** **17 26 34.0 -0.7**
435B IAmb_Lg 17 28 13.7
comp=Z,136nm,0.9s
N38A Joes South For 5.57 36 **Pn** **17 26 34.6 -0.6**
N38A IAmb_Lg 17 28 11.6
comp=Z,125nm,0.8s
N38A Joes South For 5.57 36 P **Pn** **17 26 34.7 -0.6**
baz=218,SNR=9.3
N38A Joes South For 5.57 36 P 17 26 34.7
baz=218,SNR=9.3
T25A Trinidad 5.59 280 **Pn** **17 26 36.7 +1.0**
T25A IAmb_Lg 17 28 12.8
comp=Z,145nm,0.9s
T25A Trinidad 5.59 280 P 17 26 36.4
baz=96
HBAR Harrisburg 5.62 96 Pn **Pn** **17 26 39.0 +3.2**
L34A Svensen Farm, 5.69 9 **Pn** **17 26 37.7 +0.9**
PBMO Poplar Bluff 5.72 83 **Pn** **17 26 39.6 +2.3**
PBMO IAmb_Lg 17 28 23.1
comp=Z,196nm,0.8s
OGNE Ogallala 5.80 324 **Pn** **17 26 38.2 -0.2**
OGNE IAmb_Lg 17 28 25.6
comp=Z,131nm,0.7s
OGNE Ogallala 5.80 324 P 17 26 39.1
baz=141
FVM French Village 5.90 72 IAmb_Lg 17 28 19.1
comp=Z,184nm,0.8s
LPAR Lepanto 5.90 95 IAmb_Lg 17 28 22.6
comp=Z,153nm,0.7s
GNAR Gosnell 6.08 91 IAmb_Lg 17 28 41.4
comp=Z,228nm,0.8s
JCT Junction City 6.14 199 **Pn** **17 26 43.6 +0.4**
143A Socs Landing, 6.21 124 IAmb_Lg 17 28 45.7
comp=Z,104nm,1.0s
SLM Saint Louis 6.23 66 Pn **Pn** **17 26 43.6 -0.6**
K31A O'Neill 6.35 352 **Pn** **17 26 44.9 -1.0**
SCIA State Center 6.49 30 **Pn** **17 26 45.9 -1.9**
LNXT Lenox 6.49 90 Pn **Pn** **17 26 47.2 -0.6**
HALT Halls 6.63 91 Pn **Pn** **17 26 50.1 +0.4**
HICK Hickman 6.68 86 Pn **Pn** **17 26 52.0 +1.5**
S44A Carbondale 6.75 76 **Pn** **17 26 50.3 -1.0**
SIUC Southern Illin 6.78 76 **Pn** **17 26 52.0 +0.2**
N41A Harden Midland 6.80 48 **Pn** **17 26 52.7 +0.6**
OXF Oxford 6.86 103 **Pn** **17 26 52.3 -0.7**
OXF IAmb_Lg 17 28 58.8
comp=Z,123nm,0.8s
W45A Hickory Valley 6.88 97 IAmb_Lg 17 29 00.3
comp=Z,164nm,0.9s
Y45A Yeager Farm, C 6.98 108 IAmb_Lg 17 29 07.0
comp=Z,82nm,0.8s
GDL2 Guadalupe Moun 7.01 236 Pn **Pn** **17 26 55.0 -0.1**
P43A Skaggs, Pawnee 7.12 60 **Pn** **17 26 54.8 -1.7**
T45A Paducah 7.16 82 Pn **Pn** **17 26 56.4 -0.6**
Q44A Meyer Farm, Va 7.21 67 Pn **Pn** **17 26 58.4 +0.6**
ISCO Idaho Springs 7.26 301 **Pn** **17 26 56.4 -2.3**
K38A Parkersburg 7.29 29 **Pn** **17 26 57.5 -1.3**
K38A IAmb_Lg 17 29 12.3
comp=Z,102nm,0.8s
ANMO Albuquerque 7.41 262 Pg **Pb** **17 27 25.2 +4.1**
comp=Z,0.4nm,0.3s,baz=75,slow=16,SNR=6.9
ANMO Lg Lg 17 29 01.3
comp=Z,2.6nm,0.3s,baz=356,slow=16,SNR=9.9
ANMO Albuquerque 7.41 262 **Pn** **17 26 59.1 -1.5**
ANMO IAmb_Lg 17 29 15.1
comp=Z,53nm,1.2s
ECSD EROS Data Cent 7.42 5 **Pn** **17 26 59.4 -1.2**
ECSD IAmb_Lg 17 29 15.8
comp=Z,84nm,1.1s
ECSD EROS Data Cent 7.42 5 P **Pn** **17 26 59.5 -1.1**
baz=186,SNR=12
ECSD EROS Data Cent 7.42 5 P 17 26 59.8
baz=186
ECSD EROS Data Cent 7.42 5 P 17 26 59.5
baz=186,SNR=12
L40A Anamosa 7.52 39 IAmb_Lg 17 29 13.8
comp=Z,106nm,1.0s
HDIL Hopedale 7.70 54 **Pn** **17 27 04.5 +0.1**
HDIL IAmb_Lg 17 29 29.1
comp=Z,145nm,0.7s
HDIL Hopedale 7.70 54 P 17 27 04.9
baz=239,SNR=8.5
BNM Barren Site 7.77 256 **Pn** **17 27 06.2 +0.6**
PLAL Pickwick Lake 7.80 97 Pn **Pn** **17 27 04.8 -1.0**
PLAL IAmb_Lg 17 29 20.3
comp=Z,60nm,0.9s
WVT Waverly 7.83 89 **Pn** **17 27 06.1 -0.2**
WVT IAmb_Lg 17 29 21.4
comp=Z,54nm,0.8s
PHWY Pilot Hill 7.94 311 **Pn** **17 27 06.4 -1.5**
MNTX Cornudas Mount 8.00 237 **Pn** **17 27 08.6 0.0**
N23A Red Feather La 8.01 307 P 17 27 09.2
baz=122
LENM Lemitar 8.03 257 Pn **Pn** **17 27 09.3 +0.1**
O44A Mansfield 8.07 59 Pn **Pn** **17 27 09.8 +0.3**
O44A IAmb_Lg 17 29 37.1
comp=Z,135nm,0.7s
SUSD Miller 8.17 353 IAmb_Lg 17 29 40.3
comp=Z,90nm,0.8s
I37A Lemond, Waseca 8.29 21 IAmb_Lg 17 29 39.7
comp=Z,58nm,0.8s
L42A Oliver, Polo 8.32 45 **Pn** **17 27 12.2 -0.7**
L42A IAmb_Lg 17 29 34.9
comp=Z,75nm,1.1s
Z47A Carrollton 8.38 109 IAmb_Lg 17 29 56.6
comp=Z,45nm,1.0s
T47A Sharon Grove 8.39 82 Pn **Pn** **17 27 16.1 +2.2**
JFWS Jewell Farm 8.63 38 **Pn** **17 27 15.0 -2.2**
JFWS IAmb_Lg 17 29 47.0
comp=Z,74nm,0.8s
JFWS Jewell Farm 8.63 38 P 17 27 16.4
baz=223,SNR=6.5
V48A Smith Brothers 8.68 91 IAmb_Lg 17 29 50.6
comp=Z,66nm,1.0s
TX31 Lajitas Ar. Si 8.69 218 **Pn** **17 27 17.7 -0.4**
TXAR Lajitas Array 8.69 218 Pn **Pn** **17 27 17.1 -1.0**
comp=Z,0.4nm,0.3s,baz=47,slow=11,SNR=15
TXAR Pg Pg 17 27 48.4 -10
comp=Z,0.9nm,0.3s,baz=46,slow=16,SNR=6.0
TXAR Lg Lg 17 29 39.9
comp=Z,0.7nm,0.3s,baz=38,slow=27,SNR=2.1
TXAR Lajitas Array 8.69 218 Pn **Pn** **17 27 16.9 -1.2**
TX32 Lajitas Array 8.69 218 **Pn** **17 27 17.4 -0.7**
X48A Hartselle 8.75 99 Pn **Pn** **17 27 20.1 +1.2**
P46A Rosedale 8.78 65 Pn **Pn** **17 27 19.6 +0.5**
M44A Midewin, Midew 8.94 53 Pn **Pn** **17 27 22.0 +0.6**
M44A IAmb_Lg 17 29 54.3
comp=Z,88nm,0.8s
CLTN Cedars of Leba 9.04 88 IAmb_Lg 17 30 02.2
comp=Z,44nm,0.8s
SFIN Lafayette 9.12 61 Pn **Pn** **17 27 25.5 +1.6**
SFIN **Sn** **17 29 06.2 -0.4**
SFIN LR LR 17 29 55.1
SFIN IAmb_Lg 17 29 58.6
comp=Z,105nm,0.8s
WCI Wyandotte Cave 9.14 75 IAmb_Lg 17 30 08.4
comp=Z,100nm,0.8s
RSSD Black Hills 9.23 329 **Pn** **17 27 26.6 +0.9**
RSSD IAmb_Lg 17 30 13.3
comp=Z,45nm,0.8s
RSSD Black Hills 9.23 329 P 17 27 25.6
baz=145
HQIL Hanson Quary C 9.28 51 IAmb_Lg 17 30 06.1
comp=Z,95nm,1.1s
121A Cookes Peak, D 9.29 249 IAmb_Lg 17 30 18.3
comp=Z,75nm,1.2s
K22A Casper 9.39 315 IAmb_Lg 17 30 29.7
comp=Z,44nm,0.8s
Y49A Blount Mountai 9.43 102 Pn **Pn** **17 27 28.1 0.0**
L44A Lake County Fo 9.46 49 IAmb_Lg 17 30 16.3
comp=Z,121nm,0.9s
U49A Red Boiling Sp 9.46 85 IAmb_Lg 17 30 17.8
comp=Z,47nm,1.0s
SWET Sewanee 9.48 93 IAmb_Lg 17 30 28.3
comp=Z,39nm,0.8s
F33A 5 Mile Ranch, 9.54 5 Pn **Pn** **17 27 29.6 -0.1**
F33A IAmb_Lg 17 30 15.8
comp=Z,35nm,0.8s
SPMN Marine on St. 9.57 20 Pn **Pn** **17 27 28.7 -1.3**
FPAL Fort Paine 9.88 97 Pn **Pn** **17 27 36.7 +2.4**
FPAL IAmb_Lg 17 30 26.9
comp=Z,40nm,0.8s
F36A Milaca 9.98 16 **Pn** **17 27 34.9 -0.8**
F36A IAmb_Lg 17 30 36.7
comp=Z,42nm,1.2s
W50A Signal Mountai 9.98 93 IAmb_Lg 17 30 36.2
comp=Z,63nm,0.8s
I42A Draeger Farm, 10.01 38 Pn **Pn** **17 27 36.4 +0.3**
P48A Milroy 10.05 68 Pn **Pn** **17 27 38.8 +2.1**
N47A Urbana 10.30 60 Pn **Pn** **17 27 39.7 -0.4**
CPCT Cooper Cave 10.58 91 Pn **Pn** **17 27 41.8 -2.1**
P49A Miami Univ. Ec 10.60 69 Pn **Pn** **17 27 42.5 -1.7**
V51A Loudon 10.67 89 Pn **Pn** **17 27 45.5 +0.3**
H43A Windswept, Lux 11.00 39 Pn **Pn** **17 27 50.4 +0.7**
O49A Covington 11.05 66 Pn **Pn** **17 27 50.4 0.0**
TKL Tuckaleechee C 11.15 89 Lg Lg 17 30 57.7
comp=Z,1.1nm,0.3s,baz=182,slow=20,SNR=6.0
S51A Beattyville 11.21 79 Pn **Pn** **17 27 51.6 -1.0**
BW06 Boulder Array 11.29 308 Pn **Pn** **17 27 52.6 -1.3**
PDAR Pinedale Array 11.29 308 Pn **Pn** **17 27 54.2 +0.3**
comp=Z,0.1nm,0.3s,baz=116,slow=12,SNR=2.8
PDAR Pg 17 28 38.6
comp=Z,0.3nm,0.3s,baz=113,slow=18,SNR=9.1
PDAR Lg Lg 17 30 57.6
comp=Z,0.2nm,0.3s,baz=104,slow=34,SNR=1.4
PDAR Pinedale Array 11.29 308 Pn **Pn** **17 27 55.2 +1.4**
Y52A Lilburn 11.29 99 Pn **Pn** **17 27 52.5 -1.1**
Q51A Peebles 11.55 72 Pn **Pn** **17 27 59.9 +2.7**
COWI Conover 11.61 30 Pn **Pn** **17 27 56.5 -1.4**
ULM Lac du Bonnet 13.96 4 Pn **Pn** **17 28 25.4 -4.6**
comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=2.3
ULM Sn Sn 17 30 51.2 -14
comp=Z,0.1nm,0.3s,baz=240,slow=20,SNR=2.1
ULM Lg Lg 17 32 22.4
comp=Z,0.4nm,0.3s,baz=294,slow=19,SNR=2.1
ULM Lac du Bonnet 13.96 4 **Pn** **17 28 27.9 -2.2**
ELK Elko 14.55 293 LR LR 17 34 38.3
comp=Z,53nm,18.4s,baz=29,slow=39
LPIG La Paz 16.44 226 LR LR 17 35 15.0
comp=Z,49nm,19.0s,baz=38,slow=37
ILAR Eielson Array 40.68 330 P **P** **17 32 53.7 +1.2**
comp=Z,0.7nm,0.7s,baz=101,slow=7.1,SNR=8.1
RPN Rapa Nui 64.10 192 LR LR 17 58 30.8
comp=Z,32nm,19.3s,baz=144,slow=31

SOME **07** *17:35:17.9, 40.72N, 77.05E, h10km*
NNC **07** *17:35:18.8±0.6, 40.72N±77.18E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=4.1km s-min=2.9km az=0.0*
KRNET **07** *17:35:18.4±0.1, 40.73N±77.11E, h22km, mb2.8*
ISC 07 17:35:16.9±1.8, 40.69N±0.06, 77.01E±0.03, h1km±17km, n66, σ1§19/99, 25C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.44**	**5**	⇑*i*P		**Pg**	**17 35 44.9**	**+0.4**
	baz=3.0							
KDJ				⇑*i*S		**Sg**	**17 36 04.4**	**+1.1**
	baz=3.0							
ULHL	**Ulahol**	**1.66**	**340**	⇑*i*P		**Pg**	**17 35 49.2**	**+0.6**
	baz=37							
ULHL				⇑*i*S		**Sg**	**17 36 11.6**	**+1.5**
	baz=37							
ULHL	**Ulahol**	**1.66**	**340**	P		**Pg**	**17 35 49.5**	**+0.8**
	SNR=37							
BOOM	**Boomskoye usch**	**1.97**	**336**	⇓*e*P		**Pb**	**17 35 54.6**	**+1.0**
	baz=34							
BOOM				⇓*i*S		**Sg**	**17 36 21.3**	**+1.1**
	baz=34							
PRZ	**Przheval'sk**	**2.07**	**30**	⇑*i*P		**Pb**	**17 35 55.2**	**-0.1**
	baz=28							
PRZ				⇑*i*S		**Sg**	**17 36 22.7**	**-0.7**
	baz=28							
ANVS	**Anan'yevo**	**2.15**	**13**	⇓*i*P		**Pb**	**17 35 56.9**	**+0.3**
	baz=11							
ANVS				⇓*i*S		**Sg**	**17 36 24.7**	**-1.2**
	baz=11							
ARLS	**Aral**	**2.34**	**301**	⇑*i*P		**Pb**	**17 36 00.5**	**+0.6**
	baz=99							
ARLS				⇑*i*S		**Sb**	**17 36 31.2**	**+1.9**
	baz=99							
TNSS	**Tian-Shan**	**2.34**	**359**	*e*P		**Pg**	**17 36 01.6**	**-0.3**
	10nm,0.3s							
TNSS				*e*S		**Sg**	**17 36 32.8**	**+0.6**
	33nm,0.5s							
TNSS	**Tian-Shan**	**2.34**	**359**	Pg	Pg	**Pg**	**17 36 01.6**	**-0.3**
	10nm,0.3s							
TNSS					Lg	Lg	17 36 32.8	
	33nm,0.5s							

IZV	**Izvestkoviy**	**2.36**	**353**	*eP*	**Pg**	**17 36 02.1**	**0.0**
	10nm,0.5s								
IZV				*eS*	**Sg**	**17 36 34.0**	**+1.2**
	54nm,0.3s								
IZV	**Izvestkoviy**	**2.36**	**353**	Pg	**Pg**	**17 36 02.1**	**0.0**
	10nm,0.5s								
IZV				Lg	Lg	17 36 34.0	
	54nm,0.3s								
UCH	**Uchtor**	**2.43**	**310**	⇑*iP*	**Pb**	**17 36 01.7**	**+0.2**
	baz=8.0								
UCH				⇑*iS*	**Sb**	**17 36 33.5**	**+1.4**
	baz=8.0								
UCH	**Uchtor**	**2.43**	**310**	P	**Pg**	**17 36 04.8**	**+1.4**
	SNR=17								
TKM2	**Tokmak 2**	**2.47**	**335**	⇓*iP*	**Pb**	**17 36 01.8**	**-0.3**
	baz=33								
TKM2				⇓*iS*	**Sb**	**17 36 33.7**	**+0.6**
	baz=33								
TKM2	**Tokmak 2**	**2.47**	**335**	P	**Pg**	**17 36 04.6**	**+0.4**
	SNR=9.4								
TKM2	**Tokmak 2**	**2.47**	**335**	⇑Pg	**Pg**	**17 36 04.5**	**+0.4**
	7.2nm,0.7s								
TKM2				⇑Lg	Lg	17 36 38.3	
	14nm,0.5s								
MDOK	**Medeo**	**2.47**	**1**	*eP*	**Pg**	**17 36 03.6**	**-0.6**
	10.0nm,0.4s								
MDOK				*eS*	**Sg**	**17 36 36.5**	**+0.2**
	53nm,0.5s								
MDOK	**Medeo**	**2.47**	**1**	Pg	**Pg**	**17 36 03.6**	**-0.6**
	6.9nm,0.5s								
MDOK				Lg	Lg	17 36 37.3	
	43nm,0.6s								
MDOK	**Medeo**	**2.47**	**1**	Pg	**Pg**	**17 36 03.6**	**-0.6**
	10.0nm,0.4s								
MDOK				Lg	Lg	17 36 36.5	
	53nm,0.5s								
MTBS	**Maitube**	**2.48**	**350**	*eP*	**Pg**	**17 36 04.0**	**-0.3**
	14nm,0.3s								
MTBS				*eS*	**Sg**	**17 36 37.3**	**+0.9**
	29nm,0.2s								
MTBS	**Maitube**	**2.48**	**350**	Pg	**Pg**	**17 36 04.0**	**-0.3**
	14nm,0.3s								
MTBS				Lg	Lg	17 36 37.3	
	29nm,0.2s								
KST	**Kastek**	**2.48**	**342**	*eP*	**Pg**	**17 36 04.3**	**0.0**
	7.8nm,0.2s								
KST				*eS*	**Sg**	**17 36 37.8**	**+1.3**
	44nm,0.3s								
KST	**Kastek**	**2.48**	**342**	Pg	**Pg**	**17 36 04.3**	**0.0**
	7.8nm,0.2s								
KST				Lg	Lg	17 36 37.8	
	44nm,0.3s								
KBK	**Karagaybulak**	**2.50**	**322**	P	**Pg**	**17 36 05.4**	**+0.6**
	SNR=32								
AAA	**Alma-Ata**	**2.52**	**358**	*eP*	**Pg**	**17 36 05.8**	**+0.7**
	12nm,0.1s								
AAA				*eS*	**Sg**	**17 36 39.9**	**+2.2**
	63nm,0.3s								
AAA	**Alma-Ata**	**2.52**	**358**	Pg	**Pg**	**17 36 05.8**	**+0.7**
	12nm,0.1s								
AAA				Lg	Lg	17 36 39.9	
	63nm,0.3s								
KNDC	**Almaty**	**2.52**	**359**	⇓Pg	**Pg**	**17 36 04.5**	**-0.8**
	22nm,0.6s								
KNDC				⇓Lg	Lg	17 36 39.5	
	111nm,0.5s								
KOTS	**Kotyrbulak**	**2.54**	**2**	*eP*	**Pg**	**17 36 05.1**	**-0.5**
	31nm,0.2s								
KOTS				*eS*	**Sg**	**17 36 38.9**	**+0.3**
	63nm,0.3s								
KOTS	**Kotyrbulak**	**2.54**	**2**	Pg	**Pg**	**17 36 05.1**	**-0.5**
	31nm,0.2s								
KOTS				Lg	Lg	17 36 38.9	
	63nm,0.3s								
SATY	**Saty**	**2.58**	**23**	*eP*	**Pg**	**17 36 04.9**	**+0.9**
	7.2nm,0.2s								
SATY				*eS*	**Sg**	**17 36 38.8**	**-1.1**
	33nm,0.3s								
SATY	**Saty**	**2.58**	**23**	Pg	**Pb**	**17 36 04.9**	**+0.9**
	7.2nm,0.2s								
SATY				Lg	Lg	17 36 38.8	
	33nm,0.3s								
ZHN	**Zhinishke**	**2.69**	**23**	*eP*	**Pb**	**17 36 06.9**	**+0.9**
	1.1nm,0.2s								
ZHN				*eS*	**Sg**	**17 36 41.6**	**-1.8**
	11nm,0.4s								
ZHN	**Zhinishke**	**2.69**	**23**	Pg	**Pb**	**17 36 06.8**	**+0.9**
	0.8nm,0.1s								
ZHN				Lg	Lg	17 36 41.6	
	11nm,0.5s								
AAK	**Ala-Archa**	**2.71**	**317**	⇑*iP*	**Pb**	**17 36 05.3**	**-0.9**
	baz=15								
AAK				⇑*iS*	**Sb**	**17 36 39.5**	**-0.5**
	baz=15								
AAK	**Ala-Archa**	**2.71**	**317**	P	**Pg**	**17 36 09.0**	**+0.2**
	SNR=8.4								
AAK	**Ala-Archa**	**2.71**	**317**	⇓Pg	**Pg**	**17 36 08.8**	**0.0**
	8.5nm,0.8s								
AAK				⇑Lg	Lg	17 36 47.2	
	43nm,1.1s								
DGS	**Degeres**	**2.71**	**340**	*eP*	**Pg**	**17 36 08.6**	**-0.2**
	3.8nm,0.3s								
DGS				*eS*	**Sg**	**17 36 44.9**	**+0.9**
	24nm,0.5s								
DGS	**Degeres**	**2.71**	**340**	Pg	**Pg**	**17 36 08.6**	**-0.2**
	3.8nm,0.3s								
DGS				Lg	Lg	17 36 44.9	
	24nm,0.5s								
SFK	**Sufi-Kurgan**	**2.77**	**257**	⇑*iP*	**Pb**	**17 36 07.2**	**0.0**
	baz=57								
SFK				⇑*iS*	**Sb**	**17 36 42.3**	**+0.6**
	baz=57								
FRU1	**Bishkek**	**2.77**	**321**	⇓*iP*	**Pb**	**17 36 06.5**	**-0.6**
	baz=19								
FRU1				⇓*iS*	**Sb**	**17 36 41.4**	**-0.2**
	baz=19								
CHMS	**Chumysh**	**2.86**	**325**	⇑*eP*	**Pb**	**17 36 07.3**	**-1.4**
	baz=23								
CHMS				⇑*iS*	**Sb**	**17 36 42.7**	**-1.4**
	baz=23								
CHMS	**Chumysh**	**2.86**	**325**	P	**Pg**	**17 36 11.7**	**+0.1**
	SNR=7.9								
UZB	**Uzynbulak**	**2.88**	**31**	*eP*	**Pb**	**17 36 09.6**	**+0.6**
	7.7nm,0.3s								
UZB				*eS*	**Sg**	**17 36 47.0**	**-2.3**
	11nm,0.2s								
UZB	**Uzynbulak**	**2.88**	**31**	Pg	**Pb**	**17 36 09.6**	**+0.6**
	7.7nm,0.3s								
UZB				Lg	Lg	17 36 47.0	
	11nm,0.2s								
AML	**Almayashu**	**2.88**	**301**	⇑*iP*	**Pb**	**17 36 08.3**	**-1.0**
	baz=0.0								
AML				⇑*iS*	**Sb**	**17 36 44.6**	**-0.5**
	baz=0.0								
AML	**Almayashu**	**2.88**	**301**	P	**Pg**	**17 36 13.0**	**+0.9**
	SNR=20								
KTBS	**Karatobe**	**3.03**	**355**	*eP*	**Pg**	**17 36 13.6**	**-1.4**
	8.8nm,0.3s								
KTBS				*eS*	**Sg**	**17 36 53.5**	**-0.7**
	60nm,0.5s								
KTBS	**Karatobe**	**3.03**	**355**	Pg	**Pg**	**17 36 13.5**	**-1.4**
	8.8nm,0.3s								
KTBS				Lg	Lg	17 36 53.5	
	60nm,0.5s								
KPKS	**Kokpek**	**3.04**	**24**	*eP*	**Pb**	**17 36 12.8**	**+1.0**
	16nm,0.3s								
KPKS				*eS*	**Sg**	**17 36 52.1**	**-2.4**
	34nm,0.4s								
SHLS	**Shalkode**	**3.07**	**36**	*eP*	**Pg**	**17 36 16.6**	**+1.0**
	13nm,0.4s								
SHLS				*eS*	**Sg**	**17 36 58.5**	**+3.0**
	20nm,0.5s								
SHLS	**Shalkode**	**3.07**	**36**	Pg	**Pg**	**17 36 16.6**	**+1.0**
	13nm,0.4s								
SHLS				Lg	Lg	17 36 58.5	
	20nm,0.5s								
ARSB	**Arslanbob**	**3.12**	**283**	⇑*iP*	**Pb**	**17 36 11.1**	**-2.0**
	baz=82								
ARSB				⇑*iS*	**Sb**	**17 36 50.9**	**-0.7**
	baz=82								
EKS2	**Erkin-Say**	**3.12**	**310**	P	**Pg**	**17 36 17.1**	**+0.4**
	SNR=7.8								
KRBS	**Karabastau**	**3.16**	**342**	*eP*	**Pg**	**17 36 16.6**	**-0.8**
	5.7nm,0.5s								
KRBS				*eS*	**Sg**	**17 36 58.8**	**+0.3**
	18nm,0.4s								
KRBS	**Karabastau**	**3.16**	**342**	Pg	**Pg**	**17 36 16.6**	**-0.8**
	5.7nm,0.5s								
KRBS				Lg	Lg	17 36 58.8	
	18nm,0.4s								
USP	**Ospenovka**	**3.18**	**325**	P	**Pg**	**17 36 17.3**	**-0.6**
	SNR=30								
PDGK	**Podgornoye**	**3.22**	**34**	⇑Pg	**Pb**	**17 36 14.9**	**0.0**
	6.4nm,0.8s								
PDGK				⇑Lg	Lg	17 36 56.9	
	15nm,0.8s								
KUU	**Kurty**	**3.24**	**351**	*eP*	**Pg**	**17 36 17.6**	**-1.4**
	2.7nm,0.1s								
KUU				*eS*	**Sg**	**17 37 00.4**	**-0.5**
	24nm,0.2s								
KUU	**Kurty**	**3.24**	**351**	Pg	**Pg**	**17 36 17.6**	**-1.4**
	2.7nm,0.1s								
KUU				Lg	Lg	17 37 00.4	
	24nm,0.2s								
SGDS	**Sogindy**	**3.28**	**328**	Pg	**Pg**	**17 36 19.5**	**-0.3**
	5.8nm,0.2s								
SGDS				Lg	Lg	17 37 03.8	
	12nm,0.3s								
ARXS	**Arharly**	**3.57**	**9**	*eP*	**Pb**	**17 36 22.8**	**+1.9**
	7.9nm,0.3s								
ARXS				*eS*	**Sg**	**17 37 09.3**	**-2.3**
	20nm,0.5s								
ARXS	**Arharly**	**3.57**	**9**	Pg	**Pb**	**17 36 22.8**	**+1.9**
	7.9nm,0.3s								
DJR	**Jarkent**	**4.18**	**29**	*eP*	**Pb**	**17 36 33.0**	**+1.8**
	1.5nm,0.3s								
DJR				*eS*	**Sg**	**17 37 26.5**	**-4.6**
	4.7nm,0.5s								
DJR	**Jarkent**	**4.18**	**29**	Pg	**Pb**	**17 36 33.0**	**+1.8**
	1.5nm,0.3s								
BTLS	**Baital**	**4.86**	**334**	*eP*	**Pg**	**17 36 48.0**	**-2.1**
	1.4nm,0.5s								
BTLS				*eS*	**Sg**	**17 37 52.4**	**-0.7**
	5.6nm,0.3s								
BTLS	**Baital**	**4.86**	**334**	Pg	**Pg**	**17 36 48.0**	**-2.1**
	1.4nm,0.5s								

*KRNET **07** 17:36:29.6±0.1, 42.°68N×73.°28E, h22km, mb2.7*
*SOME **07** 17:36:30.1, 42.°67N×73.°32E, h20km*
*NNC **07** 17:36:30.8±2.0, 42.°77N×73.°37E, h0km, mb3.2, mpv2.8,*
Error ellipse: s-maj=52.7km s-min=8.6km az=175.0
ISC 07 17:36:29.8±0.9, **42.°62N**±0.°03×**73.°31E**±0.°02, **h13**km±6km,
n34, σ0°**83**/62, **26C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MRKS	**Merke**	**0.14**	**334**	*eP*	**Pb**		**17 36 34.3**	**-0.2**
	40nm,0.1s							
MRKS				*eS*	**Sb**		**17 36 37.0**	**-0.5**
	54nm,0.1s							
AML	**Almayashu**	**0.56**	**150**	⇑*iP*	**Pb**		**17 36 41.7**	**-0.2**
	baz=51							
AML				⇑*iS*	**Sb**		**17 36 50.7**	**+0.7**
	baz=51							
MNAS	**Manas**	**0.61**	**258**	⇑*iP*	**Pg**		**17 36 41.3**	**-0.5**
	baz=52							
MNAS				⇑*iS*	**Sg**		**17 36 49.7**	**-0.2**
	baz=52							
AAK	**Ala-Archa**	**0.88**	**88**	⇑*iP*	**Pg**		**17 36 46.5**	**-0.3**
	baz=92							
AAK				⇑*iS*	**Sb**		**17 36 58.7**	**0.0**
	baz=92							
UCH	**Uchtor**	**0.97**	**113**	⇑*iP*	**Pg**		**17 36 48.4**	**-0.3**
	baz=16							
UCH				⇑*iS*	**Sn**		**17 37 02.5**	**-1.1**
	baz=16							
FRU1	**Bishkek**	**0.99**	**78**	⇑*iP*	**Pb**		**17 36 48.2**	**-0.7**
	baz=81							
FRU1				⇑*iS*	**Sg**		**17 37 01.9**	**0.0**
	baz=81							
ARLS	**Aral**	**1.07**	**135**	⇑*iP*	**Pn**		**17 36 50.6**	**-0.1**
	baz=36							
ARLS				⇑*iS*	**Sn**		**17 37 06.0**	**+0.5**
	baz=36							
USP	**Ospenovka**	**1.09**	**53**	⇑*iP*	**Pb**		**17 36 49.1**	**-1.5**
	baz=56							
USP				⇑*iS*	**Sb**		**17 37 03.7**	**-1.0**
	baz=56							
CHMS	**Chumysh**	**1.13**	**70**	⇑*iP*	**Pb**		**17 36 50.6**	**-0.6**
	baz=73							
CHMS				⇑*iS*	**Sb**		**17 37 05.6**	**-0.2**
	baz=73							
KBK	**Karagaybulak**	**1.21**	**88**	⇑*iP*	**Pb**		**17 36 52.7**	**0.0**
	baz=91							
KBK				⇑*iS*	**Sn**		**17 37 08.9**	**-0.1**
	baz=91							
ARSB	**Arslanbob**	**1.32**	**191**	⇑*iP*	**Pg**		**17 36 55.4**	**+0.2**
	baz=89							
ARSB				⇑*iS*	**Sg**		**17 37 13.5**	**+1.2**
	baz=89							
TKM2	**Tokmak 2**	**1.71**	**79**	⇑*iP*	**Pb**		**17 37 00.8**	**-0.5**
	baz=81							
TKM2				⇑*iS*	**Sb**		**17 37 23.5**	**+0.7**
	baz=81							
DGS	**Degeres**	**1.91**	**70**	*eP*	**Pb**		**17 37 03.9**	**-0.8**
	baz=72							
DGS				*eS*	**Sb**		**17 37 28.8**	**+0.3**
	baz=72							
DGS	**Degeres**	**1.91**	**70**	*eP*	**Pb**		**17 37 03.9**	**-0.8**
	6.1nm,0.3s							
DGS				*eS*	**Sb**		**17 37 28.8**	**+0.3**
	21nm,0.3s							
BOOM	**Boomskoye usch**	**1.95**	**93**	⇑*iP*	**Pb**		**17 36 04.9**	**-0.4**
	baz=95							
BOOM				⇑*iS*	**Sb**		**17 37 30.3**	**+0.7**
	baz=95							
TRKS	**Terek-Say**	**1.95**	**237**	⇓*iP*	**Pb**		**17 37 04.5**	**-0.8**
	baz=33							
TRKS				⇓*iS*	**Sb**		**17 37 30.2**	**+0.6**
	baz=33							
KST	**Kastek**	**2.00**	**77**	*eP*	**Pb**		**17 37 05.5**	**-0.6**
	baz=79							
KST				*eS*	**Sb**		**17 37 31.2**	**+0.2**
	baz=79							
KST	**Kastek**	**2.00**	**77**	*eP*	**Pb**		**17 37 05.5**	**-0.6**
	11nm,0.2s							
KST				*eS*	**Sb**		**17 37 31.2**	**+0.2**
	13nm,0.4s							
KRBS	**Karabastau**	**2.04**	**57**	*eP*	**Pb**		**17 37 06.2**	**-0.6**
	baz=59							
KRBS				*eS*	**Sb**		**17 37 32.5**	**+0.4**
	baz=59							
KRBS	**Karabastau**	**2.04**	**57**	*eP*	**Pb**		**17 37 06.2**	**-0.6**
	2.6nm,0.3s							
KRBS				*eS*	**Sb**		**17 37 32.4**	**+0.4**
	13nm,0.3s							
KK31	**Karatay Array**	**2.11**	**284**	⇑P	**Pg**		**17 37 12.2**	**+1.9**
	0.3nm,0.2s,baz=103,slow=16,SNR=6.0							
KK31				⇑S	**Sb**		**17 37 34.4**	**+0.2**
	0.9nm,0.2s,baz=100,slow=28,SNR=15							
MTBS	**Maitube**	**2.35**	**76**	*eP*	**Pb**		**17 37 12.9**	**+0.8**
	0.7nm,0.1s							
MTBS				*eS*	**Sg**		**17 37 43.7**	**-1.6**
	5.2nm,0.2s							
MTBS	**Maitube**	**2.35**	**76**	Pg	**Pb**		**17 37 12.9**	**+0.8**
	0.7nm,0.1s							
MTBS				Lg	Lg		17 37 43.7	
	5.2nm,0.2s							
IZV	**Izvestkoviy**	**2.47**	**79**	*eP*	**Pb**		**17 37 14.2**	**+0.1**
	1.8nm,0.2s							
IZV				*eS*	**Sb**		**17 37 46.3**	**+1.8**
	10nm,0.4s							
IZV	**Izvestkoviy**	**2.47**	**79**	Pg	**Pb**		**17 37 14.2**	**+0.1**
	1.8nm,0.2s							
IZV				Lg	Lg		17 37 46.3	
	10nm,0.4s							
IUG	**Iuzhnay**	**2.47**	**260**	*eP*	**Pg**		**17 37 15.6**	**-1.7**
	2.5nm,0.2s							
IUG				*eS*	**Sg**		**17 37 48.4**	**-1.0**
	7.3nm,0.4s							
IUG	**Iuzhnay**	**2.47**	**260**	Pg	**Pg**		**17 37 15.6**	**-1.7**
	2.5nm,0.2s							
IUG				Lg	Lg		17 37 48.4	
	7.4nm,0.6s							
BTLS	**Baital**	**2.48**	**12**	*eP*	**Pn**		**17 37 10.9**	**+0.9**
	1.2nm,0.1s							
BTLS				*eS*	**Sn**		**17 37 40.9**	**+0.8**
	4.4nm,0.1s							
KUU	**Kurty**	**2.55**	**59**	*eP*	**Pb**		**17 37 14.9**	**-0.6**
	3.6nm,0.2s							
KUU				*eS*	**Sb**		**17 37 47.5**	**+0.6**
	5.9nm,0.3s							
KUU	**Kurty**	**2.55**	**59**	Pg	**Pb**		**17 37 14.9**	**-0.6**
	3.6nm,0.2s							
KUU				Lg	Lg		17 37 47.5	
	5.9nm,0.3s							
KTBS	**Karatobe**	**2.70**	**65**	*eP*	**Pb**		**17 37 18.3**	**+0.2**
	1.4nm,0.5s							
KTBS				*eS*	**Sb**		**17 37 53.0**	**+2.0**
	5.1nm,0.6s							
KTBS	**Karatobe**	**2.70**	**65**	Pg	**Pb**		**17 37 18.3**	**+0.2**
	1.4nm,0.5s							
KTBS				Lg	Lg		17 37 53.0	
	5.1nm,0.6s							
MDOK	**Medeo**	**2.80**	**78**	*eP*	**Pb**		**17 37 19.8**	**0.0**
	1.7nm,0.3s							
MDOK				*eS*	**Sb**		**17 37 55.5**	**+1.4**
	2.5nm,0.4s							
MDOK	**Medeo**	**2.80**	**78**	Pg	**Pb**		**17 37 19.8**	**0.0**
	2.3nm,0.6s							
MDOK				Lg	Lg		17 37 55.7	
	2.7nm,0.4s							

*NNC **07** 18:02:47.0±1.6, 43.°59N×83.°55E, h0km, mb2.9, mpv2.6,*
Error ellipse: s-maj=16.3km s-min=6.8km az=125.0
*SOME **07** 18:02:52.5, 43.°85N×83.°25E, h0km*
ISC 07 18:02:47.2±2.7, **43.°6N**±0.°1×**83.°7E**±0.°1, **h10**km, **n8,**
σ1**85**/14, **6C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**2.90**	**286**	*eP*		**Pb**	**18 03 41.2**	**+2.2**
	2.5nm,0.2s							
DJR				*eS*		**Sb**	**18 04 16.0**	**+1.5**
	8.3nm,0.2s							
PDGK	**Podgornoye**	**3.05**	**267**	⇓Pn		**Pn**	**18 03 35.2**	**-0.4**
	1.3nm,0.5s							
PDGK				⇑Lg		Lg	18 04 21.2	
	11nm,0.7s							
MK31	**Makanchi Array**	**3.36**	**344**	Pn		**Pn**	**18 03 39.9**	**+0.1**
	0.1nm,0.3s,baz=156,slow=14,SNR=49							
MK31				⇑Pg		**Pb**	**18 03 48.3**	**+1.5**
	0.7nm,0.3s,baz=155,slow=16,SNR=31							
MK31				⇑Lg		Lg	18 04 31.7	
	0.7nm,0.2s,baz=163,slow=28,SNR=4.2							
MAKZ	**Makanchi**	**3.44**	**340**	⇑Pn		**Pn**	**18 03 41.4**	**+0.5**
	2.3nm,1.4s							
MAKZ				⇓Pg		**Pb**	**18 03 50.2**	**+2.0**
	2.1nm,0.4s							
MAKZ				⇓Lg		Lg	18 04 33.6	
	3.1nm,0.8s							
KPKS	**Kokpek**	**3.62**	**270**	*eP*		**Pg**	**18 03 56.1**	**-0.6**
	5.1nm,0.1s							
KPKS				*eS*		**Sg**	**18 04 41.1**	**-2.4**
	18nm,0.3s							
SATY	**Saty**	**3.87**	**264**	*eP*		**Pg**	**18 04 00.5**	**-0.9**
	1.8nm,0.1s							
SATY				*eS*		**Sg**	**18 04 49.0**	**-2.5**
	15nm,0.2s							
ZSN	**Zaisan**	**3.96**	**12**	*eP*		**Pg**	**18 04 02.1**	**-0.9**
	2.9nm,0.2s							
ZSN				*eS*		**Sg**	**18 04 51.8**	**-2.5**
	10.0nm,0.3s							
MDOK	**Medeo**	**4.84**	**267**	⇑Pg		**Pb**	**18 04 14.0**	**+1.9**
	0.8nm,0.4s							
MDOK				⇑Lg		Lg	18 05 20.2	
	4.4nm,0.9s							

IDC 07 19:23:44.6±2.5, **7.°70S**×**130.°44E, h0km, mb3.2**/1,
mb1 3.2/3, **mb1mx3.1**/21, **mbtmp3.1**/3, **ML3.1**/2, **Error**
ellipse: s-maj=134.2km s-min=34.2km az=69.0,
Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.74**	**163**	Pn		Pn	19 26 47.0	-0.3
	0.1nm,0.3s,baz=346,slow=13,SNR=5.3							
WRA				Sn		Sn	19 29 02.6	-7.4
	0.2nm,0.3s,baz=339,slow=22,SNR=2.2							
ASAR	**Alice Springs**	**16.22**	**169**	Pn		Pn	19 27 34.5	+0.4
	0.1nm,0.3s,baz=352,slow=13,SNR=4.8							
ASAR				Sn		Sn	19 30 29.3	-5.5
	0.0nm,0.3s,baz=328,slow=15,SNR=1.6							
MKAR	**Makanchi Array**	**69.05**	**327**	P		P	19 34 52.3	0.0
	0.1nm,0.6s,baz=134,slow=6.2,SNR=2.0							

*ATH **07** 19:40:21.9, 36.°69N×20.°47E, h12km±1km, ML3.6/19, Error*
ellipse: s-maj=5.5km s-min=1.5km az=41.0
*IDC **07** 19:40:22.8±1.1, 36.°87N×20.°65E, h0km, mb3.7/8,*
mb1 3.8/16, mb1mx3.6/42, mbtmp3.7/16, ML3.6/7, MS2.6/2,
Ms1 2.6/2, ms1mx2.2/47, Error ellipse: s-maj=21.1km
s-min=16.7km az=21.0
*THE **07** 19:40:24.0, 36.°76N×20.°51E, h0km±3km, ML3.6/4, Error*
ellipse: s-maj=3.2km s-min=0.9km az=209.0
*BEO **07** 19:40:27.9±2.5, 36.°89N×20.°13E, h41km±7km, ML3.6/15*
ISC 07 19:40:25.1±1.5, **36.°86N**±0.°04×**20.°58E**±0.°04, **h14**km±10km,
n183, σ1**85**/203, **mb3.7**/8, **Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LTHK	**Lithakia**	**0.87**	**14**	P		**Pg**	**19 40 42.6**	**+0.5**
LTHK				S		**Sb**	**19 40 56.4**	**+2.9**
LTHK				AML		AML	19 41 02.3	
	comp=E,6475μm,0.5s							
LTHK				AML		AML	19 41 03.5	
	comp=N,8308μm,0.4s							
LTHK	**Lithakia**	**0.87**	**14**	P		**Pg**	**19 40 42.5**	**+0.5**
LTHK				S		**Sb**	**19 40 56.5**	**+2.9**
PYL	**PYLOS**	**0.94**	**88**	P		**Pg**	**19 40 42.3**	**-0.8**
PYL	**PYLOS**	**0.94**	**88**	P		**Pg**	**19 40 42.1**	**-1.1**
PYL				S		**Sn**	**19 40 57.6**	**+0.6**
	comp=N,1μm,0.6s							
VLMS	**Volimes, Zakyn**	**1.01**	**4**	P		**Pb**	**19 40 44.9**	**+0.4**
VLMS				AML		AML	19 41 08.3	
	comp=E,11559μm,1.2s							
VLMS				AML		AML	19 41 10.8	
	comp=N,13517μm,1.0s							
VLMS	**Volimes, Zakyn**	**1.01**	**4**	P		**Pb**	**19 40 44.9**	**+0.4**
AMT	**Artemida-Makis**	**1.12**	**53**	P		**Pn**	**19 40 47.3**	**+0.8**
AMT				AML		AML	19 41 13.9	
	comp=E,6723μm,0.8s							
AMT				AML		AML	19 41 19.6	
	comp=N,7220μm,0.7s							
AMT	**Artemida-Makis**	**1.12**	**53**	P		**Pn**	**19 40 47.2**	**+0.8**
AMT				S		**Sn**	**19 41 06.0**	**+4.2**
	comp=N,3μm,0.6s							
ITM	**Ithomi**	**1.13**	**73**	P		**Pn**	**19 40 45.5**	**-0.9**
ITM				AML		AML	19 41 07.3	
	comp=E,3143μm,0.5s							
ITM				AML		AML	19 41 11.7	
	comp=N,2637μm,0.9s							
ITM	**Ithomi**	**1.13**	**73**	P		**Pn**	**19 40 45.6**	**-0.9**
ITM				S		**Sn**	**19 41 04.1**	**+2.3**
	comp=N,1μm,0.7s							
PSDA	**Pessada-Kefalo**	**1.25**	**0**	P		**Pn**	**19 40 48.6**	**+0.4**
PSDA	**Pessada-Kefalo**	**1.25**	**0**	P		**Pn**	**19 40 48.6**	**+0.4**
VLS	**Valsamata**	**1.31**	**0**	P		**Pn**	**19 40 49.2**	**+0.2**
VLS				AML		AML	19 41 20.8	
	comp=E,3543μm,0.6s							
VLS				AML		AML	19 41 21.6	
	comp=N,2262μm,0.7

AXS	**Araxos**	**1.48**	**25**	P	**Pb**	**19 40 53.0**	**+0.7**
VLX	**Vlachokerasia**	**1.53**	**70**	P	**Pn**	**19 40 52.9**	**+0.8**
VLX				AML	AML	19 41 26.7	
	comp=N,2331µm,0.8s						
VLX				AML	AML	19 41 27.4	
	comp=E,3452µm,0.5s						
VLX	**Vlachokerasia**	**1.53**	**70**	P	**Pn**	**19 40 52.9**	**+0.8**
FSK	**Fiskardo**	**1.59**	**360**	P	**Pn**	**19 40 54.2**	**+1.3**
FSK				AML	AML	19 41 29.7	
	comp=E,2860µm,0.9s						
FSK				AML	AML	19 41 30.7	
	comp=N,2126µm,1.0s						
FSK	**Fiskardo**	**1.59**	**360**	P	**Pn**	**19 40 54.2**	**+1.3**
KLV	**Kalavryta, Ach**	**1.72**	**46**	P	**Pn**	**19 40 56.1**	**+1.4**
KLV	**Kalavryta, Ach**	**1.72**	**46**	P	**Pn**	**19 40 56.1**	**+1.4**
EVGI	**Lefkada island**	**1.76**	**2**	P	**Pn**	**19 40 56.7**	**+1.6**
EVGI	**Lefkada island**	**1.76**	**2**	P	**Pn**	**19 40 56.7**	**+1.6**
LAKA	**Lakka**	**1.77**	**39**	P	**Pb**	**19 40 57.7**	**+0.3**
LAKA				AML	AML	19 41 40.7	
	comp=E,3451µm,0.7s						
LAKA				AML	AML	19 41 40.8	
	comp=N,5353µm,0.9s						
LAKA	**Lakka**	**1.77**	**39**	P	**Pb**	**19 40 57.7**	**+0.3**
PDO	**Prodromos**	**1.80**	**15**	P	**Pb**	**19 40 57.9**	**+0.1**
PDO				AML	AML	19 41 38.9	
	comp=E,1903µm,0.5s						
PDO				AML	AML	19 41 39.8	
	comp=N,2262µm,0.7s						
PDO	**Prodromos**	**1.80**	**15**	P	**Pb**	**19 40 57.9**	**+0.1**
PDO				S	**Sb**	**19 41 22.3**	**+2.1**
	comp=N,1µm,0.5s						
DRAG	**Dragano-Lefkad**	**1.82**	**360**	P	**Pn**	**19 40 57.3**	**+1.3**
DRAG	**Dragano-Lefkad**	**1.82**	**360**	P	**Pn**	**19 40 57.3**	**+1.3**
NYDR	**Nydri-Lefkada**	**1.85**	**3**	P	**Pn**	**19 40 58.0**	**+1.6**
NYDR	**Nydri-Lefkada**	**1.85**	**3**	P	**Pn**	**19 40 58.0**	**+1.6**
VLI	**Veliai**	**1.90**	**94**	P	**Pn**	**19 40 58.2**	**+1.1**
VLI				AML	AML	19 41 40.1	
	comp=E,986µm,0.8s						
VLI				AML	AML	19 41 45.6	
	comp=N,1173µm,0.7s						
VLI	**Veliai**	**1.90**	**94**	P	**Pn**	**19 40 58.2**	**+1.1**
PVO	**Paravola**	**1.91**	**23**	P	**Pb**	**19 40 59.7**	**+0.1**
PVO	**Paravola**	**1.91**	**23**	P	**Pb**	**19 40 59.7**	**+0.1**
TRIZ	**Trizonia**	**1.92**	**38**	P	**Pb**	**19 40 60.0**	**+0.2**
TRIZ	**Trizonia**	**1.92**	**38**	P	**Pb**	**19 40 59.7**	**-0.1**
LKD2	**Lefkada island**	**1.93**	**2**	P	**Pb**	**19 41 00.2**	**+0.2**
LKD2	**Lefkada island**	**1.93**	**2**	P	**Pb**	**19 40 59.9**	**-0.1**
SERG	**Sergoula**	**1.94**	**37**	P	**Pb**	**19 41 00.3**	**0.0**
SERG	**Sergoula**	**1.94**	**37**	P	**Pb**	**19 41 00.3**	**0.0**
KALE	**Kalithea**	**1.97**	**39**	P	**Pb**	**19 41 00.7**	**-0.1**
KALE				AML	AML	19 41 45.0	
	comp=N,669µm,0.5s						
KALE				AML	AML	19 41 49.8	
	comp=E,726µm,0.8s						
KALE	**Kalithea**	**1.97**	**39**	P	**Pb**	**19 41 00.7**	**-0.1**
ANX	**Ano Chora**	**2.03**	**31**	P	**Pb**	**19 41 01.6**	**-0.2**
ANX				AML	AML	19 41 47.1	
	comp=E,1451µm,0.9s						
ANX				AML	AML	19 42 00.2	
	comp=N,1608µm,0.6s						
ANX	**Ano Chora**	**2.03**	**31**	P	**Pb**	**19 41 01.6**	**-0.2**
THAL	**Thalero**	**2.03**	**54**	P	**Pn**	**19 41 00.9**	**+1.9**
THAL				AML	AML	19 41 49.3	
	comp=N,2325µm,0.7s						
THAL				AML	AML	19 41 52.7	
	comp=E,1692µm,0.9s						
THAL	**Thalero**	**2.03**	**54**	P	**Pn**	**19 41 00.8**	**+1.9**
KTHA	**Kythira Island**	**2.09**	**106**	P	**Pn**	**19 41 00.5**	**+0.8**
KTHA	**Kythira Island**	**2.09**	**106**	P	**Pn**	**19 41 00.5**	**+0.8**
KRND	**KRANIDI**	**2.12**	**75**	P	**Pn**	**19 41 00.9**	**+0.8**
KRND	**KRANIDI**	**2.12**	**75**	P	**Pn**	**19 41 00.9**	**+0.8**
DSF	**Desfina**	**2.19**	**44**	P	**Pn**	**19 41 03.1**	**+2.0**
DSF	**Desfina**	**2.19**	**44**	P	**Pn**	**19 41 03.1**	**+2.0**
LOUT	**Loutraki**	**2.21**	**59**	P	**Pn**	**19 41 02.6**	**+1.2**
LOUT	**Loutraki**	**2.21**	**59**	P	**Pn**	**19 41 02.6**	**+1.2**
LTK	**Loutraki**	**2.23**	**58**	P	**Pn**	**19 41 02.7**	**+1.1**
LTK	**Loutraki**	**2.23**	**58**	P	**Pn**	**19 41 02.7**	**+1.1**
EVR	**Evrytania**	**2.27**	**25**	P	**Pb**	**19 41 05.3**	**-0.6**
EVR				AML	AML	19 41 49.5	
	comp=E,877µm,0.6s						
EVR				AML	AML	19 42 11.7	
	comp=N,916µm,1.1s						
EVR	**Evrytania**	**2.27**	**25**	P	**Pb**	**19 41 05.3**	**-0.6**
MAKR	**Makrakomi, Fth**	**2.48**	**29**	P	**Pn**	**19 41 08.0**	**+3.0**
MAKR	**Makrakomi, Fth**	**2.48**	**29**	P	**Pn**	**19 41 08.0**	**+3.0**
AXAR	**Agios Charalam**	**2.52**	**40**	P	**Pn**	**19 41 07.7**	**+2.1**
AXAR	**Agios Charalam**	**2.52**	**40**	P	**Pn**	**19 41 07.7**	**+2.1**
VIL2	**Platees**	**2.53**	**57**	P	**Pn**	**19 41 06.4**	**+0.7**
VIL2				AML	AML	19 42 01.2	
	comp=E,1183µm,0.9s						
VIL2				AML	AML	19 42 03.8	
	comp=N,442µm,1.1s						
VILL	**Villia**	**2.53**	**58**	P	**Pn**	**19 41 06.4**	**+0.5**
AGG	**Agios Georgios**	**2.56**	**32**	P	**Pn**	**19 41 08.5**	**+2.2**
AGG	**Agios Georgios**	**2.56**	**32**	P	**Pn**	**19 41 08.5**	**+2.2**
LKR	**Lokris**	**2.62**	**46**	P	**Pn**	**19 41 08.7**	**+1.7**
LKR	**Lokris**	**2.62**	**46**	P	**Pn**	**19 41 08.7**	**+1.7**
ATAL	**Atalanti**	**2.66**	**46**	P	**Pn**	**19 41 09.3**	**+1.7**
ATAL	**Atalanti**	**2.66**	**46**	P	**Pn**	**19 41 09.3**	**+1.6**
VLY	**Voula,Athens**	**2.75**	**68**	P	**Pn**	**19 41 08.7**	**-0.1**
VLY	**Voula,Athens**	**2.75**	**68**	P	**Pn**	**19 41 08.4**	**-0.3**
ATHU	**Athens Univers**	**2.78**	**66**	P	**Pn**	**19 41 09.2**	**0.0**
ATHU	**Athens Univers**	**2.78**	**66**	P	**Pn**	**19 41 09.1**	**-0.1**
PTL	**Penteli**	**2.87**	**65**	P	**Pn**	**19 41 10.5**	**0.0**
PTL	**Penteli**	**2.87**	**65**	P	**Pn**	**19 41 10.0**	**-0.5**
SMIA	**Simia**	**2.90**	**45**	P	**Pn**	**19 41 12.2**	**+1.4**
SMIA	**Simia**	**2.90**	**45**	P	**Pn**	**19 41 12.2**	**+1.4**
KEK	**Kerkira**	**2.91**	**348**	P	**Pn**	**19 41 12.2**	**+1.2**
KEK	**Kerkira**	**2.91**	**348**	P	**Pn**	**19 41 12.2**	**+1.2**
THL	**Klokotos Trika**	**2.93**	**22**	P	**Pn**	**19 41 13.0**	**+1.8**
THL	**Klokotos Trika**	**2.93**	**22**	P	**Pn**	**19 41 13.0**	**+1.8**
DION	**Dionisos Attik**	**2.93**	**65**	P	**Pn**	**19 41 11.6**	**+0.3**
DION	**Dionisos Attik**	**2.93**	**65**	P	**Pn**	**19 41 11.6**	**+0.3**
EREA	**Eretria**	**3.08**	**59**	P	**Pn**	**19 41 13.9**	**+0.5**
EREA	**Eretria**	**3.08**	**59**	P	**Pn**	**19 41 13.9**	**+0.5**
IMMV	**Iera Moni Meta**	**3.09**	**116**	P	**Pn**	**19 41 13.0**	**-0.4**
IMMV	**Iera Moni Meta**	**3.09**	**116**	P	**Pn**	**19 41 13.0**	**-0.4**
KPRO	**Kipourio**	**3.15**	**11**	P	**Pn**	**19 41 16.8**	**+2.5**
KPRO	**Kipourio**	**3.15**	**11**	P	**Pn**	**19 41 16.8**	**+2.5**
XOR	**Xorichti**	**3.24**	**39**	P	**Pn**	**19 41 16.5**	**+0.9**
XOR	**Xorichti**	**3.24**	**39**	P	**Pn**	**19 41 16.5**	**+0.9**
KYMI	**Kymi, Euboea I**	**3.31**	**57**	P	**Pn**	**19 41 17.0**	**+0.6**
KYMI	**Kymi, Euboea I**	**3.31**	**57**	P	**Pn**	**19 41 16.8**	**+0.4**
PENT	**Pentalofos**	**3.36**	**7**	P	**Pn**	**19 41 19.3**	**+2.1**
PENT	**Pentalofos**	**3.36**	**7**	P	**Pn**	**19 41 19.7**	**+2.5**
KZN	**Kozani**	**3.56**	**15**	P	**Pn**	**19 41 21.8**	**+1.7**
KZN				AML	AML	19 42 06.2	
	comp=E,428µm,0.6s						
KZN				AML	AML	19 42 06.5	
	comp=N,241µm,0.6s						
KZN	**Kozani**	**3.56**	**15**	P	**Pn**	**19 41 21.8**	**+1.7**
NEST	**Nestorio**	**3.57**	**6**	P	**Pn**	**19 41 23.1**	**+3.0**
NEST	**Nestorio**	**3.57**	**6**	P	**Pn**	**19 41 23.1**	**+3.0**
IDI	**Anoyia**	**3.83**	**113**	Pn	**Pn**	**19 41 23.9**	**+0.2**
	comp=N,0.2nm,0.3s,baz=310,slow=16,SNR=0.9						
IDI				Sn	**Sn**	**19 42 08.7**	**+0.1**
	comp=N,5.6nm,0.3s,baz=37,slow=21,SNR=12						
IDI				LR	LR	19 43 19.4	
	comp=N,105nm,19.1s,baz=320,slow=47						
IDI	**Anoyia**	**3.83**	**113**	P	**Pn**	**19 41 24.0**	**+0.3**
IDI	**Anoyia**	**3.83**	**113**	P	**Pn**	**19 41 24.0**	**+0.3**
FNA	**Florina**	**3.97**	**9**	P	**Pn**	**19 41 26.8**	**+1.2**
FNA	**Florina**	**3.97**	**9**	P	**Pn**	**19 41 26.8**	**+1.2**
FNA	**Florina**	**3.97**	**9**	*e*Pn	**Pn**	**19 41 26.7**	**+1.2**
FNA				*e*Sn	**Sn**	**19 42 10.5**	**-1.4**
PLG	**Polygyros**	**4.17**	**32**	P	**Pn**	**19 41 30.3**	**+2.1**
PLG	**Polygyros**	**4.17**	**32**	P	**Pn**	**19 41 29.9**	**+1.6**
OHR	**Ohrid**	**4.25**	**2**	*i* Pn	**Pn**	**19 41 31.4**	**+2.0**
VAY	**Valandovo**	**4.71**	**19**	*e*Pn	**Pn**	**19 41 37.0**	**+1.2**
VAY	**Valandovo**	**4.71**	**19**	*i* Pn	**Pn**	**19 41 37.2**	**+1.5**
SRS	**Serrai**	**4.86**	**28**	*e*Pn	**Pn**	**19 41 38.7**	**+1.0**
SRS				*e*Sn	**Sn**	**19 42 34.6**	**+0.9**
VAE	**Valguarnera**	**4.96**	**279**	Pn	**Pn**	**19 41 40.8**	**+1.6**
	comp=N,2.9nm,0.3s,baz=168,slow=11,SNR=6.6						
STIP	**Stip**	**4.99**	**14**	*e*Pn	**Pn**	**19 41 42.9**	**+3.4**
DRME	**Dracevica, Mon**	**5.43**	**349**	*e*Pn	**Pn**	**19 41 45.2**	**-0.3**
PDG	**Podgorica**	**5.65**	**350**	*e*Pn	**Pn**	**19 41 48.0**	**-0.7**
HCY	**Herceg Novi**	**5.80**	**345**	*e*Pn	**Pn**	**19 41 49.9**	**-0.9**
BOSS	**Bosilegrad**	**5.81**	**14**	*e*Pn	**Pn**	**19 41 51.5**	**+0.6**
BOSS				*e*Sn	**Sn**	**19 42 54.4**	**-3.0**
BARS	**Barje**	**6.02**	**9**	*e*Pn	**Pn**	**19 41 52.7**	**-1.1**
BARS				*e*Sn	**Sn**	**19 42 59.0**	**-3.5**

TREB	**Trebinje**	**6.09**	**344**	*e*Pn	**Pn**	**19 41 53.4**	**-1.3**
TREB				*e*Sn	Sn	19 42 56.3	-7.9
TREB	**Trebinje**	**6.09**	**344**	*e*Pn	**Pn**	**19 41 53.8**	**-0.9**
VTS	**Vitosha**	**6.10**	**19**	*e*Pn	**Pn**	**19 41 55.6**	**+0.6**
VTS				*e*Sn	**Sn**	**19 43 02.7**	**-2.0**
BRY	**Bratogost**	**6.23**	**346**	*e*Pn	**Pn**	**19 41 55.4**	**-1.4**
SELS	**Selova**	**6.36**	**4**	*e*Pn	**Pn**	**19 41 57.9**	**-0.6**
SELS				*e*Sn	**Sn**	**19 43 07.0**	**-3.9**
UPM	**Unac-Piva**	**6.46**	**349**	*e*Pn	**Pn**	**19 41 59.8**	**-0.1**
ZAPS	**Zavoj**	**6.59**	**13**	*e*Pn	**Pn**	**19 42 03.0**	**+1.4**
IVAS	**Ivanjica**	**6.71**	**357**	*e*Pn	**Pn**	**19 42 02.8**	**-0.5**
IVAS				*e*Sn	**Sn**	**19 43 14.2**	**-5.4**
BLKB	**Belogradchik**	**6.94**	**13**	*e*Sn	**Sn**	**19 43 20.3**	**-4.8**
GRUS	**Gruza**	**7.02**	**1**	*e*Pn	**Pn**	**19 42 05.0**	**-1.5**
BBLS	**Lazići**	**7.05**	**353**	*e*Pn	**Pn**	**19 42 07.6**	**-0.4**
BBLS				*e*Sn	**Sn**	**19 43 22.2**	**-5.7**
BBLS	**Lazići**	**7.05**	**353**	*e*Pn	**Pn**	**19 42 06.7**	**-1.3**
DIVS	**Divibare**	**7.24**	**357**	*e*Pn	**Pn**	**19 42 09.8**	**-0.8**
DIVS				*e*Sn	**Sn**	**19 43 25.9**	**-6.7**
DIVS	**Divibare**	**7.24**	**357**	*e*Pn	**Pn**	**19 42 08.2**	**-2.4**
HAPS	**Han Pijesak,Bl**	**7.32**	**351**	*e*Pn	**Pn**	**19 42 09.8**	**-1.9**
TRUS	**Trudelj**	**7.36**	**359**	*e*Pn	**Pn**	**19 42 11.9**	**-0.1**
TEKS	**Tekeris**	**7.72**	**354**	*e*Pn	**Pn**	**19 42 16.2**	**-0.9**
MGRS	**Mrkonjic Grad**	**8.00**	**342**	*e*Pn	**Pn**	**19 42 21.8**	**+0.9**
FRGS	**Fruska Gora**	**8.31**	**356**	*e*Pn	**Pn**	**19 42 23.8**	**-1.3**
FRGS				*e*Sn	Sn	19 43 50.5	-8.2
FRGS	**Fruska Gora**	**8.31**	**356**	*e*Pn	**Pn**	**19 42 23.2**	**-1.9**
MORH	**Mrgy, Hungar**	**9.46**	**352**	*e*Pn	**Pn**	**19 42 38.8**	**-2.0**
CRES	**Cresnjev**	**9.74**	**338**	*e*Pn	**Pn**	**19 42 44.3**	**-0.5**
CEY	**Cerknica**	**10.00**	**334**	*e*Pn	**Pn**	**19 42 46.5**	**-1.8**
OBKA	**Obir**	**10.64**	**337**	*e*Pn	**Pn**	**19 42 58.3**	**+1.2**
	comp=N,1.4nm,0.5s						
SOKA	**Soboth**	**10.64**	**339**	*i* Pn	**Pn**	**19 42 56.6**	**-0.5**
	comp=N,3.9nm,0.4s,SNR=11						
ARSA	**Arzberg**	**11.04**	**342**	*e*Pn	**Pn**	**19 43 02.3**	**-0.2**
	comp=N,1.1nm,0.3s						
KBA	**Koelnbreinsper**	**11.53**	**335**	*e*Pn	**Pn**	**19 43 11.8**	**+2.4**
	comp=N,0.8nm,0.5s						
ABTA	**Abfaltersbach**	**11.56**	**331**	*e*Pn	**Pn**	**19 43 13.5**	**+3.8**
	comp=N,1.5nm,0.4s						
MOA	**Molln**	**11.93**	**339**	*i* Pn	**Pn**	**19 43 15.8**	**+1.1**
	comp=N,2.1nm,0.4s,SNR=4.5						
WTTA	**Wattenberg**	**12.32**	**330**	*e*Pn	**Pn**	**19 43 21.9**	**+1.7**
	comp=N,0.8nm,0.4s						
WTTA				*e*Sn	**Sn**	**19 45 40.9**	**+3.5**
	comp=N,6.8nm,0.9s						
WATA	**Walderalm**	**12.41**	**330**	*e*Pn	**Pn**	**19 43 22.1**	**+0.8**
	comp=N,0.7nm,0.3s						
WATA				*e*Sn	**Sn**	**19 45 46.8**	**+7.4**
	comp=N,6.9nm,1.0s						
SQTA	**Sankt Quirin**	**12.46**	**329**	*e*Sn	**Sn**	**19 45 45.4**	**+4.7**
	comp=N,5.2nm,0.9s						
FETA	**Feichten**	**12.51**	**327**	*e*Pn	**Pn**	**19 43 25.5**	**+2.7**
	comp=N,0.3nm,0.4s						
FETA				*e*Sn	**Sn**	**19 45 47.3**	**+5.4**
	comp=N,5.5nm,1.4s						
MOTA	**Moosalm**	**12.61**	**329**	*e*Pn	**Pn**	**19 43 25.1**	**+1.0**
	comp=N,0.7nm,0.3s						
MOTA				*e*Sn	**Sn**	**19 45 49.9**	**+5.7**
	comp=N,4.6nm,0.8s						
DAVOX	**Davos/Dischmat**	**12.71**	**325**	Pn	**Pn**	**19 43 26.0**	**+0.5**
	comp=N,0.2nm,0.3s,baz=141,slow=17,SNR=4.2						
DAVOX				Sn	**Sn**	**19 45 43.0**	**-3.8**
	baz=315,slow=20						
MMAI	**Mount Meron Ar**	**12.76**	**103**	Sn	Sn	19 45 38.4	-10
	comp=N,0.5nm,0.3s,baz=320,slow=26,SNR=2.3						
GERES	**GERESS Array B**	**12.99**	**339**	Pn	**Pn**	**19 43 29.1**	**-0.1**
	comp=N,0.2nm,0.3s,baz=154,slow=13,SNR=6.4						
GERES				Sn	Sn	19 45 43.4	-10
	comp=N,0.1nm,0.3s,baz=154,slow=26,SNR=2.4						
DAVA	**Damuels**	**13.09**	**326**	*e*Pn	**Pn**	**19 43 33.4**	**+2.8**
	comp=N,1.2nm,0.3s						
EIL	**Elat**	**13.99**	**117**	Pn	**Pn**	**19 43 40.8**	**-2.2**
	comp=N,0.2nm,0.3s,baz=326,slow=4.7,SNR=6.5						
EIL				Sn	Sn	19 46 04.0	-14
	comp=N,0.3nm,0.3s,baz=0.0,slow=19,SNR=1.7						
EIL				LR	LR	19 51 20.7	
	comp=N,14nm,19.5s,baz=290,slow=47						
AKASG	**Malin Array Be**	**15.16**	**21**	Pn	**Pn**	**19 43 57.8**	**-0.9**
	comp=N,0.5nm,0.3s,baz=211,slow=12,SNR=2.0						
KBZ	**Khabaz**	**18.33**	**61**	P	**P**	**19 44 39.0**	**+0.2**
	comp=N,0.1nm,0.3s,baz=270,slow=5.4,SNR=3.7						
ESDC	**Sonseca Array**	**19.46**	**286**	P	**Pn**	**19 44 51.6**	**-0.9**
	comp=N,0.1nm,0.3s,baz=84,slow=12,SNR=2.4						
HFS	**Hagfors**	**23.70**	**351**	P	**P**	**19 45 35.4**	**-0.8**
	comp=N,1.9nm,0.5s,baz=161,slow=9.4,SNR=10						
EKA	**Eskdalemuir Ar**	**24.54**	**326**	P	**P**	**19 45 44.5**	**+0.5**
	comp=N,0.7nm,0.5s,baz=126,slow=9.8,SNR=8.9						
FINES	**FINESS Array B**	**24.85**	**6**	P	**P**	**19 45 46.4**	**-0.4**
	comp=N,0.9nm,0.5s,baz=170,slow=8.9,SNR=9.4						
NOA	**NORSAR Array B**	**24.92**	**349**	P	**P**	**19 45 47.3**	**-0.2**
	comp=N,0.9nm,0.6s,baz=160,slow=9.1,SNR=6.8						
TORD	**Torodi Ar. Bea**	**29.05**	**220**	P	**P**	**19 46 25.0**	**+0.1**
	comp=N,0.4nm,0.4s,baz=27,slow=8.4,SNR=4.1						
MKAR	**Makanchi Array**	**45.96**	**57**	P	**P**	**19 48 46.4**	**-1.2**
	comp=N,1.3nm,0.6s,baz=284,slow=6.5,SNR=13						
ZALV	**Zalesovo Beam**	**46.54**	**47**	P	**P**	**19 48 50.9**	**-1.1**
	comp=N,0.5nm,0.5s,baz=268,slow=8.7,SNR=2.5						
YKA	**Yellowknife Ar**	**74.64**	**340**	P	**P**	**19 52 03.9**	**+0.4**
	comp=N,0.1nm,0.4s,baz=57,slow=7.9,SNR=4.5						

WEL 07 19:51:48.9±1.0, 35°S±15′×17°9E±1°9, h215km±18km, M3.7/18, mB4.0/2, MLv3.7/18, Mw(mB)3.1/2, Error ellipse: s-maj=0.0km s-min=0.0km az=123.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**2.80**	**193**	P	Pn	19 52 37.5	+0.5
WMGZ				S	S	19 53 15.8	+1.3
HAZ	**Te Kaha**	**2.90**	**203**	P	Pn	19 52 37.8	-0.2
HAZ				S	S	19 53 17.8	+1.3
PKGZ	**Pakihiroa**	**2.94**	**198**	P	Pn	19 52 38.7	+0.1
PUZ	**Puketiti**	**3.07**	**194**	P	Pn	19 52 40.2	0.0
PUZ				S	S	19 53 19.9	-0.3
RUGZ	**Raukumara Rang**	**3.12**	**203**	P	Pn	19 52 40.6	-0.3
RUGZ				S	S	19 53 19.3	-2.0
OPRZ	**Ohinepanea**	**3.48**	**217**	P	Pn	19 52 45.8	+0.9
CNGZ	**Carnagh Statio**	**3.48**	**193**	P	Pn	19 52 45.5	+0.6
URZ	**Urewera**	**3.58**	**207**	P	Pn	19 52 46.5	+0.4
URZ				S	S	19 53 31.6	+0.7
RIGZ	**Rimuhau**	**3.79**	**197**	P	Pn	19 52 49.0	+0.3
RIGZ				S	S	19 53 37.1	+1.6
MUGZ	**Murupara**	**3.90**	**209**	P	Pn	19 52 50.0	0.0
MUGZ				S	S	19 53 38.5	+0.5
RTZ	**Ruatahuna**	**3.94**	**206**	P	Pn	19 52 50.1	-0.5
SNGZ	**Shannon Statio**	**3.98**	**201**	P	Pn	19 52 51.0	+0.1
SNGZ				S	S	19 53 41.2	+1.6
MTHZ	**Maungataniwha**	**4.21**	**206**	P	Pn	19 52 54.1	+0.4
MTHZ				S	S	19 53 45.3	+0.6
ARHZ	**Aropaoanui**	**4.52**	**202**	P	Pn	19 52 57.2	-0.4
ARHZ				S	S	19 53 53.7	+2.0
BKZ	**Black Stump Fm**	**4.61**	**207**	P	Pn	19 52 58.6	-0.1
KWHZ	**Kaweka Forest**	**4.86**	**206**	P	Pn	19 53 01.2	-0.8
KWHZ				S	S	19 54 00.1	+0.6
CKHZ	**Cape Kidnapper**	**4.87**	**200**	P	Pn	19 53 01.1	-0.8
CKHZ				S	S	19 53 59.6	+0.2
NTVZ	**North Tongarir**	**4.89**	**214**	P	Pn	19 53 02.8	+0.4
TMVZ	**Te Maari**	**4.89**	**214**	P	Pn	19 53 02.3	-0.1
ETVZ	**East Tongariro**	**4.91**	**214**	P	Pn	19 53 02.7	+0.1
KAHZ	**Kahuranaki**	**5.05**	**201**	P	Pn	19 53 03.5	-0.7
BHHZ	**Black Hill Sta**	**5.05**	**209**	P	Pn	19 53 03.7	-0.6
PXZ	**Pawanui**	**5.27**	**200**	P	Pn	19 53 02.4	-4.7

*IDC **07** 20:23:29.0±2.2, 23°.98S×66°.90W, h160km±30km, mb1 3.5/5, mb1mx3.2/29, mbtmp4.0/5, Error ellipse: s-maj=33.2km s-min=22.8km az=128.0*
*GUC **07** 20:23:29.3±0.5, 24°.21S×67°.50W, h208km±8km, ML4.0*
ISC 07 20:23:28.9±1.2, 24°.15S±0°.06×67°.4W±0°.1, h194km±16km, n19, σ1°59/32, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.09**	**317**	P	**Pn**	**20 24 09.1**	**+0.8**
	21nm,0.3s,baz=136,slow=6.9,SNR=224						
LVC				S	**S**	**20 24 39.0**	**+0.1**
	23nm,0.3s,baz=110,slow=4.3,SNR=11						
LVC	**Limon Verde**	**2.09**	**317**	*e*P	**Pn**	**20 24 09.0**	**+0.7**
LVC				*i* S	**S**	**20 24 39.2**	**+0.3**
PB15	**IPOC Station P**	**2.15**	**296**	*e*P	**Pn**	**20 24 09.6**	**+0.8**
PB15				*i* S	**S**	**20 24 39.8**	**+0.1**
GO02	**Mina Guanaco**	**2.26**	**243**	⇑*i* P	**Pn**	**20 24 10.1**	**+0.1**
GO02				*i* S	**S**	**20 24 41.8**	**-0.3**
GO02				IAML		20 24 42.5	
	comp=N,516nm,0.1s						
PB06	**IPOC Station P**	**2.49**	**305**	⇓*i* P	**Pn**	**20 24 13.4**	**+1.0**
PB06				*i* S	**S**	**20 24 46.3**	**0.0**
PB06				IAML		20 24 49.5	
	comp=E,581nm,0.2s						
PB14	**IPOC Station P**	**2.81**	**260**	*e*P	**Pn**	**20 24 16.4**	**+0.1**
PB14				*e*S	**S**	**20 24 51.9**	**-1.2**
PB14				IAML		20 24 53.7	
	comp=E,112nm,0.3s						
PB05	**IPOC Station P**	**2.91**	**296**	*e*P	**Pn**	**20 24 17.8**	**+0.5**
PB05				*e*S	**S**	**20 24 54.0**	**-0.9**
PB05				IAML		20 24 56.5	
	comp=E,219nm,0.3s						
PB09	**IPOC Station P**	**2.91**	**323**	⇓*i* P	**Pn**	**20 24 18.6**	**+1.2**
PB09				*e*S	**S**	**20 24 56.1**	**+0.9**
PB09				IAML		20 24 57.2	
	comp=N,123nm,0.5s						
PB10	**IPOC Station P**	**2.99**	**282**	*e*P	**Pn**	**20 24 18.8**	**+0.8**
PB10				*e*S	**S**	**20 24 55.5**	**-1.0**
PB10				IAML		20 25 01.6	
	comp=N,217nm,0.3s						
PB03	**IPOC Station P**	**3.04**	**313**	*e*P	**Pn**	**20 24 19.5**	**+0.7**
PB03				*e*S	**S**	**20 24 57.2**	**-0.6**
PB03				IAML		20 24 60.0	
	comp=E,242nm,0.2s						
AC02	**Maricunga**	**3.11**	**210**	⇑*i* P	**Pn**	**20 24 19.5**	**-0.5**
PB04	**IPOC Station P**	**3.14**	**305**	*e*P	**Pn**	**20 24 20.7**	**+0.6**
PB04				*e*S	**S**	**20 24 59.2**	**-0.7**
PB04				IAML		20 25 01.5	
	comp=N,368nm,0.3s						
PB07	**IPOC Station P**	**3.35**	**316**	*e*P	**Pn**	**20 24 23.4**	**+0.7**
PB07				*e*S	**S**	**20 25 03.4**	**-1.2**
PB07				IAML		20 25 05.5	
	comp=E,290nm,0.7s						
AC01	**Pan de Azucar**	**3.54**	**235**	*e*P	**Pn**	**20 24 23.6**	**-1.2**
AC01				*e*S	**S**	**20 25 05.6**	**-2.9**
LPAZ	**La Paz**	**7.86**	**355**	P	**Pn**	**20 25 21.2**	**+0.3**
	comp=E,1.2nm,0.3s,baz=168,slow=7.3,SNR=23						
LPAZ				S	**S**	**20 26 45.9**	**-4.0**
	comp=E,0.0nm,0.3s,baz=192,slow=18,SNR=1.2						
SIV	**San Ignacio**	**10.04**	**37**	P	Pn	20 25 45.2	-3.7
	comp=E,0.9nm,0.3s,baz=221,slow=13,SNR=16						
SIV				S	S	20 27 26.2	-15
	baz=210,slow=18,SNR=1.9						
PLCA	**Paso Flores**	**16.75**	**188**	P	**Pn**	**20 27 16

BANI				*e*S		**Sn**	**20 32 04.7**	**-1.4**
BANI				IAML			20 32 10.2	
	comp=Z,222nm,0.4s							
BON1	**Bonao**	**2.53**	**283**	*e*S		**Sn**	**20 32 06.9**	**-0.9**
CDVI	**St. Croix**	**2.95**	**102**	Pn		**Pn**	**20 31 39.1**	**-0.6**
CDVI				IAML			20 32 17.5	
	comp=E,306nm,0.6s							
CDVI				IAML			20 32 42.2	
	comp=N,307nm,0.6s							
SC01	**Santiago de lo**	**2.96**	**291**	Pn		**Pn**	**20 31 40.9**	**+1.0**
SC01	**Santiago de lo**	**2.96**	**291**	*e*S		**Sn**	**20 32 16.6**	**-0.6**
SC01				IAML			20 32 39.8	
	comp=Z,147nm,0.5s							
SDDR	**Presa de Saban**	**3.37**	**281**			**Pn**	**20 31 46.1**	**+1.2**
SDDR				IAML			20 32 33.5	
	comp=Z,89nm,1.2s							
SDDR				IAML			20 32 33.7	
	comp=Z,89nm,0.6s							
SDDR	**Presa de Saban**	**3.37**	**281**	*i* P		**Pn**	**20 31 46.4**	**+1.5**
SDDR				*e*S		**Sn**	**20 32 25.3**	**-0.8**
SDDR				IAML			20 32 37.5	
	comp=Z,44nm,0.3s							
GRTK	**Grand Turk**	**4.42**	**315**	Pn		**Pn**	**20 31 58.5**	**+0.2**
GRTK	**Grand Turk**	**4.42**	**315**	*i* P		**Pn**	**20 31 58.5**	**+0.2**
GRTK				*e*S		**Sn**	**20 32 49.1**	**-1.1**

IDC 07 20:35:14.3±4.7,5°63′S×152°23′E,h0km,mb3.2/2, mb1 3.6/2,mb1mx3.2/37,mbtmp3.3/2,Error ellipse: s-maj=218.1km s-min=55.3km az=121.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.47**	**229**	P	P	20 40 14.8	-0.7
	0.9nm,0.8s,baz=53,slow=9.7,SNR=2.0						
ASAR	**Alice Springs**	**25.16**	**223**	P	P	20 40 41.8	+0.3
	0.3nm,0.5s,baz=59,slow=8.9,SNR=7.6						
TORD	**Torodi Ar. Bea**	**150.02**	**287**	PKPbc	PKPbc	20 55 07.7	-0.3
	0.3nm,0.5s,baz=63,slow=3.5,SNR=2.3						

*NEIC **07** 20:38:42.8±1.6, 17°.98S±0°.10×178°.4W±0°.1, h588km±5km, mb4.4/50, Error ellipse: s-maj=19.5km s-min=12.9km az=114.0*

*IDC **07** 20:38:44.1±1.1, 17°.93S×178°.49W, h601km±11km, mb3.5/14, mb1 3.7/16, mb1mx3.5/34, mbtmp4.5/16, Error ellipse: s-maj=19.9km s-min=12.6km az=138.0*

ISC 07 20:38:41.9±0.5, 17°.99S±0°.10×178°.33W±0°.09, h579km, n100, σ1s15/94, mb4.3/35, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.46**	**274**	P	**P**	**20 40 04.3**	**+2.1**
	15nm,0.3s,baz=113,slow=3.2,SNR=63						
MSVF				S	**S**	**20 41 12.6**	**+4.9**
	baz=128,slow=22,SNR=3.6						
AFI	**Afiamalu**	**7.49**	**58**	P	**P**	**20 40 35.8**	**0.0**
DZM	**Mont Dzumac**	**14.87**	**252**	P	**P**	**20 41 48.8**	**-0.8**
	1.6nm,0.3s,baz=90,slow=19,SNR=12						
OUZ	**Omahuta**	**18.60**	**201**	P	**P**	**20 42 26.1**	**+2.3**
OUZ				IAmb	IAmb	20 42 45.1	
	comp=Z,25nm,1.4s						
URZ	**Urewera**	**20.59**	**190**	P	**P**	**20 42 39.4**	**-2.3**
	comp=Z,4.2nm,0.5s,baz=298,slow=23,SNR=2.0						
URZ	**Urewera**	**20.59**	**190**	IAmb	IAmb	20 42 57.2	
	comp=Z,15nm,1.2s						
QRZ	**Quartz Range**	**24.08**	**197**	P	**P**	**20 43 13.2**	**+0.4**
PLWZ	**Palliser**	**24.14**	**192**	P	**P**	**20 43 11.7**	**-1.6**
THZ	**Tophouse**	**24.85**	**196**	P	**P**	**20 43 19.3**	**-0.4**
THZ				IAmb	IAmb	20 43 22.5	
	comp=Z,28nm,1.3s						
RPZ	**Rata Peaks**	**27.17**	**197**	P	**P**	**20 43 39.5**	**-0.5**
	comp=Z,14nm,1.1s,baz=329,slow=15,SNR=2.9						
LBZ	**Lake Benmore**	**28.03**	**198**	P	**P**	**20 43 45.8**	**-1.8**
LBZ				IAmb	IAmb	20 43 59.6	
	comp=Z,19nm,1.2s						
EIDS	**Eidsvold**	**29.31**	**250**	P	**P**	**20 43 58.7**	**-0.2**
EIDS				IAmb	IAmb	20 44 13.9	
	comp=Z,7.4nm,1.1s						
ARMA	**Armidale**	**29.97**	**240**	P	**P**	**20 44 05.5**	**+0.8**
ARMA				IAmb	IAmb	20 44 05.8	
	comp=Z,12nm,0.7s						
WHZ	**Wether Hill Ro**	**30.07**	**199**	P	**P**	**20 44 05.4**	**+0.2**
CTA	**Charters Tower**	**33.51**	**261**	P	**P**	**20 44 34.3**	**-0.5**
	comp=Z,6.6nm,0.6s,baz=96,slow=10,SNR=15						
CTAO	**Charters Tower**	**33.51**	**261**	P	**P**	**20 44 34.2**	**-0.5**
CTAO				IAmb	IAmb	20 44 35.2	
	comp=Z,8.6nm,0.8s						
CAN	**Canberra**	**33.72**	**233**	P	**P**	**20 44 36.8**	**+0.5**
CAN				IAmb	IAmb	20 44 37.5	
	comp=Z,16nm,0.7s						
PMG	**Port Moresby**	**34.55**	**280**	P	**P**	**20 44 43.1**	**-0.3**
	comp=Z,14nm,0.8s,baz=134,slow=6.8,SNR=4.8						
PMG	**Port Moresby**	**34.55**	**280**	IAmb	IAmb	20 44 45.0	
	comp=Z,14nm,0.8s						
TOO	**Toolangi**	**37.18**	**231**	P	**P**	**20 45 05.0**	**+0.1**
COEN	**Coen**	**37.18**	**270**	P	**P**	**20 45 04.7**	**-0.5**
COEN				IAmb	IAmb	20 45 06.8	
	comp=Z,13nm,1.0s						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**20 45 17.5**	**+0.6**
	comp=Z,11nm,0.6s,baz=94,slow=10.0,SNR=32						
STKA	**Stephens Creek**	**38.66**	**241**	P	**P**	**20 45 17.3**	**+0.4**
BBOO	**Buckleboo**	**43.43**	**241**	P	**P**	**20 45 54.5**	**-0.2**
WR0	**Warramunga Arr**	**44.50**	**260**	P	**P**	**20 46 01.8**	**-1.3**
WB0	**Warramunga Arr**	**44.66**	**260**	P	**P**	**20 46 03.4**	**-1.0**
WB2	**Warramunga Arr**	**44.68**	**260**	P	**P**	**20 46 03.5**	**-1.0**
WB2				IAmb	IAmb	20 46 29.6	
	comp=Z,21nm,0.8s						
WRA	**Warramunga Arr**	**44.69**	**260**	P	**P**	**20 46 03.9**	**-0.8**
	comp=Z,4.4nm,0.5s,baz=95,slow=7.2,SNR=62						
WRA	**Warramunga Arr**	**44.69**	**260**	P	**P**	**20 46 03.5**	**-1.2**
AS31	**Alice Springs**	**44.84**	**254**	P	**P**	**20 46 05.1**	**-0.6**
AS31				IAmb	IAmb	20 46 06.4	
	comp=Z,9.0nm,0.6s						
ASAR	**Alice Springs**	**44.84**	**254**	P	**P**	**20 46 05.4**	**-0.3**
	comp=Z,33nm,0.6s,baz=88,slow=8.5,SNR=495						
ASAR	**Alice Springs**	**44.84**	**254**	P	**P**	**20 46 04.7**	**-1.0**
FORT	**Forrest**	**50.04**	**245**	P	**P**	**20 46 43.4**	**-1.0**
FORT				IAmb	IAmb	20 46 52.2	
	comp=Z,26nm,1.1s						
VNDA	**Vanda**	**60.37**	**185**	P	**P**	**20 47 56.3**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=349,slow=6.6,SNR=6.3						
VNDA	**Vanda**	**60.37**	**185**	IAmb	IAmb	20 48 02.0	
	comp=Z,0.8nm,0.9s						
MORW	**Morawa**	**60.52**	**246**	P	**P**	**20 47 55.9**	**-1.3**
MORW				IAmb	IAmb	20 48 23.0	
	comp=Z,22nm,1.6s						
GIRL	**Giralia**	**62.94**	**253**	P	**P**	**20 48 13.1**	**+0.1**
MJAR	**Matsushiro Arr**	**68.02**	**323**	P	**P**	**20 48 43.7**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=153,slow=5.8,SNR=5.2						
UGM	**Wanagama**	**69.72**	**268**	P	**P**	**20 48 54.5**	**-0.6**
QSPA	**South Pole Qui**	**72.07**	**180**	P	**P**	**20 49 08.6**	**+0.6**
PEA0B	**Petropavlovsk-**	**73.78**	**345**	P	**P**	**20 49 17.4**	**-0.3**
PETK	**Petropavlovsk-**	**73.78**	**345**	P	**P**	**20 49 17.1**	**-0.6**
	comp=Z,7.7nm,0.6s,baz=99,slow=7.8,SNR=6.8						
PETK	**Petropavlovsk-**	**73.78**	**345**	P	**P**	**20 49 17.4**	**-0.2**
BEKR	**Beckworth**	**78.90**	**42**	P	**P**	**20 49 47.1**	**+0.8**
HUMO	**Hull Mountain**	**78.92**	**38**	P	**P**	**20 49 47.1**	**+1.0**
HUMO				IAmb	IAmb	20 50 04.2	
	comp=Z,15nm,1.6s						
PIX	**Pinacate**	**79.33**	**52**	P	**P**	**20 49 48.9**	**+0.4**
PIX				IAmb	IAmb	20 49 50.7	
	comp=Z,14nm,1.1s						
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**	**20 49 50.1**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=223,slow=8.4,SNR=12						
KVN	**Kaiserville**	**79.90**	**43**	P	**P**	**20 49 52.1**	**+0.4**
K05A	**Summer Lake**	**80.22**	**39**	P	**P**	**20 49 54.2**	**+1.1**
K05A				IAmb	IAmb	20 49 54.7	
	comp=Z,4.3nm,0.6s						
H04A	**Detroit Lake**	**80.61**	**37**	P	**P**	**20 49 55.2**	**+0.2**
H04A				IAmb	IAmb	20 49 55.6	
	comp=Z,3.5nm,0.5s						
PINE	**Pine Mountain**	**80.81**	**38**	P	**P**	**20 49 57.3**	**+1.1**
PINE				IAmb	IAmb	20 49 57.9	
	comp=Z,5.6nm,0.8s						
GAMB	**Gambell**	**81.66**	**3**	P	**P**	**20 50 00.3**	**+0.5**
GAMB				IAmb	IAmb	20 50 08.8	
	comp=Z,16nm,1.6s						
I07A	**Izee**	**81.82**	**39**	P	**P**	**20 50 02.3**	**+1.0**
J08A	**Circle Bar Ran**	**82.03**	**40**	P	**P**	**20 50 02.6**	**+0.2**
BELA	**Belgrano 2**	**82.08**	**173**	P	**P**	**20 50 01.8**	**-0.2**
G08A	**Pilot Rock**	**82.83**	**38**	P	**P**	**20 50 07.3**	**+1.0**
GHO	**Glory Hole Cre**	**82.87**	**14**	P	**P**	**20 50 05.8**	**-0.3**

BMRM	**Bremner River**	**83.21**	**16**	P		**P**	**20 50 07.7**	**-0.2**
SCM	**Sheep Creek Mo**	**83.29**	**14**	P		**P**	**20 50 07.4**	**-0.8**
N25K	**Chitina, Valde**	**83.76**	**15**	P		**P**	**20 50 10.2**	**-0.4**
N25K				IAmb		IAmb	20 50 11.1	
	comp=Z,8.5nm,0.8s							
GLB	**Gilahina Butte**	**83.82**	**16**	P		**P**	**20 50 10.4**	**-0.4**
GLB				IAmb		IAmb	20 50 25.8	
	comp=Z,8.6nm,1.0s							
LOGN	**Logan Glacier**	**84.07**	**17**	P		**P**	**20 50 11.6**	**-0.6**
BARN	**Barnard Glacie**	**84.08**	**17**	P		**P**	**20 50 12.4**	**+0.1**
BARN				IAmb		IAmb	20 50 12.8	
	comp=Z,9.0nm,0.9s							
F10A	**Beach Ranch, E**	**84.22**	**38**	P		**P**	**20 50 12.9**	**-0.3**
ILAR	**Eielson Array**	**85.95**	**13**	P		**P**	**20 50 19.9**	**-1.0**
	comp=Z,1.0nm,0.4s,baz=220,slow=5.0,SNR=20							
ILAR	**Eielson Array**	**85.95**	**13**	P		**P**	**20 50 19.7**	**-1.3**
TX31	**Lajitas Ar. Sí**	**85.97**	**58**	P		**P**	**20 50 23.7**	**+1.7**
TX31				IAmb		IAmb	20 50 24.7	
	comp=Z,6.7nm,0.8s							
TX32	**Lajitas Array**	**85.97**	**58**			**P**	**20 50 23.6**	**+1.6**
TXAR	**Lajitas Array**	**85.97**	**58**	P		**P**	**20 50 23.8**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=217,slow=6.0,SNR=22							
TXAR	**Lajitas Array**	**85.97**	**58**			**P**	**20 50 24.1**	**+2.1**
YHL	**Hebgen Lake**	**87.30**	**41**	P		**P**	**20 50 29.0**	**+0.8**
YHL				IAmb		IAmb	20 50 30.5	
	comp=Z,3.0nm,0.9s							
PDAR	**Pinedale Array**	**87.36**	**43**	P		**P**	**20 50 28.8**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=208,slow=3.3,SNR=13							
PDAR	**Pinedale Array**	**87.36**	**43**	P		**P**	**20 50 28.9**	**+0.5**
BMAR	**Burnt Mountain**	**88.72**	**12**	P		**P**	**20 50 34.0**	**+0.1**
YKA	**Yellowknife Ar**	**94.37**	**25**	P		**P**	**20 50 59.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=235,slow=4.1,SNR=4.5							
EKA	**Eskdalemuir Ar**	**142.54**	**5**	PKiKP		**PKPdf**	**20 57 04.8**	**-4.5**
	comp=Z,0.5nm,0.6s,baz=28,slow=3.8,SNR=3.7							
IOMK	**Kirk Michael**	**143.48**	**6**	*e*P	PKPab		20 57 08.8	-0.9
WIM	**Isle of Man**	**143.58**	**6**	*e*P	PKPab		20 57 09.1	-1.0
HPK	**Haverah Park**	**144.01**	**3**	*e*P	PKPbc		20 57 10.8	-0.6
WLF1	**Llynfaes**	**144.46**	**6**	*e*P	**PKPdf**		**20 57 12.1**	**-0.6**
YRC	**Rhoscolyn**	**144.47**	**6**	*e*P	**PKPdf**		**20 57 12.0**	**-0.7**
LBWR	**Ladybower, Pea**	**144.56**	**4**	*e*P	**PKPdf**		**20 57 11.8**	**-1.1**
BRTR	**Keskin Array B**	**144.89**	**315**	PKP	PKPbc		20 57 14.5	-0.3
	comp=Z,0.8nm,0.6s,baz=256,slow=4.5,SNR=3.8							
FOEL	**Foel Wylfa**	**144.96**	**5**	*e*P	**PKPdf**		**20 57 13.0**	**-0.6**
HLM1	**Long Mynd**	**145.36**	**5**	*e*P	**PKPdf**		**20 57 14.1**	**-0.2**
CLL	**Collm**	**145.56**	**347**		**PKPdf**		**20 57 14.7**	**0.0**
MCH1	**Michaelchurch**	**145.87**	**5**	*e*P	**PKPbc**		**20 57 16.2**	**-0.8**
GERES	**GERESS Array B**	**147.71**	**345**	PKPbc	**PKPbc**		**20 57 22.0**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=23,slow=3.1,SNR=14							
GERES	**GERESS Array B**	**147.71**	**345**		**PKPbc**		**20 57 21.6**	**-0.5**
CONA	**Conrad Observa**	**147.96**	**342**	*e*P	**PKPbc**		**20 57 22.3**	**-0.5**
	comp=Z,1.7nm,0.7s							
SOKA	**Soboth**	**149.34**	**342**	*e*P	**PKiKP**		**20 57 28.5**	**+1.5**
	comp=Z,4.9nm,1.3s							
KBA	**Koelnbreinsper**	**149.44**	**344**	*e*P	**PKPbc**		**20 57 24.3**	**-2.2**
	comp=Z,7.3nm,1.6s							
WATA	**Walderalm**	**149.62**	**347**	*e*P	**PKPbc**		**20 57 26.8**	**-0.2**
	comp=Z,1.8nm,0.5s							
WTTA	**Wattenberg**	**149.68**	**346**	*e*P	**PKPbc**		**20 57 26.3**	**-0.9**
	comp=Z,3.4nm,0.6s							
MOTA	**Moosalm**	**149.71**	**347**	*e*P	**PKPbc**		**20 57 26.8**	**-0.4**
	comp=Z,2.2nm,0.8s							
SQTA	**Sankt Quirin**	**149.81**	**347**	*e*P	**PKPbc**		**20 57 26.8**	**-0.5**
	comp=Z,2.6nm,0.8s							
ABTA	**Abfaltersbach**	**149.96**	**345**	*e*P	**PKPbc**		**20 57 26.5**	**-1.2**
	comp=Z,2.4nm,0.6s							
DAVA	**Damuels**	**150.01**	**349**	*e*P	**PKiKP**		**20 57 28.3**	**-0.2**
	comp=Z,5.7nm,1.4s							
FETA	**Feichten**	**150.10**	**348**	*e*P	**PKPbc**		**20 57 28.3**	**+0.2**
	comp=Z,2.5nm,0.9s							
DAVOX	**Davos/Dischmat**	**150.50**	**349**	PKPbc	**PKPbc**		**20 57 29.1**	**0.0**
	comp=Z,3.8nm,0.6s,baz=294,slow=5.0,SNR=7.5							

*DJA **07** 20:43:18.2±0.3, 7°S±2°×13°0E±°, h156km±6km, M4.5/13, mB5.0/6, mb4.6/9, MLv4.7/13, Mw(mB)4.3/6*

*IDC **07** 20:43:19.4±1.9, 6°.95S×129°.80E, h136km±20km, mb3.7/10, mb1 3.9/16, mb1mx3.7/40, mbtmp4.3/16, Error ellipse: s-maj=19.9km s-min=16.0km az=96.0*

*NEIC **07** 20:43:20.7±2.5, 6°.96S±0°.07×129°.80E±0°.07, h152km±9km, mb4.3/18, Error ellipse: s-maj=10.7km s-min=9.7km az=149.0*

ISC 07 20:43:19.6±0.5, 7°.05S±0°.04×129°.94E±0°.05, h150km, n71, σ2s57/84, mb4.1/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.64**	**124**	Pn	**Pn**	**20 43 53.5**	**+2.8**
SAUI				Sn	**Sn**	**20 44 17.9**	**+3.4**
SAUI	**Saumlaki**	**1.64**	**124**	P	**Pn**	**20 43 53.4**	**+2.8**
SAUI				S	**Sn**	**20 44 11.2**	**-3.3**
BNDI	**Bandanaira**	**2.52**	**359**	P	**Pn**	**20 43 59.3**	**-1.7**
BNDI				S	**Sn**	**20 44 34.4**	**+1.5**
MSAI	**Masohi**	**3.82**	**345**	P	**Pn**	**20 44 16.5**	**-1.1**
MSAI				S	**Sn**	**20 45 03.0**	**+0.5**
FAKI	**Fak Fak**	**4.71**	**29**	Pn	**Pn**	**20 44 26.9**	**-2.4**
FAKI				Sn	**Sn**	**20 45 17.6**	**-5.9**
FAKI	**Fak Fak**	**4.71**	**29**	P	**Pn**	**20 44 26.7**	**-2.6**
FAKI				S	**Sn**	**20 45 18.0**	**-5.5**
NLAI	**Namlea**	**4.73**	**323**	P	**Pn**	**20 44 28.2**	**-1.3**
MTN	**Manton Dam**	**5.87**	**169**	Pn	**Pn**	**20 44 46.1**	**+1.4**
MTN				Sn	**Sn**	**20 45 49.9**	**-1.3**
SOEI	**Soe**	**6.22**	**244**	Pn	**Pn**	**20 44 49.5**	**+0.1**
SOEI				Sn	**Sn**	**20 45 57.2**	**-2.4**
SOEI	**Soe**	**6.22**	**244**	P	**Pn**	**20 44 49.6**	**+0.2**
	1.1nm1μm166nm,0.7s						
SOEI				S	**Sn**	**20 45 59.0**	**-0.6**
	1.1nm1μm166nm,0.7s						
SIJI	**Sorong**	**6.29**	**12**	P	**Pn**	**20 44 47.7**	**-2.5**
	16nm,0.3s,baz=67,slow=4.6,SNR=76						
SIJI				S	Sn	20 45 51.6	-9.5
	8.7nm,0.3s,baz=133,slow=23,SNR=11						
SWI	**Sorong**	**6.29**	**12**	P	**Pn**	**20 44 47.3**	**-3.0**
	0.5nm2μm50nm,0.5s						
SWI				S	**Sn**	**20 45 52.9**	**-8.3**
	0.5nm2μm50nm,0.5s						
SANI	**Sanana**	**6.34**	**321**	P	**Pn**	**20 44 51.4**	**+0.5**
	0.1nm361nm32nm,0.5s						
BATI	**Baumata**	**6.95**	**243**	P	**Pn**	**20 44 59.2**	**+0.1**
	27nm,0.3s,baz=145,slow=2.6,SNR=67						
BATI				S	**Sn**	**20 46 11.8**	**-5.2**
	42nm,0.3s,baz=89,slow=20,SNR=9.2						
BATI	**Baumata**	**6.95**	**243**	P	**Pn**	**20 44 59.2**	**+0.1**
	0.4nm993nm93nm,1.0s						
BATI				S	**Sn**	**20 46 14.4**	**-2.6**
	0.4nm993nm93nm,1.0s						
MMRI	**Maumere**	**7.79**	**258**		**Pn**	**20 45 08.7**	**-1.6**
MMRI	**Maumere**	**7.79**	**258**	P	**Pn**	**20 45 09.5**	**-0.7**
	0.1nm35nm,0.9s						
TNTI	**Ternate**	**8.19**	**342**		**Pn**	**20 45 13.9**	**-1.7**
TNTI	**Ternate**	**8.19**	**342**	P	**Pn**	**20 45 14.6**	**-1.0**
	28nm,1.0s						
BASI	**Baing, Sumba**	**9.77**	**251**	P	**Pn**	**20 45 36.5**	**-0.2**
	21nm,0.4s						
GTOI	**Gorontalo**	**10.30**	**318**	P	Pn	20 45 35.1	-8.6
MRSI	**Marisa**	**10.94**	**313**	P	**Pn**	**20 45 52.1**	**0.0**
	24nm,1.0s						
JAY	**Jayapura**	**11.64**	**68**	P	**Pn**	**20 46 04.7**	**+3.3**
	1.7nm,0.3s,baz=237,slow=5.5,SNR=6.0						
FITZ	**Fitzroy Crossi**	**11.75**	**200**	P	**Pn**	**20 46 01.8**	**-0.9**
	2.4nm,0.3s,baz=23,slow=8.1,SNR=50						
FITZ				S	Sn	20 48 01.6	-11
	4.3nm,0.3s,baz=66,slow=12,SNR=7.6						
FITZ	**Fitzroy Crossi**	**11.75**	**200**	Pn	**Pn**	**20 46 01.6**	**-1.1**
PLAI	**Plampang**	**12.17**	**261**	P	**Pn**	**20 46 07.1**	**-1.1**
TOLI2	**Tolitoli**	**12.21**	**311**	Pn	**Pn**	**20 46 10.7**	**+1.9**
WB0	**Warramunga Arr**	**13.36**	**162**	Pn	**Pn**	**20 46 23.1**	**-0.4**
WRA	**Warramunga Arr**	**13.51**	**162**	P	**Pn**	**20 46 24.6**	**-0.8**
	4.3nm,0.3s,baz=329,slow=13,SNR=33						
WRA				S	**Sn**	**20 48 48.1**	**-6.9**
	3.7nm,0.3s,baz=333,slow=23,SNR=8.3						
WRA	**Warramunga Arr**	**13.51**	**162**		**Pn**	**20 46 23.9**	**-1.5**
WB2	**Warramunga Arr**	**13.51**	**162**	Pn	**Pn**	**20 46 24.4**	**-1.0**
WR0	**Warramunga Arr**	**13.59**	**161**	Pn	**Pn**	**20 46 25.9**	**-0.4**
COEN	**Coen**	**14.71**	**119**	P	**Pn**	**20 46 42.0**	**+1.5**
JAGI	**Jajag, Banyuwa**	**15.70**	**264**	P	**Pn**	**20 46 49.4**	**-3.5**
JAGI				IAmb	IAmb	20 47 29.7	
	comp=Z,24nm,1.4s						
AS31	**Alice Springs**	**16.95**	**167**	P	**Pn**	**20 47 11.0**	**+3.0**
AS31				IAmb	IAmb	20 47 15.0	
	comp=Z,8.7nm,0.5s						
ASAR	**Alice Springs**	**16.95**	**167**	P	**Pn**	**20 47 10.1**	**+2.0**
	comp=Z,3.0nm,0.3s,baz=344,slow=11,SNR=32						
ASAR				S	**S**	**20 50 08.7**	**-7.9**
	comp=Z,0.9nm,0.3s,baz=355,slow=30,SNR=7.0						

ASAR	**Alice Springs**	**16.95**	**167**	P		**Pn**	**20 47 09.4**	**+1.4**
PMG	**Port Moresby**	**17.20**	**99**	P		**Pn**	**20 47 14.6**	**+3.5**
	comp=Z,1.0nm,0.3s,baz=229,slow=7.0,SNR=5.3							
PMG				S		**S**	**20 50 16.3**	**-5.8**
	comp=Z,0.4nm,0.3s,baz=221,slow=18,SNR=1.3							
PMG	**Port Moresby**	**17.20**	**99**	P		**Pn**	**20 47 15.2**	**+4.0**
PMG				IAmb		IAmb	20 47 24.5	
	comp=Z,17nm,0.9s							
PSA00	**Pilbara Seismi**	**17.42**	**213**	P		**Pn**	**20 47 14.8**	**+1.2**
PSA00				IAmb		IAmb	20 47 18.3	
	comp=Z,35nm,1.4s							
KKM	**Kota Kinabalu**	**18.89**	**313**	P		**P**	**20 47 28.5**	**-0.3**
KKM				IAmb		IAmb	20 47 39.3	
	comp=Z,17nm,1.0s							
UGM	**Wanagama**	**19.27**	**266**	P		**P**	**20 47 32.3**	**-0.6**
CTA	**Charters Tower**	**20.45**	**131**	P		Pn	20 47 53.2	+3.8
	comp=Z,2.4nm,0.6s,baz=306,slow=14,SNR=3.6							
CISI	**Cisompet, Garu**	**21.95**	**267**	P		**P**	**20 47 59.6**	**-1.9**
CISI				IAmb		IAmb	20 48 06.9	
	comp=Z,13nm,0.8s							
FORT	**Forrest**	**23.67**	**184**	P		**P**	**20 48 21.5**	**+4.0**
BBOO	**Buckleboo**	**26.25**	**168**	P		**P**	**20 48 42.3**	**+1.4**
STKA	**Stephens Creek**	**26.99**	**158**	P		**P**	**20 48 49.0**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=343,slow=11,SNR=1.6							
STKA	**Stephens Creek**	**26.99**	**158**	P		**P**	**20 48 49.2**	**+1.7**
CMAR	**Chiang Mai Arr**	**39.72**	**310**	P		**P**	**20 50 37.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=134,slow=8.9,SNR=6.1							
JMN	**Monobe**	**40.73**	**5**	P		**P**	**20 50 46.7**	**+0.9**
JHS	**Saijyo**	**41.93**	**4**	P		**P**	**20 50 56.2**	**+0.6**
JWT	**Wachi**	**42.42**	**7**	P		**P**	**20 51 00.1**	**+0.6**
MJAR	**Matsushiro Arr**	**44.05**	**10**	P		**P**	**20 51 11.1**	**-1.5**
	comp=Z,3.2nm,0.8s,baz=186,slow=9.7,SNR=4.9							
KSRS	**Korea Array**	**44.31**	**358**	P		**P**	**20 51 14.9**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=175,slow=9.7,SNR=1.8							
LZH	**Lanzhou**	**49.42**	**332**	*e*P		**P**	**20 51 56.5**	**+1.9**
LZH				pP		pP	20 52 27.0	-0.8
LZH				sP		sP	20 52 42.7	-1.4
LZH				pmax		pmax		
	comp=Z,13nm,1.2s							
HHC	**Hu-ho-hao-te**	**50.57**	**342**	*e*P		**P**	**20 52 04.9**	**+1.8**
HHC				pmax		pmax		
	comp=Z,9.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,63nm,6.6s							
USRK	**Ussuriysk Ar.**	**51.05**	**2**	P		**P**	**20 52 07.0**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=178,slow=8.0,SNR=6.6							
ULN	**Ulaanbaatar**	**58.30**	**342**			**P**	**20 52 59.7**	**+0.9**
ULN				IAmb		IAmb	20 53 00.6	
	comp=Z,3.0nm,0.7s							
SONM	**Songino Array**	**58.47**	**342**	P		**P**	**20 53 00.9**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=163,slow=7.1,SNR=14							
SONM	**Songino Array**	**58.47**	**342**	P		**P**	**20 53 00.8**	**+0.8**
WMQ	**Urumqi**	**63.40**	**327**	*e*P		**P**	**20 53 35.5**	**+2.2**
PETK	**Petropavlovsk-**	**64.39**	**18**	P		**P**	**20 53 40.6**	**+1.1**
	comp=Z,3.8nm,0.9s,baz=158,slow=4.7,SNR=1.8							
MK31	**Makanchi Array**	**68.23**	**327**			**P**	**20 54 05.3**	**+1.2**
MKAR	**Makanchi Array**	**68.23**	**327**	P		**P**	**20 54 04.9**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=123,slow=8.1,SNR=30							
**

MK31 Makanchi Array 60.30 315 P P 20 56 07.8 +1.4
MKAR Makanchi Array 60.30 315 P P 20 56 05.7 -0.7
comp=Z,0.2nm,0.4s,baz=93,slow=8.2,SNR=6.3
MAKZ Makanchi 60.51 315 P P 20 56 08.9 +1.0
RDOG Red Dog Mine 60.99 20 P P 20 56 11.3 +0.6
RDOG IAmb IAmb 20 56 12.4
comp=Z,4.5nm,0.8s
KDAK Kodiak Island 61.23 32 P P 20 56 15.1 +2.6
PPLA Purkeypile 62.91 27 P P 20 56 24.3 +0.5
KURBB Kurchatov Arra 63.26 319 P P 20 56 25.6 -0.5
comp=Z,2.3nm,0.4s,baz=92,slow=7.2,SNR=49
IMAR Indian Mountai 63.31 23 P P 20 56 26.1 -0.1
GHO Glory Hole Cre 64.06 29 P P 20 56 31.7 +0.4
PWL Port Wells 64.12 30 P P 20 56 32.6 +1.0
SML Sawmill 64.34 29 P P 20 56 33.4 +0.3
SML IAmb IAmb 20 56 41.3
comp=Z,18nm,1.0s
RND Reindeer 64.51 27 P P 20 56 33.8 -0.3
RND IAmb IAmb 20 56 40.9
comp=Z,21nm,1.4s
I23K Minto, Yukon-K 64.77 25 P P 20 56 36.8 +1.1
I23K IAmb IAmb 20 56 49.2
comp=Z,16nm,1.6s
SCM Sheep Creek Mo 64.81 29 P P 20 56 36.8 +0.6
FID Port Fidalgo 64.98 30 P P 20 56 38.0 +0.8
COLD Coldfoot 65.06 23 P P 20 56 38.7 +1.1
WRH Wood River Hil 65.11 26 P P 20 56 37.7 -0.3
WRH IAmb IAmb 20 56 38.6
comp=Z,17nm,1.6s
MDM Murphy Dome 65.18 25 P P 20 56 39.1 +0.7
MDM IAmb IAmb 20 56 40.3
comp=Z,4.5nm,0.8s
CCB Clear Creek Bu 65.27 26 P P 20 56 38.8 -0.2
CCB IAmb IAmb 20 56 39.3
comp=Z,16nm,1.6s
KLU Klutina 65.40 29 P P 20 56 41.3 +1.4
KLU IAmb IAmb 20 57 00.8
comp=Z,26nm,1.4s
IL31 65.69 26 P P 20 56 41.2 -0.4
ILAR Eielson Array 65.69 26 P P 20 56 41.0 -0.7
comp=Z,2.2nm,0.4s,baz=252,slow=5.7,SNR=39
TOLK Toolik Lake Re 65.72 21 P P 20 56 43.3 +1.4
TOLK IAmb IAmb 20 56 43.8
comp=Z,5.7nm,1.1s
PAX Paxson 65.90 28 P P 20 56 44.0 +0.9
PAX IAmb IAmb 20 56 56.2
comp=Z,18nm,1.4s
BMRM Bremner River 65.92 30 P P 20 56 44.7 +1.4
N25K Chitina, Valde 66.04 29 P P 20 56 45.4 +1.3
VRDI Verde Repeater 66.52 30 P P 20 56 48.1 +0.8
VRDI IAmb IAmb 20 57 21.5
comp=Z,14nm,1.0s
CRQM Cirque 66.60 30 P P 20 56 49.4 +1.7
DOT Dot Lake 66.66 27 P P 20 56 48.6 +0.7
DOT IAmb IAmb 20 56 49.2
comp=Z,5.9nm,0.6s
MCARA McCarthy VSAT 66.75 30 P P 20 56 50.1 +1.6
SCRK Sand Creek 66.75 27 P P 20 56 49.3 +0.7
SCRK IAmb IAmb 20 56 52.4
comp=Z,13nm,1.4s
BMAR Burnt Mountain 67.21 23 P P 20 56 52.9 +1.5
BCAR Beaver Creek A 67.57 28 P P 20 56 54.6 +0.9
EGAK Eagle 68.10 26 P P 20 56 58.1 +1.2
EGAK IAmb IAmb 20 57 17.9
comp=Z,11nm,1.6s
BVAR Borovoye Array 68.47 321 P P 20 56 58.6 -0.8
comp=Z,1.2nm,0.6s,baz=209,slow=2.7,SNR=5.6
DAWY Dawson 68.76 27 P P 20 57 02.5 +1.4
DAWY IAmb IAmb 20 57 30.6
comp=Z,12nm,1.6s
GAR Garm 68.86 306 P P 20 57 02.8 +0.5
GAR IAmb IAmb 20 57 03.3
comp=Z,6.4nm,0.4s
HYT Haines Junctio 69.35 31 P P 20 57 06.8 +1.9
HYT IAmb IAmb 20 57 08.2
comp=Z,7.4nm,0.9s
INK Inuvik 71.48 23 P P 20 57 17.4 -0.1
comp=Z,2.1nm,0.7s,baz=282,slow=6.5,SNR=8.3
INK Inuvik 71.48 23 P P 20 57 18.0 +0.6
DLBC Dease Lake 73.16 33 P P 20 57 27.9 +0.2
comp=Z,3.8nm,0.8s,baz=309,slow=4.7,SNR=6.7
DLBC Dease Lake 73.16 33 P P 20 57 29.4 +1.7
DLBC IAmb IAmb 20 57 44.2
comp=Z,27nm,1.8s
C36M Paulatuk 74.88 22 P P 20 57 37.7 +0.3
ARU Arti 75.15 325 P P 20 57 38.2 -1.0
comp=Z,0.5nm,0.5s,baz=128,slow=5.0,SNR=5.4
ARU Arti 75.15 325 P P 20 57 38.7 -0.5
ABKAR Akbulak array 75.25 317 P 20 57 39.1 -0.9
ABKAR Akbulak array 75.25 317 P 20 57 39.0 -0.9
ABKAR IAmb IAmb 20 57 40.0
comp=Z,1.7nm,0.9s
HUMO Hull Mountain 79.95 49 P P 20 58 09.3 +3.1
YKA Yellowknife Ar 79.99 28 P P 20 58 06.4 +0.5
comp=Z,1.3nm,0.6s,baz=286,slow=5.1,SNR=24
EUNU Eureka 80.05 8 P P 20 58 05.6 -0.5
PINE Pine Mountain 81.11 47 P P 20 58 14.0 +1.4
PINE IAmb IAmb 20 58 16.6
comp=Z,21nm,1.7s
NVAR Mina Array Bea 84.43 52 P P 20 58 31.7 +1.8
comp=Z,0.5nm,0.6s,baz=267,slow=7.1,SNR=4.0
ARCES ARCESS Array B 94.82 342 P P 20 58 29.7 -1.3
comp=Z,1.8nm,0.7s,baz=47,slow=4.0,SNR=1.6
PDAR Pinedale Array 89.33 45 P P 20 58 53.3 -0.2
comp=Z,0.2nm,0.4s,baz=170,slow=2.1,SNR=4.0
LPAZ La Paz 147.32 95 PKPbc PKPbc 21 05 42.0 +0.7
comp=Z,1.2nm,0.7s,baz=208,slow=3.8,SNR=4.0

*IDC **07** 20:57:06.4±1.9, 54.°34N×164.°96W, h0km, mb3.5/6, mb1 3.7/8, mb1mx3.5/36, mbtmp3.5/8, ML2.8/2, Error ellipse: s-maj=43.6km s-min=22.3km az=173.0*
*AEIC **07** 20:57:08.0±0.8, 53.°69N±0.°07×164.°08W±0.°08, h59km±7km, ML3.4, mb4.0/1(NEIC), Error ellipse: s-maj=11.1km s-min=5.9km az=155.0*
*NEIC **07** 20:57:09.2±1.0, 53.°70N±0.°05×164.°12W±0.°08, h55km±10km, Error ellipse: s-maj=10.0km s-min=2.8km az=140.0*
ISC 07 20:57:07.0±1.7, 53.°6N±0.°1×163.°94W±0.°06, h46km±16km, n41, σ1s55/37, mb3.6/5, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESP	**Westdahl Peak**	**1.05**	**334**		**Pn**	**20 57 25.3**	**-0.1**
WESP					**Sn**	**20 57 38.5**	**-0.4**
WEBT	**Westdahl Beart**	**1.15**	**335**		**Pn**	**20 57 26.8**	**+0.2**
SSLS	**Shishaldin Sou**	**1.16**	**358**		**Pn**	**20 57 27.2**	**+0.3**
AKSA	**Akutan Strait**	**1.20**	**300**		**Pn**	**20 57 27.4**	**+0.1**
AKSA					**Sn**	**20 57 41.0**	**-1.3**
SSLW	**Shishaldin Wes**	**1.23**	**355**		**Pn**	**20 57 27.8**	**+0.1**
SSBA	**Shishaldin**	**1.23**	**355**		**Pn**	**20 57 27.7**	**0.0**
SSBA					**Sn**	**20 57 43.7**	**+0.5**
AKUT	**Akutan**	**1.23**	**299**		**Pn**	**20 57 27.9**	**+0.2**
AKUT				Sn	**Sn**	**20 57 43.9**	**+0.7**
SSLN	**Shishaldin Nor**	**1.26**	**358**		**Pn**	**20 57 28.9**	**+0.7**
SSLN					**Sn**	**20 57 43.6**	**-0.4**
AKBBA	**Akutan Broad B**	**1.30**	**296**		**Pn**	**20 57 29.1**	**+0.4**
FALS	**False Pass**	**1.34**	**13**		**Pn**	**20 57 29.6**	**+0.4**
AKLV	**Akutan Long Va**	**1.34**	**298**		**Pn**	**20 57 29.5**	**+0.2**
AKMO	**Akutan Morgan**	**1.34**	**294**		**Pn**	**20 57 29.7**	**+0.4**
MNAT	**Makushin Natee**	**1.67**	**283**		**Pn**	**20 57 33.9**	**+0.3**
MSW	**Makushin Switc**	**1.73**	**283**		**Pn**	**20 57 34.9**	**+0.4**
MGOD	**Makushin Gods**	**1.76**	**279**		**Pn**	**20 57 35.9**	**+0.9**
DT1	**Dutton Round H**	**1.83**	**31**		**Pn**	**20 57 36.9**	**+1.0**
PS4A	**Pavlof South-4**	**2.17**	**33**		**Pn**	**20 57 42.4**	**+1.8**
SDPT	**Sand Point**	**2.71**	**47**		**Pn**	**20 57 49.2**	**+1.4**
SDPT				Sn	**Sn**	**20 58 20.7**	**+1.4**
ATKA	**Atka Island**	**6.36**	**262**	Pn	**Pn**	**20 58 39.2**	**+1.3**
SII	**Sitkinak Islan**	**6.36**	**58**	Pn	**Pn**	**20 58 40.8**	**+2.7**
OHAK	**Old Harbor**	**7.09**	**55**	Pn	**Pn**	**20 58 47.6**	**-0.4**
KDAK	**Kodiak Island**	**7.69**	**52**	Pn	**Pn**	**20 58 58.6**	**+2.5**
	0.4nm,0.3s,baz=139,slow=24,SNR=1.5						
KDAK				Sn	**Sn**	**21 00 17.7**	**-4.1**
	baz=285,slow=21,SNR=1.4						
KDAK	**Kodiak Island**	**7.69**	**52**	Pn	**Pn**	**20 58 58.3**	**+2.1**
ADK	**Adak**	**7.92**	**263**	Pn	**Pn**	**20 59 01.6**	**+2.3**
ILAR	**Eielson Array**	**14.18**	**31**	Pn	**Pn**	**21 00 21.6**	**-3.2**
	0.0nm,0.3s,baz=221,slow=11,SNR=1.1						
INK	**Inuvik**	**20.56**	**32**	P	Pn	21 01 44.4	+0.5
	1.1nm,0.6s,baz=227,slow=11,SNR=5.7						
INK	**Inuvik**	**20.56**	**32**	P	**P**	**21 01 41.1**	**-0.2**
INK				IAmb	IAmb	21 02 14.5	
	comp=Z,15nm,1.9s						

YKA	**Yellowknife Ar**	**26.96**	**51**	P	**P**	**21 02 47.2**	**+3.5**
	comp=Z,0.2nm,0.5s,baz=270,slow=7.9,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**40.53**	**225**	T	T	21 48 16.6	
	baz=26,slow=76,SNR=52						
H11N3	**WAKE ISLAND Hy**	**40.53**	**225**	T	T	21 48 12.4	
	baz=26,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**40.55**	**225**	T	T	21 48 08.7	
	baz=26,slow=76,SNR=81						
H11S1	**WAKE ISLAND Hy**	**41.70**	**224**	T	T	21 49 46.6	
	baz=26,slow=76,SNR=81						
H11S2	**WAKE ISLAND Hy**	**41.71**	**224**	T	T	21 49 46.3	
	baz=26,slow=76,SNR=64						
H11S3	**WAKE ISLAND Hy**	**41.72**	**224**	T	T	21 49 38.8	
	baz=26,slow=76,SNR=54						
TXAR	**Lajitas Array**	**49.49**	**94**	P	P	21 06 04.8	+12
	comp=Z,0.2nm,0.6s,baz=292,slow=6.6,SNR=4.2						
SONM	**Songino Array**	**53.46**	**303**	P	**P**	**21 06 21.0**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=42,slow=8.5,SNR=5.2						
FINES	**FINESS Array B**	**65.07**	**355**	P	**P**	**21 07 42.5**	**+0.6**
	comp=Z,5.0nm,1.2s,baz=353,slow=8.3,SNR=4.0						
MKAR	**Makanchi Array**	**65.30**	**316**	P	**P**	**21 07 43.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=40,slow=5.2,SNR=5.5						
H03N2	**Juan Fernandez**	**113.37**	**115**	T	T	23 19 20.5	
	baz=322,slow=77,SNR=3.8						
H03N1	**Juan Fernandez**	**113.39**	**115**	T	T	23 19 23.4	
	baz=322,slow=77,SNR=3.7						
H03N3	**Juan Fernandez**	**113.39**	**115**	T	T	23 19 21.2	
	baz=322,slow=77,SNR=3.8						

*IGIL **07** 21:07:47.4, 36.°38N×4.°63W, h10km, ML2.8*
*MDD **07** 21:07:48.4±0.9, 36.°37N×4.°62W, h102km±6km, mb2.1/13, Error ellipse: s-maj=9.6km s-min=3.9km az=167.0, PRIMO*
*INMG **07** 21:07:48.6±1.6, 36.°36N×4.°64W, h98km±10km, ML2.6, Error ellipse: s-maj=5.6km s-min=3.1km az=162.0*
*SFS **07** 21:07:48.0, 36.°36N×4.°63W, ML2.1, ALBORAN OESTE*
ISC 07 21:07:46.6±1.2, 36.°23N±0.°04×4.°66W±0.°03, h35km, n59, σ2s08/102, 2C, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMAL	**Malaga-Limoner**	**0.56**	**19**	S	**Sn**	**21 08 13.7**	**+7.6**
EMAL	**Malaga-Limoner**	**0.56**	**19**	*eS*	**Sn**	**21 08 13.7**	**+7.6**
EJIF	**Jimena Fronter**	**0.69**	**289**	P	Pn	21 08 05.4	+5.5
	SNR=7.9						
EJIF				S	Sn	21 08 19.5	+10
	SNR=7.9						
EGOR	**Sierra Gorda,**	**0.98**	**27**	P	**Pn**	**21 08 07.3**	**+3.3**
	8.2nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**21 08 21.0**	**+4.2**
	3.5nm,0.1s,SNR=7.9						
ELGU	**Los Guajares,**	**1.05**	**52**	P	**Pn**	**21 08 05.9**	**+1.1**
	9.1nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**21 08 19.9**	**+1.7**
	37nm,0.1s,SNR=7.9						
ESPR	**Espera**	**1.15**	**304**	P	**Pn**	**21 08 09.5**	**+3.3**
	2.2nm,0.1s,SNR=5.8						
ESPR				S	**Sn**	**21 08 24.6**	**+3.9**
	18nm,0.3s,SNR=12						
EQUE	**Quentar**	**1.38**	**45**	P	**Pn**	**21 08 12.1**	**+2.6**
	3.7nm,0.1s,SNR=12						
EQUE				S	**Sn**	**21 08 29.9**	**+3.4**
	9.8nm,0.3s,SNR=9.3						
EBER	**Berja**	**1.57**	**65**	P	**Pn**	**21 08 12.2**	**0.0**
	1.7nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**21 08 31.3**	**-0.1**
	15nm,0.6s,SNR=6.9						
GORA	**Gorafe**	**1.80**	**46**	S	**Sn**	**21 08 38.7**	**+1.9**
	30nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.93**	**2**	⇑P	**Pn**	**21 08 18.1**	**+1.2**
	7.6nm,0.1s,SNR=18						
EADA				S	**Sn**	**21 08 40.1**	**0.0**
	12nm,0.2s,SNR=23						
ECAB	**El Cabril**	**1.94**	**342**	P	**Pn**	**21 08 18.1**	**+1.1**
	1.3nm,0.1s,SNR=29						
ECAB				S	**Sn**	**21 08 40.1**	**-0.1**
	18nm,0.3s,SNR=45						
EQES	**Quesada**	**2.02**	**39**	P	**Pn**	**21 08 19.2**	**+1.0**
	4.4nm,0.1s,SNR=40						
EQES				S	**Sn**	**21 08 41.8**	**-0.5**
	8.2nm,0.3s,SNR=14						
ENIJ	**Nijar**	**2.11**	**69**	S	**Sn**	**21 08 43.0**	**-1.4**
	5.0nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.22**	**314**	P	**Pn**	**21 08 22.3**	**+1.3**
	3.0nm,0.0s,SNR=68						
EMIN				S	**Sn**	**21 08 47.5**	**+0.3**
	12nm,0.3s,SNR=32						
EGRO	**El Granado**	**2.61**	**301**	P	**Pn**	**21 08 27.7**	**+1.4**
	14nm,0.1s,SNR=72						
EGRO				S	**Sn**	**21 08 56.5**	**-0.2**
	13nm,0.3s,SNR=21						
PBAR	**Barrancos**	**2.71**	**316**	P	**Pn**	**21 08 28.8**	**+1.1**
PBAR				S	**Sn**	**21 08 58.9**	**-0.4**
	17nm,0.2s						
PBAR	**Barrancos**	**2.71**	**316**	*eP*	**Pn**	**21 08 28.8**	**+1.1**
PBAR				*eS*	**Sn**	**21 08 58.9**	**-0.4**
PBAR				A	A	21 09 01.4	
	17nm,0.2s						
PVAQ	**Vaqueiros**	**2.72**	**296**	P	**Pn**	**21 08 29.1**	**+1.4**
PVAQ				S	**Sn**	**21 08 59.5**	**+0.2**
	23nm,0.2s						
PVAQ	**Vaqueiros**	**2.72**	**296**	⇑*eP*	**Pn**	**21 08 29.1**	**+1.4**
PVAQ				*eS*	**Sn**	**21 08 59.5**	**+0.2**
PVAQ				A	A	21 09 01.6	
	23nm,0.2s						
IFR	**Ifrane**	**2.74**	**188**	*eP*	**Pn**	**21 08 28.7**	**+0.6**
IFR				*eS*	**Sn**	**21 08 59.2**	**-0.9**
PBDV	**Barranco-do-Ve**	**2.81**	**292**	P	**Pn**	**21 08 30.5**	**+1.4**
PBDV				S	**Sn**	**21 09 01.8**	**0.0**
	16nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.81**	**292**	*eP*	**Pn**	**21 08 30.5**	**+1.4**
PBDV				*eS*	**Sn**	**21 09 01.8**	**0.0**
PBDV				A	A	21 09 04.4	
	16nm,0.2s						
PCVE	**Castro Verde**	**3.05**	**298**	P	**Pn**	**21 08 33.4**	**+1.2**
PCVE				S	**Sn**	**21 09 06.8**	**-0.7**
	14nm,0.2s						
PCVE	**Castro Verde**	**3.05**	**298**	*eP*	**Pn**	**21 08 33.4**	**+1.2**
PCVE				*eS*	**Sn**	**21 09 06.8**	**-0.7**
PCVE				A	A	21 09 08.3	
	14nm,0.2s						
PBEJ	**Beja**	**3.12**	**306**	P	**Pn**	**21 08 34.7**	**+1.4**
PBEJ				S	**Sn**	**21 09 08.6**	**-0.8**
	7.2nm,0.2s						
PBEJ	**Beja**	**3.12**	**306**	*eP*	**Pn**	**21 08 34.7**	**+1.4**
PBEJ				*eS*	**Sn**	**21 09 08.6**	**-0.8**
PBEJ				A	A	21 09 10.6	
	14nm,0.2s						
MESJ	**Messejana**	**3.27**	**300**	*eP*	**Pn**	**21 08 36.2**	**+0.9**
MESJ				*eS*	**Sn**	**21 09 11.9**	**-1.0**
MESJ				IAML		21 09 15.2	
	comp=N,22nm,0.2s						
MESJ	**Messejana**	**3.27**	**300**	P	**Pn**	**21 08 36.2**	**+0.9**
MESJ				S	**Sn**	**21 09 11.9**	**-1.0**
PAB	**San Pablo**	**3.32**	**4**	P	**Pn**	**21 08 35.9**	**-0.1**
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**21 09 11.4**	**-2.9**
	comp=N,4.4nm,0.1s,SNR=7.9						
MORF	**Marmelete**	**3.38**	**290**	*eS*	**Sn**	**21 09 15.4**	**-0.4**
MORF				IAML		21 09 17.7	
	comp=N,34nm,0.2s						
MORF	**Marmelete**	**3.38**	**290**	S	**Sn**	**21 09 15.4**	**-0.4**
MORF	**Marmelete**	**3.38**	**290**	*eS*	**Sn**	**21 09 15.8**	**+0.1**
MORF				A	A	21 09 18.5	
	comp=N,25nm,0.1s						
ETOB	**Tobarra**	**3.45**	**45**	P	**Pn**	**21 08 37.7**	**-0.2**
	comp=N,1.5nm,0.1s,SNR=26						
ETOB				S	**Sn**	**21 09 14.2**	**-3.4**
	comp=N,2.1nm,0.3s,SNR=6.3						
PFVI	**Vila Bisbo**	**3.47**	**286**	P	**Pn**	**21 08 39.7**	**+1.7**
	comp=N,1.8nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**21 09 17.2**	**-0.7**
	comp=N,16nm,0.4s,SNR=6.3						
PFVI	**Vila Bisbo**	**3.47**	**286**	*eS*	**Sn**	**21 09 17.1**	**-0.7**
PFVI				A	A	21 09 22.7	
	comp=N,20nm,0.6s						
ESDC	**Sonseca Array**	**3.48**	**9**	P	**Pn**	**21 08 38.2**	**-0.1**
	comp=N,0.4nm,0.3s,baz=190,slow=13,SNR=5.0						
ESDC				S	**Sn**	**21 09 15.1**	**-3.1**
	comp=N,0.4nm,0.3s,baz=202,slow=28,SNR=44						
PTEO	**Sao Teotonio**	**3.51**	**293**	P	**Pn**	**21 08 40.0**	**+1.4**
PTEO				S	**Sn**	**21 09 18.9**	**0.0**
	comp=N,4.4nm,0.4s						
PTEO	**Sao Teotonio**	**3.51**	**293**	*eP*	**Pn**	**21 08 40.0**	**+1.4**
PTEO				*eS*	**Sn**	**21 09 18.9**	**0.0**
PTEO				A	A	21 09 24.5	
	comp=N,8.9nm,0.4s						
PESTR	**Estremoz**	**3.51**	**319**	*eP*	**Pn**	**21 08 39.6**	**+0.9**
PESTR				*eS*	**Sn**	**21 09 17.6**	**-1.4**
PESTR				A	A	21 09 32.0	
	comp=N,6.4nm,0.5s						
EVO	**Evora**	**3.52**	**312**	P	**Pn**	**21 08 39.8**	**+1.0**
EVO				S	**Sn**	**21 09 18.3**	**-0.9**
EVO	**Evora**	**3.52**	**312**	*eP*	**Pn**	**21 08 39.8**	**+1.0**
EVO				*eS*	**Sn**	**21 09 18.3**	**-0.9**
PNCL	**Nicolau / Gran**	**3.61**	**302**	P	**Pn**	**21 08 40.9**	**+0.9**
PNCL				S	**Sn**	**21 09 20.3**	**-1.2**
	comp=N,16nm,0.3s						
PNCL	**Nicolau / Gran**	**3.61**	**302**	*eP*	**Pn**	**21 08 40.9**	**+0.9**
PNCL				*eS*	**Sn**	**21 09 20.3**	**-1.2**
PNCL				A	A	21 09 22.6	
	comp=N,16nm,0.3s						
PMRV	**Marv??o**	**3.85**	**327**	P	**Pn**	**21 08 44.1**	**+0.7**
PMRV				S	**Sn**	**21 09 24.9**	**-2.5**
	comp=N,8.2nm,0.4s						
PMRV	**Marv??o**	**3.85**	**327**	*eP*	**Pn**	**21 08 44.1**	**+0.7**
PMRV				*eS*	**Sn**	**21 09 24.9**	**-2.5**
PMRV				A	A	21 09 39.2	
	comp=N,8.2nm,0.4s						
PMTG	**Montargil**	**4.00**	**316**	P	**Pn**	**21 08 45.8**	**+0.4**
PMTG				S	**Sn**	**21 09 29.3**	**-1.7**
	comp=N,3.9nm,0.2s						
PMTG	**Montargil**	**4.00**	**316**	*eP*	**Pn**	**21 08 45.8**	**+0.4**
PMTG				*eS*	**Sn**	**21 09 29.3**	**-1.7**
PMTG				A	A	21 09 31.8	
	comp=N,3.9nm,0.2s						
PCBR	**Castelo Branco**	**4.23**	**329**	P	**Pn**	**21 08 49.5**	**+1.0**
PCBR				S	**Sn**	**21 09 34.0**	**-2.7**
	comp=N,2.0nm,0.3s						
PCBR	**Castelo Branco**	**4.23**	**329**	*eP*	**Pn**	**21 08 49.5**	**+1.0**
PCBR				*eS*	**Sn**	**21 09 34.0**	**-2.7**
PCBR				A	A	21 09 34.9	
	comp=N,4.1nm,0.3s						
PMAFR	**Mafra**	**4.57**	**308**	*eS*	**Sn**	**21 09 43.4**	**-1.6**
PSBE	**So Bento**	**4.63**	**316**	*eP*	**Pn**	**21 08 55.4**	**+1.4**
PSBE				*eS*	**Sn**	**21 09 44.9**	**-1.7**
PCAS	**Casmilo, Conde**	**4.87**	**323**	S	**Sn**	**21 09 49.2**	**-3.2**
	comp=N,4.3nm,0.5s						
PCAS	**Casmilo, Conde**	**4.87**	**323**	*eS*	**Sn**	**21 09 49.2**	**-3.2**
PCAS				A	A	21 09 51.7	
	comp=N,4.3nm,0.5s						
ETOR	**Torete**	**5.01**	**23**	P	**Pn**	**21 08 58.7**	**-0.7**
	comp=N,5.4nm,0.2s,SNR=9.9						
ETOR				S	**Sn**	**21 09 50.4**	**-5.7**
	comp=N,6.6nm,1.1s,SNR=7.5						
MVO	**Moncorvo**	**5.26**	**340**	P	**Pn**	**21 09 03.3**	**+0.6**
	comp=N,1.2nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**21 09 57.9**	**-4.2**
	comp=N,1.4nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**5.26**	**340**	*eP*	**Pn**	**21 09 03.4**	**+0.6**
EMOS	**Mosqueruela**	**5.28**	**37**	P	**Pn**	**21 09 03.4**	**+0.3**
	comp=N,0.4nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**21 09 57.1**	**-5.6**
	comp=N,7.8nm,0.9s,SNR=9.2						
POLO	**Lamas de Olo**	**5.69**	**335**	P	**Pn**	**21 09 09.5**	**+0.9**
POLO	**Lamas de Olo**	**5.69**	**335**	*eP*	**Pn**	**21 09 09.5**	**+0.9**

*ANF **07** 21:21:24.0±0.5, 36.°88N×98.°17W, h2km±3km, ML3.9/13, Error ellipse: s-maj=2.9km s-min=2.4km az=59.0*
*TUL **07** 21:21:24.2±0.7, 36.°89N±0.°04×98.°20W±0.°04, h5km±7km, ML3.3, mb_Lg3.2/98(NEIC), Error ellipse: s-maj=6.2km s-min=4.8km az=192.0*
*NEIC **07** 21:21:24.6±0.9, 36.°87N±0.°04×98.°18W±0.°04, h5km±2km, Error ellipse: s-maj=7.3km s-min=5.9km az=1.0*
ISC 07 21:21:24.7±1.0, 36.°87N±0.°02×98.°19W±0.°03, h6km±7km, n93, σ0s57/73, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK032	**Salt Plains WL**	**0.07**	**196**	Pg	**Pg**	**21 21 26.3**	**-0.1**
OK032				Sg	**Sg**	**21 21 27.9**	**+0.3**
KAN14	**Manchester OK**	**0.20**	**64**		**Pg**	**21 21 28.6**	**-0.1**
KAN14				Sg	**Sg**	**21 21 31.6**	**+0.2**
GC02	**Grant County #**	**0.26**	**94**	Pg	**Pg**	**21 21 29.9**	**0.0**
GC02				Sg	**Sg**	**21 21 34.0**	**+0.6**
KAN10	**Anthony SW Sta**	**0.27**	**16**	Pg	**Pg**	**21 21 29.4**	**-0.5**
KAN10				Sg	**Sg**	**21 21 33.4**	**-0.1**
KAN05	**Bluff City Nor**	**0.35**	**46**		**Pg**	**21 21 31.3**	**-0.2**
CROK	**Carrier**	**0.40**	**156**	Pg	**Pg**	**21 21 32.5**	**+0.1**
KAN08	**Anthony NE Sta**	**0.40**	**26**	Pg	**Pg**	**21 21 31.9**	**-0.5**
KAN01	**Argonia South**	**0.45**	**50**		**Pg**	**21 21 33.0**	**-0.3**
KAN12	**Harper NE Stat**	**0.45**	**19**	Pg	**Pg**	**21 21 33.0**	**-0.5**
KAN09	**Caldwell North**	**0.53**	**59**	Pg	**Pg**	**21 21 34.6**	**-0.3**
KAN13	**South Haven SW**	**0.59**	**76**		**Pg**	**21 21 35.7**	**-0.3**
U32A	**Winter Ranch,**	**0.82**	**234**		**Pg**	**21 21 39.3**	**-0.4**
U32A	**Winter Ranch,**	**0.82**	**234**	P	**Pg**	**21 21 39.7**	**-0.7**
	baz=51,SNR=26						
U32A	**Winter Ranch,**	**0.82**	**234**	P		21 21 39.7	
	baz=51,SNR=26						
OK029	**Liberty Lake**	**1.22**	**151**		**Pg**	**21 21 47.3**	**-0.8**
BCOK	**Bluff Creek, N**	**1.30**	**159**		**Pn**	**21 21 48.4**	**-0.9**
T35A	**Sooner Cattle**	**1.34**	**87**		**Pn**	**21 21 49.3**	**-0.7**
T35B	**Sooner Cattle**	**1.34**	**87**	P	**Pn**	**21 21 49.3**	**-0.7**
	baz=269,SNR=89						
T35B				S	**Sg**	**21 22 07.1**	**-0.8**
	baz=269						
T35B	**Sooner Cattle**	**1.34**	**87**	P		21 21 49.3	
	baz=269,SNR=89						
T35B				S		21 22 07.1	
	baz=269						
QUOK	**Quay**	**1.38**	**120**		**Pn**	**21 21 50.2**	**-0.3**
OK025	**Westminster Rd**	**1.46**	**152**		**Pn**	**21 21 51.4**	**-0.1**
OKCFA	**Oklahoma City**	**1.57**	**157**		**Pn**	**21 21 51.7**	**-1.3**
OKCFA	**Oklahoma City**	**1.57**	**157**	S	**Sg**	**21 22 15.1**	**0.0**
	baz=338						
OKCFA	**Oklahoma City**	**1.57**	**157**	S		21 22 15.1	
	baz=338						
R32A	**

U38A	**Gravette**	**3.09**	**97**	P			21 22 14.5	
	baz=280,SNR=12							
X37A	**Clayton**	**3.23**	**134**			**Pn**	**21 22 16.0**	**+0.1**
X37A	**Clayton**	**3.23**	**134**	P		**Pn**	**21 22 16.3**	**+0.5**
	baz=316,SNR=14							
X37A	**Clayton**	**3.23**	**134**	P			21 22 16.3	
	baz=316,SNR=14							
AMTX	**Amarillo**	**3.46**	**236**			**Pn**	**21 22 20.1**	**+0.9**
AMTX				IAmb_Lg			21 23 20.6	
	comp=Z,66nm,0.8s							
HHAR	**Hobbs**	**3.47**	**98**			**Pn**	**21 22 19.4**	**+0.2**
Z35A	**Perchaven, San**	**3.61**	**167**	Pn		**Pn**	**21 22 21.7**	**+0.5**
Z35A	**Perchaven, San**	**3.61**	**167**	S		**Sn**	**21 23 04.9**	**+0.8**
	baz=348							
Z35A	**Perchaven, San**	**3.61**	**167**	S			21 23 04.9	
	baz=348							
N33A	**J Bar K, Exete**	**3.91**	**8**	IAmb_Lg			21 23 29.2	
	comp=Z,49nm,0.8s							
W39A	**Magazine**	**3.94**	**114**			**Pn**	**21 22 25.9**	**+0.3**
W39A				IAmb_Lg			21 23 32.7	
	comp=Z,55nm,0.7s							
S39A	**Bolivar**	**3.97**	**77**	Pn		**Pn**	**21 22 25.9**	**-0.1**
S39A				IAmb_Lg			21 23 30.2	
	comp=Z,48nm,1.0s							
S39A	**Bolivar**	**3.97**	**77**	P		**Pn**	**21 22 26.4**	**+0.3**
	baz=260,SNR=23							
S39A				S		**Sn**	**21 23 12.0**	**-0.8**
	baz=260							
S39A	**Bolivar**	**3.97**	**77**	P			21 22 26.4	
	baz=260,SNR=23							
S39A				S			21 23 12.0	
	baz=260							
KSCO	**Kaye Shedlock'**	**4.11**	**303**			**Pn**	**21 22 27.9**	**-0.3**
U40A	**Yellville**	**4.32**	**95**			**Pn**	**21 22 30.8**	**-0.2**
U40A				IAmb_Lg			21 23 44.5	
	comp=Z,63nm,0.9s							
MIAR	**Mount Ida**	**4.41**	**120**	Pn		**Pn**	**21 22 33.5**	**+1.4**
MIAR				IAmb_Lg			21 23 52.7	
	comp=Z,44nm,0.9s							
Z38A	**Mt. Pleasant**	**4.46**	**143**	IAmb_Lg			21 23 51.1	
	comp=Z,50nm,0.7s							
BGNE	**Belgrade**	**4.53**	**0**	Pn		**Pn**	**21 22 33.8**	**-0.1**
BGNE	**Belgrade**	**4.53**	**0**	P		**Pn**	**21 22 33.8**	**-0.1**
	baz=180							
BGNE	**Belgrade**	**4.53**	**0**	P			21 22 33.8	
	baz=180							
P38A	**Dawn**	**4.58**	**52**	IAmb_Lg			21 23 59.3	
	comp=Z,32nm,0.7s							
MSTX	**Muleshoe**	**4.73**	**234**	Pn		**Pn**	**21 22 37.1**	**+0.5**
MGMO	**Mountain Grove**	**4.75**	**85**	Pn		**Pn**	**21 22 37.1**	**+0.3**
MGMO				IAmb_Lg			21 23 56.0	
	comp=Z,41nm,0.8s							
WHTX	**Lake Whitney,**	**4.90**	**173**	P			21 22 38.8	
	baz=353							
WHTX	**Lake Whitney,**	**4.90**	**173**	Pn		**Pn**	**21 22 39.0**	**+0.1**
WHTX				IAmb_Lg			21 24 08.2	
	comp=Z,34nm,1.1s							
WHTX	**Lake Whitney,**	**4.90**	**173**	P		**Pn**	**21 22 38.8**	**-0.1**
	baz=353							
R40A	**Maddies Statio**	**4.91**	**71**	Pn		**Pn**	**21 22 39.1**	**+0.1**
R40A				IAmb_Lg			21 24 04.7	
	comp=Z,29nm,0.9s							
X40A	**Basin Creek Fa**	**4.96**	**117**			**Pn**	**21 22 40.0**	**+0.3**
X40A				IAmb_Lg			21 24 02.8	
	comp=Z,29nm,0.7s							
T25A	**Trinidad**	**4.99**	**275**	Pn		**Pn**	**21 22 40.2**	**-0.1**
FCAR	**Ozark Folk Cen**	**4.99**	**99**	IAmb_Lg			21 24 09.9	
	comp=Z,41nm,0.8s							
WHAR	**Wooly Hollow**	**5.03**	**106**			**Pn**	**21 22 41.2**	**+0.6**
WHAR				IAmb_Lg			21 24 12.5	
	comp=Z,50nm,0.8s							
OGNE	**Ogallala**	**5.06**	**325**	Pn		**Pn**	**21 22 42.1**	**+1.1**
WLAR	**White Oak Lake**	**5.22**	**126**	IAmb_Lg			21 24 21.6	
	comp=Z,32nm,0.8s							
237A	**Washetta, Mont**	**5.24**	**157**	IAmb_Lg			21 24 22.7	
	comp=Z,51nm,0.9s							
P40A	**Paris**	**5.52**	**59**	Pn		**Pn**	**21 22 47.7**	**+0.4**
P40A				IAmb_Lg			21 24 26.8	
	comp=Z,35nm,0.8s							
CCM	**Cathedral Cave**	**5.65**	**76**			**Pn**	**21 22 48.9**	**-0.3**
CCM				IAmb_Lg			21 24 30.9	
	comp=Z,31nm,0.9s							
LCAR	**Lake Charles**	**5.72**	**96**	Pn		**Pn**	**21 22 50.0**	**-0.2**
LCAR				IAmb_Lg			21 24 28.2	
	comp=Z,30nm,0.9s							
NATX	**Nacogdoches**	**5.87**	**149**	IAmb_Lg			21 24 48.0	
	comp=Z,27nm,0.9s							
435B	**Jarrell**	**6.09**	**175**	IAmb_Lg			21 24 42.5	
	comp=Z,26nm,0.7s							
PBMO	**Poplar Bluff**	**6.22**	**89**	IAmb_Lg			21 24 42.9	
	comp=Z,34nm,0.8s							
FVM	**French Village**	**6.28**	**77**	Pn		**Pn**	**21 22 58.5**	**+0.8**
FVM				IAmb_Lg			21 24 43.2	
	comp=Z,21nm,0.8s							
ISCO	**Idaho Springs**	**6.53**	**299**			**Pn**	**21 23 01.3**	**-0.2**
N41A	**Harden Midland**	**6.89**	**54**	IAmb_Lg			21 25 13.8	
	comp=Z,37nm,0.9s							
143A	**Socs Landing,**	**6.96**	**125**	IAmb_Lg			21 25 17.7	
	comp=Z,23nm,1.0s							
ECSD	**EROS Data Cent**	**6.96**	**9**			**Pn**	**21 23 07.1**	**-0.1**
S44A	**Carbondale**	**7.17**	**81**	IAmb_Lg			21 25 19.7	
	comp=Z,26nm,0.9s							
PHWY	**Pilot Hill**	**7.18**	**310**			**Pn**	**21 23 09.8**	**-0.6**
PHWY				IAmb_Lg			21 25 21.9	
	comp=Z,20nm,0.8s							
SIUC	**Southern Illin**	**7.20**	**81**	IAmb_Lg			21 25 31.0	
	comp=Z,24nm,0.8s							
W45A	**Hickory Valley**	**7.49**	**101**	IAmb_Lg			21 25 25.3	
	comp=Z,30nm,0.8s							
SUSD	**Miller**	**7.59**	**356**	IAmb_Lg			21 25 32.3	
	comp=Z,27nm,0.9s							
I37A	**Lemond, Wasseca**	**8.02**	**26**	IAmb_Lg			21 25 49.2	
	comp=Z,22nm,0.9s							
PV15	**Paradox Valley**	**8.30**	**283**	IAmb_Lg			21 25 46.9	
	comp=Z,22nm,1.1s							
L42A	**Oliver, Polo**	**8.35**	**50**	IAmb_Lg			21 25 55.8	
	comp=Z,26nm,0.9s							
USIN	**University of**	**8.44**	**79**	IAmb_Lg			21 26 00.5	
	comp=Z,24nm,0.9s							
RWWY	**Rawlins**	**8.49**	**307**	IAmb_Lg			21 25 52.3	
	comp=Z,25nm,1.2s							
JFWS	**Jewell Farm**	**8.58**	**43**	IAmb_Lg			21 26 14.8	
	comp=Z,24nm,0.8s							
K22A	**Casper**	**8.63**	**315**	IAmb_Lg			21 26 06.9	
	comp=Z,17nm,0.7s							
P46A	**Rosedale**	**9.06**	**69**	IAmb_Lg			21 26 21.7	
	comp=Z,25nm,0.8s							
F33A	**5 Mile Ranch,**	**9.08**	**8**	IAmb_Lg			21 26 12.4	
	comp=Z,14nm,0.9s							
SFIN	**Lafayette**	**9.36**	**65**	IAmb_Lg			21 26 18.2	
	comp=Z,26nm,0.7s							
BLO	**Bloomington**	**9.49**	**72**	IAmb_Lg			21 26 31.3	
	comp=Z,23nm,0.8s							
W18A	**Petrified Fore**	**9.52**	**263**	IAmb_Lg			21 26 43.4	
	comp=Z,12nm,0.8s							
WCI	**Wyandotte Cave**	**9.54**	**78**	IAmb_Lg			21 26 26.6	
	comp=Z,12nm,0.7s							
E28A	**Huff**	**9.88**	**350**	IAmb_Lg			21 27 04.3	
	comp=Z,16nm,0.8s							

*SOME **07** 21:32:04.6, 43.00N×81.70E, h10km*
*NNC **07** 21:32:06.8±1.6, 43.12N×81.61E, h0km, mb2.5, mpv2.3, Error ellipse: s-maj=13.2km s-min=4.1km az=148.0*

ISC 07 21:32:03.5±2.9, 42.9N±0.1×81.66E±0.1, 0, h5km±13km, n9, σ2°32/17, 5C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHLS	**Shalkode**	**1.63**	**279**	*eP*		**Pn**	**21 32 30.9**	**-2.1**
	1.2nm,0.1s							
SHLS				*eS*		**Sn**	**21 32 50.0**	**-4.5**
	6.0nm,0.4s							
PDGK	**Podgornoye**	**1.64**	**285**	⇑P		**Pb**	**21 32 35.5**	**+1.2**
	2.0nm,0.8s							
PDGK				⇑S		**Sb**	**21 32 57.0**	**+1.6**
	1.2nm,0.2s							
UZB	**Uzynbulak**	**1.95**	**277**	*eP*		**Pb**	**21 32 40.8**	**+1.2**
	2.1nm,0.1s							
UZB				*eS*		**Sb**	**21 33 06.8**	**+2.6**
	4.5nm,0.3s							
DJR	**Jarkent**	**1.95**	**316**	*eP*		**Pn**	**21 32 38.8**	**+1.4**
	2.8nm,0.4s							
DJR				*eS*		**Sb**	**21 33 03.6**	**-0.7**
	3.9nm,0.4s							
KPKS	**Kokpek**	**2.24**	**285**	*eP*		**Pb**	**21 32 46.0**	**+1.4**
	2.7nm,0.1s							
KPKS				*eS*		**Sg**	**21 33 15.6**	**+0.1**
	12nm,0.3s							
SATY	**Saty**	**2.39**	**274**	*eP*		**Pb**	**21 32 49.8**	**+2.7**
	0.6nm,0.2s							
SATY				*eS*		**Sg**	**21 33 22.4**	**+2.1**
	5.6nm,0.1s							
KOTS	**Kotyrbulak**	**3.35**	**277**	*eP*		**Pb**	**21 33 05.8**	**+2.4**
	1.0nm,0.2s							
KOTS				*eS*		**Sg**	**21 33 49.5**	**-1.5**
	2.5nm,0.3s							
MAKZ	**Makanchi**	**3.88**	**3**	⇑Pg		**Pg**	**21 33 15.6**	**-2.3**
	0.8nm,1.1s							
MAKZ				⇑Sn		**Sn**	**21 33 50.2**	**+0.3**
	0.7nm,1.2s							
MAKZ				⇑Lg		Lg	21 34 04.3	
	0.5nm,0.5s							
MK31	**Makanchi Array**	**3.89**	**6**	⇓Pg		**Pb**	**21 33 14.6**	**+2.0**
	0.4nm,0.6s,baz=188,slow=15							
MK31				⇓Lg		Lg	21 34 05.2	
	0.4nm,0.4s,baz=186,slow=27							

*IDC **07** 21:44:34.6±0.7, 24.88N×141.42E, h118km±6km, mb3.9/21, mb1 4.1/25, mb1mx4.0/41, mbtmp4.3/25, MS3.0/4, Ms1 3.1/4, ms1mx2.7/35, Error ellipse: s-maj=15.1km s-min=8.4km az=95.0*
*JMA **07** 21:44:34.1, 25.09N×140.91E, h101km, 2km, M4.7*
*NEIC **07** 21:44:35.5±2.5, 24.94N±0.08×141.6E±0.1, h122km±5km, mb4.5/76, Error ellipse: s-maj=15.6km s-min=11.4km az=99.0*

ISC 07 21:44:33.1±0.4, 24.86N±0.04×141.58E±0.07, h100km, n165, σ1°36/171, mb4.5/66, 1C-1D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.85**	**17**	P		**Pn**	**21 45 05.9**	**+2.1**
JHH2				S		**Sn**	**21 45 30.0**	**+2.9**
CBIJ	**Chichi jima**	**2.30**	**14**	P		**Pn**	**21 45 11.1**	**+1.5**
CBIJ				*eS*		**Sn**	**21 45 39.2**	**+1.7**
JCJ	**Chichijima**	**2.30**	**14**	P		**Pn**	**21 45 11.8**	**+2.2**
	220nm,0.3s,baz=260,slow=23,SNR=101							
JCJ				S		**Sn**	**21 45 40.7**	**+3.2**
	348nm,0.3s,baz=300,slow=23,SNR=13							
JCJ				LR		LR	21 46 01.0	
	comp=Z,106nm,18.1s,baz=224,slow=37							
JCJ	**Chichijima**	**2.30**	**14**	Pn		**Pn**	**21 45 11.0**	**+1.4**
BSO3	**Boso 3**	**9.96**	**355**	P		**Pn**	**21 46 51.8**	**-1.1**
JHU	**Hanno**	**11.14**	**350**	P		**Pn**	**21 47 07.3**	**-1.9**
INU	**Inuyama**	**11.18**	**340**	Pn		**Pn**	**21 47 11.8**	**+2.0**
JGF	**Kuroka**	**11.31**	**342**	Pn		**Pn**	**21 47 12.4**	**+0.8**
JAG	**Ashikaga**	**11.68**	**351**	P		**Pn**	**21 47 14.0**	**-2.4**
JHO	**Hitachi**	**11.75**	**356**	P		**Pn**	**21 47 15.4**	**-2.0**
MJAR	**Matsushiro Arr**	**12.00**	**347**	P		**Pn**	**21 47 20.1**	**-0.7**
	0.3nm,0.3s,baz=162,slow=11,SNR=18							
MJAR				LR		LR	21 51 37.6	
	comp=Z,58nm,21.4s,baz=240,slow=36							
MAJO	**Matsushiro**	**12.01**	**347**	Pn		**Pn**	**21 47 22.0**	**+1.2**
MAT	**Matsushiro**	**12.01**	**347**	P		**Pn**	**21 47 18.1**	**-2.7**
MAT				*eS*		**Sn**	**21 49 29.2**	**-3.6**
JNU	**Nakatsue**	**12.47**	**314**	Pn		**Pn**	**21 47 27.6**	**+0.6**
JFK	**Kawauchi**	**12.49**	**357**	P		**Pn**	**21 47 26.1**	**-1.1**
JMM	**Marumori**	**12.99**	**357**			**Pn**	**21 47 31.4**	**-2.4**
JSD	**Sado**	**13.44**	**349**	Pn		**Pn**	**21 47 38.7**	**-1.1**
JTM	**Tenmabayashi**	**15.89**	**359**	IAmb		IAmb	21 48 10.9	
	comp=Z,54nm,1.1s							
JTM				Pn		**Pn**	**21 48 11.0**	**0.0**
KSRS	**Korea Array**	**17.13**	**320**	P		**Pn**	**21 48 25.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=137,slow=12,SNR=2.0							
ERM	**Erimo**	**17.16**	**4**	Pn		**P**	**21 48 29.9**	**+3.2**
ERM				IAmb		IAmb	21 48 34.4	
	comp=Z,20nm,0.7s							
JEW	**Eniwo**	**17.94**	**360**	P		**Pn**	**21 48 36.2**	**+0.2**
NACB	**Ninganchiao**	**18.20**	**272**			**Pn**	**21 48 39.9**	**+0.6**
NACB				IAmb		IAmb	21 48 54.6	
	comp=Z,41nm,1.0s							
YHNB	**Yeheng**	**18.35**	**274**			**Pn**	**21 48 41.9**	**+0.7**
YHNB				IAmb		IAmb	21 48 51.3	
	comp=Z,35nm,1.0s							
YULB	**Yu-li**	**18.57**	**270**	P		**Pn**	**21 48 44.3**	**+0.6**
YULB				IAmb		IAmb	21 48 46.4	
	comp=Z,44nm,1.0s							
JKA	**Kamikawa-asahi**	**19.23**	**2**	P		**Pn**	**21 48 51.4**	**0.0**
JKA				IAmb		IAmb	21 48 53.6	
	comp=Z,15nm,0.9s							
ASAJ	**Asahikawa**	**19.23**	**2**	P		**P**	**21 48 50.6**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=234,slow=13,SNR=7.7							
ASAJ				S		**S**	**21 52 16.2**	**-5.6**
	comp=Z,0.2nm,0.3s,baz=309,slow=19,SNR=1.9							
USRK	**Ussuriysk Ar.**	**20.82**	**340**	P		**P**	**21 49 05.1**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=131,slow=13,SNR=1.4							
USRK	**Ussuriysk Ar.**	**20.82**	**340**	P		**P**	**21 49 07.5**	**+0.9**
SZP	**Santa**	**20.98**	**254**	P		**P**	**21 49 09.8**	**+1.4**
NJ2	**Nanjing**	**21.20**	**295**	*eP*		**P**	**21 49 12.1**	**+1.3**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
MDJ	**Mudanjiang**	**21.99**	**337**	P		**P**	**21 49 21.8**	**+2.8**
MDJ				sP		pwP	21 49 44.6	+3.5
MDJ				S		**S**	**21 53 16.0**	**+0.4**
MDJ				sS		Sn	21 53 36.4	+3.4
MDJ				ScP		ScP	21 56 54.8	+13
MDJ				PcS		PcS	21 57 01.7	+10
MDJ				pmax		pmax		
	comp=Z,9.0nm,2.6s							
MDJ				pmax		pmax		
	comp=Z,140nm,3.6s							
H11N1	**WAKE ISLAND Hy**	**23.96**	**97**	T		T	22 14 18.0	
	baz=283,slow=74,SNR=6.5							
H11N2	**WAKE ISLAND Hy**	**23.96**	**97**	T		T	22 14 17.6	
	baz=283,slow=74,SNR=7.8							
H11N3	**WAKE ISLAND Hy**	**23.97**	**97**	T		T	22 14 16.9	
	baz=283,slow=74,SNR=7.0							
H11S3	**WAKE ISLAND Hy**	**24.15**	**100**	T		T	22 15 20.4	
	baz=289,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hy**	**24.16**	**100**	T		T	22 15 16.1	
	baz=289,slow=75,SNR=4.6							
H11S2	**WAKE ISLAND Hy**	**24.17**	**100**	T		T	22 15 17.9	
	baz=289,slow=75,SNR=6.3							
WHN	**Wuhan**	**24.73**	**289**	⇑P		**P**	**21 49 47.1**	**+1.8**
KLR	**Kul'dur**	**25.52**	**345**	P		**P**	**21 49 50.9**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=127,slow=9.6,SNR=5.7							
ENH	**Enshi**	**28.90**	**288**	P		**P**	**21 50 22.4**	**-0.3**
ENH				IAmb		IAmb	21 50 24.3	
	comp=Z,5.3nm,0.8s							
FAKI	**Fak Fak**	**29.06**	**199**	P		**P**	**21 50 25.8**	**+1.6**
MYLDM	**Lahad Datu**	**29.56**	**232**	P		**P**	**21 50 30.4**	**+1.8**
MYLDM				IAmb		IAmb	21 50 33.1	
	comp=Z,7.4nm,1.0s							
HHC	**Hu-ho-hao-te**	**29.65**	**310**	*eP*		**P**	**21 50 30.8**	**+1.5**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,79nm,7.6s							
XAN	**Xi'an**	**29.77**	**296**	P		**P**	**21 50 31.5**	**+1.1**
XAN				pP		pwP	21 50 54.3	-1.0
XAN				pmax		pmax		
	comp=Z,4.0nm,1.2s							
XAN	**Xi'an**	**29.77**	**296**	P		**P**	**21 50 30.9**	**+0.4**
XAN				IAmb		IAmb	21 50 31.8	
	comp=Z,4.3nm,0.4s							
CD2	**Chengdu**	**33.86**	**289**	P		**P**	**21 51 06.9**	**+0.6**
CD2				pmax		pmax		
	comp=Z,20nm,0.9s							
KMI	**Kunming**	**35.12**	**279**	⇓P		**P**	**21 51 19.6**	**+2.2**
KMI				pP		pP	21 51 38.7	-0.8
KMI				pmax		pmax		
	comp=Z,10.0nm,0.6s							
KMI				LR		LR		
	comp=N,380nm,8.5s							
KMI				LR		LR		
	comp=E,180nm,5.6s							
KMI				LR		LR		
	comp=Z,110nm,5.1s							
SONM	**Songino Array**	**35.99**	**319**	P		**P**	**21 51 23.5**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=125,slow=8.4,SNR=2.2							
SONM				PcP		**PcP**	**21 53 49.4**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=108,slow=4.7,SNR=1.9							
SONM				LR		LR	22 06 08.1	
	comp=Z,33nm,18.1s,baz=32,slow=36							
GTA	**Gaotai**	**37.88**	**303**	*eP*		**P**	**21 51 42.5**	**+1.8**
GTA				pP		pwP	21 52 08.6	+3.0
GTA				pmax		pmax		
	comp=Z,3.0nm,0.8s							
COEN	**Coen**	**38.61**	**178**	P		**P**	**21 51 47.0**	**+0.3**
COEN				IAmb		IAmb	21 52 02.9	
	comp=Z,8.3nm,1.4s							
CMAR	**Chiang Mai Arr**	**40.01**	**269**	P		**P**	**21 51 58.6**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=64,slow=7.8,SNR=9.3							
CMAR	**Chiang Mai Arr**	**40.01**	**269**	P		**P**	**21 51 58.2**	**-0.3**
KULM	**Kulim**	**43.80**	**250**	P		**P**	**21 52 30.2**	**+0.9**
SHL	**Shillong**	**44.75**	**282**	P		**P**	**21 52 37.3**	**+0.3**
SHL				IAmb		IAmb	21 52 39.0	
	comp=Z,18nm,1.0s							
LSA	**Lhasa**	**44.80**	**288**	P		**P**	**21 52 38.6**	**+0.8**
WB0	**Warramunga Arr**	**44.90**	**190**	P		**P**	**21 52 37.5**	**-0.4**
WB0				IAmb		IAmb	21 52 39.8	
	comp=Z,7.8nm,0.5s							
CTAO	**Charters Tower**	**44.90**	**174**	P		**P**	**21 52 37.5**	**-0.4**
CTAO				IAmb		IAmb	21 52 44.1	
	comp=Z,8.2nm,1.3s							
WB2	**Warramunga Arr**	**45.08**	**190**	P		**P**	**21 52 38.7**	**-0.7**
WRA	**Warramunga Arr**	**45.08**	**190**	P		**P**	**21 52 38.8**	**-0.5**
	comp=Z,11nm,0.3s,baz=9.2,slow=8.6,SNR=63							
WRA	**Warramunga Arr**	**45.08**	**190**	P		**P**	**21 52 38.9**	**-0.5**
FITZ	**Fitzroy Crossi**	**45.43**	**202**	P		**P**	**21 52 41.3**	**-0.8**
	comp=Z,4.2nm,0.5s,baz=34,slow=11,SNR=12							
FITZ	**Fitzroy Crossi**	**45.43**	**202**	P		**P**	**21 52 41.7**	**-0.4**
FITZ				IAmb		IAmb	21 52 42.7	
	comp=Z,6.9nm,0.9s							
BILL	**Bilibino**	**45.75**	**13**	P		**P**	**21 52 44.3**	**+0.2**
BILL				IAmb		IAmb	21 52 45.9	
	comp=Z,6.0nm,0.8s							
TIXI	**Tiksi**	**47.38**	**355**	P		**P**	**21 52 56.0**	**-0.8**
WMQ	**Urumqi**	**47.47**	**307**	*eP*		**P**	**21 52 59.7**	**+1.7**
WMQ				pmax		pmax		
	comp=Z,11nm,1.7s							
WMQ				pmax		pmax		
	comp=Z,55nm,4.9s							
TAPN	**Taplejung**	**48.13**	**285**	*eP*		**P**	**21 53 04.8**	**+1.2**
	comp=Z,18nm,0.5s							
GSI	**Gunungsitoli**	**48.49**	**248**	P		**P**	**21 53 06.5**	**+0.3**
ODAN	**Odare**	**48.49**	**285**	*eP*		**P**	**21 53 07.3**	**+1.0**
	comp=Z,27nm,0.5s							
AS31	**Alice Springs**	**48.80**	**189**	P		**P**	**21 53 07.8**	**-0.5**
ASAR	**Alice Springs**	**48.80**	**189**	P		**P**	**21 53 07.5**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=2.5,slow=6.0,SNR=14							
ASAR				PcP		**PcP**	**21 54 31.4**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=12,slow=4.6,SNR=7.2							
ASAR	**Alice Springs**	**48.80**	**189**	P		**P**	**21 53 07.8**	**-0.5**
RAMN	**Ramite**	**49.17**	**285**	*eP*		**P**	**21 53 12.7**	**+1.2**
	comp=Z,12nm,0.3s							
JIRN	**Jiri**	**49.41**	**286**	*eP*		**P**	**21 53 14.8**	**+1.4**
	comp=Z,58nm,0.4s							
GUN	**Gumba**	**49.63**	**286**	*eP*		**P**	**21 53 16.4**	**+1.3**
	comp=Z,68nm,0.3s							
PKI	**Pulchoki**	**50.10**	**286**	*eP*		**P**	**21 53 19.5**	**+0.8**
	comp=Z,8.3nm,0.4s							
PKIN	**Phulchoki**	**50.11**	**286**	*eP*		**P**	**21 53 19.3**	**+0.6**
	comp=Z,10nm,0.3s							
KKN	**Kakani**	**50.18**	**286**	*eP*		**P**	**21 53 20.1**	**+1.0**
DMN	**Daman**	**50.36**	**286**	*eP*		**P**	**21 53 21.5**	**+1.0**
	comp=Z,20nm,0.4s							
GKN	**Gorkha**	**50.70**	**287**	*eP*		**P**	**21 53 23.8**	**+0.8**
ZAA0	**Zalesovo Array**	**50.84**	**320**	P		**P**	**21 53 21.8**	**-1.6**
ZALV	**Zalesovo Beam**	**50.84**	**320**	P		**P**	**21 53 21.3**	**-2.1**
	comp=Z,1.0nm,0.5s,baz=108,slow=7.9,SNR=7.1							
ZALV				PcP		**PcP**	**21 54 36.1**	**-2.6**
	comp=Z,0.7nm,0.3s,baz=125,slow=3.8,SNR=4.2							
ZALV	**Zalesovo Beam**	**50.84**	**320**	P		**P**	**21 53 21.5**	**-1.9**
MK31	**Makanchi Array**	**51.50**	**311**	P		**P**	**21 53 27.9**	**-0.6**
MKAR	**Makanchi Array**	**51.50**	**311**	P		**P**	**21 53 27.6**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=91,slow=8.9,SNR=31							
MKAR				PcP		**PcP**	**21 54 38.7**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=91,slow=7.4,SNR=2.4							
KOLN	**Koldanda**	**51.64**	**287**	*eP*		**P**	**21 53 31.1**	**+1.0**
MAKZ	**Makanchi**	**51.72**	**311**	P		**P**	**21 53 29.3**	**-0.8**
PYUN	**Piuthan**	**52.11**	**287**	*eP*		**P**	**21 53 34.5**	**+0.9**
	comp=Z,90nm,0.4s							
STKA	**Stephens Creek**	**56.41**	**180**	P		**P**	**21 54 02.6**	**-1.6**
	comp=Z,2.2nm,0.6s,baz=342,slow=8.2,SNR=10							
STKA	**Stephens Creek**	**56.41**	**180**	P		**P**	**21 54 03.7**	**-0.6**
KDAK	**Kodiak Island**	**56.48**	**36**	P		**P**	**21 54 03.3**	**-1.2**
	comp=Z,11nm,0.9s,baz=116,slow=23,SNR=1.4							
FORT	**Forrest**	**56.81**	**194**	P		**P**	**21 54 06.9**	**-0.2**
AAK	**Ala-Archa**	**57.10**	**306**	P		**P**	**21 54 09.2**	**-0.2**
BBOO	**Buckleboo**	**57.59**	**186**	P		**P**	**21 54 12.1**	**-0.4**
BPAW	**Bear Paw Mtn.**	**58.09**	**29**	P		**P**	**21 54 16.9**	**+1.1**
BPAW				IAmb		IAmb	21 54 19.4	
	comp=Z,6.3nm,1.2s							
NEA2	**Nenana**	**58.98**	**28**	P		**P**	**21 54 22.1**	**+0.2**

BMO	**Blue Mountains**	**80.26**	**45**	P	**P**	**21 56 33.7**	**+0.6**
WALA	**Waterton Lakes**	**80.50**	**40**	P	**P**	**21 56 34.9**	**+0.6**
WALA				IAmb	IAmb	21 56 36.4	
	comp=Z,4.4nm,0.9s						
MFID	**Camas Ranch**	**81.84**	**46**	P	**P**	**21 56 42.4**	**+0.9**
KVN	**Kaiserville**	**82.21**	**51**	P	**P**	**21 56 43.1**	**-0.5**
NVAR	**Mina Array Bea**	**82.33**	**51**	P	**P**	**21 56 45.4**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=280,slow=7.0,SNR=7.1						
NVAR				pP	**pwP**	**21 57 15.0**	**+2.1**
	comp=Z,2.3nm,0.7s,baz=279,slow=5.4,SNR=4.2						
HLID	**Hailey**	**82.69**	**45**	P	**P**	**21 56 46.3**	**+0.3**
SUMG	**Summit**	**82.83**	**0**	P	**P**	**21 56 46.4**	**0.0**
SUMG				IAmb	IAmb	21 56 47.2	
	comp=Z,2.4nm,0.6s						
ELK	**Elko**	**83.43**	**48**	P	**P**	**21 56 50.9**	**+0.9**
ELK				IAmb	IAmb	21 56 51.8	
	comp=Z,5.4nm,1.2s						
FFC	**Flin Flon**	**83.93**	**31**	P	**P**	**21 56 52.4**	**+0.5**
AKASG	**Malin Array Be**	**84.09**	**324**	P	**P**	**21 56 50.8**	**-2.0**
	comp=Z,2.1nm,0.6s,baz=50,slow=5.2,SNR=7.7						
AKASG	**Malin Array Be**	**84.09**	**324**	P	**P**	**21 56 50.8**	**-2.0**
YHH	**Holmes Hill**	**84.36**	**43**	P	**P**	**21 56 55.6**	**+0.9**
FCC	**Fort Churchill**	**84.85**	**26**	P	**P**	**21 56 56.2**	**-0.2**
RLMT	**Red Lodge**	**85.17**	**42**	P	**P**	**21 56 59.8**	**+1.1**
NC405	**NORSAR Array S**	**85.26**	**338**	P	**P**	**21 56 56.7**	**-1.8**
NOA	**NORSAR Array B**	**85.48**	**338**	P	**P**	**21 56 57.2**	**-2.4**
	comp=Z,1.5nm,0.7s,baz=53,slow=6.6,SNR=6.2						
NOA				LR	LR	22 37 36.8	
	comp=Z,18nm,18.4s,baz=295,slow=37						
RAYN	**Ar Rayn**	**85.55**	**294**	P	**P**	**21 57 00.4**	**-0.3**
RAYN				IAmb	IAmb	21 57 01.4	
	comp=Z,3.3nm,0.8s						
PD31	**Pinedale Array**	**86.19**	**44**	P	**P**	**21 57 04.0**	**+0.2**
PDAR	**Pinedale Array**	**86.19**	**44**	P	**P**	**21 57 03.5**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=311,slow=2.0,SNR=6.9						
PDAR	**Pinedale Array**	**86.19**	**44**	P	**P**	**21 57 04.2**	**+0.4**
BUR08	**Bucovina Ar. S**	**87.99**	**323**	P	**P**	**21 57 11.2**	**-1.0**
BUR08				IAmb	IAmb	21 57 27.9	
	comp=Z,3.9nm,1.2s						
BURAR	**Bucovina Array**	**88.00**	**323**	P	**P**	**21 57 10.7**	**-1.5**
GERES	**GERESS Array B**	**93.13**	**329**	P	**P**	**21 57 33.0**	**-3.1**
	comp=Z,1.1nm,0.9s,baz=57,slow=4.9,SNR=6.6						
TXAR	**Lajitas Array**	**97.38**	**53**	P	Pdif	21 57 56.2	+0.3
	comp=Z,0.2nm,0.4s,baz=240,slow=1.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**125.61**	**309**	PKP	**PKPdf**	**22 03 21.9**	**-1.8**
	comp=Z,0.8nm,0.6s,baz=44,slow=1.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**125.61**	**309**		**PKPdf**	**22 03 22.0**	**-1.6**
SNAA	**Sanae**	**129.07**	**194**	PKPdf	**PKPdf**	**22 03 26.6**	**-2.1**
VNA2	**Neumayer--Watz**	**130.59**	**193**	PKPdf	**PKPdf**	**22 03 30.8**	**-0.6**
VNA3	**Neumayer Olymp**	**130.78**	**192**	PKPdf	**PKPdf**	**22 03 31.1**	**-0.7**
VNA1	**Neumayer--Stat**	**130.99**	**193**	PKPdf	**PKPdf**	**22 03 32.3**	**+0.1**
PLCA	**Paso Flores**	**148.91**	**129**	PKPbc	**PKPbc**	**22 04 09.4**	**0.0**
	comp=Z,2.3nm,0.7s,baz=240,slow=3.8,SNR=6.1						
PLCA	**Paso Flores**	**148.91**	**129**		**PKPbc**	**22 04 08.8**	**-0.7**
LPAZ	**La Paz**	**150.96**	**79**	PKPbc	**PKPbc**	**22 04 15.6**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=41,slow=4.2,SNR=6.5						

*INET **07** 21:55:48.3, 9.42N×85.79W, h12km, MW2.9*

UCR 07 21:55:46.6±1.2, 9.41N×85.96W, h20km±4km, MW3.6, 5C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INDI	**Punta indio, G**	**0.64**	**45**	*eP*	Pb	21 55 59.2	+0.1
GUAI	**GUAI**	**0.96**	**27**	*iP*	Pb	21 56 03.3	-1.3
GUAI				*iS*	Sb	21 56 17.5	+0.6
LAFE	**Finca La Fe, P**	**1.11**	**69**	*eP*	Pn	21 56 05.5	-1.4
JTS	**Las Juntas de**	**1.32**	**48**	*eP*	Pn	21 56 09.5	-0.5
LAPC	**Finca la Perla**	**1.45**	**21**	*iP*	Pn	21 56 11.0	-0.6
GBS3	**Finca Las Img**	**1.45**	**20**	*iP*	Pn	21 56 11.2	-0.6
COLC	**Colonia**	**1.45**	**31**	*iP*	Pn	21 56 11.5	-0.3
GPS2	**Hotel Rincn d**	**1.46**	**24**	*iP*	Pn	21 56 11.7	-0.2
CUI	**Cuipilapa**	**1.47**	**32**	*iP*	Pn	21 56 11.6	-0.4
GB1A	**Boringuen Arri**	**1.51**	**21**	*iS*	Sn	21 56 31.5	-0.1
HORNC	**Hornillas**	**1.51**	**31**	*iP*	Pn	21 56 12.1	-0.5
ACAL	**Aguas Claras**	**1.52**	**37**	*iP*	Pn	21 56 12.5	-0.2
BUAI	**Buenos Aires**	**1.58**	**23**	*iP*	Pn	21 56 13.6	+0.1
ARE1	**Arenal 1**	**1.61**	**49**	*eP*	Pn	21 56 14.7	+0.8
CEDE	**Laguna Cedeo**	**1.64**	**49**	*iP*	Pb	21 56 15.4	-0.7
FORC	**Fortuna**	**1.65**	**50**	*iP*	Pn	21 56 15.1	+0.7
LCR2	**La Lucha 2**	**1.96**	**80**	*eP*	Pn	21 56 18.5	-0.4
RIMA	**Rio Macho**	**2.10**	**80**	*eP*	Pn	21 56 20.5	-0.2
CDM	**Cerro de Muert**	**2.17**	**86**	*eP*	Pn	21 56 21.9	-0.1
RIOS	**Rincon, Osa**	**2.51**	**106**	*eP*	Pn	21 56 26.5	+0.2
MRVA	**Moravia de Chi**	**2.52**	**80**	*eP*	Pn	21 56 26.8	+0.4
DRK0	**Durika**	**2.68**	**93**	*eP*	Pn	21 56 29.1	+0.3
LPLA	**Las Palmas La**	**2.94**	**97**	*eP*	Pn	21 56 32.8	+0.5

IDC 07 22:03:35.8±41.0, 17.95S×179.63E, h564km±196km, mb3.2/3, mb1 3.4/3, mb1mx2.8/35, mbtmp4.2/3, Error ellipse: s-maj=917.3km s-min=117.8km az=81.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.52**	**278**	P	P	22 04 45.1	0.0
	5.7nm,0.3s,baz=106,slow=3.4,SNR=21						
STKA	**Stephens Creek**	**36.98**	**241**	P	P	22 09 58.0	-0.1
	2.2nm,0.8s,baz=50,slow=7.9,SNR=4.3						
WRA	**Warramunga Arr**	**42.78**	**260**	P	P	22 10 44.4	-0.4
	1.0nm,0.5s,baz=96,slow=7.1,SNR=9.9						
ASAR	**Alice Springs**	**42.98**	**254**	P	P	22 10 46.3	0.0
	6.3nm,0.7s,baz=87,slow=8.5,SNR=81						

*IDC **07** 22:11:30.2±0.9, 9.17S×126.64E, h0km, mb4.0/5, mb1 4.2/9, mb1mx3.9/32, mbtmp4.1/9, ML4.0/4, MS3.6/12, Ms1 3.6/12, ms1mx3.3/34, Error ellipse: s-maj=30.0km s-min=18.3km az=67.0*

*NEIC **07** 22:11:35.1±2.6, 9.28S±0.07×126.46E±0.05, h35km±1km, mb4.2/11, Error ellipse: s-maj=12.9km s-min=8.2km az=20.0*

*DJA **07** 22:11:40.1±1.1, 10°S±7°×12°6E±°, h23km±9km, M4.4/6, mb4.6/6, mB5.0/3, MLv4.3/6, Mw(mB)4.4/3*

ISC 07 22:11:34.4±0.6, 9.41S±0.06×126.52E±0.06, h35km, n59, σ1s99/53, mb4.4/18, MS3.6/6, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.25**	**261**		**Pn**	**22 12 10.9**	**+1.7**
SOEI	**Soe**	**2.25**	**261**	P	**Pn**	**22 12 11.4**	**+2.2**
SOEI				S	**Sn**	**22 12 36.1**	**+0.3**
BATI	**Baumata**	**2.92**	**254**	Pn	Pn	22 12 20.9	+2.5
	39nm,0.3s,baz=143,slow=3.4,SNR=65						
BATI				Sn	**Sn**	**22 12 58.4**	**+5.9**
	81nm,0.3s,baz=332,slow=6.5,SNR=9.1						
BATI	**Baumata**	**2.92**	**254**	P	**Pn**	**22 12 20.0**	**+1.5**
BATI				S	**Sn**	**22 12 47.8**	**-4.6**
MMRI	**Maumere**	**4.30**	**280**		**Pn**	**22 12 37.7**	**+0.3**
MMRI	**Maumere**	**4.30**	**280**	P	Pn	22 12 39.0	+1.6
MMRI				S	**Sn**	**22 13 29.4**	**+3.1**
MTN	**Manton Dam**	**5.67**	**127**		Pn	22 13 01.4	+5.1
BASI	**Baing, Sumba**	**5.91**	**262**	P	**Pn**	**22 13 00.2**	**+0.7**
	0.3nm866nm94nm,0.9s						
BASI				S	**Sn**	**22 14 00.5**	**-5.6**
	0.3nm866nm94nm,0.9s						
KAPI	**Kappang**	**8.01**	**303**	LR	LR	22 16 36.9	
	comp=Z,283nm,19.6s,baz=96,slow=38						
BNSI	**Bone**	**8.08**	**308**	P	Pn	22 13 31.0	+1.7
FAKI	**Fak Fak**	**8.60**	**42**	Pn	Pn	22 13 38.9	+2.3
PLAI	**Plampang**	**8.65**	**273**	P	**Pn**	**22 13 38.6**	**+1.4**
	33nm,0.8s						
FITZ	**Fitzroy Crossi**	**8.68**	**186**	Pn	**Pn**	**22 13 41.3**	**+3.7**
	1.4nm,0.3s,baz=12,slow=11,SNR=27						
FITZ				Sn	**Sn**	**22 15 13.5**	**-0.7**
	4.1nm,0.3s,baz=94,slow=16,SNR=16						
FITZ				LR	LR	22 17 31.8	
	comp=Z,274nm,19.2s,baz=7.0,slow=40						
FITZ	**Fitzroy Crossi**	**8.68**	**186**		**Pn**	**22 13 41.0**	**+3.4**
LUWI	**Luwuk**	**9.11**	**336**	Pn	**Pn**	**22 13 43.6**	**+0.1**
LUWI	**Luwuk**	**9.11**	**336**	P	Pn	22 13 59.4	+16
TWSI	**Taliwang, Sumb**	**9.54**	**273**	P	**Pn**	**22 13 49.2**	**-0.2**
	8.8nm,0.7s						
SIJI	**Sorong**	**9.71**	**29**	LR	LR	22 18 28.6	
	comp=Z,160nm,18.0s,baz=152,slow=44						
JAGI	**Jajag, Banyuwa**	**12.25**	**273**	Pn	**Pn**	**22 14 26.1**	**-0.5**
WB0	**Warramunga Arr**	**12.80**	**144**		**Pn**	**22 14 34.6**	**+0.5**
WRA	**Warramunga Arr**	**12.91**	**145**	Pn	**Pn**	**22 14 37.0**	**+1.4**
	0.6nm,0.3s,baz=320,slow=13,SNR=35						
WRA				Sn	**Sn**	**22 16 54.2**	**-4.0**
	0.6nm,0.3s,baz=319,slow=24,SNR=4.9						
WRA				LR	LR	22 20 51.1	
	comp=Z,390nm,19.1s,baz=330,slow=43						
WRA	**Warramunga Arr**	**12.91**	**145**		**Pn**	**22 14 35.8**	**+0.2**
WR0	**Warramunga Arr**	**13.04**	**144**		**Pn**	**22 14 38.2**	**+0.9**
PSA00	**Pilbara Seismi**	**13.69**	**207**	Pn	**Pn**	**22 14 45.8**	**-0.4**
AS31	**Alice Springs**	**15.84**	**154**		**P**	**22 15 16.9**	**-1.4**
ASAR	**Alice Springs**	**15.84**	**154**	Pn	**P**	**22 15 16.9**	**-1.5**
	0.3nm,0.3s,baz=322,slow=10,SNR=19						
ASAR				Sn	**Sn**	**22 18 09.0**	**-0.5**
	0.4nm,0.3s,baz=330,slow=25,SNR=5.3						
ASAR				LR	LR	22 22 53.7	
	comp=Z,560nm,18.1s,baz=327,slow=43						
ASAR	**Alice Springs**	**15.84**	**154**		**P**	**22 15 17.9**	**-0.5**
UGM	**Wanagama**	**15.88**	**274**	Pn	**P**	**22 15 14.8**	**-4.1**
COEN	**Coen**	**16.92**	**107**	Pn	**P**	**22 15 30.2**	**-0.2**
COEN				IAmb	IAmb	22 15 47.5	
	comp=Z,18nm,1.5s						
LEM	**Lembang**	**18.89**	**276**	LR	LR	22 24 02.1	
	comp=Z,109nm,19.3s,baz=66,slow=40						
PMG	**Port Moresby**	**20.36**	**92**	LR	LR	22 25 59.2	
	comp=Z,135nm,18.9s,baz=266,slow=43						
XMIS	**Christmas Isla**	**20.58**	**265**	P	Pn	22 16 11.5	-1.4
NWAO	**Narrogin (SRO)**	**24.92**	**199**	LR	LR	22 28 32.0	
	comp=Z,149nm,18.6s,baz=320,slow=41						
STKA	**Stephens Creek**	**26.37**	**150**	P	**P**	**22 17 10.0**	**+2.5**
	comp=Z,1.6nm,0.9s,baz=0.0,slow=7.1,SNR=1.5						
STKA				LR	LR	22 29 42.9	
	comp=Z,239nm,18.1s,baz=356,slow=41						
STKA	**Stephens Creek**	**26.37**	**150**	P	**P**	**22 17 07.8**	**+0.3**
PSI	**Prapat**	**30.05**	**293**	LR	LR	22 30 19.1	
	comp=Z,153nm,20.9s,baz=93,slow=38						
CMAR	**Chiang Mai Arr**	**38.82**	**316**	P	**P**	**22 18 56.8**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=146,slow=6.5,SNR=5.4						
CMAR				LR	LR	22 36 07.1	
	comp=Z,32nm,20.7s,baz=188,slow=38						
ODAN	**Odare**	**52.35**	**315**	*eP*	**P**	**22 20 42.8**	**-0.7**
TAPN	**Taplejung**	**52.43**	**315**	*eP*	**P**	**22 20 44.5**	**+0.3**
	comp=Z,11nm,0.8s						
RAMN	**Ramite**	**52.97**	**314**	*eP*	**P**	**22 20 48.1**	**0.0**
	comp=Z,16nm,0.8s						
JIRN	**Jiri**	**53.69**	**315**	*eP*	**P**	**22 20 53.3**	**-0.2**
	comp=Z,13nm,0.9s						
GUN	**Gumba**	**54.06**	**315**	*eP*	**P**	**22 20 56.2**	**0.0**
	comp=Z,12nm,0.7s						
PKI	**Pulchoki**	**54.18**	**314**	*eP*	**P**	**22 20 56.3**	**-0.8**
	comp=Z,14nm,1.0s						
PKIN	**Phulchoki**	**54.20**	**314**	*eP*	**P**	**22 20 56.3**	**-0.8**
	comp=Z,5.4nm,0.6s						
GKN	**Gorkha**	**54.99**	**314**	*eP*	**P**	**22 21 02.3**	**-0.4**
KOLN	**Koldanda**	**55.60**	**313**	*eP*	**P**	**22 21 06.7**	**-0.5**
	comp=Z,17nm,1.1s						
PYUN	**Piuthan**	**56.23**	**313**	*eP*	**P**	**22 21 11.3**	**-0.4**
	comp=Z,8.9nm,0.6s						
SONM	**Songino Array**	**59.72**	**344**		**P**	**22 21 36.4**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=158,slow=9.5,SNR=7.0						
SONM	**Songino Array**	**59.72**	**344**	P	**P**	**22 21 35.9**	**+0.1**
SONM				IAmb	IAmb	22 21 42.9	
	comp=Z,1.6nm,0.9s						
MK31	**Makanchi Array**	**68.42**	**329**	P	**P**	**22 22 32.5**	**-0.3**
MK31				IAmb	IAmb	22 22 45.0	
	comp=Z,1.3nm,1.0s						
MKAR	**Makanchi Array**	**68.42**	**329**	P	**P**	**22 22 32.5**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=132,slow=8.2,SNR=9.0						
MKAR	**Makanchi Array**	**68.42**	**329**	P	**P**	**22 22 32.4**	**-0.4**
KBL	**Kabul**	**69.74**	**312**	P	**P**	**22 22 40.4**	**-1.0**
KBL				IAmb	IAmb	22 22 51.7	
	comp=Z,2.9nm,0.8s						
VNDA	**Vanda**	**70.51**	**172**	P	**P**	**22 22 48.1**	**+3.0**
VNDA				IAmb	IAmb	22 22 58.5	
	comp=Z,2.7nm,1.3s						
MAW	**Mawson**	**71.47**	**201**	LR	LR	22 51 13.0	
	comp=Z,42nm,19.8s,baz=75,slow=33						
ZALV	**Zalesovo Beam**	**72.28**	**336**	P	**P**	**22 22 56.0**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=123,slow=5.5,SNR=8.9						
QSPA	**South Pole Qui**	**80.58**	**180**	P	**P**	**22 23 44.5**	**+1.3**
QSPA				IAmb	IAmb	22 23 57.8	
	comp=Z,6.0nm,1.2s						
TIXI	**Tiksi**	**80.90**	**1**	P	**P**	**22 23 44.6**	**+0.1**
TIXI				IAmb	IAmb	22 23 52.1	
	comp=Z,3.8nm,1.1s						
LPAZ	**La Paz**	**150.64**	**150**	PKPbc	**PKiKP**	**22 31 25.3**	**0.0**
	comp=Z,1.6nm,0.8s,baz=119,slow=2.1,SNR=4.0						

*DJA **07** 22:25:07.8±0.2, 7°S±2°×12°9E±°, h191km±5km, M4.5/12, mB4.9/5, mb4.4/12, MLv4.7/11, Mw(mB)4.2/5*

*IDC **07** 22:25:08.5±1.8, 6.92S×129.46E, h160km±16km, mb3.7/11, mb1 3.8/14, mb1mx3.6/38, mbtmp4.3/14, Error ellipse: s-maj=19.7km s-min=12.4km az=77.0*

*NEIC **07** 22:25:09.2±0.9, 7.00S±0.08×129.45E±0.09, h172km±7km, mb4.2/17, Error ellipse: s-maj=13.0km s-min=11.1km az=78.0*

ISC 07 22:25:07.0±0.4, 7.03S±0.05×129.38E±0.05, h150km, n78, σ1s68/85, mb4.2/25, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.12**	**117**	Pn	**Pn**	**22 25 47.5**	**+3.8**
SAUI	**Saumlaki**	**2.12**	**117**	P	**Pn**	**22 25 47.7**	**+4.1**
SAUI				S	**Sn**	**22 26 16.2**	**+4.4**
BNDI	**Bandanaira**	**2.55**	**12**	Pn	Pn	22 25 54.1	+5.3
BNDI				S	Sn	22 26 29.8	+8.8
NLAI	**Namlea**	**4.40**	**329**	P	Pn	22 26 16.9	+4.3
FAKI	**Fak Fak**	**4.99**	**35**	Pn	**Pn**	**22 26 21.1**	**+0.8**
FAKI	**Fak Fak**	**4.99**	**35**	P	**Pn**	**22 26 21.0**	**+0.7**
	1.3nm5μm70nm,0.5s						
FAKI				S	**Sn**	**22 27 15.4**	**-2.1**
	1.3nm5μm70nm,0.5s						
SOEI	**Soe**	**5.74**	**242**	Pn	**Pn**	**22 26 33.6**	**+3.3**
SOEI	**Soe**	**5.74**	**242**	P	**Pn**	**22 26 33.7**	**+3.3**
	0.7nm795nm48nm,0.6s						
SOEI				S	**Sn**	**22 27 35.9**	**+0.3**
	0.7nm795nm48nm,0.6s						
SANI	**Sanana**	**5.99**	**325**	P	Pn	22 26 41.1	+7.4
MTN	**Manton Dam**	**6.03**	**164**	Pn	**Pn**	**22 26 35.5**	**+1.4**
SIJI	**Sorong**	**6.40**	**17**	P	**Pn**	**22 26 39.6**	**+0.4**
	5.2nm,0.3s,baz=221,slow=23,SNR=20						
SIJI				S	**Sn**	**22 27 49.7**	**-1.7**
	11nm,0.3s,baz=250,slow=23,SNR=9.6						
SWI	**Sorong**	**6.41**	**17**	P	**Pn**	**22 26 40.8**	**+1.5**
	0.3nm24nm,0.8s						
BATI	**Baumata**	**6.47**	**240**	P	**Pn**	**22 26 42.9**	**+2.8**
	11nm,0.3s,baz=306,slow=3.8,SNR=12						
BATI				S	**Sn**	**22 27 53.1**	**0.0**
	16nm,0.3s,baz=86,slow=23,SNR=21						
BATI	**Baumata**	**6.47**	**240**	P	**Pn**	**22 26 42.8**	**+2.6**
	0.4nm34nm,0.6s						
BATI				S	**Sn**	**22 27 53.1**	**0.0**
	0.4nm34nm,0.6s						
TNTI	**Ternate**	**8.01**	**345**	Pn	**Pn**	**22 27 03.3**	**+2.7**
TNTI	**Ternate**	**8.01**	**345**	P	**Pn**	**22 27 04.3**	**+3.7**
	48nm,1.0s						
BASI	**Baing, Sumba**	**9.26**	**249**	P	**Pn**	**22 27 20.0**	**+2.7**
	31nm,0.8s						
GTOI	**Gorontalo**	**9.92**	**320**	P	Pn	22 27 35.6	+10
FITZ	**Fitzroy Crossi**	**11.59**	**198**	P	**Pn**	**22 27 47.2**	**-0.8**
	5.8nm,0.3s,baz=33,slow=11,SNR=130						
FITZ				S	**Sn**	**22 29 48.0**	**-8.2**
	1.9nm,0.3s,baz=82,slow=20,SNR=2.9						
FITZ	**Fitzroy Crossi**	**11.59**	**198**	Pn	**Pn**	**22 27 47.9**	**-0.1**
PLAI	**Plampang**	**11.63**	**260**	P	**Pn**	**22 27 47.9**	**-0.7**
	41nm,0.7s						
TWSI	**Taliwang, Sumb**	**12.50**	**261**	P	**Pn**	**22 27 58.7**	**-1.2**
	5.3nm,0.6s						
WB0	**Warramunga Arr**	**13.56**	**159**	Pn	**Pn**	**22 28 11.3**	**-2.2**
WRA	**Warramunga Arr**	**13.71**	**160**	P	**Pn**	**22 28 13.1**	**-2.2**
	2.3nm,0.3s,baz=335,slow=13,SNR=52						
WRA				S	Sn	22 30 38.7	-8.6
	4.7nm,0.3s,baz=332,slow=24,SNR=8.7						
BANJ	**Banjar Baru**	**14.90**	**283**	P	P	22 28 38.2	+5.9
COEN	**Coen**	**15.20**	**118**	P	**P**	**22 28 35.0**	**-0.7**
AS31	**Alice Springs**	**17.10**	**166**	P	**Pn**	**22 28 58.1**	**+0.8**
AS31				IAmb	IAmb	22 28 59.3	
	comp=Z,13nm,0.9s						
ASAR	**Alice Springs**	**17.10**	**166**	P	**Pn**	**22 28 58.2**	**+0.9**
	comp=Z,4.9nm,0.3s,baz=338,slow=9.9,SNR=222						
ASAR				S	**S**	**22 32 05.5**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=352,slow=29,SNR=5.1						
ASAR	**Alice Springs**	**17.10**	**166**	P	**Pn**	**22 28 57.6**	**+0.3**
PSA00	**Pilbara Seismi**	**17.14**	**212**	P	**Pn**	**22 28 58.4**	**+0.7**
SBUM	**Sibu**	**19.55**	**298**	P	**Pn**	**22 29 25.2**	**-0.9**
SBUM				IAmb	IAmb	22 29 27.8	
	comp=Z,8.0nm,0.9s						
STKA	**Stephens Creek**	**27.22**	**157**	P	**P**	**22 30 39.5**	**+2.5**
	comp=Z,3.1nm,0.9s,baz=321,slow=14,SNR=3.5						
RPSI	**Rantau Prapat**	**31.90**	**287**	P	**P**	**22 31 19.2**	**+0.7**
PSI	**Prapat**	**31.93**	**287**	P	**P**	**22 31 19.5**	**+0.5**
	comp=Z,8.1nm,0.6s,baz=360,slow=8.2,SNR=9.1						
CMAR	**Chiang Mai Arr**	**39.28**	**311**	P	**P**	**22 32 22.2**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=136,slow=7.4,SNR=9.6						
CMAR	**Chiang Mai Arr**	**39.28**	**311**	P	**P**	**22 32 21.3**	**-0.2**
SHL	**Shillong**	**48.77**	**313**	P	**P**	**22 33 36.6**	**-0.7**
SHL				IAmb	IAmb	22 33 37.8	
	comp=Z,9.0nm,1.2s						
ODAN	**Odare**	**52.81**	**311**	*eP*	**P**	**22 34 07.7**	**+0.1**
	comp=Z,6.0nm,0.5s						
TAPN	**Taplejung**	**52.85**	**312**	*eP*	**P**	**22 34 07.4**	**-0.5**
	comp=Z,5.0nm,0.4s						
RAMN	**Ramite**	**53.45**	**311**	*eP*	**P**	**22 34 12.0**	**-0.3**
	comp=Z,6.8nm,0.4s						
JIRN	**Jiri**	**54.15**	**311**	*eP*	**P**	**22 34 16.9**	**-0.5**
	comp=Z,4.7nm,0.5s						
GUN	**Gumba**	**54.51**	**312**	*eP*	**P**	**22 34 19.5**	**-0.5**
	comp=Z,10nm,0.7s						
PKI	**Pulchoki**	**54.68**	**311**	*eP*	**P**	**22 34 20.4**	**-0.8**
PKIN	**Phulchoki**	**54.69**	**311**	*eP*	**P**	**22 34 20.5**	**-0.8**
	comp=Z,4.7nm,0.5s						
KKN	**Kakani**	**54.89**	**311**	*eP*	**P**	**22 34 22.7**	**+0.1**
	comp=Z,7.4nm,0.6s						
DMN	**Daman**	**54.93**	**311**	*eP*	**P**	**22 34 22.9**	**0.0**
GKN	**Gorkha**	**55.49**	**311**	*eP*	**P**	**22 34 26.1**	**-0.7**
	comp=Z,4.9nm,0.3s						
KOLN	**Koldanda**	**56.15**	**310**	*eP*	**P**	**22 34 31.3**	**-0.3**
PYUN	**Piuthan**	**56.78**	**310**	*eP*	**P**	**22 34 35.8**	**-0.3**
	comp=Z,17nm,0.8s						
SONM	**Songino Array**	**58.28**	**342**	P	**P**	**22 34 46.4**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=139,slow=4.4,SNR=3.7						
SONM				PcP	**sP**	**22 35 35.6**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=152,slow=6.7,SNR=2.1						
SONM	**Songino Array**	**58.28**	**342**	P	**P**	**22 34 45.8**	**-0.2**
MK31	**Makanchi Array**	**67.92**	**327**	P	**P**	**22 35 49.4**	**-0.2**
MK31				IAmb	IAmb	22 35 51.2	
	comp=Z,2.6nm,0.9s						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**22 35 49.5**	**0.0**
	comp=Z,3.5nm,0.4s,baz=115,slow=8.4,SNR=94						
MKAR				PcP	**PcP**	**22 36 14.5**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=138,slow=3.6,SNR=5.6						
MKAR	**Makanchi Array**	**67.92**	**327**	P	**P**	**22 35 49.3**	**-0.3**
MAKZ	**Makanchi**	**68.09**	**327**	P	**P**	**22 35 50.5**	**-0.2**
AAK	**Ala-Archa**	**70.17**	**320**	P	**P**	**22 36 04.8**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=150,slow=5.4,SNR=5.6						
AAK				PcP	**PcP**	**22 36 24.8**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=22,slow=1.5,SNR=4.3						
AAK	**Ala-Archa**	**70.17**	**320**	P	**P**	**22 36 03.8**	**0.0**
ZAA0	**Zalesovo Array**	**71.34**	**334**	P	**P**	**22 36 09.6**	**-0.7**
ZALV	**Zalesovo Beam**	**71.34**	**334**	P	**P**	**22 36 09.7**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=106,slow=3.7,SNR=8.7						
ZALV	**Zalesovo Beam**	**71.34**	**334**	P	**P**	**22 36 09.4**	**-0.9**
VNDA	**Vanda**	**72.49**	**173**	P	**P**	**22 36 16.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=330,slow=5.8,SNR=5.3						
VNDA	**Vanda**	**72.49**	**173**	P	**P**	**22 36 16.8**	**-0.1**
VNDA				IAmb	IAmb	22 36 26.5	
	comp=Z,4.4nm,1.4s						
KKAR	**Karatay Array**	**72.96**

AAK					LR	LR	22 41 19.4		
	comp=Z,91nm,20.9s,baz=208,slow=42								
AAK	**Ala-Archa**	**6.41**	**21**	P	**Pn**	**Pn**	**22 38 36.7**	**+1.1**	
	SNR=16								
AAK	**Ala-Archa**	**6.41**	**21**	Pn	**Pn**	**Pn**	**22 38 36.4**	**+0.8**	
	5.1nm,0.5s								
AAK				⇑Sn	**Sn**	**Sn**	**22 39 47.1**	**-1.8**	
	44nm,0.8s								
KK31	**Karatay Array**	**6.46**	**354**	⇑Pn	**Pn**	**Pn**	**22 38 36.0**	**0.0**	
	8.9nm,0.6s,baz=183,slow=13,SNR=97								
KK31				⇑Sn	**Sn**	**Sn**	**22 39 46.0**	**-3.8**	
	6.6nm,0.5s,baz=178,slow=22								
KK31				⇓Lg	Lg	Lg	22 40 14.0		
	28nm,0.6s								
KBK	**Karagaybulak**	**6.57**	**24**	P	**Pn**	**Pn**	**22 38 39.6**	**+1.9**	
	SNR=9.9								
CHMS	**Chumysh**	**6.82**	**21**	P	**Pn**	**Pn**	**22 38 41.9**	**+0.9**	
	SNR=19								
USP	**Ospenovka**	**7.00**	**19**	P	**Pn**	**Pn**	**22 38 43.9**	**+0.4**	
	SNR=14								
TKM2	**Tokmak 2**	**7.02**	**26**	P	**Pn**	**Pn**	**22 38 44.8**	**+0.8**	
	SNR=16								
TKM2	**Tokmak 2**	**7.02**	**26**	⇑Pn	**Pn**	**Pn**	**22 38 44.7**	**+0.7**	
	15nm,1.0s								
TKM2				⇑Sn	**Sn**	**Sn**	**22 40 01.0**	**-3.0**	
	12nm,0.8s								
TKM2				⇓Lg	Lg	Lg	22 40 36.1		
	39nm,1.2s								
SMLA	**Simla**	**7.32**	**137**	*e*P	Pn		22 38 56.6	+8.8	
SMLA				*e*S	**Sn**		**22 40 14.7**	**+3.7**	
SMLA				IAML			22 40 22.2		
	comp=N,52nm,0.4s								
SMLA				IAML			22 40 24.0		
	comp=E,66nm,0.3s								
SMLA				AMP			22 40 49.2		
	comp=N,399nm,0.3s								
MDOK	**Medeo**	**7.79**	**32**	P	**Pn**	**Pn**	**22 38 55.9**	**+1.3**	
	comp=N,4.7nm,0.6s								
MDOK				⇓S	**Sn**	**Sn**	**22 40 25.6**	**+2.7**	
	comp=N,16nm,1.1s								
DDI	**Dehra Dun**	**8.43**	**137**	*e*P	Pn		22 39 13.1	+10	
DDI				*e*S	**Sn**		**22 40 39.1**	**+0.7**	
DDI				IAML			22 40 51.4		
	comp=N,54nm,0.3s								
DDI				IAML			22 40 51.8		
	comp=E,82nm,0.3s								
PDGK	**Podgornoye**	**9.09**	**41**	⇓P	**Pn**	**Pn**	**22 39 11.9**	**-0.3**	
	comp=E,8.5nm,1.4s								
PDGK				⇑S	**Sn**	**Sn**	**22 40 55.6**	**+0.9**	
	comp=E,9.6nm,0.9s								
GEYT	**Alibeck**	**10.66**	**281**	Pn	Pn		22 39 38.1	+4.4	
	comp=E,0.5nm,0.3s,baz=124,slow=12,SNR=3.0								
GEYT				Sn	**Sn**		**22 41 35.0**	**+1.9**	
	comp=E,0.9nm,0.3s,baz=119,slow=46,SNR=4.6								
GEYT				LR	LR		22 45 40.7		
	comp=E,125nm,19.2s,baz=85,slow=47								
MKAR	**Makanchi Array**	**12.96**	**35**	Pn	**Pn**		**22 40 04.2**	**-0.9**	
	comp=E,0.1nm,0.3s,baz=230,slow=9.4,SNR=25								
PYUN	**Piuthan**	**12.99**	**128**	*e*P	**Pn**		**22 40 08.2**	**+2.4**	
	comp=E,32nm,0.5s								
KOLN	**Koldanda**	**13.61**	**127**	*e*P	**Pn**		**22 40 16.2**	**+2.0**	
GKN	**Gorkha**	**14.13**	**124**	*e*P	**Pn**		**22 40 22.3**	**+1.0**	
	comp=E,12nm,0.4s								
BHPL	**Bhopal**	**14.37**	**157**	*e*P	**P**		**22 40 31.1**	**-0.4**	
BHPL				IAmb	IAmb		22 40 39.4		
	comp=Z,8.2nm,0.3s								
BHPL				*e*S	**Sn**		**22 43 00.8**	**-3.1**	
BHPL				IAML			22 43 03.0		
	comp=N,7.3nm,0.1s								
BHPL				IAML			22 43 03.3		
	comp=E,8.7nm,0.1s								
KKN	**Kakani**	**14.70**	**123**	*e*P	**Pn**		**22 40 30.4**	**+1.2**	
DMN	**Daman**	**14.70**	**124**	*e*P	**Pn**		**22 40 30.7**	**+1.5**	
	comp=E,15nm,0.6s								
KURBB	**Kurchatov Arra**	**14.85**	**18**	Pn	**Pn**		**22 40 28.5**	**-2.4**	
	comp=E,0.1nm,0.3s,baz=210,slow=11,SNR=4.1								
KURBB				Lg	Lg		22 44 42.4		
	comp=E,0.0nm,0.3s,baz=212,slow=29,SNR=1.6								
PKIN	**Phulchoki**	**14.92**	**123**	*e*P	**Pn**		**22 40 33.1**	**+1.0**	
PKI	**Pulchoki**	**14.93**	**123**	*e*P	**Pn**		**22 40 32.9**	**+0.5**	
GUN	**Gumba**	**15.03**	**121**	*e*P	**Pn**		**22 40 33.8**	**+0.1**	
AB31	**Akbulak array**	**15.09**	**330**	Pn	**Pn**		**22 40 31.0**	**-3.1**	
	comp=E,1.7nm,0.6s,baz=144,slow=12,SNR=35								
AB31				⇓Sn	**Sn**		**22 43 15.8**	**-5.3**	
	comp=E,3.3nm,0.6s,baz=160,slow=24,SNR=4.4								
JIRN	**Jiri**	**15.40**	**122**	*e*P	**Pn**		**22 40 39.0**	**+0.3**	
RAMN	**Ramite**	**16.14**	**123**	*e*P	**Pn**		**22 40 48.1**	**0.0**	
BVAR	**Borovoye Array**	**16.36**	**358**	Pn	**Pn**		**22 40 48.4**	**-2.2**	
	comp=E,0.2nm,0.3s,baz=158,slow=24,SNR=7.2								
TAPN	**Taplejung**	**16.65**	**119**	*e*P	**Pn**		**22 40 54.4**	**-0.3**	
	comp=E,8.4nm,0.5s								
ODAN	**Odare**	**16.73**	**121**	*e*P	**Pn**		**22 40 56.3**	**+0.6**	
	comp=E,9.1nm,0.5s								
AKTO	**Aktyubinsk**	**16.79**	**329**	Pn	**P**		**22 40 58.0**	**-0.2**	
	comp=E,0.6nm,0.3s,baz=127,slow=9.2,SNR=11								
AKTO				Sn	Sn		22 43 51.5	-11	
	comp=E,0.1nm,0.3s,baz=25,slow=23,SNR=2.9								
AKTO	**Aktyubinsk**	**16.79**	**329**	⇓Pn	**Pn**		**22 40 56.1**	**+0.1**	
	comp=E,11nm,1.2s								
AKTO				⇑Sn	**Sn**		**22 43 57.8**	**-4.7**	
	comp=E,10nm,1.3s								
ZALV	**Zalesovo Beam**	**19.62**	**24**	P	**P**		**22 41 27.7**	**-1.7**	
	comp=E,0.9nm,0.3s,baz=218,slow=11,SNR=21								
ARU	**Arti**	**21.57**	**340**	P	**P**		**22 41 54.0**	**+3.6**	
	comp=E,1.2nm,0.6s,baz=158,slow=6.5,SNR=8.6								
SONM	**Songino Array**	**27.97**	**55**	P	**P**		**22 42 51.8**	**0.0**	
	comp=E,0.7nm,0.9s,baz=264,slow=7.4,SNR=5.7								
FINES	**FINESS Array B**	**37.52**	**326**	P	P		22 44 19.6	+4.9	
	comp=E,0.9nm,0.6s,baz=110,slow=8.3,SNR=4.3								
ARCES	**ARCESS Array B**	**41.10**	**337**	P	**P**		**22 44 47.5**	**+3.0**	
	comp=E,4.1nm,1.0s,baz=107,slow=8.2,SNR=10								
ARCES				LR	LR		23 02 50.5		
	comp=E,113nm,20.4s,baz=225,slow=38								
NOA	**NORSAR Array B**	**44.43**	**323**	P	**P**		**22 45 14.5**	**+2.8**	
	comp=E,1.4nm,0.9s,baz=108,slow=8.0,SNR=1.8								
TORD	**Torodi Ar. Bea**	**66.04**	**269**	P	P		22 47 53.3	+5.1	
	comp=E,0.6nm,0.6s,baz=44,slow=5.2,SNR=4.5								
INK	**Inuvik**	**73.68**	**9**	P	**P**		**22 48 35.4**	**+1.1**	
	comp=E,0.8nm,0.7s,baz=335,slow=7.2,SNR=3.2								
YKA	**Yellowknife Ar**	**81.05**	**3**	P	**P**		**22 49 16.8**	**+1.1**	
	comp=E,0.8nm,0.7s,baz=351,slow=5.2,SNR=18								

IDC ***07*** *22:42:20.0±0.5, 1.61S×135.50E, h0km, mb4.5/16, mb1 4.7/20, mb1mx4.6/30, mbtmp4.5/20, ML4.5/4, MS4.4/24, Ms1 4.4/24, ms1mx4.3/31, Error ellipse: s-maj=16.3km s-min=12.1km az=58.0*

BJI ***07*** *22:42:20.8±0.0, 1.97S×135.47E, h25km, mB5.1/43, mb4.6/53, Ms4.8/47, Ms7 4.6/46*

DJA ***07*** *22:42:21.4±0.1, 2.2S±2.2×13.6E±.1°, h10km, M4.8/36, mb4.9/36, mB5.3/25, MLv5.2/10, Mw(mB)4.8/25, MwMwp4.8/7, Mwp5.1/7*

MOS ***07*** *22:42:23.5±0.9, 1.64S×135.42E, h35km, mb5.0/22, Error ellipse: s-maj=9.8km s-min=5.4km az=127.5*

GCMT ***07*** *22:42:23.4±0.1, 1.55S±0.01×135.45E±0.01, h12km, MW5.1/102, Moment Tensor Solution. s69,c95; s102,c175; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.46±.11; Mθθ=1.96±.08; Mφφ=1.51±.10; Mrθ=2.27±.26; Mθφ=3.47±.08; Mφr=0.83±.26; Best double couple: M=5.04000×10^16 NP1:φs=25.00000°, δ35.00000°, λ=-124.00000°. NP2:φs=244.00000°, δ61.00000°, λ=-69.00000°. Principal axes: T 5.7550, Plg14.0000°, Azm319.0000°; N -1.4190, Plg19.0000°, Azm53.0000°; P -4.3260, Plg66.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***07*** *22:42:24.4±1.4, 1.73S±0.06×135.33E±0.07, h28km±3km, mb4.9/73 Error ellipse: s-maj=10.6km s-min=8.4km az=64.0*

ISC 07 22:42:25.3±0.2,**1.78S**±0.03×**135.46E**±0.03,**h35**km,**n335,** σ1°**88**/354,**mb4.8**/98,**MS4.5**/40,**26C-35D,Fault plane solution: NP1:**φs74.25277°,δ21.20499°,λ-66.21883°. **NP2:**φs228.95441°,δ70.67088°,λ-98.89177°. **Principal axes:** T Plg25.1622°, Azm325.8901°; N Plg8.3868°, Azm231.9187°; P Plg63.2881°, Azm124.8819°; **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.78**	**97**	P		**Pn**	**22 42 36.1**	**-3.8**
SRPI				S		**Sn**	**22 42 47.7**	**-2.7**
BAKI	**Biak**	**0.87**	**48**	P		Pn	22 42 34.3	-6.8
BAKI				S		**Sn**	**22 42 46.4**	**-6.1**
FAKI	**Fak Fak**	**3.41**	**250**	Pn		**Pn**	**22 43 15.6**	**-0.4**
FAKI	**Fak Fak**	**3.41**	**250**	P		**Pn**	**22 43 15.6**	**-0.4**
FAKI				S		**Sn**	**22 43 55.8**	**+0.6**
SIJI	**Sorong**	**4.29**	**282**	Pn		**Pn**	**22 43 26.6**	**-1.5**
	14nm,0.3s,baz=69,slow=12,SNR=34							
SIJI				Lg		Lg	22 44 35.0	
	27nm,0.3s,baz=338,slow=15,SNR=3.8							
SWI	**Sorong**	**4.30**	**282**	P		**Pn**	**22 43 28.5**	**+0.2**
SWI	**Sorong**	**4.30**	**282**	P		**Pn**	**22 43 26.6**	**-1.7**
SWI				S		**Sn**	**22 44 18.9**	**+1.7**
GENI	**Genyem**	**4.77**	**100**	P		**Pn**	**22 43 34.0**	**-0.8**
GENI				S		**Sn**	**22 44 30.8**	**+1.9**
JAY	**Jayapura**	**5.29**	**98**	Pn		**Pn**	**22 43 40.8**	**-1.2**
	4.7nm,0.3s,baz=237,slow=11,SNR=7.5							
JAY				Sn		**Sn**	**22 44 45.0**	**+3.2**
	7.9nm,0.3s,baz=69,slow=17,SNR=4.7							
JAY	**Jayapura**	**5.29**	**98**	P		**Pn**	**22 43 40.5**	**-1.5**
	0.3nm718nm24nm,0.7s							
JAY				S		**Sn**	**22 44 42.1**	**+0.3**
	0.3nm718nm24nm,0.7s							
BNDI	**Bandanaira**	**6.18**	**244**	P		**Pn**	**22 43 54.6**	**+0.4**
	4.4nm35μm420nm,0.6s							
BNDI				S		**Sn**	**22 45 04.6**	**+0.9**
	4.4nm35μm420nm,0.6s							
MSAI	**Masohi**	**6.71**	**256**	P		**Pn**	**22 44 00.6**	**-0.9**
	1.3nm135nm,1.0s							
NLAI	**Namlea**	**8.48**	**260**	P		**Pn**	**22 44 25.9**	**+0.2**
	43nm,1.1s							
TNTI	**Ternate**	**8.48**	**287**	Pn		**Pn**	**22 44 24.1**	**-1.6**
TNTI	**Ternate**	**8.48**	**287**	P		**Pn**	**22 44 24.5**	**-1.3**
SANI	**Sanana**	**9.47**	**268**	P		**Pn**	**22 44 38.2**	**-1.2**
	2μm418nm30nm,0.9s							
KDU	**Kakadu**	**11.24**	**195**	P		**Pn**	**22 45 03.7**	**+0.2**
	baz=11,SNR=48							
MTN	**Manton Dam**	**11.80**	**201**	P		**Pn**	**22 45 11.2**	**-0.1**
	baz=12,SNR=50							
MTN	**Manton Dam**	**11.80**	**201**	Pn		**Pn**	**22 45 10.7**	**-0.6**
LUWI	**Luwuk**	**12.71**	**273**	Pn		**Pn**	**22 45 23.2**	**-0.5**
DAV	**Davao City (W)**	**13.21**	**312**	Pn		**Pn**	**22 45 33.3**	**+2.7**
	53nm,0.3s,baz=257,slow=6.0,SNR=5.3							
DAV				LR		LR	22 51 01.3	
	comp=Z,2μm,19.2s,baz=108,slow=40							
DAV	**Davao City (W)**	**13.21**	**312**			**Pn**	**22 45 30.0**	**-0.6**
SOEI	**Soe**	**13.66**	**234**	Pn		**Pn**	**22 45 35.8**	**-1.0**
SOEI	**Soe**	**13.66**	**234**	P		**Pn**	**22 45 37.0**	**+0.1**
	94nm,0.6s							
MRSI	**Marisa**	**13.70**	**279**	P		**Pn**	**22 45 36.3**	**-1.0**
	44nm,0.6s							
APSI	**Ampana**	**13.84**	**273**	P		**Pn**	**22 45 37.6**	**-1.5**
	881nm1μm102nm,1.2s							
PMG	**Port Moresby**	**13.88**	**124**	Pn		**Pn**	**22 45 43.5**	**+3.8**
	2.3nm,0.3s,baz=295,slow=11,SNR=3.8							
PMG				LR		LR	22 52 30.4	
	comp=Z,3μm,18.9s,baz=308,slow=44							
PMG	**Port Moresby**	**13.88**	**124**	P		**Pn**	**22 45 40.6**	**+0.8**
PMG	**Port Moresby**	**13.88**	**124**	Pn		**Pn**	**22 45 40.6**	**+0.8**
COEN	**Coen**	**14.30**	**148**	Pn		**Pn**	**22 45 43.7**	**-1.8**
BATI	**Baumata**	**14.41**	**234**	Pn		**Pn**	**22 45 45.6**	**-1.3**
	7.2nm,0.3s,baz=120,slow=1.2,SNR=22							
BATI	**Baumata**	**14.41**	**234**	P		**Pn**	**22 45 46.2**	**-0.7**
	1μm190nm,0.7s							
MMRI	**Maumere**	**14.82**	**242**	Pn		**Pn**	**22 45 51.5**	**-1.0**
MMRI	**Maumere**	**14.82**	**242**	P		**Pn**	**22 45 52.4**	**-0.1**
	4μm57nm,1.0s							
TOLI2	**Tolitoli**	**14.96**	**281**	Pn		**Pn**	**22 45 53.1**	**-1.2**
BNSI	**Bone**	**15.55**	**260**	P		**Pn**	**22 46 01.9**	**-0.2**
	1μm63nm,0.8s							
TTSI	**Tana Toraja**	**15.68**	**265**	P		**Pn**	**22 46 03.2**	**-0.6**
	1μm39nm,1.1s							
SPSI	**Sidrap Palu**	**15.82**	**262**	P		**Pn**	**22 46 05.6**	**0.0**
	1μm25nm,1.4s							
KAPI	**Kappang**	**16.01**	**258**	LR		LR	22 53 01.0	
	comp=Z,812nm,20.7s,baz=80,slow=40							
KAPI	**Kappang**	**16.01**	**258**	P		**Pn**	**22 46 06.5**	**-1.5**
KAPI				pmax		pmax		
	comp=Z,8.0nm,0.9s							
KAPI	**Kappang**	**16.01**	**258**	Pn		**Pn**	**22 46 06.5**	**-1.5**
RABL	**Rabaul**	**16.85**	**99**	Pn		**P**	**22 46 20.1**	**-0.4**
RABL				IAmb		IAmb	22 46 35.7	
	comp=Z,73nm,0.6s							
WB0	**Warramunga Arr**	**17.91**	**183**	Pn		**Pn**	**22 46 29.0**	**-2.8**
WB0				IAmb		IAmb	22 46 36.1	
	comp=Z,69nm,1.2s							
WRAB	**Tennant Creek**	**18.08**	**183**	*ce*P		**Pn**	**22 46 31.5**	**-2.4**
WRAB				pmax		pmax		
	comp=Z,29nm,0.6s							
WRAB	**Tennant Creek**	**18.08**	**183**			**Pn**	**22 46 32.8**	**-1.1**
WRAB				IAmb		IAmb	22 46 37.5	
	comp=Z,75nm,1.1s							
WB2	**Warramunga Arr**	**18.09**	**183**	P		**Pn**	**22 46 33.3**	**-0.7**
	baz=18							
WB2				S		**Sn**	**22 49 44.4**	**-10**
	baz=18							
WRA	**Warramunga Arr**	**18.09**	**183**	P		**Pn**	**22 46 32.1**	**-1.9**
	comp=Z,3.5nm,0.3s,baz=5.0,slow=12,SNR=53							
WRA				S		**Sn**	**22 49 45.2**	**-10**
	comp=Z,1.0nm,0.3s,baz=6.6,slow=22,SNR=5.6							
WRA				LR		LR	22 53 41.8	
	comp=Z,1μm,21.2s,baz=5.0,slow=37							
WRA	**Warramunga Arr**	**18.09**	**183**	*i* P		**Pn**	**22 46 32.0**	**-1.9**
WRA				pmax		pmax		
	comp=Z,25nm,0.5s							
WR0	**Warramunga Arr**	**18.09**	**183**	Pn		**Pn**	**22 46 32.8**	**-1.3**
MYLDM	**Lahad Datu**	**18.30**	**292**	P		**P**	**22 46 36.2**	**-0.3**
MYLDM				IAmb		IAmb	22 46 44.5	
	comp=Z,144nm,1.1s							
MTSU	**Mount Surprise**	**18.43**	**152**	P		**Pn**	**22 46 39.6**	**+1.4**
	baz=18,SNR=10.0							
FITZ	**Fitzroy Crossi**	**18.87**	**210**	P		**Pn**	**22 46 43.3**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=38,slow=11,SNR=42							
FITZ				S		**Sn**	**22 50 07.0**	**-6.8**
	comp=Z,1.0nm,0.3s,baz=205,slow=9.6,SNR=3.0							
FITZ				LR		LR	22 55 05.8	
	comp=Z,967nm,20.4s,baz=37,slow=40							
FITZ	**Fitzroy Crossi**	**18.87**	**210**	P		**Pn**	**22 46 43.7**	**+0.2**
	baz=19,SNR=31							
FITZ	**Fitzroy Crossi**	**18.87**	**210**	P		**P**	**22 46 42.4**	**-0.3**
PLAI	**Plampang**	**18.94**	**248**	P		**P**	**22 46 43.4**	**-0.2**
	comp=Z,1μmcomp=Z,1μmcomp=Z,73nm,0.8s							
QIS	**Mount Isa**	**19.10**	**168**	P		**P**	**22 46 44.9**	**-0.4**
	baz=19,SNR=11							
QIS				S		**Sn**	**22 50 15.5**	**-3.8**
	baz=19							
TWSI	**Taliwang, Sumb**	**19.74**	**249**	P		**P**	**22 46 51.3**	**-1.0**
	comp=Z,540nmcomp=Z,18nm,0.7s							
SPMM	**Sapulut**	**20.05**	**289**	P		Pn	22 46 58.0	+0.4
MTKI	**Muara Teweh, K**	**20.58**	**272**	P		**P**	**22 47 01.1**	**-0.3**
BBKI	**Banjar Baru**	**20.67**	**265**	P		**P**	**22 47 02.5**	**+0.1**
	comp=Z,1μmcomp=Z,44nm,1.1s							
KKM	**Kota Kinabalu**	**20.73**	**292**	P		**P**	**22 47 02.3**	**-0.8**
KKM				IAmb		IAmb	22 47 07.5	
	comp=Z,94nm,1.4s							
CTA	**Charters Tower**	**21.04**	**151**	P		**P**	**22 47 08.1**	**+1.8**
	comp=Z,12nm,0.8s,baz=331,slow=12,SNR=19							
CTA				LR		LR	22 56 01.4	
	comp=Z,2μm,21.2s,baz=333,slow=39							
CTAO	**Charters Tower**	**21.04**	**151**	P		**P**	**22 47 08.0**	**+1.7**
CTAO				pmax		pmax		
	comp=Z,28nm,0.7s							
CTAO	**Charters Tower**	**21.04**	**151**	P		**P**	**22 47 08.0**	**+1.7**
CTAO				IAmb		IAmb	22 47 14.7	
	comp=Z,28nm,0.7s							
SRBI	**Singaraja**	**21.11**	**252**	P		**P**	**22 47 08.0**	**+0.8**
	comp=Z,37nm,1.1s							
AS31	**Alice Springs**	**21.81**	**184**	P		**P**	**22 47 15.6**	**+1.0**
AS31				IAmb		IAmb	22 47 18.4	
	comp=Z,43nm,1.1s							
ASAR	**Alice Springs**	**21.81**	**184**	P		**P**	**22 47 16.1**	**+1.4**
	comp=Z,92nm,0.8s,baz=9.5,slow=12,SNR=628							
ASAR				S		**S**	**22 51 16.2**	**+2.1**
	comp=Z,9.0nm,1.0s,baz=3.8,slow=23,SNR=8.4							
ASAR				LR		LR	22 56 21.4	
	comp=Z,1μm,21.0s,baz=4.0,slow=38							
ASAR	**Alice Springs**	**21.81**	**184**	P		**P**	**22 47 15.4**	**+0.8**
ASPA	**Alice Springs**	**21.81**	**184**	P		**P**	**22 47 16.2**	**+1.5**
	baz=22							
ASPA				S		**S**	**22 51 15.7**	**+1.6**
	baz=22							
KMMI	**Kalianget**	**22.05**	**256**	P		**P**	**22 47 19.3**	**+2.0**
	comp=Z,56nm,0.7s							
JAGI	**Jajag, Banyuwa**	**22.23**	**252**	P		**P**	**22 47 17.8**	**-1.4**
JAGI				IAmb		IAmb	22 47 22.3	
	comp=Z,18nm,0.7s							
JAGI	**Jajag, Banyuwa**	**22.23**	**252**	P		**P**	**22 47 19.5**	**+0.3**
	comp=Z,27nm,0.7s							
SBUM	**Sibu**	**23.61**	**280**	P		**P**	**22 47 33.4**	**0.0**
SBUM				IAmb		IAmb	22 47 39.0	
	comp=Z,46nm,1.3s							
SBUM	**Sibu**	**23.61**	**280**	P		**P**	**22 47 36.0**	**+2.6**
PBKI	**Pangkalan Bun**	**23.79**	**267**	P		**P**	**22 47 34.7**	**-0.4**
	comp=Z,93nm,1.3s							
STKI	**Sintang**	**24.05**	**274**	P		**P**	**22 47 37.3**	**-0.2**
WRKA	**Warakurna**	**24.14**	**196**	P		**P**	**22 47 39.1**	**+0.8**
	baz=24,SNR=23							
PSA00	**Pilbara Seismi**	**24.87**	**217**	P		**P**	**22 47 44.6**	**-0.3**
PSA00	**Pilbara Seismi**	**24.87**	**217**	P		**P**	**22 47 44.9**	**0.0**
PSA00				IAmb		IAmb	22 48 03.6	
	comp=Z,31nm,0.9s							
KSM	**Kuching**	**25.36**	**277**	P		**P**	**22 47 49.3**	**-0.2**
KSM	**Kuching**	**25.36**	**277**	P		**P**	**22 47 50.0**	**+0.6**
SMRI	**Semarang**	**25.48**	**257**	P		**P**	**22 47 50.4**	**-0.2**
HNR	**Honiara**	**25.51**	**108**	P		**P**	**22 47 53.1**	**+2.3**
HNR				pmax		pmax		
	comp=Z,84nm,0.5s							
HNR	**Honiara**	**25.51**	**108**	P		**P**	**22 47 53.1**	**+2.3**
TPI	**Tanjungpandan**	**27.80**	**267**	P		**P**	**22 48 17.4**	**+5.9**
EIDS	**Eidsvold**	**27.87**	**149**	P		**P**	**22 48 15.1**	**+3.2**
	baz=28,SNR=10							
EIDS	**Eidsvold**	**27.87**	**149**	P		**P**	**22 48 13.3**	**+1.3**
CISI	**Cisompet, Garu**	**28.14**	**257**	P		**P**	**22 48 13.0**	**-1.5**
CISI				IAmb		IAmb	22 48 32.4	
	comp=Z,26nm,0.8s							
LEM	**Lembang**	**28.21**	**259**	LR		LR	23 01 33.0	
	comp=Z,772nm,19.6s,baz=48,slow=41							
DBJI	**Dramaga**	**29.02**	**260**	P		**P**	**22 48 21.5**	**-0.8**
	comp=Z,9μmcomp=Z,52nm,1.1s							
FORT	**Forrest**	**29.68**	**193**	P		**P**	**22 48 28.5**	**+0.5**
	baz=30,SNR=8.4							
FORT	**Forrest**	**29.68**	**193**	P		**P**	**22 48 27.8**	**-0.2**
STKA	**Stephens Creek**	**30.49**	**170**	P		**P**	**22 48 35.5**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=338,slow=10.0,SNR=11							
STKA				LR		LR	23 02 00.2	
	comp=Z,635nm,18.6s,baz=346,slow=38							
STKA	**Stephens Creek**	**30.49**	**170**	P		**P**	**22 48 35.6**	**+0.5**
	baz=30,SNR=8.6							
STKA	**Stephens Creek**	**30.49**	**170**	P		**P**	**22 48 35.2**	**+0.1**
BBOO	**Buckleboo**	**30.87**	**179**	P		**P**	**22 48 38.5**	**0.0**
BBOO				IAmb		IAmb	22 48 45.5	
	comp=Z,20nm,1.1s							
CMSA	**Cobar Meteorol**	**31.14**	**163**	P		**P**	**22 48 43.0**	**+2.2**
	baz=31,SNR=7.2							
HTT	**Hallett**	**31.66**	**174**	P		**P**	**22 48 47.8**	**+2.4**
	baz=32,SNR=4.1							
LHSI	**Lahat**	**31.96**	**266**	P		P	22 48 54.7	+6.4
KMBL	**Kambalda**	**32.11**	**202**	P		**P**	**22 48 50.7**	**+1.3**
	baz=32,SNR=7.9							
ARMA	**Armidale**	**32.35**	**153**	P		**P**	**22 48 52.7**	**+1.1**
ARMA				IAmb		IAmb	22 48 59.0	
	comp=Z,11nm,1.1s							
QIZ	**Qiongzhong**	**32.58**	**311**	P		**P**	**22 48 53.4**	**-0.3**
QIZ				S		**S**	**22 54 08.5**	**+1.3**
QIZ				LR		LR		
	comp=Z,660nm,13.6s							
QIZ				LR		LR		
	comp=Z,650nm,13.4s							
QIZ				LR		LR		
	comp=Z,1μm,23.5s							
MORW	**Morawa**	**32.85**	**212**	P		**P**	**22 48 56.3**	**+0.4**
MORW				IAmb		IAmb	22 49 04.4	
	comp=Z,22nm,1.2s							
KSI	**Kapahiang**	**32.88**	**266**	P		**P**	**22 49 01.2**	**+4.7**
BLDU	**Ballidu**	**33.74**	**210**	P		**P**	**22 49 05.4**	**+1.7**
	baz=34,SNR=7.7							
UBPT	**Khong Chiam**	**34.17**	**301**	P		**P**	**22 49 05.7**	**-1.9**
UBPT				IAmb		IAmb	22 49 15.1	
	comp=Z,21nm,1.4s							
IPM	**Ipoh**	**34.97**	**280**	P		**P**	**22 49 18.0**	**+3.4**
ARPS	**Mount Arapiles**	**35.31**	**171**	P		**P**	**22 49 18.7**	**+1.6**
	baz=35,SNR=14							
KULM	**Kulim**	**35.48**	**282**	P		**P**	**22 49 20.0**	**+1.1**
RPSI	**Rantau

XAN LR LR
comp=Z,960nm,22.8s
XAN Xi'an 43.50 327 P **P** **22 50 24.2 -1.4**
XAN pmax pmax
comp=Z,25nm,1.4s
XAN Xi'an 43.50 327 P **P** **22 50 24.2 -1.4**
XAN IAmb IAmb 22 50 28.7
comp=Z,25nm,1.4s
MSHR Mys Shultsa 44.33 355‖ *e*P **P** **22 50 32.5 +0.6**
MSHR pmax pmax
comp=Z,34nm,1.2s
CD2 Chengdu 44.35 320 P **P** **22 50 32.1 -0.3**
CD2 S **S** **22 57 06.6 +2.0**
CD2 sS sS 22 57 21.1 -0.3
CD2 pmax pmax
comp=Z,20nm,1.2s
CD2 pmax pmax
comp=Z,270nm,7.6s
CD2 LR LR
comp=Z,680nm,17.1s
CD2 LR LR
comp=Z,710nm,17.3s
CD2 LR LR
comp=Z,710nm,18.6s
BJT Baijiatuau 45.19 339 P **P** **22 50 37.6 -1.3**
BJT pmax pmax
comp=Z,24nm,1.2s
BJT Baijiatuau 45.19 339 P **P** **22 50 37.6 -1.3**
BJT IAmb IAmb 22 50 41.9
comp=Z,24nm,1.2s
BJI Beijing 45.21 339 P **P** **22 50 40.9 +1.9**
BJI S **S** **22 57 20.7 +4.1**
BJI pmax pmax
comp=Z,16nm,1.4s
BJI pmax pmax
comp=Z,72nm,3.5s
BJI LR LR
comp=Z,610nm,20.6s
BJI LR LR
comp=Z,470nm,22.1s
BJI LR LR
comp=Z,840nm,27.5s
USA0B Ussuriysk Arra 45.88 357 *de*P **P** **22 50 45.6 +1.3**
USRK Ussuriysk Ar. 45.88 357 P **P** **22 50 43.5 -0.8**
comp=Z,3.3nm,0.7s,baz=174,slow=6.0,SNR=8.2
USRK Ussuriysk Ar. 45.88 357 P **P** **22 50 43.9 -0.4**
USRK Ussuriysk Ar. 45.88 357 P **P** **22 50 43.9 -0.4**
MDJ Mudanjiang 46.49 354 P **P** **22 50 51.2 +2.1**
MDJ pP pP 22 51 00.2 +0.8
MDJ sP sP 22 51 06.6 +3.0
MDJ ScP **ScP** **22 56 15.8 +1.6**
MDJ S **S** **22 57 36.0 +1.1**
MDJ sS sS 22 57 53.0 +1.2
MDJ ScS **ScS** **23 00 43.5 +2.1**
MDJ pmax pmax
comp=Z,17nm,1.0s
MDJ pmax pmax
comp=Z,140nm,4.6s
MDJ LR LR
comp=Z,280nm,18.8s
MDJ LR LR
comp=Z,210nm,12.7s
MDJ LR LR
comp=Z,440nm,18.5s
MDJ Mudanjiang 46.49 354 P **P** **22 50 48.2 -0.9**
HHC Hu-ho-hao-te 47.69 335 *e*P **P** **22 51 00.3 +1.6**
HHC S **S** **22 57 57.3 +4.8**
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,5.7s
HHC LR LR
comp=Z,750nm,19.6s
HHC LR LR
comp=Z,360nm,18.8s
HHC LR LR
comp=Z,970nm,21.8s
LZH Lanzhou 47.83 325 *e*P **P** **22 51 03.6 +3.7**
LZH *e*S **S** **22 57 48.3 -6.4**
LZH sS sS 22 58 09.0 -2.6
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,150nm,4.9s
LZH LR LR
comp=Z,450nm,13.3s
LZH LR LR
comp=Z,620nm,13.3s
LZH LR LR
comp=Z,460nm,17.9s
SHL Shillong 50.15 306 P **P** **22 51 16.3 -1.6**
SHL pmax pmax
comp=Z,20nm,1.1s
SHL Shillong 50.15 306 P **P** **22 51 16.3 -1.6**
SHL IAmb IAmb 22 51 22.1
comp=Z,20nm,1.1s
KLR Kul'dur 50.91 357‖ *e*P **P** **22 51 22.2 -0.8**
KLR pmax pmax
comp=Z,48nm,3.1s
RAO Raoul Island 52.05 126 LR LR 23 13 49.9
comp=Z,284nm,19.4s,baz=112,slow=36
RPZ Rata Peaks 52.37 148 LR LR 23 13 39.5
comp=Z,556nm,19.9s,baz=310,slow=36
LBZ Lake Benmore 52.37 149 P **P** **22 51 35.2 +1.1**
GTA Gaotai 52.43 325 P **P** **22 51 37.3 +2.6**
GTA pP sP 22 51 49.5 +0.2
GTA S **S** **22 59 01.7 +3.0**
GTA sS sS 22 59 16.8 +0.9
GTA SS **SS** **23 02 40.8 +3.7**
GTA pmax pmax
comp=Z,7.0nm,1.2s
GTA pmax pmax
comp=Z,150nm,7.6s
GTA LR LR
comp=Z,350nm,19.3s
GTA LR LR
comp=Z,330nm,20.4s
GTA LR LR
comp=Z,360nm,20.0s
LSA Lhasa 52.62 310 P **P** **22 51 36.3 -0.4**
LSA pmax pmax
comp=Z,8.0nm,1.3s
LSA Lhasa 52.62 310 P **P** **22 51 36.3 -0.4**
URZ Urewera 52.63 139 LR LR 23 14 28.2
comp=Z,1µm,19.6s,baz=31,slow=37
TAPN Taplejung 54.29 306 *e*P **P** **22 51 47.9 -0.9**
comp=Z,67nm,1.4s
ODAN Odare 54.35 305 *e*P **P** **22 51 47.8 -1.4**
comp=Z,44nm,0.8s
RAMN Ramite 55.04 305 *e*P **P** **22 51 53.0 -1.2**
comp=Z,32nm,0.8s
ULN Ulaanbaatar 55.31 337‖ *e*P **P** **22 51 55.3 -0.3**
ULN pmax pmax
comp=Z,13nm,2.3s
ULN Ulaanbaatar 55.31 337 P **P** **22 51 55.5 -0.1**
PALK Pallekele 55.37 280‖ *e*P **P** **22 51 57.8 +1.3**
PALK pmax pmax
comp=Z,11nm,1.0s
SONM Songino Array 55.54 337 P **P** **22 51 56.4 -0.8**
comp=Z,0.5nm,0.6s,baz=129,slow=5.9,SNR=6.6
SONM LR LR 23 14 44.3
comp=Z,656nm,20.4s,baz=144,slow=35
SONM Songino Array 55.54 337 P **P** **22 51 56.8 -0.5**
SONM Songino Array 55.54 337 P **P** **22 51 56.8 -0.5**
JIRN Jiri 55.65 305 *e*P **P** **22 51 57.6 -1.1**
comp=Z,29nm,1.0s
GUN Gumba 56.00 306 *e*P **P** **22 52 00.2 -1.0**
comp=Z,26nm,0.7s
PKI Pulchoki 56.25 305 *e*P **P** **22 52 01.5 -1.5**
comp=Z,14nm,0.9s
PKIN Phulchoki 56.27 305 *e*P **P** **22 52 01.7 -1.3**
KKN Kakani 56.44 305 *e*P **P** **22 52 02.9 -1.3**
comp=Z,24nm,0.9s
DMN Daman 56.52 305 *e*P **P** **22 52 03.9 -0.9**
comp=Z,20nm,0.8s
GKN Gorkha 57.05 305 *e*P **P** **22 52 07.2 -1.3**
comp=Z,73nm,1.2s
PEA0B Petropavlovsk- 57.78 16‖ *e*P **P** **22 52 12.0 -0.9**
PETK Petropavlovsk- 57.78 16 P **P** **22 52 13.6 +0.7**
PETK Petropavlovsk- 57.78 16 P **P** **22 52 13.6 +0.7**
KOLN Koldanda 57.81 305 *e*P **P** **22 52 13.3 -0.6**
comp=Z,84nm,1.0s
DANN Dangsing 57.90 305 *e*P **P** **22 52 13.5 -1.1**
PET Petropavlovsk 57.97 16 *e*P P 22 52 24.4 +10
PET *e*S S 23 00 21.8 +10
PET MLR MLR
comp=Z,200nm,20.0s
PYUN Piuthan 58.44 305 *e*P **P** **22 52 17.8 -0.5**
comp=Z,144nm,1.0s
ZAK Zakamensk 58.81 337 *e*P **P** **22 52 18.7 -1.6**
ZAK pmax pmax
comp=Z,8.0nm,1.8s
TLY Talaya 59.69 338 *e*P **P** **22 52 24.1 -2.2**
TLY *e* 22 54 39.3
TLY *e*S **S** **23 00 34.5 0.0**
TLY *e*SS **SS** **23 04 29.5 -1.3**
TLY pmax pmax
comp=Z,15nm,1.2s
TLY MLR MLR
comp=Z,552nm,15.0s
TLY Talaya 59.69 338 P **P** **22 52 25.8 -0.5**
TLY IAmb IAmb 22 52 40.1
comp=Z,3.4nm,0.6s
MOY Mondy 60.72 336 *e*P **P** **22 52 33.6 +0.2**
MOY pmax pmax
comp=Z,41nm,2.1s
BOD Bodaibo 61.85 347 *e*P **P** **22 52 42.7 +1.9**
BOD pmax pmax
comp=Z,15nm,2.1s
WMQ Urumqi 62.29 323 *e*P **P** **22 52 44.2 +0.1**
WMQ pP pP 22 52 56.1 +1.5
WMQ sP sP 22 52 59.9 +1.3
WMQ pmax pmax
comp=Z,24nm,1.3s
WMQ pmax pmax
comp=Z,170nm,4.5s
WMQ LR LR
comp=Z,620nm,21.3s
WMQ LR LR
comp=Z,350nm,20.9s
WMQ LR LR
comp=Z,600nm,20.9s
WMQ Urumqi 62.29 323 P **P** **22 52 43.2 -0.9**
WMQ pmax pmax
comp=Z,15nm,0.8s
WMQ Urumqi 62.29 323 P **P** **22 52 43.2 -0.9**
MA2 Magadan 62.35 9‖ *e*P **P** **22 52 42.7 -1.4**
MA2 pmax pmax
comp=Z,3.0nm,0.8s
YAK Yakutsk 63.79 357 *e*P **P** **22 52 52.1 -1.5**
YAK *e**PP **pP** **22 53 01.5 -2.8**
YAK *e* 22 53 30.1
YAK *e*S **S** **23 01 25.4 -0.5**
YAK *e**SS **pS** **23 01 37.6 -1.3**
YAK *e*SS **SS** **23 05 37.1 +2.6**
YAK pmax pmax
comp=Z,43nm,1.0s
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK smax smax
comp=E,83nm,4.3s
YAK smax smax
comp=N,135nm,4.1s
YAK MLR MLR
comp=E,142nm,20.0s
YAK Yakutsk 63.79 357 P **P** **22 52 53.3 -0.3**
DGZ Jazzator, Alta 65.76 328‖ *e*P **P** **22 53 06.4 -0.5**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
SEY Seymchan 65.79 8‖ *e*P **P** **22 53 06.9 +0.3**
ZSN Zaisan 65.92 325 *e*P **P** **22 53 06.5 -1.3**
baz=325
ZSN Zaisan 65.92 325 *e*P **P** **22 53 06.5 -1.3**
MK31 Makanchi Array 67.09 323 *d i*P **P** **22 53 14.5 -0.9**
MK31 Makanchi Array 67.09 323 P **P** **22 53 14.7 -0.6**
MK31 IAmb IAmb 22 53 24.2
comp=Z,7.8nm,1.1s
MKAR Makanchi Array 67.09 323 P **P** **22 53 14.5 -0.9**
comp=Z,3.2nm,0.4s,baz=109,slow=8.5,SNR=95
MKAR LR LR 23 23 33.6
comp=Z,258nm,19.4s,baz=106,slow=37
SHLS Shalkode 67.17 319 *e*P **P** **22 53 12.8 -3.3**
comp=Z,3.9nm,0.7s,baz=319
SHLS Shalkode 67.17 319 *e*P **P** **22 53 12.8 -3.3**
SHLS pmax pmax
comp=Z,4.0nm,0.7s
MAKZ Makanchi 67.29 323 P **P** **22 53 15.7 -0.9**
MAKZ pmax pmax
comp=Z,10.0nm,0.8s
MAKZ Makanchi 67.29 323 P **P** **22 53 15.7 -0.9**
MAKZ IAmb IAmb 22 53 25.8
comp=Z,10nm,0.8s
UZB Uzynbulak 67.45 319 *e*P **P** **22 53 16.7 -1.2**
baz=319
UZB Uzynbulak 67.45 319 *e*P **P** **22 53 16.7 -1.2**
KPKS Kokpek 67.81 319 *e*P **P** **22 53 18.5 -1.7**
baz=319
KPKS Kokpek 67.81 319 *e*P **P** **22 53 18.4 -1.7**
SATY Saty 67.83 318 *e*P **P** **22 53 19.0 -1.3**
comp=Z,4.1nm,0.9s,baz=318
SATY Saty 67.83 318 *e*P **P** **22 53 18.9 -1.3**
SATY pmax pmax
comp=Z,4.0nm,0.9s
KSH Kashi 68.10 314 P **P** **22 53 26.4 +4.4**
KSH sP sP 22 53 40.6 +4.0
KSH pmax pmax
comp=Z,8.0nm,1.3s
KSH pmax pmax
comp=Z,140nm,5.5s
NIL Nilore 68.18 307 P **P** **22 53 21.4 -1.1**
NIL pmax pmax
comp=Z,29nm,1.5s
NIL Nilore 68.18 307 P **P** **22 53 21.4 -1.1**
TDK Taldyqorghan 68.66 320 *e*P **P** **22 53 24.4 -0.9**
comp=Z,5.1nm,1.0s,baz=320
TDK Taldyqorghan 68.66 320 *e*P **P** **22 53 24.3 -0.9**
TDK pmax pmax
comp=Z,5.0nm,1.0s
MDOK Medeo 68.77 318 *e*P **P** **22 53 25.2 -1.0**
baz=318
MDOK Medeo 68.77 318 *e*P **P** **22 53 25.2 -1.0**
TNSS Tian-Shan 68.79 318 *e*P **P** **22 53 25.3 -1.3**
baz=318
TNSS Tian-Shan 68.79 318 *e*P **P** **22 53 25.2 -1.3**
AAA Alma-Ata 68.88 318 *e*P **P** **22 53 25.9 -0.8**
baz=318
AAA Alma-Ata 68.88 318 *e*P **P** **22 53 25.9 -0.8**
ZAA0 Zalesovo Array 69.52 331 P **P** **22 53 29.9 -0.5**
ZALV Zalesovo Beam 69.52 331 P **P** **22 53 28.6 -1.7**
comp=Z,1.9nm,0.6s,baz=112,slow=7.3,SNR=8.6
ZALV LR LR 23 22 54.5
comp=Z,257nm,21.2s,baz=124,slow=35
ZALV Zalesovo Beam 69.52 331 P **P** **22 53 29.0 -1.4**
KUU Kurty 69.54 319 *e*P **P** **22 53 29.5 -1.3**
comp=Z,8.2nm,1.4s,baz=318
KUU Kurty 69.54 319 *e*P **P** **22 53 29.4 -1.3**
KUU pmax pmax
comp=Z,8.0nm,1.4s
AAK Ala-Archa 70.30 317‖ *e*P **P** **22 53 35.0 -0.6**
AAK pmax pmax
comp=Z,28nm,1.7s
AAK Ala-Archa 70.30 317 P **P** **22 53 34.9 -0.6**
SGDS Sogindy 70.51 318 *e*P **P** **22 53 35.6 -1.2**
baz=318
SGDS Sogindy 70.51 318 *e*P **P** **22 53 35.5 -1.2**
BTLS Baital 71.50 319 *e*P **P** **22 53 41.2 -1.4**
baz=319
BTLS Baital 71.50 319 *e*P **P** **22 53 41.2 -1.4**
KBL Kabul 71.78 307 P **P** **22 53 43.6 -1.2**
KBL pmax pmax
comp=Z,6.0nm,1.1s
KBL Kabul 71.78 307 P **P** **22 53 43.5 -1.2**
DZA Taraz 72.57 316 *e*P **P** **22 53 47.8 -1.3**
baz=316
DZA Taraz 72.57 316 *e*P **P** **22 53 47.8 -1.3**
BILL Bilibino 72.88 12‖ *e*P **P** **22 53 52.4 +2.0**
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL Bilibino 72.88 12 P **P** **22 53 52.1 +1.7**
KK31 Karatay Array 73.20 316 P **P** **22 53 51.9 -1.0**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KK31 Karatay Array 73.20 316 P **P** **22 53 51.9 -1.0**
KK31 IAmb IAmb 22 53 57.3
comp=Z,5.5nm,0.8s
KKAR Karatay Array 73.20 316 P **P** **22 53 52.0 -0.9**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 73.20 316 P **P** **22 53 51.9 -0.9**
KKAR IAmb IAmb 22 53 57.3
comp=Z,5.5nm,0.8s
IUG luzhnay 73.23 315 *e*P **P** **22 53 51.9 -1.3**
baz=315
IUG luzhnay 73.23 315 *e*P **P** **22 53 51.9 -1.3**
TIXI Tiksi 73.42 358‖ *e*P **P** **22 53 51.8 -1.7**
TIXI pmax pmax
comp=Z,70nm,2.5s
TIXI Tiksi 73.42 358 P **P** **22 53 52.6 -0.9**
TIXI IAmb IAmb 22 53 56.7
comp=Z,9.3nm,1.2s
BRZS Berezniki 74.24 323 *e*P **P** **22 53 58.1 -0.8**
baz=323
BRZS Berezniki 74.24 323 *e*P **P** **22 53 58.0 -0.8**
PPT Papeete 75.13 108 LR LR 23 23 26.9
comp=Z,77nm,20.6s,baz=229,slow=33
PPT2 Papeete2 75.13 108 *e*S **S** **23 03 45.8 +4.5**
comp=Z,105nm,24.8s
PPT2 Papeete2 75.13 108 *e*LR LR 23 17 13.0
comp=Z,406nm,30.2s
TBI Tubuai 75.60 114 *e*LR LR 23 17 33.2
comp=Z,343nm,29.0s
BRVK Borovoye 76.78 326‖ *e*P **P** **22 54 12.5 -0.8**
BRVK pmax pmax
comp=Z,19nm,2.5s
BRVK Borovoye 76.78 326 P **P** **22 54 12.4 -0.8**
BRVK IAmb IAmb 22 54 21.0
comp=Z,7.1nm,1.0s
VNDA Vanda 77.01 174 P **P** **22 54 15.3 +1.2**
comp=Z,2.0nm,0.6s,baz=328,slow=7.0,SNR=15
VNDA LR LR 23 28 18.3
comp=Z,588nm,18.1s,baz=350,slow=36
VNDA Vanda 77.01 174 P **P** **22 54 14.7 +0.6**
HRA Herat 77.21 306 P **P** **22 54 15.3 -1.1**
NRIK Noril'sk 77.94 344 P **P** **22 54 17.9 -1.5**
comp=Z,2.3nm,0.5s,baz=86,slow=3.9,SNR=3.5
NRIK LR LR 23 29 55.6
comp=Z,228nm,20.5s,baz=144,slow=37
NRIK Noril'sk 77.94 344‖ *e*P **P** **22 54 18.3 -1.1**
NRIK pmax pmax
comp=Z,22nm,1.9s
NRIK Noril'sk 77.94 344 P **P** **22 54 20.1 +0.7**
UOSS Minazif 81.01 295 P **P** **22 54 36.3 -0.8**
UOSS IAmb IAmb 22 54 40.6
comp=Z,12nm,1.1s
GEYT Alibeck 81.12 309 P **P** **22 54 37.8 +0.3**
comp=Z,8.4nm,0.8s,baz=134,slow=4.3,SNR=12
GEYT LR LR 23 33 02.1
comp=Z,145nm,20.7s,baz=210,slow=38
GEYT Alibeck 81.12 309 P **P** **22 54 37.4 -0.1**
GYA0B ALIBECK ARRAY 81.12 309 P **P** **22 54 37.2 -0.3**
GYA0B IAmb IAmb 22 54 42.6
comp=Z,13nm,1.0s
MAW Mawson 81.78 202 P **P** **22 54 42.0 +1.8**
comp=Z,3.0nm,0.9s,baz=114,slow=10.0,SNR=2.0
MAW LR LR 23 27 59.7
comp=Z,210nm,20.6s,baz=60,slow=33
MAW Mawson 81.78 202 P **P** **22 54 42.0 +1.8**
ABKAR Akbulak array 81.92 320 P **P** **22 54 39.9 -1.5**
SOCY Socotra 82.04 282 P **P** **22 54 41.8 -1.1**
SOCY IAmb IAmb 22 54 46.5
comp=Z,18nm,1.0s
IMAR Indian Mountai 83.89 23 P **P** **22 54 52.1 +0.9**
ARU Arti 84.25 327 *c i*P **P** **22 54 52.5 -0.8**
ARU 22 58 02.4
ARU S **S** **23 05 12.8 -3.3**
ARU SS **SS** **23 10 42.7 -3.3**
ARU pmax pmax
comp=Z,17nm,1.7s
ARU Arti 84.25 327 P **P** **22 54 52.8 -0.4**
ARU IAmb IAmb 22 54 58.7
comp=Z,6.3nm,1.0s
MLY Manley 84.81 24 P **P** **22 54 56.6 +0.6**
MLY IAmb IAmb 22 55 00.3
comp=Z,5.6nm,0.7s
RND Reindeer 85.20 26 P **P** **22 54 57.7 -0.3**
RND pmax pmax
comp=Z,12nm,0.8s
RND Reindeer 85.20 26 P **P** **22 54 57.7 -0.3**
I23K Minto, Yukon-K 85.40 24 P **P** **22 54 58.6 -0.2**
COLD Coldfoot 85.60 22 P **P** **22 55 00.4 +0.5**
COLD IAmb IAmb 22 55 06.0
comp=Z,10nm,1.0s
COLA College 85.96 25‖ *e*P **P** **22 55 01.7 +0.1**
COLA pmax pmax
comp=Z,12nm,1.1s
TOLK Toolik Lake Re 86.20 21 P **P** **22 55 03.2 +0.4**
TOLK IAmb IAmb 22 55 09.9
comp=Z,17nm,1.5s
IL31 86.34 25 P **P** **22 55 03.0 -0.5**
IL31 IAmb IAmb 22 55 05.5
comp=Z,7.7nm,0.9s
ILAR Eielson Array 86.34 25 P **P** **22 55 02.1 -1.4**
comp=Z,4.3nm,0.8s,baz=263,slow=4.5,SNR=18
FYU Fort Yukon 87.37 23 P **P** **22 55 09.6 +1.1**
SCRK Sand Creek 87.44 26 P **P** **22 55 09.8 +0.8**
SCRK IAmb IAmb 22 55 13.5
comp=Z,12nm,1.2s
QSPA South Pole Qui 88.16 180 P **P** **22 55 13.2 +0.6**
K27K Chicken 88.28 26 P **P** **22 55 13.7 +0.7**
BCAR Beaver Creek A 88.28 27 P **P** **22 55 13.0 0.0**
EGAK Eagle 88.77 25 P **P** **22 55 15.3 +0.1**
EGAK IAmb IAmb 22 55 19.2
comp=Z,5.4nm,0.7s
RKT Rikitea 88.91 113 *e*LR LR 23 23 44.3
comp=Z,465nm,26.8s
DAWY Dawson 89.45 26 P **P** **22 55 18.9 +0.3**
DAWY IAmb IAmb 22 55 23.3
comp=Z,8.9nm,0.9s
BELG Belogornoye 90.07 322‖ *e*P **P** **22 55 20.3 -1.2**
BELG pmax pmax
comp=Z,1.0nm,0.9s
RAYN Ar Rayn 90.66 293 P **P** **22 55 24.2 -0.9**
RAYN pmax pmax
comp=Z,12nm,1.2s
RAYN Ar Rayn 90.66 293 P **P** **22 55 24.2 -0.9**
KBZ Khabaz 93.08 314 LR LR 23 40 42.0
comp=Z,79nm,21.8s,baz=64,slow=38
KIV Kislovodsk 93.23 314 *e*P **P** **22 55 33.6 -2.9**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,379nm,20.0s
C36M Paulatuk 95.35 21 P **P** **22 55 44.1 -1.5**
KMBO Kilima Mbogo 98.17 269 LR LR 23 36 25.9
comp=Z,86nm,20.8s,baz=95,slow=33
ARCES ARCESS Array B 98.56 340 P **P** **22 55 58.9 -1.3**
comp=Z,3.3nm,1.1s,baz=77,slow=7.6,SNR=5.9
ARCES LR LR 23 41 51.0
comp=Z,260nm,21.9s,baz=90,slow=36
YKA Yellowknife Ar 100.69 26 P **Pdif** **22 56 09.1 -0.7**
comp=Z,0.6nm,0.9s,baz=290,slow=4.5,SNR=5.5
CLL Collm 111.14 325 *e*SS SS 23 17 06.0 +1.9
CLL Lm MLR 23 49 00.0
comp=Z,300nm,20.9s
CLL Collm 111.14 325 *e*PKIKP **PKiKP** **23 00 48.0 -7.3**
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL MLR MLR
comp=Z,300nm,20.9s
TXAR Lajitas Array 117.57 58 PKP **PKiKP** **23 01 08.9 +0.4**
comp=Z,0.5nm,0.8s,baz=174,slow=1.1,SNR=7.3
TORD Torodi Ar. Bea 132.88 286 PKP **PKPdf** **23 01 37.1 -0.8**
comp=Z,4.8nm,0.8s,baz=61,slow=2.1,SNR=13
TORD Torodi Ar. Bea 132.88 286 **PKPdf** **23 01 38.2 +0.2**
DBIC Dimbokro 140.14 278 PKP **PKPdf** **23 01 52.5 +1.1**
comp=Z,4.5nm,0.8s,baz=18,slow=2.8,SNR=5.7
DBIC Dimbokro 140.14 279 PKIKP **PKPdf** **23 01 52.0 +0.5**
DBIC Dimbokro 140.14 278 **PKPdf** **23 01 52.0 +0.5**
OTAV Otavalo 146.06 92 *e*P **PKPdf** **23 02 02.6 +0.1**
PCON Cinco Dias 148.16 88 *e*P **PKPdf** **23 02 06.8 +0.6**
YOTC Yotoco, Valle 148.16 85 *e*P **PKPdf** **23 02 00.9 -4.7**
MOTC Monteria, Cord 148.25 76 *e*P **PKPdf** **23 02 05.4 -0.2**
SJCC San Jacinto, C 148.50 74 *e*P **PKiKP** **23 02 11.5 +0.4**
RREF El Recreo 149.09 83 *e*P **PKPbc** **23 02 11.2 -0.7**
ORTC Ortega, Tolima 149.26 85 *e*P **PKPbc** **23 02 09.6 -2.0**
ZARC Zaragoza, Cauc 149.26 78 *e*P **PKPbc** **23 02 10.0 -1.6**
CPUP Villa Florida 149.45 157 PKPbc **PKPbc** **23 02 11.7 +0.1**
comp=Z,16nm,0.9s,baz=211,slow=3.0,SNR=11
CPUP Villa Florida 149.45 157 PKP2 **PKPbc** **23 02 12.0 +0.4**
CPUP Villa Florida 149.45 157 **PKPbc** **23 02 12.0 +0.4**
NORC Norcasia 149.50 82 *e*P **PKPdf** **23 02 09.9 +2.2**
SMLC San Martn de 149.79 76 *e*P **PKPbc** **23 02 12.3 -0.5**
ROSC El Rosal 150.12 83 PKPbc **PKPbc** **23 02 12.8 -1.3**

comp=Z,7.6nm,0.4s,baz=212,slow=20,SNR=1.7
ROSC El Rosal 150.12 83 PKIKP **PKPbc 23 02 12.6 -1.5**
ROSC El Rosal 150.12 83 **PKPbc 23 02 12.6 -1.5**
SPBC San Pablo de B 150.28 82 *eP* **PKPbc 23 02 11.6 -2.5**
LPAZ La Paz 150.59 128 PKPbc **PKPbc 23 02 15.4 0.0**
comp=Z,10nm,0.7s,baz=300,slow=2.4,SNR=16
LPAZ La Paz 150.59 128 PKIKP **PKPdf 23 02 11.1 +1.1**
LPAZ La Paz 150.59 128 PKPdf **PKPdf 23 02 11.1 +1.1**
OCAC Ocana 150.63 76 *eP* **PKPdf 23 02 09.9 +0.3**
MACC Macarena, Meta 150.71 89 *eP* **PKPdf 23 02 10.0 +0.5**
RUSC La Rusia 151.23 81 *eP* **PKPdf 23 02 11.9 +0.9**

IDC 07 23:04:58.6±2.6, 1°42.5S×135°38.8E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/38, mbtmp3.6/4, ML3.8/1 Error ellipse: s-maj=124.0km s-min=24.1km az=82.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.47 185**		P		P	23 09 15.9	-0.3
	0.3nm,0.3s,baz=5.4,slow=12,SNR=8.6							
ASAR	**Alice Springs**	**22.19 185**		P		P	23 09 56.5	-0.2
	2.9nm,0.8s,baz=9.4,slow=11,SNR=30							
SONM	**Songino Array**	**55.38 336**		P		P	23 14 33.3	-1.4
	0.3nm,0.6s,baz=142,slow=4.9,SNR=3.7							
MKAR	**Makanchi Array**	**67.06 323**		P		P	23 15 55.0	+1.2
	0.2nm,0.5s,baz=108,slow=9.8,SNR=4.8							

IDC 07 23:18:29.2±3.8, 1°39S×136°60E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/32, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=163.0km s-min=30.5km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.57 187**		P		P	23 22 47.5	-0.5
	0.2nm,0.3s,baz=5.9,slow=12,SNR=4.6							
ASAR	**Alice Springs**	**22.30 187**		P		P	23 23 28.6	+0.1
	1.2nm,0.5s,baz=9.7,slow=12,SNR=8.3							
MKAR	**Makanchi Array**	**67.46 323**		P		P	23 29 27.1	+0.1
	0.1nm,0.6s,baz=124,slow=8.7,SNR=2.0							

*IDC **07** 23:33:53.6±1.9, 0°.68N×125°.08E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/34, mbtmp3.5/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=205.9km s-min=25.5km az=64.0*
*DJA **07** 23:33:54.9±0.4, 1°.N±9°×12°.6E±°, h10km, M3.7/4, MLv3.7/4*
ISC 07 23:33:54.5±1.3, 1°.2N±0°.2×126°.19E±0°.05, h10km, n8, σ1°53/9, mb3.5/3, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25 109**		P		**Pn**	**23 34 18.0**	**0.0**
TNTI				S		**Sn**	**23 34 36.1**	**+1.2**
KMSI	**Cibinong**	**2.29 255**		P		**Pn**	**23 34 32.0**	**-0.4**
KMSI				S		**Sn**	**23 34 58.9**	**-1.8**
GTOI	**Gorontalo**	**3.23 260**		P		**Pn**	**23 34 46.2**	**+1.0**
GTOI				S		**Sn**	**23 35 26.5**	**+2.7**
WRA	**Warramunga Arr**	**22.47 160**		P		**P**	**23 38 53.6**	**-0.5**
	0.9nm,0.5s,baz=334,slow=11,SNR=5.6							
ASAR	**Alice Springs**	**25.82 164**		P		**P**	**23 39 25.8**	**-0.4**
	0.4nm,0.4s,baz=347,slow=13,SNR=9.7							
STKA	**Stephens Creek**	**35.98 157**		LR		LR	23 59 11.3	
	comp=Z,48nm,18.3s,baz=25,slow=42							
MKAR	**Makanchi Array**	**59.34 326**		P		**P**	**23 43 56.2**	**-0.6**
	0.2nm,0.4s,baz=120,slow=7.9,SNR=6.2							
YAK	**Yakutsk**	**60.75 2**		LR		LR	00 11 02.8	
	comp=Z,25nm,20.2s,baz=196,slow=36							

*IDC **07** 23:36:09.4±0.8, 1°.48S×135°.53E, h0km, mb4.2/8, mb1 4.3/11, mb1mx4.1/32, mbtmp4.2/11, ML4.1/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/36, Error ellipse: s-maj=22.0km s-min=17.2km az=67.0*
*DJA **07** 23:36:11.2±0.3, 2°.S±4°×13°.6E±°, h10km, M4.4/6, MLv4.4/6*
*NEIC **07** 23:36:13.8±1.5, 1°.58S±0°.09×135°.5E±0°.1, h28km±5km, mb4.1/13, Error ellipse: s-maj=18.9km s-min=9.5km az=56.0*
ISC 07 23:36:14.2±0.5, 1°.56S±0°.06×135°.59E±0°.04, h35km, n46, σ1°55/50, mb4.2/14, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BAKI	**Biak**	**0.63 55**		P		**Pn**	**23 36 23.8**	**-2.9**
BAKI				S		**Sn**	**23 36 33.7**	**-1.8**
SRPI	**Serui, Papua**	**0.72 116**		P		**Pn**	**23 36 25.9**	**-2.0**
SRPI				S		**Sn**	**23 36 37.1**	**-0.6**
FAKI	**Fak Fak**	**3.60 248**				**Pn**	**23 37 05.1**	**-2.5**
FAKI	**Fak Fak**	**3.60 248**		P		**Pn**	**23 37 05.8**	**-1.8**
FAKI				S		**Sn**	**23 37 46.1**	**-2.9**
SIJI	**Sorong**	**4.38 279**		Pn		**Pn**	**23 37 17.6**	**-0.6**
	4.8nm,0.3s,baz=85,slow=23,SNR=7.4							
SIJI				Lg		Lg	23 38 25.2	
	2.8nm,0.3s,baz=279,slow=22,SNR=3.9							
SIJI				LR		LR	23 39 09.5	
	comp=Z,320nm,19.3s,baz=32,slow=42							
SWI	**Sorong**	**4.39 279**		P		**Pn**	**23 37 17.1**	**-1.3**
SWI				S		**Sn**	**23 38 08.4**	**+0.1**
MTN	**Manton Dam**	**12.05 201**		Pn		**Pn**	**23 39 02.6**	**-1.0**
PMG	**Port Moresby**	**13.90 125**		LR		LR	23 46 19.7	
	comp=Z,119nm,18.7s,baz=124,slow=44							
BATI	**Baumata**	**14.64 234**		Pn		**Pn**	**23 39 36.3**	**-2.7**
	2.2nm,0.3s,baz=56,slow=7.3,SNR=1.6							
TOLI2	**Tolitoli**	**15.04 280**		P		**P**	**23 39 49.5**	**+0.2**
KAPI	**Kappang**	**16.18 257**		LR		LR	23 46 15.6	
	comp=Z,40nm,18.8s,baz=89,slow=38							
WB0	**Warramunga Arr**	**18.14 184**		P		**P**	**23 40 23.9**	**+0.4**
WB0					IAmb	IAmb	23 40 28.3	
	comp=Z,12nm,0.9s							
WB2	**Warramunga Arr**	**18.31 184**		P		**Pn**	**23 40 26.1**	**+0.5**
WB2					IAmb	IAmb	23 40 30.9	
	comp=Z,13nm,0.9s							
WRA	**Warramunga Arr**	**18.31 184**		P		**P**	**23 40 21.3**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=6.3,slow=12,SNR=5.1							
WRA				S		Sn	23 43 33.5	-16
	comp=Z,0.3nm,0.3s,baz=10,slow=23,SNR=5.2							
WRA				LR		LR	23 49 01.1	
	comp=Z,155nm,18.8s,baz=45,slow=42							
WRA	**Warramunga Arr**	**18.31 184**		P		**P**	**23 40 23.4**	**-2.1**
WR0	**Warramunga Arr**	**18.32 183**		P		**P**	**23 40 24.6**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.12 210**		P		**Pn**	**23 40 34.6**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=49,slow=12,SNR=9.6							
FITZ				S		Sn	23 43 53.4	-15
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=2.8							
FITZ	**Fitzroy Crossi**	**19.12 210**		P		**Pn**	**23 40 35.2**	**-0.2**
FITZ					IAmb	IAmb	23 40 38.9	
	comp=Z,16nm,1.5s							
CTAO	**Charters Tower**	**21.16 151**		P		**P**	**23 41 00.5**	**+3.9**
CTAO					IAmb	IAmb	23 41 11.9	
	comp=Z,12nm,1.2s							
AS31	**Alice Springs**	**22.04 184**		P		**P**	**23 41 06.7**	**+0.8**
AS31					IAmb	IAmb	23 41 11.7	
	comp=Z,7.5nm,0.9s							
ASAR	**Alice Springs**	**22.04 184**		P		**P**	**23 41 06.5**	**+0.5**
	comp=Z,14nm,0.7s,baz=13,slow=11,SNR=42							
ASAR				S		**S**	**23 45 08.5**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=4.5,slow=27,SNR=4.0							
ASAR	**Alice Springs**	**22.04 184**		P		**P**	**23 41 06.3**	**+0.3**
STKA	**Stephens Creek**	**30.69 170**		P		**P**	**23 42 27.1**	**+1.4**
	comp=Z,3.8nm,0.7s,baz=346,slow=11,SNR=6.3							
STKA	**Stephens Creek**	**30.69 170**		P		**P**	**23 42 26.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**41.17 301**		P		**P**	**23 43 54.6**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=121,slow=6.6,SNR=5.5							
CMAR				PcP		**PcP**	**23 45 55.9**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=130,slow=2.4,SNR=5.3							
USRK	**Ussuriysk Ar.**	**45.67 356**		P		**P**	**23 44 31.4**	**0.0**
	comp=Z,2.4nm,0.8s,baz=175,slow=10,SNR=5.2							
USRK	**Ussuriysk Ar.**	**45.67 356**		P		**P**	**23 44 31.8**	**+0.3**
HHC	**Hu-ho-hao-te**	**47.54 335**		*eP*		**P**	**23 44 47.7**	**+1.3**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,75nm,6.6s							
LZH	**Lanzhou**	**47.72 325**		*eP*		**P**	**23 44 48.5**	**+0.5**
LZH				pP		pP	23 44 59.2	+0.8
LZH				sP		sP	23 45 05.9	+3.4
LZH				pmax		pmax		
	comp=Z,19nm,1.1s							
WMQ	**Urumqi**	**62.19 323**		*eP*		**P**	**23 46 35.8**	**+3.4**
MK31	**Makanchi Array**	**66.99 323**		P		**P**	**23 47 04.0**	**+0.4**
MK31					IAmb	IAmb	23 47 04.9	
	comp=Z,2.2nm,1.2s							
MKAR	**Makanchi Array**	**66.99 323**		P		**P**	**23 47 03.9**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=105,slow=8.6,SNR=15							
MAKZ	**Makanchi**	**67.19 323**		P		**P**	**23 47 05.4**	**+0.5**
ZALV	**Zalesovo Beam**	**69.40 331**		P		**P**	**23 47 18.3**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=99,slow=9.2,SNR=3.7							
GAR	**Garm**	**72.01 312**		P		**P**	**23 47 36.9**	**+2.1**
KK31	**Karatay Array**	**73.14 316**		P		**P**	**23 47 42.0**	**+0.6**
KK31					IAmb	IAmb	23 47 42.5	
	comp=Z,3.2nm,1.1s							
KKAR	**Karatay Array**	**73.14 316**		P		**P**	**23 47 41.7**	**+0.3**
GEYT	**Alibeck**	**81.09 309**		P		**P**	**23 48 26.3**	**+0.1**
	comp=Z,2.8nm,0.9s,baz=178,slow=8.7,SNR=4.5							
SOCY	**Socotra**	**82.12 282**		P		**P**	**23 48 31.7**	**-0.5**
ILAR	**Eielson Array**	**86.09 25**		P		**P**	**23 48 50.8**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=263,slow=4.2,SNR=7.7							
ILAR	**Eielson Array**	**86.09 25**		P		**P**	**23 48 50.1**	**-1.2**
TORD	**Torodi Ar. Bea**	**132.94 286**		PKP		**PKPdf**	**23 55 27.2**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=58,slow=2.0,SNR=7.0							
CPUP	**Villa Florida**	**149.60 157**		PKPbc		**PKPbc**	**23 56 01.1**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=74,slow=4.6,SNR=4.3							
CPUP	**Villa Florida**	**149.60 157**				**PKiKP**	**23 56 01.4**	**-0.5**
LPAZ	**La Paz**	**150.62 128**		PKPbc		**PKiKP**	**23 56 05.7**	**+0.7**
	comp=Z,4.8nm,0.9s,baz=322,slow=1.9,SNR=3.8							
LPAZ	**La Paz**	**150.62 128**		PKPbc		**PKPbc**	**23 56 04.1**	**-0.3**

MEX 07 23:37:30.6±1.0, 15°.47N×94°.71W, h16km±999km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PCIG		**1.46**	**80**	*i* P		Pn	23 37 52.9	-3.3
PCIG				*i* S		Sn	23 38 10.2	-4.7
CMIG	**Matias Romero**	**1.62**	**354**	*i* P		Pn	23 37 55.0	-3.5
CMIG				*i* S		Sn	23 38 13.6	-5.5
TGIG		**2.01**	**49**	*i* P		Pn	23 38 01.6	-2.3
TGIG				*i* S		Sn	23 38 24.4	-4.3
VHO	**Vista Hermosa**	**2.52**	**310**	*i* P		Pn	23 38 08.8	-2.2
VHO				*i* S		Sn	23 38 37.9	-3.5
CCIG	**Comitan**	**2.61**	**71**	*i* P		Pn	23 39 11.2	-1.0
CCIG				*i* S		Sn	23 38 44.6	+1.0
TEIG	**Tepich**	**7.74**	**51**	*i* P		Pn	23 39 20.9	-1.7
TEIG				*i* S		Sn	23 40 40.0	-10

*BJI **07** 23:51:23.0±0.0, 33°.50N×132°.60E, h44km, mB4.8/12, mb4.4/20, Ms3.9/2*
*JMA **07** 23:51:25.6, 33°.60N×132°.53E, h47km, M4.1 Broadband fault plane solution: P waves. NP1:φ331.00000°, δ18.00000°, λ-93.00000°. NP2:φ154.00000°, δ72.00000°, λ-89.00000°. Principal axes: T Plg27.0000°, Azm243.0000°; N Plg1.0000°, Azm333.0000°; P Plg63.0000°, Azm65.0000°;*
JMA Felt III J1.
*NEIC **07** 23:51:25.6±1.9, 33°.60N±0°.07×132°.55E±0°.05, h50km±7km, mb4.3/12 Error ellipse: s-maj=10.0km s-min=5.4km az=164.0*
*IDC **07** 23:51:25.3±0.7, 33°.55N×132°.36E, h47km±5km, mb3.6/20, mb1 3.8/22, mb1mx3.7/47, mbtmp3.9/22, MS3.5/4, Ms1 3.5/4, ms1mx2.9/37, Error ellipse: s-maj=16.5km s-min=13.0km az=47.0*
*NIED **07** 23:51:25.6, 33°.60N×132°.53E, h47km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.02; Mθθ-0.02; Mφφ1.05; Mrθ0.03; Mθφ-0.64; Mφr1.11; Fault plane solution: M₀1.64000×10¹⁵ NP1: φs175.00000°, δ68.00000°, λ-71.00000°. NP2: φs312.00000°, δ29.00000°, λ-129.00000°.*
ISC 07 23:51:25.3±0.5, 33°.58N±0°.04×132°.53E±0°.03, h48km±4km, n69, σ0°94/84, mb4.0/25, MS3.4/4, 5C-3D, Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNA	**Nagahama**	**0.05**	**236**	⇓P		**Pn**	**23 51 32.9**	**+0.2**
JNA				S		**Sn**	**23 51 37.9**	**0.0**
UWA2	**Uwa jima 2**	**0.38**	**168**	⇓P		**Pn**	**23 51 35.2**	**+0.2**
UWA2				S		**Sn**	**23 51 42.3**	**+0.4**
JET	**Tanbara**	**0.48**	**66**	⇑P		**Pn**	**23 51 36.1**	**0.0**
JET				*e*S		**Sn**	**23 51 43.7**	**-0.2**
JKU	**Kubokawa**	**0.53**	**121**	⇑P		**Pn**	**23 51 36.8**	**+0.1**
JKU				*e*S		**Sn**	**23 51 45.1**	**+0.2**
JHM	**Kurahashi**	**0.55**	**0**	⇑P		**Pn**	**23 51 37.1**	**0.0**
JHM				*e*S		**Sn**	**23 51 45.4**	**-0.1**
JTO	**Tosashimizu**	**0.76**	**162**	⇓P		**Pn**	**23 51 40.1**	**+0.4**
JTO				*e*S		**Sn**	**23 51 50.6**	**+0.4**
JHT	**Toyohira**	**1.08**	**355**	⇑P		**Pn**	**23 51 44.4**	**+0.3**
JMN	**Monobe**	**1.14**	**82**	⇑P		**Pn**	**23 51 44.4**	**-0.4**
JMN				*e*S		**Sn**	**23 51 59.0**	**-0.4**
JMN	**Monobe**	**1.14**	**82**			**Pn**	**23 51 44.7**	**-0.1**
JMN					Sn	**Sn**	**23 51 58.8**	**-0.6**
JNU	**Nakatsue**	**1.46**	**252**	P		**Pn**	**23 51 49.7**	**+0.5**
	baz=62,slow=8.6							
JNU					LR	LR	23 52 01.2	
	comp=Z,211nm,20.2s,baz=42,slow=27							
JNU	**Nakatsue**	**1.46**	**252**			**Pn**	**23 51 50.1**	**+0.9**
JHS	**Saijyo**	**1.49**	**19**	Pn		**Pn**	**23 51 50.1**	**+0.4**
JSU	**Suzuyama**	**2.71**	**221**			**Pn**	**23 52 07.9**	**+1.5**
JTU	**Tsushima**	**2.76**	**291**	Pn		**Pn**	**23 52 07.2**	**+0.2**
JWT	**Wachi**	**2.92**	**54**	Pn		**Pn**	**23 52 09.5**	**+0.3**
INU	**Inuyama**	**4.11**	**63**			**Pn**	**23 52 26.8**	**+1.3**
JGF	**Kuroka**	**4.46**	**62**	Pn		**Pn**	**23 52 31.3**	**+0.8**
KSRS	**Korea Array**	**5.38**	**317**	P		**Pn**	**23 52 43.4**	**+0.3**
	0.7nm,0.3s,baz=134,slow=15,SNR=6.1							
KSRS				S		**Sn**	**23 53 45.2**	**+1.5**
	1.4nm,0.3s,baz=137,slow=24,SNR=5.3							
MAJO	**Matsushiro**	**5.51**	**56**	Pn		**Pn**	**23 52 46.6**	**+1.7**
MAT	**Matsushiro**	**5.51**	**56**	P		**Pn**	**23 52 46.4**	**+1.6**
MAT				*e*S		**Sn**	**23 53 45.6**	**-1.3**
MJAR	**Matsushiro Arr**	**5.51**	**56**	P		**Pn**	**23 52 46.8**	**+1.9**
	1.4nm,0.3s,baz=239,slow=13,SNR=53							
MJAR	**Matsushiro Arr**	**5.51**	**56**			**Pn**	**23 52 46.0**	**+1.1**
JSD	**Sado**	**6.44**	**45**	Pn		**Pn**	**23 52 59.1**	**+1.6**
KLR	**Kul'dur**	**15.64**	**358**	P		**P**	**23 55 06.6**	**+0.8**
	0.2nm,0.3s,baz=183,slow=7.0,SNR=5.4							
HHC	**Hu-ho-hao-te**	**18.18**	**300**	*e*P		**Pn**	**23 55 34.9**	**+0.7**
HHC				pmax		pmax		
	comp=Z,12nm,0.7s							
HHC				pmax		pmax		
	comp=Z,72nm,6.6s							
XAN	**Xi'an**	**19.62**	**278**	P		**P**	**23 55 49.3**	**-0.5**
XAN				pP		pP	23 56 03.0	+2.2
XAN				pmax		pmax		
	comp=Z,6.0nm,1.4s							
ENH	**Enshi**	**19.82**	**267**	P		**Pn**	**23 55 54.7**	**+0.7**
ENH					IAmb	IAmb	23 55 57.6	
	comp=Z,16nm,1.1s							
SONM	**Songino Array**	**24.25**	**314**	P		**P**	**23 56 37.5**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=131,slow=9.8,SNR=29							
SONM	**Songino Array**	**24.25**	**314**	P		**P**	**23 56 37.6**	**-0.2**
CD2	**Chengdu**	**24.45**	**272**	P		**P**	**23 56 39.5**	**-0.2**
CD2				pmax		pmax		
	comp=Z,30nm,0.7s							
CMAR	**Chiang Mai Arr**	**33.55**	**252**	P		**P**	**23 58 00.4**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=58,slow=6.7,SNR=1.4							
CMAR				LR		LR	00 11 36.5	
	comp=Z,47nm,18.3s,baz=150,slow=36							
CMAR	**Chiang Mai Arr**	**33.55**	**252**	P		**P**	**23 57 59.8**	**-1.0**
WMQ	**Urumqi**	**36.06**	**300**	*e*P		**P**	**23 58 21.1**	**-1.1**
WMQ				pP		pP	23 58 37.4	+2.6
WMQ				pmax		pmax		
	comp=Z,11nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,66nm,5.1s							
TIXI	**Tiksi**	**38.18**	**358**	P		**P**	**23 58 38.2**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=333,slow=10.0,SNR=3.9							
TIXI	**Tiksi**	**38.18**	**358**	P		**P**	**23 58 38.3**	**-1.5**
ZALV	**Zalesovo Beam**	**39.09**	**316**	P		**P**	**23 58 46.0**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=106,slow=11,SNR=4.7							
ZALV	**Zalesovo Beam**	**39.09**	**316**	P		**P**	**23 58 46.2**	**-1.4**
MKAR	**Makanchi Array**	**39.92**	**305**	P		**P**	**23 58 53.5**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=86,slow=11,SNR=5.9							
MKAR				PcP		**PcP**	**00 00 58.5**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=62,slow=3.4,SNR=2.4							
MKAR				LR		LR	00 16 03.9	
	comp=Z,32nm,19.6s,baz=310,slow=37							
MKAR	**Makanchi Array**	**39.92**	**305**	P		**P**	**23 58 53.7**	**-1.0**
MAKZ	**Makanchi**	**40.14**	**305**	P		**P**	**23 58 56.9**	**+0.4**
KURK	**Kurchatov**	**42.47**	**310**	P		**P**	**23 59 13.6**	**-1.9**
KURBB	**Kurchatov Arra**	**42.52**	**310**	P		**P**	**23 59 13.6**	**-2.3**
	comp=Z,0.8nm,0.5s,baz=90,slow=9.1,SNR=8.0							
AAK	**Ala-Archa**	**45.76**	**299**	P		**P**	**23 59 41.9**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=112,slow=7.2,SNR=5.5							
AAK	**Ala-Archa**	**45.76**	**299**	P		**P**	**23 59 41.5**	**-0.6**
AAK					IAmb	IAmb	23 59 42.1	
	comp=Z,1.0nm,0.5s							
BVAR	**Borovoye Array**	**47.59**	**314**	P		**P**	**23 59 55.5**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=179,slow=7.4,SNR=20							
BRVK	**Borovoye**	**47.65**	**314**	P		**P**	**23 59 56.3**	**-0.3**
KK31	**Karatay Array**	**48.56**	**300**	P		**P**	**00 00 03.9**	**0.0**
KK31					IAmb	IAmb	00 00 04.0	
	comp=Z,2.5nm,0.7s							
KKAR	**Karatay Array**	**48.56**	**300**	P		**P**	**00 00 03.3**	**-0.5**
WRA	**Warramunga Arr**	**53.26**	**178**	P		**P**	**00 00 38.5**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=353,slow=8.2,SNR=2.9							
ARU	**Arti**	**54.13**	**319**	P		**P**	**00 00 45.2**	**-0.1**
ARU					IAmb	IAmb	00 00 46.6	
	comp=Z,7.5nm,1.2s							
ILAR	**Eielson Array**	**56.22**	**31**	P		**P**	**00 01 00.5**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=270,slow=7.7,SNR=2.2							
ILAR				pP		**pP**	**00 01 15.1**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=267,slow=5.8,SNR=5.0							
ASAR	**Alice Springs**	**56.95**	**178**	P		**P**	**00 01 06.7**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=3.2,slow=4.5,SNR=4.6							
ASAR				pP		**pP**	**00 01 18.6**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=8.6,slow=12,SNR=4.4							
ASAR	**Alice Springs**	**56.95**	**178**	P		**P**	**00 01 05.9**	**+0.1**
GEYT	**Alibeck**	**59.04**	**297**	P		**P**	**00 01 19.4**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=17,slow=12,SNR=2.4							
GEYT				LR		LR	00 27 33.2	
	comp=Z,37nm,19.9s,baz=225,slow=37							
INK	**Inuvik**	**60.68**	**25**	P		**P**	**00 01 31.8**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=300,slow=9.7,SNR=3.1							
ARCES	**ARCESS Array B**	**64.57**	**338**	P		**P**	**00 01 57.2**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=58,slow=8.6,SNR=1.6							
FIA1	**FINESS Array S**	**68.33**	**330**	P		**P**	**00 02 21.1**	**0.0**
FINES	**FINESS Array B**	**68.33**	**330**	P		**P**	**00 02 20.8**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=64,slow=5.7,SNR=16							
FINES				pP		**pP**	**00 02 33.9**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=70,slow=5.6,SNR=3.7							
YKA	**Yellowknife Ar**	**70.30**	**27**	P		**P**	**00 02 34.4**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=304,slow=5.9,SNR=5.6							
YKA				pP		**pP**	**00 02 47.3**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=61,slow=39,SNR=1.9							
AKASG	**Malin Array Be**	**72.38**	**320**	P		**P**	**00 02 45.0**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=54,slow=5.5,SNR=4.1							
NC405	**NORSAR Array S**	**74.12**	**334**	P		**P**	**00 02 56.7**	**+0.4**
NOA	**NORSAR Array B**	**74.35**	**334**	P		**P**	**00 02 58.2**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=48,slow=5.7,SNR=4.6							
NOA				pP		**pP**	**00 03 10.8**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=48,slow=5.8,SNR=3.3							
RAYN	**Ar Rayn**	**75.03**	**288**	P		**P**	**00 03 01.7**	**-0.5**
RAYN					IAmb	IAmb	00 03 02.2	
	comp=Z,1.8nm,0.8s							
BURAR	**Bucovina Array**	**76.27**	**318**	P		**P**	**00 03 09.5**	**+0.5**
NVAR	**Mina Array Bea**	**82.79**	**48**	P		**P**	**00 03 47.1**	**+2.4**
	comp=Z,1.3nm,0.9s,baz=284,slow=2.4,SNR=3.6							
NVAR	**Mina Array Bea**	**82.79**	**48**	P		**P**	**00 03 46.2**	**+1.5**
ULM	**Lac du Bonnet**	**86.20**	**29**	P		**P**	**00 04 02.4**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=315,slow=3.9,SNR=6.5							
ULM	**Lac du Bonnet**	**86.20**	**29**	P		**P**	**00 04 01.7**	**+0.2**
KEST	**Kesra**	**92.96**	**317**	LR		LR	00 51 42.3	
	comp=Z,66nm,18.1s,baz=256,slow=39							

*VAO **07** 23:52:06.3±0.7, 21°.70S×68°.56W, h135km, mb4.3*
*NEIC **07** 23:52:06.9±1.9, 21°.76S±0°.04×68°.34W±0°.06, h120km±6km, mb4.1/10, ML3.9(GUC), Error ellipse: s-maj=8.4km s-min=5.9km az=113.0*
*IDC **07** 23:52:06.3±0.9, 21°.65S×68°.20W, h108km±10km, mb3.7/8, mb1 3.8/11, mb1mx3.6/31, mbtmp4.1/11, Error ellipse: s-maj=21.6km s-min=15.0km az=124.0*
*GUC **07** 23:52:07.6±0.6, 21°.77S×68°.34W, h117km±5km, ML3.8*
ISC 07 23:52:07.1±0.6, 21°.77S±0°.03×68°.34W±0°.06, h122km±6km, n99, σ0°99/113, mb4.1/10, 12C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.84**	**268**	⇑*i*P		**Pn**

comp=E,3.3nm,0.3s,baz=165,slow=3.8,SNR=58
GO03 Copiap 6.05 196 Pn **Pn** **23 53 31.1 -3.2**
AC04 Llanos de Chal 6.87 201 Pn Pn 23 53 40.9 -4.4
LCO Las Campanas 7.52 196 Pn Pn 23 53 49.2 -5.0
GO04 Tololo Observa 8.65 194 Pn Pn 23 54 04.2 -5.4
SIV San Ignacio 8.96 51 P **Pn** **23 54 11.0 -2.7**
comp=E,17nm,0.3s,baz=244,slow=11,SNR=265
CO03 El Pedregal 9.27 193 Pn Pn 23 54 12.3 -5.5
CPUP Villa Florida 11.04 116 P **Pn** **23 54 40.7 -0.8**
comp=E,0.2nm,0.3s,baz=264,slow=8.3,SNR=3.4
CPUP Villa Florida 11.04 116 Pn **Pn** **23 54 42.4 +0.9**
VILB Vilhena 11.71 43 *eP* **Pn** **23 54 49.5 -1.0**
AQDB Aquidauana 11.87 86 *eP* **Pn** **23 54 53.6 +1.0**
SAML Samuel 13.68 22 Pn **Pn** **23 55 15.8 -0.3**
BI02 San Fabin de 15.06 189 P **Pn** **23 55 33.3 -0.3**
PCMB Pacaembu 15.88 93 *eP* **P** **23 55 45.8 +0.7**
CPSB Cacapava Do Su 15.90 126 *eP* **P** **23 55 45.1 -0.1**
CLDB Colider 16.18 50 *eP* **Pn** **23 55 46.7 -0.9**
ARAG Araguaiana, MT 16.77 72 *eP* **P** **23 55 54.9 -0.1**
FRTB Fartura 17.42 99 *eP* **Pn** **23 56 02.6 0.0**
BB19B Bebedouro 18.46 91 *eP* **P** **23 56 13.3 -0.3**
SNDB Serra Nova Dou 18.98 62 *eP* **P** **23 56 18.3 -0.9**
PLCA Paso Flores 19.00 185 P **Pn** **23 56 22.5 +1.2**
comp=E,0.1nm,0.3s,baz=348,slow=12,SNR=3.2
PLCA Paso Flores 19.00 185 P **P** **23 56 20.9 +1.6**
NPGB Novo Progresso 19.27 43 *eP* **P** **23 56 20.6 -1.8**
IPMB Ipameri, GO 19.30 82 *eP* **P** **23 56 22.3 -0.4**
MACA Manacapuru-AM 19.94 23 *eP* **P** **23 56 28.0 -1.5**
BDFB Brasilia 20.19 76 P **P** **23 56 30.5 -1.9**
comp=E,1.5nm,0.4s,baz=213,slow=8.8,SNR=5.2
BDFB Brasilia 20.19 76 P **P** **23 56 31.1 -1.3**
BDFB IAmb IAmb 23 56 38.1
comp=Z,11nm,1.3s
ITTB Itaituba 21.19 37 *eP* **P** **23 56 41.6 -1.4**
PEXB Peixe 21.42 67 *eP* **P** **23 56 44.6 -0.9**
BSCB Bom Sucesso 21.96 92 *eP* **P** **23 56 50.1 -1.1**
PTGA Pitinga 22.45 22 P **P** **23 56 53.9 -2.3**
comp=Z,3.3nm,0.3s,baz=317,slow=22,SNR=7.0
PTGA Pitinga 22.45 22 P **P** **23 56 54.9 -1.3**
PTGA IAmb IAmb 23 57 00.9
comp=Z,5.2nm,0.8s
PTGA Pitinga 22.45 22 *eP* **P** **23 56 54.9 -1.3**
DIAM Diamantina, MG 23.43 86 *eP* **P** **23 57 03.9 -1.8**
PRPB Parauapebas 23.70 52 *eP* **P** **23 57 06.2 -1.7**
JANB Januaria 23.74 78 *eP* **P** **23 57 06.8 -1.5**
MALB Monte Alegre 24.08 37 *eP* **P** **23 57 10.7 -0.7**
SDBA SAO DESIDERIO 24.23 71 *eP* **P** **23 57 12.1 -0.7**
TXAR Lajitas Array 61.15 325 P **P** **00 02 09.5 +0.7**
comp=Z,0.3nm,0.9s,baz=150,slow=9.1,SNR=1.6
SNAA Sanae 61.85 161 P **P** **00 02 13.7 +0.7**
comp=Z,2.0nm,0.6s,baz=270,slow=10,SNR=11
SNAA Sanae 61.85 161 P **P** **00 02 13.7 +0.7**
DBIC Dimbokro 68.31 73 P **P** **00 02 55.6 +0.1**
comp=Z,3.4nm,0.7s,baz=219,slow=6.2,SNR=3.9
DBIC Dimbokro 68.31 73 P **P** **00 02 56.0 +0.5**
QSPA South Pole Qui 68.42 180 P **P** **00 02 56.7 +1.2**
QSPA IAmb IAmb 00 02 59.4
comp=Z,4.0nm,1.1s
KOWA Kowa 72.64 66 P **P** **00 03 22.0 +0.1**
KOWA IAmb IAmb 00 03 24.8
comp=Z,3.8nm,1.3s
TOA0 Torodi Ar. Sit 76.95 70 P **P** **00 03 46.5 -0.2**
TOA0 IAmb IAmb 00 03 52.8
comp=Z,6.4nm,1.4s
TORD Torodi Ar. Bea 76.95 70 P **P** **00 03 46.5 -0.2**
comp=Z,1.7nm,0.4s,baz=255,slow=4.9,SNR=17
TORD Torodi Ar. Bea 76.95 70 P **P** **00 03 46.3 -0.3**
TORD IAmb IAmb 00 03 49.5
comp=Z,1.8nm,0.6s
MAW Mawson 83.92 163 P **P** **00 04 23.8 +0.8**
comp=Z,1.1nm,0.6s,baz=180,slow=7.1,SNR=1.4
MAW Mawson 83.92 163 P **P** **00 04 23.3 +0.4**
YKA Yellowknife Ar 91.62 340 P **P** **00 05 00.6 +0.8**
comp=Z,0.7nm,0.7s,baz=133,slow=4.7,SNR=14
H11S2 WAKE ISLAND Hyl 28.43 277 T T 02 31 18.6
baz=100,SNR=2.9
H11S1 WAKE ISLAND Hyl 28.44 277 T T 02 31 23.9
baz=100
H11S3 WAKE ISLAND Hyl 28.45 277 T T 02 31 30.8
baz=100
ASAR Alice Springs 129.91 207 PKP **PKPdf** **00 11 03.4 +0.4**
comp=Z,0.5nm,0.5s,baz=128,slow=1.7,SNR=5.1
ASAR Alice Springs 129.91 207 **PKPdf** **00 11 03.2 +0.2**
WRA Warramunga Arr 132.99 210 PKP **PKPdf** **00 11 09.2 +0.4**
comp=Z,1.1nm,0.7s,baz=154,slow=2.1,SNR=5.1
WRA Warramunga Arr 132.99 210 **PKPdf** **00 11 08.7 -0.2**
ZALV Zalesovo Beam 141.97 26 PKP **PKPdf** **00 11 25.4 +1.1**
comp=Z,0.6nm,0.4s,baz=48,slow=2.2,SNR=5.1
MKAR Makanchi Array 145.54 37 PKPbc **PKPab** **00 11 31.6 0.0**
comp=Z,0.5nm,0.7s,baz=324,slow=4.4,SNR=6.9
MKAR Makanchi Array 145.54 37 **PKPab** **00 11 31.9 +0.3**

*IDC **07** 23:56:57.0±1.5, 39.°31N×21.°39E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/36, mbtmp3.6/6, Error ellipse: s-maj=41.1km s-min=26.3km az=119.0*
*THE **07** 23:56:59.6, 39.°34N×21.°42E, h5km±1km, ML2.9/20, Error ellipse: s-maj=1.1km s-min=0.5km az=290.0*
*ATH **07** 23:56:59.5, 39.°34N×21.°42E, h14km±1km, ML2.8/27, Error ellipse: s-maj=1.6km s-min=0.6km az=115.0*
ISC 07 23:56:59.5±0.9, 39°34N±0.°01×21°41E±0.°02, h13km±7km, n141, σ0°80/186, mb3.6/6, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DSL	**Palaion Diasel**	**0.32**	**230**	P	**Pg**	**Pg**	**23 57 05.4**	**-0.6**
DSL				S	**Sg**	**Sg**	**23 57 10.5**	**+0.3**
DSL	**Palaion Diasel**	**0.32**	**230**	P	**Pg**	**Pg**	**23 57 05.4**	**-0.6**
DSL				S	**Sg**	**Sg**	**23 57 10.4**	**+0.1**
EVR	**Evrytania**	**0.52**	**143**	P	**Pg**	**Pg**	**23 57 09.4**	**-0.3**
EVR				S	**Sg**	**Sg**	**23 57 16.7**	**+0.1**
EVR				AML	AML	AML	23 57 19.2	
	comp=N,2122μm,0.3s							
EVR				AML	AML	AML	23 57 20.3	
	comp=E,1524μm,0.5s							
EVR	**Evrytania**	**0.52**	**143**	P	**Pg**	**Pg**	**23 57 08.7**	**-1.0**
EVR				S	**Sg**	**Sg**	**23 57 16.0**	**-0.6**
	comp=E,935nm,0.3s							
THL	**Klokotos Trika**	**0.52**	**64**	P	**Pg**	**Pg**	**23 57 09.4**	**-0.3**
THL				S	**Sg**	**Sg**	**23 57 17.0**	**+0.4**
THL				AML	AML	AML	23 57 22.1	
	comp=E,1525μm,0.4s							
THL				AML	AML	AML	23 57 22.9	
	comp=N,808μm,0.4s							
THL	**Klokotos Trika**	**0.52**	**64**	P	**Pg**	**Pg**	**23 57 09.4**	**-0.3**
THL				S	**Sg**	**Sg**	**23 57 17.4**	**+0.8**
	comp=N,502nm,0.3s							
JAN	**Janina**	**0.54**	**307**	P	**Pg**	**Pg**	**23 57 10.2**	**+0.1**
JAN				S	**Sg**	**Sg**	**23 57 17.6**	**+0.4**
JAN				AML	AML	AML	23 57 20.6	
	comp=E,3155μm,0.3s							
JAN				AML	AML	AML	23 57 24.8	
	comp=N,2314μm,0.3s							
JAN	**Janina**	**0.54**	**307**	P	**Pg**	**Pg**	**23 57 09.7**	**-0.3**
JAN				S	**Sg**	**Sg**	**23 57 17.6**	**+0.4**
	comp=N,1μm,0.2s							
KPRO	**Kipourio**	**0.62**	**357**	P	**Pg**	**Pg**	**23 57 11.3**	**-0.3**
KPRO				S	**Sg**	**Sg**	**23 57 20.1**	**+0.3**
KPRO				AML	AML	AML	23 57 24.1	
	comp=N,3015μm,0.4s							
KPRO				AML	AML	AML	23 57 26.2	
	comp=E,2643μm,0.3s							
KPRO	**Kipourio**	**0.62**	**357**	P	**Pg**	**Pg**	**23 57 11.3**	**-0.3**
KPRO				S	**Sb**	**Sb**	**23 57 21.5**	**+0.6**
	comp=E,1μm,0.3s							
MAKR	**Makrakomi, Fth**	**0.65**	**120**	P	**Pg**	**Pg**	**23 57 11.9**	**-0.2**
MAKR				S	**Sg**	**Sg**	**23 57 21.0**	**+0.4**
MAKR				AML	AML	AML	23 57 28.1	
	comp=N,938μm,0.3s							
MAKR				AML	AML	AML	23 57 28.4	
	comp=E,1153μm,0.3s							
MAKR	**Makrakomi, Fth**	**0.65**	**120**	P	**Pg**	**Pg**	**23 57 11.9**	**-0.2**
MAKR				S	**Sg**	**Sg**	**23 57 21.3**	**+0.7**
	comp=E,2μm,0.4s							
PDO	**Prodromos**	**0.76**	**194**	P	**Pg**	**Pg**	**23 57 14.5**	**+0.4**
PDO				S	**Sb**	**Sb**	**23 57 25.3**	**+0.6**
PDO				AML	AML	AML	23 57 28.9	
	comp=N,2681μm,0.3s							
PDO				AML	AML	AML	23 57 31.8	
	comp=E,2139μm,0.6s							
PDO	**Prodromos**	**0.76**	**194**	P	**Pg**	**Pg**	**23 57 13.8**	**-0.3**
PDO				S	**Sb**	**Sb**	**23 57 25.3**	**+0.6**
	comp=E,2μm,0.4s							
TSLK	**Tsoukalades, L**	**0.78**	**229**	P	**Pg**	**Pg**	**23 57 14.7**	**+0.2**
TSLK				S	**Sb**		**23 57 26.0**	**+0.7**
TSLK	**Tsoukalades, L**	**0.78**	**229**	P	**Pg**		**23 57 14.4**	**-0.1**
TSLK				S	**Sb**		**23 57 26.0**	**+0.7**
	comp=E,912nm,0.4s							
AGG	**Agios Georgios**	**0.78**	**113**	P	**Pg**		**23 57 14.0**	**-0.6**
AGG				S	**Sg**		**23 57 24.9**	**+0.1**
AGG				AML	AML		23 57 31.5	
	comp=N,1364μm,0.4s							
AGG				AML	AML		23 57 32.0	
	comp=E,1601μm,0.3s							
AGG	**Agios Georgios**	**0.78**	**113**	P	**Pg**		**23 57 13.8**	**-0.8**
AGG				S	**Sb**		**23 57 26.1**	**+0.6**
	comp=E,732nm,0.3s							
LKD2	**Lefkada island**	**0.80**	**227**	P	**Pg**		**23 57 14.9**	**-0.1**
LKD2				S	**Sb**		**23 57 26.7**	**+0.7**
LKD2				AML	AML		23 57 33.1	
	comp=N,2041μm,0.5s							
LKD2				AML	AML		23 57 34.5	
	comp=E,3211μm,0.6s							
LKD2	**Lefkada island**	**0.80**	**227**	P	**Pg**		**23 57 14.7**	**-0.3**
LKD2				S	**Sb**		**23 57 26.7**	**+0.7**
	comp=E,1μm,0.5s							
LRSO	**Larissa Observ**	**0.83**	**66**	P	**Pg**		**23 57 15.1**	**-0.4**
LRSO				S	**Sg**		**23 57 26.7**	**+0.4**
LRSO	**Larissa Observ**	**0.83**	**66**	P	**Pg**		**23 57 15.1**	**-0.4**
LRSO				S	**Sg**		**23 57 26.8**	**+0.4**
	comp=E,2μm,0.4s							
NYDR	**Nydri-Lefkada**	**0.83**	**222**	P	**Pg**		**23 57 15.1**	**-0.5**
NYDR				S	**Sg**		**23 57 26.8**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.83**	**222**	P	**Pg**		**23 57 15.1**	**-0.5**
NYDR				S	**Sg**		**23 57 26.8**	**+0.3**
ANX	**Ano Chora**	**0.84**	**152**	P	**Pg**		**23 57 15.5**	**-0.3**
ANX				S	**Sg**		**23 57 27.1**	**+0.3**
ANX				AML	AML		23 57 33.7	
	comp=N,1814μm,0.7s							
ANX				AML	AML		23 57 37.8	
	comp=E,1261μm,0.4s							
ANX	**Ano Chora**	**0.84**	**152**	P	**Pg**		**23 57 15.3**	**-0.5**
ANX				S	**Sb**		**23 57 27.9**	**+0.6**
	comp=E,785nm,0.5s							
PENT	**Pentalofos**	**0.88**	**346**	P	**Pg**		**23 57 16.1**	**-0.5**
PENT				S	**Sg**		**23 57 28.7**	**+0.6**
PENT				AML	AML		23 57 33.9	
	comp=N,619μm,0.3s							
PENT				AML	AML		23 57 41.3	
	comp=E,635μm,0.5s							
PENT	**Pentalofos**	**0.88**	**346**	P	**Pg**		**23 57 16.1**	**-0.5**
PENT				S	**Sb**		**23 57 29.7**	**+1.1**
	comp=E,308nm,0.3s							
DRAG	**Dragano-Lefkad**	**0.92**	**225**	P	**Pg**		**23 57 16.6**	**-0.6**
DRAG	**Dragano-Lefkad**	**0.92**	**225**	P	**Pg**		**23 57 16.4**	**-0.8**
EVGI	**Lefkada island**	**0.93**	**220**	P	**Pg**		**23 57 16.7**	**-0.6**
EVGI	**Lefkada island**	**0.93**	**220**	P	**Pg**		**23 57 16.7**	**-0.6**
KZN	**Kozani**	**1.01**	**16**	P	**Pg**		**23 57 18.3**	**-0.7**
KZN				S	**Sg**		**23 57 32.1**	**-0.1**
KZN				AML	AML		23 57 35.8	
	comp=E,1885μm,0.4s							
KZN				AML	AML		23 57 39.9	
	comp=N,919μm,0.3s							
KZN	**Kozani**	**1.01**	**16**	P	**Pg**		**23 57 17.9**	**-1.0**
KZN				S	**Sb**		**23 57 33.1**	**+1.0**
	comp=N,662nm,0.3s							
LSK	**Leskovik**	**1.02**	**323**	P	**Pg**		**23 57 19.0**	**-0.3**
LSK				S	**Sn**		**23 57 34.7**	**+0.7**
SERG	**Sergoula**	**1.05**	**151**	P	**Pg**		**23 57 19.2**	**-0.5**
SERG				AML	AML		23 57 37.7	
	comp=E,1062μm,0.4s							
SERG				AML	AML		23 57 37.8	
	comp=N,977μm,0.5s							
SERG	**Sergoula**	**1.05**	**151**	P	**Pg**		**23 57 18.6**	**-1.1**
FSK	**Fiskardo**	**1.10**	**217**	P	**Pg**		**23 57 19.4**	**-1.2**
FSK				AML	AML		23 57 38.3	
	comp=N,1295μm,0.5s							
FSK				AML	AML		23 57 40.5	
	comp=E,1482μm,0.6s							
FSK	**Fiskardo**	**1.10**	**217**	P	**Pg**		**23 57 19.4**	**-1.2**
FSK				S	**Sn**		**23 57 36.4**	**+0.8**
TRIZ	**Trizonia**	**1.10**	**152**	P	**Pg**		**23 57 19.2**	**-1.4**
TRIZ	**Trizonia**	**1.10**	**152**	P	**Pg**		**23 57 19.2**	**-1.4**
KALE	**Kalithea**	**1.10**	**149**	P	**Pg**		**23 57 19.5**	**-1.2**
KALE				AML	AML		23 57 40.3	
	comp=N,894μm,0.3s							
KALE				AML	AML		23 57 47.8	
	comp=E,558μm,0.6s							
KALE	**Kalithea**	**1.10**	**149**	P	**Pg**		**23 57 19.5**	**-1.2**
NEST	**Nestorio**	**1.11**	**346**	P	**Pg**		**23 57 20.8**	**-0.2**
NEST				S	**Sg**		**23 57 34.7**	**-0.8**
NEST				AML	AML		23 57 42.1	
	comp=N,1233μm,0.4s							
NEST				AML	AML		23 57 44.6	
	comp=E,1337μm,0.6s							
NEST	**Nestorio**	**1.11**	**346**	P	**Pg**		**23 57 21.1**	**+0.2**
NEST				S	**Sg**		**23 57 35.6**	**+0.2**
	comp=E,560nm,0.7s							
AXAR	**Agios Charalam**	**1.13**	**120**	P	**Pg**		**23 57 21.0**	**-0.2**
AXAR				AML	AML		23 57 42.6	
	comp=E,1087μm,0.4s							
AXAR				AML	AML		23 57 46.1	
	comp=N,1747μm,0.5s							
AXAR	**Agios Charalam**	**1.13**	**120**	P	**Pg**		**23 57 21.0**	**-0.2**
LIT	**Litokhoron**	**1.13**	**47**	P	**Pg**		**23 57 19.9**	**-1.4**
LIT				S	**Sg**		**23 57 35.4**	**-0.5**
LIT				AML	AML		23 57 40.7	
	comp=E,1408μm,0.4s							
LIT				AML	AML		23 57 43.1	
	comp=N,1635μm,0.3s							
LIT	**Litokhoron**	**1.13**	**47**	P	**Pg**		**23 57 19.9**	**-1.4**
LIT				S	**Sb**		**23 57 37.0**	**+1.4**
	comp=N,665nm,0.5s							
AXS	**Araxos**	**1.14**	**181**	P	**Pg**		**23 57 20.8**	**-0.6**
AXS				AML	AML		23 57 41.1	
	comp=E,759μm,0.5s							
AXS				AML	AML		23 57 41.7	
	comp=N,689μm,0.6s							
AXS	**Araxos**	**1.14**	**181**	P	**Pg**		**23 57 20.8**	**-0.6**
LAKA	**Lakka**	**1.18**	**158**	P	**Pg**		**23 57 21.9**	**-0.3**
LAKA	**Lakka**	**1.18**	**158**	P	**Pg**		**23 57 21.9**	**-0.3**
DLFA	**Delphi**	**1.20**	**135**	P	**Pg**		**23 57 20.8**	**-1.8**
KASA	**Kassiopi**	**1.21**	**290**	P	**Pg**		**23 57 21.8**	**-1.0**
SRN	**Sarande**	**1.22**	**297**	P	**Pg**		**23 57 22.8**	**-0.1**
DSF	**Desfina**	**1.27**	**136**	P	**Pg**		**23 57 22.4**	**-1.5**
DSF				AML	AML		23 57 44.5	
	comp=E,233μm,0.4s							
DSF				AML	AML		23 57 47.4	
	comp=N,362μm,0.3s							
DSF	**Desfina**	**1.27**	**136**	P	**Pg**		**23 57 22.4**	**-1.5**
RLS	**Riolos of Patr**	**1.28**	**178**	P	**Pg**		**23 57 23.5**	**-0.5**
RLS				AML	AML		23 57 51.5	
	comp=N,474μm,0.4s							
RLS				AML	AML		23 57 52.1	
	comp=E,482μm,0.5s							
RLS	**Riolos of Patr**	**1.28**	**178**	P	**Pg**		**23 57 23.2**	**-0.8**
KEF5	**Kardakata, Kep**	**1.29**	**215**	P	**Pn**		**23 57 22.6**	**-0.6**
KEF5	**Kardakata, Kep**	**1.29**	**215**	P	**Pn**		**23 57 22.6**	**-0.6**
KEK	**Kerkira**	**1.30**	**287**	P	**Pn**		**23 57 23.4**	**0.0**
KEK				AML	AML		23 57 50.0	
	comp=E,580μm,0.5s							
KEK				AML	AML		23 57 51.0	
	comp=N,429μm,0.5s							
KEK	**Kerkira**	**1.30**	**287**	P	**Pn**		**23 57 23.4**	**0.0**
VLS	**Valsamata**	**1.32**	**209**	P	**Pn**		**23 57 23.0**	**-0.7**
VLS				S	**Sg**		**23 57 41.8**	**-0.3**
VLS				AML	AML		23 57 51.7	
	comp=E,543μm,0.4s							
VLS				AML	AML		23 57 53.8	
	comp=N,763μm,0.6s							
VLS	**Valsamata**	**1.32**	**209**	P	**Pn**		**23 57 23.0**	**-0.7**
VLS				S	**Sn**		**23 57 42.5**	**+1.3**
	comp=N,262nm,0.4s							
KEF4	**Livadi, Kephal**	**1.32**	**216**	P	**Pn**		**23 57 23.3**	**-0.4**
KEF4	**Livadi, Kephal**	**1.32**	**216**	P	**Pn**		**23 57 23.3**	**-0.4**
DMLN	**Damoulianata-K**	**1.36**	**217**	P	**Pn**		**23 57 23.8**	**-0.5**
DMLN	**Damoulianata-K**	**1.36**	**217**	P	**Pn**		**23 57 23.8**	**-0.5**
LXRA	**Lixouri, Kepha**	**1.37**	**214**	P	**Pn**		**23 57 24.1**	**-0.1**
PSDA	**Pessada-Kefalo**	**1.38**	**208**	P	**Pn**		**23 57 23.8**	**-0.6**
PSDA	**Pessada-Kefalo**	**1.38**	**208**	P	**Pn**		**23 57 23.8**	**-0.6**
XOR	**Xorichti**	**1.38**	**88**	P	**Pn**		**23 57 24.9**	**+0.4**
XOR	**Xorichti**	**1.38**	**88**	P	**Pn**		**23 57 24.9**	**+0.4**
XOR				S	**Sg**		**23 57 43.8**	**-0.2**
	comp=N,408nm,0.5s							
DRO	**Drossia**	**1.40**	**170**	P	**Pn**		**23 57 25.2**	**+0.4**
DRO				AML	AML		23 57 54.3	
	comp=N,774μm,0.4s							
DRO				AML	AML		23 57 55.2	
	comp=E,842μm,0.5s							
DRO	**Drossia**	**1.40**	**170**	P	**Pn**		**23 57 25.2**	**+0.4**
KEF3	**Kipouria, Keph**	**1.40**	**217**	P	**Pn**		**23 57 24.0**	**-0.7**
KEF3	**Kipouria, Keph**	**1.40**	**217**	P	**Pn**		**23 57 25.2**	**+0.4**
NEO	**Neokhori**	**1.41**	**91**	P	**Pn**		**23 57 24.7**	**-0.1**
NEO				S	**Sb**		**23 57 43.7**	**+0.2**
NEO				AML	AML		23 57 48.7	
	comp=N,1132μm,0.5s							
NEO				AML	AML		23 57 50.3	
	comp=E,575μm,0.3s							
NEO	**Neokhori**	**1.41**	**91**	P	**Pn**		**23 57 24.7**	**-0.1**
NEO				S	**Sb**		**23 57 43.7**	**+0.2**
	comp=E,405nm,0.4s							
ATAL	**Atalanti**	**1.41**	**117**	P	**Pn**		**23 57 25.7**	**+0.8**
ATAL	**Atalanti**	**1.41**	**117**	P	**Pn**		**23 57 25.7**	**+0.8**
KLV	**Kalavryta, Ach**	**1.41**	**156**	P	**Pn**		**23 57 25.6**	**+0.6**
KLV				AML	AML		23 57 51.2	
	comp=N,163μm,0.7s							
KLV				AML	AML		23 57 56.1	
	comp=E,347μm,1.0s							
KLV	**Kalavryta, Ach**	**1.41**	**156**	P	**Pn**		**23 57 25.6**	**+0.6**
LKR	**Lokris**	**1.42**	**118**	P	**Pn**		**23 57 25.7**	**+0.7**
LKR	**Lokris**	**1.42**	**118**	P	**Pn**		**23 57 25.7**	**+0.7**
FNA	**Florina**	**1.45**	**359**	P	**Pn**		**23 57 25.5**	**0.0**
FNA				S	**Sb**		**23 57 44.7**	**0.0**
FNA				AML	AML		23 57 50.6	
	comp=N,678μm,0.6s							
FNA				AML	AML		23 57 52.6	
	comp=E,799μm,0.6s							
FNA	**Florina**	**1.45**	**359**	P	**Pn**		**23 57 25.5**	**0.0**
FNA				S	**Sb**		**23 57 44.7**	**0.0**
	comp=E,365nm,0.5s							
SMIA	**Simia**	**1.47**	**107**	P	**Pn**		**23 57 26.1**	**+0.4**
SMIA				S	**Sb**		**23 57 45.0**	**-0.3**
SMIA				AML	AML		23 57 54.5	
	comp=E,982μm,0.6s							
SMIA				AML	AML		23 57 56.7	
	comp=N,1165μm,0.7s							
SMIA	**Simia**	**1.47**	**107**	P	**Pn**		**23 57 26.3**	**+0.5**
SMIA				S	**Sb**		**23 57 45.9**	**+0.5**
	comp=N,482nm,0.6s							
THAL	**Thalero**	**1.63**	**143**	P	**Pn**		**23 57 29.3**	**+1.5**
THAL	**Thalero**	**1.63**	**143**	P	**Pn**		**23 57 29.3**	**+1.5**
LTHK	**Lithakia**	**1.69**	**196**	P	**Pn**		**23 57 29.6**	**+1.0**
LTHK	**Lithakia**	**1.69**	**196**	P	**Pn**		**23 57 29.6**	**+1.0**
LTK	**Loutraki**	**1.79**	**137**	P	**Pn**		**23 57 30.9**	**+0.8**
LTK	**Loutraki**	**1.79**	**137**	P	**Pn**		**23 57 30.9**	**+0.8**
HORT	**Hortiatis**	**1.81**	**45**	P	**Pn**		**23 57 30.4**	**-0.1**
HORT	**Hortiatis**	**1.81**	**45**	P	**Pn**		**23 57 30.4**	**-0.1**
AMT	**Artemida-Makis**	**1.82**	**172**	P	**Pb**		**23 57 32.6**	**0.0**
AMT	**Artemida-Makis**	**1.82**	**172**	P	**Pb**		**23 57 32.6**	**0.0**
LOUT	**Loutraki**	**1.82**	**137**	P	**Pb**		**23 57 32.5**	**-0.2**
LOUT	**Loutraki**	**1.82**	**137**	P	**Pb**		**23 57 32.5**	**-0.2**
OHR	**Ohrid**	**1.83**	**345**	*i* Pn	**Pg**		**23 57 34.3**	**-0.4**
VIL2	**Platees**	**1.83**	**127**	P	**Pn**		**23 57 31.8**	**+1.1**
PLG	**Polygyros**	**1.88**	**56**	P	**Pn**		**23 57 30.6**	**-0.8**
PLG	**Polygyros**	**1.88**	**56**	P	**Pn**		**23 57 30.6**	**-0.8**
VILL	**Villia**	**1.89**	**128**	P	**Pn**		**23 57 31.8**	**+0.2**
SOH	**Sokhos**	**2.10**	**45**	P	**Pn**		**23 57 35.3**	**+0.8**
SOH	**Sokhos**	**2.10**	**45**	P	**Pn**		**23 57 35.3**	**+0.8**
VLX	**Vlachokerasia**	**2.10**	**158**	P	**Pb**		**23 57 37.5**	**-0.1**
VLX	**Vlachokerasia**	**2.10**	**158**	P	**Pb**		**23 57 38.4**	**+0.8**
EREA	**Eretria**	**2.17**	**114**	P	**Pn**		**23 57 36.5**	**+1.2**
EREA	**Eretria**	**2.17**	**114**	P	**Pn**		**23 57 36.5**	**+1.2**
ITM	**Ithomi**	**2.19**	**169**	P	**Pb**		**23 57 39.0**	**0.0**
ITM	**Ithomi**	**2.19**	**169**	P	**Pb**		**23 57 39.6**	**+0.6**
KYMI	**Kymi, Euboea I**	**2.21**	**108**	P	**Pn**		**23 57 36.5**	**+0.6**
KYMI	**Kymi, Euboea I**	**2.21**	**108**	P	**Pn**		**23 57 36.4**	**+0.5**
OUR	**Ouranopolis**	**2.22**	**62**	P	**Pn**		**23 57 36.0**	**0.0**
OUR	**Ouranopolis**	**2.22**	**62**	P	**Pn**		**23 57 36.0**	**0.0**
ATH	**Athens Observa**	**2.26**	**126**	P	**Pn**		**23 57 38.0**	**+1.5**
ATH	**Athens Observa**	**2.26**	**126**	P	**Pn**		**23 57 38.0**	**+1.5**
ATHU	**Athens Univers**	**2.31**	**126**	P	**Pn**		**23 57 38.5**	**+1.3**
ATHU	**Athens Univers**	**2.31**	**126**	P	**Pn**		**23 57 38.5**	**+1.3**
PTL	**Penteli**	**2.31**	**123**	P	**Pn**		**23 57 38.5**	**+1.2**
PTL	**Penteli**	**2.31**	**123**	P	**Pn**		**23 57 38.5**	**+1.2**
DION	**Dionisos Attik**	**2.34**	**122**	P	**Pn**		**23 57 38.9**	**+1.2**
DION	**Dionisos Attik**	**2.34**	**122**	P	**Pn**		**23 57 38.9**	**+1.2**
KRND	**KRANIDI**	**2.38**	**144**	P	**Pn**		**23 57 40.8**	**+2.6**
KRND	**KRANIDI**	**2.38**	**144**	P	**Pn**		**23 57 40.8**	**+2.6**
VLY	**Voula,Athens**	**2.38**	**128**	P	**Pn**		**23 57 39.8**	**+1.5**
VLY	**Voula,Athens**	**2.38**	**128**	P	**Pn**		**23 57 39.8**	**+1.5**
STIP	**Stip**	**2.43**	**14**	*i* Pn	**Pn**		**23 57 41.3**	**+2.4**
SRS	**Serrai**	**2.44**	**42**	P	**Pn**		**23 57 39.8**	**+0.7**
SRS	**Serrai**	**2.44**	**42**	P	**Pn**		**23 57 39.8**	**+0.7**
FINES	**FINESS Array B**	**22.32**	**6**	P	**P**		**00 01 57.1**	**+0.6**
	comp=N,2.4nm,1.0s,baz=182,slow=11,SNR=3.5							
NOA	**NORSAR Array B**	**22.63**	**347**	P	**P**		**00 01 58.5**	**-1.5**

comp=Z,74nm,20.0s,baz=336,slow=34
PMSA Palmer Station 8.93 191 Pn **Pn 00 41 57.9 -0.4**
PLCA Paso Flores 16.88 331 P **P 00 43 47.5 -0.3**
0.4nm,0.3s,baz=173,slow=10.0,SNR=10
PLCA Paso Flores 16.88 331 P **P 00 43 47.5 -0.3**
BI02 San Fabin de 20.90 334 P **P 00 44 31.4 -0.5**
BI02 IAmb IAmb 00 44 35.5
comp=Z,10nm,0.6s
BO02 Sierra Bellavi 22.57 336 P **P 00 44 50.0 +0.2**
MT02 Curacav 24.12 337 P **P 00 45 03.7 -1.6**
MT02 IAmb IAmb 00 45 06.0
comp=Z,10nm,0.8s
VA03 San Esteban 24.47 338 P **P 00 45 08.3 -0.4**
CO02 Combarbal 26.07 338 P **P 00 45 22.8 -0.3**
CO02 IAmb IAmb 00 45 23.4
comp=Z,9.3nm,0.6s
CO03 El Pedregal 26.36 339 P **P 00 45 25.1 -0.6**
CO03 IAmb IAmb 00 45 41.6
comp=Z,6.4nm,0.6s
GO04 Tololo Observa 27.03 339 P **P 00 45 31.1 -0.8**
GO04 IAmb IAmb 00 45 44.5
comp=Z,13nm,0.9s
LCO Las Campanas 28.14 340 P **P 00 45 41.4 -0.5**
LCO IAmb IAmb 00 45 45.9
comp=Z,12nm,1.2s
AC04 Llanos de Chal 29.00 339 P **P 00 45 49.4 +0.2**
CPUP Villa Florida 29.81 5 P **P 00 45 56.3 -0.1**
comp=Z,3.0nm,0.6s,baz=178,slow=8.3,SNR=8.5
CPUP LR LR 00 57 44.0
comp=Z,32nm,21.9s,baz=218,slow=36
CPUP Villa Florida 29.81 5 P **P 00 45 58.0 +1.6**
CPUP IAmb IAmb 00 46 00.0
comp=Z,3.3nm,0.7s
AC02 Maricunga 29.99 343 P **P 00 45 58.2 -0.3**
AC02 IAmb IAmb 00 46 15.8
comp=Z,5.5nm,1.1s
QSPA South Pole Qui 34.14 180 P **P 00 46 33.3 -1.0**
QSPA IAmb IAmb 00 46 34.2
comp=Z,6.9nm,0.9s
PB01 IPOC Station P 35.73 345 P **P 00 46 47.7 -0.5**
PSGCX Pisagua 37.24 344 P **P 00 47 00.6 -0.6**
PSGCX IAmb IAmb 00 47 18.1
comp=Z,12nm,1.1s
MNMC Minye Minye 37.62 345 P **P 00 47 04.7 0.0**
MNMC IAmb IAmb 00 47 05.8
comp=Z,5.7nm,0.9s
PB16 IPOC Station P 38.39 345 P **P 00 47 11.6 +0.1**
BDFB Brasilia 41.41 18 P **P 00 47 38.7 +2.7**
comp=Z,1.9nm,0.7s,baz=155,slow=10,SNR=3.6
ROSC El Rosal 61.87 344 LR LR 01 21 29.1
comp=Z,35nm,19.6s,baz=72,slow=40
LBTB Lobatse 67.19 101 P **P 00 50 43.4 -0.3**
comp=Z,2.5nm,0.9s,baz=224,slow=6.6,SNR=1.9
LBTB Lobatse 67.19 101 P **P 00 50 44.0 +0.3**
KOWA Kowa 84.38 54 P **P 00 52 23.3 +1.5**
comp=Z,0.4nm,0.5s,baz=245,slow=8.5,SNR=1.7
KOWA Kowa 84.38 54 P **P 00 52 24.6 +2.8**
TORD Torodi Ar. Bea 85.87 59 P **P 00 52 30.5 +1.2**
comp=Z,0.6nm,0.8s,baz=209,slow=4.5,SNR=3.1
TXAR Lajitas Array 92.87 323 P **P 00 53 02.1 -0.1**
comp=Z,0.1nm,0.4s,baz=159,slow=7.7,SNR=2.4
TXAR Lajitas Array 92.87 323 P **P 00 53 00.9 -1.3**
YKA Yellowknife Ar 125.67 332 PKP **PKPdf 00 58 47.7 -1.9**
comp=Z,0.2nm,0.7s,baz=142,slow=2.3,SNR=4.0

*IDC **08** 00:45:10.5±0.6,57°.45S×25°.07W,h0km,mb4.5/13, mb1 4.5/14,mb1mx4.3/32,mbtmp4.5/14,ML4.3/1,MS3.5/4, Ms1 3.4/4,ms1mx3.1/18,Error ellipse: s-maj=25.6km s-min=15.0km az=42.0*
*NEIC **08** 00:45:17.4±1.5,57°.52S±0°.08×25°.2W±0°.2,h50km±6km, mb4.6/30,Error ellipse: s-maj=13.0km s-min=11.8km az=52.0*
ISC 08 00:45:15.6±0.5,57°.53S±0°.08×25°.05W±0°.09,h35km,n70, σ1§10/70,mb4.6/22,MS3.4/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.21**	**292**	Pn	**Pn**	**00 46 59.6**	**+1.3**
VNA1	**Neumayer--Stat**	**14.97**	**158**	P	**Pn**	**00 48 45.1**	**+0.9**
VNA3	**Neumayer Olymp**	**15.20**	**161**	P	**Pn**	**00 48 47.2**	**-0.1**
VNA2	**Neumayer--Watz** baz=322,slow=15	**15.37**	**158**	P	**Pn**	**00 48 49.2**	**-0.3**
SNAA	**Sanae**	**16.90**	**156**	P	**Pn**	**00 49 09.7**	**+0.6**
SNAA	**Sanae**	**16.90**	**156**	Pn	**Pn**	**00 49 09.0**	**-0.1**
SNAA	1.2nm,0.3s,baz=326,slow=14,SNR=31			Sn	**Sn**	**00 52 09.5**	**-6.0**
SNAA	0.1nm,0.3s,baz=351,slow=22,SNR=1.4 **Sanae**	**16.90**	**156**		**Pn**	**00 49 09.3**	**+0.2**
EFI	**East Falkland**	**19.86**	**273**	Pn	**Pn**	**00 49 44.9**	**-0.2**
EFI				IAmb	IAmb	00 49 45.6	
PMSA	comp=Z,52nm,1.1s **Palmer Station**	**19.87**	**233**	LR	LR	00 56 25.3	
BELA	comp=Z,117nm,18.5s,baz=62,slow=34 **Belgrano 2**	**20.70**	**186**	P	**P**	**00 49 53.0**	**+0.8**
GO09	**Cerro Castillo**	**27.75**	**262**	P	**P**	**00 50 59.7**	**-0.8**
GO09				IAmb	IAmb	00 51 13.6	
QSPA	comp=Z,32nm,1.4s **South Pole Qui**	**32.71**	**180**	P	**P**	**00 51 46.3**	**+1.8**
QSPA				IAmb	IAmb	00 52 04.7	
PLCA	comp=Z,15nm,1.4s **Paso Flores**	**33.42**	**280**	P	**P**	**00 51 49.3**	**-1.5**
PLCA	comp=Z,1.8nm,0.7s,baz=112,slow=10,SNR=3.6			LR	LR	01 03 48.9	
PLCA	comp=Z,66nm,19.5s,baz=112,slow=34 **Paso Flores**	**33.42**	**280**	P	**P**	**00 51 50.4**	**-0.4**
MAW	**Mawson**	**38.25**	**142**	P	**P**	**00 52 33.0**	**+1.3**
MAW	comp=Z,3.3nm,0.8s,baz=254,slow=7.4,SNR=3.2			LR	LR	01 06 26.5	
CPUP	comp=Z,58nm,21.6s,baz=236,slow=33 **Villa Florida**	**38.67**	**310**	P	**P**	**00 52 34.8**	**-0.9**
CPUP	comp=Z,12nm,0.8s,baz=151,slow=7.3,SNR=26 **Villa Florida**	**38.67**	**310**	P	**P**	**00 52 35.0**	**-0.7**
CPUP				IAmb	IAmb	00 52 35.7	
MT02	comp=Z,12nm,0.8s **Curacav**	**39.37**	**288**	P	**P**	**00 52 39.0**	**-2.5**
MT02				IAmb	IAmb	00 52 45.8	
CO02	comp=Z,12nm,1.1s **Combarbal**	**40.94**	**290**	P	**P**	**00 52 53.9**	**-0.7**
CO02				IAmb	IAmb	00 53 08.0	
CO03	comp=Z,20nm,1.2s **El Pedregal**	**41.07**	**291**	P	**P**	**00 52 54.6**	**-1.1**
CO03				IAmb	IAmb	00 53 06.2	
AC02	comp=Z,14nm,1.4s **Maricunga**	**43.59**	**296**	P	**P**	**00 53 16.2**	**-0.5**
VNDA	**Vanda**	**45.14**	**182**	P	**P**	**00 53 29.3**	**+1.4**
VNDA	comp=Z,2.0nm,0.7s,baz=187,slow=6.1,SNR=5.9 **Vanda**	**45.14**	**182**	P	**P**	**00 53 30.2**	**+2.4**
GO02	**Mina Guanaco**	**45.22**	**296**	P	**P**	**00 53 28.3**	**-1.2**
BDFB	**Brasilia**	**45.24**	**328**	P	**P**	**00 53 30.3**	**+0.8**
BDFB	comp=Z,2.9nm,0.5s,baz=133,slow=5.7,SNR=6.9 **Brasilia**	**45.24**	**328**	P	**P**	**00 53 30.7**	**+1.2**
BDFB				IAmb	IAmb	00 53 34.6	
BOSA	comp=Z,19nm,1.5s **Boshof**	**45.25**	**72**	P	**P**	**00 53 28.6**	**-0.9**
BOSA	comp=Z,3.3nm,0.9s,baz=219,slow=6.5,SNR=4.3			LR	LR	01 08 26.8	
BOSA	comp=Z,72nm,18.0s,baz=196,slow=31 **Boshof**	**45.25**	**72**	P	**P**	**00 53 29.9**	**+0.4**
BOSA				IAmb	IAmb	00 53 36.6	
PB14	comp=Z,6.4nm,1.1s **IPOC Station P**	**46.06**	**296**	P	**P**	**00 53 36.9**	**+0.7**
LVC	**Limon Verde**	**47.06**	**299**	P	**P**	**00 53 43.7**	**-0.4**
LVC	comp=Z,1.7nm,0.3s,baz=134,slow=8.6,SNR=7.9 **Limon Verde**	**47.06**	**299**	P	**P**	**00 53 43.8**	**-0.2**
LVC				IAmb	IAmb	00 53 46.5	
PB07	comp=Z,12nm,1.4s **IPOC Station P**	**48.28**	**299**	P	**P**	**00 53 52.5**	**-0.7**
PB01	**IPOC Station P**	**48.67**	**299**	P	**P**	**00 53 55.4**	**-0.9**
PB08	**IPOC Station P**	**49.30**	**300**	P	**P**	**00 54 01.2**	**-0.2**
PB08				IAmb	IAmb	00 54 01.9	
SIV	comp=Z,5.3nm,0.9s **San Ignacio**	**49.45**	**312**	P	**P**	**00 54 01.7**	**-0.5**
PB11	comp=Z,8.0nm,0.5s,baz=173,slow=7.4,SNR=62 **IPOC Station P**	**49.86**	**300**	P	**P**	**00 54 04.7**	**-0.7**
PSGCX	**Pisagua**	**50.22**	**300**	P	**P**	**00 54 07.5**	**-0.6**
PSGCX				IAmb	IAmb	00 54 07.7	
MNMC	comp=Z,6.8nm,0.8s **Minye Minye**	**50.38**	**301**	P	**P**	**00 54 09.2**	**-0.3**
PB16	**IPOC Station P**	**51.03**	**301**	P	**P**	**00 54 14.5**	**-0.2**
PB16				IAmb	IAmb	00 54 30.9	
LPAZ	comp=Z,3.0nm,0.6s **La Paz**	**52.19**	**304**	P	**P**	**00 54 23.4**	**0.0**
	comp=Z,4.5nm,0.5s,baz=169,slow=6.2,SNR=26						
LPAZ	**La Paz**	**52.19**	**304**	P	**P**	**00 54 23.7**	**+0.3**
LPAZ	comp=Z,6.3nm,0.8s			IAmb	IAmb	00 54 25.3	
SAML	**Samuel**	**56.68**	**313**		**P**	**00 54 55.5**	**+0.1**
NNA	**Nana**	**59.99**	**297**	P	**P**	**00 55 18.1**	**-0.4**
PTGA	comp=Z,7.4nm,0.7s,baz=141,slow=4.5,SNR=2.6 **Pitinga**	**63.07**	**320**	P	**P**	**00 55 38.3**	**-0.9**
PTGA	comp=Z,1.7nm,0.3s,baz=194,slow=4.8,SNR=5.6			IAmb	IAmb	00 55 44.9	
PTGA	comp=Z,2.8nm,0.8s **Pitinga**	**63.07**	**320**	P	**P**	**00 55 37.6**	**-1.6**
TOA0	**Torodi Ar. Sit**	**73.81**	**27**	P	**P**	**00 56 46.6**	**+0.3**
TOA0	comp=Z,5.3nm,0.8s			IAmb	IAmb	00 56 52.4	
TORD	**Torodi Ar. Bea**	**73.81**	**27**	P	**P**	**00 56 46.4**	**+0.2**
TORD	comp=Z,3.5nm,0.8s,baz=197,slow=6.3,SNR=17 **Torodi Ar. Bea**	**73.81**	**27**	P	**P**	**00 56 46.6**	**+0.4**
MTO3	**Montecristo**	**88.94**	**299**	P	**P**	**00 58 06.0**	**-0.6**
ASAR	**Alice Springs**	**97.20**	**161**	P	**P**	**00 58 44.4**	**-0.1**
WRA	comp=Z,1.1nm,0.7s,baz=181,slow=4.2,SNR=9.6 **Warramunga Arr**	**100.92**	**160**	P	**Pdif**	**00 59 01.8**	**+0.6**
FINES	comp=Z,0.3nm,0.6s,baz=192,slow=7.7,SNR=1.4 **FINESS Array B**	**125.16**	**27**	PKP	**PKPdf**	**01 04 10.7**	**0.0**
FINES	comp=Z,1.1nm,0.7s,baz=173,slow=3.6,SNR=4.9 **FINESS Array B**	**125.16**	**27**		**PKPdf**	**01 04 10.4**	**-0.3**
ARCES	**ARCESS Array B**	**131.89**	**21**	PKP	**PKPdf**	**01 04 22.9**	**-0.4**
MKAR	comp=Z,2.5nm,0.9s,baz=222,slow=1.2,SNR=1.8 **Makanchi Array**	**136.24**	**71**	PKP	**PKPdf**	**01 04 32.6**	**+0.4**
YKA	comp=Z,0.5nm,1.0s,baz=224,slow=3.3,SNR=2.6 **Yellowknife Ar**	**138.06**	**316**	PKP	**PKPdf**	**01 04 35.3**	**+0.3**
ZALV	comp=Z,1.5nm,0.8s,baz=129,slow=2.7,SNR=12 **Zalesovo Beam**	**141.96**	**64**	PKP	**PKiKP**	**01 04 44.1**	**-1.1**
INK	comp=Z,0.3nm,0.4s,baz=255,slow=5.7,SNR=1.8 **Inuvik**	**147.70**	**319**	PKPbc	**PKPbc**	**01 04 54.5**	**-0.1**
INK	comp=Z,3.8nm,1.0s,baz=100,slow=3.7,SNR=3.9 **Inuvik**	**147.70**	**319**		**PKPbc**	**01 04 55.0**	**+0.3**
BCAR	**Beaver Creek A**	**149.34**	**307**		**PKiKP**	**01 04 59.6**	**-0.7**
SONM	**Songino Array**	**149.63**	**87**	PKPbc	**PKPbc**	**01 05 00.1**	**-0.3**
SONM	comp=Z,1.3nm,0.6s,baz=210,slow=3.4,SNR=11 **Songino Array**	**149.63**	**87**		**PKPbc**	**01 05 00.7**	**+0.3**
SCRK	**Sand Creek**	**150.56**	**308**		**PKiKP**	**01 05 02.8**	**-0.1**
BMAR	**Burnt Mountain**	**151.57**	**315**	PKPbc	**PKiKP**	**01 05 05.4**	**+0.6**
IL31		**151.98**	**309**		**PKiKP**	**01 05 05.8**	**+0.3**
ILAR	**Eielson Array**	**151.98**	**309**	PKPbc	**PKiKP**	**01 05 05.3**	**-0.3**
ILAR	comp=Z,4.6nm,0.9s,baz=129,slow=2.0,SNR=23 **Eielson Array**	**151.98**	**309**	PKPbc	**PKiKP**	**01 05 05.7**	**0.0**
KDAK	**Kodiak Island**	**152.51**	**293**	PKPbc	**PKiKP**	**01 05 07.1**	**+0.2**
TOLK	comp=Z,16nm,1.1s,baz=114,slow=0.9,SNR=4.6 **Toolik Lake Re**	**153.57**	**317**		**PKiKP**	**01 05 09.6**	**+0.7**
BPAW	**Bear Paw Mtn.**	**153.58**	**307**		**PKiKP**	**01 05 09.5**	**+0.5**

*IDC **08** 00:54:42.1±1.9,19°.82S×70°.80W,h0km,mb4.0/2, mb1 3.9/4,mb1mx3.6/31,mbtmp3.9/4,ML3.6/2,MS2.9/5, Ms1 2.9/5,ms1mx2.7/25,Error ellipse: s-maj=49.0km s-min=17.0km az=70.0*
*GUC **08** 00:54:45.4±0.7,19°.89S×70°.97W,h32km±3km,ML3.9*
*NEIC **08** 00:54:45.1±1.5,19°.95S±0°.03×71°.01W±0°.09,h31km±8km, Error ellipse: s-maj=12.0km s-min=4.9km az=91.0*
ISC 08 00:54:44.5±1.9,19°.91S±0°.04×70°.95W±0°.07,h24km±13km, n53,σ0§93/56,mb4.0/3,2C,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.84**	**69**	*eP*	**Pn**	**00 54 59.7**	**-1.2**
PSGC				*i* S	**Sn**	**00 55 10.9**	**-1.7**
PSGCX	**Pisagua**	**0.84**	**69**	Pn	**Pn**	**00 54 59.6**	**-1.3**
PSGCX				Sn	**Sn**	**00 55 10.8**	**-1.7**
TA01	**Diego Aracena**	**0.98**	**132**	*eP*	**Pn**	**00 55 02.5**	**-0.2**
TA01				*i* S	**Sn**	**00 55 15.4**	**-0.3**
TA01	comp=N,6μm,0.3s			IAML		00 55 16.6	
TA01	**Diego Aracena**	**0.98**	**132**		**Pn**	**00 55 02.4**	**-0.2**
TA01				Sn	**Sn**	**00 55 15.2**	**-0.5**
PB11	**IPOC Station P**	**1.23**	**83**		**Pn**	**00 55 06.3**	**0.0**
PB11				Sn	**Sn**	**00 55 21.5**	**-0.8**
MNMC	**Minye Minye**	**1.50**	**59**	*eP*	**Pn**	**00 55 10.7**	**+0.6**
MNMC				*i* S	**Sb**	**00 55 30.6**	**+0.2**
MNMC	comp=E,4μm,0.5s			IAML		00 55 35.9	
MNMC	**Minye Minye**	**1.50**	**59**		**Pn**	**00 55 11.1**	**+1.0**
MNMC					**Sb**	**00 55 31.0**	**+0.6**
AP01	**Chacalluta**	**1.63**	**21**	*eP*	**Pn**	**00 55 12.2**	**+0.5**
AP01	**Chacalluta**	**1.63**	**21**	Pn	**Pn**	**00 55 12.9**	**+1.2**
PB08	**IPOC Station P**	**1.71**	**98**	*eP*	**Pn**	**00 55 13.7**	**+0.6**
PB08				*i* S	**Sb**	**00 55 36.4**	**-0.2**
PB08	comp=N,2μm,0.3s			IAML		00 55 38.9	
PB08	**IPOC Station P**	**1.71**	**98**	Pn	**Pn**	**00 55 13.6**	**+0.6**
PB01	**IPOC Station P**	**1.78**	**130**	*eP*	**Pn**	**00 55 14.4**	**+0.6**
PB01				IAML		00 55 42.5	
PB01	comp=N,2μm,0.4s **IPOC Station P**	**1.78**	**130**	Pn	**Pn**	**00 55 14.4**	**+0.6**
PB07	**IPOC Station P**	**2.07**	**151**	*i* P	**Pn**	**00 55 18.1**	**+0.3**
PB07				*i* S	**Sn**	**00 55 41.4**	**-1.6**
PB07	comp=E,1μm,0.5s			IAML		00 55 57.4	
PB07	**IPOC Station P**	**2.07**	**151**		**Pn**	**00 55 17.9**	**0.0**
PB16	**IPOC Station P**	**2.08**	**41**	*iP*	**Pn**	**00 55 19.6**	**+1.2**
PB16				*i* S	**Sb**	**00 55 46.4**	**-1.0**
PB16	comp=N,755nm,0.8s			IAML		00 55 56.8	
PB16	**IPOC Station P**	**2.08**	**41**		**Pn**	**00 55 19.6**	**+1.2**
PB03	**IPOC Station P**	**2.41**	**152**	*eP*	**Pn**	**00 55 22.7**	**+0.2**
PB03				*i* S	**Sn**	**00 55 50.6**	**-0.7**
PB03	comp=N,593nm,0.5s			IAML		00 56 10.8	
PB09	**IPOC Station P**	**2.47**	**140**	*iP*	**Pn**	**00 55 25.0**	**+1.6**
PB09				*i* S	**Sn**	**00 55 54.2**	**+1.3**
PB09	comp=N,1μm,0.5s			IAML		00 56 09.4	
PB09	**IPOC Station P**	**2.47**	**140**	Pn	**Pn**	**00 55 24.9**	**+1.6**
PB04	**IPOC Station P**	**2.53**	**163**	*i* P	**Pn**	**00 55 24.0**	**-0.2**
PB04	comp=E,702nm,0.4s			IAML		00 56 14.8	
PB04	**IPOC Station P**	**2.53**	**163**		**Pn**	**00 55 24.1**	**-0.1**
PB05	**IPOC Station P**	**3.01**	**167**	*i* P	**Pn**	**00 55 30.3**	**-0.6**
PB05	comp=E,256nm,0.6s			IAML		00 56 28.2	
PB06	**IPOC Station P**	**3.07**	**155**	*eP*	**Pn**	**00 55 31.6**	**-0.1**
PB06	comp=E,422nm,0.5s			IAML		00 56 28.7	
PB06	**IPOC Station P**	**3.07**	**155**	Pn	**Pn**	**00 55 32.0**	**+0.4**
LVC	**Limon Verde**	**3.29**	**145**	Pn	**Pn**	**00 55 35.9**	**+1.0**
LVC	comp=E,4.7nm,0.3s,baz=321,slow=12,SNR=50			Pg	**Pb**	**00 55 42.8**	**+0.3**
LVC	comp=E,22nm,0.3s,baz=326,slow=11,SNR=28			Sn	**Sn**	**00 56 15.2**	**+1.7**
LVC	comp=E,21nm,0.3s,baz=140,slow=21,SNR=7.4			Lg	Lg	00 56 26.2	
LVC	comp=E,31nm,0.3s,baz=54,slow=19,SNR=9.8			LR	LR	00 56 33.4	
LVC	comp=E,37nm,19.9s,baz=309,slow=34 **Limon Verde**	**3.29**	**145**	Pn	**Pn**	**00 55 36.7**	**+1.8**
PB15	**IPOC Station P**	**3.56**	**157**		**Pn**	**00 55 38.2**	**-0.3**
PB10	**IPOC Station P**	**3.61**	**174**	*i* P	**Pn**	**00 55 38.1**	**-0.8**
PB10	**IPOC Station P**	**3.61**	**174**	Pn	**Pn**	**00 55 38.0**	**-0.8**
LPAZ	**La Paz**	**4.49**	**37**	Pn	Pn	00 55 57.6	+6.0
LPAZ	comp=E,1.2nm,0.3s,baz=224,slow=6.4,SNR=15			LR	LR	00 57 45.3	
PB14	comp=E,90nm,21.5s,baz=269,slow=42 **IPOC Station P**	**4.72**	**174**		**Pn**	**00 55 52.9**	**-1.6**
GO02	**Mina Guanaco**	**5.38**	**167**	Pn	**Pn**	**00 56 03.3**	**-0.2**
AC01	**Pan de Azucar**	**6.22**	**177**	Pn	**Pn**	**00 56 14.0**	**-0.9**
AC02	**Maricunga**	**7.10**	**167**	Pn	**Pn**	**00 56 27.6**	**+0.3**
SIV	**San Ignacio**	**10.18**	**69**	Pn	**Pn**	**00 57 08.0**	**-1.1**
SIV	comp=E,0.8nm,0.3s,baz=256,slow=9.9,SNR=8.4			LR	LR	01 01 38.7	
H03N1	comp=E,107nm,18.1s,baz=240,slow=42 **Juan Fernandez**	**15.23**	**206**	T	T	01 13 59.3	
H03N2	baz=32,slow=72,SNR=94 **Juan Fernandez**	**15.24**	**206**	T	T	01 14 04.2	
H03N3	baz=32,slow=72,SNR=53 **Juan Fernandez**	**15.25**	**206**	T	T	01 14 00.7	
PTGA	baz=32,slow=72,SNR=54 **Pitinga**	**21.88**	**31**	P	**P**	**00 59 35.1**	**-0.7**
PTGA	comp=E,1.9nm,0.3s,baz=334,slow=23,SNR=4.8			LR	LR	01 08 55.9	
BDFB	comp=E,47nm,19.2s,baz=196,slow=39 **Brasilia**	**22.25**	**83**	LR	LR	01 09 20.5	
TOA0	comp=E,84nm,18.2s,baz=119,slow=40 **Torodi Ar. Sit**	**78.64**	**72**	P	**P**	**01 06 45.0**	**0.0**
TOA0				IAmb	IAmb	01 06 45.3	
TORD	comp=Z,1.4nm,0.8s **Torodi Ar. Bea**	**78.64**	**72**	P	**P**	**01 06 44.8**	**-0.2**
TORD	comp=Z,0.8nm,0.6s,baz=254,slow=5.0,SNR=5.4 **Torodi Ar. Bea**	**78.64**	**72**	P	**P**	**01 06 44.9**	**-0.2**
TORD				IAmb	IAmb	01 06 45.3	
H11S2	comp=Z,0.9nm,0.8s **WAKE ISLAND Hyl**	**25.76**	**279**	T	T	03 33 08.3	
H11S1	baz=101,slow=74,SNR=41 **WAKE ISLAND Hyl**	**25.77**	**279**	T	T	03 33 06.5	
H11S3	baz=101,slow=74,SNR=29 **WAKE ISLAND Hyl**	**25.78**	**279**	T	T	03 33 10.3	
H11N3	baz=101,slow=74,SNR=26 **WAKE ISLAND Hyl**	**25.81**	**280**	T	T	03 33 14.7	
H11N2	baz=103,slow=74 **WAKE ISLAND Hyl**	**25.82**	**280**	T	T	03 33 11.2	
H11N1	baz=103,slow=74 **WAKE ISLAND Hyl**	**25.83**	**280**	T	T	03 32 33.7	
MKAR	baz=103 **Makanchi Array**	**145.41**	**33**	PKPbc	**PKPab**	**01 14 21.9**	**+1.3**
MKAR	comp=Z,0.6nm,0.6s,baz=328,slow=4.7,SNR=7.7 **Makanchi Array**	**145.41**	**33**		**PKPab**	**01 14 21.0**	**+0.4**
SONM	**Songino Array**	**152.06**	**4**	PKPbc	**PKiKP**	**01 14 38.5**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=354,slow=1.4,SNR=3.8						

*INET **08** 01:32:52.5,12°.73N×88°.73W,h30km,MW3.3*
*SNET **08** 01:32:53.1±0.9,12°.82N×88°.72W,h52km±12km,ML3.9*
*UCR **08** 01:32:53.2±0.9,12°.82N×88°.72W,h51km±12km,ML3.9*
ISC 08 01:32:52.5±2.6,12°.7N±0°.1×88°.72W±0°.04,h34km±3km,n41, σ0§38/65,8C-8D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.62**	**13**	*eP*	**Pb**	**01 33 04.9**	**-0.1**
ALJI				*eS*	**Sb**	**01 33 14.3**	**+0.7**
ALJI	comp=Z,3μm,0.2s			IAML		01 33 15.2	
ALJI	**Alcalda de J**	**0.62**	**13**	*eP*	**Pb**	**01 33 04.9**	**-0.1**
ALJI				*eS*	**Sb**	**01 33 14.3**	**+0.7**
ALJI	comp=Z,3μm,0.2s			IAML		01 33 15.2	
COEB	**Comit de Eme**	**0.79**	**13**	*eP*	**Pn**	**01 33 07.0**	**-0.3**
COEB				*eS*	**Sb**	**01 33 18.1**	**-0.4**
COEB	comp=Z,2μm,0.3s			IAML		01 33 23.6	
COEB	**Comit de Eme**	**0.79**	**13**	*eP*	**Pn**	**01 33 07.0**	**-0.3**
COEB				*eS*	**Sb**	**01 33 18.1**	**-0.4**
COEB	comp=Z,2μm,0.3s			IAML		01 33 23.6	
TECA	**Tecapa**	**0.79**	**15**	*eP*	**Pn**	**01 33 07.4**	**-0.1**
TECA	**Tecapa**	**0.79**	**15**	*eP*	**Pn**	**01 33 07.4**	**-0.1**
LCY	**Lacayo**	**0.81**	**31**	*eP*	**Pn**	**01 33 07.5**	**0.0**
LCY	**Lacayo**	**0.81**	**31**	*eP*	**Pn**	**01 33 07.5**	**0.0**
PACA	**Pacayal**	**0.83**	**27**	*eP*	**Pn**	**01 33 08.2**	**+0.3**
PACA				*eS*	**Sb**	**01 33 19.5**	**-0.2**
PACA	**Pacayal**	**0.83**	**27**	*eP*	**Pn**	**01 33 08.2**	**+0.3**
PACA				*eS*	**Sb**	**01 33 19.5**	**-0.2**
COEG	**Centro de Oper**	**0.90**	**350**	*eP*	**Pn**	**01 33 08.6**	**-0.3**
COEG				*eS*	**Sn**	**01 33 20.6**	**-0.2**
COEG	comp=Z,4μm,0.3s			IAML		01 33 25.0	
COEG	**Centro de Oper**	**0.90**	**350**	*eP*	**Pn**	**01 33 08.6**	**-0.3**
COEG				*eS*	**Sn**	**01 33 20.6**	**-0.2**
COEG	comp=Z,4μm,0.3s			IAML		01 33 25.0	
LCND	**La Caada**	**0.99**	**54**	*eP*	**Pn**	**01 33 09.7**	**-0.3**
LCND				*eS*	**Sn**	**01 33 23.1**	**+0.2**
LCND	comp=Z,4μm,0.3s			IAML		01 33 25.4	
LCND	**La Caada**	**0.99**	**54**	*eP*	**Pn**	**01 33 09.7**	**-0.3**
LCND				*eS*	**Sn**	**01 33 23.1**	**+0.2**
LCND	comp=Z,4μm,0.3s			IAML		01 33 25.4	
PAVA	**Las Pavas**	**1.01**	**348**	*eP*	**Pn**	**01 33 10.2**	**-0.1**
PAVA				*eS*	**Sn**	**01 33 23.6**	**+0.3**
PAVA	**Las Pavas**	**1.01**	**348**	*eP*	**Pn**	**01 33 10.2**	**-0.1**
PAVA				*eS*	**Sn**	**01 33 23.6**	**+0.3**
CNCH	**Conchagua**	**1.02**	**57**	*eP*	**Pn**	**01 33 10.5**	**0.0**
CNCH	**Conchagua**	**1.02**	**57**	*eP*	**Pn**	**01 33 10.5**	**0.0**
LBRS	**Las Brisas**	**1.06**	**343**	*eP*	**Pn**	**01 33 11.1**	**+0.1**
LBRS	**Las Brisas**	**1.06**	**343**	*eP*	**Pn**	**01 33 11.1**	**+0.1**
BOQS	**Boqueron**	**1.14**	**331**	*eP*	**Pn**	**01 33 12.4**	**+0.1**
BOQS				*eS*	**Sn**	**01 33 26.8**	**-0.2**
BOQS	**Boqueron**	**1.14**	**331**	*eP*	**Pn**	**01 33 12.4**	**+0.1**
BOQS				*eS*	**Sn**	**01 33 26.8**	**-0.2**
JAYA	**Jayaque - finc**	**1.17**	**322**	*eP*	**Pn**	**01 33 12.0**	**-0.5**
JAYA				*eS*	**Sn**	**01 33 26.5**	**-0.9**
JAYA	comp=Z,4μm,0.1s			IAML		01 33 29.3	
JAYA	**Jayaque - finc**	**1.17**	**322**	*eP*	**Pn**	**01 33 12.0**	**-0.5**
JAYA				*eS*	**Sn**	**01 33 26.5**	**-0.9**
JAYA	comp=Z,4μm,0.1s			IAML		01 33 29.3	
TACO	**Tacachico**	**1.39**	**334**	*eP*	**Pn**	**01 33 15.5**	**0.0**
TACO				*eS*	**Sn**	**01 33 32.6**	**0.0**
TACO	**Tacachico**	**1.39**	**334**	*eP*	**Pn**	**01 33 15.5**	**0.0**
TACO				*eS*	**Sn**	**01 33 32.6**	**0.0**
CEVE	**Cerro Verde**	**1.41**	**321**	*eP*	**Pn**	**01 33 16.4**	**+0.4**
CEVE				*eS*	**Sn**	**01 33 34.3**	**+0.8**
CEVE	**Cerro Verde**	**1.41**	**321**	*eP*	**Pn**	**01 33 16.4**	**+0.4**
CEVE				*eS*	**Sn**	**01 33 34.3**	**+0.8**
SBLS	**San Blas**	**1.42**	**322**	*eP*	**Pn**	**01 33 16.5**	**+0.5**
SBLS				*eS*	**Sn**	**01 33 33.8**	**+0.2**
SBLS	**San Blas**	**1.42**	**322**	*eP*	**Pn**	**01 33 16.5**	**+0.5**
SBLS				*eS*	**Sn**	**01 33 33.8**	**+0.2**
SNJE	**San Jose**	**1.43**	**

SHL eS 01 45 37.0
SHL IAML 01 45 40.9
comp=N,648nm,0.4s
SHL IAML 01 45 46.0
comp=E,432nm,0.3s
SHL Shillong 4.29 29 Pn **Pn 01 44 50.9 -2.0**
GUWA GUWAHATI 4.77 24 *e*P **Pn 01 44 57.1 -2.2**
GUWA eS **Sn 01 45 49.9 -3.4**
GUWA IAML 01 45 52.0
comp=N,399nm,0.2s
GUWA IAML 01 45 53.2
comp=E,299nm,0.4s
ODAN Odare 5.40 339 *e*Pn **Pn 01 45 09.0 +0.8**
ODAN eSn **Sn 01 46 07.4 -1.9**
GTK Tadong 5.55 351 *e*P **Pn 01 45 11.2 +1.0**
GTK eS **Sn 01 46 11.6 -1.2**
GTK IAML 01 46 14.5
comp=E,701nm,0.2s
GTK IAML 01 46 15.2
comp=N,604nm,0.5s
GTK AMP 01 46 15.7
comp=N,10µm,0.6s
KOHI KOHIMA 5.69 46 *e*P **Pn 01 45 11.6 -0.5**
KOHI eS **Sn 01 46 10.1 -6.2**
KOHI IAML 01 46 18.2
comp=N,433nm,0.5s
KOHI IAML 01 46 18.4
comp=E,661nm,0.5s
TAPN Taplejung 5.76 343 *e*Pn **Pn 01 45 13.6 +0.3**
TAPN eSn **Sn 01 46 15.5 -2.8**
comp=E,972nm,0.6s
RAMN Ramite 5.79 333 *e*Pn **Pn 01 45 14.7 +1.2**
RAMN eSn **Sn 01 46 16.5 -2.3**
comp=E,455nm,0.4s
MOKO MOKOCHONG 6.37 44 *e*P **Pn 01 45 22.7 +1.3**
MOKO eS **Sn 01 46 28.1 -4.9**
MOKO IAML 01 46 32.7
comp=N,1µm,0.5s
MOKO IAML 01 46 33.3
comp=E,1µm,0.2s
JORH JORHAT 6.50 40 *e*P **Pn 01 45 24.9 +1.8**
JORH eS **Sn 01 46 31.0 -5.1**
JORH IAML 01 46 32.5
comp=E,626nm,0.3s
JORH IAML 01 46 32.9
comp=N,807nm,0.3s
JIRN Jiri 6.58 333 *e*Pn **Pn 01 45 25.5 +1.0**
JIRN eSn **Sn 01 46 35.4 -3.1**
PKI Pulchoki 6.87 327 *e*Pn **Pn 01 45 29.3 +0.9**
PKI eSn **Sn 01 46 42.5 -3.0**
comp=N,341nm,0.5s
PKIN Phulchoki 6.88 327 *e*Pn **Pn 01 45 29.3 +0.8**
PKIN eSn **Sn 01 46 42.7 -3.0**
GUN Gumba 6.93 332 *e*Pn **Pn 01 45 30.3 +1.0**
DMN Daman 7.05 326 *e*Pn **Pn 01 45 32.2 +1.3**
DMN eSn **Sn 01 46 47.6 -2.4**
comp=N,451nm,0.5s
KKN Kakani 7.11 328 *e*Pn **Pn 01 45 32.5 +0.8**
KKN eSn **Sn 01 46 47.8 -3.6**
comp=N,75nm,0.3s
GKN Gorkha 7.62 325 *e*Pn **Pn 01 45 39.4 +0.9**
GKN eSn **Sn 01 47 00.3 -3.4**
LSA Lhasa 7.98 10 P **Pn 01 45 44.5 +0.7**
LSA Lhasa 7.98 10 Pn **Pn 01 45 44.5 +0.7**
KOLN Koldanda 8.04 319 *e*Pn **Pn 01 45 45.3 +1.0**
KOLN eSn **Sn 01 47 09.4 -4.7**
comp=N,281nm,0.5s
PYUN Piuthan 8.65 318 *e*Pn **Pn 01 45 52.9 +0.2**
PYUN eSn **Sn 01 47 24.4 -4.8**
comp=N,268nm,0.5s
MHMT Maesarieng 8.65 113 P **Pn 01 45 52.1 -0.6**
comp=N,1.1nmcomp=N,24µmcomp=N,165nm,0.7s
CHTO Chiang Mai 9.29 107 P **Pn 01 46 01.4 0.0**
CHTO Chiang Mai 9.29 107 Pn **Pn 01 46 01.4 0.0**
CM33 Chiang Mai Arr 9.29 107 P **Pn 01 46 01.0 -0.4**
CMMT Chiang Mai 9.29 107 P **Pn 01 46 00.6 -0.8**
comp=N,685nmcomp=N,74nm,0.7s
CM13 Chiang Mai Arr 9.40 109 P **Pn 01 46 03.4 +0.5**
comp=N,694nmcomp=N,47nm,0.6s
CM15 Chiang Mai Arr 9.40 109 P **Pn 01 46 04.0 +1.0**
comp=N,42nm,0.6s
CM31 Chiang Mai Arr 9.42 109 P **Pn 01 46 04.4 +1.2**
comp=N,20µmcomp=N,2µm,0.5s
CM31 Chiang Mai Arr 9.42 109 Pn **Pn 01 46 03.4 +0.3**
CMAR Chiang Mai Arr 9.42 109 Pn **Pn 01 46 03.2 +0.1**
comp=N,8.2nm,0.3s,baz=290,slow=14,SNR=77
CMAR Sn **Sn 01 47 41.6 -6.2**
comp=N,1.4nm,0.3s,baz=284,slow=18,SNR=1.7
CMAR LR LR 01 50 32.1
comp=N,172nm,20.2s,baz=344,slow=43
CMAR Chiang Mai Arr 9.42 109 Pn **Pn 01 46 03.7 +0.5**
CM02 Chiang Mai Arr 9.43 109 P **Pn 01 46 03.0 -0.3**
comp=N,515nmcomp=N,40nm,0.8s
CM05 Chiang Mai Arr 9.44 109 P **Pn 01 46 03.9 +0.4**
comp=N,407nmcomp=N,42nm,0.7s
CM01 Chiang Mai Arr 9.44 109 P **Pn 01 46 04.0 +0.5**
comp=N,407nmcomp=N,48nm,0.8s
CM34 Chiang Mai Arr 9.46 106 P **Pn 01 46 04.0 +0.3**
CM09 Chiang Mai Arr 9.46 109 P **Pn 01 46 04.7 +0.9**
comp=N,566nmcomp=N,64nm,0.7s
CM04 Chiang Mai Arr 9.47 109 P **Pn 01 46 04.0 +0.1**
comp=N,457nmcomp=N,54nm,0.7s
CM35 Chiang Mai Arr 9.52 107 P **Pn 01 46 04.0 -0.6**
CM36 Chiang Mai Arr 9.53 108 P **Pn 01 46 04.0 -0.7**
LAMP Lampang 10.00 107 P **Pn 01 46 12.0 +0.9**
comp=N,2µmcomp=N,145nm,0.5s
UMPA Umpang Tak 10.41 121 P **Pn 01 46 18.0 +1.3**
comp=N,4µmcomp=N,116nm,0.6s
SUKH Sukhothai 10.41 113 P **Pn 01 46 17.0 +0.2**
comp=N,70nm,0.7s
PBA Port Blair 10.55 163 *e*P Pn 01 46 17.6 -1.0
PBA eS Sn 01 48 06.7 -8.9
PBA Port Blair 10.55 163 Pn Pn 01 46 18.6 -0.1
PHIT Phitsanulok 11.21 112 P **Pn 01 46 28.9 +1.2**
comp=N,2µmcomp=N,170nm,0.8s
UTHA Uthaitani 11.23 122 P **Pn 01 46 28.0 0.0**
comp=N,2µmcomp=N,213nm,0.6s
HYB Hyderabad 11.27 249 *i* P **Pn 01 46 26.0 -2.5**
HYB eS **Sn 01 48 33.0 -0.3**
BHPL Bhopal 11.32 279 *e*P **Pn 01 46 27.1 -2.1**
BHPL IAmb IAmb 01 46 28.7
comp=Z,229nm,0.8s
BHPL eS Sn 01 48 24.1 -10
SRDT SRDT 11.72 128 P **Pn 01 46 34.8 +0.1**
comp=Z,3µmcomp=Z,32nm,0.6s
KMI Kunming 12.53 72 ⇑P **Pn 01 46 50.5 +4.6**
KMI sP P 01 46 55.4 -1.7
KMI pmax pmax
comp=Z,14nm,0.7s
KMI LR LR
comp=Z,270nm,9.3s
KMI LR LR
comp=Z,220nm,4.5s
PHET Kaeng Krachan 13.06 131 P **Pn 01 46 54.9 +1.9**
comp=Z,811nmcomp=Z,75nm,0.6s
CHAI Chaiyaphum 13.14 114 P **Pn 01 46 57.2 +3.1**
comp=Z,26nm,0.9s
NONG Nongkai 13.30 104 P **Pn 01 46 57.3 +1.1**
comp=Z,36nm,1.3s
DDI Dehra Dun 13.37 312 *e*P **Pn 01 46 56.0 -1.2**
DDI eS Sn 01 49 14.3 -10
DDI IAML 01 49 16.2
comp=E,321nm,0.4s
DDI IAML 01 49 17.6
comp=N,268nm,0.4s
KHON Khomkaen 13.66 111 P **P 01 47 07.1 -2.4**
SRAK Srakaew 14.17 121 P **P 01 47 17.3 +2.1**
CD2 Chengdu 15.60 52⇓ *i*P **Pn 01 47 25.3 -1.9**
CD2 pmax pmax
comp=N,20nm,0.6s
PALK Pallekele 16.80 212 Pn **Pn 01 47 35.5 -7.1**
comp=N,0.3nm,0.3s,baz=126,slow=16,SNR=1.4
PALK Sn Sn 01 50 29.5 -19
comp=N,3.1nm,0.3s,baz=43,slow=21,SNR=13
PALK LR LR 01 54 26.9
comp=N,108nm,19.7s,baz=138,slow=38
PALK Pallekele 16.80 212⇓ *e*P **Pn 01 47 41.5 -1.1**
PALK pmax pmax
comp=Z,21nm,1.1s
NIL Nilore 18.62 313 P **Pn 01 48 04.8 -0.1**
NIL pmax pmax
comp=Z,18nm,0.6s
NIL Nilore 18.62 313 P **Pn 01 48 04.8 -0.1**
NIL IAmb IAmb 01 48 06.0
comp=Z,18nm,0.7s

LZH Lanzhou 18.89 38 *e*P **P 01 48 07.8 +0.2**
LZH pP Pn 01 48 10.3 +1.9
LZH pmax pmax
comp=Z,20nm,1.1s
THW Thamme Wali 19.22 308 P **P 01 48 10.0 -1.1**
GTA Gaotai 19.60 24 ⇑P **P 01 48 15.0 -0.3**
GTA S **S 01 51 49.7 -5.0**
GTA pmax pmax
comp=Z,8.0nm,0.7s
GTA pmax pmax
comp=Z,110nm,5.3s
GTA LR LR
comp=Z,120nm,16.0s
GTA LR LR
comp=Z,110nm,14.9s
CEP Cherat 19.64 311 P **P 01 48 15.6 -0.1**
ENH Enshi 19.76 61 P **P 01 48 16.2 -0.7**
ENH IAmb IAmb 01 48 34.3
comp=Z,29nm,0.8s
XAN Xi'an 20.95 50 P **P 01 48 29.8 -0.1**
XAN pP pP 01 48 39.3 +0.2
XAN sP sP 01 48 43.9 +0.4
XAN pmax pmax
comp=Z,36nm,1.1s
XAN pmax pmax
comp=Z,270nm,5.8s
XAN Xi'an 20.95 50 P **P 01 48 29.7 -0.1**
XAN pmax pmax
comp=Z,35nm,1.1s
XAN Xi'an 20.95 50 P **P 01 48 29.7 -0.1**
XAN IAmb IAmb 01 48 31.0
comp=Z,35nm,1.1s
PSI Prapat 20.97 153 P Pn 01 48 31.8 -1.2
comp=Z,1.5nm,0.3s,baz=0.3,slow=16,SNR=1.8
RPSI Rantau Prapat 21.07 153 P **P 01 48 31.8 +0.6**
KSH Kashi 21.12 330 P **P 01 48 34.3 +2.5**
KSH sP pP 01 48 41.4 +0.4
KSH S **S 01 52 20.9 -4.1**
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH pmax pmax
comp=Z,190nm,5.2s
WMQ Urumqi 22.00 356 P **P 01 48 42.5 +1.4**
WMQ pP pP 01 48 44.7 -5.7
WMQ sP sP 01 48 55.0 +0.2
WMQ pmax pmax
comp=Z,91nm,0.9s
WMQ pmax pmax
comp=Z,160nm,4.3s
WMQ Urumqi 22.00 356 P **P 01 48 42.0 +1.0**
WMQ pmax pmax
comp=Z,47nm,0.7s
WMQ Urumqi 22.00 356 P **P 01 48 42.0 +1.0**
KBL Kabul 22.04 310 P **P 01 48 43.9 +2.1**
KBL pmax pmax
comp=Z,29nm,0.9s
KBL Kabul 22.04 310 P **P 01 48 43.9 +2.1**
KBL IAmb IAmb 01 48 47.7
comp=Z,29nm,0.9s
SHLS Shalkode 22.89 341 *e*P **P 01 48 50.0 -0.6**
baz=342
SHLS Shalkode 22.89 341 *e*P **P 01 48 50.0 -0.6**
UZB Uzynbulak 23.02 340 *e*P **P 01 48 53.1 +1.2**
baz=340
UZB Uzynbulak 23.02 340 *e*P **P 01 48 53.1 +1.2**
SATY Saty 23.14 339 *e*P **P 01 48 53.9 +0.7**
baz=339
SATY Saty 23.14 339 *e*P **P 01 48 53.9 +0.7**
KPKS Kokpek 23.41 340 *e*P **P 01 48 56.6 +0.7**
baz=340
KPKS Kokpek 23.41 340 *e*P **P 01 48 56.5 +0.7**
TNSS Tian-Shan 23.64 336 *e*P **P 01 48 59.4 +1.0**
baz=337
TNSS Tian-Shan 23.64 336 *e*P **P 01 48 59.3 +1.0**
MDOK Medeo 23.71 337 *e*P **P 01 48 59.5 +0.8**
baz=337
MDOK Medeo 23.71 337 *e*P **P 01 48 59.5 +0.8**
GAR Garm 23.77 320 P **P 01 48 59.3 -0.1**
AAA Alma-Ata 23.80 337 *e*P **P 01 48 60.0 +0.5**
comp=Z,14nm,0.6s,baz=337
AAA Alma-Ata 23.80 337 *e*P **P 01 48 59.9 +0.5**
AAA pmax pmax
comp=Z,14nm,0.6s
WHN Wuhan 23.84 63 ⇑P **P 01 49 00.7 +0.8**
AAK Ala-Archa 24.29 332 P **P 01 49 05.9 +1.8**
comp=Z,3.1nm,0.8s,baz=145,slow=12,SNR=9.2
AAK LR LR 02 00 09.3
comp=Z,98nm,21.1s,baz=144,slow=40
AAK Ala-Archa 24.29 332⇓ *e*P **P 01 49 05.6 +1.4**
AAK pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 24.29 332 P **P 01 49 05.3 +1.2**
KUU Kurty 24.60 337 *e*P **P 01 49 07.5 +0.6**
baz=337
KUU Kurty 24.60 337 *e*P **P 01 49 07.4 +0.6**
SGDS Sogindy 24.90 334 *e*P **P 01 49 08.7 -0.9**
baz=334
SGDS Sogindy 24.90 334 *e*P **P 01 49 08.6 -0.9**
TIY Taiyuan 25.30 46 *e*P **P 01 49 14.0 +0.8**
TIY pmax pmax
comp=Z,21nm,0.7s
RGRI Rengat 25.31 149 P **P 01 49 18.7 +5.3**
MK31 Makanchi Array 25.61 348 *d i*P **P 01 49 16.7 +0.8**
MK31 Makanchi Array 25.61 348 P **P 01 49 17.3 +1.4**
MK31 IAmb IAmb 01 49 19.5
comp=Z,11nm,0.8s
MKAR Makanchi Array 25.61 348 P **P 01 49 17.4 +1.5**
comp=Z,10.0nm,0.6s,baz=171,slow=9.0,SNR=69
MKAR Makanchi Array 25.61 348 P **P 01 49 17.1 +1.2**
MAKZ Makanchi 25.68 348 P **P 01 49 17.7 +1.1**
MAKZ pmax pmax
comp=Z,13nm,0.8s
MAKZ Makanchi 25.68 348 P **P 01 49 17.7 +1.1**
MAKZ IAmb IAmb 01 49 20.3
comp=Z,13nm,0.8s
ZSN Zaisan 25.86 353 *e*P **P 01 49 19.6 +1.4**
comp=Z,9.7nm,0.7s,baz=353
ZSN Zaisan 25.86 353 *e*P **P 01 49 19.5 +1.4**
ZSN pmax pmax
comp=Z,10.0nm,0.7s
IUG Iuzhnay 26.07 326 *e*P **P 01 49 20.3 +0.1**
baz=326
IUG Iuzhnay 26.07 326 *e*P **P 01 49 20.3 +0.1**
BTLS Baital 26.45 335 *e*P **P 01 49 23.5 -0.1**
baz=335
BTLS Baital 26.45 335 *e*P **P 01 49 23.4 -0.1**
KKAR Karatay Array 26.51 328 P **P 01 49 23.3 -0.9**
HHC Hu-ho-hao-te 26.57 39 *e*P **P 01 49 27.0 +2.2**
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,140nm,8.7s
HRA Herat 27.07 303 P **P 01 49 28.8 -0.6**
DGZ Jazzator, Alta 27.88 357⇑ *e*P **P 01 49 37.9 +1.4**
DGZ pmax pmax
comp=Z,6.0nm,1.4s
NJ2 Nanjing 27.95 62 *e*P **P 01 49 38.8 +1.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
SONM Songino Array 29.27 24 P **P 01 49 50.1 +1.2**
comp=Z,7.9nm,0.7s,baz=206,slow=9.9,SNR=59
SONM LR LR 02 04 32.3
comp=Z,69nm,18.6s,baz=144,slow=42
SONM Songino Array 29.27 24 P **P 01 49 50.0 +1.2**
SEM Semipalatinsk 29.46 348 *e*P **P 01 49 50.8 +0.1**
baz=348
SEM Semipalatinsk 29.46 348 *e*P **P 01 49 50.7 +0.1**
ULN Ulaanbaatar 29.55 24 *d i*P **P 01 49 51.9 +0.6**
ULN pmax pmax
comp=Z,9.0nm,1.3s
ULN Ulaanbaatar 29.55 24 P **P 01 49 52.5 +1.2**
ULN IAmb IAmb 01 49 53.0
comp=Z,9.6nm,1.2s
KURBB Kurchatov Arra 30.03 346 P **P 01 49 55.6 +0.3**
comp=Z,1.7nm,0.5s,baz=165,slow=8.8,SNR=11
KURK Kurchatov 30.10 346 P **P 01 49 55.7 -0.3**
KURK Kurchatov 30.10 346 P **P 01 49 55.6 -0.3**
ZAK Zakamensk 30.48 17 *e*P **P 01 50 00.5 +1.0**
ZAK pmax pmax
comp=Z,6.0nm,1.3s
BRZS Berezniki 31.11 339 *e*P **P 01 50 06.0 +1.1**
baz=339
BRZS Berezniki 31.11 339 *e*P **P 01 50 06.0 +1.1**
GEYT Alibeck 31.46 308 P **P 01 50 08.8 +0.6**
comp=Z,2.2nm,0.7s,baz=143,slow=10,SNR=6.9

GEYT LR LR 02 04 46.8
comp=Z,54nm,22.0s,baz=50,slow=40
GEYT Alibeck 31.46 308 P **P 01 50 09.3 +1.1**
GYA0 ALIBECK ARRAY 31.46 308 P **P 01 50 09.5 +1.3**
GYA0 pmax pmax
comp=Z,3.0nm,0.6s
GYA0B ALIBECK ARRAY 31.46 308 P **P 01 50 09.5 +1.3**
TLY Talaya 31.75 17⇑ *e*P **P 01 50 12.8 +2.2**
TLY pmax pmax
comp=Z,2.0nm,1.2s
ZAA0 Zalesovo Array 32.29 355 P **P 01 50 16.1 +0.9**
ZAA0 IAmb IAmb 01 50 17.1
comp=Z,9.5nm,1.1s
ZALV Zalesovo Beam 32.29 355 P **P 01 50 16.2 +1.0**
comp=Z,3.5nm,0.4s,baz=179,slow=8.8,SNR=26
ZALV Zalesovo Beam 32.29 355 P **P 01 50 15.6 +0.4**
BVAR Borovoye Array 34.45 339 P **P 01 50 35.0 +0.9**
comp=Z,0.5nm,0.4s,baz=208,slow=12,SNR=3.7
BVAR Borovoye Array 34.45 339 P **P 01 50 35.0 +0.9**
BRVK Borovoye 34.52 339⇓ *e*P **P 01 50 35.9 +1.3**
BRVK pmax pmax
comp=Z,1.0nm,0.9s
ABKAR Akbulak array 36.06 327 P **P 01 50 48.9 +0.9**
ABKAR IAmb IAmb 01 50 49.4
comp=Z,5.0nm,0.6s
ABKAR Akbulak array 36.06 327 P **P 01 50 48.6 +0.6**
HIA Hailar 36.35 34⇓ *e*P **P 01 50 51.4 +0.9**
HIA pmax pmax
comp=Z,6.0nm,0.9s
HIA Hailar 36.35 34 P **P 01 50 51.6 +1.1**
HIA IAmb IAmb 01 50 52.5
comp=Z,6.7nm,0.9s
KSRS Korea Array 36.52 56 P **P 01 50 52.0 -0.1**
comp=Z,1.3nm,0.6s,baz=248,slow=10,SNR=2.6
KSRS LR LR 02 08 10.0
comp=Z,53nm,19.2s,baz=272,slow=40
KSRS Korea Array 36.52 56 P **P 01 50 52.0 -0.1**
AKTO Aktyubinsk 37.77 327 P **P 01 51 02.6 +0.1**
comp=Z,1.5nm,0.4s,baz=135,slow=9.6,SNR=7.5
BOD Bodaibo 40.10 20 *e*P **P 01 51 22.5 +0.6**
BOD pmax pmax
comp=Z,11nm,1.3s
RAYN Ar Rayn 40.58 281 P **P 01 51 26.7 +0.3**
RAYN pmax pmax
comp=Z,11nm,1.0s
RAYN Ar Rayn 40.58 281 P **P 01 51 26.7 +0.3**
RAYN IAmb IAmb 01 51 27.8
comp=Z,11nm,1.1s
USRK Ussuriysk Ar. 41.40 47 P **P 01 51 33.5 +0.6**
comp=Z,2.8nm,0.8s,baz=244,slow=7.2,SNR=6.3
ARU Arti 41.44 334 P **P 01 51 33.1 +0.1**
comp=Z,0.9nm,0.3s,baz=63,slow=2.3,SNR=5.3
ARU Arti 41.44 334⇓ *e*P **P 01 51 33.5 +0.6**
ARU pmax pmax
comp=Z,3.0nm,1.1s
ARU Arti 41.44 334 P **P 01 51 33.5 +0.6**
ZEA Zeya 42.77 32 *e*P **P 01 51 45.4 +1.6**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
KLR Kul'dur 43.08 40⇑ *e*P **P 01 51 46.7 +0.3**
KLR pmax pmax
comp=Z,5.0nm,1.3s
ZEI Tsey 43.27 310 *e*P **P 01 51 48.2 -0.2**
ZEI pmax pmax
comp=Z,20nm,1.3s
NCK Nalchik 43.67 311⇓ *e*P **P 01 51 52.2 +0.9**
NCK pmax pmax
comp=Z,3.0nm,0.2s
KBZ Khabaz 44.22 311 P **P 01 51 55.6 0.0**
comp=Z,5.6nm,1.0s,baz=95,slow=3.5,SNR=6.7
KBZ Khabaz 44.22 311⇑ *e*P **P 01 51 55.8 +0.2**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
NEY Neytrino 44.23 310⇑ *e*P **P 01 51 57.9 +1.9**
NEY pmax pmax
comp=Z,3.0nm,0.7s
BELG Belogornoye 44.32 324 P **P 01 51 56.4 +0.1**
comp=Z,13nm,1.1s,baz=131,slow=19,SNR=4.1
KVAR Kislovodsk Arr 44.41 311 P **P 01 51 58.9 +1.5**
comp=Z,2.6nm,0.7s,baz=22,slow=11,SNR=1.3
KIV Kislovodsk 44.42 311 *e*P **P 01 51 58.3 +0.9**
KIV pmax pmax
comp=Z,35nm,1.1s
MJAR Matsushiro Arr 44.48 60 LR LR 02 12 33.9
comp=Z,42nm,18.8s,baz=270,slow=39
SOC Sochi 46.44 310 *e*P **P 01 52 11.2 -2.0**
SOC *e* 01 53 58.9
SOC *e*PPP PPP 01 54 47.1
SOC eS **S 01 58 58.5 -0.3**
SOC *e*SSS SSS 02 03 21.0
SOC pmax pmax
comp=Z,34nm,1.0s
KIRV Kirov 46.63 332 P **P 01 52 14.7 +0.2**
comp=Z,4.6nm,0.5s,baz=196,slow=7.4,SNR=2.5
NRIK Noril'sk 47.55 359 P **P 01 52 21.8 +0.3**
comp=Z,2.1nm,0.5s,baz=170,slow=5.7,SNR=4.3
NRIK LR LR 02 16 24.5
comp=Z,42nm,19.0s,baz=160,slow=41
NRIK Noril'sk 47.55 359 *de*P **P 01 52 22.2 +0.7**
NRIK pmax pmax
comp=Z,10.0nm,1.9s
NRIK Noril'sk 47.55 359 P **P 01 52 21.3 -0.2**
NRIK IAmb IAmb 01 52 22.7
comp=Z,2.6nm,0.6s
ASF Jabal al Asfar 47.65 294 P **P 01 52 22.6 -0.4**
comp=Z,0.1nm,0.3s,baz=112,slow=11,SNR=1.4
BR131 Keskin Array S 50.46 304 P **P 01 52 44.2 -0.3**
BR131 IAmb IAmb 01 52 45.1
comp=Z,5.6nm,0.7s
BRTR Keskin Array B 50.46 304 P **P 01 52 44.5 -0.1**
comp=Z,4.8nm,0.7s,baz=118,slow=8.6,SNR=12
BRTR LR LR 02 16 03.5
comp=Z,45nm,18.7s,baz=8.0,slow=38
BRTR Keskin Array B 50.46 304 P **P 01 52 44.0 -0.5**
OBN Obninsk 51.41 324 *e*P **P 01 52 51.3 +0.1**
OBN *e* 01 54 47.7
OBN pmax pmax
comp=Z,27nm,1.7s
ELL Elmali 53.34 300 P **P 01 53 05.9 -0.1**
TIXI Tiksi 54.67 14 P **P 01 53 14.3 -0.7**
comp=Z,2.1nm,0.5s,baz=173,slow=4.7,SNR=6.0
TIXI Tiksi 54.67 14⇑ *e*P **P 01 53 14.8 -0.1**
TIXI pmax pmax
comp=Z,27nm,2.5s
TIXI Tiksi 54.67 14 P **P 01 53 14.9 -0.1**
AKASG Malin Array Be 54.73 317 P **P 01 53 14.8 -0.9**
comp=Z,0.6nm,0.4s,baz=97,slow=5.9,SNR=7.0
AKASG Malin Array Be 54.73 317 P **P 01 53 14.4 -1.3**
KMBO Kilima Mbogo 55.90 253 P **P 01 53 24.7 -0.3**
comp=Z,1.0nm,0.7s,baz=54,slow=14,SNR=4.1
KMBO LR LR 02 14 56.6
comp=Z,30nm,20.8s,baz=80,slow=34
KMBO Kilima Mbogo 55.90 253 *i* P **P 01 53 25.7 +0.7**
KMBO pmax pmax
comp=Z,1.0nm,0.5s
MLR Muntele Rosu 56.43 311 P **P 01 53 27.7 -0.5**
comp=Z,9.2nm,0.8s,baz=180,slow=7.0,SNR=5.0
MLR Muntele Rosu 56.43 311 P **P 01 53 28.1 -0.2**
MORW Morawa 56.66 152 P **P 01 53 29.9 +0.1**
NACGM Naroch 56.84 322 *i* P **P 01 53 30.7 -0.1**
NACGM *i* P **P 01 53 30.7 -0.1**
NACGM *i* P **P 01 53 30.7 -0.1**
NACGM *i* PP **PP 01 55 39.2 +2.1**
NACGM *i* PPP PPP 01 56 54.8
NACGM *i* S **S 02 01 24.9 +3.2**
NACGM *i* PS PnS 02 01 58.6 +23
NACGM *i* SS **SS 02 05 20.6 +11**
NACGM *i* SSS SSS 02 07 45.0
NACGM *i* LQ LQ 02 14 08.0
NACGM *i* LR LR 02 18 14.3
MA2 Magadan 56.91 32⇑ *e*P **P 01 53 31.2 0.0**
MA2 pmax pmax
comp=Z,11nm,1.7s
BURAR Bucovina Array 57.03 313 P **P 01 53 32.8 +0.4**
BURAR Bucovina Array 57.03 313 P **P 01 53 32.8 +0.4**
BUR08 Bucovina Ar. S 57.05 313 P **P 01 53 32.6 +0.1**
BUR08 IAmb IAmb 01 53 33.5
comp=Z,4.2nm,0.9s
VTS Vitosha 58.36 307 P **P 01 53 42.5 +0.6**
VTS pmax pmax
comp=Z,5.0nm,0.9s
VTS Vitosha 58.36 307 P **P 01 53 42.5 +0.6**
VTS IAmb IAmb 01 53 43.1
comp=Z,5.1nm,0.9s
FINES FINESS Array B 58.45 330 P **P 01 53 41.8 -0.2**

comp=Z,1.7nm,0.9s,baz=122,slow=6.9,SNR=5.4
FINES LR LR 02 21 46.2
comp=Z,148nm,18.5s,baz=168,slow=39
FINES FINES Array B 58.45 330 *i* P **P 01 53 42.7 +0.7**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINES Array B 58.45 330 P **P 01 53 42.1 +0.2**
SEY Seymchan 58.48 29‖ *eP* **P 01 53 42.6 +0.4**
ITM Ithomi 59.69 301 P **P 01 53 49.6 -1.5**
FNA Florina 59.83 305 P **P 01 53 51.3 -0.7**
FNA pmax pmax
comp=Z,9.0nm,0.8s
FNA Florina 59.83 305 P **P 01 53 51.3 -0.7**
WB0 Warramunga Arr 60.23 130 P **P 01 53 55.6 +0.7**
WRA Warramunga Arr 60.30 130 P **P 01 53 54.5 -1.0**
comp=Z,0.5nm,0.7s,baz=321,slow=7.2,SNR=2.2
WRA LR LR 02 24 32.2
comp=Z,24nm,18.9s,baz=70,slow=41
WR0 Warramunga Arr 60.46 130 P **P 01 53 58.4 +2.0**
WR0 IAmb IAmb 01 54 12.5
comp=Z,8.0nm,1.0s
ARCES ARCESS Array B 60.74 339 P **P 01 53 57.8 +0.1**
comp=Z,5.6nm,1.2s,baz=93,slow=9.0,SNR=1.9
ARCES LR LR 02 22 10.4
comp=Z,42nm,18.4s,baz=220,slow=38
PDG Podgorica 61.31 307 P **P 01 54 01.7 -0.2**
ASAR Alice Springs 62.49 134 P **P 01 54 11.7 +1.6**
comp=Z,0.5nm,0.8s,baz=316,slow=6.9,SNR=4.4
SOKA Soboth 63.99 312 *eP* **P 01 54 20.5 +0.6**
comp=Z,8.5nm,1.5s
HFS Hagfors 64.32 327 P **P 01 54 20.8 -0.9**
comp=Z,1.9nm,0.5s,baz=81,slow=9.3,SNR=8.3
OBKA Obir 64.34 312 *eP* **P 01 54 23.1 +0.9**
comp=Z,13nm,1.9s
MOA Molln 64.42 314 *eP* **P 01 54 22.8 +0.2**
comp=Z,3.3nm,0.9s
GERES GERESS Array B 64.71 315 P **P 01 54 23.7 -0.9**
comp=Z,2.8nm,1.1s,baz=78,slow=7.0,SNR=8.3
GERES GERESS Array B 64.71 315 P **P 01 54 23.9 -0.7**
BILL Bilibino 64.99 24 *eP* **P 01 54 26.7 +0.7**
BILL *e* 01 54 40.9
BILL *e* 01 54 53.0
BILL pmax pmax
comp=Z,6.0nm,1.7s
SPITS Spitsbergen Ar 65.36 347 P **P 01 54 27.5 -0.7**
comp=Z,3.1nm,0.8s,baz=124,slow=1.2,SNR=1.6
NOA NORSAR Array B 65.54 328 P **P 01 54 28.6 -1.0**
comp=Z,2.0nm,0.9s,baz=90,slow=6.4,SNR=4.5
NOA LR LR 02 25 13.7
comp=Z,63nm,18.2s,baz=280,slow=38
NC204 NORSAR Array S 65.76 329 P **P 01 54 30.7 -0.4**
WATA Walderalm 66.28 313 *i* P **P 01 54 34.1 -0.7**
comp=Z,2.0nm,0.7s
MOTA Moosalm 66.60 313 *i* P **P 01 54 36.3 -0.5**
comp=Z,6.0nm,1.1s
RETA Reutte 66.81 314 *i* P **P 01 54 37.8 -0.3**
comp=Z,4.8nm,1.2s
DAVA Damuels 67.43 314 *i* P **P 01 54 42.1 -0.1**
comp=Z,10nm,1.2s
DAVOX Davos/Dischmat 67.50 313 P **P 01 54 42.0 -0.6**
comp=Z,1.2nm,0.5s,baz=348,slow=20
MSSA Maissana 68.13 310 P **P 01 54 45.5 -1.1**
SENIN Lac Senin/Sane 69.33 313 P **P 01 54 54.2 +0.1**
SENIN IAmb IAmb 01 54 54.7
comp=Z,8.0nm,1.3s
KEST Kesra 69.93 301 P **P 01 54 57.5 -0.3**
comp=Z,9.6nm,0.9s,baz=61,slow=4.3,SNR=7.8
KEST Kesra 69.93 301 P **P 01 54 58.4 +0.5**
BNI Bardonecchia 70.00 312 P **P 01 54 59.4 +1.2**
BNI pmax pmax
comp=Z,7.0nm,1.5s
BNI Bardonecchia 70.00 312 P **P 01 54 59.4 +1.2**
BNI IAmb IAmb 01 55 12.0
comp=Z,7.5nm,1.5s
EKA Eskdalemuir Ar 73.86 324 P **P 01 55 20.7 -0.3**
comp=Z,1.7nm,0.6s,baz=83,slow=6.3,SNR=17
ESK Eskdalemuir 73.89 324 P **P 01 55 21.5 +0.3**
ESK pmax pmax
comp=Z,4.0nm,0.8s
ESK Eskdalemuir 73.89 324 P **P 01 55 21.5 +0.3**
ESK IAmb IAmb 01 55 22.1
comp=Z,3.7nm,0.8s
TAM Tamanrasset 76.63 289 P **P 01 55 38.0 +0.3**
TAM pmax pmax
comp=Z,5.0nm,1.1s
TAM Tamanrasset 76.63 289 P **P 01 55 38.0 +0.3**
TAM IAmb IAmb 01 55 38.9
comp=Z,4.7nm,1.1s
EUNU Eureka 78.31 359 P **P 01 55 47.2 +1.3**
ESDC Sonseca Array 79.00 308 P **P 01 55 50.6 +0.1**
comp=Z,1.3nm,0.7s,baz=57,slow=5.3,SNR=7.8
ESDC Sonseca Array 79.00 308 P **P 01 55 50.0 -0.5**
ESDC IAmb IAmb 01 55 51.2
comp=Z,7.1nm,1.1s
BOSA Boshof 79.74 234 P **P 01 55 54.2 -0.5**
comp=Z,1.9nm,1.1s,baz=61,slow=1.6,SNR=5.6
BOSA LR LR 02 26 53.6
comp=Z,37nm,18.8s,baz=355,slow=32
BOSA Boshof 79.74 234 P **P 01 55 54.5 -0.1**
TOA0 Torodi Ar. Sit 83.28 281 P **P 01 56 13.6 0.0**
TORD Torodi Ar. Bea 83.28 281 P **P 01 56 13.1 -0.4**
comp=Z,1.0nm,0.8s,baz=65,slow=4.6,SNR=5.4
TORD LR LR 02 38 43.3
comp=Z,22nm,19.2s,baz=145,slow=40
TORD Torodi Ar. Bea 83.28 281 P **P 01 56 12.8 -0.8**
TXAR Lajitas Array 127.57 15 PKP **PKPdf 02 02 52.1 +0.1**
comp=Z,0.3nm,0.9s,baz=90,slow=2.5,SNR=2.7

*TUL **08** 01:47:51.8±1.0,36.°19N±0.°01×97.°03W±0.°02,h5km±7km, ML3.2,mb_Lg3.1/91(NEIC), Error ellipse: s-maj=2.5km s-min=1.7km az=81.0*
*ANF **08** 01:47:52.0±0.2,36.°20N×97.°02W,h5km, ML3.6/12, Error ellipse: s-maj=3.0km s-min=2.2km az=128.0*
*NEIC **08** 01:47:52.1±0.7,36.°197N±0.°005×97.°04W±0.°02,h5km±2km, Error ellipse: s-maj=3.1km s-min=2.8km az=81.0*
ISC 08 01:47:52.0±1.1,36.°20N±0.°02×97.°04W±0.02,h4km±11km, n95,σ0949/88,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QUOK	**Quay**	**0.27**	**95**		**Pg**	**01 47 57.4**	**+0.2**
QUOK				Sg	**Sg**	**01 48 01.1**	**+0.4**
OK031	**S. Brethren Rd**	**0.29**	**147**		**Pg**	**01 47 57.7**	**0.0**
OK031					**Sg**	**01 48 01.7**	**+0.3**
OK030	**Cody Creek RV**	**0.34**	**143**		**Pg**	**01 47 58.6**	**0.0**
OK030				Sg	**Sg**	**01 48 03.1**	**+0.2**
OK029	**Liberty Lake**	**0.53**	**220**		**Pg**	**01 48 02.0**	**0.0**
OK029				Sg	**Sg**	**01 48 09.1**	**+0.2**
OK025	**Westminster Rd**	**0.66**	**202**		**Pg**	**01 48 04.5**	**-0.2**
OK025				Sg	**Sg**	**01 48 13.6**	**+0.3**
OK001	**Jones High Sch**	**0.67**	**198**	Pg	**Pg**	**01 48 04.7**	**-0.2**
BCOK	**Bluff Creek, N**	**0.71**	**221**		**Pg**	**01 48 05.4**	**-0.3**
BCOK				Sg	**Sg**	**01 48 15.1**	**+0.2**
CROK	**Carrier**	**0.82**	**292**	Pg	**Pg**	**01 48 07.8**	**0.0**
CROK				Sg	**Sg**	**01 48 19.0**	**+0.5**
T35A	**Sooner Cattle**	**0.83**	**30**		**Pg**	**01 48 08.0**	**0.0**
T35A				Sg	**Sg**	**01 48 18.9**	**+0.1**
T35B	**Sooner Cattle** baz=210,SNR=210	**0.83**	**30**	P	**Pg**	**01 48 07.8**	**-0.2**
T35B				S	**Sg**	**01 48 19.0**	**+0.2**
	baz=210						
T35B	**Sooner Cattle** baz=210,SNR=210	**0.83**	**30**	P		01 48 07.8	
T35B				S		01 48 19.0	
	baz=210						
OKCFA	**Oklahoma City**	**0.85**	**204**	Pg	**Pg**	**01 48 07.8**	**-0.5**
OKCFA				Sg	**Sg**	**01 48 19.5**	**+0.2**
OKCFA	**Oklahoma City** baz=24	**0.85**	**204**	P	**Pg**	**01 48 07.9**	**-0.5**
OKCFA				S	**Sg**	**01 48 19.5**	**+0.2**
	baz=24						
OKCFA	**Oklahoma City** baz=24	**0.85**	**204**	P		01 48 07.9	
OKCFA				S		01 48 19.5	
	baz=24						
OKCSW	**OKLAHOMA CITY**	**0.85**	**203**		**Pg**	**01 48 07.8**	**-0.6**
OKCSW				Sg	**Sg**	**01 48 19.4**	**-0.1**
KAN13	**South Haven SW**	**0.89**	**337**		**Pg**	**01 48 09.0**	**-0.1**
GC02	**Grant County #**	**0.93**	**315**	Pg	**Pg**	**01 48 09.7**	**-0.2**
GC02				Sg	**Sg**	**01 48 22.1**	**+0.1**
FNO	**Franklin**	**0.98**	**198**		**Pg**	**01 48 10.6**	**-0.3**
FNO				Sg	**Sb**	**01 48 24.2**	**-0.7**
KAN09	**Caldwell North**	**1.05**	**334**		**Pg**	**01 48 11.8**	**-0.3**
KAN09				Sg	**Sg**	**01 48 25.7**	**0.0**
TUL1	**Leonard** baz=286	**1.05**	**105**	P	**Pg**	**01 48 11.0**	**-1.1**
TUL1				S	**Sg**	**01 48 25.0**	**-0.7**
	baz=286						
TUL1	**Leonard** baz=286	**1.05**	**105**	P		01 48 11.0	
TUL1				S		01 48 25.0	
	baz=286						
KAN01	**Argonia South**	**1.12**	**329**		**Pg**	**01 48 13.1**	**-0.3**
KAN01				Sg	**Sg**	**01 48 28.0**	**0.0**
OK032	**Salt Plains WL**	**1.12**	**303**		**Pg**	**01 48 13.0**	**-0.5**
KAN05	**Bluff City Nor**	**1.13**	**324**		**Pg**	**01 48 13.3**	**-0.4**
KAN05					**Sg**	**01 48 28.5**	**+0.1**
KAN10	**Anthony SW Sta**	**1.26**	**318**		**Pg**	**01 48 15.7**	**-0.4**
KAN08	**Anthony NE Sta**	**1.27**	**324**		**Pg**	**01 48 16.0**	**-0.5**
KAN12	**Harper NE Stat**	**1.34**	**325**	Pn	**Pn**	**01 48 17.1**	**-0.4**
U32A	**Winter Ranch,**	**1.60**	**277**		**Pn**	**01 48 21.0**	**0.0**
U32A	**Winter Ranch,** baz=96,SNR=49	**1.60**	**277**	P	**Pn**	**01 48 21.1**	**0.0**
U32A	**Winter Ranch,** baz=96,SNR=49	**1.60**	**277**	P		01 48 21.1	
X34A	**Smith Ranch, M**	**1.72**	**202**		**Pn**	**01 48 23.2**	**+0.4**
X34A				IAmb_Lg		01 48 47.9	
	comp=Z,110nm,0.8s						
WMOK	**Wichita Mounta**	**2.04**	**225**		**Pn**	**01 48 27.7**	**+0.6**
WMOK				IAmb_Lg		01 49 00.1	
	comp=Z,82nm,0.8s						
WMOK	**Wichita Mounta** baz=44,SNR=52	**2.04**	**225**	P	**Pn**	**01 48 27.5**	**+0.4**
WMOK				S	**Sb**	**01 48 55.2**	**-0.1**
	baz=44						
WMOK	**Wichita Mounta** baz=44,SNR=52	**2.04**	**225**	P		01 48 27.5	
WMOK				S		01 48 55.2	
	baz=44						
X37A	**Clayton**	**2.10**	**139**		**Pn**	**01 48 28.6**	**+0.7**
X37A	**Clayton** baz=320	**2.10**	**139**	P	**Pn**	**01 48 27.7**	**-0.3**
X37A	**Clayton** baz=320	**2.10**	**139**	P		01 48 27.7	
U38A	**Gravette**	**2.15**	**83**		**Pn**	**01 48 29.1**	**+0.4**
U38A	**Gravette** baz=264,SNR=76	**2.15**	**83**	P	**Pn**	**01 48 29.1**	**+0.4**
U38A	**Gravette** baz=264,SNR=76	**2.15**	**83**	P		01 48 29.1	
HHAR	**Hobbs**	**2.50**	**87**		**Pn**	**01 48 33.8**	**+0.2**
HHAR	**Hobbs** baz=269,SNR=16	**2.50**	**87**	P	**Pn**	**01 48 33.7**	**+0.2**
HHAR	**Hobbs** baz=269,SNR=16	**2.50**	**87**	P		01 48 33.7	
R32A	**Long Quarter,** baz=149	**2.59**	**329**	S	**Sn**	**01 49 07.4**	**+0.7**
R32A	**Long Quarter,** baz=149	**2.59**	**329**	S		01 49 07.4	
W39A	**Magazine**	**2.83**	**110**	Pn	**Pn**	**01 48 38.2**	**+0.2**
W39A				IAmb_Lg		01 49 27.5	
	comp=Z,54nm,0.8s						
Z35A	**Perchaven, San**	**2.87**	**184**	Pn	**Pn**	**01 48 38.5**	**+0.1**
Z35A	**Perchaven, San** baz=3.6	**2.87**	**184**	P	**Pn**	**01 48 38.7**	**+0.2**
Z35A	**Perchaven, San** baz=3.6	**2.87**	**184**	P		01 48 38.7	
MIAR	**Mount Ida**	**3.27**	**119**	Pn	**Pn**	**01 48 44.3**	**+0.3**
MIAR				IAmb_Lg		01 49 42.5	
	comp=Z,34nm,0.8s						
MIAR	**Mount Ida** baz=301	**3.27**	**119**	P	**Pn**	**01 48 44.2**	**+0.1**
MIAR	**Mount Ida** baz=301	**3.27**	**119**	P		01 48 44.2	
S39A	**Bolivar**	**3.33**	**62**	Pn	**Pn**	**01 48 45.0**	**+0.2**
CBKS	**Cedar Bluff**	**3.38**	**321**	IAmb_Lg		01 49 48.1	
	comp=Z,50nm,0.7s						
Z38A	**Mt. Pleasant**	**3.38**	**149**	Pn	**Pn**	**01 48 45.1**	**-0.4**
Z38A				IAmb_Lg		01 49 42.3	
	comp=Z,47nm,0.9s						
U40A	**Yellville**	**3.38**	**86**		**Pn**	**01 48 45.4**	**-0.2**
U40A	**Yellville** baz=268	**3.38**	**86**	P	**Pn**	**01 48 45.6**	**0.0**
U40A	**Yellville** baz=268	**3.38**	**86**	P		01 48 45.6	
U40A				P		01 48 45.6	
	baz=268						
X40A	**Basin Creek Fa**	**3.83**	**115**	Pn	**Pn**	**01 48 51.6**	**-0.2**
X40A				IAmb_Lg		01 49 55.0	
	comp=Z,48nm,0.7s						
X40A	**Basin Creek Fa** baz=298	**3.83**	**115**	P	**Pn**	**01 48 52.0**	**+0.2**
X40A	**Basin Creek Fa** baz=298	**3.83**	**115**	P		01 48 52.0	
X40A				P		01 48 52.0	
	baz=298						
MGMO	**Mountain Grove**	**3.95**	**75**	Pn	**Pn**	**01 48 54.0**	**+0.6**
MGMO				IAmb_Lg		01 49 56.1	
	comp=Z,42nm,0.8s						
WHAR	**Wooly Hollow**	**3.97**	**102**	Pn	**Pn**	**01 48 53.9**	**+0.3**
WHAR				IAmb_Lg		01 49 57.3	
	comp=Z,29nm,0.7s						
FCAR	**Ozark Folk Cen**	**3.99**	**93**	Pn	**Pn**	**01 48 54.4**	**+0.5**
FCAR				IAmb_Lg		01 50 03.7	
	comp=Z,31nm,0.7s						
AMTX	**Amarillo**	**4.01**	**252**	Pn	**Pn**	**01 48 54.8**	**+0.5**
AMTX				IAmb_Lg		01 50 02.9	
	comp=Z,39nm,0.9s						
237A	**Washetta, Mont**	**4.31**	**166**	Pn	**Pn**	**01 48 58.3**	**0.0**
R40A	**Maddies Statio**	**4.34**	**60**	Pn	**Pn**	**01 48 58.8**	**0.0**
R40A				IAmb_Lg		01 50 08.7	
	comp=Z,53nm,0.8s						
R40A	**Maddies Statio** baz=242,SNR=9.2	**4.34**	**60**	P	**Pn**	**01 48 58.5**	**-0.2**
R40A	**Maddies Statio** baz=242,SNR=9.2	**4.34**	**60**	P		01 48 58.5	
P38A	**Dawn**	**4.40**	**38**	Pn	**Pn**	**01 48 59.7**	**+0.1**
P38A				IAmb_Lg		01 50 11.9	
	comp=Z,30nm,0.7s						
N33A	**J Bar K, Exete**	**4.55**	**356**	Pn	**Pn**	**01 49 01.6**	**0.0**
LCAR	**Lake Charles**	**4.76**	**90**	Pn	**Pn**	**01 49 03.7**	**-0.9**
LCAR				IAmb_Lg		01 50 21.8	
	comp=Z,27nm,0.9s						
N35A	**Tabor**	**4.78**	**13**	Pn	**Pn**	**01 49 04.7**	**-0.1**
N35A				IAmb_Lg		01 50 27.5	
	comp=Z,36nm,0.8s						
CCAR	**Cane Creek**	**4.88**	**116**	IAmb_Lg		01 50 33.5	
	comp=Z,39nm,1.0s						
CCM	**Cathedral Cave**	**4.99**	**66**	Pn	**Pn**	**01 49 07.7**	**+0.1**
CCM				IAmb_Lg		01 50 36.9	
	comp=Z,43nm,0.7s						
P40A	**Paris**	**5.16**	**48**	Pn	**Pn**	**01 49 10.8**	**+0.8**
P40A				IAmb_Lg		01 50 42.7	
	comp=Z,34nm,0.7s						
KSCO	**Kaye Shedlock'**	**5.25**	**304**	Pn	**Pn**	**01 49 10.9**	**-0.5**
KSCO				IAmb_Lg		01 50 49.5	
	comp=Z,37nm,0.8s						
BGNE	**Belgrade**	**5.28**	**351**	Pn	**Pn**	**01 49 11.6**	**0.0**
BGNE				IAmb_Lg		01 50 46.7	
	comp=Z,26nm,0.8s						
PBMO	**Poplar Bluff**	**5.35**	**82**	IAmb_Lg		01 50 45.7	
	comp=Z,34nm,0.8s						
N38A	**Joes South For**	**5.47**	**32**	Pn	**Pn**	**01 49 14.7**	**+0.4**
N38A				IAmb_Lg		01 50 59.4	
	comp=Z,37nm,0.8s						
LPAR	**Lepanto**	**5.50**	**94**	IAmb_Lg		01 50 47.4	
	comp=Z,36nm,0.8s						
143A	**Socs Landing,**	**5.81**	**125**	IAmb_Lg		01 51 09.6	
	comp=Z,22nm,0.8s						
SLM	**Saint Louis**	**5.93**	**64**	IAmb_Lg		01 51 01.5	
	comp=Z,29nm,0.7s						
T25A	**Trinidad**	**6.00**	**281**	Pn	**Pn**	**01 49 22.2**	**+0.4**
LNXT	**Lenox**	**6.11**	**89**	IAmb_Lg		01 51 19.4	
	comp=Z,47nm,0.7s						
OGNE	**Ogallala**	**6.15**	**322**	IAmb_Lg		01 51 24.6	
	comp=Z,34nm,0.7s						
JCT	**Junction City**	**6.15**	**203**	IAmb_Lg		01 51 17.4	
	comp=Z,33nm,1.0s						
HALT	**Halls**	**6.24**	**90**	IAmb_Lg		01 51 10.2	
	comp=Z,36nm,0.8s						
GLAT	**Glass**	**6.26**	**87**	IAmb_Lg		01 51 20.7	
	comp=Z,46nm,0.9s						
SIUC	**Southern Illin**	**6.44**	**74**	IAmb_Lg		01 51 16.7	
	comp=Z,30nm,0.7s						
OXF	**Oxford**	**6.46**	**103**	Pn	**Pn**	**01 49 28.4**	**+0.6**
OXF				IAmb_Lg		01 51 20.6	
	comp=Z,19nm,0.8s						
Y45A	**Yeager Farm, C**	**6.57**	**109**	Pn	**Pn**	**01 49 31.8**	**+2.4**
Y45A				IAmb_Lg		01 51 29.2	
	comp=Z,15nm,0.7s						
K38A	**Parkersburg**	**7.24**	**26**	IAmb_Lg		01 51 51.2	
	comp=Z,22nm,0.7s						
L40A	**Anamosa**	**7.40**	**36**	IAmb_Lg		01 51 50.7	
	comp=Z,19nm,0.8s						
ECSD	**EROS Data Cent**	**7.53**	**2**	Pn	**Pn**	**01 49 41.5**	**-1.1**
ECSD	**EROS Data Cent** baz=183,SNR=6.8	**7.53**	**2**	P	**Pn**	**01 49 41.5**	**-1.1**
ECSD	**EROS Data Cent** baz=183,SNR=6.8	**7.53**	**2**	P		01 49 41.5	
ISCO	**Idaho Springs**	**7.67**	**301**	Pn	**Pn**	**01 49 45.3**	**+0.6**
I37A	**Lemond, Waseca**	**8.29**	**18**	IAmb_Lg		01 52 32.5	
	comp=Z,25nm,1.2s						
JFWS	**Jewell Farm**	**8.51**	**36**	IAmb_Lg		01 52 41.2	
	comp=Z,26nm,0.7s						
WCI	**Wyandotte Cave**	**8.81**	**73**	IAmb_Lg		01 52 31.4	
	comp=Z,21nm,0.8s						
SFIN	**Lafayette**	**8.86**	**59**	IAmb_Lg		01 52 45.3	
	comp=Z,24nm,0.7s						
I40A	**Norwalk**	**9.12**	**31**	IAmb_Lg		01 52 51.2	
	comp=Z,21nm,1.0s						
RSSD	**Black Hills**	**9.55**	**328**	IAmb_Lg		01 53 06.9	
	comp=Z,10nm,1.0s						
W50A	**Signal Mountai**	**9.59**	**93**	IAmb_Lg		01 52 57.4	
	comp=Z,11nm,0.9s						
RWWY	**Rawlins**	**9.63**	**308**	IAmb_Lg		01 53 16.4	
	comp=Z,12nm,1.1s						
R49A	**Shelbyville**	**9.69**	**74**	IAmb_Lg		01 52 57.1	
	comp=Z,11nm,1.0s						
P48A	**Milroy**	**9.74**	**67**	IAmb_Lg		01 53 07.4	
	comp=Z,17nm,0.8s						
K22A	**Casper**	**9.76**	**314**	IAmb_Lg		01 53 10.7	
	comp=Z,9.0nm,0.8s						
PV10	**Paradox Valley**	**9.81**	**286**	IAmb_Lg		01 53 20.2	
	comp=Z,23nm,1.1s						

JMA 08 02:28:01.6±0.2,30.°44N×138.°96E,h361km,M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**4.37**	**139**	P	Pn	02 29 15.4	+0.3
JAG	**Ashikaga**	**5.98**	**4**	P	Pn	02 29 33.0	+0.5
JAG				*e*S	S	02 30 45.0	-1.3
JMK	**Ichinoseki**	**8.69**	**12**	P	Pn	02 30 04.7	+0.8

*NEIC **08** 02:34:58.6±1.9,24.°24S±0.°07×67.°1W±0.°1,h161km±8km, mb4.2/8,Md3.8(SJA),Error ellipse: s-maj=16.8km s-min=10.0km az=88.0*
*IDC **08** 02:34:59.4±2.2,24.°11S×67.°02W,h162km±18km,mb3.4/4, mb1 3.7/8,mb1mx3.5/28,mbtmp4.0/8, Error ellipse: s-maj=30.3km s-min=21.2km az=5.0*
*GUC **08** 02:35:00.4±0.5,24.°23S×67.°28W,h175km±5km,ML4.3*
ISC 08 02:34:59.5±0.7,24.°21S±0.°05×67.°25W±0.°05,h173km±7km, n65,σ1°06/74,mb3.9/6,9C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.67**	**108**	‖ *i* P	**Pn**	**02 35 33.8**	**+1.1**
SLA				*i* S	**Sn**	**02 35 59.0**	**+0.6**
LVC	**Limon Verde** 52nm,0.3s,baz=135,slow=9.0,SNR=107	**2.21**	**316**	P	**Pn**	**02 35 40.2**	**+1.4**
LVC				S	**Sn**	**02 36 09.2**	**0.0**
	20nm,0.3s,baz=26,slow=22,SNR=3.5						
LVC	**Limon Verde**	**2.21**	**316**	‖ *i* P	**Pn**	**02 35 40.0**	**+1.1**
LVC				*i* S	**Sn**	**02 36 09.4**	**+0.2**
LVC	**Limon Verde**	**2.21**	**316**		**Pn**	**02 35 39.9**	**+1.1**
LVC				Sn	**Sn**	**02 36 09.3**	**0.0**
PB15	**IPOC Station P**	**2.27**	**296**	‖ *i* P	**Pn**	**02 35 40.5**	**+1.2**
PB15				*i* S	**Sn**	**02 36 10.4**	**+0.3**
PB15	**IPOC Station P**	**2.27**	**296**		**Pn**	**02 35 40.4**	**+1.0**
GO02	**Mina Guanaco**	**2.33**	**245**	‖ *i* P	**Pn**	**02 35 41.1**	**+0.9**
GO02				*i* S	**Sn**	**02 36 12.1**	**+0.4**
GO02				IAML		02 36 13.9	
	comp=N,1μm,0.4s						
GO02	**Mina Guanaco**	**2.33**	**245**	Pn	**Pn**	**02 35 41.2**	**+1.1**
PB06	**IPOC Station P**	**2.61**	**305**	‖ *i* P	**Pn**	**02 35 44.3**	**+1.0**
PB06				*i* S	**Sn**	**02 36 16.4**	**-0.8**
PB06				IAML		02 36 18.9	
	comp=N,646nm,0.1s						
PB06	**IPOC Station P**	**2.61**	**305**		**Pn**	**02 35 44.3**	**+1.0**
PB14	**IPOC Station P**	**2.91**	**261**	‖ *i* P	**Pn**	**02 35 47.3**	**+0.3**
PB14	**IPOC Station P**	**2.91**	**261**	Pn	**Pn**	**02 35 47.2**	**+0.2**
PB09	**IPOC Station P**	**3.02**	**322**	‖ *i* P	**Pn**	**02 35 49.6**	**+1.3**
PB09				*i* S	**Sn**	**02 36 26.4**	**+0.1**
PB09				IAML		02 36 27.9	
	comp=N,424nm,0.5s						
PB09	**IPOC Station P**	**3.02**	**322**	Pn	**Pn**	**02 35 49.6**	**+1.3**
PB05	**IPOC Station P**	**3.03**	**296**	‖ *i* P	**Pn**	**02 35 48.7**	**+0.4**
PB10	**IPOC Station P**	**3.10**	**282**	‖ *i* P	**Pn**	**02 35 49.9**	**+0.7**
PB10				*i* S	**Sn**	**02 36 25.9**	**-1.9**
PB10	**IPOC Station P**	**3.10**	**282**	Pn	**Pn**	**02 35 49.8**	**+0.7**
AC02	**Maricunga**	**3.12**	**213**	Pn	**Pn**	**02 35 50.8**	**+1.0**
PB03	**IPOC Station P**	**3.15**	**312**	‖ *i* P	**Pn**	**02 35 50.4**	**+0.5**
PB04	**IPOC Station P**	**3.26**	**304**	*eP*	**Pn**	**02 35 51.5**	**+0.3**
PB04				IAML		02 36 31.6	
	comp=N,449nm,0.4s						
PB04	**IPOC Station P**	**3.26**	**304**	Pn	**Pn**	**02 35 51.7**	**+0.5**
PB07	**IPOC Station P**	**3.47**	**315**	‖ *i* P	**Pn**	**02 35 54.1**	**+0.3**
PB07	**IPOC Station P**	**3.47**	**315**	Pn	**Pn**	**02 35 54.1**	**+0.3**
AC01	**Pan de Azucar**	**3.60**	**237**	Pn	**Pn**	**02 35 54.7**	**-0.6**
PB01	**IPOC Station P**	**3.77**	**326**	*i* P	**Pn**	**02 35 57.4**	**-0.2**
PB01	**IPOC Station P**	**3.77**	**326**	Pn	**Pn**	**02 35 57.4**	**-0.2**
GO03	**Copiap**	**4.31**	**218**	*i* P	**Pn**	**02 36 03.6**	**-0.8**
GO03	**Copiap**	**4.31**	**218**	Pn	**Pn**	**02 36 03.5**	**-0.9**
PB08	**IPOC Station P**	**4.42**	**336**	*i* P	**Pn**	**02 36 06.7**	**+0.5**
PB08	**IPOC Station P**	**4.42**	**336**	Pn	**Pn**	**02 36 06.7**	**+0.5**
TA01	**Diego Aracena**	**4.53**	**323**	Pn	**Pn**	**02 36 06.8**	**-0.5**
PB11	**IPOC Station P**	**4.96**	**333**		**Pn**	**02 36 12.3**	**-0.7**
AC04	**Llanos de Chal**	**5.26**	**220**	Pn	**Pn**	**02 36 15.2**	**-1.5**
PSGCX	**Pisagua**	**5.31**	**329**	Pn	**Pn**	**02 36 16.6**	**-1.0**
MNMC	**Minye Minye**	**5.50**	**336**	Pn	**Pn**	**02 36 19.7**	**-0.6**
LCO	**Las Campanas**	**5.70**	**212**	Pn	**Pn**	**02 36 20.7**	**-2.0**
PB16	**IPOC Station P**	**6.21**	**340**	Pn	**Pn**	**02 36 29.5**	**-0.3**
GO04	**Tololo Observa**	**6.73**	**207**	Pn	**Pn**	**02 36 34.9**	**-1.4**
CO03	**El Pedregal**	**7.28**	**204**	Pn	**Pn**	**02 36 42.3**	**-1.0**
CO02	**Combarbal**	**7.72**	**205**	Pn	**Pn**	**02 36 47.0**	**-2.3**
LPAZ	**La Paz** comp=N,5.2nm,0.3s,baz=148,slow=6.0,SNR=190	**7.92**	**354**	P	**Pn**	**02 36 52.8**	**+0.3**
LPAZ				S	**Sn**	**02 38 18.9**	**-2.7**
	comp=N,0.3nm,0.3s,baz=338,slow=17,SNR=2.6						
LPAZ	**La Paz**	**7.92**	**354**	Pn	**Pn**	**02 36 52.4**	**-0.1**
SIV	**San Ignacio** comp=N,1.1nm,0.3s,baz=238,slow=14,SNR=19	**10.02**	**36**	P	**Pn**	**02 37 16.9**	**-2.7**
BO02	**Sierra Bellavi**	**10.99**	**195**	Pn	**Pn**	**02 37 32.6**	**+0.6**
BI02	**San Fabin de**	**12.89**	**195**	P

MKAR Makanchi Array 146.83 40 PKPbc 02 54 21.8 +0.6

IDC 08 02:35:20.8±2.1,1°34'S×127°25'E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.4/38, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=161.4km s-min=27.2km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.74	160	P	P	02 39 52.7	+0.3
	0.2nm,0.3s,baz=338,slow=11,SNR=6.8						
ASAR	Alice Springs	23.11	164	P	P	02 40 28.4	-0.2
	0.5nm,0.5s,baz=349,slow=13,SNR=5.4						
MKAR	Makanchi Array	62.02	327	P	P	02 45 43.1	0.0
	0.4nm,0.5s,baz=126,slow=7.3,SNR=4.9						

WEL 08 02:36:41.2,46°S±7°×16°7E±°, h5km±7km, M3.5/9, ML3.6/9, MLv3.5/9, Error ellipse: s-maj=0.0km s-min=0.0km az=54.5, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	0.79	112	P	Pb	02 36 58.0	+0.6
MLZ	Mavora Lakes	0.89	75	P	Pg	02 36 58.0	-0.2
MLZ				S	Sb	02 37 11.6	+0.4
MSZ	Milford Sound	1.18	39	P	Pg	02 37 00.0	-3.6
MSZ				S	Sg	02 37 19.1	+0.2
APZ	The Paps	1.45	149	P	Pb	02 37 08.6	0.0
APZ				S	Sg	02 37 29.4	+1.6
WKZ	Wanaka	1.68	64	P	Pn	02 37 10.8	-0.5
WKZ				S	Sg	02 37 35.2	-0.1
EAZ	Earnscleugh	1.74	79	P	Pn	02 37 11.9	-0.1
TUZ	Tuapeka	1.94	102	P	Pg	02 37 18.2	-0.2
JCZ	Jackson Bay	2.03	42	P	Pn	02 37 14.7	-1.4
LBZ	Lake Benmore	2.63	64	P	Pn	02 37 23.8	-0.4
ODZ	Otahua Downs	2.70	80	P	Pn	02 37 23.9	-1.2
FOZ	Fox Glacier	2.93	46	P	Pn	02 37 30.5	+2.1
TMZ	Timaru	3.16	69	P	Pn	02 37 30.9	-0.6
GCSZ	Gaunt Creek Bo	3.35	48	P	Pn	02 37 35.7	+1.6
ARCZ	Arundel	3.46	63	P	Pn	02 37 34.9	-0.8
RPZ	Rata Peaks	3.51	59	P	Pn	02 37 34.9	-1.5
RPZ				S	Sn	02 38 20.2	+2.0
MQZ	McQueen's Vall	4.52	67	P	Pn	02 37 49.2	-1.0
LTZ	Lake Taylor	4.78	56	P	Pn	02 37 53.7	-0.1
LTZ				S	Sn	02 38 51.7	+2.2
DSZ	Denniston Nort	5.24	44	P	Pn	02 37 59.1	-1.0
THZ	Tophouse	5.80	51	P	Pn	02 38 09.5	+1.7
QRZ	Quartz Range	6.30	43	P	Pn	02 38 12.4	-2.2

WEL 08 02:39:46.6,46°S±4°×16°7E±°, h5km±7km, M3.5/8, ML3.7/8, MLv3.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=63.3, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.56	182	P	Pb	02 39 59.0	+0.1
PYZ				S	Sb	02 40 07.9	+0.7
WHZ	Wether Hill Ro	0.91	109	P	Pb	02 40 05.4	+0.5
WHZ				S	Sn	02 40 19.7	+0.1
MLZ	Mavora Lakes	1.02	77	P	Pg	02 40 05.5	-0.6
MLZ				S	Sg	02 40 19.8	+0.5
MSZ	Milford Sound	1.27	43	P	Pg	02 40 07.4	-3.6
MSZ				S	Sg	02 40 26.0	-1.4
APZ	The Paps	1.51	145	P	Pg	02 40 15.7	+0.1
WKZ	Wanaka	1.81	65	P	Pn	02 40 18.1	-0.3
WKZ				S	Sn	02 40 41.9	+0.2
EAZ	Earnscleugh	1.87	79	P	Pn	02 40 19.1	-0.1
TUZ	Tuapeka	2.07	101	P	Pb	02 40 24.1	-0.6
JCZ	Jackson Bay	2.13	45	P	Pn	02 40 23.1	+0.2
JCZ				S	Sb	02 40 51.9	-0.6
HHSZ	Highcliff Hill	2.73	97	P	Pb	02 40 34.1	-1.9
HHSZ				S	Sb	02 41 08.3	-1.5
LBZ	Lake Benmore	2.75	65	P	Pn	02 40 32.3	+0.9
ODZ	Otahua Downs	2.83	80	P	Pn	02 40 31.4	-1.1
FOZ	Fox Glacier	3.04	48	P	Pn	02 40 37.8	+2.5
TMZ	Timaru	3.28	70	P	Pn	02 40 38.2	-0.5
GCSZ	Gaunt Creek Bo	3.46	50	P	Pn	02 40 42.8	+1.8
ARCZ	Arundel	3.59	64	P	Pn	02 40 42.3	-0.6
RPZ	Rata Peaks	3.63	60	P	Pn	02 40 42.3	-1.2
RPZ				S	Sn	02 41 27.6	+0.9
WACZ	Wakanui South	4.01	67	P	Pn	02 40 48.8	+0.1
OXZ	Oxford	4.44	61	P	Pn	02 40 53.6	-1.1
MQZ	McQueen's Vall	4.65	68	P	Pn	02 40 57.0	-0.3
LTZ	Lake Taylor	4.89	57	P	Pn	02 41 00.4	-0.4
GVZ	Greta Valley S	5.25	62	P	Pn	02 41 04.4	-1.3
DSZ	Denniston Nort	5.34	46	P	Pn	02 41 05.9	-1.1
QRZ	Quartz Range	6.39	44	P	Pn	02 41 19.1	-2.3
PXZ	Pawanui	9.31	57	P	Pn	02 42 04.4	+3.1
KNZ	Kokohu	10.45	55	P	Pn	02 42 15.3	-1.6

IDC 08 02:43:38.9±4.3,5°30S×153°44E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/37, mbtmp3.6/5, Error ellipse: s-maj=151.3km s-min=31.8km az=111.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.61	230	P	P	02 48 51.4	-0.3
	0.8nm,0.8s,baz=53,slow=9.4,SNR=4.9						
ASAR	Alice Springs	26.23	224	P	P	02 49 15.8	0.0
	0.6nm,1.0s,baz=45,slow=11,SNR=3.2						
MKAR	Makanchi Array	81.11	319	P	P	02 55 56.2	-0.1
	0.1nm,0.5s,baz=96,slow=9.0,SNR=1.8						
ZALV	Zalesovo Beam	81.92	326	P	P	02 55 59.9	-0.4
	0.4nm,0.2s,baz=92,slow=4.8,SNR=4.1						
KURBB	Kurchatov Arra	84.58	322	P	P	02 56 14.9	+0.8
	0.3nm,0.8s,baz=112,slow=3.9,SNR=4.5						
TORD	Torodi Ar. Bea	151.06	288	PKPbc	PKPbc	03 03 34.7	-0.3
	1.2nm,0.8s,baz=90,slow=2.1,SNR=5.9						

*DJA **08** 03:14:30.9±0.2,4°S±3°×13°8E±°, h10km, M4.6/13, mB4.9/5, mb4.8/13, MLv4.6/7, Mw(mB)4.2/5*
*IDC **08** 03:14:30.1±0.7,4.29S×137°95E, h0km, mb4.2/7, mb1 4.5/15, mb1mx4.3/32, mbtmp4.4/15, ML4.4/7, MS3.4/12, Ms1 3.4/12, ms1mx3.2/32, Error ellipse: s-maj=21.2km s-min=15.1km az=74.0*
*NEIC **08** 03:14:36.5±2.6,4°49S±0°08×137°73E±0°08, h58km±8km, mb4.5/15, Error ellipse: s-maj=14.2km s-min=9.0km az=222.0*

ISC 08 03:14:34.5±0.4,4°49S±0°05×137°85E±0°04, h35km, n65, σ2s01/71, mb4.3/13, MS3.3/5, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAMI	Wamena	1.05	55	P	Pn	03 14 50.6	-2.2
GENI	Genyem	2.98	51	P	Pn	03 15 17.6	-1.8
GENI				S	Sn	03 15 52.3	-1.7
SRPI	Serui, Papua	3.06	328	P	Pn	03 15 17.7	-2.7
SRPI				S	Sn	03 15 53.9	-1.9
JAY	Jayapura	3.46	56	Pn	Pn	03 15 24.0	-2.0
	22nm,0.3s,baz=217,slow=11,SNR=26						
JAY				Lg	Lg	03 16 08.6	
	7.7nm,0.3s,baz=39,slow=11,SNR=5.2						
JAY	Jayapura	3.46	56	P	Pn	03 15 22.1	-3.9
JAY				S	Sn	03 16 04.2	-1.6
BAKI	Biak	3.71	332	P	Pn	03 15 26.3	-3.1
FAKI	Fak Fak	5.80	285	Pn	Pn	03 15 56.9	-1.2
FAKI				Sn	Sn	03 17 04.1	+0.6
FAKI	Fak Fak	5.80	285	P	Pn	03 15 57.9	-0.3
	0.3nm104nm,0.9s						
FAKI				S	Sn	03 17 04.1	+0.6
	0.3nm104nm,0.9s						
SIJI	Sorong	7.49	298	Pn	Pn	03 16 20.8	-0.6
	5.2nm,0.3s,baz=70,slow=11,SNR=7.7						
SIJI				LR	LR	03 19 32.9	
	comp=Z,353nm,19.6s,baz=129,slow=40						
SWI	Sorong	7.50	299	P	Pn	03 16 20.6	-0.9
	0.2nm63nm,0.7s						
PMG	Port Moresby	10.45	118	Pn	Pn	03 17 02.6	+0.5
	4.9nm,0.3s,baz=318,slow=4.6,SNR=14						
PMG				LR	LR	03 23 05.2	
	comp=Z,338nm,18.7s,baz=346,slow=49						
PMG	Port Moresby	10.45	118	Pn	Pn	03 17 03.3	+1.3
MTN	Manton Dam	10.63	218		Pn	03 17 05.3	+0.9
COEN	Coen	10.78	151	Pn	Pn	03 17 08.0	+1.5
SANI	Sanana	12.09	281	P	Pn	03 17 21.1	-3.3
	528nm46nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	14.45	248	Pn	Pn	03 17 56.7	-0.1
SOEI	Soe	14.45	248	P	Pn	03 17 55.2	-1.6
	92nm,0.9s						
BATI	Baumata	15.17	247	Pn	P	03 18 09.1	-1.9
	3.0nm,0.3s,baz=5.3,slow=8.1,SNR=4.4						
BATI	Baumata	15.17	247	P	P	03 18 16.3	+5.3
WB0	Warramunga Arr	15.56	192		Pn	03 18 07.9	-3.5
WB0				IAmb	IAmb	03 18 25.5	
	comp=Z,30nm,0.6s						
GTOI	Gorontalo	15.67	289	P	Pn	03 18 14.0	+1.1
	comp=Z,380nmcomp=Z,28nm,0.8s						
WR0	Warramunga Arr	15.71	192	Pn	Pn	03 18 13.6	+0.2
WR0				IAmb	IAmb	03 18 32.6	
	comp=Z,22nm,0.8s						
WB2	Warramunga Arr	15.73	192		Pn	03 18 13.7	+0.1
WB2				IAmb	IAmb	03 18 32.5	
	comp=Z,36nm,0.6s						
WRA	Warramunga Arr	15.74	192	Pn	Pn	03 18 13.9	+0.2
	comp=Z,0.8nm,0.3s,baz=18,slow=13,SNR=18						
WRA				Sn	Sn	03 21 04.3	-2.8
	comp=Z,1.0nm,0.3s,baz=11,slow=22,SNR=5.7						
WRA				LR	LR	03 24 50.8	
	comp=Z,106nm,19.6s,baz=10.0,slow=39						
WRA	Warramunga Arr	15.74	192	P	Pn	03 18 12.0	-1.8
APSI	Ampana	16.56	282	P	Pn	03 18 23.3	-1.0
	comp=Z,596nmcomp=Z,34nm,1.1s						
DAV	Davao City (W)	16.79	313	LR	LR	03 25 28.3	
	comp=Z,76nm,20.0s,baz=180,slow=39						
CTA	Charters Tower	17.54	153	P	P	03 18 38.4	+1.1
	comp=Z,1.8nm,0.3s,baz=335,slow=12,SNR=24						
CTAO	Charters Tower	17.54	153	P	P	03 18 39.0	+1.8
CTAO				IAmb	IAmb	03 18 43.2	
	comp=Z,23nm,0.8s						
BNSI	Bone	17.69	270	P	Pn	03 18 37.8	-0.5
TOLI2	Tolitoli	17.94	288		Pn	03 18 41.2	-0.2
TOLI2				IAmb	IAmb	03 18 50.4	
	comp=Z,22nm,0.8s						
KAPI	Kappang	18.04	268	LR	LR	03 26 39.2	
	comp=Z,81nm,20.4s,baz=60,slow=40						
FITZ	Fitzroy Crossi	18.04	220	P	P	03 18 44.0	+1.2
	comp=Z,0.6nm,0.3s,baz=42,slow=13,SNR=13						
FITZ				S	Sn	03 21 58.0	-5.1
	comp=Z,0.5nm,0.3s,baz=170,slow=11,SNR=6.7						
FITZ				LR	LR	03 26 18.4	
	comp=Z,157nm,18.3s,baz=42,slow=39						
FITZ	Fitzroy Crossi	18.04	220	Pn	P	03 18 44.1	+1.2
FITZ					Sn	03 21 59.9	-3.1
AS31	Alice Springs	19.44	191	Pn	Pn	03 19 00.2	+0.6
AS31				IAmb	IAmb	03 19 21.2	
	comp=Z,10nm,0.6s						
ASAR	Alice Springs	19.44	191	P	Pn	03 19 01.8	+2.2
	comp=Z,4.4nm,0.3s,baz=14,slow=11,SNR=204						
ASAR				S	S	03 22 31.0	-5.3
	comp=Z,0.2nm,0.3s,baz=9.0,slow=29,SNR=4.3						
ASAR				LR	LR	03 27 05.5	
	comp=Z,106nm,21.2s,baz=16,slow=38						
ASAR	Alice Springs	19.44	191		P	03 18 58.8	+0.5
ASAR					S	03 22 35.7	-0.6
HNR	Honiara	22.47	104	LR	LR	03 29 33.5	
	comp=Z,87nm,18.1s,baz=278,slow=40						
STKA	Stephens Creek	27.47	173	P	P	03 20 19.6	+2.0
	comp=Z,1.3nm,0.4s,baz=349,slow=9.5,SNR=7.6						
STKA				LR	LR	03 31 07.9	
	comp=Z,116nm,18.5s,baz=351,slow=36						
STKA	Stephens Creek	27.47	173	P	P	03 20 18.4	+0.9
BBOO	Buckleboo	28.23	183	P	P	03 20 23.5	-0.7
BBOO				IAmb	IAmb	03 21 24.3	
	comp=Z,26nm,1.2s						
SANVU	Saraoutou	30.85	113	P	P	03 20 47.3	-0.4
MORW	Morawa	32.02	218	P	P	03 20 56.7	-1.2
MORW				IAmb	IAmb	03 21 08.2	
	comp=Z,42nm,1.4s						
NWAO	Narrogin (SRO)	34.22	212	P	P	03 21 20.1	+3.0
	comp=Z,6.6nm,0.7s,baz=72,slow=13,SNR=1.7						
NWAO	Narrogin (SRO)	34.22	212	P	P	03 21 17.6	+0.5
JWT	Wachi	39.63	357	P	P	03 22 02.1	-0.8
KSRS	Korea Array	42.74	348	LR	LR	03 40 15.9	
	comp=Z,36nm,18.6s,baz=180,slow=36						
CMAR	Chiang Mai Arr	44.60	302	P	P	03 22 44.2	+0.4
	comp=Z,1.1nm,0.4s,baz=129,slow=6.6,SNR=9.6						
CMAR				LR	LR	03 43 12.9	
	comp=Z,29nm,19.0s,baz=188,slow=39						
CMAR	Chiang Mai Arr	44.60	302	P	P	03 22 43.2	-0.6
HHC	Hu-ho-hao-te	51.14	334	eP	P	03 23 36.3	+2.1
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,7.4s						
LZH	Lanzhou	51.40	325	eP	P	03 23 40.9	+4.6
LZH				pP	pP	03 23 45.3	-1.8
LZH				sP	sP	03 23 48.3	-3.0
LZH				pmax	pmax		
	comp=Z,22nm,0.9s						
GTA	Gaotai	56.00	325	eP	P	03 24 11.1	+1.2
GTA				pP	pP	03 24 17.0	-3.8
GTA				sP	sP	03 24 19.7	-5.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SONM	Songino Array	58.96	336	P	P	03 24 30.7	+0.1
	comp=Z,0.3nm,0.7s,baz=150,slow=10,SNR=4.5						
SONM				LR	LR	03 48 31.2	
	comp=Z,45nm,21.7s,baz=131,slow=35						
SONM	Songino Array	58.96	336	P	P	03 24 30.1	-0.6
SONM				IAmb	IAmb	03 24 36.7	
	comp=Z,2.7nm,1.6s						
WMQ	Urumqi	65.87	322	eP	P	03 25 19.7	+2.8
MKAR	Makanchi Array	70.67	323	P	P	03 25 47.1	+0.2
	comp=Z,1.2nm,0.7s,baz=111,slow=6.6,SNR=9.9						
ZALV	Zalesovo Beam	73.04	330	P	P	03 26 02.8	+2.0
	comp=Z,0.4nm,0.4s,baz=107,slow=4.8,SNR=1.8						
ZALV	Zalesovo Beam	73.04	330	P	P	03 26 01.5	+0.7
VNDA	Vanda	74.10	175	P	P	03 26 08.7	+2.0
	comp=Z,1.0nm,0.6s,baz=323,slow=6.6,SNR=13						
ILAR	Eielson Array	87.80	25	P	P	03 27 18.1	-1.7
	comp=Z,1.5nm,0.9s,baz=258,slow=3.9,SNR=11						
TORD	Torodi Ar. Bea	135.89	284	PKP	PKiKP	03 33 54.0	-0.4
	comp=Z,0.6nm,0.6s,baz=62,slow=2.3,SNR=3.2						
CPUP	Villa Florida	146.02	155	PKPbc	PKPab	03 34 12.1	+0.1
	comp=Z,1.0nm,0.5s,baz=213,slow=1.9,SNR=4.3						
LPAZ	La Paz	147.04	129	PKPbc	PKPab	03 34 16.7	-0.3
	comp=Z,2.3nm,0.8s,baz=303,slow=3.2,SNR=5.6						
LPAZ	La Paz	147.04	129	PKPdf	PKPdf	03 34 12.5	-0.9
SIV	San Ignacio	152.35	138	PKPbc	PKiKP	03 34 28.5	+0.2
	comp=Z,1.0nm,0.6s,baz=194,slow=4.2,SNR=4.3						

*ANF **08** 03:15:48.3±0.3,36°27N×97°27W, h5km, ML3.5/13, Error ellipse: s-maj=3.7km s-min=2.6km az=122.0*
*TUL **08** 03:15:48.1±1.4,36°27N±0°01×97°27W±0°01, h5km±7km, ML3.0, mb_Lg3.0/76(NEIC), Error ellipse: s-maj=1.7km s-min=1.1km az=192.0*
*NEIC **08** 03:15:48.3±1.1,36°27N±0°02×97°28W±0°02, h3km±7km, Error ellipse: s-maj=2.7km s-min=1.8km az=77.0*

ISC 08 03:15:48.2±1.1,36°27N±0°02×97°28W±0°02, h2km±11km, n101, σ0s62/101, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QUOK	Quay	0.47	102		Pg	03 15 57.3	+0.1
QUOK				Sg	Sg	03 16 04.0	+0.6
OK031	S. Brethren Rd	0.47	131		Pg	03 15 57.4	+0.1
OK031				Sg	Sg	03 16 03.9	+0.5
OK029	Liberty Lake	0.49	197		Pg	03 15 57.6	0.0
OK029				Sg	Sg	03 16 04.6	+0.6
OK030	Cody Creek RV	0.53	130		Pg	03 15 58.4	+0.1
OK030				Sg	Sg	03 16 05.5	+0.4
CROK	Carrier	0.62	293	Pg	Pg	03 16 00.1	+0.1
BCOK	Bluff Creek, N	0.67	204		Pg	03 16 00.9	0.0
BCOK				Sg	Sg	03 16 10.2	+0.6
OK025	Westminster Rd	0.69	184		Pg	03 16 01.3	-0.1
OK001	Jones High Sch	0.71	181	Pg	Pg	03 16 01.7	-0.1
GC02	Grant County #	0.75	321	Pg	Pg	03 16 02.4	-0.1
KAN13	South Haven SW	0.76	348		Pg	03 16 02.7	-0.1
KAN13				Sg	Sg	03 16 13.3	+0.6
OKCFA	Oklahoma City	0.86	189	Pg	Pg	03 16 04.4	-0.3
OKCFA	Oklahoma City	0.86	189	P	Pg	03 16 04.5	-0.3
	baz=9.9,SNR=27						
OKCFA	Oklahoma City	0.86	189	P		03 16 04.5	
	baz=9.9,SNR=27						
OKCSW	OKLAHOMA CITY	0.87	189		Pg	03 16 04.5	-0.4
KAN14	Manchester OK	0.88	321		Pg	03 16 04.9	-0.2
KAN14					Sg	03 16 16.7	+0.2
T35A	Sooner Cattle	0.89	43		Pg	03 16 05.1	-0.2
T35A				Sg	Sg	03 16 17.0	0.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T35B	Sooner Cattle	0.89	43	P	Pg	03 16 05.1	-0.2
	baz=223,SNR=97						
T35B				S	Sg	03 16 17.1	+0.1
	baz=223						
T35B	Sooner Cattle	0.89	43	P		03 16 05.1	
	baz=223,SNR=97						
T35B				S		03 16 17.1	
	baz=223						
KAN09	Caldwell North	0.91	343		Pg	03 16 05.5	-0.2
KAN09				Sg	Sg	03 16 17.7	+0.3
OK032	Salt Plains WL	0.92	306		Pg	03 16 05.5	-0.4
OK032				Sg	Sg	03 16 18.7	+0.8
KAN01	Argonia South	0.96	337		Pg	03 16 06.4	-0.3
KAN05	Bluff City Nor	0.96	331		Pb	03 16 07.3	-0.4
KAN05					Sg	03 16 19.6	+0.3
FNO	Franklin	1.01	186		Pg	03 16 07.7	0.0
KAN10	Anthony SW Sta	1.08	323		Pg	03 16 08.5	-0.3
KAN10				Sg	Sg	03 16 22.9	0.0
KAN08	Anthony NE Sta	1.11	330		Pg	03 16 09.2	-0.3
KAN12	Harper NE Stat	1.18	331		Pg	03 16 10.5	-0.3
KAN12				Sg	Sg	03 16 26.1	-0.1
TUL1	Leonard	1.26	106	P	Pg	03 16 10.9	-1.3
	baz=287						
TUL1	Leonard	1.26	106	P		03 16 10.9	
	baz=287						
U32A	Winter Ranch,	1.40	275		Pn	03 16 13.7	-1.0
U32A				lAmb_Lg		03 16 34.4	
	comp=Z,64nm,0.8s						
U32A	Winter Ranch,	1.40	275	P	Pn	03 16 13.8	-1.0
	baz=94,SNR=57						
U32A	Winter Ranch,	1.40	275	P		03 16 13.8	
	baz=94,SNR=57						
X34A	Smith Ranch, M	1.72	195	Pn	Pb	03 16 19.8	-0.8
WMOK	Wichita Mounta	1.96	219	Pn	Pn	03 16 22.5	0.0
WMOK	Wichita Mounta	1.96	219	P	Pn	03 16 22.6	+0.1
	baz=38,SNR=51						
WMOK				S	Sb	03 16 49.3	-0.2
	baz=38						
WMOK	Wichita Mounta	1.96	219	P		03 16 22.6	
	baz=38,SNR=51						
WMOK				S		03 16 49.3	
	baz=38						
X37A	Clayton	2.29	137	Pn	Pn	03 16 27.3	+0.3
X37A				lAmb_Lg		03 17 01.6	
	comp=Z,72nm,0.7s						
X37A	Clayton	2.29	137	P	Pn	03 16 27.0	0.0
	baz=318,SNR=62						
X37A	Clayton	2.29	137	P		03 16 27.0	
	baz=318,SNR=62						
U38A	Gravette	2.34	85		Pn	03 16 28.3	+0.5
R32A	Long Quarter,	2.44	332	Pn	Pn	03 16 29.5	+0.5
R32A	Long Quarter,	2.44	332	S	Sn	03 16 60.0	+0.6
	baz=152						
R32A	Long Quarter,	2.44	332	S		03 16 60.0	
	baz=152						
HHAR	Hobbs	2.70	89	Pn	Pn	03 16 32.9	+0.3
HHAR	Hobbs	2.70	89	P	Pn	03 16 33.0	+0.3
	baz=271,SNR=20						
HHAR	Hobbs	2.70	89	P		03 16 33.0	
	baz=271,SNR=20						
KSU1	Kansas State U	2.88	10	Pn	Pn	03 16 36.4	+1.3
Z35A	Perchaven, San	2.93	180	Pn	Pn	03 16 36.1	+0.3
Z35A	Perchaven, San	2.93	180	P	Pn	03 16 36.2	+0.4
	baz=360,SNR=6.5						
Z35A	Perchaven, San	2.93	180	P		03 16 36.2	
	baz=360,SNR=6.5						
W39A	Magazine	3.04	110	Pn	Pn	03 16 37.5	+0.2
W39A				lAmb_Lg		03 17 27.5	
	comp=Z,33nm,0.7s						
CBKS	Cedar Bluff	3.21	323	Pn	Pn	03 16 40.0	+0.3
S39A	Bolivar	3.47	65	Pn	Pn	03 16 43.8	+0.6
S39A				lAmb_Lg		03 17 43.9	
	comp=Z,40nm,0.7s						
S39A	Bolivar	3.47	65	P	Pn	03 16 43.8	+0.6
	baz=247,SNR=14						
S39A	Bolivar	3.47	65	P		03 16 43.8	
	baz=247,SNR=14						
MIAR	Mount Ida	3.48	119		Pn	03 16 43.7	+0.4
MIAR				lAmb_Lg		03 17 44.9	
	comp=Z,26nm,0.7s						
MIAR	Mount Ida	3.48	119	P	Pn	03 16 43.7	+0.4
	baz=301,SNR=25						
MIAR	Mount Ida	3.48	119	P		03 16 43.7	
	baz=301,SNR=25						
Z38A	Mt. Pleasant	3.54	147	Pn	Pn	03 16 43.6	-0.7
Z38A				lAmb_Lg		03 17 48.8	
	comp=Z,46nm,0.8s						
U40A	Yellville	3.57	87		Pn	03 16 44.9	+0.3
U40A				lAmb_Lg		03 17 46.9	
	comp=Z,31nm,0.8s						
U40A	Yellville	3.57	87	P	Pn	03 16 44.8	+0.1
	baz=270,SNR=12						
U40A	Yellville	3.58	87	P		03 16 44.8	
	baz=270,SNR=12						
U40A				P		03 16 44.8	
	baz=270,SNR=12						
AMTX	Amarillo	3.84	250	Pn	Pn	03 16 49.1	+0.6
AMTX				lAmb_Lg		03 17 53.6	
	comp=Z,28nm,0.8s						
X40A	Basin Creek Fa	4.04	115	Pn	Pn	03 16 51.7	+0.6
MGMO	Mountain Grove	4.12	76	lAmb_Lg		03 18 01.0	
	comp=Z,22nm,0.7s						
WHAR	Wooly Hollow	4.17	102	Pn	Pn	03 16 52.5	-0.4
FCAR	Ozark Folk Cen	4.19	94	Pn	Pn	03 16 53.9	+0.8
FCAR				lAmb_Lg		03 18 02.7	
	comp=Z,25nm,0.8s						
W41B	Gary Mavity, V	4.24	103	P	Pn	03 16 53.6	-0.1
	baz=286,SNR=12						
W41B	Gary Mavity, V	4.24	103	P		03 16 53.6	
	baz=286,SNR=12						
WHTX	Lake Whitney,	4.27	182	Pn	Pn	03 16 53.7	-0.4
WHTX	Lake Whitney,	4.27	182	P	Pn	03 16 53.8	-0.4
	baz=2.0						
WHTX	Lake Whitney,	4.27	182	P		03 16 53.8	
	baz=2.0						

OGNE					IAmb_Lg			03 19 08.2			
	comp=Z,20nm,0.8s										
SLM	**Saint Louis**	**6.08**	**65**		IAmb_Lg			03 19 08.0			
	comp=Z,22nm,0.8s										
JCT	**Junction City**	**6.15**	**201**		Pn		**Pn**	**03 17 19.1**	**-1.0**		
JCT					IAmb_Lg			03 19 06.7			
	comp=Z,15nm,1.1s										
K31A	**O'Neill**	**6.45**	**350**		IAmb_Lg			03 19 20.3			
	comp=Z,29nm,0.8s										
SCIA	**State Center**	**6.46**	**28**		Pn		**Pn**	**03 17 25.3**	**+1.1**		
S44A	**Carbondale**	**6.58**	**75**		Pn		**Pn**	**03 17 25.0**	**-0.9**		
S44A					IAmb_Lg			03 19 16.1			
	comp=Z,20nm,0.8s										
SIUC	**Southern Illin**	**6.61**	**75**		Pn		**Pn**	**03 17 25.2**	**-1.2**		
OXF	**Oxford**	**6.66**	**103**		Pn		**Pn**	**03 17 25.9**	**-1.2**		
OXF					IAmb_Lg			03 19 31.2			
	comp=Z,19nm,0.9s										
K38A	**Parkersburg**	**7.26**	**27**		Pn		**Pn**	**03 17 33.8**	**-1.5**		
L40A	**Anamosa**	**7.46**	**37**		Pn		**Pn**	**03 17 38.1**	**+0.1**		
L40A					IAmb_Lg			03 19 46.5			
	comp=Z,16nm,0.8s										
ISCO	**Idaho Springs**	**7.46**	**301**		Pn		**Pn**	**03 17 39.0**	**+0.7**		
ECSD	**EROS Data Cent**	**7.47**	**4**		Pn		**Pn**	**03 17 37.6**	**-0.6**		
HDIL	**Hopedale**	**7.59**	**53**		Pn		**Pn**	**03 17 40.3**	**+0.5**		
PHWY	**Pilot Hill**	**8.12**	**311**		IAmb_Lg			03 20 16.2			
	comp=Z,11nm,1.0s										
MNTX	**Cornudas Mount**	**8.13**	**238**		Pn		**Pn**	**03 17 47.4**	**+0.2**		
SUSD	**Miller**	**8.27**	**352**		IAmb_Lg			03 20 28.5			
	comp=Z,9.0nm,0.8s										
JFWS	**Jewell Farm**	**8.57**	**37**		Pn		**Pn**	**03 17 55.9**	**+2.6**		
WCI	**Wyandotte Cave**	**8.97**	**74**		IAmb_Lg			03 20 31.7			
	comp=Z,16nm,0.9s										
RSSD	**Black Hills**	**9.39**	**329**		IAmb_Lg			03 21 00.3			
	comp=Z,6.8nm,0.9s										
K22A	**Casper**	**9.57**	**315**		IAmb_Lg			03 21 12.4			
	comp=Z,11nm,1.0s										
F33A	**5 Mile Ranch,**	**9.59**	**4**		Pn		**Pn**	**03 18 07.3**	**+0.1**		
W50A	**Signal Mountai**	**9.79**	**93**		IAmb_Lg			03 21 06.6			
	comp=Z,11nm,0.9s										
P48A	**Milroy**	**9.90**	**68**		IAmb_Lg			03 21 01.7			
	comp=Z,12nm,0.8s										

ARE ***08*** *03:26:51±3.4, 15°.96S±0°.09×73°.7W±0°.1, h85km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=138.0*
NEIC ***08*** *03:26:53.4±1.8, 16°.15S±0°.04×73°.61W±0°.09, h110km±9km, mb3.8/3, ML4.1(ARE), Error ellipse: s-maj=11.8km s-min=5.0km az=84.0*
IDC ***08*** *03:26:53.8±2.1, 15°.89S×73°.51W, h98km±20km, mb3.6/5, mb1 3.6/9, mb1mx3.4/31, mbtmp3.9/9, MS3.0/1, Ms1 3.0/1, ms1mx2.2/33, Error ellipse: s-maj=27.5km s-min=21.0km az=58.0*

ISC 08 03:26:53.0±0.7, 16°.13S±0°.07×73°.57W±0°.08, h100km, n31, σ1§35/42, mb3.7/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**4.46**	**120**		**Pn**	**03 28 00.1**	**+1.1**
PB16				Sn	**Sn**	**03 28 49.6**	**-0.4**
PSGCX	**Pisagua**	**4.76**	**137**	Pn	**Pn**	**03 28 03.3**	**+0.7**
PSGCX				Sn	**Sn**	**03 28 56.5**	**-0.2**
MNMC	**Minye Minye**	**4.83**	**129**	Pn	**Pn**	**03 28 04.1**	**+0.5**
MNMC				Sn	**Sn**	**03 29 00.2**	**+1.7**
PB11	**IPOC Station P**	**5.19**	**135**		**Pn**	**03 28 09.4**	**+0.9**
PB11				Sn	**Sn**	**03 29 05.8**	**-1.5**
NNA	**Nana**	**5.20**	**322**	P	**Pn**	**03 28 07.4**	**-1.0**
	3.2nm,0.3s,baz=157,slow=12,SNR=9.2						
NNA				S	**Sn**	**03 29 09.3**	**+2.1**
	6.1nm,0.3s,baz=38,slow=22,SNR=6.9						
NNA	**Nana**	**5.20**	**322**	Pn	**Pn**	**03 28 08.0**	**-0.4**
NNA					**Sn**	**03 29 07.4**	**+0.2**
LPAZ	**La Paz**	**5.23**	**93**	P	**Pn**	**03 28 11.2**	**+1.9**
	0.5nm,0.3s,baz=285,slow=9.3,SNR=19						
TA01	**Diego Aracena**	**5.46**	**144**	Pn	**Pn**	**03 28 12.6**	**+0.6**
TA01					**Sn**	**03 29 13.5**	**-0.1**
PB08	**IPOC Station P**	**5.79**	**134**	Pn	**Pn**	**03 28 17.9**	**+1.1**
PB08				Sn	**Sn**	**03 29 21.3**	**-0.9**
PB01	**IPOC Station P**	**6.24**	**142**		**Pn**	**03 28 23.4**	**+0.8**
PB01				Sn	**Sn**	**03 29 30.1**	**-2.5**
PB07	**IPOC Station P**	**6.57**	**149**		**Pn**	**03 28 28.0**	**+0.8**
PB09	**IPOC Station P**	**6.97**	**145**		**Pn**	**03 28 34.0**	**+1.4**
PB06	**IPOC Station P**	**7.55**	**151**	Pn	**Pn**	**03 28 40.6**	**0.0**
PB06					**Sn**	**03 30 05.5**	**+0.8**
LVC	**Limon Verde**	**7.81**	**146**	P	**Pn**	**03 28 46.4**	**+2.2**
	1.6nm,0.3s,baz=335,slow=8.6,SNR=19						
LVC				S	**Sn**	**03 30 12.1**	**+1.1**
	3.5nm,0.3s,baz=93,slow=19,SNR=11						
LVC	**Limon Verde**	**7.81**	**146**	Pn	**Pn**	**03 28 44.9**	**+0.7**
LVC					**Sn**	**03 30 12.2**	**+1.1**
PB10	**IPOC Station P**	**7.88**	**159**	Pn	**Pn**	**03 28 45.2**	**+0.4**
PB10				Sn	**Sn**	**03 30 09.1**	**-3.3**
PB15	**IPOC Station P**	**8.03**	**152**		**Pn**	**03 28 48.0**	**+0.8**
PB15				Sn	**Sn**	**03 30 16.2**	**-0.3**
SIV	**San Ignacio**	**12.02**	**91**	P	**Pn**	**03 29 39.5**	**-1.5**
	0.1nm,0.3s,baz=304,slow=8.9,SNR=4.2						
H03N1	**Juan Fernandez**	**17.90**	**195**	T	T	03 49 30.3	
	baz=17,slow=74,SNR=812						
H03N2	**Juan Fernandez**	**17.91**	**195**	T	T	03 49 29.8	
	baz=17,slow=74,SNR=618						
H03N3	**Juan Fernandez**	**17.92**	**195**	T	T	03 49 29.0	
	baz=17,slow=74,SNR=596						
PTGA	**Pitinga**	**20.35**	**43**	P	**P**	**03 31 19.9**	**-1.6**
	2.4nm,0.3s,baz=211,slow=13,SNR=8.5						
PTGA				LR	LR	03 39 54.0	
	comp=Z,40nm,20.6s,baz=347,slow=39						
PLCA	**Paso Flores**	**24.66**	**174**	P	**P**	**03 32 07.7**	**+3.2**
	1.7nm,1.0s,baz=359,slow=12,SNR=3.6						
PLCA	**Paso Flores**	**24.66**	**174**	P	**P**	**03 32 02.8**	**-1.6**
PLCA				IAmb	IAmb	03 32 05.4	
	comp=Z,2.6nm,1.1s						
DBIC	**Dimbokro**	**71.66**	**77**	P	**P**	**03 38 04.9**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=211,slow=5.9,SNR=1.7						
DBIC	**Dimbokro**	**71.66**	**77**	P	**P**	**03 38 03.0**	**-1.4**
DBIC				IAmb	IAmb	03 38 05.4	
	comp=Z,2.7nm,0.8s						
QSPA	**South Pole Qui**	**74.03**	**180**	P	**P**	**03 38 18.4**	**+0.6**
TORD	**Torodi Ar. Bea**	**79.88**	**73**	P	**P**	**03 38 51.8**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=259,slow=5.2,SNR=7.8						
TORD	**Torodi Ar. Bea**	**79.88**	**73**	P	**P**	**03 38 50.1**	**-1.2**
TORD				IAmb	IAmb	03 38 53.0	
	comp=Z,1.1nm,0.7s						
YKA	**Yellowknife Ar**	**84.71**	**342**	P	**P**	**03 39 15.1**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=130,slow=6.5,SNR=3.7						
MKAR	**Makanchi Array**	**143.44**	**28**	PKP	**PKPdf**	**03 46 16.3**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=56,slow=5.4,SNR=2.1						

IDC ***08*** *03:27:01.7±0.7, 9°.68N×57°.67E, h0km, mb4.0/16, mb1 4.2/16, mb1mx3.9/41, mbtmp4.0/16, MS3.9/3, Ms1 3.9/3, ms1mx3.0/39, Error ellipse: s-maj=19.6km s-min=17.4km az=158.0*
NEIC ***08*** *03:27:02.0±1.4, 9°.6N±0°.1×57°.7E±0°.1, h10km±1km, mb4.5/22, Error ellipse: s-maj=18.4km s-min=16.8km az=208.0*

ISC 08 03:27:03.0±0.7, 9°.66N±0°.10×57°.63E±0°.08, h10km, n59, σ0§89/55, mb4.3/28, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**4.37**	**305**	Pn	**Pn**	**03 28 10.6**	**+1.0**
SOCY				Sn	**Sn**	**03 28 59.8**	**-0.9**
WSAR	**Wadi Sarin**	**13.54**	**4**	LR	LR	03 34 34.4	
	comp=Z,181nm,20.1s,baz=196,slow=34						
UOSS	**Minazif**	**15.26**	**355**	Pn	**Pn**	**03 30 39.5**	**+0.8**
UOSS				IAmb	IAmb	03 30 45.0	
	comp=Z,12nm,0.8s						
RAYN	**Ar Rayn**	**18.01**	**321**	P	**P**	**03 31 14.0**	**-0.1**
KMBO	**Kilima Mbogo**	**22.95**	**243**	P	**P**	**03 32 08.4**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=43,slow=9.1,SNR=6.1						
HRA	**Herat**	**24.97**	**9**	P	**P**	**03 32 26.4**	**-0.6**
HRA				IAmb	IAmb	03 32 31.5	
	comp=Z,15nm,1.2s						
KBL	**Kabul**	**26.88**	**21**	P	**P**	**03 32 42.9**	**-1.5**
NIL	**Nilore**	**27.86**	**29**	P	**P**	**03 32 52.9**	**-0.1**
GAZ	**Gaziantep**	**33.03**	**329**	P	**P**	**03 33 38.7**	**+0.1**
GAZ				IAmb	IAmb	03 33 41.3	
	comp=Z,5.1nm,0.5s						
KK31	**Karatay Array**	**35.16**	**16**	P	**P**	**03 33 57.2**	**+0.1**
KK31				IAmb	IAmb	03 34 00.4	
	comp=Z,15nm,1.7s						
KKAR	**Karatay Array**	**35.16**	**16**	P	**P**	**03 33 57.4**	**+0.3**
KKAR	**Karatay Array**	**35.16**	**16**	P	**P**	**03 33 57.5**	**+0.4**
KKAR				IAmb	IAmb	03 34 00.4	
	comp=Z,15nm,1.7s						
ABKAR	**Akbulak array**	**39.52**	**2**	P	**P**	**03 34 33.5**	**-0.3**
ABKAR				IAmb	IAmb	03 34 36.5	
	comp=Z,6.0nm,0.8s						
ABKAR	**Akbulak array**	**39.52**	**2**	P	**P**	**03 34 33.4**	**-0.4**
AKTO	**Aktyubinsk**	**40.65**	**0**	P	**P**	**03 34 44.0**	**+0.7**
	comp=Z,4.0nm,0.6s,baz=170,slow=10,SNR=18						
CMAR	**Chiang Mai Arr**	**40.93**	**73**	P	**P**	**03 34 46.8**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=262,slow=8.9,SNR=8.8						
CMAR	**Chiang Mai Arr**	**40.93**	**73**	P	**P**	**03 34 45.2**	**-0.9**
CHTO	**Chiang Mai**	**40.98**	**72**	P	**P**	**03 34 45.0**	**-1.4**
CHTO				IAmb	IAmb	03 34 50.1	
	comp=Z,17nm,1.8s						
MAKZ	**Makanchi**	**42.42**	**25**	P	**P**	**03 34 57.2**	**-0.7**
MAKZ				IAmb	IAmb	03 35 00.5	
	comp=Z,20nm,1.6s						
MK31	**Makanchi Array**	**42.54**	**25**	P	**P**	**03 34 59.0**	**+0.2**
MK31				IAmb	IAmb	03 35 01.9	
	comp=Z,12nm,1.8s						
MKAR	**Makanchi Array**	**42.54**	**25**	P	**P**	**03 34 59.3**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=212,slow=8.6,SNR=12						
MKAR				LR	LR	03 54 28.7	
	comp=Z,44nm,18.6s,baz=214,slow=39						
MKAR	**Makanchi Array**	**42.54**	**25**	P	**P**	**03 34 57.3**	**-1.5**
WMQ	**Urumqi**	**42.89**	**32**	*eP*	**P**	**03 35 03.7**	**+1.9**
AGG	**Agios Georgios**	**43.00**	**319**	P	**P**	**03 35 02.3**	**-0.4**
BRVK	**Borovoye**	**44.47**	**11**	P	**P**	**03 35 14.8**	**+0.5**
BRVK				IAmb	IAmb	03 35 23.0	
	comp=Z,12nm,1.8s						
VTS	**Vitosha**	**44.52**	**324**	P	**P**	**03 35 15.4**	**+0.4**
LBTB	**Lobatse**	**46.51**	**222**	P	**P**	**03 35 32.7**	**+1.8**
	comp=Z,2.5nm,0.8s,baz=72,slow=10,SNR=2.8						
LBTB	**Lobatse**	**46.51**	**222**	P	**P**	**03 35 29.8**	**-1.1**
BURAR	**Bucovina Array**	**46.69**	**330**	P	**P**	**03 35 32.0**	**-0.1**
BUR08	**Bucovina Ar. S**	**46.72**	**330**	P	**P**	**03 35 31.9**	**-0.4**
AKASG	**Malin Array Be**	**47.14**	**336**	P	**P**	**03 35 35.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=137,slow=7.4,SNR=5.4						
ZAA0	**Zalesovo Array**	**49.24**	**21**	P	**P**	**03 35 50.2**	**-1.4**
ZAA0				IAmb	IAmb	03 35 51.9	
	comp=Z,4.5nm,0.7s						
ZALV	**Zalesovo Beam**	**49.24**	**21**	P	**P**	**03 35 51.4**	**-0.2**
	comp=Z,5.2nm,0.6s,baz=222,slow=7.8,SNR=25						
ZALV	**Zalesovo Beam**	**49.24**	**21**	P	**P**	**03 35 50.9**	**-0.7**
XAN	**Xi'an**	**52.77**	**54**	P	**P**	**03 36 19.0**	**+0.4**
XAN				pP	pwP	03 36 26.6	+2.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GERES	**GERESS Array B**	**53.54**	**325**	P	**P**	**03 36 23.2**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=141,slow=6.3,SNR=2.1						
TORD	**Torodi Ar. Bea**	**54.85**	**279**	P	**P**	**03 36 35.0**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=87,slow=7.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**54.85**	**279**	P	**P**	**03 36 34.1**	**+0.1**
CLL	**Collm**	**55.23**	**328**	*eP*	**P**	**03 36 36.0**	**-0.2**
SONM	**Songino Array**	**55.87**	**38**	P	**P**	**03 36 41.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=232,slow=6.9,SNR=6.8						
SONM	**Songino Array**	**55.87**	**38**	P	**P**	**03 36 40.1**	**-0.9**
FINES	**FINESS Array B**	**56.64**	**342**	P	**P**	**03 36 45.0**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=108,slow=4.5,SNR=1.3						
FINES	**FINESS Array B**	**56.64**	**342**	P	**P**	**03 36 45.3**	**-0.7**
HHC	**Hu-ho-hao-te**	**56.70**	**47**	*eP*	**P**	**03 36 48.1**	**+1.0**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,72nm,5.8s						
ESDC	**Sonseca Array**	**62.09**	**310**	P	**P**	**03 37 24.4**	**0.0**
	comp=Z,2.1nm,0.7s,baz=88,slow=5.6,SNR=18						
NRIK	**Noril'sk**	**62.67**	**11**	P	**P**	**03 37 27.4**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=2.3,slow=6.3,SNR=3.8						
NRIK	**Noril'sk**	**62.67**	**11**	P	**P**	**03 37 27.2**	**-0.3**
ARCES	**ARCESS Array B**	**63.27**	**348**	P	**P**	**03 37 31.8**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=185,slow=7.8,SNR=3.9						
CN2	**Changchun**	**67.38**	**47**	*eP*	**P**	**03 38 01.2**	**+2.5**
H01W3	**Cape Leeuwin H**	**69.36**	**133**	T	T	04 53 34.9	
	baz=300,slow=75,SNR=8.1						
H01W2	**Cape Leeuwin H**	**69.37**	**133**	T	T	04 53 35.8	
	baz=300,slow=75,SNR=11						
H01W1	**Cape Leeuwin H**	**69.38**	**133**	T	T	04 53 36.3	
	baz=300,slow=75,SNR=7.4						
WRA	**Warramunga Arr**	**80.98**	**112**	P	**P**	**03 39 18.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=295,slow=4.5,SNR=7.8						
ASAR	**Alice Springs**	**81.49**	**116**	P	**P**	**03 39 20.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=286,slow=5.0,SNR=12						
JAY	**Jayapura**	**83.59**	**94**	LR	LR	04 15 02.4	
	comp=Z,416nm,20.2s,baz=234,slow=34						
PDAR	**Pinedale Array**	**126.53**	**348**	PKP	**PKiKP**	**03 46 07.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=56,slow=2.0,SNR=8.4						
PDAR	**Pinedale Array**	**126.53**	**348**		**PKPdf**	**03 46 05.7**	**-1.4**
NVAR	**Mina Array Bea**	**132.01**	**356**	PKP	**PKiKP**	**03 46 18.6**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=20,slow=3.2,SNR=4.6						
TXAR	**Lajitas Array**	**137.24**	**336**	PKP	**PKiKP**	**03 46 28.1**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=40,slow=2.1,SNR=4.1						

KNET ***08*** *03:35:29.5±0.3, 42°.54N×74°.51E, h19km±2km, ml2.8, Error ellipse: s-maj=2.8km s-min=2.1km az=161.0*
SOME ***08*** *03:35:30.6, 42°.52N×74°.57E, h20km*
KRNET ***08*** *03:35:30.3±0.1, 42°.53N×74°.49E, h17km, mb3.5*
NNC ***08*** *03:35:31.5±0.5, 42°.56N×74°.59E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=4.5km s-min=1.2km az=15.0*

ISC 08 03:35:30.5±0.9, 42°.51N±0°.02×74°.47E±0°.01, h8km±6km, n86, σ1§38/157, 64C-16D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**0.12**	**9**	⇑*i* P	**Pg**	**03 35 33.4**	**-0.1**
	baz=2.0						
AAK				⇑*i* S	**Sg**	**03 35 35.3**	**-0.3**
	baz=2.0						
AAK	**Ala-Archa**	**0.12**	**9**	P	**Pg**	**03 35 33.4**	**-0.1**
	547nm,0.1s,SNR=4079						
AAK				⇑S	**Sg**	**03 35 35.3**	**-0.3**
	9µm,0.2s						
AAK	**Ala-Archa**	**0.12**	**9**	⇑P	**Pg**	**03 35 33.3**	**-0.1**
	207nm,0.4s						
AAK				⇑S	**Sg**	**03 35 35.2**	**-0.3**
	3µm,0.3s						
UCH	**Uchtor**	**0.29**	**173**	⇑*i* P	**Pb**	**03 35 37.0**	**-1.2**
	baz=77						
UCH				⇑*i* S	**Sb**	**03 35 41.6**	**-1.7**
	baz=77						
UCH	**Uchtor**	**0.29**	**173**	P	**Pb**	**03 35 37.0**	**-1.2**
	1µm,0.3s,SNR=2617						
UCH				⇓S	**Sb**	**03 35 41.6**	**-1.7**
	977nm,0.3s						
FRU1	**Bishkek**	**0.32**	**22**	⇑*i* P	**Pg**	**03 35 36.6**	**-0.3**
	baz=17						
FRU1				⇑*i* S	**Sg**	**03 35 41.0**	**-0.1**
	baz=17						
KBK	**Karagaybulak**	**0.38**	**68**	⇑*i* P	**Pg**	**03 35 37.8**	**-0.2**
	baz=70						
KBK				⇑*i* S	**Sg**	**03 35 42.7**	**-0.4**
	baz=70						
KBK	**Karagaybulak**	**0.38**	**68**	⇑P	**Pg**	**03 35 37.8**	**-0.2**
	327nm,0.1s,SNR=224						
KBK				⇑S	**Sg**	**03 35 43.0**	**-0.1**
	1µm,0.3s						
CHMS	**Chumysh**	**0.53**	**23**	⇑*i* P	**Pg**	**03 35 40.2**	**-0.5**
	baz=22						
CHMS				⇑*i* S	**Sg**	**03 35 47.1**	**-0.6**
	baz=22						
CHMS	**Chumysh**	**0.53**	**23**	⇑P	**Pg**	**03 35 40.2**	**-0.5**
	56nm,0.1s,SNR=139						
CHMS				⇑S	**Sg**	**03 35 47.0**	**-0.7**
	1µm,0.2s						
EKS2	**Erkin-Say**	**0.53**	**286**	⇓*i* P	**Pb**	**03 35 41.1**	**-1.0**
	baz=84						
EKS2				⇓*i* S	**Sb**	**03 35 48.6**	**-1.4**
	baz=84						
EKS2	**Erkin-Say**	**0.53**	**286**	P	**Pb**	**03 35 41.1**	**-1.0**
	76nm,0.1s,SNR=448						
EKS2				⇓S	**Sb**	**03 35 49.3**	**-0.7**
	227nm,0.1s						
ARLS	**Aral**	**0.66**	**189**	⇑*i* P	**Pg**	**03 35 43.3**	**0.0**
	baz=90						
ARLS				⇑*i* S	**Sb**	**03 35 52.8**	**-0.9**
	baz=90						
AML	**Almayashu**	**0.69**	**237**	*i* P	**Pb**	**03 35 44.2**	**-0.8**
	baz=36						
AML				*i* S	**Sb**	**03 35 54.0**	**-0.8**
	baz=36						
AML	**Almayashu**	**0.69**	**237**	⇑P	**Pb**	**03 35 44.2**	**-0.8**
	194nm,0.3s,SNR=135						
AML				⇑S	**Sb**	**03 35 53.8**	**-1.0**
	414nm,0.2s						
USP	**Ospenovka**	**0.75**	**2**	⇑*i* P	**Pg**	**03 35 44.3**	**-0.7**
	baz=1.0						
USP				⇑*i* S	**Sg**	**03 35 54.1**	**-0.8**
	baz=1.0						
USP	**Ospenovka**	**0.75**	**2**	⇑P	**Pg**	**03 35 44.3**	**-0.7**
	66nm,0.1s,SNR=135						
USP				⇓S	**Sg**	**03 35 54.0**	**-0.8**
	486nm,0.2s						
TKM2	**Tokmak 2**	**0.93**	**64**	*i* P	**Pg**	**03 35 47.1**	**-1.2**
	baz=64						
TKM2				*i* S	**Sg**	**03 35 59.4**	**-1.0**
	baz=64						
TKM2	**Tokmak 2**	**0.93**	**64**	⇑P	**Pg**	**03 35 47.2**	**-1.2**
	58nm,0.1s,SNR=87						
TKM2				⇓S	**Sg**	**03 35 59.0**	**-1.4**
	150nm,0.1s						
TKM2	**Tokmak 2**	**0.93**	**64**	⇑P	**Pg**	**03 35 47.1**	**-1.2**
	30nm,0.3s						
TKM2				⇑S	**Sg**	**03 35 58.8**	**-1.6**
	47nm,0.2s						
SGDS	**Sogindy**	**0.94**	**7**	P	**Pg**	**03 35 47.7**	**-0.9**
	198nm,0.1s						
SGDS				S	**Sg**	**03 36 00.2**	**-0.8**
	299nm,0.0s						
BOOM	**Boomskoye usch**	**1.09**	**91**	*i* P	**Pg**	**03 35 50.5**	**-0.9**
	baz=92						
BOOM				*i* S	**Sg**	**03 36 04.7**	**-0.9**
	baz=92						
DGS	**Degeres**	**1.20**	**52**	⇑*e*P	**Pg**	**03 35 52.3**	**-1.3**
	baz=53						
DGS				⇑*e*S	**Sg**	**03 36 07.9**	**-1.4**
	baz=53						
DGS	**Degeres**	**1.20**	**52**	⇑*e*P	**Pg**	**03 35 52.3**	**-1.3**
	35nm,0.3s						
DGS				*e*S	**Sg**	**03 36 07.9**	**-1.4**
	153nm,0.2s						
DGS	**Degeres**	**1.20**	**52**	P	**Pg**	**03 35 52.2**	**-1.3**
	35nm,0.3s						
DGS				S	**Sg**	**03 36 07.9**	**-1.4**
	153nm,0.2s						
KST	**Kastek**	**1.22**	**64**	⇑*e*P	**Pg**	**03 35 52.7**	**-1.3**
	baz=64						
KST				⇑*e*S	**Sg**	**03 36 08.8**	**-1.0**
	baz=64						
KST	**Kastek**	**1.22**	**64**	⇑*e*P	**Pg**	**03 35 52.7**	**-1.3**
	38nm,0.2s						
KST				*e*S	**Sg**	**03 36 08.8**	**-1.0**
	157nm,0.2s						
KST	**Kastek**	**1.22**	**64**	P	**Pg**	**03 35 52.7**	**-1.3**
	51nm,0.3s						
KST				S	**Sg**	**03 36 08.6**	**-1.2**
	157nm,0.2s						
ULHL	**Ulahol**	**1.34**	**101**	⇑*i* P	**Pg**	**03 35 54.8**	**-1.4**
	baz=2.0						
ULHL				⇑*i* S	**Sg**	**03 36 12.6**	**-1.1**
	baz=2.0						
ULHL	**Ulahol**	**1.34**	**101**	⇑P	**Pg**	**03 35 54.9**	**-1.4**
	12nm,0.2s,SNR=9.5						
ULHL				S	**Sg**	**03 36 12.6**	**-1.1**
	46nm,0.2s						
MNAS	**Manas**	**1.45**	**270**	⇑*i* P	**Pn**	**03 35 57.2**	**+0.1**
	baz=69						
MNAS				⇑*i* S	**Sn**	**03 36 16.9**	**+0.5**
	baz=69						
KRBS	**Karabastau**	**1.48**	**36**	⇑*e*P	**Pn**	**03 35 57.2**	**-0.2**
	baz=36						
KRBS				⇑*e*S	**Sg**	**03 36 16.2**	**-1.7**
	baz=36						
KRBS	**Karabastau**	**1.48**	**36**	⇑*e*P	**Pn**	**03 35 57.1**	**-0.2**
	48nm,0.1s						
KRBS				*e*S	**Sg**	**03 36 16.2**	**-1.7**
	191nm,0.3s						
KRBS	**Karabastau**	**1.48**	**36**	P	**Pn**	**03 35 57.2**	**-0.2**
	48nm,0.1s						
KRBS				S	**Sg**	**03 36 16.3**	**-1.7**
	191nm,0.3s						
ARSB	**Arslanbob**	**1.62**	**223**	⇑*i* P	**Pg**	**03 36 00.9**	**-0.8**
	baz=23						
ARSB				⇑*i* S	**Sg**	**03 36 22.5**	**-0.2**
	baz=23						
IZV	**Izvestkoviy**	**1.66**	**71**	⇑*e*P	**Pb**	**03 36 00.7**	**-0.7**
	baz=71						
IZV				⇑*e*S	**Sg**	**03 36 22.6**	**-1.4**
	baz=71						
IZV	**Izvestkoviy**	**1.66**	**71**	⇑*e*P	**Pb**	**03 36 00.7**	**-0.7**
	45nm,0.2s						
IZV				*e*S	**Sg**	**03 36 22.6**	**-1.4**
	58nm,0.2s						
IZV	**Izvestkoviy**	**1.66**	**71**	P	**Pb**	**03 36 00.7**	**-0.7**
	45nm,0.2s						
IZV				S	**Sg**	**03 36 22.6**	**-1.4**
	91nm,0.4s						
**TN

DZA				⇑*i*	S	**Sg**	**03 36 45.2**	**-0.6**
	386nm,0.3s								
OHH	**Osh**	**2.35**	**213**	⇓*i*	P	**Pn**	**03 36 11.2**	**+1.7**
OHH	baz=13			⇓*i*	S	**Sb**	**03 36 41.1**	**-1.3**
	baz=13								
ANVS	**Anan'yevo**	**2.38**	**82**	⇑*i*	P	**Pn**	**03 36 11.0**	**+1.1**
ANVS	baz=83			⇑*i*	S	**Sn**	**03 36 40.5**	**+1.2**
	baz=83								
BTLS	**Baital**	**2.54**	**353**	*e*P		**Pb**	**03 36 16.6**	**+0.3**
	12nm,0.1s								
BTLS				*e*S		**Sg**	**03 36 49.2**	**-3.0**
	61nm,0.3s								
BTLS	**Baital**	**2.54**	**353**	Pg		**Pb**	**03 36 16.6**	**+0.3**
	12nm,0.1s								
BTLS				Lg		Lg	03 36 49.2		
	61nm,0.3s								
SFK	**Sufi-Kurgan**	**2.60**	**197**	⇑*i*	P	**Pn**	**03 36 14.9**	**+1.9**
	baz=97								
SFK				⇑*i*	S	**Sn**	**03 36 47.2**	**+2.3**
	baz=97								
TRKS	**Terek-Say**	**2.67**	**249**	⇑*e*	P	**Pn**	**03 36 15.8**	**+1.9**
	baz=48								
TRKS				⇑*i*	S	**Sn**	**03 36 48.7**	**+2.3**
	baz=48								
PRZ	**Przheval'sk**	**2.91**	**89**	⇓*i*	P	**Pn**	**03 36 17.8**	**+0.6**
	baz=89								
PRZ				⇓*i*	S	**Sn**	**03 36 52.9**	**+0.5**
	baz=89								
SATY	**Saty**	**2.95**	**78**	*e*P		**Pb**	**03 36 24.3**	**+0.9**
	24nm,0.2s								
SATY				*e*S		**Sg**	**03 37 02.9**	**-2.3**
	60nm,0.2s								
SATY	**Saty**	**2.95**	**78**	Pg		**Pb**	**03 36 24.3**	**+0.9**
	24nm,0.2s								
SATY				Lg		Lg	03 37 02.9		
	60nm,0.2s								
KK31	**Karatay Array**	**2.97**	**283**	⇑P		**Pb**	**03 36 24.0**	**+0.3**
	1.6nm,0.3s,baz=100,slow=12,SNR=80								
KK31				⇓S		**Sb**	**03 37 02.1**	**+2.1**
	14nm,0.3s,baz=102,slow=32,SNR=30								
ARXS	**Arharly**	**2.98**	**54**	*e*P		**Pb**	**03 36 24.0**	**+0.2**
	15nm,0.4s								
ARXS				*e*S		**Sb**	**03 37 01.6**	**+1.2**
	133nm,0.5s								
ZHN	**Zhinishke**	**2.99**	**76**	*e*P		**Pb**	**03 36 24.3**	**+0.3**
	386nm,0.2s								
ZHN				*e*S		**Sg**	**03 37 03.2**	**-3.4**
	7.6nm,0.1s								
ZHN	**Zhinishke**	**2.99**	**76**	Pg		**Pb**	**03 36 24.3**	**+0.3**
	386nm,0.2s								
ZHN				Lg		Lg	03 37 03.2		
	7.6nm,0.1s								
KPKS	**Kokpek**	**3.24**	**71**	*e*P		**Pb**	**03 36 28.9**	**+0.7**
	28nm,0.2s								
KPKS				*e*S		**Sg**	**03 37 10.8**	**-3.6**
	72nm,0.2s								
IUG	**Iuzhnay**	**3.31**	**265**	*e*P		**Pg**	**03 36 31.9**	**-2.0**
	29nm,0.2s								
IUG				*e*S		**Sg**	**03 37 16.0**	**-0.8**
	58nm,0.7s								
IUG	**Iuzhnay**	**3.31**	**265**	Pg		**Pg**	**03 36 31.9**	**-2.0**
	29nm,0.2s								
IUG				Lg		Lg	03 37 16.0		
	58nm,0.7s								
UZB	**Uzynbulak**	**3.41**	**78**	*e*P		**Pb**	**03 36 31.7**	**+0.5**
	12nm,0.3s								
UZB				*e*S		**Sb**	**03 37 15.6**	**+2.7**
	48nm,0.4s								
UZB	**Uzynbulak**	**3.41**	**78**	Pg		**Pb**	**03 36 31.7**	**+0.5**
	12nm,0.3s								
UZB				Lg		Lg	03 37 15.6		
	48nm,0.4s								
BRLS	**Boroldaу**	**3.45**	**280**	*e*P		**Pg**	**03 36 35.7**	**-0.9**
	25nm,0.3s								
BRLS				*e*S		**Sg**	**03 37 22.5**	**+1.3**
	38nm,0.2s								
BRLS	**Boroldaу**	**3.45**	**280**	Pg		**Pg**	**03 36 35.7**	**-0.9**
	25nm,0.3s								
BRLS				Lg		Lg	03 37 22.5		
	38nm,0.2s								
SHLS	**Shalkode**	**3.73**	**78**	*e*P		**Pg**	**03 36 43.8**	**+1.8**
	14nm,0.4s								
SHLS				*e*S		**Sg**	**03 37 36.1**	**+5.9**
	36nm,0.3s								
SHLS	**Shalkode**	**3.73**	**78**	Pg		**Pg**	**03 36 43.8**	**+1.8**
	14nm,0.4s								
SHLS				Lg		Lg	03 37 36.1		
	36nm,0.3s								
PDGK	**Podgornoye**	**3.78**	**76**	Pg		**Pb**	**03 36 38.5**	**+1.0**
	3.6nm,0.3s								
PDGK				Lg		Lg	03 37 27.3		
	21nm,0.6s								
PDGK	**Podgornoye**	**3.78**	**76**	⇑P		**Pb**	**03 36 35.9**	**-1.5**
	4.6nm,0.5s								
PDGK				⇑S		**Sb**	**03 37 23.6**	**+0.2**
	35nm,0.6s								
TDK	**Taldyqorghan**	**3.79**	**48**	*e*P		**Pb**	**03 36 38.8**	**+1.2**
	30nm,0.1s								
TDK				*e*S		**Sg**	**03 37 27.8**	**-4.2**
	48nm,0.5s								
TDK	**Taldyqorghan**	**3.79**	**48**	Pg		**Pb**	**03 36 38.7**	**+1.2**
	30nm,0.1s								
TDK				Lg		Lg	03 37 27.8		
	48nm,0.5s								
DJR	**Jarkent**	**4.28**	**63**	*e*P		**Pb**	**03 36 48.1**	**+2.1**
	5.8nm,0.2s								
DJR				*e*S		**Sg**	**03 37 43.9**	**-4.1**
	15nm,0.5s								
DJR	**Jarkent**	**4.28**	**63**	Pg		**Pb**	**03 36 48.1**	**+2.1**
	5.8nm,0.2s								
DJR				Lg		Lg	03 37 43.9		
	15nm,0.5s								

*JMA **08** 03:38:45.6±0.1,24°.85N×121°.94E,h39km±5km,M2.7*
*TAP **08** 03:38:45.2,24°.85N×122°.00E,h6km,ML3.3,C*
ISC 08 03:38:45.2±0.9,24°.88N±0°.02×122°.04E±0°.02,h12km±6km, n80,σ0°77/124,17C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.14**	**340**	⇑*i* P	**Pg**	**03 38 48.9**	**+0.2**
TWB1	baz=359			*i* S	**Sg**	**03 38 51.4**	**+0.3**
	baz=359						
NTC	**Toucheng**	**0.19**	**264**	⇑*i* P	**Pg**	**03 38 49.4**	**-0.1**
NTC	baz=270			*i* S	**Sg**	**03 38 52.0**	**-0.5**
	baz=270						
TIPB	**Shuangxi**	**0.22**	**296**	⇑*i* P	**Pg**	**03 38 50.0**	**+0.1**
	baz=306						
TIPB				*i* S	**Sg**	**03 38 53.1**	**0.0**
	baz=306						
ILA	**Ilan**	**0.29**	**248**	*e*P	**Pg**	**03 38 50.9**	**-0.3**
	baz=248						
ILA				*e*S	**Sg**	**03 38 55.1**	**0.0**
	baz=248						
NWF	**Wu-fen Shan**	**0.31**	**310**	⇑*i* P	**Pb**	**03 38 52.1**	**-0.7**
	baz=317						
NWF				*i* S	**Sb**	**03 38 57.2**	**-0.5**
	baz=317						
WFSB	**Wu-fen Shan**	**0.31**	**310**	⇑*i* P	**Pb**	**03 38 52.1**	**-0.6**
	baz=317						
WFSB				*e*S	**Sb**	**03 38 57.1**	**-0.6**
	baz=317						
TWC	**Suao**	**0.32**	**213**	⇓*i* P	**Pg**	**03 38 51.1**	**-0.6**
	baz=208						
TWC				*e*S	**Sg**	**03 38 54.6**	**-1.4**
	baz=208						
TNOU	**National Taiwa**	**0.37**	**318**	⇑*i* P	**Pb**	**03 38 53.2**	**-0.5**
	baz=325						
TNOU				S	**Sb**	**03 38 58.1**	**-1.3**
	baz=325						
TWE	**Neicheng**	**0.37**	**246**	⇑*i* P	**Pg**	**03 38 52.2**	**-0.5**
	baz=245						
TWE				S	**Sg**	**03 38 56.9**	**-0.8**
	baz=245						
NDS	**Dongshan**	**0.38**	**231**	*i* P	**Pg**	**03 38 52.3**	**-0.6**
	baz=230						
NDS				S	**Sg**	**03 38 57.6**	**-0.3**
	baz=230						
TWA	**Mucha**	**0.43**	**284**	⇑*i* P	**Pb**	**03 38 53.9**	**-0.9**
	baz=288						
TWA				*i* S	**Sg**	**03 38 59.7**	**+0.3**
	baz=288						
NWRT	**Kuosheng**	**0.47**	**313**	*i* P	**Pb**	**03 38 55.3**	**-0.2**
	baz=318						
NWRT				*e*S	**Sb**	**03 39 04.9**	**+2.3**
	baz=318						
NHDH	**Xindian Distri**	**0.48**	**281**	*e*P	**Pb**	**03 38 54.9**	**-0.7**
	baz=284						
NHDH				*e*S	**Sg**	**03 39 01.0**	**0.0**
	baz=284						
EWUT	**Wuta**	**0.49**	**209**	*e*P	**Pg**	**03 38 54.8**	**-0.1**
	baz=206						
EWUT				*e*S	**Sg**	**03 39 00.6**	**-0.8**
	baz=206						
ENTT	**Nioudou**	**0.49**	**242**	*i* P	**Pg**	**03 38 54.2**	**-0.7**
	baz=241						
ENTT				*i* S	**Sg**	**03 39 00.3**	**-1.2**
	baz=241						
NWLT	**Wulai**	**0.50**	**259**	⇑*i* P	**Pg**	**03 38 54.6**	**-0.5**
	baz=260						
NWLT				S	**Sg**	**03 39 00.6**	**-1.1**
	baz=260						
YM01	**YM01**	**0.51**	**302**	⇑P	**Pb**	**03 38 56.0**	**-0.1**
	baz=307						
TATO	**Taipei**	**0.51**	**281**	⇑*e*P	**Pb**	**03 38 55.5**	**-0.7**
	baz=285						
TATO				*e*S	**Sg**	**03 39 01.8**	**-0.3**
	baz=285						
TAP	**Taipei**	**0.51**	**289**	*e*P	**Pg**	**03 38 55.2**	**-0.1**
	baz=292						
TAP				*e*S	**Sb**	**03 39 02.8**	**-0.8**
	baz=292						
YM11	**YM11**	**0.51**	**304**	*e*P	**Pb**	**03 38 56.3**	**0.0**
	baz=309						
YM08	**YM08**	**0.52**	**307**	⇑P	**Pb**	**03 38 56.0**	**-0.3**
	baz=312						
YM10	**YM10**	**0.52**	**303**	⇑*e*P	**Pb**	**03 38 56.2**	**-0.1**
	baz=307						
ENA	**Nanau**	**0.52**	**212**	P	**Pg**	**03 38 54.7**	**-0.7**
	baz=208						
ENA				*e*S	**Sg**	**03 39 01.5**	**-0.9**
	baz=208						
YM04	**YM04**	**0.54**	**301**	⇑*e*P	**Pb**	**03 38 56.4**	**-0.2**
	baz=305						
YM03	**YM03**	**0.55**	**304**	*e*P	**Pb**	**03 38 56.5**	**-0.3**
	baz=308						
NDT	**Datong Townshi**	**0.55**	**241**	*i* P	**Pg**	**03 38 55.5**	**-0.6**
	baz=241						
NDT				*e*S	**Sg**	**03 39 02.4**	**-1.0**
	baz=241						
ANP	**Anpu**	**0.56**	**303**	*e*P	**Pb**	**03 38 56.7**	**-0.4**
	baz=307						
TWY	**Chenhua**	**0.56**	**315**	⇑*i* P	**Pb**	**03 38 57.3**	**+0.2**
	baz=319						
TWY				*e*S	**Sn**	**03 39 07.8**	**-0.6**
	baz=319						
NTST	**Danshui**	**0.61**	**298**	*i* P	**Pb**	**03 38 58.3**	**+0.5**
	baz=302						
TWS1	**Kuangyinshan**	**0.61**	**292**	*i* P	**Pb**	**03 38 58.1**	**+0.3**
	baz=295						
TWS1				*e*S	**Sn**	**03 39 09.3**	**-0.2**
	baz=295						
YHNB	**Yeheng**	**0.64**	**251**	⇑*i* P	**Pg**	**03 38 56.9**	**-0.8**
	baz=252						
YHNB				*e*S	**Sg**	**03 39 04.5**	**-1.6**
	baz=252						
NSK	**Sanguang**	**0.65**	**252**	⇑*i* P	**Pg**	**03 38 57.1**	**-0.8**
	baz=253						
NSK				*e*S	**Sg**	**03 39 04.5**	**-2.1**
	baz=253						
NTY	**Taoyuan**	**0.69**	**281**	*e*P	**Pb**	**03 39 00.1**	**+0.9**
	baz=283						
NTY				*e*S	**Sb**	**03 39 09.4**	**+0.8**
	baz=283						
NNSB	**Datong**	**0.75**	**234**	*e*P	**Pg**	**03 38 58.9**	**-0.9**
	baz=233						
NNSB				*e*S	**Sg**	**03 39 09.2**	**-0.3**
	baz=233						
NNSH	**Datong**	**0.75**	**234**	P	**Pg**	**03 38 58.7**	**-1.0**
	baz=233						
NNSH				*e*S	**Sg**	**03 39 08.2**	**-1.3**
	baz=233						
NNS	**Nan Shan**	**0.75**	**235**	*e*P	**Pg**	**03 38 58.9**	**-0.9**
	baz=234						
PCYT	**Pengchaiyu**	**0.75**	**2**	P	**Pn**	**03 39 01.0**	**-0.7**
	baz=5.0						
PCYT				*e*S	**Sb**	**03 39 11.6**	**+1.1**
	baz=5.0						
NCU	**National Centr**	**0.78**	**277**	*e*P	**Pb**	**03 39 01.6**	**+0.8**
	baz=279						
NCU				*e*S	**Sb**	**03 39 13.4**	**+2.0**
	baz=279						
NCUH	**Zhongli**	**0.78**	**277**	*e*P	**Pb**	**03 39 01.1**	**+0.2**
	baz=279						
NACB	**Ninganchiao**	**0.81**	**210**	P	**Pg**	**03 39 00.1**	**-0.8**
	baz=209						
NACB				S	**Sg**	**03 39 10.8**	**-0.7**
	baz=209						
ETLH	**Xiulin Townshi**	**0.84**	**218**	P	**Pg**	**03 39 00.5**	**-0.9**
	baz=216						
ETLH				*e*S	**Sg**	**03 39 12.0**	**-0.4**
	baz=216						
TWD	**Chiawan**	**0.89**	**207**	*e*P	**Pg**	**03 39 01.9**	**-0.6**
	baz=205						
TWD				*e*S	**Sg**	**03 39 12.6**	**-1.4**
	baz=205						
NHW	**Xinwu Township**	**0.91**	**278**	P	**Pn**	**03 39 03.8**	**-0.1**
	baz=280						
NHW				*e*S	**Sn**	**03 39 16.9**	**0.0**
	baz=280						
JYNG	**Yonaguni jima**	**0.92**	**117**	P	**Pb**	**03 39 03.4**	**+0.2**
JYNG				S	**Sb**	**03 39 16.2**	**+0.8**
HSN1	**Hsinchu**	**0.94**	**264**	*e*P	**Pn**	**03 39 04.5**	**+0.3**
	baz=265						
FUSS	**Fushou**	**0.96**	**229**	P	**Pg**	**03 39 02.8**	**-1.0**
	baz=229						
FUSS				*e*S	**Sb**	**03 39 18.3**	**+1.6**
	baz=229						
LIOB	**Emei**	**0.96**	**256**	P	**Pb**	**03 39 04.4**	**+0.6**
	baz=257						
LIOB				*e*S	**Sn**	**03 39 19.4**	**+1.2**
	baz=257						
SBCB	**Hsinchu**	**0.96**	**265**	*i* P	**Pn**	**03 39 05.2**	**+0.6**
	baz=266						
SBCB				*e*S	**Sn**	**03 39 18.8**	**+0.6**
	baz=266						
YOJ	**Yonaguni jima**	**0.97**	**115**	P	**Pb**	**03 39 04.3**	**+0.3**
YOJ				S	**Sb**	**03 39 17.2**	**+0.3**
YOJ	**Yonaguni jima**	**0.97**	**115**	P	**Pb**	**03 39 04.4**	**+0.3**
	baz=113						
YOJ				*e*S	**Sb**	**03 39 17.8**	**+0.9**
	baz=113						
NSTT	**Nanjuang**	**0.98**	**256**	*e*P	**Pb**	**03 39 04.2**	**0.0**
	baz=256						
NSTT				*e*S	**Sn**	**03 39 19.4**	**+0.8**
	baz=256						
TWT	**Tachien**	**1.00**	**232**	P	**Pb**	**03 39 05.1**	**+0.4**
	baz=232						
TWT				*e*S	**Sb**	**03 39 18.8**	**+0.9**
	baz=232						
WHF	**Hehuan Shan**	**1.01**	**224**	P	**Pg**	**03 39 04.0**	**-0.9**
	baz=223						
TDCB	**Techi**	**1.01**	**233**	*e*P	**Pg**	**03 39 04.1**	**-0.7**
	baz=232						
CHGB	**Renai**	**1.13**	**224**	P	**Pg**	**03 39 06.7**	**-0.4**
	baz=224						
WHP	**Taichung City**	**1.16**	**239**	*e*P	**Pg**	**03 39 06.9**	**-0.7**
	baz=240						
ESL	**Shilin**	**1.19**	**208**	*e*P	**Pg**	**03 39 07.3**	**-0.9**
	baz=206						
ESL				*e*S	**Sg**	**03 39 23.1**	**-0.6**
	baz=206						
TWQ1	**Liyutan**	**1.27**	**246**	*e*P	**Pg**	**03 39 09.2**	**-0.4**
	baz=246						
TWQ1				*e*S	**Sn**	**03 39 26.8**	**+1.0**
	baz=246						
EGFH	**Guangfu**	**1.33**	**205**	*e*P	**Pn**	**03 39 09.5**	**-0.1**
	baz=204						
WDJ	**Dajia District**	**1.38**	**248**	*e*P	**Pb**	**03 39 11.9**	**+0.9**
	baz=248						
VWDT	**VWDT**	**1.39**	**217**	*e*P	**Pn**	**03 39 11.0**	**+0.6**
	baz=216						
SMLT	**Sun Moon Lake**	**1.44**	**227**	*e*P	**Pg**	**03 39 12.7**	**-0.1**
	baz=226						
TYC	**Yuchr**	**1.45**	**228**	*e*P	**Pb**	**03 39 12.3**	**+0.1**
	baz=228						
SSLB	**Suanglung**	**1.47**	**223**	*e*P	**Pb**	**03 39 12.6**	**0.0**
	baz=222						
HGSD	**Ruisui**	**1.49**	**202**	*e*P	**Pg**	**03 39 14.2**	**+0.3**
	baz=201						
EHY	**Hungye**	**1.51**	**206**	*e*P	**Pn**	**03 39 13.1**	**+0.9**
	baz=205						
YULB	**Yu-li**	**1.62**	**205**	*e*P	**Pn**	**03 39 14.4**	**+0.7**
	baz=204						
IRIF	**Iriomote-Funau**	**1.63**	**109**	P	**Pn**	**03 39 13.1**	**-0.6**
TWF1	**Yuli**	**1.66**	**204**	*e*P	**Pb**	**03 39 15.8**	**0.0**
	baz=203						
ALS	**Alishan**	**1.77**	**220**	*e*P	**Pg**	**03 39 18.6**	**-0.6**
	baz=219						
CHN5	**Tsauling**	**1.78**	**225**	*e*P	**Pn**	**03 39 17.2**	**+1.3**
	baz=224						
HATJ	**Hateruma jima**	**1.80**	**117**	P	**Pn**	**03 39 16.2**	**+0.1**
FULB	**Fuli**	**1.80**	**202**	*e*P	**Pn**	**03 39 17.5**	**+1.3**
	baz=201						
JKRS	**Kuro-shima**	**1.90**	**109**	P	**Pn**	**03 39 17.3**	**-0.2**
JIJ	**Ishigaki jima**	**1.98**	**104**	P	**Pn**	**03 39 18.7**	**+0.1**
JIJ				*e*S	**Sn**	**03 39 43.6**	**+0.3**
WTP	**Ta-pu**	**2.08**	**219**	*e*P	**Pb**	**03 39 23.0**	**0.0**
	baz=218						
JISG	**Ishigakijimahi**	**2.08**	**97**	P	**Pn**	**03 39 20.1**	**+0.1**
TWK	**Hsinying**	**2.14**	**222**	*e*P	**Pb**	**03 39 24.3**	**+0.3**
	baz=221						
CHN1	**Nanshi**	**2.18**	**220**	*e*P	**Pb**	**03 39 24.6**	**-0.1**
	baz=219						
MASBT	**Mashibuluo**	**2.60**	**210**	*e*P	**Pb**	**03 39 30.2**	**-1.5**
	baz=209						

IDC 08 03:41:57.7±48.0,15°.54S×173°.25W,h0km,mb4.0/3, mb1 4.1/3,mb1mx3.7/37,mbtmp4.0/3,Error ellipse: s-maj=921.1km s-min=193.2km az=78.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.09**	**240**	P	P	03 50 07.9	0.0
	0.6nm,0.4s,baz=90,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**49.95**	**257**	P	P	03 50 53.5	-0.4
	0.7nm,0.7s,baz=95,slow=7.0,SNR=12						
ASAR	**Alice Springs**	**50.20**	**252**	P	P	03 50 55.8	0.0
	3.8nm,0.6s,baz=86,slow=8.3,SNR=38						

*IDC **08** 03:42:11.6±0.8,8°.90S×109°.30W,h0km,mb4.5/17, mb1 4.7/17,mb1mx4.6/27,mbtmp4.5/17,MS4.4/18, Ms1 4.4/18,ms1mx4.3/22,Error ellipse: s-maj=26.2km s-min=14.6km az=62.0*

*NEIC **08** 03:42:12.7±0.6,8°.9S±0°.1×109°.0W±0°.1,h10km±1km, mb5.1/311,Error ellipse: s-maj=20.0km s-min=17.1km az=274.0*

*GCMT **08** 03:42:16.7±0.1,9°.00S±0°.01×109°.11W±0°.01,h13km, MW5.2/149,Moment Tensor Solution. s98,c142; s149,c246; Duration: 1ᵗ0 Moment tensor: Scale 10^{16} Nm; M_{rr}3.12±.15; $M_{\theta\theta}$-0.45±.13; $M_{\phi\phi}$-2.67±.14; $M_{r\theta}$-0.75±.31; $M_{r\phi}$7.80±.12; $M_{\theta\phi}$1.53±.33; Best double couple: $M_0$8.01600×10^{16} NP1:ϕ_s94.00000°,δ79.00000°, λ1.00000°. NP2:ϕ_s4.00000°,δ89.00000°,λ169.00000°. Principal axes: T 6.3840, Plg8.0000°, Azm318.0000°; N 3.2700, Plg79.0000°, Azm181.0000°; P -9.6490, Plg7.0000°, Azm49.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 03:42:12.2±0.3,8°.94S±0°.07×109°.17W±0°.08,h10km,n423, σ0°78/406,mb5.1/168,MS4.6/22,2C-1D,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**18.09**	**180**	LR	LR	03 50 42.9	
	comp=Z,272nm,20.0s,baz=358,slow=28						
RPN	**Rapa Nui**	**18.09**	**180**		**P**	**03 46 25.0**	**+0.8**
PAYG	**Puerto Ayora**	**20.51**	**67**	P	**P**	**03 46 51.6**	**+0.7**
H06S1	**SOCORRO T**	**27.55**	**356**	T	T	04 16 58.3	
	SNR=16						
H06E1	**SOCORRO T-PHAS**	**27.59**	**356**	T	T	04 16 56.5	
	SNR=6.7						
TLIG	**Tlapa**	**28.34**	**22**	P	**P**	**03 48 06.7**	**0.0**
RKT	**Rikitea**	**28.46**	**237**	*e*T	T	04 17 34.9	
	5.4nm,0.3s						
CMIG	**Matias Romero**	**29.47**	**29**	P	**P**	**03 48 17.2**	**+0.7**
	6.6nm,0.9s,baz=223,slow=9.6,SNR=8.0						
CMIG				LR	LR	03 57 39.2	
	comp=Z,1μm,18.4s,baz=209,slow=32						
MOIG	**Morelia**	**29.50**	**15**	P	**P**	**03 48 14.7**	**-2.4**
MOIG				IAmb	IAmb	03 48 20.7	
	comp=Z,32nm,0.9s						
HUEH	**Huehuetenango**	**29.79**	**36**	P	**P**	**03 48 18.5**	**-1.2**
CCIG	**Comitan**	**30.20**	**34**	P	**P**	**03 48 21.9**	**-1.4**
MTO3	**Monteristo**	**30.39**	**40**	P	**P**	**03 48 23.6**	**-1.4**
TAOE	**Nuku Hiva Isla**	**30.60**	**268**	*e*LR	LR	03 56 10.4	
	comp=Z,2μm,26.7s,baz=102						
TAOE	**Nuku Hiva Isla**	**30.60**	**268**	*e*T	T	04 20 09.1	
	comp=Z,21nm,0.2s						
TGUH	**Tegucigalpa,Un**	**31.53**	**44**	P	**P**	**03 48 32.4**	**-2.6**
TGUH				IAmb	IAmb	03 48 40.9	
	comp=Z,18nm,0.5s						
ACON	**Acoyapa**	**31.63**	**49**	P	**P**	**03 48 34.4**	**-1.3**
OTAV	**Otavalo**	**31.92**	**75**	P	**P**	**03 48 36.9**	**-2.0**
PETF	**Flores**	**32.00**	**37**	P	**P**	**03 48 38.2**	**-0.7**
PETF				IAmb	IAmb	03 48 43.0	
	comp=Z,49nm,1.2s						
ZAIG	**Zacatecas**	**32.17**	**11**	P	**P**	**03 48 40.3**	**-0.4**
ZAIG				IAmb	IAmb	03 48 44.5	
	comp=Z,16nm,0.9s						
ESPN	**Las Esperanzas**	**32.43**	**50**	P	**P**	**03 48 42.0**	**-0.7**
ESPN				IAmb	IAmb	03 48 51.9	
	comp=Z,39nm,1.1s						
TEIG	**Tepich**	**35.53**	**35**	P	**P**	**03 49 10.9**	**+1.3**
	comp=Z,16nm,0.9s,baz=242,slow=6.9,SNR=5.4						
HPIG		**35.82**	**5**	P	**P**	**03 49 12.7**	**+0.4**
H03N2	**Juan Fernandez**	**37.02**	**136**	T	T	04 28 31.1	
	baz=308,slow=77,SNR=1325						
H03N1	**Juan Fernandez**	**37.04**	**136**	T	T	04 28 32.4	
	baz=308,slow=77,SNR=1728						
H03N3	**Juan Fernandez**	**37.04**	**136**	T	T	04 28 29.8	
	baz=308,slow=77,SNR=1716						
ROSC	**El Rosal**	**37.34**	**70**	LR	LR	04 01 52.4	
	comp=Z,988nm,21.3s,baz=244,slow=32						
HSIG		**37.77**	**357**	P	**P**	**03 49 29.2**	**+0.5**
HSIG				IAmb	IAmb	03 49 32.1	
	comp=Z,56nm,1.3s						
833A	**Chaparral WMA,**	**38.23**	**14**	P		03 49 34.0	
	baz=196						
TX31	**Lajitas Ar. Si**	**38.41**	**8**	P	**P**	**03 49 34.3**	**+0.1**
TX32	**Lajitas Array**	**38.41**	**8**	P	**P**	**03 49 34.5**	**+0.3**
TXAR	**Lajitas Array**	**38.41**	**8**	P	**P**	**03 49 36.0**	**+1.8**
	comp=Z,5.9nm,0.9s,baz=186,slow=11,SNR=32						
TXAR				LR	LR	04 03 38.2	
	comp=Z,195nm,19.5s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**38.41**	**8**	P	**P**	**03 49 34.7**	**+0.5**
PB16	**IPOC Station P**	**39.58**	**108**	P	**P**	**03 49 43.8**	**-1.0**
MNMC	**Minye Minye**	**39.62**	**109**	P	**P**	**03 49 43.4**	**-1.3**
PB01	**IPOC Station P**	**40.06**	**112**	P	**P**	**03 49 46.9**	**-1.3**
SFX	**San Felipe**	**40.12**	**352**	P	**P**	**03 49 48.8**	**+0.6**
PPT	**Papeete**	**40.18**	**253**	LR	LR	04 02 08.7	
	comp=Z,1μm,19.4s,baz=82,slow=30						
PPT2	**Papeete2**	**40.19**	**253**	*e*S	**S**	**03 55 52.8**	**-3.6**
	comp=Z,250nm,25.5s						
PPT2				*e*LQ	LQ	03 58 59.5	
	comp=Z,3μm,29.2s				

TUC	Tucson	41.04	358	P		P	03 49 56.5	+0.4	
TBI	Tubuai	41.11	245	eS		S	03 56 08.7	-1.2	
	comp=Z,394nm,27.8s								
TBI				eLQ		LQ	03 59 25.2		
	comp=Z,2µm,30.0s								
TBI				eLR		LR	04 01 09.3		
	comp=Z,3µm,27.2s,baz=71								
TBI	Tubuai	41.11	245	eT		T	04 33 27.4		
	comp=Z,9.1nm,0.3s								
GDL2	Guadalupe Moun	41.16	6	P		P	03 49 57.4	+0.3	
121A	Cookes Peak, D	41.26	2	P		P	03 49 58.4	+0.5	
121A				IAmb		IAmb	03 50 02.7		
	comp=Z,35nm,0.9s								
121A	Cookes Peak, D	41.26	2	P			03 50 00.1		
	baz=182,SNR=29								
AC02	Maricunga	41.83	120	P		P	03 50 02.7	-0.4	
IKP	In-Ko-Pah, Jac	41.88	351	P			03 50 05.2		
	baz=170								
CO03	El Pedregal	41.93	127	P		P	03 50 03.6	+0.1	
BAR	Barrett	42.00	351	P		P	03 50 04.3	+0.5	
BAR				IAmb		IAmb	03 50 07.4		
	comp=Z,68nm,2.0s								
GLA	Glamis	42.10	353	P			03 50 06.6		
	baz=172								
SWSC	Sam W. Stewart	42.12	352	P			03 50 06.3		
	baz=170								
MONP2	Monument Peak	42.16	351	P			03 50 06.2		
	baz=169								
WHTX	Lake Whitney,	42.21	15	P			03 50 06.7		
	baz=197								
SDV	Santo Domingo	42.27	66	P		P	03 50 08.4	+1.9	
	comp=Z,2.3nm,0.3s,baz=245,slow=10,SNR=5.0								
SDV				LR		LR	04 05 00.8		
	comp=Z,706nm,20.8s,baz=235,slow=32								
109C	Camp Elliot, M	42.27	350	P			03 50 07.8		
	baz=168								
ABTX	Abilene, Hawle	42.31	12	P			03 50 07.3		
	baz=194,SNR=5.2								
ABTX	Abilene, Hawle	42.31	12	P		P	03 50 06.6	+0.3	
SCI2	San Clemente I	42.63	348	P			03 50 10.6		
	baz=166								
237A	Washetta, Mont	42.66	17	P		P	03 50 09.5	+0.3	
237A				IAmb		IAmb	03 50 12.1		
	comp=Z,32nm,0.9s								
BC3	Big Chuckawall	42.77	352	P			03 50 12.2		
	baz=171,SNR=7.5								
NATX	Nacogdoches	42.78	18	P			03 50 11.6		
	baz=201								
NATX	Nacogdoches	42.78	18	P		P	03 50 10.4	+0.2	
Y22D	IRIS PASSCAL I	42.83	3	P			03 50 12.9		
	baz=183								
Y22D	IRIS PASSCAL I	42.83	3	P		P	03 50 11.3	+0.6	
TPFO	Pinon Flats	42.87	351	P			03 50 13.0		
	baz=169								
PFO	Pinyon Flats O	42.88	351	P			03 50 13.0		
	baz=169								
PFO	Pinyon Flats O	42.88	351	P		P	03 50 11.9	+0.9	
	comp=Z,2.9nm,0.9s,baz=178,slow=9.5,SNR=5.7								
PFO	Pinyon Flats O	42.88	351	P		P	03 50 11.7	+0.7	
LENM	Lemitar	42.91	3	P		P	03 50 11.8	+0.4	
BNM	Barren Site	42.92	3	P		P	03 50 11.9	+0.4	
MURC	Murrieta	42.98	350	P			03 50 13.8		
	baz=168								
CIS	Catalina Islan	43.01	349	P			03 50 13.7		
	baz=166								
SNCC	San Nicolas Is	43.09	347	P			03 50 14.4		
	baz=165								
MSTX	Muleshoe	43.10	8	P			03 50 13.5		
	baz=189,SNR=7.3								
MSTX	Muleshoe	43.10	8	P		P	03 50 13.1	+0.2	
MSTX				IAmb		IAmb	03 50 15.1		
	comp=Z,33nm,1.2s								
BELC	Belle Mtn. Jos	43.19	352	P			03 50 15.7		
	baz=170,SNR=9.9								
342A	Flagon Creek P	43.21	21	P		P	03 50 13.7	+0.1	
342A				IAmb		IAmb	03 50 18.3		
	comp=Z,79nm,1.6s								
IRM	Iron Mountain	43.23	353	P			03 50 15.9		
	baz=171,SNR=11								
PDMCI	Parker Dam,Lak	43.26	354	P			03 50 16.2		
	baz=173								
FMP	Fort Macarthur	43.29	349	P			03 50 15.4		
	baz=167								
BO02	Sierra Bellavi	43.53	132	P		P	03 50 16.1	-0.2	
BFSC	Mount Baldy Ra	43.69	350	P			03 50 19.5		
	baz=168								
ANMO	Albuquerque	43.72	3	P			03 50 19.9		
	baz=184								
ANMO	Albuquerque	43.72	3	P		P	03 50 18.5	+0.5	
NEE2	Needles Airpor	43.77	354	P			03 50 20.0		
	baz=172								
W18A	Petrified Fore	43.82	359	P			03 50 20.7		
	baz=179								
W18A	Petrified Fore	43.82	359	P		P	03 50 19.0	+0.3	
W18A				IAmb		IAmb	03 50 22.2		
	comp=Z,33nm,1.0s								
DECC	Green Verdugo	43.82	349	P			03 50 20.5		
	baz=167								
344A	Westbrook Farm	43.87	23	P		P	03 50 18.7	-0.2	
GMRC	Granite Mounta	43.91	352	P			03 50 21.5		
	baz=171,SNR=10								
HEC	Hector,Ludlow	44.05	352	P			03 50 22.9		
	baz=170								
BI02	San Fabin de	44.06	135	P		P	03 50 20.2	-0.3	
AMTX	Amarillo	44.15	9	P			03 50 21.9		
	baz=190								
AMTX	Amarillo	44.15	9	P		P	03 50 21.5	+0.2	
WUAZ	Wupatki	44.26	357	P			03 50 24.2		
	baz=177								
SBC	Santa Barbara	44.28	347	P			03 50 24.7		
	baz=165								
EDW2	Edwards Air Fo	44.37	350	P			03 50 24.4		
	baz=167								
WMOK	Wichita Mounta	44.53	12	P			03 50 24.6		
	baz=194								
WMOK	Wichita Mounta	44.53	12	P		P	03 50 24.6	+0.3	
TUQ	Turquoise Moun	44.59	352	P			03 50 26.9		
	baz=170								
X34A	Smith Ranch, M	44.61	13	P		P	03 50 25.1	+0.2	
PKM	Mcpherson Peak	44.73	348	P			03 50 27.8		
	baz=165								
143A	Socs Landing,	44.74	21	P		P	03 50 26.0	+0.1	
143A				IAmb		IAmb	03 50 28.5		
	comp=Z,32nm,0.9s								
Z41A	Richland Creek	44.76	20	P			03 50 27.6		
	baz=203,SNR=9.4								
ARVC	Arvin	44.77	349	P			03 50 27.6		
	baz=166								
LRMC	Laurel Mtn Rad	44.90	350	P			03 50 29.2		
	baz=168								
WLAR	White Oak Lake	45.05	19	P		P	03 50 28.5	+0.1	
SHOC	Shoshone, Teco	45.09	352	P			03 50 31.2		
	baz=170								
BRAL	Brewton	45.16	27	P		P	03 50 29.2	0.0	
BRAL				IAmb		IAmb	03 50 31.3		
	comp=Z,25nm,0.8s								
BRAL	Brewton	45.16	27	P			03 50 30.4		
	baz=211								
SMMC	Simmler	45.18	347	P			03 50 31.7		
	baz=165								
ISA	Isabella, Lake	45.22	349	P			03 50 31.7		
	baz=167,SNR=6.6								
X37A	Clayton	45.22	16	P		P	03 50 29.7	0.0	
ISA	Isabella, Lake	45.22	349	P		P	03 50 30.5	+0.7	
FNO	Franklin	45.34	14	P		P	03 50 30.6	-0.1	
FNO				IAmb		IAmb	03 50 34.7		
	comp=Z,28nm,1.0s								
SAML	Samuel	45.40	94	P		P	03 50 30.6	-0.9	
OKCFA	Oklahoma City	45.48	13	P		P	03 50 32.0	+0.3	
OKCFA				IAmb		IAmb	03 50 33.9		
	comp=Z,35nm,0.9s								
VES	Vestal, Richgr	45.51	349	P			03 50 33.6		
	baz=166								
SHPR	Sheep Range	45.55	353	P		P	03 50 34.2	+1.7	
SHPR				IAmb		IAmb	03 50 36.5		
	comp=Z,34nm,1.3s								
DWPF	Disney Wildern	45.56	35	P			03 50 32.8		
	baz=220								
146A	Union	45.58	24	P		P	03 50 32.6	+0.1	
146A				IAmb		IAmb	03 50 35.2		
	comp=Z,31nm,0.8s								
PAGB	Antelope Grade	45.64	347	P		P	03 50 34.0	+0.9	
PAGB				IAmb		IAmb	03 50 35.8		
	comp=Z,27nm,1.2s								
OK025	Westminster Rd	45.66	14	P		P	03 50 33.7	+0.5	
OK025				IAmb		IAmb	03 50 34.6		
	comp=Z,22nm,0.8s								
BCOK	Bluff Creek, N	45.67	13	P		P	03 50 33.7	+0.4	
MIAR	Mount Ida	45.70	18	P			03 50 34.5		
	baz=202,SNR=14								
MIAR	Mount Ida	45.70	18	P		P	03 50 33.9	+0.4	
MIAR				IAmb		IAmb	03 50 35.6		
	comp=Z,15nm,0.9s								
CCAR	Cane Creek	45.71	20	P		P	03 50 34.0	+0.4	
CCAR				IAmb		IAmb	03 50 38.4		
	comp=Z,37nm,1.0s								
FURC	Furnace Creek,	45.74	351	P			03 50 35.9		
	baz=169								
KNB	Kanab	45.84	356	P		P	03 50 35.4	+0.6	
KNB				IAmb		IAmb	03 50 38.6		
	comp=Z,44nm,1.3s								
OK029	Liberty Lake	45.84	13	P		P	03 50 34.9	+0.2	
LCMT	Little Creek M	45.86	355	P		P	03 50 35.4	+0.5	
X40A	Basin Creek Fa	45.88	19	P			03 50 35.8		
	baz=202								
X40A	Basin Creek Fa	45.88	19	P		P	03 50 35.1	+0.2	
CWC	Cottonwood Cre	45.91	350	P			03 50 37.5		
	baz=168								
MVCO	Mesa Verde	45.91	1	P			03 50 37.0		
	baz=181,SNR=16								
MVCO	Mesa Verde	45.91	1	P		P	03 50 35.8	+0.4	
T25A	Trinidad	46.05	5	P			03 50 38.2		
	baz=186,SNR=6.8								
T25A	Trinidad	46.05	5	P		P	03 50 36.7	+0.2	
U32A	Winter Ranch,	46.08	11	P		P	03 50 36.5	-0.1	
TPNV	Topopah Spring	46.12	352	P			03 50 39.8		
	baz=170								
OK030	Cody Creek RV	46.12	14	P		P	03 50 37.0	+0.2	
OK030				IAmb		IAmb	03 50 40.2		
	comp=Z,26nm,1.1s								
OK031	S. Brethren Rd	46.14	14	P		P	03 50 37.1	+0.2	
OK031				IAmb		IAmb	03 50 37.9		
	comp=Z,17nm,0.9s								
250A	Grady	46.20	27	P		P	03 50 37.2	-0.3	
250A				IAmb		IAmb	03 50 39.8		
	comp=Z,32nm,0.9s								
PKCU	Pink Cliffs	46.23	357	P		P	03 50 38.5	+0.5	
W39A	Magazine	46.24	18	P			03 50 38.4		
	baz=201,SNR=11								
W39A	Magazine	46.24	18	P		P	03 50 38.1	+0.4	
W39A				IAmb		IAmb	03 50 39.8		
	comp=Z,16nm,0.8s								
TUL1	Leonard	46.35	15	P			03 50 38.9		
	baz=198,SNR=7.0								
QUOK	Quay	46.38	14	P		P	03 50 39.2	+0.4	
QUOK				IAmb		IAmb	03 50 44.2		
	comp=Z,19nm,0.9s								
352A	Blakely	46.41	29	P		P	03 50 39.2	0.0	
CCUT	Cedar City	46.41	355	P		P	03 50 39.9	+0.5	
CCUT				IAmb		IAmb	03 50 43.3		
	comp=Z,17nm,1.0s								
PRN	Pahroc Range	46.43	354	P		P	03 50 40.2	+0.8	
PRN				IAmb		IAmb	03 50 43.5		
	comp=Z,32nm,1.2s								
Z47A	Carrollton	46.47	25	P		P	03 50 39.8	+0.3	
Y45A	Yeager Farm, C	46.47	23	P		P	03 50 39.9	+0.4	
S22A	4UR Ranch, Cre	46.49	3	P			03 50 41.9		
	baz=183,SNR=43								
TIN	Tinemaha, Big	46.53	350	P			03 50 42.3		
	baz=168								
X43A	Marvell	46.56	21	P			03 50 41.8		
	baz=205								
SDCO	Great Sand Dun	46.56	4	P			03 50 42.2		
	baz=185								
PLCA	Paso Flores	46.61	139	P		P	03 50 42.4	+1.6	
	comp=Z,1.7nm,0.8s,baz=300,slow=5.9,SNR=5.9								
PLCA				LR		LR	04 05 05.2		
	comp=Z,828nm,21.2s,baz=316,slow=29								
PLCA	Paso Flores	46.61	139	P		P	03 50 41.0	+0.2	
PLCA				IAmb		IAmb	03 50 49.1		
	comp=Z,50nm,1.9s								
OK032	Salt Plains WL	46.65	12	P		P	03 50 41.5	+0.5	
OK032				IAmb		IAmb	03 50 42.2		
	comp=Z,19nm,1.0s								
W41B	Gary Mavity, V	46.70	19	P			03 50 42.6		
	baz=203,SNR=24								
LRAL	Lakeview Retre	46.77	26	P			03 50 43.1		
	baz=210,SNR=13								
LRAL	Lakeview Retre	46.78	26	P		P	03 50 42.2	+0.2	
LRAL				IAmb		IAmb	03 50 44.1		
	comp=Z,18nm,0.8s								
WHAR	Wooly Hollow	46.79	19	P		P	03 50 42.5	+0.4	
MTPU	Mount Pierson	46.82	357	P		P	03 50 43.2	+0.5	
PV01	Paradox Valley	46.83	1	P		P	03 50 43.1	+0.4	
PV01				IAmb		IAmb	03 50 45.6		
	comp=Z,22nm,1.2s								
KAN05	Bluff City Nor	47.01	12	P		P	03 50 44.3	+0.5	
TIGA	Tifton	47.03	30	P			03 50 45.9		
	baz=215								
KAN01	Argonia South	47.08	12	P		P	03 50 44.8	+0.5	
KAN09	Caldwell North	47.09	13	P		P	03 50 44.9	+0.5	
KAN09				IAmb		IAmb	03 50 46.1		
	comp=Z,19nm,0.9s								
OXF	Oxford	47.09	22	P			03 50 45.0		
	baz=207,SNR=6.6								
OXF	Oxford	47.09	22	P		P	03 50 44.7	+0.2	
PV07	Paradox Valley	47.13	1	P		P	03 50 45.1	+0.2	
PV07				IAmb		IAmb	03 50 47.8		
	comp=Z,14nm,1.1s								
T35A	Sooner Cattle	47.13	14	P		P	03 50 44.4	-0.3	
MLAC	Mammoth, Mammo	47.20	350	P			03 50 47.1		
	baz=167								
HHAR	Hobbs	47.20	17	P		P	03 50 45.4	0.0	
HHAR				IAmb		IAmb	03 50 46.6		
	comp=Z,13nm,0.9s								
PV22	Blue Mesa, Par	47.23	0	P		P	03 50 46.0	+0.3	
U38A	Gravette	47.23	16	P		P	03 50 45.6	+0.1	
U38A				IAmb		IAmb	03 50 46.8		
	comp=Z,11nm,0.8s								
MSU	Marysvale	47.28	357	P		P	03 50 46.5	+0.4	
TPH	Tonopah	47.37	351	P		P	03 50 47.3	+0.5	
FCAR	Ozark Folk Cen	47.39	19	P		P	03 50 46.7	0.0	
FCAR				IAmb		IAmb	03 50 51.2		
	comp=Z,12nm,0.9s								
R11A	Troy Canyon, C	47.42	353	P			03 50 49.5		
	baz=171								
152A	Waverly Hall	47.49	28	P		P	03 50 47.5	-0.1	
152A				IAmb		IAmb	03 50 49.5		
	comp=Z,17nm,0.9s								
U40A	Yellville	47.59	18	P			03 50 48.9		
	baz=202,SNR=20								
Q16A	Castle Valley	47.64	358	P		P	03 50 49.4	+0.5	
Q16A				IAmb		IAmb	03 50 54.9		
	comp=Z,21nm,1.2s								
W45A	Hickory Valley	47.75	22	P		P	03 50 49.6	+0.1	
Q24A	Divide	47.80	4	P			03 50 51.3		
	baz=185,SNR=12								
Z51A	Franklin	47.82	27	P		P	03 50 50.0	-0.1	
Z51A				IAmb		IAmb	03 50 52.1		
	comp=Z,21nm,0.9s								
LCAR	Lake Charles	47.87	20	P		P	03 50 50.5	0.0	
LCAR				IAmb		IAmb	03 50 52.5		
	comp=Z,26nm,1.0s								
NVAR	Mina Array Bea	47.88	350	P		P	03 50 51.7	+0.9	
	comp=Z,10nm,1.1s,baz=177,slow=9.4,SNR=40								
NVAR				LR		LR	04 06 54.2		
	comp=Z,590nm,18.0s,baz=180,slow=31								
NVAR	Mina Array Bea	47.88	350	P		P	03 50 51.3	+0.5	
SMCO	Snowmass	47.91	2	P		P	03 50 51.2	0.0	
SMCO				IAmb		IAmb	03 50 56.1		
	comp=Z,20nm,1.1s								
SPR3	Spring Creek 3	47.93	355	P		P	03 50 51.6	+0.4	
SPR3				IAmb		IAmb	03 50 54.2		
	comp=Z,31nm,1.2s								
X48A	Hartselle	47.98	25	P		P	03 50 51.1	-0.3	
X48A				IAmb		IAmb	03 50 54.8		
	comp=Z,16nm,1.0s								
PLAL	Pickwick Lake	48.02	23	P		P	03 50 51.6	-0.1	
PLAL				IAmb		IAmb	03 50 53.2		
	comp=Z,22nm,1.1s								
TMUT	Trail Mountain	48.02	358	P		P	03 50 52.2	+0.2	
TMUT				IAmb		IAmb	03 50 57.3		
	comp=Z,22nm,0.9s								
KSCO	Kaye Shedlock'	48.09	7	P			03 50 53.3		
	baz=188								
RYN	Ryan	48.12	350	P		P	03 50 53.2	+0.6	
RYN				IAmb		IAmb	03 50 56.3		
	comp=Z,30nm,1.2s								
P17A	Butcher Ranch,	48.18	358	P		P	03 50 53.5	+0.4	
154A	Montrose	48.22	30	P		P	03 50 53.0	-0.3	
CBKS	Cedar Bluff	48.31	10	P			03 50 54.4		
	baz=192,SNR=8.3								
ISCO	Idaho Springs	48.60	4	P			03 50 58.0		
	baz=184,SNR=41								
FPAL	Fort Paine	48.66	26	P		P	03 50 56.5	-0.2	
FPAL				IAmb		IAmb	03 50 58.4		
	comp=Z,20nm,1.0s								
GOGA	Godfrey	48.69	29	P			03 50 57.3		
	baz=214,SNR=7.6								
NLU	North Lily Min	48.72	357	P		P	03 50 57.7	+0.4	
NLU				IAmb		IAmb	03 51 00.9		
	comp=Z,24nm,1.1s								
MPU	Maple Canyon	48.76	357	P		P	03 50 57.6	+0.1	
O20A	White River Ci	48.83	1	P			03 50 59.9		
	baz=181,SNR=13								
O20A	White River Ci	48.83	1	P		P	03 50 58.2	+0.1	
VCNR	Virginia City	48.96	349	P		P	03 50 59.6	+0.4	
DUG	Dugway, Tooele	49.00	356	P			03 51 01.7		
	baz=175,SNR=25								
DUG	Dugway, Tooele	49.00	356	P		P	03 50 59.7	+0.4	
DUG				IAmb		IAmb	03 51 02.9		
	comp=Z,30nm,1.1s								
X51A	Calhoun	49.01	27	P		P	03 50 59.2	-0.2	
X51A				IAmb		IAmb	03 51 01.0		
	comp=Z,33nm,1.1s								
SWET	Sewanee	49.10	25	P		P	03 50 59.9	-0.2	
SWET				IAmb		IAmb	03 51 01.6		
	comp=Z,24nm,1.0s								
WVT	Waverly	49.12	23	P			03 51 00.1		
	baz=208								
WVT	Waverly	49.12	23	P		P	03 51 00.1	-0.1	
WVT				IAmb		IAmb	03 51 02.0		
	comp=Z,16nm,1.1s								
V48A	Smith Brothers	49.18	24	P		P	03 51 00.6	0.0	
V48A				IAmb		IAmb	03 51 02.7		
	comp=Z,14nm,0.9s								
KSU1	Kansas State U	49.20	13	P			03 51 00.8		
	baz=196								
KSU1	Kansas State U	49.20	13	P		P	03 51 00.8	+0.1	
KSU1				IAmb		IAmb	03 51 04.1		
	comp=Z,24nm,1.0s								
RDMU	Red Mountain	49.26	360	P		P	03 51 01.7	+0.3	
RDMU				IAmb		IAmb	03 51 04.3		
	comp=Z,30nm,1.1s								
PAHR	Pah Rah Range	49.31	350	P		P	03 51 02.4	+0.7	
PAHR				IAmb		IAmb	03 51 07.3		
	comp=Z,26nm,1.4s								
JLU	Jordanelle	49.33	358	P		P	03 51 02.1	+0.1	
JLU				IAmb		IAmb	03 51 05.3		
	comp=Z,28nm,1.1s								
W50A	Signal Mountai	49.35	26	P		P	03 51 01.7	-0.3	
CTU	Camp Tracy	49.44	357	P		P	03 51 03.1	+0.5	
CTU				IAmb		IAmb	03 51 05.9		
	comp=Z,27nm,0.9s								
R40A	Maddies Statio	49.56	17	P		P	03 51 03.6	+0.2	
PTGA	Pitinga	49.65	83	P		P	03 51 03.6	-1.0	
CCM	Cathedral Cave	49.66	19	P			03 51 04.2		
	baz=203								
CCM	Cathedral Cave	49.66	19	P		P	03 51 04.2	0.0	
CCM				IAmb		IAmb	03 51 05.5		
	comp=Z,25nm,0.9s								
N23A	Red Feather La	49.67	3	P			03 51 06.2		
	baz=184,SNR=13								
CLTN	Cedars of Leba	49.68	24	P		P	03 51 04.3	-0.1	
CLTN				IAmb		IAmb	03 51 06.5		
	comp=Z,15nm,1.0s								
TCUT	Toone Canyon	49.85	358	P		P	03 51 05.9	0.0	
FVM	French Village	49.85	19	P		P	03 51 05.7	0.0	
W52A	Murphy	49.87	27	P		P	03 51 05.5	-0.4	
W52A				IAmb		IAmb	03 51 07.9		
	comp=Z,20nm,0.8s								
CPCT	Cooper Cave	49.90	26	P		P	03 51 05.9	-0.2	
S44A	Carbondale	49.99	21	P		P	03 51 06.6	-0.1	
S44A				IAmb		IAmb	03 51 08.3		
	comp=Z,22nm,0.8s								
SIUC	Southern Illin	50.02	21	P		P	03 51 06.7	-0.3	
SIUC				IAmb		IAmb	03 51 08.5		
	comp=Z,27nm,1.1s								
OGNE	Ogallala	50.06	7	P			03 51 08.6		
	baz=189,SNR=5.7								
OGNE	Ogallala	50.07	7	P		P	03 51 07.5	+0.1	
SPUT	South Promonto	50.09	357	P		P	03 51 07.7	+0.1	
PHWY	Pilot Hill	50.10	4	P		P	03 51 07.8	-0.1	
PHWY				IAmb		IAmb	03 51 10.4		
	comp=Z,32nm,1.1s								
T47A	Sharon Grove	50.15	23	P		P	03 51 07.8	-0.2	
T47A				IAmb		IAmb	03 51 08.8		
	comp=Z,13nm,0.8s								
RAR	Rarotonga	50.16	250	LR		LR	04 05 36.3		
	comp=Z,441nm,19.8s,baz=85,slow=28								
BG3	Lake Jocassee	50.24	28	P		P	03 51 08.4	-0.4	
U49A	Red Boiling Sp	50.27	25	P		P	03 51 08.6	-0.3	
U49A				IAmb		IAmb	03 51 18.3		
	comp=Z,20nm,1.2s								
V51A	Loudon	50.27	26	P		P	03 51 08.7	-0.2	
V51A				IAmb		IAmb	03 51 11.3		
	comp=Z,22nm,1.1s								
HWUT	Hardware Ranch	50.34	358	P		P	03 51 09.8	+0.2	
RWWY	Rawlins	50.41	2	P		P	03 51 10.1	-0.1	
TKL	Tuckaleechee C	50.41	27	P		P	03 51 09.7	-0.2	
P38A	Dawn	50.45	16	P		P	03 51 10.2	+0.1	
P38A				IAmb		IAmb	03 51 11.1		
	comp=Z,19nm,0.8s								
O02D	Mt. Diablo Mer	50.46	346	P			03 51 12.3		
	baz=162								
JSC	Jenkinsville	50.47	30	P		P	03 51 10.1	-0.3	
HVU	Hansel Valley	50.57	357	P		P	03 51 11.5	+0.2	
HVU				IAmb		IAmb	03 51 13.5		
	comp=Z,16nm,0.9s								
N33A	J Bar K, Exete	50.60	12	P		P	03 51 11.4	+0.1	
N33A				IAmb		IAmb	03 51 12.8		
	comp=Z,27nm,0.9s								
PAULI	Pauline	50.63	29	P		P	03 51 11.5	-0.2	
V52A	Sevierville	50.64	27	P		P	03 51 11.5	-0.2	
KMRM	Mail Ridge	50.73	346	P		P	03 51 12.6	+0.2	
P40A	Paris	50.77	17	P		P	03 51 12.7	+0.1	
P40A				IAmb		IAmb	03 51 13.1		
	comp=Z,18nm,0.8s								
WDC	Whiskeytown Da	50.79	347	P		P	03 51 13.3	+0.5	
USIN	University of	50.80	22	P		P	03 51 12.8	0.0	
USIN				IAmb		IAmb	03 51 15.1		
	comp=Z,27nm,0.8s								
V53A	Saluda	50.85	28	P		P	03 51 13.0	-0.4	
V53A				IAmb		IAmb	03 51 23.2		
	comp=Z,22nm,1.1s								
N35

ECR	**Eagle Creek**	**51.78**	**358**	P		**P**		**03 51 20.6**	**+0.2**
M04C	**Macdoel**	**51.79**	**348**	P				03 51 22.1	
	baz=164,SNR=11								
W57A	**Gilead**	**51.80**	**31**	P		**P**		**03 51 20.1**	**-0.3**
WVOR	**Wild Horse Val**	**51.85**	**351**	P		**P**		**03 51 21.1**	**+0.3**
WVOR				IAmb		IAmb		03 51 24.4	
	comp=Z,35nm,1.3s								
YBH	**Yreka Blue Hor**	**51.93**	**347**	P		**P**		**03 51 22.1**	**+0.7**
	comp=Z,3.7nm,0.9s,baz=124,slow=7.5,SNR=7.4								
YBH				LR		LR		04 08 16.9	
	comp=Z,602nm,21.7s,baz=170,slow=30								
YBH	**Yreka Blue Hor**	**51.93**	**347**	P		**P**		**03 51 21.9**	**+0.5**
CPUP	**Villa Florida**	**51.98**	**116**	P		**P**		**03 51 25.2**	**+3.2**
	comp=Z,4.5nm,1.1s,baz=281,slow=9.3,SNR=5.5								
CPUP				LR		LR		04 09 36.7	
	comp=Z,430nm,20.2s,baz=283,slow=32								
CPUP	**Villa Florida**	**51.98**	**116**	P		**P**		**03 51 21.6**	**-0.4**
L34A	**Svendsen Farm,**	**51.99**	**12**	P		**P**		**03 51 22.0**	**+0.2**
L34A				IAmb		IAmb		03 51 23.1	
	comp=Z,28nm,1.0s								
U54A	**Nelsons Funny**	**52.01**	**28**	P				03 51 22.2	
	baz=215								
U54A	**Nelsons Funny**	**52.01**	**28**	P		**P**		**03 51 21.7**	**-0.4**
R49A	**Shelbyville**	**52.05**	**24**	P		**P**		**03 51 22.0**	**-0.2**
R49A				IAmb		IAmb		03 51 25.6	
	comp=Z,26nm,1.3s								
REDW	**Red Top Meadow**	**52.07**	**358**	P		**P**		**03 51 22.7**	**+0.1**
REDW				IAmb		IAmb		03 51 35.8	
	comp=Z,26nm,1.1s								
SNOW	**Snow King Moun**	**52.17**	**359**	P		**P**		**03 51 23.5**	**+0.1**
SNOW				IAmb		IAmb		03 51 27.4	
	comp=Z,28nm,1.0s								
K31A	**O'Neill**	**52.19**	**10**	P		**P**		**03 51 23.4**	**+0.2**
L04D	**Klamath Falls**	**52.31**	**348**	P				03 51 25.6	
	baz=163								
LOHW	**Long Hollow**	**52.31**	**359**	P		**P**		**03 51 24.4**	**0.0**
LOHW				IAmb		IAmb		03 51 27.3	
	comp=Z,32nm,0.9s								
R50A	**Paris**	**52.38**	**25**	P		**P**		**03 51 24.3**	**-0.4**
P46A	**Rosedale**	**52.43**	**21**	P		**P**		**03 51 25.1**	**+0.1**
P46A				IAmb		IAmb		03 51 27.1	
	comp=Z,28nm,0.8s								
HLID	**Hailey**	**52.46**	**355**	P				03 51 27.2	
	baz=173,SNR=93								
K05A	**Summer Lake**	**52.52**	**349**	P		**P**		**03 51 26.2**	**+0.3**
K05A				IAmb		IAmb		03 51 29.5	
	comp=Z,42nm,1.1s								
L02E	**Cave Junction**	**52.54**	**346**	P				03 51 27.2	
	baz=162								
U56A	**King**	**52.55**	**29**	P				03 51 25.9	
	baz=217								
HDIL	**Hopedale**	**52.55**	**19**	P				03 51 25.8	
	baz=205,SNR=5.9								
K04D	**Chiloquin, OR**	**52.58**	**348**	P				03 51 28.0	
	baz=164								
SCIA	**State Center**	**52.67**	**15**	P				03 51 26.9	
	baz=200								
J08A	**Circle Bar Ran**	**52.73**	**351**	P		**P**		**03 51 27.7**	**+0.4**
J08A				IAmb		IAmb		03 51 30.9	
	comp=Z,30nm,1.1s								
FLWY	**Flagg Ranch**	**52.79**	**359**	P		**P**		**03 51 27.9**	**0.0**
CNNC	**Cliffs of the**	**52.95**	**32**	P				03 51 29.1	
	baz=220								
YPP	**Pitchstone Pla**	**52.98**	**359**	P		**P**		**03 51 29.3**	**-0.1**
RSSD	**Black Hills**	**53.01**	**5**	P				03 51 30.1	
	baz=186								
RSSD	**Black Hills**	**53.01**	**5**	P		**P**		**03 51 29.4**	**-0.2**
RSSD				IAmb		IAmb		03 51 31.5	
	comp=Z,23nm,0.9s								
K02D	**Willamette Mer**	**53.06**	**347**	P				03 51 31.2	
	baz=162								
H17A	**Grant Village**	**53.09**	**359**	P				03 51 31.6	
	baz=178,SNR=9.8								
H17A	**Grant Village**	**53.09**	**359**	P		**P**		**03 51 30.1**	**-0.1**
J05D	**Fort Rock, OR**	**53.12**	**349**	P				03 51 32.2	
	baz=165,SNR=16								
BCYI	**Bear Canyon**	**53.13**	**356**	P		**P**		**03 51 30.4**	**0.0**
SFIN	**Lafayette**	**53.14**	**21**	P				03 51 29.5	
	baz=207								
BLA	**Blacksburg**	**53.23**	**29**	P				03 51 31.2	
	baz=216								
J04D	**Umpqua Nationa**	**53.25**	**348**	P				03 51 33.0	
	baz=164,SNR=5.4								
LKWY	**Lake**	**53.26**	**359**	P		**P**		**03 51 31.5**	**+0.1**
LKWY				IAmb		IAmb		03 51 34.6	
	comp=Z,16nm,0.8s								
T56A	**Rocky Mt**	**53.27**	**29**	P				03 51 31.6	
	baz=217,SNR=7.8								
S54A	**Dingess, Beckl**	**53.29**	**27**	P				03 51 31.6	
	baz=215								
P49A	**Miami Univ. Ec**	**53.29**	**24**	P				03 51 30.5	
	baz=210								
YMR	**Madison River**	**53.38**	**358**	P		**P**		**03 51 32.5**	**+0.3**
YMR				IAmb		IAmb		03 51 35.0	
	comp=Z,31nm,0.9s								
YNR	**Norris Junctio**	**53.42**	**359**	P		**P**		**03 51 32.8**	**+0.2**
YMP	**Mirror Lake Pl**	**53.43**	**359**	P		**P**		**03 51 33.0**	**+0.3**
YMP				IAmb		IAmb		03 51 47.1	
	comp=Z,20nm,1.0s								
R53A	**Hurricane**	**53.44**	**27**	P		**P**		**03 51 32.5**	**0.0**
R53A				IAmb		IAmb		03 51 33.9	
	comp=Z,16nm,0.8s								
YHB	**Horse Butte**	**53.47**	**358**	P		**P**		**03 51 33.0**	**+0.1**
YHB				IAmb		IAmb		03 51 35.6	
	comp=Z,30nm,1.1s								
YHH	**Holmes Hill**	**53.49**	**359**	P		**P**		**03 51 33.0**	**-0.1**
YHH				IAmb		IAmb		03 51 35.8	
	comp=Z,31nm,0.9s								
QLMT	**Earthquake Lak**	**53.55**	**358**	P		**P**		**03 51 33.5**	**0.0**
PINE	**Pine Mountain**	**53.56**	**349**	P		**P**		**03 51 33.8**	**+0.3**
PINE				IAmb		IAmb		03 51 36.9	
	comp=Z,21nm,1.1s								
J01E	**Myrtle Point**	**53.56**	**347**	P				03 51 35.0	
	baz=162								
YHL	**Hebgen Lake**	**53.57**	**358**	P		**P**		**03 51 33.9**	**+0.2**
I07A	**Izee**	**53.59**	**351**	P		**P**		**03 51 34.1**	**+0.4**
I07A				IAmb		IAmb		03 51 36.6	
	comp=Z,24nm,1.2s								
MCMT	**McKenzie Canyo**	**53.62**	**357**	P		**P**		**03 51 34.3**	**+0.3**
T57A	**Hurt**	**53.62**	**30**	P		**P**		**03 51 33.8**	**-0.1**
T57A				IAmb		IAmb		03 51 36.0	
	comp=Z,16nm,0.9s								
ECSD	**EROS Data Cent**	**53.65**	**11**	P				03 51 33.8	
	baz=195,SNR=10								
ECSD	**EROS Data Cent**	**53.65**	**11**	P		**P**		**03 51 34.0**	**0.0**
YNE	**Yellowstone No**	**53.70**	**359**	P		**P**		**03 51 34.8**	**+0.2**
R54A	**Victor**	**53.75**	**27**	P				03 51 34.7	
	baz=215								
L42A	**Oliver, Polo**	**53.75**	**18**	P		**P**		**03 51 34.7**	**-0.1**
L42A				IAmb		IAmb		03 51 35.5	
	comp=Z,22nm,0.8s								
RLMT	**Red Lodge**	**53.81**	**360**	P				03 51 36.0	
	baz=180,SNR=23								
RLMT	**Red Lodge**	**53.81**	**360**	P		**P**		**03 51 35.6**	**+0.2**
RLMT				IAmb		IAmb		03 51 38.8	
	comp=Z,23nm,1.0s								
I04A	**Tendick Farm,**	**53.84**	**348**	P				03 51 36.8	
	baz=164,SNR=6.5								
SUSD	**Miller**	**53.93**	**9**	P				03 51 36.3	
	baz=192,SNR=23								
SUSD	**Miller**	**53.93**	**9**	P		**P**		**03 51 36.1**	**+0.1**
T58A	**Grand View Acr**	**53.93**	**30**	P				03 51 36.1	
	baz=218,SNR=7.2								
I03D	**Drain, OR**	**53.94**	**347**	P				03 51 37.5	
	baz=162								
S56A	**Natural Bridge**	**54.01**	**29**	P				03 51 36.4	
	baz=217								
BMO	**Blue Mountains**	**54.04**	**353**	P		**P**		**03 51 37.7**	**+0.7**
Q53A	**Leroy**	**54.06**	**27**	P				03 51 37.1	
	baz=214								
DLMT	**Dillon**	**54.13**	**357**	P		**P**		**03 51 38.1**	**+0.4**
DLMT				IAmb		IAmb		03 51 40.2	
	comp=Z,21nm,1.1s								
I05D	**Terrebonne, OR**	**54.16**	**349**	P				03 51 39.7	
	baz=165								
V62A	**Hyde County Ai**	**54.22**	**33**	P				03 51 38.7	
	baz=222								
R55A	**Marlinton**	**54.23**	**28**	P				03 51 38.0	
	baz=216								
U60A	**Pendleton**	**54.27**	**32**	P				03 51 38.4	
	baz=220								
BOZ	**Bozeman (W)**	**54.33**	**358**	P				03 51 39.7	
	baz=177,SNR=22								
BOZ	**Bozeman (W)**	**54.33**	**358**	P		**P**		**03 51 39.1**	**0.0**
S57A	**Dark Hollow, R**	**54.37**	**29**	P				03 51 39.3	
	baz=218								
S57A	**Dark Hollow, R**	**54.37**	**29**	P		**P**		**03 51 38.8**	**-0.5**
S57A				IAmb		IAmb		03 51 41.1	
	comp=Z,13nm,0.9s								
JFWS	**Jewell Farm**	**54.41**	**17**	P				03 51 39.5	
	baz=203,SNR=5.3								
JFWS	**Jewell Farm**	**54.41**	**17**	P		**P**		**03 51 39.6**	**+0.1**
JFWS				IAmb		IAmb		03 51 40.0	
	comp=Z,24nm,0.9s								
P52A	**Corning**	**54.44**	**26**	P				03 51 39.2	
	baz=213								
I02D	**Swisshome**	**54.44**	**347**	P				03 51 41.0	
	baz=162								
L44A	**Lake County Fo**	**54.46**	**19**	P				03 51 39.6	
	baz=206								
Q54A	**Coxs Mills**	**54.47**	**27**	P		**P**		**03 51 39.9**	**-0.2**
Q54A				IAmb		IAmb		03 51 41.3	
	comp=Z,21nm,0.8s								
GCMT	**Greycliff**	**54.48**	**360**	P		**P**		**03 51 40.2**	**+0.1**
U61A	**Possum Corner**	**54.54**	**32**	P				03 51 40.6	
	baz=221								
LRM	**Limekiln Ridge**	**54.59**	**357**	P		**P**		**03 51 41.3**	**+0.2**
H04D	**Lebanon**	**54.61**	**348**	P				03 51 42.9	
	baz=163								
I37A	**Lemond, Waseca**	**54.61**	**14**	P		**P**		**03 51 40.9**	**-0.1**
P53A	**Whipple**	**54.64**	**26**	P		**P**		**03 51 41.2**	**-0.1**
H04A	**Detroit Lake**	**54.65**	**349**	P		**P**		**03 51 42.0**	**+0.7**
H04A				IAmb		IAmb		03 51 43.9	
	comp=Z,28nm,1.1s								
R56A	**Bull Pasture M**	**54.66**	**29**	P				03 51 42.4	
	baz=217								
G08A	**Pilot Rock**	**54.69**	**352**	P		**P**		**03 51 42.1**	**+0.4**
G08A				IAmb		IAmb		03 51 44.9	
	comp=Z,29nm,1.1s								
S58A	**Poland Farm, P**	**54.69**	**30**	P				03 51 41.7	
	baz=218								
S58A	**Poland Farm, P**	**54.70**	**30**	P		**P**		**03 51 41.5**	**-0.2**
S58A				IAmb		IAmb		03 51 43.6	
	comp=Z,15nm,1.1s								
O52A	**Adamsville**	**54.97**	**25**	P		**P**		**03 51 43.0**	**-0.7**
O52A				IAmb		IAmb		03 51 44.1	
	comp=Z,20nm,1.1s								
T60A	**Surry**	**55.00**	**32**	P				03 51 44.3	
	baz=220								
R57A	**Stanardsville**	**55.00**	**29**	P				03 51 43.7	
	baz=218,SNR=5.7								
T60A	**Surry**	**55.00**	**32**	P		**P**		**03 51 43.7**	**-0.2**
G05D	**Wamic, OR**	**55.03**	**350**	P				03 51 45.9	
	baz=165								
R58B	**Mineral**	**55.05**	**30**	P				03 51 44.7	
	baz=218								
F10A	**Beach Ranch, E**	**55.13**	**353**	P		**P**		**03 51 45.3**	**+0.5**
S59A	**Mechanicsville**	**55.19**	**31**	P				03 51 45.5	
	baz=219								
I40A	**Norwalk**	**55.21**	**16**	P		**P**		**03 51 45.4**	**0.0**
I40A				IAmb		IAmb		03 51 45.8	
	comp=Z,22nm,1.1s								
R58A	**Rapidan**	**55.25**	**30**	P				03 51 45.8	
	baz=218								
Q56A	**Snyder Ridge,**	**55.27**	**28**	P				03 51 46.1	
	baz=217								
O53A	**New Philadelph**	**55.34**	**26**	P				03 51 46.0	
	baz=214								
O53A	**New Philadelph**	**55.34**	**26**	P		**P**		**03 51 46.2**	**-0.1**
O53A				IAmb		IAmb		03 51 47.1	
	comp=Z,15nm,0.8s								
G03D	**McMinnville, O**	**55.37**	**348**	P				03 51 48.3	
	baz=163								
F07A	**Phinny Hill Vi**	**55.43**	**351**	P		**P**		**03 51 47.4**	**+0.6**
F07A				IAmb		IAmb		03 51 49.5	
	comp=Z,18nm,1.1s								
LAO	**LASA Array**	**55.44**	**2**	P				03 51 47.7	
	baz=183,SNR=29								
LAO	**LASA Array**	**55.44**	**2**	P		**P**		**03 51 47.0**	**+0.1**
HRY	**Holter Researc**	**55.45**	**358**	P		**P**		**03 51 47.4**	**+0.3**
MCWV	**Mont Chateau**	**55.47**	**27**	P				03 51 47.3	
	baz=216								
MCWV	**Mont Chateau**	**55.47**	**27**	P		**P**		**03 51 47.1**	**-0.1**
L48A	**N Adams**	**55.48**	**22**	P		**P**		**03 51 46.7**	**-0.6**
R59A	**King George, V**	**55.62**	**30**	P				03 51 47.9	
	baz=219								
Q57A	**Strasburg**	**55.63**	**29**	P				03 51 48.8	
	baz=218								
F05D	**White Salmon**	**55.67**	**350**	P				03 51 50.6	
	baz=165								
MSO	**Missoula**	**55.68**	**356**	P				03 51 49.2	
	baz=174,SNR=12								
MSO	**Missoula**	**55.68**	**356**	P		**P**		**03 51 49.1**	**+0.3**
F33A	**5 Mile Ranch,**	**55.74**	**11**	P		**P**		**03 51 48.5**	**-0.6**
E28A	**Huff**	**55.78**	**7**	P		**P**		**03 51 49.8**	**+0.4**
P56A	**Dayton Farm, R**	**55.80**	**28**	P				03 51 49.7	
	baz=217								
HAWA	**Hanford**	**55.85**	**351**	P		**P**		**03 51 50.7**	**+0.8**
HAWA				IAmb		IAmb		03 51 52.3	
	comp=Z,18nm,1.2s								
E08A	**Dider Farm, El**	**55.88**	**352**	P		**P**		**03 51 50.6**	**+0.6**
E08A				IAmb		IAmb		03 51 52.0	
	comp=Z,16nm,1.1s								
SPMN	**Marine on St.**	**55.89**	**14**	P				03 51 50.0	
	baz=199,SNR=5.8								
SPMN	**Marine on St.**	**55.89**	**14**	P		**P**		**03 51 50.2**	**0.0**
SPMN				IAmb		IAmb		03 51 50.8	
	comp=Z,16nm,1.0s								
Q58A	**Fox Den Farm,**	**55.91**	**29**	P				03 51 50.5	
	baz=218								
N53A	**Lisbon**	**55.97**	**26**	P		**P**		**03 51 50.4**	**-0.4**
N53A				IAmb		IAmb		03 51 51.8	
	comp=Z,14nm,0.9s								
E07A	**Sunnyside**	**56.06**	**351**	P		**P**		**03 51 52.0**	**+0.6**
E07A				IAmb		IAmb		03 52 00.8	
	comp=Z,17nm,1.1s								
AAM	**Ann Arbor**	**56.08**	**23**	P				03 51 51.0	
	baz=211								
P57A	**Homestead Farm**	**56.18**	**29**	P				03 51 52.0	
	baz=218								
F36A	**Milaca**	**56.33**	**13**	P		**P**		**03 51 53.2**	**0.0**
D08A	**Wollman Farm,**	**56.42**	**352**	P		**P**		**03 51 54.5**	**+0.6**
D08A				IAmb		IAmb		03 51 56.6	
	comp=Z,21nm,1.1s								
N54A	**Moraine State**	**56.46**	**26**	P				03 51 54.1	
	baz=215								
E04D	**Cinebar**	**56.52**	**349**	P				03 51 56.7	
	baz=164,SNR=11								
O56A	**Blue Knob Stat**	**56.54**	**28**	P				03 51 55.4	
	baz=217								
O56A	**Blue Knob Stat**	**56.54**	**28**	P		**P**		**03 51 54.8**	**-0.2**
M53A	**WI Miller and**	**56.55**	**25**	P				03 51 55.1	
	baz=214								
LON	**Longmire**	**56.57**	**350**	P		**P**		**03 51 55.9**	**+0.8**
G40A	**Rib Lake**	**56.59**	**16**	P		**P**		**03 51 55.0**	**-0.2**
G40A				IAmb		IAmb		03 51 59.1	
	comp=Z,25nm,1.2s								
JTMT	**Jette**	**56.62**	**356**	P		**P**		**03 51 55.6**	**+0.1**
E03A	**Lebam**	**56.71**	**348**	P		**P**		**03 51 56.5**	**+0.6**
EGMT	**Eagleton**	**56.71**	**360**	P				03 51 57.2	
	baz=179,SNR=27								
EGMT	**Eagleton**	**56.71**	**360**	P		**P**		**03 51 56.6**	**+0.5**
D32A	**Dogwood Acres,**	**56.86**	**10**	P		**P**		**03 51 57.2**	**+0.1**
D32A				IAmb		IAmb		03 51 58.9	
	comp=Z,13nm,0.8s								
O57A	**Amberson**	**56.93**	**29**	P				03 51 57.7	
	baz=218								
D05A	**Enumclaw**	**57.03**	**350**	P		**P**		**03 51 58.8**	**+0.6**
M54A	**Oil Creek Stat**	**57.05**	**26**	P				03 51 58.3	
	baz=215								
C09A	**Chrisman Ranch**	**57.06**	**353**	P		**P**		**03 51 59.1**	**+0.6**
SSPA	**Standing Stone**	**57.15**	**28**	P				03 51 59.0	
	baz=217								
L53A	**Girard**	**57.16**	**25**	P				03 51 59.2	
	baz=214								
D04E	**Lakebay**	**57.16**	**349**	P				03 52 01.0	
	baz=164								
MDND	**Maddock**	**57.17**	**8**	P				03 51 59.1	
	baz=191,SNR=9.0								
MDND	**Maddock**	**57.17**	**8**	P		**P**		**03 51 59.6**	**+0.4**
N56A	**West Decatur**	**57.18**	**28**	P				03 51 59.8	
	baz=217,SNR=8.6								
O58A	**Lewisberry**	**57.20**	**29**	P				03 51 59.6	
	baz=219								
DGMT	**Dagmar**	**57.32**	**4**	P				03 52 01.4	
	baz=186,SNR=35								
DGMT	**Dagmar**	**57.33**	**4**	P		**P**		**03 52 00.8**	**+0.4**
PAGS	**Pennsylvania G**	**57.38**	**29**	P		**P**		**03 52 00.3**	**-0.5**
PAGS				IAmb		IAmb		03 52 02.0	
	comp=Z,15nm,0.9s								
MVL	**Millersville**	**57.38**	**30**	P		**P**		**03 52 00.4**	**-0.5**
MVL				IAmb		IAmb		03 52 02.4	
	comp=Z,16nm,0.9s								
NEW	**Newport**	**57.38**	**354**	P				03 52 01.6	
	baz=170,SNR=14								
NEW	**Newport**	**57.38**	**354**	P		**P**		**03 52 01.1**	**+0.3**
NEW				IAmb		IAmb		03 52 04.6	
	comp=Z,19nm,1.0s								
N57A	**Milroy**	**57.40**	**28**	P				03 52 01.0	
	baz=218								
C06D	**Leavenworth**	**57.55**	**351**	P				03 52 03.6	
	baz=166								
D03D	**Eldon**	**57.56**	**349**	P				03 52 03.9	
	baz=164,SNR=8.2								
NLWA	**Neilton Lookou**	**57.58**	**348**	P		**P**		**03 52 02.8**	**+0.6**
NLWA				IAmb		IAmb		03 52 05.3	
	comp=Z,30nm,1.0s								
COWI	**Conover**	**57.65**	**16**	P		**P**		**03 52 02.5**	**-0.2**
COWI				IAmb		IAmb		03 52 03.7	
	comp=Z,17nm,0.8s								
M56A	**Emporium**	**57.68**	**27**	P				03 52 03.3	
	baz=217								
M56A	**Emporium**	**57.69**	**27**	P		**P**		**03 52 02.2**	**-0.8**
O59A	**Robesonia**	**57.70**	**30**	P				03 52 03.1	
	baz=219								
B08A	**Colville Reser**	**57.75**	**352**	P		**P**		**03 52 03.9**	**+0.5**
N58A	**Sunbury**	**57.86**	**29**	P				03 52 04.3	
	baz=219,SNR=6.3								
N58A	**Sunbury**	**57.86**	**29**	P		**P**		**03 52 03.9**	**-0.3**
N58A				IAmb		IAmb		03 52 06.2	
	comp=Z,23nm,0.9s								
WALA	**Waterton Lakes**	**57.90**	**356**	P		**P**		**03 52 04.8**	**+0.3**
M57A	**Sunshine Farm,**	**58.05**	**28**	P				03 52 05.9	
	baz=218,SNR=6.0								
M57A	**Sunshine Farm,**	**58.05**	**28**	P		**P**		**03 52 05.2**	**-0.4**
M57A				IAmb		IAmb		03 52 07.8	
	comp=Z,21nm,1.0s								
B05A	**Bryant**	**58.09**	**350**	P				03 52 06.9	
	baz=165,SNR=12								
O60A	**Telford**	**58.09**	**30**	P				03 52 06.1	
	baz=220								
AGMN	**Agassiz Nation**	**58.19**	**10**	P				03 52 06.5	
	baz=195,SNR=15								
AGMN	**Agassiz Nation**	**58.19**	**10**	P		**P**		**03 52 06.8**	**+0.4**
AGMN				IAmb		IAmb		03 52 07.2	
	comp=Z,17nm,0.8s								
B06A	**Marblemount**	**58.23**	**350**	P		**P**		**03 52 07.5**	**+0.8**
WVNY	**West Valley, N**	**58.24**	**26**	P		**P**		**03 52 06.6**	**-0.3**
O61A	**Allentown**	**58.35**	**31**	P				03 52 09.5	
	baz=221								
N59A	**State Game Lan**	**58.37**	**29**	P				03 52 08.0	
	baz=220								
I51A	**Listowel**	**58.38**	**24**	P				03 52 08.0	
	baz=213,SNR=5.6								
L56A	**Greenwood**	**58.49**	**27**	P		**P**		**03 52 08.2**	**-0.4**
L56A	**Greenwood**	**58.49**	**27**	P				03 52 09.0	
	baz=217,SNR=12								
A04D	**Lummi Island**	**58.63**	**350**	P				03 52 11.1	
	baz=164,SNR=7.0								
B35A	**Bob, Littlefor**	**58.66**	**12**	P		**P**		**03 52 09.9**	**+0.2**
B35A				IAmb		IAmb		03 52 10.7	
	comp=Z,18nm,0.8s								
N60A	**Cedar Hill Far**	**58.66**	**30**	P				03 52 09.2	
	baz=220								
D41A	**Chassel**	**58.69**	**16**	P		**P**		**03 52 10.1**	**+0.1**
L57A	**Andrews Acres**	**58.70**	**28**	P				03 52 10.5	
	baz=218								
PGC	**Sidney**	**58.70**	**349**	P		**P**		**03 52 10.4**	**+0.5**
PGC				IAmb		IAmb		03 52 12.8	
	comp=Z,26nm,1.0s								
EYMN	**Ely**	**58.76**	**14**	P				03 52 10.6	
	baz=200								
EYMN	**Ely**	**58.76**	**14**	P		**P**		**03 52 10.5**	**+0.1**
A05A	**Maple Falls**	**58.79**	**350**	P		**P**		**03 52 11.3**	**+0.8**
M59A	**Waymart**	**59.01**	**29**	P				03 52 12.5	
	baz=220								
K56A	**Middlesex**	**59.04**	**27**	P				03 52 12.5	
	baz=217								
L58A	**Harry Jones Me**	**59.20**	**28**	P				03 52 13.9	
	baz=219								
M60A	**Port Jervis**	**59.24**	**30**	P				03 52 13.8	
	baz=220								
BINY	**Binghamton**	**59.26**	**28**	P				03 52 14.2	
	baz=219								
PAL	**Palisades**	**59.35**	**31**	P				03 52 14.6	
	baz=221								
K57A	**Scipio Center**	**59.43**	**27**	P				03 52 14.6	
	baz=218,SNR=5.5								
NIUE	**Niue**	**59.56**	**253**	P		**P**		**03 52 16.6**	**0.0**
M61A	**Granite Spring**	**59.65**	**30**	P				03 52 16.1	
	baz=221								
L59A	**Walton**	**59.70**	**29**	P				03 52 17.3	
	baz=220								
J56A	**Wolcott**	**59.70**	**27**	P				03 52 16.8	
	baz=218								
K58A	**Earlville**	**59.85**	**28**	P		**P**		**03 52 17.6**	**-0.5**
K58A				IAmb		IAmb		03 52 19.4	
	comp=Z,14nm,0.9s								
K58A	**Earlville**	**59.85**	**28**	P				03 52 18.1	
	baz=219								
SADO	**Sadowa**	**59.93**	**24**	P		**P**		**03 52 18.6**	**0.0**
SADO				IAmb		IAmb		03 52 19.5	
	comp=Z,15nm,0.8s								
L60A	**Shokan**	**59.94**	**30**	P				03 52 19.1	
	baz=221								
BDFB	**Brasilia**	**59.96**	**103**	P		**P**		**03 52 20.4**	**+0.9**
	comp=Z,4.3nm,0.8s,baz=199,slow=5.6,SNR=4.7								
BDFB				LR		LR		04 15 53.3	
	comp=Z,339nm,19.1s,baz=288,slow=34								
BDFB	**Brasilia**	**59.96**	**103**	P		**P**		**03 52 18.5**	**-1.0**
BDFB				IAmb		IAmb		03 52 26.1	
	comp=Z,20nm,1.3s								

G58A	**Ormstown**	**62.43**	**27**	P			03 52 35.4	
	baz=220							
J63A	**Strafford**	**62.45**	**31**	P			03 52 36.1	
	baz=223							
E55A	**Montcerf-Lytto**	**62.57**	**25**	P			03 52 36.5	
	baz=217							
H60A	**Morristown**	**62.61**	**29**	P			03 52 36.9	
	baz=221							
BBB	**Bella Bella**	**63.02**	**347**	P		**P**	**03 52 40.1**	**+0.9**
TRQ	**Mont Tremblant**	**63.03**	**26**	P		**P**	**03 52 39.4**	**-0.2**
E56A	**St. Veronique**	**63.08**	**26**	P			03 52 40.1	
	baz=218							
D55A	**Sainte-Anne-du**	**63.26**	**25**	P			03 52 41.1	
	baz=218,SNR=8.5							
VLDQ	**Val d'Or**	**63.34**	**23**	P		**P**	**03 52 41.0**	**-0.5**
VLDQ				IAmb		IAmb	03 52 42.3	
	comp=Z,10nm,0.9s							
F59A	**Saint Guilaume**	**63.54**	**28**	P			03 52 43.5	
	baz=221							
D56A	**ZEC Mazanza, M**	**63.59**	**26**	P			03 52 43.0	
	baz=218,SNR=8.1							
I64A	**Boothbay**	**63.64**	**31**	P			03 52 44.0	
	baz=224							
G61A	**St-Isidore-de-**	**63.70**	**29**	P			03 52 44.4	
	baz=222							
FFC	**Flin Flon**	**63.71**	**5**	P		**P**	**03 52 43.7**	**-0.1**
FFC				IAmb		IAmb	03 52 44.8	
	comp=Z,22nm,1.0s							
E58A	**La Victoria**	**63.71**	**27**	P			03 52 44.4	
	baz=220							
F60A	**Warwick**	**64.01**	**28**	P			03 52 46.0	
	baz=222							
G62A	**West of Eustis**	**64.13**	**29**	P			03 52 47.2	
	baz=223							
H64A	**Troy**	**64.36**	**31**	P			03 52 48.2	
	baz=224							
D58A	**Chemin du LacG**	**64.44**	**27**	P			03 52 49.0	
	baz=220							
F61A	**St Evariste**	**64.46**	**29**	P			03 52 49.4	
	baz=222							
E60A	**Ste Agathe de**	**64.54**	**28**	P			03 52 49.5	
	baz=222							
MATQ	**Matagami**	**64.61**	**22**	P			03 52 50.2	
	baz=215,SNR=5.6							
LATQ	**La Tuque**	**64.70**	**26**	P			03 52 50.3	
	baz=220							
PKME	**Peaks-Kenny Pk**	**64.77**	**30**	P			03 52 51.0	
	baz=224							
H65A	**Eastbrook**	**64.89**	**31**	P			03 52 52.1	
	baz=225							
E61A	**Lac Etchemin**	**65.04**	**28**	P			03 52 53.3	
	baz=223							
F63A	**Nahmakanta, Br**	**65.18**	**30**	P			03 52 54.0	
	baz=224							
F63A	**Nahmakanta, Br**	**65.18**	**30**	P		**P**	**03 52 53.4**	**-0.2**
H66A	**Whiting**	**65.44**	**31**	P			03 52 56.3	
	baz=226							
G65A	**Princeton**	**65.59**	**31**	P			03 52 56.8	
	baz=226							
F64A	**Sherman**	**65.66**	**30**	P			03 52 57.5	
	baz=225							
E63A	**Oxbow**	**66.02**	**30**	P			03 52 59.6	
	baz=225							
E64A	**Bridgewater**	**66.31**	**30**	P			03 53 01.5	
	baz=225							
D63A	**Stockholm**	**66.61**	**29**	P			03 53 03.5	
	baz=225							
CRAG	**Craig**	**67.21**	**345**	P			03 53 09.0	
	baz=154							
BATG	**Bathurst New B**	**67.78**	**30**	P		**P**	**03 53 09.7**	**-0.5**
WRAK	**Wrangell Islan**	**67.89**	**346**	P			03 53 12.3	
	baz=155							
WRAK	**Wrangell Islan**	**67.89**	**346**	P		**P**	**03 53 11.7**	**+1.0**
FCC	**Fort Churchill**	**68.56**	**8**	P		**P**	**03 53 15.3**	**+0.4**
SIT	**Sitka**	**69.19**	**345**	P			03 53 21.1	
	baz=152							
DLBC	**Dease Lake**	**69.24**	**348**	P		**P**	**03 53 20.0**	**+0.7**
DLBC				IAmb		IAmb	03 53 22.1	
	comp=Z,20nm,0.8s							
BESE	**Bessie Mountai**	**70.43**	**346**	P		**P**	**03 53 27.2**	**+0.7**
BESE				IAmb		IAmb	03 53 30.0	
	comp=Z,24nm,1.0s							
YKA	**Yellowknife Ar**	**71.34**	**357**	P		**P**	**03 53 32.0**	**+0.1**
	comp=Z,9.1nm,0.9s,baz=166,slow=6.2,SNR=94							
YKA				LR		LR	04 21 43.7	
	comp=Z,151nm,18.2s,baz=0.0,slow=33							
WHY	**Whitehorse**	**72.30**	**347**	P		**P**	**03 53 38.3**	**+0.4**
WHY				IAmb		IAmb	03 53 49.6	
	comp=Z,16nm,1.2s							
HYT	**Haines Junctio**	**73.05**	**346**	P		**P**	**03 53 43.1**	**+0.7**
GRNC	**Granite Creek**	**74.06**	**344**	P		**P**	**03 53 49.1**	**+0.7**
GRNC				IAmb		IAmb	03 53 50.9	
	comp=Z,30nm,1.0s							
CTG	**Chitna Glacier**	**74.14**	**344**	P			03 53 50.3	
	baz=147							
CRQE	**Cirque**	**74.44**	**343**	P			03 53 51.9	
	baz=145							
CRQM	**Cirque**	**74.46**	**343**	P		**P**	**03 53 51.3**	**+0.5**
VRDI	**Verde Repeater**	**74.94**	**344**	P		**P**	**03 53 54.1**	**+0.6**
VRDI				IAmb		IAmb	03 53 55.8	
	comp=Z,31nm,1.0s							
MCARA	**McCarthy VSAT**	**74.94**	**344**	P			03 53 55.2	
	baz=145							
BMRM	**Bremner River**	**75.05**	**343**	P			03 53 55.6	
	baz=144							
OHAK	**Old Harbor**	**75.15**	**337**	P			03 53 56.3	
	baz=135							
KLU	**Klutina**	**75.85**	**343**	P			03 53 58.9	
	baz=142							
BCAR	**Beaver Creek A**	**76.02**	**345**	P		**P**	**03 54 00.3**	**+0.9**
L27K	**Beaver Creek,**	**76.03**	**345**	P		**P**	**03 54 00.5**	**+0.9**
L27K				IAmb		IAmb	03 54 01.6	
	comp=Z,24nm,0.9s							
DAWY	**Dawson**	**76.30**	**347**	P		**P**	**03 54 02.0**	**+0.9**
DAWY				IAmb		IAmb	03 54 03.4	
	comp=Z,27nm,1.1s							
M24K	**Tolsona, Glenn**	**76.42**	**343**	P			03 54 02.4	
	baz=142							
KNK	**Knik Glacier**	**76.56**	**342**	P			03 54 03.4	
	baz=140							
RC01	**Rabbit Creek A**	**76.71**	**341**	P			03 54 04.2	
	baz=139							
K27K	**Chicken**	**76.90**	**346**	P			03 54 06.0	
	baz=146							
K27K	**Chicken**	**76.90**	**346**	P		**P**	**03 54 05.7**	**+1.3**
K27K				IAmb		IAmb	03 54 06.9	
	comp=Z,27nm,1.0s							
PMR	**Palmer**	**76.90**	**342**	P			03 54 05.2	
	baz=139,SNR=6.7							
PMR	**Palmer**	**76.90**	**342**	P		**P**	**03 54 05.3**	**+0.9**
WAT6	**Susitna Watana**	**77.24**	**343**	P			03 54 07.1	
	baz=141,SNR=12							
EGAK	**Eagle**	**77.31**	**347**	P			03 54 07.6	
	baz=147,SNR=10							
EGAK	**Eagle**	**77.31**	**347**	P		**P**	**03 54 07.6**	**+1.0**
EGAK				IAmb		IAmb	03 54 08.8	
	comp=Z,24nm,1.1s							
SUA	**Susitna One**	**77.32**	**341**	P			03 54 07.7	
	baz=138							
SCRK	**Sand Creek**	**77.33**	**345**	P			03 54 07.7	
	baz=145,SNR=14							
SPCR	**Spurr Chakacha**	**77.60**	**340**	P			03 54 08.9	
	baz=136							
WAT2	**Susitna Watana**	**77.78**	**343**	P			03 54 09.9	
	baz=140							
CUT	**Chulitna**	**77.87**	**342**	P			03 54 10.6	
	baz=138,SNR=9.6							
SKT	**Skwentna**	**77.95**	**341**	P			03 54 11.2	
	baz=137							
HDA	**Harding Lake**	**78.45**	**344**	P			03 54 13.4	
	baz=142							
HDA				P			03 54 13.4	
	baz=142							
MCK	**McKinley**	**78.48**	**343**	P			03 54 13.4	
	baz=140,SNR=8.6							
TRF	**Thorofare Moun**	**78.66**	**342**	P			03 54 15.0	
	baz=138							
IL31		**78.72**	**344**	P		**P**	**03 54 15.1**	**+0.6**
ILAR	**Eielson Array**	**78.72**	**344**	P		**P**	**03 54 14.7**	**+0.2**
	comp=Z,7.7nm,0.9s,baz=162,slow=5.1,SNR=41							
ILAR				LR		LR	04 21 39.6	
	comp=Z,151nm,19.0s,baz=148,slow=30							
ILAR	**Eielson Array**	**78.72**	**344**	P		**P**	**03 54 15.1**	**+0.5**
C36M	**Paulatuk**	**78.79**	**355**	P			03 54 15.6	
	baz=165							
WRH	**Wood River Hil**	**78.81**	**344**	P		**P**	**03 54 15.9**	**+0.9**
PPLA	**Purkeypile**	**78.83**	**341**	P			03 54 15.7	
	baz=136							
KTH	**Kantishna Hill**	**78.93**	**342**	P		**P**	**03 54 13.8**	**-2.0**
INK	**Inuvik**	**78.97**	**351**	P		**P**	**03 54 16.6**	**+0.9**
	comp=Z,18nm,1.0s,baz=145,slow=6.4,SNR=42							
PRP	**Porcupine Dome**	**78.97**	**345**	P			03 54 16.5	
	baz=143							
POKR	**Poker Plat Res**	**79.14**	**345**	P			03 54 17.3	
	baz=141							
NEA2	**Nenana**	**79.18**	**344**	P			03 54 17.5	
	baz=140,SNR=11							
BPAW	**Bear Paw Mtn.**	**79.35**	**343**	P			03 54 18.2	
	baz=138,SNR=9.4							
CHUM	**Lake Minchumin**	**79.59**	**342**	P			03 54 19.4	
	baz=136							
I23K	**Minto, Yukon-K**	**79.68**	**344**	P			03 54 20.8	
	baz=140,SNR=14							
I23K	**Minto, Yukon-K**	**79.68**	**344**	P		**P**	**03 54 20.9**	**+1.1**
I23K				IAmb		IAmb	03 54 21.9	
	comp=Z,28nm,1.1s							
NIKH	**Nikolski High**	**79.70**	**328**	P			03 54 20.9	
	baz=120							
MLY	**Manley**	**79.98**	**343**	P			03 54 22.0	
	baz=138,SNR=16							
VNDA	**Vanda**	**81.11**	**193**	P		**P**	**03 54 28.9**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=79,slow=5.3,SNR=4.1							
VNDA	**Vanda**	**81.11**	**193**	P		**P**	**03 54 28.1**	**+0.7**
QSPA	**South Pole Qui**	**81.14**	**180**	P		**P**	**03 54 28.9**	**+1.0**
COLD	**Coldfoot**	**81.49**	**345**	P		**P**	**03 54 30.5**	**+1.1**
COLD	**Coldfoot**	**81.49**	**345**	P			03 54 31.1	
	baz=139,SNR=36							
IMAR	**Indian Mountai**	**81.53**	**343**	P		**P**	**03 54 30.1**	**+0.5**
TOLK	**Toolik Lake Re**	**82.41**	**346**	P			03 54 35.6	
	baz=140,SNR=11							
ANM	**Nome**	**84.37**	**339**	P			03 54 45.8	
	baz=124,SNR=5.5							
VNA3	**Neumayer Olymp**	**84.65**	**161**	P		**P**	**03 54 45.6**	**-0.3**
VNA3	**Neumayer Olymp**	**84.65**	**161**	PcP		**PcP**	**03 54 50.9**	**+1.5**
VNA1	**Neumayer--Stat**	**85.23**	**161**	P		**P**	**03 54 48.1**	**-0.6**
VNA2	**Neumayer--Watz**	**85.44**	**161**	P		**P**	**03 54 49.2**	**-0.6**
	baz=263,slow=3.4							
VNA2	**Neumayer--Watz**	**85.44**	**161**	PcP		**PcP**	**03 54 54.7**	**+1.9**
RDOG	**Red Dog Mine**	**85.60**	**342**	P		**P**	**03 54 51.7**	**+1.1**
RDOG	**Red Dog Mine**	**85.60**	**342**	P			03 54 51.8	
	baz=127							
TNA	**Tin City**	**85.82**	**339**	P			03 54 53.0	
	baz=122							
GAMB	**Gambell**	**86.32**	**337**	P			03 54 55.0	
	baz=118,SNR=6.5							
SNAA	**Sanae**	**86.65**	**162**	P		**P**	**03 54 54.8**	**-1.0**
H11S2	**WAKE ISLAND Hy**	**87.29**	**289**	T		T	05 31 32.6	
	baz=100,slow=74,SNR=2780							
H11S1	**WAKE ISLAND Hy**	**87.30**	**289**	T		T	05 31 34.1	
	baz=100,slow=74,SNR=1222							
H11S3	**WAKE ISLAND Hy**	**87.31**	**289**	T		T	05 31 33.9	
	baz=100,slow=74,SNR=1214							
H11N3	**WAKE ISLAND Hy**	**87.32**	**290**	T		T	05 31 29.5	
	baz=102,slow=74,SNR=205							
H11N2	**WAKE ISLAND Hy**	**87.33**	**290**	T		T	05 31 30.7	
	baz=102,slow=74,SNR=161							
H11N1	**WAKE ISLAND Hy**	**87.33**	**290**	T		T	05 31 39.2	
	baz=102,slow=74,SNR=119							
EUNU	**Eureka**	**89.63**	**4**	P		**P**	**03 55 10.5**	**+0.7**
EUNU				IAmb		IAmb	03 55 14.5	
	comp=Z,36nm,1.9s							
EIDS	**Eidsvold**	**94.91**	**243**			**P**	**03 55 35.7**	**+0.4**
EIDS				IAmb		IAmb	03 55 38.8	
	comp=Z,20nm,1.8s							
PETK	**Petropavlovsk-**	**98.95**	**322**	LR		LR	04 31 29.6	
	comp=Z,29nm,21.2s,baz=103,slow=30							
SYO	**Syowa Base**	**99.23**	**169**ⁱⁱ	*e*X		**Pdif**	**03 55 47.1**	**-6.8**
SYO	**Syowa Base**	**99.23**	**169**ⁱⁱ	*e*Pdiff		**Pdif**	**03 55 52.4**	**-1.5**
AKASG	**Malin Array Be**	**126.08**	**31**	PKP		**PKPdf**	**04 01 14.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=296,slow=2.2,SNR=4.4							
NJ2	**Nanjing**	**129.99**	**305**	*e*PKP		**PKiKP**	**04 01 23.8**	**+0.1**
SONM	**Songino Array**	**130.96**	**329**	PKP		**PKPdf**	**04 01 24.3**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=91,slow=1.0,SNR=6.8							
HHC	**Hu-ho-hao-te**	**131.95**	**318**	*e*PKP		**PKiKP**	**04 01 28.8**	**+1.3**
ZALV	**Zalesovo Beam**	**133.72**	**349**	PKP		**PKPdf**	**04 01 29.5**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=0.0,slow=1.5,SNR=5.8							
ZALV				PP		**PP**	**04 03 59.9**	**+2.5**
	comp=Z,1.9nm,0.7s,baz=353,slow=5.1,SNR=6.1							
GTA	**Gaotai**	**140.10**	**324**	*e*PKP		**PKiKP**	**04 01 43.2**	**-1.0**
GTA				LR		LR		
	comp=Z,130nm,19.3s							
GTA				LR		LR		
	comp=Z,190nm,17.1s							
MK31	**Makanchi Array**	**141.03**	**347**	PKPdf		**PKPdf**	**04 01 42.7**	**-0.3**
MKAR	**Makanchi Array**	**141.03**	**347**	PKhKP		PKPpre	04 01 35.3	
	comp=Z,0.2nm,0.7s,baz=55,slow=4.6,SNR=3.6							
MKAR				PKP		**PKPdf**	**04 01 43.2**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=28,slow=2.9,SNR=12							
MKAR				PP		**PP**	**04 04 45.3**	**+2.3**
	comp=Z,0.9nm,0.9s,baz=15,slow=6.3,SNR=4.5							
MKAR	**Makanchi Array**	**141.03**	**347**	PKPdf		**PKPdf**	**04 01 42.7**	**-0.3**
MAKZ	**Makanchi**	**141.08**	**348**			**PKPdf**	**04 01 43.1**	**0.0**
GYA	**Guiyang**	**141.85**	**302**	PKP		**PKPdf**	**04 01 46.1**	**+0.8**
WMQ	**Urumqi**	**142.27**	**340**	*e*PKP		**PKiKP**	**04 01 46.9**	**-1.5**
WMQ				AMB		AMB		
	comp=Z,410nm,6.1s							
WMQ				LR		LR		
	comp=Z,720nm,18.1s							
WMQ				LR		LR		
	comp=Z,570nm,26.7s							
KUU	**Kurty**	**144.85**	**353**	*e*PKP		**PKPab**	**04 01 47.5**	**-1.3**
	baz=353							
KPKS	**Kokpek**	**144.93**	**350**	*e*PKP		**PKPab**	**04 01 48.3**	**-0.9**
	baz=350							
KMBO	**Kilima Mbogo**	**145.08**	**105**	PKPbc		**PKPdf**	**04 01 53.0**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=196,slow=2.8,SNR=8.0							
SHLS	**Shalkode**	**145.08**	**349**	*e*PKP		**PKPbc**	**04 01 48.6**	**-1.2**
	baz=348							
UZB	**Uzmulak**	**145.18**	**349**	*e*PKP		**PKPbc**	**04 01 48.9**	**-1.3**
	baz=349							
SATY	**Saty**	**145.37**	**350**	*e*PKP		**PKPbc**	**04 01 49.0**	**-1.7**
	baz=350							
AAA	**Alma-Ata**	**145.45**	**352**	*e*PKP		**PKPbc**	**04 01 49.3**	**-1.6**
	baz=352							
SGDS	**Sogindy**	**145.46**	**355**	*e*PKP		**PKPbc**	**04 01 49.3**	**-1.7**
	baz=355							
MDOK	**Meo**	**145.47**	**352**	*e*PKP		**PKPbc**	**04 01 49.6**	**-1.5**
	baz=352							
KMI	**Kunming**	**145.63**	**302**	PKPbc		**PKPbc**	**04 01 52.3**	**0.0**
USP	**Ospenovka**	**145.65**	**355**	P		**PKPab**	**04 01 51.9**	**+0.1**
	SNR=25							
TKM2	**Tokmak 2**	**145.89**	**354**	P		**PKPab**	**04 01 53.0**	**+0.1**
	SNR=9.6							
KK31	**Karatay Array**	**145.97**	**0**			**PKPdf**	**04 01 51.7**	**-0.1**
KKAR	**Karatay Array**	**145.97**	**0**			**PKPdf**	**04 01 51.8**	**-0.1**
KKAR	**Karatay Array**	**145.97**	**0**	PKPdf		**PKPdf**	**04 01 51.6**	**-0.2**
AAK	**Ala-Archa**	**146.28**	**355**			**PKPdf**	**04 01 52.6**	**0.0**
EKS2	**Erkin-Say**	**146.31**	**356**	P		**PKPab**	**04 01 54.4**	**0.0**
	SNR=19							
UCH	**Uchtor**	**146.68**	**355**	P		**PKPab**	**04 01 56.3**	**0.0**
	SNR=14							
AML	**Almayashu**	**146.84**	**356**	P		**PKPab**	**04 01 56.2**	**-0.6**
	SNR=17							
IUG	**Iuzhnay**	**146.91**	**1**	*e*PKP		**PKPdf**	**04 01 51.9**	**-1.7**
	baz=1.0							
IUG				*e*PKPab		**PKPbc**	**04 01 55.0**	**-0.5**
	baz=1.0							
GEYT	**Alibeck**	**148.94**	**20**	PKPbc		**PKiKP**	**04 02 01.6**	**-0.6**
	comp=Z,6.9nm,0.8s,baz=252,slow=3.0,SNR=9.2							
GEYT	**Alibeck**	**148.94**	**20**	PKPdf		**PKPdf**	**04 01 56.9**	**0.0**
KSH	**Kashi**	**149.20**	**352**	PKPbc		**PKPdf**	**04 01 58.6**	**+1.1**
CMAR	**Chiang Mai Arr**	**151.13**	**292**	PKPbc		**PKiKP**	**04 02 07.0**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=162,slow=0.4,SNR=4.4							
CMAR	**Chiang Mai Arr**	**151.13**	**292**			**PKPdf**	**04 02 00.4**	**-0.5**
TAPN	**Taplejung**	**155.71**	**321**	*e*P		**PKPab**	**04 02 34.5**	**+0.7**
ODAN	**Odare**	**156.26**	**321**	*e*P		**PKPab**	**04 02 36.1**	**0.0**
	comp=Z,19nm,0.9s							
GUN	**Gumba**	**156.38**	**325**	*e*P		**PKPab**	**04 02 37.0**	**+0.3**
	comp=Z,59nm,0.9s							
JIRN	**Jiri**	**156.40**	**324**	*e*P		**PKPab**	**04 02 36.5**	**-0.3**
	comp=Z,27nm,1.1s							
RAMN	**Ramite**	**156.68**	**322**	*e*P		**PKPab**	**04 02 37.8**	**-0.1**
	comp=Z,47nm,1.0s							
KKN	**Kakani**	**156.81**	**326**	*e*P		**PKPab**	**04 02 37.9**	**-0.5**
PKI	**Pulchoki**	**156.91**	**325**	*e*P		**PKPab**	**04 02 37.9**	**-1.1**
	comp=Z,20nm,1.0s							
PKIN	**Phulchoki**	**156.91**	**325**	*e*P		**PKPab**	**04 02 38.1**	**-0.8**
GKN	**Gorkha**	**157.00**	**327**	*e*P		**PKPab**	**04 02 38.5**	**-0.6**
DMN	**Daman**	**157.05**	**326**	*e*P		**PKPab**	**04 02 39.3**	**-0.2**
SMLA	**Simla**	**157.14**	**346**ⁱⁱ	*e*P		**PKPab**	**04 02 39.0**	**-0.3**
DANN	**Dangsing**	**157.17**	**329**	*e*P		**PKPab**	**04 02 39.8**	**-0.2**
KOLN	**Koldanda**	**157.72**	**329**	*e*P		**PKPab**	**04 02 40.7**	**-1.6**
	comp=Z,23nm,0.9s							
PYUN	**Piuthan**	**157.76**	**331**	*e*P		**PKPab**	**04 02 40.2**	**-2.2**
	comp=Z,47nm,1.0s							

IDC 08 03:59:08.0±8.5, 9.14S×107.99W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/29, mbtmp3.7/5, MS3.7/1, Ms1 3.7/1, ms1mx3.0/23, Error ellipse: s-maj=197.1km s-min=179.8km az=122.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTS	**Las Juntas de**	**29.98**	**50**	LR	LR	04 14 40.1	
	comp=Z,130nm,20.2s,baz=152,slow=31						
H03N2	**Juan Fernandez**	**36.07**	**136**	T	T	04 45 31.2	
	baz=308,slow=77,SNR=25						
H03N1	**Juan Fernandez**	**36.09**	**136**	T	T	04 45 36.8	
	baz=308,slow=77,SNR=25						
H03N3	**Juan Fernandez**	**36.09**	**136**	T	T	04 45 28.0	
	baz=308,slow=77,SNR=26						
NVAR	**Mina Array Bea**	**48.29**	**349**	P	P	04 07 51.8	+0.5
	0.1nm,0.3s,baz=178,slow=11,SNR=2.1						
PDAR	**Pinedale Array**	**51.68**	**359**	P	P	04 08 16.5	-0.5
	0.6nm,0.7s,baz=170,slow=6.0,SNR=5.4						
ULM	**Lac du Bonnet**	**60.08**	**9**	P	P	04 09 17.0	+0.2
	1.6nm,0.8s,baz=188,slow=7.1,SNR=3.9						
YKA	**Yellowknife Ar**	**71.60**	**357**	P	P	04 10 30.6	-0.2
	0.3nm,0.6s,baz=174,slow=6.4,SNR=6.2						
INK	**Inuvik**	**79.35**	**351**	P	P	04 11 15.2	0.0
	1.9nm,1.1s,baz=180,slow=6.2,SNR=4.4						
H11S2	**WAKE ISLAND Hy**	**88.45**	**289**	T	T	05 48 33.1	
	baz=100,slow=74,SNR=95						
H11S1	**WAKE ISLAND Hy**	**88.46**	**289**	T	T	05 48 32.1	
	baz=100,slow=74,SNR=64						
H11S3	**WAKE ISLAND Hy**	**88.47**	**289**	T	T	05 48 30.2	
	baz=100,slow=74,SNR=72						
H11N3	**WAKE ISLAND Hy**	**88.48**	**290**	T	T	05 48 38.4	
	baz=102,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**88.49**	**290**	T	T	05 48 35.9	
	baz=102,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**88.49**	**290**	T	T	05 48 39.7	
	baz=102,slow=75,SNR=7.1						

*IDC **08** 04:00:27.2±0.6, 9.11S×126.40E, h0km, mb4.2/13, mb1 4.4/16, mb1mx4.2/47, mbtmp4.3/16, ML4.7/2, MS4.5/14, Ms1 4.5/14, ms1mx4.1/30, Error ellipse: s-maj=23.1km s-min=14.6km az=62.0*

*GCMT **08** 04:00:32.1±0.3, 9.35S±0.02×126.53E±0.04, h18km±1km, MW4.9/85, Moment Tensor Solution. s36,c38; s85,c116; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.18±.15; Mθθ-1.99±.10; Mϕϕ-0.19±.10; Mrθ0.54±.21; Mrϕ-0.80±.07; Mθϕ1.21±.36; Best double couple: Mw2.59500×10¹⁶ NP1:ϕs267.00000°, δ37.00000°, λ122.00000°. NP2: ϕs49.00000°, δ60.00000°, λ69.00000°. Principal axes: T 2.6960, Plg68.0000°, Azm276.0000°; N -0.2070, Plg18.0000°, Azm61.0000°; P -2.4940, Plg12.0000°, Azm155.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **08** 04:00:33.9±0.5, 10.3S±7.1×12.6E±.1, h118km±17km, M4.5/9, mb4.6/9, mB4.9/8, MLv4.8/8, Mw(mB)4.2/8, MwMwp4.7/1, Mwp5.1/1*

*NEIC **08** 04:00:33.1±1.9, 9.53S±0.09×126.33E±0.06, h67km±8km, mb4.3/10, Error ellipse: s-maj=13.6km s-min=7.5km az=200.0*

ISC 08 04:00:31.5±0.4, 9.41S±0.06×126.40E±0.05, h35km, n80, σ1s50/77, mb4.4/19, MS4.4/10, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.13**	**260**	Pn	**Pn**	**04 01 06.5**	**+1.8**
SOEI				Sn	**Sn**	**04 01 28.6**	**-1.4**
SOEI	**Soe**	**2.13**	**260**	P	**Pn**	**04 01 06.0**	**+1.3**
BATI	**Baumata**	**2.81**	**253**	Pn	**Pn**	**04 01 16.1**	**+2.1**
	160nm,0.3s,baz=49,slow=3.1,SNR=60						
BATI				Sn	**Sn**	**04 01 50.0**	**+3.4**
	198nm,0.3s,baz=339,slow=14,SNR=7.3						
BATI	**Baumata**	**2.81**	**253**	P	**Pn**	**04 01 16.2**	**+2.2**
MMRI	**Maumere**	**4.18**	**280**		**Pn**	**04 01 34.0**	**+1.2**
MMRI	**Maumere**	**4.18**	**280**	P	**Pn**	**04 01 35.9**	**+3.1**
MTN	**Manton Dam**	**5.77**	**127**	Pn	**Pn**	**04 01 56.8**	**+2.2**
MTN				Sn	**Sn**	**04 02 59.8**	**+0.2**
BASI	**Baing, Sumba**	**5.79**	**262**	P	**Pn**	**04 01 55.1**	**+0.1**
	1.2nm2µm210nm,0.7s						
NLAI	**Namlea**	**6.17**	**7**	P	Pn	04 02 10.2	+10
BSSI	**Bau Bau, Buton**	**6.69**	**299**	P	**Pn**	**04 02 09.8**	**+2.5**
	0.1nm545nm35nm,0.8s						
SANI	**Sanana**	**7.32**	**357**	P	Pn	04 02 31.2	+15
KAPI	**Kappang**	**7.91**	**303**	Pn	**Pn**	**04 02 23.4**	**-0.6**
	baz=107,slow=9.5,SNR=6.1						
KAPI				LR	LR	04 05 32.8	
	comp=Z,2µm,19.3s,baz=110,slow=39						
KAPI	**Kappang**	**7.91**	**303**	Pn	**Pn**	**04 02 26.2**	**+2.1**
BNSI	**Bone**	**7.98**	**308**	P	**Pn**	**04 02 26.8**	**+1.7**
	0.2nm1µm58nm,0.8s						
SPSI	**

	comp=Z,1.5nm,0.3s,baz=139,slow=7.0,SNR=1.7								
CMAR					LR	LR	04 25 03.1		
	comp=Z,208nm,21.1s,baz=196,slow=38								
KSRS	**Korea Array**	**46.63**	**2**	P	**P**		**04 08 55.8**	**-0.6**	
	comp=Z,1.4nm,0.7s,baz=183,slow=11,SNR=6.4								
ODAN	**Odare**	**52.27**	**315**	*eP*	**P**		**04 09 38.4**	**-1.5**	
TAPN	**Taplejung**	**52.35**	**315**	*eP*	**P**		**04 09 39.3**	**-1.3**	
	comp=Z,7.3nm,0.5s								
RAMN	**Ramite**	**52.88**	**314**	*eP*	**P**		**04 09 43.1**	**-1.4**	
	comp=Z,15nm,0.5s								
USRK	**Ussuriysk Ar.**	**53.59**	**5**	P	**P**		**04 09 47.6**	**-1.5**	
	comp=Z,1.3nm,0.6s,baz=216,slow=13,SNR=6.6								
JIRN	**Jiri**	**53.60**	**315**	*eP*	**P**		**04 09 48.8**	**-1.1**	
	comp=Z,13nm,0.7s								
GUN	**Gumba**	**53.97**	**315**	*eP*	**P**		**04 09 51.3**	**-1.3**	
	comp=Z,29nm,0.7s								
PKI	**Pulchoki**	**54.10**	**314**	*eP*	**P**		**04 09 52.0**	**-1.5**	
PKIN	**Phulchoki**	**54.11**	**314**	*eP*	**P**		**04 09 52.1**	**-1.4**	
DMN	**Daman**	**54.33**	**314**	*eP*	**P**		**04 09 54.2**	**-1.0**	
GKN	**Gorkha**	**54.90**	**314**	*eP*	**P**		**04 09 58.0**	**-1.2**	
	comp=Z,7.6nm,0.3s								
KOLN	**Koldanda**	**55.51**	**313**	*eP*	**P**		**04 10 02.4**	**-1.2**	
	comp=Z,6.9nm,0.6s								
PYUN	**Piuthan**	**56.14**	**313**	*eP*	**P**		**04 10 07.1**	**-1.0**	
SONM	**Songino Array**	**59.69**	**345**	P	**P**		**04 10 31.5**	**-1.1**	
	comp=Z,1.4nm,0.8s,baz=160,slow=7.6,SNR=9.2								
SONM	**Songino Array**	**59.69**	**345**	P	**P**		**04 10 31.8**	**-0.8**	
SONM				IAmb	IAmb		04 10 48.7		
	comp=Z,1.8nm,1.0s								
PETK	**Petropavlovsk-**	**67.74**	**20**	P	**P**		**04 11 25.3**	**-0.1**	
	comp=Z,4.3nm,0.7s,baz=184,slow=4.5,SNR=4.3								
PETK	**Petropavlovsk-**	**67.74**	**20**	P	**P**		**04 11 25.1**	**-0.3**	
MKAR	**Makanchi Array**	**68.36**	**329**	P	**P**		**04 11 28.1**	**-1.3**	
	comp=Z,1.4nm,0.5s,baz=127,slow=7.6,SNR=22								
VNDA	**Vanda**	**70.53**	**172**	P	**P**		**04 11 45.2**	**+2.8**	
	comp=Z,0.6nm,0.7s,baz=354,slow=4.3,SNR=2.7								
VNDA				LR	LR		04 42 54.0		
	comp=Z,494nm,18.1s,baz=334,slow=36								
MAW	**Mawson**	**71.43**	**201**	LR	LR		04 39 48.4		
	comp=Z,407nm,21.0s,baz=60,slow=33								
ZALV	**Zalesovo Beam**	**72.22**	**336**	P	**P**		**04 11 51.4**	**-1.5**	
	comp=Z,3.9nm,0.5s,baz=136,slow=5.0,SNR=13								
ZALV	**Zalesovo Beam**	**72.22**	**336**	P	**P**		**04 11 51.2**	**-1.6**	
KURBB	**Kurchatov Arra**	**72.75**	**330**	P	**P**		**04 11 54.9**	**-1.1**	
	comp=Z,0.8nm,0.5s,baz=133,slow=5.0,SNR=8.6								
KURK	**Kurchatov**	**72.77**	**330**	P	**P**		**04 11 54.9**	**-1.2**	
SOCY	**Socotra**	**75.08**	**285**	P	**P**		**04 12 08.8**	**-1.8**	
SOCY				IAmb	IAmb		04 12 15.6		
	comp=Z,7.6nm,0.9s								
PPT	**Papeete**	**81.56**	**106**	LR	LR		04 44 50.1		
	comp=Z,87nm,19.0s,baz=212,slow=33								
AKTO	**Aktyubinsk**	**83.82**	**323**	P	**P**		**04 12 57.1**	**-0.2**	
	comp=Z,1.1nm,0.6s,baz=96,slow=6.7,SNR=4.6								
BRTR	**Keskin Array B**	**98.05**	**309**	LR	LR		05 02 46.6		
	comp=Z,103nm,21.9s,baz=8.0,slow=38								
EKA	**Eskdalemuir Ar**	**119.49**	**330**	PKP	**PKiKP**		**04 19 18.7**	**+1.3**	
	comp=Z,0.2nm,0.5s,baz=66,slow=4.7,SNR=4.2								
TORD	**Torodi Ar. Bea**	**125.73**	**279**	PKP	**PKiKP**		**04 19 31.4**	**+0.6**	
	comp=Z,0.9nm,0.7s,baz=83,slow=2.1,SNR=4.8								
DBIC	**Dimbokro**	**131.69**	**271**	PKP	**PKiKP**		**04 19 43.0**	**+0.2**	
	comp=Z,1.9nm,0.8s,baz=126,slow=4.9,SNR=3.0								
CPUP	**Villa Florida**	**144.29**	**174**	PKP	**PKPdf**		**04 20 05.2**	**+0.5**	
	comp=Z,1.7nm,0.7s,baz=197,slow=2.7,SNR=4.7								
CPUP	**Villa Florida**	**144.29**	**174**		**PKPab**		**04 20 01.8**	**-0.8**	
LPAZ	**La Paz**	**150.70**	**151**	PKPbc	**PKiKP**		**04 20 24.4**	**+1.9**	
	comp=Z,0.9nm,0.7s,baz=103,slow=2.3,SNR=6.5								

IDC 08 04:02:19.5±376.0, 20.60S×52.57E, h0km, Error ellipse: s-maj=190.7km s-min=106.8km az=86.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I33MG	**ANTANANARIVO I**	**5.20**	**287**	*i*		04 33 30.0	
	baz=110,slow=312,SNR=3.5						
I32KE	**NAIROBI INFRAS**	**24.63**	**319**	*i*		06 33 30.0	
	baz=140,slow=314,SNR=46						
I23FR	**KERGUELEN INFR**	**31.96**	**158**	*i*		07 18 30.0	
	baz=331,slow=320,SNR=1.1						

KRSC 08 04:02:35.3±1.4, 48.91N×157.05E, h30km±26km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.87**	**342**	*eP*	Pn	04 03 06.3	+1.1
SKR				*eS*	Sn	04 03 29.4	+1.6
ALID	**Alaid**	**2.19**	**334**	P	Pn	04 03 11.2	+1.5
PAU	**Pauzhetka**	**2.56**	**357**	*eP*	Pn	04 03 17.5	+2.8
PAU				*eS*	Sb	04 03 48.8	-2.8
KDTR	**Khodutka, Kamc**	**2.98**	**12**	*eP*	Pb	04 03 24.0	-3.5
KDTR				*eS*	Sb	04 04 00.0	-3.4
ASAK	**Asacha**	**3.52**	**9**	*eP*	Pn	04 03 32.2	+4.3
RUS	**Russkaya**	**3.65**	**14**	*eP*	Pn	04 03 32.8	+3.2
RUS				*eS*	Sn	04 04 15.7	+4.2
MTVR	**Mutnovka**	**3.65**	**11**	*eP*	Pn	04 03 33.5	+3.7
MTVR				*eS*	Sb	04 04 17.8	-5.1
GRL	**Gorelyy**	**3.70**	**10**	*eP*	Pn	04 03 34.4	+3.9
DALK	**Dalny**	**4.26**	**14**	*eP*	Pn	04 03 42.1	+4.0
DALK				*eS*	Sn	04 04 32.3	+5.6
UGLR	**Uglovaya**	**4.45**	**14**	*eP*	Pn	04 03 45.1	+4.4
AVH	**Avacha**	**4.49**	**13**	*eP*	Pn	04 03 46.4	+5.2
SMAR	**Somma**	**4.50**	**14**	*eP*	Pn	04 03 46.4	+4.9
KOK	**Koryaka**	**4.50**	**12**	*eP*	Pn	04 03 46.7	+5.3
SDLR	**Sedlovina**	**4.52**	**14**	*eP*	Pn	04 03 45.9	+4.1
KRER	**Koryakskii**	**4.53**	**13**	*eP*	Pn	04 03 46.9	+5.0
KRX	**Arik**	**4.57**	**12**	*eP*	Pn	04 03 47.5	+5.1
SPN	**Mys Shipunski**	**4.59**	**23**	*eP*	Pn	04 03 48.1	+5.5
SPN				*eS*	Sn	04 04 40.7	+5.8
GNL	**Ganaly**	**4.82**	**6**	*eP*	Pn	04 03 51.2	+5.3
MKZ	**Mys Kozlova**	**6.36**	**25**	*eP*	Pn	04 04 10.6	+3.8

*PRU **08** 04:09:01.9±0.0, 51.35N×16.20E, h0km*
*IDC **08** 04:09:05.5±0.6, 51.35N×16.18E, h0km, mb3.4/3, mb1 3.4/11, mb1mx3.2/55, mbtmp3.3/11, ML2.7/6, MS4.2/1, Ms1 4.2/1, ms1mx2.5/44, Error ellipse: s-maj=13.4km s-min=6.8km az=107.0*
*BGR **08** 04:09:07.7±0.4, 51.43N×16.10E, h1km, ML3.0/14, Error ellipse: s-maj=4.4km s-min=2.2km az=12.0*
*DNK **08** 04:09:07.2±1.2, 51.36N×15.84E, h7km±128km*
*VIE **08** 04:09:09.1±0.7, 51.29N×15.89E, h0km, mb2.7/9, ml2.9/9, Error ellipse: s-maj=7.2km s-min=4.4km az=48.0 78 km NE of Liberec Suspected Mining induced.*

ISC 08 04:09:04.8±0.6, 51.52N±0.03×16.12E±0.02, h0km, n69, σ1s09/116, mb3.3/3, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**171**	*eP*	**Pg**	**04 09 18.9**	**+0.9**
KSP				*eSg*	**Sg**	**04 09 27.4**	**+0.5**
KSP	**Ksiaz**	**0.69**	**171**	*eP*	**Pg**	**04 09 19.0**	**+1.0**
KSP				*eSg*	**Sg**	**04 09 27.5**	**+0.6**
CHVC	**Chvalec**	**0.94**	**183**	*eP*	Pg	04 09 15.9	-6.9
CHVC	**Chvalec**	**0.94**	**183**	*eP*	**Pg**	**04 09 23.8**	**+1.0**
CHVC				*eSG*	**Sg**	**04 09 35.5**	**+0.6**
	comp=Z,100nm,0.6s						
OSTC	**Ostas**	**0.97**	**177**	*eP*	**Pg**	**04 09 24.3**	**+0.9**
OSTC				*eSG*	**Sg**	**04 09 36.5**	**+0.6**
	comp=Z,78nm,0.4s						
UPC	**Upice**	**1.02**	**184**	*eP*	Pg	04 09 17.5	-6.8
UPC	**Upice**	**1.02**	**184**	*eP*	**Pg**	**04 09 25.1**	**+0.8**
UPC				*eSG*	**Sg**	**04 09 37.5**	**0.0**
	comp=Z,223nm,0.5s						
DPC	**Dobruska-Polom**	**1.18**	**174**	*eP*	Pg	04 09 18.8	-8.6
DPC	**Dobruska-Polom**	**1.18**	**174**	*eP*	**Pg**	**04 09 27.8**	**+0.4**
DPC				*eSG*	**Sg**	**04 09 42.3**	**-0.4**
DPC	**Dobruska-Polom**	**1.18**	**174**	*eP*	**Pg**	**04 09 27.9**	**+0.4**
DPC				*eSg*	**Sg**	**04 09 42.5**	**-0.2**
PVCC	**Panska Ves**	**1.40**	**225**	*eP*	Pg	04 09 25.7	-5.9
PVCC	**Panska Ves**	**1.40**	**225**	*eP*	**Pg**	**04 09 32.2**	**+0.6**
PVCC				*eSG*	**Sb**	**04 09 51.1**	**+0.9**
	comp=Z,256nm,0.4s						
KRLC	**Kraliky**	**1.51**	**164**	*eP*	Pn	04 09 25.1	-8.0
KRLC	**Kraliky**	**1.51**	**164**	*eP*	**Pn**	**04 09 33.8**	**+0.7**
KRLC				*eSG*	**Sg**	**04 09 52.4**	**-0.9**
	comp=Z,114nm,0.5s						
BRG	**Berggiesshubel**	**1.52**	**245**	Pg	**Pg**	**04 09 34.7**	**+0.9**
BRG				Sg	**Sn**	**04 09 54.7**	**+1.1**
BRG				Amp		04 09 55.5	
	comp=Z,78nm,0.3s						
BRG	**Berggiesshubel**	**1.52**	**245**	*eP*	**Pg**	**04 09 34.8**	**+0.9**
BRG				*eSg*	**Sn**	**04 09 54.8**	**+1.1**
PRA	**Prague**	**1.81**	**217**	*ePN*	**Pn**	**04 09 37.5**	**+0.3**
PRA				*ePG*	**Pg**	**04 09 39.9**	**+0.5**
PRA				*eSG*	**Sb**	**04 10 02.8**	**+0.9**
PRU	**Pruhonice**	**1.84**	**214**	*ePN*	**Pn**	**04 09 37.0**	**-0.6**
PRU				*ePG*	**Pb**	**04 09 39.1**	**-0.1**
PRU				*eSG*	**Sb**	**04 10 02.9**	**+0.1**
	comp=Z,56nm,0.5s						
FBE	**Freiberg**	**1.84**	**252**	*eP*	**Pg**	**04 09 40.8**	**+0.7**
FBE				*eSg*	**Sg**	**04 10 04.2**	**+0.2**
CLL	**Collm**	**1.97**	**265**	*ePn*	**Pn**	**04 09 40.0**	**+0.6**
CLL				*ePg*	**Pg**	**04 09 43.0**	**+0.5**
CLL				*e*		04 09 46.0	
CLL				*e*		04 09 57.0	
CLL				*eSg*	**Sg**	**04 10 09.0**	**+1.1**
	comp=Z,41nm,0.6s						
CLL	**Collm**	**1.97**	**265**	*eSg*	**Sg**	**04 10 08.6**	**+0.7**
MORC	**Moravsky Berou**	**1.97**	**152**	*ePN*	Pn	04 09 32.5	-6.9
MORC	**Moravsky Berou**	**1.97**	**152**	*ePN*	**Pn**	**04 09 39.7**	**+0.3**
MORC				*eSG*	**Sn**	**04 10 06.2**	**+1.3**
MORC	**Moravsky Berou**	**1.97**	**152**	*ePn*	**Pn**	**04 09 40.1**	**+0.7**
MORC				*eSg*	**Sb**	**04 10 06.8**	**+0.2**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*ePG*	**Pb**	**04 09 45.2**	**+1.1**
OKC				*eSG*	**Sb**	**04 10 11.5**	**+0.5**
	comp=Z,104nm,0.7s						
VRAC	**Vranov**	**2.24**	**172**	Pn	Pn	04 09 39.1	-4.0
	comp=Z,0.4nm,0.3s,baz=351,slow=13,SNR=2.0						
VRAC				Pg	**Pb**	**04 09 44.4**	**-1.7**
	comp=Z,3.6nm,0.3s,baz=332,slow=15,SNR=14						
VRAC				Lg	Lg	04 10 15.4	
	comp=Z,5.6nm,0.3s,baz=252,slow=22,SNR=9.2						
VRAC	**Vranov**	**2.24**	**172**	⇑P	**Pn**	**04 09 44.2**	**+1.1**
VRAC				⇓S	**Sn**	**04 10 12.5**	**+1.0**
VRAC	**Vranov**	**2.24**	**172**	*ePN*	**Pn**	**04 09 43.9**	**+0.8**
VRAC				*eSG*	**Sb**	**04 10 15.2**	**+0.8**
KRUC	**Moravsky**	**2.47**	**176**	*ePN*	**Pn**	**04 09 47.9**	**+1.6**
KRUC				*eSG*	**Sb**	**04 10 22.9**	**+1.9**
TANN	**Tannenbergstha**	**2.57**	**246**	*ePn*	**Pn**	**04 09 48.8**	**+1.1**
TANN				*ePg*	**Pg**	**04 09 55.3**	**+1.3**
TANN				*eSg*	**Sg**	**04 10 26.9**	**-0.3**
WERD	**Werda**	**2.64**	**247**	*ePn*	**Pn**	**04 09 49.8**	**+1.1**
WERD				*ePg*	**Pg**	**04 09 56.2**	**+0.8**
WERD				*eSg*	**Sg**	**04 10 29.9**	**+0.2**
NKC	**Novy Kostel**	**2.66**	**242**	*ePN*	**Pn**	**04 09 49.9**	**+0.9**
NKC				*ePG*	**Pg**	**04 09 56.1**	**+0.3**
NKC				*eSG*	**Sg**	**04 10 30.4**	**+0.1**
	comp=Z,80nm,0.8s						
OJC	**Ojcow**	**2.67**	**118**	*ePg*	**Pg**	**04 09 57.9**	**+2.0**
OJC				*eSg*	**Sg**	**04 10 32.3**	**+1.8**
OJC	**Ojcow**	**2.67**	**118**	*ePn*	**Pn**	**04 09 49.9**	**+0.9**
OJC				*ePg*	**Pg**	**04 09 57.5**	**+1.6**
OJC				*eSg*	**Sg**	**04 10 32.5**	**+2.0**
KHC	**Kasperske Hory**	**2.90**	**215**	*ePN*	**Pn**	**04 09 52.1**	**-0.1**
KHC				*ePG*	**Pb**	**04 09 58.8**	**+1.4**
KHC				*eSN*	**Sn**	**04 10 26.6**	**-1.2**
KHC				*eSG*	**Sg**	**04 10 37.5**	**-0.4**
	comp=Z,30nm,0.6s						
CKRC	**Cesky Krumlov**	**2.95**	**204**	*ePN*	**Pn**	**04 09 53.7**	**+0.8**
CKRC				*ePG*	**Pb**	**04 09 59.6**	**+1.4**
MANZ	**Manzenberg**	**2.98**	**240**	*ePn*	**Pn**	**04 09 54.4**	**+1.1**
ROTZ	**Rotzenmuhle**	**3.05**	**236**	*ePn*	**Pn**	**04 09 55.5**	**+1.2**
ROTZ				*eSg*	**Sg**	**04 10 41.7**	**-1.0**
GEC2	**GERESS Array S**	**3.10**	**211**	*ePn*	**Pn**	**04 09 56.2**	**+1.1**
GEC2				*eSg*	**Sg**	**04 10 43.4**	**-1.0**
GERES	**GERESS Array B**	**3.10**	**211**	Pn	**Pn**	**04 09 53.0**	**-2.1**
	comp=Z,1.7nm,0.3s,baz=26,slow=13,SNR=32						
GERES				Pg	**Pb**	**04 10 01.5**	**+0.6**
	comp=Z,5.5nm,0.3s,baz=28,slow=17,SNR=31						
GERES				Lg	Lg	04 10 41.5	
	comp=Z,6.0nm,0.3s,baz=35,slow=31,SNR=11						
SMOL	**Smolenice**	**3.13**	**164**	*ePG*	**Pg**	**04 10 04.8**	**+0.1**
SMOL				*eSG*	**Sg**	**04 10 46.2**	**+0.9**
SMOL				*eLG*	Lg	04 10 54.9	
WET	**Wettzell**	**3.16**	**222**	*ePn*	**Pn**	**04 09 56.7**	**+0.9**
WET				*eSg*	**Sg**	**04 10 46.9**	**+0.6**
LANS	**Liptovska Anna**	**3.20**	**137**	*ePN*	**Pn**	**04 09 57.6**	**+1.2**
LANS				*ePG*	**Pg**	**04 10 05.3**	**-0.8**
LANS				*eSG*	**Sg**	**04 10 46.6**	**-0.9**
LANS				*eLG*	Lg	04 10 54.6	
MODS	**Modra-Piesok**	**3.24**	**166**	*ePG*	**Pg**	**04 10 07.1**	**+0.2**
MODS				*eLG*	Lg	04 10 54.6	
VYHS	**Vyhne**	**3.50**	**149**	*ePN*	**Pn**	**04 10 00.9**	**+0.4**
VYHS				*ePG*	**Pg**	**04 10 11.2**	**-0.7**
VYHS				*eSG*	**Sg**	**04 10 56.1**	**-1.1**
CONA	**Conrad Observa**	**3.60**	**183**	*ePn*	**Pn**	**04 10 02.9**	**+1.0**
	comp=Z,3.2nm,0.3s,SNR=6.1						
CONA				*eSg*	**Sg**	**04 10 59.7**	**-0.8**
	comp=Z,30nm,0.6s						
GRF	**Grafenberg Arr**	**3.62**	**241**	*ePn*	**Pn**	**04 10 03.3**	**+1.2**
GRF				*eSg*	**Sg**	**04 11 01.1**	**0.0**
BSD	**Bornholm Skovb**	**3.67**	**349**	*iP*	**Pn**	**04 10 04.3**	**+1.6**
BSD				*eS*	**Sn**	**04 10 46.9**	**+0.2**
MOA	**Molln**	**3.87**	**199**	*iPn*	**Pn**	**04 10 06.2**	**+0.7**
	comp=Z,2.8nm,0.3s						
MOA				*eSg*	**Sg**	**04 11 08.5**	**-0.6**
	comp=Z,33nm,0.7s						
ARSA	**Arzberg**	**4.30**	**185**	*iPn*	**Pn**	**04 10 12.9**	**+1.5**
	comp=Z,2.3nm,0.3s						
ARSA				Sg	**Sg**	**04 11 23.9**	**+1.2**
	comp=Z,15nm,0.5s						
CRVS	**Cervenica-Dubn**	**4.32**	**125**	*ePN*	**Pn**	**04 10 13.5**	**+1.8**
CRVS				*ePG*	**Pg**	**04 10 26.8**	**-0.7**
CRVS				*eSG*	**Sg**	**04 11 23.1**	**-0.3**
LUNU	**Lund**	**4.41**	**340**	*iP*	**Pn**	**04 10 14.5**	**+1.5**
BLEU	**Blekinge**	**4.79**	**358**	*iP*	**Pn**	**04 10 20.4**	**+2.2**
BLEU				*iS*	**Sn**	**04 11 13.6**	**-0.8**
KBA	**Koelnbreinsper**	**4.81**	**203**	Pn	**Pn**	**04 10 19.7**	**+1.2**
	SNR=4.2						
DEL	**Delary**	**5.13**	**346**	*iP*	**Pn**	**04 10 23.0**	**+0.2**
ABTA	**Abfaltersbach**	**5.34**	**208**	*ePn*	**Pn**	**04 10 26.7**	**+1.0**
	comp=Z,1.2nm,0.3s,SNR=5.3						
MORH	**Mrgy, Hungar**	**5.57**	**162**	⇓P	**Pn**	**04 10 30.3**	**+1.5**
DAVOX	**Davos/Dischmat**	**6.27**	**223**	Pn	**Pn**	**04 10 36.9**	**-1.7**
	baz=100,slow=17						
DAVOX				Lg	Lg	04 12 23.8	
	comp=Z,0.4nm,0.3s,baz=213,slow=20,SNR=2.3						
BURAR	**Bucovina Array**	**7.09**	**120**	⇑P	**Pn**	**04 10 50.7**	**+0.9**
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**04 11 03.8**	**-2.3**
	comp=Z,1.4nm,0.3s,baz=277,slow=12,SNR=5.3						
AKASG				Lg	Lg	04 13 31.8	
	comp=Z,0.6nm,0.3s,baz=268,slow=23,SNR=4.1						
HFS	**Hagfors**	**8.74**	**352**	Pn	**Pn**	**04 11 12.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=167,slow=14,SNR=6.6						
NOA	**NORSAR Array B**	**9.92**	**346**	Pn	**Pn**	**04 11 27.5**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=169,slow=12,SNR=1.7						
FINES	**FINESS Array B**	**11.35**	**25**	Pn	**Pn**	**04 11 47.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=6.9						
EKA	**Eskdalemuir Ar**	**12.11**	**296**	Pn	**Pn**	**04 11 55.6**	**-2.7**
	baz=103,slow=13,SNR=7.4						
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn	**P**	**04 13 21.1**	**-2.2**
	baz=191,slow=12,SNR=11						
KURBB	**Kurchatov Arra**	**38.16**	**66**	P	**P**	**04 16 25.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=312,slow=9.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	**40.02**	**202**	P	**P**	**04 16 39.6**	**-1.7**
	comp=Z,0.9nm,1.0s,baz=355,slow=7.9,SNR=3.7						
DBIC	**Dimbokro**	**47.97**	**209**	LR	LR	04 40 20.6	
	comp=Z,238nm,18.8s,baz=242,slow=39						
YKA	**Yellowknife Ar**	**59.85**	**336**	P	**P**	**04 19 13.8**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=47,slow=3.9,SNR=9.0						

*SKO **08** 04:23:36.8, 41.96N×23.23E, h22km*
*SOF **08** 04:23:37.0, 42.00N×23.29E, h10km, MD2.5*
*BEO **08** 04:23:38.3±0.3, 41.98N×23.17E, h0km, ML2.0/9*

ISC 08 04:23:37.3±0.9, 41.98N±0.02×23.13E±0.03, h14km±9km, n26, σ1s25/41, 2C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.11**	**197**	*i*	Pg	**Pg**	**04 23 41.4**	**+0.8**
MMB	**Musomiste**	**0.59**	**130**	*i*	Pg	**Pg**	**04 23 48.7**	**-0.2**
VTS	**Vitosha**	**0.65**	**7**	*e*	Pg	**Pg**	**04 23 49.4**	**-0.5**
VTS				*eSg*	**Sg**	**04 23 57.9**	**-0.7**
VTS	**Vitosha**	**0.65**	**7**	*i*	Pg	**Pg**	**04 23 49.5**	**-0.5**
VTS	**Vitosha**	**0.65**	**7**	⇑*i*	Pg	**Pg**	**04 23 49.6**	**-0.4**
VTS				*i*	Sg	**Sg**	**04 23 57.9**	**-0.7**
BOSS	**Bosilegrad**	**0.71**	**317**	*e*	Pg	**Pb**	**04 23 52.0**	**+0.5**
BOSS				*eSg*		**Sb**	**04 24 02.3**	**+1.2**
STIP	**Stip**	**0.76**	**249**	*i*	Pg	**Pg**	**04 23 49.5**	**-2.5**
STIP				*i*	Sg	**Sg**	**04 23 57.7**	**-4.2**
VAY	**Valandovo**	**0.78**	**213**	*e*	Pg	**Pb**	**04 23 53.1**	**+0.5**
VAY				*eSg*		**Sb**	**04 24 04.4**	**+1.4**
VAY	**Valandovo**	**0.78**	**213**	*i*	Pg	**Pb**	**04 23 53.4**	**+0.8**
VAY				*i*	Sg	**Sb**	**04 24 04.8**	**+1.8**
VAY				*eLg*	Lg		04 24 05.1	
	comp=N,51nm,0.8s						
VAY				*eLg*	Lg		04 24 05.3	
	comp=E,27nm,0.2s						
SRS	**Serrai**	**0.93**	**158**	*e*	Pg	**Pg**	**04 23 54.4**	**-0.7**
SRS				*eSg*		**Sg**	**04 24 06.5**	**-0.8**
SRS	**Serrai**	**0.93**	**158**	⇑*i*	Pg	**Pg**	**04 23 54.5**	**-0.7**
SRS				*i*	Sg	**Sg**	**04 24 06.5**	**-0.8**
PGB	**Panagyurishte**	**0.96**	**53**	*i*	Pg	**Pg**	**04 23 53.8**	**-2.1**
GRG	**Griva**	**1.16**	**208**	*i*	Pg	**Pn**	**04 24 00.1**	**+1.0**
SOH	**Sokhos**	**1.17**	**171**	*i*	Pg	**Pg**	**04 23 59.2**	**-0.6**
SOH				*i*	Sg	**Sb**	**04 24 14.8**	**+0.5**
RZN	**Rozhen**	**1.22**	**103**	*i*	Pg	**Pg**	**04 23 58.9**	**-1.9**
BARS	**Barje**	**1.28**	**311**	*e*	Pg	**Pn**	**04 24 01.3**	**+0.4**
BARS				*eSg*		**Sb**	**04 24 18.7**	**+1.0**
BARS	**Barje**	**1.28**	**311**	*i*	Pg	**Pn**	**04 24 01.4**	**+0.5**
BARS				*i*	Sg	**Sb**	**04 24 18.5**	**+0.8**
ZAPS	**Zavoj**	**1.35**	**344**	*e*	Pg	**Pg**	**04 24 03.6**	**+0.4**
ZAPS				*eSg*		**Sg**	**04 24 22.1**	**+1.3**
THE	**Thessaloniki**	**1.35**	**185**	*i*	Pg	**Pg**	**04 24 02.9**	**-0.3**
THE				*i*	Sg	**Sg**	**04 24 21.1**	**+0.4**
BLKB	**Belogradchik**	**1.68**	**349**	*eSg*		**Sg**	**04 24 09.4**	**-0.2**
BLKB	**Belogradchik**	**1.68**	**349**	*ePn*		**Sg**	**04 24 31.3**	**-0.1**
SELS	**Selova**	**1.94**	**311**	*e*	Pg	**Pg**	**04 24 14.0**	**-0.4**
SELS				*eSg*		**Sg**	**04 24 40.3**	**+0.8**
ZAGS	**Zajecar**	**1.95**	**341**	*ePn*		**Pb**	**04 24 13.0**	**+0.4**
ZAGS				*eSg*		**Sg**	**04 24 40.5**	**+0.5**
GRUS	**Gruza**	**2.61**	**318**	*eSg*		**Sg**	**04 25 00.9**	**-0.1**
IVAS	**Ivanjica**	**2.71**	**307**	*eSn*		**Pb**	**04 24 24.0**	**-1.7**
IVAS	**Ivanjica**	**2.71**	**307**	*ePn*		**Sb**	**04 24 57.0**	**-1.8**

*IDC **08** 04:36:38.9±0.9, 52.61N×32.38W, h0km, mb3.9/22, mb1 4.1/24, mb1mx4.0/49, mbtmp4.0/24, ML4.1/2, MS3.6/4, Ms1 3.7/4, ms1mx3.2/41, Error ellipse: s-maj=24.9km s-min=11.8km az=11.0*
*NEIC **08** 04:36:41.6±0.7, 52.62N±0.09×32.4W±0.1, h15km±4km, mb4.4/29, Error ellipse: s-maj=16.1km s-min=6.8km az=223.0*

ISC 08 04:36:40.5±0.6, 52.6N±0.1×32.38W±0.06, h10km, n64, σ0s55/63, mb4.3/34, MS3.4/3, 1C, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRLN	**Deer Lake**	**16.16**	**268**	Pn	**Pn**	**04 40 27.3**	**-0.3**
DRLN				IAmb	IAmb	04 40 29.4	
	comp=Z,56nm,1.9s						
SFJD	**Kangerlussuaq**	**16.99**	**335**	Pn	**Pn**	**04 40 38.0**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=112,slow=9.2,SNR=5.2						
SFJD				LR	LR	04 45 56.7

comp=Z,3.1nm,0.7s,baz=330,slow=5.6,SNR=32
MKAR Makanchi Array 66.36 43 P **P** **04 47 29.4 +0.3**
SONM Songino Array 73.94 28 P **P** **04 48 16.6 +0.8**
comp=Z,0.9nm,0.8s,baz=339,slow=5.6,SNR=5.2
WRA Warramunga Arr 145.80 23 PKPbc **PKPab** **04 56 20.6 +0.4**
comp=Z,2.3nm,1.0s,baz=346,slow=3.2,SNR=3.1
ASAR Alice Springs 149.27 25 PKPbc **PKPbc** **04 56 29.0 -0.3**
comp=Z,0.4nm,0.5s,baz=355,slow=2.0,SNR=3.2

IDC 08 04:45:39.8±1.3, 1°.68N×126°.27E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.7/42, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=107.7km s-min=17.8km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.66**	**182**	P	Pn	04 50 11.2	-0.6
	0.2nm,0.3s,baz=359,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**22.90**	**160**	P	P	04 50 44.3	-1.1
	5.7nm,0.7s,baz=338,slow=10,SNR=28						
ASAR	**Alice Springs**	**26.27**	**164**	P	P	04 51 17.6	+0.5
	2.5nm,0.7s,baz=351,slow=14,SNR=15						
SONM	**Songino Array**	**49.09**	**342**	P	P	04 54 29.9	+0.8
	0.4nm,0.7s,baz=150,slow=9.4,SNR=2.9						
MKAR	**Makanchi Array**	**58.98**	**326**	P	P	04 55 41.1	-0.2
	1.0nm,0.4s,baz=125,slow=7.7,SNR=19						
KURBB	**Kurchatov Arra**	**63.21**	**328**	P	P	04 56 09.5	-0.4
	0.6nm,0.5s,baz=127,slow=6.2,SNR=6.2						

*REN **08** 05:06:43.0±2.5, 39°.35N±0°.03×120°.03W±0°.04, h6km±3km, Error ellipse: s-maj=5.4km s-min=4.2km az=51.0*
*NCEDC **08** 05:06:43.7±2.2, 39°.36N±0°.03×120°.02W±0°.02, h2km±6km, Mwr3.4/5, ML3.4/15(REN), ML3.1/82(NEIC), Error ellipse: s-maj=4.5km s-min=2.3km az=177.0*
*NEIC **08** 05:06:43.7, 39°.36N×120°.02W, h2km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr 0.24; Mθθ -1.38; Mφφ 1.15; Mrθ 0.94; Mrφ 0.09; Mθφ 0.45; Fault plane solution: M0 1.65000×10^14 NP1: φs 318.91000°, δ 50.45000°, λ 177.06000°. NP2: φs 50.78000°, δ 87.73000°, λ 39.59000°. Principal axes: T 1.4210, Plg 29.0000°, Azm 282.0000°; N 0.3960, Plg 50.0000°, Azm 54.0000°; P -1.8170, Plg 25.0000°, Azm 178.0000°;*
*ANF **08** 05:06:44.6±0.5, 39°.27N×120°.25W, h5km, ML3.5/13 Error ellipse: s-maj=11.2km s-min=3.5km az=58.0, Hypocentre not reviewed by the ISC*
NEIC 08 05:06:43.6±3.1, 39°.33N±0°.02×120°.02W±0°.04, h8km±4km, Error ellipse: s-maj=5.1km s-min=2.4km az=104.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MPK	**Martis Peak**	**0.03**	**194**		Pg	05 06 44.8	-0.6
IND	**Independence**	**0.24**	**297**		Pg	05 06 47.9	-0.5
PEAR	**Peavine Mounta**	**0.28**	**9**		Pg	05 06 48.2	-1.1
VCNR	**Virginia City**	**0.29**	**96**		Pg	05 06 48.9	-0.5
VCNR				IAML		05 06 55.7	
	comp=E,3μm,0.8s						
RUBR	**Rubicon Trail**	**0.29**	**201**		Pg	05 06 49.5	0.0
PNTR	**Pine Nut**	**0.40**	**126**	Pg	Pg	05 06 51.2	-0.3
PNTR				IAML		05 07 04.4	
	comp=E,3μm,0.7s						
BEKR	**Beckworth**	**0.60**	**334**		Pg	05 06 53.7	-1.5
PAHR	**Pah Rah Range**	**0.62**	**52**	Pg	Pg	05 06 54.7	-0.9
PAHR				IAML		05 07 04.8	
	comp=N,824nm,0.2s						
WVA	**Winnemucca Val**	**0.63**	**14**		Pg	05 06 54.6	-1.3
YERR	**Yerington**	**0.70**	**119**		Pg	05 06 56.6	-0.4
YERR				IAML		05 07 06.8	
	comp=N,1μm,0.5s						
AFDM	**Forest Hills D**	**0.83**	**243**		Pg	05 06 58.9	-0.7
AFDM				IAML		05 07 12.5	
	comp=E,827nm,0.3s						
AFDM				IAML		05 07 13.6	
	comp=N,958nm,0.4s						
WAKR	**Walker**	**0.94**	**151**		Pg	05 07 01.4	-0.2
ORV	**Oroville**	**1.17**	**282**	Pg	Pg	05 07 04.3	-1.8
ORV				IAML		05 07 27.5	
	comp=E,307nm,0.4s						
CMB	**Columbia Colle**	**1.32**	**193**	Pn	Pn	05 07 07.5	-1.0
CMB				IAML		05 07 30.2	
	comp=N,473nm,0.5s						
CMB				IAML		05 07 36.1	
	comp=E,389nm,0.6s						
RYN	**Ryan**	**1.36**	**120**		Pn	05 07 08.9	-0.2
RYN				IAML		05 07 30.4	
	comp=E,311nm,0.4s						
SUTB	**Sutter Butte**	**1.37**	**266**		Pn	05 07 08.1	-1.0
LCMM	**Colby Mountain**	**1.42**	**306**		Pn	05 07 08.9	-1.0
KVN	**Kaiserville**	**1.52**	**100**	Pn	Pn	05 07 11.2	-0.1
KVN				IAML		05 07 33.2	
	comp=E,400nm,0.5s						
LHV	**Little Huntoon**	**1.60**	**132**		Pb	05 07 13.1	-0.3
LHV				IAML		05 07 38.8	
	comp=N,363nm,0.5s						
NVAR	**Mina Array Bea**	**1.61**	**123**		Pn	05 07 12.2	-0.5
O03E	**Paynes Creek**	**1.68**	**306**	P		05 07 13.1	
	baz=124						
O03E				S		05 07 34.8	
	baz=124						
LMEM	**Manzanita Entr**	**1.70**	**316**		Pb	05 07 14.5	-0.7
NV11	**Mina Array Sit**	**1.71**	**121**	Pn	Pn	05 07 14.4	+0.6
NV11				IAML		05 07 39.6	
	comp=N,175nm,0.5s						
NV11				IAML		05 07 39.8	
	comp=E,151nm,1.1s						
MDCM	**Deadman Creek**	**1.79**	**154**		Pb	05 07 16.1	-0.8
LTCM	**Tuscan Springs**	**1.84**	**299**		Pn	05 07 16.5	+0.9
HATC	**Hat Creek Radi**	**1.85**	**324**		Pb	05 07 17.3	-0.5
MDRNC	**Doe Ridge**	**1.93**	**151**		Pb	05 07 19.1	0.0
MLAC	**Mammoth, Mammo**	**1.93**	**151**	P		05 07 19.4	
	baz=332						
MNRC	**McLaughlin Min**	**1.94**	**257**		Pn	05 07 17.8	+0.8
BDM	**Black Diamond**	**1.99**	**227**		Pb	05 07 19.1	-1.0
ORC	**Owens River**	**2.00**	**147**		Pb	05 07 20.0	-0.4
COSM	**Mount Oso**	**2.10**	**211**		Pb	05 07 21.7	-0.4
GASB	**Alder Springs**	**2.11**	**280**		Pn	05 07 19.9	+0.5
CVS	**Carmenet Viney**	**2.14**	**244**		Pn	05 07 20.6	+0.9
GSGM	**Seigler Mounta**	**2.14**	**258**		Pn	05 07 20.6	+1.0
GCRM	**Castle Rock Sp**	**2.17**	**256**		Pn	05 07 20.8	+0.6
GDXM	**Geysers**	**2.22**	**257**		Pn	05 07 21.5	+0.7
SCHCA	**Scheelite**	**2.23**	**152**		Pn	05 07 21.0	-0.1
BKS	**Berkeley--Byer**	**2.26**	**231**		Pn	05 07 22.9	+1.6
VAK	**Adit at Lawren**	**2.27**	**231**		Pn	05 07 23.0	+1.5
MTUM	**Tungsten Hills**	**2.28**	**149**		Pn	05 07 23.3	+1.6
O02D	**Mt. Diablo Mer**	**2.30**	**293**	P		05 07 21.6	
	baz=110,SNR=104						
WDC	**Whiskeytown Da**	**2.31**	**304**		Pn	05 07 22.9	+0.9
WDC	**Whiskeytown Da**	**2.31**	**304**	Pn	Pn	05 07 22.4	+0.5
WDC	**Whiskeytown Da**	**2.31**	**304**	IAML		05 07 55.7	
	comp=E,87nm,0.9s						
WDC				IAML		05 07 56.6	
	comp=N,88nm,0.6s						
MHC	**Mount Hamilton**	**2.36**	**213**		Pn	05 07 24.6	+1.8
HOPS	**Hopland Field**	**2.40**	**263**		Pn	05 07 24.3	+1.1
HOPS	**Hopland Field**	**2.40**	**263**	Pn	Pn	05 07 23.6	+0.4
GHS	**Gilroy Hot Spr**	**2.50**	**207**		Pb	05 07 28.5	-0.3
TPH	**Tonopah**	**2.52**	**119**		Pb	05 07 27.5	-1.8
TPH	**Tonopah**	**2.52**	**119**	IAML		05 08 04.0	
	comp=E,82nm,0.8s						
TPH				IAML		05 08 05.0	
	comp=N,96nm,0.7s						
MCCM	**Marconi Confer**	**2.53**	**243**		Pn	05 07 25.7	+0.7
MCCM	**Marconi Confer**	**2.53**	**243**		Pn	05 07 26.5	+1.5
MCCM				IAML		05 08 03.2	
	comp=N,172nm,1.7s						
MCCM				IAML		05 08 18.1	
	comp=E,167nm,1.6s						
FTR	**Fort Ross**	**2.58**	**253**		Pn	05 07 26.5	+0.8
HFEM	**San Felipe**	**2.58**	**205**		Pb	05 07 28.1	-2.1
MOD	**Modoc Plateau**	**2.58**	**355**		Pb	05 07 28.6	-1.7
MOD	**Modoc Plateau**	**2.58**	**355**		Pb	05 07 28.7	-1.5
MOD				IAML		05 08 19.3	
	comp=N,75nm,0.8s						
MOD				IAML		05 08 24.5	
	comp=E,72nm,1.0s						
JRSC	**Jasper Ridge**	**2.59**	**223**		Pb	05 07 28.6	-1.8
LGBM	**Gray Butte**	**2.61**	**321**		Pb	05 07 29.6	-1.3
N02D	**Trinity Center**	**2.63**	**309**	P		05 07 27.2	
	baz=127,SNR=20						
N02D				Sb		05 08 04.7	
	baz=127						
KCPM	**Cahto Peak**	**2.78**	**279**	Pn	Pn	05 07 30.9	+2.3
KCPM				IAML		05 08 23.4	
	comp=E,79nm,1.1s						
KCPM				IAML		05 08 38.4	
	comp=N,57nm,3.0s						
SAO	**San Andreas Ge**	**2.80**	**204**		Pn	05 07 30.0	+1.3
KMRM	**Mail Ridge**	**2.98**	**289**		Pn	05 07 33.8	+2.5
KMRM				IAML		05 07 56.3	
	comp=E,56nm,2.8s						
KMRM				IAML		05 08 20.2	
	comp=N,59nm,2.0s						
M02C	**Callahan**	**2.99**	**315**	Sb		05 08 15.2	
	baz=132						
YBH	**Yreka Blue Hor**	**3.16**	**320**	Pn	Pb	05 07 37.2	-2.9
PMPB	**Monarch Peak**	**3.17**	**192**		Pn	05 07 35.5	+1.7
KHMM	**Horse Mountain**	**3.24**	**300**	Pn	Pn	05 07 36.8	+1.9
KHMM				IAML		05 07 58.5	
	comp=E,40nm,3.7s						
KHMM				IAML		05 08 37.4	
	comp=N,38nm,1.6s						
CWC	**Cottonwood Cre**	**3.27**	**151**	Pb		05 07 43.4	
	baz=333						
WVOR	**Wild Horse Val**	**3.27**	**18**	Pn	Pn	05 07 37.4	+2.0
L04D	**Klamath Falls**	**3.37**	**330**	Sb		05 08 27.7	
	baz=148						
JCC	**Jacoby Creek,**	**3.42**	**297**	Pn	Pn	05 07 38.8	+1.7
JCC				IAML		05 08 46.3	
	comp=E,42nm,1.6s						
JCC				IAML		05 09 49.4	
	comp=N,33nm,3.5s						
K05A	**Summer Lake**	**3.46**	**349**		Pn	05 07 40.5	+2.6
K05A				IAML		05 08 40.6	
	comp=N,48nm,1.7s						
K05A				IAML		05 08 44.4	
	comp=E,35nm,2.0s						
K04D	**Chiloquin, OR**	**3.54**	**339**	Sb		05 08 32.9	
	baz=158						
PAGB	**Antelope Grade**	**3.59**	**183**	Pn	Pn	05 07 41.8	+2.1
PAGB				IAML		05 08 43.6	
	comp=N,45nm,1.5s						
PAGB				IAML		05 08 50.3	
	comp=E,49nm,0.7s						
KRMB	**Red Mountain**	**3.69**	**308**	Pn	Pn	05 07 43.9	+2.8
KRMB				IAML		05 09 01.4	
	comp=N,30nm,2.2s						
KRMB				IAML		05 09 27.6	
	comp=E,28nm,2.3s						
FURC	**Furnace Creek,**	**3.79**	**138**	Sb		05 08 45.3	
	baz=320						
TPNV	**Topopah Spring**	**3.81**	**127**	Sb		05 08 45.6	
	baz=310						
ISA	**Isabella, Lake**	**3.86**	**161**	Pn	Pn	05 07 46.1	+2.7
ISA				IAML		05 08 53.2	
	comp=N,34nm,0.8s						
ISA				IAML		05 08 58.8	
	comp=E,37nm,1.1s						
ISA	**Isabella, Lake**	**3.86**	**161**	Pb		05 07 53.4	
	baz=342						
ISA				Sb		05 08 43.8	
	baz=342						
ELK	**Elko**	**3.93**	**67**	Pn	Pn	05 07 44.3	-0.2
HUMO	**Hull Mountain**	**3.96**	**327**	Pn	Pn	05 07 48.2	+3.5
J05D	**Fort Rock, OR**	**4.06**	**347**	Sb		05 08 50.8	
	baz=166						
J08A	**Circle Bar Ran**	**4.19**	**16**	Pn	Pn	05 07 45.7	-2.3
J08A				IAML		05 08 59.9	
	comp=E,28nm,0.8s						
J08A				IAML		05 08 60.0	
	comp=N,38nm,0.8s						
ARVC	**Arvin**	**4.30**	**167**	Sb		05 08 54.8	
	baz=348						
PRN	**Pahroc Range**	**4.35**	**115**	Pn	Pn	05 07 51.7	+1.5
PRN				IAML		05 09 06.7	
	comp=N,29nm,0.6s						
PRN				IAML		05 09 14.3	
	comp=E,26nm,0.9s						
SPR3	**Spring Creek 3**	**4.43**	**92**		Pn	05 07 52.8	+1.3
SPR3				IAML		05 09 04.3	
	comp=N,20nm,0.8s						
SPR3				IAML		05 09 04.3	
	comp=E,24nm,0.8s						
I07A	**Izee**	**4.77**	**4**	Pn	Pn	05 07 58.8	+2.9
BGU	**Big Grassy Mou**	**5.59**	**71**		Pn	05 08 08.0	+0.7
DUG	**Dugway, Tooele**	**5.62**	**79**	Pn	Pn	05 08 09.0	+1.4
MSU	**Marysvale**	**6.17**	**95**	Pn	Pn	05 08 17.6	+2.4

WEL 08 05:17:56.9±1.1, 46°S±6°×16°6E±°, h12km, M3.5/13, ML3.6/13, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=65.5, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.34**	**92**	P	Pb	05 18 05.2	+0.3
PYZ				S	Sb	05 18 11.4	+1.0
DCZ	**Deep Cove**	**0.97**	**45**	P	Pg	05 18 13.7	-1.8
DCZ				S	Sg	05 18 26.1	-2.0
WHZ	**Wether Hill Ro**	**1.25**	**79**	P	Pn	05 18 19.3	-1.0
WHZ				S	Sb	05 18 36.5	-0.1
APZ	**The Paps**	**1.42**	**119**	P	Pn	05 18 21.0	-1.5
APZ				S	Sn	05 18 39.4	-1.7
MLZ	**Mavora Lakes**	**1.57**	**60**	P	Pn	05 18 24.9	+0.3
MLZ				S	Sg	05 18 47.0	-0.3
MSZ	**Milford Sound**	**1.92**	**40**	P	Pn	05 18 29.5	0.0
SYZ	**Scrubby Hill**	**2.08**	**102**	P	Pn	05 18 31.6	0.0
EAZ	**Earnscleugh**	**2.38**	**68**	P	Pn	05 18 36.6	+0.9
WKZ	**Wanaka**	**2.39**	**57**	P	Pn	05 18 37.2	+1.3
TUZ	**Tuapeka**	**2.41**	**86**	P	Pn	05 18 36.8	+0.7
TUZ				S	Sn	05 19 07.3	+1.9
JCZ	**Jackson Bay**	**2.78**	**42**	P	Pn	05 18 42.2	+0.9
ODZ	**Otahua Downs**	**3.32**	**72**	P	Pn	05 18 47.7	-1.0
LBZ	**Lake Benmore**	**3.33**	**59**	P	Pn	05 18 48.7	-0.1
FOZ	**Fox Glacier**	**3.68**	**46**	P	Pn	05 18 54.2	+0.6
RPZ	**Rata Peaks**	**4.23**	**57**	P	Pn	05 19 00.5	-0.7
LTZ	**Lake Taylor**	**5.51**	**54**	P	Pn	05 19 19.5	+0.7
THZ	**Tophouse**	**6.54**	**50**	P	Pn	05 19 35.3	+2.3
MHEZ	**Mangahewa**	**9.27**	**43**	P	Pn	05 20 09.1	-1.2

WEL 08 05:36:00.3±1.1, 38°S±9°×18°0W±°, h33km, M3.4/14, ML3.7/14, MLv3.4/14, Error ellipse: s-maj=0.0km s-min=0.0km az=25.6, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.49**	**271**	P	Pn	05 36 23.7	-1.0
MXZ				S	Sn	05 36 40.9	-2.2
PUZ	**Puketiti**	**1.59**	**253**	P	Pn	05 36 26.2	0.0
PUZ				S	Sn	05 36 45.7	+0.1
PKGZ	**Pakihiroa**	**1.69**	**260**	P	Pn	05 36 27.2	-0.5
CNGZ	**Carnagh Statio**	**1.79**	**240**	P	Pn	05 36 29.7	+0.8
TWGZ	**Tauwhareparae**	**1.83**	**251**	P	Pn	05 36 30.1	+0.6
TWGZ				S	Sn	05 36 52.2	+0.6
HAZ	**Te Kaha**	**1.91**	**265**	P	Pn	05 36 30.2	-0.3
RUGZ	**Raukumara Rang**	**2.02**	**259**	P	Pn	05 36 32.0	-0.1
TKGZ	**Te Karaka**	**2.02**	**245**	P	Pn	05 36 32.4	+0.4
TKGZ				S	Sn	05 36 57.2	+1.0
RIGZ	**Rimuhau**	**2.20**	**239**	P	Pn	05 36 35.2	+0.6
RIGZ				S	Sn	05 37 02.4	+1.8
MWZ	**Matawai**	**2.22**	**250**	P	Pn	05 36 34.7	-0.1
PRGZ	**Paritu Road**	**2.23**	**233**	P	Pn	05 36 35.6	+0.5
MHGZ	**Mahia Peninsul**	**2.36**	**229**	P	Pn	05 36 37.6	+0.9
KNZ	**Kokohu**	**2.42**	**234**	P	Pn	05 36 37.7	+0.1
URZ	**Urewera**	**2.51**	**254**	P	Pn	05 36 39.2	+0.4
SNGZ	**Shannon Statio**	**2.52**	**242**	P	Pn	05 36 39.5	+0.4
RTZ	**Ruatahuna**	**2.72**	**247**	P	Pn	05 36 42.4	+0.7
MUGZ	**Murupara**	**2.83**	**251**	P	Pn	05 36 43.5	+0.3
MCHZ	**McNeill Hill**	**3.29**	**235**	P	Pn	05 36 49.7	+0.2
KAHZ	**Kahuranaki**	**3.38**	**229**	P	Pn	05 36 50.8	0.0
KWHZ	**Kaweka Forest**	**3.46**	**237**	P	Pn	05 36 52.0	0.0
KRHZ	**Kereru**	**3.61**	**235**	P	Pn	05 36 53.4	-0.6
KUZ	**Kuaotunu**	**3.67**	**282**	P	Pn	05 36 52.7	-1.9
BHHZ	**Black Hill Sta**	**3.73**	**239**	P	Pn	05 36 55.7	+0.1
WPHZ	**Waipukurau**	**3.81**	**229**	P	Pn	05 36 55.9	-0.8
TMVZ	**Te Maari**	**3.83**	**246**	P	Pn	05 36 57.2	+0.2
PNHZ	**Pukenui**	**3.87**	**232**	P	Pn	05 36 56.7	-0.9
MOVZ	**Moawhango**	**3.91**	**241**	P	Pn	05 36 59.1	+1.0
ANWZ	**Angora Road**	**4.05**	**224**	P	Pn	05 36 59.1	-0.9
TSZ	**Takapari Road**	**4.10**	**232**	P	Pn	05 36 59.7	-1.0
DVHZ	**Dannevirke**	**4.12**	**228**	P	Pn	05 36 59.9	-1.1
BFZ	**Birch Farm**	**4.33**	**224**	P	Pn	05 37 01.8	-2.0
CTZ	**Chatham Island**	**6.58**	**159**	P	Pn	05 37 36.9	+2.1
CTZ				S	Sn	05 38 46.3	-2.3

IDC 08 05:44:00.2±18.0, 21°.74S×174°.86W, h0km, mb4.4/5, mb1 4.5/5, mb1mx4.0/32, mbtmp4.4/5, Error ellipse: s-maj=341.2km s-min=147.2km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.30**	**265**	P	P	05 51 06.9	+1.1
	9.4nm,0.4s,baz=92,slow=11,SNR=24						
STKA	**Stephens Creek**	**39.92**	**246**	P	P	05 51 35.0	-1.2
	0.8nm,0.4s,baz=73,slow=8.4,SNR=4.1						
ASAR	**Alice Springs**	**47.10**	**257**	P	P	05 52 33.5	-0.9
	3.1nm,0.7s,baz=101,slow=7.1,SNR=30						
WRA	**Warramunga Arr**	**47.34**	**262**	P	P	05 52 35.7	-0.5
	3.1nm,0.4s,baz=92,slow=8.4,SNR=91						
FITZ	**Fitzroy Crossi**	**55.77**	**262**	P	P	05 53 40.4	+1.1
	2.0nm,0.6s,baz=90,slow=6.1,SNR=2.1						

*NEIC **08** 05:56:06.3±2.1, 6°.55S±0°.06×129°.78E±0°.08, h150km±9km, mb4.5/18, Error ellipse: s-maj=12.0km s-min=8.6km az=102.0*
*IDC **08** 05:56:07.7±1.8, 6°.57S×129°.81E, h163km±18km, mb4.0/11, mb1 4.1/16, mb1mx4.0/31, mbtmp4.6/16, Error ellipse: s-maj=17.3km s-min=11.4km az=71.0*
*DJA **08** 05:56:08.3±0.2, 7°S±3°×13°0E±°, h168km±6km, M4.7/17, mB5.2/9, mb4.6/17, MLv5.0/12, Mw(mB)4.5/9*
ISC 08 05:56:06.4±0.4, 6°.62S±0°.04×129°.78E±0°.05, h150km, n99, σ1§88/101, mb4.6/28, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.02**	**132**	Pn	**Pn**	**05 56 45.2**	**+3.3**
SAUI	**Saumlaki**	**2.02**	**132**	P	**Pn**	**05 56 45.2**	**+3.3**
SAUI				S	**Sn**	**05 57 11.6**	**+2.5**
BNDI	**Bandanaira**	**2.09**	**3**	P	Pn	05 56 46.7	+4.0
NLAI	**Namlea**	**4.29**	**321**	P	Pn	05 57 18.0	+7.4
FAKI	**Fak Fak**	**4.42**	**34**	Pn	**Pn**	**05 57 12.1**	**-0.2**
FAKI	**Fak Fak**	**4.42**	**34**	P	**Pn**	**05 57 11.8**	**-0.5**
SIJI	**Sorong**	**5.90**	**15**	P	**Pn**	**05 57 31.6**	**-0.3**
	42nm,0.3s,baz=74,slow=6.0,SNR=154						
SIJI				S	**Sn**	**05 58 33.1**	**-5.7**
	18nm,0.3s,baz=23,slow=22,SNR=12						
SWI	**Sorong**	**5.91**	**15**	P	**Pn**	**05 57 31.4**	**-0.6**
SANI	**Sanana**	**5.91**	**320**	P	Pn	05 57 36.4	+4.4
	0.2nm53nm,0.7s						
SOEI	**Soe**	**6.28**	**240**	Pn	**Pn**	**05 57 38.9**	**+1.8**
SOEI	**Soe**	**6.28**	**240**	P	**Pn**	**05 57 40.0**	**+2.9**
	1.1nm1μm138nm,0.8s						
MTN	**Manton Dam**	**6.32**	**168**	P	**Pn**	**05 57 38.5**	**+1.0**
	baz=6.1,SNR=65						
MTN				S	**Sn**	**05 58 44.8**	**-4.1**
	baz=6.1						
MTN	**Manton Dam**	**6.32**	**168**	Pn	**Pn**	**05 57 38.5**	**+1.0**
KDU	**Kakadu**	**6.58**	**156**	P	**Pn**	**05 57 41.6**	**+0.6**
	baz=6.3,SNR=171						
KDU				S	**Sn**	**05 58 51.3**	**-3.8**
	baz=6.3						
RKPI	**Ransiki, Papua**	**6.71**	**41**	P	**Pn**	**05 57 42.7**	**0.0**
	3.6nm10μm683nm,0.7s						
BATI	**Baumata**	**7.02**	**239**	P	**Pn**	**05 57 50.4**	**+3.6**
	31nm,0.3s,baz=82,slow=3.3,SNR=12						
BATI				S	**Sn**	**05 59 05.0**	**-0.6**
	47nm,0.3s,baz=338,slow=23,SNR=11						
BATI	**Baumata**	**7.02**	**239**	P	**Pn**	**05 57 50.7**	**+3.9**
	0.5nm966nm68nm,0.6s						
BAKI	**Biak**	**8.30**	**50**	P	**Pn**	**05 58 06.0**	**+2.1**
BASI	**Baing, Sumba**	**9.78**	**248**	P	**Pn**	**05 58 27.8**	**+4.2**
	37nm,0.6s						
GTOI	**Gorontalo**	**9.88**	**317**	P	Pn	05 58 30.1	+5.2
	8.1nm,1.0s						
JAY	**Jayapura**	**11.63**	**70**	P	**Pn**	**05 58 50.1**	**+2.1**
	1.2nm,0.3s,baz=224,slow=13,SNR=1.8						
TOLI2	**Tolitoli**	**11.82**	**310**	Pn	**Pn**	**05 58 50.2**	**-0.2**
PLAI	**Plampang**	**12.10**	**259**	P	**Pn**	**05 58 54.8**	**+0.7**
	760nm40nm,0.7s						
FITZ	**Fitzroy Crossi**	**12.10**	**199**	P	**Pn**	**05 58 53.9**	**-0.2**
	5.7nm,0.3s,baz=21,slow=11,SNR=56						
FITZ				S	**Sn**	**06 01 00.6**	**-7.3**
	4.4nm,0.3s,baz=164,slow=22,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.10**	**199**	P	**Pn**	**05 58 53.4**	**-0.7**
	baz=12,SNR=26						
FITZ				S	Sn	06 00 59.5	-8.4
	baz=12						
FITZ	**Fitzroy Crossi**	**12.10**	**199**	Pn	**Pn**	**05 58 53.4**	**-0.7**
TWSI	**Taliwang, Sumb**	**12.95**	**260**	P	**Pn**	**05 59 07.6**	**+2.4**
	9.6nm,0.4s						
WB0	**Warramunga Arr**	**13.81**	**162**	Pn	**Pn**	**05 59 13.5**	**-2.6**
WRA	**Warramunga Arr**	**13.96**	**162**	P	**Pn**	**05 59 15.3**	**-2.6**
	2.9nm,0.3s,baz=346,slow=13,SNR=66						
WRA				S	Sn	06 01 43.9	-8.9
	8.6nm,0.3s,baz=327,slow=22,SNR=10						
WRA	**Warramunga Arr**	**13.96**	**162**		**Pn**	**05 59 14.4**	**-3.5**
WB2	**Warramunga Arr**	**13.97**	**162**	Pn	**Pn**	**05 59 15.6**	**-2.4**
WC3	**Warramunga Arr**	**13.99**	**162**	P	**Pn**	**05 59 15.5**	**-2.7**
	baz=14						
WR0	**Warramunga Arr**	**14.04**	**161**	Pn	**Pn**	**05 59 16.9**	**-2.0**
COEN	**Coen**	**15.05**	**120**	P	**Pn**	**05 59 32.7**	**+1.0**
QIS	**Mount Isa**	**16.81**	**146**	P	**P**	**05 59 53.1**	**+0.4**
	baz=17,SNR=40						
AS31	**Alice Springs**	**17.40**	**167**	P	**P**	**06 00 00.4**	**+1.1**
AS31				IAmb	IAmb	06 00 03.3	
	comp=Z,19nm,0.5s						
ASPA	**Alice Springs**	**17.40**	**167**	P	**Pn**	**06 00 00.6**	**+0.3**
	baz=17						
ASAR	**Alice Springs**	**17.41**	**167**	P	**Pn**	**06 00 00.6**	**+0.3**
	comp=Z,6.6nm,0

KSAR	Wonju Array Be	43.87 358		pP		06 04 28.4	-1.7
LZH	Lanzhou	48.97 332	*e*P	P		06 04 38.6	+0.6
LZH			pP	pwP		06 05 17.8	+1.3
LZH			sP	sP		06 05 37.9	+11
LZH			pmax	pmax			
	comp=Z,15nm,1.0s						
HHC	Hu-ho-hao-te	50.12 342	*e*P	P		06 04 47.8	+1.3
HHC			pmax	pmax			
	comp=Z,15nm,0.9s						
HHC			pmax	pmax			
	comp=Z,100nm,6.7s						
USRK	Ussuriysk Ar.	50.62 2	P	P		06 04 49.1	-1.0
	comp=Z,1.9nm,0.5s,baz=181,slow=7.8,SNR=9.3						
ODAN	Odare	52.85 311	*e*P	P		06 05 06.7	-0.5
	comp=Z,13nm,0.4s						
TAPN	Taplejung	52.87 312	*e*P	P		06 05 06.9	-0.6
	comp=Z,17nm,0.4s						
RAMN	Ramite	53.49 311	*e*P	P		06 05 11.7	-0.2
	comp=Z,34nm,0.5s						
JIRN	Jiri	54.17 311	*e*P	P		06 05 16.7	-0.3
	comp=Z,9.6nm,0.5s						
GUN	Gumba	54.54 311	*e*P	P		06 05 19.1	-0.5
	comp=Z,20nm,0.4s						
PKI	Pulchoki	54.72 310	*e*P	P		06 05 20.2	-0.7
PKIN	Phulchoki	54.73 310	*e*P	P		06 05 20.1	-0.8
GKN	Gorkha	55.52 311	*e*P	P		06 05 25.9	-0.6
	comp=Z,22nm,0.4s						
KOLN	Koldanda	56.19 310	*e*P	P		06 05 30.9	-0.4
	comp=Z,8.4nm,0.4s						
SONM	Songino Array	58.02 342	P	P		06 05 43.9	+0.2
	comp=Z,0.8nm,0.4s,baz=165,slow=6.6,SNR=7.7						
SONM	Songino Array	58.02 342	IAmb	IAmb		06 05 44.8	
	comp=Z,2.5nm,1.3s						
WMQ	Urumqi	62.96 327	*e*P	P		06 06 19.2	+2.0
WMQ			pmax	pmax			
	comp=Z,14nm,0.7s						
WMQ			pmax	pmax			
	comp=Z,100nm,4.1s						
PETK	Petropavlovsk-	64.04 18	P	P		06 06 23.5	-0.4
	comp=Z,3.9nm,0.9s,baz=180,slow=2.5,SNR=5.2						
MK31	Makanchi Array	67.79 327	P	P		06 06 48.4	+0.2
MKAR	Makanchi Array	67.79 327	P	P		06 06 48.3	+0.1
	comp=Z,14nm,0.5s,baz=115,slow=8.5,SNR=258						
MAKZ	Makanchi	67.97 327	P	P		06 06 48.6	-0.7
TKM2	Tokmak 2	69.56 321	P	P		06 07 00.1	+0.7
	SNR=8.4						
UCH	Uchtor	69.90 319	P	P		06 07 03.0	+1.1
	SNR=9.5						
AAK	Ala-Archa	70.11 320	P	P		06 07 03.5	+0.7
	SNR=7.0						
AAK	Ala-Archa	70.11 320	P	P		06 07 03.5	+0.7
AAK			IAmb	IAmb		06 07 04.4	
	comp=Z,6.2nm,0.6s						
AML	Almayashu	70.38 319	P	P		06 07 05.4	+0.7
	SNR=14						
USP	Ospenovka	70.42 320	P	P		06 07 05.0	+0.5
	SNR=17						
EKS2	Erkin-Say	70.59 320	P	P		06 07 06.5	+0.9
	SNR=9.9						
ZALV	Zalesovo Beam	71.15 334	P	P		06 07 07.4	-1.2
	comp=Z,2.0nm,0.6s,baz=127,slow=6.2,SNR=11						
GAR	Garm	71.25 315	P	P		06 07 09.3	-0.3
VNDA	Vanda	72.85 173	P	P		06 07 18.1	-0.3
	comp=Z,0.4nm,0.7s,baz=309,slow=6.2,SNR=5.6						
KK31	Karatay Array	72.91 319	P	P		06 07 19.2	-0.1
KK31			IAmb	IAmb		06 07 20.3	
	comp=Z,6.5nm,1.1s						
KKAR	Karatay Array	72.91 319	P	P		06 07 18.3	-1.1
KKAR			IAmb	IAmb		06 07 20.3	
	comp=Z,6.5nm,1.1s						
KKAR	Karatay Array	72.91 319	P	P		06 07 18.1	-1.2
GEYT	Alibeck	79.80 310	P	P		06 07 58.6	+0.2
	comp=Z,1.3nm,0.4s,baz=52,slow=12,SNR=4.1						
ABKAR	Akbulak array	82.08 322	P	P		06 08 09.1	-1.0
RAYN	Ar Rayn	87.39 294	P	P		06 08 37.3	0.0
RAYN			IAmb	IAmb		06 08 38.1	
	comp=Z,5.5nm,0.7s						
LPAZ	La Paz	151.15 142	PKPbc	PKPbc		06 15 43.7	0.0
	comp=Z,0.4nm,0.4s,baz=270,slow=1.0,SNR=1.7						

IDC ***08*** *06:03:08.9±0.9, 12°.16N×69°.88W, h0km, mb3.7/8, mb1 4.0/13, mb1mx3.8/36, mbtmpg3.9/13, ML3.6/5, MS2.8/3, Ms1 2.8/3, ms1mx2.5/41, Error ellipse: s-maj=23.7km s-min=17.5km az=86.0*

FUNV ***08*** *06:03:14.0, 12°.15N×69°.95W, h24km, MW3.9*

VAO ***08*** *06:03:15.2±1.3, 11°.88N×69°.52W, h10km, mb4.2*

ISC 08 06:03:12.3±1.1, 12°.20N±0°.05×69°.91W±0°.05, h27km±7km, n60, σ1°23/69, mb3.9/8, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MONV	Montecano	0.25	195	*e*P		Pb		06 03 19.2	+0.5
MONV				*e*S		Sb		06 03 23.4	+0.3
DABV	Dabajuro	1.46	209	*e*P		Pn		06 03 36.8	0.0
DABV	Dabajuro	1.46	209	*e*P		Pn		06 03 36.8	0.0
DABV				*e*S		Sb		06 03 54.8	-2.0
SIQV	Siquisique	1.54	176	*e*P		Pb		06 03 39.0	-1.3
SIQV				*e*S		Sb		06 03 57.7	-1.6
URIC	Uribia, Colomb	2.10	257	*e*P		Pn		06 03 45.7	0.0
URIC	Uribia, Colomb	2.10	257	*e*P		Pn		06 03 45.7	0.0
URIC				*e*S		Sn		06 04 11.4	+0.5
CURV	Curarigua	2.17	181	*e*P		Pn		06 03 48.4	+1.6
CURV				*e*S		Sn		06 04 11.7	-1.2
SANV	Sanarito	2.70	172	*e*P		Pn		06 03 55.5	+1.4
CRJC	Cerrejon, Guaj	3.14	248	*e*P		Pn		06 03 59.2	-1.0
SDV	Santo Domingo	3.37	192	Pn		Pn		06 04 04.0	+0.7
	18nm,0.3s,baz=30,slow=7.9,SNR=29								
SDV				Sn		Sn		06 04 40.5	-2.0
	32nm,0.3s,baz=357,slow=19,SNR=5.3								
SDV				LR		LR		06 05 39.5	
	comp=Z,143nm,19.2s,baz=46,slow=45								
SDV	Santo Domingo	3.37	192	*e*P		Pn		06 04 03.8	+0.5
SDV	Santo Domingo	3.37	192	*e*P		Pn		06 04 04.9	+1.6
SDV	Santo Domingo	3.37	192	*e*P		Pn		06 04 04.2	+0.9
SDV				*e*S		Sn		06 04 40.2	-2.4
BAUV	El Baul	3.72	150	*e*P		Pn		06 04 08.3	+0.3
BAUV				*e*S		Sn		06 04 48.8	-2.1
SMRC	Santa Marta, M	4.35	257	*e*P		Pn		06 04 15.1	-1.6
ARGC	Ariguani, Magd	4.85	242	*e*P		Pn		06 04 23.1	-0.5
CAPV	Capacho	4.92	209	*e*P		Pn		06 04 24.9	+0.2
OCAC	Ocana	5.17	221	*e*P		Pn		06 04 27.9	-0.2
PCRV	Puerto La Cruz	5.55	111	Pn		Pn		06 04 33.9	+0.7
	8.3nm,0.3s,baz=272,slow=2.2,SNR=48								
PAMC	Pamplona, Colo	5.56	210	*e*P		Pn		06 04 34.0	+0.3
SJCC	San Jacinto, C	5.66	247	*e*P		Pn		06 04 35.0	+0.3
BARC	Barichara	6.44	210	*e*P		Pn		06 04 47.2	+1.6
ZARC	Zaragoza, Cauc	6.76	227	*e*P		Pn		06 04 48.4	-1.4
SJG	San Juan	6.91	31	Pn		Pn		06 04 52.6	+0.8
	4.2nm,0.3s,baz=205,slow=17,SNR=5.6								
SJG				Sn		Sn		06 06 04.6	-4.9
	8.1nm,0.3s,baz=50,slow=22,SNR=6.1								
RUSC	La Rusia	7.01	207	*e*P		Pn		06 04 53.1	-0.5
RUSC	La Rusia	7.01	207	*e*P		Pn		06 04 52.7	-0.9
UREC	San Jos de Ur	7.09	232	*e*P		Pn		06 04 54.1	-0.2
PAYV	Puerto Ayacuch	7.09	162	*e*P		Pn		06 04 54.2	-0.1
PTBC	PUERTO BERRIO,	7.19	219	*e*P		Pn		06 04 56.0	+0.2
SPBC	San Pablo de B	7.70	213	*e*P		Pn		06 05 00.8	-2.0
NORC	Norcasia	8.21	217	*e*P		Pn		06 05 10.3	+0.4
ROSC	El Rosal	8.51	211	Pn		Pn		06 05 14.8	+0.6
	5.0nm,0.3s,baz=275,slow=16,SNR=11								
ROSC				Sn		Sn		06 06 49.0	-0.7
	2.3nm,0.3s,baz=17,slow=21,SNR=3.7								
BOAV	Boa Vista	13.46	136	*e*P		Pn		06 06 20.4	-1.3
OTAV	Otavalo	14.60	216	*e*P		P		06 06 43.0	-0.8
PTGA	Pitinga	16.20	142	Pn		Pn		06 06 58.6	+0.4
	0.3nm,0.3s,baz=348,slow=15,SNR=4.6								
PTGA				LR		LR		06 14 17.9	
	comp=Z,27nm,18.1s,baz=334,slow=41								
CZSB	Cruzeiro do Su	19.99	188	*e*P		P		06 07 43.3	+0.4
MALB	Monte Alegre	20.89	131	*e*P		P		06 07 52.6	0.0
ITTB	Itaituba	21.66	139	*e*P		P		06 08 01.1	+0.1
MCPB	Macapa, AP	21.67	124	*e*P		P		06 08 01.1	+0.1
ETMB	Extrema	22.18	170	*e*P		P		06 08 07.8	+1.4
NPGB	Novo Progresso	23.97	142	*e*P		P		06 08 25.3	+0.6
NNA	Nana	24.99	196	LR		LR		06 19 58.6	
	comp=Z,25nm,19.7s,baz=320,slow=40								
TMAB	Tom-Au,PA,Br	26.06	122	*e*P		P		06 08 44.7	+0.9
LPAZ	La Paz	28.36	176	P		P		06 09 05.4	+0.4
	0.5nm,0.5s,baz=8.1,slow=14,SNR=4.9								
LPAZ	La Paz	28.36	176	*e*P		P		06 09 07.2	+2.2
SIV	San Ignacio	29.34	162	P		P		06 09 12.3	-0.8
	1.3nm,0.7s,baz=330,slow=8.7,SNR=7.8								
SMTB	Santa Maria do	30.49	132	*e*P		P		06 09 25.0	+1.6
PEXB	Peixe	32.29	138	*e*P		P		06 09 40.4	+1.2
SDBA	SAO DESIDERIO	34.83	134	*e*P		P		06 10 01.8	+0.5
BDFB	Brasilia	35.14	141	P		P		06 10 05.1	+1.1
	1.2nm,0.5s,baz=257,slow=6.2,SNR=3.4								
TXAR	Lajitas Array	35.70	304	P		P		06 10 10.6	+1.8
	0.1nm,0.6s,baz=124,slow=11,SNR=2.0								
JANB	Januaria	37.09	136	*e*P		P		06 10 20.8	+0.1
NBPA	Parau_RN	37.16	117	*e*P		P		06 10 22.3	+0.9
RCBR	Riachuelo	38.26	116	*e*P		P		06 10 31.7	+1.1
BB19B	Bebedouro	39.17	147	*e*P		P		06 10 39.0	+0.9
PLCA	Paso Flores	52.66	181	P		P		06 12 23.2	-1.1
	0.9nm,0.5s,baz=349,slow=9.5,SNR=7.2								
YKA	Yellowknife Ar	59.43	338	P		P		06 13 12.8	+0.5
	0.2nm,0.7s,baz=121,slow=7.3,SNR=3.7								
DBIC	Dimbokro	64.28	88	P		P		06 13 46.6	+0.7
	4.9nm,1.0s,baz=274,slow=5.5,SNR=3.6								
TORD	Torodi Ar. Bea	69.63	80	P		P		06 14 20.2	+0.3
	0.8nm,0.7s,baz=282,slow=5.7,SNR=3.5								
CMAR	Chiang Mai Arr	147.61	20	PKPbc		PKPbc		06 22 55.8	+0.6
	0.8nm,0.3s,baz=313,slow=3.4,SNR=4.1								

IDC ***08*** *06:05:15.3±0.9, 4°.84S×151°.18E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.9/33, mbtmp4.0/8, Error ellipse: s-maj=32.2km s-min=21.2km az=99.0*

ISC 08 06:05:32.9±0.9, 5°.1S±0°.2×151°.2E±0°.2, h155km, n9, σ0s97/9, mb3.8/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.07	227	P		P		06 10 14.7	-0.9
	2.2nm,0.5s,baz=49,slow=9.9,SNR=18								
DZM	Mont Dzumac	22.38	140	P		P		06 10 19.2	+0.6
	3.4nm,0.5s,baz=295,slow=9.8,SNR=8.1								
ASAR	Alice Springs	24.87	220	P		P		06 10 41.0	-0.4
	0.5nm,0.3s,baz=54,slow=9.3,SNR=11								
PETK	Petropavlovsk-	58.27	5	P		P		06 15 10.2	-0.9
	9.9nm,1.1s,baz=176,slow=9.3,SNR=2.7								
SONM	Songino Array	65.77	329	P		P		06 16 02.4	+1.0
	0.9nm,0.5s,baz=139,slow=5.8,SNR=5.1								
MKAR	Makanchi Array	79.54	319	P		P		06 17 23.9	+1.3
	0.6nm,0.7s,baz=98,slow=9.3,SNR=4.8								
ZALV	Zalesovo Beam	80.56	327	P		P		06 17 27.1	-0.7
	0.8nm,0.5s,baz=70,slow=4.9,SNR=4.5								
ILAR	Eielson Array	83.05	22	P		P		06 17 40.2	-0.5
	0.4nm,0.5s,baz=251,slow=5.7,SNR=6.4								
TORD	Torodi Ar. Bea	148.91	287	PKPbc		PKPbc		06 25 03.8	+0.4
	2.2nm,0.6s,baz=58,slow=2.8,SNR=12								

IDC ***08*** *06:08:41.7±2.2, 7°.76S×128°.69E, h153km±26km, mb3.1/2, mb1 3.4/7, mb1mx3.2/31, mbtmp3.8/7, Error ellipse: s-maj=24.2km s-min=21.2km az=112.0*

ISC 08 06:08:41.2±0.9, 7°.88S±0°.07×128°.78E±0°.10, h150km, n7, σ2s34/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.56	245	P		Pn		06 10 02.6	+0.5
	4.9nm,0.3s,baz=359,slow=3.8,SNR=1.7								
BATI				S		Sn		06 11 06.1	+0.8
	11nm,0.3s,baz=11,slow=20,SNR=6.6								
SIJI	Sorong	7.39	20	P		Pn		06 10 25.8	-0.7
	0.7nm,0.3s,baz=323,slow=20,SNR=1.1								
FITZ	Fitzroy Crossi	10.61	196	P		Pn		06 11 09.5	+0.2
	1.5nm,0.3s,baz=45,slow=5.2,SNR=26								
FITZ				S		Sn		06 13 02.6	-4.2
	1.1nm,0.3s,baz=111,slow=21,SNR=5.1								
WRA	Warramunga Arr	13.15	156	P		Pn		06 11 44.0	+1.6
	0.8nm,0.3s,baz=329,slow=13,SNR=10								
WRA				S		Sn		06 14 06.7	-1.2
	0.4nm,0.3s,baz=337,slow=20,SNR=3.3								
ASAR	Alice Springs	16.45	163	P		Pn		06 12 27.2	+3.7
	0.2nm,0.3s,baz=336,slow=10,SNR=8.3								
SONM	Songino Array	58.90	343	P		P		06 18 24.7	+0.3
	0.3nm,0.5s,baz=160,slow=4.6,SNR=2.6								
MKAR	Makanchi Array	68.30	328	P		P		06 19 24.7	-1.4
	0.4nm,0.6s,baz=119,slow=10,SNR=5.1								

IDC 08 06:24:57.7±4.6, 6°.89S×150°.05E, h0km, mb2.9/2, mb1 3.3/2, mb1mx3.1/28, mbtmp3.0/2, Error ellipse: s-maj=182.9km s-min=54.3km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.02	228	P		P		06 29 31.9	-0.4
	0.4nm,0.5s,baz=53,slow=11,SNR=1.9								
ASAR	Alice Springs	22.77	221	P		P		06 30 02.0	0.0
	0.2nm,0.5s,baz=80,slow=9.4,SNR=5.0								
TORD	Torodi Ar. Bea	148.24	284	PKPbc		PKPbc		06 44 46.5	-0.5
	0.2nm,0.5s,baz=91,slow=3.6,SNR=1.4								

IDC ***08*** *06:38:53.9±2.9, 53°.50N×87°.53E, h0km, mb1 2.9/2, mb1mx2.8/38, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=26.9km s-min=15.0km az=58.0*

NNC 08 06:38:54.7±3.4, 53°.46N×87°.43E, h0km, mb2.9, mpv2.6, 4C-6D, Error ellipse: s-maj=29.3km s-min=12.4km az=55.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.63	289	*i*				06 49 40.0	
	baz=103,slow=325,SNR=1.7								
ZAA0	Zalesovo Array	1.63	289	⇑P		Pn		06 39 23.6	-1.0
	0.2nm,0.2s								
ZAA0				⇓S		Sn		06 39 46.3	+0.1
	1.3nm,0.7s								
ZALV	Zalesovo Beam	1.63	289	Pg		Pn		06 39 23.5	-1.1
	1.9nm,0.3s,baz=108,slow=16,SNR=30								
ZALV				Lg		Lg		06 39 47.5	
	1.9nm,0.3s,baz=105,slow=24,SNR=9.4								
KURBB	Kurchatov Arra	6.18	246	Pn		Pn		06 40 27.6	+0.6
	0.1nm,0.3s,baz=62,slow=14,SNR=8.4								
KURBB				Lg		Lg		06 42 11.4	
	0.0nm,0.3s,baz=65,slow=32,SNR=5.9								
KURBB	Kurchatov Arra	6.18	246	⇓Pn		Pn		06 40 28.1	+1.0
	2.4nm,0.8s,baz=63,slow=14								
KURBB				⇓Sn		Sn		06 41 40.9	+2.6
	2.5nm,0.9s								
KURBB				⇓Lg		Lg		06 42 11.1	
	5.1nm,0.7s,baz=64,slow=30								
MK31	Makanchi Array	7.44	208	⇓Pn		Pn		06 40 46.2	+1.7
	0.2nm,0.5s,baz=29,slow=13,SNR=7.5								
MK31				⇑Sn		Sn		06 42 08.1	-1.4
	0.6nm,0.8s								
MK31				⇓Lg		Lg		06 42 49.0	
	0.8nm,0.6s								
MKAR	Makanchi Array	7.44	208	Pn		Pn		06 40 46.1	+1.6
	0.1nm,0.3s,baz=27,slow=14,SNR=9.7								
MKAR				Lg		Lg		06 42 52.9	
	0.1nm,0.3s,baz=24,slow=30,SNR=7.0								
MAKZ	Makanchi	7.52	210	⇑Pn		Pn		06 40 47.6	+2.1
	0.2nm,0.4s								
MAKZ				⇑Lg		Lg		06 42 52.0	
	0.8nm,0.6s								

IDC ***08*** *06:55:16.0±1.7, 2°.20N×126°.93E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/54, mbtmp4.0/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/52, Error ellipse: s-maj=105.0km s-min=21.7km az=68.0*

DJA ***08*** *06:55:21.2±0.4, 2°.1N±4°×126°.7E±°, h10km, M4.0/6, mb4.2/1, MLv3.8/6*

NEIC ***08*** *06:55:23.6±1.4, 2°.1N±0°.1×126°.8E±0°.1, h59km±13km, mb4.3/9, Error ellipse: s-maj=19.4km s-min=10.8km az=224.0*

ISC 08 06:55:23.6±1.3, 2°.1N±0°.1×126°.8E±0°.1, h63km, n26, σ1s56/24, mb4.2/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.44	157			Pn		06 55 46.8	-0.8
TNTI	Ternate	1.44	157	P		Pn		06 55 46.8	-0.8
TNTI				S		Sn		06 56 05.1	-0.5
GTOI	Gorontalo	4.07	249	P		Pn		06 56 22.9	-0.6
SANI	Sanana	4.21	191	P		Pn		06 56 24.3	-1.1
DAV	Davao City (W)	5.08	346	LR		LR		06 59 01.1	
	comp=Z,65nm,18.1s,baz=177,slow=45								
LUWI	Luwuk	5.11	232	Pn		Pn		06 56 40.3	+2.6
MRSI	Marisa	5.13	252	P		Pn		06 56 34.5	-3.5
TOLI2	Tolitoli	6.11	261			Pn		06 56 49.1	-2.3
MYLDM	Lahad Datu	8.84	290			Pn		06 57 30.4	+1.6
MTN	Manton Dam	15.46	164	Pn		Pn		06 58 57.3	-0.8
MTN				IAmb	IAmb			06 59 22.0	
	comp=Z,16nm,1.1s								
JAGI	Jajag, Banyuwa	16.42	230	P		Pn		06 59 10.8	+0.5
JAGI				IAmb	IAmb			06 59 36.1	
	comp=Z,39nm,0.8s								
FITZ	Fitzroy Crossi	20.11	183	P		P		06 59 52.6	+0.2
	comp=Z,1.7nm,0.5s,baz=14,slow=8.5,SNR=7.1								
WB0	Warramunga Arr	22.98	161	P		P		07 00 22.8	-0.3
WB0				IAmb	IAmb			07 00 24.3	
	comp=Z,12nm,1.0s								
WRA	Warramunga Arr	23.12	162	P		P		07 00 24.3	-0.3
	comp=Z,5.3nm,0.5s,baz=341,slow=11,SNR=47								
WRA	Warramunga Arr	23.12	162	P		P		07 00 25.3	+0.7
WB2	Warramunga Arr	23.13	162	P		P		07 00 24.5	-0.1
WB2				IAmb	IAmb			07 00 27.0	
	comp=Z,12nm,1.1s								
WR0	Warramunga Arr	23.20	161	P		P		07 00 25.3	0.0
WR0				IAmb	IAmb			07 00 27.1	
	comp=Z,5.2nm,0.6s								
AS31	Alice Springs	26.53	165	P		P		07 00 55.3	-0.4
ASAR	Alice Springs	26.53	165	P		P		07 00 56.4	+0.8
	comp=Z,0.6nm,0.3s,baz=345,slow=12,SNR=22								
ASAR	Alice Springs	26.53	165	P		P		07 00 59.8	+4.2
FORT	Forrest	32.73	178	P		P		07 01 51.0	+0.6
HNR	Honiara	34.94	110	LR		LR		07 15 46.4	
	comp=Z,35nm,19.0s,baz=48,slow=35								
BBOO	Buckleboo	35.81	167	P		P		07 02 16.6	-0.5
STKA	Stephens Creek	36.60	159	P		P		07 02 24.3	+0.5
	comp=Z,0.7nm,0.4s,baz=352,slow=9.5,SNR=3.1								
STKA	Stephens Creek	36.60	159	IAmb	IAmb			07 02 24.5	
	comp=Z,2.2nm,1.4s								
MKAR	Makanchi Array	58.93	326	P		P		07 05 17.0	+0.5
	comp=Z,0.4nm,0.3s,baz=122,slow=7.8,SNR=11								

IDC ***08*** *06:56:07.0±3.1, 53°.83N×91°.08E, h0km, mb1 3.5/3, mb1mx3.1/59, mbtmp3.5/3, ML3.0/3, Error ellipse: s-maj=26.4km s-min=23.4km az=49.0*

NNC ***08*** *06:56:15.3±3.9, 53°.43N×90°.52E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=32.2km s-min=21.5km az=81.0, Suspected Mining explosion.*

ISC 08 06:56:08.5±4.1, 53°.8N±0°.1×90°.9E±0°.2, h0km, n10, σ1s22/12, 5C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.59	275	*i*				07 19 10.0	
	baz=88,slow=315,SNR=1.6								
ZAA0	Zalesovo Array	3.59	275	⇑Pn		Pb		06 57 11.2	-1.6
	4.8nm,0.8s								
ZAA0				⇑Lg		Lg		06 58 02.5	
	15nm,0.9s								
ZALV	Zalesovo Beam	3.59	275	Pn		Pn		06 57 07.2	+1.8
	2.0nm,0.3s,baz=94,slow=15,SNR=24								
ZALV				Lg		Lg		06 58 02.8	
	2.2nm,0.3s,baz=91,slow=26,SNR=11								
TLY	Talaya	8.03	100	Lg		Lg		07 00 12.7	
	0.0nm,0.3s,baz=41,slow=1.9,SNR=8.2								
KURBB	Kurchatov Arra	8.21	252	Pn		Pn		06 58 08.8	0.0
	0.2nm,0.3s,baz=65,slow=14,SNR=18								
KURBB				Sn		Sn		06 59 43.2	+1.1
	0.1nm,0.3s,baz=68,slow=26,SNR=8.9								
KURBB				Lg		Lg		07 00 27.9	
	baz=230,slow=32,SNR=4.1								
KURBB	Kurchatov Arra	8.21	252	⇑Pn		Pn		06 58 08.2	-0.6
	4.8nm,0.6s,baz=67,slow=14								
KURBB				⇓Sn		Sn		06 59 43.0	+0.8
	53nm,0.8s,baz=67,slow=23								
KURBB				⇓Lg		Lg		07 00 28.0	
	98nm,0.8s,baz=61,slow=30								
MK31	Makanchi Array	8.88	222	Pn		Pn		06 58 18.4	+0.5
	2.0nm,0.8s,baz=35,slow=13,SNR=18								
MK31				⇑Sn		Sn		06 59 58.6	-0.1
	8.1nm,0.9s,baz=44,slow=23,SNR=5.2								
MK31				⇑Lg		Lg		07 00 46.5	
	32nm,1.1s,baz=355,slow=38,SNR=5.3								
MKAR	Makanchi Array	8.88	222	Pn		Pn		06 58 18.6	+0.6
	0.3nm,0.3s,baz=31,slow=13,SNR=16								
MKAR				Sn		Sn		07 00 00.4	+1.8
	0.1nm,0.3s,baz=39,slow=24,SNR=8.3								
MKAR				Lg		Lg		07 00 51.8	
	0.2nm,0.3s,baz=47,slow=32,SNR=10								
MAKZ	Makanchi	8.99	223	⇓Pn		Pn		06 58 20.2	+0.7
	2.2nm,0.9s								
MAKZ				⇓Sn		Sn		07 00 00.3	-1.1
	3.3nm,0.8s								
MAKZ				⇓Lg		Lg		07 00

ETMB	Extrema	9.63	18	*e*P		Pn	07 25 11.2	+1.0
PTLB	Pontes e Lacer	10.23	71	*e*P		Pn	07 25 16.4	-1.8
VILB	Vilhena	10.54	56	*e*P		Pn	07 25 20.6	-1.9
CLDB	Colider	15.26	60	*e*P		Pn	07 26 22.8	-0.9
PTGB	Pitanga	16.82	113	*e*P		P	07 26 43.3	+0.3
ITAB	Concordia	17.63	121	*e*P		Pn	07 26 53.0	+0.4
MACA	Manacapuru-AM	17.85	29	*e*P		P	07 26 54.0	-0.3
NPGB	Novo Progresso	17.97	50	*e*P		P	07 26 54.3	-1.3
SNDB	Serra Nova Dou	18.59	70	*e*P		P	07 27 01.8	-0.7
FRTB	Fartura	18.75	107	*e*P		P	07 27 03.7	-0.5
BB19B	Bebedouro	19.48	99	*e*P		P	07 27 11.2	-0.9
ITTB	Itaituba	19.63	44	*e*P		P	07 27 12.1	-1.6
IPMB	Ipameri, GO	19.89	90	*e*P		P	07 27 15.9	-0.7
BDFB	Brasília	20.46	84	P		P	07 27 21.7	-1.1
	comp=E,2.9nm,0.4s,baz=260,slow=6,6,SNR=6.2							
PLCA	Paso Flores	21.62	183	P		P	07 27 35.9	+0.9
	comp=E,5.1nm,0.9s,baz=352,slow=11,SNR=9.6							
PLCA	Paso Flores	21.62	183	*e*P		P	07 27 37.8	+2.8
SMTB	Santa Maria do	23.23	67	*e*P		P	07 27 50.6	-0.6
JANB	Januaria	24.08	84	*e*P		P	07 27 57.2	-1.7
SDBA	SAO DESIDERIO	24.25	78	*e*P		P	07 27 59.2	-1.3
MCPB	Macapa, AP	25.04	44	*e*P		P	07 28 06.5	-1.1
NBAN	Anadia - AL	33.14	78	*e*P		P	07 29 18.4	-1.1
TXAR	Lajitas Array	58.52	325	P		P	07 32 38.9	+0.6
	comp=E,0.3nm,0.8s,baz=139,slow=7,0,SNR=2.6							
PDAR	Pinedale Array	71.90	330	P		P	07 34 05.2	+0.6
	comp=E,0.2nm,0.5s,baz=120,slow=8,4,SNR=2.8							
ULM	Lac du Bonnet	72.94	342	P		P	07 34 09.9	-0.4
	comp=E,0.8nm,0.5s,baz=97,slow=2.0,SNR=3.1							
TORD	Torodi Ar. Bea	76.77	71	P		P	07 34 31.8	-1.4
	comp=E,1.2nm,0.5s,baz=254,slow=5.1,SNR=16							
YKA	Yellowknife Ar	88.83	341	P		P	07 35 35.3	+1.1
	comp=E,0.9nm,0.7s,baz=132,slow=5.0,SNR=24							
WRA	Warramunga Arr	134.90	212	PKP		PKiKP	07 42 00.9	-0.5
	comp=E,0.5nm,1.0s,baz=150,slow=1.6,SNR=5.6							
MKAR	Makanchi Array	145.34	6	PKP		PKPdf	07 42 16.3	+1.0
	comp=E,0.2nm,0.9s,baz=330,slow=5.5,SNR=1.8							
SONM	Songino Array	151.08	6	PKPbc		PKiKP	07 42 34.5	+0.7
	comp=E,0.8nm,0.6s,baz=349,slow=1.5,SNR=3.8							

*IDC **08** 07:43:56.1±1.8, 15.05S×173.79W, h0km, mb3.9/6, mb1 4.2/6, mb1mx3.9/27, mbtmp3.9/6, MS3.1/3, Ms1 3.1/3, ms1mx2.7/33, Error ellipse: s-maj=145.4km s-min=21.0km az=150.0*

ISC 08 07:44:05.7±1.5, 15.1S±0.7×173.9W±0.4, h73km, n16, σ0.8 74/7, mb3.8/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	8.20	250	LR	LR	07 47 54.6	
	comp=Z,76nm,21.2s,baz=179,slow=29						
DZM	Mont Dzumac	19.91	247	LR	LR	07 55 26.4	
	comp=Z,47nm,19.3s,baz=43,slow=34						
URZ	Urewera	24.41	197	LR	LR	07 57 13.4	
	comp=Z,91nm,20.2s,baz=31,slow=33						
H11S2	WAKE ISLAND Hy	38.49	329	T	T	08 32 31.1	
	baz=149,slow=76,SNR=7.9						
H11S3	WAKE ISLAND Hy	38.50	329	T	T	08 32 39.7	
	baz=149,slow=76,SNR=10						
H11S1	WAKE ISLAND Hy	38.50	329	T	T	08 32 36.1	
	baz=149,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	39.44	331	T	T	08 33 51.9	
	baz=149,slow=76,SNR=7.9						
H11N1	WAKE ISLAND Hy	39.44	331	T	T	08 33 48.7	
	baz=149,slow=76,SNR=8.7						
H11N2	WAKE ISLAND Hy	39.46	331	T	T	08 33 51.1	
	baz=149,slow=76,SNR=5.8						
STKA	Stephens Creek	43.81	240	P	P	07 52 04.7	0.0
	0.7nm,0.3s,baz=72,slow=10,SNR=3.1						
WRA	Warramunga Arr	49.49	257	P	P	07 52 49.1	-0.1
	0.7nm,0.4s,baz=96,slow=7.8,SNR=14						
ASAR	Alice Springs	49.79	252	P	P	07 52 51.2	-0.3
	4.0nm,0.5s,baz=86,slow=8.2,SNR=72						
NVAR	Mina Array Bea	74.40	42	P	P	07 55 35.5	-0.7
	0.4nm,0.5s,baz=236,slow=10,SNR=6.5						
TXAR	Lajitas Array	80.81	56	P	P	07 56 12.7	+0.7
	0.3nm,0.9s,baz=256,slow=5.0,SNR=4.4						
PDAR	Pinedale Array	82.33	42	P	P	07 56 19.1	-0.8
	0.6nm,0.8s,baz=174,slow=1.5,SNR=5.3						
BRTR	Keskin Array B	145.65	321	PKPbc	PKPab	08 03 37.7	+0.7
	1.1nm,0.6s,baz=90,slow=3.5,SNR=2.5						

IDC 08 07:47:24.4±3.5, 53.62N×87.90E, h0km, mb1 2.6/2, mb1mx2.6/39, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=32.8km s-min=19.9km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.86	282	*i*		07 59 50.0	
	baz=97,slow=318,SNR=2.4						
ZALV	Zalesovo Beam	1.86	282	Pn	Pn	07 47 57.5	+0.1
	0.8nm,0.3s,baz=100,slow=15,SNR=10						
ZALV				Lg	Lg	07 48 23.4	
	1.3nm,0.3s,baz=106,slow=26,SNR=5.7						
KURBB	Kurchatov Arra	6.50	246	Pn	Pn	07 49 01.6	+0.4
	0.0nm,0.3s,baz=63,slow=15,SNR=1.8						
KURBB				Lg	Lg	07 50 49.5	
	0.0nm,0.3s,baz=62,slow=35,SNR=3.0						
MKAR	Makanchi Array	7.72	210	Pn	Pn	07 49 19.3	+1.3
	0.1nm,0.3s,baz=22,slow=14,SNR=2.1						

*IDC **08** 07:52:29.4±7.1, 10.04S×108.36W, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.9/16, mbtmp3.7/6, MS3.2/4, Ms1 3.2/4, ms1mx3.0/17, Error ellipse: s-maj=186.7km s-min=110.7km az=132.0*

ISC 08 07:52:31.0±7.1, 10.5S±1°×10.8W±°, h10km, n13, σ0.938/6, mb3.7/6, MS3.4/3, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	17.04	183	LR	LR	08 01 27.9	
	comp=Z,34nm,19.5s,baz=100,slow=32						
ATAH	Atahualpa	29.65	87	LR	LR	08 08 30.1	
	comp=Z,39nm,18.6s,baz=343,slow=32						
TXAR	Lajitas Array	39.38	6	P	P	08 00 01.2	+0.1
	0.4nm,0.8s,baz=186,slow=11,SNR=4.9						
PPT	Papeete	40.76	255	LR	LR	08 12 06.2	
	comp=Z,63nm,21.4s,baz=80,slow=29						
NVAR	Mina Array Bea	49.11	350	P	P	08 01 19.1	0.0
	0.2nm,0.4s,baz=178,slow=8.3,SNR=4.6						
PDAR	Pinedale Array	52.55	359	P	P	08 01 44.4	-0.6
	0.6nm,0.6s,baz=177,slow=5.3,SNR=8.3						
MDP	Montagnes des	57.39	77	LR	LR	08 26 04.1	
	comp=Z,30nm,18.7s,baz=194,slow=35						
ULM	Lac du Bonnet	60.99	9	P	P	08 02 44.7	+0.2
	2.5nm,0.6s,baz=204,slow=3.7,SNR=7.0						
YKA	Yellowknife Ar	72.47	357	P	P	08 03 57.4	0.0
	0.6nm,0.8s,baz=167,slow=6.0,SNR=12						
ILAR	Eielson Array	80.01	344	P	P	08 04 40.4	0.0
	0.7nm,0.8s,baz=163,slow=5.1,SNR=5.5						
H11S2	WAKE ISLAND Hy	88.50	289	T	T	09 41 56.1	
	baz=100,slow=75,SNR=79						
H11S1	WAKE ISLAND Hy	88.51	289	T	T	09 41 49.6	
	baz=100,slow=75,SNR=46						
H11S3	WAKE ISLAND Hy	88.52	289	T	T	09 41 50.1	
	baz=100,slow=75,SNR=60						

*IDC **08** 08:06:38.9±2.6, 6.26S×148.47E, h61km±23km, mb3.7/6, mb1 4.0/8, mb1mx3.6/29, mbtmp4.0/8, ML4.3/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/39, Error ellipse: s-maj=47.9km s-min=14.6km az=119.0*

ISC 08 08:06:38.7±1.0, 6.1S±0.1×148.2E±0.2, h60km, n10, σ1.980/12, mb3.9/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.42	198	P	Pn	08 07 29.5	0.0
	34nm,0.3s,baz=355,slow=5.1,SNR=23						
PMG				S	Sn	08 08 08.2	-0.6
	34nm,0.3s,baz=70,slow=4.4,SNR=16						
PMG				LR	LR	08 08 57.2	
	comp=Z,185nm,19.9s,baz=336,slow=41						
WRA	Warramunga Arr	19.25	223	P	Pn	08 11 00.0	+0.2
	0.9nm,0.3s,baz=51,slow=11,SNR=49						
WRA				S	S	08 14 29.2	-4.1
	0.0nm,0.3s,baz=44,slow=20,SNR=3.0						
WRA				LR	LR	08 19 09.9	
	comp=Z,51nm,20.0s,baz=250,slow=39						
ASAR	Alice Springs	22.22	217	P	P	08 11 31.8	+1.3
	2.4nm,0.7s,baz=58,slow=9.7,SNR=45						
ASAR				S	S	08 15 32.5	+0.9
	3.4nm,1.0s,baz=34,slow=22,SNR=11						
FITZ	Fitzroy Crossi	25.04	240	P	P	08 12 00.1	+2.5
	2.4nm,0.3s,baz=58,slow=10,SNR=20						
STKA	Stephens Creek	26.35	193	P	P	08 12 09.3	+0.1
	0.8nm,0.4s,baz=330,slow=13,SNR=3.7						
STKA				LR	LR	08 22 37.7	
	comp=Z,44nm,18.6s,baz=26,slow=36						
MSVF	Nonsavu	31.32	114	LR	LR	08 23 34.2	
	comp=Z,109nm,19.0s,baz=129,slow=33						
ZALV	Zalesovo Beam	79.78	328	P	P	08 18 39.9	-0.4
	0.5nm,0.3s,baz=111,slow=6.8,SNR=2.2						
ILAR	Eielson Array	85.13	23	P	P	08 19 06.6	-1.4
	0.4nm,0.6s,baz=255,slow=5.2,SNR=4.1						
NVAR	Mina Array Bea	96.49	52	P	P	08 20 02.8	+0.6
	0.4nm,0.8s,baz=270,slow=4.5,SNR=2.4						
TORD	Torodi Ar. Bea	146.30	284	PKPbc	PKPab	08 26 14.4	-0.3
	1.3nm,0.4s,baz=64,slow=3.3,SNR=14						

*IDC **08** 08:20:44.6±2.1, 7.07S×129.78E, h93km±18km, mb4.2/16, mb1 4.3/18, mb1mx4.1/36, mbtmp4.6/18, MS3.1/7, Ms1 3.2/7, ms1mx2.8/30, Error ellipse: s-maj=17.0km s-min=11.4km az=80.0*

*DJA **08** 08:20:45.4±0.2, 7.5S±2°×13°0E±°, h118km±6km, M4.8/13, mB5.2/9, mb4.8/13, MLv5.0/12, Mw(mB)4.6/9*

*NEIC **08** 08:20:45.4±1.4, 7.17S±0.06×129.74E±0.07, h104km±7km, mb4.7/41, Error ellipse: s-maj=10.8km s-min=9.5km az=84.0*

ISC 08 08:20:44.8±0.3, 7.25S±0.04×129.78E±0.05, h104km, n158, σ1.959/164, mb4.7/48, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.68	116	Pn	Pn	08 21 14.9	+1.4
SAUI	Saumlaki	1.68	116	P	Pn	08 21 14.6	+1.1
SAUI				S	Sn	08 21 37.8	+2.5
BNDI	Bandanaira	2.71	3	P	Pn	08 21 27.7	+0.8
NLAI	Namlea	4.79	326	P	Pn	08 21 55.9	+1.1
FAKI	Fak Fak	4.95	30		Pn	08 21 55.9	-1.1
FAKI	Fak Fak	4.95	30	P	Pn	08 21 55.9	-1.1
MTN	Manton Dam	5.72	167	P	Pn	08 22 06.7	-0.6
	baz=5.8,SNR=328						
MTN				S	Sn	08 23 07.2	-4.5
	baz=5.8						
MTN	Manton Dam	5.72	167		Pn	08 22 07.7	+0.3
SOEI	Soe	5.99	245	Pn	Pn	08 22 12.7	+1.4
SOEI	Soe	5.99	245	P	Pn	08 22 13.1	+1.9
	2.4nm3µm268nm,0.7s						
KDU	Kakadu	6.02	154	P	Pn	08 22 08.7	-2.8
	baz=6.1,SNR=847						
KDU				S	Sn	08 23 13.0	-6.1
	baz=6.1						
SANI	Sanana	6.40	324	P	Pn	08 22 19.0	+2.4
	0.2nm44nm,0.8s						
SIJI	Sorong	6.51	13	P	Pn	08 22 17.4	-0.8
	13nm,0.3s,baz=199,slow=13,SNR=22						
SIJI				S	Sn	08 23 25.0	-6.0
	22nm,0.3s,baz=242,slow=22,SNR=3.0						
SIJI				LR	LR	08 24 58.4	
	comp=Z,104nm,19.3s,baz=206,slow=40						
SWI	Sorong	6.51	13	P	Pn	08 22 17.3	-0.9
	1.2nm74nm,0.6s						
BATI	Baumata	6.72	244	P	Pn	08 22 22.5	+1.5
	74nm,0.3s,baz=98,slow=2.9,SNR=34						
BATI				S	Sn	08 23 33.2	-3.0
	92nm,0.3s,baz=269,slow=22,SNR=8.7						
BATI	Baumata	6.72	244	P	Pn	08 22 22.9	+1.9
	1.2nm2µm109nm,0.9s						
MMRI	Maumere	7.60	259	P	Pn	08 22 34.8	+1.9
	0.4nm2µm38nm,0.4s						
BAKI	Biak	8.72	47	P	Pn	08 22 46.4	-1.8
BASI	Baing, Sumba	9.56	251	P	Pn	08 22 59.6	0.0
	2µm128nm,0.5s						
GTOI	Gorontalo	10.34	319	P	Pn	08 23 16.5	+6.3
	17nm,0.6s						
FITZ	Fitzroy Crossi	11.52	200	P	Pn	08 23 22.3	-3.7
	19nm,0.3s,baz=30,slow=9.6,SNR=209						
FITZ				S	Sn	08 25 22.8	-10
	23nm,0.3s,baz=96,slow=22,SNR=4.8						
FITZ				LR	LR	08 29 00.1	
	comp=Z,68nm,18.7s,baz=26,slow=42						
FITZ	Fitzroy Crossi	11.52	200	P	Pn	08 23 21.6	-4.4
	baz=11,SNR=104						
FITZ				S	Sn	08 25 23.1	-10
	baz=11						
PLAI	Plampang	11.99	262	P	Pn	08 23 32.0	-0.4
	593nm48nm,0.6s						
TOLI2	Tolitoli	12.23	312		Pn	08 23 36.7	+1.1
WB0	Warramunga Arr	13.23	161	Pn	Pn	08 23 44.9	-3.8
WRAB	Tennant Creek	13.37	161		Pn	08 23 47.0	-3.5
WRA	Warramunga Arr	13.37	161	P	Pn	08 23 46.2	-4.4
	16nm,0.3s,baz=339,slow=13,SNR=352						
WRA				S	Sn	08 26 06.2	-12
	14nm,0.3s,baz=334,slow=22,SNR=14						
WRA				LR	LR	08 29 48.5	
	comp=Z,114nm,19.9s,baz=345,slow=40						
WRA				PKiKP	PKiKP	08 37 08.0	-0.4
	0.1nm,0.3s,baz=299,slow=1.2,SNR=5.4						
WB2	Warramunga Arr	13.38	161	Pn	Pn	08 23 46.7	-3.9
WR0	Warramunga Arr	13.45	160	Pn	Pn	08 23 48.1	-3.5
COEN	Coen	14.75	118	Pn	Pn	08 24 07.6	-0.8
MTKI	Muara Teweh, K	16.11	292	P	P	08 24 28.9	+2.2
AS31	Alice Springs	16.80	167	Pn	Pn	08 24 32.0	-1.8
AS31				IAmb	IAmb	08 24 38.8	
	comp=Z,22nm,0.5s						
ASAR	Alice Springs	16.80	167	P	Pn	08 24 31.6	-2.3
	comp=Z,9.3nm,0.3s,baz=341,slow=8.9,SNR=203						
ASAR				S	Sn	08 27 29.8	-11
	comp=Z,4.0nm,0.3s,baz=352,slow=27,SNR=15						
ASAR				LR	LR	08 32 07.9	
	comp=Z,128nm,19.5s,baz=340,slow=40						
ASAR				ScP	ScP	08 32 41.5	-0.2
	comp=Z,0.5nm,0.3s,baz=7.3,slow=1.6,SNR=5.6						
ASAR				PKiKP	PKiKP	08 37 09.3	-0.1
	comp=Z,0.1nm,0.3s,baz=4.7,slow=0.8,SNR=4.6						
ASAR	Alice Springs	16.80	167	P	Pn	08 24 31.5	-2.4
PSA00	Pilbara Seismi	17.17	213		P	08 24 37.5	-0.9
PSA00				IAmb	IAmb	08 24 43.4	
	comp=Z,40nm,0.8s						
PSA00	Pilbara Seismi	17.17	213	P	P	08 24 35.8	-2.6
PSA00				IAmb	IAmb	08 24 47.9	
	comp=Z,10nm,0.5s						
WRKA	Warakurna	17.75	184	P	P	08 24 43.6	-1.1
	baz=18,SNR=241						
MTSU	Mount Surprise	17.82	129	P	Pn	08 24 46.9	+0.5
	baz=18,SNR=17						
MANU	Manus Island	18.27	74	P	Pn	08 24 52.4	+0.7
SBUM	Sibu	20.00	298	P	P	08 25 10.3	+0.9
SBUM				IAmb	IAmb	08 25 13.4	
	comp=Z,41nm,1.0s						
CTA	Charters Tower	20.45	130	P	Pn	08 25 16.8	-0.4
	comp=Z,2.4nm,0.5s,baz=328,slow=11,SNR=4.6						
CTAO	Charters Tower	20.45	130	P	P	08 25 13.8	-0.4
CISI	Cisompet, Garu	21.78	268	P	P	08 25 27.4	-1.2
CISI				IAmb	IAmb	08 25 36.2	
	comp=Z,32nm,0.7s						
FORT	Forrest	23.47	184	P	P	08 25 46.6	+1.5
	baz=24,SNR=24						
FORT	Forrest	23.47	184	P	P	08 25 46.4	+1.2
QLP	Quilpie	23.64	146	P	P	08 25 48.6	+1.8
	baz=24,SNR=3.2						
MORW	Morawa	25.28	209	P	P	08 26 01.9	+0.3
	baz=25,SNR=3.2						
MORW	Morawa	25.28	209	P	P	08 26 02.9	+1.3
MORW				IAmb	IAmb	08 26 05.4	
	comp=Z,24nm,1.2s						
BBOO	Buckleboo	26.10	168	P	P	08 26 10.0	+1.1
	baz=26,SNR=7.2						
BBOO	Buckleboo	26.10	168	P	P	08 26 10.2	+1.3
BBOO				IAmb	IAmb	08 26 36.5	
	comp=Z,36nm,1.4s						
STKA	Stephens Creek	26.87	157	P	P	08 26 17.3	+1.4
	comp=Z,2.0nm,0.3s,baz=327,slow=9.1,SNR=10.0						
STKA				LR	LR	08 37 44.0	
	comp=Z,52nm,21.3s,baz=22,slow=38						
STKA	Stephens Creek	26.87	157	P	P	08 26 17.4	+1.4
	baz=27,SNR=6.4						
STKA	Stephens Creek	26.87	157	P	P	08 26 17.2	+1.4
HTT	Hallett	27.40	163	P	P	08 26 22.2	+1.5
	baz=28,SNR=9.2						
NWAO	Narrogin (SRO)	28.08	203	P	P	08 26 29.0	+2.3
NWAO				IAmb	IAmb	08 26 46.5	
	comp=Z,40nm,1.4s						
NWAO	Narrogin (SRO)	28.08	203	P	P	08 26 28.9	+2.1
NWAO				IAmb	IAmb	08 26 46.5	
	comp=Z,50nm,1.4s						
CMSA	Cobar Meteorol	28.37	150	P	P	08 26 31.3	+2.0
	baz=29,SNR=8.3						
ARPS	Mount Arapiles	31.38	161	P	P	08 26 58.2	+2.4
	baz=32,SNR=12						
RPSI	Rantau Prapat	32.34	287	P	P	08 27 02.4	-2.2
RPSI				IAmb	IAmb	08 27 07.1	
	comp=Z,23nm,1.0s						
PSI	Prapat	32.37	287	P	P	08 27 04.1	-0.9
	comp=Z,17nm,0.8s,baz=180,slow=3.6,SNR=15						
TOO	Toolangi	33.39	157	P	P	08 27 15.2	+1.8
	baz=34,SNR=4.1						
TOO	Toolangi	33.39	157	P	P	08 27 16.3	+2.9
TOO				IAmb	IAmb	08 27 17.3	
	comp=Z,18nm,1.1s						
CMAR	Chiang Mai Arr	39.72	310	P	P	08 28 07.2	-0.3
	comp=Z,5.2nm,0.5s,baz=134,slow=7,0,SNR=22						
CMAR				PcP	PcP	08 30 14.1	+1.9
	comp=Z,1.5nm,0.7s,baz=163,slow=2.7,SNR=6.1						
CMAR				LR	LR	08 45 30.7	
	comp=Z,18nm,18.7s,baz=174,slow=38						
CMAR	Chiang Mai Arr	39.72	310	P	P	08 28 07.4	0.0
CHTO	Chiang Mai	39.94	311	P	P	08 28 09.3	0.0
CHTO				IAmb	IAmb	08 28 10.2	
	comp=Z,8.8nm,0.7s						
GYA	Guiyang	40.32	327	⇓P	P	08 28 14.4	+2.0
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	Nanjing	40.45	346	*e*P	P	08 28 14.7	+1.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JMN	Monobe	40.94	5	P	P	08 28 17.4	+0.1
JHS	Saijyo	42.14	4	P	P	08 28 27.1	+0.1
JHS				IAmb	IAmb	08 28 44.0	
	comp=Z,22nm,1.2s						
JWT	Wachi	42.63	7	P	P	08 28 31.4	+0.5
MJAR	Matsushiro Arr	44.27	10	P	P	08 28 43.0	-1.2
	comp=Z,5.5nm,0.9s,baz=192,slow=9.6,SNR=7.6						
MJAR	Matsushiro Arr	44.27	10	IAmb	IAmb	08 28 46.9	
	comp=Z,4.3nm,1.2s						
MAT	Matsushiro	44.27	10	P	P	08 28 42.9	-1.3
KSRS	Korea Array	44.50	358	P	P	08 28 45.7	-0.2
	comp=Z,1.0nm,0.5s,baz=175,slow=10.0,SNR=2.7						
XAN	Xi'an	45.57	336	P	P	08 28 53.6	-1.0
XAN				pP	sP	08 29 26.3	-3.9
XAN				pmax	pmax		
	comp=Z,14nm,0.7s						
XAN				pmax	pmax		
	comp=Z,170nm,6.7s						
XAN	Xi'an	45.57	336	P	P	08 28 54.0	-0.5
XAN				IAmb	IAmb	08 28 54.7	
	comp=Z,8.2nm,0.7s						
JMM	Marumori	46.04	12	P	P	08 28 58.2	+0.1
LZH	Lanzhou	49.52	332	*e*P	P	08 29 26.3	+1.1
LZH				pP	pP	08 29 49.5	-0.2
LZH				sP	sP	08 30 03.6	+2.3
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC	Hu-ho-hao-te	50.71	342	*e*P	P	08 29 36.1	+2.0
HHC				pmax	pmax		
	comp=Z,4µm,0.8s						
HHC				pmax	pmax		
	comp=Z,15µm,7.8s						
USRK	Ussuriysk Ar.	51.25	2	P	P	08 29 37.9	0.0
	comp=Z,2.7nm,0.5s,baz=183,slow=7.2,SNR=12						
ODAN	Odare	53.25	311	*e*P	P	08 29 53.0	-0.4
	comp=Z,16nm,0.4s						
TAPN	Taplejung	53.29	312	*e*P	P	08 29 53.0	-0.7
RAMN	Ramite	53.89	311	*e*P	P	08 29 58.1	0.0
	comp=Z,16nm,0.3s						
GTA	Gaotai	54.08	331	*e*P	P	08 29 58.9	-0.2
GTA				pP	pwP	08 30 29.1	+1.8
GTA				sP	sP	08 30 41.3	+6.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
JIRN	Jiri	54.58	311	*e*P	P	08 30 02.6	-0.6
	comp=Z,8.4nm,0.3s						
GUN	Gumba	54.95	311	*e*P	P	08 30 04.5	-1.3
	comp=Z,22nm,0.5s						
PKI	Pulchoki	55.12	311	*e*P	P	08 30 06.9	-0.1
PKIN	Phulchoki	55.13	311	*e*P	P	08 30 06.9	-0.1
DMN	Daman	55.37	311	*e*P	P	08 30 08.8	+0.1
GKN	Gorkha	55.93	311	*e*P	P	08 30 12.1	-0.5
	comp=Z,18nm,0.3s						
KOLN	Koldanda	56.59	310	*e*P	P	08 30 17.9	+0.5
	comp=Z,36nm,0.7s						
PYUN	Piuthan	57.22	310	*e*P	P	08 30 22.1	+0.3
ULN	Ulaanbaatar	58.43	342	P	P	08 30 29.3	-0.6
ULN				IAmb	IAmb	08 30 31.5	
	comp=Z,7.7nm,0.7s						
SONM	Songino Array	58.61	342	P	P	08 30 30.8	-0.3
	comp=Z,2.6nm,0.6s,baz=154,slow=6.4,SNR=18						
SONM	Songino Array	58.61	342	P	P	08 30 31.6	+0.6
WMQ	Urumqi	63.48	327	*e*P	P	08 31 05.4	+1.4
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.9s						
PEA0B	Petropavlovsk-	64.63	18	P	P	08 31 12.4	+1.2
PETK	Petropavlovsk-	64.63	18	P	P	08 31 11.2	0.0
	comp=Z,4.3nm,0.5s,baz=169,slow=3.9,SNR=15						
PETK				PcP	PcP	08 31 44.3	+0.1
	comp=Z,3.8nm,0.5s,baz=170,slow=1.6,SNR=8.3						
ZSN	Zaisan	67.37	329	*e*P	P	08 31 28.4	-0.5
	baz=328						
SHLS	Shalkode	67.78	323	*e*P	P	08 31 29.9	-1.9
	baz=322

KKAR	Karatay Array	73.38	319	P		P		08 32 05.9	+0.3
KKAR	Karatay Array	73.38	319	P		P		08 32 05.6	0.0
BRZS	Berezniki	75.39	326	*eP*		P		08 32 17.0	-0.1
	comp=Z,3.2nm,0.7s,baz=326								
WSAR	Wadi Sarin	75.78	296	P		P		08 32 20.6	+0.7
	comp=Z,4.0nm,0.7s,baz=158,slow=3.5,SNR=4.6								
BRVK	Borovoye	78.23	328	P		P		08 32 33.1	+0.1
BRVK				IAmb		IAmb		08 32 34.0	
	comp=Z,8.6nm,0.8s								
TIXI	Tiksi	78.74	360	P		P		08 32 35.2	-0.1
NRIK	Noril'sk	81.75	346	P		P		08 32 51.8	+0.2
	comp=Z,4.1nm,0.8s,baz=128,slow=4.7,SNR=7.3								
ABKAR	Akbulak array	82.57	322	P		P		08 32 56.0	-0.3
ABKAR	Akbulak array	82.57	322	IAmb		IAmb		08 32 57.0	
	comp=Z,6.4nm,0.7s								
RAYN	Ar Rayn	87.64	294	P		P		08 33 22.3	0.0
RDOG	Red Dog Mine	88.41	20	P		P		08 33 24.0	-0.9
RDOG				IAmb		IAmb		08 33 26.1	
	comp=Z,4.2nm,0.7s								
MLY	Manley	92.10	25	P		P		08 33 42.2	+0.1
MLY				IAmb		IAmb		08 33 43.8	
	comp=Z,2.7nm,0.6s								
COLD	Coldfoot	92.78	23	P		P		08 33 45.5	+0.3
COLD				IAmb		IAmb		08 33 46.6	
	comp=Z,3.4nm,0.8s								
ILAR	Eielson Array	93.66	25	P		P		08 33 48.0	-1.3
	comp=Z,1.4nm,0.7s,baz=282,slow=4.3,SNR=14								
BMAR	Burnt Mountain	94.96	23	P		P		08 33 55.9	+0.6
LSZ	Lusaka	99.18	253	P		Pdif		08 34 16.1	+0.5
ARCES	ARCESS Array B	101.73	340	PKiKP		PKiKP		08 38 48.4	0.0
	comp=Z,5.7nm,1.0s,baz=300,slow=4.9,SNR=4.1								
FINES	FINESS Array B	102.88	331	PKiKP		PKiKP		08 38 51.3	+0.7
	comp=Z,2.0nm,0.8s,baz=93,slow=3.8,SNR=3.8								
YKA	Yellowknife Ar	108.07	26	PKiKP		PKiKP		08 39 00.5	+0.4
	comp=Z,0.4nm,0.6s,baz=303,slow=1.2,SNR=12								
PDAR	Pinedale Array	117.22	45	PKP		PKiKP		08 39 18.9	+0.3
	comp=Z,0.5nm,0.7s,baz=243,slow=1.7,SNR=5.3								
ULM	Lac du Bonnet	122.77	33	PKP		PKiKP		08 39 29.1	+0.3
	comp=Z,2.0nm,0.7s,baz=269,slow=3.4,SNR=5.6								
TXAR	Lajitas Array	125.24	59	PKP		PKiKP		08 39 35.3	+0.8
	comp=Z,0.7nm,0.9s,baz=161,slow=2.2,SNR=7.6								
TORD	Torodi Ar. Bea	128.64	281	PKP		PKPdf		08 39 41.1	+0.2
	comp=Z,2.5nm,0.6s,baz=85,slow=2.0,SNR=12								
TORD	Torodi Ar. Bea	128.64	281			PKiKP		08 39 41.5	0.0
PLCA	Paso Flores	128.72	160	PKP		PKiKP		08 39 41.5	+0.3
	comp=Z,0.9nm,0.7s,baz=318,slow=12,SNR=3.9								
DBIC	Dimbokro	134.98	272	PKP		PKiKP		08 39 54.4	0.0
	comp=Z,3.2nm,0.6s,baz=120,slow=3.3,SNR=4.7								
CPUP	Villa Florida	145.92	169	PKPbc		PKPab		08 40 14.3	+0.7
	comp=Z,3.7nm,0.7s,baz=139,slow=1.5,SNR=11								
LPAZ	La Paz	150.66	143	PKP		PKPdf		08 40 22.1	+1.0
LPAZ				PKPbc		PKiKP		08 40 28.6	+1.3
	comp=Z,2.9nm,0.4s,baz=32,slow=3.1,SNR=45								

IDC 08 08:35:01.1±3.2, 53.43N×87.30E, h0km, mb1 2.8/2, mb1mx2.8/37, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=30.5km s-min=16.6km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.56	290	*i*			08 45 30.0	
	baz=106,slow=321,SNR=1.2							
ZALV	Zalesovo Beam	1.56	290	Pg		Pn	08 35 29.9	-0.1
	0.6nm,0.3s,baz=112,slow=14,SNR=5.4							
ZALV				Lg		Lg	08 35 50.9	
	1.2nm,0.3s,baz=115,slow=26,SNR=6.7							
KURBB	Kurchatov Arra	6.10	246	Pn		Pn	08 36 32.1	-0.2
	0.1nm,0.3s,baz=62,slow=14,SNR=4.3							
KURBB				Lg		Lg	08 38 13.5	
	0.0nm,0.3s,baz=58,slow=31,SNR=2.0							
MKAR	Makanchi Array	7.38	208	Pn		Pn	08 36 51.7	+1.7
	0.1nm,0.3s,baz=26,slow=15,SNR=4.5							

IDC 08 08:50:05.1±3.0, 53.77N×87.00E, h0km, mb1 3.0/2, mb1mx2.9/47, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=29.4km s-min=16.2km az=62.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.30	279	*i*			08 58 55.6	
	baz=99,slow=323,SNR=0.7							
ZALV	Zalesovo Beam	1.30	279	Pg		Pg	08 50 29.2	-0.9
	1.1nm,0.3s,baz=100,slow=17,SNR=11							
ZALV				Lg		Lg	08 50 47.0	
	0.9nm,0.3s,baz=115,slow=12,SNR=4.4							
ZALV				Rg		Rg	08 50 55.1	
	2.2nm,0.5s,baz=98,slow=30,SNR=8.1							
KURBB	Kurchatov Arra	6.08	242	Pn		Pn	08 51 36.8	+0.6
	0.1nm,0.3s,baz=58,slow=14,SNR=5.2							
MKAR	Makanchi Array	7.61	205	Pn		Pn	08 51 58.5	+1.3
	0.2nm,0.3s,baz=26,slow=14,SNR=9.8							
MKAR				Lg		Lg	08 54 08.8	
	0.1nm,0.3s,baz=30,slow=32,SNR=2.2							

IDC 08 08:55:35.5±1.1, 13.09N×145.79E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/41, mbtmp3.6/6, MS2.7/1, Ms1 2.7/1, ms1mx2.3/38, Error ellipse: s-maj=44.5km s-min=23.9km az=99.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAY	Jayapura	16.31	198	LR		LR	09 06 25.9	
	comp=Z,28nm,18.9s,baz=230,slow=40							
H11S3	WAKE ISLAND Hy	20.81	72	T		T	09 21 50.8	
	baz=315,slow=74,SNR=4.6							
H11S1	WAKE ISLAND Hy	20.82	72	T		T	09 21 50.1	
H11S2	WAKE ISLAND Hy	20.82	72	T		T	09 21 51.2	
	baz=253,slow=74,SNR=4.7							
WRA	Warramunga Arr	34.71	199	P		P	09 02 27.5	+0.1
	0.7nm,0.9s,baz=24,slow=10,SNR=3.5							
ASAR	Alice Springs	38.34	198	P		P	09 02 58.0	-0.3
	0.1nm,0.5s,baz=18,slow=13,SNR=1.5							
SONM	Songino Array	47.65	325	P		P	09 04 13.7	0.0
	0.3nm,0.4s,baz=131,slow=9.8,SNR=3.6							
MKAR	Makanchi Array	62.47	316	P		P	09 06 00.9	+0.1
	1.7nm,0.5s,baz=92,slow=8.6,SNR=26							
ILAR	Eielson Array	68.63	25	P		P	09 06 39.9	-0.4
	0.1nm,0.3s,baz=256,slow=5.7,SNR=4.5							
YKA	Yellowknife Ar	82.88	27	P		P	09 08 02.4	+0.6
	0.3nm,0.6s,baz=286,slow=4.9,SNR=9.8							
FINES	FINESS Array B	91.98	335	P		P	09 08 45.1	-0.9
	6.0nm,1.1s,baz=106,slow=4.2,SNR=2.2							

*NNC **08** 09:00:54.5±0.1, 43.11N×76.87E, h0km, mb2.7, mpv2.9, Error ellipse: s-maj=2.1km s-min=0.7km az=167.0*
*SOME **08** 09:00:54.1, 43.15N×76.88E, h5km*
KRNET 08 09:00:54.3±0.1, 43.09N×76.88E, h20km, mb2.6, 28C-20D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNSS	Tian-Shan	0.07	134	⇓	*eP*	Pb	09 00 56.6	-1.9
	baz=32							
TNSS				⇓	*eS*	Sb	09 00 58.2	-3.2
	baz=32							
TNSS	Tian-Shan	0.07	134		*eP*	Pb	09 00 56.7	-1.9
	58nm,0.1s							
TNSS					*eS*	Sb	09 00 58.2	-3.2
	437nm,0.1s							
TNSS	Tian-Shan	0.07	134		P	Pb	09 00 56.6	-1.9
	32nm,0.1s							
TNSS					S	Sb	09 00 58.2	-3.2
	437nm,0.1s							
AAA	Alma-Ata	0.13	13	*eP*		Pb	09 00 56.3	-2.3
AAA				*eS*		Sb	09 00 57.7	-3.9
MDOK	Medeo	0.15	58	⇓	*eP*	Pb	09 00 57.5	-1.4
	baz=58							
MDOK				⇓	*eS*	Sb	09 00 59.8	-2.3
	baz=58							
MDOK	Medeo	0.15	58	*eP*		Pb	09 00 57.0	-1.9
	27nm,0.2s							
MDOK					*eS*	Sb	09 00 59.3	-2.8
	62nm,0.2s							
MDOK	Medeo	0.15	58	⇑	P	Pb	09 00 57.5	-1.5
	12nm,0.3s							
MDOK				⇑	S	Sb	09 00 59.5	-2.6
	49nm,0.4s							
MDOK	Medeo	0.15	58	Pg		Pb	09 00 57.5	-1.4
	35nm,0.3s							
MDOK				Lg		Lg	09 00 59.8	
	58nm,0.2s							
MDOK	Medeo	0.15	58	⇑	P	Pb	09 00 57.5	-1.5
	12nm,0.3s							
MDOK				⇑	S	Sb	09 00 59.5	-2.6
	49nm,0.4s							
IZV	Izvestkoviy	0.20	256	⇑	*eP*	Pb	09 00 59.1	-0.5
	baz=56							
IZV				⇑	*eS*	Sb	09 01 02.6	-0.6
	baz=56							
IZV	Izvestkoviy	0.20	256	*eP*		Pb	09 00 59.0	-0.6
	29nm,0.1s							
IZV					*eS*	Sb	09 01 02.5	-0.8
	42nm,0.1s							
IZV	Izvestkoviy	0.20	256	P		Pb	09 00 59.1	-0.5
	29nm,0.2s							
IZV					S	Sb	09 01 02.6	-0.6
	34nm,0.1s							
KOTS	Kotyrbulak	0.23	49	⇑	*eP*	Pb	09 00 59.3	-0.7
	baz=49							
KOTS				⇑	*eS*	Sb	09 01 02.6	-1.2
	baz=49							
KOTS	Kotyrbulak	0.23	49	*eP*		Pb	09 00 58.3	-1.7
	25nm,0.1s							
KOTS					*eS*	Sb	09 01 01.4	-2.4
	98nm,0.4s							
KOTS	Kotyrbulak	0.23	49	P		Pb	09 00 59.3	-0.7
	24nm,0.1s							
KOTS					S	Sb	09 01 02.6	-1.2
	98nm,0.3s							
KTBS	Karatobe	0.64	347	⇓	*eP*	Pb	09 01 06.8	-0.1
	baz=47							
KTBS				⇓	*eS*	Sb	09 01 15.4	0.0
	baz=47							
KTBS	Karatobe	0.64	347	⇓	*eP*	Pb	09 01 06.8	-0.1
	2.6nm,0.2s							
KTBS					*eS*	Sb	09 01 15.4	0.0
	11nm,0.3s							
KTBS	Karatobe	0.64	347	P		Pb	09 01 06.8	-0.1
	2.6nm,0.2s							
KTBS					S	Sb	09 01 15.4	0.0
	11nm,0.3s							
KST	Kastek	0.67	267	⇑	*eP*	Pb	09 01 07.6	+0.2
	baz=67							
KST				⇑	*eS*	Sb	09 01 17.0	+0.7
	baz=67							
KST	Kastek	0.67	267	⇑	*eP*	Pb	09 01 07.6	+0.2
	8.4nm,0.2s							
KST					*eS*	Sb	09 01 16.9	+0.6
	3.9nm,0.3s							
KST	Kastek	0.67	267	P		Pb	09 01 07.6	+0.2
	8.4nm,0.2s							
KST					S	Sb	09 01 16.9	+0.6
	3.9nm,0.3s							
DGS	Degeres	0.82	281	⇑	*eP*	Pb	09 01 10.3	+0.3
	baz=81							
DGS				⇑	*eS*	Sb	09 01 21.5	+0.8
	baz=81							
DGS	Degeres	0.82	281	⇑	*eP*	Pb	09 01 10.3	+0.4
	2.1nm,0.1s							
DGS					*eS*	Sb	09 01 21.6	+0.9
	4.0nm,0.1s							
DGS	Degeres	0.82	281	P		Pb	09 01 10.3	+0.4
	2.1nm,0.1s							
DGS					S	Sb	09 01 21.5	+0.9
	4.0nm,0.1s							
KUU	Kurty	0.90	334	*eP*		Pb	09 01 11.3	+0.1
	baz=34							
KUU					*eS*	Sb	09 01 23.2	+0.5
	baz=34							
KUU	Kurty	0.90	334	*eP*		Pb	09 01 11.3	+0.1
	0.8nm,0.2s							
KUU					*eS*	Sb	09 01 23.2	+0.5
	9.6nm,0.2s							
KUU	Kurty	0.90	334	P		Pb	09 01 11.3	+0.1
	0.8nm,0.2s							
KUU					S	Sb	09 01 23.2	+0.5
	9.6nm,0.2s							
BOOM	Boomskoye usch	0.91	230	⇓	*iP*	Pb	09 01 11.4	-0.1
	baz=30							
BOOM				⇓	*iS*	Sb	09 01 23.5	+0.2
	baz=30							
TKM2	Tokmak 2	0.95	260	⇑	*iP*	Pb	09 01 12.2	0.0
	baz=60							
TKM2				⇑	*iS*	Sn	09 01 25.3	-0.6
	baz=60							
TKM2	Tokmak 2	0.95	260	⇑	P	Pn	09 01 12.7	-0.1
	0.7nm,0.3s							
TKM2				⇑	S	Sn	09 01 25.8	0.0
	2.8nm,0.5s							
TKM2	Tokmak 2	0.95	260	⇑	P	Pn	09 01 12.7	-0.1
	0.7nm,0.3s							
TKM2				⇑	S	Sn	09 01 25.8	0.0
	2.8nm,0.5s							
ULHL	Ulahol	0.96	209	⇓	*iP*	Pb	09 01 12.1	-0.3
	baz=9.0							
ULHL				⇓	*iS*	Sb	09 01 25.1	+0.4
	baz=9.0							
KDJ	Kajisay	0.98	167	⇑	*iP*	Pn	09 01 13.3	+0.2
	baz=66							
KDJ				⇑	*iS*	Sn	09 01 26.6	+0.1
	baz=66							
KRBS	Karabastau	1.07	305	⇓	*eP*	Pn	09 01 14.7	+0.5
	baz=5.0							
KRBS				⇓	*eS*	Sn	09 01 28.9	+0.4
	baz=5.0							
KRBS	Karabastau	1.07	305	⇓	*eP*	Pn	09 01 14.7	+0.5
	1.3nm,0.2s							
KRBS					*eS*	Sn	09 01 28.8	+0.4
	4.7nm,0.2s							
KRBS	Karabastau	1.07	305	P		Pn	09 01 14.7	+0.5
	1.3nm,0.2s							
KRBS					S	Sn	09 01 28.8	+0.4
	4.7nm,0.2s							
SATY	Saty	1.12	91	*eP*		Pb	09 01 15.4	+0.4
	baz=91							
SATY					*eS*	Sn	09 01 30.4	+0.5
	baz=91							
SATY	Saty	1.12	91	*eP*		Pb	09 01 15.4	+0.4
	2.3nm,0.1s							
SATY					*eS*	Sn	09 01 30.4	+0.5
	12nm,0.1s							
SATY	Saty	1.12	91	P		Pb	09 01 15.4	+0.4
	2.3nm,0.1s							
SATY					S	Sn	09 01 30.4	+0.5
	12nm,0.1s							
ARXS	Arharly	1.32	31	*eP*		Pb	09 01 18.9	+0.4
	2.5nm,0.2s							
ARXS					*eS*	Sb	09 01 36.1	+1.1
	6.3nm,0.2s							
ARXS	Arharly	1.32	31	P		Pb	09 01 18.9	+0.4
	2.5nm,0.2s							
ARXS					S	Sb	09 01 36.1	+1.2
	6.3nm,0.2s							
KPKS	Kokpek	1.37	73	*eP*		Pb	09 01 19.9	+0.6
	baz=73							
KPKS					*eS*	Sb	09 01 38.2	+1.7
	baz=73							
KPKS	Kokpek	1.37	73	*eP*		Pb	09 01 19.9	+0.6
	14nm,0.1s							
KPKS					*eS*	Sb	09 01 38.2	+1.7
	4.6nm,0.2s							
CHMS	Chumysh	1.56	268	⇑	*iP*	Pb	09 01 22.8	+0.3
	baz=68							
CHMS				⇑	*iS*	Sb	09 01 43.6	+1.8
	baz=68							
UZB	Uzunbulak	1.57	87	*eP*		Pb	09 01 23.6	+0.9
	baz=87							
UZB					*eS*	Sb	09 01 44.3	+2.1
	baz=87							
UZB	Uzunbulak	1.57	87	*eP*		Pb	09 01 23.6	+0.9
	2.3nm,0.1s							
UZB					*eS*	Sb	09 01 44.3	+2.0
	1.2nm,0.1s							
UZB	Uzunbulak	1.57	87	P		Pb	09 01 23.6	+0.9
	2.3nm,0.1s							
UZB					S	Sb	09 01 44.3	+2.0
	1.2nm,0.1s							
SGDS	Sogindy	1.68	283	P		Pb	09 01 25.6	+1.0
	1.8nm,0.1s							
SGDS					S	Sb	09 01 47.7	+2.4
	2.2nm,0.2s							
USP	Ospenovka	1.75	277	⇑	*iP*	Pb	09 01 26.2	+0.5
	baz=77							
USP				⇑	*iS*	Sb	09 01 49.4	+2.2
	baz=77							
AAK	Ala-Archa	1.81	256	⇓	*iP*	Pb	09 01 27.1	+0.3
	baz=56							
AAK				⇓	*iS*	Sb	09 01 51.1	+2.0
	baz=56							
PDGK	Podgornoye	1.93	82	P		Pb	09 01 29.1	+0.4
	1.1nm,0.3s							
PDGK				S		Sb	09 01 53.8	+1.4
	0.5nm,0.3s							
UCH	Uchtor	1.94	245	⇑	*iP*	Pb	09 01 29.2	-0.1
	baz=45							
UCH				⇑	*iS*	Sb	09 01 54.8	+1.6
	baz=45							
EKS2	Erkin-Say	2.32	261	⇓	*iP*	Pb	09 01 34.1	-1.3
	baz=61							
EKS2				⇓	*iS*	Sb	09 02 03.4	-0.3
	baz=61							
DJR	Jarkent	2.45	58	*eP*		Pb	09 01 38.8	+1.1
	1.3nm,0.2s							
DJR					*eS*	Sb	09 02 10.4	+2.9
	1.7nm,0.2s							
DJR	Jarkent	2.45	58	Pg		Pb	09 01 38.8	+1.1
	1.3nm,0.2s							
DJR				Lg		Lg	09 02 10.4	
	1.7nm,0.2s							
AML	Almayashu	2.54	249	⇓	*iP*	Pb	09 01 37.4	-1.9
	baz=49							
AML				⇓	*iS*	Sb	09 02 08.9	-1.3
	baz=49							

*IDC **08** 09:27:38.1±3.2, 16.47N×98.77W, h0km, mb3.8/7, mb1 4.0/12, mb1mx3.8/34, mbtmp3.7/12, ML3.4/5, MS3.2/7, Ms1 3.1/7, ms1mx2.8/37, Error ellipse: s-maj=61.5km s-min=17.5km az=13.0*
*MEX **08** 09:27:40.1±1.4, 16.25N×98.92W, h16km±21km, MD4.2*
*NEIC **08** 09:27:41.9±2.5, 16.30N±0.07×98.74W±0.04, h35km±2km, Error ellipse: s-maj=11.3km s-min=6.5km az=186.0*
ISC 08 09:27:38.1±1.5, 16.26N±0.05×98.85W±0.03, h12km±9km, n141, σ1$37/168, mb4.2/32, MS3.4/4, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRIG	Cruz Grande	0.54	330	*i*	P	Pg	09 27 48.6	-0.1
CRIG					*i* S	Sg	09 27 55.5	-0.5
PNIG	Pinotepa	0.71	79	*i*	P	Pb	09 27 52.2	-0.2
PNIG					*i* S	Sb	09 28 01.8	-0.3
PNIG	Pinotepa	0.71	79			Pb	09 27 52.2	-0.2
PNIG						Sb	09 28 01.5	-0.6
ACP2	Acapulco	1.16	302	*i*	P	Pn	09 28 00.6	+0.4
ACP2					*eS*	Sb	09 28 13.9	-1.3
ACP2	Acapulco	1.16	302			Pn	09 27 59.1	-1.1
ACP2						Sb	09 28 13.9	-1.3
TLIG	Tlapa	1.32	12	*i*	P	Pn	09 28 01.4	-1.1
TLIG					*eS*	Sn	09 28 17.6	-2.5
TLIG	Tlapa	1.32	12		Pn	Pn	09 28 01.7	-0.8
TLIG						Pb	09 28 01.9	-1.0
TLIG					Sn	Sn	09 28 19.1	-1.0
YOIG	Yosondua	1.38	65	*eP*		Pn	09 28 02.6	-0.9
YOIG					*eS*	Sn	09 28 20.2	-1.6
TXIG	Tlaxiaco	1.43	46	*eP*		Pn	09 28 03.2	-0.9
TXIG					*i* S	Sn	09 28 21.0	-2.0
CAIG	El Cayaco	1.57	300	*i*	P	Pn	09 28 03.3	-2.5
CAIG					*i* S	Sn	09 28 20.6	-5.3
CAIG	El Cayaco	1.57	300			Pn	09 28 06.1	+0.4
CAIG						Sb	09 28 27.7	+0.9
PEIG	Puerto Escondi	1.66	99	*eP*		Pn	09 28 06.0	-1.1
FTIG	Fresnillo de T	1.77	23	*eP*		Pn	09 28 08.1	-0.6
FTIG					*i* S	Sn	09 28 28.3	-3.0
MEIG	Mezcala	1.81	336	*eP*		Pn	09 28 08.4	-0.7
MEIG					*i* S	Sn	09 28 28.1	-4.0
MEIG	Mezcala	1.81	336			Pn	09 28 08.6	-0.6
MEIG						Sn	09 28 33.5	+1.4
HLIG	Huajuapan de L	1.85	33	*eP*		Pn	09 28 09.4	-0.4
HLIG					*eS*	Sb	09 28 35.4	+0.1
VHO	Vista Hermosa	2.18	68	*eP*		Pn	09 28 14.4	0.0
VHO					*eS*	Sn	09 28 40.5	-0.9
PLIG	Platanillo	2.21	344	*eP*		Pn	09 28 14.7	0.0
PLIG					*eS*	Sn	09 28 40.3	-1.7
PLIG	Platanillo	2.21	344			Pn	09 28 14.7	0.0
PLIG						Sb	09 28 45.3	-0.1
TOIG	Toxpalan	2.50	43	*eP*		Pn	09 28 18.0	-0.6
TOIG					*i* S	Sn	09 28 50.0	+0.8
TPIG	Tehuac#an	2.57	33	*eP*		Pn	09 28 19.4	-0.3
TPIG					*eS*	Sn	09 28 50.1	-1.0
TPIG	Tehuac#an	2.57	33			Pn	09 28 19.4	-0.3
TPIG						Sb	09 28 55.1	-0.9
TPIG						LR	09 28 57.2	
YAIG	Yautepec	2.59	355	*eP*		Pn	09 28 20.1	+0.1
YAIG					*eS*	Sn	09 28 50.1	-1.5
YAIG	Yautepec	2.59	355			Pn	09 28 20.1	+0.1
YAIG						Sb	09 28 57.1	+0.5
MAVM	Malinalco, Edo	2.75	347	*eP*		Pn	09 28 22.3	+0.1
MAVM					*i* S	Sn	09 28 51.7	-3.8
AMVM	AMECAMECA	2.85	1	*eP*		Pn	09 28 23.2	-0.6
AMVM					*eS*	Sn	09 28 56.7	-1.5
UNM	Universidad Na	3.06	354	Pn		Pn	09 28 28.4	+1.8
TOVM	TOLUCA	3.10	345	*eP*		Pn	09 28 26.3	-0.9
TOVM					*i* S	Sn	09 29 02.3	-2.1
CVM	Colonia del Va	3.12	354	*eP*		Pn	09 28 25.8	-1.2
CVM					*i* S	Sn	09 29 02.0	-2.2
PBVM	Pinon	3.17	356	*eP*		Pn	09 28 28.3	+0.5
PBVM					*eS*	Sn	09 29 03.3	-2.2
PTVM	Pico Tres Padr	3.32	356	*eP*		Pn	09 28 30.6	+0.5
PTVM					*i* S	Sn	09 29 08.1	-1.6
VTVM	Tizayuca	3.49	1	*eP*		Pn	09 28 33.0	+0.5
VTVM					*eS*	Sn	09 29 12.7	-1.2
ZUVM	ZUMPANGO	3.55	357	*eP*		Pn	09 28 33.7	+0.4
ZUVM					*i* S	Sn	09 29 13.3	-2.1
ATVM	ATLACOMULCO	3.60	345	*eP*		Pn	09 28 31.4	-2.7
ATVM					*eS*	Sn	09 29 14.4	-2.4
ACIG	Acambay	3.82	345	*eP*		Pn	09 28 35.6	-1.4
ACIG					*eS*	Sn	09 29 21.1	-0.9
CMIG	Matias Romero	3.89	77	Pn		Pn	09 28 37.0	-0.7
	4.1nm,0.3s,baz=257,slow=11,SNR=76							
CMIG					Sn	Sn	09 29 21.2	-2.1
	11nm,0.3s,baz=257,slow=14,SNR=6.1							
CMIG					Lg	Lg	09 29 40.1	
	21nm,0.3s,baz=243,slow=15,SNR=4.6							
MOIG	Morelia	4.06	327			Pn	09 28 42.3	+2.0
ZAIG	Zacatecas	7.36	332			Pn	09 29 27.0	+1.3
APG	El Apazote	8.18	98	Pn		Pn	09 29 37.3	+0.5

ANMO Albuquerque 19.82 341 P P 09 32 08.9 +0.1
comp=Z,0.1nm,0.3s,baz=152,slow=12,SNR=9.9
ANMO LR LR 09 40 20.5
comp=Z,124nm,18.7s,baz=150,slow=39
ANMO Albuquerque 19.82 341 P Pn 09 32 10.3 -0.1
LRAL Lakeview Retre 19.84 31 P P 09 32 07.9 -1.0
OXF Oxford 20.05 23 P P 09 32 12.2 +1.1
OXF IAmb IAmb 09 32 17.4
comp=Z,14nm,0.9s
HDBT Hernando Brdge 20.39 21 P P 09 32 16.0 +1.2
HHAR Hobbs 20.41 11 P P 09 32 16.1 +1.0
FCAR Ozark Folk Cen 20.45 16 P P 09 32 15.0 -0.5
U38A Gravette 20.48 10 P Pn 09 32 17.7 -0.4
T35A Sooner Cattle 20.68 5 P P 09 32 16.9 -1.0
T35A IAmb IAmb 09 32 25.7
comp=Z,15nm,1.1s
KAN13 South Haven SW 20.70 3 P P 09 32 19.8 +1.5
KAN13 IAmb IAmb 09 32 23.6
comp=Z,20nm,1.4s
U40A Yellville 20.71 14 P Pn 09 32 20.1 -0.5
U40A IAmb IAmb 09 32 23.2
comp=Z,9.8nm,0.7s
LCAR Lake Charles 20.89 18 P P 09 32 19.2 -1.0
X48A Hartselle 20.99 28 P P 09 32 20.9 -0.4
X48A IAmb IAmb 09 32 23.5
comp=Z,7.3nm,1.1s
PLAL Pickwick Lake 20.99 25 P P 09 32 22.1 +0.8
PLAL IAmb IAmb 09 32 24.0
comp=Z,12nm,0.9s
GNAR Gosnell 21.14 20 P P 09 32 24.4 +1.5
T25A Trinidad 21.37 348 P P 09 32 27.2 +1.5
T25A IAmb IAmb 09 32 31.5
comp=Z,7.3nm,0.8s
FPAL Fort Paine 21.74 31 P P 09 32 31.7 +2.3
PBMO Poplar Bluff 21.76 18 P P 09 32 28.2 -1.4
PBMO IAmb IAmb 09 32 33.5
comp=Z,9.2nm,1.0s
S39A Bolivar 21.90 12 P P 09 32 32.6 +1.6
GOGA Godfrey 22.01 36 P P 09 32 32.5 +0.2
GOGA IAmb IAmb 09 32 33.0
comp=Z,8.5nm,0.8s
Y52A Lilburn 22.01 35 P P 09 32 32.4 0.0
Y52A IAmb IAmb 09 32 33.2
comp=Z,12nm,0.9s
R32A Long Quarter, 22.08 0 P P 09 32 32.0 -1.0
R32A IAmb IAmb 09 32 37.2
comp=Z,7.7nm,1.1s
WVT Waverly 22.09 24 P P 09 32 34.3 +1.2
WVT IAmb IAmb 09 32 36.1
comp=Z,14nm,1.1s
GLA Glamis 22.09 322 P P 09 32 34.3 +1.0
GLA IAmb IAmb 09 32 46.5
comp=Z,9.2nm,0.7s
SWET Sewanee 22.13 29 P P 09 32 32.2 -1.5
SWET IAmb IAmb 09 32 38.7
comp=Z,9.1nm,1.0s
V48A Smith Brothers 22.17 27 P P 09 32 35.6 +1.6
V48A IAmb IAmb 09 32 37.0
comp=Z,10nm,1.1s
W50A Signal Mountai 22.41 30 P P 09 32 36.2 -0.5
W50A IAmb IAmb 09 32 39.4
comp=Z,7.8nm,0.9s
CBKS Cedar Bluff 22.48 358 P P 09 32 39.2 +1.8
CBKS IAmb IAmb 09 32 48.6
comp=Z,5.0nm,0.8s
MVCO Mesa Verde 22.55 340 P P 09 32 38.6 +0.3
MVCO IAmb IAmb 09 32 41.5
comp=Z,12nm,1.3s
R40A Maddies Statio 22.70 14 P P 09 32 40.6 +1.0
CCM Cathedral Cave 22.72 16 P P 09 32 40.7 +0.9
KSCO Kaye Shedlock' 22.90 352 P P 09 32 42.4 +0.5
KSCO IAmb IAmb 09 32 46.2
comp=Z,7.8nm,1.1s
CPCT Cooper Cave 23.00 31 P P 09 32 43.5 +0.7
W52A Murphy 23.02 33 P P 09 32 43.1 0.0
W52A IAmb IAmb 09 32 46.0
comp=Z,8.3nm,0.9s
T47A Sharon Grove 23.12 25 P P 09 32 44.1 +0.1
HODGE Hodges 23.29 37 P P 09 32 45.0 -0.8
HODGE IAmb IAmb 09 32 46.0
comp=Z,8.4nm,0.9s
V51A Loudon 23.36 31 P P 09 32 44.4 -2.1
PV01 Paradox Valley 23.41 340 P P 09 32 48.2 +1.0
TKL Tuckaleechee C 23.54 32 P P 09 32 47.1 -1.2
comp=Z,5.5nm,0.9s,baz=200,slow=13,SNR=5.6
ISCO Idaho Springs 24.18 347 P P 09 32 55.6 +0.9
WCI Wyandotte Cave 24.52 24 P P 09 32 56.3 -1.1
WCI IAmb IAmb 09 32 58.5
comp=Z,7.9nm,0.9s
N38A Joes South For 24.92 10 P P 09 33 00.9 -0.1
SRU San Rafael Swe 24.95 338 P P 09 33 01.7 +0.1
SRU IAmb IAmb 09 33 05.1
comp=Z,6.2nm,0.9s
Q16A Castle Valley 25.02 337 P P 09 33 01.7 -0.5
Q16A IAmb IAmb 09 33 06.5
comp=Z,4.0nm,0.9s
O20A White River Ci 25.15 343 P P 09 33 02.4 -1.0
O20A IAmb IAmb 09 33 12.2
comp=Z,4.3nm,0.9s
S51A Beattyville 25.20 29 P P 09 33 02.1 -1.5
U54A Nelsons Funny 25.22 34 P P 09 33 01.5 -2.4
RDMU Red Mountain 25.95 341 P P 09 33 11.0 +0.4
RDMU IAmb IAmb 09 33 14.5
comp=Z,4.3nm,0.9s
P49A Miami Univ. Ec 26.27 25 P P 09 33 13.7 +0.4
RWWY Rawlins 26.34 346 P P 09 33 13.5 -0.7
RWWY IAmb IAmb 09 33 23.3
comp=Z,11nm,1.4s
Q51A Peebles 26.43 28 P P 09 33 14.9 +0.1
S54A Dingess, Beckl 26.45 32 P P 09 33 16.2 +1.2
BLA Blacksburg 26.48 34 P P 09 33 15.7 +0.4
Q52A Bidwell 26.88 29 P P 09 33 19.7 +0.9
N47A Urbana 27.05 22 P P 09 33 20.1 -0.2
NVAR Mina Array Bea 27.92 326 P P 09 33 30.4 +1.9
comp=Z,1.0nm,0.9s,baz=145,slow=10,SNR=5.1
NVAR Mina Array Bea 27.92 326 P P 09 33 29.9 +1.4
BW06 Boulder Array 27.96 343 P P 09 33 29.6 +0.9
PD31 Pinedale Array 27.96 343 P P 09 33 29.4 +0.7
PDAR Pinedale Array 27.96 343 P P 09 33 29.4 +0.7
comp=Z,1.6nm,0.9s,baz=140,slow=12,SNR=8.9
PDAR LR LR 09 43 40.0
comp=Z,24nm,21.1s,baz=130,slow=35
PDAR Pinedale Array 27.96 343 P P 09 33 30.1 +1.3
HVU Hansel Valley 28.11 338 P P 09 33 32.1 +2.1
HVU IAmb IAmb 09 33 36.1
comp=Z,3.5nm,1.1s
RSSD Black Hills 28.11 352 P P 09 33 30.3 +0.2
ELK Elko 28.23 333 LR LR 09 46 01.9
comp=Z,101nm,19.1s,baz=212,slow=39
SNOW Snow King Moun 28.95 342 P P 09 33 39.6 +2.1
SNOW IAmb IAmb 09 33 46.2
comp=Z,4.5nm,1.1s
MDND Maddock 31.50 359 P P 09 34 00.8 +1.0
AGMN Agassiz Nation 32.04 4 P P 09 34 04.2 -0.3
F10A Beach Ranch, E 33.37 336 P P 09 34 17.8 +1.5
ULM Lac du Bonnet 33.99 3 P P 09 34 20.8 -0.7
comp=Z,1.5nm,0.8s,baz=216,slow=8.5,SNR=3.4
ULM Lac du Bonnet 33.99 3 P P 09 34 21.7 +0.2
ULM IAmb IAmb 09 34 37.8
comp=Z,5.0nm,1.4s
D05A Enumclaw 36.30 333 P P 09 34 43.1 +1.7
D05A IAmb IAmb 09 34 45.6
comp=Z,5.3nm,0.9s
FFC Flin Flon 38.46 357 P P 09 34 59.9 +0.2
FFC IAmb IAmb 09 35 01.1
comp=Z,4.4nm,0.9s
YKA Yellowknife Ar 47.49 350 P P 09 36 13.2 +0.5
comp=Z,0.9nm,0.8s,baz=157,slow=7.4,SNR=12
DLBC Dease Lake 48.01 339 LR LR 09 56 36.4
comp=Z,42nm,18.9s,baz=191,slow=36
H03N2 Juan Fernandez 52.96 159 T T 10 34 00.1
baz=337,slow=77,SNR=28
H03N1 Juan Fernandez 52.96 159 T T 10 34 02.4
baz=337,slow=77,SNR=125
H03N3 Juan Fernandez 52.97 159 T T 10 34 00.7
baz=337,slow=77,SNR=31
INK Inuvik 56.49 345 P P 09 37 19.9 +0.2
comp=Z,1.3nm,0.9s,baz=129,slow=7.4,SNR=5.2
INK Inuvik 56.49 345 P P 09 37 20.6 +0.9
INK IAmb IAmb 09 37 22.3
comp=Z,1.7nm,1.0s
ILAR Eielson Array 58.22 338 P P 09 37 32.6 +0.7
comp=Z,0.8nm,0.9s,baz=149,slow=7.6,SNR=4.6
ILAR Eielson Array 58.22 338 P P 09 37 33.9 +1.9

RAR Rarotonga 70.40 240 LR LR 10 02 10.0
comp=Z,43nm,19.1s,baz=178,slow=29

*SOME **08** 09:28:35.0, 44°.22N×82°.25E, h20km*
NNC 08 09:28:35.5±3.3, 44°.61N×82°.15E, h0km, mb3.3, mpv2.9, 3C-3D, Error ellipse: s-maj=39.4km s-min=8.7km az=121.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.71**	**261**	*eP*	Pb	09 29 07.4	-0.6
	1.7nm,0.3s						
DJR				*eS*	Sg	09 29 30.8	+0.3
	7.2nm,0.5s						
DJR	**Jarkent**	**1.71**	**261**	P	Pb	09 29 07.4	-0.6
	1.7nm,0.3s						
DJR				S	Sg	09 29 30.8	+0.3
	7.2nm,0.5s						
MK31	**Makanchi Array**	**2.18**	**3**	⇑Pn	Pn	09 29 14.3	+1.1
	1.2nm,0.4s,baz=186,slow=14,SNR=40						
MK31				⇓Sn	Sn	09 29 41.9	+0.9
	1.8nm,0.4s,baz=185,slow=24,SNR=19						
MAKZ	**Makanchi**	**2.20**	**357**	⇑Pn	Pn	09 29 13.7	+0.3
	0.6nm,0.3s						
MAKZ				⇓Sn	Sn	09 29 41.4	+0.1
	1.7nm,0.4s						
PDGK	**Podgornoye**	**2.31**	**237**	Pg	Pn	09 29 16.3	+1.4
	1.2nm,0.3s						
PDGK				Lg	Lg	09 29 46.0	
	2.1nm,0.6s						
PDGK	**Podgornoye**	**2.31**	**237**	⇓Pn	Pn	09 29 16.5	+1.5
	1.4nm,0.5s						
PDGK				⇑Sn	Sb	09 29 46.5	-0.8
	4.6nm,0.8s						
SHLS	**Shalkode**	**2.43**	**234**	*eP*	Pn	09 29 11.6	-4.9
	4.6nm,0.2s						
SHLS				*eS*	Sn	09 29 38.0	-9.1
	2.0nm,0.1s						
SHLS	**Shalkode**	**2.43**	**234**	Pg	Pn	09 29 11.6	-4.9
	4.6nm,0.2s						
SHLS				Lg	Lg	09 29 38.0	
	2.0nm,0.1s						
KPKS	**Kokpek**	**2.75**	**247**	*eP*	Pb	09 29 23.9	-1.7
	5.4nm,0.2s						
KPKS				*eS*	Sb	09 29 58.8	-1.1
	7.9nm,0.5s						

*IDC **08** 09:30:15.5±6.5, 15°.40N×98°.80W, h0km, mb3.1/2, mb1 3.5/4, mb1mx3.3/34, mbtmp3.1/4, ML3.0/2, Error ellipse: s-maj=112.5km s-min=25.5km az=176.0*
*MEX **08** 09:30:24.3±1.1, 16°.26N×98°.91W, h16km±13km, MD4.1*
ISC 08 09:30:20.3±1.6, 16°.21N±0°.07×98°.84W±0°.03, h14km±11km, n17, σ1°.56/28, 1C, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.59**	**332**	*eP*	**Pg**	**09 30 32.6**	**+0.7**
CRIG				*i* S	**Sb**	**09 30 39.7**	**-1.1**
PNIG	**Pinotepa**	**0.71**	**75**	*i* P	**Pn**	**09 30 36.1**	**+0.1**
PNIG				*i* S	**Sn**	**09 30 45.7**	**-1.1**
ACP2	**Acapulco**	**1.20**	**304**	*i* P	**Pg**	**09 30 44.5**	**+1.0**
ACP2				*i* S	**Sb**	**09 30 57.9**	**-0.3**
TLIG	**Tlapa**	**1.37**	**11**	*eP*	**Pb**	**09 30 45.5**	**-0.4**
TLIG				*i* S	**Sn**	**09 31 01.2**	**-2.1**
YOIG	**Yosondua**	**1.40**	**62**	*eP*	**Pg**	**09 30 47.0**	**-0.3**
YOIG				*eS*	**Sb**	**09 31 04.3**	**0.0**
TXIG	**Tlaxiaco**	**1.46**	**45**	*eP*	**Pb**	**09 30 47.4**	**-0.2**
CAIG	**El Cayaco**	**1.60**	**302**	*i* P	**Pb**	**09 30 48.3**	**-1.4**
CAIG				*i* S	**Sn**	**09 31 05.3**	**-3.5**
PEIG	**Puerto Escondi**	**1.64**	**97**	*eP*	**Pg**	**09 30 50.0**	**-1.8**
FTIG	**Fresnillo de T**	**1.82**	**22**	*i* P	**Pb**	**09 30 52.5**	**-1.1**
FTIG				*eS*	**Sn**	**09 31 13.0**	**-1.4**
MEIG	**Mezcala**	**1.86**	**337**	*eP*	**Pn**	**09 30 51.8**	**-0.1**
MEIG				*i* S	**Sn**	**09 31 12.4**	**-3.0**
HLIG	**Huajuapan de L**	**1.89**	**32**	*eP*	**Pb**	**09 30 53.3**	**-1.6**
HLIG				*eS*	**Sn**	**09 31 15.6**	**-0.8**
VHO	**Vista Hermosa**	**2.20**	**67**	*i* P	**Pb**	**09 30 58.7**	**-1.3**
VHO				*i* S	**Sn**	**09 31 24.3**	**+0.6**
PLIG	**Platanillo**	**2.26**	**344**	*i* P	**Pn**	**09 30 57.8**	**+0.3**
PLIG				*eS*	**Sn**	**09 31 23.0**	**-2.2**
CMIG	**Matias Romero**	**3.90**	**76**	Pn	**Pn**	**09 31 21.1**	**+1.3**
	1.4nm,0.3s,baz=348,slow=22,SNR=0.4						
CMIG				Sn	**Sn**	**09 32 04.6**	**-0.8**
	1.8nm,0.3s,baz=79,slow=22,SNR=1.0						
CMIG				Lg	Lg	09 32 26.4	
	11nm,0.3s,baz=338,slow=11,SNR=4.0						
TXAR	**Lajitas Array**	**13.80**	**342**	Pn	**P**	**09 33 46.3**	**+2.1**
	0.0nm,0.3s,baz=170,slow=15,SNR=1.1						
NVAR	**Mina Array Bea**	**27.97**	**326**	P	P	09 36 15.6	+4.7
	0.1nm,0.3s,baz=150,slow=11,SNR=1.4						
YKA	**Yellowknife Ar**	**47.55**	**350**	P	**P**	**09 38 56.9**	**+1.8**
	0.2nm,0.8s,baz=152,slow=7.8,SNR=3.3						

IDC 08 09:46:00.9±20.0, 18°.65S×177°.85W, h650km±258km, mb2.9/5, mb1 3.1/5, mb1mx2.7/42, mbtmp4.0/5, Error ellipse: s-maj=134.2km s-min=88.6km az=123.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.85**	**262**	P	P	09 51 52.8	+0.1
	3.5nm,1.0s,baz=71,slow=3.1,SNR=1.7						
STKA	**Stephens Creek**	**38.74**	**242**	P	P	09 52 32.6	+0.2
	0.6nm,0.3s,baz=90,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**45.02**	**260**	P	P	09 53 21.5	0.0
	0.8nm,0.3s,baz=98,slow=7.4,SNR=32						
ASAR	**Alice Springs**	**45.10**	**255**	P	P	09 53 22.2	+0.1
	1.2nm,0.4s,baz=89,slow=8.0,SNR=25						
ILAR	**Eielson Array**	**86.48**	**13**	P	P	09 57 36.2	0.0
	0.2nm,0.4s,baz=218,slow=5.3,SNR=2.3						

*IDC **08** 09:47:14.1±0.9, 13°.36S×112°.56W, h0km, mb4.1/12, mb1 4.4/12, mb1mx4.2/33, mbtmp4.1/12, MS4.1/14, Ms1 4.1/14, ms1mx4.1/17, Error ellipse: s-maj=33.4km s-min=18.2km az=64.0*
*NEIC **08** 09:47:16.1±1.7, 13°.27S±0°.03×112°.4W±0°.1, h10km±1km, mb4.6/101, Error ellipse: s-maj=22.3km s-min=4.1km az=259.0*
*GCMT **08** 09:47:21.1±0.2, 13°.38S±0°.01×112°.26W±0°.01, h17km, MW5.0/110, Moment Tensor Solution. s47,c55; s110,c164; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.22±.13; Mθθ 0.47±.10; Mφφ -1.69±.11; Mrθ -0.43±.24; Mrφ 3.44±.08; Mθφ -0.92±.25; Best double couple: Mo 3.81600×10^16 NP1:φs 281.00000°, δ 70.00000°, λ 13.00000°. NP2:φs 186.00000°, δ 78.00000°, λ 160.00000°. Principal axes: T 3.3720, Plg23.0000°, Azm142.0000°; N 0.8860, Plg66.0000°, Azm336.0000°; P -4.2600, Plg5.0000°, Azm234.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 08 09:47:15.9±0.5, 13°.29S±0°.07×112°.50W±0°.09, h10km, n150, σ0°.84/133, mb4.6/60, MS4.3/16, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**14.08**	**168**	LR	LR	09 54 25.5	
	comp=Z,1μm,20.0s,baz=342,slow=31						
RPN	**Rapa Nui**	**14.08**	**168**	Pn	**Pn**	**09 50 35.8**	**+0.2**
PTCN	**Pitcairn Islan**	**20.30**	**232**	P	**P**	**09 51 50.5**	**-1.7**
RKT	**Rikitea**	**23.45**	**242**	eLR	LR	09 58 06.3	
	comp=Z,2μm,27.0s						
RKT	**Rikitea**	**23.45**	**242**	*eT*	T	10 16 27.2	
	3.3nm,0.3s						
H06S1	**SOCORRO T**	**31.86**	**3**	T	T	10 27 17.5	
	SNR=11						
TLIG	**Tlapa**	**33.60**	**25**	P	**P**	**09 53 54.0**	**-2.8**
TLIG				IAmb	IAmb	09 54 02.7	
	comp=Z,13nm,1.3s						
MTO3	**Montecristo**	**35.81**	**41**	P	**P**	**09 54 16.4**	**+0.4**
MTO3				IAmb	IAmb	09 54 35.9	
	comp=Z,13nm,1.3s						
PPT	**Papeete**	**35.95**	**258**	LR	LR	10 05 16.0	
	comp=Z,304nm,20.2s,baz=90,slow=30						
PPT2	**Papeete2**	**35.95**	**258**	*eS*	**S**	**09 59 56.7**	**+0.8**
	comp=Z,33nm,21.2s						
PPT2				*eLQ*	LQ	10 02 28.0	
	comp=Z,417nm,28.8s						
PPT2				*eLR*	LR	10 03 54.4	
	comp=Z,1μm,27.0s,baz=92						
CRIN	**San Cristobal**	**36.11**	**45**	P	**P**	**09 54 18.7**	**+0.3**
OTAV	**Otavalo**	**36.32**	**71**	P	**P**	**09 54 22.0**	**+1.2**
TBI	**Tubuai**	**36.39**	**249**	*eS*	**S**	**10 00 02.6**	**+0.3**
	comp=Z,86nm,28.8s						
TBI				*eLQ*	LQ	10 02 35.0	
	comp=Z,416nm,31.8s						
TBI				*eLR*	LR	10 04 09.4	
	comp=Z,1μm,27.0s,baz=79						
BOAB	**BOACO BROADBA**	**36.91**	**47**	P	**P**	**09 54 26.1**	**+0.9**
MATN	**Matagalpa**	**37.05**	**46**	P	**P**	**09 54 28.0**	**+1.5**
ZAIG	**Zacatecas**	**37.14**	**15**	P	**P**	**09 54 26.6**	**-0.7**
PETF	**Flores**	**37.43**	**37**	P	**P**	**09 54 29.9**	**+0.4**
TEIG	**Tepich**	**40.96**	**36**	P	**P**	**09 54 59.1**	**+0.1**
	comp=Z,14nm,0.9s,baz=276,slow=6.1,SNR=4.7						
MNMC	**Minye Minye**	**41.53**	**104**	P	**P**	**09 55 03.4**	**-0.8**
MNMC				IAmb	IAmb	09 55 08.5	
	comp=Z,15nm,1.4s						
PB01	**IPOC Station P**	**41.71**	**107**	P	**P**	**09 55 06.0**	**+0.5**
PB01				IAmb	IAmb	09 55 14.7	
	comp=Z,30nm,1.4s						
ROSC	**El Rosal**	**41.98**	**67**	LR	LR	10 09 09.7	
	comp=Z,120nm,18.4s,baz=240,slow=31						
PB08	**IPOC Station P**	**41.98**	**105**	P	**P**	**09 55 08.7**	**+0.7**
PB08				IAmb	IAmb	09 55 17.2	
	comp=Z,13nm,1.1s						
HSIG		**42.09**	**2**	P	**P**	**09 55 09.2**	**+1.0**
LVC	**Limon Verde**	**42.36**	**109**	P	**P**	**09 55 11.6**	**+0.5**
LPAZ	**La Paz**	**42.94**	**100**	P	**P**	**09 55 16.5**	**+0.4**
	comp=Z,3.3nm,0.9s,baz=254,slow=4.8,SNR=10						
LPAZ				LR	LR	10 09 19.2	
	comp=Z,184nm,19.3s,baz=258,slow=31						
LPAZ	**La Paz**	**42.94**	**100**		**P**	**09 55 15.5**	**-0.7**
LPAZ	**La Paz**	**42.94**	**100**	P	**P**	**09 55 15.3**	**-0.8**
TX31	**Lajitas Ar. Si**	**43.23**	**11**	P	**P**	**09 55 17.0**	**-0.6**
TX31				IAmb	IAmb	09 55 27.0	
	comp=Z,25nm,1.5s						
TX32	**Lajitas Array**	**43.23**	**11**	P	**P**	**09 55 15.5**	**-2.1**
TXAR	**Lajitas Array**	**43.23**	**11**	P	**P**	**09 55 18.4**	**+0.8**
	comp=Z,1.4nm,1.1s,baz=181,slow=9.8,SNR=8.6						
TXAR	**Lajitas Array**	**43.23**	**11**	P	**P**	**09 55 17.1**	**-0.4**
BI02	**San Fabin de**	**43.57**	**130**	P	**P**	**09 55 20.7**	**+0.3**
BI02				IAmb	IAmb	09 55 29.9	
	comp=Z,9.4nm,1.1s						
PIX	**Pinacate**	**44.60**	**359**	P	**P**	**09 55 29.0**	**+0.6**
PIX				IAmb	IAmb	09 55 34.3	
	comp=Z,6.7nm,0.9s						
LL01	**San Ignacio de**	**45.15**	**138**	P	**P**	**09 55 33.1**	**+0.4**
LL01				IAmb	IAmb	09 55 42.9	
	comp=Z,12nm,1.1s						
JCT	**Junction City**	**45.20**	**16**	P	**P**	**09 55 31.4**	**-1.9**
MNTX	**Cornudas Mount**	**45.25**	**9**	P	**P**	**09 55 34.4**	**+0.7**
MNTX				IAmb	IAmb	09 55 41.8	
	comp=Z,8.9nm,1.1s						
TUC	**Tucson**	**45.37**	**2**	P	**P**	**09 55 35.1**	**+0.4**
PLCA	**Paso Flores**	**45.67**	**135**	P	**P**	**09 55 37.4**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=291,slow=12,SNR=6.0						
PLCA				LR	LR	10 09 56.8	
	comp=Z,564nm,18.4s,baz=289,slow=30						
PLCA	**Paso Flores**	**45.67**	**135**	IAmb	IAmb	09 55 47.4	
	comp=Z,7.6nm,1.1s						
121A	**Cookes Peak, D**	**45.79**	**6**	P	**P**	**09 55 37.8**	**-0.3**
121A				IAmb	IAmb	09 55 46.4	
	comp=Z,8.8nm,1.2s						
HKT	**Hockley**	**45.90**	**20**	P	**P**	**09 55 36.8**	**-1.9**
435B	**Jarrell**	**46.11**	**18**	P	**P**	**09 55 40.2**	**-0.2**
WHTX	**Lake Whitney,**	**47.28**	**17**	P	**P**	**09 55 49.4**	**-0.2**
WHTX				IAmb	IAmb	09 55 56.3	
	comp=Z,10nm,1.1s						
MSTX	**Muleshoe**	**47.90**	**11**	P	**P**	**09 55 54.7**	**+0.2**
ANMO	**Albuquerque**	**48.31**	**7**	P	**P**	**09 55 58.5**	**+0.7**
SAML	**Samuel**	**48.52**	**90**	P	**P**	**09 55 57.6**	**-2.0**
SAML				IAmb	IAmb	09 56 03.4	
	comp=Z,8.0nm,0.9s						
Z35A	**Perchaven, San**	**48.59**	**17**	P	**P**	**09 55 59.9**	**+0.1**
AMTX	**Amarillo**	**49.00**	**12**	P	**P**	**09 56 02.6**	**-0.4**
ISA	**Isabella, Lake**	**49.02**	**354**	P	**P**	**09 56 03.9**	**+0.8**
WMOK	**Wichita Mounta**	**49.51**	**15**	P	**P**	**09 56 06.1**	**-0.7**
SHPR	**Sheep Range**	**49.59**	**357**	P	**P**	**09 56 08.5**	**+0.9**
SHPR				IAmb	IAmb	09 56 22.7	
	comp=Z,11nm,1.3s						
143A	**Socs Landing,**	**49.99**	**23**	P	**P**	**09 56 10.0**	**-0.5**
143A				IAmb	IAmb	09 56 14.2	
	comp=Z,13nm,1.1s						
LCMT	**Little Creek M**	**50.04**	**359**	P	**P**	**09 56 10.9**	**-0.1**
WLAR	**White Oak Lake**	**50.24**	**21**	P	**P**	**09 56 12.3**	**0.0**
FNO	**Franklin**	**50.36**	**16**	P	**P**	**09 56 13.7**	**+0.4**
FNO				IAmb	IAmb	09 56 36.2	
	comp=Z,7.5nm,0.8s						
MVCO	**Mesa Verde**	**50.37**	**4**	P	**P**	**09 56 13.5**	**-0.1**
MVCO				IAmb	IAmb	09 56 34.8	
	comp=Z,11nm,1.6s						
PRN	**Pahroc Range**	**50.48**	**357**	P	**P**	**09 56 14.6**	**+0.3**
PRN				IAmb	IAmb	09 56 30.6	
	comp=Z,12nm,1.6s						
OKCFA	**Oklahoma City**	**50.50**	**16**	P	**P**	**09 56 14.3**	**0.0**
T25A	**Trinidad**	**50.74**	**8**		**P**	**09 56 17.1**	**+0.8**
T25A				IAmb	IAmb	09 56 24.6	
	comp=Z,20nm,1.6s						
X40A	**Basin Creek Fa**	**51.06**	**21**	P	**P**	**09 56 17.8**	**-0.7**
X40A				IAmb	IAmb	09 56 33.0	
	comp=Z,14nm,1.5s						
OK030	**Cody Creek RV**	**51.16**	**16**	P	**P**	**09 56 18.7**	**-0.5**
OK030				IAmb	IAmb	09 56 26.0	
	comp=Z,11nm,1.0s						
PV01	**Paradox Valley**	**51.29**	**4**	P	**P**	**09 56 19.6**	**-0.9**
PV13	**Radium Mtn., P**	**51.30**	**4**	P	**P**	**09 56 19.4**	**-1.1**
PV11	**David Mesa, Pa**	**51.43**	**4**	P	**P**	**09 56 22.2**	**+0.7**
MSU	**Marysvale**	**51.53**	**0**	P	**P**	**09 56 20.9**	**-1.4**
CMB	**Columbia Colle**	**51.59**	**352**	P	**P**	**09 56 23.1**	**+0.6**
NV11	**Mina Array Sit**	**51.72**	**354**	P	**P**	**09 56 24.6**	**+1.0**
NV11				IAmb	IAmb	09 56 27.1	
	comp=Z,13nm,1.6s						
NVAR	**Mina Array Bea**	**51.74**	**354**	P	**P**	**09 56 25.2**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=178,slow=11,SNR=16						
NVAR				LR	LR	10 13 34.0	
	comp=Z,242nm,18.8s,baz=183,slow=30						
NVAR	**Mina Array Bea**	**51.74**	**354**	P	**P**	**09 56 23.9**	**+0.1**
Y45A	**Yeager Farm, C**	**51.74**	**24**	P	**P**	**09 56 24.2**	**+0.5**
Z47A	**Carrollton**	**51.78**	**26**	P	**P**	**09 56 23.2**	**-0.7**
Z47A				IAmb	IAmb	09 56 26.7	
	comp=Z,11nm,1.0s						
Q16A	**Castle Valley**	**51.95**	**1**	P	**P**	**09 56 25.5**	**+0.1**
SPR3	**Spring Creek 3**	**52.05**	**358**	P	**P**	**09 56 26.7**	**+0.5**
SPR3				IAmb	IAmb	09 56 33.9	
	comp=Z,9.1nm,1.4s						
KAN01	**Argonia South**	**52.06**	**15**	P	**P**	**09 56 26.4**	**+0.5**
SRU	**San Rafael Swe**	**52.16**	**2**	P	**P**	**09 56 26.2**	**-0.7**
SRU				IAmb	IAmb	09 56 42.4	
	comp=Z,14nm,1.5s						
TMUT	**Trail Mountain**	**52.33**	**1**	P	**P**	**09 56 27.7**	**-0.6**
HHAR	**Hobbs**	**52.33**	**19**	P	**P**	**09 56 27.3**	**-0.7**
U38A	**Gravette**	**52.34**	**18**	P	**P**	**09 56 27.6**	**-0.4**
U38A				IAmb	IAmb	09 56 30.4	
	comp=Z,7.4nm,1.1s						
OXF	**Oxford**	**52.36**	**24**	P	**P**	**09 56 28.1**	**-0.1**
OXF				IAmb	IAmb	09 56 38.5	
	comp=Z,14nm,1.1s						
SMCO	**Snowmass**	**52.45**	**5**	P	**P**	**09 56 29.5**	**+0.2**
VCNR	**Virginia City**	**52.74**	**353**	P	**P**	**09 56 31.9**	**+0.7**
U40A	**Yellville**	**52.75**	**20**	P	**P**	**09 56 31.0**	**-0.1**
U40A				IAmb	IAmb	09 56 37.3	
	comp=Z,6.4nm,1.1s						
KSCO	**Kaye Shedlock'**	**52.84**	**10**	P	**P**	**09 56 31.9**	**0.0**
KSCO				IAmb	IAmb	09 56 40.1	

comp=Z,9.4nm,1.1s
MOD Modoc Plateau 55.39 353 P P 09 56 51.0 +0.5
MOD IAmb IAmb 09 57 01.0
comp=Z,8.1nm,1.4s
WVOR Wild Horse Val 55.74 355 P P 09 56 52.0 -0.9
WVOR IAmb IAmb 09 57 02.1
comp=Z,14nm,1.5s
PD31 Pinedale Array 55.85 3 P P 09 56 53.8 0.0
PDAR Pinedale Array 55.85 3 P P 09 56 53.7 -0.2
comp=Z,1.0nm,0.5s,baz=168,slow=7.6,SNR=15
PDAR LR LR 10 17 13.7
comp=Z,104nm,18.1s,baz=188,slow=32
K22A Casper 55.94 5 P P 09 56 54.7 +0.3
K22A IAmb IAmb 09 56 55.5
comp=Z,5.8nm,0.8s
MFID Camas Ranch 56.51 357 P P 09 56 58.8 +0.3
MFID IAmb IAmb 09 57 00.9
comp=Z,6.2nm,1.0s
FLWY Flagg Ranch 57.12 2 P P 09 57 02.9 0.0
FLWY IAmb IAmb 09 57 06.2
comp=Z,7.7nm,1.1s
BCYI Bear Canyon 57.33 359 P P 09 57 03.7 -0.7
RSSD Black Hills 57.66 7 P P 09 57 06.2 -0.4
YMR Madison River 57.70 1 P P 09 57 07.7 +0.7
YHB Horse Butte 57.78 1 P P 09 57 06.7 -0.8
YHB IAmb IAmb 09 57 13.6
comp=Z,4.6nm,0.9s
YHH Holmes Hill 57.82 1 P P 09 57 08.6 +0.6
YHH IAmb IAmb 09 57 12.7
comp=Z,5.3nm,1.1s
MCMT McKenzie Canyo 57.84 360 P P 09 57 09.0 +1.0
QLMT Earthquake Lak 57.85 1 P P 09 57 09.0 +1.0
YHL Hebgen Lake 57.88 1 P P 09 57 09.5 +1.2
YHL IAmb IAmb 09 57 13.4
comp=Z,8.8nm,1.3s
BMO Blue Mountains 58.03 356 P P 09 57 10.6 +1.5
HRY Holter Researc 59.73 1 P P 09 57 21.0 +0.1
C09A Chrisman Ranch 61.03 356 P P 09 57 30.6 +0.9
C09A IAmb IAmb 09 57 34.8
comp=Z,4.7nm,0.7s
EGMT Eagleton 61.09 2 P P 09 57 30.8 +0.7
EGMT IAmb IAmb 09 57 34.6
comp=Z,5.3nm,1.0s
F36A Milaca 61.32 15 P P 09 57 31.1 -0.6
F36A IAmb IAmb 09 57 33.7
comp=Z,5.6nm,0.9s
DGMT Dagmar 61.93 6 P P 09 57 35.8 0.0
BDFB Brasilia 62.28 101 LR LR 10 22 05.4
comp=Z,75nm,18.0s,baz=320,slow=34
DLBC Dease Lake 72.90 350 P P 09 58 45.5 +0.4
comp=Z,2.3nm,0.9s,baz=257,slow=4.6,SNR=3.3
BATG Bathurst New B 73.17 31 P P 09 58 46.7 -0.1
FCC Fort Churchill 73.36 10 P P 09 58 47.4 -0.2
FCC IAmb IAmb 09 58 55.1
comp=Z,5.6nm,1.1s
YKA Yellowknife Ar 75.56 359 P P 09 59 00.2 -0.2
comp=Z,1.5nm,0.9s,baz=173,slow=5.6,SNR=27
YKA LR LR 10 29 01.1
comp=Z,216nm,18.7s,baz=0.0,slow=33
VNDA Vanda 76.17 193 P P 09 59 03.6 -0.2
comp=Z,0.5nm,0.8s,baz=326,slow=8.7,SNR=2.1
VNDA LR LR 10 25 07.9
comp=Z,150nm,20.7s,baz=82,slow=30
QSPA South Pole Qui 76.81 180 P P 09 59 07.6 -0.2
BCAR Beaver Creek A 79.44 347 P P 09 59 21.0 -1.1
VNA3 Neumayer Olymp 81.59 161 P P 09 59 34.9 +1.2
ILAR Eielson Array 82.07 346 P P 09 59 35.8 -0.4
comp=Z,0.8nm,0.8s,baz=189,slow=4.7,SNR=5.2
ILAR LR LR 10 28 00.2
comp=Z,64nm,21.7s,baz=114,slow=30
ILAR Eielson Array 82.07 346 P P 09 59 36.5 +0.3
KTH Kantishna Hill 82.11 344 P P 09 59 36.7 +0.2
WRH Wood River Hil 82.12 345 P P 09 59 37.5 +1.1
VNA1 Neumayer--Stat 82.21 161 P P 09 59 44.5 +7.6
PRP Porcupine Dome 82.39 347 P P 09 59 36.2 -1.8
PRP IAmb IAmb 09 59 42.7
comp=Z,10nm,1.2s
VNA2 Neumayer--Watz 82.39 161 P P 09 59 37.8 -0.1
NEA2 Nenana 82.46 345 P P 09 59 38.3 +0.1
NEA2 IAmb IAmb 09 59 41.0
comp=Z,5.6nm,1.0s
MDM Murphy Dome 82.55 345 P P 09 59 39.0 +0.2
BPAW Bear Paw Mtn. 82.56 344 P P 09 59 39.5 +0.8
INK Inuvik 82.78 352 P P 09 59 39.4 -0.3
comp=Z,2.3nm,0.9s,baz=144,slow=4.4,SNR=8.0
INK Inuvik 82.78 352 P P 09 59 39.7 0.0
INK IAmb IAmb 09 59 46.9
comp=Z,7.7nm,1.4s
I23K Minto, Yukon-K 82.99 345 P P 09 59 41.3 +0.4
MLY Manley 83.24 345 P P 09 59 42.4 +0.1
SNAA Sanae 83.51 163 P P 09 59 44.8 +1.0
BMAR Burnt Mountain 83.82 348 P P 09 59 46.5 +1.3
IMAR Indian Mountai 84.77 344 P P 09 59 50.3 +0.3
COLD Coldfoot 84.87 346 P P 09 59 52.0 +1.5
COLD IAmb IAmb 09 59 54.3
comp=Z,6.4nm,1.0s
H11S2 WAKE ISLAND Hy 85.65 290 T T 11 34 42.4
baz=106,slow=75,SNR=42
H11S1 WAKE ISLAND Hy 85.66 290 T T 11 34 46.4
baz=106,slow=75,SNR=26
H11S3 WAKE ISLAND Hy 85.67 290 T T 11 34 45.1
baz=106,slow=75,SNR=26
H11N3 WAKE ISLAND Hy 85.79 291 T T 11 34 57.6
baz=166,slow=74,SNR=4.0
H11N2 WAKE ISLAND Hy 85.81 291 T T 11 35 01.2
baz=108,slow=74,SNR=4.4
STKA Stephens Creek 96.14 235 LR LR 10 37 11.3
comp=Z,168nm,20.0s,baz=40,slow=31
MAW Mawson 99.25 178 LR LR 10 42 52.4
comp=Z,119nm,18.7s,baz=230,slow=34
ARCES ARCESS Array B 117.93 15 PKP PKiKP 10 06 04.2 +1.9
comp=Z,3.2nm,0.9s,baz=292,slow=10.0,SNR=1.9
MKAR Makanchi Array 144.36 342 PKP PKPbc 10 06 50.2 -0.7
comp=Z,0.9nm,0.7s,baz=336,slow=2.7,SNR=8.7
MKAR Makanchi Array 144.36 342 PKPdf 10 06 50.9 -1.7
CMAR Chiang Mai Arr 149.35 284 PKPbc PKPbc 10 07 05.0 -1.1
comp=Z,0.8nm,0.3s,baz=64,slow=2.1,SNR=2.0

*IDC **08** 10:00:15.5±0.9, 1°.12N×129°.14E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/31, mbtmp3.8/7, ML4.2/1, MS2.7/3, Ms1 2.8/3, ms1mx2.5/46, Error ellipse: s-maj=61.2km s-min=17.7km az=70.0*
*DJA **08** 10:00:18.1±0.5, 1°N±5°×12°.9E±°, h10km, M4.4/9, mb4.7/4, mbB5.6/1, MLv4.2/9, Mw(mB)5.2/1*
*NEIC **08** 10:00:19.9±1.4, 1°.0N±0°.1×129°.23E±0°.07, h34km±6km, mb4.3/15, Error ellipse: s-maj=16.6km s-min=8.3km az=208.0*

ISC 08 10:00:19.9±0.5, 1°.03N±0°.06×129°.27E±0°.06, h35km, n49, σ1§20/45, mb4.0/15, Halmahera

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.92 262**		**Pn**	**10 00 49.9**	**-0.1**
TNTI	**Ternate**	**1.92 262**	P	**Pn**	**10 00 50.7**	**+0.6**
TNTI			S	**Sn**	**10 01 15.2**	**+2.2**
SWI	**Sorong**	**2.74 133**	P	**Pn**	**10 01 02.2**	**+0.8**
SWI			S	**Sn**	**10 01 35.1**	**+1.8**
SIJI	**Sorong**	**2.75 133**	Pn	**Pn**	**10 01 02.4**	**+0.9**
	34nm,0.3s,baz=150,slow=22,SNR=86					
SIJI			Sn	**Sn**	**10 01 34.7**	**+1.2**
	19nm,0.3s,baz=196,slow=22,SNR=11					
SIJI			LR	LR	10 01 39.1	
	comp=Z,25nm,18.6s,baz=242,slow=29					
SANI	**Sanana**	**4.48 227**	P	**Pn**	**10 01 24.9**	**-0.5**
SANI			S	**Sn**	**10 02 14.5**	**-1.9**
NLAI	**Namlea**	**4.76 207**	P	**Pn**	**10 01 30.7**	**+1.5**
FAKI	**Fak Fak**	**4.92 143**		**Pn**	**10 01 32.2**	**+0.8**
FAKI	**Fak Fak**	**4.92 143**	P	**Pn**	**10 01 32.6**	**+1.1**
FAKI			S	**Sn**	**10 02 26.7**	**-0.6**
GTOI	**Gorontalo**	**6.27 266**	P	**Pn**	**10 01 52.0**	**+2.1**
	0.1nm18nm,0.7s					
APSI	**Ampana**	**7.86 256**	P	**Pn**	**10 02 13.0**	**+1.2**
	0.2nm37nm,0.6s					
TTSI	**Tana Toraja**	**10.28 247**	P	**Pn**	**10 02 46.8**	**+1.8**
	3µm32nm,0.7s					
SPSI	**Sidrap Palu**	**10.71 242**	P	**Pn**	**10 02 52.9**	**+2.0**
MTN	**Manton Dam**	**13.91 172**	Pn	**Pn**	**10 03 32.8**	**-1.8**
WB0	**Warramunga Arr**	**21.27 167**	P	**P**	**10 05 03.9**	**+0.5**
WB0			IAmb	IAmb	10 05 16.5	
	comp=Z,10nm,1.2s					
WRA	**Warramunga Arr**	**21.43 167**	P	**P**	**10 05 06.2**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=345,slow=11,SNR=14					
WRA	**Warramunga Arr**	**21.43 167**	P	**P**	**10 05 05.8**	**+0.8**
WB2	**Warramunga Arr**	**21.43 167**	P	**P**	**10 05 05.9**	**+0.8**
WB2			IAmb	IAmb	10 05 12.1	
	comp=Z,12nm,1.4s					
WR0	**Warramunga Arr**	**21.49 166**	P	**P**	**10 05 05.7**	**0.0**
WR0			IAmb	IAmb	10 05 11.0	
	comp=Z,16nm,1.4s					
AS31	**Alice Springs**	**24.96 170**	P	**P**	**10 05 40.4**	**+0.2**
ASAR	**Alice Springs**	**24.96 170**	P	**P**	**10 05 42.0**	**+1.8**
	comp=Z,2.5nm,0.8s,baz=2.3,slow=8.6,SNR=19					
ASAR	**Alice Springs**	**24.96 170**	P	**P**	**10 05 41.1**	**+0.9**
CTAO	**Charters Tower**	**26.79 142**	P	**P**	**10 05 57.1**	**+0.3**
CTAO			IAmb	IAmb	10 06 02.0	
	comp=Z,20nm,1.4s					
FORT	**Forrest**	**31.65 182**	P	**P**	**10 06 38.7**	**-1.2**
EIDS	**Eidsvold**	**33.68 143**	P	**P**	**10 06 57.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**34.43 302**	LR	LR	10 22 00.5	
	comp=Z,29nm,18.1s,baz=210,slow=38					
ENH	**Enshi**	**34.63 329**	P	**P**	**10 07 06.0**	**+0.1**
ENH			IAmb	IAmb	10 07 28.9	
	comp=Z,8.0nm,1.1s					
JGF	**Kuroka**	**35.21 11**	P	**P**	**10 07 10.3**	**-0.6**
KSRS	**Korea Array**	**36.27 358**	LR	LR	10 19 50.8	
	comp=Z,24nm,21.4s,baz=46,slow=32					
H11S3	**WAKE ISLAND Hy 40.61 62**		T	T	10 51 13.9	
	baz=248,slow=75,SNR=56					
H11S2	**WAKE ISLAND Hy 40.62 62**		T	T	10 51 18.8	
	baz=248,slow=75,SNR=25					
H11S1	**WAKE ISLAND Hy 40.62 62**		T	T	10 51 16.6	
	baz=248,slow=75,SNR=25					
H11N1	**WAKE ISLAND Hy 41.23 61**		T	T	10 52 03.4	
	baz=247,slow=75,SNR=83					
H11N2	**WAKE ISLAND Hy 41.24 61**		T	T	10 52 04.7	
	baz=247,slow=75,SNR=110					
H11N3	**WAKE ISLAND Hy 41.25 61**		T	T	10 52 04.6	
	baz=247,slow=75,SNR=190					
USRK	**Ussuriysk Ar.**	**43.05 3**	P	**P**	**10 08 16.7**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=217,slow=8.6,SNR=2.8					
SONM	**Songino Array**	**50.66 340**	P	**P**	**10 09 15.9**	**0.0**
	comp=Z,0.6nm,0.8s,baz=162,slow=6.2,SNR=4.0					
SONM	**Songino Array**	**50.66 340**	P	**P**	**10 09 15.4**	**-0.5**
MK31	**Makanchi Array**	**61.21 325**	P	**P**	**10 10 31.7**	**+0.4**
MK31			IAmb	IAmb	10 10 42.5	
	comp=Z,1.4nm,1.1s					
MKAR	**Makanchi Array**	**61.21 325**	P	**P**	**10 10 31.4**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=112,slow=8.3,SNR=9.1					
MKAR	**Makanchi Array**	**61.21 325**	P	**P**	**10 10 31.6**	**+0.3**
MAKZ	**Makanchi**	**61.39 325**	P	**P**	**10 10 32.4**	**-0.1**
MAKZ			IAmb	IAmb	10 10 33.7	
	comp=Z,6.5nm,1.5s					
ZALV	**Zalesovo Beam**	**64.13 333**	P	**P**	**10 10 50.1**	**-0.5**
KKAR	**Karatay Array**	**66.92 317**	P	**P**	**10 11 08.4**	**-0.6**
ABKAR	**Akbulak array**	**75.83 321**	P	**P**	**10 12 03.1**	**+0.6**
ABKAR			IAmb	IAmb	10 12 25.9	
	comp=Z,1.4nm,0.9s					
VNDA	**Vanda**	**80.45 173**	P	**P**	**10 12 30.9**	**+3.3**
	comp=Z,0.5nm,0.8s,baz=322,slow=5.7,SNR=2.5					
VNDA	**Vanda**	**80.45 173**	P	**P**	**10 12 27.2**	**-0.4**
IL31		**86.44 25**	P	**P**	**10 12 57.7**	**-0.9**
IL31			IAmb	IAmb	10 13 18.6	
	comp=Z,5.7nm,1.5s					
FINES	**FINESS Array B**	**95.39 332**	LR	LR	10 59 11.1	
	comp=Z,89nm,18.7s,baz=252,slow=37					
TORD	**Torodi Ar. Bea**	**126.15 287**	PKP	**PKPdf**	**10 19 18.4**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=46,slow=6.2,SNR=2.2					

INET 08 10:02:12.0, 12°.68N×87°.42W, h133km, MW3.5, Near coast of Nicaragua

NNC 08 10:04:11.2±11.0, 54°.09N×77°.36E, h0km, mb3.6, mpv3.3, 6C-2D, Error ellipse: s-maj=103.6km s-min=30.2km az=32.0, Southwestern Siberia

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**3.55 168**	⇓Pg	Pb	10 05 15.3	+0.5
	2.9nm,0.5s					
KURBB			⇓Sn	Sn	10 05 50.0	-0.1
	8.0nm,0.4s					
BRVK	**Borovoye**	**4.34 259**	⇑Pg	Pb	10 05 31.2	+2.9
	1.7nm,0.8s					
BRVK			⇑Lg	Lg	10 06 26.3	
	2.4nm,0.9s					
MAKZ	**Makanchi**	**7.87 156**	⇑Pg	Pg	10 06 45.3	+3.6
	4.1nm,1.0s					
MAKZ			⇑Sn	Sn	10 07 37.9	+1.5
	1.7nm,0.7s					
MK31	**Makanchi Array**	**7.96 155**	⇑Pg	Pg	10 06 40.2	-3.3
	3.4nm,1.1s,baz=343,slow=16,SNR=7.3					
MK31			⇑Sn	Sn	10 07 44.6	+5.9
	0.4nm,0.4s,baz=343,slow=27,SNR=5.6					

*NEIC **08** 10:29:51.5±2.6, 19°.29S±0°.05×69°.13W±0°.07, h107km±5km, Error ellipse: s-maj=10.1km s-min=7.0km az=113.0*
*VAO **08** 10:29:51.8±0.5, 19°.07S×69°.08W, h107km±5km, mb4.4*
*GUC **08** 10:29:52.3±0.6, 19°.25S×69°.26W, h116km±2km, ML4.4*
*NEIC **08** 10:29:52.3, 19°.28S×69°.27W, h109km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=2.61; Mθθ 1.60; Mθφ 1.00; Mrθ 1.45; Mθφ -0.79; Mφr 0.19; Fault plane solution: M₀2.82000×10¹⁵ NP1:φ₁286.63000°, δ59.68000°, λ-105.41000°. NP2:φ₂135.26000°, δ33.67000°, λ-65.57000°. Principal axes: T 2.4117, Plg13.0000°, Azm28.0000°; N 0.6885, Plg13.0000°, Azm295.0000°; P -3.1002, Plg71.0000°, Azm161.0000°;*
*IDC **08** 10:29:52.8±0.5, 19°.13S×68°.93W, h116km±4km, mb4.0/10, mb1 4.0/13, mb1mx3.8/39, mbtmp4.4/13 Error ellipse: s-maj=15.0km s-min=9.7km az=91.0*

ISC 08 10:29:51.3±0.5, 19°.22S±0°.04×69°.16W±0°.05, h105km±4km, n172, σ1§52/184, mb4.6/26, 9C-3D, Northern Chile

Code	Station Name	Δ° AZ°	Phase	ID	Time	Res
			Op	ISC	h m s	ISC
MNMC	**Minye Minye**	**0.42 281**	⇓*i*P	**Pn**	**10 30 08.3**	**+0.9**
MNMC			*i* S	**Sn**	**10 30 21.1**	**+1.5**
MNMC			IAML		10 30 23.6	
	comp=N,24µm,0.4s					
MNMC	**Minye Minye**	**0.42 281**	Pn	**Pn**	**10 30 08.3**	**+0.9**
MNMC			Sn	**Sn**	**10 30 20.7**	**+1.1**
PB11	**IPOC Station P**	**0.72 221**	⇑*i*P	**Pn**	**10 30 10.3**	**+0.8**
PB11			*i* S	**Sn**	**10 30 24.0**	**+0.8**
PB11			IAML		10 30 25.9	
	comp=E,24µm,0.6s					
PB11	**IPOC Station P**	**0.72 221**		**Pn**	**10 30 09.7**	**+0.2**
PB11			Sn	**Sn**	**10 30 24.0**	**+0.8**
PB08	**IPOC Station P**	**0.92 180**	⇑*i*P	**Pn**	**10 30 13.3**	**+1.6**
PB08			*i* S	**Sn**	**10 30 29.4**	**+2.4**
PB08			IAML		10 30 30.2	
	comp=E,14µm,0.3s					
PB08	**IPOC Station P**	**0.92 180**	Pn	**Pn**	**10 30 13.4**	**+1.7**
PSGC	**Pisagua**	**0.99 247**	⇓*i*P	**Pn**	**10 30 12.2**	**+0.1**
PSGC			*i* S	**Sn**	**10 30 27.3**	**-0.4**
PSGC			IAML		10 30 27.9	
	comp=N,6µm,0.5s					
PSGCX	**Pisagua**	**0.99 247**	Pn	**Pn**	**10 30 12.3**	**+0.2**
AP01	**Chacalluta**	**1.40 307**	⇓*i*P	**Pn**	**10 30 17.3**	**+0.7**
AP01			*i* S	**Sn**	**10 30 36.2**	**+0.3**
AP01			IAML		10 30 40.9	
	comp=N,13µm,0.3s					
AP01	**Chacalluta**	**1.40 307**		**Pn**	**10 30 17.3**	**+0.7**
TA01	**Diego Aracena**	**1.65 215**	⇑*i*P	**Pn**	**10 30 19.4**	**-0.3**
TA01			*i* S	**Sn**	**10 30 40.5**	**-0.8**
TA01			IAML		10 30 44.2	
	comp=E,3µm,0.2s					
TA01	**Diego Aracena**	**1.65 215**	Pn	**Pn**	**10 30 19.0**	**-0.7**
PB01	**IPOC Station P**	**1.84 190**	⇑*i*P	**Pn**	**10 30 22.9**	**+0.7**
PB01			*i* S	**Sn**	**10 30 45.8**	**0.0**
PB01			IAML		10 30 47.7	
	comp=N,4µm,0.3s					
PB01	**IPOC Station P**	**1.84 190**		**Pn**	**10 30 22.9**	**+0.7**
PB09	**IPOC Station P**	**2.57 182**		**Pn**	**10 30 33.0**	**+1.3**
PB07	**IPOC Station P**	**2.59 195**	⇑*i*P	**Pn**	**10 30 31.9**	**0.0**
PB07			*i* S	**Sn**	**10 30 59.1**	**-4.0**
PB07			IAML		10 31 12.2	
	comp=E,2µm,0.4s					
PB07	**IPOC Station P**	**2.59 195**		**Pn**	**10 30 31.9**	**0.0**
PB03	**IPOC Station P**	**2.87 191**	⇑*i*P	**Pn**	**10 30 35.5**	**-0.2**
PB03			*i* S	**Sn**	**10 31 03.2**	**-6.6**
PB03			IAML		10 31 22.7	
	comp=E,1µm,0.5s					
LPAZ	**La Paz**	**3.07 19**	P	**Pn**	**10 30 42.0**	**+3.4**
	comp=E,60nm,0.3s,baz=191,slow=3.4,SNR=1754					
LPAZ	**La Paz**	**3.07 19**	Pn	**Pn**	**10 30 42.2**	**+3.5**
PB04	**IPOC Station P**	**3.24 196**	⇑*i*P	**Pn**	**10 30 40.4**	**-0.1**
PB04	**IPOC Station P**	**3.24 196**		**Pn**	**10 30 40.0**	**-0.5**
LVC	**Limon Verde**	**3.39 176**	P	**Pn**	**10 30 44.7**	**+2.0**
	comp=E,90nm,0.3s,baz=350,slow=8.2,SNR=263					
LVC			S	**Sn**	**10 31 26.0**	**+3.8**
	comp=E,89nm,0.3s,baz=68,slow=23,SNR=9.7					
LVC	**Limon Verde**	**3.39 176**	Pn	**Pn**	**10 30 43.8**	**+1.1**
LVC	**Limon Verde**	**3.39 176**	*e*P	**Pn**	**10 30 44.9**	**+2.3**
PB06	**IPOC Station P**	**3.50 186**	⇑*i*P	**Pn**	**10 30 43.7**	**-0.2**
PB06			*i* S	**Sn**	**10 31 22.0**	**-2.6**
PB06			IAML		10 31 30.4	
	comp=E,775nm,0.4s					
PB06	**IPOC Station P**	**3.50 186**		**Pn**	**10 30 43.7**	**-0.2**
PB05	**IPOC Station P**	**3.75 195**	⇑*i*P	**Pn**	**10 30 46.7**	**-0.6**
PB15	**IPOC Station P**	**3.98 184**		**Pn**	**10 30 50.7**	**+0.1**
PB10	**IPOC Station P**	**4.47 197**	Pn	**Pn**	**10 30 55.2**	**-1.7**
PB14	**IPOC Station P**	**5.51 192**	Pn	**Pn**	**10 31 08.7**	**-2.5**
GO02	**Mina Guanaco**	**5.93 184**	Pn	**Pn**	**10 31 15.6**	**-1.4**
AC01	**Pan de Azucar**	**7.03 191**	Pn	**Pn**	**10 31 28.3**	**-3.3**
AC02	**Maricunga**	**7.58 180**	Pn	**Pn**	**10 31 38.6**	**-0.9**
SIV	**San Ignacio**	**8.35 69**	P	**Pn**	**10 31 48.4**	**-1.2**
	comp=E,4.7nm,0.3s,baz=267,slow=11,SNR=118					
SIV			S	**Sn**	**10 33 17.0**	**-5.3**
	baz=335,slow=20,SNR=1.1					
GO03	**Copiap**	**8.40 187**		**Pn**	**10 31 46.7**	**-3.5**
AC04	**Llanos de Chal**	**9.12 191**		Pn	10 31 54.5	-5.5
ETMB	**Extrema**	**9.77 17**	*e*P	**Pn**	**10 32 07.4**	**-1.5**
LCO	**Las Campanas**	**9.85 188**	Pn	Pn	10 32 05.2	-5.0
PTLB	**Pontes e Lacer**	**10.27 70**	*e*P	**Pn**	**10 32 14.5**	**-1.2**
VILB	**Vilhena**	**10.62 55**	*e*P	**Pn**	**10 32 19.7**	**-0.7**
GO04	**Tololo Observa**	**11.01 187**	Pn	Pn	10 32 20.5	-5.3
CO03	**El Pedregal**	**11.66 187**		Pn	10 32 29.1	-5.2
SAML	**Samuel**	**11.73 30**		**Pn**	**10 32 34.4**	**-0.9**
SAML	**Samuel**	**11.73 30**	*e*P	**Pn**	**10 32 32.8**	**-2.6**
CZSB	**Cruzeiro do Su**	**11.93 343**	*e*P	**Pn**	**10 32 34.6**	**-3.3**
AQDB	**Aquidauana**	**12.73 98**	*e*P	**Pn**	**10 32 48.5**	**+0.1**
CPUP	**Villa Florida**	**13.00 125**	P	**Pn**	**10 32 52.2**	**+0.2**
	comp=E,0.3nm,0.3s,baz=305,slow=15,SNR=4.0					
CPUP	**Villa Florida**	**13.00 125**		**Pn**	**10 32 52.7**	**+0.7**
CPUP	**Villa Florida**	**13.00 125**	*e*P	**Pn**	**10 32 53.1**	**+1.1**
VA03	**San Esteban**	**13.55 185**	Pn	**Pn**	**10 32 58.9**	**-0.3**
PEL	**Peldehue**	**13.94 185**	Pn	**Pn**	**10 33 03.5**	**-0.8**
MT02	**Curacav**	**14.10 187**		**Pn**	**10 33 04.1**	**-2.1**
MT05	**Renca**	**14.19 185**	Pn	**Pn**	**10 33 06.0**	**-1.5**
CLDB	**Colider**	**15.33 59**	*e*P	**Pn**	**10 33 21.5**	**-0.6**
ITQB	**Itaqui**	**15.43 135**	*e*P	**P**	**10 33 23.9**	**-1.5**
BO02	**Sierra Bellavi**	**15.58 185**		**Pn**	**10 33 24.5**	**-0.7**
PTGB	**Pitanga**	**16.77 112**	*e*P	**P**	**10 33 40.8**	**+0.4**
ARAG	**Araguaiana, MT**	**16.91 81**	*e*P	**P**	**10 33 41.8**	**-0.1**
PCMB	**Pacaembu**	**16.94 101**	*e*P	**Pn**	**10 33 41.4**	**-0.6**
BI02	**San Fabin de**	**17.48 186**		**Pn**	**10 33 48.6**	**+0.1**
ITAB	**Concordia**	**17.55 120**	*e*P	**Pn**	**10 33 49.5**	**+0.2**
ITRB	**Iturama**	**17.73 95**	*e*P	**P**	**10 33 50.9**	**-0.1**
MACA	**Manacapuru-AM**	**17.98 28**	*e*P	**P**	**10 33 52.6**	**-1.0**
NPGB	**Novo Progresso**	**18.06 50**	*e*P	**P**	**10 33 54.0**	**-0.6**
CPSB	**Cacapava Do Su**	**18.08 131**	*e*P	**Pn**	**10 33 55.5**	**-0.1**
SNDB	**Serra Nova Dou**	**18.64 70**	*e*P	**P**	**10 34 00.8**	**-0.1**
FRTB	**Fartura**	**18.71 106**	*e*P	**P**	**10 34 01.7**	**0.0**
PLTB	**Pedras Altas**	**18.77 135**	*e*P	**P**	**10 34 02.3**	**+0.1**
BB19B	**Bebedouro**	**19.46 99**	*e*P	**P**	**10 34 09.3**	**-0.5**
TIJ01	**Guaruva-PR**	**19.61 112**	*e*P	**P**	**10 34 11.7**	**+0.2**
ITTB	**Itaituba**	**19.73 43**	*e*P	**P**	**10 34 12.0**	**-0.8**
IPMB	**Ipameri, GO**	**19.89 90**	*e*P	**P**	**10 34 14.3**	**-0.3**
PTGA	**Pitinga**	**20.46 27**	P	**P**	**10 34 19.0**	**-1.6**
	comp=E,25nm,0.5s,baz=296,slow=23,SNR=80					
PTGA	**Pitinga**	**20.46 27**	P	**P**	**10 34 19.1**	**-1.6**
PTGA	**Pitinga**	**20.46 27**	*e*P	**P**	**10 34 19.1**	**-1.6**
RCLB	**Rio Claro- Sao**	**20.46 103**	*e*P	**P**	**10 34 20.0**	**-0.7**
BDFB	**Brasilia**	**20.48 83**	P	**P**	**10 34 20.1**	**-0.9**
	comp=E,7.4nm,0.6s,baz=260,slow=11,SNR=9.7					
BDFB	**Brasilia**	**20.48 83**	P	**P**	**10 34 20.5**	**-0.5**
TER01	**Tubaro-SC**	**20.50 121**	*e*P	**P**	**10 34 21.0**	**-0.1**
SPB	**Sao Paulo**	**20.68 106**	*e*P	**P**	**10 34 21.8**	**-1.2**
PEXB	**Peixe**	**21.28 74**	*e*P	**P**	**10 34 29.1**	**-0.4**
OTAV	**Otavalo**	**21.38 334**	P	**P**	**10 34 31.9**	**+1.0**
OTAV	**Otavalo**	**21.38 334**	*e*P	**P**	**10 34 33.6**	**+2.7**
OTAV	**Otavalo**	**21.38 334**	*e*P	**P**	**10 34 32.0**	**+1.0**
PLCA	**Paso Flores**	**21.48 183**	P	**P**	**10 34 33.5**	**+2.1**
	comp=E,8.8nm,0.9s,baz=4.1,slow=11,SNR=15					
PLCA	**Paso Flores**	**21.48 183**	P	**P**	**10 34 30.5**	**-1.0**
PLCA	**Paso Flores**	**21.48 183**	*e*P	**P**	**10 34 33.8**	**+2.4**
SOTA	**Rioblanco**	**22.45 340**	*e*P	**P**	**10 34 40.9**	**-1.3**
MALB	**Monte Alegre**	**22.59 42**	*e*P	**P**	**10 34 39.8**	**-3.4**
PRPB	**Parauapebas**	**22.86 58**	*e*P	**P**	**10 34 43.5**	**-2.4**
BSCB	**Bom Sucesso**	**22.96 99**	*e*P	**P**	**10 34 47.3**	**+0.3**
BOAV	**Boa Vista**	**23.09 22**	*e*P	**P**	**10 34 46.8**	**-1.3**
SMTB	**Santa Maria do**	**23.29 67**	*e*P	**P**	**10 34 49.5**	**-0.5**
ORTC	**Ortega, Tolima**	**23.75 345**	*e*P	**P**	**10 34 51.3**	**-2.9**
MAN01	**Angra dos Reis**	**23.78 103**	*e*P	**P**	**10 34 54.3**	**-0.1**
JANB	**Januaria**	**24.09 84**	*e*P	**P**	**10 34 56.8**	**-0.5**
YOTC	**Yotoco, Valle**	**24.11 342**	*e*P	**P**	**10 34 55.3**	**-2.2**
DIAM	**Diamantina, MG**	**24.14 92**	*e*P	**P**	**10 34 57.4**	**-0.5**
SDBA	**SAO DESIDERIO**	**24.28 77**	*e*P	**P**	**10 34 58.6**	**-0.5**
GUY2C	**Guyana, Caldas**	**25.04 345**	*e*P	**P**	**10 35 05.8**	**-0.6**
MCPB	**Macapa, AP**	**25.15 44**	*e*P	**P**	**10 35 05.8**	**-1.1**
RUSC	**La Rusia**	**25.25 351**	*e*P	**P**	**10 35 07.8**	**-0.5**
NORC	**Norcasia**	**25.26 347**	*e*P	**P**	**10 35 06.6**	**-1.3**
CBOC	**Ciudad Bolivar**	**25.82 344**	*e*P

DBIC	**Dimbokro**	**68.33**	**74**	P	**P**	**10 40 40.6**	**-1.1**	
	comp=Z,8.7nm,0.8s,baz=248,slow=8.0,SNR=9.8							
DBIC	**Dimbokro**	**68.33**	**74**	P	**P**	**10 40 41.5**	**-0.3**	
DBIC				IAmb	IAmb	10 40 41.7		
	comp=Z,9.4nm,0.8s							
DRLN	**Deer Lake**	**68.95**	**8**	P	**P**	**10 40 45.5**	**+0.7**	
DRLN				IAmb	IAmb	10 41 13.7		
	comp=Z,18nm,1.2s							
QSPA	**South Pole Qui**	**70.96**	**180**	P	**P**	**10 40 58.8**	**+1.6**	
QSPA				IAmb	IAmb	10 40 58.9		
	comp=Z,4.0nm,0.6s							
PDAR	**Pinedale Array**	**72.03**	**330**	P	**P**	**10 41 04.2**	**+0.2**	
	comp=Z,0.5nm,0.8s,baz=112,slow=7.2,SNR=4.1							
ULM	**Lac du Bonnet**	**73.08**	**342**	IAmb	IAmb	**10 41 09.1**	**-0.7**	
	comp=Z,3.5nm,0.4s,baz=162,slow=6.6,SNR=6.4							
ULM	**Lac du Bonnet**	**73.08**	**342**	IAmb	IAmb	10 41 14.8		
	comp=Z,4.1nm,0.5s							
RLMT	**Red Lodge**	**73.70**	**332**	P	**P**	**10 41 15.1**	**+1.2**	
RLMT				IAmb	IAmb	10 41 16.3		
	comp=Z,6.8nm,1.4s							
TOA0	**Torodi Ar. Sit**	**76.82**	**71**	P	**P**	**10 41 30.3**	**-1.8**	
TOA0				IAmb	IAmb	10 41 33.5		
	comp=Z,7.8nm,1.5s							
TORD	**Torodi Ar. Bea**	**76.82**	**71**	P	**P**	**10 41 30.6**	**-1.5**	
	comp=Z,1.3nm,0.5s,baz=250,slow=5.2,SNR=16							
TORD	**Torodi Ar. Bea**	**76.82**	**71**	P	**P**	**10 41 30.8**	**-1.3**	
VNDA	**Vanda**	**79.05**	**190**	P	**P**	**10 41 44.9**	**+1.5**	
	comp=Z,0.7nm,0.6s,baz=112,slow=7.2,SNR=5.1							
SUR	**Sutherland**	**79.93**	**121**	P	**P**	**10 41 50.0**	**+0.7**	
SUR				IAmb	IAmb	10 42 07.0		
	comp=Z,18nm,1.1s							
FCC	**Fort Churchill**	**80.36**	**347**	P	**P**	**10 41 50.8**	**+0.3**	
BOSA	**Boshof**	**84.72**	**118**	P	**P**	**10 42 13.7**	**-0.5**	
	comp=Z,2.6nm,0.9s,baz=273,slow=5.8,SNR=4.5							
BOSA	**Boshof**	**84.72**	**118**	P	**P**	**10 42 14.3**	**+0.1**	
BOSA				IAmb	IAmb	10 42 42.7		
	comp=Z,6.9nm,1.2s							
YKA	**Yellowknife Ar**	**88.97**	**341**	P	**P**	**10 42 33.8**	**+0.2**	
	comp=Z,4.9nm,0.8s,baz=134,slow=5.0,SNR=88							
YKA				pP	**pP**	**10 43 03.2**	**+0.7**	
	comp=Z,2.0nm,0.7s,baz=134,slow=5.1,SNR=8.1							
ASAR	**Alice Springs**	**131.81**	**209**	PKP	**PKPdf**	**10 48 52.8**	**-0.2**	
	comp=Z,0.6nm,0.5s,baz=137,slow=1.7,SNR=15							
WRA	**Warramunga Arr**	**134.78**	**212**	PKP	**PKPdf**	**10 48 56.9**	**-1.6**	
	comp=Z,0.3nm,0.5s,baz=226,slow=1.4,SNR=5.5							
WRA	**Warramunga Arr**	**134.78**	**212**		**PKPdf**	**10 48 58.5**	**0.0**	
ZALV	**Zalesovo Beam**	**139.98**	**24**	PKP	**PKPdf**	**10 49 07.1**	**+0.1**	
	comp=Z,2.3nm,0.4s,baz=276,slow=2.7,SNR=7.8							
MKAR	**Makanchi Array**	**143.90**	**34**	PKP	PKPab	10 49 12.1	+0.4	
	comp=Z,0.6nm,0.5s,baz=275,slow=2.5,SNR=9.9							
KLR	**Kul'dur**	**145.66**	**335**	PKPbc	**PKPbc**	**10 49 18.0**	**+0.3**	
	comp=Z,1.7nm,0.5s,baz=73,slow=5.1,SNR=12							
KLR				pPKPbc	pPKPab	10 49 48.3	+0.8	
	comp=Z,4.5nm,0.7s,baz=67,slow=3.8,SNR=8.6							
USRK	**Ussuriysk Ar.**	**149.45**	**329**	PKPbc	**PKPbc**	**10 49 28.7**	**+0.5**	
	comp=Z,4.2nm,0.8s,baz=300,slow=1.1,SNR=10							
USRK				pPKPbc	**pPKPbc**	**10 49 59.8**	**+1.5**	
	comp=Z,3.0nm,0.9s,baz=22,slow=1.7,SNR=4.5							
MJAR	**Matsushiro Arr**	**150.44**	**311**	PKPbc	**PKPbc**	**10 49 30.8**	**-0.1**	
	comp=Z,3.1nm,0.7s,baz=101,slow=1.8,SNR=6.3							
MJAR	**Matsushiro Arr**	**150.44**	**311**		**PKiKP**	**10 49 31.5**	**-0.1**	
SONM	**Songino Array**	**151.22**	**6**	PKP	**PKPdf**	**10 49 27.6**	**+1.1**	
	comp=Z,0.8nm,0.7s,baz=280,slow=0.9,SNR=5.4							
SONM				PKPbc	**PKiKP**	**10 49 33.0**	**0.0**	
	comp=Z,7.5nm,0.8s,baz=303,slow=0.9,SNR=33							
SONM				pPKPbc	**pPKPbc**	**10 50 04.0**	**+1.3**	
	comp=Z,1.5nm,0.6s,baz=350,slow=3.2,SNR=4.1							
SONM	**Songino Array**	**151.22**	**6**	PKPbc	**PKiKP**	**10 49 33.3**	**+0.3**	

IDC 08 10:33:08.9±1.6, 54°.69N×83°.79E, h0km, mb1 3.1/3, mb1mx3.1/52, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=16.4km s-min=9.3km az=17.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.96**	**140**	*i*		10 38 20.0	
	baz=319,slow=333,SNR=1.1						
ZALV	**Zalesovo Beam**	**0.96**	**140**	Pg	Pg	10 33 27.0	-0.2
	2.4nm,0.3s,baz=326,slow=18,SNR=17						
ZALV				Lg	Lg	10 33 40.9	
	9.4nm,0.3s,baz=323,slow=28,SNR=12						
KURBB	**Kurchatov Arra**	**5.18**	**220**	Pn	Pn	10 34 28.4	+0.8
	0.1nm,0.3s,baz=65,slow=35,SNR=1.8						
KURBB				Lg	Lg	10 35 51.9	
	0.1nm,0.3s,baz=170,slow=29,SNR=4.1						
MKAR	**Makanchi Array**	**7.96**	**187**	Pn	Pn	10 35 05.5	-0.3
	0.1nm,0.3s,baz=14,slow=12,SNR=4.5						
MKAR				Lg	Lg	10 37 21.0	
	0.1nm,0.3s,baz=349,slow=25,SNR=1.7						
BVAR	**Borovoye Array**	**8.10**	**264**	Pn	Pn	10 35 06.8	-0.8
	0.3nm,0.3s,baz=95,slow=7.7,SNR=4.7						
BVAR				Sn	Sn	10 36 36.1	-3.7
	0.1nm,0.3s,baz=255,slow=35,SNR=1.8						

*IDC **08** 10:42:27.6±0.9, 29°.34S×178°.04W, h108km±13km, mb3.7/4, mb1 3.8/4, mb1mx3.4/32, mbtmp4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.6/24, Error ellipse: s-maj=65.9km s-min=32.3km az=3.0*

ISC 08 10:42:26.5±1.2, 29°.80S±0°.09×178°.0W±0°.2, h100km, n22, σ1§86/21, mb4.0/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.55**	**4**	P	**Pn**	**10 42 42.9**	**+0.2**
	1μm,0.3s,baz=86,slow=23,SNR=51						
RAO				S	**Sn**	**10 42 54.9**	**+0.2**
	784nm,0.3s,baz=62,slow=22,SNR=9.5						
URZ	**Urewera**	**9.38**	**205**	P	**Pn**	**10 44 37.6**	**-1.1**
	0.3nm,0.3s,baz=122,slow=23,SNR=6.4						
URZ				S	**Sn**	**10 46 19.5**	**-2.7**
	0.8nm,0.3s,baz=302,slow=23,SNR=2.0						
MTHZ	**Maungataniwha**	**10.00**	**204**	P	**Sn**	**10 46 39.4**	**+1.9**
WHHZ	**Waihua**	**10.07**	**202**	P	**Sn**	**10 46 43.0**	**+3.9**
ARHZ	**Aropaoanui**	**10.31**	**202**	P	**Sn**	**10 46 47.4**	**+2.4**
MCHZ	**McNeill Hill**	**10.58**	**203**	P	**Sn**	**10 46 53.3**	**+1.9**
KWHZ	**Kaweka Forest**	**10.66**	**204**	P	**Sn**	**10 46 54.1**	**+0.6**
KAHZ	**Kahuranaki**	**10.84**	**202**	P	**Sn**	**10 46 56.3**	**-1.5**
KRHZ	**Kereru**	**10.87**	**204**	P	**Sn**	**10 46 58.4**	**-0.2**
PXZ	**Pawanui**	**11.05**	**201**	P	**Sn**	**10 47 00.5**	**-2.5**
PNHZ	**Pukenui**	**11.17**	**204**	P	**Sn**	**10 47 04.1**	**-1.8**
CTA	**Charters Tower**	**33.74**	**278**	P	**P**	**10 48 58.9**	**+0.2**
	1.9nm,0.5s,baz=132,slow=19,SNR=1.6						
STKA	**Stephens Creek**	**34.65**	**256**	P	**P**	**10 49 08.2**	**+1.8**
	1.5nm,0.5s,baz=104,slow=13,SNR=4.3						
ASAR	**Alice Springs**	**43.18**	**266**	P	**P**	**10 50 16.5**	**-1.2**
	0.6nm,0.5s,baz=109,slow=7.9,SNR=7.2						
ASAR				PcP	**PcP**	**10 52 07.1**	**+1.6**
	0.5nm,0.7s,baz=124,slow=4.0,SNR=4.4						
WRA	**Warramunga Arr**	**44.11**	**272**	P	**P**	**10 50 23.9**	**-1.3**
	1.2nm,0.6s,baz=110,slow=8.0,SNR=9.9						
NWAO	**Narrogin (SRO)**	**54.51**	**249**	LR	LR	11 11 11.4	
	comp=Z,3nm,20.5s,baz=113,slow=32						
H03S2	**Juan Fernandez**	**80.77**	**124**	T	T	12 24 02.1	
	baz=239,slow=74,SNR=4.2						
H03S1	**Juan Fernandez**	**80.78**	**124**	T	T	12 24 04.0	
	baz=239,slow=74,SNR=4.1						
H03S3	**Juan Fernandez**	**80.78**	**124**	T	T	12 24 03.1	
	baz=239,slow=74,SNR=5.4						
BVAR	**Borovoye Array**	**126.00**	**316**	PKP	**PKPdf**	**11 01 15.5**	**-0.9**
	0.3nm,0.4s,baz=106,slow=42,SNR=2.4						
FINES	**FINESS Array B**	**144.59**	**340**	PKP	**PKPab**	**11 01 47.8**	**-1.6**
	2.1nm,0.7s,baz=76,slow=3.4,SNR=5.8						
TORD	**Torodi Ar. Bea**	**163.43**	**179**	PKPab	**PKPab**	**11 03 10.6**	**+1.2**
	0.9nm,0.9s,baz=177,slow=3.4,SNR=2.7						

*IDC **08** 10:44:11.5±1.4, 5°.24S×152°.89E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/44, mbtmp4.0/10, ML1.7/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/34, Error ellipse: s-maj=49.7km s-min=20.3km az=118.0*

ISC 08 10:44:17.2±1.2, 5°.3S±0°.2×152°.8E±0°.2, h37km, n15, σ0§88/13, mb3.8/9, MS3.1/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.95**	**234**	Pn	**Pn**	**10 45 57.4**	**+0.8**
	0.7nm,0.3s,baz=32,slow=14,SNR=4.4						
PMG				Sn	**Sn**	**10 47 13.5**	**-0.9**
	2.2nm,0.3s,baz=140,slow=20,SNR=7.9						
HNR	**Honiara**	**8.17**	**121**	LR	LR	10 49 31.4	
	comp=Z,54nm,19.1s,baz=322,slow=39						
DZM	**Mont Dzumac**	**21.25**	**143**	LR	LR	10 57 03.1	
	comp=Z,70nm,18.2s,baz=265,slow=36						
WRA	**Warramunga Arr**	**23.14**	**229**	P	**P**	**10 49 20.4**	**-0.1**
	1.2nm,0.7s,baz=54,slow=10.0,SNR=5.1						
ASAR	**Alice Springs**	**25.81**	**223**	P	**P**	**10 49 45.2**	**+0.1**
	0.9nm,0.8s,baz=61,slow=8.8,SNR=11						
ASAR				LR	LR	10 58 41.5	
	comp=Z,38nm,19.3s,baz=49,slow=34						
STKA	**Stephens Creek**	**28.46**	**200**	P	**P**	**10 50 08.5**	**-0.3**
	0.5nm,0.2s,baz=50,slow=6.5,SNR=1.5						
STKA				LR	LR	11 01 21.6	
	comp=Z,60nm,18.9s,baz=25,slow=36						
FITZ	**Fitzroy Crossi**	**29.45**	**242**	P	**P**	**10 50 18.6**	**+0.9**
	0.9nm,0.5s,baz=256,slow=18,SNR=1.4						
CMAR	**Chiang Mai Arr**	**58.11**	**295**	P	**P**	**10 54 06.5**	**-1.1**
	0.7nm,0.3s,baz=127,slow=6.9,SNR=5.0						
ZALV	**Zalesovo Beam**	**81.58**	**326**	P	**P**	**10 56 30.9**	**-0.2**
	0.4nm,0.4s,baz=151,slow=6.3,SNR=1.7						
ILAR	**Eielson Array**	**82.60**	**22**	P	**P**	**10 56 35.9**	**-0.3**
	1.2nm,0.7s,baz=246,slow=5.6,SNR=14						
AAK	**Ala-Archa**	**85.03**	**313**	P	**P**	**10 56 50.3**	**+0.9**
	0.8nm,0.4s,baz=158,slow=9.0,SNR=3.7						
MAW	**Mawson**	**85.13**	**203**	LR	LR	11 31 22.9	
	comp=Z,48nm,19.8s,baz=236,slow=33						
BVAR	**Borovoye Array**	**89.65**	**323**	P	**P**	**10 57 10.8**	**-0.4**
	0.6nm,0.7s,baz=141,slow=17,SNR=3.7						
MDT	**Midelt**	**145.47**	**325**	PKPbc	**PKPab**	**11 03 53.6**	**+1.3**
	2.2nm,0.7s,baz=111,slow=7.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.49**	**287**	PKPbc	**PKPbc**	**11 04 04.9**	**-1.1**
	0.9nm,0.7s,baz=339,slow=2.1,SNR=3.8						

*SOME **08** 10:57:14.1, 41°.17N×83°.95E, h0km*
*NNC **08** 10:57:14.9±1.9, 41°.73N×84°.32E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=19.9km s-min=11.1km az=175.0*

ISC 08 10:57:10.1±2.7, 41°.3N±0°.1×84°.21E±0°.09, h10km, n28, σ1§57/41, 5C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.99**	**300**	*eP*	**Pb**	**10 58 20.6**	**-0.1**
	18nm,0.7s						
SHLS				*eS*	**Sb**	**10 59 08.7**	**-0.4**
	34nm,0.4s						
SHLS	**Shalkode**	**3.99**	**300**	Pg	**Pb**	**10 58 20.6**	**-0.1**
	18nm,0.7s						
SHLS				Lg	Lg	10 59 08.7	
	34nm,0.4s						
PDGK	**Podgornoye**	**4.06**	**302**	Pg	**Pg**	**10 58 27.2**	**-0.6**
PDGK				Lg	Lg	10 59 19.8	
PDGK	**Podgornoye**	**4.06**	**302**	⇑Pn	**Pn**	**10 58 15.3**	**+2.9**
	4.2nm,0.7s						
PDGK				⇓Pg	**Pg**	**10 58 27.8**	**0.0**
	20nm,0.8s						
PDGK				⇑Lg	Lg	10 59 17.2	
	45nm,0.7s						
UZB	**Uzunbulak**	**4.28**	**298**	*eP*	**Pg**	**10 58 31.2**	**-0.9**
	8.6nm,0.5s						
UZB				*eS*	**Sg**	**10 59 26.8**	**-0.8**
	25nm,0.8s						
UZB	**Uzunbulak**	**4.28**	**298**	Pg	**Pg**	**10 58 31.2**	**-0.9**
	8.6nm,0.5s						
UZB				Lg	Lg	10 59 26.8	
	25nm,0.8s						
KPKS	**Kokpek**	**4.64**	**300**	*eP*	**Pg**	**10 58 39.0**	**0.0**
	7.3nm,0.2s						
KPKS				*eS*	**Sg**	**10 59 40.1**	**+1.0**
	34nm,0.8s						
SATY	**Saty**	**4.67**	**294**	*eP*	**Pg**	**10 58 38.6**	**-0.9**
	5.7nm,0.6s						
SATY				*eS*	**Sg**	**10 59 39.3**	**-0.6**
	16nm,0.4s						
SATY	**Saty**	**4.67**	**294**	Pg	**Pg**	**10 58 38.6**	**-0.9**
	5.7nm,0.6s						
SATY				Lg	Lg	10 59 39.3	
	16nm,0.4s						
ARXS	**Arharly**	**5.54**	**304**	*eP*	**Pg**	**10 58 56.4**	**+0.3**
	8.3nm,0.5s						
ARXS				*eS*	**Sg**	**11 00 10.3**	**+2.4**
	20nm,0.6s						
ARXS	**Arharly**	**5.54**	**304**	Pg	**Pg**	**10 58 56.4**	**+0.3**
	8.3nm,0.5s						
ARXS				Lg	Lg	11 00 10.3	
	20nm,0.6s						
KOTS	**Kotyrbulak**	**5.62**	**293**	*eP*	**Pg**	**10 58 56.4**	**-1.3**
	12nm,0.5s						
KOTS				*eS*	**Sg**	**11 00 09.7**	**-0.7**
	20nm,0.8s						
KOTS	**Kotyrbulak**	**5.62**	**293**	Pg	**Pg**	**10 58 56.4**	**-1.3**
	12nm,0.5s						
KOTS				Lg	Lg	11 00 09.7	
	20nm,0.8s						
MDOK	**Medeo**	**5.64**	**292**	*eP*	**Pg**	**10 58 56.5**	**-1.7**
	4.2nm,0.9s						
MDOK				*eS*	**Sg**	**11 00 10.1**	**-1.1**
	9.4nm,0.8s						
MDOK	**Medeo**	**5.64**	**292**	Pn	**Pn**	**10 58 37.2**	**+3.0**
	9.9nm,1.0s						
MDOK				Lg	Lg	11 00 12.7	
	24nm,0.8s						
MDOK	**Medeo**	**5.64**	**292**	Pg	**Pg**	**10 58 56.4**	**-1.7**
	4.2nm,0.9s						
MDOK				Lg	Lg	11 00 10.1	
	9.4nm,0.8s						
TNSS	**Tian-Shan**	**5.68**	**290**	*eP*	**Pg**	**10 58 58.6**	**-0.3**
	2.6nm,0.6s						
TNSS				*eS*	**Sg**	**11 00 13.6**	**+1.3**
	7.1nm,0.7s						
TNSS	**Tian-Shan**	**5.68**	**290**	Pg	**Pg**	**10 58 58.6**	**-0.3**
	2.6nm,0.6s						
TNSS				Lg	Lg	11 00 13.6	
	7.1nm,0.7s						
MK31	**Makanchi Array**	**5.68**	**347**	⇑Pn	**Pn**	**10 58 35.7**	**+1.1**
	0.7nm,0.5s,baz=150,slow=14,SNR=7.7						
MK31				⇑Pg	**Pb**	**10 58 47.3**	**-2.0**
	3.6nm,0.6s,baz=156,slow=17,SNR=7.3						
MK31				⇓Lg	Lg	11 00 03.5	
	11nm,0.6s,baz=159,slow=27,SNR=3.9						
IZV	**Izvestkoviy**	**5.91**	**290**	*eP*	**Pg**	**10 59 00.4**	**-2.9**
	2.7nm,0.8s						
IZV				*eS*	**Sg**	**11 00 16.4**	**-3.5**
	7.0nm,0.4s						
IZV	**Izvestkoviy**	**5.91**	**290**	Pg	**Pg**	**10 59 00.4**	**-2.9**
	2.7nm,0.8s						
IZV				Lg	Lg	11 00 16.4	
	7.0nm,0.4s						
KTBS	**Karatobe**	**6.07**	**296**	*eP*	**Pg**	**10 59 04.6**	**-1.8**
	3.3nm,0.9s						
KTBS				*eS*	**Sg**	**11 00 24.6**	**-0.4**
	14nm,1.1s						
KTBS	**Karatobe**	**6.07**	**296**	Pg	**Pg**	**10 59 04.6**	**-1.8**
	3.3nm,0.9s						
KTBS				Lg	Lg	11 00 24.6	
	14nm,1.1s						
KST	**Kastek**	**6.38**	**289**	*eP*	**Pg**	**10 59 10.4**	**-1.9**
	3.9nm,0.8s						
KST				*eS*	**Sg**	**11 00 34.1**	**-0.7**
	8.4nm,0.7s						
KST	**Kastek**	**6.38**	**289**	Pg	**Pg**	**10 59 10.4**	**-1.9**
	3.9nm,0.8s						
KST				Lg	Lg	11 00 34.1	
	8.4nm,0.7s						
DGS	**Degeres**	**6.56**	**290**	*eP*	**Pg**	**10 59 14.7**	**-1.1**
	1.5nm,0.4s						
DGS				*eS*	**Sg**	**11 00 41.5**	**+0.8**
	7.3nm,0.7s						
DGS	**Degeres**	**6.56**	**290**	Pg	**Pg**	**10 59 14.7**	**-1.1**
	1.5nm,0.4s						
DGS				Lg	Lg	11 00 40.7	
	7.3nm,0.7s						
KURBB	**Kurchatov Arra**	**10.14**	**339**	⇑Lg	Lg	11 02 25.7	
	10nm,0.7s						

IDC 08 11:06:16.3±2.6, 49°.33S×109°.99E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.5/23, mbtmp3.8/2, Error ellipse: s-maj=176.8km s-min=52.7km az=126.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.74**	**14**	T	T	11 24 13.9	
	baz=191,slow=74,SNR=25						
H01W1	**Cape Leeuwin H**	**14.75**	**14**	T	T	11 24 13.4	
	baz=191,slow=74,SNR=22						
H01W3	**Cape Leeuwin H**	**14.76**	**13**	T	T	11 24 18.3	
	baz=191,slow=74,SNR=21						
ASAR	**Alice Springs**	**31.76**	**45**	P	P	11 12 42.1	-0.1
	0.7nm,0.8s,baz=213,slow=7.7,SNR=6.8						
WRA	**Warramunga Arr**	**35.20**	**42**	P	P	11 13 12.2	0.0
	1.4nm,0.7s,baz=207,slow=8.6,SNR=8.3						
PDAR	**Pinedale Array**	**152.03**	**88**	PKPbc	PKiKP	11 26 13.8	+0.3
	0.4nm,0.9s,baz=27,slow=1.0,SNR=2.5						
YKA	**Yellowknife Ar**	**152.39**	**45**	PKPbc	PKPbc	11 26 12.2	-0.8
	0.5nm,0.9s,baz=281,slow=1.8,SNR=7.1						

*ATH **08** 11:37:33.3, 38°.32N×20°.47E, h15km±1km, ML2.5/7, Error ellipse: s-maj=1.9km s-min=0.6km az=272.0*
*THE **08** 11:37:33.3, 38°.32N×20°.48E, h13km±1km, ML2.5/4, Error ellipse: s-maj=1.1km s-min=0.3km az=262.0*

ISC 08 11:37:33.0±0.9, 38°.32N±0°.02×20°.47E±0°.04, h16km±5km, n40, σ0§29/67, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	**0.04**	**186**	P	**Pg**	**11 37 35.7**	**-0.2**
KEF5				S	**Sg**	**11 37 37.2**	**-0.6**
KEF5	**Kardakata, Kep**	**0.04**	**186**	P	**Pg**	**11 37 35.7**	**-0.2**
KEF5				S	**Sg**	**11 37 37.2**	**-0.6**
KEF4	**Livadi, Kephal**	**0.07**	**212**	P	**Pg**	**11 37 36.2**	**0.0**
KEF4				S	**Sg**	**11 37 38.5**	**+0.4**
KEF4	**Livadi, Kephal**	**0.07**	**212**	P	**Pg**	**11 37 36.1**	**0.0**
KEF4				S	**Sg**	**11 37 38.2**	**+0.1**
DMLN	**Damoulianata-K**	**0.11**	**224**	P	**Pg**	**11 37 36.7**	**+0.1**
DMLN				S	**Sg**	**11 37 38.9**	**0.0**
DMLN	**Damoulianata-K**	**0.11**	**224**	P	**Pg**	**11 37 36.7**	**+0.1**
DMLN				S	**Sg**	**11 37 38.8**	**0.0**
LXRA	**Lixouri, Kepha**	**0.12**	**194**	P	**Pg**	**11 37 36.9**	**+0.2**
LXRA				S	**Sb**	**11 37 39.9**	**+0.2**
ARGA	**Argostoli. Kep**	**0.14**	**178**	P	**Pg**	**11 37 36.8**	**-0.1**
ARGA				S	**Sg**	**11 37 39.6**	**+0.2**
KEF3	**Kipouria, Keph**	**0.15**	**220**	P	**Pg**	**11 37 36.7**	**-0.3**
KEF3				S	**Sg**	**11 37 39.5**	**-0.2**
KEF3	**Kipouria, Keph**	**0.15**	**220**	P	**Pg**	**11 37 36.8**	**-0.3**
KEF3				S	**Sg**	**11 37 39.5**	**-0.2**
FSK	**Fiskardo**	**0.16**	**26**	P	**Pg**	**11 37 37.1**	**0.0**
FSK				S	**Sg**	**11 37 40.1**	**+0.3**
FSK				AML	AML	11 37 40.2	
	comp=N,4779μm,0.1s						
FSK				AML	AML	11 37 40.3	
	comp=E,15219μm,0.2s						
VLS	**Valsamata**	**0.17**	**147**	P	**Pg**	**11 37 37.1**	**-0.2**
VLS				S	**Sg**	**11 37 40.1**	**-0.1**
VLS				AML	AML	11 37 40.1	
	comp=E,10264μm,0.3s						
VLS				AML	AML	11 37 41.5	
	comp=N,6022μm,0.4s						
VLS	**Valsamata**	**0.17**	**147**	P	**Pg**	**11 37 37.1**	**-0.2**
VLS				S	**Sg**	**11 37 40.0**	**-0.1**
	comp=N,4μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.22**	**157**	P	**Pg**	**11 37 37.9**	**-0.1**
PSDA				S	**Sg**	**11 37 41.8**	**+0.3**
PSDA	**Pessada-Kefalo**	**0.22**	**157**	P	**Pg**	**11 37 38.0**	**-0.1**
PSDA				S	**Sg**	**11 37 41.6**	**+0.1**
EVGI	**Lefkada island**	**0.33**	**25**	P	**Pg**	**11 37 40.0**	**0.0**
EVGI				S	**Sb**	**11 37 45.5**	**-0.2**
EVGI	**Lefkada island**	**0.33**	**25**	P	**Pg**	**11 37 40.0**	**0.0**
EVGI				S	**Sg**	**11 37 45.4**	**+0.7**
DRAG	**Dragano-Lefkad**	**0.37**	**12**	P	**Pg**	**11 37 40.6**	**-0.1**
DRAG				S	**Sg**	**11 37 45.9**	**0.0**
DRAG	**Dragano-Lefkad**	**0.37**	**12**	P	**Pg**	**11 37 40.6**	**-0.1**
DRAG				S	**Sb**	**11 37 46.7**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.43**	**24**	P	**Pg**	**11 37 41.5**	**-0.2**
NYDR				S	**Sg**	**11 37 47.3**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.43**	**24**	P	**Pg**	**11 37 41.7**	**0.0**
NYDR				S	**Sb**	**11 37 48.4**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.47**	**161**	P	**Pg**	**11 37 42.2**	**-0.1**
VLMS				S	**Sg**	**11 37 48.6**	**-0.1**
VLMS				AML	AML	11 37 52.9	
	comp=N,1914μm,0.3s						
VLMS				AML	AML	11 38 00.1	
	comp=E,1002μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.47**	**161**	P	**Pg**	**11 37 42.3**	**-0.1**
VLMS				S	**Sb**	**11 37 49.5**	**-0.1**
	comp=E,712nm,0.3s						
LKD2	**Lefkada island**	**0.49**	**17**	P	**Pg**	**11 37 42.8**	**0.0**
LKD2	**Lefkada island**	**0.49**	**17**	P	**Pg**	**11 37 42.8**	**0.0**
TSLK	**Tsoukalades, L**	**0.52**	**16**	P	**Pb**	**11 37 44.0**	**+0.1**
TSLK	**Tsoukalades, L**	**0.52**	**16**	P	**Pg**	**11 37 42.9**	**-0.6**
PDO	**Prodromos**	**0.62**	**63**	P	**Pg**	**11 37 45.1**	**-0.1**
PDO				S	**Sb**	**11 37 54.7**	**+0.6**
PDO				AML	AML	11 37 58.2	
	comp=E,852μm,0.4s						
PDO				AML	AML	11 38 03.8	
	comp=N,701μm,0.6s						
PDO	**Prodromos**	**0.62**	**63**	P	**Pg**	**11 37 45.2**	**-0.1**
PDO				S	**Sb**	**11 37 54.0**	**-0.1**
	comp=

EIDS				IAmb	IAmb	11 49 10.1	
	comp=Z,10nm,1.2s						
AS31	**Alice Springs**	**21.38**	**215**	P	**P**	**11 49 10.8**	**+0.3**
AS31				IAmb	IAmb	11 49 12.5	
	comp=Z,3.5nm,0.5s						
ASAR	**Alice Springs**	**21.38**	**215**	P	**P**	**11 49 10.5**	**0.0**
	comp=Z,3.9nm,0.4s,baz=46,slow=9.3,SNR=153						
ASAR				S	**S**	**11 53 05.1**	**+2.7**
	comp=Z,1.1nm,0.9s,baz=17,slow=26,SNR=5.4						
ASAR	**Alice Springs**	**21.38**	**215**	P	**P**	**11 49 10.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**23.94**	**239**	P	**P**	**11 49 35.5**	**-0.3**
	comp=Z,12nm,0.5s,baz=52,slow=12,SNR=56						
FITZ	**Fitzroy Crossi**	**23.94**	**239**	P	**P**	**11 49 35.2**	**-0.7**
ARMA	**Armidale**	**24.36**	**170**	P	**P**	**11 49 43.0**	**+3.3**
STKA	**Stephens Creek**	**25.94**	**191**	P	**P**	**11 49 54.1**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=9.1,slow=9.1,SNR=9.2						
STKA	**Stephens Creek**	**25.94**	**191**	P	**P**	**11 49 54.4**	**+0.6**
BBOO	**Buckleboo**	**28.28**	**200**	P	**P**	**11 50 16.2**	**+1.4**
PSA00	**Pilbara Seismi**	**30.36**	**237**	P	**P**	**11 50 33.9**	**+0.5**
PSA00				IAmb	IAmb	11 50 59.6	
	comp=Z,10nm,1.2s						
CBJI	**Citeko**	**39.94**	**268**	P	**P**	**11 51 58.3**	**+2.6**
KSRS	**Korea Array**	**47.06**	**339**	P	**P**	**11 52 52.4**	**0.0**
	comp=Z,0.7nm,0.8s,baz=152,slow=10,SNR=4.6						
BSI	**Banda Aceh**	**52.97**	**282**	P	**P**	**11 53 39.2**	**+1.6**
CMAR	**Chiang Mai Arr**	**53.43**	**298**	P	**P**	**11 53 41.4**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=120,slow=5.4,SNR=2.3						
CMAR	**Chiang Mai Arr**	**53.43**	**298**	P	**P**	**11 53 39.3**	**-1.6**
VNDA	**Vanda**	**71.60**	**177**	P	**P**	**11 55 40.0**	**-0.8**
VNDA				IAmb	IAmb	11 55 43.0	
	comp=Z,5.5nm,1.4s						
MKAR	**Makanchi Array**	**77.76**	**321**	P	**P**	**11 56 16.8**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=111,slow=5.2,SNR=2.7						
MKAR	**Makanchi Array**	**77.76**	**321**	P	**P**	**11 56 17.1**	**+0.1**
ZALV	**Zalesovo Beam**	**79.30**	**328**	P	**P**	**11 56 24.1**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=110,slow=7.8,SNR=2.0						
IMAR	**Indian Mountai**	**83.77**	**21**	P	**P**	**11 56 50.1**	**+1.5**
ILAR	**Eielson Array**	**85.75**	**23**	P	**P**	**11 56 58.1**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=257,slow=4.7,SNR=7.6						
ILAR	**Eielson Array**	**85.75**	**23**	P	**P**	**11 56 58.5**	**0.0**
TORD	**Torodi Ar. Bea**	**145.21**	**284**	PKPbc	**PKiKP**	**12 03 58.9**	**-2.8**
	comp=Z,8.0nm,0.8s,baz=78,slow=3.7,SNR=30						
TORD	**Torodi Ar. Bea**	**145.21**	**284**		**PKiKP**	**12 03 59.6**	**-2.2**

DNK 08 12:03:23.4±0.3, 56°22.N×14°53.E, h0km, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DEL	**Delary**	**0.45**	**305**	P		Pg	12 03 31.5	-0.4
DEL				*i* P		Pb	12 03 31.6	-2.6
DEL				*i* S		Sg	12 03 37.5	-0.2
DEL				S		Sg	12 03 37.5	-0.2
DEL	**Delary**	**0.45**	**305**	P		Pg	12 03 31.5	-0.4
DEL				S		Sg	12 03 37.5	-0.2
BLEU	**Blekinge**	**0.72**	**83**	P		Pg	12 03 36.5	-0.7
BLEU				*e*P		Pb	12 03 36.6	-2.2
BLEU	**Blekinge**	**0.72**	**83**	P		Pg	12 03 36.5	-0.7
VXJU	**Vaexsjoe**	**0.74**	**18**	P		Pg	12 03 36.9	-0.7
VXJU	**Vaexsjoe**	**0.74**	**18**	P		Pg	12 03 36.9	-0.7
LUNU	**Lund**	**0.85**	**227**	P		Pg	12 03 38.9	-0.7
LUNU				*e*P		Pb	12 03 39.0	-2.0
LUNU	**Lund**	**0.85**	**227**	P		Pg	12 03 38.9	-0.7
BJUU	**Bjuv**	**0.86**	**261**	P		Pg	12 03 39.2	-0.6
BJUU	**Bjuv**	**0.86**	**261**	P		Pg	12 03 39.2	-0.6
BSD	**Bornholm Skovb**	**1.13**	**169**	*e*P		Pg	12 03 43.8	-1.2
GNOU	**Gnosjoe**	**1.16**	**339**	P		Pg	12 03 44.4	-1.2
GNOU	**Gnosjoe**	**1.16**	**339**	P		Pg	12 03 44.4	-1.2
FABU	**Falkenberg**	**1.27**	**309**	P		Pg	12 03 46.6	-1.2
FABU	**Falkenberg**	**1.27**	**309**	P		Pg	12 03 46.6	-1.2
OSKU	**Oskarshamn**	**1.31**	**41**	P		Pg	12 03 47.1	-1.3
OSKU	**Oskarshamn**	**1.31**	**41**	P		Pg	12 03 47.1	-1.3
BORU	**Boraas**	**1.72**	**326**	P		Pn	12 03 54.0	-0.6
BORU	**Boraas**	**1.72**	**326**	P		Pn	12 03 54.0	-0.6
BYXU	**Byxelkrok**	**1.74**	**51**	P		Pn	12 03 54.7	0.0
BYXU	**Byxelkrok**	**1.74**	**51**	P		Pn	12 03 54.7	0.0

*DNK **08** 12:03:29.9±2.0, 55°47.N×16°36.E, h0km, ML1.5(UPP), Explosion*

UPP 08 12:03:47.2±0.1, 56°62.N×15°99.E, h0km, ML1.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BLEU	**Blekinge**	**0.33**	**198**	P		Pg	12 03 53.6	+0.1
BLEU				S		Sg	12 03 58.1	+0.4
BLEU	**Blekinge**	**0.33**	**198**	P		Pg	12 03 53.6	+0.1
BLEU				S		Sg	12 03 58.1	+0.4
OSKU	**Oskarshamn**	**0.58**	**6**	P		Pg	12 03 58.1	-0.2
OSKU	**Oskarshamn**	**0.58**	**6**	P		Pg	12 03 58.1	-0.2
VXJU	**Vaexsjoe**	**0.66**	**298**	P		Pg	12 03 59.6	-0.2
VXJU	**Vaexsjoe**	**0.66**	**298**	P		Pg	12 03 59.6	-0.2
BYXU	**Byxelkrok**	**0.87**	**39**	P		Pg	12 04 03.6	-0.3
BYXU	**Byxelkrok**	**0.87**	**39**	P		Pg	12 04 03.6	-0.3
VSTU	**Vaestervik**	**1.09**	**16**	P		Pg	12 04 07.5	-0.5
VSTU	**Vaestervik**	**1.09**	**16**	P		Pg	12 04 07.5	-0.5
LNKU	**Linkoeping**	**1.63**	**351**	P		Pn	12 04 17.0	-0.1
LNKU	**Linkoeping**	**1.63**	**351**	P		Pn	12 04 17.0	-0.1

JMA 08 12:17:34.9, 33°17.N×131°32.E, h9km±1km, M0.7, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JBEP	**Beppuamama**	**0.18**	**24**	P		Pg	12 17 39.1	+0.4
JBEP				*e*S		Sg	12 17 42.0	+0.6

JMA 08 12:19:37.5, 36°42.N×138°06.E, h8km±1km, M2.1, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.04**	**112**	P		Pg	12 19 39.2	0.0
JNG				S		Sg	12 19 40.5	+0.1
MAT	**Matsushiro**	**0.17**	**44**	⇓P		Pg	12 19 40.9	-0.2
MAT				S		Sg	12 19 43.5	0.0
MAT	**Matsushiro**	**0.17**	**44**	P		Pg	12 19 40.9	-0.2
MAT				S		Sg	12 19 43.5	0.0
JGK	**Kuni**	**0.49**	**73**	P		Pg	12 19 47.2	+0.2
JNT	**Takato**	**0.55**	**173**	P		Pg	12 19 47.9	-0.2
JNT				S		Sg	12 19 55.2	-0.1
JRY	**Ryogami san**	**0.79**	**120**	P		Pg	12 19 51.9	-0.8
JRY				S		Sg	12 20 02.2	-0.8

*NOU **08** 12:47:04.4, 14°65S×167°52.E, h149km, mb4.6, Vanuatu Islands*
*NEIC **08** 12:47:04.4±1.4, 14°63S±0°09×167°4E±0°1, h144km±2km, mb4.4/43, Error ellipse: s-maj=20.8km s-min=13.0km az=99.0*
*IDC **08** 12:47:04.6±0.7, 14°64S×167°39E, h148km±5km, mb4.0/18, mb1 4.2/20, mb1mx4.1/27, mbtmp4.4/20, MS3.3/3, Ms1 3.3/3, ms1mx2.7/39, Error ellipse: s-maj=16.6km s-min=10.6km az=108.0*

ISC 08 12:47:04.9±0.4, 14°65S±0°05×167°34E±0°07, h150km, n100, σ1§26/113, mb4.4/36, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.81**	**189**	Pn		**Pn**	**12 47 27.1**	**-1.1**
SANVU				Sn		**Sn**	**12 47 44.0**	**-2.0**
SANVU	**Saraoutou**	**0.81**	**189**	P		**Pn**	**12 47 27.6**	**-0.6**
DVP	**Devils Point**	**3.17**	**165**	P		**Pn**	**12 47 54.4**	**0.0**
LIFNC	**LIFOU**	**6.10**	**181**	P		**Pn**	**12 48 31.6**	**-1.3**
	135nm,0.9s							
KOUNC	**Koumac, New Ca**	**6.55**	**206**	P		**Pn**	**12 48 39.7**	**+0.7**
	197nm,0.9s							
MARNC	**Mare, Loyalty**	**6.83**	**175**	P		**Pn**	**12 48 41.3**	**-1.4**
	1.2nm,1.0s							
YATNC	**Mamie plateau,**	**7.39**	**183**	P		**Pn**	**12 48 49.3**	**-0.8**
	93nm,0.8s							
DZM	**Mont Dzumac**	**7.43**	**186**	P		**Pn**	**12 48 50.8**	**-0.1**
	6.0nm,0.3s,baz=328,slow=9.7,SNR=68							
DZM				S		**Sn**	**12 50 14.9**	**+0.9**
	0.5nm,0.3s,baz=308,slow=17,SNR=1.0							
DZM				LR		LR	12 51 05.5	
	comp=Z,179nm,18.0s,baz=65,slow=32							
HNR	**Honiara**	**8.89**	**305**	P		**Pn**	**12 49 11.3**	**+1.1**
	27nm,0.3s,baz=218,slow=6.5,SNR=5.8							
HNR	**Honiara**	**8.89**	**305**	P		**Pn**	**12 49 12.6**	**+2.3**
EIDS	**Eidsvold**	**18.61**	**233**	P		**Pn**	**12 51 13.1**	**+0.1**
CTA	**Charters Tower**	**20.83**	**252**	P		**P**	**12 51 35.9**	**+1.0**
	14nm,1.0s,baz=78,slow=12,SNR=10							
CTAO	**Charters Tower**	**20.83**	**252**	P		**P**	**12 51 36.1**	**+1.2**
CTAO				IAmb		IAmb	12 51 37.5	
	comp=Z,31nm,1.3s							
OUZ	**Omahuta**	**21.25**	**166**	P		**P**	**12 51 42.5**	**+3.4**
OUZ				IAmb		IAmb	12 51 47.7	
	comp=Z,25nm,1.3s							
ARMA	**Armidale**	**21.34**	**220**	P		**P**	**12 51 41.9**	**+1.5**
ARMA				IAmb		IAmb	12 51 43.4	
	comp=Z,26nm,1.1s							
COEN	**Coen**	**23.42**	**269**	P		**P**	**12 52 01.9**	**+1.1**
URZ	**Urewera**	**25.06**	**162**	P		**P**	**12 52 15.5**	**+0.2**
URZ				IAmb		IAmb	12 52 19.8	
	comp=Z,22nm,1.3s							
STKA	**Stephens Creek**	**29.10**	**229**	P		**P**	**12 52 52.0**	**+0.4**
	comp=Z,6.9nm,0.7s,baz=53,slow=9.1,SNR=20							
STKA				PcP		**PcP**	**12 55 54.7**	**-1.1**
	comp=Z,6.3nm,0.7s,baz=29,slow=4.8,SNR=9.5							
STKA	**Stephens Creek**	**29.10**	**229**	P		**P**	**12 52 51.8**	**+0.2**
TOO	**Toolangi**	**29.96**	**216**	P		**P**	**12 52 58.4**	**-0.7**
WR0	**Warramunga Arr**	**31.72**	**256**	P		**P**	**12 53 13.8**	**-1.0**
WB0	**Warramunga Arr**	**31.85**	**256**	P		**P**	**12 53 15.2**	**-0.7**
WB0				IAmb		IAmb	12 53 15.4	
	comp=Z,7.8nm,1.1s							
WB2	**Warramunga Arr**	**31.90**	**256**	P		**P**	**12 53 15.8**	**-0.6**
WB2				IAmb		IAmb	12 53 16.0	
	comp=Z,11nm,1.3s							
WRA	**Warramunga Arr**	**31.91**	**256**	P		**P**	**12 53 15.1**	**-1.4**
	comp=Z,1.9nm,0.6s,baz=85,slow=9.0,SNR=16							
WRA				pP		**pP**	**12 53 49.5**	**+2.4**
	comp=Z,0.7nm,0.5s,baz=81,slow=6.7,SNR=2.2							
WRA				S		**S**	**12 58 12.4**	**-4.2**
	comp=Z,0.7nm,1.0s,baz=74,slow=16,SNR=2.0							
WRA	**Warramunga Arr**	**31.91**	**256**	P		**P**	**12 53 15.2**	**-1.3**
AS31	**Alice Springs**	**32.76**	**249**	P		**P**	**12 53 23.0**	**-0.9**
ASAR	**Alice Springs**	**32.76**	**249**	P		**P**	**12 53 22.9**	**-1.0**
	comp=Z,3.6nm,0.4s,baz=77,slow=9.0,SNR=119							
ASAR				pP		**pP**	**12 53 57.1**	**+2.7**
	comp=Z,2.4nm,0.7s,baz=77,slow=9.4,SNR=2.8							
ASAR				PcP		**PcP**	**12 56 05.2**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=88,slow=3.4,SNR=8.0							
ASAR				S		**S**	**12 58 25.8**	**-4.1**
	comp=Z,1.0nm,0.9s,baz=68,slow=18,SNR=6.1							
ASAR				ScP		**ScP**	**12 59 37.5**	**+1.6**
	comp=Z,1.6nm,0.9s,baz=102,slow=3.3,SNR=8.6							
ASAR				LR		LR	13 05 27.7	
	comp=Z,45nm,18.4s,baz=188,slow=34							
ASAR	**Alice Springs**	**32.76**	**249**	P		**P**	**12 53 22.6**	**-1.3**
BBOO	**Buckleboo**	**33.68**	**232**	P		**P**	**12 53 32.6**	**+0.9**
FORT	**Forrest**	**39.40**	**239**	P		**P**	**12 54 20.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**40.09**	**259**	P		**P**	**12 54 26.3**	**+0.2**
FITZ				IAmb		IAmb	12 54 27.0	
	comp=Z,7.9nm,1.1s							
PPTF	**Pamatai, Papee**	**41.45**	**100**	P		**P**	**12 54 39.6**	**+2.4**
PSA00	**Pilbara Seismi**	**45.52**	**254**	P		**P**	**12 55 09.1**	**-0.7**
PSA00				IAmb		IAmb	12 55 09.8	
	comp=Z,6.5nm,0.8s							
NWAO	**Narrogin (SRO)**	**48.85**	**239**	P		**P**	**12 55 35.1**	**-0.3**
MORW	**Morawa**	**49.36**	**244**	P		**P**	**12 55 39.2**	**-0.2**
MORW				IAmb		IAmb	12 56 02.6	
	comp=Z,12nm,1.3s							
MJAR	**Matsushiro Arr**	**57.86**	**332**	P		**P**	**12 56 40.2**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=163,slow=8.7,SNR=1.9							
MJAR				pP		**pP**	**12 57 15.9**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=173,slow=8.7,SNR=4.4							
CISI	**Cisompet, Garu**	**58.70**	**270**	P		**P**	**12 56 47.5**	**+0.1**
VNDA	**Vanda**	**62.95**	**181**	P		**P**	**12 57 14.8**	**-0.1**
	comp=Z,3.8nm,0.6s,baz=358,slow=7.4,SNR=23							
VNDA	**Vanda**	**62.95**	**181**	P		**P**	**12 57 15.1**	**+0.2**
VNDA				IAmb		IAmb	12 57 17.0	
	comp=Z,4.6nm,0.7s							
SBA	**Scott Base**	**63.22**	**180**	P		**P**	**12 57 18.1**	**+1.4**
CASY	**Casey**	**63.63**	**202**	P		**P**	**12 57 20.1**	**+0.5**
KSRS	**Korea Array**	**63.71**	**326**	P		**P**	**12 57 20.2**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=116,slow=8.5,SNR=4.5							
KSAR	**Wonju Array Be**	**63.72**	**326**	P		**P**	**12 57 22.0**	**+1.4**
USRK	**Ussuriysk Ar.**	**66.84**	**333**	P		**P**	**12 57 40.6**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=151,slow=4.4,SNR=4.4							
USRK	**Ussuriysk Ar.**	**66.84**	**333**	P		**P**	**12 57 41.0**	**+0.4**
PEA0B	**Petropavlovsk-**	**67.98**	**354**	P		**P**	**12 57 48.3**	**+0.8**
PETK	**Petropavlovsk-**	**67.98**	**354**	P		**P**	**12 57 48.1**	**+0.6**
	comp=Z,11nm,0.8s,baz=140,slow=4.9,SNR=17							
PETK	**Petropavlovsk-**	**67.98**	**354**	P		**P**	**12 57 48.6**	**+1.0**
KLR	**Kul'dur**	**70.96**	**336**	LR		LR	13 29 26.1	
	comp=Z,16nm,18.6s,baz=338,slow=36							
CMAR	**Chiang Mai Arr**	**74.97**	**294**	P		**P**	**12 58 31.1**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=125,slow=4.4,SNR=9.7							
CMAR				pP		**pP**	**12 59 06.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=104,slow=5.2,SNR=1.9							
MA2	**Magadan**	**75.17**	**351**	P		**P**	**12 58 30.2**	**-0.2**
MA2				IAmb		IAmb	12 58 31.2	
	comp=Z,6.4nm,0.8s							
QSPA	**South Pole Qui**	**75.38**	**180**	P		**P**	**12 58 31.1**	**-0.7**
QSPA				IAmb		IAmb	12 58 32.7	
	comp=Z,8.1nm,0.8s							
HHC	**Hu-ho-hao-te**	**75.56**	**320**	*e*P		**P**	**12 58 35.0**	**+1.8**
HHC				pmax		pmax		
	comp=Z,16nm,0.8s							
HHC				pmax		pmax		
	comp=Z,97nm,6.9s							
HIA	**Hailar**	**76.25**	**330**	P		**P**	**12 58 34.6**	**-2.2**
HIA				IAmb		IAmb	12 59 04.2	
	comp=Z,4.1nm,0.6s							
YAK	**Yakutsk**	**81.97**	**343**	P		**P**	**12 59 07.5**	**-0.1**
MAW	**Mawson**	**81.99**	**202**	P		**P**	**12 59 08.3**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=148,slow=7.2,SNR=4.5							
MAW	**Mawson**	**81.99**	**202**	P		**P**	**12 59 07.6**	**-0.1**
ULN	**Ulaanbaatar**	**82.11**	**324**	P		**P**	**12 59 08.6**	**-0.3**
BILL	**Bilibino**	**82.46**	**360**	P		**P**	**12 59 10.1**	**+0.1**
BILL				IAmb		IAmb	12 59 11.4	
	comp=Z,5.3nm,0.8s							
SONM	**Songino Array**	**82.47**	**324**	P		**P**	**12 59 11.0**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=133,slow=5.4,SNR=13							
SONM				pP		**pP**	**12 59 47.1**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=128,slow=4.5,SNR=4.8							
SONM	**Songino Array**	**82.47**	**324**	P		**P**	**12 59 10.9**	**+0.2**
GTA	**Gaotai**	**82.66**	**314**	⇓P		**P**	**12 59 13.2**	**+1.3**
GTA				pP		pP	12 59 49.0	+0.1
GTA				pmax		pmax		
	comp=Z,5.0nm,1.3s							
SML	**Sawmill**	**83.82**	**20**	P		**P**	**12 59 17.5**	**+0.3**
SCM	**Sheep Creek Mo**	**84.16**	**20**	P		**P**	**12 59 18.8**	**-0.1**
KTH	**Kantishna Hill**	**84.33**	**17**	P		**P**	**12 59 19.1**	**-0.7**
KTH				IAmb		IAmb	12 59 21.0	
	comp=Z,6.8nm,1.0s							
KLU	**Klutina**	**84.39**	**21**	P		**P**	**12 59 20.1**	**0.0**
KLU				IAmb		IAmb	12 59 45.4	
	comp=Z,9.3nm,1.1s							
BPAW	**Bear Paw Mtn.**	**84.73**	**17**	P		**P**	**12 59 21.4**	**-0.3**
N25K	**Chitina, Valde**	**84.92**	**21**	P		**P**	**12 59 23.1**	**+0.3**
IMAR	**Indian Mountai**	**85.47**	**15**	P		**P**	**12 59 25.9**	**+0.6**
WRH	**Wood River Hil**	**85.85**	**18**	P		**P**	**12 59 26.7**	**-0.5**
WRH				IAmb		IAmb	12 59 32.8	
	comp=Z,14nm,1.5s							
IL31		**86.43**	**18**	P		**P**	**12 59 30.2**	**+0.2**
IL31				IAmb		IAmb	12 59 30.5	
	comp=Z,3.9nm,0.7s							
ILAR	**Eielson Array**	**86.43**	**18**	P		**P**	**12 59 28.8**	**-1.3**
	comp=Z,2.9nm,0.7s,baz=236,slow=5.6,SNR=27							
ILAR				pP		**pP**	**13 00 06.2**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=251,slow=4.1,SNR=1.6							
ILAR	**Eielson Array**	**86.43**	**18**	P		**P**	**12 59 29.3**	**-0.7**
K05A	**Summer Lake**	**86.95**	**44**	P		**P**	**12 59 33.5**	**+0.2**
NVAR	**Mina Array Bea**	**87.17**	**49**	P		**P**	**12 59 33.9**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=213,slow=5.1,SNR=6.8							
SPR3	**Spring Creek 3**	**90.28**	**50**	P		**P**	**12 59 49.5**	**+0.2**
SPR3				IAmb		IAmb	12 59 50.5	
	comp=Z,2.4nm,0.8s							
PSUT	**Pine Spring**	**90.49**	**50**	P		**P**	**12 59 49.6**	**-0.5**
PSUT				IAmb		IAmb	12 59 51.8	
	comp=Z,2.8nm,0.9s							
WMQ	**Urumqi**	**92.72**	**315**	*e*P		**P**	**13 00 01.3**	**+1.2**
SNAA	**Sanae**	**93.64**	**183**	P		**P**	**13 00 02.8**	**-1.1**
VNA3	**Neumayer Olymp**	**94.30**	**181**	P		**P**	**13 00 05.6**	**-1.3**
VNA2	**Neumayer--Watz**	**94.57**	**182**	P		**P**	**13 00 07.2**	**-0.9**
	baz=187,slow=4.6							
VNA1	**Neumayer--Stat**	**94.86**	**181**	P		**P**	**13 00 08.2**	**-1.2**
TXAR	**Lajitas Array**	**96.18**	**61**	P		**P**	**13 00 16.6**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=224,slow=5.2,SNR=4.1							
MKAR	**Makanchi Array**	**97.19**	**316**	P		Pdif	13 00 20.6	0.0
	comp=Z,1.6nm,0.7s,baz=93,slow=6.3,SNR=13							
ZALV	**Zalesovo Beam**	**97.36**	**324**	P		**P**	**13 00 20.4**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=118,slow=6.0,SNR=8.6							
YKA	**Yellowknife Ar**	**97.44**	**27**	P		**P**	**13 00 20.0**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=252,slow=4.4,SNR=11							
ARCES	**ARCESS Array B**	**120.19**	**345**	PKP		**PKPdf**	**13 05 35.7**	**-1.8**
	comp=Z,1.8nm,0.3s,baz=70,slow=1.9,SNR=49							
ARCES	**ARCESS Array B**	**120.19**	**345**			**PKPdf**	**13 05 36.5**	**-1.0**
BOSA	**Boshof**	**123.48**	**220**	PKP		**PKiKP**	**13 05 45.6**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=332,slow=2.9,SNR=1.6							
FINES	**FINESS Array B**	**125.67**	**338**	PKP		**PKiKP**	**13 05 48.2**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=75,slow=2.2,SNR=10							
FINES	**FINESS Array B**	**125.67**	**338**			**PKiKP**	**13 05 48.4**	**-0.2**
NOA	**NORSAR Array B**	**130.56**	**345**	PKP		**PKPdf**	**13 05 57.7**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=30,slow=2.0,SNR=5.7							
AKASG	**Malin Array Be**	**130.70**	**326**	PKP		**PKiKP**	**13 05 58.5**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=42,slow=2.6,SNR=1.9							
KHC	**Kasperske Hory**	**139.44**	**333**	*e*PKP		**PKPdf**	**13 06 09.0**	**-5.5**
GERES	**GERESS Array B**	**139.60**	**333**	PKP		**PKPdf**	**13 06 15.0**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=210,slow=26,SNR=5.9							
GERES	**GERESS Array B**	**139.60**	**333**			**PKPdf**	**13 06 15.6**	**+0.7**
KEST	**Kesra**	**151.19**	**321**	PKPbc		**PKiKP**	**13 06 41.3**	**-0.2**
	comp=Z,8.7nm,0.6s,baz=180,slow=1.5,SNR=11							
KEST	**Kesra**	**151.19**	**321**			**PKiKP**	**13 06 42.0**	**+0.5**
ESDC	**Sonseca Array**	**153.92**	**345**	PKPbc		**PKiKP**	**13 06 47.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=158,slow=24,SNR=5.0							
ESDC				PKPab		**PKPab**	**13 07 00.9**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=18,slow=3.3,SNR=6.7							
TORD	**Torodi Ar. Bea**	**165.98**	**266**	PKP		**PKPdf**	**13 06 52.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=114,slow=35,SNR=2.4							
TORD				PKPab		**PKPab**	**13 07 52.7**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=110,slow=2.7,SNR=7.5							

*IDC **08** 13:16:00.4±2.2, 4°33N×122°98E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.2/55, mbtmp3.5/3, Error ellipse: s-maj=291.7km s-min=26.9km az=63.0*
*MAN **08** 13:16:21.3, 6°29N×126°27E, h117km, MS3.0*

ISC 08 13:16:13.9±1.3, 6°1N±0°1×126°6E±0°1, h150km, n8, σ2§69/11, mb3.4/3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.84**	**273**	*e*P		**Pn**	**13 16 41.3**	**+3.9**
DDMP				*e*S		**Sn**	**13 16 56.2**	**+0.9**
MATI	**Mati**	**0.92**	**341**	*e*P		**Pn**	**13 16 40.9**	**+2.8**
MATI				*e*S		**Sn**	**13 16 56.9**	**+0.4**
KCP	**Kidapawan**	**1.73**	**303**	⇑*e*P		**Pn**	**13 16 48.7**	**+2.6**
KCP				*i* S		**Sn**	**13 17 07.8**	**-2.9**
SKMP	**Bagumbayan, Su**	**2.05**	**283**	*e*P		**Pn**	**13 16 51.6**	**+1.9**
CGP	**Cagayan de Oro**	**3.01**	**322**	⇓*e*P		**Sn**	**13 17 35.7**	**-2.4**
WRA	**Warramunga Arr**	**26.95**	**164**	P		**P**	**13 21 40.4**	**-1.2**
	0.4nm,0.3s,baz=333,slow=9.8,SNR=13							
ASAR	**Alice Springs**	**30.41**	**167**	P		**P**	**13 22 09.5**	**-2.7**
	0.2nm,0.3s,baz=337,slow=7.8,SNR=13							
MKAR	**Makanchi Array**	**55.56**	**324**	P		**P**	**13 25 33.4**	**-0.4**
	0.2nm,0.3s,baz=127,slow=7.9,SNR=4.3							

*ATH **08** 13:31:12.4, 35°12N×28°04E, h52km±15km, ML3.2/4, Error ellipse: s-maj=17.9km s-min=2.9km az=329.0*
*ISK **08** 13:31:13.1, 35°02N×27°77E

KARP AML AML 13 33 53.5
comp=E,68nm,0.9s
KARP S Sn **13 33 53.6 -0.4**
ARG Arkhangelos 1.00 18 P Pn **13 33 50.9 -1.1**
ARG S Sb **13 34 04.1 -1.5**
ARG AML AML 13 34 06.1
comp=E,33503µm,0.6s
ARG AML AML 13 34 06.5
comp=N,44998µm,0.9s
ARG Arkhangelos 1.00 18 P Pn **13 33 50.7 -1.4**
ARG S Sb **13 34 03.9 -1.7**
comp=N,20µm,0.8s
ARG Arkhangelos 1.00 18 P Pn **13 33 50.9 -1.1**
ARG S Sb **13 34 04.0 -1.5**
ARG Arkhangelos 1.00 18 PG Pn **13 33 50.9 -1.1**
ARG Arkhangelos 1.00 18 ⇑P Pn **13 33 50.5 -1.6**
ARG S Sn **13 34 05.7 +0.5**
ZKR Zakros 1.25 263 P Pb **13 33 58.0 +1.0**
ZKR AML AML 13 34 23.6
comp=N,9496µm,0.8s
ZKR AML AML 13 34 29.0
comp=E,14613µm,0.8s
ZKR Zakros 1.25 263 P Pb **13 33 57.7 +0.7**
ZKR S Sb **13 34 16.1 +3.3**
comp=E,6µm,0.8s
ZKR Zakros 1.25 263 PN Pb **13 33 57.3 +0.3**
ZKR Zakros 1.25 263 P Pb **13 33 56.6 -0.4**
ZKR AML AML 13 34 22.5
comp=E,9.3nm,0.8s
ZKR AML AML 13 34 27.4
comp=E,14nm,0.8s
NIS1 Nisyros Isl. 1.41 341 P Pn **13 33 58.3 +0.6**
NIS1 S Sb **13 34 16.8 -0.4**
comp=E,25µm,0.7s
NIS1 Nisyros Isl. 1.41 341 PN Pn **13 33 58.2 +0.6**
NIS1 SN Sb **13 34 16.5 -0.7**
NISR Nisiros 1.43 340 P Pn **13 33 57.9 0.0**
NISR AML AML 13 34 21.7
comp=N,19579µm,0.7s
NISR AML AML 13 34 26.0
comp=E,28842µm,0.7s
NISR Nisiros 1.43 340 P Pb **13 33 58.8 -1.2**
NISR S Sb **13 34 17.7 -0.1**
comp=E,12µm,0.8s
TURN Turunc 1.56 15 ⇓P Pn **13 34 00.3 +0.5**
TURN *i* S Sb **13 34 21.7 +0.1**
TURN Turunc 1.56 15 PN Pn **13 33 59.6 -0.2**
TURN SN Sn **13 34 19.1 +0.1**
DALY Dalyan (Mula) 1.72 25 *i* P Pn **13 34 02.2 +0.3**
DALY *i* S Sb **13 34 27.9 +1.9**
DALY Dalyan (Mula) 1.72 25 PN Pn **13 34 01.9 0.0**
DALY SN Sn **13 34 22.8 0.0**
NPS Neapolis 1.74 270 P Pb **13 34 06.3 +1.0**
NPS AML AML 13 34 38.4
comp=N,13861µm,0.8s
NPS AML AML 13 34 41.9
comp=E,11727µm,0.7s
NPS Neapolis 1.74 270 P Pb **13 34 05.8 +0.5**
NPS S Sb **13 34 28.1 +1.4**
comp=E,6µm,0.7s
NPS Neapolis 1.74 270 P Pb **13 34 06.2 +1.0**
KSL Kastellorizon 1.74 59 P Pn **13 34 02.3 +0.1**
KSL Kastellorizon 1.74 59 ⇑P Pn **13 34 02.4 +0.1**
FETY Fethiye 1.75 38 P Pn **13 34 01.8 -0.7**
FETY S Sn **13 34 24.2 +0.5**
FETY Fethiye 1.75 38 PN Pn **13 34 01.7 -0.7**
FETY SN Sn **13 34 23.5 -0.2**
AKAS Kas 1.80 57 ⇑*i* P Pn **13 34 02.3 -0.9**
AKAS *i* S Sb 13 34 41.7 +13
AKAS Kas 1.80 57 PN Pn **13 34 02.5 -0.7**
AKAS SN Sn **13 34 23.3 -1.8**
AKAS Kas 1.80 57 Pn Pn **13 34 02.3 -0.9**
BDRM Kayabasi 1.81 353 ⇓P Pn **13 34 03.2 -0.1**
BDRM *i* S Sn **13 34 26.0 +0.8**
BODT Bodrum 1.82 349 P Pn **13 34 02.4 -1.0**
BODT Bodrum 1.82 349 PN Pn **13 34 02.7 -0.7**
BODT SN Sn **13 34 26.1 +0.6**
YKAV Yalikavak-Bodr 1.89 349 PN Pn **13 34 04.4 +0.1**
YER Yerkesik 1.92 13 P Pn **13 34 04.9 +0.2**
YER S Sn **13 34 27.9 0.0**
YER Yerkesik 1.92 13 P Pn **13 34 04.7 0.0**
YER S Sn **13 34 28.1 +0.2**
YER Yerkesik 1.92 13 PN Pn **13 34 04.8 0.0**
YER SN Sn **13 34 28.2 +0.3**
MULA Mugla, Merkez- 2.04 13 ⇓*i* P Pn **13 34 07.1 +0.6**
MULA *i* S Sb **13 34 37.0 +1.5**
SANT Santorini 2.15 301 P Pn **13 34 09.7 +1.7**
SANT AML AML 13 34 49.2
comp=N,3556µm,0.7s
SANT AML AML 13 34 51.9
comp=E,12212µm,0.7s
SANT Santorini 2.15 301 P Pn **13 34 09.8 +1.8**
SANT Santorini 2.15 301 ⇑P Pn **13 34 09.3 +1.3**
SANT Santorini 2.15 301 ⇑*i* P Pn **13 34 09.3 +1.3**
SANT *i* S Sb **13 34 37.9 -0.8**
SANT Santorini 2.15 301 PN Pn **13 34 09.5 +1.5**
SANT SN Sn **13 34 35.7 +2.0**
SANT Santorini 2.15 301 Pn Pn **13 34 09.2 +1.3**
THR8 Santorini-Mono 2.16 302 P Pn **13 34 09.6 +1.6**
THR6 Thira Island, 2.19 300 P Pn **13 34 10.3 +1.9**
THR6 Thira Island, 2.19 300 P Pn **13 34 10.1 +1.7**
SNT1 Gialos, Santor 2.20 302 P Pn **13 34 10.0 +1.5**
THR7 Fira-Santorini 2.20 302 P Pn **13 34 10.7 +2.1**
THR7 Fira-Santorini 2.20 302 P Pb **13 34 10.9 -2.2**
THR3 Thira Island, 2.21 302 P Pn **13 34 09.8 +1.1**
THR3 Thira Island, 2.21 302 P Pn **13 34 10.7 +2.0**
THR9 Santorini-Faro 2.22 300 P Pn **13 34 10.4 +1.6**
THR9 Santorini-Faro 2.22 300 P Pn **13 34 10.8 +2.0**
DDIM Aydin, Didim 2.22 350 ⇓*i* P Pn **13 34 08.9 0.0**
DDIM *i* S Sb **13 34 40.6 +0.1**
CAEL Denizli, Camel 2.25 34 *i* P Pn **13 34 09.6 +0.2**
CAEL *i* S Sb 13 34 50.6 +9.0
THR5 Thira Island, 2.25 301 P Pn **13 34 11.5 +2.3**
THR5 Thira Island, 2.25 301 P Pn **13 34 11.0 +1.7**
ELL Elmali 2.30 49 P Pn **13 34 10.8 +0.7**
ELL Elmali 2.30 49 PN Pn **13 34 09.7 -0.4**
ELL SN Sn **13 34 35.7 -1.7**
ELL Elmali 2.30 49 Pn **13 34 10.8 +0.7**
ELL Elmali 2.30 49 P Pn **13 34 10.0 0.0**
IDI Anoyia 2.33 271 Pn Pn **13 34 12.7 +2.3**
comp=E,37nm,0.3s,baz=180,slow=4.6,SNR=23
IDI Sn Sb **13 34 41.9 -1.8**
comp=E,54nm,0.3s,baz=91,slow=7.5,SNR=4.2
IDI Anoyia 2.33 271 P Pb **13 34 13.2 -2.2**
IDI AML AML 13 35 00.8
comp=N,2876µm,1.1s
IDI AML AML 13 35 05.6
comp=E,2449µm,0.6s
IDI Anoyia 2.33 271 P Pb **13 34 13.5 -1.9**
IDI Anoyia 2.33 271 ⇑P Pb **13 34 13.1 -2.2**
IDI Anoyia 2.33 271 PN Pn **13 34 11.3 +0.9**
AKUM Antalya-Kumluc 2.37 63 *i* P Pn **13 34 10.5 +0.2**
AKUM *i* S Sb 13 35 08.3 +24
TAVA DENIZLI_Tavas 2.39 23 ⇓*i* P Pn **13 34 11.5 +0.2**
TAVA *i* S Sb **13 34 48.9 +3.4**
AYDN Tasoluk 2.39 3 ⇓*i* P Pn **13 34 11.4 +0.2**
AYDN *i* S Sb **13 34 46.5 +1.0**
SIVA Sivas 2.41 265 P Pb **13 34 15.3 -1.4**
SIVA AML AML 13 35 03.1
comp=N,5381µm,0.6s
SIVA AML AML 13 35 19.6
comp=E,10012µm,0.8s
SIVA Sivas 2.41 265 P Pb **13 34 15.0 -1.7**
GOLH Golhisar 2.46 36 ⇓*i* P Pn **13 34 13.2 +0.9**
GOLH *i* S Sb **13 34 55.0 +7.5**
GCAM G?zelcaml? 2.46 351 ⇓*i* P Pn **13 34 13.5 +0.3**
GCAM *i* S Sb **13 34 53.6 +6.2**
GCAM G?zelcaml? 2.46 351 PN Pn **13 34 13.1 +1.0**
APE Apeiranthos 2.53 316 P Pn **13 34 14.2 +1.0**
APE AML AML 13 34 46.5
comp=N,5767µm,0.9s
APE AML AML 13 34 47.1
comp=E,3914µm,0.6s
APE Apeiranthos 2.53 316 P Pn **13 34 14.2 +1.0**
APE S Sn **13 34 44.5 +1.4**
comp=E,2µm,0.7s
APE Apeiranthos 2.53 316 ⇓P Pn **13 34 14.2 +1.0**
APE ⇑S Sn **13 34 44.4 +1.4**
APE Apeiranthos 2.53 316 ⇑*i* P Pn **13 34 14.2 +1.0**
APE *i* S Sn **13 34 44.4 +1.3**
APE Apeiranthos 2.53 316 *i* P Pn **13 34 13.9 +0.7**
APE Apeiranthos 2.53 316 PN Pn **13 34 14.2 +1.0**

APE SN Sn **13 34 44.9 +1.8**
APE Apeiranthos 2.53 316 ⇑P Pn **13 34 14.2 +1.0**
SMG Samos 2.54 344 P Pn **13 34 13.7 +0.4**
SMG Samos 2.54 344 P Pn **13 34 13.7 +0.4**
AYDB Zeytinkoy-Aydi 2.68 3 PN Pn **13 34 15.9 +0.7**
KORT Korkueli 2.73 50 *i* P Pn **13 34 18.3 +2.2**
KORT *i* S Sb 13 35 12.8 +17
KORT Korkueli 2.73 50 PN Pn **13 34 16.0 0.0**
DGB zmir 2.86 346 ⇓*i* P Pn **13 34 17.8 +0.2**
DGB *i* S Sb **13 34 59.8 +0.8**
ANTB Antalya 2.87 55 PN Pn **13 34 17.9 +0.1**
VAM Vamos 2.89 274 P Pb **13 34 22.3 -2.7**
VAM Vamos 2.89 274 P Pb **13 34 21.7 -3.2**
VAM Vamos 2.89 274 P Pb **13 34 22.2 -2.7**
GVD Gavdhos 3.02 263 PN Pn **13 34 21.2 +1.3**
MHLO Agia Marina, M 3.05 299 P Pn **13 34 23.9 +3.6**
BRDR BURDUR-Merkez 3.06 37 *i* P Pn **13 34 21.8 +1.3**
BRDR *i* S Sb 13 35 14.8 +10
BUCA Burdur, Bucak- 3.07 47 *i* P Pn **13 34 21.7 +1.1**
BUCA *i* S Sb 13 35 18.9 +14
IMMV Iera Moni Meta 3.07 275 P Pn **13 34 24.1 +3.5**
IMMV Iera Moni Meta 3.07 275 P Pn **13 34 23.8 +3.2**
IMMV Iera Moni Meta 3.07 275 PN Pn **13 34 22.6 +2.0**
BCK Bucak 3.18 46 PN Pn **13 34 22.1 0.0**
URLA Izmir 3.22 344 ⇓*i* P Pn **13 34 21.9 -0.7**
URLA *i* S Sb **13 35 14.1 +4.8**
URLA Izmir 3.22 344 PN Pn **13 34 22.7 +0.1**
BASM Basmaki-Afyon 3.24 34 PN Pn **13 34 23.3 +0.4**
MANT Manisa 3.28 11 *i* P Pn **13 34 22.9 -0.8**
MANT *i* S Sb **13 35 17.6 +6.2**
MANT Manisa 3.28 11 Pn Pn **13 34 23.5 -0.2**
KULA Kula-Manisa 3.33 13 P Pn **13 34 23.7 -0.4**
KULA Kula-Manisa 3.33 13 PN Pn **13 34 24.7 +0.6**
CHOS Chios island 3.39 337 P Pn **13 34 26.0 +1.0**
CHOS Chios island 3.39 337 PN Pn **13 34 26.1 +1.0**
ISP Isparta 3.40 41 P Pn **13 34 24.9 -0.2**
ISP Isparta 3.40 41 PN Pn **13 34 25.2 +0.1**
ISP Isparta 3.40 41 Pn Pn **13 34 24.9 -0.2**
OSC1 CSNet OBS 1 3.42 120 P Pn **13 34 25.2 -0.1**
OSC1 S Sn **13 35 05.1 +0.3**
GOMA Golmarmara-Man 3.44 2 PN Pn **13 34 26.6 +1.0**
KEPZ Antalya-Kepez 3.53 61 ⇑*i* P Pn **13 34 27.9 +0.9**
KEPZ *i* S Sn **13 35 07.6 -0.1**
AKHS Akhisar 3.60 1 *i* P Pn **13 34 27.5 -0.4**
AKHS *i* S Sb **13 35 25.5 +5.1**
BAGO Egridir - ISPA 3.66 41 *i* P Pn **13 34 29.1 +0.4**
BAGO *i* S Sb 13 35 33.4 +11
ZEDA zmir-Bergama 3.73 352 *i* P Pn **13 34 29.5 -0.1**
ZEDA *i* S Sb **13 35 28.8 +4.9**
AKMS Akamas 3.78 92 P Pn **13 34 29.3 -1.0**
AKMS AML AML 13 35 13.9
comp=E,3.5nm,0.9s
AKMS AML AML 13 35 13.9
comp=E,3.5nm,0.9s
AKMS S Sn **13 35 15.1 +1.3**
AKMS AML AML 13 35 16.3
comp=E,5.2nm,0.7s
AKMS AML AML 13 35 16.3
comp=E,5.2nm,0.7s
GAZI Gazipasa 3.85 74 *i* P Pn **13 34 30.3 -1.0**
GAZI *i* S Sn **13 35 12.5 -3.0**
GAZI Gazipasa 3.85 74 PN Pn **13 34 30.7 -0.6**
DKL Dikili 3.85 350 PN Pn **13 34 31.9 +0.6**
SEDI Konya, Seydise 3.91 55 ⇑*i* P Pn **13 34 34.2 +2.0**
SEDI *i* S Sn **13 35 19.3 +2.2**
KTHA Kythira Island 3.93 286 P Pn **13 34 35.2 +2.9**
SHAP Saphane-Kutahy 3.93 17 PN Pn **13 34 33.1 +0.6**
SIMA Simav-Kutahya 3.94 14 PN Pn **13 34 31.9 -0.6**
SHUT Suhut-Afyon 3.98 34 PN Pn **13 34 33.3 +0.1**
ALFC Alefka 3.98 90 ⇑P Pn **13 34 32.7 -0.5**
ALFC AML AML 13 35 18.4
comp=E,4.2nm,1.3s
ALFC AML AML 13 35 18.4
comp=E,4.2nm,1.3s
ALFC AML AML 13 35 19.0
comp=E,6.2nm,0.8s
ALFC AML AML 13 35 19.0
comp=E,6.2nm,0.8s
ALFC S Sn **13 35 19.5 +0.6**
NATA Nata 4.00 96 P Pn **13 34 33.2 -0.1**
NATA S Sn **13 35 20.6 +1.4**
GEDZ Gediz 4.00 19 PN Pn **13 34 34.2 +0.8**
AFYO Afyonkarahisar 4.07 30 *i* P Pn **13 34 35.0 +0.6**
AFYO *i* S Sb 13 35 43.2 +9.4
VLY Voula,Athens 4.09 310 P Pn **13 34 36.3 +1.8**
DION Dionisos Attik 4.15 314 P Pn **13 34 37.7 +2.3**
PTL Penteli 4.17 313 P Pn **13 34 37.8 +2.1**
SIGR SIGRI 4.21 340 PN Pn **13 34 38.2 +2.0**
LEF Lefka 4.22 91 ⇑P Pn **13 34 35.2 -1.2**
LEF Lefka 4.22 91 PN Pn **13 34 35.6 -0.8**
DOGA KONYA_Doganhis 4.25 47 *i* P Pn **13 34 37.8 +1.0**
DOGA *i* S Sb 13 36 03.5 +25
SZAC Souni 4.25 95 ⇑P Pn **13 34 36.6 -0.3**
SLUM Salum 4.32 210 P Pn **13 34 40.3 +2.6**
baz=213
SLUM AMP 13 35 00.0
baz=213
SLUM S Sn **13 35 26.0 -1.0**
OSC2 CSNet OBS 4 4.35 119 P Pn **13 34 37.1 -1.0**
OSC2 S Sn **13 35 28.4 +0.7**
BOZY Bozyazi-Mersin 4.35 77 PN Pn **13 34 37.6 -0.5**
BALB Balikesir 4.37 1 PN Pn **13 34 39.2 +0.9**
EREA Eretria 4.38 317 P Pn **13 34 41.0 +2.4**
TVSB Tavsanli 4.39 18 PN Pn **13 34 38.6 -0.2**
ERMK Ermenek 4.42 70 *i* P Pn **13 34 40.4 +1.2**
ERMK *i* S Sn **13 35 30.5 +0.6**
BALY Balya 4.47 359 *i* P Pn **13 34 38.4 -1.3**
BALY *i* S Sb 13 35 56.8 +12
ASGA Asgata 4.55 94 P Pn **13 34 40.3 -0.6**
KONT Konya--Tatoy 4.58 53 PN Pn **13 34 42.2 +0.9**
BERE Bereket-Mersin 4.59 75 PN Pn **13 34 41.8 +0.3**
CSS Mathiatis 4.60 92 *i* P Pn **13 34 41.3 -0.3**
CSS *i* S Sn **13 35 32.5 -1.5**
CSS Mathiatis 4.60 92 PN Pn **13 34 41.9 +0.4**
CSS Mathiatis 4.60 92 Pn Pn **13 34 41.0 -0.6**
CSS Mathiatis 4.60 92 ⇑P Pn **13 34 40.8 -0.8**
CSS AML AML 13 35 34.8
comp=E,1.2nm,0.8s
CSS AML AML 13 35 40.6
comp=E,1.3nm,0.6s
AKIN Akıncılar- Kıb 4.70 91 PN Pn **13 34 43.4 +0.4**
LTK Loutraki 4.72 307 P Pn **13 34 45.9 +2.7**
LADK Ladik-KONYA 4.73 50 PN Pn **13 34 43.9 +0.4**
LFK Lefkose 4.74 88 PN Pn **13 34 43.9 +0.3**
BOZC Bozcaada 4.76 344 PN Pn **13 34 45.8 +2.1**
TEVE Tevekalti-Mers 4.78 74 PN Pn **13 34 44.6 +0.5**
AKK1 Akkuyu-Mersin 4.80 78 PN Pn **13 34 44.6 +0.3**
AKK2 Akkuyu-Mersin 4.81 78 PN Pn **13 34 44.5 +0.1**
AKKU Akkuyu-Mersin 4.81 78 PN Pn **13 34 44.5 0.0**
TEPK Tepekoy-MERSIN 4.82 77 PN Pn **13 34 45.2 +0.6**
MVOU Mavrovouni 4.84 91 ⇑P Pn **13 34 44.2 -0.7**
KRMN Karaman 4.86 65 PN Pn **13 34 45.9 +0.7**
CIFT Cifteler, Eski 4.87 32 PN Pn **13 34 46.3 +0.9**
YESI Yesilovacik-Me 4.89 77 PN Pn **13 34 45.9 +0.3**
TISA Tisan-Mersin 4.92 78 PN Pn **13 34 46.4 +0.5**
IKL Isikli 4.94 77 PN Pn **13 34 46.9 +0.7**
KARG Kargicak-Mersi 4.95 77 PN Pn **13 34 46.9 +0.5**
KEBE Keben-Mersin 5.00 75 PN Pn **13 34 47.8 +0.7**
ITM Ithomi 5.07 294 Pn Pn **13 34 48.5 +0.4**
EDC Edincik 5.07 1 PN Pn **13 34 49.9 +1.9**
GADA Gvkgeada 5.13 344 PN Pn **13 34 51.1 +2.3**
SILI Silifke-Mersin 5.15 76 PN Pn **13 34 50.1 +1.0**
SVRH Sivrihisar-ESK 5.15 35 PN Pn **13 34 50.2 +1.0**
AUSIV SIVRIHISAR 5.15 35 PN Pn **13 34 50.4 +1.2**
LPK Lapseki 5.16 352 PN Pn **13 34 50.9 +1.7**
CAVI Cavuskoy 5.20 18 PN Pn **13 34 51.3 +1.5**
GELI Tayfur-Gelibol 5.22 349 PN Pn **13 34 51.0 +1.0**
EREN Erenkoy 5.26 85 PN Pn **13 34 51.3 +0.6**
CHBY Cihanbeyli 5.29 50 PN Pn **13 34 51.6 +0.4**
MRMT Marmara Adasi 5.33 359 PN Pn **13 34 53.4 +1.8**
KIZK Mersin 5.34 75 PN Pn **13 34 51.9 +0.1**
MAR9 Marsite Statio 5.34 360 PN Pn **13 34 53.5 +1.8**
RKY Sarkoy-Tekirda 5.43 356 PN Pn **13 34 54.6 +1.6**
MAR6 Marsite Statio 5.44 356 PN Pn **13 34 55.3 +2.2**
YLV Yalova 5.45 13 PN Pn **13 34 54.9 +1.6**
YESY Yesilyurt 5.45 61 PN Pn **13 34 53.7 +0.3**
MAR2 Marsite Statio 5.45 357 PN Pn **13 34 55.1 +1.9**
TRML Termal-Yalova 5.45 12 PN Pn **13 34 54.8 +1.5**
AUMIH MIHALICIK 5.47 32 PN Pn **13 34 55.1 +1.4**
MAR3 Marsite Statio 5.48 356 PN Pn **13 34 55.8 +2.2**

GZKV Gazikoy-Tekird 5.48 357 PN Pn **13 34 55.5 +1.9**
MAR4 Marsite Statio 5.52 357 PN Pn **13 34 55.6 +1.3**
GULT Gulveren 5.61 22 PN Pn **13 34 56.7 +1.3**
KULU Kulu 5.65 47 PN Pn **13 34 56.6 +0.6**
AGG Agios Georgios 5.72 313 P Pn **13 34 57.6 +0.7**
AGG Agios Georgios 5.72 313 Pn Pn **13 34 57.6 +0.7**
MERS Mersin 5.72 72 PN Pn **13 34 57.2 +0.1**
HRT Hereke 5.75 15 PN Pn **13 34 58.8 +1.4**
ALN Alexandroupoli 5.78 347 P Pn **13 34 58.5 +0.8**
ALN Alexandroupoli 5.78 347 P Pn **13 34 58.3 +0.6**
ALN Alexandroupoli 5.78 347 Pn Pn **13 34 58.3 +0.6**
SAUV Serdivan-Sakar 5.83 20 PN Pn **13 34 59.3 +0.8**
MDUB Mudurnu 5.87 27 PN Pn **13 35 00.5 +1.4**
MDUB Mudurnu 5.87 27 Pn Pn **13 35 00.1 +1.0**
ISK Istanbul-Kandi 5.88 10 P Pn **13 35 00.0 +0.9**
ISK Istanbul-Kandi 5.88 10 PN Pn **13 35 00.0 +0.9**
AFSR Afar-Bala (An 5.96 44 PN Pn **13 35 00.7 +0.4**
YUVA Yuva-Kibriscik 6.00 30 PN Pn **13 35 02.1 +1.3**
GULA Gulagac 6.05 58 PN Pn **13 35 01.9 +0.3**
ANTO Ankara 6.10 40 P Pn **13 35 03.6 +1.4**
ANTO Ankara 6.10 40 Pn Pn **13 35 03.6 +1.4**
SWA2 6.31 198 P Pn **13 35 07.4 +2.4**
baz=200
SWA2 AMP 13 36 00.0
baz=200
SWA2 S Sn **13 36 15.0 -1.1**
baz=200
KOT Kottamia 6.35 146 P Pn **13 35 06.0 +0.4**
baz=146
KOT AMP 13 36 00.0
baz=146
KOT S Sn **13 36 09.4 -7.7**
baz=146
LIT Litokhoron 6.37 321 P Pn **13 35 06.4 +0.5**
LIT Litokhoron 6.37 321 Pn Pn **13 35 06.4 +0.5**
BR131 Keskin Array S 6.47 45 *i* P Pn **13 35 08.3 +1.0**
BR131 Keskin Array S 6.47 45 Pn Pn **13 35 07.4 +0.1**
BRTR Keskin Array B 6.47 45 Pn Pn **13 35 08.0 +0.7**
comp=E,1.2nm,0.3s,baz=219,slow=15,SNR=13
BRTR Sn Sn **13 36 18.1 -2.1**
comp=E,1.3nm,0.3s,baz=222,slow=22,SNR=6.1
BRTR Keskin Array B 6.47 45 Pn Pn **13 35 07.8 +0.4**
HSAF As Saff 6.49 149 P Pn **13 35 08.7 +1.1**
baz=149
GLL Jalalah 6.59 148 P Pn **13 35 09.9 +0.9**
baz=148
DQRL Deir Qamar 6.66 101 *e*P Pn **13 35 08.6 -1.3**
MMAI Mount Meron Ar 6.74 107 Pn Pn **13 35 10.3 -0.7**
comp=E,16nm,0.3s,baz=316,slow=13,SNR=21
MMAI Sn Sn **13 36 25.4 -1.6**
comp=E,14nm,0.3s,baz=304,slow=25,SNR=2.7
HWQ Hawqa 6.83 96 *e*P Pn **13 35 10.9 -1.4**
SUZ Suez 6.91 140 P Pn **13 35 15.2 +1.8**
baz=140
RCY Rachaya 6.93 102 *e*P Pn **13 35 12.4 -1.2**
FNA Florina 7.45 320 P Pn **13 35 20.5 -0.2**
FNA Florina 7.45 320 Pn Pn **13 35 20.5 -0.2**
ILGA Ilgaz 7.45 37 Pn Pn **13 35 19.8 -1.1**
GAZ Gaziantep 7.89 73 Pn Pn **13 35 26.1 -0.8**
VTS Vitosha 8.13 336 ⇓P Pn **13 35 33.3 +3.1**
VTS Vitosha 8.13 336 ⇓Pn Pn **13 35 33.3 +3.1**
EIL Elat 8.26 130 Pn Pn **13 35 32.2 +0.4**
comp=E,3.2nm,0.3s,baz=324,slow=3.9,SNR=25
EIL Sn Sn **13 36 59.8 -4.5**
comp=E,4.8nm,0.3s,baz=42,slow=15,SNR=3.4
PLVB Pleven 8.46 344 ⇓P Pn 13 35 42.7 +8.2
SCTE Santa Cesarea 8.77 306 Pn Pn **13 35 37.5 -1.4**
TIP Timpagrande 9.58 297 ⇑P Pn **13 35 49.4 -0.6**
TIP Timpagrande 9.58 297 Pn **13 35 49.0 -1.0**
PDG Podgorica 9.74 320 ⇑P Pn **13 35 51.8 -0.2**
PDG Podgorica 9.74 320 Pn Pn **13 35 51.1 -0.9**
CFR Carcaliu 9.90 2 ⇓P Pn **13 35 57.3 +3.0**
CFR Carcaliu 9.90 2 ⇓P Pn **13 35 57.3 +3.0**
CEL Celeste 9.96 291 Pn Pn **13 35 53.9 -1.3**
MLR Muntele Rosu 10.30 353 Pn Pn **13 36 00.9 +1.0**
comp=E,0.5nm,0.3s,baz=94,slow=16,SNR=4.8
MLR Muntele Rosu 10.30 353 ⇑P Pn **13 36 03.0 +3.1**
MLR Muntele Rosu 10.30 353 ⇑P Pn **13 36 03.0 +3.1**
VOIR 10.36 349 ⇑P Pn **13 36 01.9 +1.2**
VOIR 10.36 349 ⇑P Pn **13 36 01.9 +1.2**
MDVR Moldovita 10.56 336 ⇓P Pn **13 36 00.7 -2.7**
PLOR Plostina 10.61 356 ⇑P Pn **13 36 07.2 +3.3**
PLOR Plostina 10.61 356 ⇑P Pn **13 36 07.2 +3.3**
VRI Vrincioaia 10.62 356 ⇑P Pn **13 36 07.2 +3.1**
VRI Vrincioaia 10.62 356 ⇑P Pn **13 36 07.2 +3.1**
DIVS Divibare 10.64 328 Pn Pn **13 36 05.0 +0.5**
GZR Gura Zlata 10.80 341 ⇑P Pn **13 36 08.0 +1.4**
GZR Gura Zlata 10.80 341 ⇑P Pn **13 36 08.0 +1.4**
VAE Valguarnera 10.97 285 Pn Pn **13 36 07.5 -1.5**
comp=E,1.4nm,0.3s,baz=64,slow=21,SNR=1.1
VAE Sn Sn **13 38 06.8 -3.9**
comp=E,3.8nm,0.3s,baz=2.4,slow=12,SNR=1.9
RAFF Raffo Rosso 10.97 284 Pn Pn **13 36 08.8 -0.3**
BZS Buzias 11.34 338 ⇓P Pn **13 36 16.1 +2.2**
BZS Buzias 11.34 338 ⇓P Pn **13 36 16.1 +2.2**
SGRT San Giovanni R 11.40 308 Pn Pn **13 36 13.8 -1.2**
ANN Anapa 12.07 35 *e*P Pn **13 36 21.5 -2.4**
ANN *e*S Sn **13 38 36.4 -1.0**
ANN pmax pmax
comp=Z,214nm,1.0s
DRGR 12.12 343 ⇑P Pn **13 36 28.1 +3.4**
DRGR 12.12 343 ⇑P Pn **13 36 28.1 +3.4**
BURAR Bucovina Array 12.48 352 Pn Pn **13 36 29.1 -0.5**
NRCA Norcia 13.63 308 Pn Pn **13 36 44.7 -0.7**
PSZ Piszkesteto 13.92 338 ⇑P P **13 36 55.1 -2.0**
PSZ Piszkesteto 13.92 338 ⇑P P **13 36 55.1 -2.0**
BOJS Bojanci 13.95 321 *e*Pn Pn **13 36 49.1 -0.5**
NEY Neytrino 14.07 51 *i* P Pn **13 36 52.8 +1.4**
NEY pmax pmax
comp=Z,3.0nm,1.0s
GBRS Gornja Briga 14.20 320 *e*Pn Pn **13 36 52.6 -0.4**
GNI Garni 14.31 65 LR LR 13 42 41.6
comp=Z,84nm,19.2s,baz=292,slow=39
KIV Kislovodsk 14.41 48 *e*P Pn **13 36 57.2 +1.2**
KIV pmax pmax
comp=Z,68nm,1.0s
KIV MLR MLR
comp=Z,211nm,13.0s
KIV Kislovodsk 14.41 48 P P **13 37 02.5 0.0**
KBZ Khabaz 14.42 50 Pn Pn **13 36 56.0 0.0**
comp=Z,0.3nm,0.3s,baz=233,slow=12,SNR=1.9
KBZ Khabaz 14.42 50 *i* P Pn **13 36 55.5 -0.5**
KBZ pmax pmax
comp=Z,1.0nm,0.4s
ZEI Tsey 14.62 54 *e*P P **13 37 07.1 +2.0**
ZEI pmax pmax
comp=Z,17nm,1.1s
VYHS Vyhne 14.77 336 *e*P P **13 37 06.9 +0.5**
VYHS Vyhne 14.77 336 *e*P P **13 37 06.9 +0.5**
SOKA Soboth 14.88 324 *e*Pn Pn **13 37 02.8 +0.5**
comp=Z,2.9nm,0.6s
KEST Kesra 14.99 277 Pn Pn **13 37 03.5 -0.4**
comp=Z,0.2nm,0.3s,baz=189,slow=4.6,SNR=2.4
KEST Kesra 14.99 277 P P **13 37 09.6 +0.6**
VOJS Vojsko 15.01 320 *e*Pn Pn **13 37 03.7 -0.5**
CASP Castiglione de 15.10 305 P P **13 37 09.7 -0.3**
CASP IAmb IAmb 13 37 25.1
comp=Z,14nm,0.7s
LANS Liptovska Anna 15.15 339 *e*P P **13 37 13.9 +3.2**
LANS Liptovska Anna 15.15 339 *e*P P **13 37 13.9 +3.2**
VSL Villasalto 15.19 292 P P **13 37 12.0 +0.9**
VSL IAmb IAmb 13 37 22.5
comp=Z,17nm,1.0s
MODS Modra-Piesok 15.22 333 *e*P P **13 37 16.3 +4.9**
MODS Modra-Piesok 15.22 333 *e*P P **13 37 16.3 +4.9**
GOF Gofitskoye 15.23 45 ⇑*e*P P **13 37 16.9 +5.4**
KIEV Kiev 15.46 4 P P **13 37 14.0 0.0**
AKASG Malin Array Be 15.46 4 Pn Pn **13 37 09.4 -0.5**
comp=Z,0.4nm,0.3s,baz=193,slow=11,SNR=1.8
AKASG Malin Array Be 15.46 4 P Pn **13 37 10.2 +0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 15.46 4 Pn Pn **13 37 10.2 +0.3**
AKBB Malin Array Si 15.46 4 *i* P Pn **13 37 09.8 -0.1**
AKBB Malin Array Si 15.46 4 P P **13 37 14.0 0.0**
ZOU Zoufplan 15.84 320 Pn Pn **13 37 14.3 -0.7**
KBA Koelnbreinsper 15.99 322 *e*Pn Pn **13 37 18.4 +1.6**
comp=Z,5.0nm,0.5s
ABTA Abfaltersbach 16.20 320 *e*Pn Pn **13 37 19.0 -0.5**
comp=Z,2.4nm,0.3s
CTI Castel Tesino 16.25 316 P Pn **13 37 20.4 +0.3**
CTI pmax pmax
comp=Z,21nm,1.0s

CTI	**Castel Tesino**	**16.25**	**316**		Pn	**Pn**	**13 37 20.4**	**+0.3**
CTI					IAmb	IAmb	13 37 40.2	
	comp=Z,21nm,1.0s							
VRAC	**Vranov**	**16.25**	**333**		Pn	**Pn**	**13 37 20.5**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=149,slow=8.5,SNR=1.9							
VRAC					LR	LR	13 44 37.6	
	comp=Z,232nm,19.9s,baz=122,slow=42							
MORC	**Moravsky Berou**	**16.31**	**336**		P	**P**	**13 37 23.3**	**-0.2**
MORC					pmax	pmax		
	comp=Z,6.0nm,0.9s							
MORC	**Moravsky Berou**	**16.31**	**336**			**P**	**13 37 23.3**	**-0.2**
MSSA	**Maissana**	**16.64**	**308**		Pn	**Pn**	**13 37 24.8**	**-0.2**
WTTA	**Wattenberg**	**16.99**	**320**	*i*	Pn	**P**	**13 37 30.9**	**-0.4**
	comp=Z,1.3nm,0.2s							
GEC2	**GERESS Array S**	**17.07**	**327**			**Pn**	**13 37 30.5**	**+0.1**
GERES	**GERESS Array B**	**17.07**	**327**		Pn	**Pn**	**13 37 30.0**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=147,slow=12,SNR=11							
GERES	**GERESS Array B**	**17.07**	**327**		P	**Pn**	**13 37 30.4**	**0.0**
GERES	**GERESS Array B**	**17.07**	**327**			**Pn**	**13 37 30.4**	**0.0**
WATA	**Walderalm**	**17.07**	**320**	*i*	Pn	**P**	**13 37 32.1**	**0.0**
	comp=Z,3.2nm,0.3s							
MAK	**Makhachkala**	**17.14**	**57**		*e*P	**Pn**	**13 37 27.2**	**-4.0**
MAK					*e*S	**Sn**	**13 40 34.8**	**-6.0**
MAK					pmax	pmax		
	comp=Z,130nm,1.1s							
MAK					MLR	MLR		
	comp=Z,127nm,15.0s							
SQTA	**Sankt Quirin**	**17.19**	**319**	*i*	Pn	**Pn**	**13 37 32.5**	**+0.5**
	comp=Z,3.7nm,0.4s							
DPC	**Dobruska-Polom**	**17.21**	**335**		*e*P	**P**	**13 37 32.9**	**-0.6**
DPC	**Dobruska-Polom**	**17.21**	**335**		*e*P	**P**	**13 37 32.9**	**-0.6**
MOTA	**Moosalm**	**17.33**	**319**	*i*	Pn	**P**	**13 37 34.4**	**-0.6**
	comp=Z,11nm,0.8s							
FETA	**Feichten**	**17.33**	**318**		*e*Pn	**P**	**13 37 35.6**	**+0.6**
	comp=Z,19nm,0.9s							
KHC	**Kasperske Hory**	**17.33**	**327**	*i*	P	**Pn**	**13 37 33.4**	**-0.3**
KHC					pmax	pmax		
	comp=Z,28nm,1.1s							
KHC	**Kasperske Hory**	**17.33**	**327**		*e*P	**Pn**	**13 37 34.1**	**+0.4**
KHC	**Kasperske Hory**	**17.33**	**327**		Pn	**Pn**	**13 37 32.8**	**-0.9**
CHVC	**Chvalec**	**17.50**	**335**		*e*P	**P**	**13 37 39.1**	**+2.4**
DAVOX	**Davos/Dischmat**	**17.67**	**316**		P	**Pn**	**13 37 38.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=162,slow=8.6,SNR=2.7							
DAVOX					LR	LR	13 45 32.8	
	comp=Z,192nm,21.5s,baz=324,slow=41							
SBF	**Sospel**	**17.82**	**305**		*e*P	**Pn**	**13 37 39.6**	**-0.2**
SBF					pmax	pmax		
	comp=Z,18nm,0.8s							
VSR	**Storozhevoye**	**17.95**	**24**		*e*P	**P**	**13 37 41.4**	**-0.2**
VSR					pmax	pmax		
	comp=Z,9.0nm,0.7s							
FRF	**La Foret Royal**	**18.24**	**303**		*e*P	**Pn**	**13 37 43.7**	**-1.2**
FRF					pmax	pmax		
	comp=Z,11nm,0.8s							
BRG	**Berggiesshubel**	**18.52**	**332**		*e*P	Pn	13 37 59.2	+11
BRG					Amp		13 38 00.4	
	comp=Z,3.9nm,0.6s							
MBDF	**Montbardon**	**18.59**	**307**		*e*P	**Pn**	**13 37 49.4**	**+0.1**
MBDF					pmax	pmax		
	comp=Z,7.0nm,0.6s							
BNI	**Bardonecchia**	**18.78**	**308**		P	**Pn**	**13 37 51.4**	**-0.2**
BNI					pmax	pmax		
	comp=Z,6.0nm,0.9s							
BNI	**Bardonecchia**	**18.78**	**308**		P	**Pn**	**13 37 51.4**	**-0.2**
VRH	**Novokhopyorsk**	**18.85**	**28**		*e*P	**Pn**	**13 37 52.1**	**-0.1**
VRH					pmax	pmax		
	comp=Z,20nm,1.5s							
LPG	**La Plagne**	**18.92**	**309**		*e*P	**P**	**13 37 52.4**	**-0.3**
LPG					pmax	pmax		
	comp=Z,9.0nm,0.7s							
LPL	**La Plagne**	**18.94**	**309**		*e*P	**P**	**13 37 52.5**	**-0.3**
LPL					pmax	pmax		
	comp=Z,4.0nm,0.4s							
SENIN	**Lac Senin/Sane**	**18.97**	**312**		P	**P**	**13 37 53.0**	**-0.1**
SENIN					IAmb	IAmb	13 37 58.9	
	comp=Z,13nm,0.7s							
LPSR	**Galich'ya Gora**	**19.07**	**21**		*e*P	**Pn**	**13 37 55.3**	**+0.5**
LPSR					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CLL	**Collm**	**19.23**	**331**		*e*P	**P**	**13 37 56.0**	**+0.4**
CLL					*i* sP	**sP**	**13 38 09.0**	**+2.2**
CLL	**Collm**	**19.23**	**331**		*e*P	**P**	**13 37 56.0**	**+0.4**
BFO	**Black Forest**	**19.41**	**318**		P	**P**	**13 37 58.2**	**+0.4**
BFO					pmax	pmax		
	comp=Z,7.0nm,0.8s							
BFO	**Black Forest**	**19.41**	**318**		P	**P**	**13 37 58.1**	**+0.4**
NACGM	**Naroch**	**19.65**	**358**		*i* P	**Pn**	**13 38 02.2**	**+0.5**
NACGM					*i* P	**Pn**	**13 38 02.2**	**+0.5**
NACGM					*i* P	**Pn**	**13 38 02.2**	**+0.5**
NACGM					*i* PP	**PnPn**	**13 38 21.4**	**+5.8**
NACGM					*i* S	**Sn**	**13 41 44.9**	**+3.6**
NACGM					*i* SS	SnSn	13 42 10.9	+15
NACGM					*i* LQ	LQ	13 43 59.1	
NACGM					*i* LR	LR	13 45 02.6	
CABF	**La Chapelle**	**19.83**	**311**		*e*P	**P**	**13 38 02.1**	**-0.2**
CABF					pmax	pmax		
	comp=Z,9.0nm,0.6s							
HINF	**Hinteralfeld**	**19.96**	**315**		*e*P	**Pn**	**13 38 05.4**	**-0.2**
HINF					pmax	pmax		
	comp=Z,5.0nm,0.6s							
ECH	**Echery**	**20.00**	**317**		P	**P**	**13 38 05.0**	**+0.9**
ECH					pmax	pmax		
	comp=Z,4.0nm,0.7s							
ECH	**Echery**	**20.00**	**317**		P	**P**	**13 38 05.0**	**+0.9**
VIVF	**Saint-Julien-l**	**20.02**	**306**		*e*P	**P**	**13 38 03.0**	**-1.4**
VIVF					pmax	pmax		
	comp=Z,7.0nm,0.7s							
CDF	**Champ du Feu**	**20.04**	**317**		*e*P	**P**	**13 38 05.1**	**+0.4**
CDF					pmax	pmax		
	comp=Z,5.0nm,0.7s							
HAU	**Haudompre**	**20.35**	**315**		*e*P	Pn	13 38 09.2	-0.9
HAU					pmax	pmax		
	comp=Z,6.0nm,0.7s							
OBN	**Obninsk**	**20.77**	**14**		P	**P**	**13 38 12.6**	**+0.3**
	comp=Z,5.2nm,0.4s,baz=85,slow=4.1,SNR=2.2							
OBN	**Obninsk**	**20.77**	**14**		*e*P	**P**	**13 38 12.9**	**+0.6**
OBN					*e*		13 38 30.4	
OBN					pmax	pmax		
	comp=Z,8.0nm,1.1s							
OBN					MLR	MLR		
	comp=Z,222nm,17.0s							
OBN	**Obninsk**	**20.77**	**14**		P	**P**	**13 38 12.6**	**+0.3**
OBN					IAmb	IAmb	13 38 41.8	
	comp=Z,18nm,0.6s							
SMF	**Signal de Mont**	**21.24**	**310**		*e*P	**P**	**13 38 15.0**	**-2.6**
SMF					pmax	pmax		
	comp=Z,6.0nm,0.4s							
LOR	**Lormes**	**21.49**	**311**		P	**P**	**13 38 21.8**	**+1.6**
LOR					pmax	pmax		
	comp=Z,9.0nm,0.7s							
AVF	**Avril sur Loir**	**21.61**	**310**		*e*P	**P**	**13 38 20.3**	**-1.1**
AVF					pmax	pmax		
	comp=Z,4.0nm,0.5s							
BTNL	**Ternell**	**21.90**	**321**		*d*P	**P**	**13 38 27.1**	**+2.6**
BTNL					*d*pP	**sP**	**13 38 34.8**	**-1.1**
MEM	**Membach**	**21.97**	**321**		*d*P	**P**	**13 38 25.5**	**+0.2**
MEM					*d*pP	**sP**	**13 38 34.5**	**-2.1**
BELG	**Belogornoye**	**22.21**	**33**		P	**P**	**13 38 27.6**	**-0.3**
	comp=Z,12nm,0.7s,baz=302,slow=12,SNR=3.0							
BELG	**Belogornoye**	**22.21**	**33**	*i*	P	**P**	**13 38 27.7**	**-0.2**
BELG					pmax	pmax		
	comp=Z,6.0nm,1.7s							
RJF	**Les Rejaudoux**	**22.28**	**305**		*e*P	**P**	**13 38 27.9**	**-0.9**
RJF					pmax	pmax		
	comp=Z,12nm,1.1s							
DOU	**Dourbes**	**22.43**	**318**		P	**P**	**13 38 30.8**	**+0.5**
DOU					pmax	pmax		
	comp=Z,16nm,1.2s							
EPF	**Esparros**	**22.55**	**298**		*e*P	**P**	**13 38 32.0**	**+0.3**
EPF					pmax	pmax		
	comp=Z,4.0nm,0.6s							
BAIF	**Baives**	**22.62**	**318**		*e*P	**P**	**13 38 31.6**	**-0.7**
BAIF					pmax	pmax		
	comp=Z,15nm,1.2s							
TAM	**Tamanrasset**	**23.00**	**243**		P	**P**	**13 38 39.8**	**+3.2**
TAM					pmax	pmax		
	comp=Z,7.0nm,0.9s							
ETSF	**Etsaut**	**23.17**	**298**		*e*P	**P**	**13 38 39.0**	**+0.8**
ETSF					pmax	pmax		
	comp=Z,7.0nm,0.7s							
GEYT	**Alibeck**	**24.49**	**75**		P	**P**	**13 38 52.3**	**+1.7**
	comp=Z,2.0nm,0.5s,baz=88,slow=11,SNR=2.5							
FLN	**La Foliniere**	**24.76**	**312**		*e*P	**P**	**13 38 51.0**	**-1.9**
FLN					pmax	pmax		
	comp=Z,6.0nm,0.6s							
GRR	**Gorron**	**24.85**	**311**		*e*P	**P**	**13 38 52.6**	**-1.1**
GRR					pmax	pmax		
	comp=Z,11nm,0.7s							
ESBB	**Sonseca Array**	**25.46**	**289**		P	**P**	**13 38 59.4**	**-0.1**
ESDC	**Sonseca Array**	**25.46**	**289**		P	**P**	**13 38 59.7**	**+0.2**
	comp=Z,10nm,0.6s,baz=80,slow=9.5,SNR=74							
ESDC	**Sonseca Array**	**25.46**	**289**		P	**P**	**13 38 59.5**	**0.0**
PAB	**San Pablo**	**25.76**	**289**		P	**P**	**13 39 02.3**	**+0.1**
PAB					pmax	pmax		
	comp=Z,11nm,0.8s							
PAB	**San Pablo**	**25.76**	**289**		P	**P**	**13 39 02.3**	**+0.1**
PAB					IAmb	IAmb	13 39 03.3	
	comp=Z,10nm,0.8s							
QUIF	**Quistinic**	**26.15**	**308**		*e*P	**P**	**13 39 07.6**	**+2.1**
QUIF					pmax	pmax		
	comp=Z,22nm,1.0s							
FINES	**FINESS Array B**	**26.22**	**358**		P	**P**	**13 39 04.2**	**-1.8**
	comp=Z,4.8nm,0.8s,baz=148,slow=11,SNR=8.2							
FIA1	**FINESS Array S**	**26.22**	**358**		P	**P**	**13 39 04.2**	**-1.7**
FIA1					IAmb	IAmb	13 39 04.8	
	comp=Z,19nm,1.1s							
ROSF	**Rostrenen**	**26.35**	**309**		*e*P	**P**	**13 39 06.2**	**-1.1**
ROSF					pmax	pmax		
	comp=Z,10.0nm,0.7s							
HFS	**Hagfors**	**26.50**	**344**		P	**P**	**13 39 06.7**	**-1.9**
	comp=Z,3.2nm,0.5s,baz=156,slow=11,SNR=14							
AKTO	**Aktyubinsk**	**26.64**	**46**		P	**P**	**13 39 08.8**	**-1.2**
	comp=Z,2.3nm,0.7s,baz=253,slow=7.9,SNR=8.8							
AKTO					LR	LR	13 54 24.6	
	comp=Z,116nm,19.5s,baz=246,slow=47							
KLMR	**Klimovskoe**	**26.70**	**13**		*e*P	**P**	**13 39 08.4**	**-1.9**
KLMR					pmax	pmax		
	comp=Z,23nm,1.1s							
KLMR	**Klimovskoe**	**26.70**	**13**		*e*P	**P**	**13 39 08.4**	**-1.9**
KLMR					AMP		13 39 20.3	
	comp=Z,23nm,1.1s							
KIRV	**Kirov**	**27.39**	**25**	*i*	P	**P**	**13 39 16.8**	**+0.3**
ABKAR	**Akbulak array**	**27.39**	**49**		P	**P**	**13 39 17.0**	**+0.3**
ABKAR	**Akbulak array**	**27.39**	**49**		P	**P**	**13 39 16.9**	**+0.1**
NC602	**NORSAR Array S**	**27.53**	**343**		P	**P**	**13 39 16.7**	**-1.1**
NAO01	**NORSAR Array S**	**27.79**	**342**		P	**P**	**13 39 17.5**	**-2.7**
NC405	**NORSAR Array S**	**27.82**	**343**		P	**P**	**13 39 17.1**	**-3.3**
NB201	**NORSAR Array S**	**27.87**	**343**		P	**P**	**13 39 18.4**	**-2.5**
NOA	**NORSAR Array B**	**27.88**	**343**		P	**P**	**13 39 17.6**	**-3.3**
	comp=Z,1.0nm,0.6s,baz=158,slow=6.4,SNR=7.1							
NOA					LR	LR	13 51 50.6	
	comp=Z,121nm,19.9s,baz=315,slow=40							
NBO00	**NORSAR Array S**	**27.98**	**342**		P	**P**	**13 39 20.2**	**-1.6**
NC303	**NORSAR Array S**	**28.00**	**343**		P	**P**	**13 39 19.4**	**-2.6**
NC303					IAmb	IAmb	13 39 35.5	
	comp=Z,17nm,1.1s							
MTE	**Manteigas**	**28.21**	**291**		P	**P**	**13 39 24.5**	**+0.3**
MTE					IAmb	IAmb	13 39 29.6	
	comp=Z,12nm,1.0s							
PVAQ	**Vaqueiros**	**28.54**	**285**		P	**P**	**13 39 26.0**	**-1.1**
ESK	**Eskdalemuir**	**29.21**	**323**		P	**P**	**13 39 32.0**	**-0.8**
ESK					pmax	pmax		
	comp=Z,11nm,1.3s							
ESK	**Eskdalemuir**	**29.21**	**323**		P	**P**	**13 39 32.0**	**-0.8**
ESK					IAmb	IAmb	13 39 52.0	
	comp=Z,11nm,1.3s							
ARU	**Arti**	**29.74**	**35**		P	**P**	**13 39 41.6**	**+4.1**
ARU							13 40 30.9	
ARU					SS	SS	13 46 07.1	-31
MSF	**Maaselka**	**30.69**	**1**		P	**P**	**13 39 43.9**	**-1.9**
TOA0	**Torodi Ar. Sit**	**32.21**	**233**		P	**P**	**13 40 00.8**	**+1.2**
TORD	**Torodi Ar. Bea**	**32.21**	**233**		P	**P**	**13 40 00.7**	**+1.1**
	comp=Z,13nm,0.6s,baz=37,slow=9.4,SNR=69							
TORD	**Torodi Ar. Bea**	**32.21**	**233**		P	**P**	**13 40 00.8**	**+1.1**
TORD					IAmb	IAmb	13 40 02.2	
	comp=Z,6.0nm,0.6s							
SOCY	**Socotra**	**33.06**	**128**		P	**P**	**13 40 07.5**	**+0.3**
SOCY					IAmb	IAmb	13 40 12.2	
	comp=Z,7.8nm,1.0s							
KK31	**Karatay Array**	**33.77**	**63**		P	**P**	**13 40 13.5**	**+0.4**
KK31					pmax	pmax		
	comp=Z,4.0nm,0.9s							
KK31	**Karatay Array**	**33.77**	**63**		P	**P**	**13 40 13.5**	**+0.4**
KK31					IAmb	IAmb	13 40 23.2	
	comp=Z,3.7nm,0.8s							
KKAR	**Karatay Array**	**33.77**	**63**		P	**P**	**13 40 13.4**	**+0.2**
KKAR	**Karatay Array**	**33.77**	**63**		P	**P**	**13 40 13.3**	**+0.2**
KKAR					IAmb	IAmb	13 40 23.2	
	comp=Z,3.7nm,0.8s							
ARCES	**ARCESS Array B**	**34.34**	**359**		P	**P**	**13 40 16.1**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=174,slow=8.2,SNR=12							
KEV	**Kevo**	**34.55**	**360**		P	**P**	**13 40 18.1**	**-1.4**
KEV					pmax	pmax		
	comp=Z,19nm,1.2s							
KEV	**Kevo**	**34.55**	**360**		P	**P**	**13 40 18.1**	**-1.4**
BRVK	**Borovoye**	**34.70**	**46**	*ce*	P	**P**	**13 40 20.8**	**-0.2**
BRVK					pmax	pmax		
	comp=Z,2.0nm,1.3s							
BRVK	**Borovoye**	**34.70**	**46**		P	**P**	**13 40 20.9**	**-0.1**
BVAR	**Borovoye Array**	**34.75**	**46**		P	**P**	**13 40 21.0**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=187,slow=10,SNR=6.0							
BVAR	**Borovoye Array**	**34.75**	**46**		P	**P**	**13 40 21.0**	**-0.5**
KOWA	**Kowa**	**35.22**	**242**		P	**P**	**13 40 26.7**	**+0.8**
	comp=Z,3.7nm,0.6s,baz=49,slow=8.2,SNR=9.6							
KOWA	**Kowa**	**35.22**	**242**		P	**P**	**13 40 27.0**	**+1.1**
KOWA					IAmb	IAmb	13 40 30.0	
	comp=Z,3.9nm,0.6s							
AAK	**Ala-Archa**	**36.72**	**64**		P	**P**	**13 40 39.3**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=246,slow=6.9,SNR=5.1							
AAK	**Ala-Archa**	**36.72**	**64**	*i*	P	**P**	**13 40 39.5**	**+0.8**
AAK					pmax	pmax		
	comp=Z,5.0nm,0.6s							
AAK	**Ala-Archa**	**36.72**	**64**		P	**P**	**13 40 39.7**	**+1.0**
AAK					IAmb	IAmb	13 41 00.1	
	comp=Z,3.8nm,0.9s							
KSH	**Kashi**	**38.20**	**69**		P	**P**	**13 40 52.3**	**+1.1**
KSH					pmax	pmax		
	comp=Z,3.0nm,0.4s							
KSH					pmax	pmax		
	comp=Z,190nm,5.0s							
KURBB	**Kurchatov Arra**	**39.41**	**51**		P	**P**	**13 40 59.7**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=275,slow=8.9,SNR=11							
KURBB					PP	**PnPn**	**13 42 34.4**	**-0.2**
	comp=Z,2.3nm,1.1s,baz=275,slow=12,SNR=5.5							
KURK	**Kurchatov**	**39.48**	**51**		P	**P**	**13 40 59.7**	**-1.9**
KURK	**Kurchatov**	**39.48**	**51**		P	**P**	**13 40 59.7**	**-1.9**
DBIC	**Dimbokro**	**41.31**	**234**		P	**P**	**13 41 17.4**	**+0.4**
	comp=Z,5.4nm,0.5s,baz=21,slow=8.9,SNR=15							
DBIC					LR	LR	14 01 51.0	
	comp=Z,100nm,18.4s,baz=16,slow=41							
DBIC	**Dimbokro**	**41.31**	**234**		P	**P**	**13 41 17.5**	**+0.4**
DBIC					pmax	pmax		
	comp=Z,6.0nm,0.6s							
DBIC	**Dimbokro**	**41.31**	**234**		P	**P**	**13 41 17.5**	**+0.4**
DBIC					IAmb	IAmb	13 41 19.0	
	comp=Z,5.5nm,0.6s							
TIC	**Toumodi**	**41.44**	**234**	*e*	PKP1	**P**	**13 41 18.9**	**+0.7**
KIC	**Kosan Boka**	**41.46**	**234**	*e*	PKP1	**P**	**13 41 19.2**	**+0.8**
	comp=Z,18nm,0.6s							
LIC	**Lamto**	**41.75**	**234**	*e*	PKP1	**P**	**13 41 20.0**	**-0.8**
	comp=Z,25nm,0.7s							
MK31	**Makanchi Array**	**41.95**	**57**	*i*	P	**P**	**13 41 22.5**	**+0.4**
MK31	**Makanchi Array**	**41.95**	**57**		P	**P**	**13 41 21.5**	**-0.7**
MKAR	**Makanchi Array**	**41.95**	**57**		P	**P**	**13 41 22.3**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=276,slow=7.1,SNR=21							
SPA0	**Spitsbergen Ar**	**43.29**	**357**		P	**P**	**13 41 31.6**	**-0.9**
SPITS	**Spitsbergen Ar**	**43.29**	**357**		P	**P**	**13 41 31.1**	**-1.5**
	comp=Z,2.8nm,0.6s,baz=161,slow=18,SNR=13							
ZALV	**Zalesovo Beam**	**43.41**	**46**		P	**P**	**13 41 33.2**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=268,slow=7.8,SNR=7.7							
ZALV					LR	LR	14 01 09.7	
	comp=Z,81nm,19.6s,baz=284,slow=38							
ZALV	**Zalesovo Beam**	**43.41**	**46**		P	**P**	**13 41 33.1**	**-0.7**
SCO	**Scoresbysund**	**44.00**	**338**		P	**P**	**13 41 37.7**	**-0.6**
SCO					pmax	pmax		
	comp=Z,12nm,1.4s							
SCO	**Scoresbysund**	**44.00**	**338**		P	**P**	**13 41 37.7**	**-0.6**
SCO					IAmb	IAmb	13 41 55.0	
	comp=Z,12nm,1.4s							
KBS	**Kingsbay**	**44.26**	**356**		P	**P**	**13 41 39.1**	**-1.2**
KBS					pmax	pmax		
	comp=Z,10.0nm,1.0s							
KBS	**Kingsbay**	**44.26**	**356**		P	**P**	**13 41 39.1**	**-1.2**
KBS					IAmb	IAmb	13 41 45.3	
	comp=Z,9.5nm,1.0s							
DGZ	**Jazzator, Alta**	**45.15**	**52**	*i*	P	**P**	**13 41 49.6**	**+1.6**
DGZ					pmax	pmax		
	comp=Z,3.0nm,1.5s							
WMQ	**Urumqi**	**46.12**	**60**		*e*P	**P**	**13 41 57.3**	**+1.6**
DAG	**Danmarks Havn**	**46.42**	**347**		P	**P**	**13 41 56.2**	**-1.2**
DAG					pmax	pmax		
	comp=Z,7.0nm,2.8s							
NRIK	**Noril'sk**	**46.89**	**25**		P	**P**	**13 42 01.1**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=260,slow=7.7,SNR=4.0							
NRIK	**Noril'sk**	**46.89**	**25**		P	**P**	**13 42 02.4**	**+1.2**
NRIK					pmax	pmax		
	comp=Z,2.0nm,0.6s							
NRIK	**Noril'sk**	**46.89**	**25**		P	**P**	**13 42 02.4**	**+1.2**
NRIK					IAmb	IAmb	13 42 09.2	
	comp=Z,2.4nm,0.6s							
PYUN	**Piuthan**	**47.05**	**83**	*e*	P	**P**	**13 42 05.2**	**+1.9**
KOLN	**Koldanda**	**47.68**	**83**	*e*	P	**P**	**13 42 09.6**	**+1.4**
	comp=Z,20nm,0.7s							
GKN	**Gorkha**	**48.43**	**82**	*e*	P	**P**	**13 42 15.0**	**+1.1**
	comp=Z,18nm,0.7s							
DMN	**Daman**	**48.97**	**82**	*e*	P	**P**	**13 42 19.5**	**+1.3**
	comp=Z,28nm,0.9s							
PKIN	**Phulchoki**	**49.21**	**82**	*e*	P	**P**	**13 42 21.0**	**+0.9**
	comp=Z,31nm,1.0s							
PKI	**Pulchoki**	**49.23**	**82**	*e*	P	**P**	**13 42 21.3**	**+1.0**
	comp=Z,24nm,1.0s							
GUN	**Gumba**	**49.47**	**81**	*e*	P	**P**	**13 42 23.1**	**+1.0**
	comp=Z,22nm,0.9s							
SUMG	**Summit**	**49.64**	**339**		P	**P**	**13 42 21.5**	**-1.3**
SUMG					pmax	pmax		
	comp=Z,3.0nm,0.8s							
SUMG	**Summit**	**49.64**	**339**		P	**P**	**13 42 21.5**	**-1.3**
SUMG					IAmb	IAmb	13 42 48.1	
	comp=Z,2.5nm,0.8s							
JIRN	**Jiri**	**49.82**	**82**	*e*	P	**P**	**13 42 25.3**	**+0.4**
	comp=Z,20nm,1.0s							
LSZ	**Lusaka**	**50.27**	**179**		P	**P**	**13 42 30.2**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=44,slow=13,SNR=1.4							
LSZ	**Lusaka**	**50.27**	**179**		IAmb	IAmb	13 42 59.1	
	comp=Z,4.5nm,1.2s							
RAMN	**Ramite**	**50.45**	**82**	*e*	P	**P**	**13 42 29.6**	**+0.1**
	comp=Z,21nm,0.9s							
ODAN	**Odare**	**51.12**	**82**	*e*	P	**P**	**13 42 33.8**	**-0.8**
TAPN	**Taplejung**	**51.18**	**81**	*e*	P	**P**	**13 42 34.5**	**-0.5**
	comp=Z,18nm,1.0s							
ZAK	**Zakamensk**	**55.09**	**49**	*e*	P	**P**	**13 43 03.6**	**+0.4**
ZAK					pmax	pmax		
	comp=Z,4.0nm,1.0s							
MATP	**Matopo**	**55.39**	**179**		P	**P**	**13 43 06.8**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=14,slow=6.1,SNR=7.0							
GTA	**Gaotai**	**56.05**	**63**	*e*	P	**P**	**13 43 12.0**	**+1.7**
GTA					pP	sP	13 43 23.2	+0.7
GTA					sP	pP	13 43 28.2	+9.1
GTA					pmax	pmax		
	comp=Z,3.0nm,1.0s							
GTA					pmax	pmax		
	comp=Z,91nm,6.2s							
GTA					LR	LR		
	comp=N,96nm,17.4s							
GTA					LR	LR		
	comp=E,130nm,14.9s							
GTA					LR	LR		
	comp=Z,140nm,14.9s							
SONM	**Songino Array**	**57.78**	**51**		P	**P**	**13 43 22.7**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=285,slow=7.6,SNR=7.5							
SONM	**Songino Array**	**57.78**	**51**		P	**P**	**13 43 22.5**	**0.0**
SONM					IAmb	IAmb	13 43 35.9	
	comp=Z,2.9nm,0.9s							
ULN	**Ulaanbaatar**	**58.19**	**51**	*i*	P	**P**	**13 43 26.5**	**+1.1**
ULN					pmax	pmax		
	comp=Z,2.0nm,0.9s							
TIXI	**Tiksi**	**60.32**	**21**		LR	LR	14 13 40.7	
	comp=Z,56nm,18.3s,baz=316,slow=40							
FRB	**Frobisher Bay**	**61.64**	**330**		P	**P**	**13 43 47.7**	**-0.9**
FRB					pmax	pmax		
	comp=Z,3.0nm,3.0s							
BOSA	**Boshof**	**63.58**	**182**		P	**P**	**13 44 03.8**	**+1.8**
	comp=Z,3.1nm,0.8s,baz=338,slow=5.4,SNR=3.6							
BOSA	**Boshof**	**63.58**	**182**		IAmb	IAmb	13 44 05.4	
	comp=Z,5.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**64.46**	**85**		P	**P**	**13 44 08.4**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=286,slow=9.3,SNR=4.6							
CMAR					LR	LR	14 16 25.8	
	comp=Z,32nm,20.8s,baz=90,slow=40							
YAK	**Yakutsk**	**64.72**	**31**		LR	LR	14 17 23.5	
	comp=Z,43nm,19.8s,baz=268,slow=41							
XAN	**Xi'an**	**64.89**	**65**		P	P	13 44 21.1	+10
XAN					sP	PcP	13 44 38.5	-5.3
X

ARG	**Arkhangelos**	**0.91**	**9**	P		**Pn**	**13 48 35.1**	**+0.8**
ARG				S		**Sn**	**13 48 47.2**	**-0.5**
	comp=N,220nm,0.7s							
ZKR	**Zakros**	**1.43**	**262**	P		**Pn**	**13 48 40.7**	**-0.6**
ZKR	**Zakros**	**1.43**	**262**	P		**Pn**	**13 48 41.9**	**+0.6**
ZKR				S		**Sn**	**13 49 01.8**	**+1.5**
	comp=N,80nm,0.7s							
NIS1	**Nisyros Isl.**	**1.43**	**335**	P		**Pn**	**13 48 40.8**	**-0.6**
TURN	**Turunc**	**1.48**	**9**	*i* P		**Pg**	**13 48 43.0**	**-0.3**
TURN				*i* S		**Sg**	**13 49 04.7**	**+2.1**
DALY	**Dalyan (Mula)**	**1.61**	**21**	*i* P		**Pg**	**13 48 44.7**	**-1.1**
DALY				*i* S		**Sg**	**13 49 13.5**	**+6.8**
DALY				IAML			13 49 32.0	
	comp=N,16nm,1.1s							
AKAS	**Kas**	**1.63**	**55**	*i* P		**Pn**	**13 48 43.5**	**-0.8**
BDRM	**Kayabasi**	**1.79**	**347**	*i* P		**Pn**	**13 48 46.3**	**-0.1**
BDRM				*i* S		**Sg**	**13 49 13.8**	**+1.1**
TAVA	**DENIZLI_Tavas**	**2.29**	**20**	*i* P		**Pn**	**13 48 53.8**	**+0.5**
TAVA				*i* S		**Sg**	**13 49 30.4**	**+1.9**
GOLH	**Golhisar**	**2.32**	**34**	*i* P		**Pb**	**13 48 55.2**	**-2.1**
AYDN	**Tasoluk**	**2.34**	**359**	*i* P		**Pn**	**13 48 54.7**	**+0.7**
AYDN				*i* S		**Sg**	**13 49 28.3**	**-2.0**
IDI	**Anoyia**	**2.50**	**270**	P		**Pn**	**13 48 57.3**	**+1.2**
IDI	**Anoyia**	**2.50**	**270**	P		**Pn**	**13 48 57.6**	**+1.5**
APE	**Apeiranthos**	**2.62**	**313**	P		**Pn**	**13 48 57.8**	**0.0**
VAM	**Vamos**	**3.06**	**273**	P		**Pn**	**13 49 05.8**	**+2.0**

*DJA **08** 13:49:36.9±0.2,6˚S±1˚×13˚0E±˚, h152km±4km, M4.7/24, mB5.2/13, mb4.8/24, MLv5.1/13, Mw(mB)4.5/13*
*NEIC **08** 13:49:36.9±1.5, 6˚13S±0˚06×130˚42E±0˚08, h152km±7km, mb4.6/31, Error ellipse: s-maj=12.2km s-min=9.2km az=78.0*
*IDC **08** 13:49:36.1±1.9, 6˚12S×130˚42E, h143km±18km, mb3.9/17, mb1 4.0/21, mb1mx3.9/34, mbtmp4.4/21, MS3.0/3, Ms1 3.0/3, ms1mx2.5/43, Error ellipse: s-maj=17.6km s-min=9.7km az=84.0*

ISC 08 13:49:36.4±0.4, 6˚14S±0˚04×130˚41E±0˚05, h150km, n108, σ1§80/116, mb4.5/35, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.68**	**343**	P	**Pn**	**13 50 10.6**	**+2.6**
BNDI				S	**Sn**	**13 50 35.2**	**+3.1**
SAUI	**Saumlaki**	**2.04**	**154**	Pn	**Pn**	**13 50 14.1**	**+2.0**
SAUI	**Saumlaki**	**2.04**	**154**	P	**Pn**	**13 50 14.4**	**+2.4**
SAUI				S	**Sn**	**13 50 41.4**	**+2.0**
MSAI	**Masohi**	**3.14**	**332**	P	**Pn**	**13 50 27.2**	**+1.6**
MSAI				S	**Sn**	**13 51 03.9**	**+0.2**
FAKI	**Fak Fak**	**3.68**	**30**	Pn	**Pn**	**13 50 33.1**	**+0.5**
FAKI	**Fak Fak**	**3.68**	**30**	P	**Pn**	**13 50 33.1**	**+0.5**
FAKI				S	**Sn**	**13 51 14.5**	**-1.8**
NLAI	**Namlea**	**4.38**	**311**	P	**Pn**	**13 50 44.5**	**+2.9**
SIJI	**Sorong**	**5.30**	**9**	P	**Pn**	**13 50 53.4**	**-0.5**
	47nm,0.3s,baz=52,slow=3.9,SNR=531						
SIJI				S	**Sn**	**13 51 46.2**	**-8.2**
	63nm,0.3s,baz=191,slow=18,SNR=7.9						
SIJI				LR	LR	13 53 27.8	
	comp=Z,111nm,18.5s,baz=262,slow=44						
SWI	**Sorong**	**5.31**	**9**	P	**Pn**	**13 50 54.0**	**0.0**
	7.1nm34µm150nm,0.5s						
SWI				S	**Sn**	**13 51 49.9**	**-4.6**
	7.1nm34µm150nm,0.5s						
SANI	**Sanana**	**5.99**	**312**	P	**Pn**	**13 51 04.6**	**+1.5**
	0.7nm2µm145nm,0.6s						
MTN	**Manton Dam**	**6.71**	**174**	Pn	**Pn**	**13 51 12.1**	**-0.5**
SOEI	**Soe**	**7.07**	**239**	Pn	**Pn**	**13 51 18.1**	**+0.6**
SOEI	**Soe**	**7.07**	**239**	P	**Pn**	**13 51 18.3**	**+0.8**
	0.7nm2µm145nm,0.8s						
SOEI				S	**Sn**	**13 52 35.2**	**-1.6**
	0.7nm2µm145nm,0.8s						
SRPI	**Serui, Papua**	**7.20**	**54**	P	**Pn**	**13 51 20.7**	**+1.5**
	0.8nm163nm,0.7s						
TNTI	**Ternate**	**7.50**	**336**		**Pn**	**13 51 23.4**	**+0.1**
TNTI	**Ternate**	**7.50**	**336**	P	**Pn**	**13 51 23.6**	**+0.3**
	0.2nm908nm79nm,0.8s						
BAKI	**Biak**	**7.51**	**49**	P	**Pn**	**13 51 25.9**	**+2.5**
	5µm434nm,1.1s						
BATI	**Baumata**	**7.80**	**238**	P	**Pn**	**13 51 27.2**	**-0.1**
	27nm,0.3s,baz=133,slow=2.3,SNR=45						
BATI				S	**Sn**	**13 52 50.4**	**-4.0**
	18nm,0.3s,baz=155,slow=3.5,SNR=4.3						
BATI	**Baumata**	**7.80**	**238**	P	**Pn**	**13 51 27.6**	**+0.3**
	0.4nm1µm67nm,0.5s						
LUWI	**Luwuk**	**9.14**	**303**	Pn	**Pn**	**13 51 47.1**	**+1.9**
LUWI	**Luwuk**	**9.14**	**303**	P	**Pn**	**13 51 48.7**	**+3.5**
	1µm50nm,0.9s						
KMSI	**Cibinong**	**9.25**	**316**	P	**Pn**	**13 51 46.7**	**+0.1**
	2µm74nm,1.1s						
APSI	**Ampana**	**10.16**	**300**	P	**Pn**	**13 51 58.4**	**-0.3**
	378nm38nm,0.9s						
GENI	**Genyem**	**10.35**	**71**	P	**Pn**	**13 52 01.7**	**+0.6**
	28nm,0.6s						
BASI	**Baing, Sumba**	**10.54**	**247**	P	**Pn**	**13 52 04.8**	**+1.1**
	687nm47nm,0.8s						
KAPI	**Kappang**	**10.66**	**275**	Pn	**Pn**	**13 52 04.8**	**-0.6**
MRSI	**Marisa**	**10.70**	**308**	P	**Pn**	**13 52 07.3**	**+1.5**
	1µm152nm,0.9s						
JAY	**Jayapura**	**10.88**	**71**	P	**Pn**	**13 52 06.8**	**-1.4**
	0.2nm,0.3s,baz=4.0,slow=18,SNR=1.6						
TOLI2	**Tolitoli**	**12.01**	**307**	Pn	**Pn**	**13 52 24.5**	**+1.6**
FITZ	**Fitzroy Crossi**	**12.77**	**201**	P	**Pn**	**13 52 30.4**	**-2.3**
	2.1nm,0.3s,baz=33,slow=9.2,SNR=72						
FITZ				S	Sn	13 54 42.1	-12
	14nm,0.3s,baz=241,slow=22,SNR=14						
FITZ	**Fitzroy Crossi**	**12.77**	**201**	Pn	**Pn**	**13 52 29.8**	**-2.9**
PLAI	**Plampang**	**12.81**	**257**	P	**Pn**	**13 52 32.4**	**-0.8**
	37nm,0.5s						
TWSI	**Taliwang, Sumb**	**13.66**	**258**	P	**Pn**	**13 52 44.5**	**+0.4**
	322nm15nm,0.8s						
WB0	**Warramunga Arr**	**14.09**	**164**		**Pn**	**13 52 46.4**	**-3.2**
WRAB	**Tennant Creek**	**14.24**	**165**		**Pn**	**13 52 48.1**	**-3.4**
WRA	**Warramunga Arr**	**14.25**	**165**	P	**Pn**	**13 52 47.9**	**-3.7**
	4.8nm,0.3s,baz=346,slow=13,SNR=106						
WRA				S	Sn	13 55 18.6	-11
	6.5nm,0.3s,baz=348,slow=22,SNR=7.3						
WRA	**Warramunga Arr**	**14.25**	**165**		**Pn**	**13 52 47.2**	**-4.3**
WB2	**Warramunga Arr**	**14.25**	**165**		**Pn**	**13 52 48.5**	**-3.1**
WR0	**Warramunga Arr**	**14.32**	**164**		**Pn**	**13 52 49.0**	**-3.4**
COEN	**Coen**	**14.77**	**123**	Pn	**Pn**	**13 52 58.1**	**-0.1**
SRBI	**Singaraja**	**15.20**	**262**	P	**Pn**	**13 53 04.0**	**+0.5**
	49nm,0.8s						
BBKI	**Banjar Baru**	**15.74**	**279**	P	**P**	**13 53 15.0**	**+4.1**
KMMI	**Kalianget**	**16.36**	**266**	P	**Pn**	**13 53 18.3**	**+0.6**
	42nm,0.8s						
PMG	**Port Moresby**	**16.91**	**102**	LR	LR	14 02 03.7	
	comp=Z,13nm,20.2s,baz=136,slow=44						
PMG	**Port Moresby**	**16.91**	**102**		**Pn**	**13 53 24.5**	**+0.1**
PMG				IAmb	IAmb	13 53 40.0	
	comp=Z,16nm,0.8s						
AS31	**Alice Springs**	**17.75**	**169**		**Pn**	**13 53 34.6**	**+0.2**
AS31				IAmb	IAmb	13 53 41.5	
	comp=Z,17nm,0.4s						
ASAR	**Alice Springs**	**17.75**	**169**	P	**Pn**	**13 53 34.4**	**0.0**
	comp=Z,5.2nm,0.3s,baz=358,slow=11,SNR=147						
ASAR				S	**S**	**13 56 44.1**	**-5.7**
	comp=Z,2.2nm,0.3s,baz=352,slow=26,SNR=9.2						
ASAR	**Alice Springs**	**17.75**	**169**	P	**Pn**	**13 53 34.6**	**+0.2**
PSA00	**Pilbara Seismi**	**18.44**	**213**	P	**P**	**13 53 40.9**	**+0.3**
PSA00				IAmb	IAmb	13 53 42.1	
	comp=Z,20nm,0.6s						
PSA00	**Pilbara Seismi**	**18.44**	**213**	P	**P**	**13 53 40.1**	**-0.5**
PSA00				IAmb	IAmb	13 53 43.9	
	comp=Z,5.8nm,0.7s						
KKM	**Kota Kinabalu**	**18.63**	**310**	P	**P**	**13 53 42.6**	**-0.2**
KKM				IAmb	IAmb	13 53 44.6	
	comp=Z,20nm,0.9s						
UGM	**Wanagama**	**19.81**	**264**	P	**P**	**13 53 56.4**	**+0.8**
CTA	**Charters Tower**	**20.72**	**133**	P	**P**	**13 54 06.8**	**+1.5**
	comp=Z,2.3nm,0.5s,baz=356,slow=16,SNR=1.8						
GIRL	**Giralia**	**22.65**	**222**	P	**P**	**13 54 25.4**	**+0.3**
LEM	**Lembang**	**22.65**	**267**	P	**P**	**13 54 26.0**	**+0.6**
	comp=Z,17nm,0.6s,baz=356,slow=22,SNR=4.9						
FORT	**Forrest**	**24.61**	**185**	P	**P**	**13 54 43.2**	**+0.3**
MORW	**Morawa**	**26.55**	**209**	P	**P**	**13 54 60.0**	**-0.4**
MORW				IAmb	IAmb	13 55 04.3	
	comp=Z,28nm,1.4s						
BBOO	**Buckleboo**	**27.06**	**169**	P	**P**	**13 55 04.9**	**0.0**
BBOO				IAmb	IAmb	13 55 08.9	
	comp=Z,28nm,1.5s						
STKA	**Stephens Creek**	**27.66**	**159**	P	**P**	**13 55 10.5**	**+0.2**
	comp=Z,2.2nm,0.4s,baz=346,slow=8.7,SNR=11						
STKA	**Stephens Creek**	**27.66**	**159**	P	**P**	**13 55 10.8**	**+0.5**
NWAO	**Narrogin (SRO)**	**29.34**	**203**	P	**P**	**13 55 25.6**	**+0.3**
	comp=Z,8.5nm,0.6s,baz=32,slow=6.5,SNR=9.8						
NWAO	**Narrogin (SRO)**	**29.34**	**203**	P	**P**	**13 55 25.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**29.34**	**203**	P	**P**	**13 55 25.5**	**+0.3**
NWAO				IAmb	IAmb	13 55 29.5	
	comp=Z,38nm,1.5s						
GSI	**Gunungsitoli**	**33.60**	**282**	P	**P**	**13 56 02.5**	**-0.3**
GSI				IAmb	IAmb	13 56 05.5	
	comp=Z,11nm,0.6s						
TOO	**Toolangi**	**34.18**	**158**	P	**P**	**13 56 07.5**	**0.0**
TOO				IAmb	IAmb	13 56 34.0	
	comp=Z,13nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.50**	**309**	P	**P**	**13 56 53.0**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=127,slow=6.3,SNR=4.7						
NJ2	**Nanjing**	**39.54**	**345**	*e*P	**P**	**13 56 54.2**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JMN	**Monobe**	**39.78**	**5**	P	**P**	**13 56 55.7**	**+0.8**
JHS	**Saijyo**	**40.99**	**3**	P	**P**	**13 57 04.4**	**-0.4**
JHS				IAmb	IAmb	13 57 06.1	
	comp=Z,21nm,1.0s						
JWT	**Wachi**	**41.46**	**6**	P	**P**	**13 57 09.1**	**+0.6**
JGF	**Kuroka**	**42.02**	**8**	P	**P**	**13 57 14.3**	**+1.1**
JGF				IAmb	IAmb	13 57 18.2	
	comp=Z,18nm,1.1s						
MJAR	**Matsushiro Arr**	**43.08**	**9**	P	**P**	**13 57 20.9**	**-0.7**
	comp=Z,3.6nm,0.7s,baz=236,slow=29,SNR=4.1						
MAJO	**Matsushiro**	**43.08**	**9**	P	**P**	**13 57 21.2**	**-0.4**
MAJO				IAmb	IAmb	13 57 22.3	
	comp=Z,12nm,1.1s						
MAT	**Matsushiro**	**43.08**	**9**	P	**P**	**13 57 20.9**	**-0.7**
KSRS	**Korea Array**	**43.42**	**357**	P	**P**	**13 57 23.8**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=177,slow=8.3,SNR=6.6						
XAN	**Xi'an**	**44.83**	**334**	P	**P**	**13 57 35.1**	**-0.6**
XAN				pP	pP	13 57 53.6	-15
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BJI	**Beijing**	**47.78**	**345**	P	**P**	**13 57 58.9**	**+0.4**
BJI				PP	**PP**	**13 59 51.7**	**-0.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,82nm,3.9s						
LZH	**Lanzhou**	**48.84**	**331**	*e*P	**P**	**13 58 09.5**	**+2.5**
LZH				pP	pwP	13 58 43.6	-1.7
LZH				sP	sP	13 59 01.3	+5.4
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.86**	**341**	*e*P	**P**	**13 58 14.2**	**-0.3**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,7.7s						
CN2	**Changchun**	**49.91**	**355**	*e*P	**P**	**13 58 14.7**	**0.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**50.12**	**1**	P	**P**	**13 58 16.9**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=205,slow=6.3,SNR=4.4						
LSA	**Lhasa**	**51.86**	**316**	P	**P**	**13 58 28.9**	**-1.3**
LSA				IAmb	IAmb	13 58 33.5	
	comp=Z,8.1nm,0.4s						
BKZ	**Black Stump Fm**	**52.92**	**135**	P	**P**	**13 58 37.2**	**-0.1**
BKZ				IAmb	IAmb	13 58 48.9	
	comp=Z,18nm,1.4s						
GTA	**Gaotai**	**53.42**	**331**	*e*P	**P**	**13 58 39.2**	**-1.8**
GTA				pP	pP	13 59 15.2	+0.6
GTA				sP	sP	13 59 34.5	+3.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ULN	**Ulaanbaatar**	**57.58**	**342**	P	**P**	**13 59 11.4**	**+0.8**
ULN				IAmb	IAmb	13 59 12.6	
	comp=Z,6.9nm,0.7s						
SONM	**Songino Array**	**57.76**	**341**	P	**P**	**13 59 12.5**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=161,slow=6.2,SNR=14						
SONM	**Songino Array**	**57.76**	**341**	P	**P**	**13 59 12.5**	**+0.6**
WMQ	**Urumqi**	**62.90**	**327**	*e*P	**P**	**13 59 49.3**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,52nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,300nm,5.3s						
PETK	**Petropavlovsk-**	**63.38**	**18**	P	**P**	**13 59 50.3**	**+0.7**
	comp=Z,5.7nm,1.0s,baz=91,slow=1.1,SNR=7.1						
MK31	**Makanchi Array**	**67.73**	**326**	P	**P**	**14 00 17.6**	**-0.2**
MKAR	**Makanchi Array**	**67.73**	**326**	P	**P**	**14 00 18.6**	**+0.9**
	comp=Z,2.7nm,0.4s,baz=113,slow=8.3,SNR=69						
MKAR	**Makanchi Array**	**67.73**	**326**	P	**P**	**14 00 18.1**	**+0.4**
MAKZ	**Makanchi**	**67.91**	**326**	P	**P**	**14 00 19.3**	**+0.4**
MAKZ				IAmb	IAmb	14 00 20.1	
	comp=Z,2.8nm,0.5s						
ZALV	**Zalesovo Beam**	**70.99**	**333**	P	**P**	**14 00 37.7**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=116,slow=7.4,SNR=7.8						
KURBB	**Kurchatov Arra**	**71.99**	**328**	P	**P**	**14 00 43.9**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=131,slow=5.2,SNR=11						
KURK	**Kurchatov**	**72.00**	**328**	P	**P**	**14 00 43.9**	**+0.2**
VNDA	**Vanda**	**73.25**	**173**	P	**P**	**14 00 51.3**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=324,slow=6.6,SNR=22						
VNDA	**Vanda**	**73.25**	**173**	P	**P**	**14 00 51.1**	**+0.4**
SBA	**Scott Base**	**74.13**	**172**	P	**P**	**14 00 57.2**	**+1.4**
MAW	**Mawson**	**75.90**	**201**	P	**P**	**14 01 06.8**	**+0.8**
	comp=Z,1.9nm,0.5s,baz=159,slow=7.1,SNR=2.0						
MAW	**Mawson**	**75.90**	**201**	P	**P**	**14 01 07.0**	**+0.9**
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**14 01 49.0**	**0.0**
	comp=Z,4.1nm,0.8s,baz=312,slow=1.1,SNR=16						
QSPA	**South Pole Qui**	**83.84**	**180**	P	**P**	**14 01 48.9**	**-0.2**
QSPA				IAmb	IAmb	14 01 50.2	
	comp=Z,6.8nm,1.1s						
SNAA	**Sanae**	**96.59**	**193**	P	**P**	**14 02 49.6**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=233,slow=13,SNR=6.6						
SNAA	**Sanae**	**96.59**	**193**	P	**P**	**14 02 49.2**	**+0.3**
SNAA				IAmb	IAmb	14 03 02.5	
	comp=Z,3.5nm,1.1s						
BRTR	**Keskin Array B**	**99.09**	**309**	LR	LR	14 55 36.1	
	comp=Z,29nm,18.4s,baz=322,slow=40						
CPUP	**Villa Florida**	**146.87**	**167**	PKPbc	**PKPbc**	**14 09 01.8**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=103,slow=1.3,SNR=9.0						
CPUP	**Villa Florida**	**146.87**	**167**		**PKPbc**	**14 09 01.4**	**-0.4**

*NEIC **08** 13:52:04.9±2.0, 16˚00N±0˚05×98˚48W±0˚06, h10km±1km, mb4.5/115, Md4.4/54(MEX), Error ellipse: s-maj=11.7km s-min=5.6km az=232.0*
*IDC **08** 13:52:05.4±2.1, 16˚31N×98˚34W, h0km, mb4.0/6, mb1 4.3/11, mb1mx4.0/42, mbtmp4.0/11, ML3.5/5, MS3.5/9, Ms1 3.5/9, ms1mx3.2/38, Error ellipse: s-maj=41.7km s-min=20.4km az=15.0*
*MEX **08** 13:52:07.1±0.9, 16˚01N×98˚67W, h17km±13km, MD4.4*

ISC 08 13:52:03.3±1.4, 15˚98N±0˚04×98˚57W±0˚03, h1km±9km, n192, σ1§81/209, mb4.5/50, MS3.6/8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.59**	**46**	*e*P	**Pb**	**13 52 17.2**	**+0.6**
PNIG				*i* S	**Sn**	**13 52 25.7**	**-3.5**
PNIG	**Pinotepa**	**0.59**	**46**		**Pb**	**13 52 17.1**	**+0.6**
PNIG					**Sn**	**13 52 25.6**	**-3.6**
CRIG	**Cruz Grande**	**0.92**	**325**	*e*P	**Pg**	**13 52 20.1**	**-0.9**
CRIG				*i* S	**Sg**	**13 52 30.5**	**-2.5**
YOIG	**Yosondua**	**1.32**	**48**	*e*P	**Pn**	**13 52 28.4**	**-0.7**
YOIG				*e*S	**Sg**	**13 52 44.9**	**-0.7**
PEIG	**Puerto Escondi**	**1.37**	**89**	*e*P	**Pg**	**13 52 29.6**	**0.0**
PEIG				*i* S	**Sg**	**13 52 46.7**	**-0.7**
TXIG	**Tlaxiaco**	**1.48**	**31**	*e*P	**Pn**	**13 52 30.3**	**-1.1**
TXIG				*e*S	**Sn**	**13 52 48.9**	**-2.7**
TLIG	**Tlapa**	**1.57**	**0**	*e*P	**Pn**	**13 52 30.9**	**-1.5**
TLIG				*e*S	**Sn**	**13 52 49.0**	**-4.6**
TLIG	**Tlapa**	**1.57**	**0**	Pn	**Pn**	**13 52 31.0**	**-1.5**
TLIG	**Tlapa**	**1.57**	**0**		**Sn**	**13 52 51.4**	**-2.2**
CAIG	**El Cayaco**	**1.94**	**303**	*e*P	**Pn**	**13 52 34.9**	**-2.6**
CAIG				*i* S	**Sn**	**13 52 56.7**	**-5.7**
CAIG	**El Cayaco**	**1.94**	**303**		**Pn**	**13 52 34.9**	**-2.6**
CAIG					**Sb**	**13 53 05.8**	**+1.5**
FTIG	**Fresnillo de T**	**1.96**	**12**	*e*P	**Pn**	**13 52 37.1**	**-0.8**
FTIG				*i* S	**Sn**	**13 52 59.6**	**-3.6**
HLIG	**Huajuapan de L**	**1.98**	**22**	*e*P	**Pn**	**13 52 37.5**	**-0.7**
HLIG				*e*S	**Sn**	**13 52 59.9**	**-3.8**
PANG	**Puerto Angel**	**2.04**	**98**	*i* P	**Pb**	**13 52 40.7**	**-0.6**
PANG				*e*S	**Sn**	**13 53 01.7**	**-3.3**
PANG	**Puerto Angel**	**2.04**	**98**		**Sn**	**13 53 01.7**	**-3.3**
MEIG	**Mezcala**	**2.18**	**333**	*e*P	**Pn**	**13 52 38.7**	**-2.1**
MEIG				*i* S	**Sn**	**13 53 03.6**	**-4.8**
MEIG	**Mezcala**	**2.18**	**333**		**Pn**	**13 52 39.9**	**-0.8**
MEIG					**Sn**	**13 53 08.9**	**+0.4**
TOIG	**Toxpalan**	**2.55**	**34**	*e*P	**Pn**	**13 52 46.4**	**+0.5**
TOIG				*e*S	**Sg**	**13 53 23.3**	**-2.1**
PLIG	**Platanillo**	**2.56**	**340**	*i* P	**Pn**	**13 52 44.3**	**-1.7**
PLIG				*i* S	**Sn**	**13 53 14.2**	**-3.6**
PLIG	**Platanillo**	**2.56**	**340**		**Pn**	**13 52 45.3**	**-0.7**
PLIG					**Sb**	**13 53 22.7**	**+0.6**
TPIG	**Tehuac#an**	**2.69**	**25**	*e*P	**Pn**	**13 52 47.6**	**-0.3**
TPIG				*e*S	**Sg**	**13 53 27.9**	**-1.9**
TPIG	**Tehuac#an**	**2.69**	**25**		**Pn**	**13 52 47.6**	**-0.3**
TPIG					LR	13 53 27.9	
YAIG	**Yautepec**	**2.90**	**351**	*e*P	**Pn**	**13 52 53.5**	**+2.6**
YAIG				*e*S	**Sn**	**13 53 27.2**	**+0.7**
YAIG	**Yautepec**	**2.90**	**351**		**Pn**	**13 52 53.5**	**+2.6**
YAIG					**Sn**	**13 53 27.2**	**+0.7**
MAVM	**Malinalco, Edo**	**3.09**	**344**	*e*PG	**Pn**	**13 52 52.2**	**-1.3**
MAVM				*i* SG	**Sn**	**13 53 27.5**	**-3.6**
MAVM	**Malinalco, Edo**	**3.09**	**344**		**Pb**	**13 52 57.8**	**-1.4**
MAVM					**Sb**	**13 53 37.7**	**+0.2**
ZIIG	**Zihuatanejo**	**3.21**	**301**	*e*P	**Pn**	**13 52 55.6**	**+0.8**
ZIIG				*e*S	**Sn**	**13 53 31.0**	**-2.8**
ZIIG	**Zihuatanejo**	**3.21**	**301**		**Pn**	**13 52 55.6**	**+0.8**
ZIIG					**Sb**	**13 53 43.0**	**+2.3**
TOVM	**TOLUCA**	**3.45**	**342**	*e*P	**Pb**	**13 53 04.9**	**-0.5**
TOVM				*e*S	**Sn**	**13 53 36.2**	**-4.0**
TOVM	**TOLUCA**	**3.45**	**342**		**Pb**	**13 53 04.9**	**-0.5**
TOVM					**Sb**	**13 53 48.2**	**+0.2**
CMIG	**Matias Romero**	**3.71**	**72**	Pn	**Pn**	**13 53 01.2**	**-0.5**
	10nm,0.3s,baz=258,slow=12,SNR=111						
CMIG				Sn	**Sn**	**13 53 43.7**	**-2.4**
	16nm,0.3s,baz=256,slow=15,SNR=4.1						
CMIG				LR	LR	13 53 48.0	
	comp=Z,140nm,20.8s,baz=222,slow=30						
CMIG				Lg	Lg	13 54 02.8	
	32nm,0.3s,baz=296,slow=20,SNR=6.4						
CMIG	**Matias Romero**	**3.71**	**72**	*e*P	**Pn**	**13 53 01.6**	**-0.1**
CMIG				*e*S	**Sn**	**13 53 46.2**	**+0.1**
CMIG	**Matias Romero**	**3.71**	**72**		**Pn**	**13 53 01.6**	**-0.1**
CMIG					**Sb**	**13 53 56.2**	**+1.1**
ZUVM	**ZUMPANGO**	**3.85**	**353**	*e*PG	**Pn**	**13 53 02.8**	**-1.3**
ZUVM				*e*SG	**Sn**	**13 53 45.6**	**-4.5**
ZUVM	**ZUMPANGO**	**3.85**	**353**		**Pb**	**13 53 14.8**	**+2.4**
ZUVM					**Sb**	**13 54 03.6**	**+4.0**
ACIG	**Acambay**	**4.17**	**343**	*e*P	**Pn**	**13 53 07.5**	**-0.7**
ACIG				*e*S	**Sn**	**13 53 56.9**	**-0.9**
MOIG	**Morelia**	**4.44**	**326**		**Pn**	**13 53 15.9**	**+3.8**
MMIG	**Aquila**	**5.11**	**297**	*e*P	**Pn**	**13 53 19.7**	**-1.3**
MMIG				*i* S	**Sn**	**13 54 15.7**	**-4.9**
MMIG	**Aquila**	**5.11**	**297**		**Pn**	**13 53 19.7**	**-1.3**
MMIG					LR	13 54 45.5	
CCIG	**Comitan**	**6.19**	**86**		**Pn**	**13 53 38.1**	**+2.0**
APG	**El Apazote**	**7.88**	**96**	Pn	**Pn**	**13 53 57.6**	**-1.7**
	1.1nm,0.3s,baz=238,slow=19,SNR=1.3						
APG				Sn	**Sn**	**13 55 23.1**	**-6.2**
	0.8nm,0.3s,baz=103,slow=21,SNR=2.0						
APG				Lg	Lg	13 56 05.8	
	3.0nm,0.3s,baz=62,slow=23,SNR=4.4						
MTO3	**Montecristo**	**9.03**	**99**		**Pn**	**13 54 16.2**	**+1.1**
TEIG	**Tepich**	**10.66**	**65**	Pn	**Pn**	**13 54 34.9**	**-2.4**
	0.8nm,0.3s,baz=63,slow=7.4,SNR=8.1						
TEIG				Sn	**Sn**	**13 56 29.6**	**-7.7**
	1.7nm,0.3s,baz=23,slow=20,SNR=7.7						
TEIG				LR	LR	13 58 59.5	
	comp=Z,257nm,18.7s,baz=284,slow=40						
H06E1	**SOCORRO T-PHAS**	**12.12**	**285**	T	T	14 07 05.9	
	SNR=137						
H06S1	**SOCORRO T**	**12.14**	**285**	T	T	14 07 11.8	
	SNR=27						
**H06N1

comp=Z,26nm,1.0s
U40A Yellville 20.92 13 P 13 56 48.9
baz=195,SNR=6.1
T35A Sooner Cattle 20.93 5 P **P** **13 56 46.2 -1.3**
T35A IAmb IAmb 13 56 47.6
comp=Z,20nm,0.9s
LCAR Lake Charles 21.07 17 P **P** **13 56 48.4 -0.6**
LCAR IAmb IAmb 13 56 58.8
comp=Z,16nm,1.1s
X48A Hartselle 21.11 27 **P** **13 56 48.5 -0.9**
X48A IAmb IAmb 13 56 49.7
comp=Z,12nm,0.8s
PLAL Pickwick Lake 21.14 25 P **P** **13 56 48.4 -1.3**
PLAL IAmb IAmb 13 56 55.1
comp=Z,19nm,1.1s
SPX San Pedro Mart 21.51 317 P **P** **13 56 57.5 +3.4**
W18A Petrified Fore 21.52 334 P 13 56 56.1
baz=149
T25A Trinidad 21.70 347 **P** **13 56 57.9 +1.9**
T25A IAmb IAmb 13 57 01.8
comp=Z,34nm,1.4s
T25A Trinidad 21.70 347 P 13 56 57.8
baz=164
FPAL Fort Paine 21.84 30 P **P** **13 56 56.8 -0.6**
FPAL IAmb IAmb 13 56 58.3
comp=Z,13nm,0.9s
GOGA Godfrey 22.08 35 P 13 57 00.2
baz=222
GOGA Godfrey 22.08 35 P **P** **13 56 59.5 -0.3**
Y52A Lilburn 22.09 34 **P** **13 56 59.0 -1.1**
Y52A IAmb IAmb 13 57 01.2
comp=Z,12nm,0.8s
S39A Bolivar 22.12 11 **P** **13 56 59.9 -0.3**
S39A IAmb IAmb 13 57 03.4
comp=Z,18nm,0.9s
WVT Waverly 22.23 24 P **P** **13 57 00.7 -0.8**
WVT Waverly 22.23 24 P 13 57 02.3
baz=208
SWET Sewanee 22.25 28 P **P** **13 56 58.3 -3.5**
SWET IAmb IAmb 13 57 02.0
comp=Z,16nm,0.9s
V48A Smith Brothers 22.30 26 P **P** **13 56 59.6 -2.7**
V48A IAmb IAmb 13 57 05.0
comp=Z,15nm,0.9s
GLA Glamis 22.48 322 P **P** **13 57 06.5 +2.3**
GLA IAmb IAmb 13 57 16.9
comp=Z,34nm,1.4s
GLA Glamis 22.48 322 P 13 57 06.9
baz=134
W50A Signal Mountai 22.52 29 P **P** **13 57 04.0 -0.6**
W50A IAmb IAmb 13 57 05.6
comp=Z,18nm,0.9s
WUAZ Wupatki 22.57 332 P 13 57 07.8
baz=146,SNR=6.0
WUAZ Wupatki 22.57 332 P **P** **13 57 07.3 +2.0**
WUAZ IAmb IAmb 13 57 10.6
comp=Z,24nm,0.9s
CBKS Cedar Bluff 22.77 358 P 13 57 08.4
baz=177
CLTN Cedars of Leba 22.81 26 P **P** **13 57 06.7 -0.9**
CLTN IAmb IAmb 13 57 12.1
comp=Z,15nm,1.1s
S22A 4UR Ranch, Cre 22.88 343 P 13 57 10.3
baz=159,SNR=5.5
MVCO Mesa Verde 22.90 339 P **P** **13 57 09.2 +0.3**
MVCO IAmb IAmb 13 57 11.5
comp=Z,20nm,1.1s
MVCO Mesa Verde 22.90 339 P 13 57 10.2
baz=154,SNR=11
R40A Maddies Statio 22.91 13 **P** **13 57 06.9 -1.7**
CCM Cathedral Cave 22.92 15 P 13 57 09.4
baz=198
CCM Cathedral Cave 22.92 15 P **P** **13 57 06.9 -1.9**
CCM IAmb IAmb 13 57 14.3
comp=Z,21nm,1.1s
RMX La Rumorosa 22.93 319 P **P** **13 57 10.3 +1.2**
PDMCI Parker Dam,Lak 23.00 325 P 13 57 12.7
baz=138
FVM French Village 23.07 17 P **P** **13 57 10.1 -0.2**
FVM IAmb IAmb 13 57 12.1
comp=Z,22nm,1.1s
CPCT Cooper Cave 23.11 30 P **P** **13 57 10.0 -0.7**
CPCT IAmb IAmb 13 57 11.5
comp=Z,9.8nm,0.9s
W52A Murphy 23.12 32 P **P** **13 57 10.5 -0.4**
S44A Carbondale 23.14 19 P **P** **13 57 11.2 +0.2**
SIUC Southern Illin 23.18 19 P **P** **13 57 11.3 -0.1**
KSCO Kaye Shedlock' 23.22 352 P **P** **13 57 12.3 +0.3**
KSCO Kaye Shedlock' 23.22 352 P 13 57 13.3
baz=170
T47A Sharon Grove 23.27 24 P **P** **13 57 11.7 -0.6**
BC3 Big Chuckawall 23.27 322 P 13 57 14.8
baz=134
IRM Iron Mountain 23.45 324 P 13 57 16.2
baz=136
Q24A Divide 23.61 347 P 13 57 17.0
baz=164
TKL Tuckaleechee C 23.64 31 P **P** **13 57 13.5 -2.6**
comp=Z,3.2nm,0.8s,baz=184,slow=11,SNR=4.9
TKL Tuckaleechee C 23.64 31 IAmb IAmb 13 57 19.5
comp=Z,4.5nm,0.8s
PFO Pinyon Flats O 23.85 321 LR LR 14 06 59.6
comp=Z,143nm,18.2s,baz=125,slow=38
PV13 Radium Mtn., P 23.87 340 P **P** **13 57 19.5 +0.9**
PV13 IAmb IAmb 13 57 21.1
comp=Z,8.6nm,0.9s
PV15 Paradox Valley 23.92 341 P **P** **13 57 20.1 +1.0**
PV15 IAmb IAmb 13 57 22.3
comp=Z,15nm,1.0s
PV03 Paradox Valley 23.96 340 P **P** **13 57 20.4 +0.9**
PV03 IAmb IAmb 13 57 21.4
comp=Z,10nm,1.0s
P38A Dawn 23.97 10 **P** **13 57 18.9 -0.4**
P38A IAmb IAmb 13 57 20.1
comp=Z,15nm,0.8s
PV18 Skein Mesa, Pa 23.98 340 P **P** **13 57 20.5 +0.9**
PV18 IAmb IAmb 13 57 22.0
comp=Z,8.5nm,1.0s
PV07 Paradox Valley 24.06 340 P **P** **13 57 21.5 +1.0**
PV07 IAmb IAmb 13 57 23.5
comp=Z,14nm,1.1s
V53A Saluda 24.14 33 P **P** **13 57 20.9 0.0**
V53A IAmb IAmb 13 57 30.6
comp=Z,15nm,1.4s
P40A Paris 24.15 12 P **P** **13 57 20.3 -0.6**
GMRC Granite Mounta 24.20 324 P 13 57 23.3
baz=136
Q44A Meyer Farm, Va 24.33 18 P **P** **13 57 21.6 -1.0**
OLIL Olney 24.46 20 P **P** **13 57 23.5 -0.3**
KNB Kanab 24.47 332 P **P** **13 57 26.5 +2.3**
ISCO Idaho Springs 24.52 347 P **P** **13 57 25.7 +1.0**
ISCO IAmb IAmb 13 57 28.9
comp=Z,20nm,1.4s
ISCO Idaho Springs 24.52 347 P 13 57 26.3
baz=163,SNR=7.8
KMSC Kings Mountain 24.55 36 P 13 57 25.3
baz=223
HEC Hector,Ludlow 24.62 323 P 13 57 27.6
baz=135
LCMT Little Creek M 24.66 331 P **P** **13 57 27.7 +1.9**
WCI Wyandotte Cave 24.66 24 P **P** **13 57 25.4 -0.2**
WCI Wyandotte Cave 24.66 24 P 13 57 25.8
baz=209
N33A J Bar K, Exete 24.69 2 P **P** **13 57 26.5 +0.6**
SCI2 San Clemente I 24.76 317 P 13 57 29.4
baz=128
TUQ Turquoise Moun 24.82 325 P 13 57 30.4
baz=136,SNR=5.5
N35A Tabor 24.92 5 P **P** **13 57 27.2 -0.7**
OGNE Ogallala 25.06 354 P **P** **13 57 30.4 +1.1**
OGNE Ogallala 25.06 354 P 13 57 31.1
baz=172,SNR=6.1
CCUT Cedar City 25.15 331 **P** **13 57 30.1 -0.2**
N38A Joes South For 25.15 10 P **P** **13 57 30.0 -0.1**
SHPR Sheep Range 25.21 327 P **P** **13 57 31.6 +0.8**
U54A Nelsons Funny 25.30 33 P **P** **13 57 30.9 -0.7**
U54A Nelsons Funny 25.30 33 P 13 57 32.2
baz=220
S51A Beattyville 25.31 29 P **P** **13 57 31.1 -0.4**
SRU San Rafael Swe 25.31 338 P **P** **13 57 31.9 +0.1**
SRU IAmb IAmb 13 57 44.7
comp=Z,14nm,1.1s
Q16A Castle Valley 25.38 337 P **P** **13 57 32.6 +0.2**
Q16A IAmb IAmb 13 57 46.1
comp=Z,13nm,1.2s

MSU Marysvale 25.44 335 P **P** **13 57 33.1 +0.2**
O20A White River Ci 25.50 343 P **P** **13 57 34.0 +0.6**
O20A IAmb IAmb 13 57 38.0
comp=Z,15nm,1.1s
O20A White River Ci 25.50 343 P 13 57 36.5
baz=157,SNR=9.6
N23A Red Feather La 25.64 347 P 13 57 36.2
baz=163
EDW2 Edwards Air Fo 25.64 321 P 13 57 37.1
baz=132
P17A Butcher Ranch, 25.71 338 P **P** **13 57 34.8 -0.6**
TMUT Trail Mountain 25.73 337 P **P** **13 57 35.3 -0.4**
HDIL Hopedale 25.78 16 P 13 57 36.2
baz=201
PHWY Pilot Hill 25.93 348 P **P** **13 57 37.5 +0.1**
PHWY IAmb IAmb 13 57 41.1
comp=Z,9.4nm,0.9s
TPNV Topopah Spring 26.11 326 P 13 57 41.3
baz=138
TPNV Topopah Spring 26.11 326 P **P** **13 57 40.2 +1.1**
TPNV IAmb IAmb 13 57 49.3
comp=Z,14nm,1.3s
PSUT Pine Spring 26.18 332 P **P** **13 57 40.5 +0.9**
SCIA State Center 26.25 9 P 13 57 41.1
baz=191
SFIN Lafayette 26.28 20 P **P** **13 57 38.8 -1.4**
SFIN IAmb IAmb 13 57 42.7
comp=Z,17nm,1.0s
SFIN Lafayette 26.28 20 P 13 57 40.7
baz=205
RDMU Red Mountain 26.30 341 P **P** **13 57 41.6 +0.8**
RDMU IAmb IAmb 13 57 44.8
comp=Z,9.8nm,1.0s
P49A Miami Univ. Ec 26.41 25 P 13 57 41.0
baz=211,SNR=6.2
P49A Miami Univ. Ec 26.41 25 P **P** **13 57 40.0 -1.4**
MPU Maple Canyon 26.52 337 P **P** **13 57 43.0 +0.3**
MPU IAmb IAmb 13 57 58.0
comp=Z,13nm,1.3s
Q51A Peebles 26.56 27 P **P** **13 57 41.2 -1.6**
BLA Blacksburg 26.56 34 P 13 57 43.4
baz=222
NLU North Lily Min 26.63 336 P **P** **13 57 44.8 +1.1**
NLU IAmb IAmb 13 57 47.0
comp=Z,8.6nm,1.1s
T56A Rocky Mt 26.64 35 P 13 57 44.1
baz=223
PKM Mcpherson Peak 26.78 319 P 13 57 47.5
baz=129
R11A Troy Canyon, C 26.84 329 P 13 57 47.5
baz=141
Q52A Bidwell 26.99 29 P **P** **13 57 45.9 -0.9**
R54A Victor 27.00 32 P 13 57 47.1
baz=220
DUG Dugway, Tooele 27.13 336 P **P** **13 57 49.1 +1.0**
DUG Dugway, Tooele 27.13 336 P 13 57 50.1
baz=148
N47A Urbana 27.21 22 P **P** **13 57 47.5 -1.1**
Q53A Leroy 27.26 30 P 13 57 50.0
baz=218
ACSO Alum Creek Sta 27.71 26 P 13 57 53.5
baz=214
ECSD EROS Data Cent 27.71 3 P **P** **13 57 52.6 -0.6**
ECSD IAmb IAmb 13 57 55.5
comp=Z,7.0nm,1.1s
ECSD EROS Data Cent 27.71 3 P 13 57 53.8
baz=184
S57A Dark Hollow, R 27.76 35 P 13 57 53.8
baz=224
JFWS Jewell Farm 27.77 13 P 13 57 54.8
baz=197
NVAR Mina Array Bea 28.30 326 P **P** **13 57 60.0 +1.2**
comp=Z,1.9nm,0.8s,baz=152,slow=10.0,SNR=10
NVAR LR LR 14 10 46.1
comp=Z,160nm,18.5s,baz=169,slow=40
BW06 Boulder Array 28.31 343 P 13 57 59.9
baz=157,SNR=5.2
PD31 Pinedale Array 28.31 343 P **P** **13 57 58.3 -0.4**
PDAR Pinedale Array 28.31 343 P **P** **13 57 59.5 +0.8**
comp=Z,2.6nm,1.0s,baz=141,slow=7.6,SNR=15
PDAR LR LR 14 10 47.1
comp=Z,100nm,21.1s,baz=172,slow=40
PDAR Pinedale Array 28.31 343 P **P** **13 57 58.3 -0.4**
BW06 Boulder Array 28.31 343 P **P** **13 57 58.1 -0.7**
BW06 IAmb IAmb 13 58 14.5
comp=Z,11nm,1.5s
PNTR Pine Nut 29.48 325 P **P** **13 58 11.4 +2.2**
PNTR IAmb IAmb 13 58 15.7
comp=Z,6.1nm,0.9s
RLMT Red Lodge 30.42 345 P **P** **13 58 18.7 +1.3**
RLMT Red Lodge 30.42 345 P 13 58 19.2
baz=159
ATAH Atahualpa 30.44 137 LR LR 14 08 13.6
comp=Z,66nm,18.7s,baz=256,slow=32
HLID Hailey 30.62 337 P 13 58 20.2
baz=148
M56A Emporium 30.91 31 P 13 58 22.6
baz=221
MCMT McKenzie Canyo 31.18 340 P **P** **13 58 25.6 +1.4**
BOZ Bozeman (W) 31.50 342 P 13 58 28.9
baz=155
DLMT Dillon 31.58 341 P **P** **13 58 29.1 +1.5**
DLMT IAmb IAmb 13 58 31.2
comp=Z,4.9nm,1.0s
MDND Maddock 31.79 359 P **P** **13 58 29.1 -0.1**
MDND Maddock 31.79 359 P 13 58 29.9
baz=178,SNR=5.8
LRM Limekiln Ridge 31.95 342 P **P** **13 58 32.6 +1.7**
J08A Circle Bar Ran 32.13 332 P **P** **13 58 33.8 +1.3**
J08A IAmb IAmb 13 58 36.2
comp=Z,4.6nm,1.0s
K56A Middlesex 32.25 30 P 13 58 33.7
baz=221
AGMN Agassiz Nation 32.30 3 P 13 58 33.8
baz=184,SNR=9.0
HRY Holter Researc 32.57 343 P **P** **13 58 37.1 +0.9**
EGMT Eagleton 33.26 346 P 13 58 43.8
baz=160
J57A Williamstown 33.43 31 P 13 58 44.1
baz=222
F10A Beach Ranch, E 33.73 336 P **P** **13 58 47.4 +1.0**
F10A IAmb IAmb 13 58 50.2
comp=Z,7.3nm,1.1s
ULM Lac du Bonnet 34.25 3 P **P** **13 58 50.0 -0.7**
comp=Z,2.9nm,0.9s,baz=190,slow=14,SNR=6.1
ULM Lac du Bonnet 34.25 3 P **P** **13 58 49.7 -1.0**
ULM IAmb IAmb 13 58 51.4
comp=Z,4.8nm,0.9s
H04D Lebanon 35.02 329 P 13 58 59.3
baz=136
G03D McMinnville, O 35.78 330 P 13 59 05.3
baz=136
LBNH Lisbon 36.09 33 P 13 59 07.0
baz=227
D55A Sainte-Anne-du 36.40 27 P 13 59 10.1
baz=219
I63A Otisfield 36.68 35 P 13 59 12.7
baz=229
D56A ZEC Mazanza, M 36.74 27 P 13 59 12.9
baz=220
G62A West of Eustis 37.48 33 P 13 59 18.6
baz=228
MATQ Matagami 37.73 22 P 13 59 20.4
baz=214
FFC Flin Flon 38.76 357 P **P** **13 59 28.6 -0.5**
D63A Stockholm 39.95 33 P 13 59 39.3
baz=229
FCC Fort Churchill 42.84 3 P **P** **14 00 01.7 -1.1**
YKA Yellowknife Ar 47.81 350 P **P** **14 00 41.2 -1.0**
comp=Z,1.3nm,0.8s,baz=158,slow=7.7,SNR=19
YKA LR LR 14 24 17.9
comp=Z,81nm,18.9s,baz=0.0,slow=41
TAOE Nuku Hiva Isla 47.99 242 *e*T T 14 51 58.7
comp=Z,21nm,0.2s
H03N2 Juan Fernandez 52.60 159 T T 14 58 03.8
baz=338,slow=77,SNR=766
H03N1 Juan Fernandez 52.61 159 T T 14 58 04.5
baz=338,slow=77,SNR=981
H03N3 Juan Fernandez 52.62 159 T T 14 58 03.6
baz=338,slow=77,SNR=902
RKT Rikitea 52.70 223 *e*T T 14 57 56.7
comp=Z,14nm,0.3s
BMRM Bremner River 55.63 335 P 14 01 43.1
baz=123
L27K Beaver Creek, 55.76 338 P 14 01 43.9
baz=127
K27K Chicken 56.44 339 P **P** **14 01 48.2 +1.8**
K27K IAmb IAmb 14 01 50.0
comp=Z,6.8nm,0.9s
K27K Chicken 56.44 339 P 14 01 49.1
baz=127
EGAK Eagle 56.59 340 P 14 01 48.2
baz=128
INK Inuvik 56.83 345 P **P** **14 01 49.9 +0.8**
INK IAmb IAmb 14 01 51.1
comp=Z,4.1nm,0.9s
SCRK Sand Creek 57.09 338 P 14 01 52.9
baz=125
PMR Palmer 57.83 334 P 14 01 57.8
baz=118
HOM Homer 58.05 331 P 14 01 59.8
baz=115
SII Sitkinak Islan 58.09 327 P 14 02 00.1
baz=110
WAT2 Susitna Watana 58.28 336 P 14 02 01.2
baz=120
HDA Harding Lake 58.40 338 P 14 02 01.6
baz=122
HDA P 14 02 01.6
baz=122
SUA Susitna One 58.45 334 P **P** **14 02 02.4 +1.6**
SUA IAmb IAmb 14 02 03.9
comp=Z,5.3nm,0.8s
SUA Susitna One 58.45 334 P 14 02 02.3
baz=117
PRP Porcupine Dome 58.51 339 P 14 02 02.6
baz=124
IL31 58.58 338 P **P** **14 02 02.3 +0.9**
ILAR Eielson Array 58.58 338 P **P** **14 02 01.1 -0.4**
comp=Z,2.3nm,1.0s,baz=145,slow=5.6,SNR=12
ILAR Eielson Array 58.58 338 P **P** **14 02 02.4 +0.9**
MCK McKinley 58.80 336 P 14 02 04.6
baz=120
SPCR Spurr Chakacha 58.97 333 P 14 02 05.6
baz=115
SKT Skwentna 59.02 334 P 14 02 05.4
baz=116
TRF Thorofare Moun 59.19 336 P **P** **14 02 06.9 +1.0**
TRF Thorofare Moun 59.19 336 P 14 02 07.3
baz=118
BWN Browne 59.22 337 P **P** **14 02 06.8 +0.9**
NEA2 Nenana 59.28 337 P 14 02 08.0
baz=120
I23K Minto, Yukon-K 59.67 338 P 14 02 10.2
baz=120
PPLA Purkeypile 59.70 335 P 14 02 10.5
baz=116
BPAW Bear Paw Mtn. 59.77 336 P 14 02 10.9
baz=118
MLY Manley 60.12 337 P **P** **14 02 13.3 +1.1**
MLY IAmb IAmb 14 02 14.6
comp=Z,4.7nm,1.0s
MLY Manley 60.12 337 P 14 02 13.4
baz=118
PPT2 Papeete2 60.32 239 *e*LR LR 14 20 00.7
comp=Z,50nm,23.0s
COLD Coldfoot 61.02 340 P 14 02 19.7
baz=120
TBI Tubuai 63.27 233 *e*T T 15 11 05.7
comp=Z,8.5nm,0.2s
ANM Nome 65.77 334 P 14 02 51.0
baz=104
SUMG Summit 66.09 17 P **P** **14 02 52.4 +0.2**
TNA Tin City 67.05 335 P 14 02 59.2
baz=102
MSVF Nonsavu 88.69 251 LR LR 14 36 18.6
comp=Z,64nm,19.6s,baz=139,slow=30
VAE Valguarnera 97.64 48 LR LR 14 46 45.0
comp=Z,936nm,19.4s,baz=326,slow=34
WRA Warramunga Arr 129.68 257 PKP **PKiKP** **14 11 18.5 +2.6**
comp=Z,1.1nm,1.0s,baz=83,slow=2.6,SNR=3.4

IDC ***08*** *13:58:14.6±1.1, 57.97S×140.07W, h0km, mb4.1/5, mb1 4.3/5, mb1mx4.0/34, mbtmp4.1/5, MS3.4/3, Ms1 3.4/3, ms1mx3.0/23, Error ellipse: s-maj=38.5km s-min=29.0km az=39.0*
NEIC ***08*** *13:58:16.2±1.6, 58.1S±0.2×139.8W±0.2, h15km±4km, mb4.6/13, Error ellipse: s-maj=27.7km s-min=14.7km az=167.0*

ISC 08 13:58:15.5±0.8, 58.05S±0.2×139.8W±0.2, h10km, n30, σ0.97/23, mb4.5/10, MS3.3/3, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**32.14**	**180**	P	**P**	**14 04 43.1**	**+0.1**
	1.9nm,0.9s,baz=89,slow=3.4,SNR=3.7						
QSPA	**South Pole Qui**	**32.14**	**180**	IAmb	IAmb	14 04 46.1	
	comp=Z,5.6nm,1.2s						
GO09	**Cerro Castillo**	**38.11**	**110**	P	**P**	**14 05 34.3**	**+0.1**
PPT	**Papeete**	**41.03**	**346**	LR	LR	14 18 48.3	
	comp=Z,38nm,21.1s,baz=162,slow=30						
PLCA	**Paso Flores**	**46.08**	**99**	LR	LR	14 21 21.5	
	comp=Z,36nm,19.1s,baz=322,slow=30						
H03S2	**Juan Fernandez**	**46.77**	**86**	T	T	14 57 01.0	
	baz=217,slow=74,SNR=6.4						
H03S1	**Juan Fernandez**	**46.78**	**86**	T	T	14 57 02.9	
	baz=217,slow=74,SNR=6.9						
H03S3	**Juan Fernandez**	**46.79**	**86**	T	T	14 57 01.1	
	baz=217,slow=74,SNR=7.2						
SNAA	**Sanae**	**47.16**	**163**	P	**P**	**14 06 49.7**	**+2.2**
	comp=Z,0.7nm,0.5s,baz=212,slow=8.6,SNR=8.4						
SNAA	**Sanae**	**47.16**	**163**	P	**P**	**14 06 45.2**	**-2.3**
SNAA				IAmb	IAmb	14 06 52.1	
	comp=Z,6.9nm,1.5s						
MSVF	**Nonsavu**	**50.77**	**304**	LR	LR	14 25 12.3	
	comp=Z,54nm,20.9s,baz=154,slow=32						
TOO	**Toolangi**	**51.28**	**259**	P	**P**	**14 07 19.6**	**+0.2**
TOO				IAmb	IAmb	14 07 46.2	
	comp=Z,18nm,1.3s						
STKA	**Stephens Creek**	**57.70**	**261**	P	**P**	**14 08 06.8**	**+0.8**
	comp=Z,2.7nm,0.9s,baz=90,slow=3.0,SNR=3.6						
AS31	**Alice Springs**	**68.32**	**260**	P	**P**	**14 09 15.7**	**-1.2**
ASAR	**Alice Springs**	**68.32**	**260**	P	**P**	**14 09 16.3**	**-0.5**
	comp=Z,4.5nm,1.0s,baz=141,slow=6.4,SNR=22						
WR0	**Warramunga Arr**	**71.03**	**263**	P	**P**	**14 09 33.4**	**-0.1**
WR0				IAmb	IAmb	14 10 02.2	
	comp=Z,5.2nm,1.2s						
WB2	**Warramunga Arr**	**71.14**	**263**	P	**P**	**14 09 34.0**	**-0.2**
WB2				IAmb	IAmb	14 09 35.2	
	comp=Z,4.4nm,0.9s						
WRA	**Warramunga Arr**	**71.15**	**263**	P	**P**	**14 09 34.0**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=149,slow=5.7,SNR=9.3						
WB0	**Warramunga Arr**	**71.26**	**263**	P	**P**	**14 09 35.0**	**+0.1**
WB0				IAmb	IAmb	14 09 48.1	
	comp=Z,12nm,1.4s						
MORW	**Morawa**	**72.83**	**243**	P	**P**	**14 09 44.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**77.22**	**256**	P	**P**	**14 10 08.8**	**-0.9**
FITZ				IAmb	IAmb	14 10 12.0	
	comp=Z,7.5nm,1.2s						
GIRL	**Giralia**	**79.12**	**245**	P	**P**	**14 10 20.1**	**0.0**
PV13	**Radium Mtn., P**	**99.27**	**24**	P	**Pdif**	**14 11 56.9**	**-0.4**
YKA	**Yellowknife Ar**	**121.75**	**13**	PKP	**PKPdf**	**14 17 08.3**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=193,slow=3.0,SNR=5.7						
IL31		**122.58**	**356**		**PKiKP**	**14 17 10.7**	**+1.0**
ILAR	**Eielson Array**	**122.58**	**356**	PKP	**PKiKP**	**14 17 10.9**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=233,slow=1.3,SNR=21						
ILAR	**Eielson Array**	**122.58**	**356**		**PKiKP**	**14 17 10.6**	**+0.8**
TORD	**Torodi Ar. Bea**	**126.66**	**131**	PKP	**PKPdf**	**14 17 18.5**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=248,slow=1.6,SNR=4.3						
TIXI	**Tiksi**	**143.79**	**328**	PKP	**PKPdf**	**14 17 48.0**	**-1.0**
	comp=Z,7.2nm,0.8s,baz=126,slow=3.4,SNR=16						
TIXI	**Tiksi**	**143.79**	**328**		**PKPdf**	**14 17 48.0**	**-1.0**

IDC ***08*** *14:04:21.8±1.0, 42.05N×142.96E, h0km, mb3.6/9, mb1 3.7/11, mb1mx3.5/69, mbtmp3.6/11, ML3.9/1, MS2.8/1, Ms1 3.0/1, ms1mx2.1/50, Error ellipse: s-maj=29.1km s-min=17.6km az=99.0*
MOS ***08*** *14:04:26.6±1.0, 41.97N×142.81E, h50km, mb4.6/2, Error ellipse: s-maj=14.0km s-min=7.3km az=64.9*
SKHL ***08*** *14:04:27.5±0.2, 42.00N×142.90E, h66km±4km, mb4.6/6*
NEIC ***08*** *14:04:28.4±1.4, 42.10N±0.04×142.78E±0.07, h51km±3km, mb4.5/14, Error ellipse: s-maj=8.0km s-min=5.5km az=66.0*
NIED ***08*** *14:04:29.1, 42.24N×142.75E, h36km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.48; Mθθ-1.63; Mϕϕ-0.85; Mrθ-0.26; Mθϕ1.54; Mϕr-1.58; Fault plane solution: M0 3.10000×10¹⁴ NP1: ϕs152.00000°, δ59.00000°, λ119.00000°. NP2:*

ϕ≈285.00000°, δ42.00000°, λ51.00000°.
*JMA **08** 14:04:29.0±0.1, 42.24N×142.75E, h36km±1km, M3.5*
JMA Felt I J1.
ISC 08 14:04:28.1±0.7, 42.12N±0.04×142.77E±0.03, h43km±6km, n77, σ1§24/86, mb3.8/15, 5C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.16**	**355**	⇑P	**Pn**	**14 04 34.9**	**-0.6**
JNBK				*e*S	**Sn**	**14 04 39.8**	**-0.8**
ERM	**Erimo**	**0.31**	**110**	P	**Pn**	**14 04 37.4**	**+0.7**
ERM						14 04 44.2	
ERM	**Erimo**	**0.31**	**110**		**Pn**	**14 04 37.4**	**+0.7**
ERM				Sn	**Sn**	**14 04 44.2**	**+1.5**
JEM	**Erimo**	**0.31**	**110**	⇓P	**Pn**	**14 04 37.6**	**+0.9**
JSHD	**Hidakashinhida**	**0.36**	**322**	P	**Pn**	**14 04 36.3**	**-1.0**
JTHR	**Tokachihiroo**	**0.43**	**67**	⇓P	**Pn**	**14 04 38.2**	**+0.1**
JTHR				*e*S	**Sn**	**14 04 45.6**	**+0.5**
JCH	**Churui**	**0.66**	**42**	⇓P	**Pn**	**14 04 40.7**	**-0.4**
JCH				*e*S	**Sn**	**14 04 49.7**	**-0.7**
JBT2	**Biratori 2**	**0.72**	**335**	⇑P	**Pn**	**14 04 40.8**	**-1.1**
JIAM	**Iburiatsuma**	**0.80**	**309**	⇑P	**Pn**	**14 04 43.9**	**+0.9**
JFR	**Furan**	**1.05**	**353**	P	**Pn**	**14 04 45.4**	**-1.0**
JOB	**Onbets**	**1.11**	**45**	⇓P	**Pn**	**14 04 47.8**	**+0.7**
JEW	**Eniwo**	**1.21**	**307**	⇑P	**Pn**	**14 04 49.1**	**+0.5**
JEW				*e*S	**Sn**	**14 05 04.6**	**+0.8**
JEW	**Eniwo**	**1.21**	**307**		**Pn**	**14 04 49.0**	**+0.5**
JTM	**Tenmabayashi**	**1.85**	**224**		**Pn**	**14 04 58.8**	**+1.5**
ASAJ	**Asahikawa**	**2.00**	**356**	Pn	**Pn**	**14 05 00.1**	**+0.8**
	25nm,0.3s,baz=201,slow=12,SNR=230						
ASAJ				Sn	**Sn**	**14 05 24.5**	**+1.4**
	14nm,0.3s,baz=252,slow=20,SNR=8.0						
JKA	**Kamikawa-asahi**	**2.00**	**356**		**Pn**	**14 05 00.3**	**+1.0**
JKA	**Kamikawa-asahi**	**2.00**	**356**		**Sn**	**14 05 24.5**	**+1.4**
JKA	**Kamikawa-asahi**	**2.00**	**356**	*e*P	**Pn**	**14 05 00.1**	**+0.8**
JKA				*e*S	**Sn**	**14 05 24.5**	**+1.4**
NMR	**Nemuro--Hokkai**	**2.51**	**59**	⇑*i*P	**Pn**	**14 05 05.5**	**-0.9**
NMR				*i* S	**Sn**	**14 05 33.9**	**-1.8**
NMR	**Nemuro--Hokkai**	**2.51**	**59**	*i* P	**Pn**	**14 05 05.5**	**-0.9**
NMR				*i* S	**Sn**	**14 05 34.2**	**-1.5**
GLVR	**Golovnino**	**2.58**	**50**	*e*P	**Pn**	**14 05 08.1**	**+0.7**
GLVR				*e*S	**Sn**	**14 05 38.6**	**+1.0**
GLVR				pmax	pmax		
	comp=Z,157nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,529nm,0.3s						
GLVR	**Golovnino**	**2.58**	**50**	*e*P	**Pn**	**14 05 08.1**	**+0.7**
GLVR				AMB	AMB	14 05 08.7	
	comp=E,160nm,0.3s						
GLVR				*e*S	**Sn**	**14 05 38.6**	**+1.0**
GLVR				A	A	14 05 39.0	
	comp=E,120nm,0.3s						
GLVR				A	A	14 05 39.0	
	comp=E,530nm,0.3s						
RUSJ	**Misakicho**	**2.69**	**42**	*e*P	**Pn**	**14 05 10.4**	**+1.6**
RUSJ				*e*S	**Sn**	**14 05 42.8**	**+2.8**
GRPR	**Tuman**	**2.89**	**49**	*e*P	**Pn**	**14 05 12.3**	**+0.8**
GRPR				*i* S	**Sn**	**14 05 45.6**	**+0.6**
GRPR				pmax	pmax		
	comp=Z,84nm,0.3s						
GRPR				pmax	pmax		
	comp=N,81nm,0.2s						
GRPR				smax	smax		
	comp=N,273nm,0.2s						
GRPR				smax	smax		
	comp=E,316nm,0.4s						
GRPR	**Tuman**	**2.89**	**49**	*e*P	**Pn**	**14 05 12.1**	**+0.6**
GRPR				AMB	AMB	14 05 14.0	
	comp=E,80nm,0.4s						
GRPR				*i* S	**Sn**	**14 05 45.6**	**+0.6**
GRPR				A	A	14 05 47.0	
	comp=E,270nm,0.4s						
GRPR				A	A	14 05 47.0	
	comp=E,320nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.96**	**49**	*d i* P	**Pn**	**14 05 13.3**	**+0.7**
YUK				*i* S	**Sn**	**14 05 46.4**	**-0.5**
YUK				pmax	pmax		
	comp=E,51nm,0.2s						
YUK				pmax	pmax		
	comp=Z,126nm,0.2s						
YUK				pmax	pmax		
	comp=N,15nm,0.1s						
YUK				smax	smax		
	comp=E,388nm,0.5s						
YUK				smax	smax		
	comp=N,249nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.96**	**49**	*i* P	**Pn**	**14 05 13.3**	**+0.7**
YUK				AMB	AMB	14 05 14.0	
	comp=N,130nm,0.4s						
YUK				*i* S	**Sn**	**14 05 47.6**	**+0.7**
YUK				A	A	14 05 51.0	
	comp=N,250nm,0.5s						
YUK				A	A	14 05 51.0	
	comp=N,390nm,0.5s						
JMM	**Marumori**	**4.51**	**200**		**Pn**	**14 05 35.1**	**+1.2**
KUR	**Kuril'sk**	**4.83**	**48**	*e*P	**Pn**	**14 05 40.9**	**+2.7**
KUR				*i* S	**Sn**	**14 06 33.6**	**+0.8**
KUR				pmax	pmax		
	comp=Z,32nm,0.6s						
KUR				smax	smax		
	comp=E,58nm,0.5s						
KUR				smax	smax		
	comp=N,17nm,0.4s						
KUR	**Kuril'sk**	**4.83**	**48**	*e*P	**Pn**	**14 05 40.0**	**+1.8**
KUR				AMB	AMB	14 05 44.0	
	comp=N,30nm,0.3s						
KUR				*i* S	**Sn**	**14 06 33.6**	**+0.8**
KUR				A	A	14 06 41.0	
	comp=N,50nm,0.3s						
KUR				A	A	14 06 41.0	
	comp=N,50nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.83**	**360**	*e*P	**Pn**	**14 05 42.2**	**+4.0**
YSS	**Yuzh-Sakhalins**	**4.83**	**360**	Pn	**Pn**	**14 05 39.8**	**+1.6**
YSS	**Yuzh-Sakhalins**	**4.83**	**360**	*e*P	**Pn**	**14 05 40.4**	**+2.2**
YSS				AMB	AMB	14 05 43.4	
	comp=N,20nm,0.4s						
JSD	**Sado**	**5.35**	**222**	Pn	**Pn**	**14 05 48.2**	**+2.8**
JYT	**Yasato**	**6.22**	**200**	Pn	**Pn**	**14 05 59.8**	**+2.5**
MJAR	**Matsushiro Arr**	**6.60**	**214**	Pn	**Pn**	**14 06 01.9**	**-0.7**
	comp=N,0.0nm,0.3s,baz=68,slow=10.0,SNR=2.0						
PETK	**Petropavlovsk-**	**14.87**	**37**	P	**Pn**	**14 07 56.1**	**+0.8**
PETK	**Petropavlovsk-**	**14.87**	**37**	Pn	**Pn**	**14 07 56.1**	**+0.8**
JOW	**Kunigami**	**19.33**	**223**	P	**P**	**14 08 48.7**	**-1.0**
JOW				IAmb	IAmb	14 09 11.0	
	comp=Z,51nm,1.1s						
SEY	**Seymchan**	**21.60**	**12**	P	**P**	**14 09 12.3**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=115,slow=12,SNR=5.4						
SONM	**Songino Array**	**26.19**	**295**	P	**P**	**14 10 00.3**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=89,slow=13,SNR=2.5						
SONM	**Songino Array**	**26.19**	**295**	IAmb	IAmb	14 10 05.1	
	comp=Z,0.8nm,1.2s						
ADK	**Adak**	**28.98**	**56**	P	**P**	**14 10 24.8**	**+1.5**
ADK	**Adak**	**28.98**	**56**	P	**P**	**14 10 24.8**	**+1.5**
H11N2	**WAKE ISLAND Hy**	**30.25**	**130**	T	T	14 42 04.9	
	baz=323,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**30.26**	**130**	T	T	14 42 06.1	
	baz=323,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy**	**30.27**	**130**	T	T	14 42 06.3	
	baz=323,slow=75,SNR=34						
H11S1	**WAKE ISLAND Hy**	**31.12**	**132**	T	T	14 43 14.2	
	baz=325,slow=76,SNR=40						
H11S3	**WAKE ISLAND Hy**	**31.12**	**132**	T	T	14 43 08.5	
	baz=325,slow=76,SNR=33						
H11S2	**WAKE ISLAND Hy**	**31.13**	**132**	T	T	14 43 09.2	
	baz=325,slow=76,SNR=21						
GTA	**Gaotai**	**32.40**	**280**	*e*P	**P**	**14 10 51.9**	**-1.9**
GTA				pP	sP	14 11 15.2	+4.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**39.44**	**308**	P	**P**	**14 11 54.5**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=83,slow=6.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**39.44**	**308**	P	**P**	**14 11 54.1**	**+0.5**
IMAR	**Indian Mountai**	**41.78**	**33**	P	**P**	**14 12 13.1**	**+0.2**
RSO	**Redoubt South**	**42.33**	**42**	P	**P**	**14 12 17.2**	**-0.4**
MYLDM	**Lahad Datu**	**42.66**	**217**	P	**P**	**14 12 19.2**	**-1.3**
MYLDM				IAmb	IAmb	14 12 45.5	
	comp=Z,18nm,1.3s						
HOM	**Homer**	**42.96**	**43**	P	**P**	**14 12 23.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**43.97**	**251**	LR	LR	14 32 19.7	
	comp=Z,11nm,18.9s,baz=355,slow=38						
ILAR	**Eielson Array**	**44.68**	**35**	P	**P**	**14 12 35.6**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=266,slow=8.1,SNR=4.7						
K27K	**Chicken**	**46.85**	**36**	P	**P**	**14 12 53.5**	**+0.1**
K27K				IAmb	IAmb	14 12 59.9	
	comp=Z,6.0nm,1.4s						
BCAR	**Beaver Creek A**	**47.15**	**37**	P	**P**	**14 12 55.3**	**-0.5**
INK	**Inuvik**	**49.41**	**29**	P	**P**	**14 13 12.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=285,slow=5.5,SNR=1.8						
INK	**Inuvik**	**49.41**	**29**	IAmb	IAmb	14 13 13.4	
	comp=Z,1.7nm,1.1s						
KK31	**Karatay Array**	**51.61**	**297**	P	**P**	**14 13 29.3**	**-0.7**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KK31	**Karatay Array**	**51.61**	**297**	P	**P**	**14 13 29.3**	**-0.7**
KK31				IAmb	IAmb	14 13 32.7	
	comp=Z,3.9nm,0.5s						
KKAR	**Karatay Array**	**51.61**	**297**	P	**P**	**14 13 29.4**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KKAR	**Karatay Array**	**51.61**	**297**	P	**P**	**14 13 29.4**	**-0.6**
KKAR				IAmb	IAmb	14 13 32.7	
	comp=Z,3.9nm,0.5s						
KKAR	**Karatay Array**	**51.61**	**297**	P	**P**	**14 13 29.4**	**-0.6**
C36M	**Paulatuk**	**52.39**	**27**	P	**P**	**14 13 35.5**	**+0.1**
ABKAR	**Akbulak array**	**55.55**	**308**	P	**P**	**14 13 59.2**	**+0.4**
SPA0	**Spitsbergen Ar**	**55.75**	**348**	P	**P**	**14 13 59.5**	**-0.3**
WRA	**Warramunga Arr**	**62.24**	**189**	P	**P**	**14 14 44.6**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=7.0,slow=7.8,SNR=2.0						
WRA	**Warramunga Arr**	**62.24**	**189**	P	**P**	**14 14 43.9**	**-1.5**
FINES	**FINESS Array B**	**64.82**	**332**	P	**P**	**14 15 01.4**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=45,slow=6.2,SNR=6.3						
ASAR	**Alice Springs**	**65.97**	**189**	P	**P**	**14 15 08.9**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=14,slow=12,SNR=1.4						
PSUT	**Pine Spring**	**73.76**	**53**	P	**P**	**14 15 57.3**	**-0.7**
PSUT				IAmb	IAmb	14 16 03.7	
	comp=Z,7.8nm,1.3s						
TXAR	**Lajitas Array**	**86.22**	**53**	P	**P**	**14 17 06.6**	**+1.4**
	comp=Z,0.3nm,0.9s,baz=256,slow=1.9,SNR=2.1						

*IDC **08** 14:10:47.2±1.2, 48.54N×83.75E, h0km, mb3.8/7, mb1 3.9/13, mb1mx3.6/65, mbtmp3.8/13, ML3.5/6, MS3.3/3, Ms1 3.3/3, ms1mx2.7/65, Error ellipse: s-maj=18.4km s-min=9.2km az=99.0*
*MOS **08** 14:10:49.3±1.6, 48.66N×83.23E, h12km, mb4.0/3, Error ellipse: s-maj=10.5km s-min=7.1km az=86.0*
MOS Felt (III) at Kuchum.
*NNC **08** 14:10:52.1±1.2, 48.51N×83.21E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=14.0km s-min=5.4km az=91.0*
*ASRS **08** 14:10:53.7±0.2, 48°№±1°×8'4E±°, h10km, MLh4.4/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
*SOME **08** 14:10:56.6, 48.30N×82.87E, h10km*
ISC 08 14:10:50.4±1.0, 48.48N±0.02×83.26E±0.02, h9km±7km, n108, σ2§12/157, mb3.7/11, 14C-11D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**1.49**	**133**	⇓*e*P	**Pg**	**14 11 21.7**	**+2.7**
	304nm,0.2s						
ZSN				*e*S	**Sg**	**14 11 39.9**	**+1.6**
	885nm,0.5s						
ZSN	**Zaisan**	**1.49**	**133**	⇓*e*PN	**Pg**	**14 11 21.7**	**+2.7**
ZSN				*e*S	**Sg**	**14 11 39.9**	**+1.6**
MK31	**Makanchi Array**	**1.81**	**202**	⇓P	**Pg**	**14 11 24.7**	**-0.4**
	17nm,0.3s,baz=330,slow=14,SNR=2813						
MK31				⇑S	**Sg**	**14 11 48.8**	**+0.2**
	608nm,0.6s,baz=21,slow=21,SNR=31						
MK31	**Makanchi Array**	**1.81**	**202**	*i* PN	**Pg**	**14 11 24.6**	**-0.4**
MK31				pmax	pmax		
	comp=Z,17nm,0.3s						
MKAR	**Makanchi Array**	**1.81**	**202**	Pn	**Pg**	**14 11 24.6**	**-0.5**
	comp=Z,34nm,0.3s,baz=36,slow=18,SNR=1507						
MKAR				Lg	Lg	14 11 49.1	
	comp=Z,314nm,0.3s,baz=33,slow=30,SNR=18						
MKAR				LR	LR	14 11 51.7	
	comp=Z,168nm,19.9s,baz=134,slow=32						
MKAR	**Makanchi Array**	**1.81**	**202**	Pn	**Pg**	**14 11 24.8**	**-0.3**
MKAR				Sg	**Sg**	**14 11 49.2**	**+0.7**
MKAR	**Makanchi Array**	**1.81**	**202**	*i* PN	**Pg**	**14 11 24.6**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,53nm,0.4s						
MAKZ	**Makanchi**	**1.89**	**208**	Pn	**Pg**	**14 11 26.2**	**-0.3**
MAKZ				Pg	Pb	14 11 30.4	+5.4
MAKZ				Sg	**Sg**	**14 11 51.8**	**+0.8**
MAKZ	**Makanchi**	**1.89**	**208**	⇑P	**Pg**	**14 11 26.0**	**-0.5**
	comp=Z,20nm,0.5s						
MAKZ				⇑S	**Sg**	**14 11 51.2**	**+0.2**
	comp=Z,460nm,0.6s						
MAKZ	**Makanchi**	**1.89**	**208**	*i* PN	**Pg**	**14 11 26.0**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,20nm,0.4s						
UKR	**Ust'-Kan**	**2.65**	**21**	Pn	**Pn**	**14 11 34.6**	**+1.3**
UKR				Pg	**Pg**	**14 11 41.2**	**+0.1**
UKR				Sg	**Sg**	**14 12 16.6**	**+1.3**
SEM	**Semipalatinsk**	**2.75**	**316**	*e*P	**Pg**	**14 11 45.6**	**+2.5**
	comp=Z,109nm,0.5s						
SEM				*e*S	**Sg**	**14 12 19.4**	**+0.6**
	comp=Z,463nm,0.3s						
SEM	**Semipalatinsk**	**2.75**	**316**	Pg	**Pg**	**14 11 45.6**	**+2.5**
	comp=Z,109nm,0.5s						
SEM				Lg	Lg	14 12 19.1	
	comp=Z,463nm,0.3s						
DGZ	**Jazzator, Alta**	**3.00**	**64**	Pn	**Pb**	**14 11 41.8**	**-2.3**
DGZ				Pg	**Pg**	**14 11 45.8**	**-2.0**
DGZ				Sg	**Sg**	**14 12 23.8**	**-2.9**
DGZ	**Jazzator, Alta**	**3.00**	**64**	*i* PN	**Pn**	**14 11 36.0**	**-2.3**
CHBI	**Chibit, Altay**	**3.32**	**55**	Pn	**Pn**	**14 11 44.7**	**+2.0**
CHBI				Pg	**Pg**	**14 11 52.1**	**-1.9**
CHBI				Sg	**Sb**	**14 12 32.8**	**+2.7**
CUR	**Chagan-Uzun**	**3.70**	**62**	Pn	**Pn**	**14 11 49.8**	**+1.9**
CUR				Pg	**Pb**	**14 11 58.2**	**+2.2**
CUR				Sg	**Sb**	**14 12 44.5**	**+3.4**
ULGR	**Ulagan, Altay**	**3.74**	**53**	Pn	**Pn**	**14 11 49.5**	**+1.2**
ULGR				Pg	**Pg**	**14 12 02.4**	**+0.5**
ULGR				Sg	**Sb**	**14 12 44.2**	**+2.2**
KURBB	**Kurchatov Arra**	**3.75**	**307**	Pn	**Pn**	**14 11 49.9**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=115,slow=14,SNR=181						
KURBB				Sn	**Sn**	**14 12 33.7**	**+1.0**
	comp=Z,3.2nm,0.3s,baz=108,slow=31,SNR=2.6						
KURBB				Lg	Lg	14 12 52.8	
	comp=Z,12nm,0.3s,baz=110,slow=30,SNR=7.1						
KURBB	**Kurchatov Arra**	**3.75**	**307**	⇓Pn	**Pn**	**14 11 49.7**	**+1.3**
	comp=Z,26nm,0.5s						
KURBB				⇑Lg	Lg	14 12 48.3	
	comp=Z,582nm,0.5s						
KURBB	**Kurchatov Arra**	**3.75**	**307**	PN	**Pn**	**14 11 49.7**	**+1.3**
KURK	**Kurchatov**	**3.76**	**308**	PN	**Pn**	**14 11 49.9**	**+1.4**
GALT	**Gorno-Altaysk,**	**3.88**	**25**	Pg	**Pg**	**14 12 07.5**	**+2.7**
GALT				Sg	**Sg**	**14 12 53.3**	**-1.3**
ARTR	**Artybash**	**4.21**	**36**	Pn	**Pn**	**14 11 56.2**	**+1.5**
ARTR				Pg	**Pg**	**14 12 11.6**	**+0.7**
ARTR				Sg	**Sg**	**14 13 01.2**	**-4.2**
DJR	**Jarkent**	**4.79**	**211**	*e*P	**Pg**	**14 12 21.7**	**-0.5**
DJR				*e*S	**Sg**	**14 13 21.5**	**-2.7**
DJR	**Jarkent**	**4.79**	**211**	Pg	**Pg**	**14 12 21.7**	**-0.5**
DJR				Lg	Lg	14 13 21.5	
TDK	**Taldyqorghan**	**4.82**	**226**	*e*P	**Pb**	**14 12 18.4**	**+3.4**
	comp=Z,54nm,0.4s						
TDK				*e*S	**Sb**	**14 13 17.0**	**+3.8**
	comp=Z,221nm,0.9s						
ELT	**Eltsovka**	**5.14**	**20**	Pn	**Pn**	**14 12 07.9**	**+0.4**
ELT				Sg	**Sg**	**14 13 32.1**	**-3.3**
TEL	**Teeli**	**5.17**	**58**	Pn	**Pn**	**14 12 08.9**	**+1.0**
TEL				Pg	**Pg**	**14 12 27.6**	**-1.7**
TEL				Sg	**Sg**	**14 13 30.5**	**-5.6**
TASR	**Tashtagol**	**5.20**	**33**	Pg	**Pg**	**14 12 29.5**	**-0.3**
TASR				Sg	**Sg**	**14 13 33.1**	**-4.0**
ZAA0	**Zalesovo Array**	**5.56**	**10**	⇓Pn	**Pn**	**14 12 12.5**	**-0.8**
	comp=Z,0.5nm,0.6s						
ZAA0				⇑Pg	**Pg**	**14 12 32.7**	**-4.1**
	comp=Z,3.2nm,0.8s						
ZAA0				⇓Lg	Lg	14 13 44.2	
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**5.56**	**10**	Pn	**Pn**	**14 12 11.5**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=191,slow=14,SNR=20						
ZALV				Sn	**Sn**	**14 13 13.8**	**-3.4**
	comp=Z,3.6nm,0.3s,baz=178,slow=17,SNR=1.8						
ZALV				Lg	Lg	14 13 41.6	
	comp=Z,3.8nm,0.3s,baz=202,slow=22,SNR=4.0						
ZALV	**Zalesovo Beam**	**5.56**	**10**	*i* PN	**Pn**	**14 12 12.8**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ARXS	**Arharly**	**5.69**	**223**	*e*P	**Pg**	**14 12 38.4**	**-0.9**
	comp=Z,16nm,0.6s						
ARXS				*e*S	**Sg**	**14 13 50.6**	**-2.3**
	comp=Z,132nm,0.8s						
ARXS	**Arharly**	**5.69**	**223**	Pg	**Pg**	**14 12 38.4**	**-0.9**
	comp=Z,16nm,0.6s						
ARXS				Lg	Lg	14 13 51.7	
	comp=Z,132nm,0.8s						
PDGK	**Podgornoye**	**5.79**	**208**	Pg	**Pg**	**14 12 39.6**	**-1.5**
	comp=Z,5.4nm,0.8s						
PDGK				Lg	Lg	14 13 52.2	
	comp=Z,28nm,0.5s						
PDGK	**Podgornoye**	**5.79**	**208**	⇑Pn	**Pn**	**14 12 18.9**	**+2.4**
	comp=Z,6.7nm,0.5s						
PDGK				⇑Lg	Lg	14 13 51.8	
	comp=Z,50nm,0.7s						
PDGK	**Podgornoye**	**5.79**	**208**	*i* PN	**Pn**	**14 12 18.9**	**+2.4**
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KPKS	**Kokpek**	**5.94**	**214**	*e*P	**Pg**	**14 12 42.5**	**-1.7**
	comp=Z,14nm,0.3s						
KPKS				*e*S	**Sg**	**14 13 57.4**	**-3.7**
	comp=Z,77nm,0.5s						
SHLS	**Shalkode**	**5.95**	**208**	*e*P	**Pg**	**14 12 39.9**	**-4.4**
	comp=Z,14nm,0.3s						
SHLS				*e*S	**Sb**	**14 13 52.4**	**+6.7**
	comp=Z,43nm,0.4s						
SHLS	**Shalkode**	**5.95**	**208**	Pg	**Pg**	**14 12 39.9**	**-4.4**
	comp=Z,14nm,0.3s						
SHLS				Lg	Lg	14 13 52.4	
	comp=Z,43nm,0.4s						
UZB	**Uzynbulak**	**6.10**	**211**	*e*P	**Pg**	**14 12 44.8**	**-2.4**
	comp=Z,7.0nm,0.3s						
UZB				*e*S	**Sg**	**14 14 01.1**	**-5.0**
	comp=Z,36nm,0.6s						
UZB	**Uzynbulak**	**6.10**	**211**	Pg	**Pg**	**14 12 44.8**	**-2.4**
	comp=Z,7.0nm,0.3s						
UZB				Lg	Lg	14 14 01.1	
	comp=Z,36nm,0.6s						
BSTK	**Bystrovka, Nov**	**6.11**	**357**	Pg	**Pg**	**14 12 47.6**	**+0.4**
BSTK				Sg	**Sg**	**14 14 09.2**	**+3.0**
SALR	**Pechorkino, Sa**	**6.14**	**13**	Pn	**Pn**	**14 12 21.6**	**+0.4**
SALR				Pg	**Pg**	**14 12 47.0**	**-0.8**
SALR				Sg	**Sg**	**14 14 06.2**	**-1.0**
ZHN	**Zhinishke**	**6.29**	**214**	*e*P	**Pg**	**14 12 50.7**	**-0.1**
	comp=Z,2.3nm,0.1s						
ZHN				*e*S	**Sg**	**14 14 11.0**	**-1.3**
	comp=Z,18nm,0.6s						
ZHN	**Zhinishke**	**6.29**	**214**	Pg	**Pg**	**14 12 50.7**	**-0.1**
	comp=Z,2.3nm,0.1s						
ZHN				Lg	Lg	14 14 11.0	
	comp=Z,18nm,0.6s						
SATY	**Saty**	**6.40**	**214**	*e*P	**Pg**	**14 12 51.8**	**-1.1**
	comp=Z,12nm,0.3s						
SATY				*e*S	**Sg**	**14 14 13.0**	**-2.7**
	comp=Z,39nm,0.3s						
SATY	**Saty**	**6.40**	**214**	Pg	**Pg**	**14 12 51.8**	**-1.1**
	comp=Z,12nm,0.3s						
SATY				Lg	Lg	14 14 13.0	
	comp=Z,39nm,0.3s						
KTBS	**Karatobe**	**6.61**	**226**	*e*P	**Pg**	**14 12 56.7**	**-0.2**
	comp=Z,5.8nm,0.4s						
KTBS				*e*S	**Sg**	**14 14 21.3**	**-1.1**
	comp=Z,126nm,0.6s						
KTBS	**Karatobe**	**6.61**	**226**	Pg	**Pg**	**14 12 56.7**	**-0.2**
	comp=Z,5.8nm,0.4s						
KTBS				Lg	Lg	14 14 21.3	
	comp=Z,126nm,0.6s						
KUU	**Kurty**	**6.64**	**229**	*e*P	**Pg**	**14 12 57.4**	**-0.1**
	comp=Z,4.2nm,0.3s						
KUU				*e*S	**Sg**	**14 14 22.7**	**-0.8**
	comp=Z,48nm,0.4s						
KUU	**Kurty**	**6.64**	**229**	Pg	**Pg**	**14 12 57.4**	**-0.1**
	comp=Z,4.2nm,0.3s						
KUU				Lg	Lg	14 14 22.7	
	comp=Z,48nm,0.4s						
KOTS	**Kotyrbulak**	**6.78**	**222**	*e*P	**Pg**	**14 12 59.2**	**-0.9**
	comp=Z,8.8nm,0.4s						
KOTS				*e*S	**Sg**	**14 14 26.3**	**-1.6**
	comp=Z,66nm,1.0s						
KOTS	**Kotyrbulak**	**6.78**	**222**	Pg	**Pg**	**14 12 59.2**	**-0.9**
	comp=Z,8.8nm,0.4s						
KOTS				Lg	Lg	14 14 26.3	
	comp=Z,66nm,1.0s						
MDOK	**Medeo**	**6.86**	**222**	*e*P	**Pg**	**14 13 00.2**	**-1.5**
	comp=Z,6.5nm,0.4s						
MDOK				*e*S	**Sg**	**14 14 27.6**	**-3.0**
	comp=Z,27nm,0.8s						
MDOK	**Medeo**	**6.86**	**222**	⇑Pn	**Pn**	**14 12 33.0**	**+1.6**
	comp=Z,2.9nm,0.4s						
MDOK				⇑Lg	Lg	14 14 25.6	
	comp=Z,34nm,0.8s						
MDOK	**Medeo**	**6.86**	**222**	Pg	**Pg**	**14 13 00.2**	**-1.5**
	comp=Z,6.5nm,0.4s						
MDOK				Lg	Lg	14 14 27.6	
	comp=Z,27nm,0.8s						
MDOK	**Medeo**	**6.86**	**222**	PN	**Pn**	**14 12 33.0**	**+1.6**
BRZS	**Berezniki**	**7.09**	**286**	*e*P	**Pg**	**14 13 05.0**	**-1.1**
	comp=Z,3.2nm,0.3s						
BRZS				*e*S	**Sg**	**14 14 37.2**	**-0.6**
	comp=Z,51nm,0.6s						
BRZS	**Berezniki**

SNR=6.2
AAK Ala-Archa 8.48 230 ⇑Pn **Pn 14 12 55.7 +2.2**
comp=Z,4.8nm,0.4s
AAK ⇓Sn **Sn 14 14 29.2 -0.2**
comp=Z,1.8nm,0.2s
AAK ⇓Lg Lg 14 15 21.5
comp=Z,2.2nm,0.3s
AAK Ala-Archa 8.48 230 *i* P **Pn 14 12 55.7 +2.2**
AAK pmax pmax
comp=Z,4.0nm,0.4s
EKS2 Erkin-Say 8.84 232 P **Pn 14 13 01.4 +3.1**
SNR=12
AML Almayashu 9.26 230 P **Pn 14 13 08.5 +4.1**
SNR=6.0
BVAR Borovoye Array 9.34 304 Pn **Pn 14 13 05.3 +0.2**
comp=Z,0.9nm,0.3s,baz=155,slow=12,SNR=5.3
BVAR Sn **Sn 14 14 45.8 -4.4**
comp=Z,1.6nm,0.3s,baz=121,slow=32,SNR=3.6
BVAR Lg Lg 14 15 54.0
comp=Z,2.1nm,0.3s,baz=68,slow=39,SNR=2.7
BRVK Borovoye 9.41 304 ⇑Pn **Pn 14 13 06.6 +0.5**
comp=Z,3.8nm,0.7s
BRVK ⇑Sn **Sn 14 14 48.9 -3.0**
comp=Z,6.9nm,0.7s
BRVK ⇑Lg Lg 14 15 45.0
comp=Z,22nm,0.8s
BRVK Borovoye 9.41 304 *i* P **Pn 14 13 04.2 -1.9**
KK31 Karatay Array 10.40 244 Pn **Pn 14 13 19.7 +0.1**
comp=Z,1.3nm,0.4s,baz=52,slow=14,SNR=35
KK31 ⇓Sn **Sn 14 15 17.7 +1.4**
comp=Z,4.3nm,0.7s,baz=56,slow=23,SNR=6.9
KK31 ⇓Lg Lg 14 16 17.7
comp=Z,12nm,0.7s
KK31 Karatay Array 10.40 244 *i* P **Pn 14 13 19.7 +0.1**
KK31 pmax pmax
comp=Z,1.0nm,0.4s
BRLS Borolday 10.84 245 Pg Pn 14 14 19.4 +54
comp=Z,17nm,0.2s
IUG Iuzhnay 11.26 241 Pg Pn 14 14 21.6 +50
comp=Z,5.3nm,0.3s
SONM Songino Array 15.44 84 Lg Lg 14 18 50.5
comp=Z,0.1nm,0.3s,baz=286,slow=32,SNR=1.5
ULN Ulaanbaatar 15.87 83 *i* P **Pn 14 14 32.3 -1.8**
AKTO Aktyubinsk 16.51 286 Pn **Pn 14 14 40.6 -1.4**
comp=Z,0.2nm,0.3s,baz=107,slow=12,SNR=4.5
AKTO Sn **Sn 14 17 43.8 -1.5**
comp=Z,0.1nm,0.3s,baz=265,slow=18,SNR=1.4
AKTO Lg Lg 14 19 45.1
comp=Z,0.1nm,0.3s,baz=40,slow=17,SNR=3.7
NRIK Noril'sk 21.03 4 *i* P **P 14 15 33.7 -0.4**
NRIK pmax pmax
comp=Z,1.0nm,0.3s
BELG Belogornoye 22.88 293 *i* P **P 14 15 53.6 -0.4**
BELG pmax pmax
comp=Z,3.0nm,1.1s
XAN Xi'an 23.94 118 P **P 14 16 07.6 +2.8**
XAN pmax pmax
comp=Z,5.0nm,2.1s
OBN Obninsk 29.16 301 *e*P **P 14 16 51.3 -0.3**
OBN *e* 14 20 00.7
OBN pmax pmax
comp=Z,2.0nm,0.8s
USRK Ussuriysk Ar. 33.45 79 LR LR 14 31 29.5
comp=Z,45nm,19.1s,baz=328,slow=38
ARCES ARCESS Array B 34.55 328 P **P 14 17 38.5 -0.2**
comp=Z,4.7nm,1.0s,baz=84,slow=10,SNR=2.0
BRTR Keskin Array B 36.13 275 P **P 14 17 53.6 +0.7**
comp=Z,0.5nm,0.4s,baz=91,slow=7.1,SNR=2.0
HFS Hagfors 40.31 314 P **P 14 18 26.9 -0.8**
comp=Z,0.9nm,0.4s,baz=98,slow=10,SNR=5.4
NOA NORSAR Array B 41.24 315 P **P 14 18 34.6 -0.7**
comp=Z,0.6nm,0.5s,baz=72,slow=8.3,SNR=3.3
ESDC Sonseca Array 60.03 297 P **P 14 20 57.2 -0.3**
comp=Z,1.0nm,0.8s,baz=40,slow=6.3,SNR=4.7
YKA Yellowknife Ar 68.46 9 P **P 14 21 49.4 -2.9**
comp=Z,0.2nm,0.7s,baz=344,slow=6.4,SNR=4.4
TORD Torodi Ar. Bea 74.70 273 P **P 14 22 28.9 -1.7**
comp=Z,0.3nm,0.4s,baz=27,slow=3.8,SNR=2.6
WRA Warramunga Arr 81.94 132 LR LR 15 03 58.9
comp=Z,48nm,18.2s,baz=80,slow=39

IDC 08 14:17:14.7±431.0, 57.35N×50.14E, h0km, Error ellipse: s-maj=248.0km s-min=85.0km az=144.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**18.16**	**323**	*i*		16 13 50.0	
	baz=115,slow=339,SNR=1.1						
I46RU	**ZALESOVO INFRA**	**19.73**	**85**	*i*		16 20 40.0	
	baz=297,slow=333						
I34MN	**SONGINO INFRAS**	**34.55**	**81**	*i*		17 49 20.0	
	baz=306,slow=329						

IDC 08 14:26:32.2±8.2, 31.78S×179.67E, h478km±108km, mb2.2/2, mb1 2.6/3, mb1mx2.5/25, mbtmp3.3/3, Error ellipse: s-maj=122.1km s-min=51.3km az=6.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.79**	**197**	P	P	14 28 16.0	+0.6
	0.7nm,0.3s,baz=307,slow=20,SNR=19						
URZ				S	S	14 29 39.6	-0.4
	0.9nm,0.3s,baz=302,slow=19,SNR=1.9						
ASAR	**Alice Springs**	**41.07**	**270**	P	P	14 33 33.3	0.0
	0.2nm,0.8s,baz=110,slow=8.0,SNR=1.0						
WRA	**Warramunga Arr**	**42.19**	**275**	P	P	14 33 42.0	-0.2
	0.2nm,0.5s,baz=113,slow=7.8,SNR=4.6						
FINES	**FINESS Array B**	**145.71**	**338**	PKPbc	PKPdf	14 45 15.3	+0.5
	2.4nm,0.9s,baz=139,slow=9.1,SNR=1.4						

ROM 08 14:31:14.0±0.1, 42.876N±0.004×13.268E±0.006, h9km, ML2.4/22, 2C-2D, Error ellipse: s-maj=0.4km s-min=0.4km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRCA	**Norcia**	**0.12**	**250**	⇑P	Pg	14 31 17.4	+0.5
NRCA				S	Sg	14 31 19.9	+1.1
NRCA				AML	AML		
	comp=E,3565μm,0.9s						
NRCA				AML	AML		
	comp=N,4170μm,1.5s						
NRCA				AML	AML		
	comp=E,3970μm,0.9s						
NRCA				AML	AML		
	comp=N,4165μm,1.5s						
FDMO	**Fiordimonte**	**0.21**	**320**	P	Pg	14 31 18.7	+0.4
FDMO				S	Sg	14 31 22.2	+1.0
CSP1	**Cessapalombo**	**0.22**	**348**	AML	AML		
	comp=N,2015μm,0.6s						
CSP1				AML	AML		
	comp=E,2505μm,0.3s						
SMA1	**SAN MARTINO**	**0.25**	**169**	P	Pg	14 31 19.7	+0.6
SMA1				S	Sb	14 31 24.3	-1.1
SMA1				AML	AML		
	comp=E,1600μm,0.6s						
SMA1				AML	AML		
	comp=N,2535μm,0.4s						
OFFI	**Offida**	**0.31**	**79**	P	Pb	14 31 21.4	-0.4
OFFI				S	Sb	14 31 27.3	+0.3
OFFI				AML	AML		
	comp=N,2225μm,1.0s						
OFFI				AML	AML		
	comp=N,2220μm,1.0s						
OFFI				AML	AML		
	comp=E,1930μm,0.8s						
LNSS	**Leonessa**	**0.32**	**212**	⇑P	Pg	14 31 21.1	+0.7
LNSS				S	Sb	14 31 27.2	-0.2
LNSS				AML	AML		
	comp=N,2500μm,0.4s						
LNSS				AML	AML		
	comp=E,3305μm,0.8s						
LNSS				AML	AML		
	comp=N,2495μm,0.4s						
LNSS				AML	AML		
	comp=E,3310μm,0.8s						
TERO	**Teramo**	**0.35**	**136**	⇓P	Pg	14 31 21.3	+0.3
TERO				S	Sb	14 31 27.3	-1.0
TERO				AML	AML		
	comp=E,750μm,0.6s						
TERO				AML	AML		
	comp=N,980μm,0.3s						
TERO				AML	AML		
	comp=E,320μm,0.6s						
TERO				AML	AML		
	comp=N,404μm,0.3s						
TERO				AML	AML		
	comp=E,752μm,0.6s						
TERO				AML	AML		
	comp=N,980μm,0.3s						
CAMP	**Campotosto**	**0.35**	**163**	⇓P	Pg	14 31 21.4	+0.3
CAMP				S	Sb	14 31 27.4	-1.0
CAMP				AML	AML		
	comp=E,822μm,0.5s						
CAMP				AML	AML		
	comp=N,560μm,0.5s						
RM33	**Pellescritta (**	**0.37**	**186**	P	Pg	14 31 21.8	+0.5
RM33				S	Sb	14 31 28.2	-0.5
RM33				AML	AML		
	comp=E,496μm,1.0s						
RM33				AML	AML		
	comp=N,558μm,0.5s						
RM33				AML	AML		
	comp=E,496μm,1.0s						
RM33				AML	AML		
	comp=N,559μm,0.5s						
SNTG	**Esanatoglia**	**0.45**	**328**	P	Pg	14 31 23.1	+0.3
SNTG				AML	AML		
	comp=E,289μm,0.6s						
SNTG				AML	AML		
	comp=N,404μm,0.5s						
EL6	**Elcito**	**0.47**	**345**	P	Pg	14 31 23.5	+0.3
EL6				S	Sb	14 31 31.6	-0.1
EL6				AML	AML		
	comp=N,804μm,0.3s						
EL6				AML	AML		
	comp=E,515μm,0.3s						
ARRO	**Arrone**	**0.47**	**231**	P	Pg	14 31 23.7	+0.5
ARRO				S	Sb	14 31 31.8	+0.1
ARRO				AML	AML		
	comp=E,356μm,0.3s						
ARRO				AML	AML		
	comp=N,295μm,0.8s						
ARRO				AML	AML		
	comp=N,296μm,0.8s						
ASSB	**Assisi San Ben**	**0.48**	**291**	P	Pg	14 31 23.7	+0.3
ASSB				S	Sb	14 31 31.8	-0.1
ASSB				AML	AML		
	comp=E,572μm,0.3s						
ASSB				AML	AML		
	comp=N,890μm,0.3s						
GIGS	**Gran Sasso**	**0.48**	**152**	P	Pg	14 31 23.6	+0.3
GIGS				S	Sb	14 31 31.7	-0.3
GIGS				AML	AML		
	comp=E,44μm,0.2s						
GIGS				AML	AML		
	comp=N,38μm,0.2s						
GIGS				AML	AML		
	comp=N,38μm,0.2s						
CING	**Cingoli**	**0.50**	**354**	P	Pg	14 31 24.3	+0.5
CING				AML	AML		
	comp=N,203μm,0.2s						
CING				AML	AML		
	comp=E,242μm,0.5s						
GUMA	**Gualdo di Mace**	**0.52**	**69**	P	Pg	14 31 18.8	-5.4
GUMA				S	Sg	14 31 22.4	-8.7
GUMA				AML	AML		
	comp=E,4080μm,0.4s						
GUMA				AML	AML		
	comp=N,4675μm,0.5s						
GUMA				AML	AML		
	comp=E,4085μm,0.4s						
GUMA				AML	AML		
	comp=N,4670μm,0.5s						
GUMA				AML	AML		
	comp=E,3610μm,0.5s						
GUMA				AML	AML		
	comp=N,5390μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.56**	**304**	P	Pg	14 31 25.2	+0.4
ATCC				AML	AML		
	comp=E,654μm,1.6s						
ATCC				AML	AML		
	comp=N,640μm,0.3s						
ATCC				AML	AML		
	comp=N,640μm,0.3s						
ATCC				AML	AML		
	comp=E,653μm,1.6s						
FOSV	**Fossato di Vic**	**0.56**	**319**	P	Pg	14 31 25.1	+0.2
FOSV				AML	AML		
	comp=E,407μm,0.4s						
FOSV				AML	AML		
	comp=N,674μm,0.4s						
CESX	**Cesi**	**0.57**	**243**	P	Pg	14 31 25.3	+0.2
CESX				AML	AML		
	comp=E,326μm,0.5s						
CESX				AML	AML		
	comp=E,326μm,0.5s						
CESX				AML	AML		
	comp=N,334μm,0.4s						
FIAM	**Fiamignano**	**0.62**	**190**	P	Pg	14 31 26.1	+0.1
FIAM				AML	AML		
	comp=N,220μm,0.7s						
FIAM				AML	AML		
	comp=E,198μm,0.6s						
FIAM				AML	AML		
	comp=N,219μm,0.7s						
FAGN	**Fagnano**	**0.65**	**159**	P	Pg	14 31 26.8	+0.1
FAGN				AML	AML		
	comp=N,370μm,0.4s						
FAGN				AML	AML		
	comp=E,410μm,1.2s						
SSFR	**Montelago di S**	**0.66**	**328**	P	Pg	14 31 27.1	+0.2
SSFR				AML	AML		
	comp=E,668μm,0.2s						
SSFR				AML	AML		
	comp=N,564μm,0.2s						
SSFR				AML	AML		
	comp=E,638μm,0.2s						
SSFR				AML	AML		
	comp=E,669μm,0.2s						
SSFR				AML	AML		
	comp=E,637μm,0.2s						
SSFR				AML	AML		
	comp=N,546μm,0.7s						
SSFR				AML	AML		
	comp=N,564μm,0.2s						
ARVD	**Arcevia**	**0.67**	**339**	P	Pg	14 31 27.2	+0.3
ARVD				S	Sb	14 31 38.2	+0.9
T0110	**Collepietro**	**0.75**	**150**	P	Pg	14 31 28.1	-0.4
ATVO	**AVT- Monte Val**	**0.81**	**309**	P	Pg	14 31 29.5	-0.1
ATVO				AML	AML		
	comp=E,159μm,0.6s						
ATVO				AML	AML		
	comp=N,188μm,0.4s						
ATPI	**Pietralunga -**	**0.85**	**312**	P	Pg	14 31 30.4	-0.1
ATPI				AML	AML		
	comp=E,162μm,1.1s						
ATPI				AML	AML		
	comp=N,107μm,0.4s						
ATPI				AML	AML		
	comp=N,108μm,0.4s						
DUGI	**Dugi Otok**	**1.72**	**49**	*e*Pn	Pg	14 31 48.5	+1.6
DUGI				Sn	Sg	14 32 09.4	+0.3
ZIRJ	**Zirje**	**1.90**	**65**	*e*Pn	Pg	14 31 50.0	-0.5
ZIRJ				Sn	Sn	14 32 11.4	+0.6
MORI	**Morici**	**2.04**	**60**	*e*Pn	Pg	14 31 52.2	-0.8
MORI				Sn	Sn	14 32 14.7	+0.6
NVLJ	**Novalja**	**2.05**	**34**	*e*Pg	Pg	14 31 55.8	+2.5
NVLJ				Sn	Sb	14 32 18.2	+1.2
KIJV	**Kijevo**	**2.55**	**63**	*e*Pn	Pb	14 31 58.2	-1.7
KIJV				Sn	Sn	14 32 27.0	+0.2
STON	**Ston**	**3.26**	**89**	*e*Pn	Pn	14 32 08.0	+2.7
STON				Sn	Sn	14 32 41.8	-2.4

*UPP **08** 14:32:41.8±0.5, 56.51N×11.55E, h34km±3km, ML2.8, Confirmed Earthquake*
*DNK **08** 14:32:41.2±1.1, 56.51N×11.49E, h32km±3km, ML2.8, Probable volcanic*
*BER **08** 14:32:42.9±3.5, 56.55N×11.47E, h23km±9km, ML2.1, ML2.8(UPP), Confirmed Earthquake*
*NAO **08** 14:32:42.0±1.3, 56.82N×11.35E, ML2.9*
*IDC **08** 14:32:44.0±1.9, 56.85N×11.62E, h0km, mb1 3.5/4, mb1mx3.2/53, mbtmp3.4/4, ML2.1/4, Error ellipse: s-maj=16.2km s-min=14.9km az=134.0*
ISC 08 14:32:40.2±1.2, 56.72N±0.03×11.59E±0.03, h8km±10km,

n103, σ2s10/181, 3C-3D, Denmark

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GID	**Gilleleje**	**0.68**	**151**	*i* P	**Pg**	**14 32 54.4**	**+1.2**
GID	**Gilleleje**	**0.68**	**151**	*i* P	**Pg**	**14 32 54.4**	**+1.2**
FABU	**Falkenberg**	**0.68**	**65**	⇑P	**Pb**	**14 32 56.8**	**+2.5**
FABU				*i* P	**Pb**	**14 32 56.8**	**+2.5**
FABU				S	**Sb**	**14 33 06.9**	**+3.0**
FABU	**Falkenberg**	**0.68**	**65**	⇑P	**Pb**	**14 32 56.8**	**+2.5**
FABU				S	**Sb**	**14 33 06.9**	**+3.0**
FABU	**Falkenberg**	**0.68**	**65**	⇑P	**Pb**	**14 32 56.8**	**+2.5**
FABU				S	**Sb**	**14 33 06.9**	**+3.0**
ONAU	**Onsala**	**0.70**	**14**	⇓P	**Pn**	**14 32 58.5**	**+2.1**
ONAU				*i* P	**Pn**	**14 32 58.5**	**+2.1**
ONAU				S	**Sn**	**14 33 10.2**	**+2.7**
ONAU	**Onsala**	**0.70**	**14**	⇓P	**Pn**	**14 32 58.5**	**+2.1**
ONAU				S	**Sn**	**14 33 10.2**	**+2.7**
ONAU	**Onsala**	**0.70**	**14**	⇓P	**Pn**	**14 32 58.5**	**+2.1**
ONAU				S	**Sn**	**14 33 10.2**	**+2.7**
BORU	**Boraas**	**1.12**	**34**	P	**Pn**	**14 33 04.2**	**+2.0**
BORU				*i* P	**Pn**	**14 33 04.2**	**+2.0**
BORU				*i*		14 33 05.0	
BORU				S	**Sn**	**14 33 21.1**	**+3.4**
BORU	**Boraas**	**1.12**	**34**	P	**Pn**	**14 33 04.2**	**+2.0**
BORU				S	**Sn**	**14 33 21.1**	**+3.4**
BORU	**Boraas**	**1.12**	**34**	*i* P	**Pn**	**14 33 04.2**	**+2.0**
BORU				*i*		14 33 05.0	
BORU				S	**Sn**	**14 33 21.1**	**+3.4**
COP	**Copenhagen**	**1.14**	**155**	*e*P	Pn	14 33 00.0	-2.3
COP				*i* S	Sb	14 33 12.5	-4.4
COP				IAML		14 33 16.6	
	comp=Z,53nm,0.3s						
COP	**Copenhagen**	**1.14**	**155**	*e*P	Pn	14 33 00.0	-2.3
COP				*i* S	Sb	14 33 12.5	-4.4
COP				IAML		14 33 16.6	
	comp=Z,53nm,0.3s						
DEL	**Delary**	**1.28**	**100**	P	**Pn**	**14 33 03.9**	**-0.5**
DEL				*e*P	**Pn**	**14 33 04.1**	**-0.3**
DEL				*i*		14 33 04.7	
DEL				*i* S	**Sb**	**14 33 20.3**	**-0.9**
DEL				S	**Sb**	**14 33 20.5**	**-0.7**
DEL				IAML		14 33 21.4	
	comp=Z,38nm,0.3s						
DEL	**Delary**	**1.28**	**100**	P	**Pn**	**14 33 03.9**	**-0.5**
DEL				S	**Sb**	**14 33 20.5**	**-0.7**
DEL	**Delary**	**1.28**	**100**	*e*P	**Pn**	**14 33 04.1**	**-0.3**
DEL				*i*		14 33 04.7	
DEL				*i* S	**Sb**	**14 33 20.3**	**-0.9**
DEL				IAML		14 33 21.4	
	comp=Z,38nm,0.3s						
GNOU	**Gnosjoe**	**1.32**	**63**	P	**Pn**	**14 33 06.1**	**+1.2**
GNOU				S	**Sn**	**14 33 24.2**	**+1.7**
GNOU	**Gnosjoe**	**1.32**	**63**	P	**Pn**	**14 33 06.1**	**+1.2**
GNOU				S	**Sn**	**14 33 24.2**	**+1.7**
GNOU	**Gnosjoe**	**1.32**	**63**	P	**Pn**	**14 33 06.1**	**+1.2**
GNOU				S	**Sn**	**14 33 24.2**	**+1.7**
TJOU	**Tjoern**	**1.32**	**1**	P	**Pg**	**14 33 07.0**	**+1.4**
TJOU				*i* P	**Pn**	**14 33 07.2**	**+2.3**
TJOU				*i*		14 33 09.1	
TJOU	**Tjoern**	**1.32**	**1**	P	**Pg**	**14 33 07.0**	**+1.4**
TJOU	**Tjoern**	**1.32**	**1**	P	**Pg**	**14 33 07.0**	**+1.4**
TJOU				*i*		14 33 09.1	
GOET	**G??ttrup**	**1.34**	**285**	*i* P	**Pb**	**14 33 08.7**	**+3.2**
GOET				IAML		14 33 35.9	
	comp=Z,66nm,0.3s						
GOET	**G??ttrup**	**1.34**	**285**	*i* P	**Pb**	**14 33 08.7**	**+3.2**
GOET				IAML		14 33 35.9	
	comp=Z,66nm,0.3s						
MUD	**Monsted U'grnd**	**1.36**	**260**	*e*P	**Pn**	**14 33 05.3**	**-0.2**
MUD				*i* P	**Pn**	**14 33 05.6**	**+0.1**
MUD				*i*		14 33 12.8	
MUD				*e*S	**Sn**	**14 33 22.6**	**-1.1**
MUD				*e*S	**Sn**	**14 33 22.8**	**-0.9**
MUD				IAML		14 33 30.5	
	comp=Z,92nm,0.3s						
MUD	**Monsted U'grnd**	**1.36**	**260**	*i* P	**Pn**	**14 33 05.6**	**+0.1**
MUD				*i*		14 33 12.8	
MUD				*e*S	**Sn**	**14 33 22.8**	**-0.9**
MUD				IAML		14 33 30.5	
	comp=Z,92nm,0.3s						
LLD	**Lille Linde**	**1.43**	**166**	*i* P	Pn	14 33 03.8	-2.6
LLD	**Lille Linde**	**1.43**	**166**	*i* P	Pn	14 33 03.8	-2.6
LUNU	**Lund**	**1.50**	**136**	*i* P	Pn	14 33 05.0	-2.4
LUNU				P	Pb	14 33 05.1	-3.2
LUNU	**Lund**	**1.50**	**136**	P	Pn	14 33 05.1	-2.3
LUNU	**Lund**	**1.50**	**136**	P	Pn	14 33 05.1	-2.3
VXJU	**Vaexsjoe**	**1.85**	**82**	P	**Pn**	**14 33 12.7**	**+0.5**
VXJU	**Vaexsjoe**	**1.85**	**82**	P	**Pn**	**14 33 12.7**	**+0.5**
VXJU	**Vaexsjoe**	**1.85**	**82**	P	**Pn**	**14 33 12.7**	**+0.5**
HOMB	**Homborsund**	**2.28**	**314**	Pn	**Pn**	**14 33 18.6**	**+0.5**
HOMB				*e*P	Pb	14 33 18.6	-2.9
HOMB				*i* P	Pg	14 33 18.7	-5.3
HOMB				*e*S	**Sn**	**14 33 44.2**	**-2.1**
HOMB				Sn	**Sn**	**14 33 44.8**	**-1.5**
HOMB				IAML		14 34 02.3	
	comp=Z,16nm,0.3s						
HOMB				IAML		14 34 04.0	
	comp=Z,24nm,0.3s						
HOMB	**Homborsund**	**2.28**	**314**	Pn	**Pn**	**14 33 18.6**	**+0.5**
HOMB				Sn	**Sn**	**14 33 44.8**	**-1.5**
HOMB	**Homborsund**	**2.28**	**314**	*e*P	**Pn**	**14 33 18.6**	**+0.5**
HOMB				*e*S	**Sn**	**14 33 44.2**	**-2.1**
HOMB				IAML		14 34 02.3	
	comp=Z,16nm,0.3s						
HOMB				IAML		14 34 04.0	
	comp=Z,24nm,0.3s						
STRU	**Stroemstad**	**2.33**	**355**	*e*P	**Pn**	**14 33 21.2**	**+2.4**
STRU				*i* P	**Pb**	**14 33 21.4**	**-1.1**
STRU				*e*S	**Sn**	**14 33 48.8**	**+1.2**
STRU	**Stroemstad**	**2.33**	**355**	*e*P	**Pn**	**14 33 21.2**	**+2.4**
STRU				*e*S	**Sn**	**14 33 48.8**	**+1.2**
BLEU	**Blekinge**	**2.38**	**98**	*e*P	**Pn**	**14 33 18.9**	**-0.5**
BLEU	**Blekinge**	**2.38**	**98**	*e*P	**Pn**	**14 33 18.9**	**-0.5**
BSD	**Bornholm Skovb**	**2.46**	**129**	*i* P	Pn	14 33 18.2	-2.3
BSD				IAML		14 34 01.4	
	comp=Z,18nm,0.3s						
BSD	**Bornholm Skovb**	**2.46**	**129**	*i* P	Pn	14 33 18.2	-2.3
BSD				IAML		14 34 01.4	
	comp=Z,18nm,0.3s						
SNART	**Snartemo**	**2.87**	**306**	*i* P	**Pn**	**14 33 26.4**	**+0.3**
SNART				*e*P	Pb	14 33 26.5	-5.1
SNART				Pn	Pg	14 33 26.6	-8.5
SNART				*e*S	**Sn**	**14 33 58.9**	**-1.9**
SNART				Sn	Sb	14 33 59.0	-7.8
SNART				IAML		14 34 00.9	
	comp=Z,32nm,0.1s						
SNART				IAML		14 34 26.4	
	comp=Z,13nm,0.3s						
SNART	**Snartemo**	**2.87**	**306**	*e*P	**Pn**	**14 33 26.5**	**+0.3**
SNART				*e*S	**Sn**	**14 33 58.9**	**-1.9**
SNART				IAML		14 34 00.9	
	comp=Z,32nm,0.1s						
SNART				IAML		14 34 26.4	
	comp=Z,13nm,0.3s						
KON	**Kongsberg**	**3.12**	**341**	Pn	**Pn**	**14 33 31.0**	**+1.3**
KON				Sn	**Sn**	**14 34 07.1**	**0.0**
KONO	**Kongsberg**	**3.12**	**341**	*e*P	**Pn**	**14 33 31.4**	**+1.7**
KONO				*e*S	**Sn**	**14 34 06.4**	**-0.7**
KONO				IAML		14 34 41.3	
	comp=Z,74nm,0.3s						
KONO	**Kongsberg**	**3.12**	**341**	*e*P	**Pn**	**14 33 31.4**	**+1.7**
KONO				*e*S	**Sn**	**14 34 06.4**	**-0.7**
KONO				IAML		14 34 41.3	
	comp=Z,74nm,0.3s						
HFS	**Hagfors**	**3.60**	**17**	Pn	**Pn**	**14 33 37.8**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=201,slow=14,SNR=14						
HFS				Pg	**Pb**	**14 33 45.5**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=182,slow=15,SNR=12						
HFS				Sn	**Sn**	**14 34 19.7**	**+0.8**
	comp=Z,3.2nm,0.3s,baz=199,slow=22,SNR=16						
HFS				Lg	Lg	14 34 33.0	
	comp=Z,5.9nm,0.3s,baz=197,slow=29,SNR=11						
HFS	**Hagfors**	**3.60**	**17**	Pn	**Pn**	**14 33 38.2**	**+2.0**
	baz=205,slow=14						
HFS				Sn	**Sn**	**14 34 18.8**	**0.0**
	baz=198,slow=22						
HFS				Lg	Lg	14 34 33.4	
	baz=202,slow=28						
HFS	**Hagfors**	**3.60**	**17**	Pn	**Pn**	**14 33 38.2**	**+2.0**
	baz=205,slow=14						
HFS				Sn	**Sn**	**14 34 18.8**	**0.0**
	baz=198,slow=22						

HFS					Lg	Lg	14 34 33.4	
	baz=202,slow=28							
HFS	**Hagfors**	**3.60**	**17**		Pn	**Pn**	**14 33 38.2**	**+2.0**
	baz=205,slow=14							
HFS					Sn	**Sn**	**14 34 18.8**	**0.0**
	baz=198,slow=22							
HFS					Sg	**Sg**	**14 34 33.4**	**-2.4**
	baz=202,slow=28							
BLS5	**Blasjo**	**3.85**	**317**	*eP*		**Pn**	**14 33 40.3**	**+0.7**
BLS5				*eS*		**Sn**	**14 34 21.5**	**-3.5**
BLS5				IAML			14 34 35.0	
	comp=Z,3.7nm,0.2s							
BLS5	**Blasjo**	**3.85**	**317**	*eP*		**Pn**	**14 33 40.3**	**+0.7**
BLS5				*eS*		**Sn**	**14 34 21.5**	**-3.5**
BLS5				IAML			14 34 35.0	
	comp=Z,3.7nm,0.2s							
STAV	**Stavanger**	**3.86**	**308**	*eP*		**Pn**	**14 33 40.6**	**+0.9**
STAV				*eS*		**Sn**	**14 34 21.8**	**-3.3**
STAV				IAML			14 34 52.1	
	comp=Z,5.9nm,0.2s							
NRA0	**NORESS Array S**	**4.03**	**360**		Pn	**Pn**	**14 33 43.7**	**+1.6**
	baz=180,slow=11							
NRA0					Sn	**Sn**	**14 34 28.5**	**-0.9**
	baz=176,slow=22							
NRA0					Lg	Lg	14 34 46.9	
	baz=173,slow=37							
NRA0	**NORESS Array S**	**4.03**	**360**		Pn	**Pn**	**14 33 43.7**	**+1.6**
	baz=180,slow=11							
NRA0					Sn	**Sn**	**14 34 28.5**	**-0.9**
	baz=176,slow=22							
NRA0					Lg	Lg	14 34 46.9	
	baz=173,slow=37							
NRA0	**NORESS Array S**	**4.03**	**360**		Pn	**Pn**	**14 33 43.7**	**+1.6**
	baz=180,slow=11							
NRA0					Sn	**Sn**	**14 34 28.5**	**-0.9**
	baz=176,slow=22							
NRA0					Sg	**Sg**	**14 34 46.9**	**-2.7**
	baz=173,slow=37							
NC6	**NORSAR Subarra**	**4.04**	**359**		Pn	**Pn**	**14 33 43.9**	**+1.6**
NC6					Sn	**Sn**	**14 34 30.0**	**+0.2**
NC6					Lg	Lg	14 34 47.5	
NC6	**NORSAR Subarra**	**4.04**	**359**		Pn	**Pn**	**14 33 43.9**	**+1.6**
NC6					Sn	**Sn**	**14 34 30.0**	**+0.2**
NC6					Lg	Lg	14 34 47.5	
NC6	**NORSAR Subarra**	**4.04**	**359**		Pn	**Pn**	**14 33 43.9**	**+1.6**
NC6					Sn	**Sn**	**14 34 30.0**	**+0.2**
NC6					Sg	**Sg**	**14 34 47.5**	**-2.5**
ODD1	**Odda**	**4.14**	**323**	*eP*		**Pn**	**14 33 44.7**	**+1.1**
ODD1				*eS*		**Sn**	**14 34 29.9**	**-2.2**
ODD1				IAML			14 34 45.1	
	comp=Z,8.4nm,0.4s							
ODD1	**Odda**	**4.14**	**323**	*eP*		**Pn**	**14 33 44.7**	**+1.1**
ODD1				*eS*		**Sn**	**14 34 29.9**	**-2.2**
ODD1				IAML			14 34 45.1	
	comp=Z,8.4nm,0.4s							
NAO	**NORSAR Subarra**	**4.14**	**355**		Pn	**Pn**	**14 33 44.9**	**+1.3**
NAO					Sn	**Sn**	**14 34 34.1**	**+2.0**
NAO					Lg	Lg	14 34 49.2	
NAO	**NORSAR Subarra**	**4.14**	**355**		Pn	**Pn**	**14 33 44.9**	**+1.3**
NAO					Sn	**Sn**	**14 34 34.1**	**+2.0**
NAO					Lg	Lg	14 34 49.2	
NAO	**NORSAR Subarra**	**4.14**	**355**		Pn	**Pn**	**14 33 44.9**	**+1.3**
NAO					Sn	**Sn**	**14 34 34.1**	**+2.0**
NAO01	**NORSAR Array S**	**4.16**	**355**	*eP*		**Pn**	**14 33 44.9**	**+1.1**
NAO01				IAML			14 34 56.2	
	comp=Z,22nm,0.2s							
KMY	**Karmoy**	**4.21**	**309**	*eP*		**Pn**	**14 33 45.5**	**+1.1**
KMY				*eS*		**Sn**	**14 34 30.3**	**-3.4**
KMY				IAML			14 34 33.0	
	comp=Z,3.2nm,0.3s							
KMY	**Karmoy**	**4.21**	**309**	*eP*		**Pn**	**14 33 45.5**	**+1.1**
KMY				*eS*		**Sn**	**14 34 30.3**	**-3.4**
KMY				IAML			14 34 33.0	
	comp=Z,3.2nm,0.3s							
SKAR	**Skarslia**	**4.33**	**338**	*eP*		**Pn**	**14 33 47.4**	**+1.1**
SKAR				*eS*		**Sn**	**14 34 34.6**	**-2.3**
SKAR				IAML			14 34 49.9	
	comp=Z,4.7nm,0.5s							
SKAR	**Skarslia**	**4.33**	**338**	*eP*		**Pn**	**14 33 47.4**	**+1.1**
SKAR				*eS*		**Sn**	**14 34 34.6**	**-2.3**
SKAR				IAML			14 34 49.9	
	comp=Z,4.7nm,0.5s							
NB2	**NORSAR Subarra**	**4.34**	**358**		Pn	**Pn**	**14 33 48.1**	**+1.6**
	baz=181,slow=14							
NB2					Sn	**Sn**	**14 34 35.8**	**-1.3**
	baz=175,slow=28							
NB2					Lg	Lg	14 34 57.6	
	baz=191,slow=37							
NB2	**NORSAR Subarra**	**4.34**	**358**		Pn	**Pn**	**14 33 48.1**	**+1.6**
	baz=181,slow=14							
NB2					Sn	**Sn**	**14 34 35.8**	**-1.3**
	baz=175,slow=28							
NB2					Lg	Lg	14 34 57.6	
	baz=191,slow=37							
NB2	**NORSAR Subarra**	**4.34**	**358**		Pn	**Pn**	**14 33 48.1**	**+1.6**
	baz=181,slow=14							
NB2					Sn	**Sn**	**14 34 35.8**	**-1.3**
	baz=175,slow=28							
NB2					Sg	**Sg**	**14 34 57.6**	**-1.9**
	baz=191,slow=37							
NOA	**NORSAR Array B**	**4.34**	**358**		Pn	**Pn**	**14 33 47.7**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=183,slow=12,SNR=12							
NOA					Pg	**Pb**	**14 33 55.0**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=244,slow=10,SNR=2.4							
NOA					Sn	**Sn**	**14 34 36.4**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=182,slow=14,SNR=4.6							
NOA					Lg	Lg	14 34 55.0	
	comp=Z,0.5nm,0.3s,baz=89,slow=19,SNR=6.4							
NBO	**NORSAR Subarra**	**4.35**	**355**		Pn	**Pn**	**14 33 47.8**	**+1.3**
NBO					Lg	Lg	14 34 57.9	
NBO	**NORSAR Subarra**	**4.35**	**355**		Pn	**Pn**	**14 33 47.8**	**+1.3**
NBO					Lg	Lg	14 34 57.9	
NB201	**NORSAR Array S**	**4.35**	**358**	*eP*		**Pn**	**14 33 48.1**	**+1.6**
NB201				IAML			14 35 02.2	
	comp=Z,20nm,0.4s							
NC4	**NORSAR Subarra**	**4.38**	**1**		Pn	**Pn**	**14 33 48.5**	**+1.7**
NC4					Lg	Lg	14 34 58.7	
NC4	**NORSAR Subarra**	**4.38**	**1**		Pn	**Pn**	**14 33 48.5**	**+1.7**
NC4					Lg	Lg	14 34 58.7	
NC4	**NORSAR Subarra**	**4.38**	**1**		Pn	**Pn**	**14 33 48.5**	**+1.7**
NC4					Sg	**Sg**	**14 34 58.7**	**-2.0**
NC3	**NORSAR Subarra**	**4.56**	**359**		Pn	**Pn**	**14 33 51.0**	**+1.6**
NC3					Sn	**Sn**	**14 34 41.1**	**-1.4**
NC3					Lg	Lg	14 35 03.8	
NC3	**NORSAR Subarra**	**4.56**	**359**		Pn	**Pn**	**14 33 51.0**	**+1.6**
NC3					Sn	**Sn**	**14 34 41.1**	**-1.4**
NC3					Lg	Lg	14 35 03.8	
NC3	**NORSAR Subarra**	**4.56**	**359**		Pn	**Pn**	**14 33 51.0**	**+1.6**
NC3					Sn	**Sn**	**14 34 41.1**	**-1.4**
NC2	**NORSAR Subarra**	**4.59**	**355**		Pn	**Pn**	**14 33 51.4**	**+1.4**
NC2					Sn	**Sn**	**14 34 42.8**	**-0.6**
NC2					Lg	Lg	14 35 06.6	
NC2	**NORSAR Subarra**	**4.59**	**355**		Pn	**Pn**	**14 33 51.4**	**+1.4**
NC2					Sn	**Sn**	**14 34 42.8**	**-0.6**
NC2					Lg	Lg	14 35 06.6	
NC2	**NORSAR Subarra**	**4.59**	**355**		Pn	**Pn**	**14 33 51.4**	**+1.4**
NC2					Sn	**Sn**	**14 34 42.8**	**-0.6**
ASK	**Askoy**	**5.04**	**321**	*eP*		**Pn**	**14 33 57.1**	**+1.1**
ASK				*eS*		**Sn**	**14 34 49.7**	**-4.6**
ASK				IAML			14 35 28.4	
	comp=Z,12nm,0.7s							
ASK	**Askoy**	**5.04**	**321**	*eP*		**Pn**	**14 33 57.1**	**+1.1**
ASK				*eS*		**Sn**	**14 34 49.7**	**-4.6**
ASK				IAML			14 35 28.4	
	comp=Z,12nm,0.7s							
HYA	**Hoyanger**	**5.27**	**330**	*eP*		**Pn**	**14 33 59.8**	**+0.8**
HYA				*eS*		**Sn**	**14 34 56.5**	**-3.3**
HYA				IAML			14 35 15.6	
	comp=Z,3.1nm,0.8s							
HYA	**Hoyanger**	**5.27**	**330**	*eP*		**Pn**	**14 33 59.8**	**+0.8**
HYA				*eS*		**Sn**	**14 34 56.5**	**-3.3**
HYA				IAML			14 35 15.6	
	comp=Z,3.1nm,0.8s							
DOMB	**Dombas**	**5.50**	**347**	*eP*		**Pn**	**14 34 04.0**	**+1.8**
DOMB				*eS*		**Sn**	**14 35 02.6**	**-3.0**
DOMB				IAML			14 35 21.8	
	comp=Z,3.2nm,0.3s							
DOMB	**Dombas**	**5.50**	**347**	*eP*		**Pn**	**14 34 04.0**	**+1.8**
DOMB				*eS*		**Sn**	**14 35 02.6**	**-3.0**
DOMB				IAML			14 35 21.8	
	comp=Z,3.2nm,0.3s							
SUE	**Sulen**	**5.61**	**324**	*eP*		**Pn**	**14 34 04.7**	**+0.9**
SUE				*eS*		**Sn**	**14 35 03.8**	**-4.5**
SUE				IAML			14 35 09.3	
	comp=Z,5.7nm,0.6s							
SUE	**Sulen**	**5.61**	**324**	*eP*		**Pn**	**14 34 04.7**	**+0.9**
SUE				*eS*		**Sn**	**14 35 03.8**	**-4.5**
SUE				IAML			14 35 09.3	
	comp=Z,5.7nm,0.6s							
EKA	**Eskdalemuir Ar**	**8.38**	**267**		Pn	**Pn**	**14 34 46.4**	**+4.6**
	baz=81,slow=12,SNR=3.9							
FIA0	**FINESS Array S**	**8.83**	**52**		Pn	**Pn**	**14 34 48.5**	**+0.7**
	baz=252,slow=12							
FIA0					Sn	**Sn**	**14 36 22.8**	**-4.6**
	baz=241,slow=22							
FIA0					Lg	Lg	14 37 14.9	
	baz=254,slow=28							
FIA0	**FINESS Array S**	**8.83**	**52**		Pn	**Pn**	**14 34 48.5**	**+0.7**
	baz=252,slow=12							
FIA0					Sn	**Sn**	**14 36 22.8**	**-4.6**
	baz=241,slow=22							
FIA0					Sg	**Sg**	**14 37 14.9**	**-8.3**
	baz=254,slow=28							
FINES	**FINESS Array B**	**8.83**	**52**		Pn	**Pn**	**14 34 48.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=239,slow=13,SNR=2.4							
FINES					Sn	**Sn**	**14 36 22.3**	**-5.0**
	comp=Z,0.5nm,0.3s,baz=245,slow=20,SNR=6.0							
FINES					Lg	Lg	14 37 16.9	
	comp=Z,1.6nm,0.3s,baz=248,slow=23,SNR=9.1							
ARA0	**ARCESS Array S**	**14.26**	**20**		Pn	Pn	14 35 59.0	-3.1
	baz=203,slow=16							
ARA0	**ARCESS Array S**	**14.26**	**20**		Pn	Pn	14 35 59.0	-3.1
	baz=203,slow=16							
ARCES	**ARCESS Array B**	**14.26**	**20**		Pn	**Pn**	**14 36 00.7**	**-1.4**
	baz=211,slow=14,SNR=1.8							
ARCES					Sn	Sn	14 38 29.7	-10
	baz=206,slow=22,SNR=2.0							
ARCES					Lg	Lg	14 40 06.5	
	baz=215,slow=22,SNR=1.8							

*AEIC **08** 14:47:43.1±1.3, 57.92N±0.05×151.91W±0.10, h40km±8km, ML3.3, ML3.5/58(NEIC), Error ellipse: s-maj=10.0km s-min=2.4km az=129.0*
*IDC **08** 14:47:43.9±1.1, 57.79N×151.76W, h0km, mb3.7/5, mb1 3.8/8, mb1mx3.5/57, mbtmp3.5/8, ML3.3/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/43, Error ellipse: s-maj=22.7km s-min=8.0km az=171.0*
*NEIC **08** 14:47:43.2±1.4, 57.95N±0.04×151.90W±0.09, h26km±8km, Error ellipse: s-maj=8.0km s-min=4.2km az=128.0*

ISC 08 14:47:43.2±1.4, 58.01N±0.05×151.94W±0.05, h24km±15km, n110, σ0.99/104, mb3.6/5, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**0.41**	**236**	Pg	**Pb**	**14 47 52.8**	**+0.9**
	301nm,0.3s,baz=45,slow=14,SNR=9295						
KDAK				Lg	Lg	14 47 58.6	
	709nm,0.3s,baz=143,slow=20,SNR=51						
KDAK	**Kodiak Island**	**0.41**	**236**	IAML		14 47 59.0	
	6μm,0.3s						
KDAK				IAML		14 47 59.1	
	6μm,0.3s						
OHAK	**Old Harbor**	**1.07**	**223**		**Pn**	**14 48 01.9**	**-0.8**
OHAK					**Sb**	**14 48 14.7**	**-1.9**
OHAK	**Old Harbor**	**1.07**	**223**	IAML		14 48 17.4	
	comp=N,1μm,0.5s						
OHAK				IAML		14 48 17.4	
	comp=E,896nm,0.5s						
KARR	**Katmai Rainbow**	**1.54**	**290**		**Pn**	**14 48 09.1**	**-0.1**
AU22	**Augustine Moun**	**1.55**	**332**		**Pn**	**14 48 09.7**	**+0.4**
AU22					**Sn**	**14 48 28.8**	**+0.2**
CNPM	**China Poot**	**1.56**	**13**		**Pn**	**14 48 10.7**	**+1.2**
AUL	**Augustine Lava**	**1.58**	**331**		**Pn**	**14 48 10.7**	**+1.0**
HOM	**Homer**	**1.66**	**5**		**Pn**	**14 48 12.3**	**+1.5**
HOM					**Sn**	**14 48 32.5**	**+1.2**
HOM	**Homer**	**1.66**	**5**	IAML		14 48 42.5	
	comp=N,705nm,0.7s						
OPT	**Oil Point**	**1.78**	**338**		**Pn**	**14 48 13.2**	**+0.7**
CAHL	**Cahill**	**1.79**	**273**		**Pn**	**14 48 12.0**	**-0.7**
BRLK	**Bradley Lake**	**1.84**	**17**		**Pn**	**14 48 14.2**	**+0.9**
BRLK					**Sn**	**14 48 35.7**	**-0.1**
BRSE	**Bradley Lake S**	**1.84**	**19**		**Pn**	**14 48 14.3**	**+1.0**
SII	**Sitkinak Islan**	**1.90**	**221**		**Pn**	**14 48 13.2**	**-0.8**
SII	**Sitkinak Islan**	**1.90**	**221**	IAML		14 48 52.0	
	comp=N,318nm,1.2s						
KJL	**Kejulik**	**1.93**	**273**		**Pn**	**14 48 14.5**	**-0.1**
ILS	**Iliamna Low So**	**2.04**	**344**		**Pn**	**14 48 16.9**	**+0.8**
IVE	**Iliamna Volcan**	**2.09**	**345**		**Pn**	**14 48 17.1**	**+0.3**
IVE					**Sb**	**14 48 45.3**	**-0.6**
PLK3	**Peulik 3**	**2.33**	**264**		**Pn**	**14 48 19.9**	**-0.2**
RED	**Redoubt Volcan**	**2.45**	**350**		**Pn**	**14 48 23.3**	**+0.5**
RED					**Sn**	**14 48 50.8**	**-0.2**
RSO	**Redoubt South**	**2.49**	**351**		**Pn**	**14 48 22.4**	**0.0**
PLK1	**Peulik 1**	**2.50**	**267**		**Pn**	**14 48 22.4**	**+0.1**
REF	**Redoubt East F**	**2.52**	**351**		**Pn**	**14 48 23.5**	**+0.7**
SLKM	**Skilak Lake**	**2.66**	**19**		**Pn**	**14 48 25.2**	**+0.7**
SLKM					**Sn**	**14 48 56.0**	**+0.1**
O22K	**Cooper Landing**	**2.73**	**24**		**Pn**	**14 48 26.1**	**+0.7**
CAPN	**Captain Cook N**	**2.79**	**8**	Pn	**Pn**	**14 48 26.4**	**0.0**
SPCR	**Spurr Chakacha**	**3.20**	**358**		**Pn**	**14 48 32.7**	**+0.6**
FIS	**Fire Island**	**3.26**	**15**	Pn	**Pn**	**14 48 34.0**	**+1.2**
FIS				IAML		14 49 34.3	
	comp=N,159nm,0.6s						
FIS				IAML		14 49 41.0	
	comp=E,150nm,1.1s						
RC01	**Rabbit Creek A**	**3.29**	**19**		**Pn**	**14 48 34.0**	**+0.8**
RC01					**Sn**	**14 49 10.7**	**-0.7**
PWL	**Port Wells**	**3.40**	**31**		**Pn**	**14 48 35.6**	**+0.9**
PWL					**Sn**	**14 49 12.7**	**-1.5**
PWL	**Port Wells**	**3.40**	**31**	IAML		14 49 13.3	
	comp=N,134nm,0.4s						
STLK	**Strandline Lak**	**3.50**	**1**		**Pn**	**14 48 37.1**	**+1.0**
SUA	**Susitna One**	**3.52**	**9**		**Pn**	**14 48 36.9**	**+0.5**
SVW2	**Sparrevohn**	**3.61**	**331**		**Pn**	**14 48 37.0**	**-0.5**
SVW2				IAML		14 49 36.7	
	comp=E,61nm,0.7s						
SVW2				IAML		14 49 43.9	
	comp=N,73nm,0.7s						
GLI	**Glacier Island**	**3.79**	**39**		**Pn**	**14 48 40.6**	**+0.5**
GLI	**Glacier Island**	**3.79**	**39**	IAML		14 49 21.9	
	comp=E,74nm,0.7s						
GLI				IAML		14 49 22.6	
	comp=N,78nm,0.7s						
KNK	**Knik Glacier**	**3.84**	**26**		**Pn**	**14 48 41.4**	**+0.6**
KNK	**Knik Glacier**	**3.84**	**26**	IAML		14 49 50.0	
	comp=N,51nm,1.0s						
KNK				IAML		14 50 00.5	
	comp=E,66nm,0.8s						
PMR	**Palmer**	**3.86**	**20**		**Pn**	**14 48 41.6**	**+0.6**
FID	**Port Fidalgo**	**3.92**	**43**		**Pn**	**14 48 42.0**	**+0.2**
FID	**Port Fidalgo**	**3.92**	**43**	IAML		14 49 25.7	
	comp=N,54nm,0.4s						
FID				IAML		14 49 25.8	
	comp=E,56nm,1.0s						
SKT	**Skwentna**	**3.99**	**3**		**Pn**	**14 48 43.1**	**+0.4**
GHO	**Glory Hole Cre**	**4.07**	**21**		**Pn**	**14 48 44.6**	**+0.6**
GHO	**Glory Hole Cre**	**4.07**	**21**	IAML		14 50 12.4	
	comp=N,58nm,1.2s						
GHO				IAML		14 50 13.2	
	comp=E,63nm,1.0s						
EYAK	**Cordova Ski Ar**	**4.07**	**49**	Pn	**Pn**	**14 48 45.2**	**+1.3**
SML	**Sawmill**	**4.22**	**24**		**Pn**	**14 48 47.1**	**+1.1**
SML				IAML		14 50 02.8	
	comp=E,39nm,1.1s						
SML				IAML		14 50 15.2	
	comp=N,47nm,1.0s						
RAGM	**Ragged Mountai**	**4.43**	**54**	Pn	**Pn**	**14 48 49.7**	**+0.8**
SCM	**Sheep Creek Mo**	**4.48**	**29**		**Pn**	**14 48 50.9**	**+1.2**
SCM	**Sheep Creek Mo**	**4.48**	**29**	IAML		14 49 43.4	
	comp=N,52nm,0.7s						
CUT	**Chulitna**	**4.49**	**10**		**Pn**	**14 48 50.5**	**+0.9**
CUT				IAML		14 50 28.9	
	comp=N,55nm,1.6s						
CUT				IAML		14 50 36.4	
	comp=E,64nm,1.3s						
KLU	**Klutina**	**4.63**	**39**		**Pn**	**14 48 52.4**	**+0.7**
KLU	**Klutina**	**4.63**	**39**	IAML		14 49 46.1	
	comp=N,28nm,0.5s						
KLU				IAML		14 49 46.2	
	comp=E,31nm,0.4s						

BMRM	**Bremner River**	**4.77**	**48**			**Pn**	**14 48 54.2**	**+0.6**
BMRM	**Bremner River**	**4.77**	**48**	IAML			14 49 47.6	
	comp=E,45nm,0.7s							
BMRM				IAML			14 49 48.9	
	comp=N,43nm,1.4s							
PS12	**TAPS Pump St12**	**4.89**	**42**			**Pn**	**14 48 55.6**	**+0.5**
PPLA	**Purkeypile**	**4.90**	**359**			**Pn**	**14 48 56.1**	**+0.7**
M24K	**Tolsona, Glenn**	**5.02**	**33**			**Pn**	**14 48 57.6**	**+0.6**
WAT6	**Susitna Watana**	**5.04**	**23**			**Pn**	**14 48 58.0**	**+0.7**
WAT7	**Susitna Watana**	**5.07**	**16**			**Pn**	**14 48 58.5**	**+0.7**
HUR	**Hurricane**	**5.11**	**12**			**Pn**	**14 48 59.1**	**+0.9**
WAT1	**Susitna Watana**	**5.12**	**18**			**Pn**	**14 48 59.2**	**+0.9**
N25K	**Chitina, Valde**	**5.17**	**43**			**Pn**	**14 48 59.5**	**+0.4**
N25K	**Chitina, Valde**	**5.17**	**43**	IAML			14 49 58.7	
	comp=E,27nm,0.6s							
N25K				IAML			14 49 59.1	
	comp=N,21nm,0.6s							
WAT2	**Susitna Watana**	**5.24**	**17**			**Pn**	**14 49 00.8**	**+0.8**
CRQM	**Cirque**	**5.27**	**55**	Pn		**Pn**	**14 49 01.4**	**+0.8**
CRQM				IAML			14 50 26.5	
	comp=E,38nm,3.8s							
TT01	**Tatalina**	**5.31**	**339**			**Pn**	**14 49 00.6**	**-0.3**
GLB	**Gilahina Butte**	**5.36**	**47**			**Pn**	**14 49 02.0**	**+0.3**
GLB						**Sn**	**14 50 00.7**	**-1.9**
VRDI	**Verde Repeater**	**5.38**	**50**	Pn		**Pn**	**14 49 02.1**	**0.0**
TRF	**Thorofare Moun**	**5.52**	**8**	Pn		**Pn**	**14 49 04.4**	**+0.5**
KTH	**Kantishna Hill**	**5.58**	**5**			**Pn**	**14 49 05.2**	**+0.5**
RND	**Reindeer**	**5.62**	**14**			**Pn**	**14 49 05.6**	**+0.4**
KIAG	**Kiagna River**	**5.69**	**55**			**Pn**	**14 49 06.3**	**0.0**
BALM	**Baldy**	**5.75**	**54**			**Pn**	**14 49 07.6**	**+0.6**
PTPK	**Patty Peak**	**5.77**	**53**			**Pn**	**14 49 07.8**	**+0.4**
PAX	**Paxson**	**5.91**	**30**			**Pn**	**14 49 08.7**	**-0.6**
MCK	**McKinley**	**5.92**	**13**			**Pn**	**14 49 09.4**	**0.0**
BPAW	**Bear Paw Mtn.**	**6.13**	**4**			**Pn**	**14 49 11.5**	**-0.7**
CTGM	**Chitina Glacie**	**6.16**	**57**	Pn		**Pn**	**14 49 11.6**	**-1.1**
BWN	**Browne**	**6.30**	**10**	Pn		**Pn**	**14 49 13.7**	**-0.8**
PCA	**Pinnacle**	**6.38**	**66**	Pn		**Pn**	**14 49 15.4**	**-0.2**
MENT	**Mentasta**	**6.39**	**36**	Pn		**Pn**	**14 49 14.8**	**-1.1**
BCPM	**Bancas Point**	**6.65**	**68**	Pn		**Pn**	**14 49 18.2**	**-1.1**
WRH	**Wood River Hil**	**6.74**	**14**			**Pn**	**14 49 20.4**	**-0.1**
NEA2	**Nenana**	**6.75**	**11**			**Pn**	**14 49 19.9**	**-0.8**
CCB	**Clear Creek Bu**	**6.95**	**15**			**Pn**	**14 49 23.4**	**0.0**
MLY	**Manley**	**7.07**	**4**			**Pn**	**14 49 24.5**	**-0.5**
BCAR	**Beaver Creek A**	**7.12**	**40**	Pn		**Pn**	**14 49 25.0**	**-0.8**
SCRK	**Sand Creek**	**7.12**	**30**	Pn		**Pn**	**14 49 25.6**	**-0.2**
TCOL	**CIGO, UAF Yank**	**7.16**	**14**	Pn		**Pn**	**14 49 26.8**	**+0.6**
MDM	**Murphy Dome**	**7.19**	**13**	Pn		**Pn**	**14 49 26.2**	**-0.5**
IL31		**7.20**	**18**			**Pn**	**14 49 26.7**	**-0.1**
ILAR	**Eielson Array**	**7.20**	**18**	Pn		**Pn**	**14 49 27.0**	**+0.1**
	comp=E,0.4nm,0.3s,baz=203,slow=13,SNR=18							
ILAR					Sn	**Sn**	**14 50 43.1**	**-4.7**
	comp=E,0.6nm,0.3s,baz=202,slow=26,SNR=5.5							
I23K	**Minto, Yukon-K**	**7.27**	**9**			**Pn**	**14 49 27.6**	**-0.1**
K27K	**Chicken**	**7.70**	**34**	Pn		**Pn**	**14 49 34.1**	**+0.4**
IMAR	**Indian Mountai**	**8.05**	**355**	Pn		**Pn**	**14 49 37.8**	**-0.7**
PRP	**Porcupine Dome**	**8.12**	**19**	Pn		**Pn**	**14 49 39.8**	**+0.3**
EGAK	**Eagle**	**8.52**	**33**	Pn		**Pn**	**14 49 45.4**	**+0.4**
WHY	**Whitehorse**	**9.11**	**66**	Pn		**Pn**	**14 49 52.8**	**-0.3**
FYU	**Fort Yukon**	**9.13**	**17**	Pn		**Pn**	**14 49 53.1**	**-0.1**
BMAR	**Burnt Mountain**	**10.03**	**17**	Pn		**Pn**	**14 50 06.3**	**+0.7**
TOLK	**Toolik Lake Re**	**10.72**	**5**	Pn		**Pn**	**14 50 15.4**	**+0.3**
INK	**Inuvik**	**13.19**	**31**	Pn		**P**	**14 50 55.4**	**-3.0**
	comp=E,0.1nm,0.3s,baz=156,slow=10,SNR=2.6							
YKA	**Yellowknife Ar**	**18.87**	**61**	Pn		**Pn**	**14 52 03.3**	**+1.4**
	comp=E,0.1nm,0.3s,baz=270,slow=10,SNR=15							
PETK	**Petropavlovsk-**	**28.34**	**282**	P		P	14 53 42.0	+7.1
	comp=E,5.6nm,1.1s,baz=75,slow=9.1,SNR=1.7							
NVAR	**Mina Array Bea**	**29.30**	**117**	P		**P**	**14 53 46.1**	**+2.3**
	comp=E,0.3nm,0.5s,baz=328,slow=5.4,SNR=4.1							
PDAR	**Pinedale Array**	**30.43**	**101**	P		**P**	**14 53 56.5**	**+2.8**
	comp=E,0.3nm,0.4s,baz=330,slow=5.7,SNR=3.7							
LPIG	**La Paz**	**44.98**	**121**	LR		LR	15 12 26.8	
	comp=E,43nm,18.1s,baz=24,slow=33							
ZALV	**Zalesovo Beam**	**59.31**	**325**	P		P	14 57 50.3	+7.8
	comp=E,0.5nm,0.5s,baz=46,slow=4.2,SNR=2.2							
MKAR	**Makanchi Array**	**66.34**	**323**	P		P	14 58 36.9	+7.5
	comp=E,0.4nm,0.9s,baz=11,slow=6.8,SNR=3.0							

IDC 08 14:52:50.1±11.0, 16.23N×145.73E, h650km±183km, mb2.5/5, mb1 2.7/5, mb1mx2.3/58, mbtmp3.5/5, Error ellipse: s-maj=44.1km s-min=26.0km az=61.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37

BATI	**Baumata**	**10.49 189**	P	Pn	14 57 28.1	+5.7
	2.0nm,0.3s,baz=313,slow=19,SNR=8.7					
BATI			LR	LR	15 02 38.2	
	comp=Z,92nm,19.3s,baz=356,slow=44					
BATI	**Baumata**	**10.49 189**	P	Pn	14 57 27.3	+4.8
	20nm,0.8s					
MTN	**Manton Dam**	**14.18 156**	Pn	**Pn**	**14 58 11.9**	**-0.6**
KSM	**Kuching**	**15.11 275**	P	**P**	**14 58 28.4**	**-0.2**
KSM			IAmb	IAmb	14 58 30.3	
	comp=Z,36nm,1.2s					
JAY	**Jayapura**	**15.57 100**	LR	LR	15 05 13.1	
	comp=Z,110nm,19.9s,baz=323,slow=39					
FITZ	**Fitzroy Crossi**	**18.20 179**	P	**P**	**14 59 01.6**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=357,slow=7.5,SNR=8.0					
FITZ	**Fitzroy Crossi**	**18.20 179**	P	**P**	**14 59 03.2**	**+0.5**
DLV	**T Lat**	**20.41 305**	P	**P**	**14 59 26.1**	**-1.1**
DLV			IAmb	IAmb	14 59 36.7	
	comp=Z,25nm,1.2s					
MYKOM	**Kota Tinggi**	**21.57 274**	P	**P**	**14 59 36.9**	**-2.5**
MYKOM			IAmb	IAmb	14 59 38.2	
	comp=Z,29nm,1.5s					
WB0	**Warramunga Arr**	**21.74 156**	P	**P**	**14 59 40.2**	**-1.0**
WB0			IAmb	IAmb	14 59 44.5	
	comp=Z,24nm,0.9s					
WRA	**Warramunga Arr**	**21.88 157**	P	**P**	**14 59 42.2**	**-0.5**
	comp=Z,16nm,0.8s,baz=337,slow=10,SNR=45					
WRA	**Warramunga Arr**	**21.88 157**	P	**P**	**14 59 41.1**	**-1.5**
WB2	**Warramunga Arr**	**21.88 157**	P	**P**	**14 59 42.0**	**-0.7**
WR0	**Warramunga Arr**	**21.97 156**	P	**P**	**14 59 42.7**	**-1.0**
WR0			IAmb	IAmb	14 59 46.7	
	comp=Z,14nm,1.0s					
PSA00	**Pilbara Seismi**	**22.31 194**	P	**P**	**14 59 46.5**	**-0.8**
PSA00			IAmb	IAmb	14 59 48.4	
	comp=Z,14nm,1.0s					
AS31	**Alice Springs**	**25.14 161**	P	**P**	**15 00 14.7**	**+0.4**
AS31			IAmb	IAmb	15 00 17.9	
	comp=Z,6.8nm,1.2s					
ASAR	**Alice Springs**	**25.14 161**	P	**P**	**15 00 15.3**	**+1.0**
	comp=Z,6.9nm,0.6s,baz=339,slow=6.6,SNR=196					
ASAR			PcP	**PcP**		
	comp=Z,0.7nm,0.6s,baz=358,slow=1.9,SNR=5.1					
ASAR	**Alice Springs**	**25.14 161**	P	**P**	**15 00 14.9**	**+0.6**
JOW	**Kunigami**	**26.61 6**	LR	LR	15 10 26.6	
	comp=Z,38nm,20.4s,baz=14,slow=35					
MORW	**Morawa**	**30.45 196**	P	**P**	**15 01 01.4**	**-0.3**
MORW			IAmb	IAmb	15 01 09.2	
	comp=Z,16nm,1.4s					
FORT	**Forrest**	**30.93 175**	P	**P**	**15 01 06.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**31.66 306**	LR	LR	15 15 22.0	
	comp=Z,35nm,19.2s,baz=162,slow=39					
BBOO	**Buckleboo**	**34.36 164**	P	**P**	**15 01 36.2**	**+0.3**
STKA	**Stephens Creek**	**35.42 156**	P	**P**	**15 01 46.4**	**+1.3**
	comp=Z,4.4nm,0.7s,baz=328,slow=10,SNR=9.0					
STKA	**Stephens Creek**	**35.42 156**	P	**P**	**15 01 45.1**	**+0.1**
KSRS	**Korea Array**	**37.13 3**	P	**P**	**15 01 59.8**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=178,slow=9.9,SNR=5.0					
KSRS			LR	LR	15 16 34.7	
	comp=Z,42nm,21.3s,baz=245,slow=35					
MJAR	**Matsushiro Arr**	**38.06 17**	P	**P**	**15 02 08.1**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=159,slow=8.6,SNR=2.5					
MJAR	**Matsushiro Arr**	**38.06 17**	IAmb	IAmb	15 02 31.4	
	comp=Z,3.0nm,1.2s					
ARMA	**Armidale**	**39.40 143**	P	**P**	**15 02 20.4**	**+1.6**
TOO	**Toolangi**	**41.94 156**	P	**P**	**15 02 41.1**	**+1.4**
TOO			IAmb	IAmb	15 03 00.7	
	comp=Z,16nm,1.4s					
HHC	**Hu-ho-hao-te**	**42.35 344**	*eP*	**P**	**15 02 41.8**	**-1.1**
HHC			pmax	pmax		
	comp=Z,8.0nm,0.8s					
HHC			pmax	pmax		
	comp=Z,84nm,6.8s					
GTA	**Gaotai**	**45.47 332**	*eP*	**P**	**15 03 09.7**	**+1.6**
GTA			pP	pP	15 03 17.6	-5.5
GTA			pmax	pmax		
	comp=Z,3.0nm,1.0s					
SONM	**Songino Array**	**50.22 343**	P	**P**	**15 03 44.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=165,slow=5.9,SNR=2.0					
SONM			LR	LR	15 27 34.3	
	comp=Z,45nm,18.4s,baz=80,slow=39					
WMQ	**Urumqi**	**54.87 327**	*eP*	**P**	**15 04 20.0**	**+1.0**
MK31	**Makanchi Array**	**59.70 327**	P	**P**	**15 04 51.1**	**-1.9**
MKAR	**Makanchi Array**	**59.70 327**	P	**P**	**15 04 51.3**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=124,slow=8.1,SNR=11					
MKAR	**Makanchi Array**	**59.70 327**	P	**P**	**15 04 51.0**	**-2.0**
MAKZ	**Makanchi**	**59.88 327**	P	**P**	**15 04 53.7**	**-0.6**
MAKZ			IAmb	IAmb	15 05 18.6	
	comp=Z,2.5nm,1.4s					
ZALV	**Zalesovo Beam**	**63.12 334**	P	**P**	**15 05 16.3**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=140,slow=4.7,SNR=2.5					
GEYT	**Alibeck**	**72.06 310**	LR	LR	15 41 53.0	
	comp=Z,51nm,18.0s,baz=235,slow=39					
NRIK	**Noril'sk**	**73.51 347**	LR	LR	15 41 42.8	
	comp=Z,57nm,19.7s,baz=246,slow=38					
ABKAR	**Akbulak array**	**74.02 322**	P	**P**	**15 06 22.8**	**-1.2**

*IDC **08** 15:07:36.1±2.2, 1°.58S×135°.59E, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.5/31, mbtmp3.6/5, ML3.3/3, Error ellipse: s-maj=36.2km s-min=22.1km az=45.0*
*DJA **08** 15:07:37.9±0.4, 2°.5S×13°.5E±°, h10km, M3.6/3, MLv3.6/3*
ISC 08 15:07:37.3±0.9, 1.7S±0.1×135°.56E±0.0°.05, h10km, n8, σ1§37/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.70**	**105**	P		**Pn**	**15 07 52.5**	**-0.8**
SRPI				S		**Sn**	**15 08 04.2**	**+0.1**
BAKI	**Biak**	**0.74**	**48**	P		**Pg**	**15 07 50.8**	**-0.7**
FAKI	**Fak Fak**	**3.53**	**250**	P		**Pn**	**15 08 31.3**	**-0.9**
FAKI				S		**Sn**	**15 09 11.6**	**-2.5**
SIJI	**Sorong**	**4.37**	**281**	Pn		**Pn**	**15 08 43.6**	**-0.3**
	0.8nm,0.3s,baz=115,slow=22,SNR=1.1							
SIJI				Sn		**Sn**	**15 09 36.2**	**+1.3**
	0.4nm,0.3s,baz=317,slow=21,SNR=2.0							
SIJI				Lg		Lg	15 09 55.2	
	1.0nm,0.3s,baz=335,slow=21,SNR=2.9							
WRA	**Warramunga Arr**	**18.18**	**184**	P		**P**	**15 11 51.4**	**+1.1**
	0.1nm,0.3s,baz=5.0,slow=12,SNR=8.2							
FITZ	**Fitzroy Crossi**	**18.99**	**210**	P		**P**	**15 11 59.6**	**+0.4**
	0.1nm,0.3s,baz=37,slow=12,SNR=1.5							
ASAR	**Alice Springs**	**21.90**	**184**	P		**P**	**15 12 32.8**	**+1.9**
	3.2nm,0.8s,baz=9.6,slow=11,SNR=24							
MKAR	**Makanchi Array**	**67.08**	**323**	P		**P**	**15 18 31.4**	**+0.4**
	0.2nm,0.5s,baz=106,slow=7.8,SNR=2.4							

*GEN **08** 15:30:49.4, 45°.86N×8°.16E, h10km±3km, Ml1.6*
*ZUR **08** 15:30:49.8, 45°.86N×8°.12E, h11km±2km, MLh1.7/18, Error ellipse: s-maj=4.3km s-min=1.1km az=127.0*
ROM 08 15:30:49.1±0.1, 45.863N±0.009×8.133E±0.009, h16km, ML1.7/1, 11C-6D, Error ellipse: s-maj=1.1km s-min=0.7km az=345.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SATI	**Passo dei Sala**	**0.18**	**274**	⇓Pg		Pb	15 30 54.4	-0.1
SATI				⇓Pg		Pb	15 30 54.4	-0.1
	0.2nm,SNR=5.9							
SATI				Sg		Sg	15 30 57.1	0.0
SATI	**Passo dei Sala**	**0.18**	**274**	P		Pb	15 30 54.3	-0.1
SATI				S		Sg	15 30 57.1	0.0
SATI	**Passo dei Sala**	**0.18**	**274**	P		Pb	15 30 54.4	-0.1
SATI				S		Sg	15 30 57.1	-0.1
SATI				AML		AML		
	comp=E,438μm,0.1s							
SATI				AML		AML		
	comp=N,547μm,0.1s							
SATI	**Passo dei Sala**	**0.18**	**274**	S		Sg	15 30 57.1	-0.1
MMK	**Mattmark**	**0.22**	**328**	⇑Pg		Pb	15 30 54.8	-0.1
	comp=N,0.2nm,SNR=6.8							
MMK				⇑Pg		Pb	15 30 54.8	-0.1
MMK				Sg		Sg	15 30 58.0	0.0
MMK	**Mattmark**	**0.22**	**328**	⇑P		Pb	15 30 54.8	-0.1
MMK				S		Sg	15 30 58.0	0.0
MMK				AML		AML		
	comp=E,682μm,0.2s							
MMK				AML		AML		
	comp=N,550μm,0.1s							
MMK	**Mattmark**	**0.22**	**328**	⇑P		Pb	15 30 54.8	-0.1
MMK	**Mattmark**	**0.22**	**328**	⇑P		Pb	15 30 54.8	-0.1
MMK	**Mattmark**	**0.22**	**328**	S		Sg	15 30 58.0	-0.1
TRAV	**Traversella**	**0.44**	**218**	⇑Pg		Pg	15 30 58.3	+0.2
TRAV				⇑Pg		Pg	15 30 58.3	+0.2
	comp=N,0.1nm,SNR=1.2							
TRAV	**Traversella**	**0.44**	**218**	P		Pg	15 30 58.3	+0.2
TRAV				S		Sg	15 31 04.1	0.0
TRAV	**Traversella**	**0.44**	**218**	P		Pg	15 30 58.3	+0.2
TRAV				S		Sg	15 31 04.0	-0.1
TRAV				AML		AML		
	comp=N,176μm,0.4s							
TRAV				AML		AML		
	comp=E,139μm,0.3s							
TRAV	**Traversella**	**0.44**	**218**	S		Sg	15 31 04.1	0.0
VARE	**Varese**	**0.45**	**89**	Pg		Pb	15 30 58.5	-0.2
	comp=E,0.1nm,SNR=2.5							
VARE				Pg		Pb	15 30 58.5	-0.2
VARE	**Varese**	**0.45**	**89**	P		Pb	15 30 58.5	-0.2
VARE				S		Sg	15 31 04.3	0.0
VARE				AML		AML		
	comp=E,158μm,0.6s							
VARE				AML		AML		
	comp=N,210μm,0.6s							
VARE				AML		AML		
	comp=N,210μm,0.6s							
VARE	**Varese**	**0.45**	**89**	S		Sg	15 31 04.4	+0.1
CIRO	**Champorcher**	**0.47**	**237**	Pg		Pg	15 30 58.9	+0.2
CIRO				Pg		Pg	15 30 58.9	+0.2
	comp=N,0.1nm,SNR=1.0							
CIRO	**Champorcher**	**0.47**	**237**	P		Pg	15 30 59.0	+0.3
CIRO				S		Sg	15 31 05.4	+0.2
CIRO	**Champorcher**	**0.47**	**237**	P		Pg	15 30 58.9	+0.2
CIRO				S		Sg	15 31 05.5	+0.3
CIRO				AML		AML		
	comp=E,72μm,0.2s							
CIRO				AML		AML		
	comp=E,72μm,0.2s							
CIRO				AML		AML		
	comp=N,60μm,0.2s							
CIRO	**Champorcher**	**0.47**	**237**	P		Pg	15 30 58.9	+0.2
CIRO	**Champorcher**	**0.47**	**237**	S		Sg	15 31 05.6	+0.4
VANNI	**Vissoie, Val d**	**0.51**	**313**	Pg		Pb	15 30 59.7	-0.1
VANNI				Pg		Pb	15 30 59.7	-0.1
	comp=N,0.1nm,SNR=1.4							
DIX	**Grande Dixence**	**0.55**	**294**	⇓Pg		Pg	15 31 00.3	+0.2
	SNR=0.5							
DIX				⇓Pg		Pg	15 31 00.3	+0.2
DIX	**Grande Dixence**	**0.55**	**294**	P		Pg	15 31 00.3	+0.2
DIX				S		Sg	15 31 07.2	-0.4
DIX				AML		AML		
	comp=E,29μm,1.3s							
DIX				AML		AML		
	comp=N,33μm,0.3s							
DIX	**Grande Dixence**	**0.55**	**294**	S		Sg	15 31 07.9	+0.4
FIESA	**Fiescheralp**	**0.57**	**358**	⇑Pg		Pb	15 31 00.9	-0.1
	comp=N,0.1nm,SNR=0.7							
FIESA				⇑Pg		Pb	15 31 00.9	-0.1
LKBD	**Leukerbad**	**0.63**	**326**	Sg		Sg	15 31 10.1	+0.1
REMY	**Saint-Rhmy-en**	**0.68**	**268**	Pg		Pg	15 31 02.6	-0.1
REMY				Pg		Pg	15 31 02.6	-0.1
	comp=N,0.1nm,SNR=0.9							
REMY				Sg		Sg	15 31 11.6	-0.1
REMY	**Saint-Rhmy-en**	**0.68**	**268**	P		Pg	15 31 02.6	0.0
REMY				S		Sg	15 31 11.3	-0.4
REMY	**Saint-Rhmy-en**	**0.68**	**268**	P		Pg	15 31 02.5	-0.1
REMY				S		Sg	15 31 11.3	-0.4
REMY				AML		AML		
	comp=E,65μm,0.6s							
REMY				AML		AML		
	comp=N,78μm,1.4s							
REMY	**Saint-Rhmy-en**	**0.68**	**268**	S		Sg	15 31 11.4	-0.3
FUSIO	**Fusio**	**0.70**	**32**	P		Pg	15 31 02.3	-0.5
GRIMS	**Grimsel Gerste**	**0.73**	**10**	Pg		Pg	15 31 03.5	+0.1
	comp=N,0.1nm,SNR=0.9							
MRGE	**Morge**	**0.76**	**263**	P		Pb	15 31 04.2	+0.2
MRGE				S		Sg	15 31 13.7	-0.3
LSD	**Lago del Serru**	**0.81**	**240**	Pg		Pg	15 31 04.9	0.0
LSD				Pg		Pg	15 31 04.9	0.0
	comp=N,0.1nm,SNR=0.9							
LSD	**Lago del Serru**	**0.81**	**240**	P		Pg	15 31 04.8	-0.1
LSD				S		Sg	15 31 15.2	-0.4
LSD	**Lago del Serru**	**0.81**	**240**	P		Pb	15 31 05.0	0.0
LSD				S		Sb	15 31 15.8	+0.1
LSD				AML		AML		
	comp=N,39μm,0.3s							
LSD				AML		AML		
	comp=E,32μm,0.2s							
LSD	**Lago del Serru**	**0.81**	**240**	S		Sb	15 31 15.9	+0.2
RSP	**Reno Superiore**	**0.94**	**221**	P		Pb	15 31 06.9	-0.3
RSP				S		Sb	15 31 19.4	0.0
RSP	**Reno Superiore**	**0.94**	**221**	P		Pb	15 31 06.9	-0.2
RSP				S		Sb	15 31 19.4	0.0
RSP				AML		AML		
	comp=E,30μm,1.6s							
RSP				AML		AML		
	comp=N,31μm,1.5s							
RSP	**Reno Superiore**	**0.94**	**221**	S		Sb	15 31 19.4	+0.1
BRES	**Bressanone**	**2.63**	**70**	⇓P		Pg	15 31 39.3	-0.3
BRES	**Bressanone**	**2.63**	**70**	⇓P		Pg	15 31 39.3	-0.3
FVI	**Forni Avoltri**	**3.31**	**76**	S		Sb	15 32 24.0	-3.5
FVI	**Forni Avoltri**	**3.31**	**76**	S		Sb	15 32 24.0	-3.5
MAON	**Monte Argentar**	**4.05**	**147**	⇑P		Pn	15 31 54.8	+4.3
MAON	**Monte Argentar**	**4.05**	**147**	⇑P		Pn	15 31 54.8	+4.3

ATH 08 15:31:39.5, 35°.32N×27°.87E, h13km±6km, ML2.3/2, Error ellipse: s-maj=6.8km s-min=1.7km az=284.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.62**	**291**	P		Pg	15 31 51.2	-0.4
KARP				S		Sg	15 31 60.0	+0.1
KARP				AML		AML	15 32 00.7	
	comp=N,1485μm,0.6s							
KARP				AML		AML	15 32 01.4	
	comp=E,737μm,0.3s							
ARG	**Arkhangelos**	**0.92**	**13**	P		Pb	15 31 57.2	0.0
ARG				S		Sg	15 32 08.8	-0.3
ARG				AML		AML	15 32 12.9	
	comp=E,238μm,0.5s							
ARG				AML		AML	15 32 15.3	
	comp=N,230μm,0.5s							
ZKR	**Zakros**	**1.37**	**262**	P		Pb	15 32 04.8	-0.1
KSL	**Kastellorizon**	**1.62**	**59**	P		Pn	15 32 08.2	+0.5
IDI	**Anoyia**	**2.44**	**270**	P		Pb	15 32 21.4	-1.8

*MOS **08** 15:41:35.6±0.0, 42°.13N×46°.74E, h37km, MPVA4.2*
*NORS **08** 15:41:35.5±0.0, 42°.14N×46°.77E, h36km, MPVA4.1*
*TIF **08** 15:41:36.0, 42°.15N×46°.79E, h72km±2km*
*NSSP **08** 15:41:36.2, 42°.00N×46°.63E, h10km, Ms2.9*
*DRS **08** 15:41:39.0±0.0, 42°.12N×46°.58E, h21km*
ISC 08 15:41:36.4±1.2, 42.18N±0.02×46.75E±0.02, h17km±9km, n96, σ1§56/160, 6C-1D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARKR	**Arakani**	**0.46**	**23**	*e*PG		**Pn**	**15 41 48.4**	**+0.1**
ARKR				*e*S		**Sn**	**15 41 56.7**	**+0.6**
ARKR				pmax		pmax		
	comp=Z,243nm,0.4s							
ARKR	**Arakani**	**0.46**	**23**	*i* Pg		**Pn**	**15 41 48.4**	**+0.1**
ARKR				*e*Sg		**Sn**	**15 41 55.7**	**-0.4**
LGD	**Lagodekhi**	**0.52**	**228**	P		**Pn**	**15 41 49.3**	**+0.2**
LGD				S		**Sn**	**15 41 59.6**	**+2.1**
LGD	**Lagodekhi**	**0.52**	**228**	PG		**Pn**	**15 41 49.3**	**+0.2**
LGD				S		**Sn**	**15 41 59.6**	**+2.1**
ZKTA	**Zakatala**	**0.55**	**190**	PG		**Pn**	**15 41 49.9**	**+0.3**
KRNR	**Karanay**	**0.65**	**10**	*e*PG		**Pn**	**15 41 50.7**	**-0.4**
KRNR				*e*S		**Sn**	**15 42 01.1**	**+0.1**
KRNR				pmax		pmax		
	comp=Z,256nm,0.3s							
KRNR	**Karanay**	**0.65**	**10**	*e*Pg		**Pn**	**15 41 50.6**	**-0.4**
KRNR				*e*Sg		**Sn**	**15 42 00.9**	**-0.2**
URKR	**Urkarakh**	**0.66**	**91**	⇑*e*PG		**Pn**	**15 41 50.9**	**-0.2**
URKR				*e*			15 42 01.0	
URKR				pmax		pmax		
	comp=Z,176nm,0.4s							
URKR				smax		smax		
	comp=N,662nm,0.4s							
URKR	**Urkarakh**	**0.66**	**91**	*e*Pg		**Pn**	**15 41 50.9**	**-0.2**
URKR				*e*Sg		**Sn**	**15 42 01.1**	**0.0**
BUJR	**Buynaksk**	**0.69**	**22**	*e*PG		**Pn**	**15 41 51.7**	**+0.2**
BUJR				*e*S		**Sn**	**15 42 02.7**	**+0.8**
BUJR				pmax		pmax		
	comp=Z,330nm,0.6s							
BUJR	**Buynaksk**	**0.69**	**22**	*e*Pg		**Pn**	**15 41 51.3**	**-0.2**
BUJR				*e*Sg		**Sn**	**15 42 02.6**	**+0.7**

SGKR	**Sergokala**	**0.73**	**67**	⇑*i*PG		**Pn**	**15 41 51.9**	**0.0**
SGKR				*e*			15 42 03.0	
SGKR				pmax		pmax		
	comp=Z,295nm,0.2s							
SGKR				smax		smax		
	comp=N,681nm,0.4s							
SGKR	**Sergokala**	**0.73**	**67**	*e*Pg		**Pn**	**15 41 52.0**	**0.0**
SGKR				*e*Sg		**Sn**	**15 42 03.1**	**+0.3**
DBC	**Dubki**	**0.84**	**4**	⇑*i*PG		**Pn**	**15 41 53.6**	**0.0**
DBC				*e*S		**Sn**	**15 42 06.3**	**+0.8**
DDFL	**Dedoflistskaro**	**0.88**	**213**	P		**Pn**	**15 41 55.8**	**+1.7**
DDFL				S		**Sn**	**15 42 12.6**	**+6.1**
DDFL	**Dedoflistskaro**	**0.88**	**213**	PG		**Pn**	**15 41 55.8**	**+1.7**
DDFL				S		**Sn**	**15 42 12.6**	**+6.1**
DLMR	**Dylym**	**0.89**	**354**	⇓*e*PG		**Pn**	**15 41 54.8**	**+0.6**
DLMR				*e*			15 42 08.2	
DLMR				pmax		pmax		
	comp=Z,582nm,0.5s							
DLMR				smax		smax		
	comp=N,1μm,0.6s							
DLMR	**Dylym**	**0.89**	**354**	*e*Pg		**Pn**	**15 41 54.8**	**+0.6**
DLMR				*e*Sg		**Sn**	**15 42 08.7**	**+1.9**
DVE	**Vedeno**	**0.90**	**329**	⇑*i*PG		**Pn**	**15 41 55.0**	**+0.6**
DVE				*e*S		**Sn**	**15 42 08.7**	**+1.6**
DVE	**Vedeno**	**0.90**	**329**	*i* Pg		**Pn**	**15 41 55.0**	**+0.6**
DVE				*e*Sg		**Sn**	**15 42 08.4**	**+1.3**
MAK	**Makhachkala**	**0.95**	**35**	*e*PG		**Pn**	**15 41 56.1**	**+1.0**
MAK				*e*			15 42 10.4	
MAK				pmax		pmax		
	comp=Z,250nm,0.3s							
MAK				smax		smax		
	comp=E,1μm,0.6s							
MAK				smax		smax		
	comp=E,1μm,0.5s							
MAK	**Makhachkala**	**0.95**	**35**	*e*Pg		**Pn**	**15 41 56.1**	**+1.0**
MAK				*e*Sg		**Sn**	**15 42 10.4**	**+2.1**
AKT	**Akhty**	**1.01**	**134**	*e*PG		**Pn**	**15 41 56.0**	**0.0**
AKT				*e*S		**Sn**	**15 42 09.2**	**-0.8**
AKT	**Akhty**	**1.01**	**134**	*i* Pg		**Pn**	**15 41 55.8**	**-0.2**
AKT				*e*Sg		**Sn**	**15 42 09.2**	**-0.8**
SEKA	**Sheki**	**1.03**	**161**	PG		**Pn**	**15 41 55.7**	**-0.5**
KANR	**Karaman**	**1.15**	**28**	*e*Pg		**Pg**	**15 41 59.2**	**+0.6**
KANR				*e*Sg		**Sn**	**15 42 16.4**	**+3.3**
GROC	**Groznyy**	**1.24**	**326**	⇑*i*PG		**Pg**	**15 42 00.0**	**-0.3**
GROC				*e*			15 42 17.9	
GROC				pmax		pmax		
	comp=Z,205nm,0.4s							
GROC				smax		smax		
	comp=N,441nm,0.6s							
GROC				smax		smax		
	comp=E,324nm,0.5s							
GROC				smax		smax		
	comp=N,509nm,0.4s							
GROC	**Groznyy**	**1.24**	**326**	*e*Pg		**Pg**	**15 42 00.2**	**-0.2**
GROC				*e*Sg		**Sg**	**15 42 18.2**	**+1.7**
MNGR	**Mingechevir, A**	**1.43**	**170**	PG		**Pb**	**15 42 01.9**	**-0.8**
SEAG	**Tbilisi Sea**	**1.51**	**255**	P		**Pb**	**15 42 03.8**	**-0.3**
SEAG				S		**Sb**	**15 42 23.4**	**+0.4**
SEAG	**Tbilisi Sea**	**1.51**	**255**	PG		**Pb**	**15 42 03.8**	**-0.3**
SEAG				S		**Sb**	**15 42 23.4**	**+0.4**
BTNK	**Botanikuri**	**1.54**	**252**	P		**Pn**	**15 42 02.8**	**-0.4**
BTNK				S		**Sn**	**15 42 23.4**	**+0.6**
BTNK	**Botanikuri**	**1.54**	**252**	PG		**Pn**	**15 42 02.8**	**-0.4**
BTNK				S		**Sn**	**15 42 23.4**	**+0.6**
GANJ	**Ganja**	**1.57**	**192**	PG		**Pn**	**15 42 02.4**	**-1.2**
KMGR	**Komgaron**	**1.64**	**303**	*e*PN		**Pb**	**15 42 06.1**	**-1.2**
KMGR				*e*S		**Sg**	**15 42 28.5**	**-0.9**
KMGR	**Komgaron**	**1.64**	**303**	*e*Pg		**Pb**	**15 42 05.9**	**-0.4**
KMGR				*e*Sg		**Sg**	**15 42 28.4**	**-1.0**
PNSH	**Pansheti**	**1.64**	**287**	P		**Pn**	**15 42 05.3**	**+0.6**
PNSH				S		**Sn**	**15 42 26.4**	**+0.8**
PNSH	**Pansheti**	**1.64**	**287**	PN		**Pn**	**15 42 05.3**	**+0.6**
GUDG	**Gudauri**	**1.71**	**280**	P		**Pb**	**15 42 07.2**	**-0.4**
GUDG				S		**Sb**	**15 42 29.3**	**+0.5**
GUDG	**Gudauri**	**1.71**	**280**	PN		**Pb**	**15 42 07.2**	**-0.4**
GUDG				S		**Sb**	**15 42 29.3**	**+0.5**
MTEO	**Meteo**	**1.71**	**288**	P		**Pb**	**15 42 07.4**	**-0.4**
MTEO				S		**Sb**	**15 42 29.4**	**+0.2**
VLKR	**Vladikavkaz**	**1.76**	**300**	*e*Pg		**Pn**	**15 42 07.2**	**+1.1**
VLKR				*e*Sg		**Sb**	**15 42 30.5**	**+0.5**
LACR	**Lac**	**1.93**	**290**	*e*PN		**Pn**	**15 42 08.8**	**+0.2**
LACR	**Lac**	**1.93**	**290**	*e*Pg		**Pn**	**15 42 08.8**	**+0.2**
LACR				*e*Sg		**Sn**	**15 42 32.9**	**+0.5**
KZRT	**Kazreti**	**1.93**	**246**	P		**Pn**	**15 42 06.5**	**-2.1**
KZRT				S		**Sn**	**15 42 30.6**	**-1.9**
KZRT	**Kazreti**	**1.93**	**246**	PN		**Pn**	**15 42 06.5**	**-2.1**
BTKR	**Batakoyurt**	**2.01**	**307**	*e*Pg		**Pn**	**15 42 10.6**	**+0.9**
BTKR				*e*Sg		**Sn**	**15 42 36.5**	**+2.0**
ARNR	**Ardon**	**2.07**	**300**	*e*Pg		**Pn**	**15 42 08.7**	**-1.8**
ARNR				*e*Sg		**Sn**	**15 42 35.9**	**0.0**
TRLG	**Trialeti**	**2.08**	**253**	P		**Pn**	**15 42 10.2**	**-0.5**
TRLG				S		**Sn**	**15 42 35.1**	**-1.2**
TRLG	**Trialeti**	**2.08**	**253**	PN		**Pn**	**15 42 10.2**	**-0.5**
DMNI	**Dmanisi**	**2.10**	**247**	P		**Pn**	**15 42 09.9**	**-1.0**
DMNI				S		**Sn**	**15 42 35.0**	**-1.7**
DMNI	**Dmanisi**	**2.10**	**247**	PN		**Pn**	**15 42 09.9**	**-1.0

ALER				*e*Sn	**Sn**	15 43 15.7	-2.8	
GOF	**Gofitskoye**	**3.94**	**318**	*e*Pn	**Pn**	15 42 35.1	-1.0	
GOF				pmax	pmax			
	comp=Z,26nm,0.2s							
GOF	**Gofitskoye**	**3.94**	**318**	*e*Pn	**Pn**	15 42 35.3	-0.8	
GOF				*e*Sn	**Sn**	15 43 18.9	-2.9	
ANN	**Anapa**	**7.26**	**294**	P	**Pn**	15 43 25.5	+3.8	
ANN				pmax	pmax			
	comp=Z,317nm,1.3s							
OBN	**Obninsk**	**14.56**	**336**	*e*P	**Pn**	15 45 02.5	+1.0	
OBN				pmax	pmax			
	comp=Z,10.0nm,0.3s							
AAK	**Ala-Archa**	**20.46**	**79**	*i* P	Pn	15 46 15.2	-0.2	

GCG ***08*** *15:44:28.8±0.7, 12.°03N×89.°53W, h0km±112km, MD5.1*
IDC ***08*** *15:44:43.3±2.6, 13.°44N×89.°24W, h17km±15km, mb4.8/30, mb1 4.9/30, mb1mx4.8/38, mbtmp4.8/30, MS4.5/31, Ms1 4.5/31, ms1mx4.5/35, Error ellipse: s-maj=20.6km s-min=9.2km az=52.0*
NEIC ***08*** *15:44:45.1±2.2, 13.°20N±0.°06×89.°79W±0.°05, h29km±1km, mb5.2/509, Mwb5.1/53, Mww5.4, Md5.3(SNET), Error ellipse: s-maj=10.1km s-min=7.7km az=216.0*
UCR ***08*** *15:44:46.8±1.5, 13.°18N×89.°84W, h29km±3km, ML4.9, MW4.8, mb5.4(NEIC)*
INET ***08*** *15:44:46.6, 13.°15N×89.°78W, h11km, MW5.1*
GCMT ***08*** *15:44:47.2±0.1, 13.°11N±0.°01×89.°97W±0.°01, h34km, MW5.2/127, Moment Tensor Solution. s120,c185; s127,c193; Duration: 1ŧ0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.79±.02; Mθθ-0.83±.01; Mϕϕ0.03±.01; Mrθ0.24±.01; Mϕϕ0.27±.01; Mϕr-0.14±.01; Best double couple: M₀0.89100×10¹⁷ NP1:ϕs280.00000°, δ37.00000°, λ81.00000°. NP2:ϕs111.00000°, δ54.00000°, λ96.00000°. Principal axes: T 0.8400, Plg80.0000°, Azm48.0000°; N 0.1030, Plg5.0000°, Azm287.0000°; P -0.9430, Plg9.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***08*** *15:44:48, 13.°26N×89.°71W, h33km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr4.80; Mθθ-3.32; Mϕϕ-1.48; Mrθ1.43; Mϕθ2.33; Mϕr-0.71; Fault plane solution: M₀5.11000×10¹⁶ NP1:ϕs121.68000°, δ54.08000°, λ86.99000°. NP2:ϕs306.80000°, δ36.03000°, λ94.15000°. Principal axes: T 5.0654, Plg81.0000°, Azm18.0000°; N 0.0967, Plg2.0000°, Azm123.0000°; P -5.1621, Plg9.0000°, Azm214.0000°;*
SNET ***08*** *15:44:49.8±3.3, 13.°33N×89.°67W, h48km, ML4.9, MW4.8*
MOS ***08*** *15:44:50.4±1.1, 13.°47N×89.°49W, h85km, mb5.1, Ms4.8*
BGR ***08*** *15:44:55.8±0.0, 15.°26N×88.°45W, h33km, mb5.1, Ms4.8*
NEIC ***08*** *15:45:06, 13.°06N×89.°09W, h36km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.96; Mθθ-0.72; Mϕϕ-0.24; Mrθ0.85; Mϕθ0.50; Mϕr-0.35; Fault plane solution: M₀1.36000×10¹⁷ NP1:ϕs309.00000°, δ24.00000°, λ103.00000°. NP2:ϕs115.00000°, δ66.00000°, λ84.00000°. Principal axes: T 1.3253, Plg68.0000°, Azm14.0000°; N 0.0586, Plg5.0000°, Azm117.0000°; P -1.3839, Plg21.0000°, Azm210.0000°;*
ISC 08 15:44:47.6±0.6, **13.°22N**±0.°04×**89.°77W**±0.°04, **h56**km±5km, **n923**,σ1ŧ**35**/935, **mb5.0**/337, **MS4.6**/38, **14C-40D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.51**	**59**	*e*P	**Pn**	**15 44 58.2**	**-1.1**
LALI				*e*S	**Sn**	**15 45 08.4**	**+0.5**
LALI				IAML		15 45 14.1	
	comp=Z,16μm,0.4s						
LALI	**Alcalda de L**	**0.51**	**59**	*e*P	**Pn**	**15 44 58.2**	**-1.1**
LALI				*e*S	**Sn**	**15 45 08.4**	**+0.5**
LALI				IAML		15 45 14.1	
	comp=Z,16μm,0.4s						
JAYA	**Jayaque - finc**	**0.53**	**36**	*e*P	**Pn**	**15 44 58.8**	**-1.0**
JAYA				IAML		15 45 12.7	
	comp=Z,52μm,0.2s						
JAYA	**Jayaque - finc**	**0.53**	**36**	*e*P	**Pn**	**15 44 58.8**	**-1.0**
JAYA				IAML		15 45 12.7	
	comp=Z,52μm,0.2s						
CEVE	**Cerro Verde**	**0.62**	**13**	↓*e*P	**Pn**	**15 45 00.2**	**-0.7**
CEVE				*e*S	**Sn**	**15 45 12.2**	**+1.7**
CEVE				IAML		15 45 14.6	
	comp=Z,233μm,0.4s						
CEVE	**Cerro Verde**	**0.62**	**13**	↓*e*P	**Pn**	**15 45 00.2**	**-0.7**
CEVE				*e*S	**Sn**	**15 45 12.2**	**+1.7**
CEVE				IAML		15 45 14.6	
	comp=Z,233μm,0.4s						
SBLS	**San Blas**	**0.63**	**13**	↓*i*P	**Pn**	**15 45 00.2**	**-0.8**
SBLS	**San Blas**	**0.63**	**13**	↓*i*P	**Pn**	**15 45 00.2**	**-0.8**
ITCA	**Escuela Especi**	**0.66**	**47**	*e*P	**Pn**	**15 45 00.7**	**-0.5**
ITCA	**Escuela Especi**	**0.66**	**47**	*e*P	**Pn**	**15 45 00.7**	**-0.5**
MAGS	**Ministerio de**	**0.66**	**46**	*e*P	**Pn**	**15 45 00.6**	**-0.7**
MAGS				IAML		15 45 25.0	
	comp=Z,32μm,0.6s						
PMON	**Piamonte**	**0.66**	**42**	*e*P	**Pn**	**15 45 00.6**	**-0.6**
PMON	**Piamonte**	**0.66**	**42**	*e*P	**Pn**	**15 45 00.6**	**-0.6**
PMON				*e*P		15 45 00.8	
SNJE	**San Jose**	**0.66**	**14**	↓*i*P	**Pn**	**15 45 00.7**	**-0.7**
SNJE	**San Jose**	**0.66**	**14**	↓*i*P	**Pn**	**15 45 00.7**	**-0.7**
RTR	**El Retiro**	**0.68**	**10**	↓*i*P	**Pn**	**15 45 01.1**	**-0.5**
RTR	**El Retiro**	**0.68**	**10**	↓*i*P	**Pn**	**15 45 01.1**	**-0.5**
CEDA	**San Andres**	**0.68**	**32**	↓*i*P	**Pn**	**15 45 01.1**	**-0.3**
CEDA				IAML		15 45 29.1	
	comp=Z,61μm,0.5s						
CEDA	**San Andres**	**0.68**	**32**	↓*i*P	**Pn**	**15 45 01.1**	**-0.3**
CEDA				IAML		15 45 29.1	
	comp=Z,61μm,0.5s						
BOQS	**Boqueron**	**0.70**	**43**	↓*i*P	**Pn**	**15 45 01.4**	**-0.4**
BOQS	**Boqueron**	**0.70**	**43**	↓*i*P	**Pn**	**15 45 01.4**	**-0.4**
SNET	**Serv Nac Est T**	**0.70**	**49**	↓*e*P	**Pn**	**15 45 00.9**	**-0.9**
SNET				*e*S	**Sn**	**15 45 13.2**	**+1.2**
SNET	**Serv Nac Est T**	**0.70**	**49**	↓*e*P	**Pn**	**15 45 00.9**	**-0.9**
SNET				*e*S	**Sn**	**15 45 13.2**	**+1.2**
SNET	**Serv Nac Est T**	**0.70**	**49**		**Pn**	**15 45 00.8**	**-0.9**
SEMO	**Seminario San**	**0.72**	**48**	*e*P	**Pn**	**15 45 01.4**	**-0.4**
OPAM	**Oficina de Pla**	**0.74**	**49**	*e*P	**Pn**	**15 45 01.8**	**-0.4**
OPAM	**Oficina de Pla**	**0.74**	**49**	*e*P	**Pn**	**15 45 01.8**	**-0.4**
UESS	**Universidad de**	**0.74**	**48**	*e*P	**Pn**	**15 45 02.1**	**-0.2**
UESS	**Universidad de**	**0.74**	**48**	*e*P	**Pn**	**15 45 02.1**	**-0.2**
IGN	**Direccin Gen**	**0.76**	**50**	*e*P	**Pn**	**15 45 02.2**	**-0.2**
IGN				*e*S	**Sn**	**15 45 15.1**	**+1.8**
IGN	**Direccin Gen**	**0.76**	**50**	*e*P	**Pn**	**15 45 02.1**	**-0.3**
IGN				*e*P		15 45 02.2	
IGN				*e*S	**Sn**	**15 45 15.1**	**+1.8**
UDBS	**Universidad Do**	**0.78**	**51**	*e*P	**Pn**	**15 45 02.4**	**-0.2**
UDBS				*e*S	**Sn**	**15 45 15.4**	**+1.8**
UDBS				IAML		15 45 17.3	
	comp=Z,64μm,0.4s						
UDBS	**Universidad Do**	**0.78**	**51**	*e*P	**Pn**	**15 45 02.4**	**-0.2**
UDBS				*e*S	**Sn**	**15 45 15.4**	**+1.8**
UDBS				IAML		15 45 17.3	
	comp=Z,64μm,0.4s						
UNIC	**Universidad Ca**	**0.79**	**16**	*e*P	**Pn**	**15 45 02.7**	**-0.1**
UNIC	**Universidad Ca**	**0.79**	**16**	*e*P	**Pn**	**15 45 02.7**	**-0.1**
AEIL	**Aeropuerto Ilo**	**0.79**	**53**	*e*P	**Pn**	**15 45 02.9**	**+0.1**
AEIL				*e*S	**Sn**	**15 45 16.5**	**+2.4**
AEIL				IAML		15 45 22.8	
	comp=Z,83μm,0.4s						
AEIL	**Aeropuerto Ilo**	**0.79**	**53**	*e*P	**Pn**	**15 45 02.9**	**+0.1**
AEIL				*e*S	**Sn**	**15 45 16.5**	**+2.4**
AEIL				IAML		15 45 22.8	
	comp=Z,83μm,0.4s						
LFRS	**El Faro**	**0.80**	**60**	↓*i*P	**Pn**	**15 45 02.5**	**-0.5**
LFRS	**El Faro**	**0.80**	**60**	↓*i*P	**Pn**	**15 45 02.5**	**-0.5**
LFU	**La Fuente**	**0.83**	**51**	↑*i*P	**Pn**	**15 45 03.4**	**+0.1**
LFU	**La Fuente**	**0.83**	**51**	↑*i*P	**Pn**	**15 45 03.4**	**+0.1**
TACO	**Tacachico**	**0.85**	**29**	↓*i*P	**Pn**	**15 45 03.5**	**-0.1**
TACO				*e*S	**Sn**	**15 45 17.5**	**+2.3**
TACO				IAML		15 45 23.6	
	comp=Z,20μm,0.7s						
TACO	**Tacachico**	**0.85**	**29**	↓*i*P	**Pn**	**15 45 03.5**	**-0.1**
TACO				*e*S	**Sn**	**15 45 17.5**	**+2.3**
TACO				IAML		15 45 23.6	
	comp=Z,20μm,0.7s						
LBRS	**Las Brisas**	**0.88**	**54**	↓*e*P	**Pn**	**15 45 04.0**	**0.0**
LBRS	**Las Brisas**	**0.88**	**54**	↓*e*P	**Pn**	**15 45 04.0**	**0.0**
PAVA	**Las Pavas**	**0.95**	**59**	↓*i*P	**Pn**	**15 45 05.3**	**+0.4**
PAVA				IAML		15 45 27.2	
	comp=Z,64μm,0.4s						
PAVA	**Las Pavas**	**0.95**	**59**	↓*i*P	**Pn**	**15 45 05.3**	**+0.4**
PAVA				IAML		15 45 27.2	
	comp=Z,64μm,0.4s						
COEG	**Centro de Oper**	**0.95**	**65**	↓*e*P	**Pn**	**15 45 04.7**	**-0.3**
COEG				*e*S	**Sn**	**15 45 19.4**	**+1.7**
COEG	**Centro de Oper**	**0.95**	**65**	↓*e*P	**Pn**	**15 45 04.7**	**-0.3**
COEG				*e*S	**Sn**	**15 45 19.4**	**+1.7**
UESV	**Universidad de**	**1.04**	**67**	*e*P	**Pn**	**15 45 06.1**	**+0.1**
UESV				*e*S	**Sn**	**15 45 21.9**	**+2.1**
UESV				IAML		15 45 29.8	
	comp=Z,28μm,0.6s						
UESV	**Universidad de**	**1.04**	**67**	*e*P	**Pn**	**15 45 06.1**	**+0.1**
UESV				*e*S	**Sn**	**15 45 21.9**	**+2.1**
UESV				IAML		15 45 29.8	
	comp=Z,28μm,0.6s						
ALJI	**Alcalda de J**	**1.17**	**85**	*e*P	**Pn**	**15 45 07.6**	**-0.2**
ALJI				IAML		15 45 31.4	
	comp=Z,24μm,0.6s						
ALJI	**Alcalda de J**	**1.17**	**85**	*e*P	**Pn**	**15 45 07.4**	**-0.4**
ALJI				*e*P		15 45 07.6	
ALJI				IAML		15 45 31.4	
	comp=Z,24μm,0.6s						
LLGN	**La Laguna**	**1.23**	**41**	*e*P	**Pn**	**15 45 09.6**	**+0.9**
LLGN				IAML		15 45 31.9	
	comp=Z,25μm,0.7s						
LLGN	**La Laguna**	**1.23**	**41**	*e*P	**Pn**	**15 45 09.6**	**+0.9**
LLGN				IAML		15 45 31.9	
	comp=Z,25μm,0.7s						
MTO3	**Montecristo**	**1.24**	**19**	↓*i*P	**Pn**	**15 45 09.5**	**+0.6**
MTO3	**Montecristo**	**1.24**	**19**	↓*i*P	**Pn**	**15 45 09.5**	**+0.6**
MTO3	**Montecristo**	**1.24**	**19**		**Pn**	**15 45 09.4**	**+0.6**
COEB	**Comit de Eme**	**1.24**	**77**	↓*e*P	**Pn**	**15 45 08.6**	**-0.2**
COEB				*e*S	**Sn**	**15 45 26.4**	**+1.8**
COEB				IAML		15 45 29.5	
	comp=Z,25μm,0.4s						
COEB	**Comit de Eme**	**1.24**	**77**	↓*e*P	**Pn**	**15 45 08.6**	**-0.2**
COEB				*e*S	**Sn**	**15 45 26.4**	**+1.8**
COEB				IAML		15 45 29.5	
	comp=Z,25μm,0.4s						
PQSS	**Presa 15 de Se**	**1.25**	**71**	*e*P	**Pn**	**15 45 08.9**	**+0.2**
PQSS				*e*S	**Sn**	**15 45 27.4**	**+2.8**
PQSS				IAML		15 45 28.9	
	comp=Z,15μm,0.1s						
ESQI	**Esquipulas**	**1.39**	**17**	↓*e*P	**Pn**	**15 45 12.0**	**+1.1**
ESQI	**Esquipulas**	**1.39**	**17**		**Pn**	**15 45 11.8**	**+1.0**
LCY	**Lacayo**	**1.45**	**82**	*e*P	**Pn**	**15 45 11.9**	**+0.2**
LCY	**Lacayo**	**1.45**	**82**	*e*P	**Pn**	**15 45 11.9**	**+0.2**
NBG	**Las Nubes**	**1.47**	**338**	↓*e*P	**Pn**	**15 45 13.0**	**+0.9**
NBG				*e*S	Sn	15 45 48.9	+19
JUCU	**Jucuarįn**	**1.48**	**89**	*e*P	**Pn**	**15 45 10.9**	**-1.1**
JUCU	**Jucuarįn**	**1.48**	**89**	*e*P	**Pn**	**15 45 10.9**	**-1.1**
FAGO	**Alcalda de S**	**1.69**	**74**	↓*e*P	**Pn**	**15 45 14.8**	**+0.1**
FAGO	**Alcalda de S**	**1.69**	**74**	↓*e*P	**Pn**	**15 45 14.8**	**+0.1**
LCND	**La Caada**	**1.83**	**87**	*e*P	**Pn**	**15 45 16.9**	**+0.2**
LCND				IAML		15 45 44.6	
	comp=Z,39μm,0.5s						
LCND	**La Caada**	**1.83**	**87**	*e*P	**Pn**	**15 45 16.9**	**+0.2**
LCND				IAML		15 45 44.6	
	comp=Z,39μm,0.5s						
MRL	**Marmol**	**1.85**	**3**	↑*i*P	**Pn**	**15 45 19.0**	**+1.8**
APG	**El Aguazote**	**1.89**	**339**	*i* P	**Pn**	**15 45 17.6**	**-0.2**
	comp=Z,292nm,0.3s,baz=159,slow=8.8,SNR=474						
APG				Sn	**Sn**	**15 45 42.8**	**+2.2**
	comp=Z,327nm,0.3s,baz=156,slow=20,SNR=6.8						
ERG	**Entre ros, C**	**2.12**	**305**	*e*P	**Pn**	**15 45 19.2**	**-1.5**
RTAL	**Retalhuleu**	**2.27**	**305**		**Pn**	**15 45 20.8**	**-1.9**
TGUH	**Tegucigalpa,Un**	**2.57**	**71**	*e*P	**Pn**	**15 45 27.5**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.57**	**71**	*e*P	**Pn**	**15 45 27.5**	**+0.6**
TGUH	**Tegucigalpa,Un**	**2.57**	**71**	Pn	**Pn**	**15 45 26.9**	**0.0**
HUEH	**Huehuetenango**	**2.67**	**321**	*e*P	**Pn**	**15 45 29.6**	**+1.2**
HUEH	**Huehuetenango**	**2.67**	**321**		**Pn**	**15 45 28.1**	**-0.3**
CRIN	**San Cristobal**	**2.70**	**101**		**Pn**	**15 45 28.0**	**-0.7**
PETF	**Flores**	**3.67**	**359**	*e*P	**Pn**	**15 45 43.8**	**+1.9**
PETF	**Flores**	**3.67**	**359**		**Pn**	**15 45 43.4**	**+1.5**
CCIG	**Comitan**	**3.81**	**323**		**Pn**	**15 45 44.7**	**+0.8**
BOAB	**BOACO BROADBAN**	**4.08**	**100**		**Pn**	**15 45 45.7**	**-1.7**
ACON	**Acoyapa**	**4.66**	**105**	*e*P	**Pn**	**15 45 55.4**	**0.0**
ACON	**Acoyapa**	**4.66**	**105**		**Pn**	**15 45 54.1**	**-1.3**
SAJU	**San Juanillo,**	**5.07**	**128**	*e*P	**Pn**	**15 46 00.8**	**-0.2**
ORTG	**Ortega, Santa**	**5.09**	**123**		**Pn**	**15 46 01.3**	**-0.1**
CUI	**Cuipilapa**	**5.18**	**119**	*e*P	**Pn**	**15 46 03.5**	**+0.9**
PLVR	**Palo Verde**	**5.19**	**123**	*e*P	**Pn**	**15 46 02.7**	**-0.1**
GRZA	**Playa Garza**	**5.22**	**129**	*e*P	**Pn**	**15 46 03.1**	**0.0**
DUNO	**Dulce Nombre,**	**5.23**	**126**	*e*P	**Pn**	**15 46 03.4**	**+0.1**
INDI	**Punta indio, G**	**5.35**	**128**	*e*P	**Pn**	**15 46 04.9**	**0.0**
JTS	**Las Juntas de**	**5.55**	**121**	Pn	**Pn**	**15 46 09.0**	**+1.4**
	comp=Z,15nm,0.3s,baz=360,slow=21,SNR=17						
JTS				Sn	**Sn**	**15 47 07.5**	**-2.6**
	comp=Z,28nm,0.3s,baz=233,slow=23,SNR=1.7						
JTS				Lg	Lg	15 47 27.3	
	comp=Z,18nm,0.3s,baz=194,slow=22,SNR=8.9						
JTS				LR	LR	15 48 25.4	
	comp=Z,4μm,20.6s,baz=352,slow=42						
JTS	**Las Juntas de**	**5.55**	**121**	*i* P	**Pn**	**15 46 08.8**	**+1.2**
JTS	**Las Juntas de**	**5.55**	**121**	*e*P	**Pn**	**15 46 09.0**	**+1.4**
JTS	**Las Juntas de**	**5.55**	**121**	Pn	**Pn**	**15 46 08.4**	**+0.8**
ARE1	**Arenal 1**	**5.66**	**118**	*e*P	**Pn**	**15 46 11.1**	**+1.9**
CEDE	**Laguna Cedeo**	**5.66**	**118**	*e*P	**Pn**	**15 46 10.7**	**+1.5**
LAFE	**Finca La Fe, P**	**5.85**	**125**	*e*P	**Pn**	**15 46 12.3**	**+0.6**
CMIG	**Matias Romero**	**6.26**	**309**	Pn	**Pn**	**15 46 16.3**	**-1.1**
	comp=Z,8.6nm,0.3s,baz=100,slow=9.6,SNR=52						
CMIG				Sn	**Sn**	**15 47 24.3**	**-3.3**
	comp=Z,46nm,0.3s,baz=124,slow=20,SNR=6.1						
CMIG				LR	LR	15 49 12.0	
	comp=Z,8μm,21.3s,baz=114,slow=41						
OCM	**Ochomogo**	**6.58**	**120**	*e*P	**Pn**	**15 46 24.2**	**+2.2**
LCR2	**La Lucha 2**	**6.63**	**121**	*e*P	**Pn**	**15 46 25.2**	**+2.6**
CVTR	**Volcan Turrial**	**6.70**	**118**	*e*P	**Pn**	**15 46 26.7**	**+3.0**
RIMA	**Rio Macho**	**6.73**	**120**	*e*P	**Pn**	**15 46 25.5**	**+1.5**
CDM	**Cerro de Muert**	**6.93**	**121**	*e*P	**Pn**	**15 46 28.9**	**+1.9**
EDDO	**Dominical**	**7.01**	**124**	*e*P	**Pn**	**15 46 29.5**	**+1.8**
MRVA	**Moravia de Chi**	**7.06**	**118**	*e*P	**Pn**	**15 46 30.4**	**+1.9**
PEZE	**Perez Zeledon,**	**7.09**	**122**	*e*P	**Pn**	**15 46 31.0**	**+2.1**
PEZE	**Perez Zeledon,**	**7.09**	**122**	Pn	**Pn**	**15 46 29.3**	**+0.4**
TEIG	**Tepich**	**7.11**	**11**	Pn	**Pn**	**15 46 31.1**	**+2.1**
	comp=Z,35nm,0.3s,baz=181,slow=6.5,SNR=149						
TEIG				Lg	Lg	15 48 16.1	
	comp=Z,11nm,0.3s,baz=88,slow=17,SNR=3.2						
TEIG	**Tepich**	**7.11**	**11**	Pn	**Pn**	**15 46 30.5**	**+1.5**
DRK0	**Durika**	**7.51**	**121**	*e*P	**Pn**	**15 46 36.6**	**+1.8**
RIOS	**Rincon, Osa**	**7.61**	**126**	*e*P	**Pn**	**15 46 38.5**	**+2.6**
RIOS	**Rincon, Osa**	**7.61**	**126**		**Pn**	**15 46 37.3**	**+1.4**
BRU2	**Volcan**	**8.23**	**122**	*e*P	**Pn**	**15 46 46.9**	**+2.5**
TLIG	**Tlapa**	**9.52**	**298**	Pn	**Pn**	**15 47 02.1**	**+0.1**
SOR	**Soroa**	**11.48**	**33**	Pn	**Pn**	**15 47 32.0**	**+3.1**
MOIG	**Morelia**	**12.69**	**302**		**Pn**	**15 47 46.3**	**+0.7**
MTDJ	**Mount Denham**	**12.79**	**66**	Pn	**Pn**	**15 47 48.5**	**+1.7**
PAYG	**Puerto Ayora**	**13.82**	**92**	Pn	**Pn**	**15 48 01.9**	**+1.1**
ZAIG	**Zacatecas**	**15.43**	**310**	Pn	**Pn**	**15 48 22.3**	**+0.3**
060A	**Indiantown**	**16.32**	**31**	P	**P**	**15 48 36.3**	**+1.1**
DWPF	**Disney Wildern**	**16.73**	**26**	P	**P**	**15 48 40.1**	**+0.4**
DWPF				IAmb	IAmb	15 48 58.3	
	comp=Z,133nm,1.2s						
DWPF	**Disney Wildern**	**16.73**	**26**	P		15 48 39.2	
	baz=209						
OTAV	**Otavalo**	**17.10**	**138**	*ce*P	**P**	**15 48 46.8**	**+2.5**
OTAV				pmax	pmax		
	comp=Z,24nm,1.7s						
OTAV	**Otavalo**	**17.10**	**138**	P	**P**	**15 48 44.7**	**+0.3**
OTAV	**Otavalo**	**17.10**	**138**	*e*P	**P**	**15 48 45.2**	**+0.8**
735A	**Kenedy**	**17.26**	**336**	P	**P**	**15 48 46.5**	**+1.0**
735A				IAmb	IAmb	15 49 00.1	
	comp=Z,140nm,0.9s						
ROSC	**El Rosal**	**17.37**	**117**	P	**P**	**15 48 49.4**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=133,slow=16,SNR=9.9						
ROSC				LR	LR	15 56 39.8	
	comp=Z,849nm,18.5s,baz=356,slow=42						
ROSC	**El Rosal**	**17.37**	**117**	P	**P**	**15 48 49.6**	**+2.3**
ROSC				pmax	pmax		
	comp=Z,63nm,1.1s						
ROSC	**El Rosal**	**17.37**	**117**	P	**P**	**15 48 49.6**	**+2.3**
656A	**Willston**	**17.41**	**22**	P	**P**	**15 48 48.5**	**+1.3**
833A	**Chaparral WMA,**	**17.50**	**331**	P		15 48 49.1	
	baz=147,SNR=15						
HKT	**Hockley**	**17.57**	**342**	*i* P	**Pn**	**15 48 48.1**	**-0.4**
HKT	**Hockley**	**17.57**	**342**		**P**	**15 48 48.8**	**0.0**
441A	**DeRidder**	**17.73**	**350**	IAmb	IAmb	15 49 05.8	
	comp=Z,286nm,1.1s						
BRAL	**Brewton**	**18.04**	**8**	IAmb	IAmb	15 49 12.4	
	comp=Z,162nm,0.9s						
BRAL	**Brewton**	**18.04**	**8**	P		15 48 57.9	
	baz=189						
346A	**Big Creek Wild**	**18.08**	**1**	P	**Pn**	**15 48 58.4**	**+3.6**
346A				IAmb	IAmb	15 49 12.7	
	comp=Z,277nm,1.1s						
346A				PcP	**PcP**	**15 53 23.1**	**-3.6**
SDDR	**Presa de Saban**	**18.65**	**70**	P	**Pn**	**15 49 02.4**	**+0.4**
SDDR				PcP	**PcP**	**15 53 30.0**	**+2.1**
352A	**Blakely**	**18.71**	**13**	IAmb	IAmb	15 49 22.4	
	comp=Z,332nm,1.4s						
456A	**Hilliard**	**18.83**	**21**	IAmb	IAmb	15 49 20.3	
	comp=Z,213nm,1.1s						
435B	**Jarrell**	**18.90**	**339**	P		15 49 04.6	
	baz=156,SNR=10						
435B	**Jarrell**	**18.91**	**339**	IAmb	IAmb	15 49 07.8	
	comp=Z,262nm,1.4s						
VBMS	**Vicksburg**	**18.92**	**358**	P		15 49 06.9	
	baz=178,SNR=22						
NATX	**Nacogdoches**	**18.99**	**347**		**Pn**	**15 49 05.9**	**+0.1**
NATX				IAmb	IAmb	15 49 20.0	
	comp=Z,108nm,0.7s						
NATX	**Nacogdoches**	**18.99**	**347**	P		15 49 06.5	
	baz=165,SNR=8.6						
TIGA	**Tifton**	**19.00**	**16**	P		15 49 06.6	
	baz=199						
SDV	**Santo Domingo**	**19.27**	**101**	*e*P	**P**	**15 49 07.5**	**-0.5**
SC01	**Santiago de lo**	**19.28**	**69**	IAmb	IAmb	15 49 11.9	
	comp=Z,259nm,1.1s						
237A	**Washetta, Mont**	**19.50**	**344**	Pn	**Pn**	**15 49 12.2**	**+0.4**
JCT	**Junction City**	**19.51**	**333**	P		15 49 11.5	
	baz=150,SNR=20						
JCT	**Junction City**	**19.51**	**333**	P	**Pn**	**15 49 11.0**	**-1.1**
JCT				pmax	pmax		
	comp=Z,90nm,1.1s						
JCT	**Junction City**	**19.51**	**333**		**Pn**	**15 49 10.9**	**-1.1**
JCT				IAmb	IAmb	15 49 27.0	
	comp=Z,90nm,1.1s						
GRTK	**Grand Turk**	**19.59**	**63**	Pn	**Pn**	**15 49 13.2**	**+0.2**
255A	**Hazlehurst**	**19.79**	**19**	IAmb	IAmb	15 49 28.8	
	comp=Z,184nm,1.1s						
LRAL	**Lakeview Retre**	**19.88**	**7**	P	**Pn**	**15 49 16.4**	**0.0**
LRAL				IAmb	IAmb	15 49 30.9	
	comp=Z,120nm,0.9s						
LRAL	**Lakeview Retre**	**19.88**	**7**	P		15 49 16.8	
	baz=188,SNR=20						
152A	**Waverly Hall**	**19.90**	**13**	P	**Pn**	**15 49 16.6**	**0.0**
152A				IAmb	IAmb	15 49 30.9	
	comp=Z,135nm,1.2s						
152A					**PcP**	**15 53 31.8**	**+1.9**
WHTX	**Lake Whitney,**	**19.97**	**341**	P		15 49 15.7	
	baz=158,SNR=17						
Z41A	**Richland Creek**	**20.14**	**353**	P		15 49 21.4	
	baz=172,SNR=16						
HPIG		**20.19**	**315**	P	Pn	15 49 19.2	-1.0
Z51A	**Franklin**	**20.44**	**11**	IAmb	IAmb	15 49 26.2	
	comp=Z,91nm,0.7s						
Z38A	**Mt. Pleasant**	**20.51**	**347**	IAmb	IAmb	15 49 38.5	
	comp=Z,162nm,0.9s						
TX32	**Lajitas Array**	**20.57**	**323**		Pn	15 49 24.2	-0.5
TX32				IAmb	IAmb	15 49 25.9	
	comp=Z,50nm,0.8s						
TX32					**PcP**	**15 53 34.0**	**+2.7**
TXAR	**Lajitas Array**	**20.57**	**323**	P	Pn	15 49 24.3	-0.4
	comp=Z,40nm,0.7s,baz=150,slow=9.7,SNR=419						
TXAR				PcP	**PcP**	**15 53 33.2**	**+1.9**
	comp=Z,5.4nm,0.8s,baz=162,slow=2.8,SNR=6.9						
TXAR				LR	LR	15 59 31.6	
	comp=Z,195nm,19.6s,baz=0.0,slow=43						
TXAR	**Lajitas Array**	**20.57**	**323**	P	Pn	15 49 23.5	-1.2
TXAR	**Lajitas Array**	**20.57**	**323**	P	Pn	15 49 23.5	-1.1
TXAR					**PcP**	**15 53 32.0**	**+0.7**
WLAR	**White Oak Lake**	**20.60**

comp=Z,90nm,1.0s
WMOK Wichita Mounta 22.92 341 IAmb IAmb 15 49 48.2
comp=Z,63nm,1.0s
WMOK Wichita Mounta 22.92 341 P 15 49 45.6
baz=157,SNR=55
GLAT Glass 22.95 1 P **P** **15 49 48.3 +1.1**
CLTN Cedars of Leba 22.98 7 IAmb IAmb 15 49 49.8
comp=Z,47nm,0.8s
TKL Tuckaleechee C 22.98 13 P **P** **15 49 47.8 +0.2**
comp=Z,56nm,0.7s,baz=184,slow=10.0,SNR=57
TKL LR LR 15 59 11.5
comp=Z,2µm,21.3s,baz=202,slow=38
TKL Tuckaleechee C 22.98 13 P **P** **15 49 48.5 +1.0**
TKL PcP **PcP** **15 53 36.9 +1.1**
V51A Loudon 23.01 11 IAmb IAmb 15 49 50.1
comp=Z,38nm,0.8s
UTMT University of 23.04 2 P **P** **15 49 49.0 +1.0**
KMSC Kings Mountain 23.12 18 IAmb IAmb 15 50 03.6
comp=Z,119nm,1.1s
KMSC Kings Mountain 23.12 18 P 15 49 49.6
baz=201,SNR=18
OKCSW OKLAHOMA CITY 23.15 344 P **P** **15 49 49.6 +0.5**
ATAH Atahualpa 23.17 150 P **P** **15 49 52.4 +2.5**
comp=Z,19nm,0.9s,baz=328,slow=8.7,SNR=8.9
ATAH LR LR 15 57 47.3
comp=Z,2µm,19.6s,baz=327,slow=34
V52A Sevierville 23.20 13 IAmb IAmb 15 50 04.2
comp=Z,99nm,1.2s
U40A Yellville 23.20 354 IAmb IAmb 15 50 09.2
comp=Z,91nm,1.2s
U40A Yellville 23.20 354 P 15 49 49.9
baz=172,SNR=18
HICK Hickman 23.23 1 P **P** **15 49 50.9 +1.0**
TUL1 Leonard 23.23 348 P 15 49 49.2
baz=165
SJG San Juan 23.25 75 P **P** **15 49 47.9 -2.3**
comp=Z,5.6nm,0.3s,baz=309,slow=6.5,SNR=2.1
SJG PcP **PcP** **15 53 37.1 +0.4**
comp=Z,28nm,0.8s,baz=329,slow=6.0,SNR=6.2
SJG San Juan 23.25 75 P **P** **15 49 48.5 -1.8**
SJG pmax pmax
comp=Z,42nm,1.3s
SJG San Juan 23.25 75 P **P** **15 49 48.5 -1.8**
MNTX Cornudas Mount 23.32 325 P **P** **15 49 51.4 +0.6**
MNTX IAmb IAmb 15 49 52.8
comp=Z,47nm,0.9s
MNTX PcP **PcP** **15 53 38.1 +1.5**
MNTX Cornudas Mount 23.32 325 P 15 49 51.3
baz=139,SNR=85
PARMO Parma 23.34 0 P **P** **15 49 52.3 +1.3**
HENM Henderson Moun 23.40 1 P **P** **15 49 52.8 +1.3**
PBMO Poplar Bluff 23.46 359 IAmb IAmb 15 50 07.6
comp=Z,99nm,0.9s
U49A Red Boiling Sp 23.47 8 P **P** **15 49 52.6 +0.4**
U49A IAmb IAmb 15 50 07.3
comp=Z,90nm,0.9s
U49A PcP **PcP** **15 53 37.8 +1.0**
OK030 Cody Creek RV 23.47 346 IAmb IAmb 15 49 54.4
comp=Z,85nm,0.9s
U38A Gravette 23.49 351 IAmb IAmb 15 50 18.4
comp=Z,54nm,1.2s
OK031 S. Brethren Rd 23.51 346 P **P** **15 49 52.1 -0.5**
OK031 IAmb IAmb 15 49 54.8
comp=Z,86nm,0.7s
OK029 Liberty Lake 23.52 344 P **P** **15 49 51.4 -1.2**
W57A Gilead 23.56 20 P **P** **15 49 53.3 +0.3**
W57A IAmb IAmb 15 49 55.1
comp=Z,55nm,0.9s
W57A PcP **PcP** **15 53 37.7 +0.7**
QUOK Quay 23.69 346 IAmb IAmb 15 50 08.2
comp=Z,129nm,1.1s
MSTX Muleshoe 23.80 332 P **P** **15 49 55.3 -0.1**
MSTX IAmb IAmb 15 50 20.3
comp=Z,44nm,0.9s
MSTX Muleshoe 23.80 332 P 15 49 54.8
baz=147,SNR=9.1
V55A Taylorsville 23.81 17 IAmb IAmb 15 49 57.9
comp=Z,67nm,0.8s
MGMO Mountain Grove 23.94 355 IAmb IAmb 15 50 21.9
comp=Z,168nm,1.4s
T50A Nancy 24.11 10 P **P** **15 49 57.9 -0.2**
T50A IAmb IAmb 15 50 13.5
comp=Z,35nm,0.8s
T50A PcP **PcP** **15 53 38.9 +0.7**
AMTX Amarillo 24.11 335 IAmb IAmb 15 50 03.4
comp=Z,55nm,0.7s
AMTX Amarillo 24.11 335 P 15 49 58.5
baz=151
U54A Nelsons Funny 24.27 16 P **P** **15 49 59.9 +0.3**
U54A IAmb IAmb 15 50 02.9
comp=Z,79nm,0.8s
U54A PcP **PcP** **15 53 40.2 +1.6**
U54A Nelsons Funny 24.27 16 P 15 49 59.9
baz=199,SNR=15
T35A Sooner Cattle 24.36 347 IAmb IAmb 15 50 13.6
comp=Z,67nm,0.9s
CNNC Cliffs of the 24.41 24 P 15 50 01.2
baz=209
V58A Windy Hill, Pi 24.44 21 P **P** **15 50 01.6 +0.5**
V58A PcP **PcP** **15 53 40.1 +1.2**
U32A Winter Ranch, 24.50 342 IAmb IAmb 15 50 06.5
comp=Z,48nm,0.9s
U56A King 24.52 19 P **P** **15 50 02.9 +1.1**
U56A IAmb IAmb 15 50 16.7
comp=Z,74nm,1.1s
U56A King 24.52 19 P 15 50 02.4
baz=202,SNR=9.0
S39A Bolivar 24.57 353 IAmb IAmb 15 50 04.3
comp=Z,60nm,0.6s
FVM French Village 24.67 359 P **P** **15 50 02.7 -0.4**
FVM pmax pmax
comp=Z,63nm,1.2s
FVM French Village 24.67 359 P **P** **15 50 02.7 -0.4**
FVM IAmb IAmb 15 50 23.1
comp=Z,63nm,1.1s
OK032 Salt Plains WL 24.67 344 IAmb IAmb 15 50 05.4
comp=Z,73nm,1.0s
KAN13 South Haven SW 24.68 345 IAmb IAmb 15 50 16.6
comp=Z,106nm,1.1s
KAN14 Manchester OK 24.75 344 IAmb IAmb 15 50 17.1
comp=Z,73nm,1.1s
CCM Cathedral Cave 24.77 357 P 15 50 04.3
baz=177
CCM Cathedral Cave 24.77 357 P **P** **15 50 03.7 -0.3**
CCM PcP **PcP** **15 53 40.6 +1.1**
S51A Beattyville 24.93 12 P **P** **15 50 04.8 -0.7**
S51A IAmb IAmb 15 50 22.5
comp=Z,41nm,0.9s
KAN10 Anthony SW Sta 24.94 344 IAmb IAmb 15 50 27.0
comp=Z,75nm,1.4s
KAN08 Anthony NE Sta 25.00 344 IAmb IAmb 15 50 19.1
comp=Z,103nm,1.0s
R40A Maddies Statio 25.07 355 IAmb IAmb 15 50 28.7
comp=Z,60nm,1.2s
KAN12 Harper NE Stat 25.08 344 P **P** **15 50 06.9 0.0**
WCI Wyandotte Cave 25.10 6 P **P** **15 50 06.7 -0.3**
WCI pmax pmax
comp=Z,83nm,1.0s
WCI Wyandotte Cave 25.10 6 P **P** **15 50 06.9 -0.1**
WCI IAmb IAmb 15 50 10.7
comp=Z,84nm,0.9s
WCI PcP **PcP** **15 53 41.6 +1.3**
WCI Wyandotte Cave 25.10 6 P 15 50 06.9
baz=188
HSIG 25.18 312 IAmb IAmb 15 50 14.0
comp=Z,58nm,1.3s
T56A Rocky Mt 25.26 18 P 15 50 09.0
baz=203,SNR=5.9
R49A Shelbyville 25.30 8 P **P** **15 50 08.6 -0.3**
BLA Blacksburg 25.31 18 IAmb IAmb 15 50 23.7
comp=Z,81nm,1.2s
BLA Blacksburg 25.31 18 P 15 50 09.3
baz=202,SNR=8.0
SLM Saint Louis 25.32 359 P **P** **15 50 10.6 +1.6**
SLM pmax pmax
comp=Z,155nm,1.1s
SLM Saint Louis 25.32 359 P **P** **15 50 10.6 +1.6**
121A Cookes Peak, D 25.32 322 P 15 50 11.7
baz=135,SNR=45
121A Cookes Peak, D 25.32 322 IAmb IAmb 15 50 15.4
comp=Z,91nm,0.9s
V61A Roper 25.42 26 P **P** **15 50 10.6 +0.6**
U59A Littleton 25.42 23 IAmb IAmb 15 50 14.8
comp=Z,32nm,0.8s
T57A Hurt 25.48 20 IAmb IAmb 15 50 25.3
comp=Z,70nm,0.9s

V62A Hyde County Ai 25.50 27 P 15 50 11.7
baz=213
S54A Dingess, Beckl 25.61 16 P 15 50 11.9
baz=199
S54A Dingess, Beckl 25.61 16 P **P** **15 50 11.7 0.0**
S54A PcP **PcP** **15 53 42.4 +0.8**
T58A Grand View Acr 25.68 21 P 15 50 12.3
baz=206,SNR=7.4
U60A Pendleton 25.77 24 P 15 50 13.1
baz=209
U61A Possum Corner 25.94 25 P 15 50 14.9
baz=211
S56A Natural Bridge 26.00 19 P 15 50 15.5
baz=203,SNR=7.1
BLO Bloomington 26.01 6 P **P** **15 50 14.8 -0.5**
BLO pmax pmax
comp=Z,44nm,0.8s
BLO Bloomington 26.01 6 P **P** **15 50 14.8 -0.5**
BLO IAmb IAmb 15 50 29.3
comp=Z,44nm,0.8s
R54A Victor 26.06 16 P 15 50 15.7
baz=200
T59A Double "B" Far 26.06 23 IAmb IAmb 15 50 30.5
comp=Z,57nm,0.9s
S57A Dark Hollow, R 26.27 20 P 15 50 17.5
baz=204,SNR=6.4
S57A Dark Hollow, R 26.27 20 P **P** **15 50 18.2 +0.5**
S57A IAmb IAmb 15 50 32.1
comp=Z,40nm,1.1s
S57A PcP **PcP** **15 53 44.6 +1.6**
P40A Paris 26.28 356 IAmb IAmb 15 50 33.4
comp=Z,67nm,1.0s
P43A Skaggs, Pawnee 26.32 0 IAmb IAmb 15 50 22.5
comp=Z,56nm,0.7s
Q51A Peebles 26.32 11 IAmb IAmb 15 50 32.9
comp=Z,77nm,0.9s
ANMO Albuquerque 26.37 328 P **P** **15 50 20.7 +1.8**
comp=Z,6.7nm,0.7s,baz=151,slow=9.2,SNR=17
ANMO PcP **PcP** **15 53 45.3 +1.8**
comp=Z,12nm,1.0s,baz=145,slow=6.9,SNR=6.8
ANMO LR LR 16 03 07.6
comp=Z,609nm,18.9s,baz=138,slow=42
ANMO Albuquerque 26.37 328 *i* P **P** **15 50 19.9 +1.0**
ANMO pmax pmax
comp=Z,7.0nm,0.8s
ANMO Albuquerque 26.37 328 P **P** **15 50 19.9 +1.0**
ANMO PcP **PcP** **15 53 44.0 +0.4**
ANMO Albuquerque 26.37 328 P 15 50 19.9
baz=141
P46A Rosedale 26.39 4 P **P** **15 50 18.6 -0.1**
P46A IAmb IAmb 15 50 41.9
comp=Z,55nm,0.9s
P46A PcP **PcP** **15 53 44.0 +0.8**
R55A Marlinton 26.39 17 P **P** **15 50 19.6 +0.8**
R55A PcP **PcP** **15 53 44.5 +1.2**
R55A Marlinton 26.39 17 P 15 50 19.4
baz=202,SNR=7.6
P48A Milroy 26.41 8 IAmb IAmb 15 50 32.3
comp=Z,38nm,1.1s
S58A Poland Farm, P 26.45 21 P **P** **15 50 19.6 +0.4**
S58A IAmb IAmb 15 50 33.8
comp=Z,34nm,1.0s
S58A PcP **PcP** **15 53 44.5 +1.1**
S58A Poland Farm, P 26.45 21 P 15 50 19.2
baz=206,SNR=8.1
KSU1 Kansas State U 26.48 348 P 15 50 19.0
baz=165
KSU1 Kansas State U 26.48 348 P **P** **15 50 19.8 +0.3**
KSU1 IAmb IAmb 15 50 21.8
comp=Z,32nm,0.7s
Q52A Bidwell 26.48 13 P **P** **15 50 20.1 +0.5**
Q52A IAmb IAmb 15 50 33.8
comp=Z,47nm,1.1s
Q52A PcP **PcP** **15 53 44.5 +1.1**
P38A Dawn 26.51 353 IAmb IAmb 15 50 24.7
comp=Z,31nm,0.6s
T60A Surry 26.52 24 P 15 50 20.0
baz=209
Q53A Leroy 26.56 15 P 15 50 20.0
baz=198
P49A Miami Univ. Ec 26.59 9 P 15 50 19.6
baz=191
P49A Miami Univ. Ec 26.59 9 P **P** **15 50 20.2 -0.3**
P49A IAmb IAmb 15 50 33.9
comp=Z,54nm,1.3s
P49A PcP **PcP** **15 53 44.1 +0.4**
R56A Bull Pasture M 26.72 18 P 15 50 22.3
baz=203,SNR=6.7
R58B Mineral 26.82 21 P 15 50 22.6
baz=206,SNR=7.2
R58B Mineral 26.82 21 P **P** **15 50 23.1 +0.5**
R58B IAmb IAmb 15 50 37.4
comp=Z,34nm,1.0s
R58B PcP **PcP** **15 53 45.4 +1.1**
CZSB Cruzeiro do Su 26.85 140 *e* P **P** **15 50 24.9 +1.8**
O44A Mansfield 26.85 2 IAmb IAmb 15 50 37.0
comp=Z,76nm,0.8s
Q54A Coxs Mills 26.85 16 IAmb IAmb 15 50 38.1
comp=Z,65nm,1.2s
S59A Mechanicsville 26.85 22 P 15 50 22.8
baz=208
R57A Stanardsville 26.90 20 P 15 50 23.3
baz=205,SNR=9.9
CBKS Cedar Bluff 26.98 343 P **P** **15 50 25.1 +1.0**
CBKS 15 53 47.1
CBKS pmax pmax
comp=Z,54nm,1.1s
CBKS Cedar Bluff 26.98 343 P **P** **15 50 25.1 +1.0**
CBKS IAmb IAmb 15 50 40.8
comp=Z,54nm,1.1s
CBKS PcP **PcP** **15 53 47.1 +2.4**
CBKS Cedar Bluff 26.98 343 P 15 50 24.1
baz=158
TUC Tucson 27.04 318 P **P** **15 50 26.0 +1.2**
TUC pmax pmax
comp=Z,26nm,0.9s
TUC Tucson 27.04 318 P **P** **15 50 26.0 +1.2**
TUC Tucson 27.04 318 P 15 50 26.3
baz=130
S60A Water View 27.04 23 P 15 50 24.5
baz=209
R58A Rapidan 27.08 21 P 15 50 25.0
baz=206
SFIN Lafayette 27.15 4 P **P** **15 50 24.6 -1.0**
SFIN IAmb IAmb 15 50 49.7
comp=Z,47nm,0.9s
SFIN Lafayette 27.15 4 P 15 50 25.2
baz=186,SNR=9.2
P52A Corning 27.16 13 P 15 50 25.0
baz=196
P52A Corning 27.16 13 P **P** **15 50 26.1 +0.4**
P52A **PcP** **15 53 45.7 +0.7**
T25A Trinidad 27.18 334 P 15 50 27.5
baz=148,SNR=8.4
P53A Whipple 27.19 14 P **P** **15 50 26.7 +0.7**
P53A IAmb IAmb 15 50 41.3
comp=Z,44nm,1.1s
P53A PcP **PcP** **15 53 46.6 +1.5**
HDIL Hopedale 27.23 1 IAmb IAmb 15 50 41.1
comp=Z,87nm,1.2s
HDIL Hopedale 27.23 1 P 15 50 26.3
baz=181,SNR=5.4
R59A King George, V 27.30 22 P 15 50 27.4
baz=208
Q56A Snyder Ridge, 27.37 18 P 15 50 28.1
baz=203,SNR=7.0
N41A Harden Midland 27.40 358 P **P** **15 50 27.4 -0.4**
N41A IAmb IAmb 15 50 30.6
comp=Z,32nm,0.7s
ACSO Alum Creek Sta 27.56 11 P 15 50 29.1
baz=194,SNR=7.9
ACSO Alum Creek Sta 27.56 11 P **P** **15 50 29.4 +0.2**
ACSO IAmb IAmb 15 50 43.2
comp=Z,26nm,0.8s
ACSO PcP **PcP** **15 53 46.6 +0.7**
R60A Leonardtown, M 27.56 23 P 15 50 29.8
baz=209
Q57A Strasburg 27.61 19 P 15 50 29.8
baz=204,SNR=6.0
N38A Joes South For 27.63 354 IAmb IAmb 15 50 33.5
comp=Z,44nm,0.6s
O52A Adamsville 27.68 13 IAmb IAmb 15 50 44.3
comp=Z,27nm,0.9s
MCWV Mont Chateau 27.75 17 P 15 50 31.0
baz=201
Q58A Fox Den Farm, 27.77 21 P 15 50 31.8
baz=206,SNR=6.2
N47A Urbana 27.78 7 P **P** **15 50 30.8 -0.4**
N47A IAmb IAmb 15 50 33.8
comp=Z,26nm,0.8s
N47A **PcP** **15 53 46.9 +0.4**
P56A Dayton Farm, R 27.90 18 P 15 50 32.5
baz=203,SNR=8.3
O53A New Philadelph 27.95 14 P 15 50 32.6
baz=198
O53A New Philadelph 27.95 14 P **P** **15 50 32.1 -0.7**
O53A IAmb IAmb 15 50 47.5
comp=Z,46nm,1.4s
N49A Columbus Grove 28.02 9 P **P** **15 50 33.9 +0.6**
N49A PcP **PcP** **15 53 47.9 +0.8**
Q59A Harwood 28.06 22 P 15 50 34.0
baz=208
KSCO Kaye Shedlock' 28.09 338 IAmb IAmb 15 50 38.1
comp=Z,36nm,0.9s
KSCO Kaye Shedlock' 28.09 338 P 15 50 34.5
baz=153
M44A Midewin, Midew 28.10 3 IAmb IAmb 15 50 47.7
comp=Z,63nm,1.1s
NNA Nana 28.14 152 PcP **PcP** **15 53 49.1 +1.2**
comp=Z,9.3nm,0.5s,baz=327,slow=2.1,SNR=5.6
NNA LR LR 16 00 01.0
comp=Z,601nm,20.7s,baz=297,slow=33
P57A Homestead Farm 28.14 20 P 15 50 35.0
baz=205,SNR=17
P57A Homestead Farm 28.14 20 IAmb IAmb 15 50 36.7
comp=Z,46nm,0.8s
214A Organ Pipe Nat 28.18 315 P **P** **15 50 36.0 +1.1**
214A IAmb IAmb 15 50 38.4
comp=Z,35nm,0.9s
214A PcP **PcP** **15 53 49.9 +2.2**
214A Organ Pipe Nat 28.18 315 P 15 50 36.8
baz=126,SNR=18
W18A Petrified Fore 28.30 324 P 15 50 37.7
baz=136,SNR=5.5
W18A Petrified Fore 28.30 324 IAmb IAmb 15 50 39.5
comp=Z,35nm,1.2s
L42A Oliver, Polo 28.68 0 IAmb IAmb 15 50 40.5
comp=Z,35nm,0.6s
M50A Fremont 28.68 11 P **P** **15 50 39.1 -0.1**
O56A Blue Knob Stat 28.68 18 P 15 50 39.3
baz=203,SNR=6.9
O56A Blue Knob Stat 28.69 18 P **P** **15 50 39.0 -0.3**
O56A IAmb IAmb 15 50 40.5
comp=Z,23nm,0.8s
SCIA State Center 28.73 355 IAmb IAmb 15 50 42.2
comp=Z,30nm,0.6s
SCIA State Center 28.73 355 P 15 50 39.0
baz=173
S22A 4UR Ranch, Cre 28.77 331 P 15 50 41.6
baz=144,SNR=6.8
M51A Elyria 28.78 12 P 15 50 39.2
baz=195
L46A Eue Claire 28.84 5 IAmb IAmb 15 50 42.1
comp=Z,44nm,0.7s
L44A Lake County Fo 28.89 3 P 15 50 40.4
baz=184
O57A Amberson 28.92 19 P 15 50 41.0
baz=205,SNR=5.5
N54A Moraine State 28.93 15 IAmb IAmb 15 50 42.3
comp=Z,26nm,0.8s
N54A Moraine State 28.93 15 P 15 50 41.0
baz=200,SNR=6.9
L48A N Adams 28.99 8 P **P** **15 50 41.3 -0.7**
L48A IAmb IAmb 15 50 44.8
comp=Z,38nm,0.7s
L48A PcP **PcP** **15 53 50.1 +0.6**
BGNE Belgrade 29.02 347 P 15 50 41.9
baz=163
BGNE Belgrade 29.02 347 IAmb IAmb 15 50 45.1
comp=Z,27nm,0.6s
Q24A Divide 29.03 335 P 15 50 43.4
baz=148
O58A Lewisberry 29.08 21 P 15 50 43.0
baz=206
MVCO Mesa Verde 29.17 328 P 15 50 44.8
baz=140,SNR=5.5
MVCO Mesa Verde 29.17 328 P **P** **15 50 45.6 +1.7**
L34A Svendsen Farm, 29.21 350 P **P** **15 50 43.5 -0.4**
L34A PcP **PcP** **15 53 51.0 +0.9**
M53A WI Miller and 29.21 14 P 15 50 43.5
baz=198
SSPA Standing Stone 29.23 19 P **P** **15 50 43.9 -0.2**
SSPA PcP **PcP** **15 53 50.5 +0.4**
SSPA Standing Stone 29.23 19 P 15 50 43.7
baz=204
PAGS Pennsylvania G 29.25 21 IAmb IAmb 15 50 45.3
comp=Z,28nm,1.0s
P60A Greenville 29.27 23 P 15 50 44.4
baz=209
N56A West Decatur 29.36 18 P 15 50 45.2
baz=203,SNR=16
K43A Burlington 29.40 2 P **P** **15 50 45.5 -0.1**
K43A IAmb IAmb 15 50 59.3
comp=Z,63nm,1.0s
K38A Parkersburg 29.43 355 IAmb IAmb 15 50 48.3
comp=Z,50nm,0.8s
N57A Milroy 29.45 19 P 15 50 46.0
baz=205
AAM Ann Arbor 29.45 9 IAmb IAmb 15 51 17.1
comp=Z,30nm,0.9s
O59A Robesonia 29.51 21 P 15 50 47.0
baz=208
M54A Oil Creek Stat 29.53 16 P 15 50 46.2
baz=200
WUAZ Wupatki 29.53 322 P **P** **15 50 48.9 +1.9**
WUAZ IAmb IAmb 15 50 50.9
comp=Z,38nm,0.9s
WUAZ Wupatki 29.53 322 P 15 50 48.9
baz=134,SNR=15
JFWS Jewell Farm 29.59 359 P **P** **15 50 47.4 +0.1**
JFWS pmax pmax
comp=Z,48nm,1.2s
JFWS Jewell Farm 29.59 359 P **P** **15 50 47.4 +0.1**
JFWS IAmb IAmb 15 51 15.8
comp=Z,48nm,1.1s
JFWS Jewell Farm 29.59 359 P 15 50 46.6
baz=179,SNR=7.4
OGNE Ogallala 29.63 341 P **P** **15 50 48.5 +0.7**
OGNE **PcP** **15 53 53.8 +2.5**
OGNE Ogallala 29.63 341 P 15 50 48.2
baz=155
N58A Sunbury 29.79 20 P 15 50 48.8
baz=206
O60A Telford 29.80 22 P 15 50 49.1
baz=205
L53A Girard 29.80 14 P 15 50 48.8
baz=199
M56A Emporium 29.92 18 P 15 50 50.0
baz=203,SNR=19
ISCO Idaho Springs 29.93 335 P 15 50 50.6
baz=148
ISCO Idaho Springs 29.93 335 P **P** **15 50 50.5 -0.2**
ISCO pmax pmax
comp=Z,6.0nm,0.9s
ISCO Idaho Springs 29.93 335 P **P** **15 50 50.5 -0.2**
ERPA Erie 30.02 15 P 15 50 50.7
baz=199
ERPA Erie 30.02 15 P **P** **15 50 50.3 -0.8**
ERPA IAmb IAmb 15 50 51.6
comp=Z,20nm,0.7s
LUPA Lehigh Univers 30.05 22 P **P** **15 50 51.5 +0.1**
LUPA IAmb IAmb 15 50 52.7
comp=Z,30nm,0.8s
M57A Sunshine Farm, 30.11 19 IAmb IAmb 15 50 53.4
comp=Z,32nm,0.8s
M57A Sunshine Farm, 30.11 19 P 15 50 51.9
baz=205,SNR=7.8
PV03 Paradox Valley 30.15 329 IAmb IAmb 15 50 56.3
comp=Z,17nm,0.8s
PV18 Skein Mesa, Pa 30.17 329 P **P** **15 50 54.4 +1.6**
PV18 IAmb IAmb 15 50 58.2
comp=Z,24nm,0.7s
N59A State Game Lan 30.19 21 IAmb IAmb 15 50 54.0
comp=Z,31nm,0.8s
N59A State Game Lan 30.19 21 P 15 50 52.3
baz=208,SNR=7.3
PV11 David Mesa, Pa 30.20 329 IAmb IAmb 15 50 58.4
comp=Z,34nm,0.7s
GLA Glamis 30.20 315 P **P** **15 50 54.9 +2.1**
GLA pmax pmax
comp=Z,40nm,0.8s
GLA Glamis 30.20 315 P **P** **15 50 54.9 +2.1**
GLA IAmb IAmb 15 50 57.2

comp=Z,40nm,0.8s
GLA Glamis 30.20 315 P 15 50 55.0
baz=125,SNR=14
J47A Sunmer 30.21 7 IAmb IAmb 15 51 08.0
comp=Z,20nm,0.8s
K31A O'Neill 30.31 347 P P 15 50 54.4 +0.7
N60A Cedar Hill Far 30.39 22 P 15 50 54.6
baz=209
ESJX Sierra Juarez 30.41 312 IAmb IAmb 15 50 59.4
comp=Z,26nm,1.1s
PDMCI Parker Dam,Lak 30.48 318 P 15 50 56.9
baz=128,SNR=31
I42A Draeger Farm, 30.57 1 P P 15 50 55.6 -0.3
I42A IAmb IAmb 15 50 57.4
comp=Z,48nm,0.8s
N61A South Mountain 30.59 23 P 15 50 56.3
baz=211
WVNY West Valley, N 30.65 16 IAmb IAmb 15 50 57.5
comp=Z,29nm,0.8s
L56A Greenwood 30.70 18 P 15 50 56.3
baz=204,SNR=7.0
L56A Greenwood 30.70 18 P P 15 50 56.5 -0.7
L56A IAmb IAmb 15 50 57.8
comp=Z,31nm,0.8s
L56A PcP PcP 15 53 55.4 +1.5
KSPA Keystone Colle 30.76 21 IAmb IAmb 15 50 58.0
comp=Z,22nm,1.0s
L57A Andrews Acres 30.80 19 P 15 50 57.6
baz=205,SNR=8.1
SWSC Sam W. Stewart 30.82 314 P 15 51 00.3
baz=124,SNR=10.0
M59A Waymart 30.86 21 P 15 50 58.5
baz=208,SNR=8.8
BOAV Boa Vista 30.87 108 eP P 15 50 59.9 +1.0
IKP In-Ko-Pah, Jac 30.87 313 P 15 51 00.2
baz=123,SNR=16
PAL Palisades 30.96 24 P 15 50 59.1
baz=211
M60A Port Jervis 30.96 22 P 15 50 59.6
baz=210
ECSD EROS Data Cent 30.97 350 P 15 50 58.6
baz=167,SNR=43
ECSD EROS Data Cent 30.97 350 P P 15 50 58.4 -1.0
ECSD IAmb IAmb 15 51 00.8
comp=Z,59nm,1.1s
ECSD PcP PcP 15 53 54.9 +0.3
BC3 Big Chuckawall 30.97 315 P 15 51 01.8
baz=125,SNR=48
N23A Red Feather La 30.99 336 P 15 51 00.2
baz=148
IRM Iron Mountain 31.05 316 P 15 51 02.4
baz=126,SNR=20
NEE2 Needles Airpor 31.07 318 P 15 51 02.2
baz=128
PHWY Pilot Hill 31.15 337 P P 15 51 02.0 +0.6
PHWY PcP PcP 15 53 57.4 +1.9
L58A Harry Jones Me 31.16 20 P 15 51 00.8
baz=207,SNR=7.9
TKX Tecate 31.19 313 P P 15 51 02.9 +1.4
TKX IAmb IAmb 15 51 05.9
comp=Z,65nm,1.2s
H43A Windswept, Lux 31.19 3 IAmb IAmb 15 51 01.9
comp=Z,51nm,0.8s
MONP2 Monument Peak 31.23 313 P 15 51 04.2
baz=123,SNR=13
BINY Binghamton 31.25 20 IAmb IAmb 15 51 03.3
comp=Z,37nm,0.8s
BINY Binghamton 31.25 20 P 15 51 01.9
baz=206,SNR=6.9
M61A Granite Spring 31.28 24 P 15 51 01.8
baz=211,SNR=6.6
K56A Middlesex 31.28 18 P 15 51 01.9
baz=204,SNR=8.6
WSPT Westport, CT 31.33 24 IAmb IAmb 15 51 03.2
comp=Z,34nm,0.7s
O20A White River Ci 31.34 332 P P 15 51 04.0 +1.0
O20A IAmb IAmb 15 51 06.9
comp=Z,28nm,0.9s
O20A PcP PcP 15 53 56.9 +0.9
O20A White River Ci 31.34 332 P 15 51 04.4
baz=144,SNR=13
I51A Listowel 31.39 12 P 15 51 01.5
baz=196,SNR=6.6
PKCU Pink Cliffs 31.41 324 IAmb IAmb 15 51 08.2
comp=Z,26nm,0.9s
KNB Kanab 31.41 323 P P 15 51 06.1 +2.5
KNB pmax pmax
comp=Z,27nm,0.8s
KNB Kanab 31.41 323 P P 15 51 06.0 +2.5
KNB IAmb IAmb 15 51 07.2
comp=Z,27nm,0.8s
BELC Belle Mtn. Jos 31.54 315 P 15 51 05.1
baz=125,SNR=6.2
L59A Walton 31.57 21 P 15 51 04.5
baz=208,SNR=5.6
L59A Walton 31.57 21 IAmb IAmb 15 51 05.8
comp=Z,24nm,0.8s
TPFO Pinon Flats 31.64 314 P 15 51 07.7
baz=124
PFO Pinyon Flats O 31.64 314 P P 15 51 07.9 +2.3
comp=Z,20nm,0.9s,baz=108,slow=6.2,SNR=7.7
PFO PcP PcP 15 53 58.4 +1.7
comp=Z,6.6nm,0.9s,baz=277,slow=1.9,SNR=3.7
PFO LR LR 16 05 06.0
comp=Z,1µm,19.7s,baz=123,slow=38
PFO Pinyon Flats O 31.64 314 ceP P 15 51 06.8 +1.1
PFO pmax pmax
comp=Z,31nm,0.9s
PFO Pinyon Flats O 31.64 314 P P 15 51 07.5 +1.8
PFO IAmb IAmb 15 51 09.5
comp=Z,24nm,0.9s
PFO Pinyon Flats O 31.64 314 P 15 51 07.7
baz=124,SNR=14
SRU San Rafael Swe 31.65 328 P P 15 51 06.8 +1.1
SRU PcP PcP 15 53 58.0 +1.2
LCMT Little Creek M 31.65 323 P P 15 51 07.6 +1.9
LCMT IAmb IAmb 15 51 09.5
comp=Z,23nm,1.0s
L60A Shokan 31.69 22 P 15 51 05.5
baz=210
109C Camp Elliot, M 31.71 313 P 15 51 08.1
baz=122
109C Camp Elliot, M 31.71 313 IAmb IAmb 15 51 09.8
comp=Z,39nm,1.0s
MTPU Mount Pierson 31.76 325 P P 15 51 08.6 +1.7
MTPU IAmb IAmb 15 51 11.4
comp=Z,24nm,0.8s
MTPU PcP PcP 15 53 58.2 +0.9
GMRC Granite Mounta 31.77 317 P 15 51 08.8
baz=126,SNR=35
K58A Earlville 31.87 20 P 15 51 07.1
baz=207,SNR=16
G40A Rib Lake 31.94 359 P P 15 51 08.1 +0.1
G40A IAmb IAmb 15 51 22.7
comp=Z,31nm,1.1s
J56A Wolcott 31.95 18 P 15 51 07.5
baz=204,SNR=12
SZCU Shurtz Canyon 31.96 324 P P 15 51 10.6 +2.1
SZCU IAmb IAmb 15 51 12.0
comp=Z,20nm,0.9s
SZCU PcP PcP 15 53 59.1 +1.4
SPMN Marine on St. 32.00 356 P 15 51 07.8
baz=174,SNR=17
M63A Gales Ferry 32.05 26 P 15 51 09.1
baz=214
CCUT Cedar City 32.09 323 IAmb IAmb 15 51 14.6
comp=Z,25nm,1.0s
SUSD Miller 32.09 348 P P 15 51 08.8 -0.6
SUSD PcP PcP 15 53 58.5 +0.9
SUSD Miller 32.09 348 P 15 51 09.1
baz=163,SNR=17
L61A Hillsdale 1, H 32.12 23 P 15 51 09.1
baz=211
TMUT Trail Mountain 32.14 328 P P 15 51 11.8 +1.7
K59A Cooperstown 32.15 21 P 15 51 09.6
baz=208
MURC Murrieta 32.15 314 P 15 51 12.3
baz=123,SNR=5.7
RWWY Rawlins 32.17 335 P P 15 51 10.1 -0.3
RWWY IAmb IAmb 15 51 13.1
comp=Z,23nm,0.9s
RWWY PcP PcP 15 53 58.0 -0.2
HEC Hector,Ludlow 32.24 316 P 15 51 12.7
baz=126,SNR=10.0
UCCT U. Connecticut 32.30 25 P P 15 51 10.9 -0.3
BBRC Big Bear Solar 32.32 315 P 15 51 14.3
baz=124,SNR=6.2
TUQ Turquoise Moun 32.33 318 P 15 51 13.5
baz=127,SNR=34
J57A Williamstown 32.34 19 P 15 51 10.7
baz=206,SNR=16
SHPR Sheep Range 32.49 320 IAmb IAmb 15 51 16.9
comp=Z,26nm,1.0s
SHPR PcP 15 54 00.5 +1.4
M64A Tiverton 32.53 26 P 15 51 13.4
baz=215
TRY Troy 32.54 22 IAmb IAmb 15 51 14.3
comp=Z,28nm,0.8s
L63A North Scituate 32.62 26 P 15 51 13.6
baz=214
K61A Williamstown 32.63 23 P 15 51 14.4
baz=211
PTGA Pitinga 32.64 113 P P 15 51 15.1 +0.6
PTGA PcP 15 54 00.7 +1.0
PTGA Pitinga 32.64 113 eP P 15 51 13.5 -0.9
L61B Northampton 32.67 24 P 15 51 14.4
baz=212
H53A Bobcaygeon 32.68 15 P 15 51 13.8
baz=200,SNR=12
F36A Milaca 32.69 355 P P 15 51 13.6 -0.9
K22A Casper 32.71 337 P 15 51 15.6
baz=149,SNR=5.6
K22A Casper 32.71 337 IAmb IAmb 15 51 18.4
comp=Z,23nm,1.2s
RRX Edison Barstow 32.72 316 P 15 51 16.6
baz=125
SADO Sadowa 32.72 14 P P 15 51 13.6 -1.2
comp=Z,21nm,0.6s,baz=223,slow=8.9,SNR=22
SADO PcP PcP 15 53 59.0 -0.3
comp=Z,6.9nm,0.8s,baz=183,slow=4.3,SNR=4.6
SADO LR LR 16 05 13.0
comp=Z,1µm,19.8s,baz=213,slow=38
SADO Sadowa 32.72 14 IAmb IAmb 15 51 15.0
comp=Z,24nm,0.7s
ETMB Extrema 32.73 133 eP P 15 51 15.6 +0.5
COWI Conover 32.77 1 P P 15 51 14.2 -1.1
BFSC Mount Baldy Ra 32.82 314 P 15 51 18.0
baz=123,SNR=17
SHOC Shoshone, Teco 32.83 318 P 15 51 17.8
baz=127
J59A Piesco 32.88 21 IAmb IAmb 15 51 36.0
comp=Z,27nm,1.2s
J59A Piesco 32.88 21 P 15 51 15.8
baz=208
MPU Maple Canyon 32.89 328 P P 15 51 18.0 +1.4
MPU PcP 15 54 01.1 +0.9
CIS Catalina Islan 32.91 312 P 15 51 18.0
baz=121
I57A Carthage 32.92 19 P 15 51 16.1
baz=206
I58A Old Forge 32.92 20 P 15 51 16.1
baz=207,SNR=12
F33A 5 Mile Ranch, 32.98 352 P P 15 51 15.9 -1.1
F33A IAmb IAmb 15 51 17.0
comp=Z,40nm,0.8s
PRN Pahroc Range 33.00 321 IAmb IAmb 15 51 30.9
comp=Z,19nm,1.1s
PRN PcP 15 54 01.9 +1.5
J60A Lant Hill Farm 33.07 22 P 15 51 17.7
baz=210
NLU North Lily Min 33.08 328 P P 15 51 19.3 +1.1
NLU PcP PcP 15 54 01.7 +1.0
MWC Mount Wilson 33.09 314 P P 15 51 20.2 +1.8
MWC pmax pmax
comp=Z,42nm,0.9s
MWC Mount Wilson 33.09 314 P P 15 51 20.2 +1.8
MWC IAmb IAmb 15 51 21.8
comp=Z,42nm,0.9s
RSSD Black Hills 33.13 341 P P 15 51 19.6 +0.9
RSSD 15 54 01.2
RSSD pmax pmax
comp=Z,13nm,0.9s
RSSD Black Hills 33.13 341 P P 15 51 19.6 +0.9
RSSD PcP 15 54 01.2 +0.4
RSSD Black Hills 33.13 341 P 15 51 19.4
baz=154
MACA Manacapuru-AM 33.15 117 eP P 15 51 19.4 +0.5
PASC Pasadena Art C 33.15 314 IAmb IAmb 15 51 22.1
comp=Z,47nm,1.1s
HRV Adam Dziewonsk 33.17 25 P 15 51 18.9
baz=214
DECC Green Verdugo 33.30 314 P 15 51 22.1
baz=122,SNR=5.6
E38A The Farm, Brul 33.31 358 P P 15 51 18.7 -1.2
E38A IAmb IAmb 15 51 20.3
comp=Z,36nm,0.9s
K63A Dunstable 33.34 25 P 15 51 20.1
baz=214
I59A Olmsteadville 33.39 21 P 15 51 20.3
baz=209,SNR=5.6
EDW2 Edwards Air Fo 33.40 315 P 15 51 22.7
baz=123,SNR=18
TPNV Topopah Spring 33.45 320 P P 15 51 24.2 +2.7
TPNV 15 54 03.7
TPNV pmax pmax
comp=Z,37nm,0.8s
TPNV Topopah Spring 33.45 320 P P 15 51 24.2 +2.7
TPNV IAmb IAmb 15 51 25.3
comp=Z,37nm,0.8s
TPNV PcP PcP 15 54 03.7 +2.0
TPNV Topopah Spring 33.45 320 P 15 51 24.3
baz=128,SNR=38
H57A Richville 33.48 19 P 15 51 21.0
baz=206
J61A Chester 33.48 23 P 15 51 22.0
baz=211
PLVO Plevna 33.51 16 P P 15 51 20.9 -0.7
PLVO IAmb IAmb 15 51 47.2
comp=Z,26nm,1.0s
LRMC Laurel Mtn Rad 33.52 316 P 15 51 24.1
baz=124,SNR=20
FURC Furnace Creek, 33.55 318 P 15 51 23.5
baz=127,SNR=16
G54A Lake Saint Pet 33.57 15 P 15 51 21.5
baz=201,SNR=12
TCUT Toone Canyon 33.61 330 IAmb IAmb 15 51 43.0
comp=Z,20nm,0.9s
SPR3 Spring Creek 3 33.63 324 P P 15 51 24.6 +1.4
SPR3 IAmb IAmb 15 51 27.6
comp=Z,20nm,0.9s
SPR3 PcP PcP 15 54 03.5 +1.1
I60A Shoreham 33.64 22 P 15 51 22.6
baz=210
DUG Dugway, Tooele 33.64 327 P 15 51 24.4
baz=137
DUG Dugway, Tooele 33.64 327 P P 15 51 25.6 +2.5
DUG 15 54 03.2
DUG pmax pmax
comp=Z,9.0nm,1.0s
DUG Dugway, Tooele 33.64 327 P P 15 51 25.6 +2.5
DUG PcP 15 54 03.2 +1.0
SNCC San Nicolas Is 33.64 311 P 15 51 23.8
baz=119
J62A Henniker 33.67 24 P 15 51 23.4
baz=213
D41A Chassel 33.75 1 IAmb IAmb 15 51 37.4
comp=Z,33nm,0.9s
OSI Osito Audit: C 33.76 314 P P 15 51 26.2 +2.1
OSI Osito Audit: C 33.76 314 P 15 51 25.8
baz=122
H58A Gabriels 33.83 20 P 15 51 23.6
baz=208,SNR=11
LONY Lake Ozonia 33.88 20 IAmb IAmb 15 51 39.4
comp=Z,40nm,1.0s
LONY Lake Ozonia 33.88 20 P 15 51 24.1
baz=207,SNR=8.9
R11A Troy Canyon, C 33.93 322 P P 15 51 28.0 +2.3
R11A IAmb IAmb 15 51 29.2
comp=Z,22nm,0.9s
R11A PcP PcP 15 54 04.0 +0.9
R11A Troy Canyon, C 33.93 322 P 15 51 27.8
baz=131,SNR=64
BW06 Boulder Array 34.05 334 P 15 51 26.7
baz=144,SNR=8.5
PDAR Pinedale Array 34.05 334 P P 15 51 27.6 +1.0
comp=Z,5.7nm,1.0s,baz=130,slow=9.4,SNR=27
PDAR PcP PcP 15 54 04.0 +0.6
comp=Z,10.0nm,0.7s,baz=138,slow=4.7,SNR=18
PDAR ScP ScP 15 57 49.2 +5.5
comp=Z,1.6nm,0.8s,baz=146,slow=4.9,SNR=6.3
PDAR PKiKP PKiKP 16 01 28.2 +0.7
comp=Z,1.1nm,0.6s,baz=124,slow=2.2,SNR=12
PDAR LR LR 16 09 36.8
comp=Z,299nm,18.2s,baz=148,slow=44
PDAR Pinedale Array 34.05 334 P P 15 51 26.9 +0.2
PDAR PcP PcP 15 54 03.9 +0.4
HWUT Hardware Ranch 34.06 330 P P 15 51 27.8 +1.0
HWUT PcP 15 54 04.7 +1.2
ALGO Algonquin Park 34.10 15 P 15 51 25.8
baz=201,SNR=15
ARVC Arvin 34.11 315 P 15 51 29.7
baz=123,SNR=18
ISA Isabella, Lake 34.16 316 IAmb IAmb 15 51 31.1
comp=Z,34nm,0.9s
ISA PcP PcP 15 54 05.3 +1.6
ISA Isabella, Lake 34.16 316 P 15 51 29.9
baz=124,SNR=27
G57A Newington 34.18 19 P 15 51 26.7
baz=206,SNR=5.2
H59A Cadyville 34.20 21 P 15 51 26.8
baz=209
BGU Big Grassy Mou 34.28 328 P P 15 51 30.1 +1.4
BGU PcP PcP 15 54 04.9 +0.8
CWC Cottonwood Cre 34.33 317 P 15 51 31.2
baz=125
SAML Samuel 34.39 128 P P 15 51 29.2 -0.4
SAML pmax pmax
comp=Z,71nm,0.8s
SAML Samuel 34.39 128 P P 15 51 29.0 -0.6
SAML PcP PcP 15 54 04.9 +0.4
SAML Samuel 34.39 128 eP P 15 51 29.3 -0.3
FRNY Flat Rock 34.40 21 P P 15 51 28.4 -1.0
FRNY IAmb IAmb 15 51 29.8
comp=Z,15nm,0.8s
I62A Tamworth 34.40 24 P 15 51 29.3
baz=213
I62A Tamworth 34.40 24 IAmb IAmb 15 51 30.4
comp=Z,29nm,0.9s
H60A Morristown 34.47 22 P 15 51 29.5
baz=210
G58A Ormstown 34.52 20 P 15 51 29.3
baz=208
EYMN Ely 34.65 358 IAmb IAmb 15 51 33.2
comp=Z,14nm,0.8s
EYMN Ely 34.65 358 P 15 51 30.4
baz=177,SNR=5.4
VES Vestal, Richgr 34.67 316 P 15 51 33.9
baz=123,SNR=27
PKM Mcpherson Peak 34.67 314 P 15 51 34.4
baz=121,SNR=20
H61A Lyndonville 34.73 23 P 15 51 32.1
baz=212
AHID Auburn Hatcher 34.74 332 P P 15 51 33.9 +1.3
AHID IAmb IAmb 15 51 39.8
comp=Z,16nm,0.8s
AHID PcP PcP 15 54 06.6 +1.3
TPH Tonopah 34.76 320 P P 15 51 34.6 +1.8
TPH PcP PcP 15 54 07.0 +1.6
HVU Hansel Valley 34.78 329 IAmb IAmb 15 51 37.9
comp=Z,23nm,1.0s
TIN Tinemaha, Big 34.78 318 P 15 51 35.3
baz=126
I63A Otisfield 34.85 25 P 15 51 33.8
baz=214
SMMC Simmler 35.02 314 P 15 51 37.6
baz=122,SNR=13
E55A Montcerf-Lytto 35.09 17 P 15 51 34.9
baz=204
ECR Eagle Creek 35.09 332 P P 15 51 36.1 +0.5
ECR PcP PcP 15 54 08.3 +1.9
REDW Red Top Meadow 35.09 333 P P 15 51 36.6 +0.9
LOHW Long Hollow 35.18 333 P P 15 51 37.2 +0.8
LOHW IAmb IAmb 15 51 39.3
comp=Z,14nm,0.8s
LOHW PcP PcP 15 54 07.5 +0.8
B35A Bob, Littlefor 35.19 355 IAmb IAmb 15 51 37.3
comp=Z,20nm,1.0s
AGMN Agassiz Nation 35.33 353 P 15 51 36.8
baz=170,SNR=61
AGMN Agassiz Nation 35.34 353 P P 15 51 36.7 -0.7
ELK Elko 35.34 326 P P 15 51 39.6 +1.8
comp=Z,4.2nm,0.6s,baz=148,slow=7.3,SNR=14
ELK PcP PcP 15 54 08.7 +1.5
comp=Z,17nm,0.9s,baz=208,slow=0.8,SNR=15
ELK ScP ScP 15 57 54.7 +6.3
comp=Z,0.5nm,0.3s,baz=116,slow=9.0,SNR=5.6
ELK Elko 35.34 326 P 15 51 39.5 +1.6
ELK PcP PcP 15 54 07.6 +0.4
PAGB Antelope Grade 35.41 315 P P 15 51 40.7 +2.4
PAGB PcP PcP 15 54 09.2 +2.0
E56A St. Veronique 35.46 18 P 15 51 38.1
baz=205,SNR=9.9
MDND Maddock 35.48 349 P 15 51 38.8
baz=163,SNR=77
NV11 Mina Array Sit 35.55 320 P P 15 51 41.7 +2.1
NV11 PcP PcP 15 54 09.1 +1.3
F59A Saint Guilaume 35.56 21 P 15 51 38.5
baz=209
FLWY Flagg Ranch 35.60 334 P P 15 51 40.6 +0.6
FLWY PcP PcP 15 54 09.4 +1.5
NVAR Mina Array Bea 35.65 320 P P 15 51 43.3 +2.8
comp=Z,122nm,0.8s,baz=135,slow=8.2,SNR=637
NVAR PcP PcP 15 54 10.2 +2.1
comp=Z,32nm,0.9s,baz=136,slow=3.7,SNR=16
NVAR ScP ScP 15 57 55.2 +5.7
comp=Z,1.8nm,0.7s,baz=118,slow=4.3,SNR=6.5
NVAR PKiKP PKiKP 16 01 31.3 +2.5
comp=Z,0.5nm,0.6s,baz=210,slow=3.3,SNR=4.5
NVAR LR LR 16 07 52.4
comp=Z,1µm,20.5s,baz=138,slow=39
NVAR Mina Array Bea 35.65 320 P P 15 51 42.7 +2.2
NVAR PcP 15 54 09.6 +1.5
LHV Little Huntoon 35.66 320 P P 15 51 43.4 +3.0
LHV PcP PcP 15 54 10.0 +2.2
H17A Grant Village 35.80 334 P 15 51 43.6
baz=144,SNR=5.8
G62A West of Eustis 35.84 23 P 15 51 41.2
baz=213
G62A West of Eustis 35.84 23 IAmb IAmb 15 51 43.0
comp=Z,17nm,0.8s
E58A La Victoria 35.85 20 P 15 51 41.2
baz=208,SNR=6.3
RLMT Red Lodge 35.86 336 P 15 51 42.3
baz=146,SNR=18
RLMT Red Lodge 35.86 336 P P 15 51 41.6 -0.7
RLMT IAmb IAmb 15 51 45.2
comp=Z,18nm,1.0s
LKWY Lake 35.86 335 P P 15 51 43.8 +1.5
LKWY pmax pmax
comp=Z,8.0nm,0.7s
LKWY Lake 35.86 335 P P 15 51 43.8 +1.5
KVN Kaiserville 35.90 321 P P 15 51 44.8 +2.2
KVN 15 54 10.0
KVN pmax pmax
comp=Z,76nm,1.0s
KVN Kaiserville 35.90 321 P P 15 51 44.8 +2.2
KVN PcP PcP 15 54 10.0 +1.2
RYN Ryan 35.90 320 P P 15 51 44.8 +2.2
RYN PcP PcP 15 54 10.8 +2.0
F60A Warwick 35.95 21 P 15 51 42.2
baz=210
D56A ZEC Mazanza, M 36.00 18 P 15 51 42.2
baz=205,SNR=5.5
YNE Yellowstone No 36.06 335 IAmb IAmb 15 51 47.0
comp=Z,20nm,1.1s
YNR Norris Junctio 36.10 334 P P 15 51 46.0 +1.6
G63A Kingsbury 36.12 24 P 15 51 43.7
baz=215
LAO LASA Array 36.12 341 IAmb IAmb 15 51 47.2
comp=Z,16nm,0.8s
LAO LASA Array 36.12 341 P 15 51 43.6
baz=152
YMR Madison River 36.19 334 P P 15 51 46.4 +1.3
YMR PcP PcP 15 54 11.8 +2.2
YHH Holmes Hill 36.23 334 P P 15 51 46.5 +1.0
YHH PcP PcP 15 54 11.4 +1.6
LPAZ La Paz 36.30 143 P P 15 51 47.1 +0.4
comp=Z,7.3nm,0.7s,baz=330,slow=8.0,SNR=26
LPAZ LR LR 16 06 54.5
comp=Z,1µm,20.6s,baz=320,slow=37
LPAZ La Paz 36.30 143 P P 15 51 46.8 +0.1
LPAZ La Paz 36.30 143 eP P 15 51 46.8 +0.1
H65A Eastbrook 36.35 26 P 15 51 46.1
baz=217
PKME Peaks-Kenny Pk 36.37 25 P 15 51 45.9
baz=215
WAKR Walker 36.41 319 P P 15 51 49.8 +2.8
WAKR IAmb IAmb 15 51 50.8
comp=Z,38nm,0.8s

E60A Ste Agathe de 36.48 21 P 15 51 46.2
baz=211
GCMT Greycliff 36.57 336 P **P** **15 51 48.5 +0.2**
GCMT PcP **PcP** **15 54 11.8 +1.1**
G64A Maxfield 36.58 25 P 15 51 47.3
baz=216
D58A Chemin du LacG 36.62 19 P 15 51 47.8
baz=208,SNR=7.8
CMB Columbia Colle 36.75 318 P **P** **15 51 51.4 +1.6**
CMB 15 54 12.6
CMB pmax pmax
comp=Z,39nm,1.0s
CMB Columbia Colle 36.75 318 P **P** **15 51 51.4 +1.6**
CMB IAmb IAmb 15 51 53.0
comp=Z,39nm,0.9s
CMB PcP **PcP** **15 54 12.6 +1.4**
SAO San Andreas Ge 36.78 315 IAmb IAmb 15 51 56.3
comp=Z,36nm,0.9s
H66A Whiting 36.83 27 P 15 51 50.0
baz=216
E61A Lac Etchemin 36.88 22 P 15 51 50.9
baz=212
LATQ La Tuque 36.91 19 P **P** **15 51 49.9 -0.9**
LATQ La Tuque 36.91 19 P 15 51 51.0
baz=208,SNR=9.2
HLID Hailey 36.92 330 P **P** **15 51 51.9 +0.7**
HLID PcP **PcP** **15 54 13.6 +1.8**
HLID Hailey 36.92 330 P 15 51 52.0
baz=138
VCNR Virginia City 37.01 320 IAmb IAmb 15 51 55.5
comp=Z,25nm,0.8s
G65A Princeton 37.05 26 IAmb IAmb 15 51 53.1
comp=Z,53nm,1.2s
G65A Princeton 37.05 26 P 15 51 52.3
baz=218
PAHR Pah Rah Range 37.09 321 IAmb IAmb 15 51 56.4
comp=Z,31nm,0.8s
DGMT Dagmar 37.13 344 P **P** **15 51 52.8 +0.1**
DGMT PcP **PcP** **15 54 12.9 +0.8**
DGMT Dagmar 37.13 344 P 15 51 53.1
baz=156,SNR=38
D60A Saint Jean D'O 37.13 22 P 15 51 51.4
baz=211,SNR=6.4
PB16 IPOC Station P 37.19 147 P **P** **15 51 55.7 +1.5**
PB16 IAmb IAmb 15 51 57.5
comp=Z,19nm,0.8s
PB16 PcP **PcP** **15 54 14.7 +1.2**
BOZ Bozeman (W) 37.21 334 P 15 51 54.2
baz=143
ULM Lac du Bonnet 37.26 354 P **P** **15 51 52.5 -1.2**
comp=Z,40nm,0.8s,baz=168,slow=8.6,SNR=92
ULM PcP **PcP** **15 54 12.1 -0.3**
comp=Z,15nm,0.8s,baz=192,slow=1.8,SNR=5.3
ULM ScP **ScP** **15 57 58.4 +3.5**
comp=Z,1.2nm,0.4s,baz=191,slow=5.2,SNR=4.2
ULM Lac du Bonnet 37.26 354 IAmb IAmb 15 51 53.5
comp=Z,44nm,0.8s
MFID Camas Ranch 37.52 328 P **P** **15 51 57.8 +1.6**
MFID PcP **PcP** **15 54 14.7 +1.2**
D61A St Aubert, Com 37.64 22 P 15 51 56.6
baz=212
AFDM Forest Hills D 37.64 319 P **P** **15 51 58.5 +1.2**
AFDM PcP **PcP** **15 54 14.7 +0.8**
E63A Oxbow 37.67 24 P 15 51 56.3
baz=215
E63A Oxbow 37.67 24 IAmb IAmb 15 51 57.8
comp=Z,23nm,1.1s
LRM Limekiln Ridge 37.74 334 P **P** **15 51 59.5 +1.2**
LRM PcP **PcP** **15 54 16.4 +2.1**
MATQ Matagami 37.77 13 P 15 51 57.2
baz=200,SNR=42
BEKR Beckworth 37.78 320 P **P** **15 52 00.6 +1.9**
BEKR PcP **PcP** **15 54 16.1 +1.6**
MNMC Minye Minye 37.80 148 P **P** **15 51 59.7 +0.6**
MNMC IAmb IAmb 15 52 03.0
comp=Z,37nm,1.0s
E64A Bridgewater 37.91 25 P 15 51 58.7
baz=216
PSGCX Pisagua 37.92 149 P **P** **15 52 00.4 +0.5**
ITTB Itaituba 38.05 115 *eP* **P** **15 51 59.1 -1.9**
HRY Holter Researc 38.19 335 P **P** **15 52 03.0 +1.1**
MALB Monte Alegre 38.28 110 *eP* **P** **15 52 03.2 +0.3**
PB11 IPOC Station P 38.29 148 P **P** **15 52 03.2 +0.2**
PB11 IAmb IAmb 15 52 06.5
comp=Z,32nm,1.1s
PB11 **PcP** **15 54 17.6 +1.3**
D63A Stockholm 38.30 24 P 15 52 01.9
baz=215
ORV Oroville 38.32 319 IAmb IAmb 15 52 07.6
comp=Z,30nm,0.9s
WVOR Wild Horse Val 38.36 325 P **P** **15 52 04.9 +1.5**
WVOR pmax pmax
comp=Z,27nm,1.0s
WVOR Wild Horse Val 38.36 325 P **P** **15 52 04.7 +1.4**
WVOR PcP **PcP** **15 54 18.3 +2.2**
EGMT Eagleton 38.48 338 IAmb IAmb 15 52 06.1
comp=Z,29nm,0.9s
EGMT Eagleton 38.48 338 P 15 52 04.8
baz=148
GDXM Geysers 38.76 317 IAmb IAmb 15 52 11.1
comp=Z,29nm,1.0s
LMN Caledonia Moun 38.78 28 IAmb IAmb 15 52 07.6
comp=Z,21nm,0.8s
PB08 IPOC Station P 38.87 148 P **P** **15 52 09.0 +0.9**
PB08 PcP **PcP** **15 54 19.9 +1.5**
J08A Circle Bar Ran 38.88 326 P **P** **15 52 09.2 +1.6**
J08A **PcP** **15 54 19.8 +2.1**
O03E Paynes Creek 38.93 320 P 15 52 09.6
baz=125
MSO Missoula 39.17 334 P **P** **15 52 09.4 -0.7**
MSO PcP **PcP** **15 54 19.7 +1.2**
MSO Missoula 39.17 334 P 15 52 10.3
baz=141
VILB Vilhena 39.19 130 *eP* **P** **15 52 10.8 +0.4**
O02D Mt. Diablo Mer 39.49 319 P 15 52 12.9
baz=124,SNR=17
WDC Whiskeytown Da 39.56 320 PcP **PcP** **15 54 19.8 0.0**
NPGB Novo Progresso 39.67 119 *eP* **P** **15 52 12.9 -1.6**
KCPM Cahto Peak 39.74 318 P **P** **15 52 17.0 +2.0**
KCPM IAmb IAmb 15 52 18.6
comp=Z,63nm,0.8s
MCPB Macapa, AP 39.74 107 *eP* **P** **15 52 14.8 -0.4**
M04C Macdoel 39.82 322 P 15 52 16.6
baz=126,SNR=12
K05A Summer Lake 39.83 324 PcP **PcP** **15 54 22.7 +1.8**
N02D Trinity Center 39.88 320 P 15 52 15.5
baz=124
I07A Izee 39.92 326 P **P** **15 52 18.0 +1.7**
I07A PcP **PcP** **15 54 22.9 +1.9**
F10A Beach Ranch, E 40.05 330 IAmb IAmb 15 52 20.5
comp=Z,28nm,0.8s
PB09 IPOC Station P 40.21 150 IAmb IAmb 15 52 23.1
comp=Z,31nm,0.9s
M02C Callahan 40.21 320 P 15 52 19.0
baz=125,SNR=8.8
K04D Chiloquin, OR 40.27 323 P 15 52 19.6
baz=127,SNR=6.9
YBH Yreka Blue Hor 40.32 321 P **P** **15 52 20.2 +0.6**
comp=Z,12nm,0.7s,baz=140,slow=4.7,SNR=29
YBH PcP **PcP** **15 54 23.0 +0.7**
comp=Z,11nm,0.9s,baz=116,slow=2.8,SNR=8.4
YBH Yreka Blue Hor 40.32 321 P **P** **15 52 19.8 +0.1**
YBH PcP **PcP** **15 54 23.4 +1.1**
L04D Klamath Falls 40.35 322 P 15 52 20.4
baz=126,SNR=12
J05D Fort Rock, OR 40.37 324 P 15 52 20.9
baz=128
G08A Pilot Rock 40.44 328 P **P** **15 52 23.4 +2.8**
G08A PcP **PcP** **15 54 24.2 +1.5**
KHMM Horse Mountain 40.48 319 P **P** **15 52 22.0 +0.9**
KHMM PcP **PcP** **15 54 25.2 +2.2**
PINE Pine Mountain 40.52 325 P **P** **15 52 22.4 +0.9**
PINE PcP **PcP** **15 54 25.0 +2.0**
JCC Jacoby Creek, 40.63 319 P **P** **15 52 23.6 +1.5**
J04D Umpqua Nationa 40.85 323 P 15 52 24.9
baz=127,SNR=16
WALA Waterton Lakes 40.91 336 P **P** **15 52 24.9 +0.5**
WALA PcP **PcP** **15 54 24.9 +0.8**
HUMO Hull Mountain 40.98 322 P **P** **15 52 25.1 +0.1**
LVC Limon Verde 41.06 150 *ceP* **P** **15 52 28.3 +2.0**
LVC pmax pmax
comp=Z,16nm,0.8s
LVC Limon Verde 41.06 150 *eP* **P** **15 52 26.6 +0.3**
L02E Cave Junction 41.11 321 P 15 52 27.1
baz=125
CLDB Colider 41.35 124 *eP* **P** **15 52 27.4 -1.0**
I04A Tendick Farm, 41.36 324 P 15 52 28.7
baz=128
K02D Willamette Mer 41.45 322 P 15 52 30.1
baz=125
PTLB Pontes e Lacer 41.59 132 *eP* **P** **15 52 30.2 -0.1**
NEW Newport 41.66 332 P **P** **15 52 31.0 +0.4**
comp=Z,1.5nm,0.3s,baz=150,slow=8.1,SNR=3.0
NEW PcP **PcP** **15 54 26.8 +0.3**
comp=Z,16nm,0.7s,baz=122,slow=12,SNR=6.3
NEW Newport 41.66 332 P **P** **15 52 30.7 +0.1**
NEW PcP **PcP** **15 54 26.8 +0.3**
H04A Detroit Lake 41.78 325 P **P** **15 52 31.9 +0.4**
H04A PcP **PcP** **15 54 28.2 +1.2**
C09A Chrisman Ranch 41.85 331 P **P** **15 52 33.0 +0.9**
C09A PcP **PcP** **15 54 27.7 +0.6**
J01E Myrtle Point 41.88 322 P 15 52 33.1
baz=125
H04D Lebanon 41.99 324 P 15 52 33.3
baz=128
F05D White Salmon 42.14 327 P 15 52 35.3
baz=130
FFC Flin Flon 42.50 350 P **P** **15 52 36.9 -0.3**
FFC pmax pmax
comp=Z,34nm,1.1s
FFC Flin Flon 42.50 350 P **P** **15 52 36.9 -0.3**
FFC IAmb IAmb 15 52 40.1
comp=Z,34nm,1.1s
LTY Liberty 42.64 329 P **P** **15 52 38.4 -0.2**
LTY PcP **PcP** **15 54 30.5 +0.7**
G03D McMinnville, O 42.71 325 P 15 52 40.4
baz=128
B08A Colville Reser 42.75 331 P **P** **15 52 39.0 -0.4**
B08A PcP **PcP** **15 54 31.0 +0.9**
LON Longmire 42.89 328 P **P** **15 52 41.5 +0.9**
LON PcP **PcP** **15 54 31.5 +0.8**
GO02 Mina Guanaco 42.93 153 P **P** **15 52 42.3 +0.9**
GO02 IAmb IAmb 15 52 43.9
comp=Z,25nm,0.9s
GO02 PcP **PcP** **15 54 32.0 +0.6**
E04D Cinebar 43.16 327 P 15 52 43.3
baz=130
D04E Lakebay 43.67 327 P 15 52 47.4
baz=130
E03A Lebam 43.69 326 IAmb IAmb 15 52 55.7
comp=Z,36nm,1.2s
B06A Marblemount 43.90 330 P **P** **15 52 48.3 -0.2**
B06A PcP **PcP** **15 54 34.9 +1.0**
B05A Bryant 44.03 329 P 15 52 50.2
baz=132
D03D Eldon 44.06 328 P 15 52 50.3
baz=130
PRPB Parauapebas 44.12 113 *eP* **P** **15 52 50.0 -0.9**
TMAB Tom-Au,PA,Br 44.16 108 *eP* **P** **15 52 51.5 +0.3**
RPN Rapa Nui 44.38 325 LR LR 16 06 44.4
comp=Z,885nm,19.5s,baz=26,slow=30
A05A Maple Falls 44.52 330 P **P** **15 52 54.0 +0.5**
A05A PcP **PcP** **15 54 37.0 +1.0**
AC02 Maricunga 44.58 153 P **P** **15 52 56.1 +1.2**
AC02 IAmb IAmb 15 53 09.9
comp=Z,54nm,1.4s
A04D Lummi Island 44.64 329 P 15 52 54.8
baz=131
DRLN Deer Lake 44.67 30 P **P** **15 52 53.4 -1.4**
DRLN IAmb IAmb 15 52 54.4
comp=Z,37nm,0.9s
FCC Fort Churchill 45.57 357 IAmb IAmb 15 53 02.0
comp=Z,35nm,0.8s
SNDB Serra Nova Dou 45.64 122 *eP* **P** **15 53 02.7 -0.3**
LCO Las Campanas 45.85 156 P **P** **15 53 05.0 +0.3**
LCO pmax pmax
comp=Z,26nm,0.9s
LCO Las Campanas 45.85 156 P **P** **15 53 05.0 +0.3**
LCO IAmb IAmb 15 53 06.9
comp=Z,26nm,0.8s
PP1B Ponte de Pedra 46.09 131 *eP* **P** **15 53 07.2 +0.8**
ARAG Araguaiana, MT 47.28 126 *eP* **P** **15 53 15.2 -0.6**
SMTB Santa Maria do 47.29 115 *eP* **P** **15 53 15.5 -0.4**
AQDB Aquidauana 47.37 134 *eP* **P** **15 53 16.4 +0.1**
CO03 El Pedregal 47.50 158 IAmb IAmb 15 53 19.0
comp=Z,26nm,0.8s
H03N2 Juan Fernandez 47.54 168 T T 16 44 04.0
baz=346,slow=76,SNR=60
H03N1 Juan Fernandez 47.55 168 T T 16 44 07.5
baz=346,slow=76,SNR=61
H03N3 Juan Fernandez 47.56 168 T T 16 44 05.2
baz=346,slow=76,SNR=64
ROSB Rosrio 48.05 106 *eP* **P** **15 53 21.8 0.0**
PEXB Peixe 48.22 120 *eP* **P** **15 53 22.4 -0.7**
VA03 San Esteban 49.28 159 P **P** **15 53 31.3 +0.3**
BBB Bella Bella 49.51 330 PcP **PcP** **15 54 53.0 -0.6**
comp=Z,3.8nm,0.7s,baz=100,slow=6.9,SNR=3.3
MT02 Curacav 49.52 159 IAmb IAmb 15 53 47.2
comp=Z,38nm,1.2s
PEL Peldehue 49.58 159 P **P** **15 53 33.5 +0.3**
PEL pmax pmax
comp=Z,18nm,0.8s
BDFB Brasilia 50.28 123 P **P** **15 53 37.5 -1.4**
comp=Z,12nm,0.8s,baz=292,slow=3.2,SNR=11
BDFB PcP **PcP** **15 54 57.7 +0.5**
comp=Z,18nm,1.1s,baz=249,slow=5.2,SNR=4.7
BDFB LR LR 16 16 50.7
comp=Z,677nm,19.0s,baz=307,slow=39
BDFB Brasilia 50.28 123 P **P** **15 53 38.0 -1.0**
BDFB IAmb IAmb 15 53 41.0
comp=Z,18nm,0.9s
BDFB PcP **PcP** **15 54 58.0 +0.8**
CPUP Villa Florida 50.41 141 P **P** **15 53 38.7 -0.9**
comp=Z,11nm,0.9s,baz=325,slow=8.0,SNR=22
CPUP PcP **PcP** **15 54 57.4 +0.1**
comp=Z,5.6nm,0.9s,baz=304,slow=4.2,SNR=3.7
CPUP Villa Florida 50.41 141 P **P** **15 53 38.2 -1.4**
CPUP IAmb IAmb 15 53 52.1
comp=Z,25nm,1.1s
CPUP Villa Florida 50.41 141 *eP* **P** **15 53 38.7 -0.9**
ITRB Iturama 50.75 129 *eP* **P** **15 53 42.0 -0.3**
BO02 Sierra Bellavi 51.04 160 P **P** **15 53 44.3 0.0**
BO02 IAmb IAmb 15 53 57.9
comp=Z,28nm,1.2s
NBPS Pedro II - PI 51.07 107 *eP* **P** **15 53 42.3 -2.7**
PCMB Pacaembu 51.25 132 *eP* **P** **15 53 42.8 -3.2**
SDBA SAO DESIDERIO 51.26 118 *eP* **P** **15 53 46.5 +0.2**
IPMB Ipameri, GO 51.41 126 *eP* **P** **15 53 46.6 -0.7**
NBMO Morrinhos-CE 52.02 105 *eP* **P** **15 53 52.1 +0.2**
YKA Yellowknife Ar 52.29 346 P **P** **15 53 52.5 -0.6**
comp=Z,42nm,0.9s,baz=144,slow=8.1,SNR=423
YKA PcP **PcP** **15 55 03.6 -0.1**
comp=Z,2.7nm,0.6s,baz=146,slow=3.8,SNR=6.8
YKA PKiKP **PKiKP** **16 01 43.1 -0.3**
comp=Z,0.3nm,0.8s,baz=140,slow=2.1,SNR=3.7
YKA LR LR 16 19 20.5
comp=Z,544nm,19.7s,baz=0.0,slow=40
BI02 San Fabin de 52.59 161 P **P** **15 53 55.9 +0.1**
BI02 IAmb IAmb 15 54 09.6
comp=Z,37nm,1.2s
FRB Frobisher Bay 52.61 12 P **P** **15 53 54.1 -1.3**
FRB pmax pmax
comp=Z,89nm,1.3s
PTGB Pitanga 52.69 136 *eP* **P** **15 53 56.0 -0.7**
BB19B Bebedouro 52.94 130 *eP* **P** **15 53 58.2 -0.4**
JANB Januaria 53.04 120 *eP* **P** **15 53 58.9 -0.6**
NBPB Pedra_Branca-C 53.21 107 *eP* **P** **15 54 00.3 -0.4**
ITQB Itaqui 53.30 144 *eP* **P** **15 54 01.1 +0.1**
FRTB Fartura 53.56 132 *eP* **P** **15 54 02.8 -0.3**
NBCL Cascavel-CE 53.97 105 *eP* **P** **15 54 05.0 -1.2**
DLBC Dease Lake 54.25 335 P **P** **15 54 09.1 +1.3**
comp=Z,17nm,0.8s,baz=142,slow=4.9,SNR=26
DLBC Dease Lake 54.25 335 IAmb IAmb 15 54 09.9
comp=Z,20nm,0.8s
ITAB Concordia 54.33 138 *eP* **P** **15 54 08.5 -0.1**
RCLB Rio Claro- Sao 54.48 130 *eP* **P** **15 54 09.2 -0.7**
TAOE Nuku Hiva Isla 54.62 249 *eT* T 16 52 38.0
comp=Z,44nm,0.3s
NBMA Muriti-CE 54.63 109 *eP* **P** **15 54 11.2 +0.1**
DIAM Diamantina, MG 55.21 124 *eP* **P** **15 54 14.8 -0.6**
VAO Valinhos 55.25 130 *eP* **P** **15 54 15.5 0.0**
SPB Sao Paulo 55.26 131 *eP* **P** **15 54 15.8 +0.4**
NBPA Parau_RN 55.59 106 *eP* **P** **15 54 18.4 +0.4**
CPSB Cacapava Do Su 55.72 142 *eP* **P** **15 54 18.3 -0.3**
BSCB Bom Sucesso 55.77 127 *eP* **P** **15 54 19.6 +0.3**
PET01 Itanhaem-SP 55.79 132 *eP* **P** **15 54 19.8 +0.5**
NBTA Tacaratu-PE 55.94 111 *eP* **P** **15 54 20.6 +0.2**
NBLI Livramento-PB 56.31 108 *eP* **P** **15 54 23.5 +0.3**
PARB Paraibuna 56.45 130 *eP* **P** **15 54 24.2 +0.1**
GDU01 Guandu, BA 56.48 116 *eP* **P** **15 54 24.2 -0.1**
PLCA Paso Flores 56.56 163 P **P** **15 54 25.0 +0.5**
comp=Z,8.6nm,0.7s,baz=341,slow=8.9,SNR=24
PLCA LR LR 16 13 16.3
comp=Z,520nm,21.0s,baz=358,slow=30
PLCA Paso Flores 56.56 163 P **P** **15 54 24.9 +0.3**
PLCA IAmb IAmb 15 54 38.2
comp=Z,24nm,1.0s
PLCA Paso Flores 56.56 163 *eP* **P** **15 54 24.8 +0.3**
PLTB Pedras Altas 56.59 143 *eP* **P** **15 54 24.5 -0.3**
RCBR Riachuelo 56.75 106 *ceP* **P** **15 54 27.2 +0.9**
RCBR pmax pmax
comp=Z,96nm,1.3s
RCBR Riachuelo 56.75 106 P **P** **15 54 26.5 +0.2**
RCBR Riachuelo 56.75 106 *eP* **P** **15 54 25.8 -0.5**
NBLA Lagarto - SE 56.92 113 *eP* **P** **15 54 27.0 -0.4**
RKT Rikitea 57.11 231 *eS* **S** **16 02 18.9 -1.0**
comp=Z,577nm,27.8s
RKT *e*LQ LQ 16 08 51.5
comp=Z,504nm,35.2s
RKT *e*LR LR 16 11 15.5
comp=Z,552nm,25.0s
NBIT Itapeh - BA 57.14 118 *eP* **P** **15 54 29.2 +0.3**
TER01 Tubaro-SC 57.17 137 *eP* **P** **15 54 28.9 -0.1**
SJMB Sao Joao De Ma 57.44 123 *eP* **P** **15 54 31.2 +0.1**
NBPV Pedro Velho 57.52 106 *eP* **P** **15 54 31.2 -0.5**
NRS Narsarsuaq 57.56 24 P **P** **15 54 29.1 -2.1**
NRS pmax pmax
comp=Z,34nm,0.8s
NRS Narsarsuaq 57.56 24 P **P** **15 54 29.1 -2.1**
GUA01 Guaratinga, BA 57.58 120 *eP* **P** **15 54 31.9 -0.1**
LL01 San Ignacio de 57.58 165 P **P** **15 54 31.7 +0.1**
NBAN Anadia - AL 57.77 110 *eP* **P** **15 54 33.5 -0.1**
NAN01 Guarapari, ES 57.90 121 *eP* **P** **15 54 35.0 +0.8**
RIB01 Linhares ES 58.40 123 *eP* **P** **15 54 37.5 -0.2**
NBRF Rio Formoso - 58.46 109 *eP* **P** **15 54 38.5 +0.2**
CAM01 Campos-RJ 58.66 126 *eP* **P** **15 54 40.4 +0.9**
ALF01 Guarapari-ES 58.78 124 *eP* **P** **15 54 41.1 +0.8**
SFJD Kangerlussuaq 59.62 17 P **P** **15 54 43.2 -2.2**
SFJD pmax pmax
comp=Z,30nm,1.0s
SFJD Kangerlussuaq 59.62 17 P **P** **15 54 43.2 -2.2**
SFJD IAmb IAmb 15 54 44.8
comp=Z,30nm,0.9s
C36M Paulatuk 60.14 347 IAmb IAmb 15 54 48.6
comp=Z,8.7nm,0.8s
C36M Paulatuk 60.14 347 P 15 54 47.7
baz=141
MCARA McCarthy VSAT 61.33 334 P **P** **15 54 58.5 +1.3**
MCARA IAmb IAmb 15 55 10.7
comp=Z,39nm,1.3s
MCARA McCarthy VSAT 61.33 334 P 15 54 58.0
baz=117
RES Resolute Bay 61.52 358 P **P** **15 54 57.1 -1.1**
comp=Z,37nm,0.6s,baz=181,slow=9.5,SNR=250
GLB Gilahina Butte 61.70 334 IAmb IAmb 15 55 01.3
comp=Z,14nm,0.9s
INK Inuvik 61.80 343 P **P** **15 54 59.9 -0.4**
comp=Z,20nm,0.8s,baz=117,slow=7.1,SNR=82
INK Inuvik 61.80 343 IAmb IAmb 15 55 00.9
comp=Z,22nm,0.8s
BMRM Bremner River 61.84 333 P **P** **15 55 01.6 +0.9**
BMRM IAmb IAmb 15 55 03.5
comp=Z,12nm,0.7s
BMRM Bremner River 61.84 333 P 15 55 01.2
baz=116
N25K Chitina, Valde 62.11 334 IAmb IAmb 15 55 04.2
comp=Z,20nm,0.9s
N25K Chitina, Valde 62.11 334 P 15 55 03.2
baz=116
EYAK Cordova Ski Ar 62.17 332 P 15 55 03.1
baz=114
EGAK Eagle 62.24 338 P 15 55 02.8
baz=121
KLU Klutina 62.63 333 IAmb IAmb 15 55 08.9
comp=Z,19nm,0.8s
KLU Klutina 62.63 333 P 15 55 05.5
baz=114
DOT Dot Lake 62.80 336 IAmb IAmb 15 55 08.1
comp=Z,9.8nm,0.9s
SCRK Sand Creek 62.92 336 P **P** **15 55 07.4 -0.7**
SCRK Sand Creek 62.92 336 P 15 55 07.6
baz=118
M24K Tolsona, Glenn 63.00 334 IAmb IAmb 15 55 12.4
comp=Z,27nm,1.0s
M24K Tolsona, Glenn 63.00 334 P 15 55 08.4
baz=114
PAX Paxson 63.07 335 P **P** **15 55 09.3 +0.3**
PAX 15 55 47.3
PAX pmax pmax
comp=Z,13nm,1.4s
PAX Paxson 63.07 335 P **P** **15 55 09.3 +0.3**
PAX PcP **PcP** **15 55 47.3 +1.0**
PAX Paxson 63.07 335 P 15 55 08.2
baz=116
KNK Knik Glacier 63.72 333 P 15 55 12.8
baz=112
SML Sawmill 63.82 333 P 15 55 13.2
baz=112
WAT6 Susitna Watana 63.86 334 P 15 55 13.4
baz=113
GHO Glory Hole Cre 64.06 333 IAmb IAmb 15 55 17.9
comp=Z,21nm,0.8s
PMR Palmer 64.09 333 P 15 55 15.2
baz=111
ICESG Greenland Ices 64.13 18 *i*P **P** **15 55 14.6 -1.6**
ICESG IAmb IAmb 15 55 16.0
comp=Z,28nm,0.8s
RC01 Rabbit Creek A 64.18 332 IAmb IAmb 15 55 17.1
comp=Z,15nm,0.8s
RC01 Rabbit Creek A 64.18 332 P 15 55 16.2
baz=111
BRSE Bradley Lake S 64.19 331 P 15 55 16.0
baz=109
PRP Porcupine Dome 64.22 338 P **P** **15 55 15.8 -0.7**
PRP Porcupine Dome 64.22 338 P 15 55 16.1
baz=117
TULEG Thule 64.28 5 *i* P **P** **15 55 15.7 -0.8**
TULEG IAmb IAmb 15 55 16.5
comp=Z,24nm,0.9s
TULEG Thule 64.28 5 P **P** **15 55 15.5 -1.1**
TULEG IAmb IAmb 15 55 16.8
comp=Z,23nm,0.9s
HDA Harding Lake 64.28 336 P 15 55 15.9
baz=115
HDA P 15 55 15.9
baz=115
WAT2 Susitna Watana 64.37 334 P 15 55 17.1
baz=112
IL31 64.41 336 IAmb IAmb 15 55 18.7
comp=Z,17nm,0.9s
ILAR Eielson Array 64.41 336 P **P** **15 55 16.8 -0.8**
comp=Z,15nm,1.0s,baz=119,slow=4.5,SNR=52
ILAR LR LR 16 25 38.6
comp=Z,361nm,21.5s,baz=124,slow=38
ILAR Eielson Array 64.41 336 P **P** **15 55 16.5 -1.1**
FIS Fire Island 64.42 332 P **P** **15 55 17.8 +0.1**
KDAK Kodiak Island 64.51 328 P **P** **15 55 19.0 +0.6**
comp=Z,6.6nm,0.6s,baz=151,slow=5.4,SNR=11
KDAK Kodiak Island 64.51 328 P **P** **15 55 19.0 +0.6**
KDAK Kodiak Island 64.52 328 P 15 55 18.9
baz=106
RND Reindeer 64.65 335 P **P** **15 55 19.3 0.0**
RND pmax pmax
comp=Z,30nm,0.9s
RND Reindeer 64.65 335 P **P** **15 55 19.3 0.0**
RND IAmb IAmb 15 55 20.3
comp=Z,30nm,0.9s
OHAK Old Harbor 64.73 327 P 15 55 20.0
baz=106
POKR Poker Flat Res 64.77 337 P **P** **15 55 19.4 -0.6**
POKR IAmb IAmb 15 55 20.4
comp=Z,12nm,0.8s
POKR PcP **PcP** **15 55 54.0 +0.9**
POKR Poker Flat Res 64.77 337 P 15 55 19.7
baz=115
SUA Susitna One 64.77 332 P 15 55 20.1
baz=110
MCK McKinley 64.81 335 IAmb IAmb 15 55 22.7
comp=Z,37nm,1.5s
MCK McKinley 64.81 335 P 15 55 19.4
baz=112
COLA College 64.83 336 *i* P **P** **15 55 19.4 -0.9**
COLA pmax pmax
comp=Z,11nm,0.8s
COLA College 64.83 336 P 15 55 20.0

baz=114
TCOL CIGO, UAF Yank 64.83 336 P P 15 55 19.5 -0.8
TCOL IAmb IAmb 15 55 20.5
comp=Z,13nm,0.8s
TCOL CIGO, UAF Yank 64.83 336 P 15 55 20.0
baz=114
CUT Chulitna 64.88 333 P 15 55 20.3
baz=111
MDM Murphy Dome 65.01 336 PcP PcP 15 55 54.8 +0.7
SII Sitkinak Islan 65.03 327 P 15 55 22.3
baz=104
NEA2 Nenana 65.19 336 IAmb IAmb 15 55 23.4
comp=Z,10.0nm,0.8s
NEA2 PcP **PcP 15 55 56.0 +1.1**
NEA2 Nenana 65.19 336 P 15 55 22.0
baz=113
TRF Thorofare Moun 65.27 334 IAmb IAmb 15 55 24.1
comp=Z,15nm,0.8s
TRF Thorofare Moun 65.27 334 P 15 55 22.8
baz=111
SKT Skwentna 65.30 333 IAmb IAmb 15 55 25.7
comp=Z,14nm,0.8s
SKT Skwentna 65.30 333 P 15 55 22.8
baz=109
SPCR Spurr Chakacha 65.35 332 P 15 55 23.3
baz=108
I23K Minto, Yukon-K 65.52 336 P P 15 55 24.3 -0.5
I23K IAmb IAmb 15 55 25.6
comp=Z,23nm,0.8s
I23K PcP **PcP 15 55 56.7 +0.5**
I23K Minto, Yukon-K 65.52 336 P 15 55 24.7
baz=113
KTH Kantishna Hill 65.57 334 IAmb IAmb 15 55 25.5
comp=Z,11nm,0.8s
BPAW Bear Paw Mtn. 65.79 335 P P 15 55 25.9 -0.8
BPAW IAmb IAmb 15 55 26.9
comp=Z,19nm,0.8s
BPAW Bear Paw Mtn. 65.79 335 P 15 55 26.0
baz=111
PPLA Purkeypile 65.89 334 P 15 55 26.4
baz=109
MLY Manley 66.02 336 P 15 55 27.2
baz=111
CHUM Lake Minchumin 66.26 335 P 15 55 29.2
baz=109
SUMG Summit 66.42 15 *i* P **P 15 55 30.2 -0.7**
SUMG IAmb IAmb 15 55 33.5
comp=Z,34nm,1.0s
SUMG Summit 66.42 15 *i* P **P 15 55 30.2 -0.7**
SUMG pmax pmax
comp=Z,35nm,1.0s
SUMG Summit 66.42 15 P **P 15 55 29.9 -1.0**
SUMG IAmb IAmb 15 55 33.8
comp=Z,29nm,0.9s
PPT Papeete 66.48 244 LR LR 16 16 05.4
comp=Z,528nm,19.9s,baz=62,slow=28
PPT2 Papeete2 66.49 244 *e*S **S 16 04 16.8 -2.0**
comp=Z,531nm,33.5s
PPT2 *e*LQ LQ 16 12 50.3
comp=Z,342nm,24.8s
PPT2 *e*LR LR 16 15 36.0
comp=Z,957nm,24.0s,baz=55
COLD Coldfoot 66.64 338 IAmb IAmb 15 55 33.6
comp=Z,13nm,0.9s
COLD Coldfoot 66.64 338 P 15 55 32.1
baz=113
EUNU Eureka 66.87 1 P **P 15 55 32.7 -0.6**
SVW2 Sparrevohn 66.89 331 P **P 15 55 33.6 -0.1**
TOLK Toolik Lake Re 66.99 340 P **P 15 55 34.1 -0.1**
TOLK IAmb IAmb 15 55 35.0
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 66.99 340 P 15 55 34.1
baz=114
NEEM North Greenlan 67.17 9⇑ *i*P **P 15 55 34.7 -0.9**
NEEM IAmb IAmb 15 55 35.5
comp=Z,47nm,1.0s
TBI Tubuai 68.77 238 *e*S **S 16 04 46.6 +0.9**
comp=Z,156nm,26.2s
TBI Tubuai 68.77 238 *e*LR LR 16 16 43.0
comp=Z,602nm,26.0s,baz=67
TBI Tubuai 68.77 238 *e*T T 17 10 13.8
comp=Z,7.4nm,0.3s
RDOG Red Dog Mine 71.53 338 P 15 56 02.0
baz=101
DBG Daneborg 71.86 16 *i* P **P 15 56 03.5 -0.6**
ANM Nome 71.97 334 P 15 56 04.6
baz=97
DAG Danmarks Havn 72.92 13 *i* P **P 15 56 09.0 -1.4**
DAG IAmb IAmb 15 56 09.7
comp=Z,8.5nm,0.5s
DAG Danmarks Havn 72.92 13 *i* P **P 15 56 09.0 -1.4**
DAG pmax pmax
comp=Z,9.0nm,0.5s
TNA Tin City 73.15 335 P **P 15 56 11.9 0.0**
TNA Tin City 73.15 335 P 15 56 12.3
baz=95
NOR Nord 74.55 8 *i* P **P 15 56 18.9 -1.0**
NOR IAmb IAmb 15 56 19.8
comp=Z,14nm,0.9s
NOR Nord 74.55 8 *i* P **P 15 56 18.9 -1.0**
NOR pmax pmax
comp=Z,14nm,0.9s
GAL1 Galloway 76.47 36 *e*P **P 15 56 29.5 -1.8**
GAL1 IAmb IAmb 15 56 32.0
comp=Z,39nm,1.6s
INVG Invergeldie, C 76.75 35 *e*P **P 15 56 30.0 -2.9**
INVG IAmb IAmb 15 56 31.2
comp=Z,9.9nm,0.8s
ESK Eskdalemuir 77.30 36 *e*P **P 15 56 33.0 -3.0**
ESK IAmb IAmb 15 56 34.0
comp=Z,15nm,1.0s
ESK Eskdalemuir 77.30 36 P **P 15 56 33.3 -2.7**
ESK pmax pmax
comp=Z,10.0nm,0.8s
ESK Eskdalemuir 77.30 36 P **P 15 56 33.3 -2.7**
DRUM Mains of Drumt 77.56 34 *e*P **P 15 56 34.7 -2.8**
ESY Stoneypath 77.58 35 *e*P **P 15 56 35.0 -2.6**
EDMD Edmundbyers 78.06 36 *e*P **P 15 56 36.9 -3.3**
ESDC Sonseca Array 78.50 52 P **P 15 56 40.7 -2.4**
comp=Z,7.9nm,0.8s,baz=287,slow=4.2,SNR=23
ESDC LR LR 16 26 53.1
comp=Z,292nm,19.5s,baz=350,slow=32
ESDC Sonseca Array 78.50 52 P **P 15 56 41.2 -1.8**
KBS Kingsbay 79.35 11 *i* P **P 15 56 47.8 +0.8**
KBS IAmb IAmb 15 56 48.6
comp=Z,35nm,0.8s
KBS Kingsbay 79.35 11 P **P 15 56 46.2 -0.7**
KBS pmax pmax
comp=Z,23nm,0.9s
KBS Kingsbay 79.35 11 P **P 15 56 46.2 -0.7**
KBS IAmb IAmb 15 56 48.6
comp=Z,22nm,0.9s
GRR Gorron 79.53 43 *e*P **P 15 56 47.2 -1.2**
GRR pmax pmax
comp=Z,14nm,0.8s
FLN La Foliniere 79.72 42 *e*P **P 15 56 47.8 -1.7**
FLN pmax pmax
comp=Z,9.0nm,0.9s
LDF La Druitiere 79.98 42 *e*P **P 15 56 49.7 -1.2**
LDF pmax pmax
comp=Z,10.0nm,0.8s
SJPF Ste Jean 80.05 48 *e*P **P 15 56 48.3 -3.1**
SJPF pmax pmax
comp=Z,16nm,1.0s
ETSF Etsaut 80.56 48 *e*P **P 15 56 51.1 -3.2**
ETSF pmax pmax
comp=Z,8.0nm,1.0s
EPF Esparros 81.19 48 *e*P **P 15 56 56.6 -1.0**
EPF pmax pmax
comp=Z,6.0nm,0.9s
RJF Les Rejaudoux 81.63 45 *e*P **P 15 56 58.5 -1.3**
RJF pmax pmax
comp=Z,7.0nm,0.9s
BAIF Baives 82.52 40 *e*P **P 15 57 03.1 -1.2**
BAIF pmax pmax
comp=Z,14nm,1.1s
AVF Avril sur Loir 82.61 44 *e*P **P 15 57 03.1 -1.8**
AVF pmax pmax
comp=Z,4.0nm,0.8s
KOWA Kowa 82.74 77 P **P 15 57 05.3 -0.8**
KOWA IAmb IAmb 15 57 07.1
comp=Z,14nm,0.8s
DOU Dourbes 82.75 40 *d*P **P 15 57 04.1 -1.5**
DOU Dourbes 82.75 40 P **P 15 57 04.7 -0.8**
DOU pmax pmax
comp=Z,18nm,1.3s

BMRD Maredsous 82.82 40 *d*P **P 15 57 04.2 -1.7**
BMRD *d*pP **pP 15 57 21.8 0.0**
LOR Lormes 82.85 43 P **P 15 57 05.1 -1.1**
LOR pmax pmax
comp=Z,13nm,1.1s
BILL Bilibino 82.98 338 *d i*P **P 15 57 05.3 -1.1**
BILL *e* 16 00 16.8
BILL pmax pmax
comp=Z,22nm,0.8s
BILL MLR MLR
comp=Z,378nm,20.0s
BILL Bilibino 82.98 338 P **P 15 57 05.9 -0.5**
BILL IAmb IAmb 15 57 08.5
comp=Z,27nm,0.9s
BCLA Clavier 83.13 40 *d*P **P 15 57 06.3 -1.2**
BCLA *d*PcP **PcP 15 57 11.3 -0.6**
TIC Toumodi 83.42 85 *e*P **P 15 57 09.3 -0.4**
LIC Lamto 83.50 85 *e*P **P 15 57 10.0 -0.1**
comp=Z,76nm,1.0s
DBIC Dimbokro 83.57 85 P **P 15 57 09.1 -1.4**
comp=Z,14nm,0.8s,baz=255,slow=4.4,SNR=18
DBIC LR LR 16 30 34.2
comp=Z,274nm,21.9s,baz=260,slow=33
DBIC Dimbokro 83.57 85 P **P 15 57 09.7 -0.8**
DBIC pmax pmax
comp=Z,14nm,0.9s
DBIC Dimbokro 83.57 85 P **P 15 57 09.7 -0.8**
DBIC IAmb IAmb 15 57 11.5
comp=Z,14nm,0.8s
KIC Kosan Boka 83.75 85 *e*P **P 15 57 11.2 -0.2**
comp=Z,42nm,0.8s
NOA NORSAR Array B 83.79 29 P **P 15 57 09.8 -0.9**
comp=Z,6.7nm,1.0s,baz=288,slow=5.0,SNR=11
NOA LR LR 16 32 13.9
comp=Z,227nm,20.4s,baz=280,slow=34
HLG Helgoland 83.82 36 *e*P **P 15 57 09.5 -1.4**
comp=Z,286nm,1.5s,baz=287,slow=5.1
WLF Walferdange 83.83 41 *d*P **P 15 57 10.1 -1.0**
WLF Walferdange 83.83 41 IAmb IAmb 15 57 11.9
comp=Z,10nm,0.8s
WLF Walferdange 83.83 41 *e*P **P 15 57 10.5 -0.6**
comp=Z,16nm,0.9s,baz=287,slow=5.1
VIVF Saint-Julien-l 83.91 45 *e*P **P 15 57 11.2 -0.5**
VIVF pmax pmax
comp=Z,10.0nm,1.0s
BUG Bochum--Univer 84.11 39 *e*P **P 15 57 11.8 -0.7**
comp=Z,12nm,1.1s,baz=287,slow=5.1
AHRW Bad Neuenahr-A 84.21 40 *e*P **P 15 57 12.6 -0.4**
comp=Z,14nm,1.0s,baz=287,slow=5.1
HAU Haudompre 84.34 42 *e*P **P 15 57 10.2 -3.6**
HAU pmax pmax
comp=Z,9.0nm,0.7s
HINF Hinteralfeld 84.71 42 *e*P **P 15 57 14.3 -1.4**
HINF pmax pmax
comp=Z,3.0nm,0.7s
ORIF Oris-en-Rattie 84.73 45 *e*P **P 15 57 15.7 -0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.9s
ECH Echery 84.81 42 P **P 15 57 14.1 -2.1**
ECH pmax pmax
comp=Z,14nm,0.9s
ECH Echery 84.81 42 IAmb IAmb 15 57 16.1
comp=Z,8.6nm,0.9s
LPL La Plagne 85.18 45 *e*P **P 15 57 17.8 -0.5**
LPL pmax pmax
comp=Z,5.0nm,0.8s
LPG La Plagne 85.20 45 *e*P **P 15 57 19.2 +0.7**
LPG pmax pmax
comp=Z,4.0nm,0.6s
BNI Bardonecchia 85.25 45 P **P 15 57 18.8 +0.2**
BNI pmax pmax
comp=Z,9.0nm,0.9s
BSEG Bad Segeberg 85.27 36 P **P 15 57 17.9 -0.3**
BSEG pmax pmax
comp=Z,18nm,1.1s
BSEG Bad Segeberg 85.27 36 *e*P **P 15 57 18.5 +0.2**
comp=Z,21nm,1.2s,baz=287,slow=5.1
SENIN Lac Senin/Sane 85.36 44 IAmb IAmb 15 57 20.1
comp=Z,10nm,0.8s
MBDF Montbardon 85.39 45 *e*P **P 15 57 18.7 -0.6**
MBDF pmax pmax
comp=Z,4.0nm,0.7s
BFO Black Forest 85.54 42 P **P 15 57 19.0 -0.8**
BFO pmax pmax
comp=Z,7.0nm,1.2s
BFO Black Forest 85.54 42 *e*P **P 15 57 19.7 -0.1**
comp=Z,11nm,1.3s,baz=287,slow=5.1
NRDL Niedersach Rie 85.54 37 *e*P **P 15 57 19.9 +0.3**
comp=Z,21nm,1.3s,baz=287,slow=5.1
FRF La Foret Royal 85.59 46 *e*P **P 15 57 19.1 -1.0**
FRF pmax pmax
comp=Z,7.0nm,0.7s
MILB Miltenberg 85.77 40 *e*P **P 15 57 20.5 -0.4**
comp=Z,9.6nm,0.8s,baz=287,slow=5.1
SLE Schleitheim 85.80 42 P **P 15 57 18.9 -2.2**
SLE pmax pmax
comp=Z,14nm,1.1s
CLZ Clausthal 85.88 38 *e*P **P 15 57 21.5 +0.1**
comp=Z,20nm,1.3s,baz=287,slow=5.1
ARCES ARCESS Array B 86.19 19 P **P 15 57 21.1 -1.4**
comp=Z,5.9nm,0.7s,baz=0.0,slow=1.7,SNR=18
ARCES LR LR 16 35 13.1
comp=Z,144nm,18.7s,baz=270,slow=35
FLTG Flechtingen 86.25 37 *e*P **P 15 57 22.8 -0.3**
comp=Z,20nm,1.1s,baz=287,slow=5.1
UBR Ueberruh 86.87 42 *e*P **P 15 57 26.0 -0.4**
comp=Z,22nm,1.5s,baz=287,slow=5.1
NEUB Neuenburg 86.90 38 *e*P **P 15 57 26.3 0.0**
comp=Z,22nm,1.4s,baz=287,slow=5.1
MOX Moxa 86.97 39 P **P 15 57 24.2 -2.6**
MOX pmax pmax
comp=Z,8.0nm,1.2s
GRF Grafenberg Arr 87.01 40 P **P 15 57 26.3 -0.7**
GRF pmax pmax
comp=Z,16nm,1.2s
GRF Grafenberg Arr 87.01 40 *e*P **P 15 57 27.0 0.0**
comp=Z,16nm,1.0s,baz=287,slow=5.1
GRF *e*L L 16 33 08.9
comp=Z,347nm,19.4s
PLN Plauen 87.35 39 *e*P **P 15 57 28.5 0.0**
comp=Z,14nm,1.0s,baz=287,slow=5.1
WERD Werda 87.45 39 *e*P **P 15 57 28.8 -0.3**
comp=Z,5.0nm,1.0s,baz=287,slow=5.1
FETA Feichten 87.46 42 *e*P **P 15 57 27.9 -1.5**
comp=Z,4.2nm,0.7s
MANZ Manzenberg 87.47 39 *e*P **P 15 57 29.1 -0.1**
comp=Z,8.8nm,1.0s,baz=287,slow=5.1
GUNZ Gunzen 87.49 39 *e*P **P 15 57 29.3 0.0**
comp=Z,14nm,1.0s,baz=287,slow=5.1
WERN Wernitzgruen 87.54 39 *e*P **P 15 57 29.7 +0.1**
comp=Z,18nm,1.1s,baz=287,slow=5.1
TANN Tannenbergstha 87.56 39 *e*P **P 15 57 29.6 0.0**
comp=Z,19nm,1.2s,baz=287,slow=5.1
ROTZ Rotzenmuhle 87.59 39 *e*P **P 15 57 30.0 +0.2**
comp=Z,11nm,1.2s,baz=287,slow=5.1
NKC Novy Kostel 87.60 39 *e*P **P 15 57 28.1 -1.7**
NKC Novy Kostel 87.60 39 *e*P **P 15 57 28.1 -1.7**
CLL Collm 87.61 38 *i* P **P 15 57 27.9 -1.9**
comp=Z,15nm,1.0s
CLL *e* 15 57 46.0
CLL Lm MLR 16 33 00.0
comp=N,200nm,20.1s
CLL Lm MLR 16 33 00.0
comp=E,200nm,21.9s
CLL Lm MLR 16 33 00.0
comp=Z,400nm,18.7s
CLL Collm 87.61 38 *i* P **P 15 57 27.9 -1.9**
CLL pmax pmax
comp=Z,15nm,1.0s
CLL Collm 87.61 38 P **P 15 57 28.8 -0.9**
CLL IAmb IAmb 15 57 30.4
comp=Z,19nm,1.1s
CLL Collm 87.61 38 *e*P **P 15 57 29.6 -0.2**
comp=Z,15nm,1.0s,baz=287,slow=5.1
FBE Freiberg 87.94 38 *e*P **P 15 57 31.7 +0.3**
comp=Z,20nm,1.1s,baz=287,slow=5.1
WET Wettzell 88.20 40 P **P 15 57 31.8 -0.9**
WET pmax pmax
comp=Z,17nm,1.1s
WET Wettzell 88.20 40 *e*P **P 15 57 32.8 +0.1**
comp=Z,18nm,1.1s,baz=287,slow=5.1
BRG Berggiesshubel 88.31 38 P **P 15 57 32.0 -1.1**
BRG pmax pmax
comp=Z,13nm,1.4s
BRG Berggiesshubel 88.31 38 *e*P **P 15 57 32.6 -0.5**
BRG Amp 15 57 34.1

comp=Z,10nm,1.1s
BRG Berggiesshubel 88.31 38 *e*P **P 15 57 33.1 0.0**
comp=Z,10nm,1.1s,baz=287,slow=5.1
TORD Torodi Ar. Bea 88.45 77 P **P 15 57 32.9 -1.6**
comp=Z,3.8nm,0.7s,baz=281,slow=4.7,SNR=17
TORD LR LR 16 34 41.0
comp=Z,229nm,19.7s,baz=310,slow=34
TORD Torodi Ar. Bea 88.45 77 P **P 15 57 30.8 -3.7**
KHC Kasperske Hory 88.64 40 *e*P **P 15 57 32.7 -2.1**
KHC Kasperske Hory 88.64 40 *e*P **P 15 57 32.7 -2.1**
KHC Kasperske Hory 88.64 40 IAmb IAmb 15 57 35.6
comp=Z,8.2nm,1.1s
ABTA Abfaltersbach 88.71 42 *e*P **P 15 57 35.3 +0.1**
comp=Z,1.8nm,0.4s
PVCC Panska Ves 88.80 38 P **P 15 57 35.7 +0.3**
PVCC pmax pmax
comp=Z,5.0nm,1.1s
GEC2 GERESS Array S 88.81 40 *e*P **P 15 57 35.5 -0.2**
comp=Z,11nm,1.3s,baz=287,slow=5.1
GERES GERESS Array B 88.81 40 P **P 15 57 34.0 -1.7**
comp=Z,5.2nm,1.1s,baz=355,slow=1.5,SNR=17
GERES LR LR 16 33 34.7
comp=Z,305nm,18.6s,baz=286,slow=33
GERES GERESS Array B 88.81 40 P **P 15 57 34.0 -1.7**
GERES GERESS Array B 88.81 40 P **P 15 57 33.6 -2.1**
PRU Pruhonice 88.96 39 *e*P **P 15 57 34.4 -1.8**
PRU Pruhonice 88.96 39 *e*P **P 15 57 34.4 -1.8**
KBA Koelnbreinsper 89.15 42 P **P 15 57 36.6 -0.8**
KBA pmax pmax
comp=Z,7.0nm,1.4s
KEST Kesra 89.62 53 LR LR 16 32 22.3
comp=Z,142nm,18.0s,baz=212,slow=32
CHVC Chvalec 89.67 38 *e*P **P 15 57 38.9 -0.7**
APA Apatity 89.69 19⇓ *i*P **P 15 57 42.0 +2.7**
APA pmax pmax
comp=Z,5.0nm,1.1s
TAM Tamanrasset 89.74 67 P **P 15 57 39.8 -0.8**
TAM pmax pmax
comp=Z,4.0nm,0.8s
OSTC Ostas 89.77 38 *e*P **P 15 57 39.7 -0.4**
LVZ Lovozero 89.88 18 *e*P **P 15 57 40.4 +0.2**
DPC Dobruska-Polom 89.91 38 *e*P **P 15 57 40.2 -0.5**
DPC Dobruska-Polom 89.91 38 *e*P **P 15 57 40.2 -0.5**
FINES FINESS Array B 90.27 26 P **P 15 57 41.1 -1.0**
comp=Z,2.2nm,0.7s,baz=0.0,slow=1.9,SNR=3.9
FINES LR LR 16 35 33.4
comp=Z,194nm,21.3s,baz=256,slow=34
KRLC Kraliky 90.28 38 *e*P **P 15 57 41.6 -0.9**
KRLC Kraliky 90.28 38 *e*P **P 15 57 41.6 -0.9**
SEY Seymchan 90.34 336 *i* P **P 15 57 42.7 +0.3**
KRUC Moravsky 90.41 39 *e*P **P 15 57 42.2 -0.8**
KRUC Moravsky 90.41 39 P **P 15 57 42.4 -0.6**
KRUC pmax pmax
comp=Z,7.0nm,1.4s
VRAC Vranov 90.44 39 *e*P **P 15 57 42.4 -0.8**
MORC Moravsky Berou 90.85 38 *e*P **P 15 57 44.5 -0.6**
MORC Moravsky Berou 90.85 38 P **P 15 57 44.9 -0.2**
MORC pmax pmax
comp=Z,7.0nm,1.5s
MODS Modra-Piesok 91.20 40 *e*P **P 15 57 46.6 -0.2**
MODS pmax pmax
comp=Z,11nm,1.1s
MODS Modra-Piesok 91.20 40 *e*P **P 15 57 46.6 -0.2**
TIXI Tiksi 91.45 349 *i* P **P 15 57 46.2 -1.2**
TIXI Tiksi 91.45 349 P **P 15 57 45.8 -1.5**
TIXI IAmb IAmb 15 57 46.9
comp=Z,6.7nm,0.8s
OJC Ojcow 92.03 37 IAmb IAmb 15 57 51.3
comp=Z,7.2nm,0.8s
VYHS Vyhne 92.12 39 *e*P **P 15 57 50.3 -0.7**
VYHS Vyhne 92.12 39 *e*P **P 15 57 50.3 -0.7**
PETK Petropavlovsk- 92.50 326 P **P 15 57 53.5 +0.8**
comp=Z,6.4nm,0.8s,baz=85,slow=9.1,SNR=4.7
PETK LR LR 16 40 01.5
comp=Z,85nm,20.9s,baz=66,slow=36
NIE Niedzica 92.64 38 P **P 15 57 53.2 -0.2**
NIE pmax pmax
comp=Z,4.0nm,1.2s
MA2 Magadan 92.76 334 *i* P **P 15 57 54.3 +0.6**
MA2 pmax pmax
comp=Z,6.0nm,1.0s
PSZ Piszkesteto 93.00 39 P **P 15 57 54.0 -1.1**
KLMR Klimovskoe 95.95 22 *e*P **P 15 58 05.3 -3.0**
KLMR *e* 16 01 56.5
KLMR pmax pmax
comp=Z,28nm,1.5s
KLMR Klimovskoe 95.95 22 *e*P **P 15 58 05.4 -2.9**
KLMR AMP 15 58 07.8
comp=Z,28nm,1.5s
KLMR *e*PP **PP 16 01 56.5 -4.0**
BELA Belgrano 2 96.00 170 P **P 15 58 08.0 -0.1**
BELA IAmb IAmb 15 58 20.9
comp=Z,5.2nm,1.0s
AKASG Malin Array Be 97.17 34 P **P 15 58 11.5 -2.5**
comp=Z,0.2nm,0.3s,baz=289,slow=2.9,SNR=4.1
AKASG PKKPbc **PKKPbc 16 14 53.1 -1.7**
comp=Z,0.5nm,0.4s,baz=85,slow=2.9,SNR=4.7
AKASG LR LR 16 39 52.2
comp=Z,212nm,21.0s,baz=300,slow=34
NRIK Noril'sk 97.63 1 P **P 15 58 15.2 -0.5**
comp=Z,1.6nm,0.8s,baz=26,slow=3.8,SNR=3.5
NRIK LR LR 16 44 44.8
comp=Z,680nm,19.9s,baz=5.0,slow=37
MLR Muntele Rosu 97.80 40 IAmb IAmb 15 58 19.1
comp=Z,7.5nm,1.0s
OBN Obninsk 98.37 28 *e*P **P 15 58 16.7 -2.6**
OBN *e* 16 02 18.2
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,241nm,16.0s
VNA3 Neumayer Olymp 99.26 161 Pdiff **Pdif 15 58 22.8 -0.1**
VNA1 Neumayer--Stat 99.58 160 Pdiff **Pdif 15 58 22.7 -1.5**
VNA2 Neumayer--Watz 99.92 161 Pdiff **Pdif 15 58 25.8 +0.1**
SNAA Sanae 101.49 161 Pdiff **Pdif 15 58 33.4 +0.6**
ZALV Zalesovo Beam 112.94 3 PKiKP **PKiKP 16 03 18.2 0.0**
comp=Z,4.2nm,0.6s,baz=286,slow=2.1,SNR=26
BRZS Berezniki 115.20 12 *e*PKP **PKiKP 16 03 21.3 -1.5**
baz=12
BRZS Berezniki 115.20 12 *e*PKiKP **PKiKP 16 03 21.3 -1.5**
SEM Semipalatinsk 116.04 7 *e*PKP **PKiKP 16 03 23.0 -1.7**
baz=7.2
SEM Semipalatinsk 116.04 7 *e*PKiKP **PKiKP 16 03 22.9 -1.7**
ULN Ulaanbaatar 117.36 347 *c i*PKiKP **PKiKP 16 03 28.1 +0.9**
ULN pmax pmax
comp=Z,5.0nm,0.8s
ULN Ulaanbaatar 117.36 347 P **PKiKP 16 03 28.5 +1.3**
SONM Songino Array 117.53 348 PKP **PKiKP 16 03 27.9 +0.4**
comp=Z,4.7nm,0.9s,baz=38,slow=0.3,SNR=24
SONM PKKPbc **PKKPbc 16 13 48.7 -2.8**
comp=Z,0.8nm,0.6s,baz=192,slow=3.3,SNR=3.7
SONM Songino Array 117.53 348 PKPdf **PKPdf 16 03 27.0 -0.5**
BOSA Boshof 118.07 115 PKP **PKiKP 16 03 29.7 +0.7**
comp=Z,13nm,0.9s,baz=273,slow=1.2,SNR=16
KSRS Korea Array 118.40 326 PKP **PKiKP 16 03 30.1 +0.8**
comp=Z,13nm,0.9s,baz=0.7,slow=1.4,SNR=32
KSAR Wonju Array Be 118.43 326 PKiKP **PKiKP 16 03 29.8 +0.5**
KSAR Wonju Array Be 118.43 326 **PKiKP 16 03 29.8 +0.5**
MAKZ Makanchi 119.79 7 PKiKP **PKPdf 16 03 30.9 -0.8**
MAKZ Makanchi 119.79 7 PKPdf **PKPdf 16 03 30.9 -0.8**
MK31 Makanchi Array 119.84 6 PKiKP **PKPdf 16 03 30.5 -1.3**
MK31 Makanchi Array 119.84 6 PKPdf **PKPdf 16 03 30.5 -1.3**
MKAR Makanchi Array 119.84 6 PKP **PKPdf 16 03 31.1 -0.7**
comp=Z,3.8nm,0.8s,baz=9.1,slow=2.3,SNR=41
MKAR PKKPbc **PKKPbc 16 13 40.6 -2.4**
comp=Z,0.2nm,0.8s,baz=99,slow=4.5,SNR=4.1
MKAR Makanchi Array 119.84 6 **PKPdf 16 03 30.5 -1.3**
LSZ Lusaka 120.01 100 PKiKP **PKiKP 16 03 33.7 +0.6**
LSZ Lusaka 120.01 100 **PKiKP 16 03 33.7 +0.6**
BTLS Baital 120.18 13 *e*PKP **PKPdf 16 03 31.6 -1.0**
baz=13
BTLS Baital 120.18 13 *e*PKiKP **PKPdf 16 03 31.5 -1.0**
GEYT Alibeck 120.87 29 PKP **PKPdf 16 03 34.2 +0.1**
comp=Z,10nm,0.7s,baz=298,slow=3.2,SNR=17
GEYT Alibeck 120.87 29 **PKPdf 16 03 33.6 -0.5**
TDK Taldyqorghan 121.07 10 *e*PKP **PKPdf 16 03 32.9 -1.4**
baz=9.9
TDK Taldyqorghan 121.07 10 *e*PKiKP **PKPdf 16 03 32.8 -1.4**
KUU Kurty 121.76 12 *e*PKP **PKPdf 16 03 34.4 -1.2**
baz=12
KUU Kurty 121.76 12 *e*PKiKP **PKPdf 16 03 34.4 -1.2**
IUG Iuzhnay 121.85 18 *e*PKP **PKPdf 16 03 34.6 -1.3**
baz=18
IUG Iuzhnay 121.85 18 *e*PKiKP **PKPdf 16 03 34.6 -1.3**
USP Ospenovka 121.97 13 P **PKiKP 16 03 36.6 +0.4**

SNR=34
CHMS Chumysh 122.28 13 P **PKiKP 16 03 37.1 +0.3**
SNR=8.9
EKS2 Erkin-Say 122.38 14 P **PKiKP 16 03 37.9 +0.7**
SNR=16
TKM2 Tokmak 2 122.54 13 P **PKiKP 16 03 37.8 +0.2**
SNR=11
AAK Ala-Archa 122.57 14 P **PKiKP 16 03 37.8 +0.2**
SNR=14
AAK Ala-Archa 122.57 14 *c i* PKIKP **PKiKP 16 03 38.2 +0.6**
AAK pmax pmax
comp=Z,26nm,0.6s
AAK Ala-Archa 122.57 14 PKPdf **PKiKP 16 03 37.7 +0.1**
MDOK Medeo 122.61 11 *e*PKP **PKPdf 16 03 36.9 -0.5**
baz=12
MDOK Medeo 122.61 11 *e*PKIKP **PKPdf 16 03 36.9 -0.5**
KPKS Kokpek 122.61 10 *e*PKP **PKPdf 16 03 37.0 -0.4**
baz=10
KPKS Kokpek 122.61 10 *e*PKIKP **PKPdf 16 03 36.9 -0.4**
KBK Karagaybulak 122.65 13 P **PKiKP 16 03 38.1 +0.4**
SNR=11
HHC Hu-ho-hao-te 122.69 341 *e*PKP **PKPdf 16 03 36.8 -0.8**
HHC LR LR
comp=Z,250nm,14.2s
HHC LR LR
comp=Z,190nm,17.2s
HHC LR LR
comp=Z,230nm,18.8s
MAW Mawson 122.78 168 PKP **PKPdf 16 03 36.8 +0.1**
comp=Z,5.7nm,0.8s,baz=284,slow=6.8,SNR=5.3
AML Almayashu 122.86 15 P **PKiKP 16 03 39.1 +0.7**
SNR=42
UCH Uchtor 122.96 14 P **PKiKP 16 03 39.6 +0.9**
SNR=25
UZB Uzynbulak 122.97 10 *e*PKP **PKPdf 16 03 37.8 -0.4**
baz=9.9
UZB Uzynbulak 122.97 10 *e*PKIKP **PKPdf 16 03 37.7 -0.4**
RAYN Ar Rayn 123.02 50 PKIKP **PKPdf 16 03 37.6 -1.0**
RAYN Ar Rayn 123.02 50 PKPdf **PKPdf 16 03 37.6 -1.0**
SHLS Shalkode 123.04 9 *e*PKP **PKPdf 16 03 37.9 -0.4**
baz=9.2
SHLS Shalkode 123.04 9 *e*PKIKP **PKPdf 16 03 37.8 -0.4**
WMQ Urumqi 123.19 2 *e*PKP **PKPdf 16 03 38.1 -0.3**
WMQ LR LR
comp=Z,620nm,20.5s
WMQ LR LR
comp=Z,690nm,26.5s
WMQ LR LR
comp=Z,860nm,26.5s
ULHL Ulahol 123.33 12 P **PKiKP 16 03 39.9 +0.8**
SNR=8.9
CHGR Chuyangaron 124.76 20 PKPdf **PKPdf 16 03 40.2 -1.4**
KSH Kashi 125.88 14 PKP **PKiKP 16 03 45.4 +1.2**
KMBO Kilima Mbogo 126.21 82 PKP **PKiKP 16 03 46.4 +0.8**
comp=Z,1.6nm,0.7s,baz=64,slow=3.0,SNR=4.3
GTA Gaotai 126.88 351 PKP **PKiKP 16 03 46.1 -0.1**
GTA PP **PP 16 05 45.6 +3.4**
GTA AMB AMB
comp=Z,110nm,7.8s
GTA LR LR
comp=Z,190nm,18.5s
GTA LR LR
comp=Z,190nm,20.4s
GTA LR LR
comp=Z,210nm,21.8s
NJ2 Nanjing 127.29 329 *e*PKP **PKPdf 16 03 46.5 0.0**
KBL Kabul 128.41 22 PKIKP **PKPdf 16 03 49.2 +0.4**
KBL Kabul 128.41 22 PKPdf **PKPdf 16 03 49.2 +0.4**
SHME Shamm 128.77 40 P **PKPdf 16 03 49.7 +0.2**
SNR=6.0
BANOM Banah 128.96 40 P **PKPdf 16 03 49.8 -0.1**
MASF Masafi 129.27 41 P **PKPdf 16 03 50.7 +0.2**
SNR=16
LZH Lanzhou 129.30 346 *e*PKP **PKiKP 16 03 52.1 +0.9**
MDH Madha 129.41 41 P **PKiKP 16 03 51.9 +0.5**
STKA Stephens Creek 129.55 240 PKP **PKiKP 16 03 51.7 +0.2**
comp=Z,11nm,0.9s,baz=59,slow=2.7,SNR=18
UOSS Minazif 129.59 41 PKPdf **PKPdf 16 03 49.9 -1.2**
UOSS Minazif 129.59 41 P **PKPdf 16 03 50.8 -0.3**
HATD Hatta, Dubai 129.63 41 P **PKPdf 16 03 51.0 -0.2**
SNR=11
XAN Xi'an 129.74 340 PKP **PKPdf 16 03 50.9 -0.3**
XAN LR LR
comp=Z,370nm,20.6s
XAN LR LR
comp=Z,340nm,19.5s
SOHO SOHO 130.38 42 P **PKPdf 16 03 51.7 -0.9**
NIL Nilore 130.66 19 PKIKP **PKPdf 16 03 52.1 -0.8**
NIL Nilore 130.66 19 PKPdf **PKPdf 16 03 52.1 -0.8**
HOQ Hoqain 131.27 42 P **PKPdf 16 03 54.3 0.0**
BSY Bisya 131.79 42 P **PKPdf 16 03 54.9 -0.4**
ENH Enshi 132.95 337 PKPpre 16 03 49.6
ENH PKPdf **PKiKP 16 03 58.1 -0.4**
MHTO MHTO 133.52 43 P **PKPdf 16 03 58.1 -0.5**
SNR=16
MHTO P **PKPdf 16 03 58.1 -0.5**
SNR=16
WRAB Tennant Creek 137.28 255 *c i* PKIKP **PKiKP 16 04 07.1 -0.4**
WRAB pmax pmax
comp=Z,17nm,1.0s
WRA Warramunga Arr 137.29 255 PKhKP PKPpre 16 03 56.1
comp=Z,1.4nm,0.8s,baz=97,slow=3.1,SNR=10
WRA PKP **PKiKP 16 04 06.7 -0.9**
comp=Z,13nm,0.9s,baz=87,slow=1.5,SNR=25
ASAR Alice Springs 137.44 249 PKhKP PKPpre 16 03 56.6
comp=Z,0.9nm,0.7s,baz=112,slow=4.3,SNR=11
ASAR PKP **PKiKP 16 04 06.8 -0.9**
comp=Z,5.4nm,0.8s,baz=107,slow=2.9,SNR=20
ASAR Alice Springs 137.44 249 PKIKP **PKPdf 16 04 06.3 +0.5**
ASAR Alice Springs 137.44 249 PKPpre 16 03 57.4
ASAR PKPdf **PKPdf 16 04 06.3 +0.5**
GYA Guiyang 137.44 338 PKP **PKiKP 16 04 07.7 -0.1**
PYUN Piuthan 138.33 10 *e*P **PKPdf 16 04 02.2 -5.5**
GKN Gorkha 138.66 7 *e*P **PKPdf 16 04 03.2 -5.0**
KOLN Koldanda 138.75 9 *e*P **PKPdf 16 04 03.0 -5.4**
GUN Gumba 138.89 6 *e*P **PKPdf 16 04 05.8 -3.1**
KKN Kakani 138.95 7 *e*P **PKPdf 16 04 05.0 -3.8**
JIRN Jiri 139.17 5 *e*P **PKPdf 16 04 06.3 -3.1**
PKIN Phulchoki 139.17 7 *e*P **PKPdf 16 04 05.3 -4.0**
PKI Pulchoki 139.18 7 *e*P **PKPdf 16 04 05.5 -3.9**
TAPN Taplejung 139.60 3 *e*P **PKPdf 16 04 07.7 -2.4**
RAMN Ramite 139.91 5 *e*P **PKPdf 16 04 07.1 -3.5**
ODAN Odare 140.06 4 *e*P **PKPdf 16 04 07.4 -3.5**
POO Poona 144.56 27 *e*P **PKPab 16 04 14.0 -3.3**
FITZ Fitzroy Crossi 145.60 257 **PKPab 16 04 21.6 +0.5**
PAYA Payao 146.26 343 P **PKPbc 16 04 23.1 +0.3**
CM34 Chiang Mai Arr 146.94 344 P **PKPbc 16 04 25.0 +0.3**
CM33 Chiang Mai Arr 147.02 345 P **PKPbc 16 04 25.2 +0.2**
CMMT Chiang Mai 147.03 345 P **PKPdf 16 04 24.0 +1.0**
comp=Z,217nmcomp=Z,27nm,0.9s
LAMP Lampang 147.12 343 P **PKPbc 16 04 25.9 +0.6**
CM32 Chiang Mai Arr 147.21 345 P **PKPbc 16 04 26.0 +0.5**
CM36 Chiang Mai Arr 147.27 344 P **PKPbc 16 04 25.0 -0.7**
CM09 Chiang Mai Arr 147.37 344 P **PKPbc 16 04 26.0 0.0**
comp=Z,703nmcomp=Z,97nm,0.8s
CM31 Chiang Mai Arr 147.37 345 P **PKPbc 16 04 26.0 0.0**
comp=Z,22μmcomp=Z,3μm,0.6s
CM31 Chiang Mai Arr 147.37 345 **PKPbc 16 04 25.1 -0.8**
CMAR Chiang Mai Arr 147.37 345 PKPbc **PKPbc 16 04 25.5 -0.4**
comp=Z,58nm,0.7s,baz=341,slow=3.3,SNR=72
CMAR Chiang Mai Arr 147.37 345 PKIKP **PKPdf 16 04 24.1 +0.6**
CMAR Chiang Mai Arr 147.37 345 **PKPdf 16 04 24.1 +0.6**
CM15 Chiang Mai Arr 147.38 345 P **PKPbc 16 04 26.3 +0.3**
comp=Z,630nmcomp=Z,95nm,0.8s
CM02 Chiang Mai Arr 147.39 345 P **PKPbc 16 04 26.2 +0.2**
comp=Z,708nmcomp=Z,107nm,0.8s
CM01 Chiang Mai Arr 147.40 344 P **PKPbc 16 04 26.6 +0.5**
comp=Z,605nmcomp=Z,91nm,0.9s
CM13 Chiang Mai Arr 147.41 345 P **PKPbc 16 04 26.1 0.0**
comp=Z,572nmcomp=Z,85nm,0.8s
CM04 Chiang Mai Arr 147.41 344 P **PKPbc 16 04 26.0 -0.1**
comp=Z,708nmcomp=Z,106nm,0.8s
CM05 Chiang Mai Arr 147.42 344 P **PKPbc 16 04 26.5 +0.4**
comp=Z,521nmcomp=Z,78nm,1.0s
HYB Hyderabad 147.45 21 *i* PKP **PKPdf 16 04 23.0 -0.7**
UTTA Uttaradit 147.59 341 P **PKPbc 16 04 26.1 -0.4**
SUKH Sukhothai 148.11 343 P **PKPdf 16 04 24.0 -0.7**
comp=Z,1μmcomp=Z,169nm,0.9s
PHIT Phitsanulok 148.15 341 P **PKPbc 16 04 28.0 -0.1**
DLV T Lat 149.13 323 **PKPdf 16 04 27.6 +0.8**
UMPA Umpang Tak 149.54 343 P **PKiKP 16 04 33.0 +0.2**
comp=Z,4μmcomp=Z,120nm,1.0s
KAPI Kappang 149.76 283 PKP2 **PKiKP 16 04 33.2 -0.1**
KAPI Kappang 149.76 283 PKPdf **PKPdf 16 04 28.1 +0.6**
KAPI PKPbc **PKiKP 16 04 33.2 -0.1**

UTHA Uthaitani 149.99 342 P **PKPdf 16 04 30.4 +2.6**
comp=Z,2μmcomp=Z,243nm,0.8s
PSA00 Pilbara Seismi 150.59 249 **PKPbc 16 04 34.0 -0.1**
PHET Kaeng Krachan 152.41 340 P **PKiKP 16 04 39.9 +1.2**
KSM Kuching 155.30 305 PKPdf **PKPdf 16 04 35.2 -0.5**
KSM PKPbc PKPbc 16 04 43.3
KSM PKPab sPKPbc 16 05 02.6 -4.7
PSI Prapat 161.89 331 PKIKP **PKPdf 16 04 43.2 -0.5**
RPSI Rantau Prapat 161.98 331 **PKPdf 16 04 43.2 -0.5**
GSI Gunungsitoli 163.83 333 **PKPdf 16 04 46.8 +1.3**

*IDC **08** 16:01:15.7±60.0, 22.°2**70**S×175.°27**W**, h0**km**, mb4.0/3, mb1 4.1/3, mb1mx3.7/23, mbtmp4.0/3, Error ellipse: s-maj=1126.0km s-min=176.1km az=87.0*
*NEIC **08** 16:01:27.6±0.5, 23.°2**36**S±0.°10×175.°54**W**±0.°10, h72**km**±12**km**, mb4.4/9, Error ellipse: s-maj=15.4km s-min=11.0km az=214.0*
ISC 08 16:01:25.6±0.9, 23.°22**S±0.°2×175.°8**8**W±0.°2, h35**km**, n15, σ1**s13/15, mb4.4/8, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.36**	**197**	Pn		**Pn**	**Pn**	**16 02 57.1**	**+0.3**
NIUE	**Niue**	**6.80**	**54**	Pn		**Pn**	**Pn**	**16 03 04.4**	**+1.5**
CTAO	**Charters Tower**	**35.38**	**268**	P		**P**	**P**	**16 08 19.9**	**+1.7**
STKA	**Stephens Creek**	**38.60**	**247**	P		**P**	**P**	**16 08 45.0**	**-0.5**
	2.2nm,0.9s,baz=90,slow=10,SNR=3.9								
STKA	**Stephens Creek**	**38.60**	**247**	P		**P**		**16 08 45.8**	**+0.4**
BBOO	**Buckleboo**	**43.30**	**246**	P		**P**		**16 09 23.3**	**-0.8**
AS31	**Alice Springs**	**45.99**	**259**	P		**P**		**16 09 45.5**	**-0.3**
ASAR	**Alice Springs**	**45.99**	**259**	P		**P**		**16 09 45.2**	**-0.6**
	0.4nm,0.5s,baz=95,slow=7.5,SNR=15								
WR0	**Warramunga Arr**	**46.16**	**264**	P		**P**		**16 09 46.7**	**-0.4**
WR0						IAmb	IAmb	16 10 01.9	
	comp=Z,6.0nm,1.3s								
WB2	**Warramunga Arr**	**46.33**	**264**	P		**P**		**16 09 48.1**	**-0.4**
WB2						IAmb	IAmb	16 09 57.3	
	comp=Z,8.9nm,1.4s								
WB0	**Warramunga Arr**	**46.34**	**264**	P		**P**		**16 09 48.1**	**-0.4**
WB0						IAmb	IAmb	16 09 48.9	
	comp=Z,3.6nm,0.7s								
WRA	**Warramunga Arr**	**46.34**	**264**	P		**P**		**16 09 48.0**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=101,slow=8.1,SNR=19								
WRA	**Warramunga Arr**	**46.34**	**264**	P		**P**		**16 09 47.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**54.77**	**264**	P		**P**		**16 10 53.2**	**+1.0**
FITZ						IAmb	IAmb	16 10 53.7	
	comp=Z,3.1nm,0.9s								
PAGB	**Antelope Grade**	**78.67**	**43**	P		**P**		**16 13 21.8**	**-2.4**
PAGB						IAmb	IAmb	16 13 27.6	
	comp=Z,7.1nm,0.9s								

*NEIC **08** 16:41:33.4±1.3, 18.°35**N**±0.°09×145.°5**E**±0.°1, h467**km**±5**km**, mb4.4/102, Error ellipse: s-maj=16.0km s-min=12.5km az=90.0*
*IDC **08** 16:41:33.6±0.7, 18.°39**N**×145.°55**E**, h476**km**±7**km**, mb3.7/27, mb1 3.8/31, mb1mx3.6/44, mbtmp4.5/31, Error ellipse: s-maj=11.7km s-min=7.0km az=88.0*
ISC 08 16:41:34.0±0.6, 18.°35N**±0.°05×145.°51**E**±0.°07, h479**km**±6**km, n217, σ0**s92/244, mb4.5/118, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANA2	**Anatahan**	**2.01**	**174**	P		**P**	**P**	**16 42 35.4**	**-2.0**
GUMO	**Guam**	**4.78**	**187**	P		**P**	**P**	**16 42 57.3**	**-0.6**
JCJ	**Chichijima**	**9.23**	**341**	P		**P**	**P**	**16 43 43.2**	**+0.3**
	41nm,0.3s,baz=128,slow=6.1,SNR=60								
JCJ				S			**S**	**16 45 29.7**	**+0.9**
	3.2nm,0.3s,baz=287,slow=22,SNR=3.4								
JCJ	**Chichijima**	**9.23**	**341**				**P**	**16 43 43.5**	**+0.7**
JMZ	**Minamidaito 2**	**15.18**	**302**	P		**P**	**P**	**16 44 44.9**	**-1.5**
JOW	**Kunigami**	**18.00**	**301**	P		**P**	**P**	**16 45 14.8**	**-0.6**
	11nm,0.3s,baz=139,slow=12,SNR=16								
JOW	**Kunigami**	**18.00**	**301**	P		**P**	**P**	**16 45 14.8**	**-0.6**
JYT	**Yasato**	**18.42**	**346**	P		**P**	**P**	**16 45 20.9**	**+1.7**
JSU	**Suzuyama**	**18.89**	**317**	P		**P**	**P**	**16 45 23.8**	**+0.2**
MJAR	**Matsushiro Arr**	**19.23**	**342**	P		**P**	**P**	**16 45 24.8**	**-1.9**
	0.1nm,0.3s,baz=167,slow=10.0,SNR=7.4								
MJAR	**Matsushiro Arr**	**19.23**	**342**	P		**P**	**P**	**16 45 25.8**	**-0.9**
MAJO	**Matsushiro**	**19.23**	**342**	P		**P**	**P**	**16 45 24.9**	**-1.8**
MAJO						IAmb	IAmb	16 45 35.4	
	comp=Z,12nm,1.2s								
MAT	**Matsushiro**	**19.23**	**342**	P		**P**	**P**	**16 45 24.5**	**-2.2**
JNU	**Nakatsue**	**19.71**	**321**	P		**P**	**P**	**16 45 30.6**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=110,slow=6.2,SNR=1.9								
JNU	**Nakatsue**	**19.71**	**321**	P		**P**	**P**	**16 45 31.2**	**0.0**
JMM	**Marumori**	**19.88**	**349**	P		**P**	**P**	**16 45 33.2**	**+0.7**
MANU	**Manus Island**	**20.35**	**175**	P		**P**	**P**	**16 45 37.5**	**+0.4**
MANU						IAmb	IAmb	16 45 39.3	
	comp=Z,9.3nm,0.7s								
JSD	**Sado**	**20.61**	**344**	P		**P**	**P**	**16 45 39.6**	**+0.4**
JAY	**Jayapura**	**21.27**	**193**	P		**P**	**P**	**16 45 45.3**	**-0.3**
	comp=Z,7.8nm,0.8s,baz=7.7,slow=7.7,SNR=2.6								
TWG	**Pinlag**	**23.29**	**285**	P		**P**	**P**	**16 46 03.0**	**-0.6**
RABL	**Rabaul**	**23.34**	**163**	P		**P**	**P**	**16 46 04.8**	**+0.7**
RABL						IAmb	IAmb	16 46 08.9	
	comp=Z,26nm,1.2s								
SIJI	**Sorong**	**23.69**	**218**	P		**P**	**P**	**16 46 07.2**	**-0.1**
	comp=Z,18nm,0.8s,baz=3.6,slow=18,SNR=6.2								
KSRS	**Korea Array**	**24.49**	**325**	P		**P**	**P**	**16 46 13.8**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=145,slow=9.1,SNR=11								
FAKI	**Fak Fak**	**24.85**	**213**	P		**P**	**P**	**16 46 17.0**	**-0.6**
PMG	**Port Moresby**	**27.63**	**176**	P		**P**	**P**	**16 46 42.0**	**-0.1**
PMG						IAmb	IAmb	16 46 42.5	
	comp=Z,10nm,0.6s								
MRSI	**Marisa**	**29.18**	**235**	P		**P**	**P**	**16 46 55.3**	**-0.4**
	comp=Z,391nmcomp=Z,36nm,0.9s								
MYLDM	**Lahad Datu**	**29.44**	**247**	P		**P**	**P**	**16 46 59.8**	**+1.7**
MYLDM						IAmb	IAmb	16 47 00.5	
	comp=Z,14nm,0.8s								
LUWI	**Luwuk**	**29.52**	**232**	P		**P**	**P**	**16 46 57.4**	**-1.3**
LUWI	**Luwuk**	**29.52**	**232**	P		**P**	**P**	**16 46 56.7**	**-2.0**
	comp=Z,691nmcomp=Z,53nm,0.9s								
TOLI2	**Tolitoli**	**29.71**	**238**	P		**P**	**P**	**16 47 00.4**	**+0.1**
TOLI2						IAmb	IAmb	16 47 01.1	
	comp=Z,33nm,1.2s								
WHN	**Wuhan**	**30.75**	**299**	P		**P**	**P**	**16 47 10.3**	**+1.2**
KKM	**Kota Kinabalu**	**31.07**	**251**	P		**P**	**P**	**16 47 12.9**	**+0.6**
COEN	**Coen**	**32.19**	**184**	P		**P**	**P**	**16 47 22.2**	**+0.6**
COEN						IAmb	IAmb	16 47 22.6	
	comp=Z,9.3nm,0.8s								
KLR	**Kul'dur**	**32.75**	**343**	P		**P**	**P**	**16 47 25.7**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=178,slow=9.3,SNR=9.5								
KLR						PcP	**PcP**	**16 49 57.1**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=157,slow=6.0,SNR=5.2								
TTSI	**Tana Toraja**	**33.05**	**233**	P		**P**	**P**	**16 47 30.1**	**+1.0**
	comp=Z,772nmcomp=Z,101nm,0.8s								
SPSI	**Sidrap Palu**	**33.69**	**231**	P		**P**	**P**	**16 47 34.2**	**-0.3**
	comp=Z,538nmcomp=Z,55nm,0.8s								
BNSI	**Bone**	**33.74**	**230**	P		**P**	**P**	**16 47 35.3**	**+0.4**
	comp=Z,67nm,0.7s								
MTN	**Manton Dam**	**34.09**	**206**	P		**P**	**P**	**16 47 37.9**	**+0.1**
KAPI	**Kappang**	**34.41**	**230**	P		**P**	**P**	**16 47 41.0**	**+0.4**
BSSI	**Bau Bau, Buton**	**34.66**	**228**	P		**P**	**P**	**16 47 42.7**	**0.0**
	comp=Z,676nmcomp=Z,72nm,0.7s								
ENH	**Enshi**	**34.76**	**297**	P		**P**	**P**	**16 47 43.8**	**+0.4**
ENH						IAmb	IAmb	16 47 44.5	
	comp=Z,8.6nm,0.9s								
SOEI	**Soe**	**34.92**	**219**	P		**P**	**P**	**16 47 43.5**	**-1.5**
SOEI	**Soe**	**34.92**	**219**	P		**P**	**P**	**16 47 42.9**	**-2.1**
	comp=Z,39nm,0.7s								
MMRI	**Maumere**	**35.31**	**223**	P		**P**	**P**	**16 47 47.9**	**-0.2**
MMRI	**Maumere**	**35.31**	**223**	P		**P**	**P**	**16 47 47.3**	**-0.8**
	comp=Z,47nm,0.8s								
BATI	**Baumata**	**35.64**	**219**	P		**P**	**P**	**16 47 49.3**	**-1.6**
	comp=Z,30nm,0.6s								
MTKI	**Muara Teweh, K**	**35.69**	**241**	P		**P**	**P**	**16 47 50.6**	**-0.7**
KBKI	**Kotabaru**	**36.03**	**236**	P		**P**	**P**	**16 47 53.3**	**-0.9**
	comp=Z,395nmcomp=Z,24nm,0.8s								
SBUM	**Sibu**	**36.24**	**248**	P		**P**	**P**	**16 47 56.9**	**+1.0**
CTAO	**Charters Tower**	**38.21**	**179**	P		**P**	**P**	**16 48 12.7**	**+0.7**
CTAO						IAmb	IAmb	16 48 13.1	
	comp=Z,14nm,0.8s								
KSM	**Kuching**	**38.39**	**248**	P		**P**	**P**	**16 48 13.2**	**-0.4**
KSM						IAmb	IAmb	16 48 13.7	
	comp=Z,14nm,0.7s								
PLAI	**Plampang**	**38.45**	**228**	P		**P**	**P**	**16 48 13.2**	**-0.9**
	comp=Z,914nmcomp=Z,65nm,0.9s								
TWSI	**Taliwang, Sumb**	**39.02**	**229**	P		**P**	**P**	**16 48 17.5**	**-1.2**
	comp=Z,538nmcomp=Z,73nm,0.8s								
WB0	**Warramunga Arr**	**39.42**	**197**	P		**P**	**P**	**16 48 21.9**	**0.0**
WB0						IAmb	IAmb	16 48 22.7	
	comp=Z,12nm,0.6s								

WR0 Warramunga Arr 39.57 196 P **P 16 48 23.0 0.0**
WR0 PcP **PcP 16 50 19.2 +0.4**
WB2 Warramunga Arr 39.60 197 P **P 16 48 23.3 0.0**
WB2 IAmb IAmb 16 48 24.2
comp=Z,15nm,0.7s
WB2 PcP **PcP 16 50 19.3 +0.4**
WRA Warramunga Arr 39.60 197 P **P 16 48 23.4 +0.1**
comp=Z,11nm,0.6s,baz=19,slow=8.5,SNR=85
WRA PcP **PcP 16 50 18.8 -0.2**
comp=Z,3.4nm,0.6s,baz=13,slow=3.5,SNR=10
WRA ScP **ScP 16 53 21.4 -0.4**
comp=Z,1.6nm,0.8s,baz=13,slow=3.9,SNR=6.5
WRA Warramunga Arr 39.60 197 P **P 16 48 22.4 -1.0**
WRA PcP **PcP 16 50 19.2 +0.3**
SRBI Singaraja 39.80 231 P **P 16 48 25.4 +0.4**
comp=Z,43nm,0.8s
KMMI Kalianget 40.07 234 P **P 16 48 28.5 +1.3**
comp=Z,38nm,1.0s
NONG Nongkai 40.18 276 P **P 16 48 29.0 +1.0**
KHON Khomkaen 40.73 274 P **P 16 48 33.7 +1.3**
FITZ Fitzroy Crossi 41.15 209 P **P 16 48 36.2 +0.5**
MA2 Magadan 41.35 4 P **P 16 48 36.8 0.0**
comp=Z,3.7nm,0.7s,baz=165,slow=6.9,SNR=8.9
MA2 Magadan 41.35 4 P **P 16 48 37.1 +0.4**
CHAI Chaiyaphum 41.59 273 P **P 16 48 39.0 -0.4**
comp=Z,395nmcomp=Z,28nm,0.6s
SRAK Srakaew 41.90 271 P **P 16 48 38.8 -2.9**
comp=Z,2μmcomp=Z,210nm,0.8s
UTTA Uttaradit 42.66 276 P **P 16 48 48.4 +0.6**
comp=Z,250nmcomp=Z,26nm,0.8s
PHIT Phitsanulok 42.87 276 P **P 16 48 50.0 +0.5**
comp=Z,129nm,0.7s
ULN Ulaanbaatar 42.93 322 P **P 16 48 50.1 +0.5**
PAYA Payao 43.11 279 P **P 16 48 52.1 +0.8**
comp=Z,3μmcomp=Z,269nm,0.6s
AS31 Alice Springs 43.27 196 P **P 16 48 52.4 -0.1**
ASAR Alice Springs 43.27 196 P **P 16 48 52.3 -0.2**
comp=Z,8.1nm,0.7s,baz=13,slow=7.1,SNR=191
ASAR PcP **PcP 16 50 31.6 +0.4**
comp=Z,2.5nm,0.7s,baz=27,slow=2.6,SNR=9.8
ASAR ScP **ScP 16 53 36.1 -0.3**
comp=Z,0.4nm,0.7s,baz=14,slow=4.6,SNR=2.7
ASAR Alice Springs 43.27 196 P **P 16 48 52.4 -0.2**
ASAR PcP **PcP 16 50 31.9 +0.8**
UGM Wanagama 43.28 236 P **P 16 48 52.1 -0.6**
SONM Songino Array 43.30 322 P **P 16 48 52.9 +0.4**
comp=Z,2.7nm,0.6s,baz=136,slow=7.2,SNR=25
SONM PcP **PcP 16 50 31.2 +0.1**
comp=Z,1.9nm,0.8s,baz=130,slow=4.5,SNR=7.6
SONM ScP **ScP 16 53 34.4 -2.0**
comp=Z,0.2nm,0.4s,baz=114,slow=3.7,SNR=3.6
SONM Songino Array 43.30 322 P **P 16 48 52.8 +0.2**
SONM PcP **PcP 16 50 31.4 +0.4**
LAMP Lampang 43.43 278 P **P 16 48 54.9 +1.0**
comp=Z,333nmcomp=Z,23nm,0.7s
SUKH Sukhothai 43.57 276 P **P 16 48 55.0 +0.1**
comp=Z,624nmcomp=Z,49nm,0.6s
EIDS Eidsvold 43.80 173 P **P 16 48 56.6 +0.2**
CM35 Chiang Mai Arr 43.86 278 P **P 16 48 57.0 -0.2**
CM36 Chiang Mai Arr 43.94 278 P **P 16 48 58.0 +0.2**
MYKOM Kota Tinggi 44.03 253 P **P 16 48 60.0 +1.4**
MYKOM IAmb IAmb 16 49 00.2
comp=Z,14nm,0.6s
CMMT Chiang Mai 44.04 278 P **P 16 48 58.0 -0.6**
comp=Z,6.1nm,0.6s
CM33 Chiang Mai Arr 44.04 278 P **P 16 48 58.0 -0.6**
CHTO Chiang Mai 44.04 278 P **P 16 48 59.1 +0.4**
CHTO IAmb IAmb 16 48 59.7
comp=Z,7.9nm,0.6s
CHTO PcP **PcP 16 50 35.1 +1.1**
CM09 Chiang Mai Arr 44.04 278 P **P 16 48 59.0 +0.3**
comp=Z,167nmcomp=Z,20nm,0.8s
CM04 Chiang Mai Arr 44.06 278 P **P 16 48 59.9 +1.1**
comp=Z,300nmcomp=Z,41nm,0.8s
CM01 Chiang Mai Arr 44.08 278 P **P 16 49 00.1 +1.1**
comp=Z,242nmcomp=Z,33nm,0.9s
CM02 Chiang Mai Arr 44.09 278 P **P 16 49 00.0 +1.0**
comp=Z,239nmcomp=Z,29nm,0.8s
CM31 Chiang Mai Arr 44.09 278 P **P 16 49 00.0 +1.0**
comp=Z,9μmcomp=Z,857nm,0.6s
CMAR Chiang Mai Arr 44.09 278 P **P 16 48 59.9 +0.9**
comp=Z,18nm,0.6s,baz=71,slow=6.7,SNR=117
CMAR PcP **PcP 16 50 34.4 +0.3**
comp=Z,0.5nm,0.4s,baz=71,slow=3.0,SNR=5.7
CMAR Chiang Mai Arr 44.09 278 P **P 16 49 00.8 +1.8**
CM05 Chiang Mai Arr 44.09 278 P **P 16 48 60.0 +0.9**
comp=Z,309nmcomp=Z,39nm,0.7s
CM15 Chiang Mai Arr 44.10 278 P **P 16 49 00.1 +1.0**
comp=Z,372nmcomp=Z,37nm,0.8s
CM13 Chiang Mai Arr 44.12 278 P **P 16 49 00.1 +0.9**
comp=Z,387nmcomp=Z,45nm,0.7s
PHET Kaeng Krachan 44.42 270 P **P 16 49 04.1 +2.5**
comp=Z,30nm,0.9s
UMPA Umpang Tak 44.50 275 P **P 16 49 04.0 +1.8**
comp=Z,47nm,0.6s
GTA Gaotai 44.62 308 *e*P **P 16 49 03.6 +0.7**
GTA PcP **pwP 16 50 36.5 0.0**
GTA ScP **ScP 16 53 41.5 -0.5**
GTA pmax pmax
comp=Z,3.0nm,0.9s
SEY Seymchan 44.79 4 P **P 16 49 04.2 +0.5**
comp=Z,0.5nm,0.5s,baz=185,slow=8.5,SNR=4.8
YAK Yakutsk 45.03 350 P **P 16 49 04.7 -0.8**
comp=Z,5.7nm,0.4s,baz=321,slow=1.1,SNR=5.5
MHMT Maesarieng 45.08 278 P **P 16 49 08.0 +1.4**
DZM Mont Dzumac 45.10 152 P **P 16 49 07.3 +0.5**
comp=Z,5.7nm,0.5s,baz=229,slow=2.4,SNR=15
IPM Ipoh 45.59 258 P **P 16 49 11.4 +0.8**
IPM IAmb IAmb 16 49 12.4
comp=Z,20nm,0.9s
KULM Kulim 45.65 259 P **P 16 49 12.4 +1.3**
KULM IAmb IAmb 16 49 13.2
comp=Z,19nm,0.9s
KASI Kota Agung 46.88 243 P **P 16 49 18.5 -2.0**
comp=Z,809nmcomp=Z,86nm,1.0s
PSA00 Pilbara Seismi 46.97 213 P **P 16 49 20.8 -0.2**
PSA00 IAmb IAmb 16 49 21.7
comp=Z,18nm,0.9s
PSA00 Pilbara Seismi 46.97 213 P **P 16 49 20.8 -0.2**
PSA00 IAmb IAmb 16 49 21.8
comp=Z,21nm,1.0s
LWLI Liwa 47.00 244 P **P 16 49 21.3 -0.2**
comp=Z,2μmcomp=Z,46nm,0.9s
RPSI Rantau Prapat 48.19 257 P **P 16 49 30.9 +0.5**
RPSI IAmb IAmb 16 49 31.9
comp=Z,22nm,1.4s
XMIS Christmas Isla 48.66 237 P **P 16 49 32.6 -1.2**
LHMI Lhok Sumawe 49.13 261 P **P 16 49 39.3 +1.9**
GSI Gunungsitoli 49.97 256 P **P 16 49 43.8 +0.2**
GSI PcP **PcP 16 50 55.9 +0.5**
GSI Gunungsitoli 49.97 256 P **P 16 49 43.6 0.0**
SHL Shillong 49.98 288 P **P 16

comp=Z,23nm,0.4s
KKN Kakani 55.74 291 *e*P **P 16 50 25.8 +0.7**
DMN Daman 55.91 291 *e*P **P 16 50 26.4 +0.1**
comp=Z,12nm,0.4s
GKN Gorkha 56.29 292 *e*P **P 16 50 29.0 +0.2**
comp=Z,26nm,0.5s
DANN Dangsing 57.04 292 *e*P **P 16 50 34.0 -0.1**
KOLN Koldanda 57.23 292 *e*P **P 16 50 35.3 0.0**
comp=Z,37nm,0.7s
NWAO Narrogin (SRO) 57.71 208 P **P 16 50 38.0 -0.2**
NWAO IAmb IAmb 16 50 57.1
comp=Z,21nm,1.1s
PYUN Piuthan 57.74 292 *e*P **P 16 50 38.8 0.0**
comp=Z,40nm,0.5s
ZAA0 Zalesovo Array 58.18 323 P **P 16 50 40.6 -0.5**
ZALV Zalesovo Beam 58.18 323 P **P 16 50 40.4 -0.7**
comp=Z,2.3nm,0.4s,baz=116,slow=8.8,SNR=16
ZALV PcP **PcP 16 51 24.8 -1.5**
comp=Z,1.2nm,0.6s,baz=114,slow=3.5,SNR=4.3
ZALV Zalesovo Beam 58.18 323 P **P 16 50 40.6 -0.5**
MK31 Makanchi Array 58.57 314 P **P 16 50 44.4 +0.5**
MKAR Makanchi Array 58.57 314 P **P 16 50 44.2 +0.3**
comp=Z,3.9nm,0.4s,baz=90,slow=8.2,SNR=83
MKAR PcP **PcP 16 51 27.8 -0.3**
comp=Z,1.9nm,0.7s,baz=91,slow=4.9,SNR=7.7
MKAR ScP **ScP 16 54 40.6 -1.4**
comp=Z,0.2nm,0.6s,baz=92,slow=4.3,SNR=2.2
SII Sitkinak Islan 58.59 34 P **P 16 50 45.1 +1.2**
MAKZ Makanchi 58.79 314 P **P 16 50 45.9 +0.5**
MAKZ IAmb IAmb 16 50 46.2
comp=Z,8.7nm,0.5s
KDAK Kodiak Island 59.74 33 P **P 16 50 51.7 +0.2**
comp=Z,1.9nm,0.3s,baz=228,slow=3.2,SNR=9.8
KDAK Kodiak Island 59.74 33 P **P 16 50 52.4 +0.9**
KDAK IAmb IAmb 16 50 53.0
comp=Z,19nm,1.4s
CNPM China Poot 60.85 31 P **P 16 50 59.1 +0.2**
PPLA Purkeypile 61.29 28 P **P 16 51 02.6 +0.7**
SKT Skwentna 61.33 29 P **P 16 51 02.0 0.0**
NRIK Noril'sk 61.87 340 P **P 16 51 05.1 -0.3**
comp=Z,5.8nm,0.6s,baz=118,slow=7.9,SNR=27
NRIK Noril'sk 61.87 340 P **P 16 51 05.2 -0.3**
NRIK IAmb IAmb 16 51 05.8
comp=Z,6.8nm,0.7s
KTH Kantishna Hill 62.02 27 P **P 16 51 06.6 0.0**
KTH IAmb IAmb 16 51 23.6
comp=Z,14nm,1.4s
BPAW Bear Paw Mtn. 62.14 26 P **P 16 51 07.8 +0.5**
BPAW IAmb IAmb 16 51 14.7
comp=Z,11nm,1.4s
TRF Thorofare Moun 62.27 27 P **P 16 51 08.5 +0.1**
TRF IAmb IAmb 16 51 13.8
comp=Z,9.4nm,1.3s
GHO Glory Hole Cre 62.48 29 P **P 16 51 10.0 +0.4**
GHO IAmb IAmb 16 51 10.8
comp=Z,9.6nm,1.1s
MLY Manley 62.51 25 P **P 16 51 10.5 +0.8**
PWL Port Wells 62.56 30 P **P 16 51 10.8 +0.8**
PWL IAmb IAmb 16 51 10.9
comp=Z,19nm,0.9s
KSH Kashi 62.92 306 P **P 16 51 16.3 +3.3**
KSH pmax pmax
comp=Z,7.0nm,0.6s
KSH pmax pmax
comp=Z,170nm,5.4s
TKM2 Tokmak 2 63.13 309 P **P 16 51 15.1 +0.7**
SNR=9.7
WRH Wood River Hil 63.46 26 P **P 16 51 15.6 -0.2**
KBK Karagaybulak 63.61 309 P **P 16 51 18.0 +0.5**
SNR=7.1
KLU Klutina 63.83 30 P **P 16 51 19.3 +1.0**
KLU IAmb IAmb 16 51 34.4
comp=Z,7.6nm,1.2s
USP Ospenovka 63.93 310 P **P 16 51 19.6 +0.3**
SNR=8.6
UCH Uchtor 63.94 309 P **P 16 51 21.0 +1.1**
SNR=11
AAK Ala-Archa 63.95 309 P **P 16 51 19.9 +0.3**
AAK IAmb IAmb 16 51 20.3
comp=Z,3.3nm,0.5s
TOLK Toolik Lake Re 63.98 22 P **P 16 51 20.3 +1.1**
IL31 64.03 26 P **P 16 51 18.8 -0.6**
ILAR Eielson Array 64.03 26 P **P 16 51 18.5 -1.0**
comp=Z,1.6nm,0.6s,baz=251,slow=6.0,SNR=14
ILAR pP **pP 16 52 55.5 -0.8**
comp=Z,1.0nm,0.9s,baz=257,slow=6.5,SNR=3.9
ILAR Eielson Array 64.03 26 P **P 16 51 18.2 -1.3**
PAX Paxson 64.30 28 P **P 16 51 21.8 +0.5**
PAX IAmb IAmb 16 51 22.4
comp=Z,3.6nm,0.6s
BMRM Bremner River 64.37 31 P **P 16 51 23.2 +1.4**
BMRM IAmb IAmb 16 51 25.6
comp=Z,19nm,1.2s
AML Almayashu 64.56 308 P **P 16 51 24.7 +0.9**
SNR=15
DOT Dot Lake 65.04 28 P **P 16 51 26.3 +0.4**
DOT IAmb IAmb 16 51 26.8
comp=Z,3.7nm,0.6s
FYU Fort Yukon 65.08 24 P **P 16 51 27.3 +1.3**
FYU IAmb IAmb 16 51 42.1
comp=Z,15nm,1.4s
SCRK Sand Creek 65.12 27 P **P 16 51 27.0 +0.4**
GRNC Granite Creek 65.73 31 P **P 16 51 31.5 +1.0**
GRNC IAmb IAmb 16 51 33.0
comp=Z,26nm,1.4s
BRVK Borovoye 66.69 321 P **P 16 51 36.6 +0.2**
BRVK IAmb IAmb 16 51 37.2
comp=Z,8.7nm,0.7s
KK31 Karatay Array 66.85 310 P **P 16 51 38.1 +0.5**
KK31 IAmb IAmb 16 51 38.7
comp=Z,13nm,0.8s
KKAR Karatay Array 66.85 310 P **P 16 51 38.1 +0.5**
GAR Garm 67.34 305 P **P 16 51 41.0 +0.1**
GAR IAmb IAmb 16 51 41.8
comp=Z,14nm,0.8s
KBL Kabul 68.89 301 P **P 16 51 50.9 +0.4**
KBL IAmb IAmb 16 51 51.4
comp=Z,17nm,1.1s
INK Inuvik 69.76 23 P **P 16 51 54.4 -0.4**
comp=Z,1.8nm,0.7s,baz=258,slow=11,SNR=9.0
INK pP **pP 16 53 35.6 +0.9**
comp=Z,0.9nm,0.7s,baz=246,slow=6.6,SNR=2.4
INK Inuvik 69.76 23 P **P 16 51 55.0 +0.2**
ARU Arti 73.24 325 P **P 16 52 15.2 -0.2**
ARU IAmb IAmb 16 52 15.6
comp=Z,8.0nm,0.6s
ABKAR Akbulak array 73.47 317 P **P 16 52 16.6 -0.3**
ABKAR IAmb IAmb 16 52 17.2
comp=Z,8.3nm,0.8s
GEYT Alibeck 76.95 306 P **P 16 52 36.9 +0.1**
comp=Z,2.9nm,0.6s,baz=68,slow=8.2,SNR=5.4
EUNU Eureka 78.09 8 P **P 16 52 42.6 +0.4**
YKA Yellowknife Ar 78.38 28 P **P 16 52 43.9 0.0**
comp=Z,1.1nm,0.5s,baz=290,slow=5.0,SNR=19
YKA pP **pP 16 54 26.5 -0.6**
comp=Z,0.7nm,0.8s,baz=290,slow=5.1,SNR=4.0
LTY Liberty 79.28 44 P **P 16 52 50.1 +0.9**
RES Resolute Bay 79.80 14 P **P 16 52 52.1 +0.9**
RES IAmb IAmb 16 52 52.3
comp=Z,3.8nm,0.6s
KLMR Klimovskoe 81.67 332 *e*P **P 16 52 58.3 -2.9**
KLMR AMP 16 53 02.8
comp=Z,13nm,1.2s
RUBR Rubicon Trail 81.93 52 P **P 16 53 02.4 -0.9**
KEV Kevo 82.20 342 P **P 16 53 03.2 -0.6**
KEV IAmb IAmb 16 53 20.6
comp=Z,9.6nm,1.1s
BMO Blue Mountains 82.21 45 P **P 16 53 05.6 +1.0**
ARCES ARCESS Array B 82.77 342 P **P 16 53 06.0 -0.7**
comp=Z,4.5nm,0.6s,baz=47,slow=3.8,SNR=22
ARCES ARCESS Array B 82.77 342 P **P 16 53 06.3 -0.4**
ARCES IAmb IAmb 16 53 07.1
comp=Z,8.2nm,0.8s
NVAR Mina Array Bea 83.49 52 P **P 16 53 11.9 +0.6**
comp=Z,2.0nm,0.6s,baz=266,slow=5.4,SNR=13
NVAR Mina Array Bea 83.49 52 P **P 16 53 12.8 +1.6**
KBZ Khabaz 86.26 315 P **P 16 53 23.3 -1.0**
comp=Z,6.1nm,0.9s,baz=307,slow=2.9,SNR=7.9
FINES FINESS Array B 87.12 335 P **P 16 53 26.3 -1.8**
comp=Z,2.8nm,0.5s,baz=57,slow=5.0,SNR=26
RAYN Ar Rayn 91.56 295 P **P 16 53 48.8 -0.8**
RAYN IAmb IAmb 16 53 49.1
comp=Z,4.0nm,0.8s
NOA NORSAR Array B 92.83 340 P **P 16 53 52.5 -2.1**
comp=Z,0.4nm,0.8s,baz=45,slow=5.6,SNR=3.4
BRTR Keskin Array B 94.22 314 P **P 16 54 00.2 -1.4**
comp=Z,1.8nm,0.8s,baz=64,slow=6.6,SNR=4.0
BRTR Keskin Array B 94.22 314 **P 16 54 01.0 -0.5**
LSZ Lusaka 120.17 263 **PKiKP 16 59 31.4 +0.3**
SNAA Sanae 123.55 191 PKPdf **PKPdf 16 59 35.4 -0.3**
VNA2 Neumayer--Watz 125.00 191 PKPdf **PKiKP 16 59 38.7 -0.1**
baz=122,slow=0.8
VNA3 Neumayer Olymp 125.10 190 PKPdf **PKPdf 16 59 38.6 -0.1**
TORD Torodi Ar. Bea 132.53 309 PKP **PKPdf 16 59 54.2 -0.2**
comp=Z,0.7nm,0.6s,baz=55,slow=1.5,SNR=7.5
BI02 San Fabin de 142.91 127 **PKPdf 17 00 11.6 -1.3**
PB11 IPOC Station P 146.77 98 **PKPdf 17 00 21.1 +1.0**
PB11 **PKiKP 17 00 23.9 -0.9**
MNMC Minye Minye 146.78 97 **PKiKP 17 00 24.4 -0.6**
LPAZ La Paz 147.84 92 PKPbc **PKPdf 17 00 23.2 +0.7**
comp=Z,3.0nm,0.6s,baz=315,slow=3.1,SNR=4.5
LPAZ La Paz 147.84 92 **PKPdf 17 00 24.0 +1.4**
LPAZ **PKiKP 17 00 27.6 0.0**
SAML Samuel 150.63 75 **PKiKP 17 00 32.7 -0.1**
SAML PKPab **PKPab 17 00 41.1 -0.1**

*IDC **08** 16:42:39.6±5.6,21.11N×122.93E,h0km,mb3.7/3,*
mb1 3.9/3,mb1mx3.4/36,mbtmp3.7/3,Error ellipse:
s-maj=411.3km s-min=26.4km az=61.0
*TAP **08** 16:43:00.5,21.06N×122.13E,h168km,ML4.2,D*
ISC 08 16:42:59.4±1.2,21.06N±0.07×122.13E±0.07,h178km±7km,
n111,σ1°37/195,mb3.4/3,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
LAY	**Lan-yu**	**1.11**	**331**		P	**Pn**	**16 43 27.8**	**0.0**
	baz=331							
LAY				S		**Sn**	**16 43 47.9**	**-2.0**
TSEB	**Hengchuen, Pin**	**1.42**	**307**		P	**Pn**	**16 43 31.1**	**+0.7**
	baz=300							
TSEB				S		**Sn**	**16 43 54.6**	**+0.3**
	baz=300							
TWKBT	**Hengchun**	**1.51**	**306**	*i*	P	**Pn**	**16 43 32.0**	**+0.8**
	baz=302							
TWKBT				S		**Sn**	**16 43 54.9**	**-1.0**
	baz=302							
TWK1	**Hengchun**	**1.52**	**306**	*i*	P	**Pn**	**16 43 32.0**	**+0.7**
	baz=302							
TWK1				S		**Sn**	**16 43 54.8**	**-1.2**
	baz=302							
SNW	**Nanwan**	**1.57**	**305**	*e*P		**Pn**	**16 43 33.0**	**+1.2**
	baz=304							
SNW				*e*S		**Sn**	**16 43 56.5**	**-0.4**
	baz=304							
HEN	**Hengchun**	**1.60**	**306**		P	**Pn**	**16 43 33.0**	**+0.9**
	baz=306							
HEN				S		**Sn**	**16 43 56.5**	**-1.0**
	baz=306							
SLIU	**Shizi**	**1.69**	**313**		P	**Pn**	**16 43 33.5**	**+0.4**
	baz=315							
SLIU				S		**Sn**	**16 43 57.5**	**-1.6**
	baz=315							
LDUT	**Ludao**	**1.72**	**339**	*e*P		**Pn**	**16 43 33.5**	**+0.1**
	baz=343							
LDUT				*e*S		**Sn**	**16 43 58.3**	**-1.4**
	baz=343							
TAW	**Tawu**	**1.73**	**319**		P	**Pn**	**16 43 33.5**	**+0.1**
	baz=322							
TAW				*e*S		**Sn**	**16 43 58.0**	**-1.9**
	baz=322							
EAST	**Anshuo**	**1.78**	**318**	*i*	P	**Pn**	**16 43 34.2**	**+0.3**
	baz=318							
EAST				S		**Sn**	**16 43 58.8**	**-2.0**
	baz=318							
ECL	**Taimali**	**1.88**	**325**		P	**Pn**	**16 43 34.9**	**-0.1**
	baz=320							
ECL				S		**Sn**	**16 43 59.7**	**-3.0**
	baz=320							
SCZT	**Fangliau**	**1.92**	**313**		P	**Pn**	**16 43 35.9**	**+0.5**
	baz=313							
SCZT				S		**Sn**	**16 44 02.0**	**-1.4**
	baz=313							
TWGBT	**Beinan**	**2.00**	**331**		P	**Pn**	**16 43 36.4**	**+0.1**
	baz=325							
TWGBT				S		**Sn**	**16 44 02.6**	**-2.5**
	baz=325							
TWG	**Pinlang**	**2.01**	**331**		P	**Pn**	**16 43 36.5**	**+0.1**
	baz=325							
TWG				S		**Sn**	**16 44 03.1**	**-2.2**
	baz=325							
EDH	**Donghe**	**2.06**	**338**		P	**Pn**	**16 43 37.5**	**+0.6**
	baz=341							
EDH				S		**Sn**	**16 44 05.5**	**-0.6**
	baz=341							
LONT	**Longtian**	**2.06**	**334**	*e*P		**Pn**	**16 43 37.4**	**+0.5**
	baz=326							
LONT				*e*S		**Sn**	**16 44 04.7**	**-1.6**
	baz=326							
WLCH	**Liuqiu**	**2.07**	**309**		P	**Pn**	**16 43 39.0**	**+1.9**
	baz=308							
WLCH				S		**Sn**	**16 44 08.1**	**+1.7**
	baz=308							
MASBT	**Mashibuluo**	**2.08**	**318**	*i*	P	**Pn**	**16 43 37.9**	**+0.7**
	baz=318							
MASBT				S		**Sn**	**16 44 04.2**	**-2.4**
	baz=318							
TWP	**Hsiaoliuchiu**	**2.08**	**308**		P	**Pn**	**16 43 39.1**	**+1.9**
	baz=308							
TWP				S		**Sn**	**16 44 08.8**	**+2.2**
	baz=308							
TSMG	**Majia**	**2.14**	**320**		P	**Pn**	**16 43 38.4**	**+0.6**
	baz=320							
TSMG				S		**Sn**	**16 44 06.3**	**-1.5**
	baz=320							
CHKT	**Chengkung**	**2.15**	**341**	*e*P		**Pn**	**16 43 38.8**	**+0.9**
	baz=344							
CHKT				*e*S		**Sn**	**16 44 06.6**	**-1.4**
	baz=344							
SSD	**Sandimen**	**2.18**	**321**		P	**Pn**	**16 43 39.0**	**+0.7**
	baz=320							
SSD				S		**Sn**	**16 44 07.6**	**-1.0**
	baz=320							
TSPT	**Pingtung City**	**2.21**	**317**	*e*P		**Pn**	**16 43 39.5**	**+0.8**
	baz=322							
TSPT				*e*S		**Sn**	**16 44 09.9**	**+0.7**
	baz=322							
KAU	**Kaohsiung**	**2.26**	**312**	*e*P		**Pn**	**16 43 41.0**	**+1.8**
	baz=305							
KAU				*e*S		**Sn**	**16 44 11.0**	**+0.8**
	baz=305							
FULB	**Fuli**	**2.27**	**340**	*e*P		**Pn**	**16 43 40.3**	**+1.0**
	baz=343							
FULB				*e*S		**Sn**	**16 44 11.8**	**+1.4**
	baz=343							
ELDTW	**Lidau**	**2.36**	**334**	*e*P		**Pn**	**16 43 40.9**	**+0.5**
	baz=336							
ELDTW				*e*S		**Sn**	**16 44 10.3**	**-2.2**
	baz=336							
TWM1	**Shoushan**	**2.37**	**318**		P	**Pn**	**16 43 42.3**	**+1.9**
	baz=325							
TWM1				S		**Sn**	**16 44 14.1**	**+1.7**
	baz=325							
SLGT	**Liugui**	**2.37**	**325**		P	**Pn**	**16 43 41.4**	**+0.9**
	baz=324							
SLGT				S		**Sn**	**16 44 11.3**	**-1.1**
	baz=324							
SCST	**Cishan**	**2.37**	**321**		P	**Pn**	**16 43 41.7**	**+1.3**
	baz=327							
SCST				S		**Sn**	**16 44 12.4**	**0.0**
	baz=327							
SNJT	**Kaohsiung City**	**2.37**	**316**	*e*P		**Pn**	**16 43 41.9**	**+1.5**
	baz=307							
SNJT				*e*S		**Sn**	**16 44 11.2**	**-1.2**
	baz=307							
EYUL	**Yuli**	**2.40**	**342**	*e*P		**Pn**	**16 43 42.0**	**+1.2**
	baz=345							
EYUL				*e*S		**Sn**	**16 44 13.9**	**+0.8**
	baz=345							
TWF1	**Yuli**	**2.41**	**342**	*e*P		**Pn**	**16 43 41.7**	**+0.8**
	baz=345							
TWF1				*e*S		**Sn**	**16 44 13.4**	**+0.1**
	baz=345							
STYH	**Taoyuan**	**2.45**	**329**		P	**Pn**	**16 43 42.5**	**+1.1**
	baz=322							
STYH				*e*S		**Sn**	**16 44 13.2**	**-0.9**
	baz=322							
YULB	**Yu-li**	**2.45**	**342**	*e*P		**Pn**	**16 43 41.9**	**+0.5**
	baz=337							
YULB				*e*S		**Sn**	**16 44 12.2**	**-1.9**
	baz=337							
STYT	**Tauyuan**	**2.45**	**329**		P	**Pn**	**16 43 42.4**	**+1.0**
	baz=322							
STYT				*e*S		**Sn**	**16 44 13.4**	**-0.8**
	baz=322							
SGST	**Jiashian**	**2.47**	**325**		P	**Pn**	**16 43 41.8**	**+0.1**
	baz=325							
SGST				*e*S		**Sn**	**16 44 12.9**	**-1.7**
	baz=325							
HGSD	**Ruisui**	**2.51**	**345**	*e*P		**Pn**	**16 43 43.6**	**+1.6**
	baz=346							
HGSD				*e*S		**Sn**	**16 44 16.7**	**+1.3**
	baz=346							
EHY	**Hungye**	**2.55**	**343**	*e*P		**Pn**	**16 43 43.5**	**+0.9**
	baz=335							
EHY				*e*S		**Sn**	**16 44 16.2**	**0.0**
	baz=335							
CHN1	**Nanshi**	**2.59**	**325**	*e*P		**Pn**	**16 43 44.0**	**+1.0**
	baz=325							
CHN1				*e*S		**Sn**	**16 44 16.1**	**-0.9**
	baz=325							
CHN3	**Shinhua**	**2.59**	**321**	*e*S		**Sn**	**16 44 16.3**	**-0.7**
	baz=328							
WTP	**Ta-pu**	**2.59**	**328**		P	**Pn**	**16 43 43.9**	**+0.9**
	baz=320							
WTP				*e*S		**Sn**	**16 44 16.4**	**-0.7**
	baz=320							
TPUB	**Ta-pu**	**2.63**	**328**	*e*P		**Pn**	**16 43 44.2**	**+0.7**
	baz=322							
TPUB				*e*S		**Sn**	**16 44 16.8**	**-1.2**
	baz=322							
SNST	**Tainan City**	**2.63**	**325**	*e*P		**Pn**	**16 43 44.2**	**+0.7**
	baz=325							
SNST				*e*S		**Sn**	**16 44 16.9**	**-1.0**
	baz=325							
TAI1	**Yung-k'ang**	**2.65**	**319**	*e*S		**Sn**	**16 44 17.9**	**-0.2**
	baz=325							
YUS	**Yu-Shan**	**2.66**	**336**	*e*P		**Pn**	**16 43 45.7**	**+1.4**
	baz=334							
TWK	**Hsinying**	**2.67**	**326**	*e*P		**Pn**	**16 43 44.7**	**+0.7**
	baz=325							
TWK				*e*S		**Sn**	**16 44 17.4**	**-1.5**
	baz=325							
EGFH	**Guangfu**	**2.68**	**346**	*e*S		**Sn**	**16 44 19.3**	**+0.3**
	baz=350							
CHN4	**Tsaushan**	**2.69**	**328**		P	**Pn**	**16 43 45.0**	**+0.7**
	baz=322							
CHN4				*e*S		**Sn**	**16 44 18.2**	**-0.9**
	baz=322							
ALS	**Alishan**	**2.73**	**334**	*e*P		**Pn**	**16 43 46.1**	**+1.1**
	baz=325							
ALS				*e*S		**Sn**	**16 44 20.1**	**-0.4**
	baz=325							
SCLT	**Jiali**	**2.77**	**320**	*e*P		**Pn**	**16 43 45.4**	**+0.2**
	baz=325							
SCLT				*e*S		**Sn**	**16 44 20.7**	**0.0**
	baz=325							
ESL	**Shilin**	**2.82**	**347**	*e*P		**Pn**	**16 43 47.4**	**+1.6**
	baz=352							
VWDT	**VWDT**	**2.84**	**341**	*e*P		**Pn**	**16 43 47.4**	**+1.4**
	baz=344							
VWDT				*e*S		**Sn**	**16 44 21.2**	**-1.1**
	baz=344							
CHN5	**Tsauling**	**2.86**	**332**	*e*P		**Pn**	**16 43 47.2**	**+0.8**
	baz=332							
CHN5				*e*S		**Sn**	**16 44 23.0**	**0.0**
	baz=332							
WHYT	**Xinyi Township**	**2.88**	**336**	*e*P		**Pn**	**16 43 47.2**	**+0.7**
	baz=327							
WHYT				*e*S		**Sn**	**16 44 22.9**	**-0.4**
	baz=327							
CHN8	**Yiju**	**2.89**	**322**	*e*P		**Pn**	**16 43 47.2**	**+0.7**
	baz=328							
CHN8				*e*S		**Sn**	**16 44 22.8**	**-0.6**
	baz=328							
CHY	**Chiayi**	**2.90**	**327**	*e*P		**Pn**	**16 43 47.3**	**+0.7**
	baz=322							
CHY				*e*S		**Sn**	**16 44 22.3**	**-1.3**
	baz=322							
CHN2	**Minshiung**	**2.90**	**328**	*e*S		**Sn**	**16 44 23.4**	**-0.2**
	baz=323							
SSLB	**Suanglung**	**2.93**	**338**	*e*P		**Pn**	**16 43 47.9**	**+0.8**
	baz=330							
SSLB				*e*S		**Sn**	**16 44 24.4**	**+0.1**
	baz=330							
WGK	**Gukeng**	**2.99**	**331**	*e*P		**Pn**	**16 43 48.9**	**+1.1**
	baz=331							
WGK				*e*S		**Sn**	**16 44 24.9**	**-0.7**
	baz=331							
WDLH	**Douliu**	**3.00**	**331**	*e*P		**Pn**	**16 43 48.4**	**+0.5**
	baz=330							
WDLH				*e*S		**Sn**	**16 44 25.4**	**-0.5**
	baz=330							
SMLT	**Sun Moon Lake**	**3.03**	**338**	*e*P		**Pn**	**16 43 49.0**	**+0.6**
	baz=330							
SMLT				*e*S		**Sn**	**16 44 25.7**	**-1.1**
	baz=330							
WJS	**Zhushan**	**3.04**	**335**	*e*P		**Pn**	**16 43 49.7**	**+1.2**
	baz=335							
WJS				*e*S		**Sn**	**16 44 26.7**	**-0.1**
	baz=335							
TYC	**Yuchr**	**3.07**	**338**	*e*P		**Pn**	**16 43 49.7**	**+0.9**
	baz=330							
TYC				*e*S		**Sn**	**16 44 27.3**	**0.0**
	baz=330							
WTK	**Tuku**	**3.07**	**329**	*e*P		**Pn**	**16 43 49.1**	**+0.2**
	baz=324							
WTK				*e*S		**Sn**	**16 44 26.0**	**-1.5**
	baz=324							
WNT	**Mingjian**	**3.11**	**335**	*e*P		**Pn**	**16 43 50.4**	**+1.1**
	baz=335							
WNT				*e*S		**Sn**	**16 44 28.2**	**0.0**
	baz=335							
CHGB	**Renai**	**3.12**	**344**	*e*P		**Pn**	**16 43 51.5**	**+1.9**
	baz=348							
CHGB				*e*S		**Sn**	**16 44 29.4**	**+0.7**
	baz=348							
WSF	**Szhu**	**3.12**	**326**	*e*S		**Sn**	**16 44 26.9**	**-1.4**
	baz=326							
WPL	**Puli Township**	**3.13**	**340**	*e*S		**Sn**	**16 44 27.6**	**-1.2**
	baz=331							
WNT1	**Nantou City**	**3.14**	**335**	*e*S		**Sn**	**16 44 27.6**	**-1.3**
	baz=335							
NACB	**Ninganchiao**	**3.14**	**351**	*e*P		**Pn**	**16 43 50.2**	**+0.5**
	baz=357							
NACB				*e*S		**Sn**	**16 44 27.1**	**-1.9**
	baz=357							
DPDB	**Guoxing**	**3.16**	**340**	*e*P		**Pn**	**16 43 51.3**	**+1.3**
	baz=331							
DPDB				*e*S		**Sn**	**16 44 28.3**	**-1.3**
	baz=331							
WDGT	**Dungji**	**3.17**	**314**	*e*P		**Pn**	**16 43 50.1**	**+0.1**
	baz=314							
WDGT				*e*S		**Sn**	**16 44 26.8**	**-2.6**
	baz=314							
WHF	**Hehuan Shan**	**3.18**	**346**	*e*P		**Pn**	**16 43 51.8**	**+1.3**
	baz=351							
WHF				*e*S		**Sn**	**16 44 28.8**	**-1.6**
	baz=351							
WCS	**Beigang Elemen**	**3.19**	**340**	*e*P		**Pn**	**16 43 51.4**	**+1.1**
	baz=332							
WCS				*e*S		**Sn**	**16 44 28.6**	**-1.4**
	baz=332							
ETLH	**Xiulin Townshi**	**3.19**	**349**	*e*P		**Pn**	**16 43 51.7**	**+1.4**
	baz=343							
ETLH				*e*S		**Sn**	**16 44 29.3**	**-0.9**
	baz=343							
WWF	**Wufeng**	**3.25**	**336**	*e*S		**Sn**	**16 44 31.0**	**-0.4**
	baz=336							
WRL	**Guolierlin Hig**	**3.26**	**331**	*e*S		**Sn**	**16 44 29.7**	**-1.9**
	baz=330							
WTCT	**Ta-ch'eng**	**3.27**	**329**	*e*S		**Sn**	**16 44 31.9**	**+0.1**
	baz=334							
FUSS	**Fushou**	**3.28**	**346**	*e*P		**Pn**	**16 43 54.0**	**+2.3**
	baz=349							
FUSS				*e*S		**Sn**	**16 44 33.5**	**+1.1**
	baz=349							
VCHM	**Qimei**	**3.29**	**311**	*e*P		**Pn**	**16 43 51.4**	**-0.2**
	baz=311							
VCHM				*e*S		**Sn**	**16 44 30.4**	**-1.8**
	baz=311							
TDCB	**Techi**	**3.31**	**344**	*e*P		**Pn**	**16 43 54.1**	**+2.2**
	baz=349							
TDCB				*e*S		**Sn**	**16 44 32.6**	**-0.2**
	baz=349							
WCHH	**Zhanghua**	**3.34**	**335**	*e*S		**Sn**	**16 44 32.2**	**-1.1**
	baz=334							
TCU	**Taichung**	**3.36**	**337**	*e*S		**Sn**	**16 44 32.1**	**-1.6**
	baz=336							
WHP	**Taichung City**	**3.39**	**341**	*e*P		**Pn**	**16 43 54.2**	**+1.4**
	baz=333							

WHP				eS		Sn	16 44 36.0	+1.4
	baz=333							
EWUT	**Wuta**	**3.39**	**355**	eS		Sn	16 44 33.5	-0.9
	baz=358							
PHUB	**P'eng-hu**	**3.40**	**316**	eP		Pn	16 43 53.1	+0.3
	baz=321							
PHUB				eS		Sn	16 44 31.9	-2.8
	baz=321							
NNSB	**Datong**	**3.43**	**349**	eP		Pn	16 43 54.4	+1.0
	baz=354							
NNSB				eS		Sn	16 44 33.7	-1.7
	baz=354							
NNSH	**Datong**	**3.43**	**349**	eP		Pn	16 43 54.3	+1.0
	baz=354							
NNSH				eS		Sn	16 44 33.5	-1.9
	baz=354							
NNS	**Nan Shan**	**3.44**	**348**	eP		Pn	16 43 54.7	+1.3
	baz=354							
NNS				eS		Sn	16 44 34.1	-1.6
	baz=354							
PNG	**Penghu**	**3.45**	**317**	eP		Pn	16 43 53.8	+0.3
	baz=322							
PNG				eS		Sn	16 44 33.8	-2.0
	baz=322							
TWQ1	**Liyutan**	**3.51**	**339**	eS		Sn	16 44 36.0	-1.1
	baz=339							
WDJ	**Dajia District**	**3.55**	**338**	eP		Pn	16 43 55.8	+1.0
	baz=337							
WDJ				eS		Sn	16 44 37.4	-0.7
	baz=337							
NDT	**Datong Townshi**	**3.58**	**351**	eP		Pn	16 43 56.5	+1.4
	baz=356							
NDT				eS		Sn	16 44 37.6	-1.1
	baz=356							
NDS	**Dongshan**	**3.58**	**354**	eS		Sn	16 44 37.4	-1.4
	baz=354							
ENTT	**Nioudou**	**3.60**	**352**	eP		Pn	16 43 56.5	+1.1
	baz=357							
ENTT				eS		Sn	16 44 37.7	-1.6
	baz=357							
YHNB	**Yeheng**	**3.66**	**349**	eP		Pn	16 43 56.8	+0.5
	baz=354							
YHNB				eS		Sn	16 44 38.9	-1.9
	baz=354							
NSK	**Sanguang**	**3.67**	**349**	eS		Sn	16 44 39.4	-1.6
	baz=354							
LIOB	**Emei**	**3.72**	**344**	eS		Sn	16 44 39.2	-2.7
	baz=344							
NWLT	**Wulai**	**3.75**	**351**	eP		Pn	16 43 58.4	+1.1
	baz=356							
TIPB	**Shuangxi**	**3.91**	**356**	eP		Pn	16 44 01.0	+1.7
	baz=3.0							
TIPB				eS		Sn	16 44 43.2	-3.0
	baz=3.0							
VWUC	**VWUC**	**4.63**	**328**	eP		Pn	16 44 08.7	+0.2
	baz=328							
VWUC				eS		Sn	16 45 00.7	-2.0
	baz=328							
KNM	**Kinmen**	**4.78**	**315**	eS		Sn	16 45 05.8	-0.3
	baz=313							
PTMZ	**Houxiangcun**	**4.84**	**326**	eS		Sn	16 45 05.7	-1.9
	baz=325							
KNMB	**Chin-men Tao**	**4.84**	**315**	eP		Pn	16 44 12.7	+1.5
	baz=315							
KNMB				eS		Sn	16 45 06.2	-1.3
	baz=315							
AXDP	**Jialang**	**5.41**	**316**	eP		Pn	16 44 19.4	+0.7
	baz=315							
AXDP				eS		Sn	16 45 16.3	-4.7
	baz=315							
MATB	**Ma-tsu**	**5.45**	**339**	eS		Sn	16 45 19.9	-2.1
	baz=344							
MHZQ	**Yeshan**	**5.77**	**331**	eP		Pn	16 44 24.2	+0.9
	baz=330							
MHZQ				eS		Sn	16 45 26.6	-2.8
	baz=330							
LYJJ	**Jianjiangzhen**	**5.88**	**339**	eS		Sn	16 45 28.6	-3.5
	baz=345							
MKAR	**Makanchi Array**	**41.21**	**318**	P		P	16 50 29.8	+3.0
	0.9nm,0.6s,baz=113,slow=8.3,SNR=15							
WRA	**Warramunga Arr**	**42.46**	**163**	P		P	16 50 34.8	-2.3
	0.4nm,0.3s,baz=345,slow=9.5,SNR=1.9							
ASAR	**Alice Springs**	**45.91**	**165**	P		P	16 51 03.4	-1.0
	0.4nm,0.5s,baz=350,slow=8.6,SNR=4.6							

*IDC **08** 17:09:06.3±1.7,63°.21N×150°.86W,h107km±14km, mb3.6/21,mb1 3.6/26,mb1mx3.5/51,mbtmp3.9/26,Error ellipse: s-maj=15.1km s-min=11.6km az=51.0*

*ANF **08** 17:09:07.3±0.3,63°.11N×150°.63W,h116km±2km,ML3.9/39, Error ellipse: s-maj=2.4km s-min=1.4km az=95.0, Hypocentre not reviewed by the ISC*

*NEIC **08** 17:09:07.2±1.2,63°.13N±0°.03×150°.68W±0°.07, h118km±3km,Error ellipse: s-maj=5.2km s-min=3.6km az=124.0*

*AEIC **08** 17:09:07±1.1,63°.11N±0°.03×150°.64W±0°.06,h118km±4km, ML3.7,mb4.3/15(NEIC),ML4.0/133(NEIC), Error ellipse: s-maj=5.5km s-min=3.3km az=209.0*

ISC 08 17:09:07.4±0.6, 63°.12N±0°.03×150°.69W±0°.04, h121km±5km, n180, σ0°91/186, mb4.0/26, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRF	**Thorofare Moun**	**0.38**	**28**	Pn	**Pn**	**17 09 25.0**	**0.0**
TRF				IAML		17 09 39.1	
	comp=N,2μm,0.6s						
TRF				IAML		17 09 39.0	
	comp=E,3μm,0.6s						
TRF	**Thorofare Moun**	**0.38**	**28**		**Sn**	**17 09 38.2**	**-0.2**
TRF	**Thorofare Moun**	**0.38**	**28**	P		17 09 25.1	
	baz=205,SNR=650						
TRF				S		17 09 38.0	
	baz=205						
KTH	**Kantishna Hill**	**0.45**	**346**		**Pn**	**17 09 25.2**	**-0.1**
KTH				IAML		17 09 38.6	
	comp=E,3μm,0.8s						
KTH	**Kantishna Hill**	**0.45**	**346**		**Sn**	**17 09 38.1**	**-0.7**
HUR	**Hurricane**	**0.50**	**106**		**Pn**	**17 09 25.1**	**-0.4**
HUR					**Sn**	**17 09 39.4**	**+0.2**
CAST	**Castle Rocks**	**0.70**	**296**	Pn	**Pn**	**17 09 26.0**	**-0.9**
PPLA	**Purkeypile**	**0.72**	**253**		**Pn**	**17 09 26.9**	**-0.3**
PPLA	**Purkeypile**	**0.72**	**253**		**Sn**	**17 09 42.2**	**0.0**
PPLA	**Purkeypile**	**0.72**	**253**	P		17 09 27.2	
	baz=73,SNR=547						
PPLA				S		17 09 42.0	
	baz=73						
CUT	**Chulitna**	**0.74**	**165**		**Pn**	**17 09 26.6**	**-0.6**
CUT				IAML		17 09 47.8	
	comp=N,3μm,0.5s						
CUT	**Chulitna**	**0.74**	**165**		**Sn**	**17 09 41.8**	**-0.3**
CUT	**Chulitna**	**0.74**	**165**	P		17 09 26.9	
	baz=346,SNR=167						
CUT				S		17 09 41.7	
	baz=346						
RND	**Reindeer**	**0.88**	**70**	Pn	**Pn**	**17 09 28.1**	**-0.3**
RND				IAML		17 09 46.4	
	comp=E,2μm,0.5s						
RND				IAML		17 09 46.6	
	comp=N,2μm,0.4s						
RND	**Reindeer**	**0.88**	**70**		**Sn**	**17 09 44.8**	**+0.4**
WAT7	**Susitna Watana**	**0.89**	**108**		**Pn**	**17 09 28.0**	**-0.6**
WAT2	**Susitna Watana**	**0.97**	**98**		**Pn**	**17 09 28.8**	**-0.6**
WAT2	**Susitna Watana**	**0.97**	**98**	P		17 09 28.7	
	baz=280						
WAT2				S		17 09 45.2	
	baz=280						
BPAW	**Bear Paw Mtn.**	**1.00**	**352**	Pn	**Pn**	**17 09 29.0**	**-0.5**
BPAW				IAML		17 09 45.8	
	comp=N,1μm,0.9s						
BPAW				IAML		17 09 46.0	
	comp=E,1μm,0.5s						
BPAW	**Bear Paw Mtn.**	**1.00**	**352**		**Sn**	**17 09 45.3**	**-0.9**
BPAW	**Bear Paw Mtn.**	**1.00**	**352**	P		17 09 29.2	
	baz=171,SNR=162						
BPAW				S		17 09 45.2	
	baz=171						
MCK	**McKinley**	**1.00**	**51**	Pn	**Pn**	**17 09 29.4**	**-0.1**
MCK	**McKinley**	**1.00**	**51**	P		17 09 29.5	
	baz=231,SNR=66						
MCK				S		17 09 45.2	
	baz=231						
WAT1	**Susitna Watana**	**1.02**	**106**		**Pn**	**17 09 29.3**	**-0.5**
WAT1					**Sn**	**17 09 46.5**	**-0.1**
CHUM	**Lake Minchumin**	**1.06**	**317**		**Pn**	**17 09 30.1**	**0.0**
CHUM	**Lake Minchumin**	**1.06**	**317**	P		17 09 30.1	
	baz=136,SNR=238						
CHUM				S		17 09 46.7	
	baz=136						
BWN	**Browne**	**1.19**	**27**		**Pn**	**17 09 31.8**	**+0.4**
BWN	**Browne**	**1.19**	**27**		**Sn**	**17 09 50.1**	**+0.4**
SKT	**Skwentna**	**1.21**	**199**		**Pn**	**17 09 31.3**	**-0.4**
SKT	**Skwentna**	**1.21**	**199**	P		17 09 31.4	
	baz=20						
SKT				S		17 09 49.3	
	baz=20						
WAT6	**Susitna Watana**	**1.45**	**110**		**Pn**	**17 09 34.0**	**-0.5**
WAT6					**Sn**	**17 09 54.4**	**-0.7**
WAT6	**Susitna Watana**	**1.45**	**110**	P		17 09 34.0	
	baz=293,SNR=82						
WAT6				S		17 09 54.2	
	baz=293						
GHO	**Glory Hole Cre**	**1.58**	**148**		**Pn**	**17 09 35.7**	**-0.2**
GHO				IAML		17 10 02.2	
	comp=E,2μm,0.8s						
NEA2	**Nenana**	**1.65**	**25**		**Pn**	**17 09 36.1**	**-0.5**
NEA2	**Nenana**	**1.65**	**25**	P		17 09 36.1	
	baz=206,SNR=130						
NEA2				S		17 09 56.9	
	baz=206						
SUA	**Susitna One**	**1.66**	**181**	Pn	**Pn**	**17 09 36.6**	**-0.3**
SUA				IAML		17 10 02.8	
	comp=E,844nm,0.4s						
SUA				IAML		17 10 06.3	
	comp=N,920nm,0.6s						
SUA	**Susitna One**	**1.66**	**181**	P		17 09 36.7	
	baz=1.7,SNR=300						
SUA				S		17 09 59.5	
	baz=1.7						
PMR	**Palmer**	**1.69**	**154**	Pn	**Pn**	**17 09 36.4**	**-0.7**
PMR				IAML		17 09 59.6	
	comp=E,1μm,0.3s						
PMR	**Palmer**	**1.69**	**154**		**Sn**	**17 09 59.1**	**-0.7**
PMR	**Palmer**	**1.69**	**154**	P		17 09 36.6	
	baz=336,SNR=68						
PMR				S		17 09 59.0	
	baz=336						
SML	**Sawmill**	**1.71**	**139**		**Pn**	**17 09 36.7**	**-0.7**
SML				IAML		17 10 00.6	
	comp=E,2μm,0.4s						
SML				IAML		17 10 01.5	
	comp=N,1μm,0.3s						
SML	**Sawmill**	**1.71**	**139**	P		17 09 37.0	
	baz=322,SNR=76						
SML				S		17 09 60.0	
	baz=322						
WRH	**Wood River Hil**	**1.78**	**39**	Pn	**Pn**	**17 09 37.9**	**-0.3**
WRH	**Wood River Hil**	**1.78**	**39**		**Sn**	**17 10 01.3**	**-0.4**
MLY	**Manley**	**1.92**	**359**	Pn	**Pn**	**17 09 39.8**	**-0.2**
MLY	**Manley**	**1.92**	**359**	P		17 09 39.7	
	baz=179,SNR=302						
MLY				S		17 10 03.1	
	baz=179						
CRP	**Crater Peak**	**1.98**	**201**		**Pn**	**17 09 40.8**	**0.0**
SPCP	**Crater Peak Br**	**1.98**	**201**		**Pn**	**17 09 40.5**	**-0.3**
FIS	**Fire Island**	**1.99**	**173**		**Pn**	**17 09 41.2**	**+0.5**
FIS	**Fire Island**	**1.99**	**173**		**Sn**	**17 10 08.0**	**+1.8**
CCB	**Clear Creek Bu**	**2.00**	**38**		**Pn**	**17 09 40.5**	**-0.3**
CCB	**Clear Creek Bu**	**2.00**	**38**		**Sn**	**17 10 05.1**	**-1.2**
KNK	**Knik Glacier**	**2.00**	**148**		**Pn**	**17 09 40.1**	**-0.8**
KNK				IAML		17 10 12.7	
	comp=N,888nm,0.6s						
KNK	**Knik Glacier**	**2.00**	**148**	P		17 09 40.4	
	baz=330						
KNK				S		17 10 06.3	
	baz=330						
SCM	**Sheep Creek Mo**	**2.02**	**128**		**Pn**	**17 09 40.5**	**-0.8**
SCM				IAML		17 10 15.2	
	comp=E,860nm,0.7s						
SCM				IAML		17 10 16.7	
	comp=N,960nm,0.7s						
SPCR	**Spurr Chakacha**	**2.05**	**201**		**Pn**	**17 09 41.4**	**-0.2**
SPCR	**Spurr Chakacha**	**2.05**	**201**	P		17 09 41.2	
	baz=20,SNR=24						
SPCR				S		17 10 07.2	
	baz=20						
RC01	**Rabbit Creek A**	**2.08**	**167**	Pn	**Pn**	**17 09 41.2**	**-0.8**
RC01				IAML		17 10 11.1	
	comp=E,586nm,0.4s						
RC01				IAML		17 10 18.4	
	comp=N,580nm,0.4s						
RC01	**Rabbit Creek A**	**2.08**	**167**	P		17 09 41.1	
	baz=349,SNR=87						
RC01				S		17 10 07.4	
	baz=349						
HDA	**Harding Lake**	**2.11**	**50**		**Pn**	**17 09 41.9**	**-0.3**
HDA					**Sn**	**17 10 08.7**	**-0.2**
HDA	**Harding Lake**	**2.11**	**50**	P		17 09 41.8	
	baz=233,SNR=200						
HDA				P		17 09 41.8	
	baz=233,SNR=200						
HDA				S		17 10 08.0	
	baz=233						
HDA				S		17 10 08.0	
	baz=233						
I23K	**Minto, Yukon-K**	**2.12**	**15**		**Pn**	**17 09 42.2**	**-0.1**
I23K	**Minto, Yukon-K**	**2.12**	**15**		**Sn**	**17 10 07.8**	**-1.3**
I23K	**Minto, Yukon-K**	**2.12**	**15**	P		17 09 42.3	
	baz=196,SNR=285						
I23K				S		17 10 07.5	
	baz=196						
MDM	**Murphy Dome**	**2.14**	**29**	Pn	**Pn**	**17 09 42.4**	**-0.2**
TCOL	**CIGO, UAF Yank**	**2.16**	**34**		**Pn**	**17 09 42.7**	**-0.1**
TCOL				IAML		17 10 11.9	
	comp=N,634nm,0.6s						
TCOL				IAML		17 10 12.8	
	comp=E,563nm,0.6s						
TCOL	**CIGO, UAF Yank**	**2.16**	**34**	P		17 09 42.7	
	baz=216,SNR=37						
TCOL				S		17 10 08.7	
	baz=216						
COLA	**College**	**2.16**	**34**		**Pn**	**17 09 42.7**	**-0.2**
COLA				IAML		17 10 11.9	
	comp=E,682nm,0.6s						
COLA				IAML		17 10 12.8	
	comp=E,600nm,0.6s						
COLA	**College**	**2.16**	**34**		**Sn**	**17 10 08.8**	**-1.2**
COLA	**College**	**2.16**	**34**	P		17 09 42.7	
	baz=216						
COLA				S		17 10 09.0	
	baz=216						
PS08	**TAPS Pump Stn8**	**2.23**	**48**		**Pn**	**17 09 43.5**	**-0.2**
M24K	**Tolsona, Glenn**	**2.32**	**114**	Pn	**Pn**	**17 09 44.9**	**-0.1**
M24K				IAML		17 10 21.4	
	comp=E,1μm,0.8s						
M24K	**Tolsona, Glenn**	**2.32**	**114**	P		17 09 45.1	
	baz=298,SNR=66						
M24K				S		17 10 14.1	
	baz=298						
IL31		**2.36**	**44**		**Pn**	**17 09 44.8**	**-0.5**
ILAR	**Eielson Array**	**2.36**	**44**	P	**Pn**	**17 09 45.0**	**-0.4**
	comp=E,26nm,0.3s,baz=225,slow=13,SNR=1237						
ILAR				S	**Sn**	**17 10 12.4**	**-2.2**
	comp=E,12nm,0.3s,baz=163,slow=29,SNR=3.8						
ILAR	**Eielson Array**	**2.36**	**44**		**Pn**	**17 09 44.5**	**-0.9**
CAPN	**Captain Cook N**	**2.37**	**186**		**Pn**	**17 09 47.1**	**+1.7**
CAPN	**Captain Cook N**	**2.37**	**186**	P		17 09 46.5	
	baz=5.7,SNR=11						
PAX	**Paxson**	**2.38**	**91**		**Pn**	**17 09 45.8**	**0.0**
PAX	**Paxson**	**2.38**	**91**	P		17 09 46.0	
	baz=276,SNR=250						
PAX				S		17 10 14.7	
	baz=276						
PS07	**TAPS Pump Stn7**	**2.44**	**24**		**Pn**	**17 09 46.2**	**-0.2**
POKR	**Poker Plat Res**	**2.46**	**34**		**Pn**	**17 09 46.6**	**-0.1**
POKR	**Poker Plat Res**	**2.46**	**34**	P		17 09 46.7	
	baz=216,SNR=17						
POKR				S		17 10 14.9	
	baz=216						
PWL	**Port Wells**	**2.52**	**153**		**Pn**	**17 09 46.7**	**-0.9**
PWL				IAML		17 10 18.7	
	comp=E,1μm,0.5s						
PWL				IAML		17 10 19.2	
	comp=N,746nm,0.7s						
PWL	**Port Wells**	**2.52**	**153**		**Sn**	**17 10 17.0**	**-1.3**
PS11	**TAPS Pump St11**	**2.63**	**111**		**Pn**	**17 09 49.2**	**+0.4**
SLKM	**Skilak Lake**	**2.63**	**175**		**Pn**	**17 09 48.3**	**-0.6**
O22K	**Cooper Landing**	**2.68**	**170**	Pn	**Pn**	**17 09 49.8**	**+0.2**
O22K	**Cooper Landing**	**2.68**	**170**	S		17 10 20.8	
	baz=351						
KLU	**Klutina**	**2.76**	**124**		**Pn**	**17 09 49.3**	**-1.3**
KLU				IAML		17 10 33.9	
	comp=E,692nm,0.4s						
KLU				IAML		17 10 35.0	
	comp=N,892nm,0.4s						
KLU	**Klutina**	**2.76**	**124**		**Sn**	**17 10 22.0**	**-1.8**
KLU	**Klutina**	**2.76**	**124**	P		17 09 49.6	
	baz=308,SNR=54						
KLU				S		17 10 22.0	
	baz=308						
PS06	**TAPS Pump Stn6**	**2.78**	**8**		**Pn**	**17 09 50.9**	**+0.1**
GLI	**Glacier Island**	**2.81**	**141**	Pn	**Pn**	**17 09 49.9**	**-1.4**
GLI	**Glacier Island**	**2.81**	**141**	P		17 09 50.1	
	baz=325,SNR=10.0						
GLI				S		17 10 24.0	
	baz=325						
RSO	**Redoubt South**	**2.84**	**201**		**Pn**	**17 09 51.5**	**-0.3**
RED	**Redoubt Volcan**	**2.88**	**201**		**Pn**	**17 09 52.2**	**-0.1**
DOT	**Dot Lake**	**3.03**	**77**	Pn	**Pn**	**17 09 53.4**	**-0.6**
DIV	**Divide**	**3.05**	**129**		**Pn**	**17 09 52.9**	**-1.6**
SVW2	**Sparrevohn**	**3.07**	**231**		**Pn**	**17 09 54.0**	**-0.5**
FID	**Port Fidalgo**	**3.10**	**138**		**Pn**	**17 09 53.8**	**-1.2**
SCRK	**Sand Creek**	**3.12**	**71**	Pn	**Pn**	**17 09 54.9**	**-0.4**
SCRK	**Sand Creek**	**3.12**	**71**	P		17 09 55.0	
	baz=257,SNR=54						
SCRK				S		17 10 30.1	
	baz=257						
IM03		**3.17**	**337**		**Pn**	**17 09 55.5**	**-0.3**
IMAR	**Indian Mountai**	**3.17**	**337**		**Pn**	**17 09 55.0**	**-0.9**
MENT	**Mentasta**	**3.18**	**90**		**Pn**	**17 09 55.6**	**-0.5**
MENT				IAML		17 10 45.2	
	comp=N,390nm,0.4s						
MENT				IAML		17 10 47.2	
	comp=E,609nm,0.6s						
N25K	**Chitina, Valde**	**3.22**	**115**	Pn	**Pn**	**17 09 56.6**	**0.0**
N25K				IAML		17 10 35.3	
	comp=E,316nm,0.5s						
N25K				IAML		17 10 36.3	
	comp=N,449nm,0.6s						
N25K	**Chitina, Valde**	**3.22**	**115**	P		17 09 56.1	
	baz=301,SNR=29						
N25K				S		17 10 33.5	
	baz=301						
PRP	**Porcupine Dome**	**3.29**	**41**	Pn	**Pn**	**17 09 57.4**	**-0.3**
PRP	**Porcupine Dome**	**3.29**	**41**	P		17 09 57.1	
	baz=225						
PRP				S		17 10 34.8	
	baz=225						
IVE	**Iliamna Volcan**	**3.31**	**201**		**Pn**	**17 09 57.8**	**0.0**
BRLK	**Bradley Lake**	**3.37**	**182**	Pn	**Pn**	**17 09 58.5**	**-0.1**
BRLK				IAML		17 10 48.6	
	comp=E,397nm,0.7s						
BRSE	**Bradley Lake S**	**3.39**	**180**		**Pn**	**17 09 58.5**	**-0.3**
BRSE	**Bradley Lake S**	**3.39**	**180**	P		17 09 58.4	
	baz=0.8						
BRSE				S		17 10 37.7	
	baz=0.8						
EYAK	**Cordova Ski Ar**	**3.48**	**136**		**Pn**	**17 09 59.0**	**-1.0**
EYAK	**Cordova Ski Ar**	**3.48**	**136**	P		17 09 59.2	
	baz=320						
EYAK				S		17 10 39.2	
	baz=320						
HOM	**Homer**	**3.50**	**188**		**Pn**	**17 10 00.9**	**+0.7**
HOM	**Homer**	**3.50**	**188**	P		17 10 00.7	
	baz=7.5						
HOM				S		17 10 40.6	
	baz=7.5						
BMRM	**Bremner River**	**3.58**	**124**	Pn	**Pn**	**17 10 00.3**	**-1.2**
BMRM				IAML		17 10 58.1	
	comp=N,473nm,0.5s						
BMRM	**Bremner River**	**3.58**	**124**	P		17 10 00.1	
	baz=310,SNR=9.1						
BMRM				S		17 10 41.2	
	baz=310						
CNPM	**China Poot**	**3.61**	**184**	Pn	**Pn**	**17 10 01.5**	**-0.3**
CNPM				IAML		17 10 56.0	
	comp=N,442nm,0.7s						
GLB	**Gilahina Butte**	**3.62**	**115**	Pn	**Pn**	**17 10 01.5**	**-0.5**
GLB				IAML		17 10 42.7	
	comp=E,237nm,0.4s						
GLB				IAML		17 10 44.3	
	comp=N,328nm,0.5s						
OPT	**Oil Point**	**3.69**	**201**		**Pn**	**17 10 03.2**	**+0.5**
PS05	**TAPS Pump Stn5**	**3.71**	**0**		**Pn**	**17 10 03.4**	**+0.4**
VRDI	**Verde Repeater**	**3.88**	**116**		**Pn**	**17 10 04.8**	**-0.7**
VRDI				IAML		17 10 50.8	
	comp=N,221nm,0.7s						
VRDI				IAML		17 10 51.4	
	comp=E,153nm,0.9s						
K27K	**Chicken**	**3.96**	**73**		**Pn**	**17 10 05.8**	**-0.5**
K27K				IAML		17 10 57.3	
	comp=N,172nm,0.6s						
K27K				IAML		17 10 58.5	
	comp=E,142nm,0.5s						
RAGM	**Ragged Mountai**	**3.96**	**131**		**Pn**	**17 10 05.5**	**-0.9**
AUL	**Augustine Lava**	**3.98**	**201**		**Pn**	**17 10 07.0**	**+0.4**
MCARA	**McCarthy VSAT**	**3.98**	**112**		**Pn**	**17 10 06.7**	**0.0**
MCARA				IAML		17 10 56.8	
	comp=N,289nm,0.9s						
MCARA				IAML		17 11 12.7	
	comp=E,347nm,0.8s						
MCARA	**McCarthy VSAT**	**3.98**	**112**	S		17 10 51.5	
	baz=299						
BC03		**4.05**	**87**		**Pn**	**17 10 06.8**	**-0.7**
BCAR	**Beaver Creek A**	**4.05**	**87**		**Pn**	**17 10 06.3**	**-1.3**
COLD	**Coldfoot**	**4.13**	**3**	Pn	**Pn**	**17 10 08.8**	**+0.1**
COLD	**Coldfoot**	**4.13**	**3**	P		17 10 08.8	
	baz=183,SNR=91						
COLD				S		17 10 53.6	
	baz=183						
HMT	**Hamilton**	**4.14**	**130**		**Pn**	**17 10 07.6**	**-1.2**
FYU	**Fort Yukon**	**4.17**	**31**	Pn	**Pn**	**17 10 09.0**	**-0.1**
Q23K	**Middleton Isla**	**4.25**	**149**	Pn	**Pn**	**17 10 10.0**	**-0.2**
Q23K				IAML		17 11 29.8	
	comp=E,291nm,2.6s						
Q23K				IAML		17 11 54.2	
	comp=N,253nm,2.6s						
MID	**Middleton Isla**	**4.25**	**149**		**Pn**	**17 10 10.4**	**+0.1**
MID				IAML		17 12 39.4	
	comp=E,280nm,2.1s						
MID				IAML		17 12 43.6	
	comp=N,226nm,2.5s						
CRQM	**Cirque**	**4.28**	**120**		**Pn**	**17 10 10.2**	**-0.6**
BERG	**Berg Lake**	**4.30**	**126**	Pn	**Pn**	**17 10 11.1**	**+0.2**
NICHA	**Nichawak Mount**	**4.31**	**129**		**Pn**	**17 10 10.0**	**-1.1**
PTPK	**Patty Peak**	**4.31**	**113**		**Pn**	**17 10 10.6**	**-0.7**
KAIM	**Kayak Island**	**4.39**	**134**	Pn	**Pn**	**17 10 10.5**	**-1.5**
TGL	**Tana Glacier**	**4.40**	**119**		**Pn**	**17 10 11.2**	**-1.2**
TGL				IAML		17 11 20.1	
	comp=E,229nm,0.5s						
BALM	**Baldy**	**4.44**	**114**		**Pn**	**17 10 12.1**	**-0.8**
SUCK	**Suckling Hills**	**4.50**	**130**	Pn	**Pn**	**17 10 12.3**	**-1.2**
SUCK				IAML		17 11 31.9	
	comp=E,256nm,2.0s						
KIAG	**Kiagna River**	**4.50**	**116**		**Pn**	**17 10 12.6**	**-1.2**
EGAK	**Eagle**	**4.52**	**64**	Pn	**Pn**	**17 10 13.0**	**-0.8**
EGAK				IAML		17 11 09.0	
	comp=E,82nm,1.0s						
EGAK				IAML		17 11 20.0	
	comp=E,88nm,0.9s						
EGAK	**Eagle**	**4.52**	**64**	P		17 10 13.6	
	baz=252,SNR=40						
EGAK				S		17 11 04.1	
	baz=252						
BVCY	**Beaver Creek**	**4.57**	**94**		**Pn**	**17 10 13.9**	**-0.6**
BARN	**Barnard Glacie**	**4.72**	**112**		**Pn**	**17 10 16.3**	**-0.3**
BARN				IAML		17 11 30.4	
	comp=N,72nm,0.8s						
BARN				IAML		17 11 38.8	
	comp=E,82nm,0.8s						
KULT	**Kultieth River**	**4.76**	**124**		**Pn**	**17 10 16.2**	**-0.9**
SNH	**Sunshine Point**	**4.76**	**125**		**Pn**	**17 10 16.1**	**-1.0**
YCK2	**White River**	**4.76**	**102**		**Pn**	**17 10 17.9**	**+0.2**
GRNC	**Granite Creek**	**4.85**	**116**		**Pn**	**17 10 17.4**	**-1.1**
GRNC				IAML		17 11 32.2	

YAH				IAML			17 11 40.2	
	comp=N,138nm,0.9s							
MESA	**MESA**	**5.10**	**121**	Pn		**Pn**	**17 10 21.2**	**-0.6**
MESA				IAML			17 11 47.8	
	comp=E,166nm,0.6s							
LOGN	**Logan Glacier**	**5.11**	**112**			**Pn**	**17 10 21.9**	**0.0**
LOGN				IAML			17 11 40.8	
	comp=N,53nm,0.5s							
LOGN				IAML			17 11 43.5	
	comp=E,60nm,0.9s							
DAWY	**Dawson**	**5.13**	**74**	Pn		**Pn**	**17 10 21.6**	**-0.4**
RKAV	**Rock Avalanche**	**5.26**	**118**			**Pn**	**17 10 23.4**	**-0.6**
TABL	**Table Mountain**	**5.26**	**116**	Pn		**Pn**	**17 10 23.0**	**-1.0**
TABL				IAML			17 11 53.1	
	comp=E,73nm,2.0s							
TABL				IAML			17 11 56.4	
	comp=N,62nm,2.9s							
KDAK	**Kodiak Island**	**5.43**	**191**	P		**Pn**	**17 10 24.6**	**-1.5**
	comp=N,8.4nm,0.3s,baz=59,slow=6.5,SNR=204							
KDAK				S		**Sn**	**17 11 22.2**	**-5.2**
	comp=N,4.9nm,0.3s,baz=221,slow=18,SNR=7.8							
KDAK	**Kodiak Island**	**5.43**	**191**			**Pn**	**17 10 24.8**	**-1.3**
KDAK	**Kodiak Island**	**5.43**	**191**	P			17 10 24.4	
	baz=9.4							
CHX	**Chaix Hills**	**5.50**	**120**			**Pn**	**17 10 26.7**	**-0.4**
TOLK	**Toolik Lake Re**	**5.57**	**4**	Pn		**Pn**	**17 10 29.6**	**+1.7**
TOLK	**Toolik Lake Re**	**5.57**	**4**	P			17 10 28.7	
	baz=185,SNR=31							
TOLK				S			17 11 31.0	
	baz=185							
PCA	**Pinnacle**	**5.82**	**117**			**Pn**	**17 10 31.3**	**-0.1**
PINM	**Pinnacle**	**5.83**	**117**	P			17 10 30.8	
	baz=306							
OHAK	**Old Harbor**	**6.05**	**194**	Pn		**Pn**	**17 10 32.4**	**-2.0**
OHAK	**Old Harbor**	**6.05**	**194**	P			17 10 32.6	
	baz=12							
BCPM	**Bancas Point**	**6.16**	**116**	Pn		**Pn**	**17 10 35.5**	**-0.4**
HYT	**Haines Junctio**	**6.62**	**104**	Pn		**Pn**	**17 10 41.4**	**-0.9**
ANM	**Nome**	**6.66**	**289**			**Pn**	**17 10 41.6**	**-0.9**
SII	**Sitkinak Islan**	**6.81**	**197**	Pn		**Pn**	**17 10 42.7**	**-2.0**
TNA	**Tin City**	**7.87**	**296**	Pn		**Pn**	**17 11 00.0**	**+1.2**
A21K	**Barrow**	**8.55**	**347**	Pn		**Pn**	**17 11 07.0**	**-1.0**
INK	**Inuvik**	**8.76**	**46**	P		**Pn**	**17 11 10.8**	**0.0**
	comp=N,0.4nm,0.3s,baz=240,slow=13,SNR=9.3							
INK				S		**Sn**	**17 12 46.1**	**-1.5**
	comp=N,0.2nm,0.3s,baz=246,slow=2.7,SNR=3.8							
INK	**Inuvik**	**8.76**	**46**	Pn		**Pn**	**17 11 11.1**	**+0.3**
BESE	**Bessie Mountai**	**8.95**	**113**	Pn		**Pn**	**17 11 13.1**	**-0.6**
BBB	**Bella Bella**	**16.20**	**122**	P		**Pn**	**17 12 47.9**	**+0.2**
	comp=N,0.1nm,0.3s,baz=285,slow=12,SNR=3.2							
YKA	**Yellowknife Ar**	**16.37**	**76**	P		**Pn**	**17 12 49.0**	**-0.8**
	comp=N,0.4nm,0.3s,baz=286,slow=10,SNR=26							
RES	**Resolute Bay**	**22.09**	**36**	P		**P**	**17 13 52.2**	**+0.1**
	comp=N,0.6nm,0.3s,baz=243,slow=18,SNR=12							
RES	**Resolute Bay**	**22.09**	**36**	P		**P**	**17 13 52.3**	**+0.1**
WALA	**Waterton Lakes**	**24.44**	**108**	P		**P**	**17 14 16.1**	**+1.5**
WALA				IAmb		IAmb	17 14 18.4	
	comp=Z,4.2nm,0.7s							
SEY	**Seymchan**	**25.11**	**295**	P		**P**	**17 14 19.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=74,slow=15,SNR=5.9							
FCC	**Fort Churchill**	**27.05**	**73**	P		**P**	**17 14 38.8**	**+0.9**
FCC				IAmb		IAmb	17 15 00.5	
	comp=Z,10nm,1.8s							
PDAR	**Pinedale Array**	**31.27**	**111**	P		**P**	**17 15 17.1**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=328,slow=5.3,SNR=6.5							
PDAR				PcP		**PcP**	**17 18 06.9**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=298,slow=2.5,SNR=3.5							
PDAR	**Pinedale Array**	**31.27**	**111**	P		**P**	**17 15 17.8**	**+2.1**
NVAR	**Mina Array Bea**	**31.48**	**126**	P		**P**	**17 15 19.3**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=328,slow=9.4,SNR=4.8							
NVAR				PcP		**PcP**	**17 18 08.4**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=270,slow=1.8,SNR=2.0							
ULM	**Lac du Bonnet**	**31.67**	**88**	P		**P**	**17 15 19.6**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=308,slow=7.0,SNR=4.2							
ULM	**Lac du Bonnet**	**31.67**	**88**	P		**P**	**17 15 18.9**	**+0.1**
ULM				IAmb		IAmb	17 15 45.4	
	comp=Z,16nm,1.9s							
R11A	**Troy Canyon, C**	**32.56**	**123**	P		**P**	**17 15 27.5**	**+0.5**
RSSD	**Black Hills**	**32.58**	**103**	P		**P**	**17 15 28.7**	**+1.6**
RSSD				IAmb		IAmb	17 15 29.1	
	comp=Z,4.4nm,0.6s							
B35A	**Bob, Littlefor**	**34.01**	**88**	P		**P**	**17 15 39.8**	**+0.6**
B35A				IAmb		IAmb	17 16 42.9	
	comp=Z,21nm,1.8s							
CCUT	**Cedar City**	**34.12**	**121**	P		**P**	**17 15 42.7**	**+2.2**
CCUT				IAmb		IAmb	17 15 43.2	
	comp=Z,2.2nm,0.7s							
DAG	**Danmarks Havn**	**37.19**	**16**	*i* P		**P**	**17 16 06.3**	**+0.3**
NRIK	**Noril'sk**	**41.60**	**333**	P		**P**	**17 16 42.7**	**0.0**
	comp=Z,0.9nm,0.7s,baz=46,slow=6.0,SNR=3.7							
NRIK	**Noril'sk**	**41.60**	**333**	IAmb		IAmb	17 17 58.4	
	comp=Z,9.8nm,1.9s							
TXAR	**Lajitas Array**	**45.19**	**116**	P		**P**	**17 17 13.7**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=323,slow=5.7,SNR=7.5							
TXAR	**Lajitas Array**	**45.19**	**116**	P		**P**	**17 17 12.0**	**-0.1**
ARCES	**ARCESS Array B**	**47.60**	**2**	P		**P**	**17 17 30.1**	**-0.2**
	comp=Z,4.6nm,1.0s,baz=14,slow=6.1,SNR=5.4							
FPAL	**Fort Paine**	**48.63**	**94**	P		**P**	**17 17 39.1**	**+0.4**
SONM	**Songino Array**	**53.86**	**306**	P		**P**	**17 18 17.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=46,slow=7.1,SNR=4.6							
SONM	**Songino Array**	**53.86**	**306**	IAmb		IAmb	17 18 19.4	
	comp=Z,6.0nm,2.0s							
NOA	**NORSAR Array B**	**55.40**	**11**	P		**P**	**17 18 27.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=350,slow=7.3,SNR=1.8							
ZALV	**Zalesovo Beam**	**55.51**	**324**	P		**P**	**17 18 28.8**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=19,slow=9.4,SNR=5.7							
FINES	**FINESS Array B**	**55.73**	**2**	P		**P**	**17 18 30.2**	**-0.4**
	comp=Z,3.2nm,1.0s,baz=274,slow=36,SNR=1.5							
HFS	**Hagfors**	**56.50**	**9**	P		**P**	**17 18 35.4**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=338,slow=3.4,SNR=5.6							
ARU	**Arti**	**58.65**	**341**	P		**P**	**17 18 51.2**	**0.0**
	comp=Z,1.7nm,0.5s,baz=23,slow=6.0,SNR=9.7							
ARU	**Arti**	**58.65**	**341**	IAmb		IAmb	17 18 51.7	
	comp=Z,4.8nm,0.6s							
BVAR	**Borovoye Array**	**59.81**	**333**	P		**P**	**17 18 58.2**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=298,slow=6.2,SNR=9.7							
KURBB	**Kurchatov Arra**	**60.17**	**326**	P		**P**	**17 19 01.3**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=25,slow=7.2,SNR=6.0							
OBN	**Obninsk**	**61.97**	**355**	P		**P**	**17 19 14.5**	**+0.7**
	comp=Z,3.8nm,0.4s,baz=251,slow=15,SNR=2.7							
MKAR	**Makanchi Array**	**62.67**	**322**	P		**P**	**17 19 18.0**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=46,slow=7.0,SNR=15							
AKTO	**Aktyubinsk**	**64.55**	**340**	P		**P**	**17 19 30.5**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=48,slow=5.4,SNR=2.4							
AKASG	**Malin Array Be**	**66.53**	**0**	P		**P**	**17 19 42.6**	**-1.0**
	comp=Z,1.4nm,0.4s,baz=2.0,slow=6.5,SNR=8.2							
AAK	**Ala-Archa**	**68.61**	**326**	P		**P**	**17 19 56.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=261,slow=13,SNR=3.7							

*IDC **08** 17:30:03.2±4.2, 32.˚44N×139.˚31E, h36km±45km, mb3.0/3, mb1 3.3/5, mb1mx3.0/51, mbtmp3.2/5, ML3.0/2, Error ellipse: s-maj=31.6km s-min=27.1km az=148.0*

*JMA **08** 17:30:04.5±0.1, 32.˚96N×140.˚40E, h72km±2km, M3.2*

ISC 08 17:30:03.6±1.3, **32.˚88N**±0.˚06×**140.˚4E**±0.˚1, **h75**km±9km, **n22**, σ0§**87**/22, **mb3.4**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**0.55**	**290**	P		**Pn**	**17 30 17.8**	**+0.4**
JHCJ				S		**Sn**	**17 30 27.3**	**-0.3**
JHJ2	**Mitsune**	**0.55**	**295**	P		**Pn**	**17 30 17.8**	**+0.5**
JHJ2				S		**Sn**	**17 30 27.5**	**0.0**
JHJ	**Hachijo jima 2**	**0.58**	**294**	P		**Pn**	**17 30 18.0**	**+0.3**
	127nm,0.3s,baz=86,slow=22,SNR=24							
JHJ				Sn		**Sn**	**17 30 27.5**	**-0.6**
	508nm,0.3s,baz=137,slow=23,SNR=32							
JAOM	**Aogashimamukai**	**0.69**	**233**	P		**Pn**	**17 30 19.9**	**+1.1**
JMKN	**Mikurajimanish**	**1.22**	**326**	P		**Pn**	**17 30 25.4**	**+0.3**
JMKN				S		**Sn**	**17 30 40.5**	**-0.8**
JKO	**Kozu shima**	**1.68**	**321**	P		**Pn**	**17 30 31.2**	**+0.1**
JKO				*e*S		**Sn**	**17 30 51.1**	**-0.9**
BSO1	**Boso 1**	**1.83**	**15**	P		**Pn**	**17 30 32.8**	**+0.3**
BSO3	**Boso 3**	**1.92**	**2**	P		**Pn**	**17 30 34.7**	**+0.7**
BSO3				*e*S		**Sn**	**17 30 57.1**	**-0.1**
JIM2	**Oshima 3**	**2.01**	**336**	P		**Pn**	**17 30 35.8**	**+0.4**
JIZS	**Izushimoda**	**2.23**	**326**	P		**Pn**	**17 30 39.4**	**+0.9**
JIZS				*e*S		**Sn**	**17 31 05.2**	**0.0**
JOD2	**Odawara 2**	**2.62**	**336**	P		**Pn**	**17 30 44.3**	**+0.6**
MJAR	**Matsushiro Arr**	**4.08**	**334**	Pn		**Pn**	**17 31 06.2**	**+2.7**
	0.2nm,0.3s,baz=158,slow=11,SNR=13							
JNU	**Nakatsue**	**8.01**	**274**	Pn		Pn	17 31 43.7	-14
	0.5nm,0.3s,baz=120,slow=16,SNR=1.0							
H11N2	**WAKE ISLAND Hy**	**27.02**	**112**	T		T	18 04 32.3	
	baz=305,slow=75,SNR=7.3							
H11N1	**WAKE ISLAND Hy**	**27.03**	**112**	T		T	18 04 34.8	
	baz=305,slow=75,SNR=7.2							
H11N3	**WAKE ISLAND Hy**	**27.04**	**112**	T		T	18 04 37.0	
	baz=305,slow=75,SNR=7.0							
H11S3	**WAKE ISLAND Hy**	**27.57**	**115**	T		T	18 04 58.5	
	baz=307							
H11S1	**WAKE ISLAND Hy**	**27.58**	**115**	T		T	18 05 15.4	
	baz=307							
H11S2	**WAKE ISLAND Hy**	**27.59**	**115**	T		T	18 05 00.8	
	baz=307							
MKAR	**Makanchi Array**	**45.74**	**305**	P		**P**	**17 38 16.8**	**-0.5**
	0.1nm,0.5s,baz=102,slow=9.7,SNR=1.9							
WRA	**Warramunga Arr**	**52.84**	**187**	P		**P**	**17 39 11.3**	**-0.2**
	0.3nm,0.3s,baz=1.7,slow=7.4,SNR=9.8							
ASAR	**Alice Springs**	**56.57**	**187**	P		**P**	**17 39 38.0**	**-0.5**
	0.3nm,0.8s,baz=360,slow=6.2,SNR=5.0							

*BJI **08** 18:04:36.7±0.0, 23.˚45N×143.˚13E, h11km, mB4.9/45, mb4.6/60, Ms4.4/46, Ms7 4.1/47*

*MOS **08** 18:04:36.1±0.9, 23.˚40N×142.˚83E, h33km, mb5.1/34, Error ellipse: s-maj=8.0km s-min=4.1km az=112.8*

*NEIC **08** 18:04:43.4±1.2, 23.˚36N±0.˚05×142.˚81E±0.˚09, h39km±5km, mb5.0/179, Error ellipse: s-maj=13.2km s-min=4.6km az=58.0*

*IDC **08** 18:04:44.0±2.2, 23.˚40N×142.˚93E, h42km±18km, mb4.3/37, mb1 4.4/40, mb1mx4.3/51, mbtmp4.5/40, ML4.1/3, MS4.0/30, Ms1 4.0/30, ms1mx4.0/37, Error ellipse: s-maj=14.4km s-min=11.6km az=94.0*

*JMA **08** 18:04:44.9±0.1, 23.˚75N×143.˚48E, h116km±3km, M4.7*

*GCMT **08** 18:04:46.4±0.2, 23.˚41N±0.˚01×143.˚05E±0.˚02, h41km±1km, MW5.0/106, Moment Tensor Solution. s52,c67; s106,c165; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}=0.15±.13; $M_{\theta\theta}$=2.96±.09; $M_{\phi\phi}$=-2.80±.10; $M_{r\theta}$=0.68±.10; $M_{r\phi}$=-0.02±.08; $M_{\theta\phi}$=2.67±.14; Best double couple: M=3.82200×10¹⁶ NP1:φ=129.00000°, δ=54.00000°, λ=-12.00000°. NP2:φ=226.00000°, δ=80.00000°, λ=-144.00000°. Principal axes: T 3.1690, Plg17.0000°, Azm352.0000°; N 1.3140, Plg53.0000°, Azm238.0000°; P -4.4760, Plg32.0000°, Azm93.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:04:43.8±0.3, **23.˚46N**±0.˚04×**142.˚97E**±0.˚06, **h39**km, **n477**, σ1§**46**/464, **mb4.9**/164, **MS4.1**/40, **18C-6D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**3.24**	**347**	P		**Pn**	**18 05 33.1**	**+1.0**
JHH2				*e*S		**Sn**	**18 06 10.1**	**+0.7**
CBIJ	**Chichi jima**	**3.69**	**349**	P		**Pn**	**18 05 38.9**	**+0.6**
CBIJ				*e*S		**Sn**	**18 06 20.3**	**-0.2**
JCJ	**Chichijima**	**3.69**	**349**	P		**Pn**	**18 05 39.0**	**+0.7**
	73nm,0.3s,baz=118,slow=2.5,SNR=458							
JCJ				S		**Sn**	**18 06 21.1**	**+0.6**
	274nm,0.3s,baz=311,slow=22,SNR=12							
JCJ	**Chichijima**	**3.69**	**349**			**Pn**	**18 05 38.7**	**+0.4**
ANA2	**Anatahan**	**7.54**	**159**	Pn		**Pn**	**18 06 29.0**	**-2.2**
GUMO	**Guam**	**9.98**	**169**	P		**Pn**	**18 07 01.7**	**-3.0**
GUMO	**Guam**	**9.98**	**169**	Pn		**Pn**	**18 07 01.7**	**-3.0**
JHJ	**Hachijo jima 2**	**10.02**	**344**	LR		LR	18 10 57.0	
	comp=Z,2μm,19.7s,baz=138,slow=37							
JMZ	**Minamidaito 2**	**10.94**	**285**	P		Pn	18 07 23.8	+6.0
BSO3	**Boso 3**	**11.50**	**350**	P		**Pn**	**18 07 25.6**	**+0.4**
JTNC	**Tanabenakahech**	**12.17**	**330**	P		**Pn**	**18 07 36.5**	**+1.9**
JOD2	**Odawara 2**	**12.24**	**345**	P		**Pn**	**18 07 33.4**	**-2.1**
JOD2				*e*S		**Sn**	**18 09 45.3**	**-5.3**
JNY	**Yasuok**	**12.66**	**341**	P		**Pn**	**18 07 38.9**	**-2.4**
JHU	**Hanno**	**12.76**	**346**	P		**Pn**	**18 07 39.9**	**-2.7**
JHU				*e*S		**Sn**	**18 09 57.3**	**-5.9**
JAO	**Obara**	**12.77**	**338**	P		**Pn**	**18 07 42.6**	**-0.2**
INU	**Inuyama**	**12.93**	**338**			**Pn**	**18 07 44.0**	**-0.9**
JYT	**Yasato**	**12.95**	**350**	Pn		**Pn**	**18 07 42.2**	**-3.0**
JMN	**Monobe**	**12.97**	**324**	Pn		**Pn**	**18 07 48.2**	**+2.7**
JRY	**Ryogami san**	**13.00**	**345**	P		**Pn**	**18 07 43.6**	**-2.3**
JGF	**Kuroka**	**13.04**	**339**	Pn		**Pn**	**18 07 45.5**	**-1.1**
JHO	**Hitachi**	**13.27**	**352**	P		**Pn**	**18 07 47.3**	**-2.3**
JAG	**Ashikaga**	**13.27**	**348**	P		**Pn**	**18 07 46.3**	**-3.3**
JWT	**Wachi**	**13.49**	**333**			**Pn**	**18 07 53.2**	**+0.6**
MJAR	**Matsushiro Arr**	**13.67**	**344**	P		**Pn**	**18 07 52.5**	**-2.5**
	0.3nm,0.3s,baz=164,slow=15,SNR=16							
MJAR				LR		LR	18 12 58.7	
	comp=Z,1μm,20.7s,baz=165,slow=36							
MJAR	**Matsushiro Arr**	**13.67**	**344**	P		**Pn**	**18 07 51.5**	**-3.6**
MJAR	**Matsushiro Arr**	**13.67**	**344**			**Pn**	**18 07 51.5**	**-3.6**
MAJO	**Matsushiro**	**13.67**	**344**	*i* P		**Pn**	**18 07 53.5**	**-1.6**
MAJO	**Matsushiro**	**13.67**	**344**	Pn		**Pn**	**18 07 53.0**	**-2.0**
MAT	**Matsushiro**	**13.67**	**344**	P		**Pn**	**18 07 51.4**	**-3.7**
MAT				*e*S		**Sn**	**18 10 20.6**	**-5.0**
JSU	**Suzuyama**	**13.69**	**309**	Pn		**Pn**	**18 07 54.9**	**-0.4**
JOW	**Kunigami**	**13.72**	**287**	LR		LR	18 12 29.5	
	comp=Z,1μm,20.7s,baz=108,slow=34							
JOW	**Kunigami**	**13.72**	**287**	Pn		**Pn**	**18 07 54.2**	**-1.6**
JFK	**Kawauchi**	**13.98**	**353**	P		**Pn**	**18 07 56.4**	**-2.9**
JNU	**Nakatsue**	**14.34**	**315**	P		**Pn**	**18 08 05.7**	**+1.5**
	0.4nm,0.3s,baz=119,slow=7.2,SNR=4.2							
JNU				LR		LR	18 12 51.0	
	comp=Z,461nm,20.4s,baz=120,slow=34							
JNU	**Nakatsue**	**14.34**	**315**			**P**	**18 08 07.7**	**-2.9**
JHS	**Saijyo**	**14.35**	**325**	Pn		**Pn**	**18 08 03.7**	**-0.6**
JMM	**Marumori**	**14.48**	**353**	Pn		**Pn**	**18 08 03.6**	**-2.4**
JSD	**Sado**	**15.08**	**346**	Pn		**Pn**	**18 08 09.2**	**-4.8**
JSD				IAmb		IAmb	18 08 19.5	
	comp=Z,50nm,0.9s							
JTM	**Tenmabayashi**	**17.35**	**355**	Pn		**Pn**	**18 08 41.2**	**-1.6**
JTM				IAmb		IAmb	18 08 50.0	
	comp=Z,90nm,0.9s							
ERM	**Erimo**	**18.50**	**0**	*ce*P		**Pn**	**18 08 57.4**	**+0.4**
ERM				pmax		pmax		
	comp=Z,63nm,1.0s							
ERM	**Erimo**	**18.50**	**0**			**Pn**	**18 08 57.1**	**+0.1**
ERM				IAmb		IAmb	18 09 10.4	
	comp=Z,56nm,0.8s							
TJN	**Taejon**	**18.64**	**317**	*ce*P		**P**	**18 08 57.3**	**-0.8**
KSRS	**Korea Array**	**19.01**	**321**	P		**P**	**18 09 01.6**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=135,slow=11,SNR=23							
KSRS				LR		LR	18 15 38.5	
	comp=Z,537nm,21.2s,baz=132,slow=34							
KSAR	**Wonju Array Be**	**19.02**	**321**	P		**P**	**18 09 01.1**	**-1.2**
KSAR	**Wonju Array Be**	**19.02**	**321**	P		**P**	**18 09 01.1**	**-1.2**
KS19	**Wonju Array Si**	**19.07**	**321**	P		**P**	**18 09 01.8**	**-1.1**
JEW	**Eniwo**	**19.37**	**357**			**Pn**	**18 09 07.2**	**-0.2**
INCN	**Inchon**	**19.80**	**319**	P		**P**	**18 09 10.9**	**+0.1**
INCN				pmax		pmax		
	comp=Z,25nm,0.9s							
INCN	**Inchon**	**19.80**	**319**			**P**	**18 09 10.9**	**+0.1**
YULB	**Yu-li**	**19.89**	**274**	P		**P**	**18 09 08.3**	**-3.6**
YULB				IAmb		IAmb	18 09 35.1	
	comp=Z,68nm,1.1s							
TWG	**Pinlang**	**20.14**	**273**	P		**P**	**18 09 11.7**	**-3.1**
TWG				IAmb		IAmb	18 09 35.2	
	comp=Z,138nm,1.3s							
SSLB	**Suanglung**	**20.17**	**275**			**P**	**18 09 12.2**	**-2.8**
SSLB				IAmb		IAmb	18 09 32.7	
	comp=Z,43nm,0.9s							
ASAJ	**Asahikawa**	**20.61**	**359**	P		Pn	18 09 21.3	-0.7
	comp=Z,45nm,0.6s,baz=215,slow=11,SNR=62							
ASAJ				LR		LR	18 17 23.9	
	comp=Z,300nm,21.9s,baz=186,slow=37							
ASAJ	**Asahikawa**	**20.61**	**359**	P		Pn	18 09 21.3	-0.7
ASAJ				pmax		pmax		
	comp=Z,53nm,0.7s							
JKA	**Kamikawa-asahi**	**20.61**	**359**			Pn	18 09 21.3	-0.7
JKA				IAmb		IAmb	18 09 23.2	
	comp=Z,52nm,0.7s							
YUK	**Yuzh-Kuril'sk**	**20.66**	**6**	*e*P		**P**	**18 09 15.6**	**-4.5**
YUK				*e*PPP		PPP	18 09 46.3	
YUK				*e*S		**S**	**18 13 02.4**	**-6.3**
YUK				*e*SS		**SnSn**	**18 13 37.0**	**+7.1**
YUK				pmax		pmax		
	comp=N,63nm,0.9s							
YUK				pmax		pmax		
	comp=Z,143nm,0.9s							
YUK				pmax		pmax		
	comp=E,163nm,0.7s							
YUK				pmax		pmax		
	comp=Z,164nm,2.0s							
MSHR	**Mys Shultsa**	**21.45**	**336**	*i* P		**P**	**18 09 31.1**	**+2.6**
PATS	**Pohnpei**	**22.16**	**136**	P		**P**	**18 09 37.8**	**+1.4**
H11N1	**WAKE ISLAND Hy**	**22.55**	**95**	T		T	18 33 31.7	
	baz=282							
H11N2	**WAKE ISLAND Hy**	**22.55**	**95**	T		T	18 33 46.2	
	baz=282,slow=74							
H11N3	**WAKE ISLAND Hy**	**22.57**	**95**	T		T	18 33 31.3	
	baz=282,slow=74							
USA0B	**Ussuriysk Arra**	**22.57**	**339**	*i* P		**P**	**18 09 38.9**	**-1.7**
USA0B	**Ussuriysk Arra**	**22.57**	**339**	P		**P**	**18 09 39.2**	**-1.4**
USRK	**Ussuriysk Ar.**	**22.57**	**339**	P		**P**	**18 09 39.3**	**-1.3**
	comp=Z,37nm,1.1s,baz=154,slow=11,SNR=25							
USRK				LR		LR	18 18 29.6	
	comp=Z,306nm,20.0s,baz=142,slow=36							
USRK	**Ussuriysk Ar.**	**22.57**	**339**	P		**P**	**18 09 38.1**	**-2.5**
USRK	**Ussuriysk Ar.**	**22.57**	**339**	P		**P**	**18 09 38.1**	**-2.5**
H11S3	**WAKE ISLAND Hy**	**22.68**	**98**	T		T	18 33 16.6	
	baz=282,slow=75							
H11S1	**WAKE ISLAND Hy**	**22.69**	**98**	T		T	18 33 23.8	
	baz=282,slow=75							
H11S2	**WAKE ISLAND Hy**	**22.70**	**98**	T		T	18 33 27.7	
	baz=282,slow=75							
NJ2	**Nanjing**	**22.95**	**297**	*e*P		**P**	**18 09 43.9**	**-0.9**
NJ2				pmax		pmax		
	comp=Z,15nm,0.5s							
DAV	**Davao City (W)**	**23.34**	**228**	LR		LR	18 17 19.5	
	comp=Z,425nm,19.9s,baz=30,slow=32							
YSS	**Yuzh-Sakhalins**	**23.44**	**360**	*ce*P		**P**	**18 09 50.5**	**+1.1**
YSS				pmax		pmax		
	comp=Z,33nm,1.0s							
YSS	**Yuzh-Sakhalins**	**23.44**	**360**	P		**P**	**18 09 50.6**	**+1.2**
MDJ	**Mudanjiang**	**23.77**	**336**	P		**P**	**18 09 51.6**	**-1.0**
MDJ				pmax		pmax		
	comp=Z,10.0nm,1.1s							
MDJ				pmax		pmax		
	comp=Z,130nm,4.0s							
MDJ				LR		LR		
	comp=Z,350nm,19.1s							
MDJ				LR		LR		
	comp=Z,450nm,19.5s							
MDJ				LR		LR		
	comp=Z,750nm,20.0s							
MDJ	**Mudanjiang**	**23.77**	**336**	P		**P**	**18 09 51.4**	**-1.3**
SNY	**Shenyang**	**24.44**	**323**	⇓P		**P**	**18 09 59.6**	**+0.8**
SNY				pmax		pmax		
	comp=Z,10.0nm,0.9s							
SNY				LR		LR		
	comp=Z,230nm,10.0s							
SNY				LR		LR		
	comp=Z,270nm,13.9s							
SNY				LR		LR		
	comp=Z,490nm,22.6s							
CN2	**Changchun**	**24.89**	**329**	*e*P		**P**	**18 10 03.3**	**+0.4**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
CN2				LR		LR		
	comp=Z,300nm,16.0s							
CN2				LR		LR		
	comp=Z,400nm,16.0s							
CN2				LR		LR		
	comp=Z,500nm,19.0s							
TIA	**Tai'an**	**25.68**	**306**	P		**P**	**18 10 09.5**	**-0.6**
TIA				pmax		pmax		
	comp=Z,15nm,1.0s							
WHN	**Wuhan**	**26.41**	**292**	P		**P**	**18 10 18.7**	**+1.9**
SIJI	**Sorong**	**26.73**	**207**	LR		LR	18 18 23.5	
	comp=Z,345nm,21.4s,baz=56,slow=31							
TNTI	**Ternate**	**27.16**	**216**	P		**P**	**18 10 28.2**	**+4.5**
	comp=Z,13nm,0.8s							
KLR	**Kul'dur**	**27.20**	**344**	P		**P**	**18 10 24.2**	**+0.5**
	comp=Z,28nm,0.8s,baz=150,slow=9.8,SNR=83							
KLR				LR		LR	18 21 23.9	

MA2 Magadan 36.51 7 P **P** **18 11 46.0 +0.8**
comp=Z,4.2nm,0.6s,baz=186,slow=8.3,SNR=12
MA2 Magadan 36.51 7*ce*P **P** **18 11 45.9 +0.8**
MA2 pmax pmax
comp=Z,13nm,2.5s
MA2 Magadan 36.51 7 P **P** **18 11 45.9 +0.8**
MA2 IAmb IAmb 18 12 04.9
comp=Z,13nm,0.9s
KMI Kunming 36.61 281 ⇑P **P** **18 11 45.8 -0.9**
KMI pP pP 18 11 50.3 -6.4
KMI pmax pmax
comp=Z,96nm,4.7s
KMI LR LR
comp=Z,250nm,10.7s
KMI LR LR
comp=Z,170nm,14.1s
KMI LR LR
comp=Z,260nm,18.1s
ULN Ulaanbaatar 37.49 320*ce*P **P** **18 11 51.3 -2.5**
ULN pmax pmax
comp=Z,3.0nm,1.3s
ULN Ulaanbaatar 37.49 320 P **P** **18 11 52.6 -1.2**
SOEI Soe 37.74 211 P **P** **18 11 55.1 -1.1**
SOEI IAmb IAmb 18 12 24.2
comp=Z,14nm,0.8s
MMRI Maumere 37.80 215 P **P** **18 11 57.1 +0.5**
SONM Songino Array 37.87 319 P **P** **18 11 57.4 +0.4**
comp=Z,1.3nm,0.8s,baz=140,slow=6.8,SNR=7.1
SONM LR LR 18 28 08.4
comp=Z,348nm,19.8s,baz=116,slow=37
SONM Songino Array 37.87 319 P **P** **18 11 55.7 -1.3**
SONM pmax pmax
comp=Z,5.0nm,0.8s
SONM Songino Array 37.87 319 P **P** **18 11 55.7 -1.3**
MTN Manton Dam 37.89 199 P **P** **18 11 57.2 -0.1**
MTN IAmb IAmb 18 12 13.8
comp=Z,13nm,0.6s
YAK Yakutsk 39.60 350 P **P** **18 12 11.4 +0.3**
comp=Z,32nm,0.6s,baz=162,slow=1.2,SNR=36
YAK Yakutsk 39.60 350*di*P **P** **18 12 11.3 +0.2**
YAK *e*S S **18 18 10.8 -0.4**
YAK *e*'SS ScP 18 18 14.5 +11
YAK pmax pmax
comp=E,38nm,0.8s
YAK pmax pmax
comp=E,3.0nm,0.7s
YAK pmax pmax
comp=N,5.0nm,0.8s
YAK smax smax
comp=E,45nm,2.5s
YAK smax smax
comp=N,17nm,1.8s
YAK MLR MLR
comp=Z,314nm,18.0s
YAK MLR MLR
comp=N,155nm,14.0s
YAK MLR MLR
comp=E,81nm,16.0s
YAK Yakutsk 39.60 350 P **P** **18 12 11.1 0.0**
GTA Gaotai 39.71 304 ⇑P **P** **18 12 16.8 +4.3**
GTA pP pP 18 12 23.8 +1.2
GTA pmax pmax
comp=E,3.0nm,1.1s
GTA pmax pmax
comp=E,69nm,5.5s
GTA LR LR
comp=E,150nm,18.9s
GTA LR LR
comp=E,160nm,18.9s
GTA LR LR
comp=E,240nm,21.1s
SEY Seymchan 39.97 7 P **P** **18 12 15.4 +1.3**
comp=E,5.7nm,0.8s,baz=185,slow=6.8,SNR=31
SEY Seymchan 39.97 7 *i*P **P** **18 12 14.9 +0.8**
BOD Bodaibo 40.15 336 *e*P **P** **18 12 14.6 -1.1**
BOD pmax pmax
comp=Z,10.0nm,1.3s
ZAK Zakamensk 40.84 321 *e*P **P** **18 12 19.4 -2.3**
ZAK pmax pmax
comp=Z,6.0nm,1.0s
CM34 Chiang Mai Arr 41.01 272 P **P** **18 12 24.0 +0.6**
CM36 Chiang Mai Arr 41.14 272 P **P** **18 12 27.0 +2.5**
CM33 Chiang Mai Arr 41.20 272 P **P** **18 12 25.0 0.0**
CMMT Chiang Mai 41.20 272 P **P** **18 12 24.9 -0.1**
CHTO Chiang Mai 41.20 272 P **P** **18 12 24.7 -0.3**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 41.20 272 P **P** **18 12 24.7 -0.3**
TLY Talaya 41.23 323 P **P** **18 12 26.3 +1.5**
comp=Z,1.4nm,0.6s,baz=180,slow=1.0,SNR=1.8
TLY Talaya 41.23 323 *e*P **P** **18 12 24.8 0.0**
TLY pmax pmax
comp=Z,10.0nm,0.6s
TLY MLR MLR
comp=Z,709nm,18.0s
CM09 Chiang Mai Arr 41.25 272 P **P** **18 12 29.2 +3.8**
CM04 Chiang Mai Arr 41.27 272 P **P** **18 12 28.4 +2.8**
CM01 Chiang Mai Arr 41.29 272 P **P** **18 12 29.6 +3.9**
CM31 Chiang Mai Arr 41.29 272 P **P** **18 12 28.3 +2.5**
CM31 Chiang Mai Arr 41.29 272 P **P** **18 12 26.6 +0.8**
CMAR Chiang Mai Arr 41.29 272 P **P** **18 12 26.9 +1.1**
comp=Z,2.0nm,0.4s,baz=59,slow=7.5,SNR=21
CMAR LR LR 18 28 45.3
comp=Z,143nm,20.2s,baz=133,slow=35
CM02 Chiang Mai Arr 41.30 272 P **P** **18 12 29.5 +3.7**
CM05 Chiang Mai Arr 41.31 272 P **P** **18 12 29.2 +3.4**
CM15 Chiang Mai Arr 41.31 272 P **P** **18 12 27.0 +1.1**
CM32 Chiang Mai Arr 41.33 272 P pP 18 12 37.0 +0.8
CM13 Chiang Mai Arr 41.34 272 P **P** **18 12 29.4 +3.3**
MHMT Maesarieng 42.29 272 P pP 18 12 44.2 +0.1
MOY Mondy 42.70 322 *e*P pP 18 12 48.9 +1.9
CTAO Charters Tower 43.40 176 P **P** **18 12 42.3 -0.5**
CTAO pmax pmax
comp=Z,29nm,1.3s
CTAO Charters Tower 43.40 176 P **P** **18 12 42.2 -0.5**
CTAO IAmb IAmb 18 12 59.2
comp=Z,29nm,1.3s
WB0 Warramunga Arr 43.77 192 P **P** **18 12 44.2 -1.5**
WR0 Warramunga Arr 43.93 191 P **P** **18 12 46.4 -0.6**
WRAB Tennant Creek 43.94 192*ce*P **P** **18 12 46.4 -0.7**
WRAB pmax pmax
comp=Z,16nm,1.7s
WRAB Tennant Creek 43.94 192 P **P** **18 12 46.3 -0.8**
WRAB IAmb IAmb 18 13 04.5
comp=Z,17nm,0.7s
WB2 Warramunga Arr 43.95 192 P **P** **18 12 45.9 -1.2**
WB2 IAmb IAmb 18 13 04.6
comp=Z,22nm,0.8s
WRA Warramunga Arr 43.95 192 P **P** **18 12 46.1 -1.0**
comp=Z,3.5nm,0.3s,baz=8.0,slow=7.8,SNR=22
WRA ScP **ScP** **18 18 20.2 -1.2**
comp=Z,1.8nm,0.9s,baz=10,slow=5.2,SNR=5.4
WRA Warramunga Arr 43.95 192 P **P** **18 12 45.3 -1.9**
FITZ Fitzroy Crossi 44.64 204 P **P** **18 12 52.1 -0.5**
SANVU Saraoutou 45.35 146 P **P** **18 12 57.6 -0.8**
SHL Shillong 46.30 284 P **P** **18 13 05.6 -0.5**
SHL pmax pmax
comp=Z,19nm,0.7s
SHL Shillong 46.30 284 P **P** **18 13 05.6 -0.5**
SHL IAmb IAmb 18 13 21.0
comp=Z,19nm,0.7s
LSA Lhasa 46.45 289 P **P** **18 13 07.5 -0.1**
LSA pmax pmax
comp=Z,16nm,0.7s
LSA Lhasa 46.45 289 P **P** **18 13 07.5 -0.1**
LSA IAmb IAmb 18 13 23.5
comp=Z,16nm,0.7s
BILL Bilibino 46.84 12 *e*P **P** **18 13 10.7 +1.2**
BILL pmax pmax
comp=Z,27nm,1.7s
BILL Bilibino 46.84 12 P **P** **18 13 10.5 +1.0**
BILL IAmb IAmb 18 13 11.7
comp=Z,38nm,1.5s
AS31 Alice Springs 47.66 191 P **P** **18 13 16.6 +0.2**
ASAR Alice Springs 47.66 191 P **P** **18 13 15.6 -0.9**
comp=Z,2.0nm,0.4s,baz=13,slow=7.7,SNR=20
ASAR ScP **ScP** **18 18 36.0 -0.7**
comp=Z,0.5nm,0.8s,baz=15,slow=10,SNR=4.5
ASAR LR LR 18 32 18.7
comp=Z,83nm,20.9s,baz=12,slow=35
ASAR Alice Springs 47.66 191 P **P** **18 13 15.3 -1.2**
ASAR Alice Springs 47.66 191 P **P** **18 13 15.3 -1.2**
TIXI Tiksi 48.88 354 P **P** **18 13 25.5 +0.3**
comp=Z,4.2nm,0.8s,baz=136,slow=6.3,SNR=18
TIXI Tiksi 48.88 354*ce*P **P** **18 13 25.2 0.0**
TIXI pmax pmax
comp=Z,42nm,1.3s
TIXI Tiksi 48.88 354 P **P** **18 13 25.3 0.0**
TIXI IAmb IAmb 18 13 44.3
comp=Z,6.4nm,0.7s
WMQ Urumqi 49.32 308 *e*P **P** **18 13 30.1 +0.9**
WMQ sP pP 18 13 38.8 -0.7
WMQ pmax pmax
comp=Z,27nm,1.1s
WMQ pmax pmax
comp=Z,240nm,4.5s
WMQ LR LR
comp=Z,740nm,18.3s
WMQ LR LR
comp=Z,670nm,24.5s
WMQ Urumqi 49.32 308 P **P** **18 13 28.9 -0.2**
WMQ pmax pmax
comp=Z,17nm,1.0s
WMQ Urumqi 49.32 308 **P** **18 13 28.9 -0.2**
WMQ IAmb IAmb 18 13 43.8
comp=Z,17nm,1.0s
TAPN Taplejung 49.73 287 *e*P **P** **18 13 33.2 +0.4**
comp=Z,14nm,0.6s
ODAN Odare 50.09 286 *e*P **P** **18 13 36.1 +0.7**
comp=Z,24nm,0.7s
GAMB Gambell 50.10 24 P **P** **18 13 36.0 +1.4**
GAMB Gambell 50.10 24 P **P** **18 13 35.1**
baz=238
DGZ Jazzator, Alta 50.32 316 *i*P **P** **18 13 37.3 +0.5**
DGZ pmax pmax
comp=Z,6.0nm,1.0s
RAMN Ramite 50.77 286 *e*P **P** **18 13 41.1 +0.5**
JIRN Jiri 51.02 287 *e*P **P** **18 13 43.1 +0.5**
comp=Z,65nm,0.7s
GUN Gumba 51.25 288 *e*P **P** **18 13 45.1 +0.8**
comp=Z,12nm,0.5s
PKI Pulchoki 51.72 287 *e*P **P** **18 13 48.0 +0.2**
PKIN Phulchoki 51.73 287 *e*P **P** **18 13 48.0 +0.2**
DMN Daman 51.98 287 *e*P **P** **18 13 50.3 +0.7**
SDPT Sand Point 52.12 37 P **P** **18 13 50.2**
baz=256
GKN Gorkha 52.32 288 *e*P **P** **18 13 52.4 +0.3**
TNA Tin City 52.41 23 P **P** **18 13 53.5 +1.7**
TNA Tin City 52.41 23 P **P** **18 13 52.4**
baz=241,SNR=5.7
ZAA0 Zalesovo Array 52.72 321 P **P** **18 13 53.5 -0.9**
ZALV Zalesovo Beam 52.72 321 P **P** **18 13 53.9 -0.5**
comp=Z,1.1nm,0.5s,baz=93,slow=8.9,SNR=7.8
ZALV LR LR 18 38 02.0
comp=Z,166nm,20.1s,baz=104,slow=38
ZALV Zalesovo Beam 52.72 321 *i*P **P** **18 13 52.9 -1.5**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 52.72 321 P **P** **18 13 53.3 -1.1**
ANM Nome 52.91 25 P **P** **18 13 57.6 +1.9**
ANM pmax pmax
comp=Z,12nm,1.1s
ANM Nome 52.91 25 P **P** **18 13 57.6 +1.9**
ANM IAmb IAmb 18 14 26.7
comp=Z,12nm,1.1s
ANM Nome 52.91 25 P **P** **18 13 55.9**
baz=245,SNR=5.8
DANN Dangsing 53.03 289 *e*P **P** **18 13 58.5 +1.0**
KOLN Koldanda 53.27 288 *e*P **P** **18 13 59.7 +0.6**
comp=Z,33nm,1.0s
MK31 Makanchi Array 53.37 312*di*P **P** **18 13 59.4 0.0**
MK31 Makanchi Array 53.37 312 P **P** **18 13 58.8 -0.5**
MK31 IAmb IAmb 18 14 12.9
comp=Z,7.5nm,0.7s
MKAR Makanchi Array 53.37 312 P **P** **18 13 59.0 -0.4**
comp=Z,3.6nm,0.6s,baz=91,slow=8.9,SNR=58
MKAR LR LR 18 38 38.5
comp=Z,116nm,19.2s,baz=86,slow=38
MKAR Makanchi Array 53.37 312 P **P** **18 13 58.4 -1.0**
MKAR Makanchi Array 53.37 312 P **P** **18 13 58.4 -1.0**
MAKZ Makanchi 53.59 312 P **P** **18 14 00.6 -0.4**
MAKZ pmax pmax
comp=Z,12nm,0.8s
MAKZ Makanchi 53.59 312 P **P** **18 14 00.6 -0.4**
MAKZ IAmb IAmb 18 14 14.6
comp=Z,12nm,0.8s
PYUN Piuthan 53.74 288 *e*P **P** **18 14 02.9 +0.3**
comp=Z,49nm,0.9s
STKA Stephens Creek 55.04 181 P **P** **18 14 10.6 -0.9**
comp=Z,4.6nm,0.5s,baz=353,slow=7.1,SNR=16
STKA LR LR 18 39 16.5
comp=Z,69nm,18.3s,baz=19,slow=38
STKA Stephens Creek 55.04 181 *i*P **P** **18 14 10.3 -1.2**
STKA Stephens Creek 55.04 181 P **P** **18 14 10.3 -1.2**
PDGK Podgornoye 55.26 307 P **P** **18 14 12.7 -0.6**
SHLS Shalkode 55.28 307 *e*P **P** **18 14 11.1 -2.4**
comp=Z,4.4nm,0.7s,baz=307
SHLS Shalkode 55.28 307 *e*P **P** **18 14 11.0 -2.4**
SHLS pmax pmax
comp=Z,4.0nm,0.7s
RDOG Red Dog Mine 55.31 22 P **P** **18 14 14.1 +0.9**
RDOG Red Dog Mine 55.31 22 P **P** **18 14 13.9**
baz=245
UZB Uzunbulak 55.60 307 *e*P **P** **18 14 15.9 0.0**
baz=307
UZB Uzunbulak 55.60 307 *e*P **P** **18 14 15.8 0.0**
FORT Forrest 55.79 196 P **P** **18 14 17.1 +0.2**
SII Sitkinak Islan 55.83 37 P **P** **18 14 18.0 +1.0**
SII Sitkinak Islan 55.83 37 P **P** **18 14 17.5**
baz=261
KPKS Kokpek 55.84 308 *e*P **P** **18 14 17.4 -0.1**
baz=308
KPKS Kokpek 55.84 308 *e*P **P** **18 14 17.3 -0.1**
SVW2 Sparrevohn 56.00 31 P **P** **18 14 20.0 +1.8**
SVW2 IAmb IAmb 18 14 41.6
comp=Z,18nm,0.7s
TDK Taldyqorghan 56.02 309 *e*P **P** **18 14 18.9 +0.2**
baz=310
TDK Taldyqorghan 56.02 309 *e*P **P** **18 14 18.8 +0.2**
SATY Saty 56.05 307 *e*P **P** **18 14 19.0 -0.1**
baz=307
SATY Saty 56.05 307 *e*P **P** **18 14 18.9 -0.1**
KURK Kurchatov 56.06 316 P **P** **18 14 18.6 -0.2**
KURK Kurchatov 56.06 316 P **P** **18 14 18.6 -0.2**
KURBB Kurchatov Arra 56.11 316 P **P** **18 14 18.6 -0.6**
comp=Z,3.8nm,0.5s,baz=92,slow=8.2,SNR=57
KURBB Kurchatov Arra 56.11 316 P **P** **18 14 17.9 -1.2**
NRIK Noril'sk 56.28 339 P **P** **18 14 20.1 +0.1**
comp=Z,16nm,1.1s,baz=114,slow=8.1,SNR=13
NRIK LR LR 18 40 15.2
comp=Z,291nm,18.1s,baz=120,slow=38
NRIK Noril'sk 56.28 339*ce*P **P** **18 14 19.5 -0.5**
NRIK pmax pmax
comp=Z,10.0nm,0.9s
NRIK Noril'sk 56.28 339 P **P** **18 14 19.8 -0.2**
NRIK IAmb IAmb 18 14 34.7
comp=Z,23nm,1.1s
OHAK Old Harbor 56.42 36 P **P** **18 14 20.7**
baz=261
KDAK Kodiak Island 56.88 35 P **P** **18 14 24.7 +0.3**
comp=Z,5.0nm,0.5s,baz=293,slow=5.9,SNR=13
KDAK Kodiak Island 56.88 35 P **P** **18 14 24.7 +0.3**
KDAK pmax pmax
comp=Z,28nm,1.4s
KDAK Kodiak Island 56.88 35 IAmb IAmb 18 14 40.4
comp=Z,28nm,1.4s
MDOK Medeo 57.04 307 *e*P **P** **18 14 26.6 +0.5**
baz=307
MDOK Medeo 57.04 307 *e*P **P** **18 14 26.6 +0.5**
TNSS Tian-Shan 57.12 307 *e*P **P** **18 14 27.4 +0.4**
baz=307
TNSS Tian-Shan 57.12 307 *e*P **P** **18 14 27.3 +0.3**
KUU Kurty 57.53 308 *e*P **P** **18 14 29.4 0.0**
comp=Z,7.0nm,0.7s,baz=308
KUU Kurty 57.53 308 *e*P **P** **18 14 29.3 0.0**
KUU pmax pmax
comp=Z,7.0nm,0.7s
SPCR Spurr Chakacha 57.62 31 P **P** **18 14 29.9**
baz=260
CNPM China Poot 57.83 33 P **P** **18 14 31.5 +0.4**
PPLA Purkeypile 57.95 29 P **P** **18 14 33.9 +1.8**
PPLA Purkeypile 57.95 29 P **P** **18 14 32.9**
baz=259
BRLK Bradley Lake 58.04 33 P **P** **18 14 33.0 +0.4**
SKT Skwentna 58.08 30 P **P** **18 14 33.6 +0.7**
SKT Skwentna 58.08 30 P **P** **18 14 33.6**
baz=260
CHUM Lake Minchumin 58.09 28 P **P** **18 14 33.2**
baz=258
KSH Kashi 58.09 303 P **P** **18 14 37.5 +4.0**
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH pmax pmax
comp=Z,420nm,6.7s
BRSE Bradley Lake S 58.11 33 P **18 14 33.1**
baz=262
TKM2 Tokmak 2 58.12 307 P **P** **18 14 34.8 +1.1**
SNR=7.0
TKM2 Tokmak 2 58.12 307 P **P** **18 14 33.9 +0.2**
MORW Morawa 58.30 208 P **P** **18 14 34.4 -0.4**
MORW IAmb IAmb 18 14 56.5
comp=Z,11nm,0.9s
SUA Susitna One 58.36 31 P **P** **18 14 36.9 +1.9**
SUA IAmb IAmb 18 15 03.6
comp=Z,18nm,1.4s
SUA Susitna One 58.36 31 P **18 14 35.0**
baz=261
A21K Barrow 58.61 19 P **18 14 37.0**
baz=249
KBK Karagaybulak 58.61 307 P **P** **18 14 38.3 +1.1**
SNR=5.9
KTH Kantishna Hill 58.64 29 P **P** **18 14 38.3 +1.5**
KTH IAmb IAmb 18 14 57.9
comp=Z,16nm,1.2s
NDI New Delhi 58.64 290 *e*P P 18 14 25.0 -12
BPAW Bear Paw Mtn. 58.71 28 P **P** **18 14 38.7 +1.5**
BPAW IAmb IAmb 18 14 39.6
comp=Z,14nm,0.9s
BPAW Bear Paw Mtn. 58.71 28 P **18 14 37.5**
baz=259,SNR=7.6
CHMS Chumysh 58.73 307 P **P** **18 14 38.6 +0.8**
SNR=5.6
RC01 Rabbit Creek A 58.79 32 P **P** **18 14 38.6 +0.8**
RC01 IAmb IAmb 18 14 39.0
comp=Z,14nm,1.0s
RC01 Rabbit Creek A 58.79 32 P **18 14 37.2**
baz=262
TRF Thorofare Moun 58.90 29 P **P** **18 14 39.6 +0.8**
TRF IAmb IAmb 18 14 40.3
comp=Z,15nm,0.8s
TRF Thorofare Moun 58.90 29 P **18 14 38.7**
baz=260,SNR=7.5
USP Ospenovka 58.90 307 P **P** **18 14 39.7 +0.7**
SNR=5.8
AAK Ala-Archa 58.95 307 P **P** **18 14 40.2 +0.8**
comp=Z,2.4nm,0.7s,baz=134,slow=6.9,SNR=9.1
AAK Ala-Archa 58.95 307*ce*P **P** **18 14 40.0 +0.6**
AAK pmax pmax
comp=Z,15nm,0.9s
AAK Ala-Archa 58.95 307 P **P** **18 14 40.1 +0.7**
UCH Uchtor 58.97 306 P **P** **18 14 41.4 +1.5**
SNR=17
MLY Manley 58.99 27 P **P** **18 14 40.4 +1.2**
MLY IAmb IAmb 18 15 00.7
comp=Z,22nm,1.4s
MLY Manley 58.99 27 P **18 14 40.8**
baz=259,SNR=9.7
BTLS Baital 59.11 310 *e*P **P** **18 14 39.8 -0.6**
comp=Z,4.6nm,0.9s,baz=310
BTLS Baital 59.11 310 *e*P **P** **18 14 39.7 -0.6**
BTLS pmax pmax
comp=Z,5.0nm,0.9s
PMR Palmer 59.15 31 P **P** **18 14 41.0 +0.8**
PMR pmax pmax
comp=Z,22nm,1.0s
PMR Palmer 59.15 31 P **P** **18 14 41.0 +0.8**
PMR Palmer 59.15 31 P **18 14 40.0**
baz=262
GHO Glory Hole Cre 59.27 31 P **P** **18 14 41.0 -0.2**
BWN Browne 59.38 28 P **P** **18 14 43.4 +1.5**
PWL Port Wells 59.44 32 P **P** **18 14 43.0 +0.7**
KNK Knik Glacier 59.44 31 P **P** **18 14 43.5 +1.1**
KNK Knik Glacier 59.44 31 P **18 14 41.9**
baz=263
EKS2 Erkin-Say 59.47 307 P **P** **18 14 44.0 +1.0**
SNR=5.6
RND Reindeer 59.53 29 P **P** **18 14 43.3 +0.3**
RND pmax pmax
comp=Z,8.0nm,0.8s
RND Reindeer 59.53 29 P **P** **18 14 43.3 +0.3**
RND IAmb IAmb 18 15 07.8
comp=Z,8.0nm,0.8s
MCK McKinley 59.54 29 P **18 14 43.3**
baz=261
SML Sawmill 59.55 31 P **P** **18 14 44.0 +0.9**
SML pmax pmax
comp=Z,30nm,0.9s
SML Sawmill 59.55 31 P **P** **18 14 44.0 +0.9**
SML Sawmill 59.55 31 P **18 14 42.5**
baz=263,SNR=6.7
AML Almayashu 59.58 306 P **P** **18 14 45.7 +1.6**
SNR=12
WAT2 Susitna Watana 59.59 30 P **18 14 43.0**
baz=262
I23K Minto, Yukon-K 59.59 27 P **P** **18 14 44.0 +0.7**
I23K IAmb IAmb 18 15 06.5
comp=Z,9.6nm,1.1s
I23K Minto, Yukon-K 59.59 27 P **18 14 44.6**
baz=260,SNR=5.6
NEA2 Nenana 59.62 28 P **P** **18 14 44.0 +0.5**
NEA2 IAmb IAmb 18 14 45.7
comp=Z,8.6nm,0.7s
NEA2 Nenana 59.62 28 P **18 14 44.3**
baz=261,SNR=5.8
COLD Coldfoot 59.65 25 P **P** **18 14 45.3 +1.7**
COLD Coldfoot 59.65 25 P **18 14 45.6**
baz=258
BRZS Berezniki 59.85 315 *e*P **P** **18 14 44.4 -1.0**
baz=315
BRZS Berezniki 59.85 315 *e*P **P** **18 14 44.3 -1.0**
WAT6 Susitna Watana 59.92 30 P **18 14 45.8**
baz=263,SNR=8.7
WRH Wood River Hil 60.02 28 P **P** **18 14 46.4 +0.2**
WRH IAmb IAmb 18 15 14.5
comp=Z,7.8nm,1.0s
SCM Sheep Creek Mo 60.03 31 P **P** **18 14 46.8 +0.3**
SCM pmax pmax
comp=Z,37nm,1.0s
SCM Sheep Creek Mo 60.03 31 P **P** **18 14 46.8 +0.3**
MDM Murphy Dome 60.03 27 P **P** **18 14 47.4 +1.1**
MDM IAmb IAmb 18 15 04.4
comp=Z,15nm,1.4s
GLI Glacier Island 60.04 32 P **P** **18 14 46.9 +0.4**
GLI Glacier Island 60.04 32 P **18 14 46.6**
baz=265
CCB Clear Creek Bu 60.16 28 P **P** **18 14 47.3 0.0**
CCB IAmb IAmb 18 15 02.9
comp=Z,15nm,1.5s
TOLK Toolik Lake Re 60.18 23 P **P** **18 14 48.0 +0.6**
TOLK IAmb IAmb 18 14 50.2
comp=Z,10nm,1.1s
TOLK Toolik Lake Re 60.18 23 P **18 14 49.7**
baz=258
HYB Hyderabad 60.24 277 *i*P P 18 14 42.0 -6.5
POKR Poker Plat Res 60.39 27 P **18 14 50.2**
baz=262
HDA Harding Lake 60.50 28 P **18 14 49.6**
baz=263
HDA P **18 14 49.6**
baz=263
IL31 60.57 28 P **P** **18 14 49.9 -0.1**
IL31 IAmb IAmb 18 14 50.8
comp=Z,11nm,0.8s
ILAR Eielson Array 60.57 28 P **P** **18 14 50.1 +0.1**
comp=Z,7.2nm,0.8s,baz=258,slow=5.7,SNR=66
ILAR LR LR 18 39 42.6
comp=Z,82nm,20.2s,baz=276,slow=35
ILAR Eielson Array 60.57 28 P **P** **18 14 49.9 -0.2**
ILAR Eielson Array 60.57 28 P **P** **18 14 49.9 -0.2**
M24K Tolsona, Glenn 60.60 31 P **P** **18 14 50.6 +0.3**
KLU Klutina 60.66 31 P **P** **18 14 51.5 +0.7**
KLU IAmb IAmb 18 15 11.5
comp=Z,14nm,1.0s
KLU Klutina 60.66 31 P **18 14 51.3**
baz=265
EYAK Cordova Ski Ar 60.67 32 P **P** **18 14 51.7 +0.9**
PAX Paxson 61.00 30 P **P** **18 14 54.1 +1.0**
PAX Paxson 61.00 30 P **P** **18 14 54.1 +1.0**
PAX Paxson 61.00 30 P **18 14 53.8**
baz=265
NIL Nilore 61.06 297 P **P** **18 14 54.7 +0.8**
NIL pmax pmax
comp=Z,21nm,0.8s
NIL Nilore 61.06 297 P **P** **18 14 54.7 +0.8**
RAGM Ragged Mountai 61.20 33 P **P** **18 14 55.7 +1.3**
NWAO Narrogin (SRO) 61.21 205 P **P** **18 14 54.4 -0.3**

NWAO pmax pmax
comp=Z,42nm,1.5s
NWAO Narrogin (SRO) 61.21 205 P **P** **18 14 54.4 -0.3**
NWAO Narrogin (SRO) 61.21 205 P **P** **18 14 54.4 -0.3**
NWAO IAmb IAmb 18 15 11.2
comp=Z,42nm,1.5s
PRP Porcupine Dome 61.24 27 P 18 14 55.6
baz=264
DZA Taraz 61.24 307 *e*P **P** **18 14 54.9 -0.1**
baz=307
DZA Taraz 61.24 307 *e*P **P** **18 14 54.9 -0.1**
BMRM Bremner River 61.26 32 P **P** **18 14 55.9 +1.0**
BMRM Bremner River 61.26 32 P 18 14 55.6
baz=267
BRVK Borovoye 61.28 319 *ce*P **P** **18 14 54.2 -0.8**
BRVK pmax pmax
comp=Z,23nm,1.3s
BRVK Borovoye 61.28 319 P **P** **18 14 54.9 -0.1**
N25K Chitina, Valde 61.30 31 P **P** **18 14 56.2 +1.0**
N25K IAmb IAmb 18 15 13.1
comp=Z,9.7nm,1.0s
HMT Hamilton 61.40 33 P **P** **18 14 56.7 +0.9**
FYU Fort Yukon 61.48 26 P **P** **18 14 58.2 +2.1**
FYU IAmb IAmb 18 15 22.5
comp=Z,18nm,1.0s
GLB Gilahina Butte 61.67 32 P **P** **18 14 58.0 +0.4**
GLB IAmb IAmb 18 15 27.1
comp=Z,16nm,1.1s
DOT Dot Lake 61.69 29 P **P** **18 14 58.2 +0.5**
DOT IAmb IAmb 18 15 18.0
comp=Z,11nm,0.8s
SCRK Sand Creek 61.75 29 P **P** **18 14 58.5 +0.4**
SCRK Sand Creek 61.75 29 P 18 14 58.7
baz=266,SNR=23
KK31 Karatay Array 61.82 308 *i* P **P** **18 14 59.0 +0.1**
KK31 Karatay Array 61.82 308 P **P** **18 14 59.9 +1.0**
KK31 IAmb IAmb 18 15 00.2
comp=Z,14nm,0.8s
KKAR Karatay Array 61.82 308 P **P** **18 14 59.8 +0.9**
KKAR 18 15 00.2
KKAR pmax pmax
comp=Z,14nm,0.8s
KKAR Karatay Array 61.82 308 P **P** **18 15 00.2 +1.3**
KKAR IAmb IAmb 18 15 00.2
comp=Z,14nm,0.8s
KKAR Karatay Array 61.82 308 P **P** **18 14 59.8 +0.9**
VRDI Verde Repeater 61.83 32 P **P** **18 14 59.7 +0.8**
VRDI IAmb IAmb 18 15 10.0
comp=Z,22nm,1.4s
CRQM Cirque 61.97 32 P **P** **18 15 00.9 +1.1**
CRQE Cirque 61.99 32 P 18 15 01.0
baz=268
MCARA McCarthy VSAT 62.05 32 P **P** **18 15 01.3 +1.3**
MCARA McCarthy VSAT 62.05 32 P 18 15 01.1
baz=268
TGL Tana Glacier 62.12 32 P **P** **18 15 01.5 +0.8**
IUG Iuzhnay 62.29 307 *e*P **P** **18 15 01.1 -1.0**
comp=Z,4.5nm,0.9s,baz=307
IUG Iuzhnay 62.29 307 *e*P **P** **18 15 02.0 -0.1**
IUG pmax pmax
comp=Z,5.0nm,0.9s
GAR Garm 62.52 303 P **P** **18 15 05.0 +1.3**
K27K Chicken 62.59 29 P **P** **18 15 05.2 +1.6**
K27K IAmb IAmb 18 15 06.0
comp=Z,9.1nm,1.2s
K27K Chicken 62.59 29 P 18 15 04.5
baz=268
GRNC Granite Creek 62.65 32 P **P** **18 15 05.0 +0.6**
YAH Yahtse 62.65 33 P **P** **18 15 04.8 +0.4**
BARN Barnard Glacie 62.70 32 P **P** **18 15 05.3 +0.6**
BARN IAmb IAmb 18 15 13.8
comp=Z,12nm,1.1s
CTGM Chitina Glacie 62.86 32 P **P** **18 15 06.3 +0.7**
CTGM IAmb IAmb 18 15 31.0
comp=Z,16nm,1.2s
TABL Table Mountain 62.95 33 P **P** **18 15 06.6 +0.3**
EGAK Eagle 63.02 28 P **P** **18 15 07.3 +0.8**
PINM Pinnacle 63.40 33 P 18 15 09.0
baz=271
DAWY Dawson 63.77 29 P **P** **18 15 12.8 +1.3**
KBL Kabul 64.32 298 P **P** **18 15 16.1 +0.2**
KBL pmax pmax
comp=Z,21nm,0.9s
KBL Kabul 64.32 298 P **P** **18 15 16.1 +0.2**
HYT Haines Junctio 64.73 32 P **P** **18 15 19.2 +1.2**
HYT IAmb IAmb 18 15 20.6
comp=Z,19nm,1.2s
INK Inuvik 66.04 24 P **P** **18 15 26.6 +0.5**
comp=Z,4.0nm,0.5s,baz=293,slow=6.1,SNR=46
INK Inuvik 66.04 24 P **P** **18 15 26.6 +0.5**
INK pmax pmax
comp=Z,14nm,1.2s
INK Inuvik 66.04 24 P **P** **18 15 26.6 +0.5**
INK IAmb IAmb 18 15 41.9
comp=Z,14nm,1.1s
JIS Juneau Island 66.54 35 P **P** **18 15 30.7 +1.3**
JIS IAmb IAmb 18 15 31.5
comp=Z,26nm,1.2s
SVE Sverdlovsk 66.54 324‖ *e*P **P** **18 15 29.7 +0.1**
SVE pmax pmax
comp=Z,20nm,0.9s
ARU Arti 67.73 323 P **P** **18 15 36.9 -0.2**
comp=Z,4.4nm,0.4s,baz=93,slow=3.4,SNR=30
ARU Arti 67.73 323 *c i*P **P** **18 15 36.3 -0.8**
ARU 18 16 01.8
ARU S **S** **18 24 34.9 +3.0**
ARU pmax pmax
comp=Z,16nm,0.7s
ARU Arti 67.73 323 P **P** **18 15 37.1 0.0**
AB31 Akbulak array 68.15 316 *i* P **P** **18 15 39.1 -0.8**
ABKAR Akbulak array 68.15 316 P **P** **18 15 39.5 -0.4**
ABKAR IAmb IAmb 18 15 40.4
comp=Z,8.8nm,0.8s
ABKAR Akbulak array 68.15 316 P **P** **18 15 39.3 -0.6**
DLBC Dease Lake 68.78 34 P **P** **18 15 45.8 +2.0**
DLBC IAmb IAmb 18 15 46.5
comp=Z,19nm,1.2s
AKTO Aktyubinsk 69.14 317 P **P** **18 15 45.5 -0.5**
comp=Z,1.3nm,0.6s,baz=77,slow=13,SNR=8.4
C36M Paulatuk 69.31 22 P **P** **18 15 47.0 +0.3**
C36M IAmb IAmb 18 15 48.0
comp=Z,11nm,0.6s
QRZ Quartz Range 69.61 156 P **P** **18 15 48.2 -0.6**
BKZ Black Stump Fm 69.75 153 P **P** **18 15 49.8 -0.1**
BKZ IAmb IAmb 18 16 08.2
comp=Z,28nm,1.1s
NNZ Nelson 70.27 156 P **P** **18 15 51.9 -1.0**
TUWZ Tuamarina 70.66 156 P **P** **18 15 55.0 -0.3**
LTZ Lake Taylor 71.24 158 P **P** **18 15 59.5 +0.7**
LTZ IAmb IAmb 18 16 19.3
comp=Z,16nm,1.1s
GEYT Alibeck 72.09 304 P **P** **18 16 04.5 +0.1**
comp=Z,2.7nm,0.7s,baz=99,slow=4.7,SNR=6.6
GEYT LR LR 18 52 47.7
comp=Z,82nm,18.1s,baz=5.0,slow=40
GEYT Alibeck 72.09 304 P **P** **18 16 04.0 -0.4**
KIRV Kirov 72.10 327 P **P** **18 16 03.8 0.0**
comp=Z,11nm,0.6s,baz=111,slow=1.2,SNR=6.0
PRGR Permogore 73.03 330 *e*P **P** **18 16 08.3 -1.1**
PRGR *e* 18 16 19.9
PRGR pmax pmax
comp=Z,22nm,0.9s
EUNU Eureka 73.39 8 P **P** **18 16 11.8 +0.5**
EUNU IAmb IAmb 18 16 31.7
comp=Z,10.0nm,0.8s
SPA0 Spitsbergen Ar 74.07 350 P **P** **18 16 16.2 +0.9**
SPA0 IAmb IAmb 18 16 32.4
comp=Z,28nm,1.3s
NOR Nord 74.64 357 *e* pP 18 16 31.6 +2.4
YKA Yellowknife Ar 75.00 28 P **P** **18 16 20.8 -0.1**
comp=Z,3.2nm,0.5s,baz=291,slow=5.3,SNR=60
YKA LR LR 18 48 15.5
comp=Z,67nm,21.6s,baz=0.0,slow=35
RES Resolute Bay 75.42 13 P **P** **18 16 23.9 +0.9**
RES pmax pmax
comp=Z,7.0nm,0.9s
RES Resolute Bay 75.42 13 P **P** **18 16 23.9 +0.9**
D03D Eldon 75.62 44 P 18 16 25.7
baz=289
APA Apatity 75.67 338‖ *i*P **pP** **18 16 37.1 +1.7**
APA pmax pmax
comp=Z,32nm,0.8s
D04E Lakebay 75.94 45 P 18 16 26.2
baz=289
B05A Bryant 76.01 43 P 18 16 27.5
baz=290
KLMR Klimovskoe 76.08 331 *e*P **P** **18 16 25.3 -1.7**
KLMR pmax pmax
comp=Z,25nm,1.2s
KLMR Klimovskoe 76.08 331 *e*P **P** **18 16 25.4 -1.6**
KLMR AMP 18 16 41.9
comp=Z,25nm,1.2s
E04D Cinebar 76.28 45 P 18 16 29.8
baz=290
ARCES ARCESS Array B 77.19 341 P **P** **18 16 33.6 +0.4**
comp=Z,2.5nm,0.6s,baz=66,slow=7.2,SNR=9.6
ARCES LR LR 18 55 16.2
comp=Z,269nm,19.7s,baz=250,slow=39
ARCES ARCESS Array B 77.19 341 P **P** **18 16 33.1 -0.2**
ARCES pmax pmax
comp=Z,12nm,0.8s
ARCES ARCESS Array B 77.19 341 P **P** **18 16 33.1 -0.2**
ARCES IAmb IAmb 18 16 49.1
comp=Z,12nm,0.8s
LTY Liberty 77.26 44 P **P** **18 16 34.2 +0.1**
I04A Tendick Farm, 77.33 48 P 18 16 34.9
baz=290
PPT Papeete 77.46 116 LR LR 18 43 09.4
comp=Z,133nm,20.0s,baz=308,slow=30
B08A Colville Reser 77.71 43 **P** **18 16 37.2 +0.6**
L04D Klamath Falls 77.95 49 P 18 16 38.3
baz=291
N02D Trinity Center 78.11 50 P 18 16 39.2
baz=291
J05D Fort Rock, OR 78.31 48 P 18 16 40.2
baz=291,SNR=5.6
PINE Pine Mountain 78.32 47 P **P** **18 16 41.2 +0.9**
PINE IAmb IAmb 18 16 42.5
comp=Z,13nm,0.8s
O02D Mt. Diablo Mer 78.33 51 P 18 16 40.8
baz=291
TULEG Thule 78.35 7 *i* P **P** **18 16 39.3 -0.2**
M04C Macdoel 78.43 49 P 18 16 40.7
baz=291
K05A Summer Lake 78.74 48 P **P** **18 16 42.9 +0.3**
K05A IAmb IAmb 18 16 44.8
comp=Z,14nm,1.1s
VRH Novokhopyorsk 78.75 321 *e*P **P** **18 16 41.1 -1.1**
VRH pmax pmax
comp=Z,10.0nm,0.7s
NEEM North Greenlan 78.97 3 *i* P **P** **18 16 44.6 +1.2**
NEEM *i* 18 16 55.2
O03E Paynes Creek 78.99 51 P 18 16 43.3
baz=291,SNR=6.3
NEW Newport 79.11 42 P **P** **18 16 44.9 +0.6**
NEW pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 79.11 42 P **P** **18 16 44.9 +0.6**
NEW Newport 79.11 42 P 18 16 45.0
baz=293
DAG Danmarks Havn 79.37 356 *e*P **P** **18 16 44.9 -0.2**
DAG Danmarks Havn 79.37 356 *e*P **P** **18 16 44.9 -0.2**
MOD Modoc Plateau 79.45 49 P **P** **18 16 47.1 +0.6**
ORV Oroville 79.48 52 P **P** **18 16 46.9 +0.5**
ORV pmax pmax
comp=Z,12nm,1.2s
ORV Oroville 79.48 52 P **P** **18 16 46.9 +0.5**
ORV IAmb IAmb 18 16 47.7
comp=Z,12nm,1.2s
LPSR Galich'ya Gora 79.76 323 *e*P **P** **18 16 46.6 -1.0**
LPSR pmax pmax
comp=Z,30nm,1.1s
OBN Obninsk 79.92 326 *e*P **P** **18 16 48.3 -0.1**
OBN *e* 18 16 55.1
OBN *e* 18 19 46.8
OBN pmax pmax
comp=Z,24nm,1.7s
J08A Circle Bar Ran 80.15 47 P **P** **18 16 50.9 +0.7**
J08A IAmb IAmb 18 17 15.5
comp=Z,13nm,1.1s
BEKR Beckworth 80.18 51 P **P** **18 16 51.0 +0.6**
BEKR IAmb IAmb 18 16 51.8
comp=Z,8.1nm,0.8s
VSR Storozhevoye 80.21 322 *e*P **P** **18 16 49.0 -1.1**
VSR pmax pmax
comp=Z,40nm,1.2s
BMO Blue Mountains 80.33 45 P **P** **18 16 51.3 +0.2**
BMO pmax pmax
comp=Z,12nm,1.3s
BMO Blue Mountains 80.33 45 P **P** **18 16 51.3 +0.2**
ZEI Tsey 80.71 313 *e*P **P** **18 16 52.7 -0.6**
ZEI pmax pmax
comp=Z,15nm,1.0s
WALA Waterton Lakes 80.73 40 P **P** **18 16 54.2 +1.0**
CMB Columbia Colle 80.85 53 P **P** **18 16 54.2 +0.2**
CMB pmax pmax
comp=Z,9.0nm,1.0s
CMB Columbia Colle 80.85 53 P **P** **18 16 54.2 +0.2**
KBZ Khabaz 81.01 314 P **P** **18 16 55.2 +0.7**
comp=Z,7.8nm,0.8s,baz=177,slow=3.5,SNR=13
KBZ LR LR 18 55 59.2
comp=Z,153nm,18.1s,baz=58,slow=38
KBZ Khabaz 81.01 314 *ce*P **P** **18 16 55.2 +0.7**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
PNTR Pine Nut 81.02 51 P **P** **18 16 55.3 +0.3**
PNTR IAmb IAmb 18 17 13.4
comp=Z,7.4nm,0.7s
KIV Kislovodsk 81.06 314 *e*P **P** **18 16 55.5 +0.5**
KIV pmax pmax
comp=Z,28nm,1.1s
KIV MLR MLR
comp=Z,213nm,19.0s
JTMT Jette 81.06 42 P **P** **18 16 55.9 +0.9**
FINES FINESS Array B 81.51 334 P **P** **18 16 56.1 -0.8**
comp=Z,1.8nm,0.3s,baz=65,slow=5.0,SNR=14
DBG Daneborg 81.86 355 *e*P **P** **18 16 58.8 +0.3**
MFID Camas Ranch 81.89 46 P **P** **18 17 00.3 +0.9**
MFID IAmb IAmb 18 17 24.6
comp=Z,11nm,1.1s
KVN Kaiserville 82.11 51 P **P** **18 17 01.2 +0.4**
KVN pmax pmax
comp=Z,7.0nm,1.1s
KVN Kaiserville 82.11 51 P **P** **18 17 01.2 +0.4**
LHV Little Huntoon 82.14 52 P **P** **18 17 01.8 +1.2**
LHV IAmb IAmb 18 17 25.3
comp=Z,10nm,1.2s
NVAR Mina Array Bea 82.21 52 P **P** **18 17 01.7 +0.4**
comp=Z,3.5nm,0.8s,baz=264,slow=5.5,SNR=15
NVAR LR LR 18 46 56.4
comp=Z,96nm,21.1s,baz=277,slow=31
NVAR Mina Array Bea 82.21 52 P **P** **18 17 01.3 0.0**
NV11 Mina Array Sit 82.31 52 P **P** **18 17 02.4 +0.6**
PKM Mcpherson Peak 82.50 55 P 18 17 03.5
baz=293
HLID Hailey 82.76 46 P **P** **18 17 04.9 +0.8**
HLID Hailey 82.76 46 P 18 17 05.0
baz=296
LRM Limekiln Ridge 83.03 43 P **P** **18 17 06.1 +0.6**
ELK Elko 83.41 48 P **P** **18 17 08.2 +0.6**
ELK pmax pmax
comp=Z,6.0nm,1.1s
ELK Elko 83.41 48 P **P** **18 17 08.2 +0.6**
BOZ Bozeman (W) 83.65 43 P **P** **18 17 09.2 +0.7**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 83.65 43 P **P** **18 17 09.2 +0.7**
BOZ Bozeman (W) 83.65 43 P 18 17 09.4
baz=297
EGMT Eagleton 83.67 40 P 18 17 09.5
baz=298
LRMC Laurel Mtn Rad 83.86 54 P 18 17 09.9
baz=294,SNR=5.4
EDW2 Edwards Air Fo 83.87 55 P 18 17 09.7
baz=294
FURC Furnace Creek, 84.06 53 P 18 17 11.4
baz=295
FMP Fort Macarthur 84.12 56 P 18 17 11.4
baz=294
QLMT Earthquake Lak 84.12 44 P **P** **18 17 11.7 +0.6**
R11A Troy Canyon, C 84.19 51 P **P** **18 17 12.2 +0.7**
R11A Troy Canyon, C 84.19 51 P 18 17 11.8
baz=295,SNR=6.9
SUMG Summit 84.21 0 *e*P **P** **18 17 10.4 -0.9**
SUMG Summit 84.21 0 *e*P **P** **18 17 10.3 -0.9**
YHL Hebgen Lake 84.27 43 P **P** **18 17 13.1 +1.1**
YHL IAmb IAmb 18 17 40.6
comp=Z,7.0nm,0.9s
TPNV Topopah Spring 84.30 52 P 18 17 12.6
baz=295
YHB Horse Butte 84.31 44 P **P** **18 17 13.2 +1.2**
YHB IAmb IAmb 18 17 41.2
comp=Z,7.4nm,0.8s
FFC Flin Flon 84.44 32 P **P** **18 17 13.0 +0.8**
FFC pmax pmax
comp=Z,15nm,1.0s
FFC Flin Flon 84.44 32 P **P** **18 17 13.0 +0.8**
FFC IAmb IAmb 18 17 13.8
comp=Z,15nm,1.0s
YHH Holmes Hill 84.51 43 P **P** **18 17 13.5 +0.4**
HVU Hansel Valley 84.63 47 P **P** **18 17 14.5 +0.8**
HVU pmax pmax
comp=Z,9.0nm,1.2s
HVU Hansel Valley 84.63 47 P **P** **18 17 14.5 +0.8**
HVU IAmb IAmb 18 17 15.6
comp=Z,9.0nm,1.2s
YNR Norris Junctio 84.65 43 P **P** **18 17 14.9 +1.1**
YNR IAmb IAmb 18 17 16.8
comp=Z,14nm,1.2s
H17A Grant Village 84.87 44 P **P** **18 17 15.6 +0.7**
H17A IAmb IAmb 18 17 18.6
comp=Z,16nm,1.4s
H17A Grant Village 84.87 44 P 18 17 17.1
baz=298
FLWY Flagg Ranch 84.93 44 P **P** **18 17 16.7 +1.5**
FLWY IAmb IAmb 18 17 17.7
comp=Z,11nm,1.1s
YMP Mirror Lake Pl 84.97 43 P **P** **18 17 16.0 +0.5**
YMP IAmb IAmb 18 17 18.2
comp=Z,9.5nm,1.0s
HEC Hector,Ludlow 85.14 54 P 18 17 16.7
baz=295
TUQ Turquoise Moun 85.18 54 P 18 17 17.0
baz=295
SHPR Sheep Range 85.28 52 P **P** **18 17 17.7 +0.7**
SHPR IAmb IAmb 18 17 46.5
comp=Z,5.9nm,0.9s
RLMT Red Lodge 85.34 43 P **P** **18 17 18.0 +0.8**
RLMT IAmb IAmb 18 17 36.0
comp=Z,8.8nm,0.7s
RLMT Red Lodge 85.34 43 P 18 17 19.0
baz=299
HWUT Hardware Ranch 85.52 46 P **P** **18 17 18.6 +0.5**
HWUT IAmb IAmb 18 17 42.1
comp=Z,8.5nm,1.0s
PFO Pinyon Flats O 85.56 55 P **P** **18 17 18.7 +0.3**
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 85.56 55 P **P** **18 17 18.7 +0.3**
PFO IAmb IAmb 18 17 29.3
comp=Z,5.9nm,0.9s
PFO Pinyon Flats O 85.56 55 P 18 17 19.0
baz=295
TPFO Pinon Flats 85.56 55 P 18 17 18.4
baz=295
GMRC Granite Mounta 85.66 54 P 18 17 19.3
baz=296
BELC Belle Mtn. Jos 85.74 55 P 18 17 19.8
baz=295
NLU North Lily Min 85.93 48 P **P** **18 17 20.5 +0.3**
AKASG Malin Array Be 85.96 324 P **P** **18 17 18.9 -0.9**
comp=Z,0.6nm,0.5s,baz=52,slow=5.1,SNR=3.7
AKASG LR LR 18 59 05.3
comp=Z,237nm,18.8s,baz=350,slow=38
AKBB Malin Array Si 85.96 324 P **P** **18 17 18.2 -1.7**
AKBB pmax pmax
comp=Z,11nm,0.9s
AKBB Malin Array Si 85.96 324 **P** **18 17 18.2 -1.7**
AKBB IAmb IAmb 18 17 34.4
comp=Z,11nm,0.9s
CCUT Cedar City 86.12 51 P **P** **18 17 21.5 +0.2**
PDAR Pinedale Array 86.29 45 P **P** **18 17 22.0 0.0**
comp=Z,0.5nm,0.5s,baz=258,slow=4.4,SNR=5.5
PDAR LR LR 18 49 23.0
comp=Z,97nm,21.5s,baz=316,slow=31
BW06 Boulder Array 86.29 45 P 18 17 22.1
baz=299
LAO LASA Array 86.42 40 P 18 17 23.5
baz=301
LCMT Little Creek M 86.44 51 P **P** **18 17 23.3 +0.6**
MSU Marysvale 86.52 49 P **P** **18 17 22.3 -0.9**
MSU Marysvale 86.52 49 P **P** **18 17 22.3 -0.9**
KNB Kanab 86.74 51 P **P** **18 17 24.8 +0.6**
KNB pmax pmax
comp=Z,14nm,0.9s
KNB Kanab 86.74 51 P **P** **18 17 24.8 +0.6**
KNB IAmb IAmb 18 17 53.9
comp=Z,14nm,0.9s
TMUT Trail Mountain 86.83 48 P **P** **18 17 24.8 0.0**
TMUT IAmb IAmb 18 17 35.8
comp=Z,6.1nm,0.8s
PDMCI Parker Dam,Lak 86.99 54 P 18 17 24.5
baz=296
NC405 NORSAR Array S 87.02 339 **P** **18 17 22.8 -2.0**
Q16A Castle Valley 87.03 49 P **P** **18 17 25.5 -0.1**
Q16A IAmb IAmb 18 17 27.4
comp=Z,20nm,1.4s
SUW Suwalki 87.11 329 P **P** **18 17 23.9 -1.5**
SUW pmax pmax
comp=Z,50nm,0.9s
SUW Suwalki 87.11 329 **P** **18 17 23.9 -1.5**
NB2 NORSAR Subarra 87.24 339 P **P** **18 17 25.0 -1.0**
baz=44,slow=5.6
NOA NORSAR Array B 87.24 339 P **P** **18 17 25.3 -0.7**
comp=Z,1.7nm,0.9s,baz=50,slow=5.2,SNR=4.2
NOA LR LR 19 00 46.8
comp=Z,126nm,19.2s,baz=25,slow=38
RAYN Ar Rayn 87.27 294 P **P** **18 17 26.4 -0.5**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
RAYN Ar Rayn 87.27 294 P **P** **18 17 26.4 -0.5**
RAYN IAmb IAmb 18 17 44.5
comp=Z,8.8nm,0.8s
ICESG Greenland Ices 87.70 1 *e* P 18 17 36.0 +7.6
BRTR Keskin Array B 88.99 313 P **P** **18 17 34.8 -0.1**
comp=Z,1.2nm,1.0s,baz=345,slow=9.0,SNR=2.2
BRTR LR LR 19 02 47.9
comp=Z,72nm,18.3s,baz=36,slow=39
214A Organ Pipe Nat 89.04 55 P 18 17 35.6
baz=297
PV01 Paradox Valley 89.19 48 P **P** **18 17 34.0 -2.0**
N23A Red Feather La 89.56 45 P 18 17 39.7
baz=301
BURAR Bucovina Array 89.87 323 P **P** **18 17 38.5 -0.3**
BURAR Bucovina Array 89.87 323 P **P** **18 17 38.5 -0.3**
ULM Lac du Bonnet 90.09 33 LR LR 18 57 18.3
comp=Z,38nm,20.8s,baz=358,slow=35
CRVS Cervenica-Dubn 91.10 326 *e*P **P** **18 17 46.6 +2.2**
CRVS Cervenica-Dubn 91.10 326 *e*P **P** **18 17 46.6 +2.2**
AGMN Agassiz Nation 91.30 35 P 18 17 45.6
baz=308
ANMO Albuquerque 92.26 50 *ce*P **P** **18 17 51.1 +0.8**
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO Albuquerque 92.26 50 P **P** **18 17 50.2 -0.1**
ANMO Albuquerque 92.26 50 P 18 17 51.1
baz=301
VYHS Vyhne 92.70 327 *e*P **P** **18 17 53.1 +1.3**
VYHS Vyhne 92.70 327 *e*P **P** **18 17 53.0 +1.3**
ECSD EROS Data Cent 93.69 39 P 18 17 56.5
baz=308
GERES GERESS Array B 94.98 329 P **P** **18 18 02.5 +0.1**
comp=Z,0.1nm,0.2s,baz=46,slow=2.8,SNR=1.8
TXAR Lajitas Array 97.19 54 P Pdif 18 18 13.5 +0.7
comp=Z,0.2nm,0.4s,baz=316,slow=2.5,SNR=2.5
L61B Northampton 106.63 27 P 18 23 05.3
baz=326
H66A Whiting 106.67 22 P 18 23 05.5
baz=331
K63A Dunstable 106.90 26 P 18 23 05.9
baz=327
SYO Syowa Base 116.47 203‖ *e*pPdiff pPdif 18 19 52.2 +3.7
TORD Torodi Ar. Bea 127.47 310 PKP **PKPdf** **18 23 44.6 -0.8**
comp=Z,0.6nm,0.6s,baz=298,slow=3.1,SNR=4.3
VNA2 Neumayer--Watz 129.51 192 PKPdf **PKPdf** **18 23 47.6 +0.1**
baz=136,slow=2.0
VNA2 Neumayer--Watz 129.51 192 SKPdf **SKiKP** **18 27 24.2 +2.9**
VNA3 Neumayer Olymp 129.67 191 PKPdf **PKPdf** **18 23 47.6 -0.3**
VNA3 Neumayer Olymp 129.67 191 SKPdf **SKiKP** **18 27 24.0 +2.4**
VNA1 Neumayer--Stat 129.91 192 SKPdf **SKiKP** **18 27 25.2 +3.2**
PLCA Paso Flores 147.05 130 PKPbc **PKPbc** **18 24 22.2 -0.5**
comp=Z,2.7nm,0.5s,baz=240,slow=3.3,SNR=21
PLCA Paso Flores 147.05 130 PKP2 **PKPbc** **18 24 22.5 -0.1**
PLCA Paso Flores 147.05 130 **PKPbc** **18 24 22.5 -0.1**
LPAZ La Paz 149.94 82 PKP **PKPdf** **18 24 26.6 0.0**
comp=Z,3.4nm,1.0s,baz=316,slow=5.6,SNR=4.3

LPAZ PKPbc **PKPbc** 18 24 31.3 -0.2
comp=Z,12nm,1.2s,baz=334,slow=2.3,SNR=14
LPAZ La Paz 149.94 82 PKPbc 18 24 31.2 -0.3

JMA 08 18:05:03.8±0.6, 31°.42N×139°.29E, h408km, M3.2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZS	**Izushimoda**	**3.31**	**354**	P	P	18 06 10.8	+0.9
BSO1	**Boso 1**	**3.52**	**23**	P	P	18 06 12.9	+1.8
BSO3	**Boso 3**	**3.52**	**17**	P	P	18 06 12.5	+1.0
JHU	**Hanno**	**4.42**	**360**	P	P	18 06 20.7	+0.6
JHU				*e*S	S	18 07 21.5	-1.0
JRY	**Ryogami san**	**4.60**	**356**	P	P	18 06 22.7	+0.9
JYT	**Yasato**	**4.85**	**9**	P	P	18 06 24.9	+0.6
JYT				*e*S	S	18 07 29.2	-1.1
JAG	**Ashikaga**	**4.99**	**2**	P	P	18 06 26.2	+0.4

KRSC 08 18:12:06.2±1.9, 48°.56N×158°.10E, h16km±22km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.49**	**330**	*e*P	Pn	18 12 46.8	+0.8
SKR				*e*S	Sn	18 13 16.3	+0.3
PAU	**Pauzhetka**	**3.03**	**345**	*e*P	Pn	18 12 56.3	+2.9
PAU				*e*S	Sb	18 13 33.3	-3.1
KDTR	**Khodutka, Kamc**	**3.25**	**360**	*e*P	Pn	18 12 59.8	+3.3
KDTR				*e*S	Sn	18 13 38.8	+3.9
RUS	**Russkaya**	**3.89**	**4**	*e*P	Pn	18 13 08.9	+3.6
RUS				*e*S	Sn	18 13 54.8	+4.3
MTVR	**Mutnovka**	**3.93**	**1**	*e*P	Pn	18 13 09.6	+3.6
MTVR				*e*S	Sn	18 13 56.5	+4.7
GRL	**Gorelyy**	**4.00**	**360**	*e*P	Pn	18 13 11.0	+4.1
GRL				*e*S	Sb	18 13 59.1	-5.4
KRMR	**Karymshinskiy**	**4.28**	**0**	*e*S	Sn	18 14 05.1	+5.0
DALK	**Dalny**	**4.50**	**5**	*e*P	Pn	18 13 17.8	+4.2
DALK				*e*S	Sn	18 14 10.4	+4.9
UGLR	**Uglovaya**	**4.68**	**5**	*e*P	Pb	18 13 22.4	-5.5
AVH	**Avacha**	**4.73**	**5**	*e*P	Pn	18 13 21.6	+4.7
SMAR	**Somma**	**4.73**	**5**	*e*P	Pn	18 13 21.9	+4.8
KOK	**Koryaka**	**4.75**	**4**	*e*P	Pn	18 13 22.3	+5.1
SDLR	**Sedlovina**	**4.75**	**6**	*e*P	Pn	18 13 22.6	+5.3
KRX	**Arik**	**4.82**	**4**	*e*P	Pn	18 13 23.0	+4.8
MKZ	**Mys Kozlova**	**6.42**	**19**	*e*P	Pn	18 13 44.5	+4.5

DJA 08 18:32:36.9±1.6, 9°S±26°×11°0E±°, h10km, M4.3/6, mb4.7/3, mB6.9/1, MLv4.2/6, Mw(mB)6.8/1, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**3.84**	**82**	P	Pn	18 33 34.9	-1.2
JAGI				S	Sn	18 34 23.2	+2.0
ABJI	**Asem Bagus**	**4.07**	**73**	P	Pn	18 33 38.3	-0.9
KMMI	**Kalianget**	**4.11**	**62**	P	Pb	18 33 50.5	+1.1
SRBI	**Singaraja**	**4.94**	**80**	P	Pn	18 33 50.7	-0.5
RGRI	**Rengat**	**11.71**	**317**	P	Pn	18 35 24.7	+0.5

*IDC **08** 18:44:29.8±0.5, 2°.61S×140°.33E, h0km, mb4.1/13, mb1 4.4/16, mb1mx4.3/29, mbtmp4.2/16, ML4.4/1, MS3.2/7, Ms1 3.2/7, ms1mx3.0/32, Error ellipse: s-maj=14.9km s-min=6.3km az=167.0*
*DJA **08** 18:44:30.8±0.5, 3°S±7°×14°0E±°, h11km±3km, M4.8/4, mb4.5/4, MLv5.0/2*
*NEIC **08** 18:44:33.7±1.4, 2°.76S±0°.09×140°.41E±0°.08, h31km±2km, mb4.3/38, Error ellipse: s-maj=13.6km s-min=10.8km az=163.0*

ISC 08 18:44:32.8±0.4, 2°.73S±0°.05×140°.42E±0°.04, h24km, n111, σ1§40/109, mb4.5/36, MS3.0/8, 1C, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.29**	**299**	P	**Pb**	**18 44 37.7**	**-1.8**
GENI				S	**Sb**	**18 44 42.6**	**-1.6**
JAY	**Jayapura**	**0.36**	**53**	Pg	**Pb**	**18 44 37.5**	**-3.2**
	3μm,0.3s,baz=234,slow=11						
JAY				Lg	Lg	18 44 42.0	
	baz=106,slow=20						
JAY	**Jayapura**	**0.36**	**53**	P	**Pb**	**18 44 37.7**	**-3.0**
WAMI	**Wamena**	**2.05**	**236**	P	**Pn**	**18 45 06.7**	**+0.9**
SRPI	**Serui, Papua**	**4.26**	**282**	P	**Pn**	**18 45 35.1**	**-1.1**
SRPI				S	**Sn**	**18 46 27.3**	**+2.0**
BAKI	**Biak**	**4.57**	**289**	P	**Pn**	**18 45 39.7**	**-0.8**
MANU	**Manus Island**	**6.97**	**85**	Pn	**Pn**	**18 46 14.2**	**+0.6**
FAKI	**Fak Fak**	**8.16**	**269**		**Pn**	**18 46 30.3**	**+0.4**
FAKI	**Fak Fak**	**8.16**	**269**	P	**Pn**	**18 46 30.1**	**+0.2**
	25nm,1.0s						
SIJI	**Sorong**	**9.33**	**281**	Pn	**Pn**	**18 46 49.4**	**+3.5**
	1.7nm,0.3s,baz=258,slow=23,SNR=8.4						
SIJI				Sn	**Sn**	**18 48 30.6**	**+0.3**
	0.5nm,0.3s,baz=75,slow=23,SNR=1.2						
PMG	**Port Moresby**	**9.42**	**135**	Pn	**Pn**	**18 46 51.0**	**+3.8**
	0.6nm,0.3s,baz=330,slow=16,SNR=2.5						
COEN	**Coen**	**11.48**	**166**	Pn	**Pn**	**18 47 18.1**	**+2.8**
RABL	**Rabaul**	**11.81**	**97**	Pn	**Pn**	**18 47 20.2**	**+0.3**
TNTI	**Ternate**	**13.51**	**285**	Pn	**Pn**	**18 47 39.1**	**-3.9**
MTN	**Manton Dam**	**13.61**	**222**	Pn	**Pn**	**18 47 43.7**	**-0.8**
GUMO	**Guam**	**16.81**	**15**	Pn	**Pn**	**18 48 25.5**	**-1.2**
SOEI	**Soe**	**17.50**	**246**	P	**P**	**18 48 38.2**	**+1.7**
SOEI				IAmb	IAmb	18 48 57.8	
	comp=Z,49nm,0.8s						
GTOI	**Gorontalo**	**17.72**	**281**	P	**P**	**18 48 40.1**	**+1.2**
	comp=Z,13nm,0.9s						
WB0	**Warramunga Arr**	**17.92**	**199**		**Pn**	**18 48 39.5**	**-1.1**
WB0				IAmb	IAmb	18 48 47.0	
	comp=Z,19nm,1.1s						
WR0	**Warramunga Arr**	**18.06**	**198**		**Pn**	**18 48 41.9**	**-0.4**
WR0				IAmb	IAmb	18 48 49.7	
	comp=Z,17nm,0.8s						
WRAB	**Tennant Creek**	**18.09**	**199**	P	**Pn**	**18 48 41.2**	**-1.4**
WRAB				IAmb	IAmb	18 48 53.0	
	comp=Z,18nm,0.8s						
WB2	**Warramunga Arr**	**18.10**	**199**	P	**Pn**	**18 48 42.8**	**0.0**
WB2				IAmb	IAmb	18 48 53.1	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**18.11**	**199**	P	**P**	**18 48 43.0**	**0.0**
	comp=Z,1.2nm,0.3s,baz=27,slow=13,SNR=34						
WRA				S	**Sn**	**18 51 58.2**	**-6.1**
	comp=Z,0.3nm,0.3s,baz=24,slow=22,SNR=2.9						
WRA	**Warramunga Arr**	**18.11**	**199**	P	**Pn**	**18 48 42.0**	**-0.8**
BATI	**Baumata**	**18.22**	**245**	P	**P**	**18 48 45.1**	**+0.8**
	comp=Z,4.4nm,0.3s,baz=154,slow=1.3,SNR=15						
TOLI2	**Tolitoli**	**20.00**	**281**	P	**P**	**18 49 04.1**	**+0.2**
BSSI	**Bau Bau, Buton**	**20.15**	**260**	P	**P**	**18 49 05.3**	**-0.3**
HNR	**Honiara**	**20.52**	**110**	LR	LR	18 57 56.0	
	comp=Z,79nm,19.1s,baz=334,slow=39						
KAPI	**Kappang**	**20.74**	**263**	LR	LR	18 58 25.5	
	comp=Z,48nm,19.8s,baz=81,slow=40						
FITZ	**Fitzroy Crossi**	**21.05**	**222**	P	**P**	**18 49 15.4**	**+0.2**
	comp=Z,14nm,0.8s,baz=43,slow=10,SNR=25						
FITZ				S	**S**	**18 53 03.4**	**-5.2**
	comp=Z,7.2nm,0.8s,baz=50,slow=22,SNR=5.3						
FITZ				LR	LR	18 58 58.8	
	comp=Z,107nm,18.2s,baz=40,slow=41						
FITZ	**Fitzroy Crossi**	**21.05**	**222**	P	**P**	**18 49 15.3**	**+0.1**
FITZ				IAmb	IAmb	18 49 20.1	
	comp=Z,26nm,1.2s						
AS31	**Alice Springs**	**21.74**	**196**	P	**P**	**18 49 22.6**	**-0.1**
ASAR	**Alice Springs**	**21.74**	**196**	P	**P**	**18 49 22.8**	**+0.1**
	comp=Z,9.2nm,0.7s,baz=30,slow=9.2,SNR=42						
ASAR				S	**S**	**18 53 20.9**	**-1.4**
	comp=Z,2.2nm,1.0s,baz=19,slow=22,SNR=5.2						
ASAR	**Alice Springs**	**21.74**	**196**	P	**P**	**18 49 21.9**	**-0.8**
MYLDM	**Lahad Datu**	**23.27**	**290**	P	**P**	**18 49 41.2**	**+2.4**
EIDS	**Eidsvold**	**24.74**	**156**	P	**P**	**18 49 52.7**	**+0.2**
EIDS				IAmb	IAmb	18 50 10.3	
	comp=Z,17nm,1.0s						
PSA00	**Pilbara Seismi**	**27.41**	**225**	P	**P**	**18 50 16.8**	**+0.1**
STKA	**Stephens Creek**	**29.01**	**178**	P	**P**	**18 50 32.1**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=4.2,slow=10,SNR=5.0						
STKA				LR	LR	19 04 11.2	
	comp=Z,129nm,18.5s,baz=22,slow=41						
STKA	**Stephens Creek**	**29.01**	**178**	P	**P**	**18 50 30.2**	**-0.7**
JCJ	**Chichijima**	**29.70**	**3**	LR	LR	19 01 02.3	
	comp=Z,32nm,20.9s,baz=186,slow=34						
BBOO	**Buckleboo**	**30.20**	**187**	P	**P**	**18 50 42.2**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**33.37**	**50**	T	T	19 26 01.1	
	baz=232,slow=75						
H11S2	**WAKE ISLAND Hy**	**33.38**	**50**	T	T	19 26 00.7	
	baz=232,slow=75						
H11S1	**WAKE ISLAND Hy**	**33.39**	**50**	T	T	19 26 02.4	
	baz=232,slow=75						
H11N1	**WAKE ISLAND Hy**	**34.26**	**48**	T	T	19 27 09.6	
	baz=232,slow=76						
H11N2	**WAKE ISLAND Hy**	**34.27**	**48**	T	T	19 27 17.0	
	baz=232,slow=76						
H11N3	**WAKE ISLAND Hy**	**34.28**	**48**	T	T	19 27 13.2	
	baz=232,slow=76						
MJAR	**Matsushiro Arr**	**39.13**	**357**	LR	LR	19 07 33.6	
	comp=Z,17nm,18.2s,baz=0.0,slow=36						
KSRS	**Korea Array**	**41.63**	**345**	P	**P**	**18 52 19.2**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=166,slow=9.4,SNR=2.4						
KSRS				PcP	**PcP**	**18 54 17.4**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=161,slow=3.7,SNR=4.1						
KSRS				LR	LR	19 09 15.5	
	comp=Z,13nm,18.7s,baz=290,slow=36						
PSI	**Prapat**	**41.84**	**277**	P	**P**	**18 52 19.8**	**-1.6**
	comp=Z,3.2nm,0.4s,baz=0.0,slow=2.9,SNR=5.0						
GSI	**Gunungsitoli**	**43.02**	**275**	P	**P**	**18 52 29.7**	**-1.2**
GSI				IAmb	IAmb	18 52 31.2	
	comp=Z,9.7nm,0.8s						
CM31	**Chiang Mai Arr**	**45.94**	**299**	P	**P**	**18 52 54.4**	**+0.2**
CM31				IAmb	IAmb	18 52 55.1	
	comp=Z,5.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**45.94**	**299**	P	**P**	**18 52 54.5**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=119,slow=6.5,SNR=27						
CMAR	**Chiang Mai Arr**	**45.94**	**299**	P	**P**	**18 52 52.7**	**-1.5**
CHTO	**Chiang Mai**	**46.08**	**299**	P	**P**	**18 52 54.9**	**-0.3**
XAN	**Xi'an**	**47.09**	**324**	P	**P**	**18 53 03.0**	**0.0**
XAN				sP	sP	18 53 13.3	-0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
HHC	**Hu-ho-hao-te**	**50.74**	**332**	*e*P	**P**	**18 53 32.7**	**+1.7**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,7.8s						
GTA	**Gaotai**	**56.11**	**323**	⇑P	**P**	**18 54 11.5**	**+1.0**
GTA				pP	pP	18 54 15.9	-2.2
GTA				sP	sP	18 54 18.4	-2.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,70nm,5.1s						
GTA				LR	LR		
	comp=N,74nm,14.5s						
GTA				LR	LR		
	comp=E,170nm,16.7s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
ULN	**Ulaanbaatar**	**58.22**	**334**	P	**P**	**18 54 25.9**	**+0.6**
ULN				IAmb	IAmb	18 54 36.5	
	comp=Z,3.3nm,1.4s						
SONM	**Songino Array**	**58.48**	**334**	P	**P**	**18 54 25.7**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=135,slow=8.0,SNR=3.3						
SONM				PcP	**PcP**	**18 55 17.3**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=146,slow=4.0,SNR=2.7						
SONM	**Songino Array**	**58.48**	**334**	P	**P**	**18 54 27.3**	**+0.2**
TAPN	**Taplejung**	**58.89**	**304**	*e*P	**P**	**18 54 30.6**	**+0.1**
	comp=Z,4.9nm,0.6s						
ODAN	**Odare**	**58.98**	**304**	*e*P	**P**	**18 54 31.3**	**+0.2**
	comp=Z,11nm,0.7s						
RAMN	**Ramite**	**59.67**	**303**	*e*P	**P**	**18 54 36.1**	**+0.2**
	comp=Z,8.0nm,0.6s						
JIRN	**Jiri**	**60.26**	**304**	*e*P	**P**	**18 54 40.3**	**+0.2**
	comp=Z,6.1nm,0.6s						
GUN	**Gumba**	**60.61**	**304**	*e*P	**P**	**18 54 43.0**	**+0.6**
	comp=Z,11nm,0.6s						
PKI	**Pulchoki**	**60.88**	**304**	*e*P	**P**	**18 54 44.0**	**-0.2**
	comp=Z,7.4nm,1.0s						
PKIN	**Phulchoki**	**60.89**	**304**	*e*P	**P**	**18 54 44.1**	**-0.2**
	comp=Z,5.3nm,0.7s						
KKN	**Kakani**	**61.06**	**304**	*e*P	**P**	**18 54 45.7**	**+0.3**
DMN	**Daman**	**61.14**	**304**	*e*P	**P**	**18 54 46.3**	**+0.3**
	comp=Z,12nm,0.7s						
GKN	**Gorkha**	**61.67**	**304**	*e*P	**P**	**18 54 49.6**	**+0.2**
	comp=Z,15nm,0.7s						
KOLN	**Koldanda**	**62.45**	**303**	*e*P	**P**	**18 54 55.0**	**+0.3**
DANN	**Dangsing**	**62.52**	**304**	*e*P	**P**	**18 54 55.1**	**-0.1**
PYUN	**Piuthan**	**63.07**	**303**	*e*P	**P**	**18 54 59.2**	**+0.4**
	comp=Z,29nm,0.7s						
WMQ	**Urumqi**	**66.10**	**321**	*e*P	**P**	**18 55 19.8**	**+1.7**
MK31	**Makanchi Array**	**70.86**	**322**	P	**P**	**18 55 47.0**	**-0.8**
MK31				IAmb	IAmb	18 55 49.3	
	comp=Z,4.5nm,1.2s						
MKAR	**Makanchi Array**	**70.86**	**322**	P	**P**	**18 55 48.2**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=93,slow=9.2,SNR=27						
MKAR	**Makanchi Array**	**70.86**	**322**	P	**P**	**18 55 47.9**	**+0.2**
MAKZ	**Makanchi**	**71.06**	**322**	P	**P**	**18 55 49.3**	**+0.3**
NIL	**Nilore**	**72.71**	**306**	P	**P**	**18 55 59.1**	**-0.1**
ZAA0	**Zalesovo Array**	**72.82**	**329**	P	**P**	**18 55 58.9**	**-0.4**
ZAA0				IAmb	IAmb	18 55 59.7	
	comp=Z,2.7nm,0.9s						
ZALV	**Zalesovo Beam**	**72.82**	**329**	P	**P**	**18 55 59.0**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=119,slow=6.8,SNR=7.3						
ZALV	**Zalesovo Beam**	**72.82**	**329**	P	**P**	**18 55 58.1**	**-1.2**
AAK	**Ala-Archa**	**74.41**	**316**	P	**P**	**18 56 09.3**	**+0.1**
TIXI	**Tiksi**	**74.63**	**356**	P	**P**	**18 56 10.2**	**+0.6**
VNDA	**Vanda**	**75.61**	**175**	P	**P**	**18 56 16.9**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=339,slow=5.9,SNR=8.2						
VNDA	**Vanda**	**75.61**	**175**	P	**P**	**18 56 16.6**	**+1.4**
VNDA				IAmb	IAmb	18 56 17.2	
	comp=Z,2.2nm,1.0s						
GAR	**Garm**	**76.40**	**311**	P	**P**	**18 56 21.1**	**+0.5**
KK31	**Karatay Array**	**77.35**	**315**	P	**P**	**18 56 25.9**	**+0.1**
KK31				IAmb	IAmb	18 56 26.6	
	comp=Z,2.5nm,1.1s						
KKAR	**Karatay Array**	**77.35**	**315**	P	**P**	**18 56 26.1**	**+0.4**
KKAR	**Karatay Array**	**77.35**	**315**	P	**P**	**18 56 25.6**	**-0.2**
KKAR				IAmb	IAmb	18 56 26.6	
	comp=Z,2.5nm,1.1s						
BRVK	**Borovoye**	**80.38**	**325**	P	**P**	**18 56 42.0**	**-0.2**
BRVK				IAmb	IAmb	18 56 49.5	
	comp=Z,4.0nm,1.1s						
MLY	**Manley**	**83.68**	**23**	P	**P**	**18 56 59.6**	**+0.3**
MLY				IAmb	IAmb	18 57 00.8	
	comp=Z,2.8nm,0.6s						
RND	**Reindeer**	**83.91**	**25**	P	**P**	**18 56 60.0**	**-0.6**
ILAR	**Eielson Array**	**85.15**	**24**	P	**P**	**18 57 05.8**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=261,slow=4.7,SNR=22						
GEYT	**Alibeck**	**85.59**	**308**	P	**P**	**18 57 10.2**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=189,slow=8.7,SNR=5.6						
GEYT	**Alibeck**	**85.59**	**308**	P	**P**	**18 57 10.4**	**+0.8**
GEYT				IAmb	IAmb	18 57 11.5	
	comp=Z,3.3nm,0.9s						
ABKAR	**Akbulak array**	**85.84**	**320**	P	**P**	**18 57 09.9**	**-0.6**
ABKAR				IAmb	IAmb	18 57 10.6	
	comp=Z,1.6nm,0.9s						
ABKAR	**Akbulak array**	**85.84**	**320**	P	**P**	**18 57 09.6**	**-0.9**
DAWY	**Dawson**	**88.15**	**26**	P	**P**	**18 57 22.8**	**+1.4**
YKA	**Yellowknife Ar**	**99.31**	**27**	P	**Pdif**	**18 58 12.3**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=281,slow=4.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**137.90**	**287**	PKP	**PKiKP**	**19 03 57.8**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=47,slow=2.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**137.90**	**287**		**PKPdf**	**19 03 56.3**	**-0.1**
KIC	**Kosan Boka**	**145.09**	**277**	*e*PKP2	**PKPbc**	**19 04 08.6**	**-0.2**
	comp=Z,23nm,0.7s						
DBIC	**Dimbokro**	**145.18**	**278**	PKPbc	**PKPab**	**19 04 09.3**	**+0.1**
	comp=Z,14nm,0.7s,baz=79,slow=3.2,SNR=33						
DBIC	**Dimbokro**	**145.18**	**278**		**PKPbc**	**19 04 09.0**	**-0.1**
TIC	**Toumodi**	**145.34**	**278**	*e*PKP2	**PKPbc**	**19 04 09.5**	**-0.2**
LIC	**Lamto**	**145.38**	**277**	*e*PKP2	**PKPbc**	**19 04 09.7**	**-0.1**
	comp=Z,29nm,0.8s						
LPAZ	**La Paz**	**146.04**	**125**	PKPbc	**PKPab**	**19 04 14.3**	**+1.3**
	comp=Z,4.3nm,0.9s,baz=273,slow=2.2,SNR=14						
CPUP	**Villa Florida**	**146.39**	**150**	PKPbc	**PKPab**	**19 04 13.7**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=193,slow=6.5,SNR=3.6						
CPUP	**Villa Florida**	**146.39**	**150**		**PKPdf**	**19 04 09.7**	**-1.6**

*IDC **08** 19:14:36.6±23.0, 43°.06N×144°.67E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/37, mbtmp3.8/4, MS3.6/1, Ms1 3.6/1, ms1mx2.4/50, Error ellipse: s-maj=514.8km s-min=85.0km az=156.0*
*SKHL **08** 19:15:05.2±0.4, 43°.30N×142°.70E, h79km±4km, mb4.1/3*
*JMA **08** 19:15:05.2±0.2, 43°.80N×143°.31E, h175km±2km, M2.7*

ISC 08 19:15:05.0±0.9, 43°.71N±0°.08×143°.31E±0°.05, h175km±7km, n21, σ0§78/31, mb3.5/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMP	**Maruseppu**	**0.30**	**7**	P	**Pn**	**19 15 28.6**	**+0.1**
JMP				*e*S	**Sn**	**19 15 46.1**	**-0.7**
JKK2	**Kamakawa 2**	**0.44**	**292**	P	**Pn**	**19 15 29.3**	**+0.4**
JKK2				*e*S	**Sn**	**19 15 47.0**	**-0.4**
JTKR	**Abashiri--Toko**	**0.51**	**59**	P	**Pn**	**19 15 29.5**	**+0.4**
JTKR				*e*S	**Sn**	**19 15 47.7**	**-0.1**
JAR	**Ashorobuto**	**0.53**	**141**	P	**Pn**	**19 15 30.1**	**+0.7**
ASAJ	**Asahikawa**	**0.65**	**308**	P	**Pn**	**19 15 30.1**	**+0.2**
ASAJ				*e*S	**Sn**	**19 15 48.7**	**-0.5**
JFR	**Furan**	**0.76**	**224**	P	**Pn**	**19 15 31.4**	**+0.8**
JCH	**Churui**	**1.10**	**178**	P	**Pn**	**19 15 33.3**	**+0.3**
JCH				*e*S	**Sn**	**19 15 53.9**	**-0.6**
JAK	**Akkeshi**	**1.24**	**125**	P	**Pn**	**19 15 34.3**	**+0.2**
JAK				*e*S	**Sn**	**19 15 57.0**	**+0.5**
JRA	**Rausu**	**1.33**	**80**	P	**Pn**	**19 15 35.8**	**+0.9**
JNBK	**Urakawa-nobuka**	**1.49**	**196**	P	**Pn**	**19 15 37.3**	**+0.9**
GLVR	**Golovnino**	**1.60**	**88**	*i* P	**Pn**	**19 15 38.0**	**+0.5**
GLVR				AMB	AMB	19 15 39.0	
	30nm,0.4s						
GLVR				*e*S	**Sn**	**19 16 02.0**	**-0.6**
GLVR				A	A	19 16 08.0	
	120nm,0.3s						
GLVR				A	A	19 16 08.0	
	100nm,0.3s						
JEW	**Eniwo**	**1.61**	**238**	P	**Pn**	**19 15 38.5**	**+0.9**
NMR	**Nemuro--Hokkai**	**1.79**	**100**	*i* P	**Pn**	**19 15 39.3**	**-0.1**
NMR				*i* S	**Sn**	**19 16 04.8**	**-1.3**
GRPR	**Tuman**	**1.80**	**80**	*i* P	**Pn**	**19 15 40.8**	**+1.3**
GRPR				AMB	AMB	19 15 41.0	
	20nm,0.4s						
GRPR				*e*S	**Sn**	**19 16 06.8**	**+0.5**
NEM2	**Nemuro 2**	**1.80**	**100**	P	**Pn**	**19 15 39.2**	**-0.3**
NEM2				*e*S	**Sn**	**19 16 04.6**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**1.87**	**79**	*i* P	**Pn**	**19 15 41.4**	**+1.2**
YUK				AMB	AMB	19 15 41.7	
	60nm,0.5s						
YUK				*i* S	**Sn**	**19 16 08.9**	**+1.3**
YUK				A	A	19 16 13.0	
	140nm,0.5s						
YUK				A	A	19 16 13.0	
	150nm,0.5s						
SONM	**Songino Array**	**25.91**	**292**	P	**P**	**19 20 21.2**	**+0.4**
	0.8nm,0.6s,baz=89,slow=8.9,SNR=9.0						
ZALV	**Zalesovo Beam**	**38.79**	**306**	P	**P**	**19 22 12.2**	**0.0**
	0.5nm,0.5s,baz=92,slow=8.7,SNR=2.3						
MKAR	**Makanchi Array**	**42.12**	**296**	P	**P**	**19 22 39.8**	**+0.1**
	0.3nm,0.5s,baz=80,slow=9.1,SNR=7.0						
BATI	**Baumata**	**56.56**	**203**	LR	LR	19 48 13.8	
	comp=Z,50nm,19.3s,baz=351,slow=36						
FINES	**FINESS Array B**	**63.61**	**332**	P	**P**	**19 25 15.8**	**-0.8**
	3.5nm,1.0s,baz=42,slow=9.3,SNR=1.4						

*ECX **08** 19:18:01.7±0.6, 32°.39N×115°.20W, h10km±2km, MD2.4, ML2.6*
*MEX **08** 19:18:02.8±0.5, 32°.51N×115°.14W, h5km, MD3.8*

ISC 08 19:18:02.0±1.1, 32°.39N±0°.05×115°.17W±0°.06, h15km±5km, n11, σ1§22/20, 1C-1D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.03**	**300**	*i* P	**Pg**	**19 18 04.7**	**0.0**
MBIG				*i* S	**Sg**	**19 18 06.7**	**+0.2**
MBIG	**Mexicali**	**0.03**	**300**	*e*P	**Pg**	**19 18 04.4**	**-0.3**
MBIG				*i* S	**Sg**	**19 18 06.7**	**+0.2**
CPBX	**Cerro Prieto**	**0.12**	**283**	*e*P	**Pg**	**19 18 06.2**	**+0.7**
CPBX				*e*S	**Sg**	**19 18 08.7**	**+0.9**
CPBX				IAML		19 18 10.9	
	comp=N,5μm,0.2s						
CPBX				*e*		19 18 10.9	
GLA	**Glamis**	**0.72**	**23**	*e*P	**Pn**	**19 18 17.0**	**-0.6**
IKP	**In-Ko-Pah, Jac**	**0.84**	**288**	*e*P	**Pg**	**19 18 18.6**	**+0.4**
IKP				*e*S	**Sg**	**19 18 29.8**	**+0.5**
SJX	**San Joaquin**	**0.92**	**227**	*e*P	**Pb**	**19 18 17.9**	**-1.6**
SJX				*e*S	**Sb**	**19 18 28.2**	**-3.4**
SJX				⇑*e*		19 18 29.5	
SJX				IAML		19 18 29.5	
	comp=N,267nm,0.1s						
SJX				⇓*e*		19 18 29.6	
SJX				IAML		19 18 29.6	
	comp=E,231nm,0.1s						
ECBX	**El Chinero**	**0.92**	**174**	*e*P	**Pg**	**19 18 20.6**	**+0.8**
ECBX				*e*S	**Sn**	**19 18 33.5**	**+0.2**
CBX	**Cerro Bola**	**1.27**	**267**	*e*P	**Pb**	**19 18 26.2**	**+0.6**
CBX				*e*S	**Sb**	**19 18 42.8**	**+1.0**
TJIG	**Tijuana**	**1.28**	**272**	*e*P	**Pn**	**19 18 24.3**	**-0.9**
TJIG				*e*S	**Sb**	**19 18 42.5**

PB14					IAmb	IAmb	19 30 41.9		
	comp=Z,6.4nm,0.7s								
SBA	**Scott Base**	**45.98**	**183**		P	**P**	**19 30 43.9**	**+2.0**	
VNDA	**Vanda**	**46.44**	**182**		P	**P**	**19 30 47.1**	**+1.6**	
	comp=Z,3.4nm,0.8s,baz=185,slow=6.1,SNR=23								
VNDA	**Vanda**	**46.44**	**182**		P	**P**	**19 30 47.1**	**+1.6**	
VNDA					IAmb	IAmb	19 30 58.1		
	comp=Z,6.8nm,0.8s								
LVC	**Limon Verde**	**46.73**	**297**		P	**P**	**19 30 49.8**	**+1.0**	
LVC	**Limon Verde**	**46.73**	**297**	*eP*	P	**P**	**19 30 49.2**	**+0.4**	
PB10	**IPOC Station P**	**46.80**	**295**		P	**P**	**19 30 49.4**	**+0.5**	
PB06	**IPOC Station P**	**46.98**	**297**		P	**P**	**19 30 50.9**	**+0.4**	
PB06					IAmb	IAmb	19 30 53.4		
	comp=Z,12nm,0.7s								
PB09	**IPOC Station P**	**47.58**	**298**		P	**P**	**19 30 56.6**	**+1.4**	
PB04	**IPOC Station P**	**47.58**	**296**		P	**P**	**19 30 55.2**	**0.0**	
LBTB	**Lobatse**	**47.62**	**70**		P	**P**	**19 30 54.9**	**-0.6**	
	comp=Z,2.7nm,0.8s,baz=217,slow=6.1,SNR=6.3								
LBTB	**Lobatse**	**47.62**	**70**			**P**	**19 30 55.2**	**-0.2**	
LBTB					IAmb	IAmb	19 31 06.8		
	comp=Z,7.9nm,0.9s								
PB07	**IPOC Station P**	**47.96**	**297**		P	**P**	**19 30 58.9**	**+0.7**	
PB01	**IPOC Station P**	**48.33**	**298**		P	**P**	**19 31 01.6**	**+0.7**	
PTLB	**Pontes e Lacer**	**48.52**	**313**	*eP*	P	**P**	**19 31 02.3**	**0.0**	
PB08	**IPOC Station P**	**48.93**	**299**		P	**P**	**19 31 06.2**	**+0.3**	
PB08					IAmb	IAmb	19 31 10.6		
	comp=Z,9.3nm,0.8s								
TA01	**Diego Aracena**	**49.08**	**297**		P	**P**	**19 31 07.1**	**+0.5**	
TA01					IAmb	IAmb	19 31 13.0		
	comp=Z,14nm,1.1s								
PB11	**IPOC Station P**	**49.50**	**299**		P	**P**	**19 31 10.3**	**+0.2**	
PB11					IAmb	IAmb	19 31 14.7		
	comp=Z,19nm,1.1s								
PSGCX	**Pisagua**	**49.87**	**298**		P	**P**	**19 31 12.4**	**-0.4**	
PSGCX					IAmb	IAmb	19 31 14.0		
	comp=Z,9.8nm,0.8s								
MNMC	**Minye Minye**	**50.01**	**299**		P	**P**	**19 31 14.9**	**+0.9**	
SMTB	**Santa Maria do**	**50.63**	**330**	*eP*	P	**P**	**19 31 19.6**	**+1.2**	
PB16	**IPOC Station P**	**50.65**	**300**		P	**P**	**19 31 19.7**	**+0.5**	
LPAZ	**La Paz**	**51.75**	**302**		P	**P**	**19 31 28.4**	**+0.9**	
	comp=Z,5.1nm,0.6s,baz=150,slow=5.8,SNR=28								
LPAZ	**La Paz**	**51.75**	**302**		P	**P**	**19 31 28.2**	**+0.6**	
LPAZ					IAmb	IAmb	19 31 28.9		
	comp=Z,6.5nm,0.7s								
LPAZ	**La Paz**	**51.75**	**302**	*eP*		**P**	**19 31 28.4**	**+0.9**	
NBCL	**Cascavel-CE**	**53.03**	**343**	*eP*		**P**	**19 31 39.1**	**+2.8**	
NPGB	**Novo Progresso**	**54.79**	**321**	*eP*		**P**	**19 31 49.7**	**+0.5**	
SAML	**Samuel**	**56.04**	**312**		P	**P**	**19 31 58.3**	**+0.1**	
SAML	**Samuel**	**56.04**	**312**	*eP*		**P**	**19 31 58.4**	**+0.1**	
ETMB	**Extrema**	**56.56**	**308**	*eP*		**P**	**19 32 01.9**	**0.0**	
MALB	**Monte Alegre**	**59.28**	**325**	*eP*		**P**	**19 32 22.3**	**+1.4**	
MCPB	**Macapa, AP**	**60.00**	**328**	*eP*		**P**	**19 32 27.2**	**+1.3**	
BOAV	**Boa Vista**	**65.39**	**320**	*eP*		**P**	**19 33 01.7**	**-0.2**	
TOA0	**Torodi Ar. Sit**	**72.51**	**27**		P	**P**	**19 33 45.6**	**-0.5**	
TOA0					IAmb	IAmb	19 33 46.0		
	comp=Z,6.2nm,0.5s								
TORD	**Torodi Ar. Bea**	**72.51**	**27**		P	**P**	**19 33 45.4**	**-0.6**	
	comp=Z,4.9nm,0.5s,baz=202,slow=6.3,SNR=53								
TORD	**Torodi Ar. Bea**	**72.51**	**27**		P	**P**	**19 33 44.9**	**-1.1**	
TEIG	**Tepich**	**93.08**	**302**		P	**P**	**19 35 33.0**	**0.0**	
	comp=Z,10nm,0.9s,baz=158,slow=5.4,SNR=2.9								
PPT	**Papeete**	**93.29**	**231**		LR	LR	20 10 49.3		
	comp=Z,31nm,18.9s,baz=168,slow=31								
ASAR	**Alice Springs**	**98.32**	**160**		P	**P**	**19 35 56.5**	**-0.6**	
	comp=Z,0.2nm,0.7s,baz=184,slow=4.6,SNR=6.4								
WRA	**Warramunga Arr**	**102.03**	**160**		P	**Pdif**	**19 36 13.4**	**-0.2**	
	comp=Z,0.3nm,0.4s,baz=193,slow=7.8,SNR=2.0								
KOLN	**Koldanda**	**122.54**	**88**	*eP*		**PKPdf**	**19 41 13.2**	**-1.6**	
	comp=Z,9.7nm,0.7s								
DMN	**Daman**	**123.26**	**89**	*eP*		**PKPdf**	**19 41 14.5**	**-1.7**	
	comp=Z,5.3nm,0.7s								
GKN	**Gorkha**	**123.30**	**89**	*eP*		**PKPdf**	**19 41 14.7**	**-1.5**	
PKIN	**Phulchoki**	**123.40**	**90**	*eP*		**PKPdf**	**19 41 15.2**	**-1.3**	
	comp=Z,4.0nm,0.6s								
PKI	**Pulchoki**	**123.40**	**90**	*eP*		**PKPdf**	**19 41 15.2**	**-1.4**	
CMAR	**Chiang Mai Arr**	**123.56**	**108**		PKP	**PKPdf**	**19 41 16.2**	**-0.5**	
	comp=Z,1.4nm,0.6s,baz=241,slow=3.1,SNR=7.8								
CMAR	**Chiang Mai Arr**	**123.56**	**108**			**PKPdf**	**19 41 16.0**	**-0.7**	
RAMN	**Ramite**	**123.58**	**91**	*eP*		**PKPdf**	**19 41 16.1**	**-0.8**	
JIRN	**Jiri**	**123.90**	**90**	*eP*		**PKPdf**	**19 41 16.5**	**-1.1**	
	comp=Z,9.9nm,0.6s								
GUN	**Gumba**	**123.92**	**90**	*eP*		**PKPdf**	**19 41 16.7**	**-0.9**	
	comp=Z,5.7nm,0.7s								
ODAN	**Odare**	**123.95**	**92**	*eP*		**PKPdf**	**19 41 16.2**	**-1.4**	
	comp=Z,6.3nm,0.7s								
MKAR	**Makanchi Array**	**135.51**	**70**		PKP	**PKPdf**	**19 41 37.6**	**-1.0**	
	comp=Z,0.2nm,0.7s,baz=254,slow=1.0,SNR=2.6								
CD2	**Chengdu**	**136.13**	**103**		PKP	**PKPdf**	**19 41 40.5**	**+0.2**	
WMQ	**Urumqi**	**136.46**	**77**	*eP*	KP	**PKiKP**	**19 41 42.4**	**+0.2**	
YKA	**Yellowknife Ar**	**137.34**	**317**		PKP	**PKPdf**	**19 41 40.5**	**-0.9**	
	comp=Z,0.4nm,0.7s,baz=114,slow=2.8,SNR=5.2								
YKA						PP	**PP**	**19 44 28.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=122,slow=8.3,SNR=4.5								
GTA	**Gaotai**	**140.19**	**91**	*eP*	KP	**PKiKP**	**19 41 50.2**	**+0.1**	
GTA					LR	LR			
	comp=Z,130nm,18.5s								
GTA					LR	LR			
	comp=Z,86nm,17.8s								
GTA					LR	LR			
	comp=Z,120nm,16.0s								
NJ2	**Nanjing**	**144.92**	**118**	*eP*	KP	**PKPdf**	**19 41 57.5**	**+1.5**	
INK	**Inuvik**	**146.93**	**320**		PKPbc	**PKPbc**	**19 41 59.6**	**-0.7**	
	comp=Z,3.1nm,1.0s,baz=73,slow=5.4,SNR=7.0								
INK	**Inuvik**	**146.93**	**320**			**PKPbc**	**19 41 59.5**	**-0.8**	
HHC	**Hu-ho-hao-te**	**147.71**	**100**	*eP*	KPbc	**PKPbc**	**19 42 02.7**	**-0.8**	
SONM	**Songino Array**	**149.22**	**85**		PKPbc	**PKPbc**	**19 42 06.4**	**-0.8**	
	comp=Z,3.3nm,0.7s,baz=219,slow=3.1,SNR=27								
JNU	**Nakatsue**	**151.28**	**133**		PKPbc	**PKPbc**	**19 42 11.4**	**-1.0**	
	comp=Z,8.9nm,1.0s,baz=63,slow=3.2,SNR=4.1								
ILAR	**Eielson Array**	**151.39**	**311**		PKPbc	**PKPbc**	**19 42 10.8**	**-0.9**	
	comp=Z,2.0nm,0.8s,baz=136,slow=2.7,SNR=12								

ANF ***08*** *19:23:12.9±0.6,32°.35N×115°.19W,h7km±3km,ML4.4/27, Error ellipse: s-maj=4.4km s-min=2.5km az=9.0, Hypocentre not reviewed by the ISC*

ECX ***08*** *19:23:13.3±0.7,32°.36N×115°.21W,h8km±2km,ML4.6, Fault plane solution: NP1:φs30.00000°,δ90.00000°, λ0.00000°.*

NEIC ***08*** *19:23:13.5,32°.28N×115°.16W,h5km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=4.88; Mθθ1.47; Mφφ3.41; Mrθ-0.47; Mθφ1.56; Mφr0.17; Fault plane solution: M₀4.63000×10¹⁵ NP1:φs203.97000°, δ44.72000°,λ-97.30000°. NP2:φs34.18000°,δ45.74000°, λ-82.83000°. Principal axes: T 4.2766, Plg1.0000°, Azm119.0000°; N 0.6453, Plg5.0000°, Azm209.0000°; P -4.9219, Plg85.0000°, Azm23.0000°;*

IDC ***08*** *19:23:14.2±1.3,32°.41N×115°.27W,h0km,mb3.9/7, mb1 4.0/12,mb1mx3.8/50,mbtmp3.8/12,ML3.6/5,MS3.5/15, Ms1 3.5/15,ms1mx3.4/35 Error ellipse: s-maj=23.8km s-min=9.9km az=34.0*

NEIC ***08*** *19:23:14.3±2.0,32°.42N±0°.02×115°.20W±0°.01,h18km±4km, Error ellipse: s-maj=2.9km s-min=1.8km az=190.0*

PAS ***08*** *19:23:15.4±3.1,32°.38N±0°.01×115°.21W±0°.02,h7km±4km, Error ellipse: s-maj=3.1km s-min=0.8km az=123.0*

NEIC ***08*** *19:23:15.4,32°.38N×115°.21W,h3km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-2.11; Mθθ0.44; Mφφ1.67; Mrθ-0.50; Mθφ0.89; Mφr-1.11; Fault plane solution: M₀2.45000×10¹⁵ NP1:φs209.51000°, δ30.08000°,λ-86.94000°. NP2:φs25.98000°,δ59.97000°, λ-91.77000°. Principal axes: T 2.4595, Plg15.0000°, Azm117.0000°; N -0.0216, Plg2.0000°, Azm27.0000°; P -2.4379, Plg75.0000°, Azm291.0000°;*

MEX ***08*** *19:23:15.7±1.5,32°.44N×115°.12W,h5km,MD4.3*

SCEDC ***08*** *19:23:15.4,32°.38N×115°.21W,h7km, Hypocentre not reviewed by the ISC*

ISC 08 19:23:14.5±0.6,32°.40N±0°.02×115°.21W±0°.02,h13km±3km, n166,σ1§44/178,mb4.1/11,MS3.6/12,3C-8D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.01**	**33**	*eP*	**Pg**	**19 23 16.1**	**-0.7**
MBIG				*i* P		19 23 16.1	
MBIG				*i* S	**Sg**	**19 23 18.2**	**-0.1**
MBIG	**Mexicali**	**0.01**	**33**		**Pg**	**19 23 16.1**	**-0.7**
MBIG					**Sg**	**19 23 18.2**	**-0.1**
MBIG	**Mexicali**	**0.01**	**33**	*i*/P	**Pg**	**19 23 16.1**	**-0.7**
MBIG				*e*S	**Sg**	**19 23 18.2**	**-0.1**
CPBX	**Cerro Prieto**	**0.09**	**286**	Pg	**Pg**	**19 23 17.7**	**+0.4**
CPBX	**Cerro Prieto**	**0.09**	**286**	*e*P	**Pg**	**19 23 17.7**	**+0.4**
CPBX				*e*S	**Sg**	**19 23 19.7**	**+0.4**
CPBX				IAML		19 23 25.3	
	comp=N,748μm,0.6s						
CTLX	**Tlaxcala, TLX**	**0.09**	**34**	*e*P	**Pg**	**19 23 18.2**	**+0.9**
CTLX				*e*S	**Sg**	**19 23 21.4**	**+2.0**
GUVIX	**Guadalupe Vict**	**0.14**	**130**		**Pb**	**19 23 20.2**	**+1.1**
GUVIX	**Guadalupe Vict**	**0.14**	**130**	*i*/P	**Pb**	**19 23 19.4**	**+0.3**
GUVIX				*e*S	**Sb**	**19 23 22.7**	**+0.6**
UABX	**UABC, Campus M**	**0.31**	**320**	*i*/P	**Pb**	**19 23 22.2**	**+0.3**
ICBC	**Inst. de Cultu**	**0.35**	**320**	*i*/P	**Pb**	**19 23 23.1**	**+0.5**
EMSC	**East Mesa**	**0.39**	**29**	*e*P	**Pb**	**19 23 23.6**	**+0.2**
DREC	**Desert Resrch C**	**0.46**	**334**		**Pb**	**19 23 25.0**	**+0.6**
DREC	**Desert Resrch C**	**0.46**	**334**	*i*/P	**Pb**	**19 23 25.1**	**+0.7**
COA	**Coachella**	**0.47**	**9**	*i*/P	**Pb**	**19 23 24.9**	**+0.2**
SGL	**Mount Signal**	**0.51**	**300**		**Pg**	**19 23 24.8**	**+0.3**
SGL	**Mount Signal**	**0.51**	**300**	*i*/P	**Pg**	**19 23 24.8**	**+0.3**
WESC	**Westside Schoo**	**0.57**	**309**		**Pb**	**19 23 26.2**	**-0.2**
WESC					**Sb**	**19 23 34.9**	**+0.4**
YMD	**Yuma Desert**	**0.58**	**74**		**Pb**	**19 23 26.4**	**-0.2**
YMD	**Yuma Desert**	**0.58**	**74**	*i*/P	**Pb**	**19 23 26.4**	**-0.2**
RUN	**Ruthven**	**0.61**	**19**		**Pb**	**19 23 26.7**	**-0.3**
COK2	**Cook Ranch 2**	**0.63**	**316**		**Pb**	**19 23 27.1**	**-0.3**
YUH	**Yuha Desert**	**0.66**	**293**		**Pg**	**19 23 27.2**	**-0.1**
WEMD	**Westmorland, C**	**0.71**	**334**		**Pg**	**19 23 28.4**	**0.0**
GLA	**Glamis**	**0.73**	**26**		**Pg**	**19 23 28.6**	**-0.1**
GLA					**Sb**	**19 23 39.5**	**+0.4**
GLA	**Glamis**	**0.73**	**26**	IAML		19 23 39.9	
	comp=N,18μm,0.5s						
GLA				IAML		19 23 41.0	
	comp=E,22μm,0.5s						
GLA	**Glamis**	**0.73**	**26**	P		19 23 28.6	
	baz=206,SNR=1000						
GLA				S		19 23 39.0	
	baz=206						
ESJX	**Sierra Juarez**	**0.74**	**238**		**Pb**	**19 23 29.4**	**+0.1**
ESJX	**Sierra Juarez**	**0.74**	**238**		**Sb**	**19 23 39.8**	**+0.3**
ESJX				IAML		19 23 41.3	
	comp=N,17μm,0.3s						
SWSC	**Sam W. Stewart**	**0.74**	**318**		**Pg**	**19 23 28.4**	**-0.5**
SWSC					**Sb**	**19 23 39.2**	**-0.1**
SWSC	**Sam W. Stewart**	**0.74**	**318**	*i*/P	**Pg**	**19 23 28.4**	**-0.5**
SWSC	**Sam W. Stewart**	**0.74**	**318**	P		19 23 28.4	
	baz=139,SNR=609						
SWSC				S		19 23 38.9	
	baz=139						
RMX	**La Rumorosa**	**0.77**	**286**		**Pg**	**19 23 28.6**	**-0.8**
RMX					**Sg**	**19 23 38.6**	**-0.9**
RMX				IAML		19 23 40.2	
	comp=E,10μm,0.5s						
IKP	**In-Ko-Pah, Jac**	**0.80**	**289**		**Pg**	**19 23 30.0**	**-0.1**
IKP					**Sb**	**19 23 41.5**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**0.80**	**289**	*i*/P	**Pg**	**19 23 30.0**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.80**	**289**	P		19 23 29.9	
	baz=110,SNR=1000						
IKP				S		19 23 41.3	
	baz=110						
CRR	**Carrizo Plain**	**0.81**	**308**		**Pg**	**19 23 29.7**	**-0.5**
CRR					**Sn**	**19 23 42.3**	**-1.3**
ERRC	**Elmore Ranch**	**0.89**	**324**		**Pg**	**19 23 31.3**	**-0.4**
ERRC					**Sn**	**19 23 45.6**	**+0.2**
SJX	**San Joaquin**	**0.90**	**226**	*e*		19 23 41.5	
SJX				IAML		19 23 41.5	
	comp=N,27μm,0.2s						
ECBX	**El Chinero**	**0.93**	**172**	*eP*	**Pb**	**19 23 31.0**	**-1.5**
ECBX				*e*S	**Sb**	**19 23 45.2**	**+0.5**
CBKC	**Canebrake**	**1.01**	**300**		**Pb**	**19 23 33.1**	**-0.9**
FRK	**Frink**	**1.07**	**340**		**Pb**	**19 23 33.0**	**-1.8**
SALN	**Salton City**	**1.10**	**324**		**Pb**	**19 23 33.9**	**-1.5**
SALN					**Sn**	**19 23 51.6**	**+0.9**
MONP2	**Monument Peak**	**1.14**	**296**		**Pb**	**19 23 34.9**	**-1.3**
MONP2	**Monument Peak**	**1.14**	**296**	P		19 23 35.0	
	baz=116,SNR=515						
MONP2				S		19 23 51.3	
	baz=116						
SLH	**Sleepy Hollow**	**1.19**	**312**		**Pn**	**19 23 35.0**	**-1.9**
TKX	**Tecate**	**1.20**	**279**		**Pn**	**19 23 36.4**	**-0.7**
TKX					**Sg**	**19 23 53.2**	**+0.1**
TKX				IAML		19 23 54.3	
	comp=E,5μm,0.4s						
CBX	**Cerro Bola**	**1.23**	**267**		**Pn**	**19 23 37.4**	**-0.2**
CBX				IAML		19 23 59.8	
	comp=N,5μm,0.6s						
CBX				IAML		19 24 01.1	
	comp=E,4μm,0.6s						
TJIG	**Tijuana**	**1.24**	**272**	*eP*	**Pb**	**19 23 37.9**	**0.0**
TJIG				*e*S	**Sg**	**19 23 54.3**	**-0.2**
TJIG	**Tijuana**	**1.24**	**272**		**Pb**	**19 23 37.9**	**0.0**
TJIG					**Sg**	**19 23 54.2**	**-0.2**
BAR	**Barrett**	**1.27**	**283**		**Sg**	**19 23 55.2**	**-0.2**
BAR	**Barrett**	**1.27**	**283**	Pn	**Pn**	**19 23 37.0**	**-1.0**
BAR	**Barrett**	**1.27**	**283**	IAML		19 23 56.7	
	comp=E,4μm,0.3s						
BAR				IAML		19 23 56.7	
	comp=N,6μm,0.5s						
BC3	**Big Chuckawall**	**1.27**	**351**		**Pn**	**19 23 36.8**	**-1.4**
BC3	**Big Chuckawall**	**1.27**	**351**	P		19 23 36.7	
	baz=171,SNR=839						
BORC	**Borrego Spring**	**1.34**	**311**		**Pn**	**19 23 37.1**	**-1.9**
BORC					**Sb**	**19 23 53.0**	**-3.6**
CCX	**Cicese**	**1.34**	**247**		**Pn**	**19 23 39.2**	**+0.2**
CCX				IAML		19 23 59.4	
	comp=N,5μm,0.5s						
CCX				IAML		19 23 59.9	
	comp=E,7μm,0.7s						
SPIG	**San Pedro Mart**	**1.36**	**189**	*eP*	**Pn**	**19 23 39.3**	**-0.3**
SPIG				*e*S	**Sb**	**19 23 56.9**	**-0.7**
SPIG	**San Pedro Mart**	**1.36**	**189**		**Pn**	**19 23 39.3**	**-0.3**
SPIG					**Sg**	**19 23 59.6**	**+1.1**
HAY	**Hayfield**	**1.37**	**343**		**Pn**	**19 23 37.7**	**-1.7**
SPX	**San Pedro Mart**	**1.37**	**189**		**Pn**	**19 23 39.4**	**-0.3**
SFX	**San Felipe**	**1.39**	**167**		**Pn**	**19 23 39.2**	**-0.4**
SFX				IAML		19 24 01.8	
	comp=N,4μm,0.6s						
SFX				IAML		19 24 03.5	
	comp=E,4μm,0.4s						
MATG	**Mataguay Scout**	**1.45**	**304**		**Pn**	**19 23 39.3**	**-1.3**
MATG					**Sg**	**19 24 01.3**	**-0.1**
BLYC	**Blythe**	**1.47**	**23**		**Sg**	**19 24 02.0**	**+0.2**
EML	**El Monte Cty P**	**1.47**	**290**		**Pn**	**19 23 39.7**	**-1.0**
EML					**Sg**	**19 24 01.2**	**-0.6**
OLP	**Otay Lakes Par**	**1.47**	**279**		**Pb**	**19 23 42.0**	**+0.2**
SDRC	**San Diego Road**	**1.50**	**284**		**Pb**	**19 23 42.4**	**+0.1**
SDRC					**Sg**	**19 24 02.3**	**-0.6**
TJX	**Tijuana**	**1.57**	**275**		**Pn**	**19 23 42.3**	**+0.3**
DPP	**Dos Picos Cty**	**1.58**	**293**		**Pn**	**19 23 41.5**	**-0.8**
PMD	**Palm Desert**	**1.59**	**322**		**Pn**	**19 23 40.8**	**-1.6**
XPFO	**Pion Flat**	**1.60**	**319**		**Pn**	**19 23 40.9**	**-1.8**
FRD	**Ford Ranch, An**	**1.61**	**313**		**Pn**	**19 23 41.1**	**-1.5**
FRD	**Ford Ranch, An**	**1.61**	**313**		**Pn**	**19 23 41.2**	**-1.5**
HWB	**Hans Werner Br**	**1.61**	**294**		**Pn**	**19 23 41.9**	**-0.8**
PFO	**Pinyon Flats O**	**1.61**	**319**	Pg	**Pn**	**19 23 41.2**	**-1.5**
	comp=E,20nm,0.3s,baz=135,slow=14,SNR=114						
PFO	**Pinyon Flats O**	**1.61**	**319**	Pn	**Pn**	**19 23 40.9**	**-1.9**
PFO	**Pinyon Flats O**	**1.61**	**319**	P		19 23 40.9	
	baz=139,SNR=132						
BZNA	**Buzz No.'s Pla**	**1.64**	**312**		**Pn**	**19 23 42.4**	**-0.9**
SNDA	**J Saunders Pla**	**1.65**	**315**		**Pn**	**19 23 42.0**	**-1.4**
DNR	**Dunn Ranch,Anz**	**1.67**	**315**		**Pn**	**19 23 42.9**	**-0.8**
109C	**Camp Elliot, M**	**1.68**	**288**		**Pn**	**19 23 42.9**	**-0.7**
109C				IAML		19 24 08.4	
	comp=E,5μm,0.3s						
109C				IAML		19 24 10.0	
	comp=N,5μm,0.5s						
109C	**Camp Elliot, M**	**1.68**	**288**	P		19 23 42.9	
	baz=107,SNR=115						
109C				S		19 24 06.9	
	baz=107						
CPE	**Camp Elliot**	**1.68**	**288**		**Pn**	**19 23 43.2**	**-0.3**
PLM	**Palomar**	**1.69**	**305**		**Pn**	**19 23 43.1**	**-0.9**
PIX	**Pinacate**	**1.70**	**119**	Pn	**Pn**	**19 23 42.4**	**-1.5**
BELC	**Belle Mtn. Jos**	**1.73**	**338**	P		19 23 43.1	
	baz=158,SNR=52						
CRY	**Cary Ranch**	**1.74**	**313**		**Pn**	**19 23 43.2**	**-1.3**
IRM	**Iron Mountain**	**1.76**	**2**	P		19 23 43.8	
	baz=182,SNR=90						
IRM				Sb		19 24 11.8	
	baz=182						
POB	**Polly Butte**	**1.93**	**312**		**Pn**	**19 23 46.2**	**-1.0**
BACC	**Bachelor Mtn.**	**1.96**	**309**		**Pn**	**19 23 46.7**	**-0.8**
DGR	**Domenigoni Val**	**1.96**	**310**		**Pn**	**19 23 46.5**	**-1.1**
HMTC	**Hemet**	**2.00**	**311**		**Pn**	**19 23 47.1**	**-1.0**
MURC	**Murrieta**	**2.06**	**306**	P		19 23 47.7	
	baz=126,SNR=37						
MURC				Sb		19 24 20.1	
	baz=126						
214A	**Organ Pipe Nat**	**2.08**	**102**	*e*P	**Pn**	**19 23 47.9**	**-1.2**
214A				*i* S	**Sn**	**19 24 11.1**	**-3.9**
214A	**Organ Pipe Nat**	**2.08**	**102**		**Pn**	**19 23 47.9**	**-1.2**
214A	**Organ Pipe Nat**	**2.08**	**102**	IAML		19 24 44.7	
	comp=E,2μm,0.8s						
214A				IAML		19 24 56.0	
	comp=N,2μm,1.3s						
214A	**Organ Pipe Nat**	**2.08**	**102**	P		19 23 47.9	
	baz=282						
214A				S		19 24 15.9	
	baz=282						
PDMCI	**Parker Dam,Lak**	**2.10**	**25**	P		19 23 48.8	
	baz=205,SNR=62						
PDMCI				Sb		19 24 20.4	
	baz=205						
SME	**Santa Rosa Min**	**2.30**	**309**		**Pn**	**19 23 51.6**	**-0.5**
GMRC	**Granite Mounta**	**2.41**	**351**	P		19 23 52.9	
	baz=171,SNR=44						
GMRC				Sb		19 24 31.2	
	baz=171						
NEE2	**Needles Airpor**	**2.42**	**12**	P		19 23 54.1	
	baz=192						
NEE2				Sb		19 24 31.3	
	baz=192						
HEC	**Hector,Ludlow**	**2.60**	**339**	P		19 23 56.2	
	baz=159						
HEC				S		19 24 30.8	
	baz=159						
BFSC	**Mount Baldy Ra**	**2.76**	**313**	Pg		19 24 07.1	
	baz=132						
SCI2	**San Clemente I**	**2.88**	**283**	Pb		19 24 05.9	
	baz=101						
CIS	**Catalina Islan**	**2.88**	**291**	P		19 24 00.8	
	baz=110,SNR=20						
CIS				Sb		19 24 43.8	
	baz=110						
RRX	**Edison Barstow**	**2.89**	**329**	Pg		19 24 10.0	
	baz=149						
FMP	**Fort Macarthur**	**2.91**	**298**	Sb		19 24 45.3	
	baz=116						
TUQ	**Turquoise Moun**	**3.09**	**349**	P		19 24 02.6	
	baz=169,SNR=26						
HYS	**Haystack Butte**	**3.15**	**322**		**Pn**	**19 24 01.0**	**-2.9**
EDW2	**Edwards Air Fo**	**3.40**	**318**	Pb		19 24 14.1	
	baz=136						
SHOC	**Shoshone, Teco**	**3.61**	**346**	Pg		19 24 24.3	
	baz=166						
LRMC	**Laurel Mtn Rad**	**3.70**	**327**	Pg		19 24 24.6	
	baz=146						
TUC	**Tucson**	**3.74**	**90**	*e*P	**Pn**	**19 24 11.8**	**-0.3**
TUC				*e*S	**Sn**	**19 24 53.4**	**-2.7**
TUC	**Tucson**	**3.74**	**90**	Pn	**Pn**	**19 24 10.7**	**-1.4**
TUC				IAML		19 25 29.0	
	comp=N,405nm,1.3s						
TUC	**Tucson**	**3.74**	**90**	P		19 24 12.8	
	baz=272						
SHPR	**Sheep Range**	**4.10**	**1**	Pn	**Pn**	**19 24 16.0**	**-1.1**
SHPR				IAML		19 25 56.0	
	comp=N,227nm,1.4s						
SHPR				IAML		19 26 00.7	
	comp=E,429nm,1.2s						
WUAZ	**Wupatki**	**4.45**	**45**	Pn	**Pn**	**19 24 20.6**	**-1.4**
WUAZ	**Wupatki**	**4.45**	**45**	P		19 24 23.7	
	baz=226,SNR=12						
TPNV	**Topopah Spring**	**4.62**	**350**		**Pn**	**19 24 22.5**	**-1.7**
TPNV				IAML		19 26 08.6	
	comp=E,286nm,1.2s						
KNB	**Kanab**	**5.01**	**22**	Pn	**Pn**	**19 24 30.1**	**+0.5**
NZIG	**Nacozari, Sono**	**5.24**	**111**	*eP*	**Pn**	**19 24 35.0**	**+2.3**
W18A	**Petrified Fore**	**5.30**	**58**	Pn	**Pn**	**19 24 33.5**	**-0.2**
W18A	**Petrified Fore**	**5.30**	**58**	P		19 24 35.5	
	baz=240						
PAGB	**Antelope Grade**	**5.35**	**310**	Pn	**Pn**	**19 24 32.3**	**-1.7**
CCUT	**Cedar City**	**5.36**	**16**	Pn	**Pn**	**19 24 34.7**	**+0.3**
CCUT				IAML		19 26 54.4	
	comp=E,235nm,2.3s						
**SZ

	comp=Z,142nm,19.2s,baz=0.0,slow=40						
JTS	**Las Juntas de**	**35.53**	**121**	LR	LR	19 46 03.1	
	comp=Z,95nm,20.2s,baz=159,slow=38						
KDAK	**Kodiak Island**	**35.87**	**326**	LR	LR	19 41 55.0	
	comp=Z,117nm,21.8s,baz=164,slow=31						
SUA	**Susitna One**	**37.04**	**332**	P	**P**	**19 30 23.9**	**-0.1**
SUA				IAmb	IAmb	19 30 45.6	
	comp=Z,8.3nm,1.1s						
INK	**Inuvik**	**37.48**	**349**	P	**P**	**19 30 29.6**	**+2.2**
	comp=Z,2.6nm,0.9s,baz=146,slow=11,SNR=8.6						
INK	**Inuvik**	**37.48**	**349**	P	**P**	**19 30 26.9**	**-0.5**
ILAR	**Eielson Array**	**37.79**	**338**	P	**P**	**19 30 33.1**	**+3.0**
	comp=Z,1.2nm,0.8s,baz=150,slow=7.8,SNR=12						
ILAR				LR	LR	19 44 40.7	
	comp=Z,76nm,21.8s,baz=150,slow=34						
ILAR	**Eielson Array**	**37.79**	**338**	P	**P**	**19 30 29.0**	**-1.1**
ROSC	**El Rosal**	**47.00**	**117**	LR	LR	19 53 45.7	
	comp=Z,32nm,18.4s,baz=43,slow=39						
SUMG	**Summit**	**55.47**	**21**	P	**P**	**19 32 46.8**	**-2.2**
SUMG				IAmb	IAmb	19 32 52.5	
	comp=Z,3.7nm,0.8s						
SEY	**Seymchan**	**62.75**	**329**	P	**P**	**19 33 41.0**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=88,slow=13,SNR=6.8						
TIXI	**Tiksi**	**67.13**	**342**	P	**P**	**19 34 09.8**	**+2.3**
NOA	**NORSAR Array B**	**77.21**	**24**	P	**P**	**19 35 10.4**	**+2.4**
	comp=Z,0.6nm,0.7s,baz=314,slow=5.4,SNR=3.3						
FINES	**FINESS Array B**	**81.35**	**18**	P	**P**	**19 35 33.4**	**+2.9**
	comp=Z,2.6nm,0.9s,baz=316,slow=5.3,SNR=4.1						
FINES	**FINESS Array B**	**81.35**	**18**	P	**P**	**19 35 29.0**	**-1.4**
MJAR	**Matsushiro Arr**	**83.01**	**309**	LR	LR	20 08 25.3	
	comp=Z,18nm,19.1s,baz=110,slow=33						
PLCA	**Paso Flores**	**83.64**	**147**	LR	LR	20 05 13.6	
	comp=Z,39nm,20.0s,baz=358,slow=30						
KSRS	**Korea Array**	**88.94**	**315**	LR	LR	20 13 37.5	
	comp=Z,25nm,19.5s,baz=348,slow=34						
HHC	**Hu-ho-hao-te**	**95.29**	**326**	*e*P	**P**	**19 36 40.4**	**+1.9**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,7.2s						
WMQ	**Urumqi**	**101.31**	**343**	*e*P	**Pdif**	**19 37 08.1**	**+2.7**

ECX ***08*** *19:30:25.6±0.6,32.˚36N×115.˚21W,h8km±1km,MD4.0, ML4.2*

IDC ***08*** *19:30:25.4±1.6,32.˚36N×115.˚35W,h0km,mb3.5/3, mb1 3.8/8,mb1mx3.5/52,mbtmp3.4/8,ML3.7/4,MS2.8/1, Ms1 2.8/1,ms1mx2.4/21,Error ellipse: s-maj=27.3km s-min=10.6km az=35.0*

MEX ***08*** *19:30:27.2±4.6,32.˚49N×115.˚12W,h5km,MD4.0*

NEIC ***08*** *19:30:27.1,32.˚34N×115.˚22W,h3km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=4.69; Mθθ2.18; Mφφ2.51; Mrθ-2.61; Mφr-2.19; Fault plane solution: M₀5.60000×10¹⁴ NP1:φs219.04000°, δ26.39000°,λ-96.95000°. NP2:φs46.78000°,δ63.82000°, λ-86.57000°. Principal axes: T 5.3079, Plg19.0000°, Azm134.0000°; N 0.5518, Plg3.0000°, Azm225.0000°; P -5.8597, Plg71.0000°, Azm324.0000°;*

ANF ***08*** *19:30:27.2±0.6,32.˚43N×115.˚23W,h27km±3km,ML4.0/15 Error ellipse: s-maj=4.6km s-min=2.8km az=167.0, Hypocentre not reviewed by the ISC*

NEIC ***08*** *19:30:27.1±3.1,32.˚40N±0.˚02×115.˚24W±0.˚03,h15km±5km, Error ellipse: s-maj=3.7km s-min=2.5km az=49.0*

PAS ***08*** *19:30:28.1±4.0,32.˚41N±0.˚01×115.˚25W±0.˚02,h6km±1km, Error ellipse: s-maj=3.0km s-min=2.8km az=86.0*

SCEDC ***08*** *19:30:28.1,32.˚41N×115.˚25W,h6km,Hypocentre not reviewed by the ISC*

ISC 08 19:30:26.9±0.7,32˚39N±0˚02×115˚27W±0˚02,h12km±4km, n162,σ1§35/181,mb3.4/3,2C-5D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.04**	**313**			**Pg**	**19 30 29.8**	**+0.6**
CPBX	**Cerro Prieto**	**0.04**	**313**	IAML			19 30 30.0	
	comp=E,20μm,0.6s							
CPBX				IAML			19 30 30.2	
	comp=N,8μm,0.7s							
CPBX	**Cerro Prieto**	**0.04**	**313**	⇑*e*P		**Pg**	**19 30 29.8**	**+0.6**
CPBX				IAML			19 30 37.1	
	comp=N,588μm,0.5s							
CPBX				⇑*e*			19 30 37.1	
MBIG	**Mexicali**	**0.06**	**74**	*e*P		**Pg**	**19 30 28.4**	**-0.9**
MBIG				*i* S		**Sg**	**19 30 30.6**	**-0.4**
MBIG	**Mexicali**	**0.06**	**74**			**Pg**	**19 30 28.4**	**-0.9**
MBIG				*e*S		**Sg**	**19 30 30.6**	**-0.4**
MBIG	**Mexicali**	**0.06**	**74**	*i* P		**Sg**	**19 30 28.1**	**-1.2**
MBIG				*e*S		**Sg**	**19 30 30.5**	**-0.4**
CTLX	**Tlaxcala, TLX**	**0.13**	**52**	*e*P		**Pg**	**19 30 30.8**	**+0.6**
CTLX				*e*S		**Sg**	**19 30 34.2**	**+1.7**
GUVIX	**Guadalupe Vict**	**0.18**	**118**			**Pb**	**19 30 31.7**	**-0.5**
GUVIX						**Sg**	**19 30 35.6**	**+1.8**
GUVIX	**Guadalupe Vict**	**0.18**	**118**	*e*P		**Pb**	**19 30 31.8**	**-0.5**
GUVIX				*e*S		**Sg**	**19 30 35.3**	**+1.5**
UABX	**UABC, Campus M**	**0.28**	**329**			**Sg**	**19 30 34.5**	**-2.1**
UABX	**UABC, Campus M**	**0.28**	**329**	*e*P		**Sg**	**19 30 34.5**	**-2.1**
UABX				*i* S		**Sb**	**19 30 40.5**	**+1.8**
EMSC	**East Mesa**	**0.42**	**34**			**Pb**	**19 30 36.0**	**-0.3**
EMSC	**East Mesa**	**0.42**	**34**	*e*P		**Pb**	**19 30 36.0**	**-0.3**
DREC	**Desert Rsrch C**	**0.44**	**340**			**Pb**	**19 30 37.2**	**+0.6**
DREC						Pn	19 30 45.3	+6.2
SGL	**Mount Signal**	**0.46**	**304**			**Pb**	**19 30 37.0**	**-0.1**
SGL	**Mount Signal**	**0.46**	**304**	⇓*i*P		**Pb**	**19 30 37.0**	**-0.1**
COA	**Coachella**	**0.49**	**15**			**Pb**	**19 30 37.4**	**-0.1**
COA	**Coachella**	**0.49**	**15**	⇓*i*P		**Pb**	**19 30 37.4**	**-0.1**
SNR	**Schaffner Ranc**	**0.49**	**343**			**Pb**	**19 30 37.9**	**+0.4**
SNR						Pn	19 30 45.6	+5.8
WESC	**Westside Schoo**	**0.54**	**313**			**Pb**	**19 30 38.2**	**0.0**
WESC	**Westside Schoo**	**0.54**	**313**	*e*P		**Pb**	**19 30 38.6**	**+0.3**
COK2	**Cook Ranch 2**	**0.60**	**320**			**Pb**	**19 30 39.4**	**0.0**
YUH	**Yuha Desert**	**0.61**	**295**			**Pb**	**19 30 39.5**	**-0.1**
RUN	**Ruthven**	**0.63**	**23**			**Pg**	**19 30 39.1**	**-0.1**
RUN						**Sg**	**19 30 47.9**	**+0.4**
YMD	**Yuma Desert**	**0.63**	**75**			**Pg**	**19 30 39.0**	**-0.2**
YMD	**Yuma Desert**	**0.63**	**75**	⇓*i*P		**Pg**	**19 30 39.0**	**-0.2**
ESJX	**Sierra Juarez**	**0.69**	**236**			**Pb**	**19 30 41.5**	**+0.5**
ESJX						**Sb**	**19 30 51.4**	**+0.7**
ESJX	**Sierra Juarez**	**0.69**	**236**	IAML			19 30 53.0	
	comp=E,6μm,0.3s							
SWSC	**Sam W. Stewart**	**0.71**	**321**			**Pg**	**19 30 40.6**	**-0.1**
SWSC						**Sb**	**19 30 51.1**	**0.0**
SWSC	**Sam W. Stewart**	**0.71**	**321**	P			19 30 40.6	
	baz=139,SNR=59							
SWSC				S			19 30 50.7	
	baz=139							
RMX	**La Rumorosa**	**0.72**	**287**			**Pg**	**19 30 40.8**	**-0.1**
RMX						**Sb**	**19 30 50.6**	**-0.7**
RMX	**La Rumorosa**	**0.72**	**287**	IAML			19 30 51.3	
	comp=E,4μm,0.7s							
SUP	**Superstition M**	**0.73**	**320**			**Pg**	**19 30 41.2**	**+0.1**
GLA	**Glamis**	**0.76**	**29**			**Pg**	**19 30 41.1**	**-0.5**
GLA						**Sg**	**19 30 51.3**	**-0.3**
GLA	**Glamis**	**0.76**	**29**	Pg		**Pg**	**19 30 40.2**	**-1.4**
GLA	**Glamis**	**0.76**	**29**	IAML			19 30 52.3	
	comp=E,8μm,0.5s							
GLA				IAML			19 31 03.4	
	comp=N,9μm,0.5s							
GLA	**Glamis**	**0.76**	**29**	P			19 30 41.0	
	baz=209,SNR=42							
GLA				S			19 30 51.3	
	baz=209							
IKP	**In-Ko-Pah, Jac**	**0.76**	**290**			**Pb**	**19 30 42.3**	**+0.2**
IKP						**Sb**	**19 30 52.5**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**0.76**	**290**	⇓*i*P		**Pb**	**19 30 42.2**	**+0.2**
IKP	**In-Ko-Pah, Jac**	**0.76**	**290**	P			19 30 42.2	
	baz=108,SNR=159							
IKP				S			19 30 52.7	
	baz=108							
CRR	**Carrizo Plain**	**0.77**	**310**			**Pb**	**19 30 42.0**	**-0.3**
CRR						**Sb**	**19 30 52.3**	**-0.5**
SJX	**San Joaquin**	**0.86**	**223**	⇓*i*P		**Pg**	**19 30 41.6**	**-1.9**
SJX				IAML			19 30 53.1	
	comp=E,8μm,0.2s							
SJX				*e*			19 30 53.1	
ERRC	**Elmore Ranch**	**0.86**	**327**			**Pg**	**19 30 43.3**	**-0.3**
ECBX	**El Chinero**	**0.93**	**169**	*e*P		**Pg**	**19 30 43.4**	**-1.5**
CBKC	**Canebrake**	**0.97**	**302**			**Pg**	**19 30 45.4**	**-0.3**
FRK	**Frink**	**1.06**	**343**			**Pb**	**19 30 45.2**	**-2.0**
SALN	**Salton City**	**1.07**	**326**			**Pb**	**19 30 46.0**	**-1.5**
MONP2	**Monument Peak**	**1.09**	**297**			**Pb**	**19 30 47.1**	**-0.8**
MONP2						**Sn**	**19 31 02.8**	**-0.7**
MONP2	**Monument Peak**	**1.09**	**297**	P			19 30 46.7	
	baz=116,SNR=90							
MONP2				Sb			19 31 02.6	
	baz=116							
TKX	**Tecate**	**1.15**	**279**			**Pg**	**19 30 49.1**	**+0.2**
TKX	**Tecate**	**1.15**	**279**			**Sn**	**19 31 04.8**	**+0.3**
TKX	**Tecate**	**1.15**	**279**	IAML			19 30 51.3	
	comp=E,3μm,0.3s							
SLH	**Sleepy Hollow**	**1.15**	**314**			**Pb**	**19 30 47.3**	**-1.5**
CBX	**Cerro Bola**	**1.18**	**267**			**Pg**	**19 30 49.4**	**-0.3**
CBX						**Sn**	**19 31 06.5**	**+0.9**
CBX	**Cerro Bola**	**1.18**	**267**	IAML			19 31 09.6	
	comp=E,3μm,0.5s							
CBX	**Cerro Bola**	**1.18**	**267**	IAML			19 31 08.6	
	comp=N,5μm,0.5s							
CBX				IAML			19 31 09.7	
	comp=E,5μm,0.4s							
TJIG	**Tijuana**	**1.19**	**272**	*e*P		**Pb**	**19 30 49.1**	**-0.3**
TJIG				*i* S		**Sn**	**19 31 05.9**	**+0.3**
TJIG	**Tijuana**	**1.19**	**272**			**Pb**	**19 30 49.1**	**-0.3**
TJIG						**Sn**	**19 31 05.9**	**+0.3**
BAR	**Barrett**	**1.22**	**284**			**Pn**	**19 30 48.8**	**-1.1**
BAR				IAML			19 31 08.4	
	comp=N,3μm,0.3s							
BAR				IAML			19 31 09.6	
	comp=E,2μm,0.3s							
BAR	**Barrett**	**1.22**	**284**			**Sn**	**19 31 06.9**	**+0.5**
BAR	**Barrett**	**1.22**	**284**	Pg		**Pn**	**19 30 49.5**	**-0.4**
BC3	**Big Chuckawall**	**1.27**	**353**			**Pn**	**19 30 49.1**	**-1.5**
BC3	**Big Chuckawall**	**1.27**	**353**	P			19 30 49.0	
	baz=172,SNR=72							
BC3				S			19 31 05.1	
	baz=172							
CCX	**Cicese**	**1.29**	**247**			**Pg**	**19 30 51.4**	**-0.3**
CCX	**Cicese**	**1.29**	**247**	IAML			19 31 11.2	
	comp=N,3μm,0.5s							
BORC	**Borrego Spring**	**1.30**	**312**			**Pn**	**19 30 49.4**	**-1.6**
SPIG	**San Pedro Mart**	**1.35**	**187**	*e*P		**Pn**	**19 30 51.4**	**-0.6**
	baz=35,slow=16							
SPIG				*e*S		**Sn**	**19 31 09.7**	**-0.3**
SPIG	**San Pedro Mart**	**1.35**	**187**			**Pn**	**19 30 51.4**	**-0.6**
SPIG						**Sg**	**19 31 11.5**	**+1.0**
HAY	**Hayfield**	**1.36**	**345**			**Pn**	**19 30 50.1**	**-1.7**
SPX	**San Pedro Mart**	**1.36**	**187**			**Pn**	**19 30 51.4**	**-0.6**
CTW	**Cottonwood Mou**	**1.38**	**339**			**Pn**	**19 30 50.7**	**-1.4**
SFX	**San Felipe**	**1.40**	**165**			**Pn**	**19 30 51.4**	**-0.9**
SFX				IAML			19 31 13.7	
	comp=N,2μm,0.5s							
SFX				IAML			19 31 15.6	
	comp=E,1μm,0.6s							
MATG	**Mataguay Scout**	**1.41**	**305**			**Pn**	**19 30 51.7**	**-0.9**
EML	**El Monte Cty P**	**1.42**	**291**			**Pn**	**19 30 51.9**	**-0.7**
EML						**Sg**	**19 31 12.8**	**+0.1**
OLP	**Otay Lakes Par**	**1.42**	**279**			**Pn**	**19 30 52.5**	**0.0**
OLP						**Sg**	**19 31 13.1**	**+0.4**
SDRC	**San Diego Road**	**1.46**	**284**			**Pn**	**19 30 52.8**	**-0.2**
SDRC						**Sg**	**19 31 14.3**	**+0.6**
BLYC	**Blythe**	**1.49**	**25**			**Pn**	**19 30 54.8**	**+0.2**
TJX	**Tijuana**	**1.52**	**275**			**Pn**	**19 30 52.8**	**-1.1**
DPP	**Dos Picos Cty**	**1.54**	**294**			**Pn**	**19 30 53.6**	**-0.6**
DPP						**Sb**	**19 31 15.0**	**+0.2**
HWB	**Hans Werner Br**	**1.56**	**294**			**Pn**	**19 30 53.8**	**-0.7**
HWB						**Sg**	**19 31 17.1**	**-0.1**
PMD	**Palm Desert**	**1.56**	**324**			**Pn**	**19 30 52.6**	**-1.9**
FRD	**Ford Ranch, An**	**1.57**	**315**			**Pn**	**19 30 53.5**	**-1.2**
FRD	**Ford Ranch, An**	**1.57**	**315**			**Pn**	**19 30 53.3**	**-1.5**
XPFO	**Pion Flat**	**1.57**	**321**			**Pn**	**19 30 53.0**	**-1.8**
PFO	**Pinyon Flats O**	**1.58**	**321**	Pg		**Pn**	**19 30 53.3**	**-1.6**
	comp=E,22nm,0.3s,baz=137,slow=13,SNR=78							
PFO	**Pinyon Flats O**	**1.58**	**321**			**Pn**	**19 30 53.0**	**-1.9**
PFO	**Pinyon Flats O**	**1.58**	**321**	P			19 30 53.3	
	baz=139,SNR=42							
BZNA	**Buzz No.'s Pla**	**1.61**	**313**			**Pn**	**19 30 54.1**	**-1.2**
BZNA						**Sn**	**19 31 14.9**	**-1.2**
SNDA	**J Saunders Pla**	**1.62**	**316**			**Pn**	**19 30 54.3**	**-1.1**
SNDA						**Sn**	**19 31 16.0**	**-0.4**
109C	**Camp Elliot, M**	**1.63**	**288**			**Pn**	**19 30 55.1**	**-0.3**
109C				IAML			19 31 19.6	
	comp=N,2μm,0.5s							
109C				IAML			19 31 20.8	
	comp=E,2μm,0.3s							
109C	**Camp Elliot, M**	**1.63**	**288**	P			19 30 55.1	
	baz=106,SNR=89							
109C				Sb			19 31 18.3	
	baz=106							
CPE	**Camp Elliot**	**1.63**	**288**			**Pn**	**19 30 55.3**	**-0.1**
CPE						**Pg**	**19 30 57.7**	**-0.5**
CPE						**Sg**	**19 31 19.2**	**-0.1**
PLM	**Palomar**	**1.65**	**306**			**Pn**	**19 30 55.0**	**-0.9**
CRY	**Cary Ranch**	**1.70**	**314**			**Pn**	**19 30 55.4**	**-1.2**
PIX	**Pinacate**	**1.75**	**118**	Pn		**Pn**	**19 30 53.9**	**-3.1**
PIX				IAML			19 31 45.3	
	comp=N,956nm,0.9s							
PIX				IAML			19 31 46.1	
	comp=E,985nm,0.7s							
DGR	**Domenigoni Val**	**1.93**	**311**			**Pn**	**19 30 58.7**	**-0.9**
MURC	**Murrieta**	**2.02**	**307**	P			19 30 59.5	
	baz=126							
MURC				Sb			19 31 30.1	
	baz=126							
214A	**Organ Pipe Nat**	**2.13**	**101**	*e*P		**Pn**	**19 31 00.1**	**-2.3**
214A	**Organ Pipe Nat**	**2.13**	**101**	Pn		**Pn**	**19 31 00.1**	**-2.3**
214A				IAML			19 31 59.0	
	comp=E,1μm,1.0s							
214A	**Organ Pipe Nat**	**2.13**	**101**	P			19 31 00.0	
	baz=283							
PDMCI	**Parker Dam,Lak**	**2.13**	**26**	Sb			19 31 32.2	
	baz=206							
GMRC	**Granite Mounta**	**2.41**	**352**	P			19 31 05.0	
	baz=172							
FON	**Fontana**	**2.49**	**314**			**Pn**	**19 31 09.9**	**-1.7**
BFSC	**Mount Baldy Ra**	**2.72**	**313**			**Pb**	**19 31 15.3**	**-0.3**
RHC	**Rose Hills Cem**	**2.81**	**306**			**Pb**	**19 31 14.2**	**-2.9**
CIS	**Catalina Islan**	**2.83**	**292**	P			19 31 11.1	
	baz=110							
CIS				Sb			19 31 53.6	
	baz=110							
FMP	**Fort Macarthur**	**2.86**	**298**	Sb			19 31 55.1	
	baz=116							
MWC	**Mount Wilson**	**2.97**	**309**			**Pn**	**19 31 14.9**	**+0.9**
PASC	**Pasadena Art C**	**3.02**	**307**	Pn		**Pn**	**19 31 16.1**	**+1.5**
DECC	**Green Verdugo**	**3.17**	**307**	Sb			19 32 04.8	
	baz=125							
OSI	**Osito Audit: C**	**3.64**	**308**			**Pn**	**19 31 22.6**	**-0.6**
OSI				IAML			19 33 25.8	
	comp=E,166nm,1.2s							
OSI	**Osito Audit: C**	**3.64**	**308**	S			19 32 03.0	
	baz=126							
TUC	**Tucson**	**3.79**	**90**	*e*P		**Pn**	**19 31 21.9**	**-3.4**
TUC	**Tucson**	**3.79**	**90**	Pn		**Pn**	**19 31 25.9**	**+0.6**
TUC				IAML			19 32 41.8	
	comp=E,231nm,1.6s							
TUC				IAML			19 32 53.5	
	comp=E,151nm,0.8s							
SHPR	**Sheep Range**	**4.11**	**1**	Pn		**Pn**	**19 31 29.6**	**-0.1**
SHPR				IAML			19 32 56.2	
	comp=E,220nm,1.3s							
SHPR				IAML			19 33 23.9	
	comp=N,151nm,1.1s							
ISA	**Isabella, Lake**	**4.21**	**322**			**Pb**	**19 31 43.6**	**+2.6**
WUAZ	**Wupatki**	**4.49**	**45**			**Pn**	**19 31 36.1**	**+1.1**
WUAZ				IAML			19 33 04.9	
	comp=N,198nm,0.9s							
TPNV	**Topopah Spring**	**4.62**	**350**			**Pb**	**19 31 45.6**	**-2.4**
LCMT	**Little Creek M**	**4.90**	**19**	Pn		**Pn**	**19 31 38.2**	**-2.4**
LCMT				IAML			19 33 24.2	
	comp=E,121nm,1.5s							
LCMT				IAML			19 33 38.5	
	comp=N,71nm,1.3s							
PRN	**Pahroc Range**	**5.01**	**2**			**Pn**	**19 31 42.8**	**+0.8**
HSIG		**5.01**	**131**	Pn		**Pn**	**19 31 43.0**	**+1.0**
HSIG				IAML			19 33 40.4	
	comp=E,89nm,1.1s							
HSIG				IAML			19 33 40.4	
	comp=N,58nm,1.4s							
KNB	**Kanab**	**5.04**	**23**			**Pn**	**19 31 41.6**	**-0.9**
PAGB	**Antelope Grade**	**5.31**	**310**	Pn		**Pn**	**19 31 47.2**	**+1.1**
PAGB				IAML			19 34 14.3	
	comp=N,49nm,1.2s							
W18A	**Petrified Fore**	**5.35**	**58**			**Pn**	**19 31 47.0**	**+0.2**
CCUT	**Cedar City**	**5.38**	**16**	Pn		**Pn**	**19 31 46.6**	**-0.6**
CCUT				IAML			19 33 52.1	
	comp=E,106nm,2.1s							
CCUT				IAML			19 33 57.5	
	comp=N,90nm,1.5s							
SZCU	**Shurtz Canyon**	**5.49**	**18**			**Pn**	**19 31 50.4**	**+1.6**
PKCU	**Pink Cliffs**	**5.60**	**25**			**Pb**	**19 32 03.0**	**-1.8**
TPH	**Tonopah**	**5.89**	**345**	Pg		**Pb**	**19 32 09.6**	**-0.2**
R11A	**Troy Canyon, C**	**5.95**	**358**			**Pn**	**19 31 55.7**	**+0.6**
MTPU	**Mount Pierson**	**6.18**	**23**			**Pn**	**19 32 14.4**	**-0.3**
PSUT	**Pine Spring**	**6.24**	**10**			**Pn**	**19 31 59.1**	**+0.1**
121A	**Cookes Peak, D**	**6.33**	**87**	*i* P		**Pn**	**19 32 00.0**	**-0.2**
121A	**Cookes Peak, D**	**6.33**	**87**	Pn		**Pn**	**19 31 58.9**	**-1.3**
LHV	**Little Huntoon**	**6.42**	**337**			**Pn**	**19 32 01.7**	**+0.5**
NV11	**Mina Array Sit**	**6.47**	**339**			**Pn**	**19 32 03.1**	**+1.0**
NVAR	**Mina Array Bea**	**6.51**	**338**	Pn		**Pn**	**19 32 01.4**	**-1.5**
	comp=N,0.1nm,0.3s,baz=166,slow=15,SNR=1.3							
NVAR				Lg	Lg		19 33 56.7	
	baz=148,slow=17,SNR=0.7							
NVAR				LR	LR		19 34 21.4	
	comp=N,71nm,18.5s,baz=44,slow=36							
MSU	**Marysvale**	**6.61**	**22**			**Pn**	**19 32 03.1**	**-1.0**
TCRU	**Three Creeks R**	**6.62**	**20**	Pn		**Pn**	**19 32 03.0**	**-1.3**
SPR3	**Spring Creek 3**	**6.64**	**6**	Pn		**Pn**	**19 32 05.5**	**+0.9**
CMB	**Columbia Colle**	**7.02**	**325**	Pn		**Pn**	**19 32 11.1**	**+1.5**
KVN	**Kaiserville**	**7.03**	**342**			**Pb**	**19 32 30.9**	**+1.7**
YERR	**Yerington**	**7.33**	**335**	Pn		**Pn**	**19 32 14.1**	**+0.1**
MVCO	**Mesa Verde**	**7.36**	**47**	Pn		**Pn**	**19 32 16.6**	**+2.2**
BNM	**Barren Site**	**7.45**	**74**			**Pn**	**19 32 16.4**	**+0.8**
PNTR	**Pine Nut**	**7.55**	**333**	Pn		**Pn**	**19 32 16.6**	**-0.5**
PV05	**Paradox Valley**	**7.59**	**40**			**Pn**	**19 32 20.4**	**+2.8**
TMUT	**Trail Mountain**	**7.64**	**24**	Pg		**Pb**	**19 32 38.0**	**-1.5**
SRU	**San Rafael Swe**	**7.73**	**29**			**Pn**	**19 32 18.1**	**-1.4**
ANMO	**Albuquerque**	**7.77**	**68**	Pn		**Pn**	**19 32 21.2**	**+1.1**
	comp=N,0.3nm,0.3s,baz=250,slow=8.7,SNR=2.5							
ANMO				Lg	Lg		19 34 29.2	
	baz=204,slow=16,SNR=1.2							
ANMO	**Albuquerque**	**7.77**	**68**	Pn		**Pn**	**19 32 20.9**	**+0.8**
PV13	**Radium Mtn., P**	**7.80**	**41**	Pn		**Pn**	**19 32 20.6**	**+0.1**
PV18	**Skein Mesa, Pa**	**7.82**	**40**	Pg		**Pb**	**19 32 43.7**	**+1.2**
PV10	**Paradox Valley**	**7.84**	**39**	Pn		**Pn**	**19 32 20.0**	**-1.1**
PV03	**Paradox Valley**	**7.86**	**40**	Pn		**Pn**	**19 32 23.4**	**+2.2**
PV16	**Nyswonger Mesa**	**7.86**	**40**			**Pn**	**19 32 25.1**	**+3.8**
PV11	**David Mesa, Pa**	**7.88**	**40**	Pn		**Pn**	**19 32 24.2**	**+2.7**
PV02	**Paradox Valley**	**7.88**	**41**	Pn		**Pn**	**19 32 20.9**	**-0.8**
PV04	**Paradox Valley**	**7.93**	**39**	Pn		**Pn**	**19 32 24.7**	**+2.6**
PV12	**Saucer Basin,**	**7.93**	**40**	Pn		**Pn**	**19 32 21.8**	**-0.4**
PV07	**Paradox Valley**	**8.10**	**40**	Pn		**Pn**	**19 32 23.6**	**-1.0**
ELK	**Elko**	**8.34**	**0**	Lg	Lg		19 34 46.1	
	comp=N,0.2nm,0.3s,baz=234,slow=9.3,SNR=1.8							
MNTX	**Cornudas Mount**	**8.42**	**92**	Pn		**Pn**	**19 32 28.9**	**+0.1**
TX31	**Lajitas Ar. Si**	**10.42**	**104**	Pn		**Pn**	**19 32 57.2**	**+0.8**
TX32	**Lajitas Array**	**10.42**	**104**	Pn		**Pn**	**19 32 57.2**	**+0.8**
TXAR	**Lajitas Array**	**10.42**	**104**	Pn		**Pn**	**19 32 58.0**	**+1.7**
	comp=N,0.4nm,0.3s,baz=286,slow=13,SNR=14							
TXAR				Lg	Lg		19 35 52.9	
	comp=N,0.1nm,0.3s,baz=279,slow=28,SNR=2.0							
TXAR	**Lajitas Array**	**10.42**	**104**			**Pn**	**19 32 57.6**	**+1.2**
PDAR	**Pinedale Array**	**11.30**	**22**	Pn		**Pn**	**19 33 12.4**	**+4.0**
	comp=N,0.0nm,0.3s,baz=200,slow=15,SNR=1.5							
PDAR				Lg	Lg		19 36 23.3	
	comp=N,0.0nm,0.3s,baz=196,slow=8.6,SNR=1.0							
KAN09	**Caldwell North**	**15.26**	**67**	Pn		**Pn**	**19 33 59.2**	**-3.0**
NEW	**Newport**	**15.92**	**355**	Pn		**Pn**	**19 34 14.7**	**+0.3**
	comp=N,0.1nm,0.3s,baz=176,slow=14,SNR=5.1							
EGMT	**Eagleton**	**16.17**	**13**	Pn		**Pn**	**19 34 11.4**	**-2.6**
EGMT				IAmb	IAmb		19 34 12.6	
	comp=Z,3.6nm,0.9s							
B08A	**Colville Reser**	**16.24**	**350**	Pn		**Pn**	**19 34 10.3**	**-4.7**
YKA	**Yellowknife Ar**	**30.12**	**1**	P		**P**	**19 36 38.6**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=191,slow=

0.2nm22nm,0.8s
MMRI Maumere 7.11 257 P **Pn** 19 49 59.5 **+2.8**
FITZ Fitzroy Crossi 11.48 197 P **Pn** 19 50 54.5 **+1.2**
0.6nm,0.3s,baz=26,slow=11,SNR=16
FITZ S Sn 19 52 52.4 -9.1
2.3nm,0.3s,baz=136,slow=23,SNR=11
PLAI Plampang 11.49 261 P **Pn** 19 50 54.1 **+0.6**
WRA Warramunga Arr 13.69 159 P **P** 19 51 22.9 **-0.5**
2.0nm,0.3s,baz=337,slow=13,SNR=30
WRA S **S** 19 53 47.0 **-6.8**
2.4nm,0.3s,baz=328,slow=23,SNR=7.9
ASAR Alice Springs 17.07 165 P **Pn** 19 52 07.3 **+5.0**
0.8nm,0.3s,baz=344,slow=11,SNR=81
ASAR S **S** 19 55 08.9 **+0.4**
0.4nm,0.3s,baz=345,slow=25,SNR=3.2
CMAR Chiang Mai Arr 39.22 311 P P 19 55 30.7 +6.5
0.5nm,0.5s,baz=133,slow=7.7,SNR=1.9
MKAR Makanchi Array 67.90 327 P P 19 58 59.4 +7.4
1.0nm,0.3s,baz=117,slow=7.9,SNR=48
ZALV Zalesovo Beam 71.34 334 P P 19 59 19.9 +7.0
0.7nm,0.4s,baz=131,slow=6.9,SNR=4.7

*GUC **08** 19:50:20.3±0.5,24˚.29S×67˚.51W,h217km±7km,ML4.0*
*IDC **08** 19:50:33.0±10.0,22˚.94S×65˚.82W,h232km±75km,mb3.1/1, mb1 3.1/2,mb1mx2.9/23,mbtmp3.6/2,Error ellipse: s-maj=138.1km s-min=78.0km az=44.0*
ISC 08 19:50:19.8±1.5,**24˚.31S**±0˚.05×**67˚.4W**±0˚.2,**h206**km±17km, **n18**,σ0**69**/33,**9C-3D**,**Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GO02	**Mina Guanaco**	**2.16 246**		*i*P		**Pn**	**19 51 01.1**	**+0.4**
GO02				*i* S		**S**	**19 51 32.8**	**+0.7**
GO02				IAML			19 51 34.0	
	comp=N,976nm,0.1s							
LVC	**Limon Verde**	**2.18 321**	⇓	*i*P		**Pn**	**19 51 01.1**	**0.0**
LVC				*i* S		**S**	**19 51 32.6**	**0.0**
PB15	**IPOC Station P**	**2.18 300**	⇑	*i*P		**Pn**	**19 51 01.5**	**+0.6**
PB15				*i* S		**S**	**19 51 32.6**	**+0.3**
PB06	**IPOC Station P**	**2.54 308**	⇑	*i*P		**Pn**	**19 51 05.3**	**+0.5**
PB06				*i* S		**S**	**19 51 38.7**	**-0.6**
PB06				IAML			19 51 41.7	
	comp=N,428nm,0.3s							
PB14	**IPOC Station P**	**2.74 263**		*e*P		**Pn**	**19 51 07.7**	**+0.6**
PB14				*i* S		**S**	**19 51 43.5**	**0.0**
PB14				IAML			19 51 46.0	
	comp=E,157nm,0.7s							
PB05	**IPOC Station P**	**2.94 299**	⇑	*i*P		**Pn**	**19 51 09.7**	**+0.4**
PB05				*i* S		**S**	**19 51 46.4**	**-0.8**
PB05				IAML			19 51 50.3	
	comp=E,186nm,0.5s							
PB10	**IPOC Station P**	**2.98 285**	⇓	*i*P		**Pn**	**19 51 10.1**	**+0.5**
PB10				*i* S		**S**	**19 51 47.2**	**-0.6**
PB10				IAML			19 51 52.7	
	comp=E,148nm,0.2s							
PB09	**IPOC Station P**	**3.01 326**	⇑	*i*P		**Pn**	**19 51 10.8**	**+0.6**
PB09				*i* S		**S**	**19 51 48.9**	**-0.1**
PB09				IAML			19 51 52.0	
	comp=N,124nm,0.2s							
PB03	**IPOC Station P**	**3.11 316**	⇑	*i*P		**Pn**	**19 51 11.5**	**+0.2**
PB03				*i* S		**S**	**19 51 50.3**	**-0.7**
PB03				IAML			19 51 54.5	
	comp=E,175nm,0.3s							
PB04	**IPOC Station P**	**3.19 307**		*e*P		**Pn**	**19 51 12.6**	**+0.4**
PB04				*i* S		**S**	**19 51 52.1**	**-0.6**
PB04				IAML			19 51 55.6	
	comp=E,256nm,0.1s							
AC01	**Pan de Azucar**	**3.42 237**		*e*P		**Pn**	**19 51 14.4**	**-0.3**
AC01				*i* S		**S**	**19 51 56.5**	**-0.8**
PB07	**IPOC Station P**	**3.43 318**	⇑	*i*P		**Pn**	**19 51 15.3**	**+0.2**
PB07				*i* S		**S**	**19 51 57.2**	**-0.7**
PB07				IAML			19 51 59.2	
	comp=N,228nm,0.5s							
PB01	**IPOC Station P**	**3.77 329**	⇑	*i*P		**Pn**	**19 51 18.6**	**-0.6**
PB01				*i* S		**S**	**19 52 04.0**	**-1.2**
GO03	**Copiap**	**4.14 217**	⇓	*i*P		**Pn**	**19 51 22.7**	**-0.9**
GO03				*i* S		**S**	**19 52 11.7**	**-1.7**
PB08	**IPOC Station P**	**4.45 338**	⇑	*i*P		**Pn**	**19 51 27.8**	**-0.1**
PB08				*i* S		**S**	**19 52 20.1**	**-0.8**
LPAZ	**La Paz**	**8.01 355**		P		**Pn**	**19 52 13.7**	**-0.1**
	comp=N,0.6nm,0.3s,baz=165,slow=11,SNR=11							
LPAZ				S		S	19 53 34.7	-10
	comp=N,0.2nm,0.3s,baz=330,slow=1.4,SNR=1.7							
TORD	**Torodi Ar. Bea 77.03 69**			P		**P**	**20 01 50.4**	**-0.1**
	comp=N,0.5nm,0.6s,baz=224,slow=4.0,SNR=2.5							
MKAR	**Makanchi Array 147.00 40**			PKPbc		**PKiKP**	**20 09 41.5**	**+1.1**
	comp=N,0.7nm,0.6s,baz=315,slow=2.7,SNR=12							

*NEIC **08** 20:04:00.7±2.0,43˚.80N±0˚.05×105˚.25W±0˚.08,h0km±2km, ML3.3/66, Error ellipse: s-maj=10.0km s-min=8.4km az=110.0*
*IDC **08** 20:04:00.9±1.8,43˚.91N×105˚.59W,h0km,mb3.9/4, mb1 3.8/10,mb1mx3.6/43,mbtmp3.6/10,ML3.3/6, Error ellipse: s-maj=54.4km s-min=7.9km az=147.0*
ISC 08 20:04:00.1±0.8,**43˚.80N**±0˚.06×**105˚.28W**±0˚.07,**h0**km,**n79**, σ1**9**15/**78**,**mb3.9**/4,**Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.95 70**		Pg		**Pb**	**20 04 19.1**	**-0.6**
K22A	**Casper**	**1.47 219**		Pn		**Pn**	**20 04 27.1**	**-0.9**
K22A				IAML			20 04 50.5	
	comp=E,301nm,0.3s							
K22A				IAML			20 04 52.6	
	comp=N,408nm,0.5s							
PHWY	**Pilot Hill**	**2.50 183**				**Pn**	**20 04 43.0**	**+0.6**
RWWY	**Rawlins**	**2.55 215**		Pn		**Pn**	**20 04 43.5**	**+0.6**
RWWY				IAML			20 05 23.8	
	comp=N,206nm,0.6s							
RWWY				IAML			20 05 23.9	
	comp=N,184nm,0.7s							
LAO	**LASA Array**	**2.96 347**		Pn		**Pn**	**20 04 49.5**	**+1.1**
RLMT	**Red Lodge**	**3.14 296**				**Pn**	**20 04 52.2**	**+1.1**
RLMT				IAML			20 05 48.7	
	comp=N,79nm,0.8s							
RLMT				IAML			20 05 51.5	
	comp=N,84nm,0.6s							
BW06	**Boulder Array**	**3.29 253**				**Pn**	**20 04 54.2**	**+1.1**
PD31	**Pinedale Array**	**3.29 253**				**Pn**	**20 04 54.0**	**+0.9**
PDAR	**Pinedale Array**	**3.29 253**		Pn		**Pn**	**20 04 54.0**	**+0.9**
	comp=N,3.6nm,0.3s,baz=70,slow=15,SNR=42							
PDAR				Lg		Lg	20 05 38.9	
	comp=N,9.0nm,0.3s,baz=65,slow=37,SNR=4.7							
YNE	**Yellowstone No**	**3.59 291**				**Pn**	**20 04 58.5**	**+1.2**
YNE				IAML			20 05 55.9	
	comp=N,76nm,0.6s							
YNE				IAML			20 05 58.9	
	comp=E,60nm,0.7s							
YMP	**Mirror Lake Pl**	**3.62 287**				**Pn**	**20 04 59.0**	**+1.2**
YMP				IAML			20 05 59.6	
	comp=E,96nm,0.9s							
YMP				IAML			20 06 02.9	
	comp=N,100nm,0.6s							
GCMT	**Greycliff**	**3.70 304**				**Pn**	**20 05 00.2**	**+1.5**
OGNE	**Ogallala**	**3.74 139**		Pn		**Pn**	**20 05 00.5**	**+1.4**
LKWY	**Lake**	**3.76 283**				**Pn**	**20 05 01.7**	**+2.1**
LKWY				IAML			20 05 27.5	
	comp=N,32nm,0.6s							
LKWY				IAML			20 05 27.7	
	comp=N,57nm,0.6s							
H17A	**Grant Village**	**3.86 281**				**Pn**	**20 05 02.7**	**+1.8**
LOHW	**Long Hollow**	**3.86 269**				**Pn**	**20 05 02.9**	**+1.9**
FLWY	**Flagg Ranch**	**3.92 276**		Pn		**Pn**	**20 05 03.1**	**+1.3**
FLWY				IAML			20 06 11.1	
	comp=N,41nm,2.2s							
FLWY				IAML			20 06 16.2	
	comp=N,29nm,1.0s							
YNR	**Norris Junctio**	**3.98 285**				**Pn**	**20 05 03.4**	**+0.8**
ISCO	**Idaho Springs**	**4.01 184**		Pn		**Pn**	**20 05 04.2**	**+1.1**
ISCO				IAML			20 06 15.6	
	comp=N,28nm,0.6s							
YPP	**Pitchstone Pla**	**4.01 279**				**Pn**	**20 05 04.3**	**+1.2**
REDW	**Red Top Meadow**	**4.07 266**				**Pn**	**20 05 05.1**	**+1.2**
REDW				IAML			20 06 21.3	
	comp=N,44nm,0.7s							
REDW				IAML			20 06 31.0	
	comp=N,54nm,0.8s							
YHH	**Holmes Hill**	**4.12 286**				**Pn**	**20 05 07.2**	**+2.6**
YMR	**Madison River**	**4.17 284**				**Pn**	**20 05 06.1**	**+0.8**
YMR				IAML			20 06 27.3	
	comp=N,34nm,0.9s							
YMR				IAML			20 07 43.2	
	comp=E,34nm,0.4s							
E28A	**Huff 4.27 48**					**Pn**	**20 05 08.2**	**+1.9**
O20A	**White River Ci 4.28 212**			Pn		**Pn**	**20 05 07.1**	**+0.4**
O20A				IAML			20 06 25.5	
	comp=N,40nm,0.7s							
O20A				IAML			20 06 31.4	
	comp=E,34nm,0.6s							
YHB	**Horse Butte 4.35 285**					**Pn**	**20 05 07.2**	**-0.6**
YHB				IAML			20 06 23.1	
	comp=N,20nm,0.7s							
YHL	**Hebgen Lake 4.36 286**					**Pn**	**20 05 08.4**	**+0.5**
YHL				IAML			20 06 28.1	
	comp=E,29nm,1.0s							
YHL				IAML			20 06 33.9	
	comp=N,26nm,0.7s							
AHID	**Auburn Hatcher 4.37 258**					**Pn**	**20 05 08.2**	**+0.2**
AHID				IAML			20 06 24.3	
	comp=N,45nm,0.6s							
AHID				IAML			20 06 47.4	
	comp=E,24nm,0.7s							
ECR	**Eagle Creek 4.50 263**					**Pn**	**20 05 09.9**	**+0.2**
QLMT	**Earthquake Lak 4.53 285**					**Pn**	**20 05 08.0**	**-2.2**
RDMU	**Red Mountain 4.54 226**					**Pn**	**20 05 10.6**	**+0.3**
RDMU				IAML			20 06 27.6	
	comp=E,22nm,0.7s							
RDMU				IAML			20 06 36.0	
	comp=N,27nm,0.7s							
SUSD	**Miller 4.60 80**					**Pn**	**20 05 09.6**	**-1.4**
DGMT	**Dagmar 4.73 9**			Pn		**Pn**	**20 05 14.4**	**+1.7**
SMCO	**Snowmass 4.79 196**					**Pn**	**20 05 15.6**	**+1.6**
SMCO				IAML			20 07 45.8	
	comp=N,36nm,0.6s							
SMCO				IAML			20 07 56.0	
	comp=N,29nm,1.9s							
BOZ	**Bozeman (W) 4.87 294**					**Pn**	**20 05 15.8**	**+1.1**
BOZ				IAML			20 06 38.4	
	comp=N,22nm,0.7s							
BOZ				IAML			20 06 51.3	
	comp=N,14nm,0.9s							
K31A	**O'Neill 4.92 102**					**Pn**	**20 05 15.3**	**+0.1**
HWUT	**Hardware Ranch 5.12 247**					**Pn**	**20 05 19.1**	**+0.8**
HWUT				IAML			20 06 52.7	
	comp=N,18nm,0.6s							
HWUT				IAML			20 07 00.1	
	comp=N,25nm,0.7s							
EGMT	**Eagleton 5.25 325**			Pn		**Pn**	**20 05 20.1**	**+0.2**
TCUT	**Toone Canyon 5.27 241**					**Pn**	**20 05 19.8**	**-0.5**
MCMT	**McKenzie Canyo 5.53 283**					**Pn**	**20 05 23.8**	**-0.1**
MDND	**Maddock 5.67 42**					**Pn**	**20 05 26.5**	**+0.9**
BGNE	**Belgrade 5.78 112**					**Pn**	**20 05 28.4**	**+1.2**
HVU	**Hansel Valley 5.87 252**					**Pn**	**20 05 30.4**	**+1.8**
PV22	**Blue Mesa, Par 5.89 208**			Pn		**Pn**	**20 05 29.9**	**+1.1**
PV07	**Paradox Valley 5.93 206**			Pn		**Pn**	**20 05 31.0**	**+1.6**
P17A	**Butcher Ranch, 5.95 225**					**Pn**	**20 05 29.4**	**-0.3**
SDCO	**Great Sand Dun 6.05 182**					**Pn**	**20 05 30.2**	**-1.0**
MPU	**Maple Canyon 6.06 234**					**Pn**	**20 05 30.8**	**-0.5**
SRU	**San Rafael Swe 6.12 222**					**Pn**	**20 05 31.9**	**-0.2**
PV11	**David Mesa, Pa 6.13 207**					**Pn**	**20 05 31.9**	**-0.3**
PV16	**Nyswonger Mesa 6.13 208**					**Pn**	**20 05 32.5**	**+0.2**
PV03	**Paradox Valley 6.16 207**					**Pn**	**20 05 33.8**	**+1.2**
PV02	**Paradox Valley 6.17 206**					**Pn**	**20 05 33.3**	**+0.6**
PV18	**Skein Mesa, Pa 6.19 207**					**Pn**	**20 05 34.3**	**+1.3**
ECSD	**EROS Data Cent 6.28 88**			Pn		**Pn**	**20 05 34.8**	**+0.8**
TMUT	**Trail Mountain 6.33 227**					**Pn**	**20 05 35.6**	**+0.7**
Q16A	**Castle Valley 6.59 224**					**Pn**	**20 05 35.9**	**-2.5**
T25A	**Trinidad 6.69 174**					**Pn**	**20 05 39.9**	**0.0**
F33A	**5 Mile Ranch, 6.71 69**					**Pn**	**20 05 38.3**	**-1.6**
MSU	**Marysvale 7.41 227**			Pn		**Pn**	**20 05 49.3**	**-0.5**
WALA	**Waterton Lakes 7.94 314**			Pn		**Pn**	**20 05 56.7**	**-0.2**
ELK	**Elko 7.99 251**			Pn		**Pn**	**20 05 58.7**	**+1.0**
	comp=N,0.5nm,0.3s,baz=68,slow=11,SNR=3.6							
CCUT	**Cedar City 8.75 227**			Pn		**Pn**	**20 06 09.2**	**+1.0**
ULM	**Lac du Bonnet 9.10 42**			Pn		**Pn**	**20 06 13.1**	**+0.5**
	comp=N,1.3nm,0.3s,baz=230,slow=12,SNR=16							
ULM				Pg			20 06 44.2	
	comp=N,1.5nm,0.3s,baz=227,slow=14,SNR=7.8							
ULM				Lg		Lg	20 08 42.2	
	comp=N,0.5nm,0.3s,baz=119,slow=20,SNR=2.0							
ULM	**Lac du Bonnet 9.10 42**			Pn		**Pn**	**20 06 12.0**	**-0.6**
B35A	**Bob, Littlefor 9.23 56**			Pn		**Pn**	**20 06 13.8**	**-0.7**
FFC	**Flin Flon 11.14 10**			Pn		**Pn**	**20 06 39.6**	**-0.9**
NVAR	**Mina Array Bea 11.19 246**			Pn		**Pn**	**20 06 43.6**	**+2.1**
	comp=N,0.2nm,0.3s,baz=50,slow=13,SNR=3.7							
NVAR	**Mina Array Bea 11.19 246**					**Pn**	**20 06 42.2**	**+0.7**
MNTX	**Cornudas Mount 12.09 180**			Pn		**Pn**	**20 06 54.7**	**+1.1**
YBH	**Yreka Blue Hor 12.97 267**			Pn		**Pn**	**20 07 07.9**	**+2.1**
	comp=N,0.1nm,0.3s,baz=90,slow=13,SNR=1.7							
TXAR	**Lajitas Array 14.50 174**			Lg		Lg	20 11 40.0	
	comp=N,0.0nm,0.3s,baz=356,slow=26,SNR=2.2							
YKA	**Yellowknife Ar 19.50 347**			P		**P**	**20 08 28.1**	**-0.4**
	comp=N,0.1nm,0.3s,baz=160,slow=13,SNR=5.6							
ARCES	**ARCESS Array B 61.36 18**			P		**P**	**20 14 16.6**	**-0.6**
	comp=N,4.9nm,1.0s,baz=325,slow=4.6,SNR=4.5							
ZALV	**Zalesovo Beam 82.24 354**			P		**P**	**20 16 22.6**	**-0.3**
	comp=N,0.7nm,0.6s,baz=8.4,slow=4.4,SNR=3.9							
ZALV	**Zalesovo Beam 82.24 354**			P		**P**	**20 16 22.4**	**-0.5**
SONM	**Songino Array 84.57 339**			P		**P**	**20 16 35.1**	**-0.1**
	comp=N,0.2nm,0.5s,baz=19,slow=4.9,SNR=2.0							
MKAR	**Makanchi Array 89.54 355**			P		**P**	**20 16 58.9**	**-0.3**
	comp=N,0.4nm,0.6s,baz=11,slow=4.5,SNR=6.4							
MKAR	**Makanchi Array 89.54 355**			P		**P**	**20 16 59.2**	**0.0**

*NEIC **08** 20:28:05.9±1.6,5˚.59S±0˚.04×146˚.48E±0˚.09,h40km±6km, mb4.6/64, Error ellipse: s-maj=13.0km s-min=6.0km az=85.0*
*DJA **08** 20:28:09.7±0.5,6˚S±4˚×14˚7E±˚,h72km±10km,M4.6/8, mB5.0/3,mb4.8/8,MLv4.5/2,Mw(mB)4.4/3*
*IDC **08** 20:28:10.0±2.6,5˚.61S×146˚.39E,h72km±23km,mb4.1/24, mb1 4.2/28,mb1mx4.1/43,mbtmp4.4/28,MS3.4/12, Ms1 3.4/12,ms1mx3.2/32,Error ellipse: s-maj=19.1km s-min=11.2km az=77.0*
ISC 08 20:28:05.4±0.4,**5˚.60S**±0˚.05×**146˚.57E**±0˚.07,**h35**km,**n134**, σ1**9**24/133,**mb4.6**/56,**MS3.4**/10,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MANU	**Manus Island**	**3.62 13**				**Pn**	**20 29 01.0**	**+1.9**
PMG	**Port Moresby**	**3.83 171**		P		**Pn**	**20 29 05.2**	**+3.4**
	35nm,0.3s,baz=34,slow=5.6,SNR=77							
PMG				S		**Sn**	**20 29 48.4**	**+2.8**
	23nm,0.3s,baz=334,slow=15,SNR=4.8							
PMG				LR		LR	20 30 51.5	
	comp=Z,657nm,20.8s,baz=346,slow=42							
PMG	**Port Moresby**	**3.83 171**		Pn		**Pn**	**20 29 03.5**	**+1.7**
RABL	**Rabaul**	**5.75 76**		Pn		**Pn**	**20 29 27.2**	**-1.1**
JAY	**Jayapura**	**6.61 297**		P		**Pn**	**20 29 42.8**	**+2.7**
	0.5nm,0.3s,baz=356,slow=7.1,SNR=2.5							
JAY				S		**Sn**	**20 30 58.0**	**+3.7**
	baz=67,slow=22,SNR=1.2							
JAY				LR		LR	20 33 01.3	
	comp=Z,192nm,19.1s,baz=187,slow=45							
COEN	**Coen 8.95 202**			Pn		**Pn**	**20 30 15.2**	**+2.9**
CTA	**Charters Tower 14.40 181**			P		**P**	**20 31 31.5**	**-1.9**
	1.4nm,0.3s,baz=4.3,slow=14,SNR=13							
CTAO	**Charters Tower 14.40 181**			Pn		**Pn**	**20 31 28.7**	**+1.8**
SIJI	**Sorong 15.98 287**			P		**P**	**20 31 52.0**	**+1.1**
	2.4nm,0.3s,baz=78,slow=13,SNR=9.8							
MTN	**Manton Dam 16.84 244**					**Pn**	**20 31 57.7**	**-0.9**
MTN				IAmb		IAmb	20 32 01.2	
	comp=Z,51nm,1.4s							
WB0	**Warramunga Arr 18.40 219**			P		**P**	**20 32 17.1**	**-0.6**
WR0	**Warramunga Arr 18.45 218**			P		**P**	**20 32 17.9**	**-0.4**
WRAB	**Tennant Creek 18.55 219**			P		**P**	**20 32 17.7**	**-1.6**
WRAB				IAmb		IAmb	20 32 18.8	
	comp=Z,37nm,1.2s							
WB2	**Warramunga Arr 18.56 219**			P		**P**	**20 32 18.5**	**-0.9**
WRA	**Warramunga Arr 18.57 219**			P		**P**	**20 32 18.5**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=41,slow=12,SNR=38							
WRA				PcP		**PcP**	**20 36 48.7**	**+0.5**
	baz=18,slow=1.7,SNR=6.5							
WRA	**Warramunga Arr 18.57 219**			P		**P**	**20 32 18.4**	**-1.0**
EIDS	**Eidsvold 20.13 168**			P		**P**	**20 32 37.2**	**+0.7**
SANI	**Sanana 20.84 279**			P		Pn	20 32 47.3	+0.4
	comp=Z,25nm,0.7s							
AS31	**Alice Springs 21.71 213**			P		**P**	**20 32 53.6**	**-0.1**
ASAR	**Alice Springs 21.71 213**			P		**P**	**20 32 53.6**	**0.0**
	comp=Z,6.3nm,0.7s,baz=48,slow=7.9,SNR=54							
ASAR				PcP		**PcP**	**20 36 54.2**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=65,slow=1.8,SNR=4.9							
ASAR				LR		LR	20 41 51.9	
	comp=Z,168nm,20.1s,baz=30,slow=38							
ASAR	**Alice Springs 21.71 213**			P		**P**	**20 32 53.0**	**-0.7**
SOEI	**Soe 22.48 258**			P		**P**	**20 33 01.3**	**-0.8**
SOEI	**Soe 22.48 258**			P		**P**	**20 33 01.6**	**-0.5**
	comp=Z,37nm,0.7s							
BATI	**Baumata 23.14 257**			P		**P**	**20 33 09.2**	**+0.3**
	comp=Z,48nm,0.7s,baz=160,slow=0.5,SNR=11							
FITZ	**Fitzroy Crossi 23.92 237**			P		**P**	**20 33 15.0**	**-1.3**
	comp=Z,15nm,0.6s,baz=59,slow=9.1,SNR=38							
FITZ				LR		LR	20 43 35.2	
	comp=Z,95nm,20.8s,baz=54,slow=39							
FITZ	**Fitzroy Crossi 23.92 237**			P		**P**	**20 33 14.2**	**-2.0**
LUWI	**Luwuk 24.18 280**			P		**P**	**20 33 17.8**	**-1.0**
LUWI	**Luwuk 24.18 280**			P		**P**	**20 33 18.9**	**+0.1**
	comp=Z,1μmcomp=Z,116nm,0.9s							
MMRI	**Maumere 24.33 261**			P		**P**	**20 33 19.7**	**-0.5**
MMRI	**Maumere 24.33 261**			P		**P**	**20 33 19.7**	**-0.5**
ARMA	**Armidale 25.14 170**			P		**P**	**20 33 27.7**	**+0.2**
ARMA						IAmb	IAmb	20 33 47.3
	comp=Z,20nm,1.2s							
STKA	**Stephens Creek 26.55 190**			P		**P**	**20 33 41.4**	**+1.3**
	comp=Z,1.4nm,0.4s,baz=358,slow=11,SNR=7.2							
STKA						LR	LR	20 45 56.0
	comp=Z,139nm,18.3s,baz=24,slow=40							
STKA	**Stephens Creek 26.55 190**			P		**P**	**20 33 39.3**	**-0.8**
TOLI2	**Tolitoli 26.60 284**			P		**P**	**20 33 39.2**	**-1.6**
KAPI	**Kappang 26.71 270**			P		**P**	**20 33 41.5**	**-0.2**
	comp=Z,6.3nm,0.3s,baz=89,slow=4.4,SNR=5.4							
KAPI						LR	LR	20 45 41.9
	comp=Z,29nm,21.4s,baz=70,slow=40							
BBOO	**Buckleboo 28.79 199**			P		**P**	**20 33 59.5**	**-0.6**
BBOO						IAmb	IAmb	20 34 00.8
	comp=Z,17nm,1.4s							
PSA00	**Pilbara Seismi 30.36 236**			P		**P**	**20 34 12.4**	**-1.8**
PSA00	**Pilbara Seismi 30.36 236**			P		**P**	**20 34 12.6**	**-1.6**
PSA00						IAmb	IAmb	20 34 23.5
	comp=Z,18nm,1.2s							
FORT	**Forrest 30.50 213**			P		**P**	**20 34 14.5**	**-0.8**
FORT						IAmb	IAmb	20 34 34.7
	comp=Z,20nm,1.1s							
JAGI	**Jajag, Banyuwa 32.29 263**			P		**P**	**20 34 27.3**	**-4.0**
JAGI						IAmb	IAmb	20 34 29.4
	comp=Z,19nm,1.4s							
JMZ	**Minamidaito 2 34.61 335**			P		**P**	**20 34 50.4**	**-0.9**
UGM	**Wanagama 35.86 264**			P		**P**	**20 35 01.8**	**-0.5**
MORW	**Morawa 37.12 227**			P		**P**	**20 35 12.2**	**-0.7**
NWAO	**Narrogin (SRO) 38.54 221**			P		**P**	**20 35 23.8**	**-1.0**
NWAO						IAmb	IAmb	20 35 29.2
	comp=Z,14nm,1.1s							
OUZ	**Omahuta 38.59 143**			P		**P**	**20 35 24.6**	**-0.6**
OUZ						IAmb	IAmb	20 35 30.0
	comp=Z,8.8nm,0.9s							
XMIS	**Christmas Isla 40.78 260**			P		**P**	**20 35 43.3**	**-0.4**
JWT	**Wachi 42.00 346**			P		**P**	**20 35 54.5**	**+1.2**
JWT						IAmb	IAmb	20 35 56.3
	comp=Z,17nm,1.0s							
MJAR	**Matsushiro Arr 42.65 350**			LR		LR	20 52 08.9	
	comp=Z,23nm,19.6s,baz=320,slow=34							
THZ	**Tophouse 42.97 151**			P		**P**	**20 36 01.7**	**+0.4**
THZ						IAmb	IAmb	20 36 16.0
	comp=Z,21nm,1.2s							
TUWZ	**Tuamarina 43.23 150**			P		**P**	**20 36 04.2**	**+0.9**
BSWZ	**Blackbirch Sta 43.41 150**			P		**P**	**20 36 06.3**	**+1.5**
LTZ	**Lake Taylor 43.46 152**			P		**P**	**20 36 05.6**	**+0.4**
LTZ						IAmb	IAmb	20 36 31.8
	comp=Z,9.9nm,1.0s							
RPZ	**Rata Peaks 43.65 154**			P		**P**	**20 36 08.6**	**+2.0**
	comp=Z,25nm,0.6s,baz=326,slow=2.9,SNR=18							
RPZ	**Rata Peaks 43.65 154**			P		**P**	**20 36 07.0**	**+0.3**
LBZ	**Lake Benmore 43.83 155**			P		**P**	**20 36 08.3**	**+0.2**
MLZ	**Mavora Lakes 43.83 158**			P		**P**	**20 36 08.4**	**+0.2**
KSRS	**Korea Array 46.23 339**			P		**P**	**20 36 28.1**	**+0.9**
	comp=Z,3.0nm,0.7s,baz=152,slow=8.3,SNR=9.3							
KSRS						LR	LR	20 52 50.1
	comp=Z,44nm,20.0s,baz=250,slow=32							
KSAR	**Wonju Array Be 46.23 339**			P		**P**	**20 36 28.0**	**+0.8**
JTM	**Tenmabayashi 46.44 354**			P		**P**	**20 36 30.1**	**+1.3**
INCN	**Inchon 46.72 338**			P		**P**	**20 36 32.1**	**+1.0**
RPSI	**Rantau Prapat 48.30 279**			P		**P**	**20 36 40.4**	**-3.4**
RPSI						IAmb	IAmb	20 37 02.2
	comp=Z,5.2nm,0.9s							
USA0B	**Ussuriysk Arra 51.29 347**			P		**P**	**20

RND	**Reindeer**	**83.93**	**24**	P	**P**	**20 40 32.2**	**+0.5**
RND				IAmb	IAmb	20 40 32.9	
	comp=Z,6.0nm,0.8s						
QSPA	**South Pole Qui**	**84.36**	**180**	P	**P**	**20 40 33.4**	**-0.5**
WRH	**Wood River Hil**	**84.69**	**23**	P	**P**	**20 40 35.9**	**+0.5**
WRH				IAmb	IAmb	20 40 36.9	
	comp=Z,7.9nm,1.1s						
NRIK	**Noril'sk**	**84.77**	**342**	P	**P**	**20 40 35.8**	**+0.2**
	comp=Z,5.8nm,0.8s,baz=126,slow=5.2,SNR=8.0						
NRIK	**Noril'sk**	**84.77**	**342**	P	**P**	**20 40 35.1**	**-0.5**
NRIK				IAmb	IAmb	20 40 37.1	
	comp=Z,5.5nm,0.8s						
CCB	**Clear Creek Bu**	**84.87**	**23**	P	**P**	**20 40 36.3**	**0.0**
CCB				IAmb	IAmb	20 40 37.6	
	comp=Z,6.1nm,1.0s						
COLD	**Coldfoot**	**85.11**	**20**	P	**P**	**20 40 39.6**	**+2.2**
COLD				IAmb	IAmb	20 40 40.2	
	comp=Z,2.3nm,0.7s						
IL31		**85.28**	**23**	P	**P**	**20 40 38.0**	**-0.2**
ILAR	**Eielson Array**	**85.28**	**23**	P	**P**	**20 40 38.2**	**-0.2**
	comp=Z,5.8nm,0.7s,baz=251,slow=5.0,SNR=68						
ILAR	**Eielson Array**	**85.28**	**23**	P	**P**	**20 40 37.5**	**-0.9**
DOT	**Dot Lake**	**86.00**	**25**	P	**P**	**20 40 42.8**	**+0.8**
DOT				IAmb	IAmb	20 40 44.4	
	comp=Z,3.6nm,0.9s						
BVAR	**Borovoye Array**	**86.20**	**324**	P	**P**	**20 40 41.4**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=125,slow=13,SNR=15						
BCAR	**Beaver Creek A**	**86.77**	**26**	P	**P**	**20 40 47.3**	**+1.5**
K27K	**Chicken**	**86.96**	**25**	P	**P**	**20 40 48.7**	**+2.1**
K27K				IAmb	IAmb	20 40 50.6	
	comp=Z,5.9nm,1.1s						
EGAK	**Eagle**	**87.58**	**24**	P	**P**	**20 40 51.2**	**+1.6**
EGAK				IAmb	IAmb	20 40 57.5	
	comp=Z,6.3nm,1.1s						
DAWY	**Dawson**	**88.09**	**25**	P	**P**	**20 40 54.0**	**+1.9**
DAWY				IAmb	IAmb	20 40 55.2	
	comp=Z,3.9nm,0.8s						
INK	**Inuvik**	**91.44**	**21**	P	**P**	**20 41 08.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=236,slow=8.3,SNR=3.4						
INK	**Inuvik**	**91.44**	**21**	P	**P**	**20 41 07.8**	**+0.2**
INK				IAmb	IAmb	20 41 10.1	
	comp=Z,4.0nm,1.2s						
NVAR	**Mina Array Bea**	**97.46**	**52**	P	Pdif	20 41 38.0	+1.7
	comp=Z,0.2nm,0.3s,baz=267,slow=4.5,SNR=2.2						
YKA	**Yellowknife Ar**	**99.02**	**28**	P	**Pdif**	**20 41 42.4**	**0.0**
	comp=Z,0.2nm,0.6s,baz=270,slow=4.8,SNR=5.8						
CPUP	**Villa Florida**	**140.70**	**145**	PKP	**PKPdf**	**20 47 30.7**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=335,slow=3.2,SNR=3.1						
TORD	**Torodi Ar. Bea**	**144.58**	**285**	PKP	**PKPab**	**20 47 37.4**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=72,slow=3.4,SNR=18						
KIC	**Kosan Boka**	**151.46**	**273**	*e*PKIKP	**PKiKP**	**20 47 57.6**	**+0.3**
	comp=Z,5.4nm,0.6s						
DBIC	**Dimbokro**	**151.57**	**274**	PKPbc	**PKPbc**	**20 47 57.0**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=68,slow=1.7,SNR=7.8						
DBIC	**Dimbokro**	**151.57**	**274**		**PKPbc**	**20 47 57.1**	**0.0**
TIC	**Toumodi**	**151.74**	**274**	*e*PKIKP	**PKPbc**	**20 47 57.8**	**+0.3**
LIC	**Lamto**	**151.75**	**273**	*e*PKIKP	**PKiKP**	**20 47 58.1**	**+0.2**
	comp=Z,18nm,0.7s						
BDFB	**Brasilia**	**154.42**	**146**	PKPbc	**PKPbc**	**20 48 03.9**	**+0.5**
	comp=Z,1.9nm,0.4s,baz=183,slow=2.4,SNR=4.2						

*IDC **08** 20:30:32.5±0.7, 12.°08N×143.°42E, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.0/54, mbtmp4.2/16, Error ellipse: s-maj=26.9km s-min=17.3km az=80.0*
*NEIC **08** 20:30:34.7±1.1, 12.°1N±0.°2×143.°2E±0.°2, h13km±7km, mb4.2/5, Error ellipse: s-maj=29.1km s-min=17.6km az=128.0*

ISC 08 20:30:36.3±0.7, 12.°0N±0.°1×143.°4E±0.°2, h25km, n34, σ0s84/27, mb4.3/16, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.16**	**43**		**Pn**	**20 31 11.2**	**+0.4**
H11S3	**WAKE ISLAND Hy**	**23.41**	**71**	T	T	21 00 02.6	
	baz=253,slow=80,SNR=18						
H11S1	**WAKE ISLAND Hy**	**23.42**	**71**	T	T	21 00 06.5	
	baz=253,slow=80,SNR=12						
H11S2	**WAKE ISLAND Hy**	**23.42**	**71**	T	T	21 00 02.3	
	baz=253,slow=80,SNR=16						
H11N1	**WAKE ISLAND Hy**	**23.89**	**68**	T	T	21 00 38.8	
	baz=255,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**23.90**	**68**	T	T	21 00 34.9	
	baz=255,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**23.90**	**68**	T	T	21 00 37.7	
	baz=255,slow=75,SNR=16						
MJAR	**Matsushiro Arr**	**24.86**	**350**	P	**P**	**20 35 55.4**	**-1.6**
	1.3nm,0.6s,baz=162,slow=8.0,SNR=2.6						
MJAR	**Matsushiro Arr**	**24.86**	**350**	IAmb	IAmb	20 36 21.6	
	comp=Z,1.6nm,0.8s						
WRA	**Warramunga Arr**	**32.97**	**196**	P	**P**	**20 37 08.7**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=24,slow=9.8,SNR=4.6						
AS31	**Alice Springs**	**36.64**	**195**	P	**P**	**20 37 41.5**	**+0.4**
ASAR	**Alice Springs**	**36.64**	**195**	P	**P**	**20 37 41.7**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=20,slow=12,SNR=6.8						
DZM	**Mont Dzumac**	**40.75**	**146**	P	**P**	**20 38 15.4**	**-0.2**
	comp=Z,4.0nm,0.6s,baz=286,slow=15,SNR=2.5						
SONM	**Songino Array**	**47.19**	**326**	P	**P**	**20 39 08.3**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=153,slow=7.8,SNR=2.3						
MKAR	**Makanchi Array**	**61.61**	**317**	P	**P**	**20 40 52.9**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=110,slow=7.7,SNR=2.5						
ZALV	**Zalesovo Beam**	**62.05**	**325**	P	**P**	**20 40 54.7**	**0.0**
	comp=Z,0.9nm,0.4s,baz=103,slow=7.2,SNR=2.9						
KURBB	**Kurchatov Arra**	**64.88**	**320**	P	**P**	**20 41 13.7**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=105,slow=6.3,SNR=16						
COLD	**Coldfoot**	**69.97**	**22**	P	**P**	**20 41 46.0**	**+0.7**
BVAR	**Borovoye Array**	**70.25**	**322**	P	**P**	**20 41 47.3**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=156,slow=8.1,SNR=14						
ILAR	**Eielson Array**	**70.62**	**25**	P	**P**	**20 41 47.5**	**-1.9**
	comp=Z,2.2nm,0.6s,baz=249,slow=6.0,SNR=11						
ILAR	**Eielson Array**	**70.62**	**25**	P	**P**	**20 41 48.0**	**-1.4**
BMAR	**Burnt Mountain**	**72.12**	**23**	P	**P**	**20 41 59.3**	**+0.8**
INK	**Inuvik**	**76.38**	**22**	P	**P**	**20 42 22.9**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=235,slow=8.7,SNR=8.4						
INK	**Inuvik**	**76.38**	**22**	P	**P**	**20 42 23.3**	**+0.1**
INK				IAmb	IAmb	20 42 23.5	
	comp=Z,3.0nm,0.8s						
ABKAR	**Akbulak array**	**76.72**	**318**	P	**P**	**20 42 25.2**	**-0.2**
YKA	**Yellowknife Ar**	**84.94**	**27**	P	**P**	**20 43 08.4**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=288,slow=4.9,SNR=7.9						
RES	**Resolute Bay**	**86.42**	**13**	P	**P**	**20 43 16.6**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=330,slow=3.8,SNR=8.4						
RES	**Resolute Bay**	**86.42**	**13**	P	**P**	**20 43 16.4**	**+0.1**
RES				IAmb	IAmb	20 43 17.2	
	comp=Z,1.9nm,0.8s						
ARCES	**ARCESS Array B**	**88.12**	**342**	P	**P**	**20 43 24.4**	**-0.2**
	comp=Z,5.0nm,1.0s,baz=65,slow=5.8,SNR=8.1						
ARCES	**ARCESS Array B**	**88.12**	**342**	P	**P**	**20 43 24.3**	**-0.3**
NVAR	**Mina Array Bea**	**89.06**	**51**	P	**P**	**20 43 31.0**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=270,slow=5.3,SNR=11						
NVAR	**Mina Array Bea**	**89.06**	**51**	P	**P**	**20 43 30.7**	**+0.7**
FINES	**FINESS Array B**	**91.96**	**335**	P	**P**	**20 43 41.3**	**-1.3**
	comp=Z,3.7nm,1.1s,baz=78,slow=7.3,SNR=3.6						
LPAZ	**La Paz**	**149.20**	**102**	PKPbc	**PKiKP**	**20 50 25.4**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=203,slow=5.5,SNR=8.6						

*ISK **08** 20:35:31.1, 35.°27N×27.°43E, h6km, ML2.6/9*
*ATH **08** 20:35:32.9, 35.°31N×27.°41E, h10km±31km, ML2.4/2, Error ellipse: s-maj=31.6km s-min=2.3km az=0.0*
*THE **08** 20:35:32.5, 35.°37N×27.°43E, h0km±2km, ML2.5/3, Error ellipse: s-maj=3.9km s-min=1.9km az=152.0*

ISC 08 20:35:31.6±1.8, 35.°27N±0.°07×27.°45E±0.°05, h1km±13km, n20, σ0s41/29, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.37**	**319**	P	**Pg**	**20 35 38.2**	**-0.4**
KARP				S	**Sg**	**20 35 43.8**	**+0.5**
KARP				AML	AML	20 35 45.0	
	comp=N,2069μm,0.2s						
KARP				AML	AML	20 35 46.5	
	comp=E,2082μm,0.3s						
KARP	**Karpathos**	**0.37**	**319**	P	**Pg**	**20 35 38.2**	**-0.4**
KARP				S	**Sg**	**20 35 43.9**	**+0.5**
	comp=E,1μm,0.3s						
KARP	**Karpathos**	**0.37**	**319**	PG	**Pg**	**20 35 38.4**	**-0.2**
KARP				SG	**Sg**	**20 35 44.0**	**+0.6**
ZKR	**Zakros**	**1.02**	**262**	P	**Pg**	**20 35 50.8**	**-0.4**
ZKR				AML	AML	20 36 17.9	
	comp=N,328μm,0.7s						
ZKR				AML	AML	20 36 19.6	
	comp=E,624μm,0.5s						
ZKR	**Zakros**	**1.02**	**262**	P	**Pg**	**20 35 51.4**	**+0.2**
ZKR				S	**Sn**	**20 36 08.7**	**+0.6**
	comp=E,235nm,0.6s						
ARG	**Arkhangelos**	**1.09**	**30**	P	**Pg**	**20 35 52.8**	**+0.3**
ARG				S	**Sb**	**20 36 07.7**	**-0.3**
ARG	**Arkhangelos**	**1.09**	**30**	P	**Pg**	**20 35 52.7**	**+0.2**
ARG				S	**Sb**	**20 36 07.4**	**-0.6**
	comp=E,402nm,0.5s						
ARG	**Arkhangelos**	**1.09**	**30**	PN	**Pg**	**20 35 52.6**	**+0.1**
ARG				SN	**Sb**	**20 36 08.3**	**+0.3**
STIA	**Sitia Lasithi**	**1.12**	**267**	P	**Pg**	**20 35 52.6**	**-0.4**
NPS	**Neapolis**	**1.51**	**270**	P	**Pb**	**20 36 00.9**	**+0.2**
NPS	**Neapolis**	**1.51**	**270**	P	**Pn**	**20 35 59.9**	**+0.2**
KOSK	**Kos Island**	**1.53**	**346**	PN	**Pn**	**20 35 59.5**	**-0.5**
KOSK				SN	**Sg**	**20 36 20.4**	**-0.3**
TURN	**Turunc**	**1.63**	**23**	PN	**Pn**	**20 36 01.2**	**-0.2**
TURN				SN	**Sb**	**20 36 23.3**	**-0.3**
BODT	**Bodrum**	**1.79**	**356**	PN	**Pn**	**20 36 03.3**	**-0.4**
DALY	**Dalyan (Mula)**	**1.82**	**32**	PN	**Pn**	**20 36 04.3**	**+0.2**
FETY	**Fethiye**	**1.90**	**44**	PN	**Pn**	**20 36 05.2**	**+0.1**
YER	**Yerkesik**	**1.98**	**20**	PN	**Pn**	**20 36 06.2**	**-0.1**
AKAS	**Kas**	**2.00**	**61**	PN	**Pn**	**20 36 05.8**	**-0.8**
IDI	**Anoyia**	**2.10**	**271**	P	**Pb**	**20 36 10.1**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**2.69**	**7**	PN	**Pn**	**20 36 16.5**	**+0.3**

*IDC **08** 20:37:38.8±6.8, 31.°71S×179.°92E, h342km±73km, mb3.1/3, mb1 3.4/5, mb1mx3.1/35, mbtmp4.1/5, Error ellipse: s-maj=84.6km s-min=41.9km az=11.0*
*WEL **08** 20:37:46.7±0.6, 32.°2S±7.°×18.°0W±1.°8, h328km±10km, M4.3/43, mB4.9/24, ML5.1/6, MLv5.0/43, Mw(mB)4.2/24, Error ellipse: s-maj=0.0km s-min=0.0km az=110.0*
*NOU **08** 20:38:08.7, 33.°96S×178.°40E, h333km, mb4.4, South of Kermadec Islands*

ISC 08 20:37:42.2±0.9, 32.°04S±0.°08×179.°9E±0.°1, h363km, n64, σ2s04/74, mb3.4/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.36**	**35**	P	**Pn**	**20 38 48.4**	**+2.5**
GLKZ				S	**S**	**20 39 37.2**	**+0.1**
GRZ	**Great Barrier**	**5.57**	**220**	P	**Pn**	**20 39 12.4**	**+3.9**
MXZ	**Matakaoa Point**	**5.66**	**193**	P	**Pn**	**20 39 10.8**	**+1.4**
MXZ				S	**S**	**20 40 19.7**	**-0.6**
WMGZ	**Waiomatatini S**	**5.89**	**191**	P	**Pn**	**20 39 16.6**	**+4.5**
WMGZ				S	**S**	**20 40 27.6**	**+2.5**
HAZ	**Te Kaha**	**5.96**	**196**	P	**Pn**	**20 39 13.5**	**+0.7**
HAZ				S	**S**	**20 40 24.7**	**-1.7**
PKGZ	**Pakihiroa**	**6.02**	**194**	P	**Pn**	**20 39 14.7**	**+1.1**
PKGZ				S	**S**	**20 40 24.9**	**-3.0**
PUZ	**Puketiti**	**6.16**	**192**	P	**Pn**	**20 39 19.2**	**+4.1**
PUZ				S	**S**	**20 40 29.9**	**-0.9**
RUGZ	**Raukumara Rang**	**6.18**	**196**	P	**Pn**	**20 39 16.7**	**+1.2**
RUGZ				S	**S**	**20 40 27.8**	**-3.5**
TWGZ	**Tauwhareparae**	**6.32**	**194**	P	**Pn**	**20 39 20.8**	**+3.8**
TWGZ				S	**S**	**20 40 35.7**	**+1.7**
OPRZ	**Ohinepanea**	**6.40**	**204**	P	**Pn**	**20 39 20.3**	**+2.5**
MWZ	**Matawai**	**6.57**	**196**	P	**Pn**	**20 39 20.6**	**+0.8**
MWZ				S	**S**	**20 40 36.4**	**-2.8**
CNGZ	**Carnagh Statio**	**6.57**	**191**	P	**P**	**20 39 21.4**	**+0.4**
TKGZ	**Te Karaka**	**6.60**	**194**	P	**P**	**20 39 22.8**	**+1.5**
URZ	**Urewera**	**6.61**	**199**	P	**Pn**	**20 39 20.3**	**+0.1**
	12nm,0.3s,baz=268,slow=4.3,SNR=194						
URZ				S	**S**	**20 40 37.2**	**-2.7**
	12nm,0.3s,baz=43,slow=21,SNR=9.0						
URZ	**Urewera**	**6.61**	**199**	P	**Pn**	**20 39 20.4**	**+0.2**
URZ				S	**S**	**20 40 37.9**	**-2.0**
KMRZ	**Kaimai**	**6.63**	**208**	P	**P**	**20 39 25.4**	**+3.6**
OMRZ	**Omania**	**6.70**	**204**	P	**P**	**20 39 25.6**	**+3.1**
TOZ	**Tahuroa Road**	**6.72**	**211**	P	**P**	**20 39 26.7**	**+4.1**
RAGZ	**Rawiri**	**6.75**	**197**	P	**P**	**20 39 22.9**	**-0.2**
TARZ	**Mount Tarawera**	**6.77**	**203**	P	**P**	**20 39 26.6**	**+3.2**
RIGZ	**Rimuhau**	**6.87**	**194**	P	**P**	**20 39 25.8**	**+1.2**
MUGZ	**Murupara**	**6.91**	**201**	P	**P**	**20 39 26.4**	**+1.5**
HSRZ	**Hossack Road**	**6.93**	**204**	P	**P**	**20 39 28.5**	**+3.4**
RTZ	**Ruatahuna**	**6.97**	**199**	P	**Pn**	**20 39 24.8**	**+0.3**
HRRZ	**Handcock Road**	**6.98**	**204**	P	**P**	**20 39 28.5**	**+2.6**
GRRZ	**Galatos Road**	**7.01**	**205**	P	**P**	**20 39 29.1**	**+3.0**
SNGZ	**Shannon Statio**	**7.04**	**196**	P	**P**	**20 39 27.2**	**+0.8**
PRRZ	**Plateau Road**	**7.04**	**203**	P	**P**	**20 39 28.4**	**+1.9**
PRGZ	**Paritu Road**	**7.06**	**193**	P	**P**	**20 39 28.7**	**+2.1**
ALRZ	**Allen Road**	**7.12**	**203**	P	**P**	**20 39 29.3**	**+1.9**
WPRZ	**Whakapapatarin**	**7.14**	**204**	P	**P**	**20 39 29.2**	**+1.6**
KNZ	**Kokohu**	**7.19**	**194**	P	**P**	**20 39 29.0**	**+0.9**
TLZ	**Tolley Road**	**7.21**	**208**	P	**P**	**20 39 31.8**	**+3.4**
RAHZ	**Arahi**	**7.23**	**198**	P	**P**	**20 39 29.3**	**+0.7**
MTHZ	**Maungataniwha**	**7.23**	**199**	P	**P**	**20 39 29.8**	**+1.1**
MHGZ	**Mahia Peninsul**	**7.28**	**192**	P	**P**	**20 39 30.7**	**+1.6**
MRHZ	**Matea Rd**	**7.34**	**202**	P	**P**	**20 39 29.9**	**-0.1**
WHHZ	**Waihua**	**7.34**	**196**	P	**P**	**20 39 31.4**	**+1.5**
NMHZ	**Naumai**	**7.47**	**199**	P	**P**	**20 39 32.6**	**+1.1**
ARHZ	**Aropaoanui**	**7.58**	**197**	P	**P**	**20 39 32.9**	**+0.3**
BKZ	**Black Stump Fm**	**7.62**	**200**	P	**Pn**	**20 39 32.2**	**+0.1**
HIZ	**Hauiti**	**7.65**	**211**	P	**P**	**20 39 37.2**	**+3.8**
MCHZ	**McNeill Hill**	**7.83**	**198**	P	**P**	**20 39 36.2**	**+0.8**
NTVZ	**North Tongarir**	**7.83**	**205**	P	**P**	**20 39 36.6**	**+1.1**
TMVZ	**Te Maari**	**7.83**	**205**	P	**P**	**20 39 36.7**	**+1.1**
ETVZ	**East Tongariro**	**7.85**	**204**	P	**P**	**20 39 36.7**	**+0.8**
NNVZ	**North Ngauruho**	**7.88**	**205**	P	**P**	**20 39 37.2**	**+1.0**
KWHZ	**Kaweka Forest**	**7.88**	**200**	P	**P**	**20 39 36.2**	**+0.1**
OTVZ	**Oturere**	**7.89**	**205**	P	**P**	**20 39 37.3**	**+1.0**
TWVZ	**Taurewa**	**7.89**	**206**	P	**P**	**20 39 37.2**	**+0.9**
SNVZ	**South Ngauruho**	**7.92**	**205**	P	**P**	**20 39 37.6**	**+1.0**
NGZ	**Ngauruhoe**	**7.92**	**205**	P	**P**	**20 39 37.8**	**+1.1**
CKHZ	**Cape Kidnapper**	**7.93**	**196**	P	**P**	**20 39 37.2**	**+0.6**
KRHZ	**Kereru**	**8.10**	**200**	P	**Pn**	**20 39 38.6**	**+1.0**
KAHZ	**Kahuranaki**	**8.11**	**197**	P	**Pn**	**20 39 38.5**	**+0.7**
PXZ	**Pawanui**	**8.34**	**196**	P	**Pn**	**20 39 41.2**	**+0.9**
MHEZ	**Mangahewa**	**8.35**	**211**	P	P	20 39 48.8	+6.3
WPHZ	**Waipukurau**	**8.47**	**198**	P	**Pn**	**20 39 42.6**	**+0.6**
PRHZ	**Porangahau**	**8.62**	**197**	P	**P**	**20 39 45.0**	**-0.5**
RPZ	**Rata Peaks**	**13.57**	**208**	P	**P**	**20 40 39.8**	**-0.5**
	1.0nm,0.3s,baz=60,slow=10,SNR=2.1						
RPZ				S	S	20 42 58.5	-9.5
	0.4nm,0.3s,baz=16,slow=14,SNR=1.6						
CTA	**Charters Tower**	**32.33**	**283**	P	**P**	**20 43 38.0**	**-1.1**
	1.9nm,0.5s,baz=124,slow=7.3,SNR=1.1						
ASAR	**Alice Springs**	**41.24**	**270**	P	**P**	**20 44 51.2**	**-2.1**
	0.3nm,0.6s,baz=106,slow=8.3,SNR=2.2						
WRA	**Warramunga Arr**	**42.38**	**275**	P	**P**	**20 45 00.7**	**-1.8**
	0.7nm,0.3s,baz=112,slow=7.9,SNR=12						
FINES	**FINESS Array B**	**146.01**	**338**	PKPbc	**PKPdf**	**20 56 36.3**	**-1.2**
	1.9nm,0.8s,baz=56,slow=3.5,SNR=5.7						

*ANF **08** 20:52:00.3±0.6, 35.°84N×97.°43W, h5km±4km, ML5.1/19, Error ellipse: s-maj=2.6km s-min=2.2km az=125.0*
*TUL **08** 20:52:00.5±1.9, 35.°82N±0.°04×97.°42W±0.°05, h2km±5km, ML4.1, mb_Lg4.3/143(NEIC), Mwr4.0/51(NEIC), Error ellipse: s-maj=5.7km s-min=5.3km az=64.0*
*NEIC **08** 20:52:00.5, 35.°82N×97.°42W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.47; $M_{\theta\theta}$=1.44; $M_{\phi\phi}$=-0.97; $M_{r\theta}$=0.04; $M_{r\phi}$=0.60; $M_{\theta r}$=-0.16; Fault plane solution: M_0=1.41000×10^{15} NP1:ϕ_s=300.97000°, δ=80.52000°, λ=-9.83000°. NP2:ϕ_s=32.60000°, δ=80.31000°, λ=-170.38000°. Principal axes: T 1.5802, Plg0.0000°, Azm347.0000°; N -0.4340, Plg76.0000°, Azm77.0000°; P -1.1462, Plg14.0000°, Azm257.0000°;*
*NEIC **08** 20:52:00.1±1.4, 35.°85N±0.°04×97.°44W±0.°05, h5km±2km Error ellipse: s-maj=6.6km s-min=5.9km az=39.0*
*IDC **08** 20:52:00.6±0.7, 35.°91N×97.°51W, h0km, mb3.9/6, mb1 4.2/14, mb1mx3.8/54, mbtmp4.0/14, ML4.1/7, MS3.5/16, Ms1 3.5/16, ms1mx3.3/42, Error ellipse: s-maj=11.8km s-min=8.7km az=139.0*

ISC 08 20:52:00.5±0.9, 35.°85N±0.°02×97.°41W±0.°03, h9km±6km, n187, σ1s21/161, mb3.8/5, MS3.6/9, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.06**	**214**	Pg	**Pg**	**20 52 01.6**	**-0.8**
BCOK	**Bluff Creek, N**	**0.25**	**220**		**Pg**	**20 52 04.7**	**-0.8**
BCOK				Sg	**Sg**	**20 52 08.2**	**-0.7**
OK009	**Oakdale Elemen**	**0.27**	**182**		**Pg**	**20 52 05.3**	**-0.6**
OK025	**Westminster Rd**	**0.27**	**167**		**Pg**	**20 52 05.6**	**-0.4**
OKCFA	**Oklahoma City**	**0.43**	**184**	Pg	**Pg**	**20 52 08.3**	**-0.6**
OKCFA				Sg	**Sg**	**20 52 13.8**	**-0.8**
OKCFA	**Oklahoma City**	**0.43**	**184**	P	**Pg**	**20 52 08.3**	**-0.6**
	baz=2.8,SNR=97						
OKCFA				S	**Sg**	**20 52 14.5**	**-0.2**
	baz=2.8						
OKCFA	**Oklahoma City**	**0.43**	**184**	P		20 52 08.3	
	baz=2.8,SNR=97						
OKCFA				S		20 52 14.5	
	baz=2.8						
OKCSW	**OKLAHOMA CITY**	**0.44**	**183**		**Pg**	**20 52 08.4**	**-0.7**
OKCSW				Sg	**Sg**	**20 52 14.8**	**-0.1**
OK031	**S. Brethren Rd**	**0.48**	**77**		**Pg**	**20 52 10.2**	**+0.4**
OK031				Sg	**Sg**	**20 52 16.9**	**+0.8**
OK030	**Cody Creek RV**	**0.52**	**81**		**Pg**	**20 52 10.8**	**+0.3**
FNO	**Franklin**	**0.59**	**179**		**Pg**	**20 52 11.8**	**-0.1**
QUOK	**Quay**	**0.66**	**60**		**Pg**	**20 52 13.5**	**+0.3**
QUOK				Sg	**Sg**	**20 52 22.2**	**+0.4**
CROK	**Carrier**	**0.80**	**325**	Pg	**Pg**	**20 52 15.8**	**-0.1**
GC02	**Grant County #**	**1.06**	**340**		**Pg**	**20 52 20.6**	**-0.4**
OK032	**Salt Plains WL**	**1.15**	**326**		**Pg**	**20 52 22.1**	**-0.6**
KAN13	**South Haven SW**	**1.16**	**357**		**Pg**	**20 52 22.7**	**-0.2**
KAN14	**Manchester OK**	**1.19**	**338**		**Pg**	**20 52 22.8**	**-0.6**
T35A	**Sooner Cattle**	**1.29**	**34**		**Pn**	**20 52 24.6**	**-0.1**
T35B	**Sooner Cattle**	**1.29**	**34**	P	**Pn**	**20 52 24.7**	**-0.1**
	baz=215						
T35B				S	**Sn**	**20 52 42.8**	**+0.6**
	baz=215						
T35B	**Sooner Cattle**	**1.29**	**34**	P		20 52 24.7	
	baz=215						
T35B				S		20 52 42.8	
	baz=215						
X34A	**Smith Ranch, M**	**1.29**	**196**	Pn	**Pn**	**20 52 24.1**	**-0.7**
X34A				lAmb_Lg		20 52 42.0	
	comp=Z,1μm,1.1s						
KAN09	**Caldwell North**	**1.30**	**353**		**Pn**	**20 52 24.9**	**0.0**
KAN05	**Bluff City Nor**	**1.31**	**344**		**Pn**	**20 52 25.2**	**+0.1**
TUL1	**Leonard**	**1.32**	**87**	P	**Pn**	**20 52 24.4**	**-0.8**
	baz=268,SNR=361						
TUL1				S	**Sg**	**20 52 42.7**	**-0.2**
	baz=268						
TUL1	**Leonard**	**1.32**	**87**	P		20 52 24.4	
	baz=268,SNR=361						
TUL1				S		20 52 42.4	
	baz=268						
TUL1	**Leonard**	**1.32**	**87**	P		20 52 24.4	
	baz=268,SNR=361						
TUL1				S		20 52 42.7	
	baz=268						
KAN01	**Argonia South**	**1.33**	**348**	Pn	**Pn**	**20 52 25.5**	**+0.1**
KAN10	**Anthony SW Sta**	**1.39**	**337**		**Pn**	**20 52 26.1**	**0.0**
U32A	**Winter Ranch,**	**1.39**	**293**		**Pn**	**20 52 25.6**	**-0.6**
U32A	**Winter Ranch,**	**1.39**	**293**	P	**Pn**	**20 52 25.5**	**-0.6**
	baz=112,SNR=146						
U32A				S	**Sn**	**20 52 45.4**	**+0.7**
	baz=112						
U32A	**Winter Ranch,**	**1.39**	**293**	P		20 52 25.5	
	baz=112,SNR=146						
U32A				S		20 52 45.4	
	baz=112						
KAN08	**Anthony NE Sta**	**1.45**	**342**		**Pn**	**20 52 27.2**	**+0.3**
KAN12	**Harper NE Stat**	**1.52**	**342**		**Pn**	**20 52 28.6**	**+0.6**
WMOK	**Wichita Mounta**	**1.57**	**226**	Pn	**Pn**	**20 52 28.4**	**-0.3**
WMOK	**Wichita Mounta**	**1.57**	**226**	P	**Pn**	**20 52 28.4**	**-0.3**
	baz=44,SNR=399						
WMOK				S	**Sn**	**20 52 49.1**	**-0.1**
	baz=44						
WMOK	**Wichita Mounta**	**1.57**	**226**	P		20 52 28.4	
	baz=44,SNR=721						
WMOK				S		20 52 49.0	
	baz=44						
WMOK	**Wichita Mounta**	**1.57**	**226**	P		20 52 28.

S39A IAmb_Lg 20 54 06.5
comp=Z,427nm,0.8s
S39A Bolivar 3.76 60 P Pn 20 52 59.3 +0.5
baz=242,SNR=42
S39A Bolivar 3.76 60 P 20 52 59.3
baz=242,SNR=42
WHTX Lake Whitney, 3.85 181 Pn 20 52 59.8 -0.1
WHTX Lake Whitney, 3.85 181 P Pn 20 52 59.6 -0.4
baz=0.4,SNR=25
WHTX Lake Whitney, 3.85 181 P 20 52 59.7
baz=0.4,SNR=15
WHTX S 20 53 45.9
baz=0.4
WHTX Lake Whitney, 3.85 181 P 20 52 59.6
baz=0.4,SNR=25
X40A Basin Creek Fa 3.99 109 Pn 20 53 03.1 +1.2
X40A IAmb_Lg 20 54 16.1
comp=Z,828nm,0.8s
X40A Basin Creek Fa 3.99 109 P Pn 20 53 02.8 +0.9
baz=291,SNR=56
X40A Basin Creek Fa 3.99 109 P 20 53 02.6
baz=291,SNR=20
X40A S 20 53 50.7
baz=291
X40A Basin Creek Fa 3.99 109 P 20 53 02.8
baz=291,SNR=56
X40A P 20 53 02.8
baz=291,SNR=56
237A Washetta, Mont 4.06 160 Pn 20 53 02.1 -0.8
237A IAmb_Lg 20 54 10.9
comp=Z,790nm,1.1s
237A Washetta, Mont 4.06 160 P Pn 20 53 02.3 -0.6
baz=341,SNR=12
237A Washetta, Mont 4.06 160 P 20 53 02.3
baz=341,SNR=12
WLAR White Oak Lake 4.14 120 IAmb_Lg 20 54 23.0
comp=Z,1um,1.0s
WHAR Wooly Hollow 4.21 96 Pn 20 53 05.9 +1.0
W41B Gary Mavity, V 4.27 98 P Pn 20 53 06.4 +0.8
baz=281,SNR=99
W41B Gary Mavity, V 4.27 98 P 20 53 06.4
baz=281,SNR=21
W41B S 20 53 56.2
baz=281
W41B Gary Mavity, V 4.27 98 P 20 53 06.4
baz=281,SNR=99
FCAR Ozark Folk Cen 4.29 88 Pn Pn 20 53 06.2 +0.2
FCAR IAmb_Lg 20 54 27.2
comp=Z,676nm,0.7s
MGMO Mountain Grove 4.34 71 Pn 20 53 08.7 +1.9
MGMO IAmb_Lg 20 54 30.2
comp=Z,775nm,1.0s
Z41A Richland Creek 4.60 123 P 20 53 10.4
baz=306
Z41A S 20 54 04.0
baz=306
NATX Nacogdoches 4.68 150 IAmb_Lg 20 54 40.5
comp=Z,372nm,0.9s
NATX Nacogdoches 4.68 150 S 20 54 06.7
baz=331
R40A Maddies Statio 4.78 58 Pn 20 53 13.4 +0.7
R40A IAmb_Lg 20 54 34.7
comp=Z,594nm,1.0s
R40A Maddies Statio 4.78 58 P Pn 20 53 13.7 +1.0
baz=241,SNR=39
R40A Maddies Statio 4.78 58 P 20 53 13.7
baz=241,SNR=39
P38A Dawn 4.87 38 Pn 20 53 14.2 +0.3
P38A IAmb_Lg 20 54 37.5
comp=Z,417nm,0.7s
N33A J Bar K, Exete 4.88 360 Pn 20 53 13.9 -0.2
N33A IAmb_Lg 20 54 47.3
comp=Z,587nm,0.8s
435B Jarrell 5.05 182 Pn Pn 20 53 16.3 -0.2
435B Jarrell 5.05 182 P 20 53 17.1
baz=1.5
435B S 20 54 14.9
baz=1.5
LCAR Lake Charles 5.08 86 Pn 20 53 17.0 +0.2
LCAR IAmb_Lg 20 54 44.3
comp=Z,386nm,0.8s
N35A Tabor 5.20 15 Pn 20 53 18.7 +0.2
KSCO Kaye Shedlock' 5.21 309 Pn Pn 20 53 18.6 -0.2
KSCO IAmb_Lg 20 54 58.4
comp=Z,426nm,0.7s
KSCO Kaye Shedlock' 5.21 309 P 20 53 19.9
baz=126,SNR=6.3
CCM Cathedral Cave 5.41 64 Pn Pn 20 53 21.6 +0.3
CCM IAmb_Lg 20 54 59.5
comp=Z,452nm,0.9s
CCM Cathedral Cave 5.41 64 P 20 53 22.4
baz=248
BGNE Belgrade 5.58 354 Pn Pn 20 53 23.4 -0.4
BGNE IAmb_Lg 20 55 09.7
comp=Z,664nm,0.9s
BGNE Belgrade 5.58 354 P Pn 20 53 23.7 -0.1
baz=174,SNR=12
BGNE Belgrade 5.58 354 P 20 53 23.7
baz=174
BGNE Belgrade 5.58 354 P 20 53 23.7
baz=174,SNR=12
P40A Paris 5.62 48 Pn Pn 20 53 24.5 +0.2
P40A IAmb_Lg 20 55 05.3
comp=Z,592nm,0.9s
JCT Junction City 5.72 201 Pn Pn 20 53 24.9 -0.7
JCT IAmb_Lg 20 55 12.2
comp=Z,821nm,0.8s
JCT Junction City 5.72 201 P 20 53 25.2
baz=20
T25A Trinidad 5.78 285 Pn 20 53 26.7 -0.1
T25A IAmb_Lg 20 55 09.6
comp=Z,533nm,0.8s
T25A Trinidad 5.78 285 P 20 53 26.7
baz=101,SNR=16
143A Socs Landing, 5.88 121 IAmb_Lg 20 55 15.6
comp=Z,344nm,0.8s
N38A Joes South For 5.93 32 Pn 20 53 28.7 +0.1
N38A Joes South For 5.93 32 P Pn 20 53 28.7 +0.1
baz=215,SNR=11
N38A Joes South For 5.93 32 P 20 53 28.7
baz=215,SNR=11
FVM French Village 5.99 67 Pn Pn 20 53 29.8 +0.5
FVM IAmb_Lg 20 55 16.9
comp=Z,396nm,0.9s
342A Flagon Creek P 6.16 135 IAmb_Lg 20 55 31.3
comp=Z,250nm,1.0s
L34A Svendsen Farm, 6.16 7 Pn Pn 20 53 31.7 0.0
441A DeRidder 6.19 144 IAmb_Lg 20 55 29.2
comp=Z,250nm,1.2s
OGNE Ogallala 6.25 326 Pn Pn 20 53 33.8 +0.7
OGNE IAmb_Lg 20 55 27.9
comp=Z,593nm,0.7s
OGNE Ogallala 6.25 326 P Pn 20 53 34.1 +1.1
baz=143,SNR=43
OGNE Ogallala 6.25 326 P 20 53 33.9
baz=143,SNR=25
OGNE Ogallala 6.25 326 P 20 53 34.1
baz=143,SNR=43
SLM Saint Louis 6.37 62 IAmb_Lg 20 55 27.0
comp=Z,490nm,0.8s
OXF Oxford 6.69 99 Pn Pn 20 53 38.9 -0.1
OXF IAmb_Lg 20 55 36.6
comp=Z,476nm,0.9s
OXF Oxford 6.69 99 P Pn 20 53 40.1 +1.2
baz=284,SNR=14
OXF Oxford 6.69 99 P 20 53 39.7
baz=284,SNR=12
OXF Oxford 6.69 99 P 20 53 40.1
baz=284,SNR=14
W45A Hickory Valley 6.75 93 IAmb_Lg 20 55 43.5
comp=Z,407nm,0.8s
Y45A Yeager Farm, C 6.76 105 IAmb_Lg 20 55 43.4
comp=Z,346nm,1.0s
VBMS Vicksburg 6.77 120 IAmb_Lg 20 55 52.3
comp=Z,263nm,1.1s
S44A Carbondale 6.80 72 Pn 20 53 41.8 +1.3
S44A IAmb_Lg 20 55 49.3
comp=Z,416nm,0.8s
SIUC Southern Illin 6.84 72 IAmb_Lg 20 55 48.5
comp=Z,404nm,0.8s
SCIA State Center 6.88 27 Pn Pn 20 53 41.2 -0.4
SCIA State Center 6.88 27 P 20 53 42.0
baz=210
Q24A Divide 6.90 299 P 20 53 43.0
baz=114,SNR=11
735A Kenedy 6.98 183 IAmb_Lg 20 55 48.8
comp=Z,497nm,1.2s

N41A Harden Midland 7.08 45 Pn 20 53 45.4 +1.1
N41A IAmb_Lg 20 55 48.4
comp=Z,500nm,0.8s
N41A Harden Midland 7.08 45 P Pn 20 53 45.8 +1.5
baz=229,SNR=7.3
N41A Harden Midland 7.08 45 P 20 53 45.8
baz=229,SNR=7.3
344A Westbrook Farm 7.09 126 IAmb_Lg 20 55 53.3
comp=Z,210nm,1.1s
P43A Skaggs, Pawnee 7.31 56 Pn 20 53 47.4 -0.1
Q44A Meyer Farm, Va 7.35 63 Pn Pn 20 53 48.1 +0.1
ANMO Albuquerque 7.44 266 Pn Pn 20 53 49.7 +0.3
comp=Z,0.6nm,0.3s,baz=88,slow=18,SNR=3.0
ANMO Pg **Pb 20 54 12.2 +2.3**
comp=Z,2.9nm,0.3s,baz=92,slow=17,SNR=9.9
ANMO Lg Lg 20 55 50.5
comp=Z,6.7nm,0.3s,baz=88,slow=9.1,SNR=2.4
ANMO LR LR 20 56 53.2
comp=Z,406nm,19.2s,baz=78,slow=40
ANMO Albuquerque 7.44 266 P 20 53 49.2
baz=80
ISCO Idaho Springs 7.59 304 Pn Pn 20 53 51.5 -0.2
ISCO Idaho Springs 7.59 304 P Pn 20 53 51.8 +0.1
baz=119,SNR=20
ISCO Idaho Springs 7.59 304 P 20 53 51.5
baz=119
ISCO Idaho Springs 7.59 304 P 20 53 51.8
baz=119,SNR=20
146A Union 7.62 112 IAmb_Lg 20 56 21.1
comp=Z,174nm,0.9s
K38A Parkersburg 7.68 27 IAmb_Lg 20 56 23.5
comp=Z,493nm,0.8s
833A Chaparral WMA, 7.69 193 P 20 53 53.0
baz=12
BNM Barren Site 7.75 260 Pn Pn 20 53 53.3 -0.5
WVT Waverly 7.77 85 Pn Pn 20 53 54.0 +0.2
WVT IAmb_Lg 20 56 21.0
comp=Z,252nm,1.1s
WVT Waverly 7.77 85 P 20 53 53.8
baz=271
MNTX Cornudas Mount 7.82 240 Pn Pn 20 53 54.5 0.0
MNTX Cornudas Mount 7.82 240 P 20 53 54.5
baz=56,SNR=8.5
L40A Anamosa 7.86 36 Pn 20 53 54.8 -0.2
L40A IAmb_Lg 20 56 13.6
comp=Z,447nm,1.1s
ECSD EROS Data Cent 7.90 4 Pn Pn 20 53 55.1 -0.5
ECSD IAmb_Lg 20 56 16.0
comp=Z,262nm,1.1s
ECSD EROS Data Cent 7.90 4 P 20 53 54.9
baz=185,SNR=9.3
HDIL Hopedale 7.93 51 Pn Pn 20 53 55.8 -0.3
HDIL Hopedale 7.93 51 P Pn 20 53 56.1 +0.1
baz=236,SNR=25
HDIL Hopedale 7.93 51 P 20 53 56.0
baz=236,SNR=25
HDIL Hopedale 7.93 51 P 20 53 56.1
baz=236,SNR=25
Y22D IRIS PASSCAL I 8.00 260 IAmb_Lg 20 56 32.6
comp=Z,531nm,0.9s
USIN University of 8.09 72 IAmb_Lg 20 56 22.6
comp=Z,351nm,0.9s
O44A Mansfield 8.27 56 Pn Pn 20 54 02.0 +1.4
PHWY Pilot Hill 8.32 313 IAmb_Lg 20 56 29.8
comp=Z,224nm,0.9s
TX31 Lajitas Ar. Si 8.37 221 Pn 20 54 00.3 -1.9
TX32 Lajitas Array 8.37 221 Pn 20 54 00.3 -1.9
TXAR Lajitas Array 8.37 221 Pn Pn 20 54 01.0 -1.1
comp=Z,1.7nm,0.3s,baz=40,slow=12,SNR=10
TXAR Pg **Pb 20 54 29.4 +3.8**
comp=Z,3.4nm,0.3s,baz=37,slow=15,SNR=6.8
TXAR Sn Sn 20 55 36.1 -0.6
comp=Z,4.9nm,0.3s,baz=44,slow=18,SNR=1.5
TXAR Lg Lg 20 56 20.2
comp=Z,13nm,0.3s,baz=40,slow=24,SNR=7.9
TXAR Lajitas Array 8.37 221 Pn 20 54 00.7 -1.5
N23A Red Feather La 8.38 310 P 20 54 02.9
baz=124,SNR=12
T47A Sharon Grove 8.39 79 Pn Pn 20 54 01.5 -0.8
T47A Sharon Grove 8.39 79 P Pn 20 54 03.0 +0.7
baz=265,SNR=7.7
T47A Sharon Grove 8.39 79 P 20 54 03.0
baz=265,SNR=7.7
V48A Smith Brothers 8.61 88 IAmb_Lg 20 56 42.1
comp=Z,154nm,1.0s
L42A Oliver, Polo 8.61 42 Pn 20 54 05.0 -0.4
L42A IAmb_Lg 20 56 38.4
comp=Z,464nm,0.9s
SUSD Miller 8.67 353 Pn Pn 20 54 06.2 +0.1
SUSD IAmb_Lg 20 56 55.0
comp=Z,344nm,0.9s
SUSD Miller 8.67 353 P 20 54 06.8
baz=172
JFWS Jewell Farm 8.97 36 IAmb_Lg 20 56 56.1
comp=Z,357nm,0.8s
JFWS Jewell Farm 8.97 36 P 20 54 10.4
baz=220,SNR=9.1
CLTN Cedars of Leba 8.99 85 IAmb_Lg 20 56 57.7
comp=Z,146nm,0.9s
LRAL Lakeview Retre 9.05 105 P 20 54 11.4
baz=291
M44A Midewin, Midew 9.18 50 Pn 20 54 13.2 +0.1
WCI Wyandotte Cave 9.20 72 Pn Pn 20 54 14.9 +1.4
WCI IAmb_Lg 20 56 53.4
comp=Z,275nm,1.1s
WCI Wyandotte Cave 9.20 72 P 20 54 14.3
baz=258
Y49A Blount Mountai 9.26 99 IAmb_Lg 20 57 07.0
comp=Z,160nm,0.8s
BLO Bloomington 9.27 66 Pn Pn 20 54 16.4 +2.1
BLO IAmb_Lg 20 57 03.3
comp=Z,404nm,0.8s
SFIN Lafayette 9.30 58 IAmb_Lg 20 56 54.7
comp=Z,316nm,1.0s
PV02 Paradox Valley 9.36 288 IAmb_Lg 20 57 16.5
comp=Z,174nm,1.3s
SWET Sewanee 9.38 91 IAmb_Lg 20 57 09.0
comp=Z,134nm,0.7s
PV13 Radium Mtn., P 9.41 288 IAmb_Lg 20 57 18.1
comp=Z,185nm,1.3s
PV12 Saucer Basin, 9.43 289 IAmb_Lg 20 57 07.2
comp=Z,130nm,1.0s
PV11 David Mesa, Pa 9.48 288 IAmb_Lg 20 57 13.8
comp=Z,174nm,1.1s
PV04 Paradox Valley 9.52 289 IAmb_Lg 20 57 12.3
comp=Z,134nm,1.2s
I40A Norwalk 9.58 31 IAmb_Lg 20 57 06.2
comp=Z,295nm,1.1s
RSSD Black Hills 9.70 330 IAmb_Lg 20 57 23.6
comp=Z,125nm,0.8s
RSSD Black Hills 9.70 330 P 20 54 21.5
baz=146
L44A Lake County Fo 9.72 47 P 20 54 21.3
baz=232
FPAL Fort Paine 9.75 94 IAmb_Lg 20 57 25.1
comp=Z,150nm,0.8s
K22A Casper 9.80 317 IAmb_Lg 20 57 32.0
comp=Z,218nm,0.8s
W50A Signal Mountai 9.89 90 IAmb_Lg 20 57 19.6
comp=Z,234nm,0.8s
SPMN Marine on St. 10.00 19 P 20 54 24.0
baz=202
CPCT Cooper Cave 10.50 88 Pn Pn 20 54 31.7 +0.4
V51A Loudon 10.61 86 Pn 20 54 32.6 -0.1
L46A Eue Claire 10.62 51 Pn Pn 20 54 32.1 -0.8
L46A Eue Claire 10.62 51 P Pn 20 54 32.4 -0.5
baz=238,SNR=14
L46A Eue Claire 10.62 51 P 20 54 32.4
baz=238,SNR=14
L46A P 20 54 32.4
baz=238,SNR=14
P49A Miami Univ. Ec 10.71 66 P 20 54 34.1
baz=254
TKL Tuckaleechee C 11.09 87 Pn Pn 20 54 38.9 -0.4
comp=Z,1.1nm,0.3s,baz=204,slow=9.5,SNR=6.5
TKL Sn Sn 20 56 38.0 -5.4
comp=Z,0.9nm,0.3s,baz=255,slow=16,SNR=1.5
TKL Lg Lg 20 57 44.8
comp=Z,3.6nm,0.3s,baz=188,slow=22,SNR=4.5
TKL LR LR 20 59 05.4
comp=Z,112nm,21.4s,baz=280,slow=38
H43A Windswept, Lux 11.33 38 Pn 20 54 41.1 -1.5
N49A Columbus Grove 11.55 60 Pn 20 54 43.8 -1.8
BW06 Boulder Array 11.66 310 P 20 54 47.3
baz=122
PDAR Pinedale Array 11.66 310 Pn Pn 20 54 46.4 -1.0
comp=Z,0.4nm,0.3s,baz=128,slow=14,SNR=8.5

PDAR Lg Lg 20 58 00.7
comp=Z,1.6nm,0.3s,baz=104,slow=41,SNR=2.9
GOGA Godfrey 11.74 98 Pn Pn 20 54 47.2 -1.0
GOGA Godfrey 11.74 98 P 20 54 48.9
baz=286
L48A N Adams 11.80 55 Pn Pn 20 54 47.9 -1.1
ACSO Alum Creek Sta 12.19 65 Pn 20 54 53.5 -0.9
ACSO Alum Creek Sta 12.19 65 P 20 54 53.8
baz=254,SNR=8.9
J47A Sunmer 12.20 49 Pn Pn 20 54 53.5 -0.9
J47A Sunmer 12.20 49 P Pn 20 54 54.0 -0.4
baz=237,SNR=7.7
J47A Sunmer 12.20 49 P 20 54 54.0
baz=237,SNR=7.7
J47A P 20 54 54.0
baz=237,SNR=7.7
AAM Ann Arbor 12.47 55 Pn 20 54 57.9 -0.3
AGMN Agassiz Nation 12.49 5 P 20 54 56.1
baz=186
M50A Fremont 12.53 59 Pn 20 54 58.4 -0.5
U54A Nelsons Funny 12.62 82 P 20 55 00.6
baz=272
LOHW Long Hollow 12.77 311 Pn 20 55 03.0 +0.6
EYMN Ely 12.86 18 P 20 55 01.7
baz=202
RLMT Red Lodge 12.92 319 Pn Pn 20 55 03.7 -0.8
S54A Dingess, Beckl 13.05 77 Pn 20 55 05.5 -0.6
S54A Dingess, Beckl 13.05 77 P 20 55 05.6
baz=266
E43A Lone Tree Farm 13.11 33 Pn 20 55 04.8 -2.1
V55A Taylorsville 13.14 85 Pn Pn 20 55 06.1 -1.3
GLMI Grayling 13.24 43 Pn Pn 20 55 06.5 -2.1
GLMI Grayling 13.24 43 P 20 55 06.5
baz=232
R54A Victor 13.33 75 P 20 55 06.9
baz=265
DGMT Dagmar 13.57 340 P 20 55 11.4
baz=156
ULM Lac du Bonnet 14.44 4 Pn Pn 20 55 20.7 -4.3
comp=Z,0.8nm,0.3s,baz=182,slow=12,SNR=6.3
ULM Sn Sn 20 57 52.5 -13
comp=Z,0.5nm,0.3s,baz=122,slow=17,SNR=2.2
ULM Lg Lg 20 59 25.9
comp=Z,1.8nm,0.3s,baz=101,slow=16,SNR=3.8
ULM LR LR 21 01 09.3
comp=Z,284nm,18.3s,baz=197,slow=38
ULM Lac du Bonnet 14.44 4 Pn Pn 20 55 20.3 -4.7
PFO Pinyon Flats O 15.82 267 LR LR 21 02 11.5
comp=Z,84nm,19.7s,baz=92,slow=39
LPIG La Paz 16.16 227 LR LR 21 02 18.9
comp=Z,80nm,18.2s,baz=25,slow=38
SADO Sadowa 16.51 52 Pn Pn 20 55 51.4 -1.0
comp=Z,0.7nm,0.3s,baz=255,slow=12,SNR=3.9
SADO Sn Sn 20 58 48.9 -6.8
comp=Z,0.7nm,0.3s,baz=45,slow=15,SNR=2.2
SADO Lg Lg 21 00 33.0
comp=Z,1.2nm,0.3s,baz=164,slow=21,SNR=9.7
SADO LR LR 21 02 22.6
comp=Z,110nm,18.5s,baz=186,slow=38
NVAR Mina Array Bea 16.86 285 Pn Pn 20 55 57.3 +0.3
comp=Z,0.1nm,0.3s,baz=93,slow=11,SNR=4.9
TEIG Tepich 17.51 150 P P 20 56 08.2 +2.1
comp=Z,1.0nm,0.3s,baz=76,slow=15,SNR=2.7
CMIG Matias Romero 18.82 172 P P 20 56 19.3 -1.2
comp=Z,0.4nm,0.3s,baz=12,slow=7.6,SNR=1.9
NEW Newport 19.12 317 LR LR 21 04 18.2
comp=Z,102nm,21.4s,baz=119,slow=39
YBH Yreka Blue Hor 20.54 294 P P 20 56 39.9 +0.5
comp=Z,3.8nm,0.7s,baz=70,slow=8.7,SNR=3.6
YBH LR LR 21 04 31.6
comp=Z,50nm,19.2s,baz=96,slow=37
BBB Bella Bella 27.18 317 LR LR 21 09 38.4
comp=Z,89nm,20.5s,baz=142,slow=39
YKA Yellowknife Ar 28.75 343 P P 20 57 57.5 -0.6
comp=Z,0.2nm,0.6s,baz=141,slow=9.1,SNR=3.1
YKA LR LR 21 09 57.1
comp=Z,154nm,19.4s,baz=0.0,slow=38
ILAR Eielson Array 41.15 330 P P 20 59 45.9 +1.1
comp=Z,1.0nm,0.7s,baz=109,slow=6.6,SNR=9.2
ILAR LR LR 21 17 27.6
comp=Z,65nm,20.5s,baz=114,slow=37
ARCES ARCESS Array B 67.01 19 P P 21 02 55.5 +2.1
comp=Z,3.9nm,1.0s,baz=352,slow=1.7,SNR=3.7
CPUP Villa Florida 72.50 143 LR LR 21 41 54.6
comp=Z,25nm,18.3s,baz=211,slow=41
FINES FINESS Array B 72.79 25 P P 21 03 31.4 +2.4
comp=Z,2.5nm,0.9s,baz=312,slow=9.3,SNR=5.9
TORD Tordi Ar. Bea 89.63 74 LR LR 21 42 45.3
comp=Z,27nm,18.5s,baz=350,slow=34
ZALV Zalesovo Beam 90.55 359 P P 21 05 04.0 +1.2
comp=Z,0.2nm,0.3s,baz=354,slow=5.8,SNR=3.7
ZALV LR LR 21 51 08.8
comp=Z,42nm,18.9s,baz=16,slow=39
TLY Talaya 90.91 347 LR LR 21 49 38.4
comp=Z,26nm,18.8s,baz=326,slow=38
KSRS Korea Array 95.82 325 LR LR 21 51 25.8
comp=Z,38nm,18.2s,baz=346,slow=37

IDC ***08*** *20:53:32.1±1.4, 9.77N×126.01E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.6/46, mbtmp3.9/8, MS2.5/2, Ms1 2.5/2, ms1mx2.4/28, Error ellipse: s-maj=93.8km s-min=28.0km az=71.0*

MAN ***08*** *20:53:36.7, 9.72N×126.40E, h4km, MS3.6*

ISC 08 20:53:34.1±2.5, 9.83N±0.07×126.6E±0.1, h16km±13km, n17, σ1°43/18, mb3.9/8, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GLSP	**General Luna,**	**0.46**	**264**	*e*P		**Pg**	**20 53 43.7**	**+0.4**
GLSP				*e*S		**Sg**	**20 53 48.5**	**-0.9**
BUTP	**Butuan**	**1.28**	**228**	*e*P		**Pn**	**20 53 56.4**	**-1.0**
BUTP				*e*S		**Sn**	**20 54 13.7**	**-0.5**
CGP	**Cagayan de Oro**	**2.31**	**234↑**	*e*P		**Pn**	**20 54 12.2**	**+0.6**
CGP				*i* S		**Sn**	**20 54 39.8**	**+0.1**
LLP	**Lapu-Lapu**	**2.62**	**281↓**	*e*P		**Pn**	**20 54 18.1**	**+2.3**
LLP				*e*S		Sn	20 54 50.3	+2.8
DAV	**Davao City (W)**	**2.92**	**200**	Sn		**Sb**	**20 55 00.3**	**-1.0**
	59nm,0.3s,baz=55,slow=8.0,SNR=2.1							
KCP	**Kidapawan**	**3.17**	**208↑**	*e*P		Pn	20 54 27.0	+3.6
KCP				*i* S		**Sn**	**20 55 03.7**	**+2.7**
PAGZ	**Pagadian**	**3.73**	**238**	*e*P		**Pn**	**20 54 32.1**	**+1.1**
PAGZ				*e*S		Sn	20 55 06.0	-8.7
KSRS	**Korea Array**	**27.53**	**2**	LR		LR	21 11 48.2	
	comp=Z,8.3nm,18.6s,baz=10.0,slow=40							
MJAR	**Matsushiro Arr**	**28.61**	**20**	LR		LR	21 11 22.5	
	comp=Z,11nm,19.0s,baz=135,slow=37							
ASAR	**Alice Springs**	**34.05**	**168**	P		**P**	**21 00 19.0**	**+1.1**
	0.4nm,0.7s,baz=352,slow=6.7,SNR=2.8							
SONM	**Songino Array**	**41.54**	**339**	P		**P**	**21 01 20.2**	**-0.7**
	0.4nm,0.6s,baz=144,slow=10.0,SNR=3.8							
MKAR	**Makanchi Array**	**52.56**	**323**	P		**P**	**21 02 45.7**	**-1.3**
	1.1nm,0.6s,baz=119,slow=8.6,SNR=20							
ZALV	**Zalesovo Beam**	**55.16**	**331**	P		**P**	**21 03 04.2**	**-1.6**
	0.3nm,0.3s,baz=126,slow=9.3,SNR=1.4							
KURBB	**Kurchatov Arra**	**56.51**	**325**	P		**P**	**21 03 15.1**	**-1.2**
	0.4nm,0.3s,baz=128,slow=6.5,SNR=9.4							
TIXI	**Tiksi**	**61.78**	**1**	P		**P**	**21 03 53.0**	**+1.3**
	0.6nm,0.6s,baz=166,slow=5.7,SNR=2.4							
ARCES	**ARCESS Array B**	**84.71**	**340**	P		**P**	**21 06 07.1**	**0.0**
	2.9nm,0.9s,baz=90,slow=8.3,SNR=3.7							
FINES	**FINESS Array B**	**86.42**	**332**	P		**P**	**21 06 14.2**	**-1.5**
	5.9nm,1.1s,baz=94,slow=5.6,SNR=4.8							

ANF ***08*** *21:14:26.6±0.7, 59.95N×153.38W, h145km±8km, ML3.7/30, ML3.7/29, Error ellipse: s-maj=9.4km s-min=4.0km az=109.0, Hypocentre not reviewed by the ISC*

NEIC ***08*** *21:14:26.5±1.2, 60.01N±0.04×153.5W±0.1, h150km±4km, Error ellipse: s-maj=8.6km s-min=5.7km az=108.0*

AEIC 08 21:14:27±1.3, 60.00N±0.04×153.4W±0.1, h146km±4km, ML3.4, ML3.6/92(NEIC), Error ellipse: s-maj=8.6km s-min=5.9km az=102.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ILW	**Iliamna West**	**0.16**	**67**			Pn	21 14 46.8	-0.1
ILW						Sn	21 15 01.9	0.0
ILS	**Iliamna Low So**	**0.19**	**102**			Pn	21 14 46.6	-0.2
IVE	**Iliamna Volcan**	**0.21**	**84**			Pn	21 14 46.7	-0.2
IVE						Sn	21 15 02.6	+0.6
OPT	**Oil Point**	**0.36**	**163**			Pn	21 14 47.5	+0.3
OPT						Sn	21 15 02.8	+0.3
RED	**Redoubt Volcan**	**0.54**	**38**			Pn	21 14 48.1	0.0
RED						Sn	21 15 04.0	-0.2

RSO	**Redoubt South**	**0.58**	**36**			Pn	21 14 48.6	+0.1	
AUL	**Augustine Lava**	**0.62**	**180**			Pn	21 14 48.7	+0.2	
NCT	**North Crescent**	**0.62**	**24**			Pn	21 14 48.7	+0.1	
NCT						Sn	21 15 04.7	-0.4	
AU22	**Augustine Moun**	**0.63**	**176**			Pn	21 14 48.7	+0.2	
AU22						Sn	21 15 05.2	+0.4	
AUH	**Augustine H**	**0.64**	**180**			Pn	21 14 48.8	+0.2	
DFR	**Drift River**	**0.70**	**32**			Pn	21 14 49.2	+0.1	
DFR						Sn	21 15 05.9	-0.1	
HOM	**Homer**	**0.97**	**110**			Pn	21 14 51.6	+0.6	
HOM	**Homer**	**0.97**	**110**	IAML			21 15 11.8		
	comp=E,840nm,0.5s								
HOM				IAML			21 15 19.1		
	comp=N,550nm,0.6s								
HOM	**Homer**	**0.97**	**110**	P			21 14 51.5		
	baz=292								
HOM				S			21 15 10.4		
	baz=292								
CNPM	**China Poot**	**1.21**	**112**			Pn	21 14 53.6	+0.3	
CNPM						Sn	21 15 13.2	-0.1	
CNPM	**China Poot**	**1.21**	**112**	IAML			21 15 13.9		
	comp=E,392nm,0.2s								
BRLK	**Bradley Lake**	**1.31**	**99**			Pn	21 14 54.6	+0.4	
BRLK	**Bradley Lake**	**1.31**	**99**	IAML			21 15 16.1		
	comp=E,529nm,0.3s								
BRLK				IAML			21 15 16.9		
	comp=N,616nm,0.1s								
SPCR	**Spurr Chakacha**	**1.35**	**26**			Pn	21 14 55.2	+0.5	
SPCR	**Spurr Chakacha**	**1.35**	**26**	P			21 14 55.1		
	baz=207,SNR=37								
SPCR				S			21 15 16.3		
	baz=207								
CAPN	**Captain Cook N**	**1.37**	**55**			Pn	21 14 56.3	+1.5	
CAPN	**Captain Cook N**	**1.37**	**55**	P			21 14 57.0		
	baz=237								
CAPN				S			21 15 19.6		
	baz=237								
BRSE	**Bradley Lake S**	**1.38**	**100**			Pn	21 14 55.5	+0.5	
BRSE						Sn	21 15 16.5	+0.2	
BRSE	**Bradley Lake S**	**1.38**	**100**	P			21 14 55.3		
	baz=282								
BRSE				S			21 15 16.1		
	baz=282								
SPCP	**Crater Peak Br**	**1.42**	**26**			Pn	21 14 56.1	+0.6	
SVW2	**Sparrevohn**	**1.53**	**317**			Pn	21 14 55.9	-0.6	
KAHG	**Katmai Hook Gl**	**1.61**	**201**			Pn	21 14 57.3	-0.2	
SLKM	**Skilak Lake**	**1.68**	**71**			Pn	21 14 58.4	+0.2	
SLKM						Sn	21 15 21.5	-0.6	
STLK	**Strandline Lak**	**1.70**	**27**			Pn	21 14 59.0	+0.6	
O22K	**Cooper Landing**	**1.91**	**74**			Pn	21 15 01.0	+0.3	
O22K	**Cooper Landing**	**1.91**	**74**	P			21 15 01.2		
	baz=257								
O22K				S			21 15 26.1		
	baz=257								
FIS	**Fire Island**	**1.96**	**53**			Pn	21 15 02.0	+0.7	
SUA	**Susitna One**	**1.98**	**41**			Pn	21 15 02.0	+0.4	
SUA						Sn	21 15 28.9	+0.7	
SUA	**Susitna One**	**1.98**	**41**	IAML			21 15 30.1		
	comp=E,386nm,0.6s								
SUA				IAML			21 15 31.5		
	comp=N,297nm,0.7s								
SUA	**Susitna One**	**1.98**	**41**	P			21 15 02.1		
	baz=223,SNR=56								
SUA				S			21 15 28.5		
	baz=223								
RC01	**Rabbit Creek A**	**2.13**	**57**			Pn	21 15 03.2	-0.1	
RC01						Sn	21 15 31.1	-0.2	
RC01	**Rabbit Creek A**	**2.13**	**57**	IAML			21 15 32.4		
	comp=N,527nm,0.3s								
RC01				IAML			21 15 34.3		
	comp=E,360nm,0.2s								
RC01	**Rabbit Creek A**	**2.13**	**57**	P			21 15 03.2		
	baz=241								
RC01				S			21 15 30.9		
	baz=241								
CAHL	**Cahill**	**2.18**	**207**			Pn	21 15 04.2	+0.2	
SKT	**Skwentna**	**2.19**	**24**			Pn	21 15 04.4	+0.3	
SKT	**Skwentna**	**2.19**	**24**	P			21 15 04.5		
	baz=206								
SKT				S			21 15 33.5		
	baz=206								
KDAK	**Kodiak Island**	**2.27**	**168**	Pn		Pn	21 15 03.7	-1.3	
KDAK				IAML			21 15 32.7		
	comp=E,198nm,0.4s								
KDAK				IAML			21 15 33.7		
	comp=E,173nm,0.3s								
KDAK	**Kodiak Island**	**2.27**	**168**	P			21 15 03.5		
	baz=349								
KDAK				S			21 15 31.5		
	baz=349								
PMR	**Palmer**	**2.65**	**51**	Pn		Pn	21 15 08.5	-1.1	
PMR				IAML			21 15 42.9		
	comp=N,145nm,0.3s								
PMR	**Palmer**	**2.65**	**51**	P			21 15 08.7		
	baz=235								
PMR				S			21 15 40.6		
	baz=235								
PWL	**Port Wells**	**2.67**	**69**			Pn	21 15 09.5	-0.5	
PWL				IAML			21 15 42.9		
	comp=E,233nm,0.2s								
PWL				IAML			21 15 47.2		
	comp=N,412nm,0.4s								
PWL	**Port Wells**	**2.67**	**69**			Sn	21 15 41.9	-1.3	
OHAK	**Old Harbor**	**2.78**	**178**			Pn	21 15 09.7	-1.7	
OHAK	**Old Harbor**	**2.78**	**178**	IAML			21 15 43.5		
	comp=N,143nm,0.3s								
OHAK	**Old Harbor**	**2.78**	**178**	P			21 15 09.3		
	baz=358								
OHAK				S			21 15 42.0		
	baz=358								
KNK	**Knik Glacier**	**2.83**	**58**			Pn	21 15 10.9	-1.0	
KNK	**Knik Glacier**	**2.83**	**58**	IAML			21 15 47.3		
	comp=E,269nm,0.7s								
KNK				IAML			21 15 47.6		
	comp=N,294nm,0.4s								
KNK	**Knik Glacier**	**2.83**	**58**	P			21 15 11.1		
	baz=242								
KNK				S			21 15 45.1		
	baz=242								
GHO	**Glory Hole Cre**	**2.83**	**49**			Pn	21 15 11.2	-0.9	
GHO						Sn	21 15 45.3	-1.6	
GHO	**Glory Hole Cre**	**2.83**	**49**	IAML			21 15 46.1		
	comp=E,253nm,0.7s								
GHO				IAML			21 15 46.6		
	comp=N,224nm,0.6s								
CUT	**Chulitna**	**2.86**	**31**			Pn	21 15 12.8	+0.6	
CUT	**Chulitna**	**2.86**	**31**	P			21 15 12.7		
	baz=214,SNR=28								
CUT				S			21 15 47.1		
	baz=214								
PPLA	**Purkeypile**	**2.97**	**11**			Pn	21 15 14.2	+0.4	
PPLA	**Purkeypile**	**2.97**	**11**	P			21 15 14.9		
	baz=192,SNR=13								
SML	**Sawmill**	**3.08**	**52**			Pn	21 15 14.2	-1.0	
SML						Sn	21 15 50.5	-2.1	
SML	**Sawmill**	**3.08**	**52**	IAML			21 15 51.1		
	comp=N,161nm,0.6s								
SML				IAML			21 15 52.4		
	comp=E,120nm,0.4s								
SML	**Sawmill**	**3.08**	**52**	P			21 15 14.2		
	baz=236								
SML				S			21 15 50.2		
	baz=236								
TT01	**Tatalina**	**3.17**	**338**			Pn	21 15 15.8	-0.5	
GLI	**Glacier Island**	**3.26**	**72**			Pn	21 15 18.0	+0.5	
GLI	**Glacier Island**	**3.26**	**72**	IAML			21 15 59.2		
	comp=E,109nm,0.4s								
GLI				IAML			21 16 08.2		
	comp=N,110nm,0.6s								
GLI	**Glacier Island**	**3.26**	**72**	P			21 15 17.4		
	baz=257								
GLI				S			21 15 54.1		
	baz=257								
SII	**Sitkinak Islan**	**3.47**	**187**			Pn	21 15 18.6	-1.6	
SII	**Sitkinak Islan**	**3.47**	**187**	IAML			21 15 59.4		
	comp=E,150nm,0.3s								
SII				IAML			21 16 03.8		
	comp=N,116nm,0.9s								
SII	**Sitkinak Islan**	**3.47**	**187**	P			21 15 18.7		
	baz=6.2								
SII				S			21 15 57.7		
	baz=6.2								
HIN	**Hinchinbrook I**	**3.48**	**80**			Pn	21 15 20.9	+0.5	
HIN				IAML			21 16 01.9		
	comp=N,138nm,0.8s								
HIN				IAML			21 16 03.5		
	comp=E,115nm,0.8s								
SCM	**Sheep Creek Mo**	**3.50**	**56**			Pn	21 15 19.9	-0.8	
SCM	**Sheep Creek Mo**	**3.50**	**56**	IAML			21 16 02.5		
	comp=E,176nm,0.7s								
SCM				IAML			21 16 05.8		
	comp=N,213nm,0.6s								
FID	**Port Fidalgo**	**3.54**	**75**			Pn	21 15 20.9	-0.1	
FID						Sn	21 15 59.6	-3.3	
WAT7	**Susitna Watana**	**3.60**	**36**			Pn	21 15 21.5	-0.4	
MID	**Middleton Isla**	**3.64**	**96**			Pn	21 15 22.4	+0.1	
WAT1	**Susitna Watana**	**3.69**	**37**			Pn	21 15 22.4	-0.5	
KTH	**Kantishna Hill**	**3.76**	**17**			Pn	21 15 23.9	-0.1	
TRF	**Thorofare Moun**	**3.77**	**22**			Pn	21 15 24.5	+0.3	
TRF	**Thorofare Moun**	**3.77**	**22**	P			21 15 24.4		
	baz=205,SNR=11								
TRF				S			21 16 06.6		
	baz=205								
WAT2	**Susitna Watana**	**3.78**	**36**			Pn	21 15 23.8	-0.4	
WAT2	**Susitna Watana**	**3.78**	**36**	P			21 15 23.8		
	baz=220								
WAT2				S			21 16 05.5		
	baz=220								
WAT6	**Susitna Watana**	**3.78**	**44**			Pn	21 15 23.5	-0.7	
WAT6	**Susitna Watana**	**3.78**	**44**	P			21 15 23.4		
	baz=229,SNR=10								
WAT6				S			21 16 05.9		
	baz=229								
EYAK	**Cordova Ski Ar**	**3.87**	**78**			Pn	21 15 25.7	+0.4	
EYAK	**Cordova Ski Ar**	**3.87**	**78**	P			21 15 25.3		
	baz=265								
CHUM	**Lake Minchumin**	**3.94**	**7**			Pn	21 15 26.6	+0.5	
CHUM	**Lake Minchumin**	**3.94**	**7**	P			21 15 26.9		
	baz=188								
DIV	**Divide**	**3.95**	**70**			Pn	21 15 26.8	+0.4	
KLU	**Klutina**	**3.98**	**65**			Pn	21 15 26.1	-0.7	
KLU	**Klutina**	**3.98**	**65**	P			21 15 26.1		
	baz=251								
KLU				S			21 16 11.9		
	baz=251								
RND	**Reindeer**	**4.06**	**31**			Pn	21 15 27.6	-0.2	
M24K	**Tolsona, Glenn**	**4.12**	**56**			Pn	21 15 28.6	+0.1	
M24K	**Tolsona, Glenn**	**4.12**	**56**	P			21 15 28.2		
	baz=242								
BPAW	**Bear Paw Mtn.**	**4.28**	**15**			Pn	21 15 30.5	-0.1	
BPAW	**Bear Paw Mtn.**	**4.28**	**15**	P			21 15 30.2		
	baz=197,SNR=20								
MCK	**McKinley**	**4.31**	**28**			Pn	21 15 31.6	+0.4	
MCK	**McKinley**	**4.31**	**28**	P			21 15 31.3		
	baz=212,SNR=5.7								
GOAT	**Goat Mountain**	**4.37**	**79**			Pn	21 15 31.6	-0.4	
RAGM	**Ragged Mountai**	**4.39**	**81**			Pn	21 15 31.8	-0.4	
BMRM	**Bremner River**	**4.48**	**74**			Pn	21 15 33.9	+0.5	
BMRM	**Bremner River**	**4.48**	**74**	IAML			21 16 24.5		
	comp=N,87nm,0.4s								
BMRM				IAML			21 16 26.0		
	comp=E,81nm,0.3s								
BMRM	**Bremner River**	**4.48**	**74**	P			21 15 33.4		
	baz=261								
KAIM	**Kayak Island**	**4.53**	**87**			Pn	21 15 33.9	-0.2	
BWN	**Browne**	**4.59**	**22**			Pn	21 15 35.5	+0.8	
BWN	**Browne**	**4.59**	**22**	IAML			21 16 33.4		
	comp=E,28nm,3.2s								
BWN				IAML			21 18 41.7		
	comp=N,29nm,3.9s								
HMT	**Hamilton**	**4.60**	**82**	Pn		Pn	21 15 35.0	+0.1	
HMT				IAML			21 16 31.0		
	comp=N,85nm,0.3s								
N25K	**Chitina, Valde**	**4.62**	**66**			Pn	21 15 35.0	-0.2	
N25K	**Chitina, Valde**	**4.62**	**66**	IAML			21 16 30.5		
	comp=E,50nm,0.3s								
N25K				IAML			21 16 31.9		
	comp=N,60nm,0.5s								
N25K	**Chitina, Valde**	**4.62**	**66**	P			21 15 35.0		
	baz=253								
NICHA	**Nichawak Mount**	**4.74**	**83**			Pn	21 15 37.2	+0.4	
SUCK	**Suckling Hills**	**4.84**	**85**	Pn		Pn	21 15 36.8	-1.4	
GLB	**Gilahina Butte**	**4.94**	**69**			Pn	21 15 39.3	-0.2	
GLB	**Gilahina Butte**	**4.94**	**69**	IAML			21 16 37.9		
	comp=N,45nm,0.3s								
GLB				IAML			21 16 38.5		
	comp=E,47nm,0.3s								
NEA2	**Nenana**	**5.04**	**22**			Pn	21 15 40.6	-0.1	
NEA2	**Nenana**	**5.04**	**22**	P			21 15 40.4		
	baz=206,SNR=37								
VRDI	**Verde Repeater**	**5.07**	**72**			Pn	21 15 40.7	-0.7	
VRDI	**Verde Repeater**	**5.07**	**72**	IAML			21 16 41.0		
	comp=N,38nm,0.4s								
VRDI				IAML			21 16 42.8		
	comp=E,34nm,1.0s								
KHIT	**Khitrov Hills**	**5.10**	**81**			Pn	21 15 41.7	+0.1	
WRH	**Wood River Hil**	**5.14**	**27**			Pn	21 15 41.5	-0.5	
CRQM	**Cirque**	**5.17**	**77**			Pn	21 15 42.0	-0.6	
MLY	**Manley**	**5.20**	**13**			Pn	21 15 42.1	-0.8	
MLY	**Manley**	**5.21**	**13**	P			21 15 42.1		
	baz=195,SNR=19								
MCARA	**McCarthy VSAT**	**5.30**	**70**			Pn	21 15 44.4	+0.2	
TGL	**Tana Glacier**	**5.32**	**77**			Pn	21 15 44.1	-0.4	
CCB	**Clear Creek Bu**	**5.35**	**27**			Pn	21 15 44.3	-0.5	
HDA	**Harding Lake**	**5.37**	**32**			Pn	21 15 44.5	-0.5	
HDA	**Harding Lake**	**5.37**	**32**	P			21 15 44.6		
	baz=217,SNR=30								
HDA				P			21 15 44.6		
	baz=217,SNR=30								
I23K	**Minto, Yukon-K**	**5.50**	**18**			Pn	21 15 46.2	-0.5	
I23K	**Minto, Yukon-K**	**5.50**	**18**	P			21 15 47.0		
	baz=202								
PS08	**TAPS Pump Stn8**	**5.51**	**31**			Pn	21 15 46.5	-0.4	
MENT	**Mentasta**	**5.51**	**53**			Pn	21 15 47.8	+0.8	
MDM	**Murphy Dome**	**5.53**	**24**			Pn	21 15 46.7	-0.5	
TCOL	**CIGO, UAF Yank**	**5.54**	**25**			Pn	21 15 46.8	-0.5	
TCOL	**CIGO, UAF Yank**	**5.54**	**25**	P			21 15 46.5		
	baz=210								
COLA	**College**	**5.54**	**26**			Pn	21 15 46.7	-0.5	
COLA	**College**	**5.54**	**26**	P			21 15 46.6		
	baz=210								
PTPK	**Patty Peak**	**5.54**	**73**			Pn	21 15 47.6	+0.1	
BALM	**Baldy**	**5.58**	**74**			Pn	21 15 47.8	-0.2	
IL31		**5.67**	**30**			Pn	21 15 48.4	-0.7	
ILAR	**Eielson Array**	**5.67**	**30**			Pn	21 15 48.1	-1.0	
MESA	**MESA**	**5.75**	**83**	Pn		Pn	21 15 51.2	+0.9	
DOT	**Dot Lake**	**5.75**	**46**	Pn		Pn	21 15 49.8	-0.4	
PS07	**TAPS Pump Stn7**	**5.84**	**22**			Pn	21 15 51.2	-0.1	
POKR	**Poker Plat Res**	**5.84**	**26**			Pn	21 15 51.2	-0.1	
POKR	**Poker Plat Res**	**5.84**	**26**	P			21 15 51.1		
	baz=211								
GRNC	**Granite Creek**	**5.84**	**78**			Pn	21 15 51.4	-0.3	
YAH	**Yahtse**	**5.85**	**81**			Pn	21 15 51.9	+0.2	
BARN	**Barnard Glacie**	**5.91**	**75**			Pn	21 15 52.5	0.0	
SCRK	**Sand Creek**	**5.98**	**44**			Pn	21 15 52.6	-0.7	
SCRK	**Sand Creek**	**5.98**	**44**	P			21 15 52.5		
	baz=232,SNR=10								
IM03		**6.01**	**359**			Pn	21 15 53.9	+0.3	
IMAR	**Indian Mountai**	**6.01**	**359**			Pn	21 15 54.0	+0.4	
CTG	**Chitna Glacier**	**6.06**	**76**	P			21 15 55.2		
	baz=266								
CTGM	**Chitina Glacie**	**6.06**	**76**			Pn	21 15 55.5	+1.0	
PS06	**TAPS Pump Stn6**	**6.12**	**14**			Pn	21 15 55.3	+0.3	
TABL	**Table Mountain**	**6.14**	**81**	Pn		Pn	21 15 56.4	+0.8	
CHX	**Chaix Hills**	**6.18**	**84**			Pn	21 15 55.4	-0.5	
LOGN	**Logan Glacier**	**6.22**	**77**			Pn	21 15 57.2	+0.7	
BC03		**6.36**	**56**			Pn	21 15 58.2	0.0	
BCAR	**Beaver Creek A**	**6.36**	**56**	Pn		Pn	21 15 58.0	-0.4	
YUK2	**White River**	**6.40**	**68**			Pn	21 15 58.8	-0.2	
PCA	**Pinnacle**	**6.60**	**83**			Pn	21 16 00.9	-0.7	
PINM	**Pinnacle**	**6.61**	**83**	P			21 16 00.9		
	baz=275								
PRP	**Porcupine Dome**	**6.62**	**30**			Pn	21 16 01.6	-0.3	
PRP	**Porcupine Dome**	**6.62**	**30**	P			21 16 01.4		
	baz=217								
K27K	**Chicken**	**6.70**	**48**			Pn	21 16 02.9	+0.1	
COLD	**Coldfoot**	**7.40**	**10**			Pn	21 16 11.9	-0.2	
COLD	**Coldfoot**	**7.40**	**10**	P			21 16 12.0		
	baz=193,SNR=6.8								
EGAK	**Eagle**	**7.45**	**45**	Pn		Pn	21 16 12.4	-0.3	
FYU	**Fort Yukon**	**7.55**	**26**	Pn		Pn	21 16 13.6	-0.5	
HYT	**Haines Junctio**	**7.93**	**77**	Pn		Pn	21 16 21.0	+1.6	
BM03	**Burnt Mountain**	**8.41**	**24**			Pn	21 16 24.4	-1.3	
BMAR	**Burnt Mountain**	**8.42**	**24**	Pn		Pn	21 16 24.7	-1.2	
TOLK	**Toolik Lake Re**	**8.84**	**9**	Pn		Pn	21 16 31.9	+0.5	
TOLK	**Toolik Lake Re**	**8.84**	**9**	P			21 16 32.0		
	baz=193								
INK	**Inuvik**	**11.97**	**38**	Pn		Pn	21 17 13.8	+1.2	

FUNV ***08*** *21:48:50.5, 7.°26N×71.°85W, h4km, MW3.3*
RSNC ***08*** *21:48:51.0±1.1, 7.°22N×71.°91W, h0km±5km, ML2.6*
ISC 08 21:48:49.1±1.7,**7.°26N**±0.°04×**71.°82W**±0.°04,**h6**km±12km,
n21,σ**0.°79**/39,**1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.77**	**321**	*e*P	**Pg**	**21 49 04.7**	**+0.7**
CAPV				*e*S	**Sb**	**21 49 15.8**	**-0.2**
PAMC	**Pamplona, Colo**	**0.87**	**275**	⇓*i*P	**Pg**	**21 49 05.0**	**-1.0**
PAMC				*e*S	**Sg**	**21 49 17.2**	**-0.1**
PAMC				*i*		21 49 22.8	
	comp=Z,226nm,0.1s						
BARC	**Barichara**	**1.50**	**244**	*e*P	**Pn**	**21 49 16.1**	**-0.8**
BARC				*e*S	**Sn**	**21 49 36.3**	**-0.7**
BARC				*i*		21 49 39.1	
	comp=Z,138nm,0.4s						
OCAC	**Ocana**	**1.77**	**303**	*e*P	**Pb**	**21 49 22.1**	**0.0**
OCAC				*e*S	**Sb**	**21 49 45.2**	**+0.5**
RUSC	**La Rusia**	**1.85**	**223**	*e*P	**Pn**	**21 49 21.8**	**-0.1**
RUSC				*e*S	**Sn**	**21 49 45.6**	**-0.3**
RUSC				*i*		21 49 49.4	
	comp=Z,26nm,0.6s						
RUSC	**La Rusia**	**1.85**	**223**	*e*P	**Pn**	**21 49 22.2**	**+0.3**
RUSC				*e*S	**Sn**	**21 49 45.4**	**-0.5**
BRRC	**Barranca, Sant**	**1.88**	**265**	*e*P	**Pn**	**21 49 21.9**	**0.0**
BRRC				*e*S	**Sn**	**21 49 46.0**	**0.0**
BRRC				*i*		21 49 50.9	
	comp=Z,50nm,0.3s						
SMLC	**San Martn de**	**2.70**	**305**	*e*P	**Pn**	**21 49 33.2**	**+0.1**
SMLC				*e*S	**Sn**	**21 50 07.8**	**+1.6**
SMLC				*i*		21 50 15.2	
	comp=Z,30nm,0.3s						
PTBC	**PUERTO BERRIO,**	**2.71**	**255**	*e*P	**Pn**	**21 49 32.3**	**-1.0**
PTBC				*e*S	**Sn**	**21 50 06.6**	**+0.1**
PTBC				*i*		21 50 13.4	
	comp=Z,36nm,0.3s						
SPBC	**San Pablo de B**	**2.75**	**235**	*e*P	**Pn**	**21 49 33.9**	**-0.1**
SPBC				*e*S	**Sn**	**21 50 07.5**	**0.0**
SPBC				*i*		21 50 17.7	
	comp=Z,18nm,0.3s						
ZARC	**Zaragoza, Cauc**	**3.02**	**275**	*e*P	**Pn**	**21 49 37.7**	**+0.2**
ZARC				*e*S	**Sn**	**21 50 14.3**	**+0.3**
ZARC				*i*		21 50 24.2	
	comp=Z,16nm,0.3s						
PTGC	**Puerto Gaitan,**	**3.06**	**186**	*e*P	**Pn**	**21 49 39.1**	**+1.0**
PTGC				*e*S	**Sn**	**21 50 16.1**	**+0.9**
PTGC				*i*		21 50 29.6	
	comp=Z,55nm,0.2s						
SANV	**Sanarito**	**3.17**	**45**	*e*P	**Pn**	**21 49 40.8**	**+1.0**
SANV				*e*S	**Sn**	**21 50 17.3**	**-0.8**
CURV	**Curarigua**	**3.29**	**34**	*e*P	**Pn**	**21 49 42.7**	**+1.2**
CURV				*e*S	**Sn**	**21 50 20.0**	**-1.1**
NORC	**Norcasia**	**3.46**	**241**	*e*P	**Pn**	**21 49 44.2**	**+0.4**
NORC				*e*S	**Sn**	**21 50 25.3**	**0.0**
NORC				*i*		21 50 36.8	
	comp=Z,8.8nm,0.3s						
GUY2C	**Guyana, Caldas**	**4.06**	**240**	*e*P	**Pn**	**21 49 52.9**	**+0.6**
GUY2C				*e*S	**Sn**	**21 50 40.6**	**+0.1**
GUY2C				*i*		21 50 46.1	
	comp=Z,4.3nm,0.4s						
BAUV	**El Baul**	**4.10**	**66**	*e*P	**Pn**	**21 49 52.1**	**-0.4**
RREF	**El Recreo**	**4.22**	**236**	*e*P	**Pn**	**21 49 55.1**	**+0.5**
RREF				*e*S	**Sn**	**21 50 44.6**	**0.0**
RREF				*i*		21 50 49.8	
	comp=N,5.6nm,0.3s						
CBOC	**Ciudad Bolivar**	**4.39**	**252**	*e*P	**Pn**	**21 49 57.0**	**+0.4**
MONV	**Montecano**	**5.01**	**21**	*e*P	**Pn**	**21 50 04.7**	**-0.3**
TURV	**Turiamo**	**5.05**	**51**	*e*P	**Pn**	**21 50 06.3**	**+0.8**
TURV				*e*S	**Sn**	**21 51 01.7**	**-2.6**

TAP ***08*** *22:10:04.8, 24.°85N×122.°04E, h12km, ML3.3, C*
JMA ***08*** *22:10:06.0±0.1, 24.°83N×121.°99E, h22km, M2.6*
ISC 08 22:10:05.7±0.8,**24.°83N**±0.°02×**122.°04E**±0.°02,**h9**km±6km,
n88,σ**0.°59**/174,**7C-4D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.18**	**347**	⇑*i*P	**Pg**	**22 10 08.9**	**-0.6**
	baz=337						
TWB1				*i* S	**Sg**	**22 10 11.7**	**-0.5**
	baz=337						
NTC	**Toucheng**	**0.19**	**278**	P	**Pg**	**22 10 09.3**	**-0.3**
	baz=276						
NTC				S	**Sg**	**22 10 12.4**	**+0.1**
	baz=276						
TIPB	**Shuangxi**	**0.24**	**307**	⇑*i*P	**Pg**	**22 10 10.3**	**-0.3**
	baz=300						
TIPB				S	**Sg**	**22 10 13.9**	**+0.1**
	baz=300						
TWC	**Suao**	**0.28**	**218**	⇓*i*P	**Pg**	**22 10 11.1**	**-0.1**
	baz=221						
TWC				S	**Sg**	**22 10 15.7**	**+0.7**
	baz=221						
NWF	**Wu-fen Shan**	**0.33**	**316**	⇑*i*P	**Pg**	**22 10 12.3**	**-0.1**
	baz=303						
NWF				S	**Sg**	**22 10 17.2**	**+0.4**
	baz=303						
WFSB	**Wu-fen Shan**	**0.33**	**316**	⇑*i*P	**Pg**	**22 10 12.3**	**-0.1**
	baz=307						
WFSB				S	**Sg**	**22 10 17.3**	**+0.5**
	baz=307						
NDS	**Dongshan**	**0.35**	**236**	*i* P	**Pg**	**22 10 12.4**	**-0.2**
	baz=236						
NDS				S	**Sb**	**22 10 19.0**	**-0.8**
	baz=236						
TWE	**Neicheng**	**0.35**	**252**	⇓*i*P	**Pg**	**22 10 12.4**	**-0.3**
	baz=249						
TWE				S	**Sg**	**22 10 17.9

	baz=303								
YM04	**YM04**	**0.56**	**306**	P		**Pg**	**22 10 16.8**	**+0.2**	
	baz=302								
YM04				*e*S		**Sb**	**22 10 25.8**	**+0.1**	
	baz=302								
BACT	**New Taipei Cit**	**0.56**	**287**	P		**Pb**	**22 10 17.1**	**-0.7**	
	baz=275								
BACT				S		**Sb**	**22 10 25.2**	**-0.7**	
	baz=275								
YM03	**YM03**	**0.57**	**308**	P		**Pg**	**22 10 17.1**	**+0.3**	
	baz=304								
YM03				*e*S		**Sb**	**22 10 27.2**	**+1.0**	
	baz=304								
ANP	**Anpu**	**0.59**	**307**	P		**Pg**	**22 10 17.4**	**+0.3**	
	baz=304								
ANP				*e*S		**Sg**	**22 10 25.4**	**+0.6**	
	baz=304								
TWY	**Chenhua**	**0.60**	**318**	P		**Pg**	**22 10 17.5**	**+0.3**	
	baz=315								
TWY				*e*S		**Sb**	**22 10 26.3**	**-0.6**	
	baz=315								
YHNB	**Yeheng**	**0.62**	**255**	⇓P		**Pg**	**22 10 17.2**	**-0.5**	
	baz=254								
YHNB				*e*S		**Sb**	**22 10 27.8**	**+0.2**	
	baz=254								
TWS1	**Kuangyinshan**	**0.62**	**296**	P		**Pb**	**22 10 18.3**	**-0.5**	
	baz=302								
TWS1				*e*S		**Sb**	**22 10 28.4**	**+0.7**	
	baz=302								
NTST	**Danshui**	**0.63**	**302**	P		**Pb**	**22 10 18.4**	**-0.5**	
	baz=308								
NTST				S		**Sb**	**22 10 26.9**	**-0.9**	
	baz=308								
NTY	**Taoyuan**	**0.69**	**284**	*e*P		**Pb**	**22 10 19.8**	**-0.1**	
	baz=275								
NTY				*e*S		**Sb**	**22 10 29.6**	**0.0**	
	baz=275								
NNSB	**Datong**	**0.71**	**236**	P		**Pg**	**22 10 18.9**	**-0.7**	
	baz=237								
NNSB				*e*S		**Sb**	**22 10 30.8**	**+0.3**	
	baz=237								
NNSH	**Datong**	**0.71**	**236**	P		**Pg**	**22 10 19.7**	**+0.2**	
	baz=237								
NNSH				*e*S		**Sb**	**22 10 29.6**	**-0.8**	
	baz=237								
NNS	**Nan Shan**	**0.72**	**237**	P		**Pg**	**22 10 19.2**	**-0.3**	
	baz=238								
NNS				*e*S		**Sb**	**22 10 30.7**	**+0.3**	
	baz=238								
NACB	**Ninganchiao**	**0.77**	**212**	P		**Pg**	**22 10 20.1**	**-0.3**	
	baz=224								
NACB				*e*S		**Sb**	**22 10 31.4**	**-0.3**	
	baz=224								
NCU	**National Centr**	**0.78**	**281**	*e*P		**Pb**	**22 10 22.0**	**+0.5**	
	baz=278								
NCU				*e*S		**Sn**	**22 10 34.1**	**-0.8**	
	baz=278								
NCUH	**Zhongli**	**0.79**	**280**	*e*P		**Pb**	**22 10 21.8**	**+0.3**	
	baz=278								
NCUH				*e*S		**Sn**	**22 10 33.6**	**-1.3**	
	baz=278								
PCYT	**Pengchaiyu**	**0.80**	**2**	P		**Pb**	**22 10 21.6**	**-0.2**	
	baz=344								
PCYT				S		**Sb**	**22 10 32.7**	**0.0**	
	baz=344								
ETLH	**Xiulin Townshi**	**0.80**	**219**	P		**Pg**	**22 10 20.9**	**-0.2**	
	baz=231								
ETLH				S		**Sb**	**22 10 33.1**	**+0.3**	
	baz=231								
TWD	**Chiawan**	**0.85**	**208**	P		**Pg**	**22 10 22.1**	**+0.1**	
	baz=212								
TWD				*e*S		**Sb**	**22 10 33.7**	**-0.3**	
	baz=212								
NJD	**Zhudong**	**0.87**	**264**	*e*P		**Pb**	**22 10 23.2**	**+0.3**	
	baz=258								
NJD				*e*S		**Sn**	**22 10 36.2**	**-0.6**	
	baz=258								
JYNG	**Yonagunijimaku**	**0.91**	**114**	P		**Pb**	**22 10 23.6**	**0.0**	
JYNG				S		**Sg**	**22 10 35.4**	**+0.4**	
FUSS	**Fushou**	**0.92**	**231**	*e*P		**Pg**	**22 10 22.8**	**-0.7**	
	baz=226								
FUSS				*e*S		**Sg**	**22 10 36.0**	**+0.4**	
	baz=226								
HSN1	**Hsinchu**	**0.93**	**267**	*e*P		**Pb**	**22 10 24.5**	**-0.4**	
	baz=282								
HSN1				*e*S		**Sn**	**22 10 38.2**	**-0.1**	
	baz=282								
LIOB	**Emei**	**0.94**	**259**	*e*P		**Pb**	**22 10 24.1**	**-0.2**	
	baz=259								
LIOB				*e*S		**Sn**	**22 10 38.6**	**-0.2**	
	baz=259								
SBCB	**Hsinchu**	**0.95**	**268**	*e*P		**Pb**	**22 10 24.6**	**+0.2**	
	baz=283								
SBCB				*e*S		**Sn**	**22 10 38.5**	**-0.5**	
	baz=283								
YOJ	**Yonaguni jima**	**0.96**	**112**	P		**Pg**	**22 10 24.1**	**0.0**	
YOJ				S		**Sg**	**22 10 37.0**	**+0.4**	
YOJ	**Yonaguni jima**	**0.96**	**112**	*e*P		**Pg**	**22 10 24.1**	**0.0**	
	baz=115								
YOJ				*e*S		**Sb**	**22 10 37.9**	**+0.6**	
	baz=115								
NSTT	**Nanjuang**	**0.96**	**258**	*e*P		**Pb**	**22 10 24.7**	**+0.2**	
	baz=258								
NSTT				*e*S		**Sn**	**22 10 38.6**	**-0.6**	
	baz=258								
TWT	**Tachien**	**0.97**	**234**	*e*P		**Pb**	**22 10 24.8**	**0.0**	
	baz=229								
TWT				*e*S		**Sn**	**22 10 40.2**	**+0.5**	
	baz=229								
WHF	**Hehuan Shan**	**0.98**	**226**	*e*P		**Pg**	**22 10 23.9**	**-0.6**	
	baz=229								
WHF				*e*S		**Sb**	**22 10 39.0**	**+0.8**	
	baz=229								
TDCB	**Techi**	**0.98**	**235**	*e*P		**Pg**	**22 10 24.5**	**-0.1**	
	baz=231								
TDCB				*e*S		**Sn**	**22 10 39.6**	**-0.4**	
	baz=231								
CHGB	**Renai**	**1.10**	**226**	*e*P		**Pg**	**22 10 26.4**	**-0.4**	
	baz=229								
CHGB				*e*S		**Sn**	**22 10 43.0**	**+0.1**	
	baz=229								
WHP	**Taichung City**	**1.13**	**241**	*e*P		**Pg**	**22 10 27.3**	**-0.2**	
	baz=243								
WHP				*e*S		**Sn**	**22 10 45.0**	**+1.5**	
	baz=243								
ESL	**Shilin**	**1.15**	**209**	*e*P		**Pb**	**22 10 27.1**	**-0.7**	
	baz=221								
ESL				*e*S		**Sn**	**22 10 44.5**	**+0.6**	
	baz=221								
NMLH	**Miaoli**	**1.17**	**256**	*e*P		**Pn**	**22 10 28.5**	**+0.2**	
	baz=257								
NMLH				*e*S		**Sn**	**22 10 44.9**	**+0.6**	
	baz=257								
NSY	**Sanyi**	**1.23**	**251**	*e*P		**Pg**	**22 10 30.1**	**+0.7**	
	baz=268								
WPL	**Puli Township**	**1.28**	**231**	*e*P		**Pb**	**22 10 30.0**	**+0.1**	
	baz=227								
WPL				*e*S		**Sn**	**22 10 47.0**	**0.0**	
	baz=227								
DPDB	**Guoxing**	**1.28**	**232**	*e*P		**Pn**	**22 10 29.6**	**-0.3**	
	baz=242								
DPDB				*e*S		**Sn**	**22 10 47.6**	**+0.3**	
	baz=242								
VWDT	**VWDT**	**1.35**	**218**	*e*P		**Pb**	**22 10 31.2**	**+0.1**	
	baz=230								
VWDT				*e*S		**Sn**	**22 10 48.5**	**-0.2**	
	baz=230								
SMLT	**Sun Moon Lake**	**1.40**	**228**	*e*P		**Pg**	**22 10 32.3**	**-0.3**	
	baz=225								
SMLT				*e*S		**Sn**	**22 10 50.3**	**+0.1**	
	baz=225								
TYC	**Yuchr**	**1.42**	**230**	*e*P		**Pb**	**22 10 32.1**	**-0.2**	
	baz=227								
TYC				*e*S		**Sg**	**22 10 51.1**	**-0.2**	
	baz=227								
SSLB	**Suanglung**	**1.43**	**224**	*e*P		**Pb**	**22 10 32.2**	**-0.4**	
	baz=228								
SSLB				*e*S		**Sn**	**22 10 50.6**	**-0.3**	
	baz=228								
HGSD	**Ruisui**	**1.44**	**203**	*e*P		**Pg**	**22 10 34.3**	**+0.9**	
	baz=226								
HGSD				*e*S		**Sg**	**22 10 52.4**	**+0.2**	
	baz=226								
WJS	**Zhushan**	**1.56**	**230**	*e*P		**Pg**	**22 10 35.2**	**-0.4**	
	baz=225								
YULB	**Yu-li**	**1.58**	**205**	*e*P		**Pb**	**22 10 34.6**	**-0.6**	
	baz=214								
YULB				*e*S		**Sb**	**22 10 55.3**	**+0.1**	
	baz=214								
TWF1	**Yuli**	**1.62**	**205**	*e*P		**Pn**	**22 10 34.9**	**+0.5**	
	baz=227								
TWF1				*e*S		**Sb**	**22 10 55.9**	**-0.4**	
	baz=227								
IRIF	**Iriomote-Funau**	**1.62**	**107**	P		**Pn**	**22 10 34.9**	**+0.5**	
IRIF				*e*S		**Sb**	**22 10 56.9**	**+0.6**	
YUS	**Yu-Shan**	**1.66**	**217**	*e*P		**Pn**	**22 10 35.2**	**-0.2**	
	baz=211								
YUS				*e*S		**Sb**	**22 10 57.8**	**-0.2**	
	baz=211								
ALS	**Alishan**	**1.73**	**221**	*e*P		**Pg**	**22 10 38.3**	**-0.5**	
	baz=215								
ALS				*e*S		**Sb**	**22 11 00.1**	**+0.4**	
	baz=215								
CHN5	**Tsauling**	**1.74**	**226**	*e*P		**Pg**	**22 10 38.7**	**-0.5**	
	baz=234								
CHN5				*e*S		**Sg**	**22 11 01.0**	**-0.8**	
	baz=234								
FULB	**Fuli**	**1.76**	**203**	*e*P		**Pb**	**22 10 37.5**	**-0.7**	
	baz=224								
FULB				*e*S		**Sb**	**22 10 59.9**	**-0.4**	
	baz=224								
HATJ	**Hateruma jima**	**1.79**	**115**	P		**Pn**	**22 10 36.2**	**-0.5**	
HATJ				*e*S		**Sn**	**22 10 58.9**	**-0.7**	
ELDTW	**Lidau**	**1.88**	**210**	*e*P		**Pb**	**22 10 39.6**	**-0.7**	
	baz=218								
ELDTW				*e*S		**Sn**	**22 11 01.7**	**-0.4**	
	baz=218								
JKRS	**Kuro-shima**	**1.89**	**108**	P		**Pn**	**22 10 37.3**	**-0.9**	
JKRS				*e*S		**Sn**	**22 11 00.9**	**-1.3**	
EDH	**Donghe**	**1.96**	**200**	*e*P		**Pn**	**22 10 39.5**	**+0.3**	
	baz=190								
EDH				*e*S		**Sn**	**22 11 04.8**	**+0.8**	
	baz=190								
JIJ	**Ishigaki jima**	**1.97**	**103**	P		**Pn**	**22 10 38.9**	**-0.4**	
JIJ				S		**Sn**	**22 11 03.5**	**-0.7**	
CHN4	**Tsaushan**	**1.98**	**222**	*e*P		**Pb**	**22 10 42.6**	**+0.8**	
	baz=231								
CHN4				*e*S		**Sg**	**22 11 08.6**	**-0.6**	
	baz=231								
STYH	**Taoyuan**	**2.01**	**215**	*e*P		**Pb**	**22 10 41.4**	**-1.0**	
	baz=225								
STYH				*e*S		**Sb**	**22 11 06.4**	**-1.2**	
	baz=225								
STYT	**Tauyuan**	**2.03**	**215**	*e*P		**Pb**	**22 10 42.8**	**0.0**	
	baz=225								
STYT				*e*S		**Sn**	**22 11 06.5**	**+0.9**	
	baz=225								
WTP	**Ta-pu**	**2.04**	**220**	*e*P		**Pb**	**22 10 43.0**	**0.0**	
	baz=229								
WTP				*e*S		**Sb**	**22 11 09.0**	**+0.5**	
	baz=229								
TWK	**Hsinying**	**2.10**	**223**	*e*P		**Pb**	**22 10 42.7**	**-1.3**	
	baz=231								
TWK				*e*S		**Sb**	**22 11 10.2**	**-0.1**	
	baz=231								
CHN1	**Nanshi**	**2.14**	**220**	*e*P		**Pn**	**22 10 42.6**	**+1.0**	
	baz=230								
CHN1				*e*S		**Sb**	**22 11 12.6**	**+1.2**	
	baz=230								
MATB	**Ma-tsu**	**2.30**	**305**	*e*P		**Pn**	**22 10 42.4**	**-1.5**	
	baz=303								
MATB				*e*S		**Sn**	**22 11 11.7**	**-0.7**	
	baz=303								
VWUC	**VWUC**	**2.35**	**274**	*e*P		**Pn**	**22 10 43.5**	**-1.1**	
	baz=274								
VWUC				*e*S		**Sn**	**22 11 11.9**	**-1.7**	
	baz=274								
MASBT	**Mashibuluo**	**2.55**	**211**	*e*P		**Pn**	**22 10 48.6**	**+1.3**	
	baz=221								
MASBT				*e*S		**Sb**	**22 11 21.6**	**-1.6**	
	baz=221								
XPSS	**Dashiqiu**	**2.67**	**322**	*e*P		**Pn**	**22 10 50.2**	**+1.3**	
	baz=316								
XPSS				*e*S		**Sn**	**22 11 22.2**	**+0.8**	
	baz=316								
MAT	**Matsushiro**	**18.13**	**46**	⇑P		**P**	**22 14 19.0**	**+0.9**	
MAT				S		**pP**	**22 14 21.0**	**+0.4**	

*IDC **08** 22:10:26.5±1.9, 7.°05N×60.°10E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/28, mbtmp3.7/6, MS3.2/4, Ms1 3.3/4, ms1mx2.9/37, Error ellipse: s-maj=70.0km s-min=22.5km az=151.0*

ISC 08 22:10:28.1±1.7, 7.°1N±0.°4×60.°1E±0.°2, h10km, n8, σ0§65/6, mb3.8/6, MS3.2/4, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**24.21**	**251**	P		**P**	**22 15 45.0**	**-0.6**
	8.3nm,1.0s,baz=61,slow=9.0,SNR=19							
KMBO				LR		LR	22 24 53.2	
	comp=Z,44nm,19.2s,baz=96,slow=36							
CMAR	**Chiang Mai Arr**	**39.44**	**70**	P		**P**	**22 17 59.1**	**+0.3**
	0.7nm,0.3s,baz=253,slow=9.3,SNR=1.8							
CMAR				LR		LR	22 33 11.6	
	comp=Z,16nm,20.4s,baz=290,slow=35							
MKAR	**Makanchi Array**	**43.92**	**22**	P		**P**	**22 18 34.7**	**-0.4**
	0.5nm,0.9s,baz=201,slow=7.7,SNR=4.6							
BOSA	**Boshof**	**48.86**	**222**	LR		LR	22 38 00.6	
	comp=Z,40nm,18.2s,baz=5.5,slow=34							
ZALV	**Zalesovo Beam**	**50.83**	**19**	P		**P**	**22 19 29.2**	**+0.4**
	0.4nm,0.2s,baz=205,slow=9.4,SNR=4.2							
SONM	**Songino Array**	**56.47**	**36**	P		**P**	**22 20 10.0**	**-0.4**
	0.3nm,0.5s,baz=242,slow=7.7,SNR=4.9							
TORD	**Torodi Ar. Bea**	**57.72**	**281**	P		**P**	**22 20 20.2**	**+0.6**
	0.9nm,1.1s,baz=90,slow=6.5,SNR=3.1							
DBIC	**Dimbokro**	**64.44**	**274**	LR		LR	22 48 40.3	
	comp=Z,36nm,19.6s,baz=7.5,slow=36							

*NEIC **08** 22:19:52.8±1.6, 41.°09N±0.°08×116.°22W±0.°03, h0km, ML2.0/10, Error ellipse: s-maj=13.7km s-min=4.0km az=9.0*

*IDC **08** 22:19:54.9±2.8, 40.°97N×116.°17W, h0km, mb1 2.4/1, mb1mx2.4/34, mbtmp1.9/1, ML1.9/1, Error ellipse: s-maj=28.8km s-min=6.2km az=167.0*

ISC 08 22:19:53.4±2.2, 41.°0N±0.°2×116.°14W±0.°07, h0km, n9, σ0§64/10, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ELK	**Elko**	**0.71**	**107**	Pg		**Pb**	**22 20 09.3**	**+0.4**
	0.4nm,0.3s,baz=274,slow=18,SNR=15							
ELK				Lg		Lg	22 20 18.1	
	0.9nm,0.3s,baz=19,slow=23,SNR=6.3							
ELK	**Elko**	**0.71**	**107**			**Pb**	**22 20 09.4**	**+0.6**
ELK				Sg		**Sb**	**22 20 18.5**	**-0.8**
BGU	**Big Grassy Mou**	**2.35**	**90**	Pn		**Pn**	**22 20 33.5**	**+0.1**
SPR3	**Spring Creek 3**	**2.40**	**144**			**Pn**	**22 20 35.0**	**+0.7**
SPR3				IAML			22 21 08.8	
	comp=N,6.7nm,1.5s							
SPR3				IAML			22 21 32.5	
	comp=E,5.1nm,1.8s							
KVN	**Kaiserville**	**2.43**	**219**	Pn		**Pn**	**22 20 34.9**	**+0.4**
KVN				IAML			22 20 54.7	
	comp=N,4.6nm,3.6s							
KVN				IAML			22 21 21.1	
	comp=E,5.5nm,2.5s							
PSUT	**Pine Spring**	**2.99**	**143**			**Pg**	**22 20 50.2**	**-0.6**
PSUT				IAML			22 21 24.1	
	comp=N,5.8nm,3.0s							
PSUT				IAML			22 21 30.6	
	comp=E,5.6nm,1.4s							
NVAR	**Mina Array Bea**	**3.03**	**214**	Pn		**Pn**	**22 20 43.1**	**+0.3**
	comp=E,0.2nm,0.3s,baz=36,slow=14,SNR=5.3							
NVAR				Pg		**Pg**	**22 20 50.7**	**-0.8**
	comp=E,0.4nm,0.3s,baz=38,slow=16,SNR=6.3							
NVAR				Sn		**Sn**	**22 21 20.2**	**+0.3**
	comp=E,0.4nm,0.3s,baz=34,slow=26,SNR=5.9							
NVAR				Lg		Lg	22 21 30.5	
	comp=E,0.2nm,0.3s,baz=47,slow=30,SNR=1.8							
I56US	**NEWPORT INFRAS**	**7.34**	**355**	*i*			23 04 20.0	
	baz=173,slow=320,SNR=7.1							
I10CA	**LAC DU BONNET**	**16.79**	**50**	*i*			23 59 00.0	
	baz=241,slow=320,SNR=1.4							

*IDC **08** 22:29:20.0±3.5, 6.°01S×149.°31E, h139km±32km, mb3.6/9, mb1 3.7/10, mb1mx3.5/28, mbtmp4.0/10, MS3.5/2, Ms1 3.5/2, ms1mx2.7/26, Error ellipse: s-maj=50.4km s-min=18.4km az=112.0*

ISC 08 22:29:20.8±1.6, 6.°1S±0.°2×149.°2E±0.°4, h150km, n13, σ1§04/12, mb3.9/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.87**	**212**	P		**Pn**	**22 30 19.7**	**+0.4**
	12nm,0.3s,baz=43,slow=6.0,SNR=9.0							
PMG				S		**Sn**	**22 31 03.7**	**-1.1**
	34nm,0.3s,baz=319,slow=20,SNR=10							
WRA	**Warramunga Arr**	**19.96**	**225**	P		**Pn**	**22 33 43.4**	**-1.3**
	1.4nm,0.4s,baz=52,slow=11,SNR=9.7							
ASAR	**Alice Springs**	**22.85**	**219**	P		**P**	**22 34 13.2**	**+1.9**
	0.5nm,0.4s,baz=48,slow=9.7,SNR=12							
FITZ	**Fitzroy Crossi**	**25.92**	**241**	P		**P**	**22 34 39.6**	**+0.5**
	2.5nm,0.5s,baz=52,slow=6.1,SNR=12							
JCJ	**Chichijima**	**33.70**	**349**	LR		LR	22 47 42.0	
	comp=Z,44nm,20.7s,baz=145,slow=33							
JNU	**Nakatsue**	**42.73**	**337**	P		**P**	**22 37 02.2**	**-1.0**
	8.9nm,0.8s,baz=220,slow=1.3,SNR=4.6							
KSRS	**Korea Array**	**47.68**	**337**	P		**P**	**22 37 41.7**	**-0.4**
	1.4nm,0.6s,baz=160,slow=8.2,SNR=4.2							
USRK	**Ussurisk Ar.**	**52.43**	**344**	P		**P**	**22 38 18.2**	**+0.4**
	1.8nm,0.7s,baz=182,slow=7.9,SNR=6.0							
PETK	**Petropavlovsk-**	**59.42**	**6**	P		**P**	**22 39 07.8**	**+0.4**
	2.3nm,0.5s,baz=149,slow=5.9,SNR=2.6							
SONM	**Songino Array**	**65.59**	**330**	P		**P**	**22 39 49.3**	**+0.6**
	0.3nm,0.4s,baz=141,slow=5.9,SNR=4.9							
ILAR	**Eielson Array**	**84.72**	**23**	P		**P**	**22 41 36.6**	**-1.0**
	0.8nm,0.7s,baz=255,slow=5.0,SNR=7.0							
GEYT	**Allbeck**	**94.59**	**308**	LR		LR	23 27 13.8	
	comp=Z,32nm,18.1s,baz=320,slow=37							
TORD	**Torodi Ar. Bea**	**147.26**	**285**	PKPbc		**PKPbc**	**22 48 47.5**	**-0.1**
	0.3nm,0.4s,baz=72,slow=3.2,SNR=5.4							

*VAO **08** 22:39:32.4±0.5, 15.°17S×72.°29W, h10km, mb4.3*

*NEIC **08** 22:39:39.3±2.5, 15.°09S±0.°06×72.°37W±0.°10, h87km±9km, mb4.0/7, Error ellipse: s-maj=16.0km s-min=2.2km az=59.0*

*IDC **08** 22:39:40.6±1.7, 15.°08S×72.°32W, h115km±18km, mb3.2/2, mb1 3.8/9, mb1mx3.5/32, mbtmp4.1/9, MS2.4/1, Ms1 2.4/1, ms1mx2.1/11, Error ellipse: s-maj=32.2km s-min=14.5km az=30.0*

ISC 08 22:39:39.6±0.6, 15.°08S±0.°06×72.°32W±0.°06, h100km, n67, σ1§85/72, mb3.8/4, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AP01	**Chacalluta**	**3.78**	**150**			**Pn**	**22 40 37.4**	**+1.5**
LPAZ	**La Paz**	**4.21**	**107**	P		**Pn**	**22 40 44.7**	**+2.5**
	4.5nm,0.3s,baz=292,slow=10,SNR=114							
LPAZ				S		**Sn**	**22 41 33.5**	**+2.9**
	1.2nm,0.3s,baz=11,slow=23,SNR=3.8							
LPAZ	**La Paz**	**4.21**	**107**	Pn		**Pn**	**22 40 45.0**	**+2.8**
PB16	**IPOC Station P**	**4.21**	**141**			**Pn**	**22 40 44.4**	**+2.2**
MNMC	**Minye Minye**	**4.80**	**147**	Pn		**Pn**	**22 40 50.4**	**+0.5**
PSGCX	**Pisagua**	**4.96**	**155**	Pn		**Pn**	**22 40 51.7**	**-0.2**
PB11	**IPOC Station P**	**5.30**	**152**			**Pn**	**22 40 56.3**	**-0.4**
NNA	**Nana**	**5.37**	**304**	P		**Pn**	**22 40 57.6**	**+0.2**
	61nm,0.3s,baz=128,slow=11,SNR=66							
NNA				S		**Sn**	**22 41 54.7**	**-3.2**
	9.7nm,0.3s,baz=268,slow=21,SNR=5.3							
NNA	**Nana**	**5.37**	**304**			**Pn**	**22 40 57.3**	**0.0**
TA01	**Diego Aracena**	**5.82**	**160**	Pn		**Pn**	**22 41 02.6**	**-0.9**
PB08	**IPOC Station P**	**5.87**	**149**			**Pn**	**22 41 04.8**	**+0.3**
PB01	**IPOC Station P**	**6.51**	**156**			**Pn**	**22 41 11.9**	**-1.1**
PB07	**IPOC Station P**	**7.00**	**161**			**Pn**	**22 41 18.8**	**-0.9**
PB09	**IPOC Station P**	**7.29**	**157**			**Pn**	**22 41 23.4**	**-0.2**
CZSB	**Cruzeiro do Su**	**7.31**	**357**	*e*P		**Pn**	**22 41 21.4**	**-2.4**
PB04	**IPOC Station P**	**7.50**	**164**	Pn		**Pn**	**22 41 24.7**	**-1.8**
LVC	**Limon Verde**	**8.16**	**157**	P		**Pn**	**22 41 35.1**	**-0.4**
	1.9nm,0.3s,baz=359,slow=11,SNR=13							
LVC				S		**Sn**	**22 43 01.9**	**-4.4**
	1.9nm,0.3s,baz=72,slow=21,SNR=12							
LVC				LR		LR	22 44 52.2	
	comp=Z,31nm,21.7s,baz=322,slow=38							
LVC	**Limon Verde**	**8.16**	**157**	Pn		**Pn**	**22 41 35.0**	**-0.6**
ATAH	**Atahualpa**	**9.89**	**322**	P		**Pn**	**22 42 01.1**	**+1.9**
	0.4nm,0.3s,baz=126,slow=14,SNR=2.5							
ATAH				S		**Sn**	**22 43 45.8**	**-2.9**
	0.2nm,0.3s,baz=128,slow=19,SNR=1.7							
GO02	**Mina Guanaco**	**10.35**	**166**	Pn		**Pn**	**22 42 03.9**	**-1.5**
SAML	**Samuel**	**10.81**	**57**			**Pn**	**22 42 09.0**	**-2.5**
SAML	**Samuel**	**10.81**	**57**	*e*P		**Pn**	**22 42 08.3**	**-3.1**
SIV	**San Ignacio**	**10.88**	**96**	P		**Pn**	**22 42 11.3**	**-1.1**
	0.8nm,0.3s,baz=286,slow=11,SNR=18							
SIV				S		**Sn**	**22 44 07.6**	**-4.5**
	0.0nm,0.3s,baz=302,slow=19,SNR=4.5							
VILB	**Vilhena**	**11.95**	**81**	*e*P		**Pn**	**22 42 24.1**	**-2.7**
PTLB	**Pontes e Lacer**	**12.73**	**93**	*e*P		**Pn**	**22 42 34.5**	**-2.5**
CO03	**El Pedregal**	**15.76**	**175**			**Pn**	**22 43 15.5**	**-0.5**
OTAV	**Otavalo**	**16.38**	**338**	*e*P		**Pn**	**22 43 24.2**	**0.0**
MACA	**Manacapuru-AM**	**16.49**	**45**	*e*P		**Pn**	**22 43 24.2**	**-0.8**
CLDB	**Colider**	**16.63**	**77**	*e*P		**Pn**	**22 43 25.2**	**-1.7**
CPUP	**Villa Florida**	**17.92**	**131**	P		**P**	**22 43 41.7**	**0.0**
	0.4nm,0.3s,baz=307,slow=10,SNR=12							
CPUP	**Villa Florida**	**17.92**	**131**	P		**Pn**	**22 43 42.3**	**-0.1**
CPUP				IAmb		IAmb	22 43 43.3	
	comp=Z,7.7nm,0.9s							
CPUP	**Villa Florida**	**17.92**	**131**	*e*P		**P**	**22 43 42.1**	**+0.4**
NPGB	**Novo Progresso**	**18.45**	**66**	*e*P		**P**	**22 43 48.1**	**+0.5**
PTGA	**Pitinga**	**18.77**	**42**	P		**P**	**22 43 49.9**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=224,slow=14,SNR=12							
PTGA	**Pitinga**	**18.77**	**42**	P		**P**	**22 43 51.3**	**+0.2**
PTGA				IAmb		IAmb	22 44 06.2	
	comp=Z,7.7nm,0.8s							
PTGA	**Pitinga**	**18.77**	**42**	*e*P		**P**	**22 43 51.7**	**+0.7**
ITTB	**Itaituba**	**19.49**	**59**	*e*P		**P**	**22 43 58.0**	**-0.9**
BO02	**Sierra Bellavi**	**19.68**	**176**	P		**Pn**	**22 44 01.9**	**-1.3**
BO02				IAmb		IAmb	22 44

TNTI S **Sn** **22 43 31.2 -0.6**
SANI Sanana 3.73 184 P **Pn** **22 43 46.0 +0.1**
SANI S **Sn** **22 44 29.3 +0.7**
LUWI Luwuk 4.44 232 Pn **Pn** **22 43 56.5 +0.9**
LUWI Luwuk 4.44 232 P Pn 22 44 01.0 +5.4
LUWI S Sn 22 44 59.5 +14
DAV Davao City (W) 5.38 353 Sn **Sn** **22 45 11.3 +2.0**
49nm,0.3s,baz=270,slow=20,SNR=1.6
KCP Kidapawan 5.41 347⇑*eP* **Pn** **22 44 10.9 +1.9**
KCP *i* S **Sn** **22 45 13.5 +3.5**
SIJI Sorong 5.60 117 Pn **Pn** **22 44 14.5 +2.9**
0.8nm,0.3s,baz=260,slow=12,SNR=2.2
SIJI LR LR 22 46 28.8
comp=Z,288nm,21.1s,baz=308,slow=39
FAKI Fak Fak 7.53 128 Pn **Pn** **22 44 38.3 +0.3**
MYLDM Lahad Datu 8.50 294 **Pn** **22 44 51.2 -0.1**
KAPI Kappang 9.32 224 Pn **Pn** **22 45 05.3 +2.7**
5.3nm,0.3s,baz=48,slow=9.8,SNR=6.1
KAPI Kappang 9.32 224 **Pn** **22 45 03.4 +0.8**
KKM Kota Kinabalu 10.93 294 Pn **Pn** **22 45 24.9 +0.3**
SOEI Soe 11.55 190 Pn **Pn** **22 45 32.9 -0.3**
PLAI Plampang 13.46 219 P P 22 46 13.2 +5.9
SBUM Sibu 14.07 273 **Pn** **22 46 07.8 +0.3**
MTN Manton Dam 15.23 162 Pn **Pn** **22 46 22.9 +0.1**
JAGI Jajag, Banyuwa 15.75 230 **Pn** **22 46 29.6 0.0**
JAGI IAmb IAmb 22 46 45.9
comp=Z,39nm,1.1s
FITZ Fitzroy Crossi 19.68 182 P **P** **22 47 16.3 +0.2**
comp=Z,0.7nm,0.3s,baz=14,slow=9.9,SNR=14
FITZ Fitzroy Crossi 19.68 182 P **P** **22 47 16.2 +0.2**
LEM Lembang 20.46 245 LR LR 22 55 18.8
comp=Z,61nm,21.2s,baz=30,slow=37
YULB Yu-li 22.10 348 P **P** **22 47 39.3 -2.9**
YULB IAmb IAmb 22 47 47.2
comp=Z,27nm,1.1s
SSLB Suanglung 22.56 347 P **P** **22 47 45.1 -2.1**
SSLB IAmb IAmb 22 47 54.0
comp=Z,17nm,0.8s
WB0 Warramunga Arr 22.77 160 P **P** **22 47 48.4 -1.0**
WB0 IAmb IAmb 22 47 55.7
comp=Z,19nm,0.7s
COEN Coen 22.86 133 P **P** **22 47 50.7 +0.4**
WRA Warramunga Arr 22.91 160 P **P** **22 47 50.3 -0.5**
comp=Z,13nm,0.5s,baz=338,slow=11,SNR=58
WRA PcP **PcP** **22 51 41.2 +1.0**
comp=Z,0.3nm,0.4s,baz=340,slow=2.0,SNR=1.8
WRA S **S** **22 51 56.2 -1.3**
comp=Z,0.8nm,0.7s,baz=346,slow=17,SNR=3.0
WRA Warramunga Arr 22.91 160 P **P** **22 47 50.2 -0.6**
WB2 Warramunga Arr 22.92 160 P **P** **22 47 50.3 -0.6**
WB2 IAmb IAmb 22 47 54.4
comp=Z,19nm,0.6s
QIZ Qiongzhong 23.58 318 P **P** **22 47 57.0 -0.4**
QIZ IAmb IAmb 22 48 00.8
comp=Z,19nm,0.9s
PSA00 Pilbara Seismi 23.97 195 P **P** **22 48 00.7 -0.2**
PSA00 IAmb IAmb 22 48 19.7
comp=Z,23nm,1.2s
JOW Kunigami 25.07 4 P **P** **22 48 12.0 +1.1**
comp=Z,19nm,0.6s,baz=162,slow=9.6,SNR=2.7
JOW Kunigami 25.07 4 P **P** **22 48 10.7 -0.2**
JOW IAmb IAmb 22 48 16.4
comp=Z,45nm,1.2s
AS31 Alice Springs 26.28 164 **P** **22 48 22.4 +0.4**
ASAR Alice Springs 26.28 164 P **P** **22 48 22.4 +0.5**
comp=Z,4.2nm,0.4s,baz=345,slow=8.2,SNR=100
ASAR PcP **PcP** **22 51 48.5 +0.9**
comp=Z,1.1nm,0.4s,baz=347,slow=2.3,SNR=6.2
ASAR Alice Springs 26.28 164 **P** **22 48 22.0 0.0**
GIRL Giralia 26.89 205 P **P** **22 48 27.3 -0.1**
RPSI Rantau Prapat 27.35 273 P **P** **22 48 31.8 +0.1**
PSI Prapat 27.35 273 P **P** **22 48 31.8 -0.1**
comp=Z,3.5nm,0.4s,baz=354,slow=1.2,SNR=3.6
PSI LR LR 23 00 38.5
comp=Z,112nm,18.5s,baz=80,slow=39
GSI Gunungsitoli 28.69 270 P **P** **22 48 42.6 -1.2**
GSI IAmb IAmb 22 48 45.8
comp=Z,18nm,1.0s
CTA Charters Tower 29.20 139 LR LR 23 02 11.4
comp=Z,230nm,21.4s,baz=84,slow=40
JCJ Chichijima 29.51 30 P **P** **22 48 51.2 +0.4**
comp=Z,40nm,0.7s,baz=237,slow=17,SNR=3.2
JCJ Chichijima 29.51 30 P **P** **22 48 50.2 -0.6**
NJ2 Nanjing 30.99 348 *eP* **P** **22 49 04.8 +1.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
CMAR Chiang Mai Arr 31.56 304 P **P** **22 49 08.8 -0.2**
comp=Z,0.8nm,0.3s,baz=112,slow=6.4,SNR=8.5
CMAR LR LR 23 02 25.7
comp=Z,26nm,20.2s,baz=95,slow=38
MORW Morawa 32.12 197 P **P** **22 49 14.0 +0.2**
FORT Forrest 32.34 177 P **P** **22 49 16.4 +0.8**
KMI Kunming 32.53 318 ⇑P **P** **22 49 18.8 +1.1**
KMI pP pP 22 49 28.4 -1.3
KMI pmax pmax
comp=Z,8.0nm,0.5s
KMI pmax pmax
comp=Z,91nm,4.7s
ENH Enshi 32.58 332 P **P** **22 49 16.8 -1.0**
JWT Wachi 34.48 13 P **P** **22 49 34.5 +0.3**
NWAO Narrogin (SRO) 35.48 193 P **P** **22 49 43.9 +1.0**
NWAO IAmb IAmb 22 49 51.4
comp=Z,21nm,1.3s
BBOO Buckleboo 35.55 166 P **P** **22 49 44.1 +0.6**
BBOO IAmb IAmb 22 49 46.9
comp=Z,9.6nm,0.7s
KSRS Korea Array 35.62 2 P **P** **22 49 45.4 +1.4**
comp=Z,1.6nm,0.6s,baz=183,slow=10,SNR=6.3
XAN Xi'an 36.04 335 P **P** **22 49 46.8 -1.0**
XAN pP sP 22 50 08.3 +3.1
XAN pmax pmax
comp=Z,15nm,1.0s
XAN Xi'an 36.04 335 P **P** **22 49 47.3 -0.5**
XAN IAmb IAmb 22 49 49.5
comp=Z,9.2nm,0.9s
MJAR Matsushiro Arr 36.39 16 P **P** **22 49 51.2 +0.5**
comp=Z,2.4nm,0.9s,baz=183,slow=9.7,SNR=4.3
MAT Matsushiro 36.39 16 P **P** **22 49 51.6 +0.9**
STKA Stephens Creek 36.42 158 P **P** **22 49 51.4 +0.4**
comp=Z,2.6nm,0.4s,baz=337,slow=8.4,SNR=9.9
STKA Stephens Creek 36.42 158 P **P** **22 49 51.3 +0.4**
JMM Marumori 38.39 19 P **P** **22 50 06.5 -1.1**
BJI Beijing 39.26 348 P **P** **22 50 12.2 -2.6**
BJI pmax pmax
comp=Z,5.0nm,0.6s
BJI pmax pmax
comp=Z,74nm,3.5s
LZH Lanzhou 40.04 331 *eP* **P** **22 50 21.8 +0.2**
LZH pP sP 22 50 39.5 +0.3
LZH sP pwP 22 50 46.1 +12
LZH pmax pmax
comp=Z,18nm,1.1s
ARMA Armidale 40.05 145 P **P** **22 50 22.8 +1.0**
ARMA IAmb IAmb 22 50 31.4
comp=Z,22nm,1.4s
SHL Shillong 40.75 309 P **P** **22 50 26.9 -0.7**
SHL IAmb IAmb 22 50 29.6
comp=Z,8.8nm,0.6s
HHC Hu-ho-hao-te 41.19 343 *eP* **P** **22 50 31.3 +0.4**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,79nm,7.6s
CAN Canberra 42.52 152 P **P** **22 50 42.1 +0.3**
USA0B Ussuriysk Arra 42.62 6 P **P** **22 50 42.4 0.0**
USRK Ussuriysk Ar. 42.62 6 P **P** **22 50 42.9 +0.5**
comp=Z,1.3nm,0.6s,baz=165,slow=7.1,SNR=5.5
USRK Ussuriysk Ar. 42.62 6 P **P** **22 50 42.7 +0.3**
H11S3 WAKE ISLAND Hy 42.98 64 T T 23 37 47.7
baz=253,slow=74
H11S2 WAKE ISLAND Hy 43.00 64 T T 23 37 42.9
baz=253,slow=74
H11S1 WAKE ISLAND Hy 43.00 64 T T 23 37 52.8
baz=253
LSA Lhasa 43.47 313 P **P** **22 50 49.8 -0.2**
H11N1 WAKE ISLAND Hy 43.55 63 T T 23 38 35.2
baz=250
H11N2 WAKE ISLAND Hy 43.57 63 T T 23 38 19.8
baz=250
H11N3 WAKE ISLAND Hy 43.57 63 T T 23 38 45.1
baz=250
GTA Gaotai 44.62 331 ⇑P **P** **22 50 58.5 -0.3**
GTA pP pP 22 51 09.1 -2.0
GTA sP sP 22 51 13.6 -2.9
GTA PcP **PP** **22 52 44.6 +1.0**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,130nm,6.5s
GTA LR LR
comp=N,150nm,17.8s
GTA LR LR
comp=E,120nm,18.2s
GTA LR LR
comp=Z,120nm,17.1s
ASAJ Asahikawa 44.66 17 P **P** **22 50 60.0 +1.2**
comp=Z,3.4nm,0.6s,baz=252,slow=9.3,SNR=1.4
JKA Kamikawa-asahi 44.66 17 P **P** **22 50 58.7 -0.1**
TAPN Taplejung 44.88 308 *eP* **P** **22 51 00.6 -0.7**
ODAN Odare 44.91 307 *eP* **P** **22 51 01.0 -0.4**
RAMN Ramite 45.57 307 *eP* **P** **22 51 06.4 -0.3**
comp=Z,15nm,0.9s
PALK Pallekele 45.75 278 P **P** **22 51 07.9 -0.1**
PALK IAmb IAmb 22 51 14.6
comp=Z,24nm,1.4s
JIRN Jiri 46.22 308 *eP* **P** **22 51 11.0 -0.9**
comp=Z,38nm,1.1s
GUN Gumba 46.58 308 *eP* **P** **22 51 13.7 -1.0**
comp=Z,31nm,0.8s
PKI Pulchoki 46.80 307 *eP* **P** **22 51 15.5 -0.9**
PKIN Phulchoki 46.81 307 *eP* **P** **22 51 15.7 -0.8**
comp=Z,4.5nm,0.4s
KKN Kakani 47.00 307 *eP* **P** **22 51 17.0 -0.9**
comp=Z,6.8nm,0.5s
DMN Daman 47.06 307 *eP* **P** **22 51 17.4 -1.0**
comp=Z,19nm,0.9s
GKN Gorkha 47.60 307 *eP* **P** **22 51 21.3 -1.2**
comp=Z,25nm,1.0s
HIA Hailar 47.72 354 P **P** **22 51 23.5 +0.6**
HIA IAmb IAmb 22 51 26.8
comp=Z,4.5nm,0.9s
KOLN Koldanda 48.33 306 *eP* **P** **22 51 27.6 -0.6**
comp=Z,29nm,0.6s
ULN Ulaanbaatar 48.91 343 P **P** **22 51 31.7 -0.5**
ULN IAmb IAmb 22 51 35.7
comp=Z,5.5nm,0.9s
PYUN Piuthan 48.96 307 *eP* **P** **22 51 32.5 -0.5**
comp=Z,21nm,0.5s
SONM Songino Array 49.08 342 P **P** **22 51 33.0 -0.5**
comp=Z,2.6nm,0.8s,baz=155,slow=7.7,SNR=17
SONM PcP **PcP** **22 52 57.1 +0.5**
comp=Z,0.9nm,0.6s,baz=158,slow=4.4,SNR=5.3
SONM LR LR 23 16 37.1
comp=Z,52nm,18.2s,baz=166,slow=42
SONM Songino Array 49.08 342 P **P** **22 51 32.8 -0.7**
WMQ Urumqi 54.13 326 *eP* **P** **22 52 12.2 +0.9**
WMQ pP pP 22 52 22.9 -1.0
WMQ sP sP 22 52 31.0 +1.8
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ pmax pmax
comp=Z,200nm,6.5s
WMQ Urumqi 54.13 326 P **P** **22 52 11.3 0.0**
NIL Nilore 58.82 309 P **P** **22 52 44.0 -0.8**
NIL IAmb IAmb 22 52 47.4
comp=Z,12nm,1.4s
MK31 Makanchi Array 58.97 326 P **P** **22 52 44.9 -0.7**
MKAR Makanchi Array 58.97 326 P **P** **22 52 44.8 -0.8**
comp=Z,8.6nm,0.6s,baz=123,slow=8.1,SNR=56
MKAR Makanchi Array 58.97 326 P **P** **22 52 45.0 -0.6**
MAKZ Makanchi 59.15 326 P **P** **22 52 46.1 -0.7**
KSH Kashi 59.17 316 P **P** **22 52 49.6 +2.4**
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH pmax pmax
comp=Z,160nm,7.4s
LBZ Lake Benmore 60.27 145 P **P** **22 52 54.7 +0.2**
TUWZ Tuamarina 60.87 140 P **P** **22 52 58.7 +0.1**
TKM2 Tokmak 2 60.97 319 P **P** **22 52 59.9 +0.3**
SNR=6.0
UCH Uchtor 61.37 318 P **P** **22 53 02.9 +0.3**
SNR=11
AAK Ala-Archa 61.56 319 P **P** **22 53 03.1 -0.4**
AAK IAmb IAmb 22 53 07.3
comp=Z,5.1nm,1.1s
USP Ospenovka 61.85 319 P **P** **22 53 04.7 -0.6**
SNR=12
AML Almayashu 61.87 318 P **P** **22 53 05.9 0.0**
SNR=9.2
EKS2 Erkin-Say 62.05 319 P **P** **22 53 06.8 0.0**
SNR=6.0
ZAA0 Zalesovo Array 62.19 334 P **P** **22 53 06.8 -0.5**
ZALV Zalesovo Beam 62.19 334 P **P** **22 53 05.5 -1.8**
comp=Z,1.7nm,0.4s,baz=135,slow=6.9,SNR=12
ZALV Zalesovo Beam 62.19 334 P **P** **22 53 05.7 -1.6**
KBL Kabul 62.41 308 P **P** **22 53 08.8 -0.6**
KBL IAmb IAmb 22 53 12.0
comp=Z,6.4nm,0.9s
GAR Garm 62.97 314 P **P** **22 53 11.9 -1.1**
KK31 Karatay Array 64.41 318 P **P** **22 53 21.4 -0.9**
KK31 IAmb IAmb 22 53 25.3
comp=Z,6.7nm,1.3s
KKAR Karatay Array 64.41 318 P **P** **22 53 21.1 -1.2**
KKAR Karatay Array 64.41 318 P **P** **22 53 21.3 -1.0**
KKAR IAmb IAmb 22 53 25.3
comp=Z,6.7nm,1.3s
BRVK Borovoye 68.85 328 P **P** **22 53 49.1 -1.2**
BRVK IAmb IAmb 22 53 52.3
comp=Z,5.1nm,0.8s
TIXI Tiksi 69.87 1 P **P** **22 53 55.4 -0.8**
GEYT Alibeck 71.82 309 P **P** **22 54 09.2 +0.3**
comp=Z,3.0nm,0.9s,baz=126,slow=4.6,SNR=4.7
GEYT Alibeck 71.82 309 P **P** **22 54 06.8 -2.0**
NRIK Noril'sk 72.28 347 P **P** **22 54 11.3 +0.4**
comp=Z,8.4nm,0.6s,baz=128,slow=8.1,SNR=13
NRIK Noril'sk 72.28 347 P **P** **22 54 09.9 -1.1**
NRIK IAmb IAmb 22 54 14.3
comp=Z,9.0nm,0.7s
SOCY Socotra 72.33 282 P **P** **22 54 10.1 -2.3**
SOCY IAmb IAmb 22 54 14.3
comp=Z,7.5nm,0.8s
ABKAR Akbulak array 73.43 321 P **P** **22 54 17.5 -0.6**
ABKAR Akbulak array 73.43 321 P **P** **22 54 17.5 -0.6**
ARU Arti 76.41 328 P **P** **22 54 34.6 -0.5**
ARU IAmb IAmb 22 54 37.4
comp=Z,7.4nm,0.7s
RAYN Ar Rayn 80.86 293 P **P** **22 54 59.7 -0.7**
VNDA Vanda 81.48 173 P **P** **22 55 03.8 +1.2**
comp=Z,1.3nm,0.5s,baz=322,slow=6.2,SNR=14
VNDA Vanda 81.48 173 P **P** **22 55 03.7 +1.2**
KBZ Khabaz 84.04 314 P **P** **22 55 17.8 +1.3**
comp=Z,1.7nm,0.8s,baz=101,slow=6.0,SNR=4.2
IMAR Indian Mountai 84.37 24 P **P** **22 55 19.1 +1.3**
CNPM China Poot 84.73 30 P **P** **22 55 20.3 +0.6**
SKT Skwentna 84.83 28 P **P** **22 55 20.5 +0.3**
SKT IAmb IAmb 22 55 22.2
comp=Z,5.5nm,1.2s
SUA Susitna One 85.15 29 P **P** **22 55 23.1 +1.1**
SUA IAmb IAmb 22 55 25.7
comp=Z,12nm,1.4s
RND Reindeer 86.19 27 P **P** **22 55 28.0 +1.1**
TOLK Toolik Lake Re 86.29 21 P **P** **22 55 28.5 +1.1**
TOLK IAmb IAmb 22 55 38.9
comp=Z,5.5nm,1.5s
KLMR Klimovskoe 86.94 331 *eP* **P** **22 55 29.0 -1.6**
KLMR AMP 22 55 33.9
comp=Z,11nm,0.7s
ILAR Eielson Array 87.12 25 P **P** **22 55 30.9 -0.6**
comp=Z,0.2nm,0.6s,baz=246,slow=4.1,SNR=4.2
KMBO Kilima Mbogo 89.06 269 P **P** **22 55 43.4 +1.4**
comp=Z,2.1nm,0.8s,baz=62,slow=7.7,SNR=6.4
BCAR Beaver Creek A 89.38 27 P **P** **22 55 43.3 +1.1**
SYO Syowa Base 90.38 201⇑*eX* P 22 55 55.4 +8.8
BRTR Keskin Array B 90.96 310 P **P** **22 55 49.4 -0.8**
comp=Z,1.6nm,0.7s,baz=132,slow=2.5,SNR=4.5
ARCES ARCESS Array B 92.19 340 P **P** **22 55 55.8 +0.7**
comp=Z,3.7nm,0.9s,baz=83,slow=7.4,SNR=4.9
AKASG Malin Array Be 93.17 321 P **P** **22 55 59.3 -0.7**
comp=Z,0.9nm,0.5s,baz=64,slow=5.0,SNR=1.8
FINES FINESS Array B 93.40 332 P **P** **22 56 02.0 +1.3**
comp=Z,2.7nm,0.9s,baz=64,slow=6.6,SNR=5.1
BURAR Bucovina Array 96.20 318 P **P** **22 56 14.3 +0.2**
BUR08 Bucovina Ar. S 96.21 318 P **P** **22 56 14.0 -0.2**
BUR08 IAmb IAmb 22 56 20.1
comp=Z,2.4nm,0.8s
TORD Torodi Ar. Bea 123.09 287 PKP **PKiKP** **23 01 43.8 +0.4**
comp=Z,1.5nm,0.7s,baz=76,slow=0.9,SNR=8.4
TXAR Lajitas Array 123.19 53 PKP **PKiKP** **23 01 44.2 +0.7**
comp=Z,0.1nm,0.4s,baz=290,slow=2.1,SNR=1.8

*ECX **08** 22:52:52.9±0.6, 32°.36N×115°.21W, h8km±2km, MD2.0, ML2.2*
*MEX **08** 22:52:52.8±0.3, 32°.51N×115°.06W, h5km, MD3.6*
ISC 08 22:52:54.0±0.9, 32°.36N±0'.04×115°.26W±0'.04, h9km±7km, n15, σ1§40/22, 1C-3D, California-Baja California border region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CPBX Cerro Prieto 0.07 328 *eP* **Pg** **22 52 57.2 +1.1**
CPBX ⇓*e* 22 52 59.6
CPBX IAML 22 52 59.6
comp=N,4μm,0.2s
MBIG Mexicali 0.07 49 *i* P **Pg** **22 52 55.6 -0.5**
MBIG *i* S **Sg** **22 52 57.8 +0.1**
MBIG Mexicali 0.07 49⇓*eP* **Pg** **22 52 55.2 -0.9**
MBIG *i* S **Sg** **22 52 57.8 +0.1**
CTLX Tlaxcala, TLX 0.15 41 *eP* **Pg** **22 52 58.1 +0.8**
CTLX *i* S **Sg** **22 53 01.7 +2.1**
EMSC East Mesa 0.44 32 *eP* **Pb** **22 53 03.5 -0.6**
SGL Mount Signal 0.49 306 *eP* **Pb** **22 53 04.5 -0.2**
COA Coachella 0.52 13 *eP* **Pb** **22 53 04.6 -0.6**
RMX La Rumorosa 0.73 289 *eP* **Pg** **22 53 08.2 0.0**
IKP In-Ko-Pah, Jac 0.77 292 *eP* **Pg** **22 53 09.8 +0.1**
SJX San Joaquin 0.84 225 *eP* **Pg** **22 53 09.1 -1.1**
SJX *eS* **Sg** **22 53 19.1 -2.1**
SJX ⇓*e* 22 53 19.5
SJX IAML 22 53 19.5
comp=E,151nm,0.1s
CBX Cerro Bola 1.19 268 *eP* **Pn** **22 53 17.2 +0.3**
CBX *eS* **Sn** **22 53 34.2 +1.0**
CBX ⇑*e* 22 53 36.1
CBX IAML 22 53 36.1
comp=N,29nm,0.4s
TJIG Tijuana 1.20 274 *eP* **Pn** **22 53 15.1 -1.8**
TJIG *eS* **Sb** **22 53 32.5 0.0**
BAR Barrett 1.23 285 *eP* **Pg** **22 53 17.9 +0.2**
SPIG San Pedro Mart 1.32 188 *eP* **Pg** **22 53 21.1 +1.7**
SPIG *eS* **Sn** **22 53 40.1 +3.3**
214A Organ Pipe Nat 2.12 100 *i* P **Pn** **22 53 27.7 -1.9**

IDC 08 23:03:29.9±2.8, 1°.54S×135°.65E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.5/29, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=100.5km s-min=26.6km az=83.0, Irian Jaya region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 18.33 184 P Pn 23 07 45.5 -0.3
0.2nm,0.3s,baz=5.5,slow=12,SNR=6.1
FITZ Fitzroy Crossi 19.16 210 P P 23 07 54.8 -0.3
0.2nm,0.3s,baz=30,slow=9.8,SNR=1.7
ASAR Alice Springs 22.06 184 P P 23 08 26.7 +0.1
1.6nm,0.7s,baz=9.6,slow=11,SNR=21
MKAR Makanchi Array 67.01 323 P P 23 14 24.9 +0.1
0.3nm,0.5s,baz=115,slow=6.9,SNR=5.5

*NOU **08** 23:24:32.2, 41°.90S×171°.68E, h7km, MLv3.8, South Island, New Zealand*
WEL 08 23:24:32.3, 42°.5S±1°×17°.2E±°, h10km±3km, M3.5/18, ML3.7/18, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=97.7, South Island

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DSZ Denniston Nort 0.16 353 P Pb 23 24 36.8 -0.6
DSZ S Sg 23 24 39.8 +1.4
THZ Tophouse 0.82 80 P Pg 23 24 47.7 -0.4
THZ S Sg 23 24 58.8 +0.1
INZ Inchbonnie 0.87 199 P Pg 23 24 49.0 0.0
INZ S Sg 23 25 00.4 +0.1
LTZ Lake Taylor 0.93 160 P Pg 23 24 50.2 -0.1
QRZ Quartz Range 1.20 26 P Pb 23 24 54.8 -0.3
QRZ S Sg 23 25 11.0 0.0
NNZ Nelson 1.35 60 P Pn 23 24 57.2 0.0
KHZ Kahutara 1.37 112 P Pg 23 24 58.4 -0.2
KHZ S Sg 23 25 16.6 +0.2
GVZ Greta Valley S 1.38 140 P Pb 23 24 58.3 0.0
AMCZ Amberley 1.41 155 P Pb 23 24 58.8 +0.2
WVZ Waitaha Valley 1.42 214 P Pn 23 24 58.2 0.0
WVZ S Sg 23 25 17.6 -0.4
OXZ Oxford 1.43 174 P Pn 23 24 58.3 +0.1
OXZ S Sg 23 25 17.8 -0.4
BSWZ Blackbirch Sta 1.54 84 P Pb 23 25 01.4 +0.4
BSWZ S Sg 23 25 23.1 +1.3
TUWZ Tuamarina 1.65 74 P Pb 23 25 02.5 -0.4
TUWZ S Sg 23 25 24.6 -0.8
CMWZ Cape Campbell 1.79 86 P Pg 23 25 06.4 -0.2
CMWZ S Sg 23 25 32.9 +3.1
GCSZ Gaunt Creek Bo 1.79 218 P Pn 23 25 03.3 -0.1
RACZ Rakaia 1.83 173 P Pn 23 25 04.3 +0.4
RPZ Rata Peaks 1.90 197 P Pn 23 25 05.3 +0.6
MQZ McQueen's Vall 1.90 162 P Pn 23 25 04.4 -0.3
MQZ S Sn 23 25 27.3 -1.4
DUWZ D'Urville Isla 1.92 56 P Pb 23 25 06.8 -0.7
TCW Tory Channel 1.96 70 P Pb 23 25 07.6 -0.5
OKCZ Okains Bay 2.03 154 P Pn 23 25 06.9 +0.3
WACZ Wakanui South 2.03 180 P Pn 23 25 07.3 +0.7
ARCZ Arundel 2.10 193 P Pn 23 25 07.3 -0.2
AKCZ Akaroa Harbour 2.12 158 P Pn 23 25 07.9 +0.1
FOZ Fox Glacier 2.20 222 P Pn 23 25 08.8 -0.1
BHW Baring Head 2.33 79 P Pn 23 25 12.3 +1.6
KIW Kapiti Island 2.54 67 P Pb 23 25 16.1 -1.9
TMZ Timaru 2.55 193 P Pn 23 25 13.3 -0.4
CAW Cannon Point 2.56 73 P Pn 23 25 15.2 +1.4
PLWZ Palliser 2.58 84 P Pn 23 25 14.8 +0.6
MSWZ Moikau Station 2.61 80 P Pn 23 25 15.2 +0.6
PAWZ Paruwai Farm 2.75 80 P Pn 23 25 19.2 -2.3
LBZ Lake Benmore 2.75 205 P Pn 23 25 16.8 +0.2
MTW Mount Morrison 2.85 76 P Pn 23 25 18.2 +0.3
HOWZ Holdsworth Sta 2.95 71 P Pn 23 25 21.2 +2.0
NBEZ Newall Road No 3.06 31 P Pb 23 25 24.4 -2.5
MRZ Mangatainoka R 3.09 67 P Pn 23 25 23.3 +2.2
KHEZ Kahui Hut 3.09 33 P Pn 23 25 23.1 +1.9
JCZ Jackson Bay 3.11 225 P Pn 23 25 21.1 -0.4
PREZ Palmer Road 3.12 35 P Pn 23 25 23.7 +2.2
PKE Pukeiti 3.17 32 P Pn 23 25 24.0 +1.7
ODZ Otahua Downs 3.25 195 P Pn 23 25 23.0 -0.4
BFZ Birch Farm 3.54 71 P Pn 23 25 29.1 +1.7
VRZ Vera Road 3.56 40 P Pn 23 25 30.3 +2.6
WKZ Wanaka 3.57 214 P Pn 23 25 30.6 +2.8
MSZ Milford Sound 3.97 225 P Pn 23 25 33.3 +0.1
SNVZ South Ngauruho 3.98 48 P Pn 23 25 37.0 +3.5
NNVZ North Ngauruho 4.00 47 P Pn 23 25 37.8 +4.0
OTVZ Oturere 4.01 48 P Pn 23 25 36.9 +3.0
BHHZ Black Hill Sta 4.02 54 P Pn 23 25 37.7 +3.7
NTVZ North Tongarir 4.06 48 P Pb 23 25 40.0 -3.9
HIZ Hauiti 4.11 35 P Pn 23 25 35.8 +0.7
KWHZ Kaweka Forest 4.28 56 P Pb 23 25 44.2 -3.5
MLZ Mavora Lakes 4.38 217 P Pn 23 25 40.2 +1.3
RTZ Ruatahuna 5.13 52 P Pn 23 25 53.5 +4.3

*TAP **08** 23:40:02.9, 25°.06N×122°.54E, h169km, ML3.4, C*
*JMA **08** 23:40:03.2±0.3, 25°.04N×122°.52E, h161km±3km, M2.7*
ISC 08 23:40:03.8±2.3, 25°.00N±0'.08×122°.55E±0'.03, h160km±13km, n50, σ0§65/95, Taiwan region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TWB1 Santiao Chiao 0.51 272 *eP* **Pn** **23 40 26.1 -0.2**
baz=262
TWB1 *eS* **Sn** **23 40 43.2 -0.3**
baz=262
JYNG Yonagunijimaku 0.65 146 P **Pn** **23 40 27.2 +0.1**
TIPB Shuangxi 0.66 268 *eP* **Pn** **23 40 27.0 -0.2**
baz=250
TIPB S **Sn** **23 40 44.8 -0.3**
baz=250
YOJ Yonaguni jima 0.68 141 P **Pn** **23 40 27.2 -0.1**
TWC Suao 0.74 239 P **Pn** **23 40 27.6 0.0**
baz=229
TWC *eS* **Sn** **23 40 45.4 -0.4**
baz=229
NDS Dongshan 0.84 245 P **Pn** **23 40 28.6 +0.3**
baz=236
NDS *eS* **Sn** **23 40 47.9 +0.8**
baz=236
TWE Neicheng 0.84 251 *eP* **Pn** **23 40 28.9 +0.5**

TWE				*e*S		**Sn**	**23 40 47.4 +0.3**
	baz=252						
EWUT	**Wuta**	**0.89**	**232**	*e*P		**Pn**	**23 40 28.9 +0.2**
	baz=252						
EWUT				S		**Sn**	**23 40 47.9 +0.2**
	baz=224						
YM01	**YM01**	**0.90**	**280**	*e*P		**Pn**	**23 40 28.2 -0.6**
	baz=268						
YM01				*e*S		**Sn**	**23 40 48.1 +0.2**
	baz=268						
YM10	**YM10**	**0.91**	**280**	*e*S		**Sn**	**23 40 48.3 +0.2**
	baz=269						
ENTT	**Nioudou**	**0.96**	**249**	*e*P		**Pn**	**23 40 29.7 +0.5**
	baz=244						
ENTT				*e*S		**Sn**	**23 40 48.9 +0.2**
	baz=244						
NWLT	**Wulai**	**0.97**	**257**	*e*P		**Pn**	**23 40 29.5 +0.1**
	baz=253						
NWLT				*e*S		**Sn**	**23 40 48.0 -0.9**
	baz=253						
NDT	**Datong Townshi**	**1.02**	**248**	P		**Pn**	**23 40 30.2 +0.5**
	baz=248						
NDT				S		**Sn**	**23 40 50.0 +0.5**
	baz=248						
YHNB	**Yeheng**	**1.11**	**253**	P		**Pn**	**23 40 30.1 -0.4**
	baz=243						
YHNB				S		**Sn**	**23 40 50.1 -1.0**
	baz=243						
NACB	**Ninganchiao**	**1.19**	**227**	P		**Pn**	**23 40 30.9 -0.3**
	baz=219						
NACB				S		**Sn**	**23 40 52.2 0.0**
	baz=219						
NNSB	**Datong**	**1.20**	**242**	P		**Pn**	**23 40 31.5 +0.1**
	baz=243						
NNSB				S		**Sn**	**23 40 52.6 0.0**
	baz=243						
NNSH	**Datong**	**1.20**	**242**	*e*P		**Pn**	**23 40 31.8 +0.3**
	baz=244						
NNSH				*e*S		**Sn**	**23 40 52.5 -0.1**
	baz=244						
NNS	**Nan Shan**	**1.20**	**243**	P		**Pn**	**23 40 32.0 +0.5**
	baz=244						
NNS				S		**Sn**	**23 40 53.1 +0.5**
	baz=244						
ETLH	**Xiulin Townshi**	**1.25**	**231**	P		**Pn**	**23 40 31.8 -0.1**
	baz=235						
ETLH				S		**Sn**	**23 40 53.2 0.0**
	baz=235						
TWD	**Chiawan**	**1.26**	**224**	*e*P		**Pn**	**23 40 31.8 0.0**
	baz=219						
TWD				*e*S		**Sn**	**23 40 53.4 +0.1**
	baz=219						
IRIF	**Iriomote-Funau**	**1.26**	**121**	P		**Pn**	**23 40 31.8 0.0**
IRIF				S		**Sn**	**23 40 54.3 +1.0**
FUSS	**Fushou**	**1.40**	**238**	*e*P		**Pn**	**23 40 33.9 +0.5**
	baz=230						
FUSS				*e*S		**Sn**	**23 40 56.1 0.0**
	baz=230						
LIOB	**Emei**	**1.43**	**256**	*e*P		**Pn**	**23 40 33.4 -0.1**
	baz=247						
LIOB				S		**Sn**	**23 40 55.3 -1.0**
	baz=247						
WHF	**Hehuan Shan**	**1.44**	**234**	P		**Pn**	**23 40 34.2 +0.2**
	baz=231						
WHF				S		**Sn**	**23 40 57.4 +0.2**
	baz=231						
NSTT	**Nanjuang**	**1.45**	**256**	*e*P		**Pn**	**23 40 34.1 +0.4**
	baz=246						
NSTT				S		**Sn**	**23 40 55.5 -1.1**
	baz=246						
TDCB	**Techi**	**1.46**	**240**	*e*P		**Pn**	**23 40 34.6 +0.7**
	baz=240						
TDCB				*e*S		**Sn**	**23 40 56.8 -0.2**
	baz=240						
HATJ	**Hateruma jima**	**1.48**	**129**	P		**Pn**	**23 40 34.4 +0.5**
HATJ				*e*S		**Sn**	**23 40 58.0 +0.9**
JKRS	**Kuro-shima**	**1.53**	**119**	P		**Pn**	**23 40 35.0 +0.6**
JKRS				S		**Sn**	**23 40 58.5 +0.5**
ESL	**Shilin**	**1.55**	**221**	*e*P		**Pn**	**23 40 34.7 -0.1**
	baz=222						
ESL				*e*S		**Sn**	**23 40 57.6 -0.9**
	baz=222						
CHGB	**Renai**	**1.56**	**234**	P		**Pn**	**23 40 35.6 +0.6**
	baz=230						
CHGB				*e*S		**Sn**	**23 40 59.7 +0.7**
	baz=230						
JIJ	**Ishigaki jima**	**1.58**	**113**	P		**Pn**	**23 40 35.0 0.0**
JIJ				S		**Sn**	**23 40 58.2 -0.8**
WHP	**Taichung City**	**1.62**	**244**	*e*P		**Pn**	**23 40 36.2 +0.7**
	baz=246						
WHP				S		**Sn**	**23 40 59.8 -0.1**
	baz=246						
JISG	**Ishigakijimahi**	**1.65**	**104**	P		**Pn**	**23 40 35.6 -0.1**
JISG				S		**Sn**	**23 40 59.8 -0.5**
NSY	**Sanyi**	**1.72**	**251**	*e*P		**Pn**	**23 40 36.9 +0.4**
	baz=247						
NSY				*e*S		**Sn**	**23 41 01.6 -0.1**
	baz=247						
WCS	**Beigang Elemen**	**1.76**	**238**	*e*P		**Pn**	**23 40 37.2 +0.4**
	baz=235						
WCS				*e*S		**Sn**	**23 41 02.2 -0.1**
	baz=235						
VWDT	**VWDT**	**1.78**	**226**	*e*P		**Pn**	**23 40 37.6 +0.5**
	baz=217						
VWDT				*e*S		**Sn**	**23 41 03.4 +0.6**
	baz=217						
HGSD	**Ruisui**	**1.81**	**215**	*e*P		**Pn**	**23 40 36.7 -0.8**
	baz=207						
HGSD				*e*S		**Sn**	**23 41 04.4 +1.0**
	baz=207						
EHY	**Hungye**	**1.86**	**217**	*e*P		**Pn**	**23 40 37.2 -0.8**
	baz=215						
EHY				*e*S		**Sn**	**23 41 02.4 -1.9**
	baz=215						
SMLT	**Sun Moon Lake**	**1.86**	**234**	*e*P		**Pn**	**23 40 39.1 +0.9**
	baz=231						
SMLT				*e*S		**Sn**	**23 41 05.2 +0.5**
	baz=231						
SSLB	**Suanglung**	**1.89**	**231**	*e*P		**Pn**	**23 40 38.8 +0.5**
	baz=234						
SSLB				S		**Sn**	**23 41 05.6 +0.7**
	baz=234						
YULB	**Yu-li**	**1.96**	**216**	*e*P		**Pn**	**23 40 38.3 -0.9**
	baz=213						
YULB				*e*S		**Sn**	**23 41 04.6 -1.8**
	baz=213						
JTJ	**Tarama**	**1.99**	**100**	P		**Pn**	**23 40 39.1 -0.3**
JTJ				S		**Sn**	**23 41 06.6 -0.3**
TWF1	**Yuli**	**1.99**	**215**	*e*P		**Pn**	**23 40 39.0 -0.6**
	baz=218						
TWF1				*e*S		**Sn**	**23 41 04.9 -2.2**
	baz=218						
YUS	**Yu-Shan**	**2.09**	**224**	*e*S		**Sn**	**23 41 09.6 -0.2**
	baz=217						
FULB	**Fuli**	**2.12**	**213**	*e*P		**Pn**	**23 40 40.1 -0.9**
	baz=211						
FULB				*e*S		**Sn**	**23 41 10.6 +0.8**
	baz=211						
ALS	**Alishan**	**2.17**	**227**	*e*P		**Pn**	**23 40 42.9 +1.1**
	baz=219						
ALS				*e*S		**Sn**	**23 41 12.4 +1.3**
	baz=219						
CHN5	**Tsauling**	**2.20**	**231**	*e*P		**Pn**	**23 40 42.8 +0.9**
	baz=235						
CHN5				*e*S		**Sn**	**23 41 11.2 -0.2**
	baz=235						
STYH	**Taoyuan**	**2.43**	**222**	*e*P		**Pn**	**23 40 44.9 +0.3**
	baz=219						
STYH				*e*S		**Sn**	**23 41 16.5 +0.3**
	baz=219						
TWK	**Hsinying**	**2.55**	**228**	*e*P		**Pn**	**23 40 45.9 -0.2**
	baz=225						
TWK				*e*S		**Sn**	**23 41 18.6 -0.2**
	baz=225						
CHN1	**Nanshi**	**2.58**	**226**	*e*S		**Sn**	**23 41 19.1 -0.3**
	baz=229						

*DDA **08** 23:41:40.7,35°.03N×27°.55E,h8km±3km,ML3.2*
*IDC **08** 23:41:45.1±1.1,35°.35N×27°.85E,h0km,mb3.7/4,*
mb1 3.7/9,mb1mx3.4/57,mbtmp3.6/9,ML3.7/4,Error
ellipse: s-maj=26.8km s-min=16.0km az=168.0
*HLW **08** 23:41:45.5,35°.63N×27°.92E,h24km±17km,Md4.0,Ml3.9*
*ATH **08** 23:41:46.5,35°.22N×27°.81E,h16km±5km,ML3.4/4,Error*
ellipse: s-maj=7.9km s-min=1.6km az=305.0

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*ISK **08** 23:41:48.1,35°.30N×27°.81E,h16km,ML3.4/15*
*THE **08** 23:41:50.3,35°.50N×27°.74E,h0km±1km,ML3.4/4,Error*
ellipse: s-maj=3.4km s-min=1.0km az=143.0
ISC 08 23:41:47.9±1.2,35°.28N±0°.04×27°.84E±0°.03,h17km±8km,
n61,σ1°50/84,mb3.9/4,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.62**	**296**	P	**Pg**	**23 41 58.4**	**-1.7**
KARP				S	**Sg**	**23 42 07.2**	**-1.1**
KARP				AML	AML	23 42 08.8	
	comp=N,27922μm,0.6s						
KARP				AML	AML	23 42 10.6	
	comp=E,13302μm,0.5s						
KARP	**Karpathos**	**0.62**	**296**	P	**Pg**	**23 41 59.4**	**-0.7**
KARP				S	**Sg**	**23 42 07.7**	**-0.7**
	comp=E,10μm,0.5s						
KARP	**Karpathos**	**0.62**	**296**	PG	**Pg**	**23 41 59.3**	**-0.8**
KARP				SG	**Sg**	**23 42 08.4**	**0.0**
ARG	**Arkhangelos**	**0.97**	**14**	P	**Pg**	**23 42 05.5**	**-1.2**
ARG				S	**Sg**	**23 42 18.9**	**-0.4**
ARG				AML	AML	23 42 22.0	
	comp=E,2657μm,0.6s						
ARG				AML	AML	23 42 24.8	
	comp=N,2979μm,0.7s						
ARG	**Arkhangelos**	**0.97**	**14**	P	**Pg**	**23 42 05.3**	**-1.4**
ARG				S	**Sg**	**23 42 18.0**	**-1.4**
	comp=N,1μm,0.6s						
ARG	**Arkhangelos**	**0.97**	**14**	PG	**Pg**	**23 42 05.7**	**-1.0**
ARG				SG	**Sn**	**23 42 20.4**	**+0.4**
ZKR	**Zakros**	**1.34**	**264**	P	**Pn**	**23 42 09.6**	**-2.2**
ZKR				AML	AML	23 42 40.6	
	comp=N,1251μm,1.2s						
ZKR				AML	AML	23 42 43.5	
	comp=E,2365μm,0.5s						
ZKR	**Zakros**	**1.34**	**264**	P	**Pg**	**23 42 13.8**	**+0.1**
ZKR				S	**Sg**	**23 42 33.9**	**+2.7**
	comp=E,870nm,0.6s						
ZKR	**Zakros**	**1.34**	**264**	PN	**Pn**	**23 42 12.7**	**+0.9**
ZKR				SN	**Sn**	**23 42 30.5**	**+1.3**
NIS1	**Nisyros Isl.**	**1.43**	**338**	P	**Pn**	**23 42 13.3**	**+0.2**
NIS1	**Nisyros Isl.**	**1.43**	**338**	P	**Pn**	**23 42 13.3**	**+0.2**
NIS1	**Nisyros Isl.**	**1.43**	**338**	PN	**Pn**	**23 42 13.7**	**+0.7**
NIS1				SN	**Sb**	**23 42 32.5**	**+0.5**
TURN	**Turunc**	**1.53**	**12**	*i* P	**Pn**	**23 42 15.3**	**+0.9**
TURN				*i* S	**Sg**	**23 42 40.6**	**+3.3**
TURN				IAML		23 42 41.0	
	comp=N,422nm,0.8s						
TURN				IAML		23 42 42.0	
	comp=E,234nm,0.4s						
TURN	**Turunc**	**1.53**	**12**	PN	**Pn**	**23 42 15.3**	**+0.9**
KOSK	**Kos Island**	**1.63**	**335**	PN	**Pn**	**23 42 16.5**	**+0.7**
DALY	**Dalyan (Mula)**	**1.67**	**23**	*i* P	**Pn**	**23 42 17.1**	**+0.7**
DALY				*i* S	**Sg**	**23 42 44.9**	**+3.1**
DALY				IAML		23 42 48.0	
	comp=N,202nm,1.0s						
DALY	**Dalyan (Mula)**	**1.67**	**23**	PN	**Pb**	**23 42 17.9**	**-0.3**
FETY	**Fethiye**	**1.69**	**36**	P	**Pn**	**23 42 17.0**	**+0.4**
FETY				S	**Sb**	**23 42 40.6**	**+1.1**
FETY	**Fethiye**	**1.69**	**36**	*i* P	**Pn**	**23 42 17.1**	**+0.4**
FETY	**Fethiye**	**1.69**	**36**	PN	**Pn**	**23 42 17.9**	**+1.3**
AKAS	**Kas**	**1.72**	**56**	PN	**Pn**	**23 42 18.3**	**+1.1**
FRMA	**Ierapetra Chan**	**1.75**	**262**	P	**Pn**	**23 42 18.0**	**+0.6**
FRMA				S	**Sb**	**23 42 41.3**	**+0.2**
BDRM	**Kayabasi**	**1.81**	**350**	*i* P	**Pn**	**23 42 18.7**	**+0.4**
BDRM				*i* S	**Sg**	**23 42 45.1**	**-1.3**
BDRM				IAML		23 42 46.0	
	comp=E,230nm,0.5s						
BDRM				IAML		23 42 49.0	
	comp=N,256nm,0.5s						
NPS	**Neapolis**	**1.82**	**270**	P	**Pn**	**23 42 18.8**	**+0.4**
NPS				AML	AML	23 42 52.2	
	comp=N,1550μm,0.9s						
NPS				AML	AML	23 42 53.4	
	comp=E,1704μm,0.5s						
NPS	**Neapolis**	**1.82**	**270**	P	**Pb**	**23 42 21.2**	**+0.4**
NPS				S	**Sb**	**23 42 44.1**	**+0.8**
	comp=E,1μm,0.8s						
BODT	**Bodrum**	**1.83**	**347**	P	**Pn**	**23 42 17.7**	**-0.9**
BODT				S	**Sn**	**23 42 41.0**	**-0.4**
YER	**Yerkesik**	**1.89**	**11**	P	**Pn**	**23 42 20.3**	**+0.9**
YER	**Yerkesik**	**1.89**	**11**	PN	**Pn**	**23 42 20.6**	**+1.2**
MULA	**Mugla, Merkez-**	**2.01**	**11**	*i* P	**Pb**	**23 42 25.1**	**+1.1**
MULA				*i* S	**Sg**	**23 42 54.8**	**+2.1**
MULA				IAML		23 42 59.0	
	comp=N,124nm,1.3s						
MULA				IAML		23 43 04.0	
	comp=E,206nm,0.8s						
ELL	**Elmali**	**2.23**	**48**	PN	**Pn**	**23 42 25.6**	**+1.5**
THT2	**Imerovigli**	**2.28**	**301**	PN	**Pn**	**23 42 25.9**	**+1.2**
AYDN	**Tasoluk**	**2.38**	**1**	*i* P	**Pn**	**23 42 26.3**	**+0.1**
IDI	**Anoyia**	**2.41**	**271**	Pn	**Pn**	**23 42 27.8**	**+1.2**
	comp=E,9.6nm,0.3s,baz=84,slow=16,SNR=21						
IDI				Sn	**Sb**	**23 42 59.1**	**-1.3**
	comp=E,12nm,0.3s,baz=162,slow=20,SNR=4.3						
IDI	**Anoyia**	**2.41**	**271**	P	**Pn**	**23 42 28.2**	**+1.6**
IDI	**Anoyia**	**2.41**	**271**	P	**Pn**	**23 42 27.8**	**+1.2**
IDI	**Anoyia**	**2.41**	**271**	PN	**Pn**	**23 42 27.8**	**+1.2**
GCAM	**G?zelcaml?**	**2.47**	**349**	PN	**Pn**	**23 42 28.7**	**+1.4**
SIVA	**Sivas**	**2.50**	**265**	P	**Pn**	**23 42 29.9**	**+2.2**
SIVA	**Sivas**	**2.50**	**265**	P	**Pn**	**23 42 30.2**	**+2.5**
APE	**Apeiranthos**	**2.59**	**314**	PN	**Pn**	**23 42 29.4**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**2.67**	**1**	PN	**Pn**	**23 42 31.4**	**+1.2**
GVDS	**Gavdos**	**3.11**	**263**	PN	**Pn**	**23 42 38.0**	**+1.9**
GVD	**Gavdhos**	**3.11**	**263**	PN	**Pn**	**23 42 38.0**	**+1.9**
IMMV	**Iera Moni Meta**	**3.16**	**274**	P	**Pn**	**23 42 40.1**	**+3.3**
IMMV	**Iera Moni Meta**	**3.16**	**274**	PN	**Pn**	**23 42 38.7**	**+1.9**
KNDR	**Palaiochora Ch**	**3.40**	**270**	PN	**Pn**	**23 42 42.6**	**+2.5**
SLUM	**Salum**	**4.37**	**211**	P	**Pn**	**23 42 55.3**	**+1.9**
	baz=210						
SLUM				S	**Sn**	**23 43 40.7**	**-3.2**
	baz=210						
SWA2		**6.34**	**199**	P	**Pn**	**23 43 22.2**	**+1.7**
	baz=199						
SWA2				S	**Sn**	**23 44 33.7**	**+1.0**
	baz=199						
SWA2				AMP		23 45 00.0	
	baz=199						
BRTR	**Keskin Array B**	**6.40**	**44**	Pn	**Pn**	**23 43 22.4**	**+0.9**
	comp=E,0.0nm,0.3s,baz=222,slow=13,SNR=2.5						
BRTR				Sn	**Sn**	**23 44 36.1**	**+1.9**
	comp=E,0.2nm,0.3s,baz=139,slow=47,SNR=1.6						
GLL	**Jalalah**	**6.55**	**149**	P	**Pn**	**23 43 24.7**	**+1.2**
	baz=151						
MMAI	**Mount Meron Ar**	**6.66**	**108**	Pn	**Pn**	**23 43 24.4**	**-0.6**
	comp=E,3.8nm,0.3s,baz=297,slow=12,SNR=19						
MMAI				Sn	**Sn**	**23 44 39.0**	**-1.6**
	comp=E,2.1nm,0.3s,baz=289,slow=26,SNR=6.3						
SUZ	**Suez**	**6.86**	**141**	P	**Pn**	**23 43 29.8**	**+2.0**
	baz=143						
HFRF	**Wahat Farafira**	**8.11**	**177**	P	**Pn**	**23 43 46.6**	**+1.8**
	baz=177						
EIL	**Elat**	**8.20**	**131**	Pn	**Pn**	**23 43 46.7**	**+0.5**
	comp=E,0.8nm,0.3s,baz=304,slow=3.6,SNR=9.9						
EIL				Sn	**Sn**	**23 45 14.0**	**-4.5**
	comp=E,1.3nm,0.3s,baz=326,slow=15,SNR=7.5						
HBST	**Basata**	**8.40**	**134**	P	**Pn**	**23 43 49.5**	**+0.7**
	baz=136						
HKAT	**Jabal Katrina**	**8.52**	**140**	P	**Pn**	**23 43 51.1**	**+0.4**
	baz=142						
GERES	**GERESS Array B**	**17.11**	**327**	P	**Pn**	**23 45 45.6**	**-0.6**
	comp=E,0.1nm,0.3s,baz=150,slow=14,SNR=5.9						
ESDC	**Sonseca Array**	**25.54**	**289**	P	**P**	**23 47 14.3**	**-1.5**
	comp=E,2.2nm,0.6s,baz=80,slow=9.4,SNR=33						
TORD	**Torodi Ar. Bea**	**32.28**	**233**	P	**P**	**23 48 16.2**	**+0.3**
	comp=E,1.1nm,0.6s,baz=38,slow=9.6,SNR=7.1						
KOWA	**Kowa**	**35.30**	**242**	P	**P**	**23 48 42.3**	**+0.2**
	comp=E,1.0nm,0.8s,baz=72,slow=6.4,SNR=1.9						
MKAR	**Makanchi Array**	**41.88**	**57**	P	**P**	**23 49 36.2**	**-0.9**
	comp=E,0.2nm,0.5s,baz=263,slow=9.9,SNR=3.1						

*ISK **09** 00:13:49.6,38°.86N×42°.48E,h8km,ML2.5/11*
*DDA **09** 00:13:49.8,38°.90N×42°.48E,h7km±2km,ML1.9*
ISC 09 00:13:50.1±1.0,38°.88N±0°.03×42°.48E±0°.03,h12km±8km,
n20,σ0°51/30,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADCV	**BITLIS_Adilcev**	**0.20**	**111**	*i* P	**Pg**	**00 13 54.7**	**0.0**
ADCV				*i* S	**Sg**	**00 13 57.8**	**0.0**
MLAZ	**Malazgirt-MUS**	**0.27**	**11**	PG	**Pg**	**00 13 55.8**	**+0.1**
MLAZ				SG	**Sb**	**00 14 00.6**	**-0.9**
AKDM	**Akdamar-Van**	**0.68**	**145**	PG	**Pg**	**00 14 02.9**	**-0.4**
AKDM				SG	**Sb**	**00 14 12.6**	**-0.7**
ERCV	**ERCIS-VAN**	**0.68**	**78**	PG	**Pg**	**00 14 03.0**	**-0.4**
ERCV				SG	**Sb**	**00 14 13.7**	**+0.2**
GEVA	**Gevas**	**0.73**	**141**	*i* P	**Pg**	**00 14 04.0**	**-0.2**
GEVA				*i* S	**Sb**	**00 14 15.0**	**+0.2**
GEVA				IAML		00 14 15.0	
	comp=N,60nm,0.5s						
GEVA				IAML		00 14 16.0	
	comp=E,72nm,0.3s						
VANB	**Van**	**0.77**	**112**	PG	**Pb**	**00 14 05.5**	**+0.1**
MUSM	**Mu-Merkez**	**0.77**	**259**	*i* P	**Pg**	**00 14 05.0**	**-0.1**
MUSM				*i* S	**Sb**	**00 14 16.5**	**+0.4**
MUSM				IAML		00 14 17.0	
	comp=E,37nm,0.4s						
MUSM				IAML		00 14 17.0	
	comp=N,36nm,0.6s						
AGRB	**Hanur-Agry**	**0.80**	**30**	PG	**Pg**	**00 14 05.2**	**-0.4**
TVAN	**Van**	**0.80**	**116**	*i* P	**Pb**	**00 14 06.1**	**0.0**
TVAN				*i* S	**Sb**	**00 14 17.3**	**+0.3**
TVAN				IAML		00 14 18.0	
	comp=N,122nm,0.3s						
VRTB	**Varto-Mus**	**0.85**	**290**	PG	**Pb**	**00 14 06.5**	**-0.3**
VMUR	**Van-Muradiye**	**0.86**	**82**	*i* P	**Pg**	**00 14 06.5**	**-0.2**
VMUR				*i* S	**Sb**	**00 14 19.0**	**+0.5**
VMUR				IAML		00 14 22.0	
	comp=E,38nm,0.5s						
VMUR				IAML		00 14 22.0	
	comp=N,61nm,0.3s						
PERV	**Siirt/Pervari-**	**0.94**	**177**	*i* P	**Pb**	**00 14 08.4**	**+0.1**
PERV				*i* S	**Sn**	**00 14 22.4**	**-0.1**
PERV				IAML		00 14 25.0	
	comp=E,133nm,0.4s						
PERV				IAML		00 14 26.0	
	comp=N,74nm,0.5s						
SRTM	**Siirt_Merkez**	**0.99**	**206**	*i* P	**Pn**	**00 14 10.3**	**+0.4**
KOTA	**Agri, Merkez-K**	**1.08**	**31**	*i* P	**Pg**	**00 14 09.8**	**-1.1**
KOTA				IAML		00 14 27.0	
	comp=E,17nm,0.3s						
KOTA				IAML		00 14 28.0	
	comp=N,25nm,0.4s						
DYDN	**Diyadin**	**1.15**	**54**	*i* P	**Pg**	**00 14 11.4**	**-0.8**
DYDN				*i* S	**Sb**	**00 14 27.4**	**+0.5**
DYDN				IAML		00 14 28.0	
	comp=E,33nm,0.5s						
DYDN				IAML		00 14 34.0	
	comp=N,21nm,0.6s						
KARO	**Karliova-Bingo**	**1.19**	**291**	PN	**Pn**	**00 14 13.1**	**+0.3**
BNGB	**Bingl**	**1.41**	**275**	PN	**Pb**	**00 14 16.3**	**-0.1**
SENK	**Senkaya-Erzuru**	**1.68**	**357**	PN	**Pn**	**00 14 20.4**	**+0.9**
TASB	**TASBURUN-IGDIR**	**1.75**	**50**	PN	**Pn**	**00 14 21.3**	**+1.0**
CUKT	**Cukurca**	**1.86**	**151**	PN	**Pn**	**00 14 21.3**	**-0.5**

*NEIC **09** 00:14:11.0±0.7,19°.7N±0°.1×66°.02W±0°.06,h23km±23km,*
Error ellipse: s-maj=20.1km s-min=7.3km az=193.0
*RSPR **09** 00:14:12.3,19°.75N×66°.02W,h44km±8km,MD3.4/9*
ISC 09 00:14:13.2±2.3,19°.7N±0°.1×66°.04W±0°.06,h35km,n38,
σ0°69/43,6C-3D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**1.25**	**202**	↑*e*P	**Pn**	**00 14 33.5**	**-0.6**
EMPR	**Esperanza - Ma**	**1.25**	**202**	*e*S	**Sn**	**00 14 50.1**	**+0.3**
EMPR	**Esperanza - Ma**	**1.25**	**202**		**Pn**	**00 14 33.5**	**-0.6**
EMPR					**Sn**	**00 14 50.1**	**+0.3**
EMPR	**Esperanza - Ma**	**1.25**	**202**	IAML		00 14 52.0	
	comp=E,673nm,0.6s						
EMPR				IAML		00 15 00.9	
	comp=N,517nm,0.7s						
GCPR	**Guaynabo City**	**1.33**	**182**		**Pn**	**00 14 34.3**	**-1.0**
GCPR				IAML		00 14 51.5	
	comp=E,234nm,0.4s						
CBYP	**Canovanas**	**1.38**	**173**	‖*e*P	**Pn**	**00 14 35.3**	**-0.7**
CBYP	**Canovanas**	**1.38**	**173**	*e*S	**Sn**	**00 14 53.2**	**+0.1**
CBYP	**Canovanas**	**1.38**	**173**		**Pn**	**00 14 35.3**	**-0.7**
CBYP					**Sn**	**00 14 53.2**	**+0.1**
AOPR	**Arecibo Observ**	**1.46**	**208**	↑*e*P	**Pn**	**00 14 36.4**	**-0.7**
AOPR	**Arecibo Observ**	**1.46**	**208**	*e*S	**Sn**	**00 14 55.5**	**+0.5**
AOPR	**Arecibo Observ**	**1.46**	**208**		**Pn**	**00 14 36.4**	**-0.7**
AOPR					**Sn**	**00 14 55.5**	**+0.5**
HUMP	**Col San Antoni**	**1.51**	**173**	‖*e*P	**Pn**	**00 14 37.2**	**-0.5**
HUMP	**Col San Antoni**	**1.51**	**173**	*e*S	**Sn**	**00 14 56.7**	**+0.6**
HUMP	**Col San Antoni**	**1.51**	**173**		**Pn**	**00 14 37.2**	**-0.5**
HUMP					**Sn**	**00 14 56.7**	**+0.6**
HUMP	**Col San Antoni**	**1.51**	**173**	IAML		00 15 03.1	
	comp=N,156nm,0.2s						
HUMP				IAML		00 15 04.0	
	comp=E,190nm,0.7s						
CUPR	**Culebra, Puert**	**1.51**	**151**	‖*e*P	**Pn**	**00 14 37.0**	**-0.8**
CUPR	**Culebra, Puert**	**1.51**	**151**	*e*S	**Sn**	**00 14 56.3**	**0.0**
CUPR	**Culebra, Puert**	**1.51**	**151**		**Pn**	**00 14 37.0**	**-0.8**
CUPR					**Sn**	**00 14 56.3**	**0.0**
SJG	**San Juan**	**1.53**	**184**		**Pn**	**00 14 37.6**	**-0.4**
SJG				IAML		00 14 57.4	
	comp=E,357nm,0.5s						
SJG				IAML		00 14 58.8	
	comp=E,333nm,0.7s						
AGPR	**Aguadilla, PR**	**1.55**	**221**	Pn	**Pn**	**00 14 37.5**	**-0.8**
AGPR				IAML		00 15 17.0	
	comp=E,168nm,1.2s						
MTP	**Monte Pirata**	**1.61**	**163**	↑*e*P	**Pn**	**00 14 38.4**	**-0.7**
MTP	**Monte Pirata**	**1.61**	**163**	*e*S	**Sn**	**00 14 58.9**	**+0.3**
MTP	**Monte Pirata**	**1.61**	**163**		**Pn**	**00 14 38.4**	**-0.7**
MTP					**Sn**	**00 14 58.9**	**+0.3**
PDPR	**Patillas Dam,**	**1.62**	**179**		**Pn**	**00 14 39.0**	**-0.3**
PDPR				IAML		00 15 01.3	
	comp=E,241nm,0.6s						
CELP	**Cerrillos**	**1.64**	**198**	↑*e*P	**Pn**	**00 14 39.2**	**-0.4**
CELP	**Cerrillos**	**1.64**	**198**	*e*S	**Sn**	**00 14 60.0**	**+0.5**
CELP	**Cerrillos**	**1.64**	**198**		**Pn**	**00 14 39.2**	**-0.4**
CELP					**Sn**	**00 14 60.0**	**+0.5**
IGPR	**InterUniversit**	**1.67**	**182**	↑*e*P	**Pn**	**00 14 39.2**	**-0.4**
IGPR	**InterUniversit**	**1.67**	**182**	*e*S	**Sn**	**00 15 00.8**	**+0.6**
OBIP	**Obispado Ponce**	**1.68**	**199**		**Pn**	**00 14

H08S2 Diego Garcia H 13.90 28 T T 00 50 45.8
baz=205,slow=75,SNR=26
H08S3 Diego Garcia H 13.91 28 T T 00 50 49.4
baz=205,slow=75,SNR=68
OPO Ambohidratompo 17.87 272 LR LR 00 42 40.5
comp=Z,160nm,19.0s,baz=241,slow=31
PALK Pallekele 30.82 29 LR LR 00 49 19.0
comp=Z,389nm,19.5s,baz=314,slow=31
KMBO Kilima Mbogo 33.91 300 LR LR 00 51 51.9
comp=Z,167nm,19.6s,baz=101,slow=32
BOSA Boshof 37.96 249 LR LR 00 54 02.1
comp=Z,263nm,19.9s,baz=89,slow=32
PSI Prapat 39.50 58 LR LR 00 53 53.7
comp=Z,456nm,20.9s,baz=265,slow=31
MAW Mawson 47.50 182 LR LR 00 57 07.9
comp=Z,164nm,21.4s,baz=50,slow=30
CMAR Chiang Mai Arr 50.12 42 P **P** **00 42 28.1 +0.5**
0.8nm,0.4s,baz=218,slow=6.8,SNR=1.3
CMAR LR LR 01 00 47.7
comp=Z,289nm,20.0s,baz=262,slow=33
GEYT Alibeck 58.24 353 LR LR 01 05 52.9
comp=Z,78nm,18.3s,baz=345,slow=33
ASAR Alice Springs 62.52 107 P **P** **00 43 56.2 -0.1**
1.9nm,0.8s,baz=261,slow=6.3,SNR=12
ASAR LR LR 01 07 00.0
comp=Z,281nm,21.5s,baz=270,slow=32
WRA Warramunga Arr 63.70 103 P **P** **00 44 04.0 -0.1**
2.4nm,0.9s,baz=259,slow=6.6,SNR=8.0
WRA LR LR 01 07 49.0
comp=Z,174nm,21.3s,baz=200,slow=32
BRTR Keskin Array B 66.80 333 LR LR 01 10 58.9
comp=Z,65nm,20.9s,baz=90,slow=34
STKA Stephens Creek 67.70 117 LR LR 01 10 01.2
comp=Z,130nm,20.6s,baz=214,slow=32
MKAR Makanchi Array 68.22 12 P **P** **00 44 31.5 -1.0**
0.8nm,0.9s,baz=206,slow=6.3,SNR=5.2
MKAR LR LR 01 13 18.7
comp=Z,87nm,19.3s,baz=212,slow=35
TORD Torodi Ar. Bea 71.41 292 LR LR 01 15 17.8
comp=Z,64nm,19.0s,baz=25,slow=35
VNDA Vanda 71.73 167 LR LR 01 13 11.7
comp=Z,42nm,20.3s,baz=236,slow=33
DBIC Dimbokro 74.58 283 LR LR 01 16 08.2
comp=Z,121nm,19.8s,baz=102,slow=34
ZALV Zalesovo Beam 75.53 11 P **P** **00 45 15.9 -0.4**
1.2nm,0.6s,baz=199,slow=5.2,SNR=6.3
ZALV LR LR 01 16 12.0
comp=Z,80nm,18.2s,baz=176,slow=34
SONM Songino Array 76.73 27 P **P** **00 45 23.5 +0.1**
0.6nm,0.6s,baz=216,slow=6.4,SNR=4.9
SONM LR LR 01 19 04.3
comp=Z,96nm,19.5s,baz=179,slow=36
AKASG Malin Array Be 77.64 337 P **P** **00 45 28.6 +0.4**
0.2nm,0.2s,baz=120,slow=4.8,SNR=1.5
KSRS Korea Array 81.65 45 LR LR 01 21 29.2
comp=Z,113nm,19.7s,baz=238,slow=35
MDT Midelt 85.56 307 LR LR 01 23 35.9
comp=Z,81nm,19.7s,baz=134,slow=35
USRK Ussuriysk Ar. 87.84 41 LR LR 01 26 29.1
comp=Z,70nm,19.2s,baz=217,slow=36
MJAR Matsushiro Arr 88.34 50 LR LR 01 24 12.2
comp=Z,84nm,20.7s,baz=260,slow=34
NRIK Noril'sk 90.56 7 LR LR 01 25 02.2
comp=Z,80nm,20.7s,baz=290,slow=34
ARCES ARCESS Array B 93.97 347 LR LR 01 28 08.5
comp=Z,97nm,20.9s,baz=265,slow=35

IDC 09 00:38:23.1±4.4, 20.42S×65.60E, h0km, mb4.0/6, mb1 4.2/6, mb1mx3.7/44, mbtmp4.0/6, Error ellipse: s-maj=131.7km s-min=30.8km az=59.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**14.34**	**29**	T	T	00 55 35.6	
	baz=207						
H08S2	**Diego Garcia H**	**14.35**	**29**	T	T	00 55 38.4	
	baz=207,slow=74						
H08S3	**Diego Garcia H**	**14.36**	**29**	T	T	00 55 41.4	
	baz=207,slow=74						
CMAR	**Chiang Mai Arr**	**50.61**	**42**	P	P	00 47 24.0	-0.1
	0.8nm,0.3s,baz=231,slow=7.8,SNR=4.6						
ASAR	**Alice Springs**	**62.85**	**107**	P	P	00 48 51.1	-0.2
	2.4nm,0.9s,baz=260,slow=6.2,SNR=15						
WRA	**Warramunga Arr**	**64.06**	**103**	P	P	00 48 59.6	+0.3
	2.8nm,0.9s,baz=259,slow=5.0,SNR=8.1						
MKAR	**Makanchi Array**	**68.58**	**12**	P	P	00 49 27.9	+0.3
	0.5nm,0.8s,baz=202,slow=6.2,SNR=5.4						
ZALV	**Zalesovo Beam**	**75.89**	**12**	P	P	00 50 11.1	0.0
	0.4nm,0.3s,baz=212,slow=4.5,SNR=5.5						
SONM	**Songino Array**	**77.17**	**27**	P	P	00 50 18.5	-0.2
	0.4nm,0.4s,baz=198,slow=4.1,SNR=3.6						

*NEIC **09** 01:10:39.5±1.3, 9.54S×0.04×34.44E±0.10, h10km±1km, mb4.0/3, Error ellipse: s-maj=16.2km s-min=6.4km az=100.0*
*IDC **09** 01:10:40.7±1.2, 9.33S×34.36E, h0km, mb3.8/3, mb1 4.2/9, mb1mx3.8/50, mbtmp4.2/9, ML4.0/5, MS3.2/8, Ms1 3.2/8, ms1mx3.1/38, Error ellipse: s-maj=38.7km s-min=18.9km az=117.0*
ISC 09 01:10:40.3±0.5, 9.39S±0.02×34.42E±0.02, h10km, n76, σ2s72/113, MS3.5/3, 6C-4D, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIPE	**Kipengere**	**0.09**	**9**	*i* P	Pg	01 10 50.1	+7.0
KIPE				*i* S	**Sg**	**01 10 53.7**	**+8.7**
KIPE				IAML		01 10 53.9	
	comp=Z,65μm,0.1s						
UKWA	**Ukwama**	**0.21**	**252**	*i* P	Pg	01 10 50.4	+5.5
UKWA				*i* S	**Sg**	**01 10 55.1**	**+7.1**
UKWA				IAML		01 10 57.0	
	comp=Z,120μm,0.2s						
TOLA	**Matola**	**0.26**	**142**	*i* P	Pg	01 10 51.8	+6.1
TOLA				*i* S	**Sg**	**01 10 57.2**	**+7.8**
TOLA				IAML		01 10 59.3	
	comp=Z,64μm,0.3s						
MAKE	**Makete**	**0.34**	**290**	*i* P	**Pn**	**01 10 52.0**	**+0.3**
MAKE				*i* S	**Sb**	**01 10 57.6**	**+3.3**
MAKE				IAML		01 10 58.7	
	comp=Z,116μm,0.2s						
MBHS	**Matema**	**0.43**	**264**	*i* P	**Pn**	**01 10 53.3**	**+0.6**
MBHS				*i* S	**Sb**	**01 10 59.4**	**+2.6**
MBHS				IAML		01 11 00.2	
	comp=Z,28μm,0.4s						
UNDA	**Madunda**	**0.47**	**174**	*i* P	**Pn**	**01 10 54.3**	**+1.0**
UNDA				*i* S	**Sb**	**01 11 01.5**	**+3.6**
UNDA				IAML		01 11 02.1	
	comp=Z,24μm,0.1s						
KIDE	**Kidegembe**	**0.60**	**79**	*i* P	**Pn**	**01 10 57.0**	**+1.9**
KIDE				*i* S	**Sn**	**01 11 05.8**	**+0.8**
KIDE				IAML		01 11 06.1	
	comp=Z,37μm,0.4s						
GAWA	**Igawa**	**0.62**	**357**	↑*i* P	**Pn**	**01 10 56.4**	**+1.1**
GAWA				IAML		01 11 06.6	
	comp=Z,8μm,0.3s						
BAKO	**Makambako**	**0.66**	**35**	↑*i* P	**Pn**	**01 10 57.6**	**+1.7**
BAKO				*i* S	**Sn**	**01 11 06.5**	**+0.1**
BAKO				IAML		01 11 07.1	
	comp=Z,37μm,0.2s						
NKAL	**Nkalisi**	**0.67**	**287**	*i* P	**Pn**	**01 10 56.1**	**+0.1**
NKAL				*i* S	**Sb**	**01 11 05.0**	**+1.4**
NKAL				IAML		01 11 05.3	
	comp=Z,51μm,0.6s						
CHML	**Chimala**	**0.68**	**325**	↓*i* P	**Pn**	**01 10 57.2**	**+1.0**
CHML				*i* S	**Sn**	**01 11 06.6**	**-0.3**
CHML				IAML		01 11 07.5	
	comp=Z,5μm,0.4s						
KARM1	**KARONGA**	**0.77**	**223**	*i* P	**Pn**	**01 10 59.2**	**+1.9**
KARM1				S	**Sn**	**01 11 10.0**	**+1.1**
KARM1	**KARONGA**	**0.77**	**223**	*i* P	**Pn**	**01 10 59.2**	**+1.9**
KARM1				S	**Sn**	**01 11 10.0**	**+1.1**
KARM1	**KARONGA**	**0.77**	**223**	↑*i* P	**Pn**	**01 10 59.2**	**+1.9**
KARM1				*i* S	**Sn**	**01 11 09.4**	**+0.4**
KARM1				IAML		01 11 10.7	
	comp=Z,3μm,0.4s						
NIND	**Nindi**	**0.77**	**168**	*i* P	**Pn**	**01 10 59.0**	**+1.6**
NIND				*i* S	**Sn**	**01 11 10.1**	**+1.0**
NIND				IAML		01 11 11.1	
	comp=Z,21μm,0.1s						
MFRI	**Mfriga**	**0.88**	**84**	↑*i* P	**Pn**	**01 11 01.4**	**+2.4**
MFRI				*i* S	**Sn**	**01 11 13.8**	**+1.8**
MFRI				IAML		01 11 14.2	
	comp=Z,79μm,0.2s						
BUMI	**Ibumi**	**0.90**	**146**	*i* P	**Pn**	**01 11 01.2**	**+2.1**
BUMI				*i* S	**Sn**	**01 11 13.8**	**+1.5**
BUMI				IAML		01 11 15.1	
	comp=Z,12μm,0.2s						
MZUN	**Kiwira**	**0.92**	**285**	*i* P	**Pn**	**01 11 01.3**	**+1.8**
MZUN				*i* S	**Sn**	**01 11 14.2**	**+1.3**
MZUN				IAML		01 11 14.6	
	comp=Z,66μm,0.4s						
KALO	**Kalowe**	**0.93**	**236**	↑*i* P	**Pn**	**01 11 01.8**	**+2.3**
KALO				*i* S	**Sn**	**01 11 14.1**	**+1.1**
KALO				IAML		01 11 15.6	
	comp=Z,5μm,0.2s						
WINO	**Wino**	**0.94**	**113**	↓*i* P	**Pn**	**01 11 02.6**	**+2.8**
WINO				*i* S	**Sn**	**01 11 15.9**	**+2.5**
WINO				IAML		01 11 16.6	
	comp=Z,13μm,0.4s						
KAPK	**Kapoka**	**1.03**	**248**	↑*i* P	**Pn**	**01 11 03.4**	**+2.4**
KAPK				*i* S	**Sn**	**01 11 16.8**	**+1.2**
KAPK				IAML		01 11 19.2	
	comp=Z,21μm,0.2s						
JILO	**Lwanjilo**	**1.07**	**308**	↓*i* P	**Pn**	**01 11 03.3**	**+1.7**
JILO				*i* S	**Sn**	**01 11 17.6**	**+0.9**
JILO				IAML		01 11 18.4	
	comp=Z,4μm,0.5s						
ILOM	**Ilombo**	**1.07**	**275**	*i* P	**Pn**	**01 11 03.7**	**+2.0**
ILOM				IAML		01 11 19.7	
	comp=Z,22μm,0.5s						
WENY	**Wenya**	**1.15**	**228**	*i* P	**Pn**	**01 11 05.3**	**+2.7**
WENY				*i* S	**Sn**	**01 11 19.9**	**+1.4**
WENY				IAML		01 11 21.2	
	comp=Z,16μm,0.2s						
CPMW	**Chitipa**	**1.18**	**254**	*i* P	**Pg**	**01 11 05.6**	**+2.6**
CPMW				IAML		01 11 22.6	
	comp=Z,4μm,0.1s						
ITUM	**Tunduma**	**1.22**	**269**	*i* P	**Pg**	**01 11 06.0**	**+2.3**
ITUM				IAML		01 11 23.1	
	comp=Z,6μm,0.3s						
PDHT	**Panda Hill**	**1.23**	**289**	↓*i* P	**Pg**	**01 11 06.1**	**+2.1**
PDHT				*i* S	**Sn**	**01 11 22.6**	**+2.0**
NTHA	**Nthalire**	**1.23**	**219**	*i* P	**Pg**	**01 11 06.7**	**+2.6**
NTHA				IAML		01 11 23.6	
	comp=Z,6μm,0.3s						
LIVA	**Livingstonia**	**1.26**	**194**	*i* P	**Pg**	**01 11 06.7**	**+2.1**
LIVA				*i* S	**Sn**	**01 11 23.9**	**+2.6**
LIVA				IAML		01 11 25.5	
	comp=Z,10μm,0.2s						
CHEL	**Chelinda**	**1.34**	**207**	*i* P	**Pg**	**01 11 08.5**	**+2.4**
CHEL				*i* S	**Sg**	**01 11 25.3**	**+1.8**
CHEL				IAML		01 11 27.3	
	comp=Z,6μm,0.1s						
ZINI	**Mgazini**	**1.40**	**140**	*i* P	**Pg**	**01 11 09.4**	**+2.1**
ZINI				*i* S	**Sg**	**01 11 28.5**	**+3.0**
ZINI				IAML		01 11 31.5	
	comp=Z,5μm,0.2s						
MLOW	**Mlowe**	**1.41**	**189**	*i* P	**Pg**	**01 11 09.3**	**+2.0**
MLOW				IAML		01 11 29.7	
	comp=Z,3μm,0.6s						
BANG	**Mbangamawe**	**1.41**	**121**	*i* P	**Pg**	**01 11 10.4**	**+3.0**
BANG				IAML		01 11 30.9	
	comp=Z,21μm,0.4s						
TIRI	**Matiri**	**1.44**	**162**	*i* P	**Pg**	**01 11 10.2**	**+2.1**
TIRI				*i* S	**Sg**	**01 11 29.7**	**+2.9**
TIRI				IAML		01 11 30.9	
	comp=Z,6μm,0.2s						
MKIL	**Mkili**	**1.51**	**170**	*i* P	**Pg**	**01 11 11.7**	**+2.4**
MKIL				*i* S	**Sg**	**01 11 31.9**	**+3.1**
MKIL				IAML		01 11 35.0	
	comp=Z,17μm,0.4s						
LIGA	**Liganga**	**1.53**	**148**	*i* P	**Pg**	**01 11 11.2**	**+1.5**
LIGA				*i* S	**Sg**	**01 11 32.6**	**+3.1**
LIGA				IAML		01 11 33.6	
	comp=Z,8μm,0.2s						
LOSI	**Makongolosi**	**1.59**	**309**	*i* P	**Pg**	**01 11 10.9**	**+0.1**
LOSI				IAML		01 11 33.5	
	comp=Z,2μm,0.6s						
NGON	**Ngonga**	**1.61**	**197**	*i* P	**Pg**	**01 11 11.9**	**+0.6**
NGON				*i* S	**Sg**	**01 11 31.5**	**-0.9**
NGON				IAML		01 11 35.2	
	comp=Z,3μm,0.1s						
THAZ	**Thazima**	**1.65**	**210**	*i* P	**Pg**	**01 11 12.7**	**+0.6**
THAZ				*i* S	**Sg**	**01 11 33.2**	**-0.4**
THAZ				IAML		01 11 34.3	
	comp=Z,3μm,0.2s						
BOLE	**Bolero**	**1.72**	**203**	*i* P	**Pg**	**01 11 13.4**	**0.0**
BOLE				*i* S	**Sb**	**01 11 33.9**	**+0.1**
BOLE				IAML		01 11 45.9	
	comp=Z,3μm,0.5s						
NGEA	**Songea**	**1.78**	**136**	*i* P	**Pg**	**01 11 15.6**	**+1.1**
NGEA				IAML		01 11 47.3	
	comp=Z,6μm,0.4s						
ENUK	**Enukweni**	**1.86**	**196**	*i* P	**Pg**	**01 11 15.3**	**-0.8**
ENUK				*i* S	**Sb**	**01 11 38.1**	**-0.1**
ENUK				IAML		01 11 42.2	
	comp=Z,3μm,0.2s						
MBAM	**Mbamba Bay**	**1.89**	**169**	*i* P	**Pg**	**01 11 15.7**	**-0.9**
MBAM				*i* S	**Sg**	**01 11 42.9**	**+1.8**
MBAM				IAML		01 11 43.5	
	comp=Z,3μm,0.5s						
VWZMW	**Thunduwike**	**1.96**	**205**	*i* P	**Pb**	**01 11 16.7**	**+0.4**
VWZMW				*i* S	**Sb**	**01 11 40.1**	**-0.8**
VWZMW				IAML		01 11 50.5	
	comp=Z,1μm,1.1s						
KIMO	**Ikongo**	**2.06**	**129**	*i* P	**Pg**	**01 11 18.9**	**-1.0**
KIMO				IAML		01 11 54.1	
	comp=Z,2μm,0.5s						
KURU	**Muhukuru**	**2.07**	**151**	*i* P	**Pg**	**01 11 18.7**	**-1.4**
KURU				IAML		01 11 58.8	
	comp=Z,7μm,0.2s						
THAN	**Thanula**	**2.08**	**186**	*i* P	**Pb**	**01 11 18.6**	**+0.3**
THAN				IAML		01 11 53.6	
	comp=Z,870nm,0.7s						
DODT	**Dodoma, Tanzan**	**3.44**	**23**	*i* P	**Pn**	**01 11 36.2**	**+2.1**
DODT				*i* S	**Sg**	**01 12 30.4**	**-0.4**
DODT	**Dodoma, Tanzan**	**3.44**	**23**	*i* P	**Pn**	**01 11 36.1**	**+2.0**
KIBA	**Kibaya**	**4.58**	**28**	*i* P	**Pn**	**01 11 52.4**	**+2.5**
KIBA				*i* S	**Sb**	**01 12 52.7**	**-3.6**
BUJA	**Bujumbura/Buru**	**7.77**	**320**	*i* P	**Pn**	**01 12 35.9**	**+2.3**
LSZ	**Lusaka**	**8.45**	**226**	Pn	**Pn**	**01 12 45.5**	**+2.5**
	comp=Z,8.1nm,0.3s,baz=48,slow=13,SNR=171						
LSZ				Sn	**Sn**	**01 14 13.9**	**-4.7**
	comp=Z,8.2nm,0.3s,baz=346,slow=23,SNR=9.1						
LSZ				Lg	Lg	01 15 02.9	
	comp=Z,7.6nm,0.3s,baz=332,slow=17,SNR=9.7						
LSZ				LR	LR	01 16 38.4	
	comp=Z,112nm,18.6s,baz=56,slow=42						
LSZ	**Lusaka**	**8.45**	**226**	Pn	**Pn**	**01 12 45.1**	**+2.1**
LSZ				Sn	**Sn**	**01 14 14.0**	**-4.5**
LSZ	**Lusaka**	**8.45**	**226**	*i* P	**Pn**	**01 12 46.3**	**+3.3**
KMBO	**Kilima Mbogo**	**8.67**	**19**	Pn	**Pn**	**01 12 47.2**	**+1.0**
	comp=Z,2.0nm,0.3s,baz=199,slow=14,SNR=33						
KMBO				Sn	**Sn**	**01 14 18.6**	**-5.7**
	comp=Z,4.0nm,0.3s,baz=197,slow=19,SNR=3.1						
KMBO				Lg	Lg	01 15 11.4	
	comp=Z,4.4nm,0.3s,baz=259,slow=21,SNR=16						
KMBO				LR	LR	01 15 46.7	
	comp=Z,60nm,20.4s,baz=100,slow=35						
BOBN	**Bobandana**	**9.34**	**324**	*i* P	**Pn**	**01 12 58.5**	**+3.2**
MBAR	**Mbarara**	**9.46**	**337**	Pn	**Pn**	**01 12 57.7**	**+0.7**
	comp=Z,6.8nm,0.3s,baz=303,slow=5.6,SNR=9.9						
MBAR				Sn	**Sn**	**01 14 38.0**	**-5.7**
	comp=Z,21nm,0.3s,baz=121,slow=23,SNR=10						
MBAR				Lg	Lg	01 15 33.2	
	comp=Z,46nm,0.3s,baz=186,slow=11,SNR=11						
MBAR				LR	LR	01 16 12.0	
	comp=Z,50nm,18.6s,baz=160,slow=35						
MBAR	**Mbarara**	**9.46**	**337**	Pn	**Pn**	**01 12 58.3**	**+1.3**
MBAR	**Mbarara**	**9.46**	**337**	*i* P	**Pn**	**01 12 57.9**	**+0.9**
ITZ	**Itezhi-Tezhi**	**10.36**	**232**	*e*P	**Pn**	**01 13 10.7**	**+1.5**
ITZ				*i*		01 13 10.7	
	baz=79,slow=16						
ITZ				*e*S	**Sn**	**01 15 00.4**	**-5.1**
ITZ				IAML		01 16 19.2	
	comp=Z,234nm,1.1s						
MATP	**Matopo**	**12.38**	**207**	Pn	**Pn**	**01 13 37.2**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=35,slow=15,SNR=14						
MATP				Sn	**Sn**	**01 15 47.4**	**-7.6**
	comp=Z,0.4nm,0.3s,baz=95,slow=21,SNR=2.2						
MATP				Lg	Lg	01 17 06.6	
	comp=Z,2.4nm,0.3s,baz=304,slow=22,SNR=6.5						
MATP				LR	LR	01 18 14.2	
	comp=Z,125nm,21.6s,baz=26,slow=37						
OPO	**Ambohidratompo**	**15.38**	**128**	Pn	**P**	**01 14 20.1**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=162,slow=2.9,SNR=3.6						
OPO				Sn	**Sn**	**01 17 05.7**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=267,slow=19,SNR=1.5						
ABPO	**Ambohimpanom**	**15.67**	**129**	Pn	**Pn**	**01 14 19.2**	**-2.3**
ABPO				IAmb	IAmb	01 14 31.0	
	comp=Z,6.9nm,0.9s						
LBTB	**Lobatse**	**17.67**	**207**	P	**P**	**01 14 47.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=22,slow=16,SNR=5.8						
LBTB				Sn	**Sn**	**01 17 55.2**	**-8.7**
	comp=Z,0.3nm,0.3s,baz=273,slow=18,SNR=2.6						
LBTB				Lg	Lg	01 19 46.8	
	comp=Z,0.8nm,0.3s,baz=301,slow=23,SNR=3.6						
LBTB				LR	LR	01 20 45.9	
	comp=Z,51nm,20.5s,baz=54,slow=34						
LBTB	**Lobatse**	**17.67**	**207**	Pn	**Pn**	**01 14 44.5**	**-2.3**
LBTB				IAmb	IAmb	01 14 59.7	
	comp=Z,18nm,0.6s						
BOSA	**Boshof**	**20.98**	**203**	P	Pn	01 15 27.0	+0.5
	comp=Z,2.9nm,0.9s,baz=19,slow=15,SNR=4.6						
BOSA				Lg	Lg	01 21 36.1	
	comp=Z,13nm,1.0s,baz=309,slow=18,SNR=3.7						
BOSA	**Boshof**	**20.98**	**203**	P	**P**	**01 15 21.7**	**-2.3**
BOSA				IAmb	IAmb	01 15 37.2	
	comp=Z,3.7nm,0.7s						
SUR	**Sutherland**	**26.12**	**207**	Lg	Lg	01 24 19.2	
	comp=Z,9.9nm,0.9s,baz=122,slow=6.5,SNR=2.6						
TORD	**Torodi Ar. Bea**	**39.46**	**304**	LR	LR	01 35 06.3	
	comp=Z,80nm,18.3s,baz=0.0,slow=37						
DBIC	**Dimbokro**	**42.26**	**291**	LR	LR	01 34 39.8	
	comp=Z,64nm,19.5s,baz=41,slow=34						
KKAR	**Karatay Array**	**61.72**	**29**	P	**P**	**01 20 59.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**69.39**	**66**	P	**P**	**01 21 51.7**	**+2.7**
	comp=Z,0.9nm,0.3s,baz=259,slow=7.3,SNR=4.8						
CMAR	**Chiang Mai Arr**	**69.39**	**66**	P	**P**	**01 21 47.4**	**-1.7**
MKAR	**Makanchi Array**	**70.30**	**33**	P	**P**	**01 21 55.8**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=232,slow=6.6,SNR=5.9						
MKAR	**Makanchi Array**	**70.30**	**33**	P	**P**	**01 21 53.0**	**-1.0**
PLCA	**Paso Flores**	**95.07**	**227**	LR	LR	02 00 41.2	
	comp=Z,20nm,22.0s,baz=148,slow=32						

*IDC **09** 01:23:18.6±1.0, 8.78S×149.44E, h0km, mb4.1/12, mb1 4.3/16, mb1mx4.2/33, mbtmp4.1/16, ML3.6/4, MS3.4/8, Ms1 3.4/8, ms1mx3.1/42, Error ellipse: s-maj=26.5km s-min=15.4km az=110.0*
*NEIC **09** 01:23:26±1.4, 8.76S±0.08×149.18E±0.08, h58km±5km, mb4.0/10, Error ellipse: s-maj=14.2km s-min=8.7km az=138.0*
ISC 09 01:23:24.5±0.6, 8.78S±0.07×149.25E±0.07, h35km, n40, σ1s29/39, mb4.1/12, MS3.3/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.16**	**253**	Pn	**Pn**	**01 23 58.9**	**+0.9**
	145nm,0.3s,baz=62,slow=8.9,SNR=127						
PMG				Sn	**Sn**	**01 24 27.7**	**+4.2**
	73nm,0.3s,baz=72,slow=12,SNR=5.6						
PMG				LR	LR	01 25 10.6	
	comp=Z,812nm,20.0s,baz=279,slow=48						
PMG	**Port Moresby**	**2.16**	**253**	Pn	**Pn**	**01 23 58.7**	**+0.7**
PMG				Sn	**Sn**	**01 24 24.7**	**+1.2**
RABL	**Rabaul**	**5.40**	**33**	Pn	**Pn**	**01 24 44.0**	**+1.4**
RABL				Sn	**Sn**	**01 25 46.2**	**+2.6**
HNR	**Honiara**	**10.59**	**94**	LR	LR	01 29 21.6	
	comp=Z,176nm,18.5s,baz=246,slow=35						
CTA	**Charters Tower**	**11.61**	**194**	Pn	**Pn**	**01 26 08.0**	**+0.1**
	0.4nm,0.3s,baz=16,slow=15,SNR=5.2						
CTAO	**Charters Tower**	**11.61**	**194**	Pn	**Pn**	**01 26 09.6**	**+1.7**
EIDS	**Eidsvold**	**16.59**	**174**	Pn	**Pn**	**01 27 14.9**	**+0.3**
EIDS				IAmb	IAmb	01 27 19.3	
	comp=Z,11nm,0.7s						
FAKI	**Fak Fak**	**17.88**	**288**	P	**Pn**	**01 27 30.2**	**-0.4**
FAKI				IAmb	IAmb	01 27 47.6	
	comp=Z,13nm,0.8s						
WR0	**Warramunga Arr**	**18.05**	**230**	P	**Pn**	**01 27 31.7**	**-1.1**
WR0				IAmb	IAmb	01 27 33.4	
	comp=Z,17nm,1.1s						
WB0	**Warramunga Arr**	**18.05**	**231**	P	**Pn**	**01 27 31.9**	**-1.0**
WB0				IAmb	IAmb	01 27 47.5	
	comp=Z,13nm,1.0s						
WB2	**Warramunga Arr**	**18.19**	**231**	P	**P**	**01 27 33.0**	**-1.5**
WB2				IAmb	IAmb	01 27 45.6	
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**18.20**	**231**	P	**P**	**01 27 34.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=56,slow=11,SNR=9.9						
WRA	**Warramunga Arr**	**18.20**	**231**	P	**P**	**01 27 33.3**	**-1.3**
SIJI	**Sorong**	**19.55**	**293**	P	**Pn**	**01 27 51.3**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=78,slow=9.3,SNR=5.0						
SIJI				LR	LR	01 37 13.6	
	comp=Z,65nm,19.2s,baz=64,slow=42						
AS31	**Alice Springs**	**20.85**	**223**	P	**P**	**01 28 04.1**	**+0.5**
AS31				IAmb	IAmb	01 28 22.2	
	comp=Z,3.5nm,1.1s						
ASAR	**Alice Springs**	**20.86**	**223**	P	**P**	**01 28 04.1**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=57,slow=10,SNR=20						
ASAR	**Alice Springs**	**20.86**	**223**	P	**P**	**01 28 02.1**	**-1.5**
DZM	**Mont Dzumac**	**21.17**	**131**	P	**P**	**01 28 08.6**	**+1.5**
	comp=Z,3.0nm,0.7s,baz=42,slow=18,SNR=1.9						
STKA	**Stephens Creek**	**24.06**	**196**	P	**P**	**01 28 36.9**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=351,slow=8.0,SNR=4.5						
FITZ	**Fitzroy Crossi**	**24.73**	**246**	P	**P**	**01 28 42.2**	**-0.7**
	comp=Z,8.0nm,0.5s,baz=70,slow=7.7,SNR=29						
FITZ				LR	LR	01 38 46.9	
	comp=Z,108nm,20.8s,baz=74,slow=37						
FITZ	**Fitzroy Crossi**	**24.73**	**246**		**P**	**01 28 41.4**	**-1.5**
JOW	**Kunigami**	**40.83**	**331**	LR	LR	01 46 23.8	
	comp=Z,64nm,18.1s,baz=183,slow=34						
LEM	**Lembang**	**41.28**	**270**	LR	LR	01 53 12.0	
	comp=Z,32nm,20.3s,baz=37,slow=43						
MJAR	**Matsushiro Arr**	**46.26**	**348**	P	**P**	**01 31 46.4**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=159,slow=8.2,SNR=9.0						
MJAR	**Matsushiro Arr**	**46.26**	**348**	P	**P**	**01 31 45.4**	**-1.2**
KSRS	**Korea Array**	**50.13**	**338**	P	**P**	**01 32 17.4**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=161,slow=8.0,SNR=7.2						
USRK	**Ussuriysk Ar.**	**55

1.3nm,0.3s,baz=266,slow=23,SNR=15
SIJI S Sn 01 43 13.1 -0.9
1.2nm,0.3s,baz=17,slow=19,SNR=1.9
FITZ Fitzroy Crossi 11.78 198 P Pn 01 43 21.4 +1.6
0.3nm,0.3s,baz=24,slow=13,SNR=23
FITZ S Sn 01 45 26.2 -3.3
0.5nm,0.3s,baz=300,slow=21,SNR=2.0
WRA Warramunga Arr 13.91 160 P Pn 01 43 45.8 -1.9
0.2nm,0.3s,baz=335,slow=13,SNR=3.9
WRA S Sn 01 46 11.0 -10
0.7nm,0.3s,baz=341,slow=21,SNR=8.7
ASAR Alice Springs 17.31 166 P Pn 01 44 30.9 +0.7
0.3nm,0.3s,baz=346,slow=9.4,SNR=27
JNU Nakatsue 39.75 2 LR LR 02 03 16.6
comp=Z,51nm,19.3s,baz=42,slow=34
MKAR Makanchi Array 67.73 327 P P 01 51 21.1 0.0
0.4nm,0.3s,baz=128,slow=7.5,SNR=9.3

JMA ***09*** *01:59:16.8±0.2, 37˚.21N×141˚.61E, h35km±2km, M3.7*
NIED ***09*** *01:59:16.8, 37˚.21N×141˚.61E, h35km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.72; $M_{\theta\theta}$1.13; $M_{\phi\phi}$1.59; $M_{r\theta}$-1.41; $M_{\theta\phi}$1.50; $M_{r\phi}$-0.91; Fault plane solution: M_o3.26000×10^{14} NP1:ϕ_s49.00000°, δ61.00000°, λ-81.00000°. NP2:ϕ_s212.00000°, δ31.00000°, λ-105.00000°.*
IDC ***09*** *01:59:27.0±3.5, 37˚.04N×141˚.00E, h79km±30km, mb3.4/6, mb1 3.5/9, mb1mx3.3/49, mbtmp3.6/9 Error ellipse: s-maj=35.2km s-min=21.5km az=78.0*
ISC 09 01:59:16.0±2.1**, 37˚.19N**±0˚.05×**141˚.57E**±0˚.08**, h7**km±12km**, n25**,σ1**s24/25**, mb3.8/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.58**	**288**	P	**Pb**	**01 59 28.5**	**-0.1**
JFK				S	**Sb**	**01 59 36.4**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.62**	**262**	P	**Pb**	**01 59 29.4**	**+0.1**
ONAJ				S	**Sb**	**01 59 38.9**	**+0.7**
JMST	**Minamisoumatoc**	**0.76**	**315**	S	**Sb**	**01 59 41.6**	**-0.7**
JFFD	**Fukushimafurud**	**0.81**	**264**	P	**Pb**	**01 59 32.2**	**-0.3**
JFFD				S	**Sb**	**01 59 43.1**	**-0.5**
JMM	**Marumori**	**0.92**	**318**	P	**Pg**	**01 59 33.4**	**-0.3**
JMM				S	**Sg**	**01 59 45.6**	**0.0**
JHO	**Hitachi**	**0.99**	**235**	P	**Pg**	**01 59 34.7**	**-0.2**
JHO				S	**Sb**	**01 59 48.3**	**-0.4**
JFT	**Otama**	**1.04**	**289**	P	**Pb**	**01 59 36.2**	**-0.1**
JFT				S	**Sb**	**01 59 50.2**	**+0.1**
JIO	**Ouri**	**1.28**	**352**	P	**Pn**	**01 59 38.7**	**-1.6**
JYT	**Yasato**	**1.46**	**230**	P	**Pn**	**01 59 41.5**	**-1.3**
JYT				S	**Sn**	**02 00 00.1**	**-2.1**
MJAR	**Matsushiro Arr**	**2.77**	**258**	P	**Pn**	**02 00 01.9**	**+1.0**
	0.9nm,0.3s,baz=78,slow=10.0,SNR=17						
MAT	**Matsushiro**	**2.77**	**258**	P	**Pn**	**02 00 02.0**	**+1.1**
MAT				S	**Sb**	**02 00 38.2**	**-1.9**
USRK	**Ussuriysk Ar.**	**10.09**	**317**	P	Pn	02 01 46.6	+5.2
	baz=128,slow=16,SNR=2.4						
KSRS	**Korea Array**	**10.87**	**276**	P	**Pn**	**02 01 55.8**	**+3.7**
	0.3nm,0.3s,baz=87,slow=14,SNR=2.0						
SONM	**Songino Array**	**27.80**	**304**	P	**P**	**02 05 05.6**	**-0.3**
	0.8nm,0.8s,baz=102,slow=8.2,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**28.12**	**121**	T	T	02 34 36.1	
	baz=314,slow=75,SNR=249						
H11N1	**WAKE ISLAND Hy**	**28.13**	**121**	T	T	02 34 31.9	
	baz=314,slow=75,SNR=380						
H11N3	**WAKE ISLAND Hy**	**28.14**	**121**	T	T	02 34 37.5	
	baz=314,slow=75,SNR=295						
H11S1	**WAKE ISLAND Hy**	**28.84**	**123**	T	T	02 35 24.3	
	baz=316,slow=76,SNR=164						
H11S3	**WAKE ISLAND Hy**	**28.84**	**123**	T	T	02 35 27.3	
	baz=316,slow=76,SNR=117						
H11S2	**WAKE ISLAND Hy**	**28.85**	**123**	T	T	02 35 29.0	
	baz=316,slow=76,SNR=117						
ZALV	**Zalesovo Beam**	**41.90**	**312**	P	**P**	**02 07 07.3**	**+0.4**
	1.5nm,0.7s,baz=88,slow=8.0,SNR=7.4						
MKAR	**Makanchi Array**	**44.14**	**302**	P	**P**	**02 07 25.1**	**0.0**
	1.1nm,0.7s,baz=87,slow=10,SNR=13						
ILAR	**Eielson Array**	**49.30**	**32**	P	P	02 08 10.2	+5.0
	0.5nm,0.6s,baz=251,slow=6.1,SNR=4.1						
WRA	**Warramunga Arr**	**57.23**	**188**	P	**P**	**02 09 03.7**	**-0.3**
	0.6nm,0.6s,baz=5.9,slow=7.5,SNR=2.8						
ASAR	**Alice Springs**	**60.95**	**188**	P	**P**	**02 09 31.2**	**+1.3**
	0.5nm,0.6s,baz=27,slow=8.3,SNR=4.1						

AEIC ***09*** *02:07:36±1.6, 51˚.64N±0˚.07×175˚.30W±0˚.04, h29km±4km, Error ellipse: s-maj=9.7km s-min=3.2km az=173.0*
IDC ***09*** *02:07:37.8±2.6, 51˚.81N×175˚.36W, h48km±23km, mb3.9/30, mb1 4.0/33, mb1mx3.9/67, mbtmp4.1/33, ML4.0/3, MS3.3/10, Ms1 3.3/10, ms1mx3.1/40, Error ellipse: s-maj=17.8km s-min=10.1km az=166.0*
NEIC ***09*** *02:07:37.7±1.0, 51˚.67N±0˚.07×175˚.32W±0˚.05, h49km±6km, mb4.5/105, ML4.3(AEIC), Error ellipse: s-maj=10.8km s-min=3.9km az=169.0*
ISC 09 02:07:37.8±1.1**, 51˚.72N**±0˚.09×**175˚.31W**±0˚.04**, h50**km±8km**, n209,σ0s95/206, mb4.4**/71**, MS3.2**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSMY	**Great Sitkin M**	**0.56**	**305**		**Pn**	**02 07 49.4**	**-0.5**
GSTR	**Great Sitkin T**	**0.60**	**309**		**Pn**	**02 07 50.3**	**0.0**
GSCK	**Great Sitkin C**	**0.60**	**299**		**Pn**	**02 07 49.8**	**-0.6**
GSCK					**Sn**	**02 07 59.9**	**+0.5**
GSTD	**Great Sitkin T**	**0.62**	**303**		**Pn**	**02 07 50.1**	**-0.5**
GSSP	**Great Sitkin S**	**0.65**	**305**		**Pn**	**02 07 50.8**	**-0.2**
ETKA	**Kagalaska Isla**	**0.70**	**282**		**Pn**	**02 07 50.3**	**-1.2**
ETKA					**Sn**	**02 08 00.3**	**-1.1**
ATKA	**Atka Island**	**0.84**	**55**		**Pn**	**02 07 52.6**	**-0.8**
ATKA					**Sn**	**02 08 04.5**	**-0.2**
ADAG	**Mount Adagdak**	**0.84**	**288**		**Pn**	**02 07 53.1**	**-0.3**
ADK	**Adak**	**0.87**	**281**		**Pn**	**02 07 52.5**	**-1.3**
ADK	**Adak**	**0.87**	**281**	Sn	**Sn**	**02 08 04.5**	**-1.0**
KOWE	**Korovin West**	**0.92**	**45**		**Pn**	**02 07 54.9**	**+0.4**
KOFP	**Korovin Flat P**	**0.93**	**53**		**Pn**	**02 07 54.6**	**-0.1**
KIKV	**Kanaga Island**	**1.17**	**278**		**Pn**	**02 07 56.9**	**-0.9**
KICM	**Kanaga Island**	**1.19**	**280**		**Pn**	**02 07 57.5**	**-0.5**
KIMD	**Kanaga Island**	**1.20**	**273**		**Pn**	**02 07 56.8**	**-1.4**
TAFP	**Tanaga Falls P**	**1.67**	**277**		**Pn**	**02 08 04.2**	**-0.4**
TAFP					**Sn**	**02 08 24.8**	**-0.1**
TASE	**Tanaga Southea**	**1.70**	**275**		**Pn**	**02 08 04.7**	**-0.3**
GAEA	**Gareloi East**	**2.14**	**273**		**Pn**	**02 08 11.1**	**+0.1**
GALAA	**Gareloi Lava P**	**2.15**	**272**		**Pn**	**02 08 11.1**	**-0.1**
GALAA					**Sn**	**02 08 39.6**	**+2.8**
CERAA	**Semis' Rag'd T**	**3.11**	**275**		**Pn**	**02 08 25.0**	**+0.7**
CERB	**Semis' Cerberu**	**3.15**	**276**		**Sn**	**02 09 01.7**	**+0.6**
CEAP	**Semis' Anvil P**	**3.18**	**277**		**Sn**	**02 09 03.2**	**+1.2**
CESW	**Semis' Southwe**	**3.19**	**275**		**Pn**	**02 08 25.6**	**+0.2**
AMKA	**Amchitka**	**3.38**	**266**		**Pn**	**02 08 27.6**	**-0.5**
AMKA					**Sn**	**02 09 09.5**	**+2.6**
LSPA	**Little Sitkin**	**3.80**	**276**		**Pn**	**02 08 34.1**	**+0.3**
LSPA					**Sn**	**02 09 20.3**	**+3.1**
LSNW	**Little Sitkin**	**3.84**	**276**		**Pn**	**02 08 34.5**	**+0.2**
LSSA	**Little Sitkin**	**3.84**	**276**		**Pn**	**02 08 34.7**	**+0.4**
NIKH	**Nikolski High**	**4.15**	**70**		**Pn**	**02 08 39.2**	**+0.7**
OKFG	**Magazine Ridge**	**4.82**	**67**		**Pn**	**02 08 49.3**	**+1.6**
MSW	**Makushin Switc**	**5.62**	**64**		**Pn**	**02 09 00.4**	**+1.7**
MNAT	**Makushin Natee**	**5.66**	**64**		**Pn**	**02 09 01.2**	**+2.0**
AKMO	**Akutan Morgan**	**6.10**	**64**		**Pn**	**02 09 07.2**	**+1.9**
SPIA	**Saint Paul Isl**	**6.21**	**26**		**Sn**	**02 10 18.9**	**+2.7**
SPIA	**Saint Paul Isl**	**6.21**	**26**		**Pn**	**02 09 09.8**	**+3.1**
SDPT	**Sand Point**	**9.54**	**62**		**Pn**	**02 09 54.4**	**+2.0**
GAMB	**Gambell**	**12.23**	**8**		**Pn**	**02 10 29.8**	**+0.8**
GAMB	**Gambell**	**12.23**	**8**	P		02 10 32.2	
	baz=190						
ANM	**Nome**	**13.88**	**18**	Pn	**Pn**	**02 10 52.4**	**+1.0**
ANM	**Nome**	**13.88**	**18**	P		02 10 55.3	
	baz=206						
TNA	**Tin City**	**14.38**	**12**	Pn	**Pn**	**02 10 59.2**	**+1.1**
TNA	**Tin City**	**14.38**	**12**	P		02 11 01.8	
	baz=199,SNR=7.0						
KDAK	**Kodiak Island**	**14.41**	**56**	P	**Pn**	**02 10 56.5**	**-2.1**
	0.9nm,0.3s,baz=172,slow=0.5,SNR=21						
KDAK				S	**S**	**02 13 47.3**	**-7.2**
	0.4nm,0.3s,baz=357,slow=12,SNR=2.1						
KDAK	**Kodiak Island**	**14.41**	**56**	Pn	**Pn**	**02 10 57.0**	**-1.7**
KDAK	**Kodiak Island**	**14.41**	**56**	P		02 11 03.6	
	baz=255						
RSO	**Redoubt South**	**15.26**	**46**	Pn	**Pn**	**02 11 10.4**	**+0.6**
SPCR	**Spurr Chakacha**	**15.82**	**44**	P		02 11 20.5	
	baz=243						
BRSE	**Bradley Lake S**	**15.92**	**50**	P		02 11 20.9	
	baz=250						
PETK	**Petropavlovsk-**	**16.49**	**285**	P	**P**	**02 11 26.9**	**-0.5**
	0.9nm,0.3s,baz=19,slow=19,SNR=2.3						
PETK				LR	LR	02 17 09.5	
	comp=Z,71nm,21.6s,baz=82,slow=35						
SUA	**Susitna One**	**16.57**	**44**	P		02 11 28.6	
	baz=245						
PMR	**Palmer**	**17.33**	**45**	P		02 11 36.8	
	baz=247						
KTH	**Kantishna Hill**	**17.48**	**38**		**Pn**	**02 11 38.5**	**+0.8**
KTH				IAmb	IAmb	02 11 43.4	
	comp=Z,26nm,0.9s						
TRF	**Thorofare Moun**	**17.68**	**39**		**P**	**02 11 41.0**	**+0.5**
TRF	**Thorofare Moun**	**17.68**	**39**	P		02 11 42.5	
	baz=240						
BPAW	**Bear Paw Mtn.**	**17.75**	**36**		**P**	**02 11 42.0**	**+0.8**
BPAW	**Bear Paw Mtn.**	**17.75**	**36**	P		02 11 43.6	
	baz=237,SNR=13						
IMAR	**Indian Mountai**	**17.98**	**29**		**Pn**	**02 11 45.0**	**+1.3**
WAT2	**Susitna Watana**	**18.13**	**41**	P		02 11 46.1	
	baz=244						
RND	**Reindeer**	**18.22**	**40**		**Pn**	**02 11 47.2**	**+0.5**
WAT6	**Susitna Watana**	**18.32**	**43**	P		02 11 48.5	
	baz=246						
MCK	**McKinley**	**18.34**	**39**	P	**Pn**	**02 11 48.7**	**+0.5**
MCK	**McKinley**	**18.34**	**39**	P		02 11 48.8	
	baz=241						
MLY	**Manley**	**18.36**	**34**	P	**Pn**	**02 11 49.0**	**+0.5**
MLY	**Manley**	**18.36**	**34**	P		02 11 50.4	
	baz=235,SNR=10						
BILL	**Billbino**	**18.65**	**338**		**P**	**02 11 51.7**	**+0.7**
NEA2	**Nenana**	**18.72**	**36**	P	**P**	**02 11 52.6**	**+0.7**
NEA2	**Nenana**	**18.72**	**36**	P		02 11 53.0	
	baz=239						
KLU	**Klutina**	**18.73**	**47**	P	**P**	**02 11 52.9**	**+0.8**
KLU	**Klutina**	**18.73**	**47**	P		02 11 53.3	
	baz=252						
I23K	**Minto, Yukon-K**	**18.91**	**35**	P	**P**	**02 11 55.0**	**+1.1**
I23K	**Minto, Yukon-K**	**18.91**	**35**	P		02 11 56.4	
	baz=237,SNR=10						
WRH	**Wood River Hil**	**19.03**	**37**	P	**P**	**02 11 54.9**	**-0.3**
MDM	**Murphy Dome**	**19.22**	**36**	P	**P**	**02 11 57.5**	**+0.2**
MDM				IAmb	IAmb	02 12 03.9	
	comp=Z,9.8nm,0.7s						
CCB	**Clear Creek Bu**	**19.22**	**37**	P	**P**	**02 11 57.0**	**-0.3**
N25K	**Chitina, Valde**	**19.37**	**47**	P		02 12 00.3	
	baz=253						
HDA	**Harding Lake**	**19.43**	**38**	P		02 12 00.3	
	baz=242,SNR=10						
HDA				P		02 12 00.3	
	baz=242,SNR=10						
IL31		**19.63**	**37**	P	**P**	**02 12 02.6**	**+0.9**
ILAR	**Eielson Array**	**19.63**	**37**	P	**P**	**02 12 00.6**	**-1.1**
	comp=Z,1.4nm,0.3s,baz=229,slow=9.9,SNR=57						
ILAR	**Eielson Array**	**19.63**	**37**	P	**P**	**02 12 02.6**	**+0.9**
COLD	**Coldfoot**	**19.86**	**29**	P	**P**	**02 12 05.2**	**+0.9**
COLD				IAmb	IAmb	02 12 13.3	
	comp=Z,16nm,1.0s						
COLD	**Coldfoot**	**19.86**	**29**	P		02 12 07.0	
	baz=231,SNR=23						
DOT	**Dot Lake**	**20.28**	**42**	P	**P**	**02 12 08.8**	**-0.1**
DOT				IAmb	IAmb	02 12 13.5	
	comp=Z,12nm,0.7s						
SCRK	**Sand Creek**	**20.43**	**41**	P	**P**	**02 12 10.4**	**-0.2**
SCRK				IAmb	IAmb	02 12 14.7	
	comp=Z,16nm,0.6s						
SCRK	**Sand Creek**	**20.43**	**41**	P		02 12 10.4	
	baz=248,SNR=17						
SEY	**Seymchan**	**20.49**	**316**	P	**P**	**02 12 11.0**	**-0.1**
	comp=Z,3.3nm,0.6s,baz=345,slow=23,SNR=3.2						
PRP	**Porcupine Dome**	**20.49**	**36**	P	**P**	**02 12 11.1**	**-0.2**
PRP	**Porcupine Dome**	**20.49**	**36**	P		02 12 12.0	
	baz=242						
MA2	**Magadan**	**20.50**	**306**	P	Pn	02 12 15.4	+1.6
	comp=Z,2.8nm,0.4s,baz=139,slow=17,SNR=2.3						
MA2				LR	LR	02 19 12.5	
	comp=Z,75nm,20.7s,baz=93,slow=34						
TABL	**Table Mountain**	**20.75**	**52**	P	**P**	**02 12 14.8**	**+0.7**
TABL				IAmb	IAmb	02 12 30.4	
	comp=Z,16nm,0.6s						
TOLK	**Toolik Lake Re**	**20.96**	**26**	P	**P**	**02 12 17.1**	**+0.9**
TOLK				IAmb	IAmb	02 12 36.8	
	comp=Z,11nm,0.8s						
TOLK	**Toolik Lake Re**	**20.96**	**26**	P		02 12 18.3	
	baz=229,SNR=17						
L27K	**Beaver Creek,**	**21.03**	**44**	P	**P**	**02 12 18.0**	**+0.9**
BCAR	**Beaver Creek A**	**21.05**	**44**	P	**P**	**02 12 17.9**	**+0.6**
K27K	**Chicken**	**21.23**	**42**	P	**P**	**02 12 19.5**	**+0.4**
K27K				IAmb	IAmb	02 12 27.6	
	comp=Z,19nm,1.0s						
K27K	**Chicken**	**21.23**	**42**	P		02 12 19.7	
	baz=250						
BMAR	**Burnt Mountain**	**21.76**	**32**	P	**P**	**02 12 25.7**	**+0.9**
EGAK	**Eagle**	**21.87**	**40**	P	**P**	**02 12 26.4**	**+0.5**
EGAK				IAmb	IAmb	02 12 30.4	
	comp=Z,9.1nm,0.6s						
EGAK	**Eagle**	**21.87**	**40**	P		02 12 26.3	
	baz=250,SNR=13						
DAWY	**Dawson**	**22.37**	**43**	P	**P**	**02 12 31.8**	**+0.5**
INK	**Inuvik**	**25.93**	**35**	P	**P**	**02 13 05.0**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=230,slow=5.6,SNR=16						
INK	**Inuvik**	**25.93**	**35**	P	**P**	**02 13 05.3**	**+0.5**
BBB	**Bella Bella**	**28.69**	**70**	LR	LR	02 22 37.8	
	comp=Z,64nm,19.2s,baz=278,slow=31						
JKA	**Kamikawa-asahi**	**28.88**	**272**	P	**P**	**02 13 31.7**	**+0.2**
JKA				IAmb	IAmb	02 13 48.1	
	comp=Z,18nm,1.1s						
ASAJ	**Asahikawa**	**28.88**	**272**	P	**P**	**02 13 32.1**	**+0.7**
	comp=Z,6.3nm,0.6s,baz=71,slow=3.5,SNR=6.1						
YAK	**Yakutsk**	**30.83**	**311**	LR	LR	02 26 15.2	
	comp=Z,91nm,19.2s,baz=90,slow=36						
TIXI	**Tiksi**	**31.42**	**330**	LR	LR	02 27 27.1	
	comp=Z,35nm,18.6s,baz=180,slow=38						
KLR	**Kul'dur**	**33.17**	**287**	LR	LR	02 27 31.3	
	comp=Z,35nm,21.1s,baz=30,slow=36						
YKA	**Yellowknife Ar**	**33.40**	**47**	P	**P**	**02 14 10.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=277,slow=8.6,SNR=21						
YKA				PcP	**PcP**	**02 16 52.1**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=276,slow=4.7,SNR=13						
YKA				ScP	**ScP**	**02 20 31.2**	**-0.1**
	comp=Z,0.1nm,0.8s,baz=284,slow=2.5,SNR=2.5						
YKA				LR	LR	02 29 22.9	
	comp=Z,75nm,18.6s,baz=0.0,slow=39						
D03D	**Eldon**	**33.48**	**76**	P		02 14 13.3	
	baz=297						
H11N2	**WAKE ISLAND Hy**	**34.85**	**210**	T	T	02 51 34.7	
	baz=20,slow=76,SNR=810						
H11N3	**WAKE ISLAND Hy**	**34.85**	**210**	T	T	02 51 36.1	
	baz=20,slow=76,SNR=730						
H11N1	**WAKE ISLAND Hy**	**34.87**	**210**	T	T	02 51 36.8	
	baz=20,slow=76,SNR=860						
B08A	**Colville Reser**	**35.36**	**73**	P	**P**	**02 14 27.6**	**-0.6**
B08A				IAmb	IAmb	02 14 35.6	
	comp=Z,3.8nm,0.6s						
USRK	**Ussuriysk Ar.**	**35.41**	**279**	P	**P**	**02 14 27.8**	**-0.7**
	comp=Z,3.4nm,0.7s,baz=52,slow=12,SNR=8.9						
USRK	**Ussuriysk Ar.**	**35.41**	**279**	P	**P**	**02 14 27.7**	**-0.9**
MJAR	**Matsushiro Arr**	**35.99**	**264**	LR	LR	02 27 43.3	
	comp=Z,23nm,21.3s,baz=300,slow=34						
H11S1	**WAKE ISLAND Hy**	**36.06**	**210**	T	T	02 53 06.0	
	baz=19,slow=76,SNR=898						
H11S2	**WAKE ISLAND Hy**	**36.07**	**210**	T	T	02 53 07.2	
	baz=19,slow=76,SNR=712						
H11S3	**WAKE ISLAND Hy**	**36.07**	**210**	T	T	02 53 07.2	
	baz=19,slow=76,SNR=418						
NEW	**Newport**	**36.71**	**72**	P	**P**	**02 14 40.3**	**+0.5**
NEW				IAmb	IAmb	02 14 46.3	
	comp=Z,5.1nm,0.8s						
NEW	**Newport**	**36.71**	**72**	P		02 14 41.0	
	baz=298,SNR=6.4						
WALA	**Waterton Lakes**	**38.22**	**69**	P	**P**	**02 14 53.1**	**+0.5**
WALA				IAmb	IAmb	02 14 55.2	
	comp=Z,3.1nm,0.8s						
RES	**Resolute Bay**	**38.52**	**25**	P	**P**	**02 14 54.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=263,slow=7.8,SNR=4.6						
RES				PcP	**PcP**	**02 17 06.4**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=230,slow=2.5,SNR=8.5						
RES	**Resolute Bay**	**38.52**	**25**	P	**P**	**02 14 54.2**	**-0.4**
MSO	**Missoula**	**39.29**	**72**	P	**P**	**02 15 01.8**	**+0.2**
MSO				IAmb	IAmb	02 15 07.8	
	comp=Z,3.9nm,0.7s						
MSO	**Missoula**	**39.29**	**72**	P		02 15 01.5	
	baz=300						
HLID	**Hailey**	**40.74**	**77**	P	**P**	**02 15 13.8**	**+0.1**
HLID	**Hailey**	**40.74**	**77**	P		02 15 14.2	
	baz=304						
MCMT	**McKenzie Canyo**	**40.99**	**74**	P	**P**	**02 15 16.5**	**+0.6**
EGMT	**Eagleton**	**41.14**	**68**	P		02 15 17.0	
	baz=301						
BOZ	**Bozeman (W)**	**41.30**	**72**	P	**P**	**02 15 18.5**	**+0.2**
BOZ	**Bozeman (W)**	**41.30**	**72**	P		02 15 19.0	
	baz=302,SNR=6.7						
NVAR	**Mina Array Bea**	**41.35**	**86**	P	**P**	**02 15 19.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=269,slow=7.2,SNR=3.3						
NVAR				LR	LR	02 31 05.6	
	comp=Z,66nm,19.0s,baz=252,slow=34						
KSRS	**Korea Array**	**41.81**	**273**	P	**P**	**02 15 23.0**	**+0.8**
	comp=Z,4.0nm,0.9s,baz=57,slow=8.7,SNR=10.0						
YHL	**Hebgen Lake**	**41.97**	**73**	P	**P**	**02 15 23.8**	**-0.1**
YHH	**Holmes Hill**	**42.21**	**73**	P	**P**	**02 15 26.1**	**+0.2**
YHH				IAmb	IAmb	02 15 27.4	
	comp=Z,3.4nm,0.6s						
RLMT	**Red Lodge**	**42.96**	**72**	P	**P**	**02 15 31.9**	**+0.1**
RLMT				IAmb	IAmb	02 15 34.1	
	comp=Z,3.6nm,0.7s						
RLMT	**Red Lodge**	**42.96**	**72**	P		02 15 33.0	
	baz=303,SNR=6.2						
DUG	**Dugway, Tooele**	**43.66**	**80**	P		02 15 38.2	
	baz=307						
DGMT	**Dagmar**	**44.08**	**65**	P		02 15 41.2	
	baz=302						
BW06	**Boulder Array**	**44.12**	**75**	P	**P**	**02 15 41.3**	**0.0**
BW06				IAmb	IAmb	02 15 42.8	
	comp=Z,5.6nm,0.7s						
PD31	**Pinedale Array**	**44.12**	**75**	P	**P**	**02 15 41.3**	**0.0**
PD31				IAmb	IAmb	02 15 42.8	
	comp=Z,5.2nm,0.7s						
PDAR	**Pinedale Array**	**44.12**	**75**	P	**P**	**02 15 42.0**	**+0.8**
	comp=Z,4.8nm,0.6s,baz=304,slow=4.0,SNR=75						
PDAR	**Pinedale Array**	**44.12**	**75**	P	**P**	**02 15 41.5**	**+0.2**
BW06	**Boulder Array**	**44.12**	**75**	P		02 15 42.1	
	baz=305,SNR=11						
RDMU	**Red Mountain**	**45.41**	**77**	P	**P**	**02 15 51.3**	**-0.2**
RDMU				IAmb	IAmb	02 15 54.9	
	comp=Z,5.1nm,0.9s						
SRU	**San Rafael Swe**	**45.72**	**79**	P	**P**	**02 15 53.9**	**-0.1**
SRU				IAmb	IAmb	02 15 60.0	
	comp=Z,3.4nm,0.9s						
O20A	**White River Ci**	**46.48**	**77**	P	**P**	**02 16 00.1**	**+0.1**
O20A				IAmb	IAmb	02 16 01.2	
	comp=Z,5.4nm,0.6s						
O20A	**White River Ci**	**46.48**	**77**	P		02 16 00.4	
	baz=308,SNR=6.5						
RSSD	**Black Hills**	**46.60**	**70**	P		02 16 00.6	
	baz=306						
MDND	**Maddock**	**46.98**	**63**	P	**P**	**02 16 04.0**	**+0.4**
MDND	**Maddock**	**46.99**	**63**	P		02 16 03.9	
	baz=304,SNR=12						
PV04	**Paradox Valley**	**47.16**	**79**	P	**P**	**02 16 05.2**	**0.0**
PV04				IAmb	IAmb	02 16 18.1	
	comp=Z,4.4nm,0.7s						
PV17	**East Wray Mesa**	**47.20**	**79**	P	**P**	**02 16 05.8**	**+0.3**
PV17				IAmb	IAmb	02 16 10.5	
	comp=Z,4.7nm,0.7s						
PV11	**David Mesa, Pa**	**47.24**	**79**	P	**P**	**02 16 06.1**	**+0.2**
PV11				IAmb	IAmb	02 16 20.8	
	comp=Z,6.1nm,0.6s						
PV03	**Paradox Valley**	**47.28**	**79**	P	**P**	**02 16 06.2**	**0.0**
PV03				IAmb	IAmb	02 16 16.8	
	comp=Z,4.3nm,1.1s						
N23A	**Red Feather La**	**47.40**	**75**	P		02 16 07.5	
	baz=308						
PV01	**Paradox Valley**	**47.53**	**79**	P	**P**	**02 16 08.2**	**+0.1**
PV01				IAmb	IAmb	02 16 21.2	
	comp=Z,2.3nm,0.8s						
ULM	**Lac du Bonnet**	**47.66**	**59**	P	**P**	**02 16 08.7**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=310,slow=7.2,SNR=9.0						
ULM	**Lac du Bonnet**	**47.66**	**59**	P	**P**	**02 16 08.9**	**+0.2**
ULM				IAmb	IAmb	02 16 13.6	
	comp=Z,2.7nm,1.1s						
ISCO	**Idaho Springs**	**48.28**	**75**	P		02 16 14.0	
	baz=309						
SONM	**Songino Array**	**48.42**	**298**	P	**P**	**02 16 15.6**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=46,slow=8.4,SNR=2.6						
SONM				PcP	**PcP**	**02 17 40.0**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=78,slow=2.5,SNR=8.9						
AGMN	**Agassiz Nation**	**48.78**	**61**	P	**P**	**02 16 17.1**	**-0.3**
AGMN				IAmb	IAmb	02 16 18.6	
	comp=Z,9.9nm,1.1s						
AGMN	**Agassiz Nation**	**48.78**	**61**	P		02 16 17.4	
	baz=306,SNR=5.7						
Q24A	**Divide**	**49.08**	**76**	P		02 16 20.6	
	baz=309						
SUSD	**Miller**	**49.34**	**67**	P	

W39A	**Magazine**	58.38	72	P			02 17 27.6	
	baz=314							
WHTX	**Lake Whitney,**	58.40	77	P			02 17 28.5	
	baz=314							
SFIN	**Lafayette**	58.66	63	P		P	**02 17 29.6**	**-0.1**
SFIN	**Lafayette**	58.66	63	P			02 17 29.8	
	baz=313,SNR=5.8							
FCAR	**Ozark Folk Cen**	58.87	70	P		P	**02 17 30.3**	**-0.9**
FCAR				IAmb		IAmb	02 17 39.1	
	comp=Z,3.0nm,0.6s							
MIAR	**Mount Ida**	58.95	72	P			02 17 32.1	
	baz=314							
AAM	**Ann Arbor**	59.22	60	P			02 17 33.0	
	baz=314							
W41B	**Gary Mavity, V**	59.30	71	P			02 17 33.8	
	baz=314							
I51A	**Listowel**	59.57	57	P			02 17 36.6	
	baz=314							
ALGO	**Algonquin Park**	59.59	53	P			02 17 35.7	
	baz=314							
D55A	**Sainte-Anne-du**	60.11	51	P			02 17 39.2	
	baz=315							
P48A	**Milroy**	60.22	63	P		P	**02 17 40.0**	**-0.5**
E55A	**Montcerf-Lytto**	60.23	52	P			02 17 40.4	
	baz=315							
H53A	**Bobcaygeon**	60.29	55	P			02 17 41.1	
	baz=315							
KURK	**Kurchatov**	60.33	315	P		P	**02 17 41.8**	**+0.8**
KURBB	**Kurchatov Arra**	60.44	315	P		P	**02 17 41.8**	**0.0**
	comp=Z,2.4nm,0.4s,baz=43,slow=6.8,SNR=39							
P49A	**Miami Univ. Ec**	60.56	63	P			02 17 42.1	
	baz=314							
WCI	**Wyandotte Cave**	60.60	65	P			02 17 42.4	
	baz=314							
E56A	**St. Veronique**	60.66	51	P			02 17 43.0	
	baz=315							
M51A	**Elyria**	60.69	60	P			02 17 43.5	
	baz=315							
N51A	**Ashland**	60.87	60	P		P	**02 17 45.0**	**+0.1**
T47A	**Sharon Grove**	61.01	66	P		P	**02 17 45.8**	**0.0**
T47A				IAmb		IAmb	02 17 48.8	
	comp=Z,8.5nm,1.1s							
ACSO	**Alum Creek Sta**	61.03	61	P			02 17 46.2	
	baz=315							
LATQ	**La Tuque**	61.13	49	P			02 17 46.3	
	baz=316							
L53A	**Girard**	61.27	58	P			02 17 47.8	
	baz=315							
ERPA	**Erie**	61.30	58	P		P	**02 17 48.0**	**+0.3**
ERPA	**Erie**	61.30	58	P			02 17 48.1	
	baz=315							
M53A	**WI Miller and**	61.41	59	P		P	**02 17 49.0**	**+0.5**
M53A	**WI Miller and**	61.41	59	P			02 17 48.8	
	baz=315,SNR=6.2							
OXF	**Oxford**	61.42	70	P			02 17 48.4	
	baz=315							
MKAR	**Makanchi Array**	61.50	310	P		P	**02 17 47.0**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=44,slow=5.5,SNR=5.1							
MKAR	**Makanchi Array**	61.50	310	P		P	**02 17 48.4**	**-0.7**
ALLY	**Alegheny Colle**	61.55	58	P		P	**02 17 50.1**	**+0.6**
Q51A	**Peebles**	61.68	62	P		P	**02 17 50.6**	**+0.2**
G57A	**Newington**	61.72	52	P			02 17 49.5	
	baz=316							
O52A	**Adamsville**	61.73	60	P		P	**02 17 50.9**	**+0.2**
M54A	**Oil Creek Stat**	61.90	58	P		P	**02 17 51.9**	**+0.1**
M54A	**Oil Creek Stat**	61.90	58	P			02 17 52.4	
	baz=316							
P52A	**Corning**	61.91	61	P			02 17 51.5	
	baz=315							
O53A	**New Philadelph**	61.97	60	P			02 17 52.2	
	baz=315							
BVAR	**Borovoye Array**	62.01	321	P		P	**02 17 51.7**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=90,slow=4.3,SNR=4.8							
J56A	**Wolcott**	62.09	55	P			02 17 52.7	
	baz=316							
N54A	**Moraine State**	62.12	59	P		P	**02 17 53.1**	**-0.2**
N54A	**Moraine State**	62.12	59	P			02 17 53.6	
	baz=316,SNR=6.8							
I57A	**Carthage**	62.22	54	P			02 17 54.6	
	baz=316							
K56A	**Middlesex**	62.27	56	P			02 17 55.2	
	baz=316							
D60A	**Saint Jean D'O**	62.35	49	P			02 17 55.4	
	baz=317							
M55A	**Ridgway**	62.40	57	P		P	**02 17 55.8**	**+0.6**
P53A	**Whipple**	62.42	61	P		P	**02 17 55.5**	**+0.2**
O54A	**Avella**	62.47	59	P		P	**02 17 55.9**	**+0.3**
L56A	**Greenwood**	62.55	56	P		P	**02 17 56.4**	**+0.2**
L56A	**Greenwood**	62.55	56	P			02 17 56.9	
	baz=316,SNR=6.4							
K57A	**Scipio Center**	62.66	55	P			02 17 57.1	
	baz=316							
H59A	**Cadyville**	62.68	52	P			02 17 57.2	
	baz=317							
M56A	**Emporium**	62.69	57	P		P	**02 17 57.5**	**+0.4**
M56A	**Emporium**	62.70	57	P			02 17 57.5	
	baz=316,SNR=5.0							
Q53A	**Leroy**	62.79	61	P			02 17 58.3	
	baz=316,SNR=5.4							
R53A	**Hurricane**	62.94	62	P		P	**02 17 59.4**	**+0.7**
G60A	**Masonville**	63.01	51	P			02 17 59.8	
	baz=317							
L57A	**Andrews Acres**	63.01	56	P			02 17 59.5	
	baz=316							
N56A	**West Decatur**	63.04	58	P			02 17 60.0	
	baz=316							
Q54A	**Coxs Mills**	63.08	61	P		P	**02 18 00.2**	**+0.6**
J59A	**Piesco**	63.14	53	P			02 17 59.7	
	baz=317							
BINY	**Binghamton**	63.31	55	P			02 18 01.5	
	baz=317							
M57A	**Sunshine Farm,**	63.35	57	P			02 18 01.9	
	baz=316							
O56A	**Blue Knob Stat**	63.37	58	P			02 18 01.8	
	baz=316							
ARU	**Arti**	63.43	330	P		P	**02 18 02.5**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=50,slow=19,SNR=4.1							
SSPA	**Standing Stone**	63.46	58	P		P	**02 18 02.7**	**+0.5**
SSPA	**Standing Stone**	63.46	58	P			02 18 02.7	
	baz=316							
L58A	**Harry Jones Me**	63.49	55	P			02 18 03.0	
	baz=317							
N57A	**Milroy**	63.55	57	P			02 18 03.0	
	baz=316							
R54A	**Victor**	63.57	61	P			02 18 03.6	
	baz=316,SNR=12							
FPAL	**Fort Paine**	63.60	67	P		P	**02 18 02.9**	**-0.4**
FPAL				IAmb		IAmb	02 18 03.6	
	comp=Z,4.5nm,0.6s							
S54A	**Dingess, Beckl**	63.67	62	P		P	**02 18 03.2**	**-0.4**
S54A	**Dingess, Beckl**	63.67	62	P			02 18 04.1	
	baz=316							
P56A	**Dayton Farm, R**	63.78	59	P			02 18 04.8	
	baz=316,SNR=7.0							
G62A	**West of Eustis**	63.78	50	P			02 18 04.1	
	baz=318							
J60A	**Lant Hill Farm**	63.84	53	P			02 18 04.7	
	baz=317							
TKL	**Tuckaleechee C**	63.84	65	P		P	**02 18 06.6**	**+1.8**
	comp=Z,1.1nm,0.4s,baz=270,slow=2.2,SNR=6.1							
O57A	**Amberson**	63.90	58	P			02 18 05.5	
	baz=317,SNR=5.5							
N58A	**Sunbury**	63.92	57	P			02 18 05.9	
	baz=317							
Q56A	**Snyder Ridge,**	63.93	60	P			02 18 05.4	
	baz=316							
H62A	**Milan**	63.96	50	P			02 18 05.3	
	baz=318							
R55A	**Marlinton**	63.97	61	P		P	**02 18 06.0**	**+0.3**
R55A				IAmb		IAmb	02 18 06.9	
	comp=Z,9.0nm,0.8s							
R55A	**Marlinton**	63.97	61	P			02 18 06.2	
	baz=316							
M59A	**Waymart**	64.07	55	P			02 18 06.9	
	baz=317							
E64A	**Bridgewater**	64.14	47	P			02 18 06.1	
	baz=319							
J61A	**Chester**	64.19	52	P			02 18 06.7	
	baz=318							
P57A	**Homestead Farm**	64.23	58	P		P	**02 18 07.7**	**+0.4**
P57A	**Homestead Farm**	64.23	58	P			02 18 07.6	
	baz=317							
R56A	**Bull Pasture M**	64.27	60	P			02 18 08.0	
	baz=317							
U54A	**Nelsons Funny**	64.31	63	P			02 18 08.9	
	baz=316							
O58A	**Lewisberry**	64.34	57	P			02 18 08.3	
	baz=317							
Q57A	**Strasburg**	64.34	59	P			02 18 08.7	
	baz=317							
N59A	**State Game Lan**	64.36	56	P			02 18 08.4	
	baz=317							
BLA	**Blacksburg**	64.58	62	P		P	**02 18 10.1**	**+0.4**
BLA	**Blacksburg**	64.58	62	P			02 18 10.4	
	baz=317							
O59A	**Robesonia**	64.59	57	P			02 18 10.1	
	baz=317							
S56A	**Natural Bridge**	64.71	61	P			02 18 11.0	
	baz=317							
N60A	**Cedar Hill Far**	64.74	56	P			02 18 11.0	
	baz=317							
Q58A	**Fox Den Farm,**	64.80	59	P			02 18 11.4	
	baz=317,SNR=6.4							
R57A	**Stanardsville**	64.82	60	P			02 18 11.8	
	baz=317,SNR=9.7							
K62A	**Royalston**	64.85	53	P			02 18 11.8	
	baz=318							
P60A	**Greenville**	65.24	57	P			02 18 14.3	
	baz=318							
T57A	**Hurt**	65.38	61	P		P	**02 18 15.2**	**+0.4**
T57A				IAmb		IAmb	02 18 16.3	
	comp=Z,7.9nm,0.8s							
R58B	**Mineral**	65.41	60	P		P	**02 18 15.3**	**+0.4**
R58B				IAmb		IAmb	02 18 16.3	
	comp=Z,9.9nm,0.7s							
R58B	**Mineral**	65.41	60	P			02 18 15.8	
	baz=317							
CBN	**Corbin Frederi**	65.51	59	P			02 18 16.1	
	baz=317							
S58A	**Poland Farm, P**	65.58	60	P		P	**02 18 16.2**	**+0.2**
S58A				IAmb		IAmb	02 18 17.4	
	comp=Z,11nm,0.9s							
S58A	**Poland Farm, P**	65.58	60	P			02 18 16.5	
	baz=317							
KMSC	**Kings Mountain**	65.58	64	P		P	**02 18 16.4**	**+0.3**
KMSC				IAmb		IAmb	02 18 35.0	
	comp=Z,6.5nm,0.9s							
KMSC	**Kings Mountain**	65.58	64	P			02 18 16.7	
	baz=317							
GOGA	**Godfrey**	65.64	67	P			02 18 16.0	
	baz=317							
HODGE	**Hodges**	65.73	65	P		P	**02 18 17.4**	**+0.3**
HODGE				IAmb		IAmb	02 18 19.1	
	comp=Z,3.3nm,0.6s							
T58A	**Grand View Acr**	65.81	61	P			02 18 17.7	
	baz=317,SNR=5.4							
S59A	**Mechanicsville**	65.87	59	P			02 18 18.4	
	baz=318							
FINES	**FINESS Array B**	65.90	349	P		P	**02 18 17.0**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=9.9,slow=8.9,SNR=1.8							
FINES	**FINESS Array B**	65.90	349	P		P	**02 18 16.6**	**-1.0**
JSC	**Jenkinsville**	66.25	64	P		P	**02 18 20.6**	**+0.2**
S60A	**Water View**	66.26	59	P			02 18 21.0	
	baz=318							
T59A	**Double "B" Far**	66.32	60	P		P	**02 18 21.2**	**+0.4**
NOA	**NORSAR Array B**	67.47	357	P		P	**02 18 27.0**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=5.4,slow=6.8,SNR=5.3							
NHSC	**New Hope**	67.73	65	P			02 18 30.6	
	baz=318							
EKA	**Eskdalemuir Ar**	73.11	5	P		P	**02 19 01.5**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=341,slow=4.8,SNR=4.5							
CMAR	**Chiang Mai Arr**	73.13	278	P		P	**02 19 03.5**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=25,slow=7.1,SNR=15							
AKASG	**Malin Array Be**	75.85	344	P		P	**02 19 17.8**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=17,slow=5.9,SNR=4.0							
GERES	**GERESS Array B**	79.51	354	P		P	**02 19 38.8**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=18,slow=4.8,SNR=4.7							
DIVS	**Divibare**	83.64	349	P		P	**02 20 00.9**	**+0.2**
DIVS				IAmb		IAmb	02 20 18.3	
	comp=Z,3.1nm,1.1s							
WR0	**Warramunga Arr**	83.73	227	P		P	**02 20 00.2**	**-1.0**
WR0				IAmb		IAmb	02 20 01.0	
	comp=Z,3.3nm,1.1s							
WB2	**Warramunga Arr**	83.80	227	P		P	**02 20 00.5**	**-1.1**
WB2				IAmb		IAmb	02 20 01.7	
	comp=Z,7.2nm,1.1s							
WRA	**Warramunga Arr**	83.81	227	P		P	**02 20 00.7**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=33,slow=5.8,SNR=10							
WRA	**Warramunga Arr**	83.81	227	P		P	**02 20 01.6**	**0.0**
PSI	**Prapat**	85.19	268	P		P	**02 20 10.1**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=0.4,slow=4.0,SNR=4.8							
ASAR	**Alice Springs**	87.25	225	P		P	**02 20 18.5**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=33,slow=5.2,SNR=13							
ASAR	**Alice Springs**	87.25	225	P		P	**02 20 18.1**	**-0.5**
STKA	**Stephens Creek**	91.44	216	P		P	**02 20 38.3**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=352,slow=6.3,SNR=5.6							
STKA	**Stephens Creek**	91.44	216	P		P	**02 20 38.2**	**+0.1**
TORD	**Torodi Ar. Bea**	115.35	3	PKP		PKiKP	**02 26 13.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=333,slow=2.4,SNR=2.0							
H03N2	**Juan Fernandez**	119.16	108	T		T	04 36 55.2	
	baz=317,slow=77,SNR=121							
H03N1	**Juan Fernandez**	119.17	108	T		T	04 37 10.7	
	baz=317,slow=77,SNR=117							
H03N3	**Juan Fernandez**	119.17	108	T		T	04 36 45.8	
	baz=317,slow=77,SNR=96							
PLCA	**Paso Flores**	129.00	109	PKP		PKPdf	**02 26 39.2**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=298,slow=3.9,SNR=4.3							
MAW	**Mawson**	148.09	218	PKPbc		PKPbc	**02 27 16.4**	**+0.2**
	comp=Z,5.7nm,0.8s,baz=84,slow=3.5,SNR=7.2							
MAW	**Mawson**	148.09	218			PKPbc	**02 27 16.7**	**+0.5**
BOSA	**Boshof**	152.26	318	PKPbc		PKPbc	**02 27 27.7**	**0.0**
	comp=Z,6.4nm,0.6s,baz=335,slow=1.5,SNR=16							

*IDC **09** 02:07:47.0±4.1,3.89S×70.33E,h0km,mb3.6/5,mb1 3.8/5, mb1mx3.4/54,mbtmp3.6/5,MS3.3/6,Ms1 3.3/6, ms1mx3.0/33,Error ellipse: s-maj=134.0km s-min=36.0km az=64.0*

ISC 09 02:07:44.3±3.4,4.4S±0.4×69.5E±0.7,h10km,n18,σ0.79/9, mb3.9/5,MS3.3/6,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	4.37	138	Pn	Pn	**02 08 50.3**	**-0.2**
	baz=328,slow=20,SNR=168						
H08S3				T	T	02 14 11.1	
	baz=312,slow=75,SNR=114						
H08S1	**Diego Carcia H**	4.37	138	Pn	Pn	**02 08 50.6**	**+0.1**
	baz=328,slow=20,SNR=8.8						
H08S1				T	T	02 14 02.8	
	baz=312,slow=75,SNR=15						
H08S2	**Diego Garcia H**	4.38	138	Pn	Pn	**02 08 50.6**	**-0.1**
	baz=328,slow=20,SNR=41						
H08S2				T	T	02 13 52.5	
	baz=312,slow=75,SNR=49						
PSI	**Prapat**	30.21	77	LR	LR	02 24 08.1	
	comp=Z,83nm,21.6s,baz=268,slow=34						
KMBO	**Kilima Mbogo**	32.41	275	LR	LR	02 24 10.2	
	comp=Z,61nm,21.2s,baz=101,slow=30						
CMAR	**Chiang Mai Arr**	36.80	51	LR	LR	02 27 53.2	
	comp=Z,19nm,20.8s,baz=225,slow=34						
BOSA	**Bosof**	48.42	235	LR	LR	02 34 56.6	
	comp=Z,28nm,18.4s,baz=17,slow=33						
H01W3	**Cape Leeuwin H**	51.19	132	T	T	03 12 10.5	
	baz=296,slow=75,SNR=17						
H01W2	**Cape Leeuwin H**	51.19	132	T	T	03 12 13.8	
	baz=296,slow=75,SNR=17						
H01W1	**Cape Leeuwin H**	51.20	132	T	T	03 12 10.7	
	baz=296,slow=75,SNR=13						
MKAR	**Makanchi Array**	52.18	11	P	P	**02 16 54.5**	**-0.7**
	0.3nm,0.5s,baz=189,slow=8.6,SNR=5.1						
KURBB	**Kurchatov Arra**	55.32	7	P	P	**02 17 18.3**	**+0.3**
	0.3nm,0.7s,baz=204,slow=7.5,SNR=3.2						
ZALV	**Zalesovo Beam**	59.50	10	P	P	**02 17 46.0**	**-1.5**
	0.8nm,0.5s,baz=198,slow=7.7,SNR=4.6						
SONM	**Songino Array**	61.21	27	P	P	**02 18 00.3**	**+0.8**
	0.9nm,0.9s,baz=206,slow=5.0,SNR=4.1						
ASAR	**Alice Springs**	64.80	114	LR	LR	02 44 20.1	
	comp=Z,30nm,19.9s,baz=334,slow=34						
WRA	**Warramunga Arr**	64.84	110	P	P	**02 18 24.1**	**0.0**
	0.6nm,0.6s,baz=286,slow=6.0,SNR=4.8						
KSRS	**Korea Array**	68.27	47	LR	LR	02 49 03.1	
	comp=Z,36nm,18.6s,baz=325,slow=37						
NVAR	**Mina Array Bea**	145.35	11	PKP	PKiKP	**02 27 27.6**	**+0.4**
	0.6nm,0.9s,baz=343,slow=0.9,SNR=4.4						

*NEIC **09** 02:14:19.9±1.5,36.98N±0.05×71.34E±0.08,h98km±6km, mb4.0/10,Error ellipse: s-maj=9.2km s-min=7.1km az=62.0*

*IDC **09** 02:14:19.8±0.9,36.83N×71.38E,h101km±6km,mb3.5/18, mb1 3.7/24,mb1mx3.5/57,mbtmp4.0/24,Error ellipse: s-maj=14.9km s-min=11.1km az=31.0*

*NNC **09** 02:14:23.4±6.4,37.29N×71.10E,h150km±104km,mb4.0, mpv4.8,Error ellipse: s-maj=57.9km s-min=36.2km az=7.0*

ISC 09 02:14:19.1±0.4,36.89N±0.04×71.46E±0.05,h100km,n91, σ2.911/113,mb3.8/20,9C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	2.30	337		Pn	**02 14 55.4**	**-0.3**
GAR				Sn	Sn	**02 15 22.0**	**-1.7**
KBL	**Kabul**	3.06	221	Pn	Pn	**02 15 07.7**	**+1.8**
KBL				Sn	Sn	**02 15 43.7**	**+1.9**
CEP	**Cherat**	3.08	173	P	Pn	**02 15 09.0**	**+2.9**
CEP				S	Sn	**02 15 46.0**	**+3.8**
NIL	**Nilore**	3.54	155	Pn	Pn	**02 15 15.8**	**+3.6**
NIL				Sn	Sn	**02 15 57.6**	**+4.3**
THW	**Thamme Wali**	4.09	177	P	Pn	**02 15 21.8**	**+2.3**
AML	**Almayashu**	5.52	18	P	Pn	**02 15 40.1**	**+0.9**
	SNR=495						
THN	**Thein Dam**	5.66	140	eP	Pn	**02 15 43.0**	**+2.2**
THN				eP	Pn	**02 15 43.0**	**+2.2**
THN				eS	Sn	**02 16 45.5**	**+1.1**
THN				eS	Sn	**02 16 45.5**	**+1.1**
UCH	**Uchtor**	5.83	23	P	Pn	**02 15 44.6**	**+1.1**
	SNR=130						
EKS2	**Erkin-Say**	6.04	16	P	Pn	**02 15 47.7**	**+1.7**
	SNR=134						
AAK	**Ala-Archa**	6.20	21	P	Pn	**02 15 50.2**	**+1.9**
	38nm,0.3s,baz=201,slow=7.8,SNR=265						
AAK				S	Sn	**02 16 57.1**	**-0.7**
	9.4nm,0.3s,baz=341,slow=22,SNR=7.3						
AAK	**Ala-Archa**	6.20	21	P	Pn	**02 15 50.0**	**+1.7**
	SNR=174						
AAK	**Ala-Archa**	6.20	21	⇓P	Pn	**02 15 50.0**	**+1.7**
	90nm,0.5s						
AAK				⇓S	Sn	**02 16 56.9**	**-0.9**
	82nm,0.7s						
AAK	**Ala-Archa**	6.20	21	Pn	Pn	**02 15 49.5**	**+1.3**
AAK					Sn	**02 16 57.2**	**-0.7**
KK31	**Karatay Array**	6.25	354	⇑P	Pn	**02 15 48.9**	**+0.1**
	26nm,0.5s,baz=172,slow=12,SNR=394						
KK31				⇑S	Sn	**02 16 54.3**	**-4.5**
	22nm,0.3s,baz=185,slow=24,SNR=6.2						
KK31	**Karatay Array**	6.25	354	Pn	Pn	**02 15 48.6**	**-0.2**
KKAR	**Karatay Array**	6.25	354	Pn	Pn	**02 15 48.3**	**-0.5**
KKAR	**Karatay Array**	6.25	354		Pn	**02 15 48.4**	**-0.5**
KBK	**Karagaybulak**	6.36	24	P	Pn	**02 15 52.2**	**+1.8**
	SNR=22						
ULHL	**Ulahol**	6.50	33	P	Pn	**02 15 54.5**	**+2.1**
	SNR=61						
CHMS	**Chumysh**	6.61	21	P	Pn	**02 15 55.2**	**+1.6**
	SNR=94						
USP	**Ospenovka**	6.79	19	P	Pn	**02 15 57.0**	**+0.9**
	SNR=100						
TKM2	**Tokmak 2**	6.81	27	P	Pn	**02 15 58.4**	**+1.8**
	SNR=101						
TKM2	**Tokmak 2**	6.81	27	⇑P	Pn	**02 15 58.0**	**+1.4**
	47nm,0.5s						
TKM2				⇑S	Sn	**02 17 12.1**	**-0.7**
	31nm,0.7s						
BHK	**Bhakra**	6.83	142	eS	Sn	**02 17 09.8**	**-3.1**
SMLA	**Simla**	7.44	139	eP	Pn	**02 16 05.5**	**+0.5**
SMLA				eS	Sn	**02 17 23.2**	**-4.7**
SMLA				IAML		02 17 30.6	
	comp=N,279nm,0.3s						
SMLA				IAML		02 17 30.8	
	comp=E,233nm,0.2s						
MDOK	**Medeo**	7.59	33	⇓P	Pn	**02 16 09.2**	**+2.1**
	comp=E,28nm,0.5s						
HRA	**Herat**	7.91	254	Pn	Pn	**02 16 10.9**	**-0.6**
DDI	**Dehra Dun**	8.55	138	eP	Pn	**02 16 20.8**	**+0.7**
DDI				eS	Sn	**02 17 49.7**	**-5.1**
DDI				IAML		02 17 57.6	
	comp=E,556nm,0.3s						
PDGK	**Podgornoye**	8.90	41	⇑P	Pn	**02 16 25.6**	**+0.7**
	comp=E,32nm,0.7s						
NDI	**New Delhi**	9.50	148	eP	Pn	**02 16 36.0**	**+2.9**
NDI				eS	Sn	**02 18 12.0**	**-6.1**
GEYT	**Alibeck**	10.67	280	P	Pn	**02 16 44.8**	**-4.1**
	comp=E,4.3nm,0.3s,baz=110,slow=12,SNR=29						
GEYT				S	Sn	02 18 35.0	-11
	comp=E,7.5nm,0.3s,baz=86,slow=20,SNR=10.0						
GEYT	**Alibeck**	10.67	280		Pn	**02 16 44.2**	**-4.7**
GYA0B	**ALIBECK ARRAY**	10.67	280	Pn	Pn	**02 16 44.3**	**-4.6**
AJM	**Ajmer**	10.72	164	eP	Pn	**02 16 49.0**	**-0.7**
AJM				*i* S	Sn	**02 18 43.0**	**-4.8**
MAKZ	**Makanchi**	12.63	35	⇑P	Pn	**02 17 15.0**	**0.0**
	comp=E,16nm,0.9s						
MAKZ	**Makanchi**	12.63	35	Pn	Pn	**02 17 15.2**	**+0.2**
MK31	**Makanchi Array**	12.76	36	⇑P	Pn	**02 17 17.2**	**+0.4**
	comp=E,5.8nm,0.6s,baz=223,slow=14,SNR=51						
MK31	**Makanchi Array**	12.76	36	Pn	Pn	**02 17 17.1**	**+0.3**
MKAR	**Makanchi Array**	12.76	36	P	Pn	**02 17 17.5**	**+0.7**
	comp=E,0.9nm,0.3s,baz=225,slow=15,SNR=55						
MKAR	**Makanchi Array**	12.76	36		Pn	**02 17 16.3**	**-0.5**
PYUN	**Piuthan**	13.08	129	eP	Pn	**02 17 19.3**	**-2.0**
	comp=E,114nm,0.4s						
PYUN				eS	Sn	02 19 34.3	-11
KOLN	**Koldanda**	13.70	128	eP	Pn	**02 17 27.2**	**-2.1**
	comp=E,36nm,0.3s						
GKN	**Gorkha**	14.21	125	eP	Pn	**02 17 32.6**	**-3.3**
	comp=E,55nm,0.4s						
GKN				eS	Sn	02 20 00.1	-12
BHPL	**Bhopal**	14.54	158	eP	P	**02 17 42.4**	**-1.4**
BHPL				eS	Sn	02 20 10.7	-10
KURBB	**Kurchatov Arra**	14.64	18	⇑P	Pn	**02 17 39.9**	**-1.2**
	comp=E,10nm,0.8s						
KKN	**Kakani**	14.78	124	eP	Pn	**02 17 40.8**	**-2.4**
	comp=E,18nm,0.3s						
DMN	**Daman**	14.78	125	eP	Pn	**02 17 41.0**	**-2.3**
	comp=E,24nm,0.3s						
DMN				eS	Sn	02 20 13.5	-13
AB31	**Akbulak array**	14.93	329	⇑P	Pn	**02 17 41.7**	**-3.1**
	comp=E,4.2nm,0.4s,baz=137,slow=13,SNR=161						
ABKAR	**Akbulak array**	14.93	329	Pn	Pn	**02 17 41.7**	**-3.1**
ABKAR	**Akbulak array**	14.93	329		Pn	**02 17 40.9**	**-3.9**
PKIN	**Phulchoki**	14.99	124	eP	Pn	**02 17 43.8**	**-2.2**
	comp=E,13nm,0.2s						
PKIN				eS

comp=Z,4.8nm,0.8s,baz=342,slow=23,SNR=2.5
ARU Arti 21.39 340 P **P 02 18 59.2 +0.7**
comp=Z,0.4nm,0.3s,baz=123,slow=23,SNR=1.9
ARU S **S 02 22 49.8 -0.2**
comp=Z,0.5nm,0.3s,baz=120,slow=22,SNR=2.2
KBZ Khabaz 22.76 296 P **P 02 19 13.3 +0.4**
comp=Z,1.4nm,0.9s,baz=6.0,slow=22,SNR=2.2
KBZ S **S 02 23 17.3 +3.3**
comp=Z,2.1nm,1.0s,baz=1,1,slow=9.8,SNR=2.4
RAYN Ar Rayn 25.99 246 P **P 02 19 43.1 +0.4**
RAYN IAmb IAmb 02 19 46.7
comp=Z,2.6nm,0.8s
SONM Songino Array 27.81 56 P **P 02 20 01.2 +2.3**
comp=Z,0.9nm,0.7s,baz=253,slow=10,SNR=6.3
SONM Songino Array 27.81 56 P **P 02 20 00.0 +1.1**
CMAR Chiang Mai Arr 30.32 120 P **P 02 20 23.4 +2.2**
comp=Z,0.6nm,0.3s,baz=301,slow=9.2,SNR=4.5
AKASG Malin Array Be 32.99 308 P **P 02 20 44.3 -0.1**
comp=Z,0.1nm,0.3s,baz=81,slow=8.1,SNR=2.1
NRIK Noril'sk 33.68 10 P **P 02 20 52.1 +2.0**
comp=Z,1.8nm,0.3s,baz=95,slow=1.8,SNR=1.4
FINES FINESS Array B 37.37 326 P **P 02 21 22.7 +1.0**
comp=Z,3.8nm,0.8s,baz=113,slow=9.8,SNR=8.6
FINES pP **pP 02 21 45.6 0.0**
comp=Z,1.7nm,0.7s,baz=124,slow=7.4,SNR=1.6
FINES FINESS Array B 37.37 326 P **P 02 21 21.9 +0.2**
ARCES ARCESS Array B 40.93 337 P **P 02 21 52.9 +1.6**
comp=Z,1.7nm,0.7s,baz=98,slow=6.5,SNR=8.8
ARCES pP **pP 02 22 15.4 -0.1**
comp=Z,3.3nm,0.8s,baz=111,slow=7.6,SNR=2.2
NOA NORSAR Array B 44.30 323 P **P 02 22 19.1 +0.4**
comp=Z,0.6nm,0.6s,baz=96,slow=7.7,SNR=2.3
NOA pP **pP 02 22 43.1 -0.1**
comp=Z,1.8nm,0.6s,baz=96,slow=7.9,SNR=5.8
KLR Kul'dur 44.62 54 P **P 02 22 22.3 +1.0**
comp=Z,0.9nm,0.6s,baz=265,slow=9.7,SNR=4.4
TIXI Tiksi 45.28 22 P **P 02 22 27.1 +0.9**
comp=Z,1.8nm,0.3s,baz=272,slow=5.5,SNR=7.1
TIXI Tiksi 45.28 22 P **P 02 22 27.4 +1.1**
TIXI IAmb IAmb 02 22 28.0
comp=Z,2.7nm,0.7s
ESDC Sonseca Array 57.60 298 P **P 02 23 59.3 +0.6**
comp=Z,0.6nm,0.9s,baz=45,slow=7.3,SNR=3.2
TORD Torodi Ar. Bea 66.10 269 P **P 02 24 54.9 -1.0**
comp=Z,0.5nm,0.4s,baz=54,slow=5.2,SNR=4.0
INK Inuvik 73.47 9 P **P 02 25 40.9 +0.8**
comp=Z,1.2nm,0.8s,baz=294,slow=1.8,SNR=4.1
INK Inuvik 73.47 9 P **P 02 25 41.4 +1.2**
INK IAmb IAmb 02 25 41.9
comp=Z,2.1nm,1.0s
YKA Yellowknife Ar 80.84 3 P **P 02 26 22.6 +1.1**
comp=Z,0.3nm,0.6s,baz=354,slow=5.3,SNR=14
YKA pP **pP 02 26 48.5 0.0**
comp=Z,0.8nm,0.7s,baz=352,slow=5.4,SNR=6.7
WRA Warramunga Arr 81.88 122 P **P 02 26 27.6 -0.1**
comp=Z,0.5nm,0.6s,baz=322,slow=4.8,SNR=9.3
WRA Warramunga Arr 81.88 122 P **P 02 26 27.2 -0.4**
WB2 Warramunga Arr 81.89 122 P **P 02 26 27.7 0.0**
WR0 Warramunga Arr 82.03 122 P **P 02 26 28.0 -0.3**
WR0 IAmb IAmb 02 26 35.7
comp=Z,3.5nm,1.0s
ASAR Alice Springs 84.17 125 P **P 02 26 39.5 +0.1**
comp=Z,0.7nm,0.6s,baz=310,slow=4.9,SNR=12

IDC 09 02:32:35.0±3.0, 6°64S×128°87E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.3/33, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=301.6km s-min=32.2km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.26**	**159**	Pn	Pn	02 35 56.1	-2.2
	0.2nm,0.3s,baz=334,slow=14,SNR=7.7						
WRA				Sn	Sn	02 38 22.9	-14
	0.3nm,0.3s,baz=346,slow=24,SNR=3.9						
ASAR	**Alice Springs**	**17.61**	**165**	P	P	02 36 43.6	+0.5
	0.1nm,0.3s,baz=349,slow=9.4,SNR=5.5						
ASAR				S	Sn	02 39 49.1	-10
	0.1nm,0.3s,baz=354,slow=27,SNR=3.6						
MKAR	**Makanchi Array**	**67.31**	**327**	P	P	02 43 31.8	0.0
	0.4nm,0.6s,baz=131,slow=7.7,SNR=5.0						

*THR **09** 02:48:03.1±0.4, 28°.25N×51°.63E, h43km±4km, ML3.7*
*TEH **09** 02:48:04.8, 28°.36N×51°.79E, h19km, ML3.6*
*OMAN **09** 02:48:08.6, 27°.87N×51°.69E, h10km, mb5.1/8, ml3.6/8*
ISC 09 02:48:03.4±0.9, 28°.25N±0°.05×51°.67E±0°.06, h10km, n71, σ1°62/87, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.70**	**332**	*e*Pg	**Pg**	**02 48 17.2**	**+0.3**
QIR1	**Qir**	**1.23**	**79**	*e*Pg	**Pb**	**02 48 26.0**	**-0.7**
QIR1				*e*		02 48 55.3	
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**1.37**	**359**	*e*Pg	**Pg**	**02 48 29.6**	**-0.1**
KAZ1				*e*		02 49 02.2	
	comp=Z,99nm,0.4s						
SHI	**Shiraz**	**1.57**	**28**	*e*Pg	**Pn**	**02 48 31.3**	**-0.2**
SHI				*e*		02 48 34.5	
	comp=Z,99nm,0.6s						
LMD1	**Lamerd**	**1.60**	**124**	*e*Pg	**Pg**	**02 48 35.0**	**+0.9**
LMD1				*e*		02 49 06.0	
	comp=Z,99nm,0.6s						
JHRM	**Jahrom**	**1.70**	**81**	*e*Pg	**Pb**	**02 48 34.1**	**-0.6**
JHRM				*e*		02 49 00.2	
	comp=Z,99nm,0.6s						
LAR1	**LAR**	**2.46**	**103**	*e*Pn	**Pn**	**02 48 44.9**	**+1.3**
KLNJ	**Kolanjah**	**2.75**	**359**	*e*Pn	**Pn**	**02 48 48.7**	**+0.8**
IRAM	**Ramesheh**	**3.60**	**10**	*e*Pn	**Pn**	**02 48 59.6**	**+0.1**
IMEH	**Mehriz**	**4.04**	**38**	*e*Pn	**Pn**	**02 49 06.2**	**+0.7**
ISAD	**Sadrabad**	**4.05**	**25**	*e*Pn	**Pn**	**02 49 07.1**	**+1.5**
IGAR	**Gharneh**	**4.15**	**4**	*e*Pn	**Pn**	**02 49 07.6**	**+0.5**
SLWR	**Sila**	**4.16**	**180**	P	**Pn**	**02 49 10.1**	**+3.2**
IPIR	**Pirpir**	**4.47**	**352**	*e*Pn	**Pn**	**02 49 12.0**	**+0.5**
SHME	**Shamm**	**4.54**	**118**	*e*Pn	**Pn**	**02 49 12.2**	**0.0**
SHME	**Shamm**	**4.54**	**118**	P	**Pn**	**02 49 14.1**	**+1.9**
SHME				S	**Sn**	**02 50 05.0**	**-0.1**
ICHK	**Chekchek**	**4.63**	**30**	*e*Pn	**Pn**	**02 49 14.4**	**+0.8**
NASN	**Na'in**	**4.64**	**12**	*e*Pn	**Pn**	**02 49 12.9**	**-0.9**
NASN	**Na'in**	**4.64**	**12**	*e*Pn	**Pn**	**02 49 12.9**	**-0.9**
NGRK	**Negar Kerman**	**4.64**	**71**	*e*Pn	**Pn**	**02 49 14.2**	**+0.3**
NGRK				*e*		02 50 11.6	
	comp=Z,99nm,0.3s						
IZEF	**Zefreh**	**4.67**	**7**	*e*Pn	**Pn**	**02 49 15.1**	**+1.0**
BANOM	**Banah**	**4.73**	**118**	*e*Pn	**Pn**	**02 49 15.8**	**+1.0**
BANOM	**Banah**	**4.73**	**118**	P	**Pn**	**02 49 16.0**	**+1.2**
	SNR=22						
BANOM				S	**Sn**	**02 50 08.3**	**-1.5**
IBAF	**Bafgh**	**4.75**	**44**	*e*Pn	**Pn**	**02 49 15.1**	**0.0**
KRBR	**Kerman**	**4.77**	**68**	*e*Pn	**Pn**	**02 49 14.7**	**-0.9**
KRBR	**Kerman**	**4.77**	**68**	*e*Pn	**Pn**	**02 49 14.7**	**-0.9**
TVBK	**TV Kerman**	**4.78**	**68**	*e*Pn	**Pn**	**02 49 17.1**	**+1.4**
NAZ	**Nazwa, Dubai**	**4.83**	**131**	*e*Pn	**Pn**	**02 49 18.7**	**+2.6**
NAZ	**Nazwa, Dubai**	**4.83**	**131**	P	**Pn**	**02 49 18.8**	**+2.6**
	SNR=8.7						
NAZ				S	**Sn**	**02 50 13.1**	**+1.1**
ASUD	**Al Ashush, Dub**	**4.87**	**137**	*e*Pn	**Pn**	**02 49 19.3**	**+2.6**
ASUD	**Al Ashush, Dub**	**4.87**	**137**	P	**Pn**	**02 49 19.6**	**+2.9**
	SNR=12						
ASUD				S	**Sn**	**02 50 09.6**	**-3.7**
MASF	**Masafi**	**4.93**	**125**	P	**Pn**	**02 49 19.3**	**+1.7**
	SNR=5.5						
MASF				S	**Sn**	**02 50 14.1**	**-0.5**
MSFE	**Esma-Masafi**	**4.93**	**125**	*e*Pn	**Pn**	**02 49 19.3**	**+1.7**
FAQ	**Al Faqa, Dubai**	**4.95**	**134**	*e*Pn	**Pn**	**02 49 20.3**	**+2.5**
FAQ	**Al Faqa, Dubai**	**4.95**	**134**	P	**Pn**	**02 49 20.9**	**+3.1**
FAQ				S	**Sn**	**02 50 13.8**	**-1.3**
IKLH	**Kolahrood**	**5.05**	**359**	*e*Pn	**Pn**	**02 49 20.2**	**+0.7**
MDH	**Madha**	**5.07**	**124**	*e*Pn	**Pn**	**02 49 21.3**	**+1.8**
MDH	**Madha**	**5.07**	**124**	P	**Pn**	**02 49 22.1**	**+2.7**
MDH				S	**Sn**	**02 50 16.6**	**-1.5**
UOSS	**Minazif**	**5.22**	**128**	*e*Pn	**Pn**	**02 49 23.5**	**+1.9**
UOSS	**Minazif**	**5.22**	**128**	P	**Pn**	**02 49 23.5**	**+1.9**
UOSS				S	**Sn**	**02 50 21.3**	**-0.6**
ANAR	**Anarak**	**5.23**	**19**	*e*Pn	**Pn**	**02 49 22.3**	**+0.5**
HATD	**Hatta, Dubai**	**5.25**	**129**	*e*Pn	**Pn**	**02 49 24.6**	**+2.7**
HATD	**Hatta, Dubai**	**5.25**	**129**	P	**Pn**	**02 49 24.1**	**+2.2**
HATD				S	**Sn**	**02 50 22.1**	**-0.4**
CHMN	**Cheshme madani**	**5.38**	**71**	*e*Pn	**Pn**	**02 49 24.7**	**+0.7**
KRSH	**Karshahi**	**5.72**	**4**	*e*Pn	**Pn**	**02 49 28.7**	**+0.2**
SOHO	**SOHO**	**5.99**	**132**	P	**Pn**	**02 49 33.5**	**+1.5**
SOHO				S	**Sn**	**02 50 41.5**	**+0.8**
ISFB	**Sefidab**	**6.10**	**4**	*e*Pn	**Pn**	**02 49 33.3**	**-0.4**
TPRV	**Parvadeh(Tabas**	**6.43**	**41**	*e*Pn	**Pn**	**02 49 37.7**	**-0.5**
HSAM	**Samen**	**6.50**	**337**	*e*Pn	**Pn**	**02 49 40.2**	**+0.9**
ARQ	**Araqi**	**6.56**	**137**	P	**Pn**	**02 49 41.8**	**+1.9**
ARQ				S	**Sn**	**02 50 55.4**	**+0.6**
HOQ	**Hoqain**	**6.88**	**131**	P	**Pn**	**02 49 46.1**	**+1.7**
HOQ				S	**Sn**	**02 51 00.7**	**-2.0**
HAGD	**Aghdareh**	**6.90**	**342**	*e*Pn	**Pn**	**02 49 46.0**	**+1.2**
TNSJ	**Nastanj**	**7.09**	**35**	*e*Pn	**Pn**	**02 49 47.6**	**+0.2**
TKDS	**Koohdasht(Taba**	**7.11**	**40**	*e*Pn	**Pn**	**02 49 47.4**	**-0.1**
BSY	**Bisya**	**7.41**	**136**	P	**Pn**	**02 49 53.5**	**+1.8**
	SNR=7.0						
IGHG	**Ghaleghazi**	**7.47**	**326**	*e*Pn	**Pn**	**02 49 55.0**	**+2.4**
SMDO	**Samad**	**7.73**	**131**	P	**Pn**	**02 49 58.7**	**+2.6**
SNGE	**Sanandaj**	**7.75**	**333**	*e*P	**Pn**	**02 49 54.9**	**-1.6**
SNGE				IAML		02 51 31.6	
	comp=N,9.3nm,0.5s						
SNGE				IAML		02 51 31.9	
	comp=E,8.6nm,0.6s						
ILIN	**Lien**	**7.77**	**330**	*e*Pn	**Pn**	**02 49 58.6**	**+1.9**
IDHR	**Dehrash**	**7.86**	**326**	*e*Pn	**Pn**	**02 49 59.4**	**+1.5**
ZHSF	**Zahedan**	**8.09**	**78**	*e*Pn	**Pn**	**02 50 00.6**	**-0.5**
ZHSF	**Zahedan**	**8.09**	**78**	*e*Pn	**Pn**	**02 50 00.6**	**-0.5**
JMDO	**Jabal Madar**	**8.25**	**134**	P	**Pn**	**02 50 03.8**	**+0.6**
WBK	**Wadi Bani Khal**	**8.66**	**129**	P	**Pn**	**02 50 08.9**	**+0.1**
MHTO	**MHTO**	**9.22**	**140**	P	**Pn**	**02 50 17.8**	**+1.4**
MHTO				S	**Sn**	**02 51 57.2**	**-3.1**
JLN	**Jalan Bani Buh**	**9.27**	**129**	P	**Pn**	**02 50 17.6**	**+0.5**
DOK	**Doka**	**9.85**	**166**	P	**Pn**	**02 50 26.0**	**+1.0**
DOK				S	**Sn**	**02 52 13.7**	**-2.0**
DQM	**DQM**	**9.86**	**146**	P	**Pn**	**02 50 26.4**	**+1.2**
WHFO	**Wadi Hawf**	**10.46**	**169**	P	**Pn**	**02 50 34.7**	**+1.2**
DMTO	**DMTO**	**10.91**	**163**	P	**Pn**	**02 50 41.4**	**+1.9**
	SNR=7.1						
DMTO				S	**Sn**	**02 52 38.5**	**-3.2**
ABTO	**Aybut**	**10.95**	**172**	P	**Pn**	**02 50 40.6**	**+0.4**
ABTO				S	**Sn**	**02 52 39.4**	**-3.4**

*JMA **09** 02:56:03.5±0.1, 23°.26N×121°.57E, h0km, M3.9*
*TAP **09** 02:56:06.3, 23°.29N×121°.38E, h19km, ML4.0, C*
ISC 09 02:56:06.0±0.8, 23°.27N±0°.01×121°.47E±0°.02, h18km±2km, n105, σ0°93/179, 12C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EYUL	**Yuli**	**0.16**	**299**	*i* P	**Pg**	**02 56 10.5**	**+0.1**
	baz=305						
EYUL				S	**Sg**	**02 56 13.8**	**+0.5**
	baz=305						
FULB	**Fuli**	**0.18**	**246**	*i* P	**Pg**	**02 56 10.8**	**+0.2**
	baz=213						
FULB				S	**Sg**	**02 56 15.2**	**+1.4**
	baz=213						
TWF1	**Yuli**	**0.18**	**297** ⇓	*i* P	**Pb**	**02 56 10.4**	**+0.1**
	baz=312						
TWF1				S	**Sg**	**02 56 14.0**	**+0.2**
	baz=312						
CHKT	**Chengkung**	**0.20**	**210** ⇑	*i* P	**Pg**	**02 56 11.6**	**+0.7**
	baz=175						
CHKT				*i* S	**Sg**	**02 56 15.5**	**+1.4**
	baz=175						
YULB	**Yu-li**	**0.20**	**308** ⇓	*i* P	**Pb**	**02 56 10.6**	**-0.2**
	baz=316						
YULB				*i* S	**Sb**	**02 56 13.9**	**0.0**
	baz=316						
HGSD	**Ruisui**	**0.23**	**349**	P	**Pg**	**02 56 12.4**	**+1.1**
	baz=18						
HGSD				S	**Sg**	**02 56 18.0**	**+3.0**
	baz=18						
EHY	**Hungye**	**0.27**	**330** ⇓	*i* P	**Pb**	**02 56 11.8**	**-0.5**
	baz=339						
EHY				*i* S	**Sb**	**02 56 15.9**	**-0.6**
	baz=339						
EDH	**Donghe**	**0.33**	**207**	P	**Pb**	**02 56 13.6**	**+0.2**
	baz=184						
EDH				S	**Sb**	**02 56 18.9**	**+0.5**
	baz=184						
EGFH	**Guangfu**	**0.40**	**354**	P	**Pg**	**02 56 14.8**	**+0.5**
	baz=355						
EGFH				S	**Sb**	**02 56 21.0**	**+0.6**
	baz=355						
ELDTW	**Lidau**	**0.42**	**259** ⇓	*i* P	**Pg**	**02 56 13.7**	**-1.1**
	baz=252						
ELDTW				S	**Sg**	**02 56 19.0**	**-1.6**
	baz=252						
LONT	**Longtian**	**0.48**	**221**	P	**Pg**	**02 56 15.2**	**-0.5**
	baz=211						
LONT				*e*S	**Sb**	**02 56 23.9**	**+1.3**
	baz=211						
YUS	**Yu-Shan**	**0.52**	**295** ⇑	*i* P	**Pb**	**02 56 15.8**	**-1.1**
	baz=297						
ESL	**Shilin**	**0.54**	**356**	*i* P	**Pb**	**02 56 17.3**	**+0.3**
	baz=357						
ESL				S	**Sg**	**02 56 24.8**	**+0.6**
	baz=357						
VWDT	**VWDT**	**0.57**	**328** ⇑	*i* P	**Pb**	**02 56 16.5**	**-0.8**
	baz=344						
VWDT				*i* S	**Sb**	**02 56 24.3**	**-0.8**
	baz=344						
TWGBT	**Beinan**	**0.58**	**219**	P	**Pb**	**02 56 16.4**	**-1.1**
	baz=211						
TWGBT				*e*S	**Sb**	**02 56 24.6**	**-0.7**
	baz=211						
TWG	**Pinlang**	**0.58**	**219** ⇑	*i* P	**Pb**	**02 56 16.4**	**-1.1**
	baz=211						
TWG				S	**Sb**	**02 56 25.4**	**+0.1**
	baz=211						
TTN	**Taitung**	**0.59**	**210**	*e*P	**Pg**	**02 56 18.2**	**+0.4**
	baz=201						
TTN				*e*S	**Sn**	**02 56 29.8**	**+1.1**
	baz=201						
LDUT	**Ludao**	**0.59**	**180**	*e*P	**Pb**	**02 56 17.7**	**-0.1**
	baz=163						
LDUT				*e*S	**Sg**	**02 56 26.5**	**+0.8**
	baz=163						
STYH	**Taoyuan**	**0.65**	**261**	P	**Pb**	**02 56 17.7**	**-1.0**
	baz=253						
STYH				S	**Sb**	**02 56 25.7**	**-1.6**
	baz=253						
ALS	**Alishan**	**0.66**	**292** ⇑	*i* P	**Pb**	**02 56 18.2**	**-0.8**
	baz=293						
ALS				*i* S	**Sb**	**02 56 26.7**	**-1.2**
	baz=293						
STYT	**Tauyuan**	**0.66**	**261** ⇑	*i* P	**Pb**	**02 56 18.1**	**-1.0**
	baz=257						
STYT				*i* S	**Sb**	**02 56 26.4**	**-1.5**
	baz=257						
SSLB	**Suanglung**	**0.70**	**318**	P	**Pb**	**02 56 18.3**	**-1.3**
	baz=322						
SSLB				S	**Sb**	**02 56 27.0**	**-1.9**
	baz=322						
HWA	**Hwalien**	**0.71**	**10**	*e*P	**Pg**	**02 56 21.0**	**+0.9**
	baz=4.0						
HWA				S	**Sn**	**02 56 33.4**	**+1.7**
	baz=4.0						
TPUB	**Ta-pu**	**0.77**	**272** ⇑	*i* P	**Pb**	**02 56 20.3**	**-0.6**
	baz=271						
TPUB				*i* S	**Sb**	**02 56 30.3**	**-0.8**
	baz=271						
WTP	**Ta-pu**	**0.79**	**268** ⇑	*i* P	**Pb**	**02 56 20.7**	**-0.5**
	baz=267						
WTP				*i* S	**Sb**	**02 56 31.2**	**-0.3**
	baz=267						
CHN5	**Tsauling**	**0.80**	**294** ⇑	*i* P	**Pb**	**02 56 21.0**	**-0.3**
	baz=296						
CHN5				S	**Sb**	**02 56 31.6**	**-0.2**
	baz=296						
SMLT	**Sun Moon Lake**	**0.80**	**320** ⇑	*i* P	**Pb**	**02 56 20.4**	**-1.1**
	baz=331						
SMLT				S	**Sb**	**02 56 31.2**	**-0.8**
	baz=331						
SLGT	**Liugui**	**0.81**	**250**	*e*P	**Pb**	**02 56 20.9**	**-0.5**
	baz=242						
SLGT				*e*S	**Sb**	**02 56 31.2**	**-0.8**
	baz=242						
TWD	**Chiawan**	**0.81**	**8**	P	**Pb**	**02 56 21.7**	**+0.1**
	baz=2.0						
TWD				S	**Sn**	**02 56 35.1**	**+1.0**
	baz=2.0						
ECL	**Taimali**	**0.82**	**215**	*e*P	**Pb**	**02 56 20.9**	**-0.8**
	baz=211						
CHGB	**Renai**	**0.83**	**341**	P	**Pb**	**02 56 20.9**	**-1.2**
	baz=347						
CHGB				*e*S	**Sb**	**02 56 31.5**	**-1.5**
	baz=347						
SGST	**Jiashian**	**0.84**	**257**	P	**Pb**	**02 56 20.7**	**-1.3**
	baz=254						
SGST				S	**Sb**	**02 56 32.4**	**-0.5**
	baz=254						
TYC	**Yuchr**	**0.84**	**318**	P	**Pb**	**02 56 21.2**	**-0.9**
	baz=333						
TYC				*e*S	**Sb**	**02 56 32.1**	**-1.1**
	baz=333						
CHN1	**Nanshi**	**0.87**	**265** ⇑	*i* P	**Pb**	**02 56 22.4**	**-0.2**
	baz=262						
CHN1				*i* S	**Sg**	**02 56 34.5**	**0.0**
	baz=262						
WJS	**Zhushan**	**0.88**	**309**	P	**Pb**	**02 56 22.7**	**0.0**
	baz=321						
WJS				S	**Sg**	**02 56 34.8**	**+0.2**
	baz=321						
WHF	**Hehuan Shan**	**0.89**	**348**	P	**Pb**	**02 56 21.8**	**-1.3**
	baz=4.0						
WHF				*e*S	**Sb**	**02 56 34.7**	**-0.2**
	baz=4.0						
TWK	**Hsinying**	**0.90**	**270** ⇑	*i* P	**Pb**	**02 56 22.7**	**-0.5**
	baz=269						
TWK				S	**Sb**	**02 56 34.7**	**-0.2**
	baz=269						
NACB	**Ninganchiao**	**0.91**	**7**	*e*P	**Pb**	**02 56 21.7**	**-1.5**
	baz=12						
NACB				*e*S	**Sn**	**02 56 36.9**	**+0.5**
	baz=12						
DPDB	**Guoxing**	**0.91**	**327**	*e*P	**Pb**	**02 56 22.8**	**-0.5**
	baz=337						
WGK	**Gukeng**	**0.93**	**297**	*e*P	**Pb**	**02 56 23.8**	**+0.3**
	baz=298						
WGK				*e*S	**Sg**	**02 56 36.8**	**+0.4**
	baz=298						
ETLH	**Xiulin Townshi**	**0.93**	**1**	*e*P	**Pb**	**02 56 22.2**	**-1.5**
	baz=5.0						
ETLH				*e*S	**Sb**	**02 56 34.7**	**-1.1**
	baz=5.0						
WNT	**Mingjian**	**0.94**	**310**	*e*P	**Pb**	**02 56 24.0**	**+0.2**
	baz=313						
WNT				*e*S	**Sg**	**02 56 36.7**	**0.0**
	baz=313						
CHN2	**Minshiung**	**0.95**	**286**	*e*P	**Pb**	**02 56 24.2**	**+0.3**
	baz=287						
CHN2				*e*S	**Sn**	**02 56 38.8**	**+1.3**
	baz=287						
WDLH	**Douliu**	**0.95**	**296**	*e*P	**Pb**	**02 56 23.8**	**-0.1**
	baz=298						
WDLH				*e*S	**Sn**	**02 56 37.7**	**+0.2**
	baz=298						
WNT1	**Nantou City**	**0.96**	**311**	*e*P	**Pb**	**02 56 24.4**	**+0.2**
	baz=314						
WNT1				*e*S	**Sn**	**02 56 39.8**	**+2.0**
	baz=314						
SCST	**Cishan**	**0.98**	**247**	*e*P	**Pb**	**02 56 24.2**	**-0.1**
	baz=245						
CHY	**Chiayi**	**0.99**	**283**	*e*P	**Pb**	**02 56 24.2**	**-0.3**
	baz=284						
CHY				*e*S	**Sg**	**02 56 38.7**	**+0.5**
	baz=284						
FUSS	**Fushou**	**0.99**	**348**	P	**Pb**	**02 56 23.7**	**-1.1**
	baz=2.0						
FUSS				*e*S	**Sb**	**02 56 37.4**	**-0.3**
	baz=2.0						
MASBT	**Mashibuluo**	**1.01**	**230**	*e*P	**Pb**	**02 56 23.6**	**-1.4**
	baz=227						
TWT	**Tachien**	**1.01**	**345**	*e*P	**Pb**	**02 56 24.3**	**-0.9**
	baz=341						
TWT				*e*S	**Sb**	**02 56 36.2**	**-2.0**
	baz=341						
TDCB	**Techi**	**1.02**	**344**	*e*P	**Pb**	**02 56 24.2**	**-1.0**
	baz=346						
CHN3	**Shinhua**	**1.03**	**259**	*e*P	**Pg**	**02 56 26.6**	**+0.5**
	baz=267						
CHN3				*e*S	**Sg**	**02 56 43.0**	**+3.3**
	baz=267						
EAST	**Anshuo**	**1.05**	**213**	*e*P	**Pb**	**02 56 24.5**	**-1.2**
	baz=199						
TWM1	**Shoushan**	**1.06**	**245**	*e*P	**Pg**	**02 56 26.9**	**+0.3**
	baz=236						
WTK	**Tuku**	**1.08**	**293**	*e*P	**Pb**	**02 56 25.9**	**-0.1**
	baz=294						
WTK				*e*S	**Sg**	**02 56 42.3**	**+1.3**
	baz=294						
WHP	**Taichung City**	**1.11**	**335**	*e*P	**Pg**	**02 56 28.2**	**+0.6**
	baz=343						
TCU	**Taichung**	**1.14**	**320**	*e*P	**Pg**	**02 56 28.1**	**+0.1**
	baz=323						
TCU				*e*S	**Sn**	**02 56 42.8**	**+0.6**
	baz=323						
NNSB	**Datong**	**1.16**	**356**	*e*P	**Pn**	**02 56 25.9**	**-1.4**
	baz=12						
NNSB				*e*S	**Sb**	**02 56 40.1**	**-2.1**
	baz=12						
NNSH	**Datong**	**1.16**	**356**	*e*P	**Pn**	**02 56 26.2**	**-1.1**
	baz=10.0						
CHN8	**Yiju**	**1.16**	**274**	*e*P	**Pn**	**02 56 27.1**	**-0.2**
	baz=273						
CHN8				*e*S	**Sg**	**02 56 44.0**	**+0.3**
	baz=273						
SNJT	**Kaohsiung City**	**1.17**	**244**	*e*P	**Pg**	**02 56 29.0**	**+0.5**
	baz=241						
SNJT				*e*S	**Sg**	**02 56 46.8**	**+3.0**
	baz=241						
NNS	**Nan Shan**	**1.17**	**356**	*e*P	**Pn**	**02 56 27.0**	**-0.5**
	baz=11						
NNS				*e*S	**Sb**	**02 56 40.6**	**-2.0**
	baz=11						
SCLT	**Jiali**	**1.18**	**266**	*e*P	**Pb**	**02 56 28.2**	**+0.4**
	baz=280						
SCLT				*e*S	**Sg**	**02 56 45.6**	**+1.4**
	baz=280						
SCZT	**Fangliau**	**1.19**	**221**	*e*P	**Pb**	**02 56 28.5**	**+0.5**
	baz=213						
WSF	**Szhu**	**1.20**	**288**	*e*P	**Pn**	**02 56 27.8**	**0.0**
	baz=287						
EWUT	**Wuta**	**1.20**	**14**	*e*P	**Pn**	**02 56 27.3**	**-0.6**
	baz=4.0						
SLIU	**Shizi**	**1.22**	**211**	*e*P	**Pg**	**02 56 29.9**	**+0.3**
	baz=199						
LAY	**Lan-yu**	**1.23**	**176**	*e*P	**Pn**	**02 56 26.4**	**-1.8**
	baz=164						
TWQ1	**Liyutan**	**1.25**	**329**	*e*P	**Pb**	**02 56 29.4**	**+0.3**
	baz=332						
TWQ1				*e*S	**Sg**	**02 56 48.4**	**+1.9**
	baz=332						
NSY	**Sanyi**	**1.31**	**331**	*e*P	**Pb**	**02 56 30.3**	**+0.2**
	baz=333						
NSY				*e*S	**Sg**	**02 56 48.5**	**-0.1**
	baz=333

WDGT				*e*S		**Sb**	**02 56 56.3**	**-0.4**
	baz=268								
TIPB	**Shuangxi**	**1.73**	**11**	*e*P		**Pn**	**02 56 36.3**	**+1.2**
	baz=11								
TIPB				*e*S		**Sn**	**02 56 57.1**	**+0.4**
	baz=11								
PHUB	**P'eng-hu**	**1.76**	**278**	*e*P		**Pn**	**02 56 34.5**	**-1.0**
	baz=277								
PHUB				*e*S		**Sn**	**02 56 58.3**	**+0.8**
	baz=277								
PNG	**Penghu**	**1.78**	**280**	*e*P		**Pn**	**02 56 35.5**	**-0.3**
	baz=262								
PNG				*e*S		**Sb**	**02 56 59.7**	**-0.5**
	baz=262								
JYNG	**Yonagunijimaku**	**1.79**	**49**	P		**Pn**	**02 56 36.3**	**+0.3**
JYNG				S		**Sn**	**02 56 58.3**	**0.0**
NWF	**Wu-fen Shan**	**1.82**	**9**	*e*P		**Pn**	**02 56 37.6**	**+1.2**
	baz=7.0								
WFSB	**Wu-fen Shan**	**1.82**	**9**	*e*P		**Pn**	**02 56 37.2**	**+0.9**
	baz=7.0								
YOJ	**Yonaguni jima**	**1.84**	**50**	P		**Pn**	**02 56 37.0**	**+0.3**
YOJ				*e*S		**Sn**	**02 57 00.0**	**+0.4**
YOJ	**Yonaguni jima**	**1.84**	**50**	*e*P		**Pn**	**02 56 37.0**	**+0.3**
	baz=52								
YOJ				*e*S		**Sn**	**02 56 59.5**	**-0.1**
	baz=52								
VCHM	**Qimei**	**1.88**	**269**	*e*P		**Pn**	**02 56 36.6**	**-0.6**
	baz=267								
HATJ	**Hateruma jima**	**2.28**	**69**	P		**Pn**	**02 56 42.6**	**-0.1**
IRIF	**Iriomote-Funau**	**2.33**	**62**	P		**Pn**	**02 56 43.6**	**+0.3**
IRIF				*e*S		**Sn**	**02 57 11.8**	**+0.3**
JKRS	**Kuro-shima**	**2.52**	**67**	P		**Pn**	**02 56 46.4**	**+0.4**
JKRS				*e*S		**Sn**	**02 57 16.4**	**+0.2**
JIJ	**Ishigaki jima**	**2.68**	**65**	P		**Pn**	**02 56 47.8**	**-0.4**
JIJ				S		**Sn**	**02 57 18.6**	**-1.6**
PTMZ	**Houxiangcun**	**2.78**	**310**	*e*P		**Pn**	**02 56 48.8**	**-0.7**
	baz=296								
JISG	**Ishigakijimahi**	**2.91**	**63**	P		**Pn**	**02 56 51.0**	**-0.4**
JISG				*e*S		**Sn**	**02 57 24.1**	**-1.8**
JTJ	**Tarama**	**3.26**	**65**	P		**Pn**	**02 56 56.2**	**+0.1**
JTJ				*e*S		**Sn**	**02 57 34.2**	**-0.2**
ZPLA	**Ao Xicun**	**3.48**	**282**	*e*P		**Pn**	**02 56 58.4**	**-0.8**
	baz=280								
AXDP	**Jialang**	**3.59**	**298**	*e*P		**Pn**	**02 56 59.8**	**-0.9**
	baz=297								
JIRB	**Irabujima**	**3.72**	**65**	P		**Pn**	**02 57 02.5**	**-0.1**
JIRB				S		**Sn**	**02 57 45.4**	**-0.6**
JMJ2	**Miyako jima3**	**3.82**	**67**	P		**Pn**	**02 57 04.5**	**+0.6**
JMJ2				*e*S		**Sn**	**02 57 47.9**	**-0.4**

*JMA **09** 03:33:51.6±0.1,24°.88N×122°.00E,h36km,M2.5*
*TAP **09** 03:33:51.3,24°.84N×122°.04E,h9km,ML3.1,C*
ISC 09 03:33:51.5±0.8,24°.87N±0°.02×122°.05E±0°.02,h12km±5km,
n67,σ0°68/121,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.11**	**255**	*i* P		**Pg**	**03 33 54.1**	**-0.4**
	baz=271							
EGS				S		**Sg**	**03 33 56.0**	**-0.6**
	baz=271							
TWB1	**Santiao Chiao**	**0.14**	**337**	*i* P		**Pg**	**03 33 55.3**	**+0.4**
	baz=347							
TWB1				*i* S		**Sg**	**03 33 58.1**	**+0.7**
	baz=347							
NTC	**Toucheng**	**0.20**	**265**	*i* P		**Pg**	**03 33 55.6**	**-0.3**
	baz=274							
NTC				*i* S		**Sg**	**03 33 58.8**	**-0.1**
	baz=274							
TIPB	**Shuangxi**	**0.23**	**296**	*i* P		**Pg**	**03 33 56.5**	**+0.2**
	baz=294							
TIPB				*i* S		**Sg**	**03 34 00.2**	**+0.6**
	baz=294							
NWF	**Wu-fen Shan**	**0.31**	**309**	*i* P		**Pb**	**03 33 58.6**	**-0.5**
	baz=305							
NWF				*i* S		**Sb**	**03 34 03.7**	**-0.6**
	baz=305							
WFSB	**Wu-fen Shan**	**0.31**	**309**	P		**Pb**	**03 33 58.7**	**-0.4**
	baz=305							
WFSB				S		**Sb**	**03 34 03.7**	**-0.5**
	baz=305							
TWC	**Suao**	**0.32**	**215**	P		**Pg**	**03 33 57.5**	**-0.5**
	baz=225							
TWC				S		**Sg**	**03 34 01.1**	**-1.2**
	baz=225							
TNOU	**National Taiwa**	**0.37**	**318**	*i* P		**Pb**	**03 33 59.7**	**-0.4**
	baz=313							
TNOU				S		**Sb**	**03 34 04.9**	**-1.0**
	baz=313							
TWE	**Neicheng**	**0.38**	**247**	*i* P		**Pg**	**03 33 58.8**	**-0.3**
	baz=250							
TWE				*e*S		**Sb**	**03 34 05.3**	**-0.8**
	baz=250							
NDS	**Dongshan**	**0.39**	**232**	P		**Pg**	**03 33 58.6**	**-0.7**
	baz=236							
NDS				*e*S		**Sb**	**03 34 05.9**	**-0.4**
	baz=236							
TWA	**Mucha**	**0.44**	**284**	P		**Pb**	**03 34 01.0**	**-0.2**
	baz=279							
TWA				S		**Sb**	**03 34 07.4**	**-0.3**
	baz=279							
NHDH	**Xindian Distri**	**0.48**	**281**	S		**Sb**	**03 34 08.6**	**-0.6**
	baz=276							
EWUT	**Wuta**	**0.49**	**210**	P		**Pg**	**03 34 01.4**	**+0.2**
	baz=219							
EWUT				*e*S		**Sg**	**03 34 08.5**	**+0.8**
	baz=219							
ENTT	**Nioudou**	**0.50**	**242**	*i* P		**Pg**	**03 34 00.9**	**-0.4**
	baz=245							
NWLT	**Wulai**	**0.51**	**259**	*i* P		**Pg**	**03 34 01.1**	**-0.4**
	baz=263							
NWLT				S		**Sg**	**03 34 08.5**	**+0.3**
	baz=263							
YM01	**YM01**	**0.51**	**302**	P		**Pb**	**03 34 02.6**	**0.0**
	baz=304							
YM01				S		**Sb**	**03 34 09.7**	**-0.3**
	baz=304							
TATO	**Taipei**	**0.52**	**281**	P		**Pg**	**03 34 01.9**	**+0.2**
	baz=277							
TATO				*e*S		**Sg**	**03 34 09.0**	**+0.4**
	baz=277							
YM11	**YM11**	**0.52**	**304**	P		**Pb**	**03 34 03.1**	**+0.4**
	baz=299							
YM08	**YM08**	**0.52**	**307**	P		**Pb**	**03 34 03.2**	**+0.6**
	baz=301							
YM10	**YM10**	**0.53**	**302**	P		**Pb**	**03 34 03.0**	**+0.2**
	baz=304							
YM10				*e*S		**Sg**	**03 34 08.6**	**-0.3**
	baz=304							
YM04	**YM04**	**0.54**	**301**	P		**Pb**	**03 34 03.1**	**+0.1**
	baz=303							
YM04				S		**Sb**	**03 34 10.9**	**0.0**
	baz=303							
YM03	**YM03**	**0.55**	**303**	*e*P		**Pg**	**03 34 02.0**	**-0.4**
	baz=305							
NDT	**Datong Townshi**	**0.56**	**241**	*i* P		**Pg**	**03 34 02.2**	**-0.3**
	baz=245							
NDT				S		**Sg**	**03 34 10.4**	**+0.5**
	baz=245							
TWY	**Chenhua**	**0.57**	**314**	P		**Pb**	**03 34 04.0**	**+0.5**
	baz=309							
TWS1	**Kuangyinshan**	**0.62**	**292**	P		**Pn**	**03 34 05.5**	**-0.7**
	baz=294							
YHNB	**Yeheng**	**0.65**	**252**	P		**Pg**	**03 34 03.5**	**-0.6**
	baz=255							
YHNB				*e*S		**Sg**	**03 34 11.6**	**-1.1**
	baz=255							
NSK	**Sanguang**	**0.66**	**253**	*i* P		**Pg**	**03 34 03.5**	**-0.8**
	baz=255							
NSK				*e*S		**Sb**	**03 34 15.0**	**+0.8**
	baz=255							
NNSB	**Datong**	**0.75**	**234**	P		**Pg**	**03 34 04.9**	**-1.2**
	baz=237							
NNSB				S		**Sg**	**03 34 15.0**	**-1.0**
	baz=237							
NNSH	**Datong**	**0.75**	**234**	P		**Pg**	**03 34 06.0**	**-0.1**
	baz=237							
NNSH				S		**Sg**	**03 34 14.7**	**-1.3**
	baz=237							
NNS	**Nan Shan**	**0.75**	**235**	*i* P		**Pg**	**03 34 05.7**	**-0.4**
	baz=237							
PCYT	**Pengchaiyu**	**0.75**	**1**	*i* P		**Pn**	**03 34 07.8**	**-0.2**
	baz=355							
NACB	**Ninganchiao**	**0.81**	**211**	P		**Pg**	**03 34 06.6**	**-0.6**
	baz=204							
NACB				S		**Sg**	**03 34 17.2**	**-0.6**
	baz=204							
ETLH	**Xiulin Townshi**	**0.84**	**218**	P		**Pg**	**03 34 07.3**	**-0.5**
	baz=230							
ETLH				S		**Sg**	**03 34 18.7**	**-0.1**
	baz=230							
TWD	**Chiawan**	**0.89**	**208**	P		**Pg**	**03 34 07.7**	**-1.0**
	baz=202							
TWD				S		**Sg**	**03 34 20.0**	**-0.4**
	baz=202							
JYNG	**Yonagunijimaku**	**0.92**	**117**	P		**Pg**	**03 34 08.2**	**-1.0**
JYNG				*e*S		**Sg**	**03 34 20.9**	**-0.3**
FUSS	**Fushou**	**0.96**	**230**	P		**Pg**	**03 34 09.1**	**-1.0**
	baz=232							
FUSS				S		**Sb**	**03 34 23.1**	**-0.1**
	baz=232							
YOJ	**Yonaguni jima**	**0.96**	**115**	P		**Pg**	**03 34 10.0**	**-0.1**
YOJ				*e*S		**Sg**	**03 34 22.8**	**+0.1**
YOJ	**Yonaguni jima**	**0.96**	**115**	P		**Pg**	**03 34 10.5**	**+0.4**
	baz=114							
YOJ				S		**Sg**	**03 34 23.4**	**+0.6**
	baz=114							
LIOB	**Emei**	**0.97**	**257**	P		**Pg**	**03 34 09.9**	**-0.2**
	baz=259							
LIOB				S		**Sb**	**03 34 23.9**	**+0.9**
	baz=259							
NSTT	**Nanjuang**	**0.98**	**256**	P		**Pn**	**03 34 11.3**	**+0.1**
	baz=258							
NSTT				*e*S		**Sn**	**03 34 25.6**	**+0.5**
	baz=258							
TWT	**Tachien**	**1.01**	**232**	P		**Pg**	**03 34 10.8**	**-0.2**
	baz=230							
TWT				S		**Sg**	**03 34 23.7**	**-0.5**
	baz=230							
WHF	**Hehuan Shan**	**1.02**	**225**	*e*P		**Pg**	**03 34 09.4**	**-1.8**
	baz=227							
WHF				S		**Sg**	**03 34 23.7**	**-0.9**
	baz=227							
TDCB	**Techi**	**1.02**	**233**	P		**Pg**	**03 34 10.5**	**-0.7**
	baz=228							
CHGB	**Renai**	**1.14**	**225**	P		**Pg**	**03 34 13.3**	**-0.1**
	baz=228							
CHGB				S		**Sg**	**03 34 26.7**	**-1.6**
	baz=228							
WHP	**Taichung City**	**1.17**	**240**	P		**Pb**	**03 34 13.9**	**+0.1**
	baz=242							
WHP				*e*S		**Sn**	**03 34 31.5**	**+1.7**
	baz=242							
ESL	**Shilin**	**1.20**	**208**	P		**Pb**	**03 34 14.2**	**0.0**
	baz=211							
ESL				*e*S		**Sb**	**03 34 29.5**	**-0.1**
	baz=211							
TWQ1	**Liyutan**	**1.27**	**246**	P		**Pg**	**03 34 16.1**	**+0.1**
	baz=264							
VWDT	**VWDT**	**1.39**	**217**	P		**Pn**	**03 34 16.9**	**+0.2**
	baz=229							
VWDT				S		**Sb**	**03 34 35.1**	**-0.1**
	baz=229							
SSLB	**Suanglung**	**1.47**	**223**	*e*P		**Pn**	**03 34 17.2**	**-0.8**
	baz=227							
SSLB				S		**Sn**	**03 34 36.8**	**-0.4**
	baz=227							
HGSD	**Ruisui**	**1.49**	**203**	*e*P		**Pg**	**03 34 20.0**	**-0.1**
	baz=225							
HGSD				*e*S		**Sg**	**03 34 41.8**	**+2.3**
	baz=225							
IRIF	**Iriomote-Funau**	**1.62**	**109**	P		**Pn**	**03 34 20.1**	**+0.2**
IRIF				S		**Sn**	**03 34 40.0**	**-0.8**
YULB	**Yu-li**	**1.63**	**205**	*e*P		**Pn**	**03 34 21.1**	**+1.0**
	baz=219							
YULB				S		**Sn**	**03 34 40.7**	**-0.3**
	baz=219							
YUS	**Yu-Shan**	**1.71**	**216**	S		**Sg**	**03 34 46.0**	**-0.5**
	baz=229							
ALS	**Alishan**	**1.77**	**220**	*e*P		**Pg**	**03 34 26.2**	**+0.6**
	baz=224							
ALS				*e*S		**Sn**	**03 34 45.2**	**+0.2**
	baz=224							
CHN5	**Tsauling**	**1.79**	**225**	P		**Pg**	**03 34 25.3**	**-0.5**
	baz=230							
CHN5				S		**Sg**	**03 34 49.6**	**+0.7**
	baz=230							
HATJ	**Hateruma jima**	**1.79**	**117**	P		**Pn**	**03 34 22.0**	**-0.3**
HATJ				S		**Sn**	**03 34 44.4**	**-0.7**
FULB	**Fuli**	**1.81**	**203**	*e*P		**Pb**	**03 34 24.8**	**+0.2**
	baz=224							
FULB				S		**Sb**	**03 34 47.4**	**+0.2**
	baz=224							
JKRS	**Kuro-shima**	**1.89**	**109**	P		**Pn**	**03 34 23.5**	**-0.2**
JKRS				S		**Sn**	**03 34 47.4**	**-0.1**
ELDTW	**Lidau**	**1.93**	**210**	P		**Pn**	**03 34 25.6**	**+1.3**
	baz=216							
ELDTW				S		**Sn**	**03 34 48.5**	**0.0**
	baz=216							
JIJ	**Ishigaki jima**	**1.97**	**104**	P		**Pn**	**03 34 24.7**	**-0.1**
JIJ				*e*S		**Sn**	**03 34 49.1**	**-0.4**
EDH	**Donghe**	**2.01**	**200**	*e*P		**Pb**	**03 34 28.1**	**0.0**
	baz=180							
EDH				S		**Sn**	**03 34 51.6**	**+1.1**
	baz=180							
JISG	**Ishigakijimahi**	**2.08**	**97**	P		**Pn**	**03 34 27.5**	**+1.3**
JISG				*e*S		**Sb**	**03 34 54.8**	**-0.1**
WTP	**Ta-pu**	**2.09**	**219**	P		**Pb**	**03 34 30.1**	**+0.7**
	baz=235							
WTP				S		**Sg**	**03 34 58.6**	**0.0**
	baz=235							
TWK	**Hsinying**	**2.14**	**222**	*e*P		**Pb**	**03 34 31.2**	**+0.8**
	baz=228							
TWK				*e*S		**Sg**	**03 35 00.6**	**0.0**
	baz=228							
TSMG	**Majia**	**2.51**	**211**	*e*P		**Pb**	**03 34 36.0**	**-0.7**
	baz=219							
TSMG				*e*S		**Sb**	**03 35 08.1**	**+0.5**
	baz=219							
MASBT	**Mashibuluo**	**2.60**	**210**	*e*P		**Pb**	**03 34 38.5**	**+0.4**
	baz=220							
MASBT				*e*S		**Sb**	**03 35 09.2**	**-0.8**
	baz=220							
PHUB	**P'eng-hu**	**2.64**	**240**	*e*S		**Sn**	**03 35 07.5**	**+1.6**
	baz=257							

*ISN **09** 03:37:53.5±1.0,32°.68N×47°.60E,h17km±7km,ML2.8*
*TEH **09** 03:37:53.9,32°.77N×47°.51E,h11km,ML3.0*
ISC 09 03:37:54.0±0.9,32°.75N±0°.04×47°.51E±0°.03,h10km,n29,
σ1°27/34,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DHL1	**Dehloran**	**0.20**	**252**	*e*Pg		**Pg**	**03 37 57.9**	**-0.4**
DHL1				*e*Sg		**Sg**	**03 38 02.6**	**+1.4**
IKFM	**Kafar-mosalman**	**0.83**	**20**	*e*Pg		**Pg**	**03 38 08.8**	**-1.2**
IKMR	**Kamar-syah**	**1.06**	**43**	*e*Pg		**Pg**	**03 38 12.9**	**-1.5**
IKMR				*e*Sg		**Sn**	**03 38 30.3**	**+0.5**
IKMR				*e*			03 38 32.9	
	comp=Z,99nm,0.3s							
IDOB	**Doab**	**1.18**	**28**	*e*Pg		**Pb**	**03 38 16.1**	**-0.6**
SHGR	**Shooshtar-Gavs**	**1.26**	**120**	*e*Pg		**Pn**	**03 38 19.0**	**+1.3**
IBDR	**Badra**	**1.38**	**286**	*e*Pg		**Pg**	**03 38 20.0**	**-0.5**
IBDR				*e*Sg		**Sg**	**03 38 40.0**	**+1.7**
IBDR				AML	AML		03 38 45.7	
	comp=E,148nm,0.8s							
IBDR				AML	AML		03 38 47.9	
	comp=N,132nm,0.4s							
KCHF	**Cheshme Sefid,**	**1.57**	**346**	*e*Pg		**Pg**	**03 38 24.1**	**-0.2**
KCHF				*e*			03 38 49.0	
	comp=Z,99nm,0.4s							
KER	**Kermanshah**	**1.67**	**349**	*e*Pg		**Pb**	**03 38 25.2**	**+0.3**
HSAM	**Samen**	**1.72**	**32**	*e*Pg		**Pn**	**03 38 25.6**	**+1.3**
IBZA	**Bozab**	**1.74**	**10**	*e*Pn		**Pb**	**03 38 25.9**	**-0.4**
IBZA				*e*			03 39 00.0	
	comp=Z,99nm,0.7s							
IGHG	**Ghaleghazi**	**1.76**	**334**	*e*Pg		**Pg**	**03 38 27.7**	**-0.2**
IGHG				*e*			03 39 05.4	
	comp=Z,99nm,0.7s							
NSR	**Nassriya**	**2.09**	**214**	*e*Pn		**Pn**	**03 38 29.0**	**0.0**
NSR				*e*Sn		**Sn**	**03 38 54.0**	**-1.1**
NSR				AML	AML		03 39 03.6	
	comp=E,161nm,0.1s							
IDHR	**Dehrash**	**2.16**	**335**	*e*Pn		**Pb**	**03 38 32.3**	**-1.1**
IDHR				*e*			03 39 10.5	
	comp=Z,99nm,0.8s							
IALM	**Almabolaq**	**2.18**	**14**	*e*Pn		**Pb**	**03 38 32.6**	**-1.1**
ILIN	**Lien**	**2.21**	**348**	*e*Pn		**Pb**	**03 38 33.1**	**-1.2**
ILIN				*e*			03 39 09.1	
	comp=Z,99nm,0.4s							
KHMZ	**Khomeyn**	**2.28**	**64**	*e*Pn		**Pn**	**03 38 33.6**	**+1.7**
SNGE	**Sanandaj**	**2.34**	**357**	*e*Pn		**Pn**	**03 38 33.3**	**+0.5**
HAGD	**Aghdareh**	**2.48**	**33**	*e*Pn		**Pn**	**03 38 36.2**	**+1.5**
HAGD				*e*			03 39 16.3	
	comp=Z,99nm,0.4s							
BHD	**Baghdad**	**2.68**	**282**	*e*Pn		**Pn**	**03 38 39.0**	**+1.8**
BHD				*e*Sn		**Sb**	**03 39 13.0**	**-2.0**
ASAO	**Ashtian**	**2.76**	**49**	*e*Pn		**Pn**	**03 38 39.7**	**+1.1**
IPIR	**Pirpir**	**2.85**	**90**	*e*Pn		**Pn**	**03 38 41.2**	**+1.3**
IPIR				*e*			03 39 25.6	
	comp=Z,99nm,0.8s							
IRAZ	**Razeghan**	**3.33**	**36**	*e*Pn		**Pn**	**03 38 48.5**	**+2.2**
QABG	**Abgarm-Qazvin**	**3.42**	**30**	*e*Pn		**Pn**	**03 38 48.5**	**+0.9**
QAM	**Ghamsar**	**3.44**	**72**	*e*Pn		**Pn**	**03 38 49.7**	**+1.7**
IKLH	**Kolahrood**	**3.47**	**79**	*e*Pn		**Pn**	**03 38 49.9**	**+1.6**
IKLH				*e*			03 39 54.8	
	comp=Z,99nm,0.6s							
KLNJ	**Kolanjah**	**3.88**	**115**	*e*Pn		**Pn**	**03 38 56.0**	**+1.9**
KLNJ				*e*			03 40 14.4	
	comp=Z,99nm,0.6s							
KRSH	**Karshahi**	**4.06**	**71**	*e*Pn		**Pn**	**03 38 57.2**	**+0.8**
IZEF	**Zefreh**	**4.06**	**87**	*e*Pn		**Pn**	**03 38 57.4**	**+0.9**
ISFB	**Sefidab**	**4.26**	**67**	*e*Pn		**Pn**	**03 38 59.4**	**+0.3**

*TUL **09** 03:38:08.5±1.4,36°.72N±0°.01×97°.83W±0°.03,h6km±5km,*
ML3.0,mb_Lg3.0/72(NEIC),Error ellipse: s-maj=3.0km
s-min=1.9km az=77.0
*NEIC **09** 03:38:08.6±1.0,36°.708N±0°.006×97°.82W±0°.03,h3km±7km,*
Error ellipse: s-maj=3.1km s-min=0.6km az=76.0
*ANF **09** 03:38:08.8±0.3,36°.70N×97°.81W,h5km,ML3.6/14,Error*
ellipse: s-maj=3.8km s-min=3.5km az=6.0
ISC 09 03:38:08.8±1.0,36°.70N±0°.02×97°.83W±0°.02,h5km±10km,
n90,σ0°68/82,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.15**	**350**			**Pg**	**03 38 11.5**	**-0.4**
GC02				Sg		**Sg**	**03 38 13.8**	**-0.1**
CROK	**Carrier**	**0.24**	**213**	Pg		**Pg**	**03 38 13.7**	**+0.3**
CROK				Sg		**Sg**	**03 38 17.4**	**+0.8**
KAN14	**Manchester OK**	**0.28**	**336**			**Pg**	**03 38 13.9**	**-0.3**
KAN14				Sg		**Sg**	**03 38 17.7**	**-0.1**
OK032	**Salt Plains WL**	**0.33**	**288**			**Pg**	**03 38 15.0**	**-0.2**
OK032				Sg		**Sg**	**03 38 19.6**	**+0.2**
KAN05	**Bluff City Nor**	**0.41**	**355**			**Pg**	**03 38 16.2**	**-0.4**
KAN05				Sg		**Sg**	**03 38 22.1**	**+0.1**
KAN01	**Argonia South**	**0.45**	**7**			**Pg**	**03 38 17.1**	**-0.4**
KAN09	**Caldwell North**	**0.46**	**21**	Pg		**Pg**	**03 38 17.1**	**-0.6**
KAN09				Sg		**Sg**	**03 38 23.5**	**-0.3**
KAN10	**Anthony SW Sta**	**0.47**	**333**			**Pg**	**03 38 17.4**	**-0.5**
KAN10				Sg		**Sg**	**03 38 23.9**	**-0.1**
KAN08	**Anthony NE Sta**	**0.53**	**347**			**Pg**	**03 38 18.7**	**-0.4**
KAN08				Sg		**Sg**	**03 38 25.9**	**-0.2**
KAN12	**Harper NE Stat**	**0.61**	**347**			**Pg**	**03 38 20.1**	**-0.4**
KAN12				Sg		**Sg**	**03 38 28.2**	**-0.2**
OK029	**Liberty Lake**	**0.95**	**162**			**Pg**	**03 38 26.8**	**-0.3**
OK029				Sg		**Sg**	**03 38 39.9**	**+0.4**
U32A	**Winter Ranch,**	**1.00**	**251**			**Pg**	**03 38 27.3**	**-0.7**
U32A				Sg		**Sg**	**03 38 40.8**	**-0.2**
U32A	**Winter Ranch,**	**1.00**	**251**	P		**Pg**	**03 38 27.4**	**-0.7**
	baz=70,SNR=20							
U32A				S		**Sg**	**03 38 41.3**	**+0.3**
	baz=70							
U32A	**Winter Ranch,**	**1.00**	**251**	P			03 38 27.4	
	baz=70,SNR=20							
U32A				S			03 38 41.3	
	baz=70							
QUOK	**Quay**	**1.05**	**120**			**Pg**	**03 38 28.3**	**-0.6**
QUOK				Sg		**Sg**	**03 38 42.2**	**-0.3**
BCOK	**Bluff Creek, N**	**1.06**	**170**			**Pg**	**03 38 28.5**	**-0.6**
T35A	**Sooner Cattle**	**1.07**	**78**			**Pg**	**03 38 28.6**	**-0.8**
T35B	**Sooner Cattle**	**1.07**	**78**	P		**Pg**	**03 38 28.7**	**-0.8**
	baz=260,SNR=110							
T35B				S		**Sg**	**03 38 43.3**	**-0.1**
	baz=260							
T35B	**Sooner Cattle**	**1.07**	**78**	P			03 38 28.7	
	baz=260,SNR=110							
T35B				S			03 38 43.3	
	baz=260							
OK031	**S. Brethren Rd**	**1.09**	**133**	Pg		**Pg**	**03 38 29.1**	**-0.6**
OK030	**Cody Creek RV**	**1.14**	**132**	Pg		**Pg**	**03 38 30.3**	**-0.5**
OK025	**Westminster Rd**	**1.19**	**160**			**Pg**	**03 38 31.0**	**-0.6**
OKCFA	**Oklahoma City**	**1.32**	**167**			**Pn**	**03 38 33.2**	**-0.7**
OKCFA	**Oklahoma City**	**1.32**	**167**	P		**Pn**	**03 38 33.4**	**-0.5**
	baz=347,SNR=10							
OKCFA				S		**Sn**	**03 38 52.1**	**+0.2**
	baz=347							
OKCFA	**Oklahoma City**	**1.32**	**167**	P			03 38 33.4	
	baz=347,SNR=10							
OKCFA				S			03 38 52.1	
	baz=347							
OKCSW	**OKLAHOMA CITY**	**1.33**	**166**			**Pn**	**03 38 33.7**	**-0.4**
FNO	**Franklin**	**1.48**	**166**	IAmb_Lg			03 38 58.8	
	comp=Z,64nm,0.8s							
TUL1	**Leonard**	**1.82**	**115**	P		**Pn**	**03 38 40.8**	**-0.1**
	baz=297,SNR=72							
TUL1				S		**Sb**	**03 39 05.9**	**+0.1**
	baz=297							
TUL1	**Leonard**	**1.82**	**115**	P			03 38 40.8	
	baz=297,SNR=72							
TUL1				S			03 39 05.9	
	baz=297							
R32A	**Long Quarter,**	**1.85**	**338**			**Pn**	**03 38 41.6**	**+0.3**
R32A	**Long Quarter,**	**1.85**	**338**	P		**Pn**	**03 38 41.6**	**+0.3**
	baz=157,SNR=40							
R32A				S		**Sb**	**03 39 06.2**	**-0.6**
	baz=157							
R32A	**Long Quarter,**	**1.85**	**338**	P			03 38 41.6	
	baz=157,SNR=40							
R32A				S			03 39 06.2	
	baz=157							
X34A	**Smith Ranch, M**	**2.10**	**180**	Pn		**Pb**	**03 38 46.3**	**-1.0**
WMOK	**Wichita Mounta**	**2.11**	**202**			**Pn**	**03 38 45.1**	**+0.3**
WMOK	**Wichita Mounta**	**2.11**	**202**	P		**Pn**	**03 38 45.6**	**+0.8**
	baz=21,SNR=17							
WMOK				S		**Sb**	**03 39 13.6**	**-0.5**
	baz=21							
WMOK	**Wichita Mounta**	**2.11**	**202**	P			03 38 45.6	
	baz=21,SNR=17							
WMOK				S			03 39 13.6	
	baz=21							
KSU1	**Kansas State U**	**2.58**	**22**	Pn		**Pn**	**03 38 51.4**	**+0.2**
KSU

N33B	**J Bar K, Exete**	**4.04**	**4**	P		**Pn**	**03 39 10.3**	**-1.0**	
	baz=184,SNR=5.2								
N33B	**J Bar K, Exete**	**4.04**	**4**	P			03 39 10.3		
	baz=184,SNR=5.2								
N33A	**J Bar K, Exete**	**4.04**	**4**	Pn		**Pn**	**03 39 10.0**	**-1.3**	
MIAR	**Mount Ida**	**4.08**	**121**	Pn		**Pn**	**03 39 13.2**	**+1.4**	
KSCO	**Kaye Shedlock'**	**4.44**	**303**	IAmb_Lg			03 40 41.6		
	comp=Z,27nm,0.7s								
P38A	**Dawn**	**4.47**	**48**	IAmb_Lg			03 40 29.0		
	comp=Z,22nm,0.8s								
MGMO	**Mountain Grove**	**4.47**	**83**			**Pn**	**03 39 18.0**	**+0.7**	
MGMO				IAmb_Lg			03 40 32.8		
	comp=Z,23nm,0.7s								
N35A	**Tabor**	**4.49**	**22**	Pn		**Pn**	**03 39 17.3**	**-0.1**	
X40A	**Basin Creek Fa**	**4.63**	**117**	IAmb_Lg			03 40 42.0		
	comp=Z,28nm,0.8s								
FCAR	**Ozark Folk Cen**	**4.68**	**98**	Pn		**Pn**	**03 39 20.8**	**+0.7**	
R40A	**Maddies Statio**	**4.69**	**69**	Pn		**Pn**	**03 39 20.9**	**+0.6**	
R40A				IAmb_Lg			03 40 39.3		
	comp=Z,27nm,0.8s								
R40A	**Maddies Statio**	**4.69**	**69**	P		**Pn**	**03 39 20.1**	**-0.2**	
	baz=252,SNR=6.2								
R40A	**Maddies Statio**	**4.69**	**69**	P			03 39 20.1		
	baz=252,SNR=6.2								
BGNE	**Belgrade**	**4.70**	**357**			**Pn**	**03 39 19.9**	**-0.5**	
BGNE				IAmb_Lg			03 40 42.5		
	comp=Z,33nm,0.7s								
BGNE	**Belgrade**	**4.70**	**357**	P		**Pn**	**03 39 20.1**	**-0.4**	
	baz=177,SNR=12								
BGNE	**Belgrade**	**4.70**	**357**	P			03 39 20.1		
	baz=177,SNR=12								
WHAR	**Wooly Hollow**	**4.71**	**106**	IAmb_Lg			03 40 49.9		
	comp=Z,21nm,0.8s								
WHTX	**Lake Whitney,**	**4.71**	**176**	Pn		**Pn**	**03 39 20.0**	**-0.5**	
MSTX	**Muleshoe**	**4.88**	**237**	Pn		**Pn**	**03 39 23.4**	**+0.5**	
WLAR	**White Oak Lake**	**4.89**	**127**	Pn		**Pn**	**03 39 23.9**	**+0.9**	
T25A	**Trinidad**	**5.29**	**277**	Pn		**Pn**	**03 39 29.6**	**+0.8**	
OGNE	**Ogallala**	**5.36**	**323**	IAmb_Lg			03 41 10.7		
	comp=Z,23nm,0.8s								
CCM	**Cathedral Cave**	**5.41**	**74**	Pn		**Pn**	**03 39 30.8**	**+0.7**	
CCM				Pg		**Pb**	**03 39 46.6**	**+2.8**	
CCM				IAmb_Lg			03 41 09.8		
	comp=Z,21nm,0.9s								
LCAR	**Lake Charles**	**5.42**	**95**	Pn		**Pn**	**03 39 30.2**	**-0.1**	
N38A	**Joes South For**	**5.43**	**40**	Pn		**Pn**	**03 39 31.7**	**+1.3**	
NATX	**Nacogdoches**	**5.58**	**151**	IAmb_Lg			03 41 16.6		
	comp=Z,19nm,1.1s								
PBMO	**Poplar Bluff**	**5.94**	**87**	IAmb_Lg			03 41 18.7		
	comp=Z,18nm,0.9s								
K31A	**O'Neill**	**5.95**	**353**	Pn		**Pn**	**03 39 37.0**	**-0.6**	
K31A				IAmb_Lg			03 41 29.8		
	comp=Z,28nm,0.7s								
FVM	**French Village**	**6.03**	**76**	IAmb_Lg			03 41 21.9		
	comp=Z,20nm,0.9s								
JCT	**Junction City**	**6.42**	**195**	IAmb_Lg			03 41 35.9		
	comp=Z,17nm,1.1s								
143A	**Socs Landing,**	**6.62**	**125**	IAmb_Lg			03 41 55.3		
	comp=Z,16nm,0.7s								
ISCO	**Idaho Springs**	**6.86**	**299**	Pn		**Pn**	**03 39 50.9**	**+0.5**	
S44A	**Carbondale**	**6.91**	**79**	IAmb_Lg			03 41 46.5		
	comp=Z,19nm,0.7s								
SIUC	**Southern Illin**	**6.94**	**79**	IAmb_Lg			03 41 56.1		
	comp=Z,22nm,1.0s								
ECSD	**EROS Data Cent**	**7.08**	**7**	Pn		**Pn**	**03 39 51.5**	**-1.6**	
K38A	**Parkersburg**	**7.10**	**32**	IAmb_Lg			03 42 01.9		
	comp=Z,22nm,0.7s								
OXF	**Oxford**	**7.20**	**105**	IAmb_Lg			03 41 55.5		
	comp=Z,12nm,0.8s								
Q44A	**Meyer Farm, Va**	**7.31**	**70**	Pn		**Pn**	**03 39 55.0**	**-1.2**	
Y45A	**Yeager Farm, C**	**7.34**	**110**	IAmb_Lg			03 42 10.5		
	comp=Z,18nm,1.2s								
T45A	**Paducah**	**7.37**	**85**	IAmb_Lg			03 42 22.5		
	comp=Z,21nm,0.7s								
L40A	**Anamosa**	**7.40**	**42**	IAmb_Lg			03 42 03.1		
	comp=Z,18nm,1.0s								
L42A	**Oliver, Polo**	**8.24**	**48**	IAmb_Lg			03 42 40.8		
	comp=Z,14nm,0.8s								
JFWS	**Jewell Farm**	**8.51**	**41**	IAmb_Lg			03 42 39.8		
	comp=Z,16nm,0.8s								
T47A	**Sharon Grove**	**8.60**	**85**	IAmb_Lg			03 42 40.5		
	comp=Z,12nm,1.1s								
RWWY	**Rawlins**	**8.82**	**307**	IAmb_Lg			03 43 02.2		
	comp=Z,15nm,1.2s								
TXAR	**Lajitas Array**	**8.83**	**215**	Pn		**Pn**	**03 40 17.7**	**+0.5**	
P46A	**Rosedale**	**8.86**	**68**	IAmb_Lg			03 42 51.8		
	comp=Z,16nm,0.9s								
K22A	**Casper**	**8.95**	**314**	IAmb_Lg			03 42 59.0		
	comp=Z,10nm,0.8s								
I40A	**Norwalk**	**9.04**	**35**	IAmb_Lg			03 43 06.2		
	comp=Z,11nm,0.8s								
SFIN	**Lafayette**	**9.17**	**63**	IAmb_Lg			03 42 57.0		
	comp=Z,14nm,0.7s								
SPMN	**Marine on St.**	**9.32**	**22**	IAmb_Lg			03 43 15.3		
	comp=Z,8.1nm,1.1s								

NNC 09 03:50:20.0±6.6, 36°93N×82°42E, h0km, mb4.0, mpv3.7, 4C-4D, Error ellipse: s-maj=57.9km s-min=46.6km az=40.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**6.77**	**342**	⇓P	Pn	03 52 01.3	+0.5
	1.9nm,0.2s						
PDGK				⇑Sn	Sn	03 53 21.1	+2.4
	25nm,0.8s						
MDOK	**Medeo**	**7.46**	**328**	Pn	Pn	03 52 11.2	+0.9
	3.1nm,0.4s						
MDOK				⇑Sn	Sn	03 53 37.8	+2.1
	9.6nm,0.8s						
TKM2	**Tokmak 2**	**7.95**	**321**	⇑Pg	Pb	03 52 45.2	+6.3
	1.4nm,0.5s						
TKM2				⇓Lg	Lg	03 54 34.5	
	6.1nm,0.7s						
MK31	**Makanchi Array**	**9.86**	**359**	Pn	Pn	03 52 41.6	-1.4
	0.5nm,0.3s,baz=184,slow=12,SNR=47						
MK31				⇑Sn	Sn	03 54 33.9	-0.4
	1.6nm,0.6s,baz=186,slow=24,SNR=4.9						
MAKZ	**Makanchi**	**9.88**	**358**	⇓Pn	Pn	03 52 42.1	-1.1
	2.3nm,0.4s						
MAKZ				⇓Sn	Sn	03 54 34.0	-0.8
	3.0nm,0.7s						

*IDC **09** 03:52:28.2±4.0, 4°92S×152°57E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/47, mbtmp3.8/6, MS2.6/1, Ms1 2.6/1, ms1mx2.4/25, Error ellipse: s-maj=131.7km s-min=23.6km az=110.0*

ISC 09 03:52:38.6±3.5, 4°6S±0°3×151°5E±0°7, h35km, n8, σ0§90/7, mb3.7/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.64**	**121**	LR	LR	03 58 17.2	
	comp=Z,37nm,18.5s,baz=272,slow=41						
WRA	**Warramunga Arr**	**22.68**	**226**	P	**P**	**03 57 36.3**	**-0.9**
	1.6nm,0.5s,baz=53,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**25.49**	**220**	P	**P**	**03 58 03.6**	**-0.2**
	1.0nm,0.5s,baz=58,slow=8.5,SNR=12						
FITZ	**Fitzroy Crossi**	**28.68**	**240**	P	**P**	**03 58 32.7**	**+0.2**
	2.6nm,1.1s,baz=51,slow=9.6,SNR=6.9						
MJAR	**Matsushiro Arr**	**42.76**	**344**	P	**P**	**04 00 32.1**	**-0.7**
	0.8nm,0.6s,baz=142,slow=6.2,SNR=4.6						
MKAR	**Makanchi Array**	**79.33**	**319**	P	**P**	**04 04 42.1**	**+1.2**
	0.4nm,0.5s,baz=93,slow=7.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**80.27**	**327**	P	**P**	**04 04 45.5**	**-0.3**
	0.4nm,0.4s,baz=113,slow=6.9,SNR=1.7						
TORD	**Torodi Ar. Bea**	**149.05**	**288**	PKPbc	**PKPdf**	**04 12 20.5**	**+0.4**
	1.1nm,0.7s,baz=88,slow=1.4,SNR=6.7						

IDC 09 04:17:33.9±3.5, 4°38S×152°52E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/26, mbtmp3.7/4, MS2.9/1, Ms1 2.9/1, ms1mx2.4/28, Error ellipse: s-maj=110.9km s-min=35.1km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.51**	**227**	P	P	04 22 46.0	+0.1
	0.9nm,0.4s,baz=52,slow=9.8,SNR=16						
ASAR	**Alice Springs**	**26.27**	**221**	P	P	04 23 11.7	+0.4
	0.3nm,0.5s,baz=54,slow=8.9,SNR=4.9						
FITZ	**Fitzroy Crossi**	**29.61**	**240**	P	P	04 23 41.2	0.0
	1.9nm,0.7s,baz=47,slow=8.6,SNR=6.1						
PETK	**Petropavlovsk-**	**57.45**	**4**	LR	LR	04 50 59.4	
	comp=Z,10nm,18.4s,baz=95,slow=35						
MKAR	**Makanchi Array**	**79.83**	**319**	P	P	04 29 45.4	+1.0
	0.1nm,0.4s,baz=92,slow=4.8,SNR=2.4						
TORD	**Torodi Ar. Bea**	**149.91**	**289**	PKPbc	PKPbc	04 37 25.2	-2.1
	0.3nm,0.8s,baz=81,slow=2.5,SNR=1.5						

*ATH **09** 04:21:07.2, 41°78N×20°12E, h26km±13km, ML2.6/3, Error ellipse: s-maj=13.7km s-min=1.9km az=229.0*
*THE **09** 04:21:07.5, 41°79N×20°19E, h0km±1km, ML2.6/4, Error ellipse: s-maj=2.6km s-min=1.0km az=334.0*
*PDG **09** 04:21:09.1±0.0, 41°61N×20°21E, h6km, ML3.0/14, Error ellipse: s-maj=0.0km s-min=0.1km az=0.0*
*TIR **09** 04:21:09.3, 41°64N×20°17E, h5km±2km, Md2.8, Ml2.8*
*BEO **09** 04:21:10.3±0.2, 41°65N×20°19E, h2km±1km, ML2.4/8*
*SKO **09** 04:21:10.1, 41°62N×20°20E, h11km*

ISC 09 04:21:09.9±0.9, 41°65N±0°01×20°21E±0°02, h12km±7km, n100, σ1§14/147, 15C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.17**	**79**	P	**Pg**	**04 21 14.2**	**+0.3**
	baz=77						
PHP				S	**Sg**	**04 21 17.4**	**+0.8**
	baz=77						
PHP				AMP			
	comp=N,49nm,0.1s,baz=77						
TIR	**Tirane**	**0.40**	**221**	P	**Pg**	**04 21 16.8**	**-1.0**
TIR				S	**Sg**	**04 21 23.6**	**+0.5**
TIR				AML	AML	04 21 25.7	
	comp=N,1235μm,0.2s						
TIR				AML	AML	04 21 27.2	
	comp=E,1433μm,0.2s						
TIR	**Tirane**	**0.40**	**221**	P	**Pg**	**04 21 17.1**	**-0.7**
TIR				S	**Sb**	**04 21 24.0**	**-1.0**
TIR	**Tirane**	**0.40**	**221**	*e*Pg	**Pg**	**04 21 17.2**	**-0.6**
TIR				*e*Sg	**Sg**	**04 21 23.7**	**+0.5**
TIR	**Tirane**	**0.40**	**221**	⇓P	**Pg**	**04 21 17.3**	**-0.6**
TIR				⇓S	**Sg**	**04 21 23.7**	**+0.5**
TIR	**Tirane**	**0.40**	**221**	P	**Pg**	**04 21 17.1**	**-0.6**
	baz=219						
TIR				S	**Sg**	**04 21 23.0**	**-0.2**
	baz=219						
TIR				AMP			
	comp=N,1.1nm,0.2s,baz=219						
TIR	**Tirane**	**0.40**	**221**	*i* Pg	**Pg**	**04 21 17.1**	**-0.6**
PUK	**Puka**	**0.46**	**329**	P	**Pg**	**04 21 18.6**	**-0.4**
	baz=333						
PUK				S	**Sg**	**04 21 25.9**	**+0.8**
	baz=333						
PUK				AMP			
	comp=N,8.5nm,0.2s,baz=333						
PRZK	**Prizren**	**0.69**	**36**	*e*Pg	**Pg**	**04 21 22.8**	**-0.6**
PRZK				*i* Sg	**Sb**	**04 21 34.7**	**+1.2**
OHR	**Ohrid**	**0.70**	**140**	*e*Pg	**Pg**	**04 21 22.1**	**-1.3**
OHR				*i* Sg	**Sg**	**04 21 32.8**	**+0.2**
OHR				*e*Lg	Lg	04 21 33.4	
	comp=N,217nm,0.5s						
OHR				*e*Lg	Lg	04 21 35.0	
	comp=E,169nm,0.4s						
BCI	**Bajram Curri**	**0.72**	**351**	P	**Pg**	**04 21 23.7**	**-0.2**
	baz=354						
BCI				S	**Sb**	**04 21 34.9**	**+0.4**
	baz=354						
ULC	**Ulcinj**	**0.79**	**294**	⇓*i*Pg	**Pg**	**04 21 23.9**	**-1.2**
ULC				*i* Sg	**Sb**	**04 21 36.5**	**+0.2**
DRME	**Dracevica, Mon**	**0.94**	**305**	*e*Pn	**Pg**	**04 21 26.6**	**-1.3**
DRME	**Dracevica, Mon**	**0.94**	**305**	⇑*i*Pg	**Pg**	**04 21 26.7**	**-1.2**
DRME				*i* Sg	**Sn**	**04 21 41.8**	**-0.5**
PVY	**Plav**	**0.96**	**349**	⇑*i*Pg	**Pg**	**04 21 27.6**	**-0.9**
PVY				*i* Sg	**Sn**	**04 21 43.3**	**+0.1**
SKO	**Skopje**	**0.97**	**70**	*e*Pg	**Pg**	**04 21 28.4**	**-0.2**
SKO				*e*Sg	**Sg**	**04 21 41.1**	**-0.2**
SKO	**Skopje**	**0.97**	**70**	*i* Pg	**Pb**	**04 21 28.9**	**+0.2**
SKO				*i* Sg	**Sg**	**04 21 41.3**	**0.0**
PDG	**Podgorica**	**1.06**	**318**	*e*Pg	**Pb**	**04 21 29.2**	**-0.9**
PDG				*e*Sn	**Sn**	**04 21 45.6**	**+0.4**
PDG	**Podgorica**	**1.06**	**318**	⇓P	**Pb**	**04 21 29.0**	**-1.2**
PDG				⇑S	**Sn**	**04 21 45.4**	**+0.2**
PDG	**Podgorica**	**1.06**	**318**	*e*Pn	**Pb**	**04 21 28.8**	**-1.3**
TTG	**Podgorica**	**1.06**	**318**	⇓*i*Pg	**Pb**	**04 21 29.1**	**-1.0**
TTG				*i* Sg	**Sn**	**04 21 46.0**	**+0.8**
KBN	**Korca**	**1.11**	**157**	P	**Pb**	**04 21 30.7**	**-0.5**
KBN				S	**Sn**	**04 21 49.4**	**+2.6**
KBN	**Korca**	**1.11**	**157**	P	**Pn**	**04 21 31.7**	**+0.3**
	baz=155						
KBN				S	**Sn**	**04 21 49.2**	**+2.5**
	baz=155						
BUM	**Brajici-Budva**	**1.18**	**304**	⇑*i*Pg	**Pb**	**04 21 31.2**	**-1.1**
BUM				*i* Sg	**Sn**	**04 21 49.9**	**+1.5**
GJIK	**Gjilan**	**1.22**	**48**	*i* Pn	**Pn**	**04 21 32.7**	**-0.2**
FNA	**Florina**	**1.23**	**134**	P	**Pn**	**04 21 31.6**	**-1.4**
FNA				S	**Sn**	**04 21 49.9**	**+0.2**
FNA				AML	AML	04 21 51.5	
	comp=N,646μm,0.3s						
FNA				AML	AML	04 21 52.9	
	comp=E,816μm,0.4s						
FNA	**Florina**	**1.23**	**134**	P	**Pn**	**04 21 31.8**	**-1.3**
FNA				S	**Sn**	**04 21 51.5**	**+1.8**
	comp=E,365nm,0.4s						
FNA	**Florina**	**1.23**	**134**	*e*Pg	**Pn**	**04 21 31.5**	**-1.6**
IVA	**Berane**	**1.24**	**349**	⇓*i*Pg	**Pn**	**04 21 32.8**	**-0.5**
IVA				*i* Sg	**Sn**	**04 21 52.8**	**+2.8**
KOME	**Kolasin**	**1.31**	**337**	⇑*i*Pg	**Pn**	**04 21 33.8**	**-0.3**
KOME				*i* Sg	**Sg**	**04 21 54.9**	**+2.9**
CEME	**Cevo**	**1.32**	**313**	⇓*i*Pg	**Pn**	**04 21 33.8**	**-0.4**
CEME				*i* Sg	**Sg**	**04 21 54.7**	**+2.4**
SMRK	**Smrekonice**	**1.33**	**24**	*i* Pn	**Pb**	**04 21 34.9**	**0.0**
NEST	**Nestorio**	**1.39**	**153**	P	**Pn**	**04 21 34.7**	**-0.5**
NEST				S	**Sg**	**04 21 54.4**	**-0.2**
NEST				AML	AML	04 22 01.1	
	comp=N,282μm,0.5s						
NEST				AML	AML	04 22 04.7	
	comp=E,237μm,0.3s						
NEST	**Nestorio**	**1.39**	**153**	P	**Pn**	**04 21 35.0**	**-0.2**
NEST				S	**Sg**	**04 21 57.1**	**+2.5**
	comp=E,100nm,0.4s						
NKME	**Niksic**	**1.46**	**320**	⇑*i*Pg	**Pn**	**04 21 36.0**	**-0.1**
NKME				*i* Sg	**Sg**	**04 21 59.7**	**+2.9**
NKY	**Niksic**	**1.47**	**322**	⇑*i*Pg	**Pb**	**04 21 36.9**	**-0.4**
NKY				*i* Sg	**Sg**	**04 22 00.3**	**+3.0**
STIP	**Stip**	**1.48**	**88**	*i* Pn	**Pb**	**04 21 37.8**	**+0.4**
HCY	**Herceg Novi**	**1.51**	**302**	*e*Pn	**Pn**	**04 21 36.4**	**-0.4**
HCY	**Herceg Novi**	**1.51**	**302**	⇑*i*Pg	**Pn**	**04 21 37.1**	**+0.3**
HCY				*i* Sg	**Sg**	**04 22 00.9**	**+2.5**
LSK	**Leskovik**	**1.53**	**169**	P	**Pb**	**04 21 37.6**	**-0.6**
LSK	**Leskovik**	**1.53**	**169**	P	**Pg**	**04 21 39.5**	**+0.2**
	baz=167						
LSK				S	**Sg**	**04 22 02.2**	**+3.2**
	baz=167						
PENT	**Pentalofos**	**1.61**	**154**	P	**Pn**	**04 21 38.6**	**+0.3**
PENT				S	**Sg**	**04 22 01.1**	**-0.7**
PRVS	**Prvonek**	**1.63**	**58**	*e*Sn	**Pb**	**04 21 39.6**	**-0.4**
PRVS	**Prvonek**	**1.63**	**58**	*e*Pg	**Sg**	**04 22 02.3**	**0.0**
BARS	**Barje**	**1.67**	**45**	*e*Pg	**Pb**	**04 21 40.8**	**+0.2**
BARS	**Barje**	**1.67**	**45**	*i* Sn	**Sb**	**04 22 01.2**	**-0.3**
SELS	**Selova**	**1.71**	**23**	*e*Pn	**Pb**	**04 21 40.5**	**-0.8**
TREB	**Trebinje**	**1.75**	**308**	*e*Pg	**Pn**	**04 21 40.9**	**+0.8**
TREB				*e*Sn	**Sb**	**04 22 03.7**	**-0.1**
TREB	**Trebinje**	**1.75**	**308**	*e*Pn	**Pn**	**04 21 40.7**	**+0.6**
BRY	**Bratogost**	**1.76**	**316**	*e*Pn	**Pb**	**04 21 41.6**	**-0.7**
BRY	**Bratogost**	**1.76**	**316**	*e*Pn	**Pb**	**04 21 41.5**	**-0.7**
BRY				*i* Sn	**Sg**	**04 22 07.2**	**+0.6**
SRN	**Sarande**	**1.78**	**185**	P	**Pn**	**04 21 41.3**	**+0.9**
SRN				S	**Sg**	**04 22 06.7**	**-0.3**
SRN	**Sarande**	**1.78**	**185**	P	**Pg**	**04 21 43.8**	**-0.2**
	baz=185						
SRN				S	**Sg**	**04 22 09.2**	**+2.3**
	baz=185						
PLE	**Pljevlja**	**1.79**	**340**	⇓*i*Pn	**Pb**	**04 21 42.0**	**-0.7**
PLE				*i* Sn	**Sg**	**04 22 08.0**	**+0.7**
KZN	**Kozani**	**1.79**	**138**	P	**Pn**	**04 21 41.6**	**+0.9**
KZN	**Kozani**	**1.79**	**138**	P	**Pn**	**04 21 40.5**	**-0.2**
KZN				S	**Sg**	**04 22 06.3**	**-1.1**
	comp=E,110nm,0.5s						
GRG	**Griva**	**1.79**	**112**	*i* Pn	**Pn**	**04 21 40.9**	**+0.2**
VAY	**Valandovo**	**1.80**	**100**	*e*Pn	**Pb**	**04 21 42.3**	**-0.5**
VAY				*e*Sg	**Sg**	**04 22 08.0**	**+0.2**
VAY	**Valandovo**	**1.80**	**100**	*i* Pn	**Pb**	**04 21 42.1**	**-0.7**
VAY				*i* Sn	**Sb**	**04 22 04.7**	**-0.6**
VAY				*e*Lg	Lg	04 22 10.5	
	comp=E,42nm,0.7s						
VAY				*e*Lg	Lg	04 22 12.3	
	comp=N,67nm,0.9s						
UPM	**Unac-Piva**	**1.83**	**328**	*e*Pn	**Pb**	**04 21 43.4**	**0.0**
UPM	**Unac-Piva**	**1.83**	**328**	⇑*i*Pn	**Pb**	**04 21 42.5**	**-0.9**
UPM				*i* Sn	**Sg**	**04 22 08.9**	**+0.2**
BOSS	**Bosilegrad**	**1.89**	**63**	*e*Pn	**Pb**	**04 21 44.6**	**+0.3**
KPRO	**Kipourio**	**1.91**	**152**	P	**Pn**	**04 21 42.5**	**+0.2**
IVAS	**Ivanjica**	**1.93**	**359**	*e*Pg	**Pb**	**04 21 43.9**	**-1.1**
IVAS				*e*Sn	**Sb**	**04 22 09.4**	**+0.3**
KEK	**Kerkira**	**1.96**	**189**	P	**Pn**	**04 21 43.3**	**+0.3**
KEK	**Kerkira**	**1.96**	**189**	P	**Pn**	**04 21 43.0**	**0.0**
KEK				S	**Sg**	**04 22 11.9**	**-1.0**
	comp=N,80nm,1.3s						
RUDO	**Rudo**	**2.06**	**343**	*e*Pn	**Pn**	**04 21 45.1**	**+0.7**
KNT	**Kendrikon**	**2.08**	**103**	P	**Pn**	**04 21 43.9**	**-0.7**
BBLS	**Lazići**	**2.29**	**345**	*e*Pn	**Pb**	**04 21 49.7**	**-1.6**
BBLS	**Lazići**	**2.29**	**345**	*e*Pn	**Pb**	**04 21 47.1**	**-0.6**
ZAPS	**Zavoj**	**2.42**	**47**	*e*Pn	**Pn**	**04 21 51.1**	**+1.8**
HORT	**Hortiatis**	**2.42**	**115**	P	**Pn**	**04 21 49.0**	**-0.4**
VTS	**Vitosha**	**2.45**	**66**	⇑P	**Pn**	**04 21 49.2**	**-0.6**
VTS				⇑S	**Sn**	**04 22 19.6**	**-0.2**
DIVS	**Divibare**	**2.45**	**356**	*e*Pn	**Pn**	**04 21 50.5**	**+0.6**
DIVS	**Divibare**	**2.45**	**356**	*e*Pn	**Pn**	**04 21 50.2**	**+0.3**
THL	**Klokotos Trika**	**2.49**	**146**	P	**Pn**	**04 21 50.7**	**+0.4**
HAPS	**Han Pijesak,Bl**	**2.60**	**340**	*e*Pn	**Pn**	**04 21 52.4**	**+0.4**
BLKB	**Belogradchik**	**2.68**	**42**	⇑S	**Sn**	**04 22 23.3**	**-2.1**
LKD2	**Lefkada island**	**2.88**	**173**	P	**Pn**	**04 21 55.7**	**0.0**
EVR	**Evrytania**	**2.99**	**155**	P	**Pn**	**04 21 58.1**	**+0.8**
MAKR	**Makrakomi, Fth**	**3.02**	**150**	P	**Pn**	**04 21 58.6**	**+1.1**
EVGI	**Lefkada island**	**3.04**	**173**	P	**Pn**	**04 21 57.8**	**-0.1**
AGG	**Agios Georgios**	**3.08**	**148**	P	**Pn**	**04 21 58.3**	**-0.2**
PDO	**Prodromos**	**3.14**	**166**	P	**Pn**	**04 21 59.4**	**+0.2**
MDVR	**Moldovita**	**3.32**	**19**	⇓P	**Pn**	**04 22 00.4**	**-1.4**
FRGS	**Fruska Gora**	**3.52**	**355**	⇓P	**Pn**	**04 22 03.8**	**-0.6**
FRGS				⇓S	**Sn**	**04 22 46.1**	**+0.1**
FRGS	**Fruska Gora**	**3.52**	**355**	*e*Pn	**Pn**	**04 22 05.2**	**+0.7**
KALE	**Kalithea**	**3.58**	**155**	P	**Pn**	**04 22 07.0**	**+1.7**
MGRS	**Mrkonjic Grad**	**3.59**	**321**	*e*Pn	**Pn**	**04 22 06.2**	**+0.7**
LAKA	**Lakka**	**3.67**	**158**	P	**Pn**	**04 22 07.8**	**+1.3**
BLY	**Banja Luka**	**3.81**	**325**	*e*Pn	**Pb**	**04 22 13.1**	**-3.9**
BZS	**Buzias**	**4.09**	**14**	⇑P	**Pn**	**04 22 10.9**	**-1.4**
GZR	**Gura Zlata**	**4.18**	**26**	⇓P	**Pn**	**04 22 12.8**	**-0.8**
MORH	**Mrgy, Hungar**	**4.70**	**347**	⇑P	**Pn**	**04 22 19.8**	**-0.9**
MORH				⇑S	**Sn**	**04 23 15.6**	**+0.5**
MORH	**Mrgy, Hungar**	**4.70**	**347**	*e*Pn	**Pn**	**04 22 18.0**	**-2.7**
CRES	**Cresnjev**	**5.41**	**322**	*e*Pn	**Pn**	**04 22 31.5**	**+1.1**
CEY	**Cerknica**	**5.86**	**316**	*e*Pn	**Pn**	**04 22 36.4**	**-0.2**
OBKA	**Obir**	**6.34**	**322**	*e*Pn	**Pn**	**04 22 45.0**	**+1.7**
	comp=N,0.8nm,0.2s						
WTTA	**Wattenberg**	**8.31**	**315**	Pn	**Pn**	**04 23 11.5**	**+1.1**
	comp=N,1.5nm,0.3s						
MOTA	**Moosalm**	**8.64**	**314**	*i* Pn	**Pn**	**04 23 16.5**	**+1.5**
	comp=N,1.4nm,0.4s						

*KRNET **09** 04:28:52.8±0.1, 40°17N×79°62E, mb3.7*
*IDC **09** 04:28:55.9±2.4, 40°25N×79°01E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/29, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=46.8km s-min=29.6km az=128.0*
*SOME **09** 04:28:59.3, 40°40N×79°02E, h15km*
*NNC **09** 04:29:02.0±1.0, 40°56N×78°99E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=6.9km s-min=5.2km az=172.0*

ISC 09 04:28:57.7±3.0, 40°33N±0°08×78°99E±0°05, h1km±16km, n56, σ2§39/87, 31C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**2.19**	**349**	⇑*e*P	**Pn**	**04 29 37.1**	**+1.6**
	baz=39						
PRZ				⇑*i*S	**Sg**	**04 30 09.4**	**+1.2**
	baz=39						
ANVS	**Anan'yevo**	**2.64**	**338**	⇑*i*P	**Pn**	**04 29 44.0**	**+2.3**
	baz=31						
ANVS				⇑*i*S	**Sg**	**04 30 21.2**	**-1.3**
	baz=31						
SATY	**

MTBS	**Maitube**	**3.39**	**326**	Pg	**Pb**	**04 30 00.3**	**+1.7**
	5.2nm,0.2s							
MTBS				Lg	Lg	04 30 43.9		
	22nm,0.4s							
KST	**Kastek**	**3.53**	**321**	*eP*	**Pb**	**04 30 03.1**	**+2.0**
	21nm,0.6s							
KST				*eS*	**Sg**	**04 30 48.7**	**-2.4**
	27nm,0.5s							
KST	**Kastek**	**3.53**	**321**	Pg	**Pb**	**04 30 03.1**	**+2.0**
	21nm,0.6s							
KST				Lg	Lg	04 30 48.7		
	27nm,0.5s							
TKM2	**Tokmak 2**	**3.63**	**317**	⇓*eP*	**Pn**	**04 29 58.9**	**+3.7**
	baz=14							
TKM2				⇓*iS*	**Sb**	**04 30 47.7**	**+0.4**
	baz=14							
TKM2	**Tokmak 2**	**3.63**	**317**	⇓Pg	**Pb**	**04 30 03.0**	**+0.2**
	11nm,0.5s							
TKM2				⇓Lg	Lg	04 30 53.4		
	29nm,0.7s							
DGS	**Degeres**	**3.77**	**321**	*eP*	**Pb**	**04 30 07.2**	**+2.0**
	14nm,0.8s							
DGS				*eS*	**Sg**	**04 30 56.0**	**-2.8**
	34nm,0.5s							
DGS	**Degeres**	**3.77**	**321**	Pg	**Pb**	**04 30 07.2**	**+2.0**
	14nm,0.8s							
DGS				Lg	Lg	04 30 56.0		
	34nm,0.5s							
KTBS	**Karatobe**	**3.79**	**334**	*eP*	**Pb**	**04 30 07.2**	**+1.8**
	18nm,0.5s							
KTBS				*eS*	**Sg**	**04 30 55.7**	**-3.7**
	55nm,0.6s							
KTBS	**Karatobe**	**3.79**	**334**	Pg	**Pb**	**04 30 07.2**	**+1.8**
	18nm,0.5s							
KTBS				Lg	Lg	04 30 55.5		
	55nm,0.6s							
KBK	**Karagaybulak**	**3.82**	**309**	⇑*eP*	**Pn**	**04 30 02.2**	**+4.3**
	baz=7.0							
KBK				⇑*iS*	**Sb**	**04 30 52.7**	**-0.2**
	baz=7.0							
ARLS	**Aral**	**3.84**	**295**	⇑*eP*	**Pn**	**04 30 02.6**	**+4.5**
	baz=95							
ARLS				⇑*iS*	**Sb**	**04 30 53.8**	**+0.3**
	baz=95							
UCH	**Uchtor**	**3.87**	**301**	⇑*eP*	**Pn**	**04 30 03.0**	**+4.2**
	baz=0.0							
UCH				⇑*iS*	**Sb**	**04 30 54.4**	**-0.1**
	baz=0.0							
ARXS	**Arharly**	**3.97**	**348**	*eP*	**Pb**	**04 30 10.9**	**+2.3**
	25nm,0.7s							
ARXS				*eS*	**Sg**	**04 31 02.0**	**-3.3**
	44nm,0.4s							
ARXS	**Arharly**	**3.97**	**348**	Pg	**Pb**	**04 30 10.6**	**+2.0**
	25nm,0.7s							
ARXS				Lg	Lg	04 31 02.0		
	44nm,0.4s							
DJR	**Jarkent**	**4.04**	**8**	*eP*	**Pb**	**04 30 10.7**	**+1.0**
	8.2nm,0.5s							
DJR				*eS*	**Sb**	**04 31 02.0**	**+2.9**
	18nm,0.5s							
DJR	**Jarkent**	**4.04**	**8**	Pg	**Pb**	**04 30 10.7**	**+1.0**
	8.2nm,0.5s							
DJR				Lg	Lg	04 31 02.0		
	18nm,0.5s							
KUU	**Kurty**	**4.07**	**332**	*eP*	**Pb**	**04 30 12.9**	**+2.7**
	13nm,0.6s							
KUU				*eS*	**Sg**	**04 31 05.4**	**-2.9**
	40nm,0.8s							
KUU	**Kurty**	**4.07**	**332**	Pg	**Pb**	**04 30 12.9**	**+2.7**
	13nm,0.6s							
KUU				Lg	Lg	04 31 05.4		
	40nm,0.8s							
AAK	**Ala-Archa**	**4.09**	**306**	⇓*iP*	**Pn**	**04 30 05.9**	**+4.4**
	baz=4.0							
AAK				⇓*eS*	**Sb**	**04 30 59.3**	**-1.2**
	baz=4.0							
AAK	**Ala-Archa**	**4.09**	**306**	Pg	**Pb**	**04 30 13.0**	**+2.5**
	11nm,0.8s							
AAK				⇑Lg	Lg	04 31 06.7		
	22nm,0.8s							
CHMS	**Chumysh**	**4.14**	**311**	⇑*eP*	**Pn**	**04 30 06.4**	**+4.2**
	baz=9.0							
CHMS				⇑*iS*	**Sb**	**04 31 00.1**	**-1.9**
	baz=9.0							
AML	**Almayashu**	**4.38**	**296**	⇑*iP*	**Pn**	**04 30 10.4**	**+4.7**
	baz=96							
AML				⇑*iS*	**Sb**	**04 31 06.7**	**-2.4**
	baz=96							
EKS2	**Erkin-Say**	**4.55**	**302**	⇑*iP*	**Pn**	**04 30 12.2**	**+4.3**
	baz=1.0							
EKS2				⇑*eS*	**Sb**	**04 31 10.5**	**-3.4**
	baz=1.0							
MNAS	**Manas**	**5.33**	**296**	⇑*eP*	**Pn**	**04 30 23.0**	**+4.4**
	baz=96							
MNAS				⇑*iS*	**Sb**	**04 31 29.1**	**-7.2**
	baz=96							
MAKZ	**Makanchi**	**6.83**	**18**	⇓Pn	**Pn**	**04 30 40.8**	**+1.9**
	0.6nm,0.3s							
MAKZ				⇑Sn	**Sn**	**04 31 56.9**	**-0.4**
	0.6nm,0.4s							
MAKZ				⇑Lg	Lg	04 32 34.6		
	1.4nm,0.6s							
MK31	**Makanchi Array**	**6.89**	**19**	⇑Pn	**Pn**	**04 30 40.9**	**+1.0**
	0.5nm,0.3s,baz=201,slow=12,SNR=60							
MK31				⇓Sn	**Sn**	**04 31 57.0**	**-1.8**
	0.8nm,0.5s,baz=202,slow=21,SNR=4.0							
MK31				⇑Lg	Lg	04 32 30.9		
	1.5nm,0.5s							
MKAR	**Makanchi Array**	**6.89**	**19**	Pn	**Pn**	**04 30 41.0**	**+1.2**
	1.4nm,0.3s,baz=203,slow=13,SNR=68							
MKAR				Sn	**Sn**	**04 31 57.5**	**-1.3**
	0.3nm,0.3s,baz=189,slow=26,SNR=2.6							
MKAR				Lg	Lg	04 32 37.4		
	0.3nm,0.3s,baz=202,slow=26,SNR=1.8							
KURBB	**Kurchatov Arra**	**10.29**	**358**	⇑Lg	Lg	04 34 21.8		
	12nm,0.9s							
SONM	**Songino Array**	**20.99**	**60**	P	**P**	**04 33 41.3**	**-1.3**
	0.7nm,0.7s,baz=260,slow=12,SNR=4.8							
NOA	**NORSAR Array B**	**45.26**	**321**	P	**P**	**04 37 15.7**	**-0.8**
	1.6nm,1.0s,baz=86,slow=7.8,SNR=2.4							
YKA	**Yellowknife Ar**	**76.94**	**6**	P	**P**	**04 40 49.7**	**-1.7**
	0.1nm,0.5s,baz=348,slow=5.6,SNR=4.6							

*IDC **09** 04:46:37.4±0.6,3°.36S×133°.77E,h0km,mb4.3/12, mb1 4.4/14,mb1mx4.3/30,mbtmp4.3/14,ML3.4/2,MS3.5/12, Ms1 3.5/12,ms1mx3.3/30,Error ellipse: s-maj=27.2km s-min=13.0km az=64.0*

*DJA **09** 04:46:41.4±4.0,3°.5S×13°.4E±°,h21km±38km,M4.6/8, mb4.7/6,mB5.2/3,MLv4.6/8,Mw(mB)4.7/3*

*NEIC **09** 04:46:42.0±1.8,3°.49S×0°.06×133°.61E±0°.09,h52km±8km, mb4.1/11,Error ellipse: s-maj=12.9km s-min=8.5km az=73.0*

ISC 09 04:46:37.7±0.5,3°.55S±0°.05×133°.63E±0°.06,h10km,n52, σ2°55/53,mb4.3/12,MS3.5/10,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
FAKI	**Fak Fak**	**1.51**	**295**	Pn	**Pb**	**04 47 06.2**		**+0.2**
FAKI				Sn	**Sn**	**04 47 25.2**		**+0.4**
FAKI	**Fak Fak**	**1.51**	**295**	P	**Pn**	**04 47 05.3**		**+0.4**
BAKI	**Biak**	**3.41**	**47**	P	**Pn**	**04 47 33.2**		**+2.2**
SIJI	**Sorong**	**3.56**	**318**	Pn	**Pn**	**04 47 32.9**		**-0.2**
	6.0nm,0.3s,baz=199,slow=22,SNR=19							
SIJI				Pg	**Pg**	**04 47 44.9**		**-1.1**
	48nm,0.3s,baz=117,slow=19,SNR=24							
SIJI				Sn	**Sn**	**04 48 13.6**		**-1.7**
	43nm,0.3s,baz=299,slow=23,SNR=12							
SIJI				Lg	Lg	04 48 29.7		
	47nm,0.3s,baz=360,slow=16,SNR=7.3							
SWI	**Sorong**	**3.57**	**318**	P	**Pn**	**04 47 32.9**		**-0.3**
BNDI	**Bandanaira**	**3.84**	**255**	P	**Pn**	**04 47 39.6**		**+2.7**
NLAI	**Namlea**	**6.53**	**273**	P	**Pn**	**04 48 17.2**		**+3.3**
	0.2nm4µm40nm,0.5s							
JAY	**Jayapura**	**7.14**	**82**	Pn	**Pn**	**04 48 21.3**		**-1.1**
	0.4nm,0.3s,baz=270,slow=2.0,SNR=2.6							
SANI	**Sanana**	**7.78**	**281**	P	**Pn**	**04 48 30.8**		**-0.3**
	0.1nm34nm,1.0s							
MTN	**Manton Dam**	**9.56**	**195**	Pn	**Pn**	**04 48 58.8**		**+3.3**
MTN					**Sn**	**04 50 44.3**		**+1.3**
KAPI	**Kappang**	**13.91**	**264**	Pn	**P**	**04 50 01.6**		**-1.8**
	0.7nm,0.3s,baz=128,slow=5.9,SNR=8.9							
KAPI	**Kappang**	**13.91**	**264**	Pn	**Pn**	**04 49 56.1**		**+1.0**
COEN	**Coen**	**13.99**	**138**	Pn	**Pn**	**04 49 57.7**		**+1.5**
WRA	**Warramunga Arr**	**16.30**	**178**	Pn	**Pn**	**04 50 25.5**		**-1.5**
	0.3nm,0.3s,baz=0.1,slow=13,SNR=9.8							
WRA				Sn	**Sn**	**04 53 20.0**		**-8.1**
	0.2nm,0.3s,baz=4.3,slow=23,SNR=6.5							
WRA				LR	LR	04 57 42.8		
	comp=Z,173nm,19.7s,baz=355,slow=40							
WRA	**Warramunga Arr**	**16.30**	**178**		**Pn**	**04 50 26.6**		**-0.4**
WB2	**Warramunga Arr**	**16.31**	**178**	Pn	**Pn**	**04 50 26.9**		**0.0**
WB2				IAmb	IAmb	04 50 38.5		
	comp=Z,14nm,1.1s							
WR0	**Warramunga Arr**	**16.33**	**177**	Pn	**Pn**	**04 50 28.1**		**+0.8**
WR0				IAmb	IAmb	04 50 44.8		
	comp=Z,19nm,1.1s							
FITZ	**Fitzroy Crossi**	**16.44**	**208**	Pn	**Pn**	**04 50 27.7**		**-0.9**
	comp=Z,0.7nm,0.3s,baz=31,slow=9.7,SNR=22							
FITZ				Sn	**Sn**	**04 53 23.1**		**-8.2**
	comp=Z,0.3nm,0.3s,baz=344,slow=23,SNR=2.1							
FITZ	**Fitzroy Crossi**	**16.44**	**208**	Pn	**Pn**	**04 50 28.5**		**-0.1**
FITZ				IAmb	IAmb	04 50 37.8		
	comp=Z,7.5nm,0.8s							
KMMI	**Kalianget**	**19.88**	**259**	P	**Pn**	**04 51 15.1**		**+4.1**
AS31	**Alice Springs**	**20.00**	**179**	Pn	**Pn**	**04 51 13.3**		**+1.0**
AS31				IAmb	IAmb	04 51 19.0		
	comp=Z,5.8nm,1.0s							
ASAR	**Alice Springs**	**20.00**	**179**	P	**Pn**	**04 51 14.9**		**+2.6**
	comp=Z,16nm,0.9s,baz=3.5,slow=9.9,SNR=75							
ASAR				S	**S**	**04 54 46.9**		**-8.8**
	comp=Z,2.8nm,1.0s,baz=6.5,slow=26,SNR=5.6							
ASAR				LR	LR	04 59 35.8		
	comp=Z,146nm,20.1s,baz=356,slow=39							
ASAR	**Alice Springs**	**20.00**	**179**	P	**P**	**04 51 11.1**		**+0.5**
PSA00	**Pilbara Seismi**	**22.36**	**216**	P	**P**	**04 51 37.1**		**+0.9**
PSA00	**Pilbara Seismi**	**22.36**	**216**	P	**P**	**04 51 36.0**		**-0.2**
PSA00				IAmb	IAmb	04 51 40.0		
	comp=Z,12nm,0.9s							
STKA	**Stephens Creek**	**29.16**	**166**	P	**P**	**04 52 40.5**		**+1.4**
	comp=Z,3.5nm,0.8s,baz=349,slow=9.4,SNR=7.1							
STKA				LR	LR	05 05 22.6		
	comp=Z,143nm,20.6s,baz=16,slow=38							
STKA	**Stephens Creek**	**29.16**	**166**	P	**P**	**04 52 39.7**		**+0.5**
JNU	**Nakatsue**	**36.57**	**356**	LR	LR	05 07 44.8		
	comp=Z,87nm,19.1s,baz=150,slow=35							
MJAR	**Matshiro Arr**	**40.12**	**6**	LR	LR	05 08 25.6		
	comp=Z,89nm,19.2s,baz=190,slow=33							
CMAR	**Chiang Mai Arr**	**40.57**	**304**	P	**P**	**04 54 18.4**		**+0.6**
	comp=Z,2.9nm,0.3s,baz=120,slow=6.4,SNR=13							
CMAR				LR	LR	05 12 00.7		
	comp=Z,20nm,21.7s,baz=185,slow=38							
CMAR	**Chiang Mai Arr**	**40.57**	**304**	P	**P**	**04 54 15.7**		**-2.1**
KSRS	**Korea Array**	**41.14**	**353**	P	**P**	**04 54 22.6**		**+0.4**
	comp=Z,1.4nm,0.8s,baz=169,slow=9.6,SNR=5.9							
KSRS				LR	LR	05 09 36.6		
	comp=Z,58nm,21.2s,baz=178,slow=34							
USRK	**Ussuriysk Ar.**	**47.56**	**358**	P	**P**	**04 55 12.9**		**-0.6**
	comp=Z,1.7nm,0.7s,baz=138,slow=42,SNR=3.8							
USRK	**Ussuriysk Ar.**	**47.56**	**358**	P	**P**	**04 55 12.2**		**-1.2**
ASAJ	**Asahikawa**	**48.13**	**9**	LR	LR	05 16 17.9		
	comp=Z,40nm,18.3s,baz=114,slow=37							
KLR	**Kul'dur**	**52.59**	**358**	LR	LR	05 15 20.0		
	comp=Z,41nm,19.2s,baz=155,slow=33							
SONM	**Songino Array**	**56.47**	**338**	P	**P**	**04 56 20.6**		**+0.6**
	comp=Z,1.6nm,1.0s,baz=155,slow=8.4,SNR=6.5							
SONM	**Songino Array**	**56.47**	**338**	P	**P**	**04 56 20.0**		**+0.1**
SONM				IAmb	IAmb	04 56 21.5		
	comp=Z,1.0nm,0.8s							
PETK	**Petropavlovsk-**	**59.98**	**16**	LR	LR	05 22 17.4		
	comp=Z,17nm,19.7s,baz=210,slow=36							
MKAR	**Makanchi Array**	**67.44**	**324**	P	**P**	**04 57 35.2**		**+1.5**
	comp=Z,6.6nm,0.8s,baz=119,slow=7.4,SNR=55							
MKAR	**Makanchi Array**	**67.44**	**324**	P	**P**	**04 57 31.3**		**-2.4**
ZALV	**Zalesovo Beam**	**70.19**	**332**	P	**P**	**04 57 51.4**		**+0.8**
	comp=Z,3.6nm,0.8s,baz=98,slow=6.0,SNR=9.0							
VNDA	**Vanda**	**75.44**	**174**	P	**P**	**04 58 23.5**		**+2.0**
	comp=Z,0.5nm,0.7s,baz=331,slow=8.5,SNR=5.2							
PPT	**Papeete**	**76.35**	**107**	LR	LR	05 28 39.3		
	comp=Z,18nm,20.7s,baz=216,slow=33							
NRIK	**Noril'sk**	**79.15**	**345**	P	**P**	**04 58 41.8**		**-0.6**
	comp=Z,2.7nm,0.6s,baz=126,slow=7.0,SNR=4.8							
NRIK				LR	LR	05 34 53.0		
	comp=Z,70nm,19.5s,baz=76,slow=37							
NRIK	**Noril'sk**	**79.15**	**345**	P	**P**	**04 58 40.9**		**-1.5**
NRIK				IAmb	IAmb	04 58 44.7		
	comp=Z,5.0nm,1.1s							
MAW	**Mawson**	**79.46**	**202**	P	**P**	**04 58 46.7**		**+2.6**
	comp=Z,5.1nm,0.9s,baz=71,slow=4.9,SNR=4.5							
ILAR	**Eielson Array**	**88.71**	**25**	P	**P**	**04 59 30.5**		**-0.7**
	comp=Z,1.3nm,0.9s,baz=262,slow=4.4,SNR=11							
CPUP	**Villa Florida**	**148.46**	**161**	PKPbc	**PKiKP**	**05 06 27.1**		**-0.1**
	comp=Z,7.1nm,0.9s,baz=245,slow=1.6,SNR=16							
CPUP	**Villa Florida**	**148.46**	**161**	PKPdf	**PKPdf**	**05 06 21.6**		**-0.4**
LPAZ	**La Paz**	**150.82**	**133**	PKPbc	**PKiKP**	**05 06 34.4**		**+1.4**
	comp=Z,3.6nm,0.9s,baz=97,slow=2.4,SNR=13							
LPAZ	**La Paz**	**150.82**	**133**	PKPdf	**PKPdf**	**05 06 25.0**		**-1.8**

*IDC **09** 05:12:05.6±6.1,36°.36N×142°.15E,h0km,mb3.6/2, mb1 3.6/3,mb1mx3.3/31,mbtmp3.6/3,ML2.9/1,MS2.5/1, Ms1 2.5/1,ms1mx2.1/41,Error ellipse: s-maj=107.9km s-min=54.3km az=157.0*

*JMA **09** 05:12:13.5±0.2,36°.78N×141°.67E,h55km±4km,M3.2*

ISC 09 05:12:14.0±2.2,36°.8N±0°.1×141°.8E±0°.1,h35km,n21, σ1°52/16,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
ONAJ	**Iwakimizuishiy**	**0.88**	**294**	P	**Pn**	**05 12 28.3**		**-1.6**
ONAJ				eS	**Sn**	**05 12 39.3**		**-2.2**
JFK	**Kawauchi**	**0.96**	**310**	P	**Pn**	**05 12 29.4**		**-1.7**
JHO	**Hitachi**	**1.00**	**262**	P	**Pn**	**05 12 29.8**		**-1.8**
JHYU	**Hitachinakayam**	**1.06**	**248**	P	**Pn**	**05 12 31.3**		**-1.1**
JMM	**Marumori**	**1.37**	**324**	P	**Pn**	**05 12 35.7**		**-1.0**
JFT	**Otama**	**1.40**	**304**	P	**Pn**	**05 12 36.9**		**-0.2**
JIO	**Ouri**	**1.74**	**348**	P	**Pn**	**05 12 40.9**		**-0.8**
JFY	**Yanaizu**	**1.80**	**292**	P	**Pn**	**05 12 43.3**		**+0.7**
JOU	**Okura**	**1.85**	**331**	P	**Pn**	**05 12 43.8**		**+0.6**
MJAR	**Matsushiro Arr**	**2.90**	**267**	Pn	**Pn**	**05 12 57.4**		**-0.3**
	1.4nm,0.3s,baz=103,slow=12,SNR=21							
MJAR				Sn	**Sn**	**05 13 34.6**		**+3.3**
	0.5nm,0.3s,baz=92,slow=20,SNR=5.6							
MAT	**Matsushiro**	**2.90**	**267**	P	**Pn**	**05 12 57.2**		**-0.5**
MAT				eS	**Sn**	**05 13 31.7**		**+0.3**
KSRS	**Korea Array**	**11.11**	**278**	LR	LR	05 18 16.1		
	comp=Z,26nm,20.9s,baz=340,slow=32							
H11N2	**WAKE ISLAND Hy**	**27.73**	**121**	T	T	05 47 20.8		
	baz=313,slow=75,SNR=6.9							
H11N1	**WAKE ISLAND Hy**	**27.74**	**121**	T	T	05 47 21.9		
	baz=313,slow=75,SNR=7.5							
H11N3	**WAKE ISLAND Hy**	**27.75**	**121**	T	T	05 47 23.4		
	baz=313,slow=75,SNR=7.0							
SONM	**Songino Array**	**28.20**	**304**	P	**P**	**05 18 04.5**		**+1.1**
	0.5nm,0.3s,baz=89,slow=11,SNR=4.5							
H11S1	**WAKE ISLAND Hy**	**28.44**	**123**	T	T	05 48 11.1		
	baz=315,slow=76,SNR=5.4							
H11S3	**WAKE ISLAND Hy**	**28.45**	**123**	T	T	05 48 15.8		
	baz=315,slow=76,SNR=5.3							
H11S2	**WAKE ISLAND Hy**	**28.46**	**123**	T	T	05 48 16.4		
	baz=315,slow=76,SNR=3.9							
MKAR	**Makanchi Array**	**44.53**	**302**	P	**P**	**05 20 21.8**		**-0.4**
	0.3nm,0.8s,baz=84,slow=11,SNR=4.0							
RPZ	**Rata Peaks**	**84.39**	**159**	LR	LR	05 53 51.6		
	comp=Z,84nm,21.5s,baz=30,slow=30							

IDC 09 05:40:02.6±3.0,54°.57N×86°.88E,h0km,mb1 3.0/2, mb1mx2.9/52,mbtmp3.0/2,ML2.8/2,Error ellipse: s-maj=25.8km s-min=21.1km az=29.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
I46RU	**ZALESOVO INFRA**	**1.36**	**244**	*i*		05 49 22.9		
	baz=66,slow=324,SNR=1.7							
ZALV	**Zalesovo Beam**	**1.36**	**244**	Pg	Pg	05 40 26.2		-2.4
	0.8nm,0.3s,baz=62,slow=16,SNR=5.1							
ZALV				Lg	Lg	05 40 45.5		
	1.0nm,0.3s,baz=78,slow=30,SNR=2.7							
KURBB	**Kurchatov Arra**	**6.44**	**236**	Pn	Pn	05 41 38.7		+0.1
	0.1nm,0.3s,baz=53,slow=14,SNR=7.6							
KURBB				Sn	Sn	05 42 52.7		0.0
	0.0nm,0.3s,baz=46,slow=4.0,SNR=1.3							
KURBB				Lg	Lg	05 43 28.6		
	0.0nm,0.3s,baz=46,slow=31,SNR=5.3							
MKAR	**Makanchi Array**	**8.31**	**202**	Pn	Pn	05 42 06.2		+1.9
	0.2nm,0.3s,baz=22,slow=12,SNR=7.2							
MKAR				Lg	Lg	05 44 26.4		
	0.0nm,0.3s,baz=26,slow=27,SNR=1.7							

*JMA **09** 05:43:47.0±0.1,38°.51N×142°.20E,h34km±2km,M3.4*

*IDC **09** 05:44:00.9±3.6,37°.99N×141°.14E,h125km±32km,mb3.1/5, mb1 3.3/5,mb1mx3.0/52,mbtmp3.5/5,MS2.5/2,Ms1 2.5/2, ms1mx2.2/17,Error ellipse: s-maj=36.3km s-min=23.0km az=86.0*

ISC 09 05:43:47.6±2.4,38°.49N±0°.05×142°.16E±0°.09,h35km±7km, n22,σ0°82/23,mb3.6/5,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
JIKH	**Ishinomakikobu**	**0.57**	**252**	P	**Pn**	**05 43 58.8**		**-0.5**
JIKH				S	**Sn**	**05 44 06.9**		**-0.6**
JKMT	**Kesennumamotoy**	**0.62**	**301**	P	**Pn**	**05 43 59.7**		**-0.3**
JKMT				S	**Sn**	**05 44 08.4**		**-0.4**
JIO	**Ouri**	**0.64**	**267**	P	**Pn**	**05 43 59.9**		**-0.2**
JIO				S	**Sn**	**05 44 08.8**		**-0.3**
OFUJ	**Ofunato**	**0.70**	**327**	P	**Pn**	**05 44 00.5**		**-0.6**
OFUJ				S	**Sn**	**05 44 09.9**		**-0.8**
JMK	**Ichinoseki**	**0.87**	**302**	P	**Pn**	**05 44 03.2**		**-0.1**
JMK				S	**Sn**	**05 44 14.5**		**-0.3**
JOU	**Okura**	**1.18**	**264**	P	**Pn**	**05 44 08.5**		**+0.8**
JOU				S	**Sb**	**05 44 24.0**		**-0.6**
JOM	**Ohasama**	**1.19**	**326**	P	**Pn**	**05 44 07.9**		**+0.1**
JOM				S	**Sn**	**05 44 23.1**		**+0.3**
JMM	**Marumori**	**1.25**	**240**	P	**Pn**	**05 44 08.4**		**-0.1**
JMM				*eS*	**Sn**	**05 44 23.9**		**-0.2**
JFK	**Kawauchi**	**1.52**	**223**	P	**Pn**	**05 44 12.2**		**-0.1**
JFK				*eS*	**Sn**	**05 44 29.5**		**-1.3**
MJAR	**Matsushiro Arr**	**3.70**	**239**	P	**Pn**	**05 44 44.0**		**+1.7**
	0.1nm,0.3s,baz=61,slow=13,SNR=1.9							
MJAR				LR	LR	05 45 57.3		
	comp=Z,14nm,18.7s,baz=35,slow=43							
H11N2	**WAKE ISLAND Hy**	**28.43**	**124**	T	T	06 20 08.4		
	baz=317,slow=75							
H11N1	**WAKE ISLAND Hy**	**28.44**	**124**	T	T	06 20 08.7		
	baz=317,slow=75							
H11N3	**WAKE ISLAND Hy**	**28.45**	**124**	T	T	06 20 09.4		
	baz=317,slow=75							
H11S1	**WAKE ISLAND Hy**	**29.20**	**126**	T	T	06 21 01.9		
	baz=318							
H11S3	**WAKE ISLAND Hy**	**29.20**	**126**	T	T	06 21 07.7		
	baz=318							
H11S2	**WAKE ISLAND Hy**	**29.21**	**126**	T	T	06 20 55.9		
	baz=318							
JAY	**Jayapura**	**40.83**	**182**	LR	LR	06 07 26.8		
	comp=Z,29nm,18.3s,baz=321,slow=35							
MKAR	**Makanchi Array**	**43.86**	**301**	P	**P**	**05 51 52.4**		**+1.9**
	0.1nm,0.5s,baz=88,slow=7.4,SNR=1.7							
KURBB	**Kurchatov Arra**	**45.59**	**307**	P	**P**	**05 52 04.0**		**0.0**
	0.3nm,0.4s,baz=80,slow=8.4,SNR=3.8							
ILAR	**Eielson Array**	**47.95**	**33**	P	P	05 52 33.0		+11
	0.6nm,0.8s,baz=261,slow=6.0,SNR=4.9							
WRA	**Warramunga Arr**	**58.59**	**189**	P	**P**	**05 53 40.0**		**-1.0**
	0.8nm,0.8s,baz=5.8,slow=7.3,SNR=5.3							
ASAR	**Alice Springs**	**62.31**	**189**	P	**P**	**05 54 06.4**		**0.0**
	0.3nm,0.8s,baz=21,slow=8.9,SNR=2.5							

*TAP **09** 05:48:26.7,24°.84N×122°.04E,h9km,ML3.8,C*

*JMA **09** 05:48:27.3±0.1,24°.87N×121°.98E,h43km,M3.2*

*IDC **09** 05:48:27.0±1.1,24°.79N×121°.78E,h0km,mb3.6/7, mb1 3.8/7,mb1mx3.5/44,mbtmp3.6/7,MS3.1/4,Ms1 3.2/4, ms1mx2.8/43,Error ellipse: s-maj=69.1km s-min=18.8km az=66.0*

ISC 09 05:48:27.1±0.9,24°.84N±0°.02×122°.05E±0°.02,h7km±6km, n95,σ1°23/140,mb3.7/3,3C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
EGS		**0.11**	**273**	⇑*iP*	**Pg**	**05 48 29.5**		**+0.1**
	baz=272							
EGS				S	**Sg**	**05 48 31.9**		**+0.8**
	baz=272							
TWB1	**Santiao Chiao**	**0.18**	**342**	⇑*iP*	**Pg**	**05 48 30.9**		**+0.2**
	baz=345							
TWB1				*i* S	**Sg**	**05 48 33.7**		**+0.5**
	baz=345							
NTC	**Toucheng**	**0.20**	**274**	P	**Pg**	**05 48 31.3**		**+0.3**
	baz=275							
NTC				S	**Sg**	**05 48 34.2**		**+0.4**
	baz=275							
TIPB	**Shuangxi**	**0.24**	**303**	⇑*iP*	**Pg**	**05 48 32.2**		**+0.3**
	baz=302							
TIPB				*i* S	**Sg**	**05 48 35.7**		**+0.5**
	baz=302							
TWC	**Suao**	**0.29**	**218**	*i* P	**Pg**	**05 48 33.0**		**+0.1**
	baz=227							
TWC				S	**Sg**	**05 48 36.5**		**-0.2**

TWS1 eS Sn 05 48 51.1 -1.5
baz=294
YHNB Yeheng 0.64 255 P Pb 05 48 39.1 -1.4
baz=248
YHNB eS Sb 05 48 49.4 -0.2
baz=248
NNSB Datong 0.73 236 eP Pb 05 48 41.0 -1.2
baz=243
NNSH Datong 0.73 236 eP Pb 05 48 41.4 -0.8
baz=237
NNSH eS Sn 05 48 52.3 -3.1
baz=237
NACB Ninganchiao 0.78 212 P Pb 05 48 42.3 -0.7
baz=204
NACB S Sb 05 48 52.3 -1.4
baz=204
PCYT Pengchaiyu 0.79 2 eP Pb 05 48 43.2 +0.2
baz=354
NCU National Centr 0.79 280 eP Pn 05 48 44.2 -0.4
baz=271
NCU eS Sn 05 48 55.6 -1.1
baz=271
NCUH Zhongli 0.79 279 eP Pn 05 48 44.0 -0.7
baz=271
NCUH eS Sn 05 48 55.7 -1.1
baz=271
ETLH Xiulin Townshi 0.81 219 eP Pb 05 48 42.9 -0.7
baz=232
ETLH eS Sb 05 48 54.4 -0.4
baz=232
TWD Chiawan 0.86 209 P Pb 05 48 43.9 -0.4
baz=203
TWD eS Sb 05 48 54.5 -1.5
baz=203
JYNG Yonagunijimaku 0.90 115 P Pg 05 48 44.9 +0.5
JYNG S Sg 05 48 57.4 +1.2
FUSS Fushou 0.94 231 eP Pb 05 48 45.1 -0.7
baz=223
YOJ Yonaguni jima 0.95 113 P Pg 05 48 45.5 +0.1
YOJ S Sg 05 48 58.6 +0.8
YOJ Yonaguni jima 0.95 113 eP Pg 05 48 46.0 +0.6
baz=114
YOJ eS Sg 05 48 58.2 +0.4
baz=114
LIOB Emei 0.96 259 eP Pn 05 48 46.9 0.0
baz=259
LIOB eS Sn 05 49 01.3 +0.5
baz=259
SBCB Hsinchu 0.97 267 eP Pn 05 48 47.5 +0.4
baz=261
SBCB eS Sn 05 49 01.4 +0.4
baz=261
NSTT Nanjuang 0.97 258 eP Pn 05 48 46.9 -0.2
baz=258
NSTT eS Sn 05 49 01.0 -0.2
baz=258
HSN Hsinchu 0.98 268 eP Pn 05 48 47.1 -0.1
baz=261
HSN eS Sn 05 49 00.8 -0.5
baz=261
TWT Tachien 0.99 234 eP Pn 05 48 46.7 -0.8
baz=228
WHF Hehuan Shan 0.99 226 P Pb 05 48 45.8 -1.0
baz=227
WHF eS Sb 05 48 59.5 -0.8
baz=227
TDCB Techi 1.00 234 eP Pn 05 48 46.5 -1.1
baz=228
CHGB Renai 1.11 226 eP Pb 05 48 47.8 -1.0
baz=227
WHP Taichung City 1.15 241 eP Pn 05 48 49.5 -0.1
baz=242
ESL Shilin 1.17 209 eP Pn 05 48 49.1 -0.7
baz=211
NMLH Miaoli 1.18 256 eP Pn 05 48 52.9 +2.9
baz=256
NMLH eS Sn 05 49 08.3 +2.0
baz=256
NSY Sanyi 1.25 250 eP Pn 05 48 52.2 +1.3
baz=256
NSY eS Sn 05 49 10.7 +2.8
baz=256
EGFH Guangfu 1.30 206 eP Pg 05 48 52.0 +0.1
baz=214
DPDB Guoxing 1.30 232 eP Pg 05 48 52.3 +0.3
baz=234
VWDT VWDT 1.36 218 eP Pg 05 48 52.8 -0.4
baz=229
VWDT eS Sg 05 49 10.2 -0.7
baz=229
WDJ Dajia District 1.37 249 eP Pg 05 48 54.7 +1.3
baz=251
WDJ eS Sg 05 49 14.5 +3.3
baz=251
SMLT Sun Moon Lake 1.42 228 eP Pg 05 48 54.0 -0.2
baz=230
SSLB Suanglung 1.45 224 eP Pg 05 48 53.9 -0.9
baz=226
HGSD Ruisui 1.46 203 eP Pg 05 48 55.8 +0.8
baz=212
WNT Mingjian 1.57 233 eP Pg 05 48 58.7 +1.6
baz=226
WJS Zhushan 1.57 230 eP Pg 05 48 59.7 +2.5
baz=224
YULB Yu-li 1.60 206 eP Pg 05 48 57.4 -0.3
baz=219
IRIF Iriomote-Funau 1.61 108 P Pn 05 48 54.9 -1.0
IRIF eS Sn 05 49 16.5 -0.4
TWF1 Yuli 1.63 205 eP Pg 05 48 57.6 -0.7
baz=218
YUS Yu-Shan 1.68 217 P Pg 05 48 58.7 -0.6
baz=228
ALS Alishan 1.74 221 P Pg 05 49 00.6 +0.1
baz=225
ALS eS Sg 05 49 24.2 +1.1
baz=225
CHN5 Tsauling 1.76 226 P Pg 05 49 00.8 0.0
baz=230
CHN5 eS Sg 05 49 26.6 +3.0
baz=230
FULB Fuli 1.77 203 eP Pg 05 49 00.7 -0.4
baz=220
HATJ Hateruma jima 1.78 116 P Pn 05 48 57.7 -0.5
HATJ S Sn 05 49 19.9 -1.2
JKRS Kuro-shima 1.88 108 P Pn 05 48 59.2 -0.4
JKRS S Sn 05 49 22.9 -0.7
ELDTW Lidau 1.90 210 eP Pg 05 49 02.7 -0.7
baz=193
JIJ Ishigaki jima 1.96 104 P Pn 05 49 00.2 -0.6
JIJ S Sn 05 49 24.2 -1.4
TPUB Ta-pu 2.01 221 eP Pg 05 49 04.0 -1.6
baz=213
TPUB eS Sg 05 49 32.4 +0.8
baz=213
STYH Taoyuan 2.03 215 eP Pg 05 49 05.2 -0.8
baz=220
STYT Tauyuan 2.04 216 eP Pg 05 49 06.0 -0.3
baz=220
WTP Ta-pu 2.06 220 eP Pg 05 49 05.7 -0.9
baz=224
JISG Ishigakijimahi 2.07 96 P Pn 05 49 01.7 -0.5
TWK Hsinying 2.12 223 eP Pg 05 49 06.0 -1.7
baz=227
CHN1 Nanshi 2.15 220 eP Pg 05 49 07.7 -0.7
baz=236
CHN1 eS Sg 05 49 37.1 +0.7
baz=236
MATB Ma-tsu 2.31 305 eP Pn 05 49 06.0 +0.5
baz=299
TSMG Majia 2.48 211 eP Pb 05 49 10.8 -1.2
baz=217
MASBT Mashibuluo 2.57 211 eP Pb 05 49 11.8 -1.6
baz=216
XPSS Dashiqiu 2.67 322 eP Pn 05 49 09.7 -0.8
baz=315
LYJJ Jianjiangzhen 2.68 310 eP Pn 05 49 09.8 -0.8
baz=304
KSRS Korea Array 13.54 20 LR LR 05 56 13.2
comp=Z,68nm,21.4s,baz=275,slow=34
MJAR Matsushiro Arr 18.11 46 LR LR 06 00 50.7
comp=Z,32nm,19.7s,baz=310,slow=41
CMAR Chiang Mai Arr 22.38 258 LR LR 06 03 25.9
comp=Z,67nm,18.8s,baz=74,slow=41
SONM Songino Array 26.09 336 P P 05 54 02.1 +0.7
2.0nm,0.8s,baz=155,slow=9.1,SNR=13
MKAR Makanchi Array 38.42 315 P P 05 55 48.0 -1.3
0.2nm,0.5s,baz=103,slow=10,SNR=2.6
ZALV Zalesovo Beam 40.13 326 P P 05 56 03.8 +0.4
1.2nm,0.6s,baz=125,slow=7.6,SNR=6.5
ZALV LR LR 06 15 49.8
comp=Z,58nm,18.5s,baz=13,slow=41
KURBB Kurchatov Arra 42.12 319 P P 05 56 20.3 +0.5
0.3nm,0.6s,baz=92,slow=6.6,SNR=4.1
WRA Warramunga Arr 46.09 164 P P 05 56 52.0 +0.1
1.7nm,0.5s,baz=346,slow=8.7,SNR=15
ASAR Alice Springs 49.57 166 P P 05 57 21.6 +2.7
0.2nm,0.6s,baz=347,slow=7.6,SNR=4.3
YKA Yellowknife Ar 82.06 23 P P 06 00 49.5 +1.7
0.2nm,0.8s,baz=315,slow=4.7,SNR=3.2

NNC 09 05:57:21.0±3.0, 37.16N×71.34E, h194km±44km, mb2.6, mpv3.5, 4C-2D, Error ellipse: s-maj=30.5km s-min=17.9km az=14.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KK31	**Karatay Array**	**5.97**	**354**	P	Pn		05 58 47.7	0.0
3.7nm,0.5s,baz=172,slow=11,SNR=40								
KK31				S	Sn		05 59 56.9	+0.6
9.3nm,0.6s,baz=186,slow=24,SNR=24								
AAK	**Ala-Archa**	**5.98**	**23**	⇓P	Pn		05 58 48.3	+0.3
1.8nm,0.3s								
AAK				⇑S	Sn		05 59 57.0	+0.2
6.7nm,0.6s								
TKM2	**Tokmak 2**	**6.61**	**28**	⇑P	Pn		05 58 56.1	-0.2
1.2nm,0.5s								
TKM2				⇑S	Sn		06 00 12.2	+0.5
2.8nm,0.6s								
AB31	**Akbulak array**	**14.65**	**329**	⇑P	Pn		06 00 37.7	-1.2
0.4nm,0.4s,baz=149,slow=11,SNR=16								
AKTO	**Aktyubinsk**	**16.35**	**328**	⇓P	Pn		06 00 59.9	+0.3
1.2nm,0.5s								

*IDC **09** 06:06:32.0±1.1, 3.30S×133.79E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/39, mbtmp3.9/7, ML3.4/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/35, Error ellipse: s-maj=41.4km s-min=19.1km az=55.0*

ISC 09 06:06:30.9±0.9, 3.81S±0.07×133.5E±0.2, h10km, n13, σ1°36/13, mb4.0/5, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SIJI	**Sorong**	**3.65**	**323**	Pn	**Pn**		**06 07 26.1**	**-1.3**
3.6nm,0.3s,baz=164,slow=2.1,SNR=38								
SIJI				Pg	**Pg**		**06 07 39.6**	**-1.2**
20nm,0.3s,baz=120,slow=10,SNR=28								
SIJI				Lg	Lg		06 08 24.0	
23nm,0.3s,baz=330,slow=20,SNR=9.8								
KAPI	**Kappang**	**13.72**	**264**	LR	LR		06 15 50.2	
comp=Z,40nm,20.0s,baz=104,slow=40								
WRA	**Warramunga Arr**	**16.06**	**177**	Pn	**P**		**06 10 20.6**	**+0.2**
0.2nm,0.3s,baz=359,slow=13,SNR=7.4								
WRA				Sn	**Sn**		**06 13 14.1**	**-1.2**
0.2nm,0.3s,baz=354,slow=24,SNR=7.1								
WRA				LR	LR		06 17 45.1	
comp=Z,71nm,18.7s,baz=20,slow=41								
FITZ	**Fitzroy Crossi**	**16.14**	**208**	Pn	**P**		**06 10 22.3**	**+1.1**
0.5nm,0.3s,baz=27,slow=8.9,SNR=16								
FITZ				Sn	**Sn**		**06 13 16.7**	**-0.5**
0.3nm,0.3s,baz=254,slow=23,SNR=2.0								
ASAR	**Alice Springs**	**19.75**	**179**	P	Pn		06 11 09.2	+6.7
3.6nm,0.7s,baz=2.8,slow=10,SNR=22								
ASAR				S	**S**		**06 14 42.1**	**-1.7**
0.4nm,0.5s,baz=358,slow=24,SNR=2.8								
MJAR	**Matsushiro Arr**	**40.38**	**6**	LR	LR		06 28 10.4	
comp=Z,40nm,19.4s,baz=10.0,slow=33								
CMAR	**Chiang Mai Arr**	**40.57**	**304**	P	**P**		**06 14 13.1**	**+2.2**
1.2nm,0.3s,baz=141,slow=8.3,SNR=4.8								
KSRS	**Korea Array**	**41.37**	**353**	LR	LR		06 32 01.0	
comp=Z,32nm,18.8s,baz=0.0,slow=37								
KLR	**Kul'dur**	**52.84**	**359**	P	**P**		**06 15 46.1**	**-0.5**
0.7nm,0.7s,baz=207,slow=6.8,SNR=3.8								
MKAR	**Makanchi Array**	**67.55**	**325**	P	**P**		**06 17 29.5**	**+1.9**
1.7nm,0.7s,baz=115,slow=7.7,SNR=20								
ZALV	**Zalesovo Beam**	**70.33**	**332**	P	**P**		**06 17 45.0**	**+0.4**
1.0nm,0.8s,baz=98,slow=6.1,SNR=5.0								
ILAR	**Eielson Array**	**89.01**	**25**	P	**P**		**06 19 25.4**	**-0.4**
0.3nm,0.6s,baz=260,slow=4.4,SNR=4.9								
CPUP	**Villa Florida**	**148.27**	**161**	PKPbc	**PKPab**		**06 26 21.6**	**+0.6**
1.5nm,0.8s,baz=224,slow=3.1,SNR=3.8								

*IDC **09** 06:13:57.3±0.5, 50.48S×114.38E, h0km, mb4.5/13, mb1 4.6/14, mb1mx4.4/28, mbtmp4.5/14, ML1.9/1, MS4.2/20, Ms1 4.2/20, ms1mx4.2/21, Error ellipse: s-maj=29.1km s-min=12.8km az=109.0*

*NEIC **09** 06:13:58.3±0.8, 50.46S±0.10×114.1E±0.3, h10km±1km, mb4.8/25, Error ellipse: s-maj=32.2km s-min=15.8km az=277.0*

*GCMT **09** 06:14:00.3±0.2, 50.35S±0.01×113.91E±0.02, h12km, MW5.0/116, Moment Tensor Solution. s53,c72; s116,c172; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=0.38±.09; $M_{\theta\theta}$=3.43±.08; $M_{\phi\phi}$=-3.05±.10; $M_{r\theta}$=-0.08±.25; $M_{\theta\phi}$=2.40±.08; $M_{\phi r}$=-1.60±.27; Best double couple: M_o=4.35000×10^{16} NP1:ϕ=295.00000°, δ=70.00000°, λ=-10.00000°. NP2:ϕ=28.00000°, δ=81.00000°, λ=-160.00000°. Principal axes: T 4.2980, Plg=7.0000°, Azm=160.0000°; N 0.1080, Plg=68.0000°, Azm=51.0000°; P -4.4020, Plg=21.0000°, Azm=253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 06:13:58.8±0.4, 50.51S±0.07×114.3E±0.1, h10km, n80, σ0°99/60, mb4.7/27, MS4.3/23, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.61**	**359**	T	T		06 33 25.7	
baz=180,slow=74,SNR=1086								
H01W1	**Cape Leeuwin H**	**15.61**	**360**	T	T		06 33 25.7	
baz=180,slow=74,SNR=1006								
H01W3	**Cape Leeuwin H**	**15.62**	**359**	T	T		06 33 25.2	
baz=180,slow=74,SNR=972								
CASY	**Casey**	**15.93**	**186**	Pn	**Pn**		**06 17 42.7**	**-0.1**
CASY				IAmb	IAmb		06 17 48.9	
comp=Z,72nm,1.1s								
NWAO	**Narrogin (SRO)**	**17.70**	**8**	P	**Pn**		**06 18 04.8**	**-0.6**
comp=Z,0.2nm,0.3s,baz=184,slow=12,SNR=1.9								
NWAO				LR	LR		06 23 05.9	
comp=Z,2µm,20.9s,baz=194,slow=31								
MORW	**Morawa**	**21.46**	**4**		**P**		**06 18 46.2**	**-1.0**
MORW				IAmb	IAmb		06 18 49.9	
comp=Z,40nm,1.2s								
FORT	**Forrest**	**22.23**	**33**	P	**P**		**06 18 55.8**	**+0.3**
FORT				IAmb	IAmb		06 19 05.3	
comp=Z,40nm,0.9s								
BBOO	**Buckleboo**	**23.87**	**50**	P	**P**		**06 19 13.4**	**+1.1**
BBOO				IAmb	IAmb		06 19 15.6	
comp=Z,22nm,1.1s								
STKA	**Stephens Creek**	**27.47**	**58**	P	**P**		**06 19 44.6**	**-0.4**
comp=Z,2.6nm,0.7s,baz=227,slow=7.1,SNR=4.8								
STKA				LR	LR		06 28 36.8	
comp=Z,779nm,21.8s,baz=215,slow=32								
STKA	**Stephens Creek**	**27.47**	**58**	P	**P**		**06 19 45.6**	**+0.6**
PSA00	**Pilbara Seismi**	**29.21**	**11**	P	**P**		**06 19 59.6**	**-1.0**
MAW	**Mawson**	**30.30**	**216**	P	**P**		**06 20 09.3**	**-0.5**
comp=Z,5.4nm,0.8s,baz=71,slow=11,SNR=5.9								
MAW				LR	LR		06 31 09.9	
comp=Z,117nm,18.4s,baz=65,slow=34								
MAW	**Mawson**	**30.30**	**216**	P	**P**		**06 20 08.4**	**-1.3**
ASAR	**Alice Springs**	**30.83**	**37**	P	**P**		**06 20 14.2**	**-0.7**
comp=Z,6.5nm,0.8s,baz=209,slow=8.1,SNR=36								
ASAR				PcP	**PcP**		**06 23 11.6**	**-0.3**
comp=Z,0.8nm,1.0s,baz=180,slow=0.9,SNR=3.4								
ASAR				LR	LR		06 30 56.6	
comp=Z,537nm,21.1s,baz=202,slow=33								
ASAR	**Alice Springs**	**30.83**	**37**	P	**P**		**06 20 14.6**	**-0.3**
AS31	**Alice Springs**	**30.83**	**37**	P	**P**		**06 20 14.1**	**-0.8**
VNDA	**Vanda**	**32.33**	**163**	P	**P**		**06 20 28.5**	**+0.9**
comp=Z,3.7nm,0.9s,baz=286,slow=8.7,SNR=16								
VNDA				LR	LR		06 32 57.3	
comp=Z,1µm,18.4s,baz=316,slow=35								
VNDA	**Vanda**	**32.33**	**163**	P	**P**		**06 20 28.1**	**+0.6**
VNDA				IAmb	IAmb		06 20 35.3	
comp=Z,10nm,1.0s								
SBA	**Scott Base**	**33.42**	**162**	P	**P**		**06 20 37.6**	**+0.5**
SBA				IAmb	IAmb		06 20 45.4	
comp=Z,35nm,1.6s								
FITZ	**Fitzroy Crossi**	**33.58**	**20**	P	**P**		**06 20 38.6**	**-0.2**
comp=Z,13nm,0.8s,baz=203,slow=9.2,SNR=15								
FITZ	**Fitzroy Crossi**	**33.58**	**20**	P	**P**		**06 20 38.6**	**-0.4**
WRA	**Warramunga Arr**	**34.38**	**35**	P	**P**		**06 20 45.1**	**-0.9**
comp=Z,9.5nm,0.9s,baz=204,slow=9.1,SNR=26								
WRA				PcP	**PcP**		**06 23 20.4**	**-1.3**
comp=Z,0.5nm,1.0s,baz=222,slow=1.8,SNR=1.8								
WRA				LR	LR		06 33 19.8	
comp=Z,266nm,21.5s,baz=200,slow=34								
WRA	**Warramunga Arr**	**34.38**	**35**	P	**P**		**06 20 45.0**	**-1.1**
WB2	**Warramunga Arr**	**34.39**	**35**	P	**P**		**06 20 45.7**	**-0.3**
WB2				IAmb	IAmb		06 20 56.8	
comp=Z,18nm,1.1s								
WRAB	**Tennant Creek**	**34.40**	**35**	P	**P**		**06 20 45.9**	**-0.3**
WRAB				IAmb	IAmb		06 20 57.4	
comp=Z,13nm,0.8s								
WR0	**Warramunga Arr**	**34.44**	**35**	P	**P**		**06 20 46.4**	**-0.2**
WR0				IAmb	IAmb		06 20 57.7	
comp=Z,15nm,0.9s								
WB0	**Warramunga Arr**	**34.56**	**35**	P	**P**		**06 20 47.1**	**-0.5**
WB0				IAmb	IAmb		06 20 58.7	
comp=Z,12nm,0.9s								
CTA	**Charters Tower**	**39.46**	**51**	LR	LR		06 37 00.7	
comp=Z,891nm,20.9s,baz=211,slow=35								
QSPA	**South Pole Qui**	**39.62**	**180**	P	**P**		**06 21 30.5**	**+0.3**
comp=Z,12nm,0.9s,baz=317,slow=3.7,SNR=26								
QSPA	**South Pole Qui**	**39.62**	**180**	P	**P**		**06 21 30.6**	**+0.3**
BATI	**Baumata**	**40.92**	**14**	P	**P**		**06 21 41.8**	**+0.4**
comp=Z,67nm,0.7s,baz=282,slow=10,SNR=3.9								
BATI				LR	LR		06 39 00.2	
comp=Z,610nm,18.1s,baz=192,slow=37								
SRBI	**Singaraja**	**42.30**	**1**	P	P		06 22 06.6	+14
KAPI	**Kappang**	**45.57**	**8**	LR	LR		06 41 49.1	
comp=Z,325nm,18.5s,baz=197,slow=37								
DZM	**Mont Dzumac**	**49.38**	**75**	LR	LR		06 40 41.3	
comp=Z,426nm,18.9s,baz=217,slow=32								
SNAA	**Sanae**	**50.36**	**201**	P	**P**		**06 22 54.8**	**-0.7**
SNAA	**Sanae**	**50.36**	**201**	pP	pP		06 23 00.6	+2.9
SNAA	**Sanae**	**50.36**	**201**	P	**P**		**06 22 55.0**	**-0.5**
comp=Z,9.4nm,0.9s,baz=135,slow=10,SNR=21								
SNAA	**Sanae**	**50.36**	**201**	P	**P**		**06 22 54.8**	**-0.7**
BELA	**Belgrano 2**	**50.46**	**188**	P	**P**		**06 22 55.5**	**-0.6**
SIJI	**Sorong**	**51.52**	**22**	LR	LR		06 46 22.2	
comp=Z,138nm,18.6s,baz=204,slow=38								
BKNI	**Bangkinang**	**51.90**	**343**	P	**P**		**06 23 06.9**	**-0.6**
VNA2	**Neumayer--Watz**	**51.94**	**201**	P	**P**		**06 23 06.8**	**-0.4**
baz=130,slow=8.5								
VNA2	**Neumayer--Watz**	**51.94**	**201**	pP	pP		06 23 12.4	+3.0
VNA3	**Neumayer Olymp**	**52.21**	**200**	P	**P**		**06 23 08.8**	**-0.5**
VNA3	**Neumayer Olymp**	**52.21**	**200**	pP	pP		06 23 13.9	+2.5
VNA1	**Neumayer--Stat**	**52.33**	**201**	P	**P**		**06 23 10.2**	**0.0**
VNA1	**Neumayer--Stat**	**52.33**	**201**	pP	pP		06 23 15.7	+3.4
H08S2	**Diego Garcia H**	**55.02**	**306**	T	T		07 22 23.6	
baz=151								
H08S1	**Diego Carcia H**	**55.03**	**306**	T	T		07 22 31.3	
baz=151								
H08S3	**Diego Garcia H**	**55.04**	**306**	T	T		07 22 33.6	
baz=151								
HNR	**Honiara**	**55.54**	**59**	LR	LR		06 45 33.9	
comp=Z,164nm,18.2s,baz=218,slow=34								
DAV	**Davao City (W)**	**58.17**	**13**	LR	LR		06 47 26.9	
comp=Z,161nm,20.5s,baz=148,slow=35								
BOSA	**Boshof**	**67.92**	**252**	P	**P**		**06 24 59.4**	**+1.5**
comp=Z,3.4nm,0.8s,baz=138,slow=7.8,SNR=4.4								
BOSA				LR	LR		06 49 07.1	
comp=Z,251nm,18.8s,baz=196,slow=31								
BOSA	**Boshof**	**67.92**	**252**	IAmb	IAmb		06 25 01.7	
comp=Z,7.1nm,1.1s								
CMAR	**Chiang Mai Arr**	**69.99**	**344**	P	**P**		**06 25 10.0**	**-0.5**
comp=Z,2.8nm,0.7s,baz=193,slow=5.6,SNR=13								
CMAR				LR	LR		06 52 07.0	
comp=Z,174nm,20.6s,baz=219,slow=33								
CMAR	**Chiang Mai Arr**	**69.99**	**344**	P	**P**		**06 25 09.9**	**-0.5**
TBI	**Tubuai**	**76.13**	**110**	eLR	LR		06 49 10.9	
comp=Z,236nm,26.0s								
SHL	**Shillong**	**78.31**	**339**	P	**P**		**06 25 58.2**	**-0.8**
SHL				IAmb	IAmb		06 26 09.0	
comp=Z,12nm,1.0s								
PPT2	**Papeete2**	**80.42**	**106**	eLQ	LQ		06 47 46.6	
comp=Z,482nm,33.8s								
PPT2				eLR	LR		06 51 12.3	
comp=Z,229nm,26.5s								
PPT	**Papeete**	**80.44**	**106**	LR	LR		06 54 48.5	
comp=Z,130nm,19.0s,baz=242,slow=30								
KMBO	**Kilima Mbogo**	**80.91**	**279**	LR	LR		06 57 40.8	
comp=Z,88nm,18.2s,baz=94,slow=32								
NJ2	**Nanjing**	**82.30**	**4**	eP	**P**		**06 26 22.3**	**+2.2**
NJ2				pmax	pmax			
comp=Z,15nm,0.5s								
LL01	**San Ignacio de**	**87.30**	**175**	P	**P**		**06 26 45.5**	**-0.1**
LL01				IAmb	IAmb		06 26 51.6	
comp=Z,9.3nm,0.8s								
KSRS	**Korea Array**	**88.41**	**11**	P	**P**		**06 26 51.5**	**+1.0**
comp=Z,1.2nm,0.9s,baz=178,slow=3.7,SNR=1.8								
KSRS				LR	LR		07 11 14.4	
comp=Z,31nm,18.1s,baz=204,slow=39								
PLCA	**Paso Flores**	**89.03**	**176**	P	**P**		**06 26 54.5**	**+0.5**
comp=Z,2.1nm,0.8s,baz=195,slow=6.6,SNR=9.5								
PLCA				LR	LR		07 06 53.0	
comp=Z,276nm,18.8s,baz=184,slow=36								
PLCA	**Paso Flores**	**89.03**	**176**	P	**P**		**06 26 53.6**	**-0.3**
MJAR	**Matsushiro Arr**	**89.21**	**19**	P	**P**		**06 26 53.7**	**-0.6**
comp=Z,0.6nm,0.3s,baz=189,slow=4.2,SNR=1.7								
MJAR				LR	LR		07 09 06.5	
comp=Z,24nm,18.6s,baz=230,slow=37								
HHC	**Hu-ho-hao-te**	**91.01**	**358**	eP	**P**		**06 27 01.6**	**-1.2**
HHC				pmax	pmax			
comp=Z,26nm,0.7s								
HHC				pmax	pmax			
comp=Z,110nm,5.5s								
HHC				LR	LR			
comp=Z,160nm,14.9s								
HHC				LR	LR			
comp=Z,200nm,16.2s								
KSH	**Kashi**	**95.76**	**331**	P	P		06 27 29.7	+5.0
KSH				pP	pwP		06 27 34.7	+3.5
KSH				S	**S**		**06 38 45.8**	**+3.8**
KSH				pmax	pmax			
comp=Z,4.0nm,0.4s								
KSH				LR	LR			
comp=Z,210nm,8.1s								
KSH				LR	LR			
comp=Z,190nm,7.9s								
WMQ	**Urumqi**	**96.77**	**341**	eP	**P**		**06 27 29.8**	**+0.7**
WMQ				LR	LR			
comp=Z,280nm,27.1s								
WMQ				LR	LR			
comp=Z,170nm,24.3s								
TIXI	**Tiksi**	**122.30**	**5**	PKP	**PKPdf**		**06 32 51.8**	**-0.6**
comp=Z,0.4nm,0.3s,baz=129,slow=18,SNR=1.9								
ESDC	**Sonseca Array**	**136.29**	**280**	PKP	**PKiKP**		**06 33 21.8**	**0.0**
comp=Z,1.2nm,0.8s,baz=113,slow=0.7,SNR=3.0								
YBH	**Yreka Blue Hor**	**140.40**	**80**	PKP	**PKPdf**		**06 33 27.6**	**0.0**
comp=Z,1.1nm,0.8s,baz=239,slow=7.3,SNR=4.5								
NVAR	**Mina Array Bea**	**141.34**	**87**	PKP	**PKPdf**		**06 33 28.9**	**-0.6**
comp=Z,0.6nm,0.8s,baz=226,slow=4.9,SNR=5.3								
TXAR	**Lajitas Array**	**144.54**	**112**	PKP	**PKPdf**		**06 33 35.0**	**-0.4**
comp=Z,1.7nm,0.9s,baz=204,slow=5.5,SNR=23								
TXAR	**Lajitas Array**	**144.54**	**112**		**PKPdf**		**06 33 35.1**	**-0.2**
PDAR	**Pinedale Array**	**149.28**	**87**	PKPbc	**PKPbc**		**06 33 47.0**	**-0.4**
comp=Z,1.0nm,0.9s,baz=243,slow=4.0,SNR=4.1								
YKA	**Yellowknife Ar**	**151.22**	**47**	PKPbc	**PKPbc**		**06 33 50.4**	**-0.7**
comp=Z,0.9nm,0.8s,baz=277,slow=1.5,SNR=16								
RES	**Resolute Bay**	**152.88**	**17**	PKPbc	**PKPbc**		**06 33 53.7**	**-0.8**
comp=Z,1.1nm,0.9s,baz=258,slow=5.8,SNR=4.6								
ULM	**Lac du Bonnet**	**160.80**	**79**	PKPab	**PKPab**		**06 34 44.0**	**+3.4**
comp=Z,2.6nm,0.8s,baz=224,slow=2.8,SNR=5.2								

*IDC **09** 06:15:22.1±1.5, 51.53N×178.67W, h0km, mb3.5/8, mb1 3.9/9, mb1mx3.5/55, mbtmp3.6/9, ML3.7/1, Error ellipse: s-maj=48.0km s-min=23.8km az=166.0*

*AEIC **09** 06:15:36.0±0.8, 51.51N±0.04×176.67W±0.05, h42km±9km, ML3.5, Error ellipse: s-maj=7.1km s-min=2.7km az=219.0*

*NEIC **09** 06:15:37.3±0.9, 51.5N±0.1×176.63W±0.05, h38km±45km, Error ellipse: s-maj=20.1km s-min=1.6km az=167.0*

ISC 09 06:15:37.1±0.9, 51.5N±0.1×176.66W±0.04, h47km, n42, σ1°43/33, mb3.5/8, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
ADK	**Adak**	**0.35**	**358**		**Pn**		**06 15 45.7**	**-0.7**
KIMD	**Kanaga Island**	**0.42**	**302**		**Pn**		**06 15 46.9**	**-0.3**
ADAG	**Mount Adagdak**	**0.45**	**5**		**Pn**		**06 15 48.1**	**+0.6**
KIKV	**Kanaga Island**	**0.47**	**317**		**Pn**		**06 15 47.9**	**+0.1**
KICM	**Kanaga Island**	**0.51**	**319**		**Pn**		**06 15 48.5**	**+0.3**

GSTD	Great Sitkin T	0.61	32			Pn	06 15 50.1	+0.5
GSMY	Great Sitkin M	0.63	36			Pn	06 15 50.3	+0.5
GSSP	Great Sitkin S	0.63	28			Pn	06 15 50.5	+0.6
TAFP	Tanaga Falls P	0.90	294			Pn	06 15 53.4	0.0
TASE	Tanaga Southea	0.91	290			Pn	06 15 53.8	+0.3
TANO	Tanaga North	0.98	293			Pn	06 15 55.2	+0.7
GAEA	Gareloi East	1.32	282			Pn	06 15 59.9	+0.8
GALAA	Gareloi Lava P	1.33	281			Pn	06 15 59.9	+0.7
ATKA	Atka Island	1.67	65			Pn	06 16 03.8	0.0
KOWE	Korovin West	1.71	60			Pn	06 16 05.8	+1.4
KOFP	Korovin Flat P	1.75	64			Pn	06 16 05.9	+0.9
CERAA	Semis' Rag'd T	2.30	281			Pn	06 16 13.0	+0.5
CESW	Semis' Southwe	2.38	280			Pn	06 16 13.9	+0.4
AMKA	Amchitka	2.53	268			Pn	06 16 15.4	-0.2
LSPA	Little Sitkin	2.99	280			Pn	06 16 23.1	+1.2
LSNW	Little Sitkin	3.03	280			Pn	06 16 23.2	+0.8
LSSA	Little Sitkin	3.03	280			Pn	06 16 23.1	+0.6
NIKH	Nikolski High	5.01	70	Pn		Pn	06 16 47.4	-2.2
KDAK	Kodiak Island	15.22	56	Pn		Pn	06 19 09.3	+0.7
	0.3nm,0.3s,baz=94,slow=0.8,SNR=8.4							
KDAK				Sn		Sn	06 22 00.3	+4.5
	0.2nm,0.3s,baz=300,slow=3.5,SNR=1.4							
ILAR	Eielson Array	20.29	38	P		P	06 20 06.9	-1.6
	0.2nm,0.5s,baz=238,slow=8.7,SNR=1.8							
INK	Inuvik	26.56	35	P		P	06 21 06.5	-3.7
	0.2nm,0.3s,baz=240,slow=6.6,SNR=1.5							
ASAJ	Asahikawa	28.04	271	P		P	06 21 03.0	-21
	4.4nm,0.3s,baz=83,slow=12,SNR=5.1							
YKA	Yellowknife Ar	34.15	47	P		P	06 22 16.0	-1.1
	0.1nm,0.4s,baz=281,slow=8.8,SNR=6.6							
H11N2	WAKE ISLAND Hy	34.27	208	T		T	06 58 40.9	
	baz=18,slow=76,SNR=381							
H11N3	WAKE ISLAND Hy	34.28	208	T		T	06 58 43.1	
	baz=18,slow=76,SNR=413							
H11N1	WAKE ISLAND Hy	34.29	208	T		T	06 58 42.0	
	baz=18,slow=76,SNR=338							
H11S1	WAKE ISLAND Hy	35.48	208	T		T	07 00 12.1	
	baz=17,slow=76,SNR=136							
H11S2	WAKE ISLAND Hy	35.50	208	T		T	07 00 13.8	
	baz=17,slow=76,SNR=132							
H11S3	WAKE ISLAND Hy	35.50	208	T		T	07 00 14.4	
	baz=17,slow=76,SNR=115							
NEW	Newport	37.57	71	P		P	06 22 48.0	+1.4
	0.9nm,0.4s,baz=313,slow=14,SNR=2.0							
NVAR	Mina Array Bea	42.20	84	P		P	06 23 27.0	+1.5
	0.3nm,0.7s,baz=316,slow=6.3,SNR=2.9							
PDAR	Pinedale Array	44.98	74	P		P	06 23 48.8	+1.1
	0.3nm,0.3s,baz=336,slow=3.3,SNR=9.4							
FRB	Frobisher Bay	52.18	32	P		P	06 24 40.5	-1.9
	1.1nm,0.3s,baz=316,slow=7.2,SNR=8.9							
TXAR	Lajitas Array	57.31	83	P		P	06 25 20.2	+0.1
	0.2nm,0.6s,baz=284,slow=4.5,SNR=3.0							
H03N2	Juan Fernandez	119.91	107	T		T	08 45 46.5	
	baz=317,slow=77,SNR=47							
H03N1	Juan Fernandez	119.92	107	T		T	08 45 47.8	
	baz=317,slow=77,SNR=45							
H03N3	Juan Fernandez	119.92	107	T		T	08 45 56.8	
	baz=317,slow=77,SNR=60							

IDC 09 06:33:46.8±3.8, 5°.64S×146°.55E, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.5/25, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=106.4km s-min=53.5km az=120.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.53	219	P	P	06 38 04.2	-0.8
	0.1nm,0.3s,baz=44,slow=11,SNR=7.0						
ASAR	Alice Springs	21.67	213	P	P	06 38 39.5	+0.2
	0.4nm,0.5s,baz=53,slow=9.0,SNR=6.4						
FITZ	Fitzroy Crossi	23.88	237	P	P	06 39 01.6	-0.7
	5.7nm,0.8s,baz=54,slow=12,SNR=9.2						
TORD	Torodi Ar. Bea	144.57	285	PKP	PKPdf	06 53 27.3	+0.9
	1.5nm,0.7s,baz=80,slow=3.7,SNR=6.0						

*IDC **09** 06:50:21.0±1.6, 59°.87N×153°.41W, h96km±18km, mb3.3/4, mb1 3.8/9, mb1mx3.4/36, mbtmp3.9/9, MS2.2/1, Ms1 2.2/1, ms1mx2.1/25, Error ellipse: s-maj=20.5km s-min=14.6km az=101.0*

*ANF **09** 06:50:21.6±0.3, 59°.82N×152°.91W, h128km±4km, ML4.0/34, ML4.0/35, Error ellipse: s-maj=3.8km s-min=2.3km az=108.0, Hypocentre not reviewed by the ISC*

*NEIC **09** 06:50:22.1±1.3, 59°.87N±0°.03×153°.18W±0°.08, h115km±4km, Error ellipse: s-maj=6.2km s-min=4.2km az=87.0*

*AEIC **09** 06:50:23±1.6, 59°.85N±0°.03×153°.14W±0°.08, h113km±4km, ML3.6, ML3.9/84(NEIC), Error ellipse: s-maj=6.3km s-min=3.8km az=117.0*

ISC 09 06:50:22.6±0.7, 59°.89N±0°.04×153°.11W±0°.05, h116km±5km, n147, σ1°.06/166, mb3.1/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILS	Iliamna Low So	0.07	17		Pn	06 50 38.2	-0.4
IVE	Iliamna Volcan	0.13	20		Pn	06 50 38.1	-0.6
IVE					Sn	06 50 50.6	-0.3
ILW	Iliamna West	0.17	355		Pn	06 50 38.6	-0.3
OPT	Oil Point	0.25	195		Pn	06 50 38.5	-0.4
AU22	Augustine Moun	0.54	194		Pn	06 50 39.7	-0.6
AU22					Sn	06 50 53.0	-0.6
AUL	Augustine Lava	0.54	198		Pn	06 50 40.0	-0.4
AUL					Sn	06 50 53.1	-0.6
AU2	Augustine Isla	0.54	195		Pn	06 50 39.8	-0.5
RED	Redoubt Volcan	0.56	17		Pn	06 50 40.4	-0.1
RED					Sn	06 50 54.3	+0.2
RSO	Redoubt South	0.60	17		Pn	06 50 40.7	-0.3
NCT	North Crescent	0.68	7		Pn	06 50 41.3	-0.2
NCT					Sn	06 50 55.8	+0.1
DFR	Drift River	0.73	16		Pn	06 50 41.8	-0.1
DFR					Sn	06 50 56.6	+0.1
HOM	Homer	0.78	107		Pn	06 50 42.3	+0.1
HOM					Sn	06 50 57.7	+0.8
HOM	Homer	0.78	107	P		06 50 42.2	
	baz=285,SNR=6.8						
HOM				S		06 50 57.8	
	baz=285						
CNPM	China Poot	1.02	110		Pn	06 50 44.2	-0.3
CNPM					Sn	06 51 00.3	-0.7
CNPM				IAML		06 51 01.3	
	comp=N,2μm,0.3s						
CNPM				IAML		06 51 02.0	
	comp=E,2μm,0.7s						
BRLK	Bradley Lake	1.13	96		Pn	06 50 45.4	-0.3
BRSE	Bradley Lake S	1.21	96		Pn	06 50 46.2	-0.2
BRSE					Sn	06 51 04.7	+0.2
BRSE	Bradley Lake S	1.21	96	P		06 50 46.2	
	baz=276						
BRSE				S		06 51 04.0	
	baz=276						
CAPN	Captain Cook N	1.31	47		Pn	06 50 49.1	+1.6
CAPN	Captain Cook N	1.31	47	P		06 50 49.3	
	baz=228						
CAPN				S		06 51 10.0	
	baz=228						
SPCR	Spurr Chakacha	1.39	18		Pn	06 50 48.6	+0.2
SPCR	Spurr Chakacha	1.39	18	P		06 50 48.6	
	baz=199,SNR=41						
SPCR				S		06 51 08.3	
	baz=199						
SPCN	Chakachatna No	1.41	18		Pn	06 50 49.1	+0.4
SPBG	Spurr Blockage	1.42	15		Pn	06 50 49.2	+0.4
SPBG					Sn	06 51 09.8	+0.9
SPCP	Crater Peak Br	1.46	18		Pn	06 50 49.8	+0.4
SPCP					Sn	06 51 10.8	+1.0
SLKM	Skilak Lake	1.57	66		Pn	06 50 50.6	+0.1
SLKM					Sn	06 51 11.4	-0.5
KAHC	Katmai Hardscr	1.58	219		Pn	06 50 49.8	-1.0
KAHG	Katmai Hook Gl	1.59	208		Pn	06 50 50.2	-0.7
KARR	Katmai Rainbow	1.62	211		Pn	06 50 50.5	-0.7
SVW2	Sparrevohn	1.72	316		Pn	06 50 51.5	-0.8
STLK	Strandline Lak	1.73	21		Pn	06 50 53.4	+0.9
O22K	Cooper Landing	1.79	69		Pn	06 50 53.4	+0.2
O22K	Cooper Landing	1.79	69	P		06 50 53.4	
	baz=251,SNR=16						
O22K				S		06 51 15.7	
	baz=251						
FIS	Fire Island	1.90	47		Pn	06 50 54.4	-0.2
FIS				IAML		06 51 26.8	
	comp=N,730nm,0.6s						
FIS				IAML		06 51 33.5	
	comp=E,763nm,0.5s						
SUA	Susitna One	1.96	35		Pn	06 50 55.9	+0.5
SUA					Sn	06 51 20.8	+0.3
SUA				IAML		06 51 22.7	
	comp=E,936nm,0.9s						
SUA				IAML		06 51 23.5	
	comp=N,753nm,0.5s						
SUA	Susitna One	1.96	35	P		06 50 56.0	
	baz=217,SNR=114						
SUA				S		06 51 21.1	
	baz=217						
KABU	Katmai Buttres	1.98	216		Pn	06 50 55.0	-0.7
ACHA	Angle Creek He	2.04	215		Pn	06 50 55.5	-0.8
RC01	Rabbit Creek A	2.06	53		Pn	06 50 56.9	+0.4
RC01					Sn	06 51 21.8	-0.6
RC01	Rabbit Creek A	2.06	53	P		06 50 56.8	
	baz=235,SNR=25						
RC01				S		06 51 22.0	
	baz=235						
KDAK	Kodiak Island	2.13	172	P	Pn	06 50 55.7	-1.8
	comp=N,81nm,0.3s,baz=35,slow=8.5,SNR=227						
KDAK				LR	LR	06 51 17.8	
	comp=N,54nm,20.8s,baz=265,slow=27						
KDAK				S	Sn	06 51 21.5	-2.7
	comp=N,41nm,0.3s,baz=149,slow=23,SNR=14						
KDAK	Kodiak Island	2.13	172	P		06 50 55.6	
	baz=352						
KDAK				S		06 51 21.4	
	baz=352						
CAHL	Cahill	2.17	213		Pn	06 50 57.5	-0.5
SKT	Skwentna	2.23	19		Pn	06 50 58.9	+0.1
SKT	Skwentna	2.23	19	P		06 50 58.9	
	baz=201						
SKT				S		06 51 27.4	
	baz=201						
KJL	Kejulik	2.24	216		Pn	06 50 58.6	-0.4
PWL	Port Wells	2.56	66		Pn	06 51 02.0	-1.0
PWL				IAML		06 51 36.3	
	comp=E,534nm,0.5s						
PMR	Palmer	2.59	47		Pn	06 51 02.5	-0.8
PMR				IAML		06 51 33.7	
	comp=E,269nm,0.4s						
PMR				IAML		06 51 34.5	
	comp=N,316nm,0.4s						
PMR	Palmer	2.59	47	P		06 51 02.4	
	baz=230,SNR=18						
PMR				S		06 51 32.6	
	baz=230						
OHAK	Old Harbor	2.68	182		Pn	06 51 02.2	-2.3
OHAK	Old Harbor	2.68	182	P		06 51 02.2	
	baz=1.6,SNR=8.3						
OHAK				S		06 51 32.2	
	baz=1.6						
KNK	Knik Glacier	2.75	54		Pn	06 51 05.1	-0.3
KNK				IAML		06 51 38.7	
	comp=E,502nm,0.3s						
KNK	Knik Glacier	2.75	54	P		06 51 04.8	
	baz=238						
KNK				S		06 51 36.8	
	baz=238						
GHO	Glory Hole Cre	2.79	46		Pn	06 51 05.3	-0.7
GHO				IAML		06 51 41.6	
	comp=E,453nm,0.5s						
CUT	Chulitna	2.87	27		Pn	06 51 07.1	+0.1
CUT	Chulitna	2.87	27	P		06 51 07.1	
	baz=210,SNR=23						
CUT				S		06 51 40.9	
	baz=210						
SML	Sawmill	3.03	49		Pn	06 51 08.2	-0.9
SML				IAML		06 51 45.6	
	comp=E,307nm,1.0s						
SML				IAML		06 51 50.5	
	comp=N,306nm,0.6s						
SML	Sawmill	3.03	49	P		06 51 08.2	
	baz=232,SNR=6.2						
SML				S		06 51 42.6	
	baz=232						
PPLA	Purkeypile	3.05	8		Pn	06 51 10.3	+0.9
PPLA	Purkeypile	3.05	8	P		06 51 10.4	
	baz=189,SNR=26						
PPLA				S		06 51 47.1	
	baz=189						
GLI	Glacier Island	3.15	69		Pn	06 51 10.2	-0.4
GLI				IAML		06 51 47.5	
	comp=E,246nm,0.5s						
GLI				IAML		06 51 48.6	
	comp=N,221nm,0.5s						
GLI	Glacier Island	3.15	69	P		06 51 09.3	
	baz=254						
GLI				S		06 51 45.3	
	baz=254						
TT01	Tatalina	3.33	336		Pn	06 51 12.3	-0.7
SII	Sitkinak Islan	3.39	190		Pn	06 51 11.2	-2.6
SII				IAML		06 51 51.1	
	comp=N,256nm,0.5s						
SII				IAML		06 51 53.0	
	comp=E,286nm,0.5s						
SII	Sitkinak Islan	3.39	190	P		06 51 11.4	
	baz=9.0						
SII				S		06 51 48.4	
	baz=9.0						
FID	Port Fidalgo	3.41	73		Pn	06 51 12.6	-1.5
SCM	Sheep Creek Mo	3.43	53		Pn	06 51 13.7	-0.8
SCM				IAML		06 51 57.4	
	comp=E,260nm,0.4s						
SCM				IAML		06 51 57.4	
	comp=N,201nm,0.8s						
Q23K	Middleton Isla	3.46	95		Pn	06 51 14.9	+0.1
Q23K				IAML		06 51 56.6	
	comp=N,296nm,0.5s						
Q23K				IAML		06 52 19.2	
	comp=E,264nm,2.0s						
Q23K	Middleton Isla	3.46	95	S		06 51 54.1	
	baz=280						
MID	Middleton Isla	3.47	95		Pn	06 51 15.1	+0.3
MID				IAML		06 52 14.3	
	comp=E,239nm,3.1s						
HUR	Hurricane	3.52	27		Pn	06 51 15.9	+0.4
WAT7	Susitna Watana	3.59	33		Pn	06 51 16.5	-0.1
WAT1	Susitna Watana	3.67	35		Pn	06 51 17.2	-0.4
EYAK	Cordova Ski Ar	3.73	77	Pn	Pn	06 51 17.7	-0.7
EYAK	Cordova Ski Ar	3.73	77	S		06 51 59.3	
	baz=262						
WAT6	Susitna Watana	3.74	42		Pn	06 51 17.9	-0.7
WAT6					Sn	06 52 01.2	-0.9
WAT6	Susitna Watana	3.74	42	P		06 51 18.0	
	baz=226,SNR=28						
WAT6				S		06 52 00.5	
	baz=226						
WAT2	Susitna Watana	3.77	33		Pn	06 51 18.5	-0.5
WAT2	Susitna Watana	3.77	33	P		06 51 18.6	
	baz=217						
WAT2				S		06 52 00.4	
	baz=217						
TRF	Thorofare Moun	3.81	19		Pn	06 51 19.4	-0.2
TRF				IAML		06 52 04.0	
	comp=N,91nm,0.5s						
TRF	Thorofare Moun	3.81	19	P		06 51 19.3	
	baz=202,SNR=44						
TRF				S		06 52 01.9	
	baz=202						
KTH	Kantishna Hill	3.82	15		Pn	06 51 19.3	-0.3
DIV	Divide	3.83	68		Pn	06 51 19.5	-0.3
KLU	Klutina	3.88	62		Pn	06 51 20.1	-0.4
KLU	Klutina	3.88	62	P		06 51 19.6	
	baz=248,SNR=9.8						
KLU				S		06 52 02.6	
	baz=248						
CHUM	Lake Minchumin	4.02	5		Pn	06 51 22.5	+0.2
CHUM	Lake Minchumin	4.02	5	P		06 51 22.5	
	baz=186,SNR=42						
CHUM				S		06 52 08.4	
	baz=186						
M24K	Tolsona, Glenn	4.04	54		Pn	06 51 22.7	+0.1
M24K				IAML		06 52 26.3	
	comp=N,147nm,0.7s						
M24K	Tolsona, Glenn	4.04	54	P		06 51 22.2	
	baz=239,SNR=10						
M24K				S		06 52 08.2	
	baz=239						
RND	Reindeer	4.07	28		Pn	06 51 22.8	-0.1
GOAT	Goat Mountain	4.24	77		Pn	06 51 24.7	-0.4
PS11	TAPS Pump St11	4.32	56		Pn	06 51 26.4	+0.2
MCK	McKinley	4.33	25		Pn	06 51 26.8	+0.4
MCK	McKinley	4.33	25	P		06 51 26.4	
	baz=209,SNR=29						
MCK				S		06 52 13.1	
	baz=209						
BPAW	Bear Paw Mtn.	4.34	12		Pn	06 51 26.2	-0.3
BPAW	Bear Paw Mtn.	4.34	12	P		06 51 25.9	
	baz=194,SNR=32						
BPAW				S		06 52 13.1	
	baz=194						
BMRM	Bremner River	4.35	72		Pn	06 51 27.2	+0.5
BMRM				IAML		06 52 18.0	
	comp=N,103nm,0.9s						
BMRM				IAML		06 52 20.1	
	comp=E,67nm,0.7s						
BMRM	Bremner River	4.35	72	P		06 51 25.4	
	baz=259						
BMRM				S		06 52 12.6	
	baz=259						
KAIM	Kayak Island	4.38	86		Pn	06 51 27.7	+0.8
N25K	Chitina, Valde	4.51	64		Pn	06 51 28.8	-0.1
N25K				IAML		06 52 21.1	
	comp=E,69nm,0.5s						
N25K				IAML		06 52 21.6	
	comp=N,104nm,0.6s						
N25K	Chitina, Valde	4.51	64	P		06 51 28.2	
	baz=251,SNR=12						
N25K				S		06 52 18.0	
	baz=251						
BWN	Browne	4.62	20		Pn	06 51 30.9	+0.6
BWN				IAML		06 52 57.5	
	comp=E,47nm,1.0s						
BWN				IAML		06 54 01.9	
	comp=N,54nm,2.0s						
PAX	Paxson	4.79	47		Pn	06 51 32.4	-0.3
PAX	Paxson	4.79	47	S		06 52 25.1	
	baz=233						
GLB	Gilahina Butte	4.83	67		Pn	06 51 32.6	-0.5
GLB				IAML		06 52 28.8	
	comp=E,81nm,0.7s						
GLB				IAML		06 52 28.8	
	comp=N,97nm,0.7s						
VNHG	Veniaminof 1	4.89	224		Pn	06 51 33.6	-0.4
VNSG	Veniaminof 6	4.94	223		Pn	06 51 33.6	-1.0
VRDI	Verde Repeater	4.95	70		Pn	06 51 34.9	0.0
VRDI				IAML		06 52 37.0	
	comp=N,40nm,0.8s						
KHIT	Khitrov Hills	4.96	79		Pn	06 51 34.5	-0.4
CRQM	Cirque	5.03	76		Pn	06 51 36.0	0.0
CRQE	Cirque	5.05	76	S		06 52 29.9	
	baz=264						
NEA2	Nenana	5.08	20		Pn	06 51 35.9	-0.6
NEA2	Nenana	5.08	20	P		06 51 35.8	
	baz=204,SNR=61						
WRH	Wood River Hil	5.16	25		Pn	06 51 37.1	-0.4
TGL	Tana Glacier	5.18	76		Pn	06 51 38.7	+0.8
TGL				IAML		06 52 36.5	
	comp=N,40nm,0.8s						
TGL				IAML		06 52 37.5	
	comp=E,42nm,0.7s						
MCARA	McCarthy VSAT	5.18	69		Pn	06 51 38.8	+0.9
MCARA				IAML		06 52 40.7	
	comp=E,79nm,0.4s						
MCARA	McCarthy VSAT	5.18	69	S		06 52 35.0	
	baz=257						
KULT	Kultieth River	5.21	82		Pn	06 51 38.2	-0.2
MLY	Manley	5.27	11		Pn	06 51 38.6	-0.5
MLY	Manley	5.27	11	P		06 51 38.0	
	baz=193,SNR=42						
HDA	Harding Lake	5.37	30		Pn	06 51 39.7	-0.7
HDA	Harding Lake	5.37	30	P		06 51 39.6	
	baz=215,SNR=37						
HDA				P		06 51 39.6	
	baz=215,SNR=37						
CCB	Clear Creek Bu	5.38	25		Pn	06 51 39.9	-0.5
PTPK	Patty Peak	5.41	72		Pn	06 51 40.7	-0.4
KIAG	Kiagna River	5.43	74		Pn	06 51 41.1	-0.2
MENT	Mentasta	5.45	52		Pn	06 51 42.1	+0.7
BALM	Baldy	5.45	73		Pn	06 51 40.9	-0.6
PS08	TAPS Pump Stn8	5.51	30		Pn	06 51 41.5	-0.7
I23K	Minto, Yukon-K	5.55	17		Pn	06 51 42.5	-0.2
I23K	Minto, Yukon-K	5.55	17	P		06 51 42.1	
	baz=200,SNR=74						
TCOL	CIGO, UAF Yank	5.56	24		Pn	06 51 42.5	-0.3
TCOL	CIGO, UAF Yank	5.56	24	P		06 51 42.3	
	baz=208,SNR=43						
COLA	College	5.56	24		Pn	06 51 42.5	-0.4
COLA	College	5.56	24	P		06 51 42.3	
	baz=208						
MDM	Murphy Dome	5.57	22		Pn	06 51 42.2	-0.8
IL31		5.69	28		Pn	06 51 43.7	-0.9
ILAR	Eielson Array	5.69	28	P	Pn	06 51 44.0	-0.6
	comp=E,11nm,0.3s,baz=217,slow=14,SNR=510						
ILAR				S	Sn	06 52 43.2	-5.4
	comp=E,1.7nm,0.3s,baz=215,slow=18,SNR=4.3						
ILAR	Eielson Array	5.69	28		Pn	06 51 43.3	-1.3
YAH	Yahtse	5.70	80		Pn	06 51 45.8	+0.7
GRNC	Granite Creek	5.71	77		Pn	06 51 45.5	+0.4
DOT	Dot Lake	5.71	45		Pn	06 51 44.6	-0.3
BARN	Barnard Glacie	5.78	73		Pn	06 51 47.1	+1.0
POKR	Poker Plat Res	5.86	24		Pn	06 51 46.5	-0.5
POKR	Poker Plat Res	5.86	24	P		06 51 46.3	
	baz=209,SNR=12						
PS07	TAPS Pump Stn7	5.88	20		Pn	06 51 46.9	-0.3
CTG	Chitna Glacier	5.93	74	P		06 51 48.7	
	baz=264						
CTGM	Chitina Glacie	5.93	74		Pn	06 51 48.9	+0.9
SCRK	Sand Creek	5.94	42		Pn	06 51 46.9	-1.2
SCRK	Sand Creek	5.94	42	P		06 51 46.9	
	baz=230,SNR=9.2						
TABL	Table Mountain	6.00	80		Pn	06 51 49.4	+0.4
CHX	Chaix Hills	6.02	83		Pn	06 51 50.0	+0.7
LOGN	Logan Glacier	6.08	76		Pn	06 51 50.8	+0.7
IM03		6.12	358		Pn	06 51 50.4	0.0
IMAR	Indian Mountai	6.12	358		Pn	06 51 50.1	-0.4
PS06	TAPS Pump Stn6	6.18	13		Pn	06 51 51.3	+0.1
SAMH	Samovar Hills	6.19	82		Pn	06 51 52.3	+0.8
BC03		6.29	55		Pn	06 51 52.5	-0.1
BCAR	Beaver Creek A	6.29	55		Pn	06 51 52.0	-0.8
YUK2	White River	6.29	67		Pn	06 51 52.9	+0.1
PCA	Pinnacle	6.45	83		Pn	06 51 56.0	+1.0
PRP	Porcupine Dome	6.63	28		Pn	06 51 57.0	-0.5
PRP	Porcupine Dome	6.63	28	P		06 51 56.8	
	baz=215						
K27K	Chicken	6.65	47		Pn	06 51 57.5	-0.1
PNL	Peninsula	6.93	86		Pn	06 52 01.4	0.0
YUK6	Outpost Mounta	7.38	75		Pn	06 52 06.9	-0.8
ANM	Nome	7.39	315	Pn	Pn	06 52 08.1	+0.4
EGAK	Eagle	7.41	43		Pn	06 52 06.9	-0.9
EGAK	Eagle	7.41	43	P		06 52 06.8	
	baz=234						
COLD	Coldfoot	7.48	9		Pn	06 52 08.9	+0.1
COLD	Coldfoot	7.48	9	P		06 52 08.4	
	baz=191,SNR=17						
YUK7	Dusty Glacier	7.49	79		Pn	06 52 08.9	-0.2
FYU	Fort Yukon	7.58	25		Pn	06 52 09.2	-1.0
YUK5	Granite Creek	7.63	74		Pn	06 52 11.4	+0.4
DAWY	Dawson	7.69	51		Pn	06 52 11.4	-0.3
HYT	Haines Junctio	7.79	76	Pn	Pn	06 52 14.1	+0.8
BM03	Burnt Mountain	8.44	23		Pn	06 52 20.0	-1.8
BMAR	Burnt Mountain	8.45	23	Pn	Pn	06 52 20.2	-1.8
TOLK	Toolik Lake Re	8.92	8		Pn	06 52 29.1	+0.8
TOLK	Toolik Lake Re	8.92	8	P		06 52 28.5	
	baz=192,SNR=16						
AKUT	Akutan	8.99	236	Pn	Pn	06 52 28.7	-0.6
WHY	Whitehorse	9.09	77		Pn	06 52 31.6	+0.9
BESE	Bessie Mountai	9.44	90	Pn	Pn	06 52 38.2	+2.8
SIT	Sitka	9.73	99	Pn	Pn	06 52 39.7	+0.5
JIS	Juneau Island	9.77

TXAR Lajitas Array 44.99 110 P **P** **06 58 27.7 +1.4**
comp=E,0.2nm,0.5s,baz=323,slow=5.9,SNR=5.1
MKAR Makanchi Array 64.48 321 P **P** **07 00 46.3 -0.1**
comp=E,0.1nm,0.6s,baz=46,slow=6.2,SNR=1.7

NNC 09 07:19:29.6±8.1,53°32N×87°71E, h0km, mb3.6, mpv3.2, 7C-1D, Error ellipse: s-maj=59.0km s-min=44.0km az=37.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**6.28**	**248**	⇑Pn	Pn	07 21 02.9	-0.6
	3.4nm,0.7s						
KURBB				⇑Sn	Sn	07 22 13.8	-2.1
	3.7nm,0.6s						
KURBB				⇑Lg	Lg	07 22 50.7	
	7.9nm,0.7s						
MK31	**Makanchi Array**	**7.41**	**210**	Pn	Pn	07 21 20.6	+1.6
	0.1nm,0.2s,baz=27,slow=12,SNR=29						
MK31				⇑Sn	Sn	07 22 47.0	+3.4
	0.6nm,0.6s,baz=33,slow=26						
MK31				⇑Lg	Lg	07 23 27.3	
	3.2nm,0.8s,baz=28,slow=29,SNR=5.4						
MAKZ	**Makanchi**	**7.49**	**212**	⇑Pn	Pn	07 21 21.2	+1.1
	1.7nm,0.8s						
MAKZ				⇓Sn	Sn	07 22 46.7	+1.0
	1.6nm,0.7s						
MAKZ				⇑Lg	Lg	07 23 25.0	
	4.5nm,1.2s						

*IDC **09** 07:21:18.3±0.5,51°.66N×172°.87W, h0km, mb4.4/36, mb1 4.5/38, mb1mx4.4/65, mbtmp4.4/38, ML4.1/2, MS3.6/7, Ms1 3.6/7, ms1mx3.2/62, Error ellipse: s-maj=15.6km s-min=10.4km az=168.0*

*AEIC **09** 07:21:24±1.7, 51°.72N±0°.08×173°.11W±0°.06, h29km±4km, ML4.0, mb4.4/136(NEIC), Error ellipse: s-maj=11.0km s-min=5.1km az=178.0*

*NEIC **09** 07:21:25.8±1.4, 51°.81N±0°.08×173°.06W±0°.06, h49km±6km, Error ellipse: s-maj=11.2km s-min=5.6km az=182.0*

ISC 09 07:21:24.4±0.4, 51°.76N±0°.08×173°.00W±0°.04, h35km, n267, σ1‖01/254, mb4.4/95, MS3.6/8, 1C, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOFP	**Korovin Flat P**	**0.85**	**308**		**Pn**	**07 21 41.1**	**+1.1**
ATKA	**Atka Island**	**0.86**	**301**	Pn	**Pn**	**07 21 39.9**	**-0.1**
ATKA	**Atka Island**	**0.86**	**301**		**Sn**	**07 21 51.0**	**-0.3**
KOKL	**Mount Kliuchef**	**0.93**	**308**		**Pn**	**07 21 42.1**	**+1.0**
KOWE	**Korovin West**	**0.98**	**309**		**Pn**	**07 21 43.1**	**+1.4**
GSMY	**Great Sitkin M**	**1.92**	**280**		**Pn**	**07 21 54.3**	**-0.2**
GSTR	**Great Sitkin T**	**1.93**	**281**		**Pn**	**07 21 55.3**	**+0.7**
GSTD	**Great Sitkin T**	**1.97**	**280**		**Pn**	**07 21 55.3**	**0.0**
GSTD					**Sn**	**07 22 19.4**	**+0.6**
ADAG	**Mount Adagdak**	**2.25**	**277**		**Pn**	**07 22 00.5**	**+1.5**
ADK	**Adak**	**2.29**	**275**		**Pn**	**07 21 59.1**	**-0.5**
ADK	**Adak**	**2.29**	**275**		**Sn**	**07 22 28.9**	**+2.3**
KIRH	**Kanaga Island**	**2.54**	**275**		**Pn**	**07 22 04.3**	**+1.2**
KIKV	**Kanaga Island**	**2.59**	**274**		**Pn**	**07 22 05.1**	**+1.3**
KIMD	**Kanaga Island**	**2.63**	**272**		**Pn**	**07 22 04.7**	**+0.4**
NIKH	**Nikolski High**	**2.82**	**63**		**Sn**	**07 22 42.8**	**+3.3**
TAFP	**Tanaga Falls P**	**3.10**	**275**		**Pn**	**07 22 12.0**	**+1.3**
TAFP					**Sn**	**07 22 48.7**	**+2.2**
TASE	**Tanaga Southea**	**3.13**	**273**		**Pn**	**07 22 12.4**	**+1.2**
OKSO	**Okmok South**	**3.36**	**60**		**Pn**	**07 22 16.0**	**+1.7**
OKSO					**Sn**	**07 22 55.7**	**+2.7**
OKFG	**Magazine Ridge**	**3.52**	**60**		**Pn**	**07 22 18.2**	**+1.7**
GALAA	**Gareloi Lava P**	**3.59**	**272**		**Pn**	**07 22 18.1**	**+0.7**
MAPS	**Pakushin South**	**4.21**	**58**		**Pn**	**07 22 27.8**	**+1.7**
MNAT	**Makushin Natee**	**4.38**	**58**		**Pn**	**07 22 30.1**	**+1.7**
CERAA	**Semis' Rag'd T**	**4.54**	**275**		**Pn**	**07 22 31.3**	**+0.8**
CESW	**Semis' Southwe**	**4.62**	**275**		**Pn**	**07 22 31.9**	**+0.3**
AMKA	**Amchitka**	**4.82**	**268**		**Pn**	**07 22 33.6**	**-0.7**
AMKA	**Amchitka**	**4.82**	**268**		**Sn**	**07 23 31.9**	**+3.0**
LSPA	**Little Sitkin**	**5.23**	**275**		**Pn**	**07 22 40.2**	**+0.2**
LSSA	**Little Sitkin**	**5.26**	**275**		**Pn**	**07 22 40.8**	**+0.3**
SDPT	**Sand Point**	**8.28**	**59**	Pn	**Pn**	**07 23 21.8**	**+0.1**
SII	**Sitkinak Islan**	**12.02**	**59**	Pn	**Pn**	**07 24 12.2**	**-0.7**
GAMB	**Gambell**	**12.07**	**3**		**Pn**	**07 24 12.0**	**-1.6**
GAMB	**Gambell**	**12.07**	**3**	P		07 24 17.5	
	baz=184						
OHAK	**Old Harbor**	**12.68**	**57**	Pn	**Pn**	**07 24 21.0**	**-0.9**
KDAK	**Kodiak Island**	**13.21**	**55**	Pn	**Pn**	**07 24 27.1**	**-2.1**
	0.9nm,0.3s,baz=226,slow=5.6,SNR=10						
KDAK	**Kodiak Island**	**13.21**	**55**	Pn	**Pn**	**07 24 28.3**	**-0.9**
ANM	**Nome**	**13.44**	**14**	Pn	**Pn**	**07 24 32.5**	**+0.2**
ANM	**Nome**	**13.44**	**14**	P		07 24 36.0	
	baz=201,SNR=7.5						
TNA	**Tin City**	**14.09**	**9**		**Pn**	**07 24 38.8**	**-2.2**
TNA	**Tin City**	**14.09**	**9**	P		07 24 43.1	
	baz=193						
BRLK	**Bradley Lake**	**14.74**	**48**	Pn	**Pn**	**07 24 48.6**	**-1.5**
O22K	**Cooper Landing**	**15.56**	**47**	P		07 25 03.5	
	baz=246						
PPLA	**Purkeypile**	**15.74**	**37**	Pn	**Pn**	**07 25 02.0**	**-1.3**
CHUM	**Lake Minchumin**	**16.29**	**34**	P		07 25 14.5	
	baz=232,SNR=6.5						
PMR	**Palmer**	**16.30**	**44**	Pn	**Pn**	**07 25 10.5**	**+0.3**
GHO	**Glory Hole Cre**	**16.47**	**43**		**Pn**	**07 25 12.5**	**0.0**
KNK	**Knik Glacier**	**16.51**	**45**	P	**Pn**	**07 25 12.8**	**-0.2**
KTH	**Kantishna Hill**	**16.59**	**36**	P	**P**	**07 25 16.6**	**+0.4**
SML	**Sawmill**	**16.74**	**43**	P		07 25 16.1	
	baz=244						
TRF	**Thorofare Moun**	**16.77**	**37**	P		07 25 17.8	
	baz=236						
BPAW	**Bear Paw Mtn.**	**16.89**	**35**	P	**P**	**07 25 20.2**	**+0.7**
BPAW	**Bear Paw Mtn.**	**16.89**	**35**	P		07 25 20.5	
	baz=233,SNR=14						
SCM	**Sheep Creek Mo**	**17.18**	**44**	P	**Pn**	**07 25 21.4**	**0.0**
SCM				IAmb	IAmb	07 25 23.0	
	comp=Z,22nm,0.9s						
RND	**Reindeer**	**17.29**	**38**		**Pn**	**07 25 23.1**	**+0.4**
WAT6	**Susitna Watana**	**17.33**	**42**	P		07 25 23.7	
	baz=243						
MCK	**McKinley**	**17.43**	**37**	P		07 25 24.5	
	baz=238						
MLY	**Manley**	**17.55**	**32**	P		07 25 28.2	
	baz=231,SNR=16						
KLU	**Klutina**	**17.66**	**46**	P		07 25 27.3	
	baz=249						
M24K	**Tolsona, Glenn**	**17.79**	**44**	P	**Pn**	**07 25 29.1**	**+0.2**
M24K				IAmb	IAmb	07 25 48.1	
	comp=Z,57nm,1.4s						
M24K	**Tolsona, Glenn**	**17.79**	**44**	P		07 25 28.9	
	baz=247						
NEA2	**Nenana**	**17.86**	**35**	P	**P**	**07 25 30.4**	**+0.3**
NEA2	**Nenana**	**17.86**	**35**	P		07 25 29.8	
	baz=235						
PETK	**Petropavlovsk-**	**17.87**	**286**	P	**P**	**07 25 30.6**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=90,slow=14,SNR=21						
RAGM	**Ragged Mountai**	**17.89**	**50**	P	**P**	**07 25 30.9**	**+0.3**
RAGM				IAmb	IAmb	07 25 51.5	
	comp=Z,40nm,0.8s						
HMT	**Hamilton**	**18.07**	**50**	P	**P**	**07 25 32.8**	**+0.2**
HMT				IAmb	IAmb	07 25 50.9	
	comp=Z,44nm,1.1s						
I23K	**Minto, Yukon-K**	**18.08**	**33**	P	**P**	**07 25 32.9**	**+0.3**
I23K				IAmb	IAmb	07 25 36.0	
	comp=Z,16nm,0.6s						
I23K	**Minto, Yukon-K**	**18.08**	**33**	P		07 25 33.7	
	baz=233,SNR=21						
BMRM	**Bremner River**	**18.09**	**48**	P	**Pn**	**07 25 31.8**	**-0.9**
WRH	**Wood River Hil**	**18.14**	**36**	P	**Pn**	**07 25 32.9**	**-0.3**
N25K	**Chitina, Valde**	**18.30**	**46**	P	**P**	**07 25 34.1**	**-1.0**
N25K	**Chitina, Valde**	**18.30**	**46**	P		07 25 34.9	
	baz=250						
CCB	**Clear Creek Bu**	**18.34**	**36**	P	**P**	**07 25 34.4**	**-1.0**
MDM	**Murphy Dome**	**18.36**	**34**	P	**Pn**	**07 25 36.2**	**+0.3**
PAX	**Paxson**	**18.44**	**42**	P	**Pn**	**07 25 37.5**	**+0.6**
HDA	**Harding Lake**	**18.53**	**37**	P		07 25 37.5	
	baz=239,SNR=23						
HDA				P		07 25 37.5	
	baz=239,SNR=23						
GLB	**Gilahina Butte**	**18.60**	**47**	P	**P**	**07 25 37.7**	**-0.7**
VRDI	**Verde Repeater**	**18.70**	**48**	P	**P**	**07 25 38.0**	**-1.7**
CRQM	**Cirque**	**18.72**	**50**	P	**P**	**07 25 39.0**	**-0.8**
CRQM				IAmb	IAmb	07 25 56.5	
	comp=Z,49nm,1.4s						
CRQE	**Cirque**	**18.74**	**50**	P		07 25 40.2	
	baz=255						
IL31		**18.74**	**36**	P	**P**	**07 25 39.1**	**-0.7**
ILAR	**Eielson Array**	**18.74**	**36**	P	**P**	**07 25 38.0**	**-1.8**
	comp=Z,2.1nm,0.3s,baz=237,slow=9.4,SNR=111						
ILAR	**Eielson Array**	**18.74**	**36**	P	**P**	**07 25 39.3**	**-0.5**
TGL	**Tana Glacier**	**18.86**	**50**	P	**Pn**	**07 25 42.1**	**0.0**
TGL				IAmb	IAmb	07 25 46.3	
	comp=Z,17nm,0.9s						
MCARA	**McCarthy VSAT**	**18.95**	**48**	P	**P**	**07 25 42.1**	**0.0**
MCARA				IAmb	IAmb	07 25 52.4	
	comp=Z,35nm,1.4s						
MCARA	**McCarthy VSAT**	**18.95**	**48**	P		07 25 41.8	
	baz=253						
COLD	**Coldfoot**	**19.15**	**27**		**Pn**	**07 25 46.8**	**+1.4**
COLD				IAmb	IAmb	07 25 53.2	
	comp=Z,16nm,1.0s						
COLD	**Coldfoot**	**19.15**	**27**	P		07 25 46.4	
	baz=227,SNR=14						
MENT	**Mentasta**	**19.16**	**43**	P	**Pn**	**07 25 45.7**	**+0.2**
YAH	**Yahtse**	**19.29**	**51**	P	**P**	**07 25 46.7**	**+0.6**
DOT	**Dot Lake**	**19.30**	**41**	P	**P**	**07 25 45.5**	**-0.6**
GRNC	**Granite Creek**	**19.37**	**50**	P	**P**	**07 25 47.3**	**+0.3**
GRNC				IAmb	IAmb	07 25 50.1	
	comp=Z,43nm,1.3s						
SCRK	**Sand Creek**	**19.47**	**40**	P	**P**	**07 25 47.4**	**-0.6**
SCRK				IAmb	IAmb	07 25 49.2	
	comp=Z,10nm,0.6s						
SCRK	**Sand Creek**	**19.47**	**40**	P		07 25 47.0	
	baz=245,SNR=21						
BARN	**Barnard Glacie**	**19.49**	**49**	P	**P**	**07 25 48.2**	**-0.1**
BARN				IAmb	IAmb	07 25 59.3	
	comp=Z,18nm,1.0s						
TABL	**Table Mountain**	**19.60**	**51**	P	**P**	**07 25 49.6**	**+0.1**
TABL				IAmb	IAmb	07 25 57.2	
	comp=Z,27nm,0.9s						
CTG	**Chitna Glacier**	**19.62**	**50**	P		07 25 49.2	
	baz=256						
PRP	**Porcupine Dome**	**19.62**	**35**	P	**P**	**07 25 49.8**	**+0.2**
PRP				IAmb	IAmb	07 26 11.2	
	comp=Z,9.9nm,0.7s						
PRP	**Porcupine Dome**	**19.62**	**35**	P		07 25 48.8	
	baz=239						
CTGM	**Chitina Glacie**	**19.62**	**50**	P	**P**	**07 25 49.6**	**-0.1**
CTGM				IAmb	IAmb	07 25 55.2	
	comp=Z,18nm,0.8s						
LOGN	**Logan Glacier**	**19.75**	**50**	P	**P**	**07 25 51.2**	**+0.1**
LOGN				IAmb	IAmb	07 26 07.3	
	comp=Z,20nm,0.9s						
PCA	**Pinnacle**	**19.97**	**53**	P	**P**	**07 25 54.2**	**+0.9**
PINM	**Pinnacle**	**19.97**	**53**	P		07 25 53.2	
	baz=260						
K27K	**Chicken**	**20.26**	**41**	P	**P**	**07 25 56.5**	**+0.1**
K27K				IAmb	IAmb	07 26 06.3	
	comp=Z,7.5nm,0.6s						
K27K	**Chicken**	**20.26**	**41**	P		07 25 56.8	
	baz=247						
FYU	**Fort Yukon**	**20.29**	**33**	P	**P**	**07 25 56.9**	**+0.2**
FYU				IAmb	IAmb	07 25 59.1	
	comp=Z,29nm,1.2s						
TOLK	**Toolik Lake Re**	**20.31**	**25**	P	Pn	07 25 58.7	-0.4
TOLK				IAmb	IAmb	07 26 10.0	
	comp=Z,15nm,0.8s						
TOLK	**Toolik Lake Re**	**20.31**	**25**	P		07 25 58.1	
	baz=225,SNR=9.9						
EGAK	**Eagle**	**20.92**	**39**	P	**P**	**07 26 03.8**	**+0.2**
EGAK	**Eagle**	**20.92**	**39**	P		07 26 03.1	
	baz=247,SNR=45						
BMAR	**Burnt Mountain**	**20.98**	**31**	P	Pn	07 26 06.2	-0.8
DAWY	**Dawson**	**21.38**	**42**	P	**P**	**07 26 08.2**	**-0.3**
DAWY				IAmb	IAmb	07 26 26.9	
	comp=Z,7.5nm,0.8s						
HYT	**Haines Junctio**	**21.43**	**51**	P	**P**	**07 26 09.5**	**+0.3**
HYT				IAmb	IAmb	07 26 14.3	
	comp=Z,11nm,0.7s						
SEY	**Seymchan**	**21.47**	**315**	P	**P**	**07 26 10.9**	**+1.5**
	comp=Z,2.0nm,0.4s,baz=104,slow=11,SNR=10						
MA2	**Magadan**	**21.64**	**305**	P	**P**	**07 26 12.6**	**+1.3**
	comp=Z,2.7nm,0.4s,baz=337,slow=22,SNR=2.6						
INK	**Inuvik**	**25.09**	**34**	P	**P**	**07 26 45.0**	**-0.2**
	comp=Z,18nm,0.5s,baz=246,slow=6.4,SNR=94						
INK				PcP	**PcP**	**07 30 16.9**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=226,slow=18,SNR=2.7						
INK	**Inuvik**	**25.09**	**34**	P	**P**	**07 26 45.1**	**-0.2**
DLBC	**Dease Lake**	**25.11**	**58**	P	**P**	**07 26 48.0**	**+2.4**
	comp=Z,17nm,0.8s,baz=267,slow=8,SNR=30						
DLBC	**Dease Lake**	**25.11**	**58**	P	**P**	**07 26 48.0**	**+2.4**
C36M	**Paulatuk**	**28.68**	**34**	P	**P**	**07 27 17.4**	**0.0**
C36M				IAmb	IAmb	07 27 32.7	
	comp=Z,12nm,1.4s						
JKA	**Kamikawa-asahi**	**30.31**	**273**	P	**P**	**07 27 33.1**	**+0.9**
ASAJ	**Asahikawa**	**30.32**	**273**	P	**P**	**07 27 33.1**	**+0.9**
	comp=Z,10nm,0.6s,baz=90,slow=9.3,SNR=7.4						
ERM	**Erimo**	**31.08**	**269**	P	**P**	**07 27 40.2**	**+1.2**
NLWA	**Neilton Lookou**	**31.67**	**78**	P	**P**	**07 27 45.3**	**+1.2**
NLWA				IAmb	IAmb	07 27 56.3	
	comp=Z,7.3nm,1.1s						
D03D	**Eldon**	**32.08**	**77**	P		07 27 48.8	
	baz=296						
TIXI	**Tiksi**	**32.12**	**330**	PcP	**PcP**	**07 30 35.4**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=20,slow=1.3,SNR=4.9						
E03A	**Lebam**	**32.24**	**79**	P	**P**	**07 27 50.1**	**+1.1**
E03A				IAmb	IAmb	07 28 18.8	
	comp=Z,10nm,1.1s						
YKA	**Yellowknife Ar**	**32.32**	**48**	P	**P**	**07 27 49.0**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=275,slow=7.8,SNR=44						
YKA				PcP	**PcP**	**07 30 36.6**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=286,slow=2.4,SNR=4.3						
YKA				LR	LR	07 43 20.3	
	comp=Z,128nm,18.0s,baz=0.0,slow=41						
B05A	**Bryant**	**32.36**	**76**	P		07 27 51.0	
	baz=296						
E04D	**Cinebar**	**32.84**	**79**	P		07 27 55.9	
	baz=298						
LON	**Longmire**	**33.21**	**78**	P	**P**	**07 27 58.7**	**+0.9**
LON				IAmb	IAmb	07 27 59.8	
	comp=Z,4.8nm,1.0s						
I02D	**Swisshome**	**33.26**	**84**	P		07 27 58.6	
	baz=301						
LTY	**Liberty**	**33.67**	**77**	P	**P**	**07 28 02.2**	**+0.5**
LTY				IAmb	IAmb	07 28 19.9	
	comp=Z,3.8nm,1.1s						
H04D	**Lebanon**	**33.73**	**82**	P		07 28 03.1	
	baz=301						
B08A	**Colville Reser**	**33.97**	**74**	P	**P**	**07 28 05.1**	**+0.8**
B08A				IAmb	IAmb	07 28 05.7	
	comp=Z,5.7nm,0.9s						
H04A	**Detroit Lake**	**33.99**	**82**	P	**P**	**07 28 05.4**	**+1.0**
K02D	**Willamette Mer**	**34.12**	**86**	P		07 28 06.4	
	baz=303						
G05D	**Wamic, OR**	**34.24**	**80**	P		07 28 07.2	
	baz=300						
I04A	**Tendick Farm,**	**34.31**	**83**	P		07 28 08.3	
	baz=302						
L02E	**Cave Junction**	**34.45**	**86**	P		07 28 09.5	
	baz=304						
KLR	**Kul'dur**	**34.53**	**288**	P	**P**	**07 28 08.1**	**-0.9**
	comp=Z,3.1nm,0.5s,baz=60,slow=5.9,SNR=15						
I05D	**Terrebonne, OR**	**34.69**	**81**	P		07 28 11.4	
	baz=301						
HAWA	**Hanford**	**34.76**	**77**	P	**P**	**07 28 12.0**	**+0.9**
HAWA				IAmb	IAmb	07 28 12.6	
	comp=Z,6.7nm,0.8s						
J04D	**Umpqua Nationa**	**34.79**	**84**	P		07 28 12.4	
	baz=302						
L04D	**Klamath Falls**	**35.22**	**85**	P		07 28 15.4	
	baz=304						
J05D	**Fort Rock, OR**	**35.30**	**83**	P		07 28 16.3	
	baz=302,SNR=5.4						
NEW	**Newport**	**35.33**	**73**	P	**P**	**07 28 16.3**	**+0.3**
NEW				IAmb	IAmb	07 28 16.7	
	comp=Z,4.7nm,0.7s						
NEW	**Newport**	**35.33**	**73**	P		07 28 15.6	
	baz=297,SNR=5.5						
M02C	**Callahan**	**35.34**	**87**	P		07 28 17.3	
	baz=304						
H11N2	**WAKE ISLAND Hy**	**35.64**	**214**	T	T	08 06 16.4	
	baz=21,slow=76,SNR=77						
H11N3	**WAKE ISLAND Hy**	**35.65**	**214**	T	T	08 06 23.0	
	baz=21,slow=76,SNR=75						
H11N1	**WAKE ISLAND Hy**	**35.66**	**214**	T	T	08 06 16.7	
	baz=21,slow=76,SNR=58						
N02D	**Trinity Center**	**35.67**	**87**	P		07 28 19.0	
	baz=305						
M04C	**Macdoel**	**35.75**	**86**	P		07 28 19.4	
	baz=304						
K05A	**Summer Lake**	**35.82**	**84**	P	**P**	**07 28 21.9**	**+1.4**
I07A	**Izee**	**35.95**	**81**	P	**P**	**07 28 22.3**	**+0.9**
I07A				IAmb	IAmb	07 28 22.8	
	comp=Z,8.4nm,1.2s						
O02D	**Mt. Diablo Mer**	**36.08**	**89**	P		07 28 22.6	
	baz=306						
F10A	**Beach Ranch, E**	**36.37**	**77**	P	**P**	**07 28 25.1**	**+0.1**
F10A				IAmb	IAmb	07 28 25.9	
	comp=Z,4.6nm,1.2s						
O03E	**Paynes Creek**	**36.63**	**88**	P		07 28 26.9	
	baz=306						
MOD	**Modoc Plateau**	**36.64**	**84**	P	**P**	**07 28 28.2**	**+0.8**
MOD				IAmb	IAmb	07 28 43.2	
	comp=Z,4.9nm,0.8s						
USRK	**Ussuriysk Ar.**	**36.81**	**280**	P	**P**	**07 28 27.9**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=56,slow=11,SNR=11						
USRK				LR	LR	07 42 44.9	
	comp=Z,74nm,20.9s,baz=44,slow=35						
USRK	**Ussuriysk Ar.**	**36.81**	**280**	P	**P**	**07 28 28.2**	**-0.4**
H11S1	**WAKE ISLAND Hy**	**36.84**	**213**	T	T	08 07 42.7	
	baz=20,slow=75,SNR=37						
H11S2	**WAKE ISLAND Hy**	**36.85**	**213**	T	T	08 07 42.1	
	baz=20,slow=75,SNR=43						
H11S3	**WAKE ISLAND Hy**	**36.85**	**213**	T	T	08 07 44.1	
	baz=20,slow=75,SNR=23						
WALA	**Waterton Lakes**	**36.86**	**70**	P	**P**	**07 28 29.7**	**+0.5**
WALA				IAmb	IAmb	07 28 47.3	
	comp=Z,5.6nm,0.8s						
J08A	**Circle Bar Ran**	**36.96**	**81**	P	**P**	**07 28 30.9**	**+0.8**
J08A				IAmb	IAmb	07 28 31.4	
	comp=Z,11nm,1.3s						
WVOR	**Wild Horse Val**	**37.37**	**82**	P	**P**	**07 28 34.3**	**+0.7**
WVOR				IAmb	IAmb	07 28 35.5	
	comp=Z,4.1nm,0.8s						
MAT	**Matsushiro**	**37.42**	**266**	P	**P**	**07 28 34.1**	**+0.1**
MJAR	**Matsushiro Arr**	**37.42**	**266**	P	**P**	**07 28 33.3**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=26,slow=7.6,SNR=6.1						
RES	**Resolute Bay**	**37.88**	**25**	P	**P**	**07 28 34.8**	**-2.6**
	comp=Z,1.1nm,0.9s,baz=227,slow=12,SNR=4.3						
RES				PcP	**PcP**	**07 30 53.0**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=348,slow=3.2,SNR=4.7						
RES	**Resolute Bay**	**37.88**	**25**	P	**P**	**07 28 37.3**	**0.0**
MSO	**Missoula**	**37.91**	**73**	P	**P**	**07 28 38.5**	**+0.4**
MSO				IAmb	IAmb	07 28 38.9	
	comp=Z,7.3nm,1.2s						
MSO	**Missoula**	**37.91**	**73**	P		07 28 37.4	
	baz=300						
PAHR	**Pah Rah Range**	**38.47**	**87**	P	**P**	**07 28 43.4**	**+0.5**
PAHR				IAmb	IAmb	07 28 44.2	
	comp=Z,12nm,1.2s						
PNTR	**Pine Nut**	**38.71**	**88**	P	**P**	**07 28 45.7**	**+0.7**
YERR	**Yerington**	**38.99**	**87**	P	**P**	**07 28 47.8**	**+0.4**
YERR				IAmb	IAmb	07 29 04.0	
	comp=Z,4.8nm,0.8s						
WAKR	**Walker**	**39.16**	**88**	P	**P**	**07 28 49.5**	**+0.7**
WAKR				IAmb	IAmb	07 29 02.6	
	comp=Z,4.4nm,0.8s						
HRY	**Holter Researc**	**39.22**	**72**	P	**P**	**07 28 49.4**	**+0.3**
HLID	**Hailey**	**39.33**	**78**	P	**P**	**07 28 50.6**	**+0.4**
HLID	**Hailey**	**39.34**	**78**	P		07 28 49.7	
	baz=303,SNR=5.1						
BCYI	**Bear Canyon**	**39.54**	**77**	P	**P**	**07 28 52.2**	**+0.3**
MCMT	**McKenzie Canyo**	**39.60**	**76**	P	**P**	**07 28 52.7**	**+0.3**
RYN	**Ryan**	**39.66**	**87**	P	**P**	**07 28 53.3**	**+0.4**
KVN	**Kaiserville**	**39.66**	**86**	P	**P**	**07 28 53.4**	**+0.5**
KVN				IAmb	IAmb	07 28 54.3	
	comp=Z,7.0nm,1.3s						
EGMT	**Eagleton**	**39.78**	**70**	P		07 28 53.2	
	baz=300,SNR=7.9						
NVAR	**Mina Array Bea**	**39.91**	**87**	P	**P**	**07 28 53.7**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=289,slow=8.8,SNR=16						
NVAR				LR	LR	07 43 57.7	
	comp=Z,61nm,18.9s,baz=216,slow=34						
NVAR	**Mina Array Bea**	**39.91**	**87**	P	**P**	**07 28 55.9**	**+0.8**
BOZ	**Bozeman (W)**	**39.92**	**74**	P	**P**	**07 28 55.0**	**0.0**
BOZ				IAmb	IAmb	07 28 55.8	
	comp=Z,9.6nm,1.3s						
BOZ	**Bozeman (W)**	**39.92**	**74**	P		07 28 54.4	
	baz=302,SNR=8.6						
ELK	**Elko**	**40.42**	**82**	P	**P**	**07 28 59.6**	**+0.2**
TPH	**Tonopah**	**40.80**	**87**	P	**P**	**07 29 02.7**	**+0.3**
YMR	**Madison River**	**40.81**	**75**	P	**P**	**07 29 03.0**	**+0.5**
YMR				IAmb	IAmb	07 29 03.4	
	comp=Z,4.6nm,0.8s						
YHH	**Holmes Hill**	**40.82**	**74**	P	**P**	**07 29 02.9**	**+0.3**
YHH				IAmb	IAmb	07 29 03.3	
	comp=Z,8.7nm,1.1s						
SMMC	**Simmler**	**40.83**	**92**	P		07 29 03.2	
	baz=311						
FFC	**Flin Flon**	**40.94**	**57**	P	**P**	**07 29 03.4**	**+0.3**
FFC				IAmb	IAmb	07 29 18.2	
	comp=Z,11nm,1.4s						
GCMT	**Greycliff**	**40.98**	**72**	P	**P**	**07 29 04.1**	**+0.3**
H17A	**Grant Village**	**41.20**	**75**	P		07 29 06.5	
	baz=303						
LKWY	**Lake**	**41.21**	**74**	P	**P**	**07 29 06.1**	**+0.4**
LKWY				IAmb	IAmb	07 29 22.3	
	comp=Z,6.0nm,0.7s						
HVU	**Hansel Valley**	**41.34**	**79**	P	**P**	**07 29 07.3**	**+0.6**
HVU				IAmb	IAmb	07 29 07.7	
	comp=Z,3.5nm,0.7s						
GRAC	**Grapevine Rang**	**41.38**	**88**	P		07 29 06.8	
	baz=309

IRM	**Iron Mountain**	**44.60**	**90**	P			07 29 32.9	
	baz=312							
K22A	**Casper**	**44.61**	**74**	P			07 29 32.6	
	baz=306							
O20A	**White River Ci**	**45.08**	**78**	P		**P**	**07 29 36.8**	**-0.2**
O20A	**White River Ci**	**45.08**	**78**	P			07 29 35.7	
	baz=308,SNR=7.5							
RSSD	**Black Hills**	**45.24**	**71**	P		**P**	**07 29 38.2**	**-0.1**
RSSD				IAmb		IAmb	07 30 01.4	
	comp=Z,8.6nm,1.4s							
RSSD	**Black Hills**	**45.24**	**71**	P			07 29 37.1	
	baz=305							
PV04	**Paradox Valley**	**45.74**	**81**	P		**P**	**07 29 42.0**	**-0.3**
PV04				IAmb		IAmb	07 29 42.6	
	comp=Z,6.7nm,0.8s							
PV17	**East Wray Mesa**	**45.78**	**81**	P		**P**	**07 29 42.3**	**-0.3**
PV16	**Nyswonger Mesa**	**45.79**	**81**	P		**P**	**07 29 42.6**	**-0.1**
PV16				IAmb		IAmb	07 29 42.9	
	comp=Z,4.5nm,0.6s							
PV11	**David Mesa, Pa**	**45.82**	**81**	P		**P**	**07 29 42.7**	**-0.2**
PV18	**Skein Mesa, Pa**	**45.83**	**81**	P		**P**	**07 29 42.7**	**-0.3**
PV18				IAmb		IAmb	07 29 43.0	
	comp=Z,5.1nm,0.7s							
PV12	**Saucer Basin,**	**45.85**	**81**	P		**P**	**07 29 43.0**	**-0.1**
PV03	**Paradox Valley**	**45.86**	**81**	P		**P**	**07 29 42.9**	**-0.4**
PV03				IAmb		IAmb	07 29 43.2	
	comp=Z,4.3nm,0.6s							
NRIK	**Noril'sk**	**45.88**	**331**	P		**P**	**07 29 41.4**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=85,slow=7.6,SNR=6.3							
NRIK	**Noril'sk**	**45.88**	**331**	P		**P**	**07 29 43.8**	**+1.1**
NRIK				IAmb		IAmb	07 29 44.5	
	comp=Z,2.5nm,0.7s							
PV13	**Radium Mtn., P**	**45.94**	**81**	P		**P**	**07 29 44.0**	**+0.1**
PV02	**Paradox Valley**	**45.96**	**81**	P		**P**	**07 29 43.8**	**-0.2**
N23A	**Red Feather La**	**46.01**	**76**	P			07 29 44.0	
	baz=307							
WUAZ	**Wupatki**	**46.05**	**86**	P			07 29 44.3	
	baz=311							
PV01	**Paradox Valley**	**46.11**	**81**	P		**P**	**07 29 45.2**	**-0.1**
ULM	**Lac du Bonnet**	**46.41**	**60**	P		**P**	**07 29 46.5**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=13,slow=14,SNR=2.7							
MVCO	**Mesa Verde**	**46.74**	**82**	P			07 29 49.6	
	baz=310							
S22A	**4UR Ranch, Cre**	**47.42**	**80**	P			07 29 55.6	
	baz=310							
AGMN	**Agassiz Nation**	**47.51**	**62**	P			07 29 55.5	
	baz=305							
TUC	**Tucson**	**48.54**	**88**	P			07 30 03.8	
	baz=313							
B35A	**Bob, Littlefor**	**48.63**	**61**	P		**P**	**07 30 03.9**	**-0.5**
B35A				IAmb		IAmb	07 30 11.4	
	comp=Z,4.5nm,0.8s							
T25A	**Trinidad**	**49.29**	**79**	P		**P**	**07 30 10.8**	**+0.9**
T25A	**Trinidad**	**49.29**	**79**	P			07 30 09.7	
	baz=310,SNR=5.4							
ANMO	**Albuquerque**	**49.46**	**83**	P			07 30 10.8	
	baz=312							
SONM	**Songino Array**	**49.67**	**299**	P		**P**	**07 30 13.1**	**+0.6**
	comp=Z,4.2nm,0.6s,baz=51,slow=7.9,SNR=25							
SONM				PcP		**PcP**	**07 31 33.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=56,slow=2.5,SNR=2.1							
SONM				LR		LR	07 52 10.7	
	comp=Z,108nm,18.8s,baz=33,slow=37							
SONM	**Songino Array**	**49.67**	**299**	P		**P**	**07 30 13.2**	**+0.8**
SONM				IAmb		IAmb	07 30 14.4	
	comp=Z,2.9nm,0.6s							
ECSD	**EROS Data Cent**	**49.78**	**67**	P		**P**	**07 30 12.4**	**-0.8**
ECSD				IAmb		IAmb	07 30 25.5	
	comp=Z,3.0nm,0.6s							
ECSD	**EROS Data Cent**	**49.78**	**67**	P			07 30 12.1	
	baz=308							
SPITS	**Spitsbergen Ar**	**50.20**	**357**	P		**P**	**07 30 15.5**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=119,slow=6.9,SNR=8.3							
SPMN	**Marine on St.**	**51.02**	**64**	P			07 30 22.3	
	baz=308							
HHC	**Hu-ho-hao-te**	**51.03**	**289**	*e*P		**P**	**07 30 24.2**	**+1.4**
HHC				pmax		pmax		
	comp=Z,17nm,0.7s							
HHC				pmax		pmax		
	comp=Z,140nm,6.0s							
N35A	**Tabor**	**52.14**	**70**	P		**P**	**07 30 30.9**	**-0.1**
MNTX	**Cornudas Mount**	**52.31**	**85**	P			07 30 32.0	
	baz=314							
MSTX	**Muleshoe**	**52.38**	**81**	P			07 30 32.5	
	baz=312							
E43A	**Lone Tree Farm**	**53.47**	**59**	P		**P**	**07 30 40.3**	**-0.4**
E43A				IAmb		IAmb	07 30 60.0	
	comp=Z,5.1nm,0.8s							
WMOK	**Wichita Mounta**	**54.30**	**77**	P			07 30 46.7	
	baz=313							
TXAR	**Lajitas Array**	**55.01**	**86**	P		**P**	**07 30 51.6**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=299,slow=5.3,SNR=24							
TXAR	**Lajitas Array**	**55.01**	**86**	P		**P**	**07 30 51.9**	**-0.4**
P40A	**Paris**	**55.09**	**69**	P		**P**	**07 30 51.8**	**-0.9**
MATQ	**Matagami**	**56.04**	**51**	P			07 30 58.5	
	baz=312							
ZALV	**Zalesovo Beam**	**56.34**	**316**	LR		LR	07 58 00.3	
	comp=Z,48nm,18.4s,baz=57,slow=39							
CCM	**Cathedral Cave**	**56.55**	**69**	P			07 31 01.5	
	baz=313							
U40A	**Yellville**	**56.75**	**72**	P			07 31 03.0	
	baz=313							
WHTX	**Lake Whitney,**	**56.98**	**79**	P			07 31 05.9	
	baz=314							
SFIN	**Lafayette**	**57.35**	**65**	P			07 31 08.2	
	baz=313							
FCAR	**Ozark Folk Cen**	**57.50**	**72**	P		**P**	**07 31 08.3**	**-1.6**
MIAR	**Mount Ida**	**57.56**	**74**	P		**P**	**07 31 10.4**	**+0.1**
MIAR	**Mount Ida**	**57.56**	**74**	P			07 31 09.2	
	baz=314,SNR=9.7							
W41B	**Gary Mavity, V**	**57.92**	**73**	P			07 31 11.0	
	baz=314,SNR=5.8							
ARCES	**ARCESS Array B**	**58.26**	**352**	P		**P**	**07 31 14.4**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=20,slow=7.4,SNR=15							
ARCES				PcP		**PcP**	**07 32 05.5**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=6.9,slow=4.0,SNR=5.5							
LZH	**Lanzhou**	**58.71**	**290**	*e*P		**P**	**07 31 19.7**	**+1.2**
LZH				pP		sP	07 31 32.5	+0.4
LZH				pmax		pmax		
	comp=Z,38nm,1.2s							
GTA	**Gaotai**	**58.74**	**295**	⇑P		**P**	**07 31 18.6**	**0.0**
GTA				pP		pP	07 31 29.6	+1.2
GTA				sP		sP	07 31 33.2	+1.1
GTA				pmax		pmax		
	comp=Z,8.0nm,0.9s							
GTA				pmax		pmax		
	comp=Z,74nm,6.0s							
GTA				LR		LR		
	comp=N,91nm,16.0s							
GTA				LR		LR		
	comp=E,210nm,19.3s							
GTA				LR		LR		
	comp=Z,130nm,15.3s							
D55A	**Sainte-Anne-du**	**58.96**	**52**	P			07 31 19.0	
	baz=314							
D56A	**ZEC Mazanza, M**	**59.29**	**52**	P			07 31 21.4	
	baz=314							
T47A	**Sharon Grove**	**59.67**	**68**	P		**P**	**07 31 24.6**	**-0.4**
WVT	**Waverly**	**59.85**	**69**	P		**P**	**07 31 25.5**	**-0.7**
WVT	**Waverly**	**59.85**	**69**	P			07 31 25.7	
	baz=314							
LATQ	**La Tuque**	**60.02**	**51**	P			07 31 25.9	
	baz=315							
OXF	**Oxford**	**60.06**	**71**	P			07 31 27.0	
	baz=315							
M53A	**WI Miller and**	**60.16**	**60**	P			07 31 28.1	
	baz=314							
D58A	**Chemin du LacG**	**60.17**	**51**	P			07 31 27.5	
	baz=315							
E58A	**La Victoria**	**60.49**	**52**	P			07 31 29.5	
	baz=315							
PLAL	**Pickwick Lake**	**60.51**	**70**	P		**P**	**07 31 29.8**	**-1.0**
M54A	**Oil Creek Stat**	**60.66**	**59**	P			07 31 31.2	
	baz=315							
O53A	**New Philadelph**	**60.70**	**61**	P			07 31 31.6	
	baz=315							
D59A	**Saint-Raymond**	**60.74**	**50**	P			07 31 31.6	
	baz=316							
VBMS	**Vicksburg**	**61.02**	**74**	P			07 31 33.9	
	baz=315							
K56A	**Middlesex**	**61.05**	**57**	P			07 31 34.1	
	baz=315							
LONY	**Lake Ozonia**	**61.09**	**54**	P			07 31 34.4	
	baz=316							
F59A	**Saint Guilaume**	**61.10**	**52**	P			07 31 33.9	
	baz=316							
D60A	**Saint Jean D'O**	**61.24**	**50**	P			07 31 33.8	
	baz=316							
KURK	**Kurchatov**	**61.31**	**317**	P		**P**	**07 31 36.6**	**+0.7**
L56A	**Greenwood**	**61.33**	**58**	P			07 31 36.1	
	baz=315							
E60A	**Ste Agathe de**	**61.38**	**51**	P			07 31 35.7	
	baz=316							
KURBB	**Kurchatov Arra**	**61.41**	**317**	P		**P**	**07 31 36.6**	**0.0**
	comp=Z,5.1nm,0.6s,baz=44,slow=6.6,SNR=47							
KURBB				PcP		**PcP**	**07 32 18.9**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=37,slow=4.3,SNR=5.4							
K57A	**Scipio Center**	**61.45**	**56**	P			07 31 36.6	
	baz=315							
X48A	**Hartselle**	**61.48**	**70**	P		**P**	**07 31 36.1**	**-1.3**
Z47A	**Carrollton**	**61.77**	**71**	P		**P**	**07 31 38.2**	**-1.1**
N56A	**West Decatur**	**61.80**	**59**	P			07 31 39.9	
	baz=315							
WMQ	**Urumqi**	**62.11**	**306**	*e*P		**P**	**07 31 43.6**	**+2.1**
FPAL	**Fort Paine**	**62.26**	**69**	P		**P**	**07 31 41.6**	**-1.0**
L58A	**Harry Jones Me**	**62.29**	**57**	P			07 31 42.7	
	baz=316							
S54A	**Dingess, Beckl**	**62.38**	**63**	P			07 31 42.9	
	baz=316							
D63A	**Stockholm**	**62.47**	**48**	P			07 31 43.1	
	baz=317							
LRAL	**Lakeview Retre**	**62.52**	**71**	P			07 31 42.6	
	baz=316							
P56A	**Dayton Farm, R**	**62.52**	**60**	P			07 31 44.1	
	baz=316							
MK31	**Makanchi Array**	**62.56**	**312**	P		**P**	**07 31 44.0**	**-0.4**
MK31				IAmb		IAmb	07 31 44.3	
	comp=Z,1.6nm,0.6s							
MKAR	**Makanchi Array**	**62.56**	**312**	P		**P**	**07 31 43.9**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=47,slow=5.9,SNR=24							
MKAR	**Makanchi Array**	**62.56**	**312**	P		**P**	**07 31 44.1**	**-0.3**
G62A	**West of Eustis**	**62.66**	**51**	P			07 31 45.0	
	baz=317							
O57A	**Amberson**	**62.66**	**59**	P			07 31 45.2	
	baz=316							
J60A	**Lant Hill Farm**	**62.66**	**54**	P			07 31 44.9	
	baz=316							
MAKZ	**Makanchi**	**62.70**	**312**	P		**P**	**07 31 45.1**	**-0.3**
MAKZ				IAmb		IAmb	07 31 45.2	
	comp=Z,2.1nm,0.7s							
E63A	**Oxbow**	**62.78**	**49**	P			07 31 45.2	
	baz=318							
H62A	**Milan**	**62.82**	**52**	P			07 31 46.2	
	baz=317							
BVAR	**Borovoye Array**	**62.86**	**323**	P		**P**	**07 31 45.9**	**-0.4**
	comp=Z,5.9nm,0.5s,baz=211,slow=5.2,SNR=54							
BVAR				PcP		**PcP**	**07 32 24.5**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=67,slow=4.8,SNR=4.5							
BRVK	**Borovoye**	**62.88**	**323**	P		**P**	**07 31 46.5**	**+0.1**
F63A	**Nahmakanta, Br**	**62.98**	**50**	P			07 31 47.2	
	baz=318							
E64A	**Bridgewater**	**63.06**	**49**	P			07 31 46.9	
	baz=318							
O58A	**Lewisberry**	**63.10**	**59**	P			07 31 47.9	
	baz=316							
H63A	**New Sharon**	**63.30**	**51**	P			07 31 49.2	
	baz=317							
O59A	**Robesonia**	**63.36**	**58**	P			07 31 49.8	
	baz=316							
M60A	**Port Jervis**	**63.44**	**56**	P			07 31 49.6	
	baz=317							
K62A	**Royalston**	**63.68**	**54**	P			07 31 51.8	
	baz=317							
R58A	**Rapidan**	**63.84**	**61**	P			07 31 52.9	
	baz=316							
ARU	**Arti**	**64.11**	**331**	P		**P**	**07 31 54.7**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=16,slow=4.0,SNR=11							
ARU	**Arti**	**64.11**	**331**	P		**P**	**07 31 54.8**	**+0.3**
GOGA	**Godfrey**	**64.30**	**68**	P		**P**	**07 31 54.8**	**-1.3**
GOGA	**Godfrey**	**64.31**	**68**	P			07 31 54.7	
	baz=316,SNR=5.6							
352A	**Blakely**	**64.85**	**71**	P		**P**	**07 31 58.6**	**-1.1**
FINES	**FINESS Array B**	**66.12**	**350**	P		**P**	**07 32 06.8**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=15,slow=7.9,SNR=6.8							
NOA	**NORSAR Array B**	**67.50**	**358**	P		**P**	**07 32 16.5**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=3.4,slow=6.5,SNR=5.4							
HFS	**Hagfors**	**68.33**	**356**	P		**P**	**07 32 21.3**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=59,slow=3.8,SNR=11							
AKTO	**Aktyubinsk**	**69.38**	**328**	P		**P**	**07 32 28.4**	**+0.3**
	comp=Z,11nm,0.6s,baz=48,slow=7.4,SNR=41							
EKA	**Eskdalemuir Ar**	**72.94**	**6**	P		**P**	**07 32 49.6**	**0.0**
	comp=Z,1.3nm,0.6s,baz=357,slow=4.7,SNR=6.0							
PAYA	**Payao**	**73.29**	**280**	P		**P**	**07 32 55.9**	**+3.6**
UTTA	**Uttaradit**	**74.10**	**278**	P		**P**	**07 32 59.3**	**+2.4**
CM34	**Chiang Mai Arr**	**74.12**	**280**	P		**P**	07 33 02.0	+4.9
CM35	**Chiang Mai Arr**	**74.25**	**280**	P		**P**	07 33 04.0	+6.2
CM36	**Chiang Mai Arr**	**74.40**	**280**	P		**P**	07 33 04.0	+5.2
TAPN	**Taplejung**	**74.41**	**294**	*e*P		**P**	**07 32 59.6**	**+0.5**
	comp=Z,23nm,0.7s							
CM09	**Chiang Mai Arr**	**74.52**	**280**	P		P	07 33 06.0	+6.5
CMAR	**Chiang Mai Arr**	**74.54**	**280**	P		**P**	**07 32 59.6**	**0.0**
	comp=Z,2.3nm,0.4s,baz=23,slow=6.1,SNR=2.6							
CM02	**Chiang Mai Arr**	**74.56**	**280**	P		P	07 33 05.0	+5.3
CM01	**Chiang Mai Arr**	**74.56**	**280**	P		P	07 33 04.8	+5.2
CM04	**Chiang Mai Arr**	**74.56**	**280**	P		**P**	**07 33 02.5**	**+2.8**
CM05	**Chiang Mai Arr**	**74.58**	**280**	P		**P**	**07 33 02.2**	**+2.4**
CM13	**Chiang Mai Arr**	**74.59**	**280**	P		**P**	**07 33 02.5**	**+2.6**
ODAN	**Odare**	**74.97**	**294**	*e*P		**P**	**07 33 03.2**	**+1.0**
GUN	**Gumba**	**75.01**	**296**	*e*P		**P**	**07 33 03.2**	**+0.6**
	comp=Z,38nm,0.7s							
JIRN	**Jiri**	**75.03**	**296**	*e*P		**P**	**07 33 03.5**	**+0.8**
	comp=Z,26nm,0.5s							
RAMN	**Ramite**	**75.35**	**295**	*e*P		**P**	**07 33 04.9**	**+0.5**
	comp=Z,34nm,0.5s							
MHMT	**Maesarieng**	**75.38**	**281**	P		P	07 33 12.2	+7.8
PKI	**Pulchoki**	**75.53**	**296**	*e*P		**P**	**07 33 05.7**	**+0.1**
	comp=Z,24nm,1.0s							
PKIN	**Phulchoki**	**75.54**	**296**	*e*P		**P**	**07 33 05.8**	**+0.3**
GKN	**Gorkha**	**75.63**	**297**	*e*P		**P**	**07 33 06.2**	**+0.3**
	comp=Z,21nm,0.5s							
DMN	**Daman**	**75.67**	**296**	*e*P		**P**	**07 33 06.8**	**+0.5**
	comp=Z,6.1nm,0.4s							
AKASG	**Malin Array Be**	**76.19**	**346**	P		**P**	**07 33 07.7**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=16,slow=5.9,SNR=8.2							
AKASG	**Malin Array Be**	**76.19**	**346**	IAmb		IAmb	07 33 09.1	
	comp=Z,0.8nm,0.8s							
KOLN	**Koldanda**	**76.38**	**298**	*e*P		**P**	**07 33 10.6**	**+0.3**
	comp=Z,36nm,1.1s							
PYUN	**Piuthan**	**76.46**	**298**	*e*P		**P**	**07 33 11.2**	**+0.5**
CRVS	**Cervenica-Dubn**	**78.96**	**350**	*e*P		**P**	**07 33 24.1**	**+0.1**
CRVS				*e*PP		**PP**	**07 36 21.9**	**-0.3**
GERES	**GERESS Array B**	**79.61**	**356**	P		**P**	**07 33 28.0**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=14,slow=6.1,SNR=9.1							
KBZ	**Khabaz**	**79.94**	**334**	P		**P**	**07 33 29.9**	**+0.4**
	comp=Z,2.6nm,0.2s,baz=5.4,slow=4.1,SNR=6.4							
WRA	**Warramunga Arr**	**84.89**	**229**	P		**P**	**07 33 53.7**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=32,slow=5.8,SNR=19							
WRA	**Warramunga Arr**	**84.89**	**229**	IAmb		IAmb	07 33 54.1	
	comp=Z,2.0nm,0.8s							
BRTR	**Keskin Array B**	**85.97**	**340**	LR		LR	08 21 35.2	
	comp=Z,59nm,18.0s,baz=342,slow=42							
FITZ	**Fitzroy Crossi**	**87.62**	**237**	P		**P**	**07 34 08.0**	**-0.9**
	comp=Z,2.5nm,0.6s,baz=35,slow=6.6,SNR=6.1							
ASAR	**Alice Springs**	**88.31**	**227**	P		**P**	**07 34 11.2**	**-0.8**
	comp=Z,3.3nm,0.5s,baz=30,slow=4.8,SNR=69							
ESDC	**Sonseca Array**	**88.44**	**8**	P		**P**	**07 34 11.5**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=344,slow=4.6,SNR=3.4							
STKA	**Stephens Creek**	**92.32**	**217**	P		**P**	**07 34 29.1**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=343,slow=10,SNR=5.3							
STKA	**Stephens Creek**	**92.32**	**217**	IAmb		IAmb	07 34 35.0	
	comp=Z,0.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**115.20**	**6**	PKP		**PKiKP**	**07 40 00.9**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=50,slow=2.3,SNR=4.1							
H03N2	**Juan Fernandez**	**117.81**	**109**	T		T	09 48 59.6	
	baz=317							
H03N1	**Juan Fernandez**	**117.82**	**109**	T		T	09 48 55.7	
	baz=317							
H03N3	**Juan Fernandez**	**117.83**	**109**	T		T	09 49 07.1	
	baz=317							
PLCA	**Paso Flores**	**127.66**	**110**	PKP		**PKPdf**	**07 40 23.8**	**-1.4**
	comp=Z,1.2nm,1.0s,baz=261,slow=2.4,SNR=3.4							
QSPA	**South Pole Qui**	**141.52**	**180**	PKhKP		PKPpre	07 40 41.8	
	comp=Z,0.7nm,0.6s,baz=28,slow=17,SNR=5.5							
MAW	**Mawson**	**149.01**	**218**	PKPbc		**PKPbc**	**07 41 06.2**	**-0.9**
	comp=Z,3.5nm,0.6s,baz=121,slow=2.1,SNR=7.0							
BOSA	**Boshof**	**153.15**	**322**	PKPbc		**PKPbc**	**07 41 17.8**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=23,slow=4.0,SNR=7.2							
HOPE	**Hope Point**	**154.03**	**113**	PKPbc		**PKPdf**	**07 41 15.2**	**+4.2**

IDC 09 07:23:13.4±3.1, 53°.97N×89°.90E, h0km, mb1 3.1/3, mb1mx3.0/62, mbtmp3.1/3, ML2.6/3, Error ellipse: s-maj=26.5km s-min=22.1km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.00**	**272**	*i*			07 43 30.0	
	baz=85,slow=319,SNR=0.9							
ZALV	**Zalesovo Beam**	**3.00**	**272**	Pn	Pn		07 24 03.8	+1.6
	0.7nm,0.3s,baz=93,slow=13,SNR=4.3							
ZALV				Lg	Lg		07 24 45.9	
	1.3nm,0.3s,baz=88,slow=27,SNR=6.5							
KURBB	**Kurchatov Arra**	**7.74**	**249**	Pn	Pn		07 25 07.0	-0.1
	0.1nm,0.3s,baz=63,slow=15,SNR=13							
KURBB				Sn	Sn		07 26 35.5	+0.1
	0.1nm,0.3s,baz=65,slow=24,SNR=8.3							
KURBB				Lg	Lg		07 27 17.7	
	0.0nm,0.3s,baz=63,slow=35,SNR=2.0							
MKAR	**Makanchi Array**	**8.67**	**217**	Pn	Pn		07 25 20.7	+0.6
	0.2nm,0.3s,baz=33,slow=12,SNR=8.9							
MKAR				Sn	Sn		07 26 58.0	-0.6
	0.1nm,0.3s,baz=35,slow=25,SNR=2.9							
MKAR				Lg	Lg		07 27 47.1	
	baz=36,slow=28,SNR=1.5							

IDC 09 07:53:03.1±3.8, 6°.39S×148°.07E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/47, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=113.9km s-min=47.9km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**18.95**	**223**	P	P		07 57 25.6	-0.5
	0.2nm,0.3s,baz=49,slow=10,SNR=12							
ASAR	**Alice Springs**	**21.92**	**217**	P	P		07 57 58.8	+0.5
	0.4nm,0.3s,baz=44,slow=12,SNR=18							
FITZ	**Fitzroy Crossi**	**24.78**	**240**	P	P		07 58 25.1	-1.8
	0.7nm,0.3s,baz=58,slow=8.9,SNR=1.3							
TORD	**Torodi Ar. Bea**	**146.22**	**284**	PKPbc	PKPab		08 12 47.3	0.0
	0.2nm,0.4s,baz=77,slow=3.4,SNR=1.5							

DJA ***09*** *07:54:42.7±0.8, 8°.5S×12°.0E±°, h168km±11km, M3.4/7, MLv3.4/7*

IDC ***09*** *07:54:43.9±2.0, 8°.07S×120°.00E, h201km±16km, mb2.8/3, mb1 3.1/7, mb1mx2.9/48, mbtmp3.6/7, MS2.7/1, Ms1 2.7/1, ms1mx2.1/11, Error ellipse: s-maj=56.4km s-min=10.1km az=52.0*

ISC 09 07:54:42.0±1.0, 8°.27S±0°.06×119°.70E±0°.08, h200km, n13, σ1°78/17, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PLAI	**Plampang**	**1.98**	**254**	P	**Pn**		**07 55 18.7**	**-1.6**
BASI	**Baing, Sumba**	**2.12**	**156**	P	**Pn**		**07 55 21.0**	**-0.8**
BSSI	**Bau Bau, Buton**	**2.25**	**20**	P	**Pn**		**07 55 21.9**	**-1.3**
TWSI	**Taliwang, Sumb**	**2.83**	**260**	P	**Pn**		**07 55 28.5**	**-1.1**
BKSI	**Bulukumba**	**2.96**	**8**	P	**Pn**		**07 55 29.4**	**-1.8**
KAPI	**Kappang**	**3.23**	**1**	P	**Pn**		**07 55 33.7**	**-0.8**
	5.6nm,0.3s,baz=179,slow=7.1,SNR=9.2							
BNSI	**Bone**	**3.86**	**6**	P	**Pn**		**07 55 41.2**	**-0.9**
BATI	**Baumata**	**4.36**	**117**	P	**Pn**		**07 55 48.6**	**+0.3**
	14nm,0.3s,baz=299,slow=6.9,SNR=4.9							
BATI				S	**Sn**		**07 56 37.9**	**-2.6**
	4.0nm,0.3s,baz=290,slow=14,SNR=1.6							
FITZ	**Fitzroy Crossi**	**11.35**	**150**	P	**Pn**		**07 57 20.5**	**+1.8**
	0.3nm,0.3s,baz=324,slow=8.3,SNR=9.5							
FITZ				S	**Sn**		**07 59 21.9**	**-3.5**
	0.4nm,0.3s,baz=342,slow=20,SNR=2.8							
WRA	**Warramunga Arr**	**18.32**	**131**	P	**Pn**		**07 58 43.7**	**-0.2**
	0.2nm,0.3s,baz=301,slow=12,SNR=7.0							
WRA				S	**S**		**08 02 00.3**	**-0.1**
	0.1nm,0.3s,baz=292,slow=24,SNR=2.1							
WRA				LR	LR		08 07 31.1	
	comp=Z,25nm,19.3s,baz=120,slow=42							
ASAR	**Alice Springs**	**20.49**	**140**	P	**P**		**07 59 07.5**	**+2.8**
	0.4nm,0.5s,baz=318,slow=10,SNR=7.5							
ASAR				S	**S**		**08 02 43.9**	**+1.0**
	0.6nm,0.7s,baz=324,slow=24,SNR=6.0							
MKAR	**Makanchi Array**	**64.13**	**332**	P	**P**		**08 04 56.5**	**+1.5**
	0.4nm,0.5s,baz=145,slow=7.0,SNR=4.8							
KURBB	**Kurchatov Arra**	**68.62**	**333**	P	**P**		**08 05 23.8**	**+0.4**
	0.2nm,0.7s,baz=135,slow=4.3,SNR=1.4							

IDC ***09*** *08:09:03.8±8.6, 7°.63S×128°.27E, h161km±91km, mb3.2/2, mb1 3.5/5, mb1mx3.1/43, mbtmp3.9/5, Error ellipse: s-maj=87.1km s-min=25.3km az=36.0*

ISC 09 08:09:02.9±1.4, 7°.85S±0°.1×128°.4E±0°.1, h150km, n6, σ2°70/9, Banda Sea

| Code | Station Name | Δ° | AZ

3µm213nm,0.6s
TOLI2 Tolitoli 5.53 280 Pn 08 15 13.8 -0.3
BNDI Bandanaira 5.91 142 P **Pn 08 15 20.0 +0.6**
1.8nm54µm201nm,1.2s
FAKI Fak Fak 6.74 117 Pn **Pn 08 15 30.3 -0.5**
FAKI Fak Fak 6.74 117 P **Pn 08 15 31.3 +0.5**
0.3nm1µm95nm,0.9s
KCP Kidapawan 6.92 351⇓*eP* **Pn 08 15 36.5 +3.2**
TTSI Tana Toraja 7.14 244 P **Pn 08 15 36.3 0.0**
0.9nm3µm217nm,0.6s
BNSI Bone 7.60 234 P **Pn 08 15 43.4 +0.9**
0.6nm2µm166nm,0.8s
SPSI Sidrap Palu 7.63 238 P **Pn 08 15 44.1 +1.1**
1.0nm3µm284nm,0.7s
BKSI Bulukumba 8.16 228 P **Pn 08 15 50.3 +0.1**
5µm207nm,0.8s
KAPI Kappang 8.25 232 P **Pn 08 15 52.8 +1.4**
8.1nm,0.3s,baz=43,slow=8.4,SNR=27
KAPI S **Sn 08 17 19.5 -3.8**
1.5nm,0.3s,baz=27,slow=13,SNR=1.0
KAPI Kappang 8.25 232 Pn **Pn 08 15 53.0 +1.6**
BSSI Bau Bau, Buton 8.47 222 P **Pn 08 15 55.6 +1.1**
597nm54nm,0.7s
MYLDM Lahad Datu 9.20 303 Pn **Pn 08 16 03.5 -0.9**
SOEI Soe 10.02 191 Pn **Pn 08 16 17.1 +1.2**
SOEI Soe 10.02 191 P **Pn 08 16 16.2 +0.3**
59nm,0.7s
BATI Baumata 10.59 194 LR LR 08 21 14.5
comp=Z,473nm,20.7s,baz=54,slow=41
BBKI Banjar Baru 11.93 252 P Pn 08 16 53.0 +11
PLAI Plampang 12.26 223 P **P 08 16 54.6 -3.1**
TWSI Taliwang, Sumb 12.82 226 P **Pn 08 16 53.2 -0.9**
26nm,1.0s
MTN Manton Dam 13.79 160 Pn **Pn 08 17 06.9 -0.4**
KMMI Kalianget 14.16 239 P **Pn 08 17 13.4 +1.1**
KDU Kakadu 14.17 154 P **Pn 08 17 10.5 -1.9**
baz=14,SNR=16
SBUM Sibu 14.19 279 P **P 08 17 19.7 +0.6**
SBUM Sibu 14.19 279 P **P 08 17 20.0 +0.8**
JAY Jayapura 14.71 100 LR LR 08 24 20.8
comp=Z,575nm,18.8s,baz=245,slow=42
JAGI Jajag, Banyuwa 14.76 234 P **P 08 17 25.6 0.0**
KSM Kuching 15.97 275 P **P 08 17 38.6 -0.4**
KSM IAmb IAmb 08 17 43.1
comp=Z,57nm,1.0s
KSM Kuching 15.97 275 P **P 08 17 40.0 +1.0**
WOJI Wonogiri, Jawa 17.19 242 P **P 08 17 55.2 +2.7**
SMRI Semarang 17.29 245 P **P 08 17 53.9 +0.3**
SMRI IAmb IAmb 08 18 02.6
comp=Z,90nm,0.7s
SMRI Semarang 17.29 245 P P 08 18 02.5 +8.9
FITZ Fitzroy Crossi 18.13 182 P **P 08 18 03.1 +0.3**
comp=Z,0.3nm,0.3s,baz=13,slow=11,SNR=10
FITZ LR LR 08 26 51.1
comp=Z,103nm,18.0s,baz=5.0,slow=43
FITZ Fitzroy Crossi 18.13 182 P **Pn 08 18 03.5 +0.6**
baz=18,SNR=8.0
FITZ Fitzroy Crossi 18.13 182 P 08 18 02.6 -0.3
LEM Lembang 19.81 249 P **Pn 08 18 23.3 -0.1**
comp=Z,10nm,0.3s,baz=211,slow=20,SNR=5.4
LEM LR LR 08 27 09.1
comp=Z,265nm,19.4s,baz=66,slow=40
WRAB Tennant Creek 21.48 159 P **P 08 18 38.8 -0.6**
WRAB IAmb IAmb 08 18 44.8
comp=Z,59nm,0.9s
WRA Warramunga Arr 21.48 159 P **P 08 18 38.7 -0.6**
comp=Z,38nm,0.7s,baz=338,slow=11,SNR=94
WRA Warramunga Arr 21.48 159 P **P 08 18 37.5 -1.8**
WB2 Warramunga Arr 21.49 159 P **P 08 18 38.7 -0.7**
baz=21
WB2 Warramunga Arr 21.49 159 P **P 08 18 38.8 -0.7**
WB2 IAmb IAmb 08 18 44.3
comp=Z,65nm,1.0s
COEN Coen 21.86 131 P **P 08 18 45.2 +1.8**
COEN IAmb IAmb 08 18 51.1
comp=Z,37nm,1.1s
KASI Kota Agung 22.41 255 P **P 08 18 52.6 +3.2**
PSA00 Pilbara Seismi 22.46 196 P **P 08 18 50.2 +0.4**
XMIS Christmas Isla 23.02 242 P **P 08 18 56.2 +0.5**
YULB Yu-li 23.60 349 P **P 08 19 00.2 -1.1**
YULB IAmb IAmb 08 19 02.5
comp=Z,23nm,1.0s
JRMM Jerantut 24.02 279 P **P 08 19 07.0 +1.7**
SSLB Suanglung 24.06 348 P **P 08 19 05.4 -0.2**
SSLB IAmb IAmb 08 19 14.4
comp=Z,30nm,1.0s
QIS Mount Isa 24.38 148 P **P 08 19 09.1 +0.5**
baz=24,SNR=37
QIZ Qiongzhong 24.71 320 P **P 08 19 11.2 -0.4**
QIZ S **S 08 23 31.5 +0.7**
QIZ LR LR
comp=Z,240nm,12.7s
QIZ LR LR
comp=Z,150nm,6.8s
QIZ LR LR
comp=Z,240nm,11.4s
AS31 Alice Springs 24.81 163 P **P 08 19 13.0 +0.5**
AS31 IAmb IAmb 08 19 17.3
comp=Z,16nm,0.4s
ASPA Alice Springs 24.81 163 P **P 08 19 12.3 -0.2**
baz=25
ASAR Alice Springs 24.81 163 P **P 08 19 12.9 +0.4**
comp=Z,18nm,0.3s,baz=345,slow=12,SNR=140
ASAR S **S 08 23 31.3 -1.0**
comp=Z,1.0nm,0.9s,baz=349,slow=24,SNR=2.6
WRKA Warakurna 25.11 176 P **P 08 19 16.1 +0.9**
baz=25,SNR=26
MTSU Mount Surprise 25.42 137 P **P 08 19 18.6 +0.5**
baz=25,SNR=3.9
GIRL Giralia 25.48 207 P **P 08 19 20.6 +2.1**
baz=25,SNR=3.2
GIRL Giralia 25.48 207 P **P 08 19 20.1 +1.6**
JOW Kunigami 26.61 4 P **P 08 19 29.8 +1.1**
comp=Z,40nm,0.8s,baz=198,slow=7.3,SNR=7.4
JOW Kunigami 26.61 4 P **P 08 19 30.2 +1.5**
PSI Prapat 27.42 276 LR LR 08 31 28.8
comp=Z,162nm,21.5s,baz=91,slow=38
FORT Forrest 30.80 177 P **P 08 20 05.9 0.0**
baz=31,SNR=8.3
FORT Forrest 30.80 177 P **P 08 20 06.0 +0.1**
KMBL Kambalda 31.61 187 P **P 08 20 13.2 +0.1**
baz=32,SNR=4.4
CMAR Chiang Mai Arr 32.40 306 P **P 08 20 20.9 +0.7**
comp=Z,1.0nm,0.3s,baz=143,slow=7.5,SNR=7.8
CMAR LR LR 08 35 12.0
comp=Z,53nm,18.9s,baz=160,slow=39
CMAR Chiang Mai Arr 32.40 306 P **P 08 20 19.3 -0.8**
NJ2 Nanjing 32.50 348 *eP* **P 08 20 21.3 +0.5**
NJ2 pmax pmax
comp=Z,13nm,0.5s
NWAO Narrogin (SRO) 33.97 194 P **P 08 20 33.9 +0.2**
comp=Z,6.8nm,0.8s,baz=131,slow=10,SNR=3.0
BBOO Buckleboo 34.06 165 P **P 08 20 35.1 +0.6**
baz=34,SNR=16
BBOO Buckleboo 34.06 165 P **P 08 20 34.8 +0.3**
EIDS Eidsvold 34.93 138 P **P 08 20 42.2 +0.1**
baz=35
STKA Stephens Creek 35.01 157 P **P 08 20 43.1 +0.4**
comp=Z,15nm,0.7s,baz=332,slow=8.4,SNR=28
STKA Stephens Creek 35.01 157 P **P 08 20 43.0 +0.4**
baz=35,SNR=17
STKA Stephens Creek 35.01 157 P **P 08 20 43.1 +0.4**
HTT Hallett 35.47 162 P **P 08 20 47.9 +1.2**
baz=35,SNR=6.3
JWT Wachi 35.99 13 P **P 08 20 50.9 -0.2**
JGF Kuroka 36.77 15 P **P 08 20 58.4 +0.6**
JGF IAmb IAmb 08 21 16.4
comp=Z,9.9nm,0.9s
KSRS Korea Array 37.16 2 P **P 08 21 01.6 +0.6**
comp=Z,7.7nm,0.7s,baz=179,slow=9.9,SNR=20
KS19 Wonju Array Si 37.21 2 P **P 08 21 01.7 +0.3**
KS19 IAmb IAmb 08 21 06.7
comp=Z,8.8nm,0.7s
CD2 Chengdu 37.30 327 *eP* **P 08 21 02.0 -0.4**
XAN Xi'an 37.42 336 P **P 08 21 04.4 +1.0**
XAN pP pP 08 21 15.3 +0.7
XAN pmax pmax
comp=Z,11nm,0.7s
XAN Xi'an 37.42 336 P **P 08 21 01.6 -1.8**
XAN IAmb IAmb 08 21 06.7
comp=Z,6.7nm,0.6s
MAT Matsushiro 37.89 16 P **P 08 21 05.3 -1.9**
MJAR Matsushiro Arr 37.89 16 P **P 08 21 05.8 -1.5**
comp=Z,1.9nm,0.4s,baz=187,slow=8.8,SNR=5.8
MJAR Matsushiro Arr 37.89 16 P **P 08 21 06.2 -1.0**
DL2 Dalian 38.81 354 P **P 08 21 15.2 +0.3**
DL2 pmax pmax
comp=Z,39nm,0.9s
ARPS Mount Arapiles 39.48 160 P **P 08 21 21.4 +0.9**
baz=39,SNR=5.2
JMM Marumori 39.87 18 P **P 08 21 23.6 -0.1**
BJT Baijiatuau 40.74 348 P **P 08 21 30.2 -0.7**
BJT IAmb IAmb 08 21 41.2
comp=Z,11nm,0.7s
BJI Beijing 40.76 348 P **P 08 21 32.0 +1.0**
BJI pmax pmax
comp=Z,11nm,0.6s
LZH Lanzhou 41.37 332 *eP* P 08 21 42.6 +6.2
LZH pP pwP 08 21 50.9 -0.2
LZH sP sP 08 21 55.6 +3.0
LZH pmax pmax
comp=Z,17nm,0.9s
LZH pmax pmax
comp=Z,92nm,4.2s
LZH LR LR
comp=N,190nm,14.6s
LZH LR LR
comp=E,230nm,15.8s
LZH LR LR
comp=Z,230nm,16.8s
HHC Hu-ho-hao-te 42.65 344 *eP* **P 08 21 46.8 +0.1**
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,88nm,7.0s
HHC LR LR
comp=Z,190nm,17.0s
HHC LR LR
comp=Z,150nm,16.2s
HHC LR LR
comp=Z,210nm,17.0s
USA0B Ussuriysk Arra 44.17 6 P **P 08 21 59.1 +0.4**
USA0B IAmb IAmb 08 22 03.8
comp=Z,11nm,0.9s
USRK Ussuriysk Ar. 44.17 6 P **P 08 21 58.7 -0.1**
comp=Z,6.3nm,0.6s,baz=187,slow=6.8,SNR=17
DZM Mont Dzumac 44.98 122 LR LR 08 40 40.9
comp=Z,50nm,20.6s,baz=308,slow=36
GTA Gaotai 45.94 331 ⇑P **P 08 22 15.8 +2.7**
GTA pP pP 08 22 21.1 -3.4
GTA sP pwP 08 22 24.2 -3.6
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,160nm,5.1s
GTA LR LR
comp=Z,140nm,19.3s
GTA LR LR
comp=Z,160nm,18.2s
GTA LR LR
comp=Z,220nm,18.2s
ASAJ Asahikawa 46.15 16 P **P 08 22 14.3 -0.1**
comp=Z,16nm,1.1s,baz=238,slow=8.9,SNR=11
ASAJ LR LR 08 41 54.4
comp=Z,73nm,19.9s,baz=190,slow=36
JKA Kamikawa-asahi 46.15 16 P **P 08 22 14.3 -0.1**
KLR Kul'dur 49.13 5 P **P 08 22 36.9 -0.7**
comp=Z,2.9nm,0.6s,baz=216,slow=7.2,SNR=8.6
HYB Hyderabad 49.94 293 *i* P **P 08 22 43.0 -1.3**
ULN Ulaanbaatar 50.37 343 P **P 08 22 47.2 0.0**
ULN IAmb IAmb 08 23 05.7
comp=Z,21nm,1.4s
SONM Songino Array 50.54 343 P **P 08 22 48.1 -0.3**
comp=Z,3.4nm,0.6s,baz=158,slow=7.9,SNR=24
SONM LR LR 08 45 50.5
comp=Z,152nm,21.7s,baz=150,slow=38
SONM Songino Array 50.54 343 P **P 08 22 47.9 -0.5**
TLY Talaya 54.78 343 P **P 08 23 20.7 +1.2**
comp=Z,2.6nm,0.4s,baz=172,slow=6.0,SNR=8.0
TLY Talaya 54.78 343 P **P 08 23 20.5 +1.0**
TLY IAmb IAmb 08 23 41.4
comp=Z,8.0nm,1.0s
WMQ Urumqi 55.40 327 *eP* **P 08 23 24.5 +0.3**
WMQ pP pwP 08 23 38.7 -0.5
WMQ sP sP 08 23 44.0 +3.3
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ pmax pmax
comp=Z,200nm,5.5s
WMQ LR LR
comp=Z,540nm,20.1s
WMQ LR LR
comp=Z,350nm,22.7s
PETK Petropavlovsk- 58.93 22 P **P 08 23 49.4 +0.5**
comp=Z,6.2nm,0.5s,baz=191,slow=6.8,SNR=2.5
NIL Nilore 59.76 310 P **P 08 23 54.3 -0.8**
SHLS Shalkode 59.81 322 *eP* **P 08 23 52.7 -2.7**
baz=322
UZB Uzynbulak 60.07 322 *eP* **P 08 23 56.1 -1.1**
baz=322
MK31 Makanchi Array 60.23 327 P **P 08 23 57.3 -0.7**
MK31 IAmb IAmb 08 24 08.4
comp=Z,6.2nm,0.9s
MKAR Makanchi Array 60.23 327 P **P 08 23 57.3 -0.8**
comp=Z,4.1nm,0.3s,baz=121,slow=8.6,SNR=38
MKAR LR LR 08 52 34.3
comp=Z,102nm,18.5s,baz=109,slow=38
MKAR Makanchi Array 60.23 327 P **P 08 23 57.2 -0.9**
KSH Kashi 60.26 317 P **P 08 24 00.0 +1.5**
KSH S **S 08 32 11.2 +1.5**
KSH pmax pmax
comp=Z,3.0nm,0.4s
KSH pmax pmax
comp=Z,150nm,5.5s
KSH LR LR
comp=Z,410nm,7.8s
KSH LR LR
comp=Z,470nm,8.8s
KSH LR LR
comp=Z,220nm,9.8s
MAKZ Makanchi 60.41 327 P **P 08 23 58.5 -0.8**
MAKZ IAmb IAmb 08 24 10.6
comp=Z,9.7nm,0.9s
SATY Saty 60.41 321 *eP* **P 08 23 59.1 -0.4**
comp=Z,3.4nm,0.7s,baz=321
KPKS Kokpek 60.45 322 *eP* **P 08 23 59.0 -0.8**
comp=Z,3.5nm,0.8s,baz=322
MDOK Medeo 61.32 321 *eP* **P 08 24 05.0 -0.6**
baz=321
TNSS Tian-Shan 61.32 321 *eP* **P 08 24 05.2 -0.8**
baz=321
TDK Taldyqorghan 61.44 323 *eP* **P 08 24 05.6 -0.7**
baz=323
KUU Kurty 62.13 321 *eP* **P 08 24 10.4 -0.6**
comp=Z,5.8nm,0.5s,baz=321
MA2 Magadan 62.29 14 P **P 08 24 12.6 +0.9**
AAK Ala-Archa 62.70 319 P **P 08 24 14.5 -0.4**
comp=Z,1.4nm,0.4s,baz=214,slow=6.0,SNR=5.5
AAK Ala-Archa 62.70 319 P **P 08 24 14.7 -0.3**
SGDS Sogindy 63.00 320 *eP* **P 08 24 16.5 -0.3**
comp=Z,7.5nm,0.8s,baz=320
KBL Kabul 63.34 309 P **P 08 24 18.6 -0.8**
KBL IAmb IAmb 08 24 24.8
comp=Z,7.2nm,0.7s
ZAA0 Zalesovo Array 63.56 334 P **P 08 24 19.4 -0.8**
ZAA0 IAmb IAmb 08 24 38.4
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 63.56 334 P **P 08 24 19.2 -1.0**
comp=Z,2.7nm,0.4s,baz=116,slow=5.2,SNR=10.0
ZALV Zalesovo Beam 63.56 334 P **P 08 24 19.0 -1.2**
GAR Garm 64.01 314 P **P 08 24 22.6 -1.1**
KURBB Kurchatov Arra 64.49 329 P **P 08 24 25.8 -0.7**
comp=Z,5.7nm,0.7s,baz=127,slow=6.1,SNR=42
KURK Kurchatov 64.50 329 P **P 08 24 25.8 -0.7**
DZA Taraz 64.89 318 *eP* **P 08 24 28.7 -0.6**
baz=318
IUG Iuzhnay 65.46 317 *eP* **P 08 24 32.5 -0.5**
baz=317
KK31 Karatay Array 65.53 318 P **P 08 24 32.2 -1.1**
KKAR Karatay Array 65.53 318 P **P 08 24 32.9 -0.5**
BRZS Berezniki 67.33 326 *eP* **P 08 24 44.1 -0.6**
baz=326
BVAR Borovoye Array 70.05 328 P **P 08 25 01.5 -0.1**
comp=Z,5.2nm,0.8s,baz=129,slow=2.1,SNR=14
BRVK Borovoye 70.13 328 P **P 08 25 01.9 -0.2**
BRVK IAmb IAmb 08 25 21.1
comp=Z,15nm,0.9s
TIXI Tiksi 71.42 1 P **P 08 25 08.4 -1.1**
TIXI IAmb IAmb 08 25 16.9
comp=Z,3.8nm,0.5s
SOCY Socotra 72.62 283 P **P 08 25 16.3 -1.7**
SOCY IAmb IAmb 08 25 18.6
comp=Z,14nm,0.9s
GEYT Alibeck 72.76 310 P **P 08 25 17.7 -0.6**
comp=Z,1.5nm,0.5s,baz=103,slow=6.4,SNR=1.8
GEYT LR LR 09 00 49.1
comp=Z,64nm,18.1s,baz=290,slow=39
NRIK Noril'sk 73.78 347 P **P 08 25 23.6 0.0**
comp=Z,2.7nm,0.6s,baz=139,slow=6.3,SNR=7.4
NRIK LR LR 09 01 25.2
comp=Z,105nm,18.6s,baz=151,slow=39
NRIK Noril'sk 73.78 347 P **P 08 25 23.5 -0.1**
ABKAR Akbulak array 74.61 322 P **P 08 25 28.6 -0.3**
ABKAR Akbulak array 74.61 322 P **P 08 25 28.3 -0.6**
AKTO Aktyubinsk 76.16 322 P **P 08 25 37.6 -0.1**
comp=Z,12nm,0.7s,baz=108,slow=7.4,SNR=32
ARU Arti 77.69 328 P **P 08 25 45.6 -0.7**
comp=Z,3.1nm,0.2s
ARU Arti 77.69 328 P **P 08 25 45.5 -0.7**
ARU IAmb IAmb 08 26 09.9
comp=Z,11nm,0.9s
GAMB Gambell 77.86 24 P **P 08 25 47.1 +0.1**
GAMB IAmb IAmb 08 26 08.0
comp=Z,9.4nm,1.1s
VNDA Vanda 79.95 173 P **P 08 25 58.6 +0.3**
comp=Z,1.4nm,0.7s,baz=305,slow=6.5,SNR=7.9
VNDA LR LR 09 00 28.2
comp=Z,21nm,21.8s,baz=341,slow=35
VNDA Vanda 79.95 173 P **P 08 25 57.5 -0.8**
MAW Mawson 80.24 200 LR LR 08 57 19.8
comp=Z,52nm,20.5s,baz=58,slow=32
RAYN Ar Rayn 81.44 294 P **P 08 26 07.0 -0.4**
RAYN IAmb IAmb 08 26 08.8
comp=Z,15nm,1.1s
PPT Papeete 84.51 108 LR LR 09 02 25.6
comp=Z,28nm,18.4s,baz=320,slow=34
KBZ Khabaz 85.07 314 P **P 08 26 24.9 -0.7**
comp=Z,2.8nm,0.9s,baz=190,slow=6.1,SNR=4.0
KLMR Klimovskoe 88.27 331 *eP* **P 08 26 38.4 -2.4**
KLMR AMP 08 26 39.8
comp=Z,15nm,1.3s
ILAR Eielson Array 88.54 25 P **P 08 26 41.5 -0.6**
comp=Z,0.3nm,0.6s,baz=260,slow=4.0,SNR=2.2
SYO Syowa Base 88.92 201⇓*ePcP* **PcP 08 26 49.0 +3.8**
KMBO Kilima Mbogo 88.98 269 P **P 08 26 45.0 -0.5**
comp=Z,1.2nm,0.4s,baz=75,slow=8.5,SNR=4.1
QSPA South Pole Qui 90.07 180 P **P 08 26 49.8 +0.5**
BRTR Keskin Array B 91.91 310 LR LR 09 15 13.7
comp=Z,45nm,18.6s,baz=94,slow=40
ARCES ARCESS Array B 93.62 340 P **P 08 27 04.7 -0.9**
comp=Z,2.2nm,0.7s,baz=345,slow=7.9,SNR=4.4
SPITS Spitsbergen Ar 93.88 349 P **P 08 27 05.6 -1.0**
comp=Z,3.3nm,0.8s,baz=136,slow=12,SNR=6.2
AKASG Malin Array Be 94.34 321 LR LR 09 12 46.9
comp=Z,55nm,20.0s,baz=325,slow=37
FINES FINESS Array B 94.73 332 P **P 08 27 09.9 -0.9**
comp=Z,1.0nm,0.6s,baz=72,slow=6.0,SNR=1.5
NACGM Naroch 95.32 325 *i* P **P 08 27 17.9 +4.3**
NACGM *i* P **P 08 27 17.9 +4.3**
NACGM *i* P **P 08 27 17.9 +4.3**
NACGM *i* PP **PP 08 31 06.7 +2.5**
NACGM *i* PPP PPP 08 33 08.2
NACGM *i* SKS **SKiKP 08 35 30.4 +4.8**
NACGM *i* S **SKSac 08 37 46.6 +0.6**
NACGM *i* SS **SS 08 44 55.0 +1.4**
NACGM *i* SSS SSS 08 48 30.7
NACGM *i* LQ LQ 09 03 50.9
NACGM *i* LR LR 09 09 02.2
BURAR Bucovina Array 97.32 318 P **P 08 27 20.8 -2.3**
BURAR IAmb IAmb 08 27 28.0
comp=Z,2.2nm,0.8s
BOSA Boshof 99.70 241 LR LR 09 08 35.4
comp=Z,48nm,18.6s,baz=91,slow=33
TORD Torodi Ar. Bea 123.48 286 PKP **PKPdf 08 32 47.5 -0.4**
comp=Z,2.1nm,0.7s,baz=51,slow=1.8,SNR=7.7
TXAR Lajitas Array 124.15 54 PKP **PKiKP 08 32 49.2 -0.1**
comp=Z,0.2nm,0.7s,baz=42,slow=0.8,SNR=4.2
CPUP Villa Florida 153.74 173 PKPbc **PKPbc 08 33 48.7 -0.7**
comp=Z,1.2nm,0.8s,baz=162,slow=3.2,SNR=2.3

*IDC **09** 08:14:23.8±9.8,36.50N×72.07E,h134km±72km,mb2.8/1, mb1 2.7/5,mb1mx2.6/57,mbtmp3.2/5, Error ellipse: s-maj=130.3km s-min=76.3km az=95.0*
*NNC **09** 08:14:24.1±3.9,36.57N×73.09E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=45.0km s-min=28.1km az=115.0*
ISC 09 08:14:25.6±1.9,36.41N±0.0°09,73.0E±0.2,h100km,n9, σ1s65/13,3C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**4.56**	**150**	*eP*	Pn	08 15 47.0	+15
THN				*eS*	**Sn**	**08 16 25.5**	**+1.2**
AAK	**Ala-Archa**	**6.33**	**10**	P	**Pn**	**08 15 56.4**	**-0.1**
	0.5nm,0.3s,baz=207,slow=9.0,SNR=6.8						
AAK				S	**Sn**	**08 17 08.8**	**+1.4**
	0.2nm,0.3s,baz=10,slow=22,SNR=1.8						
AAK	**Ala-Archa**	**6.33**	**10**	⇓Pn	**Pn**	**08 15 56.6**	**+0.1**
	2.1nm,0.6s						
AAK				⇑Sn	**Sn**	**08 17 10.1**	**+2.7**
	1.9nm,0.6s						
TKM2	**Tokmak 2**	**6.81**	**16**	⇓Pn	**Pn**	**08 16 02.9**	**-0.1**
	1.9nm,0.6s						
TKM2				⇓Sn	**Sn**	**08 17 19.1**	**+0.1**
	3.2nm,0.8s						
KK31	**Karatay Array**	**6.95**	**345**	⇑Pn	**Pn**	**08 16 05.3**	**+0.5**
	1.0nm,0.3s,baz=162,slow=13,SNR=13						
KK31				⇑Sn	**Sn**	**08 17 23.8**	**+1.6**
	3.9nm,0.7s,baz=162,slow=22,SNR=4.3						
MKAR	**Makanchi Array**	**12.48**	**31**	P	**Pn**	**08 17 19.5**	**-0.1**
	0.0nm,0.3s,baz=217,slow=15,SNR=2.3						
KURBB	**Kurchatov Arra**	**14.76**	**14**	P	**Pn**	**08 17 46.4**	**-2.7**
	0.0nm,0.3s,baz=200,slow=11,SNR=1.9						
ZALV	**Zalesovo Beam**	**19.37**	**21**	P	**P**	**08 18 40.7**	**-2.5**
	0.2nm,0.3s,baz=218,slow=11,SNR=1.3						
SONM	**Songino Array**	**27.08**	**55**	P	**P**	**08 19 59.1**	**+0.3**
	0.1nm,0.3s,baz=239,slow=8.1,SNR=1.4						

*NNC **09** 08:20:53.5±16.0,41.36N×78.29E,h0km,mb3.4,mpv3.0, Error ellipse: s-maj=131.6km s-min=113.8km az=148.0*
SOME 09 08:20:50.4,44.68N×81.93E,h10km,4C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.57**	**258**	*eP*	Pg	08 21 22.4	+1.8
	3.3nm,0.3s						
DJR				*eS*	Sg	08 21 45.2	+4.2
	10nm,0.3s						
MAKZ	**Makanchi**	**2.13**	**1**	⇑Pn	Pb	08 21 28.9	-0.1
	1.7nm,0.3s						
MAKZ				⇑Sn	Sb	08 21 56.7	+1.3
	4.5nm,0.4s						
MK31	**Makanchi Array**	**2.13**	**7**	Pn	Pb	08 21 28.8	-0.3
	2.5nm,0.4s,baz=191,slow=15,SNR=157						
MK31				⇑Sn	Sb	08 21 57.0	+1.5
	0.6nm,0.2s,baz=181,slow=26,SNR=18						
PDGK	**Podgornoye**	**2.22**	**233**	Pg	Pg	08 21 31.9	-1.1
	2.0nm,0.3s						
PDGK				Lg	Lg	08 22 01.8	
	2.7nm,0.5s						
PDGK	**Podgornoye**	**2.22**	**233**	⇑Pn	Pg	08 21 32.3	-0.7
	1.0nm,0.2s						
PDGK				⇓Sn	Sg	08 22 02.0	+0.2
	2.9nm,0.6s						
SHLS	**Shalkode**	**2.35**	**230**	*eP*	Pn	08 21 30.0	+0.8
	6.8nm,0.3s						
SHLS				*eS*	Sn	08 21 58.3	+0.2
	12nm,0.5s						
SHLS	**Shalkode**	**2.35**	**230**	Pg	Pn	08 21 30.0	+0.8
	6.8nm,0.3s						
SHLS				Lg	Lg	08 21 58.3	
	12nm,0.5s						
KPKS	**Kokpek**	**2.64**	**244**	*eP*	Pg	08 21 39.4	-1.5
	4.8nm,0.2s						
KPKS				*eS*	Sg	08 22 14.7	-0.4
	18nm,0.3s						
ARXS	**Arharly**	**2.98**	**262**	Pg	Pb	08 21 44.6	+1.0
	5.4nm,0.4s						
ARXS				Lg	Lg	08 22 23.7	
	7.3nm,0.4s						

*IDC **09** 08:37:28.3±2.6,17.60S×174.62W,h162km±25km,mb3.3/7, mb1 3.6/8,mb1mx3.4/35,mbtmp3.8/8, Error ellipse: s-maj=40.6km s-min=15.7km az=142.0*

ISC 09 08:37:27.0±0.9, 17.5S±0.2×174.7W±0.2, h150km, n8, σ1812/11, mb3.7/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.54**	**39**	P	**Pn**	**08 38 36.4**	**+1.9**
	8.0nm,0.3s,baz=190,slow=5.0,SNR=12						
AFI				S	**Sn**	**08 39 24.8**	**-2.3**
	50nm,0.3s,baz=62,slow=23,SNR=21						
URZ	**Urewera**	**21.89**	**198**	P	**P**	**08 42 07.8**	**-0.3**
	1.6nm,0.3s,baz=120,slow=24,SNR=6.3						
STKA	**Stephens Creek**	**41.93**	**242**	P	**P**	**08 45 02.5**	**-0.6**
	1.7nm,0.6s,baz=34,slow=8.4,SNR=6.2						
WRA	**Warramunga Arr**	**48.19**	**259**	P	**P**	**08 45 52.9**	**+0.2**
	0.6nm,0.4s,baz=97,slow=6.8,SNR=24						
WRA				PcP	**PcP**	**08 47 17.1**	**-0.7**
	0.3nm,0.8s,baz=90,slow=3.0,SNR=1.3						
ASAR	**Alice Springs**	**48.31**	**254**	P	**P**	**08 45 54.2**	**+0.6**
	4.6nm,0.6s,baz=88,slow=8.4,SNR=95						
ASAR				PcP	**PcP**	**08 47 17.7**	**-0.4**
	0.5nm,0.6s,baz=101,slow=4.0,SNR=2.6						
NVAR	**Mina Array Bea**	**76.71**	**42**	P	**P**	**08 49 02.0**	**0.0**
	0.1nm,0.4s,baz=226,slow=12,SNR=3.5						
TXAR	**Lajitas Array**	**82.81**	**56**	P	**P**	**08 49 35.0**	**+0.1**
	0.1nm,0.5s,baz=230,slow=7.0,SNR=2.2						
PDAR	**Pinedale Array**	**84.65**	**42**	P	**P**	**08 49 44.1**	**-0.1**
	0.4nm,0.8s,baz=204,slow=3.3,SNR=3.6						

*IDC **09** 08:42:06.7±2.2,20.08S×177.87W, h524km±21km, mb3.2/11, mb1 3.5/13, mb1mx3.3/26, mbtmp4.1/13, Error ellipse: s-maj=31.0km s-min=17.3km az=141.0*

ISC 09 08:42:04.8±0.6, 19.7S±0.1×177.7W±0.1, h500km, n32, σ2974/34, mb3.7/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.52**	**295**	P	**P**	**08 43 31.5**	**+3.8**
	3.5nm,0.3s,baz=132,slow=23,SNR=13						
AFI	**Afiamalu**	**8.05**	**45**	P	**P**	**08 44 01.0**	**-0.9**
	4.0nm,0.3s,baz=169,slow=21,SNR=4.5						
AFI				S	**S**	**08 45 34.9**	**-3.0**
	9.0nm,0.3s,baz=218,slow=20,SNR=7.7						
DZM	**Mont Dzumac**	**15.05**	**258**	P	**P**	**08 45 14.8**	**-0.9**
	0.2nm,0.3s,baz=112,slow=19,SNR=1.4						
PKGZ	**Pakihiroa**	**18.50**	**191**	P	**P**	**08 45 51.8**	**+2.2**
RUGZ	**Raukumara Rang**	**18.64**	**192**	P	**P**	**08 45 51.9**	**+0.9**
TWGZ	**Tauwhareparae**	**18.79**	**191**	P	**P**	**08 45 54.9**	**+2.6**
URZ	**Urewera**	**19.04**	**193**	P	**P**	**08 45 54.7**	**+0.3**
CNGZ	**Carnagh Statio**	**19.05**	**190**	P	**P**	**08 45 57.0**	**+2.4**
TKGZ	**Te Karaka**	**19.07**	**191**	P	**P**	**08 45 55.9**	**+1.2**
RAGZ	**Rawiri**	**19.21**	**192**	P	**P**	**08 45 57.3**	**+1.2**
MUGZ	**Murupara**	**19.32**	**193**	P	**P**	**08 45 57.0**	**-0.1**
RIGZ	**Rimuhau**	**19.35**	**191**	P	**P**	**08 45 56.4**	**-0.9**
RTZ	**Ruatahuna**	**19.41**	**193**	P	**P**	**08 45 59.5**	**+1.5**
MTHZ	**Maungatanawha**	**19.67**	**193**	P	**P**	**08 46 06.0**	**+5.7**
BKZ	**Black Stump Fm**	**20.04**	**193**	P	**P**	**08 46 08.3**	**+4.6**
KWHZ	**Kaweka Forest**	**20.30**	**193**	P	**P**	**08 46 11.6**	**+5.5**
KAHZ	**Kahuranaki**	**20.57**	**192**	P	**P**	**08 46 14.2**	**+5.8**
PXZ	**Pawanui**	**20.80**	**192**	P	**P**	**08 46 15.3**	**+4.9**
BFZ	**Birch Farm**	**21.55**	**193**	P	P	08 46 26.0	+8.7
STKA	**Stephens Creek**	**38.43**	**243**	P	**P**	**08 48 40.3**	**-2.7**
	2.3nm,0.7s,baz=322,slow=20,SNR=3.8						
ASAR	**Alice Springs**	**45.03**	**256**	P	**P**	**08 49 33.5**	**-1.9**
	5.3nm,0.6s,baz=100,slow=7.6,SNR=68						
ASAR				PcP	**PcP**	**08 51 04.8**	**-1.2**
	1.1nm,0.5s,baz=106,slow=4.0,SNR=8.6						
WRA	**Warramunga Arr**	**45.04**	**261**	P	**P**	**08 49 33.4**	**-2.2**
	2.2nm,0.5s,baz=96,slow=7.7,SNR=31						
WRA				PcP	**PcP**	**08 51 04.9**	**-1.3**
	1.0nm,0.9s,baz=100,slow=2.8,SNR=3.9						
FITZ	**Fitzroy Crossi**	**53.46**	**262**	P	**P**	**08 50 35.1**	**-2.8**
	1.5nm,0.5s,baz=156,slow=4.1,SNR=8.1						
VNDA	**Vanda**	**58.73**	**185**	P	**P**	**08 51 10.8**	**-2.6**
	0.5nm,0.7s,baz=21,slow=3.3,SNR=2.5						
MJAR	**Matsushiro Arr**	**69.77**	**323**	P	**P**	**08 52 25.4**	**+1.1**
	1.3nm,0.6s,baz=156,slow=5.0,SNR=3.0						
TXAR	**Lajitas Array**	**86.35**	**57**	P	**P**	**08 53 55.9**	**+2.0**
	0.4nm,0.7s,baz=230,slow=7.5,SNR=4.6						
ILAR	**Eielson Array**	**87.47**	**13**	P	**P**	**08 53 58.9**	**+0.7**
	0.4nm,0.4s,baz=219,slow=5.4,SNR=7.5						
PDAR	**Pinedale Array**	**88.16**	**43**	P	**P**	**08 54 03.5**	**+1.3**
	0.3nm,0.7s,baz=260,slow=1.6,SNR=3.0						
CMAR	**Chiang Mai Arr**	**90.16**	**289**	P	**P**	**08 54 12.6**	**+0.8**
	1.2nm,0.3s,baz=123,slow=3.2,SNR=10.0						
INK	**Inuvik**	**93.42**	**15**	P	**P**	**08 54 25.8**	**+0.2**
	1.1nm,0.9s,baz=169,slow=4.6,SNR=3.2						
BRTR	**Keskin Array B**	**146.54**	**313**	PKPbc	**PKPbc**	**09 00 50.1**	**0.0**
	1.2nm,0.4s,baz=132,slow=2.1,SNR=2.8						
GERES	**GERESS Array B**	**149.53**	**345**	PKPbc	**PKPbc**	**09 00 57.0**	**-0.3**
	1.4nm,0.8s,baz=59,slow=3.6,SNR=7.5						

TAP 09 09:04:49.1, 23.76N×121.50E, h7km±1km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESL	**Shilin**	**0.08**	**308**	P	Pg	09 04 51.1	-0.1
	baz=310						
ESL				S	Sg	09 04 52.4	-0.2
	baz=310						
EGFH	**Guangfu**	**0.12**	**217**	P	Pg	09 04 51.6	-0.1
	baz=216						
EGFH				*e*S	Sg	09 04 53.7	+0.2
	baz=216						
VWDT	**VWDT**	**0.33**	**268**	*e*P	Pg	09 04 55.7	+0.1
	baz=268						
VWDT				*e*S	Sg	09 05 00.3	+0.3
	baz=268						

*JMA **09** 09:05:19.8±0.2,24.40N×122.87E, h82km±2km, M1.6*
*TAP **09** 09:05:20.5,24.30N×122.86E, h73km, ML2.5, C*

ISC 09 09:05:20.3±1.4, 24.24N±0.06×122.87E±0.03, h75km±10km, n36, σ0968/63, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.22**	**18**	P	**Pn**	**09 05 31.6**	**-0.1**
JYNG				S	**Sn**	**09 05 40.1**	**+0.1**
YOJ	**Yonaguni jima**	**0.25**	**30**	P	**Pn**	**09 05 31.7**	**-0.2**
YOJ				S	**Sn**	**09 05 40.4**	**+0.1**
YOJ	**Yonaguni jima**	**0.25**	**30**	*i* P	**Pn**	**09 05 31.9**	**0.0**
	baz=28						
YOJ				*i* S	**Sn**	**09 05 40.0**	**-0.3**
	baz=28						
IRIF	**Iriomote-Funau**	**0.79**	**83**	P	**Pn**	**09 05 36.4**	**-0.2**
IRIF				S	**Sn**	**09 05 48.5**	**-0.2**
HATJ	**Hateruma jima**	**0.87**	**102**	P	**Pn**	**09 05 38.7**	**+1.1**
HATJ				*e*S	**Sn**	**09 05 52.3**	**+1.9**
EWUT	**Wuta**	**1.02**	**282**	*e*P	**Pn**	**09 05 40.0**	**+0.7**
	baz=278						
JKRS	**Kuro-shima**	**1.04**	**90**	P	**Pn**	**09 05 40.0**	**+0.4**
JKRS				S	**Sn**	**09 05 54.8**	**+0.8**
NDS	**Dongshan**	**1.12**	**291**	*e*P	**Pn**	**09 05 41.0**	**+0.3**
	baz=296						
NDS				*e*S	**Sn**	**09 05 55.9**	**0.0**
	baz=296						
JIJ	**Ishigaki jima**	**1.17**	**84**	P	**Pn**	**09 05 40.8**	**-0.4**
JIJ				S	**Sn**	**09 05 55.7**	**-1.1**
NACB	**Ninganchiao**	**1.17**	**267**	P	**Pn**	**09 05 40.9**	**-0.3**
	baz=263						
NACB				*e*S	**Sn**	**09 05 56.4**	**-0.5**
	baz=263						
TWD	**Chiawan**	**1.18**	**262**	*e*P	**Pn**	**09 05 41.3**	**0.0**
	baz=250						
TWD				*e*S	**Sn**	**09 05 56.5**	**-0.5**
	baz=250						
TWE	**Neicheng**	**1.20**	**294**	*e*P	**Pn**	**09 05 41.6**	**+0.1**
	baz=290						
TIPB	**Shuangxi**	**1.20**	**308**	*e*P	**Pn**	**09 05 41.2**	**-0.4**
	baz=304						
TIPB				*e*S	**Sn**	**09 05 57.4**	**-0.2**
	baz=304						
ENTT	**Nioudou**	**1.25**	**289**	*e*P	**Pn**	**09 05 42.7**	**+0.4**
	baz=293						
ENTT				*e*S	**Sn**	**09 05 58.9**	**+0.1**
	baz=293						
ETLH	**Xiulin Townshi**	**1.27**	**269**	*e*P	**Pn**	**09 05 42.3**	**-0.3**
	baz=265						
ETLH				S	**Sn**	**09 05 59.0**	**-0.3**
	baz=265						
NDT	**Datong Townshi**	**1.29**	**286**	*e*P	**Pn**	**09 05 43.1**	**+0.3**
	baz=275						
NDT				*e*S	**Sn**	**09 05 59.5**	**-0.1**
	baz=275						
NWLT	**Wulai**	**1.35**	**293**	*e*P	**Pn**	**09 05 44.2**	**+0.6**
	baz=296						
NWLT				*e*S	**Sn**	**09 06 01.8**	**+0.7**
	baz=296						
JISG	**Ishigakijimahi**	**1.36**	**75**	P	**Pn**	**09 05 43.2**	**-0.4**
JISG				*e*S	**Sn**	**09 06 00.0**	**-1.1**
NNSB	**Datong**	**1.37**	**278**	*e*P	**Pn**	**09 05 43.9**	**0.0**
	baz=274						
NNSB				*e*S	**Sn**	**09 06 00.9**	**-0.7**
	baz=274						
NNSH	**Datong**	**1.37**	**278**	*e*P	**Pn**	**09 05 43.5**	**-0.4**
	baz=275						
NNSH				*e*S	**Sn**	**09 06 00.9**	**-0.8**
	baz=275						
NNS	**Nan Shan**	**1.38**	**279**	*e*P	**Pn**	**09 05 44.3**	**+0.3**
	baz=275						
YHNB	**Yeheng**	**1.43**	**288**	*e*P	**Pn**	**09 05 44.7**	**+0.1**
	baz=275						
YHNB				*e*S	**Sn**	**09 06 02.5**	**-0.4**
	baz=275						
NSK	**Sanguang**	**1.45**	**288**	*e*P	**Pn**	**09 05 45.5**	**+0.6**
	baz=275						
NSK				*e*S	**Sn**	**09 06 03.0**	**-0.3**
	baz=275						
WHF	**Hehuan Shan**	**1.47**	**267**	*e*P	**Pn**	**09 05 45.2**	**-0.3**
	baz=263						
WHF				*e*S	**Sn**	**09 06 03.9**	**-0.5**
	baz=263						
FUSS	**Fushou**	**1.48**	**271**	*e*P	**Pn**	**09 05 43.8**	**-1.8**
	baz=267						
FUSS				*e*S	**Sn**	**09 06 04.0**	**-0.5**
	baz=267						
HGSD	**Ruisui**	**1.52**	**241**	*e*P	**Pn**	**09 05 44.2**	**-1.6**
	baz=238						
CHGB	**Renai**	**1.56**	**264**	*e*P	**Pn**	**09 05 47.4**	**+0.9**
	baz=252						
CHGB				*e*S	**Sn**	**09 06 06.0**	**-0.3**
	baz=252						
TDCB	**Techi**	**1.56**	**271**	*e*P	**Pn**	**09 05 47.1**	**+0.7**
	baz=267						
TDCB				*e*S	**Sn**	**09 06 06.2**	**0.0**
	baz=267						
EHY	**Hungye**	**1.60**	**243**	*e*P	**Pn**	**09 05 47.5**	**+0.7**
	baz=250						
EHY				*e*S	**Sn**	**09 06 06.4**	**-0.3**
	baz=250						
VWDT	**VWDT**	**1.66**	**253**	*e*P	**Pn**	**09 05 48.0**	**+0.5**
	baz=250						
YULB	**Yu-li**	**1.67**	**240**	*e*P	**Pn**	**09 05 47.8**	**0.0**
	baz=237						
JTJ	**Tarama**	**1.72**	**76**	*e*S	**Sn**	**09 06 09.1**	**-0.4**
LIOB	**Emei**	**1.74**	**284**	*e*P	**Pn**	**09 05 49.3**	**+0.6**
	baz=281						
LIOB				*e*S	**Sn**	**09 06 10.5**	**+0.4**
	baz=281						
WHP	**Taichung City**	**1.76**	**272**	*e*P	**Pn**	**09 05 50.1**	**+1.2**
	baz=268						
WHP				*e*S	**Sn**	**09 06 11.7**	**+1.0**
	baz=268						
SSLB	**Suanglung**	**1.81**	**256**	*e*S	**Sn**	**09 06 12.8**	**+1.0**
	baz=258						
EDH	**Donghe**	**1.91**	**229**	*e*S	**Sn**	**09 06 13.3**	**-1.0**
	baz=221						

*TAP **09** 09:06:04.8,23.99N×122.52E, h27km±1km, ML2.6, C*
*JMA **09** 09:06:04.7±0.3,23.97N×122.49E, h18km±4km, M2.1*

ISC 09 09:06:04.6±1.4, 23.95N±0.04×122.50E±0.02, h21km±4km, n44, σ0957/67, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.65**	**39**	P	**Pb**	**09 06 17.0**	**-0.3**
JYNG				*e*S	**Sb**	**09 06 25.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**42**	P	**Pb**	**09 06 17.8**	**-0.3**
YOJ				*e*S	**Sb**	**09 06 26.3**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**42**	*i* P	**Pb**	**09 06 17.8**	**-0.3**
	baz=50						
YOJ				*i* S	**Sb**	**09 06 26.5**	**-0.7**
	baz=50						
EWUT	**Wuta**	**0.82**	**307**	P	**Pb**	**09 06 20.1**	**-0.1**
	baz=303						
EWUT				S	**Sn**	**09 06 32.1**	**-0.3**
	baz=303						
TWD	**Chiawan**	**0.83**	**279**	*e*P	**Pn**	**09 06 21.3**	**+0.2**
	baz=276						
NACB	**Ninganchiao**	**0.85**	**286**	P	**Pb**	**09 06 20.5**	**-0.2**
	baz=267						
NACB				*e*S	**Sn**	**09 06 33.0**	**-0.2**
	baz=267						
TWC	**Suao**	**0.89**	**318**	*e*P	**Pb**	**09 06 20.5**	**-0.7**
	baz=315						
TWC				*e*S	**Sn**	**09 06 33.3**	**-0.7**
	baz=315						
ETLH	**Xiulin Townshi**	**0.96**	**286**	P	**Pb**	**09 06 22.1**	**-0.5**
	baz=269						
ETLH				*e*S	**Sb**	**09 06 35.6**	**+0.7**
	baz=269						
NDS	**Dongshan**	**0.99**	**314**	P	**Pn**	**09 06 23.1**	**0.0**
	baz=311						
NDS				*e*S	**Sn**	**09 06 37.0**	**+0.5**
	baz=311						
TWE	**Neicheng**	**1.08**	**316**	*e*P	**Pb**	**09 06 25.2**	**+0.6**
	baz=313						
HGSD	**Ruisui**	**1.08**	**246**	*e*P	**Pn**	**09 06 24.6**	**+0.1**
	baz=244						
NTC	**Toucheng**	**1.09**	**326**	*e*P	**Pb**	**09 06 24.7**	**0.0**
	baz=324						
ENTT	**Nioudou**	**1.09**	**309**	P	**Pb**	**09 06 25.0**	**+0.2**
	baz=306						
NDT	**Datong Townshi**	**1.11**	**306**	*e*P	**Pb**	**09 06 25.6**	**+0.6**
	baz=289						
NDT				*e*S	**Sn**	**09 06 39.6**	**0.0**
	baz=289						
NNSB	**Datong**	**1.12**	**296**	P	**Pn**	**09 06 25.1**	**-0.1**
	baz=292						
NNSB				S	**Sn**	**09 06 40.2**	**+0.2**
	baz=292						
NNSH	**Datong**	**1.12**	**296**	P	**Pn**	**09 06 25.2**	**0.0**
	baz=292						
NNSH				S	**Sn**	**09 06 40.6**	**+0.6**
	baz=292						
NNS	**Nan Shan**	**1.14**	**296**	P	**Pn**	**09 06 25.4**	**0.0**
	baz=293						
NNS				*e*S	**Sn**	**09 06 40.5**	**+0.1**
	baz=293						
WHF	**Hehuan Shan**	**1.14**	**280**	P	**Pn**	**09 06 25.3**	**-0.4**
	baz=264						
WHF				*e*S	**Sn**	**09 06 41.0**	**+0.1**
	baz=264						
TWB1	**Santiao Chiao**	**1.15**	**337**	*e*P	**Pn**	**09 06 25.1**	**-0.4**
	baz=335						
FUSS	**Fushou**	**1.18**	**285**	P	**Pn**	**09 06 26.1**	**+0.1**
	baz=282						
FUSS				*e*S	**Sn**	**09 06 42.0**	**+0.3**
	baz=282						
TIPB	**Shuangxi**	**1.19**	**329**	*e*P	**Pn**	**09 06 26.9**	**+0.5**
	baz=327						
TIPB				*e*S	**Sn**	**09 06 42.2**	**+0.6**
	baz=327						
IRIF	**Iriomote-Funau**	**1.19**	**71**	P	**Pb**	**09 06 27.0**	**+0.5**
IRIF				*e*S	**Sn**	**09 06 41.9**	**+0.4**
HATJ	**Hateruma jima**	**1.20**	**84**	*e*S	**Sb**	**09 06 42.2**	**+0.5**
CHGB	**Renai**	**1.21**	**276**	P	**Pn**	**09 06 26.4**	**-0.1**
	baz=261						
NWLT	**Wulai**	**1.23**	**313**	P	**Pb**	**09 06 27.0**	**-0.1**
	baz=310						
YULB	**Yu-li**	**1.23**	**244**	P	**Pn**	**09 06 26.0**	**-0.6**
	baz=241						
YULB				*e*S	**Sn**	**09 06 41.8**	**-0.7**
	baz=241						
TWF1	**Yuli**	**1.25**	**242**	*e*P	**Pn**	**09 06 26.3**	**-0.5**
	baz=229						
YHNB	**Yeheng**	**1.25**	**305**	*e*P	**Pb**	**09 06 27.3**	**-0.2**
	baz=290						
YHNB				*e*S	**Sb**	**09 06 43.2**	**+0.1**
	baz=290						
VWDT	**VWDT**	**1.25**	**262**	P	**Pn**	**09 06 26.6**	**-0.2**
	baz=259						
VWDT				S	**Sn**	**09 06 42.8**	**-0.3**
	baz=259						
TDCB	**Techi**	**1.26**	**284**	*e*P	**Pb**	**09 06 27.6**	**-0.1**
	baz=270						
NSK	**Sanguang**	**1.27**	**305**	P	**Pn**	**09 06 27.4**	**+0.3**
	baz=290						
NSK				*e*S	**Sn**	**09 06 43.2**	**-0.3**
	baz=290						
JKRS	**Kuro-shima**	**1.41**	**78**	P	**Pb**	**09 06 30.5**	**+0.3**
JKRS				S	**Sb**	**09 06 49.0**	**+1.2**
SSLB	**Suanglung**	**1.42**	**264**	*e*P	**Pb**	**09 06 30.8**	**+0.4**
	baz=262						
DPDB	**Guoxing**	**1.44**	**274**	*e*P	**Pb**	**09 06 32.4**	**+1.7**
	baz=271						
WHP	**Taichung City**	**1.45**	**283**	*e*P	**Pb**	**09 06 31.2**	**+0.3**
	baz=271						
EDH	**Donghe**	**1.46**	**229**	*e*P	**Pn**	**09 06 28.8**	**-0.9**
	baz=217						
SMLT	**Sun Moon Lake**	**1.46**	**268**	*e*P	**Pb**	**09 06 31.8**	**+0.7**
	baz=255						
YM01	**YM01**	**1.46**	**325**	*e*P	**Pb**	**09 06 31.6**	**+0.5**
	baz=323						
TYC	**Yuchr**	**1.50**	**269**	*e*P	**Pb**	**09 06 32.3**	**+0.6**
	baz=267						
LIOB	**Emei**	**1.52**	**298**	*e*P	**Pb**	**09 06 32.1**	**+0.1**
	baz=295						
JIJ	**Ishigaki jima**	**1.56**	**74**	P	**Pn**	**09 06 31.7**	**+0.6**
JIJ				*e*S	**Sb**	**09 06 51.3**	**-0.8**
LDUT	**Ludao**	**1.58**	**217**	*e*P	**Pn**	**09 06 29.9**	**-1.4**
	baz=216						
ALS	**Alishan**	**1.61**	**255**	*e*P	**Pn**	**09 06 33.2**	**+1.2**
	baz=253						
JISG	**Ishigakijimahi**	**1.78**	**69**	P	**Pn**	**09 06 34.5**	**+0.5**
JISG				*e*S	**Sn**	**09 06 55.9**	**0.0**

*IDC **09** 09:14:53.4±2.4, 32.69N×82.73E, h0km, mb3.3/6, mb1 3.6/8, mb1mx3.3/55, mbtmp3.4/8, ML3.0/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/41, Error ellipse: s-maj=74.6km s-min=22.2km az=72.0*

ISC 09 09:14:55.2±2.1, 32.8N±0.2×82.8E±0.4, h10km, n9, σ0994/8, mb3.3/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**11.86**	**329**	LR	LR	09 22 44.9	
	comp=Z,48nm,20.7s,baz=165,slow=40						
MKAR	**Makanchi Array**	**14.03**	**359**	Pn	**Pn**	**09 18 13.1**	**-0.9**
	0.1nm,0.3s,baz=182,slow=12,SNR=3.8						
KURBB	**Kurchatov Arra**	**18.14**	**351**	P	**Pn**	**09 19 07.8**	**+0.7**
	0.0nm,0.3s,baz=172,slow=11,SNR=7.4						
CMAR	**Chiang Mai Arr**	**20.32**	**131**	P	**P**	**09 19 31.5**	**0.0**
	0.9nm,0.3s,baz=318,slow=12,SNR=4.8						
ZALV	**Zalesovo Beam**	**21.24**	**3**	P	**P**	**09 19 42.6**	**+1.5**
	0.9nm,0.6s,baz=167,slow=7.2,SNR=3.9						
SONM	**Songino Array**	**23.34**	**43**	P	**P**	**09 20 03.9**	**+0.2**
	0.5nm,0.7s,baz=235,slow=9.8,SNR=4.3						
WRA	**Warramunga Arr**	**71.91**	**129**	P	**P**	**09 26 18.7**	**-0.1**
	0.7nm,1.0s,baz=327,slow=5.9,SNR=2.3						
ASAR	**Alice Springs**	**74.32**	**132**	P	**P**	**09 26 33.4**	**+0.3**
	0.1nm,0.5s,baz=319,slow=6.0,SNR=1.6						
YKA	**Yellowknife Ar**	**84.06**	**8**	P	**P**	**09 27 24.8**	**-0.9**
	0.1nm,0.3s,baz=346,slow=4.8,SNR=2.7						

*IDC **09** 09:21:24.0±1.0,50.37S×114.01E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.8/34, mbtmp3.9/6, MS3.5/16, Ms1 3.5/16, ms1mx3.4/29, Error ellipse: s-maj=50.3km s-min=20.2km az=112.0*
*NEIC **09** 09:21:25.7±1.0,50.34S±0.05×114.1E±0.4, h10km±1km, mb4.4/11, Error ellipse: s-maj=48.8km s-min=6.5km az=277.0*

ISC 09 09:21:25.5±0.8, 50.3S±0.1×114.0E±0.3, h10km, n38, σ0888/18, mb4.2/11, MS3.6/15, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.44**	**0**	T	T	09 40 48.8	
	baz=180,slow=74,SNR=264						
H01W1	**Cape Leeuwin H**	**15.44**	**0**	T	T	09 40 49.3	
	baz=180,slow=74,SNR=275						
H01W3	**Cape Leeuwin H**	**15.45**	**0**	T	T	09 40 50.0	
	baz=180,slow=74,SNR=304						
NWAO	**Narrogin (SRO)**	**17.57**	**9**	LR	LR	09 30 31.3	
	comp=Z,188nm,20.7s,baz=182,slow=31						
STKA	**Stephens Creek**	**27.55**	**58**	P	**P**	**09 27 13.0**	**+0.6**
	0.4nm,0.4s,baz=198,slow=13,SNR=1.2						
STKA				LR	LR	09 36 13.3	
	comp=Z,53nm,20.3s,baz=207,slow=32						
ASAR	**Alice Springs**	**30.81**	**38**	P	**P**	**09 27 41.6**	**+0.2**
	1.0nm,0.6s,baz=208,slow=7.9,SNR=17						
ASAR				LR	LR	09 38 23.2	
	comp=Z,44nm,20.6s,baz=202,slow=33						
ASAR	**Alice Springs**	**30.81**	**38**	P	**P**	**09 27 40.6**	**-0.8**
AS31	**Alice Springs**	**30.81**	**38**	P	**P**	**09 27 42.0**	**+0.6**
AS31				IAmb	IAmb	09 27 48.8	
	comp=Z,0.9nm,0.5s						
VNDA	**Vanda**	**32.55**	**163**	LR	LR	09 40 26.5	
	comp=Z,140nm,18.8s,baz=306,slow=35						
VNDA	**Vanda**	**32.55**	**163**	P	**P**	**09 27 56.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**33.49**	**20**	LR	LR	09 40 34.1	
	comp=Z,34nm,18.7s,baz=197,slow=34						
FITZ	**Fitzroy Crossi**	**33.49**	**20**	P	**P**	**09 28 05.3**	**+0.4**
WRA	**Warramunga Arr**	**34.36**	**35**	P	**P**	**09 28 12.4**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=201,slow=11,SNR=8.7						
WRA	**Warramunga Arr**	**34.36**	**35**	IAmb	IAmb	09 28 20.2	
	comp=Z,0.2nm,0.9s						
WB2	**Warramunga Arr**	**34.36**	**35**	P	**P**	**09 28 13.3**	**+0.8**
WRAB	**Tennant Creek**	**34.37**	**35**	P	**P**	**09 28 13.0**	**+0.4**
WRAB				IAmb	IAmb	09 28 13.6	
	comp=Z,5.7nm,0.8s						
WR0	**Warramunga Arr**	**34.42**	**36**	P	**P**	**09 28 10.1**	**-2.9**
WB0	**Warramunga Arr**	**34.54**	**35**	P	**P**	**09 28 14.1**	**0.0**
WB0				IAmb	IAmb	09 28 28.2	
	comp=Z,8.4nm,1.2s						
QSPA	**South Pole Qui**	**39.78**	**180**	P	**P**	**09 28 58.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=293,slow=1.7,SNR=7.6						
QSPA	**South Pole Qui**	**39.78**	**180**	IAmb	IAmb	09 29 06.9	
	comp=Z,13nm,1.4s						
LEM	**Lembang**	**43.70**	**351**	LR	LR	09 43 30.4	
	comp=Z,127nm,19.4s,baz=138,slow=30						
DZM	**Mont Dzumac**	**49.52**	**75**	LR	LR	09 48 36.9	
	comp=Z,29nm,18.1s,baz=210,slow=33						
SNAA	**Sanae**	**50.45**	**201**	P	**P**	**09 30 22.7**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=122,slow=10,SNR=4.2						
**SN

KURBB **Kurchatov Arra 6.06 244** Pn Pn 09 25 20.7 +2.2
0.0nm,0.3s,baz=60,slow=14,SNR=2.4
MKAR **Makanchi Array 7.48 206** Pn Pn 09 25 38.4 +0.4
0.0nm,0.3s,baz=21,slow=15,SNR=1.5
MKAR Lg Lg 09 27 43.8
0.0nm,0.3s,baz=23,slow=30,SNR=2.9

JMA ***09*** *09:29:58.4±0.1, 41.°55N×142.°06E, h66km±2km, M3.7 Broadband fault plane solution: P waves. NP1: ϕs188.00000°, δ13.00000°, λ78.00000°. NP2:ϕs20.00000°, δ77.00000°, λ93.00000°. Principal axes: T Plg58.0000°, Azm294.0000°; N Plg3.0000°, Azm200.0000°; P Plg32.0000°, Azm108.0000°;*
JMA Felt I J1.
NEIC ***09*** *09:29:58.5±2.0, 41.°55N±0.°05×142.°12E±0.°05, h58km±8km, mb4.2/17 Error ellipse: s-maj=7.5km s-min=5.8km az=180.0*
NIED ***09*** *09:29:58.4, 41.°55N×142.°06E, h66km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr6.54; Mθθ-0.58; Mϕϕ-5.96; Mrθ2.87; Mrϕ-2.59; Mθr4.64; Fault plane solution: M₀8.70000×10¹⁴ NP1:ϕs28.00000°, δ65.00000°, λ96.00000°. NP2:ϕs195.00000°, δ26.00000°, λ78.00000°.*
IDC ***09*** *09:29:60.0±1.7, 41.°61N×142.°04E, h73km±14km, mb3.7/17, mb1 3.8/21, mb1mx3.6/53, mbtmp3.9/21, MS2.9/1, Ms1 2.9/1, ms1mx2.3/52 Error ellipse: s-maj=17.7km s-min=11.4km az=121.0*

ISC 09 09:29:58.9±0.8, 41.°55N±0.°03×142.°08E±0.°04, h65km±7km, n79, σ0°94/82, mb4.2/24, 2C-12D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.62**	**243**	⇓P			**Pn**	**09 30 12.4**	**-0.1**
JAHD				S			**Sn**	**09 30 22.8**	**+0.3**
JARK	**Aomorirokkasho**	**0.76**	**225**	⇓P			**Pn**	**09 30 13.6**	**-0.5**
JARK				S			**Sn**	**09 30 24.5**	**-0.8**
JOT	**Ohata**	**0.79**	**258**	P			**Pn**	**09 30 13.9**	**-0.5**
JOT				S			**Sn**	**09 30 25.8**	**-0.1**
JKB	**Kayabe**	**0.85**	**294**	⇓P			**Pn**	**09 30 14.4**	**-0.8**
JKB				eS			**Sn**	**09 30 26.3**	**-1.0**
JNBK	**Urakawa-nobuka**	**0.89**	**34**	⇑P			**Pn**	**09 30 14.8**	**-0.8**
JSHD	**Hidakashinhida**	**0.91**	**18**	P			**Pn**	**09 30 16.3**	**+0.4**
JSHD				eS			**Sn**	**09 30 29.6**	**+1.1**
ERM	**Erimo**	**0.93**	**60**				**Pn**	**09 30 15.5**	**-0.7**
JEM	**Erimo**	**0.93**	**60**	⇑P			**Pn**	**09 30 15.8**	**-0.4**
JEM				eS			**Sn**	**09 30 28.6**	**-0.4**
JTM	**Tenmabayashi**	**1.08**	**225**	⇓P			**Pn**	**09 30 18.1**	**+0.1**
JTM				S			**Sn**	**09 30 32.3**	**0.0**
JTM	**Tenmabayashi**	**1.08**	**225**				**Pn**	**09 30 18.1**	**+0.1**
JIAM	**Iburiatsuma**	**1.08**	**354**	⇓P			**Pn**	**09 30 18.6**	**+0.5**
JIAM				eS			**Sn**	**09 30 33.2**	**+0.8**
JNB	**Noboribetsu**	**1.20**	**320**	⇓P			**Pn**	**09 30 18.8**	**-0.9**
JSR	**Shiriuchi**	**1.25**	**270**	⇓P			**Pn**	**09 30 20.0**	**-0.2**
JBT2	**Biratori 2**	**1.25**	**10**	⇓P			**Pn**	**09 30 20.3**	**0.0**
JBT2				eS			**Sn**	**09 30 36.6**	**+0.3**
JANG	**Nango**	**1.25**	**200**	P			**Pn**	**09 30 20.0**	**-0.3**
JANG				S			**Sn**	**09 30 35.6**	**-0.8**
JEW	**Eniwo**	**1.37**	**340**	⇓P			**Pn**	**09 30 22.0**	**+0.1**
JEW				eS			**Sn**	**09 30 39.4**	**+0.1**
JEW	**Eniwo**	**1.37**	**340**				**Pn**	**09 30 21.7**	**-0.2**
JYM2	**Yakumo 2**	**1.40**	**295**	⇓P			**Pn**	**09 30 22.4**	**+0.1**
JCH	**Churui**	**1.43**	**41**	P			**Pn**	**09 30 23.1**	**+0.4**
JOMM	**Oshimamatsumae**	**1.56**	**270**	⇓P			**Pn**	**09 30 24.1**	**-0.2**
JFR	**Furan**	**1.66**	**13**	⇓P			**Pn**	**09 30 25.6**	**-0.2**
JOSM	**Okushiri--Mats**	**2.02**	**286**	P			**Pn**	**09 30 30.0**	**-0.6**
ASAJ	**Asahikawa**	**2.59**	**8**	P			**Pn**	**09 30 39.4**	**+1.0**
ASAJ	11nm,0.3s,baz=216,slow=11,SNR=54			S			**Sn**	**09 31 09.0**	**+0.1**
	12nm,0.3s,baz=344,slow=26,SNR=8.2								
JKA	**Kamikawa-asahi**	**2.59**	**8**				**Pn**	**09 30 38.6**	**+0.1**
JMM	**Marumori**	**3.81**	**195**				**Pn**	**09 30 55.5**	**+0.5**
JSD	**Sado**	**4.58**	**221**				**Pn**	**09 31 06.5**	**+1.0**
JYT	**Yasato**	**5.51**	**196**	Pn			**Pn**	**09 31 19.6**	**+1.3**
MAJO	**Matsushiro**	**5.84**	**212**	Pn			**Pn**	**09 31 22.2**	**-0.6**
MJAR	**Matsushiro Arr**	**5.84**	**212**	P			**Pn**	**09 31 25.5**	**+2.7**
	0.2nm,0.3s,baz=34,slow=13,SNR=7.7								
JGF	**Kuroka**	**6.99**	**213**	Pn			**Pn**	**09 31 41.3**	**+2.6**
USA0B	**Ussuriysk Arra**	**7.87**	**293**	Pn			**Pn**	**09 31 50.5**	**-0.1**
USRK	**Ussuriysk Ar.**	**7.87**	**293**	P			**Pn**	**09 31 51.1**	**+0.6**
	baz=90,slow=14,SNR=8.3								
USRK	**Ussuriysk Ar.**	**7.87**	**293**				**Pn**	**09 31 53.4**	**+2.8**
KLR	**Kul'dur**	**10.56**	**320**	LR			LR	09 36 26.4	
	comp=Z,60nm,19.3s,baz=90,slow=37								
KSRS	**Korea Array**	**11.67**	**254**	P			**Pn**	**09 32 44.9**	**+2.4**
	0.7nm,0.3s,baz=64,slow=14,SNR=7.0								
SEY	**Seymchan**	**22.27**	**12**	P			**P**	**09 34 49.4**	**-0.9**
	1.1nm,0.7s,baz=48,slow=7.0,SNR=2.6								
SONM	**Songino Array**	**25.97**	**296**	P			**P**	**09 35 25.5**	**+0.1**
	1.7nm,0.6s,baz=80,slow=8.3,SNR=9.2								
SONM	**Songino Array**	**25.97**	**296**	P			**P**	**09 35 26.3**	**+1.0**
H11N2	**WAKE ISLAND Hy**	**30.29**	**128**	T			T	10 08 35.1	
	baz=321,slow=75								
H11N1	**WAKE ISLAND Hy**	**30.30**	**128**	T			T	10 08 37.3	
	baz=321,slow=75								
H11N3	**WAKE ISLAND Hy**	**30.30**	**128**	T			T	10 08 38.0	
	baz=321,slow=75								
H11S1	**WAKE ISLAND Hy**	**31.13**	**130**	T			T	10 09 35.7	
	baz=322,slow=74								
H11S3	**WAKE ISLAND Hy**	**31.14**	**130**	T			T	10 09 31.7	
	baz=322,slow=74								
H11S2	**WAKE ISLAND Hy**	**31.15**	**130**	T			T	10 09 32.3	
	baz=322								
ZAA0	**Zalesovo Array**	**39.38**	**308**	P			**P**	**09 37 22.3**	**+0.5**
ZAA0				IAmb		IAmb		09 37 26.7	
	comp=Z,2.2nm,0.6s								
ZALV	**Zalesovo Beam**	**39.38**	**308**	P			**P**	**09 37 22.2**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=93,slow=8.1,SNR=9.4								
ZALV	**Zalesovo Beam**	**39.38**	**308**	P			**P**	**09 37 21.6**	**-0.2**
MK31	**Makanchi Array**	**42.30**	**298**	P			**P**	**09 37 46.5**	**+0.5**
MKAR	**Makanchi Array**	**42.30**	**298**	P			**P**	**09 37 45.8**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=83,slow=9.9,SNR=11								
MKAR	**Makanchi Array**	**42.30**	**298**	P			**P**	**09 37 45.4**	**-0.6**
MAKZ	**Makanchi**	**42.51**	**298**	P			**P**	**09 37 48.3**	**+0.6**
MAKZ				IAmb		IAmb		09 37 52.9	
	comp=Z,3.7nm,1.0s								
KURK	**Kurchatov**	**43.67**	**305**	P			**P**	**09 37 57.1**	**+0.1**
KURBB	**Kurchatov Arra**	**43.75**	**304**	P			**P**	**09 37 57.1**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=78,slow=8.6,SNR=19								
TOLK	**Toolik Lake Re**	**44.25**	**29**	P			**P**	**09 38 02.0**	**+0.5**
I23K	**Minto, Yukon-K**	**44.37**	**34**	P			**P**	**09 38 02.7**	**+0.3**
I23K				IAmb		IAmb		09 38 14.2	
	comp=Z,5.6nm,1.4s								
GHO	**Glory Hole Cre**	**44.83**	**39**	P			**P**	**09 38 06.8**	**+0.6**
MDM	**Murphy Dome**	**44.86**	**34**	P			**P**	**09 38 06.7**	**+0.4**
MDM				IAmb		IAmb		09 38 08.4	
	comp=Z,2.8nm,0.8s								
ILAR	**Eielson Array**	**45.45**	**35**	P			**P**	**09 38 11.7**	**+0.7**
	comp=Z,2.1nm,1.0s,baz=274,slow=7.8,SNR=14								
ILAR	**Eielson Array**	**45.45**	**35**	P			**P**	**09 38 07.2**	**-3.7**
SCRK	**Sand Creek**	**46.80**	**36**	P			**P**	**09 38 22.2**	**+0.5**
SCRK				IAmb		IAmb		09 38 22.9	
	comp=Z,2.4nm,0.7s								
K27K	**Chicken**	**47.62**	**35**	P			**P**	**09 38 29.6**	**+1.6**
BVAR	**Borovoye Array**	**48.01**	**310**	P			**P**	**09 38 29.9**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=108,slow=14,SNR=8.3								
AAK	**Ala-Archa**	**48.92**	**295**	P			**P**	**09 38 38.1**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=151,slow=13,SNR=4.0								
AAK	**Ala-Archa**	**48.92**	**295**	IAmb		IAmb		09 38 47.0	
	comp=Z,3.7nm,1.2s								
INK	**Inuvik**	**50.16**	**29**	P			**P**	**09 38 47.9**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=299,slow=6.7,SNR=25								
INK	**Inuvik**	**50.16**	**29**	P			**P**	**09 38 48.2**	**+1.0**
INK				IAmb		IAmb		09 38 49.0	
	comp=Z,3.1nm,0.9s								
ABKAR	**Akbulak array**	**55.50**	**308**	P			**P**	**09 39 27.0**	**+0.1**
ABKAR	**Akbulak array**	**55.50**	**308**	P			**P**	**09 39 26.3**	**-0.6**
ABKAR				IAmb		IAmb		09 39 37.1	
	comp=Z,2.2nm,0.7s								
EUNU	**Eureka**	**55.65**	**9**	P			**P**	**09 39 26.3**	**-1.4**
EUNU				IAmb		IAmb		09 39 28.6	
	comp=Z,2.5nm,0.7s								
AKTO	**Aktyubinsk**	**56.11**	**310**	P			**P**	**09 39 31.5**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=55,slow=14,SNR=3.8								
RES	**Resolute Bay**	**58.11**	**15**	P			**P**	**09 39 45.0**	**0.0**
YKA	**Yellowknife Ar**	**59.67**	**32**	P			**P**	**09 39 56.0**	**0.0**
	comp=Z,0.2nm,0.7s,baz=308,slow=5.9,SNR=6.7								
ARCES	**ARCESS Array B**	**59.97**	**339**	P			**P**	**09 39 57.5**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=60,slow=8.4,SNR=1.2								
WRA	**Warramunga Arr**	**61.60**	**188**	P			**P**	**09 40 09.2**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=5.8,slow=7.1,SNR=3.7								
WRA	**Warramunga Arr**	**61.60**	**188**	IAmb		IAmb		09 40 11.4	
	comp=Z,0.3nm,1.5s								
FINES	**FINESS Array B**	**65.08**	**332**	P			**P**	**09 40 31.8**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=39,slow=9.8,SNR=11								
ASAR	**Alice Springs**	**65.32**	**188**	P			**P**	**09 40 34.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=11,slow=7.7,SNR=7.5								
NOA	**NORSAR Array B**	**70.23**	**337**	P			**P**	**09 41 04.4**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=38,slow=6.0,SNR=2.3								
AKASG	**Malin Array Be**	**71.06**	**322**	P			**P**	**09 41 09.2**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=42,slow=6.5,SNR=3.0								

IDC ***09*** *09:35:28.3±0.6, 34.°32N×141.°68E, h0km, mb3.8/18, mb1 4.0/22, mb1mx3.9/64, mbtmp3.8/22, ML3.5/4, MS3.0/5, Ms1 3.0/5, ms1mx2.7/56, Error ellipse: s-maj=16.6km s-min=13.2km az=108.0*
JMA ***09*** *09:35:28.1±0.6, 34.°21N×141.°65E, h23km±2km, M3.4*
NEIC ***09*** *09:35:33.5±2.3, 34.°45N±0.°05×141.°71E±0.°04, h35km±8km, mb4.2/10, Error ellipse: s-maj=8.6km s-min=2.3km az=215.0*

ISC 09 09:35:31.8±0.5, 34.°34N±0.°05×141.°67E±0.°06, h27km, n56, σ1°69/55, mb4.1/22, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.65**	**299**	P			**Pb**	**09 35 41.6**	**-2.6**
BSO1				eX				09 35 50.3	
BSO3	**Boso 3**	**1.06**	**296**	P			**Pn**	**09 35 48.5**	**-2.1**
BSO4	**Boso 4**	**1.27**	**301**	eS			**Sn**	**09 36 09.0**	**-0.8**
JKUC	**kamogawauchiur**	**1.46**	**304**	P			**Pn**	**09 35 54.7**	**-1.6**
CHOJ	**Chosi**	**1.51**	**334**	P			**Pn**	**09 35 55.8**	**-1.3**
JMKN	**Mikurajimanish**	**1.78**	**256**	P			**Pn**	**09 35 58.5**	**-2.3**
JHJ2	**Mitsune**	**1.97**	**232**	Pn			**Pb**	**09 36 04.3**	**-2.7**
JHJ	**Hachijo jima 2**	**1.99**	**233**	Pn			**Pn**	**09 36 03.4**	**-0.3**
	35nm,0.3s,baz=347,slow=6.4,SNR=1.8								
JHJ				Sn			**Sb**	**09 36 28.8**	**-2.9**
	49nm,0.3s,baz=62,slow=22,SNR=3.2								
JYT	**Yasato**	**2.23**	**328**	Pn			**Pn**	**09 36 06.5**	**-0.5**
JOD2	**Odawara 2**	**2.31**	**294**	P			**Pn**	**09 36 07.6**	**-0.5**
MJAR	**Matsushiro Arr**	**3.58**	**309**	Pn			**Pn**	**09 36 25.9**	**+0.4**
	0.8nm,0.3s,baz=104,slow=32,SNR=2.1								
MJAR				Sn			**Sn**	**09 37 08.6**	**+1.7**
	0.6nm,0.3s,baz=159,slow=14,SNR=6.1								
MJAR	**Matsushiro Arr**	**3.58**	**309**				**Pn**	**09 36 26.2**	**+0.7**
MAJO	**Matsushiro**	**3.58**	**309**				**Pn**	**09 36 26.9**	**+1.4**
MAT	**Matsushiro**	**3.58**	**309**	P			**Pn**	**09 36 25.9**	**+0.4**
MAT				S			**Sn**	**09 37 07.4**	**+0.5**
JMM	**Marumori**	**3.58**	**349**				**Pn**	**09 36 24.3**	**-1.3**
JGF	**Kuroka**	**3.75**	**291**				**Pn**	**09 36 31.0**	**+3.1**
INU	**Inuyama**	**3.95**	**286**	Pn			**Pn**	**09 36 32.2**	**+1.5**
JSD	**Sado**	**4.60**	**324**				**Pn**	**09 36 39.4**	**-0.2**
JWT	**Wachi**	**5.24**	**282**	Pn			**Pn**	**09 36 50.6**	**+2.3**
JCJ	**Chichijima**	**7.24**	**176**	Pn			**Pn**	**09 37 15.2**	**-0.6**
	5.3nm,0.3s,baz=44,slow=19,SNR=1.5								
JCJ				Sn			**Sn**	**09 38 35.6**	**-1.6**
	1.1nm,0.3s,baz=264,slow=22,SNR=1.7								
ERM	**Erimo**	**7.75**	**8**	Pn			**Pn**	**09 37 20.8**	**-1.9**
ASAJ	**Asahikawa**	**9.79**	**4**	Pn			**Pn**	**09 37 49.7**	**-1.0**
	0.7nm,0.3s,baz=204,slow=10.0,SNR=2.4								
ASAJ				Sn			**Sn**	**09 39 32.4**	**-7.3**
	0.0nm,0.3s,baz=221,slow=21,SNR=1.9								
ASAJ				LR			LR	09 42 39.4	
	comp=Z,60nm,18.8s,baz=198,slow=44								
KSRS	**Korea Array**	**11.57**	**289**	Pn			**Pn**	**09 38 14.6**	**-0.6**
	0.2nm,0.3s,baz=100,slow=14,SNR=2.1								
KSRS				LR			LR	09 43 10.6	
	comp=Z,60nm,20.4s,baz=100,slow=40								
JOW	**Kunigami**	**13.74**	**241**	LR			LR	09 44 07.0	
	comp=Z,46nm,18.8s,baz=43,slow=38								
MA2	**Magadan**	**25.95**	**11**	P			**P**	**09 41 02.9**	**+1.3**
	3.4nm,0.7s,baz=242,slow=2.9,SNR=4.7								
MA2	**Magadan**	**25.95**	**11**	IAmb		IAmb		09 41 03.9	
	comp=Z,4.8nm,0.9s								
YAK	**Yakutsk**	**28.74**	**348**	LR			LR	09 53 31.7	
	comp=Z,71nm,18.8s,baz=260,slow=38								
SEY	**Seymchan**	**29.39**	**10**	P			**P**	**09 41 33.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=247,slow=13,SNR=2.4								
SONM	**Songino Array**	**29.53**	**308**	P			**P**	**09 41 35.1**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=100,slow=8.0,SNR=2.0								
TLY	**Talaya**	**32.30**	**314**	LR			LR	09 55 35.5	
	comp=Z,22nm,20.8s,baz=48,slow=37								
MKAR	**Makanchi Array**	**45.76**	**304**	P			**P**	**09 43 51.8**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=89,slow=8.8,SNR=3.5								
KURK	**Kurchatov**	**47.78**	**310**	P			**P**	**09 44 06.8**	**+0.2**
KURBB	**Kurchatov Arra**	**47.85**	**310**	P			**P**	**09 44 06.8**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=84,slow=7.8,SNR=6.2								
ILAR	**Eielson Array**	**51.67**	**31**	P			**P**	**09 44 36.4**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=272,slow=6.0,SNR=7.8								
BVAR	**Borovoye Array**	**52.56**	**314**	P			**P**	**09 44 42.9**	**+0.2**
	comp=Z,3.3nm,1.2s,baz=64,slow=9.8,SNR=3.8								
FITZ	**Fitzroy Crossi**	**54.34**	**199**	P			**P**	**09 44 57.0**	**+1.0**
	comp=Z,2.8nm,1.0s,baz=32,slow=6.7,SNR=5.9								
WR0	**Warramunga Arr**	**54.43**	**188**	P			**P**	**09 44 58.0**	**+1.4**
WB2	**Warramunga Arr**	**54.43**	**188**	P			**P**	**09 44 57.4**	**+0.7**
WB2				IAmb		IAmb		09 45 08.6	
	comp=Z,4.7nm,1.1s								
WRA	**Warramunga Arr**	**54.43**	**188**	P			**P**	**09 44 56.8**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=2.4,slow=7.4,SNR=9.2								
WRA	**Warramunga Arr**	**54.43**	**188**	IAmb		IAmb		09 44 60.0	
	comp=Z,0.2nm,0.9s								
KK31	**Karatay Array**	**54.68**	**302**	P			**P**	**09 44 58.9**	**+0.4**
KK31				IAmb		IAmb		09 45 25.5	
	comp=Z,3.1nm,1.1s								
KKAR	**Karatay Array**	**54.68**	**302**				**P**	**09 44 57.9**	**-0.5**
INK	**Inuvik**	**56.69**	**26**	P			**P**	**09 45 13.6**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=308,slow=8.1,SNR=8.0								
INK	**Inuvik**	**56.69**	**26**	IAmb		IAmb		09 45 14.9	
	comp=Z,1.6nm,0.8s								
AS31	**Alice Springs**	**58.16**	**188**	P			**P**	**09 45 25.8**	**+2.5**
ASAR	**Alice Springs**	**58.16**	**188**	P			**P**	**09 45 23.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=17,slow=12,SNR=8.6								
ABKAR	**Akbulak array**	**59.85**	**311**	P			**P**	**09 45 35.5**	**+0.7**
ABKAR				IAmb		IAmb		09 45 52.6	
	comp=Z,4.6nm,1.4s								
AKTO	**Aktyubinsk**	**60.64**	**313**	P			**P**	**09 45 42.0**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=75,slow=12,SNR=4.9								
RES	**Resolute Bay**	**65.15**	**14**	P			**P**	**09 46 09.4**	**-0.4**
RES				IAmb		IAmb		09 46 14.8	
	comp=Z,1.7nm,1.0s								
YKA	**Yellowknife Ar**	**66.03**	**30**	P			**P**	**09 46 16.1**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=295,slow=6.1,SNR=4.8								
KBZ	**Khabaz**	**72.82**	**311**	P			**P**	**09 46 58.8**	**+0.9**
	comp=Z,2.2nm,0.9s,baz=151,slow=2.9,SNR=3.7								
NVAR	**Mina Array Bea**	**76.44**	**53**	P			**P**	**09 47 19.9**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=267,slow=5.5,SNR=6.3								
AKASG	**Malin Array Be**	**76.55**	**323**	P			**P**	**09 47 19.9**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=56,slow=3.8,SNR=1.8								
PDAR	**Pinedale Array**	**79.41**	**45**	P			**P**	**09 47 36.3**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=311,slow=5.8,SNR=3.0								
TXAR	**Lajitas Array**	**91.59**	**53**	P			**P**	**09 48 37.7**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=298,slow=2.7,SNR=3.7								
LPAZ	**La Paz**	**147.79**	**64**	PKPbc			**PKPab**	**09 55 16.4**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=28,slow=15,SNR=7.0								

TAP 09 09:35:51.8, 24.°84N×121.°97E, h10km, ML2.7, 7C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EGS		**0.04**	**283**	*i* P			Pg	09 35 54.1	+0.5
	baz=282								
EGS				S			Sg	09 35 55.6	+0.7
	baz=282								
NTC	**Toucheng**	**0.13**	**278**	*i* P			Pg	09 35 55.8	+1.0
	baz=277								
NTC				*i* S			Sg	09 35 58.7	+1.9
	baz=277								
TWB1	**Santiao Chiao**	**0.17**	**6**	P			Pg	09 35 55.4	-0.1
	baz=8.0								
TWB1				S			Sg	09 35 58.0	0.0
	baz=8.0								
TIPB	**Shuangxi**	**0.19**	**316**	⇑*i* P			Pg	09 35 56.5	+0.8
	baz=315								
TIPB				S			Sg	09 35 59.6	+1.1
	baz=315								
ILA	**Ilan**	**0.21**	**251**	S			Sg	09 36 01.7	+2.5
	baz=249								
TWC	**Suao**	**0.25**	**206**	⇑*i* P			Pg	09 35 57.7	+0.8
	baz=203								
TWC				S			Sb	09 36 02.1	-0.8
	baz=203								
NWF	**Wu-fen Shan**	**0.29**	**324**	⇑*i* P			Pb	09 35 58.6	-0.6
	baz=323								
NWF				*i* S			Sb	09 36 03.2	-0.9
	baz=323								
WFSB	**Wu-fen Shan**	**0.29**	**324**	⇑P			Pb	09 35 58.6	-0.5
	baz=323								
WFSB				S			Sb	09 36 03.3	-0.8
	baz=323								
TWE	**Neicheng**	**0.30**	**247**	⇑*i* P			Pb	09 35 58.7	-0.5
	baz=245								
TWE				*i* S			Sb	09 36 03.2	-1.1
	baz=245								
NDS	**Dongshan**	**0.31**	**229**	P			Pb	09 35 58.9	-0.5
	baz=228								
NDS				S			Sb	09 36 03.5	-1.0
	baz=228								
TNOU	**National Taiwa**	**0.36**	**330**	⇑P			Pb	09 35 59.7	-0.6
	baz=329								
TNOU				S			Sb	09 36 04.9	-1.1
	baz=329								
TWA	**Mucha**	**0.38**	**292**	*i* P			Pb	09 36 00.5	-0.1
	baz=292								
TWA				*i* S			Sb	09 36 06.1	-0.5
	baz=292								
ENTT	**Nioudou**	**0.42**	**242**	*i* P			Pb	09 36 01.0	-0.3
	baz=241								
ENTT				S			Sb	09 36 07.1	-0.6
	baz=241								
NHDH	**Xindian Distri**	**0.42**	**287**	*eS*			Sb	09 36 07.9	+0.1
	baz=287								
EWUT	**Wuta**	**0.43**	**204**	*eP*			Pb	09 36 01.7	+0.3
	baz=204								
EWUT				S			Sb	09 36 07.7	-0.3
	baz=204								
NWLT	**Wulai**	**0.43**	**262**	*i* P			Pb	09 36 01.1	-0.4
	baz=261								
NWLT				S			Sb	09 36 07.6	-0.4
	baz=261								
TAP	**Taipei**	**0.47**	**296**	S			Sb	09 36 09.5	+0.4
	baz=295								
YM01	**YM01**	**0.47**	**310**	*eP*			Pb	09 36 02.4	0.0
	baz=310								
NDT	**Datong Townshi**	**0.48**	**241**	*i* P			Pb	09 36 02.2	-0.1
	baz=240								
NDT				S			Sb	09 36 08.5	-0.9
	baz=240								
YM11	**YM11**	**0.48**	**312**	P			Pb	09 36 02.8	+0.2
	baz=312								
YM10	**YM10**	**0.49**	**311**	P			Pb	09 36 02.6	+0.1
	baz=310								
YM10				*eS*			Sb	09 36 10.2	+0.4
	baz=310								
YM08	**YM08**	**0.49**	**316**	⇑P			Pb	09 36 02.4	-0.2
	baz=315								
YM08				*eS*			Sb	09 36 09.7	-0.2
	baz=315								
YM04	**YM04**	**0.50**	**309**	P			Pb	09 36 02.9	+0.1
	baz=308								
YM03	**YM03**	**0.52**	**311**	*eP*			Pb	09 36 02.9	-0.2
	baz=311								
TWS1	**Kuangyinshan**	**0.56**	**298**	P			Pb	09 36 03.6	-0.3
	baz=297								
TWS1				S			Sb	09 36 12.4	+0.4
	baz=297								
YHNB	**Yeheng**	**0.56**	**253**	P			Pb	09 36 03.4	-0.4
	baz=252								
YHNB				*eS*			Sb	09 36 11.8	-0.3
	baz=252								
NTST	**Danshui**	**0.57**	**305**	P			Pb	09 36 04.7	+0.7
	baz=304								
**NT

NWF	**Wu-fen Shan**	**0.27 315**	*i* P		Pb	09 36 07.3	-0.6
	baz=314						
NWF			*i* S		Sb	09 36 12.2	-0.6
	baz=314						
WFSB	**Wu-fen Shan**	**0.27 315**	P		Pb	09 36 07.3	-0.6
	baz=314						
WFSB			S		Sb	09 36 12.1	-0.5
	baz=314						
TWC	**Suao**	**0.30 205**	P		Pb	09 36 08.0	-0.4
	baz=203						
TWC			S		Sb	09 36 12.6	-0.9
	baz=203						
TNOU	**National Taiwa**	**0.33 324**	P		Pb	09 36 08.2	-0.7
	baz=322						
TNOU			S		Sb	09 36 13.8	-0.7
	baz=322						
TWE	**Neicheng**	**0.34 242**	P		Pg	09 36 08.1	+0.8
	baz=239						
TWE			S		Sg	09 36 12.8	+1.1
	baz=239						
NDS	**Dongshan**	**0.35 225**	P		Pb	09 36 08.9	-0.3
	baz=225						
NDS			S		Sb	09 36 14.9	-0.1
	baz=225						
TWA	**Mucha**	**0.38 285**	P		Pb	09 36 09.3	-0.6
	baz=284						
TWA			S		Sb	09 36 15.2	-0.7
	baz=284						
NHDH	**Xindian Distri**	**0.43 281**	*e*S		Sb	09 36 16.9	-0.4
	baz=280						
ENTT	**Nioudou**	**0.46 238**	P		Pg	09 36 10.2	+0.6
	baz=237						
ENTT			S		Sb	09 36 17.6	-0.4
	baz=237						
NWLT	**Wulai**	**0.46 257**	P		Pg	09 36 10.3	+0.7
	baz=256						
YM01	**YM01**	**0.46 305**	*e*P		Pb	09 36 11.1	-0.1
	baz=304						
YM01			*e*S		Sb	09 36 18.0	-0.3
	baz=304						
TAP	**Taipei**	**0.47 290**	*e*P		Pb	09 36 10.8	-0.5
	baz=289						
TAP			*e*S		Sb	09 36 18.1	-0.3
	baz=289						
YM11	**YM11**	**0.47 307**	*e*P		Pg	09 36 10.6	+0.7
	baz=306						
YM11	**YM11**	**0.47 307**	*e*S		Pb	09 36 10.5	-0.9
	baz=312						
YM08	**YM08**	**0.47 310**	*e*P		Pb	09 36 11.3	-0.1
	baz=309						
EWUT	**Wuta**	**0.48 204**	*e*P		Pb	09 36 11.5	+0.1
	baz=203						
EWUT			*e*S		Sb	09 36 18.8	+0.2
	baz=203						
YM10	**YM10**	**0.48 305**	*e*P		Pb	09 36 11.0	-0.5
	baz=304						
YM04	**YM04**	**0.49 303**	*e*P		Pb	09 36 11.5	-0.2
	baz=303						
NDT	**Datong Townshi**	**0.52 237**	*e*P		Pb	09 36 11.8	-0.3
	baz=237						
NDT			*e*S		Sb	09 36 20.1	+0.3
	baz=237						
ANP	**Anpu**	**0.52 305**	*e*S		Pb	09 36 11.0	-1.3
	baz=310						
ANP	**Anpu**	**0.52 305**	*e*P		Pg	09 36 11.0	+0.1
	baz=305						
YHNB	**Yeheng**	**0.60 249**	*e*P		Pb	09 36 13.2	-0.3
	baz=249						
YHNB			*e*S		Sb	09 36 22.7	+0.5
	baz=249						
NNS	**Nan Shan**	**0.71 232**	*e*P		Pb	09 36 15.5	0.0
	baz=231						
NNS			*e*S		Sb	09 36 26.2	+0.6
	baz=231						
NNS	**Nan Shan**	**0.71 232**	*e*S		Pb	09 36 15.5	0.0
	baz=233						
NNSB	**Datong**	**0.71 231**	*e*P		Pb	09 36 15.8	+0.2
	baz=230						
NNSB			*e*S		Sb	09 36 25.7	+0.1
	baz=230						
NNSB	**Datong**	**0.71 231**	S		Pb	09 36 15.9	+0.4
	baz=232						
NNSH	**Datong**	**0.71 231**	*e*P		Pb	09 36 15.8	+0.2
	baz=230						
NNSH	**Datong**	**0.71 231**	S		Pb	09 36 15.6	+0.1
	baz=232						
NACB	**Ninganchiao**	**0.79 207**	*e*P		Pb	09 36 16.9	+0.1
	baz=207						
NACB			*e*S		Sg	09 36 26.9	+0.6
	baz=207						
TWD	**Chiawan**	**0.88 204**	*e*P		Pb	09 36 18.2	0.0
	baz=203						

IDC 09 09:38:39.6±536.0, 54°20N×5°22E, h0km, Error ellipse: s-maj=152.8km s-min=83.5km az=11.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**7.53**	**132**	*i*		10 28 10.0	
	baz=314,slow=331,SNR=1.7						
I37NO	**I37NO**	**16.15**	**17**	*i*		11 09 59.3	
	baz=209,slow=330,SNR=1.5						
I48TN	**KESRA INFRASON**	**18.62**	**170**	*i*		11 41 40.0	
	baz=356,slow=320,SNR=0.5						

IDC 09 09:39:42.3±2.5, 53°66N×86°94E, h0km, mb1 3.0/2, mb1mx2.8/64, mbtmp3.0/2, ML2.7/2, Error ellipse: s-maj=21.3km s-min=13.5km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.29**	**284**	*i*		09 49 10.0	
	baz=102,slow=314,SNR=1.5						
ZALV	**Zalesovo Beam**	**1.29**	**284**	Pg	Pg	09 40 06.1	-0.9
	1.4nm,0.3s,baz=99,slow=17,SNR=7.6						
ZALV				Lg	Lg	09 40 24.2	
	2.6nm,0.3s,baz=104,slow=31,SNR=10						
ZALV				Rg	Rg	09 40 33.2	
	2.4nm,0.3s,baz=102,slow=34,SNR=3.9						
KURBB	**Kurchatov Arra**	**6.00**	**243**	Pn	Pn	09 41 12.8	+0.5
	0.1nm,0.3s,baz=60,slow=14,SNR=1.8						
KURBB				Sn	Sn	09 42 21.2	-0.6
	0.0nm,0.3s,baz=159,slow=39,SNR=1.3						
KURBB				Lg	Lg	09 42 52.7	
	0.0nm,0.3s,baz=54,slow=22,SNR=0.9						
MKAR	**Makanchi Array**	**7.49**	**205**	Pn	Pn	09 41 34.5	+1.7
	0.3nm,0.3s,baz=28,slow=14,SNR=12						
MKAR				Sn	Sn	09 42 57.8	-0.6
	0.1nm,0.3s,baz=27,slow=26,SNR=3.5						
MKAR				Lg	Lg	09 43 38.9	
	0.1nm,0.3s,baz=17,slow=35,SNR=3.9						

IDC 09 09:57:38.2±1.2, 6°84S×130°69E, h0km, mb3.3/1, mb1 3.9/4, mb1mx3.6/37, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=13.9km s-min=4.2km az=4.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.23**	**203**	Pn	Pn	10 00 33.8	0.0
	0.7nm,0.3s,baz=22,slow=9.2,SNR=40						
WRA	**Warramunga Arr**	**13.50**	**165**	Pn	Pn	10 00 51.0	-0.2
	0.4nm,0.3s,baz=346,slow=13,SNR=21						
WRA				Sn	Sn	10 03 08.8	-13
	0.9nm,0.3s,baz=350,slow=20,SNR=9.1						
ASAR	**Alice Springs**	**17.02**	**170**	Pn	Pn	10 01 38.0	+0.2
	0.4nm,0.3s,baz=344,slow=9.7,SNR=26						
ASAR				Sn	Sn	10 04 34.9	-13
	0.2nm,0.3s,baz=353,slow=27,SNR=5.9						
MKAR	**Makanchi Array**	**68.47**	**326**	P	P	10 08 41.6	-0.6
	0.2nm,0.5s,baz=123,slow=7.5,SNR=2.7						

*NEIC **09** 09:58:28.5±1.4, 53°.18N±0°.06×166°.88W±0°.09, h40km±16km, Error ellipse: s-maj=12.1km s-min=1.4km az=141.0*
*AEIC **09** 09:58:28±1.6, 53°.5N±0°.2×167°.2W±0°.2, h78km±8km, ML3.4/25, Error ellipse: s-maj=35.6km s-min=3.9km az=148.0*
*IDC **09** 09:58:28.7±4.5, 52°.97N×165°.62W, h0km, mb3.2/4, mb1 3.7/5, mb1mx3.3/51, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=83.7km s-min=45.3km az=106.0*

ISC 09 09:58:27.6±2.1, 53°.1N±0°.1×166°.78W±0°.07, h29km±16km, n33, σ1s39/32, mb3.2/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGOD	**Makushin Gods**	**0.68**	**355**		Pb	09 58 40.8	-0.1
MGOD					Sb	09 58 50.5	+0.6
MAPS	**Pakushin South**	**0.69**	**352**		Pb	09 58 41.2	0.0
MAPS					Sb	09 58 51.0	+0.5
OKFG	**Magazine Ridge**	**0.74**	**294**		Pb	09 58 41.7	-0.2
MNAT	**Makushin Natee**	**0.77**	**4**		Pb	09 58 42.0	-0.3
MNAT					Sb	09 58 52.7	+0.2
MSW	**Makushin Switc**	**0.80**	**360**		Pb	09 58 42.4	-0.4
MSW					Sb	09 58 53.4	+0.2
OKSO	**Okmok South**	**0.86**	**286**		Pb	09 58 43.3	-0.6
OKSO					Sb	09 58 54.8	-0.4
AKMO	**Akutan Morgan**	**1.07**	**25**		Pn	09 58 46.3	-0.3
AKMO					Sb	09 59 00.6	-0.6
AKBBA	**Akutan Broad B**	**1.10**	**27**		Pn	09 58 46.6	-0.4
AKLV	**Akutan Long Va**	**1.15**	**25**		Pn	09 58 47.4	-0.4
AKGG	**Akutan Green G**	**1.18**	**23**		Pn	09 58 47.8	-0.3
AKUT	**Akutan**	**1.18**	**30**		Pn	09 58 47.6	-0.5
AKSA	**Akutan Strait**	**1.20**	**32**		Pn	09 58 47.7	-0.7
AKSA					Sn	09 59 04.8	+1.1
NIKH	**Nikolski High**	**1.26**	**264**		Sn	09 59 04.3	-0.9
NIKH	**Nikolski High**	**1.26**	**264**		Pn	09 58 48.8	-0.4
WEBT	**Westdahl Beart**	**1.90**	**38**		Pn	09 58 58.5	+0.5
WTUG	**Tugumak**	**2.23**	**38**		Pn	09 59 02.7	+0.1
FALS	**False Pass**	**2.64**	**47**		Pn	09 59 08.4	+0.3
SDPT	**Sand Point**	**4.32**	**56**	Pn	Pn	09 59 33.0	+1.8
OHAK	**Old Harbor**	**8.74**	**57**	Pn	Pn	10 00 29.9	-1.9
KDAK	**Kodiak Island**	**9.31**	**54**	Pn	Pn	10 00 39.7	0.0
	0.2nm,0.3s,baz=241,slow=13,SNR=1.6						
KDAK				Sn	Sn	10 02 17.6	-5.7
	0.2nm,0.3s,baz=109,slow=22,SNR=1.1						
INK	**Inuvik**	**21.85**	**33**	P	P	10 03 20.2	+2.8
	1.2nm,0.8s,baz=222,slow=8.1,SNR=3.6						
YKA	**Yellowknife Ar**	**28.56**	**50**	P	P	10 04 21.4	+1.0
	0.1nm,0.6s,baz=275,slow=8.2,SNR=2.7						
PDAR	**Pinedale Array**	**38.73**	**82**	P	P	10 05 49.1	-0.1
	0.2nm,0.6s,baz=287,slow=9.3,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**39.04**	**222**	T	T	10 47 32.2	
	baz=25,slow=76,SNR=46						
H11N3	**WAKE ISLAND Hy**	**39.05**	**222**	T	T	10 47 23.3	
	baz=25,slow=76,SNR=47						
H11N1	**WAKE ISLAND Hy**	**39.06**	**222**	T	T	10 47 46.7	
	baz=25,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	**40.23**	**221**	T	T	10 49 09.7	
	baz=24,slow=76,SNR=42						
H11S2	**WAKE ISLAND Hy**	**40.24**	**221**	T	T	10 49 11.9	
	baz=24,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**40.24**	**221**	T	T	10 49 15.8	
	baz=24,slow=76,SNR=28						
TXAR	**Lajitas Array**	**51.18**	**92**	P	P	10 07 28.1	0.0
	0.3nm,0.8s,baz=295,slow=6.9,SNR=3.0						
H03N2	**Juan Fernandez**	**114.75**	**113**	T	T	12 22 07.1	
	baz=322,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**114.77**	**113**	T	T	12 22 11.3	
	baz=322,slow=77,SNR=20						
H03N3	**Juan Fernandez**	**114.77**	**113**	T	T	12 22 08.0	
	baz=322,slow=77,SNR=26						

IDC 09 10:07:51.7±3.0, 50°29S×113°77E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/23, mbtmp3.8/3, Error ellipse: s-maj=164.6km s-min=29.0km az=109.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.39**	**1**	T	T	10 27 17.1	
	baz=180,slow=74,SNR=121						
H01W1	**Cape Leeuwin H**	**15.39**	**1**	T	T	10 27 16.3	
	baz=180,slow=74,SNR=120						
H01W3	**Cape Leeuwin H**	**15.40**	**1**	T	T	10 27 18.9	
	baz=180,slow=74,SNR=115						
ASAR	**Alice Springs**	**30.86**	**38**	P	P	10 14 09.6	-0.1
	1.3nm,0.8s,baz=208,slow=8.1,SNR=11						
WRA	**Warramunga Arr**	**34.41**	**36**	P	P	10 14 40.6	-0.1
	1.2nm,0.8s,baz=204,slow=9.1,SNR=6.8						
QSPA	**South Pole Qui**	**39.83**	**180**	P	P	10 15 26.3	-0.2
	0.8nm,0.8s,baz=217,slow=2.0,SNR=2.4						
YKA	**Yellowknife Ar**	**151.32**	**46**	PKPbc	PKPbc	10 27 46.0	+0.1
	0.2nm,0.7s,baz=274,slow=1.8,SNR=3.0						

IDC 09 10:08:43.3±3.7, 50°37S×114°04E, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.5/23, mbtmp3.7/2, Error ellipse: s-maj=245.7km s-min=72.1km az=122.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.46**	**0**	T	T	10 28 18.0	
	baz=181						
H01W1	**Cape Leeuwin H**	**15.47**	**0**	T	T	10 28 18.7	
	baz=181						
H01W3	**Cape Leeuwin H**	**15.48**	**0**	T	T	10 28 20.4	
	baz=181						
ASAR	**Alice Springs**	**30.82**	**37**	P	P	10 15 01.2	+0.4
	0.7nm,0.7s,baz=208,slow=8.1,SNR=5.4						
WRA	**Warramunga Arr**	**34.37**	**35**	P	P	10 15 31.3	-0.5
	0.5nm,1.0s,baz=203,slow=8.3,SNR=4.5						
YKA	**Yellowknife Ar**	**151.25**	**46**	PKPbc	PKPbc	10 28 37.0	-0.2
	0.1nm,0.4s,baz=265,slow=2.2,SNR=3.7						

*WEL **09** 10:14:00, 43°.62S×168°.73E, h22km, ML3.9, Mw3.7, Moment Tensor Solution. s7 Moment tensor: Scale 10^14 Nm; Mrr3.83; Mθθ-2.48; Mϕϕ-1.35; Mrθ-1.53; Mθϕ-2.40; Mϕr-0.49; Fault plane solution: M0 4.42000×10^14 NP1: ϕs42.00000°, δ36.00000°, λ76.00000°. NP2:ϕs240.00000°, δ56.00000°, λ100.00000°. Principal axes: T -46.5100, Plg77.0000°, Azm184.0000°; N 4.6700, Plg9.0000°, Azm54.0000°; P 41.8400, Plg10.0000°, Azm323.0000°;*
*IDC **09** 10:14:37.5±1.4, 43°.70S×168°.58E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.5/18, mbtmp3.4/3, ML2.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/8 Error ellipse: s-maj=56.8km s-min=19.0km az=6.0*
*WEL **09** 10:14:41.5, 44°.5S±2°×16°.9E±1°, h27km±5km, M3.9/15, ML4.0/14, MLv3.9/15, Error ellipse: s-maj=0.0km s-min=0.0km az=89.0*
*NOU **09** 10:14:43.3, 43°.56S×168°.75E, h88km, MLv4.4, Off W. Coast of S. Island, N.Z.*

ISC 09 10:14:40.9±1.3, 43°59S±0°.05×168°69E±0°.05, h31km±11km, n73, σ1s58/78, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.48**	**171**	P	Pn	10 14 51.9	+0.1
JCZ				S	Sb	10 14 58.5	+0.3
FOZ	**Fox Glacier**	**0.82**	**86**	P	Pb	10 14 56.7	0.0
FOZ				S	Sn	10 15 07.3	-0.2
MSZ	**Milford Sound**	**1.21**	**207**	P	Pn	10 15 01.2	-0.5
MSZ				S	Sn	10 15 15.9	-1.2
GCSZ	**Gaunt Creek Bo**	**1.23**	**77**	P	Pn	10 15 02.4	+0.5
WKZ	**Wanaka**	**1.26**	**169**	P	Pb	10 15 04.0	0.0
WKZ				S	Sb	10 15 19.9	0.0
LBZ	**Lake Benmore**	**1.34**	**127**	P	Pb	10 15 05.0	-0.4
WVZ	**Waitaha Valley**	**1.58**	**72**	P	Pn	10 15 07.2	+0.4
WVZ				S	Sn	10 15 26.1	-0.1
EAZ	**Earnscleugh**	**1.70**	**165**	P	Pn	10 15 09.7	+1.2
EAZ				S	Sn	10 15 29.8	+0.7
RPZ	**Rata Peaks**	**1.72**	**95**	Pn	Pb	10 15 11.2	-0.7
	48nm,0.3s,baz=263,slow=5.2,SNR=451						
RPZ				Sn	Sb	10 15 32.5	-0.7
	99nm,0.3s,baz=300,slow=21,SNR=33						
RPZ	**Rata Peaks**	**1.72**	**95**	P	Pb	10 15 10.8	-1.1
MLZ	**Mavora Lakes**	**1.82**	**193**	P	Pn	10 15 11.4	+1.3
MLZ				S	Sb	10 15 34.5	-1.4
ARCZ	**Arundel**	**1.84**	**102**	P	Pn	10 15 12.0	+1.7
TMZ	**Timaru**	**1.85**	**116**	P	Pn	10 15 12.2	+1.7
ODZ	**Otahua Downs**	**2.02**	**137**	P	Pn	10 15 14.3	+1.4
ODZ				S	Sn	10 15 37.7	+0.7
DCZ	**Deep Cove**	**2.17**	**210**	P	Pn	10 15 15.3	+0.4
INZ	**Inchbonnie**	**2.20**	**68**	P	Pn	10 15 15.7	+0.4
WACZ	**Wakanui South**	**2.31**	**100**	P	Pn	10 15 18.1	+1.3
WHZ	**Wether Hill Ro**	**2.36**	**193**	P	Pn	10 15 18.4	+0.9
TUZ	**Tuapeka**	**2.45**	**164**	P	Pn	10 15 19.8	+1.0
OXZ	**Oxford**	**2.46**	**85**	P	Pn	10 15 20.0	+1.2
RACZ	**Rakaia**	**2.51**	**94**	P	Pn	10 15 20.6	+1.1
HHSZ	**Highcliff Hill**	**2.67**	**150**	P	Pn	10 15 23.3	+1.6
LTZ	**Lake Taylor**	**2.75**	**74**	P	Pn	10 15 24.6	+1.7
MQZ	**McQueen's Vall**	**2.88**	**94**	P	Pn	10 15 25.2	+0.5
AMCZ	**Amberley**	**2.92**	**83**	P	Pn	10 15 26.8	+1.6
PYZ	**Puysegur Point**	**2.94**	**208**	P	Pn	10 15 27.8	+2.3
DSZ	**Denniston Nort**	**2.95**	**52**	P	Pn	10 15 26.3	+0.6
SYZ	**Scrubby Hill**	**2.96**	**174**	P	Pn	10 15 26.5	+0.8
AKCZ	**Akaroa Harbour**	**3.07**	**97**	P	Pn	10 15 28.2	+0.9
OKCZ	**Okains Bay**	**3.18**	**94**	P	Pn	10 15 29.7	+0.9
GVZ	**Greta Valley S**	**3.24**	**80**	P	Pn	10 15 31.0	+1.4
APZ	**The Paps**	**3.28**	**188**	P	Pn	10 15 30.8	+0.7
THZ	**Tophouse**	**3.61**	**61**	P	Pn	10 15 36.1	+1.3
KHZ	**Kahutara**	**3.75**	**73**	P	Pn	10 15 37.8	+1.2
QRZ	**Quartz Range**	**3.98**	**47**	P	Pn	10 15 40.6	+0.9
NNZ	**Nelson**	**4.21**	**57**	P	Pn	10 15 44.1	+1.2
BSWZ	**Blackbirch Sta**	**4.26**	**66**	P	Pn	10 15 45.7	+2.0
TUWZ	**Tuamarina**	**4.45**	**63**	P	Pn	10 15 47.8	+1.6
CMWZ	**Cape Campbell**	**4.47**	**68**	P	Pn	10 15 51.6	+5.0
TCW	**Tory Channel**	**4.78**	**62**	P	Pn	10 15 52.2	+1.5
DUWZ	**D'Urville Isla**	**4.79**	**56**	P	Pn	10 15 52.6	+1.7
PLWZ	**Palliser**	**5.25**	**70**	P	Pn	10 15 57.2	-0.1
MSWZ	**Moikau Station**	**5.32**	**68**	P	Pn	10 15 57.8	-0.4
CAW	**Cannon Point**	**5.34**	**64**	P	Pn	10 15 58.3	-0.2
KIW	**Kapiti Island**	**5.37**	**62**	P	Pn	10 15 59.4	+0.5
OGWZ	**Otaki Gorge**	**5.56**	**62**	P	Pn	10 16 01.6	+0.1
MTW	**Mount Morrison**	**5.60**	**67**	P	Pn	10 16 01.2	-0.9
HOWZ	**Holdsworth Sta**	**5.74**	**64**	P	Pn	10 16 03.5	-0.5
MRZ	**Mangatainoka R**	**5.90**	**63**	P	Pn	10 16 04.7	-1.5
PREZ	**Palmer Road**	**5.91**	**46**	P	Pn	10 16 07.6	+1.3
PKE	**Pukeiti**	**5.93**	**44**	P	Pn	10 16 08.1	+1.4
LREZ	**Lake Rotokare**	**5.95**	**48**	P	Pn	10 16 10.9	+4.0
BFZ	**Birch Farm**	**6.33**	**65**	P	Pn	10 16 13.3	+1.3
VRZ	**Vera Road**	**6.39**	**48**	P	Pn	10 16 14.7	+1.9
NNVZ	**North Ngauruho**	**6.86**	**52**	P	Pn	10 16 23.4	+3.9
OTVZ	**Oturere**	**6.86**	**52**	P	Pn	10 16 22.8	+3.3
HIZ	**Hauiti**	**6.89**	**45**	P	Pn	10 16 21.4	+1.7
KRHZ	**Kereru**	**6.98**	**58**	P	Pn	10 16 28.3	+7.3
KWHZ	**Kaweka Forest**	**7.14**	**57**	P	Pn	10 16 31.3	+8.0
BKZ	**Black Stump Fm**	**7.35**	**56**	P	Pn	10 16 34.3	+8.1
TLZ	**Tolley Road**	**7.38**	**47**	P	Pn	10 16 28.6	+2.0
TOZ	**Tahuroa Road**	**7.82**	**44**	P	Pn	10 16 34.7	+2.2
AWAZ	**Awhitu Peninsu**	**7.95**	**37**	P	Pn	10 16 36.3	+2.0
WTAZ	**Waiatarua**	**8.03**	**36**	P	Pn	10 16 37.4	+2.0
MBAZ	**Motutapu North**	**8.31**	**37**	P	Pn	10 16 41.2	+2.0
URZ	**Urewera**	**8.31**	**53**	Pn	Pn	10 16 39.7	+0.5
	0.1nm,0.3s,baz=299,slow=24,SNR=1.4						
URZ				Sn	Sn	10 18 06.1	-5.8
	0.7nm,0.3s,baz=120,slow=23,SNR=1.9						
URZ	**Urewera**	**8.31**	**53**	P	Pn	10 16 47.1	+7.9
WIAZ	**Waiheke Island**	**8.39**	**38**	P	Pn	10 16 43.3	+2.9
WCZ	**Waipu Caves**	**8.80**	**32**	P	Pn	10 16 46.8	+0.9
OUZ	**Omahuta**	**9.18**	**26**	P	Pn	10 16 52.5	+1.3
ASAR	**Alice Springs**	**34.77**	**294**	P	P	10 21 29.1	+0.4
	0.1nm,0.5s,baz=135,slow=7.3,SNR=5.2						
WRA	**Warramunga Arr**	**37.13**	**298**	P	P	10 21 50.0	+1.2
	0.5nm,0.6s,baz=137,slow=7.8,SNR=11						
WRA				LR	LR	10 37 53.5	
	comp=Z,58nm,18.1s,baz=140,slow=38						
TORD	**Torodi Ar. Bea**	**147.66**	**204**	PKPbc	PKPbc	10 34 22.6	0.0
	0.3nm,0.4s,baz=141,slow=1.6,SNR=5.7						

*IDC **09** 10:15:27.2±0.8, 58°.32N×31°.86W, h0km, mb3.9/14, mb1 4.0/17, mb1mx3.9/42, mbtmp3.9/17, ML3.5/3, MS3.5/10, Ms1 3.6/10, ms1mx3.2/37, Error ellipse: s-maj=21.8km s-min=13.9km az=17.0*
*NEIC **09** 10:15:28.8±2.0, 58°.24N±0°.10×31°.9W±0°.1, h10km±1km, mb4.2/11, Error ellipse: s-maj=16.6km s-min=9.3km az=167.0*

ISC 09 10:15:29.2±0.6, 58°.27N±0°.09×31°.91W±0°.07, h13km, n41, σ0s86/37, mb4.0/18, MS3.5/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANGG	**Ammassalik, Gr**	**7.84**	**342**	Pn	Pn	10 17 22.8	0.0
BORG	**Borgarnes**	**8.22**	**33**	Pn	Pn	10 17 27.5	-0.5
	0.6nm,0.3s,baz=310,slow=8.8,SNR=1.8						
BORG				Sn	Sn	10 19 00.4	-0.2
	1.3nm,0.3s,baz=102,slow=21,SNR=7.3						
BORG				LR	LR	10 19 53.6	
	comp=Z,436nm,19.0s,baz=210,slow=33						
BORG	**Borgarnes**	**8.22**	**33**	Pn	Pn	10 17 29.3	+1.3
EKA	**Eskdalemuir Ar**	**15.96**	**88**	Pn	Pn	10 19 13.6	+0.5
	baz=297,slow=9.5,SNR=5.5						
FRB	**Frobisher Bay**	**18.38**	**303**	P	P	10 19 42.5	-0.8
	0.0nm,0.3s,baz=108,slow=10,SNR=4.2						
FRB				LR	LR	10 25 54.0	
	comp=Z,293nm,18.6s,baz=104,slow=34						
NOA	**NORSAR Array B**	**21.67**	**64**	P	P	10 20 20.1	+0.9
	2.1nm,1.1s,baz=283,slow=9.4,SNR=3.6						
NOA				LR	LR	10 27 56.8	
	comp=Z,88nm,18.1s,baz=300,slow=35						
ESDC	**Sonseca Array**	**25.82**	**124**	P	P	10 21 00.1	+0.1
	3.0nm,1.0s,baz=320,slow=7.9,SNR=9.4						
ESDC				LR	LR	10 29 31.5	
	comp=Z,143nm,18.6s,baz=335,slow=33						
ESDC	**Sonseca Array**	**25.82**	**124**	P	P	10 20 59.3	-0.7
ESDC				IAmb	IAmb	10 21 04.2	
	comp=Z,3.3nm,1.1s						
ARCES	**ARCESS Array B**	**26.51**	**42**	P	P	10 21 06.1	+0.2
	comp=Z,3.0nm,0.9s,baz=282,slow=6.1,SNR=3.6						
RES	**Resolute Bay**	**28.09**	**330**	P	P	10 21 20.1	+0.2
	comp=Z,1.6nm,1.0s,baz=88,slow=7.8,SNR=6.1						
RES				LR	LR	10 31 58.2	
	comp=Z,40nm,20.1s,baz=137,slow=35						
GERES	**GERESS Array B**	**28.17**	**89**	LR	LR	10 32 14.9	
	comp=Z,149nm,18.2s,baz=304,slow=36						
FINES	**FINESS Array B**	**28.46**	**59**	P	P	10 21 21.9	-1.4
	comp=Z,2.7nm,0.8s,baz=282,slow=6.4,SNR=4.7						
KLMR	**Klimovskoe**	**34.65**	**55**	*e*	P	10 22 17.0	-0.7
KLMR				AMP		10 22 19.9	
	comp=Z,28nm,1.3s						
AKASG	**Malin Array Be**	**35.17**	**75**	P	P	10 22 20.

comp=Z,0.5nm,1.1s,baz=334,slow=3.6,SNR=4.5

*IDC **09** 10:16:36.1±1.4,58°.34N×31°.84W,h0km,mb3.5/5, mb1 3.8/5,mb1mx3.4/39,mbtmp3.5/5,MS3.3/1,Ms1 3.3/1, ms1mx2.6/32,Error ellipse: s-maj=52.8km s-min=28.5km az=32.0*

ISC 09 10:16:38.2±1.1,58°.3N×0°.3×31°.9W±0°.2,h13km,n7,σ0s37/6, mb3.6/5,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FINES	**FINESS Array B**	**28.42**	**59**	LR	LR	10 33 18.2	
	comp=Z,69nm,21.9s,baz=278,slow=35						
YKA	**Yellowknife Ar**	**38.42**	**312**	P	**P**	**10 23 59.2**	**+0.3**
	0.5nm,0.8s,baz=59,slow=9.6,SNR=3.3						
ILAR	**Eielson Array**	**47.78**	**328**	P	**P**	**10 25 14.6**	**+0.1**
	0.8nm,0.9s,baz=47,slow=6.2,SNR=2.6						
PDAR	**Pinedale Array**	**48.87**	**287**	P	**P**	**10 25 23.2**	**-0.4**
	0.4nm,0.7s,baz=64,slow=6.8,SNR=3.5						
TORD	**Torodi Ar. Bea**	**51.67**	**137**	P	**P**	**10 25 44.8**	**+0.1**
	0.5nm,0.8s,baz=338,slow=8.1,SNR=1.9						
MKAR	**Makanchi Array**	**62.05**	**45**	P	**P**	**10 26 57.7**	**-0.3**
	0.3nm,0.7s,baz=347,slow=5.0,SNR=2.3						
ASAR	**Alice Springs**	**143.90**	**22**	PKP	**PKPab**	**10 36 10.3**	**+0.2**
	0.2nm,0.7s,baz=5.7,slow=0.9,SNR=1.6						

JMA 09 10:23:39.7±0.1,24°.29N×123°.72E,h15km±1km,M2.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.05**	**12**	P	Pg	10 23 42.4	-0.1
IRIF				S	Sg	10 23 44.7	+0.4
HATJ	**Hateruma jima**	**0.24**	**162**	P	Pg	10 23 44.7	-0.4
HATJ				*e*S	Sg	10 23 48.9	+0.2
JKRS	**Kuro-shima**	**0.27**	**101**	P	Pg	10 23 45.5	0.0
JKRS				S	Sb	10 23 50.2	-0.4
JIJ	**Ishigaki jima**	**0.39**	**79**	P	Pg	10 23 47.4	-0.3
JIJ				S	Sg	10 23 53.0	-0.1
JISG	**Ishigakijimahi**	**0.61**	**61**	P	Pg	10 23 51.4	-0.4
JISG				S	Sg	10 24 00.2	+0.2
YOJ	**Yonaguni jima**	**0.67**	**285**	P	Pg	10 23 52.9	+0.1
YOJ				S	Sb	10 24 02.1	-0.1
JYNG	**Yonagunijimaku**	**0.72**	**283**	P	Pg	10 23 53.8	0.0
JYNG				S	Sg	10 24 03.5	+0.1
JTJ	**Tarama**	**0.96**	**68**	P	Pb	10 23 57.8	-0.3
JTJ				*e*S	Sg	10 24 11.1	+0.2

TAP 09 10:24:32.6,24°.86N×122°.03E,h5km,ML1.9,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.09**	**262**	P	Pg	10 24 34.8	+0.3
	baz=259						
EGS				S	Sg	10 24 36.9	+1.0
	baz=259						
TWB1	**Santiao Chiao**	**0.15**	**346**	*i* P	Pg	10 24 36.6	+0.8
	baz=348						
TWB1				*i* S	Sg	10 24 39.4	+1.5
	baz=348						
NTC	**Toucheng**	**0.18**	**269**	*e*P	Pg	10 24 37.3	+1.1
	baz=269						
NTC				*e*S	Sg	10 24 40.7	+2.0
	baz=269						
TIPB	**Shuangxi**	**0.22**	**302**	*i* P	Pg	10 24 38.1	+1.2
	baz=301						
TIPB				*i* S	Sg	10 24 41.7	+1.9
	baz=301						
ILA	**Ilan**	**0.27**	**251**	*e*P	Pb	10 24 39.1	-0.9
	baz=249						
ILA				S	Sb	10 24 43.8	-1.2
	baz=249						
TWC	**Suao**	**0.30**	**214**	P	Pb	10 24 39.8	-0.6
	baz=211						
TWC				S	Sb	10 24 44.8	-0.9
	baz=211						
NWF	**Wu-fen Shan**	**0.31**	**313**	P	Pb	10 24 40.2	-0.6
	baz=313						
NWF				*i* S	Sb	10 24 45.2	-1.0
	baz=313						
WFSB	**Wu-fen Shan**	**0.31**	**313**	*e*P	Pb	10 24 39.7	-1.0
	baz=313						
WFSB				S	Sb	10 24 45.2	-0.9
	baz=313						
TWE	**Neicheng**	**0.36**	**248**	*i* P	Pg	10 24 40.4	+0.8
	baz=246						
TWE				S	Sb	10 24 46.2	-1.2
	baz=246						
NDS	**Dongshan**	**0.36**	**232**	*e*P	Pb	10 24 41.0	-0.6
	baz=232						
NDS				*e*S	Sb	10 24 47.1	-0.5
	baz=232						
TNOU	**National Taiwa**	**0.37**	**321**	*e*P	Pb	10 24 41.6	-0.1
	baz=320						
TNOU				*e*S	Sb	10 24 48.1	+0.2
	baz=320						
TWA	**Mucha**	**0.42**	**287**	P	Pb	10 24 42.4	-0.2
	baz=286						
TWA				S	Sb	10 24 49.2	-0.1
	baz=286						
EWUT	**Wuta**	**0.47**	**209**	*e*P	Pb	10 24 43.2	-0.2
	baz=209						
EWUT				*e*S	Sb	10 24 50.2	-0.4
	baz=209						
NHDH	**Xindian Distri**	**0.47**	**283**	*e*S	Sb	10 24 51.0	+0.3
	baz=282						
ENTT	**Nioudou**	**0.47**	**243**	P	Pg	10 24 42.6	+0.9
	baz=242						
ENTT				S	Sb	10 24 51.0	+0.1
	baz=242						
NWLT	**Wulai**	**0.49**	**261**	*e*P	Pb	10 24 43.8	+0.1
	baz=260						
NWLT				*e*S	Sb	10 24 51.4	+0.2
	baz=260						
TATO	**Taipei**	**0.51**	**284**	*e*P	Pb	10 24 43.4	-0.7
	baz=283						
TATO				*e*S	Sb	10 24 51.1	-0.7
	baz=283						
TAP	**Taipei**	**0.51**	**291**	*e*P	Pg	10 24 43.2	+0.7
	baz=290						
NDT	**Datong Townshi**	**0.53**	**242**	*e*P	Pb	10 24 43.9	-0.6
	baz=241						
NDT				*e*S	Sb	10 24 52.5	-0.1
	baz=241						

*IDC **09** 10:51:40.7±0.7,5°.93S×146°.64E,h0km,mb3.9/12, mb1 4.1/15,mb1mx3.9/42,mbtmp4.0/15,ML3.6/2,MS3.3/11, Ms1 3.3/11,ms1mx3.1/35,Error ellipse: s-maj=26.4km s-min=12.8km az=82.0*

ISC 09 10:51:47.8±0.7,6°.00S±0°.08×146°.6E±0°.2,h52km,n24, σ0s66/20,mb4.0/12,MS3.3/8,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.43**	**170**	Pn	**Pn**	**10 52 38.3**	**-0.5**
	14nm,0.3s,baz=15,slow=6.4,SNR=21						
PMG				Sn	**Sn**	**10 53 18.3**	**0.0**
	12nm,0.3s,baz=287,slow=23,SNR=6.5						
PMG				Lg	Lg	10 53 31.6	
	27nm,0.3s,baz=42,slow=19,SNR=8.0						
PMG				LR	LR	10 54 23.2	
	comp=Z,930nm,19.4s,baz=14,slow=47						
PMG	**Port Moresby**	**3.43**	**170**	P	**Pn**	**10 52 40.1**	**+1.3**
JAY	**Jayapura**	**6.80**	**300**	LR	LR	10 56 36.0	
	comp=Z,340nm,20.6s,baz=167,slow=43						
HNR	**Honiara**	**13.68**	**105**	LR	LR	10 58 39.3	
	comp=Z,28nm,20.9s,baz=338,slow=31						
CTA	**Charters Tower**	**14.00**	**181**	Pn	**Pn**	**10 55 03.4**	**-0.3**
	0.2nm,0.3s,baz=356,slow=13,SNR=1.6						
WRA	**Warramunga Arr**	**18.26**	**220**	P	**P**	**10 55 57.3**	**0.0**
	0.2nm,0.3s,baz=44,slow=12,SNR=18						
ASAR	**Alice Springs**	**21.38**	**213**	P	**P**	**10 56 31.6**	**+0.4**
	0.8nm,0.5s,baz=55,slow=8.7,SNR=24						
ASAR				LR	LR	11 05 45.4	
	comp=Z,119nm,20.8s,baz=42,slow=39						
FITZ	**Fitzroy Crossi**	**23.71**	**238**	P	**P**	**10 56 55.8**	**+0.6**
	16nm,0.8s,baz=76,slow=6.9,SNR=23						
FITZ				LR	LR	11 07 49.6	
	comp=Z,97nm,18.8s,baz=60,slow=41						
DZM	**Mont Dzumac**	**24.98**	**132**	P	**P**	**10 57 06.4**	**-0.5**
	3.5nm,0.7s,baz=280,slow=12,SNR=2.0						
STKA	**Stephens Creek**	**26.16**	**190**	P	**P**	**10 57 16.8**	**-0.6**
	1.6nm,0.6s,baz=350,slow=9.0,SNR=4.5						
STKA				LR	LR	11 08 22.0	
	comp=Z,155nm,18.3s,baz=23,slow=38						
KAPI	**Kappang**	**26.72**	**271**	LR	LR	11 10 55.1	
	comp=Z,22nm,18.2s,baz=358,slow=43						
KSRS	**Korea Array**	**46.61**	**339**	P	**P**	**11 00 12.0**	**+1.1**
	1.3nm,0.8s,baz=162,slow=9.9,SNR=6.3						
KSRS				LR	LR	11 19 02.4	
	comp=Z,30nm,19.2s,baz=158,slow=35						
CMAR	**Chiang Mai Arr**	**52.88**	**298**	P	**P**	**11 00 58.8**	**-0.2**
	0.5nm,0.3s,baz=111,slow=5.0,SNR=1.5						
CMAR				LR	LR	11 25 19.7	
	comp=Z,15nm,18.1s,baz=142,slow=38						
SONM	**Songino Array**	**64.20**	**331**	P	**P**	**11 02 16.0**	**-1.4**
	0.3nm,0.5s,baz=145,slow=5.3,SNR=1.9						
TLY	**Talaya**	**68.16**	**333**	LR	LR	11 35 19.9	
	comp=Z,21nm,18.1s,baz=106,slow=38						
YAK	**Yakutsk**	**69.08**	**352**	LR	LR	11 34 29.8	
	comp=Z,32nm,18.4s,baz=258,slow=37						
VNDA	**Vanda**	**71.93**	**177**	P	**P**	**11 03 05.1**	**-0.2**
	0.6nm,0.8s,baz=342,slow=4.8,SNR=3.2						
MKAR	**Makanchi Array**	**77.23**	**321**	P	**P**	**11 03 36.7**	**+0.1**
	0.3nm,0.4s,baz=123,slow=7.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**78.79**	**328**	P	**P**	**11 03 44.5**	**-0.4**
	0.7nm,0.4s,baz=108,slow=6.9,SNR=3.7						
QSPA	**South Pole Qui**	**83.96**	**180**	P	**P**	**11 04 12.9**	**+0.6**
	1.7nm,0.6s,baz=292,slow=2.3,SNR=17						
ILAR	**Eielson Array**	**85.65**	**23**	P	**P**	**11 04 21.2**	**+0.6**
	0.8nm,0.7s,baz=254,slow=4.9,SNR=23						
TORD	**Torodi Ar. Bea**	**144.68**	**284**	PKP	**PKPdf**	**11 11 19.6**	**-0.3**
	6.1nm,0.7s,baz=68,slow=3.4,SNR=22						
SIV	**San Ignacio**	**144.97**	**129**	PKP	**PKPdf**	**11 11 20.3**	**-0.1**
	3.0nm,0.6s,baz=252,slow=2.9,SNR=16						
DBIC	**Dimbokro**	**151.60**	**273**	PKPbc	**PKPbc**	**11 11 37.4**	**-0.1**
	4.0nm,0.7s,baz=62,slow=1.8,SNR=5.7						

*VAO **09** 10:57:48.8±0.4,18°.38S×69°.50W,h127km,mb4.1 NEIC **09** 10:57:48±2.0,18°.54S±0°.06×69°.7W±0°.1,h131km±5km, Error ellipse: s-maj=15.3km s-min=8.6km az=91.0 GUC **09** 10:57:48.7±0.7,18°.54S×69°.77W,h131km±3km,ML4.1 IDC **09** 10:57:49.2±1.6,18°.45S×69°.40W,h133km±13km,mb3.5/6, mb1 3.7/10,mb1mx3.4/38,mbtmp4.0/10,Error ellipse: s-maj=29.4km s-min=13.2km az=102.0*

ISC 09 10:57:47.5±0.6,18°.50S±0°.04×69°.66W±0°.07,h129km±6km, n96,σ1s16/100,mb3.7/7,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	**Minye Minye**	**0.63**	**175**	*e*P	**Pn**	**10 58 08.3**	**+0.7**
MNMC				*i* S	**Sn**	**10 58 23.2**	**+0.3**
MNMC	**Minye Minye**	**0.63**	**175**		**Pn**	**10 58 08.3**	**+0.7**
AP01	**Chacalluta**	**0.66**	**281**	*e*P	**Pn**	**10 58 07.5**	**0.0**
AP01				*i* S	**Sn**	**10 58 22.2**	**-0.3**
AP01				IAML		10 58 22.9	
	comp=E,13μm,0.3s						
AP01	**Chacalluta**	**0.66**	**281**		**Pn**	**10 58 07.5**	**0.0**
PSGC	**Pisagua**	**1.18**	**202**	*e*P	**Pn**	**10 58 12.4**	**+0.3**
PSGC				*i* S	**Sn**	**10 58 30.2**	**-0.7**
PSGC				IAML		10 58 32.0	
	comp=E,2μm,0.3s						
PSGCX	**Pisagua**	**1.18**	**202**		**Pn**	**10 58 12.5**	**+0.4**
PB11	**IPOC Station P**	**1.25**	**180**		**Pn**	**10 58 13.8**	**+0.7**
PB08	**IPOC Station P**	**1.70**	**164**	*e*P	**Pn**	**10 58 19.8**	**+1.6**
PB08				*i* S	**Sn**	**10 58 43.2**	**+1.5**
PB08				IAML		10 58 45.2	
	comp=E,1μm,0.7s						
PB08	**IPOC Station P**	**1.70**	**164**		**Pn**	**10 58 18.7**	**+0.5**
TA02	**Huaiquique**	**1.82**	**194**	*e*P	**Pn**	**10 58 19.4**	**+0.2**
TA02				*i* S	**Sn**	**10 58 42.5**	**-0.9**
TA01	**Diego Aracena**	**2.11**	**193**	*e*P	**Pn**	**10 58 22.8**	**0.0**
TA01				*i* S	**Sn**	**10 58 48.8**	**-1.1**
TA01	**Diego Aracena**	**2.11**	**193**	Pn	**Pn**	**10 58 22.8**	**0.0**
PATCX	**Punta Patache**	**2.35**	**191**		**Pn**	**10 58 26.1**	**+0.2**
PB01	**IPOC Station P**	**2.54**	**176**	*e*P	**Pn**	**10 58 28.9**	**+0.8**
PB01				*i* S	**Sn**	**10 58 59.5**	**0.0**
PB01				IAML		10 59 01.1	
	comp=E,1μm,0.2s						
PB01	**IPOC Station P**	**2.54**	**176**		**Pn**	**10 58 29.1**	**+0.9**
LPAZ	**La Paz**	**2.64**	**34**	P	**Pn**	**10 58 31.4**	**+1.4**
	comp=E,5.6nm,0.3s,baz=205,slow=5.8,SNR=252						
LPAZ				S	**Sn**	**10 59 01.3**	**-1.4**
	comp=E,3.1nm,0.3s,baz=301,slow=25,SNR=7.5						
LPAZ	**La Paz**	**2.64**	**34**		**Pn**	**10 58 31.6**	**+1.6**
PB07	**IPOC Station P**	**3.22**	**184**	*e*P	**Pn**	**10 58 37.7**	**+0.6**
PB07	**IPOC Station P**	**3.22**	**184**		**Pn**	**10 58 37.7**	**+0.6**
PB09	**IPOC Station P**	**3.30**	**173**		**Pn**	**10 58 39.3**	**+1.1**
PB03	**IPOC Station P**	**3.53**	**181**	*e*P	**Pn**	**10 58 41.6**	**+0.4**
PB04	**IPOC Station P**	**3.84**	**187**	*e*P	**Pn**	**10 58 46.0**	**+0.8**
PB04	**IPOC Station P**	**3.84**	**187**		**Pn**	**10 58 44.9**	**-0.5**
LVC	**Limon Verde**	**4.15**	**170**	P	**Pn**	**10 58 51.4**	**+1.8**
	comp=E,5.8nm,0.3s,baz=1.4,slow=8.7,SNR=50						
LVC				S	**Sn**	**10 59 36.7**	**-0.9**
	comp=E,17nm,0.3s,baz=161,slow=20,SNR=17						
LVC	**Limon Verde**	**4.15**	**170**	Pn	**Pn**	**10 58 51.3**	**+1.7**
LVC	**Limon Verde**	**4.15**	**170**	*e*P	**Pn**	**10 58 51.5**	**+2.0**
PB06	**IPOC Station P**	**4.18**	**179**	*e*P	**Pn**	**10 58 50.2**	**+0.3**
PB06	**IPOC Station P**	**4.18**	**179**		**Pn**	**10 58 50.0**	**+0.2**
PB15	**IPOC Station P**	**4.69**	**178**		**Pn**	**10 58 56.6**	**0.0**
PB10	**IPOC Station P**	**5.06**	**189**	Pn	**Pn**	**10 59 00.6**	**-0.8**
PB10					**Sn**	**10 59 54.1**	**-4.7**
PB14	**IPOC Station P**	**6.13**	**186**	Pn	**Pn**	**10 59 14.6**	**-1.6**
GO02	**Mina Guanaco**	**6.63**	**179**	Pn	**Pn**	**10 59 22.2**	**-0.6**
AC01	**Pan de Azucar**	**7.66**	**186**	Pn	**Pn**	**10 59 34.0**	**-2.4**
AC02	**Maricunga**	**8.31**	**177**	Pn	**Pn**	**10 59 44.9**	**-0.7**
SIV	**San Ignacio**	**8.57**	**74**	P	**Pn**	**10 59 46.4**	**-2.4**
	comp=E,1.6nm,0.3s,baz=273,slow=11,SNR=23						
ETMB	**Extrema**	**9.26**	**22**	*e*P	**Pn**	**10 59 56.1**	**-1.8**
PTLB	**Pontes e Lacer**	**10.51**	**75**	*e*P	**Pn**	**11 00 13.6**	**-1.9**
VILB	**Vilhena**	**10.64**	**60**	*e*P	**Pn**	**11 00 14.7**	**-1.9**
CZSB	**Cruzeiro do Su**	**11.11**	**344**	*e*P	**Pn**	**11 00 23.4**	**+0.6**
SAML	**Samuel**	**11.39**	**34**	Pn	**Pn**	**11 00 23.3**	**-3.1**
AQDB	**Aquidauana**	**13.31**	**101**	*e*P	**Pn**	**11 00 50.7**	**-0.7**
CPUP	**Villa Florida**	**13.80**	**127**	*e*P	**Pn**	**11 00 58.7**	**+0.9**
CLDB	**Colider**	**15.40**	**62**	*e*P	**Pn**	**11 01 17.3**	**-0.6**
ITQB	**Itaqui**	**16.27**	**136**	*e*P	**P**	**11 01 29.5**	**+0.2**
ARAG	**Araguaiana, MT**	**17.28**	**83**	*e*P	**Pn**	**11 01 41.5**	**+0.5**
PTGB	**Pitanga**	**17.48**	**114**	*e*P	**Pn**	**11 01 43.8**	**+0.3**
PCMB	**Pacaembu**	**17.56**	**103**	*e*P	**Pn**	**11 01 43.9**	**-0.4**
MACA	**Manacapuru-AM**	**17.59**	**31**	*e*P	**Pn**	**11 01 44.0**	**-0.8**
NPGB	**Novo Progresso**	**17.98**	**53**	*e*P	**P**	**11 01 47.5**	**-0.8**
ITRB	**Iturama**	**18.28**	**97**	*e*P	**Pn**	**11 01 52.3**	**-0.7**
ITAB	**Concordia**	**18.32**	**121**	*e*P	**Pn**	**11 01 53.4**	**-0.1**
SNDB	**Serra Nova Dou**	**18.86**	**72**	*e*P	**P**	**11 01 57.8**	**0.0**
CPSB	**Cacapava Do Su**	**18.91**	**132**	*e*P	**Pn**	**11 01 59.2**	**-1.0**
FRTB	**Fartura**	**19.37**	**108**	*e*P	**P**	**11 02 03.4**	**0.0**
ITTB	**Itatiba**	**19.56**	**46**	*e*P	**P**	**11 02 04.7**	**-0.7**
PLTB	**Planalto Altas**	**19.61**	**135**	*e*P	**P**	**11 02 06.6**	**+0.8**
BB19B	**Bebedouro**	**20.05**	**101**	*e*P	**P**	**11 02 10.5**	**-0.2**
PTGA	**Pitinga**	**20.06**	**29**	P	**P**	**11 02 09.5**	**-1.3**
	comp=E,2.9nm,0.3s,baz=315,slow=22,SNR=15						
PTGA	**Pitinga**	**20.06**	**29**	P	**P**	**11 02 10.1**	**-0.7**
PTGA				IAmb	IAmb	11 02 10.4	
	comp=Z,17nm,1.2s						
PTGA	**Pitinga**	**20.06**	**29**	*e*P	**P**	**11 02 10.0**	**-0.7**
IPMB	**Ipameri, GO**	**20.38**	**92**	*e*P	**P**	**11 02 13.6**	**-0.7**
OTAV	**Otavalo**	**20.53**	**334**	*e*P	**P**	**11 02 17.3**	**+1.0**
RCLB	**Rio Claro- Sao**	**21.09**	**104**	*e*P	**P**	**11 02 22.8**	**+0.9**
SPB	**Sao Paulo**	**21.34**	**108**	*e*P	**P**	**11 02 25.1**	**+0.5**
PEXB	**Peixe**	**21.55**	**76**	*e*P	**P**	**11 02 26.3**	**-0.5**
VAO	**Valinhos**	**21.68**	**106**	*e*P	**P**	**11 02 28.7**	**+0.5**
PLCA	**Paso Flores**	**22.17**	**182**	P	**P**	**11 02 34.9**	**+1.8**
	comp=Z,1.0nm,0.9s,baz=341,slow=11,SNR=5.0						
PLCA	**Paso Flores**	**22.17**	**182**	P	**P**	**11 02 34.3**	**+1.2**
PLCA	**Paso Flores**	**22.17**	**182**	*e*P	**P**	**11 02 35.4**	**+2.3**
MALB	**Monte Alegre**	**22.39**	**44**	*e*P	**P**	**11 02 35.6**	**+0.1**
PRPB	**Parauapebas**	**22.90**	**60**	*e*P	**P**	**11 02 39.3**	**-1.1**
PARB	**Paraibuna**	**22.95**	**106**	*e*P	**P**	**11 02 41.8**	**+0.9**
SMTB	**Santa Maria do**	**23.46**	**69**	*e*P	**P**	**11 02 45.6**	**0.0**
BSCB	**Bom Sucesso**	**23.55**	**100**	*e*P	**P**	**11 02 47.6**	**+1.2**
JANB	**Januaria**	**24.50**	**86**	*e*P	**P**	**11 02 55.0**	**0.0**
MCPB	**Macapa, AP**	**24.98**	**46**	*e*P	**P**	**11 02 59.1**	**-0.2**
NBIT	**Itapeh - BA**	**29.14**	**88**	*e*P	**P**	**11 03 35.6**	**-1.0**
GDU01	**Guandu, BA**	**29.27**	**85**	*e*P	**P**	**11 03 35.6**	**-2.1**
NBLA	**Lagarto - SE**	**31.67**	**81**	*e*P	**P**	**11 03 58.6**	**-0.3**
NBRF	**Rio Formoso -**	**34.89**	**78**	*e*P	**P**	**11 04 27.0**	**+0.1**
RCBR	**Riachuelo**	**35.24**	**73**	*e*P	**P**	**11 04 29.7**	**-0.2**
DBIC	**Dimbokro**	**68.60**	**75**	P	**P**	**11 08 36.8**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=227,slow=8.5,SNR=4.3						
PDAR	**Pinedale Array**	**71.17**	**330**	P	**P**	**11 08 53.5**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=116,slow=6.1,SNR=2.4						
QSPA	**South Pole Qui**	**71.67**	**180**	P	**P**	**11 08 56.5**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=345,slow=1.8,SNR=7.2						
TOA0	**Torodi Ar. Sit**	**77.04**	**71**	P	**P**	**11 09 27.1**	**+0.2**
TOA0				IAmb	IAmb	11 09 30.7	
	comp=Z,8.5nm,1.3s						
TORD	**Torodi Ar. Bea**	**77.04**	**71**	P	**P**	**11 09 27.1**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=244,slow=4.9,SNR=12						
TORD	**Torodi Ar. Bea**	**77.04**	**71**	P	**P**	**11 09 26.5**	**-0.3**
TORD				IAmb	IAmb	11 09 30.2	
	comp=Z,2.0nm,0.7s						
YKA	**Yellowknife Ar**	**88.14**	**341**	P	**P**	**11 10 24.9**	**+1.6**
	comp=Z,6nm,0.7s,baz=130,slow=5.4,SNR=10						
H11S2	**WAKE ISLAND Hyl**	**26.75**	**280**	T	T	13 36 02.7	
	baz=100,slow=75,SNR=4.1						
H11N3	**WAKE ISLAND Hyl**	**26.75**	**281**	T	T	13 36 04.1	
	baz=100						
H11S1	**WAKE ISLAND Hyl**	**26.75**	**280**	T	T	13 36 10.8	
	baz=100,slow=75,SNR=4.4						
H11N2	**WAKE ISLAND Hyl**	**26.76**	**281**	T	T	13 36 03.0	
	baz=100						
H11S3	**WAKE ISLAND Hyl**	**26.76**	**280**	T	T	13 36 08.9	
	baz=100,slow=75,SNR=4.0						
H11N1	**WAKE ISLAND Hyl**	**26.77**	**281**	T	T	13 36 02.7	
	baz=100						
MKAR	**Makanchi Array**	**143.57**	**33**	PKP	**PKiKP**	**11 17 08.6**	**-1.9**
	comp=Z,0.1nm,0.4s,baz=301,slow=3.0,SNR=1.7						
SONM	**Songino Array**	**150.56**	**5**	PKPbc	**PKiKP**	**11 17 25.6**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=323,slow=2.2,SNR=2.3						

*DDA **09** 11:00:40.7,35°.06N×27°.47E,h13km±3km,ML3.4 ISK **09** 11:00:46.1,35°.30N×27°.57E,h15km,ML3.2/15 ATH **09** 11:00:47.1,35°.31N×27°.63E,h9km±4km,ML3.2/3,Error ellipse: s-maj=5.4km s-min=1.2km az=338.0 THE **09** 11:00:47.0,35°.29N×27°.59E,h0km,ML3.2/4,Error ellipse: s-maj=1.9km s-min=0.7km az=146.0*

ISC 09 11:00:47.0±1.4,35°.32N±0°.05×27°.59E±0°.03,h10km±10km, n59,σ1s20/83,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.42**	**303**	P	**Pg**	**11 00 55.4**	**+0.2**
KARP				S	**Sb**	**11 01 02.2**	**-0.8**
KARP				AML	AML	11 01 02.8	
	comp=N,7906μm,0.5s						
KARP				AML	AML	11 01 03.6	
	comp=E,7855μm,0.4s						
KARP	**Karpathos**	**0.42**	**303**	P	**Pg**	**11 00 55.6**	**+0.4**
KARP				S	**Sb**	**11 01 03.6**	**+0.6**
KARP	**Karpathos**	**0.42**	**303**	PG	**Pg**	**11 00 55.0**	**-0.2**
KARP				SG	**Sg**	**11 01 00.9**	**+0.1**
ARG	**Arkhangelos**	**0.99**	**26**	P	**Pb**	**11 01 05.8**	**-0.6**
ARG				S	**Sb**	**11 01 19.0**	**-0.6**
ARG				AML	AML	11 01 29.9	
	comp=N,1668μm,0.8s						
ARG				AML	AML	11 01 30.5	
	comp=E,3113μm,0.9s						
ARG	**Arkhangelos**	**0.99**	**26**	P	**Pb**	**11 01 06.2**	**-0.2**
ARG				S	**Sn**	**11 01 21.8**	**+0.6**
	comp=E,1μm,0.9s						
ARG	**Arkhangelos**	**0.99**	**26**	PG	**Pb**	**11 01 06.2**	**-0.2**
ARG				SG	**Sn**	**11 01 20.8**	**-0.4**
ZKR	**Zakros**	**1.14**	**260**	P	**Pn**	**11 01 08.7**	**-0.5**
ZKR				S	**Sn**	**11 01 24.8**	**-0.1**
ZKR				AML	AML	11 01 31.2	
	comp=E,2973μm,0.7s						
ZKR				AML	AML	11 01 31.5	
	comp=N,1723μm,0.6s						
ZKR	**Zakros**	**1.14**	**260**	P	**Pn**	**11 01 08.6**	**-0.5**
ZKR				S	**Sn**	**11 01 25.3**	**+0.4**
	comp=N,1μm,0.7s						
STIA	**Sitia Lasithi**	**1.23**	**265**	P	**Pn**	**11 01 09.5**	**-0.8**
STIA				S	**Sn**	**11 01 26.6**	**-0.5**
NIS1	**Nisyros Isl.**	**1.32**	**345**	P	**Pb**	**11 01 11.7**	**-0.3**
NIS1	**Nisyros Isl.**	**1.32**	**345**	PN	**Pn**	**11 01 11.1**	**-0.5**
KOSK	**Kos Island**	**1.51**	**341**	PN	**Pn**	**11 01 13.5**	**-0.7**
TURN	**Turunc**	**1.55**	**20**	*i* P	**Pn**	**11 01 14.1**	**-0.5**
TURN				*i* S	**Sg**	**11 01 40.2**	**+3.5**
TURN	**Turunc**	**1.55**	**20**	PN	**Pn**	**11 01 14.5**	**-0.2**
NPS	**Neapolis**	**1.62**	**269**	P	**Pb**	**11 01 17.2**	**+0.2**
NPS	**Neapolis**	**1.62**	**269**	P	**Pn**	**11 01 15.9**	**+0.2**
NPS				S	**Sb**	**11 01 38.1**	**+0.6**
	comp=N,795nm,0.6s						
DALY	**Dal

2.6nm,0.5s,baz=90,slow=9.1,SNR=9.3
FRB LR LR 11 11 35.0
comp=Z,77nm,20.0s,baz=174,slow=30
ESDC Sonseca Array 24.39 110 P **P** **11 06 17.2 -0.5**
0.9nm,0.7s,baz=311,slow=9.0,SNR=7.3
ESDC LR LR 11 14 15.1
comp=Z,65nm,18.6s,baz=295,slow=33
PECO Prince Edward 29.47 270 **S** **11 11 58.9 +1.6**
ARCES ARCESS Array B 31.64 35 P **P** **11 07 21.4 -0.8**
3.3nm,0.9s,baz=254,slow=4.4,SNR=6.8
RES Resolute Bay 32.44 334 P **P** **11 07 28.6 -0.4**
1.4nm,1.0s,baz=106,slow=8.4,SNR=5.6
FINES FINESS Array B 32.70 50 P **P** **11 07 31.0 -0.4**
1.6nm,0.8s,baz=294,slow=9.6,SNR=5.4
KEST Kesra 34.83 102 P **P** **11 07 51.6 +1.3**
4.7nm,0.7s,baz=331,slow=5.6,SNR=4.8
ULM Lac du Bonnet 37.52 292 P **P** **11 08 12.2 -0.9**
1.6nm,0.8s,baz=37,slow=11,SNR=4.0
ECSD EROS Data Cent 41.40 283 P **P** **11 08 45.6 0.0**
ECSD IAmb IAmb 11 08 47.2
comp=Z,5.8nm,1.1s
YKA Yellowknife Ar 41.45 316 P **P** **11 08 45.4 -0.3**
comp=Z,0.7nm,0.8s,baz=64,slow=8.5,SNR=6.7
YKA LR LR 11 23 38.3
comp=Z,36nm,19.0s,baz=0.0,slow=33
CCM Cathedral Cave 41.62 273 P **P** **11 08 47.3 -0.1**
CCM IAmb IAmb 11 08 49.0
comp=Z,5.3nm,0.8s
LCAR Lake Charles 42.85 271 P **P** **11 08 56.8 -0.6**
LCAR IAmb IAmb 11 08 58.9
comp=Z,6.3nm,0.9s
S39A Bolivar 43.11 274 P **P** **11 08 58.4 -1.2**
U40A Yellville 43.69 272 P **P** **11 09 03.9 -0.4**
U40A IAmb IAmb 11 09 05.8
comp=Z,5.4nm,0.9s
WHAR Wooly Hollow 44.06 271 P **P** **11 09 06.0 -1.2**
WHAR IAmb IAmb 11 09 07.9
comp=Z,7.3nm,1.1s
X40A Basin Creek Fa 44.93 270 P **P** **11 09 13.7 -0.5**
X40A IAmb IAmb 11 09 15.6
comp=Z,5.4nm,0.8s
W39A Magazine 45.03 272 P **P** **11 09 14.6 -0.4**
MIAR Mount Ida 45.34 271 P **P** **11 09 17.8 +0.3**
MIAR IAmb IAmb 11 09 18.9
comp=Z,5.1nm,0.9s
INK Inuvik 45.59 329 P **P** **11 09 18.9 -0.1**
comp=Z,0.9nm,0.5s,baz=40,slow=5.4,SNR=10.0
K22A Casper 47.84 288 P **P** **11 09 37.3 +0.1**
TORD Torodi Ar. Bea 48.69 131 P **P** **11 09 43.6 -0.2**
comp=Z,1.0nm,0.8s,baz=341,slow=7.6,SNR=3.4
BMAR Burnt Mountain 49.46 332 P **P** **11 09 49.1 0.0**
PDAR Pinedale Array 49.51 290 P **P** **11 09 49.2 -0.9**
comp=Z,0.7nm,0.5s,baz=63,slow=7.6,SNR=9.4
TOLK Toolik Lake Re 50.01 334 P **P** **11 09 53.9 +0.5**
TOLK IAmb IAmb 11 09 54.7
comp=Z,3.9nm,0.6s
HWUT Hardware Ranch 51.40 290 P **P** **11 10 04.3 0.0**
HWUT IAmb IAmb 11 10 06.7
comp=Z,5.1nm,0.8s
SCRK Sand Creek 51.61 328 P **P** **11 10 06.8 +1.2**
DBIC Dimbokro 51.77 142 LR LR 11 29 48.8
comp=Z,43nm,18.1s,baz=351,slow=33
ILAR Eielson Array 51.97 330 P **P** **11 10 08.2 +0.2**
comp=Z,0.7nm,0.7s,baz=30,slow=4.9,SNR=12
PV11 David Mesa, Pa 52.02 286 P **P** **11 10 09.4 +0.4**
PV03 Paradox Valley 52.03 286 P **P** **11 10 09.8 +0.7**
PV03 IAmb IAmb 11 10 10.5
comp=Z,7.6nm,1.4s
PV16 Nyswonger Mesa 52.03 286 IAmb IAmb 11 10 11.5
comp=Z,4.7nm,0.7s
PV18 Skein Mesa, Pa 52.07 286 P **P** **11 10 10.3 +0.8**
PV13 Radium Mtn., P 52.08 285 P **P** **11 10 09.9 +0.4**
PV13 IAmb IAmb 11 10 12.4
comp=Z,5.4nm,1.0s
IMAR Indian Mountai 53.06 334 P **P** **11 10 16.8 +0.7**
AKTO Aktyubinsk 53.42 53 LR LR 11 32 28.1
comp=Z,50nm,18.8s,baz=320,slow=35
TXAR Lajitas Array 55.10 274 P **P** **11 10 32.3 +0.7**
comp=Z,0.5nm,0.8s,baz=70,slow=8.5,SNR=5.1
TIXI Tiksi 55.34 6 P **P** **11 10 34.1 +1.5**
TIXI IAmb IAmb 11 10 42.0
comp=Z,5.2nm,0.9s
MK31 Makanchi Array 66.98 42 P **P** **11 11 51.5 -0.4**
MKAR Makanchi Array 66.98 42 P **P** **11 11 52.2 +0.2**
comp=Z,0.7nm,0.5s,baz=348,slow=6.0,SNR=10
MKAR Makanchi Array 66.98 42 P **P** **11 11 52.1 +0.1**
BDFB Brasilia 69.14 194 P **P** **11 12 05.5 -0.3**
comp=Z,1.2nm,0.4s,baz=158,slow=11,SNR=1.7
SONM Songino Array 74.31 26 P **P** **11 12 36.8 +0.1**
comp=Z,0.4nm,0.4s,baz=326,slow=6.7,SNR=3.3
CMAR Chiang Mai Arr 98.29 45 LR LR 12 02 53.8
comp=Z,31nm,18.0s,baz=202,slow=38
WRA Warramunga Arr 146.07 20 PKPbc **PKPbc** **11 20 39.0 -0.5**
comp=Z,0.4nm,0.5s,baz=345,slow=3.4,SNR=4.8
ASAR Alice Springs 149.58 22 PKPbc **PKPbc** **11 20 48.1 -0.7**
comp=Z,0.4nm,0.4s,baz=352,slow=2.3,SNR=19
VNDA Vanda 154.42 188 PKPbc **PKiKP** **11 20 58.7 +0.5**
comp=Z,0.6nm,0.7s,baz=311,slow=12,SNR=2.3
VNDA PKPab **pPKPab** **11 21 13.6 -1.3**
comp=Z,0.6nm,0.7s,baz=267,slow=16,SNR=6.3

*UCR **09** 11:18:43.1±1.1, 13°.30N×90°.05W, h55km±16km, ML3.6*
*SNET **09** 11:18:43.0±1.1, 13°.29N×90°.06W, h52km±18km, ML3.6*
*INET **09** 11:18:44.6, 13°.27N×89°.91W, h22km, MW2.8*
ISC 09 11:18:42.0±2.8, 13°.20N±0°.09×90°.0W±0°.1, h18km±4km, n37, σ0°53/54, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAYA	**Jayaque - finc**	**0.72**	**51**	*eP*		**Pb**	**11 18 56.7**	**+0.6**
JAYA					IAML		11 19 11.2	
	comp=Z,3μm,0.2s							
JAYA	**Jayaque - finc**	**0.72**	**51**	*eP*		**Pb**	**11 18 56.7**	**+0.6**
JAYA					IAML		11 19 11.2	
	comp=Z,3μm,0.2s							
CEVE	**Cerro Verde**	**0.73**	**32**	*eP*		**Pb**	**11 18 57.2**	**+0.8**
CEVE				*eS*		**Sn**	**11 19 09.0**	**+0.4**
CEVE					IAML		11 19 14.0	
	comp=Z,3μm,0.3s							
CEVE	**Cerro Verde**	**0.73**	**32**	*eP*		**Pb**	**11 18 57.2**	**+0.8**
CEVE				*eS*		**Sn**	**11 19 09.0**	**+0.4**
CEVE					IAML		11 19 14.0	
	comp=Z,3μm,0.3s							
SBLS	**San Blas**	**0.74**	**32**	*eP*		**Pb**	**11 18 57.4**	**+0.8**
SBLS	**San Blas**	**0.74**	**32**	*eP*		**Pb**	**11 18 57.4**	**+0.8**
SNJE	**San Jose**	**0.78**	**32**	*eP*		**Pb**	**11 18 57.7**	**+0.6**
SNJE	**San Jose**	**0.78**	**32**	*eP*		**Pb**	**11 18 57.7**	**+0.6**
RTR	**El Retiro**	**0.78**	**28**	*eP*		**Pb**	**11 18 58.0**	**+0.8**
RTR	**El Retiro**	**0.78**	**28**	*eP*		**Pb**	**11 18 58.0**	**+0.8**
CEDA	**San Andres**	**0.86**	**46**	*eP*		**Pb**	**11 18 58.5**	**+0.2**
CEDA				*eS*		**Sg**	**11 19 10.7**	**+0.6**
CEDA					IAML		11 19 18.6	
	comp=Z,2μm,0.3s							
CEDA	**San Andres**	**0.86**	**46**	*eP*		**Pb**	**11 18 58.5**	**+0.2**
CEDA				*eS*		**Sg**	**11 19 10.7**	**+0.6**
CEDA					IAML		11 19 18.6	
	comp=Z,2μm,0.3s							
BOQS	**Boqueron**	**0.90**	**54**	*eP*		**Pg**	**11 18 59.5**	**-0.1**
BOQS	**Boqueron**	**0.90**	**54**	*eP*		**Pg**	**11 18 59.5**	**-0.1**
SNET	**Serv Nac Est T**	**0.91**	**58**	*eP*		**Pb**	**11 18 59.5**	**+0.1**
SNET				*eS*		**Sg**	**11 19 11.8**	**0.0**
SNET	**Serv Nac Est T**	**0.91**	**58**	*eP*		**Pb**	**11 18 59.5**	**+0.1**
SNET				*eS*		**Sg**	**11 19 11.8**	**0.0**
TACO	**Tacachico**	**1.00**	**40**	*eP*		**Pb**	**11 19 00.7**	**-0.2**
TACO	**Tacachico**	**1.00**	**40**	*eP*		**Pb**	**11 19 00.7**	**-0.2**
LFRS	**El Faro**	**1.03**	**66**	*eP*		**Pb**	**11 19 00.9**	**-0.4**
LFRS	**El Faro**	**1.03**	**66**	*eP*		**Pb**	**11 19 00.9**	**-0.4**
LBRS	**Las Brisas**	**1.09**	**61**	*eP*		**Pb**	**11 19 02.3**	**-0.2**
LBRS	**Las Brisas**	**1.09**	**61**	*eP*		**Pb**	**11 19 02.3**	**-0.2**
PAVA	**Las Pavas**	**1.17**	**64**	*eP*		**Pb**	**11 19 03.9**	**+0.1**
PAVA				*eS*		**Sn**	**11 19 19.7**	**+0.4**
PAVA	**Las Pavas**	**1.17**	**64**	*eP*		**Pb**	**11 19 03.9**	**+0.1**
PAVA				*eS*		**Sn**	**11 19 19.7**	**+0.4**
COEG	**Centro de Oper**	**1.19**	**69**	*eP*		**Pn**	**11 19 03.4**	**-0.5**
COEG				*eS*		**Sb**	**11 19 18.6**	**-0.5**
COEG					IAML		11 19 21.7	
	comp=Z,1μm,0.3s							
COEG	**Centro de Oper**	**1.19**	**69**	*eP*		**Pn**	**11 19 03.4**	**-0.5**
COEG				*eS*		**Sb**	**11 19 18.6**	**-0.5**
COEG					IAML		11 19 21.7	
	comp=Z,1μm,0.3s							
MTO3	**Montecristo**	**1.35**	**28**	*eP*		**Pn**	**11 19 05.7**	**-0.5**
MTO3				*eS*		**Sn**	**11 19 22.5**	**-1.3**
MTO3	**Montecristo**	**1.35**	**28**	*eP*		**Pn**	**11 19 05.7**	**-0.5**
MTO3				*eS*		**Sn**	**11 19 22.5**	**-1.3**
ALJI	**Alcalda de J**	**1.42**	**85**	*eP*		**Pn**	**11 19 06.5**	**-0.4**
ALJI					IAML		11 19 30.9	
	comp=Z,365nm,0.1s							
ALJI	**Alcalda de J**	**1.42**	**85**	*eP*		**Pn**	**11 19 06.5**	**-0.4**
ALJI					IAML		11 19 30.9	
	comp=Z,365nm,0.1s							
COEB	**Comit de Eme**	**1.48**	**78**	*eP*		**Pn**	**11 19 07.5**	**-0.4**
COEB				*eS*		**Sb**	**11 19 28.3**	**+0.6**
COEB					IAML		11 19 35.3	
	comp=Z,559nm,0.3s							
COEB	**Comit de Eme**	**1.48**	**78**	*eP*		**Pn**	**11 19 07.5**	**-0.4**
COEB				*eS*		**Sb**	**11 19 28.3**	**+0.6**
COEB					IAML		11 19 35.3	
	comp=Z,559nm,0.3s							
PQSS	**Presa 15 de Se**	**1.49**	**73**	*eP*		**Pn**	**11 19 07.8**	**0.0**
PQSS				*eS*		**Sn**	**11 19 26.8**	**0.0**
TECA	**Tecapa**	**1.51**	**79**	*eP*		**Pn**	**11 19 08.0**	**-0.3**
TECA	**Tecapa**	**1.51**	**79**	*eP*		**Pn**	**11 19 08.0**	**-0.3**
LCND	**La Caada**	**2.08**	**87**	*eP*		**Pn**	**11 19 16.1**	**+0.1**
LCND				*eS*		**Sn**	**11 19 42.0**	**+0.4**
LCND	**La Caada**	**2.08**	**87**	*eP*		**Pn**	**11 19 16.1**	**+0.1**
LCND				*eS*		**Sn**	**11 19 42.0**	**+0.4**

*IDC **09** 11:23:06.7±1.6, 0°.87N×125°.10E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/48, mbtmp3.2/3, Error ellipse: s-maj=199.5km s-min=16.8km az=64.0*
*DJA **09** 11:23:21.8±0.4, 0°.5±4°×12°.3E±°, h90km±7km, M3.9/10, mb4.0/3, mB4.4/1, MLv3.8/10, Mw(mB)3.6/1*
ISC 09 11:23:20.6±1.0, 0°.14S±0°.05×123°.15E±0°.05, h110km±9km, n13, σ1°67/20, mb2.8/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GTOI	**Gorontalo**	**0.79**	**350**	P		**Pn**	**11 23 41.3**	**+1.6**
GTOI				S		**Sn**	**11 23 54.8**	**+0.7**
LUWI	**Luwuk**	**0.97**	**203**	P		**Pn**	**11 23 42.2**	**+0.7**
LUWI				S		**Sn**	**11 23 56.8**	**-0.5**
KMSI	**Cibinong**	**1.09**	**49**	P		**Pn**	**11 23 44.4**	**+1.6**
KMSI				S		**Sn**	**11 23 58.9**	**-0.6**
MRSI	**Marisa**	**1.36**	**297**	P		**Pn**	**11 23 44.3**	**-1.4**
MRSI				S		**Sn**	**11 24 01.9**	**-2.9**
APSI	**Ampana**	**1.69**	**243**	P		**Pn**	**11 23 50.2**	**+0.5**
APSI				S		**Sn**	**11 24 11.7**	**-0.1**
SANI	**Sanana**	**3.41**	**124**	P		**Pn**	**11 24 12.2**	**+0.1**
SANI				S		**Sn**	**11 24 49.1**	**-2.8**
TTSI	**Tana Toraja**	**4.41**	**229**	P		**Pn**	**11 24 26.6**	**+1.2**
TTSI				S		**Sn**	**11 25 15.5**	**-0.3**
NLAI	**Namlea**	**5.00**	**128**	P		**Pn**	**11 24 34.6**	**+1.1**
	0.2nm17nm,0.4s							
SPSI	**Sidrap Palu**	**5.08**	**222**	P		**Pn**	**11 24 36.3**	**+1.7**
	0.1nm473nm12nm,0.8s							
BNSI	**Bone**	**5.21**	**216**	P		**Pn**	**11 24 38.3**	**+2.0**
WRA	**Warramunga Arr**	**22.52**	**152**	P		**P**	**11 28 08.5**	**-3.0**
	0.3nm,0.7s,baz=334,slow=10,SNR=1.3							
ASAR	**Alice Springs**	**25.61**	**157**	P		**P**	**11 28 40.6**	**+0.7**
	0.2nm,0.7s,baz=343,slow=12,SNR=1.3							
MKAR	**Makanchi Array**	**58.81**	**328**	P		**P**	**11 33 08.3**	**+0.8**
	0.3nm,0.4s,baz=121,slow=8.2,SNR=4.1							

*TAP **09** 11:25:02.2, 24°.84N×122°.03E, h9km, ML3.2, C*
*JMA **09** 11:25:03.1±0.1, 24°.82N×121°.99E, h32km, M2.5*
ISC 09 11:25:01.6±0.9, 24°.85N±0°.02×122°.10E±0°.02, h12km±6km, n94, σ0°59/144, 7C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EGS		**0.15**	**267**	⇑*iP*		**Pg**	**11 25 04.9**	**-0.2**
EGS				*i*	S	**Sg**	**11 25 06.7**	**-1.0**
	baz=269							
TWB1	**Santiao Chiao**	**0.18**	**326**	⇑*iP*		**Pg**	**11 25 06.2**	**+0.6**
TWB1	baz=348			*i*	S	**Sg**	**11 25 08.9**	**+0.4**
	baz=348							
NTC	**Toucheng**	**0.25**	**270**	*i*	P	**Pg**	**11 25 06.9**	**+0.1**
NTC	baz=273				S	**Sg**	**11 25 09.9**	**-0.3**
	baz=273							
TIPB	**Shuangxi**	**0.28**	**295**	⇑*iP*		**Pb**	**11 25 07.6**	**-1.0**
TIPB	baz=303			*i*	S	**Sg**	**11 25 11.0**	**-0.1**
	baz=303							
ILA	**Ilan**	**0.33**	**255**	P		**Pg**	**11 25 08.3**	**0.0**
ILA	baz=254			*i*	S	**Sg**	**11 25 13.1**	**+0.3**
	baz=254							
TWC	**Suao**	**0.34**	**223**	⇓*iP*		**Pg**	**11 25 08.3**	**0.0**
TWC	baz=225			*i*	S	**Sg**	**11 25 11.9**	**-0.9**
	baz=225							
NWF	**Wu-fen Shan**	**0.36**	**307**	*i*	P	**Pb**	**11 25 09.6**	**-0.5**
NWF	baz=305			*i*	S	**Sg**	**11 25 14.2**	**+0.4**
	baz=305							
WFSB	**Wu-fen Shan**	**0.36**	**307**	⇑P		**Pb**	**11 25 09.6**	**-0.4**
WFSB	baz=305				S	**Sg**	**11 25 14.1**	**+0.4**
	baz=305							
NDS	**Dongshan**	**0.41**	**238**	*i*	P	**Pg**	**11 25 09.6**	**-0.1**
NDS	baz=235			*i*	S	**Sg**	**11 25 14.8**	**-0.5**
	baz=235							
TWE	**Neicheng**	**0.42**	**252**	⇓*iP*		**Pg**	**11 25 09.6**	**-0.2**
TWE	baz=250			*i*	S	**Sg**	**11 25 15.2**	**-0.1**
	baz=250							
TNOU	**National Taiwa**	**0.42**	**315**	⇑P		**Pb**	**11 25 10.7**	**-0.2**
TNOU	baz=313				S	**Sb**	**11 25 15.8**	**-1.4**
	baz=313							
TWA	**Mucha**	**0.49**	**285**	*i*	P	**Pb**	**11 25 11.5**	**-0.6**
TWA	baz=278			*i*	S	**Sg**	**11 25 17.1**	**-0.5**
	baz=278							
EWUT	**Wuta**	**0.50**	**216**	*i*	P	**Pb**	**11 25 12.2**	**-0.1**
EWUT	baz=218			*i*	S	**Sg**	**11 25 18.3**	**+0.2**
	baz=218							
NWRT	**Kuosheng**	**0.53**	**311**	S		**Sb**	**11 25 19.4**	**-1.1**
	baz=321							
ENTT	**Nioudou**	**0.53**	**246**	*i*	P	**Pg**	**11 25 11.7**	**-0.2**
ENTT	baz=245			*i*	S	**Sg**	**11 25 18.5**	**-0.5**
	baz=245							
NHDH	**Xindian Distri**	**0.54**	**282**	*eS*		**Sg**	**11 25 19.1**	**-0.1**
	baz=276							
NWLT	**Wulai**	**0.55**	**262**	P		**Pg**	**11 25 12.3**	**0.0**
NWLT	baz=263			S		**Sg**	**11 25 18.9**	**-0.8**
	baz=263							
YM01	**YM01**	**0.56**	**301**	⇑P		**Pb**	**11 25 13.5**	**+0.1**
YM01	baz=304			S		**Sb**	**11 25 20.4**	**-1.1**
	baz=304							
TATO	**Taipei**	**0.57**	**282**	*eP*		**Pb**	**11 25 13.1**	**-0.4**
TATO	baz=276			S		**Sg**	**11 25 19.9**	**-0.3**
	baz=276							
YM08	**YM08**	**0.57**	**306**	P		**Pb**	**11 25 13.5**	**-0.1**
YM08	baz=298			S		**Sb**	**11 25 20.7**	**-0.9**
	baz=298							
YM11	**YM11**	**0.57**	**303**	P		**Pb**	**11 25 13.8**	**+0.2**
YM11	baz=296			S		**Sb**	**11 25 21.5**	**-0.2**
	baz=296							
YM10	**YM10**	**0.57**	**302**	⇑P		**Pb**	**11 25 13.7**	**0.0**
	baz=305							
NDT	**Datong Townshi**	**0.59**	**245**	*i*	P	**Pg**	**11 25 12.9**	**-0.2**
NDT	baz=244			S		**Sg**	**11 25 20.0**	**-0.9**
	baz=244							
YM04	**YM04**	**0.59**	**300**	P		**Pb**	**11 25 14.0**	**+0.1**
	baz=303							
YM03	**YM03**	**0.60**	**303**	*eP*		**Pb**	**11 25 14.3**	**+0.2**
YM03	baz=295			*eS*		**Sb**	**11 25 23.0**	**+0.3**
	baz=295							
BACT	**New Taipei Cit**	**0.62**	**284**	S		**Sb**	**11 25 22.8**	**-0.2**
	baz=276							
TWY	**Chenhua**	**0.62**	**313**	*i*	P	**Pb**	**11 25 14.8**	**+0.4**
TWY	baz=316			*i*	S	**Sb**	**11 25 23.0**	**-0.1**
	baz=316							
ANP	**Anpu**	**0.62**	**302**	P		**Pb**	**11 25 14.4**	**0.0**
	baz=305							
ANP				*i*	S	**Sg**	**11 25 21.1**	**-0.9**
	baz=305							
NTST	**Danshui**	**0.67**	**298**	P		**Pb**	**11 25 16.0**	**+0.8**
	baz=300							
NTST				S		**Sb**	**11 25 24.4**	**0.0**
	baz=300							
TWS1	**Kuangyinshan**	**0.67**	**292**	*i*	P	**Pb**	**11 25 15.7**	**+0.5**
	baz=294							
TWS1				*i*	S	**Sb**	**11 25 24.4**	**0.0**
	baz=294							
YHNB	**Yeheng**	**0.69**	**255**	P		**Pg**	**11 25 14.4**	**-0.5**
	baz=254							
YHNB				S		**Sg**	**11 25 22.7**	**-1.2**
	baz=254							
NTY	**Taoyuan**	**0.74**	**281**	P		**Pn**	**11 25 17.6**	**-0.3**
	baz=274							
PCYT	**Pengchaiyu**	**0.77**	**358**	*i*	P	**Pn**	**11 25 18.9**	**+0.5**
	baz=355							
PCYT				S		**Sn**	**11 25 29.3**	**-0.6**
	baz=355							
NNSH	**Datong**	**0.78**	**237**	P		**Pg**	**11 25 16.6**	**-0.1**
	baz=230							
NNSH				*eS*		**Sg**	**11 25 25.6**	**-1.3**
	baz=230							
NNSB	**Datong**	**0.78**	**237**	*eP*		**Pg**	**11 25 15.9**	**-0.8**
	baz=236							
NNSB				*eS*		**Sg**	**11 25 27.2**	**+0.3**
	baz=236							
NNS	**Nan Shan**	**0.78**	**238**	P		**Pg**	**11 25 16.0**	**-0.7**
	baz=237							
NNS				S		**Sg**	**11 25 27.0**	**+0.1**
	baz=237							
NACB	**Ninganchiao**	**0.82**	**214**	P		**Pg**	**11 25 17.4**	**0.0**
	baz=224							
NACB				S		**Sg**	**11 25 27.7**	**-0.5**
	baz=224							
NCU	**National Centr**	**0.84**	**278**	P		**Pn**	**11 25 19.1**	**-0.1**
	baz=271							
NCU				S		**Sb**	**11 25 30.1**	**+0.8**
	baz=271							
NCUH	**Zhongli**	**0.84**	**278**	*eP*		**Pn**	**11 25 19.1**	**-0.2**
	baz=279							
NCUH				S		**Sb**	**11 25 30.8**	**+1.4**
	baz=279							
ETLH	**Xiulin Townshi**	**0.86**	**221**	P		**Pg**	**11 25 18.2**	**+0.1**
	baz=231							
ETLH				S		**Sg**	**11 25 29.0**	**-0.3**
	baz=231							
JYNG	**Yonaguniijimaku**	**0.87**	**117**	P		**Pn**	**11 25 20.3**	**+0.7**
JYNG				*eS*		**Sn**	**11 25 32.2**	**+0.1**
TWD	**Chiawan**	**0.90**	**211**	*i*	P	**Pb**	**11 25 19.1**	**0.0**
	baz=202							
TWD				*i*	S	**Sg**	**11 25 30.4**	**-0.2**
	baz=202							
YOJ	**Yonaguni jima**	**0.92**	**115**	P		**Pn**	**11 25 20.7**	**+0.4**
YOJ				*eS*		**Sn**	**11 25 33.6**	**+0.2**
YOJ	**Yonaguni jima**	**0.92**	**115**	P		**Pn**	**11 25 20.7**	**+0.4**
	baz=114							
YOJ				*eS*		**Sn**	**11 25 33.9**	**+0.5**
	baz=114							
NJD	**Zhudong**	**0.93**	**263**	P		**Pb**	**11 25 20.3**	**+0.7**
	baz=256							
FUSS	**Fushou**	**0.99**	**232**	P		**Pg**	**11 25 19.7**	**-1.0**
	baz=232							
FUSS				S		**Sg**	**11 25 33.1**	**-0.5**
	baz=232							
HSN1	**Hsinchu**	**0.99**	**266**	*eP*		**Pb**	**11 25 20.9**	**+0.3**
	baz=260							
HSN1				S		**Sb**	**11 25 34.6**	**+0.9**
	baz=260							
LIOB	**Emei**	**1.01**	**258**	*i*	P	**Pn**	**11 25 21.8**	**+0.2**
	baz=251							
SBCB	**Hsinchu**	**1.02**	**267**	P		**Pg**	**11 25 20.9**	**-0.3**
	baz=284							
SBCB				S		**Sb**	**11 25 34.7**	**+0.3**
	baz=284							
NSTT	**Nanjuang**	**1.02**	**258**	*eP*		**Pb**	**11 25 21.3**	**0.0**
	baz=250							
HSN	**Hsinchu**	**1.03**	**267**	P		**Pb**	**11 25 21.4**	**0.0**
	baz=269							
HSN				S		**Sb**	**11 25 35.1**	**+0.2**
	baz=269							
TWT	**Tachien**	**1.03**	**235**	*eP*		**Pb**	**11 25 21.7**	**+0.2**
	baz=227							
WHF	**Hehuan Shan**	**1.04**	**227**	P		**Pg**	**11 25 21.1**	**-0.6**
	baz=227							
WHF				*eS*		**Sg**	**11 25 34.4**	**-0.8**
	baz=227							
TDCB	**Techi**	**1.05**	**235**	P		**Pg**	**11 25 21.1**	**-0.7**
	baz=230							
TDCB				*eS*		**Sg**	**11 25 35.0**	**-0.5**
	baz=230							
CHGB	**Renai**	**1.16**	**227**	*eP*		**Pg**	**11 25 23.1**	**-0.7**
	baz=227							
WHP	**Taichung City**	**1.20**	**242**	P		**Pg**	**11 25 24.3**	**-0.3**
	baz=242							
ESL	**Shilin**	**1.20**	**211**	*eP*		**Pg**	**11 25 23.8**	**-0.9**
	baz=211							
ESL				S		**Sg**	**11 25 39.5**	**-0.8**
	baz=211							
NMLH	**Miaoli**	**1.23**	**255**	P		**Pn**	**11 25 21.5**	**+0.5**
	baz=256							
NMLH				S		**Sn**	**11 25 41.8**	**+0.6**
	baz=256							
NSY	**Sanyi**	**1.30**	**251**	*eP*		**Pb**	**11 25 27.4**	**+1.5**
	baz=251							
TWQ1	**Liyutan**	**1.31**	**248**	*eP*		**Pg**	**11 25 27.8**	**+1.0**
	baz=265							
WPL	**Puli Township**	**1.34**	**231**	*eP*		**Pg**	**11 25 27.0**	**-0.3**
	baz=222							
DPDB	**Guoxing**	**1.35**	**233**	*eP*		**Pg**	**11 25 27.4**	**-0.1**
	baz=223							
VWDT	**VWDT**	**1.40**	**219**	*eP*		**Pg**	**11 25 28.2**	**-0.3**
	baz=219							
SMLT	**Sun Moon Lake**	**1.46**	**229**	*eP*		**Pg**	**11 25 29.2**	**-0.4**
	baz=230							
TYC	**Yuchr**	**1.48**	**230**	*eP*		**Pb**	**11 25 29.0**	**0.0**
	baz=221							
HGSD	**Ruisui**	**1.49**	**205**	*eP*		**Pn**	**11 25 29.0**	**+0.8**
	baz=222							
SSLB	**Suanglung**	**1.49**	**225**	*eP*		**Pn**	**11 25 28.8**	**+0.6**
	baz=226							
EHY	**Hungye**	**1.52**	**208**	*eP*		**Pn**	**11 25 29.3**	**+0.7**
	baz=219							
IRIF	**Iriomote-Funau**	**1.57**	**109**	P		**Pb**	**11 25 30.2**	**-0.3**
IRIF				*eS*		**Sb**	**11 25 50.7**	**+0.3**
WNT	**Mingjian**	**1.62**	**233**	*eP*		**Pg**	**11 25 33.5**	**+0.9**
	baz=225							
WJS	**Zhushan**	**1.62**	**231**	*eP*		**Pg**	**11 25 33.7**	**+1.0**
	baz=223							
YULB	**Yu-li**	**1.63**	**207**	*eP*		**Pn**	**11 25 30.1**	**0.0**
	baz=219							
TWF1	**Yuli**	**1.67**	**206**	*eP*		**Pb**	**11 25 32.5**	**+0.3**
	baz=218							
YUS	**Yu-Shan**	**1.72**	**218**	*eP*		**Pg**	**11 25 34.5**	**-0.1**
	baz=228							
HATJ	**Hateruma jima**	**1.74**	**117**	P		**Pb**	**11 25 33.1**	**-0.4**
HATJ				*eS*		**Sb**	**11 25 55.8**	**+0.4**
ALS	**Alishan**	**1.79**	**222**	*eP*		**Pb**	**

CHN1	**Nanshi** baz=225	**2.20**	**221**	*e*P	**Pb**	**11 25 41.4 +0.1**
SGST	**Jiashian** baz=209	**2.25**	**219**	*e*P	**Pb**	**11 25 41.8 -0.3**
SLGT	**Liugui** baz=220	**2.28**	**216**	*e*P	**Pb**	**11 25 43.6 +0.9**
VWUC	**VWUC** baz=273	**2.41**	**274**	*e*P	**Pn**	**11 25 40.4 -0.5**
SSD	**Sandimen** baz=217	**2.49**	**213**	*e*P	**Pb**	**11 25 46.7 +0.4**

*IDC **09** 11:30:34.5±0.6,5˚.29S×152˚.49E, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.3/37, mbtmp4.3/19, ML2.1/1, MS3.6/12, Ms1 3.6/12, ms1mx3.3/31, Error ellipse: s-maj=19.6km s-min=14.6km az=116.0*

*DJA **09** 11:30:40.9±1.2,5˚.5S×15˚.3E±1˚.4, h50km±9km, M4.8/7, mB4.6/3, mb4.5/7, MLv5.0/2, Mw(mB)3.9/3*

*NEIC **09** 11:30:42.1±1.4,5˚.32S±0˚.05×152˚.6E±0˚.1, h54km±7km, mb4.3/15, Error ellipse: s-maj=18.6km s-min=6.9km az=94.0*

ISC 09 11:30:40.5±0.6,5˚.36S±0˚.07×152˚.6E±0˚.1, h40km, n54, σ1º07/50, mb4.2/26, MS3.6/11, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.23**	**341**	Pn	**Pn**	**11 31 02.5**	**+1.4**
PMG	**Port Moresby** 2.2nm,0.3s,baz=37,slow=7.3,SNR=11	**6.71**	**233**	Pn	**Pn**	**11 32 15.1**	**-1.4**
PMG	4.4nm,0.3s,baz=68,slow=12,SNR=11			Sn	**Sn**	**11 33 31.9**	**+0.1**
PMG	comp=Z,202nm,21.2s,baz=64,slow=34			LR	LR	11 34 24.4	
PMG	**Port Moresby**	**6.71**	**233**	Pn	**Pn**	**11 32 18.7**	**+2.1**
CTA	**Charters Tower** 0.1nm,0.3s,baz=12,slow=9.6,SNR=3.8	**15.88**	**202**	Pn	**P**	**11 34 24.8**	**+0.3**
DZM	**Mont Dzumac** 9.1nm,1.0s,baz=294,slow=15,SNR=2.8	**21.36**	**142**	P	**P**	**11 35 25.2**	**+0.6**
DZM	comp=Z,166nm,21.4s,baz=316,slow=34			LR	LR	11 42 49.3	
MTN	**Manton Dam**	**22.43**	**249**	P	**P**	**11 35 38.4**	**+2.3**
WB0	**Warramunga Arr**	**22.77**	**229**	P	**P**	**11 35 39.0**	**-0.7**
WB0	comp=Z,9.1nm,0.9s			IAmb	IAmb	11 36 05.7	
WR0	**Warramunga Arr**	**22.77**	**229**	P	**P**	**11 35 39.3**	**-0.4**
WR0	comp=Z,9.3nm,0.9s			IAmb	IAmb	11 35 48.6	
WRAB	**Tennant Creek**	**22.90**	**229**	P	**P**	**11 35 41.5**	**+0.5**
WRAB	comp=Z,7.1nm,0.9s			IAmb	IAmb	11 36 02.7	
WB2	**Warramunga Arr**	**22.90**	**229**	P	**P**	**11 35 41.9**	**+0.8**
WB2	comp=Z,13nm,1.1s			IAmb	IAmb	11 35 45.4	
WRA	**Warramunga Arr** comp=Z,2.3nm,0.9s,baz=53,slow=10.0,SNR=12	**22.91**	**229**	P	**P**	**11 35 40.2**	**-0.9**
WRA	**Warramunga Arr**	**22.91**	**229**	P	**P**	**11 35 42.4**	**+1.2**
AS31	**Alice Springs**	**25.59**	**223**	P	**P**	**11 36 07.9**	**+1.8**
ASAR	**Alice Springs** comp=Z,4.9nm,0.8s,baz=58,slow=9.0,SNR=20	**25.59**	**223**	P	**P**	**11 36 05.2**	**-1.0**
MSVF	**Nonsavu** comp=Z,105nm,18.1s,baz=65,slow=3	**27.78**	**118**	LR	LR	11 48 13.3	
STKA	**Stephens Creek** comp=Z,2.2nm,0.8s,baz=19,slow=10,SNR=3.4	**28.32**	**200**	P	**P**	**11 36 30.7**	**+0.1**
STKA	comp=Z,134nm,18.2s,baz=18,slow=38			LR	LR	11 48 21.7	
STKA	**Stephens Creek** comp=Z,1.5nm,1.1s	**28.32**	**200**	IAmb	IAmb	11 36 33.9	
FITZ	**Fitzroy Crossi** comp=Z,6.0nm,0.8s,baz=64,slow=8.8,SNR=8.7	**29.20**	**242**	P	**P**	**11 36 37.2**	**-1.3**
FITZ	comp=Z,211nm,19.1s,baz=65,slow=40			LR	LR	11 50 09.3	
FITZ	**Fitzroy Crossi**	**29.20**	**242**	P	**P**	**11 36 38.0**	**-0.6**
MJAR	**Matsushiro Arr** comp=Z,38nm,18.1s,baz=175,slow=36	**43.79**	**343**	LR	LR	11 56 45.3	
KSRS	**Korea Array** comp=Z,0.8nm,0.8s,baz=156,slow=7.1,SNR=3.2	**48.39**	**334**	P	**P**	**11 39 17.8**	**-0.8**
PPT	**Papeete** comp=Z,19nm,0.6s,baz=84,slow=21,SNR=5.8	**57.77**	**107**	P	**P**	**11 40 28.8**	**+0.6**
PPT	comp=Z,28nm,19.2s,baz=241,slow=33			LR	LR	12 02 37.5	
CMAR	**Chiang Mai Arr** comp=Z,1.9nm,0.9s,baz=110,slow=4.7,SNR=9.6	**57.91**	**296**	P	**P**	**11 40 28.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**57.91**	**296**	P	**P**	**11 40 29.1**	**0.0**
PETK	**Petropavlovsk-** comp=Z,2.7nm,0.8s,baz=173,slow=8.1,SNR=5.0	**58.40**	**4**	P	**P**	**11 40 31.8**	**0.0**
PETK	comp=Z,50nm,20.8s,baz=161,slow=32			LR	LR	12 01 39.9	
MA2	**Magadan** comp=Z,2.3nm,0.5s,baz=187,slow=1.8,SNR=4.4	**64.74**	**359**	P	**P**	**11 41 14.3**	**-0.2**
MA2	**Magadan** comp=Z,8.5nm,1.3s	**64.74**	**359**	IAmb	IAmb	11 41 15.0	
SONM	**Songino Array** comp=Z,0.9nm,0.5s,baz=142,slow=5.0,SNR=11	**66.67**	**328**	P	**P**	**11 41 27.0**	**-0.3**
SONM	comp=Z,38nm,21.5s,baz=134,slow=34			LR	LR	12 08 45.1	
BILL	**Bilibino**	**73.86**	**5**	P	**P**	**11 42 10.7**	**0.0**
BILL	comp=Z,8.2nm,0.9s			IAmb	IAmb	11 42 12.5	
MK31	**Makanchi Array** comp=Z,3.8nm,1.1s	**80.59**	**319**	P	**P**	**11 42 49.3**	**+0.3**
MK31				IAmb	IAmb	11 42 50.7	
MKAR	**Makanchi Array** comp=Z,3.1nm,0.9s,baz=100,slow=6.6,SNR=13	**80.59**	**319**	P	**P**	**11 42 49.3**	**+0.3**
MKAR	**Makanchi Array**	**80.59**	**319**	P	**P**	**11 42 49.2**	**+0.2**
MAKZ	**Makanchi**	**80.80**	**319**	P	**P**	**11 42 50.0**	**-0.1**
MAKZ	comp=Z,4.9nm,0.9s			IAmb	IAmb	11 42 51.8	
IMAR	**Indian Mountai**	**80.98**	**20**	P	**P**	**11 42 50.9**	**+0.3**
MCK	**McKinley**	**81.46**	**23**	P	**P**	**11 42 52.6**	**-0.6**
MLY	**Manley**	**81.48**	**21**	P	**P**	**11 42 54.0**	**+0.7**
MLY	comp=Z,4.6nm,1.0s			IAmb	IAmb	11 42 54.1	
ZALV	**Zalesovo Beam** comp=Z,1.4nm,0.5s,baz=104,slow=4.9,SNR=5.8	**81.49**	**326**	P	**P**	**11 42 52.4**	**-1.1**
ZALV	comp=Z,39nm,20.5s,baz=92,slow=35			LR	LR	12 18 30.8	
ILAR	**Eielson Array** comp=Z,2.1nm,0.9s,baz=247,slow=4.7,SNR=14	**82.75**	**22**	P	**P**	**11 42 59.1**	**-0.8**
ILAR	comp=Z,35nm,18.1s,baz=188,slow=36			LR	LR	12 20 10.6	
ILAR	**Eielson Array**	**82.75**	**22**	P	**P**	**11 42 57.2**	**-2.7**
BCAR	**Beaver Creek A**	**84.00**	**25**	P	**P**	**11 43 05.1**	**-1.4**
TKM2	**Tokmak 2** SNR=6.5	**84.15**	**314**	P	**P**	**11 43 09.2**	**+1.3**
UCH	**Uchtor** SNR=16	**84.78**	**313**	P	**P**	**11 43 13.3**	**+1.9**
BMAR	**Burnt Mountain**	**84.84**	**20**	P	**P**	**11 43 10.7**	**0.0**
AAK	**Ala-Archa** comp=Z,5.5nm,0.7s,baz=141,slow=3.7,SNR=15	**84.88**	**314**	P	**P**	**11 43 11.2**	**-0.3**
AAK	**Ala-Archa** SNR=7.1	**84.88**	**314**	P	**P**	**11 43 13.1**	**+1.6**
AAK	**Ala-Archa**	**84.88**	**314**	P	**P**	**11 43 11.4**	**-0.1**
USP	**Ospenovka** SNR=6.0	**85.01**	**314**	P	**P**	**11 43 13.4**	**+1.4**
AML	**Almayashu** SNR=23	**85.36**	**313**	P	**P**	**11 43 16.1**	**+1.9**
NRIK	**Noril'sk** comp=Z,3.0nm,0.5s,baz=135,slow=2.4,SNR=5.5	**86.41**	**341**	P	**P**	**11 43 17.6**	**-0.7**
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.6s,baz=253,slow=2.7,SNR=1.7	**92.60**	**52**	P	**P**	**11 43 49.0**	**+0.5**
YKA	**Yellowknife Ar** comp=Z,0.6nm,0.6s,baz=269,slow=4.4,SNR=12	**96.02**	**28**	P	**P**	**11 44 03.4**	**+0.1**
PDAR	**Pinedale Array** comp=Z,49nm,19.5s,baz=314,slow=32	**99.39**	**48**	LR	LR	12 23 39.3	
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.4s,baz=35,slow=4.1,SNR=5.2	**150.26**	**287**	PKPbc	**PKPbc**	**11 50 27.5**	**-1.0**
BDFB	**Brasilia** comp=Z,1.2nm,0.3s,baz=187,slow=8.1,SNR=1.8	**150.83**	**136**	PKPbc	**PKiKP**	**11 50 30.5**	**-0.1**

*SFS **09** 11:31:32.0,40˚.85N×1˚.03E, ML3.2, COSTA CATALANA*

*STR **09** 11:31:32.1±0.9,41˚.N±5˚×±˚, h10km±5km, mb12.3/1, MLv3.6/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary*

*LDG **09** 11:31:33.4±0.2,40˚.92N×1˚.06E, h8km, Ml3.5/27, Error ellipse: s-maj=4.0km s-min=2.5km az=134.0*

*MRB **09** 11:31:33.4±0.3,40˚.90N×1˚.00E, h8km±2km, ML3.2/29, Error ellipse: s-maj=1.2km s-min=0.6km az=129.0*

*MDD **09** 11:31:33.2±0.3,40˚.87N×1˚.03E, h4km±2km, mbLg3.2/32, Error ellipse: s-maj=3.2km s-min=1.8km az=135.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

*INMG **09** 11:31:33.8±1.6,40˚.89N×1˚.05E, h16km±4km, ML2.9, Error ellipse: s-maj=3.3km s-min=1.7km az=114.0*

ISC 09 11:31:30.7±0.7, 40˚.90N±0˚.02×1˚.03E±0˚.02, h3km±5km, n166, σ2º41/268, 2C-2D, Balearic Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGAR	**Garraf**	**0.40**	**11**	Pg	Pn	11 31 48.3	+4.9
CGAR	194nm,0.2s			Lg	Lg	11 31 59.2	
CGAR	**Garraf**	**0.40**	**11**	P	Pn	11 31 48.4	+4.9
CGAR	388nm,0.2s			S	Sb	11 31 59.2	+12
EPOB	**Poblet** 253nm,0.1s,SNR=18	**0.45**	**5**	⇓Pg	**Pg**	**11 31 42.2**	**+2.7**
EPOB	813nm,0.2s,SNR=5.0			Lg	Lg	11 31 48.3	
EPOB	**Poblet**	**0.45**	**5**	P	**Pg**	**11 31 42.1**	**+2.7**
EPOB	681nm,0.2s			S	**Sg**	**11 31 48.5**	**+3.3**
ERTA	**Horta de San J** 283nm,0.1s,SNR=18	**0.53**	**276**	⇑Pg	**Pg**	**11 31 43.1**	**+2.2**
ERTA	854nm,0.2s,SNR=28			Lg	Lg	11 31 49.9	
ERTA	**Horta de San J**	**0.53**	**276**	P	**Pg**	**11 31 43.1**	**+2.2**
ERTA	672nm,0.2s			S	**Sg**	**11 31 50.0**	**+2.2**
ALCN	**Alcanar**	**0.55**	**230**	Pg	**Pg**	**11 31 43.3**	**+2.1**
ALCN	4µm,0.2s			Lg	Lg	11 31 50.4	
ALCN	**Alcanar**	**0.55**	**230**	P	**Pg**	**11 31 43.3**	**+2.1**
ALCN	4µm,0.2s			S	**Sg**	**11 31 50.5**	**+2.2**
CMAS	**Mas de Barbera** 797nm,0.1s	**0.57**	**252**	Pg	**Pg**	**11 31 43.8**	**+2.1**
CMAS				Lg	Lg	11 31 52.0	
CMAS	**Mas de Barbera** 797nm,0.1s	**0.57**	**252**	P	**Pg**	**11 31 43.8**	**+2.1**
CMAS				S	**Sg**	**11 31 52.0**	**+3.0**
FBR	**Fabra**	**0.97**	**58**	P	**Pg**	**11 31 51.5**	**+2.1**
FBR				S	**Sg**	**11 32 05.3**	**+3.3**
CAVN	**Les Avellanes** 442nm,0.3s	**1.00**	**348**	Pg	**Pg**	**11 31 51.9**	**+2.0**
CAVN				Lg	Lg	11 32 05.3	
CAVN	**Les Avellanes** 884nm,0.3s	**1.00**	**348**	P	**Pg**	**11 31 51.9**	**+2.0**
CAVN				S	**Sg**	**11 32 05.3**	**+2.5**
ECOL	**Islas Columbre** 300nm,13.4s	**1.04**	**195**	P	**Pg**	**11 31 52.0**	**+1.4**
ECOL				S	**Sb**	**11 32 06.4**	**+1.1**
EMOS	**Mosqueruela** 57nm,0.3s,SNR=18	**1.26**	**245**	⇑Pg	**Pg**	**11 31 56.7**	**+1.8**
EMOS	242nm,0.2s,SNR=5.0			Lg	Lg	11 32 12.6	
EMOS	**Mosqueruela** 177nm,0.2s	**1.26**	**245**	P	**Pg**	**11 31 56.2**	**+1.3**
EMOS				S	**Sg**	**11 32 12.9**	**+1.6**
CORI	**Orista** 566nm,0.2s	**1.31**	**35**	Pg	**Pn**	**11 31 57.3**	**+1.3**
CORI				Lg	Lg	11 32 14.8	
CORI	**Orista** 566nm,0.2s	**1.31**	**35**	P	**Pn**	**11 31 57.4**	**+1.3**
CORI				S	**Sg**	**11 32 14.9**	**+1.9**
CORG	**Organya** 134nm,0.2s	**1.34**	**9**	Pg	**Pn**	**11 31 57.8**	**+1.4**
CORG				Lg	Lg	11 32 15.5	
CORG	**Organya** 268nm,0.2s	**1.34**	**9**	P	**Pn**	**11 31 57.8**	**+1.4**
CORG				S	**Sg**	**11 32 15.6**	**+1.7**
CFON	**Fontmartina** 2.5nm,0.2s,SNR=38	**1.36**	**51**	Pn	**Pn**	**11 31 57.4**	**+0.7**
CFON	44nm,0.2s,SNR=14			Pg	**Pb**	**11 31 59.3**	**+2.4**
CFON	426nm,0.2s,SNR=26			Lg	Lg	11 32 17.3	
CFON	**Fontmartina** 500nm,0.2s	**1.36**	**51**	S	**Sg**	**11 32 17.1**	**+2.7**
CTRE	**Tremp** 345nm,0.2s	**1.43**	**352**	Pg	**Pn**	**11 31 59.2**	**+1.5**
CTRE				Lg	Lg	11 32 18.8	
CTRE	**Tremp** 345nm,0.2s	**1.43**	**352**	P	**Pn**	**11 31 59.3**	**+1.5**
CTRE				S	**Sb**	**11 32 18.9**	**+2.0**
CSOR	**Sort** 1.9nm,0.2s,SNR=18	**1.47**	**3**	⇓Pn	**Pn**	**11 31 59.8**	**+1.5**
CSOR	13nm,0.3s,SNR=217			Pg	**Pb**	**11 32 01.0**	**+2.2**
CSOR	495nm,0.2s,SNR=40			Sn	**Sn**	**11 32 19.3**	**+1.2**
CSOR	**Sort** 514nm,0.3s	**1.47**	**3**	P	**Pn**	**11 31 60.0**	**+1.7**
CSOR				S	**Sn**	**11 32 19.8**	**+1.6**
ARBS	**La Rabassa** 516nm,0.3s	**1.59**	**14**	P	**Pn**	**11 32 01.6**	**+1.6**
ARBS				S	**Sn**	**11 32 23.2**	**+2.0**
CBRU	**Bruguera** 193nm,0.3s	**1.63**	**32**	Pn	**Pn**	**11 32 01.9**	**+1.5**
CBRU				Sn	**Sn**	**11 32 24.3**	**+2.3**
CBRU	**Bruguera** 386nm,0.3s	**1.63**	**32**	P	**Pn**	**11 32 01.9**	**+1.5**
CBRU				S	**Sn**	**11 32 24.4**	**+2.3**
CEST	**Esterri de Car** 175nm,0.1s	**1.70**	**6**	Pn	**Pn**	**11 32 03.3**	**+1.8**
CEST				Sn	**Sn**	**11 32 25.6**	**+1.7**
CEST	**Esterri de Car** 175nm,0.1s	**1.70**	**6**	P	**Pn**	**11 32 03.4**	**+1.8**
CEST				S	**Sn**	**11 32 25.7**	**+1.7**
CCAS	**Cassa de la Se** 85nm,0.4s	**1.72**	**55**	Pn	**Pn**	**11 32 02.8**	**+1.3**
CCAS				Sn	**Sn**	**11 32 25.6**	**+1.6**
CCAS	**Cassa de la Se** 85nm,0.4s	**1.72**	**55**	P	**Pn**	**11 32 02.8**	**+1.3**
CCAS				S	**Sn**	**11 32 25.7**	**+1.6**
CLLI	**Llivia** 1.4nm,0.2s,SNR=7.9	**1.73**	**24**	Pn	**Pn**	**11 32 03.3**	**+1.5**
CLLI	12nm,0.2s,SNR=44			Pg	**Pb**	**11 32 05.0**	**+1.9**
CLLI	171nm,0.2s,SNR=28			Lg	Lg	11 32 28.4	
CLLI	**Llivia** 187nm,0.4s	**1.73**	**24**	P	**Pn**	**11 32 03.5**	**+1.7**
CLLI				S	**Sn**	**11 32 26.5**	**+2.1**
ETOS	**Mallorca** 0.6nm,0.1s,SNR=10.0	**1.77**	**129**	Pn	**Pn**	**11 32 02.4**	**+0.1**
ETOS	2.7nm,0.2s,SNR=7.9			Pg	**Pb**	**11 32 04.5**	**+0.6**
ETOS	17nm,0.2s,SNR=6.9			Sn	**Sn**	**11 32 23.4**	**-2.1**
ETOS	22nm,0.2s,SNR=7.9			Lg	Lg	11 32 28.7	
CARA	**Val d'Aran** 342nm,0.2s	**1.81**	**355**	S	**Sn**	**11 32 28.2**	**+1.6**
CBEU	**Beuda** 949nm,0.3s	**1.83**	**42**	Pn	**Pn**	**11 32 04.2**	**+1.0**
CBEU				Sn	**Sn**	**11 32 28.2**	**+1.3**
CBEU	**Beuda** 949nm,0.3s	**1.83**	**42**	S	**Sn**	**11 32 28.2**	**+1.3**
EIBI	**Ibiza** 6.8nm,0.2s,SNR=11	**1.89**	**173**	Pn	**Pn**	**11 32 03.5**	**-0.4**
FILF	**Fillols**	**2.01**	**34**	Pn	**Pn**	**11 32 06.8**	**+1.1**
FILF	186nm,0.2s			Sn	**Sn**	**11 32 32.0**	**+0.6**
FILF	**Fillols** 186nm,0.2s	**2.01**	**34**	P	**Pn**	**11 32 06.8**	**+1.1**
FILF				S	**Sn**	**11 32 32.1**	**+0.6**
ECHE	**Chera** 1.7nm,0.1s,SNR=7.9	**2.02**	**230**	Pn	**Pn**	**11 32 06.3**	**+0.6**
ECHE	4.3nm,0.2s,SNR=7.9			Pg	**Pb**	**11 32 08.7**	**+0.7**
ECHE	3.4nm,0.2s,SNR=7.9			Sn	**Sn**	**11 32 30.4**	**-1.0**
ECHE	56nm,0.2s,SNR=7.9			Lg	Lg	11 32 34.7	
MLS	**Moulis** 98nm,0.4s	**2.05**	**1**	Pn	**Pn**	**11 32 08.4**	**+2.2**
MLS				Sn	**Sn**	**11 32 34.1**	**+1.8**
MLS	**Moulis** 98nm,0.4s	**2.05**	**1**	P	**Pn**	**11 32 08.4**	**+2.2**
MLS				S	**Sn**	**11 32 34.1**	**+1.8**
EJON	**La Jonquera** 1.6nm,0.2s,SNR=16	**2.08**	**41**	Pn	**Pn**	**11 32 08.2**	**+1.6**
EJON	6.5nm,0.2s,SNR=8.8			Pg	**Pb**	**11 32 11.9**	**+2.8**
EJON	156nm,0.3s,SNR=14			Lg	Lg	11 32 39.8	
SJAF	**Saint Jean de** 0.6nm,0.1s,SNR=7.9	**2.10**	**41**	Pn	**Pn**	**11 32 08.3**	**+1.5**
SJAF	4.2nm,0.1s,SNR=7.9			Pg	**Pb**	**11 32 11.6**	**+2.1**
SJAF	44nm,0.2s,SNR=7.9			Lg	Lg	11 32 40.6	
CPAL	**Palau Saverder** 54nm,0.2s	**2.13**	**48**	Pn	**Pn**	**11 32 08.2**	**+1.0**
CPAL				Sn	**Sn**	**11 32 35.6**	**+1.4**
CPAL	**Palau Saverder** 54nm,0.2s	**2.13**	**48**	S	**Sn**	**11 32 35.6**	**+1.4**
FNEB	**Nbias** 139nm,0.3s	**2.15**	**22**	Pn	**Pn**	**11 32 09.2**	**+1.6**
FNEB				Sn	**Sn**	**11 32 36.9**	**+2.1**
FNEB	**Nbias**	**2.15**	**22**	Pn	**Pn**	**11 32 08.8**	**+1.2**
FNEB				Pg	**Pb**	**11 32 12.1**	**+1.7**
FNEB				Sn	**Sn**	**11 32 38.4**	**+3.5**
FNEB				Sg	**Sb**	**11 32 41.3**	**+3.7**
FNEB	**Nbias** 139nm,0.3s	**2.15**	**22**	P	**Pn**	**11 32 09.3**	**+1.6**
FNEB				S	**Sn**	**11 32 37.0**	**+2.1**
EPF	**Esparros** 51nm,0.2s	**2.19**	**347**	Pg	**Pb**	**11 32 12.7**	**+1.7**
EPF				Lg	Lg	11 32 41.3	
EPF	**Esparros** 102nm,0.2s	**2.19**	**347**	*e*Pg	**Pb**	**11 32 12.7**	**+1.7**
EPF				*e*Sg	**Sb**	**11 32 41.3**	**+2.8**
FMON	**Montouss** 103nm,0.3s	**2.21**	**348**	S	**Sn**	**11 32 37.3**	**+1.1**
ETSF	**Etsaut** 49nm,0.4s	**2.32**	**330**	Pg	**Pb**	**11 32 15.5**	**+2.3**
ETSF				Lg	Lg	11 32 45.8	
ETSF	**Etsaut** 99nm,0.4s	**2.32**	**330**	*e*Pg	**Pb**	**11 32 15.5**	**+2.3**
ETSF				*e*Sg	**Sb**	**11 32 45.8**	**+3.4**
PYLO	**Lourdes** 139nm,0.3s	**2.33**	**340**	Pn	**Pn**	**11 32 13.1**	**+3.0**
PYLO				Pg	**Pb**	**11 32 16.0**	**+2.5**
PYLO				Sn	**Sb**	**11 32 45.2**	**+2.5**
PYLO	**Lourdes** 60nm,0.3s	**2.33**	**340**	S	**Sn**	**11 32 41.0**	**+1.7**
ETOR	**Torete** 6.9nm,0.2s,SNR=14	**2.34**	**269**	Pn	**Pn**	**11 32 12.1**	**+1.9**
ETOR	131nm,0.3s,SNR=13			Pg	**Pb**	**11 32 16.3**	**+2.6**
ETOR	58nm,0.3s,SNR=7.9			Sn	**Sn**	**11 32 40.2**	**+0.7**
ETOR	344nm,0.4s,SNR=8.4			Lg	Lg	11 32 46.0	
EBEN2	**Beniarda presa** 1.2nm,0.4s,SNR=7.9	**2.42**	**203**	Pn	**Pn**	**11 32 11.6**	**+0.5**
ATE	**Arette** 1.8nm,0.1s,SNR=7.9	**2.53**	**330**	Pn	**Pn**	**11 32 14.8**	**+2.0**
ATE	7.7nm,0.1s,SNR=7.9			Pg	**Pb**	**11 32 19.2**	**+2.4**
ATE	67nm,0.1s,SNR=7.9			Lg	Lg	11 32 52.0	
ATE	**Arette**	**2.53**	**330**	Pn	**Pn**	**11 32 15.3**	**+2.5**
ATE				Pg	**Pb**	**11 32 19.9**	**+3.1**
ATE	**Arette** 57nm,0.3s	**2.53**	**330**	P	**Pn**	**11 32 14.7**	**+1.9**
ATE				S	**Sn**	**11 32 45.6**	**+1.4**
AFON	**Font Roja** 6.8nm,0.2s,SNR=9.5	**2.54**	**209**	Pn	**Pn**	**11 32 13.4**	**+0.4**
AFON	27nm,0.4s,SNR=7.9			Lg	Lg	11 32 54.5	
MTLF	**Montolieu** 55nm,0.3s	**2.59**	**20**	Pg	**Pb**	**11 32 20.8**	**+3.0**
MTLF				Lg	Lg	11 32 53.5	
MTLF	**Montolieu** 110nm,0.3s	**2.59**	**20**	*e*Pg	**Pb**	**11 32 20.8**	**+3.0**
MTLF				*e*Sg	**Sb**	**11 32 53.5**	**+3.4**
MTLF	**Montolieu**	**2.59**	**20**	Pg	**Pb**	**11 32 21.3**	**+3.5**
MTLF	**Montolieu**	**2.59**	**20**	Sg	**Sb**	**11 32 54.1**	**+4.0**
MTLF	**Montolieu**	**2.59**	**20**	Pn	**Pn**	**11 32 15.9**	**+2.3**
MTLF	**Montolieu**	**2.59**	**20**	Pg	**Pb**	**11 32 21.3**	**+3.5**
EORO	**Oroz-Betelu** 0.4nm,0.0s	**2.65**	**319**	Pn	**Pn**	**11 32 15.0**	**+0.6**
EORO	3.2nm,0.3s,SNR=7.5			Pg	**Pb**	**11 32 20.9**	**+2.1**
EORO	23nm,0.3s,SNR=7.9			Sn	**Sn**	**11 32 47.6**	**+0.6**
EORO	90nm,0.3s,SNR=17			Lg	Lg	11 32 54.8	
MAHO	**Mahon**	**2.67**	**111**	*e*P	**Pn**	**11 32 15.9**	**+1.3**
MAHO				*e*S	**Sn**	**11 32 45.3**	**-2.2**
EARA	**Aranguren** 2.9nm,0.1s,SNR=4.5	**2.70**	**315**	Pg	**Pb**	**11 32 22.9**	**+3.2**
EARA	84nm,0.3s,SNR=5.9			Lg	Lg	11 32 57.2	
EARA	**Aranguren**	**2.70**	**315**	Pn	**Pn**	**11 32 17.3**	**+2.2**
EARA	**Aranguren**	**2.70**	**315**	Pg	**Pb**	**11 32 23.3**	**+3.6**
EARA	**Aranguren**	**2.70**	**315**	Pn	**Pn**	**11 32 17.3**	**+2.2**
SJPF	**Ste Jean** 37nm,0.3s	**2.77**	**323**	Pg	**Pb**	**11 32 24.1**	**+3.1**
SJPF				Lg	Lg	11 32 58.0	
SJPF	**Ste Jean** 74nm,0.3s	**2.77**	**323**	*e*Pg	**Pb**	**11 32 24.1**	**+3.1**
SJPF				*e*Sg	**Sb**	**11 32 58.0**	**+2.6**
ETOB	**Tobarra** 3.9nm,0.6s,SNR=7.9	**3.01**	**222**	Pn	**Pn**	**11 32 19.9**	**+0.5**
ETOB	4.6nm,0.3s,SNR=5.8			Pg	**Pb**	**11 32 27.4**	**+2.4**
ETOB	12nm,0.3s,SNR=7.2			Sn	**Sn**	**11 32 53.6**	**-2.3**
ETOB	17nm,0.2s,SNR=5.0			Lg	Lg	11 33 06.5	
UCM	**Universidad Co**	**3.31**	**261**	*e*P	**Pg**	**11 32 34.8**	**+0.6**
UCM				*e*S	**Sg**	**11 33 16.5**	**-0.5**
MONQ	**Montcuq**	**3.46**	**2**	Pn	**Pn**	**11 32 28.6**	**+3.0**
MONQ				Pg	**Pb**	**11 32 37.1**	**+4.4**
EMUR	**La Murta** 5.2nm,0.2s,SNR=10	**3.53**	**211**	Pn	**Pn**	**11 32 27.0**	**+0.5**
LASF	**Ste Croix** 9.1nm,0.3s	**3.80**	**32**	Pn	**Pn**	**11 32 31.7**	**+1.5**
LASF				Pg	**Pg**	**11 32 44.2**	**+0.7**
LASF				Lg	Lg	11 33 31.6	
LASF	**Ste Croix** 18nm,0.3s	**3.80**	**32**	*e*Pn	**Pn**	**11 32 31.7**	**+1.5**
LASF	**Ste Croix**	**3.80**	**32**	*e*Pg	**Pg**	**11 32 44.2**	**+0.7**
LASF				*e*Sg	**Sb**	**11 33 31.6**	**+6.8**
GUD	**Guadarrama** 0.5nm,0.1s,SNR=16	**3.94**	**268**	Pn	**Pn**	**11 32 33.5**	**+1.2**
GUD	1.5nm,0.1s,SNR=5.0			Sn	**Sn**	**11 33 17.1**	**-2.1**
ESDC	**Sonseca Array** 0.5nm,0.2s,baz=76,slow=14,SNR=111	**4.01**	**254**	Pn	**Pn**	**11 32 33.5**	**+0.4**
ESDC	1.8nm,0.4s,baz=71,slow=14,SNR=12			Pg	**Pb**	**11 32 41.8**	**-0.2**
ESDC	7.3nm,0.3s,baz=68,slow=30,SNR=7.9			Lg	Lg	11 33 36.8	
LFF	**La Frestale** 18nm,0.3s	**4.04**	**357**	Pn	**Pn**	**11 32 36.3**	**+2.9**
LFF				Pg	**Pg**	**11 32 49.2**	**+1.1**
LFF				Sn	**Sn**	**11 33 16.8**	**-4.5**
LFF				Lg	Lg	11 33 37.2	
LFF	**La Frestale** 36nm,0.3s	**4.04**	**357**	*e*Pn	**Pn**	**11 32 36.3**	**+2.9**
LFF	**La Frestale**	**4.04**	**357**	*e*Pg	**Pg**	**11 32 49.2**	**+1.1**
LFF				*e*Sn	**Sn**	**11 33 16.8**	**-4.5**
LFF				*e*Sg	**Sb**	**11 33 37.2**	**+5.5**
ELAN	**Lanestosa** 1.3nm,0.3s,SNR=8.3	**4.06**	**306**	Pn	**Pn**	**11 32 34.7**	**+1.0**
ELAN	3.4nm,0.3s,SNR=6.4			Pg	**Pb**	**11 32 46.7**	**+3.8**
ELAN	7.1nm,0.2s,SNR=5.0			Sn	**Sn**	**11 33 21.5**	**-0.3**
ELAN	23nm,0.2s,SNR=7.9			Lg	Lg

CAF				*e*Sg		**Sb**	**11 33 39.6**	**+6.3**
	22nm,0.2s							
PAB	**San Pablo**	**4.33**	**254**	Pn		**Pn**	**11 32 38.4**	**+0.7**
	1.0nm,0.2s,SNR=7.9							
PAB				Sn		**Sn**	**11 33 25.9**	**-2.8**
	3.2nm,0.2s,SNR=7.9							
PAB				Lg	Lg		11 33 48.5	
	9.6nm,0.3s,SNR=7.9							
PAB	**San Pablo**	**4.33**	**254**	Pn		**Pn**	**11 32 38.0**	**+0.4**
PAB				Sn		**Sn**	**11 33 26.1**	**-2.6**
RJF	**Les Rejaudoux**	**4.41**	**4**	Pn		**Pn**	**11 32 39.7**	**+1.1**
RJF				Pg		Pb	11 32 55.0	+6.1
RJF				Sn		**Sn**	**11 33 26.0**	**-4.5**
RJF				Lg	Lg		11 33 49.1	
	7.6nm,0.2s							
RJF	**Les Rejaudoux**	**4.41**	**4**	*e*Pn		**Pn**	**11 32 39.7**	**+1.1**
RJF	**Les Rejaudoux**	**4.41**	**4**	*e*Pg		Pb	11 32 55.0	+6.1
RJF				*e*Sn		**Sn**	**11 33 26.0**	**-4.5**
RJF				*e*Sg		**Sb**	**11 33 49.1**	**+6.6**
	15nm,0.2s							
EQES	**Quesada**	**4.44**	**227**	Sn		**Sn**	**11 33 30.0**	**-1.3**
	1.1nm,0.1s,SNR=7.9							
EQES				Lg	Lg		11 33 49.6	
	18nm,0.4s,SNR=7.9							
SMRF	**Simiane la Rot**	**4.55**	**46**	Pg		**Pg**	**11 32 58.1**	**+0.2**
SMRF				Lg	Lg		11 33 56.3	
	7.1nm,0.4s							
SMRF	**Simiane la Rot**	**4.55**	**46**	*e*Pg		**Pg**	**11 32 58.1**	**+0.2**
SMRF				*e*Sg		**Sg**	**11 33 56.3**	**-0.6**
	7.1nm,0.4s							
LMR	**La Mourre**	**4.74**	**57**	Pn		**Pn**	**11 32 43.8**	**+0.7**
LMR				Sn		**Sn**	**11 33 36.6**	**-2.0**
	5.6nm,0.7s							
LMR	**La Mourre**	**4.74**	**57**	*e*Pn		**Pn**	**11 32 43.8**	**+0.7**
LMR				*e*Sn		**Sn**	**11 33 36.6**	**-2.0**
	11nm,0.7s							
VIVF	**Saint-Julien-l**	**4.77**	**33**	Pn		**Pn**	**11 32 45.0**	**+1.4**
VIVF				Pg		**Pb**	**11 32 59.3**	**+4.3**
VIVF				Lg	Lg		11 34 02.9	
	5.9nm,0.3s							
VIVF	**Saint-Julien-l**	**4.77**	**33**	*e*Pn		**Pn**	**11 32 45.0**	**+1.4**
VIVF	**Saint-Julien-l**	**4.77**	**33**	*e*Pg		**Pb**	**11 32 59.3**	**+4.3**
VIVF				*e*Sg		**Sg**	**11 34 02.9**	**-1.0**
	12nm,0.3s							
FRF	**La Foret Royal**	**4.94**	**56**	Pn		**Pn**	**11 32 46.9**	**+1.0**
FRF				Sn		**Sn**	**11 33 39.8**	**-3.8**
FRF				Lg	Lg		11 34 08.5	
	4.6nm,0.4s							
FRF	**La Foret Royal**	**4.94**	**56**	*e*Pn		**Pn**	**11 32 46.9**	**+1.0**
FRF				*e*Sn		**Sn**	**11 33 39.8**	**-3.8**
FRF				*e*Sg		**Sg**	**11 34 08.5**	**-0.9**
	9.2nm,0.4s							
EBER	**Berja**	**5.03**	**219**	Pn		**Pn**	**11 32 47.9**	**+0.6**
	1.5nm,0.3s,SNR=7.9							
EBER				Lg	Lg		11 34 10.8	
	12nm,0.7s,SNR=7.9							
EQUE	**Quentar**	**5.07**	**225**	Lg	Lg		11 34 10.7	
	7.2nm,0.4s,SNR=7.9							
EADA	**Adamuz**	**5.12**	**240**	Pn		**Pn**	**11 32 50.0**	**+1.6**
	0.1nm,0.1s,SNR=7.9							
EADA				Pg		**Pg**	**11 33 07.4**	**-1.5**
	3.4nm,0.3s,SNR=11							
EADA				Sn		**Sn**	**11 33 42.8**	**-5.3**
	0.5nm,0.4s,SNR=7.9							
EADA				Lg	Lg		11 34 11.2	
	9.7nm,0.3s,SNR=7.9							
EARI	**Arriondas**	**5.22**	**299**	Pn		**Pn**	**11 32 51.3**	**+1.5**
	0.8nm,0.2s,SNR=7.5							
EARI				Sn		**Sn**	**11 33 50.1**	**-0.5**
	1.0nm,0.2s,SNR=7.9							
EARI				Lg	Lg		11 34 14.0	
	13nm,0.5s,SNR=7.9							
TCF	**Toulx Ste Croi**	**5.45**	**9**	Pn		**Pn**	**11 32 55.2**	**+2.3**
TCF				Pg		**Pg**	**11 33 14.7**	**-0.4**
TCF				Lg	Lg		11 34 21.6	
	7.1nm,0.4s							
TCF	**Toulx Ste Croi**	**5.45**	**9**	*e*Pn		**Pn**	**11 32 55.2**	**+2.3**
TCF	**Toulx Ste Croi**	**5.45**	**9**	*e*Pg		**Pg**	**11 33 14.7**	**-0.4**
TCF				*e*Sg		Sb	11 34 21.6	+9.3
	14nm,0.4s							
SBF	**Sospel**	**5.59**	**56**	Pn		**Pn**	**11 32 52.6**	**-2.2**
SBF				Sn		**Sn**	**11 33 57.1**	**-2.5**
	10nm,0.7s							
SBF	**Sospel**	**5.59**	**56**	*e*Pn		**Pn**	**11 32 52.6**	**-2.2**
SBF				*e*Sn		**Sn**	**11 33 57.1**	**-2.5**
	20nm,0.7s							
ECAB	**El Cabril**	**5.73**	**243**	Lg	Lg		11 34 30.2	
	8.6nm,0.4s,SNR=6.1							
MFF	**Saint Martin d**	**5.76**	**352**	Pn		**Pn**	**11 33 00.6**	**+3.5**
MFF				Pg		Pb	11 33 18.6	+6.8
MFF				Lg	Lg		11 34 32.7	
	3.0nm,0.3s							
MFF	**Saint Martin d**	**5.76**	**352**	*e*Pn		**Pn**	**11 33 00.6**	**+3.5**
MFF	**Saint Martin d**	**5.76**	**352**	*e*Pg		Pb	11 33 18.6	+6.8
MFF				*e*Sg		**Sg**	**11 34 32.7**	**-2.9**
	6.0nm,0.3s							
MFF	**Saint Martin d**	**5.76**	**352**	Pn		**Pn**	**11 33 01.0**	**+3.9**
BGF	**Bois d'Agland**	**5.80**	**12**	Pn		**Pn**	**11 32 57.8**	**+0.1**
BGF				Pg		**Pg**	**11 33 21.0**	**-0.9**
BGF				Lg	Lg		11 34 34.3	
	21nm,0.4s							
BGF	**Bois d'Agland**	**5.80**	**12**	*e*Pn		**Pn**	**11 32 57.8**	**+0.1**
BGF	**Bois d'Agland**	**5.80**	**12**	*e*Pg		**Pg**	**11 33 21.0**	**-0.9**
BGF				*e*Sg		**Sg**	**11 34 34.3**	**-2.7**
	43nm,0.4s							
PBRG	**Braganca**	**5.92**	**281**	*e*Pn		**Pn**	**11 32 59.6**	**+0.3**
ECAL	**Calabor**	**5.93**	**283**	Pn		**Pn**	**11 33 00.0**	**+0.5**
	2.3nm,0.2s,SNR=7.9							
ECAL				Sn		**Sn**	**11 34 04.9**	**-3.1**
	2.4nm,0.2s,SNR=7.9							
ECAL				Lg	Lg		11 34 41.4	
	16nm,0.4s,SNR=7.9							
SMF	**Signal de Mont**	**6.09**	**19**	Pn		**Pn**	**11 33 03.6**	**+2.0**
SMF				Pg		Pg	11 33 25.5	-1.8
SMF				Lg	Lg		11 34 42.7	
	2.1nm,0.4s							
SMF	**Signal de Mont**	**6.09**	**19**	*e*Pn		**Pn**	**11 33 03.6**	**+2.0**
SMF	**Signal de Mont**	**6.09**	**19**	*e*Pg		Pg	11 33 25.5	-1.8
SMF				*e*Sg		**Sg**	**11 34 42.7**	**-3.5**
	4.2nm,0.4s							
MVO	**Moncorvo**	**6.10**	**275**	Pn		**Pn**	**11 33 02.9**	**+1.1**
	0.7nm,0.1s,SNR=7.9							
MVO				Lg	Lg		11 34 46.7	
	15nm,0.5s,SNR=7.9							
MVO	**Moncorvo**	**6.10**	**275**	*e*Pn		**Pn**	**11 33 02.9**	**+1.1**
MVO				*e*Sn		**Sn**	**11 34 10.3**	**-1.9**
MVO				A	A		11 34 59.5	
	7.9nm,0.4s							
AVF	**Avril sur Loir**	**6.12**	**15**	Pn		**Pn**	**11 33 01.1**	**-0.9**
AVF				Lg	Lg		11 34 45.1	
	3.5nm,0.4s							
AVF	**Avril sur Loir**	**6.12**	**15**	*e*Pn		**Pn**	**11 33 01.1**	**-0.9**
AVF				*e*Sg		**Sg**	**11 34 45.1**	**-2.1**
	6.9nm,0.4s							
PGF	**Pioggiola**	**6.18**	**72**	Pn		**Pn**	**11 33 03.9**	**+0.9**
PGF				Sn		**Sn**	**11 34 10.2**	**-4.1**
	3.3nm,0.4s							
PGF	**Pioggiola**	**6.18**	**72**	*e*Pn		**Pn**	**11 33 03.9**	**+0.9**
PGF				*e*Sn		**Sn**	**11 34 10.2**	**-4.1**
	6.7nm,0.4s							
SSF	**Saint Saulge**	**6.41**	**15**	Pn		**Pn**	**11 33 07.0**	**+1.0**
SSF				Lg	Lg		11 34 52.8	
	3.8nm,0.5s							
SSF	**Saint Saulge**	**6.41**	**15**	*e*Pn		**Pn**	**11 33 07.0**	**+1.0**
SSF				*e*Sg		**Sg**	**11 34 52.8**	**-3.7**
	7.6nm,0.5s							
HYF	**Humbligny**	**6.47**	**10**	Pg		**Pg**	**11 33 32.8**	**-1.8**
HYF				Lg	Lg		11 34 52.3	
HYF	**Humbligny**	**6.47**	**10**	*e*Pg		**Pg**	**11 33 32.8**	**-1.8**
HYF				*e*Sg		Sb	11 34 52.3	+11
EPON	**Pontenova**	**6.55**	**294**	Pn		**Pn**	**11 33 08.7**	**+0.8**
	0.3nm,0.1s,SNR=4.0							
EPON				Lg	Lg		11 35 02.7	
	8.6nm,0.4s,SNR=7.9							
EBAD	**Badajoz**	**6.55**	**253**	Sn		**Sn**	**11 34 20.8**	**-2.5**
	1.2nm,0.3s,SNR=7.9							
EBAD				Lg	Lg		11 35 01.3	
	5.6nm,0.3s,SNR=7.9							
PMRV	**Marv??o**	**6.62**	**260**	*e*Pn		**Pn**	**11 33 09.7**	**+0.8**
PMRV				*e*Sn		**Sn**	**11 34 21.6**	**-3.3**
PMRV				A	A		11 35 05.8	
	5.5nm,0.6s							
LOR	**Lormes**	**6.68**	**17**	Pn		**Pn**	**11 33 08.1**	**-1.6**
LOR				Lg	Lg		11 35 02.0	
	2.2nm,0.3s							
LOR	**Lormes**	**6.68**	**17**	*e*Pn		**Pn**	**11 33 08.1**	**-1.6**
LOR				*e*Sg		**Sg**	**11 35 02.0**	**-3.1**
	4.5nm,0.3s							
EMIN	**Mina Concepcio**	**6.74**	**245**	Lg	Lg		11 35 06.1	
	13nm,0.8s,SNR=7.9							
CABF	**La Chapelle**	**6.78**	**31**	*e*Sg		**Sg**	**11 35 05.0**	**-3.3**
ELOB	**Lobios**	**6.91**	**281**	Pn		**Pn**	**11 33 15.7**	**+2.8**
	0.3nm,0.2s,SNR=7.9							
ELOB				Lg	Lg		11 35 11.9	
	8.7nm,0.6s,SNR=7.9							
PESTR	**Estremoz**	**6.94**	**256**	*e*Pn		**Pn**	**11 33 13.1**	**-0.2**
PESTR				*e*Sg		**Sg**	**11 35 10.3**	**-3.1**
PESTR				A	A		11 35 15.5	
	8.7nm,0.6s							
EAGO	**Agolada(Pontev**	**7.07**	**289**	Pn		**Pn**	**11 33 16.0**	**+0.9**
	0.4nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**7.42**	**246**	Lg	Lg		11 35 26.1	
	3.4nm,0.4s,SNR=7.9							
GRR	**Gorron**	**7.60**	**350**	Pn		**Pn**	**11 33 23.1**	**+0.7**
GRR				Sn		**Sn**	**11 34 44.0**	**-5.0**
	16nm,1.3s							
GRR	**Gorron**	**7.60**	**350**	*e*Pn		**Pn**	**11 33 23.1**	**+0.7**
GRR				*e*Sn		**Sn**	**11 34 44.0**	**-5.0**
	32nm,1.3s							
LDF	**La Druitiere**	**7.73**	**354**	*e*Sn		**Sn**	**11 34 46.3**	**-5.9**
	49nm,1.5s							
LDF				*e*Sg		**Sg**	**11 35 35.9**	**-3.0**
	16nm,1.0s							
SGMF	**Saint Gilles**	**7.78**	**342**	Pn		**Pn**	**11 33 24.2**	**-0.6**
SGMF	**Saint Gilles**	**7.78**	**342**	*e*Pn		**Pn**	**11 33 24.2**	**-0.6**
FLN	**La Foliniere**	**7.93**	**353**	Sn		**Sn**	**11 34 53.7**	**-3.4**
FLN	**La Foliniere**	**7.93**	**353**	*e*Sn		**Sn**	**11 34 53.7**	**-3.4**
ROSF	**Rostrenen**	**8.04**	**339**	Pn		**Pn**	**11 33 31.7**	**+3.3**
ROSF	**Rostrenen**	**8.04**	**339**	*e*Pn		**Pn**	**11 33 31.7**	**+3.3**

*INET **09** 11:35:18.3,9.°48N×85.°73W,h11km,MW3.1*
UCR 09 11:35:15.4±1.6,9.°35N×85.°94W,h22km±6km,MW3.8,14C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.64**	**28**	⇑*i*P	Pb	11 35 27.7	-0.2
INDI	**Punta indio, G**	**0.67**	**40**	⇑*i*P	Pb	11 35 28.5	0.0
INDI				*e*S	Sn	11 35 38.6	-0.9
SAJU	**San Juanillo,**	**0.75**	**18**	⇑*i*P	Pb	11 35 29.4	-0.4
SAJU				*e*S	Sb	11 35 40.2	+0.8
GUAI	**GUAI**	**1.01**	**25**	⇑*i*P	Pb	11 35 33.0	-1.1
GUAI				*i* S	Sb	11 35 47.2	+0.3
LAFE	**Finca La Fe, P**	**1.11**	**66**	⇑*i*P	Pn	11 35 34.3	-1.4
PLVR	**Palo Verde**	**1.15**	**30**	⇑*i*P	Pn	11 35 34.4	-2.0
PLVR				*e*S	Sb	11 35 49.8	-1.4
JTS	**Las Juntas de**	**1.35**	**46**	⇑*i*P	Pn	11 35 38.6	-0.4
COLC	**Colonia**	**1.49**	**29**	⇑*i*P	Pn	11 35 40.8	-0.2
GBS3	**Finca Las Img**	**1.50**	**19**	*i* P	Pn	11 35 40.8	-0.3
GPS2	**Hotel Rincn d**	**1.51**	**23**	*i* P	Pn	11 35 41.0	-0.2
GUAB	**Guayabo de Bag**	**1.52**	**27**	*i* P	Pn	11 35 41.1	-0.2
BUEV	**Buena Vista**	**1.53**	**20**	*i* P	Pn	11 35 41.2	-0.3
GB1A	**Borinquen Arri**	**1.55**	**20**	*i* P	Pn	11 35 41.5	-0.4
ACAL	**Aguas Claras**	**1.56**	**35**	*i* P	Pn	11 35 41.8	0.0
BUAI	**Buenos Aires**	**1.63**	**22**	*i* P	Pn	11 35 41.8	-1.0
ARE1	**Arenal 1**	**1.63**	**47**	⇑*i*P	Pn	11 35 43.7	+0.8
ARE1				*e*S	Sb	11 36 05.0	0.0
PTEN	**Parque Tenorio**	**1.65**	**35**	⇑*i*P	Pn	11 35 43.2	+0.1
CEDE	**Laguna Cedeo**	**1.66**	**47**	*e*P	Pn	11 35 43.3	0.0
LCR2	**La Lucha 2**	**1.95**	**78**	⇑*e*P	Pn	11 35 47.0	-0.4
EDDO	**Dominical**	**2.05**	**93**	*e*P	Pn	11 35 48.4	-0.2
RIMA	**Rio Macho**	**2.09**	**78**	⇑*i*P	Pn	11 35 49.2	-0.2
CDM	**Cerro de Muert**	**2.16**	**85**	⇑*i*P	Pn	11 35 50.5	0.0
CVTR	**Volcan Turrial**	**2.25**	**73**	*e*P	Pn	11 35 52.7	+0.9
RIOS	**Rincon, Osa**	**2.48**	**105**	*e*P	Pn	11 35 54.7	+0.2
MRVA	**Moravia de Chi**	**2.51**	**79**	⇑*e*P	Pn	11 35 55.2	+0.2
DRK0	**Durika**	**2.66**	**92**	*e*P	Pn	11 35 57.7	+0.5
LPLA	**Las Palmas La**	**2.92**	**96**	*e*P	Pn	11 36 01.3	+0.6

SKO 09 11:37:48.7,40.°93N×22.°18E,h15km,3C-1D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.17**	**81**	⇓*i*Pg	Pg	11 37 52.7	-0.3
GRG				*i* Sg	Sg	11 37 56.3	+0.5
VAY	**Valandovo**	**0.49**	**37**	*i* Pg	Pb	11 37 58.9	-0.1
VAY				*i* Sg	Sb	11 38 06.2	+0.2
VAY				*e*Lg	Lg	11 38 06.4	
	comp=E,29nm,0.4s						
VAY				*e*Lg	Lg	11 38 06.9	
	comp=N,16nm,0.3s						
KNT	**Kendrikon**	**0.59**	**67**	⇑*i*Pg	Pb	11 38 00.9	+0.1
KNT				*i* Sg	Sb	11 38 09.2	+0.3
FNA	**Florina**	**0.63**	**257**	⇑*i*Pg	Pb	11 38 01.5	+0.1
STIP	**Stip**	**0.76**	**0**	*i* Pg	Pn	11 38 05.4	+0.4
STIP				*i* Sg	Sn	11 38 17.8	+1.5
SOH	**Sokhos**	**0.90**	**97**	⇑*i*Pg	Pb	11 38 06.0	0.0
SOH				*i* Sg	Sn	11 38 18.8	-0.8

BUC 09 11:39:03.8±0.2,45.°98N×22.°86E,h9km±1km,ml1.9/8, 30C-16D,Error ellipse: s-maj=1.8km s-min=1.3km az=125.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.10**	**162**	⇑P	Pg	11 39 05.3	-0.9
DEV				⇓S	Sg	11 39 08.2	+0.2
DEV	**Deva**	**0.10**	**162**	⇑P	Pg	11 39 05.3	-0.9
DEV				⇓S	Sg	11 39 08.2	+0.2
GZR	**Gura Zlata**	**0.59**	**186**	⇑P	Pg	11 39 14.8	-0.4
GZR				⇑S	Sb	11 39 24.2	-0.6
GZR	**Gura Zlata**	**0.59**	**186**	⇑P	Pg	11 39 14.8	-0.4
GZR				⇑S	Sb	11 39 24.2	-0.6
DRGR		**0.82**	**353**	⇑P	Pg	11 39 19.3	-0.3
DRGR				⇓S	Sb	11 39 31.6	+0.2
DRGR		**0.82**	**353**	⇑P	Pg	11 39 19.3	-0.3
DRGR				⇓S	Sb	11 39 31.6	+0.2
SIRR	**Siria**	**0.88**	**289**	⇓P	Pg	11 39 20.3	-0.4
SIRR				⇓S	Sb	11 39 33.5	+0.4
SIRR	**Siria**	**0.88**	**289**	⇓P	Pg	11 39 20.3	-0.4
SIRR				⇓S	Sb	11 39 33.5	+0.4
CJR	**Cluj-Napoca**	**0.89**	**35**	⇓P	Pg	11 39 20.8	-0.2
CJR				⇑S	Sb	11 39 33.9	+0.3
CJR	**Cluj-Napoca**	**0.89**	**35**	⇓P	Pg	11 39 20.8	-0.2
CJR				⇑S	Sb	11 39 33.9	+0.3
BZS	**Buzias**	**0.94**	**248**	⇓P	Pg	11 39 20.8	-1.1
BZS				⇑S	Sb	11 39 34.5	-0.4
BZS	**Buzias**	**0.94**	**248**	⇓P	Pg	11 39 20.8	-1.1
BZS				⇑S	Sb	11 39 34.5	-0.4
MDB	**Medias**	**1.07**	**81**	⇑P	Pb	11 39 24.6	+0.1
MDB				⇑S	Sn	11 39 40.1	+0.1
MDB	**Medias**	**1.07**	**81**	⇑P	Pb	11 39 24.6	+0.1
MDB				⇑S	Sn	11 39 40.1	+0.1
HERR	**Herculane**	**1.14**	**196**	⇓P	Pb	11 39 25.0	-0.7
HERR				⇑S	Sn	11 39 42.2	+0.5
HERR	**Herculane**	**1.14**	**196**	⇓P	Pb	11 39 25.0	-0.7
HERR				⇑S	Sn	11 39 42.2	+0.5
MDVR	**Moldovita**	**1.45**	**214**	⇑P	Pn	11 39 30.3	+0.1
MDVR				⇑S	Sg	11 39 51.0	+0.8
MDVR	**Moldovita**	**1.45**	**214**	⇑P	Pn	11 39 30.3	+0.1
MDVR				⇑S	Sg	11 39 51.0	+0.8
ARCR	**ARCALIA**	**1.51**	**43**	⇓S	Sb	11 39 51.3	+0.1
ARCR	**ARCALIA**	**1.51**	**43**	⇓S	Sb	11 39 51.3	+0.1
VOIR		**1.63**	**109**	⇑P	Pn	11 39 32.5	-0.2
VOIR				⇑S	Sn	11 39 54.2	+0.3
VOIR		**1.63**	**109**	⇑P	Pn	11 39 32.5	-0.2
VOIR				⇑S	Sn	11 39 54.2	+0.3
BURAR	**Bucovina Array**	**2.30**	**44**	⇑P	Pn	11 39 42.6	+0.7
BURAR				⇑S	Sn	11 40 11.4	+0.9
BURAR	**Bucovina Array**	**2.30**	**44**	⇑P	Pn	11 39 42.6	+0.7
BURAR				⇑S	Sn	11 40 11.4	+0.9

DNK 09 11:50:29.7±0.3,57.°68N×12.°80E,h0km,ML1.4(UPP), Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORU	**Boraas**	**0.05**	**200**	P	Pg	11 50 30.7	+0.1
BORU				S	Sg	11 50 31.5	+0.2
ONAU	**Onsala**	**0.56**	**239**	P	Pg	11 50 39.9	-0.5
ONAU				S	Sg	11 50 47.3	-0.3
GNOU	**Gnosjoe**	**0.65**	**127**	P	Pg	11 50 41.6	-0.5
FABU	**Falkenberg**	**0.69**	**184**	P	Pg	11 50 42.2	-0.6
TJOU	**Tjoern**	**0.72**	**300**	P	Pg	11 50 42.8	-0.7
TJOU				S	Sg	11 50 52.5	-0.3
VANU	**Vaenersborg**	**0.90**	**335**	P	Pg	11 50 46.2	-0.8
DEL	**Delary**	**1.35**	**154**	P	Pg	11 50 53.9	-1.6
VXJU	**Vaexsjoe**	**1.39**	**122**	P	Pg	11 50 55.1	-1.1
STRU	**Stroemstad**	**1.60**	**328**	P	Pn	11 50 58.6	-0.6
BJUU	**Bjuv**	**1.62**	**176**	P	Pn	11 50 58.7	-0.8

BER 09 11:50:41.2±1.4,60.°85N×5.°09E,h0km,ML1.1,Suspected explosion,Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUE	**Sulen**	**0.27**	**322**	*e*P	Pg	11 50 45.4	-0.8
SUE				*e*S	Sg	11 50 50.2	+0.5
SUE				IAML		11 50 54.4	
	comp=Z,34nm,0.6s						
ASK	**Askoy**	**0.37**	**172**	*e*P	Pg	11 50 47.6	-0.6
ASK				*e*S	Sg	11 50 53.4	+0.3
ASK				IAML		11 51 01.2	
	comp=Z,17nm,0.5s						
BER	**Bergen**	**0.48**	**166**	*e*S	Sg	11 50 56.9	+0.3
HYA	**Hoyanger**	**0.62**	**59**	*e*P	Pg	11 50 51.9	-1.2
HYA				*e*S	Sg	11 51 00.7	-0.5
HYA				IAML		11 51 08.1	
	comp=Z,7.4nm,0.7s						
FOO	**Floro**	**0.75**	**358**	*e*P	Pg	11 50 54.2	-1.4
FOO				*e*S	Sg	11 51 04.4	-0.9
FOO				IAML		11 51 17.2	
	comp=Z,5.2nm,0.1s						
ODD1	**Odda**	**1.21**	**140**	*e*P	Pg	11 51 02.7	-1.7
ODD1				*e*S	Sg	11 51 18.9	-1.1
ODD1				IAML		11 51 19.6	
	comp=Z,4.7nm,0.5s						
BLS5	**Blasjo**	**1.58**	**154**	*e*P	Pn	11 51 08.8	-1.7
BLS5				*e*S	Sn	11 51 27.1	-4.6
BLS5				*e*Sg	Sb	11 51 30.3	-1.6
BLS5				IAML		11 51 39.9	
	comp=Z,2.8nm,0.5s						
SKAR	**Skarslia**	**1.58**	**95**	*e*Pg	Pn	11 51 09.6	-1.0
SKAR				*e*Sg	Sn	11 51 31.3	-0.5
SKAR				IAML		11 51 32.1	
	comp=Z,4.9nm,0.5s						
AKN	**Aaknes**	**1.62**	**34**	*e*P	Pn	11 51 09.0	-2.0
AKN				*e*Sg	Sn	11 51 31.7	-0.8
AKN				IAML		11 51 33.5	
	comp=Z,8.3nm,0.6s						
KMY	**Karmoy**	**1.64**	**177**	*e*P	Pn	11 51 10.3	-1.0
KMY				*e*S	Sn	11 51 30.0	-3.1
KMY				IAML		11 51 31.7	
	comp=Z,5.0nm,0.9s						

*IDC **09** 11:54:18.2±1.2,26.°88N×67.°37E,h0km,mb3.6/8, mb1 3.7/10,mb1mx3.5/50,mbtmp3.6/10,ML3.3/1,MS3.2/1, Ms1 3.2/1,ms1mx2.5/35,Error ellipse: s-maj=33.2km s-min=23.5km az=133.0*
ISC 09 11:54:19.7±1.1,26.°9N×0.°2×67.°4E±0.°2,h10km,n11, σ0.°62/10,mb3.5/8,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.70**	**247**	Pn	**Pn**	**11 56 25.4**	**-0.2**
	0.3nm,0.3s,baz=114,slow=10.0,SNR=1.7						
WSAR				Sn	Sn	11 57 52.5	-11
	0.1nm,0.3s,baz=195,slow=9.0,SNR=1.8						
AAK	**Ala-Archa**	**16.75**	**19**	Pn	**Pn**	**11 58 14.1**	**-0.6**
	baz=194,slow=12,SNR=1.2						
GNI	**Garni**	**22.84**	**311**	LR	LR	12 09 24.3	
	comp=Z,60nm,21.2s,baz=238,slow=40						
MKAR	**Makanchi Array**	**23.11**	**27**	P	**P**	**11 59 24.6**	**-1.1**
	1.3nm,1.0s,baz=225,slow=8.6,SNR=8.1						
AKTO	**Aktyubinsk**	**24.57**	**346**	P	**P**	**11 59 40.3**	**+0.6**
	0.8nm,0.7s,baz=171,slow=11,SNR=2.4						
KURBB	**Kurchatov Arra**	**25.19**	**17**	P	**P**	**11 59 45.7**	**+0.4**
	1.0nm,0.9s,baz=211,slow=8.2,SNR=4.3						
BVAR	**Borovoye Array**	**26.20**	**4**	P	**P**	**11 59 54.5**	**+0.1**
	0.8nm,0.8s,baz=162,slow=16,SNR=5.0						
SONM	**Songino Array**	**36.89**	**45**	P	**P**	**12 01 29.0**	**+0.4**
	0.3nm,0.4s,baz=253,slow=9.9,SNR=1.5						
TORD	**Torodi Ar. Bea**	**62.59**	**271**	P	**P**	**12 04 44.4**	**-0.1**
	0.8nm,0.8s,baz=63,slow=6.9,SNR=4.0						
WRA	**Warramunga Arr**	**79.88**	**118**	P	**P**	**12 06 29.0**	**-0.1**
	1.0nm,0.9s,baz=318,slow=5.7,SNR=4.8						
YKA	**Yellowknife Ar**	**90.91**	**1**

	baz=305										
STYT				*i* S		Sg	12 33 37.4	+1.1			
	baz=305										
LONT	**Longtian**	**0.25**	**128**	*e*P		Pg	12 33 36.1	+1.0			
	baz=127										
LONT				*e*S		Sb	12 33 40.8	-1.1			
	baz=127										
SLGT	**Liugui**	**0.26**	**255**	P		Pb	12 33 37.2	-0.2			
	baz=254										
SLGT				S		Sb	12 33 40.6	-1.5			
	baz=254										
TWG	**Pinlang**	**0.28**	**149**	S		Sb	12 33 42.0	-0.7			
	baz=148										
TWGBT	**Beinan**	**0.29**	**148**	S		Sb	12 33 42.1	-0.8			
	baz=148										
SGST	**Jiashian**	**0.31**	**274**	*e*P		Pb	12 33 37.3	-0.9			
	baz=273										
SGST				S		Sb	12 33 42.3	-1.2			
	baz=273										
WTP	**Ta-pu**	**0.33**	**304**	P		Pb	12 33 37.7	-1.0			
	baz=303										
WTP				*i* S		Sb	12 33 43.7	-0.6			
	baz=303										
TPUB	**Ta-pu**	**0.35**	**312**	*e*P		Pb	12 33 38.2	-0.9			
	baz=312										
TPUB				S		Sb	12 33 44.4	-0.6			
	baz=312										
EDH	**Donghe**	**0.37**	**104**	*e*S		Sb	12 33 45.3	+0.1			
	baz=103										
TTN	**Taitung**	**0.37**	**145**	P		Pb	12 33 38.4	-0.9			
	baz=144										
TTN				S		Sb	12 33 45.2	-0.1			
	baz=144										
FULB	**Fuli**	**0.37**	**68**	*e*P		Pb	12 33 39.8	+0.4			
	baz=68										
FULB				S		Sb	12 33 45.2	-0.2			
	baz=68										
CHN1	**Nanshi**	**0.38**	**289**	*e*S		Sb	12 33 45.2	-0.4			
	baz=289										
SSD	**Sandimen**	**0.41**	**220**	*e*P		Pb	12 33 39.5	-0.5			
	baz=218										
SSD				*e*S		Sb	12 33 45.8	-0.7			
	baz=218										
CHN4	**Tsaushan**	**0.41**	**314**	*e*P		Pb	12 33 39.5	-0.6			
	baz=314										
CHN4				*e*S		Sb	12 33 46.7	+0.1			
	baz=314										
CHKT	**Chengkung**	**0.42**	**85**	*e*P		Pb	12 33 39.7	-0.3			
	baz=84										
TSMG	**Majia**	**0.43**	**215**	*e*P		Pb	12 33 40.1	-0.2			
	baz=215										
TSMG				*e*S		Sb	12 33 47.3	+0.2			
	baz=215										
TWK	**Hsinying**	**0.44**	**298**	*e*P		Pb	12 33 40.2	-0.3			
	baz=297										
TWK				*e*S		Sb	12 33 47.2	-0.3			
	baz=297										
TWF1	**Yuli**	**0.46**	**50**	P		Pb	12 33 40.1	-0.6			
	baz=51										
TWF1				S		Sb	12 33 47.4	-0.4			
	baz=51										
ALS	**Alishan**	**0.46**	**347**	P		Pb	12 33 40.6	-0.4			
	baz=348										
ALS				S		Sb	12 33 48.0	-0.2			
	baz=348										
YULB	**Yu-li**	**0.48**	**47**	*e*P		Pg	12 33 40.4	+0.8			
	baz=46										
CHN3	**Shinhua**	**0.51**	**272**	*e*P		Pb	12 33 41.8	+0.1			
	baz=271										
CHN3				*e*S		Sb	12 33 49.7	+0.4			
	baz=271										
SGLT	**Jiouru**	**0.52**	**230**	*e*P		Pg	12 33 40.7	+0.5			
	baz=228										
SGLT				*e*S		Sb	12 33 49.3	-0.1			
	baz=228										
MASBT	**Mashibuluo**	**0.52**	**210**	*e*P		Pb	12 33 41.4	-0.4			
	baz=210										
MASBT				*e*S		Sb	12 33 50.2	+0.6			
	baz=210										
TSPT	**Pingtung City**	**0.54**	**225**	*e*S		Sb	12 33 51.1	+0.8			
	baz=226										
CHN5	**Tsauling**	**0.58**	**338**	*e*S		Sb	12 33 52.1	+0.7			
	baz=337										
EHY	**Hungye**	**0.58**	**40**	*e*S		Sb	12 33 51.6	+0.2			
	baz=40										

TAP 09 12:33:39.3, 23°.23N × 120°.91E, h1 km, ML0.8, 1C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.11**	**110** ⇑	*i* P	Pg	12 33 43.0	+1.6
	baz=110						
ELDTW				*i* S	Sg	12 33 45.0	+2.2
	baz=110						
STYH	**Taoyuan**	**0.13**	**245**	P	Pg	12 33 42.8	+1.0
	baz=245						
STYH				*e*S	Sg	12 33 46.0	+2.4
	baz=245						
STYT	**Tauyuan**	**0.15**	**246**	P	Pg	12 33 43.0	+0.7
	baz=243						
STYT				S	Sg	12 33 46.3	+2.1
	baz=243						
YUS	**Yu-Shan**	**0.27**	**9**	*e*P	Pg	12 33 45.7	+1.2
	baz=8.0						
YUS				*e*S	Sb	12 33 50.5	-1.8
	baz=8.0						
TPUB	**Ta-pu**	**0.27**	**286**	*e*S	Sb	12 33 51.0	-0.9
	baz=286						
WTP	**Ta-pu**	**0.27**	**274**	P	Pb	12 33 45.8	-1.2
	baz=273						
WTP				S	Sb	12 33 50.6	-1.4
	baz=273						
ALS	**Alishan**	**0.30**	**342**	*e*S	Sb	12 33 51.8	-1.3
	baz=342						
CHN4	**Tsaushan**	**0.31**	**293**	*e*P	Pb	12 33 47.4	-0.3
	baz=293						
CHN4				*e*S	Sb	12 33 52.6	-0.7
	baz=293						
CHN1	**Nanshi**	**0.35**	**263**	*e*P	Pb	12 33 48.3	-0.1
	baz=263						
CHN1				*e*S	Sb	12 33 54.1	-0.2
	baz=263						
FULB	**Fuli**	**0.36**	**94**	*e*S	Sb	12 33 54.0	-0.5
	baz=94						
TWF1	**Yuli**	**0.38**	**71**	*e*P	Pb	12 33 48.4	-0.4
	baz=71						
TWF1				S	Sb	12 33 55.3	+0.1
	baz=71						
TWK	**Hsinying**	**0.39**	**276**	*e*P	Pb	12 33 47.9	-1.0
	baz=275						
TWK				*e*S	Sb	12 33 54.9	-0.6
	baz=275						
YULB	**Yu-li**	**0.40**	**65**	*e*P	Pb	12 33 48.6	-0.5
	baz=65						
YULB				*e*S	Sb	12 33 55.0	-0.7
	baz=65						
YULB	**Yu-li**	**0.40**	**65**	*e*S	Sb	12 33 48.6	-0.5
	baz=46						
EYUL	**Yuli**	**0.40**	**72**	*e*P	Pb	12 33 48.7	-0.4
	baz=72						
EYUL				*e*S	Sb	12 33 55.5	-0.2
	baz=72						
CHN5	**Tsauling**	**0.42**	**330**	*e*S	Sb	12 33 56.6	0.0
	baz=330						
TWG	**Pinlang**	**0.43**	**159**	*e*S	Sb	12 33 56.9	+0.3
	baz=158						

*BJI **09** 13:00:15.8±0.0, 15°.53N × 121°.10E, h29 km, mB4.7/14, mb4.2/25, Ms4.0/8, Ms7 3.8/8*
*MAN **09** 13:00:18.0, 15°.78N × 120°.98E, h10 km, MS4.0*
*NEIC **09** 13:00:19.7±1.8, 15°.78N±0°.08 × 121°.1E±0°.2, h35 km±4 km, mb4.6/12, Error ellipse: s-maj=24.4km s-min=10.6km az=81.0*
*IDC **09** 13:00:19.7±5.9, 15°.82N × 121°.21E, h31 km±45 km, mb4.0/20, mb1 4.1/20, mb1mx3.9/62, mbtmp4.2/20, MS3.2/14, Ms1 3.3/14, ms1mx3.1/48, Error ellipse: s-maj=24.9km s-min=12.6km az=71.0*

ISC 09 13:00:17.6±1.6, 15°.81N±0°.02 × 121°.06E±0°.04, h16 km±10 km, n102, σ1°38/100, mb4.3/33, MS3.2/12, 5C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QVP	**Quezon City--P**	**1.18**	**183**	*e*P	**Pn**	**13 00 38.1**	**-1.4**
QVP				*e*S	**Sn**	**13 00 54.5**	**-0.8**
BOLP	**Bolinao**	**1.24**	**297**	*e*P	**Pn**	**13 00 39.2**	**-1.1**
BOLP				*e*S	**Sb**	**13 00 57.1**	**+0.5**
MACP	**Maragondon, Ca**	**1.57**	**192**	*e*P	**Pn**	**13 00 44.8**	**-0.1**
MACP				*e*S	**Sb**	**13 01 06.0**	**-0.1**
TGY	**Tagaytay City**	**1.70**	**184**	Pn	**Pb**	**13 00 47.9**	**-0.7**
	399nm,0.3s,baz=323,slow=2.0,SNR=40						
TGY				Sn	**Sg**	**13 01 13.9**	**+1.4**
	725nm,0.3s,baz=242,slow=9.8,SNR=3.9						
TGY	**Tagaytay City**	**1.70**	**184** ⇑	*e*P	**Pb**	**13 00 47.6**	**-1.0**
TGY				*i* S	**Sg**	**13 01 13.6**	**+1.1**
LQP	**Lukban**	**1.75**	**165** ⇑	*e*P	**Pb**	**13 00 48.2**	**-1.4**
LQP				*e*S	**Sg**	**13 01 13.9**	**-0.1**
SZP	**Santa**	**1.83**	**342**		**Pn**	**13 00 48.9**	**+0.4**
CVP	**Callao Caves**	**2.02**	**21** ⇓	*e*P	**Pn**	**13 00 51.6**	**+0.5**
CVP				*i* S	**Sb**	**13 01 17.4**	**-1.6**
APYP	**Conner**	**2.05**	**5**	*e*P	**Pb**	**13 00 53.4**	**-1.1**
APYP				*e*S	**Sb**	**13 01 19.6**	**-0.2**
SIPP	**Brgy, Tapao**	**2.18**	**345** ⇑	*e*P	**Pb**	**13 00 56.6**	**-0.2**
SIPP				*e*S	Sg	13 01 43.8	+16
JCNP	**Jose Panganiba**	**2.19**	**133**	*e*P	**Pb**	**13 00 55.2**	**-1.7**
JCNP				*e*S	**Sb**	**13 01 23.7**	**0.0**
LUBP	**Lubang**	**2.21**	**201**	*e*P	**Pn**	**13 00 53.1**	**-0.5**
LUBP				*e*S	**Sb**	**13 01 24.7**	**+0.3**
PGP	**Puerto Galera**	**2.29**	**183** ⇑	*e*P	**Pn**	**13 00 55.9**	**+1.0**
PGP				*i* S	**Sg**	**13 01 28.7**	**-2.8**
GQP	**Guinayangan**	**2.32**	**145** ⇑	*e*P	**Pb**	**13 00 57.0**	**-2.2**
GQP				*i* S	**Sb**	**13 01 28.0**	**+0.5**
SGCP	**Mt. Cagua**	**2.60**	**21**	*e*P	**Pn**	**13 01 00.6**	**+1.6**
SGCP				*e*S	**Sn**	**13 01 32.3**	**+2.0**
SCSP	**San Jose Seism**	**3.20**	**132**	*e*P	**Pb**	**13 01 13.2**	**-1.0**
SJMP	**San Jose**	**3.33**	**179**	*e*P	**Pn**	**13 01 11.3**	**+2.3**
TWG	**Pinlang**	**6.98**	**0**		**Pn**	**13 01 58.9**	**-0.3**
TPUB	**Ta-pu**	**7.46**	**357**		**Pn**	**13 02 06.1**	**+0.1**
YULB	**Yu-li**	**7.55**	**2**		**Pn**	**13 02 06.2**	**-1.0**
SSLB	**Suanglung**	**7.94**	**359**		**Pn**	**13 02 12.0**	**-0.5**
YHNB	**Yeheng**	**8.82**	**2**	Pn	**Pn**	**13 02 26.6**	**+2.0**
DAV	**Davao City (W)**	**9.75**	**152**	LR	LR	13 07 07.7	
	comp=Z,176nm,20.4s,baz=342,slow=42						
JOW	**Kunigami**	**12.86**	**30**	LR	LR	13 07 38.2	
	comp=Z,57nm,21.3s,baz=196,slow=34						
JOW	**Kunigami**	**12.86**	**30**	Pn	**Pn**	**13 03 21.9**	**+2.0**
GTOI	**Gorontalo**	**15.20**	**173**	P	**P**	**13 03 54.6**	**-2.1**
	13nm,1.1s						
MRSI	**Marisa**	**15.26**	**177**	P	**P**	**13 03 57.7**	**+0.3**
KMSI	**Cibinong**	**15.41**	**169**	P	**P**	**13 03 58.2**	**-0.9**
	56nm,0.5s						
TNTI	**Ternate**	**16.18**	**157**	P	**P**	**13 04 07.8**	**+0.1**
	13nm,1.1s						
NJ2	**Nanjing**	**16.30**	**353**	*e*P	**P**	**13 04 07.6**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
APSI	**Ampana**	**16.62**	**178**	P	**P**	**13 04 14.3**	**+1.8**
	9.9nm,0.8s						
LUWI	**Luwuk**	**16.83**	**174**	P	**P**	**13 04 17.0**	**+2.2**
	26nm,1.0s						
BKB	**Balikpapan**	**17.45**	**194**	P	**P**	**13 04 23.3**	**+1.6**
	69nm,1.4s						
STKI	**Sintang**	**18.28**	**212**	P	**P**	**13 04 35.3**	**+4.4**
SANI	**Sanana**	**18.40**	**164**	P	**Pn**	**13 04 33.8**	**+1.5**
	13nm,1.1s						
TTSI	**Tana Toraja**	**18.77**	**184**	P	**Pn**	**13 04 39.5**	**+2.7**
SWI	**Sorong**	**19.39**	**148**	P	**Pn**	**13 04 44.6**	**+0.4**
	20nm,0.7s						
JNU	**Nakatsue**	**19.39**	**26**	LR	LR	13 12 36.6	
	comp=Z,169nm,18.8s,baz=226,slow=38						
SIJI	**Sorong**	**19.40**	**148**	LR	LR	13 11 14.7	
	comp=Z,19nm,21.9s,baz=342,slow=34						
SPSI	**Sidrap Palu**	**19.69**	**184**	P	**Pn**	**13 04 48.7**	**+0.9**
	8.8nm,0.8s						
NLAI	**Namlea**	**19.85**	**162**	P	**Pn**	**13 04 50.0**	**+0.3**
	1um26nm,0.7s						
BNSI	**Bone**	**20.10**	**183**	P	Pn	13 04 53.3	+0.6
	25nm,1.0s						
BBKI	**Banjar Baru**	**20.11**	**198**	P	Pn	13 04 52.2	-0.6
	45nm,0.7s						
TIA	**Tai'an**	**20.62**	**351**	P	Pn	13 04 58.8	+0.1
TIA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KAPI	**Kappang**	**20.73**	**184**	P	**P**	**13 04 55.0**	**-2.7**
	9.6nm,0.4s,baz=22,slow=4.9,SNR=5.6						
KAPI				LR	LR	13 13 29.2	
	comp=Z,81nm,18.4s,baz=325,slow=38						
KAPI	**Kappang**	**20.73**	**184**	P	**P**	**13 04 55.5**	**-2.2**
KAPI				IAmb	IAmb	13 05 04.7	
	comp=Z,12nm,0.8s						
XAN	**Xi'an**	**21.20**	**331**	P	**P**	**13 05 04.0**	**+1.4**
XAN				sP	sP	13 05 15.6	+6.2
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
XAN				LR	LR		
	comp=Z,160nm,18.4s						
XAN				LR	LR		
	comp=Z,170nm,13.0s						
XAN				LR	LR		
	comp=Z,250nm,15.2s						
CMAR	**Chiang Mai Arr**	**21.30**	**280**	P	**P**	**13 05 05.9**	**+2.0**
	comp=Z,2.2nm,0.3s,baz=84,slow=9.4,SNR=9.9						
BNDI	**Bandanaira**	**22.02**	**156**	P	**P**	**13 05 13.5**	**+2.0**
	comp=Z,66nm,1.3s						
KSAR	**Wonju Array Be**	**22.38**	**14**	P	**P**	**13 05 14.5**	**-0.7**
KSRS	**Korea Array**	**22.40**	**14**	P	**P**	**13 05 14.6**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=197,slow=11,SNR=5.1						
KSRS				LR	LR	13 13 59.2	
	comp=Z,93nm,20.8s,baz=194,slow=37						
JCJ	**Chichijima**	**22.61**	**57**	LR	LR	13 13 09.1	
	comp=Z,50nm,21.4s,baz=114,slow=34						
KMMI	**Kalianget**	**23.77**	**198**	P	**P**	**13 05 31.4**	**+1.7**
	comp=Z,22nm,1.0s						
JHJ	**Hachijo jima 2**	**24.17**	**41**	LR	LR	13 13 52.5	
	comp=Z,37nm,18.6s,baz=236,slow=34						
MMRI	**Maumere**	**24.31**	**177**	P	**P**	**13 05 37.0**	**+2.3**
	comp=Z,20nm,1.0s						
LZH	**Lanzhou**	**25.37**	**326**	*e*P	**P**	**13 05 45.9**	**+1.6**
LZH				sP	sP	13 05 58.3	+7.0
LZH				pmax	pmax		
	comp=Z,17nm,0.9s						
LZH				pmax	pmax		
	comp=Z,110nm,4.1s						
LZH				LR	LR		
	comp=Z,220nm,13.6s						
LZH				LR	LR		
	comp=Z,220nm,15.7s						
LZH				LR	LR		
	comp=Z,280nm,14.6s						
BATI	**Baumata**	**25.98**	**174**	LR	LR	13 18 28.2	
	comp=Z,95nm,19.4s,baz=168,slow=42						
HHC	**Hu-ho-hao-te**	**26.28**	**344**	*e*P	**P**	**13 05 54.2**	**+1.7**
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,6.3s						
USRK	**Ussuriysk Ar.**	**29.78**	**16**	LR	LR	13 18 50.4	
	comp=Z,59nm,19.1s,baz=191,slow=37						
GTA	**Gaotai**	**29.97**	**326**	*e*P	**P**	**13 06 21.2**	**-4.3**
GTA				pP	pP	13 06 26.4	-4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**34.16**	**342**	P	**P**	**13 07 02.7**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=160,slow=10,SNR=5.0						
SONM				LR	LR	13 20 20.9	
	comp=Z,65nm,20.0s,baz=178,slow=35						
KLR	**Kul'dur**	**34.46**	**12**	P	**P**	**13 07 03.9**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=225,slow=5.8,SNR=7.6						
WB0	**Warramunga Arr**	**37.70**	**159**	P	**P**	**13 07 31.9**	**-0.8**
WB0				IAmb	IAmb	13 07 33.0	
	comp=Z,24nm,0.9s						
WRAB	**Tennant Creek**	**37.84**	**159**	P	**P**	**13 07 33.0**	**-0.9**
WRA	**Warramunga Arr**	**37.85**	**159**	P	**P**	**13 07 32.9**	**-1.0**
	comp=Z,21nm,0.8s,baz=338,slow=9.4,SNR=135						
WRA	**Warramunga Arr**	**37.85**	**159**	P	**P**	**13 07 32.2**	**-1.7**
WB2	**Warramunga Arr**	**37.85**	**159**	P	**P**	**13 07 33.1**	**-0.8**
WR0	**Warramunga Arr**	**37.93**	**159**	P	**P**	**13 07 33.8**	**-0.8**
WR0				IAmb	IAmb	13 07 35.1	
	comp=Z,24nm,1.0s						
WMQ	**Urumqi**	**39.76**	**322**	*e*P	**P**	**13 07 49.4**	**-0.4**
AS31	**Alice Springs**	**41.19**	**162**	P	**P**	**13 08 01.5**	**-0.3**
AS31				IAmb	IAmb	13 08 08.4	
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**41.19**	**162**	P	**P**	**13 08 01.2**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=342,slow=7.2,SNR=70						
ASAR	**Alice Springs**	**41.19**	**162**	P	**P**	**13 08 00.3**	**-1.5**
H11S3	**WAKE ISLAND Hy**	**43.59**	**80**	T	T	13 54 37.8	
	baz=274,slow=74,SNR=81						
H11S1	**WAKE ISLAND Hy**	**43.61**	**80**	T	T	13 54 38.6	
	baz=274,slow=74,SNR=15						
H11S2	**WAKE ISLAND Hy**	**43.61**	**80**	T	T	13 54 39.2	
	baz=274,slow=74,SNR=21						
MK31	**Makanchi Array**	**44.57**	**322**	P	**P**	**13 08 30.1**	**+1.1**
MKAR	**Makanchi Array**	**44.57**	**322**	P	**P**	**13 08 29.2**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=113,slow=9.3,SNR=10						
MKAR				PcP	**PcP**	**13 10 12.2**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=107,slow=4.1,SNR=5.3						
MKAR	**Makanchi Array**	**44.57**	**322**	P	**P**	**13 08 29.0**	**+0.1**
YAK	**Yakutsk**	**46.57**	**6**	LR	LR	13 29 09.1	
	comp=Z,19nm,18.0s,baz=262,slow=37						
ZALV	**Zalesovo Beam**	**47.37**	**332**	P	**P**	**13 08 51.2**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=134,slow=8.2,SNR=1.5						
MA2	**Magadan**	**48.81**	**20**	LR	LR	13 29 48.7	
	comp=Z,21nm,19.1s,baz=228,slow=36						
BBOO	**Buckleboo**	**50.43**	**164**	P	**P**	**13 09 13.3**	**-1.3**
STKA	**Stephens Creek**	**51.34**	**158**	P	**P**	**13 09 21.2**	**-0.2**
	comp=Z,4.8nm,0.8s,baz=333,slow=7.5,SNR=10						
STKA	**Stephens Creek**	**51.34**	**158**	P	**P**	**13 09 20.9**	**-0.5**
SEY	**Seymchan**	**51.91**	**18**	P	**P**	**13 09 24.1**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=59,slow=22,SNR=5.3						
TIXI	**Tiksi**	**56.02**	**3**	P	**P**	**13 09 54.9**	**-0.3**
TIXI				IAmb	IAmb	13 09 59.6	
	comp=Z,5.2nm,0.8s						
NRIK	**Noril'sk**	**57.45**	**347**	P	**P**	**13 10 05.3**	**-0.1**
	comp=Z,6.4nm,0.9s,baz=131,slow=6.9,SNR=11						
ABKAR	**Akbulak array**	**59.39**	**318**	P	**P**	**13 10 18.6**	**-0.7**
ABKAR				IAmb	IAmb	13 10 20.6	
	comp=Z,3.3nm,0.8s						
AKTO	**Aktyubinsk**	**60.84**	**319**	P	**P**	**13 10 29.6**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=134,slow=8.7,SNR=8.5						
ARU	**Arti**	**61.83**	**326**	P	**P**	**13 10 36.1**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=51,slow=3.1,SNR=9.6						
BELG	**Belogornoye**	**67.53**	**321**	P	**P**	**13 11 13.2**	**+0.1**
	comp=Z,15nm,0.9s,baz=80,slow=5.2,SNR=6.8						
ILAR	**Eielson Array**	**76.71**	**26**	P	**P**	**13 12 07.7**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=274,slow=2.6,SNR=4.3						
BMAR	**Burnt Mountain**	**77.20**	**23**	P	**P**	**13 12 11.5**	**+0.9**
ARCES	**ARCESS Array B**	**77.25**	**339**	P	**P**	**13 12 11.3**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=72,slow=6.0,SNR=1.3						
ARCES	**ARCESS Array B**	**77.25**	**339**	P	**P**	**13 12 10.1**	**-0.7**
SPITS	**Spitsbergen Ar**	**77.61**	**348**	P	**P**	**13 12 13.7**	**+1.0**
	comp=Z,12nm,0.8s,baz=120,slow=8.5,SNR=4.0						
FINES	**FINESS Array B**	**78.62**	**331**	P	**P**	**13 12 17.9**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=61,slow=5.5,SNR=7.6						
CRVS	**Cervenica-Dubn**	**84.41**	**319**	*e*P	**P**	**13 12 47.5**	**-2.0**
HFS	**Hagfors**	**84.80**	**331**	P	**P**	**13 12 50.8**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=151,slow=3.4,SNR=4.3						
NOA	**NORSAR Array B**	**85.56**	**333**	P	**P**	**13 12 53.7**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=66,slow=4.9,SNR=4.7						
NOA				LR	LR	13 56 27.8	
	comp=Z,44nm,18.1s,baz=350,slow=39						
MODS	**Modra-Piesok**	**87.20**	**320**	*e*P	**P**	**13 13 04.4**	**+1.0**
YKA	**Yellowknife Ar**	**90.71**	**23**	P	**P**	**13 13 19.5**	**0.0**
	comp=Z,1.0nm,0.9s,baz=310,slow=3.9,SNR=13						

*IDC **09** 13:23:59.3±2.4, 28°.17S × 176°.63W, h173 km±30 km, mb3.3/2, mb1 3.6/3, mb1mx3.3/28, mbtmp3.9/3, MS2.9/1, Ms1 2.9/1, ms1mx2.5/12, Error ellipse: s-maj=97.5km s-min=29.7km az=165.0*

ISC 09 13:23:51.2±1.6, 27°.8S±0°.1 × 175°.8W±0°.2, h150 km, n27, σ2°09/17, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.38**	**230**	P	**Pn**	**13 24 31.1**	**+0.2**
	153nm,0.3s,baz=38,slow=19,SNR=4.8						
RAO				S	**Sn**	**13 25 02.6**	**+1.1**
	89nm,0.3s,baz=285,slow=23,SNR=1.9						
MWZ	**Matawai**	**11.94**	**206**	P	P	13 26 55.0	+12
URZ	**Urewera**	**12.04**	**208**	P	**P**	13 26 51.7	+7.3
HLRZ	**Highlands Stat**	**12.36**	**210**	P	**P**	**13 26 45.7**	**-2.4**
MUGZ	**Murupara**	**12.37**	**208**	P	**P**	**13 26 50.5**	**+2.4**
MHGZ	**Mahia Peninsul**	**12.52**	**203**	P	**P**	13 27 00.5	+11
MTHZ	**Maungataniwha**	**12.66**	**207**	P	**P**	**13 26 53.0**	**+1.6**
MRHZ	**Matea Rd**	**12.82**	**208**	P	**P**	**13 26 51.6**	**-1.6**
BKZ	**Black Stump Fm**	**13.07**	**207**	P	**P**	**13 26 53.9**	**-2.1**
MCHZ	**McNeill Hill**	**13.22**	**206**	P	**P**	**13 26 57.4**	**-0.2**
KWHZ	**Kaweka Forest**	**13.32**	**207**	P	**Pn**	**13 26 56.2**	**+1.8**
KAHZ	**Kahuranaki**	**13.46**	**205**	P	**P**	**13 27 00.5**	**+0.3**
BHHZ	**Black Hill Sta**	**13.52**	**208**	P	**Pn**	**13 26 56.1**	**-0.9**
KRHZ	**Kereru**	**13.52**	**207**	P	**Pn**	**13 26 57.9**	**+0.9**
CAW	**Cannon Point**	**15.29**	**207**	P	**Pn**	**13 27 14.1**	**-5.0**
DZM	**Mont Dzumac**	**17.05**	**285**	P	**Pn**	**13 27 41.2**	**+0.4**
	0.5nm,0.3s,baz=103,slow=13,SNR=5.6						
PPT	**Papeete**	**26.20**	**73**	LR	LR	13 39 37.6	
	comp=Z,26nm,18.4s,baz=342,slow=35						
ASAR	**Alice Springs**	**45.24**	**263**	P	**P**	**13 31 53.3**	**-0.5**
	0.5nm,0.6s,baz=94,slow=7.3,SNR=37						
H03S2	**Juan Fernandez**	**80.32**	**123**	T	T	15 06 35.1	
	baz=242,slow=74,SNR=8.5						
H03S1	**Juan Fernandez**	**80.33**	**123**	T	T	15 06 32.7	
	baz=242,slow=74,SNR=9.1						
H03S3	**Juan Fernandez**	**80.33**	**123**	T	T	15 06 32.4	
	baz=242,slow=74,SNR=10.0						
H03N3	**Juan Fernandez**	**80.49**	**123**	T	T	15 06 45.4	
	baz=247,slow=74,SNR=3.6						
H03N2	**Juan Fernandez**	**80.49**	**123**	T	T	15 06 45.6	
	baz=247,slow=74,SNR=3.9						
H03N1	**Juan Fernandez**	**80.51**	**123**	T	T	15 06 45.0	
	baz=247,slow=74,S

NTC				*e*S	**Sn**	13 31 45.9	+0.1	
	baz=325							
ENTT	**Nioudou**	**1.09 310**	*i* P	**Pb**	13 31 31.7	-0.1		
	baz=292							
ENTT			*i* S	**Sn**	13 31 46.0	+0.1		
	baz=292							
NDT	**Datong Townshi**	**1.10 307**	*i* P	**Pb**	13 31 32.5	+0.4		
	baz=304							
NDT			*i* S	**Sn**	13 31 45.5	-0.7		
	baz=304							
NNSB	**Datong**	**1.12 296**	*i* P	**Pb**	13 31 32.4	0.0		
	baz=281							
NNSH	**Datong**	**1.12 296**	*i* P	**Pb**	13 31 32.1	-0.2		
	baz=293							
NNSH			S	**Sb**	13 31 46.8	+0.2		
	baz=293							
NNS	**Nan Shan**	**1.13 296**	P	**Pb**	13 31 32.6	0.0		
	baz=293							
NNS			*e*S	**Sb**	13 31 47.0	+0.1		
	baz=293							
WHF	**Hehuan Shan**	**1.13 281**	*i* P	**Pn**	13 31 32.1	-0.4		
	baz=264							
WHF			*i* S	**Sn**	13 31 47.2	-0.3		
	baz=264							
EHY	**Hungye**	**1.15 248**	*i* P	**Pn**	13 31 31.8	-0.5		
	baz=245							
EHY			S	**Sn**	13 31 46.9	-0.4		
	baz=245							
TWB1	**Santiao Chiao**	**1.15 337**	*i* P	**Pb**	13 31 32.8	-0.2		
	baz=354							
TWB1			S	**Sb**	13 31 47.5	0.0		
	baz=354							
FUSS	**Fushou**	**1.17 285**	*i* P	**Pn**	13 31 33.1	+0.2		
	baz=282							
FUSS			S	**Sn**	13 31 48.2	-0.1		
	baz=282							
TIPB	**Shuangxi**	**1.19 330**	*i* P	**Pb**	13 31 33.8	+0.3		
	baz=329							
TIPB			*i* S	**Sb**	13 31 48.2	-0.3		
	baz=329							
CHGB	**Renai**	**1.20 276**	*i* P	**Pn**	13 31 33.2	-0.1		
	baz=261							
CHGB			*i* S	**Sn**	13 31 47.9	-1.1		
	baz=261							
IRIF	**Iriomote-Funau**	**1.21 71**	P	**Pb**	13 31 34.4	+0.6		
IRIF			S	**Sb**	13 31 50.3	+1.3		
HATJ	**Hateruma jima**	**1.21 84**	P	**Pb**	13 31 34.4	+0.4		
HATJ			S	**Sb**	13 31 50.9	+1.7		
YULB	**Yu-li**	**1.22 244**	*i* P	**Pn**	13 31 32.9	-0.4		
	baz=241							
YULB			*i* S	**Sn**	13 31 48.4	-0.6		
	baz=241							
EYUL	**Yuli**	**1.22 241**	P	**Pn**	13 31 33.1	-0.2		
	baz=238							
EYUL			*e*S	**Sn**	13 31 48.4	-0.7		
	baz=238							
NWLT	**Wulai**	**1.22 313**	*i* P	**Pb**	13 31 34.3	+0.1		
	baz=311							
NWLT			*i* S	**Sb**	13 31 50.1	+0.7		
	baz=311							
TWF1	**Yuli**	**1.24 242**	*i* P	**Pn**	13 31 33.3	-0.2		
	baz=239							
TWF1			*e*S	**Sn**	13 31 49.4	-0.1		
	baz=239							
VWDT	**VWDT**	**1.24 262**	*i* P	**Pn**	13 31 33.4	-0.2		
	baz=259							
VWDT			*i* S	**Sn**	13 31 49.6	0.0		
	baz=259							
YHNB	**Yeheng**	**1.24 306**	*i* P	**Pb**	13 31 34.3	-0.2		
	baz=303							
TDCB	**Techi**	**1.25 285**	P	**Pb**	13 31 34.6	-0.1		
	baz=269							
TDCB			*e*S	**Sn**	13 31 50.0	0.0		
	baz=269							
NSK	**Sanguang**	**1.26 306**	S	**Sb**	13 31 50.8	+0.2		
	baz=289							
NWF	**Wu-fen Shan**	**1.29 331**	P	**Pb**	13 31 34.9	-0.5		
	baz=329							
NWF			*e*S	**Sb**	13 31 52.1	+0.5		
	baz=329							
WFSB	**Wu-fen Shan**	**1.29 331**	P	**Pb**	13 31 34.9	-0.5		
	baz=329							
WFSB			*e*S	**Sb**	13 31 51.9	+0.3		
	baz=329							
FULB	**Fuli**	**1.32 236**	P	**Pn**	13 31 34.1	-0.5		
	baz=220							
FULB			S	**Sn**	13 31 50.5	-1.1		
	baz=220							
TWA	**Mucha**	**1.32 322**	*i* P	**Pb**	13 31 36.5	+0.7		
	baz=320							
TWA			S	**Sb**	13 31 53.9	+1.6		
	baz=320							
NHDH	**Xindian Distri**	**1.34 320**	*i* P	**Pb**	13 31 37.0	+0.9		
	baz=318							
NHDH			*e*S	**Sb**	13 31 53.2	+0.4		
	baz=318							
SSLB	**Suanglung**	**1.41 264**	*e*P	**Pn**	13 31 36.2	+0.3		
	baz=261							
SSLB			*e*S	**Sn**	13 31 51.6	-2.2		
	baz=261							
JKRS	**Kuro-shima**	**1.43 78**	P	**Pb**	13 31 37.7	+0.1		
JKRS			S	**Sb**	13 31 56.5	+1.2		
WHP	**Taichung City**	**1.44 284**	*i* P	**Pb**	13 31 38.5	+0.6		
	baz=270							
WHP			S	**Sb**	13 31 55.6	-0.3		
	baz=270							
EDH	**Donghe**	**1.45 229**	*e*S	**Sn**	13 31 52.6	-2.1		
	baz=216							
SMLT	**Sun Moon Lake**	**1.45 268**	*i* P	**Pn**	13 31 37.3	+0.7		
	baz=265							
SMLT			S	**Sn**	13 31 55.2	+0.3		
	baz=265							
YM01	**YM01**	**1.46 325**	*e*P	**Pn**	13 31 35.9	-0.7		
	baz=324							
YM01			*e*S	**Sb**	13 31 57.2	+0.9		
	baz=324							
YM10	**YM10**	**1.47 325**	*e*P	**Pb**	13 31 37.8	-0.6		
	baz=324							
YM11	**YM11**	**1.47 326**	*e*P	**Pb**	13 31 39.3	+0.9		
	baz=325							
YM11			*e*S	**Sb**	13 31 55.9	-0.9		
	baz=325							
YUS	**Yu-Shan**	**1.47 253**	P	**Pn**	13 31 37.5	+0.2		
	baz=249							
YUS			*e*S	**Sn**	13 31 56.0	0.0		
	baz=249							
YM04	**YM04**	**1.48 325**	*e*P	**Pb**	13 31 37.8	-0.8		
	baz=323							
YM08	**YM08**	**1.48 327**	*e*P	**Pb**	13 31 38.6	0.0		
	baz=325							
TYC	**Yuchr**	**1.49 269**	*e*P	**Pb**	13 31 38.7	+0.1		
	baz=266							
YM03	**YM03**	**1.50 325**	*e*P	**Pb**	13 31 39.7	+0.7		
	baz=324							
LIOB	**Emei**	**1.51 298**	P	**Pb**	13 31 39.1	+0.1		
	baz=295							
WHYT	**Xinyi Township**	**1.51 261**	*e*P	**Pb**	13 31 39.6	+0.6		
	baz=258							
WHYT			*e*S	**Sb**	13 31 59.5	+1.6		
	baz=258							
NSTT	**Nanjuang**	**1.52 297**	*e*P	**Pb**	13 31 41.0	+1.8		
	baz=295							
ANP	**Anpu**	**1.52 325**	*e*P	**Pb**	13 31 39.6	+0.4		
	baz=323							
ELDTW	**Lidau**	**1.54 241**	P	**Pn**	13 31 37.2	-0.6		
	baz=238							
ELDTW			*e*S	**Sn**	13 31 55.4	-1.8		
	baz=238							
LDUT	**Ludao**	**1.57 217**	P	**Pn**	13 31 37.4	-0.7		
	baz=214							
LDUT			*e*S	**Sn**	13 31 55.3	-2.3		
	baz=214							
JIJ	**Ishigaki jima**	**1.57 74**	P	**Pn**	13 31 39.0	+0.8		
JIJ			S	**Sb**	13 31 59.6	0.0		
ALS	**Alishan**	**1.60 255**	*i* P	**Pn**	13 31 39.5	+0.7		
	baz=252							
ALS			S	**Sn**	13 31 59.2	+0.4		
	baz=252							
LONT	**Longtian**	**1.61 231**	P	**Pn**	13 31 38.6	-0.2		
	baz=220							
LONT			S	**Sn**	13 31 58.0	-0.9		
	baz=220							
TWQ1	**Liyutan**	**1.61 285**	P	**Pb**	13 31 41.0	+0.2		
	baz=282							
TWQ1			*e*S	**Sb**	13 32 02.3	+1.6		
	baz=282							
WNT	**Mingjian**	**1.65 268**	P	**Pb**	13 31 41.7	+0.4		
	baz=265							
WNT			*e*S	**Sb**	13 32 02.0	+0.3		
	baz=265							
TCU	**Taichung**	**1.67 277**	P	**Pb**	13 31 42.1	+0.4		
	baz=274							
TCU			*e*S	**Sb**	13 32 03.5	+1.3		
	baz=274							
CHN5	**Tsauling**	**1.69 259**	*e*P	**Pn**	13 31 41.3	+1.4		
	baz=245							
CHN5			*e*S	**Sn**	13 32 02.4	+1.6		
	baz=245							
TWG	**Pinlang**	**1.71 230**	*e*P	**Pn**	13 31 39.9	-0.1		
	baz=219							
TWG			*e*S	**Sn**	13 31 59.9	-1.3		
	baz=219							
STYH	**Taoyuan**	**1.75 244**	P	**Pn**	13 31 41.0	+0.5		
	baz=232							
STYH			*e*S	**Sn**	13 32 02.6	+0.6		
	baz=232							
STYT	**Tauyuan**	**1.76 244**	P	**Pn**	13 31 41.8	+0.9		
	baz=232							
STYT			*e*S	**Sn**	13 32 03.1	+0.6		
	baz=232							
JISG	**Ishigakijimahi**	**1.79 69**	S	**Sb**	13 32 05.2	-0.5		
TPUB	**Ta-pu**	**1.82 250**	P	**Pn**	13 31 43.3	+1.8		
	baz=247							
TPUB			*e*S	**Sb**	13 32 07.5	+0.9		
	baz=247							
CHN4	**Tsaushan**	**1.83 252**	*e*P	**Pb**	13 31 44.0	-0.4		
	baz=249							
CHN4			*e*S	**Sb**	13 32 07.0	+0.1		
	baz=249							
WTP	**Ta-pu**	**1.85 248**	*e*P	**Pb**	13 31 44.0	-0.8		
	baz=235							
WTP			*e*S	**Sb**	13 32 08.5	+0.9		
	baz=235							
SLGT	**Liugui**	**1.93 241**	P	**Pn**	13 31 44.5	+1.4		
	baz=230							
SLGT			*e*S	**Sn**	13 32 08.8	+2.1		
	baz=230							
ECL	**Taimali**	**1.94 227**	P	**Pn**	13 31 42.5	-0.7		
	baz=224							
ECL			*e*S	**Sn**	13 32 05.7	-1.2		
	baz=224							
SGST	**Jiashian**	**1.94 244**	*e*P	**Pn**	13 31 45.2	+1.9		
	baz=232							
SGST			*e*S	**Sb**	13 32 10.1	-0.1		
	baz=232							
CHN1	**Nanshi**	**1.94 248**	*e*P	**Pb**	13 31 45.5	-0.9		
	baz=236							
CHN1			*e*S	**Sb**	13 32 10.8	+0.5		
	baz=236							
TWK	**Hsinying**	**1.95 250**	P	**Pn**	13 31 45.2	+1.8		
	baz=247							
TWK			*e*S	**Sb**	13 32 09.8	-0.6		
	baz=247							
SSD	**Sandimen**	**2.08 235**	*e*P	**Pn**	13 31 46.1	+1.0		
	baz=227							
SSD			*e*S	**Sn**	13 32 12.2	+2.0		
	baz=227							
TSMG	**Majia**	**2.09 234**	*e*P	**Pb**	13 31 47.9	-1.0		
	baz=226							
TSMG			*e*S	**Sn**	13 32 11.5	+0.9		
	baz=226							
SCST	**Cishan**	**2.11 240**	P	**Pb**	13 31 48.5	-0.7		
	baz=238							
SCST			*e*S	**Sb**	13 32 15.9	+1.0		
	baz=238							
JTJ	**Tarama**	**2.14 71**	*e*S	**Sb**	13 32 14.4	-1.5		
MASBT	**Mashibuluo**	**2.15 232**	*e*P	**Pn**	13 31 47.0	+0.9		
	baz=224							
MASBT			*e*S	**Sb**	13 32 16.7	+0.4		
	baz=224							
EAST	**Anshuo**	**2.16 224**	*e*P	**Pn**	13 31 46.1	-0.2		
	baz=222							
EAST			*e*S	**Sb**	13 32 15.9	-0.6		
	baz=222							
SLIU	**Shizi**	**2.31 222**	P	**Pn**	13 31 48.5	+0.1		
	baz=229							
SLIU			*e*S	**Sn**	13 32 15.2	-1.0		
	baz=229							
SCZT	**Fangliau**	**2.32 228**	*e*P	**Pn**	13 31 51.0	+2.6		
	baz=218							
SCZT			*e*S	**Sb**	13 32 21.0	-0.1		
	baz=218							
TWKBT	**Hengchun**	**2.52 218**	*e*P	**Pn**	13 31 52.2	+1.1		
	baz=216							
PHUB	**P'eng-hu**	**2.70 262**	P	**Pn**	13 31 55.1	+1.4		
	baz=259							
PHUB			*e*S	**Sn**	13 32 26.1	+0.5		
	baz=259							
VWUC	**VWUC**	**2.96 291**	*e*P	**Pn**	13 31 57.6	+0.4		
	baz=288							
VWUC			*e*S	**Sn**	13 32 30.4	-1.5		
	baz=288							
PTMZ	**Houxiangcun**	**3.25 290**	*e*P	**Pn**	13 32 01.4	+0.2		
	baz=287							
PTMZ			*e*S	**Sn**	13 32 37.5	-1.8		
	baz=287							

*IDC **09** 13:31:25.1±1.9, 13°.23N×89°.36W, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.6/34, mbtmp3.5/5, Error ellipse: s-maj=96.3km s-min=21.0km az=55.0*
*SNET **09** 13:31:28.3±0.9, 13°.11N×91°.01W, h30km, ML3.4*
ISC 09 13:31:32.7±1.6, 13°.0N±0°.2×90°.73W±0°.08, h35km, n14, σ2s19/16, mb3.4/4, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**1.36**	**52**	*e*P	**Pn**	**13 31 54.0**	**-1.4**
RTR	**El Retiro**	**1.38**	**49**	⇑*i*P	**Pn**	**13 31 54.4**	**-1.3**
RTR				*e*S	**Sn**	**13 32 14.1**	**+1.4**
SNJE	**San Jose**	**1.39**	**51**	*e*P	**Pn**	**13 31 54.4**	**-1.4**
SNET	**Serv Nac Est T**	**1.61**	**65**	*e*P	**Pn**	**13 31 58.1**	**-0.6**
SNET				IAML		13 31 59.1	
	comp=Z,383nm,0.2s						
LFRS	**El Faro**	**1.74**	**69**	*e*P	**Pn**	**13 31 59.3**	**-1.2**
LFRS				*e*S	**Sn**	**13 32 25.0**	**+3.6**
LBRS	**Las Brisas**	**1.80**	**66**	*e*P	**Pn**	**13 32 00.8**	**-0.5**
MTO3	**Montecristo**	**1.93**	**43**	⇑*i*P	**Pn**	**13 32 02.2**	**-0.9**
APG	**El Apazote**	**2.01**	**7**	Pg	**Pn**	**13 32 04.5**	**+0.2**
	comp=Z,18nm,0.3s,baz=135,slow=13,SNR=60						
APG				Lg	Lg	13 32 31.3	
	comp=Z,14nm,0.3s,baz=121,slow=22,SNR=13						
TXAR	**Lajitas Array**	**20.22**	**326**	P	**P**	**13 36 06.5**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=147,slow=9.5,SNR=10						
NVAR	**Mina Array Bea**	**35.23**	**321**	P	**P**	**13 38 27.5**	**+3.4**
	comp=Z,0.5nm,0.8s,baz=130,slow=9.6,SNR=2.9						
ULM	**Lac du Bonnet**	**37.39**	**355**	P	**P**	**13 38 38.4**	**-3.6**
	comp=Z,1.0nm,0.6s,baz=160,slow=5.8,SNR=4.5						
YKA	**Yellowknife Ar**	**52.29**	**346**	P	**P**	**13 40 38.6**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=146,slow=7.5,SNR=3.7						
ILAR	**Eielson Array**	**64.25**	**337**	P	**P**	**13 42 02.5**	**-1.5**
	comp=Z,0.2nm,0.7s,baz=112,slow=5.6,SNR=5.2						
CMAR	**Chiang Mai Arr**	**147.32**	**343**	PKPbc	**PKPdf**	**13 51 13.7**	**+2.5**
	comp=Z,0.6nm,0.4s,baz=15,slow=3.7,SNR=4.7						

IDC 09 13:33:25.8±5.1, 2°.09S×138°.99E, h0km, mb3.1/2, mb1 3.5/3, mb1mx3.3/28, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=208.5km s-min=31.1km az=86.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.31**	**194**	P	P	13 37 41.8	+0.1
	0.1nm,0.3s,baz=17,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**22.00**	**193**	P	P	13 38 21.9	0.0
	0.4nm,0.5s,baz=14,slow=11,SNR=13						
MKAR	**Makanchi Array**	**69.47**	**322**	P	P	13 44 36.0	-0.2
	0.1nm,0.4s,baz=135,slow=7.4,SNR=1.7						

DNK 09 13:40:52.4±0.7, 58°.57N×11°.54E, h0km, ML1.1 (UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANU	**Vaenersborg**	**0.29**	**105**	P	Pg	13 40 57.6	-0.3
VANU				S	Sg	13 41 01.2	-0.4
STRU	**Stroemstad**	**0.51**	**338**	P	Pg	13 41 01.7	-0.4
STRU				S	Sg	13 41 08.3	-0.4
TJOU	**Tjoern**	**0.54**	**175**	P	Pg	13 41 02.3	-0.4
NASU	**Vaermlandsnaes**	**0.93**	**66**	P	Pg	13 41 09.3	-0.9
BORU	**Boraas**	**1.14**	**145**	P	Pg	13 41 13.2	-1.0
ONAU	**Onsala**	**1.19**	**170**	P	Pg	13 41 14.2	-1.0
ASKU	**Askersund**	**1.75**	**78**	P	Pn	13 41 24.5	+0.6

DNK 09 13:40:53.7±0.1, 58°.57N×11°.54E, h0km, ML1.2 (UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANU	**Vaenersborg**	**0.29**	**104**	P	Pg	13 40 58.9	-0.4
VANU				S	Sg	13 41 03.0	0.0
STRU	**Stroemstad**	**0.51**	**339**	P	Pg	13 41 03.0	-0.4
TJOU	**Tjoern**	**0.54**	**175**	P	Pg	13 41 03.6	-0.3
NASU	**Vaermlandsnaes**	**0.94**	**66**	P	Pg	13 41 10.7	-0.9
BORU	**Boraas**	**1.14**	**144**	P	Pg	13 41 14.5	-1.0
ONAU	**Onsala**	**1.19**	**170**	P	Pg	13 41 15.3	-1.2

*IDC **09** 13:42:07.5±1.3, 27°.85S×178°.47W, h251km±10km, mb3.4/6, mb1 3.5/7, mb1mx3.3/32, mbtmp4.0/7, Error ellipse: s-maj=27.4km s-min=22.3km az=37.0*
ISC 09 13:42:07.1±1.1, 27°.8S±0°.1×178°.4W±0°.2, h250km, n11, σ0s84/15, mb3.5/6, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.55**	**163**	P	**Pn**	**13 42 46.7**	**+1.0**
	212nm,0.3s,baz=78,slow=10,SNR=20						
RAO				S	**S**	**13 43 15.6**	**-0.7**
	178nm,0.3s,baz=89,slow=23,SNR=2.8						
URZ	**Urewera**	**11.11**	**199**	P	**Pn**	**13 44 40.1**	**+0.6**
	0.7nm,0.3s,baz=123,slow=24,SNR=5.8						
URZ				S	S	13 46 28.4	-15
	0.5nm,0.3s,baz=301,slow=24,SNR=1.4						
STKA	**Stephens Creek**	**34.79**	**253**	P	**P**	**13 48 35.1**	**+0.8**
	4.2nm,1.2s,baz=80,slow=6.1,SNR=2.5						
ASAR	**Alice Springs**	**42.93**	**264**	P	**P**	**13 49 41.5**	**-0.3**
	0.9nm,0.5s,baz=97,slow=6.5,SNR=32						
ASAR				PcP	**PP**	**13 51 27.2**	**+0.1**
	0.2nm,0.4s,baz=114,slow=3.4,SNR=2.0						
ASAR				ScP	**ScP**	**13 54 55.4**	**+0.8**
	0.3nm,0.8s,baz=93,slow=4.6,SNR=2.0						
WRA	**Warramunga Arr**	**43.68**	**270**	P	**P**	**13 49 47.6**	**-0.2**
	1.0nm,0.5s,baz=109,slow=7.2,SNR=42						
WRA				PcP	**PcP**	**13 51 30.1**	**-0.1**
	0.2nm,0.6s,baz=87,slow=4.2,SNR=1.8						
VNDA	**Vanda**	**50.67**	**185**	P	**P**	**13 50 40.1**	**-0.6**
	0.4nm,0.5s,baz=2.0,slow=8.1,SNR=5.2						
FITZ	**Fitzroy Crossi**	**52.03**	**268**	P	**P**	**13 50 50.2**	**-1.4**
	1.8nm,0.7s,baz=90,slow=7.1,SNR=5.7						
MJAR	**Matsushiro Arr**	**75.87**	**325**	P	**P**	**13 53 27.2**	**+1.1**
	0.8nm,0.4s,baz=160,slow=4.7,SNR=2.7						
HFS	**Hagfors**	**146.60**	**349**	PKPbc	**PKPbc**	**14 01 18.0**	**-0.6**
	2.2nm,0.8s,baz=4.8,slow=1.7,SNR=2.1						
AKASG	**Malin Array Be**	**148.96**	**325**	PKPbc	**PKPbc**	**14 01 24.9**	**-0.2**
	0.4nm,0.3s,baz=52,slow=2.5,SNR=1.6						
TORD	**Torodi Ar. Bea**	**165.45**	**180**	PKPab	**PKPab**	**14 02 40.5**	**-1.2**
	0.4nm,0.5s,baz=171,slow=1.9,SNR=2.9						

*IDC **09** 14:10:43.0±2.4, 23°.93S×66°.74W, h196km±36km, mb3.0/1, mb1 3.1/5, mb1mx2.9/26, mbtmp3.6/5, Error ellipse: s-maj=43.4km s-min=31.5km az=125.0*
*GUC **09** 14:10:44.3±0.5, 24°.00S×67°.37W, h230km±10km, ML3.9*
ISC 09 14:10:42.9±1.1, 23°.96S±0°.05×67°.0W±0°.1, h225km±17km, n20, σ1s19/37, 12C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.18**	**308**	P	**Pn**	**14 11 26.4**	**+0.8**
	11nm,0.3s,baz=130,slow=7.0,SNR=111						
LVC				S	**S**	**14 11 59.0**	**+0.2**
	14nm,0.3s,baz=237,slow=21,SNR=30						
LVC	**Limon Verde**	**2.18**	**308**	*e*P	**Pn**	**14 11 26.1**	**+0.4**
LVC				*i* S	**S**	**14 11 58.8**	**0.0**
PB15	**IPOC Station P**	**2.35**	**288**	⇑*i*P	**Pn**	**14 11 28.1**	**+0.9**
PB15				*i* S	**S**	**14 12 00.9**	**-0.7**
GO02	**Mina Guanaco**	**2.61**	**242**	⇑*i*P	**Pn**	**14 11 30.2**	**+0.3**
GO02				*i* S	**S**	**14 12 06.0**	**-0.6**
GO02				IAML		14 12 07.0	
	comp=E,364nm,0.1s						
PB06	**IPOC Station P**	**2.64**	**298**	⇑*i*P	**Pn**	**14 11 31.1**	**+1.0**
PB06				*i* S	**S**	**14 12 06.5**	**-0.5**
PB06				IAML		14 12 07.8	
	comp=N,212nm,0.4s						
PB09	**IPOC Station P**	**2.96**	**316**	⇓*i*P	**Pn**	**14 11 35.2**	**+1.5**
PB09				*i* S	**S**	**14 12 14.2**	**+0.8**
PB05	**IPOC Station P**	**3.11**	**290**	⇑*i*P	**Pn**	**14 11 36.2**	**+0.9**
PB05				*i* S	**S**	**14 12 15.1**	**-1.2**
PB14	**IPOC Station P**	**3.14**	**257**	⇑*i*P	**Pn**	**14 11 36.2**	**+0.4**
PB14				*i* S	**S**	**14 12 15.7**	**-1.5**
PB03	**IPOC Station P**	**3.14**	**307**	⇑*i*P	**Pn**	**14 11 36.5**	**+0.7**
PB03				*i* S	**S**	**14 12 16.8**	**-0.2**
PB10	**IPOC Station P**	**3.25**	**277**	⇑*i*P	**Pn**	**14 11 37.7**	**+0.9**
PB10				*i* S	**S**	**14 12 17.2**	**-1.7**
PB04	**IPOC Station P**	**3.29**	**299**	⇑*i*P	**Pn**	**14 11 38.7**	**+1.3**
PB04				*i* S	**S**	**14 12 19.0**	**-1.1**
AC02	**Maricunga**	**3.43**	**213**	⇑*i*P	**Pn**	**14 11 39.1**	**-0.2**
AC02				*i* S	**S**	**14 12 25.3**	**+1.8**
PB07	**IPOC Station P**	**3.44**	**310**	⇑*i*P	**Pn**	**14 11 39.9**	**+0.6**
PB07				*i* S	**S**	**14 12 21.9**	**-1.4**
PB01	**IPOC Station P**	**3.68**	**322**	⇑*i*P	**Pn**	**14 11 42.4**	**+0.4**
PB01				*i* S	**S**	**14 12 27.1**	**-1.3**
PB08	**IPOC Station P**	**4.28**	**332**	⇑*i*P	**Pn**	**14 11 51.2**	**+1.7**
PB08				*i* S	**S**	**14 12 42.2**	**+0.3**
PB11	**IPOC Station P**	**4.84**	**329**	*e*P	**Pn**	**14 11 55.9**	**-0.2**
PB11				*i* S	**S**	**14 12 51.9**	**-2.1**
LPAZ	**La Paz**	**7.71**	**352**	P	**Pn**	**14 12 34.2**	**+1.2**
	comp=N,0.3nm,0.3s,baz=172,slow=9.2,SNR=4.4						
LPAZ				S	**S**	**14 14 01.1**	**+0.1**
	comp=N,0.0nm,0.3s,baz=201,slow=12,SNR=1.4						
SIV	**San Ignacio**	**9.71**	**36**	P	**Pn**	**14 12 55.0**	**-3.2**
	comp=N,0.3nm,0.3s,baz=216,slow=14,SNR=6.1						
BDFB	**Brasilia**	**19.71**	**69**	P	**P**	**14 14 55.5**	**-0.3**
	comp=N,0.2nm,0.3s,baz=240,slow=17,SNR=3.7						
TORD	**Torodi Ar. Bea**	**76.59**	**69**	P	**P**	**14 22 10.4**	**+1.3**
	comp=N,0.2nm,0.5s,baz=232,slow=5.4,SNR=1.7						

*BJI **09** 14:12:48.7±0.0, 37°.27N×71°.95E, h176km, mB4.7/24, mb4.5/41*
*MOS **09** 14:12:48.3±0.9, 37°.22N×72°.01E, h174km, mb4.5/56, Error ellipse: s-maj=4.6km s-min=3.3km az=97.3*
*NEIC **09** 14:12:49.8±2.4, 37°.20N±0°.06×71°.83E±0°.08, h178km±6km, mb4.6/56, Error ellipse: s-maj=10.0km s-min=8.6km az=61.0*
*IDC **09** 14:12:50.2±0.5, 37°.09N×71°.97E, h184km±3km, mb4.0/32, mb1 4.1/36, mb1mx4.0/45, mbtmp4.6/36, MS3.0/2, Ms1 3.0/2, ms1mx2.5/54, Error ellipse: s-maj=8.6km s-min=7.4km az=36.0*
*NNC **09** 14:12:50.7±3.1, 37°.47N×71°.62E, h181km±40km, m

SARP Sargodha 5.25 174 P Pn 14 14 05.8 -0.2
UCH Uchtor 5.42 20 P Pn 14 14 09.4 +0.8
SNR=377
CHM Chimkent 5.47 341 eP Pn 14 14 08.1 -0.8
baz=341
CHM i S Sn 14 15 11.2 -0.4
baz=341
CHM Chimkent 5.47 341 ePN Pn 14 14 08.0 -0.8
THN Thein Dam 5.62 146 eP Pn 14 14 12.0 +1.2
THN eS Sn 14 15 14.5 -0.6
EKS2 Erkin-Say 5.67 13 P Pn 14 14 12.1 +0.7
SNR=83
DZA Taraz 5.75 355 eP Pn 14 14 11.5 -1.0
baz=355
DZA Taraz 5.75 355 ePN Pn 14 14 11.4 -1.0
AAK Ala-Archa 5.80 19 P Pn 14 14 14.3 +1.1
91nm,0.3s,baz=196,slow=6.8,SNR=622
AAK S Sn 14 15 16.8 -2.8
48nm,0.3s,baz=14,slow=23,SNR=22
AAK LR LR 14 16 49.6
comp=Z,113nm,21.1s,baz=282,slow=41
AAK Ala-Archa 5.80 19 P Pn 14 14 14.2 +1.1
SNR=181
AAK Ala-Archa 5.80 19 P Pn 14 14 14.4 +1.1
157nm,0.5s
AAK S Sn 14 15 16.6 -3.0
401nm,0.5s
AAK Ala-Archa 5.80 19 i PN Pn 14 14 14.1 +0.9
AAK pmax pmax
comp=Z,396nm,0.8s
KBK Karagaybulak 5.94 22 P Pn 14 14 16.2 +1.1
SNR=109
ULHL Ulahol 6.04 31 P Pn 14 14 17.0 +0.5
SNR=71
KK31 Karatay Array 6.05 350 ⇓P Pn 14 14 16.1 -0.2
comp=Z,30nm,0.3s,baz=172,slow=12,SNR=642
KK31 ⇓S Sn 14 15 20.6 -4.5
comp=Z,733nm,0.3s,baz=176,slow=23,SNR=62
KK31 Karatay Array 6.05 350 PN Pn 14 14 16.1 -0.2
KK31 Karatay Array 6.05 350 Pn Pn 14 14 16.3 0.0
KKAR Karatay Array 6.05 350 PN Pn 14 14 16.3 0.0
KKAR Karatay Array 6.05 350 Pn Pn 14 14 16.3 0.0
KKAR Karatay Array 6.05 350 Pn Pn 14 14 15.5 -0.8
BRLS Borolday 6.09 345 eP Pn 14 14 13.3 -3.7
baz=344
BRLS Borolday 6.09 345 ePN Pn 14 14 13.3 -3.7
CHMS Chumysh 6.20 19 P Pn 14 14 19.1 +0.6
SNR=54
TKM2 Tokmak 2 6.38 25 P Pn 14 14 21.8 +0.8
SNR=94
TKM2 Tokmak 2 6.38 25 ⇓P Pn 14 14 21.4 +0.4
comp=Z,41nm,0.5s
TKM2 ⇓S Sn 14 15 27.8 -5.6
comp=Z,127nm,0.8s
TKM2 Tokmak 2 6.38 25 i PN Pn 14 14 21.4 +0.4
TKM2 pmax pmax
comp=Z,41nm,0.4s
USP Ospenovka 6.39 17 P Pn 14 14 21.2 +0.3
SNR=24
SGDS Sogindy 6.60 17 eP Pn 14 14 23.1 -0.6
comp=Z,111nm,0.5s,baz=17
SGDS Sogindy 6.60 17 ePN Pn 14 14 23.1 -0.6
SGDS pmax pmax
comp=Z,11nm,0.5s
BHK Bhakra 6.80 146 ex Pn 14 14 21.8 -4.5
BHK eS Sn 14 15 36.4 -6.7
TNSS Tian-Shan 6.99 31 eP Pn 14 14 28.9 -0.3
baz=31
TNSS Tian-Shan 6.99 31 ePN Pn 14 14 28.8 -0.3
AAA Alma-Ata 7.12 30 eP Pn 14 14 31.0 +0.4
baz=30
AAA Alma-Ata 7.12 30 ePN Pn 14 14 30.9 +0.4
MDOK Medeo 7.14 31 eP Pn 14 14 30.7 -0.2
baz=31
MDOK Medeo 7.14 31 ⇓P Pn 14 14 31.4 +0.6
comp=Z,89nm,0.6s
MDOK Medeo 7.14 31 ePN Pn 14 14 30.6 -0.2
SMLA Simla 7.38 143 eP Pn 14 14 33.9 -0.2
SMLA eS Sn 14 15 48.4 -8.6
SMLA IAML 14 15 53.1
comp=N,536nm,0.4s
SMLA IAML 14 15 53.7
comp=E,627nm,0.4s
KUU Kurty 7.50 25 eP Pn 14 14 34.2 -1.3
comp=E,17nm,0.7s,baz=25
KUU Kurty 7.50 25 ePN Pn 14 14 34.1 -1.3
KUU pmax pmax
comp=Z,17nm,0.7s
SATY Saty 7.67 38 eP Pn 14 14 36.7 -1.2
comp=Z,20nm,0.7s,baz=38
SATY Saty 7.67 38 ePN Pn 14 14 36.7 -1.2
SATY pmax pmax
comp=Z,20nm,0.7s
BTLS Baital 8.03 10 eP Pn 14 14 41.3 -1.1
baz=11
BTLS Baital 8.03 10 ePN Pn 14 14 41.3 -1.1
UZB Uzynbulak 8.04 40 eP Pn 14 14 41.8 -1.1
comp=Z,18nm,0.7s,baz=40
UZB Uzynbulak 8.04 40 ePN Pn 14 14 41.7 -1.1
UZB pmax pmax
comp=Z,18nm,0.7s
KPKS Kokpek 8.11 37 eP Pn 14 14 42.7 -0.9
baz=37
KPKS Kokpek 8.11 37 ePN Pn 14 14 42.7 -0.9
SHLS Shalkode 8.28 41 eP Pn 14 14 48.0 +2.1
comp=Z,14nm,0.6s,baz=43
SHLS Shalkode 8.28 41 ePN Pn 14 14 48.0 +2.1
SHLS pmax pmax
comp=Z,14nm,0.6s
HRA Herat 8.39 254 Pn Pn 14 14 46.3 -1.3
PDGK Podgornoye 8.41 41 ⇓P Pn 14 14 47.6 -0.1
comp=Z,51nm,0.7s
PDGK Podgornoye 8.41 41 PN Pn 14 14 47.6 -0.1
DDI Dehra Dun 8.48 142 eP Pn 14 14 48.1 -0.5
DDI eS Sn 14 16 17.3 -6.1
DDI IAML 14 16 25.1
comp=N,820nm,0.4s
DDI IAML 14 16 27.2
comp=E,579nm,0.3s
TDK Taldyqorghan 9.21 30 eP Pn 14 14 57.4 -0.7
comp=E,29nm,0.7s,baz=30
TDK Taldyqorghan 9.21 30 eP Pn 14 14 57.3 -0.7
TDK pmax pmax
comp=Z,29nm,0.7s
NDI New Delhi 9.52 151 eP Pn 14 15 00.0 -2.3
AJM Ajmer 10.88 167 ⇓P Pn 14 15 18.0 -2.2
AJM i S Sn 14 17 08.0 -13
GEYT Alibeck 11.05 278 P Pn 14 15 18.9 -3.4
comp=Z,15nm,0.3s,baz=116,slow=10,SNR=184
GEYT S Sn 14 17 14.6 -10
comp=Z,10nm,0.3s,baz=145,slow=16,SNR=6.4
GEYT Alibeck 11.05 278 Pn 14 15 18.9 -3.3
GYA0 ALIBECK ARRAY 11.05 278 P Pn 14 15 18.5 -3.7
GYA0B ALIBECK ARRAY 11.05 278 ⇓P Pn 14 15 18.6 -3.6
GYA0B ⇑S Sn 14 17 14.9 -10
GYA0B ALIBECK ARRAY 11.05 278 Pn 14 15 19.0 -3.2
MAKZ Makanchi 12.16 34 ⇑P Pn 14 15 35.7 -0.8
comp=Z,21nm,0.7s
MAKZ Makanchi 12.16 34 P Pn 14 15 36.0 -0.5
MAKZ Makanchi 12.16 34 Pn Pn 14 15 36.0 -0.5
MK31 Makanchi Array 12.29 35 P Pn 14 15 37.5 -0.8
comp=Z,11nm,0.5s,baz=224,slow=9.9,SNR=161
MK31 Makanchi Array 12.29 35 i P Pn 14 15 37.4 -0.8
MK31 pmax pmax
comp=Z,11nm,0.4s
MK31 Makanchi Array 12.29 35 Pn Pn 14 15 37.4 -0.8
MKAR Makanchi Array 12.29 35 P Pn 14 15 37.8 -0.4
comp=Z,1.2nm,0.3s,baz=221,slow=14,SNR=110
MKAR Makanchi Array 12.29 35 i P Pn 14 15 37.4 -0.8
MKAR pmax pmax
comp=Z,12nm,0.7s
BRZS Berezniki 12.83 2 i P Pn 14 15 43.0 -2.0
baz=2.1
PYUN Piuthan 12.93 131 eP Pn 14 15 45.1 -1.6
comp=Z,348nm,0.3s
KOLN Koldanda 13.54 130 eP Pn 14 15 53.6 -0.8
comp=Z,280nm,0.4s
WMQ Urumqi 13.67 56 eP Pn 14 15 56.1 +0.4
WMQ sP sPn 14 16 37.6 -1.6
WMQ S Sn 14 18 25.2 -2.3
WMQ pmax pmax
comp=Z,55nm,0.7s
WMQ pmax pmax
comp=Z,270nm,4.9s
WMQ Urumqi 13.67 56 P Pn 14 15 55.8 +0.1
WMQ Urumqi 13.67 56 Pn Pn 14 15 55.8 +0.1

ZSN Zaisan 14.00 39 eP Pn 14 15 58.9 -0.9
baz=39
ZSN Zaisan 14.00 39 eP Pn 14 15 58.9 -0.9
GKN Gorkha 14.02 127 eP Pn 14 15 59.1 -1.3
comp=Z,374nm,0.6s
KURBB Kurchatov Arra 14.25 17 P Pn 14 16 00.9 -2.0
comp=Z,0.9nm,0.3s,baz=209,slow=12,SNR=91
KURBB Kurchatov Arra 14.25 17 ⇓P Pn 14 16 00.7 -2.1
comp=Z,99nm,0.6s
KURBB Kurchatov Arra 14.25 17 P Pn 14 16 00.7 -2.1
SEM Semipalatinsk 14.51 22 eP Pn 14 16 05.1 -1.3
comp=Z,26nm,0.7s,baz=22
SEM Semipalatinsk 14.51 22 eP Pn 14 16 05.0 -1.3
SEM pmax pmax
comp=Z,26nm,0.7s
DMN Daman 14.59 127 eP Pn 14 16 06.8 -0.8
comp=Z,168nm,0.4s
BHPL Bhopal 14.64 160 eP Pn 14 16 05.3 -2.6
BHPL IAmb IAmb 14 16 10.5
comp=Z,55nm,0.4s
PKIN Phulchoki 14.80 126 eP Pn 14 16 09.1 -1.1
comp=Z,311nm,0.6s
PKI Pulchoki 14.81 126 eP Pn 14 16 09.7 -0.7
comp=Z,346nm,0.6s
GUN Gumba 14.89 124 eP Pn 14 16 09.9 -1.5
comp=Z,232nm,0.4s
AB31 Akbulak array 14.92 328 ⇑P Pn 14 16 09.9 -1.3
comp=Z,27nm,0.5s,baz=141,slow=12,SNR=386
AB31 ⇓S Sn 14 18 44.5 -13
comp=Z,64nm,0.7s,baz=150,slow=25,SNR=8.0
AB31 Akbulak array 14.92 328 i P Pn 14 16 09.1 -2.1
ABKAR Akbulak array 14.92 328 Pn Pn 14 16 09.1 -2.1
ABKAR Akbulak array 14.92 328 Pn Pn 14 16 08.6 -2.6
JIRN Jiri 15.26 124 eP Pn 14 16 15.0 -1.0
comp=Z,394nm,0.3s
BVAR Borovoye Array 15.91 356 P Pn 14 16 22.6 -0.6
comp=Z,5.7nm,0.3s,baz=208,slow=14,SNR=81
BVAR S S 14 19 15.6 -4.2
comp=Z,4.0nm,0.3s,baz=162,slow=25,SNR=6.1
BRVK Borovoye 15.95 356 ⇓P Pn 14 16 22.7 -0.9
comp=Z,22nm,0.6s
BRVK ⇑S S 14 19 14.4 -6.2
comp=Z,15nm,0.7s
BRVK Borovoye 15.95 356 i P Pn 14 16 22.1 -1.6
BRVK pmax pmax
comp=Z,23nm,0.5s
BRVK Borovoye 15.95 356 Pn 14 16 23.0 -0.7
RAMN Ramite 16.01 125 eP Pn 14 16 24.1 -0.9
comp=Z,326nm,0.5s
TAPN Tapejung 16.48 122 eP P 14 16 30.0 -0.4
comp=Z,271nm,0.7s
ODAN Odare 16.59 124 eP P 14 16 31.6 +0.1
comp=Z,216nm,0.7s
AKTO Aktyubinsk 16.63 327 P Pn 14 16 31.8 -0.2
comp=Z,3.0nm,0.3s,baz=129,slow=12,SNR=40
AKTO S S 14 19 26.1 -10
comp=Z,0.9nm,0.3s,baz=122,slow=22,SNR=2.4
AKTO Aktyubinsk 16.63 327 ⇑P Pn 14 16 31.9 -0.2
comp=Z,35nm,0.8s
AKTO ⇓S S 14 19 26.9 -8.8
comp=Z,44nm,0.8s
DGZ Jazzator, Alta 16.78 37 d iP Pn 14 16 33.7 -0.2
LSA Lhasa 17.62 109 P Pn 14 16 46.1 +1.6
LSA pmax pmax
comp=Z,36nm,0.8s
LSA Lhasa 17.62 109 Pn Pn 14 16 46.1 +1.6
LSA IAmb IAmb 14 16 49.9
comp=Z,36nm,0.8s
BOK Bokaro 17.88 134 eP Pn 14 16 46.6 -0.5
BOK IAmb IAmb 14 16 48.0
comp=Z,50nm,0.7s
WSAR Wadi Sarin 18.02 223 P P 14 16 47.5 +0.5
comp=Z,1.6nm,0.3s,baz=70,slow=7.4,SNR=16
WSAR S S 14 20 02.2 -2.6
comp=Z,0.1nm,0.3s,baz=340,slow=23,SNR=1.3
UOSS Minazif 18.17 232 P P 14 16 46.9 -1.6
UOSS IAmb IAmb 14 16 56.6
comp=Z,15nm,0.8s
LKRN Lenkeran, Azer 18.37 282 P Pn 14 16 51.9 -0.8
POO Poona 18.63 174 eP P 14 16 52.0 -1.6
comp=Z,20nm,1.0s
ZAA0 Zalesovo Array 18.99 24 P P 14 16 57.9 +0.8
ZALV Zalesovo Beam 18.99 24 P P 14 16 57.9 +0.8
comp=Z,42nm,0.3s,baz=220,slow=12,SNR=724
ZALV S S 14 20 21.6 -1.8
comp=Z,0.5nm,0.3s,baz=212,slow=20,SNR=2.9
ZALV Zalesovo Beam 18.99 24 i P P 14 16 57.9 +0.8
ZALV pmax pmax
comp=Z,157nm,0.5s
ZALV Zalesovo Beam 18.99 24 P P 14 16 57.6 +0.5
MAK Makhachkala 19.59 295 eP P 14 17 00.1 -3.6
MAK eS S 14 20 30.2 -5.2
MAK pmax pmax
comp=Z,93nm,0.8s
SEKA Sheki 19.62 290 P P 14 17 04.6 +0.4
MNGR Mingechevir, A 19.68 288 P P 14 17 05.9 +1.2
GUWA GUWAHATI 19.97 118 eP P 14 17 09.5 +1.5
ZKTA Zakatala 20.08 291 P P 14 17 10.0 +0.9
GANJ Ganja 20.26 288 P P 14 17 12.1 +1.1
DDFL Dedoflistskaro 20.45 290 P P 14 17 14.0 +1.0
SHL Shillong 20.50 119 P P 14 17 15.2 +1.4
SHL pmax pmax
comp=Z,44nm,0.8s
SHL Shillong 20.50 119 eP P 14 17 13.3 -0.5
SHL Shillong 20.50 119 P P 14 17 15.2 +1.4
HYB Hyderabad 20.50 162 i P P 14 17 13.0 -0.7
HYB eS S 14 20 59.0 +5.2
HYB Hyderabad 20.50 162 eP P 14 17 12.3 -1.4
HYB IAmb IAmb 14 17 17.1
comp=Z,14nm,0.6s
ZIRO ZIRO 20.77 111 i Pg P 14 17 16.7 0.0
GROC Groznyy 20.86 295 eP P 14 17 18.8 +1.5
GROC e 14 17 47.6
GROC e*SP sP 14 18 07.5 -1.3
GROC eS S 14 21 04.0 +3.7
GROC e*SS sS 14 21 50.1 -2.1
GROC pmax pmax
comp=Z,64nm,0.9s
NAX Nakhchivan 20.91 284 P P 14 17 19.1 +1.1
SVE Sverdlovsk 21.09 342 ⇑eP P 14 17 20.5 +0.9
SVE eS Sn 14 21 13.8 -10
SVE pmax pmax
comp=Z,32nm,0.9s
ARU Arti 21.29 339 P P 14 17 22.3 +0.7
comp=Z,4.8nm,0.6s,baz=170,slow=6.0,SNR=30
ARU S S 14 21 08.8 +1.2
comp=Z,1.1nm,0.4s,baz=153,slow=23,SNR=2.1
ARU Arti 21.29 339 d iP P 14 17 22.4 +0.7
ARU *PP pP 14 17 49.8 -2.6
ARU S S 14 21 10.7 +3.1
ARU pmax pmax
comp=Z,41nm,1.4s
ARU Arti 21.29 339 P P 14 17 21.6 -0.1
ARU IAmb IAmb 14 17 23.3
comp=Z,18nm,0.7s
BTNK Botanikuri 21.45 291 P P 14 17 24.6 +0.9
GNI Garni 21.46 286 ceP P 14 17 25.6 +1.6
GNI pmax pmax
comp=Z,19nm,0.5s
GUDG Gudauri 21.74 293 P P 14 17 30.8 +3.9
GTA Gaotai 21.92 76 ⇑P P 14 17 30.3 +1.6
GTA sP sP 14 18 26.3 +4.3
GTA pmax pmax
comp=Z,8.0nm,0.9s
MOKO MOKOCHONG 21.94 113 eP P 14 17 30.3 +1.3
KOHI KOHIMA 21.99 115 eP P 14 17 30.7 +1.2
ZEI Tsey 22.20 293 eP P 14 17 33.8 +2.4
ZEI pmax pmax
comp=Z,9.0nm,0.6s
BGD Bogdanovka 22.34 289 P P 14 17 36.8 +4.0
AKH Akhalkalaki 22.42 290 P P 14 17 37.0 +3.5
ONI Oni 22.51 293 P P 14 17 39.9 +5.7
BELG Belogornoye 22.89 319 P P 14 17 37.8 +0.4
comp=Z,23nm,0.5s,baz=288,slow=0.5,SNR=16
BELG pP pP 14 18 11.3 +1.5
comp=Z,53nm,0.9s,baz=137,slow=6.7,SNR=4.9
BELG S S 14 21 38.0 +4.1
comp=Z,8.8nm,0.8s,baz=212,slow=13,SNR=1.4
BELG Belogornoye 22.89 319 i P P 14 17 37.5 +0.1
BELG pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 23.02 296 P P 14 17 39.2 +0.5
comp=Z,3.4nm,0.6s,baz=123,slow=15,SNR=6.5
KBZ pP pP 14 18 11.9 +1.2
comp=Z,18nm,0.8s,baz=132,slow=2.3,SNR=5.8
KBZ S S 14 21 41.4 +5.2
comp=Z,1.7nm,0.2s,baz=289,slow=6.5,SNR=6.3
NEY Neytrino 23.10 294 i P P 14 17 39.0 -0.7
NEY pmax pmax
comp=Z,2.0nm,0.7s
KIV Kislovodsk 23.20 296 eP P 14 17 40.4 -0.1
KIV eS S 14 21 39.9 +0.6
KIV pmax pmax
comp=Z,46nm,1.0s
KIV MLR MLR
comp=Z,126nm,14.0s
SAIH SAIHA 23.28 123 eP P 14 17 44.2 +2.8
SAIH IAmb IAmb 14 17 45.4
comp=Z,25nm,0.7s
MOY Mondy 25.08 45 eP P 14 18 00.0 +2.5
MOY pmax pmax
comp=Z,19nm,1.2s
LZH Lanzhou 25.53 83 eP P 14 18 05.0 +3.2
LZH pP pP 14 18 41.6 +3.3
LZH pmax pmax
comp=Z,22nm,1.1s
VRH Novokhopyorsk 25.63 313 eP P 14 18 04.0 +1.7
VRH e*PP pP 14 18 34.6 -3.9
VRH pmax pmax
comp=Z,10.0nm,1.1s
ZAK Zakamensk 25.96 49 eP P 14 18 07.0 +1.6
ZAK pmax pmax
comp=Z,5.0nm,1.1s
KIRV Kirov 26.01 333 P P 14 18 06.9 +1.3
comp=Z,10nm,0.5s,baz=126,slow=6.5,SNR=3.7
KIRV pP pP 14 18 43.8 +2.0
comp=Z,13nm,0.6s,baz=263,slow=1.9,SNR=3.8
KIRV Kirov 26.01 333 ceP P 14 18 05.5 -0.1
RAYN Ar Rayn 26.49 247 P P 14 18 11.1 +0.7
RAYN pmax pmax
comp=Z,19nm,1.2s
RAYN Ar Rayn 26.49 247 P P 14 18 11.1 +0.7
RAYN IAmb IAmb 14 18 11.5
comp=Z,19nm,1.1s
MALT Malatya 26.49 283 P P 14 18 14.0 +3.6
TLY Talaya 26.61 47 i P P 14 18 12.8 +1.6
TLY pmax pmax
comp=Z,4.0nm,1.0s
VSR Storozhevoye 27.15 312 eP P 14 18 17.5 +1.6
VSR e 14 18 48.3
VSR pmax pmax
comp=Z,5.0nm,0.5s
SONM Songino Array 27.31 56 P P 14 18 19.6 +2.1
comp=Z,5.3nm,0.8s,baz=263,slow=9.1,SNR=41
SONM Songino Array 27.31 56 P P 14 18 19.6 +2.1
ULN Ulaanbaatar 27.75 56 ceP P 14 18 22.5 +1.0
ULN pmax pmax
comp=Z,4.0nm,0.6s
LPSR Galich'ya Gora 27.75 314 eP P 14 18 21.6 +0.3
LPSR pmax pmax
comp=Z,8.0nm,0.6s
PRGR Permogore 29.51 334 eP P 14 18 36.4 -0.3
PRGR e*SP sP 14 19 35.2 +1.9
PRGR pmax pmax
comp=Z,12nm,0.8s
SOCY Socotra 29.65 218 P P 14 18 35.3 -3.3
OBN Obninsk 29.97 318 i P P 14 18 41.1 +0.3
OBN i *PP pP 14 19 14.9 -2.7
OBN pmax pmax
comp=Z,7.0nm,0.8s
BR131 Keskin Array S 30.00 287 i P P 14 18 42.3 +0.8
BR131 Keskin Array S 30.00 287 P P 14 18 42.6 +1.0
BR131 IAmb IAmb 14 18 43.8
comp=Z,9.7nm,0.7s
BRTR Keskin Array B 30.00 287 P P 14 18 42.8 +1.2
comp=Z,4.3nm,0.5s,baz=95,slow=7.8,SNR=16
BRTR PP PnPn 14 19 43.0 -3.5
comp=Z,2.3nm,0.9s,baz=100,slow=6.6,SNR=4.1
BRTR Keskin Array B 30.00 287 P P 14 18 43.3 +1.8
XAN Xi'an 30.07 85 P P 14 18 43.7 +1.7
XAN pmax pmax
comp=Z,8.0nm,1.0s
CMAR Chiang Mai Arr 30.09 121 P P 14 18 44.3 +2.0
comp=Z,0.6nm,0.6s,baz=302,slow=8.4,SNR=3.1
PALK Pallekele 30.79 163 P P 14 18 49.0 +0.6
comp=Z,5.0nm,0.7s,baz=69,slow=10,SNR=6.3
HHC Hu-ho-hao-te 30.79 71 eP P 14 18 51.9 +3.5
HHC pmax pmax
comp=Z,14nm,0.7s
HHC pmax pmax
comp=Z,100nm,7.1s
KLMR Klimovskoe 31.31 330 eP P 14 18 50.5 -2.0
KLMR pmax pmax
comp=Z,11nm,1.0s
KLMR Klimovskoe 31.31 330 eP P 14 18 50.6 -2.0
KLMR AMP 14 18 53.1
comp=Z,11nm,1.0s
AKASG Malin Array Be 33.16 308 P P 14 19 09.5 +0.7
comp=Z,6.5nm,0.6s,baz=78,slow=6.9,SNR=18
AKASG PP PP 14 20 26.5 -0.8
comp=Z,5.2nm,0.8s,baz=83,slow=10,SNR=5.0
AKASG LR LR 14 35 24.1
comp=Z,39nm,19.2s,baz=290,slow=41
AKASG Malin Array Be 33.16 308 P P 14 19 07.4 -1.5
AKBB Malin Array Si 33.16 308 ceP P 14 19 08.7 -0.1
AKBB Malin Array Si 33.16 308 P P 14 19 09.2 +0.3
AKBB IAmb IAmb 14 19 10.4
comp=Z,7.9nm,0.6s
NRIK Noril'sk 33.34 10 P P 14 19 11.6 +1.5
comp=Z,34nm,0.6s,baz=200,slow=5.8,SNR=50
NRIK Noril'sk 33.34 10 ceP P 14 19 11.0 +0.9
NRIK pmax pmax
comp=Z,36nm,0.6s
NRIK Noril'sk 33.34 10 P P 14 19 10.2 +0.1
ELL Elmali 33.44 282 P P 14 19 13.4 +1.8
ELL pmax pmax
comp=Z,67nm,0.7s
ELL Elmali 33.44 282 P P 14 19 13.3 +1.8
SORM Soroca 33.51 303 ⇑P P 14 19 12.4 +0.6
SORM Soroca 33.51 303 ⇑P P 14 19 12.4 +0.6
BOD Bodaibo 34.34 39 eP P 14 19 20.0 +1.1
BOD pmax pmax
comp=Z,11nm,1.3s
PLOR Plostina 34.65 299 ⇑P P 14 19 22.5 +0.6
PLOR Plostina 34.65 299 ⇑P P 14 19 22.5 +0.6
BIZ Bicaz 35.01 301 ⇑P P 14 19 33.6 +1.8
MLR Muntele Rosu 35.16 298 ⇓P P 14 19 29.2 +2.9
MLR Muntele Rosu 35.16 298 P P 14 19 27.7 +1.4
MLR pmax pmax
comp=Z,14nm,0.8s
MLR Muntele Rosu 35.16 298 P P 14 19 27.7 +1.4
MLR IAmb IAmb 14 19 29.8
comp=Z,14nm,0.8s
BURAR Bucovina Array 35.60 302 ⇑P P 14 19 30.8 +0.8
BURAR Bucovina Array 35.60 302 ⇑P P 14 19 30.8 +0.8
BURAR Bucovina Array 35.60 302 P P 14 19 30.9 +0.8
BUR08 Bucovina Ar. S 35.62 302 P P 14 19 31.4 +1.3
VOIR 35.80 298 ⇓P P 14 19 33.5 +1.9
VOIR 35.80 298 ⇑P P 14 19 33.5 +1.9
ARR Arges 36.09 298 ⇑P P 14 19 36.1 +1.9
ARCR ARCALIA 36.20 301 ⇓P P 14 19 37.3 +2.4
LOT Lotru 36.69 299 ⇑P P 14 19 41.5 +2.2
DRGR 37.34 301 ⇓P P 14 19 46.5 +1.8
DRGR 37.34 301 ⇓P P 14 19 46.5 +1.8
FIA1 FINESS Array S 37.39 325 P P 14 19 45.4 +0.7
FIA1 IAmb IAmb 14 19 46.0
comp=Z,13nm,1.1s
FINES FINESS Array B 37.39 325 P P 14 19 45.3 +0.6
comp=Z,2.7nm,0.4s,baz=119,slow=11,SNR=26
FINES pP pP 14 20 25.8 +3.3
comp=Z,3.6nm,0.7s,baz=100,slow=10,SNR=2.8
FINES sP sP 14 20 45.3 +2.7
comp=Z,3.0nm,0.6s,baz=110,slow=8.3,SNR=2.3
FINES FINESS Array B 37.39 325 i P P 14 19 45.2 +0.4
FINES pmax pmax
comp=Z,3.0nm,0.4s
VTS Vitosha 37.39 294 ⇑P P 14 19 46.9 +1.6
VTS Vitosha 37.39 294 ⇑P P 14 19 46.9 +1.6
VTS Vitosha 37.39 294 P P 14 19 44.7 -0.6
GZR Gura Zlata 37.39 299 ⇓P P 14 19 45.5 +0.3
CEI Carei 37.47 302 ⇑P P 14 19 42.8 -2.8
CEI Carei 37.47 302 ⇑P P 14 19 42.8 -2.8
CRVS Cervenica-Dubn 38.09 304 eP P 14 19 53.5 +2.6
CRVS Cervenica-Dubn 38.09 304 eP P 14 19 53.5 +2.6
SIRR Siria 38.10 300 ⇑P P 14 19 51.6 +0.6
BZS Buzias 38.19 299 ⇓P P 14 19 53.1 +1.4
BZS Buzias 38.19 299 ⇓P P 14 19 53.1 +1.4
NJ2 Nanjing 38.60 83 eP P 14 19 55.6 +0.3
NJ2 pmax pmax

comp=Z,9.0nm,0.5s
NIE Niedzica 38.84 305 P P 14 19 59.6 +2.4
FRGS Fruska Gora 39.50 299 ⇑P P 14 19 49.4 -13
DIVS Divibare 39.52 297 P P 14 20 04.1 +1.2
MORH Mrgy, Hungar 40.19 300 ⇓P P 14 20 09.9 +1.6
KEV Kevo 40.49 338 P P 14 20 10.3 -0.1
KEV pmax pmax
comp=Z,7.0nm,0.7s
KEV Kevo 40.49 338 P P 14 20 10.3 -0.1
MORC Moravsky Berou 40.62 306 P P 14 20 13.5 +1.7
MORC pmax pmax
comp=Z,10.0nm,2.2s
ARA0 ARCESS Array S 40.85 337 *e*P **P 14 20 14.6 +1.2**
ARCES ARCESS Array B 40.85 337 P P 14 20 14.2 +0.8
comp=Z,13nm,0.7s,baz=113,slow=8.3,SNR=52
ARCES ARCESS Array B 40.85 337 P P 14 20 13.4 0.0
ARCES IAmb IAmb 14 20 14.6
comp=Z,16nm,0.9s
MODS Modra-Piesok 40.89 304 *e*P **P 14 20 16.1 +2.0**
MODS Modra-Piesok 40.89 304 *e*P **P 14 20 16.1 +2.0**
TPTI 40.91 140 P P 14 20 11.9 -2.6
comp=Z,22nm,1.4s
ZEA Zeya 41.04 48 *e*P **P 14 20 17.7 +2.6**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
KRLC Kraliky 41.09 306 *e*P **P 14 20 16.6 +0.9**
KRLC Kraliky 41.09 306 *e*P **P 14 20 16.6 +0.9**
KTK1 Kautokeino 41.34 336 *e*P **P 14 20 17.6 +0.2**
DPC Dobruska-Polom 41.37 307 *e*P **P 14 20 19.6 +1.6**
DPC Dobruska-Polom 41.37 307 *e*P **P 14 20 19.6 +1.6**
CHVC Chvalec 41.53 307 *e*P **P 14 20 20.6 +1.4**
UPC Upice 41.56 307 *e*P **P 14 20 20.8 +1.4**
UPC Upice 41.56 307 *e*P **P 14 20 20.8 +1.4**
CONA Conrad Observa 41.88 303 *i* P **P 14 20 23.9 +1.7**
comp=Z,11nm,1.1s,SNR=5.6
HAMF Hammerfest 41.91 338 *e*P **P 14 20 23.1 +1.2**
IPM Ipoh 42.00 134 P P 14 20 23.9 +0.5
IPM IAmb IAmb 14 20 24.8
comp=Z,14nm,0.9s
PSI Prapat 42.21 138 P P 14 20 25.8 +0.5
comp=Z,9.0nm,1.0s,baz=180,slow=12,SNR=6.4
GROS Grobnik 42.31 301 *i* P **P 14 20 26.7 +1.0**
JETT Jettan, Norway 42.48 336 *e*P **P 14 20 27.4 +0.7**
PRU Pruhonice 42.54 306 *e*P **P 14 20 28.7 +1.3**
PRU Pruhonice 42.54 306 *e*P **P 14 20 28.7 +1.3**
SOKA Soboth 42.60 301 *e*P **P 14 20 29.7 +1.7**
comp=Z,5.7nm,0.7s
GSI Gunungsitoli 42.78 141 P P 14 20 31.3 +1.7
GSI Gunungsitoli 42.78 141 P P 14 20 27.7 -1.9
comp=Z,61nm,0.8s
BRG Berggiesshubel 42.85 308 *e*P **P 14 20 30.9 +1.1**
BRG Amp 14 20 32.0
comp=Z,12nm,0.6s
BRG *i* x x 14 20 34.0
BRG Amp 14 20 34.7
comp=Z,9.4nm,0.9s
MOA Molln 42.96 303 *e*P **P 14 20 32.0 +1.2**
comp=Z,3.8nm,0.8s
OBKA Obir 42.96 301 *e*P **P 14 20 32.5 +1.6**
comp=Z,10nm,1.1s
YAK Yakutsk 42.97 36 P P 14 20 31.1 +0.5
comp=Z,25nm,0.7s,baz=220,slow=0.9,SNR=20
YAK Yakutsk 42.97 36 *e*P **P 14 20 30.9 +0.3**
YAK *e**PP **sP 14 21 26.1 -3.3**
YAK *e*S **S 14 26 42.3 -0.2**
YAK *e*SS **SS 14 29 59.4 -1.3**
YAK pmax pmax
comp=Z,36nm,0.7s
YAK pmax pmax
comp=N,3.0nm,0.8s
YAK smax smax
comp=E,26nm,1.3s
YAK smax smax
comp=N,23nm,1.5s
YAK Yakutsk 42.97 36 P P 14 20 31.2 +0.6
LJU Ljubljana 43.05 301 *i* P **P 14 20 33.2 +1.7**
GERES GERESS Array B 43.20 305 P P 14 20 33.0 +0.1
comp=N,0.8nm,0.4s,baz=81,slow=8.7,SNR=7.5
GERES sP **sP 14 21 33.3 +2.1**
comp=N,0.7nm,0.7s,baz=99,slow=8.5,SNR=2.4
GERES PP **PP 14 22 16.0 -0.6**
comp=N,0.8nm,0.8s,baz=68,slow=11,SNR=1.9
KHC Kasperske Hory 43.25 305 *i* P **P 14 20 32.6 -0.6**
KHC pmax pmax
comp=Z,37nm,3.6s
KHC Kasperske Hory 43.25 305 *e*P **P 14 20 34.7 +1.5**
JAVS Javornik 43.39 301 *i* P **P 14 20 35.4 +1.0**
CLL Collm 43.40 308 ⇓*i*P **P 14 20 35.3 +1.0**
comp=Z,10.0nm,0.9s
CLL Collm 43.40 308 ⇓*i*P **P 14 20 35.3 +1.0**
CLL pmax pmax
comp=Z,10.0nm,0.9s
FAUS Fauske 43.59 332 *e*P **P 14 20 36.0 +0.5**
MOR8 Moi Rana 43.64 330 *e*P **P 14 20 35.6 -0.3**
KBA Koelnbreinsper 43.69 302 *e*P **P 14 20 38.1 +1.2**
comp=Z,3.0nm,0.5s
KBA Koelnbreinsper 43.69 302 P P 14 20 36.9 +0.1
KBA pmax pmax
comp=Z,6.0nm,1.2s
STEI Steigen 43.75 333 *e*P **P 14 20 37.4 +0.7**
KSAR Wonju Array Be 43.89 72 P P 14 20 39.4 +1.1
KSAR Wonju Array Be 43.89 72 P P 14 20 39.4 +1.1
KSRS Korea Array 43.91 72 P P 14 20 39.4 +0.9
comp=Z,1.5nm,0.6s,baz=281,slow=6.9,SNR=7.0
KLR Kul'dur 44.11 54*ce*P **P 14 20 39.5 -0.5**
KLR pmax pmax
comp=Z,3.0nm,0.6s
NC602 NORSAR Array S 44.16 322 *e*P **P 14 20 40.2 +0.1**
NORES NORESS Array B 44.16 322 P P 14 20 44.2 +4.0
KONS Konsvik 44.23 331 *e*P **P 14 20 41.1 +0.5**
MNSI Mandailing Nat 44.25 138 P P 14 20 40.7 -0.7
comp=Z,30nm,0.6s
ABTA Abfaltersbach 44.30 302 *e*P **P 14 20 42.4 +0.8**
comp=Z,0.7nm,0.3s
NB2 NORSAR Subarra 44.34 323 P P 14 20 41.2 -0.4
baz=111,slow=7.9
NOA NORSAR Array B 44.34 323 P P 14 20 41.5 -0.1
comp=Z,3.6nm,0.6s,baz=94,slow=7.7,SNR=18
NOA pP **pP 14 21 22.3 +1.8**
comp=Z,3.6nm,0.9s,baz=96,slow=8.1,SNR=2.5
NOA sP **sP 14 21 41.3 +1.5**
comp=Z,1.8nm,0.7s,baz=99,slow=8.1,SNR=2.6
MOX Moxa 44.34 308 P P 14 20 43.3 +1.5
MOX pmax pmax
comp=Z,7.0nm,1.3s
NSS Namsos 44.37 328 *e*P **P 14 20 42.0 +0.3**
NBO00 NORSAR Array S 44.55 323 P P 14 20 43.1 -0.2
NC204 NORSAR Array S 44.57 323 P P 14 20 43.2 -0.3
WTTA Wattenberg 44.81 303 *e*P **P 14 20 46.3 +0.6**
comp=Z,10nm,1.1s
WTTA Wattenberg 44.81 303 P P 14 20 46.1 +0.4
WTTA pmax pmax
comp=Z,10.0nm,0.9s
WATA Walderalm 44.83 303 *e*P **P 14 20 46.7 +0.8**
comp=Z,11nm,1.1s
TIXI Tiksi 44.87 22*ce*P **P 14 20 46.1 +0.5**
TIXI pmax pmax
comp=Z,125nm,0.7s
TIXI Tiksi 44.87 22 P P 14 20 46.1 +0.5
MURB Monte Urbino 44.99 297 P P 14 20 47.7 +0.6
KONO Kongsberg 45.08 321 P P 14 20 47.6 +0.2
KONO pmax pmax
comp=Z,7.0nm,1.1s
KONO Kongsberg 45.08 321 P P 14 20 47.6 +0.2
KONO Kongsberg 45.08 321 *e*P **P 14 20 47.6 +0.2**
SQTA Sankt Quirin 45.10 303 *e*P **P 14 20 48.4 +0.5**
comp=Z,4.6nm,0.4s
MOTA Moosalm 45.15 303 *e*P **P 14 20 48.6 +0.2**
comp=Z,9.0nm,1.2s
USRK Ussuriysk Ar. 45.15 61 P P 14 20 47.7 -0.6
comp=Z,0.8nm,0.5s,baz=274,slow=10,SNR=2.9
RETA Reutte 45.35 303 *e*P **P 14 20 51.0 +1.1**
comp=Z,5.3nm,0.8s
BKNI Bangkinang 45.43 137 P P 14 20 49.8 -0.9
comp=Z,53nm,0.8s
DOMB Dombas 45.43 324 *e*P **P 14 20 49.8 -0.5**
FETA Feichten 45.46 303 *e*P **P 14 20 51.2 +0.3**
comp=Z,3.3nm,0.5s
SKAR Skarslia 45.75 322 *e*P **P 14 20 53.5 +0.7**
DAVA Damuels 45.98 303 *e*P **P 14 20 55.2 +0.3**
comp=Z,19nm,0.5s
MSSA Maissana 46.86 299 P P 14 21 02.0 +0.3
MSSA IAmb IAmb 14 21 04.6
comp=Z,23nm,1.1s
SPA0 Spitsbergen Ar 47.04 347 *e*P **P 14 21 03.0 +0.4**

HINF Hinteralfeld 47.88 304 *e*P **P 14 21 09.2 -0.3**
HINF pmax pmax
comp=Z,6.0nm,0.6s
SENIN Lac Senin/Sane 47.90 302 P P 14 21 10.1 +0.2
SENIN IAmb IAmb 14 21 11.0
comp=Z,8.5nm,0.7s
WLF Walferdange 47.96 307 *d*P **P 14 21 12.0 +2.0**
HAU Haudompre 48.17 305 *e*P **P 14 21 11.6 -0.1**
HAU pmax pmax
comp=Z,2.0nm,0.3s
LPG La Plagne 48.48 301 *e*P **P 14 21 14.6 +0.2**
LPG pmax pmax
comp=Z,8.0nm,0.7s
LPL La Plagne 48.49 301 *e*P **P 14 21 14.9 +0.5**
LPL pmax pmax
comp=Z,10.0nm,0.7s
BNI Bardonecchia 48.64 301 P P 14 21 15.8 +0.3
BNI pmax pmax
comp=Z,7.0nm,1.0s
BNI Bardonecchia 48.64 301 P P 14 21 15.8 +0.3
CABF La Chapelle 48.66 303 *e*P **P 14 21 16.3 +0.8**
CABF pmax pmax
comp=Z,9.0nm,0.5s
MBDF Montbardon 48.66 300 *e*P **P 14 21 16.0 +0.3**
MBDF pmax pmax
comp=Z,6.0nm,0.6s
BMRD Maredsous 48.72 308 *d*P **P 14 21 17.2 +1.4**
BMRD *d*x x 14 22 57.3
DOU Dourbes 48.87 308 *d*P **P 14 21 17.9 +1.0**
DOU *d*pP **pP 14 21 57.0 +0.7**
DOU *d*x x 14 23 01.6
BAIF Baives 49.12 308 *e*P **P 14 21 19.4 +0.6**
BAIF pmax pmax
comp=Z,10.0nm,0.6s
KEST Kesra 49.58 288 P P 14 21 24.2 +1.5
comp=Z,9.1nm,0.7s,baz=38,slow=1.4,SNR=11
KSI Kapahiang 49.59 138 P P 14 21 22.9 0.0
KSI pmax pmax
comp=Z,57nm,1.0s
KSI Kapahiang 49.59 138 P P 14 21 21.7 -1.2
comp=Z,5µmcomp=Z,57nm,1.0s
KMBO Kilima Mbogo 49.86 228 P P 14 21 25.4 +0.2
comp=Z,6.4nm,0.8s,baz=33,slow=11,SNR=12
KMBO Kilima Mbogo 49.86 228 *i* P **P 14 21 25.8 +0.6**
KMBO pmax pmax
comp=Z,6.0nm,0.8s
LOR Lormes 49.98 304 *e*P **P 14 21 24.8 -0.6**
LOR pmax pmax
comp=Z,4.0nm,0.7s
SSB Saint Sauveur 50.04 302 P P 14 21 26.4 +0.4
SSB pmax pmax
comp=Z,8.0nm,0.6s
SSB Saint Sauveur 50.04 302 P P 14 21 26.4 +0.4
SSB IAmb IAmb 14 21 27.5
comp=Z,7.6nm,0.6s
VIVF Saint-Julien-l 50.07 301 *e*P **P 14 21 26.7 +0.5**
VIVF pmax pmax
comp=Z,4.0nm,0.6s
AVF Avril sur Loir 50.44 304 *e*P **P 14 21 28.6 -0.2**
AVF pmax pmax
comp=Z,13nm,0.6s
LWLI Liwa 51.52 138 P P 14 21 36.5 -0.9
comp=Z,144nm,0.5s
CAF Calviac 51.83 302 *e*P **P 14 21 39.5 +0.2**
CAF pmax pmax
comp=Z,5.0nm,0.7s
STKI Sintang 51.88 126 P P 14 21 38.9 -1.0
comp=Z,27µmcomp=Z,23nm,0.4s
MJAR Matsushiro Arr 51.97 69 P P 14 21 41.1 +0.6
comp=Z,1.8nm,0.7s,baz=289,slow=11,SNR=3.8
RJF Les Rejaudoux 52.08 303 *e*P **P 14 21 42.0 +0.9**
RJF pmax pmax
comp=Z,20nm,1.4s
GRR Gorron 52.75 307 *e*P **P 14 21 45.3 -0.6**
GRR pmax pmax
comp=Z,18nm,0.9s
MA2 Magadan 53.35 38*ce*P **P 14 21 50.2 0.0**
MA2 pmax pmax
comp=Z,7.0nm,1.7s
SEY Seymchan 53.43 34 *i* P **P 14 21 50.4 -0.3**
PBKI Pangkalan Bun 54.12 128 P P 14 21 55.0 -1.3
comp=Z,3µmcomp=Z,67nm,0.6s
ETSF Etsaut 54.27 300 *e*P **P 14 21 57.3 +0.1**
ETSF pmax pmax
comp=Z,8.0nm,0.7s
DAG Danmarks Havn 54.33 344⇑*i*P **P 14 21 57.6 +0.6**
DAG IAmb IAmb 14 21 58.3
comp=Z,13nm,0.8s
DAG Danmarks Havn 54.33 344⇑*i*P **P 14 21 57.5 +0.6**
DAG pmax pmax
comp=Z,13nm,0.8s
QUIF Quistinic 54.36 307 *e*P **P 14 21 57.1 -0.6**
QUIF pmax pmax
comp=Z,9.0nm,0.8s
MTKI Muara Teweh, K 54.88 124 P P 14 22 00.7 -1.1
BBKI Banjar Baru 56.73 126 P P 14 22 14.6 -0.3
comp=Z,33nm,0.9s
KBKI Kotabaru 57.47 124 P P 14 22 20.8 +0.6
comp=Z,34nm,0.9s
BILL Bilibino 57.66 26*d i*P **P 14 22 21.4 +0.6**
BILL *i* *PP **pP 14 23 04.4 +2.7**
BILL *i* 14 23 09.2
BILL pmax pmax
comp=Z,11nm,0.8s
BILL Bilibino 57.66 26 P P 14 22 20.8 0.0
BILL IAmb IAmb 14 22 22.9
comp=Z,10nm,0.8s
ESDC Sonseca Array 57.85 298 P P 14 22 23.0 +0.3
comp=Z,7.8nm,0.7s,baz=58,slow=7.2,SNR=49
ESDC pP **pP 14 23 04.0 +0.9**
comp=Z,1.4nm,0.7s,baz=60,slow=7.7,SNR=2.8
ESDC Sonseca Array 57.85 298 P P 14 22 21.4 -1.3
PAB San Pablo 58.18 298 P P 14 22 25.8 +0.9
PAB pmax pmax
comp=Z,9.0nm,1.5s
MRSI Marisa 58.73 116 P P 14 22 30.9 +2.0
PETK Petropavlovsk- 58.94 45 P P 14 22 28.8 -1.1
comp=Z,3.9nm,0.8s,baz=292,slow=5.9,SNR=4.2
PETK Petropavlovsk- 58.94 45 P P 14 22 28.3 -1.6
MVO Moncorvo 59.39 301 *e*P **P 14 22 34.1 +0.9**
APSI Ampana 59.49 118 P P 14 22 35.0 +0.8
comp=Z,17nm,1.0s
TTSI Tana Toraja 59.74 121 P P 14 22 35.0 -0.8
comp=Z,1µmcomp=Z,22nm,1.0s
PCAB Cabril 59.85 301 *e*P **P 14 22 38.0 +1.7**
MTE Manteigas 60.06 300 *e*P **P 14 22 39.5 +1.7**
comp=Z,36nm,1.6s
PVIS Viseu 60.17 300 *e*P **P 14 22 39.8 +1.2**
PCBR Castelo Branco 60.25 299 *e*P **P 14 22 41.9 +2.9**
PMRV Marv??o 60.37 299 *e*P **P 14 22 40.8 +0.9**
SRBI Singaraja 60.50 129 P P 14 22 40.7 -0.2
comp=Z,37nm,0.7s
NEEM North Greenlan 60.56 348⇑*i*P **P 14 22 41.6 +0.7**
NEEM IAmb IAmb 14 22 42.4
comp=Z,7.0nm,0.4s
PBAR Barrancos 60.66 297 *e*P **P 14 22 42.9 +1.0**
SUMG Summit 60.70 341⇑*i*P **P 14 22 43.2 +1.2**
SUMG IAmb IAmb 14 22 43.8
comp=Z,12nm,0.7s
SUMG Summit 60.70 341⇑*i*P **P 14 22 43.2 +1.2**
SUMG pmax pmax
comp=Z,12nm,0.7s
SUMG Summit 60.70 341 P P 14 22 42.4 +0.3
PVAQ Vaqueiros 61.48 297 *e*P **P 14 22 48.1 +0.7**
MESJ Messejana 61.65 298 *e*P **P 14 22 48.5 0.0**
MESJ IAmb IAmb 14 23 00.0
comp=Z,28nm,1.4s
MESJ Messejana 61.65 298 *e*P **P 14 22 48.5 0.0**
EUNU Eureka 62.41 356 P P 14 22 53.2 +0.2
ICESG Greenland Ices 62.90 338 *i* P **P 14 22 58.0 +1.3**
A21K Barrow 66.47 15 P 14 23 20.1
baz=319
DY2G Dye2 66.48 337 *i* P **P 14 23 20.7 +0.9**
DY2G IAmb IAmb 14 23 21.2
comp=Z,5.8nm,0.5s
TOA0 Torodi Ar. Sit 66.53 269 P P 14 23 18.6 -2.0
TOA0 IAmb IAmb 14 23 19.9
comp=Z,5.2nm,0.6s
TORD Torodi Ar. Bea 66.53 269 P P 14 23 18.8 -1.8
comp=Z,4.6nm,0.4s,baz=49,slow=6.0,SNR=54
TORD pP **pP 14 24 02.4 +0.4**
comp=Z,0.7nm,0.5s,baz=40,slow=5.6,SNR=1.5
TORD Torodi Ar. Bea 66.53 269 P P 14 23 18.7 -1.8
TNA Tin City 67.65 23 P 14 23 27.6
baz=312

RES Resolute Bay 68.10 356 P P 14 23 29.4 -0.1
RES pmax pmax
comp=Z,3.0nm,1.1s
RES Resolute Bay 68.10 356 P P 14 23 29.4 -0.1
ANM Nome 69.12 23 P P 14 23 37.1 +1.1
ANM pmax pmax
comp=Z,8.0nm,0.8s
ANM Nome 69.12 23 P P 14 23 37.0 +1.1
ANM IAmb IAmb 14 23 38.1
comp=Z,7.8nm,0.8s
ANM Nome 69.12 23 P 14 23 37.3
baz=314
TOLK Toolik Lake Re 70.08 15 P P 14 23 42.7 +0.8
TOLK Toolik Lake Re 70.08 15 P 14 23 42.5
baz=326,SNR=18
COLD Coldfoot 71.12 16 IAmb IAmb 14 23 49.2
comp=Z,6.6nm,0.6s
COLD Coldfoot 71.12 16 P 14 23 48.7
baz=326,SNR=11
IMAR Indian Mountai 71.30 18 P P 14 23 49.0 -0.2
BMAR Burnt Mountain 72.11 14 P P 14 23 55.1 +1.0
MLY Manley 72.81 18 P 14 23 58.6
baz=326,SNR=5.1
I23K Minto, Yukon-K 73.04 17 IAmb IAmb 14 24 01.3
comp=Z,9.7nm,0.9s
I23K Minto, Yukon-K 73.04 17 P 14 24 00.3
baz=327,SNR=6.6
INK Inuvik 73.12 10 P P 14 24 00.8 +0.8
comp=Z,9.1nm,0.5s,baz=343,slow=6.5,SNR=48
INK Inuvik 73.12 10 IAmb IAmb 14 24 01.1
comp=Z,10nm,0.6s
C36M Paulatuk 73.15 6 P 14 24 00.2
baz=347
CHUM Lake Minchumin 73.36 19 P 14 24 02.2
baz=324,SNR=5.1
MDM Murphy Dome 73.46 17 IAmb IAmb 14 24 03.4
comp=Z,13nm,1.2s
POKR Poker Plat Res 73.51 16 P 14 24 03.2
baz=328
BPAW Bear Paw Mtn. 73.52 18 IAmb IAmb 14 24 02.9
comp=Z,5.9nm,0.6s
BPAW Bear Paw Mtn. 73.52 18 P 14 24 02.5
baz=326
NEA2 Nenana 73.58 17 IAmb IAmb 14 24 03.8
comp=Z,13nm,0.8s
NEA2 Nenana 73.58 17 P 14 24 02.8
baz=327,SNR=11
TCOL CIGO, UAF Yank 73.62 17 P 14 24 03.3
baz=328
COLA College 73.62 17 *i* P **P 14 24 03.0 +0.1**
COLA pmax pmax
comp=Z,14nm,0.8s
COLA College 73.62 17 P 14 24 03.3
baz=328
ILAR Eielson Array 73.93 16 P P 14 24 04.5 -0.3
comp=Z,4.8nm,0.9s,baz=324,slow=5.9,SNR=5.1
ILAR PP **PP 14 26 52.0 +0.6**
comp=Z,1.2nm,0.9s,baz=319,slow=9.1,SNR=5.4
ILAR Eielson Array 73.93 16 P P 14 24 03.8 -1.0
KTH Kantishna Hill 73.99 18 IAmb IAmb 14 24 06.3
comp=Z,15nm,0.8s
PPLA Purkeypile 74.20 19 IAmb IAmb 14 24 07.1
comp=Z,11nm,0.6s
PPLA Purkeypile 74.20 19 P 14 24 06.6
baz=325,SNR=5.2
MCK McKinley 74.33 18 P 14 24 07.3
baz=327
RND Reindeer 74.63 18 IAmb IAmb 14 24 09.2
comp=Z,8.5nm,0.5s
WAT2 Susitna Watana 75.07 18 P 14 24 10.7
baz=328
CUT Chulitna 75.11 19 P 14 24 11.2
baz=326
SKT Skwentna 75.13 20 P 14 24 11.6
baz=325
SCRK Sand Creek 75.25 16 P 14 24 12.8
baz=331
DBIC Dimbokro 75.53 267 P P 14 24 14.1 -0.6
comp=Z,1.3nm,0.4s,baz=10.0,slow=5.9,SNR=4.0
SPCR Spurr Chakacha 75.59 20 P 14 24 14.9
baz=325
WAT6 Susitna Watana 75.60 18 P 14 24 14.7
baz=328
LBTB Lobatse 75.70 223 P P 14 24 13.6 -1.9
LBTB pmax pmax
comp=Z,14nm,1.2s
LBTB Lobatse 75.70 223 P P 14 24 13.6 -1.9
LBTB IAmb IAmb 14 24 15.6
comp=Z,14nm,1.1s
SUA Susitna One 75.77 20 P 14 24 15.5
baz=326
PAX Paxson 75.80 17 P 14 24 15.8
baz=330
PMR Palmer 76.09 19 P 14 24 17.3
baz=327
DAWY Dawson 76.10 14 IAmb IAmb 14 24 18.4
comp=Z,8.6nm,0.9s
SML Sawmill 76.11 18 P 14 24 17.5
baz=328
RC01 Rabbit Creek A 76.35 19 P 14 24 18.8
baz=327
M24K Tolsona, Glenn 76.39 17 P 14 24 19.9
baz=330
KNK Knik Glacier 76.42 19 P 14 24 19.7
baz=328
BCAR Beaver Creek A 76.52 15 P P 14 24 18.9 -0.8
KLU Klutina 76.98 18 P 14 24 23.0
baz=330
KDAK Kodiak Island 78.29 23 P 14 24 30.1
baz=325
CTG Chitna Glacier 78.50 16 P 14 24 31.6
baz=334
OHAK Old Harbor 78.53 23 P 14 24 31.9
baz=325
BOSA Boshof 78.76 221 P P 14 24 31.1 -1.5
comp=Z,6.2nm,1.2s,baz=42,slow=5.0,SNR=3.9
BOSA pP **pP 14 25 17.0 +1.4**
comp=Z,3.1nm,1.0s,baz=28,slow=6.0,SNR=2.1
HYT Haines Junctio 79.42 14 IAmb IAmb 14 24 37.6
comp=Z,16nm,0.9s
PINM Pinnacle 79.52 16 P 14 24 36.5
baz=334
YKA Yellowknife Ar 80.55 3 P P 14 24 41.8 +0.2
comp=Z,8.3nm,0.7s,baz=352,slow=5.1,SNR=109
YKA pP **pP 14 25 27.3 +2.4**
comp=Z,2.1nm,0.7s,baz=349,slow=5.0,SNR=3.7
WRA Warramunga Arr 81.67 123 P P 14 24 47.0 -1.1
comp=Z,0.4nm,0.4s,baz=323,slow=4.7,SNR=29
WRA pP **pP 14 25 32.5 +0.9**
comp=Z,1.1nm,0.7s,baz=326,slow=4.7,SNR=3.4
WRA sP **sP 14 25 52.8 +2.6**
comp=Z,1.3nm,0.7s,baz=323,slow=4.9,SNR=3.5
WRA PKKPbc **PKKPbc 14 43 19.6 +1.0**
comp=Z,0.2nm,0.4s,baz=128,slow=2.4,SNR=7.0
ASAR Alice Springs 83.98 126 P P 14 24 58.7 -1.3
comp=Z,0.7nm,0.7s,baz=313,slow=4.9,SNR=16
ASAR pP **pP 14 25 46.5 +2.7**
comp=Z,1.0nm,1.0s,baz=312,slow=5.3,SNR=3.0
ULM Lac du Bonnet 92.31 352 P P 14 25 38.9 -0.5
comp=Z,2.0nm,0.8s,baz=353,slow=4.1,SNR=5.6
PDAR Pinedale Array 100.44 1 P Pdif 14 26 17.0 +0.3
comp=Z,0.2nm,0.7s,baz=3.8,slow=2.7,SNR=2.2
PLCA Paso Flores 150.80 251 PKPbc **PKPbc 14 32 20.0 -0.8**
comp=Z,5.3nm,1.0s,baz=164,slow=1.5,SNR=8.1

*IDC **09** 14:29:56.0±2.5,5.'36S×152.'98E, h0km, mb3.3/5, mb1 3.5/6, mb1mx3.4/26, mbtmp3.4/6, ML1.4/1, Error ellipse: s-maj=88.5km s-min=26.4km az=120.0*
ISC 09 14:30:01.7±2.0,5.'4S±0.3×152.'9E±0.4, h37km, n7, σ1§37/8, mb3.2/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.90**	**235**	Pn	**Pn**	**14 31 39.4**	**-0.8**
	0.4nm,0.3s,baz=239,slow=12,SNR=3.1						
PMG				Sn	**Sn**	**14 32 57.4**	**-0.1**
	3.0nm,0.3s,baz=226,slow=19,SNR=12						
WRA	**Warramunga Arr**	**23.08**	**230**	P	**P**	**14 35 06.3**	**+2.0**
	0.7nm,1.0s,baz=53,slow=9.9,SNR=2.8						
ASAR	**Alice Springs**	**25.73**	**223**	P	**P**	**14 35 29.2**	**+0.4**
	0.5nm,0.7s,baz=54,slow=9.5,SNR=3.8						
SONM	**Songino Array**	**66.90**	**328**	P	**P**	**14 40 50.3**	**0.0**
	0.2nm,0.4s,baz=127,slow=7.7,SNR=1.8						
MKAR	**Makanchi Array**	**80.85**	**319**	P	**P**	**14 42 12.9**	**+1.1**
	0.1nm,0.5s,baz=112,slow=4.6,SNR=1.6						
ILAR	**Eielson Array**	**82.72**	**22**	P	**P**	**14 42 21.0**	**-0.3**

0.2nm,0.8s,baz=270,slow=3.6,SNR=1.9
TORD Torodi Ar. Bea 150.57 287 PKPab **PKPab 14 49 55.7 -1.8**
0.4nm,0.7s,baz=69,slow=3.8,SNR=2.0

WEL 09 14:30:08.5,38°S±5°×17°6E±2°,3,h214km±17km, M2.6/17, ML3.4/6,MLv2.6/17, Error ellipse: s-maj=0.0km s-min=0.0km az=92.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOZ	**Tahuroa Road**	**0.57**	**342**	P	Pn	14 30 37.8	+0.3
MRHZ	**Matea Rd**	**0.78**	**136**	P	Pn	14 30 37.6	-0.8
SNVZ	**South Ngauruho**	**0.91**	**184**	P	S	14 30 58.9	-4.6
MTHZ	**Maungataniwha**	**1.05**	**124**	P	Pn	14 30 39.7	-0.3
BKZ	**Black Stump Fm**	**1.07**	**146**	P	Pn	14 30 39.8	-0.4
URZ	**Urewera**	**1.09**	**90**	P	Pn	14 30 39.4	-0.9
MTVZ	**Mangateitei**	**1.13**	**190**	P	S	14 30 52.8	-13
NMHZ	**Naumai**	**1.18**	**134**	P	S	14 31 02.3	-3.9
BHHZ	**Black Hill Sta**	**1.24**	**168**	P	Pn	14 30 41.5	+0.2
RAHZ	**Arahi**	**1.25**	**121**	P	Pn	14 30 41.8	+0.4
SNGZ	**Shannon Statio**	**1.37**	**112**	P	Pn	14 30 42.5	+0.2
MCHZ	**McNeill Hill**	**1.39**	**147**	P	Pn	14 30 43.4	+0.9
ARHZ	**Aropaoanui**	**1.40**	**135**	P	Pn	14 30 43.2	+0.6
RUGZ	**Raukumara Rang**	**1.57**	**79**	P	Pn	14 30 43.4	-0.8
RIGZ	**Rimuhau**	**1.66**	**106**	P	Pn	14 30 45.2	+0.4
TKGZ	**Te Karaka**	**1.68**	**96**	P	Pn	14 30 45.6	+0.6
HAZ	**Te Kaha**	**1.71**	**73**	P	Pn	14 30 45.1	-0.1
PUZ	**Puketiti**	**2.01**	**85**	P	Pn	14 30 38.5	-10
CAW	**Cannon Point**	**2.87**	**190**	P	Pn	14 30 58.2	+0.9
MTW	**Mount Morrison**	**2.88**	**183**	P	Pn	14 30 52.5	-4.9
WEL	**Wellington**	**3.09**	**193**	P	Pn	14 31 00.7	+0.9
TCW	**Tory Channel**	**3.14**	**200**	P	Pn	14 31 01.5	+1.2
MSWZ	**Moikau Station**	**3.16**	**186**	P	Pn	14 31 01.3	+0.7
BHW	**Baring Head**	**3.20**	**192**	P	Pn	14 31 01.7	+0.7
PLWZ	**Palliser**	**3.31**	**186**	P	Pn	14 31 02.9	+0.4
TUWZ	**Tuamarina**	**3.44**	**203**	P	Pn	14 31 05.2	+1.4

*JMA **09** 14:32:15.0±0.1,24.°34N×122.°25E,h72km±2km,M1.8*
*TAP **09** 14:32:15.1,24.°38N×122.°25E,h64km±1km,ML2.5,D*
ISC 09 14:32:15.8±1.3,24°41N±0.°04×122°26E±0.°02,h64km±9km, n65,σ0°85/125, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.42**	**299**	*eP*	**Pn**	**14 32 27.1**	**-0.2**
	baz=302						
TWC				*eS*	**Sn**	**14 32 36.1**	**+0.4**
	baz=302						
EWUT	**Wuta**	**0.44**	**275**	*eP*	**Pn**	**14 32 27.3**	**-0.1**
	baz=278						
EWUT				*eS*	**Sn**	**14 32 36.7**	**+0.8**
	baz=278						
NDS	**Dongshan**	**0.54**	**295**	*eP*	**Pn**	**14 32 28.1**	**-0.4**
	baz=297						
NDS				*eS*	**Sn**	**14 32 37.5**	**-0.3**
	baz=297						
NTC	**Toucheng**	**0.59**	**319**	*eP*	**Pn**	**14 32 29.6**	**+0.6**
	baz=321						
NTC				*eS*	**Sn**	**14 32 40.1**	**+1.4**
	baz=321						
TWE	**Neicheng**	**0.62**	**301**	P	**Pn**	**14 32 29.4**	**0.0**
	baz=303						
TWE				*eS*	**Sn**	**14 32 39.4**	**+0.1**
	baz=303						
JYNG	**Yonagunijimaku**	**0.63**	**86**	P	**Pn**	**14 32 29.7**	**+0.3**
JYNG				*eS*	**Sn**	**14 32 40.2**	**+0.7**
NACB	**Ninganchiao**	**0.65**	**249**	*eP*	**Pn**	**14 32 29.2**	**-0.4**
	baz=251						
NACB				*eS*	**Sn**	**14 32 39.6**	**-0.2**
	baz=251						
ENTT	**Nioudou**	**0.67**	**291**	P	**Pn**	**14 32 30.0**	**0.0**
	baz=292						
ENTT				*eS*	**Sn**	**14 32 41.0**	**+0.7**
	baz=292						
TWD	**Chiawan**	**0.68**	**242**	*eP*	**Pn**	**14 32 29.6**	**-0.4**
	baz=243						
TIPB	**Shuangxi**	**0.69**	**325**	*eP*	**Pn**	**14 32 31.2**	**+1.0**
	baz=326						
YOJ	**Yonaguni jima**	**0.69**	**85**	P	**Pn**	**14 32 30.2**	**+0.1**
YOJ				*eS*	**Sn**	**14 32 41.7**	**+1.0**
NDT	**Datong Townshi**	**0.70**	**286**	*eP*	**Pn**	**14 32 30.4**	**+0.1**
	baz=288						
NDT				*eS*	**Sn**	**14 32 41.2**	**+0.2**
	baz=288						
ETLH	**Xiulin Townshi**	**0.73**	**255**	*eP*	**Pn**	**14 32 30.2**	**-0.5**
	baz=256						
ETLH				*eS*	**Sn**	**14 32 41.6**	**-0.2**
	baz=256						
NWLT	**Wulai**	**0.78**	**299**	P	**Pn**	**14 32 31.2**	**-0.1**
	baz=300						
NWLT				S	**Sn**	**14 32 42.7**	**0.0**
	baz=300						
NNSB	**Datong**	**0.80**	**272**	*eP*	**Pn**	**14 32 31.0**	**-0.5**
	baz=273						
NNSB				*eS*	**Sn**	**14 32 42.8**	**-0.3**
	baz=273						
NNSH	**Datong**	**0.80**	**272**	*eP*	**Pn**	**14 32 31.0**	**-0.5**
	baz=273						
NNSH				*eS*	**Sn**	**14 32 42.9**	**-0.2**
	baz=273						
NNS	**Nan Shan**	**0.81**	**273**	P	**Pn**	**14 32 31.4**	**-0.3**
	baz=274						
NNS				S	**Sn**	**14 32 43.3**	**0.0**
	baz=274						
YHNB	**Yeheng**	**0.84**	**288**	*eP*	**Pn**	**14 32 31.6**	**-0.5**
	baz=289						
YHNB				*eS*	**Sn**	**14 32 43.6**	**-0.5**
	baz=289						
TATO	**Taipei**	**0.90**	**309**	*eP*	**Pn**	**14 32 32.5**	**-0.2**
	baz=310						
TATO				*eS*	**Sn**	**14 32 43.8**	**-1.4**
	baz=310						
FUSS	**Fushou**	**0.94**	**261**	*eP*	**Pn**	**14 32 33.3**	**-0.1**
	baz=261						
FUSS				*eS*	**Sn**	**14 32 46.0**	**-0.5**
	baz=261						
WHF	**Hehuan Shan**	**0.94**	**254**	P	**Pn**	**14 32 33.4**	**-0.3**
	baz=255						
WHF				S	**Sn**	**14 32 46.8**	**0.0**
	baz=255						
ESL	**Shilin**	**0.95**	**232**	P	**Pn**	**14 32 32.9**	**-0.5**
	baz=232						
ESL				*eS*	**Sn**	**14 32 46.3**	**-0.2**
	baz=232						
YM01	**YM01**	**0.97**	**320**	*eP*	**Pn**	**14 32 33.0**	**-0.5**
	baz=320						
YM01				*eS*	**Sn**	**14 32 44.8**	**-2.0**
	baz=320						
YM04	**YM04**	**0.99**	**319**	*eP*	**Pn**	**14 32 32.9**	**-1.0**
	baz=319						
YM04				*eS*	**Sn**	**14 32 44.8**	**-2.5**
	baz=319						
TDCB	**Techi**	**1.01**	**262**	*eP*	**Pn**	**14 32 34.0**	**-0.2**
	baz=262						
TDCB				*eS*	**Sn**	**14 32 47.3**	**-0.7**
	baz=262						
CHGB	**Renai**	**1.04**	**251**	*eP*	**Pn**	**14 32 34.7**	**-0.1**
	baz=252						
CHGB				*eS*	**Sn**	**14 32 48.9**	**+0.1**
	baz=252						
EGFH	**Guangfu**	**1.05**	**226**	P	**Pn**	**14 32 34.0**	**-0.7**
	baz=226						
EGFH				*eS*	**Sn**	**14 32 48.2**	**-0.5**
	baz=226						
LIOB	**Emei**	**1.15**	**282**	P	**Pn**	**14 32 36.0**	**0.0**
	baz=283						
LIOB				S	**Sn**	**14 32 51.0**	**0.0**
	baz=283						
NSTT	**Nanjuang**	**1.16**	**281**	*eP*	**Pn**	**14 32 36.3**	**+0.2**
	baz=282						
NSTT				*eS*	**Sn**	**14 32 51.2**	**-0.1**
	baz=282						
HGSD	**Ruisui**	**1.19**	**220**	*eP*	**Pn**	**14 32 35.9**	**-0.5**
	baz=220						
HGSD				*eS*	**Sn**	**14 32 52.8**	**+1.0**
	baz=220						
WHP	**Taichung City**	**1.20**	**264**	P	**Pn**	**14 32 37.2**	**+0.5**
	baz=265						
WHP				S	**Sn**	**14 32 52.7**	**+0.5**
	baz=265						
VWDT	**VWDT**	**1.21**	**238**	*eP*	**Pn**	**14 32 36.5**	**-0.2**
	baz=238						
VWDT				*eS*	**Sn**	**14 32 52.1**	**-0.1**
	baz=238						
EHY	**Hungye**	**1.24**	**224**	*eP*	**Pn**	**14 32 35.9**	**-1.2**
	baz=224						
EHY				*eS*	**Sn**	**14 32 51.9**	**-1.1**
	baz=224						
DPDB	**Guoxing**	**1.27**	**253**	*eP*	**Pn**	**14 32 37.4**	**-0.1**
	baz=254						
DPDB				*eS*	**Sn**	**14 32 54.2**	**+0.4**
	baz=254						
WCS	**Beigang Elemen**	**1.27**	**255**	*eP*	**Pn**	**14 32 37.6**	**+0.1**
	baz=255						
WCS				*eS*	**Sn**	**14 32 55.2**	**+1.3**
	baz=255						
YULB	**Yu-li**	**1.34**	**221**	*eP*	**Pn**	**14 32 37.5**	**-0.9**
	baz=221						
YULB				*eS*	**Sn**	**14 32 53.8**	**-1.5**
	baz=221						
SSLB	**Suanglung**	**1.34**	**243**	*eP*	**Pn**	**14 32 39.1**	**+0.6**
	baz=243						
SSLB				*eS*	**Sn**	**14 32 54.9**	**-0.5**
	baz=243						
SMLT	**Sun Moon Lake**	**1.34**	**248**	*eP*	**Pn**	**14 32 38.6**	**+0.1**
	baz=247						
SMLT				*eS*	**Sn**	**14 32 57.5**	**+1.9**
	baz=247						
IRIF	**Iriomote-Funau**	**1.35**	**93**	P	**Pn**	**14 32 38.4**	**-0.1**
IRIF				*eS*	**Sn**	**14 32 55.7**	**+0.1**
EYUL	**Yuli**	**1.36**	**219**	*eP*	**Pn**	**14 32 38.6**	**0.0**
	baz=219						
TWF1	**Yuli**	**1.37**	**220**	*eP*	**Pn**	**14 32 37.9**	**-0.9**
	baz=220						
TWF1				*eS*	**Sn**	**14 32 55.7**	**-0.4**
	baz=220						
WHYT	**Xinyi Township**	**1.46**	**241**	*eP*	**Pn**	**14 32 40.3**	**+0.2**
	baz=241						
WHYT				*eS*	**Sn**	**14 32 59.5**	**+1.1**
	baz=241						
FULB	**Fuli**	**1.49**	**216**	*eP*	**Pn**	**14 32 39.7**	**-0.7**
	baz=216						
YUS	**Yu-Shan**	**1.50**	**233**	*eP*	**Pn**	**14 32 40.8**	**-0.2**
	baz=233						
YUS				*eS*	**Sn**	**14 32 59.8**	**-0.2**
	baz=233						
WJS	**Zhushan**	**1.51**	**248**	*eP*	**Pn**	**14 32 41.4**	**+0.7**
	baz=248						
WJS				*eS*	**Sn**	**14 33 01.4**	**+1.9**
	baz=248						
WNT	**Mingjian**	**1.53**	**250**	*eP*	**Pn**	**14 32 41.3**	**+0.4**
	baz=250						
WNT				*eS*	**Sn**	**14 33 01.3**	**+1.4**
	baz=250						
ALS	**Alishan**	**1.60**	**236**	P	**Pn**	**14 32 42.9**	**+0.7**
	baz=236						
ALS				*eS*	**Sn**	**14 33 03.6**	**+1.6**
	baz=236						
JKRS	**Kuro-shima**	**1.61**	**96**	P	**Pn**	**14 32 42.2**	**+0.2**
JKRS				S	**Sn**	**14 33 02.4**	**+0.6**
CHN5	**Tsauling**	**1.65**	**241**	P	**Pn**	**14 32 43.5**	**+0.8**
	baz=241						
CHN5				*eS*	**Sn**	**14 33 05.2**	**+2.2**
	baz=241						
ELDTW	**Lidau**	**1.66**	**223**	*eP*	**Pn**	**14 32 41.9**	**-0.9**
	baz=223						
ELDTW				*eS*	**Sn**	**14 33 02.4**	**-0.8**
	baz=223						
EDH	**Donghe**	**1.67**	**212**	*eP*	**Pn**	**14 32 41.6**	**-1.3**
	baz=211						
EDH				*eS*	**Sn**	**14 33 02.5**	**-0.8**
	baz=211						
JIJ	**Ishigaki jima**	**1.72**	**91**	P	**Pn**	**14 32 43.2**	**-0.3**
JIJ				S	**Sn**	**14 33 03.8**	**-0.8**
STYH	**Taoyuan**	**1.83**	**228**	*eP*	**Pn**	**14 32 45.5**	**+0.5**
	baz=228						
STYH				*eS*	**Sn**	**14 33 08.0**	**+0.9**
	baz=228						
STYT	**Tauyuan**	**1.85**	**228**	*eP*	**Pn**	**14 32 44.9**	**-0.4**
	baz=228						
STYT				*eS*	**Sn**	**14 33 09.9**	**+2.2**
	baz=228						
TPUB	**Ta-pu**	**1.85**	**234**	*eP*	**Pn**	**14 32 46.1**	**+0.8**
	baz=234						
TPUB				*eS*	**Sn**	**14 33 09.3**	**+1.6**
	baz=234						
WTK	**Tuku**	**1.85**	**248**	*eP*	**Pn**	**14 32 45.7**	**+0.4**
	baz=247						
WTK				*eS*	**Sn**	**14 33 07.6**	**0.0**
	baz=247						
JISG	**Ishigakijimahi**	**1.88**	**84**	P	**Pn**	**14 32 45.2**	**-0.5**
JISG				*eS*	**Sn**	**14 33 08.0**	**-0.4**
WTP	**Ta-pu**	**1.89**	**233**	*eP*	**Pn**	**14 32 45.4**	**-0.5**
	baz=232						
WTP				*eS*	**Sn**	**14 33 10.3**	**+1.5**
	baz=232						
TWK	**Hsinying**	**1.98**	**235**	*eP*	**Pn**	**14 32 47.5**	**+0.5**
	baz=235						
TWK				*eS*	**Sn**	**14 33 11.0**	**+0.2**
	baz=235						
CHN1	**Nanshi**	**1.99**	**233**	*eP*	**Pn**	**14 32 47.5**	**+0.2**
	baz=232						
CHN1				*eS*	**Sn**	**14 33 13.0**	**+1.8**
	baz=232						
WSF	**Szhu**	**2.01**	**248**	*eP*	**Pn**	**14 32 48.0**	**+0.6**
	baz=248						
WSF				*eS*	**Sn**	**14 33 10.2**	**-1.3**
	baz=248						
SLGT	**Liugui**	**2.04**	**227**	*eP*	**Pn**	**14 32 48.1**	**+0.3**
	baz=226						
SLGT				*eS*	**Sn**	**14 32 12.8**	**+0.6**
	baz=226						
ECL	**Taimali**	**2.16**	**214**	*eP*	**Pn**	**14 32 49.5**	**+0.1**
	baz=213						
ECL				*eS*	**Sn**	**14 33 12.1**	**-3.1**
	baz=213						
JTJ	**Tarama**	**2.24**	**83**	P	**Pn**	**14 32 50.8**	**+0.3**
JTJ				S	**Sn**	**14 33 17.5**	**+0.4**
MASBT	**Mashibuluo**	**2.32**	**220**	*eP*	**Pn**	**14 32 51.5**	**-0.2**
	baz=220						

JMA 09 14:32:58.5±0.1,37.°74N×142.°01E,h31km±2km,M2.1,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.71**	**323**	P	Pn	14 33 12.1	-0.4
JIKH				S	Sb	14 33 21.3	-0.7
JIO	**Ouri**	**0.88**	**324**	P	Pn	14 33 14.7	-0.1
JIO				S	Sn	14 33 26.0	-0.6
JMST	**Minamisoumatoc**	**0.89**	**269**	P	Pn	14 33 14.7	-0.2
JMST				S	Sn	14 33 26.1	-0.6
JMM	**Marumori**	**0.97**	**278**	P	Pn	14 33 16.1	+0.1
JMM				S	Sn	14 33 28.6	-0.1
JFK	**Kawauchi**	**0.98**	**248**	P	Pn	14 33 15.8	-0.3
JFK				S	Sn	14 33 28.3	-0.6
JKMT	**Kesennumamotoy**	**1.15**	**339**	P	Pn	14 33 18.4	0.0
JKMT				*eS*	Sn	14 33 32.2	-0.9
ONAJ	**Iwakimizuishiy**	**1.16**	**237**	P	Pn	14 33 18.4	-0.2
ONAJ				*eS*	Sn	14 33 32.3	-1.1
JOU	**Okura**	**1.23**	**301**	P	Pb	14 33 20.5	-0.7
JOU				*eS*	Sb	14 33 36.1	-0.7
JFT	**Otama**	**1.35**	**261**	P	Pb	14 33 22.3	-0.8
JFT				*eS*	Sb	14 33 39.4	-0.6
JMK	**Ichinoseki**	**1.36**	**333**	P	Pn	14 33 21.9	+0.6
JMK				*eS*	Sn	14 33 38.3	0.0

*NIED **09** 14:33:10.0,39.°67N×143.°55E,h12km,MW3.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.66; $M_{\theta\theta}$0.33; $M_{\phi\phi}$-0.99; $M_{r\theta}$0.91; $M_{r\phi}$-0.37; $M_{\theta\phi}$0.85; Fault plane solution: $M_0$1.56000×10^{14} NP1:ϕ_s43.00000°, δ76.00000°, λ,114.00000°. NP2:ϕ_s162.00000°, δ28.00000°, λ,33.00000°.*

JMA 09 14:33:10.0±0.3,39.°67N×143.°55E,h12km±4km,M3.6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.33**	**282**	P	Pn	14 33 34.0	-0.3
JTH				*eS*	Sb	14 33 51.0	-0.8
MIYJ	**Miyakonagasawa**	**1.34**	**267**	P	Pn	14 33 34.4	-0.1
MIYJ				*eS*	Sb	14 33 52.0	-0.1
JANG	**Nango**	**1.71**	**295**	P	Pn	14 33 39.6	-0.1
JOM	**Ohasama**	**1.76**	**264**	P	Pn	14 33 41.0	+0.8
JOM				S	Sb	14 34 03.4	-0.7
JTM	**Tenmabayashi**	**2.20**	**301**	P	Pn	14 33 47.5	+1.1
JTM				*eS*	Sb	14 34 15.9	-1.1
JRG	**Rokugo**	**2.27**	**264**	P	Pn	14 33 48.9	+1.6
JAH	**Hinai**	**2.30**	**284**	P	Pn	14 33 48.9	+1.2
JOT	**Ohata**	**2.56**	**313**	P	Pb	14 33 54.1	-1.8
JYK	**Kaneyama**	**2.59**	**254**	P	Pn	14 33 52.9	+1.2
JYK				*eS*	Sn	14 34 23.9	+0.8
JNBK	**Urakawa-nobuka**	**2.68**	**347**	P	Pn	14 33 55.0	+2.1
JNBK				*eS*	Sn	14 34 27.1	+1.9

*JMA **09** 14:52:27.4±0.1,40.°43N×142.°28E,h49km±1km,M3.8*
JMA Felt I J1.
*IDC **09** 14:52:32.0±16.0,40.°37N×142.°03E,h97km±78km,mb3.3/3, mb1 3.2/5,mb1mx3.0/31,mbtmp3.5/5,ML2.3/2,MS2.9/2, Ms1 2.9/2,ms1mx2.4/25,Error ellipse: s-maj=232.8km s-min=45.1km az=78.0*
ISC 09 14:52:26.4±2.2,40.°47N±0.°05×142.°4E±0.°2,h48km±14km, n23,σ1°05/25,mb3.5/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.55**	**242**	P	**Pn**	**14 52 38.4**	**+0.2**
JKEN				S	**Sn**	**14 52 46.2**	**-0.4**
JANG	**Nango**	**0.64**	**262**	P	**Pn**	**14 52 39.6**	**+0.3**
JANG				S	**Sn**	**14 52 48.1**	**-0.6**
JTH	**Tanohata**	**0.65**	**215**	P	**Pn**	**14 52 39.5**	**+0.2**
JTH				*eS*	**Sn**	**14 52 48.2**	**-0.5**
JKZ	**Kuzumaki**	**0.92**	**239**	P	**Pn**	**14 52 43.4**	**+0.4**
JKZ				S	**Sn**	**14 52 54.6**	**-0.6**
JARK	**Aomorirokkasho**	**0.92**	**306**	P	**Pn**	**14 52 43.5**	**+0.5**
JARK				S	**Sn**	**14 52 55.0**	**-0.1**
JTM	**Tenmabayashi**	**1.03**	**289**	P	**Pn**	**14 52 44.7**	**+0.3**
JTM				S	**Sn**	**14 52 57.0**	**-0.7**
JOM	**Ohasama**	**1.28**	**220**	P	**Pn**	**14 52 48.3**	**+0.4**
JOM				*eS*	**Sn**	**14 53 03.8**	**-0.1**
JAH	**Hinai**	**1.34**	**259**	P	**Pn**	**14 52 49.0**	**+0.4**
JAH				S	**Sn**	**14 53 04.9**	**-0.4**
JOT	**Ohata**	**1.34**	**313**	P	**Pn**	**14 52 49.2**	**+0.5**
JOT				S	**Sn**	**14 53 05.3**	**-0.1**
JRG	**Rokugo**	**1.70**	**232**	P	**Pn**	**14 52 54.6**	**+1.0**
JRG				*eS*	**Sn**	**14 53 14.8**	**+0.7**
MJAR	**Matsushiro Arr**	**5.09**	**221**	P	**Pn**	**14 53 42.5**	**+2.4**
	0.1nm,0.3s,baz=31,slow=13,SNR=6.8						
USRK	**Ussuriysk Ar.**	**8.53**	**299**	P	**Pn**	**14 54 30.7**	**+3.5**
	baz=107,slow=14,SNR=6.7						
KSRS	**Korea Array**	**11.63**	**260**	LR	LR	14 59 24.3	
	comp=Z,22nm,18.6s,baz=10.0,slow=36						
SONM	**Songino Array**	**26.64**	**298**	P	**P**	**14 58 00.1**	**-0.4**
	0.2nm,0.5s,baz=96,slow=15,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**29.46**	**127**	T	T	15 29 21.1	
	baz=319,slow=75,SNR=7.5						
H11N1	**WAKE ISLAND Hy**	**29.47**	**127**	T	T	15 29 30.6	
	baz=319,slow=75,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	15 29 23.9	
	baz=319,slow=75,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**30.29**	**129**	T	T	15 30 45.2	
	baz=321,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**30.29**	**129**	T	T	15 30 48.4	
	baz=321,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**30.30**	**129**	T	T	15 30 44.5	
	baz=321,slow=76,SNR=14						
ZALV	**Zalesovo Beam**	**40.22**	**309**	P	**P**	**14 59 57.2**	**-0.7**
	0.4nm,0.3s,baz=91,slow=10.0,SNR=2.4						
MKAR	**Makanchi Array**	**43.00**	**299**	P	**P**	**15 00 20.4**	**-0.5**
	0.6nm,0.7s,baz=88,slow=8.7,SNR=6.5						
INK	**Inuvik**	**51.01**	**28**	LR	LR	15 24 24.4	
	comp=Z,32nm,21.6s,baz=83,slow=37						

IDC 09 15:12:24.4±5.5,21.°47S×68.°12E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.5/43,mbtmp3.6/4,MS3.2/1,Ms1 3.1/1, ms1mx2.5/35,Error ellipse: s-maj=148.2km s-min=39.0km az=62.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**14.38**	**18**	T	T	15 30 02.1	
	baz=196,slow=76,SNR=9.5						
H08S2	**Diego Garcia H**	**14.38**	**18**	T	T	15 30 00.9	
	baz=196,slow=76,SNR=51						
H08S3	**Diego Garcia H**	**14.39**	**18**	T	T	15 29 57.2	
	baz=196,slow=76,SNR=24						
BOSA	**Boshof**	**39.32**	**251**	LR	LR	15 32 48.9	
	comp=Z,28nm,18.5s,baz=60,slow=31						
CMAR	**Chiang Mai Arr**	**49.86**	**40**	P	P	15 21 19.5	-0.1
	0.7nm,0.8s,baz=230,slow=8.9,SNR=6.1						
ASAR	**Alice Springs**	**60.29**	**106**	P	P	15 22 35.2	0.0
	0.7nm,0.8s,baz=263,slow=6.3,SNR=7.0						
WRA	**Warramunga Arr**	**61.53**	**102**	P	P	15 22 43.6	-0.1
	1.0nm,0.9s,baz=254,slow=5.1,SNR=3.5						
MKAR	**Makanchi Array**	**69.14**	**10**	P	P	15 23 32.5	+0.1
	0.3nm,0.6s,baz=212,slow=7.0,SNR=4.7						

*IDC **09** 15:57:24.1±0.9,37.°55N×75.°04E,h0km,mb3.9/11, mb1 4.1/17,mb1mx3.8/56,mbtmp4.0/17,ML3.7/6,Error ellipse: s-maj=20.2km s-min=16.9km az=62.0*
*NEIC **09** 15:57:41.9±2.6,38.°34N±0.°03×75.°2E±0.°1,h141km±9km, mb4.1/4,Error ellipse: s-maj=15.0km s-min=4.8km az=91.0*
*BJI **09** 15:57:41.5±0.0,38.°34N×75.°34E,h123km,mB4.2/6, mb4.0/7.*
*NNC **09** 15:57:44.5±4.0,38.°53N×75.°13E,h144km±32km,mb3.5, mpv4.4,Error ellipse: s-maj=44.7km s-min=15.9km az=8.0*
ISC 09 15:57:40.2±0.5,38.°09N±0.°04×75.°13E±0.°06,h135km,n72, σ2°26/77,mb3.5/11,5C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**3.88**	**285**		**Pn**	**15 58 39.2**	**+0.6**
UCH	**Uchtor**	**4.16**	**354**	P	**Pn**	**15 58 41.7**	**-0.9**
	SNR=349						
AML	**Almayashu**	**4.19**	**345**	P	**Pn**	**15 58 41.9**	**-0.9**
	SNR=85						
ULHL	**Ulahol**	**4.24**	**11**	P	**Pn**	**15 58 42.4**	**-1.0**
	SNR=107						
KBK	**Karagaybulak**	**4.57**	**358**	P	**Pn**	**15 58 47.3**	**-0.4**
	SNR=56						
AAK	**Ala-Archa**	**4.57**	**354**	Pn	**Pn**	**15 58 47.4**	**-0.3**
	17nm,0.3s,baz=174,slow=7.9,SNR=142						
AAK					**Sn**	**15 59 36.5**	**-3.8**
	5.7nm,0.3s,baz=230,slow=23,SNR=5.8						
AAK				Lg	Lg	15 59 59.5	
	baz=160,slow=20,SNR=1.5						
AAK	**Ala-Archa**	**4.57**	**354**	P	**Pn**	**15 58 47.5**	**-0.3**
	SNR=97						
AAK	**Ala-Archa**	**4.57**	**354**	⇑P	**Pn**	**15 58 47.4**	**-0.3**
	61nm,0.6s						
AAK	**Ala-Archa**	**4.57**	**354**		**Pn**	**15 58 47.3**	**-0.4**
CHCP	**Chirah Chowk**	**4.67**	**199**	P	Pn	15 58 55.0	+5.9
NIL	**Nilore**	**4.68**	**200**		Pn	15 58 54.8	+5.6
EKS2	**Erkin-Say**	**4.68**	**348**	P	**Pn**	**15 58 49.0**	**-0.2**
	SNR=86						
TKM2	**Tokmak 2**	**4.84**	**4**	P	**Pn**	**15 58 50.9**	**-0.5**
	SNR=76						
TKM2	**Tokmak 2**	**4.84**	**4**	⇓P	**Pn**	**15 58 50.9**	**-0.5**
	88nm,0.6s						
CHMS	**Chumysh**	**4.91**	**357**	P	**Pn**	**15

DDI	**Dehra Dun**	**8.12**	**162**	*e*P		**Pn**	**15 59 37.7**	**+2.4**
DDI				IAmb		IAmb	15 59 39.5	
	comp=Z,83nm,0.8s							
DDI				*e*S		**Sn**	**16 01 03.4**	**-2.1**
DDI				IAML			16 01 09.3	
	comp=N,116nm,0.3s							
DDI				IAML			16 01 09.9	
	comp=E,136nm,0.3s							
MAKZ	**Makanchi**	**10.07**	**28**			**Pn**	**15 59 58.8**	**-2.5**
MK31	**Makanchi Array**	**10.18**	**29**	P		**Pn**	**16 00 00.6**	**-2.1**
	comp=E,4.7nm,0.5s,baz=205,slow=11,SNR=79							
MK31	**Makanchi Array**	**10.18**	**29**	Pn		**Pn**	**16 00 01.2**	**-1.5**
MKAR	**Makanchi Array**	**10.18**	**29**	Pn		**Pn**	**16 00 01.1**	**-1.6**
	comp=E,1.4nm,0.3s,baz=207,slow=15,SNR=9.6							
HRA	**Herat**	**11.04**	**254**	Pn		**Pn**	**16 00 16.3**	**+1.8**
WMQ	**Urumqi**	**11.09**	**55**	*e*P		**Pn**	**16 00 14.5**	**-0.4**
PYUN	**Piuthan**	**11.94**	**144**	*e*P		**Pn**	**16 00 25.3**	**-1.0**
KOLN	**Koldanda**	**12.50**	**143**	*e*P		**Pn**	**16 00 32.7**	**-1.0**
	comp=E,29nm,0.6s							
KURBB	**Kurchatov Arra**	**12.76**	**10**	Pn		**Pn**	**16 00 33.4**	**-3.3**
	comp=E,0.1nm,0.3s,baz=196,slow=12,SNR=20							
KURBB				Sn		**Sn**	**16 03 02.5**	**+5.2**
	comp=E,0.0nm,0.3s,baz=200,slow=28,SNR=2.1							
KURBB				Lg		Lg	16 04 19.7	
	comp=E,0.1nm,0.3s,baz=206,slow=26,SNR=4.2							
GKN	**Gorkha**	**12.83**	**139**	*e*P		**Pn**	**16 00 37.0**	**-0.8**
	comp=E,13nm,0.4s							
KURK	**Kurchatov**	**12.87**	**10**			**Pn**	**16 00 33.4**	**-4.6**
KURK						**Sn**	**16 03 02.5**	**+2.7**
DMN	**Daman**	**13.39**	**138**	*e*P		**Pn**	**16 00 44.2**	**-1.0**
	comp=E,7.2nm,0.4s							
GEYT	**Alibeck**	**13.42**	**275**	Sn		**Sn**	**16 03 09.7**	**-3.7**
	comp=E,0.5nm,0.3s,baz=57,slow=16,SNR=2.1							
GUN	**Gumba**	**13.57**	**135**	*e*P		**Pn**	**16 00 46.5**	**-1.0**
	comp=E,6.9nm,0.3s							
PKIN	**Phulchoki**	**13.57**	**138**	*e*P		**Pn**	**16 00 45.9**	**-1.6**
	comp=E,16nm,0.4s							
PKI	**Pulchoki**	**13.58**	**138**	*e*P		**Pn**	**16 00 46.2**	**-1.5**
	comp=E,16nm,0.7s							
JIRN	**Jiri**	**13.93**	**135**	*e*P		**Pn**	**16 00 51.1**	**-1.1**
	comp=E,28nm,0.4s							
RAMN	**Ramite**	**14.71**	**136**	*e*P		**Pn**	**16 00 59.9**	**-2.1**
	comp=E,7.9nm,0.3s							
BHPL	**Bhopal**	**14.93**	**172**	*e*P		**Pn**	**16 01 03.8**	**-0.7**
BHPL				IAmb		IAmb	16 01 10.4	
	comp=Z,12nm,0.8s							
BHPL				*e*S		**Sn**	**16 03 43.4**	**-6.6**
TAPN	**Taplejung**	**15.04**	**132**	*e*P		**Pn**	**16 01 05.5**	**-0.6**
	comp=Z,4.9nm,0.3s							
ODAN	**Odare**	**15.23**	**134**	*e*P		**Pn**	**16 01 06.0**	**-2.4**
	comp=Z,5.6nm,0.5s							
BVAR	**Borovoye Array**	**15.30**	**349**	Pn		**Pn**	**16 01 06.3**	**-2.4**
	comp=E,0.3nm,0.3s,baz=191,slow=14,SNR=15							
BRVK	**Borovoye**	**15.35**	**349**	⇑P		**Pn**	**16 01 09.0**	**-0.3**
	comp=Z,15nm,1.1s							
BRVK	**Borovoye**	**15.35**	**349**	P		**Pn**	**16 01 08.0**	**-1.4**
BRVK				IAmb		IAmb	16 01 14.2	
	comp=Z,11nm,0.7s							
AB31	**Akbulak array**	**15.63**	**320**	P		**Pn**	**16 01 11.7**	**-1.3**
	comp=Z,1.9nm,0.5s,baz=125,slow=11,SNR=34							
AB31				⇓S		Sn	16 03 54.5	-12
	comp=Z,2.4nm,0.8s,baz=132,slow=25,SNR=4.6							
ABKAR	**Akbulak array**	**15.63**	**320**	⇑P		**Pn**	**16 01 12.1**	**-0.9**
ZAA0	**Zalesovo Array**	**17.20**	**20**	⇑P		**P**	**16 01 29.9**	**-1.7**
	comp=Z,1.6nm,0.9s							
ZAA0	**Zalesovo Array**	**17.20**	**20**	P		**P**	**16 01 29.8**	**-1.7**
ZAA0				IAmb		IAmb	16 01 31.1	
	comp=Z,7.2nm,0.8s							
ZALV	**Zalesovo Beam**	**17.20**	**20**	P		**P**	**16 01 30.5**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=209,slow=12,SNR=30							
AKTO	**Aktyubinsk**	**17.34**	**321**	P		**Pn**	**16 01 33.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=123,slow=17,SNR=17							
AKTO				S		**S**	**16 04 40.7**	**-6.0**
	comp=Z,0.0nm,0.3s,baz=232,slow=23,SNR=1.4							
AKTO	**Aktyubinsk**	**17.34**	**321**	⇓P		**Pn**	**16 01 34.8**	**+1.0**
	comp=Z,6.1nm,0.8s							
ARU	**Arti**	**21.42**	**334**	P		**P**	**16 02 19.0**	**+1.9**
	comp=Z,3.3nm,0.6s,baz=128,slow=17,SNR=4.6							
ARU	**Arti**	**21.42**	**334**	P		**P**	**16 02 18.6**	**+1.5**
SONM	**Songino Array**	**24.72**	**57**	P		**P**	**16 02 50.9**	**+2.0**
	comp=Z,2.0nm,0.7s,baz=257,slow=9.5,SNR=15							
FINES	**FINESS Array B**	**38.07**	**324**	P		**P**	**16 04 45.7**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=112,slow=11,SNR=3.2							
ARCES	**ARCESS Array B**	**40.99**	**336**	P		**P**	**16 05 10.8**	**+1.4**
	comp=Z,2.3nm,0.9s,baz=106,slow=6.7,SNR=5.1							
GERES	**GERESS Array B**	**44.73**	**304**	P		**P**	**16 05 40.6**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=182,slow=33,SNR=2.4							
NOA	**NORSAR Array B**	**45.13**	**322**	P		**P**	**16 05 45.3**	**+2.5**
	comp=Z,1.1nm,0.9s,baz=96,slow=8.0,SNR=1.6							
ESDC	**Sonseca Array**	**59.61**	**299**	P		**P**	**16 07 31.0**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=58,slow=6.3,SNR=4.1							
TORD	**Torodi Ar. Bea**	**69.02**	**270**	P		**P**	**16 08 32.5**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=43,slow=5.8,SNR=6.9							
YKA	**Yellowknife Ar**	**79.46**	**5**	P		**P**	**16 09 33.0**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=351,slow=5.1,SNR=16							
WRA	**Warramunga Arr**	**80.11**	**125**	P		**P**	**16 09 33.2**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=317,slow=4.2,SNR=5.7							
ASAR	**Alice Springs**	**82.54**	**128**	P		**P**	**16 09 49.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=319,slow=5.6,SNR=10							

*IDC **09** 16:33:31.2±1.4, 12°.91N×90°.71W, h0km, mb3.5/6, mb1 3.9/8, mb1mx3.6/50, mbtmp3.6/8, ML3.5/2, MS3.4/5, Ms1 3.4/5, ms1mx2.9/31, Error ellipse: s-maj=45.5km s-min=23.0km az=58.0*

*SNET **09** 16:33:33.5±1.6, 12°.94N×90°.63W, h7km±16km, MD4.0*

*UCR **09** 16:33:33.2±1.8, 12°.85N×90°.78W, h32km±135km, MD4.0*

*INET **09** 16:33:34.0, 12°.98N×90°.76W, h15km, MW3.6*

ISC 09 16:33:34.3±1.0, 13°.00N±0°.08×90°.70W±0°.05, h24km, n39, σ1°25/41, mb3.6/5, MS3.1/4, 4C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEVE	**Cerro Verde**	**1.33**	**52**	*i* P		**Pn**	**16 33 57.3**	**-0.3**
CEVE	**Cerro Verde**	**1.33**	**52**	*i* P		**Pn**	**16 33 57.3**	**-0.3**
SBLS	**San Blas**	**1.34**	**51**	*e*P		**Pn**	**16 33 58.0**	**+0.3**
SBLS	**San Blas**	**1.34**	**51**	*e*P		**Pn**	**16 33 58.0**	**+0.3**
RTR	**El Retiro**	**1.36**	**49**	⇓*i*P		**Pn**	**16 33 58.4**	**+0.4**
RTR	**El Retiro**	**1.36**	**49**	⇓*i*P		**Pn**	**16 33 58.4**	**+0.4**
SNJE	**San Jose**	**1.37**	**51**	*e*P		**Pn**	**16 33 58.4**	**+0.2**
SNJE	**San Jose**	**1.37**	**51**	*e*P		**Pn**	**16 33 58.4**	**+0.2**
JAYA	**Jayaque - finc**	**1.38**	**62**	*e*P		**Pn**	**16 33 58.1**	**-0.2**
JAYA	**Jayaque - finc**	**1.38**	**62**	*e*P		**Pn**	**16 33 58.1**	**-0.2**
TACO	**Tacachico**	**1.63**	**53**	⇑*i*P		**Pn**	**16 34 01.9**	**+0.4**
TACO				*e*S		**Sb**	**16 34 25.0**	**+1.2**
TACO	**Tacachico**	**1.63**	**53**	⇑*i*P		**Pn**	**16 34 01.9**	**+0.4**
TACO				*e*S		**Sb**	**16 34 25.0**	**+1.2**
LFRS	**El Faro**	**1.71**	**68**	*e*P		**Pn**	**16 34 02.5**	**-0.3**
LFRS	**El Faro**	**1.71**	**68**	*e*P		**Pn**	**16 34 02.5**	**-0.3**
LBRS	**Las Brisas**	**1.77**	**65**	*e*P		**Pn**	**16 34 05.0**	**+1.5**
LBRS	**Las Brisas**	**1.77**	**65**	*e*P		**Pn**	**16 34 05.0**	**+1.5**
COEG	**Centro de Oper**	**1.87**	**71**	*e*P		**Pn**	**16 34 05.8**	**+0.9**
COEG	**Centro de Oper**	**1.87**	**71**	*e*P		**Pn**	**16 34 05.8**	**+0.9**
MTO3	**Montecristo**	**1.91**	**43**	⇑*i*P		**Pn**	**16 34 06.2**	**+0.7**
MTO3	**Montecristo**	**1.91**	**43**	⇑*i*P		**Pn**	**16 34 06.2**	**+0.7**
APG	**El Apazote**	**2.01**	**6**	Pn		**Pn**	**16 34 08.8**	**+1.8**
	baz=151,slow=19							
APG				Lg		Lg	16 34 35.0	
	baz=294,slow=20							
MRL	**Marmol**	**2.29**	**25**	*e*P		**Pn**	**16 34 11.8**	**+0.9**
MRL	**Marmol**	**2.29**	**25**	*e*P		**Pn**	**16 34 11.8**	**+0.9**
MRL				*i* P		**Pb**	**16 34 12.1**	**-3.0**
LCND	**La Caada**	**2.75**	**83**	*e*P		**Pn**	**16 34 17.6**	**+0.6**
LCND				*e*S		**Sn**	**16 34 49.9**	**+0.4**
LCND	**La Caada**	**2.75**	**83**	*e*P		**Pn**	**16 34 17.6**	**+0.6**
LCND				*e*S		**Sn**	**16 34 49.9**	**+0.4**
CMIG	**Matias Romero**	**5.74**	**316**	Pn		**Pn**	**16 34 59.8**	**+1.8**
	0.5nm,0.3s,baz=148,slow=7.9,SNR=6.5							
CMIG				Sn		**Sn**	**16 36 01.6**	**-1.6**
	0.5nm,0.3s,baz=97,slow=11,SNR=1.7							
CMIG				Lg		Lg	16 36 21.8	
	1.6nm,0.3s,baz=139,slow=15,SNR=3.3							
JTS	**Las Juntas de**	**6.24**	**115**	Pn		**Pn**	**16 35 08.1**	**+3.2**
	0.7nm,0.3s,baz=22,slow=19,SNR=1.6							
JTS				Sn		**Sn**	**16 36 13.3**	**-2.3**
	0.5nm,0.3s,baz=171,slow=23,SNR=1.6							
JTS				Lg		Lg	16 36 51.1	
	0.4nm,0.3s,baz=31,slow=22,SNR=1.8							
TEIG	**Tepich**	**7.55**	**18**	Pn		**Pn**	**16 35 25.4**	**+2.4**
	1.8nm,0.3s,baz=312,slow=0.6,SNR=9.2							
TEIG				Lg		Lg	16 37 30.2	
	0.2nm,0.3s,baz=219,slow=24,SNR=2.3							
TEIG				LR		LR	16 38 48.8	
	comp=Z,341nm,18.7s,baz=121,slow=42							
SDV	**Santo Domingo**	**20.11**	**100**	LR		LR	16 48 03.5	
	comp=Z,52nm,18.4s,baz=286,slow=43							
TXAR	**Lajitas Array**	**20.23**	**325**	P		Pn	16 38 10.6	+0.6
	1.2nm,0.6s,baz=153,slow=9.8,SNR=10.0							
TKL	**Tuckaleechee C**	**23.41**	**14**	LR		LR	16 48 57.7	
	comp=Z,114nm,18.2s,baz=162,slow=39							
ANMO	**Albuquerque**	**26.10**	**330**	LR		LR	16 51 30.1	
	comp=Z,33nm,18.3s,baz=127,slow=41							
SADO	**Sadowa**	**33.17**	**15**	LR		LR	16 54 21.4	
	comp=Z,114nm,18.8s,baz=86,slow=38							
NVAR	**Mina Array Bea**	**35.24**	**321**	P		**P**	**16 40 29.6**	**+2.3**
	0.2nm,0.4s,baz=130,slow=8.4,SNR=2.4							
SIV	**San Ignacio**	**41.09**	**134**	P		**P**	**16 41 17.1**	**+0.6**
	0.7nm,0.6s,baz=302,slow=9.7,SNR=4.6							
YKA	**Yellowknife Ar**	**52.29**	**346**	P		**P**	**16 42 43.0**	**-0.6**
	0.3nm,0.6s,baz=148,slow=8.0,SNR=6.7							
INK	**Inuvik**	**61.76**	**343**	P		**P**	**16 43 50.1**	**-0.4**
	0.9nm,0.8s,baz=84,slow=7.6,SNR=3.4							
ILAR	**Eielson Array**	**64.25**	**337**	P		**P**	**16 44 07.2**	**0.0**
	0.5nm,0.9s,baz=157,slow=4.9,SNR=2.7							
CMAR	**Chiang Mai Arr**	**147.33**	**343**	PKPbc		**PKPab**	**16 53 18.1**	**-0.5**
	1.0nm,0.7s,baz=348,slow=3.5,SNR=8.1							

*NIC **09** 16:36:24.9±0.0, 34°.04N×30°.60E, h20km±8km, Md2.0/1*

*HLW **09** 16:36:27.5, 33°.77N×30°.77E, h11km±14km, Ml3.6*

ISC 09 16:36:25.7±2.0, 33°.94N±0°.07×30°.6E±0°.1, h35km, n10, σ1°81/15, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OSC1	**CSNet OBS 1**	**0.71**	**128**	P		**Pn**	**16 36 39.8**	**+0.6**
OSC1				S		**Sn**	**16 36 51.3**	**+2.4**
OSC1				AMd			16 36 57.0	
OSC1				AMd			16 36 57.0	
AKMS	**Akamas**	**1.78**	**53**	P		**Pn**	**16 36 53.8**	**-0.3**
SZAC	**Souni**	**2.04**	**66**	P		**Pn**	**16 36 57.9**	**+0.2**
SZAC				S		**Sn**	**16 37 22.4**	**+0.4**
ASGA	**Asgata**	**2.34**	**68**	P		**Pn**	**16 37 02.0**	**+0.3**
KOT	**Kottamia**	**4.13**	**165**	P		**Pn**	**16 37 27.8**	**+1.3**
	baz=166							
KOT				AMP			16 38 00.0	
	baz=166							
KOT				S		**Sn**	**16 38 11.4**	**-2.1**
	baz=166							
GLL	**Jalalah**	**4.45**	**168**	P		**Pn**	**16 37 32.3**	**+1.5**
	baz=168							
SUZ	**Suez**	**4.50**	**155**	P		**Pn**	**16 37 32.7**	**+1.2**
	baz=155							
RYAN	**Fayoum**	**4.85**	**183**	P		**Pn**	**16 37 37.6**	**+1.4**
	baz=186							
RYAN				AMP			16 38 00.0	
	baz=186							
RYAN				S		**Sn**	**16 38 29.7**	**-1.6**
	baz=186							
HKAT	**Jabal Katrina**	**6.13**	**151**	P		**Pn**	**16 37 54.5**	**+0.5**
	baz=151							
HKAT				S		**Sn**	**16 38 58.8**	**-4.2**
	baz=151							
HFRF	**Wahat Farafira**	**7.06**	**197**	P		**Pn**	**16 38 07.4**	**+0.9**
	baz=199							

*NEIC **09** 16:37:12.9±1.8, 41°.69N±0°.04×110°.67W±0°.05, h0km±2km, ML2.6/124, Error ellipse: s-maj=7.0km s-min=6.3km az=139.0*

*IDC **09** 16:37:13.5±1.4, 41°.94N×110°.69W, h0km, mb2.6/1, mb1 3.1/3, mb1mx3.0/52, mbtmp2.8/3, ML2.4/2, Error ellipse: s-maj=37.8km s-min=8.6km az=147.0*

ISC 09 16:37:11.9±0.9, 41°.69N±0°.02×110°.61W±0°.03, h0km, n75, σ1°39/74, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWUT	**Hardware Ranch**	**0.72**	**264**			**Pg**	**16 37 25.7**	**0.0**
HWUT				IAML			16 37 44.5	
	156nm,1.1s							
TCUT	**Toone Canyon**	**0.83**	**227**			**Pg**	**16 37 28.5**	**+0.7**
TCUT				IAML			16 37 55.3	
	comp=N,429nm,0.6s							
AHID	**Auburn Hatcher**	**1.14**	**341**			**Pg**	**16 37 33.7**	**0.0**
AHID				IAML			16 37 55.7	
	comp=E,139nm,0.5s							
AHID				IAML			16 37 56.2	
	comp=N,176nm,0.5s							
JLU	**Jordanelle**	**1.26**	**211**			**Pg**	**16 37 36.1**	**+0.1**
JLU				IAML			16 37 59.0	
	comp=E,71nm,0.6s							
CTU	**Camp Tracy**	**1.32**	**221**			**Pg**	**16 37 37.0**	**-0.2**
CTU				IAML			16 38 08.0	
	comp=E,57nm,0.7s							
BW06	**Boulder Array**	**1.33**	**35**			**Pg**	**16 37 37.2**	**-0.1**
PD31	**Pinedale Array**	**1.33**	**35**			**Pg**	**16 37 37.3**	**0.0**
PDAR	**Pinedale Array**	**1.33**	**35**	Pg		**Pg**	**16 37 37.2**	**-0.2**
	comp=E,4.5nm,0.3s,baz=213,slow=15,SNR=154							
PDAR				Lg		Lg	16 37 57.2	
	comp=E,7.1nm,0.3s,baz=225,slow=15,SNR=19							
PDAR	**Pinedale Array**	**1.33**	**35**	Pn		**Pg**	**16 37 37.0**	**-0.4**
RDMU	**Red Mountain**	**1.36**	**145**			**Pg**	**16 37 38.2**	**+0.2**
RDMU				IAML			16 38 02.9	
	comp=E,52nm,0.8s							
SPUT	**South Promonto**	**1.44**	**255**			**Pn**	**16 37 39.1**	**-0.2**
SPUT				IAML			16 38 06.8	
	comp=N,54nm,0.6s							
ECR	**Eagle Creek**	**1.48**	**338**			**Pn**	**16 37 40.0**	**0.0**
HVU	**Hansel Valley**	**1.63**	**274**	Pn		**Pn**	**16 37 41.6**	**-0.3**
HVU				IAML			16 38 08.0	
	comp=E,142nm,0.6s							
HVU				IAML			16 38 10.4	
	comp=N,116nm,0.6s							
REDW	**Red Top Meadow**	**1.68**	**354**			**Pn**	**16 37 43.0**	**+0.2**
REDW				IAML			16 38 17.0	
	comp=N,95nm,0.8s							
REDW				IAML			16 38 17.4	
	comp=N,77nm,1.1s							
SNOW	**Snow King Moun**	**1.78**	**356**			**Pb**	**16 37 45.1**	**-0.3**
SNOW				IAML			16 38 08.1	
	comp=N,83nm,0.5s							
SNOW				IAML			16 38 15.1	
	comp=N,76nm,0.8s							
MPU	**Maple Canyon**	**1.84**	**205**			**Pn**	**16 37 44.3**	**-0.7**
LOHW	**Long Hollow**	**1.92**	**0**			**Pn**	**16 37 45.8**	**-0.3**
LOHW				IAML			16 38 17.3	
	comp=N,29nm,1.1s							
LOHW				IAML			16 38 18.7	
	comp=N,32nm,0.8s							
BGU	**Big Grassy Mou**	**1.98**	**248**	Pn		**Pn**	**16 37 47.1**	**+0.3**
NLU	**North Lily Min**	**2.06**	**213**			**Pn**	**16 37 47.9**	**-0.1**
P17A	**Butcher Ranch,**	**2.22**	**183**			**Pn**	**16 37 51.0**	**+1.0**
P17A				IAML			16 38 29.6	
	comp=N,38nm,0.9s							
P17A				IAML			16 38 29.7	
	comp=E,50nm,0.8s							
DUG	**Dugway, Tooele**	**2.24**	**229**			**Pn**	**16 37 51.0**	**+0.6**
DUG				IAML			16 38 30.9	
	comp=E,30nm,0.6s							
DUG				IAML			16 38 38.2	
	comp=E,21nm,0.7s							
O20A	**White River Ci**	**2.37**	**130**	Pn		**Pb**	**16 37 55.3**	**-0.2**
O20A				IAML			16 38 37.4	
	comp=E,52nm,0.5s							
FLWY	**Flagg Ranch**	**2.39**	**358**	Pn		**Pb**	**16 37 55.2**	**-0.8**
FLWY				IAML			16 38 35.1	
	comp=E,25nm,1.4s							
FLWY				IAML			16 38 47.9	
	comp=E,32nm,1.3s							
TMUT	**Trail Mountain**	**2.43**	**191**			**Pn**	**16 37 54.4**	**+1.2**
TMUT				IAML			16 38 33.9	
	comp=N,36nm,0.7s							
TMUT				IAML			16 38 36.7	
	comp=E,50nm,0.6s							
RWWY	**Rawlins**	**2.54**	**89**	Pn		**Pb**	**16 37 57.3**	**-1.3**
RWWY				IAML			16 38 33.6	
	comp=E,39nm,0.6s							
RWWY				IAML			16 38 47.2	
	comp=E,45nm,0.7s							
SRU	**San Rafael Swe**	**2.58**	**179**			**Pn**	**16 37 57.6**	**+2.5**
SRU				IAML			16 38 44.2	
	comp=E,46nm,0.7s							
SRU				IAML			16 38 46.5	
	comp=N,41nm,0.7s							
YPP	**Pitchstone Pla**	**2.58**	**357**			**Pb**	**16 37 57.9**	**-1.4**
H17A	**Grant Village**	**2.71**	**0**			**Pb**	**16 37 59.2**	**-2.1**
Q16A	**Castle Valley**	**2.80**	**189**			**Pn**	**16 37 58.8**	**+0.7**
Q16A				IAML			16 38 51.8	
	comp=N,19nm,0.7s							
Q16A				IAML			16 38 53.0	
	comp=E,15nm,0.9s							
YMR	**Madison River**	**2.99**	**355**			**Pn**	**16 38 03.1**	**+2.3**
YMR				IAML			16 39 02.0	
	comp=N,21nm,1.1s							
YMR				IAML			16 39 02.9	
	comp=E,16nm,1.1s							
YNR	**Norris Junctio**	**3.03**	**359**			**Pb**	**16 38 04.2**	**-2.6**
YMP	**Mirror Lake Pl**	**3.07**	**6**			**Pn**	**16 38 03.6**	**+1.7**
YMP				IAML			16 39 02.7	
	comp=N,11nm,1.6s							
YMP				IAML			16 39 11.7	
	comp=E,9.4nm,1.1s							
YHB	**Horse Butte**	**3.09**	**352**			**Pn**	**16 38 03.0**	**+0.9**
YHH	**Holmes Hill**	**3.10**	**357**			**Pn**	**16 38 03.1**	**+0.8**
K22A	**Casper**	**3.18**	**71**			**Pb**	**16 38 08.1**	**-1.3**
K22A				IAML			16 38 58.5	
	comp=E,28nm,0.7s							
K22A				IAML			16 39 06.6	
	comp=N,27nm,0.7s							
YHL	**Hebgen Lake**	**3.19**	**353**			**Pb**	**16 38 08.0**	**-1.6**
QLMT	**Earthquake Lak**	**3.20**	**349**			**Pn**	**16 38 06.1**	**+2.5**
BCYI	**Bear Canyon**	**3.33**	**323**			**Pn**	**16 38 07.5**	**+2.0**
YNE	**Yellowstone No**	**3.35**	**7**			**Pb**	**16 38 11.9**	**-0.3**
YNE				IAML			16 39 03.7	
	comp=N,11nm,3.5s							
YNE				IAML			16 39 32.1	
	comp=E,14nm,4.5s							
HLID	**Hailey**	**3.38**	**305**	Pn		**Pn**	**16 38 05.7**	**-0.3**
TCRU	**Three Creeks R**	**3.38**	**205**			**Pn**	**16 38 07.1**	**+0.9**
TCRU				IAML			16 38 29.0	
	comp=E,12nm,0.6s							
TCRU				IAML			16 39 07.2	
	comp=N,11nm,1.1s							
MSU	**Marysvale**	**3.39**	**201**	Pn		**Pn**	**16 38 07.0**	**+0.7**
PV22	**Blue Mesa, Par**	**3.44**	**156**			**Pn**	**16 38 08.5**	**+1.5**
PV10	**Paradox Valley**	**3.52**	**160**			**Pn**	**16 38 10.2**	**+2.1**
PV14	**Lion Creek, Pa**	**3.53**	**159**			**Pn**	**16 38 09.2**	**+1.1**
MCMT	**McKenzie Canyo**	**3.54**	**333**			**Pn**	**16 38 09.7**	**+1.3**
PV04	**Paradox Valley**	**3.54**	**158**			**Pn**	**16 38 09.8**	**+1.5**
RLMT	**Red Lodge**	**3.57**	**15**			**Pn**	**16 38 09.1**	**+0.4**
RLMT				IAML			16 39 19.3	
	comp=N,7.0nm,2.9s							
PV20	**West Nyswonger**	**3.57**	**159**	Pn		**Pn**	**16 38 09.9**	**+1.1**
PV07	**Paradox Valley**	**3.58**	**155**			**Pn**	**16 38 10.3**	**+1.5**
PV07				IAML			16 39 16.9	
	comp=N,20nm,0.9s							
PV19	**Morning Glory**	**3.60**	**159**			**Pn**	**16 38 09.9**	**+0.8**
PV19				IAML			16 39 26.8	
	comp=E,22nm,0.7s							
PV16	**Nyswonger Mesa**	**3.61**	**158**			**Pn**	**16 38 08.8**	**-0.5**
ELK	**Elko**	**3.62**	**256**	Pn		**Pn**	**16 38 12.4**	**+2.9**
	comp=E,0.1nm,0.3s,baz=59,slow=18,SNR=2.1							
ELK				Lg		Lg	16 39 06.2	
	comp=E,0.2nm,0.3s,baz=192,slow=19,SNR=1.8							
ELK	**Elko**	**3.62**	**256**			**Pn**	**16 38 08.2**	**-1.2**
PV17	**East Wray Mesa**	**3.63**	**159**			**Pn**	**16 38 10.4**	**+0.8**
PV17				IAML			16 39 27.8	
	comp=E,21nm,0.8s							
PV11	**David Mesa, Pa**	**3.64**	**158**			**Pn**	**16 38 10.0**	**+0.3**
PV12	**Saucer Basin,**	**3.64**	**157**			**Pn**	**16 38 11.7**	**+2.0**
PV18	**Skein Mesa, Pa**	**3.68**	**159**			**Pn**	**16 38 10.8**	**+0.6**
PV18				IAML			16 39 16.3	
	comp=E,14nm,0.7s							
PV18				IAML			16 39 18.1	
	comp=N,13nm,1.4s							
PV03	**Paradox Valley**	**3.69**	**158**			**Pn**	**16 38 10.9**	**+0.6**
PV03				IAML			16 39 16.9	
	comp=E,18nm,1.0s							
PV03				IAML			16 39 22.5	
	comp=N,17nm,1.2s							
PV15	**Paradox Valley**	**3.72**	**153**			**Pn**	**16 38 11.6**	**+0.7**
SMCO	**Snowmass**	**3.74**	**131**			**Pb**	**16 38 16.3**	**-2.7**
SMCO				IAML			16 39 22.9	
	comp=N,18nm,0.9s							
PV02	**Paradox Valley**	**3.76**	**157**			**Pn**	**16 38 13.1**	**+1.7**
PV13	**Radium Mtn., P**	**3.78**	**158**		

TAPN	**Taplejung**	**6.66**	**50**	*e*Pn		**Pn**	**17 02 07.5**	**0.0**
	21nm,0.6s							
MKAR	**Makanchi Array**	**23.61**	**0**	P		**P**	**17 05 40.2**	**-0.1**
	0.3nm,0.6s,baz=175,slow=9.7,SNR=3.7							
TLY	**Talaya**	**33.02**	**25**	LR		LR	17 20 39.2	
	comp=Z,58nm,18.4s,baz=184,slow=38							
WRA	**Warramunga Arr**	**66.63**	**126**	P		**P**	**17 11 20.2**	**-0.2**
	0.4nm,0.8s,baz=315,slow=6.3,SNR=4.9							
ASAR	**Alice Springs**	**68.60**	**129**	P		**P**	**17 11 32.9**	**+0.1**
	0.3nm,0.8s,baz=311,slow=6.3,SNR=6.6							

*IDC **09** 17:00:57.9±1.0,67.11N×20.48E,h0km,mb1 2.9/3, mb1mx2.8/49,mbtmp2.8/3,ML1.9/3,Error ellipse: s-maj=9.7km s-min=3.9km az=154.0*
*UPP **09** 17:00:58.6±0.1,67.06N×20.94E,h0km,ML2.3,Explosion HEL **09** 17:00:59.5±0.1,67.07N×20.96E,h0km,ML2.0, ML2.3(UPP),Explosion*

ISC 09 17:00:58.2±0.8,67.07N±0.02×20.86E±0.03,h0km,n45, σ1.934/59,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAJU	**Pajala**	**0.89**	**92**	P	**Pg**	**17 01 14.7**	**-0.4**
PAJU				S	**Sg**	**17 01 26.5**	**-0.1**
PAJU	**Pajala**	**0.89**	**92**	*e*P	**Pg**	**17 01 14.5**	**-0.6**
PAJU				*e*S	**Sg**	**17 01 25.7**	**-0.8**
RATU	**Laukkuluspa**	**0.90**	**328**	P	**Pg**	**17 01 15.9**	**+0.5**
RATU	**Laukkuluspa**	**0.90**	**328**	*e*P	**Pg**	**17 01 15.9**	**+0.5**
HARU	**Harads**	**0.91**	**177**	P	**Pg**	**17 01 15.5**	**0.0**
HARU	**Harads**	**0.91**	**177**	*e*P	**Pg**	**17 01 15.5**	**0.0**
KUA	**Kurravaara**	**0.91**	**348**	P	**Pg**	**17 01 15.9**	**+0.3**
KUA				S	**Sb**	**17 01 28.8**	**-0.7**
KUA	**Kurravaara**	**0.91**	**348**	*e*P	**Pg**	**17 01 15.9**	**+0.3**
KUA				*e*S	**Sb**	**17 01 28.8**	**-0.7**
NIKU	**Nikkaluokta**	**1.07**	**320**	P	**Pg**	**17 01 19.0**	**+0.5**
NIKU	**Nikkaluokta**	**1.07**	**320**	*e*P	**Pg**	**17 01 19.0**	**+0.5**
LANU	**Lannavaara**	**1.08**	**23**	P	**Pg**	**17 01 18.4**	**-0.4**
LANU	**Lannavaara**	**1.08**	**23**	*e*P	**Pg**	**17 01 18.3**	**-0.4**
KOVU	**Salmi**	**1.19**	**347**	P	**Pg**	**17 01 21.1**	**+0.2**
KOVU	**Salmi**	**1.19**	**347**	*e*P	**Pg**	**17 01 21.1**	**+0.2**
KALU	**Kalix**	**1.58**	**139**	P	**Pn**	**17 01 26.9**	**-0.4**
KALU	**Kalix**	**1.58**	**139**	*e*P	**Pn**	**17 01 26.9**	**-0.4**
SJUU	**Sjulsmark**	**1.60**	**169**	P	**Pn**	**17 01 27.6**	**0.0**
SJUU	**Sjulsmark**	**1.60**	**169**	*e*P	**Pn**	**17 01 27.6**	**0.0**
TOF	**Tornio**	**1.71**	**124**	*e*P	**Pn**	**17 01 29.2**	**+0.1**
TOF				MSG		17 01 48.8	
	comp=Z,19nm,0.2s						
TOF				*e*SG	**Sn**	**17 01 51.6**	**+0.1**
HEF	**Hetta**	**1.72**	**37**	*e*P	**Pn**	**17 01 29.5**	**+0.2**
HEF	**Hetta**	**1.72**	**37**	*e*P	**Pn**	**17 01 29.5**	**+0.2**
HEF				MSG		17 01 49.1	
	comp=Z,9.6nm,0.2s						
HEF				*e*SG	**Sn**	**17 01 51.7**	**-0.2**
LILU	**Lilltraesk**	**1.84**	**193**	P	**Pn**	**17 01 32.0**	**+1.1**
LILU	**Lilltraesk**	**1.84**	**193**	*e*P	**Pn**	**17 01 32.0**	**+1.1**
KIF	**Kilpisjarvi**	**1.95**	**359**	*e*P	**Pg**	**17 01 35.5**	**+0.2**
KIF	**Kilpisjarvi**	**1.95**	**359**	*e*PB	**Pb**	**17 01 34.6**	**+0.2**
	baz=173						
KIF				MSG		17 01 58.7	
	comp=Z,14nm,0.2s						
KIF				*e*SG	**Sg**	**17 02 01.0**	**+0.4**
RNF	**Rovaniemi**	**2.09**	**100**	*e*PB	**Pn**	**17 01 35.4**	**+1.0**
RNF				*e*SG	**Sb**	**17 02 02.9**	**-0.5**
I37NO	**I37NO**	**2.19**	**338**	*i*		17 15 43.4	
	baz=160,slow=336,SNR=5.7						
SGF	**Sodankyl**	**2.24**	**78**	*e*PB	**Pn**	**17 01 37.7**	**+1.3**
	baz=259						
SGF				*e*SG	**Sb**	**17 02 07.2**	**-0.3**
BURU	**Burvik**	**2.50**	**175**	P	**Pn**	**17 01 41.5**	**+1.5**
BURU	**Burvik**	**2.50**	**175**	*e*P	**Pn**	**17 01 41.6**	**+1.6**
BURU				*e*SG	**Sb**	**17 02 17.0**	**+1.8**
ODEU	**Stanfors**	**2.67**	**181**	P	**Pn**	**17 01 43.7**	**+1.3**
ODEU	**Stanfors**	**2.67**	**181**	*e*P	**Pn**	**17 01 43.7**	**+1.3**
OUL	**Oulu**	**2.86**	**132**	*e*P	**Pn**	**17 01 46.8**	**+1.9**
OBF0	**Syolatti, Pyha**	**2.93**	**150**	*e*PG	**Pb**	**17 01 51.8**	**+0.5**
ARA0	**ARCESS Array S**	**3.02**	**33**	*e*P	**Pn**	**17 01 48.0**	**+0.8**
ARA0				*e*SB	**Sb**	**17 02 29.7**	**-0.4**
ARCES	**ARCESS Array B**	**3.02**	**33**	Pn	**Pn**	**17 01 48.4**	**+1.2**
	baz=209,slow=14,SNR=13						
ARCES				Sn	**Sn**	**17 02 25.5**	**+1.5**
	baz=221,slow=23,SNR=7.9						
ARCES				Lg	Lg	17 02 31.5	
	baz=229,slow=24,SNR=5.2						
OUF	**Merijarvi**	**3.15**	**148**	*e*P	**Pn**	**17 01 50.5**	**+1.6**
OUF				MSG		17 02 31.3	
	comp=Z,1.7nm,0.2s						
VRF	**Varrio**	**3.45**	**75**	*e*P	**Pn**	**17 01 55.8**	**+2.8**
VRF				*e*SG	**Sb**	**17 02 42.8**	**+0.4**
OLKF	**Oulanka, Finla**	**3.48**	**99**	*e*P	**Pn**	**17 01 54.6**	**+1.2**
KEV	**Kevo**	**3.53**	**37**	*e*P	**Pn**	**17 01 55.4**	**+1.3**
KU6	**Riekki**	**3.76**	**102**	*e*P	**Pn**	**17 01 58.7**	**+1.4**
	baz=290						
VAF	**Vlistaro**	**4.12**	**168**	*e*P	**Pn**	**17 02 04.0**	**+1.8**
	baz=356						
HEMU	**Hemsoen**	**4.57**	**197**	*e*P	**Pn**	**17 02 10.3**	**+1.9**
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**17 02 30.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=5.1						
FINES				Sn	**Sn**	**17 03 38.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=339,slow=36,SNR=1.6						
FINES				Lg	Lg	17 04 10.8	
	comp=Z,0.2nm,0.3s,baz=171,slow=37,SNR=1.7						
NOA	**NORSAR Array B**	**7.37**	**219**	Pn	**Pn**	**17 02 46.4**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=49,slow=20,SNR=2.2						
NOA				Sn	**Sn**	**17 04 04.6**	**-6.7**
	comp=Z,0.0nm,0.3s,baz=174,slow=12,SNR=1.6						

VIE 09 17:22:23.2±0.8,46.52N×12.67E,h8km,mb0.4/1,ml1.6/2, 1C-2D,Error ellipse: s-maj=9.2km s-min=1.9km az=26.0 10 km ESE of San Stefano di Cadore,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSMI	**Casera Mimoias**	**0.02**	**231**	*e*Pg	Pg	17 22 25.3	+0.4
CSMI				*e*Sg	Sg	17 22 26.7	+0.6
CLUD	**Cludinico**	**0.16**	**115**	*e*Pg	Pg	17 22 26.7	+0.2
CLUD				*e*Sg	Sg	17 22 29.1	+0.2
ABTA	**Abfaltersbach**	**0.25**	**334**	*i* Pg	Pg	17 22 28.7	+0.4
	1.9nm,0.0s						
ABTA				*i* Sg	Sg	17 22 32.0	+0.3
	4.8nm,0.1s						
FUSE	**Fusea**	**0.25**	**116**	*e*Pg	Pg	17 22 28.2	0.0
FUSE				*e*Sg	Sg	17 22 31.7	+0.1
CIMO	**Cimolais**	**0.27**	**217**	*e*Pg	Pg	17 22 29.2	+0.7
PLRO	**Paularo**	**0.33**	**85**	*e*Pg	Pg	17 22 29.2	-0.6
MPRI	**Monte Prat**	**0.36**	**142**	*e*Pg	Pb	17 22 31.1	-0.8

LJU 09 17:22:44.2,45.89N×15.09E,h7km,ML0.4,1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEGS	**Legarje**	**0.17**	**70**	*i* Pg	Pg	17 22 47.7	+0.1
LEGS				*i* Sg	Sg	17 22 50.4	+0.3
PDKS	**Podkum**	**0.18**	**339**	*i* Pg	Pg	17 22 48.0	+0.1
PDKS				*i* Sg	Sg	17 22 50.8	+0.4
PDKS				IAML		17 22 51.3	
	comp=Z,7.6nm,0.1s						
VISS	**Visnje**	**0.20**	**243**	*e*Pg	Pg	17 22 48.2	+0.1
VISS				*i* Sg	Sg	17 22 51.2	+0.4
VISS				IAML		17 22 52.7	
	comp=Z,3.2nm,0.2s						
CRES	**Cresnjev**	**0.27**	**104**	*e*Pg	Pg	17 22 49.7	+0.3

IDC 09 17:25:14.1±2.1,17.70S×175.68W,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.5/29,mbtmp3.4/4,Error ellipse: s-maj=197.9km s-min=34.2km az=156.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.01**	**242**	P	P	17 32 59.2	0.0
	0.9nm,0.7s,baz=86,slow=14,SNR=1.7						
WRA	**Warramunga Arr**	**47.22**	**259**	P	P	17 33 48.8	-0.4
	0.3nm,0.8s,baz=96,slow=7.3,SNR=4.5						
ASAR	**Alice Springs**	**47.34**	**254**	P	P	17 33 50.2	0.0
	0.3nm,0.5s,baz=89,slow=8.4,SNR=6.8						
TXAR	**Lajitas Array**	**83.70**	**57**	P	P	17 37 45.4	0.0
	0.2nm,0.7s,baz=248,slow=9.5,SNR=1.8						

KRSC 09 17:29:29.2±1.7,49.89N×157.79E,h47km±25km,ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.33**	**307**	*e*P	Pn	17 29 52.0	+0.7
SKR				*e*S	Sn	17 30 08.8	+1.0
PAU	**Pauzhetka**	**1.69**	**339**	*e*P	Pn	17 29 59.2	+2.9
PAU				*e*S	Sn	17 30 21.2	+4.5
ALID	**Alaid**	**1.73**	**305**	*e*P	Pn	17 29 59.3	+2.3
KDTR	**Khodutka, Kamc**	**1.93**	**5**	*e*P	Pn	17 30 01.6	+2.1
KDTR				*e*S	Sn	17 30 25.2	+2.7
RUS	**Russkaya**	**2.58**	**10**	*e*P	Pn	17 30 11.0	+2.5
RUS				*e*S	Sn	17 30 41.8	+3.2
MTVR	**Mutnovka**	**2.61**	**5**	*e*P	Pn	17 30 11.7	+2.8
MTVR				*e*S	Sn	17 30 42.3	+2.9
GRL	**Gorelyy**	**2.67**	**4**	*e*P	Pn	17 30 12.7	+2.9
KRMR	**Karymshinskiy**	**2.95**	**4**	*e*P	Pn	17 30 17.4	+3.9
PET	**Petropavlovsk**	**3.18**	**9**	*e*P	Pn	17 30 19.5	+2.9
DALK	**Dalny**	**3.20**	**11**	*e*P	Pn	17 30 19.7	+2.8
DALK				*e*S	Sn	17 30 57.1	+3.4
UGLR	**Uglovaya**	**3.38**	**11**	*e*P	Pn	17 30 24.2	+4.7
AVH	**Avacha**	**3.43**	**10**	*e*P	Pn	17 30 24.0	+3.9
SMAR	**Somma**	**3.43**	**10**	*e*P	Pn	17 30 24.3	+4.0
KOK	**Koryaka**	**3.44**	**9**	*e*P	Pn	17 30 24.0	+3.6
SDLR	**Sedlovina**	**3.46**	**11**	*e*P	Pn	17 30 24.2	+3.6
SPN	**Mys Shipunski**	**3.50**	**23**	*e*S	Sn	17 31 05.3	+4.2
KRX	**Arik**	**3.51**	**8**	*e*P	Pn	17 30 25.1	+3.8
GNL	**Ganaly**	**3.81**	**1**	*e*P	Pn	17 30 29.2	+3.8
TUMD	**Tumrok D**	**5.55**	**16**	*e*P	Pn	17 30 53.5	+4.3
TUMR	**Tumrok**	**5.59**	**14**	*e*P	Pn	17 30 54.9	+5.2
KBTR	**Krutoberegovo**	**7.01**	**24**	*e*P	Pn	17 31 12.2	+3.0

*NEIC **09** 18:04:03.8±1.6,43.78N±0.04×105.26W±0.06,h0km±1km, ML3.5/68,Error ellipse: s-maj=8.4km s-min=6.5km az=321.0*
*IDC **09** 18:04:04.5±0.8,44.07N×105.71W,h0km,mb4.0/4, mb1 3.9/11,mb1mx3.7/53,mbtmp3.7/11,ML3.6/7,Error ellipse: s-maj=22.6km s-min=7.4km az=146.0*

ISC 09 18:04:03.2±0.7,43.81N±0.06×105.27W±0.07,h0km,n110, σ0.999/108,mb4.0/4,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.94**	**70**	Pg	**Pb**	**18 04 22.5**	**0.0**
K22A	**Casper**	**1.48**	**219**		**Pn**	**18 04 29.7**	**-1.5**
K22A				IAML		18 04 54.6	
	comp=N,849nm,0.3s						
K22A				IAML		18 04 56.8	
	comp=E,487nm,0.3s						
PHWY	**Pilot Hill**	**2.51**	**183**		**Pn**	**18 04 45.5**	**-0.1**
RWWY	**Rawlins**	**2.56**	**215**		**Pn**	**18 04 46.2**	**+0.1**
RWWY				IAML		18 05 23.3	
	comp=E,238nm,0.6s						
RWWY				IAML		18 05 25.5	
	comp=E,289nm,0.8s						
LAO	**LASA Array**	**2.95**	**347**	Pn	**Pn**	**18 04 52.3**	**+0.9**
LAO				IAML		18 05 50.0	
	comp=E,213nm,0.6s						
RLMT	**Red Lodge**	**3.15**	**296**		**Pn**	**18 04 55.1**	**+0.9**
RLMT				IAML		18 05 46.2	
	comp=E,91nm,0.4s						
RLMT				IAML		18 05 52.4	
	comp=E,93nm,0.4s						
BW06	**Boulder Array**	**3.30**	**253**		**Pn**	**18 04 56.8**	**+0.4**
BW06				IAML		18 05 46.4	
	comp=E,80nm,0.7s						
PD31	**Pinedale Array**	**3.30**	**253**		**Pn**	**18 04 56.8**	**+0.4**
PDAR	**Pinedale Array**	**3.30**	**253**	Pn	**Pn**	**18 04 56.8**	**+0.4**
	comp=E,7.4nm,0.3s,baz=69,slow=16,SNR=130						
PDAR				Lg	Lg	18 05 40.5	
	comp=E,14nm,0.3s,baz=69,slow=36,SNR=5.7						
PDAR	**Pinedale Array**	**3.30**	**253**	Pn	**Pn**	**18 04 56.4**	**0.0**
YNE	**Yellowstone No**	**3.60**	**291**		**Pn**	**18 05 00.9**	**+0.5**
YNE				IAML		18 06 00.2	
	comp=N,92nm,0.9s						
YNE				IAML		18 06 00.5	
	comp=E,95nm,0.4s						
YMP	**Mirror Lake PI**	**3.63**	**286**		**Pn**	**18 05 01.5**	**+0.6**
YMP				IAML		18 06 04.3	
	comp=N,138nm,0.7s						
YMP				IAML		18 06 11.8	
	comp=E,144nm,1.0s						
GCMT	**Greycliff**	**3.70**	**304**		**Pn**	**18 05 02.8**	**+1.0**
OGNE	**Ogallala**	**3.74**	**139**	Pn	**Pn**	**18 05 03.1**	**+1.0**
LKWY	**Lake**	**3.77**	**283**		**Pn**	**18 05 03.7**	**+1.0**
LKWY				IAML		18 05 35.3	
	comp=E,77nm,0.6s						
H17A	**Grant Village**	**3.87**	**280**		**Pn**	**18 05 05.5**	**+1.4**
H17A				IAML		18 06 07.7	
	comp=N,52nm,0.7s						
LOHW	**Long Hollow**	**3.87**	**269**		**Pn**	**18 05 05.3**	**+1.1**
FLWY	**Flagg Ranch**	**3.93**	**276**	Pn	**Pn**	**18 05 05.7**	**+0.8**
FLWY				IAML		18 06 14.6	
	comp=N,62nm,1.2s						
FLWY				IAML		18 06 21.1	
	comp=N,49nm,1.2s						
YNR	**Norris Junctio**	**3.99**	**285**		**Pn**	**18 05 06.4**	**+0.6**
SNOW	**Snow King Moun**	**4.00**	**267**		**Pn**	**18 05 06.8**	**+0.9**
SNOW				IAML		18 06 14.3	
	comp=N,58nm,0.8s						
SNOW				IAML		18 06 23.3	
	comp=N,59nm,1.0s						
YPP	**Pitchstone Pla**	**4.02**	**278**		**Pn**	**18 05 07.3**	**+1.1**
ISCO	**Idaho Springs**	**4.02**	**184**	Pn	**Pn**	**18 05 07.2**	**+1.0**
REDW	**Red Top Meadow**	**4.08**	**266**		**Pn**	**18 05 08.0**	**+0.9**
REDW				IAML		18 06 19.4	
	comp=N,73nm,0.9s						
REDW				IAML		18 06 29.0	
	comp=N,52nm,1.1s						
YHH	**Holmes Hill**	**4.12**	**286**		**Pn**	**18 05 08.2**	**+0.5**
E28A	**Huff**	**4.25**	**48**		**Pn**	**18 05 11.2**	**+2.0**
E28A				IAML		18 06 33.9	
	comp=N,90nm,0.6s						
O20A	**White River Ci**	**4.29**	**212**	Pn	**Pn**	**18 05 10.6**	**+0.6**
O20A				IAML		18 06 20.9	
	comp=E,67nm,0.6s						
O20A				IAML		18 06 27.8	
	comp=N,68nm,1.1s						
YHB	**Horse Butte**	**4.36**	**284**		**Pn**	**18 05 11.5**	**+0.6**
YHL	**Hebgen Lake**	**4.37**	**286**		**Pn**	**18 05 11.6**	**+0.5**
YHL				IAML		18 06 43.4	
	comp=N,39nm,1.1s						
YHL				IAML		18 06 44.8	
	comp=E,56nm,1.0s						
AHID	**Auburn Hatcher**	**4.38**	**258**		**Pn**	**18 05 11.5**	**+0.3**
AHID				IAML		18 06 25.5	
	comp=N,54nm,0.9s						
AHID				IAML		18 06 31.2	
	comp=E,35nm,0.9s						
ECR	**Eagle Creek**	**4.51**	**262**		**Pn**	**18 05 13.3**	**+0.4**
QLMT	**Earthquake Lak**	**4.54**	**285**		**Pn**	**18 05 13.9**	**+0.6**
RDMU	**Red Mountain**	**4.55**	**226**		**Pn**	**18 05 14.4**	**+0.9**
RDMU				IAML		18 06 31.3	
	comp=N,41nm,1.1s						
RDMU				IAML		18 06 32.7	
	comp=E,42nm,1.1s						
SUSD	**Miller**	**4.59**	**80**		**Pn**	**18 05 15.9**	**+2.1**
DGMT	**Dagmar**	**4.72**	**9**	Pn	**Pn**	**18 05 17.2**	**+1.7**
SMCO	**Snowmass**	**4.80**	**196**		**Pn**	**18 05 17.8**	**+0.6**
SMCO				IAML		18 06 33.5	
	comp=E,32nm,0.4s						
SMCO				IAML		18 06 40.5	
	comp=E,27nm,0.7s						
BOZ	**Bozeman (W)**	**4.87**	**294**		**Pn**	**18 05 17.9**	**+0.1**
BOZ				IAML		18 06 39.8	
	comp=E,24nm,0.9s						
BOZ				IAML		18 06 40.6	
	comp=E,34nm,0.9s						
K31A	**O'Neill**	**4.91**	**102**		**Pn**	**18 05 17.8**	**-0.4**
HWUT	**Hardware Ranch**	**5.14**	**247**		**Pn**	**18 05 21.6**	**+0.1**
HWUT				IAML		18 06 57.1	
	comp=E,38nm,1.1s						
KSCO	**Kaye Shedlock'**	**5.19**	**157**	Pn	**Pn**	**18 05 22.5**	**+0.2**
EGMT	**Eagleton**	**5.25**	**325**	Pn	**Pn**	**18 05 23.1**	**+0.2**
TCUT	**Toone Canyon**	**5.28**	**241**		**Pn**	**18 05 22.8**	**-0.7**
DLMT	**Dillon**	**5.46**	**289**		**Pn**	**18 05 26.0**	**+0.1**
HRY	**Holter Researc**	**5.46**	**304**		**Pn**	**18 05 26.7**	**+0.7**
LRM	**Limekiln Ridge**	**5.49**	**294**		**Pn**	**18 05 26.6**	**+0.2**
MCMT	**McKenzie Canyo**	**5.53**	**283**	Pn	**Pn**	**18 05 27.4**	**+0.4**
JLU	**Jordanelle**	**5.60**	**237**	Pn	**Pn**	**18 05 26.2**	**-1.7**
MDND	**Maddock**	**5.65**	**42**	Pn	**Pn**	**18 05 28.3**	**-0.1**
CTU	**Camp Tracy**	**5.73**	**239**	Pn	**Pn**	**18 05 29.2**	**-0.5**

BGNE	**Belgrade**	**5.78**	**112**			**Pn**	**18 05 30.9**	**+0.8**
SPUT	**South Promonto**	**5.86**	**247**			**Pn**	**18 05 32.6**	**+1.1**
BCYI	**Bear Canyon**	**5.88**	**278**			**Pn**	**18 05 32.6**	**+0.8**
HVU	**Hansel Valley**	**5.88**	**252**	Pn		**Pn**	**18 05 32.1**	**+0.3**
PV22	**Blue Mesa, Par**	**5.90**	**208**	Pn		**Pn**	**18 05 32.8**	**+0.8**
PV07	**Paradox Valley**	**5.95**	**207**			**Pn**	**18 05 32.9**	**+0.3**
P17A	**Butcher Ranch,**	**5.97**	**225**			**Pn**	**18 05 33.9**	**+1.0**
PV15	**Paradox Valley**	**5.98**	**205**			**Pn**	**18 05 33.8**	**+0.6**
PV04	**Paradox Valley**	**6.07**	**208**			**Pn**	**18 05 34.9**	**+0.5**
MPU	**Maple Canyon**	**6.08**	**234**	Pn		**Pn**	**18 05 32.7**	**-1.8**
PV12	**Saucer Basin,**	**6.11**	**207**			**Pn**	**18 05 34.9**	**+0.1**
PV14	**Lion Creek, Pa**	**6.13**	**209**			**Pn**	**18 05 35.5**	**+0.3**
P10	**Paradox Valley**	**6.13**	**209**	Pn		**Pn**	**18 05 37.0**	**+1.8**
SRU	**San Rafael Swe**	**6.13**	**222**			**Pn**	**18 05 35.0**	**-0.2**
PV20	**West Nyswonger**	**6.14**	**208**	Pn		**Pn**	**18 05 35.9**	**+0.6**
PV11	**David Mesa, Pa**	**6.14**	**208**			**Pn**	**18 05 36.0**	**+0.6**
PV16	**Nyswonger Mesa**	**6.15**	**208**			**Pn**	**18 05 36.2**	**+0.8**
PV19	**Morning Glory**	**6.17**	**208**			**Pn**	**18 05 36.5**	**+0.8**
PV03	**Paradox Valley**	**6.18**	**207**			**Pn**	**18 05 36.3**	**+0.5**
PV02	**Paradox Valley**	**6.18**	**206**			**Pn**	**18 05 36.7**	**+0.7**
PV17	**East Wray Mesa**	**6.19**	**208**			**Pn**	**18 05 36.8**	**+0.8**
PV01	**Paradox Valley**	**6.20**	**205**			**Pn**	**18 05 36.9**	**+0.7**
PV18	**Skein Mesa, Pa**	**6.21**	**208**			**Pn**	**18 05 36.7**	**+0.5**
PV13	**Radium Mtn., P**	**6.25**	**207**			**Pn**	**18 05 36.8**	**-0.1**
ECSD	**EROS Data Cent**	**6.27**	**88**			**Pn**	**18 05 37.7**	**+0.9**
TMUT	**Trail Mountain**	**6.34**	**227**			**Pn**	**18 05 38.1**	**-0.1**
BGU	**Big Grassy Mou**	**6.43**	**246**	Pn		**Pn**	**18 05 40.7**	**+1.4**
CBKS	**Cedar Bluff**	**6.50**	**138**	Pn		**Pn**	**18 05 40.9**	**+0.8**
Q16A	**Castle Valley**	**6.61**	**224**			**Pn**	**18 05 41.9**	**+0.2**
HLID	**Hailey**	**6.64**	**271**			**Pn**	**18 05 42.8**	**+0.7**
DUG	**Dugway, Tooele**	**6.68**	**240**			**Pn**	**18 05 42.2**	**-0.5**
F33A	**5 Mile Ranch,**	**6.70**	**69**			**Pn**	**18 05 42.3**	**-0.5**
T25A	**Trinidad**	**6.70**	**174**	Pn		**Pn**	**18 05 42.0**	**-1.0**
MSO	**Missoula**	**6.82**	**299**	Pn		**Pn**	**18 05 42.3**	**-2.1**
MVCO	**Mesa Verde**	**7.04**	**202**	Pn		**Pn**	**18 05 50.1**	**+2.4**
JTMT	**Jette**	**7.43**	**305**			**Pn**	**18 05 52.3**	**-0.6**
MSU	**Marysvale**	**7.43**	**227**	Pn		**Pn**	**18 05 53.4**	**+0.4**
PLID	**Pearl Lake**	**7.79**	**283**	Pn		**Pn**	**18 05 60.0**	**+2.1**
MTPU	**Mount Pierson**	**7.79**	**225**			**Pn**	**18 05 58.2**	**+0.2**
AGMN	**Agassiz Nation**	**7.93**	**52**	Pn		**Pn**	**18 06 00.1**	**+0.5**
WALA	**Waterton Lakes**	**7.95**	**314**	Pn		**Pn**	**18 05 59.3**	**-0.7**
ELK	**Elko**	**8.00**	**251**	Pn		**Pn**	**18 06 02.2**	**+1.3**
	comp=E,0.7nm,0.3s,baz=68,slow=7.9,SNR=9.5							
ELK				Lg	Lg	18 08 09.5		
	comp=E,0.2nm,0.3s,baz=179,slow=17,SNR=1.9							
ELK	**Elko**	**8.00**	**251**			**Pn**	**18 06 00.9**	**0.0**
PSUT	**Pine Spring**	**8.35**	**234**	Pn		**Pn**	**18 06 06.5**	**+0.8**
CCUT	**Cedar City**	**8.77**	**227**	Pn		**Pn**	**18 06 12.5**	**+1.1**
ULM	**Lac du Bonnet**	**9.08**	**42**	Pn		**Pn**	**18 06 15.2**	**-0.2**
	comp=E,2.2nm,0.3s,baz=230,slow=12,SNR=26							
ULM				Lg	Lg	18 08 42.5		
	comp=E,0.7nm,0.3s,baz=326,slow=23,SNR=1.7							
ULM	**Lac du Bonnet**	**9.08**	**42**	Pn		**Pn**	**18 06 15.5**	**+0.1**
B35A	**Bob, Littlefor**	**9.22**	**56**	Pn		**Pn**	**18 06 17.3**	**0.0**
NEW	**Newport**	**9.37**	**303**	Lg	Lg	18 08 40.6		
	comp=E,0.2nm,0.3s,baz=334,slow=12,SNR=1.6							
I56US	**NEWPORT INFRAS**	**9.37**	**302**	*i*		18 58 50.0		
	baz=113,slow=321,SNR=3.7							
WUAZ	**Wupatki**	**9.53**	**212**			**Pn**	**18 06 18.8**	**-2.9**
WMOK	**Wichita Mounta**	**10.36**	**149**	Pn		**Pn**	**18 06 30.5**	**-2.5**
FFC	**Flin Flon**	**11.13**	**10**	Pn		**Pn**	**18 06 42.8**	**-0.7**
NVAR	**Mina Array Bea**	**11.20**	**246**	Pn		**Pn**	**18 06 46.5**	**+1.7**
	comp=E,0.2nm,0.3s,baz=48,slow=12,SNR=6.5							
YBH	**Yreka Blue Hor**	**12.98**	**267**	Pn		**Pn**	**18 07 11.7**	**+2.7**
	comp=E,0.2nm,0.3s,baz=54,slow=5.2,SNR=7.4							
TXAR	**Lajitas Array**	**14.51**	**174**	Pn		**P**	**18 07 37.4**	**+0.7**
	comp=E,0.1nm,0.3s,baz=355,slow=7.5,SNR=3.4							
TXAR				Pg		18 08 33.3		
	comp=E,0.0nm,0.3s,baz=358

	comp=N,1.9nm,0.3s							
PCVE	**Castro Verde**	**5.02**	**85**	*e*Pn	**Pn**	**18 18 13.5**	**+2.8**
PCVE				*e*Sn	**Sn**	**18 19 06.8**	**-1.9**
PCVE				A	A	18 19 17.3	
	comp=N,1.9nm,0.3s						
PBDV	**Barranco-do-Ve**	**5.11**	**89**	P	**Pn**	**18 18 13.6**	**+1.6**
PBDV				S	**Sn**	**18 19 08.7**	**-2.4**
	comp=N,3.4nm,0.6s						
PBDV	**Barranco-do-Ve**	**5.11**	**89**	*e*Pn	**Pn**	**18 18 13.6**	**+1.6**
PBDV				*e*Sn	**Sn**	**18 19 08.7**	**-2.4**
PBDV				A	A	18 19 16.4	
	comp=N,3.4nm,0.6s						
PMTG	**Montargil**	**5.11**	**69**	P	**Pn**	**18 18 13.5**	**+1.5**
PMTG				S	**Sn**	**18 19 10.6**	**-0.4**
	comp=N,1.9nm,0.2s						
PMTG	**Montargil**	**5.11**	**69**	*e*Pn	**Pn**	**18 18 13.5**	**+1.5**
PMTG				*e*Sn	**Sn**	**18 19 10.6**	**-0.4**
PMTG				A	A	18 19 17.8	
	comp=N,1.9nm,0.2s						
EVO	**Evora**	**5.14**	**75**	P	**Pn**	**18 18 14.2**	**+1.9**
EVO				S	**Sn**	**18 19 10.9**	**-0.8**
	comp=N,5.2nm,0.2s						
EVO	**Evora**	**5.14**	**75**	*e*P	**Pn**	**18 18 13.3**	**+0.9**
EVO				*e*S	**Sn**	**18 19 10.3**	**-1.4**
EVO	**Evora**	**5.14**	**75**	*e*Pn	**Pn**	**18 18 14.2**	**+1.9**
EVO				*e*Sn	**Sn**	**18 19 10.9**	**-0.8**
EVO				A	A	18 19 15.7	
	comp=N,5.2nm,0.2s						
PVAQ	**Vaqueiros**	**5.27**	**87**	P	**Pn**	**18 18 15.8**	**+1.6**
PVAQ				S	**Sn**	**18 19 13.2**	**-1.9**
	comp=N,4.4nm,1.1s						
PVAQ	**Vaqueiros**	**5.27**	**87**	*e*Pn	**Pn**	**18 18 15.8**	**+1.6**
PVAQ				*e*Sn	**Sn**	**18 19 13.2**	**-1.9**
PVAQ				A	A	18 19 19.8	
	comp=N,4.4nm,1.1s						
PCAS	**Casmilo, Conde**	**5.30**	**58**	P	**Pn**	**18 18 17.5**	**+2.9**
PCAS				S	**Sn**	**18 19 16.7**	**+0.9**
	comp=N,3.4nm,0.6s						
PCAS	**Casmilo, Conde**	**5.30**	**58**	*e*Pn	**Pn**	**18 18 17.5**	**+2.9**
PCAS				*e*Sn	**Sn**	**18 19 16.7**	**+0.9**
PCAS				A	A	18 19 21.2	
	comp=N,3.4nm,0.6s						
EGRO	**El Granado**	**5.46**	**86**	P	**Pn**	**18 18 18.8**	**+2.1**
	comp=N,1.6nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**18 19 18.2**	**-1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**5.53**	**72**	*e*Sn	**Sn**	**18 19 21.0**	**-0.5**
PMRV	**Marv??o**	**5.84**	**67**	P	**Pn**	**18 18 23.5**	**+1.5**
PMRV				S	**Sn**	**18 19 28.3**	**-0.7**
	comp=N,2.9nm,0.3s						
PMRV	**Marv??o**	**5.84**	**67**	*e*Pn	**Pn**	**18 18 23.5**	**+1.5**
PMRV				*e*Sn	**Sn**	**18 19 28.3**	**-0.7**
PMRV				A	A	18 19 30.7	
	comp=N,2.9nm,0.3s						
PBAR	**Barrancos**	**5.84**	**80**	P	**Pn**	**18 18 24.4**	**+2.4**
PBAR				S	**Sn**	**18 19 27.1**	**-1.9**
	comp=N,1.7nm,0.2s						
PBAR	**Barrancos**	**5.84**	**80**	*e*Pn	**Pn**	**18 18 24.4**	**+2.4**
PBAR				*e*Sn	**Sn**	**18 19 27.1**	**-1.9**
PBAR				A	A	18 19 35.3	
	comp=N,1.7nm,0.2s						
PCBR	**Castelo Branco**	**5.92**	**63**	P	**Pn**	**18 18 26.0**	**+2.9**
PCBR				S	**Sn**	**18 19 30.3**	**-0.7**
	comp=N,1.8nm,0.1s						
PCBR	**Castelo Branco**	**5.92**	**63**	*e*Pn	**Pn**	**18 18 26.0**	**+2.9**
PCBR				*e*Sn	**Sn**	**18 19 30.3**	**-0.7**
PCBR				A	A	18 19 40.6	
	comp=N,3.6nm,0.1s						
EBAD	**Badajoz**	**5.95**	**74**	P	**Pn**	**18 18 25.6**	**+2.1**
	comp=N,1.8nm,0.1s,SNR=5.7						
EBAD				S	**Sn**	**18 19 29.5**	**-2.2**
	comp=N,0.3nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**6.04**	**54**	P	**Pn**	**18 18 28.0**	**+3.3**
PVIS				S	**Sn**	**18 19 33.7**	**-0.2**
	comp=N,1.4nm,0.3s						
PVIS	**Viseu**	**6.04**	**54**	*e*Pn	**Pn**	**18 18 28.0**	**+3.3**
PVIS				*e*Sn	**Sn**	**18 19 33.7**	**-0.2**
PVIS				A	A	18 19 38.1	
	comp=N,2.9nm,0.3s						
EMIN	**Mina Concepcio**	**6.10**	**84**	P	**Pn**	**18 18 27.6**	**+2.0**
	comp=N,0.5nm,0.1s,SNR=7.6						
EMIN				S	**Sn**	**18 19 34.1**	**-1.4**
	comp=N,0.3nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	**6.47**	**50**	P	**Pn**	**18 18 33.1**	**+2.4**
POLO				S	**Sn**	**18 19 43.9**	**-0.7**
	comp=N,0.8nm,0.5s						
POLO	**Lamas de Olo**	**6.47**	**50**	*e*Pn	**Pn**	**18 18 33.1**	**+2.4**
POLO				*e*Sn	**Sn**	**18 19 43.9**	**-0.7**
POLO				A	A	18 19 55.4	
	comp=N,0.8nm,0.5s						
EZAM	**Zamans**	**6.47**	**40**	S	**Sn**	**18 19 40.5**	**-4.0**
	comp=N,0.1nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.57**	**44**	P	**Pn**	**18 18 34.4**	**+2.3**
PGAV				S	**Sn**	**18 19 45.2**	**-1.8**
	comp=N,3.9nm,0.4s						
PGAV	**Gavieira, Arco**	**6.57**	**44**	*e*Pn	**Pn**	**18 18 34.4**	**+2.3**
PGAV				*e*Sn	**Sn**	**18 19 45.2**	**-1.8**
PGAV				A	A	18 19 50.8	
	comp=N,3.9nm,0.4s						
ELOB	**Lobios**	**6.62**	**45**	P	**Pn**	**18 18 34.9**	**+2.2**
	comp=N,1.3nm,0.2s,SNR=6.2						
ELOB				S	**Sn**	**18 19 45.3**	**-2.9**
	comp=N,0.3nm,0.1s,SNR=7.9						
ESPR	**Espera**	**6.80**	**92**	S	**Sn**	**18 19 50.3**	**-2.2**
	comp=N,1.2nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.83**	**54**	P	**Pn**	**18 18 37.2**	**+1.6**
	comp=N,1.3nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**18 19 50.3**	**-3.2**
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.83**	**54**	*e*Pn	**Pn**	**18 18 38.1**	**+2.4**
MVO				*e*Sn	**Sn**	**18 19 51.7**	**-1.8**
MVO				A	A	18 19 57.7	
	comp=N,2.4nm,0.5s						
EMAZ	**Mazaricos**	**6.93**	**35**	P	**Pn**	**18 18 38.1**	**+1.1**
	comp=N,1.0nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**18 19 50.0**	**-6.0**
	comp=N,1.0nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**7.11**	**81**	P	**Pn**	**18 18 41.2**	**+1.7**
	comp=N,0.6nm,0.1s,SNR=15						
ECAB				S	**Sn**	**18 19 56.7**	**-3.6**
	comp=N,0.0nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**7.25**	**39**	P	**Pn**	**18 18 43.0**	**+1.6**
	comp=N,1.0nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**18 19 59.8**	**-4.0**
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**7.44**	**50**	P	**Pn**	**18 18 46.3**	**+2.2**
	comp=N,2.8nm,0.2s,SNR=9.2						
ECAL				S	**Sn**	**18 20 06.4**	**-2.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.78**	**81**	P	**Pn**	**18 18 50.4**	**+1.8**
	comp=N,0.8nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 20 15.1**	**-1.7**
	comp=N,0.8nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**8.11**	**40**	P	**Pn**	**18 18 54.5**	**+1.4**
	comp=N,1.0nm,0.3s,SNR=7.9						
EPON				S	**Sn**	**18 20 19.4**	**-5.3**
	comp=N,0.2nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**8.14**	**71**	P	**Pn**	**18 18 55.2**	**+1.6**
	comp=N,0.4nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**18 20 22.1**	**-3.6**
	comp=N,0.1nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**8.46**	**71**	P	**Pn**	**18 18 59.6**	**+1.6**
	comp=N,0.3nm,0.1s,baz=254,slow=13,SNR=6.5						

*ISK **09** 18:20:12.9, 42°.53N×43°.57E, h5km, ML3.0/4*
*NORS **09** 18:20:13.4±0.0, 42°.48N×43°.45E, h8km, MPVA4.0*
*MOS **09** 18:20:14.1±0.0, 42°.52N×43°.42E, h10km, MPVA3.8*
*DDA **09** 18:20:15.1, 42°.44N×43°.46E, h19km, ML2.7*
*TIF **09** 18:20:16.9, 42°.54N×43°.54E, h16km*

ISC 09 18:20:14.8±0.7, 42°.51N±0°.01×43°.51E±0°.02, h9km±4km, n56, σ0.94/113, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.10**	**331**	P	**Pg**	**18 20 16.9**	**-0.3**
ONI				S	**Sg**	**18 20 19.1**	**+0.1**
ONI	**Oni**	**0.10**	**331**	*i* Pg	**Pg**	**18 20 16.9**	**-0.3**
ONI				*e*Sg	**Sg**	**18 20 19.1**	**+0.1**
DIGR	**Digorskoe uzhe**	**0.40**	**7**	*e*Pg	**Pg**	**18 20 21.3**	**-1.3**
DIGR				*e*Sg	**Sg**	**18 20 26.8**	**-1.0**
ZEI	**Tsey**	**0.40**	**45**	*i* Pg	**Pg**	**18 20 21.6**	**-1.1**
ZEI				*e*Sg	**Sg**	**18 20 27.2**	**-0.8**
TKB	**Tkibuli**	**0.41**	**248**	P	**Pg**	**18 20 22.9**	**0.0**
TKB				S	**Sb**	**18 20 29.8**	**-1.0**
LACR	**Lac**	**0.66**	**61**	*i* Pg	**Pg**	**18 20 26.2**	**-1.3**
LACR				*e*Sg	**Sg**	**18 20 35.3**	**-0.9**
KORR	**Kora**	**0.71**	**35**	*i* Pg	**Pg**	**18 20 27.6**	**-0.9**
KORR				*i* Sg	**Sg**	**18 20 38.5**	**+0.8**
GUDG	**Gudauri**	**0.71**	**93**	P	**Pg**	**18 20 27.9**	**-0.6**
GUDG				S	**Sg**	**18 20 38.5**	**+0.6**
BKRG	**Bakuriani**	**0.75**	**180**	P	**Pg**	**18 20 29.0**	**-0.1**
BKRG				S	**Sb**	**18 20 40.5**	**+0.1**
LSNR	**Lesken**	**0.80**	**16**	*i* Pg	**Pg**	**18 20 29.3**	**-0.9**
LSNR				*e*Sg	**Sb**	**18 20 41.6**	**-0.4**
PNSH	**Pansheti**	**0.82**	**81**	P	**Pg**	**18 20 29.2**	**-1.4**
PNSH				S	**Sg**	**18 20 40.6**	**-0.8**
ARNR	**Ardon**	**0.88**	**40**	*e*Pg	**Pg**	**18 20 31.4**	**-0.3**
ARNR				*e*Sg	**Sb**	**18 20 44.8**	**+0.6**
BRNG	**Burnasheti**	**0.91**	**165**	P	**Pg**	**18 20 31.1**	**-1.2**
BRNG				S	**Sg**	**18 20 44.5**	**+0.3**
ABS	**Abastumani**	**0.91**	**215**	P	**Pg**	**18 20 31.8**	**-0.6**
ABS				S	**Sb**	**18 20 45.7**	**+0.5**
NEY	**Neytrino**	**0.94**	**322**	*e*Pg	**Pg**	**18 20 31.8**	**-1.1**
NEY				*e*Sg	**Sg**	**18 20 44.4**	**-0.8**
STDR	**Stavd-Durt**	**0.95**	**25**	*i* Pg	**Pg**	**18 20 32.9**	**-0.2**
STDR				*e*Sg	**Sn**	**18 20 47.9**	**-0.2**
NCK	**Nalchik**	**0.99**	**3**	*e*Pg	**Pg**	**18 20 33.2**	**-0.6**
NCK				*e*Sg	**Sb**	**18 20 47.5**	**+0.2**
VLKR	**Vladikavkaz**	**1.01**	**57**	*e*Pg	**Pb**	**18 20 34.5**	**-0.1**
VLKR				*e*Sg	**Sn**	**18 20 49.5**	**-0.1**
TRLG	**Trialeti**	**1.06**	**155**	P	**Pg**	**18 20 34.6**	**-0.5**
TRLG				S	**Sb**	**18 20 49.2**	**-0.3**
CHVG	**Ch'k'valeri**	**1.08**	**282**	P	**Pg**	**18 20 34.7**	**-0.7**
CHVG				S	**Sg**	**18 20 49.5**	**+0.1**
AKH	**Akhalkalaki**	**1.10**	**181**	P	**Pg**	**18 20 35.1**	**-0.7**
AKH				S	**Sb**	**18 20 51.0**	**+0.5**
AKH	**Akhalkalaki**	**1.10**	**181**	PN	**Pg**	**18 20 34.9**	**-0.9**
AKH				SN	**Sb**	**18 20 50.7**	**+0.2**
KMGR	**Komgaron**	**1.14**	**61**	*e*Pg	**Pb**	**18 20 36.8**	**+0.1**
KMGR				*e*Sg	**Sn**	**18 20 54.2**	**+1.5**
BTKR	**Batakoyurt**	**1.15**	**41**	*i* Pg	**Pn**	**18 20 37.3**	**+0.2**
BTKR				*e*Sg	**Sn**	**18 20 55.2**	**+2.3**
EPOS	**Posof**	**1.16**	**211**	*i* P	**Pg**	**18 20 35.8**	**-1.2**
EPOS				*i* S	**Sg**	**18 20 51.7**	**-0.4**
EPOS				IAML		18 21 03.0	
	comp=N,90nm,0.9s						
BGD	**Bogdanovka**	**1.24**	**177**	P	**Pg**	**18 20 37.8**	**-0.9**
BGD				S	**Sb**	**18 20 55.3**	**+0.5**
BTNK	**Botanikuri**	**1.26**	**130**	P	**Pg**	**18 20 37.1**	**-1.9**
BTNK				S	**Sg**	**18 20 55.0**	**-0.3**
BTNK	**Botanikuri**	**1.26**	**130**	*i* P	**Pg**	**18 20 36.9**	**-2.0**
BTNK				*i* S	**Sg**	**18 20 55.3**	**-1.9**
DMNI	**Dmanisi**	**1.28**	**157**	P	**Pg**	**18 20 37.9**	**-1.5**
DMNI				S	**Sg**	**18 20 55.3**	**-0.7**
KBZ	**Khabaz**	**1.30**	**340**	*e*Pg	**Pn**	**18 20 38.2**	**-1.0**
KBZ				*i* Sg	**Sg**	**18 20 54.7**	**-1.9**
KBTC	**Kuba-Taba**	**1.31**	**357**	*e*Pg	**Pn**	**18 20 39.3**	**-0.1**
KBTC				*e*Sg	**Sn**	**18 20 57.8**	**+0.7**
PRTR	**Priterechnaya**	**1.36**	**24**	*e*Pg	**Pg**	**18 20 40.9**	**-0.1**
PRTR				*e*Sg	**Sn**	**18 21 01.4**	**+3.1**
SHA1	**Shidzhatmaz**	**1.38**	**333**	*e*Pg	**Pn**	**18 20 39.9**	**-0.6**
SHA1				*e*Sg	**Sg**	**18 20 57.8**	**-1.4**
TRKR	**Terskaya**	**1.51**	**36**	*e*Pg	**Pn**	**18 20 42.4**	**+0.4**
TRKR				*e*Sg	**Sg**	**18 21 04.7**	**+1.5**
KIV0	**Kislovodsk Arr**	**1.57**	**338**	*e*Pg	**Pn**	**18 20 43.3**	**+0.3**
KIV0				*e*Sg	**Sn**	**18 21 03.3**	**-0.1**
KIV	**Kislovodsk**	**1.57**	**338**	*e*Pg	**Pn**	**18 20 43.5**	**+0.5**
KIV				*e*Sg	**Sn**	**18 21 03.2**	**-0.2**
KIV	**Kislovodsk**	**1.57**	**338**	PN	**Pn**	**18 20 42.2**	**-0.7**
KIV				SN	**Sn**	**18 21 03.2**	**-0.4**
PYA1	**Pyatigorsk**	**1.58**	**349**	*e*Pg	**Pn**	**18 20 42.9**	**-0.2**
PYA1				*e*Sg	**Sn**	**18 21 03.2**	**-0.5**
BEYR	**Belyy Ugol+**	**1.59**	**342**	*e*Pg	**Pn**	**18 20 43.3**	**+0.2**
BEYR				*e*Sg	**Sn**	**18 21 03.4**	**-0.5**
DBOC	**Borcka**	**1.80**	**231**	*i* P	**Pn**	**18 20 46.4**	**+0.3**
DBOC				*i* S	**Sn**	**18 21 10.3**	**+1.2**
DBOC				IAML		18 21 13.0	
	comp=E,144nm,0.3s						
GROC	**Groznyy**	**1.82**	**67**	*e*Pg	**Pn**	**18 20 46.5**	**+0.3**
GROC				*e*Sg	**Sb**	**18 21 10.8**	**-0.3**
HOPA	**Hopa-Artvin**	**1.91**	**235**	PN	**Pn**	**18 20 47.6**	**+0.2**
HOPA				SN	**Sn**	**18 21 12.9**	**+1.3**
KARS	**Kars**	**1.91**	**190**	PN	**Pn**	**18 20 47.6**	**0.0**
ARXR	**Arkhyz**	**1.95**	**303**	*e*Pg	**Pn**	**18 20 48.0**	**-0.3**
ARXR				*e*Sg	**Sn**	**18 21 14.5**	**+1.5**
DVE	**Vedeno**	**1.98**	**76**	*e*Pg	**Pb**	**18 20 50.4**	**+0.6**
DVE				*e*Sg	**Sg**	**18 21 17.1**	**-1.2**
DBAD	**Bademkaya**	**2.02**	**223**	*i* P	**Pn**	**18 20 50.1**	**+1.0**
DBAD				*i* S	**Sb**	**18 21 16.6**	**-0.3**
DBAD				IAML		18 21 19.0	
	comp=N,157nm,0.6s						
DBAD				IAML		18 21 20.0	
	comp=E,148nm,0.5s						
SENK	**Senkaya-Erzuru**	**2.13**	**205**	PN	**Pn**	**18 20 50.8**	**0.0**
LGD	**Lagodekhi**	**2.14**	**107**	P	**Pn**	**18 20 51.4**	**+0.8**
LGD				S	**Sn**	**18 21 19.1**	**+1.8**
DDFL	**Dedoflistskaro**	**2.21**	**118**	P	**Pb**	**18 20 54.3**	**-0.7**
ALER	**Alexandrovskoy**	**2.30**	**349**	*e*Pn	**Pn**	**18 20 53.8**	**+0.9**
ALER				*e*Sn	**Sn**	**18 21 21.5**	**-0.1**
CHOM	**Cayeli-Rize**	**2.49**	**237**	PN	**Pn**	**18 20 56.0**	**+0.4**
KRNR	**Karanay**	**2.52**	**82**	*e*Pn	**Pn**	**18 20 58.2**	**+2.2**
KRNR				*e*Sn	**Sn**	**18 21 27.6**	**+0.6**
GNI	**Garni**	**2.53**	**158**	*e*Pn	**Pn**	**18 20 56.0**	**-0.1**
GNI				*e*Sn	**Sb**	**18 21 30.3**	**-1.4**
GNBR	**Gunib**	**2.56**	**91**	*e*Pn	**Pg**	**18 21 02.5**	**-1.2**
GNBR				*e*Sn	**Sn**	**18 21 29.3**	**+1.5**
ARKR	**Arakani**	**2.57**	**87**	*e*Pn	**Pb**	**18 20 59.9**	**-1.2**
ARKR				*e*Sn	**Sn**	**18 21 29.5**	**+1.4**
MNK	**Minsk**	**15.81**	**325**	*i* P	**Pn**	**18 23 57.6**	**+0.2**
	comp=E,1.0nm,1.3s						
MNK				*i* P	**Pn**	**18 23 57.6**	**+0.2**
	comp=N,7.0nm,0.7s						
MNK				*i* P	**Pn**	**18 23 57.6**	**+0.2**
	comp=Z,4.0nm,0.9s						
MNK				*i* PP	**sP**	**18 24 06.0**	**+0.6**
MNK				*i* PPP	PPP	18 24 13.7	
MNK				*i* S	**Sn**	**18 26 53.3**	**+0.7**
MNK				*i* SS	**S**	**18 27 07.4**	**+0.1**
MNK				*i* SSS	SSS	18 27 20.0	
MNK				*i* LQ	LQ	18 28 36.1	
MNK				*i* PcP	**PcP**	**18 28 57.0**	**+0.7**
MNK				*i* LR	LR	18 29 48.1	
MNK				*i* LRM	MLR	18 31 09.1	
	comp=E,8.0nm,11.6s						
MNK				*i* LRM	MLR	18 31 16.4	
	comp=N,142nm,16.2s						
MNK				*i* LRM	MLR	18 31 19.6	
	comp=Z,70nm,16.9s						

*BJI **09** 18:20:26.5±0.0, 6°.90S×105°.20E, h45km, mB4.9/32, mb4.8/44, Ms4.4/19, Ms7 4.2/19*
*NEIC **09** 18:20:28.5±1.4, 6°.71S±0°.09×105°.33E±0°.08, h35km±1km, mb4.9/60, Error ellipse: s-maj=14.7km s-min=13.1km az=190.0*
*IDC **09** 18:20:29.6±1.6, 6°.65S×105°.37E, h39km±13km, mb4.5/40, mb1 4.5/42, mb1mx4.4/58, mbtmp4.7/42, ML4.6/2, MS3.8/22, Ms1 3.8/22, ms1mx3.6/43, Error ellipse: s-maj=14.5km s-min=9.1km az=44.0*
*DJA **09** 18:20:29.4±0.2, 7°S±2°×10°5E±°, h53km±3km, M4.7/66, mb4.8/66, mB5.2/23, MLv5.0/20, Mw(mB)4.6/23, MwMwp4.4/1, Mwp4.8/1*
*KLM **09** 18:20:29, 7°.03S×104°.96E, h58km, mb4.7*
*GCMT **09** 18:20:31.5±0.4, 7°.19S±0°.02×105°.26E±0°.03, h47km±1km, MW4.8/63, Moment Tensor Solution. s33,c42; s63,c90; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.31±.14; Mθθ -2.26±.09; Mφφ 0.95±.13; Mrθ 0.92±.07; Mθφ 0.74±.07; Mφr 0.41±.09; Best double couple: Mo 2.24900×10^16 NP1: φs 316.00000°, δ45.00000°, λ144.00000°. NP2: φs 73.00000°, δ66.00000°, λ51.00000°. Principal axes: T 1.9060, Plg52.0000°, Azm296.0000°; N 0.6900, Plg35.0000°, Azm92.0000°; P -2.5920, Plg12.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 18:20:31.4±0.5, 6°.87S±0°.05×105°.25E±0°.04, h63km±4km, n274, σ1.51/298, mb4.8/97, 13C-4D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**1.49**	**360**	P	**Pn**	**18 20 55.9**	**-0.1**
BLSI				S	**Sn**	**18 21 17.6**	**+3.0**
DBJI	**Dramaga**	**1.53**	**78**	P	**Pn**	**18 20 56.2**	**-0.3**
DBJI				S	**Sn**	**18 21 16.0**	**+0.5**
KASI	**Kota Agung**	**1.53**	**331**	P	**Pn**	**18 20 56.0**	**-0.5**
KASI				S	**Sn**	**18 21 16.1**	**+0.6**
TNG	**Tangerang**	**1.55**	**64**	P	**Pn**	**18 20 56.7**	**-0.2**
TNG				S	**Sn**	**18 21 19.0**	**+2.9**
CBJI	**Citeko**	**1.65**	**75**	P	**Pn**	**18 20 58.7**	**+0.5**
CBJI				S	**Sn**	**18 21 20.6**	**+2.1**
LWLI	**Liwa**	**2.18**	**327**	P	**Pn**	**18 21 05.7**	**+0.2**
LWLI				S	**Sn**	**18 21 32.1**	**+0.6**
LEM	**Lembang**	**2.36**	**89**	Pn	**Pn**	**18 21 09.1**	**+1.2**
	111nm,0.3s,baz=336,slow=2.6,SNR=87						
LEM				Sn	**Sn**	**18 21 34.0**	**-1.8**
	321nm,0.3s,baz=177,slow=24,SNR=6.4						
LEM				LR	LR	18 22 14.0	
	comp=Z,2μm,20.2s,baz=272,slow=47						
LEM	**Lembang**	**2.36**	**89**	P	**Pn**	**18 21 08.4**	**+0.5**
JCJI	**Jatiwangi**	**3.03**	**83**	P	**Pn**	**18 21 17.8**	**+0.9**
JCJI				S	**Sn**	**18 21 53.5**	**+1.5**
LHSI	**Lahat**	**3.47**	**330**	P	**Pn**	**18 21 24.0**	**+1.0**
PMBI	**Palembang**	**3.94**	**353**	P	**Pn**	**18 21 31.3**	**+1.9**
KSI	**Kapahiang**	**4.14**	**320**	P	**Pn**	**18 21 31.7**	**-0.6**
TPI	**Tanjungpandan**	**4.73**	**31**	P	**Pn**	**18 21 40.3**	**0.0**
PPBI	**Pangkal Pinang**	**4.76**	**11**	P	**Pn**	**18 21 41.9**	**+1.3**
SMRI	**Semarang**	**5.16**	**92**	P	**Pn**	**18 21 46.5**	**+0.3**
	1.4nm329nm,1.2s						
UGM	**Wanagama**	**5.34**	**102**	P	**Pn**	**18 21 46.1**	**-2.5**
	1.5nm265nm,0.8s						
JMBI	**JAMBI**	**5.44**	**343**	P	**Pn**	**18 21 51.0**	**+1.1**
	0.7nm2μm180nm,0.7s						
RGRI	**Rengat**	**7.09**	**336**	P	**Pn**	**18 22 12.2**	**-0.4**
PBKI	**Pangkalan Bun**	**7.62**	**57**	P	**Pn**	**18 22 21.0**	**+1.2**
	0.8nm2μm90nm,0.5s						
BKNI	**Bangkinang**	**8.28**	**329**	P	**Pn**	**18 22 27.9**	**-1.0**
	44nm,0.7s						
KMMI	**Kaliangget**	**8.66**	**92**	P	**Pn**	**18 22 33.1**	**-1.0**
	20nm,0.7s						
MYKOM	**Kota Tinggi**	**8.71**	**351**	P	**Pn**	**18 22 37.0**	**+2.3**
ABJI	**Asem Bagus**	**8.96**	**96**	P	**Pn**	**18 22 41.5**	**+3.3**
JAGI	**Jajag, Banyuwa**	**8.97**	**101**	P	**Pn**	**18 22 37.6**	**-0.7**
	2μm112nm,0.8s						
STKI	**Sintang**	**9.28**	**42**	P	**Pn**	**18 22 44.7**	**+2.2**
	2μm35nm,0.7s						
MNSI	**Mandailing Nat**	**9.48**	**323**	P	**Pn**	**18 22 42.3**	**-3.0**
	25nm,0.7s						
KSM	**Kuching**	**9.70**	**32**	P	**Pn**	**18 22 51.0**	**+2.7**
COCO	**West Island**	**9.84**	**237**	Pn	**Pn**	**18 22 48.8**	**-1.3**
SRBI	**Singaraja**	**9.96**	**98**	P	**Pn**	**18 22 51.6**	**-0.2**
	1μm101nm,0.6s						
DNP	**Denpasar**	**10.04**	**101**	P	**Pn**	**18 22 52.6**	**-0.3**
	193nm,0.6s						
BBKI	**Banjar Baru**	**10.14**	**71**	P	**Pn**	**18 22 55.3**	**+1.0**
	1μm16nm,1.0s						
JRMM	**Jerantut**	**11.03**	**345**	P	**Pn**	**18 23 07.0**	**+0.5**
GSI	**Gunungsitoli**	**11.15**	**316**	P	**Pn**	**18 23 06.0**	**-2.2**
	3μm237nm,0.5s						
MTKI	**Muara Teweh, K**	**11.28**	**59**	P	**Pn**	**18 23 10.8**	**+0.9**
	7.0nm,0.7s						
RPSI	**Rantau Prapat**	**11.40**	**326**		**Pn**	**18 23 08.0**	**-3.6**
KBKI	**Kotabaru**	**11.44**	**73**	P	**Pn**	**18 23 12.9**	**+0.8**
	14nm,0.7s						
PSI	**Prapat**	**11.49**	**326**	Pn	Pn	18 23 08.0	-4.9
	0.7nm,0.3s,baz=181,slow=7.0,SNR=5.2						
PSI				LR	LR	18 28 22.6	
	comp=Z,650nm,21.6s,baz=91,slow=42						
SBUM	**Sibu**	**11.58**	**37**	P	**Pn**	**18 23 17.0**	**+3.0**
TWSI	**Tawang, Sumb**	**11.68**	**100**	P	**Pn**	**18 23 12.9**	**-2.4**
	435nm20nm,0.6s						
IPM	**Ipoh**	**12.03**	**339**	P	**Pn**	**18 23 20.0**	**-0.2**
TSI	**Tuntungan**	**12.27**	**327**	P	**Pn**	**18 23 22.8**	**-0.6**
	41nm,1.0s						
PLAI	**Plampang**	**12.57**	**100**	P	**Pn**	**18 23 25.3**	**-2.2**
	67nm,0.8s						
TPTI		**12.88**	**321**	P	**Pn**	**18 23 29.0**	**-2.8**
KULM	**Kulim**	**12.92**	**339**	P	**Pn**	**18 23 31.0**	**-1.2**
KAPI	**Kappang**	**14.54**	**84**	Pn	**Pn**	**18 23 54.6**	**+0.7**
	0.8nm,0.3s,baz=

comp=Z,75nm,18.6s,baz=287,slow=42
FAKI Fak Fak 27.18 83 P **P** **18 26 10.4 +1.1**
comp=Z,32nm,0.9s
KDU Kakadu 27.43 104 P **P** **18 26 10.2 -1.3**
baz=28,SNR=19
PALK Pallekele 28.22 299 LR LR 18 37 05.1
comp=Z,191nm,18.9s,baz=230,slow=35
NWAO Narrogin (SRO) 28.23 158 P **P** **18 26 21.2 +2.8**
comp=Z,3.8nm,0.9s,baz=343,slow=17,SNR=0.9
H01W3 Cape Leeuwin H 29.06 165 T T 18 56 48.1
baz=345,slow=76,SNR=606
H01W2 Cape Leeuwin H 29.08 165 T T 18 56 48.5
baz=345,slow=76,SNR=896
H01W1 Cape Leeuwin H 29.08 165 T T 18 56 49.1
baz=345,slow=76,SNR=516
WB0 Warramunga Arr 31.06 117 P **P** **18 26 43.7 -0.1**
WB0 IAmb IAmb 18 27 06.8
comp=Z,13nm,1.2s
WRA Warramunga Arr 31.07 118 P **P** **18 26 43.3 -0.5**
comp=Z,2.1nm,0.5s,baz=289,slow=10,SNR=22
WRA PcP **PcP** **18 29 38.8 +0.5**
comp=Z,2.0nm,0.5s,baz=306,slow=1.9,SNR=12
WRA LR LR 18 40 27.8
comp=Z,147nm,21.4s,baz=290,slow=39
WRA Warramunga Arr 31.07 118 P **P** **18 26 44.0 +0.2**
WRA **PcP** **18 29 38.4 +0.1**
WRAB Tennant Creek 31.08 118 P **P** **18 26 43.7 -0.2**
WRAB IAmb IAmb 18 27 07.1
comp=Z,9.2nm,0.8s
WB2 Warramunga Arr 31.08 118 P **P** **18 26 43.9 -0.1**
WR0 Warramunga Arr 31.26 117 P **P** **18 26 45.8 +0.3**
WR0 IAmb IAmb 18 27 10.5
comp=Z,8.5nm,0.8s
KMI Kunming 31.89 356 ⇓P **P** **18 26 55.2 +4.1**
KMI pP pP 18 27 03.9 -2.7
KMI S **S** **18 32 00.1 +2.3**
KMI sS sS 18 32 14.9 -8.8
KMI SS **SnSn** **18 33 49.9 -1.8**
KMI pmax pmax
comp=Z,13nm,0.8s
KMI pmax pmax
comp=Z,57nm,4.5s
KMI LR LR
comp=Z,440nm,15.5s
KMI LR LR
comp=Z,190nm,16.5s
KMI LR LR
comp=Z,540nm,14.1s
FORT Forrest 31.99 141 P **P** **18 26 49.8 -1.9**
FORT IAmb IAmb 18 27 07.1
comp=Z,28nm,0.9s
AS31 Alice Springs 32.19 124 P **P** **18 26 54.0 +0.3**
ASAR Alice Springs 32.19 124 P **P** **18 26 53.5 -0.2**
comp=Z,1.4nm,0.7s,baz=297,slow=7.8,SNR=23
ASAR PcP **PcP** **18 29 42.4 +1.0**
comp=Z,2.3nm,0.5s,baz=302,slow=2.3,SNR=12
ASAR S **S** **18 32 00.7 -1.7**
comp=Z,1.8nm,1.0s,baz=292,slow=15,SNR=6.6
ASAR LR LR 18 39 55.8
comp=Z,238nm,21.6s,baz=300,slow=36
ASAR Alice Springs 32.19 124 P **P** **18 26 54.2 +0.5**
ASAR **PcP** **18 29 42.2 +0.9**
H08S2 Diego Garcia H 32.49 267 T T 19 01 13.9
baz=91,slow=76,SNR=309
H08S3 Diego Garcia H 32.51 267 T T 19 01 09.3
baz=91,slow=76,SNR=527
H08S1 Diego Garcia H 32.51 267 T T 19 01 13.3
baz=91,slow=76,SNR=168
HYB Hyderabad 35.74 313 *i* P **P** **18 27 24.0 -0.5**
QIS Mount Isa 35.95 116 P **P** **18 27 26.6 +0.4**
baz=36,SNR=4.7
CD2 Chengdu 37.59 358 *eP* **P** **18 27 40.0 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ODAN Odare 37.73 333 *eP* **P** **18 27 39.9 -1.6**
comp=Z,24nm,0.5s
COEN Coen 37.92 104 P **P** **18 27 41.5 -1.6**
TAPN Taplejung 38.01 334 *eP* **P** **18 27 42.3 -1.6**
comp=Z,30nm,0.7s
LSA Lhasa 38.80 340 P **P** **18 27 47.6 -3.1**
LSA IAmb IAmb 18 27 52.2
comp=Z,7.6nm,0.6s
JIRN Jiri 38.96 333 *eP* **P** **18 27 51.2 -0.7**
comp=Z,58nm,0.7s
PKI Pulchoki 39.24 332 *eP* **P** **18 27 52.5 -1.8**
comp=Z,8.5nm,0.8s
PKIN Phulchoki 39.26 332 *eP* **P** **18 27 53.0 -1.3**
comp=Z,12nm,0.5s
GUN Gumba 39.31 332 *eP* **P** **18 27 54.0 -0.9**
comp=Z,50nm,0.6s
DMN Daman 39.42 331 *eP* **P** **18 27 54.6 -1.1**
comp=Z,40nm,1.0s
MTSU Mount Surprise 39.66 110 P **P** **18 27 58.1 +0.5**
baz=40,SNR=4.9
GKN Gorkha 39.97 331 *eP* **P** **18 27 58.6 -1.6**
comp=Z,28nm,0.6s
KOLN Koldanda 40.29 330 *eP* **P** **18 28 01.6 -1.2**
comp=Z,96nm,0.7s
NJ2 Nanjing 40.82 18 *eP* **P** **18 28 07.4 +0.6**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
XAN Xi'an 40.83 5 P **P** **18 28 06.1 -0.9**
XAN pP pP 18 28 21.5 -1.4
XAN pmax pmax
comp=Z,7.0nm,0.7s
XAN LR LR
comp=Z,390nm,17.3s
XAN LR LR
comp=Z,380nm,22.8s
XAN Xi'an 40.83 5 P **P** **18 28 05.8 -1.2**
HTT Hallett 40.88 135 P **P** **18 28 08.5 +1.0**
baz=41,SNR=5.1
PMG Port Moresby 41.55 96 P **P** **18 28 13.5 +0.3**
comp=Z,29nm,0.6s,baz=207,slow=1.7,SNR=22
PMG Port Moresby 41.55 96 P **P** **18 28 13.1 -0.1**
PMG IAmb IAmb 18 28 14.1
comp=Z,30nm,0.6s
STKA Stephens Creek 42.03 131 P **P** **18 28 17.8 +0.9**
comp=Z,5.8nm,0.7s,baz=300,slow=9.0,SNR=18
STKA LR LR 18 46 36.9
comp=Z,261nm,21.0s,baz=280,slow=37
STKA Stephens Creek 42.03 131 P **P** **18 28 16.4 -0.5**
baz=42,SNR=13
STKA Stephens Creek 42.03 131 P **P** **18 28 17.0 +0.1**
MANU Manus Island 42.25 85 P **P** **18 28 16.0 -3.0**
MANU IAmb IAmb 18 28 42.8
comp=Z,25nm,1.4s
JSU Suzuyama 45.12 31 P **P** **18 28 40.1 -1.6**
JSU IAmb IAmb 18 28 47.2
comp=Z,16nm,1.0s
GTA Gaotai 46.31 354 P **P** **18 28 51.0 -0.1**
GTA pP pP 18 29 07.0 -0.3
GTA PcP **PcP** **18 30 26.4 +0.9**
GTA pmax pmax
comp=Z,4.0nm,1.3s
GTA pmax pmax
comp=Z,72nm,5.3s
GTA LR LR
comp=Z,150nm,17.1s
GTA LR LR
comp=Z,140nm,16.4s
GTA LR LR
comp=Z,210nm,17.1s
JNU Nakatsue 46.63 30 P **P** **18 28 52.6 -1.0**
comp=Z,4.1nm,0.4s,baz=261,slow=3.0,SNR=12
JNU Nakatsue 46.63 30 P **P** **18 28 52.5 -1.1**
JTU Tsushima 47.07 27 P **P** **18 28 55.9 -1.1**
HHC Hu-ho-hao-te 47.83 6 *eP* **P** **18 29 03.3 +0.4**
HHC S **S** **18 35 53.7 -1.6**
HHC pmax pmax
comp=Z,17nm,0.8s
HHC pmax pmax
comp=Z,100nm,6.6s
HHC LR LR
comp=Z,170nm,17.0s
HHC LR LR
comp=Z,170nm,17.0s
HHC LR LR
comp=Z,200nm,19.6s
KSAR Wonju Array Be 48.89 24 P **P** **18 29 09.9 -1.0**
KSRS Korea Array 48.91 24 P **P** **18 29 11.3 +0.2**
comp=Z,3.6nm,0.6s,baz=214,slow=6.8,SNR=22
KSRS PcP **PcP** **18 30 35.2 +0.6**
comp=Z,1.7nm,0.7s,baz=210,slow=4.4,SNR=6.6
KSRS LR LR 18 49 09.3
comp=Z,40nm,21.9s,baz=234,slow=35

KS19 Wonju Array Si 48.93 24 P **P** **18 29 09.3 -2.0**
KS19 IAmb IAmb 18 29 12.8
comp=Z,14nm,1.1s
JHS Saijyo 49.25 30 P **P** **18 29 13.0 -0.8**
NIL Nilore 50.44 325 P **P** **18 29 22.0 -0.8**
JWT Wachi 50.64 32 P **P** **18 29 22.7 -1.6**
JWT IAmb IAmb 18 29 23.8
comp=Z,8.3nm,0.6s
WMQ Urumqi 52.89 344 *eP* **P** **18 29 40.7 -0.3**
WMQ pmax pmax
comp=Z,21nm,0.7s
WMQ pmax pmax
comp=Z,160nm,6.5s
MAJO Matsushiro 53.09 33 P **P** **18 29 40.9 -1.7**
MAJO IAmb IAmb 18 30 00.7
comp=Z,8.7nm,1.2s
MAT Matsushiro 53.09 33 P **P** **18 29 39.7 -2.9**
MJAR Matsushiro Arr 53.09 33 P **P** **18 29 40.2 -2.4**
comp=Z,2.4nm,0.6s,baz=205,slow=8.4,SNR=9.1
MJAR Matsushiro Arr 53.09 33 P **P** **18 29 40.7 -1.9**
KSH Kashi 53.51 332 P **P** **18 29 43.7 -2.0**
KSH pP pP 18 29 56.4 -5.7
KSH pmax pmax
comp=Z,16nm,0.5s
KSH pmax pmax
comp=Z,150nm,6.8s
KSH LR LR
comp=Z,160nm,5.1s
KSH LR LR
comp=Z,140nm,3.8s
KSH LR LR
comp=Z,160nm,6.2s
KBL Kabul 53.53 323 P **P** **18 29 44.4 -1.7**
KBL IAmb IAmb 18 29 47.5
comp=Z,11nm,0.7s
CN2 Changchun 53.64 18 *eP* **P** **18 29 45.2 -1.2**
CN2 S **S** **18 37 15.0 -0.5**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,14.0s
JSD Sado 54.23 32 P **P** **18 29 49.6 -1.2**
JSD IAmb IAmb 18 29 50.7
comp=Z,14nm,0.9s
SOCY Socotra 54.36 290 P **P** **18 29 53.6 +1.3**
SONM Songino Array 54.47 1 P **P** **18 29 52.2 -0.4**
comp=Z,3.2nm,0.5s,baz=178,slow=8.9,SNR=26
SONM PcP **PcP** **18 30 55.8 +0.4**
comp=Z,4.8nm,0.6s,baz=177,slow=3.3,SNR=12
SONM ScP **ScP** **18 34 49.9 +1.5**
comp=Z,0.9nm,0.9s,baz=156,slow=3.1,SNR=3.1
SONM Songino Array 54.47 1 P **P** **18 29 52.3 -0.3**
SONM PcP **PcP** **18 30 55.6 +0.2**
WSAR Wadi Sarin 54.49 305 P **P** **18 29 54.9 +1.8**
comp=Z,3.7nm,0.6s,baz=142,slow=5.7,SNR=5.2
ULN Ulaanbaatar 54.52 1 P **P** **18 29 52.6 -0.3**
SHLS Shalkode 55.02 337 *eP* **P** **18 29 53.6 -3.0**
comp=Z,5.0nm,0.6s,baz=337
UZB Uzynbulak 55.18 337 *eP* **P** **18 29 56.2 -1.6**
comp=Z,3.3nm,0.5s,baz=336
SATY Saty 55.35 336 *eP* **P** **18 29 57.0 -2.0**
baz=336
KPKS Kokpek 55.58 337 *eP* **P** **18 29 59.3 -1.3**
baz=336
TNSS Tian-Shan 55.93 335 *eP* **P** **18 30 01.8 -1.7**
baz=335
GAR Garm 55.95 327 P **P** **18 30 02.4 -1.0**
MDOK Medeo 55.99 335 *eP* **P** **18 30 02.3 -1.3**
baz=335
AAA Alma-Ata 56.08 335 *eP* **P** **18 30 03.4 -0.8**
comp=Z,4.4nm,0.5s,baz=335
USA0B Ussuriysk Arra 56.27 23 P **P** **18 30 04.8 -0.6**
USRK Ussuriysk Ar. 56.27 23 P **P** **18 30 04.5 -0.8**
comp=Z,15nm,0.5s,baz=198,slow=7.0,SNR=64
USRK Ussuriysk Ar. 56.27 23 P **P** **18 30 04.7 -0.7**
UCH Uchtor 56.33 333 P **P** **18 30 06.8 +0.4**
SNR=6.4
TKM2 Tokmak 2 56.41 334 P **P** **18 30 07.1 +0.4**
SNR=11
KBK Karagaybulak 56.48 333 P **P** **18 30 08.0 +0.8**
SNR=13
AML Almayashu 56.63 332 P **P** **18 30 08.3 -0.2**
SNR=21
AAK Ala-Archa 56.66 333 P **P** **18 30 08.0 -0.5**
comp=Z,1.2nm,0.4s,baz=148,slow=4.3,SNR=12
AAK Ala-Archa 56.66 333 P **P** **18 30 07.9 -0.6**
KUU Kurty 56.88 335 *eP* **P** **18 30 08.0 -1.8**
comp=Z,7.7nm,0.6s,baz=335
TDK Taldyqorghan 56.98 338 *eP* **P** **18 30 08.8 -1.7**
baz=337
EKS2 Erkin-Say 57.01 333 P **P** **18 30 10.6 -0.3**
SNR=19
ZSN Zaisan 57.01 344 *eP* **P** **18 30 09.5 -1.1**
comp=Z,4.1nm,0.6s,baz=343
MK31 Makanchi Array 57.19 341 P **P** **18 30 10.9 -1.0**
MK31 IAmb IAmb 18 30 12.3
comp=Z,3.7nm,0.6s
MKAR Makanchi Array 57.19 341 P **P** **18 30 10.7 -1.2**
comp=Z,5.9nm,0.5s,baz=148,slow=8.2,SNR=88
UOSS Minazif 57.24 305 P **P** **18 30 14.0 +1.3**
UOSS IAmb IAmb 18 30 14.8
comp=Z,26nm,1.4s
SGDS Sogindy 57.25 334 *eP* **P** **18 30 12.2 -0.3**
baz=334
MAKZ Makanchi 57.30 341 P **P** **18 30 11.5 -1.2**
HIA Hailar 57.32 11 P **P** **18 30 11.0 -1.7**
HIA IAmb IAmb 18 30 13.1
comp=Z,3.4nm,0.5s
DZA Taraz 58.33 331 *eP* **P** **18 30 18.5 -1.5**
baz=331
TLY Talaya 58.33 359 P **P** **18 30 19.9 +0.1**
comp=Z,2.3nm,0.5s,baz=226,slow=5.2,SNR=4.8
TLY Talaya 58.33 359 P **P** **18 30 18.9 -0.9**
IUG Iuzhnay 58.41 330 *eP* **P** **18 30 19.6 -1.0**
comp=Z,8.3nm,1.1s,baz=330
KK31 Karatay Array 58.88 331 P **P** **18 30 23.0 -0.8**
KKAR Karatay Array 58.88 331 P **P** **18 30 22.9 -1.0**
ERM Erimo 59.70 32 P **P** **18 30 28.1 -1.3**
ASAJ Asahikawa 60.91 30 LR LR 18 54 41.9
comp=Z,42nm,21.8s,baz=190,slow=34
SEM Semipalatinsk 61.02 342 *eP* **P** **18 30 36.7 -1.8**
baz=342
KURBB Kurchatov Arra 61.74 341 P **P** **18 30 42.3 -0.8**
comp=Z,2.1nm,0.6s,baz=154,slow=5.9,SNR=8.4
KURK Kurchatov 61.80 341 P **P** **18 30 42.3 -1.2**
GEYT Alibeck 62.52 319 P **P** **18 30 49.1 +0.5**
comp=Z,19nm,0.8s,baz=157,slow=7.9,SNR=29
GEYT LR LR 18 59 24.1
comp=Z,111nm,20.1s,baz=40,slow=37
GYA0B ALIBECK ARRAY 62.52 319 P **P** **18 30 49.1 +0.4**
ZAA0 Zalesovo Array 62.98 347 P **P** **18 30 50.6 -0.8**
ZAA0 IAmb IAmb 18 30 52.1
comp=Z,6.6nm,0.9s
ZALV Zalesovo Beam 62.98 347 P **P** **18 30 50.0 -1.4**
comp=Z,4.9nm,0.3s,baz=153,slow=6.1,SNR=39
ZALV LR LR 19 00 36.4
comp=Z,215nm,19.5s,baz=149,slow=38
YSS Yuzh-Sakhalins 63.06 28 P **P** **18 30 50.8 -1.3**
YSS IAmb IAmb 18 30 51.9
comp=Z,15nm,0.8s
BRZS Berezniki 63.29 337 *eP* **P** **18 30 52.1 -1.4**
baz=337
RAYN Ar Rayn 65.66 300 P **P** **18 31 10.8 +1.2**
RAYN IAmb IAmb 18 31 11.8
comp=Z,26nm,1.4s
BVAR Borovoye Array 66.58 338 P **P** **18 31 13.7 -1.1**
comp=Z,4.2nm,0.6s,baz=87,slow=6.9,SNR=35
BRVK Borovoye 66.64 338 P **P** **18 31 14.7 -0.5**
BRVK IAmb IAmb 18 31 16.4
comp=Z,4.8nm,0.7s
LBZ Lake Benmore 67.40 135 P **P** **18 31 20.7 +0.4**
LBZ IAmb IAmb 18 31 40.5
comp=Z,22nm,1.3s
KMBO Kilima Mbogo 68.02 272 LR LR 18 56 30.6
comp=Z,65nm,19.2s,baz=94,slow=32
ABKAR Akbulak array 68.42 330 P **P** **18 31 26.6 +0.2**
AKTO Aktyubinsk 70.13 330 P **P** **18 31 36.9 -0.2**
comp=Z,11nm,0.6s,baz=115,slow=8.2,SNR=43
BKZ Black Stump Fm 71.17 129 P **P** **18 31 43.7 -0.1**
BKZ IAmb IAmb 18 31 58.2
comp=Z,28nm,1.2s
YAK Yakutsk 71.25 12 P **P** **18 31 42.7 -0.9**
URZ Urewera 71.55 128 LR LR 19 03 36.4
comp=Z,141nm,21.3s,baz=211,slow=36
ARU Arti 73.76 335 P **P** **18 31 58.9 +0.3**
comp=Z,8.9nm,0.5s,baz=137,slow=3.8,SNR=45
ARU Arti 73.76 335 P **P** **18 31 58.6 -0.1**
PEA0B Petropavlovsk- 74.33 30 P **P** **18 32 01.5 -0.6**
PETK Petropavlovsk- 74.33 30 P **P** **18 32 01.2 -0.8**
comp=Z,6.2nm,0.6s,baz=174,slow=3.4,SNR=28
PETK LR LR 19 06 40.2
comp=Z,15nm,18.2s,baz=242,slow=37
PETK Petropavlovsk- 74.33 30 P **P** **18 32 00.8 -1.3**
MBAR Mbarara 74.55 271 P **P** **18 32 05.7 +1.4**
comp=Z,1.4nm,0.3s,baz=129,slow=21,SNR=4.9
PET Petropavlovsk 74.76 30 P **P** **18 32 03.9 -0.6**
KBZ Khabaz 75.39 318 P **P** **18 32 08.8 +0.5**
comp=Z,6.7nm,0.8s,baz=196,slow=6.0,SNR=8.5
MA2 Magadan 75.41 22 P **P** **18 32 08.1 -0.1**
MA2 IAmb IAmb 18 32 08.6
comp=Z,12nm,0.7s
VNDA Vanda 76.42 169 P **P** **18 32 16.1 +2.5**
comp=Z,1.0nm,0.7s,baz=336,slow=5.1,SNR=5.9
EIL Elat 76.53 303 P **P** **18 32 16.7 +1.5**
comp=Z,8.9nm,0.6s,baz=158,slow=1.5,SNR=10
NRIK Noril'sk 77.01 354 P **P** **18 32 16.7 -0.4**
comp=Z,15nm,0.5s,baz=146,slow=6.4,SNR=23
NRIK Noril'sk 77.01 354 P **P** **18 32 16.5 -0.5**
MMAI Mount Meron Ar 77.11 306 P **P** **18 32 20.6 +2.1**
comp=Z,4.4nm,0.6s,baz=94,slow=7.9,SNR=21
BOSA Boshof 77.98 242 P **P** **18 32 24.8 +1.2**
comp=Z,1.7nm,0.5s,baz=106,slow=3.0,SNR=8.8
BOSA Boshof 77.98 242 P **P** **18 32 25.2 +1.7**
KIRV Kirov 78.99 334 P **P** **18 32 28.9 +0.7**
comp=Z,31nm,0.7s,baz=87,slow=1.5,SNR=12
TIXI Tiksi 79.89 7 P **P** **18 32 31.5 -1.3**
TIXI IAmb IAmb 18 32 32.4
comp=Z,17nm,0.7s
BR131 Keskin Array S 80.44 312 P **P** **18 32 37.1 +0.4**
BR131 IAmb IAmb 18 32 38.0
comp=Z,14nm,0.7s
BRTR Keskin Array B 80.44 312 P **P** **18 32 37.0 +0.3**
comp=Z,7.8nm,0.6s,baz=139,slow=6.8,SNR=35
BRTR LR LR 19 10 43.9
comp=Z,65nm,18.3s,baz=131,slow=38
BRTR Keskin Array B 80.44 312 P **P** **18 32 36.4 -0.3**
KLMR Klimovskoe 84.47 333 *eP* **P** **18 32 55.9 -1.1**
KLMR AMP 18 33 13.3
comp=Z,24nm,1.2s
BILL Bilibino 85.93 19 P **P** **18 33 04.0 -0.2**
BILL IAmb IAmb 18 33 05.6
comp=Z,4.6nm,0.7s
IDI Anoyia 86.11 306 P **P** **18 33 07.5 +1.6**
comp=Z,22nm,0.9s,baz=150,slow=8.1,SNR=1.3
SORM Soroca 86.41 319 ⇓P **P** **18 33 07.8 +0.9**
AKASG Malin Array Be 86.51 322 P **P** **18 33 07.3 0.0**
comp=Z,3.4nm,0.7s,baz=87,slow=4.3,SNR=16
AKASG PP **PP** **18 36 27.7 -2.2**
comp=Z,0.7nm,0.6s,baz=86,slow=6.6,SNR=4.6
AKASG LR LR 19 16 39.3
comp=Z,26nm,19.0s,baz=315,slow=39
AKBB Malin Array Si 86.51 322 P **P** **18 33 06.9 -0.5**
AKBB IAmb IAmb 18 33 10.4
comp=Z,4.6nm,0.8s
VRI Vrincioaia 86.95 317 ⇑P **P** **18 33 11.4 +1.7**
PLOR Plostina 87.00 317 ⇑P **P** **18 33 11.6 +1.6**
GIRR Girov 87.35 318 P **P** **18 33 13.0 +1.4**
MLR Muntele Rosu 87.41 316 P **P** **18 33 13.1 +1.1**
comp=Z,14nm,0.9s,baz=143,slow=3.1,SNR=9.0
MLR Muntele Rosu 87.41 316 ⇑P **P** **18 33 13.6 +1.5**
MLR Muntele Rosu 87.41 316 P **P** **18 33 13.4 +1.3**
PLCAZ Plcaz 87.61 318 ⇓P **P** **18 33 14.3 +1.4**
HUMR Humele 87.87 315 ⇑P **P** **18 33 15.2 +1.1**
DOPR Dopca 87.89 317 ⇑P **P** **18 33 15.6 +1.4**
PLVB Pleven 87.90 314 ⇑P **P** **18 33 15.3 +1.0**
VOIR 88.01 316 P **P** **18 33 15.7 +0.8**
BURAR Bucovina Array 88.34 318 ⇑P **P** **18 33 18.3 +1.8**
BUR08 Bucovina Ar. S 88.36 318 P **P** **18 33 17.7 +1.1**
VTS Vitosha 88.75 313 ⇑P **P** **18 33 19.7 +1.2**
NACGM Naroch 88.98 326 *i* P **P** **18 33 19.2 +0.1**
NACGM *i* P **P** **18 33 19.2 +0.1**
NACGM *i* P **P** **18 33 19.2 +0.1**
NACGM *i* pP **pP** **18 33 33.6 -3.0**
NACGM *i* sP **sP** **18 33 45.8 +2.4**
NACGM *i* PP **PP** **18 36 52.0 +2.5**
NACGM *i* PPP PPP 18 39 00.2
NACGM *i* SKS SKSac 18 43 27.6 -16
NACGM *i* S **SKKSac** **18 43 48.2 -6.8**
NACGM *i* sS **pS** **18 44 24.2 +0.1**
NACGM *i* PS **PnS** **18 45 04.7 -9.4**
NACGM *i* SS SS 18 50 07.6 +11
NACGM *i* SSS SSS 18 53 26.9
SNAA Sanae 89.13 198 P **P** **18 33 22.3 +2.6**
DEV Deva 89.57 316 ⇑P **P** **18 33 22.8 +0.6**
GZR Gura Zlata 89.57 316 ⇑P **P** **18 33 24.1 +1.8**
HERR Herculane 89.74 315 ⇑P **P** **18 33 23.8 +0.9**
MDVR Moldovita 90.21 315 ⇓P **P** **18 33 26.5 +1.3**
BZS Buzias 90.42 316 ⇑P **P** **18 33 27.8 +1.7**
VNA2 Neumayer--Watz 90.77 198 P **P** **18 33 29.2 +1.9**
FINES FINESS Array B 90.83 332 P **P** **18 33 27.7 +0.1**
comp=Z,4.0nm,0.4s,baz=110,slow=4.2,SNR=32
FINES LR LR 19 18 43.4
comp=Z,39nm,20.7s,baz=67,slow=38
VNA3 Neumayer Olymp 91.32 197 P **P** **18 33 30.3 +0.5**
MORH Mrgy. Hungar 92.56 316 ⇑P **P** **18 33 36.9 +0.9**
ARCES ARCESS Array B 92.81 340 P **P** **18 33 36.4 -0.3**
comp=Z,2.8nm,0.6s,baz=0.0,slow=3.6,SNR=20
ARCES LR LR 19 21 50.8
comp=Z,110nm,19.2s,baz=265,slow=40
MODS Modra-Piesok 93.73 318 *eP* **P** **18 33 42.9 +1.5**
GERES GERESS Array B 96.13 318 P **P** **18 33 53.1 +0.6**
comp=Z,0.4nm,0.5s,baz=108,slow=2.6,SNR=3.3
HFS Hagfors 96.67 330 P **P** **18 33 56.9 +2.4**
comp=Z,2.5nm,0.6s,baz=158,slow=1.6,SNR=7.4
NOA NORSAR Array B 97.91 331 LR LR 19 24 50.6
comp=Z,37nm,18.4s,baz=10.0,slow=40
RC01 Rabbit Creek A 103.23 29 P 18 34 24.2
baz=280
HDA Harding Lake 103.82 25 P 18 34 26.8
baz=283
HDA P 18 34 26.8
baz=283
EYAK Cordova Ski Ar 105.25 29 P 18 38 47.0
baz=283
N25K Chitina, Valde 105.54 28 P 18 38 47.8
baz=285
YKA Yellowknife Ar 117.33 20 PKP **PKPdf** **18 39 09.3 -0.1**
comp=Z,0.5nm,0.6s,baz=344,slow=1.8,SNR=9.6
B05A Bryant 122.54 36 P 18 39 20.7
baz=300
H04D Lebanon 123.94 40 P 18 39 23.8
baz=297
K02D Willamette Mer 124.15 42 P 18 39 24.0
baz=295
L04D Klamath Falls 125.26 42 P 18 39 26.2
baz=296
J05D Fort Rock, OR 125.48 41 P 18 39 26.8
baz=298
N02D Trinity Center 125.53 44 P 18 39 27.0
baz=295
M04C Macdoel 125.77 42 P 18 39 27.7
baz=296
O02D Mt. Diablo Mer 125.81 45 P 18 39 27.5
baz=295
O03E Paynes Creek 126.44 44 P 18 39 28.4
baz=296
MSO Missoula 127.93 33 P 18 39 31.4
baz=307
EGMT Eagleton 129.35 30 P 18 39 34.3
baz=313
PDAR Pinedale Array 132.90 35 PKP **PKiKP** **18 39 41.0 -0.2**
comp=Z,0.5nm,0.6s,baz=80,slow=1.8,SNR=6.5
PDAR SKPbc **SKPab** **18 43 04.2 +0.1**
comp=Z,0.6nm,0.8s,baz=306,slow=3.1,SNR=5.0
PDAR Pinedale Array 132.90 35 **PKPdf** **18 39 40.6 +0.4**
PDAR **SKPbc** **18 43 03.1 +0.7**
ULM Lac du Bonnet 133.29 19 PKP **PKiKP** **18 39 41.0 -0.5**
comp=Z,1.7nm,0.7s,baz=23,slow=6.7,SNR=4.9
ULM SKPbc **SKPab** **18 43 05.0 0.0**
comp=Z,1.7nm,0.5s,baz=313,slow=5.0,SNR=4.8
ULM Lac du Bonnet 133.29 19 SKPbc **SKPbc** **18 43 03.9 +0.8**
K56A Middlesex 144.24 3 P 18 39 58.2
baz=356
K57A Scipio Center 144.25 2 P 18 39 58.6
baz=357

K62A	**Royalston**	**144.28**	**357**	P			18 39 58.8	
	baz=4.1							
K61A	**Williamstown**	**144.32**	**358**	P			18 39 59.0	
	baz=2.4							
K60A	**Five Rivers En**	**144.39**	**359**	P			18 39 59.4	
	baz=1.3							
WMOK	**Wichita Mounta**	**144.51**	**35**	P			18 39 59.7	
	baz=316							
ERPA	**Erie**	**144.59**	**7**	P			18 39 59.6	
	baz=351,SNR=5.4							
L53A	**Girard**	**144.72**	**7**	P			18 39 59.8	
	baz=350,SNR=5.5							
TXAR	**Lajitas Array**	**144.77**	**47**	PKP		**PKPdf**	**18 40 02.0**	**+0.1**
	comp=Z,3.0nm,0.5s,baz=310,slow=1.2,SNR=82							
L56A	**Greenwood**	**144.79**	**4**	P			18 40 00.2	
	baz=355,SNR=5.8							
BINY	**Binghamton**	**144.79**	**2**	P			18 40 00.4	
	baz=358,SNR=5.9							
L61A	**Hillsdale 1, H**	**144.80**	**358**	P			18 40 01.2	
	baz=1.9							
L59A	**Walton**	**144.82**	**0**	P			18 40 00.6	
	baz=359							
SFIN	**Lafayette**	**144.85**	**16**	P			18 40 00.7	
	baz=338,SNR=8.5							
L58A	**Harry Jones Me**	**144.95**	**1**	P			18 40 01.0	
	baz=358,SNR=12							
L57A	**Andrews Acres**	**144.96**	**3**	P			18 40 00.8	
	baz=356							
L60A	**Shokan**	**145.02**	**359**	P			18 40 01.2	
	baz=0.8							
M51A	**Elyria**	**145.05**	**10**	P			18 40 01.4	
	baz=347							
M53A	**WI Miller and**	**145.17**	**8**	P			18 40 01.4	
	baz=350,SNR=10							
M54A	**Oil Creek Stat**	**145.23**	**6**	P			18 40 01.7	
	baz=351,SNR=13							
TUL1	**Leonard**	**145.25**	**31**	P			18 40 02.0	
	baz=321							
BDFB	**Brasilia**	**145.34**	**230**	PKPbc		**PKPab**	**18 40 05.2**	**+1.9**
	comp=Z,2.8nm,0.7s,baz=36,slow=6.6,SNR=4.0							
M56A	**Emporium**	**145.39**	**5**	P			18 40 02.2	
	baz=354,SNR=8.4							
M59A	**Waymart**	**145.46**	**1**	P			18 40 02.6	
	baz=359,SNR=6.0							
CCM	**Cathedral Cave**	**145.54**	**23**	P			18 40 02.7	
	baz=330							
M58A	**Price's Panora**	**145.60**	**2**	P			18 40 03.2	
	baz=357							
M57A	**Sunshine Farm,**	**145.61**	**3**	P			18 40 03.3	
	baz=356,SNR=9.2							
M60A	**Port Jervis**	**145.68**	**360**	P			18 40 03.1	
	baz=0.1,SNR=5.0							
M61A	**Granite Spring**	**145.69**	**359**	P			18 40 03.2	
	baz=1.6							
N54A	**Moraine State**	**145.73**	**7**	P			18 40 03.4	
	baz=351,SNR=6.4							
N56A	**West Decatur**	**145.95**	**5**	P			18 40 04.1	
	baz=354							
ACSO	**Alum Creek Sta**	**145.97**	**11**	P			18 40 04.1	
	baz=345,SNR=7.3							
PAL	**Palisades**	**146.00**	**359**	P			18 40 04.1	
	baz=1.3							
N59A	**State Game Lan**	**146.08**	**1**	P			18 40 04.8	
	baz=358							
N58A	**Sunbury**	**146.12**	**3**	P			18 40 04.7	
	baz=356,SNR=5.2							
N60A	**Cedar Hill Far**	**146.14**	**0**	P			18 40 04.9	
	baz=359							
N57A	**Milroy**	**146.16**	**4**	P			18 40 04.6	
	baz=355,SNR=6.5							
N61A	**South Mountain**	**146.25**	**359**	P			18 40 05.1	
	baz=0.6							
SSPA	**Standing Stone**	**146.26**	**4**	P			18 40 05.4	
	baz=354							
O53A	**New Philadelph**	**146.26**	**9**	P			18 40 05.6	
	baz=348							
P49A	**Miami Univ. Ec**	**146.26**	**14**	P			18 40 04.9	
	baz=342,SNR=6.2							
U40A	**Yellville**	**146.30**	**27**	P			18 40 05.2	
	baz=326							
O56A	**Blue Knob Stat**	**146.57**	**5**	P			18 40 06.0	
	baz=353,SNR=14							
O59A	**Robesonia**	**146.67**	**2**	P			18 40 06.3	
	baz=357,SNR=6.5							
O60A	**Telford**	**146.69**	**1**	P			18 40 06.3	
	baz=359							
O57A	**Amberson**	**146.70**	**4**	P			18 40 06.3	
	baz=355							
P52A	**Corning**	**146.71**	**10**	P			18 40 06.0	
	baz=346							
JCT	**Junction City**	**146.77**	**42**	P			18 40 07.3	
	baz=310							
O58A	**Lewisberry**	**146.83**	**3**	P			18 40 06.7	
	baz=356							
MCWV	**Mont Chateau**	**147.03**	**7**	P			18 40 07.6	
	baz=351							
WCI	**Wyandotte Cave**	**147.07**	**17**	P			18 40 07.5	
	baz=339							
P60A	**Greenville**	**147.19**	**1**	P			18 40 08.6	
	baz=358							
P56A	**Dayton Farm, R**	**147.30**	**6**	P			18 40 08.2	
	baz=352,SNR=9.4							
P59A	**Jarrettsville**	**147.36**	**2**	P			18 40 08.1	
	baz=357							
P57A	**Homestead Farm**	**147.39**	**5**	P			18 40 08.5	
	baz=354							
MIAR	**Mount Ida**	**147.44**	**30**	P			18 40 08.8	
	baz=324							
Q53A	**Leroy**	**147.57**	**10**	P			18 40 08.9	
	baz=347,SNR=5.7							
Q56A	**Snyder Ridge,**	**147.72**	**6**	P			18 40 09.4	
	baz=352							
Q57A	**Strasburg**	**147.80**	**5**	P			18 40 09.7	
	baz=353							
Q58A	**Fox Den Farm,**	**147.96**	**4**	P			18 40 09.9	
	baz=354							
R54A	**Victor**	**148.32**	**9**	P			18 40 10.5	
	baz=348							
R56A	**Bull Pasture M**	**148.32**	**7**	P			18 40 10.9	
	baz=351							
R55A	**Marlinton**	**148.35**	**8**	P			18 40 11.1	
	baz=350							
833A	**Chaparral WMA,**	**148.40**	**45**	P			18 40 11.9	
	baz=308							
WVT	**Waverly**	**148.51**	**21**	P			18 40 11.7	
	baz=335							
R57A	**Stanardsville**	**148.52**	**6**	P			18 40 11.9	
	baz=353							
R58A	**Rapidan**	**148.57**	**5**	P			18 40 11.7	
	baz=354							
S54A	**Dingess, Beckl**	**148.63**	**10**	P			18 40 11.8	
	baz=347							
CBN	**Corbin Frederi**	**148.71**	**4**	P			18 40 12.0	
	baz=355							
R58B	**Mineral**	**148.91**	**5**	P			18 40 12.6	
	baz=354							
S57A	**Dark Hollow, R**	**149.01**	**6**	P			18 40 12.9	
	baz=352							
S56A	**Natural Bridge**	**149.02**	**7**	P			18 40 12.9	
	baz=351							
S59A	**Mechanicsville**	**149.16**	**4**	P			18 40 13.3	
	baz=355							
S58A	**Poland Farm, P**	**149.25**	**5**	P			18 40 13.4	
	baz=353							
S60A	**Water View**	**149.25**	**3**	P			18 40 13.7	
	baz=356							
OXF	**Oxford**	**149.34**	**24**	P			18 40 13.4	
	baz=330							
BLA	**Blacksburg**	**149.35**	**9**	P			18 40 13.4	
	baz=349							
TZTN	**Tazewell**	**149.38**	**14**	P			18 40 13.8	
	baz=343							
T56A	**Rocky Mt**	**149.59**	**8**	P			18 40 14.1	
	baz=350							
U54A	**Nelsons Funny**	**149.78**	**11**	P			18 40 14.6	
	baz=346							
T58A	**Grand View Acr**	**149.86**	**6**	P			18 40 15.0	
	baz=352							
U56A	**King**	**150.21**	**9**	P			18 40 15.8	
	baz=349							
KMSC	**Kings Mountain**	**151.21**	**11**	P			18 40 17.8	
	baz=346							
LRAL	**Lakeview Retre**	**151.59**	**22**	P			18 40 19.2	
	baz=334							
GOGA	**Godfrey**	**152.38**	**16**	P			18 40 20.7	
	baz=341							

*IDC **09** 18:22:33.0±1.9,23°.31N×100°.42E,h0km,mb3.1/2, mb1 3.2/3,mb1mx3.0/63,mbtmp3.1/3,ML3.5/1,Error ellipse: s-maj=52.4km s-min=18.6km az=99.0*

ISC 09 18:22:33.9±1.4,23°.21N±0°.09×100°.4E±0°.2,h10km,n20, σ1§16/21,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM34	**Chiang Mai Arr**	**4.50**	**196**	P	**Pg**	**18 23 59.0**	**-1.2**
CM33	**Chiang Mai Arr**	**4.59**	**198**	P	**Pg**	**18 24 00.0**	**-1.8**
CMMT	**Chiang Mai**	**4.59**	**198**	P	**Pg**	**18 23 59.6**	**-2.3**
	151nm16nm,1.1s						
LAMP	**Lampang**	**4.72**	**189**	P	**Pg**	**18 24 04.7**	**+0.3**
	28nm,0.7s						
CM32	**Chiang Mai Arr**	**4.77**	**199**	P	**Pg**	**18 24 05.0**	**-0.3**
CM36	**Chiang Mai Arr**	**4.83**	**195**	P	**Pg**	**18 24 06.0**	**-0.5**
CM31	**Chiang Mai Arr**	**4.93**	**197**	P	**Pg**	**18 24 08.0**	**-0.4**
	12µm971nm,0.5s						
CMAR	**Chiang Mai Arr**	**4.93**	**197**	Pn	**Pn**	**18 23 49.1**	**+1.0**
	0.5nm,0.3s,baz=13,slow=13,SNR=5.7						
CMAR				Pg	**Pg**	**18 24 06.2**	**-2.2**
	2.3nm,0.3s,baz=8.8,slow=18,SNR=104						
CMAR				Lg	Lg	18 25 11.8	
	2.0nm,0.3s,baz=14,slow=28,SNR=13						
CM09	**Chiang Mai Arr**	**4.93**	**196**	P	**Pg**	**18 24 08.2**	**-0.2**
	282nm32nm,0.9s						
CM15	**Chiang Mai Arr**	**4.94**	**197**	P	**Pg**	**18 24 08.2**	**-0.4**
	404nm41nm,0.9s						
CM02	**Chiang Mai Arr**	**4.95**	**197**	P	**Pg**	**18 24 08.4**	**-0.4**
	326nm48nm,0.9s						
CM01	**Chiang Mai Arr**	**4.96**	**197**	P	**Pg**	**18 24 08.0**	**-1.0**
	305nm38nm,0.9s						
CM13	**Chiang Mai Arr**	**4.98**	**197**	P	**Pg**	**18 24 07.9**	**-1.4**
	308nm43nm,0.7s						
CM04	**Chiang Mai Arr**	**4.98**	**196**	P	**Pg**	**18 24 09.0**	**-0.3**
	332nm45nm,0.8s						
CM05	**Chiang Mai Arr**	**4.99**	**197**	P	**Pg**	**18 24 09.0**	**-0.4**
	232nm28nm,0.9s						
UTTA	**Uttaradit**	**5.44**	**179**	P	**Pg**	**18 24 18.0**	**-0.1**
MHMT	**Maesarieng**	**5.53**	**206**	P	**Pg**	**18 24 21.5**	**+1.6**
PHIT	**Phitsanulok**	**5.99**	**180**	P	**Pg**	**18 24 28.2**	**-0.4**
SONM	**Songino Array**	**25.03**	**10**	P	**P**	**18 27 58.8**	**+0.6**
	0.2nm,0.3s,baz=179,slow=7.2,SNR=3.6						
MKAR	**Makanchi Array**	**27.70**	**333**	P	**P**	**18 28 21.2**	**-1.0**
	0.1nm,0.5s,baz=140,slow=9.2,SNR=2.2						

*IDC **09** 19:04:55.5±0.5,43°.86S×41°.56E,h0km,mb4.0/17, mb1 4.1/17,mb1mx4.0/32,mbtmp4.0/17,MS3.8/21, Ms1 3.8/21,ms1mx3.8/26,Error ellipse: s-maj=22.4km s-min=16.0km az=52.0*

*GCMT **09** 19:04:58.8±0.4,43°.68S±0°.02×41°.82E±0°.06,h20km±1km, MW4.9/81,Moment Tensor Solution. s16,c18; s81,c107; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-2.22±.20; Mθθ2.14±.12; Mϕϕ0.08±.10; Mrθ-0.01±.18; Mϕθ0.07±.07; Mϕr-1.15±.28; Best double couple: Mo2.41900×10^16^ NP1:ϕs289.00000°,δ48.00000°,λ-59.00000°. NP2: ϕs67.00000°,δ50.00000°,λ-120.00000°. Principal axes: T 2.1430, Plg1.0000°, Azm178.0000°; N 0.5570, Plg22.0000°, Azm87.0000°; P -2.6960, Plg68.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 19:04:58.8±1.8,43°.91S±0°.07×41°.3E±0°.1,h17km±3km, mb4.6/17 Error ellipse: s-maj=16.9km s-min=7.6km az=62.0*

ISC 09 19:04:57.5±0.4,43°.87S±0°.09×41°.34E±0°.09,h10km,n57, σ1§50/47,mb4.2/19,MS3.9/19,Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRZF	**Crozet Islands**	**7.87**	**113**	Pn	**Pn**	**19 06 53.2**	**+1.3**
SUR	**Sutherland**	**19.75**	**299**	P	**Pn**	**19 09 31.3**	**+2.1**
	0.3nm,0.3s,baz=114,slow=11,SNR=5.5						
SUR				LR	LR	19 15 12.2	
	comp=Z,315nm,21.5s,baz=129,slow=31						
SUR	**Sutherland**	**19.75**	**299**	P	**P**	**19 09 26.4**	**-1.4**
BOSA	**Boshof**	**19.95**	**314**	P	**Pn**	**19 09 32.0**	**+0.6**
	2.7nm,0.8s,baz=118,slow=10,SNR=5.4						
BOSA				LR	LR	19 15 55.4	
	comp=Z,326nm,19.2s,baz=147,slow=33						
BOSA	**Boshof**	**19.95**	**314**	P	**P**	**19 09 29.1**	**-0.6**
LBTB	**Lobatse**	**22.78**	**321**	P	**P**	**19 10 01.4**	**+1.1**
	3.3nm,0.9s,baz=156,slow=6.9,SNR=4.1						
LBTB				LR	LR	19 17 10.3	
	comp=Z,443nm,20.8s,baz=134,slow=32						
LBTB	**Lobatse**	**22.78**	**321**	P	**P**	**19 10 00.7**	**+0.4**
LBTB				IAmb	IAmb	19 10 07.2	
	comp=Z,12nm,1.1s						
OPO	**Ambohidratompo**	**25.70**	**13**	LR	LR	19 19 06.3	
	comp=Z,675nm,19.4s,baz=3.0,slow=33						
MATP	**Matopo**	**25.71**	**331**	P	**P**	**19 10 28.6**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=198,slow=15,SNR=2.6						
MATP				LR	LR	19 19 17.1	
	comp=Z,301nm,18.5s,baz=152,slow=33						
MAW	**Mawson**	**26.41**	**162**	LR	LR	19 18 30.6	
	comp=Z,252nm,21.5s,baz=28,slow=31						
LSZ	**Lusaka**	**30.62**	**334**	P	**P**	**19 11 10.8**	**-1.2**
LSZ				IAmb	IAmb	19 11 20.1	
	comp=Z,8.7nm,1.3s						
SNAA	**Sanae**	**35.00**	**203**	P	**P**	**19 11 51.3**	**+1.6**
SNAA	**Sanae**	**35.00**	**203**	P	**P**	**19 11 50.1**	**+0.4**
	comp=Z,2.2nm,0.8s,baz=102,slow=8.8,SNR=6.3						
SNAA	**Sanae**	**35.00**	**203**	P	**P**	**19 11 49.6**	**0.0**
SNAA				IAmb	IAmb	19 11 57.9	
	comp=Z,8.4nm,1.3s						
VNA2	**Neumayer--Watz**	**36.00**	**205**	P	**P**	**19 11 59.3**	**+1.0**
VNA3	**Neumayer Olymp**	**36.81**	**205**	P	**P**	**19 12 05.7**	**+0.5**
KMBO	**Kilima Mbogo**	**42.71**	**354**	LR	LR	19 27 50.2	
	comp=Z,297nm,21.7s,baz=100,slow=32						
DGAR	**Diego Garcia**	**45.36**	**46**	P	**P**	**19 13 17.3**	**+1.3**
QSPA	**South Pole Qui**	**46.34**	**180**	P	**P**	**19 13 22.5**	**-1.0**
QSPA				IAmb	IAmb	19 13 25.6	
	comp=Z,12nm,1.2s						
VNDA	**Vanda**	**53.55**	**167**	P	**P**	**19 14 18.6**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=229,slow=6.2,SNR=3.5						
VNDA				LR	LR	19 35 43.4	
	comp=Z,96nm,20.4s,baz=230,slow=34						
VNDA	**Vanda**	**53.55**	**167**	P	**P**	**19 14 18.4**	**+0.6**
H01W2	**Cape Leeuwin H**	**55.31**	**107**	T	T	20 14 04.4	
	baz=238,slow=74						
H01W3	**Cape Leeuwin H**	**55.32**	**107**	T	T	20 14 05.1	
	baz=238						
H01W1	**Cape Leeuwin H**	**55.32**	**107**	T	T	20 14 05.7	
	baz=238,slow=74						
DBIC	**Dimbokro**	**65.32**	**308**	P	**P**	**19 15 39.8**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=149,slow=6.5,SNR=3.7						
DBIC				LR	LR	19 40 50.4	
	comp=Z,77nm,20.9s,baz=123,slow=33						
DBIC	**Dimbokro**	**65.32**	**308**	P	**P**	**19 15 40.1**	**+0.3**
DBIC				IAmb	IAmb	19 15 50.6	
	comp=Z,6.9nm,1.1s						
TOA0	**Torodi Ar. Sit**	**67.27**	**318**	P	**P**	**19 15 53.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**67.27**	**318**	P	**P**	**19 15 52.8**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=152,slow=5.7,SNR=16						
TORD				LR	LR	19 43 00.2	
	comp=Z,84nm,21.8s,baz=95,slow=34						
TORD	**Torodi Ar. Bea**	**67.27**	**318**	P	**P**	**19 15 53.0**	**+0.7**
TORD				IAmb	IAmb	19 15 53.8	
	comp=Z,3.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**73.65**	**99**	P	**P**	**19 16 30.9**	**-0.5**
FITZ				IAmb	IAmb	19 16 39.8	
	comp=Z,15nm,1.5s						
STKA	**Stephens Creek**	**75.32**	**120**	P	**P**	**19 16 40.2**	**-0.8**
	comp=Z,5.6nm,0.7s,baz=232,slow=3.1,SNR=12						
STKA				LR	LR	19 43 26.6	
	comp=Z,47nm,18.9s,baz=205,slow=31						
STKA	**Stephens Creek**	**75.32**	**120**	P	**P**	**19 16 40.6**	**-0.4**
ASAR	**Alice Springs**	**75.76**	**109**	P	**P**	**19 16 42.0**	**-1.7**
	comp=Z,0.5nm,1.0s,baz=218,slow=5.2,SNR=4.7						
PLCA	**Paso Flores**	**75.88**	**227**	P	**P**	**19 16 44.0**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=90,slow=3.0,SNR=3.8						
PLCA				LR	LR	19 43 12.0	
	comp=Z,73nm,21.4s,baz=158,slow=30						
PLCA	**Paso Flores**	**75.88**	**227**	P	**P**	**19 16 44.0**	**-0.2**
PLCA				IAmb	IAmb	19 16 45.2	
	comp=Z,5.8nm,1.2s						
CPUP	**Villa Florida**	**78.07**	**245**	P	**P**	**19 16 55.6**	**-1.0**
	comp=Z,3.0nm,0.9s,baz=111,slow=3.8,SNR=4.8						
CPUP				LR	LR	19 43 44.4	
	comp=Z,47nm,21.9s,baz=156,slow=30						
CPUP	**Villa Florida**	**78.07**	**245**	IAmb	IAmb	19 16 57.5	
	comp=Z,8.2nm,1.3s						

KAPI	**Kappang**	**78.19**	**86**	LR	LR	19 46 45.1		
	comp=Z,25nm,19.4s,baz=266,slow=32							
WRA	**Warramunga Arr**	**78.55**	**107**	P	**P**	**19 16 57.8**	**-1.6**	
	comp=Z,1.4nm,1.0s,baz=221,slow=4.9,SNR=6.9							
CMAR	**Chiang Mai Arr**	**81.34**	**54**	P	**P**	**19 17 13.5**	**-0.8**	
	comp=Z,0.3nm,0.8s,baz=217,slow=4.3,SNR=1.9							
CMAR				LR	LR	19 47 37.5		
	comp=Z,40nm,19.2s,baz=228,slow=32							
GEYT	**Alibeck**	**82.83**	**13**	P	**P**	**19 17 21.7**	**0.0**	
	comp=Z,0.9nm,0.5s,baz=258,slow=4.1,SNR=2.0							
BRTR	**Keskin Array B**	**83.50**	**354**	P	**P**	**19 17 25.1**	**-0.2**	
	comp=Z,0.6nm,0.8s,baz=148,slow=7.1,SNR=2.6							
BRTR				LR	LR	19 55 22.8		
	comp=Z,49nm,18.5s,baz=147,slow=36							
KEST	**Kesra**	**84.40**	**334**	LR	LR	19 56 53.6		
	comp=Z,111nm,19.1s,baz=245,slow=37							
CHGR	**Chuyangaron**	**85.91**	**21**	P	**P**	**19 17 38.2**	**+0.8**	
KBZ	**Khabaz**	**87.22**	**1**	LR	LR	19 57 29.3		
	comp=Z,43nm,18.2s,baz=164,slow=36							
ESDC	**Sonseca Array**	**92.67**	**327**	P	**P**	**19 18 09.1**	**-0.1**	
	comp=Z,0.3nm,0.8s,baz=180,slow=3.0,SNR=4.3							
ESDC				LR	LR	20 00 46.2		
	comp=Z,30nm,18.0s,baz=145,slow=36							
GERES	**GERESS Array B**	**95.46**	**342**	LR	LR	20 03 16.3		
	comp=Z,18nm,19.4s,baz=108,slow=37							
MKAR	**Makanchi Array**	**97.26**	**27**	P	**P**	**19 18 29.3**	**-0.8**	
	comp=Z,0.3nm,1.0s,baz=205,slow=6.4,SNR=2.2							
MKAR				LR	LR	19 59 52.4		
	comp=Z,39nm,19.0s,baz=256,slow=34							
RES	**Resolute Bay**	**143.57**	**342**	PKP	PKPbc	19 24 28.7	+0.3	
	comp=Z,0.7nm,0.8s,baz=144,slow=3.0,SNR=2.3							
TXAR	**Lajitas Array**	**148.65**	**254**	PKP	**PKPdf**	**19 24 41.2**	**0.0**	
	comp=Z,7.1nm,0.8s,baz=131,slow=3.8,SNR=32							
TXAR				PKPbc	**PKPbc**	**19 24 44.9**	**0.0**	
	comp=Z,7.2nm,0.9s,baz=139,slow=5.4,SNR=50							
ULM	**Lac du Bonnet**	**150.49**	**298**	PKPbc	**PKPbc**	**19 24 47.6**	**-1.1**	
	comp=Z,6.4nm,0.7s,baz=115,slow=5.0,SNR=9.1							
ANMO	**Albuquerque**	**153.71**	**261**	PKPbc	**PKPbc**	**19 24 56.5**	**-0.2**	
	comp=Z,2.3nm,0.8s,baz=120,slow=2.5,SNR=5.2							
ANMO	**Albuquerque**	**153.71**	**261**	PKPdf	**PKPdf**	**19 24 48.6**	**-0.3**	
ANMO					**PKiKP**	**19 24 56.6**	**-0.2**	
INK	**Inuvik**	**155.35**	**355**	PKPbc	**PKPdf**	**19 24 57.4**	**+7.6**	
	comp=Z,1.0nm,0.7s,baz=339,slow=5.8,SNR=3.7							
YKA	**Yellowknife Ar**	**156.68**	**331**	PKP	**PKPdf**	**19 24 50.3**	**-1.4**	
	comp=Z,0.2nm,0.6s,baz=36,slow=2.2,SNR=4.5							
ILAR	**Eielson Array**	**158.55**	**10**	PKPab	**PKPab**	**19 25 26.7**	**-2.4**	
	comp=Z,0.8nm,0.8s,baz=318,slow=3.0,SNR=4.5							
ILAR	**Eielson Array**	**158.55**	**10**		**PKPab**	**19 25 28.0**	**-1.2**	

*NEIC **09** 19:20:14.1±2.9,43°.42N±0°.04×105°.30W±0°.08,h0km±2km, ML3.2/56,Error ellipse: s-maj=10.8km s-min=5.9km az=241.0*

*IDC **09** 19:20:14.2±2.3,43°.38N×105°.31W,h0km,mb1 3.5/2, mb1mx3.2/38,mbtmp3.3/2,ML3.0/2,Error ellipse: s-maj=50.5km s-min=10.0km az=154.0*

*ANF **09** 19:20:15.3±0.6,43°.37N×105°.12W,h2km±4km,ML3.0/6, Error ellipse: s-maj=5.3km s-min=3.9km az=112.0, Hypocentre not reviewed by the ISC*

ISC 09 19:20:13.1±1.0,43°.40N±0°.04×105°.37W±0°.05,h0km,n47, σ1§66/46,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K22A	**Casper**	**1.13**	**229**		**Pn**	**19 20 39.0**	**+2.6**
K22A	**Casper**	**1.13**	**229**	P		19 20 39.1	
	baz=55,SNR=71						
K22A				S		19 20 58.0	
	baz=55						
RSSD	**Black Hills**	**1.20**	**53**	Pg	**Pg**	**19 20 36.5**	**+0.4**
RSSD	**Black Hills**	**1.20**	**53**	P		19 20 36.6	
	baz=226						
PHWY	**Pilot Hill**	**2.10**	**182**	Pg	**Pg**	**19 20 55.2**	**+1.8**
RWWY	**Rawlins**	**2.19**	**219**	Pg	**Pg**	**19 20 56.5**	**+1.4**
RWWY				IAML		19 21 33.7	
	226nm,0.6s						
RWWY				IAML		19 21 35.7	
	120nm,0.6s						
N23A	**Red Feather La**	**2.54**	**190**	Pb		19 21 02.0	
	baz=14,SNR=25						
N23A				S		19 21 30.8	
	baz=14						
PD31	**Pinedale Array**	**3.14**	**260**	Pn	**Pb**	**19 21 08.3**	**-1.5**
PDAR	**Pinedale Array**	**3.14**	**260**	Pn	**Pb**	**19 21 08.2**	**-1.7**
	0.9nm,0.3s,baz=77,slow=15,SNR=37						
PDAR				Lg	Lg	19 21 54.1	
	8.7nm,0.3s,baz=78,slow=34,SNR=5.4						
PDAR	**Pinedale Array**	**3.14**	**260**		**Pb**	**19 21 08.4**	**-1.5**
BW06	**Boulder Array**	**3.14**	**260**		**Pb**	**19 21 08.4**	**-1.4**
BW06	**Boulder Array**	**3.14**	**260**	P		19 21 08.4	
	baz=78						
BW06				Sb		19 21 57.6	
	baz=78						
RLMT	**Red Lodge**	**3.29**	**303**	Pn	**Pn**	**19 21 09.9**	**+3.8**
RLMT				IAML		19 22 10.5	
	46nm,0.5s						
RLMT				IAML		19 22 40.5	
	51nm,1.1s						
RLMT	**Red Lodge**	**3.29**	**303**	P		19 21 10.0	
	baz=119,SNR=7.2						
LAO	**LASA Array**	**3.34**	**350**		**Pn**	**19 21 07.7**	**+1.0**
OGNE	**Ogallala**	**3.49**	**134**	Pn	**Pn**	**19 21 09.2**	**+0.5**
ISCO	**Idaho Springs**	**3.60**	**183**	Pn	**Pn**	**19 21 11.7**	**+1.2**
ISCO	**Idaho Springs**	**3.60**	**183**	Pb		19 21 19.1	
	baz=5.7						
YMP	**Mirror Lake PI**	**3.70**	**293**	Pn	**Pn**	**19 21 14.7**	**+2.9**
YMP				IAML		19 22 19.0	
	comp=N,62nm,0.7s						
YNE	**Yellowstone No**	**3.70**	**297**	Pn	**Pn**	**19 21 15.2**	**+3.4**
YNE				IAML		19 22 24.2	
	comp=N,55nm,0.5s						
LKWY	**Lake**	**3.81**	**289**	Pn	**Pn**	**19 21 14.2**	**+0.9**
LKWY				IAML		19 22 32.4	
	comp=N,44nm,0.6s						
LKWY				IAML		19 23 04.0	
	comp=N,28nm,1.0s						
LOHW	**Long Hollow**	**3.82**	**275**	Pn	**Pn**	**19 21 14.9**	**+1.5**
LOHW				IAML		19 22 21.5	
	comp=N,21nm,0.8s						
GCMT	**Greycliff**	**3.89**	**309**	Pn	**Pn**

	comp=E,21nm,1.1s						
HWUT				IAML		19 24 19.8	
	comp=E,23nm,1.4s						
BOZ	**Bozeman (W)**	**4.99**	**298**	Pn	**Pn**	**19 21 28.2**	**-1.1**
BOZ				IAML		19 22 55.5	
	comp=E,12nm,1.3s						
BOZ				IAML		19 23 32.2	
	comp=E,18nm,1.5s						
TCUT	**Toone Canyon**	**5.03**	**245**	Pn	**Pn**	**19 21 31.6**	**+1.5**
DGMT	**Dagmar**	**5.13**	**9**	Pn	**Pn**	**19 21 31.8**	**+0.6**
PV22	**Blue Mesa, Par**	**5.51**	**209**	Pn	**Pn**	**19 21 36.5**	**-0.1**
PV07	**Paradox Valley**	**5.55**	**208**	Pn	**Pn**	**19 21 36.1**	**-1.0**
EGMT	**Eagleton**	**5.55**	**328**	Pn	**Pn**	**19 21 38.4**	**+1.4**
MCMT	**McKenzie Canyo**	**5.57**	**287**	Pn	**Pn**	**19 21 37.9**	**+0.4**
PV15	**Paradox Valley**	**5.58**	**206**	Pg	**Pg**	**19 21 59.6**	**-0.4**
LRM	**Limekiln Ridge**	**5.61**	**298**	Pn	**Pn**	**19 21 38.7**	**+0.8**
SPUT	**South Promonto**	**5.65**	**251**		**Pg**	**19 22 00.8**	**-0.5**
PV04	**Paradox Valley**	**5.68**	**209**	Pn	**Pn**	**19 21 40.2**	**+1.4**
PV14	**Lion Creek, Pa**	**5.74**	**210**	Pn	**Pn**	**19 21 39.8**	**0.0**
SRU	**San Rafael Swe**	**5.79**	**224**	Pn	**Pn**	**19 21 43.8**	**+3.4**
ULM	**Lac du Bonnet**	**9.44**	**40**	Pn	**Pn**	**19 22 29.4**	**-0.8**
	comp=E,0.5nm,0.3s,baz=227,slow=13,SNR=5.4						
ULM				Lg	Lg	19 25 05.1	
	comp=E,0.3nm,0.3s,baz=23,slow=23,SNR=1.3						
ULM	**Lac du Bonnet**	**9.44**	**40**		**Pn**	**19 22 29.3**	**-1.0**
I56US	**NEWPORT INFRAS**	**9.54**	**305**	*i*		20 17 30.0	
	baz=112,slow=322,SNR=3.4						

*IDC **09** 19:23:01.9±1.8, 35°.50N×27°.44E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/33, mbtmp3.4/5, ML2.6/1, Error ellipse: s-maj=51.7km s-min=21.7km az=149.0*
*ISK **09** 19:23:02.6, 35°.28N×27°.59E, h12km, ML3.4/17*
*ATH **09** 19:23:03.1, 35°.30N×27°.59E, h12km±5km, ML3.1/4, Error ellipse: s-maj=7.1km s-min=1.5km az=314.0*
*DDA **09** 19:23:03.3, 35°.22N×27°.58E, h8km±2km, ML2.8*
*THE **09** 19:23:04.2, 35°.40N×27°.57E, h6km±3km, ML3.0/4, Error ellipse: s-maj=4.2km s-min=1.2km az=331.0*

ISC 09 19:23:02.7±1.4, 35°.28N±0°.05×27°.59E±0°.03, h9km±9km, n48, σ0°85/62, mb3.5/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.44**	**307**	P	**Pg**	**19 23 11.3**	**+0.1**
KARP				S	**Sg**	**19 23 17.6**	**+0.5**
KARP				AML	AML	19 23 22.5	
	comp=N,4228μm,0.5s						
KARP				AML	AML	19 23 24.0	
	comp=E,4300μm,0.6s						
KARP	**Karpathos**	**0.44**	**307**	P	**Pg**	**19 23 11.3**	**+0.1**
KARP				S	**Sg**	**19 23 17.6**	**+0.5**
	comp=E,2μm,0.5s						
KARP	**Karpathos**	**0.44**	**307**	PG	**Pg**	**19 23 11.7**	**+0.4**
KARP				SG	**Sb**	**19 23 18.3**	**-1.1**
ARG	**Arkhangelos**	**1.03**	**25**	P	**Pg**	**19 23 22.1**	**-0.4**
ARG				S	**Sg**	**19 23 35.3**	**-0.5**
ARG				AML	AML	19 23 46.0	
	comp=N,1394μm,0.9s						
ARG				AML	AML	19 23 46.7	
	comp=E,2257μm,0.9s						
ARG	**Arkhangelos**	**1.03**	**25**	P	**Pg**	**19 23 22.1**	**-0.4**
ARG				S	**Sg**	**19 23 35.3**	**-0.5**
	comp=E,915nm,0.9s						
ARG	**Arkhangelos**	**1.03**	**25**	PG	**Pg**	**19 23 22.2**	**-0.2**
ZKR	**Zakros**	**1.14**	**262**	P	**Pg**	**19 23 24.2**	**-0.3**
ZKR				AML	AML	19 23 47.2	
	comp=E,2564μm,0.7s						
ZKR				AML	AML	19 23 47.6	
	comp=N,1397μm,0.6s						
ZKR	**Zakros**	**1.14**	**262**	P	**Pg**	**19 23 24.2**	**-0.3**
ZKR				S	**Sn**	**19 23 41.4**	**+0.9**
	comp=N,992nm,0.7s						
ZKR	**Zakros**	**1.14**	**262**	PN	**Pg**	**19 23 24.1**	**-0.4**
ZKR				SN	**Sn**	**19 23 41.5**	**+0.9**
NIS1	**Nisyros Isl.**	**1.36**	**346**	PN	**Pn**	**19 23 28.3**	**+0.5**
KOSK	**Kos Island**	**1.55**	**341**	PN	**Pn**	**19 23 30.9**	**+0.5**
TURN	**Turunc**	**1.58**	**19**	*i* P	**Pb**	**19 23 32.1**	**0.0**
TURN				*i* S	**Sg**	**19 23 53.7**	**+0.2**
TURN				IAML		19 24 00.0	
	comp=N,128nm,0.7s						
TURN				IAML		19 24 01.0	
	comp=E,108nm,0.8s						
TURN	**Turunc**	**1.58**	**19**	PN	**Pn**	**19 23 31.4**	**+0.5**
NPS	**Neapolis**	**1.62**	**270**	P	**Pb**	**19 23 32.6**	**-0.1**
NPS				AML	AML	19 24 08.0	
	comp=E,1612μm,1.1s						
NPS				AML	AML	19 24 12.1	
	comp=N,1108μm,0.7s						
NPS	**Neapolis**	**1.62**	**270**	P	**Pb**	**19 23 32.6**	**-0.1**
NPS				S	**Sn**	**19 23 52.0**	**-0.4**
	comp=N,698nm,1.0s						
DALY	**Dalyan (Mula)**	**1.76**	**29**	*i* P	**Pb**	**19 23 35.2**	**+0.2**
DALY				*i* S	**Sg**	**19 24 00.3**	**+1.1**
DALY				IAML		19 24 07.0	
	comp=N,108nm,0.6s						
DALY	**Dalyan (Mula)**	**1.76**	**29**	PN	**Pn**	**19 23 34.2**	**+0.9**
BDRM	**Kayabasi**	**1.78**	**356**	*i* P	**Pn**	**19 23 34.7**	**+1.0**
BDRM				*i* S	**Sg**	**19 23 59.0**	**-1.0**
BDRM				IAML		19 24 11.0	
	comp=E,81nm,0.5s						
BDRM				IAML		19 24 14.0	
	comp=N,75nm,0.6s						
BODT	**Bodrum**	**1.79**	**353**	PN	**Pn**	**19 23 34.3**	**+0.5**
FETY	**Fethiye**	**1.81**	**41**	P	**Pn**	**19 23 32.8**	**-1.3**
FETY	**Fethiye**	**1.81**	**41**	PN	**Pn**	**19 23 34.4**	**+0.3**
AKAS	**Kas**	**1.89**	**59**	*i* P	**Pn**	**19 23 35.3**	**0.0**
AKAS				*i* S	**Sb**	**19 24 00.9**	**-0.3**
AKAS	**Kas**	**1.89**	**59**	PN	**Pn**	**19 23 35.5**	**+0.2**
YER	**Yerkesik**	**1.93**	**17**	PN	**Pn**	**19 23 36.5**	**+0.8**
HRKL	**Herakleio**	**2.04**	**272**	PN	**Pn**	**19 23 37.6**	**+0.5**
MULA	**Mugla, Merkez-**	**2.06**	**16**	*i* P	**Pg**	**19 23 41.8**	**-0.3**
MULA				*i* S	**Sb**	**19 24 05.6**	**-0.4**
THT2	**Imerovigli**	**2.10**	**304**	PN	**Pn**	**19 23 38.8**	**+0.7**
IDI	**Anoyia**	**2.21**	**271**	P	**Pb**	**19 23 41.9**	**-0.9**
IDI	**Anoyia**	**2.21**	**271**	PN	**Pn**	**19 23 40.3**	**+0.7**
SIVA	**Sivas**	**2.29**	**264**	P	**Pb**	**19 23 43.6**	**-0.6**
CAEL	**Denizli, Camel**	**2.31**	**37**	*i* P	**Pn**	**19 23 43.2**	**+2.2**
ELL	**Elmali**	**2.38**	**51**	PN	**Pn**	**19 23 42.9**	**+0.9**
AYDN	**Tasoluk**	**2.39**	**5**	*i* P	**Pn**	**19 23 43.2**	**+1.2**
TAVA	**DENIZLI_Tavas**	**2.43**	**26**	*i* P	**Pb**	**19 23 46.6**	**+0.1**
GCAM	**G?zelcaml?**	**2.43**	**353**	PN	**Pn**	**19 23 43.8**	**+1.3**
APE	**Apeiranthos**	**2.44**	**318**	PN	**Pn**	**19 23 43.4**	**+0.7**
GOLH	**Golhisar**	**2.52**	**39**	*i* P	**Pn**	**19 23 44.8**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**2.67**	**5**	PN	**Pn**	**19 23 46.9**	**+0.9**
KORT	**Korkueli**	**2.82**	**52**	PN	**Pn**	**19 23 49.1**	**+1.1**
GVD	**Gavdhos**	**2.91**	**262**	PN	**Pn**	**19 23 50.0**	**+0.9**
IMMV	**Iera Moni Meta**	**2.96**	**274**	PN	**Pn**	**19 23 50.6**	**+0.8**
ANTB	**Antalya**	**2.96**	**56**	PN	**Pn**	**19 23 50.9**	**+1.1**
KNDR	**Palaiochora Ch**	**3.20**	**270**	PN	**Pn**	**19 23 54.8**	**+1.7**
BRTR	**Keskin Array B**	**6.54**	**46**	Pn	**Pn**	**19 24 41.0**	**+1.9**
	comp=N,0.1nm,0.3s,baz=226,slow=14,SNR=2.0						
BRTR				Sn	**Sn**	**19 25 54.2**	**+0.3**
	comp=N,0.1nm,0.3s,baz=210,slow=25,SNR=6.4						
ESDC	**Sonseca Array**	**25.35**	**289**	P	**P**	**19 28 29.0**	**-1.0**
	comp=N,0.6nm,0.6s,baz=81,slow=9.7,SNR=6.3						
TORD	**Torodi Ar. Bea**	**32.12**	**233**	P	**P**	**19 29 31.4**	**+0.9**
	comp=N,0.8nm,0.9s,baz=28,slow=6.9,SNR=2.1						
ARCES	**ARCESS Array B**	**34.33**	**359**	P	**P**	**19 29 47.5**	**-1.7**
	comp=N,5.5nm,1.2s,baz=162,slow=6.6,SNR=1.6						
MKAR	**Makanchi Array**	**42.04**	**57**	P	**P**	**19 30 55.0**	**+0.5**
	comp=N,0.2nm,0.6s,baz=260,slow=8.3,SNR=2.1						

IDC 09 19:24:19.6±3.9, 6°.42S×147°.69E, h0km, mb2.7/1, mb1 3.6/2, mb1mx3.2/22, mbtmp3.3/2, ML3.7/1, Error ellipse: s-maj=140.3km s-min=47.9km az=114.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.68**	**223**	P	P	19 28 38.6	-0.9
	0.3nm,0.3s,baz=46,slow=11,SNR=20						
ASAR	**Alice Springs**	**21.67**	**216**	P	P	19 29 11.9	-0.2
	0.3nm,0.8s,baz=53,slow=9.3,SNR=2.3						
TORD	**Torodi Ar. Bea**	**145.86**	**284**	PKPbc	PKPdf	19 44 01.7	+0.2
	1.2nm,0.7s,baz=73,slow=3.7,SNR=5.8						

*JMA **09** 19:25:31.9±0.2, 42°.94N×146°.32E, h42km±2km, M3.0*
*SKHL **09** 19:25:32.1±0.3, 42°.90N×146°.10E, h63km±3km, mb4.0/4*

ISC 09 19:25:34.3±2.3, 43°.0N±0°.1×146°.20E±0°.08, h42km, n13, σ0°75/21, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.47**	**314**	P	**Pn**	**19 25 43.9**	**-0.8**
NEM2				*e*S	**Sn**	**19 25 52.6**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.48**	**314**	*i* P	**Pn**	**19 25 44.0**	**-0.8**
NMR				*i* S	**Sn**	**19 25 53.0**	**+0.8**
JKHN	**Kushirohamanak**	**0.76**	**274**	P	**Pn**	**19 25 47.7**	**-0.9**
GLVR	**Golovnino**	**0.86**	**325**	*e*P	**Pn**	**19 25 49.0**	**-0.9**
GLVR				AMB	AMB	19 25 50.0	
	40nm,0.2s						
GLVR				*e*S	**Sn**	**19 26 02.0**	**+0.7**
GLVR				A	A	19 26 03.0	
	440nm,0.3s						
GLVR				A	A	19 26 03.0	
	200nm,0.3s						
GRPR	**Tuman**	**1.00**	**342**	*e*P	**Pn**	**19 25 51.0**	**-0.9**
GRPR				AMB	AMB	19 25 51.0	
	50nm,0.3s						
GRPR				*e*S	**Sn**	**19 26 05.0**	**+0.2**
GRPR				A	A	19 26 05.5	
	1μm,0.4s						
GRPR				A	A	19 26 05.5	
	1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.03**	**346**	*i* P	**Pn**	**19 25 51.0**	**-1.2**
YUK				AMB	AMB	19 25 52.0	
	10.0nm,0.2s						
YUK				AMB	AMB	19 25 52.0	
	40nm,0.2s						
YUK				AMB	AMB	19 25 52.0	
	30nm,0.2s						
YUK				*i* S	**Sn**	**19 26 05.3**	**-0.1**
YUK				A	A	19 26 05.9	
	250nm,0.4s						
YUK				A	A	19 26 05.9	
	930nm,0.4s						
JAK	**Akkeshi**	**1.10**	**268**	P	**Pn**	**19 25 52.4**	**-0.9**
JNSB	**Nemuroshibetsu**	**1.14**	**311**	P	**Pn**	**19 25 53.4**	**-0.4**
JRA	**Rausu**	**1.19**	**319**	P	**Pn**	**19 25 54.5**	**0.0**
JNK	**Nakash**	**1.21**	**297**	P	**Pn**	**19 25 54.2**	**-0.6**
JNK				*e*S	**Sn**	**19 26 10.0**	**0.0**
JAR	**Ashorobuto**	**1.80**	**279**	P	**Pn**	**19 26 02.7**	**-0.1**
JAR				*e*S	**Sn**	**19 26 25.4**	**+1.0**
JTKR	**Abashiri--Toko**	**1.91**	**300**	P	**Pn**	**19 26 05.0**	**+0.7**
KUR	**Kuril'sk**	**2.50**	**28**	*e*P	**Pn**	**19 26 12.5**	**+0.1**
KUR				AMB	AMB	19 26 14.0	
	10.0nm,0.3s						
KUR				AMB	AMB	19 26 14.0	
	10.0nm,0.3s						
KUR				AMB	AMB	19 26 14.0	
	20nm,0.3s						
KUR				*e*S	**Sn**	**19 26 42.5**	**+0.8**
KUR				A	A	19 26 44.0	
	70nm,0.3s						
KUR				A	A	19 26 44.0	
	80nm,0.3s						

*IDC **09** 19:36:59.9±0.8, 34°.70N×105°.72E, h0km, mb3.9/16, mb1 4.0/18, mb1mx3.8/48, mbtmp3.9/18, ML3.6/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/43, Error ellipse: s-maj=26.8km s-min=15.9km az=61.0*
*NEIC **09** 19:37:02.5±1.1, 34°.68N±0°.08×105°.6E±0°.1, h15km±4km, mb4.2/15, Error ellipse: s-maj=17.0km s-min=10.9km az=68.0*
*BJI **09** 19:37:03.6±0.0, 34°.65N×105°.57E, h17km, mB4.6/3, mb4.2/8, ML4.3/22, Ms3.8/15, Ms7 3.5/16*
*MOS **09** 19:37:04.0±1.3, 34°.77N×105°.54E, h38km, mb4.2/6, Error ellipse: s-maj=13.5km s-min=7.4km az=114.2*

ISC 09 19:37:01.9±0.4, 34°.74N±0°.05×105°.58E±0°.04, h10km, n81, σ1§15/87, mb4.0/26, 9C-1D, Gansu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**1.95**	**314**	*i* Pg	**Pb**	**19 37 38.1**	**+0.5**
LZH				Sg	**Sg**	**19 38 05.5**	**+0.9**
LZH				smax	smax		
	comp=N,4μm,1.0s						
LZH				smax	smax		
	comp=E,6μm,1.0s						
XAN	**Xi'an**	**2.85**	**103**	Pn	**Pn**	**19 37 47.8**	**+0.3**
XAN				Pg	**Pg**	**19 37 55.0**	**-1.5**
XAN				Sg	**Sg**	**19 38 31.1**	**-2.4**
XAN				smax	smax		
	comp=N,2μm,0.7s						
XAN				smax	smax		
	comp=E,1μm,0.6s						
XAN	**Xi'an**	**2.85**	**103**	P	**Pn**	**19 37 47.8**	**+0.3**
XAN	**Xi'an**	**2.85**	**103**		**Pn**	**19 37 47.8**	**+0.3**
ENH	**Enshi**	**5.55**	**142**	Pn	**Pn**	**19 38 24.8**	**+0.2**
GTA	**Gaotai**	**6.55**	**317**	⇑Pn	**Pn**	**19 38 39.4**	**+1.0**
GTA				Pg	Pb	19 39 02.0	+6.0
GTA				Sn	**Sn**	**19 39 55.8**	**+2.6**
GTA				Sg	**Sg**	**19 40 29.2**	**-3.0**
GTA				smax	smax		
	comp=N,120nm,0.9s						
GTA				smax	smax		
	comp=E,100nm,1.1s						
GTA				LR	LR		
	comp=N,280nm,10.9s						
GTA				LR	LR		
	comp=E,450nm,10.5s						
GTA				LR	LR		
	comp=Z,540nm,10.2s						
BTO	**Baotou**	**6.83**	**30**	Pn	Pn	19 38 49.3	+7.1
BTO				Pg	Pb	19 39 06.6	+5.9
BTO				Sn	**Sn**	**19 39 58.9**	**-1.1**
BTO				Sg	Sg	19 40 33.5	-7.5
BTO				smax	smax		
	comp=N,540nm,0.7s						
BTO				smax	smax		
	comp=E,490nm,0.7s						
GYA	**Guiyang**	**8.31**	**173**	Pg	Pb	19 39 15.8	-10
GYA				Sg	Sb	19 40 49.7	-15
GYA				Sn	Sn	19 40 59.4	+23
GYA				smax	smax		
	comp=N,54nm,0.8s						
GYA				smax	smax		
	comp=E,130nm,0.9s						
WHN	**Wuhan**	**8.50**	**117**	⇑P	**Pn**	**19 39 08.6**	**+3.6**
WHN				S	**Sn**	**19 40 43.9**	**+3.0**
WHN				LR	LR		
	comp=E,850nm,4.8s						
WHN				LR	LR		
	comp=E,990nm,4.9s						
TIA	**Tai'an**	**9.53**	**78**	Pn	Pn	19 39 28.5	+9.4
TIA				Pg		19 40 02.0	
TIA				Sg	Sn	19 41 53.9	+48
TIA				smax	smax		
	comp=N,26nm,0.7s						
TIA				smax	smax		
	comp=E,14nm,0.8s						
SONM	**Songino Array**	**13.09**	**2**	Pn	**Pn**	**19 40 08.4**	**+0.5**
	comp=E,0.3nm,0.3s,baz=185,slow=15,SNR=9.2						
SONM				Sn	**Sn**	**19 42 32.7**	**-1.0**
	comp=E,0.2nm,0.3s,baz=184,slow=22,SNR=2.1						
SONM				Lg	Lg	19 43 56.1	
	comp=E,0.2nm,0.3s,baz=171,slow=28,SNR=1.6						
SONM				LR	LR	19 44 56.0	
	comp=E,25nm,18.3s,baz=144,slow=36						
ULN	**Ulaanbaatar**	**13.15**	**4**	*ce*P	**Pn**	**19 40 09.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ULN	**Ulaanbaatar**	**13.15**	**4**		**Pn**	**19 40 10.2**	**+1.3**
ZAK	**Zakamensk**	**15.72**	**355**	*e*P	**Pn**	**19 40 41.4**	**-2.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	**Urumqi**	**16.52**	**309**	*e*P	**P**	**19 40 55.5**	**-0.9**
WMQ				LR	LR		
	comp=Z,330nm,9.3s						
WMQ				LR	LR		
	comp=Z,150nm,15.1s						
TAPN	**Taplejung**	**16.98**	**249**	*e*P	**P**	**19 41 00.9**	**-0.9**
TLY	**Talaya**	**16.99**	**356**	LR	LR	19 48 21.9	
	comp=Z,48nm,18.2s,baz=126,slow=40						
CMAR	**Chiang Mai Arr**	**17.26**	**202**	P	**Pn**	**19 41 01.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=14,slow=11,SNR=5.9						
CMAR	**Chiang Mai Arr**	**17.26**	**202**	P	**P**	**19 41 04.6**	**0.0**
ODAN	**Odare**	**17.48**	**248**	*e*P	**P**	**19 41 07.2**	**0.0**
TJN	**Taejon**	**17.80**	**78**	*ce*P	**P**	**19 41 13.2**	**+2.8**
JIRN	**Jiri**	**18.01**	**252**	*e*P	**P**	**19 41 12.6**	**-0.7**
	comp=Z,6.4nm,0.7s						
RAMN	**Ramite**	**18.04**	**250**	*e*P	**Pn**	**19 41 12.6**	**-0.3**
GUN	**Gumba**	**18.14**	**253**	*e*P	**Pn**	**19 41 13.3**	**-1.0**

	comp=Z,25nm,0.8s						
PKI	**Pulchoki**	**18.67**	**253**	*e*P	**P**	**19 41 19.7**	**-0.7**
	comp=Z,10nm,0.6s						
KKN	**Kakani**	**18.67**	**254**	*e*P	**P**	**19 41 20.0**	**-0.4**
	comp=Z,14nm,0.7s						
PKIN	**Phulchoki**	**18.68**	**253**	*e*P	**Pn**	**19 41 20.3**	**-0.5**
	comp=Z,9.0nm,0.5s						
DMN	**Daman**	**18.89**	**253**	*e*P	**P**	**19 41 22.5**	**-0.3**
	comp=Z,16nm,0.7s						
GKN	**Gorkha**	**19.09**	**255**	*e*P	**P**	**19 41 24.0**	**-0.9**
	comp=Z,23nm,0.6s						
KOLN	**Koldanda**	**20.02**	**256**	*e*P	**P**	**19 41 34.7**	**-0.4**
	comp=Z,33nm,0.9s						
DGZ	**Jazzator, Alta**	**20.02**	**324**	*i* P	**P**	**19 41 35.8**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PYUN	**Piuthan**	**20.36**	**257**	*e*P	**P**	**19 41 38.4**	**-0.5**
	comp=Z,26nm,0.5s						
MK31	**Makanchi Array**	**21.27**	**311**	*c* P	**P**	**19 41 48.5**	**+0.2**
MK31	**Makanchi Array**	**21.27**	**311**	P	**P**	**19 41 48.9**	**+0.6**
MK31				IAmb	IAmb	19 41 52.9	
	comp=Z,5.5nm,0.6s						
MKAR	**Makanchi Array**	**21.27**	**311**	P	**P**	**19 41 48.9**	**+0.6**
	comp=Z,7.5nm,0.6s,baz=106,slow=12,SNR=66						
MKAR	**Makanchi Array**	**21.27**	**311**	P	**P**	**19 41 49.1**	**+0.8**
MKAR	**Makanchi Array**	**21.27**	**311**	P	**P**	**19 41 49.1**	**+0.8**
MAKZ	**Makanchi**	**21.47**	**311**	P	**P**	**19 41 51.1**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	**Makanchi**	**21.47**	**311**	P	**P**	**19 41 51.1**	**+0.7**
ZAA0	**Zalesovo Array**	**24.11**	**329**	P	**P**	**19 42 18.0**	**+0.5**
ZAA0				IAmb	IAmb	19 42 19.7	
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**24.11**	**329**	P	**P**	**19 42 18.1**	**+0.6**
	comp=Z,2.2nm,0.6s,baz=125,slow=10.0,SNR=13						
KURK	**Kurchatov**	**25.24**	**317**	P	**P**	**19 42 28.5**	**+0.7**
KURK	**Kurchatov**	**25.24**	**317**	P	**P**	**19 42 28.5**	**+0.7**
KURBB	**Kurchatov Arra**	**25.24**	**317**	P	**P**	**19 42 28.5**	**+0.6**
	comp=Z,7.1nm,0.8s,baz=122,slow=9.6,SNR=67						
AAK	**Ala-Archa**	**25.41**	**297**	P	**P**	**19 42 31.0**	**+1.3**
	comp=Z,2.4nm,0.8s,baz=104,slow=4.9,SNR=15						
AAK	**Ala-Archa**	**25.41**	**297**	*ce*P	**P**	**19 42 31.2**	**+1.5**
AAK				pmax	pmax		
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**25.41**	**297**	P	**P**	**19 42 29.6**	**-0.1**
AAK				IAmb	IAmb	19 42 33.5	
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**28.37**	**298**	P	**P**	**19 42 56.3**	**+0.1**
KKAR	**Karatay Array**	**28.37**	**298**	P	**P**	**19 42 56.2**	**+0.1**
BVAR	**Borovoye Array**	**30.84**	**317**	P	**P**	**19 43 17.5**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=145,slow=5.4,SNR=4.1						
BRVK	**Borovoye**	**30.91**	**317**	*i* P	**P**	**19 43 19.3**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NRIK	**Noril'sk**	**36.07**	**349**	*ce*P	**P**	**19 44 03.8**	**+0.6**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ABKAR	**Akbulak array**	**36.31**	**308**	P	**P**	**19 44 05.9**	**+0.4**
GEYT	**Alibeck**	**38.05**	**289**	P	**P**	**19 44 22.1**	**+1.6**
	comp=Z,1.1nm,0.4s,baz=50,slow=12,SNR=2.6						
GEYT	**Alibeck**	**38.05**	**289**	P	**P**	**19 44 19.9**	**-0.6**
GEYT				IAmb	IAmb	19 44 22.7	
	comp=Z,1.4nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**38.05**	**289**	P	**P**	**19 44 20.5**	**0.0**
GYA0B				IAmb	IAmb	19 44 40.9	
	comp=Z,3.5nm,0.9s						
ARU	**Arti**	**38.41**	**319**	*d* P	**P**	**19 44 24.3**	**+1.1**
ARU						19 45 52.7	
ARU				S	**S**	**19 50 16.3**	**-1.6**
ARU				SS	**SnSn**	**19 53 02.1**	**-1.3**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**38.41**	**319**	P	**P**	**19 44 23.8**	**+0.5**
ARU				IAmb	IAmb	19 44 24.9	
	comp=Z,4.1nm,0.8s						
TIXI	**Tiksi**	**38.95**	**11**	P	**P**	**19 44 27.6**	**0.0**
	comp=Z,1.1nm,0.3s,baz=147,slow=4.3,SNR=2.3						
TIXI	**Tiksi**	**38.95**	**11**	*i* P	**P**	**19 44 27.0**	**-0.6**
PET	**Petropavlovsk**	**41.32**	**47**	*ce*P	**P**	**19 44 46.5**	**-1.0**
ARCES	**ARCESS Array B**	**54.48**	**335**	P	**P**	**19 46 29.5**	**+0.3**
	comp=Z,5.2nm,1.2s,baz=72,slow=7.8,SNR=3.9						
FINES	**FINESS Array B**	**55.27**	**325**	P	**P**	**19 46 35.3**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=99,slow=8.6,SNR=2.4						
AKASG	**Malin Array Be**	**55.85**	**312**	P	**P**	**19 46 39.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=67,slow=7.1,SNR=2.2						
BR131	**Keskin Array S**	**56.08**	**298**	P	**P**	**19 46 40.9**	**-0.5**
BR131				pmax	pmax		
	comp=Z,16nm,1.5s						
BR131	**Keskin Array S**	**56.08**	**298**	P	**P**	**19 46 40.9**	**-0.5**
BRTR	**Keskin Array B**	**56.08**	**298**	P	**P**	**19 46 41.7**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=83,slow=3.4,SNR=5.2						
BURAR	**Bucovina Array**	**59.27**	**309**	P	**P**	**19 47 03.3**	**-0.3**
WB0	**Warramunga Arr**	**60.74**	**149**	P	**P**	**19 47 12.4**	**-1.4**
WRA	**Warramunga Arr**	**60.87**	**149**	P	**P**	**19 47 13.3**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=340,slow=7.7,SNR=3.2						
WRA	**Warramunga Arr**	**60.87**	**149**	*i* P	**P**	**19 47 17.7**	**+3.0**
WRA	**Warramunga Arr**	**60.87**	**149**	P	**P**	**19 47 13.4**	**-1.4**
WB2	**Warramunga Arr**	**60.88**	**149**	P	**P**	**19 47 13.6**	**-1.2**
WB2				IAmb	IAmb	19 47 22.8	
	comp=Z,5.7nm,1.2s						
WR0	**Warramunga Arr**	**60.97**	**149**	P	**P**	**19 47 14.3**	**-1.1**

*IDC **09** 20:20:04.9±15.0, 12°.92N×143°.40E, h255km±153km, mb3.1/10, mb1 3.4/10, mb1mx3.2/46, mbtmp3.7/10, Error ellipse: s-maj=39.6km s-min=21.0km az=65.0*

ISC 09 20:19:54.0±0.9, 13°.0N±0°.1×143°.5E±0°.2, h150km, n10, σ0$87/10, mb3.5/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.95**	**196**	P	**P**	**20 26 23.4**	**+0.2**
	1.9nm,0.8s,baz=5.6,slow=9.3,SNR=12						
ASAR	**Alice Springs**	**37.62**	**194**	P	**P**	**20 26 55.0**	**+0.5**
	0.7nm,0.8s,baz=18,slow=13,SNR=16						
CMAR	**Chiang Mai Arr**	**43.14**	**283**	P	**P**	**20 27 40.1**	**+0.1**
	0.3nm,0.5s,baz=75,slow=6.8,SNR=2.1						
STKA	**Stephens Creek**	**44.65**	**182**	P	**P**	**20 27 51.5**	**-0.3**
	0.8nm,0.4s,baz=18,slow=13,SNR=2.8						
SONM	**Songino Array**	**46.45**	**326**	P	**P**	**20 28 06.7**	**+0.7**
	0.3nm,0.8s,baz=134,slow=6.2,SNR=2.1						
MKAR	**Makanchi Array**	**60.99**	**316**	P	**P**	**20 29 51.6**	**0.0**
	0.1nm,0.3s,baz=101,slow=7.5,SNR=5.4						
ILAR	**Eielson Array**	**69.68**	**25**	P	**P**	**20 30 47.0**	**-0.1**
	0.6nm,0.6s,baz=245,slow=6.1,SNR=9.3						
YKA	**Yellowknife Ar**	**84.00**	**27**	P	**P**	**20 32 08.0**	**+0.7**
	0.2nm,0.7s,baz=290,slow=5.2,SNR=3.4						
ARCES	**ARCESS Array B**	**87.23**	**342**	P	**P**	**20 32 22.9**	**-0.3**
	2.5nm,0.9s,baz=78,slow=4.9,SNR=1.9						
FINES	**FINESS Array B**	**91.13**	**335**	P	**P**	**20 32 39.6**	**-2.0**
	2.0nm,1.0s,baz=72,slow=4.5,SNR=4.9						

*THR **09** 20:22:18.8±0.3, 28°.27N×51°.53E, h28km±5km, ML3.2*
*TEH **09** 20:22:20.5, 28°.42N×51°.66E, h8km, ML3.4*
*OMAN **09** 20:22:24.9, 28°.03N×51°.67E, h20km, mb4.9/3, ml3.3/8*

ISC 09 20:22:19.4±1.0, 28°.32N±0°.06×51°.62E±0°.07, h10km, n45, σ1$69/57, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.61**	**333**	*e*Pg	**Pg**	**20 22 31.1**	**-0.2**
QIR1	**Qir**	**1.27**	**83**	*e*Pg	**Pn**	**20 22 44.1**	**+0.8**
QIR1				*e*		20 23 13.9	
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**1.30**	**1**	*e*Pg	**Pn**	**20 22 43.7**	**-0.1**
KAZ1				*e*		20 23 15.7	
	comp=Z,99nm,0.8s						
SHI	**Shiraz**	**1.54**	**31**	*e*Pg	**Pn**	**20 22 47.9**	**+0.8**
LMD1	**Lamerd**	**1.68**	**125**	*e*Pn	**Pg**	**20 22 52.3**	**+0.6**
LMD1				*e*		20 23 27.7	
	comp=Z,99nm,0.9s						
JHRM	**Jahrom**	**1.74**	**83**	*e*Pg	**Pb**	**20 22 52.5**	**+1.0**
JHRM				*e*		20 23 22.0	
	comp=Z,99nm,0.6s						
LAR1	**LAR**	**2.52**	**104**	*e*Pn	**Pb**	**20 23 03.9**	**-1.0**
LAR1				*e*		20 23 57.6	
	comp=Z,99nm,0.9s						
KLNJ	**Kolanjah**	**2.68**	**360**	*e*Pn	**Pn**	**20 23 04.4**	**+1.4**
IRAM	**Ramesheh**	**3.54**	**11**	*e*Pn	**Pn**	**20 23 15.5**	**+0.8**
ISAD	**Sadrabad**	**4.01**	**26**	*e*Pn	**Pn**	**20 23 23.1**	**+1.9**
IMEH	**Mehriz**	**4.02**	**40**	*e*Pn	**Pn**	**20 23 23.5**	**+2.2**
IGAR	**Gharneh**	**4.09**	**5**	*e*Pn	**Pn**	**20 23 24.5**	**+2.3**
SLWR	**Sila**	**4.23**	**179**	P	**Pn**	**20 23 27.2**	**+3.2**
IZEF	**Zefreh**	**4.60**	**8**	*e*Pn	**Pn**	**20 23 30.5**	**+1.1**
SHME	**Shamm**	**4.62**	**118**	P	**Pn**	**20 23 30.9**	**+1.5**
SHME				S	**Sn**	**20 24 21.3**	**-1.8**
NGRK	**Negar Kerman**	**4.67**	**72**	*e*Pn	**Pn**	**20 23 32.3**	**+1.9**
TVBK	**TV Kerman**	**4.80**	**69**	*e*Pn	**Pn**	**20 23 35.8**	**+3.7**
YZKH	**Yazd**	**4.80**	**32**	*e*Pn	**Pn**	**20 23 32.9**	**+0.9**
YZKH	**Yazd**	**4.80**	**32**	*e*Pn	**Pn**	**20 23 32.9**	**+0.9**
BANOM	**Banah**	**4.81**	**119**	P	**Pn**	**20 23 32.6**	**+0.6**
	SNR=13						
BANOM				S	**Sn**	**20 24 26.6**	**-1.2**
NAZ	**Nazwa, Dubai**	**4.91**	**132**	P	**Pn**	**20 23 36.0**	**+2.6**
NAZ				S	**Sn**	**20 24 29.7**	**-0.5**
ASUD	**Al Ashush, Dub**	**4.96**	**137**	P	**Pn**	**20 23 37.0**	**+3.0**
	SNR=8.8						
MZWR	**Madinat Zayed**	**4.97**	**155**	P	**Pn**	**20 23 37.9**	**+3.7**
IKLH	**Kolahrood**	**4.99**	**360**	*e*Pn	**Pn**	**20 23 36.2**	**+1.6**
MASF	**Masafi**	**5.01**	**125**	P	**Pn**	**20 23 36.9**	**+1.2**
MASF				S	**Sn**	**20 24 30.7**	**-2.0**
FAQ	**Al Faqa, Dubai**	**5.04**	**134**	P	**Pn**	**20 23 37.3**	**+2.2**
FAQ				S	**Sn**	**20 24 33.3**	**0.0**
MDH	**Madha**	**5.15**	**125**	P	**Pn**	**20 23 38.4**	**+1.7**
MDH				S	**Sn**	**20 24 33.0**	**-3.2**
UOSS	**Minazif**	**5.31**	**128**	P	**Pn**	**20 23 40.3**	**+1.5**
UOSS				S	**Sn**	**20 24 38.1**	**-1.9**
HATD	**Hatta, Dubai**	**5.33**	**130**	P	**Pn**	**20 23 41.5**	**+2.3**
HATD				S	**Sn**	**20 24 41.1**	**+0.4**
SOHO	**SOHO**	**6.07**	**132**	P	**Pn**	**20 23 50.1**	**+0.8**
ASAO	**Ashtian**	**6.36**	**348**	*e*Pn	**Pn**	**20 23 53.7**	**+0.2**
ASAO				IAML		20 25 09.2	
	comp=N,3.0nm,0.4s						
ASAO	**Ashtian**	**6.36**	**348**	*e*Pn	**Pn**	**20 23 53.7**	**+0.2**
UMZA	**Um Al Zommool**	**6.43**	**149**	P	**Pn**	**20 23 56.5**	**+2.3**
UMZA				S	**Sn**	**20 24 35.5**	**-2.3**
ARQ	**Araqi**	**6.64**	**137**	P	**Pn**	**20 23 59.6**	**+2.4**
ARQ				S	**Sn**	**20 25 12.2**	**-0.8**
HOQ	**Hoqain**	**6.96**	**131**	P	**Pn**	**20 24 02.8**	**+1.2**
HOQ				S	**Sn**	**20 25 18.9**	**-2.0**
BSY	**Bisya**	**7.50**	**136**	P	**Pn**	**20 24 09.7**	**+0.8**
SMDO	**Samad**	**7.82**	**131**	P	**Pn**	**20 24 14.6**	**+1.2**
SMDO				S	**Sn**	**20 25 40.5**	**-1.5**
JMDO	**Jabal Madar**	**8.34**	**134**	P	**Pn**	**20 24 20.2**	**-0.2**
WBK	**Wadi Bani Khal**	**8.74**	**129**	P	**Pn**	**20 24 26.1**	**0.0**
MHTO	**MHTO**	**9.31**	**140**	P	**Pn**	**20 24 34.6**	**+0.9**
JLN	**Jalan Bani Buh**	**9.35**	**129**	P	**Pn**	**20 24 33.3**	**-1.1**
DOK	**Doka**	**9.93**	**166**	P	**Pn**	**20 24 42.3**	**+0.1**
WHFO	**Wadi Hawf**	**10.54**	**169**	P	**Pn**	**20 24 51.0**	**+0.3**
	SNR=6.7						
DMTO	**DMTO**	**10.99**	**163**	P	**Pn**	**20 24 57.0**	**+0.2**
	SNR=9.5						
ABTO	**Aybut**	**11.02**	**172**	P	**Pn**	**20 24 57.1**	**-0.2**

*IDC **09** 20:22:20.6±2.3, 5°.44S×150°.77E, h130km±19km, mb3.6/12, mb1 3.6/13, mb1mx3.5/43, mbtmp4.0/13, MS2.6/1, Ms1 2.6/1, ms1mx2.2/28, Error ellipse: s-maj=25.0km s-min=14.8km az=99.0*

ISC 09 20:22:22.7±0.8, 5°.5S±0°.1×150°.7E±0°.2, h150km, n15, σ1$55/19, mb3.8/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.24**	**222**	P	**Pn**	**20 23 38.2**	**-1.1**
	2.9nm,0.3s,baz=28,slow=5.9,SNR=6.4						
PMG				S	**Sn**	**20 24 36.7**	**-2.4**
	2.1nm,0.3s,baz=126,slow=17,SNR=3.8						
HNR	**Honiara**	**9.96**	**114**	LR	LR	20 28 07.9	
	comp=Z,31nm,19.8s,baz=203,slow=35						
WRA	**Warramunga Arr**	**21.44**	**226**	P	**P**	**20 26 58.7**	**-0.5**
	3.9nm,0.8s,baz=53,slow=9.7,SNR=15						
WRA				S	**S**	**20 30 51.0**	**+3.0**
	2.1nm,0.9s,baz=47,slow=15,SNR=7.8						
WRA				ScP	**ScP**	**20 34 22.2**	**+2.4**
	0.8nm,1.1s,baz=53,slow=2.9,SNR=2.2						
DZM	**Mont Dzumac**	**22.43**	**139**	P	**P**	**20 27 09.7**	**+0.3**
	7.6nm,0.7s,baz=309,slow=14,SNR=7.5						
ASAR	**Alice Springs**	**24.25**	**220**	P	**P**	**20 27 26.9**	**+0.9**
	2.4nm,0.5s,baz=57,slow=8.4,SNR=38						
ASAR				S	**S**	**20 31 35.0**	**+1.1**
	0.2nm,0.6s,baz=49,slow=13,SNR=2.1						
ASAR				ScP	**ScP**	**20 34 29.9**	**+2.7**
	0.4nm,0.9s,baz=49,slow=2.8,SNR=2.9						
FITZ	**Fitzroy Crossi**	**27.50**	**241**	P	**P**	**20 27 55.3**	**+0.1**
	0.7nm,0.4s,baz=57,slow=12,SNR=7.5						
STKA	**Stephens Creek**	**27.60**	**197**	P	**P**	**20 27 56.6**	**+0.6**
	4.2nm,1.0s,baz=29,slow=15,SNR=4.9						
JNU	**Nakatsue**	**42.77**	**335**	P	**P**	**20 30 06.0**	**+0.5**
	5.4nm,0.7s,baz=133,slow=19,SNR=1.9						
KSRS	**Korea Array**	**47.72**	**335**	P	**P**	**20 30 45.0**	**+0.7**
	1.4nm,0.8s,baz=155,slow=7.3,SNR=6.1						
PETK	**Petropavlovsk-**	**58.68**	**5**	P	**P**	**20 32 03.1**	**-1.1**
	2.2nm,0.8s,baz=139,slow=6.8,SNR=1.8						
SONM	**Songino Array**	**65.82**	**329**	P	**P**	**20 32 53.0**	**+1.0**
	0.3nm,0.4s,baz=154,slow=6.4,SNR=3.1						
MKAR	**Makanchi Array**	**79.49**	**319**	P	**P**	**20 34 12.6**	**-0.1**
	0.2nm,0.7s,baz=102,slow=6.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**80.58**	**327**	P	**P**	**20 34 18.4**	**0.0**
	0.4nm,0.6s,baz=111,slow=6.3,SNR=2.3						
ILAR	**Eielson Array**	**83.59**	**22**	P	**P**	**20 34 32.1**	**-1.7**
	0.5nm,0.8s,baz=251,slow=4.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**148.52**	**286**	PKPbc	**PKPbc**	**20 41 51.7**	**-1.2**
	0.3nm,0.6s,baz=70,slow=4.1,SNR=1.5						

*IDC **09** 20:28:36.7±0.7, 13°.53N×91°.31W, h0km, mb3.9/12, mb1 4.2/15, mb1mx4.0/54, mbtmp4.0/15, ML4.3/3, MS3.5/14, Ms1 3.5/14, ms1mx3.3/31, Error ellipse: s-maj=24.1km s-min=14.4km az=63.0*
*NEIC **09** 20:28:40.5±2.6, 13°.70N±0°.05×91°.42W±0°.06, h10km±1km, mb4.3/62, Md4.4(SNET), Error ellipse: s-maj=11.1km s-min=7.5km az=245.0*
*SNET **09** 20:28:41.6±1.6, 13°.62N×91°.34W, h20km±43km, ML4.4*
*INET **09** 20:28:41.6, 13°.62N×91°.45W, h19km, MW3.9*
*UCR **09** 20:28:41.9±1.6, 13°.62N×91°.35W, h22km±44km, ML4.2, mb4.3(NEIC)*
*GCG **09** 20:28:44.6±0.3, 13°.80N×91°.31W, h17km±3km, MD4.6*

ISC 09 20:28:38.5±2.2, 13°.59N±0°.06×91°.46W±0°.05, h9km±13km, n158, σ1$42/154, mb4.3/36, MS3.5/16, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.85**	**353**	*e*P	**Pn**	**20 28 57.3**	**+0.6**
RTAL	**Retalhuleu**	**0.95**	**346**		**Pb**	**20 28 56.7**	**-0.5**
FUG	**Fuego 3**	**1.04**	**35**	*e*P	**Pn**	**20 28 59.7**	**+0.2**
PCG	**Pacaya**	**1.15**	**46**	*e*P	**Pb**	**20 29 01.7**	**+1.0**
NBG	**Las Nubes**	**1.47**	**47**	*e*P	**Pb**	**20 29 06.9**	**+0.8**
APG	**El Apazote**	**1.71**	**34**	Pn	**Pn**	**20 29 09.5**	**+0.9**
	141nm,0.3s,baz=177,slow=15,SNR=202						
APG				Sn	**Sn**	**20 29 31.1**	**+0.4**
	237nm,0.3s,baz=298,slow=22,SNR=11						
HUEH	**Huehuetenango**	**1.72**	**359**	*e*P	**Pb**	**20 29 10.6**	**+0.2**
RTR	**El Retiro**	**1.79**	**80**	*e*P	**Pn**	**20 29 09.8**	**0.0**
RTR	**El Retiro**	**1.79**	**80**	*e*P	**Pn**	**20 29 09.8**	**0.0**
SBLS	**San Blas**	**1.81**	**82**	*e*P	**Pn**	**20 29 09.1**	**-0.9**
SBLS	**San Blas**	**1.81**	**82**	*e*P	**Pn**	**20 29 09.1**	**-0.9**
SNJE	**San Jose**	**1.83**	**81**	*e*P	**Pn**	**20 29 10.2**	**-0.1**
SNJE	**San Jose**	**1.83**	**81**	*e*P	**Pn**	**20 29 10.2**	**-0.1**
JAYA	**Jayaque - finc**	**1.96**	**88**	*e*P	**Pn**	**20 29 11.4**	**-0.6**
JAYA	**Jayaque - finc**	**1.96**	**88**	*e*P	**Pn**	**20 29 11.4**	**-0.6**
TACO	**Tacachico**	**2.08**	**79**	*e*P	**Pn**	**20 29 13.9**	**+0.2**
TACO				*e*S	**Sn**	**20 29 39.4**	**-0.4**
TACO				IAML		20 29 47.3	
	comp=Z,1μm,0.3s						
TACO	**Tacachico**	**2.08**	**79**	*e*P	**Pn**	**20 29 13.9**	**+0.2**
TACO				*e*S	**Sn**	**20 29 39.4**	**-0.4**
TACO				IAML		20 29 47.3	
	comp=Z,1μm,0.3s						
SNET	**Serv Nac Est T**	**2.17**	**87**	*e*P	**Pn**	**20 29 14.5**	**-0.4**
SNET				*e*S	**Sn**	**20 29 41.1**	**-0.9**
SNET				IAML		20 29 46.7	
	comp=Z,4μm,0.3s						
SNET	**Serv Nac Est T**	**2.17**	**87**	*e*P	**Pn**	**20 29 14.5**	**-0.4**
SNET				*e*S	**Sn**	**20 29 41.1**	**-0.9**
SNET				IAML		20 29 46.7	
	comp=Z,4μm,0.3s						
SNET	**Serv Nac Est T**	**2.17**	**87**	Pn	**Pn**	**20 29 14.3**	**-0.6**
MTO3	**Montecristo**	**2.19**	**68**	*e*P	**Pn**	**20 29 15.9**	**+0.6**
MTO3				*e*S	**Sn**	**20 29 42.5**	**-0.3**
MTO3	**Montecristo**	**2.19**	**68**	*e*P	**Pn**	**20 29 15.9**	**+0.6**
MTO3				*e*S	**Sn**	**20 29 42.5**	**-0.3**
MTO3	**Montecristo**	**2.19**	**68**	Pn	**Pn**	**20 29 16.1**	**+0.8**
ESQI	**Esquipulas**	**2.27**	**65**	Pn	**Pn**	**20 29 17.4**	**+1.0**
MRL	**Marmol**	**2.27**	**49**	*e*P	**Pn**	**20 29 17.6**	**+1.2**
MRL	**Marmol**	**2.27**	**49**	*e*P	**Pn**	**20 29 17.6**	**+1.2**
MRL	**Marmol**	**2.27**	**49**	*e*P	**Pn**	**20 29 18.6**	**+2.1**
MRL				*e*S	**Sn**	**20 29 45.0**	**+0.3**
LFU	**La Fuente**	**2.29**	**86**	*e*P	**Pn**	**20 29 17.6**	**+1.1**
LFU	**La Fuente**	**2.29**	**86**	*e*P	**Pn**	**20 29 17.6**	**+1.1**
LFRS	**El Faro**	**2.34**	**89**	*e*P	**Pn**	**20 29 17.6**	**+0.4**
LFRS	**El Faro**	**2.34**	**89**	*e*P	**Pn**	**20 29 17.6**	**+0.4**
LBRS	**Las Brisas**	**2.36**	**86**	*e*P	**Pn**	**20 29 18.4**	**+0.9**
LBRS	**Las Brisas**	**2.36**	**86**	*e*P	**Pn**	**20 29 18.4**	**+0.9**
PAVA	**Las Pavas**	**2.46**	**87**	*e*P	**Pn**	**20 29 19.7**	**+0.8**
PAVA				IAML		20 29 60.0	
	comp=Z,3μm,0.5s						
PAVA	**Las Pavas**	**2.46**	**87**	*e*P	**Pn**	**20 29 19.7**	**+0.8**
PAVA				IAML		20 29 60.0	
	comp=Z,3μm,0.5s						
COEG	**Centro de Oper**	**2.51**	**89**	*e*P	**Pn**	**20 29 20.5**	**+0.9**
COEG				*e*S	**Sn**	**20 29 49.8**	**-0.6**
COEG	**Centro de Oper**	**2.51**	**89**	*e*P	**Pn**	**20 29 20.5**	**+0.9**
COEG				*e*S	**Sn**	**20 29 49.8**	**-0.6**
CCIG	**Comitan**	**2.75**	**346**	Pn	**Pn**	**20 29 24.4**	**+1.4**
TECA	**Tecapa**	**2.88**	**92**	*e*P	**Pn**	**20 29 25.6**	**+0.8**
TECA	**Tecapa**	**2.88**	**92**	*e*P	**Pn**	**20 29 25.6**	**+0.8**
VSM	**San Miguel**	**3.11**	**93**	*e*P	**Pn**	**20 29 29.4**	**+1.5**
VSM	**San Miguel**	**3.11**	**93**	*e*P	**Pn**	**20 29 29.4**	**+1.5**
PETF	**Flores**	**3.65**	**25**	Pn	**Pn**	**20 29 35.6**	**+0.5**
TGUH	**Tegucigalpa,Un**	**4.10**	**83**		**Pn**	**20 29 41.6**	**+0.2**
CRIN	**San Cristobal**	**4.39**	**101**	Pn	**Pn**	**20 29 45.9**	**+0.4**
CMIG	**Matias Romero**	**4.79**	**317**	Pn	**Pn**	**20 29 51.2**	**+0.3**
	comp=Z,4.3nm,0.3s,baz=134,slow=11,SNR=34						
CMIG				Sn	**Sn**	**20 30 44.9**	**-1.7**
	comp=Z,5.1nm,0.3s,baz=149,slow=18,SNR=4.4						
CMIG	**Matias Romero**	**4.79**	**317**		**Pn**	**20 29 52.0**	**+1.1**
BOAB	**BOACO BROADBAN**	**4.76**	**101**	Pn	**Pn**	**20 30 04.1**	**-0.2**
ACON	**Acoyapa**	**6.34**	**104**	Pn	**Pn**	**20 30 11.9**	**-0.3**
ORTG	**Ortega, Santa**	**6.70**	**118**	Pn	**Pn**	**20 30 19.5**	**+2.4**
ESPN	**Las Esperanzas**	**7.12**	**100**	Pn	**Pn**	**20 30 24.5**	**+1.6**
JTS	**Las Juntas de**	**7.11**	**117**	Pn	**Pn**	**20 30 26.0**	**+2.4**
	comp=Z,2.7nm,0.3s,baz=10,slow=10,SNR=6.8						
JTS				Lg	Lg	20 32 10.4	
	comp=Z,3.4nm,0.3s,baz=339,slow=21,SNR=9.0						
TEIG	**Tepich**	**7.27**	**24**	Pn	**Pn**	**20 30 26.1**	**+1.2**
	comp=Z,14nm,0.3s,baz=211,slow=2.4,SNR=32						
TEIG				Sn	**Sn**	**20 31 45.9**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=79,slow=22,SNR=6.8						
TEIG	**Tepich**	**7.27**	**24**	Pn	**Pn**	**20 30 25.7**	**+0.7**
CAO2	**Cobano, Puntar**	**7.34**	**121**	Pn	**Pn**	**20 30 26.4**	**+0.5**
TLIG	**Tlapa**	**7.90**	**301**	Pn	**Pn**	**20 30 37.0**	**+3.3**
PEZE	**Perez Zeledon,**	**8.70**	**118**		**Pn**	**20 30 47.2**	**+2.5**
RIOS	**Rincon, Osa**	**9.19**	**121**	Pn	**Pn**	**20 30 53.9**	**+2.6**
553A	**Crawfordville**	**17.75**	**20**	P	**P**	**20 32 49.3**	**+2.5**
JCT	**Junction City**	**18.48**	**337**	P	**P**	**20 32 54.9**	**0.0**
HPIG		**18.78**	**317**	P	**P**	**20 32 58.0**	**-0.4**
352A	**Blakely**	**18.79**	**18**	P	**P**	**20 32 56.4**	**-1.8**
250A	**Grady**	**18.91**	**14**	Pn	**Pn**	**20 33 02.0**	**+1.9**
TX32	**Lajitas Array**	**19.32**	**326**	P	**Pn**	**20 33 06.9**	**+1.7**
TXAR	**Lajitas Array**	**19.32**	**326**	P	**Pn**	**20 33 06.4**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=153,slow=12,SNR=37						
TXAR				ScP	**ScP**	**20 41 06.0**	**+3.0**
	comp=Z,0.0nm,0.3s,baz=146,slow=5.5,SNR=3.6						
TXAR	**Lajitas Array**	**19.32**	**326**	P	**Pn**	**20 33 06.0**	**+0.7**
TX31	**Lajitas Ar. Si**	**19.32**	**326**	P	**Pn**	**20 33 06.1**	**+0.9**
TX31				IAmb	IAmb	20 33 10.0	
	comp=Z,19nm,0.8s						
H06E1	**SOCORRO T-PHAS**	**19.38**	**288**	T	T	20 53 17.5	
	SNR=36						
LRAL	**Lakeview Retre**	**19.78**	**11**		**Pn**	**20 33 10.5**	**0.0**
LRAL				IAmb	IAmb	20 33 15.8	
	comp=Z,25nm,1.1s						
152A	**Waverly Hall**	**19.97**	**17**	P	**P**	**20 33 11.6**	**+0.5**
152A				IAmb	IAmb	20 33 17.4	
	comp=Z,9.2nm,0.8s						
ABTX	**Abilene, Hawle**	**20.37**	**340**	P	**P**	**20 33 14.9**	**-0.6**
ABTX				IAmb	IAmb	20 33 19.5	
	comp=Z,9.0nm,0.7s						
Z51A	**Franklin**	**20.45**	**15**	P	Pn	20 33 18.6	0.0
Z51A				IAmb	IAmb	20 33 21.7	
	comp=Z,8.5nm,0.7s						
LPIG	**La Paz**	**20.65**	**303**	LR	LR	20 40 05.2	
	comp=Z,87nm,19.8s,baz=124,slow=33						
Y49A	**Blount Mountai**	**20.69**	**12**	P	**P**	**20 33 19.8**	**+0.8**
Y49A				IAmb	IAmb	20 33 26.7	
	comp=Z,9.5nm,0.8s						
MIAR	**Mount Ida**	**20.95**	**355**	P	**P**	**20 33 19.3**	**-2.5**
GOGA	**Godfrey**	**21.03**	**19**	P	**P**	**20 33 21.9**	**-0.7**
GOGA				IAmb	IAmb	20 33 43.4	
	comp=Z,11nm,1.0s						
X48A	**Hartselle**	**21.15**	**10**	P	**P**	**20 33 21.6**	**-2.3**
X48A				IAmb	IAmb	20 33 31.9	
	comp=Z,10nm,0.8s						
X37A	**Clayton**	**21.20**	**351**	P	**P**	**20 33 26.8**	**+2.3**
X37A				IAmb	IAmb	20 33 49.7	
	comp=Z,22nm,1.3s						
Y52A	**Lilburn**	**21.27**	**17**	P	**P**	**20 33 21.6**	**-3.6**
Y52A				IAmb	IAmb	20 33 46.2	
	comp=Z,10.0nm,0.8s						
WMOK	**Wichita Mounta**	**22.07**	**344**	P	**P**	**20 33 35.3**	**+1.5**
MNTX	**Cornudas Mount**	**22.09**	**327**	P	**P**	**20 33 34.2**	**+0.2**
MNTX				IAmb	IAmb	20 33 40.4	
	comp=Z,8.2nm,0.8s						
W50A	**Signal Mountai**	**22.22**	**13**	P	**P**	**20 33 37.0**	**+1.6**
W50A				IAmb	IAmb	20 34 01.0	
	comp=Z,7.4nm,0.7s						
MSTX	**Muleshoe**	**22.74**	**335**	P	**P**	**20 33 40.9**	**-0.2**
V51A	**Loudon**	**23.02**	**15**	P	**P**	**20 33 41.7**	**-2.2**
V51A				IAmb	IAmb	20 33 54.6	
	comp=Z,11nm,0.9s						
TKL	**Tuckaleechee C**	**23.04**	**16**	LR	LR	20 43 18.7	
	comp=Z,122nm,21.5s,baz=206,slow=38						
TKL	**Tuckaleechee C**	**23.04**	**16**	P	**P**	**20 33 44.6**	**+0.5**
TKL				IAmb	IAmb	20 34 08.2	
	comp=Z,12nm,0.9s						
AMTX	**Amarillo**	**23.12**	**338**	P	**P**	**20 33 44.9**	**-0.2**
AMTX				IAmb	IAmb	20 33 50.0	
	comp=Z,12nm,1.0s						
V52A	**Sevierville**	**23.26**	**16**	P	**P**	**20 33 44.0**	**-2.3**
V53A	**Saluda**	**23.32**	**18**	P	**P**	**20 33 49.0**	**+1.9**
V53A				IAmb	IAmb	20 34 07.9	
	comp=Z,8.0nm,0.7s						
U49A	**Red Boiling Sp**	**23.39**	**12**	P	**P**	**20 33 47.2**	**-0.4**
U49A				IAmb	IAmb	20 33 58.5	
	comp=Z,12nm,0.9s						
MGMO	**Mountain Grove**	**23.48**	**358**	P	**P**	**20 33 49.0**	**+0.5**
V55A	**Taylorsville**	**24.01**	**21**	P	**P**	**20 33 54.9**	**+1.3**
121A	**Cookes Peak, D**	**24.04**	**324**	P	**P**	**20 33 51.8**	**-2.4**
121A				IAmb	IAmb	20 34 05.2	
	comp=Z,9.0nm,1.1s						
S39A	**Bolivar**	**24.06**	**356**	P	**P**	**20 33 52.1**	**-2.0**
S39A				IAmb	IAmb	20 33 54.9	
	comp=Z,6.2nm,0.7s						
S44A	**Carbondale**	**24.08**	**4**	P	**P**	**20 33 51.7**	**-2.6**
CCM	**Cathedral Cave**	**24.37**	**0**	P	**P**	**20 33 55.1**	**-1.8**
R40A	**Maddies Statio**	**24.61**	**358**	P	**P**	**20 33 59.3**	**+0.2**
V58A	**Windy Hill, Pi**	**24.74**	**25**	P	**P**	**20 33 59.3**	**-1.0**
V58A				IAmb	IAmb	20 34 02.3	
	comp=Z,6.6nm,0.8s						
LENM	**Lemitar**	**24.85**	**328**	P	**P**	**20 34 01.4**	**-0.2**
ANMO	**Albuquerque**	**25.21**	**330**	P	**P**	**20 34 06.5**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=169,slow=12,SNR=3.7						
ANMO	**Albuquerque**	**25.21**	**330**	IAmb	IAmb	20 34 14.7	
	comp=Z,1.2nm,0.8s						
TUC	**Tucson**	**25.68**	**320**	P	**P**	**20 34 10.5**	**+1.5**
214A	**Organ Pipe Nat**	**26.77**	**317**	P	**P**	**20 34 20.6**	**+1.8**
214A				IAmb	IAmb	20 34 25.8	
	comp=Z,4.5nm,0.8s						
MVCO	**Mesa Verde**	**28.01**	**330**	P	**P**	**20 34 31.1**	**+0.9**
MVCO				IAmb	IAmb	20 34 44.4	
	comp=Z,3.5nm,0.7s						
PV03	**Paradox Valley**	**29.01**	**331**	P	**P**	**20 34 41.6**	**+2.6**
MTPU	**Mount Pierson**	**30.53**	**327**	P	**P**	**20 34 55.8**	**+3.2**
MTPU				IAmb	IAmb	20 34 59.3	
	comp=Z,3.0nm,0.7s						
CCUT	**Cedar City**	**30.82**	**325**	P	**P**	**20 34 57.0**	**+1.9**
CCUT				IAmb	IAmb	20 35 05.2	
	comp=Z,3.4nm,1.0s						
SADO	**Sadowa**	**32.80**	**16**	LR	LR	20 49 23.5	
	comp=Z,98nm,21.2s,baz=246,slow=38						
PDAR	**Pinedale Array**	**33.01**	**335**	P	**P**	**20 35 15.0**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=132,slow=12,SNR=2.9						
PDAR				LR	LR	20 50 57.5	
	comp=Z,38nm,18.4s,baz=131,slow=40						
ELK	**Elko**	**34

*ISK **09** 20:49:59.9, 35°.44N×31°.05E, h25km, ML4.0/45*
*HLW **09** 20:49:59.2, 35°.52N×30°.98E, h10km±17km, ML4.0*
*DDA **09** 20:50:01.1, 35°.50N×31°.25E, h22km±1km, MW4.0*
*NIC **09** 20:50:02.5±0.0, 35°.36N×31°.06E, h24km±3km, Ml3.8/4*
*IDC **09** 20:50:02.3±4.0, 35°.62N×31°.06E, h33km±36km, mb3.4/12, mb1 3.6/17, mb1mx3.4/40, mbtmp3.6/17, ML3.7/5, MS3.1/8, Ms1 3.1/8, ms1mx2.8/35, Error ellipse: s-maj=23.9km s-min=16.5km az=20.0*

ISC 09 20:50:02.5±0.7, **35°.38N**±0°.03×**31°.05E**±0°.02, **h42**km±8km, **n148**, σ1°.74/170, **mb3.5**/12, **MS3.3**/4, **8C-8D**, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**1.10**	**329**	⇓*i* P	**Pn**	**20 50 21.0**	**-0.5**
AKUM				*i* S	**Sn**	**20 50 38.5**	**+3.0**
AKMS	**Akamas**	**1.11**	**109**	P	**Pn**	**20 50 21.9**	**+0.2**
AKMS				AML	AML	20 50 43.4	
	6.5nm,0.2s						
AKMS				AML	AML	20 50 44.3	
	8.4nm,0.5s						
KEMT	**Kemer-ANTALYA**	**1.29**	**342**	PN	**Pn**	**20 50 21.9**	**-2.1**
ALFC	**Alefka**	**1.29**	**100**	P	**Pn**	**20 50 24.4**	**+0.3**
ALFC				S	**Sn**	**20 50 41.4**	**+1.3**
ALFC				AML	AML	20 50 48.2	
	6.6nm,0.6s						
ALFC				AML	AML	20 50 48.2	
	6.6nm,0.6s						
ALFC				AML	AML	20 50 53.4	
	5.8nm,0.5s						
ALFC				AML	AML	20 50 53.4	
	5.8nm,0.5s						
GAZI	**Gazipasa**	**1.34**	**50**	⇑*i* P	**Pn**	**20 50 22.3**	**-2.4**
GAZI				*i* S	**Sn**	**20 50 39.0**	**-2.3**
GAZI	**Gazipasa**	**1.34**	**50**	PN	**Pn**	**20 50 22.4**	**-2.3**
GAZI				SN	**Sn**	**20 50 39.8**	**-1.5**
NATA	**Nata**	**1.38**	**115**	P	**Pn**	**20 50 26.6**	**+1.3**
KSL	**Kastellorizon**	**1.42**	**303**	P	**Pn**	**20 50 26.6**	**+0.8**
AKAS	**Kas**	**1.45**	**306**	⇓*i* P	**Pn**	**20 50 30.2**	**+3.9**
AKAS				*i* S	**Sn**	**20 50 50.8**	**+6.5**
AKAS	**Kas**	**1.45**	**306**	PN	**Pn**	**20 50 25.1**	**-1.3**
LEF	**Lefka**	**1.53**	**99**	⇑P	**Pn**	**20 50 30.0**	**+2.7**
LEF	**Lefka**	**1.53**	**99**	*i* P	**Pn**	**20 50 26.6**	**-0.7**
LEF				*i* S	**Sn**	**20 50 49.1**	**+3.1**
LEF	**Lefka**	**1.53**	**99**	PN	**Pn**	**20 50 26.1**	**-1.2**
LEF				SN	**Sn**	**20 50 44.8**	**-1.2**
ANTB	**Antalya**	**1.55**	**348**	PN	**Pn**	**20 50 26.1**	**-1.5**
AKDN	**Akdeniz- Kıbrı**	**1.57**	**92**	PN	**Pn**	**20 50 26.9**	**-1.0**
SZAC	**Souni**	**1.63**	**112**	P	**Pn**	**20 50 29.5**	**+0.8**
SZAC				AML	AML	20 51 16.3	
	4.6nm,1.6s						
SZAC				AML	AML	20 51 17.2	
	4.5nm,0.6s						
ELL	**Elmali**	**1.65**	**326**	PN	**Pn**	**20 50 27.7**	**-1.4**
KORT	**Korkueli**	**1.71**	**341**	⇓*i* P	**Pn**	**20 50 31.5**	**+1.5**
KORT				*i* S	Sn	20 51 02.1	+11
KORT	**Korkueli**	**1.71**	**341**	PN	**Pn**	**20 50 28.4**	**-1.6**
ASGA	**Asgata**	**1.90**	**108**	P	**Pn**	**20 50 33.3**	**+0.9**
CSS	**Mathiatis**	**1.92**	**102**	PN	**Pn**	**20 50 32.1**	**-0.5**
CSS	**Mathiatis**	**1.92**	**102**	P	**Pn**	**20 50 33.3**	**+0.6**
ERMK	**Ermenek**	**1.97**	**50**	*e*P	**Pn**	**20 50 31.7**	**-1.8**
ERMK				*i* S	**Sn**	**20 51 00.7**	**+3.6**
BUCA	**Burdur, Bucak-**	**1.98**	**349**	*e*P	**Pn**	**20 50 36.2**	**+2.6**
BUCA				*i* S	Sn	20 51 06.7	+9.4
AKIN	**Akıncılar- Kıb**	**2.01**	**100**	PN	**Pn**	**20 50 33.5**	**-0.5**
BERE	**Bereket-Mersin**	**2.01**	**61**	PN	**Pn**	**20 50 32.8**	**-1.3**
FETY	**Fethiye**	**2.03**	**309**	*i* P	**Pn**	**20 50 33.0**	**-1.3**
FETY				*i* S	**Sn**	**20 50 56.4**	**-1.9**
FETY	**Fethiye**	**2.03**	**309**	PN	**Pn**	**20 50 32.9**	**-1.3**
LFK	**Lefkose**	**2.03**	**92**	PN	**Pn**	**20 50 33.9**	**-0.4**
YORU	**Yoruktepe-Mers**	**2.07**	**67**	PN	**Pn**	**20 50 33.2**	**-1.5**
BCK	**Bucak**	**2.11**	**350**	PN	**Pn**	**20 50 33.4**	**-2.0**
OREN	**Orenkoy-Mersin**	**2.13**	**66**	PN	**Pn**	**20 50 34.4**	**-1.1**
SEDI	**Konya, Seydise**	**2.15**	**15**	⇓*i* P	**Pn**	**20 50 35.7**	**-0.2**
SEDI				*i* S	**Sn**	**20 51 01.3**	**0.0**
MVOU	**Mavrovouni**	**2.15**	**99**	P	**Pn**	**20 50 35.8**	**0.0**
MVOU				AML	AML	20 51 20.0	
	1.5nm,0.7s						
AKK1	**Akkuyu-Mersin**	**2.17**	**69**	PN	**Pn**	**20 50 34.9**	**-1.1**
AKK2	**Akkuyu-Mersin**	**2.17**	**69**	PN	**Pn**	**20 50 34.6**	**-1.5**
AKKU	**Akkuyu-Mersin**	**2.18**	**68**	PN	**Pn**	**20 50 35.2**	**-1.0**
GULN	**MERSIN_Gulnar**	**2.18**	**68**	*i* P	**Pn**	**20 50 36.2**	**0.0**
GULN				*i* S	**Sn**	**20 51 06.0**	**+3.9**
GULN				IAML		20 51 08.0	
	comp=E,252nm,1.3s						
GULN				IAML		20 51 15.0	
	comp=N,208nm,0.8s						
TEPK	**Tepekoy-MERSIN**	**2.20**	**67**	PN	**Pn**	**20 50 35.5**	**-1.0**
GOLH	**Golhisar**	**2.21**	**327**	*i* P	**Pn**	**20 50 37.5**	**+0.8**
GOLH				*i* S	Sn	20 51 18.3	+15
TEVE	**Tevekalti-Mers**	**2.21**	**61**	PN	**Pn**	**20 50 35.9**	**-0.9**
CAEL	**Denizli, Camel**	**2.23**	**322**	*e*P	**Pn**	**20 50 40.4**	**+3.3**
CAEL				*i* S	Sn	20 51 21.8	+18
YESI	**Yesilovacik-Me**	**2.26**	**68**	PN	**Pn**	**20 50 36.1**	**-1.2**
TISA	**Tisan-Mersin**	**2.28**	**69**	PN	**Pn**	**20 50 36.5**	**-1.1**
IKL	**Isikli**	**2.31**	**67**	PN	**Pn**	**20 50 37.1**	**-0.9**
KKBE	**Karaman, Kazim**	**2.39**	**39**	*i* P	**Pn**	**20 50 40.3**	**+1.1**
KKBE				*i* S	**Sn**	**20 51 09.6**	**+2.2**
KKBE				IAML		20 51 15.0	
	comp=E,624nm,1.8s						
KEBE	**Keben-Mersin**	**2.41**	**63**	PN	**Pn**	**20 50 39.1**	**-0.4**
DALY	**Dalyan (Mula)**	**2.41**	**307**	*i* P	**Pn**	**20 50 39.5**	**+0.1**
DALY				*i* S	**Sn**	**20 51 06.4**	**-1.3**
DALY	**Dalyan (Mula)**	**2.41**	**307**	PN	**Pn**	**20 50 38.3**	**-1.1**
BRDR	**BURDUR-Merkez**	**2.44**	**341**	*i* P	**Pn**	**20 50 41.9**	**+1.9**
BRDR				*i* S	Sn	20 51 17.6	+8.9
ISP	**Isparta**	**2.48**	**350**	PN	**Pn**	**20 50 39.3**	**-1.1**
ARG	**Arkhangelos**	**2.52**	**290**	PN	**Pn**	**20 50 39.8**	**-1.1**
KRMN	**Karaman**	**2.53**	**44**	PN	**Pn**	**20 50 40.3**	**-0.9**
SILI	**Silifke-Mersin**	**2.54**	**66**	PN	**Pn**	**20 50 40.1**	**-1.0**
SLFK	**Silifke-Mersin**	**2.56**	**66**	PN	**Pn**	**20 50 40.5**	**-1.0**
KMER	**Konya-Meram**	**2.61**	**24**	⇑*i* P	**Pn**	**20 50 43.1**	**+0.8**
KMER				*i* S	**Sn**	**20 51 13.3**	**+0.5**
KMER				IAML		20 51 19.0	
	comp=N,362nm,0.7s						
KMER				IAML		20 51 21.0	
	comp=E,621nm,1.4s						
BAGO	**Egridir - ISPA**	**2.62**	**355**	*i* P	**Pn**	**20 50 43.7**	**+1.4**
BAGO				*i* S	**Sn**	**20 51 15.3**	**+2.4**
BASM	**Basmaki-Afyon**	**2.66**	**343**	PN	**Pn**	**20 50 41.7**	**-1.2**
TURN	**Turunc**	**2.67**	**302**	*i* P	**Pn**	**20 50 43.5**	**+0.6**
TURN				*i* S	**Sn**	**20 51 12.3**	**-1.7**
TURN	**Turunc**	**2.67**	**302**	PN	**Pn**	**20 50 42.1**	**-0.8**
TAVA	**DENIZLI_Tavas**	**2.70**	**321**	*i* P	**Pn**	**20 50 43.7**	**+0.2**
TAVA				*i* S	Sn	20 51 32.6	+18
KIZK	**Mersin**	**2.74**	**65**	*i* P	**Pn**	**20 50 44.2**	**+0.2**
KIZK				*i* S	**Sn**	**20 51 17.6**	**+1.7**
KIZK				IAML		20 51 24.0	
	comp=N,197nm,1.6s						
KIZK				IAML		20 51 35.0	
	comp=E,165nm,0.8s						
KIZK	**Mersin**	**2.74**	**65**	PN	**Pn**	**20 50 43.6**	**-0.4**
DOGA	**KONYA_Doganhis**	**2.77**	**10**	⇓*i* P	**Pn**	**20 50 44.5**	**0.0**
DOGA				*i* S	**Sn**	**20 51 17.7**	**+1.0**
DOGA				IAML		20 51 21.0	
	comp=E,451nm,1.2s						
DOGA				IAML		20 51 22.0	
	comp=N,582nm,1.1s						
KONT	**Konya--Tatoy**	**2.77**	**22**	*i* P	**Pn**	**20 50 45.4**	**+1.0**
KONT				*i* S	**Sn**	**20 51 17.3**	**+0.7**
KONT	**Konya--Tatoy**	**2.77**	**22**	PN	**Pn**	**20 50 43.3**	**-1.1**
YER	**Yerkesik**	**2.84**	**309**	PN	**Pn**	**20 50 44.6**	**-0.8**
YVAC	**Isparta, Yalva**	**2.89**	**3**	*i* P	**Pn**	**20 50 45.9**	**-0.2**
YVAC				*i* S	**Sn**	**20 51 22.5**	**+2.8**
YVAC				IAML		20 51 32.0	
	comp=E,224nm,1.1s						
MULA	**Mugla, Merkez-**	**2.89**	**311**	*i* P	**Pn**	**20 50 47.9**	**+1.8**
MULA				*i* S	**Sn**	**20 51 18.1**	**-1.6**
KZIL	**AFYON_Kizioren**	**2.96**	**346**	*i* P	**Pn**	**20 50 47.3**	**+0.2**
KZIL				*i* S	**Sn**	**20 51 23.5**	**+2.0**
LADK	**Ladik-KONYA**	**3.01**	**20**	PN	**Pn**	**20 50 46.6**	**-1.1**
KARP	**Karpathos**	**3.18**	**274**	PN	**Pn**	**20 50 49.3**	**-0.7**
KARP	**Karpathos**	**3.18**	**274**	P	**Pn**	**20 50 51.8**	**+1.8**
MERS	**Mersin**	**3.18**	**61**	PN	**Pn**	**20 50 49.2**	**-0.9**
SHUT	**Suhut-Afyon**	**3.19**	**353**	PN	**Pn**	**20 50 49.3**	**-1.0**
KERG	**Konya-Eregli**	**3.21**	**50**	*i* P	**Pn**	**20 50 50.9**	**+0.4**
KERG				*i* S	**Sn**	**20 51 30.9**	**+3.4**
YESY	**Yesilyurt**	**3.23**	**41**	PN	**Pn**	**20 50 50.1**	**-0.7**
ALIN	**Konya, Altinte**	**3.26**	**26**	*i* P	**Pn**	**20 50 51.4**	**+0.2**
ALIN				*i* S	**Sn**	**20 51 31.6**	**+2.7**
BDRM	**Kayabasi**	**3.37**	**301**	*i* P	**Pn**	**20 50 52.9**	**+0.4**
BDRM				*i* S	**Sn**	**20 51 29.4**	**-1.8**
NIS1	**Nisyros Isl.**	**3.37**	**292**	PN	**Pn**	**20 50 51.9**	**-0.7**
AYDN	**Tasoluk**	**3.42**	**313**	*i* P	**Pn**	**20 50 53.6**	**+0.3**
AYDN				*i* S	**Sn**	**20 51 29.7**	**-3.0**
DED	**Mersin**	**3.42**	**61**	*i* P	**Pn**	**20 50 53.2**	**-0.1**
DED				*i* S	**Sn**	**20 51 35.9**	**+3.3**
DED				IAML		20 51 51.0	
	comp=N,136nm,0.9s						
DED				IAML		20 51 52.0	
	comp=E,82nm,1.1s						
BODT	**Bodrum**	**3.46**	**300**	PN	**Pn**	**20 50 53.2**	**-0.6**
CHBY	**Cihanbeyli**	**3.52**	**24**	PN	**Pn**	**20 50 53.9**	**-0.9**
KOSK	**Kos Island**	**3.57**	**294**	PN	**Pn**	**20 50 54.5**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**3.61**	**316**	PN	**Pn**	**20 50 55.5**	**-0.5**
KULA	**Kula-Manisa**	**3.67**	**329**	PN	**Pn**	**20 50 55.9**	**-0.9**
KARA	**Karaisali**	**3.74**	**59**	PN	**Pn**	**20 50 57.3**	**-0.4**
GCAM	**G?zelcaml?**	**3.85**	**308**	PN	**Pn**	**20 50 58.8**	**-0.3**
CMRD	**Camardi-Nigde**	**3.91**	**53**	PN	**Pn**	**20 50 59.9**	**-0.2**
GULA	**Gulagac**	**3.91**	**40**	PN	**Pn**	**20 50 59.6**	**-0.5**
ZKR	**Zakros**	**3.96**	**268**	PN	**Pn**	**20 51 00.9**	**+0.1**
NIDE	**Nigde/Merkez-G**	**3.98**	**48**	*i* P	**Pn**	**20 51 02.1**	**+1.0**
KKUL	**Konya-Kulu**	**4.07**	**21**	*i* P	**Pn**	**20 51 03.6**	**+1.3**
KKUL				*i* S	Sn	20 52 05.3	+17
AKO	**Adana**	**4.11**	**58**	*i* P	**Pn**	**20 51 05.2**	**+2.4**
CEYT	**Ceyhan**	**4.13**	**65**	PN	**Pn**	**20 51 02.7**	**-0.4**
TAHT	**Tahtakopru-Hat**	**4.29**	**75**	PN	**Pn**	**20 51 05.4**	**+0.2**
MMAI	**Mount Meron Ar**	**4.31**	**122**	Pn	**Pn**	**20 51 06.2**	**+0.5**
	comp=E,4.6nm,0.3s,baz=303,slow=12,SNR=28						
MMAI				Sn	**Sn**	**20 51 54.4**	**-0.3**
	comp=E,13nm,0.3s,baz=308,slow=26,SNR=8.3						
KOZT	**Kozan**	**4.39**	**60**	PN	**Pn**	**20 51 06.5**	**-0.1**
BRTR	**Keskin Array B**	**4.80**	**25**	Pn	**Pn**	**20 51 12.2**	**-0.2**
	comp=E,0.6nm,0.3s,baz=198,slow=16,SNR=20						
BRTR				Sn	**Sn**	**20 52 01.1**	**-5.8**
	comp=E,0.6nm,0.3s,baz=200,slow=21,SNR=6.4						
BRTR				LR	LR	20 53 52.5	
	comp=E,114nm,18.2s,baz=210,slow=50						
IDI	**Anoyia**	**5.04**	**271**	Pn	**Pn**	**20 51 16.8**	**+1.2**
	comp=E,3.0nm,0.3s,baz=96,slow=2.9,SNR=16						
IDI				Sn	**Sn**	**20 52 10.9**	**-1.6**
	comp=E,26nm,0.3s,baz=342,slow=22,SNR=14						
IDI	**Anoyia**	**5.04**	**271**	⇑P	Pn	20 51 23.7	+8.2
KZIT	**Kziot**	**5.27**	**147**	P	**Pn**	**20 51 20.3**	**+1.6**
KZIT				S	**Sn**	**20 52 18.3**	**0.0**
KOT	**Kottamia**	**5.48**	**173**	P	**Pn**	**20 51 23.8**	**+2.2**
	baz=172						
KOT				AMP		20 52 00.0	
	baz=172						
KOT				S	**Sn**	**20 52 22.5**	**-0.9**
	baz=172						
SUZ	**Suez**	**5.72**	**164**	P	**Pn**	**20 51 27.0**	**+2.1**
	baz=164						
HSAF	**As Saff**	**5.76**	**176**	P	**Pn**	**20 51 27.3**	**+1.8**
	baz=175						
GLL	**Jalalah**	**5.81**	**174**	P	**Pn**	**20 51 28.2**	**+2.0**
	baz=173						
RYAN	**Fayoum**	**6.31**	**186**	AMP		20 52 00.0	
	baz=186						
EIL	**Elat**	**6.58**	**149**	Pn	**Pn**	**20 51 38.1**	**+1.4**
	comp=E,1.0nm,0.3s,baz=242,slow=3.0,SNR=16						
EIL				Sn	**Sn**	**20 52 49.3**	**-1.1**
	comp=E,0.7nm,0.3s,baz=354,slow=18,SNR=1.6						
EIL				LR	LR	20 55 29.6	
	comp=E,51nm,18.3s,baz=294,slow=48						
NBNS	**Bani Suef**	**6.74**	**178**	P	**Pn**	**20 51 40.3**	**+1.4**
	baz=177						
HKAT	**Jabal Katrina**	**7.28**	**159**	P	**Pn**	**20 51 47.6**	**+1.1**
	baz=159						
HKAT				AMP		20 53 00.0	
	baz=159						
HKAT				S	**Sn**	**20 53 07.2**	**-0.7**
	baz=159						
HFRF	**Wahat Farafira**	**8.53**	**197**	P	**Pn**	**20 52 04.0**	**+0.6**
	baz=196						
HFRF				S	**Sn**	**20 53 35.8**	**-2.7**
	baz=196						
VTS	**Vitosha**	**9.44**	**322**	⇑P	Pn	20 52 25.0	+9.0
CFR	**Carcaliu**	**10.04**	**348**	⇓P	Pn	20 52 28.1	+4.1
MLR	**Muntele Rosu**	**10.82**	**341**	⇑P	Pn	20 52 41.6	+6.7
PLOR	**Plostina**	**10.98**	**344**	⇑P	Pn	20 52 44.0	+7.0
VOIR		**11.03**	**337**	⇓P	Pn	20 52 44.8	+7.1
MDVR	**Moldovita**	**11.79**	**326**	⇑P	Pn	20 52 55.1	+7.0
BURAR	**Bucovina Array**	**12.98**	**342**	⇓P	**P**	**20 53 13.2**	**-0.7**
SOKA	**Soboth**	**16.50**	**318**	P	**P**	**20 53 53.7**	**+0.6**
	comp=E,2.3nm,0.7s						
VRAC	**Vranov**	**17.50**	**327**	LR	LR	21 02 05.0	
	comp=E,78nm,20.7s,baz=141,slow=42						
ABTA	**Abtaltersbach**	**17.96**	**315**	*e*P	**P**	**20 54 15.0**	**+5.9**
	comp=E,1.0nm,0.5s						
CKRC	**Cesky Krumlov**	**18.24**	**323**	*e*P	**Pn**	**20 54 13.2**	**+0.9**
DPC	**Dobruska-Polom**	**18.40**	**329**	*e*P	Pn	20 54 24.3	+10
GERES	**GERESS Array B**	**18.56**	**322**	P	**P**	**20 54 14.2**	**-1.5**
	comp=E,0.2nm,0.3s,baz=123,slow=9.7,SNR=10						
CHVC	**Chvalec**	**18.69**	**329**	*e*P	**Pn**	**20 54 20.8**	**+3.0**
WTTA	**Wattenberg**	**18.74**	**315**	*e*P	**Pn**	**20 54 19.9**	**+1.3**
	comp=E,1.1nm,0.4s						
KHC	**Kasperske Hory**	**18.81**	**322**	*e*P	**P**	**20 54 18.3**	**-0.1**
MOTA	**Moosalm**	**19.09**	**315**	*e*P	**Pn**	**20 54 27.8**	**+5.0**
	comp=E,1.6nm,0.5s						
FETA	**Feichten**	**19.15**	**314**	*e*P	**Pn**	**20 54 25.7**	**+2.3**
	comp=E,2.1nm,0.7s						
DAVOX	**Davos/Dischmat**	**19.54**	**312**	LR	LR	21 03 07.0	
	comp=E,67nm,20.2s,baz=127,slow=40						
DAVA	**Damuels**	**19.78**	**313**	*e*P	**P**	**20 54 29.4**	**+0.2**
	comp=E,9.1nm,0.8s						
CLL	**Collm**	**20.54**	**326**	*e*P	**P**	**20 54 36.0**	**-1.2**
	comp=Z,7.0nm,1.3s						
CLL				*e*pP	**sP**	**20 54 51.0**	**-0.8**
BELG	**Belogornoye**	**20.70**	**30**	P	**P**	**20 54 37.9**	**-1.0**
	comp=Z,2.5nm,0.4s,baz=207,slow=7.9,SNR=5.2						
AKTO	**Aktyubinsk**	**24.65**	**44**	P	**P**	**20 55 19.2**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=241,slow=6.4,SNR=5.2						
FINES	**FINESS Array B**	**26.28**	**355**	P	**P**	**20 55 30.9**	**-2.7**
	comp=Z,1.2nm,0.5s,baz=158,slow=11,SNR=11						
ESDC	**Sonseca Array**	**27.98**	**289**	P	**P**	**20 55 50.7**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=79,slow=9.7,SNR=2.8						
ARU	**Arti**	**28.13**	**33**	P	**P**	**20 55 48.9**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=234,slow=17,SNR=3.1						
NOA	**NORSAR Array B**	**28.64**	**340**	P	**P**	**20 55 53.3**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=139,slow=11,SNR=0.9						
NOA				LR	LR	21 08 26.7	
	comp=Z,35nm,20.6s,baz=350,slow=39						
EKA	**Eskdalemuir Ar**	**30.77**	**321**	P	**P**	**20 56 12.2**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=116,slow=11,SNR=1.5						
ARCES	**ARCESS Array B**	**34.35**	**357**	P	**P**	**20 56 42.7**	**-2.2**
	comp=Z,4.1nm,1.1s,baz=165,slow=7.5,SNR=9.8						
MKAR	**Makanchi Array**	**39.62**	**57**	P	**P**	**20 57 29.4**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=271,slow=7.2,SNR=8.4						
MKAR				LR	LR	21 15 27.5	
	comp=Z,38nm,18.1s,baz=281,slow=39						
ZALV	**Zalesovo Beam**	**41.38**	**46**	P	**P**	**20 57 42.9**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=249,slow=7.3,SNR=2.1						
GTA	**Gaotai**	**53.58**	**64**	*e*P	P	20 59 13.8	-5.6
GTA				pP	pP	20 59 24.5	-6.1
GTA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
SONM	**Songino Array**	**55.58**	**52**	P	**P**	**20 59 34.2**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=281,slow=7.4,SNR=3.6						
CMAR	**Chiang Mai Arr**	**61.75**	**87**	P	**P**	**21 00 18.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=295,slow=6.6,SNR=2.4						
FRB	**Frobisher Bay**	**62.89**	**330**	LR	LR	21 29 46.1	
	comp=Z,23nm,18.4s,baz=208,slow=38						
KSRS	**Korea Array**	**74.26**	**55**	LR	LR	21 36 13.3	
	comp=Z,21nm,18.4s,baz=285,slow=37						

*IDC **09** 21:07:17.6±12.0, 25°.75S×177°.88W, h296km±124km, mb3.2/4, mb1 3.5/5, mb1mx3.2/21, mbtmp3.9/5, Error ellipse: s-maj=110.4km s-min=34.3km az=179.0*

ISC 09 21:07:17.5±1.0, **26°.1S**±0°.1×**177°.8W**±0°.2, **h300**km, **n11**, σ1°.86/12, **mb3.4**/4, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.19**	**182**	S	**S**	**21 09 02.3**	**+1.2**
	89nm,0.3s,baz=82,slow=21,SNR=2.9						
URZ	**Urewera**	**12.91**	**198**	P	**P**	**21 10 13.4**	**+2.0**
	1.6nm,0.3s,baz=120,slow=24,SNR=2.8						
URZ				S	**S**	**21 12 30.1**	**-3.7**
	0.3nm,0.3s,baz=304,slow=23,SNR=1.4						
STKA	**Stephens Creek**	**35.86**	**251**	P	**P**	**21 13 51.5**	**+2.0**
	1.6nm,0.9s,baz=88,slow=8.1,SNR=4.0						
ASAR	**Alice Springs**	**43.71**	**262**	P	**P**	**21 14 53.8**	**-0.1**
	0.7nm,0.4s,baz=92,slow=7.7,SNR=19						
WRA	**Warramunga Arr**	**44.30**	**268**	P	**P**	**21 14 57.3**	**-1.3**
	0.6nm,0.5s,baz=104,slow=7.7,SNR=5.5						
PDAR	**Pinedale Array**	**92.86**	**43**	P	**P**	**21 19 56.9**	**+0.2**
	0.5nm,0.8s,baz=214,slow=4.4,SNR=3.9						
MKAR	**Makanchi Array**	**115.08**	**312**	PKP	**PKPdf**	**21 25 20.6**	**-2.3**
	0.2nm,0.5s,baz=105,slow=1.6,SNR=4.3						
ARCES	**ARCESS Array B**	**134.39**	**349**	PKP	**PKiKP**	**21 26 00.4**	**-0.2**
	4.3nm,1.1s,baz=46,slow=2.9,SNR=1.7						
NOA	**NORSAR Array B**	**144.49**	**352**	PKP	**PKPab**	**21 26 16.1**	**-0.9**
	1.4nm,0.7s,baz=14,slow=2.3,SNR=6.0						
AKASG	**Malin Array Be**	**147.87**	**327**	PKPbc	**PKPbc**	**21 26 26.9**	**-0.1**
	1.0nm,0.4s,baz=42,slow=4.5,SNR=3.2						
BRTR	**Keskin Array B**	**150.47**	**305**	PKPbc	**PKPbc**	**21 26 34.4**	**+0.3**
	1.0nm,0.8s,baz=88,slow=1.1,SNR=4.6						

*IDC **09** 21:39:55.6±1.6, 29°.60N×51°.89E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/41, mbtmp3.6/7, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/29, Error ellipse: s-maj=35.3km s-min=29.8km az=148.0*
*TEH **09** 21:39:55.6, 29°.65N×51°.93E, h5km, ML3.5*

ISC 09 21:39:57.1±0.7, **29°.58N**±0°.06×**51°.90E**±0°.04, **h10**km, **n33**, σ1°.56/35, **mb3.6**/6, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**0.23**	**281**	*e*Pg	**Pg**	**21 40 00.8**	**-1.1**
KAZ1				*e*Sg	**Sg**	**21 40 05.4**	**+0.3**
SHI	**Shiraz**	**0.54**	**84**	*e*Sg	**Sg**	**21 40 14.5**	**-0.3**
SHI				*e*Pg	**Pg**	**21 40 06.1**	**-1.6**
KLNJ	**Kolanjah**	**1.45**	**350**	*e*Pg	**Pn**	**21 40 23.1**	**-0.6**
KLNJ				*e*		21 40 58.3	
	comp=Z,99nm,0.6s						
QIR1	**Qir**	**1.49**	**137**	*e*Pg	**Pb**	**21 40 26.3**	**+1.4**
QIR1				*e*		21 41 02.7	
	comp=Z,99nm,0.5s						
JHRM	**Jahrom**	**1.82**	**126**	*e*Pn	**Pn**	**21 40 30.3**	**+1.7**
JHRM				*e*		21 41 07.7	
	comp=Z,99nm,0.5s						
IRAM	**Ramesheh**	**2.26**	**11**	*e*Pn	**Pn**	**21 40 36.1**	**+1.4**
IRAM				*e*		21 41 20.7	
	comp=Z,99nm,0.7s						
LMD1	**Lamerd**	**2.50**	**153**	*e*Pn	**Pn**	**21 40 40.6**	**+2.8**
LMD1				*e*		21 41 44.3	
	comp=Z,99nm,0.7s						
ISAD	**Sadrabad**	**2.79**	**33**	*e*Pn	**Pn**	**21 40 44.2**	**+2.1**
IGAR	**Gharneh**	**2.81**	**2**	*e*Pn	**Pn**	**21 40 43.2**	**+0.8**
SHK1	**Shahrekord**	**2.87**	**343**	*e*Pn	**Pn**	**21 40 43.6**	**+0.4**
LAR1	**LAR**	**2.89**	**131**	*e*Pn	**Pn**	**21 40 45.3**	**+2.0**
LAR1				*e*		21 41 52.5	
	comp=Z,99nm,0.6s						
IPIR	**Pirpir**	**3.21**	**345**	*e*Pn	**Pn**	**21 40 48.8**	**+0.9**
NASN	**Na^{a}in**	**3.30**	**13**	*e*Pn	**Pn**	**21 40 49.7**	**+0.5**
IZEF	**Zefreh**	**3.32**	**6**	*e*Pn	**Pn**	**21 40 51.1**	**+1.7**
IKLH	**Kolahrood**	**3.73**	**356**	*e*Pn	**Pn**	**21 40 56.3**	**+1.2**
ANAR	**Anarak**	**3.92**	**23**	*e*Pn	**Pn**	**21 40 58.8**	**+1.3**
KHGB

n52,σ1ᵍ03/50,mb3.9/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.35**	**318**	P	**Pn**	**22 12 05.5**	**+1.4**
	5.5nm,0.3s,baz=128,slow=8.6,SNR=20						
MSVF	**Nonsavu**	**5.35**	**318**	P	**Pn**	**22 12 05.6**	**+1.6**
RAO	**Raoul Island**	**7.46**	**178**	P	**P**	**22 12 28.6**	**+1.2**
	69nm,0.3s,baz=49,slow=22,SNR=2.5						
RAO	**Raoul Island**	**7.46**	**178**	P	**P**	**22 12 29.9**	**+2.5**
NIUE	**Niue**	**8.20**	**72**	P	**P**	**22 12 36.9**	**+1.1**
DZM	**Mont Dzumac**	**14.26**	**266**	P	**P**	**22 13 44.4**	**+1.6**
	0.7nm,0.3s,baz=72,slow=7.1,SNR=6.7						
URZ	**Urewera**	**16.93**	**193**	P	**P**	**22 14 10.3**	**-0.9**
	1.0nm,0.3s,baz=300,slow=23,SNR=6.5						
URZ	**Urewera**	**16.93**	**193**	IAmb	IAmb	22 14 25.0	
	comp=Z,17nm,1.2s						
HIZ	**Hauiti**	**17.73**	**198**	P	**P**	**22 14 20.0**	**+0.3**
BKZ	**Black Stump Fm**	**17.93**	**194**	P	**P**	**22 14 20.9**	**-0.9**
BFZ	**Birch Farm**	**19.44**	**193**	P	**P**	**22 14 36.1**	**-1.1**
QRZ	**Quartz Range**	**20.56**	**200**	P	**P**	**22 14 47.3**	**-0.3**
THZ	**Tophouse**	**21.30**	**199**	P	**P**	**22 14 54.9**	**+0.5**
KHZ	**Kahutara**	**21.72**	**197**	P	**P**	**22 14 57.8**	**-0.4**
LTZ	**Lake Taylor**	**22.42**	**199**	P	**P**	**22 15 03.5**	**-1.0**
LTZ				IAmb	IAmb	22 15 19.1	
	comp=Z,4.5nm,1.1s						
MLZ	**Mavora Lakes**	**26.08**	**202**	P	**P**	**22 15 38.0**	**+0.8**
MLZ				IAmb	IAmb	22 15 39.1	
	comp=Z,12nm,1.1s						
DCZ	**Deep Cove**	**26.51**	**204**	P	**P**	**22 15 40.1**	**-0.9**
DCZ				IAmb	IAmb	22 15 56.7	
	comp=Z,8.9nm,1.2s						
ARMA	**Armidale**	**28.37**	**246**	P	**P**	**22 15 58.5**	**+0.7**
ARMA				IAmb	IAmb	22 16 11.2	
	comp=Z,7.3nm,1.1s						
CTAO	**Charters Tower**	**33.21**	**266**	P	**P**	**22 16 40.7**	**+0.8**
CTAO				IAmb	IAmb	22 16 49.8	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**37.09**	**246**	P	**P**	**22 17 12.9**	**+0.5**
	comp=Z,4.3nm,0.6s,baz=91,slow=9.6,SNR=11						
STKA	**Stephens Creek**	**37.09**	**246**	IAmb	IAmb	22 17 13.7	
	comp=Z,1.1nm,0.7s						
COEN	**Coen**	**37.50**	**275**	P	**P**	**22 17 17.2**	**+1.2**
COEN				IAmb	IAmb	22 17 17.5	
	comp=Z,5.4nm,1.1s						
BBOO	**Buckleboo**	**41.84**	**245**	P	**P**	**22 17 50.0**	**-1.0**
BBOO				IAmb	IAmb	22 17 50.9	
	comp=Z,7.1nm,0.5s						
AS31	**Alice Springs**	**44.07**	**258**	P	**P**	**22 18 08.7**	**-0.2**
ASAR	**Alice Springs**	**44.07**	**258**	P	**P**	**22 18 08.8**	**0.0**
	comp=Z,2.6nm,0.7s,baz=94,slow=8.2,SNR=27						
ASAR				PcP	**PcP**	**22 19 45.6**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=113,slow=3.9,SNR=3.0						
WR0	**Warramunga Arr**	**44.07**	**263**	P	**P**	**22 18 08.2**	**-0.7**
WB0	**Warramunga Arr**	**44.25**	**264**	P	**P**	**22 18 09.6**	**-0.7**
WB2	**Warramunga Arr**	**44.25**	**263**	P	**P**	**22 18 09.6**	**-0.7**
WB2				IAmb	IAmb	22 18 10.3	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**44.26**	**263**	P	**P**	**22 18 09.6**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=94,slow=7.9,SNR=27						
WRA				PcP	**PcP**	**22 19 47.7**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=93,slow=4.7,SNR=2.4						
WRA	**Warramunga Arr**	**44.26**	**263**	P	**P**	**22 18 09.9**	**-0.5**
FORT	**Forrest**	**48.64**	**248**	P	**P**	**22 18 43.5**	**-0.3**
MTN	**Manton Dam**	**49.01**	**272**	P	**P**	**22 18 46.5**	**-0.2**
MTN				IAmb	IAmb	22 18 58.5	
	comp=Z,10nm,1.1s						
FAKI	**Fak Fak**	**51.62**	**284**	P	**P**	**22 19 03.7**	**-2.4**
FITZ	**Fitzroy Crossi**	**52.69**	**263**	P	**P**	**22 19 13.7**	**-0.1**
PSA00	**Pilbara Seismi**	**57.22**	**258**	P	**P**	**22 19 45.2**	**-0.5**
PSA00				IAmb	IAmb	22 20 05.2	
	comp=Z,5.1nm,0.9s						
NWAO	**Narrogin (SRO)**	**57.65**	**244**	P	**P**	**22 19 47.0**	**-1.5**
NWAO				IAmb	IAmb	22 20 03.8	
	comp=Z,13nm,1.1s						
MORW	**Morawa**	**59.19**	**248**	P	**P**	**22 19 58.5**	**-0.7**
MORW				IAmb	IAmb	22 20 01.6	
	comp=Z,6.7nm,1.0s						
GIRL	**Giralia**	**62.05**	**255**	P	**P**	**22 20 18.0**	**-0.3**
TOLI2	**Tolitoli**	**63.70**	**283**	P	**P**	**22 20 29.6**	**+0.5**
TOLI2				IAmb	IAmb	22 20 48.6	
	comp=Z,6.1nm,1.0s						
NVAR	**Mina Array Bea**	**82.07**	**43**	P	**P**	**22 22 15.9**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=222,slow=9.4,SNR=9.6						
TXAR	**Lajitas Array**	**87.89**	**57**	P	**P**	**22 22 44.8**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=207,slow=8.0,SNR=4.7						
ILAR	**Eielson Array**	**89.58**	**13**	P	**P**	**22 22 49.8**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=231,slow=6.5,SNR=6.1						
PDAR	**Pinedale Array**	**90.00**	**43**	P	**P**	**22 22 53.5**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=202,slow=1.6,SNR=5.6						
CMAR	**Chiang Mai Arr**	**90.37**	**290**	P	**P**	**22 22 56.5**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=113,slow=4.3,SNR=2.2						
ARCES	**ARCESS Array B**	**130.13**	**349**	PKP	**PKPdf**	**22 28 59.1**	**-1.5**
	comp=Z,0.5nm,0.4s,baz=48,slow=1.3,SNR=9.3						
HFS	**Hagfors**	**140.76**	**351**	PKhKP	PKPpre	22 29 13.1	
	comp=Z,2.0nm,0.9s,baz=54,slow=2.6,SNR=5.5						
AKASG	**Malin Array Be**	**144.03**	**330**	PKP	PKPbc	22 29 23.7	-1.8
	comp=Z,0.6nm,0.4s,baz=43,slow=4.2,SNR=8.8						
EKA	**Eskdalemuir Ar**	**146.28**	**5**	PKPbc	**PKPdf**	**22 29 29.2**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=329,slow=1.4,SNR=5.7						
BRTR	**Keskin Array B**	**147.54**	**311**	PKPbc	**PKPbc**	**22 29 34.8**	**-1.7**
	comp=Z,1.3nm,1.0s,baz=140,slow=2.6,SNR=2.7						
MMAI	**Mount Meron Ar**	**148.27**	**298**	PKPbc	**PKPbc**	**22 29 38.4**	**0.0**
	comp=Z,2.8nm,0.8s,baz=80,slow=6.9,SNR=5.3						
GERES	**GERESS Array B**	**151.36**	**343**	PKPbc	**PKPbc**	**22 29 44.6**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=58,slow=5.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	**171.43**	**179**	PKPab	**PKPab**	**22 31 22.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=177,slow=3.3,SNR=4.3						

*IDC **09** 22:21:30.9±1.3,35.7°S×5.6°E,h0ᵏᵐ,mb3.5/6,mb1 3.5/9, mb1mx3.2/76,mbtmp3.5/9,ML3.0/3, Error ellipse: s-maj=32.0km s-min=20.6km az=158.0*

*CRAAG **09** 22:21:31.0,35.76N×5.74E, MI3.2*

ISC 09 22:21:32.5±0.9,35.77N±0.08×5.62E±0.07,h10ᵏᵐ,n16, σ0ˢ81/17,mb3.6/6,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHR	**Kef el Ahmar**	**0.26**	**341**	P	**Pb**	**22 21 39.1**	**-0.3**
SET	**Setif**	**0.47**	**338**	P	**Pn**	**22 21 45.0**	**-0.3**
CTEI	**Djebel Teioual**	**0.70**	**65**	P	**Pg**	**22 21 45.0**	**-1.1**
DFRA	**Djebel Bou Aff**	**0.80**	**15**	P	**Pn**	**22 21 50.9**	**+0.9**
CASM	**Ain Smara**	**0.86**	**55**	P	**Pg**	**22 21 48.8**	**-0.2**
CKFL	**Kef-Lekhel**	**1.09**	**54**	P	**Pn**	**22 21 53.9**	**0.0**
CMAH	**Djebel Manchou**	**1.69**	**59**	P	**Pg**	**22 22 05.6**	**+0.7**
KEST	**Kesra**	**3.03**	**90**	Pn	**Pn**	**22 22 20.5**	**0.0**
	1.0nm,0.3s,baz=207,slow=4.7,SNR=26						
KEST				Sn	**Sn**	**22 22 57.7**	**+0.8**
	1.3nm,0.3s,baz=197,slow=6.6,SNR=2.4						
ESDC	**Sonseca Array**	**8.54**	**300**	Pn	**Pn**	**22 23 37.8**	**+1.7**
	0.1nm,0.3s,baz=119,slow=14,SNR=5.8						
MDT	**Midelt**	**8.96**	**254**	Pn	**Pn**	**22 23 41.7**	**-0.3**
	0.1nm,0.3s,baz=72,slow=14,SNR=1.7						
BRTR	**Keskin Array B**	**22.47**	**71**	P	**P**	**22 26 32.9**	**+1.0**
	1.7nm,1.0s,baz=266,slow=9.8,SNR=2.9						
AKASG	**Malin Array Be**	**22.63**	**41**	P	**P**	**22 26 32.2**	**-1.2**
	0.6nm,0.5s,baz=239,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**22.80**	**190**	P	**P**	**22 26 35.2**	**-0.2**
	0.7nm,0.8s,baz=8.9,slow=9.4,SNR=3.1						
KURBB	**Kurchatov Arra**	**53.07**	**50**	P	**P**	**22 30 49.5**	**-0.3**
	0.7nm,0.7s,baz=290,slow=8.0,SNR=5.4						
ZALV	**Zalesovo Beam**	**55.98**	**44**	P	**P**	**22 31 10.4**	**-0.4**
	0.4nm,0.5s,baz=245,slow=5.5,SNR=2.2						
MKAR	**Makanchi Array**	**56.52**	**53**	P	**P**	**22 31 14.3**	**-0.5**
	0.7nm,0.7s,baz=283,slow=6.2,SNR=9.8						

*IDC **09** 22:23:22.6±2.0,3.85S×102.35W,h0ᵏᵐ,mb3.6/7, mb1 3.9/7,mb1mx3.7/43,mbtmp3.6/7,MS3.5/16, Ms1 3.5/16,ms1mx3.3/33,Error ellipse: s-maj=162.7km s-min=29.0km az=68.0*

ISC 09 22:23:23.6±1.7,3.9S±0.4×102.5W±0.9,h10ᵏᵐ,n31, σ1ᵍ14/8,mb4.0/7,MS3.5/18,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**22.29**	**32**	LR	LR	22 34 58.4	
	comp=Z,213nm,21.5s,baz=42,slow=32						
JTS	**Las Juntas de**	**22.49**	**51**	LR	LR	22 34 46.0	
	comp=Z,305nm,19.2s,baz=154,slow=31						
ATAH	**Atahualpa**	**24.23**	**99**	LR	LR	22 35 52.9	
	comp=Z,50nm,20.8s,baz=274,slow=31						
TEIG	**Tepich**	**27.79**	**30**	LR	LR	22 38 34.8	
	comp=Z,135nm,19.5s,baz=263,slow=33						
LPIG	**La Paz**	**28.88**	**345**	LR	LR	22 37 56.2	
	comp=Z,95nm,20.3s,baz=200,slow=30						
ROSC	**El Rosal**	**29.49**	**73**	LR	LR	22 38 58.4	
	comp=Z,121nm,21.0s,baz=26,slow=32						
TXAR	**Lajitas Array**	**33.09**	**358**	P	**P**	**22 30 00.9**	**+1.0**
	0.1nm,0.3s,baz=172,slow=6.9,SNR=1.2						
TXAR				LR	LR	22 42 05.4	
	comp=Z,115nm,18.9s,baz=0.0,slow=34						
SDV	**Santo Domingo**	**34.25**	**68**	LR	LR	22 41 49.0	
	comp=Z,132nm,20.6s,baz=244,slow=32						
LPAZ	**La Paz**	**35.94**	**112**	LR	LR	22 42 00.5	
	comp=Z,43nm,18.5s,baz=266,slow=31						
H03N2	**Juan Fernandez**	**36.70**	**146**	T	T	23 09 38.8	
	baz=322,slow=77,SNR=16						
H03N1	**Juan Fernandez**	**36.71**	**146**	T	T	23 09 41.0	
	baz=322,slow=77,SNR=19						
RKT	**Rikitea**	**36.71**	**236**	*e*LR	LR	22 40 36.0	
	comp=Z,200nm,25.8s						
H03N3	**Juan Fernandez**	**36.71**	**146**	T	T	23 09 50.1	
	baz=322,slow=77,SNR=18						
ANMO	**Albuquerque**	**38.85**	**355**	LR	LR	22 43 21.6	
	comp=Z,24nm,18.3s,baz=173,slow=31						
ELK	**Elko**	**45.96**	**347**	LR	LR	22 49 36.2	
	comp=Z,21nm,18.2s,baz=152,slow=34						
PLCA	**Paso Flores**	**46.58**	**146**	P	**P**	**22 31 51.8**	**-0.1**
	2.2nm,1.0s,baz=317,slow=5.5,SNR=2.8						
PLCA				LR	LR	22 46 45.1	
	comp=Z,94nm,18.3s,baz=324,slow=30						
PDAR	**Pinedale Array**	**46.91**	**353**	P	**P**	**22 31 52.7**	**-1.9**
	0.6nm,1.0s,baz=152,slow=9.8,SNR=2.1						
PDAR				LR	LR	22 50 24.1	
	comp=Z,29nm,18.4s,baz=178,slow=35						
PPT	**Papeete**	**48.02**	**250**	LR	LR	22 47 06.4	
	comp=Z,70nm,19.2s,baz=92,slow=30						
PPT2	**Papeete2**	**48.02**	**250**	*e*LR	LR	22 45 52.6	
	comp=Z,152nm,24.5s						
CPUP	**Villa Florida**	**48.63**	**122**	LR	LR	22 50 30.4	
	comp=Z,23nm,18.2s,baz=294,slow=34						
YBH	**Yreka Blue Hor**	**49.02**	**340**	P	**P**	**22 32 10.4**	**-0.4**
	0.4nm,0.4s,baz=141,slow=6.5,SNR=1.4						
YBH				LR	LR	22 49 27.7	
	comp=Z,23nm,19.1s,baz=155,slow=32						
YKA	**Yellowknife Ar**	**66.88**	**354**	P	**P**	**22 34 16.0**	**+0.4**
	1.8nm,1.0s,baz=161,slow=6.5,SNR=6.8						
INK	**Inuvik**	**75.24**	**349**	P	**P**	**22 35 06.7**	**+0.5**
	1.3nm,0.9s,baz=194,slow=4.5,SNR=2.9						
ILAR	**Eielson Array**	**75.87**	**342**	P	**P**	**22 35 10.9**	**+1.0**
	1.7nm,0.8s,baz=161,slow=8.5,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**91.84**	**290**	T	T	00 18 02.7	
	baz=93,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hy**	**91.85**	**290**	T	T	00 18 06.5	
	baz=93,slow=74,SNR=25						
H11N1	**WAKE ISLAND Hy**	**91.86**	**290**	T	T	00 18 06.1	
	baz=93,slow=74,SNR=17						
H11S2	**WAKE ISLAND Hy**	**91.96**	**288**	T	T	00 18 09.8	
	baz=94,slow=74,SNR=26						
H11S1	**WAKE ISLAND Hy**	**91.96**	**288**	T	T	00 18 12.5	
	baz=94,slow=74,SNR=24						
H11S3	**WAKE ISLAND Hy**	**91.97**	**288**	T	T	00 18 13.7	
	baz=94,slow=74,SNR=25						
MKAR	**Makanchi Array**	**137.10**	**355**	PKP	**PKiKP**	**22 42 49.1**	**0.0**
	0.5nm,0.8s,baz=38,slow=2.3,SNR=5.7						

*NEIC **09** 22:29:19.4±1.0,20.5S±0.1×179.6W±0.1,h512ᵏᵐ±14ᵏᵐ, mb4.0/12,Error ellipse: s-maj=19.1km s-min=17.3km az=128.0*

*IDC **09** 22:29:19.4±12.0,20.57S×179.64W,h502ᵏᵐ±54ᵏᵐ, mb3.0/4,mb1 3.1/5,mb1mx2.9/48,mbtmp3.9/5,Error ellipse: s-maj=265.4km s-min=102.4km az=96.0*

ISC 09 22:29:19.0±0.7,20.6S±0.1×179.67W±0.10,h500ᵏᵐ,n23, σ1ᵍ18/23,mb3.8/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**322**	P	**P**	**22 30 34.8**	**+0.7**
	2.4nm,0.3s,baz=141,slow=20,SNR=11						
MSVF	**Nonsavu**	**3.54**	**322**	P	**P**	**22 30 35.1**	**+1.1**
RAO	**Raoul Island**	**8.79**	**170**	P	**P**	**22 31 24.4**	**+0.9**
NIUE	**Niue**	**9.29**	**82**	P	**P**	**22 31 29.2**	**+0.2**
HIZ	**Hauiti**	**18.50**	**194**	P	**P**	**22 33 03.6**	**-0.1**
MSWZ	**Moikau Station**	**21.23**	**191**	P	**P**	**22 33 29.0**	**+0.4**
PLWZ	**Palliker**	**21.38**	**190**	P	**P**	**22 33 29.8**	**-0.2**
ARMA	**Armidale**	**27.63**	**243**	P	**P**	**22 34 28.9**	**+3.1**
ARMA				IAmb	IAmb	22 34 47.5	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**36.02**	**274**	P	**P**	**22 35 36.2**	**-1.4**
COEN				IAmb	IAmb	22 35 36.9	
	comp=Z,3.5nm,0.9s						
STKA	**Stephens Creek**	**36.35**	**244**	P	**P**	**22 35 40.0**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=17,slow=17,SNR=3.2						
STKA	**Stephens Creek**	**36.35**	**244**	P	**P**	**22 35 40.6**	**+0.5**
TAOE	**Nuku Hiva Isla**	**39.85**	**79**	P	**P**	**22 36 08.2**	**-0.9**
BBOO	**Buckleboo**	**41.11**	**243**	P	**P**	**22 36 15.9**	**-3.0**
BBOO				IAmb	IAmb	22 36 35.5	
	comp=Z,8.5nm,1.1s						
WR0	**Warramunga Arr**	**42.85**	**262**	P	**P**	**22 36 33.4**	**+0.7**
WR0				IAmb	IAmb	22 36 43.5	
	comp=Z,2.4nm,1.1s						
ASAR	**Alice Springs**	**42.98**	**257**	P	**P**	**22 36 34.5**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=96,slow=8.1,SNR=17						
WB0	**Warramunga Arr**	**43.01**	**263**	P	**P**	**22 36 34.8**	**+0.8**
WB0				IAmb	IAmb	22 36 40.8	
	comp=Z,2.6nm,0.9s						
WB2	**Warramunga Arr**	**43.02**	**262**	P	**P**	**22 36 34.8**	**+0.7**
WB2				IAmb	IAmb	22 36 52.3	
	comp=Z,4.4nm,1.1s						
WRAB	**Tennant Creek**	**43.03**	**262**	P	**P**	**22 36 33.5**	**-0.6**
WRA	**Warramunga Arr**	**43.04**	**262**	P	**P**	**22 36 34.6**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=97,slow=7.5,SNR=23						
FITZ	**Fitzroy Crossi**	**51.46**	**263**	P	**P**	**22 37 38.1**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=75,slow=12,SNR=1.5						
FITZ	**Fitzroy Crossi**	**51.46**	**263**	P	**P**	**22 37 37.5**	**-0.2**
VNDA	**Vanda**	**57.71**	**185**	P	**P**	**22 38 20.2**	**-0.6**
CLL	**Collm**	**147.75**	**345**	*e*PKPbc	**PKiKP**	**22 48 09.0**	**+0.6**

*IDC **09** 22:35:48.3±0.5,1.99S×139.29E,h0ᵏᵐ,mb4.3/16, mb1 4.5/20,mb1mx4.3/38,mbtmp4.4/20,ML4.7/3,MS3.7/11, Ms1 3.7/11,ms1mx3.4/40,Error ellipse: s-maj=17.6km s-min=11.7km az=62.0*

*DJA **09** 22:35:51.7±0.9,2°S±3°×13°9E±°,h23ᵏᵐ±7ᵏᵐ,M4.7/35, mb4.8/35,mB5.2/7,MLv4.8/7,Mw(mB)4.6/7,MwMwp5.4/1, Mwp5.6/1*

*NEIC **09** 22:35:53.9±1.4,1.99S±0.05×139.30E±0.06,h35ᵏᵐ±1ᵏᵐ, mb4.6/46,Error ellipse: s-maj=10.5km s-min=7.6km az=301.0*

ISC 09 22:35:52.5±0.3,2.01S±0.04×139.30E±0.03,h27ᵏᵐ,n161, σ1ᵍ33/147,mb4.6/48,MS3.8/9,2C,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.04**	**124**	P	**Pb**	**22 36 12.4**	**+0.5**
GENI				S	**Sb**	**22 36 28.7**	**+3.5**
JAY	**Jayapura**	**1.49**	**110**	Pn	**Pn**	**22 36 17.1**	**-0.5**
	254nm,0.3s,baz=252,slow=9.9,SNR=402						
JAY				Sn	**Sb**	**22 36 38.1**	**+0.1**
	436nm,0.3s,baz=95,slow=18,SNR=14						
JAY				LR	LR	22 37 07.3	
	comp=Z,3µm,20.3s,baz=312,slow=52						
JAY	**Jayapura**	**1.49**	**110**	P	**Pn**	**22 36 17.2**	**-0.3**
JAY				S	**Sb**	**22 36 38.7**	**+0.6**
WAMI	**Wamena**	**1.95**	**198**	P	**Pb**	**22 36 31.4**	**+4.0**
WAMI				S	**Sb**	**22 36 55.2**	**+3.9**
SRPI	**Serui, Papua**	**3.06**	**273**	P	**Pn**	**22 36 38.5**	**-0.6**
SRPI				S	**Sn**	**22 37 14.4**	**-0.5**
BAKI	**Biak**	**3.29**	**284**	P	**Pn**	**22 36 41.2**	**-1.1**
FAKI	**Fak Fak**	**7.10**	**263**	Pn	**Pn**	**22 37 35.5**	**+0.8**
FAKI	**Fak Fak**	**7.10**	**263**	P	**Pn**	**22 37 34.5**	**-0.2**
	0.3nm65nm,0.8s						
SIJI	**Sorong**	**8.11**	**278**	LR	LR	22 41 13.1	
	comp=Z,941nm,18.3s,baz=56,slow=40						
PMG	**Port Moresby**	**10.72**	**134**	Pn	**Pn**	**22 38 22.7**	**-1.7**
	3.5nm,0.3s,baz=234,slow=16,SNR=2.7						
PMG				LR	LR	22 43 49.2	
	comp=Z,718nm,20.0s,baz=344,slow=45						
PMG	**Port Moresby**	**10.72**	**134**	Pn	**Pn**	**22 38 25.6**	**+1.2**
NLAI	**Namlea**	**12.25**	**264**	P	**Pn**	**22 38 43.8**	**-1.5**
	24nm,0.8s						
SANI	**Sanana**	**13.30**	**270**	P	**Pn**	**22 38 58.2**	**-1.5**
	19nm,0.8s						
MTN	**Manton Dam**	**13.46**	**217**	Pn	**Pn**	**22 39 02.6**	**+0.8**
DAV	**Davao City (W)**	**16.40**	**304**	LR	LR	22 46 00.5	
	comp=Z,120nm,18.5s,baz=110,slow=37						
GTOI	**Gorontalo**	**16.50**	**279**	P	**Pn**	**22 39 42.7**	**+0.5**
	14nm,0.9s						
LUWI	**Luwuk**	**16.55**	**273**	P	**P**	**22 39 45.2**	**0.0**
LUWI				IAmb	IAmb	22 40 12.6	
	comp=Z,41nm,1.0s						
SOEI	**Soe**	**16.81**	**242**	P	**P**	**22 39 48.2**	**0.0**
SOEI	**Soe**	**16.81**	**242**	P	**Pn**	**22 39 45.8**	**-0.4**
	comp=Z,108nm,0.9s						
BATI	**Baumata**	**17.54**	**242**	Pn	**Pn**	**22 39 53.6**	**-1.7**
	comp=Z,2.0nm,0.3s,baz=352,slow=9.4,SNR=1.8						
BATI	**Baumata**	**17.54**	**242**	P	**Pn**	**22 39 55.0**	**-0.3**
	comp=Z,50nm,0.8s						
APSI	**Ampana**	**17.68**	**273**	P	**Pn**	**22 39 55.8**	**-1.2**
	comp=Z,35nm,1.1s						
WB0	**Warramunga Arr**	**18.29**	**195**	P	**Pn**	**22 40 05.5**	**+1.1**
WB0				IAmb	IAmb	22 40 10.5	
	comp=Z,22nm,0.7s						
WR0	**Warramunga Arr**	**18.43**	**194**	P	**Pn**	**22 40 06.5**	**+0.2**
WR0				IAmb	IAmb	22 40 18.9	
	comp=Z,22nm,0.7s						
WRAB	**Tennant Creek**	**18.46**	**195**	P	**Pn**	**22 40 07.8**	**+1.3**
WRAB				IAmb	IAmb	22 40 33.1	
	comp=Z,33nm,0.7s						
WB2	**Warramunga Arr**	**18.46**	**195**	P	**Pn**	**22 40 06.6**	**0.0**
WB2				IAmb	IAmb	22 40 25.7	
	comp=Z,34nm,0.8s						
WRA	**Warramunga Arr**	**18.47**	**195**	P	**P**	**22 40 06.0**	**-0.5**
	comp=Z,3.7nm,0.3s,baz=18,slow=12,SNR=81						
WRA				S	**Sn**	**22 43 24.6**	**-7.8**
	comp=Z,0.7nm,0.3s,baz=11,slow=22,SNR=5.2						
WRA	**Warramunga Arr**	**18.47**	**195**	P	**P**	**22 40 06.3**	**-0.1**
TOLI2	**Tolitoli**	**18.77**	**279**	P	**Pn**	**22 40 10.7**	**+0.3**
CTA	**Charters Tower**	**19.21**	**160**	P	**Pn**	**22 40 15.6**	**0.0**
	comp=Z,0.9nm,0.3s,baz=347,slow=12,SNR=8.9						
CTAO	**Charters Tower**	**19.21**	**160**	P	**Pn**	**22 40 15.7**	**+0.1**
ANA2	**Anatahan**	**19.31**	**19**	P	**Pn**	**22 40 16.6**	**-0.2**
BNSI	**Bone**	**19.31**	**262**	P	**P**	**22 40 14.8**	**-0.9**
	comp=Z,633nmcomp=Z,32nm,1.2s						
TTSI	**Tana Toraja**	**19.49**	**267**	P	**P**	**22 40 17.0**	**-0.7**
	comp=Z,24nm,0.9s						
SPSI	**Sidrap Palu**	**19.60**	**264**	P	**P**	**22 40 18.3**	**-0.6**
	comp=Z,30nm,1.7s						
KAPI	**Kappang**	**19.74**	**261**	LR	LR	22 49 25.6	
	comp=Z,59nm,21.9s,baz=90,slow=41						
KAPI	**Kappang**	**19.74**	**261**	P	**P**	**22 40 20.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**20.86**	**219**	P	**P**	**22 40 32.4**	**-0.2**
	comp=Z,6.1nm,0.7s,baz=40,slow=12,SNR=20						
FITZ				S	**S**	**22 44 18.8**	**-5.2**
	comp=Z,22nm,1.1s,baz=156,slow=13,SNR=4.8						
FITZ				LR	LR	22 49 55.9	
	comp=Z,86nm,18.9s,baz=42,slow=41						
FITZ	**Fitzroy Crossi**	**20.86**	**219**	P	Pn	**22 40 33.9**	**-1.2**
HNR	**Honiara**	**21.81**	**111**	LR	LR	22 48 23.0	
	comp=Z,366nm,20.1s,baz=44,slow=35						
MYLDM	**Lahad Datu**	**21.97**	**289**	P	**P**	**22 40 44.6**	**0.0**
MYLDM				IAmb	IAmb	22 41 06.6	
	comp=Z,26nm,1.0s						
AS31	**Alice Springs**	**22.15**	**193**	P	**P**	**22 40 47.1**	**+0.8**
AS31				IAmb	IAmb	22 40 53.4	
	comp=Z,11nm,0.7s						
ASAR	**Alice Springs**	**22.15**	**193**	P	**P**	**22 40 46.7**	**+0.3**
	comp=Z,24nm,0.7s,baz=24,slow=10,SNR=191						
ASAR				S	**S**	**22 44 45.2**	**-4.0**
	comp=Z,0.8nm,0.6s,baz=5.4,slow=20,SNR=2.3						
ASAR				LR	LR	22 50 12.3	
	comp=Z,328nm,18.6s,baz=15,slow=39						
ASAR	**Alice Springs**	**22.15**	**193**	P	**P**	**22 40 45.9**	**-0.5**
**BKB

BKZ	Black Stump Fm	50.15	142	P	P	22 44 46.2	+0.5	
TCW	Tory Channel	50.15	146	P	P	22 44 46.3	+0.6	
RPZ	Rata Peaks	50.19	150	P	P	22 44 44.9	-1.1	
	comp=Z,17nm,0.8s,baz=358,slow=11,SNR=4.6							
BSWZ	Blackbirch Sta	50.27	146	P	P	22 44 45.8	-0.8	
KRHZ	Kereru	50.37	143	P	P	22 44 48.4	+1.0	
CMWZ	Cape Campbell	50.48	146	P	P	22 44 47.6	-0.6	
KHZ	Kahutara	50.56	147	P	P	22 44 48.9	+0.2	
HOWZ	Holdsworth Sta	50.66	145	P	P	22 44 49.6	+0.1	
GVZ	Greta Valley S	50.67	148	P	P	22 44 50.5	+0.9	
BFZ	Birch Farm	50.94	144	P	P	22 44 52.1	+0.4	
TRWZ	Traveller	51.08	145	P	P	22 44 46.0	-6.7	
SHL	Shillong	53.43	304	P	P	22 45 09.5	-1.1	
SHL				IAmb	IAmb	22 45 11.4		
	comp=Z,5.9nm,1.0s							
GTA	Gaotai	54.87	323	⇑P	P	22 45 21.3	+0.5	
GTA				pP	sP	22 45 31.0	-1.2	
GTA				sP	pP	22 45 35.2	+6.0	
GTA				PcP	PcP	22 46 24.3	+1.5	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,78nm,5.6s							
GTA				LR	LR			
	comp=N,230nm,15.6s							
GTA				LR	LR			
	comp=E,190nm,18.9s							
GTA				LR	LR			
	comp=Z,250nm,18.2s							
ULN	Ulaanbaatar	57.09	335	P	P	22 45 36.7	+0.1	
ULN				IAmb	IAmb	22 45 47.5		
	comp=Z,3.6nm,0.8s							
SONM	Songino Array	57.35	334	P	P	22 45 38.3	-0.1	
	comp=Z,0.5nm,0.7s,baz=163,slow=6.2,SNR=4.7							
SONM	Songino Array	57.35	334	P	P	22 45 39.0	+0.6	
ODAN	Odare	57.65	304	*eP*	P	22 45 40.6	-0.5	
	comp=Z,12nm,0.8s							
RAMN	Ramite	58.34	303	*eP*	P	22 45 45.9	0.0	
JIRN	Jiri	58.94	304	*eP*	P	22 45 50.4	+0.2	
	comp=Z,8.0nm,0.8s							
GUN	Gumba	59.28	304	*eP*	P	22 45 52.7	+0.1	
	comp=Z,9.3nm,0.7s							
PKI	Pulchoki	59.55	304	*eP*	P	22 45 54.4	0.0	
PKIN	Phulchoki	59.56	304	*eP*	P	22 45 53.9	-0.5	
DMN	Daman	59.82	304	*eP*	P	22 45 55.8	-0.4	
	comp=Z,15nm,0.8s							
GKN	Gorkha	60.34	304	*eP*	P	22 45 59.8	+0.1	
	comp=Z,14nm,0.9s							
KOLN	Koldanda	61.13	303	*eP*	P	22 46 05.1	0.0	
PYUN	Piuthan	61.74	303	*eP*	P	22 46 09.4	+0.2	
	comp=Z,26nm,0.9s							
SMY	Shemya	61.88	23	P	P	22 46 10.2	+0.9	
WMQ	Urumqi	64.84	321	*eP*	P	22 46 31.4	+2.2	
WMQ				pmax	pmax			
	comp=Z,12nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,110nm,3.9s							
MK31	Makanchi Array	69.60	322	P	P	22 46 59.8	+0.4	
MK31				IAmb	IAmb	22 47 10.3		
	comp=Z,5.3nm,0.9s							
MKAR	Makanchi Array	69.60	322	P	P	22 46 59.4	0.0	
	comp=Z,4.6nm,1.0s,baz=108,slow=8.3,SNR=32							
MKAR	Makanchi Array	69.60	322	P	P	22 46 59.6	+0.2	
MAKZ	Makanchi	69.80	322	P	P	22 47 00.9	+0.3	
KSH	Kashi	71.04	313	P	P	22 47 10.2	+1.8	
KSH				pP	sP	22 47 21.6	+1.7	
KSH				S	S	22 56 25.2	+1.9	
KSH				pmax	pmax			
	comp=Z,2.0nm,1.0s							
KSH				pmax	pmax			
	comp=Z,140nm,5.2s							
KSH				LR	LR			
	comp=N,160nm,5.7s							
KSH				LR	LR			
	comp=E,150nm,5.3s							
KSH				LR	LR			
	comp=Z,99nm,6.3s							
PPT	Papeete	71.40	108	LR	LR	23 15 14.1		
	comp=Z,27nm,20.6s,baz=238,slow=33							
ZAA0	Zalesovo Array	71.64	330	IAmb	IAmb	22 47 21.3		
	comp=Z,4.0nm,0.8s							
ZALV	Zalesovo Beam	71.64	330	P	P	22 47 10.7	-0.8	
	comp=Z,1.5nm,0.7s,baz=107,slow=5.7,SNR=7.9							
AAK	Ala-Archa	73.12	316	P	P	22 47 21.3	+0.4	
AAK				IAmb	IAmb	22 47 51.7		
	comp=Z,15nm,1.9s							
GAR	Garm	75.08	311	P	P	22 47 31.6	-0.8	
GAR				IAmb	IAmb	22 48 01.4		
	comp=Z,14nm,1.2s							
VNDA	Vanda	76.42	175	P	P	22 47 39.8	+0.6	
	comp=Z,4.9nm,0.7s,baz=327,slow=6.9,SNR=36							
VNDA	Vanda	76.42	175	P	P	22 47 39.7	+0.6	
VNDA				IAmb	IAmb	22 47 40.5		
	comp=Z,5.2nm,0.8s							
BRVK	Borovoye	79.15	325	P	P	22 47 55.1	+0.3	
BRVK				IAmb	IAmb	22 48 05.6		
	comp=Z,8.7nm,1.1s							
NRIK	Noril'sk	79.22	344	P	P	22 47 54.5	-0.3	
	comp=Z,1.0nm,0.5s,baz=142,slow=6.9,SNR=1.8							
MAW	Mawson	82.99	202	P	P	22 48 14.8	-0.1	
	comp=Z,3.2nm,0.7s,baz=91,slow=6.1,SNR=6.4							
GEYT	Alibeck	84.27	308	P	P	22 48 21.6	-0.6	
	comp=Z,1.3nm,0.5s,baz=70,slow=1.7,SNR=4.4							
ABKAR	Akbulak array	84.57	320	P	P	22 48 23.2	-0.2	
ABKAR	Akbulak array	84.57	320	P	P	22 48 23.4	0.0	
ABKAR				IAmb	IAmb	22 48 24.4		
	comp=Z,15nm,1.9s							
ILAR	Eielson Array	84.96	24	P	P	22 48 23.5	-1.5	
	comp=Z,0.9nm,0.8s,baz=261,slow=4.2,SNR=5.9							
NVAR	Mina Array Bea	100.96	51	P	Pdif	22 49 41.0	+0.8	
	comp=Z,0.1nm,0.5s,baz=256,slow=1.9,SNR=2.5							
TORD	Torodi Ar. Bea	136.62	287	PKP	PKPdf	22 55 13.0	-0.4	
	comp=Z,2.4nm,0.7s,baz=57,slow=2.1,SNR=7.7							
DBIC	Dimbokro	143.97	279	PKP	PKPbc	22 55 24.5	-0.1	
	comp=Z,4.2nm,0.6s,baz=70,slow=4.6,SNR=9.6							
SOTA	Rioblanco	144.12	89	*eP*	PKPbc	22 55 25.7	+0.1	
PCON	Cinco Dias	144.33	89	*eP*	PKPab	22 55 25.6	-0.4	
YOTC	Yotoco, Valle	144.35	86	*eP*	PKPab	22 55 25.2	-0.4	
MOTC	Monteria, Cord	144.57	78	*eP*	PKPbc	22 55 26.4	0.0	
MARP	Paez Belalcaza	144.77	88	*eP*	PKPdf	22 55 28.5	0.0	
SJCC	San Jacinto, C	144.85	76	*eP*	PKPbc	22 55 27.6	+0.3	
GUY2C	Guyana, Caldas	145.26	84	*eP*	PKPab	22 55 29.3	-0.1	
RREF	El Recreo	145.30	84	*eP*	PKPdf	22 55 30.5	+0.7	
ORTC	Ortega, Tolima	145.45	86	*eP*	PKPbc	22 55 28.8	-0.6	
ZARC	Zaragoza, Cauc	145.54	80	*eP*	PKPdf	22 55 26.1	-3.3	
NORC	Norcasia	145.73	83	*eP*	PKPdf	22 55 29.6	-0.2	
PTBC	PUERTO BERRIO	146.05	81	*eP*	PKPdf	22 55 28.5	-1.8	
SMLC	San Martn de	146.12	77	*eP*	PKPdf	22 55 29.7	-0.7	
ROSC	El Rosal	146.33	84	PKPbc	PKPdf	22 55 31.8	+0.6	
	comp=Z,13nm,0.6s,baz=292,slow=13,SNR=4.4							
MACC	Macarena, Meta	146.88	89	*eP*	PKPdf	22 55 31.1	-0.6	
OCAC	Ocana	146.95	78	*eP*	PKPdf	22 55 29.2	-2.8	
VILC	Villavicencio,	146.99	86	*eP*	PKPbc	22 55 33.9	-0.2	
LPAZ	La Paz	147.37	125	PKPbc	PKPbc	22 55 35.0	-0.6	
	comp=Z,2.6nm,0.7s,baz=311,slow=1.9,SNR=9.9							
LPAZ	La Paz	147.37	125		PKPab	22 55 36.8	-0.7	
RUSC	La Rusia	147.47	82	*eP*	PKPdf	22 55 34.3	+1.0	
URIC	Uribia, Colomb	147.51	71	*eP*	PKPdf	22 55 22.9	-10	
CPUP	Villa Florida	147.56	151	PKPbc	PKPbc	22 55 35.3	+0.2	
	comp=Z,1.6nm,0.4s,baz=238,slow=5.4,SNR=5.9							

*CRAAG **09** 22:42:59.8, 35˚.74N×5˚.62E, Ml3.3*
*IDC **09** 22:43:02.4±2.1, 35˚.9N±0˚.1×5˚.60E±0˚.06, **h7**km±13km, **n12**, σ0˚**78**/13, **mb3.3**/3, **Northern Algeria***

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CKHR	Kef el Ahmar	0.16	333	P	Pg	22 43 07.0	+0.2
SET	Setif	0.37	334	P	Pn	22 43 15.0	-0.2
CTEI	Djebel Teioual	0.68	73	P	Pb	22 43 16.6	-1.0
DFRA	Djebel Bou Aff	0.71	18	P	Pn	22 43 19.8	-0.1
CASM	Ain Smara	0.82	61	P	Pn	22 43 20.4	-1.0
CKFL	Kef-Lekhel	1.05	59	P	Pn	22 43 24.4	-0.2
CMAH	Djebel Manchou	1.65	62	P	Pg	22 43 36.0	+1.0
KEST	Kesra	3.05	92	Pn	Pn	22 43 52.1	+0.1
	0.7nm,0.3s,baz=212,slow=9.7,SNR=20						
KEST				Sn	Sn	22 44 29.9	+1.2
	0.8nm,0.3s,baz=246,slow=13,SNR=2.2						
ESDC	Sonseca Array	8.47	299	Pn	Pn	22 45 07.3	+0.8
	0.1nm,0.3s,baz=117,slow=16,SNR=2.4						
AKASG	Malin Array Be	22.57	42	P	P	22 48 04.3	+0.3
	0.6nm,0.5s,baz=238,slow=8.7,SNR=2.2						
TORD	Torodi Ar. Bea	22.90	190	P	P	22 48 07.9	+0.2
	0.9nm,0.8s,baz=8.6,slow=11,SNR=2.9						
MKAR	Makanchi Array	56.47	53	P	P	22 52 45.3	-0.5
	0.2nm,0.6s,baz=279,slow=6.2,SNR=4.1						

*IDC **09** 22:45:01.6±28.0, 23˚.47S×174˚.13W, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.9/30, mbtmp4.3/4, Error ellipse: s-maj=508.1km s-min=147.7km az=78.0*
*NEIC **09** 22:45:02.1±1.2, 23˚.9S±0˚.1×174˚.0W±0˚.2, h10km±2km, mb4.4/11, Error ellipse: s-maj=33.0km s-min=14.7km az=126.0*
ISC 09 22:45:02.2**±1.3, **23˚.9S**±0˚.2×**174˚.0W**±0˚.2, **h10**km, **n19**, σ0˚**78**/18, **mb4.3**/10, **Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	6.08	39	Pn	Pn	22 46 32.6	+0.4
RAO	Raoul Island	6.42	212	Pn	Pn	22 46 36.5	-0.4
AFI	Afiamalu	10.11	12	Pn	Pn	22 47 26.7	-0.9
CTA	Charters Tower	36.96	268	P	P	22 52 12.6	+0.6
	1.7nm,0.6s,baz=94,slow=12,SNR=8.4						
CTAO	Charters Tower	36.96	268	P	P	22 52 13.4	+1.5
CTAO				IAmb	IAmb	22 52 14.1	
	comp=Z,6.6nm,0.8s						
STKA	Stephens Creek	39.84	248	P	P	22 52 36.1	+0.1
	comp=Z,1.1nm,0.4s,baz=79,slow=10,SNR=4.2						
COEN	Coen	41.55	276	P	P	22 52 51.6	+1.3
COEN				IAmb	IAmb	22 52 56.4	
	comp=Z,2.9nm,1.0s						
BBOO	Buckleboo	44.51	247	P	P	22 53 13.2	-0.9
BBOO				IAmb	IAmb	22 53 14.0	
	comp=Z,5.7nm,0.9s						
AS31	Alice Springs	47.44	259	P	P	22 53 37.8	+0.4
AS31				IAmb	IAmb	22 53 38.9	
	comp=Z,1.0nm,0.5s						
ASAR	Alice Springs	47.45	259	P	P	22 53 38.0	+0.6
	comp=Z,1.4nm,0.4s,baz=89,slow=7.8,SNR=20						
WR0	Warramunga Arr	47.69	264	P	P	22 53 39.8	+0.4
WR0				IAmb	IAmb	22 53 49.2	
	comp=Z,2.3nm,1.1s						
WB2	Warramunga Arr	47.87	264		P	22 53 40.9	+0.1
WB2				IAmb	IAmb	22 53 42.0	
	comp=Z,3.5nm,0.7s						
WB0	Warramunga Arr	47.87	264	P	P	22 53 41.3	+0.6
WRA	Warramunga Arr	47.88	264	P	P	22 53 41.2	+0.4
	comp=Z,2.0nm,0.5s,baz=102,slow=8.2,SNR=23						
WRA	Warramunga Arr	47.88	264	P	P	22 53 41.0	+0.2
FITZ	Fitzroy Crossi	56.30	264	P	P	22 54 42.5	-0.9
PSA00	Pilbara Seismi	60.55	258	P	P	22 55 10.7	-2.5
MBWA	Marble Bar	60.77	258	P	P	22 55 13.9	-0.8
MORW	Morawa	62.02	249	P	P	22 55 23.0	-0.1
MORW				IAmb	IAmb	22 55 30.3	
	comp=Z,5.1nm,1.1s						

*BJI **09** 22:49:37.4±0.0, 13˚.79N×92˚.73E, h20km, mB4.8/41, mb4.7/59, Ms4.3/55, Ms7 4.1/50*
*BGR **09** 22:49:38.1±0.0, 13˚.50N×93˚.50E, h39km±3km, mb5.1, Ms4.1*
*MOS **09** 22:49:40.2±0.9, 14˚.04N×92˚.84E, h26km, mb5.1/74, Error ellipse: s-maj=6.3km s-min=3.5km az=117.2*
*DJA **09** 22:49:40.4±0.1, 14˚N±2˚×9˚3E±˚, h10km, M5.0/95, mB5.5/27, mb5.1/95, MLv5.1/5, Mw(mB)5.0/27*
*NDI **09** 22:49:41.3±3.0, 14˚.09N×92˚.80E, h15km, mb4.7, ML5.0, mb5.1(NEIC)*
*IDC **09** 22:49:41.6±3.2, 14˚.02N×92˚.81E, h22km±20km, mb4.7/28, mb1 4.8/31, mb1mx4.7/41, mbtmp4.8/31, ML4.4/3, MS4.0/28, Ms1 4.0/28, ms1mx3.9/41, Error ellipse: s-maj=12.8km s-min=10.2km az=49.0*
*NEIC **09** 22:49:42.6±1.2, 14˚.07N±0˚.04×92˚.85E±0˚.07, h28km±3km, mb5.1/153, Error ellipse: s-maj=10.0km s-min=5.7km az=105.0*
*GCMT **09** 22:49:43.6±0.3, 14˚.03N±0˚.02×92˚.80E±0˚.02, h28km±1km, MW4.8/83, Moment Tensor Solution. s32,c35; s83,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}~1.29±.12; $M_{\theta\theta}$0.38±.08; $M_{\phi\phi}$0.90±.08; $M_{r\theta}$0.76±.13; $M_{\theta\phi}$1.57±.06; $M_{\phi r}$~1.18±.13; Best double couple: M○2.39000×10^{16} NP1:ϕ○253.00000°, δ51.00000°, λ-34.00000°. NP2: ϕ○6.00000°, δ64.00000°, λ-136.00000°. Principal axes: T 2.2900, Plg8.0000°, Azm127.0000°; N 0.1950, Plg40.0000°, Azm31.0000°; P -2.4900, Plg49.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **09** 22:49:45, 13˚.93N×92˚.82E, h28km, mb5.0*
ISC 09 22:49:42.3**±0.4, **14˚.03N**±0˚.03×**92˚.79E**±0˚.03, **h26**km±2km, **h26**km:**pP-P, n761**, σ1°**57**/830, **mb5.0**/271, **MS4.1**/46, **51C-22D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGPR	DIGLIPUR	0.86	171	*eP*	Pn	22 50 01.0	+2.2
DGPR				*eS*	Sn	22 50 11.7	+1.2
DGPR				*eS*	Sn	22 50 11.7	+1.2
DGPR				IAML		22 50 14.2	
	comp=N,96μm,0.3s						
DGPR				IAML		22 50 15.1	
	comp=E,129μm,0.4s						
PBA	Port Blair	2.36	181	*eP*	Pn	22 50 20.1	+0.7
PBA				*eS*	Sn	22 50 49.5	+2.0
PBA				IAML		22 50 51.5	
	comp=E,9μm,0.5s						
PBA				IAML		22 50 51.9	
	comp=N,8μm,0.4s						
PBA	Port Blair	2.36	181	Pn	Pn	22 50 20.1	+0.7
PBA	Port Blair	2.36	181	P	Pn	22 50 21.0	+1.6
SRDT	SRDT	6.15	86	P	Pn	22 51 11.9	+0.4
UMPA	Umpang Tak	6.25	69	P	Pn	22 51 13.3	+0.4
MHMT	Maesarieng	6.43	49	P	Pn	22 51 14.9	-0.5
PHET	Kaeng Krachan	6.74	99	P	Pn	22 51 22.0	+2.3
CM13	Chiang Mai Arr	7.32	53	P	Pn	22 51 28.4	+0.8
CM05	Chiang Mai Arr	7.33	53	P	Pn	22 51 28.7	+0.8
CM15	Chiang Mai Arr	7.35	52	P	Pn	22 51 28.9	+0.9
CM02	Chiang Mai Arr	7.35	53	P	Pn	22 51 29.1	+0.9
CM01	Chiang Mai Arr	7.36	53	P	Pn	22 51 29.3	+1.2
CM04	Chiang Mai Arr	7.36	53	P	Pn	22 51 29.4	+1.3
CM31	Chiang Mai Arr	7.37	52	P	Pn	22 51 29.6	+1.3
CM31	Chiang Mai Arr	7.37	52	Pn	Pn	22 51 28.6	+0.4
CM31				Sn	Sn	22 52 46.6	-4.5
CMAR	Chiang Mai Arr	7.37	52	Pn	Pn	22 51 27.6	-0.6
	comp=N,1.3nm,0.3s,baz=243,slow=15,SNR=40						
CMAR				Sn	Sn	22 52 46.4	-4.6
	comp=N,6.8nm,0.3s,baz=318,slow=27,SNR=3.5						
CMAR				LR	LR	22 55 10.2	
	comp=N,2μm,18.8s,baz=299,slow=45						
CMAR	Chiang Mai Arr	7.37	52	Pn	Pn	22 51 27.5	-0.7
CM09	Chiang Mai Arr	7.39	53	P	Pn	22 51 29.9	+1.3
CHTO	Chiang Mai	7.58	50	P	Pn	22 51 30.4	-0.8
CHTO						22 52 50.8	
CHTO	Chiang Mai	7.58	50	Pn	Pn	22 51 30.4	-0.8
CHTO				Sn	Sn	22 52 50.8	-5.5
CMMT	Chiang Mai	7.58	50	P	Pn	22 51 30.3	-0.9
SURT	Suratani	7.75	130	P	Pn	22 51 40.8	+7.3
PATY	Pattaya	7.93	97	P	Pn	22 51 37.3	+1.3
LAMP	Lampang	7.94	55	P	Pn	22 51 36.8	+0.6
PHIT	Phitsanulok	7.99	66	P	Pn	22 51 37.6	+0.9
PKDT	Phuket	8.17	138	P	Pn	22 51 41.3	+2.0
PBKT	Sadao Pong	8.28	71	P	Pn	22 51 42.1	+1.2
SAIH	SAIHA	8.41	1	*eP*	Pn	22 51 41.5	-1.2
SAIH				*eS*	Sn	22 53 10.8	-6.2
KRAB	Krabi	8.53	132	P	Pn	22 51 45.0	+0.7
SRIT	Nakonsritamara	8.59	128	P	Pn	22 51 46.6	+1.6
PAYA	Payao	8.60	51	P	Pn	22 51 46.2	+1.0
SRAK	Srakaew	8.98	89	P	Pn	22 52 00.4	+10
CHAI	Chaiyaphum	9.08	77	P	Pn	22 52 00.0	+8.3
BELO	BELONIA	9.26	352	*eP*	Pn	22 51 53.6	-0.6
BELO				*eS*	Sn	22 53 29.5	-7.9
CRAI	Chiangrai	9.51	49	P	Pn	22 51 58.9	+1.2
LHMI	Lhok Sumawe	9.66	155	Pn	Pn	22 52 00.0	+0.3
LHMI	Lhok Sumawe	9.66	155	P	Pn	22 52 00.0	+0.3
	comp=N,2μmcomp=N,313nm,0.8s						
AGT	Agartala	9.91	352	*eS*	Sn	22 53 44.8	-8.6
NONG	Nongkai	10.73	67	P	Pn	22 52 18.3	+3.9
SHL	Shillong	11.51	356	P	Pn	22 52 21.0	-4.2
SHL	Shillong	11.51	356	*eP*	Pn	22 52 21.0	-4.2
SHL				*eS*	Sn	22 54 21.8	-11
SHL				IAML		22 54 28.9	
	comp=E,197nm,0.4s						
SHL	Shillong	11.51	356	Pn	Pn	22 52 21.0	-4.2
TPTI		11.55	158	P	Pn	22 52 25.1	-0.5
	comp=E,369nmcomp=E,19nm,0.7s						
KULM	Kulim	11.63	138	Pn	Pn	22 52 27.0	+0.2
KULM	Kulim	11.63	138	P	Pn	22 52 30.0	+3.2
KOHI	KOHIMA	11.69	6	*eP*	Pn	22 52 26.0	-1.7
KOHI				*eS*	Sn	22 54 27.1	-10
KOHI				IAML		22 54 34.5	
	comp=N,117nm,0.5s						
KOHI				IAML		22 54 35.0	
	comp=E,216nm,0.6s						
BOK	Bokaro	11.70	327	*eP*	Pn	22 52 25.8	-1.9
BOK				IAmb	IAmb	22 52 37.3	
	comp=Z,146nm,0.5s						
BOK				*eS*	Sn	22 54 27.3	-10
TSI	Tuntungan	11.91	151	P	Pn	22 52 30.2	-0.4
	comp=Z,117nm,1.0s						
GUWA	GUWAHATI	12.14	355	*eP*	Pn	22 52 28.6	-5.1
GUWA				*eS*	Sn	22 54 36.4	-12
GUWA				IAML		22 54 40.8	
	comp=E,98nm,0.6s						
IPM	Ipoh	12.49	139	Pn	Pn	22 52 38.3	-0.2
IPM	Ipoh	12.49	139	P	Pn	22 52 40.0	+1.5
PSI	Prapat	12.70	151	Pn	Pn	22 52 43.5	+2.0
	comp=E,1.6nm,0.3s,baz=360,slow=10,SNR=18						
PSI				LR	LR	22 58 32.0	
	comp=E,421nm,18.9s,baz=271,slow=42						
RPSI	Rantau Prapat	12.79	151	Pn	Pn	22 52 46.0	+3.4
RPSI	Rantau Prapat	12.79	151		Pn	22 52 43.5	+0.9
SLVN	Son La	12.84	54	Pn	Pn	22 52 44.5	+1.2
ZIRO	ZIRO	13.46	4	*eP*	Pn	22 52 49.3	-2.6
ZIRO				*eS*	Sn	22 55 08.8	-12
ZIRO				IAML		22 55 15.7	
	comp=N,659nm,0.6s						
ZIRO				IAML		22 55 17.9	
	comp=E,930nm,0.6s						
GSI	Gunungsitoli	13.50	159	Pn	Pn	22 52 52.8	+0.5
GSI	Gunungsitoli	13.50	159	P	Pn	22 52 52.6	+0.3
	comp=E,39nm,1.2s						
PALK	Pallekele	13.64	242	Pn	Pn	22 52 53.2	-1.1
	comp=E,4.1nm,0.3s,baz=166,slow=13,SNR=23						
PALK				Sn	Sn	22 55 13.7	-11
	comp=E,7.9nm,0.3s,baz=240,slow=3.0,SNR=9.2						
PALK				LR	LR	22 57 51.9	
	comp=E,1μm,19.6s,baz=161,slow=36						
PALK	Pallekele	13.64	242	*d*	*iP*	Pn	22 52 53.4	-0.9
PALK	Pallekele	13.64	242	P	Pn	22 52 53.7	-0.6
PALK				P	Pn	22 52 53.7	-0.6
ODAN	Odare	13.73	339	*eP*	Pn	22 52 51.2	-4.4
	comp=E,113nm,0.3s						
JRMM	Jerantut	13.89	136	P	Pn	22 52 59.0	+1.4
TAPN	Taplejung	14.07	341	*eP*	Pn	22 52 57.3	-3.1
	comp=E,49nm,0.2s						
RAMN	Ramite	14.10	337	*eP*	Pn	22 52 55.6	-5.0
	comp=E,225nm,0.5s						
HYB	Hyderabad	14.12	286	*i* P	Pn	22 52 59.0	-1.8
HYB				*e*S	Sn	22 55 46.0	+9.3
KMI	Kunming	14.47	39	⇑P	Pn	22 53 07.2	+1.5
KMI				pP	P	22 53 12.8	+0.6
KMI				sP		22 53 15.0	
KMI				S	Sn	22 55 47.3	+1.8
KMI				sS	S	22 55 55.9	-8.8
KMI				pmax	pmax		
	comp=E,5.0nm,0.7s						
KMI				pmax	pmax		
	comp=E,32nm,3.5s						
KMI				LR	LR		
	comp=E,1μm,16.3s						
KMI				LR	LR		
	comp=E,400nm,16.9s						
KMI				LR	LR		
	comp=E,680nm,21.1s						
MNSI	Mandailing Nat	14.77	152	P	Pn	22 53 09.6	0.0
	comp=E,30nm,0.4s						
JIRN	Jiri	14.89	337	*eP*	Pn	22 53 06.7	-4.9
	comp=E,56nm,0.3s						
PKI	Pulchoki	15.13	334	*eP*	Pn	22 53 09.6	-5.1
	comp=E,82nm,0.4s						
PKIN	Phulchoki	15.14	334	*eP*	Pn	22 53 09.7	-5.1
	comp=E,89nm,0.3s						
GUN	Gumba	15.24	336	*eP*	Pn	22 53 11.8	-4.3
	comp=E,22nm,0.2s						
DMN	Daman	15.29	333	*eP*	Pn	22 53 12.3	-4.5
	comp=E,62nm,0.4s						
DLV	T Lat	15.44	96	Pn	Pn	22 53 17.7	-1.0
LSA	Lhasa	15.67	355	P	Pn	22 53 18.6	-3.2
LSA				S	Sn	22 56 14.6	-0.3
LSA				LR	LR		
	comp=E,1μm,15.7s						
LSA				LR	LR		
	comp=E,750nm,13.2s						
LSA				LR	LR		
	comp=E,2μm,15.7s						
LSA	Lhasa	15.67	355	*i* P	Pn	22 53 21.7	-0.1
	SNR=5.3						
LSA	Lhasa	15.67	355	P	Pn	22 53 21.2	-0.7
LSA				pmax	pmax		
	comp=Z,26nm,0.8s						
LSA	Lhasa	15.67	355	Pn	Pn	22 53 21.2	-0.7
GKN	Gorkha	15.84	333	*eP*	Pn	22 53 19.7	-4.1
	comp=Z,138nm,0.3s						
BKNI	Bangkinang	15.88	148		P	22 53 26.6	-1.1
BKNI				IAmb	IAmb	22 53 36.3	
	comp=Z,199nm,1.1s						
BKNI	Bangkinang	15.88	148	P	Pn	22 53 24.2	0.0
	comp=Z,171nm,1.2s					

PPBI Pangkal Pinang 20.83 140 P **P** **22 54 22.4 +0.3**
comp=Z,59μmcomp=Z,52nm,0.6s
DDI Dehra Dun 21.15 322 IAmb IAmb 22 54 38.9
comp=Z,99nm,0.7s
KSM Kuching 21.35 124 P **P** **22 54 26.6 -1.1**
KSM Kuching 21.35 124 P **P** **22 54 28.0 +0.3**
LWLI Liwa 21.98 149 P **P** **22 54 34.5 -0.1**
comp=Z,20μmcomp=Z,40nm,0.7s
TPI Tanjungpandan 22.26 137 P **P** **22 54 37.6 +0.1**
comp=Z,41nm,0.8s
ENH Enshi 22.32 41 P **P** **22 54 37.6 -0.5**
ENH IAmb IAmb 22 54 48.9
comp=Z,90nm,0.8s
SBUM Sibu 22.38 119 P **P** **22 54 38.2 -0.6**
SBUM Sibu 22.38 119 P **P** **22 54 39.0 +0.2**
KASI Kota Agung 22.64 148 P **P** **22 54 41.3 -0.2**
comp=Z,26nm,0.5s
BHK Bhakra 22.92 322 *ex* **P** **22 54 50.2 +5.8**
LZH Lanzhou 24.10 22 *eP* **P** **22 54 57.2 +1.1**
LZH pP pP 22 55 03.9 +0.4
LZH sP sP 22 55 06.7 +0.2
LZH S **S** **22 59 12.7 +0.4**
LZH sS sS 22 59 22.8 -1.6
LZH SS **SnSn** **23 00 05.2 +11**
LZH pmax pmax
comp=Z,42nm,1.0s
LZH LR LR
comp=Z,510nm,14.6s
LZH LR LR
comp=Z,300nm,15.0s
LZH LR LR
comp=Z,630nm,15.2s
KKM Kota Kinabalu 24.37 107 P **P** **22 54 57.6 -1.1**
XAN Xi'an 24.71 33 P **P** **22 55 00.8 -0.7**
XAN pP pP 22 55 08.2 -0.7
XAN sP sP 22 55 11.6 -0.4
XAN pmax pmax
comp=Z,39nm,0.9s
XAN LR LR
comp=Z,200nm,17.3s
XAN LR LR
comp=Z,370nm,19.5s
XAN LR LR
comp=Z,410nm,17.4s
XAN Xi'an 24.71 33 P **P** **22 55 01.1 -0.4**
XAN pmax pmax
comp=Z,104nm,1.1s
XAN Xi'an 24.71 33 P **P** **22 55 01.1 -0.4**
SPMM Sapulut 25.10 109 P **P** **22 55 06.0 +0.8**
LEM Lembang 25.41 144 LR LR 23 06 26.7
comp=Z,352nm,18.9s,baz=314,slow=40
WHN Wuhan 25.77 47 ⇑P P 22 55 21.8 +11
WHN S **S** **22 59 31.3 -7.5**
WHN pmax pmax
comp=Z,34nm,0.9s
WHN LR LR
comp=N,3μm,19.8s
WHN LR LR
comp=E,650nm,13.8s
WHN LR LR
comp=Z,1μm,16.9s
GTA Gaotai 26.03 12 ⇓P **P** **22 55 14.3 +0.8**
GTA pP pP 22 55 21.8 +0.8
GTA sP sP 22 55 24.6 +0.5
GTA PcP **PcP** **22 58 42.0 +0.7**
GTA S **S** **22 59 41.7 -1.3**
GTA sS sS 22 59 58.4 +3.2
GTA SS **SnSn** **23 00 48.6 +7.0**
GTA pmax pmax
comp=Z,12nm,1.1s
GTA pmax pmax
comp=Z,35nm,6.2s
GTA LR LR
comp=Z,260nm,18.2s
GTA LR LR
comp=Z,220nm,19.3s
GTA LR LR
comp=Z,320nm,17.8s
COCO West Island 26.36 171 P **P** **22 55 16.6 +0.1**
COCO pmax pmax
comp=Z,38nm,0.8s
COCO West Island 26.36 171 P **P** **22 55 16.6 +0.1**
COCO IAmb IAmb 22 55 22.2
comp=Z,38nm,0.8s
NIL Nilore 26.39 321 P **P** **22 55 17.5 +0.8**
NIL pmax pmax
comp=Z,60nm,0.7s
NIL Nilore 26.39 321 P **P** **22 55 17.5 +0.8**
MTKI Muara Teweh, K 26.47 122 P **P** **22 55 17.6 0.0**
comp=Z,29nm,0.8s
MYLDM Lahad Datu 26.80 107 P **P** **22 55 19.9 -0.7**
SZP Santa 26.84 79 P **P** **22 55 20.3 -0.6**
SZP IAmb IAmb 22 55 38.2
comp=Z,62nm,0.9s
SMRI Semarang 27.30 139 P **P** **22 55 24.5 -0.6**
SMRI IAmb IAmb 22 55 27.6
comp=Z,70nm,1.2s
SMRI Semarang 27.30 139 P **P** **22 55 25.0 -0.1**
XMIS Christmas Isla 27.49 152 P **P** **22 55 26.2 -0.5**
XMIS IAmb IAmb 22 55 44.0
comp=Z,26nm,0.9s
BBKI Banjar Baru 27.93 127 P **P** **22 55 31.0 +0.2**
comp=Z,4μmcomp=Z,19nm,0.8s
UGM Wanagama 28.02 140 P **P** **22 55 31.1 -0.4**
comp=Z,81nm,1.7s
TWG Pinlang 28.18 68 P **P** **22 55 32.5 -0.3**
TWG IAmb IAmb 22 55 46.2
comp=Z,43nm,1.2s
SSLB Suanglung 28.30 66 P **P** **22 55 32.7 -1.3**
SSLB IAmb IAmb 22 55 47.2
comp=Z,57nm,1.1s
YULB Yu-li 28.51 67 P **P** **22 55 34.3 -1.5**
YULB IAmb IAmb 22 55 49.9
comp=Z,27nm,0.9s
KBKI Kotabaru 28.88 125 P **P** **22 55 39.2 +0.1**
comp=Z,19nm,1.0s
YHNB Yeheng 28.91 64 P **P** **22 55 38.7 -0.8**
YHNB IAmb IAmb 22 55 49.2
comp=Z,76nm,1.5s
DGAR Diego Garcia 29.35 225 P **P** **22 55 43.8 +0.5**
DGAR pmax pmax
comp=Z,212nm,1.3s
DGAR Diego Garcia 29.35 225 P **P** **22 55 43.8 +0.5**
KSH Kashi 29.39 333 P **P** **22 55 43.2 -0.4**
KSH pP pP 22 55 51.2 +0.2
KSH S **S** **23 00 36.6 +0.6**
KSH sS sS 23 00 49.0 +1.1
KSH pmax pmax
comp=Z,4.0nm,0.5s
KSH pmax pmax
comp=Z,140nm,4.8s
KSH LR LR
comp=Z,160nm,6.6s
KSH LR LR
comp=Z,190nm,5.1s
KSH LR LR
comp=Z,380nm,17.4s
H08S3 Diego Garcia H 29.48 224 T T 23 26 44.0
baz=42,slow=76,SNR=41
H08S2 Diego Garcia H 29.49 224 T T 23 26 42.6
baz=42,slow=76,SNR=36
H08S1 Diego Garcia H 29.50 224 T T 23 26 44.0
baz=42,slow=76,SNR=5.2
KBL Kabul 29.62 318 P **P** **22 55 46.3 +0.5**
KBL pmax pmax
comp=Z,11nm,1.0s
KBL Kabul 29.62 318 P **P** **22 55 46.3 +0.5**
KMMI Kalianget 29.67 134 P **P** **22 55 46.1 -0.1**
comp=Z,21nm,0.9s
NJ2 Nanjing 29.82 49 *eP* **P** **22 55 45.2 -2.1**
NJ2 sP **pP** **22 55 55.9 +1.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,510nm,13.7s
NJ2 LR LR
comp=Z,550nm,12.3s
NJ2 LR LR
comp=Z,620nm,13.3s
WMQ Urumqi 30.01 353 *eP* **P** **22 55 51.3 +2.3**
WMQ pP sP 22 55 58.3 -1.3
WMQ sP pP 22 56 01.6 +5.1
WMQ pmax pmax
comp=Z,23nm,0.9s
WMQ pmax pmax
comp=Z,190nm,4.5s
WMQ LR LR
comp=Z,480nm,19.9s
WMQ LR LR
comp=Z,670nm,23.1s
YOJ Yonaguni jima 30.29 65 P **P** **22 55 50.0 -1.6**
YOJ pmax pmax
comp=Z,156nm,1.2s
YOJ Yonaguni jima 30.29 65 P **P** **22 55 50.0 -1.6**
BTO Baotou 30.46 26 P **P** **22 55 53.5 +0.4**
BTO pmax pmax
comp=Z,59nm,0.6s
TOLI2 Tolitoli 30.51 112 P **P** **22 55 53.0 -0.7**
JAGI Jajag, Banyuwa 30.81 135 P **P** **22 55 56.6 +0.4**
comp=Z,33nm,0.9s
TIA Tai'an 31.03 40 P **P** **22 55 58.4 +0.4**
TIA pP **sP** **22 56 07.5 -1.1**
TIA pmax pmax
comp=Z,8.0nm,0.6s
TIA pmax pmax
comp=Z,21nm,3.5s
TIA LR LR
comp=Z,290nm,15.7s
TIA LR LR
comp=Z,190nm,5.8s
TIA LR LR
comp=Z,440nm,20.6s
SSE Sheshan 31.10 52 P **P** **22 55 58.3 -0.4**
SSE S **S** **23 01 04.1 +1.3**
SSE pmax pmax
comp=Z,10.0nm,0.8s
SSE pmax pmax
comp=Z,110nm,3.5s
SSE LR LR
comp=Z,170nm,10.0s
SSE LR LR
comp=Z,210nm,11.8s
SHLS Shalkode 31.21 341 *eP* **P** **22 55 58.6 -1.1**
comp=Z,6.4nm,1.0s,baz=341
SHLS Shalkode 31.21 341 *eP* **P** **22 55 58.6 -1.1**
SHLS pmax pmax
comp=Z,6.0nm,1.0s
SRBI Singaraja 31.27 133 P **P** **22 56 00.4 +0.1**
comp=Z,1μmcomp=Z,29nm,1.0s
UZB Uzynbulak 31.34 340 *eP* **P** **22 56 01.0 +0.2**
baz=340
UZB Uzynbulak 31.34 340 *eP* **P** **22 56 01.0 +0.2**
HHC Hu-ho-hao-te 31.34 28 *eP* **P** **22 56 01.2 +0.4**
HHC S **S** **23 01 04.8 -1.8**
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,130nm,4.9s
HHC LR LR
comp=Z,220nm,17.9s
HHC LR LR
comp=Z,220nm,16.2s
HHC LR LR
comp=Z,240nm,17.9s
SATY Satty 31.47 340 *eP* **P** **22 56 02.3 +0.4**
baz=339
SATY Satty 31.47 340 *eP* **P** **22 56 02.3 +0.4**
ULHL Ulahol 31.55 336 P **P** **22 56 03.5 +0.7**
SNR=5.5
DNP Denpasar 31.68 134 P **P** **22 56 03.9 -0.1**
TTSI Tana Toraja 31.72 120 P **P** **22 56 05.3 +1.0**
comp=Z,26nm,1.1s
KPKS Kokpek 31.74 340 *eP* **P** **22 56 04.9 +0.6**
baz=340
KPKS Kokpek 31.74 340 *eP* **P** **22 56 04.8 +0.6**
GAR Garm 31.81 326 P **P** **22 56 04.7 -0.3**
MRSI Marisa 31.83 113 P **P** **22 56 05.3 0.0**
TNSS Tian-Shan 31.96 338 *eP* **P** **22 56 07.0 +0.3**
baz=338
TNSS Tian-Shan 31.96 338 *eP* **P** **22 56 06.9 +0.3**
MDOK Medeo 32.03 338 *eP* **P** **22 56 07.8 +0.8**
baz=338
MDOK Medeo 32.03 338 *eP* **P** **22 56 07.7 +0.8**
AAA Alma-Ata 32.12 338 *eP* **P** **22 56 08.1 +0.5**
baz=338
AAA Alma-Ata 32.12 338 *eP* **P** **22 56 08.1 +0.5**
SPSI Sidrap Palu 32.18 122 P **P** **22 56 08.9 +0.5**
comp=Z,30nm,1.2s
APSI Ampana 32.21 115 P **P** **22 56 08.7 +0.1**
comp=Z,875nmcomp=Z,71nm,0.9s
CHGR Chuyangaron 32.22 324 P **P** **22 56 08.3 -0.3**
CHGR IAmb IAmb 22 56 21.9
comp=Z,25nm,0.9s
AML Almayashu 32.52 333 P **P** **22 56 12.9 +1.4**
SNR=9.7
AAK Ala-Archa 32.59 335 P **P** **22 56 13.4 +1.6**
SNR=5.4
AAK Ala-Archa 32.59 335 *i* P **P** **22 56 13.0 +1.1**
SNR=8.1
AAK Ala-Archa 32.59 335 *ce* P **P** **22 56 12.6 +0.8**
AAK pmax pmax
comp=Z,11nm,0.8s
AAK Ala-Archa 32.59 335 P **P** **22 56 11.9 0.0**
BNSI Bone 32.70 122 P **P** **22 56 12.8 -0.1**
comp=Z,22nm,1.2s
KAPI Kappang 32.77 123 P **P** **22 56 12.8 -0.7**
KAPI pmax pmax
comp=Z,25nm,1.3s
KAPI Kappang 32.77 123 P **P** **22 56 12.8 -0.7**
KAPI IAmb IAmb 22 56 14.8
comp=Z,25nm,1.2s
EKS2 Erkin-Say 32.91 334 P **P** **22 56 16.0 +1.4**
SNR=9.1
TWSI Taliwang, Sumb 32.91 132 P **P** **22 56 14.3 -0.4**
comp=Z,10nm,1.0s
KUU Kurty 32.92 338 *eP* **P** **22 56 14.5 -0.2**
baz=338
KUU Kurty 32.92 338 *eP* **P** **22 56 14.4 -0.2**
BJT Baijiatuau 33.02 34 P **P** **22 56 15.6 +0.2**
BJT pmax pmax
comp=Z,16nm,0.7s
BJT Baijiatuau 33.02 34 P **P** **22 56 15.6 +0.2**
BJT IAmb IAmb 22 56 27.8
comp=Z,16nm,0.7s
BJI Beijing 33.04 34 P **P** **22 56 16.6 +1.0**
BJI S **S** **23 01 34.5 +1.7**
BJI pmax pmax
comp=Z,10.0nm,0.7s
BJI pmax pmax
comp=Z,41nm,4.0s
BJI LR LR
comp=Z,250nm,19.8s
BJI LR LR
comp=Z,290nm,17.8s
BJI LR LR
comp=Z,320nm,28.0s
USP Ospenovka 33.11 335 P **P** **22 56 17.4 +1.1**
SNR=12
WBK Wadi Bani Khal 33.16 290 P **P** **22 56 19.8 +2.9**
WBK P **P** **22 56 19.8 +2.9**
TDK Taldyqorghan 33.20 341 *eP* **P** **22 56 16.5 -0.5**
comp=Z,8.7nm,0.8s,baz=341
TDK Taldyqorghan 33.20 341 *eP* **P** **22 56 16.5 -0.5**
TDK pmax pmax
comp=Z,9.0nm,0.8s
SGDS Sogindy 33.21 336 *eP* **P** **22 56 16.3 -0.9**
baz=335
SGDS Sogindy 33.21 336 *eP* **P** **22 56 16.2 -0.9**
LUWI Luwuk 33.26 114 P **P** **22 56 17.3 -0.5**
LUWI Luwuk 33.26 114 P **P** **22 56 18.0 +0.2**
comp=Z,2μmcomp=Z,109nm,1.1s
MK31 Makanchi Array 33.83 347 *i* P **P** **22 56 22.5 +0.1**
MK31 pmax pmax
comp=Z,15nm,0.7s
MK31 Makanchi Array 33.83 347 P **P** **22 56 22.7 +0.2**
MK31 IAmb IAmb 22 56 34.8
comp=Z,19nm,0.8s
MKAR Makanchi Array 33.83 347 P **P** **22 56 22.9 +0.5**
comp=Z,14nm,0.7s,baz=172,slow=7.4,SNR=138
MKAR PcP **PcP** **22 59 01.2 +0.1**
comp=Z,1.3nm,0.7s,baz=225,slow=4.2,SNR=1.6
MKAR LR LR 23 13 58.6
comp=Z,196nm,19.6s,baz=160,slow=43
MKAR Makanchi Array 33.83 347 *ce* P **P** **22 56 23.0 +0.5**
MKAR pmax pmax
comp=Z,14nm,0.7s
MKAR Makanchi Array 33.83 347 P **P** **22 56 22.2 -0.2**
MHTO MHTO 33.87 287 P **P** **22 56 25.2 +2.1**
MHTO P **P** **22 56 25.2 +2.1**
MAKZ Makanchi 33.91 347 P **P** **22 56 23.6 +0.4**
MAKZ pmax pmax
comp=Z,20nm,0.7s
MAKZ Makanchi 33.91 347 P **P** **22 56 23.6 +0.4**
MAKZ IAmb IAmb 22 56 35.3
comp=Z,20nm,0.7s
JMDO Jabal Madar 33.92 289 P **P** **22 56 22.9 -0.6**
JMDO P **P** **22 56 22.9 -0.6**
ZSN Zaisan 33.97 350 *eP* **P** **22 56 24.3 +0.6**
comp=Z,7.4nm,0.8s,baz=350
ZSN Zaisan 33.97 350 *eP* **P** **22 56 24.2 +0.6**
ZSN pmax pmax
comp=Z,7.0nm,0.8s
TAS Tashkent 34.02 328 P **P** **22 56 24.8 +0.6**
TAS pmax pmax
comp=Z,36nm,0.9s
TAS Tashkent 34.02 328 P **P** **22 56 24.8 +0.6**
SMDO Samad 34.07 290 P **P** **22 56 27.4 +2.5**
SNR=6.0
SMDO P **P** **22 56 27.4 +2.5**
SNR=6.0
BIDO Bidbid 34.07 291 P **P** **22 56 27.7 +2.8**
DQM DQM 34.18 285 P **P** **22 56 23.6 -2.2**
DZA Taraz 34.19 331 *eP* **P** **22 56 26.2 +0.5**
baz=331
DZA Taraz 34.19 331 *eP* **P** **22 56 26.1 +0.5**
HRA Herat 34.24 312 P **P** **22 56 25.6 -0.8**
IUG Iuzhnay 34.25 329 *eP* **P** **22 56 26.9 +0.7**
comp=Z,6.1nm,0.8s,baz=329
IUG Iuzhnay 34.25 329 *eP* **P** **22 56 26.9 +0.7**
IUG pmax pmax
comp=Z,6.0nm,0.8s
KDI Kendari 34.56 119 P **P** **22 56 29.3 +0.1**
KK31 Karatay Array 34.73 331 P **P** **22 56 29.9 -0.4**
KK31 pmax pmax
comp=Z,11nm,1.0s
KK31 Karatay Array 34.73 331 P **P** **22 56 29.9 -0.4**
KKAR Karatay Array 34.73 331 P **P** **22 56 31.0 +0.7**
KKAR Karatay Array 34.73 331 P **P** **22 56 30.4 +0.1**
KKAR Karatay Array 34.73 331 P **P** **22 56 31.0 +0.7**
BTLS Baital 34.77 336 *eP* **P** **22 56 30.8 +0.2**
comp=Z,2.8nm,0.5s,baz=336
BTLS Baital 34.77 336 *eP* **P** **22 56 30.7 +0.2**
BTLS pmax pmax
comp=Z,3.0nm,0.5s
BSY Bisya 34.80 290 P **P** **22 56 34.6 +3.5**
SNR=9.7
BSY P **P** **22 56 34.6 +3.5**
SNR=9.7
HOQ Hoqain 34.82 291 P **P** **22 56 29.9 -1.4**
HOQ P **P** **22 56 29.9 -1.4**
JOW Kunigami 35.48 63 P **P** **22 56 37.8 +0.9**
DL2 Dalian 35.51 40 P **P** 22 56 47.3 +10
DL2 S S 23 02 30.3 +19
DL2 pmax pmax
comp=Z,60nm,0.8s
DL2 LR LR
comp=N,230nm,22.4s
DL2 LR LR
comp=E,330nm,18.7s
DL2 LR LR
comp=Z,370nm,19.8s
SONM Songino Array 35.55 16 P **P** **22 56 38.1 +0.6**
comp=Z,6.9nm,0.7s,baz=201,slow=8.4,SNR=32
SONM PcP **PcP** **22 59 06.9 +0.8**
comp=Z,4.9nm,0.8s,baz=198,slow=3.3,SNR=7.4
SONM ScP **ScP** **23 02 51.4 +0.8**
comp=Z,0.6nm,0.9s,baz=188,slow=5.2,SNR=1.9
SONM LR LR 23 11 07.5
comp=Z,132nm,21.6s,baz=190,slow=36
SONM Songino Array 35.55 16 P **P** **22 56 38.2 +0.8**
SONM pmax pmax
comp=Z,14nm,0.9s
SONM Songino Array 35.55 16 P **P** **22 56 38.2 +0.8**
SONM IAmb IAmb 22 56 50.9
comp=Z,14nm,0.9s
SOHO SOHO 35.62 292 P **P** **22 56 40.5 +2.4**
SOHO P **P** **22 56 40.5 +2.4**
ULN Ulaanbaatar 35.76 16 *ce* P **P** **22 56 39.4 +0.2**
ULN pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 35.76 16 P **P** **22 56 39.4 +0.2**
ULN IAmb IAmb 22 56 51.3
comp=Z,14nm,0.8s
DGZ Jazzator, Alta 35.84 354 *i* P **P** **22 56 40.3 +0.4**
DGZ pmax pmax
comp=Z,5.0nm,0.8s
SHAO Shalim 35.90 281 P **P** **22 56 40.8 +0.1**
SHAO Shalim 35.90 281 P **P** **22 56 39.5 -1.2**
MDH Madha 36.03 294 P **P** **22 56 42.7 +0.9**
MDH Madha 36.03 294 P **P** **22 56 43.3 +1.6**
MDH P **P** **22 56 43.3 +1.6**
UOSS Minazif 36.05 293 P **P** **22 56 43.5 +1.6**
UOSS Minazif 36.05 293 P **P** **22 56 42.6 +0.7**
UOSS IAmb IAmb 22 56 49.8
comp=Z,21nm,1.2s
UOSS Minazif 36.05 293 P **P** **22 56 44.3 +2.4**
UOSS P **P** **22 56 44.3 +2.4**
HATD Hatta, Dubai 36.09 293 *i* P **P** **22 56 45.2 +3.0**
SNR=8.0
HATD Hatta, Dubai 36.09 293 P **P** **22 56 45.9 +3.6**
HATD P **P** **22 56 45.9 +3.6**
ASHO Ashiyiah 36.14 293 P **P** **22 56 45.4 +2.7**
ALNE Al Ain 36.31 292 *i* P **P** **22 56 46.5 +2.4**
SNR=7.8
ALNE Al Ain 36.31 292 P **P** **22 56 46.9 +2.8**
ALNE P **P** **22 56 46.9 +2.8**
SHME Shamm 36.32 295 P **P** **22 56 44.7 +0.5**
DMTO DMTO 36.55 281 P **P** **22 56 46.3 +0.2**
FAQ Al Faqa, Dubai 36.56 293 *i* P **P** **22 56 48.6 +2.4**
SNR=11
FAQ Al Faqa, Dubai 36.56 293 P **P** **22 56 48.6 +2.4**
FAQ P **P** **22 56 48.6 +2.4**
ASUD Al Ashush, Dub 36.78 292 *i* P **P** **22 56 50.4 +2.3**
SNR=13
ASUD Al Ashush, Dub 36.78 292 P **P** **22 56 51.1 +3.0**
ASUD P **P** **22 56 51.1 +3.0**
MMRI Maumere 36.89 126 P **P** **22 56 49.2 +0.1**
comp=Z,27nm,0.6s
AJN Ajban 37.08 292 P **P** **22 56 52.6 +2.0**
ZAK Zakamensk 37.24 11 *eP* **P** **22 56 52.4 +0.6**
ZAK pmax pmax
comp=Z,11nm,1.3s
DOK Doka 37.33 282 P **P** **22 56 55.2 +2.3**
SNR=16
DOK P **P** **22 56 55.2 +2.3**
SNR=16
WHFO Wadi Hawf 37.67 281 P **P** **22 56 57.7 +1.9**
SNR=27
WHFO P **P** **22 56 57.7 +1.9**
SNR=27
SEM Semipalatinsk 37.69 347 *eP* **P** **22 56 55.0 -0.7**
comp=Z,5.7nm,0.7s,baz=347
SEM Semipalatinsk 37.69 347 *eP* **P** **22 56 55.0 -0.7**
SEM pmax pmax
comp=Z,6.0nm,0.7s
SOCY Socotra 37.81 272 P **P** **22 56 57.8 +0.8**
SOCY IAmb IAmb 22 56 59.0
comp=Z,18nm,1.0s
SOCY Socotra 37.81 272 P **P** **22 56 58.0 +0.9**
SNR=18
MZWR Madinat Zayed 37.96 291 P **P** **22 56 59.9 +1.8**
NLAI Namlea 38.10 114 P **P** **22 56 59.9 +0.5**
comp=Z,2μmcomp=Z,16nm,0.7s
MOY Mondy 38.12 8 *eP* **P** **22 57 00.6 +1.4**
MOY pmax pmax
comp=Z,18nm,1.9s
TLY Talaya 38.56 11 *eP* **P** **22 57 04.9 +2.1**
TLY *eS* **S** **23 03 00.9 +3.8**
TLY *eSS* **SnSn** **23 05 41.7 -3.7**
TLY pmax pmax
comp=Z,44nm,1.0s
TLY MLR MLR
comp=Z,464nm,17.0s
TLY Talaya 38.56 11 P **P** **22 57 03.9 +1.1**
JTU Tsushima 38.81 52 P **P** **22 57 04.4 -0.7**
GEYT Alibeck 38.86 314 P **P** **22 57 07.3 +1.7**
comp=Z,18nm,0.8s,baz=148,slow=8.6,SNR=28
GEYT PcP **PcP** **22 59 17.1 +0.7**
comp=Z,5.8nm,0.7s,baz=130,slow=4.6,SNR=3.7
GEYT LR LR 23 15 05.0
comp=Z,214nm,18.7s,baz=165,slow=39
GEYT Alibeck 38.86 314 P **P** **22 57 06.8 +1.2**
GYA0B ALIBECK ARRAY 38.86 314 P **P** **22 57 06.3 +0.7**
GYA0B IAmb IAmb 22 57 08.1
comp=Z,19nm,0.8s
KSAR Wonju Array Be 38.93 47 P **P** **22 57 06.2 +0.1**

KSAR Wonju Array Be 38.93 47 P **P** 22 57 06.2 +0.1
KS19 Wonju Array Si 38.94 47 P **P** 22 57 05.8 -0.5
BATI Baumata 38.96 127 P **P** 22 57 05.3 -1.3
comp=Z,19nm,1.1s
KSRS Korea Array 38.96 47 P **P** 22 57 06.2 -0.1
comp=Z,3.6nm,0.7s,baz=240,slow=8.5,SNR=15
KSRS LR LR 23 15 57.8
comp=Z,659nm,18.2s,baz=239,slow=40
SOEI Soe 39.16 125 P **P** 22 57 08.9 +0.5
SOEI lAmb lAmb 22 57 13.3
comp=Z,25nm,0.9s
SOEI Soe 39.16 125 P **P** 22 57 08.1 -0.3
comp=Z,35nm,0.7s
IRK Irkutsk 39.21 11 *e*P P 22 57 18.6 +10
IRK pmax pmax
comp=Z,34nm,1.9s
BRZS Berezniki 39.44 340 *e*P **P** 22 57 10.5 +0.3
baz=339
BRZS Berezniki 39.44 340 *e*P **P** 22 57 10.5 +0.3
SLWR Silа 39.98 291 P **P** 22 57 16.5 +1.4
ZAA0 Zalesovo Array 40.32 353 P **P** 22 57 17.3 -0.1
ZAA0 lAmb lAmb 22 57 29.1
comp=Z,32nm,0.7s
ZALV Zalesovo Beam 40.32 353 P **P** 22 57 17.5 +0.1
comp=Z,21nm,0.7s,baz=176,slow=8.6,SNR=106
CN2 Changchun 40.73 37 *e*P **P** 22 57 21.0 +0.1
CN2 S **S** 23 03 32.0 +2.2
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,100nm,7.0s
CN2 LR LR
comp=Z,300nm,17.0s
CN2 LR LR
comp=Z,200nm,17.0s
CN2 LR LR
comp=Z,400nm,17.0s
SWI Sorong 40.87 108 P **P** 22 57 21.7 -0.8
comp=Z,14nm,0.8s
BNDI Bandanaira 41.17 114 P **P** 22 57 23.5 -1.5
comp=Z,12µmcomp=Z,72nm,0.7s
HIA Hailar 41.52 27 P **P** 22 57 27.7 +0.3
HIA pmax pmax
comp=Z,9.0nm,0.9s
HIA Hailar 41.52 27 P **P** 22 57 27.7 +0.3
GIRL Giralia 42.07 150 P **P** 22 57 32.6 +0.5
baz=42,SNR=5.7
BRVK Borovoye 42.84 340 *ce*P **P** 22 57 37.8 -0.3
BRVK pmax pmax
comp=Z,8.0nm,1.1s
BRVK Borovoyge 42.84 340 P **P** 22 57 38.0 -0.1
PSA00 Pilbara Seismi 44.24 143 P **P** 22 57 48.1 -1.6
AB31 Akbulak array 44.26 329 *i*eP **P** 22 57 50.2 +0.6
AB31 pmax pmax
comp=Z,14nm,0.9s
ABKAR Akbulak array 44.26 329 P **P** 22 57 49.9 +0.4
ABKAR Akbulak array 44.26 329 lAmb lAmb 22 58 02.4
comp=Z,21nm,1.0s
USA0B Ussuriysk Arra 44.90 40 *i* P **P** 22 57 54.2 -0.6
USA0B Ussuriysk Arra 44.90 40 P **P** 22 57 54.5 -0.2
USA0B lAmb lAmb 22 58 06.2
comp=Z,18nm,1.1s
USRK Ussuriysk Ar. 44.90 40 P **P** 22 57 54.6 -0.1
comp=Z,2.8nm,0.7s,baz=246,slow=8.3,SNR=7.4
USRK LR LR 23 19 36.9
comp=Z,221nm,18.1s,baz=236,slow=40
USRK Ussuriysk Ar. 44.90 40 P **P** 22 57 54.4 -0.4
USRK Ussuriysk Ar. 44.90 40 P **P** 22 57 54.4 -0.4
INU Inuyama 44.98 54 P **P** 22 57 55.1 -0.5
INU lAmb lAmb 22 58 08.2
comp=Z,16nm,0.8s
FITZ Fitzroy Crossi 45.48 134 P **P** 22 57 58.7 -1.0
baz=46,SNR=17
FITZ Fitzroy Crossi 45.48 134 lAmb lAmb 22 57 59.6
comp=Z,16nm,0.9s
RAYN Ar Rayn 45.58 289 *i* P **P** 22 58 00.7 +0.1
SNR=11
RAYN Ar Rayn 45.58 289 P **P** 22 58 01.1 +0.5
RAYN pmax pmax
comp=Z,11nm,1.1s
RAYN Ar Rayn 45.58 289 P **P** 22 58 01.1 +0.5
MAJO Matsushiro 46.25 53 *i* P **P** 22 58 05.0 -0.6
MAJO pmax pmax
comp=Z,30nm,0.9s
MAJO Matsushiro 46.25 53 P **P** 22 58 05.5 -0.2
MAJO lAmb lAmb 22 58 17.8
comp=Z,21nm,0.8s
MAT Matsushiro 46.25 53 P **P** 22 58 04.9 -0.7
MAT *e*S **S** 23 04 55.6 +4.7
MJAR Matsushiro Arr 46.25 53 P **P** 22 58 06.6 +0.9
comp=Z,2.4nm,0.8s,baz=267,slow=8.4,SNR=5.2
MJAR PcP **PcP** 22 59 40.7 -0.3
comp=Z,4.7nm,0.7s,baz=224,slow=2.5,SNR=9.3
MJAR LR LR 23 19 30.2
comp=Z,241nm,19.4s,baz=245,slow=39
MJAR Matsushiro Arr 46.25 53 P **P** 22 58 06.6 +0.9
MJAR pmax pmax
comp=Z,7.0nm,1.0s
MTN Manton Dam 46.43 123 P **P** 22 58 07.0 -0.3
baz=46,SNR=3.8
BOD Bodaibo 46.55 15 *e*P **P** 22 58 07.9 +0.3
BOD *e* 22 58 17.8
BOD pmax pmax
comp=Z,31nm,1.1s
JSD Sado 46.74 51 P **P** 22 58 09.0 -0.4
JSD lAmb lAmb 22 58 21.5
comp=Z,24nm,0.9s
KLR Kul'dur 47.41 34 *ce*P **P** 22 58 13.1 -1.4
KLR pmax pmax
comp=Z,5.0nm,1.3s
KDU Kakadu 47.44 122 P **P** 22 58 13.6 -1.5
baz=48,SNR=4.0
ZEA Zeya 47.99 27 *e*P P 22 58 29.1 +10
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=Z,100nm,14.0s
MORW Morawa 48.38 152 P **P** 22 58 22.3 +0.2
baz=49,SNR=5.2
DDFL Dedoflistskaro 48.74 313 P **P** 22 58 29.1 +4.1
SVE Sverdlovsk 49.23 337 *ce*P **P** 22 58 29.1 +0.7
SVE pmax pmax
comp=Z,32nm,1.0s
GNI Garni 49.31 311 *ce*P **P** 22 58 29.9 +0.4
GNI pmax pmax
comp=Z,39nm,1.3s
GNI Garni 49.31 311 P **P** 22 58 30.4 +1.0
GROC Groznyy 49.58 315 *e*P **P** 22 58 32.2 +0.9
GROC *e* 22 59 52.9
GROC *e* 23 00 24.7
GROC *e*S **S** 23 05 36.9 -1.0
GROC pmax pmax
comp=Z,48nm,1.0s
JTM Tenmabayashi 49.66 48 P **P** 22 58 31.3 -0.7
ARU Arti 49.75 336 *d* iP **P** 22 58 32.4 +0.1
ARU S **S** 23 05 41.8 +1.9
ARU SS **SS** 23 09 10.3 -2.1
ARU pmax pmax
comp=Z,20nm,1.2s
ARU Arti 49.75 336 P **P** 22 58 31.3 -1.0
ARU lAmb lAmb 22 58 33.5
comp=Z,18nm,1.1s
BLDU Ballidu 50.00 153 P **P** 22 58 34.8 +0.2
baz=50,SNR=9.1
BGD Bogdanovka 50.47 312 P **P** 22 58 41.0 +2.6
AKH Akhalkalaki 50.59 312 P **P** 22 58 41.5 +2.3
ZEI Tsey 50.74 314 *e*P **P** 22 58 40.4 0.0
ZEI pmax pmax
comp=Z,13nm,0.8s
MUN Mundaring 50.96 154 P **P** 22 58 42.1 +0.3
baz=51,SNR=9.5
NCK Nalchik 51.19 315 *e*P **P** 22 58 44.1 +0.6
NCK pmax pmax
comp=Z,5.0nm,0.5s
KLBR Kellerberrin 51.30 153 P **P** 22 58 44.4 0.0
baz=52,SNR=24
MARD Mardin 51.56 307 P **P** 22 58 46.2 -0.3
KBZ Khabaz 51.74 315 P **P** 22 58 47.8 +0.3
comp=Z,4.2nm,0.7s,baz=114,slow=5.0,SNR=7.8
KBZ Khabaz 51.74 315 *ce*P **P** 22 58 46.7 -0.9
KBZ pmax pmax
comp=Z,6.0nm,0.8s
KIV Kislovodsk 51.96 315 *i* P **P** 22 58 50.2 +0.9
SNR=7.7
KIV Kislovodsk 51.96 315 *e*P **P** 22 58 49.3 -0.1
KIV pmax pmax
comp=Z,94nm,1.0s
KIV MLR MLR
comp=Z,121nm,17.0s
KIV Kislovodsk 51.96 315 P **P** 22 58 49.8 +0.4
WRKA Warakurna 52.02 138 P **P** 22 58 49.9 -0.1
baz=52,SNR=12
GOF Gofitskoye 52.09 317 ⇑ *e*P **P** 22 58 51.2 +1.0
GOF pmax pmax
comp=Z,22nm,0.9s
NWAO Narrogin (SRO) 52.21 154 P **P** 22 58 50.9 -0.2
baz=52,SNR=18
NWAO Narrogin (SRO) 52.21 154 P **P** 22 58 50.8 -0.3
NWAO pmax pmax
comp=Z,20nm,0.6s
NWAO Narrogin (SRO) 52.21 154 P **P** 22 58 50.8 -0.3
NWAO lAmb lAmb 22 58 51.9
comp=Z,20nm,0.6s
NWAO Narrogin (SRO) 52.21 154 P **P** 22 58 50.2 -0.9
NWAO lAmb lAmb 22 58 51.9
comp=Z,26nm,0.6s
BELG Belogornoye 52.43 327 *d* iP **P** 22 58 51.9 -0.6
BELG pmax pmax
comp=Z,4.0nm,0.9s
YSS Yuzh-Sakhalins 52.90 41 *e*P P 22 59 07.3 +11
YSS pmax pmax
comp=Z,60nm,1.2s
YSS MLR MLR
comp=Z,600nm,13.0s
WB0 Warramunga Arr 52.95 128 P **P** 22 58 56.3 -0.5
WB0 lAmb lAmb 22 58 57.0
comp=Z,15nm,0.8s
WRA Warramunga Arr 53.01 129 P **P** 22 58 55.8 -1.5
comp=Z,17nm,0.9s,baz=309,slow=8.2,SNR=69
WRA PcP **PcP** 23 00 05.5 -0.4
comp=Z,2.7nm,0.6s,baz=314,slow=3.5,SNR=6.6
WRA S **S** 23 06 19.9 -6.0
comp=Z,1.4nm,0.8s,baz=294,slow=15,SNR=6.3
WRA LR LR 23 22 47.1
comp=Z,66nm,18.6s,baz=355,slow=38
WRA Warramunga Arr 53.01 129 *i* P **P** 22 58 56.5 -0.9
WRA pmax pmax
comp=Z,17nm,0.9s
WRA Warramunga Arr 53.01 129 P **P** 22 58 56.4 -0.9
WRAB Tennant Creek 53.01 129 *ce*P **P** 22 58 56.5 -0.8
WRAB pmax pmax
comp=Z,37nm,1.7s
WRAB Tennant Creek 53.01 129 P **P** 22 58 56.9 -0.5
WB2 Warramunga Arr 53.02 129 lAmb lAmb 22 58 57.7
comp=Z,16nm,0.8s
WR0 Warramunga Arr 53.17 129 lAmb lAmb 22 58 58.8
comp=Z,22nm,0.9s
FURI Furi 53.19 271 P **P** 22 58 59.5 +0.4
GAZ Gaziantep 54.33 306 P **P** 22 59 07.2 +0.3
GAZ lAmb lAmb 22 59 08.5
comp=Z,23nm,0.8s
YAK Yakutsk 54.66 20 *e*P **P** 22 59 06.5 -2.2
YAK *e**PP **pP** 22 59 16.4 -0.2
YAK *e* 23 00 08.9
YAK *e* 23 01 06.6
YAK *e*S **S** 23 06 44.7 -2.2
YAK *e**SS **sS** 23 07 01.8 +2.1
YAK *e*SS **SS** 23 10 26.2 -3.6
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=Z,140nm,4.5s
YAK pmax pmax
comp=N,51nm,3.3s
YAK pmax pmax
comp=E,32nm,3.3s
YAK smax smax
comp=N,73nm,4.4s
YAK smax smax
comp=E,50nm,3.2s
YAK MLR MLR
comp=Z,214nm,21.0s
YAK MLR MLR
comp=E,170nm,25.0s
KIRV Kirov 54.92 334 *ce*P **P** 22 59 10.4 -0.2
ASAR Alice Springs 54.95 133 P **P** 22 59 10.9 -0.5
comp=E,13nm,0.4s,baz=308,slow=6.8,SNR=139
ASAR PcP **PcP** 23 00 13.1 -0.1
comp=E,2.1nm,0.6s,baz=309,slow=5.9,SNR=0.9
ASAR ScP **ScP** 23 04 09.5 -0.8
comp=E,1.1nm,1.0s,baz=338,slow=4.2,SNR=3.6
ASAR Alice Springs 54.95 133 P **P** 22 59 10.2 -1.3
ASAR Alice Springs 54.95 133 P **P** 22 59 10.2 -1.3
VRH Novokhopyorsk 55.18 323 *e*P **P** 22 59 11.6 -1.1
VRH pmax pmax
comp=Z,20nm,0.7s
NRIK Noril'sk 55.37 358 P **P** 22 59 13.4 -0.3
comp=Z,6.4nm,0.5s,baz=160,slow=6.7,SNR=14
NRIK LR LR 23 26 11.3
comp=Z,104nm,21.1s,baz=176,slow=40
NRIK Noril'sk 55.37 358 *ce*P **P** 22 59 13.3 -0.5
NRIK pmax pmax
comp=Z,7.0nm,0.6s
NRIK Noril'sk 55.37 358 lAmb lAmb 22 59 25.7
comp=Z,16nm,0.7s
TOKA Tokat 55.47 309 P **P** 22 59 15.5 +0.5
ABPO Ambohimpanom 55.61 235 P **P** 22 59 16.8 +0.3
ABPO pmax pmax
comp=Z,23nm,1.1s
ABPO Ambohimpanom 55.61 235 P **P** 22 59 16.8 +0.3
ABPO lAmb lAmb 22 59 19.0
comp=Z,23nm,1.1s
ANN Anapa 55.81 315 *e*P P 22 59 11.9 -5.4
ANN *e**PP pP 22 59 21.2 -3.9
ANN *e*S **S** 23 06 55.8 -7.1
ANN pmax pmax
comp=Z,55nm,1.1s
FORT Forrest 55.99 143 P **P** 22 59 19.5 +0.8
baz=56,SNR=13
FORT Forrest 55.99 143 P **P** 22 59 18.8 0.0
VSR Storozhevoye 56.68 323 *e*P **P** 22 59 21.8 -1.6
VSR pmax pmax
comp=Z,7.0nm,0.6s
KMBO Kilima Mbogo 57.02 259 P **P** 22 59 27.4 +0.7
comp=Z,5.6nm,0.9s,baz=53,slow=12,SNR=19
KMBO LR LR 23 20 58.7
comp=Z,152nm,21.5s,baz=92,slow=33
LPSR Galich'ya Gora 57.32 324 *e*P **P** 22 59 26.8 -1.1
LPSR pmax pmax
comp=Z,10.0nm,0.8s
QIS Mount Isa 57.43 126 P **P** 22 59 29.6 +0.4
baz=58,SNR=9.4
BR131 Keskin Array S 57.51 308 *d* iP **P** 22 59 29.1 -0.6
BRTR Keskin Array B 57.51 308 P **P** 22 59 29.3 -0.4
comp=Z,16nm,0.7s,baz=120,slow=7.7,SNR=60
BRTR PcP **PcP** 23 00 22.5 -0.6
comp=Z,3.7nm,0.7s,baz=108,slow=4.7,SNR=1.6
BRTR LR LR 23 27 33.6
comp=Z,201nm,20.1s,baz=119,slow=40
BRTR Keskin Array B 57.51 308 P **P** 22 59 29.1 -0.6
ILGA Ilgaz 57.67 310 P **P** 22 59 30.7 -0.2
ILGA lAmb lAmb 22 59 44.7
comp=Z,22nm,0.7s
ANTO Ankara 58.17 308 P **P** 22 59 33.3 -1.0
ANTO pmax pmax
comp=Z,32nm,1.3s
ANTO Ankara 58.17 308 P **P** 22 59 33.3 -1.0
ANTO lAmb lAmb 22 59 47.6
comp=Z,32nm,1.2s
BR231 Keskin MP Arra 58.19 308 P **P** 22 59 33.5 -0.9
BR231 lAmb lAmb 22 59 35.1
comp=Z,18nm,0.8s
PRGR Permogore 58.21 336 *e*P **P** 22 59 33.0 -1.0
PRGR *e**PP **sP** 22 59 44.0 -0.9
PRGR pmax pmax
comp=Z,24nm,0.8s
PMG Port Moresby 58.75 110 *ce*P **P** 22 59 39.0 +0.5
PMG pmax pmax
comp=Z,78nm,1.7s
PMG Port Moresby 58.75 110 P **P** 22 59 39.3 +0.8
MOS Moscow 59.19 327 *e*P **P** 22 59 39.4 -1.5
MOS *e* 22 59 51.0
OBN Obninsk 59.52 326 *i* P **P** 22 59 42.0 -1.2
OBN *i* 22 59 53.4
OBN *i* 23 00 28.4
OBN pmax pmax
comp=Z,12nm,1.1s
OBN MLR MLR
comp=Z,140nm,16.0s
OBN Obninsk 59.52 326 P **P** 22 59 42.4 -0.9
ISP Isparta 59.69 306 P **P** 22 59 45.1 +0.2
ISP pmax pmax
comp=Z,26nm,0.8s
ISP Isparta 59.69 306 P **P** 22 59 45.1 +0.2
ELL Elmali 60.08 304 P **P** 22 59 47.4 -0.2
ELL pmax pmax
comp=Z,128nm,0.7s
ELL Elmali 60.08 304 P **P** 22 59 47.4 -0.2
KLMR Klimovskoe 60.38 333 *e*P **P** 22 59 46.6 -2.5
KLMR pmax pmax
comp=Z,24nm,1.3s
KLMR Klimovskoe 60.38 333 *e*P **P** 22 59 46.7 -2.4
KLMR AMP 22 59 50.3
comp=Z,24nm,1.3s
TIXI Tiksi 61.51 12 *ce*P **P** 22 59 55.2 -1.3
TIXI pmax pmax
comp=Z,18nm,0.6s
TIXI Tiksi 61.51 12 P **P** 22 59 55.6 -0.9
TIXI lAmb lAmb 23 00 09.2
comp=Z,15nm,0.7s
TLCR 61.87 314 ⇑P **P** 22 59 59.8 +0.3
MA2 Magadan 62.01 29 LR LR 23 30 36.8
comp=Z,128nm,18.8s,baz=261,slow=40
MA2 Magadan 62.01 29 *ce*P **P** 22 59 59.4 -0.7
MA2 pmax pmax
comp=Z,5.0nm,1.0s
MA2 Magadan 62.01 29 P **P** 22 59 59.8 -0.4
MA2 lAmb lAmb 23 00 11.4
comp=Z,14nm,1.0s
TIRR Tirgusor 62.05 313 P **P** 22 59 59.6 -1.1
TIRR pmax pmax
comp=Z,56nm,0.9s
TIRR Tirgusor 62.05 313 P **P** 22 59 59.6 -1.1
MILM Milestii Mici 62.14 316 ⇑P **P** 23 00 00.3 -0.9
BBOO Buckleboo 62.28 139 P **P** 23 00 02.4 +0.1
baz=62,SNR=6.7
BBOO Buckleboo 62.28 139 P **P** 23 00 02.4 +0.1
BBOO lAmb lAmb 23 00 03.4
comp=Z,20nm,1.2s
CFR Carcaliu 62.34 314 ⇑P **P** 23 00 03.1 +0.5
HARR Harsova 62.42 313 ⇑P **P** 23 00 03.1 0.0
CTA Charters Tower 62.56 122 P **P** 23 00 03.4 -1.0
comp=Z,3.7nm,0.6s,baz=268,slow=4.3,SNR=7.6
AKASG Malin Array Be 62.57 320 P **P** 23 00 03.1 -0.9
comp=Z,6.1nm,0.7s,baz=86,slow=5.0,SNR=23
AKASG LR LR 23 30 49.5
comp=Z,106nm,20.1s,baz=90,slow=39
AKASG Malin Array Be 62.57 320 *ce*P **P** 23 00 03.0 -1.0
AKASG pmax pmax
comp=Z,6.0nm,0.6s
AKASG Malin Array Be 62.57 320 P **P** 23 00 03.0 -1.0
AKBB Malin Array Si 62.57 320 *ce*P **P** 23 00 02.9 -1.1
AKBB Malin Array Si 62.57 320 P **P** 23 00 03.5 -0.6
AKBB lAmb lAmb 23 00 04.0
comp=Z,7.5nm,0.8s
SORM Soroca 62.65 317 ⇑P **P** 23 00 04.4 -0.2
MBAR Mbarara 63.11 262 *d* iP **P** 23 00 09.8 +1.3
MBAR pmax pmax
comp=Z,18nm,1.0s
MBAR Mbarara 63.11 262 P **P** 23 00 09.4 +0.9
MBAR lAmb lAmb 23 00 11.2
comp=Z,16nm,0.9s
VRI Vrincioaia 63.42 314 ⇑P **P** 23 00 11.1 +1.3
VRI Vrincioaia 63.42 314 P **P** 23 00 10.9 +1.1
PLOR Plostina 63.47 314 ⇑P **P** 23 00 11.5 +1.3
PLOR Plostina 63.47 314 P **P** 23 00 11.1 +0.9
SGRR Singureni 63.76 313 ⇑P **P** 23 00 12.9 +0.8
PETK Petropavlovsk- 63.87 37 LR LR 23 31 35.8
comp=Z,133nm,18.5s,baz=237,slow=39
MLR Muntele Rosu 63.92 314 ⇑P **P** 23 00 14.4 +1.1
PRAR RASCA 63.95 316 ⇑P **P** 23 00 12.5 -0.8
SEY Seymchan 63.96 26 *i* P **P** 23 00 12.0 -1.0
KMPD K-Podol'skiy 63.97 317 P **P** 23 00 12.0 -1.3
BIZ Bicaz 63.98 316 ⇑P **P** 23 00 14.1 +0.6
HORU Horodok 64.08 318 P **P** 23 00 13.5 -0.6
ZIMR 64.14 312 ⇑P **P** 23 00 14.8 +0.2
MNK Minsk 64.17 324 *i* P **P** 23 00 14.5 0.0
comp=E,5.0nm,1.4s
MNK *i* P **P** 23 00 14.5 0.0
comp=N,8.0nm,1.0s
MNK *i* P **P** 23 00 14.5 0.0
comp=Z,30nm,0.8s
MNK *i* PcP **PcP** 23 00 49.3 -0.1
MNK *i* PP **PP** 23 02 35.5 -0.2
MNK *i* PPP PPP 23 04 05.8
MNK *i* S **S** 23 08 52.2 +2.2
MNK *i* ScS **ScS** 23 10 08.5 +1.7
MNK *i* SS **SS** 23 13 04.7 +5.4
MNK *i* SSS SSS 23 16 01.6
MNK *i* LQ LQ 23 23 38.1
MNK *i* LR LR 23 28 31.1
MNK *i* LRM MLR 23 31 41.3
comp=E,26nm,15.5s
MNK *i* LRM MLR 23 31 49.7
comp=N,151nm,14.2s
MNK *i* LRM MLR 23 31 52.9
comp=Z,99nm,14.2s
QLP Quilpie 64.25 129 P **P** 23 00 16.6 +1.2
baz=64,SNR=7.9
DOPR Dopca 64.36 314 ⇑P **P** 23 00 16.4 +0.4
HUMR Humele 64.50 313 ⇑P **P** 23 00 17.4 +0.5
HTT Hallett 64.51 138 P **P** 23 00 17.9 +0.7
baz=65,SNR=6.3
VOIR 64.54 314 ⇑P **P** 23 00 16.3 -1.0
PLVB Pleven 64.66 312 ⇓P **P** 23 00 18.4 +0.5
BURAR Bucovina Array 64.67 316 ⇑P **P** 23 00 18.9 +0.8
BURAR Bucovina Array 64.67 316 P **P** 23 00 18.4 +0.3
BURAR Bucovina Array 64.67 316 P **P** 23 00 18.4 +0.3
BURAR lAmb lAmb 23 00 19.7
comp=Z,8.7nm,0.8s
BUR08 Bucovina Ar. S 64.68 316 lAmb lAmb 23 00 32.9
comp=Z,8.4nm,0.8s
ARR Arges 64.82 314 ⇑P **P** 23 00 19.4 +0.3
KSV Kosov 64.85 317 P **P** 23 00 18.4 -0.8
NACGM Naroch 64.88 324 *i* P **P** 23 00 19.1 -0.1
NACGM *i* P **P** 23 00 19.1 -0.1
NACGM *i* P **P** 23 00 19.1 -0.1
NACGM *i* PP **PP** 23 02 47.4 +5.5
NACGM *i* PPP PPP 23 04 00.1
NACGM *i* S **S** 23 09 06.8 +8.0
NACGM *i* SS SS 23 12 32.2 -38
NACGM *i* SSS SSS 23 17 04.5
NACGM *i* LQ LQ 23 24 25.7
NACGM *i* LR LR 23 29 26.6
IDID Didziasalis 64.98 325 *e*P **P** 23 00 19.8 0.0
IIGN Ignalina 65.28 325 *e*P **P** 23 00 21.7 -0.1
STKA Stephens Creek 65.34 135 P **P** 23 00 21.8 -0.7
comp=Z,5.3nm,0.6s,baz=313,slow=5.8,SNR=19
STKA LR LR 23 30 06.4
comp=Z,84nm,21.2s,baz=324,slow=37
STKA Stephens Creek 65.34 135 P **P** 23 00 22.6 +0.1
baz=66,SNR=6.6
STKA Stephens Creek 65.34 135 P **P** 23 00 22.6 +0.1
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 65.34 135 P **P** 23 00 22.6 +0.1
ISAL Salakas 65.38 325 *e*P **P** 23 00 21.9 -0.6
LOT Lotru 65.44 314 ⇑P **P** 23 00 23.0 -0.1
VTS Vitosha 65.62 311 ⇑P **P** 23 00 24.8 +0.3
VTS Vitosha 65.62 311 lAmb lAmb 23 00 24.9
comp=Z,10.0nm,0.7s
APA Apatity 65.66 339 ⇓ *i*P P 23 00 15.6 -8.4
APA pmax pmax
comp=Z,10.0nm,0.8s
VSU Vasula 65.67 328 *e*P **P** 23 00 23.1 -1.1
MORS Morshin 65.72 318 P **P** 23 00 24.8 0.0
PUNG Punghina 65.94 312 ⇑P **P** 23 00 26.9 +0.7
VAY Valandovo 66.06 309 P **P** 23 00 26.8 -0.3
VAY pmax pmax
comp=Z,26nm,1.0s
GZR Gura Zlata 66.13 314 ⇑P **P** 23 00 27.5 0.0
HERR Herculane 66.35 313 ⇑P **P** 23 00 29.5 +0.6
TRPA Tarpa 66.51 317 ⇑P **P** 23 00 30.6 +0.8
KWP Kalwaria Pacla 66.55 318 *e*P **P** 23 00 30.3 +0.2
KWP Kalwaria Pacla 66.55 318 P **P** 23 00 29.8 -0.3
KWP pmax pmax
comp=Z,27nm,0.9s
KWP Kalwaria Pacla 66.55 318 P **P** 23 00 29.8 -0.3
PABE Paberze 66.57 325 *e*P **P** 23 00 29.8 -0.3
FINES FINESS Array B 66.69 331 P **P** 23 00 30.4 -0.3
comp=Z,16nm,0.7s,baz=95,slow=6.0,SNR=70

FINES LR LR 23 32 55.9
comp=Z,140nm,18.2s,baz=79,slow=39
FINES FINESS Array B 66.69 331 *i* P **P** **23 00 30.3 -0.4**
FINES pmax pmax
comp=Z,16nm,0.7s
SUW Suwalki 66.79 323 *e*P **P** **23 00 30.5 -1.0**
SUW Suwalki 66.79 323 *e*P **P** **23 00 31.3 -0.2**
SUW Suwalki 66.79 323 P **P** **23 00 30.6 -1.0**
SUW pmax pmax
comp=Z,33nm,0.7s
SUW Suwalki 66.79 323 P **P** **23 00 30.6 -1.0**
MDVR Moldovita 66.84 313 ⇑P **P** **23 00 32.4 +0.3**
FNA Florina 66.94 309 P **P** **23 00 31.7 -1.2**
FNA pmax pmax
comp=Z,17nm,1.3s
CRVS Cervenica-Dubn 67.29 317 *e*P **P** **23 00 35.7 +0.8**
CRVS pmax pmax
comp=Z,29nm,1.0s
CRVS Cervenica-Dubn 67.29 317 *e*P **P** **23 00 35.7 +0.8**
RMQ Roma 67.67 127 P **P** **23 00 38.2 +0.7**
baz=68,SNR=6.6
PBUR Paburge 67.79 325 *e*P **P** **23 00 37.2 -0.6**
BEL Belsk 67.98 320 *e*P **P** **23 00 38.9 -0.1**
CMSA Cobar Meteorol 68.01 133 P **P** **23 00 40.1 +0.6**
baz=68,SNR=47
DIVS Divibare 68.05 312 *e*P **P** **23 00 38.7 -1.1**
NIE Niedzica 68.09 318 *e*P **P** **23 00 41.1 +1.2**
FRGS Fruska Gora 68.21 313 ⇑P **P** **23 00 40.7 0.0**
PSZ Piszkesteto 68.27 316 ⇑P **P** **23 00 41.6 +0.5**
PSZ Piszkesteto 68.27 316 IAmb IAmb 23 00 42.1
comp=Z,10nm,1.0s
ARPS Mount Arapiles 68.46 139 P **P** **23 00 44.0 +1.7**
baz=69,SNR=5.3
BBLS Lazići 68.47 312 *e*P **P** **23 00 39.3 -3.1**
OJC Ojcow 68.47 319 *e*P **P** **23 00 42.6 +0.3**
OJC Ojcow 68.47 319 P **P** **23 00 41.2 -1.0**
OJC pmax pmax
comp=Z,15nm,0.8s
OJC Ojcow 68.47 319 P **P** **23 00 41.2 -1.0**
OJC IAmb IAmb 23 00 43.2
comp=Z,14nm,0.8s
PDG Podgorica 68.56 310 ⇑P **P** **23 00 42.1 -0.8**
PDG Podgorica 68.56 310 *e*P **P** **23 00 40.1 -2.8**
DRME Dracevica, Mon 68.61 310 *e*P **P** **23 00 42.4 -0.8**
LANS Liptovska Anna 68.62 318 *e*P **P** **23 00 44.2 +1.0**
LANS Liptovska Anna 68.62 318 *e*P **P** **23 00 44.2 +1.0**
UPM Unac-Piva 68.82 311 *e*P **P** **23 00 43.9 -0.9**
VYHS Vyhne 69.00 317 *e*P **P** **23 00 45.9 +0.3**
VYHS Vyhne 69.00 317 *e*P **P** **23 00 45.9 +0.3**
MORH Mrgy, Hungar 69.06 314 ⇑P **P** **23 00 46.2 +0.3**
MORH Mrgy, Hungar 69.06 314 *e*P **P** **23 00 45.1 -0.8**
ARCES ARCESS Array B 69.06 340 P **P** **23 00 45.4 -0.2**
comp=Z,9.7nm,0.7s,baz=92,slow=6.8,SNR=42
ARCES LR LR 23 34 42.1
comp=Z,192nm,19.2s,baz=150,slow=39
BRY Bratogost 69.09 311 P **P** **23 00 46.3 -0.1**
BRY Bratogost 69.09 311 *e*P **P** **23 00 45.0 -1.4**
HCY Herceg Novi 69.12 310 *e*P **P** **23 00 45.0 -1.4**
TREB Trebinje 69.23 311 *e*P **P** **23 00 44.3 -2.8**
SRO2 Moca 69.27 316 *e*P **P** **23 00 46.9 -0.3**
SRO2 Moca 69.27 316 *e*P **P** **23 00 46.9 -0.3**
JAVC Velka Javorina 69.79 317 *e*P **P** **23 00 51.3 +0.8**
MORC Moravsky Berou 69.90 318 *e*P **P** **23 00 51.5 +0.3**
MORC Moravsky Berou 69.90 318 P **P** **23 00 51.4 +0.3**
MORC Moravsky Berou 69.90 318 IAmb IAmb 23 00 52.5
comp=Z,13nm,0.8s
SMOL Smolenice 69.94 317 *e*P **P** **23 00 51.6 +0.2**
SMOL Smolenice 69.94 317 *e*P **P** **23 00 51.6 +0.2**
MODS Modra-Piesok 70.04 317 *e*P **P** **23 00 52.2 +0.2**
MODS pmax pmax
comp=Z,17nm,1.5s
MODS Modra-Piesok 70.04 317 *e*P **P** **23 00 52.2 +0.2**
BLY Banja Luka 70.07 313 *e*P **P** **23 00 52.1 -0.1**
MGRS Mrkonjic Grad 70.14 312 *e*P **P** **23 00 49.0 -3.7**
GKP Gorka Klasztor 70.24 322 *e*P **P** **23 00 52.9 -0.2**
GKP Gorka Klasztor 70.24 322 *e*P **P** **23 00 52.6 -0.5**
KRLC Kraliky 70.40 318 *e*P **P** **23 00 54.2 0.0**
KRLC Kraliky 70.40 318 *e*P **P** **23 00 54.2 0.0**
UPP Uppsala 70.53 329 *e*P **P** **23 00 54.1 -0.6**
KRUC Moravsky 70.63 317 *e*P **P** **23 00 55.6 0.0**
DPC Dobruska-Polom 70.70 319 *e*P **P** **23 00 56.7 +0.6**
DPC *e* 23 01 07.6
DPC Dobruska-Polom 70.70 319 *e*P **P** **23 00 56.7 +0.6**
DPC *e*pP **sP** **23 01 07.6 +0.5**
KOGS Kog 70.72 315 *i* P **P** **23 00 56.2 +0.1**
comp=Z,39nm,0.7s
KSP Ksiaz 70.73 319 *e*P **P** **23 00 56.7 +0.6**
KSP Ksiaz 70.73 319 P **P** **23 00 56.4 +0.2**
OSTC Ostas 70.78 319 *e*P **P** **23 00 56.9 +0.4**
CHVC Chvalec 70.88 319 *e*P **P** **23 00 57.1 0.0**
BILL Bilibino 70.91 22 *i* P **P** **23 00 55.0 -1.9**
BILL *i* 23 01 06.0
BILL *i* 23 01 13.9
BILL *i* 23 03 33.0
BILL pmax pmax
comp=Z,6.0nm,1.3s
BILL Bilibino 70.91 22 P **P** **23 00 56.6 -0.3**
BILL IAmb IAmb 23 01 09.1
comp=Z,6.2nm,0.6s
CONA Conrad Observa 70.98 316 *e*P **P** **23 00 58.1 +0.2**
comp=Z,5.0nm,0.9s
ARSA Arzberg 71.21 315 *e*P **P** **23 00 59.6 +0.4**
comp=Z,5.0nm,0.9s
BLEU Blekinge 71.22 325 *i* P **P** **23 00 58.6 -0.3**
TREC Trest 71.23 318 *e*P **P** **23 00 59.2 -0.1**
TREC Trest 71.23 318 *e*P **P** **23 00 59.2 -0.1**
TOO Toolangi 71.27 138 P **P** **23 01 00.8 +1.2**
baz=71,SNR=15
CRES Cresnjev 71.28 314 *e*P **P** **23 00 59.1 -0.5**
SOKA Soboth 71.56 315 *i* P **P** **23 01 01.4 +0.1**
comp=Z,14nm,1.2s,SNR=7.0
ARMA Armidale 71.79 129 P **P** **23 01 04.7 +1.7**
baz=72,SNR=9.1
ARMA Armidale 71.79 129 P **P** **23 01 02.6 -0.4**
ARMA IAmb IAmb 23 01 05.6
comp=Z,21nm,0.7s
PVCC Panska Ves 71.83 319 *e*P **P** **23 01 03.6 +0.8**
PVCC Panska Ves 71.83 319 *e*P **P** **23 01 03.6 +0.8**
PRU Pruhonice 71.84 318 *e*P **P** **23 01 03.0 +0.1**
PRU *e* 23 01 13.3
PRU Pruhonice 71.84 318 *e*P **P** **23 01 03.0 +0.1**
PRU *e*pP **sP** **23 01 13.3 -0.7**
OBKA Obir 71.89 315 *e*P **P** **23 01 03.3 -0.1**
comp=Z,10nm,0.8s
PRA Prague 71.92 318 *e*P **P** **23 01 03.9 +0.6**
PRA Prague 71.92 318 *e*P **P** **23 01 03.9 +0.6**
CEY Cerknica 72.00 314 *e*P **P** **23 01 03.0 -1.0**
CKRC Cesky Krumlov 72.01 317 *e*P **P** **23 01 03.5 -0.5**
CKRC *ex* x 23 01 14.6
MOA Molln 72.06 316 *e*P **P** **23 01 03.6 -0.7**
comp=Z,5.9nm,0.9s
LNIZ Loecknitz 72.06 322 *e*P **P** **23 01 04.7 +0.6**
comp=Z,95nm,1.6s,baz=88,slow=5.8
CRNS Crni Vrh 72.10 314 *i* P **P** **23 01 04.5 -0.1**
comp=Z,27nm,0.6s
CRNS *i* pP **sP** **23 01 16.1 +0.5**
PBCC Pribram 72.20 318 *e*P **P** **23 01 05.1 0.0**
PBCC *ex* x 23 01 16.5
BRG Berggiesshubel 72.22 319 P **P** **23 01 05.4 +0.3**
BRG Berggiesshubel 72.22 319 *i* P **P** **23 01 05.5 +0.3**
BRG Amp 23 01 07.5
comp=Z,13nm,0.8s
BRG *ex* x 23 01 16.9
BRG Amp 23 01 20.3
comp=Z,8.2nm,0.8s
BRG Berggiesshubel 72.22 319 *e*P **P** **23 01 05.9 +0.7**
comp=Z,13nm,0.8s,baz=88,slow=5.8
BRG *e*pP **sP** **23 01 16.9 +0.7**
baz=88,slow=5.7
DEL Delary 72.31 325 *i* P **P** **23 01 04.7 -0.8**
RUE Ruedersdorf 72.32 321 *e*P **P** **23 01 06.2 +0.6**
comp=Z,43nm,1.1s,baz=88,slow=5.8
RUE *e*pP **sP** **23 01 18.6 +1.9**
baz=88,slow=5.7
GEC2 GERESS Array S 72.41 317 IAmb IAmb 23 01 07.5
comp=Z,15nm,0.8s
GEC2 GERESS Array S 72.41 317 *e*P **P** **23 01 06.9 +0.5**
comp=Z,16nm,0.9s,baz=88,slow=5.8
GEC2 *e*pP **sP** **23 01 18.1 +0.6**
baz=88,slow=5.7
GERES GERESS Array B 72.41 317 P **P** **23 01 06.5 +0.1**
comp=Z,10.0nm,0.7s,baz=87,slow=6.5,SNR=96
CADS Cadrg 72.46 314 *i* P **P** **23 01 06.3 -0.4**
comp=Z,45nm,1.3s
KHC Kasperske Hory 72.48 317 *c i* P **P** **23 01 06.3 -0.5**
KHC pmax pmax
comp=Z,12nm,0.8s
KHC Kasperske Hory 72.48 317 *e*P **P** **23 01 06.4 -0.4**
KHC *e*pP **sP** **23 01 18.3 +0.4**
MYKA Terra Mystica 72.51 315 *e*P **P** **23 01 07.0 0.0**
comp=Z,5.7nm,0.8s
LUNU Lund 72.53 324 *i* P **P** **23 01 06.6 -0.3**
FBE Fryberg 72.59 319 *e*P **P** **23 01 08.3 +1.0**
comp=Z,26nm,0.9s,baz=88,slow=5.8
FBE *e*pP **sP** **23 01 19.4 +1.0**
baz=88,slow=5.7
KBA Koelnbreinsper 72.70 315 *e*P **P** **23 01 07.3 -1.0**
comp=Z,5.8nm,1.0s
CLL Collm 72.81 320 *e*P **P** **23 01 08.0 -0.6**
comp=Z,11nm,1.2s
CLL *i* sP **sP** **23 01 19.5 -0.2**
CLL Lm MLR 23 36 00.0
comp=Z,100nm,19.2s
CLL Collm 72.81 320 *e*P **P** **23 01 08.0 -0.6**
CLL *i* 23 01 19.5
CLL pmax pmax
comp=Z,11nm,1.2s
CLL Collm 72.81 320 *e*P **P** **23 01 08.7 +0.1**
comp=Z,11nm,1.2s,baz=88,slow=5.8
CLL *e*pP **sP** **23 01 20.1 +0.4**
baz=88,slow=5.7
WET Wettzell 72.94 317 *e*P **P** **23 01 10.0 +0.5**
comp=Z,19nm,1.4s,baz=88,slow=5.8
WET *e*pP **sP** **23 01 21.2 +0.6**
baz=88,slow=5.7
ZOU Zoufplan 72.98 315 IAmb IAmb 23 01 22.1
comp=Z,18nm,1.5s
TANN Tannenbergstha 73.17 319 *e*P **P** **23 01 11.3 +0.4**
comp=Z,6.3nm,0.9s,baz=88,slow=5.8
NKC Novy Kostel 73.19 319 *e*P **P** **23 01 10.9 0.0**
NKC *e* 23 01 21.8
NKC Novy Kostel 73.19 319 *e*P **P** **23 01 10.9 0.0**
NKC *e*pP **sP** **23 01 21.8 -0.2**
WERN Wernitzgruen 73.23 319 *e*P **P** **23 01 11.9 +0.6**
comp=Z,98nm,2.8s,baz=88,slow=5.8
WERN *e*pP **sP** **23 01 23.0 +0.7**
baz=88,slow=5.7
GUNZ Gunzen 73.26 319 *e*P **P** **23 01 11.9 +0.6**
comp=Z,20nm,1.4s,baz=88,slow=5.8
GUNZ *e*pP **sP** **23 01 23.0 +0.6**
baz=88,slow=5.7
WERD Werda 73.27 319 *e*P **P** **23 01 11.9 +0.5**
comp=Z,95nm,2.6s,baz=88,slow=5.8
ABTA Abfaltersbach 73.29 315 *e*P **P** **23 01 11.1 -0.6**
comp=Z,4.5nm,0.9s
ROTZ Rotzenmuhle 73.36 318 *e*P **P** **23 01 12.9 +1.0**
comp=Z,18nm,1.1s,baz=88,slow=5.8
ROTZ *e*pP **sP** **23 01 24.2 +1.2**
baz=88,slow=5.7
PLN Plauen 73.37 319 *e*P **P** **23 01 12.4 +0.5**
comp=Z,9.1nm,0.9s,baz=88,slow=5.8
PLN *e*pP **sP** **23 01 23.5 +0.5**
baz=88,slow=5.7
MANZ Manzenberg 73.42 318 *e*P **P** **23 01 13.2 +0.9**
comp=Z,34nm,1.6s,baz=88,slow=5.8
MANZ *e*pP **sP** **23 01 24.5 +1.1**
baz=88,slow=5.7
NEUB Neuenburg 73.58 320 *e*P **P** **23 01 13.6 +0.4**
comp=Z,14nm,1.1s,baz=88,slow=5.8
NEUB *e*pP **sP** **23 01 24.6 +0.3**
baz=88,slow=5.7
NORES NORESS Array B 73.60 330 P **P** **23 01 12.6 -0.5**
MOX Moxa 73.71 319 *e*P **P** **23 01 14.5 +0.5**
comp=Z,40nm,1.9s,baz=88,slow=5.8
MOX *e*pP **sP** **23 01 25.6 +0.6**
baz=88,slow=5.7
MOX *e*L L 23 43 45.5
comp=Z,81nm,18.3s
NOA NORSAR Array B 73.76 330 P **P** **23 01 13.3 -0.8**
comp=Z,5.5nm,0.7s,baz=90,slow=5.8,SNR=29
NOA LR LR 23 36 59.0
comp=Z,63nm,19.4s,baz=115,slow=38
WTTA Wattenberg 73.86 316 *i* P **P** **23 01 14.3 -0.8**
comp=Z,8.9nm,0.5s,SNR=6.7
WTTA Wattenberg 73.86 316 P **P** **23 01 14.3 -0.8**
FLTG Flechtingen 73.88 321 *e*P **P** **23 01 14.6 -0.3**
comp=Z,8.7nm,0.9s,baz=88,slow=5.8
WATA Walderalm 73.89 316 *e*P **P** **23 01 14.3 -1.0**
comp=Z,4.1nm,0.5s
TEOL Teolo 73.95 314 IAmb IAmb 23 01 17.0
comp=Z,10.0nm,0.6s
GRA1 Grafenberg Arr 74.00 318 P **P** **23 01 15.6 -0.1**
GRA1 IAmb IAmb 23 01 17.3
comp=Z,12nm,0.9s
GRF Grafenberg Arr 74.00 318 P **P** **23 01 15.6 -0.1**
GRF pmax pmax
comp=Z,12nm,0.9s
GRF Grafenberg Arr 74.00 318 *e*P **P** **23 01 16.6 +0.9**
comp=Z,13nm,1.0s,baz=88,slow=5.8
GRF *e*pP **sP** **23 01 27.7 +0.9**
baz=88,slow=5.7
GRF *e*L L 23 37 31.2
comp=Z,107nm,18.2s
GRFO Grafenberg 74.00 318 P **P** **23 01 15.7 0.0**
GRFO pmax pmax
comp=Z,11nm,0.9s
GRFO Grafenberg 74.00 318 P **P** **23 01 15.7 0.0**
GRFO IAmb IAmb 23 01 17.3
comp=Z,11nm,0.9s
FUR Furstenfeldbru 74.05 316 *e*P **P** **23 01 16.1 0.0**
comp=Z,25nm,1.2s,baz=88,slow=5.8
SQTA Sankt Quirin 74.15 315 *e*P **P** **23 01 15.9 -0.9**
comp=Z,8.5nm,0.5s
MOTA Moosalm 74.21 316 *i* P **P** **23 01 16.3 -0.9**
comp=Z,14nm,1.2s,SNR=5.7
ASSE Asse, Remlinge 74.23 321 *e*P **P** **23 01 17.1 +0.2**
comp=Z,16nm,1.1s,baz=88,slow=5.8
ASSE *e*pP **sP** **23 01 28.3 +0.4**
baz=88,slow=5.7
BSEG Bad Segeberg 74.37 323 *e*P **P** **23 01 18.6 +0.9**
comp=Z,25nm,1.0s,baz=88,slow=5.8
CLZ Clausthal 74.43 320 *e*P **P** **23 01 18.7 +0.5**
comp=Z,13nm,0.8s,baz=88,slow=5.8
CLZ *e*pP **sP** **23 01 30.1 +0.8**
baz=88,slow=5.7
RETA Reutte 74.44 316 *i* P **P** **23 01 17.8 -0.6**
comp=Z,7.8nm,0.5s,SNR=7.0
FETA Feichten 74.49 315 *i* P **P** **23 01 18.3 -0.5**
comp=Z,11nm,1.1s,SNR=5.4
ZCCA Zocca 74.52 313 P **P** **23 01 18.6 -0.2**
ZCCA IAmb IAmb 23 01 24.9
comp=Z,15nm,0.9s
NRDL Niedersach Rie 74.56 321 *e*P **P** **23 01 19.7 +0.9**
comp=Z,19nm,1.2s,baz=88,slow=5.8
NRDL *e*pP **sP** **23 01 31.0 +1.1**
baz=88,slow=5.7
GTTG Gottingen 74.70 320 *e*P **P** **23 01 20.1 +0.4**
comp=Z,22nm,1.1s,baz=88,slow=5.8
UBBA Unterbreizbach 74.72 319 *e*P **P** **23 01 20.2 +0.5**
comp=Z,19nm,1.9s,baz=88,slow=5.8
UBR Ueberruh 74.86 316 *e*P **P** **23 01 20.6 -0.3**
comp=Z,14nm,1.0s,baz=88,slow=5.8
UBR *e*pP **sP** **23 01 31.7 -0.2**
baz=88,slow=5.7
DAVA Damuels 75.05 316 *i* P **P** **23 01 21.7 -0.3**
comp=Z,14nm,0.7s,SNR=9.4
MILB Miltenberg 75.24 318 *e*P **P** **23 01 23.2 +0.3**
comp=Z,9.3nm,0.9s,baz=88,slow=5.8
MILB *e*pP **sP** **23 01 34.4 +0.5**
baz=88,slow=5.7
TUE Stuetta 75.48 315 IAmb IAmb 23 01 37.5
comp=Z,10nm,0.8s
KASTN Kahler Asten 75.69 320 *e*P **P** **23 01 25.9 +0.4**
comp=Z,20nm,1.9s,baz=88,slow=5.8
KASTN *e*pP **sP** **23 01 37.1 +0.5**
baz=88,slow=5.7
TNS Taunus Mts 75.75 319 *e*P **P** **23 01 26.3 +0.4**
comp=Z,7.7nm,0.8s,baz=88,slow=5.8
TNS *e*pP **sP** **23 01 37.4 +0.4**
baz=88,slow=5.7
BFO Black Forest 76.00 317 P **P** **23 01 27.0 -0.3**
BFO pmax pmax
comp=Z,6.0nm,1.0s
BFO Black Forest 76.00 317 P **P** **23 01 27.0 -0.3**
BFO Black Forest 76.00 317 *e*P **P** **23 01 27.0 -0.3**
comp=Z,7.5nm,1.0s,baz=88,slow=5.8
BFO *e*pP **sP** **23 01 38.2 -0.2**
baz=88,slow=5.7
IBBN Ibbenburen 76.01 321 *e*P **P** **23 01 27.8 +0.6**
comp=Z,57nm,1.7s,baz=88,slow=5.8
LBTB Lobatse 76.11 239 P **P** **23 01 29.6 +1.2**
LBTB pmax pmax
comp=Z,28nm,0.8s
LBTB Lobatse 76.11 239 P **P** **23 01 29.6 +1.2**
BUG Bochum--Univer 76.39 320 *e*P **P** **23 01 29.9 +0.5**
comp=Z,17nm,0.8s,baz=88,slow=5.8
BUG *e*pP **PcP** **23 01 41.3 +0.2**
baz=88,slow=5.7
AHRW Bad Neuenahr-A 76.60 319 *e*P **P** **23 01 31.1 +0.6**
comp=Z,13nm,1.0s,baz=88,slow=5.8
AHRW *e*pP **PcP** **23 01 42.6 +0.5**
baz=88,slow=5.7
CDF Champ du Feu 76.69 317 *e*P **P** **23 01 30.2 -1.1**
CDF pmax pmax
comp=Z,7.0nm,1.0s
KEST Kesra 76.69 304 P **P** **23 01 31.3 -0.3**
comp=Z,13nm,0.9s,baz=262,slow=0.9,SNR=13
KEST LR LR 23 41 31.5
comp=Z,76nm,18.3s,baz=289,slow=40
KEST Kesra 76.69 304 IAmb IAmb 23 01 32.4
comp=Z,19nm,1.0s
SENIN Lac Senin/Sane 76.90 315 IAmb IAmb 23 01 33.9
comp=Z,26nm,1.5s
SBF Sospel 77.10 312 *e*P **P** **23 01 32.7 -1.0**
SBF pmax pmax
comp=Z,10.0nm,0.8s
MEM Membach 77.27 319 *d*P **P** **23 01 33.9 -0.5**
MEM *d*sP **PcP** **23 01 45.0 +0.1**
WLF Walferdange 77.28 318 *d*P **P** **23 01 34.2 -0.3**
WLF *d*sP **sP** **23 01 47.0 +1.4**
WLF Walferdange 77.28 318 *e*P **P** **23 01 35.2 +0.7**
comp=Z,157nm,3.5s,baz=88,slow=5.8
HAU Haudompre 77.35 317 *e*P **P** **23 01 33.8 -1.2**
HAU pmax pmax
comp=Z,10.0nm,0.9s
LPG La Plagne 77.39 314 *e*P **P** **23 01 34.9 -0.6**
LPG pmax pmax
comp=Z,25nm,0.7s
LPL La Plagne 77.40 314 *e*P **P** **23 01 34.9 -0.6**
LPL pmax pmax
comp=Z,31nm,0.7s
MBDF Montbardon 77.47 313 *e*P **P** **23 01 34.3 -1.5**
MBDF pmax pmax
comp=Z,11nm,0.8s
BNI Bardonecchia 77.49 314 P **P** **23 01 35.8 -0.1**
BNI Bardonecchia 77.49 314 IAmb IAmb 23 01 40.2
comp=Z,11nm,0.8s
CABF La Chapelle 77.70 315 *e*P **P** **23 01 36.4 -0.6**
CABF pmax pmax
comp=Z,11nm,0.8s
FRF La Foret Royal 77.71 312 *e*P **P** **23 01 36.2 -0.8**
FRF pmax pmax
comp=Z,16nm,0.9s
BCLA Clavier 77.74 319 *d*P **P** **23 01 37.1 +0.1**
BCLA *d*sP **sP** **23 01 47.9 -0.2**
BOSA Boshof 77.80 236 P **P** **23 01 38.8 +0.9**
comp=Z,42nm,0.7s,baz=76,slow=4.1,SNR=121
BOSA LR LR 23 31 26.7
comp=Z,96nm,19.2s,baz=40,slow=32
BOSA Boshof 77.80 236 P **P** **23 01 38.8 +0.9**
LMR La Mourre 77.84 312 *e*P **P** **23 01 36.8 -0.9**
LMR pmax pmax
comp=Z,24nm,1.3s
BGES Gesves 77.88 319 *d*P **P** **23 01 37.7 -0.1**
BGES *d*sP **sP** **23 01 49.5 +0.6**
ORIF Oris-en-Rattie 78.07 314 *e*P **P** **23 01 38.5 -0.6**
ORIF pmax pmax
comp=Z,5.0nm,0.8s
GIVF Givet 78.08 319 *e*P **P** **23 01 38.3 -0.6**
GIVF pmax pmax
comp=Z,13nm,1.2s
BMRD Maredsous 78.09 319 *d*P **P** **23 01 39.1 +0.1**
BMRD *d*sP **sP** **23 01 50.2 +0.1**
DOU Dourbes 78.23 319 *b*P **P** **23 01 39.9 +0.2**
DOU *d*sP **sP** **23 01 51.6 +0.7**
BAIF Baives 78.48 319 *e*P **P** **23 01 40.7 -0.4**
BAIF pmax pmax
comp=Z,13nm,1.0s
VIVF Saint-Julien-l 78.93 314 *e*P **P** **23 01 43.0 -0.8**
VIVF pmax pmax
comp=Z,18nm,1.1s
SSB Saint Sauveur 78.96 314 P **P** **23 01 44.0 +0.1**
NOR Nord 79.00 352 *i* P **P** **23 01 42.8 -0.7**
NOR IAmb IAmb 23 01 43.4
comp=Z,6.0nm,0.6s
NOR Nord 79.00 352 *i* P **P** **23 01 42.7 -0.7**
NOR pmax pmax
comp=Z,6.0nm,0.6s
LOR Lormes 79.12 316 *e*P **P** **23 01 43.6 -1.2**
LOR pmax pmax
comp=Z,11nm,0.9s
AVF Avril sur Loir 79.54 316 *e*P **P** **23 01 45.9 -1.1**
AVF pmax pmax
comp=Z,10.0nm,0.8s
BGF Bois d'Agland 79.92 316 *e*P **P** **23 01 49.3 +0.2**
BGF pmax pmax
comp=Z,10.0nm,1.0s
GAMB Gambell 79.95 27 P 23 01 48.5
baz=281
CLF Chambon-Foret 80.06 317 IAmb IAmb 23 01 50.8
comp=Z,16nm,0.9s
TCF Toulx Ste Croi 80.40 315 *e*P **P** **23 01 51.2 -0.5**
TCF pmax pmax
comp=Z,13nm,1.0s
DZM Mont Dzumac 80.60 116 P **P** **23 01 54.7 +1.4**
comp=Z,5.3nm,0.7s,baz=94,slow=22,SNR=2.4
CAF Calviac 80.75 314 *e*P **P** **23 01 53.2 -0.4**
CAF pmax pmax
comp=Z,8.0nm,0.9s
RJF Les Rejaudoux 81.06 314 *e*P **P** **23 01 54.9 -0.3**
RJF pmax pmax
comp=Z,13nm,0.8s
FLN La Foliniere 81.72 318 *e*P **P** **23 01 57.7 -1.0**
FLN pmax pmax
comp=Z,12nm,0.9s
GRR Gorron 82.04 318 *e*P **P** **23 01 59.9 -0.5**
GRR pmax pmax
comp=Z,37nm,1.8s
EPF Esparros 82.34 312 *e*P **P** **23 02 02.3 +0.2**
EPF pmax pmax
comp=Z,12nm,1.3s
RDOG Red Dog Mine 82.35 22 P 23 02 01.8
baz=288
ANM Nome 82.45 25 P **P** **23 02 02.9 +0.7**
ANM pmax pmax
comp=Z,12nm,1.2s
ANM Nome 82.45 25 P **P** **23 02 02.9 +0.7**
ANM Nome 82.45 25 P 23 02 02.7
baz=287
SUR Sutherland 82.78 234 P **P** **23 02 06.3 +1.6**
ETSF Etsaut 83.01 312 *e*P **P** **23 02 05.2 -0.4**
ETSF pmax pmax
comp=Z,12nm,1.0s
A21K Barrow 83.22 18 P 23 02 06.7
baz=294
ROSF Rostrenen 83.63 318 *e*P **P** **23 02 07.8 -0.8**
ROSF pmax pmax
comp=Z,22nm,0.9s
QUIF Quistinic 83.66 318 *e*P **P** **23 02 07.6 -1.1**
QUIF pmax pmax
comp=Z,106nm,2.2s
MAW Mawson 84.27 191 P **P** **23 02 12.1 +0.8**
comp=Z,9.3nm,0.8s,baz=5.0,slow=8.1,SNR=11
MAW LR LR 23 33 16.7
comp=Z,71nm,19.1s,baz=56,slow=31
MAW Mawson 84.27 191 P **P** **23 02 12.5 +1.2**
baz=84,SNR=5.7
MAW Mawson 84.27 191 P **P** **23 02 12.1 +0.8**
MAW pmax pmax
comp=Z,3.0nm,0.9s
MAW Mawson 84.27 191 IAmb IAmb 23 02 13.2
comp=Z,2.8nm,0.9s
SCO Scoresbysund 84.81 342 *i* P **P** **23 02 14.6 +0.4**
SCO IAmb IAmb 23 02 15.4
comp=Z,2.0nm,0.7s
SCO Scoresbysund 84.81 342 *i* P **P** **23 02 14.5 +0.4**
SCO pmax pmax
comp=Z,2.0nm,0.7s
ESDC Sonseca Array 86.27 310 P **P** **23 02 21.9 -0.3**
comp=Z,5.6nm,0.7s,baz=60,slow=4.2,SNR=46
NEEM North Greenlan 86.35 353 *i* P **P** **23 02 21.7 -0.4**
NEEM IAmb IAmb 23 02 25.1
comp=Z,3.2nm,0.7s
NEEM *i* 23 02 34.3
PAB San Pablo 86.59 310 P **P** **23 02 23.9 +0.2**

PAB pmax pmax
comp=Z,5.0nm,0.8s
PAB San Pablo 86.59 310 P **P** **23 02 23.9 +0.2**
TOLK Toolik Lake Re 86.60 19 IAmb IAmb 23 02 36.9
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 86.60 19 P 23 02 23.7
baz=300
COLD Coldfoot 87.11 20 P 23 02 25.9
baz=300
PBRG Braganca 87.72 312 *eP* **P** **23 02 28.6 -0.5**
comp=Z,16nm,2.2s
SUMG Summit 87.88 347 *i* P **P** **23 02 29.3 -0.5**
SUMG IAmb IAmb 23 02 30.1
comp=Z,5.8nm,0.7s
SUMG Summit 87.88 347 *i* P **P** **23 02 29.2 -0.5**
SUMG pmax pmax
comp=Z,6.0nm,0.7s
SUMG Summit 87.88 347 P **P** **23 02 29.5 -0.2**
SUMG IAmb IAmb 23 02 43.7
comp=Z,14nm,1.0s
TORD Torodi Ar. Bea 87.92 283 P **P** **23 02 30.6 +0.1**
comp=Z,16nm,0.8s,baz=80,slow=4.5,SNR=47
TORD PP **PP** **23 05 57.6 +0.8**
comp=Z,1.2nm,0.8s,baz=61,slow=7.5,SNR=4.4
TORD LR LR 23 43 32.7
comp=Z,46nm,20.3s,baz=45,slow=37
TORD Torodi Ar. Bea 87.92 283 P **P** **23 02 30.7 +0.2**
TORD IAmb IAmb 23 02 31.7
comp=Z,13nm,0.8s
CHUM Lake Minchumin 87.98 24 P 23 02 30.9
baz=298
MLY Manley 88.02 22 IAmb IAmb 23 02 44.6
comp=Z,9.5nm,0.9s
MLY Manley 88.02 22 P 23 02 30.2
baz=300
MVO Moncorvo 88.11 312 *eP* **P** **23 02 31.2 +0.2**
BPAW Bear Paw Mtn. 88.39 23 P 23 02 31.6
baz=299
I23K Minto, Yukon-K 88.47 22 IAmb IAmb 23 02 47.0
comp=Z,8.8nm,0.9s
I23K Minto, Yukon-K 88.47 22 P 23 02 32.0
baz=301
PPLA Purkeypile 88.50 25 P 23 02 32.5
baz=298
POLO Lamas de Olo 88.60 312 *eP* **P** **23 02 33.3 -0.1**
PCAB Cabril 88.67 313 *eP* **P** **23 02 34.1 +0.5**
MTE Manteigas 88.71 311 *eP* **P** **23 02 34.1 +0.2**
comp=Z,22nm,1.9s
PCBR Castelo Branco 88.83 311 *eP* **P** **23 02 34.7 +0.4**
NEA2 Nenana 88.86 22 P 23 02 34.0
baz=301
PVIS Viseu 88.87 312 *eP* **P** **23 02 35.2 +0.6**
comp=Z,27nm,1.8s
PMRV Marv??o 88.88 310 *eP* **P** **23 02 35.6 +0.9**
TULEG Thule 88.94 356 *i* P **P** **23 02 33.4 -0.8**
TULEG IAmb IAmb 23 02 34.2
comp=Z,6.8nm,0.7s
TULEG *i* 23 02 45.5
MDM Murphy Dome 88.97 22 P **P** **23 02 34.3 -0.2**
TRF Thorofare Moun 88.98 24 P 23 02 35.0
baz=300
PBAR Barrancos 88.99 309 *eP* **P** **23 02 35.6 +0.5**
POKR Poker Plat Res 89.18 22 P 23 02 35.5
baz=303
SKT Skwentna 89.21 25 P **P** **23 02 35.3 -0.4**
SKT Skwentna 89.21 25 P 23 02 35.7
baz=299
SPCR Spurr Chakacha 89.30 26 P 23 02 36.3
baz=298
MCK McKinley 89.36 23 IAmb IAmb 23 02 50.9
comp=Z,16nm,1.0s
MCK McKinley 89.36 23 P 23 02 36.7
baz=301
IL31 89.56 22 IAmb IAmb 23 02 50.2
comp=Z,6.5nm,0.9s
ILAR Eielson Array 89.56 22 P **P** **23 02 36.3 -1.0**
comp=Z,2.6nm,0.7s,baz=302,slow=4.7,SNR=42
ILAR LR LR 23 49 55.9
comp=Z,58nm,18.7s,baz=306,slow=40
ILAR Eielson Array 89.56 22 P **P** **23 02 36.0 -1.3**
ILAR Eielson Array 89.56 22 P **P** **23 02 36.0 -1.3**
PMTG Montargil 89.61 310 *eP* **P** **23 02 38.2 +0.2**
EVO Evora 89.61 310 *eP* **P** **23 02 38.5 +0.4**
PRP Porcupine Dome 89.62 21 P **P** **23 02 37.9 +0.2**
PRP IAmb IAmb 23 02 52.3
comp=Z,15nm,1.0s
PRP Porcupine Dome 89.62 21 P 23 02 37.5
baz=304
HDA Harding Lake 89.74 22 P 23 02 37.0
baz=303
HDA P 23 02 37.0
baz=303
SUA Susitna One 89.79 25 P 23 02 38.4
baz=300
WAT2 Susitna Watana 89.89 24 P 23 02 38.4
baz=302
CAPN Captain Cook N 89.96 26 P 23 02 39.2
baz=299
PNCL Nicolau / Gran 90.13 309 *eP* **P** **23 02 41.0 +0.5**
PMR Palmer 90.39 25 P 23 02 41.2
baz=301
RC01 Rabbit Creek A 90.40 26 P 23 02 41.8
baz=301
WAT6 Susitna Watana 90.43 24 P 23 02 41.5
baz=302
ICESG Greenland Ices 90.59 345 *i* P **P** **23 02 42.3 -0.1**
ICESG IAmb IAmb 23 02 43.4
comp=Z,7.8nm,0.6s
SML Sawmill 90.61 25 P 23 02 42.6
baz=302
SYO Syowa Base 90.88 197 ‖*e*PcP **PcP** **23 02 46.2 +2.1**
SYO Syowa Base 90.88 197 ‖*i*pP pP 23 02 52.6 +1.2
UPNV Upernavik 91.01 351 *i* P **P** **23 02 44.1 +0.2**
UPNV IAmb IAmb 23 02 44.8
comp=Z,7.7nm,0.8s
SCRK Sand Creek 91.05 22 P **P** **23 02 44.2 -0.2**
SCRK IAmb IAmb 23 02 45.4
comp=Z,9.1nm,0.6s
SCRK Sand Creek 91.05 22 P 23 02 44.3
baz=306
DOT Dot Lake 91.22 22 IAmb IAmb 23 02 58.5
comp=Z,6.7nm,0.8s
K27K Chicken 91.70 21 P 23 02 48.3
baz=307
KLU Klutina 91.74 24 P 23 02 48.3
baz=304
N25K Chitina, Valde 92.20 24 P 23 02 50.7
baz=305
L27K Beaver Creek, 92.38 22 P 23 02 51.0
baz=308
BMRM Bremner River 92.57 24 P 23 02 52.3
baz=305
C36M Paulatuk 92.88 12 IAmb IAmb 23 03 03.6
comp=Z,15nm,1.4s
C36M Paulatuk 92.88 12 P 23 02 52.1
baz=324
MCARA McCarthy VSAT 92.94 24 P 23 02 54.1
baz=306
KOWA Kowa 92.95 286 P **P** **23 02 54.5 +0.5**
DBIC Dimbokro 95.77 278 P **P** **23 03 07.0 0.0**
comp=Z,7.5nm,1.0s,baz=85,slow=1.1,SNR=3.7
DBIC LR LR 23 47 40.6
comp=Z,55nm,18.3s,baz=86,slow=36
VNDA Vanda 99.19 168 LR LR 23 45 45.8
comp=Z,61nm,19.9s,baz=300,slow=34
YKA Yellowknife Ar 100.76 13 P **Pdif** **23 03 27.9 -0.5**
comp=Z,0.5nm,0.8s,baz=332,slow=4.1,SNR=7.5
YKA PP **PP** **23 07 42.8 +7.6**
comp=Z,1.2nm,0.9s,baz=338,slow=7.5,SNR=8.6
YKA PKKPbc **PKKPbc** **23 19 39.8 -4.0**
comp=Z,0.4nm,0.8s,baz=150,slow=2.9,SNR=4.9
NIUE Niue 101.22 107 P **Pdif** **23 03 31.8 +0.5**
baz=101,SNR=9.6
ULM Lac du Bonnet 115.55 6 PKP **PKiKP** **23 08 21.0 -1.1**
comp=Z,1.3nm,0.7s,baz=271,slow=2.0,SNR=3.1
ULM PKKPbc **PKKPbc** **23 18 54.0 -2.9**
comp=Z,1.9nm,0.6s,baz=174,slow=5.4,SNR=4.1
PDAR Pinedale Array 119.87 19 PKP **PKPdf** **23 08 30.4 -0.6**
comp=Z,1.8nm,0.6s,baz=156,slow=0.1,SNR=17
PDAR Pinedale Array 119.87 19 PKPdf **PKPdf** **23 08 30.2 -0.8**
NVAR Mina Array Sba 120.24 28 PKP **PKiKP** **23 08 32.8 +0.9**
comp=Z,3.6nm,0.6s,baz=317,slow=1.9,SNR=39
NV11 Mina Array Sit 120.30 28 PKPdf **PKiKP** **23 08 32.1 +0.1**
ANMO Albuquerque 127.98 20 *i* PKIKP **PKPdf** **23 08 46.6 -0.1**
ANMO Albuquerque 127.98 20 PKPdf **PKiKP** **23 08 47.7 +0.4**
TUC Tucson 128.69 26 PKIKP **PKiKP** **23 08 49.0 +0.3**
TUC Tucson 128.69 26 PKPdf **PKiKP** **23 08 49.0 +0.3**

TXAR Lajitas Array 134.05 20 PKP **PKPdf** **23 08 57.0 -1.3**
comp=Z,1.4nm,0.5s,baz=95,slow=0.6,SNR=22
TXAR Lajitas Array 134.05 20 PKIKP **PKPdf** **23 08 58.3 +0.1**
TXAR Lajitas Array 134.05 20 PKPdf **PKPdf** **23 08 58.3 +0.1**
BDFB Brasilia 142.12 263 PKhKP PKPpre 23 09 07.7
comp=Z,4.7nm,0.6s,baz=133,slow=1.6,SNR=5.0
BDFB Brasilia 142.12 263 PKIKP **PKPdf** **23 09 13.7 +0.4**
BDFB Brasilia 142.12 263 PKPdf **PKPdf** **23 09 13.7 +0.4**
TEIG Tepich 145.94 2 **PKPab** **23 09 20.8 0.0**
CPUP Villa Florida 149.49 242 PKP **PKPdf** **23 09 24.1 -1.3**
comp=Z,14nm,0.8s,baz=186,slow=10,SNR=3.3
CPUP PKPbc **PKPbc** **23 09 28.6 -1.4**
comp=Z,13nm,0.7s,baz=56,slow=1.1,SNR=6.0
CPUP Villa Florida 149.49 242 PKP2 **PKPbc** **23 09 29.1 -0.9**
CPUP Villa Florida 149.49 242 PKPbc **PKPbc** **23 09 29.1 -0.9**
PLCA Paso Flores 149.68 206 PKP **PKPdf** **23 09 25.8 +0.3**
comp=Z,6.7nm,0.9s,baz=177,slow=6.9,SNR=3.0
PLCA PKPbc **PKPbc** **23 09 30.4 +0.2**
comp=Z,5.3nm,0.7s,baz=138,slow=2.8,SNR=14
PLCA Paso Flores 149.68 206 PKP2 **PKPbc** **23 09 30.5 +0.4**
PLCA Paso Flores 149.68 206 **PKPbc** **23 09 30.4 +0.4**
PTGA Pitinga 149.98 294 PKPdf **PKPdf** **23 09 27.3 +0.7**
PTGA PKPbc **PKPbc** **23 09 31.3 -0.3**
PTGA **sPKPdf** **23 09 37.8 -0.3**
SIV San Ignacio 154.69 262 PKP **PKPdf** **23 09 33.1 -0.4**
comp=Z,1.5nm,0.8s,baz=84,slow=3.7,SNR=6.9
SIV PKPbc **pPKPdf** **23 09 40.6 -1.4**
comp=Z,1.3nm,0.5s,baz=166,slow=5.9,SNR=6.9
ROSC El Rosal 157.31 325 PKP **PKPdf** **23 09 37.0 -0.5**
comp=Z,12nm,0.5s,baz=132,slow=3.7,SNR=3.8
ROSC PKPab **PKPab** **23 10 08.3 -0.2**
comp=Z,12nm,0.5s,baz=98,slow=12,SNR=4.4
ROSC El Rosal 157.31 325 PKPdf **PKPdf** **23 09 37.6 +0.1**
LVC Limon Verde 160.66 241 PKPab **PKPab** **23 10 23.0 0.0**
comp=Z,6.3nm,0.7s,baz=90,slow=4.1,SNR=7.4
LVC Limon Verde 160.66 241 PKP2 **PKPab** **23 10 24.0 +1.0**
LVC Limon Verde 160.66 241 **PKPab** **23 10 24.0 +1.0**
LPAZ La Paz 161.45 261 PKP **PKPdf** **23 09 41.7 -0.8**
comp=Z,3.3nm,0.8s,baz=36,slow=3.6,SNR=13
LPAZ PKPab **PKPab** **23 10 24.7 -2.2**
comp=Z,4.5nm,0.9s,baz=82,slow=5.3,SNR=7.3
MNMC Minye Minye 162.38 251 PKPdf **PKPdf** **23 09 43.4 +0.4**

*NEIC **09** 22:59:36.7±2.1, 22°.2S±0°.2×179°.5W±0°.1, h584km±10km, mb4.1/20, Error ellipse: s-maj=23.2km s-min=17.8km az=153.0*
*IDC **09** 22:59:37.8±3.2, 22°.28S×179°.58W, h584km±26km, mb3.1/8, mb1 3.4/9, mb1mx3.2/27, mbtmp4.1/9, Error ellipse: s-maj=58.6km s-min=16.6km az=143.0*
ISC 09 22:59:36.6±0.6, **22°.3S**±0°.1×**179°.50W**±0°.10, **h579**km, **n42,** σ1§**01**/41, **mb4.0**/15, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.11**	**333**	P	**P**	**23 01 09.8**	**+0.5**
	4.5nm,0.3s,baz=182,slow=12,SNR=15						
MSVF				S	**S**	**23 02 26.3**	**+1.4**
	baz=180,slow=20,SNR=1.9						
MSVF	**Nonsavu**	**5.11**	**333**	P	**P**	**23 01 10.0**	**+0.7**
NIUE	**Niue**	**9.52**	**72**	P	**P**	**23 01 50.4**	**+0.2**
SANVU	**Saraoutou**	**14.32**	**296**	P	**P**	**23 02 37.5**	**-1.5**
URZ	**Urewera**	**16.15**	**190**	P	**P**	**23 02 55.8**	**-0.4**
URZ				IAmb	IAmb	23 03 12.9	
	comp=Z,9.8nm,0.8s						
BKZ	**Black Stump Fm**	**17.14**	**191**	P	**P**	**23 03 06.8**	**+1.6**
BKZ				IAmb	IAmb	23 03 11.2	
	comp=Z,4.0nm,0.8s						
BFZ	**Birch Farm**	**18.66**	**190**	P	**P**	**23 03 17.8**	**-1.1**
SNZO	**South Karori**	**19.56**	**193**	P	**P**	**23 03 27.4**	**+0.4**
PLWZ	**Palliser**	**19.70**	**192**	P	**P**	**23 03 29.5**	**+1.2**
KHZ	**Kahutara**	**20.87**	**195**	P	**P**	**23 03 40.1**	**+1.3**
ARMA	**Armidale**	**27.04**	**247**	P	**P**	**23 04 34.6**	**+0.7**
ARMA				IAmb	IAmb	23 04 48.5	
	comp=Z,5.5nm,0.9s						
EIDS	**Eidsvold**	**27.06**	**258**	P	**P**	**23 04 34.9**	**+0.9**
CTA	**Charters Tower**	**31.97**	**268**	P	**P**	**23 05 15.4**	**-1.0**
	comp=Z,9.0nm,1.0s,baz=97,slow=8.1,SNR=3.9						
CTAO	**Charters Tower**	**31.97**	**268**	P	**P**	**23 05 16.2**	**-0.2**
CTAO				IAmb	IAmb	23 05 29.0	
	comp=Z,6.3nm,1.1s						
TOO	**Toolangi**	**33.71**	**235**	P	**P**	**23 05 32.1**	**+1.2**
TOO				IAmb	IAmb	23 05 35.2	
	comp=Z,3.1nm,0.7s						
STKA	**Stephens Creek**	**35.76**	**246**	P	**P**	**23 05 49.2**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=84,slow=10,SNR=3.4						
BBOO	**Buckleboo**	**40.51**	**245**	P	**P**	**23 06 26.6**	**+0.2**
BBOO				IAmb	IAmb	23 06 27.2	
	comp=Z,5.9nm,0.9s						
AS31	**Alice Springs**	**42.77**	**259**	P	**P**	**23 06 45.5**	**+1.1**
ASAR	**Alice Springs**	**42.77**	**259**	P	**P**	**23 06 45.0**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=96,slow=8.1,SNR=18						
ASAR	**Alice Springs**	**42.77**	**259**	P	**P**	**23 06 44.9**	**+0.5**
WR0	**Warramunga Arr**	**42.81**	**264**	P	**P**	**23 06 44.3**	**-0.4**
WB0	**Warramunga Arr**	**42.98**	**265**	P	**P**	**23 06 45.1**	**-1.0**
WB0				IAmb	IAmb	23 06 46.3	
	comp=Z,4.3nm,0.9s						
WB2	**Warramunga Arr**	**42.99**	**264**	P	**P**	**23 06 45.3**	**-0.8**
WB2				IAmb	IAmb	23 06 54.9	
	comp=Z,5.9nm,1.1s						
WRA	**Warramunga Arr**	**43.00**	**264**	P	**P**	**23 06 45.8**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=98,slow=8.0,SNR=9.9						
WRA	**Warramunga Arr**	**43.00**	**264**	IAmb	IAmb	23 06 47.0	
	comp=Z,0.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.43**	**264**	P	**P**	**23 07 48.7**	**-0.7**
NWAO	**Narrogin (SRO)**	**56.32**	**245**	P	**P**	**23 08 21.8**	**-1.8**
NWAO				IAmb	IAmb	23 08 30.3	
	comp=Z,24nm,1.1s						
MORW	**Morawa**	**57.86**	**249**	P	**P**	**23 08 33.7**	**-0.4**
MORW				IAmb	IAmb	23 08 36.1	
	comp=Z,11nm,1.1s						
PETK	**Petropavlovsk-**	**77.68**	**346**	P	**P**	**23 10 34.7**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=122,slow=7.3,SNR=1.7						
NVAR	**Mina Array Bea**	**83.30**	**44**	P	**P**	**23 11 04.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=230,slow=8.1,SNR=4.0						
NVAR	**Mina Array Bea**	**83.30**	**44**	P	**P**	**23 11 03.7**	**+0.1**
PKCU	**Pink Cliffs**	**86.72**	**47**	P	**P**	**23 11 17.1**	**-3.2**
TXAR	**Lajitas Array**	**89.20**	**58**	P	**P**	**23 11 32.5**	**+0.7**
	comp=Z,1.0nm,1.0s,baz=189,slow=2.4,SNR=4.2						
TXAR	**Lajitas Array**	**89.20**	**58**	P	**P**	**23 11 31.0**	**-0.8**
ILAR	**Eielson Array**	**90.39**	**13**	P	**P**	**23 11 36.7**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=214,slow=4.8,SNR=4.3						
ILAR	**Eielson Array**	**90.39**	**13**	P	**P**	**23 11 35.4**	**-1.0**
AKASG	**Malin Array Be**	**143.88**	**329**	PKP	PKPbc	23 18 05.5	-0.2
	comp=Z,1.0nm,0.3s,baz=40,slow=3.8,SNR=6.4						
AKASG	**Malin Array Be**	**143.88**	**329**		PKPbc	23 18 05.4	-0.3
BRTR	**Keskin Array B**	**146.97**	**309**	PKPbc	**PKPbc**	**23 18 15.7**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=124,slow=5.4,SNR=4.5						
CLL	**Collm**	**149.47**	**344**	*i* PKPbc	**PKiKP**	**23 18 21.6**	**0.0**
	comp=Z,8.0nm,1.1s						
CLL				*i* PKPab	**PKPab**	**23 18 28.8**	**+0.5**
CLL	**Collm**	**149.47**	**344**		**PKiKP**	**23 18 21.6**	**0.0**
GERES	**GERESS Array B**	**151.52**	**342**	PKPbc	**PKiKP**	**23 18 26.6**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=34,slow=0.5,SNR=4.7						

*IDC **09** 23:09:41.6±6.6, 84°.64N×96°.01E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.4/42, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=133.3km s-min=41.9km az=37.0*
*NEIC **09** 23:09:43.6±0.3, 84°.6N±0°.2×96°.7E±0°.8, h10km±6km, mb4.1/10, Error ellipse: s-maj=21.7km s-min=10.9km az=186.0*
ISC 09 23:09:43.4±0.9, **84°.6N**±0°.2×**96°.3E**±0°.1, **h10**km, **n15,** σ0§**52**/13, **mb4.1**/7, **North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRIK	**Noril'sk**	**15.44**	**192**	Pn	**Pn**	**23 13 20.3**	**-0.5**
	0.4nm,0.3s,baz=28,slow=12,SNR=2.6						
NRIK	**Noril'sk**	**15.44**	**192**	IAmb	IAmb	23 13 28.6	
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**19.46**	**265**	P	**Pn**	**23 14 10.2**	**-0.8**
ARCES				IAmb	IAmb	23 15 00.5	
	comp=Z,26nm,1.6s						
BILL	**Bilibino**	**20.84**	**97**	P	**P**	**23 14 24.4**	**-0.2**
BILL				IAmb	IAmb	23 14 24.6	
	comp=Z,8.0nm,1.5s						
LSH	**Leshukonskoye**	**22.20**	**241**	*e*P	**P**	**23 14 40.1**	**+0.8**
	comp=Z,80nm,3.4s						
RDOG	**Red Dog Mine**	**23.67**	**67**	P	**P**	**23 14 54.4**	**-0.1**
RDOG				IAmb	IAmb	23 14 59.0	
	comp=Z,24nm,1.8s						
FINES	**FINESS Array B**	**27.32**	**260**	P	**P**	**23 15 27.3**	**-0.5**
	comp=Z,4.3nm,1.1s,baz=355,slow=13,SNR=1.9						

POKR Poker Plat Res 27.83 54 P **P** **23 15 32.3 0.0**
SONM Songino Array 37.02 169 P **P** **23 16 52.8 -0.1**
comp=Z,0.8nm,0.7s,baz=348,slow=8.2,SNR=8.4
SONM Songino Array 37.02 169 IAmb IAmb 23 16 54.2
comp=Z,0.7nm,0.8s
AKBB Malin Array Si 37.65 254 P **P** **23 16 58.4 +0.4**
AKBB IAmb IAmb 23 18 06.1
comp=Z,4.9nm,1.1s
MAKZ Makanchi 38.14 196 P **P** **23 17 02.9 +0.7**
MAKZ IAmb IAmb 23 17 55.2
comp=Z,6.5nm,1.9s
MK31 Makanchi Array 38.15 196 P **P** **23 17 02.3 +0.1**
MK31 IAmb IAmb 23 17 13.2
comp=Z,3.0nm,1.7s
MKAR Makanchi Array 38.15 196 P **P** **23 17 02.1 -0.1**
comp=Z,0.6nm,0.6s,baz=354,slow=6.7,SNR=9.4
ADK Adak 38.34 86 P **P** **23 17 04.0 +0.2**

*NOU **09** 23:19:56.8, 40°.17S×176°.13E, h0km, MLv3.4, North Island, New Zealand*
WEL 09 23:19:55.4, 40°.4S±0°.8×**17°.6E**±°, **h28**km±2km, **M3.2**/19, **ML3.5**/19, **MLv3.2**/19, **Error ellipse: s-maj=0.0km s-min=0.0km az=79.3, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVHZ	**Dannevirke**	**0.08**	**51**	P	Pb	23 20 00.4	+0.2
DVHZ				S	Sb	23 20 04.4	+0.8
PRWZ	**Pori Road**	**0.22**	**203**	P	Pn	23 20 02.6	-0.3
PRWZ				S	Sb	23 20 08.1	+2.2
POWZ	**Post Office Ro**	**0.25**	**260**	P	Pn	23 20 02.6	-0.6
TSZ	**Takapari Road**	**0.30**	**342**	P	Pb	23 20 02.9	+0.2
TSZ				S	Sb	23 20 08.5	+0.8
ANWZ	**Angora Road**	**0.32**	**111**	P	Pb	23 20 03.5	+0.6
ANWZ				S	Sn	23 20 10.2	+0.3
BFZ	**Birch Farm**	**0.35**	**160**	P	Pb	23 20 03.9	+0.5
WPHZ	**Waipukurau**	**0.39**	**44**	P	Pb	23 20 04.3	+0.4
WPHZ				S	Sn	23 20 11.6	-0.2
PRHZ	**Porangahau**	**0.43**	**79**	P	Pb	23 20 05.0	+0.5
PRHZ				S	Sn	23 20 13.1	+0.5
PNHZ	**Pukenui**	**0.44**	**11**	P	Pb	23 20 05.0	+0.2
PNHZ				S	Sn	23 20 12.4	-0.7
MRZ	**Mangatainoka R**	**0.50**	**231**	P	Pb	23 20 06.1	+0.5
MRZ				S	Sn	23 20 14.2	-0.2
CPWZ	**Castlepoint**	**0.57**	**171**	P	Pn	23 20 07.8	+0.1
CPWZ				S	Sn	23 20 18.5	+2.4
OHWZ	**Ohakea**	**0.61**	**283**	P	Pn	23 20 08.9	+0.8
PXZ	**Pawanui**	**0.67**	**62**	P	Pb	23 20 08.4	-0.1
PXZ				S	Sn	23 20 20.0	+1.4
HOWZ	**Holdsworth Sta**	**0.70**	**218**	P	Pn	23 20 09.3	-0.2
HOWZ				S	Sn	23 20 19.8	+0.4
KRHZ	**Kereru**	**0.74**	**17**	P	Pb	23 20 09.7	+0.1
KRHZ				S	Sn	23 20 20.7	+0.4
TMWZ	**Te Maipa**	**0.77**	**191**	P	Pb	23 20 09.9	-0.3
KAHZ	**Kahuranaki**	**0.82**	**48**	P	Pb	23 20 10.8	-0.2
KAHZ				S	Sn	23 20 23.9	+1.5
BHHZ	**Black Hill Sta**	**0.86**	**359**	P	Pb	23 20 11.8	0.0
BHHZ				S	Sn	23 20 23.8	+0.4
MTW	**Mount Morrison**	**0.92**	**209**	P	Pn	23 20 11.9	-0.6
KWHZ	**Kaweka Forest**	**0.96**	**16**	P	Pn	23 20 13.1	0.0
KWHZ				S	Sn	23 20 26.4	+0.6
MOVZ	**Moawhango**	**0.97**	**345**	P	Pb	23 20 13.7	+0.1
MCHZ	**McNeill Hill**	**1.02**	**28**	P	Pn	23 20 13.7	-0.1
MCHZ				S	Sb	23 20 28.3	+0.9
CKHZ	**Cape Kidnapper**	**1.03**	**48**	P	Pn	23 20 13.0	-0.9
KIW	**Kapiti Island**	**1.03**	**240**	P	Pn	23 20 14.2	+0.2
WAZ	**Wanganui**	**1.03**	**305**	P	Pb	23 20 15.5	+0.9
MTVZ	**Mangateitei**	**1.07**	**334**	P	Pb	23 20 15.6	+0.3
CAW	**Cannon Point**	**1.08**	**225**	P	Pn	23 20 14.4	-0.3
WNVZ	**Wahianoa**	**1.09**	**340**	P	Pb	23 20 15.8	+0.1
TRWZ	**Traveller**	**1.09**	**196**	P	Pn	23 20 14.1	-0.7
TRVZ	**Turoa**	**1.13**	**338**	P	Pb	23 20 16.7	+0.4
TUVZ	**Tukino**	**1.13**	**343**	P	Pb	23 20 16.5	+0.2
WHVZ	**Whangaehu Hut**	**1.13**	**340**	P	Pb	23 20 16.9	+0.5
PAWZ	**Paruwai Farm**	**1.15**	**206**	P	Pn	23 20 14.9	-0.7
FWVZ	**Far West T-bar**	**1.17**	**339**	P	Pb	23 20 17.0	0.0
PKVZ	**Pokaka**	**1.20**	**331**	P	Pb	23 20 17.5	0.0
SNVZ	**South Ngauruho**	**1.21**	**343**	P	Pb	23 20 17.7	-0.1
BKZ	**Black Stump Fm**	**1.22**	**15**	P	Pn	23 20 16.4	-0.3
OTVZ	**Oturere**	**1.23**	**345**	P	Pb	23 20 17.9	-0.1
NGZ	**Ngauruhoe**	**1.23**	**342**	P	Pb	23 20 18.0	0.0
MSWZ	**Moikau Station**	**1.24**	**210**	P	Pn	23 20 15.9	-1.0
ETVZ	**East Tongariro**	**1.25**	**346**	P	Pb	23 20 18.3	+0.1
TMVZ	**Te Maari**	**1.27**	**346**	P	Pb	23 20 18.7	0.0
NNVZ	**North Ngauruho**	**1.27**	**343**	P	Pb	23 20 18.6	-0.1
NTVZ	**North Tongarir**	**1.29**	**346**	P	Pb	23 20 18.8	-0.2
WTVZ	**West Tongariro**	**1.29**	**343**	P	Pb	23 20 19.1	+0.1
ARHZ	**Aropaoanui**	**1.29**	**33**	P	Pn	23 20 17.5	0.0
KRVZ	**Karewarewa**	**1.30**	**345**	P	Pb	23 20 19.2	0.0
NMHZ	**Naumai**	**1.37**	**24**	P	Pn	23 20 18.7	0.0
PLWZ	**Palliser**	**1.37**	**207**	P	Pn	23 20 17.5	-1.2
RITZ	**Rihia Road**	**1.38**	**353**	P	Pb	23 20 20.3	-0.2
BHW	**Baring Head**	**1.40**	**221**	P	Pn	23 20 18.6	-0.5
KATZ	**Kakaramea**	**1.41**	**347**	P	Pb	23 20 21.0	0.0
RATZ	**Rangitukua**	**1.50**	**351**	P	Pb	23 20 23.2	+0.6
MRHZ	**Matea Rd**	**1.53**	**10**	P	Pn	23 20 20.8	-0.1
VRZ	**Vera Road**	**1.59**	**320**	P	Pb	23 20 23.3	-0.9
MTHZ	**Maungataniwha**	**1.60**	**22**	P	Pn	23 20 22.1	+0.2
TCW	**Tory Channel**	**1.62**	**237**	P	Pn	23 20 21.5	-0.7
RAHZ	**Arahi**	**1.63**	**29**	P	Pn	23 20 22.0	-0.2
WATZ	**Wairara**	**1.66**	**350**	P	Pb	23 20 25.2	-0.1
DUWZ	**D'Urville Isla**	**1.71**	**254**	P	Pn	23 20 23.7	+0.3
MHGZ	**Mahia Peninsul**	**1.84**	**50**	P	Pn	23 20 23.7	-1.5
NEZ	**North Egmont**	**1.87**	**304**	P	Pb	23 20 29.3	+0.4
NMEZ	**Namu Road**	**1.94**	**298**	P	Pb	23 20 29.2	+0.8
MUGZ	**Murupara**	**1.94**	**16**	P	Pn	23 20 25.6	-0.9
TUWZ	**Tuamarina**	**1.95**	**236**	P	Pn	23 20 25.0	-1.6
PKE	**Pukeiti**	**1.99**	**305**	P	Pb	23 20 30.6	-0.3
PRGZ	**Paritu Road**	**1.99**	**45**	P	Pn	23 20 26.0	-1.2
NBEZ	**Newall Road No**	**2.02**	**302**	P	Pb	23 20 32.0	+0.6
TLZ	**Tolley Road**	**2.06**	**348**	P	Pb	23 20 32.6	+0.4
HIZ	**Hauiti**	**2.07**	**332**	P	Pb	23 20 31.0	-1.2
TARZ	**Mount Tarawera**	**2.13**	**9**	P	Pn	23 20 28.7	-0.6
BSWZ	**Blackbirch Sta**	**2.16**	**230**	P	Pn	23 20 29.1	-0.4
NNZ	**Nelson**	**2.23**	**246**	P	Pb	23 20 35.0	0.0
URZ	**Urewera**	**2.23**	**21**	P	Pn	23 20 28.8	-1.7
MWZ	**Matawai**	**2.30**	**30**	P	Pn	23 20 29.7	-1.8
TKGZ	**Te Karaka**	**2.34**	**36**	P	Pn	23 20 30.4	-1.6
RUGZ	**Raukumara Rang**	**2.68**	**28**	P	Pn	23 20 35.0	-1.8
QRZ	**Quartz Range**	**2.75**	**259**	P	Pb	23 20 41.4	-2.4
THZ	**Tophouse**	**2.79**	**239**	P	Pn	23 20 36.9	-1.3
PKGZ	**Pakihiroa**	**2.90**	**33**	P	Pn	23 20 38.9	-1.0
HAZ	**Te Kaha**

DBBC	**Dabeiba**	**2.39**	**46**	*eP*		**Pn**	**23 32 56.1**	**+0.6**
DBBC				*eS*		**Sn**	**23 33 22.4**	**-2.0**
DBBC				*i*			23 33 32.9	
	comp=Z,133nm,0.6s							
GUY2C	**Guyana, Caldas**	**2.57**	**93**	*eP*		**Pn**	**23 32 57.5**	**-0.8**
GUY2C				*eS*		**Sn**	**23 33 27.6**	**-1.7**
GUY2C				*i*			23 33 36.8	
	comp=Z,34nm,0.7s							
RREF	**El Recreo**	**2.62**	**100**	*eP*		**Pn**	**23 33 00.7**	**+1.6**
RREF				*eS*		**Sn**	**23 33 29.0**	**-1.9**
RREF				*i*			23 33 35.8	
	comp=N,56nm,0.4s							
ORTC	**Ortega, Tolima**	**3.04**	**118**	*eP*		**Pn**	**23 33 04.9**	**+0.5**
ORTC				*eS*		**Sn**	**23 33 39.1**	**-1.4**
ORTC				*i*			23 33 45.9	
	comp=Z,46nm,0.7s							
UPD2	**Meteti**	**3.18**	**359**	*eP*		**Pn**	**23 33 05.7**	**-0.5**
MARP	**Paez Belalcaza**	**3.18**	**141**	*eP*		**Pn**	**23 33 06.2**	**-0.3**
PCON	**Cinco Dias**	**3.37**	**153**	*eP*		**Pn**	**23 33 09.2**	**-0.1**
PCON				*eS*		**Sn**	**23 33 48.8**	**-0.5**
PCON				*i*			23 33 54.7	
	comp=Z,22nm,0.5s							
UREC	**San Jos de Ur**	**3.38**	**45**	*eP*		**Pn**	**23 33 08.4**	**-0.6**
SOTA	**Rioblanco**	**3.46**	**157**	*eP*		**Pn**	**23 33 10.2**	**-0.3**
SOTA				*eS*		**Sn**	**23 33 50.0**	**-1.4**
SOTA				*i*			23 33 55.1	
	comp=Z,29nm,0.5s							
ROSC	**El Rosal**	**3.64**	**98**	Pn		Pn	23 33 05.8	-7.2
	comp=Z,2.4nm,0.3s,baz=170,slow=21,SNR=1.7							
BCIP	**Isla Barro Col**	**4.23**	**334**	*eP*		**Pn**	**23 33 20.4**	**-0.3**
BCIP				*eS*		**Sn**	**23 34 07.8**	**-2.1**
BCIP				*i*			23 34 13.9	
	comp=Z,6.4nm,0.3s							
OTAV	**Otavalo**	**5.10**	**186**	*eP*		**Pn**	**23 33 32.8**	**-0.3**
OTAV				*eS*		**Sn**	**23 34 24.6**	**-7.3**
OTAV				*i*			23 34 31.3	
	comp=Z,5.7nm,0.5s							
ATAH	**Atahualpa**	**12.41**	**182**	LR		LR	23 40 18.4	
	comp=Z,44nm,18.9s,baz=254,slow=39							
TEIG	**Tepich**	**17.88**	**327**	LR		LR	23 42 57.4	
	comp=Z,45nm,20.9s,baz=156,slow=36							
PTGA	**Pitinga**	**18.94**	**108**	LR		LR	23 45 02.8	
	comp=Z,37nm,18.8s,baz=293,slow=41							
LPAZ	**La Paz**	**23.59**	**156**	P		**P**	**23 37 25.5**	**-2.2**
	comp=Z,0.4nm,0.4s,baz=330,slow=7.8,SNR=1.3							
LPAZ				LR		LR	23 48 01.4	
	comp=Z,44nm,20.2s,baz=10.0,slow=40							
MDP	**Montagnes des**	**25.20**	**89**	LR		LR	23 48 18.2	
	comp=Z,42nm,19.9s,baz=267,slow=39							
SIV	**San Ignacio**	**26.99**	**142**	P		**P**	**23 37 57.7**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=311,slow=11,SNR=2.6							
SIV				LR		LR	23 49 15.9	
	comp=Z,80nm,18.8s,baz=330,slow=38							
PDAR	**Pinedale Array**	**46.60**	**328**	P		**P**	**23 40 46.7**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=159,slow=5.4,SNR=3.8							
ULM	**Lac du Bonnet**	**47.22**	**344**	P		**P**	**23 40 50.7**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=173,slow=8.1,SNR=2.9							
NVAR	**Mina Array Bea**	**49.22**	**318**	P		**P**	**23 41 08.6**	**+3.7**
	comp=Z,0.3nm,0.6s,baz=114,slow=9.0,SNR=2.6							
YKA	**Yellowknife Ar**	**63.07**	**342**	P		**P**	**23 42 44.3**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=129,slow=7.5,SNR=6.1							
ILAR	**Eielson Array**	**76.29**	**336**	P		**P**	**23 44 05.1**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=115,slow=6.1,SNR=2.6							
TORD	**Torodi Ar. Bea**	**78.73**	**78**	P		**P**	**23 44 18.8**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=280,slow=5.1,SNR=2.6							
ASAR	**Alice Springs**	**144.34**	**236**	PKP		**PKPab**	**23 51 51.6**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=122,slow=3.9,SNR=19							
WRA	**Warramunga Arr**	**145.42**	**242**	PKPbc		**PKPbc**	**23 51 55.3**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=105,slow=3.4,SNR=11							

*IDC **09** 23:39:45.9±1.2,5.66N×74.57W,h119km±23km,mb3.1/1, mb1 3.5/1,mb1mx2.8/30,mbtmp3.5/1,Error ellipse: s-maj=101.7km s-min=39.6km az=92.0*
*RSNC **09** 23:39:45.8±1.2,5.78N×73.98W,h108km±4km,ML3.2, Mw3.4,Fault plane solution: NP1:φs=48.00000°, δ48.00000°,λ-127.00000°.*
ISC 09 23:39:44.6±0.9,5.79N±0.03×73.98W±0.03,h117km±6km, n32,σ0§93/60,3C-4D,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time	Res
					Op			h m s	ISC
SPBC	**San Pablo de B**	**0.17**	**214**	⇓*iP*			**Pn**	**23 40 00.7**	**-0.3**
SPBC				*eS*			**Sn**	**23 40 11.2**	**-2.0**
SPBC				*i*				23 40 12.8	
	comp=Z,1μm,0.7s								
PTBC	**PUERTO BERRIO,**	**0.88**	**327**	*eP*			**Pn**	**23 40 04.8**	**-0.5**
PTBC				*eS*			**Sn**	**23 40 19.8**	**-1.1**
PTBC				*i*				23 40 22.3	
	comp=Z,244nm,0.2s								
RUSC	**La Rusia**	**0.90**	**84**	⇓*iP*			**Pn**	**23 40 06.2**	**+0.3**
RUSC				*eS*			**Sn**	**23 40 21.6**	**-0.4**
NORC	**Norcasia**	**0.92**	**256**	⇓*iP*			**Pn**	**23 40 05.6**	**-0.1**
NORC				*eS*			**Sn**	**23 40 20.2**	**-1.4**
NORC				*i*				23 40 22.2	
	comp=Z,648nm,0.2s								
ROSC	**El Rosal**	**1.01**	**200**	P			**Pn**	**23 40 07.8**	**+0.8**
	comp=Z,27nm,0.3s,baz=346,slow=19,SNR=16								
ROSC				S			**Sn**	**23 40 23.4**	**-0.3**
	comp=Z,124nm,0.3s,baz=314,slow=20,SNR=18								
ROSC	**El Rosal**	**1.01**	**200**	*eP*			**Pn**	**23 40 07.6**	**+0.6**
ROSC				*eS*			**Sn**	**23 40 23.7**	**0.0**
ROSC				*i*				23 40 29.3	
	comp=Z,296nm,0.4s								
BARC	**Barichara**	**1.12**	**45**	⇓*iP*			**Pn**	**23 40 08.8**	**+0.8**
BARC				*eS*			**Sn**	**23 40 26.0**	**+0.5**
BRRC	**Barranca, Sant**	**1.33**	**11**	⇑*iP*			**Pn**	**23 40 10.5**	**+0.5**
BRRC				*eS*			**Sn**	**23 40 29.8**	**+0.6**
BRRC				*i*				23 40 34.7	
	comp=Z,285nm,0.2s								
GUY2C	**Guyana, Caldas**	**1.49**	**248**	⇑*eP*			**Pn**	**23 40 12.6**	**+0.3**
GUY2C				*eS*			**Sn**	**23 40 33.9**	**+0.7**
GUY2C				*i*				23 40 39.4	
	comp=Z,154nm,0.3s								
HELC	**Santa Helena**	**1.59**	**284**	*eP*			**Pn**	**23 40 14.0**	**+0.7**
HELC				*eS*			**Sn**	**23 40 35.0**	**-0.1**
HELC				*i*				23 40 40.0	
	comp=Z,166nm,0.4s								
RREF	**El Recreo**	**1.63**	**237**	*eP*			**Pn**	**23 40 14.8**	**+0.8**
RREF				*eS*			**Sn**	**23 40 36.3**	**0.0**
RREF				*i*				23 40 41.4	
	comp=N,243nm,0.4s								
VILC	**Villavicencio,**	**1.69**	**170**	*eP*			**Pn**	**23 40 14.7**	**+0.3**
VILC				*eS*			**Sn**	**23 40 37.1**	**+0.1**
VILC				*i*				23 40 46.7	
	comp=Z,252nm,0.5s								
ZARC	**Zaragoza, Cauc**	**1.90**	**333**	⇑*iP*			**Pn**	**23 40 16.5**	**-0.2**
ZARC				*eS*			**Sn**	**23 40 42.1**	**+0.8**
ZARC				*i*				23 40 46.8	
	comp=Z,293nm,0.4s								
PAMC	**Pamplona, Colo**	**1.99**	**40**	*eP*			**Pn**	**23 40 19.3**	**+1.0**
PAMC				*eS*			**Sn**	**23 40 44.4**	**+0.4**
PAMC				*i*				23 40 50.5	
	comp=Z,105nm,0.6s								
CBOC	**Ciudad Bolivar**	**2.02**	**272**	*eP*			**Pn**	**23 40 19.4**	**+1.0**
CBOC				*eS*			**Sn**	**23 40 44.1**	**-0.1**
CBOC				*i*				23 40 56.1	
	comp=Z,46nm,0.5s								
ORTC	**Ortega, Tolima**	**2.26**	**214**	*eP*			**Pn**	**23 40 21.2**	**-0.1**
ORTC				*eS*			**Sn**	**23 40 49.8**	**+0.4**
PTGC	**Puerto Gaitan,**	**2.43**	**131**	*eP*			**Pn**	**23 40 23.3**	**-0.1**
PTGC				*eS*			**Sn**	**23 40 52.2**	**-1.0**
PTGC				*i*				23 40 55.8	
	comp=Z,119nm,0.3s								
UREC	**San Jos de Ur**	**2.48**	**322**	*eP*			**Pn**	**23 40 23.0**	**-1.2**
UREC				*eS*			**Sn**	**23 40 54.1**	**-0.4**
UREC				*i*				23 41 04.5	
	comp=Z,189nm,0.3s								
OCAC	**Ocana**	**2.52**	**15**	*eP*			**Pn**	**23 40 25.4**	**+0.6**
OCAC				*eS*			**Sn**	**23 40 55.1**	**-0.3**
DBBC	**Dabeiba**	**2.53**	**299**	*eP*			**Pn**	**23 40 25.8**	**+1.0**
DBBC				*eS*			**Sn**	**23 40 56.6**	**+1.0**
DBBC				*i*				23 40 59.4	
	comp=Z,245nm,0.4s								
YOTC	**Yotoco, Valle**	**2.97**	**233**	*eP*			**Pn**	**23 40 30.8**	**+0.2**
YOTC				*eS*			**Sn**	**23 41 05.9**	**0.0**
SMLC	**San Martn de**	**2.99**	**358**	*eP*			**Pn**	**23 40 30.5**	**-0.2**
SMLC				*eS*			**Sn**	**23 41 06.4**	**+0.1**
SMLC				*i*				23 41 15.5	
	comp=Z,101nm,0.4s								
MOTC	**Monteria, Cord**	**3.41**	**331**	*eP*			**Pn**	**23 40 34.9**	**-1.3**
MOTC				*eS*			**Sn**	**23 41 16.2**	**+0.1**
MOTC				*i*				23 41 32.1	
	comp=Z,30nm,0.4s								

GUVC	**San Jose del G**	**3.50**	**157**	*eP*		**Pn**	**23 40 37.6**	**+0.1**
GUVC				*eS*		**Sn**	**23 41 17.8**	**-0.5**
GUVC				*i*			23 41 21.7	
	comp=Z,88nm,0.2s							
MARP	**Paez Belalcaza**	**3.53**	**214**	*eP*		**Pn**	**23 40 38.4**	**+0.2**
MARP				*eS*		**Sn**	**23 41 19.2**	**-0.3**
MACC	**Macarena, Meta**	**3.63**	**178**	*eS*		**Sn**	**23 41 19.0**	**-2.4**
GARC	**Garzon, Huila**	**3.89**	**203**	*eP*		**Pn**	**23 40 41.9**	**-1.1**
GARC				*eS*		**Sn**	**23 41 27.3**	**-0.7**
GARC				*i*			23 41 31.8	
	comp=Z,48nm,0.2s							
PCON	**Cinco Dias**	**4.20**	**215**	*eP*		**Pn**	**23 40 47.5**	**0.0**
PCON				*eS*		**Sn**	**23 41 35.8**	**-0.2**
PCON				*i*			23 41 42.0	
	comp=Z,15nm,0.4s							
SJCC	**San Jacinto, C**	**4.25**	**344**	*eP*		**Pn**	**23 40 46.2**	**-1.3**
SJCC				*eS*		**Sn**	**23 41 32.7**	**-3.7**
SJCC				*i*			23 41 36.9	
	comp=Z,24nm,0.4s							
YKA	**Yellowknife Ar**	**63.93**	**340**	P		**P**	**23 50 05.3**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=131,slow=6.8,SNR=13							
ASAR	**Alice Springs**	**147.82**	**234**	PKPbc		**PKPdf**	**23 59 15.4**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=109,slow=3.8,SNR=1.8							
WRA	**Warramunga Arr**	**149.09**	**240**	PKPbc		**PKPbc**	**23 59 19.3**	**-0.9**
	comp=Z,2.8nm,1.3s,baz=106,slow=3.8,SNR=2.6							

*IDC **09** 23:52:57.5±1.4,5.71S×152.32E,h0km,mb3.8/8, mb1 4.0/9,mb1mx3.8/41,mbtmp3.8/9,ML2.1/1,Error ellipse: s-maj=53.6km s-min=19.0km az=128.0*
ISC 09 23:53:03.3±1.3,5.8S±0.3×152.4E±0.3,h40km,n10, σ0§76/11,mb3.7/8,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time	Res
					Op			h m s	ISC
PMG	**Port Moresby**	**6.30**	**234**	Pn			**Pn**	**23 54 33.6**	**-0.2**
	3.0nm,0.3s,baz=200,slow=8.8,SNR=1.7								
PMG				Sn			**Sn**	**23 55 45.8**	**+1.3**
	6.2nm,0.3s,baz=143,slow=22,SNR=5.6								
WRA	**Warramunga Arr**	**22.49**	**230**	P			**P**	**23 57 58.7**	**-0.9**
	0.7nm,0.7s,baz=57,slow=10,SNR=5.2								
ASAR	**Alice Springs**	**25.15**	**223**	P			**P**	**23 58 24.8**	**-0.3**
	0.9nm,0.7s,baz=60,slow=9.0,SNR=14								
FITZ	**Fitzroy Crossi**	**28.82**	**247**	P			**P**	**23 58 57.0**	**-1.0**
	2.0nm,0.6s,baz=52,slow=8.3,SNR=9.4								
SONM	**Songino Array**	**66.88**	**328**	P			**P**	**00 03 51.3**	**-0.2**
	0.2nm,0.6s,baz=116,slow=3.4,SNR=1.9								
MKAR	**Makanchi Array**	**80.74**	**319**	P			**P**	**00 05 13.0**	**+0.4**
	0.5nm,0.8s,baz=114,slow=5.4,SNR=5.8								
ZALV	**Zalesovo Beam**	**81.69**	**326**	P			**P**	**00 05 17.7**	**+0.3**
	1.0nm,0.4s,baz=98,slow=4.5,SNR=4.7								
ILAR	**Eielson Array**	**83.20**	**22**	P			**P**	**00 05 25.1**	**0.0**
	1.1nm,0.7s,baz=246,slow=5.3,SNR=8.6								
NVAR	**Mina Array Bea**	**93.02**	**52**	P			**P**	**00 06 14.0**	**+0.7**
	0.3nm,0.6s,baz=289,slow=5.1,SNR=4.3								
TORD	**Torodi Ar. Bea**	**150.16**	**286**	PKPbc			**PKPbc**	**00 12 50.5**	**-0.5**
	0.5nm,0.7s,baz=54,slow=2.9,SNR=3.9								

IDC 09 23:58:27.7±2.0,1.86N×126.32E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.4/36,mbtmp3.6/3,MS2.8/1,Ms1 2.8/1, ms1mx2.2/32,Error ellipse: s-maj=175.3km s-min=24.3km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time	Res
					Op			h m s	ISC
WRA	**Warramunga Arr**	**23.05**	**160**	P			P	00 03 34.9	0.0
	1.0nm,0.4s,baz=339,slow=11,SNR=12								
ASAR	**Alice Springs**	**26.42**	**164**	P			P	00 04 06.5	0.0
	0.2nm,0.4s,baz=345,slow=8.7,SNR=5.9								
MJAR	**Matsushiro Arr**	**36.22**	**16**	LR			LR	00 24 47.8	
	comp=Z,13nm,18.1s,baz=240,slow=44								
MKAR	**Makanchi Array**	**58.86**	**326**	P			P	00 08 28.3	-0.1
	0.4nm,0.4s,baz=120,slow=7.3,SNR=9.8								

*IDC **10** 00:00:28.0±3.0,6.01S×146.72E,h75km±25km,mb3.5/9, mb1 3.7/12,mb1mx3.5/42,mbtmp3.9/12,MS3.2/4, Ms1 3.2/4,ms1mx2.7/32,Error ellipse: s-maj=29.9km s-min=16.5km az=81.0*
*NEIC **10** 00:00:28.0±2.8,6.07S±0.09×146.76E±0.1,h73km±9km, mb4.0/13,Error ellipse: s-maj=20.6km s-min=10.9km az=69.0*
ISC 10 00:00:25.8±0.6,6.09S±0.06×146.71E±0.09,h52km,n41, σ1§85/38,mb3.9/11,MS3.2/3,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time	Res
					Op			h m s	ISC
PMG	**Port Moresby**	**3.33**	**172**	P			**Pn**	**00 01 19.2**	**+3.8**
	15nm,0.3s,baz=18,slow=4.8,SNR=29								
PMG				S			**Sn**	**00 01 53.7**	**0.0**
	16nm,0.3s,baz=328,slow=23,SNR=2.1								
PMG				LR			LR	00 03 09.5	
	comp=Z,243nm,19.9s,baz=37,slow=47								
JAY	**Jayapura**	**6.96**	**300**	P			**Pn**	**00 02 07.5**	**+2.3**
	0.5nm,0.3s,baz=148,slow=13,SNR=1.9								
COEN	**Coen**	**8.56**	**204**	Pn			**Pn**	**00 02 29.1**	**+1.9**
COEN				Sn			**Sn**	**00 04 01.7**	**-0.7**
CTA	**Charters Tower**	**13.93**	**182**	P			**P**	**00 03 46.4**	**-0.7**
	0.3nm,0.3s,baz=347,slow=16,SNR=2.2								
CTAO	**Charters Tower**	**13.93**	**182**	P			**P**	**00 03 46.5**	**-0.7**
FAKI	**Fak Fak**	**14.75**	**282**	Pn			**Pn**	**00 03 53.9**	**+2.4**
MTN	**Manton Dam**	**16.76**	**245**				**Pn**	**00 04 18.2**	**+1.1**
MTN				IAmb			IAmb	00 04 24.5	
	comp=Z,11nm,0.9s								
WB0	**Warramunga Arr**	**18.12**	**220**	P			**Pn**	**00 04 36.0**	**+2.1**
WR0	**Warramunga Arr**	**18.17**	**219**	P			**Pn**	**00 04 35.9**	**+1.4**
WR0				IAmb			IAmb	00 04 39.2	
	comp=Z,7.7nm,1.1s								
WB2	**Warramunga Arr**	**18.27**	**220**	P			**P**	**00 04 35.2**	**-0.2**
WB2				IAmb			IAmb	00 04 42.5	
	comp=Z,4.2nm,0.9s								
WRA	**Warramunga Arr**	**18.28**	**220**	P			**P**	**00 04 35.8**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=34,slow=10,SNR=7.9								
WRA				S			**Sn**	**00 07 51.8**	**-7.6**
	comp=Z,0.1nm,0.3s,baz=38,slow=24,SNR=1.5								
WRA				PcP			**PcP**	**00 09 06.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=33,slow=1.4,SNR=3.5								
EIDS	**Eidsvold**	**19.63**	**168**	P			**Pn**	**00 04 51.5**	**-0.4**
EIDS				IAmb			IAmb	00 04 52.2	
	comp=Z,8.9nm,1.0s								
AS31	**Alice Springs**	**21.39**	**214**	P			**P**	**00 05 10.2**	**+1.0**
ASAR	**Alice Springs**	**21.39**	**214**	P			**P**	**00 05 09.9**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=53,slow=9.1,SNR=11								
ASAR				LR			LR	00 14 42.4	
	comp=Z,99nm,18.8s,baz=19,slow=40								
FITZ	**Fitzroy Crossi**	**23.78**	**238**	P			**P**	**00 05 33.3**	**-0.5**
	comp=Z,5.0nm,0.6s,baz=64,slow=8.6,SNR=18								
FITZ	**Fitzroy Crossi**	**23.78**	**238**	P			**P**	**00 05 33.5**	**-0.3**
FITZ				IAmb			IAmb	00 05 35.1	
	comp=Z,5.4nm,0.7s								
STKA	**Stephens Creek**	**26.10**	**190**	P			**P**	**00 05 56.1**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=348,slow=11,SNR=3.5								
STKA				LR			LR	00 16 49.4	
	comp=Z,68nm,19.5s,baz=24,slow=38								
STKA	**Stephens Creek**	**26.10**	**190**	P			**P**	**00 05 55.9**	**+1.1**
KAPI	**Kappang**	**26.85**	**271**	LR			LR	00 18 32.7	
	comp=Z,37nm,18.1s,baz=103,slow=40								
TOLI2	**Tolitoli**	**26.86**	**285**	P			**P**	**00 06 01.8**	**0.0**
TOLI2				IAmb			IAmb	00 06 04.9	
	comp=Z,5.5nm,0.8s								
H11S3	**WAKE ISLAND Hy**	**31.38**	**39**	T			T	00 39 29.0	
	baz=226								
H11S2	**WAKE ISLAND Hy**	**31.39**	**39**	T			T	00 39 32.2	
	baz=226								
H11S1	**WAKE ISLAND Hy**	**31.40**	**39**	T			T	00 39 32.7	
	baz=226								
H11N1	**WAKE ISLAND Hy**	**32.43**	**37**	T			T	00 40 50.7	
	baz=219,slow=76,SNR=3.6								
H11N3	**WAKE ISLAND Hy**	**32.45**	**37**	T			T	00 40 52.1	
	baz=219,slow=76,SNR=4.2								
H11N2	**WAKE ISLAND Hy**	**32.45**	**37**	T			T	00 40 54.5	
	baz=219,slow=76,SNR=11								
NACB	**Ninganchiao**	**38.78**	**322**	P			**P**	**00 07 45.1**	**-0.5**
JHS	**Saijyo**	**42.83**	**344**	P			**P**	**00 08 20.1**	**+1.3**
LBZ	**Lake Benmore**	**43.33**	**155**	P			**P**	**00 08 21.2**	**-1.5**
LBZ				IAmb			IAmb	00 08 29.5	
	comp=Z,2.4nm,0.8s								
MSWZ	**Moikau Station**	**43.41**	**148**	P			**P**	**00 08 21.9**	**-1.5**
BFZ	**Birch Farm**	**43.42**	**147**	P			**P**	**00 08 24.4**	**+0.9**
PLWZ	**Palliser**	**43.52**	**149**	P			**P**	**00 08 23.7**	**-0.7**
KSRS	**Korea Array**	**46.73**	**339**	P			**P**	**00 08 50.0**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=159,slow=9.1,SNR=6.1								
CMAR	**Chiang Mai Arr**	**53.04**	**298**	P			**P**	**00 09 38.2**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=120,slow=5.9,SNR=6.0								

SONM	**Songino Array**	**64.34**	**331**	P		**P**	**00 10 55.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=131,slow=5.1,SNR=3.8							
VNDA	**Vanda**	**71.84**	**177**	P		**P**	**00 11 43.1**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=314,slow=7.0,SNR=5.7							
MKAR	**Makanchi Array**	**77.38**	**321**	P		**P**	**00 12 13.4**	**-2.0**
	comp=Z,0.1nm,0.4s,baz=103,slow=7.7,SNR=4.5							
ILAR	**Eielson Array**	**85.67**	**23**	P		**P**	**00 12 56.5**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=254,slow=4.8,SNR=11							
SIV	**San Ignacio**	**144.82**	**129**	PKP		**PKPdf**	**00 19 57.1**	**-1.0**
	comp=Z,2.6nm,0.6s,baz=239,slow=4.7,SNR=16							
TORD	**Torodi Ar. Bea**	**144.83**	**284**	PKP		**PKPab**	**00 19 56.3**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=66,slow=3.1,SNR=8.6							
DBIC	**Dimbokro**	**151.74**	**273**	PKPbc		**PKiKP**	**00 20 15.8**	**-0.4**
	comp=Z,3.3nm,0.5s,baz=24,slow=0.8,SNR=7.6							

*IDC **10** 00:08:55.1±2.2,1.90N×90.87W,h0km,mb3.7/8,mb1 4.0/8, mb1mx3.8/30,mbtmp3.7/8,MS3.4/9,Ms1 3.4/9, ms1mx3.1/30,Error ellipse: s-maj=105.3km s-min=20.4km az=50.0*
ISC 10 00:08:57.5±1.9,1.8N±0.4×91.0W±0.5,h17km,n21, σ0§92/10,mb3.7/8,MS3.5/4,Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		ISC	Time	Res
					Op			h m s	ISC
JTS	**Las Juntas de**	**10.33**	**35**	LR			LR	00 14 23.8	
	comp=Z,489nm,18.3s,baz=40,slow=32								
APG	**El Apazote**	**13.12**	**2**	LR			LR	00 14 52.7	
	comp=Z,27nm,18.1s,baz=108,slow=28								
ATAH	**Atahualpa**	**15.37**	**125**	Pn			**P**	**00 12 39.2**	**+0.5**
	0.1nm,0.3s,baz=302,slow=12,SNR=4.1								
ATAH				LR			LR	00 17 29.0	
	comp=Z,237nm,18.6s,baz=287,slow=34								
CMIG	**Matias Romero**	**15.67**	**346**	Pn			**P**	**00 12 43.1**	**+1.5**
	baz=150,slow=20,SNR=1.9								
TEIG	**Tepich**	**18.49**	**8**	LR			LR	00 19 23.2	
	comp=Z,128nm,21.0s,baz=340,slow=34								
NNA	**Nana**	**19.61**	**135**	LR			LR	00 19 36.6	
	comp=Z,58nm,18.4s,baz=284,slow=33								
H06E1	**SOCORRO T-PHAS**	**25.83**	**312**	T			T	00 41 32.4	
	SNR=4.6								
LPAZ	**La Paz**	**28.84**	**129**	P			**P**	**00 14 56.5**	**+0.5**
	0.8nm,0.7s,baz=341,slow=9.5,SNR=2.3								
LPAZ				LR			LR	00 25 56.1	
	comp=Z,110nm,21.4s,baz=4.0,slow=35								
TXAR	**Lajitas Array**	**29.93**	**337**	P			**P**	**00 15 04.9**	**0.0**
	0.2nm,0.7s,baz=160,slow=11,SNR=2.6								
SIV	**San Ignacio**	**34.42**	**122**	P			**P**	**00 15 44.4**	**0.0**
	0.9nm,0.6s,baz=303,slow=5.0,SNR=6.1								
CPUP	**Villa Florida**	**42.86**	**133**	LR			LR	00 35 34.6	
	comp=Z,58nm,19.2s,baz=305,slow=37								
NVAR	**Mina Array Bea**	**44.22**	**329**	P			**P**	**00 17 05.9**	**-0.2**
	0.6nm,0.7s,baz=152,slow=6.7,SNR=6.1								
ULM	**Lac du Bonnet**	**48.45**	**356**	P			**P**	**00 17 38.4**	**-0.5**
	0.9nm,0.6s,baz=161,slow=8.7,SNR=3.1								
PPT	**Papeete**	**60.84**	**249**	LR			LR	00 39 30.5	
	comp=Z,48nm,20.4s,baz=280,slow=30								
YKA	**Yellowknife Ar**	**63.07**	**348**	P			**P**	**00 19 24.6**	**+1.0**
	0.9nm,0.9s,baz=146,slow=6.8,SNR=12								
ILAR	**Eielson Array**	**74.44**	**338**	P			**P**	**00 20 33.5**	**-1.0**
	0.7nm,0.9s,baz=140,slow=3.4,SNR=5.2								
AFI	**Afiamalu**	**81.52**	**256**	LR			LR	00 48 25.7	
	comp=

	baz=14								
KBK				⇑	*i*	S	**Sb**	**00 17 09.5**	**+2.0**
	baz=14								
KBK	**Karagaybulak**	**3.31**	**13**			P	**Pb**	**00 16 28.5**	**+1.1**
	SNR=26								
BOOM	**Boomskoye usch**	**3.40**	**25**	⇑	*e*	P	**Pb**	**00 16 29.5**	**+0.5**
	baz=27								
BOOM				⇑	*i*	S	**Sb**	**00 17 11.8**	**+1.6**
	baz=27								
CHMS	**Chumysh**	**3.62**	**9**	⇑	*e*	P	**Pb**	**00 16 32.1**	**-0.4**
	baz=11								
CHMS				⇑	*i*	S	**Sb**	**00 17 16.4**	**+0.2**
	baz=11								
KDJ	**Kajisay**	**3.64**	**41**	⇓	*e*	P	**Pb**	**00 16 33.9**	**+1.0**
	baz=42								
KDJ				⇓	*i*	S	**Sb**	**00 17 17.9**	**+0.9**
	baz=42								
TKM2	**Tokmak 2**	**3.70**	**19**	⇓	Pg		**Pg**	**00 16 37.7**	**-1.9**
	9.3nm,0.9s								
TKM2				⇓	Lg		Lg	00 17 27.3	
	10nm,0.5s								
KST	**Kastek**	**3.91**	**22**		*e*	P	**Pb**	**00 16 39.9**	**+2.3**
	4.9nm,0.7s								
KST					*e*	S	**Sg**	**00 17 34.1**	**-0.3**
	18nm,0.7s								
KST	**Kastek**	**3.91**	**22**		Pg		**Pb**	**00 16 36.1**	**-1.5**
	6.7nm,0.4s								
KST					Lg		Lg	00 17 34.1	
	18nm,0.7s								
IUG	**Iuzhnay**	**4.04**	**314**		*e*	P	**Pb**	**00 16 42.3**	**+2.5**
	8.9nm,0.3s								
IUG					*e*	S	**Sg**	**00 17 37.7**	**-0.8**
	34nm,0.6s								
SGDS	**Sogindy**	**4.05**	**7**		Pg		**Pb**	**00 16 38.3**	**-1.7**
	3.5nm,0.4s								
SGDS					Lg		Lg	00 17 36.8	
	13nm,0.7s								
IZV	**Izvestkoviy**	**4.12**	**28**		*e*	P	**Pg**	**00 16 44.5**	**-3.2**
	3.4nm,0.6s								
IZV					*e*	S	**Sg**	**00 17 41.4**	**+0.4**
	22nm,0.8s								
IZV	**Izvestkoviy**	**4.12**	**28**		Pg		**Pb**	**00 16 40.7**	**-0.4**
	7.7nm,0.6s								
IZV					Lg		Lg	00 17 41.4	
	22nm,0.8s								
MTBS	**Maitube**	**4.14**	**26**		*e*	P	**Pg**	**00 16 44.6**	**-3.4**
	1.9nm,0.2s								
MTBS					*e*	S	**Sg**	**00 17 41.7**	**+0.1**
	13nm,0.6s								
MTBS	**Maitube**	**4.14**	**26**		Pg		**Pb**	**00 16 40.7**	**-0.7**
	4.5nm,0.5s								
MTBS					Lg		Lg	00 17 41.7	
	13nm,0.6s								
TNSS	**Tian-Shan**	**4.25**	**31**		*e*	P	**Pg**	**00 16 47.2**	**-2.9**
	5.9nm,0.8s								
TNSS					*e*	S	**Sg**	**00 17 46.2**	**+1.1**
	8.3nm,0.7s								
TNSS	**Tian-Shan**	**4.25**	**31**		Pg		**Pb**	**00 16 43.7**	**+0.3**
	4.7nm,0.5s								
TNSS					Lg		Lg	00 17 46.2	
	8.3nm,0.7s								
MDOK	**Medeo**	**4.39**	**31**		*e*	P	**Pb**	**00 16 49.0**	**+3.2**
	4.7nm,0.4s								
MDOK					*e*	S	**Sg**	**00 17 49.6**	**-0.2**
	11nm,0.7s								
MDOK	**Medeo**	**4.39**	**31**		Pg		**Pg**	**00 16 50.7**	**-2.2**
	7.2nm,0.6s								
MDOK					Lg		Lg	00 17 49.5	
	34nm,1.3s								
MDOK	**Medeo**	**4.39**	**31**		Pg		**Pb**	**00 16 45.6**	**-0.2**
	4.7nm,0.4s								
MDOK					Lg		Lg	00 17 49.6	
	11nm,0.7s								
KRBS	**Karabastau**	**4.45**	**16**		*e*	P	**Pb**	**00 16 48.9**	**+2.1**
	3.1nm,0.4s								
KRBS					*e*	S	**Sg**	**00 17 49.4**	**-2.3**
	9.8nm,0.6s								
KRBS	**Karabastau**	**4.45**	**16**		Pg		**Pb**	**00 16 45.5**	**-1.3**
	3.1nm,0.4s								
KRBS					Lg		Lg	00 17 49.4	
	9.8nm,0.6s								
KK31	**Karatay Array**	**4.50**	**326**	⇓	Pn		**Pb**	**00 16 43.5**	**-4.1**
	0.6nm,0.2s,baz=137,slow=12,SNR=29								
KK31				⇑	Sn		**Sb**	**00 17 37.2**	**-4.6**
	4.6nm,0.5s,baz=137,slow=23,SNR=4.9								
KK31				⇓	Lg		Lg	00 17 54.4	
	6.4nm,0.5s,baz=287,slow=11,SNR=4.5								
KUU	**Kurty**	**4.80**	**21**		*e*	P	**Pb**	**00 16 54.8**	**+2.1**
	1.1nm,0.1s								
KUU					*e*	S	**Sg**	**00 17 59.7**	**-3.1**
	11nm,0.6s								
PDGK	**Podgornoye**	**5.69**	**45**	⇑	Pg		**Pb**	**00 17 11.9**	**+3.9**
	2.4nm,0.7s								
PDGK				⇓	Lg		Lg	00 18 31.0	
	7.3nm,0.8s								

SOME **10** *00:24:22.8, 40.82N×79.83E, h10km*
KRNET **10** *00:24:22.7±0.1, 40.71N×80.23E, mb3.3*
NNC **10** *00:24:26.8±1.7, 40.98N×79.74E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.8km s-min=8.5km az=158.0*
ISC 10 00:24:24.8±2.5, **40.8N**±0.1×**79.97E**±0.06, **h10**km, **n41**, σ1§**64**/63, **12C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**2.06**	**326**	⇑	*e*	P	**Pn**	**00 25 00.0**	**+0.4**
	baz=23								
PRZ				⇑	*i*	S	**Sb**	**00 25 27.2**	**-0.9**
	baz=23								
SHLS	**Shalkode**	**2.39**	**351**		*e*	P	**Pb**	**00 25 06.1**	**-1.9**
	21nm,0.2s								
SHLS					*e*	S	**Sb**	**00 25 37.3**	**-0.3**
	35nm,0.7s								
SHLS	**Shalkode**	**2.39**	**351**		Pg		**Pb**	**00 25 06.1**	**-1.9**
	21nm,0.2s								
SHLS					Lg		Lg	00 25 37.3	
	35nm,0.7s								
UZB	**Uzynbulak**	**2.45**	**344**		*e*	P	**Pb**	**00 25 07.3**	**-1.8**
	10nm,0.3s								
UZB					*e*	S	**Sb**	**00 25 39.3**	**-0.1**
	32nm,0.3s								
UZB	**Uzynbulak**	**2.45**	**344**		Pg		**Pb**	**00 25 07.3**	**-1.8**
	10nm,0.3s								
UZB					Lg		Lg	00 25 39.3	
	32nm,0.3s								
KDJ	**Kajisay**	**2.48**	**303**	⇑	*e*	P	**Pn**	**00 25 06.1**	**+0.6**
	baz=3.0								
KDJ				⇑	*i*	S	**Sn**	**00 25 37.6**	**+1.6**
	baz=3.0								
SATY	**Saty**	**2.54**	**333**		*e*	P	**Pb**	**00 25 08.9**	**-1.8**
	11nm,0.3s								
SATY					*e*	S	**Sb**	**00 25 42.3**	**+0.3**
	39nm,0.3s								
SATY	**Saty**	**2.54**	**333**		Pg		**Pb**	**00 25 08.9**	**-1.8**
	11nm,0.3s								
SATY					Lg		Lg	00 25 42.3	
	39nm,0.3s								
PDGK	**Podgornoye**	**2.56**	**352**		Pg		**Pb**	**00 25 08.9**	**-1.9**
	5.1nm,0.4s								
PDGK					Lg		Lg	00 25 42.4	
	12nm,0.4s								
PDGK	**Podgornoye**	**2.56**	**352**	⇓	Pn		**Pb**	**00 25 08.9**	**-1.9**
	5.3nm,0.3s								
PDGK				⇓	Lg		Lg	00 25 42.2	
	28nm,0.5s								
ANVS	**Anan'yevo**	**2.63**	**320**	⇓	*i*	P	**Pn**	**00 25 08.0**	**+0.5**
	baz=18								
ANVS				⇓	*i*	S	**Sn**	**00 25 41.3**	**+1.8**
	baz=18								
KTMS	**Ketmen**	**2.66**	**6**		*e*	P	**Pb**	**00 25 11.5**	**-1.3**
	6.5nm,0.3s								
KTMS					*e*	S	**Sb**	**00 25 46.3**	**+0.7**
	26nm,0.4s								
KTMS	**Ketmen**	**2.66**	**6**		Pg		**Pb**	**00 25 11.5**	**-1.3**
	6.5nm,0.3s								
KTMS					Lg		Lg	00 25 46.3	
	26nm,0.4s								
KPKS	**Kokpek**	**2.83**	**341**		*e*	P	**Pb**	**00 25 13.9**	**-1.6**
	24nm,0.2s								
KPKS					*e*	S	**Sb**	**00 25 50.6**	**+0.3**
	66nm,0.5s								
ULHL	**Ulahol**	**3.15**	**299**	⇑	*i*	P	**Pn**	**00 25 15.4**	**+0.7**
	baz=98								
ULHL				⇑	*i*	S	**Sn**	**00 25 53.8**	**+1.3**
	baz=98								
TNSS	**Tian-Shan**	**3.18**	**316**		*e*	P	**Pb**	**00 25 19.2**	**-2.4**
	9.2nm,0.5s								
TNSS					*e*	S	**Sb**	**00 26 00.2**	**-0.3**
	14nm,0.3s								
TNSS	**Tian-Shan**	**3.18**	**316**		Pg		**Pb**	**00 25 19.2**	**-2.4**
	9.2nm,0.5s								
TNSS					Lg		Lg	00 26 00.2	
	14nm,0.3s								
MDOK	**Medeo**	**3.21**	**318**		Pn		**Pb**	**00 25 18.8**	**-3.3**
	9.1nm,0.6s								
MDOK					Lg		Lg	00 25 59.7	
	26nm,1.0s								
KOTS	**Kotyrbulak**	**3.23**	**320**		*e*	P	**Pb**	**00 25 20.9**	**-1.5**
	24nm,0.4s								
KOTS					*e*	S	**Sb**	**00 26 03.2**	**+1.2**
	24nm,0.5s								
KOTS	**Kotyrbulak**	**3.23**	**320**		Pg		**Pb**	**00 25 20.9**	**-1.5**
	24nm,0.4s								
KOTS					Lg		Lg	00 26 03.2	
	24nm,0.5s								
IZV	**Izvestkoviy**	**3.36**	**313**		*e*	P	**Pb**	**00 25 21.4**	**-3.2**
	6.0nm,0.4s								
IZV					*e*	S	**Sb**	**00 26 04.0**	**-1.6**
	20nm,0.5s								
IZV	**Izvestkoviy**	**3.36**	**313**		Pg		**Pb**	**00 25 21.4**	**-3.2**
	6.0nm,0.4s								
IZV					Lg		Lg	00 26 04.0	
	20nm,0.5s								
BOOM	**Boomskoye usch**	**3.46**	**301**	⇑	*e*	P	**Pn**	**00 25 19.6**	**+0.7**
	baz=0.0								
BOOM				⇑	*i*	S	**Sn**	**00 26 01.2**	**+1.1**
	baz=0.0								
MNBS	**Baschi**	**3.48**	**341**		*e*	P	**Pb**	**00 25 25.1**	**-1.5**
	6.5nm,0.3s								
MNBS					*e*	S	**Sb**	**00 26 09.8**	**+0.8**
	24nm,0.3s								
MNBS	**Baschi**	**3.48**	**341**		Pg		**Pb**	**00 25 25.1**	**-1.5**
	6.5nm,0.3s								
MNBS					Lg		Lg	00 26 09.8	
	24nm,0.3s								
DJR	**Jarkent**	**3.54**	**358**		*e*	P	**Pb**	**00 25 26.5**	**-1.1**
	1.7nm,0.3s								
DJR					*e*	S	**Sb**	**00 26 12.0**	**+1.4**
	9.7nm,0.3s								
DJR	**Jarkent**	**3.54**	**358**		Pg		**Pb**	**00 25 26.5**	**-1.1**
	1.7nm,0.3s								
DJR					Lg		Lg	00 26 12.0	
	9.7nm,0.3s								
KST	**Kastek**	**3.74**	**308**		*e*	P	**Pb**	**00 25 28.2**	**-2.8**
	4.4nm,0.4s								
KST					*e*	S	**Sb**	**00 26 15.2**	**-1.2**
	5.1nm,0.4s								
KST	**Kastek**	**3.74**	**308**		Pg		**Pb**	**00 25 28.2**	**-2.8**
	4.4nm,0.4s								
KST					Lg		Lg	00 26 15.2	
	5.1nm,0.4s								
ARXS	**Arharly**	**3.76**	**336**		*e*	P	**Pb**	**00 25 30.5**	**-0.9**
	6.0nm,0.5s								
ARXS					*e*	S	**Sb**	**00 26 18.8**	**+1.7**
	12nm,0.5s								
ARXS	**Arharly**	**3.76**	**336**		Pg		**Pb**	**00 25 30.5**	**-0.9**
	6.0nm,0.5s								
ARXS					Lg		Lg	00 26 18.8	
	12nm,0.5s								
KTBS	**Karatobe**	**3.80**	**321**		*e*	P	**Pb**	**00 25 30.6**	**-1.4**
	1.9nm,0.4s								
KTBS					*e*	S	**Sb**	**00 26 19.0**	**+0.9**
	20nm,0.6s								
KTBS	**Karatobe**	**3.80**	**321**		Pg		**Pb**	**00 25 30.6**	**-1.4**
	1.9nm,0.4s								
KTBS					Lg		Lg	00 26 19.0	
	20nm,0.6s								
TKM2	**Tokmak 2**	**3.89**	**304**	⇓	Pg		**Pb**	**00 25 31.0**	**-2.7**
	1.2nm,0.5s								
TKM2				⇑	Lg		Lg	00 26 21.0	
	5.6nm,0.7s								
DGS	**Degeres**	**3.97**	**309**		*e*	P	**Pb**	**00 25 32.7**	**-2.2**
	3.5nm,0.4s								
DGS					*e*	S	**Sb**	**00 26 22.6**	**-0.4**
	12nm,0.6s								
DGS	**Degeres**	**3.97**	**309**		Pg		**Pb**	**00 25 32.7**	**-2.2**
	3.5nm,0.4s								
DGS					Lg		Lg	00 26 22.6	
	12nm,0.6s								
KUU	**Kurty**	**4.10**	**320**		*e*	P	**Pb**	**00 25 36.3**	**-0.8**
	1.9nm,0.4s								
KUU					*e*	S	**Sb**	**00 26 28.9**	**+2.2**
	9.2nm,0.4s								
KUU	**Kurty**	**4.10**	**320**		Pg		**Pb**	**00 25 36.3**	**-0.8**
	1.9nm,0.4s								
KUU					Lg		Lg	00 26 28.9	
	9.2nm,0.4s								
AAK	**Ala-Archa**	**4.49**	**296**	⇓	Pg		**Pb**	**00 25 45.9**	**+2.0**
	2.0nm,0.8s								
AAK				⇓	Lg		Lg	00 26 45.1	
	4.1nm,0.8s								
MAKZ	**Makanchi**	**6.18**	**13**	⇑	Pn		**Pn**	**00 25 56.7**	**+0.5**
	0.7nm,0.7s								
MAKZ				⇑	Sn		**Sn**	**00 27 07.0**	**+0.1**
	0.8nm,0.7s								
MK31	**Makanchi Array**	**6.23**	**15**	⇓	Pn		**Pn**	**00 25 57.4**	**+0.6**
	0.1nm,0.2s,baz=202,slow=13,SNR=7.8								
MK31				⇑	Sn		**Sn**	**00 27 07.6**	**-0.4**
	1.0nm,0.6s,baz=201,slow=25,SNR=12								

SOME **10** *00:31:16.7, 39.02N×74.07E, h20km*
IDC **10** *00:31:18.5±2.8, 38.46N×74.00E, h108km±21km, mb3.7/15, mb1 3.8/19, mb1mx3.6/54, mbtmp4.1/19, MS2.7/2, Ms1 2.8/2, ms1mx2.4/42, Error ellipse: s-maj=21.7km s-min=13.9km az=157.0*
MOS **10** *00:31:19.2±1.0, 38.62N×74.01E, h128km, mb4.4/14, Error ellipse: s-maj=7.2km s-min=4.1km az=88.2*
BJI **10** *00:31:19.5±0.0, 38.47N×74.19E, h128km, mB4.4/7, mb4.0/8*
NEIC **10** *00:31:20.2±2.0, 38.52N±0.05×73.96E±0.07, h124km±5km, mb4.3/38, Error ellipse: s-maj=8.5km s-min=7.7km az=62.0*
NNC **10** *00:31:26.5±4.1, 39.15N×73.98E, h210km±38km, mb3.2, mpv4.1, Error ellipse: s-maj=44.7km s-min=22.6km az=6.0*
ISC 10 00:31:18.8±0.4, **38.33N**±0.04×**73.97E**±0.04, **h124**km, **n209**, σ2§**39**/220, **mb4.4**/40, **10C-11D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.96**	**52**		P	**Pn**	**00 31 47.7**	**-4.3**
KSH					S	Sn	00 32 07.9	-10
KSH					smax	smax		
	comp=N,2μm,0.3s							
KSH					smax	smax		
	comp=E,1μm,0.2s							
GAR	**Garm**	**2.94**	**284**			**Pn**	**00 32 04.2**	**-0.2**
GAR					Sn	**Sn**	**00 32 38.3**	**-1.4**
AML	**Almayashu**	**3.80**	**357**		P	**Pn**	**00 32 14.8**	**-1.4**
	SNR=220							
UCH	**Uchtor**	**3.92**	**6**		P	**Pn**	**00 32 16.5**	**-1.2**
	SNR=84							
ULHL	**Ulahol**	**4.28**	**23**		P	**Pn**	**00 32 20.7**	**-1.6**
	SNR=23							
AAK	**Ala-Archa**	**4.32**	**5**		P	**Pn**	**00 32 21.8**	**-1.0**
	5.0nm,0.3s,baz=182,slow=8.3,SNR=67							
AAK					S	**Sn**	**00 33 08.2**	**-4.3**
	11nm,0.3s,baz=348,slow=16,SNR=14							
AAK					LR	LR	00 33 26.7	
	comp=Z,32nm,20.0s,baz=218,slow=31							
AAK	**Ala-Archa**	**4.32**	**5**		P	**Pn**	**00 32 21.9**	**-1.0**
	SNR=32							
AAK	**Ala-Archa**	**4.32**	**5**	⇓	P	**Pn**	**00 32 21.4**	**-1.5**
	13nm,0.5s							
AAK				⇓	S	**Sn**	**00 33 08.0**	**-4.5**
	143nm,1.1s							
AAK	**Ala-Archa**	**4.32**	**5**	*i*	PN	**Pn**	**00 32 21.3**	**-1.5**
AAK					pmax	pmax		
	comp=Z,13nm,0.4s							
EKS2	**Erkin-Say**	**4.33**	**358**		P	**Pn**	**00 32 22.1**	**-0.7**
	SNR=76							
KBK	**Karagaybulak**	**4.39**	**9**		P	**Pn**	**00 32 22.9**	**-0.7**
	SNR=37							
TAS	**Tashkent**	**4.68**	**311**		PN	**Pn**	**00 32 26.4**	**-1.1**
TAS	**Tashkent**	**4.68**	**311**		Pn	**Pn**	**00 32 26.4**	**-1.1**
CHCP	**Chirah Chowk**	**4.70**	**187**		P	**Pn**	**00 32 30.9**	**+3.2**
CHMS	**Chumysh**	**4.70**	**7**		P	**Pn**	**00 32 26.6**	**-1.2**
	SNR=20							
NIL	**Nilore**	**4.71**	**187**		PN	**Pn**	**00 32 31.2**	**+3.3**
NIL	**Nilore**	**4.71**	**187**			**Pn**	**00 32 31.2**	**+3.3**
TKM2	**Tokmak 2**	**4.75**	**15**		P	**Pn**	**00 32 27.4**	**-1.1**
	SNR=12							
TKM2	**Tokmak 2**	**4.75**	**15**	⇑	P	**Pn**	**00 32 27.1**	**-1.5**
	comp=Z,8.4nm,0.5s							
TKM2				⇓	S	**Sn**	**00 33 18.9**	**-3.9**
	comp=Z,67nm,0.4s							
TKM2	**Tokmak 2**	**4.75**	**15**	*i*	PN	**Pn**	**00 32 27.1**	**-1.5**
TKM2					pmax	pmax		
	comp=Z,8.0nm,0.4s							
CEP	**Cherat**	**4.80**	**201**		P	**Pn**	**00 32 32.3**	**+3.1**
CEP					S	**Sn**	**00 33 26.0**	**+2.1**
IUG	**Iuzhnay**	**4.86**	**323**		*e*P	Pn	00 32 36.0	+6.1
	comp=Z,24nm,0.3s							
IUG					*e*S	**Sn**	**00 33 32.8**	**+7.5**
	comp=Z,101nm,0.5s							
IUG	**Iuzhnay**	**4.86**	**323**		*e*P	**Pn**	**00 32 27.9**	**-2.1**
	baz=320							
IUG					*e*S	**Sn**	**00 33 20.6**	**-4.7**
	baz=320							
IUG	**Iuzhnay**	**4.86**	**323**		*e*PN	**Pn**	**00 32 27.8**	**-2.1**
KST	**Kastek**	**4.95**	**17**		*e*P	**Pn**	**00 32 30.1**	**-1.0**
	comp=Z,20nm,0.5s							
KST					*e*S	**Sn**	**00 33 22.8**	**-4.7**
	comp=Z,279nm,0.7s							
USP	**Ospenovka**	**4.95**	**4**		P	**Pn**	**00 32 29.5**	**-1.6**
	SNR=8.0							
DZA	**Taraz**	**4.98**	**337**		*e*P	Pn	00 32 36.9	+5.4
	comp=Z,62nm,0.2s							
DZA					*e*S	**Sn**	**00 33 34.7**	**+6.6**
	comp=Z,153nm,0.5s							
DZA	**Taraz**	**4.98**	**337**		*e*P	**Pn**	**00 32 29.3**	**-2.3**
	baz=335							
DZA	**Taraz**	**4.98**	**337**		*e*PN	**Pn**	**00 32 29.2**	**-2.3**
DGS	**Degeres**	**5.09**	**15**		*e*P	**Pn**	**00 32 33.1**	**+0.1**
	comp=Z,15nm,0.6s							
DGS					*e*S	**Sn**	**00 33 27.7**	**-3.2**
	comp=Z,90nm,0.6s							
IZV	**Izvestkoviy**	**5.11**	**22**		*e*P	**Pn**	**00 32 33.5**	**+0.1**
	comp=Z,8.5nm,0.6s							
IZV					*e*S	**Sn**	**00 33 28.3**	**-3.2**
	comp=Z,63nm,0.6s							
SGDS	**Sogindy**	**5.14**	**5**		*e*P	**Pn**	**00 32 31.1**	**-2.7**
	baz=5.6							
SGDS	**Sogindy**	**5.14**	**5**		*e*PN	**Pn**	**00 32 31.0**	**-2.7**
MTBS	**Maitube**	**5.15**	**20**		*e*P	Pn	00 32 39.7	+6.0
	comp=Z,7.1nm,0.5s							
MTBS					*e*S	**Sn**	**00 33 39.2**	**+7.1**
	comp=Z,24nm,0.9s							
CHM	**Chimkent**	**5.20**	**321**		*e*P	**Pn**	**00 32 33.5**	**-1.0**
	comp=Z,11nm,0.6s,baz=318							
CHM	**Chimkent**	**5.20**	**321**		*e*PN	**Pn**	**00 32 33.4**	**-1.0**
CHM					pmax	pmax		
	comp=Z,11nm,0.6s							
TNSS	**Tian-Shan**	**5.22**	**25**		*e*P	**Pn**	**00 32 32.6**	**-2.4**
	baz=27							
TNSS	**Tian-Shan**	**5.22**	**25**		*e*PN	**Pn**	**00 32 32.6**	**-2.4**
MDOK	**Medeo**	**5.36**	**25**		*e*P	Pn	00 32 46.1	+9.4
	comp=Z,6.5nm,0.8s							
MDOK					*e*S	Sn	00 33 50.6	+13
	comp=Z,72nm,0.8s							
MDOK	**Medeo**	**5.36**	**25**		*e*P	**Pn**	**00 32 33.1**	**-3.6**
	baz=27							
MDOK	**Medeo**	**5.36**	**25**		P	**Pn**	**00 32 37.4**	**+0.6**
	comp=Z,50nm,0.7s							
MDOK	**Medeo**	**5.36**	**25**		*e*PN	**Pn**	**00 32 33.9**	**-2.8**
KK31	**Karatay Array**	**5.45**	**332**	⇓	P	**Pn**	**00 32 36.5**	**-1.2**
	comp=Z,23nm,0.3s,baz=134,slow=13,SNR=345							
KK31				⇓	S	**Sn**	**00 33 33.5**	**-5.8**
	comp=Z,17nm,0.3s,baz=137,slow=22,SNR=12							
KK31	**Karatay Array**	**5.45**	**332**		*e*PN	**Pn**	**00 32 36.2**	**-1.5**
KK31	**Karatay Array**	**5.45**	**332**		Pn	**Pn**	**00 32 36.5**	**-1.2**
KKAR	**Karatay Array**	**5.45**	**332**		PN	**Pn**	**00 32 36.6**	**-1.1**
KKAR	**Karatay Array**	**5.45**	**332**			**Pn**	**00 32 36.6**	**-1.1**
KKAR	**Karatay Array**	**5.45**	**332**		Pn	**Pn**	**00 32 35.4**	**-2.3**
KBL	**Kabul**	**5.49**	**228**		PN	**Pn**	**00 32 40.8**	**+2.3**
KBL	**Kabul**	**5.49**	**228**		Pn	**Pn**	**00 32 40.8**	**+2.3**
KRBS	**Karabastau**	**5.51**	**13**		*e*P	Pn	00 32 43.6	+4.9
	comp=Z,2.3nm,0.6s							
KRBS					*e*S	**Sn**	**00 33 45.7**	**+4.8**
	comp=Z,19nm,0.7s							
BRLS	**Borolday**	**5.65**	**328**		*e*P	**Pn**	**00 32 43.3**	**+2.8**
	comp=Z,24nm,0.4s							
BRLS					*e*S	**Sn**	**00 33 46.2**	**+2.0**
	comp=Z,44nm,0.4s							
SATY	**Saty**	**5.80**	**34**		*e*P	**Pn**	**00 32 40.1**	**-2.6**
	baz=36							
SATY	**Saty**	**5.80**	**34**		*e*PN	**Pn**	**00 32 40.0**	**-2.6**
THW	**Thamme Wali**	**5.81**	**199**		P	**Pn**	**00 32 44.7**	**+1.9**
KUU	**Kurty**	**5.84**	**17**		*e*P	**Pn**	**00 32 47.1**	**+4.1**
	comp=Z,2.5nm,0.6s							
KUU					*e*S	**Sn**	**00 33 51.6**	**+2.9**
	comp=Z,20nm,0.6s							
KUU	**Kurty**	**5.84**	**17**		*e*P	**Pn**	**00 32 39.1**	**-3.9**
	comp=Z,3.8nm,0.7s,baz=18							
KUU	**Kurty**	**5.84**	**17**		*e*PN	**Pn**	**00 32 39.9**	**-3.1**
KUU					pmax	pmax		
	comp=Z,4.0nm,0.7s							
THN	**Thein Dam**	**6.05**	**166**		*e*P	**Pn**	**00 32 47.5**	**+1.6**
THN					*e*S	**Sn**	**00 33 52.0**	**-1.9**
KPKS	**Kokpek**	**6.25**	**33**		*e*P	**Pn**	**00 32 46.2**	**-2.5**
	baz=36							
KPKS	**Kokpek**	**6.25**	**33**		*e*PN	**Pn**	**00 32 46.1**	**-2.5**
DHRM	**DHARAMSHALA**	**6.36**	**162**		*e*P	**Pn**	**00 32 49.9**	**-0.4**
DHRM					*e*P		00 32 50.7	
DHRM					*e*S	**Sn**	**00 33 57.6**	**-4.0**
DHRM					IAML		00 34 03.2	
	comp=N,375nm,0.4s							
DHRM					IAML		00 34 06.3	
	comp=E,638nm,0.5s							
SHLS	**Shalkode**	**6.37**	**39**		*e*P	**Pn**	**00 32 51.1**	**+0.8**
	baz=44							
SHLS	**Shalkode**	**6.37**	**39**		*e*PN	**Pn**	**00 32 51.1**	**+0.8**
SARP	**Sargodha**	**6.48**	**190**		P	**Pn**	**00 32 52.6**	**+0.9**
PDGK	**Podgornoye**	**6.51**	**38**	⇑	P	**Pn**	**00 32 50.9**	**-1.3**
	comp=E,11nm,0.6s							
PDGK

comp=E,2.0nm,0.6s,baz=135,slow=23,SNR=13
AB31 Akbulak array 14.87 322 P Pn 00 34 39.9 -2.7
AB31 S Sn 00 37 13.2 -14
ABKAR Akbulak array 14.87 322 Pn Pn 00 34 40.2 -2.3
ABKAR Akbulak array 14.87 322 Pn Pn 00 34 39.8 -2.8
DGZ Jazzator, Alta 14.90 36 *i* **P Pn 00 34 40.3 -2.9**
BVAR Borovoye Array 14.91 352 P Pn 00 34 39.2 -3.8
comp=E,0.7nm,0.3s,baz=193,slow=20,SNR=17
BRVK Borovoye 14.95 351 ⇓**P Pn 00 34 40.6 -3.0**
comp=E,24nm,0.6s
BRVK Borovoye 14.95 351 *i* P Pn **00 34 40.5 -3.0**
BRVK pmax pmax
comp=E,24nm,0.6s
BRVK Borovoye 14.95 351 Pn Pn **00 34 41.2 -2.3**
BHPL Bhopal 15.33 168 *eP* **Pn 00 34 47.4 -1.1**
BHPL IAmb IAmb 00 34 56.4
comp=E,5.7nm,0.5s
BHPL *eS* Sn 00 37 24.5 -14
AKTO Aktyubinsk 16.59 322 P Pn 00 35 02.3 -1.5
comp=E,1.9nm,0.3s,baz=125,slow=11,SNR=28
AKTO S Sn 00 37 55.4 -13
comp=E,0.2nm,0.3s,baz=347,slow=20,SNR=1.8
AKTO Aktyubinsk 16.59 322 ⇓**P Pn 00 35 01.7 -2.1**
comp=E,17nm,0.9s
AKTO ⇑S Sn 00 37 55.2 -13
comp=E,3.7nm,0.8s
AKTO Aktyubinsk 16.59 322 *i* **P Pn 00 35 01.7 -2.1**
AKTO pmax pmax
comp=E,17nm,0.9s
ZAA0 Zalesovo Array 17.30 22 ⇑**P P 00 35 09.6 -2.4**
comp=Z,2.0nm,0.8s
ZAA0 Zalesovo Array 17.30 22 P P 00 35 10.8 -1.2
ZAA0 IAmb IAmb 00 35 11.4
comp=Z,14nm,1.1s
ZALV Zalesovo Beam 17.30 22 P P 00 35 10.4 -1.6
comp=Z,2.0nm,0.3s,baz=212,slow=12,SNR=49
ZALV Zalesovo Beam 17.30 22 *i* **P P 00 35 10.3 -1.6**
ZALV pmax pmax
comp=Z,8.0nm,0.4s
ZALV Zalesovo Beam 17.30 22 P P 00 35 10.0 -2.0
WSAR Wadi Sarin 19.96 225 P Pn 00 35 43.2 -0.8
comp=Z,8.9nm,0.8s,baz=86,slow=7.9,SNR=8.1
UOSS Minazif 20.12 234 P P 00 35 44.9 +1.9
GTA Gaotai 20.13 79 *eP* Pn 00 35 48.2 +2.1
GTA pmax pmax
comp=Z,2.0nm,0.9s
ARU Arti 20.81 335 P P 00 35 50.3 +0.3
comp=Z,3.0nm,0.5s,baz=149,slow=5.2,SNR=13
ARU Arti 20.81 335*d* *iP* **P 00 35 49.9 -0.1**
ARU 00 36 24.3
ARU S **S 00 39 35.6 +0.4**
ARU pmax pmax
comp=Z,24nm,1.4s
ARU Arti 20.81 335 P P 00 35 49.7 -0.3
ARU IAmb IAmb 00 35 51.1
comp=Z,12nm,1.0s
NCK Nalchik 23.46 292 *i* P **P 00 36 17.6 +0.6**
NCK pmax pmax
comp=Z,17nm,1.2s
KIV Kislovodsk 24.14 293 *eP* **P 00 36 24.2 +1.0**
KIV pmax pmax
comp=Z,15nm,1.0s
SONM Songino Array 25.35 58 P P 00 36 35.4 +1.2
comp=Z,1.1nm,0.5s,baz=253,slow=11,SNR=12
SONM Songino Array 25.35 58 P P 00 36 34.3 +0.1
ULN Ulaanbaatar 25.80 58*ce***P P 00 36 38.9 +0.7**
ULN pmax pmax
comp=Z,6.0nm,1.7s
SOC Sochi 26.28 292 *eP* **P 00 36 42.1 -0.3**
SOC *e* 00 37 30.4
SOC *eS* **S 00 41 04.3 -1.5**
SOC pmax pmax
comp=Z,72nm,1.1s
HHC Hu-ho-hao-te 28.93 73 *eP* **P 00 37 09.3 +3.0**
HHC pmax pmax
comp=Z,20nm,0.7s
HHC pmax pmax
comp=Z,170nm,7.7s
BRTR Keskin Array B 31.18 285 P P 00 37 28.6 +2.4
comp=Z,2.0nm,1.0s,baz=82,slow=12,SNR=3.2
BRTR Keskin Array B 31.18 285 P P 00 37 27.0 +0.8
ANTO Ankara 31.80 286 P P 00 37 32.3 +0.8
ANTO pmax pmax
comp=Z,12nm,1.0s
ANTO Ankara 31.80 286 P P 00 37 32.3 +0.8
NRIK Noril'sk 31.93 9 P P 00 37 32.7 +0.6
comp=Z,2.6nm,0.6s,baz=191,slow=6.1,SNR=6.8
NRIK Noril'sk 31.93 9*ce***P P 00 37 32.5 +0.4**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
NRIK Noril'sk 31.93 9 P P 00 37 32.5 +0.4
NRIK IAmb IAmb 00 37 33.6
comp=Z,4.4nm,0.9s
AKASG Malin Array Be 33.71 306 P P 00 37 48.5 +0.6
comp=Z,0.7nm,0.4s,baz=80,slow=7.3,SNR=3.8
ELL Elmali 34.73 281 P P 00 37 58.3 +1.3
ELL pmax pmax
comp=Z,36nm,1.1s
ELL Elmali 34.73 281 P P 00 37 58.3 +1.3
MLR Muntele Rosu 36.01 297 P P 00 38 09.4 +1.6
MLR pmax pmax
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 36.01 297 P P 00 38 09.4 +1.6
MLR IAmb IAmb 00 38 12.1
comp=Z,5.7nm,0.9s
BURAR Bucovina Array 36.33 301 P P 00 38 11.5 +0.9
BURAR Bucovina Array 36.33 301 P P 00 38 11.5 +0.9
BUR08 Bucovina Ar. S 36.34 301 P P 00 38 10.6 -0.1
FIA1 FINESS Array S 37.34 324 P P 00 38 19.5 +0.7
FIA1 IAmb IAmb 00 38 38.4
comp=Z,7.5nm,1.1s
FINES FINESS Array B 37.34 324 P P 00 38 19.7 +0.9
comp=Z,2.3nm,0.4s,baz=113,slow=9.7,SNR=31
FINES FINESS Array B 37.34 324 P P 00 38 19.3 +0.5
IDI Anoyia 39.05 281 P P 00 38 34.0 +0.5
ZEA Zeya 39.09 49 *eP* P 00 38 43.1 +10
OJC Ojcow 39.73 305 P P 00 38 40.0 +1.1
OJC pmax pmax
comp=Z,4.0nm,0.6s
OJC Ojcow 39.73 305 P P 00 38 40.0 +1.1
OJC IAmb IAmb 00 38 41.2
comp=Z,4.0nm,0.6s
AGG Agios Georgios 39.87 288 P P 00 38 41.8 +1.5
AGG pmax pmax
comp=Z,8.0nm,1.1s
AGG Agios Georgios 39.87 288 P P 00 38 41.8 +1.5
AGG IAmb IAmb 00 38 46.9
comp=Z,7.9nm,1.1s
KEV Kevo 40.02 337 P P 00 38 41.6 +0.6
KEV pmax pmax
comp=Z,14nm,1.1s
KEV Kevo 40.02 337 P P 00 38 41.6 +0.6
FNA Florina 40.13 291 P P 00 38 43.0 +0.6
FNA pmax pmax
comp=Z,10.0nm,1.2s
FNA Florina 40.13 291 P P 00 38 43.0 +0.6
FNA IAmb IAmb 00 38 43.3
comp=Z,9.5nm,1.2s
ARCES ARCESS Array B 40.40 336 P P 00 38 45.2 +1.1
comp=Z,8.3nm,0.6s,baz=110,slow=8.3,SNR=59
ARCES ARCESS Array B 40.40 336 IAmb IAmb 00 38 46.0
comp=Z,7.6nm,0.8s
DIVS Divibare 40.40 296 P P 00 38 46.8 +2.1
DIVS IAmb IAmb 00 38 47.7
comp=Z,4.0nm,0.9s
KRLC Kraliky 41.68 305 *eP* **P 00 38 56.8 +1.8**
KRLC Kraliky 41.68 305 *eP* **P 00 38 56.8 +1.8**
DPC Dobruska-Polom 41.94 306 *eP* **P 00 38 59.2 +2.1**
DPC Dobruska-Polom 41.94 306 *eP* **P 00 38 59.2 +2.1**
CHVC Chvalec 42.09 306 *eP* **P 00 39 00.3 +2.1**
KLR Kul'dur 42.16 56 P P 00 38 59.5 +0.7
comp=Z,0.8nm,0.5s,baz=272,slow=8.5,SNR=6.2
PRU Pruhonice 43.12 306 *eP* **P 00 39 08.6 +2.0**
PRU Pruhonice 43.12 306 *eP* **P 00 39 08.6 +2.0**
TIXI Tiksi 43.19 22*ce***P P 00 39 06.5 -0.3**
TIXI pmax pmax
comp=Z,11nm,0.5s
TIXI Tiksi 43.19 22 P P 00 39 06.8 0.0
TIXI IAmb IAmb 00 39 07.7
comp=Z,5.1nm,0.6s
BRG Berggiesshubel 43.39 307 *i* **P P 00 39 10.6 +1.9**
BRG Amp 00 39 11.4
comp=Z,3.1nm,0.8s
CKRC Cesky Krumlov 43.45 304 *eP* **P 00 39 10.2 +1.0**
GERES GERESS Array B 43.84 304 P P 00 39 13.9 +1.5
comp=Z,0.8nm,0.7s,baz=90,slow=9.3,SNR=7.2
KHC Kasperske Hory 43.87 305 *eP* **P 00 39 14.5 +1.9**
KHC Kasperske Hory 43.87 305 *eP* **P 00 39 14.5 +1.9**
CLL Collm 43.92 308 *eP* **P 00 39 14.4 +1.5**
SGRT San Giovanni R 43.98 294 P P 00 39 15.1 +1.4
NC405 NORSAR Array S 44.14 322 P P 00 39 14.9 +0.3
JTU Tsushima 44.20 77 P P 00 39 18.9 +3.5
NC602 NORSAR Array S 44.21 321 P P 00 39 15.0 -0.2
NC303 NORSAR Array S 44.31 322 P P 00 39 16.8 +0.9
NB201 NORSAR Array S 44.34 322 P P 00 39 16.4 +0.2
NOA NORSAR Array B 44.38 322 P P 00 39 16.9 +0.4
comp=Z,0.6nm,0.5s,baz=92,slow=7.7,SNR=7.4
NOA LR LR 00 58 08.5
comp=Z,29nm,19.0s,baz=330,slow=36
TRI Trieste 44.40 300 P P 00 39 17.9 +1.0
TRI pmax pmax
comp=Z,4.0nm,0.8s
TRI Trieste 44.40 300 P P 00 39 17.9 +1.0
TRI IAmb IAmb 00 39 36.5
comp=Z,4.1nm,0.8s
NBO00 NORSAR Array S 44.59 322 P P 00 39 18.6 +0.5
NC204 NORSAR Array S 44.60 322 P P 00 39 18.5 +0.2
NRCA Norcia 45.56 296 P P 00 39 27.9 +1.7
NRCA IAmb IAmb 00 39 30.5
comp=Z,4.4nm,1.0s
CORL Corleone 46.96 289 P P 00 39 38.2 +1.1
CORL IAmb IAmb 00 39 39.1
comp=Z,12nm,1.2s
VLC Villacollemand 47.11 298 P P 00 39 39.4 +1.2
VLC IAmb IAmb 00 39 41.4
comp=Z,5.3nm,1.0s
KBS Kingsbay 47.37 347 P P 00 39 40.8 +1.1
KBS pmax pmax
comp=Z,7.0nm,0.9s
KBS Kingsbay 47.37 347 P P 00 39 40.8 +1.1
KBS IAmb IAmb 00 39 47.9
comp=Z,7.0nm,0.9s
MSSA Maissana 47.67 299 P P 00 39 43.7 +1.1
MSSA IAmb IAmb 00 39 48.1
comp=Z,3.9nm,0.9s
JMN Monobe 47.93 76 P P 00 39 45.2 +0.5
SENIN Lac Senin/Sane 48.61 302 P P 00 39 51.0 +1.1
VSL Villasalto 49.28 293 P P 00 39 55.0 +0.1
VSL IAmb IAmb 00 39 58.0
comp=Z,8.1nm,1.1s
BNI Bardonecchia 49.40 301 P P 00 39 56.8 +0.9
BNI pmax pmax
comp=Z,1.0nm,0.7s
BNI Bardonecchia 49.40 301 P P 00 39 56.8 +0.9
ERM Erimo 51.67 63 P P 00 40 15.5 +2.7
ERM pmax pmax
comp=Z,19nm,1.0s
ERM Erimo 51.67 63 P P 00 40 15.5 +2.7
BILL Bilibino 55.92 27 *i* **P P 00 40 43.3 0.0**
BILL pmax pmax
comp=Z,5.0nm,1.7s
BILL Bilibino 55.92 27 P P 00 40 44.5 +1.2
BILL IAmb IAmb 00 40 44.6
comp=Z,2.1nm,0.6s
SCO Scoresbysund 56.33 336 P P 00 40 44.4 -1.8
SCO Scoresbysund 56.33 336 P P 00 40 44.4 -1.8
ESDC Sonseca Array 58.70 298 P P 00 41 04.7 +1.4
comp=Z,0.6nm,0.5s,baz=57,slow=7.1,SNR=11
EUNU Eureka 61.35 356 P P 00 41 22.0 +1.1
SFS San Fernando 61.73 296 P P 00 41 23.8 -0.1
SFS pmax pmax
comp=Z,125nm,0.8s
TORD Torodi Ar. Bea 68.11 270 P P 00 42 06.2 +0.7
comp=Z,2.2nm,0.6s,baz=48,slow=5.6,SNR=15
TOLK Toolik Lake Re 68.54 16 P P 00 42 08.4 +0.9
TOLK IAmb IAmb 00 42 08.9
comp=Z,4.5nm,0.6s
ILAR Eielson Array 72.36 17 P P 00 42 30.6 -0.1
comp=Z,0.9nm,0.8s,baz=318,slow=5.3,SNR=7.6
YKA Yellowknife Ar 79.28 4 P P 00 43 10.7 +0.6
comp=Z,1.2nm,0.6s,baz=351,slow=5.2,SNR=27

*ATH **10** 00:48:31.0,34°.67N×25°.82E,h10km±31km,ML2.8/4, Error ellipse: s-maj=31.6km s-min=1.3km az=0.0*
*IDC **10** 00:48:32.0±54.0, 35°.68N×26°.09E, h0km, mb4.0/3, mb1 4.0/3,mb1mx3.4/31,mbtmp4.0/3, Error ellipse: s-maj=1064.0km s-min=53.8km az=33.0*
*THE **10** 00:48:31.3,34°.70N×25°.82E,h12km±2km, ML2.7/4, Error ellipse: s-maj=2.7km s-min=0.7km az=48.0*
ISC 10 00:48:31.0±1.7, 34°.7N±0°.1×25°.84E±0°.04, h32km±9km, n17, σ1§20/26, mb4.0/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.30**	**343**	P	**Pb**	**00 48 37.9**	**-0.8**
FRMA				S	**Sb**	**00 48 43.5**	**-0.5**
	1μm,0.5s						
ZKR	**Zakros**	**0.50**	**38**	P	**Pb**	**00 48 41.5**	**0.0**
ZKR				S	**Sb**	**00 48 49.2**	**+0.5**
ZKR				AML	AML	00 48 55.6	
	comp=E,2355μm,0.4s						
ZKR				AML	AML	00 48 56.0	
	comp=N,1695μm,0.3s						
ZKR	**Zakros**	**0.50**	**38**	P	**Pb**	**00 48 41.6**	**+0.1**
ZKR				S	**Sb**	**00 48 49.9**	**+1.2**
	comp=N,930nm,0.4s						
NPS	**Neapolis**	**0.57**	**341**	P	**Pb**	**00 48 42.2**	**-0.5**
NPS				S	**Sb**	**00 48 51.5**	**+0.8**
NPS				AML	AML	00 48 56.7	
	comp=E,2575μm,0.6s						
NPS				AML	AML	00 48 58.4	
	comp=N,2201μm,0.8s						
NPS	**Neapolis**	**0.57**	**341**	P	**Pb**	**00 48 42.2**	**-0.5**
NPS				S	**Sb**	**00 48 51.7**	**+1.0**
	comp=N,1μm,0.6s						
SIVA	**Sivas**	**0.90**	**289**	P	**Pb**	**00 48 47.8**	**-0.3**
SIVA				S	**Sn**	**00 49 00.1**	**+0.9**
SIVA				AML	AML	00 49 08.1	
	comp=E,2798μm,0.7s						
SIVA				AML	AML	00 49 08.9	
	comp=N,1952μm,0.5s						
SIVA	**Sivas**	**0.90**	**289**	P	**Pn**	**00 48 48.0**	**+0.7**
SIVA				S	**Sn**	**00 49 01.1**	**+1.9**
	comp=N,1μm,0.6s						
TMBK	**Timbaki Herakl**	**0.95**	**292**	P	**Pb**	**00 48 48.9**	**-0.1**
IDI	**Anoyia**	**0.96**	**306**	P	**Pb**	**00 48 49.4**	**+0.1**
IDI				S	**Sn**	**00 49 02.3**	**+1.3**
IDI				AML	AML	00 49 04.3	
	comp=N,630μm,0.6s						
IDI				AML	AML	00 49 16.0	
	comp=E,530μm,0.5s						
IDI	**Anoyia**	**0.96**	**306**	P	**Pn**	**00 48 49.2**	**+0.9**
IDI				S	**Sn**	**00 49 02.6**	**+1.6**
KARP	**Karpathos**	**1.36**	**52**	P	**Pb**	**00 48 56.8**	**+1.0**
GVD	**Gavdhos**	**1.45**	**275**	P	**Pb**	**00 48 57.6**	**+0.2**
VAM	**Vamos**	**1.51**	**297**	P	**Pb**	**00 48 57.9**	**-0.5**
IMMV	**Iera Moni Meta**	**1.70**	**296**	P	**Pb**	**00 49 02.2**	**+0.7**
FINES	**FINESS Array B**	**26.74**	**0**	P	**P**	**00 54 04.3**	**-3.0**
	comp=E,4.8nm,1.0s,baz=164,slow=12,SNR=3.4						
ARCES	**ARCESS Array B**	**34.87**	**360**	P	**P**	**00 55 16.2**	**-2.6**
	comp=E,1.7nm,0.9s,baz=172,slow=7.0,SNR=1.8						
MKAR	**Makanchi Array**	**43.55**	**56**	P	**P**	**00 56 31.7**	**+0.1**
	comp=E,0.5nm,0.4s,baz=269,slow=7.2,SNR=9.1						

*NEIC **10** 01:04:49.8±1.7, 17°.97N±0°.08×146°.0E±0°.1, h86km±9km, mb4.1/3, Error ellipse: s-maj=19.9km s-min=11.5km az=86.0*
*IDC **10** 01:04:55.8±5.0, 17°.99N×145°.89E, h143km±47km, mb3.4/9, mb1 3.7/10,mb1mx3.4/41,mbtmp3.9/10, Error ellipse: s-maj=49.4km s-min=14.6km az=108.0*
ISC 10 01:04:50.9±0.7, 17°.95N±0°.07×145°.8E±0°.2, h100km, n22, σ1§19/13, mb3.8/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**1.60**	**184**		**Pn**	**01 05 18.0**	**-0.4**
GUMO	**Guam**	**4.43**	**192**	Pn	**Pn**	**01 05 54.9**	**-1.1**
JCJ	**Chichijima**	**9.71**	**340**	P	Pn	01 07 11.4	+3.9
	3.0nm,0.3s,baz=224,slow=8.0,SNR=1.3						
JCJ				S	**Sn**	**01 08 56.0**	**+1.3**
	2.9nm,0.3s,baz=287,slow=19,SNR=1.4						
JCJ	**Chichijima**	**9.71**	**340**		**Pn**	**01 07 06.0**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**19.82**	**85**	T	T	01 30 11.3	
	baz=274,slow=74,SNR=9.4						
H11S1	**WAKE ISLAND Hy**	**19.83**	**85**	T	T	01 30 09.9	
	baz=274,slow=74,SNR=13						
H11S2	**WAKE ISLAND Hy**	**19.84**	**85**	T	T	01 30 09.5	
	baz=274,slow=74,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**20.01**	**82**	T	T	01 30 12.5	
	baz=267,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**20.02**	**82**	T	T	01 30 13.9	
	baz=267,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**20.03**	**82**	T	T	01 30 13.6	
	baz=267,slow=75,SNR=11						
PETK	**Petropavlovsk-**	**36.29**	**12**	P	**P**	**01 11 46.0**	**+1.5**
	1.2nm,0.8s,baz=194,slow=6.9,SNR=1.0						
WRA	**Warramunga Arr**	**39.31**	**197**	P	**P**	**01 12 11.1**	**+0.7**
	0.9nm,0.9s,baz=25,slow=9.4,SNR=5.1						
WRA	**Warramunga Arr**	**39.31**	**197**	IAmb	IAmb	01 12 28.7	
	comp=Z,0.2nm,1.3s						
FITZ	**Fitzroy Crossi**	**40.96**	**210**	P	**P**	**01 12 24.9**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=17,slow=6.2,SNR=8.7						
FITZ	**Fitzroy Crossi**	**40.96**	**210**	IAmb	IAmb	01 12 42.8	
	comp=Z,6.9nm,1.4s						
ASAR	**Alice Springs**	**42.97**	**196**	P	**P**	**01 12 42.0**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=16,slow=7.2,SNR=1.8						
ILAR	**Eielson Array**	**64.26**	**26**	P	**P**	**01 15 14.2**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=251,slow=6.0,SNR=14						
YKA	**Yellowknife Ar**	**78.59**	**28**	P	**P**	**01 16 41.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=287,slow=5.0,SNR=4.8						
ARCES	**ARCESS Array B**	**83.24**	**342**	P	**P**	**01 17 06.7**	**+0.7**
	comp=Z,2.7nm,1.0s,baz=81,slow=7.5,SNR=4.5						
ARCES	**ARCESS Array B**	**83.24**	**342**	IAmb	IAmb	01 17 16.8	
	comp=Z,16nm,1.4s						
NVAR	**Mina Array Bea**	**83.50**	**52**	P	**P**	**01 17 08.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=262,slow=5.7,SNR=8.5						
FINES	**FINESS Array B**	**87.61**	**335**	P	**P**	**01 17 26.7**	**-1.0**
	comp=Z,2.2nm,0.9s,baz=58,slow=2.4,SNR=4.9						

IDC 10 01:11:17.5±2.8, 6.72S×129.98E, h148km±38km, mb3.3/1, mb1 3.1/5, mb1mx2.9/28, mbtmp3.5/5, MS2.8/3, Ms1 2.8/3, ms1mx2.5/13, Error ellipse: s-maj=72.1km s-min=21.1km az=88.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.95**	**12**	P	Pn	01 12 43.7	+0.1
	1.8nm,0.3s,baz=25,slow=24,SNR=9.2						
SIJI				S	Sn	01 13 46.0	-5.0
	1.8nm,0.3s,baz=239,slow=22,SNR=7.4						
SIJI				LR	LR	01 16 07.8	
	comp=Z,44nm,18.1s,baz=114,slow=49						
BATI	**Baumata**	**7.15**	**241**	LR	LR	01 16 29.7	
	comp=Z,250nm,18.2s,baz=82,slow=44						
KAPI	**Kappang**	**10.32**	**279**	LR	LR	01 18 26.7	
	comp=Z,27nm,19.4s,baz=132,slow=42						
FITZ	**Fitzroy Crossi**	**12.08**	**200**	P	Pn	01 14 04.3	-0.7
	0.1nm,0.3s,baz=25,slow=11,SNR=1.3						
FITZ				S	Sn	01 16 10.8	-7.7
	0.2nm,0.3s,baz=254,slow=21,SNR=2.6						
WRA	**Warramunga Arr**	**13.81**	**163**	P	Pn	01 14 27.7	+0.5
	0.1nm,0.3s,baz=347,slow=12,SNR=2.2						
WRA				S	Sn	01 16 51.0	-9.2
	0.2nm,0.3s,baz=334,slow=22,SNR=1.8						
ASAR	**Alice Springs**	**17.27**	**168**	P	P	01 15 09.3	+0.2
	0.1nm,0.3s,baz=351,slow=11,SNR=9.1						
ASAR				S	S	01 18 12.5	-9.1
	0.0nm,0.3s,baz=222,slow=38,SNR=1.9						
MKAR	**Makanchi Array**	**67.98**	**327**	P	P	01 22 00.7	0.0
	0.4nm,0.4s,baz=116,slow=8.2,SNR=5.1						

*IDC **10** 01:40:58.8±1.5, 5°.15S×153°.10E, h0km, mb3.9/14, mb1 4.0/14,mb1mx3.8/46,mbtmp3.9/14,MS2.8/5, Ms1 2.8/5,ms1mx2.6/29, Error ellipse: s-maj=51.6km s-min=19.5km az=118.0*
*NEIC **10** 01:41:01.0±1.3, 5°.3S±0°.1×153°.3E±0°.1, h23km±7km, mb4.3/9, Error ellipse: s-maj=23.8km s-min=8.0km az=45.0*
ISC 10 01:41:04.7±1.1, 5°.2S±0°.1×153°.1E±0°.2, h43km, n33, σ0§88/27, mb4.1/17, MS2.7/3, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.40**	**317**	Pn	**Pn**	**01 41 28.1**	**+0.2**
PMG	**Port Moresby**	**7.24**	**235**	Sn	**Sn**	**01 44 09.0**	**0.0**
	2.1nm,0.3s,baz=137,slow=21,SNR=3.0						
PMG				LR	LR	01 45 31.9	
	comp=Z,56nm,21.2s,baz=86,slow=38						
HNR	**Honiara**	**7.95**	**122**	LR	LR	01 46 11.5	
	comp=Z,110nm,20.3s,baz=316,slow=39						
WRAB	**Tennant Creek**	**23.41**	**230**	P	**P**	**01 46 09.7**	**-0.3**
WB2	**Warramunga Arr**	**23.41**	**230**	P	**P**	**01 46 09.3**	**-0.8**
WB2				IAmb	IAmb	01 46 22.6	
	comp=Z,7.7nm,1.1s						
WRA	**Warramunga Arr**	**23.42**	**230**	P	**P**	**01 46 09.5**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=52,slow=9.8,SNR=4.8						
WRA				PcP	**PcP**	**01 49 57.6**	**+1.8**
	comp=Z,0.3nm,0.4s,baz=53,slow=2.7,SNR=5.0						
ASAR	**Alice Springs**	**26.07**	**223**	P	**P**	**01 46 35.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=64,slow=8.8,SNR=4.7						
FITZ	**Fitzroy Crossi**	**29.75**	**242**	P	**P**	**01 47 06.6**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=64,slow=5.6,SNR=9.0						
DAV	**Davao City (W)**	**30.08**	**294**	LR	LR	01 56 06.8	
	comp=Z,17nm,21.2s,baz=188,slow=30						
MJAR	**Matsushiro Arr**	**43.83**	**343**	LR	LR	02 05 23.7	
	comp=Z,18nm,20.4s,baz=255,slow=34						
KSRS	**Korea Array**	**48.52**	**333**	LR	LR	02 08 45.2	
	comp=Z,5.1nm,18.0s,baz=110,slow=34						
KLR	**Kul'dur**	**57.34**	**344**	P	**P**	**01 50 49.1**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=118,slow=12,SNR=2.8						
PETK	**Petropavlovsk-**	**58.24**	**3**	P	**P**	**01 50 55.4**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=158,slow=6.5,SNR=8.0						
CMAR	**Chiang Mai Arr**	**58.35**	**295**	P	**P**	**01 50 56.4**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=116,slow=6.1,SNR=5.1						
SONM	**Songino Array**	**66.85**	**328**	P	**P**	**01 51 52.6**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=134,slow=4.2,SNR=2.8						
SONM	**Songino Array**	**66.85**	**328**	IAmb	IAmb	01 51 54.3	
	comp=Z,1.6nm,1.4s						
TIXI	**Tiksi**	**78.35**	**352**	P	**P**	**01 52 58.7**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=102,slow=4.6,SNR=1.7						
TIXI	**Tiksi**	**78.35**	**352**	IAmb	IAmb	01 53 01.4	
	comp=Z,5.1nm,1.4s						
MK31	**Makanchi Array**	**80.86**	**319**	P	**P**	**01 53 13.4**	**-0.9**
MKAR	**Makanchi Array**	**80.86**	**319**	P	**P**	**01 53 14.9**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=95,slow=6.5,SNR=7.5						
MKAR	**Makanchi Array**	**80.86**	**319**	P	**P**	**01 53 14.8**	**+0.4**
MAKZ	**Makanchi**	**81.07**	**319**	P	**P**	**01 53 13.7**	**-1.7**
MAKZ				IAmb	IAmb	01 54 16.0	
	comp=Z,9.4nm,1.9s						
ZAA0	**Zalesovo Array**	**81.68**	**326**	P	**P**	**01 53 16.9**	**-1.5**
ZAA0				IAmb	IAmb	01 53 18.9	
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**81.68**	**326**	P	**P**	**01 53 17.4**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=110,slow=5.5,SNR=11						
ZALV	**Zalesovo Beam**	**81.68**	**326**	P	**P**	**01 53 18.0**	**-0.5**
ILAR	**Eielson Array**	**82.42**	**22**	P	**P**	**01 53 21.5**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=241,slow=5.0,SNR=2.5						
KURK	**Kurchatov**	**84.30**	**322**	P	**P**	**01 53 31.8**	**-0.3**
KURBB	**Kurchatov Arra**	**84.33**	**322**	P	**P**	**01 53 31.8**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=116,slow=4.0,SNR=7.6						
AAK	**Ala-Archa**	**85.19**	**313**	P	**P**	**01 53 37.7**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=121,slow=4.2,SNR=5.1						
AAK	**Ala-Archa**	**85.19**	**313**	IAmb	IAmb	01 53 38.9	
	comp=Z,1.3nm,0.8s						
NRIK	**Noril'sk**	**86.46**	**341**	P	**P**	**01 53 42.8**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=136,slow=4.6,SNR=3.6						
GERES	**GERESS Array B**	**124.58**	**329**	PKP	**PKiKP**	**02 00 00.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=59,slow=3.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**150.75**	**288**	PKPbc	**PKPbc**	**02 00 53.1**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=53,slow=2.0,SNR=5.9						

*IDC **10** 02:51:55.3±3.1, 53°.58N×87°.96E, h0km, mb1 2.8/2, mb1mx2.8/48, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=24.7km s-min=15.4km az=61.0*
NNC 10 02:51:54.8±4.6, 53°.54N×88°.07E, h1km±35km, mb3.1, mpv2.7,5C-6D, Error ellipse: s-maj=41.8km s-min=16.4km az=68.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.97**	**283**	*i*		03 05 00.0	
	baz=96,slow=317,SNR=1.5						
ZAA0	**Zalesovo Array**	**1.97**	**283**	⇑Pn	Pn	02 52 29.0	-0.4
	1.0nm,0.8

ZALV				Lg	Lg	02 52 56.2			
	1.8nm,0.3s,baz=104,slow=26,SNR=16								
KURBB	**Kurchatov Arra**	**6.56**	**247**	Pn	Pn	02 53 33.5	+1.2		
	0.1nm,0.3s,baz=62,slow=14,SNR=4.0								
KURBB				Sn	Sn	02 54 46.7	-1.0		
	0.0nm,0.3s,baz=57,slow=23,SNR=1.6								
KURBB				Lg	Lg	02 55 20.8			
	0.0nm,0.3s,baz=62,slow=31,SNR=5.9								
KURBB	**Kurchatov Arra**	**6.56**	**247**	⇑Pn	Pn	02 53 32.8	+0.5		
	0.9nm,0.5s								
KURBB				⇓Sn	Sn	02 54 46.3	-1.4		
	2.7nm,0.7s								
KURBB				⇑Lg	Lg	02 55 23.6			
	4.5nm,0.7s								
MK31	**Makanchi Array**	**7.70**	**211**	⇓Pn	Pn	02 53 48.9	+1.0		
	0.2nm,0.5s,baz=24,slow=15,SNR=5.2								
MK31				⇓Sn	Sn	02 55 17.3	+1.6		
	0.5nm,0.6s,baz=25,slow=26								
MK31				⇓Lg	Lg	02 55 58.8			
	2.3nm,1.0s,baz=32,slow=30								
MKAR	**Makanchi Array**	**7.70**	**211**	Pn	Pn	02 53 50.0	+2.0		
	0.1nm,0.3s,baz=34,slow=12,SNR=5.2								
MKAR				Sn	Sn	02 55 16.0	+0.3		
	0.1nm,0.3s,baz=27,slow=25,SNR=5.3								
MKAR				Lg	Lg	02 55 59.4			
	0.1nm,0.3s,baz=31,slow=29,SNR=6.2								
MAKZ	**Makanchi**	**7.78**	**213**	⇑Pn	Pn	02 53 50.0	+0.8		
	0.4nm,0.3s								
MAKZ				⇑Sn	Sn	02 55 20.4	+2.6		
	0.4nm,0.5s								
MAKZ				⇓Lg	Lg	02 55 59.7			
	0.8nm,0.9s								

IDC ***10*** *03:12:17.9±0.8, 10°.33S×124°.06E, h0km, mb4.3/10, mb1 4.4/13, mb1mx4.1/39, mbtmp4.3/13, ML4.1/3, MS3.1/8, Ms1 3.2/8, ms1mx2.8/42, Error ellipse: s-maj=18.0km s-min=7.6km az=16.0*

DJA ***10*** *03:12:19.2±0.6, 11°.S±4°×12°.4E±°, h11km±4km, M4.6/15, mb4.7/15, mB5.1/8, MLv4.7/10, Mw(mB)4.5/8, MwMwp5.9/1, Mwp5.9/1*

NEIC ***10*** *03:12:23.0±1.5, 10°.49S±0°.06×123°.94E±0°.07, h44km±3km, mb4.5/18, Error ellipse: s-maj=10.2km s-min=8.8km az=96.0*

ISC 10 03:12:18.9±0.4, 10°.52S±0°.05×123°.91E±0°.06, h10km, n68, σ1ᵍ53/66, mb4.6/20, MS3.4/5, 1D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.40**	**322**	Pg		**Pg**		**03 12 25.9**	**-0.9**
	14µm,0.3s,baz=100,slow=2.2,SNR=3216								
BATI				Lg		Lg		03 12 31.4	
	15µm,0.3s,baz=42,slow=37,SNR=53								
BATI				LR		LR		03 12 33.0	
	comp=Z,420nm,21.3s,baz=42,slow=37								
BATI	**Baumata**	**0.40**	**322**	P		**Pg**		**03 12 25.9**	**-0.9**
SOEI	**Soe**	**0.84**	**25**			**Pn**		**03 12 37.7**	**+0.8**
SOEI	**Soe**	**0.84**	**25**	P		**Pn**		**03 12 37.4**	**+0.5**
MMRI	**Maumere**	**2.50**	**318**	Pn		**Pn**		**03 13 00.7**	**+1.0**
MMRI	**Maumere**	**2.50**	**318**	P		**Pn**		**03 13 00.0**	**+0.3**
BASI	**Baing, Sumba**	**3.29**	**275**	P		**Pn**		**03 13 10.6**	**0.0**
BASI				S		**Sn**		**03 13 48.8**	**-1.1**
BSSI	**Bau Bau, Buton**	**5.51**	**322**	P		**Pn**		**03 13 42.0**	**+0.9**
	0.2nm602nm54nm,0.6s								
PLAI	**Plampang**	**6.28**	**285**	P		**Pn**		**03 13 52.1**	**+0.4**
	1.6nm2µm93nm,0.8s								
PLAI				S		**Sn**		**03 15 00.8**	**-2.8**
	1.6nm2µm93nm,0.8s								
KAPI	**Kappang**	**6.85**	**323**	LR		LR		03 16 45.7	
	comp=Z,119nm,19.3s,baz=124,slow=39								
KAPI	**Kappang**	**6.85**	**323**	Pn		**Pn**		**03 14 01.6**	**+2.1**
TWSI	**Taliwang, Sumb**	**7.16**	**284**	P		**Pn**		**03 14 03.5**	**-0.2**
	0.3nm644nm29nm,0.5s								
BNSI	**Bone**	**7.16**	**328**	P		**Pn**		**03 14 04.4**	**+0.7**
	0.1nm25nm,0.9s								
MTN	**Manton Dam**	**7.44**	**109**	Pn		**Pn**		**03 14 10.0**	**+2.4**
FITZ	**Fitzroy Crossi**	**7.71**	**168**	Pn		**Pn**		**03 14 13.5**	**+2.1**
	2.3nm,0.3s,baz=351,slow=9.7,SNR=90								
FITZ				Sn		**Sn**		**03 15 39.1**	**+0.2**
	4.9nm,0.3s,baz=174,slow=8.3,SNR=8.3								
FITZ				LR		LR		03 17 30.6	
	comp=Z,92nm,20.5s,baz=344,slow=40								
TTSI	**Tana Toraja**	**8.47**	**331**	P		**Pn**		**03 14 22.4**	**+0.7**
SANI	**Sanana**	**8.67**	**14**	P		**Pn**		**03 14 25.8**	**+1.3**
	17nm,0.8s								
FAKI	**Fak Fak**	**11.20**	**48**	Pn		**Pn**		**03 14 60.0**	**+0.7**
PSA00	**Pilbara Seismi**	**11.66**	**199**	Pn		**Pn**		**03 15 07.0**	**+1.5**
TOLI2	**Tolitoli**	**11.97**	**345**			**Pn**		**03 15 11.4**	**+1.7**
WB0	**Warramunga Arr**	**13.66**	**134**	Pn		**Pn**		**03 15 31.8**	**-1.1**
WRA	**Warramunga Arr**	**13.74**	**134**	Pn		**Pn**		**03 15 33.0**	**-0.9**
	0.8nm,0.3s,baz=302,slow=15,SNR=26								
WRA				Sn		**Sn**		**03 18 01.7**	**-5.0**
	3.6nm,0.3s,baz=307,slow=24,SNR=12								
WRA				LR		LR		03 21 27.4	
	comp=Z,61nm,20.7s,baz=340,slow=40								
WRA	**Warramunga Arr**	**13.74**	**134**			**Pn**		**03 15 34.9**	**+0.9**
WB2	**Warramunga Arr**	**13.75**	**134**	Pn		**Pn**		**03 15 33.7**	**-0.4**
WR0	**Warramunga Arr**	**13.89**	**134**	Pn		**Pn**		**03 15 35.7**	**-0.4**
GIRL	**Giralia**	**15.20**	**216**	Pn		**Pn**		**03 15 55.7**	**+1.9**
AS31	**Alice Springs**	**16.18**	**145**	Pn		**Pn**		**03 16 07.3**	**+0.8**
ASAR	**Alice Springs**	**16.18**	**145**	Pn		**Pn**		**03 16 07.3**	**+0.8**
	1.3nm,0.3s,baz=319,slow=12,SNR=84								
ASAR				Sn		**Sn**		**03 19 03.0**	**-3.1**
	0.9nm,0.3s,baz=317,slow=22,SNR=17								
ASAR				LR		LR		03 21 55.7	
	comp=Z,80nm,21.3s,baz=317,slow=36								
ASAR	**Alice Springs**	**16.18**	**145**	Pn		**Pn**		**03 16 07.5**	**+1.0**
LEM	**Lembang**	**16.52**	**282**	Pn		**P**		**03 16 14.3**	**+0.6**
	25nm,0.3s,baz=33,slow=12,SNR=10								
KKM	**Kota Kinabalu**	**18.16**	**335**	P		**P**		**03 16 32.2**	**+0.5**
KASI	**Kota Agung**	**19.85**	**283**	P		**P**		**03 16 50.5**	**+0.2**
	2µm131nm,1.0s								
FORT	**Forrest**	**20.52**	**170**	P		**P**		**03 16 55.6**	**-1.8**
FORT				IAmb		IAmb		03 17 03.1	
	comp=Z,23nm,0.7s								
PMG	**Port Moresby**	**22.92**	**89**	LR		LR		03 26 34.7	
	comp=Z,45nm,19.1s,baz=151,slow=38								
NWAO	**Narrogin (SRO)**	**23.13**	**194**	P		**P**		**03 17 27.1**	**+1.8**
	comp=Z,6.1nm,0.9s,baz=342,slow=14,SNR=1.4								
NWAO	**Narrogin (SRO)**	**23.13**	**194**	IAmb		IAmb		03 17 32.8	
	comp=Z,33nm,1.4s								
MNSI	**Mandailing Nat**	**26.69**	**293**	P		P		03 17 48.1	-10
STKA	**Stephens Creek**	**26.81**	**145**	P		**P**		**03 18 02.0**	**+2.6**
	comp=Z,0.9nm,0.4s,baz=307,slow=13,SNR=3.1								
STKA				LR		LR		03 28 30.2	
	comp=Z,63nm,18.6s,baz=13,slow=36								
STKA	**Stephens Creek**	**26.81**	**145**	IAmb		IAmb		03 18 05.8	
	comp=Z,1.9nm,1.3s								
CMAR	**Chiang Mai Arr**	**37.90**	**319**	P		**P**		**03 19 36.5**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=146,slow=8.1,SNR=6.3								
KMI	**Kunming**	**41.01**	**330**	⇓P		**P**		**03 20 05.0**	**+2.3**
KMI				pmax		pmax			
	comp=Z,17nm,0.6s								
NJ2	**Nanjing**	**42.61**	**354**	*e*P		**P**		**03 20 16.7**	**+1.3**
NJ2				pmax		pmax			
	comp=Z,12nm,0.5s								
MAT	**Matsushiro**	**48.71**	**15**	P		**P**		**03 21 01.9**	**-1.8**
MJAR	**Matsushiro Arr**	**48.71**	**15**	P		**P**		**03 21 01.8**	**-1.8**
	comp=Z,1.9nm,0.8s,baz=186,slow=8.2,SNR=4.4								
MJAR	**Matsushiro Arr**	**48.71**	**15**	IAmb		IAmb		03 21 06.7	
	comp=Z,1.5nm,0.6s								
USRK	**Ussuriysk Ar.**	**54.95**	**7**	P		**P**		**03 21 50.0**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=198,slow=7.0,SNR=6.0								
ULN	**Ulaanbaatar**	**60.03**	**347**	P		**P**		**03 22 24.1**	**-2.0**
ULN				IAmb		IAmb		03 22 48.5	
	comp=Z,2.4nm,0.5s								
SONM	**Songino Array**	**60.15**	**346**	P		**P**		**03 22 25.7**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=166,slow=6.7,SNR=5.5								
WMQ	**Urumqi**	**63.31**	**331**	*e*P		**P**		**03 22 45.5**	**-2.7**
WMQ				pP		sP		03 23 03.5	+11
WMQ				PP		**PP**		**03 25 10.7**	**+3.0**
WMQ				pmax		pmax			
	comp=Z,21nm,0.7s								
WMQ				LR		LR			
	comp=N,2µm,29.2s								
WMQ				LR		LR			
	comp=E,4µm,29.1s								
WMQ				LR		LR			
	comp=Z,150nm,28.9s								
NIL	**Nilore**	**65.17**	**315**	P		**P**		**03 22 59.3**	**-1.2**
KSH	**Kashi**	**66.76**	**321**	P		**P**		**03 23 12.7**	**+1.9**
KSH				pmax		pmax			
	comp=Z,4.0nm,0.9s								
KSH				pmax		pmax			
	comp=Z,240nm,4.8s								

MK31	**Makanchi Array**	**68.08**	**331**	P		**P**		**03 23 18.1**	**-0.8**
MKAR	**Makanchi Array**	**68.08**	**331**	P		**P**		**03 23 18.2**	**-0.6**
	comp=Z,7.9nm,0.6s,baz=135,slow=7.4,SNR=83								
MAKZ	**Makanchi**	**68.25**	**330**	P		**P**		**03 23 18.3**	**-1.6**
MAKZ				IAmb		IAmb		03 23 19.9	
	comp=Z,3.8nm,0.7s								
KBL	**Kabul**	**68.61**	**314**	P		**P**		**03 23 21.1**	**-1.6**
KBL				IAmb		IAmb		03 23 22.4	
	comp=Z,6.1nm,0.8s								
AAK	**Ala-Archa**	**69.54**	**323**	P		**P**		**03 23 27.8**	**-0.4**
AAK				IAmb		IAmb		03 23 28.6	
	comp=Z,2.7nm,0.7s								
PETK	**Petropavlovsk-**	**69.64**	**21**	P		**P**		**03 23 27.9**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=191,slow=6.8,SNR=2.4								
VNDA	**Vanda**	**69.77**	**172**	LR		LR		03 52 11.1	
	comp=Z,26nm,20.0s,baz=316,slow=34								
ZAA0	**Zalesovo Array**	**72.25**	**337**	P		**P**		**03 23 43.2**	**-1.1**
ZALV	**Zalesovo Beam**	**72.25**	**337**	P		**P**		**03 23 43.0**	**-1.3**
	comp=Z,6.5nm,0.5s,baz=136,slow=4.6,SNR=24								
ZALV	**Zalesovo Beam**	**72.25**	**337**	P		**P**		**03 23 42.8**	**-1.4**
SOCY	**Socotra**	**73.02**	**286**	P		**P**		**03 23 50.2**	**+0.5**
SEY	**Seymchan**	**76.46**	**13**	P		**P**		**03 24 09.2**	**+0.7**
	comp=Z,3.6nm,0.5s,baz=194,slow=4.5,SNR=16								
GEYT	**Alibeck**	**78.01**	**312**	LR		LR		04 05 15.3	
	comp=Z,16nm,18.2s,baz=0.0,slow=41								
ABKAR	**Akbulak array**	**81.62**	**323**	P		**P**		**03 24 36.7**	**-0.5**
TIXI	**Tiksi**	**82.06**	**2**	P		**P**		**03 24 38.2**	**-0.8**
TIXI				IAmb		IAmb		03 24 58.1	
	comp=Z,5.3nm,1.4s								
RAYN	**Ar Rayn**	**83.72**	**295**	P		**P**		**03 24 49.7**	**+1.0**
RAYN				IAmb		IAmb		03 24 51.2	
	comp=Z,2.1nm,0.6s								
TORD	**Torodi Ar. Bea**	**123.49**	**279**	PKP		**PKiKP**		**03 31 18.5**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=67,slow=1.7,SNR=2.1								

IDC ***10*** *03:15:16.5±2.5, 21°.93N×143°.10E, h189km±21km, mb3.6/11, mb1 3.9/12, mb1mx3.5/48, mbtmp4.2/12, Error ellipse: s-maj=22.4km s-min=18.4km az=88.0*

NEIC ***10*** *03:15:16.1±1.2, 21°.9N±0°.1×143°.2E±0°.2, h191km±7km, mb4.2/11, Error ellipse: s-maj=24.3km s-min=15.9km az=78.0*

ISC 10 03:15:17.2±0.7, 21°.9N±0°.1×143°.2E±0°.2, h200km, n30, σ0ᵍ91/31, mb4.0/18, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.21**	**350**	P		**Pn**		**03 16 34.3**	**-0.1**
	34nm,0.3s,baz=276,slow=22,SNR=20								
JCJ				S		**Sn**		**03 17 33.8**	**-1.5**
	16nm,0.3s,baz=287,slow=21,SNR=7.2								
JSD	**Sado**	**16.60**	**346**	P		**P**		**03 18 58.3**	**+0.7**
JSD				IAmb		IAmb		03 19 12.1	
	comp=Z,10nm,1.0s								
KSRS	**Korea Array**	**20.33**	**323**	P		Pn		03 19 41.7	-1.3
	comp=Z,1.1nm,0.6s,baz=153,slow=9.3,SNR=4.6								
KLR	**Kul'dur**	**28.71**	**344**	P		**P**		**03 20 56.1**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=202,slow=4.9,SNR=6.6								
HHC	**Hu-ho-hao-te**	**32.68**	**313**	*e*P		**P**		**03 21 32.0**	**+1.2**
HHC				pmax		pmax			
	comp=Z,28nm,0.8s								
HHC				pmax		pmax			
	comp=Z,140nm,7.9s								
WRA	**Warramunga Arr**	**42.52**	**192**	P		**P**		**03 22 52.1**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=16,slow=9.6,SNR=4.9								
TLY	**Talaya**	**42.58**	**324**	P		**P**		**03 22 52.7**	**-0.6**
ZALV	**Zalesovo Beam**	**54.03**	**322**	P		**P**		**03 24 20.9**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=107,slow=8.0,SNR=4.4								
MKAR	**Makanchi Array**	**54.55**	**313**	P		**P**		**03 24 25.6**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=94,slow=9.3,SNR=2.0								
MKAR				PcP		**PcP**		**03 25 25.2**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=67,slow=6.5,SNR=3.5								
MKAR	**Makanchi Array**	**54.55**	**313**	P		**P**		**03 24 24.9**	**+0.2**
MAKZ	**Makanchi**	**54.76**	**313**	P		**P**		**03 24 26.4**	**+0.2**
MAKZ				IAmb		IAmb		03 24 29.1	
	comp=Z,2.7nm,0.7s								
IL31		**61.81**	**27**	P		**P**		**03 25 13.9**	**-0.7**
ILAR	**Eielson Array**	**61.81**	**27**	P		**P**		**03 25 14.6**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=262,slow=5.2,SNR=27								
BRVK	**Borovoye**	**62.56**	**319**	P		**P**		**03 25 18.4**	**-1.4**
BRVK				IAmb		IAmb		03 25 21.1	
	comp=Z,3.4nm,0.7s								
KK31	**Karatay Array**	**62.92**	**308**	P		**P**		**03 25 23.1**	**+0.7**
KK31				IAmb		IAmb		03 25 23.7	
	comp=Z,1.6nm,0.6s								
KKAR	**Karatay Array**	**62.92**	**308**	P		**P**		**03 25 22.6**	**+0.2**
ARU	**Arti**	**69.08**	**324**	P		**P**		**03 25 59.0**	**-2.4**
ARU				IAmb		IAmb		03 26 07.0	
	comp=Z,19nm,1.7s								
ABKAR	**Akbulak array**	**69.39**	**316**	P		**P**		**03 26 03.5**	**+0.1**
ABKAR				IAmb		IAmb		03 26 04.1	
	comp=Z,2.5nm,0.7s								
YKA	**Yellowknife Ar**	**76.23**	**28**	P		**P**		**03 26 44.0**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=291,slow=5.2,SNR=25								
ARCES	**ARCESS Array B**	**78.70**	**341**	P		**P**		**03 26 57.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=67,slow=9.9,SNR=4.4								
BEKR	**Beckworth**	**80.96**	**51**	P		**P**		**03 27 08.9**	**-1.0**
BEKR				IAmb		IAmb		03 27 11.7	
	comp=Z,2.4nm,0.7s								
KBZ	**Khabaz**	**82.21**	**314**	P		**P**		**03 27 16.9**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=21,slow=3.1,SNR=4.4								
FINES	**FINESS Array B**	**82.97**	**334**	P		**P**		**03 27 18.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=67,slow=5.2,SNR=18								
NVAR	**Mina Array Bea**	**82.98**	**52**	P		**P**		**03 27 22.0**	**+1.6**
	comp=Z,2.1nm,0.7s,baz=275,slow=5.6,SNR=21								
NVAR	**Mina Array Bea**	**82.98**	**52**	P		**P**		**03 27 21.4**	**+1.0**
ELK	**Elko**	**84.25**	**48**	P		**P**		**03 27 26.6**	**-0.2**
PDAR	**Pinedale Array**	**87.21**	**45**	P		**P**		**03 27 42.2**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=327,slow=4.3,SNR=2.6								
PLCA	**Paso Flores**	**145.90**	**131**	PKPbc		**PKPab**		**03 34 34.2**	**0.0**
	comp=Z,3.0nm,0.5s,baz=245,slow=4.0,SNR=29								
LPAZ	**La Paz**	**149.90**	**85**	PKPbc		**PKiKP**		**03 34 46.2**	**0.0**
	comp=Z,3.5nm,0.6s,baz=324,slow=1.5,SNR=15								
LPAZ	**La Paz**	**149.90**	**85**			**PKiKP**		**03 34 46.5**	**+0.3**

MAN ***10*** *03:24:49.5, 5°.12N×126°.12E, h56km, mb4.9, ML3.9, MS3.9*

DJA ***10*** *03:24:51.1±0.8, 5°.N±7°×12°.6E±°, h86km±7km, M4.7/16, mB5.2/8, mb4.8/16, MLv5.0/12, Mw(mB)4.5/8*

IDC ***10*** *03:24:52.5±0.9, 5°.38N×125°.96E, h110km±8km, mb3.9/18, mb1 4.1/21, mb1mx3.9/40, mbtmp4.3/21, MS2.7/3, Ms1 2.7/3, ms1mx2.3/48, Error ellipse: s-maj=25.8km s-min=8.4km az=78.0*

NEIC ***10*** *03:24:52.0±1.7, 5°.41N±0°.03×126°.2E±0°.1, h106km±6km, mb4.4/30, Error ellipse: s-maj=15.9km s-min=3.8km az=81.0*

KLM ***10*** *03:25:00, 5°.18N×125°.74E, h197km, mb4.7*

ISC 10 03:24:51.9±0.7, 5°.40N±0°.04×126°.12E±0°.06, h104km±7km, n101, σ1ᵍ73/104, mb4.3/33, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.81**	**330**	*e*P		**Pn**		**03 25 09.8**	**-1.0**
DDMP				*e*S		**Sn**		**03 25 23.2**	**-1.6**
MATI	**Mati**	**1.54**	**5**	*e*P		**Pn**		**03 25 17.8**	**-1.1**
DAV	**Davao City (W)**	**1.74**	**342**	P		**Pn**		**03 25 21.0**	**-0.4**
	125nm,0.3s,baz=225,slow=5.7,SNR=6.1								
DAV				S		**Sn**		**03 25 44.9**	**+1.0**
	142nm,0.3s,baz=81,slow=23,SNR=10								
DAV	**Davao City (W)**	**1.74**	**342**	Pn		**Pn**		**03 25 21.6**	**+0.1**
SGSI	**Sangihe**	**1.81**	**199**	P		**Pn**		**03 25 22.0**	**-0.2**
SGSI				S		**Sn**		**03 25 46.1**	**+0.8**
KCP	**Kidapawan**	**1.90**	**327**	⇓*i*P		**Pn**		**03 25 24.0**	**+0.5**
KCP				*i* S		**Sn**		**03 25 40.6**	**-6.8**
SKMP	**Bagumbayan, Su**	**1.92**	**305**	*e*P		**Pn**		**03 25 23.6**	**-0.1**
SKMP				*e*S		**Sn**		**03 25 47.9**	**-0.1**
CGP	**Cagayan de Oro**	**3.35**	**335**	⇓*e*P		**Pn**		**03 25 44.8**	**+2.3**
CGP				*e*S		**Sn**		**03 26 26.6**	**+5.2**
BUTP	**Butuan**	**3.58**	**352**	*e*P		**Pn**		**03 25 47.3**	**+1.8**
BUTP				*e*S		**Sn**		**03 26 29.0**	**+2.1**
GLSP	**General Luna,**	**4.35**	**0**	*e*P		**Pn**		**03 25 58.0**	**+2.1**
GLSP				*e*S		**Sn**		**03 26 52.6**	**+7.0**
TNTI	**Ternate**	**4.77**	**165**			**Pn**		**03 26 00.9**	**-0.7**
TNTI	**Ternate**	**4.77**	**165**	P		**Pn**		**03 26 00.7**	**-0.9**
MSLP	**Maasin**	**4.86**	**345**	*e*P		**Pn**		**03 26 05.3**	**+2.5**
KMSI	**Cibinong**	**5.25**	**204**	P		**Pn**		**03 26 08.8**	**+0.7**
	1.3nm12µm254nm,0.8s								
LLP	**Lapu-Lapu**	**5.33**	**337**	*e*P		**Pn**		**03 26 10.5**	**+1.3**
LLP				*e*S		**Sn**		**03 27 01.9**	**-7.5**
GTOI	**Gorontalo**	**5.66**	**213**	P		**Pn**		**03 26 12.3**	**-1.4**
	0.9nm2µm256nm,0.6s								
MRSI	**Marisa**	**6.43**	**221**	P		**Pn**		**03 26 24.0**	**-0.2**
	0.8nm3µm228nm,0.6s								

TOLI2	**Tolitoli**	**6.83**	**232**	Pn		**Pn**		**03 26 28.6**	**-1.0**
LUWI	**Luwuk**	**7.22**	**208**	Pn		**Pn**		**03 26 36.6**	**+1.6**
LUWI	**Luwuk**	**7.22**	**208**	P		**Pn**		**03 26 35.2**	**+0.3**
	0.9nm207nm,0.7s								
SANI	**Sanana**	**7.41**	**181**	P		**Pn**		**03 26 34.8**	**-2.6**
	0.6nm3µm123nm,0.6s								
MYLDM	**Lahad Datu**	**7.59**	**269**	Pn		**Pn**		**03 26 41.1**	**+1.2**
APSI	**Ampana**	**7.70**	**216**	P		**Pn**		**03 26 43.0**	**+1.6**
	0.3nm821nm94nm,1.3s								
SWI	**Sorong**	**8.07**	**140**	P		**Pn**		**03 26 44.5**	**-1.9**
	47nm,0.7s								
SIJI	**Sorong**	**8.08**	**140**	P		**Pn**		**03 26 46.3**	**-0.3**
	6.9nm,0.3s,baz=331,slow=13,SNR=11								
SIJI				S		**Sn**		**03 28 14.1**	**-2.1**
	1.4nm,0.3s,baz=165,slow=23,SNR=1.6								
NLAI	**Namlea**	**8.64**	**173**	P		**Pn**		**03 26 52.6**	**-1.6**
FAKI	**Fak Fak**	**10.29**	**143**	Pn		**Pn**		**03 27 16.4**	**-0.1**
TTSI	**Tana Toraja**	**10.49**	**217**	P		**Pn**		**03 27 20.3**	**+1.0**
	1µm30nm,0.6s								
SPSI	**Sidrap Palu**	**11.26**	**214**	P		**Pn**		**03 27 29.6**	**-0.2**
	21nm,0.7s								
KAPI	**Kappang**	**12.15**	**212**	LR		LR		03 31 54.9	
	comp=Z,46nm,18.7s,baz=52,slow=35								
SBUM	**Sibu**	**14.18**	**259**	Pn		**Pn**		**03 28 10.1**	**+2.0**
SBUM	**Sibu**	**14.18**	**259**	P		**P**		**03 28 12.0**	**-0.3**
BATI	**Baumata**	**15.70**	**189**	P		**P**		**03 28 28.9**	**-0.4**
	7.8nm,0.3s,baz=304,slow=2.6,SNR=2.7								
JAY	**Jayapura**	**16.55**	**118**	P		**P**		**03 28 39.5**	**+0.8**
	0.6nm,0.3s,baz=228,slow=8.3,SNR=1.1								
TWSI	**Taliwang, Sumb**	**16.80**	**213**	P		**P**		**03 28 43.1**	**+1.7**
	12nm,0.7s								
MTN	**Manton Dam**	**18.80**	**165**	P		**P**		**03 29 03.3**	**0.0**
MTN				IAmb		IAmb		03 29 13.8	
	comp=Z,16nm,0.5s								
JOW	**Kunigami**	**21.41**	**5**	LR		LR		03 37 48.8	
	comp=Z,17nm,19.9s,baz=144,slow=36								
FITZ	**Fitzroy Crossi**	**23.36**	**181**	P		**P**		**03 29 51.7**	**+0.4**
	comp=Z,5.7nm,0.6s,baz=28,slow=9.4,SNR=15								
FITZ	**Fitzroy Crossi**	**23.36**	**181**	P		**P**		**03 29 51.2**	**-0.1**
FITZ				IAmb		IAmb		03 29 56.8	
	comp=Z,4.6nm,0.6s								
PMG	**Port Moresby**	**25.61**	**125**	LR		LR		03 41 34.9	
	comp=Z,19nm,20.0s,baz=195,slow=39								
COEN	**Coen**	**25.62**	**139**	P		**P**		**03 30 12.1**	**+0.2**
COEN				IAmb		IAmb		03 30 17.1	
	comp=Z,13nm,0.9s								
WB0	**Warramunga Arr**	**26.30**	**162**	P		**P**		**03 30 18.6**	**+0.6**
WB0				IAmb		IAmb		03 30 32.4	
	comp=Z,15nm,1.1s								
WRA	**Warramunga Arr**	**26.45**	**162**	P		**P**		**03 30 19.3**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=342,slow=10.0,SNR=15								
WRA	**Warramunga Arr**	**26.45**	**162**	P		**P**		**03 30 18.9**	**-0.4**
WB2	**Warramunga Arr**	**26.46**	**162**	P		**P**		**03 30 19.6**	**+0.3**
WB2				I

comp=Z,0.6nm,0.8s,baz=56,slow=2.3,SNR=2.3

*IDC **10** 03:28:02.1±1.2,0.˚68N×96.˚86E,h0km,mb4.2/8, mb1 4.3/10,mb1mx3.9/43,mbtmp4.2/10,ML4.1/2,MS3.2/5, Ms1 3.2/5,ms1mx2.8/48,Error ellipse: s-maj=39.7km s-min=18.2km az=63.0*

*DJA **10** 03:28:06.8±1.2,1.˚N×3.˚×9.˚7E±.˚,h31km±9km,M4.4/10, mb4.8/3,mB5.2/3,MLv4.2/10,Mw(mB)4.6/3*

*NEIC **10** 03:28:08.2±1.4,0.˚85N±0.˚07×97.˚07E±0.˚09,h36km±5km, mb4.3/18,Error ellipse: s-maj=14.7km s-min=8.4km az=58.0*

ISC 10 03:28:06.3±0.7,0.˚80N±0.˚05×97.˚03E±0.˚07,h25km,n65, σ0s98/56,mb4.4/19,MS3.6/4,1C,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.74**	**47**		**Pn**	**03 28 21.3**	**+0.1**
GSI	**Gunungsitoli**	**0.74**	**47**	P	**Pn**	**03 28 21.2**	**+0.1**
GSI				S	**Sb**	**03 28 29.6**	**-0.7**
PBSI	**Pulau Batu**	**1.51**	**124**	P	**Pn**	**03 28 31.4**	**-0.4**
PBSI				S	**Sn**	**03 28 49.5**	**-1.2**
TPTI		**2.45**	**4**	P	**Pn**	**03 28 43.3**	**-1.4**
TPTI				S	**Sn**	**03 29 11.4**	**-2.4**
MNSI	**Mandailing Nat**	**2.55**	**90**	P	**Pn**	**03 28 46.3**	**+0.2**
RPSI	**Rantau Prapat**	**2.67**	**45**		**Pn**	**03 28 47.9**	**+0.2**
RPSI	**Rantau Prapat**	**2.67**	**45**		**Pn**	**03 28 48.5**	**+0.8**
PSI	**Prapat** 7.7nm,0.3s,baz=355,slow=0.7,SNR=24	**2.74**	**44**	Pn	**Pn**	**03 28 48.5**	**-0.3**
PSI				LR	LR	03 29 37.1	
	comp=Z,215nm,21.5s,baz=271,slow=33						
SISI	**Saibi**	**2.95**	**136**	P	**Pn**	**03 28 51.6**	**0.0**
TSI	**Tuntungan**	**3.09**	**30**	P	**Pn**	**03 28 54.9**	**+1.4**
BKNI	**Bangkinang**	**4.04**	**97**	Pn	**Pn**	**03 29 07.4**	**+0.9**
LHMI	**Lhok Sumawe**	**4.40**	**359**	Pn	**Pn**	**03 29 13.6**	**+2.0**
IPM	**Ipoh**	**5.41**	**47**		**Pn**	**03 29 26.1**	**+0.6**
KULM	**Kulim**	**5.74**	**39**	Pn	**Pn**	**03 29 29.5**	**-0.4**
KSI	**Kapahiang**	**7.10**	**129**	P	**Pn**	**03 29 49.0**	**+0.2**
LEM	**Lembang** comp=Z,108nm,21.0s,baz=236,slow=41	**13.00**	**126**	LR	LR	03 36 54.7	
KSM	**Kuching**	**13.29**	**87**	Pn	**Pn**	**03 31 13.8**	**+0.2**
SBUM	**Sibu**	**15.27**	**84**	Pn	**Pn**	**03 31 40.5**	**+0.1**
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=194,slow=11,SNR=7.8	**17.65**	**6**	P	**Pn**	**03 32 10.8**	**+0.2**
CMAR				LR	LR	03 39 34.8	
	comp=Z,58nm,18.0s,baz=210,slow=39						
CMAR	**Chiang Mai Arr**	**17.65**	**6**	Pn	**Pn**	**03 32 09.8**	**-0.8**
CHTO	**Chiang Mai**	**18.00**	**6**	Pn	**Pn**	**03 32 13.8**	**-1.1**
SRBI	**Singaraja**	**20.16**	**116**	P	Pn	03 32 55.7	+15
KMI	**Kunming**	**24.80**	**12**	⇑P	**P**	**03 33 29.5**	**+2.8**
KMI				pP	sP	03 33 38.1	+1.4
KMI				sP	pP	03 33 43.6	+10
KMI				pmax	pmax		
	comp=Z,16nm,0.9s						
KMI				LR	LR		
	comp=N,210nm,11.1s						
KMI				LR	LR		
	comp=E,120nm,10.7s						
KMI				LR	LR		
	comp=Z,170nm,14.5s						
KMI	**Kunming**	**24.80**	**12**	P	**P**	**03 33 27.4**	**+0.7**
H08S2	**Diego Garcia H** baz=72,slow=75,SNR=413	**25.87**	**251**	T	T	04 00 23.9	
H08S3	**Diego Garcia H** baz=72,slow=75,SNR=807	**25.87**	**251**	T	T	04 00 27.3	
H08S1	**Diego Carcia H** baz=72,slow=75,SNR=213	**25.89**	**251**	T	T	04 00 29.3	
XAN	**Xi'an**	**34.89**	**17**	P	**P**	**03 34 55.8**	**-0.1**
XAN				pP	sP	03 35 08.6	+2.8
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN	**Xi'an**	**34.89**	**17**	P	**P**	**03 34 55.9**	**-0.1**
XAN				IAmb	IAmb	03 34 56.5	
	comp=Z,5.1nm,0.6s						
H01W3	**Cape Leeuwin H** baz=333,slow=76,SNR=336	**38.94**	**157**	T	T	04 16 43.6	
H01W2	**Cape Leeuwin H** baz=333,slow=76,SNR=317	**38.96**	**157**	T	T	04 16 47.2	
H01W1	**Cape Leeuwin H** baz=333,slow=76,SNR=364	**38.96**	**157**	T	T	04 16 45.4	
WB0	**Warramunga Arr**	**41.94**	**121**	P	**P**	**03 35 56.0**	**+0.6**
WB0				IAmb	IAmb	03 36 05.8	
	comp=Z,7.5nm,1.3s						
WRA	**Warramunga Arr** comp=Z,2.3nm,0.8s,baz=298,slow=9.0,SNR=6.9	**41.97**	**121**	P	**P**	**03 35 55.6**	**0.0**
HHC	**Hu-ho-hao-te**	**41.99**	**17**	*e*P	**P**	**03 35 56.1**	**+0.5**
HHC				pmax	pmax		
	comp=Z,35nm,0.8s						
HHC				pmax	pmax		
	comp=Z,160nm,6.1s						
HHC				LR	LR		
	comp=N,220nm,16.2s						
HHC				LR	LR		
	comp=E,170nm,17.0s						
HHC				LR	LR		
	comp=Z,210nm,16.2s						
WR0	**Warramunga Arr**	**42.15**	**121**	P	**P**	**03 35 57.5**	**+0.4**
WR0				IAmb	IAmb	03 35 59.6	
	comp=Z,11nm,1.4s						
BJT	**Baijiatuau**	**42.75**	**22**	P	**P**	**03 36 02.7**	**+1.1**
BJT				IAmb	IAmb	03 36 03.7	
	comp=Z,5.7nm,0.7s						
KSH	**Kashi**	**43.06**	**336**	P	**P**	**03 36 04.0**	**-0.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KSH				pmax	pmax		
	comp=Z,170nm,5.5s						
ASAR	**Alice Springs** comp=Z,1.0nm,0.6s,baz=301,slow=8.0,SNR=7.7	**43.29**	**127**	P	**P**	**03 36 06.8**	**+0.4**
WMQ	**Urumqi**	**43.64**	**350**	*e*P	**P**	**03 36 10.3**	**+1.5**
KS19	**Wonju Array Si**	**46.27**	**34**	P	**P**	**03 36 27.4**	**-2.5**
AAK	**Ala-Archa**	**46.30**	**337**	P	**P**	**03 36 29.4**	**-0.8**
AAK				IAmb	IAmb	03 36 44.7	
	comp=Z,2.4nm,1.1s						
SONM	**Songino Array** comp=Z,1.5nm,0.7s,baz=191,slow=9.2,SNR=8.7	**47.55**	**9**	P	**P**	**03 36 40.7**	**+0.9**
SONM				PcP	**PcP**	**03 38 10.2**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=176,slow=4.0,SNR=5.2						
SONM	**Songino Array**	**47.55**	**9**	P	**P**	**03 36 40.2**	**+0.3**
SONM				IAmb	IAmb	03 36 52.1	
	comp=Z,1.7nm,0.8s						
MK31	**Makanchi Array**	**47.59**	**346**	P	**P**	**03 36 40.7**	**+0.7**
MK31				IAmb	IAmb	03 36 41.8	
	comp=Z,2.7nm,0.7s						
MKAR	**Makanchi Array** comp=Z,3.2nm,0.5s,baz=160,slow=8.9,SNR=17	**47.59**	**346**	P	**P**	**03 36 41.1**	**+1.1**
MKAR	**Makanchi Array**	**47.59**	**346**	P	**P**	**03 36 40.8**	**+0.8**
MAKZ	**Makanchi**	**47.67**	**346**	P	**P**	**03 36 41.1**	**+0.4**
MAKZ				IAmb	IAmb	03 36 42.4	
	comp=Z,2.8nm,0.8s						
KK31	**Karatay Array**	**48.34**	**334**	P	**P**	**03 36 46.6**	**+0.7**
KK31				IAmb	IAmb	03 36 55.3	
	comp=Z,1.8nm,0.8s						
KKAR	**Karatay Array**	**48.34**	**334**	P	**P**	**03 36 46.1**	**+0.2**
USRK	**Ussuriysk Ar.** comp=Z,4.6nm,0.8s,baz=238,slow=4.8,SNR=10	**53.20**	**31**	P	**P**	**03 37 23.6**	**+1.2**
USRK	**Ussuriysk Ar.**	**53.20**	**31**	P	**P**	**03 37 22.9**	**+0.5**
STKA	**Stephens Creek** comp=Z,1.6nm,0.7s,baz=135,slow=18,SNR=2.9	**53.22**	**132**	P	**P**	**03 37 23.4**	**+0.5**
STKA	**Stephens Creek** comp=Z,0.9nm,1.2s	**53.22**	**132**	IAmb	IAmb	03 37 29.5	
ZAA0	**Zalesovo Array**	**53.92**	**351**	P	**P**	**03 37 28.2**	**+0.6**
ZALV	**Zalesovo Beam** comp=Z,5.0nm,0.5s,baz=180,slow=6.6,SNR=21	**53.92**	**351**	P	**P**	**03 37 28.4**	**+0.8**
ZALV	**Zalesovo Beam**	**53.92**	**351**	P	**P**	**03 37 27.9**	**+0.3**
ABKAR	**Akbulak array**	**57.78**	**332**	P	**P**	**03 37 55.5**	**+0.1**
BRTR	**Keskin Array B** comp=Z,19nm,18.2s,baz=158,slow=38	**69.25**	**312**	LR	LR	04 12 10.7	
LBTB	**Lobatse** comp=Z,22nm,21.2s,baz=121,slow=30	**73.56**	**244**	LR	LR	04 04 48.2	
ARCES	**ARCESS Array B** comp=Z,2.3nm,0.8s,baz=101,slow=4.7,SNR=5.2	**82.85**	**340**	P	**P**	**03 40 26.9**	**-1.3**
IMAR	**Indian Mountai**	**97.01**	**23**	P	**P**	**03 41 35.6**	**0.0**
BELA	**Belgrano 2**	**98.86**	**189**	P	**P**	**03 41 42.1**	**-1.7**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.5s,baz=347,slow=3.0,SNR=5.0	**144.09**	**32**	PKP	PKPbc	03 47 39.0	+0.3
CPUP	**Villa Florida** comp=Z,1.3nm,0.7s,baz=340,slow=14,SNR=2.2	**144.60**	**222**	PKP	PKPbc	03 47 40.2	0.0

*ARE **10** 03:35:24±1.4,16.˚42S±0.˚09×73.˚3W±0.˚1,h36km±7km, ML4.3,mb4.2/2(NEIC),Error ellipse: s-maj=16.1km s-min=10.6km az=59.0*

*NEIC **10** 03:35:25.2±1.6,16.˚58S±0.˚10×73.˚5W±0.˚1,h63km±11km, Error ellipse: s-maj=18.1km s-min=11.7km az=52.0*

*IDC **10** 03:35:29.1±6.3,16.˚35S×73.˚44W,h93km±55km,mb3.2/3, mb1 3.5/4,mb1mx3.2/19,mbtmp3.6/4,ML4.1/1,Error ellipse: s-maj=49.0km s-min=34.6km az=114.0*

ISC 10 03:35:23.8±1.1,16.66S±0.09×73.62W±0.09,h39km,n37, σ1s78/32,mb3.5/3,3C-1D,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.55**	**119**	⇑*i*P	**Pn**	**03 36 17.5**	**+1.0**
AP01				*i* S	**Sn**	**03 36 55.9**	**-1.3**
AP01				IAML		03 37 14.4	
	comp=N,965nm,0.2s						
AP01	**Chacalluta**	**3.55**	**119**	Pn	**Pn**	**03 36 17.0**	**+0.6**
PB16	**IPOC Station P**	**4.26**	**114**	⇑*e*P	**Pn**	**03 36 27.9**	**+1.3**
PB16				*e*S	**Sn**	**03 37 17.1**	**+1.7**
PB16	**IPOC Station P**	**4.26**	**114**		**Pn**	**03 36 27.4**	**+0.8**
PSGCX	**Pisagua**	**4.42**	**132**		**Pn**	**03 36 28.9**	**+0.5**
MNMC	**Minye Minye**	**4.54**	**123**	⇓*e*P	**Pn**	**03 36 31.1**	**+0.8**
MNMC				*e*S	**Sn**	**03 37 19.5**	**-2.6**
MNMC				IAML		03 37 44.1	
	comp=N,301nm,0.6s						
MNMC	**Minye Minye**	**4.54**	**123**		**Pn**	**03 36 30.2**	**-0.2**
PB11	**IPOC Station P**	**4.86**	**130**	⇑*e*P	**Pn**	**03 36 35.6**	**+1.0**
PB11				*e*S	**Sn**	**03 37 26.6**	**-3.1**
PB11				IAML		03 37 28.8	
	comp=E,118nm,0.4s						
PB11	**IPOC Station P**	**4.86**	**130**		**Pn**	**03 36 35.1**	**+0.5**
TA01	**Diego Aracena**	**5.07**	**141**		**Pn**	**03 36 39.1**	**+1.9**
LPAZ	**La Paz** comp=E,3.9nm,0.3s,baz=272,slow=9.8,SNR=60	**5.28**	**87**	P	**Pn**	**03 36 42.8**	**+2.1**
LPAZ				S	**Sn**	**03 37 42.9**	**+2.3**
	comp=E,0.3nm,0.3s,baz=111,slow=4.0,SNR=4.4						
LPAZ	**La Paz**	**5.28**	**87**	Pn	**Pn**	**03 36 41.4**	**+0.7**
PATCX	**Punta Patache**	**5.28**	**142**		**Pn**	**03 36 41.6**	**+1.4**
PB08	**IPOC Station P**	**5.47**	**130**		**Pn**	**03 36 44.6**	**+1.5**
NNA	**Nana**	**5.60**	**326**		**Pn**	**03 36 45.8**	**+1.1**
PB01	**IPOC Station P**	**5.85**	**139**		**Pn**	**03 36 49.1**	**+0.9**
PB07	**IPOC Station P**	**6.14**	**146**		**Pn**	**03 36 54.1**	**+1.8**
PB04	**IPOC Station P**	**6.52**	**150**	Pn	**Pn**	**03 36 59.1**	**+1.7**
PB09	**IPOC Station P**	**6.57**	**142**		**Pn**	**03 36 59.8**	**+1.8**
LVC	**Limon Verde**	**7.39**	**144**		**Pn**	**03 37 12.1**	**+2.6**
PB15	**IPOC Station P**	**7.59**	**150**		**Pn**	**03 37 14.4**	**+2.3**
GO02	**Mina Guanaco**	**9.25**	**157**	Pn	**Pn**	**03 37 36.0**	**+1.0**
AC02	**Maricunga**	**10.94**	**158**	Pn	**Pn**	**03 37 57.5**	**-0.9**
H03N1	**Juan Fernandez** baz=18,slow=74,SNR=1053	**17.38**	**195**	T	T	03 57 52.3	
H03N2	**Juan Fernandez** baz=18,slow=74,SNR=891	**17.38**	**195**	T	T	03 57 59.0	
H03N3	**Juan Fernandez** baz=18,slow=74,SNR=897	**17.39**	**195**	T	T	03 57 56.7	
BI02	**San Fabin de**	**20.03**	**174**	P	**P**	**03 39 54.8**	**+1.3**
BI02				IAmb	IAmb	03 40 38.4	
	comp=Z,11nm,1.4s						
PLCA	**Paso Flores** comp=Z,1.7nm,1.1s,baz=158,slow=11,SNR=1.7	**24.13**	**174**	P	**P**	**03 40 39.2**	**+3.1**
PLCA	**Paso Flores** comp=Z,19nm,1.8s	**24.13**	**174**	IAmb	IAmb	03 41 28.6	
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.4s,baz=254,slow=6.5,SNR=1.6	**80.07**	**73**	P	**P**	**03 47 27.4**	**-2.7**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.7s,baz=137,slow=5.7,SNR=4.8	**85.21**	**342**	P	**P**	**03 47 54.0**	**-1.7**
H11N3	**WAKE ISLAND Hyd** baz=98,slow=74,SNR=5.4	**22.68**	**283**	T	T	06 09 53.7	
H11N2	**WAKE ISLAND Hyd** baz=98,slow=74,SNR=6.7	**22.69**	**283**	T	T	06 09 54.6	
H11N1	**WAKE ISLAND Hyd** baz=98,slow=74,SNR=3.7	**22.69**	**283**	T	T	06 09 54.7	
H11S2	**WAKE ISLAND Hyd** baz=98,slow=75,SNR=9.3	**22.70**	**282**	T	T	06 09 52.6	
H11S1	**WAKE ISLAND Hyd** baz=98,slow=75,SNR=10	**22.71**	**282**	T	T	06 09 54.7	
H11S3	**WAKE ISLAND Hyd** baz=98,slow=75,SNR=12	**22.72**	**282**	T	T	06 09 54.8	

IDC 10 03:42:09.1±2.3,1.72N×127.˚10E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.1/43,mbtmp3.3/3,Error ellipse: s-maj=188.8km s-min=27.9km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.6nm,0.8s,baz=341,slow=11,SNR=2.1	**22.67**	**162**	P	P	03 47 12.5	+0.2
ASAR	**Alice Springs** 0.1nm,0.3s,baz=346,slow=6.2,SNR=1.9	**26.09**	**166**	P	P	03 47 44.3	-0.4
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=114,slow=7.1,SNR=4.9	**59.41**	**326**	P	P	03 52 13.6	+0.1

*LDG **10** 03:42:37.9±0.1,44.˚21N×8.˚26E,h10km,Md1.9/2,Ml1.9/12, Error ellipse: s-maj=2.4km s-min=1.8km az=125.0*

*STR **10** 03:42:38.3±1.1,44.˚N±5×.˚±.˚,h14km,MLv1.5/7,MLv1.4/2, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

ROM 10 03:42:37.8±0.1,44.222N±0.006×8.223E±0.006,h7km, ML2.0/10,2C-2D,Error ellipse: s-maj=0.7km s-min=0.3km az=156.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.14**	**41**	⇑P	Pg	03 42 41.2	+0.5
QLNO				S	Sg	03 42 43.1	+0.4
QLNO				AML	AML		
	comp=E,506μm,0.4s						
QLNO				AML	AML		
	comp=N,424μm,0.3s						
QLNO				AML	AML		
	comp=E,1450μm,0.3s						
QLNO				AML	AML		
	comp=N,1360μm,0.4s						
RORO	**Rocca Rossa**	**0.16**	**226**	⇓P	Pg	03 42 42.0	+0.9
RORO				S	Sg	03 42 44.4	+1.2
RORO				AML	AML		
	comp=E,327μm,0.1s						
RORO				AML	AML		
	comp=N,708μm,0.1s						
RORO				AML	AML		
	comp=E,825μm,0.1s						
RORO				AML	AML		
	comp=N,1725μm,0.2s						
GBOS	**Grotte di Boss**	**0.28**	**274**	⇓P	Pg	03 42 44.2	+0.9
GBOS				S	Sg	03 42 48.1	+1.2
GBOS				AML	AML		
	comp=E,147μm,0.3s						
GBOS				AML	AML		
	comp=N,183μm,0.3s						
GBOS				AML	AML		
	comp=E,382μm,0.3s						
GBOS				AML	AML		
	comp=N,474μm,0.3s						
IMI	**Imperia**	**0.39**	**217**	⇑P	Pg	03 42 46.1	+0.7
IMI				AML	AML		
	comp=E,48μm,1.2s						
IMI				AML	AML		
	comp=N,80μm,0.3s						
IMI				AML	AML		
	comp=E,132μm,0.8s						
IMI				AML	AML		
	comp=N,218μm,0.3s						
PCP	**Piancastagn**	**0.39**	**36**	AML	AML		
	comp=N,151μm,1.1s						
PCP				AML	AML		
	comp=E,47μm,1.0s						
PCP				AML	AML		
	comp=N,48μm,0.3s						
PCP				AML	AML		
	comp=E,130μm,0.1s						
SAOF	**Saorge**	**0.54**	**244**	Pg	Pg	03 42 48.6	+0.5
SAOF				Sg	Sg	03 42 56.2	+1.0
ENR	**Entracque**	**0.58**	**271**	P	Pg	03 42 49.6	+0.6
ENR				S	Sb	03 42 57.9	-0.9
ENR				AML	AML		
	comp=E,98μm,0.4s						
ENR				AML	AML		
	comp=N,224μm,0.1s						
ENR				AML	AML		
	comp=N,503μm,0.1s						
ENR				AML	AML		
	comp=E,260μm,0.7s						
ENR	**Entracque**	**0.58**	**271**	P	Sn	03 43 00.0	-2.4
ROTM	**Rocchetta Tana**	**0.63**	**8**	P	Pb	03 42 51.1	-0.2
ROTM				S	Sb	03 43 00.3	-0.1
ROTM				AML	AML		
	comp=E,384μm,0.4s						
ROTM				AML	AML		
	comp=N,454μm,1.1s						
STV	**Sant Anna di V**	**0.65**	**272**	P	Pb	03 42 51.1	-0.4
STV				AML	AML		
	comp=E,38μm,1.6s						
STV				AML	AML		
	comp=N,49μm,0.4s						
STV				AML	AML		
	comp=E,94μm,1.5s						
STV				AML	AML		
	comp=N,142μm,0.4s						
TURF	**col de Turini**	**0.65**	**248**	Pg	Pb	03 42 51.2	-0.4
TURF				Sg	Sb	03 43 00.1	-0.8
SBF	**Sospel**	**0.67**	**238**	*e*Pg	Pb	03 42 51.6	-0.4
SBF	**Sospel**	**0.67**	**238**	*e*Pn	Pn	03 42 53.1	-0.8
SBF				*e*Sg	Sg	03 43 00.5	+1.0
	comp=N,20nm,0.2s						
ESCA	**l'Escarene**	**0.73**	**238**	Pg	Pb	03 42 53.1	+0.2
ESCA				Sg	Sb	03 43 03.3	+0.3
MON	**Monaco**	**0.76**	**230**	Pg	Pb	03 42 53.6	+0.3
MON				Sg	Sb	03 43 05.2	+1.3
PZZ	**Stroppo**	**0.84**	**290**	P	Pg	03 42 54.4	+0.3
PZZ				S	Sb	03 43 05.8	-0.8
PZZ				AML	AML		
	comp=N,139μm,1.4s						
PZZ				AML	AML		
	comp=E,116μm,0.3s						
GORR	**Gorreto**	**0.86**	**63**	P	Pg	03 42 54.3	0.0
GORR				S	Sb	03 43 06.2	-0.7
BHB	**Bricherasio**	**0.93**	**312**	P	Pg	03 42 55.7	+0.1
MSSA	**Maissana**	**0.94**	**84**	P	Pb	03 42 56.2	-0.2
MSSA				S	Sb	03 43 08.5	-0.6
SURF	**Saint Ours**	**1.04**	**285**	Pg	Pg	03 42 57.7	-0.2
CALF	**Calern**	**1.05**	**244**	Pg	Pn	03 42 59.0	-0.2
CALF				Sg	Sn	03 43 13.3	-0.8
RSP	**Reno Superiore**	**1.15**	**324**	P	Pg	03 42 59.5	-0.4
RSP				S	Sb	03 43 15.5	+0.1
RSP				AML	AML		
	comp=N,30μm,1.3s						
RSP				AML	AML		
	comp=E,45μm,0.3s						
MBDF	**Montbardon**	**1.16**	**296**	*e*Pg	Pg	03 42 59.8	-0.2
MBDF				*e*Sg	Sg	03 43 14.9	-0.1
	comp=E,3.6nm,0.3s						
FRF	**La Foret Royal**	**1.32**	**240**	*e*Pg	Pn	03 43 02.6	-0.1
FRF				*e*Sg	Sn	03 43 20.4	-0.1
	comp=E,7.4nm,0.2s						
LMR	**La Mourre**	**1.53**	**235**	*e*P	Pn	03 43 04.8	-0.8
LMR	**La Mourre**	**1.53**	**235**	*e*Pg	Pb	03 43 06.5	0.0
LMR				*e*Sg	Sg	03 43 27.0	+0.1
	comp=E,13nm,0.2s						
LPG	**La Plagne**	**1.65**	**321**	*e*P	Pb	03 43 08.2	-0.6
LPG				*e*Sg	Sg	03 43 31.0	+0.1
	comp=E,0.7nm,0.2s						
LPL	**La Plagne**	**1.67**	**321**	*e*P	Pb	03 43 08.5	-0.6
LPL				*e*Sg	Sg	03 43 31.7	+0.1
	comp=E,2.2nm,0.4s						
PGF	**Pioggiola**	**1.77**	**161**	*e*Pn	Pn	03 43 06.5	-2.5
PGF				*e*Sn	Sn	03 43 26.0	-5.8
	comp=E,1.1nm,0.2s						
ORIF	**Oris-en-Rattie**	**1.81**	**293**	*e*Pg	Pb	03 43 11.7	+0.3
ORIF				*e*Sg	Sg	03 43 35.7	-0.4
	comp=E,2.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.81**	**293**	Pg	Pb	03 43 11.7	+0.3
SMRF	**Simiane la Rot**	**1.92**	**264**	*e*Pg	Pb	03 43 12.9	-0.4
SMRF				*e*Sg	Sg	03 43 40.0	+0.4
	comp=E,4.3nm,0.3s						
RUSF	**Rustrel**	**1.99**	**263**	Pg	Pb	03 43 13.9	-0.5
VIVF	**Saint-Julien-l**	**2.62**	**285**	*e*Pg	Pg	03 43 26.9	-1.1
VIVF				*e*Sg	Sg	03 44 00.3	-1.6
	comp=E,0.6nm,0.3s						
CABF	**La Chapelle**	**2.82**	**329**	*e*P	Pn	03 43 24.6	+1.1
LASF	**Ste Croix**	**3.15**	**269**	*e*Pg	Pg	03 43 36.8	-1.3
LASF				*e*Sn	Sn	03 44 02.7	-3.0
	comp=E,0.3nm,0.2s						

*STR **10** 03:43:32.2±0.7,44.˚N±3.˚×±.˚,h16km±3km,MLv2.0/9, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*ROM **10** 03:43:32.9±0.1,44.˚221N±0.˚007×8.˚228E±0.˚006, h7km,ML1.9/13,Error ellipse: s-maj=0.7km s-min=0.4km az=158.0*

*GEN **10** 03:43:33.4,44.˚23N×8.˚25E,h6km±2km,Ml1.8*

*LDG **10** 03:43:33.6±0.1,44.˚25N×8.˚23E,h8km,Md2.3/2,Ml2.5/9, Error ellipse: s-maj=3.0km s-min=2.0km az=136.0*

ISC 10 03:43:32.8±0.8,44.22N±0.02×8.26E±0.02,h14km±5km, n60,σ0s81/99,3C-3D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.12**	**32**	⇑P	**Pg**	**03 43 36.3**	**-0.1**
QLNO				S	**Sg**	**03 43 38.2**	**-0.5**
QLNO				AML	AML		
	comp=E,1450μm,0.3s						
QLNO				AML	AML		
	comp=N,1360μm,0.4s						
RORO	**Rocca Rossa**	**0.18**	**231**	P	**Pg**	**03 43 37.1**	**0.0**
RORO				S	**Sg**	**03 43 39.5**	**-0.4**
RORO	**Rocca Rossa**	**0.18**	**231**	⇓P	**Pg**	**03 43 37.0**	**0.0**
RORO				S	**Sg**	**03 43 39.5**	**-0.4**
GBOS	**Grotte di Boss**	**0.30**	**274**	P	**Pg**	**03 43 39.3**	**+0.1**
GBOS				S	**Sg**	**03 43 43.2**	**-0.3**
GBOS	**Grotte di Boss**	**0.30**	**274**	⇓P	**Pg**	**03 43 39.3**	**+0.1**
GBOS				S	**Sg**	**03 43 43.2**	**-0.3**
GBOS				AML	AML		
	comp=E,382μm,0.3s						
GBOS				AML	AML		
	comp=N,474μm,0.3s						
PCP	**Piancastagn**	**0.38**	**33**	P	**Pg**	**03 43 40.6**	**+0.1**
PCP				S	**Sg**	**03 43 46.0**	**+0.2**
PCP	**Piancastagn** comp=N,151μm,1.1s	**0.38**	**33**	AML	AML		
PCP				AML	AML		
	comp=E,130μm,0.1s						
IMI	**Imperia**	**0.41**	**220**	P	**Pg**	**03 43 41.2**	**+0.2**
IMI	**Imperia**	**0.41**	**220**	⇑P	**Pg**	**03 43 41.2**	**+0.2**
IMI				AML	AML		
	comp=N,218μm,0.3s						
IMI				AML	AML		
	comp=N,218μm,0.3s						
IMI				AML	AML		
	comp=E,132μm,0.8s						
SAOF	**Saorge**	**0.56**	**245**	Pg	**Pg**	**03 43 44.3**	**+0.5**
SAOF				Sg	**Sg**	**03 43 51.3**	**0.0**
SAOF	**Saorge**	**0.56**	**245**	⇓P	**Pg**	**03 43 44.4**	**+0.5**
SAOF				S	**Sg**	**03 43 51.0**	**-0.3**
SAOF	**Saorge** comp=E,123μm,0.2s	**0.56**	**245**	AML	AML		
SAOF				AML	AML		
	comp=N,146μm,1.3s						
ENR	**Entracque**	**0.60**	**271**	S	**Sg**	**03 43 52.7**	**0.0**
ENR	**Entracque** comp=N,503μm,0.1s	**0.60**	**271**	AML	AML		
ENR				AML	AML		
	comp=E,260μm,0.7s						
**ROTM

SBF				*e*Sg		**Sg**	**03 43 55.8**	**+0.2**
	comp=N,63nm,0.3s							
ESCA	**l'Escarene**			Pg		**Pb**	**03 43 48.1**	**+0.4**
ESCA				Sg		**Sb**	**03 43 58.5**	**+0.8**
MON	**Monaco**	**0.78**	**231**	Pg		**Pg**	**03 43 48.1**	**+0.2**
MON				Pn		**Pb**	**03 43 48.7**	**+0.6**
MON				Sg		**Sb**	**03 43 59.1**	**+0.7**
GORR	**Gorreto**	**0.83**	**62**	P		**Pg**	**03 43 49.2**	**+0.2**
GORR				S		**Sg**	**03 44 00.3**	**+0.2**
GORR	**Gorreto**	**0.83**	**62**	P		**Pg**	**03 43 49.2**	**+0.2**
GORR				S		**Sb**	**03 44 00.9**	**+0.8**
PZZ	**Stroppo**	**0.87**	**289**	P		**Pg**	**03 43 49.3**	**-0.4**
PZZ				S		**Sg**	**03 44 00.5**	**-0.5**
PZZ	**Stroppo**	**0.87**	**289**	P		**Pg**	**03 43 49.2**	**-0.5**
PZZ				S		**Sg**	**03 44 00.9**	**-0.2**
PZZ				AML		AML		
	comp=N,139µm,1.4s							
PZZ				AML		AML		
	comp=E,116µm,0.3s							
ISO	**Isola**	**0.87**	**268**	Pg		**Pb**	**03 43 50.4**	**+0.7**
ISO				Sg		**Sg**	**03 44 00.6**	**-0.5**
MONC	**Moncucco Torin**	**0.88**	**345**	AML		AML		
	comp=N,136µm,0.4s							
MONC				AML		AML		
	comp=E,105µm,0.5s							
MSSA	**Maissana**	**0.91**	**84**	P		**Pb**	**03 43 50.9**	**+0.5**
MSSA				S		**Sb**	**03 44 03.2**	**+0.9**
MSSA				AML		AML		
	comp=E,38µm,1.1s							
MSSA				AML		AML		
	comp=N,39µm,1.0s							
BHB	**Bricherasio**	**0.94**	**311**	P		**Pb**	**03 43 50.7**	**-0.3**
BHB				S		**Sg**	**03 44 03.0**	**-0.5**
BHB	**Bricherasio**	**0.94**	**311**	P		**Pb**	**03 43 50.6**	**-0.3**
BHB				AML		AML		
	comp=N,70µm,0.3s							
BHB				AML		AML		
	comp=E,58µm,0.9s							
BOB	**Bobbio (Coli)**	**1.01**	**57**	P		**Pn**	**03 43 53.0**	**+0.4**
CALF	**Calern**	**1.07**	**244**	Pg		**Pn**	**03 43 54.1**	**+0.6**
CALF				Sg		**Sg**	**03 44 07.8**	**+0.2**
RSP	**Reno Superiore**	**1.17**	**323**	P		**Pb**	**03 43 54.4**	**-0.4**
RSP				S		**Sg**	**03 44 10.4**	**-0.1**
RSP	**Reno Superiore**	**1.17**	**323**	P		**Pb**	**03 43 54.3**	**-0.5**
RSP				S		**Sg**	**03 44 10.4**	**-0.1**
RSP				AML		AML		
	comp=N,30µm,1.3s							
RSP				AML		AML		
	comp=E,45µm,0.3s							
MBDF	**Montbardon**	**1.18**	**296**	*e*Pg		**Pb**	**03 43 54.9**	**-0.1**
MBDF				*e*Sg		**Sb**	**03 44 10.0**	**-0.2**
	comp=E,19nm,0.3s							
OGAG	**Argentiere**	**1.25**	**281**	Pg		**Pg**	**03 43 57.8**	**+0.8**
OGAG				Pn		**Pb**	**03 43 57.9**	**+1.6**
OGAG				Sn		**Sg**	**03 44 16.0**	**+2.7**
RRL	**Rocca Remolon**	**1.26**	**304**	P		**Pn**	**03 43 56.0**	**-0.1**
RRL				S		**Sn**	**03 44 13.5**	**+0.5**
RRL	**Rocca Remolon**	**1.26**	**304**	⇑P		**Pn**	**03 43 56.1**	**0.0**
RRL				S		**Sn**	**03 44 13.3**	**+0.3**
RRL				AML		AML		
	comp=N,18µm,0.7s							
RRL				AML		AML		
	comp=E,16µm,1.6s							
FRF	**La Foret Royal**	**1.34**	**241**	*e*Pn		**Pn**	**03 43 57.0**	**-0.1**
FRF	**La Foret Royal**	**1.34**	**241**	*e*Pg		**Pb**	**03 43 58.3**	**+0.6**
FRF				*e*Sg		**Sn**	**03 44 15.5**	**+0.9**
	comp=E,44nm,0.3s							
LSD	**Lago del Serru**	**1.47**	**327**	P		**Pn**	**03 43 59.3**	**+0.1**
OGMO	**Fort Saint-Gob**	**1.49**	**312**	Pn		**Pn**	**03 44 00.0**	**+0.8**
LMR	**La Mourre**	**1.55**	**236**	*e*Pn		**Pn**	**03 43 59.8**	**-0.1**
LMR	**La Mourre**	**1.55**	**236**	*e*Pg		**Pb**	**03 44 02.1**	**+0.9**
LMR				*e*Sg		**Sg**	**03 44 22.0**	**-0.7**
	comp=E,38nm,0.2s							
BLAF	**les Blancs**	**1.62**	**261**	Pn		**Pn**	**03 44 01.5**	**+0.6**
BLAF				Sg		**Sg**	**03 44 25.1**	**+0.2**
LPG	**La Plagne**	**1.67**	**320**	*e*P		**Pb**	**03 44 03.1**	**-0.3**
LPG				*e*Sg		**Sb**	**03 44 25.3**	**+1.0**
	comp=E,2.1nm,0.2s							
LPL	**La Plagne**	**1.69**	**321**	*e*P		**Pb**	**03 44 03.5**	**-0.3**
LPL				*e*Sg		**Sb**	**03 44 25.9**	**+1.0**
	comp=E,4.9nm,0.3s							
PGF	**Pioggiola**	**1.76**	**162**	Pn		**Pn**	**03 44 01.8**	**-1.1**
PGF	**Pioggiola**	**1.76**	**162**	Sn		**Sn**	**03 44 21.8**	**-3.3**
REMY	**Saint-Rhmy-en**	**1.79**	**335**	P		**Pb**	**03 44 04.9**	**-0.7**
ORIF	**Oris-en-Rattie**	**1.84**	**293**	*e*Pg		**Pb**	**03 44 06.8**	**+0.6**
ORIF				*e*Sg		**Sb**	**03 44 30.3**	**+1.2**
	comp=E,4.9nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.84**	**293**	Pg		**Pb**	**03 44 06.8**	**+0.6**
ARTF	**Artigues**	**1.88**	**251**	Pn		**Pn**	**03 44 05.9**	**+1.4**
ARTF				Pg		**Pg**	**03 44 08.8**	**-0.1**
BSTF	**la Bastide-des**	**1.92**	**261**	Pn		**Pn**	**03 44 05.5**	**+0.5**
BSTF				Pg		**Pg**	**03 44 10.1**	**+0.5**
BSTF				Sg		**Sg**	**03 44 34.9**	**+0.4**
SMRF	**Simiane la Rot**	**1.95**	**264**	*e*Pg		**Pg**	**03 44 09.5**	**-0.7**
SMRF				*e*Sg		**Sg**	**03 44 34.4**	**-1.1**
	comp=E,16nm,0.3s							
VIVF	**Saint-Julien-l**	**2.64**	**285**	*e*Pg		**Pg**	**03 44 21.9**	**-1.5**
VIVF				*e*Sn		**Sn**	**03 44 44.2**	**-2.6**
	comp=E,1.3nm,0.2s							
LASF	**Ste Croix**	**3.17**	**269**	*e*Pn		**Pn**	**03 44 21.8**	**-0.5**
LASF				*e*Sn		**Sn**	**03 44 57.5**	**-2.4**
	comp=E,0.6nm,0.2s							

*IDC **10** 03:44:53.3±14.0, 10°.77N×87°.42W, h0km, mb3.4/3, mb1 3.9/3, mb1mx3.5/26, mbtmp3.4/3, Error ellipse: s-maj=322.6km s-min=121.1km az=17.0*
*SNET **10** 03:45:09.6±1.3, 12°.16N×87°.83W, h23km±7km, ML3.5*
*INET **10** 03:45:09.0, 12°.08N×87°.78W, h15km, MW3.6*
ISC 10 03:45:09.2±2.3, 12°.0N±0°.3×87°.8W±0°.1, h37km±6km, n21, σ0s65/31, mb3.6/3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.23**	**357**	*e*P	**Pn**	**03 45 29.5**	**-0.5**
CNCH				*e*S	**Sn**	**03 45 45.9**	**+0.4**
LCND	**La Caada**	**1.27**	**354**	*e*P	**Pn**	**03 45 30.0**	**-0.4**
LCND				*e*S	**Sn**	**03 45 46.0**	**-0.2**
LCND				IAML		03 45 49.2	
	comp=Z,1µm,0.3s						
LCY	**Lacayo**	**1.47**	**339**	*e*P	**Pn**	**03 45 32.9**	**-0.4**
ALJI	**Alcalda de J**	**1.50**	**328**	*e*P	**Pn**	**03 45 32.6**	**-1.0**
ALJI				*e*S	**Sn**	**03 45 51.9**	**-0.1**
ALJI				IAML		03 45 54.4	
	comp=Z,462nm,0.2s						
PACA	**Pacayal**	**1.52**	**339**	*e*P	**Pn**	**03 45 34.0**	**0.0**
TECA	**Tecapa**	**1.62**	**333**	*e*P	**Pn**	**03 45 35.1**	**-0.3**
TECA				*e*S	**Sn**	**03 45 55.3**	**+0.4**
COEB	**Comit de Eme**	**1.63**	**333**	*e*P	**Pn**	**03 45 35.3**	**-0.2**
COEB				*e*S	**Sn**	**03 45 54.8**	**-0.6**
COEB				IAML		03 46 01.2	
	comp=Z,562nm,0.3s						
FAGO	**Alcalda de S**	**1.68**	**348**	*e*P	**Pn**	**03 45 36.0**	**-0.1**
FAGO				*e*S	**Sn**	**03 45 56.7**	**+0.3**
UESV	**Universidad de**	**1.88**	**328**	*e*P	**Pn**	**03 45 38.0**	**-0.9**
UESV				*e*S	**Sn**	**03 46 00.4**	**-0.9**
COEG	**Centro de Oper**	**1.92**	**325**	*e*P	**Pn**	**03 45 39.3**	**0.0**
COEG				IAML		03 46 06.1	
	comp=Z,345nm,0.3s						
PAVA	**Las Pavas**	**2.02**	**325**	*e*P	**Pn**	**03 45 41.4**	**+0.5**
PAVA				*e*S	**Sn**	**03 46 05.1**	**+0.1**
LFRS	**El Faro**	**2.02**	**321**	*e*P	**Pn**	**03 45 39.4**	**-1.5**
LFRS				*e*S	**Sn**	**03 46 05.3**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.06**	**13**	*e*P	**Pn**	**03 45 41.6**	**+0.2**
LBRS	**Las Brisas**	**2.10**	**324**	*e*P	**Pn**	**03 45 42.1**	**+0.1**
PMON	**Piamonte**	**2.25**	**318**	*e*P	**Pn**	**03 45 44.2**	**+0.2**
JAYA	**Jayaque - finc**	**2.30**	**314**	*e*P	**Pn**	**03 45 45.4**	**+0.6**
JAYA				*e*S	**Sn**	**03 46 11.6**	**-0.3**
JAYA				IAML		03 46 16.1	
	comp=Z,333nm,0.2s						
TACO	**Tacachico**	**2.47**	**321**	*e*P	**Pn**	**03 45 47.2**	**+0.3**
MTO3	**Montecristo**	**2.82**	**327**	*e*P	**Pn**	**03 45 52.1**	**+0.2**
TXAR	**Lajitas Array**	**22.70**	**322**	P	**P**	**03 50 08.5**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=135,slow=10,SNR=21						
PDAR	**Pinedale Array**	**35.99**	**332**	P	**P**	**03 52 08.1**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=139,slow=8.4,SNR=3.9						
YKA	**Yellowknife Ar**	**53.93**	**345**	P	**P**	**03 54 27.2**	**-1.6**
	comp=Z,0.1nm,0.6s,baz=148,slow=6.8,SNR=2.4						

*IDC **10** 03:46:25.5±1.0, 31°.47N×138°.49E, h387km±15km, mb3.0/7, mb1 3.0/11, mb1mx2.7/52, mbtmp3.7/11, Error ellipse:*
s-maj=43.1km s-min=15.1km az=67.0
*JMA **10** 03:46:26.2±0.4, 31°.69N×138°.67E, h377km, M3.4*
ISC 10 03:46:25.0±0.8, 31°.62N±0°.07×138°.66E±0°.09, h381km, n25, σ1s79/29, mb3.1/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**1.77**	**32**	P	**Pn**	**03 47 20.3**	**+2.6**
	19nm,0.3s,baz=134,slow=22,SNR=9.4						
JHJ				S	**S**	**03 48 04.9**	**+4.6**
	16nm,0.3s,baz=48,slow=15,SNR=1.3						
JIE	**Ise**	**3.21**	**330**	P	**Pn**	**03 47 30.1**	**+1.6**
JKN2	**Miekihoku**	**3.29**	**323**	P	**Pn**	**03 47 30.2**	**+1.0**
JTNC	**Tanabenakahech**	**3.38**	**311**	P	**Pn**	**03 47 30.5**	**+0.5**
BSO3	**Boso 3**	**3.53**	**26**	P	**Pn**	**03 47 32.3**	**+1.2**
BSO3				*e*S	**S**	**03 48 24.2**	**-0.4**
BSO1	**Boso 1**	**3.59**	**32**	P	**Pn**	**03 47 32.9**	**+1.6**
BSO1				S	**S**	**03 48 26.0**	**+0.9**
BSO4	**Boso 4**	**3.64**	**22**	S	**S**	**03 48 26.1**	**-0.7**
JWY	**Kouya**	**3.66**	**316**	P	**Pn**	**03 47 33.7**	**+1.0**
JHU	**Hanno**	**4.25**	**7**	*e*S	**S**	**03 48 34.8**	**-2.9**
JRY	**Ryogami san**	**4.39**	**3**	P	**Pn**	**03 47 41.2**	**+1.5**
JAG	**Ashikaga**	**4.84**	**8**	P	**Pn**	**03 47 44.4**	**+0.1**
MJAR	**Matsushiro Arr**	**4.92**	**356**	P	**Pn**	**03 47 47.1**	**+1.9**
	0.1nm,0.3s,baz=171,slow=11,SNR=2.8						
JHO	**Hitachi**	**5.22**	**17**	S	**S**	**03 48 52.4**	**-3.7**
CBIJ	**Chichi jima**	**5.46**	**145**	*e*S	**S**	**03 49 00.8**	**-0.2**
JCJ	**Chichijima**	**5.46**	**145**	P	**Pn**	**03 47 51.9**	**+0.7**
	10nm,0.3s,baz=353,slow=20,SNR=7.2						
JCJ				S	**S**	**03 49 00.9**	**-0.1**
	20nm,0.3s,baz=303,slow=22,SNR=14						
JFK	**Kawauchi**	**6.02**	**17**	S	**S**	**03 49 08.2**	**-3.8**
KSRS	**Korea Array**	**10.59**	**306**	P	**P**	**03 48 49.7**	**0.0**
	0.3nm,0.3s,baz=123,slow=11,SNR=4.4						
KLR	**Kul'dur**	**18.35**	**345**	P	**P**	**03 50 13.9**	**+0.1**
	0.3nm,0.3s,baz=192,slow=8.4,SNR=8.1						
SONM	**Songino Array**	**29.36**	**313**	P	**P**	**03 51 53.7**	**-0.8**
	0.2nm,0.3s,baz=128,slow=7.9,SNR=3.2						
MKAR	**Makanchi Array**	**45.28**	**306**	P	**P**	**03 54 06.0**	**-0.3**
	0.2nm,0.4s,baz=92,slow=8.1,SNR=2.9						
KURBB	**Kurchatov Arra**	**47.72**	**312**	P	**P**	**03 54 25.0**	**+0.1**
	0.3nm,0.3s,baz=84,slow=9.0,SNR=5.0						
BVAR	**Borovoye Array**	**52.66**	**315**	P	**P**	**03 55 01.7**	**+0.2**
	0.5nm,0.5s,baz=173,slow=6.8,SNR=4.2						
ARCES	**ARCESS Array B**	**68.26**	**340**	P	**P**	**03 56 46.3**	**+0.8**
	3.4nm,1.0s,baz=51,slow=7.1,SNR=3.9						
FINES	**FINESS Array B**	**72.53**	**332**	P	**P**	**03 57 11.8**	**+0.6**
	2.6nm,1.1s,baz=77,slow=8.7,SNR=7.6						
AKASG	**Malin Array Be**	**77.17**	**322**	P	**P**	**03 57 37.7**	**+0.1**
	0.6nm,0.4s,baz=55,slow=5.1,SNR=2.6						

*LDG **10** 03:53:29.7±0.2, 44°.25N×8°.23E, h8km, Md1.4/2, Ml1.5/7, Error ellipse: s-maj=3.1km s-min=2.1km az=89.0*
ROM 10 03:53:28.0±0.2, 44°.24N±0°.02×8°.22E±0°.03, h10km±1km, ML1.0/5, 1C-2D, Error ellipse: s-maj=3.4km s-min=0.3km az=139.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano**	**0.12**	**47**	P	Pb	03 53 31.7	-0.7
QLNO				S	Sg	03 53 33.7	+0.6
QLNO				AML	AML		
	comp=E,148µm,0.4s						
QLNO				AML	AML		
	comp=N,97µm,0.4s						
RORO	**Rocca Rossa**	**0.17**	**221**	⇓P	Pb	03 53 32.6	-0.7
RORO				S	Sg	03 53 34.9	+0.6
RORO				AML	AML		
	comp=N,83µm,0.1s						
RORO				AML	AML		
	comp=E,51µm,0.2s						
GBOS	**Grotte di Boss**	**0.28**	**270**	⇑P	Pb	03 53 34.9	-0.2
GBOS				S	Sb	03 53 38.7	-1.1
GBOS				AML	AML		
	comp=N,30µm,0.3s						
GBOS				AML	AML		
	comp=E,26µm,0.3s						
PCP	**Piancastagn**	**0.38**	**38**	⇓P	Pb	03 53 36.2	-0.6
PCP				S	Sg	03 53 41.2	+0.7
PCP				AML	AML		
	comp=E,21µm,1.4s						
PCP				AML	AML		
	comp=N,20µm,0.1s						
IMI	**Imperia**	**0.41**	**216**	P	Pb	03 53 36.8	-0.6
ENR	**Entracque**	**0.58**	**269**	P	Pb	03 53 41.1	+0.8
SBF	**Sospel**	**0.68**	**236**	*e*Pg	Pb	03 53 42.5	+0.4
SBF				*e*Sg	Sb	03 53 52.0	+0.4
	comp=N,4.1nm,0.2s						
SBF	**Sospel**	**0.68**	**236**	*e*Pg	Pb	03 53 42.5	+0.4
SBF	**Sospel**	**0.68**	**236**	*e*Pn	Pn	03 53 43.9	+0.1
SBF				*e*Sg	Sb	03 53 52.0	+0.4
	comp=N,4.1nm,0.2s						
MBDF	**Montbardon**	**1.15**	**295**	*e*Pn	Pn	03 53 50.5	+0.2
MBDF				*e*Sn	Sn	03 54 05.7	-0.4
	comp=N,0.9nm,0.3s						
MBDF	**Montbardon**	**1.15**	**295**	*e*Pn	Pn	03 53 50.5	+0.2
MBDF				*e*Sn	Sn	03 54 05.6	-0.5
	comp=N,0.9nm,0.2s						
EUCT	**Pavia**	**1.16**	**34**	P	Pb	03 53 49.8	-0.3
EUCT				AML	AML		
	comp=E,1280µm,0.1s						
EUCT				AML	AML		
	comp=N,2040µm,0.1s						
FRF	**La Foret Royal**	**1.33**	**240**	*e*Pn	Pb	03 53 53.0	0.0
FRF	**La Foret Royal**	**1.33**	**240**	*e*Pg	Pg	03 53 54.1	+0.6
FRF				*e*Sn	Sg	03 54 11.0	+0.3
	comp=N,1.4nm,0.2s						
FRF	**La Foret Royal**	**1.33**	**240**	*e*Pn	Pg	03 53 53.4	-0.1
FRF				*e*Sg	Sg	03 54 11.5	+0.8
	comp=N,1.6nm,0.2s						
LMR	**La Mourre**	**1.54**	**234**	*e*Pn	Pn	03 53 55.7	+0.2
LMR				*e*Sn	Sn	03 54 14.8	-0.7
LMR				*e*Sg	Sg	03 54 17.7	+0.2
	comp=N,2.0nm,0.2s						
LMR	**La Mourre**	**1.54**	**234**	*e*Pn	Pn	03 53 55.8	+0.3
LMR				*e*Sn	Sn	03 54 14.8	-0.7
LMR				*e*Sg	Sg	03 54 17.7	+0.2
	comp=N,2.0nm,0.2s						
LPG	**La Plagne**	**1.63**	**321**	*e*Pg	Pg	03 53 59.3	-0.1
LPG	**La Plagne**	**1.63**	**321**	*e*P	Pg	03 53 59.3	-0.1
LPG				*e*Sg	Sg	03 54 21.4	+0.8
	comp=N,0.3nm,0.3s						
LPL	**La Plagne**	**1.66**	**321**	*e*P	Pg	03 53 59.9	+0.1
PGF	**Pioggiola**	**1.79**	**161**	*e*Pn	Pn	03 53 56.9	-2.1
PGF				*e*Sn	Sn	03 54 16.9	-4.9
	comp=N,0.2nm,0.2s						
PGF	**Pioggiola**	**1.79**	**161**	*e*Sn	Sn	03 54 20.9	-0.9
	comp=N,0.2nm,0.2s						
SMRF	**Simiane la Rot**	**1.93**	**263**	*e*Pg	Pg	03 54 05.9	+1.0
SMRF				*e*Sg	Sg	03 54 31.1	+1.2
	comp=N,1.1nm,0.3s						
SMRF	**Simiane la Rot**	**1.93**	**263**	*e*Pg	Pg	03 54 05.9	+1.0
SMRF				*e*Sg	Sg	03 54 31.0	+1.1
	comp=N,1.1nm,0.3s						

*IDC **10** 03:53:34.8±0.9, 50°.29S×112°.62E, h0km, mb4.4/7, mb1 4.6/7, mb1mx4.1/33, mbtmp4.4/7, MS3.5/10, Ms1 3.5/10, ms1mx3.3/18, Error ellipse: s-maj=47.1km s-min=17.0km az=101.0*
*NEIC **10** 03:53:36.2±2.0, 50°.2S±0°.1×112°.5E±0°.4, h10km±1km, mb4.6/11, Error ellipse: s-maj=42.2km s-min=13.0km az=286.0*
ISC 10 03:53:36.2±0.8, 50°.3S±0°.1×112°.7E±0°.3, h10km, n45, σ0s62/30, mb4.5/11, MS3.5/9, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.40**	**4**	T	T	04 12 53.3	
	baz=183,slow=74,SNR=663						
H01W1	**Cape Leeuwin H**	**15.41**	**4**	T	T	04 12 54.6	
	baz=183,slow=74,SNR=722						
H01W3	**Cape Leeuwin H**	**15.42**	**4**	T	T	04 12 55.3	
	baz=183,slow=74,SNR=657						
CASY	**Casey**	**16.09**	**183**	Pn	**Pn**	**03 57 21.8**	**-0.4**
NWAO	**Narrogin (SRO)**	**17.65**	**13**	LR	LR	04 02 56.2	
	comp=Z,293nm,19.1s,baz=158,slow=32						
FORT	**Forrest**	**22.62**	**36**	P	**P**	**03 58 36.5**	**-0.6**
STKA	**Stephens Creek**	**28.23**	**60**	LR	LR	04 08 36.0	
	comp=Z,122nm,21.6s,baz=206,slow=32						
ASAR	**Alice Springs**	**31.28**	**40**	P	**P**	**03 59 55.9**	**-0.4**
	2.5nm,0.9s,baz=208,slow=8.6,SNR=14						
ASAR				LR	LR	04 10 58.6	
	comp=Z,185nm,20.7s,baz=193,slow=33						

VNDA	**Vanda**	**32.87**	**162**	P		**P**	**04 00 09.3**	**-0.3**
	3.4nm,0.7s,baz=292,slow=8.3,SNR=23							
VNDA				LR		LR	04 11 51.9	
	comp=Z,53nm,18.9s,baz=308,slow=33							
VNDA	**Vanda**	**32.87**	**162**	P		**P**	**04 00 10.1**	**+0.4**
VNDA				IAmb		IAmb	04 00 17.4	
	comp=Z,5.7nm,0.7s							
FITZ	**Fitzroy Crossi**	**33.73**	**23**	P		**P**	**04 00 19.2**	**+1.5**
	comp=Z,13nm,1.0s,baz=202,slow=8.3,SNR=4.9							
FITZ	**Fitzroy Crossi**	**33.73**	**23**	IAmb		IAmb	04 00 19.8	
	comp=Z,15nm,0.9s							
SBA	**Scott Base**	**33.96**	**162**	P		**P**	**04 00 20.3**	**+1.1**
SBA				IAmb		IAmb	04 00 36.9	
	comp=Z,7.0nm,1.1s							
WRA	**Warramunga Arr**	**34.80**	**37**	P		**P**	**04 00 26.6**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=204,slow=8.6,SNR=15							
WRA				LR		LR	04 13 00.7	
	comp=Z,168nm,21.9s,baz=235,slow=34							
WRA	**Warramunga Arr**	**34.80**	**37**	IAmb		IAmb	04 00 27.7	
	comp=Z,0.3nm,1.0s							
WR0	**Warramunga Arr**	**34.86**	**38**	P		**P**	**04 00 26.6**	**-1.0**
WR0				IAmb		IAmb	04 00 28.2	
	comp=Z,6.7nm,1.0s							
WB0	**Warramunga Arr**	**34.98**	**37**	P		**P**	**04 00 28.1**	**-0.4**
WB0				IAmb		IAmb	04 00 29.0	
	comp=Z,12nm,1.2s							
QSPA	**South Pole Qui**	**39.85**	**180**	P		**P**	**04 01 09.2**	**-0.4**
	comp=Z,6.0nm,0.7s,baz=304,slow=1.5,SNR=38							
QSPA	**South Pole Qui**	**39.85**	**180**	P		**P**	**04 01 09.9**	**+0.3**
QSPA				IAmb		IAmb	04 01 16.8	
	comp=Z,8.7nm,0.8s							
SNAA	**Sanae**	**50.20**	**202**	P		**P**	**04 02 31.5**	**-0.2**
SNAA	**Sanae**	**50.20**	**202**	pP		pP	04 02 37.6	+3.9
SNAA	**Sanae**	**50.20**	**202**	P		**P**	**04 02 31.1**	**-0.6**
	comp=Z,4.6nm,0.8s,baz=164,slow=5.4,SNR=3.0							
SNAA	**Sanae**	**50.20**	**202**	P		**P**	**04 02 31.7**	**0.0**
SNAA				IAmb		IAmb	04 02 39.0	
	comp=Z,10nm,0.9s							
BELA	**Belgrano 2**	**50.55**	**188**	P		**P**	**04 02 33.9**	**-0.2**
BELA				IAmb		IAmb	04 02 40.9	
	comp=Z,11nm,0.8s							
VNA2	**Neumayer--Watz**	**51.79**	**201**	P		**P**	**04 02 43.3**	**-0.2**
	baz=122,slow=6.8							
VNA2	**Neumayer--Watz**	**51.79**	**201**	pP		pP	04 02 49.4	+3.9
VNA3	**Neumayer Olymp**	**52.08**	**200**	P		**P**	**04 02 45.2**	**-0.5**
VNA3	**Neumayer Olymp**	**52.08**	**200**	pP		pP	04 02 51.2	+3.5
VNA1	**Neumayer--Stat**	**52.19**	**201**	P		**P**	**04 02 47.3**	**+0.9**
VNA1	**Neumayer--Stat**	**52.19**	**201**	pP		pP	04 02 51.4	+2.9
BOSA	**Boshof**	**67.02**	**253**	LR		LR	04 28 10.3	
	comp=Z,45nm,18.6s,baz=178,slow=31							
CMAR	**Chiang Mai Arr**	**69.50**	**346**	P		**P**	**04 04 44.6**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=190,slow=5.3,SNR=7.8							
CMAR				LR		LR	04 32 47.3	
	comp=Z,11nm,19.5s,baz=315,slow=34							
KSRS	**Korea Array**	**88.38**	**12**	LR		LR	04 47 38.7	
	comp=Z,8.1nm,18.2s,baz=200,slow=37							
PLCA	**Paso Flores**	**89.33**	**178**	LR		LR	04 46 51.5	
	comp=Z,43nm,19.0s,baz=178,slow=36							
MJAR	**Matsushiro Arr**	**89.33**	**20**	LR		LR	04 43 57.5	
	comp=Z,13nm,21.5s,baz=260,slow=34							
NVAR	**Mina Array Bea**	**142.36**	**88**	PKP		**PKiKP**	**04 13 10.8**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=223,slow=3.7,SNR=3.0							
TXAR	**Lajitas Array**	**145.58**	**114**	PKPbc		**PKPab**	**04 13 15.2**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=188,slow=6.1,SNR=5.7							
JCT	**Junction City**	**148.68**	**117**			**PKPdf**	**04 13 20.7**	**+1.1**
RDMU	**Red Mountain**	**149.16**	**92**	PKPbc		**PKiKP**	**04 13 26.0**	**+0.3**
MSTX	**Muleshoe**	**149.41**	**109**	PKPbc		**PKiKP**	**04 13 26.4**	**+0.1**
DLMT	**Dillon**	**149.56**	**82**	PKPbc		**PKiKP**	**04 13 25.8**	**-0.5**
SNOW	**Snow King Moun**	**149.86**	**86**	PKPbc		**PKiKP**	**04 13 27.1**	**0.0**
PDAR	**Pinedale Array**	**150.29**	**88**	PKPbc		**PKiKP**	**04 13 28.6**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=222,slow=2.0,SNR=7.7							
PDAR	**Pinedale Array**	**150.29**	**88**			**PKiKP**	**04 13 28.1**	**+0.1**
YKA	**Yellowknife Ar**	**151.80**	**46**	PKPbc		**PKiKP**	**04 13 29.9**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=279,slow=1.8,SNR=20							

*IDC **10** 03:55:21.5±1.3, 10°.24S×124°.10E, h0km, mb4.2/2, mb1 3.8/5, mb1mx3.5/35, mbtmp3.7/5, ML3.2/3, Error ellipse: s-maj=27.8km s-min=9.6km az=4.0*
ISC 10 03:55:22.4±1.2, 10°.3S±0°.1×124°.4E±0°.2, h10km, n7, σ2s01/9, 1C, Timor region

	258nm,31.2s						
TBI				*e*LR	LR	04 58 08.4	
	comp=Z,293nm,25.8s						
TBI	**Tubuai**	**24.17**	**113**	*e*T	T	05 16 32.0	
	8.3nm,0.4s						
HNR	**Honiara**	**26.45**	**279**	LR	LR	05 02 03.1	
	comp=Z,162nm,18.6s,baz=28,slow=34						
TAOE	**Nuku Hiva Isla**	**33.29**	**83**	*e*LR	LR	05 02 12.4	
	comp=Z,147nm,26.1s						
RKT	**Rikitea**	**37.25**	**108**	*e*LR	LR	05 04 05.0	
	comp=Z,180nm,25.5s						
RKT	**Rikitea**	**37.25**	**108**	*e*T	T	05 32 50.8	
	4.5nm,0.4s						
H11S2	**WAKE ISLAND Hy**	**38.66**	**329**	T	T	05 35 50.7	
	baz=149,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**38.67**	**329**	T	T	05 35 54.0	
	baz=149,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**38.68**	**329**	T	T	05 35 38.9	
	baz=149,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**39.61**	**330**	T	T	05 37 23.4	
	baz=150,slow=76,SNR=3.7						
H11N1	**WAKE ISLAND Hy**	**39.62**	**330**	T	T	05 37 06.3	
	baz=150,slow=76,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**39.63**	**330**	T	T	05 37 18.9	
	baz=150,slow=76,SNR=5.3						
STKA	**Stephens Creek**	**43.99**	**240**	P	**P**	**04 55 14.2**	**-0.2**
	1.9nm,0.7s,baz=103,slow=8.9,SNR=4.4						
WRA	**Warramunga Arr**	**49.71**	**257**	P	**P**	**04 55 59.8**	**+0.5**
	2.0nm,0.6s,baz=91,slow=6.8,SNR=46						
ASAR	**Alice Springs**	**50.00**	**252**	P	**P**	**04 56 02.1**	**+0.6**
	5.6nm,0.6s,baz=88,slow=8.0,SNR=58						
ASAR				LR	LR	05 16 02.1	
	comp=Z,106nm,19.0s,baz=110,slow=35						
MJAR	**Matsushiro Arr**	**68.63**	**320**	LR	LR	05 22 35.5	
	comp=Z,42nm,21.9s,baz=300,slow=31						
NVAR	**Mina Array Bea**	**74.28**	**42**	P	**P**	**04 58 45.5**	**+1.0**
	0.4nm,0.8s,baz=225,slow=10,SNR=2.7						
KDAK	**Kodiak Island**	**74.73**	**11**	LR	LR	05 24 06.2	
	comp=Z,50nm,19.4s,baz=226,slow=30						
KSRS	**Korea Array**	**75.86**	**316**	LR	LR	05 27 25.8	
	comp=Z,17nm,21.1s,baz=0.0,slow=32						
USRK	**Ussuriysk Ar.**	**77.08**	**323**	LR	LR	05 25 51.9	
	comp=Z,58nm,21.6s,baz=102,slow=30						
MA2	**Magadan**	**79.88**	**342**	LR	LR	05 29 51.8	
	comp=Z,18nm,20.5s,baz=108,slow=32						
TXAR	**Lajitas Array**	**80.64**	**56**	P	**P**	**04 59 20.0**	**-0.2**
	0.6nm,1.0s,baz=224,slow=6.3,SNR=3.3						
PDAR	**Pinedale Array**	**82.22**	**42**	P	**P**	**04 59 28.4**	**0.0**
	0.3nm,0.7s,baz=256,slow=3.6,SNR=2.3						
ILAR	**Eielson Array**	**82.25**	**11**	P	**P**	**04 59 27.2**	**-0.6**
	0.3nm,0.8s,baz=195,slow=5.5,SNR=4.2						
INK	**Inuvik**	**88.08**	**14**	P	**P**	**04 59 58.1**	**+1.2**
	0.6nm,0.6s,baz=206,slow=12,SNR=2.3						
YKA	**Yellowknife Ar**	**89.96**	**23**	P	**P**	**05 00 05.5**	**-0.3**
	0.3nm,0.9s,baz=235,slow=4.1,SNR=3.2						
CMAR	**Chiang Mai Arr**	**92.36**	**288**	LR	LR	05 41 54.6	
	comp=Z,10nm,18.1s,baz=55,slow=36						
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc	**PKiKP**	**05 06 48.7**	**-1.6**
	3.5nm,0.9s,baz=88,slow=2.9,SNR=7.8						
GERES	**GERESS Array B**	**145.88**	**351**	PKPbc	**PKPab**	**05 06 46.6**	**-0.2**
	0.2nm,0.3s,baz=54,slow=5.0,SNR=1.6						
DAVOX	**Davos/Dischmat**	**148.34**	**355**	PKPbc	**PKPbc**	**05 06 53.7**	**+0.2**
	1.0nm,0.5s,baz=166,slow=16,SNR=2.0						

*SOME **10** 04:56:30.9, 44.07N×76.93E*
*NNC **10** 04:56:31.2±0.3, 44.02N×76.96E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=2.7km s-min=1.8km az=149.0, Suspected Mining explosion.*
ISC 10 04:56:30.4±0.8, 44.08N±0.03×76.87E±0.02, h0km, n38, σ0s95/57, 11C-6D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTBS	**Karatobe**	**0.39**	**201**	P	**Pg**	**04 56 38.5**	**+0.7**
	65nm,0.4s						
KTBS				S	**Sg**	**04 56 44.3**	**+1.5**
	279nm,0.3s						
KUU	**Kurty**	**0.42**	**245**	P	**Pb**	**04 56 40.2**	**-0.5**
	81nm,0.3s						
KUU				S	**Sb**	**04 56 46.7**	**-1.1**
	273nm,0.3s						
ARXS	**Arharly**	**0.70**	**78**	P	**Pg**	**04 56 43.4**	**-0.4**
	45nm,0.3s						
ARXS				S	**Sg**	**04 56 52.4**	**-0.5**
	105nm,0.3s						
KOTS	**Kotyrbulak**	**0.86**	**168**	P	**Pg**	**04 56 46.6**	**-0.2**
	91nm,0.3s						
KOTS				S	**Sg**	**04 56 57.4**	**-0.6**
	49nm,0.4s						
MDOK	**Medeo**	**0.92**	**172**	⇓P	**Pg**	**04 56 47.4**	**-0.6**
	14nm,0.4s						
MDOK				⇓S	**Sg**	**04 56 59.5**	**-0.4**
	18nm,0.4s						
MDOK	**Medeo**	**0.92**	**172**	Pg	**Pg**	**04 56 47.6**	**-0.4**
	28nm,0.4s						
MDOK				Lg	Lg	04 56 59.2	
	33nm,0.4s						
KRBS	**Karabastau**	**0.94**	**247**	P	**Pb**	**04 56 49.6**	**-0.1**
	40nm,0.3s						
KRBS				S	**Sb**	**04 57 03.0**	**+0.2**
	71nm,0.3s						
MTBS	**Maitube**	**1.00**	**199**	P	**Pg**	**04 56 49.5**	**0.0**
	28nm,0.3s						
MTBS				S	**Sg**	**04 57 02.4**	**0.0**
	38nm,0.3s						
TNSS	**Tian-Shan**	**1.04**	**177**	P	**Pg**	**04 56 50.0**	**-0.3**
	25nm,0.4s						
TNSS				S	**Sg**	**04 57 03.8**	**0.0**
	28nm,0.3s						
IZV	**Izvestkoviy**	**1.06**	**190**	P	**Pg**	**04 56 49.9**	**-0.7**
	29nm,0.4s						
IZV				S	**Sg**	**04 57 03.4**	**-0.8**
	24nm,0.3s						
MNBS	**Baschi**	**1.10**	**89**	P	**Pg**	**04 56 51.3**	**-0.3**
	13nm,0.3s						
MNBS				S	**Sg**	**04 57 05.6**	**-0.3**
	64nm,0.3s						
DGS	**Degeres**	**1.15**	**224**	P	**Pg**	**04 56 52.7**	**+0.3**
	36nm,0.3s						
DGS				S	**Sb**	**04 57 08.9**	**+0.1**
	78nm,0.3s						
KST	**Kastek**	**1.23**	**213**	P	**Pn**	**04 56 55.1**	**+0.2**
	22nm,0.3s						
KST				S	**Sn**	**04 57 12.5**	**+0.3**
	40nm,0.2s						
TDK	**Taldyqorghan**	**1.44**	**49**	P	**Pn**	**04 56 56.9**	**-0.8**
	58nm,0.3s						
TDK				S	**Sg**	**04 57 15.4**	**-1.1**
	86nm,0.3s						
TKM2	**Tokmak 2**	**1.48**	**219**	P	**Pn**	**04 56 58.5**	**+0.1**
	SNR=17						
TKM2	**Tokmak 2**	**1.48**	**219**	⇑P	**Pn**	**04 56 58.5**	**+0.1**
	8.9nm,0.4s						
TKM2				⇑S	**Sn**	**04 57 20.0**	**+1.3**
	13nm,0.3s						
SATY	**Saty**	**1.51**	**132**	P	**Pn**	**04 56 58.3**	**-0.5**
	34nm,0.3s						
SATY				S	**Sg**	**04 57 17.7**	**-1.2**
	71nm,0.3s						
SGDS	**Sogindy**	**1.74**	**250**	P	**Pg**	**04 57 03.7**	**0.0**
	60nm,0.4s						
SGDS				S	**Sg**	**04 57 27.7**	**+1.5**
	34nm,0.2s						
UZB	**Uzynbulak**	**1.82**	**120**	P	**Pb**	**04 57 03.7**	**-0.9**
	11nm,0.4s						
UZB				S	**Sn**	**04 57 26.9**	**0.0**
	35nm,0.3s						
CHMS	**Chumysh**	**1.88**	**236**	P	**Pb**	**04 57 05.8**	**+0.2**
	SNR=18						
ULHL	**Ulahol**	**1.89**	**194**	P	**Pb**	**04 57 05.6**	**-0.2**
	SNR=41						
USP	**Ospenovka**	**1.90**	**246**	P	**Pb**	**04 57 06.3**	**+0.4**
	SNR=108						
KBK	**Karagaybulak**	**1.99**	**225**	P	**Pb**	**04 57 07.8**	**+0.2**
	SNR=41						
PDGK	**Podgornoye**	**2.04**	**111**	Pg	**Pn**	**04 57 06.5**	**+0.4**
	11nm,0.3s						
PDGK				Lg	Lg	04 57 32.1	
	31nm,0.5s						
PDGK	**Podgornoye**	**2.04**	**111**	⇑Pn	**Pn**	**04 57 06.2**	**+0.1**
	10nm,0.4s						
PDGK				⇓Sn	**Sb**	**04 57 34.2**	**-0.2**
	28nm,0.7s						
SHLS	**Shalkode**	**2.10**	**115**	Pg	**Pg**	**04 57 13.4**	**+2.9**
	9.3nm,0.3s						
SHLS				Lg	Lg	04 57 43.5	
	58nm,0.5s						
DJR	**Jarkent**	**2.12**	**82**	Pg	**Pb**	**04 57 08.7**	**-1.0**
	14nm,0.3s						
DJR				Lg	Lg	04 57 36.1	
	37nm,0.4s						
BTLS	**Baital**	**2.24**	**297**	Pg	**Pg**	**04 57 13.6**	**+0.3**
	7.6nm,0.2s						
BTLS				Lg	Lg	04 57 43.8	
	6.2nm,0.3s						
AAK	**Ala-Archa**	**2.25**	**231**	P	**Pb**	**04 57 11.5**	**-0.5**
	SNR=20						
AAK	**Ala-Archa**	**2.25**	**231**	⇑Pn	**Pb**	**04 57 11.2**	**-0.8**
	12nm,0.6s						
AAK				⇑Lg	Lg	04 57 42.4	
	31nm,0.6s						
UCH	**Uchtor**	**2.53**	**224**	P	**Pb**	**04 57 17.4**	**+0.5**
	SNR=19						
KTMS	**Ketmen**	**2.60**	**103**	Pg	**Pb**	**04 57 17.5**	**-0.5**
	16nm,0.3s						
KTMS				Lg	Lg	04 57 49.2	
	22nm,0.4s						
EKS2	**Erkin-Say**	**2.66**	**239**	P	**Pb**	**04 57 17.3**	**-1.7**
	SNR=13						
AML	**Almayashu**	**3.03**	**231**	P	**Pb**	**04 57 23.8**	**-1.7**
	SNR=6.5						
MAKZ	**Makanchi**	**4.51**	**51**	⇓Pn	**Pn**	**04 57 41.1**	**+1.0**
	1.5nm,0.3s						
MAKZ				⇑Sn	**Sn**	**04 58 34.6**	**+1.4**
	2.3nm,0.6s						
MAKZ				⇑Lg	Lg	04 58 52.2	
	3.8nm,0.5s						
MK31	**Makanchi Array**	**4.68**	**53**	⇑Pn	**Pn**	**04 57 43.8**	**+1.4**
	0.9nm,0.3s,baz=221,slow=8.9,SNR=34						
MK31				⇑Sn	**Sn**	**04 58 39.3**	**+1.9**
	0.9nm,0.3s,baz=360,slow=52,SNR=8.8						
MK31				⇑Lg	Lg	04 58 58.0	
	1.6nm,0.5s,baz=232,slow=27,SNR=5.2						
KK31	**Karatay Array**	**4.72**	**260**	⇓Pg	**Pg**	**04 57 58.2**	**-2.6**
	1.0nm,0.4s,baz=80,slow=15,SNR=15						
KK31				⇓Lg	Lg	04 58 59.9	
	4.7nm,0.5s,baz=77,slow=25,SNR=13						
KURBB	**Kurchatov Arra**	**6.65**	**9**	⇑Lg	Lg	05 00 03.1	
	6.8nm,0.6s						

ASRS 10 05:11:51.4±0.3, 52°N±1°×9°5E±°, h5km, MLh3.5/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZLR	**Kyzyl**	**0.12**	**340**	Pg	Pg	05 11 53.9	0.0
KZLR				Sg	Sg	05 11 56.3	+0.8
ARDR	**Aradan**	**1.20**	**326**	Pg	Pb	05 12 14.5	-0.1
ARDR				Sg	Sb	05 12 30.5	+0.1
KNGR	**Kungurtug, Tuv**	**2.13**	**116**	Pg	Pn	05 12 28.8	+1.0
KNGR				Sg	Sb	05 12 57.0	-0.3
DJOS	**Djoyskaya Sosn**	**2.27**	**303**	Pg	Pg	05 12 33.1	+0.9
DJOS				Sg	Sg	05 13 04.1	-0.1
CERR	**Cheremushki**	**2.29**	**305**	Pg	Pg	05 12 35.2	-0.1
CERR				Sg	Sg	05 13 04.3	-0.6
DJO	**Djoy, Khakassi**	**2.36**	**302**	Pg	Pb	05 12 33.3	-1.0
DJO				Sg	Sb	05 13 05.1	+1.4
TBTR	**Tabat**	**2.69**	**301**	Pn	Pn	05 12 30.0	-5.4
TBTR				Pg	Pb	05 12 36.6	-3.4
TBTR				Sg	Sb	05 13 12.9	-0.5
TEL	**Teeli**	**2.77**	**260**	Pg	Pb	05 12 41.4	0.0
TEL				Sg	Sb	05 13 16.2	+0.5
ABNR	**Abakan**	**2.85**	**320**	Sg	Sb	05 13 16.9	-0.8
SHRR	**Shira**	**3.92**	**320**	Sg	Sg	05 13 54.9	-2.3
LUZB	**Luzhba, Kemero**	**4.00**	**303**	Pg	Pb	05 13 04.4	+2.0
LUZB				Sg	Sg	05 13 57.1	-2.8
CUR	**Chagan-Uzun**	**4.19**	**252**	Pg	Pb	05 13 08.0	+2.5
CUR				Sg	Sg	05 14 02.5	-3.3
ULGR	**Ulagan, Altay**	**4.25**	**259**	Pg	Pg	05 13 10.1	-2.6
ULGR				Sg	Sg	05 14 05.1	-2.6
TASR	**Tashtagol**	**4.25**	**289**	Pg	Pb	05 13 08.3	+1.7
TASR				Sg	Sg	05 14 04.8	-3.1
ARTR	**Artybash**	**4.51**	**275**	Pn	Pn	05 12 57.4	-2.9
ARTR				Pg	Pb	05 13 13.7	+2.7
ARTR				Sg	Sg	05 14 13.3	-2.8
CHBI	**Chibit, Altay**	**4.62**	**257**	Pn	Pn	05 13 03.6	+1.8
CHBI				Pg	Pg	05 13 17.3	-2.5
CHBI				Sg	Sg	05 14 17.5	-2.1
DGZ	**Jazzator, Alta**	**4.89**	**250**	Pn	Pn	05 13 06.6	+0.9
DGZ				Sg	Sg	05 14 25.7	-2.7
ELT	**Eltsovka**	**5.34**	**291**	Pg	Pb	05 13 26.7	+1.6
ELT				Sg	Sg	05 14 40.6	-2.0
BRCR	**Berchikul'**	**5.48**	**320**	Pg	Pb	05 13 30.7	+3.2
BRCR				Sg	Sg	05 14 45.6	-1.7
POMOR	**Pomortsevo, Ku**	**5.59**	**303**	Sg	Sg	05 14 51.2	+0.5
SALR	**Pechorkino, Sa**	**6.03**	**301**	Sg	Sg	05 15 02.6	-2.2
UKR	**Ust'-Kan**	**6.16**	**268**	Pg	Pg	05 13 44.5	-4.7
UKR				Sg	Sg	05 15 09.9	+1.0
NVSII	**Novosibirsk**	**7.51**	**300**	Sg	Sg	05 15 50.9	-1.5
NVS	**Novosibirsk**	**7.52**	**300**	Sg	Sg	05 15 55.5	+3.1

*IDC **10** 05:59:30.6±1.0, 8.54S×76.07W, h0km, mb4.0/10, mb1 4.2/13, mb1mx4.1/30, mbtmp4.0/13, ML3.9/3, Error ellipse: s-maj=39.4km s-min=13.1km az=31.0*
*NEIC **10** 05:59:36±2.0, 8.51S±0.03×76.04W±0.1, h41km±8km, mb4.4/22, Error ellipse: s-maj=17.0km s-min=2.8km az=79.0*
*VAO **10** 05:59:40.3±0.8, 8.26S×75.63W, h45km, mb4.4*
ISC 10 05:59:36.2±0.5, 8.38S±0.06×75.96W±0.08, h35km, n83, σ1s42/83, mb4.3/21, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.71**	**297**	P	**Pn**	**06 00 16.0**	**-1.7**
	16nm,0.3s,baz=120,slow=13,SNR=83						
ATAH				Lg	Lg	06 00 57.5	
	40nm,0.3s,baz=127,slow=20,SNR=6.5						
NNA	**Nana**	**3.69**	**194**	Pn	**Pn**	**06 00 31.2**	**+0.4**
	7.9nm,0.3s,baz=1.4,slow=12,SNR=16						
NNA				Sn	**Sn**	**06 01 15.1**	**+2.0**
	12nm,0.3s,baz=90,slow=19,SNR=2.6						
NNA	**Nana**	**3.69**	**194**	Pn	**Pn**	**06 00 29.8**	**-1.1**
PTLC	**Puerto Leguiza**	**8.57**	**8**	*e*P	**Pn**	**06 01 35.1**	**-2.9**
OTAV	**Otavalo**	**8.92**	**344**	Pn	**Pn**	**06 01 45.1**	**+2.0**
OTAV	**Otavalo**	**8.92**	**344**	*e*P	**Pn**	**06 01 45.4**	**+2.3**
OTAV	**Otavalo**	**8.92**	**344**	*e*P	**Pn**	**06 01 46.1**	**+3.0**
GCUF	**Volcan Galeras**	**9.64**	**352**	*e*P	**Pn**	**06 01 54.1**	**+1.0**
ETMF	**Extrema**	**9.73**	**99**	*e*P	**Pn**	**06 01 54.2**	**+0.4**
SOTA	**Rioblanco**	**10.47**	**356**	*e*P	**Pn**	**06 02 04.5**	**+0.2**
GARC	**Garzon, Huila**	**10.51**	**3**	*e*P	**Pn**	**06 02 04.5**	**-0.2**
PCON	**Cinco Dias**	**10.65**	**358**	*e*P	**Pn**	**06 02 07.5**	**+0.6**
MACC	**Macarena, Meta**	**10.67**	**11**	*e*P	**Pn**	**06 02 07.1**	**+0.4**
POPC	**Popayan, Colom**	**10.87**	**356**	*e*P	**Pn**	**06 02 09.9**	**+0.2**
LPAZ	**La Paz**	**10.96**	**137**	Pn	**Pn**	**06 02 12.8**	**+1.6**
	0.1nm,0.3s,baz=256,slow=13,SNR=2.8						
LPAZ				Lg	Lg	06 05 20.5	
	0.1nm,0.3s,baz=238,slow=18,SNR=2.4						
LPAZ	**La Paz**	**10.96**	**137**	Pn	**Pn**	**06 02 11.8**	**+0.5**
MARP	**Paez Belalcaza**	**11.15**	**0**	*e*P	**Pn**	**06 02 14.9**	**+1.3**
ORTC	**Ortega, Tolima**	**12.23**	**3**	*e*P	**Pn**	**06 02 28.8**	**+0.6**
YOTC	**Yotoco, Valle**	**12.29**	**358**	*e*P	**Pn**	**06 02 33.1**	**+4.1**
VILC	**Villavicencio,**	**12.62**	**10**	*e*P	**Pn**	**06 02 35.0**	**+1.6**
SAML	**Samuel**	**12.64**	**94**		**Pn**	**06 02 31.9**	**-1.9**
ROSC	**El Rosal**	**13.24**	**7**	Pn	**Pn**	**06 02 46.1**	**+3.9**
	1.5nm,0.3s,baz=195,slow=15,SNR=4.9						
ROSC				Lg	Lg	06 06 27.2	
	1.3nm,0.3s,baz=260,slow=20,SNR=1.5						
ROSC	**El Rosal**	**13.24**	**7**	Pn	**Pn**	**06 02 44.4**	**+2.2**
GUY2C	**Guyana, Caldas**	**13.53**	**3**	*e*P	**Pn**	**06 02 49.1**	**+2.9**
NORC	**Norcasia**	**13.90**	**5**	*e*P	**Pn**	**06 02 50.9**	**0.0**
SPBC	**San Pablo de B**	**14.07**	**8**	*e*P	**Pn**	**06 02 55.1**	**+1.8**
CBOC	**Ciudad Bolivar**	**14.15**	**360**	*e*P	**Pn**	**06 02 58.3**	**+3.8**
RUSC	**La Rusia**	**14.47**	**12**	*e*P	**Pn**	**06 02 59.5**	**+0.5**
LVC	**Limon Verde**	**15.69**	**155**	Pn	**P**	**06 03 18.7**	**-0.1**
	0.1nm,0.3s,baz=283,slow=10,SNR=5.8						
LVC	**Limon Verde**	**15.69**	**155**		**Pn**	**06 03 13.8**	**-1.3**
ZARC	**Zaragoza, Cauc**	**15.81**	**4**	*e*P	**P**	**06 03 19.1**	**-0.7**
MACA	**Manacapuru-AM**	**16.05**	**72**	*e*P	**Pn**	**06 03 17.5**	**-2.0**
VILB	**Vilhena**	**16.14**	**108**	*e*P	**Pn**	**06 03 20.4**	**-0.2**
SIV	**San Ignacio**	**16.39**	**119**	Pn	**Pn**	**06 03 22.7**	**-1.1**
	0.5nm,0.3s,baz=305,slow=12,SNR=26						
SIV				Lg	Lg	06 08 11.6	
	0.3nm,0.3s,baz=5.8,slow=21,SNR=4.2						
SMLC	**San Martn de**	**17.17**	**6**	*e*P	**Pn**	**06 03 33.5**	**-0.1**
PTGA	**Pitinga**	**17.65**	**65**	P	**Pn**	**06 03 39.4**	**-0.2**
	0.6nm,0.3s,baz=243,slow=13,SNR=8.5						
PTGA	**Pitinga**	**17.65**	**65**	*e*P	**Pn**	**06 03 38.2**	**-1.4**
PTLB	**Pontes e Lacer**	**17.89**	**115**	*e*P	**Pn**	**06 03 41.8**	**-0.6**
SDV	**Santo Domingo**	**17.96**	**17**	P	**Pn**	**06 03 43.3**	**-0.2**
AC01	**Pan de Azucar**	**18.39**	**165**	P	**P**	**06 03 44.7**	**-3.6**
AC01				IAmb	IAmb	06 04 02.6	
	comp=Z,26nm,1.2s						
NPGB	**Novo Progresso**	**20.46**	**88**	*e*P	**P**	**06 04 11.8**	**+0.8**
AQDB	**Aquidauana**	**22.98**	**124**	*e*P	**P**	**06 04 38.8**	**+0.9**
SNDB	**Serra Nova Dou**	**24.53**	**100**	*e*P	**P**	**06 04 53.6**	**+0.7**
MCPB	**Macapa, AP**	**25.11**	**73**	*e*P	**P**	**06 04 59.4**	**+1.3**
CPUP	**Villa Florida**	**25.13**	**138**	P	**P**	**06 04 56.1**	**-2.0**
	comp=Z,2.2nm,0.9s,baz=330,slow=6.9,SNR=5.3						
PCMB	**Pacaembu**	**27.18**	**122**	*e*P	**P**	**06 05 17.8**	**+1.0**
TX32	**Lajitas Array**	**46.03**	**326**	P	**P**	**06 07 56.4**	**-0.3**
TXAR	**Lajitas Array**	**46.03**	**326**	P	**P**	**06 07 57.3**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=152,slow=9.6,SNR=12						
TX31	**Lajitas Ar. Si**	**46.03**	**326**	P	**P**	**06 07 56.4**	**-0.3**
MNTX	**Cornudas Mount**	**48.78**	**326**	P	**P**	**06 08 17.5**	**-0.6**
MNTX				IAmb	IAmb	06 08 23.2	
	comp=Z,3.4nm,1.2s						
ANMO	**Albuquerque**	**51.84**	**328**	P	**P**	**06 08 40.0**	**-1.4**
T25A	**Trinidad**	**52.55**	**331**	P	**P**	**06 08 46.1**	**-0.5**
T25A				IAmb	IAmb	06 08 48.5	
	comp=Z,4.2nm,0.9s						
ECSD	**EROS Data Cent**	**55.16**	**342**	P	**P**	**06 09 04.4**	**-0.9**
ECSD				IAmb	IAmb	06 09 05.8	
	comp=Z,4.0nm,0.9s						
PDAR	**Pinedale Array**	**59.41**	**332**	P	**P**	**06 09 35.5**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=131,slow=6.1,SNR=4.0						
HWUT	**Hardware Ranch**	**59.50**	**330**	P	**P**	**06 09 35.2**	**-1.0**
HWUT				IAmb	IAmb	06 09 37.3	
	comp=Z,3.6nm,1.1s						
ULM	**Lac du Bonnet**	**60.91**	**346**	P	**P**	**06 09 45.1**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=156,slow=6.8,SNR=12						
ULM	**Lac du Bonnet**	**60.91**	**346**	IAmb	IAmb	06 09 45.9	
	comp=Z,5.7nm,0.8s						
FLWY	**Flagg Ranch**	**60.95**	**332**	P	**P**	**06 09 45.8**	**-0.3**
NVAR	**Mina Array Bea**	**61.01**	**323**	P	**P**	**06 09 46.4**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=138,slow=6.2,SNR=4.9						
YHH	**Holmes Hill**	**61.56**	**332**	P	**P**	**06 09 50.0**	**-0.4**
YHH				IAmb	IAmb	06 09 52.4	
	comp=Z,2.1nm,1.0s						
YHB	**Horse Butte**	**61.69**	**332**	P	**P**	**06 09 51.7**	**+0.6**
YHL	**Hebgen Lake**	**61.76**	**332**	P	**P**	**06 09 50.8**	**-0.9**
GCMT	**Greycliff**	**61.81**	**334**	P	**P**	**06 09 52.5**	**+0.7**
BOZ	**Bozeman (W)**	**62.53**	**333**	P	**P**	**06 09 56.3**	**-0.4**
BOZ				IAmb	IAmb	06 09 58.8	
	comp=Z,3.9nm,1.4s						
MFID	**Camas Ranch**	**62.99**	**328**	P	**P**	**06 09 60.0**	**+0.2**
MFID				IAmb	IAmb	06 10 01.6	
	comp=Z,5.2nm,1.1s						
LRM	**Limekiln Ridge**	**63.08**	**332**	P	**P**	**06 10 00.3**	**-0.1**
ORV	**Oroville**	**63.65**	**322**	P	**P**	**06 10 02.9**	**-1.1**
ORV				IAmb	IAmb	06 10 06.1	
	comp=Z,4.3nm,1.1s						
WVOR	**Wild Horse Val**	**63.82**	**326**	P	**P**	**06 10 06.0**	**+0.7**
WVOR				IAmb	IAmb	06 10 18.4	
	comp=Z,4.0nm,1.4s						
MSO	**Missoula**	**64.52**	**332**	P	**P**	**06 10 10.3**	**+0.6**
MSO				IAmb	IAmb	06 10 12.1	
	comp=Z,4.2nm,1.0s						
I07A	**Izee**	**65.39**	**327**	P	**P**	**06 10 14.8**	**-0.6**
I07A				IAmb	IAmb	06 10 17.3	
	comp=Z,2.8nm,0.8s						
DBIC	**Dimbokro**	**72.44**	**80**	P	**P**	**06 11 00.5**	**+0.7**
	comp=Z,5.7nm,0.8s,baz=181,slow=5.3,SNR=6.6						
YKA	**Yellowknife Ar**	**76.67**	**343**	P	**P**	**06 11 23.0**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=139,slow=6.3,SNR=11						
TORD	**Torodi Ar. Bea**	**80.02**	**75**	P	**P**	**06 11 44.1**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=289,slow=6.4,SNR=10.0						
ESDC	**Sonseca Array**	**81.72**	**48**	P	**P**	**06 11 53.5**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=276,slow=6.7,SNR=4.8						
ILAR	**Eielson Array**	**89.56**	**336**	P	**P**	**06 12 28.9**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=164,slow=3.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**132.00**	**15**	PKP	**PKPdf**	**06 18 46.5**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=282,slow=1.3,SNR=3.6						
KURK	**Kurchatov**	**132.84**	**22**		**PKiKP**	**06 18 49.3**	**+0.5**
KURBB	**Kurchatov Arra**	**132.88**	**22**	PKP	**PKiKP**	**06 18 49.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=311,slow=3.0,SNR=3.5						
ASAR	**Alice Springs**	**136.80**	**222**	PKP	**PKPdf**	**06 18 55.9**	**-0

Azm222.0000°; N -0.2052, Plg86.0000°, Azm44.0000°; P -1.2888, Plg0.0000°, Azm312.0000°;

ISC 10 06:10:38.5-0.3,**41°27S**-0'06-**88°80W**-0'06,**h10**km,**n257**, σ1$**04**/209,**mb4.9**/75,**MS4.8**/63,**2C-1D, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**10.79**	**50**	T	T	06 24 34.4	
	baz=222,slow=73,SNR=6409						
H03S1	**Juan Fernandez**	**10.79**	**50**	T	T	06 24 44.8	
	baz=222,slow=73,SNR=7664						
H03S3	**Juan Fernandez**	**10.81**	**50**	T	T	06 24 40.9	
	baz=222,slow=73,SNR=6917						
H03N3	**Juan Fernandez**	**11.07**	**48**	T	T	06 24 53.3	
	baz=223,slow=72						
H03N2	**Juan Fernandez**	**11.07**	**48**	T	T	06 24 51.2	
	baz=223,slow=72						
H03N1	**Juan Fernandez**	**11.09**	**48**	T	T	06 24 45.0	
	baz=223,slow=72						
LL01	**San Ignacio de**	**12.28**	**101**		**Pn**	**06 13 35.0**	**+1.6**
PLCA	**Paso Flores**	**13.80**	**94**	Pn	**Pn**	**06 13 52.8**	**-1.4**
	0.2nm,0.3s,baz=276,slow=12,SNR=9.8						
PLCA				LR	LR	06 17 11.1	
	comp=Z,1μm,18.3s,baz=262,slow=29						
PLCA	**Paso Flores**	**13.80**	**94**		**Pn**	**06 13 55.2**	**+0.9**
BI02	**San Fabin de**	**14.39**	**77**	Pn	**Pn**	**06 14 03.6**	**+1.3**
GO09	**Cerro Castillo**	**15.12**	**137**	Pn	**Pn**	**06 14 12.6**	**+0.5**
GO09				IAmb	IAmb	06 14 17.0	
	comp=Z,80nm,1.2s						
BO02	**Sierra Bellavi**	**15.59**	**71**	Pn	**Pn**	**06 14 18.5**	**+0.1**
MT05	**Renca**	**16.36**	**67**	Pn	**Pn**	**06 14 28.2**	**-0.2**
MT05				IAmb	IAmb	06 14 44.6	
	comp=Z,165nm,1.5s						
PEL	**Peldehue**	**16.54**	**66**	Pn	**Pn**	**06 14 30.0**	**-0.6**
VA03	**San Esteban**	**16.85**	**66**	P	**Pn**	**06 14 34.0**	**-0.5**
GO10	**Punta Arenas**	**16.88**	**141**	P	**P**	**06 14 35.9**	**-0.9**
CO03	**El Pedregal**	**17.93**	**60**	P	**Pn**	**06 14 46.3**	**-1.8**
CO03				IAmb	IAmb	06 14 53.4	
	comp=Z,106nm,1.5s						
GO04	**Tololo Observa**	**18.30**	**58**	P	**Pn**	**06 14 52.0**	**-0.8**
ZON	**Zonda**	**18.84**	**65**	P	**P**	**06 14 58.8**	**+0.1**
USHA	**Ushuaia**	**19.12**	**142**	LR	LR	06 20 56.5	
	comp=Z,6μm,18.8s,baz=307,slow=33						
LCO	**Las Campanas**	**19.16**	**56**	P	**P**	**06 15 00.5**	**-1.8**
AC02	**Maricunga**	**21.68**	**55**	P	**P**	**06 15 29.5**	**-0.4**
AC02				IAmb	IAmb	06 15 33.4	
	comp=Z,99nm,1.4s						
RPN	**Rapa Nui**	**22.00**	**303**	P	**P**	**06 15 31.4**	**-1.5**
PB14	**IPOC Station P**	**22.59**	**48**	P	**P**	**06 15 39.4**	**-0.2**
PB14				IAmb	IAmb	06 16 03.0	
	comp=Z,74nm,1.5s						
PB14				IAMs_20	IAMs_20	06 21 38.7	
	comp=Z,4μm,21.0s						
GO02	**Mina Guanaco**	**22.65**	**51**	P	**P**	**06 15 40.1**	**0.0**
GO02				IAmb	IAmb	06 15 55.7	
	comp=Z,30nm,0.9s						
PB10	**IPOC Station P**	**23.39**	**46**	IAMs_20	IAMs_20	06 22 01.8	
	comp=Z,3μm,20.0s						
PB04	**IPOC Station P**	**24.56**	**45**	P	**P**	**06 15 57.4**	**-1.4**
PB04				IAMs_20	IAMs_20	06 22 36.8	
	comp=Z,4μm,22.0s						
LVC	**Limon Verde**	**25.02**	**48**	P	**P**	**06 16 02.1**	**-1.1**
	comp=Z,11nm,0.9s,baz=210,slow=10,SNR=6.8						
LVC				LR	LR	06 23 25.8	
	comp=Z,2μm,19.1s,baz=228,slow=31						
LVC	**Limon Verde**	**25.02**	**48**	P	**P**	**06 16 02.5**	**-0.7**
LVC				IAmb	IAmb	06 16 16.9	
	comp=Z,35nm,1.3s						
LVC	**Limon Verde**	**25.02**	**48**	IAMs_20	IAMs_20	06 23 04.9	
	comp=Z,3μm,19.0s						
LPA	**La Plata**	**25.03**	**85**	*e*P	P	06 15 55.4	-7.3
LPA				PP	**PnPn**	**06 16 33.2**	**-2.7**
LPA				PPP	PPP	06 16 42.5	
LPA				PPP	PPP	06 17 53.4	
LPA				PCP	**PcP**	**06 19 35.3**	**-2.1**
LPA				S	**S**	**06 20 29.9**	**+3.2**
LPA				SSS	SSS	06 23 11.7	
LPA				SSS	SSS	06 23 11.7	
LPA				SSS	SSS	06 24 19.0	
LPA				SKIKP		06 30 49.5	
LPA				SKIKS		06 34 13.0	
PB09	**IPOC Station P**	**25.48**	**46**	IAMs_20	IAMs_20	06 23 17.3	
	comp=Z,2μm,20.0s						
PATCX	**Punta Patache**	**25.80**	**43**	IAMs_20	IAMs_20	06 23 11.6	
	comp=Z,3μm,22.0s						
PB01	**IPOC Station P**	**25.96**	**45**	P	**P**	**06 16 11.1**	**-0.3**
PB01				IAmb	IAmb	06 16 36.9	
	comp=Z,31nm,1.3s						
PB01				IAMs_20	IAMs_20	06 23 29.0	
	comp=Z,2μm,19.0s						
PSGCX	**Pisagua**	**26.83**	**42**	IAMs_20	IAMs_20	06 23 43.1	
	comp=Z,3μm,22.0s						
PB08	**IPOC Station P**	**26.88**	**44**	IAMs_20	IAMs_20	06 23 58.3	
	comp=Z,3μm,20.0s						
PB11	**IPOC Station P**	**26.93**	**43**	IAMs_20	IAMs_20	06 23 55.8	
	comp=Z,2μm,18.0s						
MNMC	**Minye Minye**	**27.49**	**42**	P	**P**	**06 16 25.2**	**-0.2**
MNMC				IAmb	IAmb	06 16 43.5	
	comp=Z,21nm,1.0s						
MNMC				IAMs_20	IAMs_20	06 24 13.5	
	comp=Z,2μm,19.0s						
PMSA	**Palmer Station**	**27.49**	**157**	LR	LR	06 24 13.7	
	comp=Z,1μm,19.6s,baz=309,slow=30						
PMSA	**Palmer Station**	**27.49**	**157**	P	**P**	**06 16 26.2**	**+1.5**
PMSA	**Palmer Station**	**27.49**	**157**	IAMs_20	IAMs_20	06 23 41.6	
	comp=Z,2μm,21.0s						
CPUP	**Villa Florida**	**29.91**	**70**	P	**P**	**06 16 44.6**	**-1.9**
	comp=Z,3.6nm,1.1s,baz=276,slow=11,SNR=4.4						
CPUP				LR	LR	06 27 52.9	
	comp=Z,2μm,19.2s,baz=242,slow=35						
CPUP	**Villa Florida**	**29.91**	**70**	P	**P**	**06 16 44.6**	**-1.9**
CPUP	**Villa Florida**	**29.91**	**70**	IAmb	IAmb	06 16 47.5	
	comp=Z,14nm,1.4s						
LPAZ	**La Paz**	**30.63**	**42**	P	**P**	**06 16 53.4**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=156,slow=6.5,SNR=9.9						
LPAZ				LR	LR	06 26 35.4	
	comp=Z,2μm,18.2s,baz=196,slow=31						
LPAZ	**La Paz**	**30.63**	**42**	P	**P**	**06 16 53.4**	**-0.3**
SIV	**San Ignacio**	**34.75**	**52**	P	**P**	**06 17 28.5**	**-0.6**
	comp=Z,8.8nm,1.1s,baz=252,slow=9.5,SNR=12						
SIV	**San Ignacio**	**34.75**	**52**	P	**P**	**06 17 28.5**	**-0.6**
ATAH	**Atahualpa**	**35.23**	**18**	P	**P**	**06 17 35.9**	**+2.2**
	comp=Z,25nm,0.7s,baz=240,slow=5.2,SNR=11						
ATAH	**Atahualpa**	**35.23**	**18**	P	**P**	**06 17 35.9**	**+2.2**
HOPE	**Hope Point**	**36.63**	**129**	IAMs_20	IAMs_20	06 32 14.8	
	comp=Z,20nm,20.0s						
SPB	**Sao Paulo**	**38.70**	**76**	IAMs_20	IAMs_20	06 33 07.4	
	comp=Z,1μm,18.0s						
SAML	**Samuel**	**39.37**	**42**	P	**P**	**06 18 07.2**	**-1.1**
SAML	**Samuel**	**39.37**	**42**	IAMs_20	IAMs_20	06 31 36.3	
	comp=Z,1μm,21.0s						
OTAV	**Otavalo**	**42.37**	**15**	P	**P**	**06 18 33.6**	**+0.1**
OTAV				IAmb	IAmb	06 18 41.8	
	comp=Z,25nm,1.2s						
OTAV	**Otavalo**	**42.37**	**15**	*e*P	**P**	**06 18 31.8**	**-1.8**
RKT	**Rikitea**	**42.51**	**281**	*e*S	**S**	**06 24 56.0**	**-0.4**
	comp=Z,451nm,29.2s						
RKT				*e*LQ	LQ	06 28 31.8	
	comp=Z,2μm,32.5s						
RKT				*e*LR	LR	06 30 11.8	
RKT	**Rikitea**	**42.51**	**281**	*e*T	T	07 03 24.8	
	comp=Z,2.7nm,0.3s						
BELA	**Belgrano 2**	**42.65**	**165**	P	**P**	**06 18 36.1**	**+1.4**
PTLC	**Puerto Leguiza**	**43.16**	**21**	*e*P	**P**	**06 18 37.4**	**-2.1**
BDFB	**Brasilia**	**43.45**	**66**	P	**P**	**06 18 40.3**	**-1.7**
	comp=Z,3.1nm,0.7s,baz=222,slow=10,SNR=4.4						
BDFB				LR	LR	06 36 19.3	
	comp=Z,2μm,18.8s,baz=239,slow=36						
GCUF	**Volcan Galeras**	**43.56**	**17**	*e*P	**P**	**06 18 43.7**	**+0.5**
PCON	**Cinco Dias**	**44.84**	**18**	*e*P	**P**	**06 18 53.5**	**-0.1**
POPC	**Popayan, Colom**	**44.98**	**17**	*e*P	**P**	**06 18 54.4**	**0.0**
YOTC	**Yotoco, Valle**	**46.45**	**17**	*e*P	**P**	**06 19 05.4**	**-0.5**
ORTC	**Ortega, Tolima**	**46.64**	**19**	*e*P	**P**	**06 19 07.8**	**+0.6**
ROSC	**El Rosal**	**47.76**	**20**	LR	LR	06 36 41.8	
	comp=Z,2μm,21.8s,baz=209,slow=33						
GUY2C	**Guyana, Caldas**	**47.88**	**18**	*e*P	**P**	**06 19 17.2**	**-0.1**
VNA3	**Neumayer Olymp**	**48.11**	**155**	P	**P**	**06 19 17.1**	**-0.9**
NORC	**Norcasia**	**48.32**	**19**	*e*P	**P**	**06 19 20.0**	**-0.3**
CBOC	**Ciudad Bolivar**	**48.35**	**17**	*e*P	**P**	**06 19 20.8**	**+0.1**
SPBC	**San Pablo de B**	**48.61**	**20**	*e*P	**P**	**06 19 23.1**	**+0.6**
VNA1	**Neumayer--Stat**	**48.64**	**154**	P	**P**	**06 19 21.6**	**-0.4**
VNA2	**Neumayer--Watz**	**48.88**	**154**	P	**P**	**06 19 23.3**	**-0.7**
	baz=263,slow=8.7						
QSPA	**South Pole Qui**	**48.96**	**180**	P	**P**	**06 19 24.7**	**-0.1**
	comp=Z,9.2nm,1.1s,baz=120,slow=3.2,SNR=12						
QSPA	**South Pole Qui**	**48.96**	**180**	P	**P**	**06 19 24.7**	**-0.1**
QSPA				IAmb	IAmb	06 19 35.2	
	comp=Z,24nm,1.4s						
RUSC	**La Rusia**	**49.10**	**21**	*e*P	**P**	**06 19 26.7**	**0.0**
PTBC	**PUERTO BERRIO,**	**49.36**	**19**	*e*P	**P**	**06 19 26.7**	**-1.5**
ZARC	**Zaragoza, Cauc**	**50.19**	**18**	*e*P	**P**	**06 19 34.5**	**0.0**
SNAA	**Sanae**	**50.20**	**156**	P	**P**	**06 19 33.0**	**-1.0**
SNAA	**Sanae**	**50.20**	**156**	P	**P**	**06 19 36.2**	**+2.2**
PEZE	**Perez Zeledon,**	**50.62**	**7**	P	**P**	**06 19 39.7**	**+1.8**
PEZE				IAmb	IAmb	06 19 43.4	
	comp=Z,16nm,1.0s						
HDC	**Heredia**	**51.20**	**6**	IAMs_20	IAMs_20	06 36 16.3	
	comp=Z,883nm,19.0s						
MOTC	**Monteria, Cord**	**51.25**	**17**	*e*P	**P**	**06 19 42.8**	**+0.3**
OCAC	**Ocana**	**51.28**	**20**	*e*P	**P**	**06 19 41.0**	**-1.9**
JTS	**Las Juntas de**	**51.43**	**5**	P	**P**	**06 19 43.4**	**-0.4**
JTS				IAmb	IAmb	06 19 54.1	
	comp=Z,18nm,1.2s						
JTS	**Las Juntas de**	**51.43**	**5**	IAMs_20	IAMs_20	06 36 03.3	
	comp=Z,919nm,19.0s						
SMLC	**San Martn de**	**51.64**	**19**	*e*P	**P**	**06 19 43.7**	**-1.7**
SDV	**Santo Domingo**	**52.64**	**23**	P	**P**	**06 19 51.6**	**-1.4**
SDV				IAmb	IAmb	06 20 02.5	
	comp=Z,18nm,0.9s						
SDV	**Santo Domingo**	**52.64**	**23**	IAMs_20	IAMs_20	06 39 45.0	
	comp=Z,1μm,20.0s						
SBA	**Scott Base**	**52.96**	**195**	P	**P**	**06 19 55.4**	**+0.8**
SBA				IAmb	IAmb	06 20 00.2	
	comp=Z,26nm,1.2s						
TBI	**Tubuai**	**53.24**	**270**	*e*S	**S**	**06 27 25.4**	**-3.2**
	comp=Z,84nm,27.5s						
TBI				*e*LQ	LQ	06 32 54.7	
	comp=Z,879nm,30.0s						
TBI				*e*LR	LR	06 35 09.9	
	comp=Z,1μm,26.8s,baz=127						
CRIN	**San Cristobal**	**53.72**	**2**	IAMs_20	IAMs_20	06 37 55.1	
	comp=Z,714nm,20.0s						
VNDA	**Vanda**	**54.05**	**195**	P	**P**	**06 20 02.8**	**+0.2**
	comp=Z,7.6nm,1.0s,baz=118,slow=6.6,SNR=13						
VNDA				LR	LR	06 37 52.5	
	comp=Z,842nm,21.9s,baz=120,slow=30						
TAOE	**Nuku Hiva Isla**	**55.54**	**291**	*e*S	**S**	**06 27 59.7**	**-0.3**
	comp=Z,419nm,26.0s						
TAOE				*e*LR	LR	06 36 17.4	
	comp=Z,4μm,32.1s						
PPT2	**Papeete2**	**56.74**	**275**	*e*S	**S**	**06 28 16.4**	**+0.6**
	comp=Z,238nm,25.5s						
PPT2				*e*LQ	LQ	06 34 30.4	
	comp=Z,859nm,30.8s						
PPT2				*e*LR	LR	06 36 45.2	
	comp=Z,958nm,27.2s,baz=139						
PPT	**Papeete**	**56.76**	**275**	LR	LR	06 38 27.2	
	comp=Z,222nm,19.2s,baz=133,slow=29						
CCIG	**Comitan**	**57.34**	**356**	P	**P**	**06 20 28.3**	**+1.3**
CCIG				IAmb	IAmb	06 20 38.8	
	comp=Z,10nm,0.8s						
GRGR	**Grenville**	**58.75**	**31**	IAMs_20	IAMs_20	06 44 33.1	
	comp=Z,904nm,19.0s						
TLIG	**Tlapa**	**59.23**	**349**	P	**P**	**06 20 41.1**	**+1.0**
TLIG				IAmb	IAmb	06 21 00.2	
	comp=Z,11nm,1.1s						
FDF	**Fort de France**	**61.32**	**31**	IAMs_20	IAMs_20	06 46 27.2	
	comp=Z,762nm,20.0s						
SJG	**San Juan**	**62.71**	**24**	IAMs_20	IAMs_20	06 46 54.8	
	comp=Z,696nm,18.0s						
CUPR	**Culebra, Puert**	**63.16**	**25**	P	**P**	**06 21 05.6**	**-1.0**
SYO	**Syowa Base**	**63.62**	**162**	*e*pP	**P**	**06 21 10.0**	**+0.9**
SYO	**Syowa Base**	**63.62**	**162**	*e*X	P	06 21 17.9	+8.8
ZAIG	**Zacatecas**	**64.98**	**346**	P	**P**	**06 21 20.4**	**+1.5**
ZAIG				IAmb	IAmb	06 21 24.5	
	comp=Z,12nm,1.3s						
ODZ	**Otahua Downs**	**68.56**	**228**	P	**P**	**06 21 42.0**	**+0.8**
URZ	**Urewera**	**68.72**	**237**	LR	LR	06 45 45.0	
	comp=Z,713nm,18.3s,baz=211,slow=31						
RPZ	**Rata Peaks**	**69.13**	**230**	LR	LR	06 44 04.4	
	comp=Z,1μm,21.1s,baz=164,slow=29						
MAW	**Mawson**	**69.35**	**169**	P	**P**	**06 21 45.4**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=168,slow=5.2,SNR=7.1						
MAW				LR	LR	06 50 43.2	
	comp=Z,305nm,20.3s,baz=211,slow=35						
MAW	**Mawson**	**69.35**	**169**	P	**P**	**06 21 45.4**	**-0.3**
MAW	**Mawson**	**69.35**	**169**	IAmb	IAmb	06 21 53.8	
	comp=Z,1.9nm,0.9s						
HPIG		**69.64**	**344**	P	**P**	**06 21 49.0**	**+0.8**
TX31	**Lajitas Ar. Si**	**71.59**	**346**	P	**P**	**06 22 00.7**	**+0.8**
TX32	**Lajitas Array**	**71.59**	**346**	P	**P**	**06 22 01.2**	**+1.2**
TX32				IAmb	IAmb	06 22 10.9	
	comp=Z,7.7nm,0.9s						
TXAR	**Lajitas Array**	**71.59**	**346**	P	**P**	**06 22 01.5**	**+1.6**
	comp=Z,2.6nm,0.7s,baz=170,slow=6.9,SNR=30						
TXAR				LR	LR	06 48 11.1	
	comp=Z,176nm,18.8s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**71.59**	**346**	P	**P**	**06 22 01.5**	**+1.6**
JCT	**Junction City**	**72.11**	**350**	P	**P**	**06 22 03.5**	**+0.5**
JCT				IAmb	IAmb	06 22 14.6	
	comp=Z,10.0nm,0.9s						
435B	**Jarrell**	**72.15**	**352**	P	**P**	**06 22 04.0**	**+0.8**
435B				IAmb	IAmb	06 22 13.5	
	comp=Z,16nm,1.1s						
352A	**Blakely**	**72.48**	**3**	P	**P**	**06 22 05.4**	**+0.3**
WHTX	**Lake Whitney,**	**73.34**	**352**	P	**P**	**06 22 10.3**	**+0.2**
WHTX				IAmb	IAmb	06 22 20.5	
	comp=Z,13nm,0.8s						
143A	**Socs Landing,**	**73.65**	**358**	P	**P**	**06 22 12.4**	**+0.4**
152A	**Waverly Hall**	**73.67**	**4**	P	**P**	**06 22 12.4**	**+0.3**
152A				IAmb	IAmb	06 22 21.3	
	comp=Z,17nm,0.9s						
LRAL	**Lakeview Retre**	**73.96**	**2**	P	**P**	**06 22 14.2**	**+0.4**
LRAL				IAmb	IAmb	06 22 30.1	
	comp=Z,12nm,1.1s						
MNTX	**Cornudas Mount**	**74.20**	**345**	P	**P**	**06 22 15.1**	**-0.3**
ABTX	**Abilene, Hawle**	**74.21**	**351**	P	**P**	**06 22 14.7**	**-0.7**
ABTX				IAmb	IAmb	06 22 25.1	
	comp=Z,9.9nm,0.9s						
Z51A	**Franklin**	**74.30**	**3**	P	**P**	**06 22 16.1**	**+0.3**
Z51A				IAmb	IAmb	06 22 25.7	
	comp=Z,8.3nm,0.7s						
GOGA	**Godfrey**	**74.48**	**5**	P	**P**	**06 22 17.0**	**+0.2**
GOGA				IAmb	IAmb	06 22 26.0	
	comp=Z,13nm,0.9s						
GOGA	**Godfrey**	**74.48**	**5**	IAMs_20	IAMs_20	06 50 04.9	
	comp=Z,408nm,21.0s						
Y52A	**Lilburn**	**74.89**	**4**	P	**P**	**06 22 19.6**	**+0.3**
X48A	**Hartselle**	**75.37**	**2**	P	**P**	**06 22 21.9**	**-0.1**
X48A				IAmb	IAmb	06 22 31.5	
	comp=Z,8.0nm,0.7s						
HODGE	**Hodges**	**75.37**	**6**	P	**P**	**06 22 22.4**	**+0.4**
HODGE				IAmb	IAmb	06 22 31.4	
	comp=Z,14nm,0.9s						
JSC	**Jenkinsville**	**75.50**	**6**	P	**P**	**06 22 22.6**	**-0.1**
MIAR	**Mount Ida**	**75.57**	**356**	P	**P**	**06 22 24.0**	**+0.9**
PIX	**Pinacate**	**75.96**	**338**	P	**P**	**06 22 26.2**	**+0.8**
PIX				IAmb	IAmb	06 22 31.9	
	comp=Z,12nm,1.4s						
MSTX	**Muleshoe**	**75.97**	**348**	P	**P**	**06 22 25.5**	**-0.1**
TUC	**Tucson**	**75.97**	**341**	P	**P**	**06 22 26.2**	**+0.6**
BG3	**Lake Jocassee**	**76.08**	**5**	P	**P**	**06 22 25.9**	**-0.1**
BG3				IAmb	IAmb	06 22 35.5	
	comp=Z,9.5nm,0.8s						
W52A	**Murphy**	**76.12**	**4**	P	**P**	**06 22 27.0**	**+0.7**
214A	**Organ Pipe Nat**	**76.16**	**339**	P	**P**	**06 22 27.1**	**+0.5**
214A				IAmb	IAmb	06 22 32.1	
	comp=Z,20nm,1.4s						
SWET	**Sewanee**	**76.16**	**2**	P	**P**	**06 22 26.6**	**+0.1**
SWET				IAmb	IAmb	06 22 42.4	
	comp=Z,13nm,1.0s						
W50A	**Signal Mountai**	**76.17**	**3**	P	**P**	**06 22 26.6**	**+0.1**
W50A				IAmb	IAmb	06 22 42.6	
	comp=Z,11nm,0.9s						
W39A	**Magazine**	**76.23**	**356**	P	**P**	**06 22 27.4**	**+0.5**
W39A				IAmb	IAmb	06 22 35.8	
	comp=Z,15nm,1.2s						
FNO	**Franklin**	**76.56**	**353**	P	**P**	**06 22 28.7**	**-0.1**
V48A	**Smith Brothers**	**76.66**	**2**	P	**P**	**06 22 29.4**	**+0.1**
V48A				IAmb	IAmb	06 22 38.9	
	comp=Z,7.2nm,0.8s						
TKL	**Tuckaleechee C**	**76.70**	**4**	LR	LR	06 52 04.7	
	comp=Z,319nm,19.0s,baz=176,slow=32						
AMTX	**Amarillo**	**76.70**	**349**	P	**P**	**06 22 30.4**	**+0.7**
BCOK	**Bluff Creek, N**	**76.98**	**353**	P	**P**	**06 22 30.3**	**-0.8**
LCAR	**Lake Charles**	**77.00**	**358**	P	**P**	**06 22 30.6**	**-0.5**
CLTN	**Cedars of Leba**	**77.02**	**2**	P	**P**	**06 22 31.5**	**+0.1**
CLTN				IAmb	IAmb	06 22 40.7	
	comp=Z,6.6nm,0.7s						
HHAR	**Hobbs**	**77.32**	**356**	P	**P**	**06 22 32.2**	**-0.8**
HHAR				IAmb	IAmb	06 22 55.1	
	comp=Z,7.7nm,1.0s						
QUOK	**Quay**	**77.41**	**353**	P	**P**	**06 22 33.7**	**+0.2**
QUOK				IAmb	IAmb	06 22 43.9	
	comp=Z,15nm,0.9s						
U49A	**Red Boiling Sp**	**77.46**	**2**	P	**P**	**06 22 33.5**	**-0.3**
U38A	**Gravette**	**77.51**	**355**	P	**P**	**06 22 34.2**	**+0.1**
U38A				IAmb	IAmb	06 22 43.5	
	comp=Z,11nm,0.8s						
ANMO	**Albuquerque**	**77.56**	**345**	P	**P**	**06 22 35.0**	**+0.3**
U54A	**Nelsons Funny**	**77.68**	**6**	IAMs_20	IAMs_20	06 52 57.8	
	comp=Z,632nm,19.0s						
U32A	**Winter Ranch,**	**77.84**	**352**	P	**P**	**06 22 36.1**	**+0.1**
T50A	**Nancy**	**78.00**	**3**	P	**P**	**06 22 36.9**	**+0.1**
T50A				IAmb	IAmb	06 22 46.1	
	comp=Z,6.0nm,0.8s						
T35A	**Sooner Cattle**	**78.13**	**354**	P	**P**	**06 22 38.4**	**+0.8**
T35A				IAmb	IAmb	06 23 02.6	
	comp=Z,11nm,0.9s						
KAN13	**South Haven SW**	**78.31**	**353**	P	**P**	**06 22 39.1**	**+0.6**
KAN13				IAmb	IAmb	06 23 04.2	
	comp=Z,19nm,1.2s						
KAN09	**Caldwell North**	**78.45**	**353**	P	**P**	**06 22 39.4**	**+0.2**
KAN01	**Argonia South**	**78.48**	**353**	P	**P**	**06 22 40.1**	**+0.6**
S51A	**Beattyville**	**78.68**	**4**	P	**P**	**06 22 40.2**	**-0.3**
S39A	**Bolivar**	**78.69**	**356**	P	**P**	**06 22 40.8**	**+0.2**
CCM	**Cathedral Cave**	**78.98**	**358**	P	**P**	**06 22 42.4**	**+0.2**
S54A	**Dingess, Beckl**	**78.99**	**6**	IAMs_20	IAMs_20	06 55 43.4	
	comp=Z,545nm,18.0s						
WUAZ	**Wupatki**	**79.18**	**341**	P	**P**	**06 22 43.2**	**-0.3**
WUAZ				IAmb	IAmb	06 22 58.7	
	comp=Z,10nm,1.1s						
R50A	**Paris**	**79.28**	**4**	P	**P**	**06 22 43.8**	**0.0**
R50A				IAmb	IAmb	06 23 07.7	
	comp=Z,10nm,1.0s						
T25A	**Trinidad**	**79.33**	**347**	P	**P**	**06 22 44.1**	**-0.3**
T25A				IAmb	IAmb	06 22 48.1	
	comp=Z,15nm,1.3s						
BLO	**Bloomington**	**80.09**	**2**	P	**P**	**06 22 47.7**	**-0.5**
MVCO	**Mesa Verde**	**80.16**	**344**	P	**P**	**06 22 48.1**	**-0.8**
KSU1	**Kansas State U**	**80.31**	**354**	P	**P**	**06 22 48.9**	**-0.5**
P49A	**Miami Univ. Ec**	**80.51**	**3**	P	**P**	**06 22 50.2**	**-0.2**
MSVF	**Nonsavu**	**80.82**	**255**	LR	LR	06 53 26.2	
	comp=Z,111nm,18.4s,baz=146,slow=32						
KSCO	**Kaye Shedlock'**	**80.89**	**349**	P	**P**	**06 22 52.7**	**+0.1**
KSCO				IAmb	IAmb	06 23 19.6	
	comp=Z,14nm,1.1s						
ISA	**Isabella, Lake**	**81.26**	**336**	P	**P**	**06 22 53.6**	**-1.1**
CCUT	**Cedar City**	**81.60**	**340**	P	**P**	**06 22 57.2**	**+0.6**
CCUT				IAmb	IAmb	06 23 08.0	
	comp=Z,8.6nm,0.8s						
N35A	**Tabor**	**81.99**	**355**	P	**P**	**06 22 57.8**	**-0.4**
MSU	**Marysvale**	**82.22**	**342**	P	**P**	**06 23 00.5**	**+0.6**
Q16A	**Castle Valley**	**82.38**	**343**	P	**P**	**06 22 59.0**	**-1.6**
Q16A				IAmb	IAmb	06 23 11.0	
	comp=Z,9.2nm,1.0s						
TCRU	**Three Creeks R**	**82.38**	**342**	P	**P**	**06 23 01.1**	**+0.4**
TCRU				IAmb	IAmb	06 23 18.1	
	comp=Z,12nm,1.2s						
SRU	**San Rafael Swe**	**82.42**	**343**	P	**P**	**06 23 01.0**	**+0.2**
PSUT	**Pine Spring**	**82.65**	**340**	P	**P**	**06 23 00.9**	**-1.2**
PSUT				IAmb	IAmb	06 23 08.8	
	comp=Z,6.4nm,1.0s						
TMUT	**Trail Mountain**	**82.75**	**343**	P	**P**	**06 23 01.4**	**-1.3**
TMUT				IAmb	IAmb	06 23 10.9	
	comp=Z,12nm,1.1s						
P17A	**Butcher Ranch,**	**82.81**	**343**	P	**P**	**06 23 02.4**	**-0.4**
P17A				IAmb	IAmb	06 23 19.4	
	comp=Z,8.1nm,1.0s						
R11A	**Troy Canyon, C**	**82.93**	**339**	P	**P**	**06 23 03.7**	**+0.2**
O20A	**White River Ci**	**82.93**	**345**	P	**P**	**06 23 03.0**	**-0.5**
TPH	**Tonopah**	**83.13**	**338**	P	**P**	**06 23 05.2**	**+0.6**
MPU	**Maple Canyon**	**83.53**	**343**	P	**P**	**06 23 06.6**	**0.0**
MPU				IAmb	IAmb	06 23 33.5	
	comp=Z,11nm,1.1s						
LHV	**Little Huntoon**	**83.66**	**337**	P	**P**	**06 23 07.0**	**+0.1**
NVAR	**Mina Array

CART	**Cartagena**	**112.09**	**59**	IAMs_20	IAMs_20	07 20 03.0		
	comp=Z,270nm,19.0s							
ANM	**Nome**	**121.14**	**331**	IAMs_20	IAMs_20	07 11 27.2		
	comp=Z,287nm,18.0s							
ATD	**Arta Tunnel**	**128.42**	**111**	IAMs_20	IAMs_20	07 24 02.2		
	comp=Z,260nm,19.0s							
CSS	**Mathiatis**	**134.76**	**78**	IAMs_20	IAMs_20	07 22 49.6		
	comp=Z,293nm,21.0s							
SBUM	**Sibu**	**136.96**	**212**	IAMs_20	IAMs_20	07 32 13.4		
	comp=Z,162nm,21.0s							
MNK	**Minsk**	**136.99**	**50**	*i* PKP	**PKPdf**	**06 30 02.1**	**+1.3**	
	comp=E,3.0nm,0.8s							
MNK				*i* PKP	**PKPdf**	**06 30 02.1**	**+1.3**	
	comp=N,23nm,0.8s							
MNK				*i* PKP	**PKPdf**	**06 30 02.1**	**+1.3**	
	comp=Z,10.0nm,0.9s							
MNK				*i* PP	**PP**	**06 32 47.1**	**+1.9**	
MNK				*i* PKS	**PKSdf**	**06 33 38.3**	**+1.6**	
MNK				*i* PPP	PPP	06 35 45.7		
MNK				*i* SKS	**SKSdf**	**06 37 12.9**	**+1.7**	
MNK				*i* PS	**PS**	**06 43 12.6**	**+1.6**	
MNK				*i* SS	**SS**	**06 50 54.2**	**+3.9**	
MNK				*i* SSS	SSS	06 55 59.8		
MNK				*i* LR	LR	07 26 31.9		
MNK				*i* LRM	MLR	07 31 06.9		
	comp=Z,61nm,12.3s							
MNK				*i* LRM	MLR	07 31 09.8		
	comp=E,16nm,18.8s							
MNK				*i* LRM	MLR	07 31 35.8		
	comp=N,171nm,17.4s							
RAYN	**Ar Rayn**	**138.08**	**101**	IAMs_20	IAMs_20	07 25 50.4		
	comp=Z,233nm,19.0s							
KULM	**Kulim**	**143.19**	**196**	IAMs_20	IAMs_20	07 26 59.3		
	comp=Z,238nm,20.0s							
MJAR	**Matsushiro Arr**	**143.46**	**278**	PKP	**PKPdf**	**06 30 13.7**	**+0.5**	
	comp=Z,1.9nm,0.7s,baz=152,slow=4.4,SNR=5.0							
MJAR	**Matsushiro Arr**	**143.46**	**278**		**PKPdf**	**06 30 13.7**	**+0.5**	
TIXI	**Tiksi**	**144.32**	**341**	PKP	**PKPab**	**06 30 11.4**	**-0.1**	
	comp=Z,14nm,1.0s,baz=20,slow=2.8,SNR=8.7							
PALK	**Pallekele**	**144.88**	**162**	PKP	**PKPab**	**06 30 13.7**	**-1.6**	
	comp=Z,5.1nm,0.8s,baz=71,slow=8.8,SNR=4.5							
UOSS	**Minazif**	**146.74**	**108**	IAMs_20	IAMs_20	07 42 10.6		
	comp=Z,207nm,19.0s							
USRK	**Ussuriysk Ar.**	**150.11**	**289**	PKPbc	**PKPbc**	**06 30 29.3**	**+0.3**	
	comp=Z,5.7nm,0.9s,baz=92,slow=2.1,SNR=9.5							
USRK	**Ussuriysk Ar.**	**150.11**	**289**		**PKPbc**	**06 30 29.3**	**+0.3**	
KLR	**Kul'dur**	**150.66**	**300**	PKPbc	**PKPbc**	**06 30 30.1**	**0.0**	
	comp=Z,4.8nm,1.0s,baz=42,slow=1.6,SNR=8.5							
KSRS	**Korea Array**	**151.49**	**274**	PKPbc	**PKPbc**	**06 30 33.4**	**+0.9**	
	comp=Z,3.1nm,0.7s,baz=107,slow=2.6,SNR=11							
KSRS	**Korea Array**	**151.49**	**274**		**PKPbc**	**06 30 33.4**	**+0.9**	
NRIK	**Noril'sk**	**151.80**	**3**	PKPbc	**PKiKP**	**06 30 35.0**	**+2.4**	
	comp=Z,1.7nm,0.5s,baz=319,slow=3.4,SNR=3.8							
NJ2	**Nanjing**	**156.06**	**256**	*e*PKP	**PKPdf**	**06 30 32.2**	**+0.2**	
CMAR	**Chiang Mai Arr**	**156.31**	**199**	PKP	**PKPdf**	**06 30 32.2**	**-1.6**	
	comp=Z,1.0nm,0.7s,baz=230,slow=2.1,SNR=9.0							
CMAR	**Chiang Mai Arr**	**156.31**	**199**		**PKPdf**	**06 30 32.2**	**-1.6**	
KMI	**Kunming**	**161.25**	**214**	⇑PKP	**PKPdf**	**06 30 37.7**	**-2.1**	
HHC	**Hu-ho-hao-te**	**164.63**	**275**	*e*PKP	**PKPdf**	**06 30 43.5**	**+1.1**	
CD2	**Chengdu**	**165.53**	**228**	PKP	**PKPdf**	**06 30 43.5**	**+0.1**	
WMQ	**Urumqi**	**176.37**	**44**	*e*PKP	**PKPdf**	**06 30 49.2**	**+0.6**	

ISK ***10*** *06:18:13.2,36.˚95N×36.˚86E,h8km,ML2.6/11*
DDA ***10*** *06:18:13.6,36.˚97N×36.˚83E,h7km±3km,ML2.8*

ISC 10 06:18:13.8±0.9, 36.˚97N±0.˚03×36.˚83E±0.˚03, h13km±7km, n22, σ0°56/36, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KAMA	**Osmaniye**	**0.25**	**329**	*i* P		**Pg**		**06 18 19.2**	**0.0**
KAMA				*i* S		**Sg**		**06 18 22.8**	**0.0**
KUZU	**Kuzuini**	**0.28**	**135**	*i* P		**Pg**		**06 18 19.7**	**+0.1**
KUZU				*i* S		**Sg**		**06 18 23.8**	**+0.3**
KUZU				IAML				06 18 24.0	
	comp=N,2μm,0.3s								
KUZU				IAML				06 18 26.0	
	comp=E,3μm,0.3s								
GAZ	**Gaziantep**	**0.36**	**56**	PG		**Pg**		**06 18 20.7**	**-0.5**
GAZ				SG		**Sg**		**06 18 25.9**	**-0.2**
HCB	**Kahramanmara**	**0.38**	**9**	*i* P		**Pg**		**06 18 21.0**	**-0.4**
HCB				*i* S		**Sg**		**06 18 26.6**	**0.0**
HCB				IAML				06 18 27.0	
	comp=E,595nm,0.2s								
KHMN	**Narli-Kahraman**	**0.49**	**32**	PG		**Pg**		**06 18 23.5**	**-0.1**
KMRS	**Kahramanmaras**	**0.54**	**6**	PG		**Pb**		**06 18 24.7**	**-0.4**
GZT	**Gaziantep**	**0.70**	**56**	*i* P		**Pg**		**06 18 27.2**	**-0.3**
GZT				*i* S		**Sn**		**06 18 39.6**	**-0.8**
GZT				IAML				06 18 40.0	
	comp=N,205nm,0.2s								
ANDN	**Andirin**	**0.72**	**328**	*i* P		**Pb**		**06 18 28.1**	**-0.2**
ANDN				*i* S		**Sb**		**06 18 38.1**	**-0.1**
TAHT	**Tahtakopru-Hat**	**0.79**	**221**	PG		**Pg**		**06 18 28.8**	**-0.3**
TAHT				SG		**Sb**		**06 18 40.0**	**0.0**
CEYT	**Ceyhan**	**0.87**	**273**	PG		**Pb**		**06 18 30.9**	**+0.2**
CEYT				SG		**Sn**		**06 18 43.5**	**-0.7**
KOZT	**Kozan**	**0.95**	**303**	PG		**Pb**		**06 18 32.4**	**+0.3**
KOZT				SG		**Sn**		**06 18 46.4**	**+0.1**
AKO	**Adana**	**1.21**	**294**	*i* P		**Pn**		**06 18 36.7**	**+0.2**
AKO				*i* S		**Sg**		**06 18 52.6**	**-0.2**
ATAB	**Bozova**	**1.27**	**66**	*i* P		**Pb**		**06 18 37.7**	**+0.1**
ATAB				*i* S		**Sb**		**06 18 53.9**	**0.0**
ATAB				IAML				06 18 58.0	
	comp=E,104nm,0.3s								
ELBS	**KAHRAMANMARAS**	**1.37**	**10**	*i* P		**Pg**		**06 18 39.9**	**-0.3**
ELBS				*i* S		**Sg**		**06 18 60.0**	**+1.9**
ELBS				IAML				06 19 00.0	
	comp=N,165nm,0.4s								
ELBS				IAML				06 19 00.0	
	comp=E,273nm,0.5s								
KARA	**Karaisali**	**1.45**	**282**	PN		**Pb**		**06 18 40.9**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.47**	**347**	PN		**Pn**		**06 18 40.5**	**+0.3**
SARI				SN		**Sg**		**06 19 01.5**	**+0.2**
AKCD	**Akcadag**	**1.58**	**33**	*i* P		**Pg**		**06 18 44.3**	**+0.2**
AKCD				*i* S		**Sg**		**06 19 04.1**	**-0.7**
AKCD				IAML				06 19 08.0	
	comp=N,163nm,0.5s								
AKCD				IAML				06 19 08.0	
	comp=E,143nm,0.5s								
CMRD	**Camardi-Nigde**	**1.62**	**296**	PN		**Pb**		**06 18 43.3**	**-0.4**
DARE	**Darende-Malaty**	**1.68**	**18**	PN		**Pb**		**06 18 44.1**	**-0.5**
MALT	**Malatya**	**1.84**	**43**	PN		**Pn**		**06 18 45.8**	**+0.5**
MERS	**Mersin**	**1.85**	**268**	PN		**Pb**		**06 18 46.6**	**-1.0**
BNN	**Bunyan**	**2.03**	**338**	PN		**Pn**		**06 18 49.2**	**+1.3**

IDC 10 06:19:44.1±3.6, 54.˚26N×87.˚67E, h0km, mb1 2.6/2, mb1mx2.6/67, mbtmp2.6/2, ML2.3/2, Error ellipse: s-maj=33.1km s-min=21.7km az=38.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.71**	**261**	*i*				06 30 10.0	
	baz=81,slow=323,SNR=1.5								
ZALV	**Zalesovo Beam**	**1.71**	**261**	Pn		Pn		06 20 13.9	-1.3
	2.6nm,0.3s,baz=75,slow=13,SNR=13								
ZALV				Lg		Lg		06 20 38.5	
	1.7nm,0.3s,baz=79,slow=21,SNR=8.3								
KURBB	**Kurchatov Arra**	**6.67**	**241**	Pn		Pn		06 21 23.9	+0.7
	0.0nm,0.3s,baz=57,slow=13,SNR=2.8								
MKAR	**Makanchi Array**	**8.22**	**207**	Pn		Pn		06 21 46.1	+1.5
	0.1nm,0.3s,baz=26,slow=15,SNR=2.2								

IDC ***10*** *06:21:55.6±3.4, 36.˚38N×71.˚36E, h60km±29km, mb3.6/9, mb1 3.7/16, mb1mx3.4/71, mbtmp3.9/16, ML3.7/6, MS3.9/3, Ms1 3.9/3, ms1mx2.9/49, Error ellipse: s-maj=25.5km s-min=17.6km az=22.0*
NNC ***10*** *06:22:05.7±4.2, 37.˚00N×71.˚43E, h200km±59km, mb3.2, mpv4.2, Error ellipse: s-maj=39.1km s-min=25.5km az=25.0*

ISC 10 06:21:58.0±0.6, 36.˚44N±0.˚06×71.˚40E±0.˚07, h100km, n34, σ2°43/40, mb3.8/9, 6C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.35**	**137**	*e*P			**Pn**	**06 23 18.5**	**+3.0**
THN				*e*S			**Sn**	**06 24 14.0**	**-1.9**
DHRM	**DHARAMSHALA**	**5.82**	**134**	*e*P			**Pn**	**06 23 21.7**	**-0.4**
DHRM				*e*S			**Sn**	**06 24 23.5**	**-4.0**
DHRM				IAML				06 24 26.2	
	comp=E,488nm,0.3s								
DHRM				IAML				06 24 26.3	
	comp=N,225nm,0.3s								
AML	**Almayashu**	**5.96**	**17**	P			**Pn**	**06 23 25.3**	**+1.3**
	SNR=68								
UCH	**Uchtor**	**6.26**	**22**	P			**Pn**	**06 23 29.8**	**+1.5**
	SNR=7.7								
EKS2	**Erkin-Say**	**6.48**	**16**	P			**Pn**	**06 23 32.4**	**+1.5**
	SNR=24								
AAK	**Ala-Archa**	**6.63**	**20**	P			**Pn**	**06 23 33.3**	**+0.3**
	comp=N,4.3nm,0.3s,baz=162,slow=4.4,SNR=40								
AAK				S			**Sn**	**06 24 47.1**	**-0.1**
	comp=N,1.9nm,0.3s,baz=322,slow=21,SNR=7.5								
AAK	**Ala-Archa**	**6.63**	**20**	P			**Pn**	**06 23 35.0**	**+1.9**
	SNR=11								
AAK	**Ala-Archa**	**6.63**	**20**	⇑P			**Pn**	**06 23 34.8**	**+1.8**
	comp=N,7.6nm,0.5s								
AAK				⇑S			**Sn**	**06 24 46.8**	**-0.4**
	comp=N,10nm,0.5s								
KK31	**Karatay Array**	**6.69**	**354**	⇑P			**Pn**	**06 23 33.9**	**+0.2**
	comp=N,14nm,0.3s,baz=178,slow=12,SNR=203								
KK31				⇑S			**Sn**	**06 24 45.6**	**-2.8**
	comp=N,11nm,0.3s,baz=182,slow=22,SNR=12								
CHMS	**Chumysh**	**7.04**	**20**	P			**Pn**	**06 23 39.8**	**+1.4**
	SNR=6.6								
SMLA	**Simla**	**7.14**	**136**	*e*P			**Pn**	**06 23 39.9**	**0.0**
SMLA				*e*S			**Sn**	**06 24 53.9**	**-5.6**
SMLA				IAML				06 24 58.4	
	comp=N,206nm,0.2s								
SMLA				IAML				06 24 59.1	
	comp=E,160nm,0.2s								
USP	**Ospenovka**	**7.22**	**18**	P			**Pn**	**06 23 42.5**	**+1.6**
	SNR=6.9								
TKM2	**Tokmak 2**	**7.24**	**25**	P			**Pn**	**06 23 43.0**	**+1.7**
	SNR=9.1								
TKM2	**Tokmak 2**	**7.24**	**25**	⇑P			**Pn**	**06 23 42.6**	**+1.3**
	comp=E,6.3nm,0.6s								
TKM2				⇓S			**Sn**	**06 24 57.5**	**-4.4**
	comp=E,3.1nm,0.6s								
GEYT	**Alibeck**	**10.71**	**282**	P			**Pn**	**06 24 25.8**	**-2.5**
	comp=E,0.7nm,0.3s,baz=82,slow=11,SNR=3.0								
MKAR	**Makanchi Array**	**13.15**	**35**	P			**Pn**	**06 25 00.2**	**-0.6**
	comp=E,0.1nm,0.3s,baz=224,slow=15,SNR=6.7								
BHPL	**Bhopal**	**14.15**	**157**	*e*P			**Pn**	**06 25 11.4**	**-2.5**
BHPL				IAmb			IAmb	06 25 19.4	
	comp=Z,12nm,0.5s								
BHPL				*e*S			Sn	06 27 40.1	-10
KURBB	**Kurchatov Arra**	**15.08**	**18**	P			**Pn**	**06 25 24.0**	**-1.6**
	comp=Z,0.0nm,0.3s,baz=210,slow=13,SNR=4.1								
AB31	**Akbulak array**	**15.30**	**330**	⇓P			**Pn**	**06 25 25.4**	**-2.9**
	comp=Z,2.3nm,0.3s,baz=137,slow=13,SNR=136								
AB31				S			**Sn**	**06 28 10.5**	**-6.6**
	comp=Z,24nm,1.1s,baz=140,slow=26,SNR=44								
BVAR	**Borovoye Array**	**16.60**	**358**	P			**Pn**	**06 25 43.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=153,slow=23,SNR=4.7								
AKTO	**Aktyubinsk**	**17.00**	**330**	P			**Pn**	**06 25 48.6**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=132,slow=7.9,SNR=14								
AKTO	**Aktyubinsk**	**17.00**	**330**	⇑P			**Pn**	**06 25 45.8**	**-3.6**
	comp=Z,6.4nm,0.6s								
ZALV	**Zalesovo Beam**	**19.84**	**24**	P			**P**	**06 26 21.6**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=214,slow=9.8,SNR=13								
BELG	**Belogornoye**	**23.14**	**321**	P			**P**	**06 26 56.0**	**+0.6**
	comp=Z,2.7nm,0.4s,baz=112,slow=19,SNR=2.7								
CMAR	**Chiang Mai Arr**	**30.14**	**119**	P			**P**	**06 28 00.2**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=309,slow=7.2,SNR=4.6								
OBN	**Obninsk**	**30.20**	**319**	LR			LR	06 41 20.6	
	comp=Z,48nm,19.8s,baz=183,slow=39								
AKASG	**Malin Array Be**	**33.24**	**309**	P			**P**	**06 28 26.8**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=80,slow=6.9,SNR=3.5								
AKASG				LR			LR	06 45 23.9	
	comp=Z,351nm,18.4s,baz=155,slow=42								
FINES	**FINESS Array B**	**37.72**	**326**	P			**P**	**06 29 05.5**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=123,slow=8.2,SNR=19								
GERES	**GERESS Array B**	**43.23**	**305**	P			**P**	**06 29 50.9**	**+1.6**
	comp=Z,0.2nm,0.2s,baz=92,slow=7.2,SNR=4.0								
HFS	**Hagfors**	**43.31**	**322**	P			**P**	**06 29 51.4**	**+1.8**
	comp=Z,3.7nm,0.5s,baz=98,slow=11,SNR=24								
NOA	**NORSAR Array B**	**44.62**	**323**	P			**P**	**06 30 01.6**	**+1.5**
	comp=Z,1.7nm,0.5s,baz=96,slow=7.7,SNR=14								
YKA	**Yellowknife Ar**	**81.29**	**3**	P			**P**	**06 34 05.6**	**+2.8**
	comp=Z,0.2nm,0.5s,baz=356,slow=5.3,SNR=7.2								
WRA	**Warramunga Arr**	**81.68**	**122**	P			**P**	**06 34 06.7**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=329,slow=4.9,SNR=1.6								
DLBC	**Dease Lake**	**83.79**	**11**	LR			LR	07 12 39.4	
	comp=Z,118nm,20.7s,baz=138,slow=36								

BJI ***10*** *06:23:11.0±0.0, 28.˚30N×51.˚90E, h5km, mB4.9/27, mb4.6/39, Ms4.6/24, Ms7 4.2/25*
IDC ***10*** *06:23:11.8±0.6, 28.˚36N×51.˚85E, h0km, mb4.4/38, mb1 4.5/45, mb1mx4.4/68, mbtmp4.4/45, ML4.1/5, MS4.2/27, Ms1 4.2/27, ms1mx3.9/53, Error ellipse: s-maj=13.3km s-min=10.6km az=7.0*
GCMT ***10*** *06:23:12.0±0.4, 28.˚12N±0.˚02×51.˚66E±0.˚02, h14km±2km, MW4.7/91, Moment Tensor Solution. s14,c16; s91,c110; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.04±.07; Mθθ-1.19±.07; Mϕϕ 1.23±.08; Mrθ 0.45±.19; Mθϕ 0.82±.07; Mϕr 0.51±.18; Best double couple: M0 1.60000×10^16 NP1: ϕs 330.00000°, δ57.00000°, λ174.00000°. NP2: ϕs 63.00000°, δ85.00000°, λ23.00000°. Principal axes: T 1.7020, Plg20.0000°, Azm289.0000°; N -0.2070, Plg67.0000°, Azm76.0000°; P -1.4980, Plg12.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
THR ***10*** *06:23:12.5±0.8, 28.˚46N×51.˚89E, h18km±10km, ML4.6*
TEH ***10*** *06:23:12.1, 28.˚36N×51.˚83E, h9km, ML4.7*
MOS ***10*** *06:23:13.5±1.0, 28.˚34N×51.˚87E, h22km, mb4.9/68, Error ellipse: s-maj=5.1km s-min=3.5km az=108.1*
NEIC ***10*** *06:23:13.0±1.9, 28.˚27N±0.˚06×51.˚84E±0.˚07, h10km±1km, Error ellipse: s-maj=10.5km s-min=9.5km az=150.0*
OMAN ***10*** *06:23:14.6, 28.˚48N×51.˚81E, h148km, mb5.5/17, ml4.9/9*
DSN ***10*** *06:23:16.7±1.4, 28.˚18N×51.˚99E, h10km, ML5.1/12, Error ellipse: s-maj=20.4km s-min=9.9km az=14.0*

ISC 10 06:23:14.2±0.3, 28.˚34N±0.˚03×51.˚83E±0.˚03, h15km, n470, σ1°30/499, mb4.6/139, MS4.1/46, 11C-4D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.70**	**318**	*e*Pg		**Pg**		**06 23 25.1**	**-2.8**
QIR1	**Qir**	**1.08**	**82**	*e*Pg		**Pb**		**06 23 33.1**	**-1.5**
QIR1				*e*				06 24 07.6	
	comp=Z,99nm,0.6s								
KAZ1	**Kazerun**	**1.29**	**353**				**Pn**	**06 23 37.0**	**-0.8**
KAZ1	**Kazerun**	**1.29**	**353**	*e*Pg			**Pn**	**06 23 37.0**	**-0.8**
KAZ1				*e*				06 24 13.1	
	comp=Z,99nm,0.7s								
SHI	**Shiraz**	**1.43**	**25**	P			**Pn**	**06 23 39.0**	**-0.8**
SHI	**Shiraz**	**1.43**	**25**				**Pn**	**06 23 39.0**	**-0.8**
SHI	**Shiraz**	**1.43**	**25**	*e*Pg			**Pn**	**06 23 38.7**	**-1.1**
LMD1	**Lamerd**	**1.55**	**130**				**Pb**	**06 23 42.0**	**-0.6**
LMD1	**Lamerd**	**1.55**	**130**	*e*Pg			**Pb**	**06 23 42.3**	**-0.3**
LMD1				*e*				06 24 14.0	
	comp=Z,99nm,0.7s								
JHRM	**Jahrom**	**1.55**	**83**				**Pn**	**06 23 42.0**	**+0.6**
JHRM	**Jahrom**	**1.55**	**83**	*e*Pg			**Pn**	**06 23 42.0**	**+0.6**
JHRM				*e*				06 24 12.9	
	comp=Z,99nm,0.4s								
LAR1	**LAR**	**2.35**	**106**	*e*Pn			**Pn**	**06 23 53.2**	**+0.9**
KLNJ	**Kolanjah**	**2.67**	**356**	*e*Pn			**Pn**	**06 23 56.8**	**-0.2**
IRAM	**Ramesheh**	**3.49**	**8**	*e*Pn			**Pn**	**06 24 07.9**	**-0.3**
IMEH	**Mehriz**	**3.89**	**38**	*e*Pn			**Pn**	**06 24 14.9**	**+1.3**
ISAD	**Sadrabad**	**3.91**	**24**	*e*Pn			**Pn**	**06 24 15.3**	**+1.3**
GENO	**Geno**	**3.96**	**103**	*e*Pn			**Pn**	**06 24 14.2**	**-0.4**
IGAR	**Gharneh**	**4.06**	**3**	*e*Pn			**Pn**	**06 24 15.8**	**-0.1**
SHK1	**Shahrekord**	**4.06**	**349**	*e*Pn			**Pn**	**06 24 17.8**	**+1.8**
AHWZ	**Ahwaz**	**4.07**	**318**	*e*Pn			**Pn**	**06 24 16.4**	**+0.6**
SLWR	**Sila**	**4.25**	**182**	*e*Pn			**Pn**	**06 24 20.0**	**+1.5**
SLWR	**Sila**	**4.25**	**182**	P			**Pn**	**06 24 19.9**	**+1.5**
SHME	**Shamm**	**4.47**	**120**	*i* P			**Pn**	**06 24 20.4**	**-1.0**
	SNR=42								
SHME	**Shamm**	**4.47**	**120**	*e*Pn			**Pn**	**06 24 21.2**	**-0.2**
SHME	**Shamm**	**4.47**	**120**	P			**Pn**	**06 24 21.4**	**0.0**
	SNR=23								
SHME				S			**Sn**	**06 25 13.3**	**+0.2**
ICHK	**Chekchek**	**4.49**	**29**	*e*Pn			**Pn**	**06 24 22.4**	**+0.5**
NGRK	**Negar Kerman**	**4.49**	**72**	*e*Pn			**Pn**	**06 24 22.8**	**+0.8**
NGRK				*e*				06 25 21.0	
	comp=Z,99nm,0.4s								
NASN	**Na'in**	**4.53**	**11**	*e*Pn			**Pn**	**06 24 21.2**	**-1.3**
NASN				*e*Sg			**Sb**	**06 25 28.9**	**+0.8**
NASN	**Na'in**	**4.53**	**11**	*e*Pn			**Pn**	**06 24 21.2**	**-1.3**
KHGB	**Koh Gabri**	**4.54**	**62**	*e*Pn			**Pn**	**06 24 23.2**	**+0.6**
IZEF	**Zefreh**	**4.56**	**5**	*e*Pn			**Pn**	**06 24 22.8**	**-0.1**
SHGR	**Shooshtar-Gavs**	**4.58**	**326**	*e*Pn			**Pn**	**06 24 21.2**	**-1.7**
SHGR				IAML				06 25 58.4	
	comp=E,476nm,0.6s								
SHGR				IAML				06 26 12.8	
	comp=N,347nm,0.6s								
SHGR	**Shooshtar-Gavs**	**4.58**	**326**	*e*Pn			**Pn**	**06 24 21.2**	**-1.7**
IBAF	**Bafgh**	**4.59**	**44**	*e*Pn			**Pn**	**06 24 23.9**	**+0.7**
KRBR	**Kerman**	**4.62**	**68**	*e*Pn			**Pn**	**06 24 22.7**	**-1.0**
KRBR	**Kerman**	**4.62**	**68**	*e*Pn			**Pn**	**06 24 22.7**	**-1.0**
TVBK	**TV Kerman**	**4.62**	**68**	*e*Pn			**Pn**	**06 24 24.9**	**+1.1**
TVBK				*e*				06 26 02.7	
	comp=Z,99nm,1.0s								
BANOM	**Banah**	**4.66**	**120**	*i* P			**Pn**	**06 24 23.8**	**-0.2**
	SNR=61								
BANOM				S			**Sn**	**06 25 16.9**	**-0.9**
BANOM	**Banah**	**4.66**	**120**	*e*Pn			**Pn**	**06 24 23.8**	**-0.2**
BANOM	**Banah**	**4.66**	**120**	P			**Pn**	**06 24 24.0**	**0.0**
	SNR=233								
BANOM				S			**Sn**	**06 25 20.5**	**+2.7**
AJN	**Ajban**	**4.71**	**142**	*i* P			**Pn**	**06 24 26.1**	**+1.4**
	SNR=20								
AJN	**Ajban**	**4.71**	**142**	*e*Pn			**Pn**	**06 24 27.1**	**+2.4**
AJN	**Ajban**	**4.71**	**142**	P			**Pn**	**06 24 26.1**	**+1.4**
	SNR=20								
AJN				S			**Sn**	**06 25 22.8**	**+3.8**
NAZ	**Nazwa, Dubai**	**4.79**	**133**	*i* P			**Pn**	**06 24 27.0**	**+1.2**
	SNR=24								
NAZ	**Nazwa, Dubai**	**4.79**	**133**	*e*Pn			**Pn**	**06 24 26.8**	**+1.0**
NAZ	**Nazwa, Dubai**	**4.79**	**133**	P			**Pn**	**06 24 27.0**	**+1.2**
	SNR=22								
NAZ				S			**Sn**	**06 25 23.1**	**+2.1**
ASUD	**Al Ashush, Dub**	**4.85**	**139**	*i* P			**Pn**	**06 24 28.0**	**+1.3**
	SNR=68								
ASUD				*i* P			**Pn**	**06 24 28.0**	**+1.3**
	SNR=129								
ASUD	**Al Ashush, Dub**	**4.85**	**139**	P			**Pn**	**06 24 28.0**	**+1.3**
	SNR=128								
MASF	**Masafi**	**4.87**	**126**	P			**Pn**	**06 24 27.3**	**+0.3**
	SNR=123								
MASF				S			**Sn**	**06 25 24.9**	**+1.8**
MSFE	**Esma-Masafi**	**4.88**	**126**	*i* P			**Pn**	**06 24 27.1**	**0.0**
	SNR=54								
MSFE	**Esma-Masafi**	**4.88**	**126**	*e*Pn			**Pn**	**06 24 27.2**	**+0.1**
FAQ	**Al Faqa, Dubai**	**4.92**	**136**	*i* P			**Pn**	**06 24 28.9**	**+1.4**
	SNR=9.1								
FAQ	**Al Faqa, Dubai**	**4.92**	**136**	*e*Pn			**Pn**	**06 24 28.5**	**+0.9**
FAQ	**Al Faqa, Dubai**	**4.92**	**136**	P			**Pn**	**06 24 28.7**	**+1.1**
	SNR=13								
FAQ				S			**Sn**	**06 25 25.7**	**+1.5**
MZWR	**Madinat Zayed**	**4.92**	**157**	P			**Pn**	**06 24 29.4**	**+1.9**
MZWR				S			**Sn**	**06 25 27.0**	**+2.8**
IKLH	**Kolahrood**	**4.97**	**358**	*e*Pn			**Pn**	**06 24 28.0**	**-0.5**
MDH	**Madha**	**5.01**	**126**	*i* P			**Pn**	**06 24 28.8**	**-0.1**
	SNR=22								
MDH	**Madha**	**5.01**	**126**	*e*Pn			**Pn**	**06 24 29.0**	**+0.1**
MDH	**Madha**	**5.01**	**126**	P			**Pn**	**06 24 29.0**	**+0.1**
	SNR=22								
MDH				S			**Sn**	**06 25 27.4**	**+0.8**
ANAR	**Anarak**	**5.11**	**18**	*e*Pn			**Pn**

GEYT Alibeck 10.92 27 Pn **Pn** **06 25 49.6 -0.3**
comp=Z,1.0nm,0.3s,baz=220,slow=11,SNR=5.7
DMTO DMTO 10.96 164 P **Pn** **06 25 49.3 -1.1**
SNR=16
RBK Rabkut 11.00 168 P **Pn** **06 25 50.4 -0.8**
SNR=5.8
GEVA Gevas 12.35 326 Pn **Pn** **06 26 07.8 -1.8**
GNI Garni 13.15 335 Pn **Pn** **06 26 23.1 +2.5**
comp=Z,0.9nm,0.3s,baz=167,slow=9.0,SNR=3.2
GNI LR LR 06 32 06.0
comp=Z,462nm,18.8s,baz=152,slow=41
GNI Garni 13.15 335 *i* P **Pn** **06 26 21.0 +0.5**
GNI Garni 13.15 335 Pn **Pn** **06 26 21.3 +0.8**
EIL Elat 14.83 279 Pn **Pn** **06 26 44.4 +1.0**
comp=Z,0.2nm,0.3s,baz=100,slow=6.1,SNR=3.8
MMAI Mount Meron Ar 14.88 292 Pn **Pn** **06 26 45.1 +1.0**
comp=Z,1.4nm,0.3s,baz=98,slow=17,SNR=2.7
MMAI LR LR 06 33 46.0
comp=Z,1µm,18.9s,baz=105,slow=43
MAK Makhachkala 15.00 348 *e*P **Pn** **06 26 40.8 -4.8**
MAK *e*S **Sn** **06 29 25.6 -5.9**
MAK pmax pmax
comp=Z,199nm,1.4s
MAK MLR MLR
comp=Z,914nm,15.0s
GAZ Gaziantep 15.11 309 P **Pn** **06 26 49.1 +1.9**
GAZ IAmb IAmb 06 27 06.1
comp=Z,22nm,0.9s
GUDG Gudauri 15.30 339 P **P** **06 26 54.2 -0.4**
GROC Groznyy 15.61 343 *e*P **Pn** **06 26 54.9 +1.3**
GROC pmax pmax
comp=Z,13nm,0.4s
GROC MLR MLR
comp=Z,49nm,6.0s
ONI Oni 15.76 337 P **P** **06 26 58.7 -0.8**
ZEI Tsey 15.78 338 *e*P **Pn** **06 26 55.9 -0.1**
ZEI pmax pmax
comp=Z,54nm,1.1s
KBL Kabul 15.94 63 P **P** **06 27 00.0 -1.7**
KBL pmax pmax
comp=Z,24nm,1.2s
KBL Kabul 15.94 63 P **P** **06 27 00.0 -1.7**
SOCY Socotra 16.20 172 **Pn** **06 26 55.9 -5.5**
SOCY Socotra 16.20 172 P **Pn** **06 26 56.5 -4.9**
SNR=7.2
NCK Nalchik 16.51 339 *i* P **P** **06 27 06.6 -1.2**
NEY Neytrino 16.59 336 *i* P **Pn** **06 27 07.4 +1.0**
KBZ Khabaz 16.95 337 Pn **Pn** **06 27 11.6 +0.9**
comp=Z,0.8nm,0.3s,baz=144,slow=6.7,SNR=16
KBZ Khabaz 16.95 337 *c*e**P** **Pn** **06 27 10.3 -0.4**
KIV Kislovodsk 17.23 337 *e*P **Pn** **06 27 14.6 +0.3**
KIV *e*S **Sn** **06 30 27.7 +2.1**
KIV pmax pmax
comp=Z,141nm,1.0s
KIV MLR MLR
comp=Z,444nm,14.0s
KIV Kislovodsk 17.23 337 **P** **06 27 16.2 +0.4**
KIV IAmb IAmb 06 27 22.3
comp=Z,73nm,1.2s
TOKA Tokat 17.39 317 P **P** **06 27 17.1 -0.5**
CEP Cherat 18.04 67 P **P** **06 27 25.1 +0.2**
GOF Gofitskoye 18.09 340⇑ *e*P **P** **06 27 25.6 +0.4**
GOF pmax pmax
comp=Z,49nm,0.9s
SARP Sargodha 18.38 74 P **P** **06 27 27.4 -1.1**
GAR Garm 18.67 51 P **P** **06 27 30.8 -1.0**
GAR IAmb IAmb 06 27 34.6
comp=Z,51nm,1.1s
ATD Arta Tunnel 18.72 208 LR LR 06 35 45.0
comp=Z,1µm,19.3s,baz=20,slow=40
BR131 Keskin Array S 18.84 312 *i* P **P** **06 27 33.4 -0.2**
BRTR Keskin Array B 18.84 312 P **P** **06 27 33.8 +0.2**
comp=Z,1.4nm,0.3s,baz=136,slow=12,SNR=33
BRTR LR LR 06 36 43.6
comp=Z,1µm,18.5s,baz=132,slow=43
NIL Nilore 19.11 69 P **P** **06 27 35.9 -0.6**
NIL pmax pmax
comp=Z,42nm,1.1s
NIL Nilore 19.11 69 P **P** **06 27 35.9 -0.6**
NIL IAmb IAmb 06 27 42.3
comp=Z,42nm,1.1s
CHCP Chirah Chowk 19.12 69 P **Pn** **06 27 37.4 -0.1**
ANTO Ankara 19.47 311 P **P** **06 27 41.0 +0.6**
ANTO pmax pmax
comp=Z,25nm,0.9s
ANTO Ankara 19.47 311 P **P** **06 27 41.0 +0.6**
ANTO IAmb IAmb 06 27 45.0
comp=Z,25nm,0.8s
ANN Anapa 20.04 329 *e*P **P** **06 27 45.9 -0.6**
ANN *e*S Sn 06 31 34.5 +1.1
ANN pmax pmax
comp=Z,97nm,1.4s
IUG Iuzhnay 20.21 42 *e*P **P** **06 27 48.4 -0.2**
baz=43
IUG LR LR 06 36 22.6
comp=Z,209nm,11.2s,baz=43
IUG Iuzhnay 20.21 42 *e*P **P** **06 27 48.4 -0.2**
IUG MLR MLR
comp=Z,209nm,11.0s
ELL Elmali 20.26 300 P **P** **06 27 49.1 -0.1**
ELL pmax pmax
comp=Z,108nm,0.6s
ELL Elmali 20.26 300 P **P** **06 27 49.1 -0.1**
KKAR Karatay Array 21.08 41 P **P** **06 27 57.6 -0.3**
KKAR pmax pmax
comp=Z,34nm,1.1s
KKAR Karatay Array 21.08 41 P **P** **06 27 57.6 -0.3**
KKAR IAmb IAmb 06 28 01.1
comp=Z,34nm,1.1s
DZA Taraz 21.43 42 *e*P **P** **06 28 01.1 -0.6**
comp=Z,18nm,1.0s,baz=42
DZA LR LR 06 37 32.6
comp=Z,159nm,10.8s,baz=42
DZA Taraz 21.43 42 *e*P **P** **06 28 01.0 -0.6**
DZA pmax pmax
comp=Z,18nm,1.0s
DZA MLR MLR
comp=Z,159nm,11.0s
SIM Simferopol' 21.76 324 *e*P **P** **06 28 05.3 +0.2**
SIM pmax pmax
comp=Z,33nm,0.8s
ABKAR Akbulak array 21.80 14 P **P** **06 28 05.0 -0.5**
ABKAR IAmb IAmb 06 28 07.5
comp=Z,37nm,1.3s
POO Poona 22.41 111 *ex* **P** **06 28 12.0 -0.4**
AML Almayashu 22.46 46 P **P** **06 28 16.5 +3.3**
SNR=9.4
AKTO Aktyubinsk 22.56 10 P **P** **06 28 14.3 +0.6**
comp=Z,17nm,0.9s,baz=204,slow=12,SNR=13
AKTO LR LR 06 38 56.7
comp=Z,420nm,18.3s,baz=195,slow=42
EKS2 Erkin-Say 22.79 45 P **P** **06 28 18.5 +2.1**
SNR=8.4
KSH Kashi 22.86 55 P **P** **06 28 14.5 -2.6**
KSH pP pP 06 28 19.3 -2.2
KSH S S 06 32 12.4 -14
KSH pmax pmax
comp=Z,4.0nm,0.4s
KSH pmax pmax
comp=Z,170nm,4.8s
KSH LR LR
comp=Z,720nm,10.9s
KSH LR LR
comp=Z,740nm,10.2s
KSH LR LR
comp=Z,460nm,9.9s
UCH Uchtor 23.04 47 P **P** **06 28 20.7 +1.4**
SNR=17
AAK Ala-Archa 23.23 46 P **P** **06 28 22.2 +1.3**
comp=Z,7.2nm,0.8s,baz=247,slow=14,SNR=5.9
AAK LR LR 06 38 24.3
comp=Z,433nm,18.3s,baz=252,slow=39
AAK Ala-Archa 23.23 46 P **P** **06 28 23.6 +2.7**
SNR=8.8
AAK Ala-Archa 23.23 46 *i* P **P** **06 28 21.1 +0.1**
AAK pmax pmax
comp=Z,58nm,1.1s
AAK Ala-Archa 23.23 46 P **P** **06 28 22.2 +1.3**
USP Ospenovka 23.56 45 P **P** **06 28 25.5 +1.4**
SNR=8.8
SGDS Sogindy 23.74 45 *e*P **P** **06 28 25.1 -0.8**
baz=45
SGDS Sogindy 23.74 45 *e*P **P** **06 28 25.0 -0.8**
IDI Anoyia 23.87 294 LR LR 06 40 39.3
comp=Z,207nm,21.8s,baz=78,slow=44
VRH Novokhopyorsk 24.07 344 *e*P **P** **06 28 28.8 0.0**
VRH pmax pmax
comp=Z,180nm,0.9s
ULHL Ulahol 24.18 49 P **P** **06 28 32.0 +1.9**
SNR=9.4
BELG Belogornoye 24.23 354 P **P** **06 28 31.1 +0.9**
comp=Z,102nm,1.1s,baz=303,slow=3.5,SNR=10
BELG LR LR 06 40 21.8
comp=Z,266nm,19.4s,baz=187,slow=42
BELG Belogornoye 24.23 354 *d i*P **P** **06 28 30.5 +0.3**
BELG pmax pmax
comp=Z,17nm,0.9s
BTLS Baital 24.28 41 *e*P **P** **06 28 30.7 -0.2**
comp=Z,11nm,1.2s,baz=41
BTLS *e*S **S** **06 32 50.4 +1.3**
baz=41
BTLS LR LR 06 38 26.9
comp=Z,86nm,9.9s,baz=41
BTLS Baital 24.28 41 *e*P **P** **06 28 30.6 -0.2**
BTLS *e*S **S** **06 32 50.4 +1.3**
BTLS pmax pmax
comp=Z,11nm,1.2s
BTLS MLR MLR
comp=Z,86nm,10.0s
ALN Alexandroupoli 24.54 307 P **P** **06 28 33.8 +0.6**
ALN pmax pmax
comp=Z,19nm,0.9s
ALN Alexandroupoli 24.54 307 P **P** **06 28 33.8 +0.6**
ALN IAmb IAmb 06 28 35.9
comp=Z,19nm,0.9s
VSR Storozhevoye 24.76 341 *e*P **P** **06 28 33.1 -2.0**
VSR pmax pmax
comp=Z,60nm,1.1s
TPGR Topolog 24.86 318⇑ P **P** **06 28 36.6 +0.5**
TNSS Tian-Shan 25.00 47 *e*P **P** **06 28 38.8 +0.9**
baz=48
TNSS Tian-Shan 25.00 47 *e*P **P** **06 28 38.7 +0.9**
KUU Kurty 25.03 45 *e*P **P** **06 28 37.7 0.0**
comp=Z,14nm,1.0s,baz=45
KUU LR LR 06 39 25.2
comp=Z,328nm,11.4s,baz=45
KUU Kurty 25.03 45 *e*P **P** **06 28 37.6 0.0**
KUU pmax pmax
comp=Z,14nm,1.0s
KUU MLR MLR
comp=Z,328nm,11.0s
AAA Alma-Ata 25.06 47 *e*P **P** **06 28 38.7 +0.6**
baz=47
AAA LR LR 06 38 30.1
comp=Z,486nm,15.3s,baz=47
AAA Alma-Ata 25.06 47 *e*P **P** **06 28 38.6 +0.6**
AAA MLR MLR
comp=Z,486nm,15.0s
MDOK Medeo 25.13 47 *e*P **P** **06 28 38.7 -0.1**
baz=48
MDOK LR LR 06 38 36.1
comp=Z,454nm,14.2s,baz=48
MDOK Medeo 25.13 47 *e*P **P** **06 28 38.6 -0.1**
MDOK MLR MLR
comp=Z,454nm,14.0s
CFR Carcaliu 25.21 318⇑ P **P** **06 28 39.1 -0.1**
CFR Carcaliu 25.21 318 P **P** **06 28 40.0 +0.8**
CFR pmax pmax
comp=Z,16nm,1.5s
SATY Saty 25.97 48 *e*P **P** **06 28 46.3 0.0**
baz=49
SATY Saty 25.97 48 *e*P **P** **06 28 46.3 0.0**
LPSR Galich'ya Gora 26.07 342 *e*P **P** **06 28 47.5 +0.6**
LPSR pmax pmax
comp=Z,150nm,0.9s
KPKS Kokpek 26.33 48 *e*P **P** **06 28 49.5 0.0**
comp=Z,19nm,1.1s,baz=48
KPKS LR LR 06 39 38.9
comp=Z,215nm,13.4s,baz=48
KPKS Kokpek 26.33 48 *e*P **P** **06 28 49.5 0.0**
KPKS pmax pmax
comp=Z,19nm,1.1s
KPKS MLR MLR
comp=Z,215nm,13.0s
SRS Serrai 26.35 306 P **P** **06 28 51.1 +1.5**
SRS pmax pmax
comp=Z,27nm,1.1s
UZB Uzynbulak 26.41 49 *e*P **P** **06 28 50.7 +0.3**
comp=Z,17nm,1.2s,baz=49
UZB Uzynbulak 26.41 49 *e*P **P** **06 28 50.6 +0.3**
UZB pmax pmax
comp=Z,17nm,1.2s
VRI Vrincioaia 26.42 318⇑ P **P** **06 28 51.0 +0.8**
VRI Vrincioaia 26.42 318 P **P** **06 28 52.1 +1.9**
VRI pmax pmax
comp=Z,26nm,1.1s
SOH Sokhos 26.42 306 P **P** **06 28 52.4 +2.1**
SOH pmax pmax
comp=Z,13nm,1.1s
PLOR Plostina 26.45 318⇑ P **P** **06 28 51.8 +1.3**
THE Thessaloniki 26.64 305 P **P** **06 28 54.8 +2.6**
THE pmax pmax
comp=Z,14nm,0.9s
MLR Muntele Rosu 26.68 317 P **P** **06 28 54.1 +1.4**
comp=Z,6.4nm,0.6s,baz=20,slow=6.4,SNR=8.6
MLR LR LR 06 41 56.7
comp=Z,754nm,21.0s,baz=120,slow=42
MLR Muntele Rosu 26.68 317⇑ P **P** **06 28 54.4 +1.7**
MLR Muntele Rosu 26.68 317 P **P** **06 28 54.9 +2.2**
MLR IAmb IAmb 06 29 22.0
comp=Z,36nm,1.4s
SHLS Shalkode 26.71 49 *e*P **P** **06 28 54.8 +1.8**
baz=50
SHLS Shalkode 26.71 49 *e*P **P** **06 28 54.8 +1.8**
BRZS Berezniki 26.82 31 *e*P **P** **06 28 53.8 -0.1**
baz=31
BRZS LR LR 06 39 55.0
comp=Z,82nm,12.2s,baz=31
BRZS Berezniki 26.82 31 *e*P **P** **06 28 53.7 -0.1**
BRZS MLR MLR
comp=Z,82nm,12.0s
LIT Litokhoron 26.82 304 P **P** **06 28 55.2 +1.3**
LIT pmax pmax
comp=Z,9.0nm,0.7s
LIT Litokhoron 26.82 304 P **P** **06 28 55.2 +1.3**
LIT IAmb IAmb 06 28 58.4
comp=Z,8.7nm,0.7s
HYB Hyderabad 26.86 108 *i* P **P** **06 28 56.0 +1.6**
TDK Taldyqorghan 26.87 45 *e*P **P** **06 28 53.6 -0.6**
baz=45
TDK LR LR 06 39 56.0
comp=Z,331nm,13.3s,baz=45
TDK Taldyqorghan 26.87 45 *e*P **P** **06 28 53.6 -0.6**
TDK MLR MLR
comp=Z,331nm,13.0s
VTS Vitosha 27.14 309⇑ P **P** **06 28 58.5 +1.5**
VTS Vitosha 27.14 309 P **P** **06 28 57.3 +0.4**
VTS pmax pmax
comp=Z,6.0nm,1.0s
VTS Vitosha 27.14 309 P **P** **06 28 57.3 +0.4**
GRG Griva 27.15 305 P **P** **06 28 58.7 +1.8**
GRG pmax pmax
comp=Z,18nm,0.9s
VOIR 27.20 316 P **P** **06 28 59.2 +1.9**
VOIR pmax pmax
comp=Z,12nm,0.8s
FNA Florina 27.84 304 P **P** **06 29 03.5 +0.4**
FNA pmax pmax
comp=Z,24nm,1.5s
FNA Florina 27.84 304 P **P** **06 29 03.5 +0.4**
FNA IAmb IAmb 06 29 07.7
comp=Z,24nm,1.5s
AKASG Malin Array Be 28.12 329 P **P** **06 29 04.8 -0.6**
comp=Z,3.0nm,0.5s,baz=115,slow=6.9,SNR=12
AKBB Malin Array Si 28.12 329 *i* P **P** **06 29 04.9 -0.5**
BRVK Borovoye 28.22 24 *i* P **P** **06 29 05.9 -0.3**
BRVK pmax pmax
comp=Z,9.0nm,1.3s
BRVK Borovoye 28.22 24 P **P** **06 29 05.5 -0.8**
BVAR Borovoye Array 28.23 24 P **P** **06 29 06.4 0.0**
comp=Z,2.9nm,0.8s,baz=8.6,slow=4.9,SNR=10
BURAR Bucovina Array 28.24 320 P **P** **06 29 08.7 +2.0**
ARU Arti 28.48 8 P **P** **06 29 08.7 +0.2**
comp=Z,1.7nm,0.2s,baz=203,slow=5.7,SNR=5.5
ARU LR LR 06 42 34.1
comp=Z,477nm,18.9s,baz=184,slow=41
ARU Arti 28.48 8 *d i*P **P** **06 29 09.2 +0.7**
ARU S **S** **06 33 59.8 +4.4**
ARU SS **SnSn** **06 35 15.8 +1.5**
ARU pmax pmax
comp=Z,15nm,1.4s
ARU MLR MLR
comp=Z,399nm,17.0s
ARU Arti 28.48 8 P **P** **06 29 08.9 +0.3**
ARU IAmb IAmb 06 29 11.1
comp=Z,20nm,1.4s
OBN Obninsk 28.95 342 P **P** **06 29 13.7 +1.0**
comp=Z,4.2nm,0.3s,baz=182,slow=14,SNR=3.5
OBN Obninsk 28.95 342‖ *e*P **P** **06 29 13.9 +1.3**
OBN *e* 06 29 21.0
OBN *e*S **S** **06 34 07.5 +4.8**
OBN pmax pmax
comp=Z,36nm,1.2s
OBN MLR MLR
comp=Z,168nm,18.0s
OBN Obninsk 28.95 342 P **P** **06 29 13.0 +0.4**
MOS Moscow 29.22 343 *e*P **P** **06 29 12.8 -2.3**
MOS *e* 06 30 06.2
MOS *e*S **S** **06 34 04.4 -2.6**
MAKZ Makanchi 29.92 44 P **P** **06 29 20.9 -0.6**
MAKZ pmax pmax
comp=Z,6.0nm,0.9s
MAKZ Makanchi 29.92 44 P **P** **06 29 20.9 -0.6**
KURBB Kurchatov Arra 30.05 35 P **P** **06 29 23.0 +0.5**
comp=Z,3.5nm,0.8s,baz=236,slow=9.3,SNR=19
KURBB ScP **ScP** **06 36 05.8 -0.2**
comp=Z,0.5nm,0.7s,baz=223,slow=4.2,SNR=4.3
MK31 Makanchi Array 30.10 44 *i* P **P** **06 29 22.3 -0.8**
MK31 Makanchi Array 30.10 44 P **P** **06 29 23.3 +0.2**
MK31 IAmb IAmb 06 29 25.3
comp=Z,12nm,1.4s
MKAR Makanchi Array 30.10 44 P **P** **06 29 23.3 +0.2**
comp=Z,2.4nm,0.6s,baz=232,slow=7.6,SNR=19
MKAR ScP **ScP** **06 36 06.0 -0.3**
comp=Z,0.9nm,1.0s,baz=225,slow=1.4,SNR=3.9
MKAR LR LR 06 43 35.7
comp=Z,459nm,20.0s,baz=242,slow=41
KURK Kurchatov 30.15 35 P **P** **06 29 23.0 -0.4**
KURK 06 36 05.8
KURK Kurchatov 30.15 35 P **P** **06 29 23.0 -0.4**
KURK **ScP** **06 36 05.8 -0.5**
KIRV Kirov 30.28 357 P **P** **06 29 25.3 +0.8**
comp=Z,19nm,0.7s,baz=163,slow=2.8,SNR=6.2
KIRV LR LR 06 44 20.9
comp=Z,265nm,18.2s,baz=179,slow=42
KIRV Kirov 30.28 357 *i* P **P** **06 29 25.1 +0.7**
KWP Kalwaria Pacla 30.74 322 P **P** **06 29 29.5 +0.8**
KWP pmax pmax
comp=Z,18nm,0.9s
KWP Kalwaria Pacla 30.74 322 P **P** **06 29 29.5 +0.8**
SEM Semipalatinsk 30.80 36 *e*P **P** **06 29 28.6 -0.9**
baz=37
SEM Semipalatinsk 30.80 36 *e*P **P** **06 29 28.6 -0.9**
TIP Timpagrande 30.92 300 P **P** **06 29 30.8 +0.3**
TIP IAmb IAmb 06 29 38.4
comp=Z,21nm,1.5s
CRVS Cervenica-Dubn 31.05 320 *e*P **P** **06 29 33.0 +1.5**
CRVS pmax pmax
comp=Z,13nm,0.9s
CRVS Cervenica-Dubn 31.05 320 *e*P **P** **06 29 33.0 +1.5**
MNK Minsk 31.41 333 *i* P **P** **06 29 35.7 +1.3**
comp=E,4.0nm,1.0s
MNK *i* P **P** **06 29 35.7 +1.3**
comp=N,43nm,0.8s
MNK *i* P **P** **06 29 35.7 +1.3**
comp=Z,20nm,0.9s
MNK *i* PP **PnPn** **06 30 37.7 +0.5**
MNK *i* PPP PPP 06 30 46.7
MNK *i* PcP **PcP** **06 32 29.8 +2.1**
MNK *i* S **S** **06 34 44.3 +3.0**
MNK *i* SS **SnSn** **06 36 27.0 +1.4**
MNK *i* SSS SSS 06 36 42.0
MNK *i* LQ LQ 06 39 48.7
MNK *i* LR LR 06 42 11.5
MNK *i* LRM MLR 06 43 43.0
comp=E,27nm,17.4s
MNK *i* LRM MLR 06 44 11.2
comp=Z,166nm,19.6s
MNK *i* LRM MLR 06 44 28.6
comp=N,519nm,21.0s
KECS Kecovo 31.41 318 *e*P **P** **06 29 36.3 +1.7**
KECS Kecovo 31.41 318 *e*P **P** **06 29 36.3 +1.7**
ZSN Zaisan 31.97 44 *e*P **P** **06 29 39.0 -0.6**
baz=44
ZSN Zaisan 31.97 44 *e*P **P** **06 29 39.0 -0.6**
NACGM Naroch 32.14 333 *i* P **P** 06 29 49.5 +8.6
NACGM *i* P P 06 29 49.5 +8.6
NACGM *i* P P 06 29 49.5 +8.6
NACGM *i* PP PP 06 31 07.2 +14
NACGM *i* PPP PPP 06 31 23.8
NACGM *i* S S 06 35 20.3 +27
NACGM *i* SS SS 06 37 33.9 +23
NACGM *i* LQ LQ 06 41 08.4
NACGM *i* LR LR 06 44 13.3
LANS Liptovska Anna 32.32 319 *e*P **P** **06 29 44.6 +2.0**
LANS pmax pmax
comp=Z,9.0nm,0.6s
LANS Liptovska Anna 32.32 319 *e*P **P** **06 29 44.6 +2.0**
KMBO Kilima Mbogo 32.46 208 LR LR 06 44 01.9
comp=Z,950nm,18.6s,baz=2.0,slow=38
WMQ Urumqi 32.56 52 *e*P **P** **06 29 46.7 +1.9**
WMQ PP **PnPn** **06 30 54.4 +2.1**
WMQ pmax pmax
comp=Z,19nm,1.1s
WMQ pmax pmax
comp=Z,120nm,3.9s
WMQ LR LR
comp=Z,880nm,20.5s
WMQ LR LR
comp=Z,400nm,13.1s
WMQ LR LR
comp=Z,880nm,24.3s
OJC Ojcow 32.65 321 P **P** **06 29 45.5 0.0**
OJC pmax pmax
comp=Z,12nm,0.8s
OJC Ojcow 32.65 321 P **P** **06 29 45.5 0.0**
OJC IAmb IAmb 06 29 47.4
comp=Z,12nm,0.8s
IIGN Ignalina 32.69 333 *e*P **P** **06 29 45.9 +0.2**
ISAL Salakas 32.88 333 *e*P **P** **06 29 47.2 -0.2**
MODS Modra-Piesok 33.28 316 *e*P **P** **06 29 52.3 +1.3**
MODS Modra-Piesok 33.28 316 *e*P **P** **06 29 52.3 +1.3**
PRGR Permogore 33.55 355 *e*P **P** **06 29 52.3 -0.8**
PRGR pmax pmax
comp=Z,14nm,0.8s
KLMR Klimovskoe 33.55 349 *e*P **P** **06 29 52.3 -0.9**
KLMR pmax pmax
comp=Z,30nm,1.0s
KLMR Klimovskoe 33.55 349 *e*P **P** **06 29 52.3 -0.9**
KLMR AMP 06 29 55.8
comp=Z,30nm,1.0s
PABE Paberze 33.72 331 *e*P **P** **06 29 55.5 +0.8**
MORC Moravsky Berou 33.73 319 P **P** **06 29 54.1 -0.8**
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 33.73 319 P **P** **06 29 54.1 -0.8**
MORC IAmb IAmb 06 29 57.6
comp=Z,5.4nm,0.8s
SOKA Soboth 34.06 313 *e*P **P** **06 29 58.0 +0.2**
comp=Z,2.7nm,1.0s
KRLC Kraliky 34.30 319 AMS AMS 06 46 10.0
comp=Z,400nm,18.1s
OBKA Obir 34.32 312 *e*P **P** **06 29 59.5 -0.6**
comp=Z,5.4nm,1.1s
NRCA Norcia 34.33 305 P **P** **06 30 00.4 +0.2**
NRCA IAmb IAmb 06 30 15.3
comp=Z,10nm,0.8s
PALK Pallekele 34.40 122 P **P** **06 30 01.4 +0.3**
comp=Z,4.5nm,0.7s,baz=56,slow=19,SNR=4.7
PALK Pallekele 34.40 122 P **P** **06 30 01.2 +0.1**
DGZ Jazzator, Alta 34.47 42 *i* P **P** **06 30 01.3 -0.2**
DGZ pmax pmax
comp=Z,7.0nm,1.1s
DPC Dobruska-Polom 34.68 319 *e*P **P** **06 30 04.1 +0.9**
DPC MLR MLR
comp=Z,400nm,18.4s
DPC Dobruska-Polom 34.68 319 *e*P **P** **06 30 04.1 +0.9**
DPC AMS AMS 06 48 20.0
comp=Z,400nm,18.4s
VSU Vasula 34.78 337 *e*P **P** **06 30 04.4 +0.5**
MURB Monte Urbino 34.84 306 P **P** **06 30 06.1 +1.5**
KSP Ksiaz 34.92 320 *e*P **P** **06 30 06.1 +0.9**
UPC Upice 34.93 319 AMS AMS 06 48 50.0
comp=Z,500nm,15.6s
CHVC Chvalec 34.94 319 *e*P **P** **06 30 06.4 +1.0**
MOA Molln 34.95 314 *e*P **P** **06 30 05.1 -0.4**
comp=Z,4.3nm,0.6s

MYKA	**Terra Mystica**	**34.95**	**312**	*e*P	**P**	**06 30 04.9**	**-0.7**
	comp=Z,5.9nm,1.3s						
ZALV	**Zalesovo Beam**	**35.12**	**34**	P	**P**	**06 30 05.8**	**-1.1**
	comp=Z,4.5nm,0.7s,baz=208,slow=11,SNR=8.1						
ZALV				LR	LR	06 45 35.8	
	comp=Z,258nm,21.7s,baz=230,slow=38						
MBAR	**Mbarara**	**35.17**	**219**	P	**P**	**06 30 09.2**	**+1.3**
	comp=Z,3.8nm,0.2s,baz=39,slow=17,SNR=4.7						
MBAR	**Mbarara**	**35.17**	**219**	P	**P**	**06 30 08.1**	**+0.3**
KBA	**Koelnbreinsper**	**35.28**	**313**	*i* P	**P**	**06 30 08.7**	**+0.1**
	comp=Z,6.0nm,0.8s,SNR=6.6						
GERES	**GERESS Array B**	**35.65**	**316**	P	**P**	**06 30 10.3**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=101,slow=8.8,SNR=5.9						
GERES				LR	LR	06 49 12.6	
	comp=Z,222nm,19.1s,baz=115,slow=44						
ABTA	**Abfaltersbach**	**35.73**	**312**	*e*P	**P**	**06 30 12.9**	**+0.6**
	comp=Z,7.1nm,1.2s						
KHC	**Kasperske Hory**	**35.83**	**316**	*i* P	**P**	**06 30 12.4**	**-0.7**
KHC				pmax	pmax		
	comp=Z,19nm,1.4s						
KHC	**Kasperske Hory**	**35.83**	**316**	*e*P	**P**	**06 30 12.9**	**-0.1**
KHC				AMS	AMS	06 49 10.0	
	comp=Z,400nm,14.8s						
KHC	**Kasperske Hory**	**35.83**	**316**	P	**P**	**06 30 13.0**	**-0.1**
MTSE	**Matsula**	**36.01**	**335**	*e*P	**P**	**06 30 15.4**	**+1.0**
CTI	**Castel Tesino**	**36.11**	**310**	P	**P**	**06 30 13.9**	**-1.7**
CTI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CTI	**Castel Tesino**	**36.11**	**310**	P	**P**	**06 30 13.9**	**-1.7**
CTI				IAmb	IAmb	06 30 16.9	
	comp=Z,7.7nm,0.7s						
BRG	**Berggiesshubel**	**36.28**	**319**	*e*P	**P**	**06 30 17.3**	**+0.4**
BRG				Amp		06 30 19.4	
	comp=Z,3.6nm,0.7s						
WTTA	**Wattenberg**	**36.45**	**312**	*e*P	**P**	**06 30 17.8**	**-0.8**
	comp=Z,10nm,0.6s						
WATA	**Walderalm**	**36.51**	**312**	*e*P	**P**	**06 30 18.7**	**-0.4**
	comp=Z,6.4nm,0.6s						
KEST	**Kesra**	**36.54**	**293**	P	**P**	**06 30 20.1**	**+0.8**
	comp=Z,11nm,1.1s,baz=349,slow=4.0,SNR=5.9						
KEST				LR	LR	06 49 10.3	
	comp=Z,170nm,18.2s,baz=307,slow=43						
SQTA	**Sankt Quirin**	**36.72**	**312**	*e*P	**P**	**06 30 19.9**	**-0.9**
	comp=Z,11nm,0.5s						
MOTA	**Moosalm**	**36.82**	**312**	*e*P	**P**	**06 30 21.6**	**-0.1**
	comp=Z,9.4nm,0.7s						
FETA	**Feichten**	**36.98**	**312**	*e*P	**P**	**06 30 22.3**	**-0.7**
	comp=Z,7.6nm,0.7s						
CLL	**Collm**	**37.00**	**319**	*e*P	**P**	**06 30 24.0**	**+1.1**
	comp=Z,10.0nm,0.9s						
CLL				*e*S	S	06 36 18.0	+10
CLL				LmH		06 47 00.0	
	comp=N,200nm,21.5s						
CLL				LmH		06 47 00.0	
	comp=E,100nm,21.4s						
CLL				LmV		06 49 00.0	
	comp=Z,300nm,18.1s						
CLL				LmV		07 23 00.0	
	comp=N,100nm,18.4s						
CLL				LmV		07 23 00.0	
	comp=E,200nm,18.9s						
CLL				LmV		07 23 00.0	
	comp=Z,300nm,19.3s						
CLL	**Collm**	**37.00**	**319**	P	**P**	**06 30 23.0**	**+0.1**
CLL				pmax	pmax		
	comp=Z,16nm,1.2s						
CLL	**Collm**	**37.00**	**319**	P	**P**	**06 30 23.0**	**+0.1**
CLL				IAmb	IAmb	06 30 27.1	
	comp=Z,16nm,1.2s						
RETA	**Reutte**	**37.08**	**312**	*e*P	**P**	**06 30 22.6**	**-1.3**
	comp=Z,4.3nm,0.6s						
PGF	**Pioggiola**	**37.26**	**304**	*e*P	**P**	**06 30 25.7**	**+0.2**
PGF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FINES	**FINESS Array B**	**37.29**	**340**	P	**P**	**06 30 24.2**	**-1.0**
	comp=Z,11nm,0.7s,baz=144,slow=9.9,SNR=27						
FINES				LR	LR	06 47 01.1	
	comp=Z,290nm,19.0s,baz=148,slow=38						
DAVOX	**Davos/Dischmat**	**37.48**	**311**	P	**P**	**06 30 27.3**	**0.0**
	comp=Z,6.1nm,0.6s,baz=153,slow=6.3,SNR=9.1						
DAVA	**Damuels**	**37.60**	**312**	*i* P	**P**	**06 30 27.4**	**-0.9**
	comp=Z,23nm,0.5s,SNR=13						
SBF	**Sospel**	**38.59**	**306**	*e*P	**P**	**06 30 37.0**	**+0.4**
SBF				pmax	pmax		
	comp=Z,12nm,0.8s						
SENIN	**Lac Senin/Sane**	**39.12**	**310**	P	**P**	**06 30 40.8**	**-0.4**
MBDF	**Montbardon**	**39.19**	**307**	*e*P	**P**	**06 30 41.6**	**-0.1**
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BNI	**Bardonecchia**	**39.31**	**308**	P	**P**	**06 30 42.4**	**-0.3**
BNI				pmax	pmax		
	comp=Z,13nm,1.1s						
BNI	**Bardonecchia**	**39.31**	**308**	P	**P**	**06 30 42.4**	**-0.3**
BNI				IAmb	IAmb	06 30 55.4	
	comp=Z,13nm,1.1s						
LPG	**La Plagne**	**39.33**	**308**	*e*P	**P**	**06 30 43.3**	**+0.2**
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPL	**La Plagne**	**39.35**	**308**	*e*P	**P**	**06 30 42.8**	**-0.3**
LPL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ECH	**Echery**	**39.62**	**312**	P	**P**	**06 30 44.4**	**-0.7**
ECH				pmax	pmax		
	comp=Z,12nm,1.2s						
ECH	**Echery**	**39.62**	**312**	P	**P**	**06 30 44.4**	**-0.7**
CABF	**La Chapelle**	**39.99**	**310**	*e*P	**P**	**06 30 47.9**	**-0.4**
CABF				pmax	pmax		
	comp=Z,11nm,1.0s						
DGAR	**Diego Garcia**	**40.74**	**148**	P	**P**	**06 30 51.5**	**-3.2**
DGAR				pmax	pmax		
	comp=Z,94nm,0.9s						
HFS	**Hagfors**	**40.90**	**332**	P	**P**	**06 30 54.8**	**-0.7**
	comp=Z,11nm,0.5s,baz=127,slow=9.5,SNR=36						
GTA	**Gaotai**	**40.92**	**61**	⇓P	**P**	**06 30 57.5**	**+1.4**
GTA				pP	sP	06 31 02.1	-0.7
GTA				sP	pP	06 31 04.8	+3.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,70nm,7.5s						
GTA				LR	LR		
	comp=Z,280nm,17.4s						
GTA				LR	LR		
	comp=Z,200nm,17.5s						
SMF	**Signal de Mont**	**41.52**	**309**	*e*P	**P**	**06 31 00.5**	**-0.3**
SMF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PBA	**Port Blair**	**41.64**	**105**	P	P	06 31 02.7	+0.5
BAIF	**Baives**	**41.93**	**315**	*e*P	**P**	**06 31 05.7**	**+1.6**
BAIF				pmax	pmax		
	comp=Z,14nm,1.2s						
TAM	**Tamanrasset**	**41.94**	**273**	P	**P**	**06 31 05.9**	**+1.2**
TAM				pmax	pmax		
	comp=Z,10.0nm,1.3s						
TAM	**Tamanrasset**	**41.94**	**273**	P	**P**	**06 31 05.8**	**+1.2**
OSL	**Oslo**	**42.06**	**330**	*e*P	**P**	**06 31 05.9**	**+0.8**
NC602	**NORSAR Array S**	**42.13**	**332**	*e*P	**P**	**06 31 06.3**	**+0.8**
NORES	**NORESS Array B**	**42.13**	**332**	P	**P**	**06 31 10.3**	**+4.7**
BGF	**Bois d'Agland**	**42.18**	**309**	*e*P	**P**	**06 31 07.5**	**+1.2**
BGF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MTLF	**Montolieu**	**42.30**	**304**	*e*P	**P**	**06 31 08.1**	**+0.9**
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KONO	**Kongsberg**	**42.42**	**330**	*e*P	**P**	**06 31 08.6**	**+0.7**
NB2	**NORSAR Subarra**	**42.42**	**332**	P	**P**	**06 31 06.4**	**-1.6**
	baz=122,slow=8.6						
NOA	**NORSAR Array B**	**42.42**	**332**	P	**P**	**06 31 07.0**	**-1.0**
	comp=Z,3.4nm,0.5s,baz=122,slow=8.3,SNR=22						
NOA	**NORSAR Array B**	**42.42**	**332**	P	**P**	**06 31 07.0**	**-1.0**
CAF	**Calviac**	**42.54**	**307**	*e*P	**P**	**06 31 09.1**	**-0.1**
CAF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RJF	**Les Rejaudoux**	**42.96**	**307**	*e*P	**P**	**06 31 13.2**	**+0.6**
RJF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MOY	**Mondy**	**43.25**	**43**	*e*P	**P**	**06 31 16.8**	**+1.8**
LFF	**La Frestale**	**43.47**	**307**	*e*P	**P**	**06 31 17.3**	**+0.6**
LFF				pmax	pmax		
	comp=Z,14nm,0.8s						
SKAR	**Skarslia**	**43.48**	**330**	*e*P	**P**	**06 31 16.9**	**+0.3**
DOMB	**Dombas**	**43.82**	**332**	*e*P	**P**	**06 31 19.9**	**+0.5**
KEV	**Kevo**	**43.85**	**348**	P	**P**	**06 31 20.1**	**+0.8**
KEV				pmax	pmax		
	comp=Z,17nm,1.2s						
KEV	**Kevo**	**43.85**	**348**	P	**P**	**06 31 20.1**	**+0.8**
KEV				IAmb	IAmb	06 31 20.8	
	comp=Z,18nm,1.2s						
ARA0	**ARCESS Array S**	**43.95**	**347**	*e*P	**P**	**06 31 21.2**	**+1.0**
ARCES	**ARCESS Array B**	**43.95**	**347**	P	**P**	**06 31 19.3**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=142,slow=7.8,SNR=14						
ARCES				LR	LR	06 52 39.6	
	comp=Z,170nm,21.3s,baz=165,slow=40						
KTK1	**Kautokeino**	**44.00**	**346**	*e*P	**P**	**06 31 21.4**	**+0.8**
NSS	**Namsos**	**44.08**	**337**	*e*P	**P**	**06 31 22.9**	**+1.6**
CMAR	**Chiang Mai Arr**	**44.11**	**92**	P	**P**	**06 31 21.8**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=282,slow=8.9,SNR=2.6						
CMAR				PcP	**PcP**	**06 33 08.0**	**+0.7**
	comp=Z,2.1nm,0.6s,baz=286,slow=4.8,SNR=6.3						
CMAR				LR	LR	06 52 44.8	
	comp=Z,115nm,21.2s,baz=337,slow=40						
LZH	**Lanzhou**	**44.25**	**66**	*e*P	**P**	**06 31 25.5**	**+2.2**
LZH				pP	pP	06 31 28.9	+0.8
LZH				sP	sP	06 31 31.8	+1.8
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
ETSF	**Etsaut**	**44.30**	**304**	*e*P	**P**	**06 31 26.1**	**+2.6**
ETSF				pmax	pmax		
	comp=Z,19nm,1.4s						
ZAK	**Zakamensk**	**44.41**	**46**	*e*P	**P**	**06 31 23.9**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
LDF	**La Druitiere**	**44.45**	**312**	*e*P	**P**	**06 31 23.9**	**-0.6**
LDF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FLN	**La Foliniere**	**44.71**	**312**	*e*P	**P**	**06 31 26.1**	**-0.5**
FLN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SJPF	**Ste Jean**	**44.80**	**304**	*e*P	**P**	**06 31 28.4**	**+1.0**
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FAUS	**Fauske**	**44.81**	**341**	*e*P	**P**	**06 31 27.8**	**+0.7**
STOK	**Stokkvaagen**	**44.82**	**339**	*e*P	**P**	**06 31 28.2**	**+1.0**
TLY	**Talaya**	**44.86**	**44**	*e*P	**P**	**06 31 27.8**	**0.0**
TLY				pmax	pmax		
	comp=Z,16nm,0.8s						
TLY				MLR	MLR		
	comp=Z,2μm,16.0s						
KONS	**Konsvik**	**44.89**	**339**	*e*P	**P**	**06 31 28.5**	**+0.7**
GRR	**Gorron**	**44.91**	**311**	*e*P	**P**	**06 31 28.9**	**+0.7**
GRR				pmax	pmax		
	comp=Z,31nm,1.4s						
JETT	**Jettan, Norway**	**45.06**	**345**	*e*P	**P**	**06 31 29.5**	**+0.4**
STEI	**Steigen**	**45.20**	**341**	*e*P	**P**	**06 31 30.6**	**+0.5**
HAMF	**Hammerfest**	**45.22**	**347**	*e*P	**P**	**06 31 31.2**	**+0.9**
KMI	**Kunming**	**45.32**	**82**	⇑P	**P**	**06 31 32.8**	**+0.8**
KMI				pP	pP	06 31 36.1	-0.8
KMI				sP	sP	06 31 37.3	-1.5
KMI				S	**S**	**06 38 17.9**	**+5.4**
KMI				SS	**ScS**	**06 41 27.5**	**-1.4**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,80nm,3.5s						
KMI				LR	LR		
	comp=Z,190nm,12.1s						
KMI				LR	LR		
	comp=Z,140nm,13.7s						
KMI				LR	LR		
	comp=Z,250nm,14.7s						
JSA	**Saint Aubin**	**45.87**	**312**	*e*P	**P**	**06 31 34.9**	**-0.8**
JSA				IAmb	IAmb	06 31 35.5	
	comp=Z,21nm,0.6s						
NRIK	**Noril'sk**	**45.94**	**17**	P	**P**	**06 31 35.7**	**-0.3**
	comp=Z,4.2nm,0.6s,baz=228,slow=3.6,SNR=5.7						
NRIK				LR	LR	06 54 28.9	
	comp=Z,445nm,18.1s,baz=234,slow=41						
NRIK	**Noril'sk**	**45.94**	**17**	*i* P	**P**	**06 31 34.9**	**-1.1**
NRIK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONM	**Songino Array**	**46.11**	**50**	P	**P**	**06 31 37.0**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=265,slow=8.1,SNR=13						
SONM				LR	LR	06 52 43.0	
	comp=Z,274nm,18.9s,baz=276,slow=38						
SONM	**Songino Array**	**46.11**	**50**	P	**P**	**06 31 37.0**	**-0.9**
ROSF	**Rostrenen**	**46.51**	**311**	*e*P	**P**	**06 31 40.6**	**-0.2**
ROSF				pmax	pmax		
	comp=Z,45nm,1.5s						
ULN	**Ulaanbaatar**	**46.56**	**50**	*ce*P	**P**	**06 31 41.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	**Ulaanbaatar**	**46.56**	**50**	P	**P**	**06 31 40.7**	**-0.7**
ULN				IAmb	IAmb	06 31 51.5	
	comp=Z,4.1nm,0.8s						
EDMD	**Edmundbyers**	**46.65**	**320**	*e*P	**P**	**06 31 41.9**	**0.0**
EDMD				IAmb	IAmb	06 31 43.5	
	comp=Z,11nm,0.6s						
MCH1	**Michaelchurch**	**46.76**	**316**	*e*P	**P**	**06 31 42.8**	**+0.1**
ESDC	**Sonseca Array**	**46.94**	**299**	P	**P**	**06 31 44.2**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=64,slow=7.6,SNR=4.7						
SBD1	**Bryn Du**	**47.05**	**317**	*e*P	P	06 31 50.1	+5.1
ESY	**Stoneypath**	**47.24**	**321**	*e*P	**P**	**06 31 46.1**	**-0.4**
KESW	**Keswick, Cumbr**	**47.25**	**320**	*e*P	**P**	**06 31 46.4**	**-0.1**
KESW				IAmb	IAmb	06 31 50.5	
	comp=Z,75nm,1.5s						
LLW	**Llanuwchllyn**	**47.29**	**317**	*e*P	**P**	**06 31 46.3**	**-0.5**
EKA	**Eskdalemuir Ar**	**47.43**	**321**	P	**P**	**06 31 47.2**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=106,slow=8.8,SNR=8.9						
EBL	**Broad Law**	**47.45**	**321**	*e*P	**P**	**06 31 48.5**	**+0.4**
RSBS	**Rosebush, Pemb**	**47.82**	**316**	*e*P	**P**	**06 31 50.9**	**-0.2**
RSBS				IAmb	IAmb	06 31 52.2	
	comp=Z,9.6nm,0.7s						
MDT	**Midelt**	**48.31**	**290**	P	**P**	**06 31 55.4**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=99,slow=4.1,SNR=6.8						
XAN	**Xi'an**	**48.64**	**68**	P	**P**	**06 31 57.6**	**-0.1**
XAN				sP	sP	06 32 07.8	+3.3
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN				LR	LR		
	comp=Z,500nm,21.7s						
XAN				LR	LR		
	comp=Z,330nm,21.7s						
TOA0	**Torodi Ar. Sit**	**48.92**	**263**	P	**P**	**06 31 59.7**	**-0.2**
TOA0				IAmb	IAmb	06 32 15.7	
	comp=Z,16nm,1.3s						
TORD	**Torodi Ar. Bea**	**48.92**	**263**	P	**P**	**06 31 59.9**	**-0.1**
	comp=Z,4.2nm,0.6s,baz=56,slow=7.5,SNR=19						
TORD				LR	LR	06 54 08.0	
	comp=Z,248nm,19.2s,baz=235,slow=38						
MVO	**Moncorvo**	**49.17**	**301**	*e*P	**P**	**06 32 03.1**	**+1.5**
MVO	**Moncorvo**	**49.17**	**301**	*e*LR	LR	07 07 22.0	
	comp=Z,522nm,20.0s						
PBAR	**Barrancos**	**49.47**	**297**	*e*P	**P**	**06 32 03.3**	**-0.6**
PMRV	**Marv??o**	**49.60**	**299**	*e*P	**P**	**06 32 05.5**	**+0.6**
PMRV	**Marv??o**	**49.60**	**299**	*e*LR	LR	07 03 24.5	
	comp=Z,367nm,20.0s						
MTE	**Manteigas**	**49.62**	**300**	*e*LR	LR	07 03 35.8	
	comp=Z,479nm,20.0s						
PCBR	**Castelo Branco**	**49.62**	**300**	*e*P	**P**	**06 32 06.8**	**+1.7**
PVRL	**Vila Real**	**49.67**	**302**	*e*P	**P**	**06 32 07.3**	**+1.8**
POLO	**Lamas de Olo**	**49.73**	**302**	*e*P	**P**	**06 32 06.8**	**+0.9**
PVIS	**Viseu**	**49.86**	**301**	*e*P	**P**	**06 32 06.9**	**0.0**
HHC	**Hu-ho-hao-te**	**49.86**	**59**	*e*P	**P**	**06 32 07.7**	**+0.7**
HHC				PP	**PP**	**06 33 58.1**	**-3.5**
HHC				S	**S**	**06 39 20.6**	**+4.1**
HHC				sS	sS	06 39 27.4	+2.9
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
HHC				LR	LR		
	comp=Z,380nm,13.6s						
HHC				LR	LR		
	comp=Z,290nm,13.6s						
HHC				LR	LR		
	comp=Z,310nm,15.3s						
PGAV	**Gavieira, Arco**	**50.03**	**302**	*e*P	**P**	**06 32 07.0**	**-1.3**
	comp=Z,27nm,1.3s						
PGAV	**Gavieira, Arco**	**50.03**	**302**	*e*LR	LR	07 09 32.1	
	comp=Z,533nm,20.0s						
PVAQ	**Vaqueiros**	**50.10**	**297**	*e*LR	LR	07 02 48.1	
	comp=Z,284nm,22.0s						
EVO	**Evora**	**50.19**	**298**	*e*P	**P**	**06 32 10.8**	**+1.5**
BOD	**Bodaibo**	**51.75**	**37**	*e*P	**P**	**06 32 20.2**	**-0.6**
BOD				pmax	pmax		
	comp=Z,13nm,1.3s						
SPA0	**Spitsbergen Ar**	**52.40**	**351**	*e*P	**P**	**06 32 26.3**	**+0.9**
SPITS	**Spitsbergen Ar**	**52.40**	**351**	P	**P**	**06 32 25.3**	**-0.1**
	comp=Z,8.3nm,0.9s,baz=150,slow=15,SNR=11						
KOWA	**Kowa**	**53.36**	**267**	P	**P**	**06 32 32.9**	**-0.4**
KOWA				IAmb	IAmb	06 32 37.5	
	comp=Z,9.2nm,0.7s						
BKNI	**Bangkinang**	**54.66**	**112**	P	**P**	**06 32 41.6**	**-1.2**
DBIC	**Dimbokro**	**57.63**	**259**	P	**P**	**06 33 04.3**	**+0.3**
	comp=Z,8.7nm,0.8s,baz=43,slow=6.8,SNR=12						
SCO	**Scoresbysund**	**58.16**	**338**	P	**P**	**06 33 09.0**	**+2.0**
SCO				pmax	pmax		
	comp=Z,16nm,1.5s						
SCO	**Scoresbysund**	**58.16**	**338**	P	**P**	**06 33 09.0**	**+2.0**
SCO				IAmb	IAmb	06 33 17.3	
	comp=Z,16nm,1.5s						
DAG	**Danmarks Havn**	**58.17**	**345**	*i* P	**P**	**06 33 07.1**	**+0.1**
DAG				IAmb	IAmb	06 33 07.8	
	comp=Z,1.9nm,0.4s						
DAG	**Danmarks Havn**	**58.17**	**345**	*i* P	**P**	**06 33 07.1**	**+0.1**
DAG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NOR	**Nord**	**59.03**	**351**	*e*P	**P**	**06 33 13.2**	**+0.3**
NOR	**Nord**	**59.03**	**351**	*e*P	**P**	**06 33 13.2**	**+0.3**
CN2	**Changchun**	**59.62**	**54**	*e*P	**P**	**06 33 14.9**	**-2.7**
CN2				S	**S**	**06 41 21.9**	**-5.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,50nm,2.9s						
CN2				LR	LR		
	comp=Z,190nm,16.0s						
CN2				LR	LR		
	comp=Z,280nm,17.0s						
NACB	**Ninganchiao**	**61.92**	**76**	P	**P**	**06 33 31.3**	**-2.2**
KSRS	**Korea Array**	**62.97**	**60**	P	**P**	**06 33 40.0**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=281,slow=7.4,SNR=11						
KSRS				LR	LR	07 03 53.6	
	comp=Z,147nm,18.7s,baz=296,slow=39						
KSRS	**Korea Array**	**62.97**	**60**	P	**P**	**06 33 40.0**	**-0.3**
SUMG	**Summit**	**63.32**	**340**	*i* P	**P**	**06 33 43.3**	**+0.7**
SUMG				IAmb	IAmb	06 33 49.4	
	comp=Z,5.6nm,0.8s						
SUMG	**Summit**	**63.32**	**340**	*i* P	**P**	**06 33 43.3**	**+0.7**
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUMG	**Summit**	**63.32**	**340**	P	**P**	**06 33 43.1**	**+0.5**
USA0B	**Ussuriysk Arra**	**64.13**	**52**	*i* P	**P**	**06 33 47.0**	**-0.9**
NEEM	**North Greenlan**	**65.31**	**346**	*e*P	**P**	**06 33 56.0**	**+0.6**
DY2G	**Dye2**	**67.50**	**335**	*i* P	**P**	**06 34 10.5**	**+1.0**
DY2G				IAmb	IAmb	06 34 12.8	
	comp=Z,9.0nm,0.6s						
SFJD	**Kangerlussuaq**	**68.93**	**336**	P	**P**	**06 34 18.7**	**+0.6**
	comp=Z,8.6nm,1.1s,baz=49,slow=8.2,SNR=4.3						
SFJD	**Kangerlussuaq**	**68.93**	**336**	IAmb	IAmb	06 34 21.6	
	comp=Z,11nm,1.1s						
SEY	**Seymchan**	**69.76**	**29**	P	**P**	**06 34 23.6**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=296,slow=6.4,SNR=4.7						
SEY				LR	LR	07 08 48.9	
	comp=Z,275nm,19.2s,baz=291,slow=39						
SEY	**Seymchan**	**69.76**	**29**	*i* P	**P**	**06 34 23.5**	**+0.1**
MA2	**Magadan**	**70.32**	**32**	LR	LR	07 07 00.0	
	comp=Z,1μm,18.5s,baz=324,slow=37						
BILL	**Bilibino**	**72.52**	**21**	⇑*e*P	**P**	**06 34 41.2**	**+1.1**
BILL				*i*		06 34 50.0	
BILL				*e*		06 37 19.7	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,145nm,16.0s						
BILL	**Bilibino**	**72.52**	**21**	P	**P**	**06 34 40.4**	**+0.3**
BILL				IAmb	IAmb	06 34 42.5	
	comp=Z,5.1nm,1.0s						
TOLK	**Toolik Lake Re**	**82.03**	**8**	P	**P**	**06 35 34.0**	**+0.6**
TOLK				IAmb	IAmb	06 35 37.5	
	comp=Z,14nm,1.5s						
INK	**Inuvik**	**83.57**	**2**	P	**P**	**06 35 41.2**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=342,slow=6.4,SNR=5.1						
MDM	**Murphy Dome**	**85.70**	**8**	P	**P**	**06 35 51.6**	**-0.6**
ILAR	**Eielson Array**	**86.05**	**8**	P	**P**	**06 35 53.2**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=330,slow=3.8,SNR=7.5						
ILAR				LR	LR	07 19 08.0	
	comp=Z,72nm,20.6s,baz=92,slow=39						
BPAW	**Bear Paw Mtn.**	**86.14**	**10**	P	**P**	**06 35 54.2**	**-0.1**
YKA	**Yellowknife Ar**	**88.83**	**354**	P	**P**	**06 36 07.1**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=11,slow=4.9,SNR=20						
YKA	**Yellowknife Ar**	**88.83**	**354**	*i* P	**P**	**06 36 07.9**	**+0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	**Warramunga Arr**	**92.98**	**111**	P	**P**	**06 36 27.6**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=312,slow=3.9,SNR=4.9						
ASAR	**Alice Springs**	**94.42**	**114**	P	**P**	**06 36 33.6**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=304,slow=4.5,SNR=10						
TXAR	**Lajitas Array**	**118.05**	**336**	PKP	**PKPdf**	**06 42 00.6**	**-0.5**
	comp=Z,0.3nm,1.0s,baz=237,slow=4.3,SNR=3.4						

IDC ***10*** *06:56:26.8±1.4, 2°.53N×124°.46E, h296km±15km, mb3.9/16, mb1 4.0/20, mb1mx3.8/44, mbtmp4.6/20, Error ellipse: s-maj=16.4km s-min=7.9km az=76.0*

BJI ***10*** *06:56:26.0±0.0, 2°.21N×124°.13E, h303km, mB4.5/22, mb4.2/35*

NEIC ***10*** *06:56:27.4±2.3, 2°.56N±0°.07×124°.53E±0°.07, h300km±6km, mb4.7/36, Error ellipse: s-maj=10.8km s-min=9.5km az=80.0*

KLM ***10*** *06:56:27, 2°.50N×124°.68E, h299km, mb4.9*

DJA ***10*** *06:56:28.2±0.3, 3°.N×3°.×12°.5E±°, h275km×3km, M4.8/20, mB5.2/15, mb5.0/20, MLv5.2/17, Mw(mB)4.5/15*

ISC 10 06:56:26.1±0.3, 2°.57N±0°.04×124°.57E±0°.05, h288km, n148, σ1§**41**/158, **mb4.6**/52, **4C-1D, Celebes Sea**

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

MMRI	Maumere	11.37	192	P		P	06 59 03.1	-0.7	
	6µm192nm,0.7s								
BBKI	Banjar Baru	11.42	238	P		P	06 59 04.7	+0.4	
	150nm,0.8s								
LQP	Lukban	11.85	346⇑	*eP*		Pn	06 59 04.4	-3.0	
BAKI	Biak	12.12	108	P		P	06 59 13.9	+1.8	
	3µm412nm,1.0s								
SOEI	Soe	12.25	181			P	06 59 14.2	+0.6	
SOEI	Soe	12.25	181	P		P	06 59 15.1	+1.5	
	4µm395nm,1.0s								
SBUM	Sibu	12.34	270			P	06 59 15.3	+0.8	
SBUM	Sibu	12.34	270	P		P	06 59 16.0	+1.5	
BATI	Baumata	12.72	184	P		P	06 59 19.2	+0.4	
	132nm,0.3s,baz=344,slow=1.6,SNR=47								
BATI	Baumata	12.72	184	P		P	06 59 20.3	+1.5	
	6µm542nm,0.9s								
PLAI	Plampang	13.19	211	P		P	06 59 24.9	+0.9	
	7µm822nm,0.8s								
BASI	Baing, Sumba	13.31	197	P		P	06 59 27.0	+1.7	
TWSI	Taliwang, Sumb	13.60	214	P		P	06 59 29.9	+1.4	
KSM	Kuching	14.29	266	P		Pn	06 59 37.8	+1.1	
JAGI	Jajag, Banyuwa	15.11	223	P		Pn	06 59 46.5	+0.1	
MTN	Manton Dam	16.64	157	P		P	07 00 01.7	-0.2	
JAY	Jayapura	16.90	107	P		Pn	07 00 06.0	-1.5	
	4.4nm,0.3s,baz=250,slow=10,SNR=11								
SMRI	Semarang	17.04	236	P		P	07 00 07.0	+0.8	
UGM	Wanagama	17.46	233	P		P	07 00 12.3	+1.5	
FITZ	Fitzroy Crossi	20.57	177	P		P	07 00 42.4	-1.3	
	188nm,0.4s,baz=8.1,slow=9.0,SNR=360								
FITZ	Fitzroy Crossi	20.57	177	P		P	07 00 42.7	-1.0	
YULB	Yu-li	20.94	352	P		P	07 00 46.5	-0.9	
YULB					IAmb	IAmb	07 01 10.9		
	comp=Z,24nm,1.2s								
JRMM	Jerantut	22.10	274	P		P	07 01 00.0	+1.8	
YHNB	Yeheng	22.19	352	P		P	07 01 00.4	+1.5	
YHNB					IAmb	IAmb	07 01 15.8		
	comp=Z,33nm,1.0s								
GUMO	Guam	22.86	60	P		P	07 01 05.7	+0.7	
XMIS	Christmas Isla	22.86	235	P		P	07 01 06.3	+1.2	
XMIS					IAmb	IAmb	07 01 09.5		
	comp=Z,41nm,1.1s								
WRAB	Tennant Creek	24.34	157	P		P	07 01 17.7	-0.7	
WRA	Warramunga Arr	24.34	157	P		P	07 01 17.6	-0.8	
	comp=Z,65nm,0.7s,baz=332,slow=11,SNR=551								
WRA				S		S	07 05 10.3	-6.0	
	comp=Z,24nm,1.0s,baz=331,slow=17,SNR=16								
SRAK	Srakaew	24.99	298	P		P	07 01 21.6	-2.8	
	comp=Z,2µmcomp=Z,152nm,0.8s								
PSI	Prapat	25.62	271	P		P	07 01 29.4	-0.7	
	comp=Z,3.7nm,0.6s,baz=178,slow=0.6,SNR=5.2								
CHAI	Chaiyaphum	25.89	302	P		P	07 01 32.4	0.0	
	comp=Z,27nm,0.7s								
GIRL	Giralia	27.02	201	P		P	07 01 42.8	+0.5	
GIRL					IAmb	IAmb	07 01 52.3		
	comp=Z,53nm,1.2s								
ASAR	Alice Springs	27.62	161	P		P	07 01 47.5	-0.2	
	comp=Z,13nm,0.5s,baz=343,slow=7.2,SNR=241								
ASAR				S		S	07 06 05.0	-2.9	
	comp=Z,4.1nm,0.7s,baz=348,slow=20,SNR=8.1								
PHIT	Phitsanulok	27.82	303	P		P	07 01 50.8	+1.2	
	comp=Z,62nm,0.8s								
UTHA	Uthaitani	27.92	299	P		P	07 01 50.7	+0.3	
	comp=Z,24nm,0.7s								
KHLT	Khaolaem Dam	28.36	297	P		P	07 01 54.6	+0.2	
	comp=Z,9.8nm,0.6s								
SUKH	Sukhothai	28.62	303	P		P	07 01 57.7	+1.2	
	comp=Z,14nm,0.7s								
UMPA	Umpang Tak	28.70	300	P		P	07 01 58.1	+0.8	
CMAR	Chiang Mai Arr	29.66	304	P		P	07 02 04.7	-1.1	
	comp=Z,0.7nm,0.4s,baz=122,slow=7.8,SNR=8.4								
NJ2	Nanjing	29.82	350	*eP*		P	07 02 08.8	+1.9	
NJ2					pmax	pmax			
	comp=Z,9.0nm,0.5s								
MORW	Morawa	32.50	194	P		P	07 02 30.0	-0.5	
MORW					IAmb	IAmb	07 02 31.0		
	comp=Z,21nm,0.8s								
FORT	Forrest	33.33	175	P		P	07 02 36.8	-0.8	
JWT	Wachi	34.07	16	P		P	07 02 44.5	+0.7	
CD2	Chengdu	34.37	327	*eP*		P	07 02 47.5	+0.9	
CD2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
XAN	Xi'an	34.55	337	P		P	07 02 49.3	+1.3	
XAN					pmax	pmax			
	comp=Z,9.0nm,0.9s								
NWAO	Narrogin (SRO)	35.98	191	P		P	07 03 00.0	-0.1	
	comp=Z,18nm,0.4s,baz=21,slow=8.3,SNR=28								
NWAO	Narrogin (SRO)	35.98	191	P		P	07 02 59.9	-0.3	
NWAO	Narrogin (SRO)	35.98	191	P		P	07 02 59.4	-0.7	
NWAO					IAmb	IAmb	07 03 00.9		
	comp=Z,84nm,1.4s								
BBOO	Buckleboo	36.83	164	P		P	07 03 07.2	-0.1	
BBOO					IAmb	IAmb	07 03 08.1		
	comp=Z,34nm,0.8s								
STKA	Stephens Creek	37.88	156	P		P	07 03 16.8	+0.7	
	comp=Z,47nm,0.7s,baz=328,slow=9.0,SNR=95								
STKA	Stephens Creek	37.88	156	P		P	07 03 16.6	+0.5	
HHC	Hu-ho-hao-te	39.88	345	*eP*		P	07 03 34.9	+2.4	
HHC					pmax	pmax			
	comp=Z,34nm,0.8s								
HHC					pmax	pmax			
	comp=Z,140nm,6.2s								
CN2	Changchun	41.06	1	*eP*		P	07 03 48.4	+6.4	
CN2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
ARMA	Armidale	41.75	144	P		P	07 03 49.3	+1.4	
ARMA					IAmb	IAmb	07 03 50.2		
	comp=Z,15nm,0.6s								
USRK	Ussuriysk Ar.	41.97	8	P		P	07 03 50.0	+0.7	
	comp=Z,0.9nm,0.4s,baz=194,slow=8.4,SNR=9.3								
MDJ	Mudanjiang	42.11	5	P		P	07 03 51.3	+0.9	
MDJ					pmax	pmax			
	comp=Z,7.0nm,0.7s								
MDJ					pmax	pmax			
	comp=Z,180nm,5.0s								
GTA	Gaotai	43.03	332	⇑P		P	07 03 58.9	+0.8	
GTA					pmax	pmax			
	comp=Z,5.0nm,0.9s								
CAN	Canberra	44.10	151	P		P	07 04 08.4	+1.9	
CAN					IAmb	IAmb	07 04 09.0		
	comp=Z,37nm,0.6s								
TOO	Toolangi	44.41	156	P		P	07 04 10.3	+1.5	
TOO					IAmb	IAmb	07 04 11.6		
	comp=Z,24nm,0.9s								
SONM	Songino Array	47.75	344	P		P	07 04 35.7	+1.0	
	comp=Z,0.9nm,0.5s,baz=160,slow=9.0,SNR=5.7								
TAU	Tasmania Unive	49.71	158	P		P	07 04 50.4	+1.0	
TAU					IAmb	IAmb	07 04 54.9		
	comp=Z,54nm,1.5s								
WMQ	Urumqi	52.47	327	*eP*		P	07 05 11.4	+1.4	
WMQ					pmax	pmax			
	comp=Z,24nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,150nm,4.3s								
WMQ					LR	LR			
	comp=Z,750nm,29.2s								
WMQ					LR	LR			
	comp=Z,4µm,29.3s								
WMQ					LR	LR			
	comp=Z,260nm,29.1s								
ZSN	Zaisan	56.33	329	*eP*		P	07 05 37.3	-0.2	
	baz=329								
SHLS	Shalkode	56.89	322	*eP*		P	07 05 39.6	-2.0	
	baz=322								
UZB	Uzynbulak	57.15	322	*eP*		P	07 05 43.0	-0.6	
	baz=322								
MKAR	Makanchi Array	57.30	327	P		P	07 05 43.4	-1.0	
	comp=Z,6.3nm,0.6s,baz=124,slow=7.7,SNR=65								
PETK	Petropavlovsk-	57.32	23	P		P	07 05 44.9	+0.6	
	comp=Z,1.5nm,0.6s,baz=191,slow=6.0,SNR=4.1								
KSH	Kashi	57.36	316	P		P	07 05 46.4	+1.3	
KSH					pmax	pmax			
	comp=Z,4.0nm,0.5s								
KSH					pmax	pmax			
	comp=Z,130nm,5.7s								
MAKZ	Makanchi	57.48	327	P		P	07 05 46.2	+0.6	
SATY	Saty	57.49	321	*eP*		P	07 05 45.6	-0.3	
	baz=321								
KPKS	Kokpek	57.53	322	*eP*		P	07 05 45.5	-0.6	
	comp=Z,6.1nm,0.7s,baz=322								
MDOK	Medeo	58.40	321	*eP*		P	07 05 51.5	-0.7	
	baz=321								
TNSS	Tian-Shan	58.40	321	*eP*		P	07 05 51.4	-1.1	
	baz=321								
AAA	Alma-Ata	58.51	321	*eP*		P	07 05 52.1	-0.7	
	comp=Z,7.0nm,0.3s,baz=321								
TDK	Taldyqorghan	58.52	323	*eP*		P	07 05 52.6	-0.2	
	comp=Z,8.4nm,0.4s,baz=323								
KUU	Kurty	59.21	321	*eP*		P	07 05 57.0	-0.6	
	comp=Z,8.0nm,0.7s,baz=321								
KBL	Kabul	60.53	309	P		P	07 06 06.3	-0.6	
SEM	Semipalatinsk	60.56	329	*eP*		P	07 06 06.4	-0.4	
	baz=329								
ZALV	Zalesovo Beam	60.66	334	P		P	07 06 07.4	+0.3	
	comp=Z,2.0nm,0.6s,baz=116,slow=6.8,SNR=8.5								
GAR	Garm	61.14	314	P		P	07 06 10.4	-0.4	
GAR					IAmb	IAmb	07 06 11.5		
	comp=Z,18nm,1.0s								
DZA	Taraz	61.99	318	*eP*		P	07 06 15.5	-0.8	
	baz=318								
THZ	Tophouse	62.14	141	P		P	07 06 17.5	+0.2	
THZ					IAmb	IAmb	07 06 41.8		
	comp=Z,67nm,1.5s								
IUG	Iuzhnay	62.56	317	*eP*		P	07 06 19.6	-0.6	
	baz=317								
BKZ	Black Stump Fm	63.20	137	P		P	07 06 24.4	+0.2	
BKZ					IAmb	IAmb	07 06 33.0		
	comp=Z,20nm,1.1s								
BRZS	Berezniki	64.40	326	*eP*		P	07 06 31.4	-0.5	
	baz=326								
BRVK	Borovoye	67.20	328	P		P	07 06 49.2	-0.3	
TIXI	Tiksi	69.03	1	P		P	07 06 59.0	-1.4	
CASY	Casey	69.43	186	P		P	07 07 03.2	+0.2	
CASY					IAmb	IAmb	07 07 03.7		
	comp=Z,12nm,0.7s								
SOCY	Socotra	70.48	282	P		P	07 07 08.4	-2.1	
SOCY					IAmb	IAmb	07 07 09.3		
	comp=Z,6.8nm,0.7s								
NRIK	Noril'sk	71.05	347	P		P	07 07 13.4	+0.7	
	comp=Z,6.3nm,0.6s,baz=131,slow=6.1,SNR=12								
NRIK	Noril'sk	71.05	347	P		P	07 07 13.8	+1.1	
NRIK					IAmb	IAmb	07 07 15.0		
	comp=Z,7.7nm,0.7s								
ABKAR	Akbulak array	71.69	321	P		P	07 07 15.7	-1.2	
RAYN	Ar Rayn	78.95	293	P		P	07 07 57.6	-1.2	
RAYN					IAmb	IAmb	07 07 59.5		
	comp=Z,6.3nm,0.9s								
MAW	Mawson	81.93	200	P		P	07 08 13.1	-0.3	
	comp=Z,2.9nm,0.7s,baz=67,slow=5.5,SNR=2.3								
MAW	Mawson	81.93	200	P		P	07 08 13.2	-0.3	
VNDA	Vanda	82.56	172	P		P	07 08 16.3	-0.3	
	comp=Z,3.0nm,0.6s,baz=318,slow=5.8,SNR=16								
KLMR	Klimovskoe	85.35	331	*eP*		P	07 08 29.6	-1.3	
KLMR					AMP		07 08 32.2		
	comp=Z,11nm,0.6s								
SYO	Syowa Base	90.58	201	⇑*i*	PcP	PcP	07 08 57.0	+0.7	
ARCES	ARCESS Array B	90.78	340	P		P	07 08 55.2	-1.3	
	comp=Z,1.9nm,0.8s,baz=81,slow=5.6,SNR=1.4								
AKASG	Malin Array Be	91.42	321	P		P	07 08 57.3	-2.5	
	comp=Z,0.6nm,0.5s,baz=66,slow=4.4,SNR=4.6								
MNK	Minsk	91.81	325	*i*	P	P	07 09 00.6	-0.9	
	comp=E,2.0nm,0.7s								
MNK				*i*	P	P	07 09 00.6	-0.9	
	comp=N,25nm,0.8s								
MNK				*i*	P	P	07 09 00.6	-0.9	
	comp=Z,14nm,0.7s								
MNK				*j*	pP	pwP	07 10 12.1	-3.2	
MNK				*i*	PP	PP	07 12 44.1	-0.6	
MNK				*i*	PPP	PPP	07 14 44.7		
MNK				*i*	S	SKSac	07 19 03.4	-2.8	
MNK				*i*	sS	pS	07 21 16.5	+13	
MNK				*i*	SS	SS	07 25 51.5	-0.6	
MNK				*i*	SSS	SSS	07 29 33.0		
MNK				*i*	LRM	MLR	07 51 57.2		
	comp=Z,81nm,18.1s								
MNK				*i*	LRM	MLR	07 52 02.3		
	comp=E,24nm,18.8s								
MNK				*i*	LRM	MLR	07 52 05.9		
	comp=N,365nm,18.8s								
FINES	FINESS Array B	91.82	332	P		P	07 08 59.5	-1.9	
	comp=N,2.3nm,0.6s,baz=44,slow=6.3,SNR=9.3								
CRVS	Cervenica-Dubn	96.66	320	*e*	PDIFF	P	07 09 24.0	+0.2	
MODS	Modra-Piesok	99.49	320	*e*	PDIFF	Pdif	07 09 35.0	-1.5	
TORD	Torodi Ar. Bea	121.21	287	PKP		PKPdf	07 14 44.8	-1.2	
	comp=N,0.7nm,0.8s,baz=243,slow=1.3,SNR=3.5								
PLCA	Paso Flores	139.63	162	PKP		PKPdf	07 15 19.8	-0.3	
	comp=N,0.8nm,0.7s,baz=199,slow=4.9,SNR=4.9								
MTO3	Montecristo	142.39	62			PKPpre	07 15 17.6		
CPUP	Villa Florida	156.31	176	PKPab		PKPab	07 16 16.7	+0.1	
	comp=N,1.8nm,0.7s,baz=205,slow=6.0,SNR=5.1								

IDC ***10*** *07:04:23.4±4.5, 41°.93N×126°.54W, h0km, mb2.9/3, mb1 3.4/6, mb1mx3.2/50, mbtmp3.1/6, ML2.7/3, MS3.0/5, Ms1 3.0/5, ms1mx2.9/15, Error ellipse: s-maj=62.7km s-min=25.8km az=63.0*

ANF ***10*** *07:04:24.4±0.8, 41°.78N×126°.49W, h10km, ML2.8/12, Error ellipse: s-maj=9.0km s-min=5.5km az=10.0, Hypocentre not reviewed by the ISC*

NEIC ***10*** *07:04:24.3±1.8, 41°.77N±0°.07×126°.6W±0°.1, h10km±2km, ML2.5/38, Error ellipse: s-maj=17.5km s-min=11.7km az=254.0*

ISC 10 07:04:22.9±2.3, 41°.73N±0°.08×126°.8W±0°.2, h10km, n56, σ1°.08/48, mb2.9/3, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	Bosley Butte	1.96	75		Pn	07 04 54.6	-1.6
KBO				IAML		07 05 06.0	
	comp=E,29nm,1.5s						
KBO				IAML		07 05 22.3	
	comp=N,30nm,2.9s						
KEBM	Edson Butte	2.14	57		Pn	07 04 57.1	-1.6
KEBM				IAML		07 05 29.9	
	comp=N,33nm,1.2s						
KEBM				IAML		07 05 30.2	
	comp=E,39nm,1.9s						
KRMB	Red Mountain	2.16	94		Pn	07 04 57.7	-1.4
JCC	Jacoby Creek,	2.26	113		Pn	07 04 58.1	-2.2
L02E	Cave Junction	2.41	79	P		07 05 00.7	
	baz=261,SNR=14						
L02E				S		07 05 28.6	
	baz=261						
KHMM	Horse Mountain	2.45	109		Pn	07 05 01.0	-2.0
KHMM				IAML		07 05 45.3	
	comp=E,18nm,1.0s						
KHMM				IAML		07 05 45.8	
	comp=N,18nm,2.0s						
K02D	Willamette Mer	2.51	66	P		07 05 01.9	
	baz=248						
J01E	Myrtle Point	2.55	55	P		07 05 02.0	
	baz=235,SNR=8.2						
KMRM	Mail Ridge	2.77	122	Pn	Pn	07 05 06.8	-0.5
M02C	Callahan	2.96	95	P		07 05 09.2	
	baz=279,SNR=33						
HUMO	Hull Mountain	2.97	72	Pn	Pn	07 05 09.3	-0.8
YBH	Yreka Blue Hor	3.04	89	Pn	Pn	07 05 11.1	0.0
	comp=N,2.4nm,0.3s,baz=276,slow=13,SNR=71						
YBH				LR	LR	07 06 15.1	
	comp=N,210nm,18.1s,baz=282,slow=39						
YBH	Yreka Blue Hor	3.04	89	Pn	Pn	07 05 11.6	+0.4
YBH				IAML		07 05 33.2	
	comp=E,9.5nm,1.5s						
N02D	Trinity Center	3.16	102	P		07 05 11.4	
	baz=287,SNR=14						
KCPM	Cahto Peak	3.17	129		Pn	07 05 10.9	-2.0
KCPM				IAML		07 05 57.9	
	comp=E,18nm,2.4s						
KCPM				IAML		07 06 30.2	
	comp=N,14nm,4.8s						
I03D	Drain, OR	3.20	51	P		07 05 11.3	
	baz=232						
I02D	Swishome	3.21	41	P		07 05 12.2	
	baz=221,SNR=14						
L04D	Klamath Falls	3.37	80	P		07 05 15.0	
	baz=264,SNR=13						
O02D	Mt. Diablo Mer	3.40	116	P		07 05 14.4	
	baz=301,SNR=6.9						
WDC	Whiskeytown Da	3.40	108	Pn	Pn	07 05 15.3	-0.6
M04C	Macdoel	3.69	88	P		07 05 20.3	
	baz=272,SNR=20						
I04A	Tendick Farm,	3.82	56	P		07 05 20.7	
	baz=238,SNR=8.4						
HOPS	Hopland Field	3.93	133		Pn	07 05 21.5	-1.7
O03E	Paynes Creek	4.03	109	P		07 05 23.3	
	baz=294						
H04D	Lebanon	4.07	45	P		07 05 24.3	
	baz=227,SNR=6.3						
GDXM	Geysers	4.22	132	Pn	Pn	07 05 27.3	+0.1
GDXM				IAML		07 06 32.3	
	comp=E,7.5nm,1.4s						
GDXM				IAML		07 07 14.2	
	comp=N,7.9nm,0.2s						
J05D	Fort Rock, OR	4.38	67	P		07 05 28.4	
	baz=251						
H04A	Detroit Lake	4.47	47	Pn	Pn	07 05 30.5	-0.2
H04A				IAML		07 06 32.7	
	comp=N,8.3nm,4.2s						
H04A				IAML		07 07 59.5	
	comp=E,7.1nm,4.7s						
K05A	Summer Lake	4.48	75		Pn	07 05 32.3	+1.3
K05A				IAML		07 06 54.5	
	comp=N,8.7nm,4.5s						
ORV	Oroville	4.56	117	Pn	Pn	07 05 32.0	0.0
ORV				IAML		07 06 58.4	
	comp=E,3.8nm,2.7s						
ORV				IAML		07 07 47.0	
	comp=N,3.6nm,4.0s						
PINE	Pine Mountain	4.77	62	Pn	Pn	07 05 34.9	0.0
MOD	Modoc Plateau	4.84	86	Pn	Pn	07 05 35.5	-0.5
MOD				IAML		07 06 10.9	
	comp=E,5.4nm,4.9s						
MOD				IAML		07 07 22.4	
	comp=N,4.9nm,3.8s						
BEKR	Beckworth	5.21	109		Pn	07 05 41.1	+0.1
AFDM	Forest Hills D	5.23	120	Pn	Pn	07 05 42.0	+0.8
AFDM				IAML		07 07 37.3	
	comp=E,3.1nm,3.7s						
AFDM				IAML		07 07 51.7	
	comp=N,2.7nm,4.5s						
E03A	Lebam	5.34	25	Pn	Pn	07 05 42.2	-0.4
E04D	Cinebar	5.70	31	P		07 05 47.6	
	baz=212,SNR=6.5						
RUBR	Rubicon Trail	5.72	116		Pn	07 05 49.5	+1.5
I07A	Izee	5.84	64	Pn	Pn	07 05 50.6	+1.1
VCNR	Virginia City	5.95	112		Pn	07 05 52.5	+1.3
PNTR	Pine Nut	6.08	113	Pn	Pn	07 05 54.2	+1.2
CMB	Columbia Colle	6.14	125	Pn	Pn	07 05 54.1	+0.4
LON	Longmire	6.16	34		Pn	07 05 54.6	+0.7
YERR	Yerington	6.37	113		Pn	07 05 57.4	+0.3
D05A	Enumclaw	6.44	30	Pn	Pn	07 05 58.8	+1.1
G08A	Pilot Rock	6.71	55	Pn	Pn	07 06 00.8	-0.7
HAWA	Hanford	7.00	46	Pn	Pn	07 06 05.1	-0.3
LTY	Liberty	7.04	36	Pn	Pn	07 06 06.3	+0.2
KVN	Kaiserville	7.14	109	Pn	Pn	07 06 07.4	-0.1
NVAR	Mina Array Bea	7.28	114	Pn	Pn	07 06 11.1	+1.6
	comp=N,0.2nm,0.3s,baz=291,slow=13,SNR=10.0						
NVAR				LR	LR	07 08 35.6	
	comp=N,51nm,20.9s,baz=56,slow=34						
BMO	Blue Mountains	7.58	63	Pn	Pn	07 06 12.8	-0.7
B06A	Marblemount	7.75	27	Pn	Pn	07 06 16.3	+0.7
B08A	Colville Reser	8.47	36	Pn	Pn	07 06 26.8	+1.3
C09A	Chrisman Ranch	8.57	42	Pn	Pn	07 06 26.6	-0.3
ELK	Elko	8.75	93	Pn	Pn	07 06 31.2	+1.5
	comp=N,0.0nm,0.3s,baz=288,slow=14,SNR=2.3						
ELK				LR	LR	07 09 49.3	
	comp=N,219nm,19.2s,baz=171,slow=38						
ELK	Elko	8.75	93		Pn	07 06 28.8	-0.8
ISA	Isabella, Lake	8.87	130	Pn	Pn	07 06 32.1	+1.0
HLID	Hailey	9.29	74	Pn	Pn	07 06 37.4	+0.4
DUG	Dugway, Tooele	10.67	94	Pn	Pn	07 06 56.0	+0.1
CTU	Camp Tracy	11.37	90	Pn	Pn	07 07 04.7	-0.8
PFO	Pinyon Flats O	11.50	131	LR	LR	07 10 58.6	
	comp=N,88nm,20.7s,baz=271,slow=34						
HRY	Holter Researc	11.82	60	Pn	Pn	07 07 10.0	-1.5
ANMO	Albuquerque	17.30	106	LR	LR	07 14 52.8	
	comp=N,64nm,19.4s,baz=88,slow=37						
YKA	Yellowknife Ar	22.02	15	P	P	07 09 16.4	-0.7
	comp=N,0.3nm,0.9s,baz=204,slow=10,SNR=3.8						
TXAR	Lajitas Array	22.43	116	P	P	07 09 23.6	+1.7
	comp=N,0.4nm,0.8s,baz=314,slow=11,SNR=4.7						
ULM	Lac du Bonnet	22.97	58	P	P	07 09 26.5	-0.7
	comp=N,0.9nm,0.6s,baz=255,slow=12,SNR=2.2						
H11N3	WAKE ISLAND Hy	59.62	270	T	T	08 18 46.5	
	baz=53,slow=75,SNR=24						
H11N2	WAKE ISLAND Hy	59.62	270	T	T	08 18 45.6	
	baz=53,slow=75,SNR=16						
H11N1	WAKE ISLAND Hy	59.64	270	T	T	08 18 42.1	
	baz=53,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	60.52	269	T	T	08 19 52.0	
	baz=52,slow=75,SNR=76						
H11S2	WAKE ISLAND Hy	60.52	269	T	T	08 19 50.1	
	baz=52,slow=75,SNR=59						
H11S3	WAKE ISLAND Hy	60.53	269	T	T	08 19 54.1	
	baz=52,slow=75,SNR=45						

IDC ***10*** *07:15:43.5±27.0, 8°.93N×84°.89W, h0km, mb3.2/3, mb1 3.7/3, mb1mx3.5/28, mbtmp3.2/3, Error ellipse: s-maj=588.9km s-min=125.0km az=179.0*

UPA ***10*** *07:15:51.0±1.3, 9°.38N×85°.94W, h0km±162km, MW3.8*

UCR ***10*** *07:15:53.3±2.0, 9°.46N×85°.91W, h25km±5km, MW3.8*

INET ***10*** *07:15:53.9, 9°.46N×85°.80W, h8km, MW2.9*

ISC 10 07:15:52.0±2.2, 9°.49N±0°.06×85°.86W±0°.07, h7km±12km, n46, σ0°.93/57, mb3.1/3, 14C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	Playa Garza	0.48	27	⇑*i* P	Pb	07 16 03.8	+1.0
INDI	Punta indio, G	0.52	43	⇑*i* P	Pb	07 16 04.8	+1.3
LAFE	Finca La Fe, P	0.99	71	⇑*i* P	Pg	07 16 11.1	+0.1
PLVR	Palo Verde	0.99	30	‖*e* P	Pg	07 16 10.1	-1.1
JTS	Las Juntas de	1.20	48	*e* P	Pg	07 16 14.6	-0.5
LIM1	Limonal	1.35	26	*i* P	Pn	07 16 17.0	-0.4
GBS3	Finca Las Img	1.35	17	*i* P	Pn	07 16 16.6	-0.8
GBS3				*i* S	Sb	07 16 34.7	-0.5
CUI	Cuipilapa	1.35	30	*i* P	Pn	07 16 16.1	-1.4
CUI				*i* S	Sb	07 16 35.4	+0.1
BUEV	Buena Vista	1.38	19	*i* P	Pn	07 16 17.4	-0.5
BUEV

Error ellipse: s-maj=19.7km s-min=9.3km az=62.0, Suspected Mining explosion.

ISC 10 07:16:50.2±2.0, 53.65N±0.01, 87.8E±0.1, h0km, n11, σ1§25/17, 7C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.79	281	*i*		07 29 30.0	
	baz=96,slow=313,SNR=1.0						
ZAA0	Zalesovo Array	1.79	281	⇑Pn	Pn	07 17 23.1	+0.8
	5.0nm,0.5s						
ZAA0				⇓Sn	Sg	07 17 49.0	+1.3
	17nm,0.5s						
ZALV	Zalesovo Beam	1.79	281	Pn	Pb	07 17 23.3	-0.6
	15nm,0.3s,baz=101,slow=14,SNR=109						
ZALV				Lg	Lg	07 17 49.6	
	34nm,0.3s,baz=100,slow=25,SNR=21						
KURBB	Kurchatov Arra	6.46	246	Pn	Pn	07 18 28.1	+1.6
	0.8nm,0.3s,baz=62,slow=14,SNR=74						
KURBB				Sn	Sn	07 19 41.0	+0.1
	0.3nm,0.3s,baz=136,slow=25,SNR=6.4						
KURBB				Lg	Lg	07 20 14.4	
	0.3nm,0.3s,baz=60,slow=36,SNR=8.7						
KURBB	Kurchatov Arra	6.46	246	⇑Pn	Pn	07 18 27.5	+1.0
	11nm,0.5s						
KURBB				⇓Sn	Sn	07 19 39.3	-1.6
	18nm,0.5s						
KURBB				⇓Lg	Lg	07 20 16.2	
	25nm,0.6s						
MK31	Makanchi Array	7.72	209	⇑Pn	Pn	07 18 45.0	+1.1
	0.7nm,0.5s,baz=29,slow=13,SNR=23						
MK31				⇑Sn	Sn	07 20 10.7	-1.3
	2.9nm,0.7s,baz=28,slow=18,SNR=4.5						
MK31				⇑Lg	Lg	07 20 54.3	
	4.3nm,0.6s,baz=34,slow=33,SNR=4.5						
MKAR	Makanchi Array	7.72	209	Pn	Pn	07 18 45.1	+1.3
	0.6nm,0.3s,baz=28,slow=13,SNR=28						
MKAR				Sn	Sn	07 20 10.1	-1.8
	0.6nm,0.3s,baz=32,slow=26,SNR=7.8						
MKAR				Lg	Lg	07 20 51.7	
	0.5nm,0.3s,baz=35,slow=34,SNR=4.3						
MAKZ	Makanchi	7.80	211	⇑Pn	Pn	07 18 46.0	+1.0
	2.1nm,0.8s						
MAKZ				⇑Sn	Sn	07 20 14.0	+0.1
	1.9nm,0.6s						
MAKZ				⇓Lg	Lg	07 20 54.4	
	5.3nm,0.8s						
BVAR	Borovoye Array	10.43	274	Pn	Pn	07 19 21.6	+0.6
	1.1nm,0.3s,baz=98,slow=6.0,SNR=12						
BVAR				Sn	Sn	07 21 16.9	-1.5
	1.4nm,0.3s,baz=76,slow=28,SNR=7.6						
AKTO	Aktyubinsk	18.53	272	P	Pn	07 21 09.1	+0.9
	0.1nm,0.3s,baz=89,slow=14,SNR=1.9						
ESDC	Sonseca Array	60.21	297	P	P	07 26 59.0	-0.8
	0.4nm,0.4s,baz=46,slow=8.8,SNR=4.1						

IDC 10 07:26:36.8±3.2, 54.27N×86.95E, h0km, mb1 3.0/2, mb1mx2.8/55, mbtmp3.0/2, ML2.5/2, Error ellipse: s-maj=30.4km s-min=18.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.30	256	*i*		07 35 40.0	
	baz=76,slow=317,SNR=2.9						
ZALV	Zalesovo Beam	1.30	256	Pg	Pg	07 27 00.1	-1.6
	2.3nm,0.3s,baz=72,slow=17,SNR=26						
ZALV				Lg	Lg	07 27 18.6	
	2.1nm,0.3s,baz=76,slow=27,SNR=5.9						
KURBB	Kurchatov Arra	6.31	238	Pn	Pn	07 28 11.8	+0.8
	0.1nm,0.3s,baz=54,slow=14,SNR=16						
MKAR	Makanchi Array	8.05	203	Pn	Pn	07 28 36.4	+1.4
	0.1nm,0.3s,baz=18,slow=12,SNR=4.2						

IDC 10 07:32:55.3±4.1, 52.30N×160.91E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.2/41, mbtmp3.6/3, ML2.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/59, Error ellipse: s-maj=85.8km s-min=44.0km az=1.0

KRSC 10 07:32:59.7±1.8, 52.35N×160.73E, h18km±26km, ML3.9

ISC 10 07:32:57.7±1.9, 52.33N±0.06×160.79E±0.06, h10km±10km, n36, σ1§39/44, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.90	329	*e*P	Pn	07 33 16.4	0.0
SPN				*e*S	Sg	07 33 27.2	+0.5
NLC	Nalytchevo	1.21	314	*e*P	Pg	07 33 21.2	+0.2
NLC				*e*S	Sb	07 33 35.7	-0.8
RUS	Russkaya	1.40	275	*e*P	Pb	07 33 24.1	+0.2
RUS				*e*S	Sn	07 33 41.3	-0.4
DALK	Dalny	1.42	300	*e*P	Pb	07 33 24.4	+0.1
DALK				*e*S	Sn	07 33 42.1	-0.2
PET	Petropavlovsk	1.47	299	*e*P	Pb	07 33 25.2	0.0
PET				*e*S	Sn	07 33 43.3	-0.3
UGLR	Uglovaya	1.48	307	*e*P	Pg	07 33 26.0	-0.1
SDLR	Sedlovina	1.49	310	*e*P	Pb	07 33 25.8	+0.2
SDLR				*e*S	Sn	07 33 44.6	+0.3
SMAR	Somma	1.52	309	*e*P	Pb	07 33 26.4	+0.2
AVH	Avacha	1.56	308	*e*P	Pb	07 33 27.1	+0.5
KRER	Koryakskii	1.57	309	*e*P	Pg	07 33 28.0	+0.1
MTVR	Mutnovka	1.60	276	*e*P	Pb	07 33 27.5	0.0
MTVR				*e*S	Sn	07 33 47.1	+0.1
KOK	Koryaka	1.62	307	*e*P	Pb	07 33 28.3	+0.5
KRX	Arik	1.65	309	*e*P	Pb	07 33 28.3	-0.1
GRL	Gorelyy	1.67	279	*e*P	Pg	07 33 29.5	-0.3
GRL				*e*S	Sg	07 33 51.3	-0.2
KRMR	Karymshinskiy	1.69	288	*e*P	Pb	07 33 29.6	+0.6
KRMR				*e*S	Sb	07 33 50.9	+0.6
KDTR	Khodutka, Kamc	1.75	254	*e*P	Pn	07 33 29.1	+1.0
KDTR				*e*S	Sn	07 33 49.1	-1.4
KII	Karymskiy	1.89	335	*e*P	Pb	07 33 32.4	+0.1
PETK	Petropavlovsk-	2.03	294	Pn	Pn	07 33 31.9	-0.1
	12nm,0.3s,baz=108,slow=18,SNR=184						
PETK				Sn	Sb	07 34 00.3	+0.3
	10nm,0.3s,baz=126,slow=28,SNR=8.7						
GNL	Ganaly	2.19	310	*e*P	Pb	07 33 37.0	-0.6
APC	Apacha	2.29	286	*e*P	Pb	07 33 37.9	-1.2
MKZ	Mys Kozlova	2.30	14	*e*P	Pb	07 33 37.7	-1.5
PAU	Pauzhetka	2.61	252	*e*P	Pb	07 33 44.1	-0.5
KZV	Kizimen	2.80	354	*e*P	Pb	07 33 46.7	-1.2
KZV				*e*S	Sb	07 34 20.5	-1.8
TUMD	Tumrok D	2.89	356	*e*P	Pn	07 33 46.1	+2.3
TUMD				*e*S	Sn	07 34 19.6	+1.1
TUMR	Tumrok	2.98	353	*e*P	Pb	07 33 48.4	-2.6
KMNR	Kamenistaya	3.45	355	*e*P	Pb	07 33 57.9	-1.0
ESO	Esso	3.80	342	*e*P	Pb	07 34 00.8	-4.1
SRDR	Sredinnyy	4.04	352	*e*P	Pn	07 34 04.0	+4.3
KBTR	Krutoberegovo	4.06	16	*e*P	Pn	07 34 03.3	+3.4
KSRS	Korea Array	27.34	250	LR	LR	07 50 14.5	
	comp=Z,48nm,20.6s,baz=320,slow=38						
H11N2	WAKE ISLAND Hy	32.88	169	T	T	08 15 21.5	
	baz=353,slow=76,SNR=14						
H11N3	WAKE ISLAND Hy	32.90	169	T	T	08 15 30.7	
	baz=353,slow=76,SNR=10.0						
H11N1	WAKE ISLAND Hy	32.90	169	T	T	08 15 23.4	
	baz=353,slow=76,SNR=10						
MKAR	Makanchi Array	48.87	297	P	P	07 41 42.4	-0.9
	0.1nm,0.4s,baz=63,slow=9.0,SNR=3.9						
ARCES	ARCESS Array B	54.14	342	LR	LR	08 09 06.6	
	comp=Z,77nm,18.1s,baz=40,slow=40						
FINES	FINESS Array B	60.99	337	P	P	07 43 10.6	-0.1
	0.9nm,0.6s,baz=23,slow=10,SNR=3.6						

NEIC 10 07:58:15.1±0.6, 15.19S±0.07×173.10W±0.06, h10km±2km, mb4.2/7, Error ellipse: s-maj=14.6km s-min=4.1km az=37.0

IDC 10 07:58:16.5±1.8, 15.35S×173.33W, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.9/39, mbtmp4.0/5, MS3.3/3, Ms1 3.3/3, ms1mx3.0/39, Error ellipse: s-maj=120.6km s-min=24.3km az=148.0

ISC 10 07:58:18.6±0.7, 15.19S±0.08×173.08W±0.09, h29km, n36, σ1§83/19, mb4.2/9, MS3.3/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.79	45	Pn	Pn	07 58 46.7	-1.0
	30nm,0.3s,baz=183,slow=2.3,SNR=29						
AFI				Sn	Sn	07 59 06.2	-3.3
	222nm,0.3s,baz=79,slow=19,SNR=12						
AFI				LR	LR	07 59 39.1	
	comp=Z,405nm,21.8s,baz=264,slow=40						
AFI	Afiamalu	1.79	45	Pn	Pn	07 58 46.5	-1.2
NIUE	Niue	4.90	142	Pn	Pn	07 59 27.8	-2.6
MSVF	Nonsavu	8.88	252	LR	LR	08 03 25.4	
	comp=Z,479nm,18.4s,baz=62,slow=36						
FUNA	Funafuti	10.04	310	Pn	Pn	08 00 39.2	-1.8
PPT	Papeete	22.67	99	LR	LR	08 10 13.8	
	comp=Z,56nm,19.0s,baz=238,slow=31						
PAE	Paea	22.67	99	*e*T	T	08 26 31.1	
	1.6nm,0.3s						
PPT2	Papeete2	22.67	99	*e*LQ	LQ	08 07 43.3	
	292nm,28.2s						
PPT2				*e*LR	LR	08 08 51.8	
	comp=Z,120nm,24.5s						
PPT2	Papeete2	22.67	99	*e*T	T	08 26 31.4	
	2.2nm,0.4s						
TBI	Tubuai	23.70	114	*e*LQ	LQ	08 08 09.7	
	190nm,32.0s						
TBI				*e*LR	LR	08 09 12.3	
	comp=Z,138nm,24.5s,baz=294						
TBI	Tubuai	23.70	114	*e*T	T	08 27 46.6	
	4.2nm,0.3s						
TAOE	Nuku Hiva Isla	32.79	83	*e*LR	LR	08 13 21.5	
	comp=Z,91nm,22.9s						
TAOE	Nuku Hiva Isla	32.79	83	*e*T	T	08 39 12.4	
	18nm,0.2s						
RKT	Rikitea	36.77	108	*e*LR	LR	08 15 19.8	
	comp=Z,105nm,26.2s						
RKT	Rikitea	36.77	108	*e*T	T	08 44 06.2	
	2.4nm,0.3s						
H11S2	WAKE ISLAND Hy	38.94	329	T	T	08 47 22.8	
	baz=149,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	38.95	329	T	T	08 47 28.5	
	baz=149,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	38.96	329	T	T	08 47 32.3	
	baz=149,slow=76,SNR=12						
CTAO	Charters Tower	38.99	257	P	P	08 05 42.0	-0.8
H11N3	WAKE ISLAND Hy	39.88	330	T	T	08 48 39.1	
	baz=149,slow=76,SNR=4.3						
H11N1	WAKE ISLAND Hy	39.89	330	T	T	08 48 19.6	
	baz=149,slow=76,SNR=6.3						
H11N2	WAKE ISLAND Hy	39.90	330	T	T	08 48 20.6	
	baz=149,slow=76,SNR=4.9						
COEN	Coen	42.30	266	P	P	08 06 09.2	-1.0
COEN				IAmb	IAmb	08 06 36.3	
	comp=Z,11nm,1.4s						
STKA	Stephens Creek	44.41	240	P	P	08 06 28.1	+1.2
	comp=Z,2nm,0.7s,baz=55,slow=11,SNR=4.4						
STKA	Stephens Creek	44.41	240	IAmb	IAmb	08 06 29.0	
	comp=Z,0.7nm,0.9s						
WB0	Warramunga Arr	50.15	257	P	P	08 07 11.8	-0.1
WB0				IAmb	IAmb	08 07 16.0	
	comp=Z,6.6nm,1.3s						
WB2	Warramunga Arr	50.18	257	P	P	08 07 11.3	-0.8
WB2				IAmb	IAmb	08 07 20.9	
	comp=Z,5.1nm,1.2s						
WRA	Warramunga Arr	50.19	257	P	P	08 07 11.3	-0.9
	comp=Z,1.3nm,0.5s,baz=91,slow=6.8,SNR=25						
AS31	Alice Springs	50.47	252	P	P	08 07 13.1	-1.1
AS31				IAmb	IAmb	08 07 17.1	
	comp=Z,1.2nm,0.6s						
ASAR	Alice Springs	50.47	252	P	P	08 07 13.8	-0.5
	comp=Z,4.3nm,0.7s,baz=88,slow=8.0,SNR=40						
QSPA	South Pole Qui	74.86	180	P	P	08 09 57.5	+1.1
TXAR	Lajitas Array	80.24	56	P	P	08 10 30.6	+3.6
	comp=Z,1.1nm,1.1s,baz=262,slow=5.0,SNR=4.9						
YKA	Yellowknife Ar	89.78	23	P	P	08 11 17.0	+3.0
	comp=Z,0.3nm,0.9s,baz=232,slow=4.7,SNR=5.9						
GERES	GERESS Array B	145.98	352	PKPbc	PKiKP	08 17 59.4	+0.3
	comp=Z,0.4nm,0.4s,baz=0.0,slow=2.7,SNR=3.4						
BR131	Keskin Array S	146.18	321	PKPdf	PKPdf	08 17 55.0	-0.6
BRTR	Keskin Array B	146.18	321	PKPbc	PKiKP	08 17 59.4	-0.5
	comp=Z,5.4nm,1.1s,baz=58,slow=3.1,SNR=7.3						

IDC 10 08:00:20.4±11.0, 0.38N×123.81E, h102km±106km, mb3.0/3, mb1 3.3/4, mb1mx3.1/41, mbtmp3.4/4, ML3.7/1, Error ellipse: s-maj=129.2km s-min=30.2km az=61.0

DJA 10 08:00:26.2±0.6, 0.12S×123.15E, h139km±7km, M3.9/8, MLv3.9/8

ISC 10 08:00:25.8±0.9, 0.12S±0.07×123.15E±0.07, h162km, n11, σ1§93/16, mb3.2/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	Gorontalo	0.77	349	P	Pn	08 00 50.0	-0.1
GTOI				S	Sn	08 01 07.7	-1.0
LUWI	Luwuk	0.99	203	P	Pn	08 00 50.3	-1.4
LUWI				S	Sn	08 01 08.8	-2.8
KMSI	Cibinong	1.08	50	P	Pn	08 00 51.2	-1.2
MRSI	Marisa	1.35	296	P	Pn	08 00 53.4	-1.5
MRSI				S	Sn	08 01 14.1	-3.1
APSI	Ampana	1.70	243	P	Pn	08 00 58.5	+0.1
APSI				S	Sn	08 01 22.2	-1.2
SANI	Sanana	3.42	124	P	Pn	08 01 16.1	-2.9
NLAI	Namlea	5.01	128	P	Pn	08 01 39.7	0.0
FITZ	Fitzroy Crossi	18.03	172	P	Pn	08 04 26.9	+0.5
	comp=Z,0nm,0.3s,baz=11,slow=9.3,SNR=2.2						
WRA	Warramunga Arr	22.54	152	P	P	08 05 13.1	+0.6
	0.9nm,0.5s,baz=332,slow=10,SNR=32						
ASAR	Alice Springs	25.63	157	P	P	08 05 44.0	+3.4
	0.3nm,0.6s,baz=351,slow=16,SNR=5.1						
ASAR				PcP	PcP	08 09 08.7	+1.5
	0.3nm,0.4s,baz=356,slow=1.9,SNR=5.0						
MKAR	Makanchi Array	58.80	328	P	P	08 10 07.8	+0.6
	0.1nm,0.3s,baz=121,slow=7.6,SNR=2.6						

UCR 10 08:16:56.4±2.1, 9.43N×85.94W, h28km±6km, MW3.5, 8C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	Playa Garza	0.56	32	*i* P	Pb	08 17 07.4	-0.4
GRZA				*e*S	Sn	08 17 17.3	+0.2
INDI	Punta indio, G	0.61	45	*e*P	Pb	08 17 08.3	-0.2
INDI				*e*S	Sn	08 17 18.3	+0.2
GUAI	GUAI	0.93	27	*i* P	Pn	08 17 12.7	-1.0
GUAI				*i* S	Sn	08 17 26.1	0.0
PLVR	Palo Verde	1.08	32	*e*P	Pn	08 17 14.0	-1.8
LAFE	Finca La Fe, P	1.08	70	*i* P	Pn	08 17 14.8	-0.8
JTS	Las Juntas de	1.29	49	*e*P	Pn	08 17 18.7	0.0
JTS				*e*S	Sb	08 17 36.7	+0.4
GBS3	Finca Las Img	1.42	19	*i* P	Pn	08 17 20.1	-0.3
CUI	Cuipilapa	1.44	32	*i* P	Pn	08 17 19.6	-1.1
BUEV	Buena Vista	1.45	21	*i* P	Pn	08 17 20.7	-0.2
CASO	Castillo	1.55	50	*i* P	Pn	08 17 23.0	+0.8
SRA1	San Ramn	1.57	66	*e*P	Pn	08 17 22.8	+0.1
ARE1	Arenal 1	1.58	49	*e*P	Pb	08 17 23.9	-1.0
CEDE	Laguna Cedeo	1.60	49	*i* P	Pn	08 17 23.6	+0.6
FORC	Fortuna	1.62	50	*i* P	Pb	08 17 24.4	-1.2
LCR2	La Lucha 2	1.93	81	*e*P	Pn	08 17 27.6	0.0
COVE	Coope Vega, Sa	1.98	50	*e*P	Pn	08 17 29.1	+1.0
RIMA	Rio Macho	2.07	81	*e*P	Pn	08 17 29.8	+0.2
CDM	Cerro de Muert	2.15	87	*e*P	Pn	08 17 31.3	+0.6
RIOS	Rincon, Osa	2.50	107	*e*P	Pn	08 17 35.2	0.0
EDBA	Buenos Aires	2.64	96	*e*P	Pn	08 17 38.5	+1.3
LPLA	Las Palmas La	2.92	98	*e*P	Pn	08 17 41.7	+0.6

IDC 10 08:22:28.1±1.1, 19.36N×145.33E, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.7/56, mbtmp3.7/5, Error ellipse: s-maj=53.1km s-min=26.2km az=121.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	41.95	209	P	P	08 30 20.8	0.0
	1.1nm,0.3s,baz=32,slow=12,SNR=13						
MKAR	Makanchi Array	57.75	314	P	P	08 32 20.8	-0.1
	0.1nm,0.3s,baz=83,slow=6.2,SNR=3.7						
ILAR	Eielson Array	63.21	26	P	P	08 32 58.2	+0.3
	0.4nm,0.6s,baz=252,slow=5.3,SNR=4.8						
YKA	Yellowknife Ar	77.57	28	P	P	08 34 25.6	-0.1
	0.4nm,0.6s,baz=292,slow=5.0,SNR=10						
NVAR	Mina Array Bea	83.01	52	P	P	08 34 55.7	-0.2
	0.4nm,0.6s,baz=266,slow=5.2,SNR=5.1						

NEIC 10 08:24:34.5±1.7, 5.67S±0.05×153.23E±0.07, h10km±1km, mb5.2/64, Ms_20 4.7/63, Error ellipse: s-maj=13.9km s-min=4.2km az=52.0

IDC 10 08:24:34.1±0.5, 5.60S×153.14E, h0km, mb4.7/23, mb1 4.9/26, mb1mx4.8/40, mbtmp4.7/26, ML4.2/2, MS4.1/24, Ms1 4.1/24, ms1mx4.0/31, Error ellipse: s-maj=17.4km s-min=11.5km az=97.0

BJI 10 08:24:36.4±0.0, 5.26S×153.49E, h25km, mB5.2/42, mb4.8/54, Ms4.6/31, Ms7 4.3/30

GCMT 10 08:24:39.5±0.2, 5.87S±0.01×153.01E±0.02, h17km, MW5.1/106, Moment Tensor Solution. s76,c86; s106,c156; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.56±.14; Mθθ-2.83±.09; Mϕϕ-0.73±.09; Mrθ3.53±.26; Mθϕ0.90±.06; Mϕr-1.82±.28; Best double couple: M₀5.20100×10¹⁶ NP1:ϕs287.00000°, δ20.00000°, λ82.00000°. NP2:ϕs115.00000°, δ70.00000°, λ93.00000°. Principal axes: T 5.4130, Plg65.0000°, Azm231.0000°; N -0.4270, Plg3.0000°, Azm294.0000°; P -4.9890, Plg25.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

DJA 10 08:24:40.1±0.5, 6°S±3°×15°E±1°, h44km±4km, M5.1/31, mb5.0/31, mB5.6/14, MLv5.4/3, Mw(mB)5.0/14, MwMwp5.0/3, Mwp5.3/3

ISC 10 08:24:34.5±1.1, 5.55S±0.04×153.20E±0.05, h6km±6km, n204, σ1§61/186, mb5.0/75, MS4.5/69, 1C-3D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.70	322		Pb	08 25 06.5	+0.2
RABL				Sn	Sg	08 25 29.0	-0.3
RABL	Rabaul	1.70	322	P	Pg	08 25 06.8	-0.4
MANU	Manus Island	6.79	301	Pn	Pn	08 26 14.8	0.0
PMG	Port Moresby	7.11	237	Pn	Pn	08 26 19.8	+0.6
	5.4nm,0.3s,baz=45,slow=7.3,SNR=26						
PMG				Sn	Sn	08 27 39.4	-1.0
	10nm,0.3s,baz=211,slow=23,SNR=7.0						
PMG				LR	LR	08 29 27.2	
	comp=Z,1µm,18.0s,baz=21,slow=42						
PMG	Port Moresby	7.11	237	Pn	Pn	08 26 19.4	+0.2
PMG	Port Moresby	7.11	237	P	Pn	08 26 20.9	+1.7
JAY	Jayapura	12.83	283	Pn	Pn	08 27 37.5	-0.1
	1.0nm,0.3s,baz=180,slow=23,SNR=7.5						
COEN	Coen	12.93	229	Pn	Pn	08 27 39.9	+0.8
PATS	Pohnpei	13.32	23	P	Pn	08 27 45.9	+1.5
	baz=14,SNR=5.1						
PATS				S	Sn	08 30 06.2	-6.7
	baz=14						
PATS	Pohnpei	13.32	23	Pn	Pn	08 27 44.8	+0.4
GENI	Genyem	13.33	282	P	Pn	08 27 45.4	+0.9
	2µm90nm,1.8s						
MTSU	Mount Surprise	15.22	214	P	Pn	08 28 10.4	+0.1
	baz=15,SNR=3.9						
CTA	Charters Tower	15.95	204	Pn	Pn	08 28 20.9	+1.2
	0.7nm,0.3s,baz=27,slow=14,SNR=19						
CTA				LR	LR	08 33 44.5	
	comp=Z,991nm,21.0s,baz=3.0,slow=35						
CTAO	Charters Tower	15.95	204		Pn	08 28 20.9	+1.2
SANVU	Saraoutou	16.90	127		P	08 28 34.1	+0.1
SANVU				IAmb	IAmb	08 28 55.6	
	comp=Z,202nm,1.1s						
EIDS	Eidsvold	19.81	186	P	P	08 29 05.4	-0.5
QIS	Mount Isa	19.92	220	P	P	08 29 07.7	+0.5
	baz=20,SNR=45						
GUMO	Guam	20.74	337		Pn	08 29 17.5	-0.9
DZM	Mont Dzumac	20.83	143	P	Pn	08 29 19.0	-0.5
	comp=Z,116nm,1.1s,baz=206,slow=15,SNR=20						
FAKI	Fak Fak	21.06	276	P	P	08 29 20.9	+1.2
FAKI				IAMs_20	IAMs_20	08 38 15.7	
	comp=Z,924nm,18.0s						
RMQ	Roma	21.25	191	P	P	08 29 22.8	+1.3
	baz=21,SNR=42						
KDU	Kakadu	21.65	249	P	P	08 29 25.5	-0.4
	baz=22,SNR=28						
SIJI	Sorong	22.39	281	P	P	08 29 33.0	-1.0
	comp=Z,4.2nm,0.3s,baz=287,slow=19,SNR=2.7						
SWI	Sorong	22.39	281	P	P	08 29 31.6	-2.4
	comp=Z,2µmcomp=Z,33nm,1.2s						
MTN	Manton Dam	22.95	250	P	P	08 29 38.8	-1.0
	baz=23,SNR=16						
MTN	Manton Dam	22.95	250	P	P	08 29 38.8	-1.0
MTN				IAmb	IAmb	08 29 47.6	
	comp=Z,84nm,0.9s						
WRAB	Tennant Creek	23.25	230	P	P	08 29 41.8	-1.1
WRAB				IAmb	IAmb	08 29 47.1	
	comp=Z,57nm,1.0s						
WRA	Warramunga Arr	23.26	230	P	P	08 29 42.1	-1.0
	comp=Z,43nm,1.0s,baz=56,slow=10,SNR=66						
WRA				S	S	08 33 53.7	-2.3
	comp=Z,2.4nm,1.0s,baz=59,slow=17,SNR=2.1						
WRA				ScP	ScP	08 37 10.8	+1.0
	comp=Z,4.0nm,1.1s,baz=67,slow=3.3,SNR=5.0						
WRA				LR	LR	08 39 20.3	
	comp=Z,628nm,19.5s,baz=65,slow=38						
ARMA	Armidale	24.78	183	P	P	08 29 57.9	+0.5
	baz=25,SNR=5.8						
ARMA	Armidale	24.78	183	P	P	08 29 53.6	-3.8
ARMA				IAmb	IAmb	08 29 59.0	
	comp=Z,40nm,1.2s						
AS31	Alice Springs	25.88	224	P	P	08 30 05.9	-1.5
ASAR	Alice Springs	25.88	224	P	P	08 30 06.8	-0.6
	comp=Z,16nm,0.9s,baz=58,slow=8.8,SNR=78						
ASAR				PcP	PcP	08 33 37.5	+0.8
	comp=Z,2.4nm,0.9s,baz=64,slow=2.4,SNR=5.0						
ASAR				ScP	ScP	08 37 20.1	+3.0
	comp=Z,2.6nm,1.0s,baz=55,slow=2.8,SNR=7.0						
ASAR				LR	LR	08 40 00.3	
	comp=Z,474nm,20.1s,baz=51,slow=36						
CMSA	Cobar Meteorol	26.79	194	P	P	08 30 15.6	+0.1
	baz=27,SNR=9.2						
MSVF	Nonsavu	27.13	119	LR	LR	08 40 21.2	
	comp=Z,810nm,18.3s,baz=327,slow=35						
STKA	Stephens Creek	28.36	201	P	P	08 30 28.4	-1.1
	comp=Z,15nm,0.9s,baz=355,slow=8.2,SNR=25						
STKA				LR	LR	08 42 27.9	
	comp=Z,626nm,18.1s,baz=26,slow=38						
STKA	Stephens Creek	28.36	201	P	P	08 30 28.4	-1.1
	baz=28,SNR=20						
STKA	Stephens Creek	28.36	201	P	P	08 30 27.5	-2.0
SOEI	Soe	28.

comp=Z,60nm,1.3s
JWT Wachi 43.94 339 P **P** **08 32 42.5 +0.1**
MJAR Matsushiro Arr 44.16 343 P **P** **08 32 42.8 -1.5**
comp=Z,8.6nm,1.1s,baz=166,slow=9.0,SNR=9.0
MJAR PcP **PcP** **08 34 30.4 +1.2**
comp=Z,7.2nm,1.1s,baz=174,slow=3.8,SNR=6.2
MJAR LR LR 08 49 56.2
comp=Z,94nm,21.2s,baz=180,slow=34
MAJO Matsushiro 44.17 343 P **P** **08 32 42.3 -2.0**
MAT Matsushiro 44.17 343 P **P** **08 32 42.5 -1.8**
MAT *e*S **S** **08 39 16.0 -1.9**
CISI Cisompet, Garu 45.12 265 P **P** **08 32 50.7 -1.6**
LEM Lembang 45.33 266 LR LR 08 55 59.7
comp=Z,179nm,19.3s,baz=140,slow=42
JSD Sado 45.54 343 P **P** **08 32 54.8 -0.3**
JSD IAmb IAmb 08 32 56.3
comp=Z,39nm,1.4s
XMIS Christmas Isla 47.30 261 P **P** **08 33 08.1 -1.3**
PMBI Palembang 48.36 271 IAMs_20 IAMs_20 08 54 11.0
comp=Z,812nm,18.0s
KASI Kota Agung 48.47 268 P **P** **08 33 16.4 -2.1**
comp=Z,48nm,1.2s
KSRS Korea Array 48.85 333 P **P** **08 33 20.6 -0.3**
comp=Z,2.1nm,0.8s,baz=151,slow=7.4,SNR=10
KSRS PcP **PcP** **08 34 47.5 +1.9**
comp=Z,1.0nm,0.6s,baz=158,slow=4.1,SNR=4.4
KSRS LR LR 08 51 23.1
comp=Z,99nm,18.9s,baz=247,slow=33
INCN Inchon 49.46 332 P **P** **08 33 26.4 +0.7**
NJ2 Nanjing 49.68 321 *e*P **P** **08 33 29.4 +2.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
MYKOM Kota Tinggi 49.83 277 P **P** **08 33 28.6 -0.3**
MYKOM IAmb IAmb 08 33 40.3
comp=Z,45nm,1.5s
ASAJ Asahikawa 50.36 350 P **P** **08 33 33.2 +0.8**
comp=Z,13nm,0.9s,baz=244,slow=24,SNR=4.9
BKNI Bangkinang 52.41 275 P **P** **08 33 47.9 -0.4**
USRK Ussuriysk Ar. 53.09 341 P **P** **08 33 52.3 -0.4**
comp=Z,5.3nm,1.0s,baz=160,slow=6.1,SNR=10
YSS Yuzh-Sakhalins 53.09 351 P **P** **08 33 52.9 +0.1**
YSS IAmb IAmb 08 34 19.4
comp=Z,45nm,1.5s
MNSI Mandailing Nat 53.92 275 P **P** **08 33 59.2 -0.2**
comp=Z,3μmcomp=Z,28nm,0.9s
MDJ Mudanjiang 54.26 339 P **P** **08 34 03.1 +1.7**
MDJ sP pwP 08 34 10.8 +4.3
MDJ pmax pmax
comp=Z,13nm,1.2s
MDJ pmax pmax
comp=Z,140nm,5.2s
ENH Enshi 54.96 313 IAMs_20 IAMs_20 08 54 02.1
comp=Z,205nm,19.0s
CN2 Changchun 55.15 336 *e*P **P** **08 34 08.3 +0.5**
CN2 *e*S **S** **08 41 48.0 -3.3**
CN2 pmax pmax
comp=Z,10.0nm,1.5s
CN2 pmax pmax
comp=Z,110nm,3.8s
CN2 LR LR
comp=Z,210nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
CN2 LR LR
comp=Z,150nm,19.0s
GYA Guiyang 55.17 308 P P 08 34 15.2 +6.7
GYA pmax pmax
comp=Z,7.0nm,0.8s
GYA LR LR
comp=Z,260nm,20.0s
GSI Gunungsitoli 55.97 275 P **P** **08 34 12.9 -1.4**
GSI IAmb IAmb 08 34 18.5
comp=Z,31nm,1.0s
GSI Gunungsitoli 55.97 275 P **P** **08 34 13.1 -1.2**
comp=Z,35nm,1.6s
BJI Beijing 56.74 326 P **P** **08 34 19.7 +0.4**
BJI S **S** **08 42 17.3 +4.7**
BJI pmax pmax
comp=Z,7.0nm,1.1s
BJI pmax pmax
comp=Z,130nm,3.8s
BJI LR LR
comp=Z,170nm,19.4s
BJI LR LR
comp=Z,120nm,17.9s
PPT Papeete 57.12 107 LR LR 08 56 22.0
comp=Z,80nm,19.4s,baz=296,slow=33
PPT2 Papeete2 57.12 107 *e*S **S** **08 42 20.3 +1.7**
comp=Z,227nm,26.0s
PPT2 *e*LQ LQ 08 48 45.7
comp=Z,350nm,25.2s
PPT2 *e*LR LR 08 51 10.3
comp=Z,154nm,24.8s
XAN Xi'an 57.44 317 P **P** **08 34 27.5 +3.0**
XAN pP pwP 08 34 36.6 +7.0
XAN S **S** **08 42 18.7 -3.6**
XAN pmax pmax
comp=Z,9.0nm,1.5s
XAN LR LR
comp=Z,250nm,18.4s
XAN LR LR
comp=Z,200nm,19.5s
XAN LR LR
comp=Z,320nm,20.6s
KMI Kunming 57.74 304 ⇓P **P** **08 34 29.2 +2.2**
KMI pP pwP 08 34 36.2 +4.1
KMI sP sP 08 34 39.4 +11
KMI S **S** **08 42 31.2 +4.4**
KMI sS sS 08 42 42.7 +14
KMI SS **SS** **08 46 20.7 +3.2**
KMI pmax pmax
comp=Z,10.0nm,0.8s
KMI pmax pmax
comp=Z,110nm,4.4s
KMI LR LR
comp=Z,280nm,20.5s
KMI LR LR
comp=Z,180nm,21.0s
KMI LR LR
comp=Z,220nm,24.2s
TBI Tubuai 57.88 114 *e*LQ LQ 08 49 06.0
comp=Z,512nm,29.8s
TBI *e*LR LR 08 51 24.2
comp=Z,185nm,22.8s
CMAR Chiang Mai Arr 58.56 295 P **P** **08 34 34.1 +1.6**
comp=Z,3.4nm,0.9s,baz=107,slow=5.4,SNR=16
CMAR LR LR 08 59 37.0
comp=Z,44nm,19.8s,baz=146,slow=36
PETK Petropavlovsk- 58.56 3 P **P** **08 34 33.6 +1.7**
comp=Z,26nm,1.0s,baz=151,slow=6.9,SNR=14
PETK LR LR 08 56 44.7
comp=Z,83nm,20.9s,baz=175,slow=33
CHTO Chiang Mai 58.67 296 P **P** **08 34 33.5 +0.1**
CHTO IAmb IAmb 08 34 37.9
comp=Z,18nm,1.4s
CD2 Chengdu 59.53 311 P **P** **08 34 40.1 +1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 59.89 324 *e*P **P** **08 34 42.9 +1.4**
HHC S **S** **08 42 52.1 -1.9**
HHC ScS **ScS** **08 44 32.2 -0.7**
HHC pmax pmax
comp=Z,67nm,0.8s
HHC pmax pmax
comp=Z,420nm,5.2s
HHC LR LR
comp=Z,330nm,14.5s
HHC LR LR
comp=Z,430nm,14.5s
HIA Hailar 61.88 336 P **P** **08 34 55.4 +0.7**
HIA IAmb IAmb 08 34 56.8
comp=Z,22nm,1.3s
LZH Lanzhou 62.05 316 *e*P **P** **08 34 58.2 +1.9**
LZH pP pwP 08 35 04.5 +3.0
LZH sP sP 08 35 07.4 +10
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.9s
LZH LR LR
comp=Z,320nm,15.0s
LZH LR LR
comp=Z,360nm,16.1s
MA2 Magadan 64.95 359 P **P** **08 35 14.6 -0.2**
GTA Gaotai 66.48 317 ⇑P **P** **08 35 26.8 +1.5**
GTA pP pwP 08 35 35.1 +4.6
GTA sP sP 08 35 39.6 +13
GTA S **S** **08 44 16.6 0.0**
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,150nm,7.3s
GTA LR LR
comp=Z,170nm,17.5s
GTA LR LR
comp=Z,160nm,18.5s
ULN Ulaanbaatar 66.84 328 P **P** **08 35 28.0 +0.5**
ULN IAmb IAmb 08 35 30.6
comp=Z,18nm,1.1s
SHL Shillong 67.03 301 P **P** **08 35 29.3 +0.1**
SONM Songino Array 67.17 328 P **P** **08 35 31.5 +1.9**
comp=Z,12nm,1.1s,baz=134,slow=4.9,SNR=27
SONM LR LR 09 03 49.4
comp=Z,82nm,20.7s,baz=114,slow=35
YAK Yakutsk 69.79 348 P **P** **08 35 46.2 +0.8**
TLY Talaya 70.93 330 P **P** **08 35 53.2 +0.5**
RKT Rikitea 71.13 112 *e*LR LR 08 57 39.7
comp=Z,176nm,24.0s
VNDA Vanda 72.07 178 P **P** **08 35 58.8 -0.4**
comp=Z,2.8nm,0.8s,baz=324,slow=6.3,SNR=15
GAMB Gambell 73.99 15 P 08 36 11.4
baz=216
GAMB Gambell 74.00 15 P **P** **08 36 10.9 +0.2**
GAMB IAMs_20 IAMs_20 09 13 11.1
comp=Z,269nm,22.0s
BILL Bilibino 74.00 5 P **P** **08 36 11.4 +0.8**
BILL IAmb IAmb 08 36 13.3
comp=Z,22nm,1.1s
ANM Nome 76.37 17 P 08 36 25.6
baz=223
WMQ Urumqi 76.56 317 *e*P **P** **08 36 27.8 +1.8**
WMQ pP pwP 08 36 30.7 -0.5
WMQ PcP **PcP** **08 36 42.7 +5.1**
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ pmax pmax
comp=Z,230nm,3.9s
WMQ LR LR
comp=Z,960nm,23.1s
WMQ LR LR
comp=Z,240nm,25.3s
HYB Hyderabad 77.12 289 *i* P P 08 36 24.0 -5.6
SVW2 Sparrevohn 77.36 23 P **P** **08 36 29.2 -0.8**
CNPM China Poot 78.22 25 P **P** **08 36 35.7 +0.8**
TIXI Tiksi 78.69 352 P **P** **08 36 37.7 +0.5**
TIXI IAmb IAmb 08 36 41.3
comp=Z,34nm,1.4s
FIS Fire Island 79.52 24 P **P** **08 36 41.9 0.0**
RDOG Red Dog Mine 79.59 15 P 08 36 43.1
baz=224
RDOG Red Dog Mine 79.60 15 P **P** **08 36 42.0 -0.3**
RDOG IAmb IAmb 08 36 46.5
comp=Z,31nm,1.3s
RC01 Rabbit Creek A 79.69 24 P 08 36 43.5
baz=238
ZSN Zaisan 79.70 320 *e*P **P** **08 36 43.3 0.0**
comp=Z,7.2nm,1.4s,baz=320
PPLA Purkeypile 79.71 22 P 08 36 43.5
baz=235
CHUM Lake Minchumin 80.23 21 P 08 36 46.9
baz=235
KNK Knik Glacier 80.39 25 IAMs_20 IAMs_20 09 04 48.0
comp=Z,540nm,20.0s
SML Sawmill 80.64 24 P 08 36 48.6
baz=239
TRF Thorofare Moun 80.74 22 P 08 36 47.5
baz=237
BPAW Bear Paw Mtn. 80.83 22 P 08 36 49.3
baz=236
SCM Sheep Creek Mo 81.06 24 P **P** **08 36 50.8 +0.4**
SCM IAmb IAmb 08 37 17.5
comp=Z,45nm,1.4s
WAT2 Susitna Watana 81.13 23 P 08 36 51.1
baz=239
MKAR Makanchi Array 81.15 319 P **P** **08 36 52.0 +0.9**
comp=Z,5.9nm,0.9s,baz=101,slow=6.4,SNR=46
MKAR LR LR 09 13 07.8
comp=Z,87nm,19.0s,baz=106,slow=36
WAT6 Susitna Watana 81.27 24 P 08 36 52.4
baz=240
MAKZ Makanchi 81.36 319 P **P** **08 36 52.0 -0.3**
MAKZ IAmb IAmb 08 36 54.6
comp=Z,20nm,1.1s
MCK McKinley 81.40 22 P **P** **08 36 51.6 -0.4**
MCK McKinley 81.40 22 P 08 36 52.1
baz=238
MLY Manley 81.44 21 P 08 36 52.7
baz=236
KLU Klutina 81.48 25 P 08 36 53.9
baz=241
M24K Tolsona, Glenn 81.67 24 P 08 36 55.3
baz=241
NEA2 Nenana 81.80 22 P **P** **08 36 54.2 0.0**
NEA2 IAmb IAmb 08 36 55.9
comp=Z,13nm,1.0s
NEA2 Nenana 81.80 22 P 08 36 53.8
baz=238
I23K Minto, Yukon-K 81.99 21 P 08 36 55.9
baz=238
ZALV Zalesovo Beam 82.00 326 P **P** **08 36 55.5 +0.2**
comp=Z,7.2nm,0.7s,baz=104,slow=6.3,SNR=17
ZALV LR LR 09 13 14.7
comp=Z,76nm,21.4s,baz=97,slow=36
SHLS Shalkode 82.04 315 *e*P **P** **08 36 54.1 -2.0**
comp=Z,7.1nm,1.4s,baz=315
N25K Chitina, Valde 82.10 25 P 08 36 56.5
baz=243
UZB Uzynbulak 82.35 315 *e*P **P** **08 36 57.6 -0.1**
comp=Z,6.6nm,1.3s,baz=315
CRQE Cirque 82.37 26 P 08 36 57.4
baz=244
TCOL CIGO, UAF Yank 82.39 22 P **P** **08 36 56.4 -0.8**
TCOL IAmb IAmb 08 36 58.2
comp=Z,20nm,1.1s
TCOL CIGO, UAF Yank 82.39 22 P 08 36 56.9
baz=239
COLA College 82.40 22 P **P** **08 36 56.4 -0.8**
COLA IAmb IAmb 08 36 58.3
comp=Z,18nm,1.1s
HDA Harding Lake 82.50 22 P 08 36 58.9
baz=240
HDA P 08 36 58.9
baz=240
KPKS Kokpek 82.67 315 *e*P **P** **08 36 59.0 -0.4**
comp=Z,7.8nm,1.3s,baz=315
ILAR Eielson Array 82.70 22 P **P** **08 36 58.2 -0.6**
comp=Z,7.0nm,1.0s,baz=256,slow=4.8,SNR=29
ILAR LR LR 09 11 48.7
comp=Z,135nm,19.1s,baz=245,slow=34
COLD Coldfoot 82.83 19 P 08 36 60.0
baz=237
COLD Coldfoot 82.83 19 P **P** **08 36 59.4 -0.1**
DOT Dot Lake 83.25 24 P **P** **08 37 01.1 -0.7**
DOT IAmb IAmb 08 37 03.9
comp=Z,20nm,1.1s
TDK Taldygorghan 83.25 316 *e*P **P** **08 37 02.4 +0.2**
comp=Z,12nm,0.6s,baz=316
A21K Barrow 83.43 14 P **P** **08 37 01.8 -0.6**
A21K IAmb IAmb 08 37 05.8
comp=Z,14nm,1.1s
A21K Barrow 83.43 14 P 08 37 02.6
baz=230
SCRK Sand Creek 83.43 23 P 08 37 02.9
baz=243
KSH Kashi 83.73 311 P **P** **08 37 07.8 +2.9**
KSH S **S** **08 47 33.5 +5.0**
KSH pmax pmax
comp=Z,12nm,1.7s
KSH pmax pmax
comp=Z,280nm,4.5s
KSH LR LR
comp=Z,420nm,12.6s
KSH LR LR
comp=Z,130nm,7.2s
MDOK Medeo 83.76 314 *e*P **P** **08 37 05.2 +0.3**
baz=314
TNSS Tian-Shan 83.80 314 *e*P **P** **08 37 05.5 0.0**
baz=314
TOLK Toolik Lake Re 83.80 18 P 08 37 05.5
baz=237
L27K Beaver Creek, 83.90 25 P 08 37 05.7
baz=245
K27K Chicken 84.21 24 P 08 37 07.6
baz=245
K27K Chicken 84.21 24 P **P** **08 37 05.8 -0.9**
K27K IAmb IAmb 08 37 14.9
comp=Z,16nm,1.4s
QSPA South Pole Qui 84.41 180 P **P** **08 37 07.7 -0.1**
comp=Z,8.4nm,0.9s,baz=358,slow=1.3,SNR=19
QSPA South Pole Qui 84.41 180 P **P** **08 37 07.9 +0.1**
QSPA IAmb IAmb 08 37 30.4
comp=Z,16nm,0.9s
KUU Kurty 84.43 315 *e*P **P** **08 37 07.7 -0.5**
comp=Z,39nm,1.3s,baz=315
NIL Nilore 84.73 304 P **P** **08 37 08.6 -1.4**
NIL IAmb IAmb 08 37 28.5
comp=Z,12nm,0.8s
EGAK Eagle 84.89 23 P **P** **08 37 09.2 -0.8**
EGAK IAmb IAmb 08 37 12.9
comp=Z,13nm,1.1s
MAW Mawson 85.03 203 P **P** **08 37 10.6 -0.1**
comp=Z,3.5nm,0.6s,baz=103,slow=11,SNR=8.1
MAW LR LR 09 11 51.0
comp=Z,107nm,20.7s,baz=60,slow=33
CHMS Chumysh 85.36 314 P **P** **08 37 14.6 +1.7**
SNR=5.5
UCH Uchtor 85.38 313 P **P** **08 37 15.4 +1.9**
SNR=21
AAK Ala-Archa 85.47 313 P **P** **08 37 15.0 +1.3**
SNR=8.2
AAK Ala-Archa 85.47 313 P **P** **08 37 13.1 -0.6**
AAK IAmb IAmb 08 37 16.4
comp=Z,26nm,1.4s
SGDS Sogindy 85.54 314 *e*P **P** **08 37 13.9 0.0**
comp=Z,6.7nm,1.0s,baz=314
USP Ospenovka 85.60 314 P **P** **08 37 15.9 +1.8**
SNR=9.6
AML Almayashu 85.95 313 P **P** **08 37 18.1 +1.7**
SNR=25
EKS2 Erkin-Say 86.00 313 P **P** **08 37 17.8 +1.5**
SNR=9.5
BTLS Baital 86.28 316 *e*P **P** **08 37 17.0 -0.4**
comp=Z,7.7nm,1.5s,baz=316
NRIK Noril'sk 86.80 341 P **P** **08 37 20.2 +0.8**
comp=Z,9.3nm,0.7s,baz=107,slow=5.0,SNR=23
NRIK LR LR 09 18 22.9
comp=Z,74nm,18.2s,baz=157,slow=37
BRZS Berezniki 88.14 320 *e*P **P** **08 37 25.9 -0.4**
baz=320
INK Inuvik 89.01 21 P **P** **08 37 29.9 -0.1**
comp=Z,6.3nm,1.1s,baz=234,slow=5.6,SNR=8.7
INK Inuvik 89.01 21 P **P** **08 37 29.2 -0.7**
INK IAmb IAmb 08 37 31.9
comp=Z,9.0nm,1.1s
HUMO Hull Mountain 89.20 47 IAMs_20 IAMs_20 09 12 20.4
comp=Z,405nm,20.0s
ORV Oroville 89.88 50 IAMs_20 IAMs_20 09 12 24.5
comp=Z,192nm,20.0s
BRVK Borovoye 90.15 323 P **P** **08 37 33.9 -1.7**
BRVK IAmb IAmb 08 37 39.7
comp=Z,14nm,1.1s
CMB Columbia Colle 90.56 52 IAMs_20 IAMs_20 09 11 36.5
comp=Z,267nm,19.0s
NVAR Mina Array Bea 92.23 52 P **P** **08 37 47.3 +1.3**
comp=Z,1.7nm,1.1s,baz=256,slow=6.0,SNR=7.2
NVAR LR LR 09 12 35.1
comp=Z,170nm,20.3s,baz=243,slow=31
SYO Syowa Base 93.09 199 ⇓*e*P **P** **08 37 48.0 -1.0**
BMO Blue Mountains 93.51 45 IAMs_20 IAMs_20 09 13 48.6
comp=Z,225nm,18.0s
NEW Newport 93.88 42 IAMs_20 IAMs_20 09 11 21.3
comp=Z,262nm,18.0s
HRA Herat 93.89 304 P **P** **08 37 52.1 -1.6**
MFID Camas Ranch 94.48 47 IAMs_20 IAMs_20 09 14 56.2
comp=Z,283nm,20.0s
HLID Hailey 95.51 47 IAMs_20 IAMs_20 09 15 57.6
comp=Z,372nm,21.0s
YKA Yellowknife Ar 95.90 28 P **P** **08 38 02.5 +0.5**
comp=Z,3.0nm,1.0s,baz=269,slow=4.4,SNR=29
YKA PKiKP **PKiKP** **08 42 42.4 +1.3**
comp=Z,0.4nm,0.8s,baz=270,slow=1.1,SNR=5.3
YKA LR LR 09 16 50.5
comp=Z,93nm,20.0s,baz=0.0,slow=33
MSO Missoula 95.97 44 IAMs_20 IAMs_20 09 17 04.4
comp=Z,360nm,19.0s
ARU Arti 97.16 326 P **P** **08 38 04.3 -3.5**
GEYT Alibeck 97.39 307 LR LR 09 23 14.0
comp=Z,75nm,20.8s,baz=35,slow=36
BOZ Bozeman (W) 97.55 45 IAMs_20 IAMs_20 09 13 40.4
comp=Z,250nm,22.0s
LOHW Long Hollow 98.28 47 IAMs_20 IAMs_20 09 19 05.8
comp=Z,334nm,19.0s
EGMT Eagleton 98.81 42 IAMs_20 IAMs_20 09 14 17.6
comp=Z,210nm,18.0s
PDAR Pinedale Array 99.06 48 LR LR 09 19 30.1
comp=Z,315nm,18.6s,baz=270,slow=33
EPT El Paso 101.64 59 IAMs_20 IAMs_20 09 21 36.1
comp=Z,252nm,19.0s
ISCO Idaho Springs 102.12 51 IAMs_20 IAMs_20 09 25 44.6
comp=Z,223nm,20.0s
PHWY Pilot Hill 102.16 49 IAMs_20 IAMs_20 09 20 20.5
comp=Z,204nm,19.0s
KLMR Klimovskoe 106.23 332 *e*Pdif **Pdif** **08 38 45.5 -2.7**
KLMR AMP 08 38 49.8
comp=Z,21nm,1.5s
JCT Junction City 107.44 60 IAMs_20 IAMs_20 09 22 33.6
comp=Z,256nm,20.0s
ECSD EROS Data Cent 108.37 46 IAMs_20 IAMs_20 09 24 40.7
comp=Z,265nm,20.0s
OK025 Westminster Rd 109.02 54 IAMs_20 IAMs_20 09 13 07.4
comp=Z,80nm,19.0s
OK030 Cody Creek RV 109.43 54 IAMs_20 IAMs_20 09 33 17.1
comp=Z,283nm,18.0s
NATX Nacogdoches 111.70 58 IAMs_20 IAMs_20 09 23 25.6
comp=Z,116nm,20.0s
X40A Basin Creek Fa 112.84 55 IAMs_20 IAMs_20 09 40 25.4
comp=Z,185nm,18.0s
JFWS Jewell Farm 113.08 46 IAMs_20 IAMs_20 09 36 02.4
comp=Z,278nm,18.0s
MNK Minsk 114.44 328 *i* PKP **PKiKP** **08 43 13.7 -1.7**
comp=E,4.0nm,0.9s
MNK *i* PKP **PKiKP** **08 43 13.7 -1.7**
comp=N,15nm,0.7s
MNK *i* PKP **PKiKP** **08 43 13.7 -1.7**
comp=Z,7.0nm,0.7s
MNK *i* PP **PP** **08 44 09.7 -1.6**
MNK *i* PPP PPP 08 46 34.6
MNK *i* SKS **SKSdf** **08 50 23.1 -5.0**
MNK *i* PS **PS** **08 53 48.1 -1.7**
MNK *i* SS **SS** **09 00 00.2 -3.8**
MNK *i* SSS SSS 09 04 15.9
MNK *i* LQ LQ 09 25 10.2
MNK *i* LR LR 09 30 22.8
MNK *i* LRM MLR 09 31 25.7
comp=N,2μm,23.2s
MNK *i* LRM MLR 09 31 27.9
comp=Z,306nm,25.3s
MNK *i* LRM MLR 09 31 35.1
comp=E,34nm,21.0s
CLL Collm 123.70 331 *e*PS PS 08 55 18.0 +4.9
CLL *e*SS SS 09 02 12.0 +8.6
CLL LmH 09 29 00.0
comp=N,100nm,18.7s
CLL LmH 09 29 00.0
comp=E,100nm,20.3s
CLL LmV 09 38 00.0
comp=Z,100nm,18.2s
L59A Walton 123.84 42 IAMs_20 IAMs_20 09 38 07.0
comp=Z,228nm,20.0s
GERES GERESS Array B 124.90 328 PKP **PKPdf** **08 43 36.0 +0.1**
comp=Z,2.5nm,0.9s,baz=64,slow=3.1,SNR=12
BMRD Maredsous 128.14 335 *d*PKP **PKPdf** **08 43 41.4 -0.5**
LPAZ La Paz 133.71 119 PKP **PKiKP** **08 43 56.0 +0.6**
comp=Z,5.7nm,0.7s,baz=273,slow=3.1,SNR=18
CPUP Villa Florida 136.64 138 PKP **PKiKP** **08 43 60.0 -0.4**
comp=Z,2.7nm,0.8s,baz=220,slow=3.0,SNR=7.9
SAML Samuel 140.97 111 IAMs_20 IAMs_20 09 43 07.0
comp=Z,94nm,19.0s
SPB Sao Paulo 144.72 146 PKPdf PKPbc 08 44 12.8 +0.8
MDT Midelt 145.89 325 PKPbc **PKPab** **08 44 16.9 +0.8**
comp=Z,9.9nm,0.9s,baz=334,slow=2.2,SNR=12
PTGA Pitinga 146.29 100 **PKPdf** **08 44 15.4 -0.9**
BDFB Brasilia 150.25 135 PKPbc **PKPbc** **08 44 28.4 +0.6**
comp=Z,11nm,0.7s,baz=296,slow=2.5,SNR=8.7
TOA0 Torodi Ar. Sit 150.92 287 PKPbc **PKPbc** **08 44 29.0 -0.3**
TORD Torodi Ar. Bea 150.92 287 PKPbc **PKPbc** **08 44 29.2 -0.1**
comp=Z,15nm,1.0s,baz=61,slow=2.5,SNR=39

IDC 10 08:46:51.1±5.3, 3°75S×133°63E, h112km±40km, mb3.2/1,

mb1 3.1/5, mb1mx3.0/28, mbtmp3.5/5, Error ellipse: s-maj=103.9km s-min=18.0km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.71**	**320**	P	Pn	08 47 46.1	-0.6
	5.0nm,0.3s,baz=127,slow=12,SNR=9.2						
SIJI				S	Sn	08 48 30.5	+0.8
	4.3nm,0.3s,baz=324,slow=20,SNR=5.8						
WRA	**Warramunga Arr**	**16.11**	**178**	P	Pn	08 50 30.9	-0.4
	0.0nm,0.3s,baz=356,slow=12,SNR=3.0						
FITZ	**Fitzroy Crossi**	**16.27**	**208**	P	Pn	08 50 31.7	-1.5
	0.1nm,0.3s,baz=47,slow=10,SNR=1.3						
ASAR	**Alice Springs**	**19.80**	**179**	P	P	08 51 13.8	+0.9
	0.0nm,0.3s,baz=1.9,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**67.60**	**325**	P	P	08 57 35.7	-0.1
	0.4nm,0.7s,baz=114,slow=7.4,SNR=4.6						

RSNC 10 08:50:34.0±1.1, 6.80N×73.14W, h144km±10km, ML1.6, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.21**	**191**	*e*P	Pn	08 50 53.5	-0.5
BARC				*e*S	Sn	08 51 08.4	-0.7
BARC				*i*		08 51 10.4	
	comp=Z,8.5nm,0.2s						
BARC	**Barichara**	**0.21**	**191**	*e*P	Pn	08 50 53.6	-0.3
BARC				*e*S	Sn	08 51 07.9	-1.2
BARC				*i*		08 51 10.5	
	comp=Z,8.5nm,0.2s						
BRRC	**Barranca, Sant**	**0.64**	**299**	*e*P	Pn	08 50 55.0	-0.6
BRRC				*e*S	Sn	08 51 12.2	+0.2
BRRC				*i*		08 51 15.9	
	comp=Z,5.5nm,0.1s						
BRRC	**Barranca, Sant**	**0.64**	**299**	*e*P	Pn	08 50 54.9	-0.6
BRRC				*e*S	Sn	08 51 12.2	+0.3
BRRC				*i*		08 51 15.9	
	comp=Z,5.5nm,0.1s						
RUSC	**La Rusia**	**0.90**	**176**	*e*S	Sn	08 51 16.1	-0.1
RUSC				*i*		08 51 18.7	
	comp=Z,2.4nm,0.6s						
RUSC	**La Rusia**	**0.90**	**176**	*e*S	Sn	08 51 16.1	-0.2
SPBC	**San Pablo de B**	**1.46**	**219**	*e*S	Sn	08 51 24.4	-0.6
SPBC				*i*		08 51 26.2	
	comp=Z,4.8nm,0.2s						
SPBC	**San Pablo de B**	**1.46**	**219**	*e*S	Sn	08 51 24.6	-0.3
SPBC				*i*		08 51 30.2	
	comp=Z,4.6nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.84**	**292**	*e*P	Pn	08 51 06.6	-0.3
ZARC				*e*S	Sn	08 51 31.3	-0.8
ZARC				*i*		08 51 33.5	
	comp=Z,3.6nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.84**	**292**	*e*P	Pn	08 51 06.4	-0.5
ZARC				*e*S	Sn	08 51 31.1	-1.1
ZARC				*i*		08 51 33.4	
	comp=Z,3.6nm,0.3s						
SMLC	**San Martn de**	**2.19**	**335**	*e*P	Pn	08 51 10.1	-1.1
SMLC				*e*S	Sn	08 51 37.7	-2.0
SMLC				*i*		08 51 42.2	
	comp=Z,4.5nm,0.3s						

RSNC 10 08:57:57.9±0.9, 6.86N×73.24W, h126km±5km, ML2.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**168**	*e*P	Pn	08 58 15.9	+0.1
BARC				*e*S	Sn	08 58 29.1	-0.2
BARC				*i*		08 58 30.2	
	comp=Z,58nm,0.5s						
BARC	**Barichara**	**0.27**	**168**	*e*P	Pn	08 58 15.9	+0.1
BARC				*e*S	Sn	08 58 29.0	-0.3
BARC				*i*		08 58 30.2	
	comp=Z,58nm,0.5s						
BRRC	**Barranca, Sant**	**0.53**	**298**	*e*P	Pn	08 58 16.2	-0.5
BRRC				*e*S	Sn	08 58 30.5	-0.4
BRRC				*i*		08 58 31.3	
	comp=Z,16nm,0.1s						
BRRC	**Barranca, Sant**	**0.53**	**298**	*e*P	Pn	08 58 16.2	-0.5
BRRC				*e*S	Sn	08 58 30.3	-0.6
BRRC				*i*		08 58 31.2	
	comp=Z,16nm,0.1s						
PAMC	**Pamplona, Colo**	**0.72**	**48**	*e*S	Sn	08 58 36.0	+1.8
RUSC	**La Rusia**	**0.97**	**171**	*e*P	Pn	08 58 20.5	-0.3
RUSC				*e*S	Sn	08 58 37.7	-0.3
RUSC	**La Rusia**	**0.97**	**171**	*e*P	Pn	08 58 20.8	0.0
RUSC				*e*S	Sn	08 58 37.7	-0.4
PTBC	**PUERTO BERRIO,**	**1.25**	**255**	*e*P	Pn	08 58 21.1	-1.9
PTBC				*e*S	Sn	08 58 38.5	-3.5
PTBC				*i*		08 58 43.4	
	comp=Z,12nm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.25**	**255**	*e*P	Pn	08 58 21.1	-1.8
PTBC				*e*S	Sn	08 58 38.2	-3.8
PTBC				*i*		08 58 43.4	
	comp=Z,12nm,0.4s						
OCAC	**Ocana**	**1.37**	**357**	*e*P	Pn	08 58 23.9	-0.5
OCAC				*e*S	Sn	08 58 44.0	-0.7
OCAC				*i*		08 58 45.0	
	comp=Z,17nm,0.3s						
OCAC	**Ocana**	**1.37**	**357**	*e*P	Pn	08 58 24.1	-0.4
OCAC				*e*S	Sn	08 58 43.9	-0.8
OCAC				*i*		08 58 45.0	
	comp=Z,17nm,0.3s						
SPBC	**San Pablo de B**	**1.46**	**215**	*e*P	Pn	08 58 24.3	-1.1
SPBC				*e*S	Sn	08 58 45.8	-0.4
SPBC				*i*		08 58 50.5	
	comp=Z,9.2nm,0.2s						
SPBC	**San Pablo de B**	**1.46**	**215**	*e*P	Pn	08 58 24.6	-0.8
SPBC				*e*S	Sn	08 58 45.6	-0.7
SPBC				*i*		08 58 50.5	
	comp=Z,9.2nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.73**	**291**	*e*P	Pn	08 58 28.7	+0.3
ZARC				*e*S	Sn	08 58 51.1	-0.5
ZARC				*i*		08 58 53.4	
	comp=Z,9.3nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.73**	**291**	*e*P	Pn	08 58 27.5	-0.8
ZARC				*e*S	Sn	08 58 50.6	-1.0
ZARC				*i*		08 58 53.4	
	comp=Z,9.3nm,0.3s						
SMLC	**San Martn de**	**2.10**	**337**	*e*P	Pn	08 58 32.0	-0.8
SMLC				*e*S	Sn	08 58 59.3	-0.4
SMLC				*i*		08 59 06.7	
	comp=Z,14nm,0.3s						

PDG ***10*** *09:04:11.3±0.1, 41.50N×20.28E, h6km, ML2.6/13, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*
TIR ***10*** *09:04:11.3, 41.52N×20.29E, h12km±1km, Md2.7, Ml2.5*
SKO ***10*** *09:04:11.3, 41.49N×20.33E, h15km*
BEO ***10*** *09:04:12.1±0.4, 41.45N×20.32E, h0km, ML2.2/9*
THE ***10*** *09:04:12.2, 41.50N×20.31E, h0km±2km, ML2.4/3, Error ellipse: s-maj=2.1km s-min=0.5km az=320.0*

ISC 10 09:04:12.1±1.0, 41.50N±0.02×20.30E±0.02, h7km±8km, n51, σ0.97/89, 4C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.22**	**30**	P	**Pg**	**09 04 16.3**	**-0.1**
PHP				S	**Sg**	**09 04 19.9**	**+0.5**
	2μm,0.1s						
PHP	**Peshkopia**	**0.22**	**30**	P	**Pg**	**09 04 16.5**	**0.0**
	baz=34						
PHP				S	**Sg**	**09 04 19.4**	**0.0**
	baz=34						
PHP				AMP			
	comp=N,5.9nm,0.1s,baz=34						
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**09 04 19.1**	**+0.1**
TIR				S	**Sb**	**09 04 25.0**	**-1.5**
	comp=N,582nm,0.2s						
TIR	**Tirane**	**0.36**	**245**	*e*Pg	**Pg**	**09 04 18.7**	**-0.3**
TIR				*e*Sg	**Sg**	**09 04 23.8**	**+0.1**
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**09 04 19.2**	**+0.2**
	baz=242						
TIR				S	**Sg**	**09 04 24.6**	**+1.0**
	baz=242						
TIR				AMP			
	comp=E,2.0nm,0.2s,baz=242						
TIR	**Tirane**	**0.36**	**245**	*i* Pg	**Pg**	**09 04 19.1**	**+0.2**
LACI	**Lac**	**0.46**	**288**	P	**Pg**	**09 04 20.7**	**-0.3**
	baz=285						
OHR	**Ohrid**	**0.54**	**135**	*i* Pg	**Pg**	**09 04 22.3**	**-0.2**
OHR				*i* Sg	**Sb**	**09 04 31.3**	**-0.6**
OHR				*e*Lg	Lg	09 04 31.6	
	comp=N,100nm,0.3s						
OHR				*e*Lg	Lg	09 04 31.9	
	comp=Z,50nm,0.1s						
PUK	**Puka**	**0.62**	**331**	P	**Pg**	**09 04 23.2**	**-0.9**
	baz=331						
PUK				S	**Sg**	**09 04 32.6**	**+0.4**
	baz=331						
PUK				AMP			
	comp=E,1.0nm,0.2s,baz=331						
PRZK	**Prizren**	**0.79**	**26**	*i* Pg	**Pg**	**09 04 26.4**	**-0.9**
PRZK				*i* Sg	**Sb**	**09 04 38.3**	**-0.9**
BCI	**Bajram Curri**	**0.89**	**349**	P	**Pg**	**09 04 28.4**	**-0.7**
	baz=349						
BCI				AMP			
	comp=E,1.1nm,0.5s,baz=349						
ULC	**Ulcinj**	**0.91**	**301**	↑ *i* Pg	**Pg**	**09 04 28.0**	**-1.6**
ULC				*i* Sg	**Sb**	**09 04 42.2**	**-0.4**
KBN	**Korca**	**0.95**	**157**	P	**Pb**	**09 04 30.4**	**-0.5**
	baz=157						
SKO	**Skopje**	**0.98**	**61**	*e*Pg	**Pg**	**09 04 29.6**	**-1.3**
SKO				*e*Sg	**Sg**	**09 04 43.5**	**-0.1**
SKO	**Skopje**	**0.98**	**61**	*i* Pg	**Pg**	**09 04 30.0**	**-0.8**
SKO				*i* Sg	**Sb**	**09 04 43.9**	**-0.5**
DRME	**Dracevica, Mon**	**1.08**	**310**	↓ *i* Pg	**Pg**	**09 04 31.1**	**-1.7**
DRME				*i* Sg	**Sb**	**09 04 47.8**	**+0.5**
FNA	**Florina**	**1.08**	**131**	P	**Pg**	**09 04 32.2**	**-0.7**
FNA				S	**Sn**	**09 04 48.1**	**-0.9**
	comp=E,310nm,0.4s						
FNA	**Florina**	**1.08**	**131**	P	**Pg**	**09 04 32.2**	**-0.7**
	baz=131						
FNA	**Florina**	**1.08**	**131**	*i* Pg	**Pg**	**09 04 31.1**	**-1.7**
FNA				*i* Sg	**Sn**	**09 04 48.3**	**-0.7**
PVY	**Plav**	**1.12**	**347**	↓ *i* Pg	**Pg**	**09 04 32.0**	**-1.7**
PVY				*i* Sg	**Sn**	**09 04 49.6**	**-0.5**
PDG	**Podgorica**	**1.21**	**321**	*e*Pg	**Pb**	**09 04 33.6**	**-1.8**
PDG				*e*Sg	**Sn**	**09 04 52.1**	**0.0**
PDG	**Podgorica**	**1.21**	**321**	*i* Pg	**Pb**	**09 04 33.7**	**-1.6**
PDG				*i* Sg	**Sn**	**09 04 53.0**	**+0.9**
TTG	**Podgorica**	**1.21**	**321**	↓ *i* Pg	**Pb**	**09 04 33.5**	**-1.8**
TTG				*i* Sg	**Sn**	**09 04 52.4**	**+0.3**
NEST	**Nestorio**	**1.22**	**152**	P	**Pn**	**09 04 35.4**	**-0.2**
NEST				S	**Sn**	**09 04 53.2**	**+0.7**
BUM	**Brajici-Budva**	**1.32**	**308**	↓ *i* Pg	**Pn**	**09 04 35.5**	**-1.4**
BUM				*i* Sg	**Sn**	**09 04 56.0**	**+1.2**
LSK	**Leskovik**	**1.37**	**170**	P	**Pn**	**09 04 37.4**	**-0.2**
	baz=170						
IVA	**Berane**	**1.41**	**348**	↓ *i* Pg	**Pn**	**09 04 37.2**	**-1.0**
IVA				*i* Sg	**Sg**	**09 04 59.2**	**+1.9**
STIP	**Stip**	**1.43**	**81**	*i* Pn	**Pg**	**09 04 41.1**	**+1.6**
SMRK	**Smrekonice**	**1.46**	**19**	*i* Pg	**Pb**	**09 04 39.1**	**-0.4**
SMRK				*i* Sg	**Sg**	**09 04 58.8**	**-0.1**
CEME	**Cevo**	**1.47**	**316**	↓ *i* Pg	**Pn**	**09 04 38.3**	**-0.7**
CEME				*i* Sg	**Sg**	**09 05 01.1**	**+1.9**
KOME	**Kolasin**	**1.47**	**337**	↓ *i* Pg	**Pn**	**09 04 38.5**	**-0.6**
KOME				*i* Sg	**Sg**	**09 05 01.3**	**+1.9**
NKME	**Niksic**	**1.61**	**322**	↑ *i* Pn	**Pn**	**09 04 40.9**	**-0.1**
NKME				*i* Sn	**Sg**	**09 05 05.1**	**+1.2**
SRN	**Sarande**	**1.63**	**188**	P	**Pg**	**09 04 44.2**	**+0.9**
	baz=188						
SRN				S	**Sg**	**09 05 06.5**	**+2.1**
	baz=188						
NKY	**Niksic**	**1.63**	**324**	↑ *i* Pn	**Pn**	**09 04 41.5**	**+0.2**
NKY				*i* Sn	**Sg**	**09 05 05.6**	**+1.1**
HCY	**Herceg Novi**	**1.65**	**306**	↓ *i* Pn	**Pn**	**09 04 41.3**	**-0.1**
HCY				*i* Sn	**Sg**	**09 05 05.8**	**+0.9**
PRVS	**Prvonek**	**1.67**	**52**	*e*Pg	**Pb**	**09 04 42.9**	**-0.2**
PRVS				*e*Sg	**Sg**	**09 05 05.6**	**-0.1**
GRG	**Griva**	**1.68**	**108**	P	**Pn**	**09 04 41.9**	**+0.1**
GRG	**Griva**	**1.68**	**108**	*i* Pn	**Pn**	**09 04 41.9**	**+0.1**
VAY	**Valandovo**	**1.72**	**95**	*e*Pg	**Pn**	**09 04 42.6**	**+0.2**
VAY				*e*Sg	**Sb**	**09 05 04.9**	**-0.9**
VAY	**Valandovo**	**1.72**	**95**	*i* Pn	**Pn**	**09 04 42.5**	**+0.2**
TREB	**Trebinje**	**1.89**	**311**	*e*Pn	**Pb**	**09 04 46.5**	**-0.4**
TREB				*e*Sn	**Sb**	**09 05 11.3**	**+0.6**
BOSS	**Bosilegrad**	**1.91**	**58**	*e*Pn	**Pb**	**09 04 46.6**	**-0.6**
BOSS				*e*Sn	**Sb**	**09 05 11.4**	**+0.1**
BRY	**Bratogost**	**1.92**	**318**	*e*Pn	**Pn**	**09 04 45.5**	**+0.3**
BRY				*i* Sn	**Sb**	**09 05 12.4**	**+0.8**
PLE	**Pljevlja**	**1.95**	**340**	*e*Pn	**Pn**	**09 04 46.0**	**+0.3**
PLE				*i* Sn	**Sb**	**09 05 13.2**	**+0.7**
IGT	**Igoumenitsa**	**1.96**	**179**	P	**Pb**	**09 04 47.0**	**-1.1**
	baz=179						
UPM	**Unac-Piva**	**1.99**	**329**	↑ *i* Pn	**Pn**	**09 04 46.5**	**+0.2**
UPM				*i* Sn	**Sb**	**09 05 14.2**	**+0.4**
IVAS	**Ivanjica**	**2.08**	**357**	*e*Pn	**Pn**	**09 04 48.1**	**+0.7**
IVAS				*e*Sn	**Sb**	**09 05 16.6**	**+0.4**
BBLS	**Lazići**	**2.46**	**345**	*e*Pn	**Pn**	**09 04 54.2**	**+1.6**
BBLS				*e*Sn	**Sb**	**09 05 26.4**	**-0.7**
ZAPS	**Zavoj**	**2.48**	**44**	*e*Sn	**Pn**	**09 04 53.6**	**+0.7**
ZAPS	**Zavoj**	**2.48**	**44**	*e*Pn	**Sn**	**09 05 25.6**	**+2.2**
DIVS	**Divibare**	**2.61**	**355**	*e*Pn	**Pn**	**09 04 56.2**	**+1.5**
DIVS				*e*Sn	**Sn**	**09 05 28.5**	**+1.8**

NIED ***10*** *09:04:44.7, 40.01N×142.40E, h19km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.39; $M_{\theta\theta}$2.75; $M_{\phi\phi}$-2.36; $M_{r\theta}$-0.82; $M_{\theta\phi}$-0.66; $M_{\phi r}$-1.82; Fault plane solution: $M_0$3.28000×10^{14} NP1: ϕ_s55.00000°, δ77.00000°, λ-148.00000°. NP2: ϕ_s317.00000°, δ59.00000°, λ-15.00000°.*
JMA ***10*** *09:04:44.7, 40.01N×142.40E, h19km±1km, M3.6*
JMA Felt I J1.
IDC ***10*** *09:04:51.8±2.9, 39.92N×142.41E, h56km±27km, mb3.3/6, mb1 3.5/10, mb1mx3.3/47, mbtmp3.5/10, ML3.1/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/35, Error ellipse: s-maj=30.3km s-min=17.3km az=105.0*

ISC 10 09:04:45.2±0.8, 40.01N±0.04×142.38E±0.06, h10km, n28, σ1.9/75/29, mb3.6/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.41**	**260**	P	**Pg**	**09 04 53.2**	**+0.1**
JTH				S	**Sb**	**09 04 59.2**	**-1.5**
JKEN	**Kujiedanarisaw**	**0.55**	**291**	P	**Pg**	**09 04 55.6**	**-0.3**
JKEN				*e*S	**Sb**	**09 05 04.0**	**-0.9**
MIYJ	**Miyakonagasawa**	**0.61**	**225**	P	**Pg**	**09 04 56.5**	**-0.6**
MIYJ				S	**Sg**	**09 05 04.8**	**-0.3**
JANG	**Nango**	**0.76**	**299**	P	**Pg**	**09 04 58.9**	**-0.9**
JKZ	**Kuzumaki**	**0.81**	**268**	P	**Pg**	**09 05 00.2**	**-0.6**
JOM	**Ohasama**	**1.00**	**238**	P	**Pg**	**09 05 03.1**	**-1.3**
JOM				*e*S	**Sg**	**09 05 16.1**	**-1.2**
OFUJ	**Ofunato**	**1.08**	**211**	P	**Pg**	**09 05 04.2**	**-1.8**
OFUJ				S	**Sg**	**09 05 18.1**	**-1.9**
JARK	**Aomorirokkasho**	**1.26**	**322**	P	**Pn**	**09 05 07.8**	**-1.0**
JTM	**Tenmabayashi**	**1.27**	**308**	P	**Pn**	**09 05 07.8**	**-1.1**
JTM				S	**Sb**	**09 05 24.5**	**-1.0**
JAH	**Hinai**	**1.35**	**278**	P	**Pn**	**09 05 09.5**	**-0.6**
JMK	**Ichinoseki**	**1.39**	**221**	P	**Pn**	**09 05 09.3**	**-1.3**
JMK				*e*S	**Sb**	**09 05 27.4**	**-1.6**
ASAJ	**Asahikawa**	**4.10**	**2**	P	**Pb**	**09 05 54.0**	**-3.5**
	2.1nm,0.3s,baz=205,slow=9.2,SNR=9.1						
ASAJ				S	**Sb**	**09 06 45.8**	**-1.3**
	0.7nm,0.3s,baz=275,slow=33,SNR=4.2						
ASAJ				LR	LR	09 07 44.9	
	comp=Z,187nm,20.0s,baz=141,slow=41						
MAT	**Matsushiro**	**4.77**	**225**	P	**Pn**	**09 06 00.7**	**+3.5**
MJAR	**Matsushiro Arr**	**4.77**	**225**	P	**Pn**	**09 05 59.5**	**+2.4**
	0.2nm,0.3s,baz=32,slow=12,SNR=14						
MJAR				LR	LR	09 07 49.0	
	comp=Z,89nm,19.0s,baz=130,slow=38						
USRK	**Ussuriysk Ar.**	**8.78**	**302**	P	Pn	09 06 58.2	+6.1
	baz=131,slow=12,SNR=4.9						
KSRS	**Korea Array**	**11.58**	**262**	P	**Pn**	**09 07 34.1**	**+3.6**
	0.1nm,0.3s,baz=67,slow=13,SNR=1.6						
SEY	**Seymchan**	**23.73**	**11**	P	**P**	**09 09 58.4**	**+1.3**
	0.6nm,0.7s,baz=201,slow=17,SNR=2.2						
H11N2	**WAKE ISLAND Hy 29.17**	**127**		T	T	09 41 23.2	
	baz=319,slow=75,SNR=602						
H11N1	**WAKE ISLAND Hy 29.18**	**127**		T	T	09 41 27.5	
	baz=319,slow=75,SNR=459						
H11N3	**WAKE ISLAND Hy 29.19**	**127**		T	T	09 41 23.2	
	baz=319,slow=75,SNR=376						
H11S1	**WAKE ISLAND Hy 29.98**	**129**		T	T	09 42 25.8	
	baz=321,slow=76,SNR=103						
H11S3	**WAKE ISLAND Hy 29.98**	**129**		T	T	09 42 25.0	
	baz=321,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy 30.00**	**129**		T	T	09 42 25.3	
	baz=321,slow=76,SNR=61						
ZALV	**Zalesovo Beam**	**40.53**	**310**	P	**P**	**09 12 27.0**	**+2.7**
	0.7nm,0.4s,baz=54,slow=35,SNR=2.5						
MKAR	**Makanchi Array**	**43.24**	**300**	P	**P**	**09 12 47.0**	**+0.4**
	0.6nm,0.7s,baz=82,slow=10,SNR=6.6						
ILAR	**Eielson Array**	**46.59**	**34**	P	**P**	**09 13 14.0**	**+1.2**
	0.3nm,0.8s,baz=263,slow=6.3,SNR=3.3						
WRA	**Warramunga Arr**	**60.11**	**189**	P	**P**	**09 14 52.2**	**-0.5**
	1.3nm,0.8s,baz=6.3,slow=7.0,SNR=9.6						
ASAR	**Alice Springs**	**63.84**	**189**	P	**P**	**09 15 18.9**	**+1.1**
	0.6nm,0.8s,baz=9.6,slow=7.3,SNR=5.9						

TAP 10 09:07:57.4, 24.02N×121.60E, h7km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.05**	**169**	*i* P	Pg	09 07 59.4	+0.4
	baz=160						
HWA				*i* S	Sg	09 08 00.9	+0.9
	baz=160						
TWD	**Chiawan**	**0.06**	**1**	*i* P	Pg	09 07 59.8	+0.7
	baz=9.0						
TWD				*i* S	Sg	09 08 01.3	+1.0
	baz=9.0						
NACB	**Ninganchiao**	**0.15**	**360**	*i* P	Pg	09 08 01.1	+0.6
NACB				*i* S	Sg	09 08 03.8	+1.1
ETLH	**Xiulin Townshi**	**0.21**	**331**	*i* P	Pg	09 08 02.8	+1.1
	baz=330						
ETLH				*i* S	Sg	09 08 06.4	+1.8
	baz=330						
WHF	**Hehuan Shan**	**0.33**	**292**	*i* P	Pb	09 08 04.9	-0.8
	baz=292						
WHF				S	Sb	09 08 10.0	-1.3
	baz=292						
CHGB	**Renai**	**0.39**	**276**	*i* P	Pb	09 08 06.3	-0.3
	baz=275						
CHGB				S	Sb	09 08 12.1	-0.8
	baz=275						
FUSS	**Fushou**	**0.39**	**305**	*i* P	Pb	09 08 06.0	-0.8
	baz=304						
FUSS				S	Sb	09 08 12.8	-0.3
	baz=304						
NNSB	**Datong**	**0.45**	**334**	*i* P	Pb	09 08 07.4	-0.2
	baz=334						
NNSB				S	Sb	09 08 13.9	-0.6
	baz=334						
NNSH	**Datong**	**0.45**	**334**	*i* P	Pb	09 08 07.3	-0.3
	baz=334						
NNSH				S	Sb	09 08 13.3	-1.2
	baz=334						
VWDT	**VWDT**	**0.49**	**237**	P	Pg	09 08 07.4	+0.5
	baz=237						
VWDT				*e*S	Sb	09 08 15.9	+0.1
	baz=237						
NDT	**Datong Townshi**	**0.58**	**353**	*i* P	Pb	09 08 09.8	0.0
	baz=352						
NDT				S	Sb	09 08 18.2	-0.1
	baz=352						
NDS	**Dongshan**	**0.62**	**10**	P	Pb	09 08 10.2	-0.3
	baz=10.0						

TAP 10 09:08:00.2, 24.88N×122.02E, h15km, ML2.0, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.13**	**349**	*i* P	Pb	09 08 04.3	-0.2
	baz=352						
TWB1				*i* S	Sb	09 08 06.9	-0.3
	baz=352						
NTC	**Toucheng**	**0.17**	**262**	*i* P	Pb	09 08 04.8	-0.3
	baz=261						
NTC				S	Sb	09 08 08.1	-0.2
	baz=261						
TIPB	**Shuangxi**	**0.20**	**298**	*i* P	Pb	09 08 05.8	+0.2
	baz=298						
TIPB				*i* S	Sb	09 08 09.2	+0.1
	baz=298						
WFSB	**Wu-fen Shan**	**0.29**	**312**	*e*S	Sb	09 08 12.7	+1.0
	baz=312						
NDS	**Dongshan**	**0.37**	**228**	P	Pb	09 08 09.1	+0.7
	baz=228						
NDS				*e*S	Sb	09 08 14.6	+0.6
	baz=228						
ENTT	**Nioudou**	**0.47**	**240**	*i* P	Pb	09 08 10.3	0.0
	baz=358						
ENTT				*e*S	Sn	09 08 19.0	-1.5
	baz=358						
ENTT	**Nioudou**	**0.47**	**240**	P	Pb	09 08 10.3	0.0
	baz=239						
ENTT				*e*S	Sn	09 08 19.1	-1.5
	baz=239						
NWLT	**Wulai**	**0.48**	**258**	*i* P	Pb	09 08 10.3	0.0
	baz=257						
NWLT				*e*S	Sb	09 08 17.2	0.0
	baz=257						
NDT	**Datong Townshi**	**0.53**	**239**	P	Pb	09 08 11.3	0.0
	baz=238						
NDT				*e*S	Sb	09 08 18.7	-0.1
	baz=238						
ANP	**Anpu**	**0.54**	**304**	P	Pb	09 08 12.2	+0.7
	baz=304						
ANP				S	Sb	09 08 19.0	-0.2
	baz=304						
YHNB	**Yeheng**	**0.62**	**250**	*i* P	Pg	09 08 12.0	-0.4
	baz=342						
YHNB				S	Sn	09 08 23.2	-1.1
	baz=342						
YHNB	**Yeheng**	**0.62**	**250**	P	Pg	09 08 12.2	-0.2
	baz=250						
YHNB				*e*S	Sn	09 08 23.7	-0.6
	baz=250						

BJI ***10*** *09:15:17.3±0.0, 12.97N×146.51E, h9km, mB4.8/21, mb4.7/36, Ms4.4/10, Ms7 4.1/10*
IDC ***10*** *09:15:18.9±0.6, 12.88N×146.17E, h0km, mb4.4/26, mb1 4.5/26, mb1mx4.3/59, mbtmp4.4/26, MS3.5/7, Ms1 3.5/7, ms1mx3.0/56, Error ellipse: s-maj=21.4km s-min=13.0km az=90.0*
NEIC ***10*** *09:15:20.7±1.6, 12.86N±0.07×146.14E±0.06, h10km±1km, mb4.7/72, Error ellipse: s-maj=11.8km s-min=9.6km az=177.0*

ISC 10 09:15:20.2±0.5, 12.88N±0.08×146.16E±0.07, h10km, n123, σ1.8/37/123, mb4.7/68, MS3.6/11, 2C, South of Mariana Islands

| Code | Station Name | Δ°

USRK	Ussuriysk Ar.	33.50	341	P		P		09 21 59.2	-0.5
	comp=Z,1.5nm,0.7s,baz=165,slow=12,SNR=5.2								
WRAB	Tennant Creek	34.62	200	P		P		09 22 09.7	-0.1
WB2	Warramunga Arr	34.62	200	P		P		09 22 10.2	+0.4
WB2				IAmb		IAmb		09 22 21.7	
	comp=Z,10nm,1.3s								
WRA	Warramunga Arr	34.63	200	P		P		09 22 09.2	-0.7
	comp=Z,2.1nm,0.7s,baz=20,slow=9.3,SNR=15								
WRA				PcP		PcP			
	comp=Z,1.0nm,0.7s,baz=11,slow=3.9,SNR=5.4								
WRA	Warramunga Arr	34.63	200	P		P		09 22 10.1	+0.2
SBUM	Sibu	35.14	256	P		P		09 22 15.2	+0.8
SBUM				IAmb		IAmb		09 22 16.2	
	comp=Z,6.2nm,0.7s								
FITZ	Fitzroy Crossi	36.84	214	P		P		09 22 28.8	-0.1
	comp=Z,2.7nm,0.8s,baz=31,slow=10,SNR=6.8								
FITZ	Fitzroy Crossi	36.84	214	P		P		09 22 29.3	+0.5
KSM	Kuching	37.27	255	P		P		09 22 32.1	-0.5
KSM				IAmb		IAmb		09 22 33.9	
	comp=Z,7.2nm,0.6s								
BJT	Baijiatuau	37.77	321	P		P		09 22 35.6	-0.9
BJT				IAmb		IAmb		09 22 37.6	
	comp=Z,9.7nm,1.0s								
BJI	Beijing	37.78	321	P		P		09 22 36.6	0.0
BJI				pmax		pmax			
	comp=Z,10.0nm,0.8s								
BJI				pmax		pmax			
	comp=Z,32nm,4.6s								
BJI				LR		LR			
	comp=Z,87nm,9.9s								
BJI				LR		LR			
	comp=Z,130nm,12.7s								
AS31	Alice Springs	38.25	198	P		P		09 22 41.3	+0.5
ASAR	Alice Springs	38.25	198	P		P		09 22 41.0	+0.2
	comp=Z,0.8nm,0.6s,baz=22,slow=9.1,SNR=16								
XAN	Xi'an	39.82	308	P		P		09 22 53.6	-0.3
XAN				pmax		pmax			
	comp=Z,10.0nm,1.0s								
XAN	Xi'an	39.82	308	P		P		09 22 54.0	+0.1
HHC	Hu-ho-hao-te	41.12	319	*eP*		P		09 23 05.9	+1.2
HHC				pmax		pmax			
	comp=Z,23nm,0.6s								
HHC				pmax		pmax			
	comp=Z,150nm,6.8s								
KMI	Kunming	42.64	293	⇑P		P		09 23 18.2	+0.7
KMI				pP		sP		09 23 21.8	+4.1
KMI				pmax		pmax			
	comp=Z,6.0nm,0.8s								
LZH	Lanzhou	44.44	309	*eP*		P		09 23 32.9	+1.1
LZH				pP		pwP		09 23 38.6	-5.8
LZH				pmax		pmax			
	comp=Z,27nm,0.8s								
LZH				pmax		pmax			
	comp=Z,56nm,4.3s								
LZH				LR		LR			
	comp=Z,330nm,11.4s								
LZH				LR		LR			
	comp=Z,290nm,14.6s								
STKA	Stephens Creek	44.72	186	P		P		09 23 32.8	-0.9
	comp=Z,2.1nm,0.9s,baz=31,slow=10,SNR=3.4								
STKA	Stephens Creek	44.72	186	IAmb		IAmb		09 23 33.8	
	comp=Z,1.1nm,1.2s								
CMAR	Chiang Mai Arr	45.70	283	P		P		09 23 42.3	+0.5
	comp=Z,3.7nm,0.7s,baz=86,slow=6.1,SNR=20								
CMAR				LR		LR		09 42 06.5	
	comp=Z,40nm,20.7s,baz=310,slow=35								
CMAR	Chiang Mai Arr	45.70	283	P		P		09 23 41.2	-0.6
MA2	Magadan	46.74	3	P		P		09 23 48.7	-0.6
	comp=Z,5.9nm,0.7s,baz=176,slow=7.4,SNR=11								
MA2	Magadan	46.74	3	P		P		09 23 49.2	-0.2
MA2				IAmb		IAmb		09 23 51.0	
	comp=Z,6.8nm,0.8s								
SONM	Songino Array	48.03	325	P		P		09 23 59.8	0.0
	comp=Z,2.3nm,0.6s,baz=136,slow=6.5,SNR=8.4								
GTA	Gaotai	48.58	312	⇑P		P		09 24 04.6	+0.4
GTA				pP		sP		09 24 09.1	+4.7
GTA				sP		pwP		09 24 12.2	-4.7
GTA				pmax		pmax			
	comp=Z,13nm,1.0s								
AFI	Afiamalu	49.45	121	LR		LR		09 42 21.5	
	comp=Z,23nm,18.7s,baz=300,slow=33								
TLY	Talaya	51.62	328	P		P		09 24 26.1	-0.8
	comp=Z,2.2nm,0.6s,baz=0.1,slow=5.8,SNR=5.8								
TLY	Talaya	51.62	328	IAmb		IAmb		09 24 30.2	
	comp=Z,4.1nm,0.9s								
BILL	Bilibino	56.66	9	P		P		09 25 03.7	+0.3
BILL				IAmb		IAmb		09 25 19.0	
	comp=Z,10nm,1.0s								
WMQ	Urumqi	58.53	314	*eP*		P		09 25 18.6	+1.5
WMQ				pP		sP		09 25 22.3	+5.0
WMQ				pmax		pmax			
	comp=Z,25nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,82nm,3.8s								
WMQ				LR		LR			
	comp=Z,1μm,29.0s								
WMQ				LR		LR			
	comp=Z,110nm,24.9s								
MK31	Makanchi Array	62.87	316	P		P		09 25 47.8	+1.3
MK31				IAmb		IAmb		09 25 48.6	
	comp=Z,11nm,1.4s								
MKAR	Makanchi Array	62.87	316	P		P		09 25 47.6	+1.1
	comp=Z,4.8nm,0.8s,baz=94,slow=8.3,SNR=29								
ZAA0	Zalesovo Array	62.93	324	P		P		09 25 48.4	+1.7
ZAA0				IAmb		IAmb		09 26 03.6	
	comp=Z,3.1nm,0.6s								
ZALV	Zalesovo Beam	62.93	324	P		P		09 25 47.1	+0.4
	comp=Z,2.2nm,0.6s,baz=107,slow=7.8,SNR=5.0								
MAKZ	Makanchi	63.08	316	P		P		09 25 48.7	+0.7
KURK	Kurchatov	65.93	320	P		P		09 26 07.4	+0.9
KURBB	Kurchatov Arra	65.97	320	P		P		09 26 07.4	+0.6
	comp=Z,14nm,0.6s,baz=102,slow=6.7,SNR=34								
PWL	Port Wells	66.98	29	P		P		09 26 13.9	+0.8
KNK	Knik Glacier	67.07	28	P		P		09 26 13.8	+0.2
MLY	Manley	67.18	24	P		P		09 26 15.3	+1.0
MLY				IAmb		IAmb		09 26 16.2	
	comp=Z,4.1nm,0.8s								
NRIK	Noril'sk	67.21	341	P		P		09 26 15.6	+1.2
	comp=Z,1.9nm,0.5s,baz=100,slow=7.0,SNR=5.6								
NRIK	Noril'sk	67.21	341	P		P		09 26 15.8	+1.5
NRIK				IAmb		IAmb		09 26 29.4	
	comp=Z,4.8nm,0.9s								
SML	Sawmill	67.24	28	P		P		09 26 14.6	-0.1
RND	Reindeer	67.46	26	P		P		09 26 16.7	+0.6
A21K	Barrow	67.68	17	P		P		09 26 18.0	+0.7
A21K				IAmb		IAmb		09 26 24.5	
	comp=Z,8.6nm,1.1s								
SCM	Sheep Creek Mo	67.70	28	P		P		09 26 19.8	+2.1
NEA2	Nenana	67.72	25	P		P		09 26 18.5	+0.8
I23K	Minto, Yukon-K	67.77	24	P		P		09 26 19.1	+1.1
I23K				IAmb		IAmb		09 26 22.3	
	comp=Z,8.2nm,1.3s								
WRH	Wood River Hil	68.09	25	P		P		09 26 20.1	+0.1
WRH				IAmb		IAmb		09 26 46.1	
	comp=Z,4.8nm,1.1s								
COLD	Coldfoot	68.13	22	P		P		09 26 20.4	+0.2
COLD				IAmb		IAmb		09 26 44.0	
	comp=Z,7.9nm,1.3s								
MDM	Murphy Dome	68.17	25	P		P		09 26 21.5	+1.0
MDM				IAmb		IAmb		09 26 45.2	
	comp=Z,7.8nm,1.4s								
CCB	Clear Creek Bu	68.26	25	P		P		09 26 20.7	-0.3
CCB				IAmb		IAmb		09 26 24.3	
	comp=Z,8.0nm,1.4s								
M24K	Tolsona, Glenn	68.30	28	P		P		09 26 21.6	+0.1
IL31		68.67	25	P		P		09 26 23.4	-0.1
IL31				IAmb		IAmb		09 26 31.4	
	comp=Z,8.4nm,1.4s								
ILAR	Eielson Array	68.67	25	P		P		09 26 22.9	-0.7
	comp=Z,1.5nm,0.6s,baz=251,slow=5.8,SNR=24								
ILAR	Eielson Array	68.67	25	P		P		09 26 23.3	-0.3
NIL	Nilore	68.82	301	P		P		09 26 26.0	+0.8
POO	Poona	69.44	285	*ex*		P		09 26 29.0	-0.3
FYU	Fort Yukon	69.80	23	P		P		09 26 31.7	+1.1
BMAR	Burnt Mountain	70.27	23	P		P		09 26 35.4	+1.9
PPT	Papeete	70.28	114	LR		LR		09 51 48.9	
	comp=Z,34nm,18.7s,baz=348,slow=31								
TABL	Table Mountain	70.36	30	P		P		09 26 36.2	+1.9
L27K	Beaver Creek,	70.47	27	P		P		09 26 36.0	+1.3
LOGN	Logan Glacier	70.48	30	P		P		09 26 35.3	+0.2
K27K	Chicken	70.54	26	P		P		09 26 37.2	+2.0
K27K				IAmb		IAmb		09 26 51.4	
	comp=Z,4.7nm,1.1s								
KK31	Karatay Array	70.86	311	P		P		09 26 38.6	+1.0
KKAR	Karatay Array	70.86	311	P		P		09 26 38.7	+1.1
EGAK	Eagle	71.06	26	P		P		09 26 39.5	+1.2
EGAK				IAmb		IAmb		09 26 53.3	
	comp=Z,8.7nm,1.4s								
BVAR	Borovoye Array	71.26	322	P		P		09 26 40.1	+0.4
	comp=Z,9.1nm,0.7s,baz=140,slow=12,SNR=18								
BRVK	Borovoye	71.32	322	P		P		09 26 41.3	+1.2
DAWY	Dawson	71.71	26	P		P		09 26 44.1	+1.8
HYT	Haines Junctio	72.19	30	P		P		09 26 46.8	+1.5
INK	Inuvik	74.54	22	P		P		09 26 59.3	+0.5
HRA	Herat	77.88	303	P		P		09 27 18.8	0.0
HRA				IAmb		IAmb		09 27 20.9	
	comp=Z,10.0nm,0.9s								
ABKAR	Akbulak array	77.91	318	P		P		09 27 18.8	+0.4
ABKAR				IAmb		IAmb		09 27 19.6	
	comp=Z,7.7nm,0.8s								
C36M	Paulatuk	77.97	21	P		P		09 27 18.0	-0.3
C36M				IAmb		IAmb		09 27 19.4	
	comp=Z,12nm,1.4s								
ARU	Arti	78.06	325	P		P		09 27 19.8	+0.7
	comp=Z,2.9nm,0.2s,baz=106,slow=4.5,SNR=6.1								
AKTO	Aktyubinsk	79.02	319	P		P		09 27 24.9	+0.4
	comp=Z,1.7nm,0.6s,baz=334,slow=4.8,SNR=3.5								
AKTO				LR		LR		10 03 38.5	
	comp=Z,52nm,20.7s,baz=53,slow=37								
GEYT	Alibeck	80.68	307	P		P		09 27 34.5	+0.7
	comp=Z,2.1nm,0.5s,baz=114,slow=14,SNR=3.6								
YKA	Yellowknife Ar	82.91	28	P		P		09 27 45.5	+0.4
	comp=Z,1.2nm,0.8s,baz=284,slow=5.0,SNR=21								
PINE	Pine Mountain	83.28	47	P		P		09 27 48.8	+1.1
PINE				IAmb		IAmb		09 27 53.5	
	comp=Z,4.8nm,0.9s								
B08A	Colville Reser	83.46	42	P		P		09 27 48.4	+0.2
MOD	Modoc Plateau	84.12	49	P		P		09 27 52.8	+0.8
RES	Resolute Bay	84.94	14	P		P		09 27 55.6	+0.4
BELG	Belogornoye	85.05	323	P		P		09 27 57.1	+1.0
	comp=Z,5.8nm,0.6s,baz=320,slow=16,SNR=2.6								
BMO	Blue Mountains	85.60	45	P		P		09 28 00.1	+0.8
NVAR	Mina Array Bea	86.38	52	P		P		09 28 04.4	+1.0
	comp=Z,0.9nm,0.6s,baz=274,slow=5.1,SNR=13								
WALA	Waterton Lakes	86.78	40	P		P		09 28 05.5	+0.5
MFID	Camas Ranch	86.98	46	P		P		09 28 06.9	+0.8
MFID				IAmb		IAmb		09 28 08.6	
	comp=Z,3.1nm,0.9s								
HLID	Hailey	87.94	46	P		P		09 28 11.9	+1.1
ELK	Elko	88.10	49	P		P		09 28 13.1	+1.4
ELK				IAmb		IAmb		09 28 16.4	
	comp=Z,5.0nm,1.1s								
ARCES	ARCESS Array B	88.14	342	P		P		09 28 12.4	+1.4
	comp=Z,1.5nm,1.2s,baz=333,slow=6.8,SNR=5.0								
TPNV	Topopah Spring	88.32	53	P		P		09 28 14.3	+1.6
TPNV				IAmb		IAmb		09 28 28.8	
	comp=Z,5.8nm,1.4s								
HRY	Holter Researc	88.79	42	P		P		09 28 16.1	+1.4
BOZ	Bozeman (W)	89.26	43	P		P		09 28 18.3	+1.3
BOZ				IAmb		IAmb		09 28 19.3	
	comp=Z,6.9nm,1.5s								
HVU	Hansel Valley	89.60	47	P		P		09 28 20.7	+2.0
HVU				IAmb		IAmb		09 28 21.3	
	comp=Z,3.2nm,0.9s								
PSUT	Pine Spring	89.73	51	P		P		09 28 20.6	+1.2
PSUT				IAmb		IAmb		09 28 35.9	
	comp=Z,2.7nm,0.8s								
YHL	Hebgen Lake	89.79	44	P		P		09 28 19.8	+0.2
DUG	Dugway, Tooele	90.03	49	P		P		09 28 21.4	+0.7
YHH	Holmes Hill	90.03	44	P		P		09 28 22.6	+1.8
YHH				IAmb		IAmb		09 28 23.9	
	comp=Z,4.4nm,1.3s								
FINES	FINESS Array B	92.33	335	P		P		09 28 29.9	-0.8
	comp=Z,4.5nm,0.5s,baz=76,slow=5.3,SNR=13								
WUAZ	Wupatki	92.50	53	P		P		09 28 32.8	+0.6
WUAZ				IAmb		IAmb		09 28 37.5	
	comp=Z,4.5nm,1.1s								
MNK	Minsk	95.14	329	*i* P		P		09 28 37.1	-6.6
	comp=E,5.0nm,0.8s								
MNK				*i* P		P		09 28 37.1	-6.6
	comp=N,38nm,0.8s								
MNK				*i* P		P		09 28 37.1	-6.6
	comp=Z,9.0nm,0.8s								
MNK				*i* PP		PP		09 32 26.2	-6.6
MNK				*i* PPP		PPP		09 34 29.3	
MNK				*i* S		SKSac		09 39 12.8	-6.8
MNK				*i* PS		PS		09 41 12.3	-4.2
MNK				*i* SS		SS		09 46 21.6	-2.2
MNK				*i* SSS		SSS		09 50 04.6	
MNK				*i* LR		LR		10 08 59.7	
MNK				*i* LRM		MLR		10 12 33.9	
	comp=Z,263nm,26.1s								
MNK				*i* LRM		MLR		10 12 41.1	
	comp=E,15nm,18.8s								
MNK				*i* LRM		MLR		10 12 41.1	
	comp=N,667nm,28.9s								
DBIC	Dimbokro	145.26	302	PKPbc		PKPbc		09 34 59.5	+0.4
	comp=N,8.2nm,0.6s,baz=35,slow=4.7,SNR=12								
LPAZ	La Paz	146.67	100	PKPbc		PKPbc		09 35 05.1	+1.1
	comp=N,1.2nm,0.5s,baz=322,slow=3.4,SNR=6.3								

IDC ***10*** *09:19:53.7±0.6, 33°.36N×81°.26E, h0km, mb4.0/17, mb1 4.2/21, mb1mx3.9/59, mbtmp4.1/21, ML3.5/4, MS3.4/17, Ms1 3.5/17, ms1mx3.2/62, Error ellipse: s-maj=19.1km s-min=13.3km az=49.0*

NDI ***10*** *09:19:54.4±2.4, 33°.86N×80°.87E, h282km±86km, ML3.8, mb4.5(NEIC)*

NEIC ***10*** *09:19:56.0±2.5, 33°.39N±0°.07×81°.08E±0°.07, h10km±1km, mb4.5/28, Error ellipse: s-maj=11.8km s-min=10.2km az=2.0*

ISC 10 09:19:55.7±0.4,**33°.30N**±0°.05×**81°.13E**±0°.04,**h10**km,**n81,**
σ1**s67**/77,**mb4.2**/28,**MS3.4**/14,**1D,Xizang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DDI	Dehra Dun	3.96	222	*eP*		Pb	09 21 04.5	-1.1
DDI				*eS*		Sb	09 21 53.8	+0.3
DDI				IAML			09 22 11.3	
	comp=N,239nm,0.5s							
DDI				IAML			09 22 19.5	
	comp=E,216nm,0.6s							
SMLA	Simla	3.99	238	*eP*		Pb	09 21 02.6	-3.6
SMLA				*eS*		Sb	09 21 51.7	-2.9
SMLA				IAML			09 21 54.0	
	comp=N,131nm,0.6s							
DHRM	DHARAMSHALA	4.20	257	*eP*		Pn	09 21 02.9	+2.9
DHRM				IAML			09 22 06.1	
	comp=E,137nm,0.9s							
DHRM				IAML			09 22 17.7	
	comp=N,179nm,1.1s							
DHRM				IAML			09 22 18.8	
	comp=E,160nm,0.7s							
THN	Thein Dam	4.63	261	*eP*		Pb	09 21 16.0	-1.1
NDI	New Delhi	5.70	217	*eP*		Pn	09 21 26.0	+5.6
CHCP	Chirah Chowk	6.58	275	P		Pn	09 21 34.9	+2.3
NIL	Nilore	6.59	275	Pn		Pn	09 21 33.7	+0.9
NIL				Sn		Sn	09 22 50.9	+2.9
CEP	Cherat	7.71	276	P		Pn	09 21 48.9	+0.7
THW	Thamme Wali	7.90	269	P		Pn	09 21 51.7	+1.1
LSA	Lhasa	9.28	110	P		Pn	09 22 12.6	+2.6
LSA				S		Sn	09 23 51.0	-3.7
LSA				LR		LR		
	comp=N,470nm,8.5s							
LSA				LR		LR		
	comp=E,570nm,6.1s							
LSA				LR		LR		
	comp=Z,990nm,5.7s							
LSA	Lhasa	9.28	110			Pn	09 22 12.6	+2.6
KBL	Kabul	10.12	280	Pn		Pn	09 22 21.7	+0.4
KBL				Sn		Sn	09 24 13.8	-1.1
BHPL	Bhopal	10.54	199	*eP*		Pn	09 22 27.6	+0.7
BHPL				IAmb		IAmb	09 22 28.8	
	comp=Z,40nm,0.5s							
BHPL				*eS*		Sn	09 24 23.8	-1.3
BHPL				IAML			09 24 26.9	
	comp=N,65nm,0.1s							
AAK	Ala-Archa	10.69	333	Pn		Pn	09 22 31.6	+2.6
	comp=N,0.6nm,0.3s,baz=165,slow=5.2,SNR=5.9							
AAK				LR		LR	09 26 50.8	
	comp=N,244nm,19.9s,baz=146,slow=39							
AAK	Ala-Archa	10.69	333			Pn	09 22 32.5	+3.5
WMQ	Urumqi	11.69	24	*eP*		Pn	09 22 50.5	+7.9
WMQ				pP			09 22 54.4	
WMQ				sP			09 22 57.5	
WMQ				S		Sn	09 25 04.2	+11
WMQ				pmax		pmax		
	comp=Z,22nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,59nm,5.1s							
WMQ				smax		smax		
	comp=N,12nm,0.5s							
WMQ				smax		smax		
	comp=E,14nm,0.5s							
WMQ				LR		LR		
	comp=N,520nm,20.1s							
WMQ				LR		LR		
	comp=E,320nm,13.9s							
WMQ				LR		LR		
	comp=Z,320nm,15.7s							
KK31	Karatay Array	12.85	323	Pn		Pn	09 22 58.2	-0.3
KKAR	Karatay Array	12.85	323			Pn	09 22 57.8	-0.7
MK31	Makanchi Array	13.51	3	Pn		Pn	09 23 06.1	-1.3
MKAR	Makanchi Array	13.51	3	Pn		Pn	09 23 06.1	-1.3
	comp=Z,0.4nm,0.3s,baz=176,slow=13,SNR=37							
MKAR				LR		LR	09 29 26.8	
	comp=Z,59nm,20.7s,baz=180,slow=43							
MAKZ	Makanchi	13.51	2	Pn		Pn	09 23 06.4	-1.0
HRA	Herat	15.73	279	Pn		Pn	09 23 38.5	+0.8
HYB	Hyderabad	15.98	189	*i* P		Pn	09 23 37.0	-3.8
HYB				*eS*		S	09 26 56.0	+3.9
GTA	Gaotai	16.23	63	*eP*		P	09 23 51.0	+3.9
GTA				pP		sP	09 23 55.8	+2.6
GTA				sP		pP	09 23 58.3	+7.0
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
GTA				pmax		pmax		
	comp=Z,48nm,5.5s							
GTA				LR		LR		
	comp=N,1μm,14.9s							
GTA				LR		LR		
	comp=E,360nm,16.4s							
GTA				LR		LR		
	comp=Z,300nm,13.1s							
KURBB	Kurchatov Arra	17.42	354	P		Pn	09 23 58.6	-0.1
	comp=Z,0.0nm,0.3s,baz=175,slow=9.9,SNR=8.8							
KURK	Kurchatov	17.50	355	P		Pn	09 23 58.6	-1.1
GEYT	Alibeck	19.26	290	P		P	09 24 20.8	+0.4
	comp=Z,0.4nm,0.3s,baz=143,slow=15,SNR=4.3							
GEYT				LR		LR	09 32 23.8	
	comp=Z,81nm,19.4s,baz=160,slow=39							
GYA0B	ALIBECK ARRAY	19.26	290	P		P	09 24 18.3	-2.0
KMI	Kunming	20.52	108	⇓P		P	09 24 34.7	+0.2
KMI				pP		pP	09 24 38.3	-0.4
KMI				pmax		pmax		
	comp=Z,30nm,0.7s							
KMI				pmax		pmax		
	comp=Z,64nm,3.5s							
KMI	Kunming	20.52	108	P		P	09 24 34.5	+0.1
KMI				IAmb		IAmb	09 24 39.0	
	comp=Z,31nm,0.9s							
ZAA0	Zalesovo Array	20.81	6	P		P	09 24 34.8	-2.3
ZALV	Zalesovo Beam	20.81	6	P		P	09 24 35.6	-1.4
	comp=Z,6.6nm,0.8s,baz=190,slow=13,SNR=9.4							
ZALV				LR		LR	09 33 58.5	
	comp=Z,50nm,18.2s,baz=198,slow=41							
BVAR	Borovoye Array	21.17	342	P		P	09 24 40.0	-1.0
	comp=Z,1.5nm,0.4s,baz=172,slow=13,SNR=5.1							
BRVK	Borovoye	21.23	342	P		P	09 24 40.6	-1.0
BRVK				IAmb		IAmb	09 24 50.2	
	comp=Z,10.0nm,0.9s							
CHTO	Chiang Mai	21.50	128	P		P	09 24 41.9	-2.9
CM31	Chiang Mai Arr	21.75	128	P		P	09 24 48.2	+0.7
CM31				IAmb		IAmb	09 24 53.5	
	comp=Z,8.1nm,0.8s							
CMAR	Chiang Mai Arr	21.75	128	P		P	09 24 47.0	-0.6
	comp=Z,7.1nm,0.8s,baz=311,slow=11,SNR=26							
CMAR				LR		LR	09 33 03.5	
	comp=Z,73nm,21.6s,baz=310,slow=36							
CMAR	Chiang Mai Arr	21.75	128	P		P	09 24 46.6	-0.9
WSAR	Wadi Sarin	22.16	249	P		P	09 24 53.9	+2.0
	comp=Z,5.0nm,0.7s,baz=95,slow=8.5,SNR=9.1							
ABKAR	Akbulak array	22.41	322	P		P	09 24 53.7	-0.6
ABKAR				IAmb		IAmb	09 25 07.8	
	comp=Z,7.0nm,0.8s							
SONM	Songino Array	23.93	45	P		P	09 25 07.3	-2.7
	comp=Z,1.3nm,0.8s,baz=238,slow=8.5,SNR=3.6							
SONM				LR		LR	09 34 26.1	
	comp=Z,151nm,18.1s,baz=252,slow=37							
AKTO	Aktyubinsk	24.12	322	P		P	09 25 11.8	+0.2
	comp=Z,3.1nm,0.7s,baz=124,slow=11,SNR=7.6							
AKTO				LR		LR	09 35 30.6	
	comp=Z,87nm,19.8s,baz=143,slow=39							
ULN	Ulaanbaatar	24.33	46	P		P	09 25 13.9	+0.2
TLY	Talaya	24.59	35	LR		LR	09 35 08.2	
	comp=Z,104nm,18.1s,baz=233,slow=37							
TLY	Talaya	24.59	35	P		P	09 25 15.2	-0.7
PALK	Pallekele	25.90	181	LR		LR	09 34 13.3	
	comp=Z,40nm,20.2s,baz=115,slow=33							
GNI	Garni	29.80	294	P		P	09 26 02.8	-0.2
	comp=Z,2.4nm,0.3s,baz=135,slow=10,SNR=3.2							
KBZ	Khabaz	31.43	301	LR		LR	09 41 14.4	
	comp=Z,134nm,19.1s,baz=98,slow=41							
SOCY	Socotra	32.51	236	P		P	09 26 25.2	-1.7
SOCY				IAmb		IAmb	09 26 47.3	
	comp=Z,6.6nm,1.1s							
KSRS	Korea Array	38.08	70	LR		LR	09 44 07.6	
	comp=Z,58nm,21.9s,baz=155,slow=38							
BRTR	Keskin Array B	38.34	294	P		P	09 27 16.9	-0.1
	comp=Z,1.1nm,0.7s,baz=118,slow=8.0,SNR=4.4							
JOW	Kunigami	41.04	86	LR		LR	09 46 00.6	
	comp=Z,50nm,20.3s,baz=168,slow=38							
MLR	Muntele Rosu	43.55	303	P		P	09 28 01.2	+1.4
MLR				IAmb		IAmb	09 28 14.3	
	comp=Z,11nm,1.0s							
KARP	Karpathos	44.11	289	P		P	09 28 03.5	-0.8
JWT	Wachi	44.41	72	P		P	09 28 06.4	-0.3

*TEH **10** 09:36:26.8,28˚.36N×51˚.77E,h19km,ML3.8*
*DSN **10** 09:36:31.2±0.9,28˚.21N×52˚.09E,h10km,ML3.7/11,Error ellipse: s-maj=15.5km s-min=7.5km az=22.0*
*OMAN **10** 09:36:33.1,28˚.14N×51˚.95E,h148km,mb4.4/10,ml3.6/9*

ISC 10 09:36:26.1±0.9,28˚32N±0.04×51˚75E±0.06,h10km,n70, σ1§74/96,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.67**	**324**	*e*Pg	**Pg**	**09 36 39.2**	**+0.1**
QIR1	**Qir**	**1.15**	**82**	*e*Pg	**Pb**	**09 36 47.9**	**-0.3**
QIR1				*e*		09 37 14.8	
	comp=Z,99nm,0.4s						
KAZ1	**Kazerun**	**1.31**	**356**	*e*Pg	**Pn**	**09 36 50.6**	**+0.1**
KAZ1				*e*		09 37 22.0	
	comp=Z,99nm,0.5s						
SHI	**Shiraz**	**1.48**	**27**	*e*Pg	**Pn**	**09 36 53.9**	**+0.9**
SHI				*e*Sg	**Sn**	**09 37 13.6**	**+1.1**
LMD1	**Lamerd**	**1.59**	**127**	*e*Pg	**Pg**	**09 36 57.8**	**+1.2**
LMD1				*e*		09 37 32.9	
	comp=Z,99nm,0.5s						
JHRM	**Jahrom**	**1.62**	**83**	*e*Pg	**Pb**	**09 36 56.9**	**+0.7**
KLNJ	**Kolanjah**	**2.69**	**357**	*e*Pn	**Pn**	**09 37 11.1**	**+1.4**
IRAM	**Ramesheh**	**3.52**	**9**	*e*Pn	**Pn**	**09 37 22.0**	**+0.9**
IMEH	**Mehriz**	**3.95**	**38**	*e*Pn	**Pn**	**09 37 28.7**	**+1.8**
SLWR	**Sila**	**4.23**	**181**	P	**Pn**	**09 37 34.4**	**+3.7**
IPIR	**Pirpir**	**4.41**	**351**	*e*Pn	**Pn**	**09 37 33.6**	**+0.2**
SHME	**Shamm**	**4.52**	**119**	P	**Pn**	**09 37 34.9**	**+0.3**
SHME	**Shamm**	**4.52**	**119**	*e*Pn	**Pn**	**09 37 34.7**	**+0.1**
SHME	**Shamm**	**4.52**	**119**	P	**Pn**	**09 37 35.4**	**+0.8**
SHME				S	**Sn**	**09 38 25.9**	**-1.3**
SHGR	**Shooshtar-Gavs** comp=E,30nm,0.4s	**4.56**	**327**	IAML		09 38 56.1	
SHGR				IAML		09 39 21.4	
	comp=N,30nm,0.5s						
NASN	**Na'in**	**4.56**	**11**	*e*Pn	**Pn**	**09 37 37.0**	**+1.5**
NASN				*e*Sg	**Sg**	**09 38 49.6**	**-3.0**
NASN	**Na'in**	**4.56**	**11**	*e*Pn	**Pn**	**09 37 37.0**	**+1.5**
IZEF	**Zefreh**	**4.59**	**6**	*e*Pn	**Pn**	**09 37 37.3**	**+1.5**
KRBR	**Kerman**	**4.69**	**68**	*e*Pn	**Pn**	**09 37 38.7**	**+1.5**
KRBR				*e*S	**Sn**	**09 38 32.6**	**+0.8**
KRBR	**Kerman**	**4.69**	**68**	*e*Pn	**Pn**	**09 37 38.7**	**+1.5**
TVBK	**TV Kerman**	**4.69**	**68**	*e*Pn	**Pn**	**09 37 40.3**	**+3.0**
BANOM	**Banah** SNR=19	**4.71**	**119**	*i* P	**Pn**	**09 37 37.8**	**+0.6**
BANOM				S	**Sn**	**09 38 30.7**	**-1.2**
BANOM	**Banah**	**4.71**	**119**	*e*Pn	**Pn**	**09 37 38.1**	**+0.9**
BANOM	**Banah**	**4.71**	**119**	P	**Pn**	**09 37 38.1**	**+0.9**
BANOM				S	**Sn**	**09 38 30.9**	**-1.0**
YZKH	**Yazd**	**4.75**	**30**	*e*Pn	**Pn**	**09 37 39.5**	**+1.7**
YZKH	**Yazd**	**4.75**	**30**	*e*Pn	**Pn**	**09 37 39.5**	**+1.7**
NAZ	**Nazwa, Dubai** SNR=11	**4.82**	**133**	*i* P	**Pn**	**09 37 40.9**	**+2.2**
NAZ	**Nazwa, Dubai**	**4.82**	**133**	*e*Pn	**Pn**	**09 37 41.1**	**+2.4**
NAZ	**Nazwa, Dubai** SNR=11	**4.82**	**133**	P	**Pn**	**09 37 41.2**	**+2.4**
NAZ				S	**Sn**	**09 38 33.4**	**-1.3**
ASUD	**Al Ashush, Dub** SNR=20	**4.88**	**138**	*i* P	**Pn**	**09 37 42.0**	**+2.4**
ASUD	**Al Ashush, Dub**	**4.88**	**138**	*e*Pn	**Pn**	**09 37 41.7**	**+2.1**
ASUD	**Al Ashush, Dub** SNR=20	**4.88**	**138**	P	**Pn**	**09 37 42.2**	**+2.7**
ASUD				S	**Sn**	**09 38 37.4**	**+1.3**
MASF	**Masafi** SNR=6.3	**4.91**	**126**	P	**Pn**	**09 37 41.3**	**+1.2**
MASF				S	**Sn**	**09 38 36.2**	**-0.8**
MSFE	**Esma-Masafi** SNR=6.2	**4.92**	**126**	*i* P	**Pn**	**09 37 40.8**	**+0.7**
MSFE	**Esma-Masafi**	**4.92**	**126**	*e*Pn	**Pn**	**09 37 41.1**	**+0.9**
FAQ	**Al Faqa, Dubai**	**4.95**	**135**	P	**Pn**	**09 37 42.9**	**+2.3**
FAQ	**Al Faqa, Dubai**	**4.95**	**135**	*e*Pn	**Pn**	**09 37 42.6**	**+2.1**
FAQ	**Al Faqa, Dubai**	**4.95**	**135**	P	**Pn**	**09 37 43.1**	**+2.5**
FAQ				S	**Sn**	**09 38 38.7**	**+0.8**
MDH	**Madha**	**5.06**	**125**	P	**Pn**	**09 37 42.8**	**+0.8**
MDH	**Madha**	**5.06**	**125**	*e*Pn	**Pn**	**09 37 43.0**	**+1.0**
MDH	**Madha**	**5.06**	**125**	P	**Pn**	**09 37 43.1**	**+1.0**
MDH				S	**Sn**	**09 38 40.0**	**-0.5**
UOSS	**Minazif** SNR=12	**5.21**	**129**	*i* P	**Pn**	**09 37 45.1**	**+0.9**
UOSS	**Minazif**	**5.21**	**129**	*e*Pn	**Pn**	**09 37 44.9**	**+0.7**
UOSS	**Minazif**	**5.21**	**129**	P	**Pn**	**09 37 45.0**	**+0.9**
UOSS				S	**Sn**	**09 38 42.5**	**-1.9**
HATD	**Hatta, Dubai** SNR=12	**5.25**	**131**	*i* P	**Pn**	**09 37 46.3**	**+1.7**
HATD				S	**Sn**	**09 38 43.8**	**-1.3**
HATD	**Hatta, Dubai** SNR=12	**5.25**	**131**	P	**Pn**	**09 37 46.5**	**+1.9**
HATD				S	**Sn**	**09 38 44.4**	**-0.7**
ASHO	**Ashiyiah**	**5.29**	**132**	P	**Pn**	**09 37 46.7**	**+1.4**
ALNE	**Al Ain** SNR=7.0	**5.56**	**139**	*i* P	**Pn**	**09 37 50.8**	**+1.8**
ALNE	**Al Ain**	**5.56**	**139**	*e*Pn	**Pn**	**09 37 50.5**	**+1.5**
ALNE	**Al Ain** SNR=7.0	**5.56**	**139**	P	**Pn**	**09 37 51.0**	**+2.1**
ALNE				S	**Sn**	**09 38 53.0**	**0.0**
KRSH	**Karshahi**	**5.64**	**3**	*e*Pn	**Pn**	**09 37 51.0**	**+0.8**
KBAM	**BAM**	**5.94**	**81**	*e*Pn	**Pn**	**09 37 55.6**	**+1.3**
SOHO	**SOHO**	**5.99**	**133**	P	**Pn**	**09 37 55.7**	**+1.0**
SOHO	**SOHO**	**5.99**	**133**	P	**Pn**	**09 37 55.9**	**+1.2**
SOHO				S	**Sn**	**09 39 04.1**	**+0.7**
ISFB	**Sefidab**	**6.03**	**4**	*e*Pn	**Pn**	**09 37 55.6**	**+0.2**
UMZA	**Um Al Zommool**	**6.38**	**150**	*e*Pn	**Pn**	**09 38 02.0**	**+1.9**
UMZA	**Um Al Zommool**	**6.38**	**150**	P	**Pn**	**09 38 02.0**	**+1.9**
UMZA				S	**Sn**	**09 39 11.0**	**-2.0**
ARQ	**Araqi** SNR=6.0	**6.56**	**138**	P	**Pn**	**09 38 03.7**	**+1.0**
ARQ				S	**Sn**	**09 39 16.5**	**-1.3**
HOQ	**Hoqain**	**6.88**	**132**	P	**Pn**	**09 38 08.3**	**+1.3**
HOQ				S	**Sn**	**09 39 24.7**	**-0.7**
BSY	**Bisya** SNR=7.8	**7.42**	**137**	P	**Pn**	**09 38 15.7**	**+1.2**
BSY				S	**Sn**	**09 39 35.8**	**-2.9**
SMDO	**Samad** SNR=6.1	**7.73**	**131**	P	**Pn**	**09 38 20.6**	**+1.8**
SMDO				S	**Sn**	**09 39 44.6**	**-1.8**
JMDO	**Jabal Madar**	**8.25**	**134**	P	**Pn**	**09 38 26.1**	**+0.2**
WBK	**Wadi Bani Khal**	**8.65**	**129**	P	**Pn**	**09 38 31.9**	**+0.5**
WBK				S	**Sn**	**09 40 06.4**	**-2.7**
MHTO	**MHTO** SNR=8.2	**9.23**	**141**	P	**Pn**	**09 38 40.4**	**+1.0**
MHTO				S	**Sn**	**09 40 19.4**	**-3.9**
JLN	**Jalan Bani Buh**	**9.26**	**130**	P	**Pn**	**09 38 39.7**	**0.0**
JLN				S	**Sn**	**09 40 19.1**	**-4.9**
DQM	**DQM**	**9.88**	**146**	P	**Pn**	**09 38 48.5**	**+0.2**
DOK	**Doka**	**9.90**	**167**	P	**Pn**	**09 38 49.7**	**+1.2**
WHFO	**Wadi Hawf**	**10.52**	**169**	P	**Pn**	**09 38 57.6**	**+0.6**
WHFO				S	**Sn**	**09 40 50.7**	**-4.3**
DMTO	**DMTO**	**10.96**	**164**	P	**Pn**	**09 39 03.0**	**0.0**
DMTO				S	**Sn**	**09 41 02.7**	**-2.9**
RBK	**Rabkut**	**11.00**	**168**	P	**Pn**	**09 39 04.3**	**+0.7**
RBK				S	**Sn**	**09 41 02.9**	**-3.8**

*BJI **10** 09:42:21.5±0.0,5˚.08S×138˚.20E,h46km,mB5.0/11, mb4.8/19,Ms4.8/2*
*NEIC **10** 09:42:24.1±2.6,4˚.49S±0˚.07×138˚.22E±0˚.07,h35km±2km, mb4.7/32,Error ellipse: s-maj=13.0km s-min=10.0km az=138.0*
*DJA **10** 09:42:25.2±0.2,5˚S±2˚×13˚8E±˚,h43km±4km,M4.7/23, mB5.1/11,mb4.9/23,MLv5.0/7,Mw(mB)4.5/11*
*IDC **10** 09:42:26.3±2.2,4˚.45S×138˚.25E,h57km±22km,mb3.9/13, mb1 4.2/18,mb1mx4.0/49,mbtmp4.3/18,ML4.7/5,MS3.3/9, Ms1 3.3/9,ms1mx3.0/46,Error ellipse: s-maj=22.6km s-min=15.4km az=85.0*

ISC 10 09:42:24.0±0.4,4˚67S±0˚05×138˚17E±0˚05,h35km,n100, σ1§80/101,mb4.6/35,MS3.2/6,1C,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAMI	**Wamena**	**0.95**	**35**	P	**Pn**	**09 42 41.3**	**+0.4**
WAMI				S	**Sn**	**09 42 54.0**	**+0.8**
GENI	**Genyem**	**2.87**	**44**	P	**Pn**	**09 43 07.9**	**+0.6**
GENI				S	**Sn**	**09 43 42.7**	**+2.1**
JAY	**Jayapura** 35nm,0.3s,baz=213,slow=12,SNR=128	**3.31**	**50**	P	**Pn**	**09 43 12.9**	**-0.6**
JAY				S	**Sn**	**09 43 50.5**	**-1.2**
	48nm,0.3s,baz=129,slow=18,SNR=6.1						
JAY				LR	LR	09 44 12.4	
	comp=Z,459nm,18.0s,baz=253,slow=34						
JAY	**Jayapura**	**3.31**	**50**	P	**Pn**	**09 43 13.2**	**-0.3**
SRPI	**Serui, Papua**	**3.38**	**325**	P	**Pn**	**09 43 15.2**	**+0.8**
SRPI				S	**Sn**	**09 43 55.2**	**+1.8**
BAKI	**Biak**	**4.02**	**329**	P	**Pn**	**09 43 23.1**	**-0.1**
FAKI	**Fak Fak**	**6.16**	**286**	Pn	**Pn**	**09 43 55.0**	**+2.4**
FAKI	**Fak Fak** 0.6nm1µm145nm,0.7s	**6.16**	**286**	P	**Pn**	**09 43 54.4**	**+1.8**
SAUI	**Saumlaki**	**7.58**	**244**	Pn	**Pn**	**09 44 13.7**	**+1.6**
SIJI	**Sorong** 25nm,0.3s,baz=121,slow=6.0,SNR=46	**7.86**	**299**	P	**Pn**	**09 44 17.4**	**+1.4**
SIJI				S	**Sn**	**09 45 43.2**	**-0.6**
	5.2nm,0.3s,baz=310,slow=22,SNR=6.1						
SIJI				LR	LR	09 47 56.5	
	comp=Z,284nm,19.3s,baz=195,slow=42						
SWI	**Sorong** 0.8nm3µm208nm,0.7s	**7.87**	**299**	P	**Pn**	**09 44 17.8**	**+1.7**
PMG	**Port Moresby** 5.4nm,0.3s,baz=334,slow=3.9,SNR=20	**10.08**	**118**	P	**Pn**	**09 44 47.1**	**+0.6**
PMG				LR	LR	09 49 21.5	
	comp=Z,178nm,20.0s,baz=18,slow=41						
COEN	**Coen**	**10.46**	**152**	Pn	**Pn**	**09 44 53.7**	**+2.0**
MTN	**Manton Dam**	**10.69**	**220**	Pn	**Pn**	**09 44 58.0**	**+3.3**
SANI	**Sanana** 42nm,0.8s	**12.44**	**282**	P	**Pn**	**09 45 18.3**	**-0.4**
SOEI	**Soe**	**14.69**	**249**	Pn	**Pn**	**09 45 50.3**	**+0.8**
SOEI	**Soe** 1µm133nm,0.7s	**14.69**	**249**	P	**Pn**	**09 45 50.2**	**+0.8**
BATI	**Baumata** 64nm,0.8s	**15.40**	**248**	P	**Pn**	**09 45 58.9**	**+0.1**
WB0	**Warramunga Arr**	**15.45**	**193**	Pn	**Pn**	**09 46 00.6**	**+1.1**
WB0				IAmb	IAmb	09 46 20.7	
	comp=Z,34nm,0.6s						
WR0	**Warramunga Arr**	**15.60**	**193**	Pn	**Pn**	**09 46 01.3**	**-0.2**
WRAB	**Tennant Creek**	**15.62**	**193**	Pn	**Pn**	**09 46 01.3**	**-0.4**
WRAB				IAmb	IAmb	09 46 24.0	
	comp=Z,48nm,0.6s						
WB2	**Warramunga Arr**	**15.63**	**193**	Pn	**Pn**	**09 46 02.0**	**+0.2**
WRA	**Warramunga Arr** comp=Z,1.8nm,0.3s,baz=18,slow=12,SNR=48	**15.63**	**193**	P	**Pn**	**09 46 01.4**	**-0.5**
WRA				S	**Sn**	**09 48 49.7**	**-4.3**
	comp=Z,2.2nm,0.3s,baz=10,slow=22,SNR=6.9						
LUWI	**Luwuk**	**15.79**	**283**	Pn	**Pn**	**09 46 03.1**	**-0.8**
LUWI				IAmb	IAmb	09 46 25.6	
	comp=Z,49nm,0.9s						
APSI	**Ampana**	**16.92**	**282**	P	**Pn**	**09 46 18.8**	**+0.6**
	comp=Z,633nmcomp=Z,72nm,0.7s						
MRSI	**Marisa**	**17.00**	**287**	P	**P**	**09 46 21.1**	**+0.3**
	comp=Z,102nm,0.6s						
CTA	**Charters Tower** comp=Z,0.8nm,0.3s,baz=333,slow=13,SNR=9.4	**17.23**	**153**	P	**P**	**09 46 25.6**	**+2.3**
CTAO	**Charters Tower**	**17.23**	**153**	P	**P**	**09 46 24.1**	**+0.8**
FITZ	**Fitzroy Crossi** comp=Z,3.1nm,0.3s,baz=36,slow=10,SNR=41	**18.12**	**222**	P	**P**	**09 46 35.5**	**+2.3**
FITZ				S	**Sn**	**09 49 45.5**	**-8.8**
	comp=Z,2.8nm,0.3s,baz=102,slow=14,SNR=5.9						
FITZ				LR	LR	09 54 14.4	
	comp=Z,106nm,18.1s,baz=46,slow=39						
FITZ	**Fitzroy Crossi**	**18.12**	**222**		**P**	**09 46 34.0**	**+0.8**
FITZ				IAmb	IAmb	09 46 50.7	
	comp=Z,60nm,1.2s						
TOLI2	**Tolitoli**	**18.30**	**288**		**Pn**	**09 46 36.6**	**+1.3**
TOLI2				IAmb	IAmb	09 46 39.0	
	comp=Z,47nm,0.7s						
KAPI	**Kappang**	**18.36**	**268**	P	**Pn**	**09 46 36.6**	**+0.7**
KAPI				IAmb	IAmb	09 46 37.0	
	comp=Z,20nm,0.3s						
AS31	**Alice Springs**	**19.33**	**192**	P	**Pn**	**09 46 50.2**	**+2.5**
AS31				IAmb	IAmb	09 47 04.8	
	comp=Z,24nm,0.7s						
ASAR	**Alice Springs** comp=Z,3.9nm,0.3s,baz=16,slow=9.3,SNR=340	**19.33**	**192**	P	**Pn**	**09 46 49.9**	**+2.2**
ASAR				S	**S**	**09 50 17.2**	**-6.2**
	comp=Z,0.5nm,0.3s,baz=1.4,slow=20,SNR=5.1						
MYLDM	**Lahad Datu**	**21.95**	**296**	P	**P**	**09 47 16.8**	**+2.0**
MYLDM				IAmb	IAmb	09 47 26.7	
	comp=Z,25nm,1.0s						
HNR	**Honiara** comp=Z,55nm,21.1s,baz=207,slow=37	**22.12**	**104**	LR	LR	09 56 11.6	
KKM	**Kota Kinabalu**	**24.37**	**296**	P	**P**	**09 47 38.4**	**-0.8**
KKM				IAmb	IAmb	09 47 41.3	
	comp=Z,25nm,0.7s						
PSA00	**Pilbara Seismi**	**24.46**	**225**	P	**P**	**09 47 42.6**	**+2.8**
SBUM	**Sibu**	**26.88**	**285**	P	**P**	**09 48 03.3**	**+1.4**
STKA	**Stephens Creek** comp=Z,1.2nm,0.6s,baz=339,slow=14,SNR=4.4	**27.25**	**174**	P	**P**	**09 48 08.7**	**+3.6**
STKA				LR	LR	09 59 54.3	
	comp=Z,65nm,18.4s,baz=8.7,slow=38						
TNG	**Tangerang**	**31.42**	**266**	P	P	09 48 55.2	+13
MORW	**Morawa**	**32.07**	**218**	P	**P**	**09 48 50.6**	**+2.8**
DZM	**Mont Dzumac** comp=Z,53nm,18.8s,baz=236,slow=35	**32.38**	**125**	LR	LR	10 01 36.2	
NWAO	**Narrogin (SRO)**	**34.24**	**212**	P	**P**	**09 49 09.2**	**+2.6**
JNU	**Nakatsue** comp=Z,10nm,0.8s,baz=221,slow=11,SNR=2.7	**38.22**	**350**	P	**P**	**09 49 39.7**	**-1.0**
JMN	**Monobe**	**38.41**	**354**	P	**P**	**09 49 41.6**	**-0.6**
JHS	**Saijyo**	**39.74**	**354**	P	**P**	**09 49 53.2**	**-0.2**
JHS				IAmb	IAmb	09 50 05.8	
	comp=Z,12nm,0.9s						
JWT	**Wachi**	**39.83**	**356**	P	**P**	**09 49 53.0**	**-1.0**
NJ2	**Nanjing**	**40.88**	**335**	*e*P	**P**	**09 50 03.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CHAI	**Chaiyaphum**	**41.23**	**300**	P	**P**	**09 50 05.9**	**-0.1**
JSD	**Sado**	**42.49**	**0**	P	**P**	**09 50 13.2**	**-2.7**
JSD				IAmb	IAmb	09 50 15.1	
	comp=Z,16nm,1.3s						
KSAR	**Wonju Array Be**	**42.98**	**348**	P	**P**	**09 50 18.2**	**-1.7**
KSRS	**Korea Array** comp=Z,1.5nm,0.8s,baz=162,slow=9.4,SNR=7.0	**42.98**	**348**	P	**P**	**09 50 18.9**	**-0.9**
UTTA	**Uttaradit**	**43.29**	**302**	P	**P**	**09 50 23.1**	**+0.5**
UTHA	**Uthaitani**	**43.29**	**298**	P	**P**	**09 50 22.9**	**+0.1**
UMPA	**Umpang Tak**	**44.07**	**299**	P	**P**	**09 50 30.3**	**+1.3**
PAYA	**Payao** comp=Z,0.5nmcomp=Z,141nm,0.7s	**44.61**	**304**	P	**P**	**09 50 33.8**	**+0.4**
CM36	**Chiang Mai Arr**	**44.87**	**302**	P	**P**	**09 50 35.0**	**-0.4**
CM35	**Chiang Mai Arr**	**44.90**	**302**	P	**P**	**09 50 35.0**	**-0.6**
CM04	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,9.2nm,0.8s	**44.92**	**302**	P	**P**	**09 50 36.6**	**+0.8**
CM09	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,7.2nm,0.9s	**44.93**	**302**	P	**P**	**09 50 37.0**	**+1.1**
CM01	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,139nmcomp=Z,9.6nm,1.2s	**44.94**	**302**	P	**P**	**09 50 36.9**	**+0.9**
CM05	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,236nmcomp=Z,6.0nm,0.9s	**44.95**	**302**	P	**P**	**09 50 36.0**	**0.0**
CM02	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,72nmcomp=Z,9.1nm,0.8s	**44.96**	**302**	P	**P**	**09 50 37.0**	**+0.9**
CM31	**Chiang Mai Arr**	**44.97**	**302**	P	**P**	**09 50 34.4**	**-1.9**
CM31				IAmb	IAmb	09 50 37.5	
	comp=Z,8.2nm,0.8s						
CMAR	**Chiang Mai Arr** comp=Z,5.2nm,0.8s,baz=124,slow=6.2,SNR=29	**44.97**	**302**	P	**P**	**09 50 36.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.97**	**302**	P	**P**	**09 50 35.6**	**-0.6**
CM34	**Chiang Mai Arr**	**44.98**	**302**	P	**P**	**09 50 36.0**	**-0.3**
CM13	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,9.0nm,0.9s	**44.99**	**302**	P	**P**	**09 50 37.0**	**+0.6**
CM15	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,9.8nm,0.8s	**44.99**	**302**	P	**P**	**09 50 37.2**	**+0.9**
CMMT	**Chiang Mai** comp=Z,0.0nmcomp=Z,4.6nm,0.8s	**45.13**	**302**	P	**P**	**09 50 36.0**	**-1.5**
CM33	**Chiang Mai Arr**	**45.13**	**302**	P	**P**	**09 50 37.0**	**-0.5**
CHTO	**Chiang Mai**	**45.13**	**302**	P	**P**	**09 50 37.1**	**-0.4**
CHTO				IAmb	IAmb	09 50 38.4	
	comp=Z,6.9nm,0.9s						
CM32	**Chiang Mai Arr**	**45.14**	**302**	P	**P**	**09 50 38.0**	**+0.4**
URZ	**Urewera** comp=Z,53nm,19.3s,baz=31,slow=36	**48.69**	**139**	LR	LR	10 11 30.4	
USRK	**Ussuriysk Ar.** comp=Z,0.9nm,0.6s,baz=174,slow=7.5,SNR=7.2	**48.96**	**354**	P	**P**	**09 51 06.2**	**-0.8**
CN2	**Changchun**	**49.59**	**348**	*e*P	**P**	**09 51 12.3**	**+0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**51.44**	**334**	*e*P	**P**	**09 51 26.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,23nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
KLR	**Kul'dur** comp=Z,1.1nm,0.5s,baz=172,slow=7.6,SNR=8.7	**53.97**	**355**	P	**P**	**09 51 43.5**	**-0.9**
SHL	**Shillong**	**54.03**	**306**	P	**P**	**09 51 45.1**	**-0.3**
GTA	**Gaotai**	**56.33**	**325**	*e*P	P	09 52 15.8	+14
GTA				pP	sP	09 52 19.8	+3.2
GTA				sP	pP	09 52 22.8	+10
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array** comp=Z,0.5nm,0.5s,baz=145,slow=5.3,SNR=2.7	**59.26**	**336**	P	**P**	**09 52 21.4**	**-0.8**
PETK	**Petropavlovsk-** comp=Z,20nm,21.6s,baz=173,slow=32	**59.88**	**13**	LR	LR	10 14 10.5	
WMQ	**Urumqi**	**66.21**	**322**	*e*P	**P**	**09 53 10.3**	**+1.8**
WMQ				PP	**PP**	**09 55 34.8**	**+0.1**
WMQ				LR	LR		
	comp=Z,1µm,29.1s						
MK31	**Makanchi Array**	**71.01**	**323**	P	**P**	**09 53 37.1**	**-1.2**
MKAR	**Makanchi Array** comp=Z,1.9nm,0.6s,baz=113,slow=8.1,SNR=19	**71.01**	**323**	P	**P**	**09 53 36.8**	**-1.6**
MAKZ	**Makanchi**	**71.21**	**323**	P	**P**	**09 53 39.0**	**-0.6**
NIL	**Nilore**	**72.07**	**307**	P	**P**	**09 53 44.6**	**-0.4**
NIL				IAmb	IAmb	09 53 45.6	
	comp=Z,9.7nm,0.8s						
ZALV	**Zalesovo Beam** comp=Z,1.3nm,0.5s,baz=120,slow=8.8,SNR=6.2	**73.36**	**330**	P	**P**	**09 53 50.6**	**-1.6**
KURK	**Kurchatov**	**75.01**	**325**	P	**P**	**09 54 00.5**	**-1.3**
KURBB	**Kurchatov Arra** comp=Z,1.4nm,0.8s,baz=115,slow=5.1,SNR=10	**75.02**	**325**	P	**P**	**09 54 00.5**	**-1.4**
BVAR	**Borovoye Array** comp=Z,3.1nm,0.7s,baz=157,slow=8.0,SNR=22	**80.61**	**325**	P	**P**	**09 54 31.4**	**-1.6**
BRVK	**Borovoye**	**80.68**	**325**	P	**P**	**09 54 32.7**	**-0.7**
BRVK				IAmb	IAmb	09 54 33.5	
	comp=Z,4.9nm,0.7s						
NRIK	**Noril'sk** comp=Z,4.3nm,0.9s,baz=111,slow=5.2,SNR=5.1	**81.44**	**344**	P	**P**	**09 54 35.8**	**-1.3**
NRIK	**Noril'sk** comp=Z,5.4nm,0.9s	**81.44**	**344**	IAmb	IAmb	09 54 37.5	
ABKAR	**Akbulak array**	**85.86**	**320**	P	**P**	**09 54 58.1**	**-2.0**
ABKAR				IAmb	IAmb	09 54 59.9	
	comp=Z,3.2nm,0.7s						
ILAR	**Eielson Array** comp=Z,0.6nm,0.8s,baz=262,slow=3.8,SNR=4.6	**87.83**	**24**	P	**P**	**09 55 07.6**	**-1.8**
SYO	**Syowa Base**	**88.75**	**201**	*e*X	P	09 55 21.8	+8.1
ARCES	**ARCESS Array B** comp=Z,3.3nm,1.0s,baz=29,slow=2.8,SNR=4.5	**102.17**	**341**	P	**Pdif**	**09 56 12.1**	**-2.8**
TORD	**Torodi Ar. Bea** comp=Z,0.9nm,0.8s,baz=45,slow=2.5,SNR=3.5	**136.24**	**284**	PKP	**PKPdf**	**10 01 41.3**	**-1.6**

*MAN **10** 09:52:41.6,11˚.02N×125˚.39E,h79km,mb4.9,ML3.8, MS3.8*
*IDC **10** 09:52:42.2±1.0,10˚.89N×125˚.33E,h106km±8km,mb3.9/16, mb1 3.9/16,mb1mx3.7/55,mbtmp4.2/16,MS2.7/4, Ms1 2.8/4,ms1mx2.6/40,Error ellipse: s-maj=20.7km s-min=10.7km az=76.0*
*NEIC **10** 09:52:43.3±1.5,10˚.99N±0˚.09×125˚.3E±0˚.1,h111km±7km, mb4.5/24,Error ellipse: s-maj=16.6km s-min=12.9km az=95.0*

ISC 10 09:52:42.2±0.6,10˚98N±0˚04×125˚38E±0˚06,h101km±5km, n69,σ1§41/69,mb4.4/32,1C-3D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.62**	**6**	*e*P	**Pn**	**09 52 57.6**	**-1.4**
BESP				*e*S	**Sn**	**09 53 10.0**	**-1.5**
MSLP	**Maasin**	**0.98**	**211**	*e*P	**Pn**	**09 53 01.7**	**-0.9**
MSLP				*e*S	**Sn**	**09 53 17.6**	**-0.2**
GLSP	**General Luna,**	**1.40**	**148**	*e*P	**Pn**	**09 53 05.8**	**-1.5**
GLSP				*e*S	**Sn**	**09 53 26.4**	**0.0**
LLP	**Lapu-Lapu**	**1.54**	**245**	*e*P	**Pn**	**09 53 08.1**	**-0.9**
LLP				*e*S	**Sn**	**09 53 28.2**	**-1.1**
BUTP	**Butuan**	**2.02**	**173**	*e*P	**Pn**	**09 53 15.1**	**0.0**
BUTP				*e*S	**Sn**	**09 53 45.1**	**+5.0**
CGP	**Cagayan de Oro**	**2.60**	**195**	*e*P	**Pn**	**09 53 22.9**	**+0.2**
RCP	**Roxas**	**2.64**	**283**	*e*P	**Pn**	**09 53 24.2**	**+0.9**
CNOP	**Candoni, Negro**	**2.93**	**247**	*e*P	**Pn**	**09 53 27.1**	**+0.1**
CNOP				*e*S	**Sn**	**09 54 00.7**	**-0.8**
PAGZ	**Pagadian**	**3.68**	**212**	*e*P	**Pn**	**09 53 39.0**	**+1.8**
DAV	**Davao City (W)** comp=Z,21nm,20.6s,baz=305,slow=33	**3.89**	**177**	LR	LR	09 54 47.3	
LQP	**Lukban**	**4.87**	**310**	*e*P	Pn	09 53 45.9	-7.5
MYLDM	**Lahad Datu**	**8.92**	**230**		**Pn**	**09 54 49.1**	**+0.8**
KKM	**Kota Kinabalu**	**10.30**	**242**	Pn	**Pn**	**09 55 09.8**	**+2.6**
KNMB	**Chin-men Tao**	**14.96**	**335**	Pn	**Pn**	**09 56 07.1**	**-1.4**
SBUM	**Sibu**	**15.56**	**238**

	comp=Z,18nm,13.7s								
PEA0B	**Petropavlovsk-**	49.36	25	P		**P**		10 01 20.9	-0.5
PETK	**Petropavlovsk-**	49.36	25	P		**P**		10 01 21.8	+0.5
	comp=Z,4.1nm,0.8s,baz=243,slow=3.8,SNR=6.2								
MK31	**Makanchi Array**	50.93	323	P		**P**		10 01 33.6	+0.2
MK31				IAmb		IAmb		10 01 34.9	
	comp=Z,6.0nm,0.7s								
MKAR	**Makanchi Array**	50.93	323	P		**P**		10 01 33.9	+0.5
	comp=Z,8.0nm,0.7s,baz=122,slow=8.4,SNR=91								
MKAR	**Makanchi Array**	50.93	323	P		**P**		10 01 33.2	-0.2
MAKZ	**Makanchi**	51.12	323	P		**P**		10 01 34.0	-0.8
MAKZ				IAmb		IAmb		10 01 35.8	
	comp=Z,4.8nm,0.7s								
ZALV	**Zalesovo Beam**	53.58	331	pP		pP		10 02 16.0	-1.2
	comp=Z,0.7nm,0.4s,baz=134,slow=8.4,SNR=3.2								
KURK	**Kurchatov**	54.98	326	P		**P**		10 02 03.0	**0.0**
KURBB	**Kurchatov Arra**	54.99	325	P		**P**		10 02 03.0	**0.0**
	comp=Z,4.6nm,0.7s,baz=127,slow=6.9,SNR=44								
BVAR	**Borovoye Array**	60.58	325	P		**P**		10 02 41.9	-0.2
	comp=Z,2.6nm,0.8s,baz=135,slow=19,SNR=16								
BRVK	**Borovoye**	60.65	325	P		**P**		10 02 41.8	-0.8
BRVK				IAmb		IAmb		10 02 43.7	
	comp=Z,5.5nm,0.8s								
ATKA	**Atka Island**	63.42	37	P		**P**		10 03 02.2	+1.0
ABKAR	**Akbulak array**	65.76	319	P		**P**		10 03 15.6	-0.8
ARU	**Arti**	68.15	327	P		**P**		10 03 30.3	-1.1
	comp=Z,1.7nm,0.2s,baz=110,slow=13,SNR=4.2								
GAMB	**Gambell**	68.40	25	P		**P**		10 03 33.6	+0.8
GAMB				IAmb		IAmb		10 03 35.1	
	comp=Z,9.1nm,1.4s								
BKZ	**Black Stump Fm**	68.89	140	P		**P**		10 03 37.0	+0.6
TOLK	**Toolik Lake Re**	78.04	22	P		**P**		10 04 30.7	+1.1
ILAR	**Eielson Array**	79.19	26	P		**P**		10 04 35.4	-0.5
	comp=Z,0.5nm,0.8s,baz=234,slow=5.7,SNR=5.8								
ARCES	**ARCESS Array B**	83.22	340	P		**P**		10 04 56.2	-0.9
	comp=Z,2.9nm,0.9s,baz=75,slow=4.8,SNR=3.5								
ARCES	**ARCESS Array B**	83.22	340	IAmb		IAmb		10 05 11.4	
	comp=Z,9.3nm,1.2s								
FINES	**FINESS Array B**	84.85	332	P		**P**		10 05 04.3	-1.2
	comp=Z,2.7nm,1.0s,baz=43,slow=3.4,SNR=4.6								
AKASG	**Malin Array Be**	85.46	321	P		**P**		10 05 07.3	-1.4
	comp=Z,1.4nm,0.7s,baz=62,slow=5.0,SNR=4.9								
NOA	**NORSAR Array B**	91.73	334	LR		LR		10 48 49.4	
	comp=Z,8.9nm,19.9s,baz=15,slow=37								
YKA	**Yellowknife Ar**	93.46	24	P		**P**		10 05 46.3	**0.0**
	comp=Z,1.1nm,1.1s,baz=301,slow=4.2,SNR=5.2								
PLCA	**Paso Flores**	147.20	157	PKPbc		**PKPab**		10 12 14.7	-1.4
	comp=Z,1.0nm,1.0s,baz=219,slow=3.6,SNR=3.7								

*SOME **10** 10:02:39.4, 43.˚70N×69.˚63E*
*KRNET **10** 10:02:40.3±0.1, 43.˚73N×69.˚59E, mb3.0*
*NNC **10** 10:02:41.0±2.9, 43.˚69N×69.˚74E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=16.5km s-min=10.1km az=144.0, Suspected Mining explosion.*

ISC 10 10:02:43.1±2.3, 43.˚63N±0.˚09×69.˚70E±0.˚09, h0km, n20, σ1ş36/38, 30C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BRLS	**Boroldaу**	0.61	170	P			**Pb**	10 02 56.9	**+0.3**
	97nm,0.3s								
BRLS				S			**Sn**	10 03 08.8	**-0.7**
	31nm,0.4s								
KK31	**Karatay Array**	0.79	131	⇑P			**Pg**	10 02 56.4	**-1.9**
	2.3nm,0.4s,baz=319,slow=16,SNR=74								
KK31				⇑S			**Sg**	10 03 07.7	**-0.8**
	16nm,0.4s,baz=315,slow=30,SNR=95								
DZA	**Taraz**	1.40	121	P			**Pg**	10 03 09.3	**-0.7**
	58nm,0.1s								
DZA				S			**Sn**	10 03 29.8	**+0.6**
	190nm,0.3s								
IUG	**luzhnay**	1.50	170	P			**Pg**	10 03 10.5	**-1.4**
	32nm,0.2s								
IUG				S			**Sn**	10 03 31.9	**+0.2**
	54nm,0.4s								
TRKS	**Terek-Say**	2.35	153	⇑*i*P			**Pn**	10 03 25.0	**+1.8**
	baz=52								
TRKS				⇑*i*S			**Sg**	10 03 57.9	**-0.8**
	baz=52								
MNAS	**Manas**	2.35	118	⇑*i*P			**Pn**	10 03 24.1	**+0.9**
	baz=19								
MNAS				⇑*i*S			**Sb**	10 03 55.8	**-0.3**
	baz=19								
EKS2	**Erkin-Say**	3.14	107	⇑*e*P			**Pn**	10 03 34.7	**+0.8**
	baz=8.0								
EKS2				⇑*i*S			**Sn**	10 04 14.6	**+2.4**
	baz=8.0								
AML	**Almayashu**	3.30	116	⇑*i*P			**Pn**	10 03 37.1	**+0.7**
	baz=17								
AML				⇑*i*S			**Sn**	10 04 18.3	**+1.8**
	baz=17								
ARSB	**Arslanbob**	3.35	132	⇑*i*P			**Pn**	10 03 37.9	**+1.1**
	baz=33								
ARSB				⇑*i*S			**Sn**	10 04 19.9	**+2.5**
	baz=33								
USP	**Ospenovka**	3.52	94	⇑*i*P			**Pn**	10 03 39.8	**+0.7**
	baz=96								
USP				⇑*i*S			**Sn**	10 04 23.0	**+1.6**
	baz=96								
AAK	**Ala-Archa**	3.65	104	⇑*i*P			**Pn**	10 03 42.0	**+1.0**
	baz=5.0								
AAK				⇑*i*S			**Sn**	10 04 26.4	**+1.6**
	baz=5.0								
AAK	**Ala-Archa**	3.65	104	⇓Pg			**Pb**	10 03 46.8	**-1.8**
	2.8nm,0.5s								
AAK				⇓Lg			Lg	10 04 38.3	
	4.6nm,0.6s								
BTK	**Batken**	3.66	166	⇑*i*P			**Pn**	10 03 42.0	**+0.9**
	baz=66								
BTK				⇑*i*S			**Sn**	10 04 27.3	**+2.2**
	baz=66								
CHMS	**Chumysh**	3.74	98	⇑*i*P			**Pn**	10 03 42.9	**+0.7**
	baz=99								
CHMS				⇑*i*S			**Sn**	10 04 28.4	**+1.4**
	baz=99								
UCH	**Uchtor**	3.81	110	⇑*i*P			**Pn**	10 03 44.4	**+1.0**
	baz=11								
UCH				⇑*i*S			**Sn**	10 04 30.8	**+1.7**
	baz=11								
ARLS	**Aral**	3.84	116	⇑*i*P			**Pn**	10 03 44.6	**+1.0**
	baz=17								
ARLS				⇑*i*S			**Sn**	10 04 31.3	**+1.8**
	baz=17								
KBK	**Karagaybulak**	3.96	102	⇑*i*P			**Pn**	10 03 46.1	**+0.8**
	baz=3.0								
KBK				⇑*i*S			**Sn**	10 04 34.1	**+1.5**
	baz=3.0								
TKM2	**Tokmak 2**	4.37	97	⇑*i*P			**Pn**	10 03 51.5	**+0.6**
	baz=98								
TKM2				⇑*i*S			**Sn**	10 04 43.8	**+1.2**
	baz=98								
TKM2	**Tokmak 2**	4.37	97	⇑Pg			**Pb**	10 03 59.7	**-1.1**
	2.2nm,0.8s								
TKM2				⇑Lg			Lg	10 04 58.2	
	2.6nm,0.5s								
BOOM	**Boomskoye usch**	4.71	102	⇓*i*P			**Pn**	10 03 56.5	**+0.9**
	baz=3.0								
BOOM				⇓*i*S			**Sn**	10 04 52.3	**+1.2**
	baz=3.0								

*ANF **10** 10:07:31.9±0.3, 35.˚84N×97.˚23W, h1km±3km, ML3.6/12, Error ellipse: s-maj=2.5km s-min=1.8km az=137.0*
*TUL **10** 10:07:32.6±1.6, 35.˚81N±0.˚02×97.˚23W±0.˚02, h6km±6km, ML3.2, mb_Lg3.1/79(NEIC), Error ellipse: s-maj=2.8km s-min=0.4km az=138.0*
*NEIC **10** 10:07:32.8±1.0, 35.˚84N±0.˚01×97.˚26W±0.˚02, h7km±6km, Error ellipse: s-maj=2.8km s-min=1.8km az=119.0*

ISC 10 10:07:32.7±0.9, 35.˚84N±0.˚02×97.˚24W±0.˚02, h9km±8km, n91, σ0ş73/87, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	0.18	258				**Pg**	10 07 36.5	**-0.1**
OK029					Sg		**Sg**	10 07 39.1	**0.0**
OK005	**Luther M Schoo**	0.18	168				**Pg**	10 07 36.3	**-0.3**
OK005					Sg		**Sg**	10 07 39.0	**-0.3**
OK025	**Westminster Rd**	0.27	198				**Pg**	10 07 37.8	**-0.3**
OK025					Sg		**Sg**	10 07 41.6	**-0.1**
OK001	**Jones High Sch**	0.28	189		Pg		**Pg**	10 07 37.9	**-0.4**
OK001					Sg		**Sg**	10 07 41.8	**-0.2**
OK031	**S. Brethren Rd**	0.34	70				**Pg**	10 07 39.8	**+0.2**
OK031					Sg		**Sg**	10 07 44.7	**+0.6**
BCOK	**Bluff Creek, N**	0.35	240				**Pg**	10 07 39.4	**-0.3**
OK030	**Cody Creek RV**	0.38	76				**Pg**	10 07 40.4	**+0.2**
OK030					Sg		**Sg**	10 07 45.8	**+0.6**
OKCFA	**Oklahoma City**	0.45	203				**Pg**	10 07 41.1	**-0.4**
OKCFA					Sg		**Sg**	10 07 47.5	**-0.1**
OKCFA	**Oklahoma City**	0.45	203	P			**Pg**	10 07 41.2	**-0.4**
	baz=22,SNR=72								
OKCFA				S			**Sg**	10 07 47.5	**-0.1**
	baz=22								
OKCFA	**Oklahoma City**	0.45	203	P				10 07 41.2	
	baz=22,SNR=72								
OKCFA				S				10 07 47.5	
	baz=22								
OKCSW	**OKLAHOMA CITY**	0.46	201				**Pg**	10 07 41.2	**-0.5**
OKCSW					Sg		**Sg**	10 07 47.6	**-0.1**
QUOK	**Quay**	0.55	52				**Pg**	10 07 43.5	**+0.2**
QUOK					Sg		**Sg**	10 07 51.2	**+0.7**
FNO	**Franklin**	0.59	193				**Pg**	10 07 44.2	**0.0**
FNO					Sg		**Sg**	10 07 52.3	**+0.4**
CROK	**Carrier**	0.90	318				**Pg**	10 07 50.1	**+0.1**
CROK					Sg		**Sg**	10 08 01.8	**0.0**
GC02	**Grant County #**	1.13	334				**Pg**	10 07 54.1	**-0.4**
GC02					Sg		**Sg**	10 08 08.8	**-0.3**
TUL1	**Leonard**	1.18	86	P			**Pg**	10 07 53.7	**-1.6**
	baz=267								
TUL1				S			**Sg**	10 08 09.8	**-0.8**
	baz=267								
TUL1	**Leonard**	1.18	86	P				10 07 53.7	
	baz=267								
TUL1				S				10 08 09.8	
	baz=267								
KAN13	**South Haven SW**	1.19	351				**Pg**	10 07 55.1	**-0.5**
KAN13					Sn		**Sn**	10 08 12.1	**+0.3**
T35A	**Sooner Cattle**	1.23	28				**Pg**	10 07 55.4	**-0.9**
T35B	**Sooner Cattle**	1.23	28	P			**Pg**	10 07 55.3	**-1.0**
	baz=209								
T35B				S			**Sb**	10 08 12.4	**+0.4**
	baz=209								
T35B	**Sooner Cattle**	1.23	28	P				10 07 55.3	
	baz=209								
T35B				S				10 08 12.4	
	baz=209								
OK032	**Salt Plains WL**	1.25	321				**Pg**	10 07 56.0	**-0.6**
OK032					Sg		**Sg**	10 08 12.6	**-0.2**
KAN14	**Manchester OK**	1.26	333				**Pg**	10 07 56.3	**-0.6**
X34A	**Smith Ranch, M**	1.32	202	Pn			**Pn**	10 07 56.9	**-0.5**
KAN09	**Caldwell North**	1.33	347				**Pn**	10 07 57.6	**+0.1**
KAN05	**Bluff City Nor**	1.37	338				**Pn**	10 07 58.3	**+0.3**
KAN01	**Argonia South**	1.38	342				**Pn**	10 07 58.5	**+0.3**
KAN10	**Anthony SW Sta**	1.46	332				**Pn**	10 07 59.9	**+0.6**
KAN08	**Anthony NE Sta**	1.51	337				**Pn**	10 08 00.6	**+0.7**
U32A	**Winter Ranch,**	1.53	291				**Pn**	10 08 00.3	**+0.1**
U32A	**Winter Ranch,**	1.53	291	P			**Pn**	10 08 00.3	**+0.1**
	baz=110,SNR=50								
U32A				S			**Sg**	10 08 21.6	**-0.2**
	baz=110								
U32A	**Winter Ranch,**	1.53	291	P				10 08 00.3	
	baz=110,SNR=50								
U32A				S				10 08 21.6	
	baz=110								
KAN12	**Harper NE Stat**	1.58	337	Pn			**Pn**	10 08 00.6	**-0.3**
WMOK	**Wichita Mounta**	1.67	230				**Pn**	10 08 02.4	**+0.3**
WMOK	**Wichita Mounta**	1.67	230	P			**Pn**	10 08 02.4	**+0.3**
	baz=48,SNR=118								
WMOK				S			**Sb**	10 08 25.0	**+0.2**
	baz=48								
WMOK	**Wichita Mounta**	1.67	230	P				10 08 02.4	
	baz=48,SNR=118								
WMOK				S				10 08 25.0	
	baz=48								
X37A	**Clayton**	1.97	129				**Pn**	10 08 06.8	**+0.6**
X37A					IAmb	Lg		10 08 39.0	
	comp=Z,113nm,0.9s								
X37A	**Clayton**	1.97	129	P			**Pn**	10 08 06.5	**+0.2**
	baz=310,SNR=175								
X37A	**Clayton**	1.97	129	P				10 08 06.5	
	baz=310,SNR=175								
U38A	**Gravette**	2.39	75	Pn			**Pn**	10 08 13.8	**+1.8**
Z35A	**Perchaven, San**	2.50	180				**Pn**	10 08 14.2	**+0.7**
Z35A	**Perchaven, San**	2.50	180	P			**Pn**	10 08 13.9	**+0.3**
	baz=0.4,SNR=21								
Z35A	**Perchaven, San**	2.50	180	P				10 08 13.9	
	baz=0.4,SNR=21								
HHAR	**Hobbs**	2.71	80				**Pn**	10 08 17.5	**+1.1**
W39A	**Magazine**	2.89	102	Pn			**Pn**	10 08 19.4	**+0.6**
W39A					IAmb	Lg		10 09 05.8	
	comp=Z,84nm,0.8s								
W39A	**Magazine**	2.89	102	P			**Pn**	10 08 19.1	**+0.2**
	baz=284,SNR=41								
W39A	**Magazine**	2.89	102	P				10 08 19.1	
	baz=284,SNR=41								
Z38A	**Mt. Pleasant**	3.17	143	Pn			**Pn**	10 08 23.3	**+0.5**
MIAR	**Mount Ida**	3.26	112	Pn			**Pn**	10 08 25.1	**+1.1**
MIAR					IAmb	Lg		10 09 22.1	
	comp=Z,53nm,0.8s								
MIAR	**Mount Ida**	3.26	112	P			**Pn**	10 08 24.3	**+0.3**
	baz=295,SNR=50								
MIAR	**Mount Ida**	3.26	112	P				10 08 24.3	
	baz=295,SNR=50								
KSU1	**Kansas State U**	3.30	9	Pn			**Pn**	10 08 25.4	**+0.9**
KSU1					IAmb	Lg		10 09 25.4	
	comp=Z,41nm,0.7s								
CBKS	**Cedar Bluff**	3.58	327	Pn			**Pn**	10 08 27.3	**-1.1**
CBKS					IAmb	Lg		10 09 34.9	
	comp=Z,54nm,0.7s								
U40A	**Yellville**	3.59	80				**Pn**	10 08 28.6	**+0.1**
U40A					IAmb	Lg		10 09 25.8	
	comp=Z,62nm,0.7s								
U40A	**Yellville**	3.59	80	P			**Pn**	10 08 29.3	**+0.8**
	baz=263,SNR=25								
U40A	**Yellville**	3.59	80	P				10 08 29.3	
	baz=263,SNR=25								
U40A				P				10 08 29.3	
	baz=263,SNR=25								
S39A	**Bolivar**	3.65	58	Pn			**Pn**	10 08 29.5	**+0.2**
AMTX	**Amarillo**	3.75	257	Pn			**Pn**	10 08 32.0	**+1.1**
AMTX					IAmb	Lg		10 09 41.2	
	comp=Z,49nm,0.9s								
AMTX	**Amarillo**	3.75	257	P			**Pn**	10 08 31.9	**+1.1**
	baz=74,SNR=11								
AMTX	**Amarillo**	3.75	257	P				10 08 31.9	
	baz=74,SNR=11								
ABTX	**Abilene, Hawle**	3.77	213	IAmb		Lg		10 09 35.4	
	comp=Z,29nm,0.7s								
WHTX	**Lake Whitney,**	3.84	183	Pn			**Pn**	10 08 33.1	**+1.2**
X40A	**Basin Creek Fa**	3.85	109	Pn			**Pn**	10 08 33.3	**+1.2**
X40A					IAmb	Lg		10 09 39.6	
	comp=Z,55nm,0.8s								
237A	**Washetta, Mont**	4.00	162	Pn			**Pn**	10 08 33.6	**-0.6**
237A	**Washetta, Mont**	4.00	162	P			**Pn**	10 08 33.7	**-0.6**
	baz=343								
237A	**Washetta, Mont**	4.00	162	P				10 08 33.7	
	baz=343								
WLAR	**White Oak Lake**	4.01	121	Pn			**Pn**	10 08 34.4	**0.0**
WLAR					IAmb	Lg		10 09 42.8	
	comp=Z,29nm,0.7s								
WHAR	**Wooly Hollow**	4.07	96	Pn			**Pn**	10 08 35.4	**+0.3**
WHAR					IAmb	Lg		10 09 42.4	
	comp=Z,36nm,0.8s								
W41B	**Gary Mavity, V**	4.12	98	P			**Pn**	10 08 36.1	**+0.3**
	baz=281,SNR=80								
W41B	**Gary Mavity, V**	4.12	98	P				10 08 36.1	
	baz=281,SNR=80								
FCAR	**Ozark Folk Cen**	4.15	88	Pn			**Pn**	10 08 37.7	**+1.4**
FCAR					IAmb	Lg		10 09 48.7	
	comp=Z,31nm,0.9s								
MGMO	**Mountain Grove**	4.21	70	Pn			**Pn**	10 08 38.4	**+1.3**
MGMO					IAmb	Lg		10 09 49.3	
	comp=Z,28nm,0.8s								
R40A	**Maddies Statio**	4.67	57	Pn			**Pn**	10 08 44.4	**+1.1**
R40A					IAmb	Lg		10 10 01.5	
	comp=Z,32nm,0.8s								
P38A	**Dawn**	4.79	37	IAmb		Lg		10 10 16.5	
	comp=Z,26nm,0.8s								
N33A	**J Bar K, Exete**	4.90	358	IAmb		Lg		10 10 21.2	
	comp=Z,27nm,0.9s								
MSTX	**Muleshoe**	4.92	249	Pn			**Pn**	10 08 47.7	**+0.9**
KSCO	**Kaye Shedlock'**	5.33	308	IAmb		Lg		10 10 34.3	
	comp=Z,31nm,0.8s								
BGNE	**Belgrade**	5.61	353	Pn			**Pn**	10 08 53.7	**-2.6**
BGNE					IAmb	Lg		10 10 42.7	
	comp=Z,35nm,0.8s								
LPAR	**Lepanto**	5.65	90	IAmb		Lg		10 10 39.0	
	comp=Z,38nm,0.8s								
JCT	**Junction City**	5.76	203	IAmb		Lg		10 10 43.7	
	comp=Z,36nm,0.9s								
FVM	**French Village**	5.86	67	IAmb		Lg		10 10 38.4	
	comp=Z,21nm,0.9s								
T25A	**Trinidad**	5.92	285	Pn			**Pn**	10 09 01.1	**+0.3**
T25A				IAmb		Lg		10 10 46.3	
	comp=Z,39nm,0.9s								
SLM	**Saint Louis**	6.25	61	IAmb		Lg		10 10 50.2	
	comp=Z,21nm,0.8s								
OGNE	**Ogallala**	6.34	325	Pn			**Pn**	10 09 05.2	**-1.1**
OGNE				IAmb		Lg		10 10 56.5	
	comp=Z,29nm,0.7s								
OXF	**Oxford**	6.55	99	Pn			**Pn**	10 09 10.0	**+0.9**
OXF				IAmb		Lg		10 11 08.2	
	comp=Z,17nm,0.9s								
W45A	**Hickory Valley**	6.60	94	IAmb		Lg		10 11 12.0	
	comp=Z,28nm,0.8s								
SCIA	**State Center**	6.83	26	IAmb		Lg		10 11 27.9	
	comp=Z,26nm,0.7s								
K31A	**O'Neill**	6.88	351	IAmb		Lg		10 11 15.9	
	comp=Z,32nm,0.7s								
Q44A	**Meyer Farm, Va**	7.23	62	IAmb		Lg		10 11 30.1	
	comp=Z,30nm,1.1s								
PLAL	**Pickwick Lake**	7.53	94	Pn			**Pn**	10 09 21.5	**-1.1**
WVT	**Waverly**	7.63	85	Pn			**Pn**	10 09 25.1	**+1.0**
ISCO	**Idaho Springs**	7.72	303	Pn			**Pn**	10 09 25.8	**+0.2**
MNTX	**Cornudas Mount**	7.94	241	Pn			**Pn**	10 09 27.8	**-0.4**
T47A	**Sharon Grove**	8.25	79	IAmb		Lg		10 12 02.5	
	comp=Z,24nm,0.9s								
PHWY	**Pilot Hill**	8.44	313	IAmb		Lg		10 12 02.8	
	comp=Z,12nm,0.9s								
I37A	**Lemond, Waseca**	8.68	19	IAmb		Lg		10 12 19.2	
	comp=Z,18nm,1.0s								
JFWS	**Jewell Farm**	8.90	35	IAmb		Lg		10 12 24.3	
	comp=Z,20nm,0.8s								
WCI	**Wyandotte Cave**	9.07	71	IAmb		Lg		10 12 19.3	
	comp=Z,14nm,0.9s								
BLO	**Bloomington**	9.14	65	IAmb		Lg		10 12 38.5	
	comp=Z,16nm,0.8s								
SFIN	**Lafayette**	9.19	57	IAmb		Lg		10 12 27.5	
	comp=Z,20nm,0.8s								
SWET	**Sewanee**	9.24	91	IAmb		Lg		10 12 25.5	
	comp=Z,9.5nm,1.1s								
RWWY	**Rawlins**	9.73	310	IAmb		Lg		10 12 56.6	
	comp=Z,8.8nm,0.9s								
W50A	**Signal Mountai**	9.74	90	IAmb		Lg		10 12 50.2	
	comp=Z,12nm,0.9s								
K22A	**Casper**	9.90	316	IAmb		Lg		10 13 01.4	
	comp=Z,12nm,0.8s								

*TEH **10** 10:13:46.3, 28.˚31N×51.˚81E, h10km, ML4.0*
*THR **10** 10:13:46.6±1.6, 28.˚34N×51.˚53E, h46km±18km, ML3.8*
*IDC **10** 10:13:47.3±2.9, 28.˚54N×51.˚40E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/45, mbtmp3.7/5, ML3.6/1, MS3.0/4, Ms1 3.0/4, ms1mx2.7/43, Error ellipse: s-maj=60.3km s-min=35.5km az=157.0*
*DSN **10** 10:13:50.6±1.1, 28.˚28N×52.˚06E, h10km, ML4.1/11, Error ellipse: s-maj=17.9km s-min=5.6km az=10.0*
*OMAN **10** 10:13:51.8, 28.˚20N×51.˚88E, h163km, mb4.5/16, ml3.9/8*

ISC 10 10:13:46.4±0.7, 28.˚27N±0.˚05×51.˚74E±0.˚05, h10km, n100, σ1ş40/120, mb3.7/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	0.71	327	*e*Pg			**Pg**	10 13 59.4	**-0.7**
QIR1	**Qir**	1.17	80	*e*				10 14 37.1	
	comp=Z,99nm,0.6s								
QIR1				*e*Pg			**Pg**	10 14 07.9	**-1.0**
KAZ1	**Kazerun**	1.35	356	*e*Pg			**Pg**	10 14 12.2	**-0.2**
KAZ1				*e*				10 14 40.6	
	comp=Z,99nm,0.5s								
SHI	**Shiraz**	1.52	26	*e*Pg			**Pb**	10 14 14.1	**-0.8**
LMD1	**Lamerd**	1.57	126	*e*Pg			**Pn**	10 14 15.0	**+0.6**
LMD1				*e*				10 14 49.1	
	comp=Z,99nm,0.4s								
JHRM	**Jahrom**	1.64	81	*e*Pg			**Pb**	10 14 16.5	**-0.3**
JHRM				*e*				10 14 47.9	
	comp=Z,99nm,0.5s								
LAR1	**LAR**	2.41	104	*e*Pn			**Pn**	10 14 27.0	**+1.0**
KLNJ	**Kolanjah**	2.73	357	*e*Pn			**Pn**	10 14 31.3	**+0.6**
IRAM	**Rameshеh**	3.57	9	*e*Pn			**Pn**	10 14 41.9	**-0.2**
IMEH	**Mehriz**	3.99	38	*e*Pn			**Pn**	10 14 49.0	**+1.2**
ISAD	**Sadrabad**	4.00	24	*e*Pn			**Pn**	10 14 49.5	**+1.4**
IGAR	**Gharneh**	4.13	4	*e*Pn			**Pn**	10 14 49.6	**-0.1**
SLWR	**Sila**	4.19	181	*e*Pn			**Pn**	10 14 53.9	**+3.6**
SLWR	**Sila**	4.19	181	P			**Pn**	10 14 54.3	**+4.0**
SHME	**Shamm**	4.50	118	*i* P			**Pn**	10 14 55.4	**+0.7**
	SNR=9.4								
SHME				S			**Sn**	10 15 45.7	**-1.4**
SHME	**Shamm**	4.50	118	*e*Pn			**Pn**	10 14 55.3	**+

SNR=6.2
ALNE Al Ain 5.53 138 *e*Pn **Pn 10 15 11.0 +2.1**
ALNE Al Ain 5.53 138 P **Pn 10 15 11.2 +2.3**
SNR=6.5
ALNE S **Sn 10 16 12.7 +0.1**
KRSH Karshahi 5.69 3 *e*Pn **Pn 10 15 11.0 -0.2**
KBAM BAM 5.96 80 *e*Pn **Pn 10 15 16.2 +1.4**
SOHO SOHO 5.96 133 *i* P **Pn 10 15 15.5 +0.7**
SNR=10
SOHO SOHO 5.96 133 *e*Pn **Pn 10 15 15.3 +0.6**
SOHO SOHO 5.96 133 P **Pn 10 15 15.9 +1.2**
SOHO S **Sn 10 16 23.9 +0.8**
ISFB Sefidab 6.08 4 *e*Pn **Pn 10 15 15.8 -0.6**
UMZA Um Al Zommool 6.34 150 *e*Pn **Pn 10 15 21.7 +1.7**
UMZA Um Al Zommool 6.34 150 P **Pn 10 15 22.2 +2.2**
UMZA S **Sn 10 16 32.7 +0.3**
TPRV Parvadeh(Tabas 6.37 41 *e*Pn **Pn 10 15 19.9 -0.6**
ARQ Araqi 6.54 138 P **Pn 10 15 23.9 +1.2**
SNR=9.5
IQOM Qom 6.58 355 *e*Pn **Pn 10 15 22.6 -0.8**
IVRN Varamin 6.70 360 *e*Pn **Pn 10 15 24.4 -0.6**
HOQ Hoqain 6.85 132 P **Pn 10 15 27.9 +0.9**
HOQ S **Sn 10 16 44.4 -0.7**
TNSJ Nastanj 7.04 35 *e*Pn **Pn 10 15 28.7 -1.0**
TKDS Koohdasht(Taba 7.05 40 *e*Pn **Pn 10 15 30.3 +0.5**
BSY Bisya 7.39 137 P **Pn 10 15 36.0 +1.5**
SNR=9.9
BSY S **Sn 10 16 56.1 -2.3**
BIDO Bidbid 7.45 128 P **Pn 10 15 36.6 +1.4**
BIDO S **Sn 10 16 59.7 0.0**
SMDO Samad 7.70 131 P **Pn 10 15 40.0 +1.2**
SNR=16
SMDO S **Sn 10 17 03.5 -2.7**
QALM Alamut, Qazvin 8.19 354 *e*Pn **Pn 10 15 44.7 -0.9**
JMDO Jabal Madar 8.22 134 P **Pn 10 15 45.0 -0.9**
JMDO S **Sn 10 17 18.2 -0.8**
WBK Wadi Bani Khal 8.63 129 P **Pn 10 15 51.6 +0.2**
SNR=14
WBK S **Sn 10 17 27.5 -1.4**
MHTO MHTO 9.20 141 P **Pn 10 16 00.5 +1.2**
SNR=6.9
MHTO S **Sn 10 17 39.5 -3.4**
JLN Jalan Bani Buh 9.24 130 P **Pn 10 15 59.8 0.0**
SBZV Sabzevar 9.49 30 *e*Pn **Pn 10 16 03.4 0.0**
DQM DQM 9.85 146 P **Pn 10 16 09.3 +1.2**
DOK Doka 9.86 167 P **Pn 10 16 09.0 +0.7**
WHFO Wadi Hawf 10.47 169 P **Pn 10 16 17.2 +0.4**
SNR=15
WHFO S **Sn 10 18 12.7 -1.6**
DMTO DMTO 10.91 164 P **Pn 10 16 23.7 +1.0**
SNR=8.7
RBK Rabkut 10.96 168 P **Pn 10 16 23.9 +0.5**
ABTO Aybut 10.96 172 P **Pn 10 16 23.4 -0.1**
SNR=8.9
ABTO S **Sn 10 18 25.2 -1.0**
GEYT Alibeck 11.01 27 LR LR 10 20 52.4
comp=Z,47nm,18.7s,baz=330,slow=39
KBZ Khabaz 16.98 338 LR LR 10 25 39.3
comp=Z,45nm,18.4s,baz=117,slow=43
BRTR Keskin Array B 18.82 312 P **P 10 18 05.7 -0.8**
comp=Z,0.2nm,0.3s,baz=120,slow=13,SNR=5.8
MKAR Makanchi Array 30.20 44 P **P 10 19 59.9 +2.9**
comp=Z,0.3nm,0.5s,baz=247,slow=6.6,SNR=2.4
MKAR LR LR 10 32 03.0
comp=Z,30nm,20.6s,baz=240,slow=36
KMBO Kilima Mbogo 32.37 208 LR LR 10 32 59.8
comp=Z,52nm,19.5s,baz=88,slow=36
FINES FINESS Array B 37.32 340 P **P 10 20 58.2 -0.3**
comp=Z,2.8nm,0.8s,baz=140,slow=9.9,SNR=5.5
NOA NORSAR Array B 42.45 332 P **P 10 21 39.1 -2.2**
comp=Z,1.0nm,0.7s,baz=122,slow=8.3,SNR=3.3
TORD Torodi Ar. Bea 48.83 263 P **P 10 22 32.6 +0.2**
comp=Z,0.5nm,0.7s,baz=58,slow=6.7,SNR=2.3

*SKHL **10** 10:20:43.9±0.2, 43.°80N×148.°10E, h52km±4km, mb4.7/11*
*JMA **10** 10:20:43.6±0.3, 43.°73N×147.°71E, h0km, M4.2*
*NIED **10** 10:20:43.7, 43.°73N×147.°71E, h0km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.02; Mθθ0.41; Mφφ-0.42; Mrθ1.02; Mθφ-0.29; Mφr0.52; Fault plane solution: M₀1.25000×10¹⁵ NP1:φs63.00000°, δ90.00000°, λ114.00000°. NP2:φs153.00000°, δ24.00000°, λ1.00000°.*
*MOS **10** 10:20:43.5±1.2, 43.°88N×148.°04E, h48km, mb4.0/6 Error ellipse: s-maj=9.4km s-min=7.7km az=77.5*
*IDC **10** 10:20:47.6±3.0, 43.°94N×147.°99E, h69km±27km, mb3.3/12, mb1 3.6/17, mb1mx3.4/57, mbtmp3.7/17, MS2.8/7, Ms1 2.8/7, ms1mx2.6/30, Error ellipse: s-maj=24.6km s-min=16.1km az=139.0*
ISC 10 10:20:43.5±2.7, 43.°86N±0.°06×148.°04E±0.°06, h32km±19km, n84, σ1s50/88, mb3.7/16, MS2.9/3, 9C-6D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**1.38**	**355**	*c*	*i* P	N	**Pn**	**10 21 06.6 +0.1**
KUR					*i* S		**Sn**	**10 21 22.8 -0.8**
KUR					pmax	pmax		
	comp=Z,487nm,0.4s							
KUR					pmax	pmax		
	comp=N,126nm,0.3s							
KUR					pmax	pmax		
	comp=E,206nm,0.3s							
KUR					smax	smax		
	comp=N,2μm,0.3s							
KUR					smax	smax		
	comp=E,2μm,0.3s							
KUR	**Kuril'sk**	**1.38**	**355**	*i*	P		**Pn**	**10 21 06.6 +0.1**
KUR					AMB	AMB	10 21 07.0	
	comp=E,130nm,0.4s							
KUR					AMB	AMB	10 21 07.0	
	comp=E,210nm,0.4s							
KUR					AMB	AMB	10 21 07.0	
	comp=E,490nm,0.4s							
KUR				*i*	S		**Sn**	**10 21 23.5 -0.1**
KUR					A	A	10 21 24.1	
	comp=E,2μm,0.3s							
KUR					A	A	10 21 24.1	
	comp=E,2μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.58**	**277**	*d*	*i* PN		**Pn**	**10 21 09.1 -0.2**
YUK	**Yuzh-Kuril'sk**	**1.58**	**277**	*i*	P		**Pn**	**10 21 09.2 -0.1**
YUK					AMB	AMB	10 21 13.0	
	comp=E,420nm,0.3s							
YUK				*i*	S		**Sn**	**10 21 28.2 -0.5**
YUK					A	A	10 21 29.0	
	comp=E,950nm,0.4s							
YUK					A	A	10 21 29.0	
	comp=E,2μm,0.4s							
GRPR	**Tuman**	**1.64**	**275**	⇓ *i*	PN		**Pn**	**10 21 10.2 0.0**
GRPR					eS		**Sn**	**10 21 29.4 -0.8**
GRPR					pmax	pmax		
	comp=Z,347nm,0.3s							
GRPR					pmax	pmax		
	comp=N,176nm,0.1s							
GRPR					smax	smax		
	comp=N,937nm,0.2s							
GRPR					smax	smax		
	comp=E,994nm,0.2s							
GRPR	**Tuman**	**1.64**	**275**	*i*	P		**Pn**	**10 21 10.2 0.0**
GRPR					AMB	AMB	10 21 14.0	
	comp=E,350nm,0.3s							
GRPR					eS		**Sn**	**10 21 29.8 -0.4**
GRPR					A	A	10 21 32.0	
	comp=E,940nm,0.2s							
GRPR					A	A	10 21 32.0	
	comp=E,990nm,0.2s							
NEM2	**Nemuro 2**	**1.74**	**254**		P		**Pn**	**10 21 11.3 -0.2**
NEM2					eS		**Sn**	**10 21 31.0 -1.6**
NMR	**Nemuro--Hokkai**	**1.75**	**254**	⇓ *i*	PN		**Pn**	**10 21 11.2 -0.4**
NMR					eS		**Sn**	**10 21 33.2 +0.4**
NMR	**Nemuro--Hokkai**	**1.75**	**254**	*i*	P		**Pn**	**10 21 11.4 -0.2**
NMR					eS		**Sn**	**10 21 32.2 -0.6**
GLVR	**Golovnino**	**1.83**	**267**	⇓ *i*	PN		**Pn**	**10 21 13.3 +0.6**
GLVR					eS		**Sn**	**10 21 34.3 -0.4**
GLVR					pmax	pmax		
	comp=N,179nm,0.3s							
GLVR					pmax	pmax		
	comp=Z,695nm,0.3s							
GLVR					smax	smax		
	comp=E,626nm,0.4s							
GLVR					smax	smax		
	comp=N,2μm,0.3s							
GLVR	**Golovnino**	**1.83**	**267**	*i*	P		**Pn**	**10 21 13.0 +0.3**
GLVR					AMB	AMB	10 21 15.0	
	comp=N,700nm,0.4s							
GLVR					eS		**Sn**	**10 21 34.3 -0.4**
GLVR					A	A	10 21 37.0	
	comp=N,2μm,0.4s							
GLVR					A	A	10 21 37.0	
	comp=N,630nm,0.4s							
RUSJ	**Misakicho**	**2.03**	**278**	*e*	PN		**Pn**	**10 21 16.6 +1.1**
RUSJ					eS		**Sn**	**10 21 37.8 -1.9**
JRA	**Rausu**	**2.11**	**273**		P		**Pn**	**10 21 17.5 +0.9**
JRA					eS		**Sn**	**10 21 42.7 +1.0**
JNSB	**Nemuroshibetsu**	**2.20**	**269**		P		**Pn**	**10 21 18.8 +1.0**
JKHN	**Kushirohamanak**	**2.23**	**251**		P		**Pn**	**10 21 18.8 +0.5**
JNK	**Nakash**	**2.42**	**265**		P		**Pn**	**10 21 21.7 +0.8**
JNK					eS		**Sn**	**10 21 49.9 +0.5**
JAK	**Akkeshi**	**2.58**	**252**		P		**Pn**	**10 21 23.1 0.0**
JTKR	**Abashiri--Toko**	**2.99**	**274**		P		**Pn**	**10 21 30.3 +1.7**
JAR	**Ashorobuto**	**3.15**	**261**		P		**Pn**	**10 21 32.6 +1.7**
JOB	**Onbets**	**3.21**	**254**		P		**Pn**	**10 21 32.6 +0.9**
JMP	**Maruseppu**	**3.38**	**274**		P		**Pn**	**10 21 36.0 +1.9**
JCH	**Churui**	**3.64**	**252**		P		**Pn**	**10 21 38.9 +1.3**
JKA	**Kamikawa-asahi**	**3.93**	**276**	*e*	P		**Pn**	**10 21 44.8 +3.1**
ASAJ	**Asahikawa**	**3.94**	**276**		P		**Pn**	**10 21 44.8 +3.1**
	comp=N,3.6nm,0.3s,baz=77,slow=16,SNR=28							
ASAJ					S		**Sb**	**10 22 37.3 -1.9**
	comp=N,1.6nm,0.3s,baz=74,slow=18,SNR=1.8							
ASAJ					LR	LR	10 23 24.9	
	comp=N,143nm,19.6s,baz=176,slow=40							
JFR	**Furan**	**4.02**	**262**		P		**Pn**	**10 21 45.2 +2.3**
ERM	**Erimo**	**4.03**	**244**	*de*	PN		**Pn**	**10 21 46.6 +3.6**
JSE	**Soyaes**	**4.06**	**288**		P		**Pn**	**10 21 45.0 +1.6**
JNBK	**Urakawa-nobuka**	**4.18**	**250**		P		**Pn**	**10 21 46.6 +1.5**
YSS	**Yuzh-Sakhalins**	**4.84**	**312**	*e*	PN		**Pn**	**10 21 55.2 +1.1**
YSS					eS		**Sn**	**10 22 48.7 -0.2**
YSS					pmax	pmax		
	comp=Z,20nm,0.5s							
YSS					smax	smax		
	comp=E,30nm,1.1s							
YSS	**Yuzh-Sakhalins**	**4.84**	**312**	*e*	P		**Pn**	**10 21 55.4 +1.3**
YSS					AMB	AMB	10 21 56.9	
	comp=E,20nm,0.5s							
YSS					eS		**Sn**	**10 22 48.7 -0.2**
YSS					A	A	10 22 51.5	
	comp=E,30nm,0.5s							
YSS					A	A	10 22 51.5	
	comp=E,40nm,0.5s							
TEY	**Ternei**	**8.27**	**282**	*e*	P		**Pn**	**10 22 42.9 +1.8**
TEY					AMB	AMB	10 22 46.3	
	comp=E,10.0nm,0.6s							
SKR	**Severo-Kuril's**	**8.76**	**36**	*e*	PN		Pn	10 22 53.9 +6.1
SKR					eS		Sn	10 24 40.2 +15
SKR					pmax	pmax		
	comp=Z,84nm,0.7s							
SKR					smax	smax		
	comp=N,98nm,0.9s							
SKR					smax	smax		
	comp=E,120nm,0.7s							
SKR	**Severo-Kuril's**	**8.76**	**36**	*e*	P		**Pn**	**10 22 49.4 +1.6**
SKR					AMB	AMB	10 22 54.0	
	comp=E,80nm,0.7s							
SKR					eS		**Sn**	**10 24 23.0 -2.3**
SKR					A	A	10 24 35.0	
	comp=E,100nm,0.7s							
SKR					A	A	10 24 35.0	
	comp=E,120nm,0.7s							
PAU	**Pauzhetka**	**9.63**	**35**	*e*	P		**Pn**	**10 23 02.3 +2.5**
MAJO	**Matsushiro**	**10.48**	**229**	⇑ *e*	PN		**Pn**	**10 23 12.7 +1.2**
NKL	**Nikolayevsk**	**10.49**	**335**	*e*	P		**Pn**	**10 23 13.7 +2.1**
NKL					AMB	AMB	10 23 15.0	
	comp=E,10.0nm,0.6s							
PEA0B	**Petropavlovsk-**	**11.24**	**31**	⇑ *e*	PN		**Pn**	**10 23 22.7 +0.8**
PETK	**Petropavlovsk-**	**11.24**	**31**		P		**Pn**	**10 23 23.2 +1.3**
	comp=E,0.4nm,0.3s,baz=202,slow=10.0,SNR=11							
PET	**Petropavlovsk**	**11.55**	**34**	*i*	PN		**Pn**	**10 23 22.8 -3.3**
PET	**Petropavlovsk**	**11.55**	**34**	*e*	P		**Pn**	**10 23 27.0 +0.9**
PET					AMB	AMB	10 23 28.7	
	comp=E,10.0nm,0.7s							
KLR	**Kul'dur**	**12.43**	**301**		P		**Pn**	**10 23 42.3 +4.3**
	comp=E,0.1nm,0.3s,baz=120,slow=15,SNR=3.7							
KLR					LR	LR	10 28 52.3	
	comp=E,59nm,18.4s,baz=114,slow=39							
KLR	**Kul'dur**	**12.43**	**301**	⇑ *e*	PN		**Pn**	**10 23 39.7 +1.7**
KLR					pmax	pmax		
	comp=Z,2.0nm,1.2s							
KLR	**Kul'dur**	**12.43**	**301**	*e*	P		**Pn**	**10 23 39.7 +1.7**
EKMR	**Ekimchan**	**13.58**	**318**	*e*	P		**Pn**	**10 23 53.5 -0.3**
MA2	**Magadan**	**15.83**	**5**		P		**P**	**10 24 25.7 -1.5**
	comp=Z,0.6nm,0.3s,baz=150,slow=20,SNR=2.0							
MA2					LR	LR	10 30 12.8	
	comp=Z,20nm,20.7s,baz=194,slow=36							
MA2	**Magadan**	**15.83**	**5**	⇑ *e*	P		**Pn**	**10 24 25.4 +1.6**
MA2					pmax	pmax		
	comp=Z,2.0nm,0.9s							
BMKR	**Bomnak**	**16.51**	**318**	*e*	P		**Pn**	**10 24 30.0 -2.6**
BMKR					AMB	AMB	10 24 36.7	
	comp=Z,4.0nm,0.6s							
KSRS	**Korea Array**	**16.53**	**254**		LR	LR	10 31 06.7	
	comp=Z,10.0nm,18.2s,baz=78,slow=37							
KROS	**Kirovskiy**	**17.30**	**315**	*e*	P		**Pn**	**10 24 40.5 -2.0**
SEY	**Seymchan**	**19.27**	**6**		P		**P**	**10 25 04.5 -0.7**
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=4.7							
SEY	**Seymchan**	**19.27**	**6**	⇓ *e*	P		**P**	**10 25 03.9 -1.3**
HIA	**Hailar**	**20.13**	**296**	⇑ *e*	P		**P**	**10 25 15.2 +0.5**
HIA					pmax	pmax		
	comp=Z,2.0nm,0.8s							
YAK	**Yakutsk**	**21.16**	**336**		LR	LR	10 33 36.5	
	comp=Z,33nm,21.1s,baz=91,slow=36							
YAK	**Yakutsk**	**21.16**	**336**	⇑ *e*	P		**P**	**10 25 28.0 +2.4**
YAK					pmax	pmax		
	comp=Z,6.0nm,0.7s							
YAK	**Yakutsk**	**21.16**	**336**	*e*	P		**P**	**10 25 28.0 +2.4**
BILL	**Bilibino**	**26.08**	**16**	⇑ *e*	P		**P**	**10 26 13.0 -0.8**
BILL					pmax	pmax		
	comp=Z,2.0nm,1.3s							
H11N2	**WAKE ISLAND Hy**	**28.77**	**141**		T	T	10 57 17.7	
	baz=331,slow=76,SNR=193							
H11N1	**WAKE ISLAND Hy**	**28.79**	**141**		T	T	10 57 18.7	
	baz=331,slow=76,SNR=184							
H11N3	**WAKE ISLAND Hy**	**28.79**	**141**		T	T	10 57 19.1	
	baz=331,slow=76,SNR=206							
SONM	**Songino Array**	**29.02**	**293**		P	P	**P**	**10 26 41.7 +1.1**
	comp=Z,0.3nm,0.4s,baz=78,slow=8.0,SNR=1.8							
SONM					LR	LR	10 39 01.7	
	comp=Z,31nm,19.1s,baz=262,slow=38							
H11S1	**WAKE ISLAND Hy**	**29.75**	**142**		T	T	10 58 27.8	
	baz=333,slow=76,SNR=602							
H11S3	**WAKE ISLAND Hy**	**29.76**	**142**		T	T	10 58 28.1	
	baz=333,slow=76,SNR=264							
H11S2	**WAKE ISLAND Hy**	**29.77**	**142**		T	T	10 58 29.0	
	baz=333,slow=76,SNR=249							
TLY	**Talaya**	**30.44**	**301**		LR	LR	10 39 55.9	
	comp=Z,30nm,18.1s,baz=60,slow=38							
COLA	**College**	**40.60**	**36**	⇑ *e*	P		**P**	**10 28 20.8 +1.0**
COLA					pmax	pmax		
	comp=Z,3.0nm,1.2s							
ILAR	**Eielson Array**	**41.02**	**36**		P		**P**	**10 28 22.6 -0.6**
	comp=Z,0.3nm,0.4s,baz=264,slow=6.7,SNR=7.3							
ILAR	**Eielson Array**	**41.02**	**36**	*e*	P		**P**	**10 28 24.2 +0.9**
MKAR	**Makanchi Array**	**45.10**	**298**		P		**P**	**10 28 56.5 -0.1**
	comp=Z,0.4nm,0.6s,baz=74,slow=8.9,SNR=4.3							
INK	**Inuvik**	**45.98**	**30**		P		**P**	**10 29 03.8 +0.6**
	comp=Z,0.9nm,0.6s,baz=298,slow=9.3,SNR=6.8							
RES	**Resolute Bay**	**54.67**	**17**		P		**P**	**10 30 07.3 -1.5**
	comp=Z,0.9nm,0.6s,baz=330,slow=4.4,SNR=5.5							
YKA	**Yellowknife Ar**	**55.35**	**34**		P		**P**	**10 30 14.8 +0.9**
	comp=Z,0.4nm,0.6s,baz=301,slow=6.8,SNR=8.1							
YKA	**Yellowknife Ar**	**55.35**	**34**	*e*	P		**P**	**10 30 16.7 +2.8**
YKA					pmax	pmax		
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**59.37**	**340**		P		**P**	**10 30 40.7 -1.4**
	comp=Z,0.9nm,0.8s,baz=46,slow=7.7,SNR=0.9							
WRA	**Warramunga Arr**	**64.72**	**194**		P		**P**	**10 31 18.3 -0.3**
	comp=Z,0.3nm,0.8s,baz=16,slow=3.6,SNR=1.6							
FINES	**FINESS Array B**	**65.07**	**333**		P		**P**	**10 31 18.3 -2.0**
	comp=Z,1.0nm,0.6s,baz=38,slow=9.6,SNR=5.3							
FINES	**FINESS Array B**	**65.07**	**333**	*i*	P		**P**	**10 31 20.0 -0.3**
FINES					pmax	pmax		
	comp=Z,1.0nm,0.6s							
NVAR	**Mina Array Bea**	**66.97**	**58**		P		**P**	**10 31 33.2 -0.1**
	comp=Z,0.5nm,0.5s,baz=296,slow=6.7,SNR=7.6							
ASAR	**Alice Springs**	**68.44**	**194**		P		**P**	**10 31 42.3 +0.1**
	comp=Z,0.1nm,0.5s,baz=15,slow=7.0,SNR=4.1							
KIV	**Kislovodsk**	**70.17**	**312**	*e*	P		**P**	**10 31 52.4 -0.6**
KIV					pmax	pmax		
	comp=Z,29nm,1.1s							
KIV	**Kislovodsk**	**70.17**	**312**	*e*	P		**P**	**10 31 52.4 -0.6**
TXAR	**Lajitas Array**	**82.05**	**57**	P			**P**	**10 33 00.8 0.0**
	comp=Z,0.4nm,0.7s,baz=300,slow=3.9,SNR=6.5							
H03N2	**Juan Fernandez**	**142.32**	**90**	T		T	13 19 17.3	
	baz=304,slow=77,SNR=50							
H03N3	**Juan Fernandez**	**142.34**	**90**	T		T	13 19 18.2	
	baz=304,slow=77,SNR=76							
H03N1	**Juan Fernandez**	**142.34**	**90**	T		T	13 19 18.5	
	baz=304,slow=77,SNR=67							

UCR 10 10:34:26.8±1.9, 9.°42N×85.°96W, h6km±15km, MW3.6, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GRZA	**Playa Garza**	**0.59**	**33**	*e*	P		Pb	10 34 39.2 -0.3
GRZA					eS		Sb	10 34 49.5 +1.3
INDI	**Punta indio, G**	**0.64**	**45**	*e*	P		Pb	10 34 39.9 -0.4
SAJU	**San Juanillo,**	**0.69**	**21**	*e*	P		Pg	10 34 40.5 +0.4
SAJU					eS		Sb	10 34 51.0 -0.1
DUNO	**Dulce Nombre,**	**0.80**	**35**	*e*	P		Pg	10 34 42.3 +0.1
DUNO					eS		Sb	10 34 54.4 +0.1
GUAI	**GUAI**	**0.96**	**27**	*i*	P		Pg	10 34 44.4 -0.8
GUAI				*i*	S		Sg	10 34 58.1 +0.4
PLVR	**Palo Verde**	**1.10**	**33**	*e*	P		Pg	10 34 45.6 -2.4
PLVR					eS		Sg	10 35 01.0 -1.3
LAFE	**Finca La Fe, P**	**1.10**	**69**	*e*	P		Pg	10 34 46.7 -1.4
LAFE					eS		Sg	10 35 00.6 -1.8
JTS	**Las Juntas de**	**1.32**	**49**	*e*	P		Pn	10 34 50.6 -1.2
JTS					eS		Sb	10 35 08.9 -0.2
GBS3	**Finca Las Img**	**1.45**	**20**	*i*	P		Pn	10 34 52.0 -1.6
LIM1	**Limonal**	**1.45**	**29**	*i*	P		Pn	10 34 52.0 -1.4
CUI	**Cuipilapa**	**1.46**	**32**	*e*	P		Pn	10 34 51.4 -2.3
VRLE	**La Escondida,**	**1.48**	**23**	*e*	P		Pn	10 34 52.7 -1.4
GB1A	**Borinquen Arri**	**1.50**	**22**	*i*	P		Pn	10 34 53.0 -1.4
CASO	**Castillo**	**1.57**	**50**	*i*	P		Pn	10 34 54.8 -0.5
ARE1	**Arenal 1**	**1.60**	**50**	*e*	P		Pn	10 34 55.6 -0.1
CEDE	**Laguna Cedeo**	**1.63**	**49**	*e*	P		Pn	10 34 55.5 -0.6
FORC	**Fortuna**	**1.64**	**50**	*i*	P		Pn	10 34 56.2 0.0
HDC	**Heredia**	**1.91**	**72**	*e*	P		Pn	10 34 59.7 -0.3
HDC3	**Heredia 3**	**1.91**	**72**	*e*	P		Pn	10 35 00.1 0.0
LCR2	**La Lucha 2**	**1.96**	**80**	*e*	P		Pn	10 34 59.1 -1.6
COVE	**Coope Vega, Sa**	**2.01**	**50**	*e*	P		Pn	10 35 01.1 -0.2
OCM	**Ochomogo**	**2.03**	**76**	*e*	P		Pn	10 35 00.4 -1.3
RIMA	**Rio Macho**	**2.10**	**80**	*e*	P		Pn	10 35 01.4 -1.2
CDM	**Cerro de Muert**	**2.17**	**86**	*e*	P		Pn	10 35 03.0 -0.9
VTUC	**Crater, Volcan**	**2.25**	**74**	*e*	P		Pn	10 35 05.8 +0.9
MRVA	**Moravia de Chi**	**2.51**	**81**	*e*	P		Pn	10 35 07.9 -0.4
RIOS	**Rincon, Osa**	**2.52**	**106**	*e*	P		Pn	10 35 07.4 -0.8
SRBA	**San Rafael, Bu**	**2.57**	**94**	*e*	P		Pn	10 35 08.5 -0.6
DRK0	**Durika**	**2.68**	**93**	*e*	P		Pn	10 35 10.3 -0.4

*IDC **10** 10:40:44.9±1.6, 41.°72N×80.°27E, h0km, mb3.5/2, mb1 3.7/5, mb1mx3.3/54, mbtmp3.5/5, ML3.1/3, Error ellipse: s-maj=24.1km s-min=19.3km az=139.0*
*SOME **10** 10:40:47.2, 41.°82N×79.°88E, h10km*
*KRNET **10** 10:40:48.0±0.1, 41.°88N×79.°99E, mb3.7*
*NNC **10** 10:40:48.1±1.5, 41.°82N×79.°98E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=10.1km s-min=6.0km az=148.0*
ISC 10 10:40:46.8±2.0, 41.°83N±0.°06×80.°12E±0.°04, h0km±11km, n62, σ1s54/101, 30C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHLS	**Shalkode**	**1.41**	**340**	*e*	P		**Pn**	**10 41 13.4 -0.5**
SHLS	437nm,0.3s				eS		**Sn**	**10 41 32.1 -1.2**
SHLS	537nm,0.4s				P		**Pn**	**10 41 13.4 -0.5**
SHLS	**Shalkode**	**1.41**	**340**					
SHLS	437nm,0.3s				S		**Sn**	**10 41 32.1 -1.2**
SHLS	537nm,0.4s				P		**Pn**	**10 41 13.2 -1.0**
PRZ	**Przheval'sk**	**1.43**	**298**	⇑ *i*	P		**Pn**	**10 41 13.2 -1.0**
PRZ	baz=98			⇑ *i*	S		**Sb**	**10 41 31.5 -1.8**
UZB	**Uzynbulak**	**1.54**	**329**	*e*	P		**Pn**	**10 41 15.7 0.0**
UZB	159nm,0.3s				eS		**Sg**	**10 41 36.8 +0.4**
UZB	**Uzynbulak**	**1.54**	**329**		P		**Pn**	**10 41 15.7 0.0**
UZB	159nm,0.3s				S		**Sg**	**10 41 36.8 +0.4**
PDGK	**Podgornoye**	**1.57**	**343**		P		**Pn**	**10 41 16.5 +0.4**
PDGK	50nm,0.3s				S		**Sg**	**10 41 38.1 +0.9**
PDGK	**Podgornoye**	**1.57**	**343**	⇓	Pn		**Pn**	**10 41 16.4 +0.4**
PDGK	55nm,0.5s			⇑	Sn		**Sg**	**10 41 41.7 +4.5**
KTMS	**Ketmen**	**1.62**	**6**	*e*	P		**Pn**	**10 41 17.4 +0.5**
KTMS	80nm,0.2s				eS		**Sg**	**10 41 39.6 +0.6**
KTMS	**Ketmen**	**1.62**	**6**		P		**Pn**	**10 41 17.3 +0.5**
KTMS	80nm,0.2s				S		**Sg**	**10 41 40.1 +1.0**
KPKS	**Kokpek**	**1.95**	**328**	*e*	P		**Pb**	**10 41 22.8 -0.3**
KPKS	243nm,0.4s				eS		**Sg**	**10 41 48.6 -0.8**
ANVS	**Anan'yevo**	**2.05**	**299**	⇑ *i*	P		**Pn**	**10 41 23.9 +1.2**
ANVS	baz=98			⇑ *i*	S		**Sb**	**10 41 50.5 -0.6**
KDJ	**Kajisay**	**2.21**	**279**	⇑ *i*	P		**Pn**	**10 41 26.3 +1.4**
KDJ	baz=78			⇑ *i*	S		**Sn**	**10 41 54.0 +1.0**
DJR	**Jarkent**	**2.51**	**355**	*e*	P		**Pb**	**10 41 32.3 -0.5**
DJR	23nm,0.3s				eS		**Sb**	**10 42 04.7 +0.4**
DJR	**Jarkent**	**2.51**	**355**		Pg		**Pb**	**10 41 32.3 -0.5**
DJR	23nm,0.3s				Lg	Lg	10 42 04.7	
MNBS	**Baschi**	**2.58**	**331**	*e*	P		**Pb**	**10 41 33.8 -0.2**
MNBS	81nm,0.3s				eS		**Sb**	**10 42 06.9 +0.7**
MNBS	**Baschi**	**2.58**	**

	318nm,0.5s							
ARXS	**Arharly**	**2.91**	**326**	*e*P		**Pb**	**10 41 39.5**	**-0.2**
	79nm,0.6s							
ARXS				*e*S		**Sb**	**10 42 17.0**	**+1.1**
	216nm,0.5s							
ARXS	**Arharly**	**2.91**	**326**	Pg		**Pb**	**10 41 39.5**	**-0.2**
	79nm,0.6s							
ARXS				Lg		Lg	10 42 17.0	
	216nm,0.5s							
ULHL	**Ulahol**	**2.92**	**279**	⇑*i*P		**Pn**	**10 41 36.3**	**+1.7**
	baz=79							
ULHL				⇑*i*S		**Sn**	**10 42 11.4**	**+1.0**
	baz=79							
KTBS	**Karatobe**	**3.15**	**308**	*e*P		**Pb**	**10 41 43.3**	**-0.4**
	21nm,0.4s							
KTBS				*e*S		**Sb**	**10 42 23.7**	**+1.0**
	140nm,0.4s							
KTBS	**Karatobe**	**3.15**	**308**	Pg		**Pb**	**10 41 43.3**	**-0.4**
	21nm,0.4s							
KTBS				Lg		Lg	10 42 23.7	
	140nm,0.4s							
BOOM	**Boomskoye usch**	**3.17**	**283**	⇑*e*P		**Pn**	**10 41 39.8**	**+1.7**
	baz=83							
BOOM				⇑*i*S		**Sn**	**10 42 17.5**	**+0.8**
	baz=83							
KST	**Kastek**	**3.30**	**293**	*e*P		**Pb**	**10 41 45.5**	**-0.9**
	22nm,0.7s							
KST				*e*S		**Sb**	**10 42 27.4**	**+0.3**
	89nm,0.6s							
KST	**Kastek**	**3.30**	**293**	Pg		**Pb**	**10 41 45.5**	**-0.9**
	22nm,0.7s							
KST				Lg		Lg	10 42 27.4	
	89nm,0.6s							
TDK	**Taldyqorghan**	**3.41**	**339**	*e*P		**Pb**	**10 41 49.0**	**+0.9**
	98nm,0.5s							
TDK				*e*S		**Sg**	**10 42 33.6**	**-2.6**
	128nm,0.6s							
TDK	**Taldyqorghan**	**3.41**	**339**	Pg		**Pb**	**10 41 48.9**	**+0.9**
	98nm,0.5s							
TDK				Lg		Lg	10 42 33.6	
	128nm,0.6s							
KUU	**Kurty**	**3.46**	**308**	*e*P		**Pb**	**10 41 48.0**	**-0.9**
	15nm,0.3s							
KUU				*e*S		**Sb**	**10 42 31.8**	**+0.3**
	68nm,0.4s							
KUU	**Kurty**	**3.46**	**308**	Pg		**Pb**	**10 41 48.0**	**-0.9**
	15nm,0.3s							
KUU				Lg		Lg	10 42 31.8	
	68nm,0.4s							
DGS	**Degeres**	**3.51**	**295**	*e*P		**Pb**	**10 41 50.0**	**+0.2**
	22nm,0.5s							
DGS				*e*S		**Sb**	**10 42 35.0**	**+2.1**
	79nm,0.5s							
DGS	**Degeres**	**3.51**	**295**	Pg		**Pb**	**10 41 50.0**	**+0.2**
	22nm,0.5s							
DGS				Lg		Lg	10 42 35.0	
	79nm,0.5s							
TKM2	**Tokmak 2**	**3.52**	**290**	⇑*i*P		**Pn**	**10 41 44.5**	**+1.6**
	baz=89							
TKM2				⇑*i*S		**Sn**	**10 42 26.0**	**+0.6**
	baz=89							
TKM2	**Tokmak 2**	**3.52**	**290**	⇓Pg		**Pb**	**10 41 51.7**	**+1.6**
	8.6nm,0.5s							
TKM2				⇑Lg		Lg	10 42 37.3	
	59nm,0.5s							
KRBS	**Karabastau**	**3.76**	**301**	*e*P		**Pb**	**10 41 53.4**	**-0.7**
	10nm,0.4s							
KRBS				*e*S		**Sb**	**10 42 41.0**	**+0.7**
	103nm,0.3s							
KRBS	**Karabastau**	**3.76**	**301**	Pg		**Pb**	**10 41 53.4**	**-0.7**
	10nm,0.4s							
KRBS				Lg		Lg	10 42 41.0	
	103nm,0.3s							
CHMS	**Chumysh**	**4.14**	**288**	⇑*i*P		**Pn**	**10 41 52.9**	**+1.6**
	baz=88							
CHMS				⇑*i*S		**Sn**	**10 42 40.4**	**0.0**
	baz=88							
UCH	**Uchtor**	**4.19**	**277**	⇑*i*P		**Pn**	**10 41 54.1**	**+1.7**
	baz=77							
UCH				⇑*i*S		**Sn**	**10 42 42.4**	**+0.2**
	baz=77							
AAK	**Ala-Archa**	**4.25**	**283**	Pn		**Pn**	**10 41 55.4**	**+2.5**
	0.4nm,0.3s,baz=90,slow=9.1,SNR=2.6							
AAK				Pg		**Pb**	**10 42 06.2**	**+3.8**
	4.3nm,0.3s,baz=105,slow=8.6,SNR=32							
AAK				Lg		Lg	10 42 56.8	
	3.0nm,0.3s,baz=250,slow=18,SNR=7.4							
AAK	**Ala-Archa**	**4.25**	**283**	⇑*i*P		**Pn**	**10 41 54.6**	**+1.7**
	baz=82							
AAK				⇑*i*S		**Sn**	**10 42 43.6**	**+0.3**
	baz=82							
AAK	**Ala-Archa**	**4.25**	**283**	⇓Pg		**Pg**	**10 42 07.0**	**-1.3**
	8.8nm,0.5s							
AAK				Lg		Lg	10 43 01.6	
	23nm,0.6s							
ARLS	**Aral**	**4.33**	**272**	⇑*i*P		**Pn**	**10 41 55.9**	**+1.9**
	baz=72							
ARLS				⇑*i*S		**Sn**	**10 42 45.5**	**+0.3**
	baz=72							
SGDS	**Sogindy**	**4.36**	**294**	Pg		**Pb**	**10 42 04.2**	**-0.1**
	13nm,0.4s							
SGDS				Lg		Lg	10 42 59.6	
	32nm,0.6s							
EKS2	**Erkin-Say**	**4.78**	**282**	⇑*i*P		**Pn**	**10 42 01.8**	**+1.7**
	baz=82							
EKS2				⇑*i*S		**Sn**	**10 42 55.9**	**-0.3**
	baz=82							
AML	**Almayashu**	**4.80**	**276**	⇑*i*P		**Pn**	**10 42 02.3**	**+1.7**
	baz=75							
AML				⇑*i*S		**Sn**	**10 42 56.8**	**-0.3**
	baz=75							
MAKZ	**Makanchi**	**5.15**	**14**	⇑Pn		**Pn**	**10 42 07.4**	**+2.2**
	1.2nm,0.3s							
MAKZ				⇓Sn		**Sn**	**10 43 07.5**	**+2.2**
	2.5nm,0.3s							
MAKZ				⇓Lg		Lg	10 43 30.6	
	3.9nm,0.3s							
MK31	**Makanchi Array**	**5.20**	**17**	⇑Pn		**Pn**	**10 42 08.4**	**+2.6**
	1.5nm,0.3s,baz=199,slow=13,SNR=198							
MK31				⇑Sn		**Sn**	**10 43 09.8**	**+3.2**
	3.5nm,0.3s,baz=207,slow=24,SNR=10							
MK31				⇑Lg		Lg	10 43 35.8	
	5.4nm,0.5s,baz=202,slow=23,SNR=5.1							
MKAR	**Makanchi Array**	**5.20**	**17**	Pn		**Pn**	**10 42 08.4**	**+2.5**
	3.2nm,0.3s,baz=196,slow=14,SNR=104							
MKAR				Sn		**Sn**	**10 43 09.4**	**+2.8**
	3.7nm,0.3s,baz=193,slow=24,SNR=14							
MKAR				Lg		Lg	10 43 29.2	
	2.1nm,0.3s,baz=191,slow=29,SNR=3.7							
BTLS	**Baital**	**5.46**	**308**	*e*P		**Pb**	**10 42 26.8**	**+3.8**
	5.3nm,0.8s							
BTLS				*e*S		**Sg**	**10 43 38.4**	**-3.7**
	7.5nm,0.7s							
WMQ	**Urumqi**	**5.92**	**68**	*e*P		**Pn**	**10 42 18.0**	**+2.3**
WMQ				smax		smax		
	comp=N,30nm,0.7s							
WMQ				smax		smax		
	comp=E,27nm,1.3s							
KK31	**Karatay Array**	**7.21**	**283**	⇓Pg		Pg	10 43 01.5	-3.5
	comp=E,0.8nm,0.5s,baz=101,slow=17,SNR=13							
KK31				⇓Lg		Lg	10 44 37.7	
	comp=E,3.3nm,0.5s,baz=95,slow=28,SNR=4.6							
KURBB	**Kurchatov Arra**	**8.86**	**353**	Lg		Lg	10 45 30.2	
	comp=E,0.1nm,0.3s,baz=183,slow=27,SNR=6.6							
ZALV	**Zalesovo Beam**	**12.53**	**13**	Pn		**Pn**	**10 43 46.9**	**+0.8**
	comp=E,0.3nm,0.3s,baz=208,slow=12,SNR=3.1							
ZALV				Sn		**Sn**	**10 46 03.9**	**-2.4**
	comp=E,0.5nm,0.3s,baz=210,slow=25,SNR=6.2							
YKA	**Yellowknife Ar**	**75.35**	**7**	P		**P**	**10 52 29.5**	**-2.0**
	comp=E,0.2nm,0.6s,baz=344,slow=5.7,SNR=5.2							
WRA	**Warramunga Arr**	**79.29**	**129**	P		**P**	**10 52 51.9**	**-2.3**
	comp=E,0.4nm,1.0s,baz=334,slow=5.6,SNR=1.9							

HEL 10 10:44:52.6±0.1, 60.33N×24.95E, h0km, ML0.9, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
NUR	**Nurmijrvi**	**0.23**	**321**	*e*P		Pg	10 44 55.8			-1.3
NUR				*e*S		Sg	10 44 58.4			-1.7
MEF	**Metsahovi**	**0.30**	**248**	*e*P		Pg	10 44 57.8			-0.4
MEF				*e*S		Sg	10 45 01.7			-0.3
PVF	**Pernaja**	**0.50**	**64**	*e*P		Pg	10 45 01.4			-0.8
PVF				*e*S		Sg	10 45 08.0			-0.8
FIA1	**FINESS Array S**	**1.25**	**26**	*e*P		Pg	10 45 14.6			-2.0
FIA1				*e*S		Sg	10 45 30.8			-1.9
FIA1				MSG			10 45 37.4			
	comp=Z,1.2nm,0.1s									
VJF	**Virojoki**	**1.31**	**80**	*e*P		Pg	10 45 16.4			-1.3
RAF	**Rauma**	**1.72**	**295**	*e*P		Pn	10 45 22.8			-0.9
RAF				*e*S		Sn	10 45 44.9			-1.3
RAF				MSG			10 45 46.8			
	comp=Z,0.5nm,0.1s									
KEF	**Keuruu**	**1.85**	**359**	*e*P		Pn	10 45 25.4			-0.1
KEF				*e*S		Sn	10 45 49.1			-0.4
KEF				MSG			10 45 53.1			
	comp=Z,0.5nm,0.1s									

*NEIC **10** 11:04:50.6±2.3, 55.04N±0.07×159.68W±0.07, h18km±4km, Error ellipse: s-maj=10.1km s-min=5.7km az=177.0*

AEIC 10 11:04:52±2.4, 55.11N±0.07×159.80W±0.05, h15km±7km, ML2.9, ML3.5/7(NEIC), **Error ellipse: s-maj=10.5km s-min=3.9km az=168.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
SDPT	**Sand Point**	**0.46**	**302**			Pb	11 05 01.5			-0.3
SDPT	**Sand Point**	**0.46**	**302**		IAML		11 05 12.4			
	comp=N,566nm,0.8s									
VNSG	**Veniaminof 6**	**1.09**	**21**			Pb	11 05 12.2			-0.4
PS1A	**Pavlof South-1**	**1.16**	**286**			Pn	11 05 12.0			-0.8
VNHG	**Veniaminof 1**	**1.17**	**18**			Pn	11 05 13.8			-0.1
HAG	**Hague Volcano**	**1.23**	**281**			Pn	11 05 13.8			-0.7
PN6	**Pavlof North-6**	**1.26**	**287**			Pn	11 05 15.2			+0.1
BLHA	**Black Hill**	**1.42**	**296**			Pn	11 05 17.3			0.0
DT1	**Dutton Round H**	**1.43**	**271**			Pn	11 05 15.1			-2.2
FALS	**False Pass**	**2.10**	**264**			Pn	11 05 25.5			-1.0
CHIR	**Chirikof Islan**	**2.48**	**72**	Pn		Pn	11 05 29.3			-2.5
CHIR					IAML		11 06 20.4			
	comp=N,245nm,2.5s									
CHIR					IAML		11 06 48.5			
	comp=E,187nm,2.0s									
SII	**Sitkinak Islan**	**3.48**	**63**	Pn		Pn	11 05 44.5			-1.0
SII					IAML		11 07 26.0			
	comp=N,151nm,3.0s									
OHAK	**Old Harbor**	**4.21**	**57**	Pn		Pn	11 05 54.6			-0.9
OHAK					IAML		11 07 60.0			
	comp=N,91nm,3.2s									
NIKH	**Nikolski High**	**5.75**	**252**	Pn		Pn	11 06 16.2			-0.5
ATKA	**Atka Island**	**9.03**	**257**	Pn		Pn	11 06 58.7			-3.0
EYAK	**Cordova Ski Ar**	**9.25**	**48**	Pn		Pn	11 07 00.5			-4.2

*IDC **10** 11:09:03.3±1.2, 28.36N×51.88E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.7/52, mbtmp3.8/14, ML3.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.3/65, Error ellipse: s-maj=26.7km s-min=20.5km az=168.0*
*NEIC **10** 11:09:04.9±2.6, 28.35N±0.04×51.75E±0.07, h10km±1km, Error ellipse: s-maj=10.4km s-min=5.9km az=248.0*
*THR **10** 11:09:05.7±0.4, 28.39N×51.78E, h19km±5km, ML3.8*
*TEH **10** 11:09:05.2, 28.34N×51.77E, h20km, ML3.9*
*DSN **10** 11:09:08.2±0.9, 28.49N×52.19E, h10km, ML3.8/10, Error ellipse: s-maj=16.4km s-min=5.9km az=18.0*
*OMAN **10** 11:09:09.7, 28.27N×51.93E, h162km, mb4.4/14, ml3.7/8*

ISC 10 11:09:05.0±0.5, 28.32N±0.04×51.81E±0.04, h15km, n119, σ1966/138, mb3.8/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
AHBU	**AHRAM**	**0.71**	**320**	*e*Pg		**Pg**	**11 09 17.8**			**-1.1**
QIR1	**Qir**	**1.10**	**81**	*e*Pg		**Pn**	**11 09 27.1**			**+1.2**
QIR1				*e*			11 09 55.4			
	comp=Z,99nm,0.4s									
KAZ1	**Kazerun**	**1.31**	**353**	Pg		**Pb**	**11 09 29.4**			**0.0**
KAZ1	**Kazerun**	**1.31**	**353**	*e*Pg		**Pg**	**11 09 30.3**			**0.0**
KAZ1				*e*			11 10 02.9			
	comp=Z,99nm,0.4s									
SHI	**Shiraz**	**1.46**	**25**	Pg		**Pg**	**11 09 32.2**			**-0.9**
SHI	**Shiraz**	**1.46**	**25**	*e*Pg		**Pg**	**11 09 32.2**			**-0.9**
SHI				*e*			11 09 35.6			
	comp=Z,99nm,0.5s									
LMD1	**Lamerd**	**1.54**	**129**	Pg		**Pg**	**11 09 34.4**			**-0.3**
LMD1	**Lamerd**	**1.54**	**129**	*e*Pn		**Pg**	**11 09 34.2**			**-0.5**
LMD1				*e*			11 10 07.2			
	comp=Z,99nm,0.8s									
JHRM	**Jahrom**	**1.57**	**83**	Pg		**Pg**	**11 09 34.7**			**-0.5**
JHRM	**Jahrom**	**1.57**	**83**	*e*Pg		**Pg**	**11 09 34.4**			**-0.8**
JHRM				*e*			11 10 03.9			
	comp=Z,99nm,0.6s									
LAR1	**LAR**	**2.36**	**105**	Pn		**Pb**	**11 09 44.9**			**-2.3**
LAR1	**LAR**	**2.36**	**105**	*e*Pn		**Pb**	**11 09 45.6**			**-1.6**
KLNJ	**Kolanjah**	**2.69**	**356**	Pn		**Pn**	**11 09 48.9**			**+0.8**
KLNJ	**Kolanjah**	**2.69**	**356**	*e*Pn		**Pn**	**11 09 49.1**			**+1.0**
IRAM	**Ramesheh**	**3.52**	**8**	*e*Pn		**Pn**	**11 10 00.2**			**+0.9**
IMEH	**Mehriz**	**3.91**	**38**	*e*Pn		**Pn**	**11 10 06.1**			**+1.3**
GENO	**Geno**	**3.97**	**102**	*e*Pn		**Pn**	**11 10 07.2**			**+1.7**
IGAR	**Gharneh**	**4.08**	**3**	*e*Pn		**Pn**	**11 10 08.3**			**+1.7**
SLWR	**Sila**	**4.23**	**182**	P		**Pn**	**11 10 12.6**			**+3.7**
SHME	**Shamm**	**4.47**	**119**	P		**Pn**	**11 10 13.4**			**+1.1**
SHME	**Shamm**	**4.47**	**119**	*e*Pn		**Pn**	**11 10 13.9**			**+1.7**
SHME	**Shamm**	**4.47**	**119**	P		**Pn**	**11 10 14.2**			**+1.9**
	SNR=5.2									
NASN	**Na'in**	**4.55**	**11**	*e*Pn		**Pn**	**11 10 15.0**			**+1.3**
NASN				*e*S		**Sn**	**11 11 05.7**			**-0.7**
NASN	**Na'in**	**4.55**	**11**	*e*Pn		**Pn**	**11 10 15.0**			**+1.3**
KHGB	**Koh Gabri**	**4.56**	**62**	*e*Pn		**Pn**	**11 10 15.5**			**+1.8**
IZEF	**Zefreh**	**4.58**	**5**	*e*Pn		**Pn**	**11 10 15.4**			**+1.3**
SHGR	**Shooshtar-Gavs**	**4.59**	**326**	*e*Pn		**Pn**	**11 10 15.2**			**+1.3**
SHGR					IAML		11 12 03.0			
	comp=E,69nm,0.6s									
SHGR	**Shooshtar-Gavs**	**4.59**	**326**	*e*Pn		**Pn**	**11 10 15.2**			**+1.3**
IBAF	**Bafgh**	**4.61**	**44**	*e*Pn		**Pn**	**11 10 16.9**			**+2.6**
KRBR	**Kerman**	**4.63**	**68**	*e*Pn		**Pn**	**11 10 17.2**			**+2.4**
KRBR	**Kerman**	**4.63**	**68**	*e*Pn		**Pn**	**11 10 17.2**			**+2.4**
TVBK	**TV Kerman**	**4.64**	**68**	*e*Pn		**Pn**	**11 10 17.3**			**+2.4**
BANOM	**Banah**	**4.66**	**120**	*i* P		**Pn**	**11 10 16.1**			**+1.3**
	SNR=21									
BANOM					S	**Sn**	**11 11 09.0**			**+0.3**
BANOM	**Banah**	**4.66**	**120**	*e*Pn		**Pn**	**11 10 16.4**			**+1.6**
BANOM	**Banah**	**4.66**	**120**	P		**Pn**	**11 10 16.5**			**+1.6**
	SNR=6.5									
BANOM					S	**Sn**	**11 11 09.4**			**+0.7**
YZKH	**Yazd**	**4.72**	**30**	*e*Pn		**Pn**	**11 10 17.8**			**+2.1**
YZKH	**Yazd**	**4.72**	**30**	*e*Pn		**Pn**	**11 10 17.8**			**+2.1**
NAZ	**Nazwa, Dubai**	**4.78**	**133**	P		**Pn**	**11 10 19.0**			**+2.5**
NAZ	**Nazwa, Dubai**	**4.78**	**133**	*e*Pn		**Pn**	**11 10 18.9**			**+2.4**
NAZ	**Nazwa, Dubai**	**4.78**	**133**	P		**Pn**	**11 10 19.2**			**+2.7**
NAZ					S	**Sn**	**11 11 15.1**			**+3.4**
ASUD	**Al Ashush, Dub**	**4.84**	**139**	*i* P		**Pn**	**11 10 20.4**			**+3.0**
	SNR=14									
ASUD	**Al Ashush, Dub**	**4.84**	**139**	*e*Pn		**Pn**	**11 10 19.6**			**+2.2**
ASUD	**Al Ashush, Dub**	**4.84**	**139**	P		**Pn**	**11 10 20.6**			**+3.3**
	SNR=14									
ASUD					S	**Sn**	**11 11 16.8**			**+3.6**
MASF	**Masafi**	**4.87**	**126**	P		**Pn**	**11 10 20.0**			**+2.3**
	SNR=7.5									
MASF					S	**Sn**	**11 11 14.2**			**+0.3**
MSFE	**Esma-Masafi**	**4.87**	**126**	*i* P		**Pn**	**11 10 19.4**			**+1.5**
	SNR=8.6									
MSFE	**Esma-Masafi**	**4.87**	**126**	*e*Pn		**Pn**	**11 10 19.8**			**+1.9**
FAQ	**Al Faqa, Dubai**	**4.91**	**136**	P		**Pn**	**11 10 21.0**			**+2.6**
FAQ	**Al Faqa, Dubai**	**4.91**	**136**	*e*Pn		**Pn**	**11 10 19.9**			**+1.6**
FAQ	**Al Faqa, Dubai**	**4.91**	**136**	P		**Pn**	**11 10 21.2**			**+2.8**
FAQ					S	**Sn**	**11 11 17.6**			**+2.7**
IKLH	**Kolahrood**	**4.99**	**358**	*e*Pn		**Pn**	**11 10 20.8**			**+1.1**
MDH	**Madha**	**5.01**	**126**	P		**Pn**	**11 10 21.2**			**+1.5**
MDH	**Madha**	**5.01**	**126**	*e*Pn		**Pn**	**11 10 21.5**			**+1.8**
MDH	**Madha**	**5.01**	**126**	P		**Pn**	**11 10 22.2**			**+2.5**
MDH					S	**Sn**	**11 11 18.9**			**+1.6**
ANAR	**Anarak**	**5.13**	**18**	*e*Pn		**Pn**	**11 10 21.7**			**+0.3**
UOSS	**Minazif**	**5.17**	**130**	*i* P		**Pn**	**11 10 23.2**			**+1.2**
	SNR=19									
UOSS	**Minazif**	**5.17**	**130**			**Pn**	**11 10 21.3**			**-0.6**
UOSS					Sn	**Sn**	**11 11 20.2**			**-1.1**
UOSS	**Minazif**	**5.17**	**130**	*e*Pn		**Pn**	**11 10 23.1**			**+1.2**
UOSS	**Minazif**	**5.17**	**130**	P		**Pn**	**11 10 23.8**			**+1.9**
UOSS					S	**Sn**	**11 11 20.7**			**-0.6**
HATD	**Hatta, Dubai**	**5.20**	**131**	*i* P		**Pn**	**11 10 24.3**			**+2.0**
	SNR=12									
HATD	**Hatta, Dubai**	**5.20**	**131**	*e*Pn		**Pn**	**11 10 24.9**			**+2.6**
HATD	**Hatta, Dubai**	**5.20**	**131**	P		**Pn**	**11 10 25.2**			**+2.9**
	SNR=12									
HATD					S	**Sn**	**11 11 22.7**			**+0.6**
ASHO	**Ashiyiah**	**5.25**	**133**	P		**Pn**	**11 10 25.4**			**+2.4**
ALNE	**Al Ain**	**5.53**	**139**	*i* P		**Pn**	**11 10 29.3**			**+2.4**
	SNR=6.9									
ALNE	**Al Ain**	**5.53**	**139**	*e*Pn		**Pn**	**11 10 29.2**			**+2.4**
ALNE	**Al Ain**	**5.53**	**139**	P		**Pn**	**11 10 30.1**			**+3.3**
	SNR=6.8									
ALNE					S	**Sn**	**11 11 32.3**			**+2.2**
KRSH	**Karshahi**	**5.64**	**3**	*e*Pn		**Pn**	**11 10 29.4**			**+0.9**
KBAM	**BAM**	**5.89**	**80**	*e*Pn		**Pn**	**11 10 33.5**			**+1.7**
SOHO	**SOHO**	**5.94**	**133**	*i* P		**Pn**	**11 10 34.1**			**+1.5**
	SNR=8.4									
SOHO	**SOHO**	**5.94**	**133**	*e*Pn		**Pn**	**11 10 33.8**			**+1.3**
SOHO	**SOHO**	**5.94**	**133**	P		**Pn**	**11 10 33.8**			**+1.3**
SOHO					S	**Sn**	**11 11 43.1**			**+2.8**
ISFB	**Sefidab**	**6.03**	**3**	*e*Pn		**Pn**	**11 10 33.9**			**+0.2**
TPRV	**Parvadeh(Tabas**	**6.30**	**41**	*e*Pn		**Pn**	**11 10 39.5**			**+2.0**
UMZA	**Um Al Zommool**	**6.35**	**151**	P		**Pn**	**11 10 40.5**			**+2.5**
UMZA					S	**Sn**	**11 11 50.5**			**+0.2**
ARQ	**Araqi**	**6.53**	**138**	P		**Pn**	**11 10 42.0**			**+1.4**
	SNR=6.8									
ARQ					S	**Sn**	**11 11 56.2**			**+1.4**
IQOM	**Qom**	**6.54**	**355**	*e*Pn		**Pn**	**11 10 40.4**			**-0.5**
IVRN	**Varamin**	**6.66**	**359**	*e*Pn		**Pn**	**11 10 42.0**			**-0.4**
HOQ	**Hoqain**	**6.83**	**132**	P		**Pn**	**11 10 47.4**			**+2.6**
TNSJ	**Nastanj**	**6.97**	**35**	*e*Pn		**Pn**	**11 10 47.6**			**+0.9**
TKDS	**Koohdasht(Taba**	**6.97**	**39**	*e*Pn		**Pn**	**11 10 47.7**			**+0.9**
IRAZ	**Razeghan**	**7.25**	**348**	*e*Pn		**Pn**	**11 10 50.7**			**+0.1**
BSY	**Bisya**	**7.38**	**138**	P		**Pn**	**11 10 54.1**			**+1.8**
	SNR=12									
BSY					S	**Sn**	**11 12 15.0**			**-0.8**
RAYN	**Ar Rayn**	**7.42**	**231**			**Pn**	**11 10 52.1**			**-0.7**
RAYN					Sn	**Sn**	**11 12 14.3**			**-2.5**
BIDO	**Bidbid**	**7.42**	**129**	P		**Pn**	**11 10 54.1**			**+1.2**
QABG	**Abgarm-Qazvin**	**7.61**	**346**	*e*Pn		**Pn**	**11 10 55.1**			**-0.5**
SMDO	**Samad**	**7.68**	**132**	P		**Pn**	**11 10 58.1**			**+1.5**
	SNR=9.1									
SMDO					S	**Sn**	**11 12 23.9**			**+0.4**
WSAR	**Wadi Sarin**	**7.96**	**128**	Pn		**Pn**	**11 11 00.6**			**+0.4**
	comp=E,2.5nm,0.3s,baz=317,slow=8.7,SNR=24									
WSAR					Sn	**Sn**	**11 12 28.1**			**-1.9**
	comp=E,1.0nm,0.3s,baz=99,slow=17,SNR=1.8									
JMDO	**Jabal Madar**	**8.21**	**135**	P		**Pn**	**11 11 04.7**			**+1.0**
	SNR=8.4									
JMDO					S	**Sn**	**11 12 34.9**			**-1.3**
WBK	**Wadi Bani Khal**	**8.61**	**130**	P		**Pn**	**11 11 10.3**			**+1.1**
WBK					S	**Sn**	**11 12 45.4**			**-0.7**
MHTO	**MHTO**	**9.20**	**141**	P		**Pn**	**11 11 18.5**			**+1.4**
	SNR=16									
MHTO					S	**Sn**	**11 12 57.5**			**-2.9**
JLN	**Jalan Bani Buh**	**9.22**	**130**	P		**Pn**	**11 11 18.7**			**+1.2**
SBZV	**Sabzevar**	**9.42**	**30**	*e*Pn		**Pn**	**11 11 21.9**			**+1.5**
DQM	**DQM**	**9.85**	**147**	P		**Pn**	**11 11 26.8**			**+0.6**
DOK	**Doka**	**9.89**	**167**	P		**Pn**	**11 11 27.1**			**+0.4**
WHFO	**Wadi Hawf**	**10.51**	**170**	P		**Pn**	**11 11 35.0**			**-0.2**
	SNR=25									
DMTO	**DMTO**	**10.94**	**164**	P		**Pn**	**11 11 41.0**			**-0.1**
GEYT	**Alibeck**	**10.94**	**27**	LR		LR	11 16 05.9			
	comp=E,53nm,18.5s,baz=195,slow=39									
ABTO	**Aybut**	**11.00**	**173**	P		**Pn**	**11 11 41.3**			**-0.6**
GAR	**Garm**	**18.70**	**50**	P		**P**	**11 13 21.1**			**-1.8**
GAR					IAmb	IAmb	11 13 29.8			
	comp=Z,14nm,1.2s									
BRTR	**Keskin Array B**	**18.84**	**312**	P		**Pn**	**11 13 25.9**			**+0.8**
	comp=Z,0.2nm,0.3s,baz=136,slow=13,SNR=6.2									
KK31	**Karatay Array**	**21.10**	**41**	P		**P**	**11 13 49.5**			**+0.5**
KK31					IAmb	IAmb	11 13 54.7			
	comp=Z,4.4nm,1.1s									
KKAR	**Karatay Array**	**21.10**	**41**	P		**P**	**11 13 49.7**			**+0.7**
KKAR					IAmb

baz=189,SNR=121
M24K S 11 15 19.5
baz=189
SCM Sheep Creek Mo 0.53 298 Pn 11 15 10.9 -1.3
SCM Sheep Creek Mo 0.53 298 Sn 11 15 19.5 -0.5
DIV Divide 0.54 149 Pn 11 15 11.2 -1.1
DIV Sn 11 15 19.9 -0.3
JPK Jack Peak 0.55 193 Pn 11 15 11.5 -1.0
PS12 TAPS Pump St12 0.58 101 Pn 11 15 11.9 -1.0
PS11 TAPS Pump St11 0.64 40 Pn 11 15 12.9 -0.7
GLI Glacier Island 0.80 207 Pn 11 15 15.2 -0.6
GLI Glacier Island 0.80 207 IAML 11 15 28.8
comp=E,3µm,0.3s
GLI Glacier Island 0.80 207 P 11 15 15.1
baz=27,SNR=17
GLI S 11 15 26.7
baz=27
N25K Chitina, Valde 0.83 88 Pn 11 15 15.3 -0.9
N25K IAML 11 15 28.7
comp=N,2µm,0.5s
N25K IAML 11 15 29.7
comp=E,2µm,0.5s
N25K Chitina, Valde 0.83 88 Sn 11 15 26.8 -0.6
N25K Chitina, Valde 0.83 88 P 11 15 15.3
baz=270,SNR=71
N25K S 11 15 26.9
baz=270
FID Port Fidalgo 0.85 185 Pn 11 15 16.4 0.0
SML Sawmill 0.97 284 Pn 11 15 16.8 -1.4
SML Sawmill 0.97 284 IAML 11 15 31.9
comp=E,2µm,0.3s
SML IAML 11 15 32.3
comp=N,2µm,0.3s
SML Sawmill 0.97 284 P 11 15 16.8
baz=102,SNR=69
SML S 11 15 29.9
baz=102
KNK Knik Glacier 1.03 261 Pn 11 15 18.5 -0.4
KNK Knik Glacier 1.03 261 IAML 11 15 34.0
comp=E,2µm,0.3s
KNK IAML 11 15 34.4
comp=N,2µm,0.4s
KNK Knik Glacier 1.03 261 P 11 15 18.5
baz=79
KNK S 11 15 32.4
baz=79
BMRM Bremner River 1.05 126 Pn 11 15 18.2 -0.9
BMRM Bremner River 1.05 126 IAML 11 15 34.1
comp=E,2µm,0.5s
BMRM Bremner River 1.05 126 P 11 15 18.3
baz=308,SNR=176
BMRM S 11 15 33.0
baz=308
EYAK Cordova Ski Ar 1.08 164 Pn 11 15 19.8 +0.2
EYAK Cordova Ski Ar 1.08 164 P 11 15 19.8
baz=345
WAT6 Susitna Watana 1.19 327 Pn 11 15 19.6 -1.7
WAT6 Sn 11 15 35.3 -1.0
WAT6 Susitna Watana 1.19 327 P 11 15 19.6
baz=146,SNR=94
WAT6 S 11 15 35.4
baz=146
PWL Port Wells 1.21 234 Pn 11 15 21.3 -0.1
GLB Gilahina Butte 1.22 96 Pn 11 15 20.7 -0.9
GLB Sn 11 15 36.7 -0.2
GLB Gilahina Butte 1.22 96 IAML 11 15 39.0
comp=N,995nm,0.5s
GHO Glory Hole Cre 1.25 280 Pn 11 15 21.1 -0.9
GHO Glory Hole Cre 1.25 280 Sn 11 15 38.0 +0.5
GOAT Goat Mountain 1.28 142 Pn 11 15 22.3 -0.1
PMR Palmer 1.33 271 Pn 11 15 22.6 -0.4
PMR Sn 11 15 39.9 +0.4
PMR Palmer 1.33 271 IAML 11 15 41.7
comp=E,1µm,0.8s
PMR Palmer 1.33 271 P 11 15 22.6
baz=89,SNR=63
PMR S 11 15 39.8
baz=89
VRDI Verde Repeater 1.44 103 Pn 11 15 23.9 -0.7
RAGM Ragged Mountai 1.46 145 Pn 11 15 24.8 +0.1
MCARA McCarthy VSAT 1.60 96 Pn 11 15 26.6 -0.1
MCARA McCarthy VSAT 1.60 96 IAML 11 15 52.8
comp=N,994nm,0.5s
MCARA IAML 11 15 55.4
comp=E,1µm,0.3s
MCARA McCarthy VSAT 1.60 96 P 11 15 26.6
baz=279,SNR=79
HMT Hamilton 1.62 140 Pn 11 15 26.5 -0.4
WAT1 Susitna Watana 1.62 321 Pn 11 15 26.3 -0.7
WAT1 Sn 11 15 46.9 +0.3
RC01 Rabbit Creek A 1.71 254 Pn 11 15 28.0 -0.2
RC01 Rabbit Creek A 1.71 254 IAML 11 15 52.5
comp=N,1µm,0.4s
RC01 IAML 11 15 52.7
comp=E,855nm,0.4s
RC01 Rabbit Creek A 1.71 254 P 11 15 28.1
baz=71,SNR=34
WAT7 Susitna Watana 1.71 318 Pn 11 15 27.8 -0.6
WAT2 Susitna Watana 1.73 324 Pn 11 15 28.1 -0.5
WAT2 Susitna Watana 1.73 324 P 11 15 28.2
baz=142
BERG Berg Lake 1.76 132 Pn 11 15 29.2 +0.3
CRQM Cirque 1.76 117 Pn 11 15 29.4 +0.3
CRQM IAML 11 15 58.2
comp=E,843nm,0.8s
CRQM IAML 11 16 01.0
comp=N,931nm,0.7s
CRQE Cirque 1.79 117 P 11 15 28.6
baz=300
NICHA Nichawak Mount 1.79 139 Pn 11 15 29.3 0.0
MENT Mentasta 1.82 41 Pn 11 15 29.5 -0.3
MENT IAML 11 16 04.4
comp=E,556nm,0.4s
MENT IAML 11 16 07.1
comp=N,393nm,0.4s
KHIT Khitrov Hills 1.90 126 Pn 11 15 30.4 -0.5
TGL Tana Glacier 1.90 115 Pn 11 15 30.4 -0.4
PTPK Patty Peak 1.91 101 Pn 11 15 31.1 -0.1
PTPK Sn 11 15 53.6 -0.3
KAIM Kayak Island 1.92 150 Pn 11 15 31.0 -0.1
KAIM IAML 11 16 06.6
comp=N,494nm,2.2s
KAIM IAML 11 16 08.2
comp=E,526nm,2.9s
KAIM Kayak Island 1.92 150 P 11 15 30.6
baz=331
FIS Fire Island 1.92 258 Pn Pn 11 15 31.9 +0.9
FIS IAML 11 16 05.2
comp=E,647nm,0.6s
FIS IAML 11 16 11.3
comp=N,706nm,0.9s
SUCK Suckling Hills 1.98 139 Pn 11 15 32.0 +0.2
SUCK Suckling Hills 1.98 139 IAML 11 16 04.4
comp=E,588nm,0.4s
GRIN Grindle Hills 1.98 130 Pn 11 15 31.5 -0.4
O22K Cooper Landing 1.99 237 Pn 11 15 32.4 +0.4
BALM Baldy 2.01 104 Pn 11 15 31.8 -0.6
CUT Chulitna 2.03 295 Pn 11 15 32.7 +0.2
CUT Chulitna 2.03 295 P 11 15 32.7
baz=112,SNR=128
KIAG Kiagna River 2.04 107 Pn 11 15 32.1 -0.7
HUR Hurricane 2.08 314 Pn 11 15 32.9 -0.4
SUA Susitna One 2.12 268 Pn 11 15 33.8 -0.1
SUA Susitna One 2.12 268 Sn 11 15 58.6 -0.3
SUA Susitna One 2.12 268 P 11 15 33.4
baz=85,SNR=16
RND Reindeer 2.16 328 Pn 11 15 34.5 0.0
RND IAML 11 16 03.9
comp=E,473nm,0.6s
RND Reindeer 2.16 328 Sn 11 16 00.2 +0.1
Q23K Middleton Isla 2.17 180 Pn 11 15 34.6 +0.1
Q23K Middleton Isla 2.17 180 IAML 11 16 01.5
comp=N,533nm,4.2s
Q23K IAML 11 16 46.7
comp=E,567nm,3.5s
Q23K Middleton Isla 2.17 180 P 11 15 34.7
baz=0.1
MID Middleton Isla 2.17 180 Pn Pn 11 15 34.8 +0.2
MID IAML 11 16 01.4
comp=E,610nm,2.9s
MID IAML 11 16 10.7
comp=N,511nm,2.8s
SLKM Skilak Lake 2.18 242 Pn 11 15 34.2 -0.5
SNH Sunshine Point 2.22 128 Pn 11 15 34.9 -0.4
KULT Kultieth River 2.22 126 Pn 11 15 34.7 -0.6

DOT Dot Lake 2.32 26 Pn 11 15 36.9 +0.3
BARN Barnard Glacie 2.32 101 Pn 11 15 36.8 0.0
BARN Barnard Glacie 2.32 101 IAML 11 16 15.8
comp=E,330nm,0.7s
GRNC Granite Creek 2.38 109 Pn 11 15 37.2 -0.4
GRNC Granite Creek 2.38 109 IAML 11 16 14.9
comp=N,218nm,0.9s
MCK McKinley 2.46 332 Pn 11 15 38.5 0.0
MCK IAML 11 16 10.2
comp=E,200nm,0.6s
MCK IAML 11 16 14.0
comp=N,305nm,0.7s
MCK McKinley 2.46 332 Sn 11 16 08.1 +0.8
MCK McKinley 2.46 332 P 11 15 38.4
baz=150,SNR=78
CTG Chitna Glacier 2.50 102 P 11 15 38.9
baz=287
SKT Skwentna 2.50 281 Pn 11 15 38.8 -0.3
SKT IAML 11 16 16.0
comp=N,434nm,0.7s
SKT IAML 11 16 17.4
comp=E,310nm,0.4s
SKT Skwentna 2.50 281 P 11 15 38.7
baz=97,SNR=19
SKT S 11 16 08.6
baz=97
CTGM Chitina Glacie 2.50 102 Pn 11 15 39.2 0.0
YAH Yahtse 2.56 117 Pn 11 15 39.5 -0.5
YAH IAML 11 16 20.9
comp=N,346nm,0.6s
YAH IAML 11 16 21.3
comp=E,313nm,0.6s
L27K Beaver Creek, 2.57 53 Pn 11 15 40.1 0.0
L27K Beaver Creek, 2.57 53 P 11 15 40.0
baz=237,SNR=6.5
BC03 2.59 53 Pn 11 15 40.3 +0.1
TRF Thorofare Moun 2.61 317 Pn 11 15 40.4 -0.4
TRF IAML 11 16 23.8
comp=N,342nm,0.7s
TRF IAML 11 16 25.3
comp=E,251nm,0.6s
TRF Thorofare Moun 2.61 317 P 11 15 40.3
baz=134,SNR=25
TRF S 11 16 11.5
baz=134
YUK2 White River 2.63 83 Pn 11 15 40.9 0.0
SCRK Sand Creek 2.63 23 Pn 11 15 40.5 -0.5
SCRK Sand Creek 2.63 23 P 11 15 40.3
baz=205,SNR=33
STLK Strandline Lak 2.63 270 Pn 11 15 40.6 -0.4
LOGN Logan Glacier 2.69 104 Pn 11 15 41.8 -0.1
LOGN IAML 11 16 27.8
comp=E,184nm,0.7s
BVCY Beaver Creek 2.71 70 Pn 11 15 42.5 +0.5
BVCY Sn 11 16 14.9 +1.3
TABL Table Mountain 2.78 112 Pn 11 15 42.7 -0.5
TABL IAML 11 16 29.1
comp=E,156nm,1.2s
YUK3 Moose Creek 2.81 84 Pn 11 15 43.4 -0.1
HDA Harding Lake 2.84 355 Pn 11 15 43.1 -0.7
HDA Harding Lake 2.84 355 P 11 15 42.9
baz=174,SNR=180
HDA P 11 15 42.9
baz=174,SNR=180
BRSE Bradley Lake S 2.85 231 Pn 11 15 43.6 -0.4
BRSE Bradley Lake S 2.85 231 P 11 15 43.6
baz=48
BRLK Bradley Lake 2.89 233 Pn 11 15 44.3 -0.2
KTH Kantishna Hill 2.89 315 Pn 11 15 44.5 0.0
KTH Kantishna Hill 2.89 315 IAML 11 16 34.9
comp=E,271nm,0.7s
KTH IAML 11 16 35.3
comp=N,232nm,1.1s
BWN Browne 2.96 332 Pn 11 15 44.7 -0.6
CHX Chaix Hills 2.98 119 Pn 11 15 45.7 -0.1
WRH Wood River Hil 3.00 345 Pn 11 15 45.3 -0.6
PPLA Purkeypile 3.03 298 Pn 11 15 46.3 -0.2
PPLA Purkeypile 3.03 298 P 11 15 46.1
baz=113,SNR=11
K27K Chicken 3.13 37 Pn 11 15 47.8 0.0
K27K Chicken 3.13 37 P 11 15 47.5
baz=221
CCB Clear Creek Bu 3.14 348 Pn 11 15 46.9 -1.0
CCB Clear Creek Bu 3.14 348 IAML 11 16 30.0
comp=N,127nm,0.5s
CCB IAML 11 16 38.2
comp=E,128nm,0.8s
CNPM China Poot 3.18 232 Pn 11 15 48.2 -0.3
CNPM IAML 11 16 45.2
comp=E,112nm,2.6s
IL31 3.20 356 Pn 11 15 47.4 -1.3
HOM Homer 3.25 236 Pn Pn 11 15 49.4 0.0
NEA2 Nenana 3.26 339 Pn 11 15 48.2 -1.3
NEA2 IAML 11 16 41.6
comp=E,106nm,0.7s
NEA2 Nenana 3.26 339 P 11 15 48.2
baz=156
BPAW Bear Paw Mtn. 3.30 322 Pn 11 15 49.3 -0.7
BPAW IAML 11 16 43.4
comp=N,169nm,1.5s
BPAW IAML 11 16 43.9
comp=E,111nm,1.3s
BPAW Bear Paw Mtn. 3.30 322 P 11 15 49.1
baz=138,SNR=96
RSO Redoubt South 3.32 253 Pn 11 15 49.8 -0.8
PCA Pinnacle 3.33 114 Pn 11 15 50.1 -0.4
PINM Pinnacle 3.34 114 P 11 15 49.8
baz=299
RED Redoubt Volcan 3.35 252 Pn 11 15 49.8 -1.0
COLA College 3.37 349 Pn 11 15 51.9 +1.0
COLA College 3.37 349 P 11 15 50.0
baz=168
TCOL CIGO, UAF Yank 3.37 349 Pn 11 15 50.0 -0.9
TCOL CIGO, UAF Yank 3.37 349 P 11 15 50.0
baz=168
MDM Murphy Dome 3.49 347 Pn 11 15 51.7 -0.9
MDM IAML 11 16 52.3
comp=N,103nm,1.0s
MDM IAML 11 17 00.3
comp=E,85nm,0.8s
POKR Poker Plat Res 3.57 353 Pn 11 15 53.3 -0.6
POKR IAML 11 16 50.6
comp=N,80nm,0.6s
POKR Poker Plat Res 3.57 353 P 11 15 52.8
baz=172
CHUM Lake Minchumin 3.58 313 Pn 11 15 53.3 -0.6
CHUM Lake Minchumin 3.58 313 P 11 15 53.2
baz=127,SNR=13
BCPM Bancas Point 3.68 114 Pn Pn 11 15 55.0 -0.3
BCPM IAML 11 16 25.6
comp=E,156nm,4.1s
BCPM IAML 11 16 26.1
comp=N,168nm,3.5s
I23K Minto, Yukon-K 3.82 340 Pn 11 15 58.1 +0.9
I23K IAML 11 16 58.2
comp=E,85nm,0.7s
I23K IAML 11 17 02.3
comp=N,112nm,0.8s
I23K Minto, Yukon-K 3.82 340 P 11 15 56.0
baz=158,SNR=46
OPT Oil Point 3.91 243 Pn 11 15 58.5 0.0
PRP Porcupine Dome 3.96 5 Pn 11 15 58.9 -0.3
PRP IAML 11 17 08.0
comp=N,60nm,0.7s
PRP IAML 11 17 14.7
comp=E,78nm,0.7s
EGAK Eagle 3.97 34 Pn 11 15 59.4 +0.2
EGAK IAML 11 17 11.1
comp=E,107nm,0.9s
EGAK IAML 11 17 11.1
comp=E,73nm,0.8s
EGAK Eagle 3.97 34 P 11 15 58.8
baz=219,SNR=14
MLY Manley 3.98 332 Pn 11 15 58.7 -0.8
MLY Manley 3.98 332 P 11 15 58.5
baz=148,SNR=27
DAWY Dawson 4.04 49 Pn 11 16 00.3 +0.1
HYT Haines Junctio 4.34 96 Pn Pn 11 16 04.2 -0.3
SVW2 Sparrevohn 4.48 268 Pn Pn 11 16 04.5 -1.8
TT01 Tatalina 4.71 290 Pn 11 16 07.8 -1.6
KDAK Kodiak Island 4.96 222 Pn Pn 11 16 11.4 -1.4
KDAK IAML 11 18 44.8
comp=E,62nm,3.3s
KDAK IAML 11 18 51.6
comp=E,54nm,2.6s

KDAK Kodiak Island 4.96 222 P 11 16 12.0
baz=37
FYU Fort Yukon 5.02 5 Pn Pn 11 16 13.2 -0.4
FYU IAML 11 17 25.7
comp=N,63nm,4.1s
IM03 5.50 327 Pn 11 16 18.4 -1.7
WHY Whitehorse 5.63 94 Pn Pn 11 16 24.1 +2.0
OHAK Old Harbor 5.64 222 Pn 11 16 21.8 -0.3
BM03 Burnt Mountain 5.90 7 Pn 11 16 25.4 -0.3
COLD Coldfoot 5.90 345 Pn Pn 11 16 26.7 +1.0
COLD Coldfoot 5.90 345 P 11 16 25.3
baz=162,SNR=105
EPYK Eagle Plains 6.39 37 Pn Pn 11 16 31.6 -0.9
JIS Juneau Island 6.86 114 Pn 11 16 38.8 -0.1
SIT Sitka 7.24 124 Pn 11 16 43.7 -0.3
INK Inuvik 8.64 33 Pn Pn 11 17 02.4 -0.8
ANM Nome 9.12 297 Pn Pn 11 17 12.3 +2.5
GAMB Gambell 11.82 292 Pn Pn 11 17 47.8 +1.1
C36M Paulatuk 12.01 40 Pn Pn 11 17 46.9 -2.4

*IDC **10** 11:52:21.4±1.6, 12°.69N×124°.85E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/69, mbtmp3.7/5, MS3.0/2, Ms1 3.1/2, ms1mx2.6/47, Error ellipse: s-maj=76.4km s-min=20.3km az=61.0*
*MAN **10** 11:52:29.1, 12°.83N×125°.04E, h32km, mb4.6, ML3.5, MS3.4*

ISC 10 11:52:24.2±1.2, 13°.01N±0°.08×125°.4E±0°.1, h28km, n14, σ1§80/17, mb3.6/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**1.40**	**178**	*eP*	**Pb**	**11 52 48.7**	**-1.0**
BESP				*eS*	**Sb**	**11 53 08.2**	**+1.0**
SCSP	**San Jose Seism**	**1.93**	**290**	*eP*	**Pn**	**11 52 56.3**	**+1.1**
SCSP				*eS*	**Sb**	**11 53 21.7**	**-0.8**
MSLP	**Maasin**	**2.91**	**190**	*eP*	**Pn**	**11 53 11.3**	**+2.7**
MSLP				*eS*	**Sb**	**11 53 52.1**	**+1.6**
JCNP	**Jose Panganiba**	**2.91**	**296**	*eP*	**Pn**	**11 53 11.2**	**+2.5**
JCNP				*eS*	**Sn**	**11 53 42.7**	**-0.1**
GLSP	**General Luna,**	**3.29**	**167**	*eP*	**Pb**	**11 53 18.8**	**-3.1**
GLSP				*eS*	**Sn**	**11 53 52.1**	**+0.1**
GUIM	**Jordan**	**3.63**	**230**	*eP*	**Pn**	**11 53 19.0**	**+0.4**
LQP	**Lukban**	**3.91**	**287**	*eP*	**Pn**	**11 53 24.6**	**+2.1**
DAV	**Davao City (W)**	**5.91**	**178**	LR	LR	11 56 33.0	
	comp=Z,180nm,21.6s,baz=340,slow=45						
JOW	**Kunigami**	**14.01**	**11**	LR	LR	12 02 09.9	
	comp=Z,22nm,18.3s,baz=328,slow=41						
CMAR	**Chiang Mai Arr**	**26.01**	**285**	P	**P**	**11 57 52.2**	**-2.9**
	0.4nm,0.4s,baz=95,slow=7.4,SNR=4.3						
CMAR				LR	LR	12 07 39.1	
	comp=Z,29nm,19.8s,baz=102,slow=36						
WRA	**Warramunga Arr**	**33.91**	**165**	P	**P**	**11 59 04.1**	**-0.9**
	0.2nm,0.5s,baz=342,slow=9.2,SNR=6.6						
ASAR	**Alice Springs**	**37.39**	**167**	P	**P**	**11 59 35.1**	**+0.3**
	0.5nm,0.5s,baz=349,slow=7.6,SNR=24						
MKAR	**Makanchi Array**	**49.35**	**322**	P	**P**	**12 01 12.6**	**+1.5**
	1.9nm,0.9s,baz=112,slow=9.3,SNR=12						
ZALV	**Zalesovo Beam**	**51.83**	**331**	P	**P**	**12 01 30.4**	**+0.8**
	0.5nm,0.3s,baz=111,slow=8.0,SNR=1.8						

*BGR **10** 11:56:03.9±0.0, 52°.37N×159°.41E, h33km, mb5.3*
*MOS **10** 11:56:05.7±0.7, 52°.97N×159°.94E, h49km, mb5.2/140, Error ellipse: s-maj=21.1km s-min=5.2km az=102.3*
MOS Felt (II-III) at Petropavlovsk-Kamchatskiy.
*KRSC **10** 11:56:07.1±1.2, 52°.92N×160°.16E, h49km±11km, ML5.5*
*BJI **10** 11:56:07.4±0.0, 53°.23N×159°.79E, h59km, mB4.9/31, mb4.9/51, Ms4.4/28, Ms7 4.1/29*
*NEIC **10** 11:56:10.5±1.7, 52°.97N±0°.08×159°.88E±0°.09, h61km±5km, mb4.9/394, Error ellipse: s-maj=12.4km s-min=7.8km az=170.0*
*IDC **10** 11:56:13.0±1.1, 53°.11N×159°.69E, h80km±8km, mb4.7/44, mb1 4.7/49, mb1mx4.6/74, mbtmp5.0/49, MS3.8/30, Ms1 3.8/30, ms1mx3.7/47, Error ellipse: s-maj=10.9km s-min=8.4km az=131.0*
*GCMT **10** 11:56:13.6±0.3, 53°.05N±0°.02×160°.00E±0°.04, h44km±1km, MW4.9/76, Moment Tensor Solution. s51,c60; s76,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.38±.13; $M_{\theta\theta}$-0.94±.11; $M_{\phi\phi}$-1.45±.09; $M_{r\theta}$1.02±.09; $M_{r\phi}$-1.19±.07; $M_{\theta\phi}$1.24±.07; Best double couple: M_o2.88400×10^{16} NP1:ϕ_s219.00000°, δ28.00000°, λ89.00000°. NP2: ϕ_s39.00000°, δ62.00000°, λ90.00000°. Principal axes: T 2.8680, Plg73.0000°, Azm310.0000°; N 0.0240, Plg0.0000°, Azm219.0000°; P -2.8990, Plg17.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 11:56:09.5±0.5, 52°.97N±0°.03×159°.96E±0°.03, h55km±3km, n1149, σ1§36/1209, mb5.0/455, MS4.0/41, 70C-47D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.13**	**17**	PN	**Pn**	**11 56 16.5**	**-1.5**
SPN				S	**Sn**	**11 56 22.0**	**-2.2**
SPN	**Mys Shipunski**	**0.13**	**17**	*eP*	**Pn**	**11 56 16.5**	**-1.5**
SPN				*eS*	**Sn**	**11 56 22.0**	**-2.2**
NLC	**Nalytchevo**	**0.42**	**298**	PN	**Pn**	**11 56 19.7**	**-0.5**
NLC				S	**Sn**	**11 56 28.0**	**+0.1**
NLC	**Nalytchevo**	**0.42**	**298**	*eP*	**Pn**	**11 56 19.7**	**-0.5**
NLC				*eS*	**Sn**	**11 56 28.0**	**+0.1**
SDLR	**Sedlovina**	**0.71**	**296**	PN	**Pn**	**11 56 24.0**	**+0.3**
SDLR	**Sedlovina**	**0.71**	**296**	*i* P	**Pn**	**11 56 24.0**	**+0.3**
UGLR	**Uglovaya**	**0.72**	**289**	PN	**Pn**	**11 56 24.2**	**+0.4**
UGLR	**Uglovaya**	**0.72**	**289**	*i* P	**Pn**	**11 56 24.2**	**+0.4**
DALK	**Dalny**	**0.73**	**275**	PN	**Pn**	**11 56 23.7**	**-0.1**
DALK				S	**Sn**	**11 56 34.9**	**+0.7**
DALK	**Dalny**	**0.73**	**275**	*eP*	**Pn**	**11 56 23.7**	**-0.1**
DALK				*eS*	**Sn**	**11 56 34.9**	**+0.7**
SMAR	**Somma**	**0.76**	**293**	PN	**Pn**	**11 56 24.2**	**-0.1**
SMAR	**Somma**	**0.76**	**293**	*eP*	**Pn**	**11 56 24.2**	**-0.1**
PET	**Petropavlovsk**	**0.79**	**274**	*d* PN	**Pn**	**11 56 24.7**	**+0.1**
PET				*eS*	**Sn**	**11 56 36.7**	**+1.1**
PET				pmax	pmax		
	comp=Z,22µm,0.8s						
PET				smax	smax		
	comp=N,42µm,0.4s						
PET				smax	smax		
	comp=E,66µm,0.7s						
PET	**Petropavlovsk**	**0.79**	**274**	*eP*	**Pn**	**11 56 24.6**	**+0.1**
PET	**Petropavlovsk**	**0.79**	**274**		**Pn**	**11 56 24.7**	**+0.1**
PET				Sn	**Sn**	**11 56 36.6**	**+1.1**
AVH	**Avacha**	**0.79**	**292**	PN	**Pn**	**11 56 25.3**	**+0.6**
AVH	**Avacha**	**0.79**	**292**	*i* P	**Pn**	**11 56 25.3**	**+0.6**
KRER	**Koryakskii**	**0.80**	**295**	PN	**Pn**	**11 56 25.5**	**+0.6**
KRER	**Koryakskii**	**0.80**	**295**	*i* P	**Pn**	**11 56 25.5**	**+0.6**
KOK	**Koryaka**	**0.86**	**292**	PN	**Pn**	**11 56 26.1**	**+0.6**
KOK	**Koryaka**	**0.86**	**292**	*i* P	**Pn**	**11 56 26.1**	**+0.6**
KRX	**Arik**	**0.88**	**297**	PN	**Pn**	**11 56 26.3**	**+0.5**
KRX	**Arik**	**0.88**	**297**	*i* P	**Pn**	**11 56 26.3**	**+0.5**
RUS	**Russkaya**	**1.03**	**239**	PN	**Pn**	**11 56 27.3**	**-0.4**
RUS	**Russkaya**	**1.03**	**239**	*eP*	**Pn**	**11 56 27.3**	**-0.4**
KII	**Karymskiy**	**1.11**	**344**	PN	**Pn**	**11 56 29.2**	**+0.4**
KII	**Karymskiy**	**1.11**	**344**	*eP*	**Pn**	**11 56 29.2**	**+0.4**
KRMR	**Karymshinskiy**	**1.12**	**263**	PN	**Pn**	**11 56 29.4**	**+0.6**
KRMR				S	**Sn**	**11 56 44.7**	**+1.5**
KRMR	**Karymshinskiy**	**1.12**	**263**	*eP*	**Pn**	**11 56 29.4**	**+0.6**
KRMR				*eS*	**Sn**	**11 56 44.7**	**+1.5**
MTVR	**Mutnovka**	**1.19**	**246**	PN	**Pn**	**11 56 30.3**	**+0.4**
MTVR	**Mutnovka**	**1.19**	**246**	*eP*	**Pn**	**11 56 30.3**	**+0.4**
GRL	**Gorelyy**	**1.22**	**251**	PN	**Pn**	**11 56 31.2**	**+0.8**
GRL	**Gorelyy**	**1.22**	**251**	*eP*	**Pn**	**11 56 31.2**	**+0.8**
I44RU	**PETROPAVLOVSK-**	**1.36**	**276**	P	**Pn**	**11 56 33.1**	**+0.9**
	baz=87,slow=18,SNR=4.9						
PEA0B	**Petropavlovsk-**	**1.37**	**277**	*d* iPN	**Pn**	**11 56 33.6**	**+1.3**
PEA0B	**Petropavlovsk-**	**1.37**	**277**	Pn	**Pn**	**11 56 33.5**	**+1.2**
PETK	**Petropavlovsk-**	**1.37**	**277**	P	**Pn**	**11 56 32.6**	**+0.3**
	comp=E,2µm,0.3s,baz=98,slow=19						
PETK				S	**Sn**	**11 56 51.8**	**+2.4**
	comp=E,2µm,0.3s,baz=122,slow=47,SNR=5.9						
PETK				LR	LR	11 57 20.5	
	comp=E,5µm,19.5s,baz=148,slow=56						
PETK	**Petropavlovsk-**	**1.37**	**277**	PN	**Pn**	**11 56 32.6**	**+0.3**
PETK				S	**Sn**	**11 56 51.8**	**+2.4**
GNL	**Ganaly**	**1.41**	**302**	PN	**Pn**	**11 56 34.3**	**+1.4**
GNL	**Ganaly**	**1.41**	**302**	*eP*	**Pn**	**11 56 34.3**	**+1.4**
KDTR	**Khodutka, Kamc**	**1.64**	**225**	PN	**Pn**	**11 56 36.6**	**+0.7**
KDTR				S	**Sn**	**11 56 57.8**	**+1.9**

KDTR **Khodutka, Kamc** 1.64 225 *e*P Pn 11 56 36.6 +0.7
KDTR *e*S Sn 11 56 57.8 +1.9
APC Apacha 1.69 269 PN Pn 11 56 38.6 +2.0
APC S Sn 11 57 01.0 +3.8
APC Apacha 1.69 269 *e*P Pn 11 56 38.6 +2.0
APC *e*S Sn 11 57 01.0 +3.8
MKZ Mys Kozlova 1.90 33 PN Pn 11 56 38.1 -1.4
MKZ S Sn 11 56 59.2 -3.0
MKZ Mys Kozlova 1.90 33 *e*P Pn 11 56 38.1 -1.4
MKZ *e*S Sn 11 56 59.2 -3.0
KZV Kizimen 2.15 5 PN Pn 11 56 43.9 +0.8
KZV Kizimen 2.15 5 *e*P Pn 11 56 43.9 +0.8
TUMD Tumrok D 2.25 6 *e*P Pn 11 56 44.8 +0.6
TUMD *e*S Sn 11 57 11.8 +1.0
TUMR Tumrok 2.32 3 PN Pn 11 56 46.6 +1.3
TUMR Tumrok 2.32 3 *e*P Pn 11 56 46.6 +1.3
PAU Pauzhetka 2.45 233 PN Pn 11 56 48.8 +1.8
PAU Pauzhetka 2.45 233 *e*P Pn 11 56 48.8 +1.8
KMNR Kamenistaya 2.79 3 PN Pn 11 56 53.7 +2.0
KMNR Kamenistaya 2.79 3 *e*P Pn 11 56 53.7 +2.0
BZMR Bezymyannaya 2.98 6 PN Pn 11 56 56.0 +1.6
BZMR Bezymyannaya 2.98 6 *e*P Pn 11 56 56.0 +1.6
KIRR Kirishev 2.99 4 PN Pn 11 56 56.3 +1.8
KIRR Kirishev 2.99 4 *e*P Pn 11 56 56.3 +1.8
BZGR Bezymyannyi-Gr 3.00 8 PN Pn 11 56 57.1 +2.5
BZGR Bezymyannyi-Gr 3.00 8 *e*P Pn 11 56 57.1 +2.5
BZWR Bezymyannyi-We 3.01 6 PN Pn 11 56 57.0 +2.2
BZWR Bezymyannyi-We 3.01 6 *e*P Pn 11 56 57.0 +2.2
ESO Esso 3.05 347 PN Pn 11 56 57.0 +1.9
ESO Esso 3.05 347 *e*P Pn 11 56 57.0 +1.9
ZLN Zelenaya 3.09 9 PN Pn 11 56 58.9 +3.1
ZLN Zelenaya 3.09 9 *e*P Pn 11 56 58.9 +3.1
KOZ Kozyrevsk 3.09 359 PN Pn 11 56 57.5 +1.8
KOZ Kozyrevsk 3.09 359 *e*P Pn 11 56 57.5 +1.8
CIRR Tsirk 3.18 8 PN Pn 11 57 00.1 +3.0
CIRR Tsirk 3.18 8 *e*P Pn 11 57 00.1 +3.0
KRSR Krestovskiy 3.27 6 PN Pn 11 56 59.2 +0.9
KRSR Krestovskiy 3.27 6 *e*P Pn 11 56 59.2 +0.9
SKR Severo-Kuril's 3.31 228 *e*PN Pn 11 57 00.5 +1.8
SKR *e*S Sn 11 57 36.8 +0.1
SKR pmax pmax
comp=Z,123nm,0.4s
SKR smax smax
comp=E,2μm,0.4s
SKR smax smax
comp=N,2μm,0.4s
SKR MLR MLR
comp=Z,400nm,12.0s
SKR MLR MLR
comp=Z,700nm,14.0s
SKR Severo-Kuril's 3.31 228 *e*P Pn 11 56 59.6 +0.9
SKR *e*S Sn 11 57 37.8 +1.1
SRDR Sredinnyy 3.35 358 PN Pn 11 57 00.6 +1.2
SRDR Sredinnyy 3.35 358 *e*P Pn 11 57 00.6 +1.2
KLY Klyuchi 3.37 7 PN Pn 11 57 01.4 +1.9
KLY Klyuchi 3.37 7 *e*P Pn 11 57 01.4 +1.9
ALID Alaid 3.45 234 PN Pn 11 57 05.3 +4.5
ALID Alaid 3.45 234 *e*P Pn 11 57 05.3 +4.5
KBTR Krutoberegovo 3.64 26 PN Pn 11 57 05.1 +1.8
KBTR S Sn 11 57 48.0 +3.1
KBTR Krutoberegovo 3.64 26 *e*P Pn 11 57 05.1 +1.8
KBTR *e*S Sn 11 57 48.0 +3.1
KBG Krutoberegovo 3.66 25 PN Pn 11 57 05.4 +2.0
KBG S Sn 11 57 48.9 +3.7
KBG Krutoberegovo 3.66 25 *e*P Pn 11 57 05.4 +2.0
KBG *e*S Sn 11 57 48.9 +3.7
BDR Baidarnaya 3.67 11 PN Pn 11 57 05.6 +1.8
BDR S Sn 11 57 50.0 +4.2
BDR Baidarnaya 3.67 11 *e*P Pn 11 57 05.6 +1.8
BDR *e*S Sn 11 57 50.0 +4.2
SMKR Semkarok 3.72 13 PN Pn 11 57 05.7 +1.3
SMKR S Sn 11 57 51.4 +4.4
SMKR Semkarok 3.72 13 *e*P Pn 11 57 05.7 +1.3
SMKR *e*S Sn 11 57 51.4 +4.4
SRKR Sorokina 3.75 10 PN Pn 11 57 06.6 +1.7
SRKR Sorokina 3.75 10 *e*P Pn 11 57 06.6 +1.7
BKI Bering 4.19 55 PN Pn 11 57 10.0 -0.7
BKI Bering 4.19 55 *e*P Pn 11 57 10.0 -0.7
PALN Palana 6.13 0 PN Pn 11 57 39.4 +2.1
PALN Palana 6.13 0 *e*P Pn 11 57 39.4 +2.1
OSSR Ossora 6.53 14 PN Pn 11 57 46.2 +3.5
OSSR Ossora 6.53 14 *e*P Pn 11 57 46.2 +3.5
MA2 Magadan 8.36 326 P Pn 11 58 07.7 0.0
comp=Z,0.8nm,0.3s,baz=140,slow=7.1,SNR=26
MA2 LR LR 12 01 54.0
comp=Z,888nm,19.9s,baz=128,slow=42
MA2 Magadan 8.36 326 ⇓*i*PN Pn 11 58 08.4 +0.6
MA2 MLR MLR
comp=Z,579nm,14.0s
MA2 Magadan 8.36 326 Pn Pn 11 58 09.3 +1.6
SMY Shemya 8.57 86 PN Pn 11 58 10.4 -0.2
SMY Shemya 8.57 86 Pn Pn 11 58 10.4 -0.2
KMSK Kamenskaya 10.08 17 PN Pn 11 58 34.2 +2.9
KMSK Kamenskaya 10.08 17 *e*P Pn 11 58 34.2 +2.9
OKH Okha 10.22 280 *de*PN Pn 11 58 34.7 +1.5
SEY Seymchan 10.76 341 P Pn 11 58 40.7 +0.2
comp=Z,0.1nm,0.3s,baz=146,slow=12,SNR=25
SEY LR LR 12 03 20.4
comp=Z,881nm,20.9s,baz=156,slow=40
SEY Seymchan 10.76 341⇓*e*PN Pn 11 58 43.6 +3.1
TYV Tymovskoe 10.89 266 *e*PN Pn 11 58 47.1 +4.6
TYV *e* 12 00 46.4
TYV pmax pmax
comp=Z,19nm,1.3s
TYV pmax pmax
comp=Z,200nm,2.9s
KUR Kuril'sk 11.07 230 *e*PN Pn 11 58 47.4 +2.5
KUR pmax pmax
comp=Z,44nm,0.7s
KUR pmax pmax
comp=E,26nm,0.5s
KUR pmax pmax
comp=N,21nm,0.4s
YSS Yuzh-Sakhalins 12.59 248 *e*PN Pn 11 59 05.2 -0.5
YSS pmax pmax
comp=Z,30nm,1.3s
YSS MLR MLR
comp=E,200nm,15.0s
YSS MLR MLR
comp=Z,300nm,15.0s
YUK Yuzh-Kuril'sk 12.92 232 *e*PN Pn 11 59 07.8 -2.3
YUK pmax pmax
comp=N,40nm,0.3s
YUK pmax pmax
comp=E,58nm,0.3s
YUK pmax pmax
comp=Z,267nm,0.3s
GRPR Tuman 12.99 232 *e*PN Pn 11 59 10.2 -0.9
GRPR pmax pmax
comp=Z,118nm,0.4s
GRPR pmax pmax
comp=N,90nm,0.1s
GRPR pmax pmax
comp=E,83nm,0.2s
RUSJ Misakicho 13.16 233 *e*PN Pn 11 59 13.3 -0.1
GLVR Golovnino 13.30 232 PN Pn 11 59 13.4 -1.9
NMR Nemuro--Hokkai 13.48 230 *e*PN Pn 11 59 12.6 -5.2
JKA Kamikawa-asahi 14.48 239 Pn Pn 11 59 31.8 +0.6
ASAJ Asahikawa 14.48 239 P Pn 11 59 31.5 +0.3
comp=E,4.6nm,0.3s,baz=75,slow=13,SNR=43
ASAJ LR LR 12 04 54.9
comp=E,260nm,19.9s,baz=54,slow=36
ASAJ Asahikawa 14.48 239 P Pn 11 59 31.8 +0.6
GRNR Gornyy 14.69 271 ⇓*i*P P 11 59 41.1 +2.3
GRNR pmax pmax
comp=E,30nm,0.6s
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,40nm,1.0s
GRNR MLR MLR
comp=N,150nm,13.0s
GRNR MLR MLR
comp=E,170nm,13.0s
BILL Bilibino 15.42 9 *ce*P Pn 11 59 43.3 +0.2
BILL pmax pmax
comp=Z,77nm,1.3s
BILL MLR MLR
comp=Z,145nm,12.0s
BILL Bilibino 15.42 9 Pn Pn 11 59 43.7 +0.6
BILL IAmb IAmb 11 59 50.0
comp=Z,55nm,0.8s
ERM Erimo 15.74 233 ⇑*i*P Pn 11 59 43.2 -4.2
ERM Erimo 15.74 233 Pn Pn 11 59 43.9 -3.5
ERM IAmb IAmb 11 59 55.5
comp=Z,64nm,0.4s
JEW Eniwo 15.98 238 Pn Pn 11 59 49.7 -0.7
JEW IAmb IAmb 11 59 52.1
comp=Z,170nm,1.2s
TEY Ternei 17.20 252⇑ *e*P P 12 00 08.1 +1.5
TEY pmax pmax
comp=E,40nm,0.5s
JTM Tenmabayashi 17.69 234 Pn 12 00 07.9 -3.8
JTM IAmb IAmb 12 00 09.3
comp=Z,109nm,1.5s
KLR Kul'dur 18.05 269 P Pn 12 00 16.1 0.0
comp=Z,2.6nm,0.3s,baz=73,slow=10,SNR=41
KLR LR LR 12 08 01.7
comp=Z,354nm,18.5s,baz=70,slow=40
KLR Kul'dur 18.05 269 *ce*P Pn 12 00 17.2 +1.1
KLR MLR MLR
comp=Z,314nm,18.0s
GAMB Gambell 18.20 42 P Pn 12 00 17.8 +0.1
GAMB Gambell 18.20 42 P 12 00 18.6
baz=247
YAK Yakutsk 18.45 311 P P 12 00 19.8 -0.4
comp=Z,0.3nm,0.3s,baz=85,slow=2.5,SNR=20
YAK LR LR 12 08 25.3
comp=Z,554nm,18.2s,baz=90,slow=40
YAK Yakutsk 18.45 311 *c*⇓*i*P P 12 00 19.0 -1.2
YAK pmax pmax
comp=Z,117nm,0.8s
YAK MLR MLR
comp=Z,522nm,17.0s
YAK Yakutsk 18.45 311 P P 12 00 19.4 -0.8
YAK IAmb IAmb 12 00 24.2
comp=Z,105nm,0.7s
NIKH Nikolski High 18.71 77 P 12 00 25.5
baz=283
ZEA Zeya 19.45 285 *e*P P 12 00 31.0 -0.2
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
JMM Marumori 20.13 229 P P 12 00 39.1 +0.3
JMM IAmb IAmb 12 00 43.5
comp=Z,49nm,1.0s
USA0B Ussuriysk Arra 20.37 256⇓*e*P P 12 00 40.4 -0.8
USA0B Ussuriysk Arra 20.37 256 P P 12 00 41.1 -0.2
USRK Ussuriysk Ar. 20.37 256 P P 12 00 40.8 -0.5
comp=Z,16nm,0.5s,baz=57,slow=10,SNR=54
USRK LR LR 12 08 54.9
comp=Z,320nm,20.0s,baz=50,slow=38
USRK Ussuriysk Ar. 20.37 256 P P 12 00 40.8 -0.5
TNA Tin City 20.40 39 P Pn 12 00 43.2 -0.6
TNA IAmb IAmb 12 00 43.9
comp=Z,42nm,0.9s
TNA Tin City 20.40 39 P 12 00 42.6
baz=248,SNR=11
ANM Nome 21.07 43 P P 12 00 50.1 +1.4
ANM pmax pmax
comp=Z,12nm,0.8s
ANM Nome 21.07 43 P P 12 00 50.1 +1.4
ANM Nome 21.07 43 P 12 00 50.1
baz=254
JSD Sado 21.19 234 P P 12 00 50.5 +0.3
FALS False Pass 21.50 70 P 12 00 54.7
baz=280
MDJ Mudanjiang 21.55 259 P P 12 00 53.2 -0.7
MDJ PP PnPn 12 01 16.4 +0.3
MDJ S S 12 04 46.4 -3.2
MDJ pmax pmax
comp=Z,16nm,0.7s
MDJ pmax pmax
comp=Z,99nm,5.1s
MDJ LR LR
comp=Z,290nm,17.1s
MDJ LR LR
comp=Z,210nm,18.6s
MDJ LR LR
comp=Z,350nm,18.6s
MDJ Mudanjiang 21.55 259 P P 12 00 52.2 -1.7
JYT Yasato 21.75 228 P P 12 00 56.8 +0.7
JYT IAmb IAmb 12 00 58.7
comp=Z,48nm,0.6s
MAJO Matsushiro 22.41 232 *ce*P P 12 01 03.1 -0.1
MAJO pmax pmax
comp=Z,167nm,0.9s
MAJO Matsushiro 22.41 232 P P 12 01 03.5 +0.3
MAT Matsushiro 22.41 232 P P 12 01 04.3 +1.1
MAT *e*S S 12 05 10.6 +4.9
MJAR Matsushiro Arr 22.41 232 P P 12 01 04.5 +1.2
comp=Z,105nm,0.9s,baz=21,slow=12,SNR=124
MJAR LR LR 12 11 04.0
comp=Z,141nm,20.9s,baz=60,slow=40
MJAR Matsushiro Arr 22.41 232 P P 12 01 04.5 +1.2
TIXI Tiksi 23.16 335 PcP PcP 12 04 57.6 +0.7
comp=Z,1.9nm,0.3s,baz=322,slow=3.3,SNR=3.6
TIXI Tiksi 23.16 335 *ce*P P 12 01 08.9 -1.7
TIXI pmax pmax
comp=Z,76nm,0.8s
RDOG Red Dog Mine 23.19 35 P P 12 01 11.3 +0.3
JGF Kuroka 23.57 232 P P 12 01 15.0 0.0
JGF IAmb IAmb 12 01 23.4
comp=Z,29nm,0.6s
INU Inuyama 23.94 232 P P 12 01 17.6 -0.6
INU IAmb IAmb 12 01 22.0
comp=Z,36nm,0.6s
CN2 Changchun 24.48 262 *e*P P 12 01 20.0 -3.1
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,60nm,3.8s
CN2 LR LR
comp=Z,310nm,19.0s
CN2 LR LR
comp=Z,330nm,19.0s
CN2 LR LR
comp=Z,420nm,18.0s
JWT Wachi 24.77 234 P P 12 01 26.3 +0.4
JWT IAmb IAmb 12 01 29.1
comp=Z,65nm,1.2s
SVW2 Sparrevohn 25.07 53 P P 12 01 29.3 +0.9
HIA Hailar 25.28 278 *c*⇓*i*P P 12 01 28.8 -1.6
HIA pmax pmax
comp=Z,40nm,0.8s
HIA Hailar 25.28 278 P P 12 01 28.9 -1.4
HIA IAmb IAmb 12 01 30.0
comp=Z,47nm,0.7s
BOD Bodaibo 26.13 299 *e*P P 12 01 36.4 -1.6
BOD pmax pmax
comp=Z,28nm,1.2s
JHS Saijyo 26.14 237 P P 12 01 40.1 +1.8
JHS IAmb IAmb 12 01 41.4
comp=Z,56nm,0.8s
A21K Barrow 26.43 30 P P 12 01 40.3 -0.3
A21K IAmb IAmb 12 02 00.0
comp=Z,64nm,1.4s
A21K Barrow 26.43 30 P 12 01 40.4
baz=249,SNR=9.8
CHUM Lake Minchumin 26.59 47 P 12 01 43.0
baz=269
JMN Monobe 26.77 234 P P 12 01 44.7 +0.8
SKT Skwentna 26.97 51 P P 12 01 47.1 +1.5
KS19 Wonju Array Si 27.09 248 P P 12 01 47.4 +0.6
KSRS Korea Array 27.09 248 P P 12 01 46.8 0.0
comp=Z,13nm,0.9s,baz=43,slow=9.2,SNR=25
KSRS PcP PcP 12 05 07.8 +1.5
comp=Z,2.8nm,0.8s,baz=330,slow=1.6,SNR=11
KSRS LR LR 12 13 43.1
comp=Z,156nm,20.2s,baz=54,slow=39
KSRS Korea Array 27.09 248 P P 12 01 46.8 0.0
KSRS 12 05 07.9
BPAW Bear Paw Mtn. 27.18 47 P P 12 01 48.3 +0.8
BPAW Bear Paw Mtn. 27.18 47 P 12 01 47.9
baz=270
KTH Kantishna Hill 27.21 48 P P 12 01 49.3 +1.6
MLY Manley 27.32 45 P P 12 01 49.4 +0.8
MLY PcP PcP 12 05 07.8 +1.3
MLY Manley 27.32 45 P 12 01 48.9
baz=268,SNR=10
CNPM China Poot 27.35 57 P P 12 01 49.6 +0.6
CNPM IAmb IAmb 12 01 51.8
comp=Z,54nm,1.4s
SUA Susitna One 27.38 52 P P 12 01 49.7 +0.4
BRLK Bradley Lake 27.50 56 P P 12 01 48.4 -1.8
BRLK IAmb IAmb 12 02 03.3
comp=Z,47nm,1.5s
TRF Thorofare Moun 27.50 48 P P 12 01 51.4 +1.0
TRF Thorofare Moun 27.50 48 P 12 01 51.0
baz=271
CUT Chulitna 27.54 50 P P 12 01 50.5 0.0
CUT IAmb IAmb 12 01 55.8
comp=Z,37nm,1.4s
COLD Coldfoot 27.70 40 P P 12 01 52.4 +0.5
COLD Coldfoot 27.70 40 P 12 01 52.4
baz=264,SNR=13
BWN Browne 27.85 46 P P 12 01 55.5 +2.1
BWN IAmb IAmb 12 01 56.8
comp=Z,43nm,1.2s
I23K Minto, Yukon-K 27.90 44 P P 12 01 54.6 +0.9
I23K IAmb IAmb 12 01 56.5
comp=Z,26nm,1.2s
I23K Minto, Yukon-K 27.90 44 P 12 01 53.6
baz=269,SNR=7.9
NEA2 Nenana 28.02 46 P P 12 01 55.5 +0.6
NEA2 Nenana 28.02 46 P 12 01 55.2
baz=270,SNR=7.2
MCK McKinley 28.09 47 P P 12 01 56.8 +1.3
MCK pmax pmax
comp=Z,13nm,1.0s
MCK McKinley 28.09 47 P P 12 01 56.8 +1.3
MCK McKinley 28.09 47 P 12 01 56.5
baz=272
TOLK Toolik Lake Re 28.11 37 P P 12 01 56.3 +0.6
TOLK Toolik Lake Re 28.11 37 P 12 01 55.8
baz=262,SNR=7.8
PMR Palmer 28.14 52 P P 12 01 57.5 +1.6
PMR pmax pmax
comp=Z,16nm,1.5s
PMR Palmer 28.14 52 P P 12 01 57.5 +1.6
RND Reindeer 28.14 48 P P 12 01 56.3 +0.3
RND pmax pmax
comp=Z,16nm,1.2s
RND Reindeer 28.14 48 P P 12 01 56.3 +0.3
WAT2 Susitna Watana 28.29 49 P 12 01 58.0
baz=274
MDM Murphy Dome 28.38 45 P P 12 01 59.5 +1.4
WRH Wood River Hil 28.45 46 P P 12 01 60.0 +1.4
KNK Knik Glacier 28.48 52 P 12 01 59.2
baz=277
SML Sawmill 28.50 51 P 12 01 59.1
baz=276
TCOL CIGO, UAF Yank 28.54 45 P P 12 02 00.3 +0.9
TCOL CIGO, UAF Yank 28.54 45 P 12 02 00.1
baz=271
COLA College 28.54 45 *d*⇓*i*P P 12 02 00.6 +1.2
COLA pmax pmax
comp=Z,12nm,1.1s
COLA College 28.54 45 P P 12 02 00.6 +1.2
COLA College 28.54 45 P 12 02 00.3
baz=271
CCB Clear Creek Bu 28.57 45 P P 12 02 01.1 +1.4
JNU Nakatsue 28.76 238 P P 12 02 02.3 +0.6
comp=Z,19nm,0.6s,baz=8.6,slow=4.2,SNR=14
JNU LR LR 12 13 57.4
comp=Z,149nm,21.5s,baz=44,slow=37
JNU Nakatsue 28.76 238 P P 12 02 02.0 +0.3
JNU IAmb IAmb 12 02 16.2
comp=Z,48nm,1.1s
HDA Harding Lake 28.94 46 P 12 02 03.7
baz=273
HDA P 12 02 03.7
baz=273
IL31 28.96 45 P P 12 02 04.0 +0.9
ILAR Eielson Array 28.96 45 P P 12 02 03.4 +0.2
comp=Z,5.6nm,0.7s,baz=264,slow=7.6,SNR=47
ILAR LR LR 12 14 42.4
comp=Z,113nm,18.2s,baz=280,slow=38
ILAR Eielson Array 28.96 45 P P 12 02 03.4 +0.2
SCM Sheep Creek Mo 28.97 51 P P 12 02 04.4 +1.0
SCM pmax pmax
comp=Z,41nm,1.4s
SCM Sheep Creek Mo 28.97 51 P P 12 02 04.4 +1.0
SCM IAmb IAmb 12 02 15.0
comp=Z,41nm,1.4s
JCJ Chichijima 29.05 214 LR LR 12 12 09.8
comp=Z,47nm,21.7s,baz=46,slow=33
GLI Glacier Island 29.20 53 P P 12 02 07.5 +2.1
GLI IAmb IAmb 12 02 26.9
comp=Z,54nm,1.2s
M24K Tolsona, Glenn 29.48 51 P P 12 02 09.9 +2.1
M24K IAmb IAmb 12 02 15.9
comp=Z,49nm,1.4s
FYU Fort Yukon 29.62 41 P P 12 02 10.6 +1.6
FYU IAmb IAmb 12 02 11.3
comp=Z,20nm,0.8s
KLU Klutina 29.68 52 P P 12 02 09.0 -0.6
KLU IAmb IAmb 12 02 17.2
comp=Z,28nm,1.4s
DL2 Dalian 29.74 257 P P 12 02 07.9 -2.4
DL2 *e*S S 12 07 02.4 0.0
DL2 pmax pmax
comp=Z,15nm,1.1s
DL2 LR LR
comp=Z,270nm,22.0s
DL2 LR LR
comp=Z,220nm,25.4s
DL2 LR LR
comp=Z,390nm,21.6s
JSU Suzuyama 30.26 237 P P 12 02 16.2 +1.2
DOT Dot Lake 30.27 47 P P 12 02 14.8 0.0
SCRK Sand Creek 30.27 47 P P 12 02 15.2 +0.3
SCRK Sand Creek 30.27 47 P 12 02 15.3
baz=276
N25K Chitina, Valde 30.29 51 P P 12 02 16.5 +1.5
MENT Mentasta 30.50 49 P P 12 02 18.2 +1.3
K27K Chicken 31.10 46 P P 12 02 22.4 +0.3
L27K Beaver Creek, 31.34 48 P P 12 02 25.8 +1.5
L27K Beaver Creek, 31.34 48 P 12 02 25.2
baz=279,SNR=7.4
EGAK Eagle 31.41 45 P P 12 02 24.8 +0.1
EGAK Eagle 31.41 45 P 12 02 24.2
baz=277,SNR=8.4
BARN Barnard Glacie 31.78 52 P P 12 02 28.8 +0.4
CTGM Chitina Glacie 31.96 52 P P 12 02 31.1 +1.3
CTGM IAmb IAmb 12 02 55.8
comp=Z,17nm,1.2s
LOGN Logan Glacier 32.15 52 P P 12 02 33.3 +1.8
DAWY Dawson 32.26 46 P P 12 02 33.5 +1.1
PINM Pinnacle 32.68 53 P 12 02 36.6
baz=285
EPYK Eagle Plains 33.04 41 P P 12 02 39.7 +0.6
ULN Ulaanbaatar 33.45 283 *de*P P 12 02 42.4 -0.6
ULN pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 33.45 283 P P 12 02 42.0 -1.0
H11N2 WAKE ISLAND Hy 33.61 168 T T 12 38 37.5
baz=352,slow=76,SNR=5112
H11N3 WAKE ISLAND Hy 33.63 168 T T 12 38 38.6
baz=352,slow=76,SNR=4890
H11N1 WAKE ISLAND Hy 33.63 168 T T 12 38 38.7
baz=352,slow=76,SNR=5912
TLY Talaya 33.69 291 *e*P P 12 02 43.7 -1.2
TLY *e*S S 12 08 08.4 +4.5
TLY *e*SS SS 12 10 40.0 +9.2
TLY pmax pmax
comp=Z,21nm,1.0s
TLY MLR MLR
comp=Z,284nm,13.0s
TLY Talaya 33.69 291 P P 12 02 44.3 -0.6
TLY PcP PcP 12 05 24.6 +1.2
HYT Haines Junctio 33.81 51 P P 12 02 48.1 +2.2
HYT IAmb IAmb 12 03 09.0
comp=Z,11nm,1.0s
SONM Songino Array 33.85 283 P P 12 02 45.8 -0.6
comp=Z,4.2nm,0.5s,baz=68,slow=7.8,SNR=27
SONM PcP PcP 12 05 25.0 +0.9
comp=Z,8.2nm,0.6s,baz=76,slow=1.4,SNR=23
SONM Songino Array 33.85 283 P P 12 02 45.8 -0.6
SONM 12 05 25.0
INK Inuvik 34.01 38 P P 12 02 48.7 +1.3
INK pmax pmax
comp=Z,15nm,0.8s
INK Inuvik 34.01 38 P P 12 02 48.7 +1.3
INK IAmb IAmb 12 02 49.4
comp=Z,15nm,0.8s
ZAK Zakamensk 34.46 289 *e*P P 12 02 51.0 -0.7
ZAK *e* 12 04 10.2
ZAK pmax pmax
comp=Z,6.0nm,1.1s
ZAK pmax pmax
comp=Z,3.0nm,1.1s

HHC Hu-ho-hao-te 34.56 269 *e*P **P** **12 02 52.4 -0.3**
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,100nm,5.5s
HHC LR LR
comp=Z,300nm,13.6s
HHC LR LR
comp=Z,360nm,15.3s
HHC LR LR
comp=Z,410nm,14.5s
H11S1 WAKE ISLAND Hy 34.80 169 T T 12 40 10.4
baz=352,slow=76,SNR=1793
H11S3 WAKE ISLAND Hy 34.81 169 T T 12 40 11.2
baz=352,slow=76,SNR=2038
H11S2 WAKE ISLAND Hy 34.81 169 T T 12 40 22.5
baz=352,slow=76,SNR=794
JOW Kunigami 35.17 235 P **P** **12 02 58.9 +0.9**
comp=Z,62nm,0.3s,baz=29,slow=7.8,SNR=43
JOW LR LR 12 19 15.4
comp=Z,47nm,18.3s,baz=322,slow=39
JOW Kunigami 35.17 235 P **P** **12 02 59.6 +1.7**
MOY Mondy 35.19 292 *e*P **P** **12 02 57.6 -0.4**
MOY pmax pmax
comp=Z,11nm,1.3s
NRIK Noril'sk 35.96 325 PcP **PcP** **12 05 29.7 +0.1**
comp=Z,4.4nm,0.6s,baz=78,slow=0.7,SNR=4.2
NRIK LR LR 12 19 11.1
comp=Z,763nm,19.0s,baz=78,slow=38
NRIK Noril'sk 35.96 325⇑ *e*P **P** **12 03 03.5 -0.7**
NRIK Noril'sk 35.96 325 P **P** **12 03 03.4 -0.8**
NJ2 Nanjing 36.14 251 *e*P **P** **12 03 04.7 -1.5**
NJ2 pmax pmax
comp=Z,12nm,0.5s
C36M Paulatuk 37.19 35 P **P** **12 03 15.3 +0.6**
C36M Paulatuk 37.19 35 P 12 03 15.3
baz=284,SNR=70
DLBC Dease Lake 38.18 53 P **P** **12 03 26.0 +2.7**
DLBC IAmb IAmb 12 03 27.7
comp=Z,12nm,1.0s
YOJ Yonaguni jima 39.79 239 P **P** **12 03 37.2 +0.2**
EUNU Eureka 42.09 14 P **P** **12 03 56.1 +0.8**
GTA Gaotai 42.54 276⇑ P **P** **12 03 58.8 -0.8**
GTA pP pP 12 04 14.8 +0.9
GTA sP sP 12 04 23.3 +3.0
GTA PcP **PcP** **12 05 52.0 +0.8**
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,100nm,7.1s
GTA LR LR
comp=Z,150nm,17.8s
GTA LR LR
comp=Z,250nm,17.8s
GTA LR LR
comp=Z,200nm,17.4s
ZAA0 Zalesovo Array 42.77 303 P **P** **12 03 58.6 -2.5**
ZALV Zalesovo Beam 42.77 303 P **P** **12 03 59.0 -2.1**
comp=Z,2.7nm,0.4s,baz=58,slow=7.5,SNR=11
ZALV PcP **PcP** **12 05 51.6 +0.1**
comp=Z,4.7nm,0.7s,baz=46,slow=4.3,SNR=7.7
ZALV Zalesovo Beam 42.77 303 *i* P **P** **12 03 59.0 -2.1**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ENH Enshi 42.91 259 P **P** **12 04 01.8 -0.7**
ENH IAmb IAmb 12 04 03.2
comp=Z,19nm,0.6s
ENH **PcP** **12 05 53.1 +0.7**
YKA Yellowknife Ar 43.31 42 P **P** **12 04 06.2 +0.9**
comp=Z,12nm,0.9s,baz=298,slow=7.9,SNR=100
YKA PcP **PcP** **12 05 53.5 +0.3**
comp=Z,2.5nm,1.1s,baz=300,slow=3.0,SNR=4.4
YKA LR LR 12 23 21.0
comp=Z,102nm,20.6s,baz=0.0,slow=38
YKA Yellowknife Ar 43.31 42 P **P** **12 04 06.2 +0.9**
YKA 12 05 53.5
RES Resolute Bay 43.47 22 P **P** **12 04 07.0 +0.6**
RES pmax pmax
comp=Z,6.0nm,0.8s
RES Resolute Bay 43.47 22 P **P** **12 04 07.0 +0.6**
DGZ Jazzator, Alta 43.65 296*c i*P **P** **12 04 07.7 -0.7**
DGZ pmax pmax
comp=Z,20nm,0.9s
DGZ MLR MLR
comp=Z,148nm,21.0s
NOR Nord 45.66 359 *i* P **P** **12 04 23.6 -0.3**
NOR IAmb IAmb 12 04 25.0
comp=Z,5.7nm,0.7s
NOR Nord 45.66 359 *i* P **P** **12 04 23.5 -0.3**
NOR pmax pmax
comp=Z,6.0nm,0.7s
CD2 Chengdu 45.87 264 *e*P **P** **12 04 25.0 -1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
ZSN Zaisan 46.33 295 *e*P **P** **12 04 27.8 -1.9**
comp=Z,4.2nm,0.8s,baz=295
ZSN Zaisan 46.33 295 *e*P **P** **12 04 27.7 -1.9**
ZSN pmax pmax
comp=Z,4.0nm,0.8s
A04D Lummi Island 46.80 62 P 12 04 34.1
baz=306
WMQ Urumqi 46.93 289 *e*P **P** **12 04 34.0 -0.4**
WMQ pP sP 12 04 52.5 -2.7
WMQ pmax pmax
comp=Z,47nm,0.9s
WMQ pmax pmax
comp=Z,150nm,4.1s
WMQ LR LR
comp=Z,250nm,18.9s
WMQ LR LR
comp=Z,310nm,20.3s
WMQ LR LR
comp=Z,340nm,29.0s
WMQ Urumqi 46.93 289 P **P** **12 04 34.5 +0.1**
WMQ pmax pmax
comp=Z,32nm,0.6s
WMQ Urumqi 46.93 289 P **P** **12 04 34.5 +0.1**
KBS Kingsbay 46.98 352 *i* P **P** **12 04 35.3 +1.0**
KBS Kingsbay 46.98 352⇑ *e*P **P** **12 04 34.8 +0.6**
KBS pmax pmax
comp=Z,17nm,0.9s
KBS Kingsbay 46.98 352 P **P** **12 04 35.2 +1.0**
KBS IAmb IAmb 12 04 38.1
comp=Z,21nm,1.0s
SEM Semipalatinsk 47.06 301 *e*P **P** **12 04 32.5 -3.1**
baz=301
SEM Semipalatinsk 47.06 301 *e*P **P** **12 04 32.4 -3.1**
TULEG Thule 47.09 14 *i* P **P** **12 04 34.8 -0.3**
TULEG IAmb IAmb 12 04 36.4
comp=Z,14nm,0.9s
TULEG Thule 47.09 14 P **P** **12 04 35.1 0.0**
TULEG IAmb IAmb 12 04 36.6
comp=Z,18nm,1.0s
SPA0 Spitsbergen Ar 47.24 350 P **P** **12 04 35.9 -0.4**
SPA0 Spitsbergen Ar 47.24 350 *e*P **P** **12 04 35.9 -0.4**
D03D Eldon 47.30 64 P 12 04 38.1
baz=307
GYA Guiyang 47.39 258⇑ P **P** **12 04 38.7 +0.5**
GYA pP pP 12 04 54.8 +2.1
GYA pmax pmax
comp=Z,17nm,1.0s
B05A Bryant 47.40 63 P 12 04 39.1
baz=307
KURBB Kurchatov Arra 47.83 302 P **P** **12 04 39.5 -1.7**
comp=Z,8.5nm,0.5s,baz=58,slow=8.0,SNR=51
KURBB PcP **PcP** **12 06 08.9 -0.2**
comp=Z,5.2nm,0.7s,baz=56,slow=3.2,SNR=10.0
KURBB Kurchatov Arra 47.83 302 P **P** **12 04 39.2 -1.9**
MK31 Makanchi Array 48.13 296*d i*P **P** **12 04 41.8 -1.8**
MK31 Makanchi Array 48.13 296 P **P** **12 04 42.0 -1.6**
MK31 IAmb IAmb 12 04 42.5
comp=Z,6.7nm,0.7s
MKAR Makanchi Array 48.13 296 P **P** **12 04 41.6 -1.9**
comp=Z,6.7nm,0.5s,baz=58,slow=7.4,SNR=92
MKAR LR LR 12 26 15.1
comp=Z,174nm,19.4s,baz=38,slow=38
MKAR Makanchi Array 48.13 296 P **P** **12 04 41.7 -1.9**
E04D Cinebar 48.17 65 P 12 04 44.8
baz=308
MAKZ Makanchi 48.29 296 P **P** **12 04 43.0 -1.9**
MAKZ pmax pmax
comp=Z,14nm,1.0s
MAKZ Makanchi 48.29 296 P **P** **12 04 43.0 -1.9**
MAKZ IAmb IAmb 12 04 43.8
comp=Z,14nm,0.9s
NEEM North Greenlan 48.41 9 *i* P **P** **12 04 45.7 0.0**
NEEM IAmb IAmb 12 04 46.4
comp=Z,8.8nm,0.6s
LTY Liberty 48.77 63 P **P** **12 04 50.0 +1.4**
B08A Colville Reser 48.81 61 P **P** **12 04 50.5 +1.7**
B08A IAmb IAmb 12 04 50.9
comp=Z,9.6nm,0.8s
E07A Sunnyside 49.64 63 P **P** **12 04 56.4 +1.2**
E07A IAmb IAmb 12 05 08.6
comp=Z,11nm,1.2s
G05D Wamic, OR 49.67 65 P 12 04 56.7
baz=309
C09A Chrisman Ranch 49.72 61 P **P** **12 04 56.9 +1.2**
C09A IAmb IAmb 12 04 57.5
comp=Z,7.6nm,0.9s
HAWA Hanford 49.92 63 P **P** **12 04 58.5 +1.2**
I04A Tendick Farm, 49.98 67 P 12 04 58.7
baz=310
F07A Phinny Hill Vi 50.02 64 P **P** **12 05 00.3 +2.3**
F07A IAmb IAmb 12 05 00.8
comp=Z,10nm,0.6s
NEW Newport 50.03 60 P **P** **12 04 59.2 +1.1**
NEW pmax pmax
comp=Z,7.0nm,1.0s
NEW Newport 50.03 60 P **P** **12 04 59.2 +1.1**
NEW Newport 50.03 60 P 12 04 58.5
baz=309,SNR=5.8
I05D Terrebonne, OR 50.23 66 P 12 05 00.6
baz=310
KULLO Kullorsuaq 50.32 12 *i* P **P** **12 04 59.4 -0.5**
KULLO IAmb IAmb 12 05 01.1
comp=Z,26nm,0.8s
KULLO Kullorsuaq 50.32 12 *i* P **P** **12 04 59.3 -0.5**
KULLO pmax pmax
comp=Z,26nm,0.8s
L02E Cave Junction 50.36 70 P 12 05 02.1
baz=310
BVAR Borovoye Array 50.40 308 P **P** **12 04 58.6 -2.2**
comp=Z,4.1nm,0.5s,baz=257,slow=2.6,SNR=36
BVAR PcP **PcP** **12 06 18.2 -0.3**
comp=Z,3.6nm,0.7s,baz=114,slow=3.6,SNR=5.0
BVAR Borovoye Array 50.40 308 P **P** **12 04 58.6 -2.2**
BVAR 12 06 18.2
BRVK Borovoye 50.43 308*c i*P **P** **12 04 58.9 -2.1**
BRVK pmax pmax
comp=Z,12nm,1.0s
BRVK Borovoye 50.43 308 P **P** **12 04 59.3 -1.7**
BRVK IAmb IAmb 12 05 01.4
comp=Z,8.7nm,0.8s
BRVK **PcP** **12 06 18.4 -0.1**
J04D Umpqua Nationa 50.50 68 P 12 05 02.8
baz=310
DAG Danmarks Havn 50.52 360⇑ *i*P **P** **12 05 01.1 -0.3**
DAG IAmb IAmb 12 05 01.9
comp=Z,40nm,0.8s
DAG Danmarks Havn 50.52 360⇑ *i*P **P** **12 05 01.1 -0.3**
DAG pmax pmax
comp=Z,40nm,0.8s
E09A Wood Farm, Sta 50.59 62 P **P** **12 05 03.4 +1.1**
E09A IAmb IAmb 12 05 04.6
comp=Z,12nm,0.9s
KMI Kunming 50.72 260⇑ P **P** **12 05 05.0 +1.2**
KMI pmax pmax
comp=Z,10.0nm,0.6s
KMI LR LR
comp=Z,210nm,22.0s
KMI LR LR
comp=Z,120nm,18.9s
KMI LR LR
comp=Z,260nm,23.6s
PINE Pine Mountain 50.80 67 P **P** **12 05 05.6 +1.4**
G08A Pilot Rock 50.93 64 P **P** **12 05 05.6 +0.6**
J05D Fort Rock, OR 50.96 67 P 12 05 06.8
baz=310,SNR=7.0
L04D Klamath Falls 51.05 69 P 12 05 06.6
baz=311
YBH Yreka Blue Hor 51.14 70 P **P** **12 05 08.9 +2.3**
YBH pmax pmax
comp=Z,3.0nm,1.0s
YBH Yreka Blue Hor 51.14 70 P **P** **12 05 08.9 +2.3**
BRZS Berezniki 51.19 304 *e*P **P** **12 05 03.9 -2.9**
baz=304
BRZS Berezniki 51.19 304 *e*P **P** **12 05 03.9 -2.9**
WALA Waterton Lakes 51.19 57 P **P** **12 05 08.2 +1.2**
WALA IAmb IAmb 12 05 08.9
comp=Z,11nm,0.8s
TDK Taldyqorghan 51.37 296 *e*P **P** **12 05 06.3 -2.0**
comp=Z,25nm,1.0s,baz=296
TDK Taldyqorghan 51.37 296 *e*P **P** **12 05 06.2 -2.0**
TDK pmax pmax
comp=Z,25nm,1.0s
F10A Beach Ranch, E 51.43 62 P **P** **12 05 09.7 +1.0**
K05A Summer Lake 51.52 68 P **P** **12 05 11.1 +1.5**
K05A IAmb IAmb 12 05 37.7
comp=Z,9.9nm,1.2s
M04C Macdoel 51.60 69 P 12 05 11.3
baz=311
N02D Trinity Center 51.64 70 P 12 05 11.6
baz=311
JTMT Jette 51.84 59 P **P** **12 05 13.0 +1.2**
JTMT IAmb IAmb 12 05 14.1
comp=Z,15nm,0.9s
SHLS Shalkode 51.98 294 *e*P **P** **12 05 09.1 -3.8**
comp=Z,8.7nm,0.5s,baz=293
SHLS Shalkode 51.98 294 *e*P **P** **12 05 09.1 -3.8**
SHLS pmax pmax
comp=Z,9.0nm,0.5s
WDC Whiskeytown Da 51.99 71 P **P** **12 05 12.6 -0.3**
WDC pmax pmax
comp=Z,10.0nm,1.5s
WDC Whiskeytown Da 51.99 71 P **P** **12 05 12.6 -0.3**
UPNV Upernavik 52.07 13 *i* P **P** **12 05 12.6 -0.4**
UPNV IAmb IAmb 12 05 14.1
comp=Z,19nm,0.9s
BMO Blue Mountains 52.11 63 P **P** **12 05 15.3 +1.5**
BMO pmax pmax
comp=Z,3.0nm,0.7s
BMO Blue Mountains 52.11 63 P **P** **12 05 15.3 +1.5**
O02D Mt. Diablo Mer 52.12 71 P 12 05 15.1
baz=312
KPKS Kokpek 52.21 294 *e*P **P** **12 05 12.4 -2.3**
comp=Z,6.6nm,0.7s,baz=294
KPKS Kokpek 52.21 294 *e*P **P** **12 05 12.3 -2.3**
KPKS pmax pmax
comp=Z,7.0nm,0.7s
UZB Uzynbulak 52.23 294 *e*P **P** **12 05 12.8 -2.1**
baz=294
UZB Uzynbulak 52.23 294 *e*P **P** **12 05 12.7 -2.1**
MOD Modoc Plateau 52.39 68 P **P** **12 05 16.9 +0.9**
O03E Paynes Creek 52.60 70 P 12 05 18.3
baz=312
MSO Missoula 52.61 60 P **P** **12 05 18.5 +1.0**
MSO IAmb IAmb 12 05 30.8
comp=Z,15nm,1.4s
MSO Missoula 52.61 60 P 12 05 18.5
baz=311
PLID Pearl Lake 52.66 62 P **P** **12 05 19.2 +1.2**
PLID IAmb IAmb 12 05 20.5
comp=Z,7.4nm,0.8s
HAMF Hammerfest 52.76 343 *e*P **P** **12 05 18.6 +0.4**
LVZ Lovozero 52.78 337⇑ *e*P **P** **12 05 16.9 -1.4**
LVZ pmax pmax
comp=Z,25nm,1.4s
WVOR Wild Horse Val 52.97 66 P **P** **12 05 21.4 +1.2**
WVOR pmax pmax
comp=Z,6.0nm,1.3s
WVOR Wild Horse Val 52.97 66 P **P** **12 05 21.4 +1.2**
DBG Daneborg 53.01 0 *i* P **P** **12 05 18.9 -0.9**
DBG IAmb IAmb 12 05 20.1
comp=Z,23nm,1.0s
KUU Kurty 53.21 296 *e*P **P** **12 05 19.2 -2.7**
comp=Z,11nm,0.7s,baz=296
KUU Kurty 53.21 296 *e*P **P** **12 05 19.2 -2.7**
KUU pmax pmax
comp=Z,11nm,0.7s
ORV Oroville 53.27 71 P **P** **12 05 24.0 +1.6**
ORV pmax pmax
comp=Z,3.0nm,0.9s
ORV Oroville 53.27 71 P **P** **12 05 24.0 +1.6**
MDOK Medeo 53.31 295 *e*P **P** **12 05 20.8 -2.0**
baz=295
MDOK Medeo 53.31 295 *e*P **P** **12 05 20.8 -2.0**
AAA Alma-Ata 53.35 295 *e*P **P** **12 05 21.8 -1.2**
comp=Z,15nm,0.7s,baz=295
AAA Alma-Ata 53.35 295 *e*P **P** **12 05 21.7 -1.2**
AAA pmax pmax
comp=Z,15nm,0.7s
ARA0 ARCESS Array S 53.38 342 *e*P **P** **12 05 22.1 -0.5**
ARCES ARCESS Array B 53.38 342 P **P** **12 05 21.1 -1.5**
comp=Z,5.2nm,0.8s,baz=42,slow=5.2,SNR=13
ARCES PcP **PcP** **12 06 29.6 +0.3**
comp=Z,3.5nm,0.5s,baz=34,slow=4.4,SNR=13
ARCES LR LR 12 32 59.7
comp=Z,92nm,19.0s,baz=15,slow=42
ARCES ARCESS Array B 53.38 342 P **P** **12 05 21.2 -1.5**
ARCES 12 06 29.6
ARU Arti 53.43 317 P **P** **12 05 21.1 -2.2**
comp=Z,7.2nm,0.4s,baz=22,slow=6.0,SNR=19
ARU Arti 53.43 317*d i*P **P** **12 05 22.0 -1.2**
ARU 12 07 21.4
ARU S **S** **12 12 52.0 +0.9**
ARU SS **SS** **12 16 27.4 -3.6**
ARU pmax pmax
comp=Z,11nm,0.5s
ARU Arti 53.43 317 P **P** **12 05 21.9 -1.3**
TNSS Tian-Shan 53.45 295 *e*P **P** **12 05 22.0 -2.2**
baz=295
TNSS Tian-Shan 53.45 295 *e*P **P** **12 05 21.9 -2.2**
FCC Fort Churchill 53.62 38 P **P** **12 05 24.9 +0.3**
FCC pmax pmax
comp=Z,20nm,0.7s
FCC Fort Churchill 53.62 38 P **P** **12 05 24.9 +0.3**
BTLS Baital 53.69 299 *e*P **P** **12 05 22.7 -2.7**
baz=299
BTLS Baital 53.69 299 *e*P **P** **12 05 22.6 -2.7**
BEKR Beckworth 53.71 70 P **P** **12 05 28.0 +2.2**
HRY Holter Researc 53.78 58 P **P** **12 05 27.9 +1.8**
MFID Camas Ranch 53.85 64 P **P** **12 05 27.7 +1.0**
EGMT Eagleton 53.97 56 P **P** **12 05 28.4 +1.0**
EGMT Eagleton 53.97 56 P 12 05 27.7
baz=312
AFDM Forest Hills D 53.98 71 P **P** **12 05 30.0 +2.4**
SUMG Summit 54.09 7 *i* P **P** **12 05 28.2 -0.1**
SUMG IAmb IAmb 12 05 31.6
comp=Z,14nm,0.9s
SUMG Summit 54.09 7 P **P** **12 05 28.6 +0.3**
SUMG pmax pmax
comp=Z,32nm,1.0s
SUMG Summit 54.09 7 P **P** **12 05 28.6 +0.3**
KTK1 Kautokeino 54.25 342 *e*P **P** **12 05 28.2 -0.9**
TKM2 Tokmak 2 54.27 296 P **P** **12 05 28.6 -1.3**
SNR=12
JETT Jettan, Norway 54.27 344 *e*P **P** **12 05 29.6 +0.4**
DLMT Dillon 54.28 60 P **P** **12 05 31.2 +1.3**
LSA Lhasa 54.35 273 P **P** **12 05 30.5 -0.4**
LSA pmax pmax
comp=Z,6.0nm,0.7s
LSA Lhasa 54.35 273 P **P** **12 05 30.5 -0.4**
LSA IAmb IAmb 12 05 33.8
comp=Z,5.7nm,0.7s
ULHL Ulahol 54.37 295 P **P** **12 05 29.8 -0.8**
SNR=8.7
PAHR Pah Rah Range 54.37 69 P **P** **12 05 32.1 +1.5**
PAHR IAmb IAmb 12 05 33.9
comp=Z,9.9nm,1.2s
RUBR Rubicon Trail 54.38 71 P **P** **12 05 32.7 +2.0**
RUBR IAmb IAmb 12 05 37.5
comp=Z,7.5nm,0.8s
SGDS Sogindy 54.43 297 *e*P **P** **12 05 29.4 -1.5**
comp=Z,4.4nm,0.7s,baz=297
SGDS Sogindy 54.43 297 *e*P **P** **12 05 29.3 -1.5**
SGDS pmax pmax
comp=Z,4.0nm,0.7s
PRGR Permogore 54.50 328 *e*P **P** **12 05 29.5 -1.4**
PRGR *e**PP **pP** **12 05 44.7 -1.0**
PRGR *e* 12 06 29.8
PRGR pmax pmax
comp=Z,13nm,0.8s
VCNR Virginia City 54.50 70 P **P** **12 05 33.1 +1.5**
MCMT McKenzie Canyo 54.51 61 P **P** **12 05 32.3 +0.7**
HLID Hailey 54.52 63 P **P** **12 05 32.9 +1.3**
HLID **PcP** **12 06 35.0 +0.7**
BCYI Bear Canyon 54.56 62 P **P** **12 05 32.6 +0.7**
USP Ospenovka 54.63 297 P **P** **12 05 31.2 -1.1**
SNR=12
BOZ Bozeman (W) 54.63 59 P **P** **12 05 33.7 +1.3**
BOZ pmax pmax
comp=Z,6.0nm,0.7s
BOZ Bozeman (W) 54.63 59 P **P** **12 05 33.6 +1.3**
BOZ IAmb IAmb 12 05 34.6
comp=Z,6.0nm,0.7s
BOZ Bozeman (W) 54.63 59 P 12 05 33.2
baz=312,SNR=11
PNTR Pine Nut 54.67 70 P **P** **12 05 35.0 +2.1**
PNTR IAmb IAmb 12 05 47.0
comp=Z,9.0nm,0.8s
CHMS Chumysh 54.67 296 P **P** **12 05 31.7 -0.8**
SNR=5.4
KBK Karagaybulak 54.80 296 P **P** **12 05 33.0 -0.6**
SNR=6.3
CMB Columbia Colle 54.94 72 P **P** **12 05 37.5 +2.9**
CMB pmax pmax
comp=Z,3.0nm,0.9s
CMB Columbia Colle 54.94 72 P **P** **12 05 37.5 +2.9**
YERR Yerington 54.95 70 P **P** **12 05 36.7 +1.9**
AAK Ala-Archa 55.05 296 P **P** **12 05 34.4 -1.1**
SNR=21
AAK Ala-Archa 55.05 296*c i*P **P** **12 05 34.1 -1.4**
AAK pmax pmax
comp=Z,63nm,1.0s
AAK Ala-Archa 55.05 296 P **P** **12 05 34.4 -1.1**
AAK IAmb IAmb 12 05 35.7
comp=Z,23nm,1.1s
WAKR Walker 55.16 71 P **P** **12 05 38.8 +2.4**
WAKR IAmb IAmb 12 06 03.9
comp=Z,9.7nm,1.2s
QLMT Earthquake Lak 55.25 60 P **P** **12 05 38.8 +1.8**
UCH Uchtor 55.32 296 P **P** **12 05 37.0 -0.8**
SNR=6.4
YHL Hebgen Lake 55.37 60 P **P** **12 05 39.5 +1.7**
YHB Horse Butte 55.43 60 P **P** **12 05 39.8 +1.6**
YHB IAmb IAmb 12 05 40.7
comp=Z,8.0nm,0.7s
EKS2 Erkin-Say 55.43 297 P **P** **12 05 37.0 -1.1**
SNR=18
KIRV Kirov 55.44 323 P **P** **12 05 37.5 -0.3**
comp=Z,14nm,0.7s,baz=139,slow=5.5,SNR=5.0
KIRV Kirov 55.44 323‖ *e*P **P** **12 05 37.3 -0.4**
KVN Kaiserville 55.55 69 P **P** **12 05 40.7 +1.6**
KVN pmax pmax
comp=Z,6.0nm,0.8s
KVN Kaiserville 55.55 69 P **P** **12 05 40.7 +1.6**
YHH Holmes Hill 55.58 60 P **P** **12 05 40.8 +1.4**
YHH IAmb IAmb 12 05 41.8
comp=Z,6.4nm,0.8s
RYN Ryan 55.60 70 P **P** **12 05 41.3 +1.8**
YMR Madison River 55.60 60 P **P** **12 05 40.8 +1.3**
YMR IAmb IAmb 12 05 42.1
comp=Z,8.3nm,0.8s
YNR Norris Junctio 55.72 60 P **P** **12 05 39.5 -0.9**
AML Almayashu 55.83 296 P **P** **12 05 40.8 -0.6**
SNR=13
NVAR Mina Array Bea 55.86 70 P **P** **12 05 43.5 +2.1**
comp=Z,3.6nm,0.8s,baz=302,slow=6.9,SNR=30
LHV Little Huntoon 55.87 70 P **P** **12 05 43.7 +2.6**
LHV IAmb IAmb 12 06 02.5
comp=Z,8.8nm,1.0s
YNE Yellowstone No 55.87 59 P **P** **12 05 42.8 +1.4**
YNE IAmb IAmb 12 05 43.8
comp=Z,8.1nm,0.8s
NV11 Mina Array Sit 55.94 70 P **P** **12 05 44.1 +2.2**
YPP Pitchstone Pla 55.96 60 P **P** **12 05 44.2 +2.1**
LKWY Lake 55.97 60 P **P** **12 05 44.9 +2.8**
LKWY pmax pmax
comp=Z,7.0nm,0.8s
LKWY Lake 55.97 60 P **P** **12 05 44.9 +2.8**
LKWY IAmb IAmb 12 05 46.0
comp=Z,7.1nm,0.8s
YMP Mirror Lake Pl 55.98 59 P **P** **12 05 43.9 +1.6**
YMP IAmb IAmb 12 05 45.1
comp=Z,8.0nm,0.9s
ELK Elko 55.98 66 P **P** **12 05 44.1 +1.8**
ELK Elko 55.98 66 P **P** **12 05 44.1 +1.8**
H17A Grant Village 55.99 60 P **P** **12 05 45.4 +3.1**
H17A IAmb IAmb 12 05 46.3
comp=Z,11nm,1.0s
H17A Grant Village 55.99 60 P 12 05 44.4
baz=313,SNR=10
JNW Jan Mayen West 56.02 355 *e*P **P** **12 05 42.0 +0.2**
FLWY Flagg Ranch 56.14 60 P **P** **12 05 46.0 +2.7**
FLWY IAmb IAmb 12 05 46.7
comp=Z,8.9nm,0.9s

RLMT **Red Lodge** 56.17 58 P P 12 05 45.4 +1.9
RLMT IAmb IAmb 12 05 46.4
comp=Z,13nm,0.8s
RLMT **Red Lodge** 56.18 58 P 12 05 44.8
baz=314,SNR=12
KSH **Kashi** 56.38 293 P P 12 05 47.4 +2.5
KSH pP sP 12 06 08.3 +2.3
KSH pmax pmax
comp=Z,8.0nm,1.1s
KSH pmax pmax
comp=Z,130nm,4.7s
DGMT **Dagmar** 56.40 53 P P 12 05 45.3 +0.4
DGMT IAmb IAmb 12 05 46.9
comp=Z,15nm,1.1s
DGMT **Dagmar** 56.40 53 P 12 05 45.6
baz=314
LOHW **Long Hollow** 56.52 61 P P 12 05 48.0 +2.0
SNOW **Snow King Moun** 56.54 61 P P 12 05 48.6 +2.4
REDW **Red Top Meadow** 56.56 61 P P 12 05 48.9 +2.6
STEI **Steigen** 56.58 345 eP P 12 05 45.9 +0.1
HVU **Hansel Valley** 56.62 63 P P 12 05 48.7 +2.0
HVU pmax pmax
comp=Z,7.0nm,1.0s
HVU **Hansel Valley** 56.62 63 P P 12 05 48.7 +2.0
LAO **LASA Array** 56.64 55 P P 12 05 47.7 +1.1
LAO IAmb IAmb 12 05 49.3
comp=Z,17nm,0.9s
LAO **LASA Array** 56.64 55 P 12 05 47.7
baz=314,SNR=11
LOF **Lofoten** 56.66 346 eP P 12 05 46.1 -0.2
TPH **Tonopah** 56.72 69 P P 12 05 49.1 +1.6
TPH pmax pmax
comp=Z,31nm,0.8s
TPH **Tonopah** 56.72 69 P P 12 05 49.0 +1.6
PAYA **Payao** 56.83 258 P P 12 05 49.8 +1.6
AHID **Auburn Hatcher** 56.84 62 P P 12 05 50.2 +1.9
AHID IAmb IAmb 12 05 51.0
comp=Z,15nm,1.1s
SCO **Scoresbysund** 56.84 1 i P P 12 05 48.0 +0.3
SCO IAmb IAmb 12 05 48.7
comp=Z,4.4nm,0.7s
SCO **Scoresbysund** 56.84 1 i P P 12 05 47.9 +0.3
SCO pmax pmax
comp=Z,4.0nm,0.7s
KK31 **Karatay Array** 56.87 299 i P P 12 05 46.6 -1.7
KK31 **Karatay Array** 56.87 299 P P 12 05 46.4 -1.8
KK31 IAmb IAmb 12 05 47.9
comp=Z,10nm,0.9s
KKAR **Karatay Array** 56.87 299 P P 12 05 46.2 -2.1
KKAR pmax pmax
comp=Z,10.0nm,0.9s
KKAR **Karatay Array** 56.87 299 P P 12 05 46.2 -2.1
KKAR IAmb IAmb 12 05 47.9
comp=Z,10nm,0.9s
SHL **Shillong** 56.92 269 P P 12 05 47.8 -1.2
SHL pmax pmax
comp=Z,11nm,0.5s
SHL **Shillong** 56.92 269 P P 12 05 47.8 -1.2
SHL IAmb IAmb 12 05 49.0
comp=Z,11nm,0.5s
KLMR **Klimovskoe** 57.01 330 eP P 12 05 46.5 -2.4
KLMR pmax pmax
comp=Z,5.0nm,0.5s
KLMR **Klimovskoe** 57.01 330 eP P 12 05 46.6 -2.4
KLMR AMP 12 05 49.4
comp=Z,5.0nm,0.5s
BGU **Big Grassy Mou** 57.07 64 P P 12 05 51.4 +1.5
FAUS **Fauske** 57.07 345 eP P 12 05 49.0 -0.2
SPUT **South Promonto** 57.12 64 P P 12 05 52.1 +1.8
SPUT IAmb IAmb 12 05 53.2
comp=Z,8.0nm,0.9s
CWC **Cottonwood Cre** 57.37 71 P 12 05 53.3
baz=315
GRAC **Grapevine Rang** 57.39 71 P 12 05 53.5
baz=315
HWUT **Hardware Ranch** 57.39 63 P P 12 05 54.3 +2.1
HWUT IAmb IAmb 12 05 55.2
comp=Z,9.5nm,0.8s
ICESG **Greenland Ices** 57.40 8 i P P 12 05 51.9 -0.1
ICESG IAmb IAmb 12 05 52.5
comp=Z,12nm,0.6s
R11A **Troy Canyon, C** 57.45 68 P P 12 05 53.4 +0.7
R11A **Troy Canyon, C** 57.45 68 P 12 05 54.0
baz=315
PKM **Mcpherson Peak** 57.46 74 P 12 05 53.8
baz=315
LAMP **Lampang** 57.62 257 P P 12 05 55.9 +2.1
JOF **Joensuu** 57.64 335 P P 12 05 51.3 -2.0
JOF pmax pmax
comp=Z,28nm,1.4s
CM34 **Chiang Mai Arr** 57.65 258 P P 12 05 54.0 0.0
FRB **Frobisher Bay** 57.65 23 P P 12 05 52.7 -0.6
FRB pmax pmax
comp=Z,18nm,1.0s
BW06 **Boulder Array** 57.65 61 P P 12 05 55.7 +1.7
BW06 IAmb IAmb 12 05 56.6
comp=Z,11nm,0.8s
BW06 **Boulder Array** 57.65 61 P 12 05 55.2
baz=315,SNR=18
PD31 **Pinedale Array** 57.65 61 P P 12 05 55.6 +1.5
PD31 IAmb IAmb 12 05 56.6
comp=Z,10nm,0.8s
PDAR **Pinedale Array** 57.65 61 P P 12 05 55.6 +1.5
comp=Z,10nm,0.8s,baz=317,slow=2.6,SNR=82
ISA **Isabella, Lake** 57.69 72 P 12 05 55.1
baz=315
NBB30 **Finnes** 57.69 345 eP P 12 05 53.7 +0.1
DUG **Dugway, Tooele** 57.70 65 P P 12 05 54.8 +0.5
DUG pmax pmax
comp=Z,9.0nm,1.1s
DUG **Dugway, Tooele** 57.70 65 P P 12 05 54.8 +0.5
DUG IAmb IAmb 12 05 57.2
comp=Z,8.8nm,1.1s
DUG **Dugway, Tooele** 57.70 65 P 12 05 55.9
baz=315
CM35 **Chiang Mai Arr** 57.78 258 P P 12 05 55.0 +0.1
IUG **Iuzhnay** 57.79 298 eP P 12 05 53.1 -1.8
comp=Z,6.3nm,0.6s,baz=298
IUG **Iuzhnay** 57.79 298 eP P 12 05 53.0 -1.8
IUG pmax pmax
comp=Z,6.0nm,0.6s
CM33 **Chiang Mai Arr** 57.79 258 P P 12 05 55.0 0.0
CMMT **Chiang Mai** 57.80 258 P P 12 05 55.0 -0.1
CHTO **Chiang Mai** 57.80 258 P P 12 05 55.1 0.0
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO **Chiang Mai** 57.80 258 P P 12 05 55.1 0.0
CHTO IAmb IAmb 12 05 57.2
comp=Z,11nm,0.8s
AB31 **Akbulak array** 57.81 310 P P 12 05 52.3 -2.4
ABKAR **Akbulak array** 57.81 310 P P 12 05 52.9 -1.8
ABKAR IAmb IAmb 12 05 56.4
comp=Z,6.0nm,0.8s
DLV **T Lat** 57.83 245 P P 12 05 55.5 -0.1
AKTO **Aktyubinsk** 57.84 312 P P 12 05 53.3 -1.7
comp=Z,4.5nm,0.5s,baz=74,slow=9.4,SNR=10
AKTO PcP PcP 12 06 46.9 0.0
comp=Z,8.3nm,0.8s,baz=50,slow=1.0,SNR=8.3
AKTO **Aktyubinsk** 57.84 312 P P 12 05 53.3 -1.7
AKTO 12 06 46.9
CTU **Camp Tracy** 57.93 64 P P 12 05 57.4 +1.4
CTU IAmb IAmb 12 05 58.6
comp=Z,9.7nm,1.2s
CM32 **Chiang Mai Arr** 57.98 258 P P 12 06 06.0 +10
FURC **Furnace Creek,** 58.05 71 P 12 05 57.9
baz=315,SNR=9.0
TPNV **Topopah Spring** 58.06 70 P P 12 05 58.4 +1.5
TPNV pmax pmax
comp=Z,9.0nm,1.2s
TPNV **Topopah Spring** 58.06 70 P P 12 05 58.4 +1.5
TPNV IAmb IAmb 12 06 24.6
comp=Z,8.6nm,1.1s
CM09 **Chiang Mai Arr** 58.06 258 P P 12 05 58.0 +1.1
TPNV **Topopah Spring** 58.06 70 P 12 05 58.5
baz=315,SNR=7.9
CM31 **Chiang Mai Arr** 58.08 258 P P 12 05 59.1 +2.1
CM31 **Chiang Mai Arr** 58.08 258 P P 12 05 56.6 -0.4
CM31 IAmb IAmb 12 05 59.4
comp=Z,9.6nm,0.9s
CM31 PcP PcP 12 06 48.8 +0.5
CMAR **Chiang Mai Arr** 58.08 258 P P 12 05 57.7 +0.7
comp=Z,6.9nm,0.9s,baz=22,slow=7.0,SNR=37
CMAR PcP PcP 12 06 49.3 +1.0
comp=Z,5.4nm,0.8s,baz=358,slow=2.7,SNR=12
CMAR LR LR 12 35 48.7
comp=Z,63nm,18.1s,baz=85,slow=41
CMAR **Chiang Mai Arr** 58.08 258 P P 12 05 57.7 +0.7
CMAR 12 06 49.3
CM15 **Chiang Mai Arr** 58.09 258 P P 12 05 58.0 +0.9
CM02 **Chiang Mai Arr** 58.09 258 P P 12 05 58.6 +1.5
CM01 **Chiang Mai Arr** 58.10 258 P P 12 05 58.8 +1.7
CM04 **Chiang Mai Arr** 58.10 258 P P 12 05 58.5 +1.3
CM05 **Chiang Mai Arr** 58.12 258 P P 12 05 58.9 +1.5
SFJD **Kangerlussuaq** 58.15 14 i P P 12 05 56.5 -0.4
SFJD IAmb IAmb 12 05 57.1
comp=Z,5.2nm,0.6s
SFJD **Kangerlussuaq** 58.15 14 P P 12 05 56.4 -0.4
SFJD pmax pmax
comp=Z,19nm,1.1s
SFJD **Kangerlussuaq** 58.15 14 P P 12 05 56.4 -0.4
SFJD IAmb IAmb 12 05 57.2
comp=Z,18nm,1.1s
KONS **Konsvik** 58.23 345 eP P 12 05 57.6 +0.3
NLU **North Lily Min** 58.27 65 P P 12 06 00.5 +2.1
NLU IAmb IAmb 12 06 01.2
comp=Z,6.1nm,0.8s
LRMC **Laurel Mtn Rad** 58.28 72 P 12 05 59.2
baz=316
PSUT **Pine Spring** 58.29 67 P P 12 06 00.4 +1.8
STOK **Stokkvaagen** 58.40 345 eP P 12 05 59.0 +0.5
PRN **Pahroc Range** 58.41 69 P P 12 06 01.3 +2.0
PRN IAmb IAmb 12 06 13.6
comp=Z,9.9nm,0.9s
MPU **Maple Canyon** 58.47 64 P P 12 06 01.7 +1.9
MPU IAmb IAmb 12 06 02.6
comp=Z,6.7nm,0.9s
EDW2 **Edwards Air Fo** 58.52 73 P 12 06 01.2
baz=316
SWI **Sorong** 58.77 214 P P 12 06 02.8 +1.0
SWI pmax pmax
comp=Z,21nm,1.0s
SWI **Sorong** 58.77 214 P P 12 05 59.9 -1.9
comp=Z,22nm,1.0s
SWI **Sorong** 58.77 214 P P 12 06 02.4 +0.6
comp=Z,22nm,1.0s
SIJI **Sorong** 58.77 214 P P 12 06 02.3 +0.5
comp=Z,13nm,0.8s,baz=346,slow=6.2,SNR=7.9
SIJI LR LR 12 26 27.6
comp=Z,51nm,21.9s,baz=191,slow=31
SHOC **Shoshone, Teco** 58.79 71 P 12 06 03.4
baz=316
MHMT **Maesarieng** 58.89 259 P P 12 06 04.0 +1.3
comp=Z,0.1nmcomp=Z,20nm,0.9s
ULM **Lac du Bonnet** 58.96 47 P P 12 06 03.6 +0.9
comp=Z,9.9nm,0.6s,baz=311,slow=6.8,SNR=23
ULM LR LR 12 32 13.8
comp=Z,104nm,21.1s,baz=328,slow=37
ULM **Lac du Bonnet** 58.96 47 c i P P 12 06 03.0 +0.2
ULM **Lac du Bonnet** 58.96 47 P P 12 06 03.4 +0.7
ULM IAmb IAmb 12 06 04.5
comp=Z,12nm,0.8s
SHPR **Sheep Range** 58.99 69 P P 12 06 05.6 +2.3
MDND **Maddock** 59.01 51 P P 12 06 04.7 +1.5
MDND **Maddock** 59.02 51 P 12 06 03.8
baz=316
TCRU **Three Creeks R** 59.02 66 P P 12 06 05.6 +2.0
TCRU IAmb IAmb 12 06 18.2
comp=Z,9.3nm,1.4s
TCRU PcP 12 06 54.5 +2.4
VALR **Valaam** 59.05 334 i P P 12 06 02.5 -0.7
VALR pmax pmax
comp=Z,41nm,1.0s
BFSC **Mount Baldy Ra** 59.17 73 P 12 06 06.4
baz=316
RDMU **Red Mountain** 59.19 62 P P 12 06 06.8 +2.0
RDMU IAmb IAmb 12 06 07.7
comp=Z,14nm,0.8s
TMUT **Trail Mountain** 59.21 65 P P 12 06 06.0 +0.9
TMUT IAmb IAmb 12 06 07.7
comp=Z,7.2nm,0.7s
DY2G **Dye2** 59.23 12 i P P 12 06 04.1 -0.6
MSU **Marysvale** 59.23 66 P P 12 06 07.1 +2.0
MSU 12 06 54.8
MSU **Marysvale** 59.23 66 P P 12 06 07.1 +2.0
MSU PcP 12 06 54.8 +1.9
CCUT **Cedar City** 59.26 67 P P 12 06 06.9 +1.6
TUQ **Turquoise Moun** 59.32 71 P 12 06 06.8
baz=316,SNR=5.4
K22A **Casper** 59.32 59 P P 12 06 06.5 +0.9
K22A IAmb IAmb 12 06 07.9
comp=Z,7.2nm,0.8s
K22A **Casper** 59.32 59 P 12 06 06.6
baz=316
P17A **Butcher Ranch,** 59.34 64 P P 12 06 07.1 +1.4
P17A IAmb IAmb 12 06 36.0
comp=Z,13nm,1.4s
SZCU **Shurtz Canyon** 59.38 67 P P 12 06 07.5 +1.3
E28A **Huff** 59.42 52 P P 12 06 07.6 +1.6
Q16A **Castle Valley** 59.50 65 P P 12 06 08.4 +1.5
Q16A IAmb IAmb 12 06 09.7
comp=Z,6.6nm,0.9s
HEC **Hector,Ludlow** 59.52 72 P 12 06 07.8
baz=316
RSSD **Black Hills** 59.54 56 P P 12 06 08.3 +1.2
RSSD pmax pmax
comp=Z,36nm,0.7s
RSSD **Black Hills** 59.54 56 P P 12 06 08.3 +1.2
RSSD **Black Hills** 59.54 56 P 12 06 08.4
baz=316
MTPU **Mount Pierson** 59.56 66 P P 12 06 10.2 +2.6
RWWY **Rawlins** 59.65 60 P P 12 06 08.1 +0.1
RWWY IAmb IAmb 12 06 27.7
comp=Z,8.2nm,1.0s
LCMT **Little Creek M** 59.71 68 P P 12 06 10.1 +1.8
LCMT IAmb IAmb 12 06 11.3
comp=Z,7.0nm,1.0s
SRU **San Rafael Swe** 59.71 64 P P 12 06 10.0 +1.6
SRU pmax pmax
comp=Z,12nm,0.8s
SRU **San Rafael Swe** 59.71 64 P P 12 06 10.0 +1.6
SRU IAmb IAmb 12 06 11.0
comp=Z,12nm,0.8s
GAR **Garm** 59.86 296 P P 12 06 08.2 -1.1
UMPA **Umpang Tak** 59.89 256 P P 12 06 12.5 +2.9
MURC **Murrieta** 59.90 73 P 12 06 10.4
baz=316
PKCU **Pink Cliffs** 59.92 67 P P 12 06 12.2 +2.3
PKCU IAmb IAmb 12 06 13.2
comp=Z,6.4nm,0.9s
GMRC **Granite Mounta** 59.93 71 P 12 06 10.8
baz=316
KNB **Kanab** 59.94 67 P P 12 06 12.2 +2.2
KNB IAmb IAmb 12 06 23.9
comp=Z,7.4nm,1.0s
KNB PcP 12 06 56.7 +1.0
FIA1 **FINESS Array S** 60.20 336 P P 12 06 10.1 -1.0
FINES **FINESS Array B** 60.20 336 P P 12 06 10.4 -0.6
comp=Z,8.7nm,0.5s,baz=37,slow=8.0,SNR=52
FINES LR LR 12 35 11.5
comp=Z,129nm,18.6s,baz=44,slow=39
FINES **FINESS Array B** 60.20 336 P P 12 06 10.5 -0.6
O20A **White River Ci** 60.21 62 P P 12 06 13.1 +1.3
O20A IAmb IAmb 12 06 14.2
comp=Z,7.5nm,0.9s
O20A **White River Ci** 60.21 62 P 12 06 12.8
baz=316,SNR=5.9
NSS **Namsos** 60.24 345 eP P 12 06 11.1 -0.2
BELC **Belle Mtn. Jos** 60.30 72 P 12 06 13.2
baz=316
PFO **Pinyon Flats O** 60.32 73 ⅄ eP P 12 06 13.4 +0.9
PFO pmax pmax
comp=Z,18nm,2.5s
PFO **Pinyon Flats O** 60.32 73 P P 12 06 14.1 +1.6
PFO **Pinyon Flats O** 60.32 73 P 12 06 13.7
baz=316
AGMN **Agassiz Nation** 60.40 48 P P 12 06 13.3 +0.6
AGMN IAmb IAmb 12 06 14.3
comp=Z,14nm,0.8s
AGMN **Agassiz Nation** 60.40 48 P 12 06 13.3
baz=318,SNR=7.6
GTOI **Gorontalo** 60.52 224 P P 12 06 12.5 -1.4
comp=Z,7.9nm,0.8s
GTOI **Gorontalo** 60.52 224 P P 12 06 13.5 -0.4
comp=Z,7.9nm,0.8s
IRM **Iron Mountain** 60.68 71 P 12 06 16.1
baz=317
D32A **Dogwood Acres,** 60.73 50 P P 12 06 16.1 +1.1
CHGR **Chuyangaron** 60.74 296 P P 12 06 15.9 +0.7
CHGR PcP 12 06 58.8 0.0
BELG **Belogornoye** 60.76 319 P P 12 06 14.2 -0.8
comp=Z,24nm,0.7s,baz=356,slow=1.6,SNR=15
BELG **Belogornoye** 60.76 319 c i P P 12 06 13.8 -1.2
BELG pmax pmax
comp=Z,5.0nm,0.9s
BELG MLR MLR
comp=Z,29nm,16.0s
MONP2 **Monument Peak** 60.86 73 P 12 06 17.6
baz=317
BC3 **Big Chuckawall** 60.87 72 P 12 06 17.5
baz=317
N23A **Red Feather La** 60.88 60 P 12 06 17.7
baz=317,SNR=13
MRSI **Marisa** 61.12 225 P P 12 06 16.6 -1.3
comp=Z,38nm,1.0s
MRSI **Marisa** 61.12 225 P P 12 06 18.2 +0.3
comp=Z,38nm,1.0s
PDMCI **Parker Dam,Lak** 61.15 71 P 12 06 19.7
baz=317
IKP **In-Ko-Pah, Jac** 61.21 73 P 12 06 19.8
baz=317
B35A **Bob, Littlefor** 61.31 47 P P 12 06 19.3 +0.5
B35A IAmb IAmb 12 06 20.8
comp=Z,14nm,0.9s
SMCO **Snowmass** 61.58 62 P P 12 06 22.9 +1.5
SMCO IAmb IAmb 12 06 23.7
comp=Z,6.9nm,0.8s
SANI **Sanana** 61.77 219 P P 12 06 21.5 -0.8
comp=Z,27nm,0.9s
SANI **Sanana** 61.77 219 P P 12 06 22.3 0.0
comp=Z,27nm,0.9s
WUAZ **Wupatki** 61.83 68 P P 12 06 24.2 +1.5
WUAZ IAmb IAmb 12 06 53.5
comp=Z,12nm,1.4s
WUAZ **Wupatki** 61.83 68 P 12 06 23.5
baz=317,SNR=5.9
ISCO **Idaho Springs** 61.85 61 P P 12 06 24.4 +1.4
ISCO pmax pmax
comp=Z,11nm,1.0s
ISCO **Idaho Springs** 61.85 61 P P 12 06 24.4 +1.4
ISCO IAmb IAmb 12 06 25.9
comp=Z,11nm,0.9s
ISCO **Idaho Springs** 61.85 61 P 12 06 24.8
baz=317,SNR=15
F33A **5 Mile Ranch,** 62.03 50 P P 12 06 24.5 +0.7
NIL **Nilore** 62.08 290 P P 12 06 23.7 -0.6
NIL pmax pmax
comp=Z,27nm,0.7s
NIL **Nilore** 62.08 290 P P 12 06 23.6 -0.6
LUWI **Luwuk** 62.14 223 P P 12 06 23.7 -1.0
LUWI **Luwuk** 62.14 223 P P 12 06 23.7 -1.0
comp=Z,21nm,0.7s
LUWI **Luwuk** 62.14 223 P P 12 06 24.1 -0.7
comp=Z,21nm,0.7s
MVCO **Mesa Verde** 62.19 64 P P 12 06 26.7 +1.5
MVCO IAmb IAmb 12 06 27.7
comp=Z,5.5nm,0.7s
MVCO **Mesa Verde** 62.19 64 P 12 06 26.5
baz=317
APSI **Ampana** 62.49 224 P P 12 06 25.1 -2.0
comp=Z,22nm,0.9s
APSI **Ampana** 62.49 224 P P 12 06 27.6 +0.5
comp=Z,22nm,0.9s
OBN **Obninsk** 62.57 327 ⅄ eP P 12 06 26.4 -0.8
OBN pmax pmax
comp=Z,15nm,0.5s
OBN MLR MLR
comp=Z,163nm,18.0s
EYMN **Ely** 62.60 46 P P 12 06 28.1 +0.5
EYMN **Ely** 62.60 46 P 12 06 27.7
baz=320,SNR=6.0
VSU **Vasula** 62.62 334 ⅄ eP P 12 06 26.8 -0.7
VSU pmax pmax
comp=Z,36nm,0.9s
BNDI **Bandanaira** 62.65 214 P P 12 06 28.1 0.0
comp=Z,46nm,0.6s
S22A **4UR Ranch, Cre** 62.70 63 P 12 06 29.8
baz=318,SNR=13
Q24A **Divide** 62.71 61 P 12 06 29.3
baz=318
DOMB **Dombas** 63.04 345 eP P 12 06 29.9 -0.4
AKN **Aaknes** 63.22 346 eP P 12 06 31.6 +0.2
K31A **O'Neill** 63.26 54 P P 12 06 32.7 +0.7
K31A IAmb IAmb 12 06 33.8
comp=Z,22nm,1.0s
F36A **Milaca** 63.29 49 P P 12 06 32.4 +0.3
ECSD **EROS Data Cent** 63.46 52 P P 12 06 33.8 +0.5
ECSD IAmb IAmb 12 06 34.8
comp=Z,12nm,0.9s
ECSD **EROS Data Cent** 63.46 52 P 12 06 33.6
baz=319,SNR=10
NC405 **NORSAR Array S** 63.48 343 P P 12 06 32.8 -0.4
NC405 IAmb IAmb 12 06 40.9
comp=Z,26nm,1.2s
NC204 **NORSAR Array S** 63.49 344 P P 12 06 32.6 -0.7
E38A **The Farm, Brul** 63.60 47 P P 12 06 34.7 +0.5
NB201 **NORSAR Array S** 63.61 344 P P 12 06 33.2 -0.8
NB2 **NORSAR Subarra** 63.63 344 P P 12 06 33.5 -0.7
baz=22,slow=6.9
NOA **NORSAR Array B** 63.63 344 P P 12 06 33.8 -0.4
comp=Z,14nm,0.7s,baz=21,slow=6.6,SNR=53
NOA LR LR 12 39 08.0
comp=Z,41nm,18.1s,baz=40,slow=41
NOA **NORSAR Array B** 63.63 344 P P 12 06 33.8 -0.4
KBL **Kabul** 63.80 293 P P 12 06 33.8 -2.2
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL **Kabul** 63.80 293 P P 12 06 33.7 -2.2
KBL IAmb IAmb 12 06 36.2
comp=Z,8.4nm,0.8s
LPSR **Galich'ya Gora** 63.83 324 eP P 12 06 34.1 -1.5
LPSR pmax pmax
comp=Z,20nm,0.8s
NC602 **NORSAR Array S** 63.86 343 P P 12 06 36.0 +0.4
NC602 **NORSAR Array S** 63.86 343 eP P 12 06 35.8 +0.1
NORES **NORESS Array B** 63.86 343 P P 12 06 35.1 -0.6
SBUM **Sibu** 63.89 235 P P 12 06 35.8 -0.6
VRH **Novokhopyorsk** 63.96 322 eP P 12 06 34.3 -2.1
VRH pmax pmax
comp=Z,20nm,0.5s
KSCO **Kaye Shedlock'** 63.99 59 P P 12 06 37.8 +0.7
KSCO IAmb IAmb 12 06 54.3
comp=Z,8.0nm,0.7s
KSCO **Kaye Shedlock'** 63.99 59 P 12 06 37.7
baz=318
HFS **Hagfors** 64.04 342 P P 12 06 36.1 -0.7
comp=Z,11nm,0.4s,baz=44,slow=4.7,SNR=91
HFS **Hagfors** 64.04 342 P P 12 06 36.1 -0.7
FOO **Floro** 64.05 347 eP P 12 06 37.2 +0.4
SPMN **Marine on St.** 64.10 49 P P 12 06 37.7 +0.3
SPMN IAmb IAmb 12 06 38.9
comp=Z,13nm,0.8s
SPMN **Marine on St.** 64.10 49 P 12 06 38.1
baz=320
HYA **Hoyanger** 64.30 346 eP P 12 06 38.4 -0.1
T25A **Trinidad** 64.45 62 P P 12 06 41.5 +1.3
T25A **Trinidad** 64.45 62 P 12 06 41.4
baz=318
SKAR **Skarslia** 64.45 345 eP P 12 06 39.8 +0.3
BGNE **Belgrade** 64.47 55 P P 12 06 40.8 +0.8
BGNE **Belgrade** 64.47 55 P 12 06 40.2
baz=319
TUC **Tucson** 64.52 70 P P 12 06 42.8 +2.3
TUC pmax pmax
comp=Z,3.0nm,1.0s
TUC **Tucson** 64.52 70 P P 12 06 42.8 +2.3
TUC **Tucson** 64.52 70 P 12 06 42.6
baz=318
D41A **Chassel** 64.54 45 P P 12 06 41.0 +0.7
SUE **Sulen** 64.61 347 eP P 12 06 40.7 +0.3
I37A **Lemond, Waseca** 64.75 50 P P 12 06 42.9 +1.1
OSL **Oslo** 64.76 343 eP P 12 06 41.7 +0.3
VSR **Storozhevoye** 64.88 323 eP P 12 06 40.3 -2.2
VSR pmax pmax
comp=Z,10.0nm,0.7s
L34A **Svendsen Farm,** 64.91 53 P P 12 06 43.4 +0.5
ANMO **Albuquerque** 64.97 65 ⅄ eP P 12 06 44.9 +1.3
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO **Albuquerque** 64.97 65 P P 12 06 45.2 +1.6
ANMO **Albuquerque** 64.97 65 P 12 06 45.0
baz=318
COWI **Conover** 65.05 46 P P 12 06 43.3 -0.3
COWI IAmb IAmb 12 06 45.2
comp=Z,16nm,0.9s
ASK **Askoy** 65.10 347 eP P 12 06 44.0 +0.3

BER	**Bergen**	**65.18**	**346**	*eP*		**P**		**12 06 44.7**	**+0.5**
TTSI	**Tana Toraja**	**65.19**	**225**	P		**P**		**12 06 44.0**	**-0.8**
	comp=Z,9.6nm,0.9s								
TTSI	**Tana Toraja**	**65.19**	**225**	P		**P**		**12 06 44.9**	**+0.1**
	comp=Z,9.6nm,0.9s								
KONO	**Kongsberg**	**65.22**	**344**	*eP*		**P**		**12 06 44.7**	**+0.2**
LENM	**Lemitar**	**65.27**	**66**	P		**P**		**12 06 48.4**	**+2.9**
ODD1	**Odda**	**65.44**	**346**	*eP*		**P**		**12 06 46.2**	**+0.2**
BNM	**Barren Site**	**65.47**	**66**	P		**P**		**12 06 49.0**	**+2.1**
CBKS	**Cedar Bluff**	**65.63**	**58**	P				12 06 47.7	
	baz=320								
KSM	**Kuching**	**65.68**	**237**	P		**P**		**12 06 49.6**	**+1.6**
KSM				IAmb		IAmb		12 06 50.9	
	comp=Z,15nm,0.9s								
NACGM	**Naroch**	**65.72**	**332**	*i* P		**P**		**12 06 48.7**	**+0.9**
NACGM				*i* P		**P**		**12 06 48.7**	**+0.9**
NACGM				*i* P		**P**		**12 06 48.7**	**+0.9**
NACGM				*i* PP		**PP**		**12 09 14.1**	**+1.8**
NACGM				*i* PPP		PPP		12 10 51.7	
NACGM				*i* S		S		12 15 38.9	+10
NACGM				*i* PS		PnS		12 16 52.6	+57
NACGM				*i* SS		SS		12 19 57.4	+14
NACGM				*i* SSS		SSS		12 23 05.7	
NACGM				*i* LQ		LQ		12 30 39.9	
NACGM				*i* LR		LR		12 35 53.3	
MNK	**Minsk**	**65.76**	**332**	*i* P		P		12 06 38.9	-9.2
	comp=E,2.0nm,0.7s								
MNK				*i* P		P		12 06 38.9	-9.2
	comp=N,21nm,0.8s								
MNK				*i* P		P		12 06 38.9	-9.2
	comp=Z,11nm,0.7s								
MNK				*i* PcP		sP		12 07 09.7	+0.3
MNK				*i* PP		**PP**		**12 09 08.5**	**-4.1**
MNK				*i* PPP		PPP		12 10 38.0	
MNK				*i* S		S		12 15 18.4	-11
MNK				*i* ScS		**SKSac**		**12 16 27.9**	**-11**
MNK				*i* SS		**SS**		**12 19 35.8**	**-8.2**
MNK				*i* SSS		SSS		12 22 40.5	
MNK				*i* LQ		LQ		12 30 59.5	
MNK				*i* LR		LR		12 35 19.3	
MNK				*i* LRM		MLR		12 38 57.5	
	comp=Z,205nm,18.1s								
MNK				*i* LRM		MLR		12 39 01.8	
	comp=N,906nm,27.5s								
MNK				*i* LRM		MLR		12 39 09.8	
	comp=E,51nm,17.4s								
BLS5	**Blasjo**	**65.94**	**346**	*eP*		**P**		**12 06 49.3**	**+0.2**
SPSI	**Sidrap Palu**	**66.03**	**225**	P		**P**		**12 06 49.9**	**-0.4**
	comp=E,22nm,1.1s								
SPSI	**Sidrap Palu**	**66.03**	**225**	P		**P**		**12 06 50.9**	**+0.6**
	comp=E,22nm,1.1s								
121A	**Cookes Peak, D**	**66.04**	**67**	P				12 06 52.1	
	baz=319								
BNSI	**Bone**	**66.28**	**224**	P		**P**		**12 06 52.7**	**+0.8**
	comp=E,20nm,1.0s								
KMY	**Karmoy**	**66.32**	**346**	*eP*		**P**		**12 06 52.0**	**+0.4**
SCIA	**State Center**	**66.47**	**51**	P		**P**		**12 06 53.8**	**+0.9**
SCIA	**State Center**	**66.47**	**51**	P				12 06 53.4	
	baz=321								
MATQ	**Matagami**	**66.67**	**37**	P				12 06 53.3	
	baz=326,SNR=7.4								
HOMB	**Homborsund**	**66.71**	**344**	*eP*		**P**		**12 06 54.1**	**+0.1**
SNART	**Snartemo**	**66.86**	**345**	*eP*		**P**		**12 06 55.5**	**+0.5**
E46A	**Sault Ste Mari**	**66.88**	**43**	P		**P**		**12 06 55.1**	**-0.2**
KAPI	**Kappang**	**66.98**	**224**	LR		LR		12 34 32.5	
	comp=E,16nm,19.5s,baz=2.0,slow=34								
KBKI	**Kotabaru**	**67.03**	**229**	P		**P**		**12 06 57.1**	**+0.5**
	comp=E,20nm,0.8s								
JFWS	**Jewell Farm**	**67.06**	**49**	P				12 06 56.8	
	baz=322								
GEYT	**Alibeck**	**67.08**	**303**	P		**P**		**12 06 55.8**	**-1.1**
	comp=E,2.8nm,0.4s,baz=46,slow=6.4,SNR=5.8								
GEYT				LR		LR		12 38 42.7	
	comp=E,232nm,18.0s,baz=210,slow=38								
N38A	**Joes South For**	**67.32**	**52**	P		**P**		**12 06 58.6**	**+0.4**
N38A				IAmb		IAmb		12 06 59.4	
	comp=Z,20nm,0.9s								
AMTX	**Amarillo**	**67.60**	**62**	P				12 07 00.9	
	baz=320								
MSTX	**Muleshoe**	**67.71**	**63**	P		**P**		**12 07 01.6**	**+0.7**
MSTX				IAmb		IAmb		12 07 03.2	
	comp=Z,10nm,0.8s								
MSTX	**Muleshoe**	**67.71**	**63**	P				12 07 01.7	
	baz=320,SNR=5.3								
BBKI	**Banjar Baru**	**67.78**	**230**	P		**P**		**12 07 01.6**	**+0.2**
BBKI	**Banjar Baru**	**67.78**	**230**	P		**P**		**12 07 01.4**	**0.0**
KAN05	**Bluff City Nor**	**67.88**	**58**	P		**P**		**12 07 01.9**	**0.0**
KAN01	**Argonia South**	**67.91**	**57**	P		**P**		**12 07 02.3**	**+0.2**
KAN01				IAmb		IAmb		12 07 02.6	
	comp=Z,13nm,0.7s								
GLMI	**Grayling**	**67.99**	**44**	P				12 07 02.9	
	baz=324								
MNTX	**Cornudas Mount**	**68.00**	**66**	P		**P**		**12 07 04.2**	**+1.5**
MNTX	**Cornudas Mount**	**68.00**	**66**	P				12 07 04.0	
	baz=320,SNR=14								
P38A	**Dawn**	**68.09**	**53**	P		**P**		**12 07 03.1**	**0.0**
P38A				IAmb		IAmb		12 07 16.8	
	comp=Z,23nm,1.2s								
IPM	**Ipoh**	**68.10**	**247**	P		**P**		**12 07 04.0**	**+0.5**
IPM				IAmb		IAmb		12 07 04.9	
	comp=Z,16nm,1.0s								
VLDQ	**Val d'Or**	**68.11**	**37**	P		**P**		**12 07 01.7**	**-1.4**
GDL2	**Guadalupe Moun**	**68.18**	**65**	P		**P**		**12 07 05.2**	**+1.2**
COEN	**Coen**	**68.21**	**198**	P		**P**		**12 07 04.9**	**+0.9**
CROK	**Carrier**	**68.29**	**58**	P		**P**		**12 07 04.5**	**+0.1**
N41A	**Harden Midland**	**68.51**	**50**	P		**P**		**12 07 06.0**	**+0.2**
PBKI	**Pangkalan Bun**	**68.62**	**233**	P		**P**		**12 07 06.6**	**0.0**
	comp=Z,81nm,1.0s								
AKASG	**Malin Array Be**	**68.67**	**329**	P		**P**		**12 07 05.3**	**-1.2**
	comp=Z,13nm,0.6s,baz=29,slow=6.4,SNR=26								
AKASG				LR		LR		12 40 09.7	
	comp=Z,179nm,20.1s,baz=355,slow=38								
AKASG	**Malin Array Be**	**68.67**	**329**	P		**P**		**12 07 05.4**	**-1.2**
AKBB	**Malin Array Si**	**68.67**	**329⇑**	*eP*		**P**		**12 07 05.1**	**-1.5**
AKBB	**Malin Array Si**	**68.67**	**329**	P		**P**		**12 07 05.0**	**-1.6**
AKBB				IAmb		IAmb		12 07 07.1	
	comp=Z,14nm,0.7s								
LLD	**Lille Linde**	**68.81**	**341**	*i* P		**P**		**12 07 06.8**	**-0.6**
LLD	**Lille Linde**	**68.81**	**341**	*i* P		**P**		**12 07 06.7**	**-0.6**
P40A	**Paris**	**68.88**	**52**	P		**P**		**12 07 07.8**	**-0.2**
P40A				IAmb		IAmb		12 07 09.9	
	comp=Z,26nm,1.0s								
MCD	**Coleburn Disti**	**68.95**	**350⇑**	*eP*		**P**		**12 07 08.4**	**+0.2**
MDO	**Dochfour**	**69.20**	**351⇑**	*eP*		**P**		**12 07 09.8**	**+0.1**
WMOK	**Wichita Mounta**	**69.24**	**60**	P		**P**		**12 07 11.2**	**+0.8**
WMOK				pmax		pmax			
	comp=Z,13nm,0.9s								
WMOK	**Wichita Mounta**	**69.24**	**60**	P		**P**		**12 07 11.2**	**+0.8**
WMOK				IAmb		IAmb		12 07 12.1	
	comp=Z,13nm,0.8s								
WMOK	**Wichita Mounta**	**69.24**	**60**	P				12 07 10.9	
	baz=321,SNR=12								
RGN	**Rugen**	**69.33**	**340**	P		**P**		**12 07 11.1**	**+0.6**
RGN	**Rugen**	**69.33**	**340**	*eP*		**P**		**12 07 11.3**	**+0.8**
	comp=Z,85nm,0.8s,baz=20,slow=5.9								
HDIL	**Hopedale**	**69.36**	**50**	P		**P**		**12 07 11.2**	**+0.2**
HDIL	**Hopedale**	**69.36**	**50**	P				12 07 10.8	
	baz=323								
KIV	**Kislovodsk**	**69.47**	**317**	*eP*		**P**		**12 07 09.1**	**-2.7**
KIV				pmax		pmax			
	comp=Z,28nm,1.1s								
KIV				MLR		MLR			
	comp=Z,373nm,17.0s								
SOEI	**Soe**	**69.51**	**218**	P		**P**		**12 07 11.2**	**-1.1**
SOEI				IAmb		IAmb		12 07 29.0	
	comp=Z,30nm,1.2s								
SOEI	**Soe**	**69.51**	**218**	P		**P**		**12 07 11.0**	**-1.2**
	comp=Z,21nm,0.9s								
KBZ	**Khabaz**	**69.57**	**316**	P		**P**		**12 07 12.3**	**+0.2**
	comp=Z,7.9nm,0.7s,baz=79,slow=3.9,SNR=9.7								
KBZ	**Khabaz**	**69.57**	**316⇑**	*eP*		**P**		**12 07 12.9**	**+0.7**
KBZ				pmax		pmax			
	comp=Z,10.0nm,0.9s								
LGD	**Lagodekhi**	**69.67**	**313**	P		**P**		**12 07 13.6**	**+0.7**
ALGO	**Algonquin Park**	**69.69**	**39**	P				12 07 12.2	
	baz=327								
S39A	**Bolivar**	**69.70**	**54**	P		**P**		**12 07 13.0**	**-0.2**
S39A				IAmb		IAmb		12 07 13.4	
	comp=Z,16nm,1.4s								
R40A	**Maddies Statio**	**69.75**	**53**	P		**P**		**12 07 13.5**	**+0.1**
R40A				IAmb		IAmb		12 07 13.9	
	comp=Z,11nm,0.8s								
D55A	**Sainte-Anne-du**	**69.76**	**37**	P				12 07 13.0	
	baz=328,SNR=8.9								
TUL1	**Leonard**	**69.87**	**57**	P				12 07 14.4	
	baz=322								
D56A	**ZEC Mazanza, M**	**69.99**	**36**	P				12 07 14.1	
	baz=329,SNR=6.3								
E55A	**Montcerf-Lytto**	**70.02**	**38**	P				12 07 14.6	
	baz=328								
DDFL	**Dedoflistskaro**	**70.04**	**313**	P		**P**		**12 07 17.6**	**+2.3**
MTN	**Manton Dam**	**70.07**	**210**	P		**P**		**12 07 15.9**	**+0.4**
MTN				IAmb		IAmb		12 07 17.2	
	comp=Z,22nm,1.1s								
G54A	**Lake Saint Pet**	**70.14**	**39**	P				12 07 15.0	
	baz=327								
BATI	**Baumata**	**70.15**	**218**	P		**P**		**12 07 16.1**	**+0.1**
	comp=Z,18nm,0.6s,baz=50,slow=2.7,SNR=3.9								
U38A	**Gravette**	**70.16**	**56**	P		**P**		**12 07 15.9**	**-0.1**
U38A				IAmb		IAmb		12 07 16.8	
	comp=Z,8.4nm,0.7s								
TSI	**Tuntungan**	**70.29**	**249**	P		**P**		**12 07 16.7**	**-0.3**
	comp=Z,4µmcomp=Z,65nm,0.6s								
I51A	**Listowel**	**70.31**	**42**	P				12 07 16.8	
	baz=326								
E56A	**St. Veronique**	**70.32**	**37**	P				12 07 15.8	
	baz=328,SNR=6.8								
LATQ	**La Tuque**	**70.40**	**35**	P		**P**		**12 07 17.9**	**+0.6**
LATQ	**La Tuque**	**70.40**	**35**	P				12 07 17.5	
	baz=330								
L48A	**N Adams**	**70.41**	**46**	P		**P**		**12 07 17.7**	**+0.2**
ABTX	**Abilene, Hawle**	**70.42**	**62**	P		**P**		**12 07 18.2**	**+0.6**
ABTX				IAmb		IAmb		12 07 19.4	
	comp=Z,12nm,0.9s								
ABTX	**Abilene, Hawle**	**70.42**	**62**	P				12 07 18.3	
	baz=321								
CCM	**Cathedral Cave**	**70.42**	**52**	P		**P**		**12 07 17.9**	**+0.3**
CCM				pmax		pmax			
	comp=Z,9.0nm,0.9s								
CCM	**Cathedral Cave**	**70.42**	**52**	P		**P**		**12 07 17.9**	**+0.3**
CCM	**Cathedral Cave**	**70.42**	**52**	P				12 07 17.6	
	baz=323								
LAWE	**Loch Awe, Argy**	**70.46**	**351⇑**	*eP*		**P**		**12 07 17.4**	**-0.1**
LAWE				IAmb		IAmb		12 07 18.2	
	comp=Z,36nm,0.8s								
BSEG	**Bad Segeberg**	**70.50**	**342**	P		**P**		**12 07 18.7**	**+0.9**
BSEG				pmax		pmax			
	comp=Z,24nm,2.1s								
BSEG	**Bad Segeberg**	**70.50**	**342**	*eP*		**P**		**12 07 18.6**	**+0.8**
	comp=Z,37nm,1.3s,baz=20,slow=5.9								
HHAR	**Hobbs**	**70.51**	**55**	P		**P**		**12 07 18.0**	**-0.1**
HHAR				IAmb		IAmb		12 07 18.8	
	comp=Z,13nm,0.6s								
ESY	**Stoneypath**	**70.53**	**350⇑**	*eP*		**P**		**12 07 17.7**	**-0.2**
D58A	**Chemin du LacG**	**70.61**	**35**	P				12 07 18.4	
	baz=330								
MGMO	**Mountain Grove**	**70.64**	**54**	P		**P**		**12 07 19.4**	**+0.4**
H53A	**Bobcaygeon**	**70.64**	**40**	P				12 07 18.1	
	baz=327								
TX31	**Lajitas Ar. Si**	**70.76**	**67**	P		**P**		**12 07 20.1**	**+0.2**
TX32	**Lajitas Array**	**70.76**	**67**	P		**P**		**12 07 20.3**	**+0.4**
TX32				IAmb		IAmb		12 07 22.1	
	comp=Z,9.2nm,0.7s								
TXAR	**Lajitas Array**	**70.76**	**67**	P		**P**		**12 07 21.3**	**+1.4**
	comp=Z,7.4nm,0.5s,baz=298,slow=4.8,SNR=157								
TXAR	**Lajitas Array**	**70.76**	**67**	P		**P**		**12 07 21.3**	**+1.4**
TRQ	**Mont Tremblant**	**70.77**	**37**	P		**P**		**12 07 19.2**	**-0.4**
PGBU	**Glenifferbraes**	**70.82**	**351⇑**	*eP*		**P**		**12 07 20.1**	**+0.4**
PGBU				IAmb		IAmb		12 07 20.6	
	comp=Z,65nm,0.9s								
ANN	**Anapa**	**70.87**	**321**	*eP*		P		12 07 13.9	-6.2
ANN				pmax		pmax			
	comp=Z,72nm,0.9s								
FVM	**French Village**	**70.87**	**52**	P		**P**		**12 07 20.3**	**0.0**
FVM				pmax		pmax			
	comp=Z,15nm,1.2s								
FVM	**French Village**	**70.87**	**52**	P		**P**		**12 07 20.3**	**0.0**
FVM				IAmb		IAmb		12 07 21.6	
	comp=Z,15nm,1.1s								
SOC	**Sochi**	**70.99**	**318**	*eP*		**P**		**12 07 19.0**	**-1.9**
SOC				*e*				12 09 54.2	
SOC				*e*PPP		PPP		12 11 37.8	
SOC				*e*S		**S**		**12 16 29.5**	**-2.8**
SOC				*e*SSS		SSS		12 24 21.7	
SOC				MLR		MLR			
	comp=Z,321nm,20.0s								
U40A	**Yellville**	**70.99**	**55**	P		**P**		**12 07 21.2**	**+0.2**
U40A				IAmb		IAmb		12 07 21.8	
	comp=Z,19nm,1.0s								
U40A	**Yellville**	**70.99**	**55**	P				12 07 20.9	
	baz=323,SNR=11								
E58A	**La Victoria**	**71.10**	**36**	P				12 07 21.2	
	baz=330,SNR=9.3								
EKA	**Eskdalemuir Ar**	**71.16**	**350**	P		**P**		**12 07 21.9**	**+0.2**
	comp=Z,13nm,0.4s,baz=18,slow=5.1,SNR=114								
EKA	**Eskdalemuir Ar**	**71.16**	**350**	P		**P**		**12 07 21.9**	**+0.2**
RUE	**Ruedersdorf**	**71.17**	**339**	*eP*		**P**		**12 07 22.4**	**+0.6**
	comp=Z,84nm,1.2s,baz=20,slow=5.9								
ESK	**Eskdalemuir**	**71.18**	**350⇑**	*eP*		**P**		**12 07 22.0**	**+0.2**
ESK				IAmb		IAmb		12 07 22.2	
	comp=Z,43nm,0.9s								
ESK	**Eskdalemuir**	**71.18**	**350**	P		**P**		**12 07 22.1**	**+0.2**
ESK				pmax		pmax			
	comp=Z,28nm,0.8s								
ESK	**Eskdalemuir**	**71.18**	**350**	P		**P**		**12 07 22.1**	**+0.3**
SORM	**Soroca**	**71.20**	**328**	⇓P		**P**		**12 07 21.3**	**-0.8**
PLAI	**Plampang**	**71.25**	**224**	P		**P**		**12 07 21.6**	**-1.2**
	comp=Z,23nm,0.9s								
PLAI	**Plampang**	**71.25**	**224**	P		**P**		**12 07 21.5**	**-1.2**
	comp=Z,23nm,0.9s								
W39A	**Magazine**	**71.44**	**56**	P				12 07 23.9	
	baz=322								
D61A	**St Aubert, Com**	**71.44**	**34**	P				12 07 23.5	
	baz=331,SNR=6.9								
D60A	**Saint Jean D'O**	**71.44**	**34**	P				12 07 23.3	
	baz=331,SNR=6.1								
NEWG	**New Galloway**	**71.48**	**350⇑**	*eP*		**P**		**12 07 23.6**	**-0.1**
NEWG				IAmb		IAmb		12 07 24.3	
	comp=Z,19nm,0.7s								
KWP	**Kalwaria Pacla**	**71.56**	**332**	P		**P**		**12 07 24.6**	**+0.3**
KWP				pmax		pmax			
	comp=Z,94nm,1.1s								
KWP	**Kalwaria Pacla**	**71.56**	**332**	P		**P**		**12 07 24.6**	**+0.3**
G57A	**Newington**	**71.56**	**38**	P				12 07 23.7	
	baz=329								
S44A	**Carbondale**	**71.66**	**51**	P		**P**		**12 07 25.4**	**+0.3**
S44A				IAmb		IAmb		12 07 26.3	
	comp=Z,15nm,0.8s								
SIUC	**Southern Illin**	**71.66**	**51**	P		**P**		**12 07 25.3**	**+0.3**
SIUC				IAmb		IAmb		12 07 38.9	
	comp=Z,39nm,1.4s								
CLGH	**Cloghs, Cushen**	**71.69**	**352⇑**	*eP*		**P**		**12 07 25.0**	**+0.1**
CLGH				IAmb		IAmb		12 07 25.8	
	comp=Z,68nm,1.1s								
FCAR	**Ozark Folk Cen**	**71.72**	**54**	P		**P**		**12 07 25.2**	**-0.3**
FCAR				IAmb		IAmb		12 07 26.1	
	comp=Z,13nm,0.8s								
F59A	**Saint Guilaume**	**71.72**	**36**	P				12 07 25.0	
	baz=330,SNR=7.2								
E60A	**Ste Agathe de**	**71.74**	**35**	P				12 07 25.2	
	baz=330,SNR=8.2								
OJC	**Ojcow**	**71.82**	**334**	*eP*		**P**		**12 07 26.5**	**+0.7**
OJC	**Ojcow**	**71.82**	**334**	P		**P**		**12 07 26.0**	**+0.2**
OJC				pmax		pmax			
	comp=Z,169nm,0.7s								
PBMO	**Poplar Bluff**	**71.83**	**53**	P		**P**		**12 07 26.5**	**+0.4**
PBMO				IAmb		IAmb		12 07 27.4	
	comp=Z,30nm,1.4s								
FLTG	**Flechtingen**	**71.84**	**340**	*eP*		**P**		**12 07 26.2**	**+0.4**
	comp=Z,31nm,1.0s,baz=20,slow=5.9								
G58A	**Ormstown**	**71.87**	**37**	P				12 07 25.7	
	baz=329								
M51A	**Elyria**	**71.87**	**44**	P				12 07 26.2	
	baz=326								
KESW	**Keswick, Cumbr**	**71.89**	**350**	*eP*		**P**		**12 07 26.5**	**+0.4**
KESW				IAmb		IAmb		12 07 27.2	
	comp=Z,74nm,0.9s								
F60A	**Warwick**	**71.91**	**35**	P				12 07 25.9	
	baz=330								
NRDL	**Niedersach Rie**	**71.91**	**341**	*eP*		**P**		**12 07 27.2**	**+1.0**
	comp=Z,19nm,1.0s,baz=20,slow=5.9								
D62A	**Allapoint, All**	**71.92**	**33**	P		**P**		**12 07 26.9**	**+0.4**
H57A	**Richville**	**71.96**	**38**	P				12 07 26.6	
	baz=329								
JCT	**Junction City**	**71.99**	**63**	P		**P**		**12 07 27.8**	**+0.6**
JCT				pmax		pmax			
	comp=Z,7.0nm,0.9s								
JCT	**Junction City**	**71.99**	**63**	P		**P**		**12 07 27.8**	**+0.6**
JCT	**Junction City**	**71.99**	**63**	P				12 07 27.2	
	baz=322								
P48A	**Milroy**	**71.99**	**48**	P		**P**		**12 07 26.7**	**-0.3**
P48A				IAmb		IAmb		12 07 27.6	
	comp=Z,19nm,0.8s								
E61A	**Lac Etchemin**	**72.01**	**34**	P				12 07 27.1	
	baz=331								
MIAR	**Mount Ida**	**72.06**	**56**	P		**P**		**12 07 27.8**	**+0.3**
MIAR				pmax		pmax			
	comp=Z,7.0nm,0.8s								
MIAR	**Mount Ida**	**72.06**	**56**	P		**P**		**12 07 27.8**	**+0.3**
MIAR	**Mount Ida**	**72.06**	**56**	P				12 07 27.7	
	baz=323,SNR=5.2								
WHAR	**Wooly Hollow**	**72.11**	**55**	P		**P**		**12 07 28.2**	**+0.4**
WHAR				IAmb		IAmb		12 07 28.8	
	comp=Z,11nm,1.0s								
KSP	**Ksiaz**	**72.12**	**337**	P		**P**		**12 07 28.2**	**+0.6**
KSP				pmax		pmax			
	comp=Z,24nm,0.8s								
LONY	**Lake Ozonia**	**72.13**	**38**	P				12 07 27.0	
	baz=329								
N51A	**Ashland**	**72.13**	**45**	P		**P**		**12 07 28.1**	**+0.2**
ERPA	**Erie**	**72.13**	**43**	P		**P**		**12 07 28.0**	**+0.2**
ERPA	**Erie**	**72.13**	**43**	P				12 07 27.4	
	baz=327								
ASSE	**Asse, Remlinge**	**72.15**	**341**	*eP*		**P**		**12 07 28.6**	**+1.0**
	comp=Z,43nm,1.3s,baz=20,slow=5.9								
L53A	**Girard**	**72.16**	**43**	P				12 07 27.9	
	baz=327								
USIN	**University of**	**72.19**	**50**	P		**P**		**12 07 29.4**	**+1.2**
W41B	**Gary Mavity, V**	**72.22**	**55**	P				12 07 28.2	
	baz=323,SNR=7.3								
F61A	**St Evariste**	**72.24**	**35**	P				12 07 28.5	
	baz=331,SNR=7.4								
P49A	**Miami Univ. Ec**	**72.25**	**47**	P		**P**		**12 07 28.4**	**-0.2**
P49A				IAmb		IAmb		12 07 28.8	
	comp=Z,15nm,0.8s								
PARMO	**Parma**	**72.25**	**52**	P		**P**		**12 07 29.6**	**+1.0**
P49A	**Miami Univ. Ec**	**72.25**	**47**	P				12 07 28.6	
	baz=325								
D63A	**Stockholm**	**72.27**	**32**	P				12 07 28.6	
	baz=332								
I57A	**Carthage**	**72.31**	**39**	P				12 07 28.9	
	baz=329								
HPK	**Haverah Park**	**72.34**	**349⇑**	*eP*		**P**		**12 07 29.1**	**+0.3**
HPK				IAmb		IAmb		12 07 29.9	
	comp=Z,58nm,0.7s								
IOMK	**Kirk Michael**	**72.36**	**351**	*eP*		**P**		**12 07 28.9**	**0.0**
OSTC	**Ostas**	**72.40**	**337**	*eP*		**P**		**12 07 29.5**	**+0.2**
J56A	**Wolcott**	**72.41**	**40**	P				12 07 29.1	
	baz=328								
CHVC	**Chvalec**	**72.41**	**337**	*eP*		**P**		**12 07 29.7**	**+0.3**
M53A	**WI Miller and**	**72.42**	**43**	P		**P**		**12 07 30.1**	**+0.5**
M53A				IAmb		IAmb		12 07 30.3	
	comp=Z,22nm,0.8s								
NIE	**Niedzica**	**72.42**	**334**	*eP*		**P**		**12 07 30.6**	**+1.2**
M53A	**WI Miller and**	**72.42**	**43**	P				12 07 29.3	
	baz=327								
H59A	**Cadyville**	**72.43**	**37**	P				12 07 28.9	
	baz=330								
CLL	**Collm**	**72.44**	**339**	*i* P		**P**		**12 07 29.7**	**+0.2**
	comp=Z,45nm,1.0s								
CLL				*e*PcP		**PcP**		**12 07 47.0**	**0.0**
CLL				*es*P		**sP**		**12 07 55.0**	**+4.0**
CLL	**Collm**	**72.44**	**339**	*i* P		**P**		**12 07 29.7**	**+0.2**
CLL				*e**PP		**sP**		**12 07 55.0**	**+4.0**
CLL				pmax		pmax			
	comp=Z,45nm,1.0s								
CLL	**Collm**	**72.44**	**339**	P		**P**		**12 07 29.5**	**+0.1**
CLL	**Collm**	**72.44**	**339**	*eP*		**P**		**12 07 29.7**	**+0.2**
	comp=Z,45nm,1.0s,baz=20,slow=5.9								
ACSO	**Alum Creek Sta**	**72.44**	**46**	P		**P**		**12 07 30.6**	**+0.9**
ACSO	**Alum Creek Sta**	**72.44**	**46**	P				12 07 29.2	
	baz=326								
H58A	**Gabriels**	**72.45**	**38**	P				12 07 28.8	
	baz=329								
X40A	**Basin Creek Fa**	**72.48**	**56**	P				12 07 29.5	
	baz=323								
CLZ	**Clausthal**	**72.48**	**341**	*eP*		**P**		**12 07 30.6**	**+0.8**
	comp=Z,58nm,1.1s,baz=20,slow=5.9								
WIM	**Isle of Man**	**72.48**	**351⇑**	*eP*		**P**		**12 07 29.9**	**+0.2**
UPC	**Upice**	**72.50**	**337**	*eP*		**P**		**12 07 30.9**	**+1.0**
UPC	**Upice**	**72.50**	**337**	*eP*		**P**		**12 07 30.9**	**+1.0**
G60A	**Masonville**	**72.53**	**36**	P				12 07 29.1	
	baz=330								
IBBN	**Ibbenburen**	**72.53**	**343**	*eP*		**P**		**12 07 30.6**	**+0.6**
	comp=Z,39nm,0.7s,baz=20,slow=5.9								
CRVS	**Cervenica-Dubn**	**72.57**	**333**	*eP*		**P**		**12 07 30.9**	**+0.6**
CRVS				pmax		pmax			
	comp=Z,26nm,1.1s								
CRVS	**Cervenica-Dubn**	**72.57**	**333**	*eP*		**P**		**12 07 30.9**	**+0.6**
DPC	**Dobruska-Polom**	**72.57**	**337**	*eP*		**P**		**12 07 30.9**	**+0.5**
DPC	**Dobruska-Polom**	**72.57**	**337**	*eP*		**P**		**12 07 30.9**	**+0.5**
BUR08	**Bucovina Ar. S**	**72.61**	**330**	P		**P**		**12 07 30.6**	**-0.1**
BUR08				IAmb		IAmb		12 07 31.9	
	comp=Z,19nm,0.8s

comp=Z,30nm,1.1s
G62A **West of Eustis** **73.06 35** P 12 07 33.9
baz=331
I59A **Olmsteadville** **73.09 38** P 12 07 33.2
baz=330
L56A **Greenwood** **73.10 41** P **P** **12 07 33.0 -0.6**
L56A **Greenwood** **73.10 41** P 12 07 33.2
baz=328,SNR=5.7
N54A **Moraine State** **73.10 43** P 12 07 33.5
baz=327
F63A **Nahmakanta, Br** **73.12 34** P 12 07 33.3
baz=332
J59A **Piesco** **73.14 38** P 12 07 33.1
baz=329
H61A **Lyndonville** **73.16 36** P 12 07 34.1
baz=330
O53A **New Philadelph** **73.18 44** P **P** **12 07 33.6 -0.5**
O53A **New Philadelph** **73.18 44** P 12 07 34.3
baz=327
WME **Myndd Eilian** **73.19 350** *e*P **P** **12 07 33.5 -0.3**
WME IAmb IAmb 12 07 34.3
comp=Z,19nm,0.8s
KECS **Kecovo** **73.22 333** *e*P **P** **12 07 35.1 +0.9**
KECS **Kecovo** **73.22 333** *e*P **P** **12 07 35.1 +0.9**
F64A **Sherman** **73.22 33** P **P** **12 07 34.1 -0.2**
F64A IAmb IAmb 12 07 35.6
comp=Z,18nm,0.8s
F64A **Sherman** **73.23 33** P 12 07 34.4
baz=332
T47A **Sharon Grove** **73.24 50** P **P** **12 07 35.1 +0.6**
T47A IAmb IAmb 12 07 48.7
comp=Z,21nm,0.9s
I60A **Shoreham** **73.27 37** P 12 07 34.0
baz=330
P52A **Corning** **73.30 45** P **P** **12 07 35.1 +0.3**
P52A IAmb IAmb 12 07 35.3
comp=Z,17nm,0.7s
P52A **Corning** **73.30 45** P 12 07 35.0
baz=326
WLF1 **Llynfaes** **73.30 350** *e*P **P** **12 07 34.4 -0.2**
WLF1 IAmb IAmb 12 07 34.9
comp=Z,25nm,0.8s
K58A **Earlville** **73.31 39** P 12 07 34.1
baz=329
PRU **Pruhonice** **73.33 338** *e*P **P** **12 07 35.3 +0.5**
PRU **Pruhonice** **73.33 338** *e*P **P** **12 07 35.3 +0.5**
MOX **Moxa** **73.36 340** P **P** **12 07 35.5 +0.6**
MOX pmax pmax
comp=Z,24nm,1.7s
MOX **Moxa** **73.36 340** *e*P **P** **12 07 35.5 +0.6**
comp=Z,27nm,1.1s,baz=20,slow=5.9
ARCR **ARCALIA** **73.37 330** ⇓P **P** **12 07 35.4 +0.3**
PLN **Plauen** **73.39 339** *e*P **P** **12 07 35.4 +0.2**
comp=Z,24nm,1.1s,baz=20,slow=5.9
TANN **Tannenbergstha** **73.39 339** *e*P **P** **12 07 35.8 +0.5**
comp=Z,20nm,1.4s,baz=20,slow=5.9
WERD **Werda** **73.40 339** *e*P **P** **12 07 35.6 +0.4**
comp=Z,20nm,1.1s,baz=20,slow=5.9
M56A **Emporium** **73.40 42** P **P** **12 07 35.5 +0.1**
M56A IAmb IAmb 12 07 53.2
comp=Z,12nm,1.1s
H62A **Milan** **73.40 35** P **P** **12 07 35.7 +0.4**
H62A **Milan** **73.40 35** P 12 07 35.3
baz=331,SNR=8.0
M56A **Emporium** **73.40 42** P 12 07 35.1
baz=328
LBNH **Lisbon** **73.42 36** P 12 07 35.5
baz=330
R50A **Paris** **73.45 48** P **P** **12 07 35.6 -0.1**
R50A IAmb IAmb 12 07 49.6
comp=Z,12nm,0.9s
BUG **Bochum--Univer** **73.45 343** P **P** **12 07 36.0 +0.6**
BUG pmax pmax
comp=Z,37nm,0.9s
BUG **Bochum--Univer** **73.45 343** *e*P **P** **12 07 36.1 +0.7**
comp=Z,33nm,1.0s,baz=20,slow=5.9
KASTN **Kahler Asten** **73.47 342** *e*P **P** **12 07 36.2 +0.6**
comp=Z,28nm,1.2s,baz=20,slow=5.9
GUNZ **Gunzen** **73.47 339** *e*P **P** **12 07 36.2 +0.5**
comp=Z,21nm,1.0s,baz=20,slow=5.9
VRAC **Vranov** **73.47 336** P **P** **12 07 36.7 +1.0**
comp=Z,19nm,0.7s,baz=31,slow=5.9,SNR=16
VRAC **Vranov** **73.47 336** ⇑P **P** **12 07 36.7 +1.0**
VRAC **Vranov** **73.47 336** *e*P **P** **12 07 36.2 +0.5**
VRAC **Vranov** **73.47 336** P **P** **12 07 36.7 +1.0**
L57A **Andrews Acres** **73.49 41** P 12 07 35.9
baz=328
ACCN **Adirondack Com** **73.52 38** P **P** **12 07 36.0 0.0**
ACCN IAmb IAmb 12 07 36.7
comp=Z,15nm,0.8s
UBBA **Unterbuizbach** **73.53 341** *e*P **P** **12 07 36.5 +0.8**
comp=Z,28nm,1.5s,baz=20,slow=5.9
WERN **Wernitzgruen** **73.53 339** *e*P **P** **12 07 37.0 +0.9**
comp=Z,24nm,0.8s,baz=20,slow=5.9
DSB **Dublin** **73.54 351** P **P** **12 07 36.3 +0.4**
DSB IAmb IAmb 12 07 37.1
comp=Z,24nm,0.9s
NKC **Novy Kostel** **73.57 339** *e*P **P** **12 07 36.0 -0.2**
NKC **Novy Kostel** **73.57 339** *e*P **P** **12 07 36.0 -0.2**
FOEL **Foel Wylfa** **73.57 349**⇑ *e*P **P** **12 07 35.4 -0.8**
FOEL IAmb IAmb 12 07 36.1
comp=Z,40nm,0.9s
O54A **Avella** **73.59 44** P **P** **12 07 36.5 0.0**
O54A IAmb IAmb 12 07 38.0
comp=Z,18nm,0.8s
WVT **Waverly** **73.59 51** P **P** **12 07 36.5 -0.1**
WVT pmax pmax
comp=Z,14nm,1.1s
WVT **Waverly** **73.59 51** P **P** **12 07 36.5 -0.1**
WVT PcP **pP** **12 07 49.7 -2.2**
WVT IAmb IAmb 12 07 50.1
comp=Z,14nm,1.1s
WVT **Waverly** **73.60 51** P 12 07 37.0
baz=325
K59A **Cooperstown** **73.60 39** P 12 07 36.1
baz=329
JAVC **Velka Javorina** **73.62 335** *e*P **P** **12 07 37.9 +1.3**
G64A **Maxfield** **73.63 34** P 12 07 36.7
baz=332
TLCR **73.64 326** ⇓P **P** **12 07 36.9 +0.2**
VYHS **Vyhne** **73.65 334** *e*P **P** **12 07 37.5 +0.8**
VYHS **Vyhne** **73.65 334** *e*P **P** **12 07 37.5 +0.8**
H63A **New Sharon** **73.71 35** P 12 07 36.6
baz=331
VRI **Vrincioaia** **73.72 328** ⇓P **P** **12 07 37.3 +0.1**
VRI **Vrincioaia** **73.72 328** P **P** **12 07 37.8 +0.6**
VRI pmax pmax
comp=Z,11nm,1.0s
PBCC **Pribram** **73.74 338** *e*P **P** **12 07 37.7 +0.5**
J60A **Lant Hill Farm** **73.74 38** P 12 07 37.0
baz=330
KRUC **Moravsky** **73.75 336** *e*P **P** **12 07 37.7 +0.4**
KRUC **Moravsky** **73.75 336** P **P** **12 07 38.4 +1.1**
KRUC pmax pmax
comp=Z,32nm,1.1s
TREC **Trest** **73.75 337** *e*P **P** **12 07 37.9 +0.6**
TREC **Trest** **73.75 337** *e*P **P** **12 07 37.9 +0.6**
PLOR **Plostina** **73.76 328** ⇑P **P** **12 07 37.7 +0.3**
N56A **West Decatur** **73.83 42** P 12 07 37.9
baz=328
L58A **Harry Jones Me** **73.85 40** P 12 07 37.8
baz=329
CFR **Carcaliu** **73.87 327** ⇓P **P** **12 07 37.7 -0.3**
MANZ **Manzenberg** **73.87 339** *e*P **P** **12 07 38.6 +0.6**
comp=Z,16nm,1.1s,baz=20,slow=5.9
PSZ **Piszkesteto** **73.90 333** ⇓P **P** **12 07 39.4 +1.2**
PSZ **Piszkesteto** **73.90 333** P **P** **12 07 39.3 +1.1**
PSZ pmax pmax
comp=Z,20nm,0.9s
PSZ **Piszkesteto** **73.90 333** P **P** **12 07 39.3 +1.1**
PSZ IAmb IAmb 12 07 40.2
comp=Z,20nm,0.9s
HLM1 **Long Mynd** **73.90 349**⇑ *e*P **P** **12 07 38.1 0.0**
HLM1 IAmb IAmb 12 07 39.0
comp=Z,42nm,1.1s
M57A **Sunshine Farm,** **73.94 41** P **P** **12 07 38.6 0.0**
M57A **Sunshine Farm,** **73.95 41** P 12 07 38.2
baz=328,SNR=7.3
J61A **Chester** **73.97 37** P 12 07 38.4
baz=330
SMOL **Smolenice** **74.00 335** *e*P **P** **12 07 40.5 +1.8**
SMOL pmax pmax
comp=Z,12nm,0.9s
SMOL **Smolenice** **74.00 335** *e*P **P** **12 07 40.5 +1.8**
BISRR **Bisoca** **74.01 328** ⇑P **P** **12 07 39.5 +0.5**
L59A **Walton** **74.03 39** P 12 07 38.8
baz=329
DOPR **Dopca** **74.06 329** ⇓P **P** **12 07 39.9 +0.8**
I63A **Otisfield** **74.06 35** P **P** **12 07 39.9 +0.8**
I63A **Otisfield** **74.06 35** P 12 07 39.1
baz=331
ROTZ **Rotzenmuhle** **74.06 339** *e*P **P** **12 07 39.5 +0.4**
comp=Z,20nm,0.9s,baz=20,slow=5.9
TPGR **Topolog** **74.06 326** ⇑P **P** **12 07 39.1 -0.1**
G65A **Princeton** **74.07 33** P 12 07 39.1
baz=333
DRGR **74.13 331** ⇑P **P** **12 07 39.5 -0.1**
DRGR **74.13 331** P **P** **12 07 39.4 -0.2**
DRGR pmax pmax
comp=Z,23nm,1.0s
OXF **Oxford** **74.15 53** P **P** **12 07 40.2 +0.4**
OXF pmax pmax
comp=Z,30nm,1.0s
OXF **Oxford** **74.15 53** P **P** **12 07 40.2 +0.4**
OXF **Oxford** **74.15 53** P 12 07 40.1
baz=324
MODS **Modra-Piesok** **74.17 335** *e*P **P** **12 07 41.3 +1.6**
MODS pmax pmax
comp=Z,24nm,1.0s
MODS **Modra-Piesok** **74.17 335** *e*P **P** **12 07 41.3 +1.6**
Q53A **Leroy** **74.20 45** P 12 07 40.0
baz=327,SNR=10
SSPA **Standing Stone** **74.23 42** P **P** **12 07 40.3 0.0**
SSPA IAmb IAmb 12 07 41.1
comp=Z,18nm,1.1s
SSPA **Standing Stone** **74.23 42** P 12 07 40.1
baz=328
U49A **Red Boiling Sp** **74.24 50** P **P** **12 07 39.7 -0.6**
U49A PcP **PcP** **12 07 53.4 -1.6**
U49A IAmb IAmb 12 07 53.7
comp=Z,25nm,1.4s
MCWV **Mont Chateau** **74.25 44** P **P** **12 07 40.7 +0.3**
MCWV IAmb IAmb 12 07 41.7
comp=Z,13nm,0.8s
MCWV **Mont Chateau** **74.25 44** P 12 07 40.4
baz=327,SNR=5.1
T50A **Nancy** **74.26 49** P **P** **12 07 40.6 +0.2**
T50A IAmb IAmb 12 07 41.7
comp=Z,14nm,1.1s
O56A **Blue Knob Stat** **74.27 43** P **P** **12 07 41.0 +0.5**
O56A IAmb IAmb 12 07 41.5
comp=Z,20nm,0.8s
O56A **Blue Knob Stat** **74.27 43** P 12 07 40.3
baz=328,SNR=6.8
N57A **Milroy** **74.27 42** P 12 07 40.0
baz=326,SNR=12
H65A **Eastbrook** **74.29 34** P 12 07 40.3
baz=332
K61A **Williamstown** **74.29 38** P 12 07 40.1
baz=330
MLR **Muntele Rosu** **74.31 328** P **P** **12 07 41.2 +0.4**
comp=Z,22nm,0.6s,baz=281,slow=1.1,SNR=28
MLR **Muntele Rosu** **74.31 328** ⇑P **P** **12 07 41.6 +0.8**
MLR **Muntele Rosu** **74.31 328** P **P** **12 07 41.5 +0.8**
MLR pmax pmax
comp=Z,23nm,0.7s
MLR **Muntele Rosu** **74.31 328** P **P** **12 07 41.5 +0.8**
CLTN **Cedars of Leba** **74.33 50** P **P** **12 07 41.5 +0.6**
CLTN IAmb IAmb 12 07 42.4
comp=Z,23nm,1.2s
CLTN PcP **PcP** **12 07 53.4 -2.0**
GRA1 **Grafenberg Arr** **74.34 340** P **P** **12 07 41.3 +0.6**
GRF **Grafenberg Arr** **74.34 340** P **P** **12 07 41.3 +0.6**
GRF pmax pmax
comp=Z,41nm,0.8s
GRF **Grafenberg Arr** **74.34 340** *e*P **P** **12 07 41.6 +0.9**
comp=Z,50nm,0.9s,baz=20,slow=5.9
GRFO **Grafenberg** **74.34 340** P **P** **12 07 41.8 +1.1**
GRFO pmax pmax
comp=Z,39nm,0.8s
GRFO **Grafenberg** **74.34 340** P **P** **12 07 41.8 +1.1**
AHRW **Bad Neuenahr-A** **74.35 342** *e*P **P** **12 07 41.3 +0.5**
comp=Z,33nm,1.2s,baz=20,slow=5.9
KHC **Kasperske Hory** **74.35 338** *e*P **P** **12 07 41.4 +0.6**
KHC **Kasperske Hory** **74.35 338** *e*P **P** **12 07 41.4 +0.6**
KHC **Kasperske Hory** **74.35 338** P **P** **12 07 41.7 +0.9**
BEBN **Eben Emael** **74.35 343** *d*P **P** **12 07 41.1 +0.4**
HARR **Harsova** **74.37 327** ⇑P **P** **12 07 41.6 +0.7**
V48A **Smith Brothers** **74.39 51** P **P** **12 07 41.9 +0.7**
V48A PcP **PcP** **12 07 54.0 -1.7**
V48A IAmb IAmb 12 07 54.6
comp=Z,16nm,1.1s
Q54A **Coxs Mills** **74.40 45** P **P** **12 07 41.8 +0.6**
Q54A IAmb IAmb 12 07 42.6
comp=Z,26nm,1.4s
TNS **Taunus Mts** **74.40 341** *e*P **P** **12 07 41.4 +0.3**
comp=Z,24nm,0.9s,baz=20,slow=5.9
PLAL **Pickwick Lake** **74.41 52** P **P** **12 07 41.4 +0.1**
PLAL IAmb IAmb 12 07 54.5
comp=Z,16nm,1.1s
SRO **Srobarova** **74.42 334** *e*P **P** **12 07 42.8 +1.7**
SRO **Srobarova** **74.42 334** *e*P **P** **12 07 42.8 +1.7**
TIRR **Tirgusor** **74.42 326** P **P** **12 07 41.6 +0.4**
TIRR pmax pmax
comp=Z,68nm,1.1s
TIRR **Tirgusor** **74.42 326** P **P** **12 07 41.6 +0.4**
MCH1 **Michaelchurch** **74.43 349**⇑ *e*P **P** **12 07 41.1 0.0**
MCH1 IAmb IAmb 12 07 42.0
comp=Z,27nm,0.8s
M59A **Waymart** **74.44 40** P 12 07 40.6
baz=329
ISR **Istrita** **74.45 328** ⇓P **P** **12 07 42.4 +0.9**
ISR **Istrita** **74.45 328** P **P** **12 07 42.9 +1.4**
ISR pmax pmax
comp=Z,50nm,1.0s
R53A **Hurricane** **74.46 46** P **P** **12 07 41.8 +0.2**
R53A IAmb IAmb 12 07 54.9
comp=Z,24nm,1.1s
TLBR **Topalu** **74.46 326** ⇑P **P** **12 07 41.4 -0.1**
CKRC **Cesky Krumlov** **74.47 337** *e*P **P** **12 07 42.1 +0.6**
MEM **Membach** **74.48 343** *d*P **P** **12 07 42.0 +0.6**
comp=Z,60nm,1.0s
MEM **Membach** **74.48 343** P **P** **12 07 42.2 +0.7**
MEM pmax pmax
comp=Z,94nm,1.0s
BTNL **Ternell** **74.48 343** *d*P **P** **12 07 42.1 +0.6**
WET **Wettzell** **74.50 338** *e*P **P** **12 07 41.9 +0.2**
comp=Z,25nm,0.9s,baz=20,slow=5.9
I64A **Boothbay** **74.50 35** P 12 07 41.9
baz=332
L60A **Shokan** **74.52 39** P 12 07 41.9
baz=330
H66A **Whiting** **74.52 33** P 12 07 42.2
baz=333
BUD **Budapest** **74.53 334** P **P** **12 07 43.5 +1.7**
BUD pmax pmax
comp=Z,43nm,1.0s
N58A **Sunbury** **74.53 41** P **P** **12 07 42.0 +0.1**
N58A IAmb IAmb 12 07 42.2
comp=Z,12nm,0.8s
N58A **Sunbury** **74.53 41** P 12 07 41.8
baz=329
GRB1 **Grafenberg Arr** **74.53 339** P **P** **12 07 43.3 +1.4**
GRB1 pmax pmax
comp=Z,34nm,1.2s
STRD **Stroud** **74.55 349** *e*P **P** **12 07 42.1 +0.3**
UCC **Uccle** **74.57 344** P **P** **12 07 41.7 -0.3**
UCC pmax pmax
comp=Z,24nm,0.7s
UCC **Uccle** **74.57 344** P **P** **12 07 41.7 -0.3**
BSTI **Sart Tilman** **74.58 343** *d*P **P** **12 07 42.8 +0.8**
BSTI *d*PcP **PcP** **12 07 56.2 0.0**
GEC2 **GERESS Array S** **74.59 338** *e*P **P** **12 07 42.3 0.0**
comp=Z,25nm,1.2s,baz=20,slow=5.9
GERES **GERESS Array B** **74.59 338** P **P** **12 07 42.7 +0.4**
comp=Z,8.3nm,0.5s,baz=35,slow=6.1,SNR=66
GERES LR LR 12 44 09.5
comp=Z,107nm,21.8s,baz=58,slow=39
GERES **GERESS Array B** **74.59 338** P **P** **12 07 42.7 +0.4**
L61A **Hillsdale 1, H** **74.59 38** P 12 07 42.0
baz=330
VOIR **74.64 329** ⇑P **P** **12 07 43.5 +0.9**
VOIR **74.64 329** P **P** **12 07 43.4 +0.8**
VOIR pmax pmax
comp=Z,32nm,0.8s
O57A **Amberson** **74.70 42** P 12 07 42.9
baz=328,SNR=5.2
BHOU **Houvegnez** **74.72 343** *d*P **P** **12 07 43.8 +0.8**
BCLA **Clavier** **74.78 344** xP **P** **12 07 44.0 +0.7**
BCLA *dx* x 12 07 48.8
BCLA *d*PcP **PcP** **12 07 54.7 -2.4**
P56A **Dayton Farm, R** **74.80 43** P 12 07 43.7
baz=328,SNR=14
ARR **Arges** **74.83 329** ⇑P **P** **12 07 44.5 +0.8**
N59A **State Game Lan** **74.84 40** P **P** **12 07 43.5 -0.3**
N59A IAmb IAmb 12 08 11.2
comp=Z,36nm,1.4s
N59A **State Game Lan** **74.84 40** P 12 07 43.4
baz=329
BGES **Gesves** **74.85 344** *d*P **P** **12 07 43.8 +0.1**
SNF **Seneffe** **74.87 344** *d*P **P** **12 07 43.5 -0.2**
comp=Z,26nm,0.8s
WOL **Wolverton** **74.89 348** *e*P **P** **12 07 43.8 0.0**
K63A **Dunstable** **74.91 37** P 12 07 43.7
baz=331
CONA **Conrad Observa** **74.93 336** *i* P **P** **12 07 45.5 +1.2**
comp=Z,20nm,0.6s,SNR=18
M60A **Port Jervis** **74.93 39** P 12 07 43.9
baz=330
DZM **Mont Dzumac** **74.94 174** LR LR 12 36 06.0
comp=Z,95nm,20.0s,baz=23,slow=32
BMRD **Maredsous** **74.98 344** *d*P **P** **12 07 44.8 +0.4**
comp=Z,35nm,1.0s
SOP **Sopron** **74.99 335** P **P** **12 07 44.5 0.0**
SOP pmax pmax
comp=Z,34nm,0.7s
R54A **Victor** **75.00 45** P 12 07 44.7
baz=327
LOT **Lotru** **75.02 330** ⇓P **P** **12 07 45.1 +0.2**
Q56A **Snyder Ridge,** **75.05 44** P 12 07 45.1
baz=328
RCHB **Rochefort** **75.05 343** *d*P **P** **12 07 45.4 +0.7**
HRV **Adam Dziewonsk** **75.06 37** P 12 07 44.3
baz=331
O58A **Lewisberry** **75.06 42** P 12 07 44.8
baz=329,SNR=5.5
N60A **Cedar Hill Far** **75.14 40** P 12 07 44.9
baz=329
P57A **Homestead Farm** **75.16 43** P 12 07 45.3
baz=328
GIVF **Givet** **75.17 344** *e*P **P** **12 07 44.9 -0.6**
GIVF pmax pmax
comp=Z,25nm,0.9s
S54A **Dingess, Beckl** **75.18 46** P 12 07 45.9
baz=327
O59A **Robesonia** **75.19 41** P 12 07 45.3
baz=329
DOU **Dourbes** **75.21 344** *d*P **P** **12 07 45.9 +0.2**
DOU *d*PcP **PcP** **12 07 58.6 -0.4**
DOU **Dourbes** **75.21 344** P **P** **12 07 46.2 +0.5**
DOU pmax pmax
comp=Z,32nm,0.9s
SWET **Sewanee** **75.23 51** P **P** **12 07 46.3 +0.1**
SWET IAmb IAmb 12 07 59.6
comp=Z,19nm,0.9s
M61A **Granite Spring** **75.28 39** P 12 07 46.0
baz=330
R55A **Marlinton** **75.29 45** P **P** **12 07 46.7 +0.2**
R55A IAmb IAmb 12 07 47.8
comp=Z,12nm,0.8s
R55A **Marlinton** **75.29 45** P 12 07 46.7
baz=328
BAIF **Baives** **75.31 344** *e*P **P** **12 07 45.9 -0.4**
BAIF pmax pmax
comp=Z,25nm,0.7s
GZR **Gura Zlata** **75.37 330** ⇑P **P** **12 07 46.9 0.0**
Q57A **Strasburg** **75.37 43** P 12 07 46.8
baz=328
MOA **Molln** **75.39 337** *i* P **P** **12 07 47.6 +0.7**
comp=Z,10nm,0.7s,SNR=6.4
MVL **Millersville** **75.39 41** P **P** **12 07 47.1 +0.1**
V51A **Loudon** **75.48 49** P **P** **12 07 47.7 +0.2**
V51A IAmb IAmb 12 07 48.8
comp=Z,21nm,1.1s
V51A **PcP** **12 07 60.0 -0.4**
PAL **Palisades** **75.48 39** P 12 07 47.0
baz=330
R56A **Bull Pasture M** **75.49 44** P 12 07 47.6
baz=328
O60A **Telford** **75.50 41** P 12 07 47.1
baz=329
BZS **Buzias** **75.51 331** ⇑P **P** **12 07 47.4 -0.1**
BZS **Buzias** **75.51 331** P **P** **12 07 47.9 +0.4**
BZS pmax pmax
comp=Z,32nm,1.0s
W50A **Signal Mountai** **75.53 50** P **P** **12 07 48.3 +0.4**
W50A IAmb IAmb 12 07 49.0
comp=Z,15nm,0.9s
W50A **PcP** **12 08 00.4 -0.2**
ARSA **Arzberg** **75.65 336** *i* P **P** **12 07 49.6 +1.3**
comp=Z,16nm,0.6s,SNR=11
CPCT **Cooper Cave** **75.69 49** P **P** **12 07 49.0 +0.3**
CPCT **PcP** **12 08 01.3 0.0**
CPCT IAmb IAmb 12 08 01.9
comp=Z,16nm,1.0s
P59A **Jarrettsville** **75.69 42** P 12 07 48.5
baz=329
SDMD **Soldier's Deli** **75.70 42** P **P** **12 07 48.8 +0.1**
SDMD IAmb IAmb 12 07 49.6
comp=Z,7.7nm,0.7s
Q58A **Fox Den Farm,** **75.75 43** P 12 07 48.9
baz=328,SNR=8.3
MARD **Mardin** **75.78 314** P **P** **12 07 49.8 +0.4**
MORH **Mrgy, Hungar** **75.80 333** ⇑P **P** **12 07 49.1 -0.1**
MORH **Mrgy, Hungar** **75.80 333** *e*P **P** **12 07 49.1 -0.1**
P60A **Greenville** **75.84 41** P 12 07 49.5
baz=329
M63A **Gales Ferry** **75.84 38** P 12 07 48.9
baz=331
Z47A **Carrollton** **75.86 53** P **P** **12 07 49.9 +0.2**
Z47A **PcP** **12 08 02.4 +0.3**
Z47A IAmb IAmb 12 08 03.5
comp=Z,20nm,1.0s
WRAB **Tennant Creek** **75.93 205** *c* *e*P **P** **12 07 50.3 +0.2**
WRAB pmax pmax
comp=Z,10.0nm,0.8s
WRAB **Tennant Creek** **75.93 205** P **P** **12 07 50.7 +0.6**
WRAB IAmb IAmb 12 07 51.5
comp=Z,12nm,1.0s
WRAB **PcP** **12 08 03.0 +0.7**
FPAL **Fort Paine** **75.94 51** P **P** **12 07 50.0 -0.2**
FPAL **PcP** **12 08 02.9 +0.5**
FPAL IAmb IAmb 12 08 03.9
comp=Z,19nm,1.0s
WRA **Warramunga Arr** **75.94 205** P **P** **12 07 50.5 +0.4**
comp=Z,6.7nm,0.8s,baz=20,slow=6.0,SNR=36
WRA **Warramunga Arr** **75.94 205** P **P** **12 07 50.5 +0.4**
HERR **Herculane** **75.94 330** ⇓P **P** **12 07 50.0 0.0**
R57A **Stanardsville** **75.95 44** P 12 07 50.5
baz=328
U54A **Nelsons Funny** **76.02 47** P **P** **12 07 51.3 +0.6**
U54A IAmb IAmb 12 07 52.0
comp=Z,9.7nm,0.7s
U54A **Nelsons Funny** **76.02 47** P 12 07 50.9
baz=327
S56A **Natural Bridge** **76.03 45** P 12 07 50.8
baz=328
BLA **Blacksburg** **76.06 46** P **P** **12 07 51.2 +0.3**
BLA pmax pmax
comp=Z,13nm,0.8s
BLA **Blacksburg** **76.06 46** P **P** **12 07 51.2 +0.3**
BLA IAmb IAmb 12 07 52.0
comp=Z,13nm,0.8s
BLA **Blacksburg** **76.06 46** P 12 07 50.7
baz=328
DYA **Yadsworthy** **76.07 349**⇑ *e*P **P** **12 07 50.6 0.0**
DYA IAmb IAmb 12 07 51.4
comp=Z,66nm,0.8s
Y49A **Blount Mountai** **76.12 52** P **P** **12 07 51.5 +0.3**
Y49A IAmb IAmb 12 07 52.1
comp=Z,13nm,1.1s
R58A **Rapidan** **76.17 43** P 12 07 51.0
baz=328
S57A **Dark Hollow, R** **76.22 44** P 12 07 52.2
baz=328
BFO **Black Forest** **76.23 341** P **P** **12 07 50.8 -0.8**
BFO pmax pmax
comp=Z,26nm,1.2s
BFO **Black Forest** **76.23 341** P **P** **12 07 50.8 -0.8**
BFO IAmb IAmb 12 07 53.1
comp=Z,26nm,1.2s
BFO **Black Forest** **76.23 341** *e*P **P** **12 07 51.9 +0.3**
comp=Z,25nm,1.2s,baz=20,slow=5.9
Q59A **Harwood** **76.24 42** P 12 07 51.8
baz=329
MDVR **Moldovita** **76.24 331** ⇓P **P** **12 07 51.7 -0.1**
W52A **Murphy** **76.26 49** P **P** **12 07 52.0 0.0**

W52A IAmb IAmb 12 08 06.0
comp=Z,11nm,1.0s
SOKA Soboth 76.30 336 *i* P **P** **12 07 53.0 +0.8**
comp=Z,23nm,0.5s,SNR=27
PERS Pernice 76.32 336 *i* P **P** **12 07 52.8 +0.6**
KBA Koelnbreinsper 76.33 337 *i* P **P** **12 07 53.6 +1.2**
comp=Z,100nm,0.8s,SNR=82
KBA Koelnbreinsper 76.33 337 P **P** **12 07 53.7 +1.2**
KBA pmax pmax
comp=Z,132nm,0.9s
GROS Grobnik 76.39 336 *i* P **P** **12 07 53.0 +0.3**
FRGS Fruska Gora 76.45 332 ⇑P **P** **12 07 53.5 +0.6**
FRGS Fruska Gora 76.45 332 ⇑*i*P **P** **12 07 52.9 0.0**
UBR Ueberruh 76.48 340 *e*P **P** **12 07 53.6 +0.5**
comp=Z,35nm,1.2s,baz=20,slow=5.9
WATA Walderalm 76.49 338 *i* P **P** **12 07 54.4 +1.1**
comp=Z,15nm,0.6s,SNR=9.5
R58B Mineral 76.50 43 P **P** **12 07 53.9 +0.6**
R58B IAmb IAmb 12 07 54.6
comp=Z,25nm,1.3s
R58B Mineral 76.50 43 P 12 07 53.1
baz=328
LRAL Lakeview Retre 76.51 53 P 12 07 53.4
baz=325
RETA Reutte 76.53 339 *i* P **P** **12 07 54.5 +1.1**
comp=Z,23nm,1.2s,SNR=6.9
WTTA Wattenberg 76.55 338 *i* P **P** **12 07 55.1 +1.4**
comp=Z,37nm,1.0s,SNR=15
WTTA Wattenberg 76.55 338 P **P** **12 07 55.2 +1.6**
WTTA pmax pmax
comp=Z,39nm,1.2s
ECH Echery 76.57 342 P **P** **12 07 53.7 +0.2**
ECH pmax pmax
comp=Z,24nm,0.9s
ECH Echery 76.57 342 P **P** **12 07 53.6 +0.2**
ECH IAmb IAmb 12 07 55.0
comp=Z,24nm,0.9s
OBKA Obir 76.58 336 *i* P **P** **12 07 54.8 +1.1**
comp=Z,17nm,0.6s,SNR=15
MOTA Mooosalm 76.59 339 *i* P **P** **12 07 54.9 +1.1**
comp=Z,48nm,1.2s,SNR=16
PLVB Pleven 76.61 328 ⇓P **P** **12 07 53.5 -0.3**
R59A King George, V 76.62 43 P 12 07 54.0
baz=329
BR131 Keskin Array S 76.66 320⇑*e*P **P** **12 07 53.6 -0.8**
BRTR Keskin Array B 76.66 320 P **P** **12 07 54.0 -0.4**
comp=Z,12nm,1.1s,baz=40,slow=3.0,SNR=18
BRTR Keskin Array B 76.66 320 P **P** **12 07 54.0 -0.4**
SQTA Sankt Quirin 76.68 339 *i* P **P** **12 07 55.7 +1.4**
comp=Z,41nm,1.0s,SNR=10
MYKA Terra Mystica 76.69 337 *i* P **P** **12 07 55.1 +0.8**
comp=Z,19nm,1.0s,SNR=7.2
S58A Poland Farm, P 76.73 44 P 12 07 53.9
baz=328
SLE Schleitheim 76.74 341 P **P** **12 07 55.1 +0.6**
SLE pmax pmax
comp=Z,19nm,1.0s
T57A Hurt 76.74 45 P **P** **12 07 54.5 -0.2**
FITZ Fitzroy Crossi 76.75 213 P **P** **12 07 55.8 +1.1**
FITZ IAmb IAmb 12 07 56.9
comp=Z,17nm,1.1s
BG3 Lake Jocassee 76.80 49 P **P** **12 07 55.4 +0.4**
BG3 IAmb IAmb 12 07 56.4
comp=Z,7.9nm,0.8s
ABTA Abfaltersbach 76.84 338 *i* P **P** **12 07 55.9 +0.8**
comp=Z,41nm,0.9s,SNR=20
ANTO Ankara 76.86 321 P **P** **12 07 55.9 +0.5**
ANTO pmax pmax
comp=Z,23nm,1.1s
ANTO Ankara 76.86 321 P **P** **12 07 55.9 +0.5**
ANTO IAmb IAmb 12 07 57.2
comp=Z,23nm,1.1s
DAVA Damuels 76.91 340 *i* P **P** **12 07 56.8 +1.1**
comp=Z,24nm,1.0s,SNR=8.0
ZOU Zoufplan 76.91 337 P **P** **12 07 55.5 -0.2**
ZOU IAmb IAmb 12 07 57.8
comp=Z,28nm,1.5s
HAU Haudompre 76.92 342 *e*P **P** **12 07 55.0 -0.5**
HAU pmax pmax
comp=Z,23nm,0.8s
MDUB Mudurnu 76.93 322 P **P** **12 07 54.7 -1.1**
FETA Feichten 76.98 339 *i* P **P** **12 07 57.3 +1.2**
comp=Z,34nm,0.9s,SNR=10
CRES Cresnjev 76.99 335⇑*i*P **P** **12 07 56.0 0.0**
HINF Hinteralfeld 77.01 342 *e*P **P** **12 07 55.3 -0.7**
HINF pmax pmax
comp=Z,12nm,0.9s
JLP Les Platons 77.03 348⇑*e*P **P** **12 07 56.4 +0.3**
JQE Queens East 77.06 348⇑*e*P **P** **12 07 56.4 +0.2**
JVM Valle D.L. Mar 77.07 348⇑*e*P **P** **12 07 56.6 +0.3**
TEKS Tekeris 77.09 332 *e*P **P** **12 07 56.6 +0.1**
JSA Saint Aubin 77.09 348⇑*e*P **P** **12 07 55.7 -0.7**
JSA IAmb IAmb 12 07 56.3
comp=Z,57nm,0.8s
T58A Grand View Acr 77.09 44 P 12 07 56.3
baz=328
S60A Water View 77.23 43 P 12 07 56.9
baz=329
FLN La Foliniere 77.29 347 *e*P **P** **12 07 56.7 -0.8**
FLN pmax pmax
comp=Z,48nm,0.9s
BOVS Bovan 77.29 330 ⇑P **P** **12 07 57.5 -0.1**
CEY Cerknica 77.33 336 *e*P **P** **12 07 57.1 -0.8**
DIVS Divibare 77.37 332 *e*P **P** **12 07 57.9 -0.3**
DIVS Divibare 77.37 332 P **P** **12 07 57.6 -0.5**
DAVOX Davos/Dischmat 77.39 339 P **P** **12 07 58.7 +0.3**
comp=Z,15nm,0.6s,baz=354,slow=4.5,SNR=21
DAVOX Davos/Dischmat 77.39 339 P **P** **12 07 58.7 +0.3**
KMSC Kings Mountain 77.39 47 P 12 07 58.3
baz=327
GBRS Gornja Briga 77.43 336 *i* P **P** **12 07 58.7 +0.3**
BLY Banja Luka 77.55 334 *e*P **P** **12 07 58.3 -0.7**
CLF Chambon-Foret 77.60 345 P **P** **12 07 59.0 -0.3**
HAPS Han Pijesak,BI 77.67 332 *e*P **P** **12 07 58.9 -1.0**
CTI Castel Tesino 77.70 338 P **P** **12 07 59.8 -0.2**
CTI pmax pmax
comp=Z,28nm,1.0s
CTI Castel Tesino 77.70 338 P **P** **12 07 59.8 -0.2**
GRR Gorron 77.70 347 *e*P **P** **12 07 59.3 -0.5**
GRR pmax pmax
comp=Z,44nm,0.7s
HODGE Hodges 77.74 49 P **P** **12 08 00.9 +0.6**
HODGE IAmb IAmb 12 08 01.5
comp=Z,12nm,1.0s
PLD Plovdiv 77.74 328 P **P** **12 08 00.5 +0.4**
PLD pmax pmax
comp=Z,5.0nm,0.9s
VTS Vitosha 77.74 329 ⇓P **P** **12 08 00.7 +0.3**
VTS Vitosha 77.74 329 P **P** **12 08 00.5 +0.1**
VTS pmax pmax
comp=Z,33nm,1.0s
VTS Vitosha 77.74 329 P **P** **12 08 00.5 +0.1**
BBLS Lazići 77.75 332⇑*i*P **P** **12 08 00.5 +0.2**
PALK Pallekele 77.76 266 LR LR 12 48 55.9
comp=Z,35nm,18.0s,baz=153,slow=41
PALK Pallekele 77.76 266*c i*P **P** **12 08 00.2 -0.5**
PALK pmax pmax
comp=Z,41nm,0.9s
PALK Pallekele 77.76 266 P **P** **12 08 00.7 0.0**
TUE Stuetta 77.80 340 P **P** **12 08 01.6 +0.9**
V58A Windy Hill, Pi 77.82 46 P **P** **12 08 01.3 +0.7**
V58A IAmb IAmb 12 08 14.2
comp=Z,19nm,1.1s
GOGA Godfrey 77.87 50 P 12 08 00.3
baz=327
MGRS Mrkonjic Grad 77.88 334 *e*P **P** **12 08 02.1 +1.1**
W57A Gilead 77.97 46 P **P** **12 08 01.8 +0.2**
W57A IAmb IAmb 12 08 02.5
comp=Z,8.1nm,0.8s
RUDO Rudo 77.99 332 *e*P **P** **12 08 01.3 -0.2**
SGMF Saint Gilles 78.06 348 *e*P **P** **12 08 01.3 -0.5**
SGMF pmax pmax
comp=Z,59nm,0.7s
ROSF Rostrenen 78.06 349 *e*P **P** **12 08 02.3 +0.4**
BIRD Birdtown, Kers 78.20 47 P **P** **12 08 03.5 +0.6**
BIRD IAmb IAmb 12 08 03.9
comp=Z,13nm,1.0s
UOSS Minazif 78.26 296 P **P** **12 08 02.3 -1.0**
UOSS IAmb IAmb 12 08 02.3
comp=Z,9.3nm,0.6s
WSAR Wadi Sarin 78.28 293 P **P** **12 08 03.4 0.0**
comp=Z,4.2nm,0.5s,baz=6.0,slow=2.0,SNR=15
SENIN Lac Senin/Sane 78.31 341 P **P** **12 08 03.8 +0.3**
SENIN IAmb IAmb 12 08 08.2
comp=Z,17nm,0.9s
TEOL Teolo 78.34 338 P **P** **12 08 03.8 +0.3**
SALO Salr 78.35 339 P **P** **12 08 03.8 +0.2**
ALN Alexandroupoli 78.38 326 P **P** **12 08 04.2 +0.5**
ALN pmax pmax
comp=Z,47nm,1.2s
ALN Alexandroupoli 78.38 326 P **P** **12 08 03.6 -0.1**
UPM Unac-Piva 78.50 332 *e*P **P** **12 08 04.3 -0.3**
AVF Avril sur Loir 78.62 344 *e*P **P** **12 08 04.6 -0.4**
AVF pmax pmax
comp=Z,38nm,0.8s
BRY Bratogost 78.88 332 *e*P **P** **12 08 05.9 -0.8**
SKO Skotopje 78.89 330 *i* P **P** **12 08 07.1 +0.6**
STIP Stip 78.91 329 *i* P **P** **12 08 06.2 -0.5**
BGF Bois d'Agland 78.93 344 *e*P **P** **12 08 06.4 -0.3**
BGF pmax pmax
comp=Z,16nm,0.6s
SRS Serrai 78.99 328 P **P** **12 08 07.5 +0.4**
SRS pmax pmax
comp=Z,61nm,1.0s
TREB Trebinje 79.11 332 *e*P **P** **12 08 06.6 -1.1**
PDG Podgorica 79.11 331 ⇓P **P** **12 08 07.9 +0.2**
PDG Podgorica 79.11 331⇑*i*P **P** **12 08 07.4 -0.3**
PDG Podgorica 79.11 331 P **P** **12 08 07.7 0.0**
VAY Valandovo 79.13 329 *i* P **P** **12 08 08.5 +0.7**
KNT Kendrikon 79.17 328 P **P** **12 08 08.5 +0.4**
KNT pmax pmax
comp=Z,53nm,1.0s
LPL La Plagne 79.24 341 *e*P **P** **12 08 09.2 +0.5**
LPL pmax pmax
comp=Z,60nm,0.8s
LPG La Plagne 79.25 341 *e*P **P** **12 08 09.4 +0.6**
LPG pmax pmax
comp=Z,63nm,0.7s
TCF Toulx Ste Croi 79.30 344 *e*P **P** **12 08 08.5 -0.2**
TCF pmax pmax
comp=Z,30nm,0.8s
HCY Herceg Novi 79.31 332 *e*P **P** **12 08 08.1 -0.7**
SOH Sokhos 79.33 328 P **P** **12 08 09.2 +0.2**
SOH pmax pmax
comp=Z,10.0nm,1.3s
DRME Dracevica, Mon 79.36 331⇑*i*P **P** **12 08 08.8 -0.3**
ZCCA Zocca 79.46 338 P **P** **12 08 09.9 +0.3**
GRG Griva 79.51 329 P **P** **12 08 10.6 +0.6**
GRG pmax pmax
comp=Z,52nm,1.2s
ASAR Alice Springs 79.61 204 P **P** **12 08 11.7 +1.1**
comp=Z,6.8nm,0.6s,baz=16,slow=5.3,SNR=137
ASAR Alice Springs 79.61 204 P **P** **12 08 11.7 +1.1**
BNI Bardonecchia 79.70 341 P **P** **12 08 11.9 +0.9**
BNI pmax pmax
comp=Z,23nm,0.8s
BNI Bardonecchia 79.70 341 P **P** **12 08 11.9 +0.9**
BNI IAmb IAmb 12 08 13.5
comp=Z,23nm,0.8s
VLC Villacollemand 79.77 338 P **P** **12 08 12.6 +1.3**
VLC IAmb IAmb 12 08 13.5
comp=Z,23nm,0.8s
MSSA Maissana 79.81 339 P **P** **12 08 11.5 -0.2**
OHR Ohrid 79.87 330 *i* P **P** **12 08 12.0 +0.1**
SSB Saint Sauveur 79.88 343 P **P** **12 08 12.8 +0.9**
SSB pmax pmax
comp=Z,29nm,0.6s
SSB Saint Sauveur 79.88 343 P **P** **12 08 12.8 +0.9**
TIR Tirane 79.93 331 P **P** **12 08 12.7 +0.5**
TIR pmax pmax
comp=Z,90nm,1.0s
ORIF Oris-en-Rattie 79.98 342 P **P** **12 08 14.1 +1.6**
ORIF pmax pmax
comp=Z,63nm,1.1s
FNA Florina 79.99 329 P **P** **12 08 12.3 -0.3**
FNA pmax pmax
comp=Z,27nm,0.9s
FNA Florina 79.99 329 P **P** **12 08 12.3 -0.3**
FNA IAmb IAmb 12 08 13.2
comp=Z,27nm,0.9s
MBDF Montbardon 79.99 341 *e*P **P** **12 08 13.2 +0.5**
MBDF pmax pmax
comp=Z,20nm,0.7s
MURB Monte Urbino 80.12 336 P **P** **12 08 14.4 +1.1**
OSSC Osservatorio P 80.18 337 P **P** **12 08 13.3 -0.2**
OSSC IAmb IAmb 12 08 14.7
comp=Z,22nm,1.1s
LIT Litokhoron 80.26 328 P **P** **12 08 13.1 -0.9**
LIT pmax pmax
comp=Z,17nm,0.8s
LIT Litokhoron 80.26 328 P **P** **12 08 13.1 -0.9**
LIT IAmb IAmb 12 08 14.0
comp=Z,17nm,0.8s
VIVF Saint-Julien-l 80.27 342 *e*P **P** **12 08 14.4 +0.4**
VIVF pmax pmax
comp=Z,50nm,0.9s
RJF Les Rejaudoux 80.37 345 *e*P **P** **12 08 14.6 +0.1**
RJF pmax pmax
comp=Z,14nm,0.7s
NRCA Norcia 80.38 336 P **P** **12 08 15.7 +1.0**
ISO Isola 80.46 341 P **P** **12 08 16.4 +1.3**
ISO pmax pmax
comp=Z,20nm,0.9s
SAOF Saorge 80.54 340 P **P** **12 08 15.9 +0.4**
SAOF pmax pmax
comp=Z,29nm,1.0s
CAF Calviac 80.65 344 *e*P **P** **12 08 16.5 +0.5**
CAF pmax pmax
comp=Z,32nm,0.8s
ELL Elmali 80.68 321 P **P** **12 08 16.6 +0.1**
ELL pmax pmax
comp=Z,135nm,1.2s
ELL Elmali 80.68 321 P **P** **12 08 16.6 +0.1**
SBF Sospel 80.69 340 *e*P **P** **12 08 16.7 +0.4**
SBF pmax pmax
comp=Z,33nm,0.9s
SGRT San Giovanni R 80.72 334 P **P** **12 08 16.3 -0.3**
LFF La Frestale 80.85 345 *e*P **P** **12 08 17.3 +0.3**
LFF pmax pmax
comp=Z,38nm,0.8s
CSS Mathiatis 80.91 318 P **P** **12 08 17.7 +0.1**
INTR Introdacqua 80.96 335 P **P** **12 08 18.0 +0.2**
FRF La Foret Royal 81.14 341 *e*P **P** **12 08 18.7 +0.1**
FRF pmax pmax
comp=Z,17nm,0.9s
SCTE Santa Cesarea 81.52 331 P **P** **12 08 20.8 +0.1**
PGF Pioggiola 81.61 339 *e*P **P** **12 08 20.5 -0.8**
PGF pmax pmax
comp=Z,20nm,0.9s
PAOL Paolisi 81.71 334 P **P** **12 08 21.8 0.0**
MMAI Mount Meron Ar 81.74 316 P **P** **12 08 22.6 +0.5**
comp=Z,27nm,0.5s,baz=34,slow=6.2,SNR=51
PPT2 Papeete2 82.65 132 *e*LR LR 12 34 30.4
comp=Z,192nm,25.0s,baz=325
EPF Esparros 82.77 345 *e*P **P** **12 08 27.1 -0.2**
EPF pmax pmax
comp=Z,33nm,1.1s
TIP Timpagrande 82.84 332 ⇓P **P** **12 08 28.6 +0.9**
TIP Timpagrande 82.84 332 P **P** **12 08 28.1 +0.4**
ETSF Etsaut 83.04 346 *e*P **P** **12 08 29.3 +0.6**
ETSF pmax pmax
comp=Z,41nm,0.7s
ITM Ithomi 83.10 327 P **P** **12 08 27.8 -1.2**
VSL Villasalto 84.44 338 P **P** **12 08 34.7 -1.1**
DOK Doka 84.47 294 P **P** **12 08 36.0 -0.3**
SNR=6.3
EIL Elat 84.82 314 P **P** **12 08 37.9 0.0**
comp=Z,33nm,0.9s,baz=349,slow=4.4,SNR=17
PGAV Gavieira, Arco 84.89 351 *e*P **P** **12 08 39.5 +1.3**
comp=Z,33nm,1.1s
PBRG Braganca 84.90 350 *e*P **P** **12 08 39.2 +1.0**
comp=Z,33nm,0.9s
CORL Corleone 84.98 334 P **P** **12 08 38.1 -0.5**
RAYN Ar Rayn 85.05 303 P **P** **12 08 38.4 -0.8**
RAYN pmax pmax
comp=Z,40nm,0.8s
RAYN Ar Rayn 85.05 303 P **P** **12 08 38.4 -0.8**
PCAB Cabril 85.12 351 *e*P **P** **12 08 39.7 +0.4**
comp=Z,25nm,0.9s
WHFO Wadi Hawf 85.24 293 P **P** **12 08 39.0 -1.2**
SNR=42
RAFF Raffo Rosso 85.33 333 P **P** **12 08 39.6 -0.8**
POLO Lamas de Olo 85.43 351 *e*P **P** **12 08 41.7 +0.8**
comp=Z,18nm,1.1s
PVRL Vita Real 85.52 351 *e*P **P** **12 08 42.2 +0.9**
comp=Z,58nm,1.0s
MVO Moncorvo 85.56 350 *e*P **P** **12 08 42.2 +0.7**
comp=Z,61nm,1.0s
PTO Porto 85.74 351 *e*P **P** **12 08 43.2 +0.9**
comp=Z,35nm,0.9s
ABTO Aybut 85.96 293 P **P** **12 08 43.0 -0.8**
SNR=5.6
STKA Stephens Creek 86.00 196 P **P** **12 08 44.6 +1.3**
comp=Z,6.0nm,0.8s,baz=350,slow=8.3,SNR=14
STKA Stephens Creek 86.00 196⇓*e*P **P** **12 08 44.5 +1.1**
PVIS Viseu 86.09 351 *e*P **P** **12 08 44.8 +0.7**
comp=Z,30nm,0.9s
MTE Manteigas 86.37 350 *e*P **P** **12 08 46.2 +0.7**
comp=Z,35nm,0.7s
MTE Manteigas 86.37 350 P **P** **12 08 45.8 +0.3**
COI Coimbra 86.65 351 P **P** **12 08 47.6 +0.9**
COI pmax pmax
comp=Z,39nm,0.8s
COI Coimbra 86.65 351 *e*P **P** **12 08 48.1 +1.3**
comp=Z,45nm,0.6s
COI Coimbra 86.65 351 P **P** **12 08 47.6 +0.9**
ESDC Sonseca Array 86.68 348 P **P** **12 08 47.5 +0.5**
comp=Z,28nm,1.0s,baz=2.0,slow=4.6,SNR=96
ESDC LR LR 12 51 20.0
comp=Z,22nm,18.9s,baz=0.0,slow=38
PCAS Casmilo, Conde 86.81 351 *e*P **P** **12 08 48.3 +0.7**
comp=Z,43nm,0.7s
PAB San Pablo 86.86 348 P **P** **12 08 48.2 +0.3**
PAB pmax pmax
comp=Z,15nm,0.9s
PAB San Pablo 86.86 348 P **P** **12 08 48.2 +0.3**
PCBR Castelo Branco 86.92 350 *e*P **P** **12 08 48.3 +0.2**
comp=Z,25nm,1.0s
PMRV Marv??o 87.32 350 *e*P **P** **12 08 51.0 +0.9**
PSBE So Bento 87.37 351 *e*P **P** **12 08 51.4 +1.1**
comp=Z,37nm,0.9s
PMTG Montargil 87.76 351 *e*P **P** **12 08 52.0 -0.1**
comp=Z,12nm,1.1s
TBI Tubuai 87.76 135 *e*LR LR 12 36 35.6
comp=Z,127nm,23.5s,baz=334
TBI Tubuai 87.76 135 *e*T T 13 45 42.0
comp=Z,5.0nm,0.2s
KEST Kesra 88.03 336 P **P** **12 08 53.7 0.0**
comp=Z,14nm,0.8s,baz=268,slow=5.4,SNR=9.9
KEST LR LR 12 53 37.1
comp=Z,84nm,19.8s,baz=276,slow=39
EVO Evora 88.27 351 *e*P **P** **12 08 55.0 +0.4**
comp=Z,14nm,1.5s
PBAR Barrancos 88.52 350 *e*P **P** **12 08 56.1 +0.3**
comp=Z,23nm,1.4s
PNCL Nicolau / Gran 88.74 351 *e*P **P** **12 08 58.6 +1.8**
MESJ Messejana 88.98 351 *e*P **P** **12 08 57.6 -0.2**
MESJ IAmb IAmb 12 08 58.2
comp=Z,8.0nm,0.9s
MESJ Messejana 88.98 351 *e*P **P** **12 08 57.7 -0.2**
SOCY Socotra 89.75 290 P **P** **12 08 59.3 -2.7**
RPZ Rata Peaks 96.78 172 LR LR 12 45 18.9
comp=Z,43nm,21.4s,baz=62,slow=30
DBIC Dimbokro 119.20 343 PKP **PKiKP** **12 14 52.6 +0.2**
comp=Z,4.9nm,0.8s,baz=300,slow=3.5,SNR=4.5
DBIC Dimbokro 119.20 343 PKIKP **PKiKP** **12 14 52.6 +0.2**
DBIC Dimbokro 119.20 343 **PKiKP** **12 14 52.4 0.0**
LPAZ La Paz 127.58 64 PKP **PKiKP** **12 15 09.4 -0.2**
comp=Z,2.1nm,0.7s,baz=22,slow=5.6,SNR=9.7
LPAZ La Paz 127.58 64 PKIKP **PKPdf** **12 15 09.2 +0.1**
LPAZ La Paz 127.58 64 **PKPdf** **12 15 09.2 +0.1**
VNDA Vanda 130.23 179 PKP **PKPdf** **12 15 09.6 -1.9**
comp=Z,1.9nm,0.8s,baz=357,slow=4.9,SNR=13
VNDA Vanda 130.23 179 PKIKP **PKPdf** **12 15 09.6 -1.9**
CPUP Villa Florida 141.55 61 PKP **PKPdf** **12 15 34.2 +0.1**
comp=Z,1.2nm,0.5s,baz=334,slow=6.8,SNR=4.7
CPUP Villa Florida 141.55 61 PKIKP **PKPdf** **12 15 34.2 +0.1**
PLCA Paso Flores 144.09 91 PKP PKPbc 12 15 37.2 +0.8
comp=Z,5.5nm,0.7s,baz=301,slow=4.4,SNR=18
PLCA Paso Flores 144.09 91 PKIKP PKPbc 12 15 37.2 +0.8
SNAA Sanae 159.76 196 PKPab **PKPab** **12 16 39.4 -0.3**
SNAA Sanae 159.76 196 PKPdf **PKPdf** **12 15 59.5 -1.0**
VNA3 Neumayer Olymp 161.09 190 PKPab **PKPab** **12 16 44.9 -0.6**
VNA3 Neumayer Olymp 161.09 190 PKPdf **PKPdf** **12 16 02.1 +0.3**
VNA2 Neumayer--Watz 161.11 193 PKPab **PKPab** **12 16 45.3 -0.3**
baz=159,slow=3.1
VNA2 Neumayer--Watz 161.11 193 PKPdf **PKPdf** **12 16 04.2 +2.3**

IDC 10 11:56:28.9±2.0, 28°.90S×178°.36W, h123km±12km, mb3.3/3, mb1 3.5/3, mb1mx3.2/36, mbtmp3.7/3, Error ellipse: s-maj=80.4km s-min=28.7km az=38.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.52**	**132**	P	Pn	11 56 48.6	+1.3
	224nm,0.3s,baz=89,slow=12,SNR=9.6						
RAO				S	Sn	11 57 02.6	+1.4
	432nm,0.3s,baz=278,slow=22,SNR=12						
ASAR	**Alice Springs**	**42.89**	**265**	P	P	12 04 15.3	-0.1
	0.3nm,0.5s,baz=103,slow=6.7,SNR=15						
WRA	**Warramunga Arr**	**43.74**	**271**	P	P	12 04 22.1	-0.3
	0.5nm,0.3s,baz=109,slow=8.0,SNR=24						
QSPA	**South Pole Qui**	**61.20**	**180**	P	P	12 06 30.6	+0.1
	0.5nm,0.4s,baz=226,slow=2.4,SNR=8.1						
FINES	**FINESS Array B**	**143.63**	**340**	PKP	PKPbc	12 15 46.8	+0.5
	1.0nm,0.5s,baz=29,slow=3.2,SNR=7.6						

*MOS **10** 12:24:51.8±0.0, 43°.44N×45°.79E, h14km, MPVA3.4*
*TIF **10** 12:24:51.4, 43°.43N×45°.74E, h4km±1km*
*NORS **10** 12:24:52.0±0.0, 43°.44N×45°.80E, h17km, MPVA3.5*
ISC 10 12:24:53.6±1.3, 43°.43N±0°.06×45°.78E±0°.03, h15km±8km, n18, σ0°95/36, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.22**	**176**	*e*Pg	**Pg**	**12 24 58.8**	**+0.1**
GROC				*e*Sg	**Sb**	**12 25 04.3**	**+1.2**
DVE	**Vedeno**	**0.53**	**151**	*e*Pg	**Pg**	**12 25 03.0**	**-1.2**
DVE				*e*Sg	**Sb**	**12 25 12.0**	**-0.2**
DBC	**Dubki**	**0.87**	**117**	*e*Pg	**Pg**	**12 25 09.7**	**-0.8**
DBC				*e*Sg	**Sn**	**12 25 23.3**	**-0.5**
KRNR	**Karanay**	**1.02**	**125**	*e*Pg	**Pn**	**12 25 13.4**	**0.0**
KRNR				*e*Sg	**Sn**	**12 25 28.5**	**+1.0**
PRTR	**Priterechnaya**	**1.13**	**287**	*e*Pg	**Pg**	**12 25 15.3**	**-0.2**
PRTR				*e*Sg	**Sn**	**12 25 30.8**	**+0.7**
PNSH	**Pansheti**	**1.16**	**227**	P	**Pb**	**12 25 14.0**	**-1.5**
PNSH				S	**Sb**	**12 25 30.7**	**+0.4**
ARKR	**Arakani**	**1.22**	**132**	*i* Pg	**Pb**	**12 25 16.1**	**-0.1**
ARKR				*e*Sg	**Sn**	**12 25 34.3**	**+2.1**
LACR	**Lac**	**1.24**	**242**	*i* Pg	**Pn**	**12 25 15.5**	**-0.9**
LACR				*e*Sg	**Sb**	**12 25 32.6**	**+0.2**
STDR	**Stavd-Durt**	**1.25**	**268**	*e*Pg	**Pg**	**12 25 17.2**	**-0.5**
STDR				*e*Sg	**Sg**	**12 25 36.1**	**+2.1**
KORR	**Kora**	**1.29**	**255**	*e*Pg	**Pb**	**12 25 17.4**	**-0.2**
KORR				*e*Sg	**Sg**	**12 25 37.1**	**+1.7**
GUDG	**Gudauri**	**1.35**	**225**	P	**Pn**	**12 25 17.6**	**-0.5**
GUDG				S	**Sn**	**12 25 36.7**	**+0.8**
GNBR	**Gunib**	**1.35**	**139**	*e*Pg	**Pg**	**12 25 19.4**	**-0.3**
GNBR				*e*Sg	**Sg**	**12 25 38.4**	**+1.1**
LSNR	**Lesken**	**1.43**	**265**	*e*Pg	**Pb**	**12 25 19.6**	**-0.4**
LSNR				*e*Sg	**Sg**	**12 25 39.9**	**+0.2**
ZEI	**Tsey**	**1.51**	**246**	*e*Pg	**Pn**	**12 25 19.9**	**-0.4**
ZEI				*e*Sg	**Sn**	**12 25 39.9**	**+0.1**
LGD	**Lagodekhi**	**1.63**	**168**	P	**Pb**	**12 25 22.9**	**-0.4**
LGD				S	**Sg**	**12 25 45.4**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.69**	**253**	*e*Pg	**Pn**	**12 25 22.4**	**-0.3**
DIGR				*e*Sg	**Sb**	**12 25 45.6**	**0.0**
ONI	**Oni**	**1.90**	**245**	P	**Pb**	**12 25 26.8**	**-1.1**
ONI				S	**Sb**	**12 25 52.5**	**+1.1**
NEY	**Neytrino**	**2.23**	**267**	*e*Pg	**Pb**	**12 25 32.1**	**-1.6**
NEY				*e*Sg	**Sn**	**12 25 58.1**	**+0.6**

*WEL **10** 12:26:28.6±0.6, 35°.5S±5°.1×17°.9W±1°.0, h33km, M4.4/42, mB5.0/14, ML4.8/42, MLv4.6/42, Mw(mB)4.3/14, Error ellipse: s-maj=0.0km s-min=0.0km az=109.9*
*IDC **10** 12:26:31.3±7.9, 34°.79S×179°.52W, h85km±67km, mb3.9/3, mb1 4.1/4, mb1mx3.6/39, mbtmp4.2/4, ML3.9/1, Error ellipse: s-maj=63.3km s-min=47.4km az=5.0*
*NEIC **10** 12:26:31.9±1.4, 34°.5S±0°.1×179°.75E±0°.07, h35km±2km, mb4.3/9, ML4.4(WEL), Error ellipse: s-maj=18.4km s-min=8.9km az=193.0*
*NOU **10** 12:26:35.8, 34°.80S×179°.80E, h174km, mb4.3, South of Kermadec Islands*
ISC 10 12:26:27.2±1.0, 34°.53S±0°.06×179°.4W±0°.1, h61km, n93, σ1°81/96, mb4.3/7, South of Kermadec Islands

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

MXZ	**Matakaoa Point**	**3.57 211**	Pn	**Pn**	**12 27 21.3 +1.2**	
MXZ	**Matakaoa Point**	**3.57 211**	P	**Pn**	**12 27 24.3 +4.2**	
MXZ			S	**Sn**	**12 28 01.8 +0.8**	
WMGZ	**Waiomatatini S**	**3.75 208**	P	**Pn**	**12 27 25.4 +3.0**	
WMGZ			S	**Sn**	**12 28 07.3 +2.0**	
PKGZ	**Pakihiroa**	**3.94 211**	P	**Pn**	**12 27 27.2 +2.0**	
PKGZ			S	**Sn**	**12 28 09.2 -1.0**	
HAZ	**Te Kaha**	**3.97 215**	P	**Pn**	**12 27 28.0 +2.5**	
HAZ			S	**Sn**	**12 28 12.1 +1.4**	
PUZ	**Puketiti**	**4.03 208**	P	**Pn**	**12 27 28.3 +1.9**	
PUZ			S	**Sn**	**12 28 11.7 -0.5**	
RUGZ	**Raukumara Rang**	**4.18 214**	P	**Pn**	**12 27 31.0 +2.4**	
TWGZ	**Tauwhareparae**	**4.23 210**	P	**Pn**	**12 27 30.4 +1.2**	
TWGZ			S	**Sn**	**12 28 17.4 +0.2**	
CNGZ	**Carnagh Statio**	**4.41 206**	P	**Pn**	**12 27 33.9 +2.4**	
CNGZ			S	**Sn**	**12 28 22.6 +1.1**	
TKGZ	**Te Karaka**	**4.50 209**	P	**Pn**	**12 27 35.4 +2.5**	
TKGZ			S	**Sn**	**12 28 22.5 -1.5**	
MWZ	**Matawai**	**4.55 213**	P	**Pn**	**12 27 34.6 +1.1**	
MWZ			S	**Sn**	**12 28 25.0 -0.2**	
GRZ	**Great Barrier**	**4.57 246**	P	**Pn**	**12 27 34.3 +0.6**	
KUZ	**Kuaotunu**	**4.58 240**	P	**Pn**	**12 27 35.1 +1.2**	
URZ	**Urewera**	**4.69 216**	P	**Pn**	**12 27 36.3 +0.9**	
	6.6nm,0.3s,baz=301,slow=24,SNR=97					
URZ			S	**Sn**	**12 28 25.8 -2.6**	
	6.8nm,0.3s,baz=123,slow=22,SNR=1.5					
URZ	**Urewera**	**4.69 216**		**Pn**	**12 27 36.4 +1.0**	
URZ	**Urewera**	**4.69 216**	P	**Pn**	**12 27 36.2 +0.9**	
URZ			S	**Sn**	**12 28 26.6 -1.8**	
MARZ	**Manawahe**	**4.71 222**	P	**Pn**	**12 27 37.9 +2.2**	
RAGZ	**Rawiri**	**4.74 212**	P	**Pn**	**12 27 38.3 +2.2**	
PRGZ	**Paritu Road**	**4.91 206**	P	**Pn**	**12 27 39.6 +1.2**	
PRGZ			S	**Sn**	**12 28 34.1 +0.1**	
OMRZ	**Omania**	**4.96 223**	P	**Pn**	**12 27 42.7 +3.5**	
KARZ	**Kaharoa**	**4.98 224**	P	**Pn**	**12 27 42.5 +3.2**	
SNGZ	**Shannon Statio**	**5.01 211**	P	**Pn**	**12 27 41.7 +1.9**	
SNGZ			S	**Sn**	**12 28 35.1 -1.2**	
MUGZ	**Murupara**	**5.03 217**	P	**Pn**	**12 27 40.5 +0.5**	
RTZ	**Ruatahuna**	**5.03 215**	P	**Pn**	**12 27 41.2 +1.1**	
RRRZ	**Republican Roa**	**5.05 220**	P	**Pn**	**12 27 41.1 +0.7**	
KNZ	**Kokohu**	**5.08 207**	P	**Pn**	**12 27 40.7 0.0**	
KNZ			S	**Sn**	**12 28 32.8 -5.1**	
PRRZ	**Plateau Road**	**5.24 220**	P	**Pn**	**12 27 44.4 +1.5**	
TOZ	**Tahuroa Road**	**5.25 231**	P	**Pn**	**12 27 44.7 +1.7**	
MTHZ	**Maungataniwha**	**5.29 214**	P	**Pn**	**12 27 45.1 +1.5**	
ALRZ	**Alien Road**	**5.31 219**	P	**Pn**	**12 27 45.7 +1.8**	
WCZ	**Waipu Caves**	**5.34 253**	P	**Pn**	**12 27 44.8 +0.5**	
GLKZ	**Green Lake**	**5.39 14**	P	**Pn**	**12 27 44.6 -0.4**	
GLKZ			S	**Sn**	**12 28 44.9 -0.8**	
MRHZ	**Matea Rd**	**5.47 217**	P	**Pn**	**12 27 47.3 +1.1**	
NMHZ	**Naumai**	**5.50 213**	P	**Pn**	**12 27 48.2 +1.6**	
KUTZ	**Kaahu Road**	**5.54 223**	P	**Pn**	**12 27 50.2 +3.1**	
ARHZ	**Aropaoanui**	**5.56 211**	P	**Pn**	**12 27 48.5 +1.2**	
WHTZ	**Whakaora**	**5.59 221**	P	**Pn**	**12 27 48.8 +1.0**	
BKZ	**Black Stump Fm**	**5.70 214**		**Pn**	**12 27 48.6 -0.7**	
BKZ	**Black Stump Fm**	**5.70 214**	P	**Pn**	**12 27 49.1 -0.2**	
OUZ	**Omahuta**	**5.83 261**	P	**Pn**	**12 27 50.6 -0.4**	
MCHZ	**McNeill Hill**	**5.83 212**	P	**Pn**	**12 27 52.1 +1.0**	
RITZ	**Rihia Road**	**5.87 219**	P	**Pn**	**12 27 53.9 +2.3**	
KWHZ	**Kaweka Forest**	**5.94 213**	P	**Pn**	**12 27 53.3 +0.7**	
WTVZ	**West Tongariro**	**6.11 220**	P	**Pn**	**12 27 57.3 +2.3**	
HIZ	**Hauiti**	**6.12 228**	Pn	**Pn**	**12 27 52.6 -2.4**	
HIZ	**Hauiti**	**6.12 228**	P	**Pn**	**12 27 58.1 +3.1**	
KRHZ	**Kereru**	**6.16 213**	P	**Pn**	**12 27 55.6 +0.3**	
NGZ	**Ngauruhoe**	**6.15 220**	P	**Pn**	**12 27 57.1 +1.5**	
BHHZ	**Black Hill Sta**	**6.16 215**	P	**Pn**	**12 27 56.2 +0.6**	
TWVZ	**Taurewa**	**6.16 221**	P	**Pn**	**12 27 58.9 +3.3**	
MOVZ	**Moawhango**	**6.25 217**	P	**Pn**	**12 27 57.9 +1.1**	
MOVZ			P	**Pn**	**12 27 58.0 +1.3**	
PKVZ	**Pokaka**	**6.37 220**	P	**Pn**	**12 28 00.6 +2.1**	
PNHZ	**Pukenui**	**6.44 212**	P	**Pn**	**12 27 59.8 +0.4**	
WPHZ	**Waipukurau**	**6.46 210**	P	**Pn**	**12 28 00.2 +0.6**	
PRHZ	**Porangahau**	**6.55 208**	P	**Pn**	**12 28 00.3 -0.6**	
TSZ	**Takapari Road**	**6.66 213**	P	**Pn**	**12 28 03.3 +0.9**	
WAZ	**Wanganui**	**6.90 219**	P	**Pn**	**12 28 07.4 +1.8**	
NEZ	**North Egmont**	**7.06 226**	P	**Pn**	**12 28 10.6 +2.7**	
PRWZ	**Pori Road**	**7.07 210**	P	**Pn**	**12 28 09.4 +1.5**	
MRZ	**Mangatainoka R**	**7.32 212**	P	**Pn**	**12 28 10.4 -1.0**	
HOWZ	**Holdsworth Sta**	**7.54 211**	P	**Pn**	**12 28 13.1 -1.4**	
MTW	**Mount Morrison**	**7.77 210**	P	**Pn**	**12 28 16.2 -1.3**	
TUWZ	**Tuamarina**	**8.68 216**	Pn	**Pn**	**12 28 25.6 -3.5**	
NNZ	**Nelson**	**8.80 219**	Pn	**Pn**	12 28 26.9 -4.7	
QRZ	**Quartz Range**	**8.99 223**	Pn	**Pn**	**12 28 31.8 -2.4**	
THZ	**Tophouse**	**9.45 218**	Pn	**Pn**	**12 28 37.5 -3.0**	
KHZ	**Kahutara**	**9.64 213**	Pn	**Pn**	**12 28 42.7 -0.4**	
LTZ	**Lake Taylor**	**10.52 216**	Pn	**Pn**	**12 28 52.0 -3.1**	
OXZ	**Oxford**	**11.04 215**	Pn	Pn	12 28 57.7 -4.5	
MQZ	**McQueen's Vall**	**11.06 212**	Pn	**Pn**	**12 28 59.0 -3.5**	
RPZ	**Rata Peaks**	**11.81 216**	P	Pn	12 29 07.4 -5.3	
	0.6nm,0.3s,baz=18,slow=22,SNR=1.9					
RPZ			S	Sn	12 31 09.2 -14	
	0.8nm,0.3s,baz=151,slow=22,SNR=6.1					
RPZ	**Rata Peaks**	**11.81 216**		Pn	12 29 08.6 -4.1	
ODZ	**Otahua Downs**	**13.00 213**	Pn	Pn	12 29 23.7 -5.3	
KNTN	**Kanton**	**32.38 14**	P	P	12 33 01.1 +10	
XMAS	**Kiritimati**	**41.80 34**	P	P	12 34 20.7 +10	
ASAR	**Alice Springs**	**41.92 272**	P	**P**	**12 34 13.1 +1.0**	
	1.6nm,0.4s,baz=114,slow=7.9,SNR=25					
ASAR			PcP	**PcP**	**12 36 07.3 +0.6**	
	0.3nm,0.7s,baz=116,slow=4.4,SNR=2.0					
WR0	**Warramunga Arr**	**43.11 277**	P	**P**	**12 34 21.8 +0.1**	
WR0			IAmb	IAmb	12 34 29.4	
	comp=Z,7.6nm,1.4s					
WB2	**Warramunga Arr**	**43.28 277**	P	**P**	**12 34 23.6 +0.6**	
WB2			IAmb	IAmb	12 34 24.2	
	comp=Z,5.6nm,0.5s					
WRAB	**Tennant Creek**	**43.28 277**	P	**P**	**12 34 23.7 +0.6**	
WRAB			IAmb	IAmb	12 34 24.7	
	comp=Z,4.5nm,0.9s					
WRA	**Warramunga Arr**	**43.29 277**	P	**P**	**12 34 23.6 +0.5**	
	comp=Z,2.8nm,0.5s,baz=118,slow=7.6,SNR=36					
WRA			PcP	**PcP**	**12 36 11.2 +0.1**	
	comp=Z,0.3nm,0.6s,baz=106,slow=3.5,SNR=1.2					
WB0	**Warramunga Arr**	**43.33 278**	P	**P**	**12 34 23.6 +0.1**	
SBA	**Scott Base**	**43.85 184**	P	P	12 34 34.2 +7.4	
SBA			IAmb	IAmb	12 34 38.1	
	comp=Z,7.2nm,1.1s					
FITZ	**Fitzroy Crossi**	**51.34 274**	P	**P**	**12 35 26.1 +0.4**	
	comp=Z,1.6nm,0.6s,baz=144,slow=6.3,SNR=8.5					
FITZ	**Fitzroy Crossi**	**51.34 274**	P	**P**	**12 35 25.4 -0.3**	
FITZ			IAmb	IAmb	12 35 35.7	
	comp=Z,4.7nm,1.2s					
QSPA	**South Pole Qui**	**55.59 180**	P	P	12 36 03.1 +6.8	
H03S2	**Juan Fernandez**	**79.15 124**	T	T	14 06 46.9	
	baz=233,slow=74,SNR=6.6					
H03S1	**Juan Fernandez**	**79.16 124**	T	T	14 06 45.2	
	baz=233,slow=74,SNR=7.6					
H03S3	**Juan Fernandez**	**79.17 124**	T	T	14 06 43.9	
	baz=233,slow=74,SNR=6.4					
H03N3	**Juan Fernandez**	**79.36 123**	T	T	14 06 53.8	
	baz=237,slow=72,SNR=24					
H03N2	**Juan Fernandez**	**79.37 123**	T	T	14 06 54.5	
	baz=237,slow=72,SNR=19					
H03N1	**Juan Fernandez**	**79.38 123**	T	T	14 06 52.9	
	baz=237,slow=72,SNR=31					
ARCES	**ARCESS Array B**	**142.34 346**	PKP	**PKPdf**	**12 45 51.5 -0.3**	
	comp=Z,1.9nm,0.8s,baz=1.4,slow=3.8,SNR=2.0					
FINES	**FINESS Array B**	**148.55 337**	PKPbc	**PKPbc**	**12 46 07.5 +1.2**	
	comp=Z,0.8nm,0.4s,baz=27,slow=3.9,SNR=10					

*IDC **10** 12:29:39.1±1.2,61°.93S×161°.83W,h0km,mb4.0/4, mb1 4.2/5,mb1mx4.0/29,mbtmp4.0/5,ML3.9/1,MS3.9/17, Ms1 3.9/17,ms1mx3.9/20,Error ellipse: s-maj=38.8km s-min=28.0km az=44.0*

*NEIC **10** 12:29:40.6±1.3,62°.0S±0°.1×161°.9W±0°.2,h10km±1km, mb4.6/14,Error ellipse: s-maj=22.5km s-min=13.2km az=165.0*

*GCMT **10** 12:29:46.6±0.3,62°.45S±0°.02×161°.97W±0°.05,h19km±2km, MW4.9/70,Moment Tensor Solution. s15,c16; s70,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.12; $M_{\theta\theta}$2.08±.13; $M_{\phi\phi}$-1.79±.10; $M_{r\theta}$0.54±.23; $M_{\theta\phi}$0.20±.09; $M_{\phi r}$1.46±.32; Best double couple: M_o2.47700×10^{16} NP1:ϕ_s127.00000°,δ55.00000°,λ-12.00000°. NP2: ϕ_s224.00000°,δ80.00000°,λ-145.00000°. Principal axes: T 2.2730, Plg17.0000°, Azm351.0000°; N 0.4160, Plg53.0000°, Azm238.0000°; P -2.6820, Plg32.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 12:29:40.3±0.8,62°.0S±0°.1×161°.8W±0°.1,h10km,n55, σ1^{s}06/25,mb4.6/11,MS3.9/19,Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**18.77**	**200**	P	**P**	**12 33 58.7**	**-0.3**
VNDA	**Vanda**	**19.42**	**203**	P	**P**	**12 34 05.8**	**-0.3**
	0.3nm,0.3s,baz=64,slow=15,SNR=19						
VNDA				LR	LR	12 39 38.8	
	comp=Z,539nm,18.7s,baz=58,slow=31						
VNDA	**Vanda**	**19.42**	**203**	P	**P**	**12 34 06.1**	**0.0**
MLZ	**Mavora Lakes**	**24.02**	**300**	P	**P**	**12 34 53.5**	**-1.6**
MLZ				IAmb	IAmb	12 34 55.6	
	comp=Z,29nm,1.1s						
MXZ	**Matakaoa Point**	**27.37**	**324**	P	**P**	**12 35 25.6**	**+0.3**
QSPA	**South Pole Qui**	**28.14**	**180**	P	**P**	**12 35 34.0**	**+1.8**
	comp=Z,3.2nm,1.0s,baz=52,slow=7.7,SNR=5.8						
QSPA				LR	LR	12 44 07.2	
	comp=Z,243nm,21.5s,baz=66,slow=31						
QSPA	**South Pole Qui**	**28.14**	**180**	P	**P**	**12 35 31.7**	**-0.5**
RAO	**Raoul Island**	**34.40**	**335**	LR	LR	12 46 36.8	
	comp=Z,218nm,20.1s,baz=124,slow=30						
CASY	**Casey**	**35.51**	**224**	P	**P**	**12 36 37.5**	**+1.0**
CASY				IAmb	IAmb	12 37 03.1	
	comp=Z,14nm,1.4s						
TBI	**Tubuai**	**39.53**	**18**	*e*LR	LR	12 47 51.6	
	comp=Z,383nm,28.5s,baz=190						
TBI	**Tubuai**	**39.53**	**18**	*e*T	T	13 19 25.0	
	comp=Z,40nm,0.3s						
RAR	**Rarotonga**	**40.76**	**3**	LR	LR	12 49 33.4	
	comp=Z,154nm,20.6s,baz=162,slow=29						
RKT	**Rikitea**	**42.95**	**38**	*e*LQ	LQ	12 47 39.4	
	comp=Z,565nm,29.2s						
RKT	**Rikitea**	**42.95**	**38**	*e*T	T	13 23 34.8	
	comp=Z,5.8nm,0.3s						
PAE	**Paea**	**45.10**	**17**	*e*T	T	13 26 21.4	
	comp=Z,4.5nm,0.3s						
PPT2	**Papeete2**	**45.17**	**17**	*e*S	S	12 44 21.8	-15
	comp=Z,59nm,24.0s						
PPT2				*e*LR	LR	12 50 31.0	
	comp=Z,415nm,25.2s,baz=192						
PPT2	**Papeete2**	**45.17**	**17**	*e*T	T	13 26 24.9	
	comp=Z,8.3nm,0.3s						
PPT	**Papeete**	**45.20**	**17**	LR	LR	12 52 01.9	
	comp=Z,156nm,19.7s,baz=188,slow=30						
VNA3	**Neumayer Olymp**	**45.66**	**168**	P	**P**	**12 38 01.1**	**+0.7**
SNAA	**Sanae**	**45.84**	**171**	P	**P**	**12 38 00.8**	**-1.0**
SNAA	**Sanae**	**45.84**	**171**	P	**P**	**12 38 00.2**	**-1.6**
VNA2	**Neumayer--Watz**	**46.18**	**169**	P	**P**	**12 38 02.6**	**-1.9**
	baz=195,slow=6.2						
VNA1	**Neumayer--Stat**	**46.36**	**168**	P	**P**	**12 38 03.7**	**-2.1**
MSVF	**Nonsavu**	**46.41**	**333**	LR	LR	12 53 42.5	
	comp=Z,137nm,21.5s,baz=171,slow=31						
GO09	**Cerro Castillo**	**46.50**	**120**	P	**P**	**12 38 07.0**	**-0.2**
MAW	**Mawson**	**46.72**	**202**	LR	LR	12 56 26.1	
	comp=Z,85nm,18.3s,baz=156,slow=34						
STKA	**Stephens Creek**	**46.79**	**283**	LR	LR	12 53 24.3	
	comp=Z,130nm,20.4s,baz=182,slow=30						
AFI	**Afiamalu**	**48.53**	**347**	LR	LR	12 55 41.1	
	comp=Z,101nm,18.3s,baz=165,slow=32						
RPN	**Rapa Nui**	**49.01**	**70**	LR	LR	12 55 22.8	
	comp=Z,126nm,18.2s,baz=241,slow=32						
TAOE	**Nuku Hiva Isla**	**55.36**	**26**	*e*LR	LR	12 55 10.7	
	comp=Z,184nm,27.6s						
PLCA	**Paso Flores**	**55.61**	**113**	LR	LR	12 58 24.7	
	comp=Z,89nm,18.3s,baz=208,slow=31						
H01W1	**Cape Leeuwin H**	**57.15**	**257**	T	T	13 41 21.9	
	baz=146,slow=76,SNR=25						
H01W2	**Cape Leeuwin H**	**57.15**	**257**	T	T	13 41 23.0	
	baz=146,slow=76,SNR=28						
H01W3	**Cape Leeuwin H**	**57.16**	**257**	T	T	13 41 23.1	
	baz=146,slow=76,SNR=25						
ASAR	**Alice Springs**	**57.32**	**281**	P	**P**	**12 39 28.8**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=155,slow=7.4,SNR=6.8						
ASAR				LR	LR	13 00 17.2	
	comp=Z,124nm,21.6s,baz=150,slow=32						
H03S2	**Juan Fernandez**	**57.52**	**102**	T	T	13 42 02.5	
	baz=211,slow=74,SNR=139						
H03S1	**Juan Fernandez**	**57.52**	**102**	T	T	13 42 03.8	
	baz=211,slow=74,SNR=156						
H03S3	**Juan Fernandez**	**57.53**	**102**	T	T	13 42 03.1	
	baz=211,slow=74,SNR=205						
H03N3	**Juan Fernandez**	**57.84**	**101**	T	T	13 42 21.4	
	baz=197,slow=72						
H03N2	**Juan Fernandez**	**57.84**	**101**	T	T	13 42 29.1	
	baz=197,slow=72						
H03N1	**Juan Fernandez**	**57.85**	**101**	T	T	13 42 26.2	
	baz=197,slow=72						
WR0	**Warramunga Arr**	**60.23**	**284**	P	**P**	**12 39 47.6**	**-0.8**
WR0				IAmb	IAmb	12 39 53.0	
	comp=Z,5.2nm,1.1s						
WB2	**Warramunga Arr**	**60.33**	**284**	P	**P**	**12 39 49.0**	**-0.1**
WB2				IAmb	IAmb	12 40 16.3	
	comp=Z,9.1nm,1.4s						
WRA	**Warramunga Arr**	**60.34**	**284**	P	**P**	**12 39 49.6**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=153,slow=5.7,SNR=6.9						
WRA				LR	LR	13 03 42.5	
	comp=Z,128nm,20.0s,baz=45,slow=34						
WRAB	**Tennant Creek**	**60.34**	**284**	P	**P**	**12 39 50.8**	**+1.6**
WRAB				IAmb	IAmb	12 39 53.3	
	comp=Z,3.9nm,1.1s						
WB0	**Warramunga Arr**	**60.47**	**284**	P	**P**	**12 39 50.9**	**+0.8**
WB0				IAmb	IAmb	12 40 07.1	
	comp=Z,6.0nm,1.1s						
AC02	**Maricunga**	**67.92**	**106**	P	**P**	**12 40 40.0**	**+0.4**
AC02				IAmb	IAmb	12 40 43.3	
	comp=Z,6.9nm,1.4s						
CPUP	**Villa Florida**	**73.58**	**115**	LR	LR	13 08 54.2	
	comp=Z,67nm,20.5s,baz=212,slow=32						
LPAZ	**La Paz**	**77.50**	**101**	P	**P**	**12 41 37.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=195,slow=4.6,SNR=4.1						
LPAZ				LR	LR	13 08 44.2	
	comp=Z,43nm,18.1s,baz=213,slow=30						
LPAZ	**La Paz**	**77.50**	**101**	IAmb	IAmb	12 41 43.0	
	comp=Z,7.3nm,1.4s						
BDFB	**Brasilia**	**87.00**	**118**	LR	LR	13 17 36.0	
	comp=Z,111nm,20.8s,baz=164,slow=33						
BOSA	**Boshof**	**89.55**	**186**	LR	LR	13 19 10.3	
	comp=Z,153nm,20.1s,baz=186,slow=33						
ZALV	**Zalesovo Beam**	**145.24**	**288**	PKPbc	**PKPbc**	**12 49 16.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=106,slow=4.7,SNR=1.5						
KURBB	**Kurchatov Arra**	**145.92**	**279**	PKPbc	**PKPdf**	**12 49 17.6**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=134,slow=2.8,SNR=4.2						
BVAR	**Borovoye Array**	**151.31**	**276**	PKPbc	**PKiKP**	**12 49 33.6**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=111,slow=3.2,SNR=2.5						

DRS 10 12:52:58.4±0.0,43°.07N×47°.52E,h3km,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUJR	**Buynaksk**	**0.39**	**232**	*e*Pg	Pn	12 53 10.0	-0.9
	74nm,0.3s						
BUJR				*e*Sg	Sb	12 53 20.3	+6.0
	48nm,0.3s						
DBC	**Dubki**	**0.51**	**265**	*i* Pg	Pb	12 53 11.0	+1.0
	4.0nm,0.5s						
DBC				*e*Sg	Sn	12 53 21.5	-0.4
	4.0nm,0.3s						
KRNR	**Karanay**	**0.51**	**242**	*i* Pg	Pb	12 53 11.4	+1.3
	79nm,0.2s						
KRNR				*e*Sg	Sn	12 53 22.8	+0.8
	48nm,0.2s						
DLMR	**Dylym**	**0.66**	**271**	*e*Pg	Pn	12 53 16.9	+2.3
	7.0nm,0.2s						
DLMR				*e*Sg	Sn	12 53 31.8	+6.3
	145nm,0.2s						
GNBR	**Gunib**	**0.79**	**212**	*e*Pg	Pn	12 53 20.4	+3.8
	13nm,0.1s						
GNBR				*e*Sg	Sn	12 53 39.6	+11
	32nm,0.1s						
URKR	**Urkarakh**	**0.90**	**175**	*e*Pg	Pn	12 53 21.8	+3.6
	4.0nm,0.3s						
URKR				*e*Sg	Sn	12 53 43.1	+11
	107nm,0.1s						

*IDC **10** 13:20:52.5±0.7,30°.47N×142°.90E,h0km,mb3.7/12, mb1 3.9/14,mb1mx3.8/35,mbtmp3.7/14,ML3.3/2,MS3.1/2, Ms1 3.2/2,ms1mx2.4/53,Error ellipse: s-maj=24.1km s-min=16.8km az=107.0*

ISC 10 13:20:57.7±0.7,30°.41N±0°.07×142°.8E±0°.1,h35km,n16, σ1^{s}13/16,mb3.7/12,Southeast of Honshu

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

JCJ	**Chichijima**	**3.34 189**	Pn	**Pn**	**13 21 47.0**	**-0.5**
	9.1nm,0.3s,baz=0.7,slow=22,SNR=10					
JCJ			Sn	**Sn**	**13 22 24.4**	**-1.5**
	18nm,0.3s,baz=85,slow=22,SNR=6.6					
MJAR	**Matsushiro Arr**	**7.21 329**	Pn	**Pn**	**13 22 39.1**	**-1.5**
	0.2nm,0.3s,baz=159,slow=11,SNR=8.2					
JOW	**Kunigami**	**13.22 258**	LR	LR	13 27 59.5	
	comp=Z,62nm,21.1s,baz=322,slow=32					
SONM	**Songino Array**	**32.78 312**	P	**P**	**13 27 28.4**	**+0.9**
	0.5nm,0.6s,baz=95,slow=7.2,SNR=2.6					
CMAR	**Chiang Mai Arr**	**41.40 264**	P	**P**	**13 28 41.0**	**+0.1**
	0.3nm,0.3s,baz=77,slow=5.7,SNR=1.9					
MKAR	**Makanchi Array**	**48.82 307**	P	**P**	**13 29 40.2**	**+0.7**
	0.4nm,0.9s,baz=71,slow=12,SNR=3.4					
WRA	**Warramunga Arr**	**50.71 190**	P	**P**	**13 29 54.7**	**+0.7**
	2.0nm,0.7s,baz=8.2,slow=7.8,SNR=17					
ASAR	**Alice Springs**	**54.44 190**	P	**P**	**13 30 22.4**	**+0.8**
	0.7nm,0.5s,baz=6.3,slow=6.9,SNR=36					
ILAR	**Eielson Array**	**54.58 30**	P	**P**	**13 30 21.1**	**-1.0**
	0.3nm,0.6s,baz=272,slow=7.0,SNR=2.5					
INK	**Inuvik**	**59.82 25**	P	**P**	**13 30 56.8**	**-2.2**
	0.5nm,0.5s,baz=234,slow=8.7,SNR=2.4					
YKA	**Yellowknife Ar**	**69.00 29**	P	**P**	**13 31 58.9**	**-0.3**
	0.7nm,0.8s,baz=291,slow=6.0,SNR=8.8					
NVAR	**Mina Array Bea**	**78.08 52**	P	**P**	**13 32 54.2**	**+0.8**
	0.5nm,0.6s,baz=288,slow=6.1,SNR=6.2					
NVAR			LR	LR	14 01 53.4	
	comp=Z,19nm,20.6s,baz=6.0,slow=32					
PDAR	**Pinedale Array**	**81.51 45**	P	**P**	**13 33 11.7**	**-0.2**
	0.2nm,0.6s,baz=289,slow=2.8,SNR=2.1					
BRTR	**Keskin Array B**	**84.13 313**	P	**P**	**13 33 26.0**	**+0.5**
	0.7nm,0.8s,baz=68,slow=3.9,SNR=2.3					
TXAR	**Lajitas Array**	**93.22 53**	P	**P**	**13 34 09.9**	**+0.9**
	0.3nm,0.6s,baz=336,slow=2.7,SNR=4.6					
LPAZ	**La Paz**	**148.46 71**	PKPbc	**PKPdf**	**13 40 39.7**	**+1.3**
	0.9nm,0.6s,baz=357,slow=4.3,SNR=5.0					

IDC 10 13:24:12.1±2.4,4°.02S×154°.47E,h0km,mb3.3/4, mb1 3.6/4,mb1mx3.4/40,mbtmp3.3/4,MS3.2/1,Ms1 3.4/1, ms1mx2.6/17,Error ellipse: s-maj=97.9km s-min=29.5km az=119.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.21 229**		P	P	13 29 40.6	+0.8
	0.2nm,0.7s,baz=54,slow=9.8,SNR=5.9						
ASAR	**Alice Springs**	**27.86 224**		P	P	13 30 02.8	-0.9
	0.2nm,0.5s,baz=56,slow=9.2,SNR=5.5						
CMAR	**Chiang Mai Arr**	**59.07 294**		LR	LR	13 56 44.9	
	comp=Z,23nm,21.8s,baz=220,slow=33						
ILAR	**Eielson Array**	**80.81 22**		P	P	13 36 27.6	+0.1
	0.2nm,0.6s,baz=248,slow=4.8,SNR=1.8						
MKAR	**Makanchi Array**	**80.84 319**		P	P	13 36 28.0	0.0
	0.4nm,0.5s,baz=104,slow=5.9,SNR=7.4						

*MOS **10** 13:40:05.6±0.0,42°.26N×45°.07E,h9km,MPVA4.1*
*NORS **10** 13:40:05.1±0.0,42°.20N×45°.06E,h10km,MPVA4.2*
*DDA **10** 13:40:06.1,42°.36N×44°.99E,h20km±2km,ML3.0*
*TIF **10** 13:40:06.9,42°.32N×45°.04E,h17km±1km*
*ISK **10** 13:40:07.6,42°.32N×44°.84E,h2km,ML3.1/4*
*DRS **10** 13:40:09.4±0.0,42°.29N×45°.22E,h14km*

ISC 10 13:40:08.1±1.1,42°.32N±0°.01×45°.01E±0°.02,h5km±9km, n63,σ1^{s}28/123,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUDG	**Gudauri**	**0.42**	**290**	P	**Pg**	**13 40 16.5**	**+0.2**
GUDG				S	**Sg**	**13 40 23.1**	**+1.3**
PNSH	**Pansheti**	**0.43**	**317**	P	**Pg**	**13 40 16.2**	**-0.2**
PNSH				S	**Sg**	**13 40 22.3**	**+0.3**
SEAG	**Tbilisi Sea**	**0.58**	**196**	P	**Pg**	**13 40 20.1**	**+0.9**
SEAG				S	**Sb**	**13 40 29.1**	**-0.3**
BTNK	**Botanikuri**	**0.66**	**194**	P	**Pg**	**13 40 20.4**	**-0.4**
BTNK				S	**Sg**	**13 40 30.5**	**+1.2**
BTNK	**Botanikuri**	**0.

comp=N,173nm,0.4s
EAK IAML 13 41 12.0
comp=E,194nm,0.4s
KBZ Khabaz 2.09 313 *e*Pg **Pb 13 40 46.1 -0.5**
KBZ *e*Sg **Sg 13 41 15.2 -0.1**
GNI Garni 2.18 185 *i* Pg **Pn 13 40 46.2 +1.0**
GNI *e*Sg **Sb 13 41 16.4 +0.7**
GNI Garni 2.18 185 PN **Pn 13 40 45.9 +0.6**
GNI SN **Sn 13 41 13.8 +1.0**
AKT Akhty 2.20 112 *e*Pg **Pn 13 40 46.0 +0.6**
AKT *e*Sg **Sb 13 41 15.2 -0.8**
CHVG Ch'k'valeri 2.20 281 P **Pb 13 40 47.2 -0.7**
CHVG S **Sg 13 41 18.2 -0.6**
SHA1 Shidzhatmaz 2.23 310 *e*Pn **Pn 13 40 46.7 +0.7**
SHA1 *e*Sn **Sg 13 41 20.5 +0.7**
PYA1 Pyatigorsk 2.23 322 *e*Pn **Pn 13 40 46.6 +0.7**
PYA1 *e*Sn **Sb 13 41 17.3 +0.3**
DIGO Kars 2.27 213 *i* P **Pn 13 40 45.2 -1.4**
DIGO *i* S **Sb 13 41 17.0 -1.3**
DIGO IAML 13 41 26.0
comp=E,113nm,0.5s
DIGO IAML 13 41 27.0
comp=N,77nm,0.7s
BEYR Belyy Ugol+ 2.33 317 *e*Pn **Pn 13 40 47.5 +0.3**
BEYR *e*Sn **Sb 13 41 18.1 -1.6**
KIV0 Kislovodsk Arr 2.35 315 *e*Pn **Pn 13 40 48.5 +0.9**
KIV0 *e*Sn **Sg 13 41 22.0 -1.7**
KIV Kislovodsk 2.36 315 *e*Pn **Pb 13 40 49.6 -1.5**
KIV *e*Sn **Sb 13 41 20.5 -0.1**
KIV Kislovodsk 2.36 315 PN **Pn 13 40 47.4 -0.2**
TASB TASBURUN-IGDIR 2.41 194 PN **Pn 13 40 48.8 +0.5**
TASB SN **Sn 13 41 19.2 +0.9**
DBOC Borcka 2.68 250 *i* P **Pn 13 40 52.8 +0.7**
DBOC *i* S **Sb 13 41 30.9 +1.0**
DBAD Bademkaya 2.81 243 *i* P **Pn 13 40 54.3 +0.5**
DBAD *i* S **Sb 13 41 34.7 +1.2**
HOPA Hopa-Artvin 2.82 252 PN **Pn 13 40 53.3 -0.6**
KOTA Agri, Merkez-K 2.87 209 *i* P **Pn 13 40 55.2 +0.5**
KOTA *i* S **Sg 13 41 44.7 +4.5**
AGRB Hanur-Agry 3.14 210 PN **Pn 13 40 59.2 +0.7**

ATH ***10*** *13:50:39.6,41°.69N×20°.29E,h15km±6km, ML2.7/4, Error ellipse: s-maj=7.8km s-min=1.4km az=305.0*
TIR ***10*** *13:50:41.0,41°.52N×20°.29E,h14km±2km, Md2.8, Ml2.7*
SKO ***10*** *13:50:40.8,41°.55N×20°.30E,h13km*
PDG ***10*** *13:50:41.4±0.1,41°.50N×20°.24E,h6km, ML2.8/14, Error ellipse: s-maj=0.1km s-min=0.1km az=0.0*
THE ***10*** *13:50:42.1,41°.51N×20°.29E,h2km±2km, ML2.4/3, Error ellipse: s-maj=2.3km s-min=0.6km az=319.0*
ISC 10 13:50:41.6±0.9, 41°.52N±0'.02×20°.28E±0'.02, h16km±7km, n48, σ1§04/80, 9C-5D, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.20**	**36**	P		**Pb**	**13 50 46.2**	**-0.9**
PHP				S		**Sg**	**13 50 49.4**	**-0.3**
PHP	**Peshkopia** baz=34	**0.20**	**36**	P		**Pb**	**13 50 46.1**	**-0.9**
PHP				S		**Sb**	**13 50 49.9**	**-0.9**
	baz=34							
PHP				AMP				
	comp=N,9.6nm,0.1s,baz=34							
TIR	**Tirane**	**0.36**	**242**	P		**Pg**	**13 50 48.6**	**-0.3**
TIR				S		**Sb**	**13 50 55.1**	**+0.1**
TIR				AML	AML		13 50 55.9	
	comp=N,4175μm,0.4s							
TIR				AML	AML		13 50 56.1	
	comp=E,2982μm,0.4s							
TIR	**Tirane**	**0.36**	**242**	P		**Pb**	**13 50 48.8**	**-0.8**
TIR				S		**Sb**	**13 50 54.2**	**-0.8**
	comp=E,710nm,0.4s							
TIR	**Tirane** baz=242	**0.36**	**242**	P		**Pb**	**13 50 48.9**	**-0.8**
TIR				S		**Sb**	**13 50 55.2**	**+0.1**
	baz=242							
TIR				AMP				
	comp=E,2.4nm,0.5s,baz=242							
TIR	**Tirane**	**0.36**	**242**	*i* Pg		**Pg**	**13 50 48.7**	**-0.3**
OHR	**Ohrid**	**0.56**	**136**	*i* Pg		**Pb**	**13 50 52.7**	**-0.5**
OHR				*i* Sg		**Sb**	**13 51 01.1**	**+0.1**
OHR				*e*Lg		Lg	13 51 01.6	
	comp=N,533nm,1.1s							
OHR				*e*Lg		Lg	13 51 02.0	
	comp=E,129nm,0.4s							
PUK	**Puka** baz=331	**0.60**	**331**	P		**Pg**	**13 50 53.0**	**-0.5**
PUK				S		**Sb**	**13 51 02.4**	**+0.3**
	baz=331							
PUK				AMP				
	comp=N,1.8nm,0.1s,baz=331							
PRZK	**Prizren**	**0.78**	**27**	*i* Pg		**Pb**	**13 50 56.2**	**-0.7**
PRZK				*i* Sg		**Sn**	**13 51 08.2**	**-1.3**
BCI	**Bajram Curri** baz=349	**0.86**	**349**	P		**Pg**	**13 50 57.6**	**-0.8**
BCI				S		**Sn**	**13 51 10.7**	**-0.8**
	baz=349							
BCI				AMP				
	comp=E,1.2nm,0.7s,baz=349							
ULC	**Ulcinj**	**0.89**	**300**	⇑ *i* Pg		**Pg**	**13 50 57.7**	**-1.3**
ULC				*i* Sg		**Sn**	**13 51 11.4**	**-0.9**
SKO	**Skopje**	**0.98**	**62**	*i* Pg		**Pb**	**13 50 59.3**	**-1.0**
SKO				*i* Sg		**Sn**	**13 51 13.7**	**-0.7**
DRME	**Dracevica, Mon**	**1.06**	**310**	⇑ *i* Pg		**Pb**	**13 51 00.8**	**-0.8**
DRME				*i* Sg		**Sn**	**13 51 17.3**	**+1.0**
PVY	**Plav**	**1.10**	**348**	⇑ *i* Pg		**Pb**	**13 51 02.0**	**-0.4**
PVY				*i* Sg		**Sn**	**13 51 19.6**	**+2.0**
FNA	**Florina**	**1.11**	**131**	P		**Pb**	**13 51 01.8**	**-0.7**
FNA				S		**Sn**	**13 51 18.0**	**+0.5**
FNA				AML	AML		13 51 20.6	
	comp=E,870μm,0.8s							
FNA				AML	AML		13 51 22.2	
	comp=N,692μm,0.6s							
FNA	**Florina**	**1.11**	**131**	P		**Pg**	**13 51 02.4**	**-0.6**
FNA				S		**Sn**	**13 51 18.3**	**+0.8**
	comp=N,415nm,0.8s							
FNA	**Florina** baz=131	**1.11**	**131**	P		**Pg**	**13 51 02.3**	**-0.6**
FNA				S		**Sn**	**13 51 18.3**	**+0.8**
	baz=131							
FNA	**Florina**	**1.11**	**131**	*i* Pg		**Pg**	**13 51 02.4**	**-0.6**
FNA				*i* Sg		**Sn**	**13 51 18.2**	**+0.7**
PDG	**Podgorica**	**1.19**	**320**	*i* Pg		**Pb**	**13 51 03.5**	**-0.3**
PDG				*i* Sg		**Sg**	**13 51 22.0**	**+1.9**
TTG	**Podgorica**	**1.19**	**320**	⇓ *i* Pg		**Pn**	**13 51 03.3**	**-0.3**
TTG				*i* Sg		**Sg**	**13 51 22.0**	**+1.9**
NEST	**Nestorio**	**1.25**	**152**	P		**Pg**	**13 51 04.9**	**-0.8**
NEST				S		**Sg**	**13 51 22.8**	**+0.9**
NEST				AML	AML		13 51 26.2	
	comp=N,217μm,0.6s							
NEST				AML	AML		13 51 28.4	
	comp=E,258μm,0.6s							
NEST	**Nestorio**	**1.25**	**152**	P		**Pg**	**13 51 05.2**	**-0.5**
NEST				S		**Sg**	**13 51 23.0**	**+1.1**
	comp=E,92nm,0.5s							
GJIK	**Gjilan**	**1.28**	**42**	*i* Pg		**Pg**	**13 51 05.8**	**-0.5**
GJIK				*i* Sg		**Sg**	**13 51 23.2**	**+0.3**
BUM	**Brajici-Budva**	**1.30**	**308**	⇓ *i* Pg		**Pb**	**13 51 05.2**	**-0.5**
BUM				*i* Sg		**Sg**	**13 51 25.4**	**+1.8**
IVA	**Berane**	**1.38**	**348**	⇑ *i* Pg		**Pg**	**13 51 07.3**	**-1.0**
IVA				*i* Sg		**Sg**	**13 51 29.3**	**+3.0**
SMRK	**Smrekonice**	**1.44**	**20**	*i* Pn		**Pg**	**13 51 08.5**	**-0.9**
STIP	**Stip**	**1.44**	**82**	*i* Pn		**Pg**	**13 51 10.8**	**+1.4**
CEME	**Cevo**	**1.45**	**316**	⇑ *i* Pg		**Pb**	**13 51 08.0**	**-0.2**
CEME				*i* Sg		**Sg**	**13 51 30.7**	**+2.4**
KOME	**Kolasin**	**1.45**	**337**	⇓ *i* Pg		**Pb**	**13 51 08.3**	**0.0**
KOME				*i* Sg		**Sg**	**13 51 31.2**	**+2.8**
PENT	**Pentalofos**	**1.47**	**154**	P		**Pg**	**13 51 09.0**	**-1.0**
NKME	**Niksic**	**1.59**	**322**	*e*Pn		**Pb**	**13 51 10.8**	**+0.1**
NKME				*i* Sn		**Sg**	**13 51 34.8**	**+1.9**
NKY	**Niksic**	**1.61**	**324**	⇑ *i* Pn		**Pb**	**13 51 11.2**	**+0.1**
NKY				*i* Sn		**Sg**	**13 51 35.2**	**+1.7**
HCY	**Herceg Novi**	**1.62**	**305**	⇓ *i* Pn		**Pb**	**13 51 11.0**	**-0.2**
HCY				*i* Sn		**Sg**	**13 51 35.3**	**+1.3**
KZN	**Kozani**	**1.66**	**137**	P		**Pb**	**13 51 11.7**	**-0.1**
KZN				AML	AML		13 51 37.5	
	comp=N,209μm,0.6s							
KZN				AML	AML		13 51 41.1	
	comp=E,212μm,0.5s							
GRG	**Griva**	**1.69**	**109**	P		**Pn**	**13 51 10.5**	**-0.1**
GRG	**Griva**	**1.69**	**109**	*i* Pn		**Pb**	**13 51 11.7**	**-0.7**
VAY	**Valandovo**	**1.73**	**96**	*i* Pn		**Pb**	**13 51 12.2**	**-0.9**
KPRO	**Kipourio**	**1.77**	**152**	P		**Pb**	**13 51 13.9**	**+0.2**
KPRO	**Kipourio**	**1.77**	**152**	P		**Pb**	**13 51 13.5**	**-0.2**
KEK	**Kerkira**	**1.84**	**192**	P		**Pg**	**13 51 15.6**	**-1.3**
BRY	**Bratogost**	**1.89**	**317**	⇑ *i* Pn		**Pb**	**13 51 15.3**	**-0.6**
BRY				*i* Sn		**Sg**	**13 51 42.0**	**-0.6**
PLE	**Pljevlja**	**1.93**	**340**	⇑ *i* Pn		**Pb**	**13 51 16.0**	**-0.5**
PLE				*i* Sn		**Sg**	**13 51 43.2**	**-0.5**
UPM	**Unac-Piva**	**1.97**	**329**	⇑ *i* Pn		**Pb**	**13 51 16.5**	**-0.7**
UPM				*i* Sn		**Sg**	**13 51 44.0**	**-1.0**
IGT	**Igoumenitsa**	**1.98**	**179**	P		**Pb**	**13 51 16.8**	**-0.6**
IGT	**Igoumenitsa**	**1.98**	**179**	P		**Pb**	**13 51 16.2**	**-1.2**
SCTE	**Santa Cesarea**	**2.00**	**224**	P		**Pb**	**13 51 16.6**	**-1.0**
KNT	**Kendrikon**	**2.00**	**99**	P		**Pn**	**13 51 15.3**	**+0.5**
HORT	**Hortiatis**	**2.32**	**112**	P		**Pn**	**13 51 20.3**	**+1.0**

IDC 10 13:55:00.9±1.4, 3°.59N×125°.72E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.3/67, mbtmp3.4/5, MS2.5/2, Ms1 2.5/2, ms1mx2.2/26, Error ellipse: s-maj=116.6km s-min=21.1km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong** comp=Z,24nm,18.4s,baz=159,slow=42	**7.10**	**128**	LR	LR		14 00 02.5	
FITZ	**Fitzroy Crossi** 2.2nm,1.0s,baz=12,slow=8.2,SNR=3.3	**21.55**	**180**	P		P	13 59 53.6	+1.6
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=337,slow=11,SNR=7.5	**24.87**	**160**	P		P	14 00 24.5	-1.0
ASAR	**Alice Springs** 0.2nm,0.8s,baz=344,slow=7.2,SNR=1.9	**28.24**	**164**	P		P	14 00 56.1	+0.2
JHJ	**Hachijo jima 2** comp=Z,10nm,18.8s,baz=92,slow=40	**32.19**	**23**	LR	LR		14 16 28.6	
SONM	**Songino Array** 0.8nm,0.7s,baz=164,slow=7.5,SNR=3.7	**47.12**	**342**	P		P	14 03 35.5	+0.5
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=119,slow=7.7,SNR=5.7	**57.10**	**326**	P		P	14 04 48.7	-0.5

MOS ***10*** *13:57:51.9±0.9, 47°.29N×150°.79E, h187km, mb4.1/7, Error ellipse: s-maj=10.8km s-min=6.0km az=67.9*
SKHL ***10*** *13:57:52.3±0.3, 47°.10N×150°.90E, h178km±8km, mb5.1/8, mbv5.1/2, msha5.7/4*
NEIC ***10*** *13:57:53.1±1.3, 47°.2N±0°.1×150°.7E±0°.2, h182km±9km, mb4.1/19, Error ellipse: s-maj=17.5km s-min=13.1km az=138.0*
IDC ***10*** *13:57:54.6±1.7, 47°.34N×150°.75E, h194km±16km, mb3.5/20, mb1 3.6/28, mb1mx3.4/73, mbtmp4.0/28, MS3.1/2, Ms1 3.1/2, ms1mx2.4/39, Error ellipse: s-maj=13.1km s-min=9.8km az=132.0*
ISC 10 13:57:53.7±0.5, 47°.09N±0'.06×150°.79E±0'.07, h200km, n124, σ1§67/137, mb3.9/32, 8C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.75**	**229**	PN		**Pn**	**13 58 40.0**	**-0.4**
KUR				S		**Sn**	**13 59 18.2**	**+1.4**
KUR				pmax	pmax			
	comp=N,12nm,0.3s							
KUR				pmax	pmax			
	comp=E,18nm,0.3s							
KUR				pmax	pmax			
	comp=Z,93nm,0.3s							
KUR				smax	smax			
	comp=N,259nm,0.4s							
KUR				smax	smax			
	comp=E,110nm,0.5s							
KUR	**Kuril'sk**	**2.75**	**229**	*e*P		**Pn**	**13 58 40.1**	**-0.4**
KUR				AMB	AMB		13 58 41.5	
	comp=E,400nm,1.2s							
KUR				AMB	AMB		13 58 42.9	
	comp=E,10.0nm,0.3s							
KUR				AMB	AMB		13 58 42.9	
	comp=E,20nm,0.3s							
KUR				AMB	AMB		13 58 42.9	
	comp=E,90nm,0.3s							
KUR				*e*S		**Sn**	**13 59 17.3**	**+0.5**
KUR				A	A		13 59 19.9	
	comp=E,600nm,2.0s							
KUR				A	A		13 59 19.9	
	comp=E,700nm,2.0s							
KUR				A	A		13 59 28.7	
	comp=E,260nm,0.4s							
KUR				A	A		13 59 28.7	
	comp=E,110nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**4.62**	**230**	*e*PN		**Pn**	**13 59 02.9**	**-0.3**
YUK				*e*S		**Sn**	**13 59 57.3**	**-0.5**
YUK				pmax	pmax			
	comp=Z,368nm,0.2s							
YUK				smax	smax			
	comp=N,173nm,0.3s							
YUK				smax	smax			
	comp=E,151nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**4.62**	**230**	*e*P		**Pn**	**13 59 03.3**	**+0.1**
YUK				AMB	AMB		13 59 04.0	
	comp=E,370nm,0.3s							
YUK				*e*S		**Sn**	**13 59 58.8**	**+1.0**
YUK				A	A		14 00 04.0	
	comp=E,170nm,0.3s							
YUK				A	A		14 00 04.0	
	comp=E,150nm,0.3s							
GRPR	**Tuman**	**4.69**	**231**	*e*PN		**Pn**	**13 59 03.9**	**-0.3**
GRPR				*e*S		**Sn**	**14 00 00.2**	**+0.6**
GRPR				pmax	pmax			
	comp=N,65nm,0.2s							
GRPR				pmax	pmax			
	comp=Z,212nm,0.2s							
GRPR				pmax	pmax			
	comp=E,71nm,0.1s							
GRPR				smax	smax			
	comp=N,207nm,0.2s							
GRPR				smax	smax			
	comp=E,90nm,0.2s							
GRPR	**Tuman**	**4.69**	**231**	*e*P		**Pn**	**13 59 04.2**	**0.0**
GRPR				AMB	AMB		13 59 05.0	
	comp=E,210nm,0.2s							
GRPR				*e*S		**Sn**	**14 00 00.0**	**+0.4**
GRPR				A	A		14 00 04.0	
	comp=E,210nm,0.3s							
GRPR				A	A		14 00 04.0	
	comp=E,90nm,0.3s							
RUSJ	**Misakicho**	**4.90**	**234**	*e*PN		**Pn**	**13 59 07.7**	**+0.9**
GLVR	**Golovnino**	**5.00**	**230**	*e*PN		**Pn**	**13 59 07.8**	**-0.3**
GLVR				*e*S		**Sn**	**14 00 06.9**	**+0.3**
GLVR				pmax	pmax			
	comp=N,8.0nm,0.2s							
GLVR				pmax	pmax			
	comp=E,4.0nm,0.2s							
GLVR				pmax	pmax			
	comp=Z,118nm,0.2s							
GLVR				smax	smax			
	comp=N,162nm,0.2s							
GLVR				smax	smax			
	comp=E,77nm,0.2s							
GLVR	**Golovnino**	**5.00**	**230**	*e*P		**Pn**	**13 59 07.9**	**-0.2**
GLVR				AMB	AMB		13 59 08.0	
	comp=E,120nm,0.2s							
GLVR				*e*S		**Sn**	**14 00 07.1**	**+0.5**
GLVR				A	A		14 00 11.0	
	comp=E,160nm,0.3s							
GLVR				A	A		14 00 11.0	
	comp=E,80nm,0.3s							
SKR	**Severo-Kuril's**	**5.03**	**42**	⇑ *e*PN		**Pn**	**13 59 05.6**	**-2.7**
SKR	**Severo-Kuril's**	**5.03**	**42**	*e*P		**Pn**	**13 59 06.8**	**-1.5**
SKR				AMB	AMB		13 59 08.5	
	comp=E,180nm,0.8s							
JRA	**Rausu**	**5.08**	**234**	P		**Pn**	**13 59 09.5**	**+0.4**
NEM2	**Nemuro 2**	**5.15**	**226**	P		**Pn**	**13 59 07.6**	**-2.5**
NEM2				*e*S		**Sn**	**14 00 05.2**	**-5.0**
NMR	**Nemuro--Hokkai**	**5.16**	**226**	*e*PN		**Pn**	**13 59 07.6**	**-2.5**
NMR	**Nemuro--Hokkai**	**5.16**	**226**	*e*P		**Pn**	**13 59 07.0**	**-3.1**
YSS	**Yuzh-Sakhalins**	**5.50**	**272**	⇑ *e*PN		**Pn**	**13 59 15.4**	**+1.0**
YSS	**Yuzh-Sakhalins**	**5.50**	**272**	Pn		**Pn**	**13 59 12.8**	**-1.5**
YSS	**Yuzh-Sakhalins**	**5.50**	**272**	*e*P		**Pn**	**13 59 15.4**	**+1.0**
YSS				AMB	AMB		13 59 16.6	
	comp=E,10.0nm,0.4s							
JNK	**Nakash**	**5.53**	**233**	P		**Pn**	**13 59 14.8**	**-0.1**
JTKR	**Abashiri--Toko**	**5.75**	**240**	P		**Pn**	**13 59 18.6**	**+0.9**
PAU	**Pauzhetka**	**5.89**	**40**	*e*P		**Pn**	**13 59 16.4**	**-3.0**
PAU				AMB	AMB		13 59 16.8	
	comp=E,100nm,0.6s							
PAU				AMB	AMB		13 59 18.0	
	comp=E,600nm,3.0s							
JAK	**Akkeshi**	**5.95**	**229**	P		**Pn**	**13 59 18.1**	**-2.2**
JAK				*e*S		**Sn**	**14 00 24.3**	**-4.3**
JAR	**Ashorobuto**	**6.24**	**235**	P		**Pn**	**13 59 24.8**	**+0.7**
JOB	**Onbets**	**6.46**	**232**	P		**Pn**	**13 59 25.9**	**-1.1**
JKA	**Kamikawa-asahi**	**6.47**	**246**			**Pn**	**13 59 27.0**	**0.0**
JKA	**Kamikawa-asahi**	**6.47**	**246**	*e*P		**Pn**	**13 59 27.0**	**0.0**
ASAJ	**Asahikawa** comp=E,1.7nm,0.3s,baz=74,slow=14,SNR=19	**6.47**	**246**	P		**Pn**	**13 59 29.4**	**+2.4**
ASAJ	**Asahikawa**	**6.47**	**246**	P		**Pn**	**13 59 29.6**	**+2.6**
ASAJ	**Asahikawa**	**6.47**	**246**	PN		**Pn**	**13 59 27.0**	**0.0**
JKK2	**Kamakawa 2**	**6.50**	**243**	P		**Pn**	**13 59 29.4**	**+1.9**
TYV	**Tymovskoe**	**6.55**	**308**	*e*P		**Pn**	**13 59 29.7**	**+1.7**
TYV				AMB	AMB		14 59 30.4	
	comp=E,20nm,0.6s							
JCH	**Churui**	**6.92**	**232**	P		**Pn**	**13 59 31.2**	**-1.6**
ERM	**Erimo**	**7.44**	**230**	⇑ *e*PN		**Pn**	**13 59 39.8**	**+0.1**
ERM	**Erimo**	**7.44**	**230**	Pn		**Pn**	**13 59 39.0**	**-0.7**
JNBK	**Urakawa-nobuka**	**7.47**	**233**	P		**Pn**	**13 59 38.0**	**-2.1**
JNBK				*e*S		**Sn**	**14 00 59.1**	**-5.5**
PEA0B	**Petropavlovsk-**	**7.48**	**34**	⇓ *i* PN		**Pn**	**13 59 37.1**	**-3.0**
PEA0B	**Petropavlovsk-**	**7.48**	**34**	Pn		**Pn**	**13 59 37.2**	**-3.0**
PETK	**Petropavlovsk-** comp=E,1.8nm,0.3s,baz=203,slow=10,SNR=34	**7.48**	**34**	P		**Pn**	**13 59 37.1**	**-3.0**
PET	**Petropavlovsk**	**7.80**	**38**	⇓ *e*PN		**Pn**	**13 59 40.2**	**-4.0**
PET	**Petropavlovsk**	**7.80**	**38**	*e*P		**Pn**	**13 59 43.1**	**-1.1**
JKB	**Kayabe**	**8.70**	**237**	P		**Pn**	**13 59 54.0**	**-2.0**
JKB				*e*S		**Sn**	**14 01 26.8**	**-6.7**
JYM2	**Yakumo 2**	**8.94**	**240**	P		**Pn**	**13 59 57.7**	**-1.4**
MA2	**Magadan** comp=E,0.2nm,0.3s,baz=160,slow=7.4,SNR=8.3	**12.51**	**360**	P		**Pn**	**14 00 41.5**	**-3.3**
MA2	**Magadan**	**12.51**	**360**	⇑ *e*PN		**Pn**	**14 00 42.0**	**-2.8**
MA2				pmax	pmax			
	comp=Z,5.0nm,1.0s							
EKMR	**Ekimchan**	**12.91**	**304**	*e*P		**Pn**	**14 00 51.1**	**+1.2**
EKMR				AMB	AMB		14 00 57.0	
	comp=Z,10.0nm,0.7s							
USA0B	**Ussuriysk Arra**	**13.46**	**264**	P		**Pn**	**14 00 56.0**	**-0.9**
USA0B	**Ussuriysk Arra**	**13.46**	**264**	Pn		**Pn**	**14 00 56.0**	**-0.9**
USRK	**Ussuriysk Ar.** baz=70,slow=12,SNR=6.0	**13.46**	**264**	P		**P**	**14 00 59.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**13.46**	**264**	P		**P**	**14 00 59.2**	**-0.2**
MJAR	**Matsushiro Arr** comp=Z,0.1nm,0.3s,baz=48,slow=11,SNR=2.4	**14.09**	**226**	P		**P**	**14 01 07.8**	**+1.4**
BMKR	**Bomnak**	**15.76**	**307**	*e*P		**Pn**	**14 01 26.2**	**+1.3**
BMKR				AMB	AMB		14 01 28.5	
	comp=Z,10.0nm,0.5s							
SEY	**Seymchan** comp=Z,0.4nm,0.3s,baz=178,slow=8.3,SNR=24	**15.90**	**3**	P		**P**	**14 01 25.0**	**-1.3**
SEY	**Seymchan**	**15.90**	**3**	⇑ *e*P		**P**	**14 01 24.4**	**-1.8**
SEY	**Seymchan**	**15.90**	**3**	*e*P		**P**	**14 01 24.4**	**-1.8**
KROS	**Kirovskiy**	**16.71**	**305**	*e*P		**Pn**	**14 01 36.3**	**0.0**
KROS				AMB	AMB		14 01 37.0	
	comp=Z,4.0nm,0.4s							
JMN	**Monobe**	**18.49**	**230**	P		**P**	**14 01 54.2**	**-0.7**
YAK	**Yakutsk** comp=Z,0.2nm,0.3s,baz=132,slow=2.2,SNR=4.0	**19.19**	**329**	P		**P**	**14 02 02.1**	**+0.1**
YAK	**Yakutsk**	**19.19**	**329**	*de*P		**P**	**14 02 01.1**	**-0.9**
YAK	**Yakutsk**	**19.19**	**329**	P		**P**	**14 02 01.6**	**-0.5**
KSRS	**Korea Array** comp=Z,0.1nm,0.3s,baz=54,slow=9.4,SNR=4.1	**19.41**	**249**	P		**Pn**	**14 02 08.4**	**+0.2**
BILL	**Bilibino**	**22.45**	**15**	⇑ *e*P		**P**	**14 02 33.7**	**-2.0**
BILL				pmax	pmax			
	comp=Z,2.0nm,1.4s							
BILL	**Bilibino**	**22.45**	**15**	P		**P**	**14 02 32.9**	**-2.8**
BILL				IAmb	IAmb		14 02 39.9	
	comp=Z,2.0nm,0.5s							
BILL	**Bilibino**	**22.45**	**15**	*e*P		**P**	**14 02 33.7**	**-2.0**
TIXI	**Tiksi** comp=Z,2.0nm,0.3s,baz=145,slow=6.0,SNR=8.8	**26.71**	**345**	P		**P**	**14 03 12.6**	**-1.4**
TIXI	**Tiksi**	**26.71**	**345**	P		**P**	**14 03 12.4**	**-1.5**
TIXI				IAmb	IAmb		14 03 13.7	
	comp=Z,1.2nm,0.5s							
H11N2	**WAKE ISLAND Hy** baz=339,slow=76,SNR=50	**30.30**	**149**	T		T	14 35 34.6	
H11N1	**WAKE ISLAND Hy** baz=339,slow=76,SNR=41	**30.31**	**149**	T		T	14 35 43.7	
H11N3	**WAKE ISLAND Hy** baz=339,slow=76,SNR=44	**30.31**	**149**	T		T	14 35 35.0	
H11S1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=50	**31.36**	**150**	T		T	14 36 42.1	
H11S3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=42	**31.37**	**150**	T		T	14 36 45.6	
H11S2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=28	**31.38**	**150**	T		T	14 37 00.2	
A21K	**Barrow**	**34.42**	**27**	P		**P**	**14 04 21.6**	**+0.1**
IMAR	**Indian Mountai**	**34.44**	**37**	P		**P**	**14 04 22.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**35.51**	**40**	P		**P**	**14 04 31.6**	**+0.5**
CUT	**Chulitna**	**35.88**	**43**	P		**P**	**14 04 34.5**	**+0.5**
COLD	**Coldfoot**	**35.95**	**35**	P		**P**	**14 04 35.2**	**+0.5**
COLD				IAmb	IAmb		14 04 36.1	
	comp=Z,3.3nm,0.7s							
TOLK	**Toolik Lake Re**	**36.30**	**32**	P		**P**	**14 04 38.5**	**+0.7**
TOLK				IAmb	IAmb		14 04 39.3	
	comp=Z,5.1nm,0.5s							
MDM	**Murphy Dome**	**36.70**	**39**	P		**P**	**14 04 42.1**	**+1.0**
MDM				IAmb	IAmb		14 04 43.0	
	comp=Z,3.6nm,0.9s							
WRH	**Wood River Hil**	**36.77**	**39**	P		**P**	**14 04 42.2**	**+0.5**
WRH				IAmb	IAmb		14 04 49.3	
	comp=Z,4.6nm,1.1s							
SML	**Sawmill**	**36.83**	**44**	P		**P**	**14 04 42.8**	**+0.5**
SML				IAmb	IAmb		14 04 44.0	
	comp=Z,3.8nm,0.8s							
CCB	**Clear Creek Bu**	**36.89**	**39**	P		**P**	**14 04 42.0**	**-0.6**
IL31		**37.28**	**39**	P		**P**	**14 04 46.4**	**+0.5**
ILAR	**Eielson Array** comp=Z,0.7nm,0.5s,baz=271,slow=5.7,SNR=12	**37.28**	**39**	P		**P**	**14 04 46.0**	**0.0**
ILAR	**Eielson Array**	**37.28**	**39**	*e*P		**P**	**14 04 46.4**	**+0.5**
ILAR			

comp=Z,3.0nm,0.9s,baz=40,slow=6.6,SNR=5.3
ARCES PcP **PcP** **14 08 11.7 +1.1**
comp=Z,1.5nm,0.8s,baz=63,slow=4.2,SNR=1.4
AKTO Aktyubinsk 57.30 311 P **P** **14 07 20.8 +0.5**
comp=Z,1.0nm,0.5s,baz=50,slow=7.9,SNR=5.5
FINES FINESS Array B 63.04 334 P **P** **14 07 59.1 +0.1**
comp=Z,2.8nm,0.5s,baz=37,slow=7.8,SNR=16
FINES FINESS Array B 63.04 334 *i* P **P** **14 07 59.5 +0.5**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 63.04 334 P **P** **14 07 59.0 0.0**
NVAR Mina Array Bea 63.68 61 P **P** **14 08 04.3 +0.4**
comp=Z,0.2nm,0.4s,baz=301,slow=6.2,SNR=3.0
PDAR Pinedale Array 65.82 53 P **P** **14 08 18.4 +0.7**
comp=Z,0.4nm,0.5s,baz=298,slow=2.1,SNR=6.2
ULM Lac du Bonnet 67.29 40 LR LR 14 38 37.0
comp=Z,17nm,19.7s,baz=26,slow=36
NOA NORSAR Array B 67.38 340 P **P** **14 08 26.7 -0.3**
comp=Z,0.5nm,0.4s,baz=30,slow=6.6,SNR=9.8
HFS Hagfors 67.57 338 P **P** **14 08 27.2 -0.8**
comp=Z,1.9nm,0.4s,baz=43,slow=4.6,SNR=21
WRA Warramunga Arr 68.35 197 P **P** **14 08 34.9 +1.5**
comp=Z,0.3nm,0.5s,baz=16,slow=6.8,SNR=7.0
WRA Warramunga Arr 68.35 197 *i* P **P** **14 08 36.4 +3.0**
AKASG Malin Array Be 70.36 325 P **P** **14 08 44.9 -0.5**
comp=Z,0.9nm,0.4s,baz=46,slow=5.8,SNR=4.4
ASAR Alice Springs 72.06 196 P **P** **14 08 58.8 +2.9**
comp=Z,0.9nm,0.5s,baz=10,slow=6.1,SNR=27
EIDS Eidsvold 72.12 180 P **P** **14 08 56.7 +0.6**
EIDS IAmb IAmb 14 09 00.4
comp=Z,7.8nm,0.9s
EKA Eskdalemuir Ar 75.61 345 P **P** **14 09 16.2 0.0**
comp=Z,0.3nm,0.3s,baz=20,slow=4.6,SNR=3.7
TXAR Lajitas Array 78.70 59 P **P** **14 09 34.7 +0.8**
comp=Z,0.4nm,0.5s,baz=299,slow=4.4,SNR=7.4
PLCA Paso Flores 149.82 93 PKPbc **PKiKP** **14 17 21.3 +0.9**
comp=Z,0.5nm,0.7s,baz=255,slow=3.2,SNR=4.6

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*IDC **10** 14:04:07.8±0.8, 14.°27N×121.°00E, h128km±4km, mb3.1/5, mb1 3.2/5, mb1mx2.9/54, mbtmp3.5/5, Error ellipse: s-maj=23.9km s-min=7.1km az=23.0*
*MAN **10** 14:04:08.7, 14.°12N×120.°40E, h107km, mb4.4, ML3.2, MS3.0*
ISC 10 14:04:08.4±0.9, 14.°08N±0.°07×120.°5E±0.°1, h120km, n13, σ1s53/16, mb3.4/5, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MACP	**Maragondon, Ca**	**0.26**	**46**	*eP*	**Pn**	**14 04 25.5**	**+0.3**
MACP				*eS*	**Sn**	**14 04 38.0**	**+0.1**
TGY	**Tagaytay City**	**0.40**	**86**	P	**Pn**	**14 04 25.9**	**+0.1**
	138nm,0.3s,baz=8.2,slow=3.4,SNR=9.9						
TGY				S	**Sn**	**14 04 40.0**	**+1.0**
	282nm,0.3s,baz=18,slow=22,SNR=12						
TGY	**Tagaytay City**	**0.40**	**86**	*iP*	**Pn**	**14 04 26.8**	**+1.0**
TGY				*i* S	**Sn**	**14 04 41.8**	**+2.8**
LUBP	**Lubang**	**0.43**	**218**	*eP*	**Pn**	**14 04 26.4**	**+0.4**
LUBP				*eS*	**Sn**	**14 04 39.5**	**+0.3**
LQP	**Lukban**	**0.99**	**88**	*eP*	Pn	14 04 23.1	-7.4
BOLP	**Bolinao**	**2.37**	**346**	*eP*	**Pn**	**14 04 46.5**	**0.0**
ENPP	**El Nido**	**3.05**	**201**	*eP*	**Pn**	**14 04 56.3**	**+1.0**
APYP	**Conner**	**3.83**	**10**	*eP*	**Pn**	**14 05 07.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**21.16**	**285**	P	**P**	**14 08 47.2**	**+3.0**
	0.4nm,0.3s,baz=89,slow=9.1,SNR=4.8						
SONM	**Songino Array**	**35.65**	**344**	P	**P**	**14 10 52.8**	**-2.1**
	0.9nm,0.6s,baz=159,slow=9.1,SNR=4.2						
WRA	**Warramunga Arr**	**36.44**	**158**	P	**P**	**14 11 00.0**	**-1.7**
	0.2nm,0.3s,baz=330,slow=10.0,SNR=9.8						
ASAR	**Alice Springs**	**39.73**	**161**	P	**P**	**14 11 28.5**	**-0.9**
	0.5nm,0.6s,baz=338,slow=6.8,SNR=14						
MKAR	**Makanchi Array**	**45.63**	**323**	P	**P**	**14 12 16.3**	**-0.5**
	0.2nm,0.5s,baz=129,slow=8.7,SNR=4.2						

IDC 10 14:11:15.0±5.2, 7.°27S×156.°46E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/42, mbtmp3.7/4, Error ellipse: s-maj=135.6km s-min=36.3km az=107.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.87**	**237**	P	P	14 16 40.0	+0.3
	0.9nm,0.5s,baz=64,slow=9.3,SNR=18						
ASAR	**Alice Springs**	**27.10**	**231**	P	P	14 16 59.4	-0.4
	0.4nm,0.6s,baz=58,slow=9.9,SNR=11						
H11S3	**WAKE ISLAND Hy**	**27.52**	**21**	T	T	14 45 34.8	
	baz=201,slow=75,SNR=68						
H11S2	**WAKE ISLAND Hy**	**27.52**	**21**	T	T	14 45 34.4	
	baz=201,slow=75,SNR=57						
H11S1	**WAKE ISLAND Hy**	**27.54**	**21**	T	T	14 45 36.1	
	baz=201,slow=75,SNR=31						
H11N1	**WAKE ISLAND Hy**	**28.71**	**21**	T	T	14 47 05.1	
	baz=202,slow=76,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**28.73**	**21**	T	T	14 47 03.9	
	baz=202,slow=76,SNR=12						
H11N2	**WAKE ISLAND Hy**	**28.73**	**21**	T	T	14 47 08.1	
	baz=202,slow=76,SNR=4.9						
CMAR	**Chiang Mai Arr**	**62.21**	**295**	P	P	14 21 39.4	+0.3
	0.3nm,0.3s,baz=111,slow=4.9,SNR=4.0						
MKAR	**Makanchi Array**	**84.57**	**318**	P	P	14 23 50.2	-0.2
	0.7nm,0.6s,baz=96,slow=6.6,SNR=9.2						

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*IDC **10** 14:23:38.7±3.0, 35.°71S×179.°22E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.5/27, mbtmp3.5/3, ML3.9/1, Error ellipse: s-maj=66.2km s-min=43.4km az=114.0*
*WEL **10** 14:23:47.4±0.7, 36.°5S×17.°9E±.°, h131km±9km, M3.7/36, ML3.9/32, MLv3.7/36, Error ellipse: s-maj=0.0km s-min=0.0km az=70.3*
ISC 10 14:23:46.9±1.9, 36.°3S±0.°1×179.°39E±0.°10, h110km±14km, n58, σ1s46/80, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.53**	**214**	P	**Pn**	**14 24 12.3**	**-1.6**
MXZ				S	**Sn**	**14 24 32.9**	**-1.6**
WMGZ	**Waiomatatini S**	**1.70**	**207**	P	**Pn**	**14 24 16.7**	**+0.7**
WMGZ				S	**Sn**	**14 24 40.7**	**+2.4**
PKGZ	**Pakihiroa**	**1.90**	**213**	P	**Pn**	**14 24 18.1**	**-0.5**
PKGZ				S	**Sn**	**14 24 43.5**	**+0.7**
HAZ	**Te Kaha**	**1.94**	**221**	P	**Pn**	**14 24 18.2**	**-0.8**
PUZ	**Puketiti**	**1.98**	**207**	P	**Pn**	**14 24 19.8**	**+0.2**
RUGZ	**Raukumara Rang**	**2.15**	**219**	P	**Pn**	**14 24 22.1**	**+0.2**
TWGZ	**Tauwhareparae**	**2.18**	**211**	P	**Pn**	**14 24 22.7**	**+0.5**
TWGZ				S	**Sn**	**14 24 51.1**	**+1.9**
CNGZ	**Carnagh Statio**	**2.37**	**203**	P	**Pn**	**14 24 25.2**	**+0.6**
TKGZ	**Te Karaka**	**2.46**	**210**	P	**Pn**	**14 24 25.7**	**0.0**
TKGZ				S	**Sn**	**14 24 55.9**	**+0.4**
MWZ	**Matawai**	**2.51**	**216**	P	**Pn**	**14 24 26.6**	**+0.1**
MWZ				S	**Sn**	**14 24 56.8**	**-0.1**
URZ	**Urewera**	**2.67**	**222**	Pn	**Pn**	**14 24 28.3**	**-0.1**
	15nm,0.3s,baz=252,slow=4.7,SNR=109						
URZ				Sn	**Sn**	**14 24 59.4**	**-1.0**
	9.7nm,0.3s,baz=174,slow=22,SNR=2.8						
URZ	**Urewera**	**2.67**	**222**	P	**Pn**	**14 24 28.1**	**-0.3**
URZ				S	**Sn**	**14 24 59.1**	**-1.3**
RAGZ	**Rawiri**	**2.69**	**215**	P	**Pn**	**14 24 29.0**	**+0.1**
RIGZ	**Rimuhau**	**2.72**	**208**	P	**Pn**	**14 24 29.1**	**-0.1**
RIGZ				S	**Sn**	**14 25 01.7**	**-0.1**
OPRZ	**Ohinepanea**	**2.74**	**235**	P	**Pn**	**14 24 28.9**	**-0.5**
PRGZ	**Paritu Road**	**2.87**	**204**	P	**Pn**	**14 24 31.0**	**-0.2**
PRGZ				S	**Sn**	**14 25 04.4**	**-0.9**
TGRZ	**Tauranga**	**2.88**	**239**	P	**Pn**	**14 24 30.3**	**-0.9**
SNGZ	**Shannon Statio**	**2.96**	**213**	P	**Pn**	**14 24 32.2**	**-0.1**
SNGZ				S	**Sn**	**14 25 07.9**	**+0.5**
KUZ	**Kuaotunu**	**2.99**	**260**	P	**Pn**	**14 24 30.5**	**-2.2**
RTZ	**Ruatahuna**	**3.00**	**219**	P	**Pn**	**14 24 32.4**	**-0.5**
MUGZ	**Murupara**	**3.01**	**223**	P	**Pn**	**14 24 32.2**	**-0.8**
MUGZ				S	**Sn**	**14 25 06.6**	**-1.9**
KNZ	**Kokohu**	**3.04**	**206**	P	**Pn**	**14 24 32.3**	**-1.0**
KARZ	**Kaharoa**	**3.04**	**235**	P	**Pn**	**14 24 33.1**	**-0.3**
MHGZ	**Mahia Peninsul**	**3.08**	**202**	P	**Pn**	**14 24 33.8**	**0.0**
RAHZ	**Arahi**	**3.19**	**214**	P	**Pn**	**14 24 35.2**	**-0.1**
PRRZ	**Plateau Road**	**3.24**	**227**	P	**Pn**	**14 24 36.0**	**0.0**
MTHZ	**Maungataniwha**	**3.25**	**218**	S	**Sn**	**14 25 13.9**	**-0.4**
WHHZ	**Waihua**	**3.25**	**211**	P	**Pn**	**14 24 36.0**	**-0.2**
ALRZ	**Allen Road**	**3.31**	**226**	P	**Pn**	**14 24 37.1**	**+0.1**
TOZ	**Tahuroa Road**	**3.42**	**244**	P	**Pn**	**14 24 37.7**	**-0.7**
TOZ				S	**Sn**	**14 25 14.5**	**-3.8**
MRHZ	**Matea Rd**	**3.46**	**222**	P	**Pn**	**14 24 38.9**	**-0.1**
NMHZ	**Naumai**	**3.46**	**216**	P	**Pn**	**14 24 38.7**	**-0.3**
ARHZ	**Aropaoanui**	**3.51**	**212**	P	**Pn**	**14 24 39.3**	**-0.3**
ARHZ				S	**Sn**	**14 25 21.0**	**+0.6**
KUTZ	**Kaahu Road**	**3.58**	**231**	P	**Pn**	**14 24 41.1**	**+0.5**
ETAZ	**East Tamaki Re**	**3.65**	**258**	P	**Pn**	**14 24 40.8**	**-0.6**
BKZ	**Black Stump Fm**	**3.67**	**218**	P	**Pn**	**14 24 40.6**	**-1.1**
MCHZ	**McNeill Hill**	**3.79**	**213**	P	**Pn**	**14 24 42.2**	**-1.2**
MCHZ				S	**Sn**	**14 25 27.1**	**-0.1**
RATZ	**Rangitukua**	**3.85**	**227**	P	**Pn**	**14 24 44.2**	**0.0**
RITZ	**Rihia Road**	**3.87**	**225**	P	**Pn**	**14 24 44.9**	**+0.5**
AWAZ	**Awhitu Peninsu**	**3.89**	**257**	P	**Pn**	**14 24 44.5**	**-0.2**
KWHZ	**Kaweka Forest**	**3.90**	**216**	P	**Pn**	**14 24 44.7**	**-0.2**
KWHZ				S	**Sn**	**14 25 29.3**	**-0.6**
KAHZ	**Kahuranaki**	**4.01**	**209**	P	**Pn**	**14 24 45.1**	**-1.3**
KAHZ				S	**Sn**	**14 25 31.3**	**-1.1**
KRVZ	**Karewarewa**	**4.07**	**226**	P	**Pn**	**14 24 47.6**	**+0.3**
WCZ	**Waipu Caves**	**4.10**	**274**	P	**Pn**	**14 24 45.9**	**-1.6**
OTVZ	**Oturere**	**4.11**	**225**	P	**Pn**	**14 24 46.9**	**-0.8**
BHHZ	**Black Hill Sta**	**4.13**	**219**	P	**Pn**	**14 24 47.6**	**-0.4**
BHHZ				S	**Sn**	**14 25 33.5**	**-1.8**
NGZ	**Ngauruhoe**	**4.15**	**225**	P	**Pn**	**14 24 48.7**	**+0.4**
TWVZ	**Taurewa**	**4.18**	**227**	P	**Pn**	**14 24 50.6**	**+2.0**
MOVZ	**Moawhango**	**4.23**	**222**	P	**Pn**	**14 24 48.1**	**-1.2**
MOVZ				S	**Sn**	**14 25 34.5**	**-3.3**
PNHZ	**Pukenui**	**4.39**	**214**	P	**Pn**	**14 24 49.9**	**-1.6**
PNHZ				S	**Sn**	**14 25 39.3**	**-2.4**
VRZ	**Vera Road**	**4.63**	**231**	P	**Pn**	**14 24 56.6**	**+2.0**
DVHZ	**Dannevirke**	**4.72**	**211**	P	**Pn**	**14 24 54.4**	**-1.5**
DVHZ				S	**Sn**	**14 25 46.9**	**-2.7**
OUZ	**Omahuta**	**4.83**	**281**	P	**Pn**	**14 24 55.5**	**-1.9**
BFZ	**Birch Farm**	**5.02**	**208**	P	**Pn**	**14 24 57.1**	**-2.8**
CTZ	**Chatham Island**	**8.03**	**159**	P	**Pn**	**14 25 43.2**	**+2.7**
CTZ				S	**Sn**	**14 27 04.3**	**-5.3**
ASAR	**Alice Springs**	**41.02**	**275**	P	**P**	**14 31 22.2**	**+2.9**
	0.3nm,0.5s,baz=119,slow=7.7,SNR=9.5						
WRA	**Warramunga Arr**	**42.55**	**280**	P	**P**	**14 31 34.2**	**+2.4**
	0.2nm,0.4s,baz=120,slow=7.7,SNR=6.3						
FINES	**FINESS Array B**	**149.74**	**335**	PKPbc	**PKPab**	**14 43 27.7**	**-0.9**
	0.7nm,0.4s,baz=46,slow=4.4,SNR=5.5						

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*INET **10** 14:33:29.2, 9.°48N×85.°91W, h12km, MW3.0*
UCR 10 14:33:28.5±1.7, 9.°40N×85.°96W, h22km±6km, MW3.7, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRZA	**Playa Garza**	**0.60**	**32**	*eP*	Pb	14 33 40.1	-0.4
GRZA				*eS*	Sn	14 33 50.0	-0.9
INDI	**Punta indio, G**	**0.65**	**44**	*eP*	Pb	14 33 41.1	-0.1
SAJU	**San Juanillo,**	**0.71**	**21**	*eP*	Pb	14 33 41.4	-0.8
SAJU				*eS*	Sb	14 33 52.1	+0.5
GUAI	**GUAI**	**0.97**	**27**	*i* P	Pb	14 33 45.3	-1.4
GUAI				*i* S	Sb	14 33 59.4	+0.3
LAFE	**Finca La Fe, P**	**1.11**	**69**	*eP*	Pn	14 33 47.5	-1.2
LAFE				*eS*	Sb	14 34 10.9	-1.3
PLVR	**Palo Verde**	**1.12**	**33**	*eP*	Pn	14 33 46.6	-2.4
JTS	**Las Juntas de**	**1.33**	**48**	*eP*	Pn	14 33 51.3	-0.5
JTS				*eS*	Sb	14 34 10.1	+0.6
BUEV	**Buena Vista**	**1.49**	**21**	*i* P	Pn	14 33 53.6	-0.5
GB1A	**Borinquen Arri**	**1.52**	**21**	*i* P	Pn	14 33 53.8	-0.6
ACAL	**Aguas Claras**	**1.53**	**37**	*i* P	Pn	14 33 55.0	+0.4
ARE1	**Arenal 1**	**1.62**	**49**	*eP*	Pn	14 33 56.7	+1.0
CEDE	**Laguna Cedeo**	**1.65**	**49**	*eP*	Pn	14 33 56.5	+0.3
EDDO	**Dominical**	**2.08**	**94**	*eP*	Pn	14 34 01.7	-0.3
RIMA	**Rio Macho**	**2.10**	**80**	*eP*	Pn	14 34 02.6	0.0
CDM	**Cerro de Muert**	**2.17**	**86**	*eP*	Pn	14 34 04.0	+0.3
CDM				*eS*	Sn	14 34 31.4	+1.1
CVTR	**Volcan Turrial**	**2.26**	**74**	*eP*	Pn	14 34 06.3	+1.4
RIOS	**Rincon, Osa**	**2.52**	**106**	*eP*	Pn	14 34 08.4	+0.3
MRVA	**Moravia de Chi**	**2.52**	**80**	*eP*	Pn	14 34 08.9	+0.7
DRK0	**Durika**	**2.69**	**93**	*eP*	Pn	14 34 11.2	+0.7

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*IDC **10** 14:35:26.4±0.8, 27.°56N×142.°44E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.7/39, mbtmp4.0/7, ML3.0/1, Error ellipse: s-maj=11.5km s-min=12.0km az=109.0*
*NEIC **10** 14:35:30.1±1.2, 27.°55N±0.°06×142.°5E±0.°2, h33km±11km, mb4.3/6, Error ellipse: s-maj=28.0km s-min=8.2km az=88.0*
*JMA **10** 14:35:31.9, 27.°50N×142.°43E, h42km±3km, M4.4*
JMA Felt I J1.
ISC 10 14:35:30.2±0.8, 27.°57N±0.°05×142.°4E±0.°1, h30km, n39, σ1s73/40, mb4.0/9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**0.52**	**206**	P	**Pn**	**14 35 42.1**	**+0.4**
CBIJ				S	**Sn**	**14 35 49.5**	**0.0**
JCJ	**Chichijima**	**0.52**	**206**	Pn	**Pn**	**14 35 42.2**	**+0.5**
	577nm,0.3s,baz=359,slow=18,SNR=1104						
JCJ				LR	LR	14 35 48.7	
	comp=Z,76nm,19.6s,baz=135,slow=44						
JCJ				Sn	**Sn**	**14 35 49.8**	**+0.2**
	2μm,0.3s,baz=274,slow=24,SNR=42						
JHH2	**Haha-jima-NKT2**	**0.96**	**194**	P	**Pb**	**14 35 48.2**	**-0.2**
JHH2				*eS*	**Sb**	**14 36 00.1**	**-0.6**
JHJ2	**Mitsune**	**5.97**	**338**	Pn	**Pn**	**14 36 58.4**	**+1.9**
BSO1	**Boso 1**	**7.17**	**350**	P	**Pn**	**14 37 13.4**	**+0.8**
BSO3	**Boso 3**	**7.40**	**348**	P	**Pn**	**14 37 16.5**	**+0.6**
BSO4	**Boso 4**	**7.61**	**347**	P	**Pn**	**14 37 20.7**	**+1.7**
JOD2	**Odawara 2**	**8.19**	**340**	P	**Pn**	**14 37 28.7**	**+1.7**
JYN	**Shimob**	**8.57**	**338**	P	**Pn**	**14 37 35.4**	**+3.0**
JYN				*eS*	**Sn**	**14 39 12.2**	**+4.1**
JHU	**Hanno**	**8.68**	**343**	P	**Pn**	**14 37 34.1**	**+0.3**
JHU				*eS*	**Sn**	**14 39 06.7**	**-4.0**
JYT	**Yasato**	**8.84**	**348**	Pn	**Pn**	**14 37 36.4**	**+0.5**
JRY	**Ryogami san**	**8.94**	**341**	P	**Pn**	**14 37 38.5**	**+1.1**
JRY				*eS*	**Sn**	**14 39 15.1**	**-2.0**
INU	**Inuyama**	**9.03**	**331**	Pn	**Pn**	**14 37 38.5**	**-0.1**
JHO	**Hitachi**	**9.15**	**351**	P	**Pn**	**14 37 39.4**	**-0.8**
JHO				*eS*	**Sn**	**14 39 16.3**	**-5.9**
JAG	**Ashikaga**	**9.19**	**345**	P	**Pn**	**14 37 40.2**	**-0.5**
MJAR	**Matsushiro Arr**	**9.64**	**339**	Pn	**Pn**	**14 37 47.0**	**+0.1**
	0.1nm,0.3s,baz=150,slow=12,SNR=14						
MJAR	**Matsushiro Arr**	**9.64**	**339**	Pn	**Pn**	**14 37 47.8**	**+0.8**
MAJO	**Matsushiro**	**9.64**	**339**	Pn	**Pn**	**14 37 48.0**	**+1.1**
JMM	**Marumori**	**10.36**	**353**	Pn	**Pn**	**14 37 55.7**	**-1.1**
JSD	**Sado**	**11.01**	**342**	Pn	**Pn**	**14 38 03.7**	**-2.0**
INCN	**Inchon**	**16.57**	**311**	Pn	**Pn**	**14 39 21.0**	**+0.5**
INCN				IAmb	IAmb	14 39 49.8	
	comp=Z,18nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**23.70**	**104**	T	T	15 05 30.7	
	baz=293,slow=75,SNR=48						
H11N1	**WAKE ISLAND Hy**	**23.70**	**104**	T	T	15 05 27.7	
	baz=293,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**23.71**	**104**	T	T	15 05 27.0	
	baz=293,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hy**	**24.04**	**107**	T	T	15 06 02.6	
	baz=297,slow=75,SNR=109						
H11S1	**WAKE ISLAND Hy**	**24.04**	**107**	T	T	15 06 00.4	
	baz=297,slow=75,SNR=46						
H11S2	**WAKE ISLAND Hy**	**24.06**	**107**	T	T	15 05 59.3	
	baz=297,slow=75,SNR=48						
WB0	**Warramunga Arr**	**47.70**	**190**	P	**P**	**14 44 03.0**	**-1.3**
WB0				IAmb	IAmb	14 44 04.9	
	comp=Z,4.5nm,0.9s						
WR0	**Warramunga Arr**	**47.86**	**190**	P	**P**	**14 44 05.2**	**-0.3**
WR0				IAmb	IAmb	14 44 05.8	
	comp=Z,2.4nm,0.7s						
WB2	**Warramunga Arr**	**47.88**	**190**	P	**P**	**14 44 05.5**	**-0.2**
WRA	**Warramunga Arr**	**47.88**	**190**	P	**P**	**14 44 05.6**	**-0.1**
	comp=Z,3.9nm,0.6s,baz=12,slow=8.5,SNR=51						
WRA	**Warramunga Arr**	**47.88**	**190**	P	**P**	**14 44 04.8**	**-0.8**
AS31	**Alice Springs**	**51.60**	**190**	P	**P**	**14 44 33.2**	**-0.8**
AS31				IAmb	IAmb	14 44 57.6	
	comp=Z,1.5nm,1.4s						
ASAR	**Alice Springs**	**51.60**	**190**	P	**P**	**14 44 33.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=5.8,slow=6.7,SNR=20						
ASAR	**Alice Springs**	**51.60**	**190**	P	**P**	**14 44 33.3**	**-0.7**
YKA	**Yellowknife Ar**	**71.62**	**28**	P	**P**	**14 46 49.5**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=288,slow=5.5,SNR=5.6						
ARCES	**ARCESS Array B**	**73.17**	**341**	P	**P**	**14 46 58.8**	**+1.1**
	comp=Z,4.4nm,1.1s,baz=68,slow=5.0,SNR=2.2						
FINES	**FINESS Array B**	**77.62**	**334**	P	**P**	**14 47 23.4**	**0.0**
	comp=Z,1.1nm,0.6s,baz=81,slow=5.4,SNR=5.6						
NVAR	**Mina Array Bea**	**80.05**	**52**	P	**P**	**14 47 39.1**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=305,slow=6.4,SNR=5.2						

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*TRN **10** 14:37:01.3, 10.°04N×62.°37W, h71km, MD3.5*
*FUNV **10** 14:37:01.5, 10.°12N×62.°36W, h22km, MW3.6*
ISC 10 14:37:01.8±1.3, 10.°10N±0.°05×62.°43W±0.°04, h46km±50km, n14, σ1s02/22, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRUV	**Carupano**	**0.97**	**306**	*eP*	**Pn**	**14 37 19.1**	**-0.1**
CRUV				*eS*	**Sn**	**14 37 31.0**	**-0.8**
TPP	**Pointe-a-Pierr**	**0.99**	**77**	*e*	Pn	14 37 27.3	+8.0
TRN	**Trinidad (W)**	**1.15**	**62**	*eP*	**Pn**	**14 37 21.6**	**+0.1**
TRN				*eS*	**Sn**	**14 37 36.6**	**+0.4**
RIOV	**Rio Grande**	**2.11**	**163**	*eP*	**Pn**	**14 37 35.4**	**+0.6**
RIOV				*eS*	**Sn**	**14 37 59.0**	**-0.8**
GRGR	**Grenville**	**2.16**	**21**	*eP*	**Pn**	**14 37 36.3**	**+0.9**
GRGR				*eS*	**Sn**	**14 38 01.4**	**+0.4**
GRGR	**Grenville**	**2.16**	**21**	*eP*	**Pn**	**14 37 36.0**	**+0.6**
GRGR				*eS*	**Sn**	**14 37 59.2**	**-1.7**
PCRV	**Puerto La Cruz**	**2.17**	**272**	*eP*	**Pn**	**14 37 36.8**	**+1.2**
PCRV				*eS*	**Sn**	**14 38 01.6**	**+0.4**
TOSP	**Speyside**	**2.21**	**57**	*eP*	**Pn**	**14 37 35.9**	**-0.2**
TOSP				*eS*	**Sn**	**14 38 01.9**	**-0.3**
GCMP	**Grenada, Carri**	**2.57**	**23**	*eP*	**Pn**	**14 37 41.0**	**+0.1**
GCMP				*eS*	**Sn**	**14 38 10.9**	**0.0**
SVB	**Belmont**	**3.36**	**20**	*e*	Pn	14 37 54.8	+3.0
BIRV	**Birongo**	**3.79**	**276**	*eP*	**Pn**	**14 37 59.9**	**+2.1**
BIRV				*eS*	**Sn**	**14 38 40.1**	**-1.2**
TACV	**Tcata**	**4.52**	**271**	*eP*	**Pn**	**14 38 08.6**	**+0.7**
TACV				*eS*	**Sn**	**14 38 58.1**	**-1.2**
BAUV	**El Baul**	**5.65**	**259**	*eP*	**Pn**	**14 38 23.3**	**0.0**
BAUV	**El Baul**	**5.65**	**259**	*eS*	**Sn**	**14 39 25.2**	**-1.8**

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*IDC **10** 14:38:34.9±2.1, 21.°57N×142.°80E, h295km±21km, mb3.2/8, mb1 3.3/10, mb1mx3.0/44, mbtmp3.9/10, Error ellipse: s-maj=46.2km s-min=14.4km az=82.0*
ISC 10 14:38:35.9±1.2, 21.°6N±0.°1×142.°9E±0.°4, h311km, n11, σ0s61/12, mb3.4/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.47**	**353**	P	**Pn**	**14 39 58.4**	**-0.9**
	3.4nm,0.3s,baz=270,slow=19,SNR=1.8						
JCJ				S	**S**	**14 41 05.9**	**-0.6**
	8.6nm,0.3s,baz=122,slow=23,SNR=6.1						
MJAR	**Matsushiro Arr**	**15.41**	**346**	P	**P**	**14 41 57.0**	**+0.2**
	0.1nm,0.3s,baz=164,slow=11,SNR=2.2						
KSRS	**Korea Array**	**20.43**	**324**	P	**P**	**14 42 50.3**	**0.0**
	1.6nm,0.6s,baz=145,slow=8.9,SNR=12						
USRK	**Ussuriysk Ar.**	**24.26**	**341**	P	**P**	**14 43 26.1**	**+0.7**
	0.9nm,0.6s,baz=143,slow=7.5,SNR=4.5						
KLR	**Kul'dur**	**28.93**	**345**	P	**P**	**14 44 07.5**	**+0.6**
	2.5nm,0.5s,baz=164,slow=8.9,SNR=7.6						
WRA	**Warramunga Arr**	**42.18**	**192**	P	**P**	**14 45 58.6**	**-0.4**
	1.1nm,0.5s,baz=18,slow=9.5,SNR=7.6						
ASAR	**Alice Springs**	**45.89**	**192**	P	**P**	**14 46 27.6**	**-0.6**
	0.4nm,0.7s,baz=14,slow=8.8,SNR=5.0						
MKAR	**Makanchi Array**	**54.57**	**313**	P	**P**	**14 47 32.9**	**+0.2**
	0.2nm,0.8s,baz=90,slow=8.6,SNR=2.1						
ARCES	**ARCESS Array B**	**78.90**	**341**	P	**P**	**14 50 05.5**	**+0.7**
	2.9nm,1.0s,baz=348,slow=5.1,SNR=4.1						
FINES	**FINESS Array B**	**83.14**	**334**	P	**P**	**14 50 27.3**	**+0.2**
	1.2nm,0.7s,baz=46,slow=4.0,SNR=3.3						
PLCA	**Paso Flores**	**145.89**	**132**	PKPbc	**PKPbc**	**14 57 39.6**	**+0.3**
	1.0nm,0.9s,baz=262,slow=4.0,SNR=3.5						

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*IDC **10** 15:05:25.2±0.7, 35.°48N×140.°91E, h0km, mb3.9/16, mb1 4.0/21, mb1mx3.9/60, mbtmp3.9/21, ML3.4/3, MS3.1

1.3nm,0.5s,baz=72,slow=6.2,SNR=6.6
AKASG **Malin Array Be** 75.34 322 P P 15 17 09.4 +0.3
0.5nm,0.4s,baz=45,slow=6.7,SNR=4.9
NOA **NORSAR Array B** 75.50 337 P P 15 17 10.3 +0.3
1.5nm,0.7s,baz=40,slow=5.7,SNR=4.8
H03N2 **Juan Fernandez** 147.12 98 T T 18 09 34.4
baz=289,slow=76,SNR=7.9
H03N3 **Juan Fernandez** 147.13 98 T T 18 09 36.5
baz=289,slow=76,SNR=13
H03N1 **Juan Fernandez** 147.14 98 T T 18 09 36.1
baz=289,slow=76,SNR=15

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*IDC **10** 15:11:43.2±1.8,5°.83S×152°.59E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/39,mbtmp3.6/5,ML1.7/1,MS2.7/1, Ms1 2.7/1,ms1mx2.2/21,Error ellipse: s-maj=78.4km s-min=23.4km az=128.0*

ISC 10 15:11:48.5±1.9,**6°.0S**±0°.4×**152°.7E**±0°.4,**h38**km,**n7**,**σ0§40**/7, **mb3.4/4,New Britain region**

Code	Station Name	Δ° AZ°	Phase ID		Time	Res
			Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.46 238**	Pn	**Pn**	**15 13 21.5**	**+0.4**
	1.0nm,0.3s,baz=39,slow=13,SNR=2.7					
PMG			Sn	**Sn**	**15 14 33.5**	**-0.1**
	1.3nm,0.3s,baz=327,slow=15,SNR=3.3					
WRA	**Warramunga Arr**	**22.60 230**	P	**P**	**15 16 45.6**	**-0.5**
	0.3nm,0.4s,baz=54,slow=10,SNR=2.8					
ASAR	**Alice Springs**	**25.22 224**	P	**P**	**15 17 11.1**	**+0.1**
	0.6nm,0.6s,baz=58,slow=9.3,SNR=15					
PETK	**Petropavlovsk-**	**59.03 4**	LR	LR	15 45 29.8	
	comp=Z,6.6nm,19.4s,baz=152,slow=34					
MKAR	**Makanchi Array**	**81.16 319**	P	**P**	**15 24 00.2**	**0.0**
	0.5nm,0.9s,baz=96,slow=6.4,SNR=4.1					
ILAR	**Eielson Array**	**83.30 22**	P	**P**	**15 24 11.2**	**+0.2**
	0.7nm,0.9s,baz=237,slow=5.6,SNR=7.7					
TORD	**Torodi Ar. Bea**	**150.57 286**	PKPbc	**PKPbc**	**15 31 37.0**	**-0.4**
	0.5nm,0.7s,baz=61,slow=3.8,SNR=2.4					

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*IDC **10** 15:11:52.0±0.8,42°.21N×148°.44E,h0km,mb3.7/13, mb1 3.9/17,mb1mx3.7/52,mbtmp3.7/17,ML3.0/3,Error ellipse: s-maj=20.7km s-min=16.3km az=158.0*
*MOS **10** 15:11:55.7±1.3,42°.52N×148°.29E,h42km,mb4.0/1,Error ellipse: s-maj=13.9km s-min=8.5km az=113.4*
*JMA **10** 15:11:55.8±0.3,42°.52N×148°.08E,h10km,M4.1*
*NIED **10** 15:11:55.9,42°.52N×148°.08E,h10km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.37; $M_{\theta\theta}$3.17; $M_{\phi\phi}$-0.80; $M_{r\theta}$-0.30; $M_{\theta\phi}$0.87; $M_{\phi r}$-1.59; Fault plane solution: $M_0$3.39000×10^{14} NP1:ϕ_s50.00000°, δ59.00000°,λ-128.00000°. NP2:ϕ_s286.00000°, δ47.00000°,λ-45.00000°.*
*SKHL **10** 15:11:55.9±0.5,42°.50N×148°.30E,h34km±4km,mb4.4/5*

ISC 10 15:11:56.9±1.3,**42°.39N**±0°.05×**148°.26E**±0°.06,**h34**km±4km, **n53**,**σ1§92**/66,**mb3.7**/13,**1D**,**Off southeast coast of Hokkaido**

Code	Station Name	Δ° AZ°	Phase ID		Time	Res
			Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**2.09 299**	P	**Pn**	**15 12 28.9**	**-0.6**
NEM2			*e*S	**Sn**	**15 12 53.6**	**-0.7**
NMR	**Nemuro--Hokkai**	**2.10 299**	⇓*i*PN	**Pn**	**15 12 29.2**	**-0.5**
NMR			*i* S	**Sn**	**15 12 53.6**	**-1.0**
NMR	**Nemuro--Hokkai**	**2.10 299**	*i* P	**Pn**	**15 12 29.2**	**-0.5**
NMR			*i* S	**Sn**	**15 12 53.6**	**-1.0**
JKHN	**Kushirohamanak**	**2.38 288**	P	**Pn**	**15 12 33.7**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**2.40 314**	*e*Pn	**Pn**	**15 12 32.2**	**-1.6**
YUK			*e*S	**Sn**	**15 12 59.5**	**-2.5**
YUK			pmax	pmax		
	comp=Z,80nm,0.2s					
YUK			smax	smax		
	comp=N,946nm,0.3s					
YUK			smax	smax		
	comp=E,216nm,0.3s					
YUK	**Yuzh-Kuril'sk**	**2.40 314**	*e*P	**Pn**	**15 12 32.2**	**-1.6**
YUK			AMB	AMB	15 12 35.0	
	comp=E,80nm,0.2s					
YUK			*e*S	**Sn**	**15 12 59.5**	**-2.5**
YUK			A	A	15 13 04.0	
	comp=E,950nm,0.3s					
YUK			A	A	15 13 04.0	
	comp=E,220nm,0.3s					
GLVR	**Golovnino**	**2.42 305**	*e*PN	**Pn**	**15 12 33.3**	**-0.7**
GLVR			*e*S	**Sn**	**15 13 01.8**	**-0.6**
GLVR			smax	smax		
	comp=E,352nm,0.4s					
GLVR			smax	smax		
	comp=N,748nm,0.3s					
GLVR	**Golovnino**	**2.42 305**	*e*P	**Pn**	**15 12 33.0**	**-1.0**
GLVR			*e*S	**Sn**	**15 13 01.1**	**-1.3**
GLVR			A	A	15 13 03.0	
	comp=N,750nm,0.4s					
GLVR			A	A	15 13 03.0	
	comp=N,350nm,0.4s					
GRPR	**Tuman**	**2.42 312**	*e*PN	**Pb**	**15 12 36.6**	**-3.2**
GRPR			*e*S	**Sn**	**15 13 00.0**	**-2.6**
GRPR			pmax	pmax		
	comp=Z,81nm,0.4s					
GRPR			smax	smax		
	comp=N,608nm,0.4s					
GRPR			smax	smax		
	comp=E,321nm,0.4s					
GRPR	**Tuman**	**2.42 312**	*e*P	**Pb**	**15 12 36.6**	**-3.2**
GRPR			AMB	AMB	15 12 39.0	
	comp=E,80nm,0.4s					
GRPR			*e*S	**Sn**	**15 13 00.0**	**-2.6**
GRPR			A	A	15 13 03.0	
	comp=E,610nm,0.4s					
GRPR			A	A	15 13 03.0	
	comp=E,320nm,0.4s					
JAK	**Akkeshi**	**2.69 284**	P	**Pn**	**15 12 38.0**	**+0.2**
JAK			*e*S	**Sn**	**15 13 08.6**	**-0.7**
JNSB	**Nemuroshibetsu**	**2.76 301**	*e*S	**Sn**	**15 13 10.3**	**-0.5**
JRA	**Rausu**	**2.77 305**	*e*S	**Sn**	**15 13 10.8**	**-0.2**
RUSJ	**Misakicho**	**2.79 309**	*e*PN	**Pn**	**15 12 40.0**	**+0.9**
RUSJ			*e*S	**Sn**	**15 13 12.1**	**+0.5**
KUR	**Kuril'sk**	**2.86 354**	*e*PN	**Pn**	**15 12 38.1**	**-1.9**
KUR			pmax	pmax		
	comp=E,29nm,0.5s					
KUR			pmax	pmax		
	comp=Z,63nm,0.5s					
KUR			pmax	pmax		
	comp=N,22nm,0.3s					
KUR	**Kuril'sk**	**2.86 354**	*e*P	**Pn**	**15 12 37.9**	**-2.1**
KUR			AMB	AMB	15 12 42.0	
	comp=N,80nm,0.5s					
KUR			*e*S	**Sn**	**15 13 08.0**	**-5.2**
KUR			A	A	15 13 13.0	
	comp=N,260nm,0.5s					
KUR			A	A	15 13 13.0	
	comp=N,220nm,0.5s					
JAR	**Ashorobuto**	**3.42 287**	P	**Pn**	**15 12 48.2**	**+0.3**
JAR			*e*S	**Sn**	**15 13 26.4**	**-0.8**
JTKR	**Abashiri--Toko**	**3.55 298**	P	**Pn**	**15 12 49.9**	**+0.3**
JTKR			*e*S	**Sn**	**15 13 30.6**	**+0.2**
JCH	**Churui**	**3.63 275**	P	**Pn**	**15 12 51.6**	**+0.9**
JKA	**Kamikawa-asahi**	**4.48 295**	*e*P	**Pn**	**15 13 04.5**	**+2.1**
ASAJ	**Asahikawa**	**4.48 295**	Pn	**Pn**	**15 13 04.5**	**+2.1**
	comp=N,2.5nm,0.3s,baz=108,slow=6.8,SNR=13					
ASAJ			Sn	**Sn**	**15 13 59.0**	**+5.7**
	comp=N,1.4nm,0.3s,baz=233,slow=20,SNR=1.4					
JKB	**Kayabe**	**5.40 267**	*e*S	**Sn**	**15 14 14.6**	**-1.3**
JANG	**Nango**	**5.46 251**	P	**Pn**	**15 13 15.0**	**-0.8**
JANG			*e*S	**Sn**	**15 14 13.9**	**-3.5**
JOT	**Ohata**	**5.48 262**	*e*S	**Sn**	**15 14 16.1**	**-1.7**
YSS	**Yuzh-Sakhalins**	**6.02 321**	*e*P	**Pn**	**15 13 24.0**	**+0.5**
YSS			AMB	AMB	15 13 25.6	
	comp=N,10.0nm,0.4s					
JOM	**Ohasama**	**6.03 243**	*e*S	**Sn**	**15 14 27.8**	**-3.6**
JMK	**Ichinoseki**	**6.36 240**	*e*S	**Sn**	**15 14 35.9**	**-3.7**
TYV	**Tymovskoe**	**9.31 338**	*e*P	**Pn**	**15 14 09.3**	**+0.7**
TYV			AMB	AMB	15 14 10.0	
	comp=N,10.0nm,0.7s					
MJAR	**Matsushiro Arr**	**9.72 236**	Pn	**Pn**	**15 14 13.8**	**-0.5**
	comp=N,0.0nm,0.3s,baz=53,slow=10,SNR=1.6					
SKR	**Severo-Kuril's**	**9.90 30**	*e*P	**Pn**	**15 14 15.9**	**-0.8**
PETK	**Petropavlovsk-**	**12.45 27**	Pn	**Pn**	**15 14 52.1**	**+0.5**
	comp=N,0.1nm,0.3s,baz=207,slow=11,SNR=4.4					
EKMR	**Ekimchan**	**14.81 321**	*e*P	**Pn**	**15 15 21.0**	**-2.7**
MA2	**Magadan**	**17.28 4**	P	**P**	**15 15 57.0**	**+0.5**
	comp=N,0.2nm,0.3s,baz=158,slow=9.3,SNR=4.0					
MA2	**Magadan**	**17.28 4**	P	**P**	**15 15 57.0**	**+0.5**
BMKR	**Bomnak**	**17.73 321**	*e*P	**Pn**	**15 15 57.4**	**-3.6**
KROS	**Kirovskiy**	**18.48 318**	*e*P	**Pn**	**15 16 11.2**	**+1.1**
H11S1	**WAKE ISLAND Hy**	**28.50 141**	T	T	15 47 37.3	
	baz=331,slow=76,SNR=15					
H11S3	**WAKE ISLAND Hy**	**28.51 141**	T	T	15 47 19.8	
	baz=331,slow=76,SNR=14					
H11S2	**WAKE ISLAND Hy**	**28.52 141**	T	T	15 47 39.3	
	baz=331,slow=76,SNR=15					
SONM	**Songino Array**	**29.76 295**	P	**P**	**15 18 02.1**	**+1.8**
	comp=N,1.1nm,0.8s,baz=90,slow=8.2,SNR=3.6					
ZALV	**Zalesovo Beam**	**42.47 308**	P	**P**	**15 19 51.2**	**+2.8**
	comp=N,0.7nm,0.5s,baz=65,slow=6.8,SNR=1.9					
MKAR	**Makanchi Array**	**45.95 299**	P	**P**	**15 20 18.1**	**+1.7**
	comp=N,1.1nm,0.7s,baz=79,slow=9.4,SNR=12					
INK	**Inuvik**	**47.17 30**	P	**P**	**15 20 26.4**	**+0.8**
	comp=N,1.4nm,0.8s,baz=37,slow=2.0,SNR=4.1					
CMAR	**Chiang Mai Arr**	**47.95 256**	P	**P**	**15 20 33.2**	**+0.9**
	comp=N,0.6nm,0.7s,baz=45,slow=8.2,SNR=4.4					
YKA	**Yellowknife Ar**	**56.48 34**	P	**P**	**15 21 35.6**	**+0.5**
	comp=N,0.3nm,0.8s,baz=297,slow=6.7,SNR=7.6					
WRA	**Warramunga Arr**	**63.34 195**	P	**P**	**15 22 21.4**	**-1.2**
	comp=N,0.3nm,0.8s,baz=12,slow=6.8,SNR=2.0					
FINES	**FINESS Array B**	**66.45 334**	P	**P**	**15 22 43.5**	**+1.1**
	comp=N,1.2nm,0.5s,baz=35,slow=7.0,SNR=12					
ASAR	**Alice Springs**	**67.05 194**	P	**P**	**15 22 45.8**	**-0.9**
	comp=N,0.3nm,1.0s,baz=15,slow=6.8,SNR=2.2					
NVAR	**Mina Array Bea**	**67.61 58**	P	**P**	**15 22 51.1**	**+0.7**
	comp=N,0.4nm,0.6s,baz=298,slow=7.9,SNR=4.5					
PDAR	**Pinedale Array**	**70.16 50**	P	**P**	**15 23 06.5**	**+0.2**
	comp=N,0.3nm,0.6s,baz=249,slow=4.1,SNR=3.8					
NOA	**NORSAR Array B**	**71.16 339**	P	**P**	**15 23 12.8**	**+1.0**
	comp=N,0.5nm,0.6s,baz=32,slow=6.2,SNR=1.8					
TXAR	**Lajitas Array**	**82.72 57**	P	**P**	**15 24 17.9**	**+0.4**
	comp=N,0.6nm,0.6s,baz=302,slow=4.4,SNR=10					
PLCA	**Paso Flores**	**151.08 100**	PKPbc	**PKiKP**	**15 31 47.0**	**+0.4**
	comp=N,1.1nm,0.8s,baz=315,slow=2.9,SNR=4.3					

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*NOU **10** 15:32:09.0,16°.92S×177°.15W,h410km,mb4.2,Fiji Islands Region*
*NEIC **10** 15:32:33.4±1.4,18°.1S±0°.2×178°.2W±0°.1,h627km±12km, mb4.3/12,Error ellipse: s-maj=24.1km s-min=14.4km az=161.0*
*IDC **10** 15:32:35.0±1.9,18°.05S×178°.36W,h623km±17km, mb3.4/10,mb1 3.5/11,mb1mx3.1/38,mbtmp4.4/11,Error ellipse: s-maj=36.2km s-min=16.2km az=141.0*

ISC 10 15:32:33.5±0.6,**18°.1S**±0°.1×**178°.14W**±0°.08,**h627**km,**n33**, **σ1§41**/37,**mb4.3**/16,**Fiji Islands region**

Code	Station Name	Δ° AZ°	Phase ID		Time	Res
			Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.64 275**	P	**P**	**15 33 58.3**	**-0.4**
	1.9nm,0.3s,baz=129,slow=5.1,SNR=13					
AFI	**Afiamalu**	**7.40 57**	S	**S**	**15 35 59.7**	**-2.8**
	0.9nm,0.3s,baz=335,slow=18,SNR=2.6					
NIUE	**Niue**	**7.86 99**	P	**P**	**15 34 32.6**	**+0.1**
DZM	**Mont Dzumac**	**15.01 252**	P	**P**	**15 35 40.9**	**0.0**
	0.3nm,0.3s,baz=94,slow=19,SNR=1.6					
KNTN	**Kanton**	**16.47 23**	P	**P**	**15 35 51.3**	**-2.8**
RAR	**Rarotonga**	**17.58 103**	P	**P**	**15 36 05.5**	**+1.3**
URZ	**Urewera**	**20.53 191**	P	**P**	**15 36 28.7**	**-1.8**
CTA	**Charters Tower**	**33.67 261**	P	**P**	**15 38 25.1**	**+0.2**
	5.5nm,0.6s,baz=100,slow=10,SNR=8.4					
PMG	**Port Moresby**	**34.74 280**	P	**P**	**15 38 34.5**	**+0.7**
	20nm,0.8s,baz=92,slow=5.3,SNR=7.4					
PMG	**Port Moresby**	**34.74 280**	P	**P**	**15 38 34.1**	**+0.3**
COEN	**Coen**	**37.36 271**	P	**P**	**15 38 56.1**	**+0.8**
COEN			IAmb	IAmb	15 38 57.0	
	comp=Z,12nm,0.7s					
STKA	**Stephens Creek**	**38.77 241**	P	**P**	**15 39 07.2**	**+0.7**
	comp=Z,3.1nm,0.5s,baz=93,slow=8.7,SNR=14					
STKA	**Stephens Creek**	**38.77 241**	P	**P**	**15 39 05.1**	**-1.4**
JAY	**Jayapura**	**43.20 286**	P	**P**	**15 39 42.2**	**+0.6**
	comp=Z,9.2nm,0.6s,baz=130,slow=6.1,SNR=9.3					
BBOO	**Buckleboo**	**43.54 241**	P	**P**	**15 39 44.3**	**+0.3**
BBOO			IAmb	IAmb	15 39 44.7	
	comp=Z,7.3nm,0.9s					
WB0	**Warramunga Arr**	**44.82 260**	P	**P**	**15 39 53.7**	**-0.3**
WB0			IAmb	IAmb	15 39 54.4	
	comp=Z,7.8nm,0.5s					
WB2	**Warramunga Arr**	**44.84 260**	P	**P**	**15 39 53.8**	**-0.3**
WB2			IAmb	IAmb	15 39 54.6	
	comp=Z,7.3nm,0.6s					
WRA	**Warramunga Arr**	**44.85 260**	P	**P**	**15 39 54.1**	**-0.1**
	comp=Z,2.9nm,0.3s,baz=95,slow=7.3,SNR=206					
WRA			PcP	**PcP**	**15 41 23.2**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=96,slow=3.7,SNR=2.8					
WRA			S	**S**	**15 45 42.7**	**-5.4**
	comp=Z,0.4nm,0.8s,baz=106,slow=12,SNR=3.0					
WRA	**Warramunga Arr**	**44.85 260**	P	**P**	**15 39 53.2**	**-1.0**
AS31	**Alice Springs**	**44.98 254**	P	**P**	**15 39 55.3**	**+0.1**
AS31			IAmb	IAmb	15 39 56.5	
	comp=Z,5.1nm,0.5s					
ASAR	**Alice Springs**	**44.99 254**	P	**P**	**15 39 55.5**	**+0.3**
	comp=Z,13nm,0.6s,baz=88,slow=8.8,SNR=356					
ASAR			PcP	**PcP**	**15 41 23.6**	**+1.2**
	comp=Z,1.0nm,0.4s,baz=103,slow=4.0,SNR=7.6					
ASAR			S	**S**	**15 45 49.2**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=89,slow=15,SNR=8.1					
ASAR	**Alice Springs**	**44.99 254**	P	**P**	**15 39 55.1**	**-0.2**
MTN	**Manton Dam**	**49.05 269**	P	**P**	**15 40 24.8**	**-0.8**
MTN			IAmb	IAmb	15 40 26.3	
	comp=Z,8.0nm,0.8s					
FITZ	**Fitzroy Crossi**	**53.25 261**	P	**P**	**15 40 56.1**	**+0.3**
MJAR	**Matsushiro Arr**	**68.20 323**	P	**P**	**15 42 33.7**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=302,slow=7.9,SNR=5.1					
MAJO	**Matsushiro**	**68.20 323**	P	**P**	**15 42 32.7**	**-0.5**
PETK	**Petropavlovsk-**	**73.91 345**	P	**P**	**15 43 07.6**	**+1.6**
	comp=Z,2.9nm,1.0s,baz=113,slow=6.6,SNR=1.8					
ILAR	**Eielson Array**	**86.00 13**	P	**P**	**15 44 09.1**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=220,slow=4.8,SNR=2.6					
CMAR	**Chiang Mai Arr**	**89.18 290**	P	**P**	**15 44 26.5**	**+2.1**
	comp=Z,1.0nm,0.9s,baz=111,slow=2.6,SNR=5.4					
ARCES	**ARCESS Array B**	**126.53 350**	PKP	**PKiKP**	**15 50 27.2**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=29,slow=2.1,SNR=2.5					
BRTR	**Keskin Array B**	**145.08 315**	PKP	**PKPab**	**15 51 03.2**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=97,slow=2.4,SNR=6.8					
CLL	**Collm**	**145.69 348**	*i* PKPbc	**PKPab**	**15 51 05.0**	**-0.3**
GERES	**GERESS Array B**	**147.84 345**	PKPbc	**PKiKP**	**15 51 10.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=34,slow=3.7,SNR=8.6					

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*SOME **10** 15:34:07.0,43°.20N×78°.27E,h10km*
*NNC **10** 15:34:07.2±1.1,43°.18N×78°.37E,h5km±7km,mpv2.9, Error ellipse: s-maj=6.3km s-min=3.5km az=104.0*
*KRNET **10** 15:34:07.3±0.1,42°.98N×78°.39E,h17km,mb1.7*

ISC 10 15:34:05.5±1.0,**43°.10N**±0°.04×**78°.44E**±0°.04,**h25**km±5km, **n12**,**σ0§92**/24,**10C**,**Lake Issyk-Kul region**

Code	Station Name	Δ° AZ°	Phase ID		Time	Res
			Op	ISC	h m s	ISC
SATY	**Saty**	**0.04 211**	*e*P	**Pb**	**15 34 10.2**	**+0.2**
	26nm,0.1s					
SATY			*e*S	**Sb**	**15 34 12.9**	**-0.2**
	146nm,0.1s					
SATY	**Saty**	**0.04 211**	P	**Pb**	**15 34 10.2**	**+0.2**
	26nm,0.1s					
SATY			S	**Sb**	**15 34 12.9**	**-0.2**
	146nm,0.1s					
KPKS	**Kokpek**	**0.41 26**	*e*P	**Pb**	**15 34 14.2**	**-0.2**
	12nm,0.1s					
KPKS			*e*S	**Sb**	**15 34 19.8**	**-0.6**
	13nm,0.3s					
UZB	**Uzynbulak**	**0.43 83**	*e*P	**Pn**	**15 34 17.0**	**+0.7**
	2.4nm,0.1s					
UZB			*e*S	**Sn**	**15 34 24.5**	**+1.0**
	15nm,0.1s					
UZB	**Uzynbulak**	**0.43 83**	P	**Pn**	**15 34 17.0**	**+0.7**
	2.4nm,0.1s					
UZB			S	**Sn**	**15 34 24.5**	**+1.0**
	15nm,0.1s					
PRZ	**Przheval'sk**	**0.61 183**	⇑*i*P	**Pb**	**15 34 16.5**	**-1.3**
	baz=79					
PRZ			⇑*i*S	**Sb**	**15 34 23.6**	**-2.5**
	baz=79					
ANVS	**Anan'yevo**	**0.65 241**	⇑*i*P	**Pb**	**15 34 18.1**	**-0.2**
	baz=50					
ANVS			⇑*i*S	**Sb**	**15 34 26.0**	**-1.0**
	baz=50					
MNBS	**Baschi**	**0.98 358**	*e*P	**Pn**	**15 34 23.2**	**-0.6**
	0.8nm,0.1s					
MNBS			*e*S	**Sb**	**15 34 35.4**	**-1.2**
	3.9nm,0.3s					
MNBS	**Baschi**	**0.98 358**	P	**Pn**	**15 34 23.2**	**-0.6**
	0.8nm,0.1s					
MNBS			S	**Sb**	**15 34 35.4**	**-1.2**
	3.9nm,0.3s					
KDJ	**Kajisay**	**1.34 224**	⇑*i*P	**Pb**	**15 34 30.6**	**+0.6**
	baz=26					
KDJ			⇑*i*S	**Sb**	**15 34 46.5**	**-0.3**
	baz=26					
ULHL	**Ulahol**	**1.83 243**	⇑*i*P	**Pb**	**15 34 39.1**	**+0.7**
	baz=46					
ULHL			⇑*i*S	**Sb**	**15 35 01.3**	**+0.4**
	baz=46					
TKM2	**Tokmak 2**	**2.09 266**	⇑*i*P	**Pb**	**15 34 43.1**	**+0.2**
	baz=69					
TKM2			⇑*i*S	**Sb**	**15 35 08.5**	**0.0**
	baz=69					

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*IDC **10** 15:49:04.7±2.5,27°.76N×51°.71E,h0km,mb3.6/11, mb1 3.7/11,mb1mx3.5/53,mbtmp3.6/11,MS2.5/1, Ms1 2.5/1,ms1mx2.0/47,Error ellipse: s-maj=52.1km s-min=26.4km az=162.0*
*THR **10** 15:49:09.8±0.4,28°.30N×51°.72E,h28km±5km,ML3.4*
*TEH **10** 15:49:10.3,28°.35N×51°.79E,h8km,ML3.5*
*DSN **10** 15:49:16.0±1.2,28°.11N×52°.05E,h10km,ML3.8/10,Error ellipse: s-maj=20.9km s-min=9.3km az=25.0*
*OMAN **10** 15:49:17.6±99.0,28°.20N×52°.14E,h172km±451km,Error ellipse: s-maj=8905.0km s-min=188.5km az=318.0*

ISC 10 15:49:10.3±0.8,**28°.31N**±0°.06×**51°.76E**±0°.07,**h10**km,**n53**, **σ1§16**/54,**mb3.6**/11,**Southern Iran**

Code	Station Name	Δ° AZ°	Phase ID		Time	Res
			Op	ISC	h m s	ISC
AHBU	**AHRAM**	**0.69 324**	*e*Pn	**Pg**	**15 49 22.9**	**-0.7**
QIR1	**Qir**	**1.15 81**	*e*Pg	**Pb**	**15 49 32.2**	**0.0**
QIR1			*e*		15 49 56.9	
	comp=Z,99nm,0.6s					
KAZ1	**Kazerun**	**1.31 356**	*e*Pg	**Pg**	**15 49 35.7**	**+0.1**
KAZ1			*e*		15 50 02.4	
	comp=Z,99nm,0.3s					
SHI	**Shiraz**	**1.48 26**	*e*Pg	**Pn**	**15 49 38.0**	**+0.8**
SHI			*e*		15 49 39.4	
	comp=Z,99nm,0.6s					
SHI			*e*Sg	**Sg**	**15 49 58.4**	**+0.3**
LMD1	**Lamerd**	**1.58 127**	*e*Pg	**Pb**	**15 49 40.2**	**+0.6**
LMD1			*e*		15 50 15.6	
	comp=Z,99nm,0.4s					
JHRM	**Jahrom**	**1.61 83**	*e*Pg	**Pb**	**15 49 40.2**	**-0.1**
LAR1	**LAR**	**2.40 105**	*e*Pn	**Pb**	**15 49 52.2**	**-1.5**
KLNJ	**Kolanjah**	**2.69 357**	*e*Pn	**Pn**	**15 49 54.5**	**+0.5**
IRAM	**Ramesheh**	**3.53 9**	*e*Pn	**Pn**	**15 50 06.0**	**+0.6**
IMEH	**Mehriz**	**3.95 38**	*e*Pn	**Pn**	**15 50 12.9**	**+1.7**
IGAR	**Gharneh**	**4.09 3**	*e*Pn	**Pn**	**15 50 14.0**	**+0.9**
SHME	**Shamm**	**4.51 119**	P	**Pn**	**15 50 19.3**	**+0.6**
NASN	**Na'in**	**4.57 11**	*e*Pn	**Pn**	**15 50 19.6**	**-0.2**
NASN	**Na'in**	**4.57 11**	*e*Pn	**Pn**	**15 50 19.6**	**-0.2**
SHGR	**Shooshtar-Gavs**	**4.57 327**	IAML		15 51 32.6	
	comp=E,24nm,0.7s					
SHGR			IAML		15 51 43.4	
	comp=N,25nm,0.5s					
IZEF	**Zefreh**	**4.60 6**	*e*Pn	**Pn**	**15 50 21.1**	**+1.0**
KHGB	**Koh Gabri**	**4.61 62**	*e*Pn	**Pn**	**15 50 21.3**	**+1.1**
KHGB			*e*		15 50 39.1	
	comp=Z,99nm,0.6s					
IBAF	**Bafgh**	**4.65 44**	*e*Pn	**Pn**	**15 50 22.1**	**+1.4**
BANOM	**Banah**	**4.69 119**	*i* P	**Pn**	**15 50 21.6**	**+0.3**
	SNR=29					
BANOM			S	**Sn**	**15 51 14.6**	**-1.3**
YZKH	**Yazd**	**4.75 30**	*e*Pn	**Pn**	**15 50 22.4**	**+0.4**
YZKH	**Yazd**	**4.75 30**	*e*Pn	**Pn**	**15 50 22.5**	**+0.4**
NAZ	**Nazwa, Dubai**	**4.81 133**	P	**Pn**	**15 50 25.0**	**+2.1**
ASUD	**Al Ashush, Dub**	**4.87 138**	*i* P	**Pn**	**15 50 26.0**	**+2.4**
	SNR=16					
ASUD	**Al Ashush, Dub**	**4.87 138**	P	**Pn**	**15 50 26.0**	**+2.4**
	SNR=16					
MSFE	**Esma-Masafi**	**4.91 126**	*i* P	**Pn**	**15 50 25.2**	**+1.0**
	SNR=9.1					
MSFE			S	**Sn**	**15 51 19.8**	**-1.4**
IKLH	**Kolahrood**	**5.00 358**	*e*Pn	**Pn**	**15 50 26.6**	**+1.0**
MDH	**Madha**	**5.04 125**	P	**Pn**	**15 50 27.0**	**+1.0**
UOSS	**Minazif**	**5.20 129**	*i* P	**Pn**	**15 50 30.9**	**+2.7**
	SNR=13					
HATD	**Hatta, Dubai**	**5.23 131**	*i* P	**Pn**	**15 50 32.0**	**+3.3**
	SNR=8.1					
ASHO	**Ashiyiah**	**5.28 132**	P	**Pn**	**15 50 30.1**	**+0.8**
ASHO			S	**Sn**	**15 51 29.0**	**-1.3**
ASHO	**Ashiyiah**	**5.28 132**	P	**Pn**	**15 50 31.0**	**+1.6**
	SNR=24					
CHMN	**Cheshme madani**	**5.29 72**	*e*Pn	**Pn**	**15 50 30.3**	**+0.6**
CHMN			*e*		15 50 32.4	
	comp=Z,99nm,0.6s					
KHMZ	**Khomeyn**	**5.63 345**	*e*Pn	**Pn**	**15 50 34.2**	**0.0**
KHMZ	**Khomeyn**	**5.63 345**	*e*Pn	**Pn**	**15 50 34.2**	**0.0**
KRSH	**Karshahi**	**5.65 3**	*e*Pn	**Pn**	**15 50 34.7**	**+0.2**
KBAM	**BAM**	**5.94 80**	*e*Pn	**Pn**	**15 50 39.6**	**+1.2**
SOHO	**SOHO**	**5.97 133**	*i* P	**Pn**	**15 50 40.0**	**+1.3**
	SNR=12					
ASAO	**Ashtian**	**6.39 347**	*e*Pn	**Pn**	**15 50 44.7**	**-0.1**
ASAO	**Ashtian**	**6.39 347**	*e*Pn	**Pn**	**15 50 44.7**	**-0.1**
ARQ	**Araqi**	**6.55 138**	P	**Pn**	**15 50 47.7**	**+0.9**
	SNR=15					
BSY	**Bisya**	**7.41 137**	P	**Pn**	**15 50 59.5**	**+1.0**
	SNR=14					
GEYT	**Alibeck**	**10.97 27**	LR	LR	15 57 37.0	
	comp=Z,25nm,20.2s,baz=240,slow=45					
AKTO	**Aktyubinsk**	**22.60 10**	P	**P**	**15 54 12.6**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=188,slow=14,SNR=2.9					
AKASG	**Malin Array Be**	**28.12 329**	P	**P**	**15 55 03.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=134,slow=7.9,SNR=1.1					
KURBB	**Kurchatov Arra**	**30.11 35**

WB2	**Warramunga Arr**	**23.88**	**229**	P		**P**	**16 01 12.2**	**-1.1**
WB2				IAmb		IAmb	16 01 28.3	
	comp=Z,6.5nm,0.8s							
WRA	**Warramunga Arr**	**23.88**	**229**	P		**P**	**16 01 12.8**	**-0.5**
	comp=Z,3.1nm,0.4s,baz=52,slow=9.5,SNR=34							
WRA				PcP		**PcP**	**16 04 55.6**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=64,slow=2.5,SNR=4.0							
WRA				S		**S**	**16 05 27.1**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=53,slow=12,SNR=2.1							
WRA	**Warramunga Arr**	**23.88**	**229**	P		**P**	**16 01 11.1**	**-2.2**
H11S3	**WAKE ISLAND Hy**	**26.55**	**29**	T		T	16 29 21.1	
	baz=208,slow=72,SNR=8.3							
H11S2	**WAKE ISLAND Hy**	**26.55**	**30**	T		T	16 29 35.5	
	baz=208,slow=72,SNR=12							
AS31	**Alice Springs**	**26.56**	**223**	P		**P**	**16 01 36.9**	**-0.8**
ASAR	**Alice Springs**	**26.56**	**223**	P		**P**	**16 01 36.7**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=56,slow=9.0,SNR=15							
ASAR				PcP		**PcP**	**16 05 01.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=72,slow=2.8,SNR=4.1							
ASAR				LR		LR	16 11 36.5	
	comp=Z,38nm,20.7s,baz=43,slow=35							
ASAR	**Alice Springs**	**26.56**	**223**	P		**P**	**16 01 38.0**	**+0.4**
H11S1	**WAKE ISLAND Hy**	**26.57**	**30**	T		T	16 29 40.4	
	baz=208,slow=72,SNR=6.5							
MSVF	**Nonsavu**	**27.50**	**120**	LR		LR	16 13 41.7	
	comp=Z,42nm,18.0s,baz=206,slow=38							
STKA	**Stephens Creek**	**29.20**	**201**	LR		LR	16 13 47.4	
	comp=Z,51nm,19.9s,baz=24,slow=36							
DAV	**Davao City (W)**	**30.01**	**293**	LR		LR	16 14 14.6	
	comp=Z,13nm,18.1s,baz=102,slow=36							
FITZ	**Fitzroy Crossi**	**30.14**	**242**	P		**P**	**16 02 07.6**	**-1.9**
MJAR	**Matsushiro Arr**	**43.36**	**342**	PcP		**PcP**	**16 05 49.6**	**0.0**
	comp=Z,2.3nm,0.9s,baz=128,slow=3.7,SNR=4.2							
MJAR				LR		LR	16 19 33.3	
	comp=Z,28nm,21.8s,baz=240,slow=32							
KSRS	**Korea Array**	**48.11**	**333**	P		**P**	**16 04 38.9**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=152,slow=8.0,SNR=12							
USRK	**Ussuriysk Ar.**	**52.29**	**341**	P		**P**	**16 05 10.7**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=164,slow=6.6,SNR=14							
USRK	**Ussuriysk Ar.**	**52.29**	**341**	P		**P**	**16 05 08.8**	**-1.8**
PANO	**Nakornpanom**	**52.72**	**296**	P		P	16 05 23.1	+8.8
UTTA	**Uttaradit**	**56.58**	**295**	P		**P**	**16 05 43.4**	**+1.2**
SUKH	**Sukhothai**	**57.34**	**294**	P		**P**	**16 05 49.2**	**+1.6**
PETK	**Petropavlovsk-**	**57.69**	**3**	P		**P**	**16 05 50.3**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=159,slow=6.1,SNR=12							
CM35	**Chiang Mai Arr**	**58.13**	**295**	P		**P**	**16 05 54.0**	**+0.8**
CM36	**Chiang Mai Arr**	**58.14**	**295**	P		**P**	**16 05 54.0**	**+0.8**
CM04	**Chiang Mai Arr**	**58.21**	**295**	P		**P**	**16 05 55.6**	**+1.9**
	comp=Z,0.0nmcomp=Z,4.5nm,0.8s							
CM09	**Chiang Mai Arr**	**58.21**	**295**	P		**P**	**16 05 55.2**	**+1.5**
	comp=Z,0.0nmcomp=Z,5.4nm,0.8s							
CM01	**Chiang Mai Arr**	**58.23**	**295**	P		**P**	**16 05 55.8**	**+1.9**
	comp=Z,0.0nmcomp=Z,95nmcomp=Z,4.9nm,0.8s							
CM02	**Chiang Mai Arr**	**58.25**	**295**	P		**P**	**16 05 55.8**	**+1.8**
	comp=Z,0.0nmcomp=Z,4.0nm,0.9s							
CM31	**Chiang Mai Arr**	**58.26**	**295**	P		**P**	**16 05 55.8**	**+1.7**
	comp=Z,0.4nmcomp=Z,122nm,0.7s							
CMAR	**Chiang Mai Arr**	**58.26**	**295**	P		**P**	**16 05 54.5**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=116,slow=5.2,SNR=26							
CM15	**Chiang Mai Arr**	**58.27**	**295**	P		**P**	**16 05 55.5**	**+1.3**
	comp=Z,0.0nmcomp=Z,5.2nm,0.8s							
CM13	**Chiang Mai Arr**	**58.28**	**295**	P		**P**	**16 05 55.5**	**+1.3**
	comp=Z,0.0nmcomp=Z,4.1nm,0.8s							
MA2	**Magadan**	**64.08**	**359**	P		**P**	**16 06 32.8**	**+0.1**
	comp=Z,6.6nm,0.9s,baz=171,slow=7.9,SNR=5.6							
SONM	**Songino Array**	**66.47**	**328**	P		**P**	**16 06 49.3**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=138,slow=6.0,SNR=8.1							
SONM	**Songino Array**	**66.47**	**328**	P		**P**	**16 06 48.4**	**-0.3**
SEY	**Seymchan**	**67.42**	**360**	P		**P**	**16 06 54.6**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=186,slow=4.8,SNR=3.9							
VNDA	**Vanda**	**72.94**	**178**	P		**P**	**16 07 28.6**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=323,slow=7.1,SNR=8.2							
VNDA	**Vanda**	**72.94**	**178**	P		**P**	**16 07 27.7**	**0.0**
VNDA				IAmb		IAmb	16 07 48.5	
	comp=Z,3.3nm,1.0s							
BILL	**Bilibino**	**73.12**	**5**	P		**P**	**16 07 29.4**	**+0.4**
BILL				IAmb		IAmb	16 07 30.1	
	comp=Z,3.5nm,0.8s							
TIXI	**Tiksi**	**77.84**	**352**	P		**P**	**16 07 55.3**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=128,slow=9.1,SNR=8.6							
TIXI	**Tiksi**	**77.84**	**352**	P		**P**	**16 07 54.9**	**-1.0**
TIXI				IAmb		IAmb	16 07 57.4	
	comp=Z,3.9nm,1.4s							
MKAR	**Makanchi Array**	**80.55**	**319**	P		**P**	**16 08 11.4**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=98,slow=7.2,SNR=50							
ZALV	**Zalesovo Beam**	**81.31**	**326**	P		**P**	**16 08 14.5**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=120,slow=5.8,SNR=9.8							
ILAR	**Eielson Array**	**81.87**	**22**	P		**P**	**16 08 16.4**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=255,slow=5.6,SNR=7.4							
ULHL	**Ulahol**	**83.58**	**313**	P		**P**	**16 08 28.2**	**+0.7**
	SNR=5.1							
KURBB	**Kurchatov Arra**	**84.00**	**322**	P		**P**	**16 08 28.9**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=110,slow=4.0,SNR=25							
TKM2	**Tokmak 2**	**84.19**	**314**	P		**P**	**16 08 31.1**	**+0.4**
	SNR=7.6							
KBK	**Karagaybulak**	**84.60**	**313**	P		**P**	**16 08 33.3**	**+0.6**
	SNR=11							
CHMS	**Chumysh**	**84.81**	**314**	P		**P**	**16 08 34.1**	**+0.5**
	SNR=8.8							
UCH	**Uchtor**	**84.83**	**313**	P		**P**	**16 08 35.0**	**+0.8**
	SNR=14							
AAK	**Ala-Archa**	**84.93**	**313**	P		**P**	**16 08 34.9**	**+0.6**
	comp=Z,9.5nm,0.6s,baz=121,slow=4.5,SNR=44							
AAK	**Ala-Archa**	**84.93**	**313**	P		**P**	**16 08 35.0**	**+0.7**
	SNR=15							
USP	**Ospenovka**	**85.04**	**314**	P		**P**	**16 08 35.6**	**+0.9**
	SNR=8.0							
AML	**Almayashu**	**85.42**	**313**	P		**P**	**16 08 38.1**	**+1.1**
	SNR=31							
EKS2	**Erkin-Say**	**85.45**	**313**	P		**P**	**16 08 37.7**	**+0.8**
	SNR=11							
NRIK	**Noril'sk**	**86.00**	**341**	P		**P**	**16 08 38.8**	**0.0**
	comp=Z,6.9nm,0.5s,baz=112,slow=4.2,SNR=18							
BVAR	**Borovoye Array**	**89.43**	**323**	P		**P**	**16 08 54.4**	**-1.2**
	comp=Z,8.5nm,0.7s,baz=145,slow=16,SNR=73							
YKA	**Yellowknife Ar**	**95.09**	**28**	P		**P**	**16 09 21.6**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=270,slow=4.6,SNR=6.0							
AKASG	**Malin Array Be**	**114.67**	**325**	PKP		**PKiKP**	**16 14 38.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=52,slow=2.1,SNR=5.2							
NOA	**NORSAR Array B**	**116.96**	**340**	PKP		**PKPdf**	**16 14 43.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=44,slow=1.9,SNR=1.9							
PLCA	**Paso Flores**	**119.59**	**143**	PKP		**PKPdf**	**16 14 49.5**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=145,slow=1.7,SNR=5.2							
GERES	**GERESS Array B**	**124.20**	**329**	PKP		**PKPdf**	**16 14 58.1**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=70,slow=1.9,SNR=15							
ESDC	**Sonseca Array**	**136.54**	**333**	PKP		**PKPdf**	**16 15 27.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=34,slow=3.1,SNR=2.6							
TORD	**Torodi Ar. Bea**	**150.72**	**289**	PKPbc		**PKPbc**	**16 15 51.4**	**-0.5**
	comp=Z,11nm,0.8s,baz=64,slow=2.1,SNR=42							
TORD	**Torodi Ar. Bea**	**150.72**	**289**			**PKPbc**	**16 15 51.2**	**-0.8**
BDFB	**Brasilia**	**150.81**	**134**	PKPbc		**PKPbc**	**16 15 52.3**	**0.0**
	comp=Z,3.4nm,0.5s,baz=309,slow=2.9,SNR=4.5							

*IDC **10** 16:08:57.9± 1.2, 9.°31N× 85.°83W, h0km, mb3.5/6, mb1 3.9/7, mb1mx3.7/32, mbtmp3.5/7, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/27, Error ellipse: s-maj=25.3km s-min=16.0km az=139.0*

*UCR **10** 16:08:59.6± 1.9, 9.°45N× 85.°98W, h20km± 6km, MW3.9*

*INET **10** 16:09:00.8, 9.°50N× 85.°85W, h8km, MW3.1*

ISC 10 16:09:00.9±0.8, 9.°49N±0.°05× 85.°84W±0.°06, h16km, n41, σ0 91/43, mb3.6/6, 2C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.47**	**25**	*eP*			**Pb**	**16 09 11.1**	**+0.3**
INDI	**Punta indio, G**	**0.50**	**41**	*eP*			**Pb**	**16 09 12.1**	**+0.7**
INDI				*eS*			**Sn**	**16 09 22.3**	**+0.5**
DUNO	**Dulce Nombre,**	**0.68**	**30**	*eP*			**Pg**	**16 09 14.2**	**-0.1**
GUAI	**GUAI**	**0.84**	**23**	↑*iP*			**Pb**	**16 09 16.4**	**-0.8**
GUAI				*i* S			**Sn**	**16 09 30.0**	**-0.3**
LAFE	**Finca La Fe, P**	**0.97**	**71**	*eP*			**Pb**	**16 09 18.4**	**-1.0**
PLVR	**Palo Verde**	**0.98**	**29**	*eP*			**Pb**	**16 09 17.6**	**-2.1**
PLVR				*eS*			**Sb**	**16 09 33.0**	**+0.5**
JTS	**Las Juntas de**	**1.19**	**47**	Pg			**Pn**	**16 09 22.5**	**-0.4**
	17nm,0.3s,baz=13,slow=21,SNR=3.9								
JTS				Lg			Lg	16 09 40.2	
	244nm,0.3s,baz=32,slow=20,SNR=14								
JTS	**Las Juntas de**	**1.19**	**47**	*eP*			**Pn**	**16 09 22.2**	**-0.7**
HZTE	**Horizontes, Gu**	**1.24**	**11**	*eP*			**Pn**	**16 09 22.7**	**-1.0**
COLC	**Colonia**	**1.33**	**28**	*iP*			**Pn**	**16 09 23.9**	**-1.0**
LAPC	**Finca la Perla**	**1.33**	**17**	↑*iP*			**Pn**	**16 09 22.7**	**-2.3**
GPS2	**Hotel Rincn d**	**1.35**	**21**	*eP*			**Pn**	**16 09 24.0**	**-1.2**
VRLE	**La Escondida,**	**1.38**	**20**	*eP*			**Pn**	**16 09 24.6**	**-1.0**
HORNC	**Hornillas**	**1.38**	**28**	*iP*			**Pn**	**16 09 24.8**	**-0.9**
CASO	**Castillo**	**1.44**	**49**	*iP*			**Pn**	**16 09 26.8**	**+0.3**
SRA1	**San Ramn**	**1.47**	**66**	*eP*			**Pb**	**16 09 27.5**	**-0.4**
ARE1	**Arenal 1**	**1.47**	**49**	*eP*			**Pb**	**16 09 27.5**	**-0.4**
PTEN	**Parque Tenorio**	**1.48**	**34**	*iP*			**Pn**	**16 09 26.8**	**-0.2**
CEDE	**Laguna Cedeo**	**1.50**	**48**	*iP*			**Pn**	**16 09 27.0**	**-0.2**
LCR2	**La Lucha 2**	**1.83**	**82**	*eP*			**Pn**	**16 09 31.3**	**-0.6**
COVE	**Coope Vega, Sa**	**1.87**	**49**	*eP*			**Pn**	**16 09 33.1**	**+0.8**
OCM	**Ochomogo**	**1.90**	**77**	*eP*			**Pn**	**16 09 33.4**	**+0.6**
EDDO	**Dominical**	**1.96**	**97**	*eP*			**Pn**	**16 09 32.9**	**-0.6**
RIMA	**Rio Macho**	**1.97**	**82**	*eP*			**Pn**	**16 09 33.5**	**-0.3**
CDM	**Cerro de Muert**	**2.05**	**88**	*eP*			**Pn**	**16 09 35.0**	**-0.2**
CVTR	**Volcan Turrial**	**2.12**	**75**	*eP*			**Pb**	**16 09 37.7**	**-1.6**
MRVA	**Moravia de Chi**	**2.39**	**82**	*eP*			**Pn**	**16 09 38.8**	**-0.7**
RIOS	**Rincon, Osa**	**2.42**	**109**	*eP*			**Pn**	**16 09 39.3**	**-0.6**
ACON	**Acoyapa**	**2.55**	**15**	*eP*			**Pn**	**16 09 41.0**	**-0.7**
DRK0	**Durika**	**2.57**	**95**	*eP*			**Pn**	**16 09 42.0**	**-0.1**
LPLA	**Las Palmas La**	**2.83**	**99**	*eP*			**Pn**	**16 09 45.6**	**-0.1**
ESPN	**Las Esperanzas**	**3.09**	**29**	*eP*			**Pn**	**16 09 48.9**	**-0.1**
BRU2	**Volcan**	**3.18**	**102**	*eP*			**Pn**	**16 09 51.3**	**+0.8**
CMIG	**Matias Romero**	**11.60**	**312**	Pn			**Pn**	**16 11 46.3**	**+0.4**
	0.2nm,0.3s,baz=0.4,slow=18,SNR=1.7								
ATAH	**Atahualpa**	**18.10**	**156**	LR			LR	16 18 50.8	
	comp=Z,38nm,18.6s,baz=342,slow=33								
TXAR	**Lajitas Array**	**25.86**	**322**	P			**P**	**16 14 32.9**	**+0.8**
	1.3nm,1.0s,baz=139,slow=9.7,SNR=7.5								
NVAR	**Mina Array Bea**	**40.97**	**320**	P			**P**	**16 16 45.3**	**+2.0**
	0.4nm,0.7s,baz=115,slow=6.1,SNR=3.2								
PLCA	**Paso Flores**	**51.92**	**165**	P			**P**	**16 18 07.3**	**-1.8**
	1.1nm,0.7s,baz=296,slow=6.8,SNR=4.3								
YKA	**Yellowknife Ar**	**56.87**	**345**	P			**P**	**16 18 44.6**	**-0.1**
	0.1nm,0.4s,baz=141,slow=7.2,SNR=4.1								
ILAR	**Eielson Array**	**69.35**	**336**	P			**P**	**16 20 07.6**	**0.0**
	0.5nm,1.0s,baz=147,slow=8.2,SNR=4.1								
ESDC	**Sonseca Array**	**77.78**	**51**	P			**P**	**16 20 58.2**	**+0.5**
	0.4nm,0.5s,baz=258,slow=6.2,SNR=2.4								

IDC 10 16:19:31.6±1.1, 5.°82S× 127.°88E, h383km±16km, mb2.8/1, mb1 3.0/5, mb1mx2.7/33, mbtmp3.7/5, Error ellipse: s-maj=25.3km s-min=13.7km az=115.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.96**	**35**	P			Pn	16 21 04.7	+1.4
	0.8nm,0.3s,baz=229,slow=19,SNR=7.0								
SIJI				S			S	16 22 17.2	-0.7
	1.1nm,0.3s,baz=226,slow=23,SNR=7.2								
BATI	**Baumata**	**6.04**	**224**	P			Pn	16 21 04.9	+0.8
	9.7nm,0.3s,baz=45,slow=4.3,SNR=15								
BATI				S			S	16 22 18.8	-0.6
	3.5nm,0.3s,baz=288,slow=17,SNR=8.6								
WRA	**Warramunga Arr**	**15.38**	**156**	P			P	16 22 49.0	+0.1
	0.3nm,0.3s,baz=336,slow=11,SNR=28								
ASAR	**Alice Springs**	**18.67**	**163**	P			P	16 23 24.0	-0.1
	0.1nm,0.3s,baz=343,slow=12,SNR=16								
MKAR	**Makanchi Array**	**66.10**	**328**	P			P	16 29 38.8	-0.1
	0.3nm,0.5s,baz=114,slow=8.9,SNR=5.1								

*BGR **10** 16:22:58.9± 0.0, 15.°26S× 65.°46E, h10km, mb5.6, Ms4.8*

*BJI **10** 16:23:00.3± 0.0, 13.°98S× 65.°48E, h14km, mB5.4/60, mb5.2/79, Ms5.5/85, Ms7 5.2/80*

*IDC **10** 16:23:02.8± 0.3, 13.°77S× 65.°85E, h0km, mb5.1/37, mb1 5.1/38, mb1mx5.1/39, mbtmp5.1/38, ML5.3/1, MS5.0/35, Ms1 5.0/35, ms1mx4.9/44, Error ellipse: s-maj=11.8km s-min=9.6km az=162.0*

*MOS **10** 16:23:03.0± 0.9, 13.°67S× 65.°93E, h10km, mb5.6/121, MS5.1/54, Error ellipse: s-maj=6.3km s-min=3.5km az=105.1*

*NEIC **10** 16:23:04.2, 13.°77S× 65.°86E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=0.59; Mθθ=1.68; Mφφ=2.27; Mrθ=1.47; Mrφ=-1.72; Mθφ=-0.30; Fault plane solution: M0=3.06000×10^17 NP1:φs=201.65000°, δ=60.03000°, λ=-111.79000°. NP2:φs=297.60000°, δ=79.80000°, λ=-149.50000°. Principal axes: T 3.1046, Plg=13.0000°, Azm=66.0000°; N -0.0842, Plg=58.0000°, Azm=314.0000°; P -3.0205, Plg=29.0000°, Azm=164.0000°;*

*NEIC **10** 16:23:04.1± 1.8, 13.°79S± 0.°08× 65.°86E± 0.°08, h10km± 1km, mb5.5/104, Ms_20 5.3/428, Mwb5.6/76, Mww5.7, Mwc5.7(GCMT) Error ellipse: s-maj=16.2km s-min=11.2km az=138.0*

*NEIC **10** 16:23:08, 13.°73S× 65.°72E, h17km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=2.14; Mθθ=-2.53; Mφφ=4.67; Mrθ=1.39; Mrφ=-2.35; Mθφ=0.57; Fault plane solution: M0=4.92000×10^17 NP1:φs=304.00000°, δ=65.00000°, λ=-155.00000°. NP2:φs=203.00000°, δ=67.00000°, λ=-27.00000°. Principal axes: T 5.3733, Plg=1.0000°, Azm=254.0000°; N -1.0903, Plg=55.0000°, Azm=346.0000°; P -4.2830, Plg=35.0000°, Azm=163.0000°;*

*GCMT **10** 16:23:08.1± 0.1, 13.°71S± 0.°01× 65.°74E, h19km, MW5.7/154, Moment Tensor Solution. s144,c287; s154,c343; Duration: 1s7 Moment tensor: Scale 10^17 Nm; Mrr=2.05±.04; Mθθ=-2.38±.04; Mφφ=4.42±.04; Mrθ=1.27±.09; Mθφ=-2.26±.03; Mrφ=0.82±.09; Best double couple: M0=4.61400×10^17 NP1:φs=304.00000°, δ=63.00000°, λ=-156.00000°. NP2:φs=202.00000°, δ=68.00000°, λ=-29.00000°. Principal axes: T 5.1280, Plg=3.0000°, Azm=254.0000°; N -1.0370, Plg=54.0000°, Azm=349.0000°; P -4.1010, Plg=36.0000°, Azm=161.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **10** 16:23:09, 13.°89S× 65.°75E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=2.44; Mθθ=-1.69; Mφφ=4.14; Mrθ=0.29; Mrφ=-2.40; Mθφ=-0.43; Fault plane solution: M0=4.36000×10^17 NP1:φs=200.00000°, δ=62.00000°, λ=-25.00000°. NP2:φs=302.00000°, δ=68.00000°, λ=-149.00000°. Principal axes: T 5.0328, Plg=4.0000°, Azm=70.0000°; N -2.3850, Plg=53.0000°, Azm=335.0000°; P -2.6479, Plg=37.0000°, Azm=163.0000°;*

ISC 10 16:23:05.8±0.4, 13.°82S± 0.°04× 65.°84E± 0.°04, h18km± 1km, h19km: pP-P, n1048, σ1937/906, mb5.5/346, MS5.3/315, 88C-162D, Fault plane solution: NP1:φs=277.40000°, δ=54.32731°, λ=-145.28334°. NP2:φs=165.45926°, δ=62.44144°, λ=-41.13137°. Principal axes: T Plg=4.8879°, Azm=223.1466°; N Plg=41.8932°, Azm=317.5461°; P Plg=47.6887°, Azm=127.7560°; Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.96**	**47**	T			T	16 34 12.8	
	baz=227,slow=75,SNR=3506								
H08S2	**Diego Garcia H**	**8.97**	**47**	T			T	16 34 10.7	
	baz=227,slow=75								
H08S3	**Diego Garcia H**	**8.98**	**47**	T			T	16 34 14.1	
	baz=227,slow=75,SNR=7966								
DGAR	**Diego Garcia**	**9.10**	**46**	*ce*P			**Pn**	**16 25 15.9**	**-0.4**
DGAR				pmax		pmax			
	comp=Z,339nm,0.6s								
DGAR	**Diego Garcia**	**9.10**	**46**				**Pn**	**16 25 14.9**	**-1.4**
DGAR	**Diego Garcia**	**9.10**	**46**	P			**Pn**	**16 25 15.9**	**-0.4**
RER	**Riviere de l'E**	**12.07**	**231**	Pn			**Pn**	**16 25 53.8**	**-3.3**
OPO	**Ambohidratompo**	**18.52**	**253**	P			**Pn**	**16 27 23.1**	**+1.5**
	comp=Z,9.6nm,0.3s,baz=79,slow=14,SNR=34								
OPO				S			**Sn**	**16 30 49.0**	**+0.6**
	comp=Z,2.0nm,0.3s,baz=128,slow=19,SNR=2.2								
ABPO	**Ambohimpanom**	**18.58**	**251**	P			**Pn**	**16 27 23.1**	**+0.7**
ABPO				pmax		pmax			
	comp=Z,239nm,1.3s								
ABPO	**Ambohimpanom**	**18.58**	**251**	P			**Pn**	**16 27 23.1**	**+0.7**
ABPO				IAmb		IAmb		16 27 34.6	
	comp=Z,239nm,1.3s								
MNCI	**Minicoy**	**23.10**	**18**	P			**P**	**16 28 08.7**	**-2.1**
PALK	**Pallekele**	**25.63**	**36**	P			**P**	**16 28 34.8**	**+0.3**
	comp=Z,70nm,1.1s,baz=317,slow=10,SNR=16								
PALK				LR			LR	16 36 14.1	
	comp=Z,9μm,21.8s,baz=316,slow=31								
PALK	**Pallekele**	**25.63**	**36**	↑*eP*			**P**	**16 28 34.7**	**+0.2**
PALK				pmax		pmax			
	comp=Z,147nm,1.3s								
PALK				MLR		MLR			
	comp=Z,6μm,16.0s								
PALK	**Pallekele**	**25.63**	**36**	P			**P**	**16 28 34.8**	**+0.2**
PALK				IAmb		IAmb		16 28 40.2	
	comp=Z,138nm,1.3s								
PALK	**Pallekele**	**25.63**	**36**	IAMs_20		IAMs_20		16 35 52.3	
	comp=Z,9μm,22.0s								
PALK	**Pallekele**	**25.63**	**36**	P			**P**	**16 28 35.4**	**+0.9**
SOCY	**Socotra**	**28.39**	**335**	P			**P**	**16 29 00.6**	**+1.3**
COCO	**West Island**	**30.24**	**91**	*i* P			**P**	**16 29 12.7**	**-3.0**
KMBO	**Kilima Mbogo**	**30.96**	**292**	P			**P**	**16 29 23.8**	**+1.4**
	comp=Z,14nm,0.8s,baz=117,slow=10,SNR=20								
KMBO				LR			LR	16 39 46.1	
	comp=Z,2μm,18.7s,baz=116,slow=32								
KMBO	**Kilima Mbogo**	**30.96**	**292**	*i* P			**P**	**16 29 24.6**	**+2.1**
KMBO				pmax		pmax			
	comp=Z,14nm,0.8s								
POO	**Poona**	**33.10**	**14**	*eP*			**P**	**16 29 37.0**	**-3.9**
DMTO	**DMTO**	**33.13**	**341**	P			**P**	**16 29 41.9**	**+0.9**
SHAO	**Shalim**	**33.21**	**342**	*i* P			**P**	**16 29 43.2**	**+1.5**
	SNR=5.4								
SHAO	**Shalim**	**33.21**	**342**	P			**P**	**16 29 43.4**	**+1.6**
HYB	**Hyderabad**	**33.48**	**22**	*i* P			**P**	**16 29 44.0**	**-0.2**
HYB				*e*PP			**PnPn**	**16 30 51.0**	**-4.7**
HYB				*e*PcP			**PcP**	**16 32 24.0**	**-1.2**
DQM	**DQM**	**34.52**	**346**	P			**P**	**16 29 53.9**	**+0.8**
LODK	**Lodwar**	**34.75**	**297**	P			**P**	**16 29 57.2**	**+1.8**
GSI	**Gunungsitoli**	**34.86**	**67**	P			**P**	**16 29 57.6**	**+1.3**
GSI	**Gunungsitoli**	**34.86**	**67**	P			**P**	**16 29 57.4**	**+1.1**
	comp=Z,74nm,0.7s								
TPTI		**35.42**	**64**	P			**P**	**16 30 01.3**	**+0.2**
	comp=Z,593nmcomp=Z,14nm,0.8s								
JLN	**Jalan Bani Buh**	**36.30**	**350**	P			**P**	**16 30 08.4**	**0.0**
LSZ	**Lusaka**	**36.44**	**263**	P			**P**	**16 30 09.1**	**-0.9**
LSZ				pmax		pmax			
	comp=Z,59nm,1.4s								
LSZ				MLR		MLR			
	comp=Z,4μm,19.0s								
LSZ	**Lusaka**	**36.44**	**263**	P			**P**	**16 30 09.1**	**-0.9**
MNSI	**Mandailing Nat**	**36.45**	**69**	P			**P**	**16 30 11.1**	**+1.2**
	comp=Z,49nm,0.9s								
RPSI	**Rantau Prapat**	**36.69**	**66**	IAMs_20		IAMs_20		16 42 02.8	
	comp=Z,5μm,22.0s								
TSI	**Tuntungan**	**36.75**	**64**	P			**P**	**16 30 13.1**	**+0.7**
	comp=Z,3μmcomp=Z,3μmcomp=Z,98nm,1.0s								
PBA	**Port Blair**	**36.78**	**48**	P			P	16 30 10.0	-2.7
MBAR	**Mbarara**	**37.13**	**288**	‖*eP*			**P**	**16 30 16.9**	**+0.9**
MBAR				pmax		pmax			
	comp=Z,9.0nm,1.6s								
MBAR	**Mbarara**	**37.13**	**288**	P			**P**	**16 30 16.2**	**+0.3**
BSY	**Bisya**	**37.31**	**347**	P			**P**	**16 30 17.7**	**+0.6**
BKNI	**Bangkinang**	**37.59**	**71**	P			**P**	**16 30 21.5**	**+1.9**
	comp=Z,2μmcomp=Z,56nm,0.6s								
UMZA	**Um Al Zommool**	**37.79**	**344**	P			**P**	**16 30 20.8**	**-0.3**
LHSI	**Lahat**	**38.48**	**79**	P			**P**	**16 30 29.7**	**+2.5**
	comp=Z,2μmcomp=Z,32nm,0.9s								
RGRI	**Rengat**	**38.53**	**73**	P			**P**	**16 30 30.1**	**+2.6**
	comp=Z,41nm,0.4s								
LWLI	**Liwa**	**38.66**	**81**	P			**P**	**16 30 30.4**	**+1.6**
	comp=Z,48nm,0.7s								
SOHO

comp=Z,196nmcomp=Z,22nm,0.8s
CM15 Chiang Mai Arr 45.75 46 P **P** **16 31 27.1 +0.8**
comp=Z,227nmcomp=Z,28nm,0.8s
CM01 Chiang Mai Arr 45.75 46 P **P** **16 31 27.1 +0.8**
comp=Z,283nmcomp=Z,32nm,0.8s
CM04 Chiang Mai Arr 45.75 46 P **P** **16 31 27.1 +0.8**
comp=Z,212nmcomp=Z,27nm,1.2s
CM02 Chiang Mai Arr 45.75 46 P **P** **16 31 27.0 +0.6**
comp=Z,224nmcomp=Z,31nm,0.8s
CM31 Chiang Mai Arr 45.76 46 P **P** **16 31 27.1 +0.6**
comp=Z,7µmcomp=Z,629nm,0.8s
CM31 Chiang Mai Arr 45.76 46 P **P** **16 31 26.1 -0.3**
CM31 IAmb IAmb 16 31 30.6
comp=Z,27nm,0.9s
CMAR Chiang Mai Arr 45.76 46 P **P** **16 31 26.8 +0.3**
comp=Z,14nm,0.7s,baz=241,slow=9.7,SNR=81
CMAR PcP **PcP** **16 33 04.0 -0.1**
comp=Z,6.3nm,0.8s,baz=234,slow=4.5,SNR=7.8
CMAR LR LR 16 48 21.7
comp=Z,2µm,21.0s,baz=266,slow=33
CMAR Chiang Mai Arr 45.76 46 P **P** **16 31 25.5 -0.9**
CM09 Chiang Mai Arr 45.79 46 P **P** **16 31 27.7 +1.0**
comp=Z,209nmcomp=Z,26nm,1.0s
CM32 Chiang Mai Arr 45.83 46 P **P** **16 31 28.0 +1.0**
CM36 Chiang Mai Arr 45.91 46 P **P** **16 31 28.0 +0.4**
PHIT Phitsanulok 45.99 49 P **P** **16 31 29.4 +1.1**
comp=Z,2µmcomp=Z,295nm,0.7s
CHTO Chiang Mai 46.00 46 P **P** **16 31 28.4 +0.1**
CHTO pmax pmax
comp=Z,25nm,1.1s
CHTO MLR MLR
comp=Z,2µm,21.0s
CHTO Chiang Mai 46.00 46 P **P** **16 31 28.4 +0.1**
CHTO Chiang Mai 46.00 46 P **P** **16 31 28.7 +0.4**
CMMT Chiang Mai 46.00 46 P **P** **16 31 27.8 -0.6**
comp=Z,283nmcomp=Z,14nm,1.1s
CM33 Chiang Mai Arr 46.01 46 P **P** **16 31 28.0 -0.4**
CM35 Chiang Mai Arr 46.06 46 P **P** **16 31 29.0 +0.2**
CM34 Chiang Mai Arr 46.17 46 P **P** **16 31 30.0 +0.3**
LAMP Lampang 46.29 47 P **P** **16 31 31.5 +0.8**
comp=Z,437nmcomp=Z,52nm,0.7s
CHAI Chaiyaphum 46.36 52 P **P** **16 31 31.0 -0.2**
comp=Z,1µmcomp=Z,141nm,0.7s
UTTA Uttaradit 46.45 48 P **P** **16 31 32.0 +0.2**
comp=Z,915nmcomp=Z,123nm,0.7s
KSM Kuching 46.62 75 P **P** **16 31 34.0 +0.7**
SHL Shillong 46.66 33 P **P** **16 31 33.2 -0.4**
SHL pmax pmax
comp=Z,142nm,0.9s
SHL MLR MLR
comp=Z,5µm,18.0s
SHL Shillong 46.66 33 P **P** **16 31 33.1 -0.4**
SHL Shillong 46.66 33 P **P** **16 31 34.4 +0.8**
STKI Sintang 47.24 77 P **P** **16 31 39.7 +1.5**
KHON Khomkaen 47.27 52 P **P** **16 31 39.8 +1.5**
comp=Z,4µmcomp=Z,41nm,0.6s
JAGI Jajag, Banyuwa 47.64 89 P **P** **16 31 39.0 -2.3**
NIL Nilore 47.73 8 P **P** **16 31 41.0 -0.7**
NIL pmax pmax
comp=Z,50nm,1.0s
NIL MLR MLR
comp=Z,2µm,18.0s
NIL Nilore 47.73 8 P **P** **16 31 41.0 -0.7**
NIL IAmb IAmb 16 31 46.7
comp=Z,50nm,0.9s
KMMI Kalianget 47.74 87 P **P** **16 31 43.4 +1.3**
comp=Z,53nm,0.8s
ABJI Asem Bagus 47.85 88 P **P** **16 31 43.8 +0.9**
comp=Z,88nm,0.8s
HRA Herat 48.06 356 P **P** **16 31 43.6 -0.8**
HRA IAmb IAmb 16 31 49.1
comp=Z,39nm,1.4s
HRA IAMs_20 IAMs_20 16 51 25.5
comp=Z,3µm,18.0s
KBL Kabul 48.19 4 P **P** **16 31 45.9 +0.4**
KBL pmax pmax
comp=Z,78nm,1.1s
KBL MLR MLR
comp=Z,2µm,18.0s
KBL Kabul 48.19 4 P **P** **16 31 45.9 +0.4**
KBL Kabul 48.19 4 P **P** **16 31 46.6 +1.2**
H01W3 Cape Leeuwin H 48.21 125 T T 17 23 23.5
baz=284,slow=75,SNR=586
H01W2 Cape Leeuwin H 48.21 125 T T 17 23 23.7
baz=284,slow=75,SNR=554
H01W1 Cape Leeuwin H 48.23 125 T T 17 23 25.0
baz=284,slow=75,SNR=680
NONG Nongkai 48.56 50 P **P** **16 31 48.8 +0.5**
DNP Denpasar 48.63 89 P **P** **16 31 50.9 +1.9**
DNP pmax pmax
comp=Z,166nm,1.0s
DNP Denpasar 48.63 89 P **P** **16 31 50.6 +1.6**
comp=Z,14µmcomp=Z,180nm,0.6s
SRBI Singaraja 48.74 89 P **P** **16 31 51.2 +1.4**
comp=Z,1µmcomp=Z,55nm,0.8s
SBUM Sibu 48.75 74 P **P** **16 31 48.9 -1.0**
SBUM IAmb IAmb 16 31 53.2
comp=Z,26nm,0.8s
SBUM Sibu 48.75 74 P **P** **16 31 51.0 +1.1**
MORW Morawa 48.77 117 P **P** **16 31 49.9 0.0**
MORW IAmb IAmb 16 31 53.6
comp=Z,43nm,1.1s
BBKI Banjar Baru 49.44 83 P **P** **16 31 55.4 +0.2**
comp=Z,1µmcomp=Z,21nm,0.8s
LSA Lhasa 49.69 29 P **P** **16 31 57.7 +0.4**
LSA pmax pmax
comp=Z,78nm,0.9s
LSA Lhasa 49.69 29 *i* P **P** **16 31 58.2 +0.9**
SNR=18
LSA Lhasa 49.69 29 P **P** **16 31 57.1 -0.2**
LSA pmax pmax
comp=Z,46nm,0.9s
LSA MLR MLR
comp=Z,3µm,19.0s
LSA Lhasa 49.69 29 P **P** **16 31 57.1 -0.2**
LSA IAmb IAmb 16 32 07.3
comp=Z,46nm,0.9s
LSA IAMs_20 IAMs_20 16 49 05.1
comp=Z,3µm,19.0s
MTKI Muara Teweh, K 50.19 80 P **P** **16 32 01.8 +0.9**
comp=Z,1µmcomp=Z,25nm,0.7s
TWSI Taliwang, Sumb 50.24 90 P **P** **16 32 01.8 +0.5**
comp=Z,821nmcomp=Z,39nm,0.9s
NWAO Narrogin (SRO) 50.35 121 P **P** **16 32 01.9 0.0**
comp=Z,7.9nm,0.8s,baz=273,slow=9.3,SNR=5.7
NWAO Narrogin (SRO) 50.35 121 P **P** **16 31 59.9 -1.9**
NWAO Narrogin (SRO) 50.35 121 IAMs_20 IAMs_20 16 46 54.9
comp=Z,2µm,20.0s
KBKI Kotabaru 50.76 83 P **P** **16 32 06.0 +0.8**
comp=Z,430nmcomp=Z,46nm,0.8s
PLAI Plampang 51.09 90 P **P** **16 32 07.7 0.0**
comp=Z,2µmcomp=Z,1µmcomp=Z,52nm,1.0s
SLVN Son La 51.16 48 IAmb IAmb 16 32 11.6
comp=Z,47nm,0.8s
SLVN IAMs_20 IAMs_20 16 51 11.0
comp=Z,2µm,20.0s
MBWA Marble Bar 51.72 106 P **P** **16 32 12.9 +0.5**
GEYT Alibeck 51.98 352 P **P** **16 32 13.4 -0.6**
comp=Z,9.2nm,0.9s,baz=194,slow=12,SNR=9.1
GEYT Alibeck 51.98 352 P **P** **16 32 12.9 -1.1**
GYA0B ALIBECK ARRAY 51.98 352 IAmb IAmb 16 32 19.9
comp=Z,43nm,1.2s
KMI Kunming 52.85 43 ⇓P **P** **16 32 23.2 +2.3**
KMI pP pP 16 32 26.4 +0.7
KMI sP sP 16 32 28.0 +0.4
KMI PP **PP** **16 34 18.9 -1.7**
KMI S **S** **16 39 49.8 +0.6**
KMI sS sS 16 39 57.8 +0.7
KMI SS **SS** **16 43 30.6 +2.1**
KMI pmax pmax
comp=Z,21nm,0.9s
KMI pmax pmax
comp=Z,140nm,4.1s
KMI LR LR
comp=Z,1µm,17.2s
KMI LR LR
comp=Z,1µm,20.7s
KMI LR LR
comp=Z,2µm,19.2s
SPMM Sapulut 53.50 73 P **P** **16 32 26.0 +0.3**
MAW Mawson 53.77 181 P **P** **16 32 27.5 +0.8**
comp=Z,22nm,0.6s,baz=6.7,slow=8.6,SNR=32
MAW LR LR 16 50 03.1
comp=Z,3µm,19.6s,baz=360,slow=30
MAW Mawson 53.77 181 P **P** **16 32 28.0 +1.3**
MAW pmax pmax
comp=Z,6.0nm,0.9s
MAW MLR MLR
comp=Z,900nm,20.0s
MAW Mawson 53.77 181 P **P** **16 32 28.0 +1.3**
KAPI Kappang 53.80 86 LR LR 16 51 38.9
comp=Z,918nm,21.9s,baz=220,slow=32
KAPI Kappang 53.80 86 P **P** **16 32 25.9 -1.9**
KAPI pmax pmax
comp=Z,42nm,0.9s
KAPI MLR MLR
comp=Z,1µm,22.0s
KAPI Kappang 53.80 86 P **P** **16 32 25.9 -1.9**
KAPI IAmb IAmb 16 32 39.8
comp=Z,42nm,0.9s
KAPI Kappang 53.80 86 P **P** **16 32 28.1 +0.3**
KSH Kashi 53.90 10 P **P** **16 32 24.8 -3.4**
KSH pP pP 16 32 29.1 -3.9
KSH S **S** **16 39 59.8 -2.9**
KSH sS sS 16 40 10.4 -0.2
KSH pmax pmax
comp=Z,41nm,0.7s
KSH pmax pmax
comp=Z,450nm,3.1s
KSH LR LR
comp=Z,2µm,12.0s
KSH LR LR
comp=Z,2µm,11.8s
KSH LR LR
comp=Z,2µm,11.8s
SPSI Sidrap Palu 54.07 85 P **P** **16 32 30.6 +0.8**
comp=Z,2µmcomp=Z,16nm,0.8s
QIZ Qiongzhong 54.27 54 P **P** **16 32 30.7 -0.4**
QIZ S **S** **16 40 09.1 +1.0**
QIZ SS **SS** **16 43 52.7 +2.2**
QIZ LR LR
comp=Z,950nm,19.6s
QIZ LR LR
comp=Z,1µm,20.9s
QIZ LR LR
comp=Z,2µm,20.0s
BNSI Bone 54.29 85 P **P** **16 32 31.7 +0.3**
comp=Z,1µmcomp=Z,45nm,1.3s
TTSI Tana Toraja 54.34 84 P **P** **16 32 32.0 +0.2**
comp=Z,805nmcomp=Z,44nm,0.8s
MMRI Maumere 55.46 91 P **P** **16 32 39.3 -0.7**
MMRI IAmb IAmb 16 32 46.6
comp=Z,57nm,1.0s
MMRI Maumere 55.46 91 P **P** **16 32 38.5 -1.4**
comp=Z,1µmcomp=Z,1µmcomp=Z,62nm,1.1s
IUG luzhnay 55.82 4 *eP* **P** **16 32 41.3 -0.7**
comp=Z,16nm,0.6s,baz=3.6
IUG *eS* **S** **16 40 29.1 +0.6**
baz=3.6
IUG luzhnay 55.82 4 *eP* **P** **16 32 41.3 -0.7**
IUG *eS* **S** **16 40 29.0 +0.6**
IUG pmax pmax
comp=Z,16nm,0.6s
AML Almayashu 56.14 7 P **P** **16 32 44.3 -0.4**
SNR=29
UCH Uchtor 56.34 8 P **P** **16 32 45.9 -0.3**
SNR=0.0
GYA Guiyang 56.38 45 ⇑P **P** **16 32 46.5 +0.1**
GYA pP pP 16 32 51.6 +0.4
GYA PcP **PcP** **16 33 43.7 +0.3**
GYA PP **PP** **16 34 50.3 -1.8**
GYA S **S** **16 40 36.5 +0.1**
GYA SS **SS** **16 44 24.5 +0.6**
GYA pmax pmax
comp=Z,43nm,0.8s
GYA pmax pmax
comp=Z,190nm,3.1s
GYA LR LR
comp=Z,800nm,17.4s
GYA LR LR
comp=Z,820nm,15.4s
GYA LR LR
comp=Z,1µm,18.6s
TOLI2 Tolitoli 56.41 79 P **P** **16 32 43.9 -2.8**
BATI Baumata 56.57 93 LR LR 16 53 59.4
comp=Z,790nm,20.2s,baz=240,slow=33
BATI Baumata 56.57 93 P **P** **16 32 49.7 +1.9**
comp=Z,1µmcomp=Z,89nm,0.7s
ULHL Ulahol 56.61 9 P **P** **16 32 47.2 -0.6**
SNR=18
DZA Taraz 56.66 5 *eP* **P** **16 32 47.3 -0.7**
comp=Z,16nm,1.2s,baz=4.7
DZA *eS* **S** **16 40 40.0 +0.5**
baz=4.7
DZA Taraz 56.66 5 *eP* **P** **16 32 47.2 -0.7**
DZA *eS* **S** **16 40 39.9 +0.5**
DZA pmax pmax
comp=Z,16nm,1.2s
EKS2 Erkin-Say 56.68 7 P **P** **16 32 48.3 +0.2**
SNR=16
AAK Ala-Archa 56.74 8 LR LR 16 55 28.5
comp=Z,2µm,20.9s,baz=194,slow=34
AAK Ala-Archa 56.74 8 P **P** **16 32 48.5 -0.1**
SNR=20
AAK Ala-Archa 56.74 8 *i* P **P** **16 32 48.5 -0.1**
SNR=44
AAK Ala-Archa 56.74 8 *c i* P **P** **16 32 48.6 -0.1**
AAK pmax pmax
comp=Z,123nm,1.0s
AAK MLR MLR
comp=Z,4µm,15.0s
AAK Ala-Archa 56.74 8 P **P** **16 32 48.2 -0.4**
AAK IAmb IAmb 16 32 53.8
comp=Z,41nm,1.1s
AAK Ala-Archa 56.74 8 P **P** **16 32 48.8 +0.1**
KK31 Karatay Array 56.81 4 *i* P **P** **16 32 48.5 -0.4**
KK31 Karatay Array 56.81 4 P **P** **16 32 48.8 -0.1**
KK31 IAmb IAmb 16 32 54.1
comp=Z,58nm,1.5s
KKAR Karatay Array 56.81 4 P **P** **16 32 48.8 -0.1**
KKAR pmax pmax
comp=Z,58nm,1.5s
KKAR Karatay Array 56.81 4 P **P** **16 32 48.8 -0.1**
KKAR IAmb IAmb 16 32 54.1
comp=Z,58nm,1.5s
KKAR Karatay Array 56.81 4 P **P** **16 32 48.4 -0.6**
KBK Karagaybulak 56.82 8 P **P** **16 32 48.8 -0.5**
SNR=18
GNI Garni 57.17 341 P **P** **16 32 53.2 +1.5**
GNI Garni 57.17 341 *d i* P **P** **16 32 52.2 +0.5**
GNI pmax pmax
comp=Z,238nm,1.0s
GNI MLR MLR
comp=Z,1µm,16.0s
GNI Garni 57.17 341 P **P** **16 32 52.7 +1.0**
GNI Garni 57.17 341 P **P** **16 32 53.4 +1.7**
TKM2 Tokmak 2 57.17 9 P **P** **16 32 51.1 -0.7**
SNR=33
SOEI Soe 57.23 93 P **P** **16 32 54.0 +1.4**
SOEI Soe 57.23 93 P **P** **16 32 54.3 +1.6**
comp=Z,1µmcomp=Z,151nm,1.0s
USP Ospenovka 57.36 8 P **P** **16 32 52.3 -0.6**
SNR=12
GAZ Gaziantep 57.43 333 IAmb IAmb 16 32 59.5
comp=Z,62nm,1.1s
FITZ Fitzroy Crossi 57.45 103 P **P** **16 32 54.8 +0.7**
TNSS Tian-Shan 57.49 10 *eP* **P** **16 32 52.6 -1.7**
baz=9.5
TNSS Tian-Shan 57.49 10 *eP* **P** **16 32 52.6 -1.7**
CD2 Chengdu 57.50 39 P **P** **16 32 53.8 -0.4**
CD2 sP pP 16 32 59.5 +0.5
CD2 S **S** **16 40 50.3 -0.7**
CD2 sS sS 16 41 00.3 +1.4
CD2 pmax pmax
comp=Z,60nm,0.8s
CD2 pmax pmax
comp=Z,310nm,5.9s
CD2 LR LR
comp=Z,3µm,19.4s
CD2 LR LR
comp=Z,3µm,18.4s
CD2 LR LR
comp=Z,3µm,19.4s
AKT Akhty 57.51 344 ⇓*eP* **P** **16 32 54.0 -0.1**
AKT pmax pmax
comp=Z,100nm,1.0s
SGDS Sogindy 57.56 8 *eP* **P** **16 32 53.3 -1.1**
comp=Z,12nm,0.7s,baz=7.4
SGDS Sogindy 57.56 8 *eP* **P** **16 32 53.2 -1.1**
SGDS pmax pmax
comp=Z,11nm,0.7s
SYO Syowa Base 57.63 191 ⇓*eP* **P** **16 32 55.2 +0.8**
SYO Syowa Base 57.63 191 ⇓*es*P sP 16 32 59.6 -1.5
MDOK Medeo 57.63 10 *eP* **P** **16 32 53.7 -1.3**
baz=9.5
MDOK *eS* **S** **16 40 52.4 0.0**
baz=9.5
MDOK LR LR 16 58 05.8
comp=Z,718nm,13.3s,baz=9.5
MDOK Medeo 57.63 10 *eP* **P** **16 32 53.6 -1.3**
MDOK *eS* **S** **16 40 52.4 0.0**
MDOK MLR MLR
comp=Z,718nm,13.0s
SATY Saty 57.77 11 *eP* **P** **16 32 54.6 -1.2**
comp=Z,30nm,1.0s,baz=11
SATY Saty 57.77 11 *eP* **P** **16 32 54.6 -1.2**
SATY pmax pmax
comp=Z,30nm,1.0s
DDFL Dedoflistskaro 57.93 343 P **P** **16 32 59.2 +2.2**
UZB Uzynbulak 57.97 11 *eP* **P** **16 32 56.0 -1.4**
comp=Z,12nm,1.1s,baz=11
UZB Uzynbulak 57.97 11 *eP* **P** **16 32 55.9 -1.4**
UZB pmax pmax
comp=Z,12nm,1.1s
SHLS Shalkode 58.06 12 *eP* **P** **16 32 57.4 -0.5**
comp=Z,23nm,1.0s,baz=12
SHLS Shalkode 58.06 12 *eP* **P** **16 32 57.4 -0.5**
SHLS pmax pmax
comp=Z,23nm,1.0s
KARS Kars 58.14 340 P **P** **16 33 01.0 +2.4**
KPKS Kokpek 58.21 11 *eP* **P** **16 32 57.6 -1.3**
comp=Z,13nm,0.8s,baz=11
KPKS Kokpek 58.21 11 *eP* **P** **16 32 57.6 -1.3**
KPKS pmax pmax
comp=Z,13nm,0.8s
KUU Kurty 58.23 9 *eP* **P** **16 32 57.4 -1.6**
comp=Z,14nm,1.0s,baz=8.8
KUU LR LR 16 56 54.0
comp=Z,781nm,13.2s,baz=8.8
KUU Kurty 58.23 9 *eP* **P** **16 32 57.4 -1.6**
KUU pmax pmax
comp=Z,14nm,1.0s
KUU MLR MLR
comp=Z,781nm,13.0s
KZRT Kazreti 58.40 341 P **P** **16 33 01.9 +1.7**
BGD Bogdanovka 58.54 340 P **P** **16 33 06.2 +4.8**
GNBR Gunib 58.57 344 ⇑*eP* **P** **16 33 02.1 +0.7**
GNBR pmax pmax
comp=Z,101nm,1.0s
AKH Akhalkalaki 58.71 340 ⇓P **P** **16 33 01.6 -0.9**
AKH Akhalkalaki 58.71 340 P **P** **16 33 01.6 -0.9**
MAK Makhachkala 58.95 344 *eP* P 16 32 58.7 -5.3
MAK *eS* **S** **16 41 00.6 -8.7**
MAK *e*SS **SS** **16 44 55.5 -8.1**
MAK *e*SSS SSS 16 47 32.2
MAK pmax pmax
comp=Z,324nm,1.0s
MAK MLR MLR
comp=Z,1µm,17.0s
BTLS Baital 59.06 7 *eP* **P** **16 33 03.5 -1.2**
comp=Z,11nm,0.8s,baz=6.6
BTLS Baital 59.06 7 *eP* **P** **16 33 03.4 -1.2**
BTLS pmax pmax
comp=Z,11nm,0.8s
GUDG Gudauri 59.35 342 P **P** **16 33 07.9 +0.8**
GROC Groznyy 59.64 343 *eP* **P** **16 33 09.4 +0.7**
GROC *e* 16 34 00.1
GROC *e*S S 16 41 32.6 +14
GROC pmax pmax
comp=Z,118nm,1.2s
TDK Taldyqorghan 59.65 10 *eP* **P** **16 33 07.7 -1.2**
comp=Z,41nm,1.0s,baz=10
TDK *e*S **S** **16 41 18.5 +0.1**
baz=10
TDK LR LR 16 58 13.2
comp=Z,1µm,13.5s,baz=10
TDK Taldyqorghan 59.65 10 *eP* **P** **16 33 07.6 -1.2**
TDK *e*S **S** **16 41 18.4 +0.1**
TDK pmax pmax
comp=Z,41nm,1.0s
TDK MLR MLR
comp=Z,1µm,14.0s
ONI Oni 59.79 341 P P 16 33 14.7 +4.9
ZEI Tsey 59.83 341 *eP* **P** **16 33 10.1 -0.2**
ZEI pmax pmax
comp=Z,46nm,1.0s
CASY Casey 60.23 161 P **P** **16 33 11.6 -0.9**
CASY IAmb IAmb 16 33 15.0
comp=Z,24nm,0.9s
CASY Casey 60.23 161 IAMs_20 IAMs_20 16 52 46.3
comp=Z,2µm,21.0s
SANI Sanana 60.56 84 P **P** **16 33 15.4 -0.2**
comp=Z,2µmcomp=Z,1µmcomp=Z,55nm,1.2s
NCK Nalchik 60.56 342 ⇑*eP* **P** **16 33 15.4 +0.3**
NCK pmax pmax
comp=Z,11nm,0.8s
NCK MLR MLR
comp=Z,2µm,17.0s
NEY Neytrino 60.61 341 *de*P **P** **16 33 17.6 +2.0**
NEY pmax pmax
comp=Z,5.0nm,1.0s
NEY MLR MLR
comp=Z,737nm,18.0s
ENH Enshi 60.73 43 IAmb IAmb 16 33 28.8
comp=Z,46nm,0.8s
ENH IAMs_20 IAMs_20 16 58 14.2
comp=Z,2µm,20.0s
WMQ Urumqi 60.74 18 *eP* **P** **16 33 17.9 +1.5**
WMQ pP pP 16 33 21.3 +0.1
WMQ PcP **PcP** **16 34 01.6 +1.4**
WMQ PP **PP** **16 35 31.6 +1.1**
WMQ S **S** **16 41 30.7 -1.8**
WMQ SS **SS** **16 45 38.0 +6.1**
WMQ pmax pmax
comp=Z,100nm,1.3s
WMQ pmax pmax
comp=Z,340nm,3.7s
WMQ LR LR
comp=Z,8µm,17.3s
WMQ LR LR
comp=Z,5µm,19.1s
WMQ LR LR
comp=Z,11µm,20.7s
KBZ Khabaz 60.99 341 P **P** **16 33 17.9 0.0**
comp=Z,36nm,1.0s,baz=195,slow=6.4,SNR=12
KBZ LR LR 16 59 23.2
comp=Z,1µm,18.2s,baz=166,slow=36
KBZ Khabaz 60.99 341 *ceP* **P** **16 33 18.2 +0.3**
KBZ pmax pmax
comp=Z,55nm,1.1s
KBZ MLR MLR
comp=Z,1µm,17.0s
BR131 Keskin Array S 61.13 332 *c i*P **P** **16 33 19.2 0.0**
BR131 Keskin Array S 61.13 332 P **P** **16 33 19.0 -0.2**
BRTR Keskin Array B 61.13 332 P **P** **16 33 19.4 +0.2**
comp=Z,38nm,1.0s,baz=147,slow=7.4,SNR=24
BRTR LR LR 16 58 45.6
comp=Z,2µm,19.3s,baz=139,slow=35
BRTR Keskin Array B 61.13 332 P **P** **16 33 18.4 -0.8**
ISP Isparta 61.13 328 P **P** **16 33 19.3 +0.1**
ISP pmax pmax
comp=Z,40nm,1.4s
KVT Kavak 61.19 335 P P 16 33 24.8 +5.4
KARP Karpathos 61.25 324 P **P** **16 33 19.5 -0.4**
KIV Kislovodsk 61.26 341 *i* P **P** **16 33 20.1 +0.2**
SNR=6.5
KIV Kislovodsk 61.26 341 *eP* **P** **16 33 19.2 -0.7**
KIV *e* 16 35 34.5
KIV *e*S **S** **16 41 40.0 +0.8**
KIV *e*SS **SS** **16 45 42.4 +2.4**
KIV pmax pmax
comp=Z,121nm,1.0s
KIV pmax pmax
comp=Z,166nm,3.7s
KIV MLR MLR
comp=Z,3µm,17.0s
KIV Kislovodsk 61.26 341 P **P** **16 33 19.2 -0.7**
KIV IAmb IAmb 16 33 26.9
comp=Z,49nm,1.1s
KIV Kislovodsk 61.26 341 P **P** **16 33 18.4 -1.5**
LZH Lanzhou 61.27 35 *eP* **P** **16 33 22.4 +2.2**
LZH pP pP 16 33 25.3 +0.2
LZH sP pwP 16 33 29.0 -0.3
LZH S **S** **16 41 39.8 +0.1**
LZH sS sS 16 41 48.4 +0.7
LZH SS **SS** **16 45 41.8 +1.3**

LZH pmax pmax
comp=Z,36nm,1.1s
LZH pmax pmax
comp=Z,110nm,4.5s
LZH LR LR
comp=Z,1μm,15.2s
LZH LR LR
comp=Z,2μm,16.8s
LZH LR LR
comp=Z,890nm,18.4s
NLAI Namlea 61.34 86 P **P** 16 33 20.6 -0.4
comp=Z,28nm,0.8s
ANTO Ankara 61.63 332 P **P** 16 33 22.7 +0.2
ANTO pmax pmax
comp=Z,39nm,1.0s
ANTO MLR MLR
comp=Z,1μm,21.0s
ANTO Ankara 61.63 332 P **P** 16 33 22.6 +0.2
ANTO IAmb IAmb 16 33 27.9
comp=Z,39nm,1.0s
GTA Gaotai 61.71 29 ⇓P **P** 16 33 23.1 0.0
GTA pP pP 16 33 27.1 -0.9
GTA sP sP 16 33 30.2 +0.3
GTA S **S** **16 41 45.2 0.0**
GTA sS sS 16 41 54.4 +1.1
GTA SS **SS** **16 45 46.3 -1.0**
GTA pmax pmax
comp=Z,29nm,1.1s
GTA pmax pmax
comp=Z,210nm,6.7s
GTA LR LR
comp=Z,1μm,18.9s
GTA LR LR
comp=Z,2μm,19.6s
GTA LR LR
comp=Z,2μm,21.8s
YER Yerkesik 61.79 326 P **P** **16 33 27.4 +3.8**
SOC Sochi 61.92 339 *e*P **P** **16 33 22.6 -1.6**
SOC *e*PPP PPP 16 37 04.6
SOC *e*S **S** **16 41 48.5 +1.2**
SOC *e*SS **SS** **16 45 50.2 +0.1**
SOC *e*SSS SSS 16 48 32.9
SOC pmax pmax
comp=Z,102nm,1.1s
MAKZ Makanchi 62.07 12 P **P** **16 33 24.2 -1.0**
MAKZ pmax pmax
comp=Z,43nm,1.0s
MAKZ MLR MLR
comp=Z,2μm,22.0s
MAKZ Makanchi 62.07 12 P **P** **16 33 24.2 -1.0**
MAKZ IAmb IAmb 16 33 29.6
comp=Z,43nm,1.0s
MK31 Makanchi Array 62.12 13 *d* iP **P** **16 33 24.0 -1.6**
MK31 Makanchi Array 62.12 13 P **P** **16 33 24.4 -1.2**
MK31 IAmb IAmb 16 33 29.9
comp=Z,36nm,1.1s
MKAR Makanchi Array 62.12 13 P **P** **16 33 24.6 -1.0**
comp=Z,14nm,0.7s,baz=205,slow=7.4,SNR=96
MKAR LR LR 16 59 53.6
comp=Z,2μm,18.4s,baz=190,slow=36
MKAR PKP2bc 17 02 38.5
comp=Z,0.8nm,0.8s,baz=45,slow=3.6,SNR=7.4
MKAR Makanchi Array 62.12 13 *c e*P **P** **16 33 24.3 -1.3**
MKAR pmax pmax
comp=Z,15nm,0.7s
MKAR Makanchi Array 62.12 13 P **P** **16 33 23.9 -1.7**
GOF Gofitskoye 62.14 342⇑ *e*P **P** **16 33 29.7 +4.0**
GOF pmax pmax
comp=Z,711nm,3.1s
SZP Santa 62.26 62 IAMs_20 IAMs_20 16 56 35.1
comp=Z,2μm,20.0s
XAN Xi'an 62.82 40 P **P** **16 33 29.6 -0.9**
XAN PP **PP** **16 35 51.0 +2.0**
XAN S **S** **16 41 56.0 -3.2**
XAN ScS **SKSac** **16 43 22.0 -0.6**
XAN pmax pmax
comp=Z,60nm,1.2s
XAN pmax pmax
comp=Z,360nm,5.9s
XAN LR LR
comp=Z,1μm,17.7s
XAN LR LR
comp=Z,900nm,19.5s
XAN LR LR
comp=Z,2μm,21.7s
XAN Xi'an 62.82 40 P **P** **16 33 29.9 -0.6**
XAN pmax pmax
comp=Z,57nm,0.9s
DAV Davao City (W) 62.82 75 LR LR 16 58 31.2
comp=Z,819nm,20.8s,baz=231,slow=34
AB31 Akbulak array 63.02 356 *i* P **P** **16 33 30.6 -0.8**
ABKAR Akbulak array 63.02 356 P **P** **16 33 30.3 -1.2**
ABKAR Akbulak array 63.02 356 IAmb IAmb 16 33 36.2
comp=Z,128nm,1.2s
APE Apeiranthos 63.25 325 ⇑P **P** **16 33 33.3 -0.1**
ZSN Zaisan 63.33 14 *e*P **P** **16 33 32.7 -0.9**
comp=Z,12nm,1.1s,baz=14
ZSN Zaisan 63.33 14 *e*P **P** **16 33 32.7 -0.9**
ZSN pmax pmax
comp=Z,12nm,1.1s
MTN Manton Dam 63.36 98 IAmb IAmb 16 33 42.3
comp=Z,43nm,1.4s
ANN Anapa 63.79 338 *e*P **P** **16 33 36.7 0.0**
ANN *e* 16 36 00.9
ANN *e*S **S** **16 42 13.7 +2.9**
ANN pmax pmax
comp=Z,85nm,0.9s
ANN MLR MLR
comp=Z,890nm,17.0s
BRZS Berezniki 63.81 5 *e*P **P** **16 33 35.6 -1.1**
comp=Z,9.0nm,1.0s,baz=4.8
BRZS *e*S **S** **16 42 11.5 +0.5**
baz=4.8
BRZS Berezniki 63.81 5 *e*P **P** **16 33 35.6 -1.1**
BRZS *e*S **S** **16 42 11.4 +0.5**
BRZS pmax pmax
comp=Z,9.0nm,1.0s
KNMB Chin-men Tao 63.87 54 IAMs_20 IAMs_20 16 58 24.4
comp=Z,2μm,21.0s
WHN Wuhan 64.21 46⇑ *i*P **P** **16 33 40.4 +0.7**
WHN S **S** **16 42 18.6 +2.1**
WHN pmax pmax
comp=Z,66nm,1.0s
WHN LR LR
comp=Z,1μm,10.2s
WHN LR LR
comp=Z,1μm,14.2s
WHN LR LR
comp=Z,4μm,26.6s
QZH Quanzhou 64.27 53 P **P** **16 33 41.0 +0.8**
QZH S **S** **16 42 22.6 +5.1**
QZH LR LR
comp=Z,1μm,18.9s
QZH LR LR
comp=Z,640nm,18.9s
QZH LR LR
comp=Z,1μm,22.7s
ASAR Alice Springs 64.70 110 P **P** **16 33 42.9 -0.4**
comp=Z,18nm,0.8s,baz=272,slow=6.0,SNR=206
ASAR LR LR 16 59 22.8
comp=Z,2μm,18.1s,baz=260,slow=34
ASAR Alice Springs 64.70 110 P **P** **16 33 42.1 -1.1**
EZN Ezine 64.80 327 P **P** **16 33 47.8 +4.4**
TPUB Ta-pu 65.07 56 IAMs_20 IAMs_20 17 00 58.3
comp=Z,2μm,19.0s
KURBB Kurchatov Arra 65.13 9 P **P** **16 33 44.2 -1.1**
SEM Semipalatinsk 65.19 10 *e*P **P** **16 33 44.8 -1.2**
comp=Z,15nm,0.9s,baz=10.0
SEM *e*S **S** **16 42 28.4 0.0**
baz=10.0
SEM Semipalatinsk 65.19 10 *e*P **P** **16 33 44.8 -1.2**
SEM *e*S **S** **16 42 28.4 0.0**
SEM pmax pmax
comp=Z,15nm,0.9s
WRA Warramunga Arr 65.46 106 P **P** **16 33 48.4 +0.1**
comp=Z,27nm,0.8s,baz=269,slow=5.9,SNR=164
WRA PKP2bc 17 02 30.9
comp=Z,0.9nm,0.9s,baz=79,slow=3.6,SNR=3.1
WRA Warramunga Arr 65.46 106 P **P** **16 33 47.4 -0.8**
WB2 Warramunga Arr 65.47 106 IAmb IAmb 16 33 49.5
comp=Z,40nm,0.9s
WRAB Tennant Creek 65.47 106 *d* iP **P** **16 33 48.3 0.0**
WRAB pmax pmax
comp=Z,50nm,1.0s
WRAB Tennant Creek 65.47 106 P **P** **16 33 48.5 +0.2**
WRAB IAmb IAmb 16 33 49.5
comp=Z,41nm,0.9s
WB0 Warramunga Arr 65.53 106 IAmb IAmb 16 33 55.9
comp=Z,28nm,1.0s
SSLB Suanglung 65.56 56 IAMs_20 IAMs_20 17 02 35.4
comp=Z,2μm,18.0s
NVL N'lazarevskaya 65.59 197 *e*P **P** **16 33 48.9 +0.8**
NVL *e*SS **SKSac** **16 43 40.9 -1.5**
NVL pmax pmax
comp=Z,59nm,1.2s
WR0 Warramunga Arr 65.64 106 IAmb IAmb 16 33 53.8
comp=Z,28nm,0.8s
YULB Yu-li 65.65 56 IAMs_20 IAMs_20 17 00 29.7
comp=Z,2μm,20.0s
ALN Alexandroupoli 65.73 328 P **P** **16 33 53.8 +4.4**
SWI Sorong 65.95 85 P **P** **16 33 52.4 +1.0**
SWI pmax pmax
comp=Z,43nm,1.3s
SWI Sorong 65.95 85 P **P** **16 33 52.2 +0.8**
comp=Z,2μmcomp=Z,44nm,1.3s
DGZ Jazzator, Alta 66.05 15⇑ *i*P **P** **16 33 51.3 -0.2**
DGZ pmax pmax
comp=Z,19nm,1.4s
DGZ MLR MLR
comp=Z,2μm,15.0s
BBOO Buckleboo 66.12 120 P **P** **16 33 52.0 -0.3**
BBOO IAmb IAmb 16 33 54.9
comp=Z,35nm,0.9s
NACB Ninganchiao 66.26 56 IAMs_20 IAMs_20 17 02 42.9
comp=Z,1μm,18.0s
YHNB Yeheng 66.33 55 IAMs_20 IAMs_20 16 59 30.6
comp=Z,2μm,21.0s
BRVK Borovoye 66.72 3 *d* iP **P** **16 33 54.3 -1.2**
BRVK pmax pmax
comp=Z,60nm,1.1s
BRVK MLR MLR
comp=Z,628nm,14.0s
BRVK Borovoye 66.72 3 P **P** **16 33 54.3 -1.2**
BRVK IAmb IAmb 16 34 00.1
comp=Z,57nm,1.1s
BRVK Borovoye 66.72 3 P **P** **16 33 55.1 -0.4**
LIT Litokhoron 67.07 325 P **P** **16 33 57.7 -0.4**
LIT pmax pmax
comp=Z,79nm,1.1s
SRS Serrai 67.18 327 P **P** **16 34 01.0 +2.3**
SRS pmax pmax
comp=Z,43nm,1.0s
TIRR Tirgusor 67.25 332 IAMs_20 IAMs_20 17 01 00.2
comp=Z,2μm,21.0s
JURR Jurilovca 67.27 332 ⇑P **P** **16 33 59.3 +0.1**
PLD Plovdiv 67.30 328 P **P** **16 33 59.8 +0.4**
PLD pmax pmax
comp=Z,10.0nm,1.7s
TIY Taiyuan 67.37 39 *e*P **P** **16 34 00.6 +0.5**
TIY S **S** **16 42 53.5 -1.6**
TIY pmax pmax
comp=Z,24nm,0.7s
TIY LR LR
comp=Z,660nm,13.0s
TIY LR LR
comp=Z,260nm,12.2s
TIY LR LR
comp=Z,1μm,21.1s
TPGR Topolog 67.55 332 ⇓P **P** **16 34 00.2 -0.8**
HARR Harsova 67.65 332 ⇓P **P** **16 34 01.5 -0.1**
HARR Harsova 67.65 332 P **P** **16 34 01.4 -0.1**
BELG Belogornoye 67.80 348 *d* iP **P** **16 34 01.1 -1.2**
BELG pmax pmax
comp=Z,15nm,0.9s
BELG MLR MLR
comp=Z,176nm,20.0s
VAY Valandovo 67.87 326 *i* P **P** **16 34 06.0 +3.0**
BTO Baotou 67.89 35 *e*P **P** **16 34 02.6 -0.7**
BTO LR LR
comp=Z,3μm,17.7s
BTO LR LR
comp=Z,4μm,22.6s
IGT Igoumenitsa 67.91 323 P **P** **16 34 06.5 +3.1**
IGT pmax pmax
comp=Z,90nm,1.0s
CFR Carcaliu 67.93 332 ⇓P **P** **16 34 03.4 +0.1**
CFR Carcaliu 67.93 332 P **P** **16 34 03.2 -0.1**
CFR pmax pmax
comp=Z,92nm,1.9s
VRH Novokhopyorsk 68.08 344 *e*P **P** **16 34 03.5 -0.6**
VRH pmax pmax
comp=Z,100nm,1.0s
FNA Florina 68.16 325 P **P** **16 34 04.7 -0.3**
FNA pmax pmax
comp=Z,58nm,1.1s
FNA Florina 68.16 325 IAmb IAmb 16 34 09.6
comp=Z,41nm,0.8s
NJ2 Nanjing 68.23 47⇑ *i*P **P** **16 34 05.8 +0.3**
NJ2 pP **pP** **16 34 07.5 -3.0**
NJ2 sP **sP** **16 34 12.7 +0.4**
NJ2 S **S** **16 43 08.5 +3.1**
NJ2 sS **sS** **16 43 16.6 +3.3**
NJ2 ScS **ScS** **16 44 04.9 +0.6**
NJ2 SS **SS** **16 47 29.1 +0.2**
NJ2 pmax pmax
comp=Z,25nm,0.6s
NJ2 pmax pmax
comp=Z,200nm,3.5s
NJ2 LR LR
comp=Z,920nm,17.1s
NJ2 LR LR
comp=Z,1μm,15.6s
NJ2 LR LR
comp=Z,1μm,17.0s
PLVB Pleven 68.27 329 ⇓P **P** **16 34 05.3 -0.2**
STIP Stip 68.34 326 *i* P **P** **16 34 09.6 +3.6**
VTS Vitosha 68.43 328 ⇓P **P** **16 34 06.0 -0.7**
VTS Vitosha 68.43 328 P **P** **16 34 07.1 +0.3**
VTS pmax pmax
comp=Z,58nm,2.3s
VTS Vitosha 68.43 328 IAmb IAmb 16 34 12.1
comp=Z,58nm,1.1s
ISR Istrita 68.62 331 ⇑P **P** **16 34 06.9 -0.8**
ISR Istrita 68.62 331 P **P** **16 34 09.3 +1.6**
ISR pmax pmax
comp=Z,130nm,1.2s
OHR Ohrid 68.70 325 *i* P **P** **16 34 12.3 +3.9**
VSR Storozhevoye 68.81 342 *e*P **P** **16 34 07.9 -0.8**
VSR pmax pmax
comp=Z,90nm,0.9s
BISRR Bisoca 68.86 332 ⇑P **P** **16 34 08.3 -1.0**
HHC Hu-ho-hao-te 68.92 36 *e*P **P** **16 34 09.8 0.0**
HHC sP sP 16 34 17.0 +0.4
HHC S **S** **16 43 08.5 -5.0**
HHC SS **SS** **16 47 38.9 -0.6**
HHC pmax pmax
comp=Z,37nm,0.9s
HHC pmax pmax
comp=Z,600nm,5.6s
HHC LR LR
comp=Z,1μm,18.7s
HHC LR LR
comp=Z,2μm,19.6s
HHC LR LR
comp=Z,2μm,19.6s
SKO Skopje 68.94 326 *i* P **P** **16 34 13.7 +4.0**
TORD Torodi Ar. Bea 68.96 290 P **P** **16 34 10.4 0.0**
comp=Z,4.0nm,1.1s,baz=104,slow=5.0,SNR=12
TORD PKP2bc 17 02 22.2
comp=Z,0.6nm,1.0s,baz=261,slow=3.9,SNR=4.2
TORD LR LR 17 04 12.8
comp=Z,709nm,18.1s,baz=100,slow=36
TORD Torodi Ar. Bea 68.96 290 P **P** **16 34 09.3 -1.1**
KIS Kishinev 69.03 334 *e*LR LR 17 05 06.0
comp=Z,300nm,18.0s
KIS Kishinev 69.03 334 *d* iP **P** **16 34 14.2 +4.0**
KIS pmax pmax
comp=Z,370nm,4.4s
KIS Kishinev 69.03 334⇓ *i*P **P** **16 34 14.2 +4.0**
comp=Z,340nm,4.4s
VRI Vrincioaia 69.09 332 ⇓P **P** **16 34 11.4 +0.7**
VRI Vrincioaia 69.09 332 P **P** **16 34 11.3 +0.7**
VRI pmax pmax
comp=Z,187nm,1.1s
PLOR Plostina 69.12 332 ⇑P **P** **16 34 11.5 +0.6**
PLOR Plostina 69.12 332 P **P** **16 34 11.4 +0.6**
MLR Muntele Rosu 69.17 331 ⇓P **P** **16 34 12.1 +0.8**
MLR Muntele Rosu 69.17 331 IAMs_20 IAMs_20 17 04 29.9
comp=Z,2μm,18.0s
TAM Tamanrasset 69.36 301 P **P** **16 34 14.4 +1.5**
TAM pmax pmax
comp=Z,9.0nm,1.1s
TIR Tirane 69.39 325 P **P** 16 34 17.5 +5.0
TIR pmax pmax
comp=Z,161nm,0.9s
SSE Sheshan 69.41 49 P **P** **16 34 11.6 -1.3**
SSE S **S** **16 43 21.4 +2.1**
SSE pmax pmax
comp=Z,22nm,0.7s
SSE LR LR
comp=Z,270nm,15.8s
SSE LR LR
comp=Z,290nm,16.0s
SSE LR LR
comp=Z,470nm,17.7s
TIA Tai'an 69.41 42 P **P** **16 34 12.8 0.0**
TIA S **S** **16 43 21.8 +2.5**
TIA pmax pmax
comp=Z,26nm,0.9s
TIA pmax pmax
comp=Z,130nm,3.5s
TIA LR LR
comp=Z,1μm,20.4s
TIA LR LR
comp=Z,1μm,18.8s
TIA LR LR
comp=Z,2μm,19.2s
ZAA0 Zalesovo Array 69.42 12 IAmb IAmb 16 34 20.9
comp=Z,39nm,0.8s
ZAA0 IAMs_20 IAMs_20 17 02 56.6
comp=Z,2μm,19.0s
ZALV Zalesovo Beam 69.42 12 P **P** **16 34 11.4 -1.0**
comp=Z,15nm,0.7s,baz=206,slow=6.8,SNR=59
ZALV LR LR 17 03 07.6
comp=Z,2μm,19.8s,baz=203,slow=35
ZALV Zalesovo Beam 69.42 12 *i* P **P** **16 34 11.1 -1.3**
ZALV pmax pmax
comp=Z,15nm,0.6s
ZALV Zalesovo Beam 69.42 12 P **P** **16 34 11.1 -1.3**
VOIR 69.56 331 ⇓P **P** **16 34 13.6 -0.1**
VOIR 69.56 331 P **P** **16 34 13.3 -0.3**
VOIR pmax pmax
comp=Z,63nm,1.4s
ARR Arges 69.71 330 ⇑P **P** **16 34 14.2 -0.3**
DOPR Dopca 69.79 331 ⇑P **P** **16 34 14.5 -0.4**
TIP Timpagrande 69.81 321 ⇓P **P** **16 34 14.4 -0.9**
LPSR Galich'ya Gora 70.11 343 *e*P **P** **16 34 16.4 -0.3**
LPSR pmax pmax
comp=Z,120nm,0.9s
SORM Soroca 70.12 334 ⇑P **P** **16 34 16.0 -0.8**
SORM Soroca 70.12 334 P **P** **16 34 16.0 -0.8**
ULC Ulcinj 70.14 325 *e*P **P** **16 34 18.1 +0.9**
LOT Lotru 70.18 330 ⇑P **P** **16 34 17.1 -0.4**
BIZ Bicaz 70.19 332 ⇑P **P** **16 34 16.6 -0.7**
ARU Arti 70.25 356 P **P** **16 34 16.9 -0.7**
comp=Z,18nm,1.0s,baz=175,slow=6.5
ARU Arti 70.25 356 *c i*P **P** **16 34 17.3 -0.2**
ARU 16 34 36.9
ARU 16 36 51.8
ARU S **S** **16 43 32.0 +3.7**
ARU SS **SS** **16 47 54.6 -4.6**
ARU pmax pmax
comp=Z,50nm,1.0s
ARU MLR MLR
comp=Z,829nm,19.0s
ARU Arti 70.25 356 P **P** **16 34 16.8 -0.7**
SNAA Sanae 70.31 198 P **P** **16 34 18.2 +0.4**
SNAA Sanae 70.31 198 *d* iP **P** **16 34 18.3 +0.4**
SNAA pmax pmax
comp=Z,55nm,1.7s
SNAA Sanae 70.31 198 P **P** **16 34 17.3 -0.6**
SNAA IAmb IAmb 16 34 19.9
comp=Z,25nm,0.8s
SNAA IAMs_20 IAMs_20 16 58 31.9
comp=Z,2μm,20.0s
DRME Dracevica, Mon 70.32 325 *e*P **P** **16 34 18.3 0.0**
DRME Dracevica, Mon 70.32 325 *e*P **P** **16 34 18.9 +0.6**
IVA Berane 70.39 326 *e*P **P** **16 34 19.3 +0.5**
PDG Podgorica 70.44 325 ⇑P **P** **16 34 18.2 -0.8**
PDG Podgorica 70.44 325 *e*P **P** **16 34 18.8 -0.2**
TTG Podgorica 70.44 325 *e*P **P** **16 34 19.6 +0.6**
HERR Herculane 70.45 329 ⇑P **P** **16 34 18.2 -0.8**
SVE Sverdlovsk 70.52 357⇓ *e*P **P** **16 34 18.8 -0.3**
SVE *e*S **S** **16 43 28.8 -2.6**
SVE pmax pmax
comp=Z,84nm,1.3s
SVE MLR MLR
comp=Z,1μm,18.0s
BUM Brajici-Budva 70.56 325 *e*P **P** **16 34 20.2 +0.4**
KOME Kolasin 70.58 326 *e*P **P** **16 34 20.5 +0.5**
CEME Cevo 70.71 325 *e*P **P** **16 34 21.4 +0.7**
MDVR Moldovita 70.73 328 ⇓P **P** **16 34 20.7 -0.1**
MATE Matera 70.76 322 ⇓P **P** **16 34 21.1 +0.2**
NKME Niksic 70.83 325 *e*P **P** **16 34 21.8 +0.3**
NKY Niksic 70.84 325 *e*P **P** **16 34 22.8 +1.2**
STKA Stephens Creek 70.85 119 P **P** **16 34 21.9 0.0**
comp=Z,14nm,0.9s,baz=294,slow=6.6,SNR=24
STKA LR LR 17 00 46.6
comp=Z,891nm,21.1s,baz=254,slow=32
STKA Stephens Creek 70.85 119 P **P** **16 34 21.9 0.0**
HCY Herceg Novi 70.88 325 *e*P **P** **16 34 21.9 +0.2**
HCY Herceg Novi 70.88 325 *e*P **P** **16 34 22.1 +0.4**
DEV Deva 70.92 330 P **P** **16 34 22.7 +0.9**
DEV pmax pmax
comp=Z,72nm,1.1s
BJT Baijiatuau 71.09 39 P **P** **16 34 23.7 +0.7**
BJT pmax pmax
comp=Z,14nm,1.4s
BURAR Bucovina Array 71.09 332 ⇓P **P** **16 34 23.5 +0.5**
BURAR Bucovina Array 71.09 332 P **P** **16 34 23.5 +0.5**
BURAR Bucovina Array 71.09 332 P **P** **16 34 22.8 -0.2**
BJI Beijing 71.11 39 P **P** **16 34 23.5 +0.4**
BJI S **S** **16 43 40.0 +1.1**
BJI pmax pmax
comp=Z,11nm,0.8s
BJI pmax pmax
comp=Z,110nm,4.1s
BJI LR LR
comp=Z,850nm,19.2s
BJI LR LR
comp=Z,720nm,19.4s
BJI LR LR
comp=Z,670nm,21.8s
TREB Trebinje 71.14 325 *e*P **P** **16 34 23.2 0.0**
UPM Unac-Piva 71.15 326 *e*P **P** **16 34 23.6 +0.1**
UPM Unac-Piva 71.15 326 *e*P **P** **16 34 23.7 +0.2**
BRY Bratogost 71.15 325 *e*P **P** **16 34 23.7 +0.2**
BRY Bratogost 71.15 325 *e*P **P** **16 34 23.9 +0.4**
DIVS Divibare 71.16 327 ⇓ *i*P **P** **16 34 23.3 -0.2**
CJR Cluj-Napoca 71.18 331 ⇓P **P** **16 34 23.7 +0.2**
CJR Cluj-Napoca 71.18 331 P **P** **16 34 23.7 +0.2**
SONM Songino Array 71.23 28 P **P** **16 34 24.0 +0.2**
comp=Z,16nm,0.7s,baz=215,slow=6.8,SNR=60
SONM PKPPKP 17 02 14.7
comp=Z,2.7nm,1.0s,baz=58,slow=1.4,SNR=8.7
SONM LR LR 17 05 00.5
comp=Z,3μm,20.2s,baz=221,slow=35
SONM Songino Array 71.23 28 P **P** **16 34 23.5 -0.3**
SONM IAmb IAmb 16 34 29.6
comp=Z,32nm,1.0s
KMPD K-Podol'skiy 71.25 334 P **P** **16 34 23.0 -0.8**
BBLS Lazi?i 71.32 326 ⇓ *i*P **P** **16 34 24.9 +0.5**
BZS Buzias 71.37 329 ⇑P **P** **16 34 24.2 -0.3**
BZS Buzias 71.37 329 P **P** **16 34 24.7 +0.2**
BZS pmax pmax
comp=Z,57nm,1.2s
ULN Ulaanbaatar 71.55 28 *d* iP **P** **16 34 25.4 -0.4**
ULN pmax pmax
comp=Z,24nm,1.0s
ULN MLR MLR
comp=Z,2μm,15.0s
ULN Ulaanbaatar 71.55 28 IAMs_20 IAMs_20 17 05 02.0
comp=Z,1μm,18.0s
ULN Ulaanbaatar 71.55 28 P **P** **16 34 26.0 +0.2**
VNA2 Neumayer--Watz 71.56 199 P **P** **16 34 26.1 +0.7**
baz=76,slow=6.6
DRGR 71.66 330 ⇓P **P** **16 34 25.8 -0.6**
DRGR 71.66 330 P **P** **16 34 26.8 +0.4**
DRGR pmax pmax
comp=Z,64nm,1.2s
KSV Kosov 71.68 333 P **P** **16 34 25.2 -1.2**
HAPS Han Pijesak,Bl 71.71 326 *e*P **P** **16 34 31.6 +4.8**
TEKS Tekeris 71.71 327 *e*P **P** **16 34 26.2 -0.5**
HORU Horodok 71.76 334 P **P** **16 34 25.8 -1.1**
AKASG Malin Array Be 71.78 336 P **P** **16 34 26.0 -0.9**

comp=Z,41nm,0.9s,baz=140,slow=4.8,SNR=55
AKASG LR LR 17 06 27.9
comp=Z,813nm,19.9s,baz=125,slow=36
AKASG Malin Array Be 71.78 336 P **P** **16 34 26.2 -0.7**
AKASG pmax pmax
comp=Z,11nm,1.0s
AKASG Malin Array Be 71.78 336 P **P** **16 34 26.2 -0.7**
AKBB Malin Array Si 71.78 336 *de*P **P** **16 34 25.9 -1.0**
AKBB Malin Array Si 71.78 336 IAmb IAmb 16 34 31.4
comp=Z,55nm,0.8s
KIEV Kiev 71.78 336 P **P** **16 34 25.0 -1.9**
VNA1 Neumayer--Stat 71.79 200 P **P** **16 34 27.5 +0.7**
SIRR Siria 71.80 329 ⇓P **P** **16 34 27.6 +0.4**
ZAK Zakamensk 71.86 24 *e*P **P** **16 34 25.8 -1.8**
ZAK pmax pmax
comp=Z,13nm,1.3s
FRGS Fruska Gora 71.97 328 ⇑P **P** **16 34 27.6 -0.7**
FRGS Fruska Gora 71.97 328 *e*P **P** **16 34 27.6 -0.7**
MOY Mondy 72.01 22 *e*P **P** **16 34 28.4 0.0**
MOY pmax pmax
comp=Z,54nm,2.6s
VNA3 Neumayer Olymp 72.34 199 P **P** **16 34 30.6 +0.5**
TRSU Trosnyk 72.48 331 P **P** **16 34 30.6 -0.6**
KEST Kesra 72.64 315 P **P** **16 34 33.1 +0.6**
comp=Z,12nm,0.9s,baz=133,slow=8.5,SNR=6.0
KEST LR LR 17 06 21.3
comp=Z,1μm,19.7s,baz=133,slow=36
KEST Kesra 72.64 315 IAMs_20 IAMs_20 17 06 00.6
comp=Z,1μm,19.0s
TRPA Tarpa 72.70 331 ⇑P **P** **16 34 32.5 0.0**
MORS Morshin 72.81 333 P **P** **16 34 33.3 +0.2**
MGRS Mrkonjic Grad 72.94 326 *e*P **P** **16 34 33.2 -0.8**
OBN Obninsk 72.99 343 *de*P **P** **16 34 33.4 -0.6**
OBN *i* 16 34 37.3
OBN *i* 16 34 51.4
OBN *i* 16 37 15.0
OBN *i* S **S** **16 44 01.3 +1.4**
OBN pmax pmax
comp=Z,82nm,1.0s
OBN MLR MLR
comp=Z,938nm,19.0s
TLY Talaya 73.02 24 P **P** **16 34 34.1 -0.3**
comp=Z,10.0nm,0.9s,baz=230,slow=11
TLY Talaya 73.02 24 *e*P **P** **16 34 34.9 +0.6**
TLY *e*S **SKiKP** **16 44 08.0 +1.5**
TLY *e* 16 44 49.3
TLY *e*SS **SS** **16 48 42.4 +0.5**
TLY pmax pmax
comp=Z,59nm,1.1s
TLY MLR MLR
comp=Z,4μm,15.0s
TLY Talaya 73.02 24 P **P** **16 34 35.5 +1.1**
DBIC Dimbokro 73.04 281 P **P** **16 34 35.3 +0.1**
comp=Z,16nm,1.0s,baz=96,slow=5.7,SNR=11
DBIC LR LR 17 04 02.4
comp=Z,358nm,21.9s,baz=92,slow=34
BLY Banja Luka 73.10 326 ⇓*i*P **P** **16 34 34.8 -0.1**
UZH Uzhgorod 73.17 331 *e*P **P** **16 34 34.6 -0.7**
UZH *i* 16 34 39.6
UZH *e* 16 34 48.2
MOS Moscow 73.24 344 *e*P **P** **16 34 39.4 +3.9**
MOS *e* 16 34 55.7
MOS pmax pmax
comp=Z,111nm,0.7s
LVV L'vov 73.25 333 *e*P **P** **16 34 35.2 -0.5**
LVV *e*S **S** **16 44 03.6 +0.4**
LVV MLR MLR
comp=Z,600nm,16.0s
MORH Mrgy, Hungar 73.29 328 ⇑P **P** **16 34 36.0 0.0**
MORH Mrgy, Hungar 73.29 328 ⇓*i*P **P** **16 34 35.6 -0.4**
KIRV Kirov 73.39 351 P **P** **16 34 35.8 -0.5**
comp=Z,67nm,1.1s,baz=21,slow=2.5
KIRV Kirov 73.39 351 *de*P **P** **16 34 35.3 -1.0**
TOO Toolangi 73.58 125 P **P** **16 34 39.8 +1.7**
TOO pmax pmax
comp=Z,23nm,0.8s
IRK Irkutsk 73.70 23 *e*P **P** **16 34 36.8 -1.5**
IRK pmax pmax
comp=Z,56nm,1.6s
CRVS Cervenica-Dubn 73.75 331 *e*P **P** **16 34 39.0 +0.3**
CRVS pmax pmax
comp=Z,173nm,1.6s
CRVS Cervenica-Dubn 73.75 331 *e*P **P** **16 34 39.0 +0.3**
AQU L'Aquila 73.76 322 P **P** **16 34 43.2 +4.2**
AQU pmax pmax
comp=Z,84nm,1.2s
AQU L'Aquila 73.76 322 ⇓*i*P **P** **16 34 43.4 +4.4**
PSZ Piszkesteto 73.82 330 ⇑P **P** **16 34 38.5 -0.7**
DL2 Dalian 73.88 42 P **P** **16 34 39.7 0.0**
DL2 S **S** **16 44 12.9 +2.2**
DL2 pmax pmax
comp=Z,19nm,0.9s
DL2 pmax pmax
comp=Z,220nm,6.6s
DL2 LR LR
comp=Z,480nm,15.9s
DL2 LR LR
comp=Z,830nm,16.1s
DL2 LR LR
comp=Z,930nm,21.2s
KECS Kecovo 73.92 330 *e*P **P** **16 34 39.9 +0.2**
KECS pmax pmax
comp=Z,23nm,0.9s
KECS Kecovo 73.92 330 *e*P **P** **16 34 39.9 +0.2**
BUD Budapest 73.95 329 P **P** **16 34 40.2 +0.3**
BUD pmax pmax
comp=Z,64nm,1.1s
BEHE Becsehely 74.43 327 ⇓*i*P **P** **16 34 46.3 +3.6**
SRO2 Moca 74.45 329 *e*P **P** **16 34 42.0 -0.8**
SRO2 pmax pmax
comp=Z,103nm,1.3s
SRO2 Moca 74.45 329 *e*P **P** **16 34 42.0 -0.8**
SRO Srobarova 74.53 329 *e*P **P** **16 34 43.3 0.0**
SRO pmax pmax
comp=Z,99nm,1.3s
SRO Srobarova 74.53 329 *e*P **P** **16 34 43.2 0.0**
NIE Niedzica 74.66 331 P **P** **16 34 44.5 +0.5**
NIE pmax pmax
comp=Z,19nm,1.2s
KOGS Kog 74.70 327 *i*P **P** **16 34 44.2 0.0**
KOGS *i*pP **pP** **16 34 49.0 -0.3**
JAY Jayapura 74.71 89 LR LR 17 05 45.4
comp=Z,103nm,21.1s,baz=248,slow=34
CRES Cresnjev 74.72 326 *e*P **P** **16 34 44.5 0.0**
VYHS Vyhne 74.73 330 *e*P **P** **16 34 44.5 +0.1**
VYHS Vyhne 74.73 330 *e*P **P** **16 34 44.5 +0.1**
GOLS Golise 74.75 326 *i*P **P** **16 34 45.0 +0.3**
LANS Liptovska Anna 74.87 331 *e*P **P** **16 34 46.0 +0.7**
LANS pmax pmax
comp=Z,27nm,0.9s
LANS Liptovska Anna 74.87 331 *e*P **P** **16 34 46.0 +0.7**
CEY Cerknica 75.23 326 ⇓*i*P **P** **16 34 46.9 -0.5**
MNK Minsk 75.29 338 *i*P **P** **16 34 47.2 -0.3**
comp=E,6.0nm,1.1s
MNK *i*P **P** **16 34 47.2 -0.3**
comp=N,54nm,1.1s
MNK *i*P **P** **16 34 47.2 -0.3**
comp=Z,94nm,1.0s
MNK *i*PP **PP** **16 37 35.5 -1.0**
MNK *i*PPP PPP 16 39 21.4
MNK *i*S **S** **16 44 28.4 +2.5**
MNK *i*ScS **ScS** **16 44 60.0 +0.6**
MNK *i*SS **SS** **16 49 17.8 +1.5**
MNK *i*SSS SSS 16 52 40.3
MNK *i*LQ LQ 17 02 55.6
MNK *i*LR LR 17 07 29.6
MNK *i*LRM MLR 17 09 47.1
comp=N,310nm,18.8s
MNK *i*LRM MLR 17 09 50.0
comp=E,29nm,14.5s
MNK *i*LRM MLR 17 09 51.5
comp=Z,308nm,17.4s
SOP Sopron 75.33 328 P **P** **16 34 48.5 +0.6**
SOP pmax pmax
comp=Z,59nm,1.3s
SKDS Skadanscina 75.34 325 *i*P **P** **16 34 47.7 -0.4**
SKDS *i*pP **pP** **16 34 52.5 -0.6**
LJU Ljubljana 75.37 326 *i*P **P** **16 34 48.2 +0.1**
LJU *i*pP **pP** **16 34 53.0 -0.1**
MODS Modra-Piesok 75.42 329 *e*P **P** **16 34 48.2 -0.2**
MODS pmax pmax
comp=Z,84nm,1.2s
MODS Modra-Piesok 75.42 329 *e*P **P** **16 34 48.2 -0.2**
SMOL Smolenice 75.44 329 *e*P **P** **16 34 48.2 -0.3**
SMOL pmax pmax
comp=Z,24nm,1.2s
SMOL Smolenice 75.44 329 *e*P **P** **16 34 48.2 -0.3**
OJC Ojcow 75.45 331 P **P** **16 34 48.0 -0.5**
OJC pmax pmax
comp=Z,44nm,1.1s
SOKA Soboth 75.49 327 *i*P **P** **16 34 49.1 +0.1**
comp=Z,52nm,1.2s,SNR=34
JAVC Velka Javorina 75.55 329 *e*P **P** **16 34 49.7 +0.5**
TRI Trieste 75.58 325 P **P** **16 34 49.4 0.0**
TRI pmax pmax
comp=Z,52nm,1.3s
ARSA Arzberg 75.59 327 *i*P **P** **16 34 49.9 +0.4**
comp=Z,93nm,1.3s,SNR=40
OBKA Obir 75.64 326 *i*P **P** **16 34 50.1 +0.2**
comp=Z,70nm,1.3s,SNR=22
CONA Conrad Observa 75.85 328 *i*P **P** **16 34 50.9 -0.1**
comp=Z,102nm,1.2s,SNR=51
OKC Ostrava-Krasne 75.97 330 AMS AMS 17 08 30.0
comp=Z,900nm,18.5s
NACGM Naroch 76.00 338 *i*P **P** **16 34 51.8 +0.2**
NACGM *i*P **P** **16 34 51.8 +0.2**
NACGM *i*P **P** **16 34 51.8 +0.2**
NACGM *i*PcP **pwP** **16 35 01.1 +0.4**
NACGM *i*PP **PP** **16 37 41.7 -0.7**
NACGM *i*PPP PPP 16 39 25.6
NACGM *i*S **S** **16 44 35.0 +1.3**
NACGM *i*PS PnS 16 45 48.0 +36
NACGM *i*PS PnS 16 45 48.0 +36
NACGM *i*SS SS 16 50 10.0 +43
NACGM *i*SSS SSS 16 52 12.4
NACGM *i*LQ LQ 17 01 34.6
NACGM *i*LR LR 17 07 47.5
MYKA Terra Mystica 76.21 326 *i*P **P** **16 34 53.0 -0.1**
comp=Z,32nm,1.2s,SNR=9.5
MORC Moravsky Berou 76.22 330 *e*P **P** **16 34 52.8 -0.2**
MORC Moravsky Berou 76.22 330 P **P** **16 34 53.0 0.0**
MORC pmax pmax
comp=Z,52nm,1.2s
MORC Moravsky Berou 76.22 330 IAmb IAmb 16 34 58.4
comp=Z,44nm,1.0s
QSPA South Pole Qui 76.25 180 P **P** **16 34 53.3 +0.2**
QSPA IAmb IAmb 16 34 57.1
comp=Z,62nm,1.2s
KRUC Moravsky 76.31 329 *e*P **P** **16 34 53.2 -0.3**
KRUC Moravsky 76.31 329 P **P** **16 34 53.4 -0.1**
KRUC pmax pmax
comp=Z,70nm,1.1s
IDID Didziasalis 76.34 338 *e*P **P** **16 34 54.0 +0.6**
VRAC Vranov 76.37 329 ⇑P **P** **16 34 53.0 -0.8**
VRAC Vranov 76.37 329 *e*P **P** **16 34 53.5 -0.3**
VRAC Vranov 76.37 329 P **P** **16 34 54.2 +0.4**
VRAC pmax pmax
comp=Z,51nm,2.1s
TJN Taejon 76.50 47 *de*P **P** **16 34 54.7 -0.1**
CTAO Charters Tower 76.53 108 IAMs_20 IAMs_20 17 03 57.4
comp=Z,2μm,20.0s
IIGN Ignalina 76.55 338 *e*P **P** **16 34 55.4 +0.8**
MOA Molln 76.63 327 *i*P **P** **16 34 55.5 +0.1**
comp=Z,143nm,1.5s,SNR=58
KBA Koelnbreinsper 76.65 326 *i*P **P** **16 34 55.2 -0.5**
comp=Z,64nm,1.2s,SNR=31
KBA Koelnbreinsper 76.65 326 P **P** **16 34 55.4 -0.3**
KBA pmax pmax
comp=Z,57nm,1.3s
SUW Suwalki 76.70 336 *e*P **P** **16 34 55.3 -0.2**
SUW Suwalki 76.70 336 *e*P **P** **16 34 56.0 +0.4**
SNY Shenyang 76.72 40 ⇑P **P** **16 34 58.0 +2.1**
SNY S **S** **16 44 43.6 +1.5**
SNY pmax pmax
comp=Z,14nm,1.7s
SNY pmax pmax
comp=Z,210nm,7.5s
SNY LR LR
comp=Z,800nm,20.0s
SNY LR LR
comp=Z,1μm,20.4s
SNY LR LR
comp=Z,1μm,19.5s
ISAL Salakas 76.76 338 *e*P **P** **16 34 56.9 +1.1**
KRLC Kraliky 76.78 330 *e*P **P** **16 34 56.3 +0.1**
KRLC *e* 16 34 59.8
KRLC MLR MLR
comp=Z,600nm,18.7s
KRLC Kraliky 76.78 330 *e*P **P** **16 34 56.3 +0.1**
KRLC *e*pP **pP** **16 34 59.8 -1.4**
KRLC AMS AMS 17 11 50.0
comp=Z,600nm,18.7s
PRGR Permogore 76.89 350 *e*P **P** **16 34 54.9 -1.5**
PRGR pmax pmax
comp=Z,53nm,1.1s
ABTA Abfaltersbach 76.90 326 *i*P **P** **16 34 57.2 +0.2**
comp=Z,84nm,1.3s,SNR=47
TREC Trest 76.92 329 *e*P **P** **16 34 56.9 0.0**
TREC MLR MLR
comp=Z,500nm,17.2s
TREC Trest 76.92 329 *e*P **P** **16 34 56.9 0.0**
TREC AMS AMS 17 09 20.0
comp=Z,500nm,17.2s
DPC Dobruska-Polom 77.19 330 *e*P **P** **16 34 58.7 +0.2**
DPC *e* 16 35 02.2
DPC MLR MLR
comp=Z,600nm,20.7s
DPC Dobruska-Polom 77.19 330 *e*P **P** **16 34 58.7 +0.2**
DPC *e*pP **pP** **16 35 02.2 -1.3**
DPC AMS AMS 17 09 20.0
comp=Z,600nm,20.7s
CKRC Cesky Krumlov 77.22 328 *e*P **P** **16 34 58.1 -0.5**
CKRC *e*x x 16 35 02.5
CKRC AMS AMS 17 11 30.0
comp=Z,400nm,17.0s
KLMR Klimovskoe 77.34 347 *e*P **P** **16 34 57.9 -1.1**
KLMR *e*S **S** **16 44 49.7 +1.7**
KLMR *e*SS **SS** **16 49 49.4 +2.4**
KLMR pmax pmax
comp=Z,205nm,1.2s
KLMR Klimovskoe 77.34 347 *e*P **P** **16 34 57.9 -1.1**
KLMR AMP 16 35 04.1
comp=Z,205nm,1.2s
KLMR *e*S **S** **16 44 49.8 +1.7**
KLMR *e*S **S** **16 44 49.8 +1.7**
KLMR *e*SS **SS** **16 49 49.4 +2.4**
KLMR *e*SS **SS** **16 49 49.4 +2.4**
KLMR LQ LQ 17 02 38.3
KLMR LQ LQ 17 02 38.3
KLMR LR LR 17 06 40.0
KSAR Wonju Array Be 77.37 46 P **P** **16 34 58.9 -0.8**
KSAR Wonju Array Be 77.37 46 P **P** **16 34 58.9 -0.8**
OSTC Ostas 77.37 330 *e*P **P** **16 35 00.0 +0.5**
KS19 Wonju Array Si 77.39 46 P **P** **16 34 58.7 -1.1**
KSRS Korea Array 77.40 46 P **P** **16 34 59.5 -0.3**
comp=Z,11nm,0.9s,baz=250,slow=6.1,SNR=48
KSRS LR LR 17 10 44.5
comp=Z,957nm,18.3s,baz=243,slow=37
UPC Upice 77.44 330 *e*P **P** **16 35 00.2 +0.4**
UPC MLR MLR
comp=Z,700nm,18.1s
UPC Upice 77.44 330 *e*P **P** **16 35 00.2 +0.4**
UPC AMS AMS 17 09 20.0
comp=Z,700nm,18.1s
CIT Chita 77.46 28 *e*P **P** **16 34 59.2 -0.7**
CIT *e* 16 35 08.2
CIT pmax pmax
comp=Z,76nm,1.3s
CHVC Chvalec 77.47 330 *e*P **P** **16 35 00.2 +0.2**
CHVC *ex* x 16 35 04.9
CHVC AMS AMS 17 09 20.0
comp=Z,600nm,18.3s
PABE Paberze 77.51 337 *e*P **P** **16 35 00.7 +0.7**
KSP Ksiaz 77.52 330 P **P** **16 35 01.2 +0.9**
KSP pmax pmax
comp=Z,45nm,1.3s
GEC2 GERESS Array S 77.55 328 IAmb IAmb 16 35 05.4
comp=Z,32nm,1.1s
GEC2 GERESS Array S 77.55 328 *e*P **P** **16 34 59.8 -0.8**
comp=Z,53nm,1.3s,baz=127,slow=5.5
GERES GERESS Array B 77.55 328 P **P** **16 35 00.0 -0.5**
comp=Z,14nm,0.9s,baz=132,slow=5.6,SNR=53
GERES GERESS Array B 77.55 328 P **P** **16 34 59.4 -1.2**
JNU Nakatsue 77.59 51 LR LR 17 08 13.3
comp=Z,608nm,21.0s,baz=246,slow=35
WTTA Wattenberg 77.69 326 *i*P **P** **16 35 01.1 -0.4**
comp=Z,85nm,1.1s,SNR=28
WTTA Wattenberg 77.69 326 P **P** **16 35 01.2 -0.4**
WTTA pmax pmax
comp=Z,97nm,1.0s
WATA Walderalm 77.77 326 *i*P **P** **16 35 01.3 -0.6**
comp=Z,68nm,1.1s,SNR=24
KHC Kasperske Hory 77.79 328 *e*P **P** **16 35 00.9 -0.9**
KHC *e* 16 35 05.1
KHC MLR MLR
comp=Z,500nm,21.3s
KHC Kasperske Hory 77.79 328 *e*P **P** **16 35 00.9 -0.9**
KHC *e*pP **pP** **16 35 05.1 -1.8**
KHC AMS AMS 17 10 40.0
comp=Z,500nm,21.3s
KHC Kasperske Hory 77.79 328 IAmb IAmb 16 35 06.8
comp=Z,52nm,1.1s
PRU Pruhonice 77.83 329 *e*P **P** **16 35 02.1 +0.1**
PRU *e* 16 35 06.0
PRU MLR MLR
comp=Z,600nm,19.6s
PRU Pruhonice 77.83 329 *e*P **P** **16 35 02.1 +0.1**
PRU *e*pP **pP** **16 35 06.0 -1.0**
PRU AMS AMS 17 09 00.0
comp=Z,600nm,19.6s
SQTA Sankt Quirin 77.90 325 *i*P **P** **16 35 02.2 -0.5**
comp=Z,64nm,1.3s,SNR=23
VNDA Vanda 77.90 167 P **P** **16 35 02.2 +0.2**
comp=Z,4.9nm,0.9s,baz=268,slow=5.5,SNR=27
VNDA LR LR 17 05 06.2
comp=Z,3μm,21.3s,baz=248,slow=32
VNDA Vanda 77.90 167 P **P** **16 35 02.2 +0.2**
PBCC Pribram 77.92 329 *e*P **P** **16 35 02.0 -0.5**
PRA Prague 77.94 329 *e*P **P** **16 35 03.0 +0.4**
PRA Prague 77.94 329 *e*P **P** **16 35 03.0 +0.4**
MOTA Moosalm 78.03 325 *i*P **P** **16 35 02.7 -0.7**
comp=Z,57nm,1.2s,SNR=23
FETA Feichten 78.05 325 *i*P **P** **16 35 03.3 -0.2**
comp=Z,33nm,1.0s,SNR=23
WET Wettzell 78.16 328 P **P** **16 35 03.0 -0.9**
WET pmax pmax
comp=Z,39nm,1.2s
WET Wettzell 78.16 328 *e*P **P** **16 35 02.9 -0.9**
comp=Z,50nm,1.2s,baz=127,slow=5.5
PVCC Panska Ves 78.16 329 *e*P **P** **16 35 04.5 +0.7**
PVCC *e* 16 35 08.3
PVCC Panska Ves 78.16 329 *e*P **P** **16 35 04.5 +0.7**
PVCC *e*pP **pP** **16 35 08.3 -0.6**
SAOF Saorge 78.21 321 P **P** **16 35 04.9 +0.6**
SAOF pmax pmax
comp=Z,54nm,1.3s
RETA Reutte 78.30 325 *i*P **P** **16 35 04.4 -0.4**
comp=Z,38nm,1.2s,SNR=6.7
FUR Furstenfeldbru 78.42 326 P **P** **16 35 05.7 +0.4**
FUR pmax pmax
comp=Z,204nm,1.2s
FUR Furstenfeldbru 78.42 326 *e*P **P** **16 35 05.3 -0.1**
comp=Z,232nm,1.1s,baz=127,slow=5.5
LMR La Mourre 78.51 320 *e*P **P** **16 35 05.9 0.0**
LMR pmax pmax
comp=Z,58nm,1.4s
TUE Stuetta 78.52 324 IAmb IAmb 16 35 14.3
comp=Z,36nm,1.0s
FRF La Foret Royal 78.54 320 *e*P **P** **16 35 06.0 -0.1**
FRF pmax pmax
comp=Z,77nm,1.6s
PBUR Paburge 78.67 337 *e*P **P** **16 35 07.0 +0.5**
DAVA Damuels 78.68 325 *i*P **P** **16 35 06.6 -0.4**
comp=Z,28nm,0.9s,SNR=14
BRG Berggiesshubel 78.69 329 P **P** **16 35 07.3 +0.6**
BRG pmax pmax
comp=Z,64nm,2.6s
BRG Berggiesshubel 78.69 329 *e*P **P** **16 35 07.2 +0.4**
BRG Amp 16 35 09.3
comp=Z,9.8nm,0.9s
BRG *ex* x 16 35 12.8
BRG Amp 16 35 13.9
comp=Z,122nm,1.6s
BRG Berggiesshubel 78.69 329 S **S** **16 45 07.0 +4.0**
BRG Berggiesshubel 78.69 329 *e*P **P** **16 35 07.4 +0.6**
comp=Z,91nm,1.4s,baz=127,slow=5.5
GKP Gorka Klasztor 78.69 333 *e*P **P** **16 35 07.7 +1.0**
HIA Hailar 78.73 33 *de*P **P** **16 35 06.7 -0.3**
HIA pmax pmax
comp=Z,11nm,0.8s
HIA Hailar 78.73 33 IAMs_20 IAMs_20 17 11 00.2
comp=Z,1μm,21.0s
UBR Ueberruh 78.78 325 *e*P **P** **16 35 07.3 -0.1**
comp=Z,129nm,1.1s,baz=127,slow=5.5
VSU Vasula 78.80 340 *e*P **P** **16 35 07.7 +0.5**
VSU Vasula 78.80 340 *de*P **P** **16 35 07.0 -0.1**
VSU pmax pmax
comp=Z,129nm,1.0s
VSU MLR MLR
comp=Z,2μm,19.0s
SBA Scott Base 78.87 168 P **P** **16 35 06.9 -0.5**
SBA pmax pmax
comp=Z,26nm,1.4s
SBA Scott Base 78.87 168 P **P** **16 35 06.9 -0.5**
ROTZ Rotzenmuhle 78.88 328 *e*P **P** **16 35 07.6 -0.2**
comp=Z,120nm,2.0s,baz=127,slow=5.5
CN2 Changchun 78.93 40 *e*P **P** **16 35 07.3 -0.9**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,130nm,4.0s
CN2 LR LR
comp=Z,780nm,18.0s
CN2 LR LR
comp=Z,800nm,18.0s
CN2 LR LR
comp=Z,1μm,19.0s
FBE Freiberg 79.01 329 *e*P **P** **16 35 09.1 +0.7**
comp=Z,109nm,1.4s,baz=127,slow=5.5
NKC Novy Kostel 79.04 328 *e*P **P** **16 35 09.3 +0.6**
NKC *e* 16 35 13.6
NKC Novy Kostel 79.04 328 *e*P **P** **16 35 09.3 +0.6**
NKC *e*pP **pP** **16 35 13.6 -0.2**
MANZ Manzenberg 79.07 328 *e*P **P** **16 35 08.7 -0.2**
comp=Z,33nm,1.2s,baz=127,slow=5.5
WERN Wernitzgruen 79.11 328 *e*P **P** **16 35 09.6 +0.5**
comp=Z,117nm,1.4s,baz=127,slow=5.5
TANN Tannenbergstha 79.15 328 *e*P **P** **16 35 09.7 +0.3**
comp=Z,87nm,1.6s,baz=127,slow=5.5
GUNZ Gunzen 79.18 328 *e*P **P** **16 35 10.0 +0.5**
comp=Z,102nm,1.3s,baz=127,slow=5.5
WERD Werda 79.25 328 *e*P **P** **16 35 10.2 +0.3**
comp=Z,66nm,1.5s,baz=127,slow=5.5
BNI Bardonecchia 79.31 322 P **P** **16 35 10.3 -0.1**
BNI pmax pmax
comp=Z,18nm,1.2s
PLN Plauen 79.34 328 *e*P **P** **16 35 10.7 +0.4**
comp=Z,68nm,1.6s,baz=127,slow=5.5
GRF Grafenberg Arr 79.35 327 *e*P **P** **16 35 10.1 -0.3**
comp=Z,135nm,1.3s,baz=127,slow=5.5
GRF *e*PP **PP** **16 38 12.9 +2.2**
baz=118,slow=8.9
GRF *e*L L 17 11 21.9
comp=Z,419nm,21.0s
GRFO Grafenberg 79.35 327 P **P** **16 35 10.0 -0.4**
GRFO pmax pmax
comp=Z,114nm,1.3s
GRFO Grafenberg 79.35 327 P **P** **16 35 10.0 -0.4**
CLL Collm 79.42 329 *i*P **P** **16 35 11.1 +0.4**
comp=Z,12nm,1.0s
CLL *i*Pmax 16 35 15.1
comp=Z,105nm,1.6s
CLL *e*(PcP) **pwP** **16 35 20.0 +0.2**
CLL *e*S **S** **16 45 10.0 -0.8**
CLL *e*PS **PnS** **16 45 55.0 -0.5**
CLL *e*SS **SS** **16 50 19.0 +0.2**
CLL *e*SSS SSS 16 53 42.0
CLL *e* 16 54 54.0
CLL *e*SSSS 16 56 12.0
CLL LmH 17 10 00.0
comp=N,500nm,19.5s
CLL LmH 17 10 00.0
comp=E,300nm,20.2s
CLL LmV 17 12 00.0
comp=Z,500nm,19.9s
CLL LmV 19 46 00.0
comp=Z,100nm,19.4s
CLL Collm 79.42 329 *i*P **P** **16 35 11.1 +0.4**
CLL *e* 16 35 20.0
CLL *e*S **S** **16 45 10.0 -0.8**
CLL pmax pmax
comp=Z,105nm,1.6s
CLL MLR MLR
comp=Z,500nm,19.9s

CLL Collm 79.42 329 *e*P P **16 35 11.2 +0.4**
comp=Z,105nm,1.6s,baz=127,slow=5.5
PMG Port Moresby 79.45 97*d i*P P **16 35 11.8 +0.1**
PMG pmax pmax
comp=Z,14nm,1.0s
PMG MLR MLR
comp=Z,457nm,16.0s
LPG La Plagne 79.50 322 *e*P P **16 35 10.7 -1.0**
LPG pmax pmax
comp=Z,31nm,1.3s
LPL La Plagne 79.52 322 *e*P P **16 35 10.8 -0.9**
LPL pmax pmax
comp=Z,34nm,1.2s
SENIN Lac Senin/Sane 79.64 323 IAmb IAmb 16 35 17.5
comp=Z,35nm,0.9s
MOX Moxa 79.72 328 P P **16 35 12.8 +0.4**
MOX pmax pmax
comp=Z,43nm,2.3s
MOX Moxa 79.72 328 *e*P P **16 35 12.7 +0.4**
comp=Z,72nm,1.4s,baz=127,slow=5.5
ORIF Oris-en-Rattie 79.72 321 *e*P P **16 35 13.3 +0.7**
ORIF pmax pmax
comp=Z,25nm,2.0s
SLE Schleitheim 79.72 325 P P **16 35 12.7 +0.2**
SLE pmax pmax
comp=Z,43nm,1.2s
RUE Ruedersdorf 79.78 331 *e*P P **16 35 13.0 +0.4**
comp=Z,109nm,1.1s,baz=127,slow=5.5
VALR Valaam 79.89 344⇓ *e*P P **16 35 12.2 -0.8**
VALR pmax pmax
comp=Z,43nm,0.8s
STU Stuttgart 79.90 326 P P **16 35 13.7 +0.3**
STU pmax pmax
comp=Z,53nm,1.1s
STU Stuttgart 79.90 326 *e*P P **16 35 13.1 -0.3**
comp=Z,58nm,1.2s,baz=127,slow=5.5
NEUB Neuenburg 79.97 329 *e*P P **16 35 14.2 +0.5**
comp=Z,138nm,1.2s,baz=127,slow=5.5
MTSE Matsula 79.97 339 *e*P P **16 35 14.6 +1.1**
BFO Black Forest 80.13 325 P P **16 35 13.4 -1.3**
BFO pmax pmax
comp=Z,53nm,1.3s
BFO Black Forest 80.13 325 P P **16 35 13.4 -1.3**
BFO IAmb IAmb 16 35 20.1
comp=Z,53nm,1.3s
BFO Black Forest 80.13 325 *e*P P **16 35 14.5 -0.2**
comp=Z,70nm,1.4s,baz=127,slow=5.5
LNIZ Loecknitz 80.22 332 *e*P P **16 35 15.3 +0.3**
comp=Z,78nm,1.0s,baz=127,slow=5.5
VIVF Saint-Julien-l 80.42 321 *e*P P **16 35 16.5 +0.1**
VIVF pmax pmax
comp=Z,71nm,1.6s
MOF Molkenrain 80.54 324 P P **16 35 21.2 +4.2**
TOD Tromm 80.58 326 P P **16 35 17.5 +0.4**
UBBA Unterbreizbach 80.65 328 *e*P P **16 35 17.7 +0.4**
comp=Z,108nm,1.8s,baz=127,slow=5.5
HINF Hinteralfeld 80.68 324 *e*P P **16 35 17.0 -0.7**
HINF pmax pmax
comp=Z,46nm,1.4s
SSB Saint Sauveur 80.72 321 IAmb IAmb 16 35 23.8
comp=Z,60nm,1.3s
ECH Echery 80.72 325 P P **16 35 17.4 -0.5**
ECH pmax pmax
comp=Z,19nm,2.1s
KTD Kalmit 80.81 326 P P **16 35 18.9 +0.5**
FLTG Flechtingen 80.92 330 *e*P P **16 35 18.8 0.0**
comp=Z,106nm,1.4s,baz=127,slow=5.5
BSD Bornholm Skovb 80.94 333 *e*P P **16 35 19.3 +0.5**
BSD Bornholm Skovb 80.94 333 *i* P P **16 35 18.8 +0.1**
BSD Bornholm Skovb 80.94 333 P P **16 35 18.5 -0.3**
BSD pmax pmax
comp=Z,24nm,2.0s
CLZ Clausthal 81.06 329 *e*P P **16 35 20.1 +0.5**
comp=Z,111nm,1.3s,baz=127,slow=5.5
HAU Haudompre 81.07 324 *e*P P **16 35 19.1 -0.6**
HAU pmax pmax
comp=Z,48nm,1.4s
JOF Joensuu 81.07 345 P P **16 35 18.7 -0.6**
JOF pmax pmax
comp=Z,140nm,1.1s
ASSE Asse, Remlinge 81.08 329 *e*P P **16 35 19.8 +0.3**
comp=Z,53nm,1.3s,baz=127,slow=5.5
GTTG Gottingen 81.09 328 *e*P P **16 35 20.2 +0.5**
comp=Z,87nm,1.5s,baz=127,slow=5.5
TNS Taunus Mts 81.12 327 P P **16 35 20.7 +0.7**
TNS pmax pmax
comp=Z,34nm,1.2s
TNS Taunus Mts 81.12 327 *e*P P **16 35 20.1 +0.1**
comp=Z,56nm,1.3s,baz=127,slow=5.5
RGN Rugen 81.29 332 *e*P P **16 35 21.3 +0.7**
comp=Z,163nm,1.3s,baz=127,slow=5.5
BLEU Blekinge 81.33 334 *e*P P **16 35 21.1 +0.2**
FINES FINESS Array B 81.34 342 P P **16 35 20.7 -0.1**
comp=Z,29nm,1.0s,baz=98,slow=5.8,SNR=15
FINES LR LR 17 13 20.1
comp=Z,509nm,18.4s,baz=124,slow=37
FINES FINESS Array B 81.34 342 P P **16 35 20.5 -0.2**
NRDL Niedersach Rie 81.57 329 *e*P P **16 35 23.0 +0.8**
comp=Z,72nm,1.6s,baz=127,slow=5.5
BOD Bodaibo 81.60 24 *e*P P **16 35 21.3 -0.9**
BOD pmax pmax
comp=Z,20nm,1.5s
KASTN Kahler Asten 81.69 328 *e*P P **16 35 23.4 +0.5**
comp=Z,35nm,1.3s,baz=127,slow=5.5
LUNU Lund 81.92 333 *i* P P **16 35 24.2 +0.3**
MDJ Mudanjiang 81.92 40 P P **16 35 23.9 -0.4**
MDJ pP pP 16 35 27.2 -2.1
MDJ S S **16 45 38.2 +0.9**
MDJ sS sS 16 45 46.1 +0.5
MDJ SS SS **16 51 04.6 +8.2**
MDJ pmax pmax
comp=Z,27nm,0.9s
MDJ LR LR
comp=Z,800nm,19.4s
MDJ LR LR
comp=Z,980nm,20.6s
MDJ LR LR
comp=Z,1μm,23.7s
MDJ Mudanjiang 81.92 40 IAMs_20 IAMs_20 17 11 11.9
comp=Z,1μm,21.0s
AHRW Bad Neuenahr-A 82.03 327 *e*P P **16 35 25.6 +0.9**
comp=Z,169nm,2.2s,baz=127,slow=5.5
WLF Walferdange 82.06 326 *d*P P **16 35 24.9 0.0**
WLF *d*x x 16 35 29.5
WLF Walferdange 82.06 326 *e*P P **16 35 24.9 0.0**
comp=Z,57nm,1.3s,baz=127,slow=5.5
CAF Calviac 82.07 320 *e*P P **16 35 25.4 +0.3**
CAF pmax pmax
comp=Z,47nm,1.4s
LOR Lormes 82.13 323 P P **16 35 25.8 +0.5**
LOR pmax pmax
comp=Z,24nm,1.3s
AVF Avril sur Loir 82.19 322 *e*P P **16 35 25.3 -0.3**
AVF pmax pmax
comp=Z,17nm,1.1s
DEL Delary 82.26 334 *i* P P **16 35 26.4 +0.6**
EPF Esparros 82.30 318 *e*P P **16 35 27.3 +0.9**
EPF pmax pmax
comp=Z,15nm,1.2s
SUF Sumiainen 82.31 343 P P **16 35 26.2 +0.3**
SUF pmax pmax
comp=Z,106nm,1.1s
BSEG Bad Segeberg 82.32 331 *e*P P **16 35 26.3 +0.2**
comp=Z,72nm,1.4s,baz=127,slow=5.5
BGF Bois d'Agland 82.38 322 *e*P P **16 35 26.2 -0.5**
BGF pmax pmax
comp=Z,93nm,1.3s
BUG Bochum--Univer 82.42 327 P P **16 35 27.7 +1.0**
BUG pmax pmax
comp=Z,59nm,1.0s
BUG Bochum--Univer 82.42 327 *e*P P **16 35 27.1 +0.4**
comp=Z,90nm,1.4s,baz=127,slow=5.5
BHOU Houvegnez 82.51 326 *d*P P **16 35 28.3 +1.0**
BHOU *d*x x 16 35 32.9
BTNL Ternell 82.56 326 *d*P P **16 35 27.9 +0.3**
BTNL *d*x x 16 35 31.3
RJF Les Rejaudoux 82.59 320 *e*P P **16 35 27.4 -0.4**
RJF pmax pmax
comp=Z,58nm,1.2s
MEM Membach 82.64 326 *d*P P **16 35 28.6 +0.7**
MEM *d*x x 16 35 32.6
MEM Membach 82.64 326 P P **16 35 28.7 +0.8**
MEM pmax pmax
comp=Z,24nm,1.2s
IBBN Ibbenburen 82.65 328 *e*P P **16 35 28.3 +0.4**
comp=Z,63nm,1.3s,baz=127,slow=5.5

ETSF Etsaut 82.83 317 *e*P P **16 35 29.7 +0.5**
ETSF pmax pmax
comp=Z,43nm,1.2s
BCLA Clavier 82.92 326 *d*P P **16 35 30.1 +0.7**
BCLA *d*x x 16 35 33.4
GIVF Givet 83.02 325 *e*P P **16 35 30.2 +0.3**
GIVF pmax pmax
comp=Z,64nm,1.2s
BGES Gesves 83.02 326 *d*P P **16 35 30.4 +0.5**
FABU Falkenberg 83.09 334 *i* P P **16 35 30.6 +0.6**
DOU Dourbes 83.14 325 *d*P P **16 35 30.8 +0.3**
DOU *d*x x 16 35 34.4
BMRD Maredsous 83.16 326 *d*P P **16 35 30.8 +0.2**
BMRD *d*x x 16 35 34.4
SKMB Sankelmark Bun 83.19 331 *e*P P **16 35 31.5 +0.9**
comp=Z,72nm,0.7s,baz=127,slow=5.5
USA0B Ussuriysk Arra 83.25 41*d i*P P **16 35 29.8 -1.4**
USA0B Ussuriysk Arra 83.25 41 P P **16 35 30.1 -1.1**
USA0B IAmb IAmb 16 35 44.8
comp=Z,31nm,1.0s
USRK Ussuriysk Ar. 83.25 41 P P **16 35 30.3 -0.9**
comp=Z,17nm,0.9s,baz=244,slow=4.6,SNR=55
USRK LR LR 17 14 37.2
comp=Z,409nm,18.1s,baz=238,slow=37
USRK Ussuriysk Ar. 83.25 41 P P **16 35 30.1 -1.1**
BAIF Baives 83.34 325 *e*P P **16 35 32.1 +0.6**
BAIF pmax pmax
comp=Z,111nm,1.4s
BORU Boraas 83.46 334 *i* P P **16 35 32.1 +0.1**
SNF Seneffe 83.53 326 *d*P P **16 35 32.7 +0.3**
VAF Ylistaro 83.59 342 P P **16 35 33.2 +0.7**
VAF pmax pmax
comp=Z,101nm,2.0s
HLG Helgoland 83.63 330 *e*P P **16 35 33.3 +0.4**
comp=Z,109nm,1.2s,baz=127,slow=5.5
ONAU Onsala 83.68 334 *i* P P **16 35 34.1 +1.0**
ESDC Sonseca Array 83.80 313 P P **16 35 34.5 +0.3**
comp=Z,24nm,0.9s,baz=104,slow=4.0,SNR=128
ESDC LR LR 17 11 18.6
comp=Z,369nm,21.0s,baz=175,slow=35
ESDC Sonseca Array 83.80 313 P P **16 35 34.6 +0.3**
ESDC IAmb IAmb 16 35 40.2
comp=Z,37nm,1.1s
PAB San Pablo 84.03 313 P P **16 35 35.6 +0.2**
PAB pmax pmax
comp=Z,61nm,1.1s
PAB San Pablo 84.03 313 P P **16 35 35.6 +0.2**
OUL Oulu 84.24 344 P P **16 35 36.3 +0.6**
OUL pmax pmax
comp=Z,99nm,1.2s
MUD Monsted U'grnd 84.32 332 *i* P P **16 35 36.0 -0.4**
MUD Monsted U'grnd 84.32 332 P P **16 35 37.4 +1.0**
MUD pmax pmax
comp=Z,88nm,1.0s
NRIK Noril'sk 84.36 8 P P **16 35 36.0 -0.2**
comp=Z,5.0nm,1.0s,baz=186,slow=6.0,SNR=8.0
NRIK LR LR 17 14 17.7
comp=Z,1μm,19.1s,baz=197,slow=36
NRIK Noril'sk 84.36 8⇓ *e*P P **16 35 36.1 -0.2**
NRIK pmax pmax
comp=Z,31nm,1.5s
NRIK MLR MLR
comp=Z,1μm,16.0s
JHJ Hachijo jima 2 84.47 54 LR LR 17 10 52.6
comp=Z,423nm,21.8s,baz=270,slow=34
MAJO Matsushiro 84.48 50*c e*P P **16 35 37.8 +0.1**
MAJO pmax pmax
comp=Z,22nm,0.9s
MAJO MLR MLR
comp=Z,758nm,21.0s
MAJO Matsushiro 84.48 50 P P **16 35 37.4 -0.4**
MAJO IAmb IAmb 16 35 52.6
comp=Z,49nm,1.2s
MAT Matsushiro 84.48 50 P P **16 35 37.5 -0.2**
MAT S S **16 46 01.2 -2.5**
MJAR Matsushiro Arr 84.48 50 P P **16 35 37.8 0.0**
comp=Z,18nm,0.8s,baz=239,slow=5.6,SNR=26
MJAR LR LR 17 14 05.9
comp=Z,314nm,18.7s,baz=245,slow=36
LVZ Lovozero 84.56 349⇑ *e*P P **16 35 36.9 -0.6**
LVZ pmax pmax
comp=Z,91nm,3.8s
LVZ MLR MLR
comp=Z,1μm,17.0s
STRU Stroemstad 84.99 335 *i* P P **16 35 40.1 +0.5**
ZEA Zeya 85.12 32 *e*P P **16 35 40.2 -0.3**
ZEA *e*S S **16 46 06.9 -2.3**
ZEA *e* 16 47 09.6
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA pmax pmax
comp=Z,100nm,3.4s
ZEA smax smax
comp=N,200nm,9.0s
ZEA smax smax
comp=E,400nm,14.4s
ZEA MLR MLR
comp=N,600nm,14.0s
KLR Kul'dur 85.38 37 P P **16 35 40.8 -1.1**
comp=N,9.4nm,0.8s,baz=239,slow=6.4
KLR Kul'dur 85.38 37*d i*P P **16 35 40.4 -1.5**
KLR pmax pmax
comp=Z,14nm,0.9s
KLR MLR MLR
comp=Z,766nm,16.0s
FLN La Foliniere 85.40 323 *e*P P **16 35 42.0 0.0**
FLN pmax pmax
comp=Z,63nm,1.4s
PBAR Barrancos 85.45 311 *e*P P **16 35 42.6 +0.1**
comp=Z,25nm,1.8s
PBAR Barrancos 85.45 311 *e*S S **16 46 15.7 +2.5**
GRR Gorron 85.46 322 *e*P P **16 35 41.5 -0.8**
GRR pmax pmax
comp=Z,53nm,1.4s
PVAQ Vaqueiros 85.67 310 *e*P P **16 35 43.6 -0.1**
comp=Z,46nm,1.9s
PVAQ Vaqueiros 85.67 310 *e*S S **16 46 13.2 -2.2**
PVAQ Vaqueiros 85.67 310 *e*LQ LQ 16 58 45.1
PVAQ *e*LR LR 17 04 41.1
comp=Z,1μm,20.0s
PBDV Barranco-do-Ve 85.78 310 *e*P P **16 35 45.3 +1.1**
PBDV Barranco-do-Ve 85.78 310 *e*S S **16 46 24.6 +8.1**
NORES NORESS Array B 85.88 336 P P **16 35 44.2 +0.1**
PCVE Castro Verde 85.99 310 *e*P P **16 35 46.0 +0.8**
comp=Z,28nm,2.0s
PCVE Castro Verde 85.99 310 *e*S S 16 46 29.8 +11
PBEJ Beja 86.01 311 *e*P P **16 35 45.9 +0.6**
KONO Kongsberg 86.01 335⇓ *e*P P **16 35 45.4 +0.6**
KONO pmax pmax
comp=Z,16nm,1.3s
KONO MLR MLR
comp=Z,770nm,18.0s
PESTR Estremoz 86.10 311 *e*P P **16 35 46.4 +0.6**
comp=Z,38nm,0.9s
PESTR Estremoz 86.10 311 *e*S S **16 46 19.0 -0.6**
PMRV Marv??o 86.16 312 *e*P P **16 35 46.5 +0.4**
comp=Z,31nm,1.6s
PMRV Marv??o 86.16 312 *e*S S **16 46 16.3 -3.8**
PMRV Marv??o 86.16 312 *e*LQ LQ 16 58 52.4
PMRV *e*LR LR 17 05 55.5
comp=Z,798nm,20.0s
NB2 NORSAR Subarra 86.20 337 P P **16 35 45.3 -0.5**
baz=127,slow=5.1
NOA NORSAR Array B 86.20 337 P P **16 35 45.5 -0.2**
comp=Z,16nm,1.0s,baz=116,slow=4.7,SNR=12
NOA LR LR 17 15 48.3
comp=Z,620nm,18.8s,baz=125,slow=37
MESJ Messejana 86.20 310 *e*P P **16 35 46.0 -0.3**
MESJ *e*SKSac **SKSac 16 46 11.4 -0.3**
MESJ IAMs_20 IAMs_20 17 06 31.7
comp=N,2μm,26.0s
MESJ Messejana 86.20 310 *e*P P **16 35 46.0 -0.3**
MESJ *e* 16 46 11.4
MORF Marmelete 86.34 310 *e*P P **16 35 46.7 -0.3**
MORF *e*SKSac **SKSac 16 46 12.3 -0.4**
MORF IAMs_20 IAMs_20 17 11 29.3
comp=Z,2μm,34.1s
MORF Marmelete 86.34 310 *e*P P **16 35 46.7 -0.3**
MORF *e* 16 46 12.3
PCBR Castelo Branco 86.37 312 *e*P P **16 35 47.6 +0.5**
comp=Z,36nm,2.0s
PFVI Vila Bisbo 86.41 309 *e*P P **16 35 49.0 +1.7**
comp=Z,130nm,1.6s

PFVI Vila Bisbo 86.41 309 *e*S S 16 46 34.6 +12
PTEO Sao Teotonio 86.47 310 *e*P P **16 35 48.6 +1.0**
comp=Z,53nm,1.6s
PNCL Nicolau / Gran 86.53 310 *e*P P **16 35 48.5 +0.7**
comp=Z,33nm,1.1s
MVO Moncorvo 86.54 314 *e*P P **16 35 48.9 +1.0**
comp=Z,46nm,2.0s
MVO Moncorvo 86.54 314 *e*S S **16 46 22.8 -1.0**
MVO Moncorvo 86.54 314 *e*LQ LQ 16 58 59.4
MVO *e*LR LR 17 06 23.9
comp=Z,428nm,18.0s
PBRG Braganca 86.57 314 *e*P P **16 35 48.5 +0.4**
comp=Z,41nm,1.4s
MTE Manteigas 86.62 313 *e*P P **16 35 49.1 +0.7**
comp=Z,31nm,1.5s
MTE Manteigas 86.62 313 *e*S S **16 46 22.4 -2.3**
MTE Manteigas 86.62 313 *e*LQ LQ 16 58 54.3
MTE *e*LR LR 17 07 09.9
comp=Z,478nm,18.0s
PMTG Montargil 86.64 311 *e*P P **16 35 49.2 +0.8**
comp=Z,55nm,0.9s
PMTG Montargil 86.64 311 *e*S S **16 46 22.6 -2.1**
QUIF Quistinic 86.65 321 *e*P P **16 35 47.8 -0.4**
QUIF pmax pmax
comp=Z,92nm,1.6s
PVIS Viseu 86.98 313 *e*P P **16 35 51.0 +0.9**
comp=Z,47nm,1.5s
PVRL Vila Real 87.06 314 *e*P P **16 35 51.5 +1.0**
comp=Z,33nm,1.5s
POLO Lamas de Olo 87.15 314 *e*P P **16 35 51.9 +0.9**
comp=Z,16nm,1.2s
POLO Lamas de Olo 87.15 314 *e*S S **16 46 26.5 -3.3**
COI Coimbra 87.17 312 *e*S S 16 46 43.1 +13
PCAS Casmilo, Conde 87.18 312 *e*P P **16 35 51.9 +0.9**
comp=Z,50nm,1.1s
PCAS Casmilo, Conde 87.18 312 *e*S S 16 46 42.6 +13
PSBE So Bento 87.21 312 *e*S S 16 46 42.9 +13
PMAFR Mafra 87.37 311 *e*P P **16 35 53.5 +1.5**
comp=Z,90nm,1.4s
PMAFR Mafra 87.37 311 *e*S S 16 46 43.4 +12
PCAB Cabril 87.43 314 *e*P P **16 35 53.1 +0.9**
comp=Z,51nm,1.3s
PGAV Gavieira, Arco 87.69 314 *e*P P **16 35 54.3 +0.7**
comp=Z,44nm,1.7s
PGAV Gavieira, Arco 87.69 314 *e*S S 16 46 23.7 -11
PGAV Gavieira, Arco 87.69 314 *e*LQ LQ 17 01 42.5
PGAV *e*LR LR 17 09 08.1
comp=Z,543nm,18.0s
ARCES ARCESS Array B 87.81 347 P P **16 35 53.1 -0.2**
comp=Z,12nm,0.8s,baz=211,slow=2.1,SNR=26
ARCES LR LR 17 16 51.6
comp=Z,575nm,18.5s,baz=140,slow=37
ARCES ARCESS Array B 87.81 347 P P **16 35 53.6 +0.2**
ARCES pmax pmax
comp=Z,17nm,0.8s
ARCES ARCESS Array B 87.81 347 P P **16 35 53.6 +0.2**
ARCES IAmb IAmb 16 36 04.1
comp=Z,17nm,0.8s
GRNR Gornyy 88.76 37⇓ *i* P P **16 35 58.0 -0.3**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
ERM Erimo 89.97 47 IAMs_20 IAMs_20 17 19 26.2
comp=Z,903nm,18.0s
ASAJ Asahikawa 90.26 45 LR LR 17 17 48.6
comp=Z,546nm,18.2s,baz=213,slow=36
YAK Yakutsk 90.43 25 P P **16 36 05.1 -0.7**
comp=Z,5.3nm,0.7s,baz=189,slow=1.1,SNR=7.0
YAK Yakutsk 90.43 25 *e*P P **16 36 04.8 -1.0**
YAK *e*S **SKSac 16 46 32.8 -3.2**
YAK *e**SS S **16 46 53.3 -6.3**
YAK pmax pmax
comp=Z,7.0nm,0.7s
YAK pmax pmax
comp=N,1.0nm,0.9s
YAK pmax pmax
comp=E,1.0nm,1.1s
YAK pmax pmax
comp=Z,68nm,2.8s
YAK pmax pmax
comp=N,21nm,2.7s
YAK pmax pmax
comp=E,38nm,3.2s
YAK smax smax
comp=E,121nm,4.8s
YAK smax smax
comp=N,64nm,4.1s
YAK pmax pmax
comp=E,3.0nm,0.6s
YAK MLR MLR
comp=Z,2μm,20.0s
YAK MLR MLR
comp=N,686nm,20.0s
YAK MLR MLR
comp=E,1μm,25.0s
YSS Yuzh-Sakhalins 91.28 42 *e*P P **16 36 14.0 +3.9**
YSS *e* 16 39 52.7
YSS *e* 16 46 34.1
YSS *e*S S **16 47 06.6 -1.4**
YSS *e*PS PS 16 48 20.5 +1.6
YSS *e*SS SS **16 53 13.8 +0.3**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS pmax pmax
comp=Z,200nm,4.2s
YSS smax smax
comp=N,600nm,3.6s
YUK Yuzh-Kuril'sk 92.47 45⇓ *i*P P **16 36 15.3 -0.4**
TIXI Tiksi 94.91 16 P P **16 36 25.3 -1.1**
comp=N,9.5nm,0.9s,baz=240,slow=1.4,SNR=24
TIXI Tiksi 94.91 16*d i*P P **16 36 24.9 -1.4**
TIXI pmax pmax
comp=Z,68nm,1.0s
TIXI Tiksi 94.91 16 P P **16 36 25.0 -1.4**
TIXI IAmb IAmb 16 36 31.5
comp=Z,22nm,1.0s
SPITS Spitsbergen Ar 95.86 351 P P **16 36 31.0 +0.4**
comp=Z,8.6nm,0.8s,baz=169,slow=8.8,SNR=3.6
KBS Kingsbay 97.02 351⇑ *e*P Pdif 16 36 37.5 +1.6
KBS pmax pmax
comp=Z,56nm,1.5s
KBS MLR MLR
comp=Z,728nm,18.0s
MA2 Magadan 99.25 31 P **Pdif 16 36 44.9 -1.3**
comp=Z,3.5nm,0.8s,baz=227,slow=3.2,SNR=9.0
MA2 LR LR 17 22 30.6
comp=Z,1μm,18.5s,baz=342,slow=36
MA2 Magadan 99.25 31⇑ *e*P **Pdif 16 36 44.5 -1.7**
MA2 pmax pmax
comp=Z,8.0nm,1.0s
MA2 MLR MLR
comp=Z,1μm,18.0s
MA2 Magadan 99.25 31 P **Pdif 16 36 43.4 -2.9**
MA2 IAmb IAmb 16 36 59.5
comp=Z,9.5nm,1.0s
RCBR Riachuelo 99.94 261 LR LR 17 18 19.9
comp=Z,602nm,18.3s,baz=154,slow=33
SEY Seymchan 100.62 28 P **Pdif 16 36 51.7 -0.5**
comp=Z,1.6nm,0.7s,baz=256,slow=4.1,SNR=13
SEY PP **PP 16 40 56.2 -3.3**
comp=Z,1.7nm,0.9s,baz=280,slow=8.6,SNR=5.6
SEY Seymchan 100.62 28⇑ *e*P **Pdif 16 36 51.0 -1.2**
PET Petropavlovsk 102.59 38 IAMs_20 IAMs_20 17 22 45.6
comp=Z,880nm,20.0s
SPB Sao Paulo 104.92 241 IAMs_20 IAMs_20 17 16 15.3
comp=Z,815nm,21.0s
BILL Bilibino 106.63 23 IAMs_20 IAMs_20 17 27 59.0
comp=Z,946nm,18.0s
BDFB Brasilia 108.35 248 IAMs_20 IAMs_20 17 19 24.7
comp=Z,803nm,20.0s
EUNU Eureka 112.54 355 IAMs_20 IAMs_20 17 32 54.0
comp=Z,733nm,19.0s
A21K Barrow 117.11 14 IAMs_20 IAMs_20 17 32 56.8
comp=Z,969nm,22.0s
A21K Barrow 117.11 14 P 16 41 49.3
baz=312
RES Resolute Bay 118.20 354 PKIKP **PKiKP 16 41 51.6 +0.5**
RES MLR MLR
comp=Z,500nm,19.0s
RES Resolute Bay 118.20 354 PKPdf **PKiKP 16 41 51.6 +0.5**
RES IAMs_20 IAMs_20 17 36 33.6
comp=Z,526nm,19.0s
ANM Nome 118.49 23 P 16 41 52.2
baz=300
SIV San Ignacio 119.74 242 PKP **PKPdf 16 41 54.8 -1.0**
comp=Z,1.2nm,0.6s,baz=137,slow=4.7,SNR=7.2
TOLK Toolik Lake Re 120.73 14 P 16 41 56.8

baz=319
COLD **Coldfoot** 121.63 16 IAMs_20 IAMs_20 17 38 45.5
comp=Z,738nm,18.0s
COLD **Coldfoot** 121.63 16 P 16 41 58.3
baz=318
MLY **Manley** 123.10 18 P 16 42 00.9
baz=316
FYU **Fort Yukon** 123.39 14 IAMs_20 IAMs_20 17 39 17.9
comp=Z,694nm,19.0s
I23K **Minto, Yukon-K** 123.41 17 P 16 42 01.5
baz=318
BPAW **Bear Paw Mtn.** 123.70 18 P 16 42 02.4
baz=316
INK **Inuvik** 124.13 9 PKP PKPdf 16 42 01.5 -1.1
comp=Z,5.9nm,0.8s,baz=8.3,slow=4.3,SNR=22
INK PP PP 16 43 42.0 -4.8
comp=Z,2.6nm,1.0s,baz=334,slow=6.8,SNR=2.1
INK **Inuvik** 124.13 9 IAMs_20 IAMs_20 17 39 58.3
comp=Z,751nm,22.0s
C36M **Paulatuk** 124.16 4 IAMs_20 IAMs_20 17 40 21.9
comp=Z,560nm,22.0s
C36M **Paulatuk** 124.16 4 P 16 42 02.2
baz=348
PRP **Porcupine Dome** 124.16 15 P 16 42 02.8
baz=322
TRF **Thorofare Moun** 124.38 19 P 16 42 02.9
baz=316
ILAR **Eielson Array** 124.39 16 PKP PKPdf 16 42 02.1 -1.1
comp=Z,3.5nm,0.8s,baz=313,slow=2.9,SNR=29
ILAR PP PP 16 43 46.5 -2.2
comp=Z,1.1nm,0.9s,baz=325,slow=4.4,SNR=2.5
ILAR **Eielson Array** 124.39 16 PKIKP PKPdf 16 42 02.3 -1.0
ILAR **Eielson Array** 124.39 16 PKPdf 16 42 02.3 -1.0
PTGA **Pitinga** 124.42 259 PKP PKPdf 16 42 04.8 0.0
comp=Z,5.5nm,0.7s,baz=106,slow=5.4,SNR=10
PTGA **Pitinga** 124.42 259 eP PKiKP 16 42 05.1 0.0
SAML **Samuel** 124.58 249 eP PKiKP 16 42 05.4 0.0
MCK **McKinley** 124.59 18 P 16 42 03.7
baz=318
HDA **Harding Lake** 124.65 17 P 16 42 03.2
baz=320
HDA P 16 42 03.2
baz=320
SKT **Skwentna** 125.02 20 P 16 42 03.8
baz=314
WAT2 **Susitna Watana** 125.27 18 P 16 42 04.9
baz=318
SDPT **Sand Point** 125.32 30 P 16 42 04.9
baz=301
LPAZ **La Paz** 125.55 238 PKP PKPdf 16 42 07.6 -0.1
comp=Z,7.3nm,0.8s,baz=51,slow=1.7,SNR=33
LPAZ **La Paz** 125.55 238 PKPdf PKPdf 16 42 07.8 +0.1
LPAZ **La Paz** 125.55 238 eP PKiKP 16 42 08.2 +0.1
SUA **Susitna One** 125.65 21 P 16 42 05.8
baz=315
SCRK **Sand Creek** 125.79 16 P 16 42 05.8
baz=323
WAT6 **Susitna Watana** 125.81 18 P 16 42 06.1
baz=318
EGAK **Eagle** 125.83 14 P 16 42 06.0
baz=327
BCAR **Beaver Creek A** 127.11 15 PKiKP 16 42 09.7 +0.6
KLU **Klutina** 127.20 18 P 16 42 09.0
baz=320
HAL **Halifax** 127.35 316 IAMs_20 IAMs_20 17 41 40.1
comp=Z,585nm,21.0s
TBI **Tubuai** 129.43 137 eSS SS 17 01 37.7 -6.0
comp=Z,272nm,31.8s
TBI **Tubuai** 129.43 137 eLQ LQ 17 16 49.2
comp=Z,620nm,35.8s
TBI eLR LR 17 23 02.0
comp=Z,652nm,32.2s
PKME **Peaks-Kenny Pk** 130.86 319 P 16 42 16.0
baz=65
E61A **Lac Etchemin** 131.10 321 P 16 42 17.4
baz=63
WVL **Waterville** 131.39 318 IAMs_20 IAMs_20 17 45 09.9
comp=Z,593nm,19.0s
YKA **Yellowknife Ar** 131.40 0 PKP PKPdf 16 42 15.9 -0.8
comp=Z,2.9nm,0.8s,baz=355,slow=2.1,SNR=29
YKA PP PP 16 44 33.4 -1.2
comp=Z,6.6nm,1.0s,baz=0.1,slow=6.5,SNR=5.8
I63A **Otisfield** 132.21 318 P 16 42 19.2
baz=65
FCC **Fort Churchill** 132.70 346 IAMs_20 IAMs_20 17 40 10.2
comp=Z,572nm,22.0s
PPT2 **Papeete2** 133.15 131 eSS SS 17 02 39.3 +10
comp=Z,280nm,28.8s
PPT2 **Papeete2** 133.15 131 eLQ LQ 17 17 50.0
comp=Z,1μm,40.8s
PPT2 eLR LR 17 24 44.9
comp=Z,527nm,25.0s
D56A **ZEC Mazanza, M** 133.35 323 P 16 42 20.7
baz=58
J62A **Henniker** 133.37 317 P 16 42 21.2
baz=64
E56A **St. Veronique** 133.78 323 P 16 42 21.8
baz=58
D55A **Sainte-Anne-du** 133.78 324 P 16 42 21.6
baz=57
L63A **North Scituate** 133.82 316 P 16 42 22.4
baz=65
VLDQ **Val d'Or** 134.27 326 IAMs_20 IAMs_20 17 48 53.1
comp=Z,582nm,22.0s
NNA **Nana** 134.98 237 PKP PKPdf 16 42 25.1 +0.2
comp=Z,5.8nm,0.5s,baz=155,slow=1.5,SNR=3.7
L61A **Hillsdale 1, H** 134.98 317 P 16 42 24.7
baz=63
M61A **Granite Spring** 135.52 316 P 16 42 25.5
baz=64
L60A **Shokan** 135.52 317 P 16 42 26.4
baz=63
PLVO **Plevna** 135.79 322 IAMs_20 IAMs_20 17 43 36.6
comp=Z,519nm,18.0s
K58A **Earlville** 136.08 319 P 16 42 26.9
baz=60
M60A **Port Jervis** 136.09 316 P 16 42 27.3
baz=63
PECO **Prince Edward** 136.33 321 IAMs_20 IAMs_20 17 39 06.1
comp=Z,646nm,22.0s
M59A **Waymart** 136.53 317 P 16 42 27.9
baz=62
L58A **Harry Jones Me** 136.56 318 P 16 42 27.7
baz=61
BINY **Binghamton** 136.58 318 P 16 42 28.2
baz=61
O60A **Telford** 137.07 315 P 16 42 28.5
baz=63
SADO **Sadowa** 137.16 323 IAMs_20 IAMs_20 17 44 54.8
comp=Z,536nm,20.0s
K56A **Middlesex** 137.18 319 P 16 42 29.0
baz=59
L57A **Andrews Acres** 137.23 318 P 16 42 30.0
baz=60
N58A **Sunbury** 137.71 317 P 16 42 29.8
baz=61
M57A **Sunshine Farm,** 137.74 318 P 16 42 29.9
baz=60
RKT **Rikitea** 138.01 151 eSS SS 17 03 39.7 +13
comp=Z,269nm,36.5s
RKT **Rikitea** 138.01 151 eLQ LQ 17 21 15.8
comp=Z,506nm,37.0s
RKT eLR LR 17 26 57.6
comp=Z,768nm,23.8s
SC01 **Santiago de lo** 138.09 284 IAMs_20 IAMs_20 17 33 01.1
comp=Z,426nm,18.0s
P59A **Jarrettsville** 138.09 315 P 16 42 30.9
baz=63
WVNY **West Valley, N** 138.14 320 IAMs_20 IAMs_20 17 46 45.1
comp=Z,504nm,20.0s
O58A **Lewisberry** 138.19 316 P 16 42 30.7
baz=62
N57A **Milroy** 138.31 317 P 16 42 31.1
baz=60
M56A **Emporium** 138.35 318 P 16 42 31.2
baz=59
SSPA **Standing Stone** 138.59 317 IAMs_20 IAMs_20 17 42 35.3
comp=Z,450nm,20.0s
SSPA **Standing Stone** 138.59 317 P 16 42 31.8
baz=60
ATAH **Atahualpa** 138.84 242 PKP PKPdf 16 42 33.6 +1.1
comp=Z,8.2nm,0.9s,baz=135,slow=12,SNR=4.0
ERPA **Erie** 139.16 320 IAMs_20 IAMs_20 17 39 58.1
comp=Z,707nm,22.0s
P57A **Homestead Farm** 139.23 316 P 16 42 33.4
baz=61
CBN **Corbin Frederi** 139.38 314 IAMs_20 IAMs_20 17 46 30.9
comp=Z,442nm,19.0s

V62A **Hyde County Ai** 139.45 309 P 16 42 33.8
baz=67
P56A **Dayton Farm, R** 139.78 316 P 16 42 33.8
baz=60
R58B **Mineral** 139.85 313 IAMs_20 IAMs_20 17 46 51.2
comp=Z,463nm,19.0s
M53A **Wi Miller and** 139.96 320 P 16 42 34.0
baz=56
T59A **Double "B" Far** 140.05 312 IAMs_20 IAMs_20 17 47 42.9
comp=Z,422nm,20.0s
R57A **Stanardsville** 140.15 314 P 16 42 35.0
baz=62
Q56A **Snyder Ridge,** 140.25 316 IAMs_20 IAMs_20 17 54 03.4
comp=Z,466nm,21.0s
E43A **Lone Tree Farm** 140.32 330 IAMs_20 IAMs_20 17 48 41.4
comp=Z,556nm,21.0s
M52A **Chesterland** 140.33 320 IAMs_20 IAMs_20 17 48 51.0
comp=Z,501nm,20.0s
K50A **Casco** 140.37 323 IAMs_20 IAMs_20 17 28 41.8
comp=Z,560nm,20.0s
G45A **Suttons Bay** 140.59 328 IAMs_20 IAMs_20 17 55 53.9
comp=Z,587nm,20.0s
S57A **Dark Hollow, R** 140.70 314 IAMs_20 IAMs_20 17 51 08.6
comp=Z,503nm,20.0s
S57A **Dark Hollow, R** 140.70 314 P 16 42 36.0
baz=62
R56A **Bull Pasture M** 140.70 315 P 16 42 35.5
baz=61
ULM **Lac du Bonnet** 140.73 341 PKP PKPdf 16 42 33.1 -1.3
comp=Z,5.0nm,1.0s,baz=2.2,slow=4.1,SNR=6.2
ULM PP PP 16 45 32.8 -0.7
comp=Z,6.5nm,1.1s,baz=61,slow=8.7,SNR=4.4
O53A **New Philadelph** 140.96 319 IAMs_20 IAMs_20 17 59 09.8
comp=Z,523nm,19.0s
O53A **New Philadelph** 140.96 319 P 16 42 35.5
baz=57
EYMN **Ely** 141.11 336 IAMs_20 IAMs_20 17 48 39.7
comp=Z,579nm,20.0s
EYMN **Ely** 141.11 336 P 16 42 34.4
baz=36
R55A **Marlinton** 141.25 315 IAMs_20 IAMs_20 17 55 54.1
comp=Z,434nm,19.0s
T57A **Hurt** 141.26 313 IAMs_20 IAMs_20 17 56 36.7
comp=Z,497nm,19.0s
O52A **Adamsville** 141.43 319 IAMs_20 IAMs_20 17 58 35.3
comp=Z,472nm,20.0s
M50A **Fremont** 141.44 321 IAMs_20 IAMs_20 17 59 15.3
comp=Z,559nm,20.0s
P53A **Whipple** 141.48 318 IAMs_20 IAMs_20 17 46 43.9
comp=Z,516nm,22.0s
COWI **Conover** 141.53 332 IAMs_20 IAMs_20 17 49 02.3
comp=Z,478nm,21.0s
B35A **Bob, Littlefor** 141.63 338 IAMs_20 IAMs_20 17 50 19.1
comp=Z,441nm,20.0s
T56A **Rocky Mt** 141.80 313 P 16 42 36.2
baz=62
P52A **Corning** 141.89 318 IAMs_20 IAMs_20 17 46 34.4
comp=Z,500nm,22.0s
L48A **N Adams** 141.94 323 IAMs_20 IAMs_20 17 48 33.3
comp=Z,472nm,20.0s
H43A **Windswept, Lux** 142.07 329 IAMs_20 IAMs_20 17 49 36.8
comp=Z,600nm,22.0s
ACSO **Alum Creek Sta** 142.09 320 IAMs_20 IAMs_20 17 52 51.6
comp=Z,521nm,21.0s
OTAV **Otavalo** 142.16 252 eP PKPdf 16 42 39.8 +1.2
S54A **Dingess, Beckl** 142.31 315 IAMs_20 IAMs_20 17 46 46.9
comp=Z,453nm,21.0s
N49A **Columbus Grove** 142.42 322 IAMs_20 IAMs_20 17 58 58.1
comp=Z,456nm,18.0s
AGMN **Agassiz Nation** 142.43 340 IAMs_20 IAMs_20 17 56 18.0
comp=Z,483nm,19.0s
W57A **Gilead** 142.62 311 IAMs_20 IAMs_20 17 45 56.0
comp=Z,485nm,20.0s
G40A **Rib Lake** 142.65 332 IAMs_20 IAMs_20 17 50 58.8
comp=Z,450nm,22.0s
L46A **Eue Claire** 142.97 325 IAMs_20 IAMs_20 17 59 35.1
comp=Z,467nm,20.0s
Q51A **Peebles** 143.00 318 IAMs_20 IAMs_20 17 52 29.9
comp=Z,564nm,22.0s
I42A **Draeger Farm,** 143.06 329 IAMs_20 IAMs_20 17 56 01.9
comp=Z,406nm,20.0s
U54A **Nelsons Funny** 143.30 314 IAMs_20 IAMs_20 17 43 11.4
comp=Z,534nm,22.0s
N47A **Urbana** 143.35 323 IAMs_20 IAMs_20 17 48 15.3
comp=Z,621nm,19.0s
P49A **Miami Univ. Ec** 143.58 320 IAMs_20 IAMs_20 17 52 43.9
comp=Z,416nm,20.0s
K43A **Burlington** 143.60 327 IAMs_20 IAMs_20 17 48 09.7
comp=Z,440nm,21.0s
F36A **Milaca** 143.62 335 IAMs_20 IAMs_20 17 56 32.0
comp=Z,615nm,19.0s
L44A **Lake County Fo** 143.75 326 IAMs_20 IAMs_20 17 48 42.5
comp=Z,541nm,20.0s
SPMN **Marine on St.** 143.83 334 IAMs_20 IAMs_20 17 50 05.9
comp=Z,507nm,21.0s
I40A **Norwalk** 143.89 331 IAMs_20 IAMs_20 17 51 43.7
comp=Z,631nm,22.0s
S51A **Beattyville** 143.93 317 IAMs_20 IAMs_20 17 59 47.7
comp=Z,475nm,19.0s
HQIL **Hanson Quary C** 143.97 326 IAMs_20 IAMs_20 17 48 54.6
comp=Z,602nm,21.0s
MDND **Maddock** 143.98 343 IAMs_20 IAMs_20 17 49 28.7
comp=Z,444nm,19.0s
R50A **Paris** 144.06 318 IAMs_20 IAMs_20 17 48 19.8
comp=Z,576nm,20.0s
P48A **Milroy** 144.06 321 IAMs_20 IAMs_20 17 53 21.6
comp=Z,439nm,20.0s
M44A **Midewin, Midew** 144.36 325 IAMs_20 IAMs_20 17 51 43.7
comp=Z,586nm,20.0s
JFWS **Jewell Farm** 144.43 329 IAMs_20 IAMs_20 17 46 08.8
comp=Z,515nm,22.0s
JFWS **Jewell Farm** 144.43 329 P 16 42 39.7
baz=42
DGMT **Dagmar** 144.48 349 P 16 42 40.3
baz=17
SFIN **Lafayette** 144.49 323 IAMs_20 IAMs_20 17 48 52.5
comp=Z,588nm,21.0s
A04D **Lummi Island** 144.50 10 P 16 42 40.4
baz=346
L42A **Oliver, Polo** 144.80 328 IAMs_20 IAMs_20 17 47 43.0
comp=Z,434nm,19.0s
B06A **Marblemount** 144.88 8 PKPdf PKPdf 16 42 41.4 -0.4
BLO **Bloomington** 144.91 321 IAMs_20 IAMs_20 17 57 21.0
comp=Z,431nm,19.0s
B05A **Bryant** 145.04 9 P 16 42 41.1
baz=346,SNR=16
P46A **Rosedale** 145.04 322 IAMs_20 IAMs_20 17 56 44.3
comp=Z,572nm,22.0s
TKL **Tuckleechee C** 145.10 314 PKPbc PKPbc 16 42 41.8 -0.2
comp=Z,28nm,1.0s,baz=122,slow=6.7,SNR=16
T50A **Nancy** 145.10 317 IAMs_20 IAMs_20 17 48 06.7
comp=Z,500nm,20.0s
WCI **Wyandotte Cave** 145.35 320 P 16 42 42.5
baz=53
O44A **Mansfield** 145.43 324 IAMs_20 IAMs_20 17 49 35.1
comp=Z,451nm,21.0s
C06D **Leavenworth** 145.54 8 P 16 42 43.1
baz=348
NEW **Newport** 145.57 3 P 16 42 43.4
baz=355,SNR=35
D03D **Eldon** 145.58 11 P 16 42 43.6
baz=344,SNR=12
HDIL **Hopedale** 145.62 325 P 16 42 43.8
baz=46
EGMT **Eagleton** 145.71 355 P 16 42 43.5
baz=7.5
CPCT **Cooper Cave** 145.73 314 IAMs_20 IAMs_20 17 49 49.7
comp=Z,509nm,21.0s
255A **Hazlehurst** 145.87 307 IAMs_20 IAMs_20 17 51 40.4
comp=Z,519nm,22.0s
GOGA **Godfrey** 145.97 310 IAMs_20 IAMs_20 17 50 29.2
comp=Z,443nm,22.0s
GOGA **Godfrey** 145.97 310 P 16 42 44.9
baz=62
456A **Hilliard** 146.00 305 IAMs_20 IAMs_20 17 41 42.0
comp=Z,520nm,22.0s
U49A **Red Boiling Sp** 146.01 317 IAMs_20 IAMs_20 17 59 01.8
comp=Z,379nm,18.0s
Y52A **Lilburn** 146.20 311 IAMs_20 IAMs_20 18 01 55.4
comp=Z,543nm,20.0s
N41A **Harden Midland** 146.35 327 IAMs_20 IAMs_20 17 53 29.3
comp=Z,520nm,20.0s
P43A **Skaggs, Pawnee** 146.37 324 IAMs_20 IAMs_20 17 58 39.2
comp=Z,502nm,18.0s
W50A **Signal Mountai** 146.41 314 IAMs_20 IAMs_20 17 50 28.7
comp=Z,434nm,20.0s
DWPF **Disney Wildern** 146.42 300 IAMs_20 IAMs_20 17 45 46.8
comp=Z,618nm,20.0s

E03A **Lebam** 146.44 12 PKPab 16 42 47.3 +0.7
LON **Longmire** 146.55 10 PKP2 PKPbc 16 42 46.6 +0.4
LON MLR MLR
comp=Z,600nm,20.0s
LON **Longmire** 146.55 10 PKPbc 16 42 46.6 +0.4
LON IAMs_20 IAMs_20 17 53 35.4
comp=Z,623nm,20.0s
LAO **LASA Array** 146.56 350 P 16 42 46.5
baz=14
T47A **Sharon Grove** 146.60 319 IAMs_20 IAMs_20 18 01 11.2
comp=Z,461nm,19.0s
ECSD **EROS Data Cent** 146.61 337 IAMs_20 IAMs_20 17 48 47.4
comp=Z,571nm,21.0s
ECSD **EROS Data Cent** 146.61 337 P 16 42 46.6
baz=32
E04D **Cinebar** 146.61 11 P 16 42 46.4
baz=345,SNR=9.6
CLTN **Cedars of Leba** 146.62 317 IAMs_20 IAMs_20 17 50 29.8
comp=Z,428nm,20.0s
SCIA **State Center** 146.63 331 P 16 42 47.2
baz=39
SWET **Sewanee** 146.83 315 IAMs_20 IAMs_20 17 51 11.7
comp=Z,388nm,20.0s
SUSD **Miller** 146.84 340 IAMs_20 IAMs_20 18 00 11.7
comp=Z,530nm,18.0s
SUSD **Miller** 146.84 340 P 16 42 47.3
baz=28
656A **Williston** 146.91 303 IAMs_20 IAMs_20 17 46 53.4
comp=Z,451nm,19.0s
TIGA **Tifton** 146.94 307 P 16 42 47.4
baz=65
FPAL **Fort Paine** 146.97 314 IAMs_20 IAMs_20 17 48 28.5
comp=Z,392nm,20.0s
E07A **Sunnyside** 147.02 7 PKPab 16 42 48.4 -0.6
MSO **Missoula** 147.10 360 PKPab 16 42 48.7 -0.7
MSO **Missoula** 147.10 360 P 16 42 47.4
baz=0.3,SNR=26
V48A **Smith Brothers** 147.14 316 IAMs_20 IAMs_20 18 00 18.8
comp=Z,522nm,22.0s
E08A **Dider Farm, El** 147.18 6 IAMs_20 IAMs_20 17 52 01.7
comp=Z,651nm,21.0s
152A **Waverly Hall** 147.25 310 IAMs_20 IAMs_20 17 56 18.5
comp=Z,408nm,19.0s
Z51A **Franklin** 147.27 311 IAMs_20 IAMs_20 17 47 42.0
comp=Z,509nm,21.0s
SLM **Saint Louis** 147.46 324 IAMs_20 IAMs_20 17 58 51.1
comp=Z,467nm,20.0s
T45A **Paducah** 147.56 320 IAMs_20 IAMs_20 18 02 21.4
comp=Z,528nm,20.0s
WVT **Waverly** 147.58 318 PKP2 PKPbc 16 42 48.4 -1.0
WVT MLR MLR
comp=Z,500nm,21.0s
WVT **Waverly** 147.58 318 PKPbc 16 42 48.4 -1.0
WVT **Waverly** 147.58 318 IAMs_20 IAMs_20 17 58 42.1
comp=Z,456nm,21.0s
WVT **Waverly** 147.58 318 P 16 42 48.6
baz=53
G03D **McMinnville, O** 147.78 12 P 16 42 50.2
baz=343
P40A **Paris** 147.83 327 IAMs_20 IAMs_20 17 52 01.6
comp=Z,586nm,20.0s
L34A **Svendsen Farm,** 147.99 335 IAMs_20 IAMs_20 17 48 40.9
comp=Z,579nm,20.0s
FVM **French Village** 148.01 323 IAMs_20 IAMs_20 17 45 39.9
comp=Z,416nm,20.0s
X48A **Hartselle** 148.01 315 IAMs_20 IAMs_20 17 59 53.1
comp=Z,464nm,20.0s
G05D **Wamic, OR** 148.10 10 P 16 42 51.1
baz=347
553A **Crawfordville** 148.12 306 PKPab PKPab 16 42 54.7 +0.8
HICK **Hickman** 148.22 320 IAMs_20 IAMs_20 17 51 01.9
comp=Z,379nm,20.0s
BOZ **Bozeman (W)** 148.26 357 IAMs_20 IAMs_20 17 51 55.7
comp=Z,563nm,21.0s
BOZ **Bozeman (W)** 148.26 357 P 16 42 51.2
baz=4.6,SNR=22
HENM **Henderson Moun** 148.27 320 IAMs_20 IAMs_20 18 00 20.0
comp=Z,561nm,20.0s
G08A **Pilot Rock** 148.37 6 IAMs_20 IAMs_20 17 53 34.4
comp=Z,636nm,22.0s
PLAL **Pickwick Lake** 148.42 316 IAMs_20 IAMs_20 17 56 58.0
comp=Z,583nm,22.0s
GLAT **Glass** 148.43 320 IAMs_20 IAMs_20 17 51 17.5
comp=Z,542nm,20.0s
CCM **Cathedral Cave** 148.43 324 PKP2 PKPbc 16 42 51.7 +0.1
CCM MLR MLR
comp=Z,600nm,20.0s
CCM **Cathedral Cave** 148.43 324 PKPbc 16 42 51.7 +0.1
CCM **Cathedral Cave** 148.43 324 IAMs_20 IAMs_20 17 52 46.9
comp=Z,566nm,20.0s
CCM **Cathedral Cave** 148.43 324 P 16 42 51.7
baz=46
PARMO **Parma** 148.47 321 IAMs_20 IAMs_20 18 00 21.4
comp=Z,438nm,20.0s
H04A **Detroit Lake** 148.49 11 PKPbc 16 42 51.7 +0.1
RLMT **Red Lodge** 148.53 353 IAMs_20 IAMs_20 17 50 39.0
comp=Z,624nm,21.0s
RLMT **Red Lodge** 148.53 353 P 16 42 51.9
baz=9.0,SNR=22
PENMO **Penman** 148.53 320 IAMs_20 IAMs_20 17 59 34.0
comp=Z,445nm,20.0s
P38A **Dawn** 148.53 329 IAMs_20 IAMs_20 17 53 15.9
comp=Z,619nm,21.0s
DLMT **Dillon** 148.54 358 IAMs_20 IAMs_20 17 56 23.1
comp=Z,514nm,21.0s
H04D **Lebanon** 148.54 12 P 16 42 52.2
baz=344,SNR=9.0
RSSD **Black Hills** 148.59 346 P 16 42 52.5
baz=19
PVMO **Portageville** 148.60 320 IAMs_20 IAMs_20 17 59 34.8
comp=Z,474nm,21.0s
LNXT **Lenox** 148.67 319 IAMs_20 IAMs_20 18 00 58.6
comp=Z,418nm,21.0s
HALT **Halls** 148.69 319 IAMs_20 IAMs_20 18 00 36.3
comp=Z,392nm,18.0s
I02D **Swisshome** 148.70 13 P 16 42 53.0
baz=342
250A **Grady** 148.73 310 IAMs_20 IAMs_20 17 58 44.7
comp=Z,416nm,20.0s
LRAL **Lakeview Retre** 148.74 312 P 16 42 52.3
baz=58
PBMO **Poplar Bluff** 148.81 321 IAMs_20 IAMs_20 17 56 07.3
comp=Z,402nm,20.0s
R40A **Maddies Statio** 148.84 325 IAMs_20 IAMs_20 17 53 33.5
comp=Z,500nm,19.0s
PEBM **Pemiscott Bayo** 148.89 320 IAMs_20 IAMs_20 17 51 38.6
comp=Z,468nm,20.0s
I05D **Terrebonne, OR** 148.98 10 P 16 42 53.6
baz=346
W45A **Hickory Valley** 149.05 318 IAMs_20 IAMs_20 17 55 25.0
comp=Z,406nm,20.0s
GNAR **Gosnell** 149.08 320 IAMs_20 IAMs_20 18 00 32.6
comp=Z,566nm,20.0s
BGNE **Belgrade** 149.18 336 P 16 42 53.4
baz=31
I03D **Drain, OR** 149.20 13 P 16 42 54.0
baz=342,SNR=6.9
I04A **Tendick Farm,** 149.31 12 P 16 42 53.5
baz=344,SNR=7.8
Z47A **Carrollton** 149.41 314 IAMs_20 IAMs_20 18 01 40.2
comp=Z,500nm,20.0s
N33A **J Bar K, Exete** 149.46 335 IAMs_20 IAMs_20 17 54 16.8
comp=Z,520nm,20.0s
LPAR **Lepanto** 149.49 320 IAMs_20 IAMs_20 18 00 52.0
comp=Z,612nm,20.0s
MET **Memphis--Engin** 149.56 318 IAMs_20 IAMs_20 17 50 54.3
comp=Z,486nm,21.0s
J01E **Myrtle Point** 149.58 14 P 16 42 55.1
baz=341
OXF **Oxford** 149.58 317 IAMs_20 IAMs_20 18 01 28.8
comp=Z,490nm,19.0s
MGMO **Mountain Grove** 149.64 324 IAMs_20 IAMs_20 17 52 38.9
comp=Z,524nm,20.0s
FLWY **Flagg Ranch** 149.70 355 IAMs_20 IAMs_20 17 56 16.9
comp=Z,565nm,22.0s
LCAR **Lake Charles** 149.72 321 IAMs_20 IAMs_20 17 54 05.3
comp=Z,513nm,20.0s
S39A **Bolivar** 149.85 326 IAMs_20 IAMs_20 17 54 36.2
comp=Z,587nm,21.0s
J04D **Umpqua Nationa** 149.90 12 P 16 42 55.5
baz=344
J05D **Fort Rock, OR** 150.02 10 P 16 42 55.9
baz=346
Y45A **Yeager Farm, C** 150.05 316 IAMs_20 IAMs_20 18 01 01.8
comp=Z,602nm,20.0s
K02D **Willamette Mer** 150.08 14 P 16 42 55.5
baz=341
SNOW **Snow King Moun** 150.32 355 IAMs_20 IAMs_20 17 59 54.7

comp=Z,579nm,20.0s
HLID Hailey 150.36 0 IAMs_20 IAMs_20 17 54 51.4
comp=Z,550nm,19.0s
HLID Hailey 150.36 0 P 16 42 56.7
baz=359
146A Union 150.41 314 IAMs_20 IAMs_20 18 02 17.8
comp=Z,566nm,20.0s
FCAR Ozark Folk Cen 150.43 322 IAMs_20 IAMs_20 18 02 33.9
comp=Z,483nm,19.0s
REDW Red Top Meadow 150.43 355 IAMs_20 IAMs_20 17 59 56.2
comp=Z,603nm,20.0s
KSU1 Kansas State U 150.43 332 IAMs_20 IAMs_20 17 56 07.3
comp=Z,581nm,20.0s
KSU1 Kansas State U 150.43 332 P 16 42 56.1
baz=36
MFID Camas Ranch 150.48 2 IAMs_20 IAMs_20 17 53 43.4
comp=Z,603nm,21.0s
K22A Casper 150.53 348 P 16 42 56.0
baz=15,SNR=14
U40A Yellville 150.54 323 IAMs_20 IAMs_20 17 54 32.6
comp=Z,493nm,20.0s
U40A Yellville 150.54 323 P 16 42 56.5
baz=46
K04D Chiloquin, OR 150.56 11 P 16 42 57.0
baz=345,SNR=8.4
L02E Cave Junction 150.61 14 P 16 42 57.4
baz=341
L04D Klamath Falls 150.84 12 P 16 42 57.3
baz=344,SNR=26
ESPN Las Esperanzas 150.87 270 IAMs_20 IAMs_20 17 43 45.9
comp=Z,540nm,19.0s
BW06 Boulder Array 150.89 353 IAMs_20 IAMs_20 17 51 57.4
comp=Z,544nm,20.0s
BW06 Boulder Array 150.89 353 P 16 42 57.0
baz=9.1
PDAR Pinedale Array 150.89 353 PKP PKPdf 16 42 52.0 -0.2
comp=Z,2.6nm,0.9s,baz=43,slow=1.2,SNR=18
PDAR PKPbc pPKPdf 16 42 57.6 +0.1
comp=Z,14nm,0.8s,baz=90,slow=2.7,SNR=54
PDAR Pinedale Array 150.89 353 PKPbc 16 42 57.9 +0.1
WHAR Wooly Hollow 150.93 321 IAMs_20 IAMs_20 17 53 23.3
comp=Z,566nm,22.0s
OGNE Ogallala 150.97 341 P 16 42 57.0
baz=25
W41B Gary Mavity, V 150.98 321 P 16 42 57.3
baz=48,SNR=6.3
AHID Auburn Hatcher 151.04 355 IAMs_20 IAMs_20 17 56 37.4
comp=Z,557nm,22.0s
KRMB Red Mountain 151.13 15 PKiKP 16 42 59.4 +0.6
HHAR Hobbs 151.21 325 IAMs_20 IAMs_20 18 01 44.8
comp=Z,390nm,19.0s
JTS Las Juntas de 151.23 266 PKPbc PKPbc 16 42 58.6 -0.5
comp=Z,9.2nm,1.0s,baz=288,slow=20,SNR=2.2
JTS Las Juntas de 151.23 266 IAMs_20 IAMs_20 17 54 51.6
comp=Z,475nm,19.0s
WVOR Wild Horse Val 151.23 7 IAMs_20 IAMs_20 17 57 03.4
comp=Z,550nm,19.0s
U38A Gravette 151.34 325 IAMs_20 IAMs_20 17 44 44.8
comp=Z,500nm,22.0s
M04C Macdoel 151.36 12 P 16 42 58.4
baz=344,SNR=15
M02C Callahan 151.51 14 P 16 42 58.9
baz=342,SNR=25
MOD Modoc Plateau 151.52 10 IAMs_20 IAMs_20 17 52 47.8
comp=Z,571nm,21.0s
PHWY Pilot Hill 151.59 346 IAMs_20 IAMs_20 17 56 52.4
comp=Z,534nm,20.0s
VBMS Vicksburg 151.67 314 P 16 42 59.6
baz=55
X40A Basin Creek Fa 151.79 321 IAMs_20 IAMs_20 17 58 26.3
comp=Z,422nm,20.0s
X40A Basin Creek Fa 151.79 321 P 16 42 59.9
baz=48
W39A Magazine 151.88 323 IAMs_20 IAMs_20 17 56 39.4
comp=Z,526nm,20.0s
W39A Magazine 151.89 323 P 16 42 59.7
baz=46
R32A Long Quarter, 151.93 334 IAMs_20 IAMs_20 17 53 58.2
comp=Z,486nm,21.0s
N02D Trinity Center 151.94 14 P 16 42 59.9
baz=342,SNR=12
143A Socs Landing, 151.99 316 IAMs_20 IAMs_20 18 04 52.3
comp=Z,523nm,20.0s
CBKS Cedar Bluff 152.03 335 P 16 43 00.2
baz=31
N23A Red Feather La 152.09 347 P 16 43 00.2
baz=17
T35A Sooner Cattle 152.11 329 IAMs_20 IAMs_20 17 56 13.6
comp=Z,533nm,21.0s
MIAR Mount Ida 152.21 321 IAMs_20 IAMs_20 18 01 35.6
comp=Z,546nm,21.0s
MIAR Mount Ida 152.21 321 P 16 43 00.4
baz=47,SNR=7.8
HWUT Hardware Ranch 152.23 356 IAMs_20 IAMs_20 18 03 57.8
comp=Z,460nm,20.0s
WLAR White Oak Lake 152.49 320 IAMs_20 IAMs_20 18 02 02.0
comp=Z,570nm,20.0s
TUL1 Leonard 152.50 326 P 16 43 00.2
baz=41
Z41A Richland Creek 152.57 318 P 16 43 01.2
baz=50
O02D Mt. Diablo Mer 152.68 14 P 16 43 01.2
baz=342
O03E Paynes Creek 152.79 13 P 16 43 01.6
baz=344,SNR=8.9
KSCO Kaye Shedlock' 152.92 340 P 16 43 02.4
baz=25
OK032 Salt Plains WL 153.03 331 IAMs_20 IAMs_20 18 02 59.7
comp=Z,628nm,22.0s
ISCO Idaho Springs 153.05 345 IAMs_20 IAMs_20 18 00 44.2
comp=Z,511nm,20.0s
ISCO Idaho Springs 153.05 345 P 16 43 02.5
baz=18
O20A White River Ci 153.28 350 P 16 43 03.0
baz=13
OK029 Liberty Lake 153.46 328 IAMs_20 IAMs_20 18 06 21.3
comp=Z,572nm,22.0s
BEKR Beckworth 153.49 11 IAMs_20 IAMs_20 17 57 45.0
comp=Z,568nm,20.0s
ORV Oroville 153.57 13 IAMs_20 IAMs_20 17 54 02.1
comp=Z,427nm,21.0s
DUG Dugway, Tooele 153.70 358 P 16 43 04.3
baz=2.8
U32A Winter Ranch, 153.75 331 IAMs_20 IAMs_20 17 57 50.5
comp=Z,563nm,21.0s
PAHR Pah Rah Range 153.81 9 IAMs_20 IAMs_20 17 47 28.3
comp=Z,520nm,22.0s
TGUH Tegucigalpa,Un 153.90 274 IAMs_20 IAMs_20 17 50 36.3
comp=Z,580nm,20.0s
SMCO Snowmass 153.96 347 IAMs_20 IAMs_20 17 56 33.0
comp=Z,529nm,20.0s
VCNR Virginia City 154.17 10 IAMs_20 IAMs_20 17 54 00.9
comp=Z,571nm,21.0s
AFDM Forest Hills D 154.26 12 IAMs_20 IAMs_20 18 00 38.5
comp=Z,398nm,22.0s
RUBR Rubicon Trail 154.32 11 IAMs_20 IAMs_20 17 57 59.9
comp=Z,576nm,22.0s
PNTR Pine Nut 154.38 10 IAMs_20 IAMs_20 17 53 46.5
comp=Z,466nm,20.0s
TEIG Tepich 154.46 288 PKPbc PKPbc 16 43 05.8 -0.3
comp=Z,4.2nm,0.3s,baz=138,slow=0.4,SNR=6.1
TEIG Tepich 154.46 288 IAMs_20 IAMs_20 17 58 47.2
comp=Z,532nm,19.0s
YERR Yerington 154.54 9 IAMs_20 IAMs_20 17 56 51.7
comp=Z,549nm,20.0s
KVN Kaiserville 154.63 7 IAMs_20 IAMs_20 17 54 55.1
comp=Z,546nm,22.0s
NATX Nacogdoches 154.74 318 IAMs_20 IAMs_20 18 00 50.1
comp=Z,462nm,22.0s
WMOK Wichita Mounta 154.96 329 IAMs_20 IAMs_20 18 05 00.5
comp=Z,560nm,21.0s
WMOK Wichita Mounta 154.96 329 P 16 43 06.0
baz=37
RYN Ryan 154.99 8 IAMs_20 IAMs_20 18 04 15.7
comp=Z,474nm,21.0s
PV10 Paradox Valley 155.13 350 IAMs_20 IAMs_20 17 45 40.0
comp=Z,552nm,21.0s
T25A Trinidad 155.20 341 IAMs_20 IAMs_20 18 03 30.0
comp=Z,543nm,20.0s
T25A Trinidad 155.20 341 P 16 43 07.2
baz=23
NVAR Mina Array Bea 155.22 8 PKP PKPdf 16 42 59.7 +1.1
comp=Z,1.5nm,0.8s,baz=281,slow=1.6,SNR=10
NVAR PKPbc sPKPdf 16 43 08.0 +2.3
comp=Z,6.8nm,0.8s,baz=279,slow=1.1,SNR=25
NVAR PP PP 16 46 49.3 -9.0
comp=Z,0.8nm,1.0s,baz=48,slow=5.4,SNR=2.9
Z35A Perchaven, San 155.22 324 IAMs_20 IAMs_20 17 46 12.5
comp=Z,564nm,22.0s
CMB Columbia Colle 155.26 12 IAMs_20 IAMs_20 18 00 34.9
comp=Z,536nm,21.0s
S22A 4UR Ranch, Cre 155.30 346 P 16 43 23.8
baz=17
LHV Little Huntoon 155.37 8 IAMs_20 IAMs_20 17 56 00.6
comp=Z,555nm,20.0s
R11A Troy Canyon, C 155.54 3 IAMs_20 IAMs_20 17 58 30.0
comp=Z,461nm,20.0s
R11A Troy Canyon, C 155.54 3 P 16 43 24.6
baz=357
MVCO Mesa Verde 156.17 349 IAMs_20 IAMs_20 17 53 33.4
comp=Z,481nm,20.0s
WHTX Lake Whitney, 156.31 323 IAMs_20 IAMs_20 18 00 51.7
comp=Z,516nm,20.0s
GRAC Grapevine Rang 156.75 7 P 16 43 29.4
baz=352
APG El Apazote 157.02 276 PKP PKPdf 16 43 01.2 -0.3
comp=Z,2.8nm,0.3s,baz=180,slow=19,SNR=2.1
ANMO Albuquerque 157.85 343 PKP PKPdf 16 43 02.2 +0.1
comp=Z,1.0nm,0.6s,baz=27,slow=2.3,SNR=1.2
ANMO PKPab PKPab 16 43 34.1 -0.5
comp=Z,3.1nm,0.8s,baz=349,slow=5.3,SNR=2.7
ANMO PP PP 16 47 14.6 +1.6
comp=Z,1.6nm,0.3s,baz=47,slow=5.6,SNR=8.4
SMMC Simmler 157.97 13 P 16 43 34.6
baz=345
LRMC Laurel Mtn Rad 158.21 8 P 16 43 35.7
baz=351
WUAZ Wupatki 158.25 354 P 16 43 35.9
baz=7.2
PKM Mcpherson Peak 158.41 13 P 16 43 36.4
baz=345
TUQ Turquoise Moun 158.42 4 P 16 43 36.5
baz=351
W18A Petrified Fore 158.42 350 P 16 43 37.1
baz=12
EDW2 Edwards Air Fo 158.75 9 P 16 43 38.4
baz=350
JCT Junction City 158.78 324 IAMs_20 IAMs_20 18 02 58.4
comp=Z,497nm,21.0s
JCT Junction City 158.78 324 P 16 43 38.3
baz=42
HEC Hector,Ludlow 158.99 5 P 16 43 39.7
baz=354
GMRC Granite Mounta 159.09 3 P 16 43 40.0
baz=356
SCZ2 Santa Cruz Isl 159.31 13 P 16 43 39.6
baz=345
BFSC Mount Baldy Ra 159.43 8 P 16 43 40.7
baz=350
IRM Iron Mountain 159.74 2 P 16 43 42.2
baz=357
PFO Pinyon Flats O 160.19 6 PKPab PKPab 16 43 44.5 -0.2
baz=354,slow=3.0
PFO PP PP 16 47 24.9 -0.6
comp=Z,2.9nm,0.9s,baz=32,slow=2.5,SNR=1.8
TPFO Pinon Flats 160.20 6 P 16 43 44.6
baz=353
MNTX Cornudas Mount 160.47 337 P 16 43 44.6
baz=26
121A Cookes Peak, D 160.49 344 P 16 43 45.9
baz=19
CMIG Matias Romero 161.13 282 PKP PKPdf 16 43 05.9 -0.2
comp=Z,4.5nm,0.9s,baz=349,slow=3.0,SNR=8.2
CMIG PKPab PKPab 16 43 49.2 -0.2
comp=Z,3.6nm,0.9s,baz=72,slow=4.2,SNR=1.9
TXAR Lajitas Array 161.76 329 PKP PKPdf 16 43 06.7 +0.2
comp=Z,2.7nm,0.9s,baz=63,slow=0.6,SNR=15
TXAR PKPab PKPab 16 43 51.4 -0.3
comp=Z,7.9nm,0.9s,baz=58,slow=3.6,SNR=13
TXAR PP PP 16 47 34.8 +0.4
comp=Z,2.1nm,0.9s,baz=45,slow=5.0,SNR=5.9

SKO 10 16:32:24.1, 40°.95N × 22°.39E, h7km, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRG	Griva	0.01	52	*i* Pg	Pg	16 32 25.5	0.0
GRG				*i* Sg	Sg	16 32 26.1	-0.3
VAY	Valandovo	0.40	20	*i* Pg	Pg	16 32 32.3	+0.5
VAY				*i* Sg	Sb	16 32 38.4	-1.3
VAY				*e*Lg	Lg	16 32 38.7	
	comp=N,6.9nm,0.3s						
KNT	Kendrikon	0.44	61	*i* Pg	Pg	16 32 32.8	+0.2
KNT				*i* Sg	Sg	16 32 38.7	+0.4

*IDC **10** 16:53:05.5±1.0, 28°.90N × 130°.68E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/59, mbtmp3.6/8, ML3.1/2, Error ellipse: s-maj=36.6km s-min=19.3km az=94.0*
*JMA **10** 16:53:09.4±0.1, 28°.90N × 130°.61E, h63km±2km, M3.3*
ISC 10 16:53:07.0±2.4, 28°.87N±0°.03 × 130°.66E±0°.05, h12km±15km, n26, σ1s06/46, mb3.5/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	0.82	228	P	Pn	16 53 25.3	+1.0
JZK				*e*S	Sn	16 53 37.0	+0.7
JAM	Amami Oshima	1.03	244	P	Pn	16 53 27.5	+0.3
JAM				*e*S	Sb	16 53 40.8	+0.6
JNN	Nakanoshima	1.19	325	P	Pn	16 53 29.7	+0.3
JNN				*e*S	Sg	16 53 44.6	-0.7
JTAJ	Takarajima	1.31	283	P	Pn	16 53 31.1	+0.1
JTAJ				*e*S	Sb	16 53 47.0	-1.1
JYAK	Yakushimahirau	1.37	355	P	Pn	16 53 32.3	+0.4
JYAK				S	Sb	16 53 49.1	-0.9
JAMN	Amaminishikomi	1.45	245	P	Pb	16 53 33.8	0.0
JAMN				S	Sn	16 53 52.2	+0.4
JMTN	Minamitane	1.54	8	P	Pn	16 53 34.7	+0.5
JMTN				S	Sn	16 53 54.2	+0.1
JKC	Kuchinoerabu	1.64	346	P	Pn	16 53 35.4	-0.2
JKC				*e*S	Sn	16 53 55.3	-1.3
JTN	Tanegashima 3	1.80	9	P	Pn	16 53 38.3	+0.4
JTN				*e*S	Sn	16 53 59.3	-1.3
JTK	Tokunoshima	1.85	235	P	Pn	16 53 39.8	+1.3
JTK				*e*S	Sn	16 54 02.1	+0.2
JTSR	Tashiro 2	2.30	6	P	Pn	16 53 45.7	+0.9
JTSR				*e*S	Sn	16 54 12.0	-1.0
JOKE	Okinoerabujima	2.38	231	P	Pn	16 53 46.5	+0.7
JOKE				*e*S	Sn	16 54 14.1	-0.8
JSU	Suzuyama	2.63	356	P	Pn	16 53 49.3	0.0
JSU				*e*S	Sn	16 54 20.1	-1.1
JYO	Yoronjima	2.68	227	P	Pn	16 53 50.1	+0.2
JYRO				*e*S	Sn	16 54 20.7	-1.6
JNAR	Kushima--Naru	2.70	11	P	Pn	16 53 51.6	+1.4
JNAR				*e*S	Sn	16 54 23.0	+0.2
JOW	Kunigami	2.93	227	Pn	Pn	16 53 53.7	+0.3
	11nm,0.3s,baz=110,slow=18,SNR=81						
JOW				Sn	Sn	16 54 27.1	-1.3
	14nm,0.3s,baz=42,slow=29,SNR=11						
JOW	Kunigami	2.93	227	P	Pn	16 53 53.6	+0.3
JOW				*e*S	Sn	16 54 26.7	-1.7
JIH	Iheya	3.00	233	P	Pn	16 53 54.6	+0.3
JIH				*e*S	Sn	16 54 27.4	-2.8
JMZ	Minamidaito 2	3.08	171	P	Pn	16 53 55.1	-0.3
JMZ				*e*S	Sn	16 54 29.3	-2.8
JNU	Nakatsue	4.24	2	Pn	Pn	16 54 12.6	+1.1
	0.6nm,0.3s,baz=188,slow=14,SNR=18						
JNU				Sn	Sn	16 54 59.1	-1.8
	1.5nm,0.3s,baz=132,slow=17,SNR=5.9						
MKAR	Makanchi Array	41.47	309	P	P	17 00 54.5	+0.8
	0.2nm,0.7s,baz=96,slow=8.7,SNR=3.7						
WRA	Warramunga Arr	48.66	175	P	P	17 01 51.5	+0.6
	0.6nm,0.6s,baz=354,slow=8.7,SNR=8.5						
ASAR	Alice Springs	52.33	176	P	P	17 02 19.6	+0.9
	0.5nm,0.8s,baz=10,slow=12,SNR=7.8						
ILAR	Eielson Array	61.10	29	P	P	17 03 20.5	-0.1
	0.4nm,0.8s,baz=283,slow=5.5,SNR=2.4						
FINES	FINESS Array B	71.63	331	P	P	17 04 27.7	-0.3
	1.8nm,0.8s,baz=57,slow=5.6,SNR=4.4						
YKA	Yellowknife Ar	75.23	26	P	P	17 04 49.6	+0.4
	0.4nm,0.9s,baz=303,slow=5.3,SNR=3.6						

IDC 10 16:53:13.2±2.2, 15°.21S × 178°.76W, h430km±29km, mb3.1/5, mb1 3.4/6, mb1mx3.0/54, mbtmp3.9/6, Error ellipse: s-maj=113.4km s-min=21.9km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.96	230	P	P	16 54 26.9	+0.1
	7.2nm,0.3s,baz=100,slow=12,SNR=40						
STKA	Stephens Creek	39.70	238	P	P	17 00 06.5	-0.1
	0.7nm,0.6s,baz=90,slow=9.1,SNR=3.7						
WRA	Warramunga Arr	44.85	257	P	P	17 00 47.4	-0.3
	0.1nm,0.3s,baz=95,slow=7.4,SNR=8.1						
ASAR	Alice Springs	45.26	252	P	P	17 00 50.8	0.0
	3.7nm,0.3s,baz=84,slow=8.6,SNR=198						
NVAR	Mina Array Bea	77.73	44	P	P	17 04 24.9	+0.2
	0.4nm,0.2s,baz=234,slow=7.6,SNR=3.4						
ILAR	Eielson Array	83.35	13	P	P	17 04 53.0	-0.2
	0.4nm,0.4s,baz=230,slow=5.7,SNR=5.6						

*INET **10** 16:54:34.2, 9°.50N × 85°.77W, h8km, MW2.9*
UCR 10 16:54:33.6±1.9, 9°.46N × 85°.93W, h34km±4km, MW4.0, 2C-1D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRZA	Playa Garza	0.53	32	*e*P	Pb	16 54 44.0	-0.7
GRZA				*e*S	Sn	16 54 53.1	+0.4
INDI	Punta indio, G	0.58	46	*e*P	Pn	16 54 44.9	-0.5
INDI				*e*S	Sn	16 54 55.0	+1.2
SAJU	San Juanillo,	0.64	19	*e*P	Pn	16 54 45.3	-0.9
SAJU				*e*S	Sn	16 54 55.6	+0.3
GUAI	GUAI	0.90	27	*i*P	Pn	16 54 48.9	-1.0
GUAI				*i* S	Sb	16 55 02.7	+0.1
LAFE	Finca La Fe, P	1.06	71	*e*P	Pn	16 54 51.2	-0.9
LAFE				*e*S	Sn	16 55 05.2	-0.5
JTS	Las Juntas de	1.26	49	*e*P	Pn	16 54 55.1	+0.1
LAPC	Finca la Perla	1.38	20	*i* P	Pn	16 54 55.6	-1.0
COLC	Colonia	1.39	31	*i* P	Pn	16 54 56.9	+0.2
GPS2	Hotel Rincn d	1.40	24	*e*P	Pn	16 54 57.2	+0.3
CUI	Cuipilapa	1.40	32	*i*P	Pn	16 54 56.2	-0.7
GUAB	Guayabo de Bag	1.41	29	*i* P	Pn	16 54 57.4	+0.3
HORNC	Hornillas	1.44	31	*i* P	Pn	16 54 57.6	+0.2
CASO	Castillo	1.52	50	*i* P	Pn	16 54 59.5	+1.0
ARE1	Arenal 1	1.55	50	*e*P	Pb	16 55 00.4	-1.3
PTEN	Parque Tenorio	1.55	37	*i* P	Pn	16 54 59.5	+0.6
CEDE	Laguna Cedeo	1.58	50	*i* P	Pn	16 54 59.6	+0.3
HDC	Heredia	1.86	73	*e*P	Pn	16 55 04.4	+1.1
LCR2	La Lucha 2	1.92	82	*e*P	Pn	16 55 03.9	-0.2
COVE	Coope Vega, Sa	1.95	50	*e*P	Pn	16 55 05.6	+1.2
EDDO	Dominical	2.05	96	*e*P	Pn	16 55 05.3	-0.3
RIMA	Rio Macho	2.06	81	*e*P	Pn	16 55 05.9	-0.1
CDM	Cerro de Muert	2.13	87	*e*P	Pn	16 55 07.7	+0.4
PEZE	Perez Zeledon,	2.22	92	*e*P	Pn	16 55 07.9	-0.2
VTCV	VTCV, Calle Va	2.23	76	*e*P	Pn	16 55 09.6	+1.2
MRVA	Moravia de Chi	2.48	81	*e*P	Pn	16 55 12.2	+0.5
EDPN	Palmar Norte	2.49	101	*e*P	Pn	16 55 12.1	+0.3
RIOS	Rincon, Osa	2.50	107	*e*P	Pn	16 55 11.9	0.0
DRK0	Durika	2.65	94	*e*P	Pn	16 55 14.9	+0.7
POTG	Potrero Grande	2.80	98	*e*P	Pn	16 55 16.8	+0.6
LPLA	Las Palmas La	2.91	98	*e*P	Pn	16 55 18.5	+0.8
BRU2	Volcan	3.26	101	*e*P	Pn	16 55 24.0	+1.4

UCR 10 17:01:51.5±1.8, 9°.42N × 85°.98W, h8km±15km, MW3.7, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
INDI	Punta indio, G	0.64	47	*e*P	Pb	17 02 04.8	-0.2
SAJU	San Juanillo,	0.69	22	*e*P	Pg	17 02 05.3	+0.5
SAJU				*e*S	Sb	17 02 15.9	+0.3
DUNO	Dulce Nombre,	0.81	36	*e*P	Pg	17 02 07.0	0.0
GUAI	GUAI	0.96	29	*i* P	Pg	17 02 09.2	-0.8
GUAI				*i* S	Sg	17 02 22.7	+0.3
PLVR	Palo Verde	1.11	34	*e*P	Pg	17 02 10.5	-2.3
PLVR				*e*S	Sg	17 02 25.9	-1.3
LAFE	Finca La Fe, P	1.12	70	*e*P	Pg	17 02 11.4	-1.6
JTS	Las Juntas de	1.33	49	*e*P	Pn	17 02 15.4	-1.0
HZTE	Horizontes, Gu	1.34	16	*e*P	Pn	17 02 15.6	-1.0
HZTE				*e*S	Sb	17 02 33.8	-0.3
COLC	Colonia	1.45	32	*i* P	Pn	17 02 17.0	-1.1
CUI	Cuipilapa	1.47	33	*e*P	Pn	17 02 16.3	-2.0
GB1A	Borinquen Arri	1.50	22	*i* P	Pn	17 02 17.7	-1.2
ARE1	Arenal 1	1.61	50	*e*P	Pn	17 02 20.7	+0.4
SRA1	San Ramn	1.62	66	*e*P	Pn	17 02 20.2	-0.2
CEDE	Laguna Cedeo	1.64	50	*i* P	Pn	17 02 20.0	-0.8
CEDE				*e*P	Pb	17 02 20.2	-1.9
HDC	Heredia	1.93	73	*e*P	Pn	17 02 24.9	+0.1
LCR2	La Lucha 2	1.97	81	*e*P	Pn	17 02 24.3	-1.2
COVE	Coope Vega, Sa	2.02	50	*e*P	Pn	17 02 25.9	0.0
RIMA	Rio Macho	2.11	81	*e*P	Pn	17 02 26.3	-1.1
CDM	Cerro de Muert	2.19	86	*e*P	Pn	17 02 27.8	-0.8
CVTR	Volcan Turrial	2.27	75	*e*P	Pn	17 02 30.8	+1.1
PEZE	Perez Zeledon,	2.27	91	*e*P	Pn	17 02 28.3	-1.2
MRVA	Moravia de Chi	2.53	81	*e*P	Pn	17 02 32.7	-0.4
RIOS	Rincon, Osa	2.54	106	*e*P	Pn	17 02 32.3	-0.7
ACON	Acoyapa	2.65	17	*e*P	Pn	17 02 34.3	-0.3
DRK0	Durika	2.70	93	*e*P	Pn	17 02 35.1	-0.4
POTG	Potrero Grande	2.85	97	*e*P	Pn	17 02 37.2	-0.2

*IDC **10** 17:06:19.7±1.3, 10°.53S × 77°.77W, h91km±13km, mb3.3/4, mb1 3.6/5, mb1mx3.3/48, mbtmp3.7/5, Error ellipse: s-maj=43.4km s-min=9.2km az=70.0*
ISC 10 17:06:19.9±1.0, 10°.53S±0°.07 × 77°.6W±0°.1, h100km, n7, σ0s99/10, mb3.4/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	1.65	152	P	Pn	17 06 47.1	-1.0
	33nm,0.3s,baz=315,slow=8.9,SNR=28						
NNA				S	Sn	17 07 10.1	+0.6
	102nm,0.3s,baz=18,slow=9.6,SNR=13						
ATAH	Atahualpa	3.45	347	P	Pn	17 07 11.2	-0.9
	12nm,0.3s,baz=145,slow=4.2,SNR=91						
ATAH				S	Sn	17 07 52.4	+0.1
	16nm,0.3s,baz=43,slow=13,SNR=3.1						
PTGA	Pitinga	20.08	62	P	Pn	17 10 46.9	-1.4
	0.7nm,0.3s,baz=127,slow=20,SNR=1.3						
PTGA				S	Sn	17 14 36.0	+1.2
	2.9nm,0.8s,baz=318,slow=20,SNR=2.0						
TXAR	Lajitas Array	46.91	328	P	P	17 14 40.5	-0.1
	0.2nm,0.5s,baz=148,slow=8.6,SNR=2.4						
ULM	Lac du Bonnet	62.58	347	P	P	17 16 33.7	+0.5
	1.5nm,0.6s,baz=139,slow=5.7,SNR=4.1						
YKA	Yellowknife Ar	78.22	343	P	P	17 18 09.0	+0.9
	0.4nm,0.6s,baz=140,slow=6.2,SNR=10.0						
WRA	Warramunga Arr	136.32	226	PKP	PKiKP	17 25 32.7	+0.2
	0.3nm,0.8s,baz=125,slow=2.2,SNR=1.5						

UCR 10 17:12:51.0±2.4, 9°.42N × 85°.99W, h17km±10km, MW3.7, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRZA	Playa Garza	0.60	35	*e*P	Pg	17 13 03.0	+0.1
GRZA				*e*S	Sn	17 13 12.7	-1.4
INDI	Punta indio, G	0.65	47	*e*P	Pb	17 13 04.0	+0.1
INDI				*e*S	Sn	17 13 14.3	-1.1
SAJU	San Juanillo,	0.70	23	*e*P	Pg	17 13 04.4	-0.3
SAJU				*e*S	Sb	17 13 15.1	+1.0
GUAI	GUAI	0.96	29	*i* P	Pb	17 13 08.3	-1.0
GUAI				*i* S	Sb	17 13 21.9	+0.1
PLVR	Palo Verde	1.11	34	*e*P	Pb	17 13 09.7	-2.2
PLVR				*e*S	Sb	17 13 24.9	-1.4
LAFE	Finca La Fe, P	1.13	70	*e*P	Pn	17 13 10.5	-1.5
LAFE				*e*S	Sb	17 13 24.3	-2.2
JTS	Las Juntas de	1.34	50	*e*P	Pn	17 13 14.5	-0.4
GBS3	Finca Las Img	1.45	21	*i* P	Pn	17 13 15.9	-0.6
CUI	Cuipilapa	1.47	33	*e*P	Pn	17 13 15.4	-1.4
GB1A	Borinquen Arri	1.50	23	*i* P	Pn	17 13 16.9	-0.4
GB1A				*i* S	Sn	17 13 36.1	-0.5
CASO	Castillo	1.59	51	*i* P	Pn	17 13 19.0	+0.5
ARE1	Arenal 1	1.62	50	*e*P	Pn	17 13 19.6	+0.8
CEDE	Laguna Cedeo	1.65	50	*i* P	Pn	17 13 18.8	-0.5
RIMA	Rio Macho	2.12	81	*e*P	Pn	17 13 25.5	-0.4
CDM	Cerro de Muert	2.20	86	*e*P	Pn	17 13 26.9	-0.2
CVTR	Volcan Turrial	2.27	75	*e*P	Pn	17 13 29.4	+1.2
PEZE	Perez Zeledon,	2.28	91	*e*P	Pn	17 13 27.6	-0.3
MRVA	Moravia de Chi	2.54	81	*e*P	Pn	17 13 32.1	+0.5
RIOS	Rincon, Osa	2.54	106	*e*P	Pn	17 13 31.8	+0.2
DRK0	Durika	2.71	93	*e*P	Pn	17 13 34.1	+0.1

*JMA **10** 17:18:55.6±0.1, 36°.90N × 141°.46E, h61km±2km, M3.9*
JMA Felt I J1.
*IDC **10** 17:18:55.0±2.3, 36°.79N × 141°.57E, h52km±26km, mb3.4/4, mb1 3.7/8, mb1mx3.2/71, mbtmp3.9/8, ML3.9/4, MS3.7/1, Ms1 3.7/1, ms1mx2.9/32, Error ellipse: s-maj=18.7km*

s-min=14.5km az=69.0

ISC 10 17:18:53.9±1.6, 36°86N±0°05×141°66E±0°09, h38km±3km, n27,σ1§00/32, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.73**	**289**	P	**Pn**	**17 19 08.3**	**+0.6**
ONAJ				S	**Sn**	**17 19 17.4**	**-0.2**
JFK	**Kawauchi**	**0.80**	**309**	P	**Pn**	**17 19 09.2**	**+0.5**
JFK				S	**Sn**	**17 19 19.0**	**-0.5**
JFFD	**Fukushimafurud**	**0.91**	**285**	P	**Pn**	**17 19 10.5**	**+0.4**
JFFD				S	**Sn**	**17 19 21.1**	**-0.9**
JHO	**Hitachi**	**0.91**	**254**	P	**Pn**	**17 19 10.6**	**+0.5**
JHO				S	**Sn**	**17 19 21.4**	**-0.7**
JMM	**Marumori**	**1.22**	**326**	P	**Pn**	**17 19 14.9**	**+0.6**
JMM				S	**Sn**	**17 19 29.1**	**-0.4**
JFT	**Otama**	**1.24**	**302**	P	**Pn**	**17 19 15.8**	**+1.1**
JFT				S	**Sn**	**17 19 30.1**	**-0.1**
JIO	**Ouri**	**1.61**	**351**	P	**Pn**	**17 19 20.9**	**+1.2**
JIO				S	**Sn**	**17 19 39.4**	**+0.3**
JFY	**Yanaizu**	**1.65**	**290**	P	**Pn**	**17 19 20.9**	**+0.6**
JOU	**Okura**	**1.69**	**332**	P	**Pn**	**17 19 21.7**	**+0.8**
JOU				S	**Sn**	**17 19 41.5**	**+0.1**
JAG	**Ashikaga**	**1.83**	**257**	P	**Pn**	**17 19 23.3**	**+0.6**
JKT	**Katashina**	**1.94**	**268**	P	**Pn**	**17 19 25.4**	**+1.1**
MJAR	**Matsushiro Arr**	**2.79**	**264**	P	**Pn**	**17 19 37.1**	**+1.1**
	2.6nm,0.3s,baz=67,slow=13,SNR=171						
MJAR				S	**Sn**	**17 20 07.7**	**-0.7**
	1.4nm,0.3s,baz=88,slow=31,SNR=6.6						
MAT	**Matsushiro**	**2.79**	**264**	P	**Pn**	**17 19 37.8**	**+1.8**
MAT				S	**Sn**	**17 20 10.2**	**+1.7**
JHJ	**Hachijo jima 2**	**4.04**	**203**	P	**Pn**	**17 19 54.3**	**+1.1**
	33nm,0.3s,baz=347,slow=23,SNR=6.9						
JHJ				S	**Sn**	**17 20 38.2**	**-1.0**
	37nm,0.3s,baz=136,slow=23,SNR=8.2						
ASAJ	**Asahikawa**	**7.28**	**5**	P	**Pn**	**17 20 37.9**	**+0.3**
	2.2nm,0.3s,baz=215,slow=12,SNR=28						
ASAJ				S	**Sn**	**17 21 57.2**	**-1.7**
	0.4nm,0.3s,baz=270,slow=20,SNR=1.3						
JCJ	**Chichijima**	**9.75**	**177**	P	**Pn**	**17 21 10.6**	**-1.0**
	3.2nm,0.3s,baz=350,slow=20,SNR=6.0						
JCJ				S	Sn	17 22 53.0	-6.8
	3.5nm,0.3s,baz=270,slow=20,SNR=1.7						
SEY	**Seymchan**	**26.92**	**11**	P	**P**	**17 24 32.8**	**+1.8**
	0.8nm,0.6s,baz=162,slow=20,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**27.89**	**121**	T	T	17 54 28.0	
	baz=313,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.90**	**121**	T	T	17 54 13.4	
	baz=313,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.91**	**121**	T	T	17 54 44.2	
	baz=313,slow=75						
SONM	**Songino Array**	**28.04**	**304**	P	**P**	**17 24 41.1**	**-0.4**
	0.6nm,0.5s,baz=102,slow=8.9,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	**28.60**	**123**	T	T	17 55 42.7	
	baz=314,slow=75						
H11S3	**WAKE ISLAND Hy**	**28.60**	**123**	T	T	17 55 44.3	
	baz=314,slow=75						
H11S2	**WAKE ISLAND Hy**	**28.62**	**123**	T	T	17 55 28.5	
	baz=314,slow=75						
DAV	**Davao City (W)**	**33.09**	**210**	LR	LR	17 36 42.8	
	comp=Z,129nm,20.4s,baz=3.0,slow=32						
ZALV	**Zalesovo Beam**	**42.17**	**313**	P	**P**	**17 26 41.1**	**-1.4**
	0.9nm,0.5s,baz=88,slow=7.4,SNR=4.1						
MKAR	**Makanchi Array**	**44.38**	**302**	P	**P**	**17 27 00.0**	**-0.4**
	0.1nm,0.5s,baz=89,slow=9.3,SNR=2.5						

IDC 10 17:21:23.8±333.0, 57°66N×31°46E, h0km, Error ellipse: s-maj=93.7km s-min=46.6km az=146.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.27**	**104**	*i*		17 44 30.0	
	baz=287,slow=313,SNR=3.1						
I37NO	**I37NO**	**12.78**	**339**	*i*		18 33 50.0	
	baz=147,slow=332,SNR=1.1						
I48TN	**KESRA INFRASON**	**26.38**	**224**	*i*		20 02 10.0	
	baz=27,slow=322,SNR=0.6						

*IDC **10** 17:31:34.6±0.7, 1°.90N×128°.82E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.9/39, mbtmp3.9/15, ML3.6/2, Error ellipse: s-maj=30.6km s-min=12.6km az=77.0*
*NEIC **10** 17:31:41.3±1.9, 1°.80N±0°.08×128°.82E±0°.07, h56km±7km, mb4.3/33, Error ellipse: s-maj=11.9km s-min=9.7km az=204.0*
*DJA **10** 17:31:41.0±1.0, 2°.5N±5°×12°.9E±°, h33km±15km, M4.2/14, mb4.4/13, mB4.8/4, MLv4.2/14, Mw(mB)4.1/4*

ISC 10 17:31:39.9±0.4, 1°.85N±0°.06×128°.93E±0°.06, h40km, n81, σ1§10/77, mb4.1/25, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.90**	**236**		**Pn**	**17 32 08.6**	**-1.1**
TNTI	**Ternate**	**1.90**	**236**	P	**Pn**	**17 32 09.5**	**-0.2**
SWI	**Sorong**	**3.56**	**139**	P	**Pn**	**17 32 34.0**	**+1.4**
SWI				S	**Sn**	**17 33 13.4**	**-0.1**
SIJI	**Sorong**	**3.57**	**139**	Pn	**Pn**	**17 32 33.2**	**+0.5**
	4.3nm,0.3s,baz=235,slow=23,SNR=35						
SIJI				Sn	**Sn**	**17 33 13.1**	**-0.6**
	3.1nm,0.3s,baz=0.0,slow=20,SNR=3.6						
SGSI	**Sangihe**	**3.86**	**298**	P	**Pn**	**17 32 38.1**	**+1.4**
SANI	**Sanana**	**4.86**	**217**	P	**Pn**	**17 32 49.7**	**-0.9**
KMSI	**Cibinong**	**5.11**	**256**	P	**Pn**	**17 32 54.8**	**+0.9**
NLAI	**Namlea**	**5.38**	**200**	P	**Pn**	**17 32 58.1**	**+0.5**
FAKI	**Fak Fak**	**5.78**	**145**	Pn	**Pn**	**17 33 04.2**	**+1.0**
FAKI	**Fak Fak**	**5.78**	**145**	P	**Pn**	**17 33 04.2**	**+1.0**
	0.1nm22nm,1.1s						
GTOI	**Gorontalo**	**6.04**	**259**	P	**Pn**	**17 33 08.2**	**+1.5**
	0.1nm290nm27nm,0.6s						
GTOI				S	**Sn**	**17 34 18.0**	**+3.3**
	0.1nm290nm27nm,0.6s						
BNDI	**Bandanaira**	**6.40**	**171**	P	**Pn**	**17 33 12.6**	**+0.9**
	0.2nm46nm,1.1s						
LUWI	**Luwuk**	**6.80**	**245**	Pn	**Pn**	**17 33 16.5**	**-0.7**
LUWI	**Luwuk**	**6.80**	**245**	P	**Pn**	**17 33 17.2**	**+0.1**
	0.2nm648nm53nm,1.1s						
MRSI	**Marisa**	**7.12**	**259**	P	**Pn**	**17 33 21.2**	**-0.4**
	0.2nm709nm40nm,1.0s						
APSI	**Ampana**	**7.78**	**249**	P	**Pn**	**17 33 30.1**	**-0.5**
	0.1nm24nm,0.9s						
TOLI2	**Tolitoli**	**8.18**	**265**		**Pn**	**17 33 35.7**	**-0.4**
TTSI	**Tana Toraja**	**10.33**	**242**	P	**Pn**	**17 34 05.1**	**-0.4**
	18nm,0.8s						
BNSI	**Bone**	**10.79**	**235**	P	**Pn**	**17 34 11.5**	**-0.3**
	15nm,0.7s						
SPSI	**Sidrap Palu**	**10.83**	**238**	P	**Pn**	**17 34 12.8**	**+0.4**
	25nm,1.0s						
MYLDM	**Lahad Datu**	**10.93**	**288**	Pn	**Pn**	**17 34 12.9**	**-0.9**
KAPI	**Kappang**	**11.43**	**233**	Pn	**Pn**	**17 34 19.1**	**-1.6**
	0.5nm,0.3s,baz=94,slow=13,SNR=1.5						
MTKI	**Muara Teweh, K**	**14.31**	**259**	P	**Pn**	**17 34 59.9**	**0.0**
MTN	**Manton Dam**	**14.76**	**172**	Pn	**Pn**	**17 35 05.1**	**-0.9**
SBUM	**Sibu**	**16.71**	**272**	P	**P**	**17 35 34.4**	**+1.3**
FITZ	**Fitzroy Crossi**	**20.08**	**189**	P	**P**	**17 36 10.7**	**+0.6**
	1.1nm,0.7s,baz=29,slow=13,SNR=2.0						
FITZ	**Fitzroy Crossi**	**20.08**	**189**	P	**P**	**17 36 09.6**	**-0.5**
WB0	**Warramunga Arr**	**22.14**	**166**	P	**P**	**17 36 33.1**	**+0.8**
WB0				IAmb	IAmb	17 37 04.7	
	comp=Z,7.8nm,1.1s						
WRA	**Warramunga Arr**	**22.30**	**166**	P	**P**	**17 36 34.7**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=345,slow=11,SNR=10						
WRA	**Warramunga Arr**	**22.30**	**166**	P	**P**	**17 36 33.5**	**-0.5**
WB2	**Warramunga Arr**	**22.30**	**166**	P	**P**	**17 36 33.3**	**-0.7**
WB2				IAmb	IAmb	17 36 48.3	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**22.36**	**166**	P	**P**	**17 36 35.1**	**+0.5**
TPUB	**Ta-pu**	**22.79**	**340**	P	**P**	**17 36 39.5**	**+0.2**
AS31	**Alice Springs**	**25.82**	**169**	P	**P**	**17 37 09.0**	**+1.4**
ASAR	**Alice Springs**	**25.82**	**169**	P	**P**	**17 37 08.6**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=356,slow=10,SNR=14						
ASAR				PcP	**PcP**	**17 40 36.9**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=353,slow=2.1,SNR=4.1						
ASAR	**Alice Springs**	**25.82**	**169**	P	**P**	**17 37 08.3**	**+0.7**
GSI	**Gunungsitoli**	**31.35**	**269**	P	**P**	**17 37 55.2**	**-1.8**
JHS	**Saijyo**	**33.21**	**6**	P	**P**	**17 38 15.6**	**+2.6**
CMAR	**Chiang Mai Arr**	**33.72**	**301**	P	**P**	**17 38 17.8**	**0.0**
	comp=Z,1.3nm,0.9s,baz=112,slow=6.8,SNR=7.2						
CMAR	**Chiang Mai Arr**	**33.72**	**301**	P	**P**	**17 38 17.9**	**+0.2**
JWT	**Wachi**	**33.80**	**10**	P	**P**	**17 38 20.1**	**+1.9**
CHTO	**Chiang Mai**	**33.87**	**302**	P	**P**	**17 38 20.1**	**+1.0**
CHTO				IAmb	IAmb	17 38 20.4	
	comp=Z,2.7nm,0.7s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
INU	**Inuyama**	**34.17**	**12**	P	**P**	**17 38 23.5**	**+2.2**
KSAR	**Wonju Array Be**	**35.43**	**359**	P	**P**	**17 38 33.5**	**+1.3**
KSRS	**Korea Array**	**35.45**	**359**	P	**P**	**17 38 33.0**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=175,slow=9.5,SNR=24						
KS19	**Wonju Array Si**	**35.49**	**359**	P	**P**	**17 38 33.3**	**+0.5**
MJAR	**Matsushiro Arr**	**35.57**	**13**	P	**P**	**17 38 33.6**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=186,slow=9.1,SNR=9.3						
MJAR	**Matsushiro Arr**	**35.57**	**13**	P	**P**	**17 38 34.3**	**+0.8**
MJAR				IAmb	IAmb	17 38 34.8	
	comp=Z,1.6nm,0.7s						
STKA	**Stephens Creek**	**35.63**	**161**	P	**P**	**17 38 35.6**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=349,slow=8.2,SNR=4.5						
JSD	**Sado**	**37.02**	**12**	P	**P**	**17 38 46.6**	**+0.8**
JSD				IAmb	IAmb	17 39 03.4	
	comp=Z,13nm,1.1s						
JMM	**Marumori**	**37.47**	**16**	P	**P**	**17 38 51.4**	**+1.8**
H11S3	**WAKE ISLAND Hy**	**40.53**	**63**	T	T	18 22 48.9	
	baz=251						
H11S2	**WAKE ISLAND Hy**	**40.55**	**63**	T	T	18 22 48.9	
	baz=251						
H11S1	**WAKE ISLAND Hy**	**40.55**	**63**	T	T	18 22 51.6	
	baz=251						
H11N1	**WAKE ISLAND Hy**	**41.13**	**62**	T	T	18 23 36.4	
	baz=250,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.15**	**62**	T	T	18 23 36.1	
	baz=250,slow=75						
H11N3	**WAKE ISLAND Hy**	**41.15**	**62**	T	T	18 23 42.3	
	baz=250,slow=75						
USRK	**Ussuriysk Ar.**	**42.26**	**3**	P	**P**	**17 39 29.6**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=181,slow=7.2,SNR=7.4						
USRK	**Ussuriysk Ar.**	**42.26**	**3**	P	**P**	**17 39 30.2**	**+0.9**
SHL	**Shillong**	**42.76**	**307**	P	**P**	**17 39 33.5**	**-0.4**
SHL				IAmb	IAmb	17 39 34.6	
	comp=Z,15nm,0.9s						
SONM	**Songino Array**	**49.79**	**340**	P	**P**	**17 40 28.4**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=148,slow=7.5,SNR=3.6						
MIDW	**Midway**	**57.50**	**57**	P	**P**	**17 41 26.3**	**+0.9**
YAK	**Yakutsk**	**60.04**	**0**	P	**P**	**17 41 43.0**	**+0.6**
MK31	**Makanchi Array**	**60.35**	**325**	P	**P**	**17 41 44.2**	**-0.7**
MK31				IAmb	IAmb	17 41 46.0	
	comp=Z,1.1nm,0.7s						
MKAR	**Makanchi Array**	**60.35**	**325**	P	**P**	**17 41 44.6**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=118,slow=8.7,SNR=2.2						
MKAR	**Makanchi Array**	**60.35**	**325**	P	**P**	**17 41 44.8**	**-0.1**
MAKZ	**Makanchi**	**60.53**	**325**	P	**P**	**17 41 45.4**	**-0.8**
MAKZ				IAmb	IAmb	17 41 46.8	
	comp=Z,3.9nm,1.1s						
JOHN	**Johnston Islan**	**62.25**	**72**	P	**P**	**17 41 57.8**	**-0.5**
ZALV	**Zalesovo Beam**	**63.26**	**333**	P	**P**	**17 42 02.9**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=134,slow=11,SNR=3.6						
GAR	**Garm**	**64.81**	**313**	P	**P**	**17 42 13.9**	**-1.0**
GAR				IAmb	IAmb	17 42 15.2	
	comp=Z,5.7nm,0.8s						
KK31	**Karatay Array**	**66.10**	**317**	P	**P**	**17 42 22.1**	**-1.0**
KK31				IAmb	IAmb	17 42 23.3	
	comp=Z,2.9nm,0.9s						
KKAR	**Karatay Array**	**66.10**	**317**	P	**P**	**17 42 22.3**	**-0.8**
KKAR				IAmb	IAmb	17 42 23.3	
	comp=Z,2.9nm,0.9s						
TIXI	**Tiksi**	**69.70**	**360**	P	**P**	**17 42 45.4**	**+0.3**
BRVK	**Borovoye**	**70.16**	**327**	P	**P**	**17 42 47.6**	**-0.7**
BRVK				IAmb	IAmb	17 42 48.2	
	comp=Z,3.3nm,0.7s						
NRIK	**Noril'sk**	**72.78**	**346**	P	**P**	**17 43 03.3**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=79,slow=5.2,SNR=2.2						
NRIK	**Noril'sk**	**72.78**	**346**	IAmb	IAmb	17 43 12.9	
	comp=Z,3.0nm,1.2s						
SOCY	**Socotra**	**74.90**	**282**	P	**P**	**17 43 14.6**	**-2.8**
SOCY				IAmb	IAmb	17 43 17.8	
	comp=Z,6.5nm,1.1s						
ABKAR	**Akbulak array**	**74.99**	**321**	P	**P**	**17 43 15.3**	**-1.8**
ABKAR	**Akbulak array**	**74.99**	**321**	P	**P**	**17 43 15.4**	**-1.7**
ABKAR				IAmb	IAmb	17 43 17.0	
	comp=Z,2.0nm,0.8s						
VNDA	**Vanda**	**81.30**	**173**	P	**P**	**17 43 52.0**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=334,slow=7.3,SNR=6.4						
VNDA	**Vanda**	**81.30**	**173**	IAmb	IAmb	17 44 15.6	
	comp=Z,4.4nm,1.5s						

*NEIC **10** 17:41:14.1±1.9, 14°.45N±0°.08×92°.51W±0°.03, h74km±9km, Error ellipse: s-maj=12.5km s-min=3.6km az=193.0*
*MEX **10** 17:41:15.3±1.1, 14°.58N×92°.35W, h87km±12km, MD4.4*
*IDC **10** 17:41:17.7±4.2, 14°.74N×92°.52W, h75km±24km, mb3.3/4, mb1 3.7/7, mb1mx3.3/51, mbtmp3.6/7, Error ellipse: s-maj=68.9km s-min=16.6km az=15.0*

ISC 10 17:41:14.9±1.0, 14°.50N±0°.07×92°.52W±0°.05, h70km±7km, n40,σ1§58/52, mb4.0/6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.48**	**30**	*i* P	**Pn**	**17 41 27.0**	**-0.5**
THIG				*i* S	**Sn**	**17 41 36.7**	**0.0**
THIG		**0.48**	**30**		**Pn**	**17 41 27.0**	**-0.5**
THIG					**Sn**	**17 41 36.7**	**0.0**
RTAL	**Retalhuleu**	**0.80**	**88**		**Pn**	**17 41 30.6**	**-0.3**
RTAL				Sn	**Sn**	**17 41 42.2**	**-0.5**
HUEH	**Huehuetenango**	**1.28**	**50**		**Pn**	**17 41 38.1**	**+1.0**
HUEH				Sn	**Sn**	**17 41 55.5**	**+1.7**
PCIG		**1.38**	**331**	*i* P	**Pn**	**17 41 38.5**	**+0.3**
PCIG				*i* S	**Sn**	**17 41 55.8**	**-0.1**
PCIG		**1.38**	**331**		**Pn**	**17 41 38.5**	**+0.3**
PCIG					**Sn**	**17 41 55.8**	**-0.1**
CCIG	**Comitan**	**1.81**	**12**	*i* P	**Pn**	**17 41 46.2**	**+2.0**
CCIG				*i* S	**Sn**	**17 42 07.8**	**+1.4**
CCIG	**Comitan**	**1.81**	**12**		**Pn**	**17 41 45.7**	**+1.5**
CCIG	**Comitan**	**1.81**	**12**		**Sn**	**17 42 07.8**	**+1.4**
APG	**El Apazote**	**2.05**	**75**	P	**Pn**	**17 41 48.0**	**+0.6**
	42nm,0.3s,baz=283,slow=7.5,SNR=130						
APG				S	**Sn**	**17 42 15.2**	**+3.1**
	52nm,0.3s,baz=162,slow=20,SNR=7.9						
TGIG		**2.34**	**346**	*i* P	**Pn**	**17 41 51.1**	**-0.1**
TGIG				*e*S	**Sn**	**17 42 17.8**	**-1.2**
TGIG		**2.34**	**346**		**Pn**	**17 41 51.6**	**+0.3**
TGIG					**Sn**	**17 42 17.8**	**-1.2**
MTO3	**Montecristo**	**3.06**	**91**		**Pn**	**17 42 00.4**	**-0.7**
ESQI	**Esquipulas**	**3.07**	**88**		**Pn**	**17 42 01.5**	**+0.3**
SNET	**Serv Nac Est T**	**3.29**	**104**	Pn	**Pn**	**17 42 04.4**	**+0.4**
CMIG	**Matias Romero**	**3.44**	**319**	P	**Pn**	**17 42 06.6**	**+0.4**
	4.5nm,0.3s,baz=147,slow=12,SNR=18						
CMIG				S	**Sn**	**17 42 41.8**	**-4.0**
	19nm,0.3s,baz=107,slow=12,SNR=6.4						
CMIG	**Matias Romero**	**3.44**	**319**	*e*P	**Pn**	**17 42 07.3**	**+1.1**
CMIG				*e*S	**Sn**	**17 42 45.3**	**-0.5**
CMIG	**Matias Romero**	**3.44**	**319**		**Pn**	**17 42 07.3**	**+1.1**
CMIG					**Sn**	**17 42 45.3**	**-0.5**
PETF	**Flores**	**3.51**	**46**		**Pn**	**17 42 07.6**	**+0.6**
PETF				Sn	**Sn**	**17 42 45.5**	**-1.8**
CRIN	**San Cristobal**	**5.61**	**108**	Pn	**Pn**	**17 42 35.0**	**-0.8**
BOAB	**BOACO BROADBAN**	**5.96**	**106**	Pn	**Pn**	**17 42 51.5**	**-2.8**
TEIG	**Tepich**	**6.99**	**35**	P	**Pn**	**17 42 53.9**	**-0.7**
	20nm,0.3s,baz=226,slow=2.0,SNR=67						
TEIG				S	**Sn**	**17 44 07.2**	**-5.5**
	baz=154,slow=18,SNR=0.9						
TEIG	**Tepich**	**6.99**	**35**	*i* P	**Pn**	**17 42 52.0**	**-2.6**
RIOS	**Rincon, Osa**	**10.53**	**122**	Pn	**Pn**	**17 43 41.2**	**-1.8**
SOR	**Soroa**	**12.21**	**46**	Pn	**Pn**	**17 44 05.5**	**-0.5**
061Z	**Ochoppi**	**15.69**	**42**		**Pn**	**17 44 51.5**	**-0.4**
TXAR	**Lajitas Array**	**18.01**	**327**	P	**Pn**	**17 45 21.3**	**+0.6**
	0.1nm,0.3s,baz=148,slow=12,SNR=6.0						
MIAR	**Mount Ida**	**19.99**	**357**	P	**Pn**	**17 45 43.7**	**-0.3**
GOGA	**Godfrey**	**20.55**	**22**	P	**P**	**17 45 46.2**	**-1.6**
GOGA				IAmb	IAmb	17 45 57.3	
	comp=Z,14nm,0.9s						
Y52A	**Lilburn**	**20.75**	**20**	P	**P**	**17 45 49.1**	**-0.9**
Y52A				IAmb	IAmb	17 46 05.8	
	comp=Z,19nm,1.1s						
W52A	**Murphy**	**21.92**	**19**	P	**P**	**17 46 01.4**	**-1.1**
W52A				IAmb	IAmb	17 46 29.4	
	comp=Z,9.9nm,0.8s						
TKL	**Tuckaleechee C**	**22.49**	**19**	P	**P**	**17 46 06.0**	**-2.6**
TKL				IAmb	IAmb	17 46 29.8	
	comp=Z,14nm,0.8s						
NVAR	**Mina Array Bea**	**32.98**	**321**	P	**P**	**17 47 45.7**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=138,slow=8.3,SNR=3.3						
YKA	**Yellowknife Ar**	**50.43**	**347**	P	**P**	**17 50 04.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=149,slow=7.9,SNR=8.3						
INK	**Inuvik**	**59.83**	**344**	P	**P**	**17 51 12.9**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=133,slow=5.8,SNR=6.5						
ILAR	**Eielson Array**	**62.19**	**337**	P	**P**	**17 51 29.6**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=116,slow=6.1,SNR=5.1						
H11N3	**WAKE ISLAND Hy**	**94.82**	**292**	T	T	19 39 50.3	
	baz=68						
H11N2	**WAKE ISLAND Hy**	**94.83**	**292**	T	T	19 39 49.6	
	baz=68						
H11N1	**WAKE ISLAND Hy**	**94.84**	**292**	T	T	19 39 51.4	
	baz=68						
CMAR	**Chiang Mai Arr**	**145.36**	**341**	PKPbc	**PKPab**	**18 00 46.5**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=18,slow=3.2,SNR=4.5						

JMA 10 18:35:13.9±0.1, 24°.94N×123°.31E, h25km±4km, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.55**	**210**	P	Pb	18 35 24.6	-0.3
IRIF	**Iriomote-Funau**	**0.71**	**148**	P	Pb	18 35 27.3	-0.4
IRIF				S	Sb	18 35 36.8	-0.3
JKRS	**Kuro-shima**	**0.95**	**138**	P	Pn	18 35 31.2	-0.4
JKRS				S	Sb	18 35 43.3	-0.4
JIJ	**Ishigaki jima**	**0.95**	**127**	P	Pn	18 35 31.0	-0.7
JIJ				*e*S	Sb	18 35 43.2	-0.7
JISG	**Ishigakijimahi**	**0.97**	**111**	P	Pn	18 35 31.8	-0.2
JISG				S	Sb	18 35 43.8	-0.8
HATJ	**Hateruma jima**	**0.99**	**153**	P	Pn	18 35 31.8	-0.4

TAP 10 18:35:15.6, 24°.92N×122°.03E, h22km, ML1.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.09**	**336**	*i* P	Pb	18 35 19.9	+0.1
	baz=341						
TWB1				*i* S	Sb	18 35 22.7	0.0
	baz=341						
TIPB	**Shuangxi**	**0.19**	**285**	*i* P	Pb	18 35 21.2	+0.1
	baz=285						
TIPB				*i* S	Sb	18 35 24.5	-0.5
	baz=285						
TNOU	**National Taiwa**	**0.32**	**314**	P	Pb	18 35 21.1	-1.7
	baz=314						
TNOU				S	Sb	18 35 28.3	+0.6
	baz=314						
NDS	**Dongshan**	**0.41**	**225**	P	Pb	18 35 25.0	+0.9
	baz=225						
NDS				S	Sb	18 35 30.0	+0.1
	baz=225						
YM04	**YM04**	**0.50**	**297**	*e*S	Sn	18 35 34.2	-1.3
	baz=297						
ENTT	**Nioudou**	**0.51**	**236**	P	Pb	18 35 26.2	+0.4
	baz=236						
YM03	**YM03**	**0.51**	**300**	*e*P	Pb	18 35 25.7	-0.3
	baz=299						
YM03				*e*S	Sb	18 35 33.0	0.0
	baz=299						

NNC 10 18:43:01.3±6.6, 37°.12N×71°.34E, h0km, mb3.7, mpv3.3, 1C-3D, Error ellipse: s-maj=51.6km s-min=48.2km az=146.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.01**	**354**	⇓P	Pn	18 44 31.2	-0.4
	0.6nm,0.2s,baz=177,slow=12,SNR=20						
KK31				⇑S	Sn	18 45 42.2	+1.1
	1.1nm,0.5s,baz=181,slow=24,SNR=4.4						
AAK	**Ala-Archa**	**6.03**	**23**	P	Pn	18 44 32.4	+0.5
	1.8nm,0.5s						
AAK				S	Sn	18 45 45.0	+3.4
	1.1nm,0.9s						
TKM2	**Tokmak 2**	**6.65**	**28**	⇓P	Pn	18 44 40.6	0.0
	1.2nm,0.5s						
TKM2				⇓S	Sn	18 45 55.6	-1.6
	2.8nm,0.8s						

*IDC **10** 18:49:40.2±2.5, 36°.44N×70°.85E, h216km±22km, mb3.4/16, mb1 3.5/22, mb1mx3.2/64, mbtmp4.0/22, Error ellipse: s-maj=17.9km s-min=12.7km az=28.0*
*MOS **10** 18:49:40.7±0.9, 36°.63N×70°.86E, h225km, mb4.2/9, Error ellipse: s-maj=10.3km s-min=4.6km az=77.0*
*NEIC **10** 18:49:41.5±2.2, 36°.62N±0°.06×70°.84E±0°.09, h221km±7km, mb4.2/27, Error ellipse: s-maj=10.3km s-min=8.7km az=67.0*
*BJI **10** 18:49:41.5±0.0, 36°.63N×70°.93E, h225km, mB4.5/8, mb3.8/10*
*NNC **10** 18:49:44.2±2.9, 36°.88N×70°.92E, h225km±22km, mb3.0, mpv3.9, Error ellipse: s-maj=25.6km s-min=15.9km az=29.0*

**ISC 10 18:49:41.1±0.4, 36°.56N±0°.04×70°.92E±

	SNR=5.3								
USP	**Ospenovka**	**7.24**	**21**		P		**Pn**	18 51 24.7	**+0.2**
	SNR=19								
TKM2	**Tokmak 2**	**7.30**	**28**		P		**Pn**	18 51 25.7	**+0.2**
	SNR=9.0								
TKM2	**Tokmak 2**	**7.30**	**28**		⇓P		**Pn**	18 51 25.4	**-0.1**
	comp=Z,4.5nm,0.5s								
TKM2					⇓S		**S**	18 52 46.2	**-2.6**
	comp=Z,14nm,0.8s								
TKM2	**Tokmak 2**	**7.30**	**28**		PN		**Pn**	18 51 25.4	**-0.1**
TKM2					S		**S**	18 52 46.2	**-2.6**
HRA	**Herat**	**7.40**	**256**				**Pn**	18 51 26.2	**-0.8**
SMLA	**Simla**	**7.50**	**134**		*e*P		**Pn**	18 51 28.0	**0.0**
SMLA					*e*S		**S**	18 52 48.1	**-5.2**
SMLA					IAML			18 52 52.7	
	comp=N,117nm,0.3s								
SMLA					IAML			18 52 53.0	
	comp=E,266nm,0.4s								
TNSS	**Tian-Shan**	**7.96**	**34**		*e*P		**Pn**	18 51 33.7	**-0.4**
	baz=34								
TNSS	**Tian-Shan**	**7.96**	**34**		*e*PN		**Pn**	18 51 33.7	**-0.4**
AAA	**Alma-Ata**	**8.08**	**33**		*e*P		**Pn**	18 51 35.4	**0.0**
	baz=33								
AAA	**Alma-Ata**	**8.08**	**33**		*e*PN		**Pn**	18 51 35.3	**0.0**
MDOK	**Medeo**	**8.10**	**34**		*e*P		**Pn**	18 51 36.0	**+0.2**
	baz=34								
MDOK	**Medeo**	**8.10**	**34**		P		**Pn**	18 51 36.3	**+0.5**
	comp=E,4.5nm,1.1s								
MDOK	**Medeo**	**8.10**	**34**		*e*PN		**Pn**	18 51 35.9	**+0.2**
KUU	**Kurty**	**8.41**	**28**		*e*P		**Pn**	18 51 40.2	**+0.5**
	baz=28								
KUU	**Kurty**	**8.41**	**28**		*e*PN		**Pn**	18 51 40.1	**+0.5**
DDI	**Dehra Dun**	**8.61**	**134**		*e*S		**S**	18 53 13.9	**-5.8**
DDI					IAML			18 53 16.5	
	comp=N,159nm,0.2s								
DDI					IAML			18 53 17.2	
	comp=E,120nm,0.4s								
SATY	**Saty**	**8.68**	**39**		*e*P		**Pn**	18 51 43.1	**0.0**
	baz=39								
SATY	**Saty**	**8.68**	**39**		*e*PN		**Pn**	18 51 43.1	**0.0**
BTLS	**Baital**	**8.80**	**15**		*e*P		**Pn**	18 51 44.0	**-0.5**
	baz=15								
BTLS	**Baital**	**8.80**	**15**		*e*PN		**Pn**	18 51 44.0	**-0.5**
UZB	**Uzynbulak**	**9.06**	**41**		*e*P		**Pn**	18 51 48.0	**-0.1**
	baz=41								
UZB	**Uzynbulak**	**9.06**	**41**		*e*P		**Pn**	18 51 47.9	**-0.1**
KPKS	**Kokpek**	**9.11**	**38**		*i* P		**Pn**	18 51 48.1	**-0.5**
	baz=38								
KPKS	**Kokpek**	**9.11**	**38**		*i* P		**Pn**	18 51 48.1	**-0.5**
PDGK	**Podgornoye**	**9.43**	**42**		⇑P		**Pn**	18 51 51.8	**-1.0**
	comp=E,2.0nm,0.8s								
PDGK	**Podgornoye**	**9.43**	**42**		P		**Pn**	18 51 51.8	**-1.0**
GEYT	**Alibeck**	**10.30**	**281**		P		**Pn**	18 52 02.0	**-1.9**
	comp=E,0.3nm,0.3s,baz=122,slow=9.5,SNR=1.6								
GYA0B	**ALIBECK ARRAY**	**10.30**	**281**		Pn		**Pn**	18 52 04.2	**+0.3**
MAKZ	**Makanchi**	**13.14**	**35**		⇑P		**Pn**	18 52 38.9	**-0.6**
	comp=E,3.8nm,0.7s								
MAKZ	**Makanchi**	**13.14**	**35**		P		**Pn**	18 52 39.0	**-0.6**
MAKZ	**Makanchi**	**13.14**	**35**		Pn		**Pn**	18 52 39.0	**-0.6**
MK31	**Makanchi Array**	**13.28**	**36**		⇑P		**Pn**	18 52 40.9	**-0.4**
	comp=E,1.2nm,0.7s,baz=218,slow=14,SNR=20								
MK31	**Makanchi Array**	**13.28**	**36**		*c*eP		**Pn**	18 52 41.2	**-0.1**
MK31	**Makanchi Array**	**13.28**	**36**				**Pn**	18 52 41.1	**-0.1**
MKAR	**Makanchi Array**	**13.28**	**36**		P		**Pn**	18 52 41.2	**0.0**
	comp=E,0.2nm,0.3s,baz=220,slow=15,SNR=12								
MKAR	**Makanchi Array**	**13.28**	**36**		*i* P		**Pn**	18 52 41.5	**+0.2**
MKAR					pmax		pmax		
	comp=Z,1.0nm,0.4s								
MKAR	**Makanchi Array**	**13.28**	**36**		P		**Pn**	18 52 41.0	**-0.3**
BHPL	**Bhopal**	**14.42**	**155**	⇑	*e*P		**P**	18 52 58.0	**+1.7**
BHPL					IAmb		IAmb	18 52 58.6	
	comp=Z,31nm,0.7s								
BHPL					*e*S		**S**	18 55 28.5	**-6.6**
WMQ	**Urumqi**	**14.71**	**55**		*e*P		**P**	18 53 01.0	**+1.5**
AB31	**Akbulak array**	**15.00**	**331**	⇑	P		**Pn**	18 53 00.4	**-1.9**
	comp=Z,1.9nm,0.6s,baz=143,slow=11,SNR=30								
AB31					⇓S		**S**	18 55 50.9	**+2.9**
	comp=Z,5.9nm,1.4s								
AB31	**Akbulak array**	**15.00**	**331**		P		**Pn**	18 53 00.4	**-1.9**
AB31					S		**S**	18 55 50.9	**+2.9**
ABKAR	**Akbulak array**	**15.00**	**331**				**Pn**	18 53 01.2	**-1.0**
ABKAR	**Akbulak array**	**15.00**	**331**		P		**Pn**	18 53 01.2	**-1.0**
KURBB	**Kurchatov Arra**	**15.09**	**19**		P		**Pn**	18 53 02.3	**-1.0**
	comp=Z,0.2nm,0.3s,baz=210,slow=10,SNR=17								
KURBB	**Kurchatov Arra**	**15.09**	**19**		⇓P		**Pn**	18 53 01.3	**-2.0**
	comp=Z,3.6nm,0.7s								
KURBB	**Kurchatov Arra**	**15.09**	**19**		P		**Pn**	18 53 01.3	**-2.0**
KURK	**Kurchatov**	**15.20**	**19**		P		**Pn**	18 53 02.3	**-2.3**
KURK	**Kurchatov**	**15.20**	**19**		P		**Pn**	18 53 02.3	**-2.3**
SEM	**Semipalatinsk**	**15.39**	**23**		*e*P		**P**	18 53 07.1	**+0.1**
	baz=23								
SEM	**Semipalatinsk**	**15.39**	**23**		*e*P		**P**	18 53 07.1	**+0.1**
BVAR	**Borovoye Array**	**16.47**	**359**		P		**P**	18 53 19.1	**+0.5**
	comp=Z,0.9nm,0.3s,baz=211,slow=17,SNR=9.9								
BRVK	**Borovoye**	**16.50**	**359**		⇓P		**P**	18 53 19.3	**+0.3**
	comp=Z,4.4nm,0.7s								
BRVK	**Borovoye**	**16.50**	**359**	*c*	*e*P		**Pn**	18 53 19.9	**-0.3**
BRVK					pmax		pmax		
	comp=Z,13nm,1.7s								
BRVK	**Borovoye**	**16.50**	**359**		P		**P**	18 53 18.9	**-0.1**
BRVK					IAmb		IAmb	18 53 23.0	
	comp=Z,6.0nm,0.9s								
AKTO	**Aktyubinsk**	**16.70**	**330**		P		**P**	18 53 22.0	**+0.9**
	comp=Z,1.3nm,0.3s,baz=140,slow=10,SNR=39								
AKTO					S		**S**	18 56 22.3	**-1.9**
	comp=Z,0.1nm,0.3s,baz=156,slow=20,SNR=1.6								
AKTO	**Aktyubinsk**	**16.70**	**330**		⇓P		**P**	18 53 21.4	**+0.2**
	comp=Z,15nm,0.8s								
AKTO					⇑S		**S**	18 56 21.5	**-2.6**
	comp=Z,4.3nm,1.4s								
GTK	**Tadong**	**17.59**	**117**	⇑	*e*P		**Pn**	18 53 33.5	**+0.1**
GTK					IAmb		IAmb	18 53 35.0	
	comp=Z,8.0nm,0.8s								
DGZ	**Jazzator, Alta**	**17.77**	**37**	⇓	*e*P		**Pn**	18 53 34.7	**-0.7**
DGZ					pmax		pmax		
	comp=Z,2.0nm,0.7s								
LSA	**Lhasa**	**18.26**	**106**		P		**Pn**	18 53 41.3	**-0.3**
LSA					pmax		pmax		
	comp=Z,6.0nm,0.7s								
LSA	**Lhasa**	**18.26**	**106**		P		**Pn**	18 53 41.3	**-0.3**
LSA					IAmb		IAmb	18 53 46.1	
	comp=Z,5.6nm,0.7s								
ZAA0	**Zalesovo Array**	**19.89**	**25**	⇑	P		**P**	18 53 55.0	**-0.6**
	comp=Z,0.7nm,0.7s								
ZAA0	**Zalesovo Array**	**19.89**	**25**		P		**P**	18 53 55.7	**+0.1**
ZAA0					IAmb		IAmb	18 53 56.8	
	comp=Z,3.6nm,0.7s								
ZALV	**Zalesovo Beam**	**19.89**	**25**		P		**P**	18 53 55.8	**+0.2**
	comp=Z,4.2nm,0.6s,baz=216,slow=11,SNR=19								
ZALV					S		**S**	18 57 26.8	**-0.2**
	comp=Z,0.9nm,0.7s,baz=204,slow=17,SNR=3.2								
ZALV	**Zalesovo Beam**	**19.89**	**25**		*i* P		**P**	18 53 56.0	**+0.4**
ZALV					pmax		pmax		
	comp=Z,4.0nm,0.6s								
ZALV	**Zalesovo Beam**	**19.89**	**25**		P		**P**	18 53 55.6	**+0.1**
SHL	**Shillong**	**20.99**	**116**		P		**P**	18 54 08.3	**+0.5**
SHL					pmax		pmax		
	comp=Z,16nm,1.0s								
SHL	**Shillong**	**20.99**	**116**		*e*P		**P**	18 54 08.5	**+0.7**
SHL					IAmb		IAmb	18 54 10.6	
	comp=Z,14nm,1.1s								
SHL	**Shillong**	**20.99**	**116**		P		**P**	18 54 08.3	**+0.5**
SHL					IAmb		IAmb	18 54 10.9	
	comp=Z,16nm,1.0s								
ARU	**Arti**	**21.55**	**341**		P		**P**	18 54 13.3	**+0.3**
	comp=Z,1.4nm,0.7s,baz=180,slow=10.0,SNR=6.1								
ARU	**Arti**	**21.55**	**341**	*d*	*i* P		**P**	18 54 15.1	**+2.1**
ARU					S		**S**	18 58 01.7	**+5.2**
ARU					pmax		pmax		
	comp=Z,6.0nm,0.9s								
ARU	**Arti**	**21.55**	**341**		P		**P**	18 54 13.3	**+0.3**
ARU					IAmb		IAmb	18 54 16.1	
	comp=Z,4.9nm,0.8s								
MOKO	**MOKOCHONG**	**22.52**	**110**		*e*P		**P**	18 54 24.4	**+1.8**
MOKO					AMP			18 54 24.6	
	comp=Z,7.7nm,0.6s								
BELG	**Belogornoye**	**22.80**	**321**		P		**P**	18 54 25.8	**+1.2**
	comp=Z,12nm,0.7s,baz=166,slow=5.2,SNR=4.5								
BELG	**Belogornoye**	**22.80**	**321**	⇑	*e*P		**P**	18 54 25.0	**+0.4**
BELG					pmax		pmax		
	comp=Z,2.0nm,0.8s								
GTA	**Gaotai**	**22.91**	**74**		*e*P		**P**	18 54 26.3	**+0.4**
GTA					pP		pP	18 55 04.4	-1.8
KIRV	**Kirov**	**26.16**	**334**		P		**P**	18 54 56.0	**+1.2**
	comp=Z,4.8nm,0.5s,baz=124,slow=5.2,SNR=4.1								
KIRV	**Kirov**	**26.16**	**334**	⇑	*e*P		**P**	18 54 53.5	**-1.3**
SONM	**Songino Array**	**28.35**	**55**		P		**P**	18 55 16.1	**+1.4**
	comp=Z,0.3nm,0.7s,baz=263,slow=10.0,SNR=3.0								
ULN	**Ulaanbaatar**	**28.80**	**56**	⇑	*e*P		**P**	18 55 18.6	**0.0**
ULN					pmax		pmax		
	comp=Z,3.0nm,2.5s								
PRGR	**Permogoe**	**29.69**	**336**		*e*P		**P**	18 55 23.3	**-2.8**
PRGR					pmax		pmax		
	comp=Z,7.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**30.54**	**119**		P		**P**	18 55 35.1	**+1.0**
	comp=Z,0.9nm,0.9s,baz=295,slow=8.2,SNR=7.4								
CMAR	**Chiang Mai Arr**	**30.54**	**119**		*i* P		**P**	18 55 36.2	**+2.1**
CMAR					pmax		pmax		
	comp=Z,1.0nm,0.9s								
HHC	**Hu-ho-hao-te**	**31.80**	**70**		*e*P		**P**	18 55 47.4	**+2.3**
HHC					pmax		pmax		
	comp=Z,150nm,5.6s								
NRIK	**Noril'sk**	**34.08**	**10**		P		**P**	18 56 05.5	**+1.3**
	comp=Z,3.1nm,0.6s,baz=210,slow=4.8,SNR=4.2								
NRIK	**Noril'sk**	**34.08**	**10**	*c*	*e*P		**P**	18 56 05.8	**+1.6**
NRIK					pmax		pmax		
	comp=Z,2.0nm,0.6s								
NRIK	**Noril'sk**	**34.08**	**10**		P		**P**	18 56 04.1	**-0.1**
ALN	**Alexandroupoli**	**34.98**	**291**		P		**P**	18 56 13.0	**+0.7**
ALN					pmax		pmax		
	comp=Z,19nm,1.3s								
ALN	**Alexandroupoli**	**34.98**	**291**		P		**P**	18 56 13.0	**+0.7**
ALN					IAmb		IAmb	18 56 45.3	
	comp=Z,19nm,1.3s								
KARP	**Karpathos**	**35.17**	**282**		P		**P**	18 56 16.9	**+2.8**
BURAR	**Bucovina Array**	**35.20**	**303**		P		**P**	18 56 13.9	**-0.4**
LVZ	**Lovozero**	**37.38**	**338**		P		**P**	18 56 33.2	**+0.9**
LVZ					pmax		pmax		
	comp=Z,25nm,1.4s								
LVZ	**Lovozero**	**37.38**	**338**		P		**P**	18 56 33.2	**+0.9**
FIA1	**FINESS Array S**	**37.40**	**326**		P		**P**	18 56 33.4	**+0.9**
FIA1					IAmb		IAmb	18 56 55.5	
	comp=Z,20nm,1.2s								
FINES	**FINESS Array B**	**37.40**	**326**		P		**P**	18 56 33.0	**+0.5**
	comp=Z,1.7nm,0.6s,baz=117,slow=7.2,SNR=8.2								
FINES	**FINESS Array B**	**37.40**	**326**		*i* P		**P**	18 56 33.4	**+1.0**
FINES					pmax		pmax		
	comp=Z,2.0nm,0.6s								
FINES	**FINESS Array B**	**37.40**	**326**		P		**P**	18 56 33.5	**+1.0**
KEV	**Kevo**	**40.72**	**338**		P		**P**	18 57 00.5	**+0.6**
KEV					pmax		pmax		
	comp=Z,66nm,1.6s								
KEV	**Kevo**	**40.72**	**338**		P		**P**	18 57 00.5	**+0.6**
SCTE	**Santa Cesarea**	**40.82**	**291**		P		**P**	18 57 01.1	**0.0**
ARCES	**ARCESS Array B**	**41.06**	**338**		P		**P**	18 57 03.4	**+0.7**
	comp=Z,2.7nm,0.5s,baz=113,slow=7.8,SNR=33								
ARCES	**ARCESS Array B**	**41.06**	**338**		*e*P		**P**	18 57 03.9	**+1.2**
ARCES	**ARCESS Array B**	**41.06**	**338**		P		**P**	18 57 03.6	**+1.0**
ARCES					IAmb		IAmb	18 57 04.5	
	comp=Z,5.2nm,0.8s								
IPM	**Ipoh**	**42.23**	**132**		P		**P**	18 57 13.5	**+0.7**
IPM					IAmb		IAmb	18 57 31.3	
	comp=Z,7.7nm,1.1s								
NC303	**NORSAR Array S**	**44.24**	**323**		P		**P**	18 57 28.3	**+0.1**
NC303					IAmb		IAmb	18 57 48.5	
	comp=Z,17nm,1.5s								
NB201	**NORSAR Array S**	**44.26**	**323**		P		**P**	18 57 28.7	**+0.2**
NOA	**NORSAR Array B**	**44.29**	**323**		P		**P**	18 57 28.3	**-0.4**
	comp=Z,1.4nm,0.7s,baz=97,slow=7.8,SNR=5.1								
NOA	**NORSAR Array B**	**44.29**	**323**		*e*P		**P**	18 57 28.7	**-0.1**
NBO00	**NORSAR Array S**	**44.51**	**323**		P		**P**	18 57 30.0	**-0.4**
NBO00					IAmb		IAmb	18 57 58.6	
	comp=Z,10nm,1.0s								
TIXI	**Tiksi**	**45.74**	**22**	⇑	*e*P		**P**	18 57 39.9	**0.0**
TIXI					pmax		pmax		
	comp=Z,18nm,1.7s								
TIXI	**Tiksi**	**45.74**	**22**		P		**P**	18 57 40.0	**+0.1**
YOJ	**Yonaguni jima**	**45.97**	**90**		P		**P**	18 57 44.7	**+2.4**
YOJ					pmax		pmax		
	comp=Z,161nm,1.1s								
YOJ	**Yonaguni jima**	**45.97**	**90**		P		**P**	18 57 44.7	**+2.4**
SPA0	**Spitsbergen Ar**	**47.42**	**347**		P		**P**	18 57 54.0	**+1.1**
SPA0					IAmb		IAmb	18 57 59.8	
	comp=Z,33nm,1.3s								
TOA0	**Torodi Ar. Sit**	**65.66**	**269**		P		**P**	19 00 00.9	**-1.1**
TOA0					IAmb		IAmb	19 00 42.9	
	comp=Z,9.7nm,1.6s								
TORD	**Torodi Ar. Bea**	**65.66**	**269**		P		**P**	19 00 00.5	**-1.6**
	comp=Z,1.0nm,0.5s,baz=49,slow=5.8,SNR=7.2								
TORD	**Torodi Ar. Bea**	**65.66**	**269**		P		**P**	19 00 00.8	**-1.3**
TOLK	**Toolik Lake Re**	**70.88**	**15**		P		**P**	19 00 34.8	**+1.2**
TOLK					IAmb		IAmb	19 00 35.3	
	comp=Z,2.6nm,0.6s								
COLD	**Coldfoot**	**71.93**	**16**		P		**P**	19 00 41.1	**+1.2**
COLD					IAmb		IAmb	19 01 16.9	
	comp=Z,6.0nm,1.4s								
IMAR	**Indian Mountai**	**72.14**	**18**		P		**P**	19 00 41.6	**+0.5**
BMAR	**Burnt Mountain**	**72.90**	**14**		P		**P**	19 00 47.3	**+1.6**
INK	**Inuvik**	**73.86**	**9**		P		**P**	19 00 50.6	**-0.5**
	comp=Z,0.8nm,0.5s,baz=355,slow=8.2,SNR=4.5								
INK	**Inuvik**	**73.86**	**9**		P		**P**	19 00 51.2	**+0.1**
INK					pmax		pmax		
	comp=Z,3.0nm,1.3s								
INK	**Inuvik**	**73.86**	**9**		P		**P**	19 00 51.2	**+0.1**
ILAR	**Eielson Array**	**74.74**	**16**		P		**P**	19 00 56.0	**-0.2**
	comp=Z,0.2nm,0.4s,baz=306,slow=5.4,SNR=4.8								
YKA	**Yellowknife Ar**	**81.19**	**3**		P		**P**	19 01 32.0	**+0.3**
	comp=Z,0.4nm,0.4s,baz=354,slow=5.1,SNR=16								
YKA	**Yellowknife Ar**	**81.19**	**3**		*i* P		**P**	19 01 32.4	**+0.7**
WRA	**Warramunga Arr**	**82.08**	**122**		P		**P**	19 01 35.9	**-1.1**
	comp=Z,0.4nm,0.7s,baz=325,slow=5.0,SNR=6.9								
WRA	**Warramunga Arr**	**82.08**	**122**		*i* P		**P**	19 01 36.5	**-0.5**
ASAR	**Alice Springs**	**84.34**	**125**		P		**P**	19 01 47.5	**-1.0**
	comp=Z,0.4nm,0.7s,baz=304,slow=5.0,SNR=3.1								

JMA ***10*** *18:52:53.3, 24°.20N×121°.86E, h29km±1km, M2.2*
TAP ***10*** *18:52:53.5, 24°.27N×121°.86E, h25km, ML3.3, C*
ISC 10 18:52:53.3±0.9, 24°.23N±0°.01×121°.90E±0°.02, h18km±3km,
n133, s0°61/262**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.24**	**332**	*i* P			**Pg**	18 52 59.2	**+0.4**
	baz=337								
EWUT				*i* S			**Sg**	18 53 03.2	**+0.6**
	baz=337								
NACB	**Ninganchiao**	**0.29**	**259**	*i* P			**Pb**	18 52 59.9	**0.0**
	baz=248								
NACB				*i* S			**Sg**	18 53 04.7	**+0.9**
	baz=248								
TWD	**Chiawan**	**0.32**	**242**	*i* P			**Pb**	18 53 00.6	**+0.2**
	baz=239								
TWD				*i* S			**Sb**	18 53 06.4	**+1.2**
	baz=239								
HWA	**Hwalien**	**0.37**	**227**	P			**Pb**	18 53 02.3	**+0.9**
	baz=218								
HWA				S			**Sn**	18 53 09.6	**-1.0**
	baz=218								
TWC	**Suao**	**0.38**	**353**	*i* P			**Pg**	18 53 01.2	**0.0**
	baz=4.0								
TWC				*i* S			**Sg**	18 53 06.8	**+0.2**
	baz=4.0								
ETLH	**Xiulin Townshi**	**0.38**	**266**	*i* P			**Pb**	18 53 01.7	**0.0**
	baz=259								
ETLH				S			**Sg**	18 53 07.1	**+0.3**
	baz=259								
NDS	**Dongshan**	**0.43**	**337**	*i* P			**Pg**	18 53 02.2	**0.0**
	baz=342								
NDS				*i* S			**Sb**	18 53 08.7	**-0.1**
	baz=342								
ENTT	**Nioudou**	**0.51**	**323**	*i* P			**Pb**	18 53 03.4	**-0.3**
	baz=322								
ENTT				*i* S			**Sb**	18 53 10.4	**-0.4**
	baz=322								
NDT	**Datong Townshi**	**0.51**	**316**	*i* P			**Pb**	18 53 03.5	**-0.3**
	baz=314								
NDT				*i* S			**Sb**	18 53 10.6	**-0.3**
	baz=314								
NNSB	**Datong**	**0.51**	**293**	*i* P			**Pb**	18 53 02.6	**-1.3**
	baz=288								
NNSB				*i* S			**Sb**	18 53 10.2	**-0.8**
	baz=288								
NNS	**Nan Shan**	**0.53**	**293**	*i* P			**Pb**	18 53 03.7	**-0.4**
	baz=289								
NNS				*i* S			**Sb**	18 53 11.2	**-0.2**
	baz=289								
TWE	**Neicheng**	**0.53**	**336**	*i* P			**Pb**	18 53 03.8	**-0.3**
	baz=342								
TWE				*i* S			**Sb**	18 53 11.2	**-0.2**
	baz=342								
ILA	**Ilan**	**0.55**	**345**	*i* P			**Pg**	18 53 04.6	**+0.3**
	baz=342								
ILA				*i* S			**Sg**	18 53 12.6	**+0.8**
	baz=342								
WHF	**Hehuan Shan**	**0.59**	**262**	*i* P			**Pb**	18 53 04.9	**-0.4**
	baz=256								
WHF				*i* S			**Sg**	18 53 14.1	**+1.0**
	baz=256								
ESL	**Shilin**	**0.60**	**226**	*i* P			**Pb**	18 53 05.0	**-0.2**
	baz=225								
ESL				S			**Sg**	18 53 14.4	**+1.3**
	baz=225								
FUSS	**Fushou**	**0.60**	**272**	*i* P			**Pb**	18 53 05.3	**-0.1**
	baz=267								
FUSS				*i* S			**Sb**	18 53 13.3	**-0.4**
	baz=267								
NTC	**Toucheng**	**0.62**	**354**	*i* P			**Pb**	18 53 05.5	**-0.1**
	baz=356								
NTC				*i* S			**Sg**	18 53 14.3	**+0.3**
	baz=356								
YHNB	**Yeheng**	**0.65**	**312**	*i* P			**Pb**	18 53 05.7	**-0.5**
	baz=310								
YHNB				*i* S			**Sb**	18 53 14.2	**-0.7**
	baz=310								
NWLT	**Wulai**	**0.65**	**326**	*i* P			**Pb**	18 53 05.8	**-0.4**
	baz=323								
NWLT				*i* S			**Sb**	18 53 13.6	**-1.4**
	baz=323								
NSK	**Sanguang**	**0.66**	**312**	*i* P			**Pb**	18 53 05.8	**-0.6**
	baz=310								
NSK				*i* S			**Sb**	18 53 14.6	**-0.8**
	baz=310								
TDCB	**Techi**	**0.68**	**272**	P			**Pb**	18 53 06.5	**-0.2**
	baz=263								
TDCB				S			**Sb**	18 53 15.3	**-0.5**
	baz=263								
CHGB	**Renai**	**0.69**	**256**	*i* P			**Pb**	18 53 06.7	**-0.1**
	baz=243								
CHGB				*i* S			**Sg**	18 53 16.5	**+0.4**
	baz=243								
EGFH	**Guangfu**	**0.71**	**218**	P			**Pg**	18 53 07.3	**+0.1**
	baz=227								
EGFH				S			**Sn**	18 53 18.5	**-0.4**
	baz=227								
TIPB	**Shuangxi**	**0.74**	**355**	*i* P			**Pb**	18 53 07.6	**-0.1**
	baz=3.0								
TIPB				*i* S			**Sb**	18 53 17.5	**-0.1**
	baz=3.0								
TWB1	**Santiao Chiao**	**0.78**	**6**	P			**Pb**	18 53 08.2	**-0.1**
	baz=3.0								
TWB1				S			**Sb**	18 53 18.6	**0.0**
	baz=3.0								
TWA	**Mucha**	**0.80**	**339**	*i* P			**Pb**	18 53 08.7	**0.0**
	baz=331								
TWA				*i* S			**Sb**	18 53 18.3	**-0.9**
	baz=331								
NHDH	**Xindian Distri**	**0.81**	**335**	P			**Pg**	18 53 09.1	**0.0**
	baz=319								
NHDH				*i* S			**Sb**	18 53 19.2	**-0.1**
	baz=319								
TATO	**Taipei**	**0.83**	**333**	*i* P			**Pb**	18 53 09.1	**-0.1**
	baz=319								
TATO				*i* S			**Sb**	18 53 19.6	**-0.5**
	baz=319								
VWDT	**VWDT**	**0.84**	**236**	P			**Pb**	18 53 09.3	**-0.1**
	baz=232								
VWDT				S			**Sg**	18 53 21.4	**+0.5**
	baz=232								
NWF	**Wu-fen Shan**	**0.84**	**353**	*i* P			**Pb**	18 53 09.7	**+0.2**
	baz=348								
NWF				*i* S			**Sg**	18 53 20.9	**0.0**
	baz=348								
WFSB	**Wu-fen Shan**	**0.84**	**353**	P			**Pg**	18 53 09.9	**+0.1**
	baz=348								
WFSB				S			**Sg**	18 53 20.9	**-0.1**
	baz=348								
HGSD	**Ruisui**	**0.86**	**211**	P			**Pb**	18 53 09.5	**-0.1**
	baz=200								
HGSD				*e*S			**Sn**	18 53 23.2	**+0.7**

YM08				S		Sb	18 53 24.2	-0.6
	baz=330							
YM03	**YM03**	**1.00 341**		P		**Pb**	**18 53 11.7**	**-0.4**
	baz=327							
YM03				S		Sb	18 53 24.4	-0.6
	baz=327							
YULB	**Yu-li**	**1.00 214**		P		**Pb**	**18 53 10.9**	**-1.3**
	baz=212							
YULB				S		Sg	18 53 26.6	+0.7
	baz=212							
SBCB	**Hsinchu**	**1.00 304**		*e*P		**Pn**	**18 53 12.4**	**-0.2**
	baz=301							
SBCB				*e*S		Sg	18 53 26.4	+0.3
	baz=301							
TYC	**Yuchr**	**1.01 251**		P		**Pb**	**18 53 11.8**	**-0.5**
	baz=242							
TYC				*e*S		Sn	18 53 25.6	-0.7
	baz=242							
ANP	**Anpu**	**1.01 340**		P		**Pb**	**18 53 11.3**	**-1.0**
	baz=328							
ANP				S		Sn	18 53 26.0	-0.6
	baz=328							
NTST	**Danshui**	**1.02 336**		*e*P		**Pb**	**18 53 12.2**	**-0.1**
	baz=335							
NTST				*e*S		Sg	18 53 27.5	+1.1
	baz=335							
HSN	**Hsinchu**	**1.02 304**		*e*S		**Sg**	**18 53 27.3**	**+0.7**
	baz=304							
EYUL	**Yuli**	**1.03 211**		*e*P		**Pb**	**18 53 11.7**	**-0.9**
	baz=224							
EYUL				*e*S		Sb	18 53 26.1	+0.4
	baz=224							
TWF1	**Yuli**	**1.03 212**		*e*P		**Pb**	**18 53 11.5**	**-1.2**
	baz=224							
TWF1				*e*S		Sb	18 53 26.1	+0.1
	baz=224							
TWQ1	**Liyutan**	**1.04 277**		*e*P		**Pn**	**18 53 12.9**	**-0.1**
	baz=273							
TWQ1				S		Sn	18 53 26.6	-0.4
	baz=273							
YOJ	**Yonaguni jima**	**1.04 77**		P		**Pb**	**18 53 12.9**	**+0.2**
YOJ				S		Sn	18 53 27.1	+0.1
YOJ	**Yonaguni jima**	**1.04 77**		*e*P		**Pn**	**18 53 13.1**	**+0.1**
	baz=71							
YOJ				*e*S		Sg	18 53 28.1	+1.1
	baz=71							
NJN	**Zhunan**	**1.04 296**		*e*P		**Pb**	**18 53 12.6**	**-0.3**
	baz=292							
NJN				*e*S		Sg	18 53 27.6	+0.4
	baz=292							
NSY	**Sanyi**	**1.06 280**		P		**Pg**	**18 53 14.0**	**+0.2**
	baz=276							
NSY				S		Sg	18 53 27.8	+0.1
	baz=276							
NMLH	**Miaoli**	**1.06 287**		P		**Pg**	**18 53 13.8**	**-0.1**
	baz=283							
NMLH				S		Sg	18 53 28.5	+0.8
	baz=283							
TWY	**Chenhua**	**1.08 345**		*e*P		**Pb**	**18 53 13.4**	**0.0**
	baz=345							
TWY				*e*S		Sg	18 53 28.4	+0.1
	baz=345							
WHYT	**Xinyi Township**	**1.10 241**		*e*P		**Pn**	**18 53 13.8**	**-0.1**
	baz=242							
WHYT				*e*S		Sn	18 53 28.6	+0.1
	baz=242							
WWF	**Wufeng**	**1.11 261**		P		**Pg**	**18 53 15.0**	**+0.1**
	baz=256							
WWF				S		Sg	18 53 32.0	+2.4
	baz=256							
TCU	**Taichung**	**1.12 266**		P		**Pb**	**18 53 14.6**	**+0.4**
	baz=262							
TCU				S		Sg	18 53 30.6	+0.8
	baz=262							
YUS	**Yu-Shan**	**1.14 230**		P		**Pn**	**18 53 14.2**	**-0.6**
	baz=228							
YUS				S		Sn	18 53 30.2	0.0
	baz=228							
WJS	**Zhushan**	**1.15 249**		P		**Pn**	**18 53 14.4**	**-0.1**
	baz=239							
WJS				S		Sg	18 53 30.8	+0.2
	baz=239							
WDJ	**Dajia District**	**1.16 276**		*e*P		**Pb**	**18 53 14.7**	**-0.1**
	baz=273							
WDJ				*e*S		Sg	18 53 30.9	+0.1
	baz=273							
WNT1	**Nantou City**	**1.16 254**		P		**Pn**	**18 53 14.2**	**-0.5**
	baz=251							
WNT1				S		Sg	18 53 31.7	+0.7
	baz=251							
WNT	**Mingjian**	**1.17 253**		P		**Pb**	**18 53 15.3**	**+0.3**
	baz=249							
WNT				S		Sg	18 53 31.5	+0.3
	baz=249							
FULB	**Fuli**	**1.17 209**		*e*P		**Pn**	**18 53 13.9**	**-0.9**
	baz=221							
FULB				*e*S		Sg	18 53 31.2	-0.1
	baz=221							
ALS	**Alishan**	**1.23 235**		P		**Pn**	**18 53 16.0**	**0.0**
	baz=232							
ALS				*e*S		Sn	18 53 32.5	+0.2
	baz=232							
WCHH	**Zhanghua**	**1.24 263**		*e*P		**Pb**	**18 53 16.3**	**+0.1**
	baz=260							
WCHH				*e*S		Sg	18 53 33.9	+0.6
	baz=260							
CHN5	**Tsauling**	**1.28 241**		P		**Pb**	**18 53 17.3**	**+0.3**
	baz=225							
CHN5				*e*S		Sg	18 53 35.0	+0.1
	baz=225							
ELDTW	**Lidau**	**1.32 218**		P		**Pn**	**18 53 16.3**	**-0.6**
	baz=217							
ELDTW				*e*S		Sn	18 53 33.9	-0.2
	baz=217							
WGK	**Gukeng**	**1.34 246**		P		**Pb**	**18 53 18.2**	**+0.4**
	baz=244							
WGK				S		Sg	18 53 37.0	+0.3
	baz=244							
WDLH	**Douliu**	**1.36 247**		P		**Pn**	**18 53 17.7**	**+0.3**
	baz=244							
WDLH				S		Sg	18 53 36.8	-0.5
	baz=244							
EDH	**Donghe**	**1.37 204**		*e*P		**Pn**	**18 53 16.9**	**-0.7**
	baz=191							
EDH				*e*S		Sn	18 53 35.0	-0.2
	baz=191							
WRL	**Guolierlin Hig**	**1.43 257**		*e*P		**Pb**	**18 53 19.7**	**+0.3**
	baz=254							
WRL				*e*S		Sb	18 53 38.3	+1.0
	baz=254							
STYH	**Taoyuan**	**1.48 225**		*e*P		**Pn**	**18 53 18.7**	**-0.3**
	baz=213							
STYH				*e*S		Sb	18 53 38.8	+0.1
	baz=213							
CHN2	**Minshiung**	**1.48 242**		*e*P		**Pb**	**18 53 20.5**	**+0.2**
	baz=240							
CHN2				*e*S		Sg	18 53 40.1	-1.1
	baz=240							
CHN4	**Tsaushan**	**1.48 234**		*e*P		**Pb**	**18 53 20.7**	**+0.4**
	baz=232							
CHN4				*e*S		Sg	18 53 40.6	-0.7
	baz=232							
WTK	**Tuku**	**1.49 249**		*e*P		**Pb**	**18 53 20.1**	**-0.3**
	baz=246							
WTK				*e*S		Sg	18 53 40.4	-1.0
	baz=246							
TPUB	**Ta-pu**	**1.49 232**		P		**Pb**	**18 53 20.4**	**-0.1**
	baz=230							
TPUB				S		Sg	18 53 40.4	-1.1
	baz=230							
STYT	**Tauyuan**	**1.49 225**		*e*P		**Pb**	**18 53 20.1**	**-0.5**
	baz=212							
STYT				*e*S		Sb	18 53 39.8	+0.5
	baz=212							
LONT	**Longtian**	**1.50 208**		*e*P		**Pn**	**18 53 18.4**	**-0.9**
	baz=208							
LONT				*e*S		Sn	18 53 37.8	-0.6
	baz=208							
WTP	**Ta-pu**	**1.53 231**		P		**Pb**	**18 53 20.8**	**-0.4**
	baz=229							
WTP				S		Sg	18 53 41.9	-1.0
	baz=229							
CHY	**Chiayi**	**1.54 242**		P		**Pb**	**18 53 21.4**	**+0.1**
	baz=239							
CHY				S		Sb	18 53 41.0	+0.6
	baz=239							
TWGBT	**Beinan**	**1.60 208**		*e*P		**Pn**	**18 53 19.5**	**-1.2**
	baz=209							
TWGBT				*e*S		Sn	18 53 40.9	+0.1
	baz=209							
TWG	**Pinlang**	**1.60 209**		*e*P		**Pn**	**18 53 20.5**	**-0.2**
	baz=209							
TWG				*e*S		Sn	18 53 41.1	+0.2
	baz=209							
LDUT	**Ludao**	**1.60 194**		*e*S		**Sn**	**18 53 39.0**	**-1.9**
	baz=187							
TWK	**Hsinying**	**1.61 234**		P		**Pb**	**18 53 22.1**	**-0.5**
	baz=232							
TWK				S		Sb	18 53 43.8	+1.2
	baz=232							
CHN1	**Nanshi**	**1.63 231**		*e*P		**Pb**	**18 53 22.6**	**-0.4**
	baz=229							
CHN1				*e*S		Sb	18 53 44.1	+0.9
	baz=229							
SNST	**Tainan City**	**1.63 232**		*e*P		**Pb**	**18 53 22.9**	**0.0**
	baz=231							
SNST				*e*S		Sb	18 53 44.2	+1.0
	baz=231							
WSF	**Szhu**	**1.65 249**		P		**Pb**	**18 53 22.4**	**-0.7**
	baz=247							
WSF				S		Sb	18 53 44.8	+1.3
	baz=247							
SGST	**Jiashian**	**1.66 227**		P		**Pn**	**18 53 22.1**	**+0.5**
	baz=213							
SGST				*e*S		Sb	18 53 44.4	+0.3
	baz=213							
IRIF	**Iriomote-Funau**	**1.67 86**		P		**Pn**	**18 53 21.5**	**-0.2**
IRIF				S		Sn	18 53 42.9	+0.2
SLGT	**Liugui**	**1.69 223**		*e*P		**Pb**	**18 53 23.6**	**-0.3**
	baz=222							
SLGT				*e*S		Sb	18 53 45.3	+0.6
	baz=222							
ICHU	**Yijhu**	**1.72 240**		P		**Pb**	**18 53 23.8**	**-0.6**
	baz=224							
ICHU				S		Sb	18 53 46.5	+0.8
	baz=224							
CHN8	**Yiju**	**1.78 241**		*e*P		**Pn**	**18 53 23.7**	**+0.5**
	baz=226							
CHN8				*e*S		Sb	18 53 48.9	+1.5
	baz=226							
ECL	**Taimali**	**1.84 208**		*e*P		**Pn**	**18 53 23.1**	**-1.0**
	baz=198							
ECL				*e*S		Sn	18 53 46.2	-0.7
	baz=198							
SCST	**Cishan**	**1.86 224**		*e*P		**Pb**	**18 53 26.8**	**0.0**
	baz=223							
SCST				*e*S		Sg	18 53 51.6	-1.6
	baz=223							
SSD	**Sandimen**	**1.88 218**		P		**Pn**	**18 53 25.7**	**+1.1**
	baz=218							
SSD				S		Sb	18 53 50.5	+0.1
	baz=218							
SCLT	**Jiali**	**1.89 236**		*e*S		**Sb**	**18 53 50.8**	**+0.3**
	baz=234							
TSMG	**Majia**	**1.91 217**		P		**Pb**	**18 53 27.2**	**-0.4**
	baz=216							
TSMG				S		Sb	18 53 50.8	-0.2
	baz=216							
JKRS	**Kuro-shima**	**1.92 89**		P		**Pn**	**18 53 25.8**	**+0.6**
JKRS				*e*S		Sn	18 53 50.2	+1.3
TWM1	**Shoushan**	**1.95 224**		*e*P		**Pb**	**18 53 28.2**	**-0.2**
	baz=223							
TWM1				*e*S		Sb	18 53 54.1	+1.7
	baz=223							
MASBT	**Mashibuluo**	**1.99 216**		*e*P		**Pb**	**18 53 27.9**	**-1.1**
	baz=215							
MASBT				*e*S		Sb	18 53 53.5	0.0
	baz=215							
TSPT	**Pingtung City**	**2.02 220**		*e*P		**Pb**	**18 53 29.7**	**+0.3**
	baz=219							
JIJ	**Ishigaki jima**	**2.05 86**		P		**Pn**	**18 53 26.9**	**0.0**
JIJ				S		Sn	18 53 50.9	-1.1
EAST	**Anshuo**	**2.08 208**		*e*P		**Pn**	**18 53 26.8**	**-0.5**
	baz=200							
EAST				*e*S		Sn	18 53 51.8	-1.0
	baz=200							
SCZT	**Fangliau**	**2.19 213**		*e*P		**Pn**	**18 53 30.4**	**+1.6**
	baz=212							
SCZT				*e*S		Sb	18 53 58.4	-1.0
	baz=212							
JISG	**Ishigakijimahi**	**2.23 80**		P		**Pn**	**18 53 28.9**	**-0.4**
JISG				*e*S		Sn	18 53 55.8	-0.5
SLIU	**Shizi**	**2.25 207**		*e*P		**Pn**	**18 53 29.7**	**+0.1**
	baz=200							
SLIU				*e*S		Sn	18 53 56.7	-0.3
	baz=200							
PHUB	**P'eng-hu**	**2.25 252**		*e*P		**Pn**	**18 53 29.2**	**-0.4**
	baz=249							
PHUB				*e*S		Sn	18 53 56.8	-0.1
	baz=249							
VWUC	**VWUC**	**2.36 289**		*e*P		**Pn**	**18 53 30.9**	**-0.2**
	baz=286							
VWUC				*e*S		Sn	18 53 59.5	-0.1
	baz=286							
TWKBT	**Hengchun**	**2.49 204**		*e*P		**Pn**	**18 53 33.4**	**+0.5**
	baz=193							
TWKBT				*e*S		Sn	18 54 04.0	+1.1
	baz=193							
MATB	**Ma-tsu**	**2.61 318**		*e*P		**Pn**	**18 53 34.8**	**+0.2**
	baz=315							
MATB				*e*S		Sn	18 54 06.0	+0.2
	baz=315							
PTMZ	**Houxiangcun**	**2.66 288**		*e*P		**Pn**	**18 53 35.4**	**+0.2**
	baz=285							
PTMZ				*e*S		Sn	18 54 07.5	+0.5
	baz=285							
LYJJ	**Jianjiangzhen**	**3.01 320**		*e*P		**Pn**	**18 53 39.9**	**-0.2**
	baz=318							
LYJJ				*e*S		Sn	18 54 16.2	+0.4
	baz=318							
XPSS	**Dashiqiu**	**3.10 330**		*e*P		**Pn**	**18 53 41.9**	**+0.5**
	baz=328							
XPSS				*e*S		Sn	18 54 18.1	+0.2
	baz=328							
MHZQ	**Yeshan**	**3.20 306**		*e*P		**Pn**	**18 53 43.2**	**+0.5**
	baz=304							
MHZQ				*e*S		Sn	18 54 21.0	+0.6
	baz=304							
KNMB	**Chin-men Tao**	**3.21 275**		*e*P		**Pn**	**18 53 42.2**	**-0.7**
	baz=272							
KNMB				*e*S		Sn	18 54 19.9	-0.8
	baz=272							
AXDP	**Jialang**	**3.64 281**		*e*P		**Pn**	**18 53 49.9**	**+1.1**
	baz=278							
AXDP				*e*S		Sn	18 54 32.0	+0.7
	baz=278							

NEIC ***10*** *18:59:34.1,40.35N×126.47W,h11km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-0.02; Mθθ0.11; Mφφ-0.09; Mrθ0.54; Mθφ-1.82; Mφr-0.12; Fault plane solution: M₀1.91000×10¹⁶ NP1:φs179.02000°, δ73.90000°,λ3.29000°. NP2:φs88.11000°,δ86.84000°, λ163.87000°. Principal axes: T 1.9485, Plg14.0000°, Azm42.0000°; N -0.0869, Plg74.0000°, Azm257.0000°; P -1.8616, Plg9.0000°, Azm135.0000°;*

BJI ***10*** *18:59:36.0±0.0,40.40N×126.20W,h20km,mB4.9/2, mb5.1/10,Ms4.7/1,Ms7 4.4/1*

IDC ***10*** *18:59:36.3±1.1,40.66N×126.21W,h0km,mb3.9/11, mb1 4.1/17,mb1mx3.9/57,mbtmp3.9/17,ML3.8/5,MS3.8/34, Ms1 3.8/34,ms1mx3.7/49,Error ellipse: s-maj=19.9km s-min=10.5km az=23.0*

ANF ***10*** *18:59:37.1±1.1,40.38N×126.26W,h10km,ML4.5/18, Error ellipse: s-maj=13.9km s-min=3.3km az=84.0, Hypocentre not reviewed by the ISC*

NCEDC ***10*** *18:59:38.9±1.9,40.46N±0.05×126.11W±0.10,h12km±5km, Error ellipse: s-maj=11.3km s-min=6.5km az=70.0*

NEIC ***10*** *18:59:38.8±1.8,40.42N±0.04×126.16W±0.08,h20km±5km, mb4.7/52,Mwr4.7/23,Mwr4.8/6(NCEDC),Error ellipse: s-maj=9.1km s-min=5.9km az=91.0*

NEIC ***10*** *18:59:39.4,40.41N×126.16W,h25km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr0.42; Mθθ-0.19; Mφφ-0.22; Mrθ0.34; Mθφ-1.35; Mφr-0.25; Fault plane solution: M₀1.46000×10¹⁶ NP1:φs182.27000°, δ71.58000°,λ16.51000°. NP2:φs86.92000°,δ74.35000°, λ160.85000°. Principal axes: T 1.3272, Plg24.0000°, Azm44.0000°; N 0.2305, Plg65.0000°, Azm229.0000°; P -1.5576, Plg2.0000°, Azm135.0000°;*

GCMT ***10*** *18:59:39.8±0.3,40.50N±0.02×126.29W±0.02,h21km±1km, MW4.9/115,Moment Tensor Solution. s28,c35; s115,c161; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.65±.11; Mθθ-0.05±.10; Mφφ0.69±.09; Mrθ-0.18±.15; Mθφ-2.89±.08; Mφr0.14±.16; Best double couple: M₀2.92100×10¹⁶ NP1:φs4.00000°,δ87.00000°,λ2.00000°. NP2:φs274.00000°,δ88.00000°,λ177.00000°. Principal axes: T 3.2510, Plg3.0000°, Azm229.0000°; N -0.6600, Plg86.0000°, Azm69.0000°; P -2.5920, Plg1.0000°, Azm319.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 18:59:38.1±3.2, 40.50N±0.06×126.16W±0.07, h15km±19km, n237, σ1§20/222, mb4.7/33, MS3.9/27, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KSMM	**Slide Mountain**	**1.55**	**101**			**Pn**	**19 00 03.5**	**-1.7**
JCC	**Jacoby Creek,**	**1.65**	**78**			**Pn**	**19 00 04.9**	**-1.6**
JCC					Sn	**Sn**	**19 00 25.9**	**-1.6**
KCRM	**Chalk Rock**	**1.79**	**92**			**Pn**	**19 00 07.9**	**-0.6**
KHMM	**Horse Mountain**	**1.88**	**78**			**Pn**	**19 00 08.7**	**-1.3**
KHMM					Sn	**Sn**	**19 00 32.5**	**-1.1**
KMRM	**Mail Ridge**	**1.89**	**98**			**Pn**	**19 00 09.5**	**-0.5**
KMRM					Sn	**Sn**	**19 00 34.0**	**+0.3**
KRMB	**Red Mountain**	**1.99**	**58**			**Pn**	**19 00 09.9**	**-1.4**
KRMB					Sn	**Sn**	**19 00 34.0**	**-2.1**
KBSM	**Bell Springs**	**2.05**	**106**			**Pn**	**19 00 11.1**	**-1.1**
KCPM	**Cahto Peak**	**2.13**	**111**			**Pn**	**19 00 11.8**	**-1.6**
KCPM					Sn	**Sn**	**19 00 37.1**	**-2.6**
KOMM	**Orleans Mounta**	**2.19**	**68**			**Pn**	**19 00 13.2**	**-1.0**
KBO	**Bosley Butte**	**2.25**	**40**			**Pn**	**19 00 14.3**	**-0.6**
KBO					Sn	**Sn**	**19 00 40.0**	**-2.4**
GNAM	**Navarro Ridge**	**2.34**	**123**			**Pn**	**19 00 13.4**	**-2.6**
L02E	**Cave Junction**	**2.54**	**48**	P			19 00 18.9	
	baz=229,SNR=584							
O02D	**Mt. Diablo Mer**	**2.59**	**96**	P			19 00 19.3	
	baz=278,SNR=314							
O02D				S			19 00 50.2	
	baz=278							
M02C	**Callahan**	**2.66**	**69**	P			19 00 19.6	
	baz=250,SNR=140							
M02C				S			19 00 51.1	
	baz=250							
N02D	**Trinity Center**	**2.67**	**79**	P			19 00 19.7	
	baz=260,SNR=313							
N02D				S			19 00 51.6	
	baz=260							
KEBM	**Edson Butte**	**2.74**	**29**			**Pn**	**19 00 20.9**	**-0.7**
WDC	**Whiskeytown Da**	**2.76**	**87**			**Pn**	**19 00 21.0**	**-0.8**
GASB	**Alder Springs**	**2.77**	**107**			**Pn**	**19 00 21.4**	**-0.8**
HOPS	**Hopland Field**	**2.81**	**121**			**Pn**	**19 00 20.4**	**-2.2**
YBH	**Yreka Blue Hor**	**2.88**	**64**	Pn		**Pn**	**19 00 23.3**	**-0.3**
	54nm,0.3s,baz=273,slow=12,SNR=247							
YBH					Sn	**Sn**	**19 00 58.0**	**0.0**
	14nm,0.3s,baz=240,slow=18,SNR=4.2							
YBH					LR	LR	19 01 27.5	
	comp=Z,2µm,21.1s,baz=312,slow=39							
YBH	**Yreka Blue Hor**	**2.88**	**64**			**Pn**	**19 00 23.2**	**-0.4**
K02D	**Willamette Mer**	**2.88**	**40**	P			19 00 23.7	
	baz=220,SNR=737							
GDXM	**Geysers**	**3.10**	**122**			**Pn**	**19 00 24.6**	**-1.9**
J01E	**Myrtle Point**	**3.14**	**31**	P			19 00 26.6	
	baz=212,SNR=206							
HUMO	**Hull Mountain**	**3.20**	**48**			**Pn**	**19 00 28.0**	**+0.1**
O03E	**Paynes Creek**	**3.33**	**92**	P			19 00 28.9	
	baz=274,SNR=183							
O03E				S			19 01 08.1	
	baz=274							
L04D	**Klamath Falls**	**3.37**	**58**	P			19 00 31.6	
	baz=240,SNR=588							
MCCM	**Marconi Confer**	**3.46**	**132**			**Pn**	**19 00 28.2**	**-3.2**
M04C	**Macdoel**	**3.50**	**67**	P			19 00 32.7	
	baz=249,SNR=71							
M04C				S			19 01 14.8	
	baz=249							
ORV	**Oroville**	**3.70**	**103**			**Pn**	**19 00 33.5**	**-1.3**
I03D	**Drain, OR**	**3.82**	**32**	P			19 00 36.4	
	baz=213,SNR=162							
K04D	**Chiloquin, OR**	**3.93**	**56**	P			19 00 39.3	
	baz=238,SNR=126							
I02D	**Swisshome**	**3.99**	**25**	P			19 00 39.2	
	baz=205,SNR=10							
J04D	**Umpqua Nationa**	**4.08**	**46**	P			19 00 42.1	
	baz=228,SNR=105							
AFDM	**Forest Hills D**	**4.29**	**109**			**Pn**	**19 00 42.4**	**-0.5**
I04A	**Tendick Farm,**	**4.31**	**39**	P			19 00 44.5	
	baz=221,SNR=886							
BEKR	**Beckwourth**	**4.49**	**96**			**Pn**	**19 00 45.6**	**-0.2**
K05A	**Summer Lake**	**4.53**	**59**			**Pn**	**19 00 47.3**	**+1.0**
COR	**Corvallis**	**4.60**	**26**			**Pn**	**19 00 47.5**	**+0.4**
J05D	**Fort Rock, OR**	**4.61**	**51**	P			19 00 49.0	
	baz=234,SNR=808							
MOD	**Modoc Plateau**	**4.63**	**70**			**Pn**	**19 00 47.8**	**0.0**
H04D	**Lebanon**	**4.75**	**31**	P			19 00 49.8	
	baz=213,SNR=54							
RUBR	**Rubicon Trail**	**4.84**	**105**			**Pn**	**19 00 51.0**	**+0.3**
PINE	**Pine Mountain**	**5.09**	**48**			**Pn**	**19 00 55.6**	**+1.6**
CMB	**Columbia Colle**	**5.11**	**117**			**Pn**	**19 00 54.3**	**+0.1**
H04A	**Detroit Lake**	**5.11**	**34**			**Pn**	**19 00 55.0**	**+0.8**
VCNR	**Virginia City**	**5.15**	**101**			**Pn**	**19 00 55.1**	**+0.3**
G03D	**McMinnville, O**	**5.17**	**23**	P			19 00 55.7	
	baz=205,SNR=7.7							
I05D	**Terrebonne, OR**	**5.24**	**41**	P			19 00 57.2	
	baz=224,SNR=25							
PNTR	**Pine Nut**	**5.24**	**103**			**Pn**	**19 00 57.0**	**+0.8**
SAO	**San Andreas Ge**	**5.24**	**134**			**Pn**	**19 00 53.2**	**-2.8**
PAHR	**Pah Rah Range**	**5.25**	**96**			**Pn**	**19 00 55.5**	**-0.7**
YERR	**Yerington**	**5.54**	**104**			**Pn**	**19 00 59.4**	**-0.9**
WAKR	**Walker**	**5.57**	**109**			**Pn**	**19 01 00.0**	**-0.6**
G05D	**Wamic, OR**	**5.93**	**35**	P			19 01 06.9	
	baz=218,SNR=28							
WVOR	**Wild Horse Val**	**5.97**	**69**			**Pn**	**19 01 05.9**	**-0.2**
PMPB	**Monarch Peak**	**6.00**	**134**			**Pn**	**19 01 03.9**	**-2.5**
F04D	**Rainier, OR**	**6.04**	**21**	P			19 01 08.6	
	baz=203							
I07A	**Izee**	**6.10**	**52**			**Pn**	**19 01 09.4**	**+1.6**
RYN	**Ryan**	**6.19**	**105**			**Pn**	**19 01 09.1**	**0.0**
E03A	**Lebam**	**6.33**	**16**			**Pn**	**19 01 12.4**	**+1.6**
LHV	**Little Huntoon**	**6.34**	**108**			**Pn**	**19 01 11.2**	**+0.2**
KVN	**Kaiserville**	**6.37**	**100**			**Pn**	**19 01 11.5**	**-0.2**
F05D	**White Salmon**	**6.39**	**31**	P			19 01 12.6	
	baz=214,SNR=9.8							
J08A	**Circle Bar Ran**	**6.40**	**61**			**Pn**	**19 01 12.9**	**+0.9**
NVAR	**Mina Array Bea**	**6.42**	**106**	Pn		**Pn**	**19 01 13.4**	**+1.1**
	4.7nm,0.3s,baz=284,slow=14,SNR=92							
NVAR					Sn	**Sn**	**19 02 30.5**	**+5.0**
	0.8nm,0.3s,baz=296,slow=21,SNR=2.7							
NVAR					LR	LR	19 03 51.6	
	comp=Z,1µm,19.2s,baz=290,slow=39							
NVAR	**Mina Array Bea**	**6.42**	**106**			**Pn**	**19 01 12.0**	**-0.3**
NV11	**Mina Array Sit**	**6.53**	**106**			**Pn**	**19 01 13.3**	**-0.5**
E04D	**Cinebar**	**6.59**	**22**	P			19 01 16.8	
	baz=204,SNR=18							
PAGB	**Antelope Grade**	**6.66**	**134**			**Pn**	**19 01 13.0**	**-2.5**
LON	**Longmire**	**7.00**	**25**			**Pn**	**19 01 20.9**	**+0.7**
F07A	**Phinny Hill Vi**	**7.06**	**38**			**Pn**	**19 01 22.1**	**+1.3**
NLWA	**Neilton Lookou**	**7.09**	**13**	Pn		**Pn**	**19 01 22.2**	**+0.9**
SMMC	**Simmler**	**7.11**	**135**	P			19 01 19.2	
	baz=319							
D04E	**Lakebay**	**7.11**	**19**	P			19 01 23.7	
	baz=201							
G08A	**Pilot Rock**	**7.13**	**45**			**Pn**	**19 01 24.3**	**+2.3**
VES	**Vestal, Richgr**	**7.25**	**128**	P			19 01 22.6	
	baz=312							
D05A	**Enumclaw**	**7.33**	**23**			**Pn**	**19 01 26.1**	**+1.5**
TPH	**Tonop

B05A	**Bryant**	8.29	19	P			19 01 40.0	
	baz=202,SNR=11							
ELK	**Elko**	8.31	85	Pn		Pn	19 01 40.3	+2.0
	0.2nm,0.3s,baz=278,slow=12,SNR=16							
ELK				Lg		Lg	19 03 46.8	
	0.2nm,0.3s,baz=6.7,slow=22,SNR=4.4							
ELK				LR		LR	19 04 29.8	
	comp=Z,93nm,20.5s,baz=265,slow=35							
ELK	**Elko**	8.31	85			Pn	19 01 37.8	-0.5
SCZ2	**Santa Cruz Isl**	8.31	139	P			19 01 36.7	
	baz=323							
OSI	**Osito Audit: C**	8.32	133			Pn	19 01 37.6	-0.7
C06D	**Leavenworth**	8.33	25	P			19 01 40.9	
	baz=208,SNR=6.2							
LRMC	**Laurel Mtn Rad**	8.36	124	P			19 01 38.8	
	baz=309							
E09A	**Wood Farm, Sta**	8.37	41			Pn	19 01 39.2	+0.3
PGC	**Sidney**	8.38	12			Pn	19 01 41.5	+2.6
D08A	**Wollman Farm,**	8.39	36			Pn	19 01 40.0	+0.9
R11A	**Troy Canyon, C**	8.46	101			Pn	19 01 39.3	-1.0
R11A	**Troy Canyon, C**	8.46	101	P			19 01 41.1	
	baz=288							
F10A	**Beach Ranch, E**	8.51	47			Pn	19 01 42.1	+1.2
TPNV	**Topopah Spring**	8.52	111			Pn	19 01 41.1	+0.1
EDW2	**Edwards Air Fo**	8.56	128	P			19 01 40.5	
	baz=313							
B06A	**Marblemount**	8.69	21			Pn	19 01 44.6	+1.5
PLID	**Pearl Lake**	8.76	55			Pn	19 01 46.6	+2.1
PASC	**Pasadena Art C**	8.95	132			Pn	19 01 45.4	-1.5
A05A	**Maple Falls**	8.98	17			Pn	19 01 48.0	+0.8
MWC	**Mount Wilson**	8.98	132			Pn	19 01 45.9	-1.6
RRX	**Edison Barstow**	9.17	125	P			19 01 49.7	
	baz=310							
PRN	**Pahroc Range**	9.19	106			Pn	19 01 50.8	+0.6
BFSC	**Mount Baldy Ra**	9.20	130	P			19 01 48.9	
	baz=315							
C09A	**Chrisman Ranch**	9.24	35			Pn	19 01 51.5	+0.7
B08A	**Colville Reser**	9.25	30			Pn	19 01 52.1	+1.1
HLID	**Hailey**	9.26	67			Pn	19 01 51.9	+0.6
HLID	**Hailey**	9.26	67	P			19 01 53.8	
	baz=254							
SHPR	**Sheep Range**	9.50	111			Pn	19 01 53.6	-0.9
HEC	**Hector,Ludlow**	9.62	123	P			19 01 56.2	
	baz=309							
SCI2	**San Clemente I**	9.67	138	P			19 01 55.6	
	baz=323							
PSUT	**Pine Spring**	9.71	98			Pn	19 01 58.9	+1.5
BGU	**Big Grassy Mou**	9.98	83			Pn	19 02 02.5	+1.4
GMRC	**Granite Mounta**	10.09	121	P			19 02 02.1	
	baz=308							
NEW	**Newport**	10.10	37	Pn		Pn	19 02 03.9	+1.3
	0.3nm,0.3s,baz=220,slow=12,SNR=7.1							
NEW				LR		LR	19 06 08.5	
	comp=Z,766nm,18.2s,baz=224,slow=39							
NEW	**Newport**	10.10	37			Pn	19 02 03.5	+0.9
BCYI	**Bear Canyon**	10.17	64			Pn	19 02 04.8	+1.0
HVU	**Hansel Valley**	10.18	78			Pn	19 02 05.2	+1.4
DUG	**Dugway, Tooele**	10.19	87			Pn	19 02 04.9	+0.9
DUG	**Dugway, Tooele**	10.19	87	P			19 02 04.8	
	baz=276							
PFO	**Pinyon Flats O**	10.35	129	Pn		Pn	19 02 04.3	-1.9
	0.6nm,0.3s,baz=308,slow=9.9,SNR=7.3							
PFO				LR		LR	19 05 58.4	
	comp=Z,876nm,19.5s,baz=298,slow=36							
PFO	**Pinyon Flats O**	10.35	129			Pn	19 02 04.2	-2.0
PFO	**Pinyon Flats O**	10.35	129	P			19 02 04.5	
	baz=314							
BELC	**Belle Mtn. Jos**	10.37	125	P			19 02 05.6	
	baz=312							
CCUT	**Cedar City**	10.38	102			Pn	19 02 06.8	+0.1
SPUT	**South Promonto**	10.41	81			Pn	19 02 06.6	-0.4
SZCU	**Shurtz Canyon**	10.57	102			Pn	19 02 09.8	+0.5
LCMT	**Little Creek M**	10.67	105			Pn	19 02 10.8	+0.2
MCMT	**McKenzie Canyo**	10.71	62			Pn	19 02 12.9	+1.7
NLU	**North Lily Min**	10.79	88	Pn		Pn	19 02 12.8	+0.7
IRM	**Iron Mountain**	10.81	122	P			19 02 11.7	
	baz=309							
MSO	**Missoula**	10.87	50			Pn	19 02 14.3	+1.0
MSO	**Missoula**	10.87	50	P			19 02 15.2	
	baz=238							
MONP2	**Monument Peak**	10.89	131	P			19 02 12.4	
	baz=317							
BAR	**Barrett**	10.90	133			Pn	19 02 12.2	-1.5
BC3	**Big Chuckawall**	10.94	125	P			19 02 13.0	
	baz=312							
CTU	**Camp Tracy**	10.96	84	Pn		Pn	19 02 15.8	+1.2
KNB	**Kanab**	10.98	104			Pn	19 02 15.7	+0.9
MSU	**Marysvale**	10.98	96			Pn	19 02 14.2	-0.7
DLMT	**Dillon**	11.06	59			Pn	19 02 15.5	-0.5
HWUT	**Hardware Ranch**	11.08	80			Pn	19 02 16.7	+0.5
MTPU	**Mount Pierson**	11.11	98			Pn	19 02 17.3	+0.6
MPU	**Maple Canyon**	11.11	88	Pn		Pn	19 02 15.7	-1.0
CBX	**Cerro Bola**	11.18	134			Pn	19 02 15.8	-1.7
JTMT	**Jette**	11.19	46			Pn	19 02 17.8	+0.2
JLU	**Jordanelle**	11.20	85	Pn		Pn	19 02 17.9	0.0
TCUT	**Toone Canyon**	11.20	82			Pn	19 02 17.6	-0.3
PKCU	**Pink Cliffs**	11.20	101			Pn	19 02 16.7	-1.3
IKP	**In-Ko-Pah, Jac**	11.24	131	P			19 02 18.6	
	baz=317							
RMX	**La Rumorosa**	11.30	131	Pn		Pn	19 02 18.8	-0.3
ECR	**Eagle Creek**	11.34	72			Pn	19 02 21.1	+1.4
PDMCI	**Parker Dam,Lak**	11.38	119	P			19 02 20.9	
	baz=306							
AHID	**Auburn Hatcher**	11.50	74	Pn		Pn	19 02 23.5	+1.6
CCX	**Cicese**	11.52	135	Pn		Pn	19 02 22.7	+0.6
TMUT	**Trail Mountain**	11.55	91			Pn	19 02 22.3	-0.4
Q16A	**Castle Valley**	11.65	93	Pn		Pn	19 02 25.3	+1.2
QLMT	**Earthquake Lak**	11.67	63	Pn		Pn	19 02 27.4	+3.0
GLA	**Glamis**	11.73	126	Pn		Pn	19 02 23.6	-1.4
REDW	**Red Top Meadow**	11.76	71			Pn	19 02 27.0	+1.5
BBB	**Bella Bella**	11.77	354	LR		LR	19 05 30.2	
	comp=Z,174nm,18.5s,baz=160,slow=30							
BOZ	**Bozeman (W)**	11.78	60			Pn	19 02 26.5	+0.8
BOZ	**Bozeman (W)**	11.78	60	P			19 02 27.6	
	baz=249							
YHB	**Horse Butte**	11.81	64			Pn	19 02 26.1	-0.1
ESJX	**Sierra Juarez**	11.81	133			Pn	19 02 25.7	-0.5
YHL	**Hebgen Lake**	11.85	64			Pn	19 02 26.6	-0.2
P17A	**Butcher Ranch,**	11.88	90			Pn	19 02 27.8	+0.7
YPP	**Pitchstone Pla**	11.96	67			Pn	19 02 28.4	0.0
LOHW	**Long Hollow**	11.97	70			Pn	19 02 29.0	+0.6
FLWY	**Flagg Ranch**	12.00	68			Pn	19 02 29.4	+0.6
YHH	**Holmes Hill**	12.06	64			Pn	19 02 29.7	0.0
HRY	**Holter Researc**	12.09	54			Pn	19 02 30.5	+0.5
SRU	**San Rafael Swe**	12.11	92			Pn	19 02 28.7	-1.6
H17A	**Grant Village**	12.15	66			Pn	19 02 31.4	+0.5
WALA	**Waterton Lakes**	12.19	41			Pn	19 02 32.7	+1.4
RDMU	**Red Mountain**	12.62	84			Pn	19 02 36.3	-1.1
PDAR	**Pinedale Array**	12.63	74	Pn		Pn	19 02 40.1	+2.7
	baz=270,slow=12,SNR=4.1							
PDAR				LR		LR	19 07 57.7	
	comp=Z,692nm,18.6s,baz=262,slow=40							
PDAR	**Pinedale Array**	12.63	74			Pn	19 02 39.1	+1.7
SPX	**San Pedro Mart**	12.81	134			Pn	19 02 40.1	0.0
RLMT	**Red Lodge**	13.23	64			Pn	19 02 46.2	+0.6
PIX	**Pinacate**	13.59	127			Pn	19 02 50.0	-0.4
214A	**Organ Pipe Nat**	13.72	124			Pn	19 02 51.3	-0.9
EGMT	**Eagleton**	13.94	52			Pn	19 02 55.2	+0.1
EGMT	**Eagleton**	13.94	52	P			19 02 55.7	
	baz=243							
W18A	**Petrified Fore**	14.04	107			Pn	19 02 58.3	+1.6
MVCO	**Mesa Verde**	14.15	98			Pn	19 02 58.7	+0.5
RWWY	**Rawlins**	14.34	79			Pn	19 02 59.1	-1.7
TUC	**Tucson**	14.82	119			Pn	19 03 05.0	-2.2
LAO	**LASA Array**	15.70	60			Pn	19 03 18.9	+0.2
LAO					IAmb	IAmb	19 03 27.3	
	comp=Z,48nm,1.0s							
ANMO	**Albuquerque**	16.53	103	Pn		P	19 03 32.3	+0.1
	comp=Z,0.2nm,0.3s,baz=307,slow=13,SNR=4.4							
ANMO				LR		LR	19 09 52.6	
	comp=Z,352nm,19.0s,baz=294,slow=37							
ANMO	**Albuquerque**	16.53	103	P		Pn	19 03 30.5	+0.9
121A	**Cookes Peak, D**	16.75	113			Pn	19 03 32.6	+0.2
BNM	**Barren Site**	16.76	106	P		P	19 03 34.1	-0.7
DGMT	**Dagmar**	17.54	56	P		P	19 03 43.1	0.0
DGMT					IAmb	IAmb	19 03 47.6	
	comp=Z,61nm,1.4s							
DLBC	**Dease Lake**	18.13	353	P		P	19 03 50.6	+1.1
	comp=Z,0.2nm,0.3s,baz=163,slow=16,SNR=4.2							
DLBC				LR		LR	19 09 17.2	
	comp=Z,354nm,19.2s,baz=148,slow=32							
MNTX	**Cornudas Mount**	18.91	111	P		P	19 03 57.7	-0.6
E28A	**Huff**	19.39	63	P		Pn	19 04 04.3	-0.3
E28A					IAmb	IAmb	19 04 07.1	
	comp=Z,34nm,0.9s							
AMTX	**Amarillo**	20.14	98	P		P	19 04 11.2	-0.5
CBKS	**Cedar Bluff**	20.39	86	P		P	19 04 14.4	0.0
CBKS					IAmb	IAmb	19 04 18.2	
	comp=Z,51nm,1.1s							
SUSD	**Miller**	20.41	70	P		P	19 04 15.1	+0.6
SUSD					IAmb	IAmb	19 04 16.9	
	comp=Z,56nm,0.9s							
SUSD	**Miller**	20.41	70	P			19 04 15.3	
	baz=268							
K31A	**O'Neill**	20.59	75	P		P	19 04 16.9	+0.5
LPIG	**La Paz**	21.08	136	LR		LR	19 11 18.5	
	comp=Z,301nm,20.3s,baz=325,slow=33							
BGNE	**Belgrade**	21.14	78	P		P	19 04 22.6	+0.1
BGNE	**Belgrade**	21.14	78	P			19 04 23.5	
	baz=277							
R32A	**Long Quarter,**	21.26	87	P		P	19 04 23.3	-0.5
R32A					IAmb	IAmb	19 04 28.6	
	comp=Z,29nm,1.1s							
TX31	**Lajitas Ar. Si**	21.48	114	P		P	19 04 25.9	-0.4
TX31					IAmb	IAmb	19 04 35.2	
	comp=Z,40nm,1.1s							
TX32	**Lajitas Array**	21.48	114	P		P	19 04 25.8	-0.6
TXAR	**Lajitas Array**	21.48	114	P		P	19 04 29.4	+3.1
	comp=Z,3.4nm,0.8s,baz=293,slow=10,SNR=30							
TXAR				LR		LR	19 13 12.7	
	comp=Z,216nm,21.0s,baz=0.0,slow=38							
TXAR	**Lajitas Array**	21.48	114	P		P	19 04 25.9	-0.4
FFC	**Flin Flon**	21.49	40	P		P	19 04 26.3	+0.2
FFC					IAmb	IAmb	19 04 34.5	
	comp=Z,37nm,0.8s							
KAN10	**Anthony SW Sta**	22.09	90	P		P	19 04 31.8	-0.8
ECSD	**EROS Data Cent**	22.10	72	P		P	19 04 33.3	+0.6
ECSD					IAmb	IAmb	19 04 35.0	
	comp=Z,31nm,0.9s							
ECSD	**EROS Data Cent**	22.10	72	P			19 04 34.0	
	baz=272							
KAN08	**Anthony NE Sta**	22.15	89	P		P	19 04 33.6	+0.2
KAN14	**Manchester OK**	22.24	90	P		P	19 04 33.7	-0.6
KAN05	**Bluff City Nor**	22.26	90	P		P	19 04 34.5	0.0
KAN01	**Argonia South**	22.34	89	P		P	19 04 34.8	-0.6
KAN01					IAmb	IAmb	19 04 48.7	
	comp=Z,47nm,1.4s							
F33A	**5 Mile Ranch,**	22.35	66	P		P	19 04 35.1	-0.3
F33A					IAmb	IAmb	19 04 37.7	
	comp=Z,26nm,0.9s							
WMOK	**Wichita Mounta**	22.39	96	P		P	19 04 36.3	+0.4
L34A	**Svendsen Farm,**	22.40	76	P		P	19 04 35.8	-0.2
L34A					IAmb	IAmb	19 04 39.9	
	comp=Z,27nm,0.8s							
KAN09	**Caldwell North**	22.45	89	P		P	19 04 36.8	+0.2
KAN09					IAmb	IAmb	19 04 46.3	
	comp=Z,39nm,1.4s							
ABTX	**Abilene, Hawle**	22.64	102	P		P	19 04 38.3	-0.4
ABTX					IAmb	IAmb	19 04 46.1	
	comp=Z,54nm,1.8s							
KSU1	**Kansas State U**	22.70	84	P		P	19 04 40.5	+1.3
KSU1					IAmb	IAmb	19 04 47.5	
	comp=Z,18nm,0.7s							
AGMN	**Agassiz Nation**	22.90	60	P		P	19 04 41.7	+0.5
AGMN	**Agassiz Nation**	22.90	60	P			19 04 42.0	
	baz=261							
N35A	**Tabor**	23.09	79	P		P	19 04 42.8	-0.5
N35A					IAmb	IAmb	19 04 57.0	
	comp=Z,34nm,0.8s							
YKA	**Yellowknife Ar**	23.10	14	P		P	19 04 43.8	+0.7
	comp=Z,1.4nm,0.8s,baz=198,slow=11,SNR=16							
YKA				LR		LR	19 13 03.7	
	comp=Z,118nm,19.6s,baz=0.0,slow=35							
ULM	**Lac du Bonnet**	23.26	55	P		P	19 04 45.4	+0.5
	comp=Z,15nm,0.7s,baz=265,slow=9.7,SNR=24							
ULM				LR		LR	19 14 12.1	
	comp=Z,642nm,19.3s,baz=267,slow=38							
ULM	**Lac du Bonnet**	23.26	55	P		P	19 04 45.4	+0.5
T35A	**Sooner Cattle**	23.36	89	P		P	19 04 45.7	-0.3
F36A	**Milaca**	24.29	66	P		P	19 04 55.6	+0.8
B35A	**Bob, Littlefor**	24.32	60	P		P	19 04 55.7	+0.6
I37A	**Lemond, Waseca**	24.41	71	P		P	19 04 56.8	+0.8
I37A					IAmb	IAmb	19 05 01.4	
	comp=Z,22nm,1.1s							
K38A	**Parkersburg**	24.98	74	P		P	19 05 02.4	+1.2
U38A	**Gravette**	25.13	89	P		P	19 05 03.4	+0.9
U38A					IAmb	IAmb	19 05 06.2	
	comp=Z,17nm,0.9s							
PMR	**Palmer**	25.33	334	P		P	19 05 05.0	+1.0
HHAR	**Hobbs**	25.52	89	P		P	19 05 06.9	+0.9
HHAR					IAmb	IAmb	19 05 18.4	
	comp=Z,40nm,1.6s							
S39A	**Bolivar**	25.56	86	P		P	19 05 06.6	+0.2
SUA	**Susitna One**	25.79	333	P			19 05 10.3	
	baz=133							
W39A	**Magazine**	26.02	91	P		P	19 05 11.0	+0.5
W39A					IAmb	IAmb	19 05 29.7	
	comp=Z,34nm,1.5s							
CUT	**Chulitna**	26.29	335	P		P	19 05 13.6	+0.9
MIAR	**Mount Ida**	26.42	93	P		P	19 05 17.4	+3.2
MIAR					IAmb	IAmb	19 05 28.6	
	comp=Z,24nm,1.5s							
CCM	**Cathedral Cave**	27.03	84	P		P	19 05 20.3	+0.6
CCM					IAmb	IAmb	19 05 23.3	
	comp=Z,57nm,1.9s							
IL31		27.11	341	P		P	19 05 19.8	-0.3
ILAR	**Eielson Array**	27.11	341	P		P	19 05 19.4	-0.7
	comp=Z,0.7nm,0.9s,baz=154,slow=9.1,SNR=5.4							
ILAR				LR		LR	19 14 24.1	
	comp=Z,162nm,20.5s,baz=140,slow=33							
ILAR	**Eielson Array**	27.11	341	P		P	19 05 20.3	+0.2
WHAR	**Wooly Hollow**	27.12	90	P		P	19 05 21.0	+0.5
WHAR					IAmb	IAmb	19 05 34.3	
	comp=Z,38nm,1.6s							
FCC	**Fort Churchill**	27.27	37	P		P	19 05 22.0	+0.4
FCC					IAmb	IAmb	19 05 35.4	
	comp=Z,12nm,0.8s							
PLAL	**Pickwick Lake**	30.45	88	P		P	19 05 49.8	-0.3
T47A	**Sharon Grove**	30.49	84	P		P	19 05 50.4	-0.1
T47A					IAmb	IAmb	19 05 57.2	
	comp=Z,8.7nm,0.8s							
X48A	**Hartselle**	31.43	88	P		P	19 05 59.0	+0.2
TAOE	**Nuku Hiva Isla**	50.78	198	eT		T	20 02 44.5	
	comp=Z,131nm,0.2s							
PETK	**Petropavlovsk-**	51.23	311	LR		LR	19 26 58.9	
	comp=Z,38nm,19.4s,baz=93,slow=32							
TIXI	**Tiksi**	56.55	338	P		P	19 09 19.1	-0.4
ROSC	**El Rosal**	58.42	113	LR		LR	19 38 21.5	
	comp=Z,50nm,18.8s,baz=276,slow=40							
YAK	**Yakutsk**	61.15	329	LR		LR	19 34 28.9	
	comp=Z,84nm,21.1s,baz=88,slow=34							
PPT2	**Papeete2**	61.76	205	eS		S	19 18 18.9	+0.1
	comp=Z,250nm,26.2s							
PPT2				eLR		LR	19 27 56.0	
	comp=Z,271nm,28.5s,baz=31							
PPT2	**Papeete2**	61.76	205	eT		T	20 16 26.0	
	comp=Z,6.0nm,0.2s							
ASAJ	**Asahikawa**	64.10	307	LR		LR	19 34 11.4	
	comp=Z,29nm,18.9s,baz=178,slow=32							
TBI	**Tubuai**	67.12	203	eLR		LR	19 30 34.7	
	comp=Z,162nm,29.2s							
TBI	**Tubuai**	67.12	203	eT		T	20 23 08.8	
	comp=Z,6.9nm,0.3s							
ARCES	**ARCESS Array B**	68.32	10	LR		LR	19 40 47.3	
	comp=Z,50nm,18.7s,baz=25,slow=36							
MJAR	**Matsushiro Arr**	71.14	302	LR		LR	19 38 13.1	
	comp=Z,24nm,19.1s,baz=225,slow=33							
NOA	**NORSAR Array B**	73.02	20	LR		LR	19 41 42.8	
	comp=Z,97nm,20.6s,baz=325,slow=35							
FINES	**FINESS Array B**	75.93	13	P		P	19 11 24.9	+1.1
	comp=Z,1.5nm,0.8s,baz=304,slow=8.2,SNR=1.8							
KSRS	**Korea Array**	76.98	309	LR		LR	19 41 17.0	
	comp=Z,28nm,20.4s,baz=67,slow=32							
MSVF	**Nonsavu**	77.72	234	LR		LR	19 36 32.9	
	comp=Z,138nm,21.1s,baz=7.9,slow=28							
LPAZ	**La Paz**	78.02	124	LR		LR	19 45 59.3	
	comp=Z,28nm,20.6s,baz=330,slow=36							
SONM	**Songino Array**	80.47	327	P		P	19 11 47.6	-1.8
	comp=Z,0.3nm,0.8s,baz=13,slow=3.1,SNR=2.3							
ZALV	**Zalesovo Beam**	82.22	342	P		P	19 11 58.5	+0.1
	comp=Z,0.5nm,0.6s,baz=39,slow=9.3,SNR=2.5							
ZALV				LR		LR	19 50 04.1	
	comp=Z,54nm,18.7s,baz=76,slow=37							
HHC	**Hu-ho-hao-te**	83.54	320	eP		P	19 12 06.4	+0.8
HHC					pmax	pmax		
	comp=Z,20nm,0.9s							
HHC					pmax	pmax		
	comp=Z,130nm,6.5s							
GERES	**GERESS Array B**	84.23	25	LR		LR	19 50 49.4	
	comp=Z,73nm,18.4s,baz=336,slow=36							
ESDC	**Sonseca Array**	84.39	41	P		P	19 12 09.8	-0.2
	comp=Z,0.5nm,0.7s,baz=309,slow=6.1,SNR=4.0							
ESDC				LR		LR	19 47 23.9	
	comp=Z,40nm,18.0s,baz=305,slow=34							
BVAR	**Borovoye Array**	85.76	350	P		P	19 12 16.9	+0.4
	comp=Z,0.8nm,0.9s,baz=54,slow=7.3,SNR=3.1							
NJ2	**Nanjing**	86.10	310	eP		P	19 12 16.6	-1.9
NJ2				pmax		pmax		
	comp=Z,15nm,0.5s							
KURK	**Kurchatov**	86.61	345	P		P	19 12 20.9	+0.2
AKASG	**Malin Array Be**	86.65	15	P		P	19 12 19.9	-1.0
	comp=Z,0.2nm,0.3s,baz=349,slow=4.7,SNR=1.6							
AKASG				LR		LR	19 51 01.2	
	comp=Z,71nm,19.3s,baz=40,slow=36							
KURBB	**Kurchatov Arra**	86.71	345	P		P	19 12 20.9	-0.4
	comp=Z,0.9nm,0.8s,baz=14,slow=4.6,SNR=6.4							
MKAR	**Makanchi Array**	89.47	341	LR		LR	19 53 56.5	
	comp=Z,35nm,18.6s,baz=3.0,slow=36							
WMQ	**Urumqi**	90.69	336	eP		P	19 12 42.1	+1.8
BDFB	**Brasilia**	91.28	109	LR		LR	19 56 29.1	
	comp=Z,61nm,21.9s,baz=290,slow=37							
CPUP	**Villa Florida**	92.19	123	LR		LR	19 54 11.0	
	comp=Z,53nm,19.9s,baz=326,slow=36							
KEST	**Kesra**	93.81	35	LR		LR	19 55 47.3	
	comp=Z,61nm,18.0s,baz=307,slow=36							
KBZ	**Khabaz**	95.58	8	LR		LR	19 58 38.6	
	comp=Z,45nm,18.6s,baz=333,slow=37							
BRTR	**Keskin Array B**	98.06	16	LR		LR	19 57 55.6	
	comp=Z,43nm,20.8s,baz=352,slow=36							

*MAN **10** 19:02:44.7, 8°.35N×123°.35E, h9km, mb4.8, ML3.7, MS3.6*
*NEIC **10** 19:02:49.0±2.1, 8°.3N±0°.1×123°.45E±0°.08, h45km±13km, mb4.3/7, Error ellipse: s-maj=14.8km s-min=11.7km az=192.0*
*IDC **10** 19:02:51.1±3.5, 8°.26N×123°.45E, h71km±38km, mb3.2/7, mb1 3.4/8, mb1mx3.2/47, mbtmp3.5/8, ML3.9/1, Error ellipse: s-maj=35.4km s-min=17.0km az=71.0*

ISC 10 19:02:44.6±2.0, 8°.32N±0°.03×123°.50E±0°.03, h11km±14km, n36, σ1°37/49, mb3.8/10, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAGZ	**Pagadian**	0.48	194	eP	Pb	19 02 54.6	-0.5
PAGZ				eS	Sb	19 03 01.8	-0.4
CGP	**Cagayan de Oro**	1.19	83	eP	Pn	19 03 06.1	-1.2
CGP				eS	Sg	19 03 23.2	+0.1
CNOP	**Candoni, Negro**	1.72	331	eP	Pn	19 03 12.7	-1.9
CNOP				eS	Sb	19 03 38.3	+0.2
ZCP	**Zamboanga City**	1.97	226	iP	Pb	19 03 17.9	0.0
ZCP				i S	Sb	19 03 45.1	0.0
LLP	**Lapu-Lapu**	2.04	13	eP	Pn	19 03 18.8	-0.2
LLP				eS	Sn	19 03 46.0	+1.4
KCP	**Kidapawan**	2.05	129	iP	Pb	19 03 22.0	+0.1
KCP				i S	Sg	19 03 49.6	-0.9
SKMP	**Bagumbayan, Su**	2.07	150	eP	Pn	19 03 20.3	+0.9
SKMP				eS	Sb	19 03 46.7	-1.2
BUTP	**Butuan**	2.20	73	eP	Pb	19 03 23.7	-0.7
BUTP				eS	Sb	19 03 53.4	+1.6
MSLP	**Maasin**	2.25	37	eP	Pn	19 03 22.9	+1.0
MSLP				eS	Sn	19 03 51.9	+2.2
DAV	**Davao City (W)**	2.41	121	P	Pb	19 03 28.3	+0.2
	28nm,0.3s,baz=200,slow=3.5,SNR=1.5						
DAV				S	Sb	19 03 57.7	-0.1
	5.2nm,0.3s,baz=139,slow=21,SNR=1.0						
DAV	**Davao City (W)**	2.41	121	Pn	Pb	19 03 26.9	-1.2
GUIM	**Jordan**	2.46	339	eP	Pn	19 03 25.2	+0.4
GUIM				eS	Sb	19 03 57.7	-1.7
GLSP	**General Luna,**	2.98	61	eP	Pn	19 03 33.3	+1.4
GLSP				eS	Sn	19 04 06.3	-1.5
RCP	**Roxas**	3.31	347	eP	Pn	19 03 39.7	+3.2
CUYO	**Cuyo Island**	3.51	316	eP	Pn	19 03 38.8	-0.4
CUYO				eS	Sn	19 04 20.1	-0.7
ENPP	**El Nido**	4.93	306	eP	Pn	19 03 59.1	+0.3
MYLDM	**Lahad Datu**	5.86	238		Pn	19 04 12.8	+1.3
KKM	**Kota Kinabalu**	7.57	253	Pn	Pn	19 04 37.6	+2.5
TOLI2	**Tolitoli**	7.65

JTKR	**Abashiri--Toko**	**1.27**	**305**	P	**Pn**	19 08 52.6	+0.2
JTKR				*e*S	**Sn**	19 09 08.6	0.0
JCH	**Churui**	**1.58**	**247**	P	**Pn**	19 08 56.1	-0.5
KUR	**Kuril'sk**	**2.69**	**42**	*e*S	**Sn**	19 09 43.5	+0.5
KUR				A	A	19 09 50.5	
	30nm,0.2s						
KUR				A	A	19 09 50.5	
	10.0nm,0.2s						

TAP ***10*** *19:20:07.9,24.°57N×121.°96E,h51km,ML3.1,C*
JMA ***10*** *19:20:07.2±0.1,24.°52N×121.°97E,h65km±3km,M2.8*
ISC 10 19:20:08.5±1.2,24.°56N±0.°02×122.°02E±0.°02,h48km±5km,
n123,σ1§05/242,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TWC	**Suao**	**0.16**	**287**	P	**Pn**	**Pn**	**19 20 16.6**	**+0.2**
	baz=292							
TWC				S	**Sn**	**Sn**	**19 20 22.8**	**+0.8**
	baz=292							
EWUT	**Wuta**	**0.25**	**242**	*i* P	**Pn**	**Pn**	**19 20 16.9**	**-0.1**
	baz=232							
EWUT				*i* S	**Sn**	**Sn**	**19 20 23.4**	**+0.4**
	baz=232							
NDS	**Dongshan**	**0.28**	**285**	*i* P	**Pn**	**Pn**	**19 20 17.4**	**+0.1**
	baz=285							
NDS				*i* S	**Sn**	**Sn**	**19 20 23.8**	**+0.2**
	baz=285							
ILA	**Ilan**	**0.32**	**310**	*e*P	**Pn**	**Pn**	**19 20 17.6**	**-0.1**
	baz=317							
ILA				*e*S	**Sn**	**Sn**	**19 20 25.4**	**+1.4**
	baz=317							
NTC	**Toucheng**	**0.34**	**329**	*i* P	**Pn**	**Pn**	**19 20 17.8**	**0.0**
	baz=343							
NTC				S	**Sn**	**Sn**	**19 20 24.7**	**+0.3**
	baz=343							
TWE	**Neicheng**	**0.36**	**296**	*i* P	**Pn**	**Pn**	**19 20 18.1**	**+0.1**
	baz=300							
TWE				*i* S	**Sn**	**Sn**	**19 20 24.9**	**+0.1**
	baz=300							
ENTT	**Nioudou**	**0.42**	**281**	*i* P	**Pn**	**Pn**	**19 20 18.7**	**-0.1**
	baz=284							
ENTT				*i* S	**Sn**	**Sn**	**19 20 25.6**	**-0.4**
	baz=284							
TIPB	**Shuangxi**	**0.44**	**337**	*i* P	**Pn**	**Pn**	**19 20 18.8**	**-0.2**
	baz=335							
TIPB				*i* S	**Sn**	**Sn**	**19 20 26.4**	**-0.1**
	baz=335							
TWB1	**Santiao Chiao**	**0.45**	**356**	*i* P	**Pn**	**Pn**	**19 20 18.6**	**-0.5**
	baz=13							
TWB1				*i* S	**Sn**	**Sn**	**19 20 24.9**	**-1.5**
	baz=13							
NDT	**Datong Townshi**	**0.46**	**275**	*i* P	**Pn**	**Pn**	**19 20 19.2**	**0.0**
	baz=274							
NDT				*i* S	**Sn**	**Sn**	**19 20 26.8**	**-0.1**
	baz=274							
NWLT	**Wulai**	**0.52**	**295**	*i* P	**Pn**	**Pn**	**19 20 19.9**	**0.0**
	baz=296							
NWLT				*i* S	**Sn**	**Sn**	**19 20 27.8**	**-0.2**
	baz=296							
NACB	**Ninganchiao**	**0.55**	**225**	*i* P	**Pn**	**Pn**	**19 20 19.5**	**-0.8**
	baz=212							
NACB				S	**Sn**	**Sn**	**19 20 28.6**	**0.0**
	baz=212							
NWF	**Wu-fen Shan**	**0.55**	**337**	*i* P	**Pn**	**Pn**	**19 20 20.1**	**-0.2**
	baz=342							
NWF				*i* S	**Sn**	**Sn**	**19 20 28.5**	**-0.4**
	baz=342							
WFSB	**Wu-fen Shan**	**0.55**	**337**	*i* P	**Pn**	**Pn**	**19 20 20.0**	**-0.3**
	baz=342							
WFSB				*i* S	**Sn**	**Sn**	**19 20 28.6**	**-0.2**
	baz=342							
TWA	**Mucha**	**0.57**	**317**	*i* P	**Pn**	**Pn**	**19 20 20.4**	**-0.2**
	baz=321							
TWA				*i* S	**Sn**	**Sn**	**19 20 30.0**	**+0.8**
	baz=321							
NNSB	**Datong**	**0.59**	**257**	*i* P	**Pn**	**Pn**	**19 20 20.5**	**-0.5**
	baz=255							
NNSB				S	**Sn**	**Sn**	**19 20 29.6**	**-0.3**
	baz=255							
YHNB	**Yeheng**	**0.59**	**281**	*i* P	**Pn**	**Pn**	**19 20 20.6**	**-0.3**
	baz=280							
YHNB				*i* S	**Sn**	**Sn**	**19 20 29.4**	**-0.5**
	baz=280							
NHDH	**Xindian Distri**	**0.60**	**312**	*i* P	**Pn**	**Pn**	**19 20 20.7**	**-0.2**
	baz=322							
NHDH				*i* S	**Sn**	**Sn**	**19 20 30.0**	**+0.2**
	baz=322							
NNS	**Nan Shan**	**0.60**	**258**	*i* P	**Pn**	**Pn**	**19 20 20.6**	**-0.4**
	baz=250							
NNS				*i* S	**Sn**	**Sn**	**19 20 29.3**	**-0.7**
	baz=250							
ETLH	**Xiulin Townshi**	**0.60**	**234**	*i* P	**Pn**	**Pn**	**19 20 20.5**	**-0.6**
	baz=239							
ETLH				*i* S	**Sn**	**Sn**	**19 20 29.6**	**-0.4**
	baz=239							
NSK	**Sanguang**	**0.61**	**281**	*i* P	**Pn**	**Pn**	**19 20 20.8**	**-0.4**
	baz=281							
NSK				*i* S	**Sn**	**Sn**	**19 20 29.7**	**-0.5**
	baz=281							
TWD	**Chiawan**	**0.62**	**219**	*i* P	**Pn**	**Pn**	**19 20 20.7**	**-0.4**
	baz=206							
TWD				*i* S	**Sn**	**Sn**	**19 20 30.1**	**-0.1**
	baz=206							
TNOU	**National Taiwa**	**0.63**	**339**	*e*P	**Pn**	**Pn**	**19 20 20.4**	**-0.8**
	baz=344							
TNOU				*e*S	**Sn**	**Sn**	**19 20 30.1**	**-0.3**
	baz=344							
TATO	**Taipei**	**0.63**	**311**	*i* P	**Pn**	**Pn**	**19 20 21.0**	**-0.3**
	baz=313							
TATO				*i* S	**Sn**	**Sn**	**19 20 30.6**	**+0.1**
	baz=313							
HWA	**Hwalien**	**0.69**	**213**	P	**Pn**	**Pn**	**19 20 22.2**	**+0.1**
	baz=195							
HWA				S	**Sn**	**Sn**	**19 20 33.2**	**+1.2**
	baz=195							
YM01	**YM01**	**0.71**	**325**	*i* P	**Pn**	**Pn**	**19 20 21.8**	**-0.6**
	baz=329							
YM01				S	**Sn**	**Sn**	**19 20 31.9**	**-0.5**
	baz=329							
YM10	**YM10**	**0.72**	**325**	*i* P	**Pn**	**Pn**	**19 20 22.0**	**-0.6**
	baz=328							
YM10				S	**Sn**	**Sn**	**19 20 32.1**	**-0.6**
	baz=328							
YM11	**YM11**	**0.72**	**326**	P	**Pn**	**Pn**	**19 20 22.0**	**-0.6**
	baz=330							
YM11				S	**Sn**	**Sn**	**19 20 31.6**	**-1.2**
	baz=330							
YM04	**YM04**	**0.73**	**323**	*i* P	**Pn**	**Pn**	**19 20 22.0**	**-0.7**
	baz=327							
YM04				S	**Sn**	**Sn**	**19 20 31.9**	**-1.1**
	baz=327							
YM08	**YM08**	**0.73**	**328**	*i* P	**Pn**	**Pn**	**19 20 21.8**	**-0.9**
	baz=332							
YM08				S	**Sn**	**Sn**	**19 20 31.6**	**-1.3**
	baz=332							
YM03	**YM03**	**0.75**	**325**	*e*P	**Pn**	**Pn**	**19 20 22.4**	**-0.5**
	baz=328							
YM03				S	**Sn**	**Sn**	**19 20 33.1**	**-0.4**
	baz=328							
TWS1	**Kuangyinshan**	**0.77**	**315**	P	**Pn**	**Pn**	**19 20 22.8**	**-0.2**
	baz=325							
TWS1				S	**Sn**	**Sn**	**19 20 32.9**	**-0.7**
	baz=325							
ANP	**Anpu**	**0.77**	**324**	P	**Pn**	**Pn**	**19 20 22.2**	**-1.1**
	baz=327							
ANP				S	**Sn**	**Sn**	**19 20 33.2**	**-0.6**
	baz=327							
FUSS	**Fushou**	**0.77**	**246**	P	**Pn**	**Pn**	**19 20 23.0**	**-0.4**
	baz=237							
FUSS				S	**Sn**	**Sn**	**19 20 34.0**	**-0.2**
	baz=237							
NTY	**Taoyuan**	**0.79**	**304**	P	**Pn**	**Pn**	**19 20 23.0**	**-0.3**
	baz=313							
NTY				S	**Sn**	**Sn**	**19 20 35.0**	**+0.9**
	baz=313							
NTST	**Danshui**	**0.79**	**319**	P	**Pn**	**Pn**	**19 20 22.7**	**-0.7**
	baz=331							
NTST				S	**Sn**	**Sn**	**19 20 35.0**	**+0.7**
	baz=331							
WHF	**Hehuan Shan**	**0.80**	**239**	P	**Pn**	**Pn**	**19 20 23.7**	**-0.3**
	baz=235							
WHF				S	**Sn**	**Sn**	**19 20 34.1**	**-1.0**
	baz=235							
TWY	**Chenhua**	**0.81**	**332**	P	**Pn**	**Pn**	**19 20 23.2**	**-0.4**
	baz=336							
TWY				S	**Sn**	**Sn**	**19 20 35.0**	**+0.5**
	baz=336							
TWT	**Tachien**	**0.83**	**248**	*i* P	**Pn**	**Pn**	**19 20 24.2**	**+0.1**
	baz=242							
TWT				S	**Sn**	**Sn**	**19 20 35.5**	**+0.1**
	baz=242							
TDCB	**Techi**	**0.84**	**249**	P	**Pn**	**Pn**	**19 20 24.1**	**-0.1**
	baz=242							
TDCB				S	**Sn**	**Sn**	**19 20 35.4**	**-0.3**
	baz=242							
JYNG	**Yonagunijimaku**	**0.85**	**97**	P	**Pn**	**Pn**	**19 20 24.3**	**+0.1**
JYNG				S	**Sn**	**Sn**	**19 20 36.5**	**+0.9**
NCU	**National Centr**	**0.86**	**298**	P	**Pn**	**Pn**	**19 20 24.0**	**-0.3**
	baz=299							
NCU				S	**Sn**	**Sn**	**19 20 36.1**	**+0.3**
	baz=299							
NCUH	**Zhongli**	**0.86**	**298**	P	**Pn**	**Pn**	**19 20 23.8**	**-0.5**
	baz=299							
NCUH				S	**Sn**	**Sn**	**19 20 36.0**	**+0.2**
	baz=299							
NJD	**Zhudong**	**0.86**	**282**	*e*P	**Pn**	**Pn**	**19 20 25.5**	**+1.1**
	baz=282							
NJD				*e*S	**Sn**	**Sn**	**19 20 37.2**	**+1.2**
	baz=282							
YOJ	**Yonaguni jima**	**0.91**	**96**	P	**Pn**	**Pn**	**19 20 25.0**	**0.0**
YOJ				S	**Sn**	**Sn**	**19 20 37.7**	**+0.7**
YOJ	**Yonaguni jima**	**0.91**	**96**	P	**Pn**	**Pn**	**19 20 24.9**	**-0.1**
	baz=88							
YOJ				S	**Sn**	**Sn**	**19 20 36.9**	**-0.1**
	baz=88							
ESL	**Shilin**	**0.92**	**216**	P	**Pn**	**Pn**	**19 20 23.5**	**-1.6**
	baz=221							
ESL				S	**Sn**	**Sn**	**19 20 36.1**	**-1.1**
	baz=221							
LIOB	**Emei**	**0.92**	**275**	P	**Pn**	**Pn**	**19 20 24.9**	**-0.2**
	baz=286							
LIOB				S	**Sn**	**Sn**	**19 20 38.1**	**+0.8**
	baz=286							
CHGB	**Renai**	**0.92**	**237**	*i* P	**Pn**	**Pn**	**19 20 25.1**	**-0.2**
	baz=234							
CHGB				S	**Sn**	**Sn**	**19 20 37.2**	**-0.4**
	baz=234							
NSTT	**Nanjuang**	**0.93**	**274**	P	**Pn**	**Pn**	**19 20 24.7**	**-0.6**
	baz=285							
NSTT				S	**Sn**	**Sn**	**19 20 38.0**	**+0.5**
	baz=285							
HSN1	**Hsinchu**	**0.94**	**283**	*e*P	**Pn**	**Pn**	**19 20 24.3**	**-1.0**
	baz=283							
HSN1				*e*S	**Sn**	**Sn**	**19 20 37.5**	**-0.1**
	baz=283							
SBCB	**Hsinchu**	**0.97**	**284**	*e*P	**Pn**	**Pn**	**19 20 24.1**	**-1.7**
	baz=284							
SBCB				*e*S	**Sn**	**Sn**	**19 20 38.5**	**+0.1**
	baz=284							
WHP	**Taichung City**	**1.02**	**254**	P	**Pn**	**Pn**	**19 20 27.2**	**+0.7**
	baz=249							
WHP				S	**Sn**	**Sn**	**19 20 40.3**	**+0.5**
	baz=249							
EGFH	**Guangfu**	**1.04**	**211**	P	**Pn**	**Pn**	**19 20 25.5**	**-1.3**
	baz=218							
EGFH				*e*S	**Sn**	**Sn**	**19 20 39.1**	**-1.1**
	baz=218							
WPL	**Puli Township**	**1.11**	**241**	P	**Pn**	**Pn**	**19 20 27.5**	**-0.2**
	baz=234							
WPL				S	**Sn**	**Sn**	**19 20 41.9**	**-0.1**
	baz=234							
NMLH	**Miaoli**	**1.12**	**269**	P	**Pn**	**Pn**	**19 20 27.8**	**0.0**
	baz=280							
NMLH				*e*S	**Sn**	**Sn**	**19 20 42.9**	**+0.8**
	baz=280							
DPDB	**Guoxing**	**1.13**	**242**	P	**Pn**	**Pn**	**19 20 28.4**	**+0.4**
	baz=235							
DPDB				S	**Sn**	**Sn**	**19 20 42.9**	**+0.5**
	baz=235							
VWDT	**VWDT**	**1.14**	**225**	*i* P	**Pn**	**Pn**	**19 20 27.9**	**-0.1**
	baz=215							
VWDT				*i* S	**Sn**	**Sn**	**19 20 42.2**	**-0.3**
	baz=215							
NSY	**Sanyi**	**1.16**	**263**	P	**Pn**	**Pn**	**19 20 28.7**	**+0.4**
	baz=261							
NSY				S	**Sn**	**Sn**	**19 20 43.2**	**+0.2**
	baz=261							
HGSD	**Ruisui**	**1.20**	**207**	P	**Pn**	**Pn**	**19 20 27.9**	**-0.9**
	baz=203							
HGSD				*e*S	**Sn**	**Sn**	**19 20 45.1**	**+1.1**
	baz=203							
SMLT	**Sun Moon Lake**	**1.23**	**237**	P	**Pn**	**Pn**	**19 20 29.9**	**+0.5**
	baz=234							
SMLT				S	**Sn**	**Sn**	**19 20 47.7**	**+2.9**
	baz=234							
EHY	**Hungye**	**1.23**	**211**	P	**Pn**	**Pn**	**19 20 27.4**	**-1.9**
	baz=207							
EHY				S	**Sn**	**Sn**	**19 20 43.1**	**-1.7**
	baz=207							
SSLB	**Suanglung**	**1.24**	**232**	P	**Pn**	**Pn**	**19 20 29.4**	**-0.2**
	baz=221							
SSLB				S	**Sn**	**Sn**	**19 20 44.6**	**-0.5**
	baz=221							
TYC	**Yuchr**	**1.25**	**239**	P	**Pn**	**Pn**	**19 20 30.0**	**+0.5**
	baz=235							
TYC				S	**Sn**	**Sn**	**19 20 45.6**	**+0.4**
	baz=235							
WDJ	**Dajia District**	**1.27**	**261**	*e*S	**Sn**	**Sn**	**19 20 44.2**	**-1.7**
	baz=259							
TCU	**Taichung**	**1.29**	**252**	*e*P	**Pn**	**Pn**	**19 20 29.0**	**-1.1**
	baz=249							
TCU				*e*S	**Sn**	**Sn**	**19 20 47.9**	**+1.5**
	baz=249							
WWF	**Wufeng**	**1.31**	**247**	*e*S	**Sn**	**Sn**	**19 20 46.8**	**0.0**
	baz=257							
YULB	**Yu-li**	**1.34**	**210**	P	**Pn**	**Pn**	**19 20 28.9**	**-2.0**
	baz=206							
YULB				*e*S	**Sn**	**Sn**	**19 20 47.2**	**-0.3**
	baz=206							
EYUL	**Yuli**	**1.37**	**208**	P	**Pn**	**Pn**	**19 20 29.6**	**-1.7**
	baz=204							
EYUL				S	**Sn**	**Sn**	**19 20 49.1**	**+0.9**
	baz=204							
WHYT	**Xinyi Township**	**1.37**	**231**	P	**Pn**	**Pn**	**19 20 32.5**	**+1.2**
	baz=219							
WHYT				S	**Sn**	**Sn**	**19 20 50.8**	**+2.5**
	baz=219							
TWF1	**Yuli**	**1.37**	**209**	P	**Pn**	**Pn**	**19 20 29.3**	**-2.0**
	baz=205							
TWF1				S	**Sn**	**Sn**	**19 20 48.1**	**-0.2**
	baz=205							
WNT1	**Nantou City**	**1.39**	**242**	*e*P	**Pn**	**Pn**	**19 20 32.4**	**+1.0**
	baz=253							
WNT1				*e*S	**Sn**	**Sn**	**19 20 50.2**	**+1.6**
	baz=253							
WJS	**Zhushan**	**1.39**	**238**	P	**Pn**	**Pn**	**19 20 31.7**	**+0.2**
	baz=250							
WJS				S	**Sn**	**Sn**	**19 20 50.7**	**+2.0**
	baz=250							
WNT	**Mingjian**	**1.40**	**241**	P	**Pn**	**Pn**	**19 20 32.7**	**+1.1**
	baz=238							
WNT				S	**Sn**	**Sn**	**19 20 50.6**	**+1.7**
	baz=238							
WCHH	**Zhanghua**	**1.42**	**250**	*e*S	**Sn**	**Sn**	**19 20 50.6**	**+1.2**
	baz=249							
YUS	**Yu-Shan**	**1.45**	**223**	*e*P	**Pn**	**Pn**	**19 20 32.5**	**-0.2**
	baz=212							
YUS				*e*S	**Sn**	**Sn**	**19 20 51.4**	**+0.6**
	baz=212							
FULB	**Fuli**	**1.51**	**206**	P	**Pn**	**Pn**	**19 20 32.0**	**-1.2**
	baz=211							
FULB				S	**Sn**	**Sn**	**19 20 51.5**	**-0.2**
	baz=211							
ALS	**Alishan**	**1.52**	**227**	P	**Pn**	**Pn**	**19 20 34.6**	**+0.9**
	baz=213							
ALS				S	**Sn**	**Sn**	**19 20 53.8**	**+1.3**
	baz=213							
CHN5	**Tsauling**	**1.56**	**232**	P	**Pn**	**Pn**	**19 20 34.4**	**+0.5**
	baz=242							
CHN5				S	**Sn**	**Sn**	**19 20 54.7**	**+1.7**
	baz=242							
CHKT	**Chengkung**	**1.57**	**202**	*e*P	**Pn**	**Pn**	**19 20 33.4**	**-0.6**
	baz=188							
CHKT				*e*S	**Sn**	**Sn**	**19 20 52.2**	**-1.0**
	baz=188							
IRIF	**Iriomote-Funau**	**1.58**	**98**	P	**Pn**	**Pn**	**19 20 33.8**	**-0.2**
IRIF				S	**Sn**	**Sn**	**19 20 53.5**	**+0.2**
WGK	**Gukeng**	**1.59**	**237**	*e*S	**Sn**	**Sn**	**19 20 55.2**	**+1.6**
	baz=246							
WDLH	**Douliu**	**1.61**	**238**	*e*P	**Pn**	**Pn**	**19 20 33.4**	**-1.1**
	baz=247							
WDLH				*e*S	**Sn**	**Sn**	**19 20 55.9**	**+1.9**
	baz=247							
WRL	**Guolierlin Hig**	**1.64**	**247**	*e*P	**Pn**	**Pn**	**19 20 35.2**	**+0.3**
	baz=256							
WRL				*e*S	**Sn**	**Sn**	**19 20 54.0**	**-0.8**
	baz=256							
ELDTW	**Lidau**	**1.65**	**214**	P	**Pn**	**Pn**	**19 20 34.1**	**-1.1**
	baz=202							
ELDTW				S	**Sn**	**Sn**	**19 20 53.9**	**-1.3**
	baz=202							
EDH	**Donghe**	**1.71**	**203**	*e*P	**Pn**	**Pn**	**19 20 35.6**	**-0.3**
	baz=191							
EDH				*e*S	**Sn**	**Sn**	**19 20 55.4**	**-1.3**
	baz=191							
WTK	**Tuku**	**1.73**	**240**	P	**Pn**	**Pn**	**19 20 36.5**	**+0.4**
	baz=237							
WTK				*e*S	**Sn**	**Sn**	**19 20 58.4**	**+1.4**
	baz=237							
CHN4	**Tsaushan**	**1.78**	**228**	P	**Pn**	**Pn**	**19 20 37.8**	**+1.0**
	baz=224							
CHN4				S	**Sn**	**Sn**	**19 21 00.6**	**+2.4**
	baz=224							
TPUB	**Ta-pu**	**1.79**	**226**	P	**Pn**	**Pn**	**19 20 37.7**	**+0.7**
	baz=212							
TPUB				S	**Sn**	**Sn**	**19 20 59.9**	**+1.4**
	baz=212							
STYH	**Taoyuan**	**1.79**	**220**	P	**Pn**	**Pn**	**19 20 37.4**	**+0.4**
	baz=205							
STYH				S	**Sn**	**Sn**	**19 21 00.7**	**+2.1**
	baz=205							
CHY	**Chiayi**	**1.80**	**234**	*e*P	**Pn**	**Pn**	**19 20 37.0**	**-0.2**
	baz=244							
CHY				*e*S	**Sn**	**Sn**	**19 21 00.5**	**+1.7**
	baz=244							
STYT	**Tauyuan**	**1.81**	**220**	*e*P	**Pn**	**Pn**	**19 20 38.4**	**+1.1**
	baz=205							
STYT				*e*S	**Sn**	**Sn**	**19 21 01.1**	**+2.0**
	baz=205							
WTP	**Ta-pu**	**1.83**	**225**	*e*P	**Pn**	**Pn**	**19 20 38.1**	**+0.5**
	baz=211							
WTP				*e*S	**Sn**	**Sn**	**19 21 02.1**	**+2.3**
	baz=211							
LONT	**Longtian**	**1.84**	**206**	*e*P	**Pn**	**Pn**	**19 20 35.6**	**-2.0**
	baz=193							
LONT				*e*S	**Sn**	**Sn**	**19 20 58.7**	**-1.0**
	baz=193							
JKRS	**Kuro-shima**	**1.84**	**100**	P	**Pn**	**Pn**	**19 20 38.0**	**+0.3**
JKRS				S	**Sn**	**Sn**	**19 21 00.6**	**+0.8**
WSF	**Szhu**	**1.88**	**241**	*e*P	**Pn**	**Pn**	**19 20 37.9**	**-0.3**
	baz=238							
WSF				*e*S	**Sn**	**Sn**	**19 21 01.4**	**+0.6**
	baz=238							
TWK	**Hsinying**	**1.90**	**228**	P	**Pn**	**Pn**	**19 20 39.6**	**+1.0**
	baz=224							
TWK				S	**Sn**	**Sn**	**19 21 03.0**	**+1.6**
	baz=224							
CHN1	**Nanshi**	**1.93**	**225**	*e*P	**Pn**	**Pn**	**19 20 40.6**	**+1.6**
	baz=222							
CHN1				*e*S	**Sn**	**Sn**	**19 21 05.0**	**+2.9**
	baz=222							
TWG	**Pinlang**	**1.94**	**207**	*e*P	**Pn**	**Pn**	**19 20 38.2**	**-0.8**
	baz=194							
TWG				*e*S	**Sn**	**Sn**	**19 21 00.5**	**-1.7**
	baz=194							
TWGBT	**Beinan**	**1.94**	**207**	*e*P	**Pn**	**Pn**	**19 20 37.7**	**-1.3**
	baz=194							
TWGBT				*e*S	**Sn**	**Sn**	**19 21 00.9**	**-1.3**
	baz=194							
JIJ	**Ishigaki jima**	**1.95**	**95**	P	**Pn**	**Pn**	**19 20 38.8**	**-0.3**
JIJ				S	**Sn**	**Sn**	**19 21 02.1**	**-0.3**
LDUT	**Ludao**	**1.95**	**195**	*e*P	**Pn**	**Pn**	**19 20 36.7**	**-2.4**
	baz=184							
LDUT				*e*S	**Sn**	**Sn**	**19 20 58.4**	**-3.9**
	baz=184							
SGST	**Jiashian**	**1.98**	**222**	P	**Pn**	**Pn**	**19 20 39.1**	**-0.5**
	baz=218							
SGST				*e*S	**Sn**	**Sn**	**19 21 04.2**	**+1.1**
	baz=218							
SLGT	**Liugui**	**2.00**	**219**	P	**Pn**	**Pn**	**19 20 41.0**	**+1.1**
	baz=206							
SLGT				*e*S	**Sn**	**Sn**	**19 21 05.6**	**+1.7**
	baz=206							
CHN8	**Yiju**	**2.05**	**234**	*e*P	**Pn**	**Pn**	**19 20 39.7**	**-0.8**
	baz=231							
CHN8				*e*S	**Sn**	**Sn**	**19 21 07.7**	**+2.8**
	baz=231							
JISG	**Ishigakijimahi**	**2.09**	**89**	P	**Pn**	**Pn**	**19 20 41.0**	**0.0**
JISG				S	**Sn**	**Sn**	**19 21 06.0**	**+0.2**
SCST	**Cishan**	**2.18**	**220**	*e*P	**Pn**	**Pn**	**19 20 43.3**	**+1.0**
	baz=217							
SCST				*e*S	**Sn**	**Sn**	**19 21 10.9**	**+2.9**
	baz=217							
ECL	**Taimali**	**2.19**	**207**	*e*P	**Pn**	**Pn**	**19 20 40.5**	**-1.9**
	baz=195							
ECL				*e*S	**Sn**	**Sn**	**19 21 07.8**	**-0.5**
	baz=195							
SSD	**Sandimen**	**2.21**	**215**	*e*P	**Pn**	**Pn**	**19 20 43.4**	**+0.6**
	baz=202							
SSD				*e*S	**Sn**	**Sn**	**19 21 10.8**	**+1.9**
	baz=202							
TSMG	**Majia**	**2.24**	**215**	*e*P	**Pn**	**Pn**	**19 20 44.2**	**+1.1**
	baz=202							
TSMG				*e*S	**Sn**	**Sn**	**19 21 11.3**	**+1.8**
	baz=202							
MASBT	**Mashibuluo**	**2.32**	**214**	*e*P	**Pn**	**Pn**	**19 20 44.2**	**-0.1**
	baz=198							
MASBT				*e*S	**Sn**	**Sn**	**19 21 12.9**	**+1.4**
	baz=198							
VWUC	**VWUC**	**2.37**	**281**	*e*P	**Pn**	**Pn**	**19 20 44.1**	**-0.9**
	baz=279							
VWUC				*e*S	**Sn**	**Sn**	**19 21 10.6**	**-2.3**
	baz=279							
EAST	**Anshuo**	**2.42**	**207**	*e*P	**Pn**	**Pn**	**19 20 45.0**	**-0.7**
	baz=196							
EAST				*e*S	**Sn**	**Sn**	**19 21 12.6**	**-1.5**
	baz=196							
JTJ	**Tarama**	**2.44**	**88**	P	**Pn**	**Pn**	**19 20 46.8**	**+0.9**
JTJ				*e*S	**Sn**	**Sn**	**19 21 16.1**	**+1.5**
MATB	**Ma-tsu**	**2.45**	**311**	*e*P	**Pn**	**Pn**	**19 20 46.8**	**+0.7**
	baz=310							
MATB				*e*S	**Sn**	**Sn**	**19 21 13.7**	**-1.2**
	baz=310							
PHUB	**P'eng-hu**	**2.47**	**245**	*e*P	**Pn**	**Pn**	**19 20 45.5**	**-0.7**
	baz=242							
PHUB				*e*S	**Sn**	**Sn**	**19 21 13.4**	**-1.8**
	baz=242							
MSUT	**Lienchiang**	**2.48**	**311**	*e*P	**Pn**	**Pn**	**19 20 47.1**	**+0.6**
	baz=311							
MSUT				*e*S	**Sn**	**Sn**	**19 21 15.2**	**-0.3**
	baz=311							
PTMZ	**Houxiangcun**	**2.68**	**281**	*e*P	**Pn**	**Pn**	**19 20 48.2**	**-0.9**
	baz=279							
PTMZ				*e*S	**Sn**	**Sn**	**19 21 19.7**	**-0.6**
	baz=279							
LYJJ	**Jianjiangzhen**	**2.84**	**315**	*e*P	**Pn**	**Pn**	**19 20 51.9**	**+0.5**
	baz=315							
LYJJ				*e*S

DAV	**Davao City (W)**	**17.59**	**311**	LR	LR	19 59 49.5		
	comp=Z,49nm,19.7s,baz=310,slow=39							
ASAR	**Alice Springs**	**19.62**	**194**	P	Pn	19 52 47.8	-0.4	
	0.1nm,0.3s,baz=11,slow=11,SNR=8.6							
STKA	**Stephens Creek**	**27.32**	**175**	P	P	19 54 02.1	-1.1	
	1.1nm,0.8s,baz=342,slow=20,SNR=1.6							
KSRS	**Korea Array**	**43.01**	**347**	LR	LR	20 12 26.9		
	comp=Z,13nm,20.9s,baz=160,slow=34							

IDC 10 20:00:33.9±3.2, 4°30S×133°35E, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.3/28, mbtmp3.4/4, ML3.2/3, Error ellipse: s-maj=132.3km s-min=31.8km az=81.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.58**	**177**	Pn	Pn	20 04 12.8	-2.2
	0.1nm,0.3s,baz=358,slow=13,SNR=2.6						
WRA				Sn	Sn	20 06 59.6	-8.9
	0.0nm,0.3s,baz=360,slow=23,SNR=2.3						
FITZ	**Fitzroy Crossi**	**15.65**	**208**	Pn	Pn	20 04 15.4	-0.6
	0.3nm,0.3s,baz=29,slow=11,SNR=15						
ASAR	**Alice Springs**	**19.26**	**178**	P	Pn	20 05 01.4	+0.3
	0.1nm,0.3s,baz=4.9,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**67.88**	**325**	P	P	20 11 34.3	0.0
	0.1nm,0.6s,baz=132,slow=7.3,SNR=1.9						

IDC 10 20:05:24.5±170.0, 45°88N×152°16E, h0km, Error ellipse: s-maj=380.2km s-min=16.7km az=121.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**28.77**	**150**	H	H	20 41 22.7	
	baz=338,slow=76,SNR=31						
H11N1	**WAKE ISLAND Hy**	**28.79**	**150**	H	H	20 41 25.6	
	baz=338,slow=76,SNR=42						
H11N3	**WAKE ISLAND Hy**	**28.79**	**150**	H	H	20 41 28.4	
	baz=338,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**29.84**	**151**	H	H	20 42 49.5	
	baz=339,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**29.85**	**151**	H	H	20 42 50.1	
	baz=339,slow=76,SNR=38						
H11S2	**WAKE ISLAND Hy**	**29.86**	**151**	H	H	20 42 50.4	
	baz=339,slow=76,SNR=35						
H03N2	**Juan Fernandez**	**139.41**	**91**	H	H	22 59 54.0	
	baz=307,slow=77,SNR=19						
H03N1	**Juan Fernandez**	**139.42**	**91**	H	H	22 59 54.1	
	baz=307,slow=77,SNR=21						
H03N3	**Juan Fernandez**	**139.42**	**91**	H	H	22 59 53.7	
	baz=307,slow=77,SNR=23						

IDC 10 20:16:57.2±177.0, 45°96N×151°90E, h0km, Error ellipse: s-maj=394.4km s-min=17.8km az=121.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**28.93**	**150**	H	H	20 53 08.8	
	baz=338,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.94**	**150**	H	H	20 53 11.1	
	baz=338,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**28.95**	**150**	H	H	20 53 11.7	
	baz=338,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**29.99**	**151**	H	H	20 54 33.5	
	baz=339,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**30.00**	**151**	H	H	20 54 32.7	
	baz=339,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**30.01**	**151**	H	H	20 54 31.7	
	baz=339,slow=76,SNR=25						
H03N2	**Juan Fernandez**	**139.59**	**90**	H	H	23 11 37.8	
	baz=308,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**139.60**	**90**	H	H	23 11 37.8	
	baz=308,slow=77,SNR=14						
H03N1	**Juan Fernandez**	**139.60**	**90**	H	H	23 11 40.5	
	baz=308,slow=77,SNR=13						

IDC 10 20:18:10.3±179.0, 46°43N×150°78E, h0km, Error ellipse: s-maj=398.4km s-min=14.2km az=119.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**29.74**	**148**	H	H	20 55 27.7	
	baz=338,slow=76,SNR=25						
H11N1	**WAKE ISLAND Hy**	**29.75**	**148**	H	H	20 55 28.2	
	baz=338,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**29.75**	**148**	H	H	20 55 29.4	
	baz=338,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**30.79**	**149**	H	H	20 56 47.5	
	baz=339,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**30.80**	**149**	H	H	20 56 46.9	
	baz=339,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**30.81**	**149**	H	H	20 56 49.2	
	baz=339,slow=76,SNR=31						
H03N2	**Juan Fernandez**	**140.36**	**89**	H	H	23 13 52.5	
	baz=307,slow=77,SNR=20						
H03N1	**Juan Fernandez**	**140.38**	**89**	H	H	23 13 53.7	
	baz=307,slow=77,SNR=19						
H03N3	**Juan Fernandez**	**140.38**	**89**	H	H	23 13 53.7	
	baz=307,slow=77,SNR=26						

IDC 10 20:20:28.8±165.0, 46°24N×151°61E, h0km, Error ellipse: s-maj=369.2km s-min=17.9km az=120.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**29.28**	**149**	H	H	20 57 08.2	
	baz=338,slow=76,SNR=8.5						
H11N1	**WAKE ISLAND Hy**	**29.29**	**149**	H	H	20 57 12.5	
	baz=338,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**29.30**	**149**	H	H	20 57 11.9	
	baz=338,slow=76,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	**30.34**	**151**	H	H	20 58 29.9	
	baz=339,slow=76,SNR=9.6						
H11S3	**WAKE ISLAND Hy**	**30.35**	**151**	H	H	20 58 30.4	
	baz=339,slow=76,SNR=9.3						
H11S2	**WAKE ISLAND Hy**	**30.36**	**151**	H	H	20 58 28.9	
	baz=339,slow=76,SNR=11						
H03N2	**Juan Fernandez**	**139.79**	**90**	H	H	23 15 27.4	
	baz=307,slow=77,SNR=6.5						
H03N1	**Juan Fernandez**	**139.81**	**90**	H	H	23 15 29.8	
	baz=307,slow=77,SNR=7.5						
H03N3	**Juan Fernandez**	**139.81**	**90**	H	H	23 15 29.0	
	baz=307,slow=77,SNR=6.7						

IDC 10 20:24:27.7±207.0, 46°40N×150°72E, h0km, Error ellipse: s-maj=462.2km s-min=13.0km az=119.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	**WAKE ISLAND Hy**	**29.73**	**148**	H	H	21 01 47.8	
	baz=338,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**29.74**	**148**	H	H	21 01 47.3	
	baz=338,slow=76,SNR=46						
H11N3	**WAKE ISLAND Hy**	**29.74**	**148**	H	H	21 01 47.4	
	baz=338,slow=76,SNR=52						
H11S1	**WAKE ISLAND Hy**	**30.78**	**149**	H	H	21 03 03.4	
	baz=339,slow=76,SNR=62						
H11S3	**WAKE ISLAND Hy**	**30.79**	**149**	H	H	21 03 05.1	
	baz=339,slow=76,SNR=61						
H11S2	**WAKE ISLAND Hy**	**30.80**	**149**	H	H	21 03 03.4	
	baz=339,slow=76,SNR=63						
H03N2	**Juan Fernandez**	**140.40**	**89**	H	H	23 20 09.1	
	baz=302,slow=78,SNR=36						
H03N1	**Juan Fernandez**	**140.42**	**89**	H	H	23 20 14.9	
	baz=302,slow=78,SNR=33						
H03N3	**Juan Fernandez**	**140.42**	**89**	H	H	23 20 11.4	
	baz=302,slow=78,SNR=38						

*IDC **10** 20:44:37.5±5.4, 3°77S×147°21E, h90km±64km, mb3.5/7, mb1 3.6/8, mb1mx3.4/38, mbtmp3.8/8, ML1.5/1, MS3.2/5, Ms1 3.2/5, ms1mx2.8/27, Error ellipse: s-maj=81.8km s-min=28.8km az=107.0*

ISC 10 20:44:34.0±1.8, 3°5S±0°1×146°8E±0°4, h35km, n13, σ1§30/8, mb3.7/6, MS3.2/4, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.84**	**177**	P	**Pn**	**20 45 58.7**	**+0.6**
	1.0nm,0.3s,baz=336,slow=8.3,SNR=5.1						
HNR	**Honiara**	**14.28**	**115**	LR	LR	20 53 26.7	
	comp=Z,63nm,18.9s,baz=252,slow=38						
WRA	**Warramunga Arr**	**20.36**	**216**	P	**P**	**20 49 07.1**	**-0.6**
	7.1nm,0.8s,baz=40,slow=11,SNR=39						
ASAR	**Alice Springs**	**23.59**	**211**	P	**P**	**20 49 41.4**	**-0.4**
	1.8nm,0.7s,baz=41,slow=8.8,SNR=20						
FITZ	**Fitzroy Crossi**	**25.30**	**234**	P	**P**	**20 49 56.2**	**-1.3**
	3.3nm,0.9s,baz=42,slow=14,SNR=8.0						
FITZ				LR	LR	20 59 45.0	
	comp=Z,72nm,18.8s,baz=48,slow=36						
H11S3	**WAKE ISLAND Hy**	**29.36**	**41**	T	T	21 21 07.6	
	baz=223,slow=76,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**29.36**	**41**	T	T	21 21 15.0	
	baz=223,slow=76,SNR=5.2						
H11S1	**WAKE ISLAND Hy**	**29.38**	**41**	T	T	21 21 10.7	
	baz=223,slow=76,SNR=5.6						
KSRS	**Korea Array**	**44.42**	**338**	LR	LR	21 08 54.5	
	comp=Z,23nm,19.6s,baz=160,slow=32						
CMAR	**Chiang Mai Arr**	**51.98**	**297**	P	**P**	**20 53 42.4**	**+2.1**
	0.9nm,0.8s,baz=117,slow=6.0,SNR=7.0						
SONM	**Songino Array**	**62.20**	**330**	P	**P**	**20 54 51.7**	**-0.5**
	0.3nm,0.7s,baz=150,slow=9.9,SNR=1.5						
MKAR	**Makanchi Array**	**75.51**	**320**	P	**P**	**20 56 13.9**	**-1.0**
	0.6nm,0.9s,baz=113,slow=5.9,SNR=5.3						
MKAR				LR	LR	21 28 52.4	
	comp=Z,13nm,21.3s,baz=82,slow=35						
ZALV	**Zalesovo Beam**	**76.86**	**328**	P	**P**	**20 56 22.0**	**-0.4**
	0.5nm,0.5s,baz=101,slow=7.5,SNR=2.6						
ZALV				LR	LR	21 28 38.1	
	comp=Z,15nm,21.9s,baz=90,slow=34						

IDC 10 20:48:04.4±2.3, 2°03S×127°17E, h0km, mb3.0/2, mb1 3.2/3, mb1mx3.1/44, mbtmp3.0/3, ML2.9/1, Error ellipse: s-maj=224.7km s-min=27.1km az=66.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.14**	**159**	P	P	20 52 28.9	-0.5
	0.0nm,0.3s,baz=341,slow=13,SNR=1.4						
ASAR	**Alice Springs**	**22.48**	**164**	P	P	20 53 06.3	+0.7
	0.2nm,0.8s,baz=347,slow=10,SNR=1.6						
MKAR	**Makanchi Array**	**62.55**	**327**	P	P	20 58 30.0	-0.2
	0.2nm,0.3s,baz=113,slow=7.1,SNR=7.6						

*IDC **10** 20:53:26.9±0.7, 1°61S×135°54E, h0km, mb4.0/10, mb1 4.2/15, mb1mx4.0/44, mbtmp4.1/15, ML3.7/5, MS3.2/8, Ms1 3.2/8, ms1mx2.9/34, Error ellipse: s-maj=21.9km s-min=14.6km az=59.0*

*DJA **10** 20:53:28.2±0.6, 2°S±5°×13°6E±°, h13km±6km, M4.3/8, mb4.4/6, MLv4.3/8*

*NEIC **10** 20:53:31.0±1.4, 1°67S±0°06×135°48E±0°10, h28km±5km, mb4.1/16, Error ellipse: s-maj=14.6km s-min=8.3km az=98.0*

ISC 10 20:53:29.9±0.5, 1°74S±0°06×135°50E±0°05, h21km, n58, σ1§92/58, mb4.0/14, MS3.1/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**0.75**	**100**	P	**Pb**	**20 53 43.5**	**-0.7**
SRPI				S	**Sn**	**20 53 55.0**	**-1.0**
BAKI	**Biak**	**0.81**	**48**	P	**Pb**	**20 53 41.8**	**-3.5**
FAKI	**Fak Fak**	**3.45**	**250**		**Pn**	**20 54 22.4**	**-0.1**
FAKI	**Fak Fak**	**3.45**	**250**	P	**Pn**	**20 54 22.0**	**-0.4**
SIJI	**Sorong**	**4.32**	**281**	Pn	**Pn**	**20 54 34.8**	**+0.4**
	1.9nm,0.3s,baz=115,slow=9.0,SNR=15						
SIJI				Sn	**Sn**	**20 55 26.2**	**+2.0**
	2.1nm,0.3s,baz=124,slow=22,SNR=1.6						
SWI	**Sorong**	**4.33**	**282**	P	**Pn**	**20 54 34.5**	**0.0**
GENI	**Genyem**	**4.74**	**100**	P	**Pn**	**20 54 39.4**	**-0.8**
JAY	**Jayapura**	**5.26**	**99**	Pn	**Pn**	**20 54 47.1**	**-0.2**
	0.4nm,0.3s,baz=190,slow=23,SNR=1.8						
JAY				Sn	**Sn**	**20 55 51.9**	**+4.5**
	0.2nm,0.3s,baz=93,slow=20,SNR=2.0						
JAY	**Jayapura**	**5.26**	**99**	P	**Pn**	**20 54 46.7**	**-0.6**
	0.1nm9.7nm,1.2s						
BNDI	**Bandanaira**	**6.23**	**244**	P	**Pn**	**20 55 00.4**	**-0.3**
	0.6nm69nm,0.8s						
MTN	**Manton Dam**	**11.85**	**201**	Pn	**Pn**	**20 56 18.9**	**+1.2**
DAV	**Davao City (W)**	**13.21**	**312**	LR	LR	21 01 57.8	
	comp=Z,96nm,19.7s,baz=20,slow=39						
PMG	**Port Moresby**	**13.87**	**124**	LR	LR	21 03 27.4	
	comp=Z,138nm,19.1s,baz=78,slow=43						
BATI	**Baumata**	**14.46**	**234**	Pn	**Pn**	**20 56 54.9**	**+1.4**
	0.7nm,0.3s,baz=130,slow=6.9,SNR=5.7						
BATI	**Baumata**	**14.46**	**234**	P	**Pn**	**20 56 52.6**	**-0.9**
WB0	**Warramunga Arr**	**17.95**	**183**		**P**	**20 57 39.4**	**+0.6**
WRAB	**Tennant Creek**	**18.12**	**183**	P	**P**	**20 57 42.3**	**+1.7**
WRAB				IAmb	IAmb	20 57 46.4	
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**18.13**	**183**	P	**P**	**20 57 41.8**	**+1.1**
WB2				IAmb	IAmb	20 57 46.5	
	comp=Z,19nm,1.2s						
WRA	**Warramunga Arr**	**18.13**	**184**	P	**P**	**20 57 41.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=5.5,slow=12,SNR=25						
WRA				S	**Sn**	**21 00 55.6**	**-6.8**
	comp=Z,0.1nm,0.3s,baz=0.7,slow=23,SNR=5.7						
WRA	**Warramunga Arr**	**18.13**	**184**	P	**P**	**20 57 41.8**	**+1.1**
WR0	**Warramunga Arr**	**18.13**	**183**		**Pn**	**20 57 40.9**	**+0.3**
MYLDM	**Lahad Datu**	**18.32**	**292**	P	**P**	**20 57 43.5**	**+0.6**
MYLDM				IAmb	IAmb	20 57 50.5	
	comp=Z,33nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.92**	**210**	P	**Pn**	**20 57 50.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=34,slow=9.8,SNR=13						
FITZ				S	**Sn**	**21 01 13.2**	**-8.4**
	comp=Z,0.1nm,0.3s,baz=181,slow=17,SNR=1.8						
FITZ	**Fitzroy Crossi**	**18.92**	**210**	P	**Pn**	**20 57 51.1**	**+1.0**
CTA	**Charters Tower**	**21.05**	**151**	P	**P**	**20 58 14.2**	**+1.6**
	comp=Z,7.5nm,1.0s,baz=283,slow=14,SNR=2.7						
CTAO	**Charters Tower**	**21.05**	**151**	P	**P**	**20 58 14.7**	**+2.0**
AS31	**Alice Springs**	**21.85**	**184**	P	**P**	**20 58 23.0**	**+1.7**
AS31				IAmb	IAmb	20 58 25.4	
	comp=Z,6.3nm,0.9s						
ASAR	**Alice Springs**	**21.85**	**184**	P	**P**	**20 58 23.5**	**+2.2**
	comp=Z,16nm,0.9s,baz=9.7,slow=11,SNR=77						
ASAR				S	**S**	**21 02 23.1**	**+1.1**
	comp=Z,1.7nm,1.0s,baz=2.4,slow=27,SNR=4.7						
ASAR	**Alice Springs**	**21.85**	**184**	P	**P**	**20 58 23.3**	**+2.0**
PSA00	**Pilbara Seismi**	**24.92**	**217**	P	**P**	**20 58 51.5**	**-0.3**
JOW	**Kunigami**	**29.25**	**347**	LR	LR	21 10 39.5	
	comp=Z,52nm,19.2s,baz=356,slow=35						
JCJ	**Chichijima**	**29.38**	**12**	LR	LR	21 09 00.3	
	comp=Z,76nm,20.2s,baz=134,slow=32						
STKA	**Stephens Creek**	**30.52**	**170**	P	**P**	**20 59 42.6**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=357,slow=7.1,SNR=4.7						
STKA	**Stephens Creek**	**30.52**	**170**	P	**P**	**20 59 42.7**	**+0.9**
DZM	**Mont Dzumac**	**36.25**	**126**	LR	LR	21 16 01.5	
	comp=Z,26nm,19.0s,baz=178,slow=37						
MJAR	**Matsushiro Arr**	**38.17**	**4**	LR	LR	21 13 37.7	
	comp=Z,30nm,19.8s,baz=165,slow=32						
CMAR	**Chiang Mai Arr**	**41.18**	**301**	P	**P**	**21 01 13.2**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=116,slow=6.8,SNR=10.0						
CMAR				PcP	**PcP**	**21 03 13.9**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=158,slow=3.6,SNR=7.0						
CMAR				LR	LR	21 17 57.2	
	comp=Z,14nm,19.1s,baz=165,slow=36						
CMAR	**Chiang Mai Arr**	**41.18**	**301**	P	**P**	**21 01 12.3**	**-1.0**
SHL	**Shillong**	**50.16**	**306**	P	**P**	**21 02 23.8**	**-0.6**
SHL				PcP	**PcP**	**21 03 43.6**	**-0.1**
SONM	**Songino Array**	**55.52**	**337**	LR	LR	21 25 30.3	
	comp=Z,37nm,21.6s,baz=120,slow=35						
WMQ	**Urumqi**	**62.28**	**323**	*eP*	**P**	**21 03 52.4**	**+1.8**
MK31	**Makanchi Array**	**67.08**	**323**	P	**P**	**21 04 21.4**	**-0.5**
MK31				IAmb	IAmb	21 04 23.0	
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	**67.08**	**323**	P	**P**	**21 04 22.0**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=116,slow=8.1,SNR=20						
MKAR	**Makanchi Array**	**67.08**	**323**	P	**P**	**21 04 21.2**	**-0.6**
MAKZ	**Makanchi**	**67.28**	**323**	P	**P**	**21 04 22.9**	**-0.2**
ZALV	**Zalesovo Beam**	**69.51**	**331**	P	**P**	**21 04 36.0**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=149,slow=5.9,SNR=2.1						
ZALV	**Zalesovo Beam**	**69.51**	**331**	P	**P**	**21 04 35.8**	**-1.0**
KK31	**Karatay Array**	**73.20**	**316**	P	**P**	**21 04 59.4**	**0.0**
KK31				IAmb	IAmb	21 05 00.8	
	comp=Z,2.7nm,0.9s						
KKAR	**Karatay Array**	**73.20**	**316**	P	**P**	**21 04 59.3**	**-0.2**
KKAR	**Karatay Array**	**73.20**	**316**	P	**P**	**21 04 59.4**	**0.0**
KKAR				IAmb	IAmb	21 05 00.8	
	comp=Z,2.7nm,0.9s						
BVAR	**Borovoye Array**	**76.70**	**326**	P	**P**	**21 05 19.4**	**0.0**
	comp=Z,0.7nm,0.7s,baz=134,slow=15,SNR=6.2						
VNDA	**Vanda**	**77.04**	**174**	P	**P**	**21 05 20.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=338,slow=6.4,SNR=5.4						
VNDA	**Vanda**	**77.04**	**174**	IAmb	IAmb	21 06 12.9	
	comp=Z,1.5nm,1.2s						
GEYT	**Alibeck**	**81.13**	**309**	P	**P**	**21 05 45.2**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=200,slow=12,SNR=4.4						
GEYT	**Alibeck**	**81.13**	**309**	P	**P**	**21 05 44.8**	**+0.7**
ILAR	**Eielson Array**	**86.29**	**25**	P	**P**	**21 06 08.9**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=263,slow=4.7,SNR=7.0						
TORD	**Torodi Ar. Bea**	**132.91**	**286**	PKP	**PKiKP**	**21 12 44.4**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=63,slow=3.0,SNR=4.4						
LPAZ	**La Paz**	**150.58**	**128**	PKPbc	**PKiKP**	**21 13 23.2**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=31,slow=3.7,SNR=5.2						

IDC 10 21:05:16.1±22.0, 55°39S×127°15W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.6/34, mbtmp3.6/2, MS3.4/2, Ms1 3.4/2, ms1mx2.9/18, Error ellipse: s-maj=1331.0km s-min=140.1km az=135.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03S2	**Juan Fernandez**	**39.50**	**77**	T	T	21 54 23.1	
	baz=220,slow=74,SNR=157						
H03S1	**Juan Fernandez**	**39.51**	**77**	T	T	21 54 23.8	
	baz=220,slow=74,SNR=142						
H03S3	**Juan Fernandez**	**39.52**	**77**	T	T	21 54 23.5	
	baz=220,slow=74,SNR=126						
H03N3	**Juan Fernandez**	**39.79**	**77**	T	T	21 54 41.7	
	baz=223,slow=72,SNR=954						
H03N2	**Juan Fernandez**	**39.79**	**77**	T	T	21 54 38.4	
	baz=223,slow=72,SNR=806						
H03N1	**Juan Fernandez**	**39.80**	**77**	T	T	21 54 37.3	
	baz=223,slow=72,SNR=1187						
PPT	**Papeete**	**41.45**	**327**	LR	LR	21 26 11.0	
	comp=Z,43nm,19.3s,baz=170,slow=30						
ASAR	**Alice Springs**	**75.73**	**249**	P	P	21 17 03.7	+0.1
	0.3nm,0.6s,baz=138,slow=5.5,SNR=4.9						
H01W1	**Cape Leeuwin H**	**75.97**	**228**	T	T	22 41 43.7	
	baz=149,slow=76,SNR=20						
H01W2	**Cape Leeuwin H**	**75.98**	**228**	T	T	22 41 42.1	
	baz=149,slow=76,SNR=20						
H01W3	**Cape Leeuwin H**	**75.99**	**228**	T	T	22 41 43.6	
	baz=149,slow=76,SNR=21						
WRA	**Warramunga Arr**	**78.52**	**252**	P	P	21 17 19.3	+0.1
	0.4nm,0.8s,baz=139,slow=5.3,SNR=2.3						
TXAR	**Lajitas Array**	**86.75**	**20**	LR	LR	21 51 22.9	
	comp=Z,22nm,18.8s,baz=0.0,slow=32						
H11S2	**WAKE ISLAND Hy**	**92.28**	**300**	T	T	23 00 58.2	
	baz=148,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**92.30**	**300**	T	T	23 00 58.4	
	baz=148,slow=76,SNR=23						
H11S1	**WAKE ISLAND Hy**	**92.30**	**300**	T	T	23 00 56.4	
	baz=148,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**93.22**	**301**	T	T	23 02 10.0	
	baz=149,slow=74						
H11N1	**WAKE ISLAND Hy**	**93.23**	**300**	T	T	23 02 07.6	
	baz=149,slow=74						
H11N2	**WAKE ISLAND Hy**	**93.24**	**300**	T	T	23 02 06.7	
	baz=149,slow=74						
SONM	**Songino Array**	**146.65**	**280**	PKPbc	PKPbc	21 24 58.3	-0.6
	0.2nm,0.5s,baz=147,slow=3.4,SNR=1.2						

*SOME **10** 21:14:43.8, 42°63N×78°60E, h10km*
*NNC **10** 21:14:44.2±0.6, 42°75N×78°67E, h16km±3km, mb3.1, mpv2.3, Error ellipse: s-maj=6.2km s-min=1.7km az=173.0*
*KRNET **10** 21:14:45.2±0.1, 42°63N×78°59E, h26km, mb1.7*

ISC 10 21:14:44.5±1.1, 42.71N±0.04×78.62E±0.03, h10km±9km, n21, σ1§13/40, 10C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.28**	**217**	⇑*i*P	**Pg**	**21 14 50.5**	**+0.3**
	baz=27						
PRZ				⇑*i*S	**Sg**	**21 14 54.0**	**0.0**
	baz=27						
SATY	**Saty**	**0.39**	**336**	*e*P	**Pb**	**21 14 53.3**	**-0.4**
	2.9nm,0.1s						
SATY				*e*S	**Sb**	**21 14 59.9**	**+0.2**
	18nm,0.1s						
SATY	**Saty**	**0.39**	**336**	P	**Pb**	**21 14 53.2**	**-0.4**
	2.9nm,0.1s						
SATY				S	**Sb**	**21 14 59.8**	**+0.1**
	18nm,0.1s						
UZB	**Uzynbulak**	**0.53**	**33**	*e*P	**Pb**	**21 14 54.7**	**-1.3**
	3.1nm,0.2s						
UZB				*e*S	**Sb**	**21 15 02.8**	**-1.0**
	8.1nm,0.1s						
UZB	**Uzynbulak**	**0.53**	**33**	P	**Pb**	**21 14 54.8**	**-1.2**
	2.3nm,0.1s						
UZB				S	**Sb**	**21 15 02.8**	**-1.0**
	8.4nm,0.1s						
ANVS	**Anan'yevo**	**0.71**	**277**	⇑*i*P	**Pg**	**21 14 58.4**	**+0.1**
	baz=83						
ANVS				⇑*i*S	**Sg**	**21 15 08.5**	**+0.9**
	baz=83						
KPKS	**Kokpek**	**0.76**	**3**	*e*P	**Pb**	**21 14 59.5**	**-0.4**
	12nm,0.1s						
KPKS				*e*S	**Sn**	**21 15 10.6**	**-2.5**
	5.0nm,0.3s						
SHLS	**Shalkode**	**0.76**	**53**	*e*P	**Pn**	**21 15 03.0**	**+1.6**
	1.3nm,0.1s						
SHLS				*e*S	**Sn**	**21 15 16.7**	**+3.6**
	4.7nm,0.5s						
PDGK	**Podgornoye**	**0.89**	**45**	P	**Pb**	**21 15 00.8**	**-1.4**
	0.2nm,0.2s						
PDGK				S	**Sb**	**21 15 12.8**	**-1.3**
	1.2nm,0.2s						
KDJ	**Kajisay**	**1.21**	**242**	⇑*i*P	**Pn**	**21 15 06.7**	**-1.0**
	baz=45						
KDJ

WRA	**Warramunga Arr**	**22.78**	**227**	P		**P**	**21 29 42.4**	**-0.7**
	0.4nm,0.3s,baz=52,slow=10.0,SNR=9.7							
ASAR	**Alice Springs**	**25.54**	**221**	P		**P**	**21 30 07.5**	**-1.0**
	0.7nm,0.7s,baz=57,slow=9.6,SNR=9.9							
FITZ	**Fitzroy Crossi**	**28.90**	**241**	P		**P**	**21 30 38.5**	**-0.2**
	0.6nm,0.5s,baz=55,slow=11,SNR=1.5							
MKAR	**Makanchi Array**	**79.87**	**319**	P		**P**	**21 36 47.0**	**-0.3**
	0.1nm,0.4s,baz=92,slow=6.8,SNR=1.2							
ILAR	**Eielson Array**	**82.56**	**22**	P		**P**	**21 37 01.5**	**+0.4**
	0.3nm,0.7s,baz=245,slow=5.9,SNR=1.7							
TORD	**Torodi Ar. Bea**	**149.57**	**288**	PKPbc		**PKPbc**	**21 44 29.2**	**+0.5**
	0.3nm,0.6s,baz=67,slow=2.2,SNR=1.4							

*NEIC **10** 21:31:09.5±1.1,6.71S±0.04×127.5E±0.1,h410km±16km, mb4.1/6,Error ellipse: s-maj=19.2km s-min=3.0km az=73.0*
*IDC **10** 21:31:12.4±2.5,6.99S×127.08E,h446km±30km,mb3.1/4, mb1 3.3/9,mb1mx3.0/36,mbtmp4.1/9,Error ellipse: s-maj=50.1km s-min=11.8km az=60.0*
ISC 10 21:31:11.7±0.7,6.93S±0.09×127.26E±0.10,h450km,n30, σ1851/30,mb3.6/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**4.08**	**226**	P	**P**	**21 32 26.3**	**-1.4**
SAUI	**Saumlaki**	**4.14**	**105**	P	P	21 32 23.6	-4.5
SAUI				S	S	21 33 17.2	-13
BATI	**Baumata**	**4.82**	**227**	P	**P**	**21 32 34.6**	**+0.2**
	6.6nm,0.3s,baz=92,slow=3.2,SNR=8.4						
BATI				S	**S**	**21 33 38.4**	**-3.4**
	10nm,0.3s,baz=119,slow=4.1,SNR=8.8						
FAKI	**Fak Fak**	**6.37**	**52**	P	P	21 32 43.0	-6.9
MTN	**Manton Dam**	**7.00**	**147**	P	**P**	**21 32 54.6**	**-1.9**
KAPI	**Kappang**	**7.71**	**284**	P	**P**	**21 33 03.9**	**-0.1**
	0.7nm,0.3s,baz=54,slow=21,SNR=4.3						
KNRA	**Kununurra**	**8.81**	**171**	P	**P**	**21 33 12.7**	**-3.3**
TOLI2	**Tolitoli**	**10.28**	**321**	P	**P**	**21 33 29.8**	**-2.2**
FITZ	**Fitzroy Crossi**	**11.21**	**188**	P	**P**	**21 33 42.8**	**+0.8**
	0.5nm,0.3s,baz=14,slow=6.5,SNR=16						
WB0	**Warramunga Arr**	**14.52**	**152**	P	**P**	**21 34 17.3**	**-0.5**
WRAB	**Tennant Creek**	**14.64**	**153**	P	**P**	**21 34 18.8**	**-0.3**
WRA	**Warramunga Arr**	**14.64**	**153**	P	**P**	**21 34 18.8**	**-0.4**
	2.4nm,0.3s,baz=331,slow=11,SNR=122						
WRA				S	**S**	**21 36 52.9**	**-1.1**
	baz=331,slow=21,SNR=5.0						
WRA	**Warramunga Arr**	**14.64**	**153**	P	**P**	**21 34 17.2**	**-1.9**
WB2	**Warramunga Arr**	**14.65**	**153**	P	**P**	**21 34 18.8**	**-0.4**
WR0	**Warramunga Arr**	**14.75**	**152**	P	**P**	**21 34 19.9**	**-0.4**
COEN	**Coen**	**17.13**	**115**	P	**P**	**21 34 43.9**	**-1.6**
COEN				IAmb	IAmb	21 34 44.1	
	comp=Z,3.2nm,0.6s						
AS31	**Alice Springs**	**17.82**	**160**	P	**P**	**21 34 53.6**	**+1.0**
AS31				IAmb	IAmb	21 34 54.4	
	comp=Z,3.5nm,0.4s						
ASAR	**Alice Springs**	**17.82**	**160**	P	**P**	**21 34 53.4**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=348,slow=12,SNR=106						
ASAR				S	**S**	**21 37 56.0**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=334,slow=17,SNR=4.9						
ASAR	**Alice Springs**	**17.82**	**160**	P	**P**	**21 34 53.6**	**+1.0**
CISI	**Cisompet, Garu**	**19.30**	**267**	P	**P**	**21 35 08.2**	**+1.3**
CISI				IAmb	IAmb	21 35 09.3	
	comp=Z,14nm,0.6s						
MANU	**Manus Island**	**20.62**	**77**		**PcP**	**21 39 08.7**	**-1.1**
BBOO	**Buckleboo**	**27.02**	**164**	P	**P**	**21 36 17.8**	**+1.8**
BBOO				IAmb	IAmb	21 36 27.3	
	comp=Z,7.8nm,1.1s						
STKA	**Stephens Creek**	**28.20**	**154**	P	**P**	**21 36 28.0**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=329,slow=7.3,SNR=14						
STKA	**Stephens Creek**	**28.20**	**154**	IAmb	IAmb	21 36 28.2	
	comp=Z,0.7nm,1.0s						
TUWZ	**Tuamarina**	**53.76**	**137**	P	**P**	**21 39 52.0**	**+1.5**
SNZO	**South Karori**	**54.22**	**137**	P	**P**	**21 39 55.0**	**+1.2**
SONM	**Songino Array**	**57.56**	**343**	P	**P**	**21 40 18.0**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=155,slow=6.8,SNR=3.9						
MKAR	**Makanchi Array**	**66.71**	**328**	P	**P**	**21 41 17.9**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=121,slow=8.0,SNR=11						
ZALV	**Zalesovo Beam**	**70.34**	**335**	P	**P**	**21 41 38.3**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=160,slow=4.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**126.13**	**281**	PKP	**PKPdf**	**21 49 23.6**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=90,slow=1.7,SNR=1.6						

IDC 10 21:41:26.4±2.9,11.40S×162.95E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.5/25,mbtmp3.7/4,ML2.8/1,MS2.4/1, Ms1 2.4/1,ms1mx2.1/37,Error ellipse: s-maj=59.9km s-min=44.7km az=71.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.54**	**303**	LR	LR	21 43 24.3	
	comp=Z,57nm,19.1s,baz=172,slow=33						
DZM	**Mont Dzumac**	**11.13**	**163**	Pn	Pn	21 44 06.0	-1.0
	0.1nm,0.3s,baz=292,slow=16,SNR=1.8						
WRA	**Warramunga Arr**	**28.79**	**249**	P	P	21 47 26.6	+0.3
	0.5nm,0.3s,baz=78,slow=8.9,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**29.93**	**7**	T	T	22 19 17.9	
	baz=189						
H11S3	**WAKE ISLAND Hy**	**29.93**	**7**	T	T	22 19 14.6	
	baz=189						
H11S1	**WAKE ISLAND Hy**	**29.94**	**7**	T	T	22 19 17.4	
	baz=189						
ASAR	**Alice Springs**	**30.19**	**242**	P	P	21 47 38.5	-0.3
	0.4nm,0.7s,baz=63,slow=9.9,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**31.16**	**7**	T	T	22 20 49.7	
	baz=190						
H11N3	**WAKE ISLAND Hy**	**31.16**	**7**	T	T	22 20 50.5	
	baz=190						
H11N2	**WAKE ISLAND Hy**	**31.17**	**7**	T	T	22 20 50.2	
	baz=190						
MKAR	**Makanchi Array**	**91.91**	**317**	P	P	21 54 37.0	+0.2
	0.1nm,0.5s,baz=101,slow=6.4,SNR=3.7						

*DDA **10** 21:50:49.6,38.37N×26.82E,h7km±5km,ML1.9*
ISK 10 21:50:49.0,38.33N×26.87E,h10km±2km,ML2.3/5, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.22**	**279**	*i* P	Pg	21 50 53.6	0.0
URLA				*i* S	Sg	21 50 56.8	+0.1
URLA	**Izmir**	**0.22**	**279**	PG	Pg	21 50 53.9	+0.3
URLA				SG	Sg	21 50 57.8	+1.1
ZEYE	**Izmir, Urla-Ze**	**0.30**	**254**	*i* P	Pb	21 50 56.4	-0.2
ZEYE				*i* S	Sg	21 50 59.4	+0.2
ZEYE				IAML		21 51 02.0	
	comp=N,145nm,0.5s						
FOCM	**Foa**	**0.40**	**344**	PG	Pg	21 50 57.5	+0.6
FOCM				SG	Sb	21 51 03.6	-0.9
CHOS	**Chios island**	**0.65**	**276**	PG	Pb	21 51 02.1	-0.4
CHOS				SG	Sb	21 51 11.6	0.0
ZEDA	**zmir-Bergama**	**0.66**	**14**	*i* P	Pg	21 51 02.1	+0.3
ZEDA				*i* S	Sg	21 51 09.6	-0.8
DKL	**Dikili**	**0.74**	**2**	PG	Pb	21 51 03.8	-0.3
AYDB	**Zeytinkoy-Aydi**	**0.89**	**115**	PG	Pb	21 51 06.6	0.0
BUHA	**Balikesir, Bur**	**1.19**	**8**	*i* P	Pg	21 51 12.3	+0.6
BUHA				*i* S	Sb	21 51 22.3	-4.7
BDRM	**Kayabasi**	**1.34**	**160**	*i* P	Pn	21 51 13.8	0.0
BDRM				*i* S	Sb	21 51 23.2	-8.2
BDRM				IAML		21 51 34.0	
	comp=E,20nm,0.2s						
BDRM				IAML		21 51 47.0	
	comp=N,33nm,1.4s						
BDRM	**Kayabasi**	**1.34**	**160**	*i* P	Pn	21 51 13.7	-0.1
BDRM				*i* S	Sb	21 51 25.0	-6.4
BDRM				IAML		21 51 30.0	
	comp=E,77nm,0.3s						

*DDA **10** 21:50:57.3,36.26N×27.71E,h7km±6km,ML2.2*
ISK 10 21:50:51.5,35.69N×27.94E,h30km,ML2.7/7, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.55**	**16**	PG	Pn	21 51 03.8	+0.5
ARG				SG	Sn	21 51 11.9	+0.4
KARP	**Karpathos**	**0.65**	**258**	PG	Pn	21 51 04.9	+0.2
KARP				SG	Sn	21 51 14.5	+0.5
TURN	**Turunc**	**1.11**	**13**	*i* P	Pn	21 51 11.1	0.0
TURN				*i* S	Sn	21 51 21.6	-3.8
TURN	**Turunc**	**1.11**	**13**	*i* P	Pn	21 51 11.3	+0.2
TURN				*i* S	Sn	21 51 20.4	-5.0
TURN				IAML		21 51 29.0	
	comp=E,118nm,0.3s						
TURN				IAML		21 51 30.0	
	comp=N,122nm,0.3s						
TURN	**Turunc**	**1.11**	**13**	PN	Pn	21 51 11.1	+0.1
DALY	**Dalyan (Mula)**	**1.27**	**27**	*i* P	Pb	21 51 14.0	-0.7
DALY				*i* S	Sn	21 51 24.0	-5.2
DALY				IAML		21 51 26.0	
	comp=E,118nm,1.4s						
DALY	**Dalyan (Mula)**	**1.27**	**27**	PN	Pn	21 51 13.5	+0.3
DALY				SN	Sn	21 51 29.8	+0.6
AKAS	**Kas**	**1.46**	**68**	PN	Pn	21 51 16.4	+0.5
YER	**Yerkesik**	**1.47**	**11**	PN	Pn	21 51 16.5	+0.5
ZKR	**Zakros**	**1.52**	**248**	PN	Pn	21 51 17.1	+0.5
MULA	**Mugla, Merkez-**	**1.59**	**11**	*i* P	Pn	21 51 18.7	+0.9
MULA				*i* S	Sn	21 51 33.5	-4.0
MULA				IAML		21 51 41.0	
	comp=E,46nm,0.4s						
TAVA	**DENIZLI_Tavas**	**1.94**	**24**	*i* P	Pn	21 51 23.0	+0.5
TAVA				*i* S	Sn	21 51 40.6	-5.3
TAVA	**DENIZLI_Tavas**	**1.94**	**24**	*i* P	Pn	21 51 23.0	+0.5
TAVA				*i* S	Sn	21 51 41.6	-4.4
TAVA				IAML		21 51 52.0	
	comp=E,49nm,0.4s						
TAVA				IAML		21 51 53.0	
	comp=N,37nm,0.3s						
AYDN	**Tasoluk**	**1.97**	**359**	*i* P	Pn	21 51 22.3	-0.6
AYDN				*i* S	Sn	21 51 36.3	-10
AYDN	**Tasoluk**	**1.97**	**359**	*i* P	Pn	21 51 22.4	-0.6
AYDN				*i* S	Sn	21 51 35.9	-11
AYDN				IAML		21 51 47.0	
	comp=N,30nm,0.3s						
KORT	**Korkueli**	**2.35**	**55**	PN	Pn	21 51 28.9	+0.7
IDI	**Anoyia**	**2.52**	**262**	PN	Pn	21 51 31.3	+0.8

*JMA **10** 22:11:44.7±0.1,23.64N×122.43E,h37km,M2.0*
*TAP **10** 22:11:45.7,23.63N×122.45E,h36km±1km,ML2.7,D*
ISC 10 22:11:42.6±1.2,23.63N±0.03×122.43E±0.02,h12km±9km, n69,σ0.69/131,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.89**	**300**	P	**Pn**	**22 12 00.9**	**+0.1**
	baz=292						
TWD				S	**Sn**	**22 12 12.4**	**-1.2**
	baz=292						
EGFH	**Guangfu**	**0.92**	**273**	*e*P	**Pn**	**22 12 01.7**	**+0.4**
	baz=274						
EGFH				*e*S	**Sn**	**22 12 13.9**	**-0.7**
	baz=274						
ESL	**Shilin**	**0.93**	**281**	P	**Pn**	**22 12 01.6**	**0.0**
	baz=283						
ESL				*e*S	**Sb**	**22 12 12.9**	**-0.1**
	baz=283						
HGSD	**Ruisui**	**0.94**	**262**	P	**Pn**	**22 12 01.6**	**+0.1**
	baz=264						
HGSD				*e*S	**Sb**	**22 12 13.7**	**+0.6**
	baz=264						
NACB	**Ninganchiao**	**0.94**	**305**	P	**Pn**	**22 12 01.6**	**0.0**
	baz=298						
NACB				S	**Sn**	**22 12 13.7**	**-1.3**
	baz=298						
JYNG	**Yonagunijimaku**	**0.94**	**30**	P	**Pb**	**22 12 01.5**	**+0.6**
JYNG				*e*S	**Sn**	**22 12 14.3**	**-0.7**
YOJ	**Yonaguni jima**	**0.98**	**32**	P	**Pn**	**22 12 02.6**	**+0.4**
YOJ				*e*S	**Sn**	**22 12 15.4**	**-0.6**
YOJ	**Yonaguni jima**	**0.98**	**32**	*e*P	**Pn**	**22 12 02.8**	**+0.6**
	baz=31						
YOJ				*e*S	**Sn**	**22 12 15.6**	**-0.4**
	baz=31						
EWUT	**Wuta**	**1.01**	**324**	P	**Pn**	**22 12 03.7**	**+1.2**
	baz=323						
EWUT				S	**Sn**	**22 12 16.5**	**-0.2**
	baz=323						
ETLH	**Xiulin Townshi**	**1.04**	**304**	P	**Pn**	**22 12 03.3**	**+0.2**
	baz=300						
ETLH				*e*S	**Sn**	**22 12 16.9**	**-0.7**
	baz=300						
EYUL	**Yuli**	**1.06**	**255**	*e*P	**Pg**	**22 12 03.3**	**+0.3**
	baz=249						
EYUL				S	**Sg**	**22 12 17.2**	**+0.3**
	baz=249						
YULB	**Yu-li**	**1.07**	**257**	P	**Pn**	**22 12 03.9**	**+0.5**
	baz=251						
YULB				S	**Sg**	**22 12 17.4**	**+0.3**
	baz=251						
TWF1	**Yuli**	**1.08**	**255**	P	**Pn**	**22 12 04.0**	**+0.4**
	baz=249						
TWF1				S	**Sg**	**22 12 17.5**	**+0.1**
	baz=249						
TWC	**Suao**	**1.11**	**331**	*e*P	**Pn**	**22 12 05.0**	**+1.1**
	baz=331						
TWC				*e*S	**Sg**	**22 12 17.6**	**-0.9**
	baz=331						
FULB	**Fuli**	**1.13**	**248**	P	**Pb**	**22 12 04.4**	**+0.3**
	baz=240						
FULB				*e*S	**Sb**	**22 12 18.2**	**-0.5**
	baz=240						
WHF	**Hehuan Shan**	**1.19**	**296**	P	**Pn**	**22 12 05.8**	**+0.4**
	baz=289						
WHF				S	**Sg**	**22 12 20.3**	**-0.6**
	baz=289						
VWDT	**VWDT**	**1.19**	**276**	P	**Pg**	**22 12 06.2**	**+0.6**
	baz=279						
VWDT				S	**Sn**	**22 12 20.8**	**-0.3**
	baz=279						
NDS	**Dongshan**	**1.19**	**327**	P	**Pg**	**22 12 06.6**	**+1.0**
	baz=326						
NDS				S	**Sn**	**22 12 21.6**	**+0.4**
	baz=326						
EDH	**Donghe**	**1.23**	**238**	P	**Pn**	**22 12 05.5**	**0.0**
	baz=232						
EDH				S	**Sb**	**22 12 20.2**	**-1.3**
	baz=232						
CHGB	**Renai**	**1.23**	**291**	P	**Pg**	**22 12 07.0**	**+0.7**
	baz=293						
CHGB				*e*S	**Sg**	**22 12 21.5**	**-0.8**
	baz=293						
NNSB	**Datong**	**1.25**	**310**	P	**Pg**	**22 12 07.0**	**+0.4**
	baz=310						
NNSB				S	**Sn**	**22 12 22.5**	**-0.2**
	baz=310						
FUSS	**Fushou**	**1.25**	**300**	P	**Pg**	**22 12 07.1**	**+0.4**
	baz=301						
FUSS				S	**Sn**	**22 12 22.8**	**-0.1**
	baz=301						
NNS	**Nan Shan**	**1.26**	**310**	*i* P	**Pg**	**22 12 07.3**	**+0.4**
	baz=310						
NNS				S	**Sg**	**22 12 22.3**	**-1.0**
	baz=310						
ENTT	**Nioudou**	**1.28**	**322**	P	**Pg**	**22 12 07.7**	**+0.5**
	baz=322						
NDT	**Datong Townshi**	**1.28**	**319**	P	**Pg**	**22 12 07.8**	**+0.5**
	baz=310						
NDT				*e*S	**Sg**	**22 12 24.3**	**+0.3**
	baz=310						
TWE	**Neicheng**	**1.29**	**327**	P	**Pg**	**22 12 08.1**	**+0.6**
	baz=327						
TWE				S	**Sg**	**22 12 23.9**	**-0.3**
	baz=327						
TDCB	**Techi**	**1.32**	**298**	*e*P	**Pg**	**22 12 08.2**	**+0.2**
	baz=299						
HATJ	**Hateruma jima**	**1.33**	**71**	P	**Pn**	**22 12 07.5**	**+0.6**
HATJ				*e*S	**Sb**	**22 12 23.7**	**-0.7**
SSLB	**Suanglung**	**1.36**	**277**	P	**Pg**	**22 12 08.7**	**-0.1**
	baz=279						
SSLB				S	**Sn**	**22 12 25.3**	**-0.2**
	baz=279						
YUS	**Yu-Shan**	**1.37**	**264**	P	**Pg**	**22 12 09.2**	**+0.2**
	baz=267						
YUS				S	**Sb**	**22 12 25.7**	**-0.3**
	baz=267						
ELDTW	**Lidau**	**1.37**	**252**	P	**Pn**	**22 12 08.2**	**+0.6**
	baz=243						
ELDTW				*e*S	**Sb**	**22 12 23.8**	**-2.0**
	baz=243						
IRIF	**Iriomote-Funau**	**1.38**	**59**	P	**Pn**	**22 12 08.3**	**+0.7**
IRIF				*e*S	**Sn**	**22 12 25.8**	**0.0**
LONT	**Longtian**	**1.40**	**239**	*e*P	**Pn**	**22 12 08.6**	**+0.7**
	baz=235						
LONT				*e*S	**Sn**	**22 12 26.1**	**-0.2**
	baz=235						
YHNB	**Yeheng**	**1.42**	**317**	P	**Pg**	**22 12 09.8**	**-0.1**
	baz=305						
YHNB				*e*S	**Sn**	**22 12 26.7**	**-0.1**
	baz=305						
NWLT	**Wulai**	**1.42**	**324**	P	**Pg**	**22 12 09.7**	**-0.2**
	baz=323						
NWLT				S	**Sg**	**22 12 27.8**	**-0.7**
	baz=323						
SMLT	**Sun Moon Lake**	**1.43**	**280**	*e*P	**Pg**	**22 12 09.9**	**-0.2**
	baz=291						
SMLT				*e*S	**Sb**	**22 12 27.5**	**+0.1**
	baz=291						
NSK	**Sanguang**	**1.43**	**317**	P	**Pg**	**22 12 10.0**	**-0.1**
	baz=305						
NSK				S	**Sg**	**22 12 27.2**	**-1.5**
	baz=305						
DPDB	**Guoxing**	**1.44**	**286**	*e*P	**Pg**	**22 12 10.2**	**-0.1**
	baz=289						
DPDB				*e*S	**Sb**	**22 12 27.1**	**-0.5**
	baz=289						
TIPB	**Shuangxi**	**1.45**	**338**	P	**Pg**	**22 12 10.8**	**+0.4**
	baz=336						
TIPB				S	**Sb**	**22 12 27.1**	**-0.8**
	baz=336						
WCS	**Beigang Elemen**	**1.46**	**287**	*e*P	**Pg**	**22 12 10.5**	**-0.1**
	baz=290						
WCS				*e*S	**Sb**	**22 12 27.9**	**-0.1**
	baz=290						
TYC	**Yuchr**	**1.47**	**281**	P	**Pb**	**22 12 10.2**	**+0.4**
	baz=292						
TYC				S	**Sb**	**22 12 28.3**	**-0.2**
	baz=292						
TWGBT	**Beinan**	**1.48**	**237**	P	**Pn**	**22 12 09.7**	**+0.6**
	baz=231						
TWGBT				*e*S	**Sn**	**22 12 27.5**	**-1.0**
	baz=231						
TWG	**Pinlang**	**1.49**	**237**	*e*P	**Pn**	**22 12 09.6**	**+0.4**
	baz=231						
TWG				*e*S	**Sn**	**22 12 27.8**	**-0.8**
	baz=231						
ALS	**Alishan**	**1.50**	**266**	P	**Pg**	**22 12 11.5**	**0.0**
	baz=268						
ALS				S	**Sn**	**22 12 29.0**	**-0.1**
	baz=268						
WHP	**Taichung City**	**1.50**	**296**	P	**Pg**	**22 12 12.0**	**+0.4**
	baz=298						
WHP				*e*S	**Sg**	**22 12 29.7**	**-1.4**
	baz=298						
JKRS	**Kuro-shima**	**1.56**	**67**	P	**Pn**	**22 12 11.1**	**+0.9**
JKRS				*e*S	**Sn**	**22 12 29.4**	**-1.0**
STYH	**Taoyuan**	**1.59**	**254**	*e*P	**Pb**	**22 12 12.1**	**+0.1**
	baz=249						
STYH				*e*S	**Sn**	**22 12 30.4**	**-0.6**
	baz=249						
STYT	**Tauyuan**	**1.61**	**253**	P	**Pb**	**22 12 12.5**	**+0.2**
	baz=248						
STYT				S	**Sn**	**22 12 31.4**	**-0.2**
	baz=248						
CHN5	**Tsauling**	**1.61**	**269**	P	**Pg**	**22 12 13.2**	**-0.4**
	baz=272						
CHN5				S	**Sb**	**22 12 32.9**	**+0.2**
	baz=272						
NSTT	**Nanjuang**	**1.64**	**308**	*e*P	**Pg**	**22 12 14.2**	**0.0**
	baz=308						
NSTT				*e*S	**Sg**	**22 12 34.1**	**-1.4**
	baz=308						
TWQ1	**Liyutan**	**1.68**	**296**	*e*P	**Pg**	**22 12 14.7**	**-0.1**
	baz=297						
TPUB	**Ta-pu**	**1.69**	**259**	P	**Pg**	**22 12 14.5**	**-0.5**
	baz=262						
TPUB				S	**Sb**	**22 12 35.3**	**+0.5**
	baz=262						
CHN4	**Tsaushan**	**1.71**	**261**	P	**Pg**	**22 12 15.2**	**-0.3**
	baz=264						
CHN4				*e*S	**Sg**	**22 12 36.6**	**-1.1**
	baz=264						
WTP	**Ta-pu**	**1.71**	**257**	P	**Pg**	**22 12 15.1**	**-0.4**
	baz=260						
WTP				S	**Sb**	**22 12 36.0**	**+0.5**
	baz=260						
WGK	**Gukeng**	**1.72**	**272**	*e*S	**Sb**	**22 12 36.2**	**+0.6**
	baz=275						
JIJ	**Ishigaki jima**	**1.73**	**65**	P	**Pn**	**22 12 12.9**	**+0.5**
JIJ				*e*S	**Sn**	**22 12 32.8**	**-1.6**
WDLH	**Douliu**	**1.74**	**272**	*e*S	**Sg**	**22 12 37.2**	**-1.4**
	baz=275						
SGST	**Jiashian**	**1.79**	**253**	*e*P	**Pb**	**22 12 15.1**	**-0.2**
	baz=254						
SGST				*e*S	**Sb**	**22 12 38.6**	**+1.0**
	baz=254						
CHN1	**Nanshi**	**1.81**	**256**	*e*P	**Pb**	**22 12 16.4**	**+0.8**
	baz=259						
CHN1				*e*S	**Sb**	**22 12 38.6**	**+0.4**
	baz=259						
TWK	**Hsinying**	**1.82**	**259**	P	**Pb**	**22 12 16.4**	**+0.5**
	baz=262						
TWK				S	**Sb**	**22 12 39.1**	**+0.4**
	baz=262						
SSD	**Sandimen**	**1.88**	**242**	*e*P	**Pb**	**22 12 16.1**	**-0.7**
	baz=240						
SSD				*e*S	**Sn**	**22 12 37.4**	**-0.7**
	baz=240						
TSMG	**Majia**	**1.89**	**241**	*e*P	**Pn**	**22 12 16.2**	**+1.6**
	baz=239						
TSMG				*e*S	**Sn**	**22 12 37.9**	**-0.4**
	baz=239						
EAST	**Anshuo**	**1.92**	**230**	*e*P	**Pn**	**22 12 15.9**	**+0.8**
	baz=240						
MASBT	**Mashibuluo**	**1.94**	**239**	*e*P	**Pn**	**22 12 16.9**	**+1.5**
	baz=236						
MASBT				*e*S	**Sn**	**22 12 39.7**	**0.0**
	baz=236						
JISG	**Ishigakijimahi**	**1.96**	**61**	P	**Pn**	**22 12 15.9**	**+0.2**
JISG				*e*S	**Sn**	**22 12 39.3**	**-0.9**
SLIU	**Shizi**	**2.06**	**227**	*e*P	**Pn**	**22 12 18.0**	**+0.9**
	baz=229						
SLIU				*e*S	**Sn**	**22 12 43.7**	**+1.1**
	baz=229						
JTJ	**Tarama**	**2.30**	**64**	P	**Pn**	**22 12 21.1**	**+0.7**
JTJ				*e*S	**Sn**	**22 12 48.8**	**+0.2**
PHUB	**P'eng-hu**	**2.63**	**268**	*e*S	**Sn**	**22 12 57.3**	**+0.7**
	baz=272						
PTMZ	**Houxiangcun**	**3.33**	**296**	*e*P	**Pn**	**22 12 35.8**	**+1.3**
	baz=298						
PTMZ				*e*S	**Sn**	**22 13 13.5**	**-0.4**
	baz=298						

*JMA **10** 22:14:57.3,23.71N×121.62E,h3km±1km,M2.8*
*TAP **10** 22:14:58.1,23.75N×121.52E,h7km,ML3.1,C*
ISC 10 22:14:58.2±0.9,23.73N±0.01×121.56E±0.02,h7km±7km, n76,σ0.69/132,2C-13D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.13**	**244**	⇓*i* P	**Pg**	**22 15 00.8**	**-0.2**
	baz=238						
EGFH				S	**Sg**	**22 15 02.7**	**-0.2**
	baz=238						
ESL	**Shilin**	**0.14**	**308**	⇓*i* P	**Pg**	**22 15 00.8**	**-0.4**
	baz=308						
ESL				*i* S	**Sg**	**22 15 02.4**	**-0.9**
	baz=308						
HWA	**Hwalien**	**0.25**	**10**	*e*P	**Pg**	**22 15 04.6**	**+1.4**
	baz=7.0						
HWA				*e*S	**Sg**	**22 15 10.8**	**+4.2**
	baz=7.0						
HGSD	**Ruisui**	**0.26**	**208**	*i* P	**Pb**	**22 15 04.2**

TWF1 eS Sb 22 15 14.0 -1.1
baz=222
NACB Ninganchiao 0.45 4 ⇓iP Pg 22 15 06.8 -0.1
baz=355
NACB S Sg 22 15 12.9 +0.1
baz=355
CHGB Renai 0.48 314 ⇓iP Pg 22 15 07.5 0.0
baz=311
CHGB S Sg 22 15 13.7 -0.2
baz=311
ETLH Xiulin Townshi 0.48 352 iP Pg 22 15 07.4 -0.2
baz=351
ETLH S Sg 22 15 13.1 -0.8
baz=351
WHF Hehuan Shan 0.49 327 ⇓iP Pg 22 15 07.6 -0.2
baz=315
WHF eS Sg 22 15 14.3 -0.1
baz=315
SSLB Suanglung 0.56 276 ⇓iP Pg 22 15 08.6 -0.3
baz=274
SSLB S Sg 22 15 15.4 -0.8
baz=274
FULB Fuli 0.58 205 eP Pb 22 15 11.0 +0.4
baz=218
FUSS Fushou 0.59 331 P Pg 22 15 09.7 0.0
baz=319
FUSS eS Sg 22 15 17.6 +0.1
baz=319
WPL Puli Township 0.62 298 P Pg 22 15 10.1 0.0
baz=296
WPL eS Sg 22 15 17.8 -0.4
baz=296
SMLT Sun Moon Lake 0.62 285 ⇓iP Pg 22 15 10.1 -0.1
baz=283
SMLT eS Sg 22 15 18.8 +0.5
baz=283
TDCB Techi 0.64 325 P Pg 22 15 10.5 0.0
baz=317
TDCB eS Sg 22 15 17.5 -1.4
baz=317
DPDB Guoxing 0.65 298 eP Pg 22 15 10.8 0.0
baz=304
TYC Yuchr 0.67 286 ⇓iP Pg 22 15 10.7 -0.3
baz=284
TYC eS Sb 22 15 20.9 -0.7
baz=284
NNSB Datong 0.72 347 ⇓iP Pg 22 15 12.0 0.0
baz=346
NNSB S Sg 22 15 20.6 -0.8
baz=346
ALS Alishan 0.72 253 ⇓iP Pg 22 15 12.3 +0.2
baz=251
ALS S Sg 22 15 21.9 +0.3
baz=251
ELDTW Lidau 0.73 223 P Pg 22 15 11.5 -0.7
baz=221
ELDTW eS Sg 22 15 21.7 0.0
baz=221
NNS Nan Shan 0.73 347 ⇓iP Pg 22 15 12.3 0.0
baz=346
NNS *i* S Sg 22 15 21.4 -0.4
baz=346
EWUT Wuta 0.74 16 eP Pg 22 15 12.4 0.0
baz=5.0
EWUT eS Sb 22 15 22.6 -1.2
baz=5.0
WJS Zhushan 0.77 277 eP Pb 22 15 14.2 +0.4
baz=281
WJS eS Sn 22 15 26.4 -0.8
baz=281
WHP Taichung City 0.78 315 P Pg 22 15 13.1 -0.1
baz=313
WHP S Sg 22 15 23.9 +0.5
baz=313
EDH Donghe 0.79 197 P Pb 22 15 14.7 +0.6
baz=185
EDH S Sn 22 15 27.9 +0.2
baz=185
WNT Mingjian 0.81 281 eP Pn 22 15 15.4 -0.7
baz=285
WNT eS Sn 22 15 28.1 -0.2
baz=285
CHN5 Tsauling 0.82 261 P Pb 22 15 14.4 -0.4
baz=252
CHN5 eS Sb 22 15 26.7 +0.8
baz=252
NDT Datong Townshi 0.87 357 P Pb 22 15 15.3 -0.4
baz=346
NDT eS Sg 22 15 25.4 -0.9
baz=346
LONT Longtian 0.91 206 eP Pn 22 15 17.1 -0.3
baz=216
STYH Taoyuan 0.91 233 eP Pg 22 15 15.5 -0.1
baz=227
STYH eS Sb 22 15 28.6 +0.1
baz=227
TCU Taichung 0.91 298 eP Pn 22 15 17.1 -0.2
baz=296
ENTT Nioudou 0.91 1 eP Pb 22 15 15.8 -0.5
baz=350
ENTT eS Sg 22 15 27.3 -0.2
baz=350
WGK Gukeng 0.91 268 eP Pn 22 15 16.8 -0.6
baz=265
NDS Dongshan 0.92 9 eP Pb 22 15 16.4 0.0
baz=7.0
NDS eS Sb 22 15 27.9 -0.9
baz=7.0
TWC Suao 0.92 17 eP Pb 22 15 16.1 -0.4
baz=7.0
TWC eS Sb 22 15 29.3 +0.4
baz=7.0
STYT Tauyuan 0.92 233 P Pg 22 15 16.0 0.0
baz=227
STYT eS Sn 22 15 30.4 -0.7
baz=227
WDLH Douliu 0.94 268 eP Pb 22 15 17.1 +0.5
baz=266
WDLH eS Sn 22 15 30.8 -0.5
baz=266
TWQ1 Liyutan 0.95 311 eP Pn 22 15 17.8 -0.1
baz=310
TPUB Ta-pu 0.95 244 eP Pb 22 15 16.9 -0.1
baz=251
TPUB eS Sb 22 15 29.5 -0.3
baz=251
YHNB Yeheng 0.95 350 P Pb 22 15 16.7 -0.4
baz=338
YHNB eS Sg 22 15 28.3 -0.6
baz=338
CHN4 Tsaushan 0.96 247 ⇑iP Pb 22 15 17.5 +0.3
baz=247
CHN4 S Sb 22 15 31.2 +1.2
baz=247
NSK Sanguang 0.96 349 P Pb 22 15 16.8 -0.4
baz=337
NSK S Sg 22 15 28.3 -0.9
baz=337
WTP Ta-pu 0.99 241 eP Pb 22 15 17.9 +0.2
baz=248
WTP eS Sb 22 15 31.8 +0.9
baz=248
TWE Neicheng 1.00 6 eP Pb 22 15 17.4 -0.4
baz=4.0
TWE eS Sb 22 15 31.6 +0.6
baz=4.0
NSY Sanyi 1.00 314 eP Pn 22 15 19.2 +0.5
baz=311
NSY eS Sn 22 15 33.8 +0.8
baz=311
TWG Pinlang 1.00 206 eP Pb 22 15 18.0 +0.1
baz=204
TWGBT Beinan 1.00 206 eP Pg 22 15 17.3 -0.2
baz=204
NSTT Nanjuang 1.03 331 eP Pb 22 15 18.4 0.0
baz=328
NSTT eS Sb 22 15 32.3 +0.1
baz=328
LIOB Emei 1.04 332 eP Pn 22 15 18.8 -0.4
baz=328
LIOB eS Sb 22 15 32.9 +0.5
baz=328
WDJ Dajia District 1.04 307 eP Pn 22 15 19.8 +0.6
baz=305
NWLT Wulai 1.05 357 eP Pb 22 15 18.5 -0.1
baz=357
LDUT Ludao 1.05 184 eP Pg 22 15 17.5 -0.8
baz=173
LDUT eS Sn 22 15 34.0 -0.2
baz=173
CHY Chiayi 1.06 258 eP Pn 22 15 19.4 0.0
baz=257
CHY eS Sn 22 15 34.5 0.0
baz=257
NMLH Miaoli 1.07 319 eP Pn 22 15 20.2 +0.7
baz=323
NMLH eS Sn 22 15 35.5 +0.8
baz=323
WTK Tuku 1.07 268 eP Pn 22 15 19.6 0.0
baz=266
TWK Hsinying 1.08 245 P Pb 22 15 19.1 -0.1
baz=245
TWK S Sb 22 15 34.5 +0.9
baz=245
CHN1 Nanshi 1.09 241 eP Pn 22 15 19.8 -0.1
baz=241
CHN1 eS Sn 22 15 35.7 +0.5
baz=241
SGST Jiashian 1.10 235 P Pg 22 15 18.7 -0.6
baz=235
SGST S Sn 22 15 35.3 -0.1
baz=235
TIPB Shuangxi 1.26 11 eP Pn 22 15 22.6 +0.3
baz=357
SCST Cishan 1.29 230 eP Pb 22 15 24.2 +1.5
baz=216
SSD Sandimen 1.29 221 eP Pb 22 15 22.7 -0.1
baz=211
TSMG Majia 1.32 220 eP Pg 22 15 23.8 +0.4
baz=210
MASBT Mashibuluo 1.40 218 eP Pb 22 15 24.4 -0.2
baz=216
MASBT eS Sn 22 15 45.2 +2.4
baz=216
YM04 YM04 1.42 359 eP Pb 22 15 24.6 -0.4
baz=358
EAST Anshuo 1.49 206 eP Pg 22 15 26.7 0.0
baz=193
SCZT Fangliau 1.60 213 eP Pb 22 15 28.2 +0.2
baz=216
SCZT eS Sg 22 15 49.7 +0.1
baz=216
PHUB P'eng-hu 1.83 264 eP Pn 22 15 30.4 +0.3
baz=263
PHUB eS Sn 22 15 54.4 +0.9
baz=263
IRIF Iriomote-Funau 2.08 73 P Pn 22 15 33.0 -0.4
JKRS Kuro-shima 2.30 77 eS Sn 22 16 06.3 +1.3
JIJ Ishigaki jima 2.45 74 P Pn 22 15 37.7 -0.8
JIJ eS Sn 22 16 08.3 -0.4
JISG Ishigakijimahi 2.66 71 P Pn 22 15 40.9 -0.5
JISG eS Sn 22 16 13.5 -0.4

*DJA **10** 22:16:43.8±0.7,3°N±7°×12°9E±°, h231km±5km, M4.5/8, mb4.6/7, mB5.2/4, MLv4.4/8, Mw(mB)4.6/4*
*NEIC **10** 22:16:45.5±1.2,2.65N±0.09×128.51E±0.09, h235km±7km, mb4.1/22, Error ellipse: s-maj=15.3km s-min=10.5km az=220.0*
*IDC **10** 22:16:47.9±6.2,2.62N×128.58E, h260km±69km, mb3.3/12, mb1 3.4/13, mb1mx3.3/43, mbtmp4.0/13, Error ellipse: s-maj=37.4km s-min=12.2km az=88.0*
ISC 10 22:16:46.6±0.5,2.60N±0.06×128.42E±0.09, h250km, n51, σ0 97/50, mb3.8/22, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.10**	**210**	Pn	**Pn**	**22 17 28.8**	**-1.2**
TNTI	**Ternate**	**2.10**	**210**	P	**Pn**	**22 17 28.8**	**-1.2**
TNTI				S	**S**	**22 18 00.8**	**-3.5**
SGSI	**Sangihe**	**3.08**	**291**	P	**Pn**	**22 17 39.0**	**-1.0**
KMSI	**Cibinong**	**4.87**	**246**	P	**Pn**	**22 18 00.6**	**-0.3**
	0.9nm152nm,0.5s						
SANI	**Sanana**	**5.22**	**208**	P	**Pn**	**22 18 03.1**	**-2.0**
	1.3nm7μm263nm,0.5s						
GTOI	**Gorontalo**	**5.75**	**250**	P	**Pn**	**22 18 13.0**	**+1.3**
	0.1nm306nm15nm,0.5s						
NLAI	**Namlea**	**5.95**	**193**	P	**Pn**	**22 18 13.6**	**-0.6**
FAKI	**Fak Fak**	**6.69**	**145**	Pn	**Pn**	**22 18 23.4**	**0.0**
LUWI	**Luwuk**	**6.71**	**237**	Pn	**Pn**	**22 18 24.7**	**+1.1**
LUWI	**Luwuk**	**6.71**	**237**	P	**Pn**	**22 18 23.3**	**-0.3**
	3μm38nm,1.0s						
APSI	**Ampana**	**7.62**	**243**	P	**Pn**	**22 18 34.9**	**-0.2**
	0.1nm20nm,0.6s						
TTSI	**Tana Toraja**	**10.27**	**237**	P	**Pn**	**22 19 09.8**	**+1.2**
	15nm,0.7s						
MMRI	**Maumere**	**12.75**	**209**	Pn	**Pn**	**22 19 40.2**	**+0.6**
JAY	**Jayapura**	**13.29**	**112**	P	**Pn**	**22 19 46.8**	**+0.6**
	1.2nm,0.3s,baz=305,slow=16,SNR=4.9						
MTN	**Manton Dam**	**15.58**	**170**	P	**P**	**22 20 12.4**	**-0.5**
MTN				IAmb	IAmb	22 20 27.2	
	comp=Z,5.2nm,0.7s						
KNRA	**Kununurra**	**18.17**	**179**	P	**P**	**22 20 42.5**	**+1.4**
FITZ	**Fitzroy Crossi**	**20.75**	**187**	P	**P**	**22 21 09.0**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=0.0,slow=7.1,SNR=2.2						
FITZ	**Fitzroy Crossi**	**20.75**	**187**	IAmb	IAmb	22 21 18.9	
	comp=Z,1.4nm,0.9s						
YULB	**Yu-li**	**21.79**	**342**	P	**P**	**22 21 18.1**	**-0.6**
YULB				IAmb	IAmb	22 21 19.1	
	comp=Z,9.1nm,0.9s						
TPUB	**Ta-pu**	**21.92**	**340**	P	**P**	**22 21 19.8**	**-0.1**
COEN	**Coen**	**22.02**	**139**	P	**P**	**22 21 20.1**	**-0.8**
COEN				IAmb	IAmb	22 21 30.6	
	comp=Z,4.7nm,1.0s						
NACB	**Ninganchiao**	**22.44**	**343**	P	**P**	**22 21 23.2**	**-1.4**
WB0	**Warramunga Arr**	**22.99**	**165**	P	**P**	**22 21 30.4**	**+0.6**
WB0				IAmb	IAmb	22 21 31.2	
	comp=Z,6.8nm,1.1s						
WRA	**Warramunga Arr**	**23.15**	**166**	P	**P**	**22 21 31.1**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=343,slow=10,SNR=25						
WB2	**Warramunga Arr**	**23.15**	**166**	P	**P**	**22 21 32.1**	**+0.9**
WB2				IAmb	IAmb	22 21 35.7	
	comp=Z,2.7nm,0.9s						
WR0	**Warramunga Arr**	**23.21**	**165**	P	**P**	**22 21 32.0**	**+0.2**
WR0				IAmb	IAmb	22 21 32.4	
	comp=Z,2.4nm,1.1s						
AS31	**Alice Springs**	**26.65**	**169**	P	**P**	**22 22 03.5**	**+0.8**
ASAR	**Alice Springs**	**26.65**	**169**	P	**P**	**22 22 03.4**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=354,slow=8.0,SNR=24						
KULM	**Kulim**	**27.83**	**276**	P	**P**	**22 22 13.5**	**+0.2**
KULM				IAmb	IAmb	22 22 30.9	
	comp=Z,4.3nm,1.1s						
JWT	**Wachi**	**33.16**	**10**	P	**P**	**22 22 59.6**	**-0.1**
FORT	**Forrest**	**33.20**	**181**	P	**P**	**22 23 00.8**	**+0.7**
JGF	**Kuroka**	**33.86**	**13**	P	**P**	**22 23 04.6**	**-1.3**
JGF				IAmb	IAmb	22 23 07.1	
	comp=Z,9.5nm,1.1s						
KSRS	**Korea Array**	**34.69**	**359**	P	**P**	**22 23 13.4**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=174,slow=9.8,SNR=4.5						
MJAR	**Matsushiro Arr**	**34.96**	**14**	P	**P**	**22 23 14.0**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=192,slow=9.8,SNR=5.7						
MJAR	**Matsushiro Arr**	**34.96**	**14**	IAmb	IAmb	22 23 15.5	
	comp=Z,1.3nm,0.8s						
BBOO	**Buckleboo**	**35.96**	**169**	P	**P**	**22 23 24.5**	**+0.8**
BBOO				IAmb	IAmb	22 23 41.1	
	comp=Z,7.0nm,1.1s						
JSD	**Sado**	**36.40**	**13**	P	**P**	**22 23 26.2**	**-1.2**
JSD				IAmb	IAmb	22 23 33.4	
	comp=Z,9.5nm,1.0s						
STKA	**Stephens Creek**	**36.50**	**161**	P	**P**	**22 23 28.7**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=341,slow=11,SNR=4.4						
STKA	**Stephens Creek**	**36.50**	**161**	P	**P**	**22 23 28.7**	**+0.4**
NWAO	**Narrogin (SRO)**	**36.89**	**196**	P	**P**	**22 23 30.8**	**-0.8**
NWAO				IAmb	IAmb	22 23 35.2	
	comp=Z,13nm,1.1s						
USRK	**Ussuriysk Ar.**	**41.54**	**4**	P	**P**	**22 24 09.8**	**0.0**
	comp=Z,0.7nm,0.5s,baz=177,slow=5.7,SNR=5.4						
SONM	**Songino Array**	**48.91**	**340**	P	**P**	**22 25 07.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=169,slow=5.3,SNR=3.7						
PETK	**Petropavlovsk-**	**55.85**	**21**	P	**P**	**22 25 58.2**	**0.0**
	comp=Z,2.0nm,0.8s,baz=188,slow=8.7,SNR=2.0						
PETK	**Petropavlovsk-**	**55.85**	**21**	P	**P**	**22 25 58.0**	**-0.2**
MKAR	**Makanchi Array**	**59.44**	**325**	P	**P**	**22 26 24.6**	**+1.3**
	comp=Z,0.6nm,0.4s,baz=113,slow=7.0,SNR=19						
MKAR	**Makanchi Array**	**59.44**	**325**	P	**P**	**22 26 24.2**	**+0.9**
WHZ	**Wether Hill Ro**	**59.61**	**149**	P	**P**	**22 26 25.0**	**+0.6**
ZALV	**Zalesovo Beam**	**62.35**	**333**	P	**P**	**22 26 43.1**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=137,slow=5.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**62.35**	**333**	P	**P**	**22 26 42.6**	**0.0**
GAR	**Garm**	**63.92**	**313**	P	**P**	**22 26 54.4**	**+1.0**
GAR				IAmb	IAmb	22 27 08.4	
	comp=Z,3.0nm,1.1s						
ARCES	**ARCESS Array B**	**92.08**	**340**	P	**P**	**22 29 27.0**	**-0.1**
	comp=Z,4.9nm,1.1s,baz=81,slow=6.5,SNR=3.7						

*NEIC **10** 22:46:58.4±2.1,22.5S±0.1×176.13W±0.09, h81km±6km, mb4.6/37, Error ellipse: s-maj=16.0km s-min=11.4km az=162.0*
*IDC **10** 22:47:06.7±3.4,22.48S×176.52W, h143km±29km, mb3.9/19, mb1 4.1/21, mb1mx3.9/47, mbtmp4.3/21, MS3.1/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=21.0km s-min=14.1km az=153.0*
ISC 10 22:47:04.6±0.4,22.62S±0.09×176.35W±0.07, h134km, n103, σ1 43/99, mb4.5/33, 5C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.96**	**61**	Pn	**Pn**	**22 48 34.6**	**-10**
NIUE					Sn	22 49 44.7	-17
MSVF	**Nonsavu**	**7.17**	**312**	P	**Pn**	**22 48 46.8**	**-0.1**
	1.9nm,0.3s,baz=133,slow=14,SNR=8.4						
MSVF	**Nonsavu**	**7.17**	**312**	Pn	**Pn**	**22 48 45.1**	**-1.9**
AFI	**Afiamalu**	**9.69**	**27**	P	Pn	22 49 11.2	-10
	3.4nm,0.3s,baz=348,slow=20,SNR=1.7						
AFI				S	Sn	22 50 45.7	-22
	2.9nm,0.3s,baz=120,slow=21,SNR=2.3						
AFI	**Afiamalu**	**9.69**	**27**		Pn	22 49 11.4	-9.5
RAR	**Rarotonga**	**15.45**	**88**	P	**Pn**	**22 50 32.1**	**-3.2**
	1.8nm,0.3s,baz=335,slow=22,SNR=2.1						
RAR				S	Sn	22 53 10.4	-16
	1.1nm,0.3s,baz=78,slow=22,SNR=1.7						
RAR	**Rarotonga**	**15.45**	**88**		**Pn**	**22 50 29.6**	**-5.7**
DZM	**Mont Dzumac**	**15.93**	**269**	P	**Pn**	**22 50 41.1**	**-0.4**
	0.2nm,0.3s,baz=78,slow=19,SNR=4.1						
URZ	**Urewera**	**16.57**	**198**	P	**Pn**	**22 50 45.7**	**-3.3**
	0.6nm,0.3s,baz=302,slow=19,SNR=1.8						
URZ				S	Sn	22 53 38.3	-15
	0.6nm,0.3s,baz=113,slow=22,SNR=2.1						
URZ	**Urewera**	**16.57**	**198**		**Pn**	**22 50 46.5**	**-2.5**
URZ				IAmb	IAmb	22 50 49.1	
	comp=Z,33nm,1.2s						
SANVU	**Saraoutou**	**17.10**	**292**	Pn	**P**	**22 50 52.4**	**-2.8**
SANVU				IAmb	IAmb	22 51 03.7	
	comp=Z,50nm,0.8s						
BKZ	**Black Stump Fm**	**17.59**	**199**		**P**	**22 50 59.5**	**-0.9**
BFZ	**Birch Farm**	**19.06**	**197**	P	**P**	**22 51 13.0**	**-3.5**
BFZ				IAmb	IAmb	22 51 27.0	
	comp=Z,20nm,0.9s						
QRZ	**Quartz Range**	**20.43**	**205**	P	**P**	**22 51 31.1**	**-0.2**
QRZ				IAmb	IAmb	22 51 42.8	
	comp=Z,25nm,1.1s						
TUWZ	**Tuamarina**	**20.45**	**201**	P	**P**	**22 51 27.9**	**-3.5**
NNZ	**Nelson**	**20.46**	**203**	P	**P**	**22 51 32.7**	**+1.2**
BSWZ	**Blackbirch Sta**	**20.73**	**201**	P	**P**	**22 51 34.0**	**-0.5**
THZ	**Tophouse**	**21.11**	**203**	P	**P**	**22 51 38.7**	**+0.2**
KHZ	**Kahutara**	**21.47**	**201**	P	**P**	**22 51 40.4**	**-1.9**
KHZ				IAmb	IAmb	22 51 41.2	
	comp=Z,29nm,1.1s						
LTZ	**Lake Taylor**	**22.23**	**203**	P	**P**	**22 51 51.0**	**+0.7**
LTZ				IAmb	IAmb	22 51 58.3	
	comp=Z,18nm,1.0s						
MQZ	**McQueen's Vall**	**22.91**	**201**	P	**P**	**22 51 59.3**	**+2.5**
RPZ	**Rata Peaks**	**23.48**	**203**	P	**P**	**22 52 02.8**	**+0.7**
	comp=Z,3.3nm,0.4s,baz=57,slow=18,SNR=1.9						
RPZ	**Rata Peaks**	**23.48**	**203**	P	**P**	**22 52 02.3**	**+0.3**
RPZ				IAmb	IAmb	22 52 04.8	
	comp=Z,26nm,1.1s						
FOZ	**Fox Glacier**	**23.80**	**206**	P	**P**	**22 52 04.9**	**0.0**
LBZ	**Lake Benmore**	**24.37**	**204**	P	**P**	**22 52 08.5**	**-1.7**
ODZ	**Otahua Downs**	**24.77**	**202**	P	**P**	**22 52 14.4**	**+0.6**
ODZ				IAmb	IAmb	22 52 16.4	
	comp=Z,25nm,1.1s						
WKZ	**Wanaka**	**25.19**	**205**	P	**P**	**22 52 19.2**	**+1.6**
WKZ				IAmb	IAmb	22 52 24.5	
	comp=Z,37nm,1.2s						
PPT	**Papeete**	**25.62**	**84**	LR	LR	23 00 52.1	
	comp=Z,16nm,18.5s,baz=4.5,slow=32						
MLZ	**Mavora Lakes**	**26.00**	**206**	P	**P**	**22 52 25.6**	**+0.7**
MLZ				IAmb	IAmb	22 52 30.6	
	comp=Z,16nm,1.1s						
DCZ	**Deep Cove**	**26.47**	**207**	P	**P**	**22 52 29.8**	**+0.8**
DCZ				IAmb	IAmb	22 52 38.0	
	comp=Z,22nm,1.2s						
WHZ	**Wether Hill Ro**	**26.50**	**205**	P	**P**	**22 52 30.9**	**+1.5**
WHZ				IAmb	IAmb	22 52 46.2	
	comp=Z,18nm,1.1s						
ARMA	**Armidale**	**29.61**	**248**	P	**P**	**22 52 59.9**	**+2.5**
ARMA				IAmb	IAmb	22 53 12.7	
	comp=Z,9.8nm,1.1s						
EIDS	**Eidsvold**	**29.84**	**258**	P	**P**	**22 53 00.3**	**+0.9**
EIDS				IAmb	IAmb	22 53 15.7	
	comp=Z,12nm,1.1s						
CAN	**Canberra**	**32.68**	**239**	P	**P**	**22 53 25.1**	**+0.8**
CAN				IAmb	IAmb	22 53 27.6	
	comp=Z,12nm,1.0s						
CTA	**Charters Tower**	**34.87**	**267**	P	**P**	**22 53 44.0**	**+0.7**
	comp=Z,12nm,0.4s,baz=91,slow=10,SNR=45						
CTAO	**Charters Tower**	**34.87**	**267**	P	**P**	**22 53 43.8**	**+0.6**
TOO	**Toolangi**	**35.96**	**237**	P	**P**	**22 53 53.7**	**+1.3**
PMG	**Port Moresby**	**37.34**	**285**	P	**P**	**22 54 05.5**	**+1.2**
	comp=Z,7.5nm,0.4s,baz=127,slow=9.7,SNR=3.8						
STKA	**Stephens Creek**	**38.31**	**247**	P	**P**	**22 54 13.2**	**+0.8**
	comp=Z,3.8nm,0.5s,baz=97,slow=12,SNR=16						
STKA	**Stephens Creek**	**38.31**	**247**	P	**P**	**22 54 13.8**	**+1.5**
COEN	**Coen**	**39.29**	**276**	P	**P**	**22 54 21.7**	**+1.1**
COEN				IAmb	IAmb	22 54 22.6	
	comp=Z,8.1nm,1.1s						
BBOO	**Buckleboo**	**43.03**	**246**	P	**P**	**22 54 51.6**	**+0.6**
BBOO				IAmb	IAmb	22 54 52.3	
	comp=Z,9.5nm,0.9s						
AS31	**Alice Springs**	**45.57**	**259**	P	**P**	**22 55 11.6**	**+0.1**
ASAR	**Alice Springs**	**45.57**	**259**	P	**P**	**22 55 10.8**	**-0.6**
	comp=Z,7.6nm,0.7s,baz=93,slow=6.8,SNR=72						
ASAR				PcP	**PcP**	**22 56 48.8**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=104,slow=3.6,SNR=3.4						
ASAR	**Alice Springs**	**45.57**	**259**	P	**P**	**22 55 11.7**	**+0.3**
WR0	**Warramunga Arr**	**45.68**	**264**	P	**P**	**22 55 11.2**	**-1.1**
WR0				IAmb	IAmb	22 55 13.6	
	comp=Z,4.8nm,0.6s						
WB0	**Warramunga Arr**	**45.85**	**264**	P	**P**	**22 55 13.0**	**-0.7**
WB2	**Warramunga Arr**	**45.85**	**264**	P	**P**	**22 55 12.9**	**-0.8**
WRA	**Warramunga Arr**	**45.87**	**264**	P	**P**	**22 55 12.6**	**-1.1**
	comp=Z,6.1nm,0.6s,baz=102,slow=8.6,SNR=72						
WRA				PcP	**PcP**	**22 56 50.0**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=97,slow=3.6,SNR=3.7						
WRA	**Warramunga Arr**	**45.87**	**264**	P	**P**	**22 55 12.5**	**-1.3**
JAY	**Jayapura**	**46.19**	**289**	P	**P**	**22 55 15.5**	**-0.8**
	comp=Z,19nm,0.9s,baz=98,slow=22,SNR=8.1						
FORT	**Forrest**	**49.90**	**248**	P	**P**	**22 55 44.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**54.30**	**263**	P	**P**	**22 56 17.4**	**+0.1**
	comp=Z,3.4nm,0.5s,baz=120,slow=7.3,SNR=28						
SIJI	**Sorong**	**55.28**	**285**	P	**P**	**22 56 24.0**	**-0.5**
	comp=Z,5.6nm,0.4s,baz=99,slow=6.5,SNR=6.6						
NWAO	**Narrogin (SRO)**	**58.82**	**244**	P	**P**	**22 56 49.9**	**+0.7**
	comp=Z,9.2nm,1.0s,baz=76,slow=12,SNR=1.8						
NWAO	**Narrogin (SRO)**	**58.82**	**244**	P	**P**	**22 56 50.0**	**+0.8**
RPN	**Rapa Nui**	**60.33**	**109**	P	**P**	**22 57 02.2**	**+2.6**
	comp=Z,22nm,0.3s,baz=162,slow=2.5,SNR=4.1						
RPN	**Rapa Nui**	**60.33**	**109**	P	**P**	**22 57 01.6**	**+2.1**
MORW	**Morawa**	**60.47**	**248**	P	**P**	**22 57 00.5**	**-0.1**
MORW				IAmb	IAmb	22 57 02.0	
	comp=Z,6.9nm,1.1s						
MJAR	**Matsushiro Arr**	**72.82**	**323**	P	**P**	**22 58 17.4**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=180,slow=7.3,SNR=1.7						
MAW	**Mawson**	**80.09**	**200**	LR	LR	23 33 15.2	
	comp=Z,27nm,20.8s,baz=261,slow=34						
YBH	**Yreka Blue Hor**	**81.00**	**38**	P	**P**	**22 59 05.3**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=116,slow=24,SNR=2.3						
NVAR	**Mina Array Bea**	**81.53**	**42**	P	**P**	**22 59 08.8**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=195,slow=6.5,SNR=2.6						
H03S2	**Juan Fernandez**	**83.53**	**124**	T	T	00 31 27.8	
	baz=245,slow=75,SNR=64						
H03S1	**Juan Fernandez**	**83.54**	**124**	T	T	00 31 25.5	
	baz=245,slow=75,SNR=66						
H03S3	**Juan Fernandez**	**83.55**	**124**	T	T	00 31 19.3	
	baz=245,slow=75,SNR=59						
TXAR	**Lajitas Array**	**86.92**	**57**	P	**P**	**22 59 36.6**	**+1.8**
	comp=Z,0.5nm,1.0s,baz=238,slow=5.0,SNR=2.9						
PDAR	**Pinedale Array**	**89.46**	**43**	P	**P**	**22 59 48.4**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=228,slow=12,SNR=1.8						
LKWY	**Lake**	**89.90**	**41**	P	**P**	**22 59 47.5**	**-1.2**
IMAR	**Indian Mountai**	**89.99**	**9**	P	**P**	**22 59 48.7**	**+0.4**
ILAR	**Eielson Array**	**90.04**	**12**	P	**P**	**22 59 48.2**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=208,slow=6.8,SNR=11						
CMAR	**Chiang Mai Arr**	**92.27**	**289**	P	**P**	**23 00 01.9**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=116,slow=2.9,SNR=5.7						
YKA	**Yellowknife Ar**	**97.80**	**24**	P	Pdif	23 00 24.2	+0.1

comp=Z,0.2nm,0.7s,baz=230,slow=4.5,SNR=2.2
SONM Songino Array 98.36 318 P **P** **23 00 25.6 -1.6**
comp=Z,0.1nm,0.3s,baz=132,slow=10,SNR=1.5
BVAR Borovoye Array 121.69 319 PKP **PKPdf** **23 05 42.3 0.0**
comp=Z,0.6nm,0.4s,baz=169,slow=8.5,SNR=8.6
ARCES ARCESS Array B 131.27 350 PKP **PKPdf** **23 06 00.3 +0.2**
comp=Z,1.0nm,0.6s,baz=29,slow=3.0,SNR=6.7
FINES FINESS Array B 138.23 344 PKhKP PKPpre 23 06 02.1
comp=Z,1.7nm,0.9s,baz=67,slow=3.6,SNR=1.4
FINES PKP **PKiKP** **23 06 14.8 -0.5**
comp=Z,0.8nm,0.3s,baz=123,slow=5.4,SNR=8.0
STRU Stroemstad 143.23 354 *i* P PKPbc 23 06 20.1 +0.3
ONAU Onsala 144.75 352 *i* P **PKPab** **23 06 24.0 -0.2**
AKASG Malin Array Be 145.61 331 PKPbc **PKPbc** **23 06 27.1 -0.2**
comp=Z,3.6nm,0.3s,baz=42,slow=4.3,SNR=22
LUNU Lund 146.24 350 *i* P **PKPbc** **23 06 29.1 +0.2**
SORM Soroca 147.81 328 ⇑P **PKPbc** **23 06 33.1 -0.5**
BRTR Keskin Array B 149.39 311 PKPbc **PKPbc** **23 06 38.5 +0.3**
comp=Z,0.9nm,0.5s,baz=138,slow=3.5,SNR=10.0
TPGR Topolog 149.95 323 ⇓P **PKPbc** **23 06 39.5 +0.3**
VRI Vrincioaia 150.18 327 ⇑P **PKiKP** **23 06 40.3 -0.1**
TRPA Tarpa 150.41 334 ⇑P **PKPbc** **23 06 40.2 +0.1**
OSTC Ostas 150.44 344 *e*PKP **PKiKP** **23 06 41.3 +0.4**
OSTC *ex* x 23 06 48.5
CLL Collm 150.46 348 *i* PKPbc **PKiKP** **23 06 41.0 +0.2**
comp=Z,5.0nm,1.0s
CLL *e*PKPab **PKPab** **23 06 46.0 -1.0**
DPC Dobruska-Polom 150.60 343 *e*PKP **PKiKP** **23 06 41.4 +0.2**
DPC *ex* x 23 06 48.5
KRLC Kraliky 150.72 343 *e*PKP **PKiKP** **23 06 41.9 +0.4**
KRLC *ex* x 23 06 49.1
MLR Muntele Rosu 150.83 327 ⇑P **PKPbc** **23 06 41.5 +0.1**
VOIR 151.32 328 ⇑P **PKPbc** **23 06 42.5 0.0**
KHC Kasperske Hory 152.40 346 *e*PKP **PKiKP** **23 06 45.4 +0.4**
KHC *ex* x 23 06 55.8
CKRC Cesky Krumlov 152.52 345 *e*PKP **PKiKP** **23 06 45.6 +0.4**
GERES GERESS Array B 152.64 345 PKPbc **PKiKP** **23 06 46.0 +0.5**
comp=Z,0.5nm,0.5s,baz=48,slow=2.0,SNR=6.3
GERES PKPab **PKPab** **23 06 56.0 -0.3**
comp=Z,0.5nm,0.5s,baz=35,slow=4.9,SNR=4.3
CONA Conrad Observa 152.92 342 *i* P **PKiKP** **23 06 46.8 +0.7**
comp=Z,1.9nm,0.7s
CONA *i* P **PKPab** **23 06 58.4 +0.8**
comp=Z,2.9nm,0.7s
MOA Molln 153.43 344 *i* P **PKPab** **23 06 60.0 +0.3**
comp=Z,1.7nm,0.7s
ARSA Arzberg 153.63 342 *e*P **PKiKP** **23 06 50.0 +2.4**
comp=Z,1.0nm,0.4s
ARSA *e*P **PKPab** **23 06 58.1 -2.4**
comp=Z,2.0nm,0.7s
SOKA Soboth 154.30 342 *e*P **PKPab** **23 07 03.8 +0.4**
comp=Z,3.1nm,1.1s
KBA Koelnbreinsper 154.38 345 *e*P **PKPab** **23 07 02.5 -1.4**
comp=Z,2.8nm,0.8s
OBKA Obir 154.59 342 *e*P **PKPab** **23 07 04.5 -0.2**
comp=Z,2.5nm,0.8s
ESDC Sonseca Array 161.81 19 PKPab **PKPab** **23 07 36.4 +0.3**
comp=Z,0.5nm,1.0s,baz=328,slow=4.6,SNR=2.7
TORD Torodi Ar. Bea 170.39 168 PKPab **PKPab** **23 08 16.3 +1.9**
comp=Z,0.8nm,0.9s,baz=178,slow=5.6,SNR=2.7

NEIC ***10*** *22:54:50.2±2.1, 7.°58S±0.°07×127.°59E±0.°06, h160km±4km, mb4.7/61, Error ellipse: s-maj=9.8km s-min=9.1km az=196.0*
DJA ***10*** *22:54:51.4±0.2, 8.°3S±2.°×12.°8E±.°, h167km±3km, M4.6/41, mB5.1/19, mb4.7/41, MLv5.0/13, Mw(mB)4.4/19*
IDC ***10*** *22:54:51.6±1.4, 7.°55S×127.°62E, h170km±12km, mb4.2/30, mb1 4.2/36, mb1mx4.1/45, mbtmp4.7/36, MS3.0/4, Ms1 3.0/4, ms1mx2.6/33, Error ellipse: s-maj=11.5km s-min=8.3km az=84.0*
ISC 10 22:54:49.7±0.7, 7.74S±0.04×127.59E±0.04, h160km±6km, n296, σ1°46/308, mb4.6/70, 4C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SAUI	**Saumlaki**	**3.69**	**94**		**Pn**	**22 55 47.0**	**+0.8**
SAUI	**Saumlaki**	**3.69**	**94**	P	**Pn**	**22 55 47.0**	**+0.8**
SOEI	**Soe**	**3.85**	**238**	Pn	**Pn**	**22 55 50.3**	**+1.9**
SOEI	**Soe**	**3.85**	**238**	P	**Pn**	**22 55 50.9**	**+2.6**
BNDI	**Bandanaira**	**3.94**	**36**	P	**Pn**	**22 55 50.3**	**+0.9**
NLAI	**Namlea**	**4.50**	**354**	P	**Pn**	**22 55 59.4**	**+2.7**
BATI	**Baumata**	**4.59**	**237**	P	**Pn**	**22 56 00.5**	**+2.6**
	73nm,0.3s,baz=100,slow=2.2,SNR=55						
BATI				S	**Sn**	**22 56 52.5**	**+1.3**
	305nm,0.3s,baz=28,slow=7.6,SNR=27						
BATI	**Baumata**	**4.59**	**237**	P	**Pn**	**22 56 00.1**	**+2.2**
MMRI	**Maumere**	**5.37**	**260**	Pn	**Pn**	**22 56 09.3**	**+1.1**
MMRI	**Maumere**	**5.37**	**260**	P	**Pn**	**22 56 09.7**	**+1.5**
	1.3nm6µm235nm,0.8s						
SANI	**Sanana**	**5.87**	**344**	P	**Pn**	**22 56 16.8**	**+2.0**
	0.4nm1µm128nm,0.8s						
MTN	**Manton Dam**	**6.16**	**146**	P	**Pn**	**22 56 18.9**	**+0.3**
	baz=6.2,SNR=280						
MTN				S	**Sn**	**22 57 24.1**	**-4.2**
	baz=6.2						
MTN	**Manton Dam**	**6.16**	**146**	Pn	**Pn**	**22 56 18.8**	**+0.3**
FAKI	**Fak Fak**	**6.67**	**44**	Pn	**Pn**	**22 56 24.4**	**-1.1**
FAKI	**Fak Fak**	**6.67**	**44**	P	**Pn**	**22 56 24.2**	**-1.2**
	0.5nm2µm45nm,0.8s						
KDU	**Kakadu**	**6.88**	**136**	P	**Pn**	**22 56 27.9**	**-0.3**
	baz=6.9,SNR=1000						
KDU				S	**Sn**	**22 57 39.4**	**-6.2**
	baz=6.9						
BASI	**Baing, Sumba**	**7.35**	**250**	P	**Pn**	**22 56 36.1**	**+1.6**
SIJI	**Sorong**	**7.75**	**28**	P	**Pn**	**22 56 39.9**	**+0.1**
	12nm,0.3s,baz=200,slow=22,SNR=38						
SIJI				S	**Sn**	**22 58 05.5**	**-1.0**
	5.4nm,0.3s,baz=137,slow=24,SNR=7.6						
SWI	**Sorong**	**7.75**	**28**	P	**Pn**	**22 56 39.5**	**-0.3**
	0.4nm2µm98nm,0.6s						
KNRA	**Kununurra**	**7.97**	**172**		**Pn**	**22 56 42.2**	**-0.6**
BNSI	**Bone**	**8.14**	**294**	P	**Pn**	**22 56 45.4**	**+0.4**
	1µm75nm,0.8s						
LUWI	**Luwuk**	**8.20**	**324**	Pn	**Pn**	**22 56 48.1**	**+2.2**
LUWI	**Luwuk**	**8.20**	**324**	P	**Pn**	**22 56 48.8**	**+3.0**
	4µm152nm,1.2s						
KAPI	**Kappang**	**8.24**	**289**	P	**Pn**	**22 56 49.4**	**+3.0**
	2.3nm,0.3s,baz=114,slow=7.0,SNR=12						
KAPI				LR	LR	23 00 36.0	
	comp=Z,25nm,19.1s,baz=108,slow=42						
KAPI	**Kappang**	**8.24**	**289**	Pn	**Pn**	**22 56 48.1**	**+1.7**
TNTI	**Ternate**	**8.46**	**358**	Pn	**Pn**	**22 56 49.4**	**+0.2**
SPSI	**Sidrap Palu**	**8.63**	**295**	P	**Pn**	**22 56 52.7**	**+1.2**
	53nm,0.9s						
APSI	**Ampana**	**9.00**	**319**	P	**Pn**	**22 56 55.9**	**-0.5**
	701nm78nm,1.2s						
TTSI	**Tana Toraja**	**9.03**	**301**	P	**Pn**	**22 57 00.1**	**+3.3**
	1µm41nm,0.9s						
GTOI	**Gorontalo**	**9.49**	**331**	P	Pn	22 57 08.6	+5.7
	333nm28nm,0.9s						
PLAI	**Plampang**	**9.77**	**263**	P	**Pn**	**22 57 06.4**	**-0.2**
	48nm,0.6s						
MRSI	**Marisa**	**9.92**	**325**	P	**Pn**	**22 57 10.9**	**+2.4**
	51nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.47**	**190**	P	**Pn**	**22 57 14.2**	**-1.6**
	12nm,0.3s,baz=28,slow=11,SNR=96						
FITZ				S	**Sn**	**22 59 05.4**	**-6.5**
	27nm,0.3s,baz=92,slow=20,SNR=16						
FITZ	**Fitzroy Crossi**	**10.47**	**190**	P	**Pn**	**22 57 13.9**	**-1.8**
	baz=11,SNR=75						
TWSI	**Taliwang, Sumb**	**10.64**	**264**	P	**Pn**	**22 57 16.8**	**-1.3**
	13nm,0.7s						
TOLI2	**Tolitoli**	**11.11**	**322**	Pn	**Pn**	**22 57 24.9**	**+0.8**
BKB	**Balikpapan**	**12.45**	**301**		**P**	**22 57 45.4**	**-1.6**
BBKI	**Banjar Baru**	**13.38**	**288**	P	**P**	**22 57 57.8**	**+0.5**
	40nm,1.2s						
WB0	**Warramunga Arr**	**13.66**	**152**	Pn	**Pn**	**22 57 54.6**	**-2.4**
WRAB	**Tennant Creek**	**13.78**	**152**	Pn	**Pn**	**22 57 56.3**	**-2.2**
WRA	**Warramunga Arr**	**13.78**	**152**	P	**Pn**	**22 57 56.1**	**-2.5**
	14nm,0.3s,baz=319,slow=14,SNR=334						
WRA				S	Sn	23 00 21.3	-10
	26nm,0.3s,baz=333,slow=24,SNR=12						
WRA	**Warramunga Arr**	**13.78**	**152**		**Pn**	**22 57 54.8**	**-3.8**
WB2	**Warramunga Arr**	**13.79**	**152**		**Pn**	**22 57 55.8**	**-2.9**
WC3	**Warramunga Arr**	**13.81**	**152**	P	**Pn**	**22 57 56.5**	**-2.4**
	baz=14						
WR0	**Warramunga Arr**	**13.89**	**152**	Pn	**Pn**	**22 57 58.2**	**-1.7**
JAY	**Jayapura**	**14.05**	**69**	P	**Pn**	**22 58 02.6**	**+0.6**
	0.9nm,0.3s,baz=229,slow=9.3,SNR=2.7						
JAY				S	Sn	23 00 23.8	-14
	0.5nm,0.3s,baz=258,slow=19,SNR=1.9						
MTKI	**Muara Teweh, K**	**14.34**	**297**	P	**P**	**22 58 10.7**	**+2.7**
	52nm,0.8s						
DAV	**Davao City (W)**	**14.85**	**352**	P	**Pn**	**22 58 10.6**	**-1.2**
	38nm,0.3s,baz=216,slow=17,SNR=2.1						
DAV	**Davao City (W)**	**14.85**	**352**		**Pn**	**22 58 09.7**	**-2.2**
KCP	**Kidapawan**	**14.86**	**350**	⇑*i*P	**P**	**22 58 16.4**	**+2.5**
PSA00	**Pilbara Seismi**	**15.65**	**208**		**Pn**	**22 58 22.0**	**+0.2**
PSA00				IAmb	IAmb	22 58 40.3	
	comp=Z,19nm,0.6s						
PSA00	**Pilbara Seismi**	**15.65**	**208**		**P**	**22 58 22.4**	**-0.1**
PSA00				IAmb	IAmb	22 58 24.8	
	comp=Z,6.7nm,0.8s						
MYLDM	**Lahad Datu**	**15.71**	**324**		**P**	**22 58 26.2**	**+3.0**
MYLDM				IAmb	IAmb	22 58 40.9	
	comp=Z,30nm,1.0s						
COEN	**Coen**	**16.50**	**113**	P	**Pn**	**22 58 32.3**	**+0.1**
COEN				IAmb	IAmb	22 58 36.5	
	comp=Z,24nm,0.6s						
AS31	**Alice Springs**	**16.96**	**160**	P	**Pn**	**22 58 38.1**	**+0.5**
ASAR	**Alice Springs**	**16.96**	**160**	P	**Pn**	**22 58 39.2**	**+1.6**
	comp=Z,32nm,0.3s,baz=336,slow=10,SNR=821						
ASAR				S	**S**	**23 01 40.5**	**-5.1**
	comp=Z,8.6nm,0.3s,baz=342,slow=26,SNR=8.5						
ASAR	**Alice Springs**	**16.96**	**160**	P	**Pn**	**22 58 37.9**	**+0.3**
ASPA	**Alice Springs**	**16.96**	**160**	P	**Pn**	**22 58 38.4**	**+0.8**
	baz=17						
WRKA	**Warakurna**	**17.22**	**178**	P	**Pn**	**22 58 41.5**	**+0.8**
	baz=17,SNR=52						
QIS	**Mount Isa**	**17.25**	**139**	P	**Pn**	**22 58 42.3**	**+1.1**
	baz=17,SNR=64						
KKM	**Kota Kinabalu**	**17.78**	**320**	P	**P**	**22 58 46.3**	**+0.2**
KKM				IAmb	IAmb	22 59 02.1	
	comp=Z,41nm,1.0s						
STKI	**Sintang**	**17.84**	**295**	P	**Pn**	**22 58 49.6**	**+1.4**
SBUM	**Sibu**	**18.37**	**303**		**Pn**	**22 58 54.8**	**+0.4**
MTSU	**Mount Surprise**	**19.28**	**124**	P	**Pn**	**22 59 04.5**	**-0.7**
	baz=19,SNR=54						
PMG	**Port Moresby**	**19.42**	**96**	P	**Pn**	**22 59 07.6**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=278,slow=8.0,SNR=20						
PMG				S	**S**	**23 02 38.1**	**+3.0**
	comp=Z,2.0nm,0.3s,baz=239,slow=11,SNR=1.2						
PMG				LR	LR	23 07 44.4	
	comp=Z,79nm,19.3s,baz=267,slow=40						
PMG	**Port Moresby**	**19.42**	**96**	P	**Pn**	**22 59 06.5**	**-0.3**
KSM	**Kuching**	**19.51**	**297**	P	**P**	**22 59 05.6**	**+0.7**
KSM				IAmb	IAmb	22 59 11.2	
	comp=Z,30nm,0.7s						
CISI	**Cisompet, Garu**	**19.60**	**269**	P	**P**	**22 59 05.3**	**-0.6**
CISI	**Cisompet, Garu**	**19.60**	**269**	P	**Pn**	**22 59 07.8**	**-1.1**
	comp=Z,45nm,0.5s						
GIRL	**Giralia**	**19.61**	**219**	P	**Pn**	**22 59 09.3**	**+0.4**
	baz=20,SNR=4.6						
LEM	**Lembang**	**19.83**	**271**	P	**Pn**	**22 59 11.4**	**-0.4**
	comp=Z,3.4nm,0.3s,baz=294,slow=20,SNR=1.7						
LEM				S	**S**	**23 02 40.0**	**-3.4**
	comp=Z,2.3nm,0.3s,baz=133,slow=23,SNR=1.5						
LEM				LR	LR	23 08 20.1	
	comp=Z,39nm,18.1s,baz=42,slow=41						
TPI	**Tanjungpandan**	**20.45**	**283**	P	**P**	**22 59 16.5**	**+1.5**
	comp=Z,22nm,0.9s						
XMIS	**Christmas Isla**	**21.83**	**261**	P	**P**	**22 59 28.6**	**-1.0**
XMIS				IAmb	IAmb	22 59 31.5	
	comp=Z,25nm,0.9s						
CTA	**Charters Tower**	**21.85**	**126**	P	**P**	**22 59 31.9**	**+2.0**
	comp=Z,8.7nm,0.7s,baz=302,slow=13,SNR=12						
CTAO	**Charters Tower**	**21.85**	**126**	P	**P**	**22 59 30.2**	**+0.3**
CTAO				IAmb	IAmb	22 59 33.2	
	comp=Z,23nm,1.1s						
PPBI	**Pangkal Pinang**	**22.07**	**283**	P	**P**	**22 59 33.2**	**+1.1**
	comp=Z,26µmcomp=Z,39nm,0.8s						
LQP	**Lukban**	**22.52**	**345**	⇑*e*P	**P**	**22 59 36.6**	**0.0**
TGY	**Tagaytay City**	**22.68**	**343**	P	**P**	**22 59 39.4**	**+1.5**
	comp=Z,669nm,0.6s,baz=191,slow=2.2,SNR=16						
FORT	**Forrest**	**22.93**	**179**	P	**P**	**22 59 42.0**	**+2.1**
	baz=23,SNR=12						
FORT	**Forrest**	**22.93**	**179**	P	**P**	**22 59 41.0**	**+1.1**
MORW	**Morawa**	**23.84**	**206**	P	**P**	**22 59 51.0**	**+2.6**
	baz=24,SNR=12						
QLP	**Quilpie**	**24.52**	**142**	P	**P**	**22 59 58.0**	**+3.4**
	baz=25,SNR=4.4						
BLDU	**Ballidu**	**24.93**	**203**	P	**P**	**23 00 00.4**	**+2.2**
	baz=25,SNR=6.5						
BBOO	**Buckleboo**	**26.16**	**164**	P	**P**	**23 00 11.2**	**+2.0**
	baz=26,SNR=38						
BBOO	**Buckleboo**	**26.16**	**164**	P	**P**	**23 00 10.4**	**+1.2**
NWAO	**Narrogin (SRO)**	**26.84**	**200**	P	**P**	**23 00 17.7**	**+2.3**
	comp=Z,8.1nm,0.8s,baz=47,slow=4.9,SNR=5.9						
NWAO	**Narrogin (SRO)**	**26.84**	**200**	P	**P**	**23 00 17.9**	**+2.5**
	baz=27,SNR=4.2						
NWAO	**Narrogin (SRO)**	**26.84**	**200**	IAmb	IAmb	23 00 30.5	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**27.33**	**153**	P	**P**	**23 00 21.6**	**+1.9**
	comp=Z,12nm,0.4s,baz=328,slow=9.4,SNR=39						
STKA	**Stephens Creek**	**27.33**	**153**	P	**P**	**23 00 21.7**	**+1.9**
	baz=28,SNR=21						
STKA	**Stephens Creek**	**27.33**	**153**	P	**P**	**23 00 20.4**	**+0.6**
HTT	**Hallett**	**27.64**	**159**	P	**P**	**23 00 24.8**	**+2.3**
	baz=28,SNR=24						
CMSA	**Cobar Meteorol**	**29.08**	**147**	P	**P**	**23 00 37.6**	**+2.3**
	baz=29,SNR=19						
IPM	**Ipoh**	**29.15**	**294**	P	**P**	**23 00 35.7**	**-0.4**
IPM				IAmb	IAmb	23 00 37.3	
	comp=Z,20nm,0.9s						
MNSI	**Mandailing Nat**	**29.19**	**286**	P	**P**	**23 00 35.5**	**-0.9**
	comp=Z,31nm,1.0s						
KULM	**Kulim**	**29.83**	**295**	P	**P**	**23 00 41.9**	**-0.2**
RPSI	**Rantau Prapat**	**30.42**	**289**	P	**P**	**23 00 46.7**	**-0.6**
PSI	**Prapat**	**30.45**	**289**	P	**P**	**23 00 47.1**	**-0.7**
	comp=Z,29nm,0.8s,baz=180,slow=1.7,SNR=23						
ARPS	**Mount Arapiles**	**31.68**	**158**	P	**P**	**23 01 00.9**	**+2.8**
	baz=32,SNR=25						
YNG	**Young**	**32.65**	**147**	P	**P**	**23 01 09.1**	**+2.5**
	baz=33,SNR=7.1						
LHMI	**Lhok Sumawe**	**33.17**	**292**	P	**P**	**23 01 10.6**	**-0.8**
CAN	**Canberra**	**33.75**	**147**	P	**P**	**23 01 18.4**	**+2.2**
CAN				IAmb	IAmb	23 01 33.1	
	comp=Z,14nm,1.1s						
TOO	**Toolangi**	**33.85**	**154**	P	**P**	**23 01 19.3**	**+2.3**
	baz=34,SNR=5.0						
TOO	**Toolangi**	**33.85**	**154**	P	**P**	**23 01 19.9**	**+2.9**
JOW	**Kunigami**	**34.37**	**1**	P	**P**	**23 01 19.9**	**-1.6**
	comp=Z,16nm,0.6s,baz=200,slow=21,SNR=5.3						
JOW	**Kunigami**	**34.37**	**1**	P	**P**	**23 01 21.1**	**-0.4**
UTTA	**Uttaradit**	**36.80**	**314**	P	**P**	**23 01 42.9**	**+0.5**
SUKH	**Sukhothai**	**37.30**	**312**	P	**P**	**23 01 47.5**	**+0.9**
LAMP	**Lampang**	**37.97**	**314**	P	**P**	**23 01 53.5**	**+1.2**
CM36	**Chiang Mai Arr**	**38.35**	**313**	P	**P**	**23 01 56.0**	**+0.5**
CM04	**Chiang Mai Arr**	**38.36**	**313**	P	**P**	**23 01 56.1**	**+0.6**
CM09	**Chiang Mai Arr**	**38.38**	**313**	P	**P**	**23 01 56.5**	**+0.7**
CM05	**Chiang Mai Arr**	**38.39**	**313**	P	**P**	**23 01 56.2**	**+0.5**
CM01	**Chiang Mai Arr**	**38.39**	**313**	P	**P**	**23 01 56.5**	**+0.7**
CM02	**Chiang Mai Arr**	**38.41**	**313**	P	**P**	**23 01 56.6**	**+0.7**
CM35	**Chiang Mai Arr**	**38.41**	**313**	P	**P**	**23 01 56.0**	**0.0**
CM31	**Chiang Mai Arr**	**38.42**	**313**	P	**P**	**23 01 56.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**38.42**	**313**	P	**P**	**23 01 56.6**	**+0.5**
	comp=Z,8.2nm,0.6s,baz=141,slow=6.7,SNR=55						
CMAR				PcP	**PcP**	**23 04 07.5**	**+1.2**
	comp=Z,3.4nm,0.5s,baz=162,slow=2.7,SNR=13						
CMAR	**Chiang Mai Arr**	**38.42**	**313**		**P**	**23 01 56.4**	**+0.3**
CM13	**Chiang Mai Arr**	**38.43**	**313**	P	**P**	**23 01 56.5**	**+0.5**
CM15	**Chiang Mai Arr**	**38.43**	**313**	P	**P**	**23 01 56.9**	**+0.8**
CM34	**Chiang Mai Arr**	**38.53**	**314**	P	**P**	**23 01 57.0**	**+0.1**
CM32	**Chiang Mai Arr**	**38.62**	**313**	P	**P**	**23 01 58.0**	**+0.3**
CMMT	**Chiang Mai**	**38.65**	**313**	P	**P**	**23 01 57.3**	**-0.7**
CHTO	**Chiang Mai**	**38.65**	**313**	P	**P**	**23 01 58.4**	**+0.5**
CHTO				IAmb	IAmb	23 01 58.9	
	comp=Z,9.5nm,0.7s						
CM33	**Chiang Mai Arr**	**38.65**	**313**	P	**P**	**23 01 58.0**	**0.0**
GYA	**Guiyang**	**39.60**	**330**	⇓P	**P**	**23 02 06.0**	**+0.2**
GYA				pmax	pmax		
	comp=Z,14nm,1.5s						
DZM	**Mont Dzumac**	**40.02**	**115**	LR	LR	23 20 20.5	
	comp=Z,38nm,19.2s,baz=296,slow=38						
WHN	**Wuhan**	**40.13**	**342**	⇓P	**P**	**23 02 10.7**	**+0.7**
NJ2	**Nanjing**	**40.44**	**349**	*e*P	**P**	**23 02 14.9**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI	**Kunming**	**40.65**	**324**	⇑P	**P**	**23 02 14.6**	**-0.1**
KMI				pP	pP	23 02 45.6	-2.6
KMI				sP	sP	23 03 02.0	-3.8
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
JNU	**Nakatsue**	**40.75**	**4**	P	**P**	**23 02 14.0**	**-1.2**
	comp=Z,7.0nm,0.8s,baz=162,slow=3.2,SNR=2.0						
JNU	**Nakatsue**	**40.75**	**4**	P	**P**	**23 02 13.5**	**-1.6**
JNU				IAmb	IAmb	23 02 14.4	
	comp=Z,18nm,1.1s						
JMN	**Monobe**	**41.67**	**8**	P	**P**	**23 02 21.8**	**-0.8**
JHS	**Saijyo**	**42.83**	**7**	P	**P**	**23 02 31.4**	**-0.5**
JWT	**Wachi**	**43.42**	**9**	P	**P**	**23 02 35.5**	**-1.1**
JWT				IAmb	IAmb	23 02 36.9	
	comp=Z,14nm,0.5s						
JGF	**Kuroka**	**44.08**	**11**	P	**P**	**23 02 40.8**	**-1.2**
KSRS	**Korea Array**	**44.96**	**0**	P	**P**	**23 02 48.9**	**0.0**
	comp=Z,1.9nm,0.4s,baz=176,slow=9.6,SNR=8.9						
KSRS				PcP	**PcP**	**23 04 27.9**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=185,slow=3.4,SNR=5.3						
MAT	**Matsushiro**	**45.16**	**12**	P	**P**	**23 02 48.4**	**-2.1**
MJAR	**Matsushiro Arr**	**45.16**	**12**	P	**P**	**23 02 48.5**	**-2.0**
	comp=Z,4.5nm,0.5s,baz=188,slow=9.4,SNR=13						
XAN	**Xi'an**	**45.16**	**338**	P	**P**	**23 02 49.3**	**-1.3**
XAN				PcP	**PcP**	**23 04 28.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,16nm,0.7s						
XAN	**Xi'an**	**45.16**	**338**	IAmb	IAmb	23 02 50.2	
	comp=Z,11nm,0.6s						
JSD	**Sado**	**46.61**	**12**	P	**P**	**23 03 00.5**	**-1.3**
JSD				IAmb	IAmb	23 03 01.3	
	comp=Z,9.3nm,0.5s						
JMM	**Marumori**	**47.01**	**14**	P	**P**	**23 03 03.8**	**-1.1**
JMM				IAmb	IAmb	23 03 04.6	
	comp=Z,20nm,0.7s						
BJT	**Baijiatuan**	**48.68**	**348**	P	**P**	**23 03 17.4**	**-0.3**
BJT				IAmb	IAmb	23 03 18.1	
	comp=Z,9.0nm,0.6s						
BJI	**Beijing**	**48.70**	**348**	P	**P**	**23 03 16.7**	**-1.1**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,47nm,3.6s						
LZH	**Lanzhou**	**48.98**	**334**	*e*P	**P**	**23 03 20.7**	**+0.4**
LZH				pmax	pmax		
	comp=Z,27nm,1.2s						
JTM	**Tenmabayashi**	**49.86**	**13**	P	**P**	**23 03 23.6**	**-3.0**
JTM				IAmb	IAmb	23 03 42.3	
	comp=Z,20nm,1.1s						
MSVF	**Nonsavu**	**50.08**	**107**	P	**P**	**23 03 30.3**	**+1.5**
HHC	**Hu-ho-hao-te**	**50.55**	**344**	*e*P	**P**	**23 03 31.0**	**-1.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,230nm,6.2s						
LSA	**Lhasa**	**51.12**	**318**	P	**P**	**23 03 37.5**	**+0.6**
LSA				IAmb	IAmb	23 03 38.3	
	comp=Z,15nm,0.7s						
QRZ	**Quartz Range**	**51.73**	**137**	P	**P**	**23 03 41.6**	**+1.0**
USA0B	**Ussuriysk Arra**	**51.85**	**4**	P	**P**	**23 03 41.0**	**-0.4**
USRK	**Ussuriysk Ar.**	**51.85**	**4**	P	**P**	**23 03 40.9**	**-0.6**
	comp=Z,2.9nm,0.5s,baz=183,slow=7.2,SNR=18						
USRK	**Ussuriysk Ar.**	**51.85**	**4**	P	**P**	**23 03 41.0**	**-0.5**
MDJ	**Mudanjiang**	**52.14**	**2**	P	**P**	**23 03 44.1**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,94nm,4.6s						
TUWZ	**Tuamarina**	**52.95**	**137**	P	**P**	**23 03 50.8**	**+1.1**
ASAJ	**Asahikawa**	**53.37**	**13**	P	**P**	**23 03 52.1**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=215,slow=16,SNR=2.0						
GTA	**Gaotai**	**53.51**	**333**	⇑P	**P**	**23 03 54.0**	**+0.1**
GTA				pP	pwP	23 04 33.0	-2.2
GTA				sP	sP	23 04 51.0	+4.9
GTA				PcP	**PcP**	**23 05 00.1**	**+1.4**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BKZ	**Black Stump Fm**	**53.80**	**133**	P	**P**	**23 03 56.9**	**+0.8**
KLR	**Kul'dur**	**56.84**	**3**	P	**P**	**23 04 17.4**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=206,slow=8.5,SNR=4.1						
KLR				PcP	**PcP**	**23 05 10.8**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=119,slow=1.5,SNR=5.6						
ULN	**Ulaanbaatar**	**58.26**	**344**	P	**P**	**23 04 27.8**	**+0.2**
ULN				IAmb	IAmb	23 04 30.8	
	comp=Z,10.0nm,0.9s						
SONM	**Songino Array**	**58.42**	**343**	P	**P**	**23 04 28.9**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=176,slow=7.0,SNR=47						
SONM				PcP	**PcP**	**23 05 16.

baz=320
VNDA Vanda 72.02 173 P **P** 23 05 57.6 +2.0
comp=Z,2.1nm,0.7s,baz=322,slow=7.4,SNR=22
VNDA Vanda 72.02 173 P **P** 23 05 57.8 +2.1
IUG luzhnay 72.19 319 *e*P **P** 23 05 56.3 -1.1
baz=319
WBK Wadi Bani Khal 73.58 296 P **P** 23 06 06.0 +0.1
MHTO MHTO 74.05 294 P **P** 23 06 08.1 -0.5
SNR=6.4
JMDO Jabal Madar 74.28 296 P **P** 23 06 09.9 -0.1
SMDO Samad 74.52 296 P **P** 23 06 11.3 -0.1
HRA Herat 74.53 309 P **P** 23 06 11.8 +0.4
HRA IAmb IAmb 23 06 12.9
comp=Z,11nm,0.9s
BIDO Bidbid 74.57 297 P **P** 23 06 12.0 +0.5
BRZS Berezniki 74.60 327 *e*P **P** 23 06 10.2 -1.0
comp=Z,8.2nm,0.8s,baz=327
BSY Bisya 75.19 296 P **P** 23 06 15.0 -0.2
HOQ Hoqain 75.31 297 P **P** 23 06 15.8 0.0
SOCY Socotra 75.79 285 P **P** 23 06 17.8 -1.0
SOCY IAmb IAmb 23 06 18.8
comp=Z,16nm,0.8s
SOCY Socotra 75.79 285 P **P** 23 06 17.8 -1.0
SNR=20
ARQ Araqi 75.94 296 P **P** 23 06 19.1 -0.3
DMTO DMTO 76.03 290 P **P** 23 06 19.5 -0.5
SOHO SOHO 76.14 297 P **P** 23 06 20.3 -0.2
UOSS Minazif 76.64 298 P **P** 23 06 23.2 -0.1
RBK Rabkut 76.68 290 P **P** 23 06 23.7 0.0
MASF Masafi 76.79 298 P **P** 23 06 25.0 +0.8
BANOM Banah 76.81 299 P **P** 23 06 24.7 +0.4
SHME Shamm 76.98 299 P **P** 23 06 25.7 +0.4
DOK Doka 76.99 291 P **P** 23 06 24.6 -0.8
SNR=9.7
FAQ Al Faqa, Dubai 77.12 297 P **P** 23 06 25.9 -0.2
WHFO Wadi Hawf 77.17 290 P **P** 23 06 25.6 -0.8
SNR=17
ASUD Al Ashush, Dub 77.33 297 P **P** 23 06 27.4 +0.2
BVAR Borovoye Array 77.43 329 P **P** 23 06 26.7 -0.4
comp=Z,2.8nm,0.4s,baz=134,slow=8.4,SNR=32
ABTO Aybut 77.49 290 P **P** 23 06 27.8 -0.5
SNR=6.0
BRVK Borovoye 77.50 329 P **P** 23 06 27.2 -0.2
BRVK IAmb IAmb 23 06 28.9
comp=Z,8.4nm,0.8s
GEYT Alibeck 78.88 311 P **P** 23 06 36.0 +0.5
comp=Z,2.7nm,0.6s,baz=179,slow=8.9,SNR=5.9
TIXI Tiksi 79.23 0 P **P** 23 06 35.5 -1.0
comp=Z,4.8nm,0.4s,baz=162,slow=4.9,SNR=18
TIXI Tiksi 79.23 0 P **P** 23 06 35.8 -0.8
ABKAR Abkulak array 81.61 322 P **P** 23 06 49.4 -0.4
ABKAR Abkulak array 81.61 322 IAmb IAmb 23 06 50.2
comp=Z,3.8nm,0.8s
NRIK Noril'sk 81.71 347 P **P** 23 06 50.3 +0.4
comp=Z,4.9nm,0.7s,baz=134,slow=5.0,SNR=6.5
NRIK Noril'sk 81.71 347 P **P** 23 06 50.2 +0.4
AKTO Aktyubinsk 83.20 323 P **P** 23 06 57.6 -0.4
comp=Z,7.3nm,0.8s,baz=120,slow=4.7,SNR=24
GAMB Gambell 84.52 23 P **P** 23 07 04.3 0.0
GAMB IAmb IAmb 23 07 05.0
comp=Z,5.7nm,0.8s
ARU Arti 85.08 329 P **P** 23 07 06.6 -0.7
comp=Z,2.1nm,0.4s,baz=98,slow=6.0,SNR=11
ARU Arti 85.08 329 P **P** 23 07 06.7 -0.7
ARU IAmb IAmb 23 07 08.3
comp=Z,8.6nm,0.6s
RAYN Ar Rayn 85.86 294 P **P** 23 07 12.1 +0.1
RAYN IAmb IAmb 23 07 12.8
comp=Z,11nm,0.8s
KBZ Khabaz 91.47 314 P **P** 23 07 37.0 -1.0
comp=Z,2.0nm,0.8s,baz=149,slow=5.7,SNR=4.3
BELA Belgrano 2 93.94 184 P **P** 23 07 49.5 +0.6
BELA IAmb IAmb 23 07 51.3
comp=Z,5.9nm,1.0s
SNAA Sanae 94.38 194 P **P** 23 07 53.2 +2.2
ILAR Eielson Array 95.03 25 P **P** 23 07 53.5 -0.5
comp=Z,0.4nm,0.7s,baz=267,slow=4.9,SNR=5.5
ILAR PKKPbc **PKKPdf** 23 24 50.1 -0.7
comp=Z,0.1nm,0.6s,baz=34,slow=3.0,SNR=4.6
VNA2 Neumayer--Watz 95.97 194 P **P** 23 08 00.1 +1.9
VNA1 Neumayer--Stat 96.37 194 P **P** 23 07 57.5 -2.4
BOSA Boshof 97.03 240 P Pdif 23 08 06.0 +1.8
comp=Z,2.7nm,0.9s,baz=141,slow=6.2,SNR=3.6
BRTR Keskin Array B 97.92 309 P **P** 23 08 06.5 -1.3
comp=Z,0.9nm,0.6s,baz=142,slow=7.2,SNR=4.6
BRTR PKiKP **PKiKP** 23 12 40.7 +0.1
comp=Z,0.9nm,1.0s,baz=95,slow=10,SNR=2.4
AKASG Malin Array Be 101.24 320 PKiKP **PKiKP** 23 12 46.0 +0.1
comp=Z,0.4nm,0.4s,baz=80,slow=2.5,SNR=4.5
ARCES ARCESS Array B 101.43 339 P **Pdif** 23 08 21.5 -1.1
comp=Z,3.4nm,0.9s,baz=73,slow=6.0,SNR=5.1
ARCES PKiKP **PKiKP** 23 12 46.1 +0.3
comp=Z,5.2nm,1.1s,baz=91,slow=0.6,SNR=14
FINES FINESS Array B 102.26 331 P **Pdif** 23 08 24.1 -2.3
comp=Z,0.9nm,0.6s,baz=94,slow=10.0,SNR=3.6
FINES PKiKP **PKiKP** 23 12 47.8 +0.3
comp=Z,2.7nm,0.8s,baz=76,slow=5.9,SNR=6.1
NOA NORSAR Array B 109.34 332 PKiKP **PKiKP** 23 13 00.9 +0.2
comp=Z,0.3nm,0.7s,baz=271,slow=3.6,SNR=1.7
YKA Yellowknife Ar 109.46 26 PKiKP **PKiKP** 23 13 00.6 -0.2
comp=Z,1.2nm,0.6s,baz=295,slow=1.3,SNR=22
YKA PKKPbc **PKKPbc** 23 24 07.0 -1.9
comp=Z,0.4nm,0.5s,baz=47,slow=2.0,SNR=11
CONA Conrad Observa 110.22 318 *e*P **PKiKP** 23 13 02.4 -0.4
comp=Z,2.0nm,0.2s
ARSA Arzberg 110.58 318 *e*P **PKiKP** 23 13 02.3 -1.1
comp=Z,0.8nm,0.3s
CLL Collm 111.28 322 *e*PKiKP **PKiKP** 23 13 04.0 -0.6
OBKA Obir 111.38 317 *e*P **PKiKP** 23 13 04.8 -0.3
comp=Z,1.3nm,0.8s
GERES GERESS Array B 111.44 320 PKiKP **PKiKP** 23 13 05.0 0.0
comp=Z,1.9nm,0.6s,baz=77,slow=1.8,SNR=21
ABTA Abfaltersbach 112.70 318 *i* P **PKiKP** 23 13 07.0 -0.5
comp=Z,2.8nm,0.8s
WTTA Wattenberg 113.16 318 *i* P **PKiKP** 23 13 08.3 -0.3
comp=Z,8.1nm,0.5s
WATA Walderalm 113.18 318 *e*P **PKiKP** 23 13 07.7 -0.8
comp=Z,2.2nm,0.5s
MOTA Moosalm 113.49 318 *e*P **PKiKP** 23 13 08.6 -0.5
comp=Z,3.3nm,0.7s
NVAR Mina Array Bea 113.62 51 PKiKP **PKiKP** 23 13 10.4 +0.6
comp=Z,0.3nm,0.5s,baz=260,slow=3.0,SNR=5.7
NVAR Mina Array Bea 113.62 51 **PKiKP** 23 13 11.0 +1.2
RETA Reutte 113.68 319 *i* P **PKiKP** 23 13 09.1 -0.3
comp=Z,2.1nm,0.8s
FETA Feichten 113.82 318 *i* P **PKiKP** 23 13 09.6 -0.2
comp=Z,1.1nm,0.5s
DAVA Damuels 114.31 319 *i* P PKPdf 23 13 10.7 0.0
comp=Z,4.4nm,0.5s
KEST Kesra 117.34 306 PKP **PKiKP** 23 13 17.0 +0.2
comp=Z,3.8nm,0.8s,baz=251,slow=0.8,SNR=4.9
PDAR Pinedale Array 119.11 45 PKP **PKiKP** 23 13 20.4 +0.2
comp=Z,1.1nm,0.7s,baz=61,slow=0.6,SNR=13
PDAR PKKPbc **PKKPbc** 23 23 36.0 +0.3
comp=Z,0.6nm,0.7s,baz=114,slow=3.6,SNR=5.4
PDAR Pinedale Array 119.11 45 **PKPdf** 23 13 20.0 -0.2
RSSD Black Hills 122.41 42 PKPdf **PKPdf** 23 13 26.4 -0.1
ANMO Albuquerque 123.66 53 PKPdf **PKiKP** 23 13 30.6 +1.2
ULM Lac du Bonnet 124.36 32 PKP **PKPdf** 23 13 29.4 -0.4
comp=Z,3.8nm,0.6s,baz=316,slow=3.0,SNR=12
ESDC Sonseca Array 126.33 314 PKP **PKiKP** 23 13 34.5 +0.1
comp=Z,1.8nm,0.9s,baz=18,slow=2.8,SNR=14
TOA0 Torodi Ar. Sit 126.60 281 PKPdf **PKiKP** 23 13 35.6 +0.1
TORD Torodi Ar. Bea 126.60 281 PKP **PKPdf** 23 13 35.2 +0.2
comp=Z,3.8nm,0.7s,baz=66,slow=1.9,SNR=20
PBRG Braganca 127.34 318 *e*PKPdf **PKiKP** 23 13 36.7 +0.4
TXAR Lajitas Array 127.36 59 PKP **PKiKP** 23 13 36.5 -0.3
comp=Z,1.4nm,0.8s,baz=189,slow=2.2,SNR=10
TXAR Lajitas Array 127.36 59 PKPdf **PKiKP** 23 13 37.2 +0.4
F36A Milaca 128.13 36 PKPdf **PKiKP** 23 13 37.6 -0.1
PVRL Vila Real 128.24 318 *e*PKPdf **PKiKP** 23 13 39.0 +0.9
PCAB Cabril 128.24 318 *e*PKPdf **PKiKP** 23 13 38.5 +0.4
POLO Lamas de Olo 128.24 318 *e*PKPdf **PKiKP** 23 13 39.0 +0.8
PGAV Gavieira, Arco 128.28 319 *e*PKPdf **PKPdf** 23 13 36.9 -0.7
MTE Manteigas 128.52 316 *e*PKPdf **PKiKP** 23 13 39.7 +1.0
PCBR Castelo Branco 128.72 316 *e*PKPdf **PKiKP** 23 13 39.8 +0.8
PBAR Barrancos 129.12 314 *e*PKPdf **PKiKP** 23 13 40.7 +0.8
PVAQ Vaqueiros 129.93 313 *e*PKPdf **PKiKP** 23 13 42.5 +0.9
DBIC Dimbokro 132.83 272 PKP **PKPdf** 23 13 47.2 +0.4
comp=Z,2.2nm,0.5s,baz=37,slow=3.5,SNR=5.4
LVC Limon Verde 145.78 152 PKPab **PKiKP** 23 14 13.8 -1.0
CPUP Villa Florida 145.80 172 PKPbc **PKPab** 23 14 12.7 +1.3
comp=Z,7.6nm,0.8s,baz=184,slow=2.6,SNR=18
JTS Las Juntas de 147.77 83 **PKiKP** 23 14 18.2 -0.4
MNMC Minye Minye 148.38 148 **PKiKP** 23 14 20.4 +0.3
LPAZ La Paz 151.50 147 PKPbc **PKiKP** 23 14 27.6 +0.6
comp=Z,5.5nm,0.4s,baz=39,slow=2.3,SNR=40
LPAZ La Paz 151.50 147 **PKiKP** 23 14 28.2 +1.1

IDC ***10*** *23:22:55.4±0.8, 1°.56S×125°.58E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.7/46, mbtmp3.9/10, ML3.2/2, MS2.5/1, Ms1 2.5/1, ms1mx2.2/43, Error ellipse: s-maj=44.6km s-min=16.3km az=64.0*
DJA ***10*** *23:22:59.6±1.0, 1°.S±4°×12°.6E±°, h15km±9km, M4.1/12, mb4.3/3, MLv4.0/12*
NEIC ***10*** *23:23:00.2±0.9, 1°.58S±0°.08×125°.72E±0°.08, h33km±6km, mb4.0/12, Error ellipse: s-maj=12.3km s-min=10.5km az=62.0*
ISC 10 23:23:00.6±0.7, **1°.49S**±0°.06×**125°.85E**±0°.06, **h35**km, **n38,** σ1**s22/37, mb3.9/9, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**0.57**	**166**	P	**Pn**	**23 23 12.3**	**0.0**
NLAI	**Namlea**	**2.14**	**144**	P	**Pn**	**23 23 34.9**	**+1.1**
TNTI	**Ternate**	**2.71**	**34**	Pn	**Pn**	**23 23 44.1**	**+2.3**
TNTI	**Ternate**	**2.71**	**34**	P	**Pn**	**23 23 40.5**	**-1.3**
KMSI	**Cibinong**	**2.78**	**318**	P	**Pn**	**23 23 43.2**	**+0.6**
LUWI	**Luwuk**	**3.11**	**278**	P	**Pn**	**23 23 48.5**	**+1.3**
GTOI	**Gorontalo**	**3.54**	**307**	P	**Pn**	**23 23 57.0**	**+3.8**
APSI	**Ampana**	**4.24**	**278**	P	**Pn**	**23 24 04.6**	**+1.8**
MRSI	**Marisa**	**4.37**	**297**	P	**Pn**	**23 24 05.9**	**+1.3**
SWI	**Sorong**	**5.44**	**83**	P	**Pn**	**23 24 19.7**	**+0.4**
	0.1nm20nm,0.7s						
SIJI	**Sorong**	**5.45**	**84**	Pn	**Pn**	**23 24 21.6**	**+2.2**
	1.8nm,0.3s,baz=85,slow=21,SNR=9.7						
SIJI				Sn	**Sn**	**23 25 21.8**	**+0.8**
	1.0nm,0.3s,baz=188,slow=22,SNR=1.4						
TOLI2	**Tolitoli**	**5.69**	**297**	Pn	**Pn**	**23 24 21.3**	**-1.5**
FAKI	**Fak Fak**	**6.55**	**103**	Pn	**Pn**	**23 24 33.5**	**-1.0**
SPSI	**Sidrap Palu**	**6.55**	**248**	P	**Pn**	**23 24 36.3**	**+1.7**
SAUI	**Saumlaki**	**8.43**	**140**	Pn	**Pn**	**23 25 00.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**16.50**	**181**	Pn	**Pn**	**23 26 47.6**	**-1.9**
	0.0nm,0.3s,baz=6.7,slow=17,SNR=1.7						
FITZ				LR	LR	23 32 54.0	
	comp=Z,18nm,20.9s,baz=348,slow=36						
SZP	**Santa**	**19.66**	**345**	P	**P**	**23 27 26.1**	**-0.5**
WB0	**Warramunga Arr**	**19.99**	**156**	P	**P**	**23 27 30.4**	**0.0**
WB0				IAmb	IAmb	23 27 32.6	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**20.13**	**156**	P	**P**	**23 27 31.2**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=336,slow=12,SNR=21						
WRA	**Warramunga Arr**	**20.13**	**156**	IAmb	IAmb	23 27 34.6	
	comp=Z,0.1nm,0.7s						
WB2	**Warramunga Arr**	**20.13**	**156**	P	**P**	**23 27 31.6**	**-0.3**
WB2				IAmb	IAmb	23 27 35.7	
	comp=Z,6.8nm,1.1s						
WR0	**Warramunga Arr**	**20.23**	**156**	P	**P**	**23 27 32.5**	**-0.4**
WR0				IAmb	IAmb	23 27 40.5	
	comp=Z,7.8nm,1.3s						
COEN	**Coen**	**21.14**	**127**	P	**P**	**23 27 43.7**	**+1.0**
COEN				IAmb	IAmb	23 27 44.0	
	comp=Z,4.9nm,0.6s						
AS31	**Alice Springs**	**23.38**	**161**	P	**P**	**23 28 07.5**	**+1.1**
ASAR	**Alice Springs**	**23.38**	**161**	P	**P**	**23 28 06.4**	**0.0**
	comp=Z,1.5nm,0.6s,baz=329,slow=7.2,SNR=28						
ASAR	**Alice Springs**	**23.38**	**161**	P	**P**	**23 28 07.0**	**+0.6**
NACB	**Ninganchiao**	**25.85**	**351**	P	**P**	**23 28 28.6**	**-0.3**
NACB				IAmb	IAmb	23 28 30.4	
	comp=Z,23nm,1.0s						
STKA	**Stephens Creek**	**33.68**	**155**	P	**P**	**23 29 38.7**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=320,slow=7.9,SNR=3.0						
STKA	**Stephens Creek**	**33.68**	**155**	P	**P**	**23 29 37.8**	**-0.6**
EIDS	**Eidsvold**	**33.99**	**136**	P	**P**	**23 29 41.4**	**+0.2**
ARMA	**Armidale**	**37.75**	**142**	P	**P**	**23 30 13.8**	**+0.2**
SONM	**Songino Array**	**51.98**	**343**	P	**P**	**23 32 06.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=166,slow=6.2,SNR=4.5						
SONM	**Songino Array**	**51.98**	**343**	IAmb	IAmb	23 32 17.6	
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**61.39**	**327**	P	**P**	**23 33 12.9**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=127,slow=8.6,SNR=7.4						
ZALV	**Zalesovo Beam**	**64.86**	**335**	P	**P**	**23 33 35.4**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=139,slow=9.0,SNR=1.9						
KURBB	**Kurchatov Arra**	**65.69**	**329**	P	**P**	**23 33 41.2**	**-0.3**
	comp=Z,1.3nm,0.6s,baz=130,slow=5.9,SNR=14						
KURK	**Kurchatov**	**65.70**	**329**	P	**P**	**23 33 41.2**	**-0.4**
AKTO	**Aktyubinsk**	**77.22**	**323**	P	**P**	**23 34 50.3**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=81,slow=13,SNR=2.3						

ISK ***10*** *23:39:07.1, 43°.06N×27°.82E, h10km, ML2.7/8*
SOF ***10*** *23:39:10.2, 43°.10N×27°.72E, h25km, MD2.3*
DDA ***10*** *23:39:18.4, 42°.46N×27°.77E, h8km±6km, ML1.7*
ISC 10 23:39:08.4±1.3, **42°.98N**±0°.02×**27°.84E**±0°.03, **h21**km±3km, **n60,** σ2**s08/89, 30C-24D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROIA	**ROIAK**	**0.35**	**288**	P	**Pb**	**23 39 16.8**	**+0.9**
ROIA	**ROIAK**	**0.35**	**288**	P	**Pb**	**23 39 16.8**	**+0.9**
ROIA	**ROIAK**	**0.35**	**288**	P	**Pb**	**23 39 16.8**	**+0.9**
PRD	**Provadia**	**0.39**	**304**	P	**Pb**	**23 39 16.4**	**0.0**
PRD	**Provadia**	**0.39**	**304**	P	**Pb**	**23 39 16.4**	**0.0**
PRD	**Provadia**	**0.39**	**304**	P	**Pb**	**23 39 16.4**	**0.0**
KALB	**Balgarevo**	**0.60**	**45**	⇓S	**Sn**	**23 39 30.8**	**0.0**
PSN	**Preselentsi**	**0.74**	**20**	P	**Pb**	**23 39 22.6**	**0.0**
PSN	**Preselentsi**	**0.74**	**20**	P	**Pb**	**23 39 22.6**	**0.0**
PSN	**Preselentsi**	**0.74**	**20**	P	**Pb**	**23 39 22.6**	**0.0**
JMB	**Yambol**	**1.06**	**241**	P	**Pn**	**23 39 30.3**	**+2.3**
JMB	**Yambol**	**1.06**	**241**	P	**Pn**	**23 39 30.3**	**+2.3**
JMB	**Yambol**	**1.06**	**241**	P	**Pn**	**23 39 30.3**	**+2.3**
ARMN	**Kirklareli, Me**	**1.16**	**195**	*i* P	**Pb**	**23 39 32.4**	**+2.7**
ARMN				*i* S	**Sb**	**23 39 41.9**	**-2.4**
MFTR	**Murfatlar**	**1.27**	**19**	⇓P	**Pb**	**23 39 35.5**	**+4.0**
MFTR				⇑S	**Sb**	**23 39 48.4**	**+1.0**
KIRK	**Kırklareli**	**1.32**	**205**	*i* P	**Pb**	**23 39 34.1**	**+1.7**
KIRK				*i* S	**Sn**	**23 39 47.0**	**-1.5**
RASA	**Rasa**	**1.33**	**338**	⇓P	**Pb**	**23 39 35.8**	**+3.3**
CVDA	**Cernavoda**	**1.36**	**6**	⇑P	**Pb**	**23 39 36.2**	**+3.1**
CVDA				⇓S	**Sb**	**23 39 51.0**	**+1.0**
EDRB	**Edirne**	**1.39**	**216**	PN	**Pb**	**23 39 34.9**	**+1.2**
EDRB				SN	**Sb**	**23 39 53.3**	**+2.3**
VIZE	**Kirklareli, Vi**	**1.40**	**180**	*i* P	**Pb**	**23 39 35.8**	**+1.9**
VIZE				*i* S	**Sn**	**23 39 47.9**	**-2.7**
VIZE				IAML		23 39 55.0	
	comp=N,32nm,0.3s						
VIZE				IAML		23 39 55.0	
	comp=E,24nm,0.5s						
SZH	**Strazhica**	**1.42**	**282**	P	**Pn**	**23 39 33.3**	**+0.3**
CTYL	**Yalikoy Yolu**	**1.54**	**167**	PN	**Pb**	**23 39 36.2**	**0.0**
CTYL				SN	**Sb**	**23 39 57.6**	**+2.3**
TLBR	**Topalu**	**1.57**	**6**	⇓P	**Pb**	**23 39 39.6**	**+3.0**
TLBR				⇑S	**Sb**	**23 39 56.6**	**+0.6**
LEHL	**Lehliu**	**1.66**	**334**	⇑P	**Pb**	**23 39 41.7**	**+3.4**
LEHL				⇑S	**Sb**	**23 40 00.0**	**+1.3**
AMRR	**Amara**	**1.67**	**348**	⇑P	**Pb**	**23 39 41.7**	**+3.4**
AMRR				⇓S	**Sb**	**23 40 00.0**	**+1.2**
SLVT	**Silivri**	**1.77**	**171**	PN	**Pb**	**23 39 39.5**	**-0.7**
SLVT				SN	**Sb**	**23 40 03.1**	**+1.1**
CTKS	**Kestanelik-??a**	**1.82**	**164**	PN	**Pb**	**23 39 40.2**	**-0.7**
SGRR	**Singureni**	**1.83**	**313**	⇓P	**Pb**	**23 39 44.8**	**+3.6**
ELBA	**Catalca**	**1.89**	**166**	*i* P	**Pb**	**23 39 50.6**	**+8.5**
ELBA				*i* S	**Sn**	**23 40 00.4**	**-2.1**
TPGR	**Topolog**	**1.92**	**13**	⇓P	**Pb**	**23 39 44.6**	**+1.9**
TPGR				⇓S	**Sb**	**23 40 06.7**	**+0.5**
ZIMR		**1.93**	**291**	⇑P	Pb	23 39 47.8	+5.1
BGKT	**Bogazkoy**	**1.93**	**159**	PN	**Pb**	**23 39 41.8**	**-1.0**
SULR		**2.04**	**327**	⇑P	**Pb**	**23 39 47.4**	**+2.7**
SULR				⇓S	**Sb**	**23 40 11.3**	**+1.6**
ISK	**Istanbul-Kandi**	**2.12**	**154**	PN	**Pb**	**23 39 44.6**	**-1.5**
KAVV	**Kandilli-Istan**	**2.12**	**154**	PN	**Pb**	**23 39 44.6**	**-1.5**
CFR	**Carcaliu**	**2.21**	**6**	⇓P	**Pb**	**23 39 47.6**	**+0.1**
CFR				⇓S	**Sb**	**23 40 14.4**	**0.0**
TLCR		**2.31**	**17**	⇑P	**Pb**	**23 39 51.1**	**+1.7**
TLCR				⇓S	**Sb**	**23 40 18.7**	**+1.2**
KESN	**Edirne-Kesan**	**2.32**	**202**	*i* P	Pb	23 40 03.7	+14
KESN				*i* S	**Sn**	**23 40 10.2**	**-3.6**
KESN				IAML		23 40 42.0	
	comp=E,8.9nm,0.9s						
KESN				IAML		23 41 22.0	
	comp=N,5.6nm,1.1s						
ISR	**Istrita**	**2.33**	**337**	⇑P	**Pb**	**23 39 52.0**	**+2.4**
ISR				⇑S	**Sb**	**23 40 20.2**	**+2.2**
PLVB	**Pleven**	**2.39**	**281**	⇑P	**Pb**	**23 39 53.9**	**+3.4**
ALN	**Alexandroupoli**	**2.48**	**213**	PN	**Pn**	**23 39 49.2**	**+1.7**
GRER		**2.48**	**346**	⇓P	**Pb**	**23 39 52.9**	**+0.7**
GRER				⇓S	**Sb**	**23 40 21.1**	**-1.1**
RDO	**Rodhopi**	**2.51**	**224**	PN	**Pn**	**23 39 49.6**	**+1.7**
ERIK	**Erikli-Kesan**	**2.51**	**204**	PN	**Pn**	**23 39 49.8**	**+1.8**
HUMR	**Humele**	**2.58**	**308**	⇑P	**Pb**	**23 39 55.6**	**+1.6**
HUMR				⇓S	**Sb**	**23 40 26.9**	**+1.7**
TUDR		**2.61**	**357**	⇑P	**Pb**	**23 39 54.8**	**+0.3**
TUDR				⇓S	**Sb**	**23 40 26.2**	**+0.1**
NEHR	**Nehoiu**	**2.68**	**336**	⇑P	**Pb**	**23 39 56.5**	**+0.8**
NEHR				⇑S	**Sb**	**23 40 26.8**	**-1.3**
BISRR	**Bisoca**	**2.69**	**343**	⇑P	**Pb**	**23 39 55.7**	**-0.2**
BISRR				⇑S	**Sb**	**23 40 27.8**	**-0.5**
VLAD	**Vladila**	**2.70**	**293**	⇓P	**Pb**	**23 39 58.9**	**+3.1**
VLAD				⇑S	**Sb**	**23 40 31.8**	**+3.4**
MLR	**Muntele Rosu**	**2.85**	**332**	⇑P	**Pb**	**23 39 58.7**	**+0.1**
MLR				⇓S	**Sb**	**23 40 31.8**	**-1.3**
MLR	**Muntele Rosu**	**2.85**	**332**	PN	**Pn**	**23 39 52.8**	**0.0**
VRI	**Vrincioaia**	**2.99**	**345**	⇑P	**Pb**	**23 40 00.3**	**-0.6**
VRI				⇑S	**Sb**	**23 40 35.8**	**-1.2**
VRI	**Vrincioaia**	**2.99**	**345**	PN	**Pn**	**23 39 54.4**	**-0.2**
PLOR	**Plostina**	**2.99**	**344**	⇑P	**Pb**	**23 40 00.8**	**-0.2**
PLOR				⇓S	**Sb**	**23 40 34.4**	**-2.6**
VOIR		**3.17**	**322**	⇑P	**Pb**	**23 40 03.5**	**-0.5**
VOIR				⇑S	**Sb**	**23 40 41.3**	**-0.8**
ARR	**Arges**	**3.31**	**317**	⇑P	**Pb**	**23 40 06.2**	**-0.3**
ARR				⇑S	**Sb**	**23 40 44.5**	**-1.9**
VTS	**Vitosha**	**3.41**	**265**	⇑P	**Pb**	**23 40 09.5**	**+1.5**
VTS				⇓S	**Sb**	**23 40 51.5**	**+2.5**
DOPR	**Dopca**	**3.46**	**330**	⇓S	**Sb**	**23 40 47.4**	**-3.1**
HERR	**Herculane**	**4.35**	**298**	⇑P	**Pb**	**23 40 19.8**	**-4.2**
HERR				⇓S	**Sb**	**23 41 11.4**	**-4.7**
GZR	**Gura Zlata**	**4.36**	**305**	⇑P	**Pb**	**23 40 21.1**	**-3.3**
GZR				⇓S	**Sb**	**23 41 10.9**	**-5.6**

UCR ***10*** *23:43:38.2±2.1, 9°.43N×85°.94W, h23km±6km, MW4.4*
INET ***10*** *23:43:40.1, 9°.45N×85°.82W, h16km, MW3.4*
IDC ***10*** *23:43:44.5±1.0, 11°.13N×85°.08W, h0km, mb3.5/5, mb1 3.9/5, mb1mx3.6/34, mbtmp3.5/5, Error ellipse: s-maj=43.2km s-min=14.0km az=75.0*
ISC 10 23:43:38.6±1.9, **9°.46N**±0°.06×**85°.89W**±0°.07, **h15**km±10km, **n46,** σ1**s04/52, mb3.7/5, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRZA	**Playa Garza**	**0.51**	**29**	*e*P	**Pg**	**23 43 49.5**	**+0.7**
GRZA				*e*S	**Sn**	**23 43 59.2**	**-0.7**
INDI	**Punta indio, G**	**0.55**	**43**	*e*P	**Pg**	**23 43 50.3**	**+0.8**
INDI				*e*S	**Sn**	**23 44 01.1**	**+0.2**
SAJU	**San Juanillo,**	**0.62**	**16**	*e*P	**Pg**	**23 43 50.9**	**0.0**
SAJU				*e*S	**Sb**	**23 44 01.4**	**+1.6**
DUNO	**Dulce Nombre,**	**0.72**	**32**	*e*P	**Pg**	**23 43 52.6**	**-0.1**
DUNO				*e*S	**Sb**	**23 44 04.5**	**+1.8**
GUAI	**GUAI**	**0.88**	**25**	*i* P	**Pb**	**23 43 54.8**	**-0.9**
GUAI				*i* S	**Sb**	**23 44 08.0**	**+0.8**
LAFE	**Finca La Fe, P**	**1.02**	**70**	*e*P	**Pb**	**23 43 56.5**	**-1.5**
PLVR	**Palo Verde**	**1.03**	**31**	*e*P	**Pb**	**23 43 56.1**	**-2.0**
PLVR				*e*S	**Sb**	**23 44 11.4**	**-0.1**
JTS	**Las Juntas de**	**1.23**	**48**	Pg	**Pn**	**23 44 00.6**	**-0.8**
	89nm,0.3s,baz=269,slow=5.7,SNR=254						
JTS				Lg	Lg	23 44 18.8	
	124nm,0.3s,baz=319,slow=20,SNR=7.4						
JTS	**Las Juntas de**	**1.23**	**48**	*e*P	**Pn**	**23 44 00.8**	**-0.6**
HZTE	**Horizontes, Gu**	**1.28**	**13**	*e*P	**Pn**	**23 44 01.4**	**-0.5**
COLC	**Colonia**	**1.37**	**29**	*i* P	**Pn**	**23 44 02.3**	**-1.0**
LIM1	**Limonal**	**1.38**	**27**	*i* P	**Pn**	**23 44 02.7**	**-0.7**
CUI	**Cuiplapa**	**1.39**	**31**	*i* P	**Pn**	**23 44 01.5**	**-1.9**
VRLE	**La Escondida,**	**1.41**	**21**	*e*P	**Pn**	**23 44 03.0**	**-0.9**
ACAL	**Aguas Claras**	**1.44**	**36**	*i* P	**Pn**	**23 44 03.3**	**-0.8**
CASO	**Castillo**	**1.49**	**50**	*i* P	**Pn**	**23 44 04.8**	**-0.1**
BUAI	**Buenos Aires**	**1.51**	**21**	*i* P	**Pn**	**23 44 03.3**	**-1.8**
SRA1	**San Ramn**	**1.52**	**66**	*e*P	**Pn**	**23 44 05.1**	**-0.2**
ARE1	**Arenal 1**	**1.52**	**49**	*e*P	**Pn**	**23 44 05.8**	**+0.5**
PTEN	**Parque Tenorio**	**1.53**	**35**	*i* P	**Pn**	**23 44 05.0**	**-0.4**
CEDE	**Laguna Cedeo**	**1.55**	**49**	*e*P	**Pn**	**23 44 05.2**	**-0.5**
HDC	**Heredia**	**1.83**	**73**	*e*P	**Pn**	**23 44 10.4**	**+0.8**
HDC3	**Heredia 3**	**1.83**	**73**	*e*P	**Pn**	**23 44 10.4**	**+0.8**
LCR2	**La Lucha 2**	**1

baz=179,slow=11,SNR=2.9
MKAR Makanchi Array 26.10 317 P P 01 02 26.2 -0.1
0.4nm,0.6s,baz=116,slow=10,SNR=5.5
WRA Warramunga Arr 55.70 150 P P 01 06 28.8 -0.4
0.7nm,0.9s,baz=339,slow=7.9,SNR=6.9
ASAR Alice Springs 58.81 152 P P 01 06 51.5 +0.3
0.3nm,0.5s,baz=335,slow=7.0,SNR=6.2

IDC 11 01:08:09.4±2.4, 6°63′N×123°73′E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/37, mbtmp3.4/3, Error ellipse: s-maj=246.6km s-min=27.7km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.40**	**159**	P	P	01 14 05.5	-0.3
	0.3nm,0.7s,baz=337,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**31.71**	**162**	P	P	01 14 35.4	+0.3
	0.3nm,0.4s,baz=340,slow=7.2,SNR=5.4						
MKAR	**Makanchi Array**	**53.48**	**326**	P	P	01 17 31.5	-0.1
	0.1nm,0.4s,baz=115,slow=8.9,SNR=4.8						

*IDC **11** 01:17:47.7±0.9, 28°.08N×104°.70E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.7/62, mbtmp3.9/13, ML3.7/1, MS2.7/1, Ms1 2.9/1, ms1mx2.3/39, Error ellipse: s-maj=30.4km s-min=16.6km az=61.0*
*NEIC **11** 01:17:50.6±1.3, 28°.26N±0°.08×104°.7E±0°.1, h10km±1km, mb4.1/10, Error ellipse: s-maj=19.8km s-min=11.8km az=119.0*

ISC 11 01:17:53.6±0.7, 28°23′N±0°08×104°74′E±0°09, h35km, n28, σ0s82/25, mb3.8/14, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.58**	**210**	Pn	**Pn**	**01 18 47.5**	**+0.7**
ENH	**Enshi**	**4.62**	**63**		**Pn**	**01 19 01.7**	**+0.7**
XAN	**Xi'an**	**6.81**	**31**		**Pn**	**01 19 30.7**	**-0.3**
SLVN	**Son La**	**6.91**	**186**	Pn	**Pn**	**01 19 32.5**	**0.0**
CMAR	**Chiang Mai Arr**	**11.09**	**210**	LR	LR	01 25 09.7	
	comp=Z,36nm,19.4s,baz=195,slow=40						
SONM	**Songino Array**	**19.61**	**3**	P	**P**	**01 22 19.5**	**+0.5**
	0.2nm,0.3s,baz=185,slow=12,SNR=7.9						
SONM	**Songino Array**	**19.61**	**3**	P	**P**	**01 22 17.0**	**-2.0**
ULN	**Ulaanbaatar**	**19.68**	**5**	P	**P**	**01 22 19.7**	**-0.1**
KSRS	**Korea Array**	**21.50**	**59**	P	**P**	**01 22 39.4**	**+0.1**
	0.8nm,0.5s,baz=238,slow=12,SNR=2.6						
MK31	**Makanchi Array**	**25.55**	**323**	P	**P**	**01 23 19.7**	**+0.6**
MKAR	**Makanchi Array**	**25.55**	**323**	P	**P**	**01 23 19.1**	**0.0**
	1.1nm,0.5s,baz=128,slow=9.2,SNR=13						
MAKZ	**Makanchi**	**25.73**	**322**	P	**P**	**01 23 20.7**	**0.0**
MAKZ				IAmb	IAmb	01 23 23.9	
	comp=Z,2.0nm,0.9s						
USRK	**Ussuriysk Ar.**	**26.98**	**47**	P	**P**	**01 23 32.3**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=250,slow=5.7,SNR=5.0						
ZALV	**Zalesovo Beam**	**29.55**	**336**	P	**P**	**01 23 55.0**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=135,slow=8.8,SNR=3.9						
KURBB	**Kurchatov Arra**	**29.89**	**326**	P	**P**	**01 23 57.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=132,slow=10.0,SNR=4.8						
KURK	**Kurchatov**	**29.90**	**326**	P	**P**	**01 23 57.6**	**-0.3**
ABKAR	**Akbulak array**	**40.03**	**314**	P	**P**	**01 25 24.7**	**-0.4**
NRIK	**Noril'sk**	**42.34**	**351**	P	**P**	**01 25 44.9**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=150,slow=7.9,SNR=4.4						
NRIK	**Noril'sk**	**42.34**	**351**	IAmb	IAmb	01 25 47.5	
	comp=Z,3.9nm,1.2s						
TIXI	**Tiksi**	**45.46**	**10**	P	**P**	**01 26 07.9**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=193,slow=3.3,SNR=4.6						
TIXI	**Tiksi**	**45.46**	**10**	IAmb	IAmb	01 26 58.4	
	comp=Z,5.9nm,1.5s						
WRA	**Warramunga Arr**	**55.79**	**146**	P	**P**	**01 27 25.6**	**-1.8**
	comp=Z,0.9nm,0.7s,baz=334,slow=8.3,SNR=9.9						
WB2	**Warramunga Arr**	**55.80**	**146**	P	**P**	**01 27 28.7**	**+1.3**
AS31	**Alice Springs**	**58.76**	**148**	P	**P**	**01 27 48.0**	**-0.3**
AS31				IAmb	IAmb	01 27 55.3	
	comp=Z,3.4nm,1.7s						
ASAR	**Alice Springs**	**58.76**	**148**	P	**P**	**01 27 47.1**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=333,slow=6.5,SNR=15						
ARCES	**ARCESS Array B**	**60.10**	**337**	P	**P**	**01 27 57.6**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=89,slow=8.3,SNR=1.3						
GERES	**GERESS Array B**	**69.96**	**315**	P	**P**	**01 29 01.6**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=89,slow=7.0,SNR=1.9						
YKA	**Yellowknife Ar**	**84.26**	**17**	P	**P**	**01 30 21.7**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=328,slow=5.1,SNR=5.2						

*IDC **11** 01:33:09.2±1.1, 14°.71S×168°.07E, h0km, mb4.3/10, mb1 4.4/12, mb1mx4.2/28, mbtmp4.3/12, ML4.6/2, MS3.3/9, Ms1 3.3/9, ms1mx3.0/30, Error ellipse: s-maj=37.0km s-min=20.3km az=129.0*
*NEIC **11** 01:33:11.0±2.0, 14°.75S±0°.03×167°.91E±0°.07, h10km±1km, mb4.5/13, Error ellipse: s-maj=11.6km s-min=3.2km az=67.0*

ISC 11 01:33:10.9±0.7, 14°74′S±0°07×168°0′E±0°1, h10km, n44, σ1s23/41, mb4.4/17, MS3.2/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.04**	**227**		**Pg**	**01 33 29.0**	**-1.8**
DZM	**Mont Dzumac**	**7.44**	**191**	Pn	**Pn**	**01 35 00.5**	**+0.8**
	3.4nm,0.3s,baz=356,slow=7.0,SNR=22						
DZM				Sn	**Sn**	**01 36 23.7**	**-0.5**
	0.7nm,0.3s,baz=316,slow=20,SNR=6.5						
DZM				LR	LR	01 37 40.8	
	comp=Z,218nm,18.9s,baz=20,slow=36						
HNR	**Honiara**	**9.47**	**303**	Pn	**Pn**	**01 35 29.8**	**+2.4**
	16nm,0.3s,baz=200,slow=6.1,SNR=2.5						
HNR				Sn	**Sn**	**01 37 12.2**	**-1.8**
	14nm,0.3s,baz=220,slow=16,SNR=1.8						
HNR				LR	LR	01 38 53.6	
	comp=Z,175nm,20.8s,baz=124,slow=36						
HNR	**Honiara**	**9.47**	**303**	Pn	**Pn**	**01 35 27.8**	**+0.3**
MSVF	**Nonsavu**	**10.11**	**108**	LR	LR	01 38 34.9	
	comp=Z,293nm,18.9s,baz=115,slow=32						
AFI	**Afiamalu**	**19.62**	**90**	LR	LR	01 42 59.7	
	comp=Z,53nm,21.2s,baz=74,slow=30						
CTA	**Charters Tower**	**21.40**	**253**	P	**P**	**01 38 01.8**	**+2.7**
	4.2nm,0.7s,baz=74,slow=12,SNR=2.6						
STKA	**Stephens Creek**	**29.52**	**230**	P	**P**	**01 39 17.2**	**+1.6**
	8.4nm,0.4s,baz=56,slow=9.0,SNR=35						
STKA				LR	LR	01 50 47.5	
	comp=Z,43nm,20.2s,baz=52,slow=36						
STKA	**Stephens Creek**	**29.52**	**230**	P	**P**	**01 39 15.1**	**-0.5**
WB0	**Warramunga Arr**	**32.44**	**256**	P	**P**	**01 39 40.5**	**-1.0**
WB0				IAmb	IAmb	01 39 55.4	
	comp=Z,5.5nm,1.1s						
WB2	**Warramunga Arr**	**32.49**	**256**	P	**P**	**01 39 41.2**	**-0.8**
WB2				IAmb	IAmb	01 39 42.4	
	comp=Z,9.9nm,1.4s						
WRAB	**Tennant Creek**	**32.49**	**256**	P	**P**	**01 39 39.9**	**-2.1**
WRA	**Warramunga Arr**	**32.50**	**256**	P	**P**	**01 39 40.8**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=85,slow=8.6,SNR=12						
WRA				LR	LR	01 52 13.8	
	comp=Z,137nm,19.4s,baz=100,slow=35						
AS31	**Alice Springs**	**33.32**	**249**	P	**P**	**01 39 49.1**	**-0.1**
ASAR	**Alice Springs**	**33.32**	**249**	P	**P**	**01 39 48.9**	**-0.4**
	comp=Z,4.1nm,0.7s,baz=78,slow=9.1,SNR=60						
ASAR				PcP	**PcP**	**01 42 31.1**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=79,slow=2.0,SNR=2.4						
ASAR				LR	LR	01 52 34.1	
	comp=Z,115nm,18.8s,baz=98,slow=35						
ASAR	**Alice Springs**	**33.32**	**249**	P	**P**	**01 39 48.6**	**-0.7**
BBOO	**Buckleboo**	**34.13**	**233**	P	**P**	**01 39 56.9**	**+0.8**
FORT	**Forrest**	**39.89**	**239**	P	**P**	**01 40 46.2**	**+1.0**
FORT				IAmb	IAmb	01 40 57.2	
	comp=Z,28nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.70**	**259**	P	**P**	**01 40 52.0**	**0.0**
FITZ				IAmb	IAmb	01 40 57.1	
	comp=Z,9.2nm,1.4s						
PPT	**Papeete**	**40.80**	**100**	LR	LR	01 56 53.2	
	comp=Z,30nm,18.1s,baz=359,slow=35						
MYLDM	**Lahad Datu**	**52.89**	**288**	P	**P**	**01 42 28.6**	**+1.0**
KSAR	**Wonju Array Be**	**64.15**	**325**	P	**P**	**01 43 45.1**	**-0.6**
USRK	**Ussuriysk Ar.**	**67.21**	**333**	P	**P**	**01 44 06.8**	**+1.5**
MA2	**Magadan**	**75.36**	**351**	LR	LR	02 11 57.1	
	comp=Z,12nm,21.7s,baz=92,slow=31						
CMAR	**Chiang Mai Arr**	**75.59**	**294**	P	**P**	**01 44 56.6**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=124,slow=5.5,SNR=6.7						
CMAR	**Chiang Mai Arr**	**75.59**	**294**	P	**P**	**01 44 57.6**	**+1.1**
ULN	**Ulaanbaatar**	**82.55**	**324**	P	**P**	**01 45 31.2**	**-3.0**
ULN				IAmb	IAmb	01 45 36.1	
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**82.92**	**323**	P	**P**	**01 45 36.8**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=130,slow=6.7,SNR=6.6						
SONM	**Songino Array**	**82.92**	**323**	P	**P**	**01 45 37.1**	**+1.0**
ILAR	**Eielson Array**	**86.32**	**18**	P	**P**	**01 45 52.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=243,slow=4.6,SNR=5.7						
YKA	**Yellowknife Ar**	**97.23**	**27**	P	**P**	**01 46 43.0**	**-0.6**
	comp=Z,0.5nm,1.0s,baz=253,slow=4.4,SNR=4.9						
MK31	**Makanchi Array**	**97.69**	**316**	P	**P**	**01 46 45.7**	**-0.4**
MK31				IAmb	IAmb	01 46 48.0	
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	**97.69**	**316**	P	**P**	**01 46 46.0**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=96,slow=6.2,SNR=14						
MKAR	**Makanchi Array**	**97.69**	**316**	P	**P**	**01 46 45.6**	**-0.5**
ZAA0	**Zalesovo Array**	**97.81**	**324**	P	**P**	**01 46 44.0**	**-2.4**
ZAA0				IAmb	IAmb	01 46 47.0	
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**97.81**	**324**	P	**P**	**01 46 45.9**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=98,slow=6.0,SNR=3.7						
ARCES	**ARCESS Array B**	**120.43**	**346**	PKP	**PKPdf**	**01 52 02.1**	**0.0**
	comp=Z,6.1nm,1.1s,baz=49,slow=3.3,SNR=5.4						
NRCA	**Norcia**	**144.65**	**327**	PKPdf	**PKPab**	**01 52 46.4**	**-0.5**
INTR	**Introdacqua**	**144.79**	**326**	PKPdf	**PKPab**	**01 52 46.6**	**-0.8**
AQU	**L'Aquila**	**144.83**	**326**	PKPdf	PKPbc	01 52 48.5	+1.0
TIP	**Timpagrande**	**144.91**	**319**	PKPdf	PKPbc	01 52 48.9	+1.0
KEST	**Kesra**	**151.65**	**321**	PKPbc	**PKPbc**	**01 53 06.2**	**0.0**
	comp=Z,4.6nm,0.8s,baz=3.4,slow=1.9,SNR=4.7						
ESDC	**Sonseca Array**	**154.17**	**346**	PKPab	**PKPab**	**01 53 25.3**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=16,slow=3.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**166.60**	**265**	PKPab	**PKPab**	**01 54 19.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=107,slow=3.7,SNR=3.2						

*IDC **11** 01:37:55.0±2.4, 47°.31S×165°.64E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.8/21, mbtmp3.8/3, ML2.9/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/25, Error ellipse: s-maj=70.7km s-min=38.0km az=177.0*

ISC 11 01:37:56.2±1.2, 47°.66S±0°.1×165°68E±0°07, h14km, n37, σ1s65/36, MS3.2/4, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**1.58**	**26**	P	**Pn**	**01 38 23.6**	**-0.2**
APZ	**The Paps**	**1.75**	**65**	P	**Pn**	**01 38 26.6**	**+0.4**
APZ				S	**Sn**	**01 38 46.8**	**-1.4**
WHZ	**Wether Hill Ro**	**2.31**	**43**	P	**Pn**	**01 38 33.7**	**0.0**
WHZ				S	**Sn**	**01 39 02.2**	**+0.2**
DCZ	**Deep Cove**	**2.36**	**26**	P	**Pn**	**01 38 34.5**	**0.0**
SYZ	**Scrubby Hill**	**2.59**	**67**	P	**Pn**	**01 38 40.4**	**+2.7**
SYZ				S	**Sb**	**01 39 14.9**	**+0.9**
MLZ	**Mavora Lakes**	**2.79**	**38**	P	**Pn**	**01 38 41.1**	**+0.7**
MLZ				S	**Sn**	**01 39 16.7**	**+2.8**
TUZ	**Tuapeka**	**3.17**	**60**	P	**Pn**	**01 38 47.4**	**+1.7**
TUZ				S	**Sb**	**01 39 28.8**	**-2.0**
MSZ	**Milford Sound**	**3.31**	**29**	P	**Pn**	**01 38 50.4**	**+2.9**
EAZ	**Earnscleugh**	**3.44**	**48**	P	**Pn**	**01 38 50.4**	**+0.9**
EAZ				S	**Sn**	**01 39 31.9**	**+1.9**
WKZ	**Wanaka**	**3.61**	**41**	P	**Pn**	**01 38 53.4**	**+1.7**
JCZ	**Jackson Bay**	**4.13**	**33**	P	**Pn**	**01 39 01.3**	**+2.4**
ODZ	**Otahua Downs**	**4.28**	**55**	P	**Pn**	**01 39 00.6**	**-0.3**
LBZ	**Lake Benmore**	**4.49**	**46**	P	**Pn**	**01 39 04.0**	**+0.3**
TMZ	**Timaru**	**4.91**	**51**	P	Pn	01 39 16.7	+7.1
FOZ	**Fox Glacier**	**4.99**	**37**	P	**Pn**	**01 39 12.0**	**+1.3**
GCSZ	**Gaunt Creek Bo**	**5.38**	**39**	P	**Pn**	**01 39 17.9**	**+1.9**
RPZ	**Rata Peaks**	**5.41**	**46**	Pn	**Pn**	**01 39 14.4**	**-2.0**
	0.4nm,0.3s,baz=292,slow=3.1,SNR=2.5						
RPZ				Sn	**Sn**	**01 40 13.9**	**-4.5**
	1.4nm,0.3s,baz=178,slow=22,SNR=1.4						
RPZ				LR	LR	01 41 15.5	
	comp=Z,230nm,21.4s,baz=190,slow=38						
RPZ	**Rata Peaks**	**5.41**	**46**	P	**Pn**	**01 39 17.2**	**+0.8**
OXZ	**Oxford**	**6.18**	**49**	P	**Pn**	**01 39 28.6**	**+1.6**
INZ	**Inchbonnie**	**6.34**	**42**	P	**Pn**	**01 39 29.8**	**+0.6**
LTZ	**Lake Taylor**	**6.69**	**47**	P	**Pn**	**01 39 35.2**	**+1.1**
DSZ	**Denniston Nort**	**7.29**	**39**	P	**Pn**	**01 39 43.1**	**+0.8**
THZ	**Tophouse**	**7.77**	**44**	P	**Pn**	**01 39 51.1**	**+2.1**
QRZ	**Quartz Range**	**8.36**	**39**	P	**Pn**	**01 39 57.5**	**+0.6**
HIZ	**Hauiti**	**11.28**	**40**	P	**Pn**	**01 40 37.2**	**+0.3**
VNDA	**Vanda**	**30.08**	**182**	LR	LR	01 53 11.0	
	comp=Z,43nm,19.6s,baz=346,slow=30						
MSVF	**Nonsavu**	**31.46**	**23**	LR	LR	01 54 35.3	
	comp=Z,64nm,21.6s,baz=107,slow=32						
ASAR	**Alice Springs**	**34.77**	**302**	P	**P**	**01 44 46.1**	**-0.1**
	0.8nm,0.6s,baz=133,slow=7.8,SNR=9.3						
WRA	**Warramunga Arr**	**37.49**	**306**	P	**P**	**01 45 07.9**	**-1.5**
	1.7nm,1.1s,baz=141,slow=7.7,SNR=5.0						
AFI	**Afiamalu**	**38.47**	**37**	LR	LR	01 59 32.6	
	comp=Z,29nm,18.6s,baz=180,slow=34						
H01W1	**Cape Leeuwin H**	**40.06**	**269**	T	T	02 27 45.3	
	baz=124,slow=75,SNR=30						
H01W2	**Cape Leeuwin H**	**40.07**	**269**	T	T	02 27 50.6	
	baz=124,slow=75,SNR=31						
H01W3	**Cape Leeuwin H**	**40.08**	**269**	T	T	02 27 47.2	
	baz=124,slow=75,SNR=27						
FITZ	**Fitzroy Crossi**	**43.93**	**298**	LR	LR	02 03 41.6	
	comp=Z,56nm,19.0s,baz=132,slow=35						
TORD	**Torodi Ar. Bea**	**143.15**	**207**	PKP	**PKPdf**	**01 57 29.3**	**-0.7**
	0.3nm,0.6s,baz=171,slow=1.9,SNR=1.6						
BRTR	**Keskin Array B**	**144.90**	**275**	PKP	**PKPdf**	**01 57 32.9**	**+0.4**
	1.1nm,0.9s,baz=104,slow=4.6,SNR=4.2						
ARCES	**ARCESS Array B**	**150.67**	**333**	PKPbc	**PKiKP**	**01 57 47.6**	**+0.5**
	3.9nm,1.1s,baz=85,slow=1.9,SNR=1.4						

IDC 11 01:44:35.9±4.6, 1°23′N×97°27′E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/37, mbtmp3.5/4, Error ellipse: s-maj=182.3km s-min=32.0km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**26.24**	**250**	T	T	02 17 08.8	
	baz=72,slow=75						
H08S3	**Diego Garcia H**	**26.24**	**250**	T	T	02 17 08.4	
	baz=72,slow=75						
H08S1	**Diego Carcia H**	**26.26**	**250**	T	T	02 17 09.1	
	baz=72,slow=75						
H01W3	**Cape Leeuwin H**	**39.25**	**158**	T	T	02 33 35.7	
	baz=332						
H01W2	**Cape Leeuwin H**	**39.26**	**158**	T	T	02 33 37.4	
	baz=332						
H01W1	**Cape Leeuwin H**	**39.26**	**158**	T	T	02 33 37.4	
	baz=332						
WRA	**Warramunga Arr**	**41.99**	**122**	P	P	01 52 29.1	-0.1
	0.2nm,0.6s,baz=299,slow=9.0,SNR=1.8						
SONM	**Songino Array**	**47.09**	**8**	P	P	01 53 09.8	0.0
	0.3nm,0.7s,baz=186,slow=8.7,SNR=2.5						
MKAR	**Makanchi Array**	**47.23**	**346**	P	P	01 53 11.1	+0.3
	0.4nm,0.5s,baz=170,slow=8.7,SNR=6.3						
ZALV	**Zalesovo Beam**	**53.54**	**351**	P	P	01 53 57.6	-0.7
	0.7nm,0.5s,baz=182,slow=7.4,SNR=4.1						

IDC 11 01:53:28.5±5.9, 26°60S×71°45E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/49, mbtmp3.7/4, MS3.4/1, Ms1 3.3/1, ms1mx2.5/27, Error ellipse: s-maj=156.8km s-min=41.2km az=56.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**37.38**	**113**	T	T	02 40 04.9	
	baz=271						
H01W3	**Cape Leeuwin H**	**37.38**	**113**	T	T	02 39 57.7	
	baz=271						
H01W1	**Cape Leeuwin H**	**37.40**	**113**	T	T	02 40 03.4	
	baz=271						
BOSA	**Boshof**		**40.79**	**256**	LR	LR	02 14 54.0
	comp=Z,46nm,18.9s,baz=198,slow=32						
CMAR	**Chiang Mai Arr**	**52.14**	**34**	P	P	02 02 40.9	-0.1
	0.6nm,0.3s,baz=219,slow=9.7,SNR=7.0						
ASAR	**Alice Springs**	**56.12**	**102**	P	P	02 03 10.0	-0.1
	0.7nm,1.0s,baz=250,slow=6.8,SNR=3.7						
WRA	**Warramunga Arr**	**57.67**	**98**	P	P	02 03 21.2	+0.1
	0.8nm,0.9s,baz=249,slow=7.6,SNR=3.9						
MKAR	**Makanchi Array**	**73.71**	**8**	P	P	02 05 03.9	-0.1
	0.5nm,0.9s,baz=202,slow=7.3,SNR=3.7						

*IDC **11** 01:55:01.3±3.0, 21°.19S×178°.16W, h596km±26km, mb2.9/4, mb1 3.1/7, mb1mx2.9/42, mbtmp4.0/7, Error ellipse: s-maj=49.6km s-min=38.1km az=63.0*

ISC 11 01:55:00.9±2.3, 21°25′S±0°2×178°1′W±0°3, h600km, n8, σ0s55/8, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.00**	**312**	P	**P**	**01 56 33.9**	**-0.1**
	1.0nm,0.3s,baz=128,slow=13,SNR=4.4						
DZM	**Mont Dzumac**	**14.43**	**264**	P	**P**	**01 58 04.5**	**+0.5**
	0.2nm,0.3s,baz=114,slow=19,SNR=1.8						
URZ	**Urewera**	**17.54**	**193**	P	**P**	**01 58 32.0**	**-0.1**
	0.5nm,0.3s,baz=110,slow=23,SNR=0.8						
CTA	**Charters Tower**	**33.36**	**265**	P	**P**	**02 00 51.0**	**-0.3**
	1.1nm,0.3s,baz=85,slow=11,SNR=1.6						
ASAR	**Alice Springs**	**44.30**	**257**	P	**P**	**02 02 19.0**	**-0.2**
	1.9nm,0.8s,baz=96,slow=7.5,SNR=21						
WRA	**Warramunga Arr**	**44.44**	**263**	P	**P**	**02 02 19.7**	**-0.6**
	0.5nm,0.3s,baz=96,slow=7.3,SNR=17						
FITZ	**Fitzroy Crossi**	**52.87**	**263**	P	**P**	**02 03 23.3**	**+0.8**
	0.5nm,0.4s,baz=98,slow=7.1,SNR=6.7						
AKASG	**Malin Array Be**	**143.56**	**331**	PKP	**PKPdf**	**02 13 28.2**	**+0.1**
	0.5nm,0.4s,baz=48,slow=3.5,SNR=2.1						

*IDC **11** 02:06:32.8±1.7, 6°.24S×128°.79E, h275km±23km, mb3.1/1, mb1 3.6/6, mb1mx3.1/39, mbtmp4.2/6, Error ellipse: s-maj=33.8km s-min=18.0km az=89.0*

ISC 11 02:06:31.7±0.9, 6°27S±0°07×128°9E±0°1, h300km, n6, σ2s88/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.88**	**24**	P	**Pn**	**02 08 00.0**	**+0.4**
	6.6nm,0.3s,baz=227,slow=23,SNR=31						
SIJI				S	**S**	**02 09 05.4**	**-5.1**
	1.7nm,0.3s,baz=266,slow=23,SNR=1.7						
BATI	**Baumata**	**6.46**	**232**	P	**Pn**	**02 08 07.4**	**+0.9**
	15nm,0.3s,baz=60,slow=3.9,SNR=5.1						
BATI				S	**S**	**02 09 19.7**	**-3.4**
	9.3nm,0.3s,baz=15,slow=20,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.17**	**195**	P	**Pn**	**02 09 16.4**	**0.0**
	0.1nm,0.3s,baz=23,slow=14,SNR=4.4						
FITZ				S	**S**	**02 11 28.1**	**-3.6**
	0.1nm,0.3s,baz=319,slow=22,SNR=1.6						
WRA	**Warramunga Arr**	**14.60**	**159**	P	**Pn**	**02 09 46.8**	**+1.3**
	0.3nm,0.3s,baz=334,slow=13,SNR=20						
WRA				S	**S**	**02 12 23.9**	**-0.6**
	0.1nm,0.3s,baz=341,slow=22,SNR=1.8						
ASAR	**Alice Springs**	**17.97**	**165**	P	**Pn**	**02 10 24.8**	**-0.2**
	1.5nm,0.3s,baz=345,slow=12,SNR=151						
ASAR				S	**S**	**02 13 33.3**	**+1.7**
	0.1nm,0.3s,baz=343,slow=20,SNR=4.1						
MKAR	**Makanchi Array**	**66.99**	**327**	P	**P**	**02 16 55.9**	**+3.2**
	0.3nm,0.4s,baz=114,slow=7.8,SNR=7.4						

UCR 11 02:15:05.1±2.0, 9°40N×85°97W, h20km±8km, MW3.5, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.60**	**33**	*eP*	Pb	02 15 16.9	-0.1
GRZA				*eS*	Sg	02 15 26.5	+1.2
INDI	**Punta indio, G**	**0.65**	**45**	*eP*	Pg	02 15 18.0	-0.1
GUAI	**GUAI**	**0.97**	**27**	*i P*	Pb	02 15 22.2	-1.1
GUAI				*i S*	Sb	02 15 36.0	+0.3
LAFE	**Finca La Fe, P**	**1.11**	**69**	*eP*	Pn	02 15 24.5	-1.2
PLVR	**Palo Verde**	**1.12**	**33**	*eP*	Pn	02 15 23.4	-2.4
JTS	**Las Juntas de**	**1.33**	**48**	*eP*	Pn	02 15 28.1	-0.5
CUI	**Cuipilapa**	**1.48**	**32**	*eP*	Pn	02 15 29.0	-1.7
CASO	**Castillo**	**1.59**	**50**	*i P*	Pn	02 15 32.9	+0.7
ARE1	**Arenal 1**	**1.62**	**49**	*eP*	Pb	02 15 33.5	-0.8
ARE1				*eS*	Sb	02 15 55.3	+1.0
CEDE	**Laguna Cedeo**	**1.64**	**49**	*eP*	Pn	02 15 32.9	-0.1
LCR2	**La Lucha 2**	**1.96**	**80**	*eP*	Pn	02 15 37.3	-0.2
COVE	**Coope Vega, Sa**	**2.02**	**50**	*eP*	Pn	02 15 39.1	+1.0
RIMA	**Rio Macho**	**2.10**	**80**	*eP*	Pn	02 15 39.5	0.0
CDM	**Cerro de Muert**	**2.18**	**86**	*eP*	Pn	02 15 40.6	0.0
PEZE	**Perez Zeledon,**	**2.26**	**90**	*eP*	Pn	02 15 41.6	+0.1
RIOS	**Rincon, Osa**	**2.52**	**106**	*eP*	Pn	02 15 45.6	+0.7
DRK0	**Durika**	**2.69**	**93**	*eP*	Pn	02 15 48.1	+0.6
LPLA	**Las Palmas La**	**2.94**	**97**	*eP*	Pn	02 15 51.8	+0.9

*IDC **11** 02:24:16.4±6.3, 29°.19S×178°.17W, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.4/17, mbtmp3.3/2, Error ellipse: s-maj=367.1km s-min=86.1km az=165.0*

**ISC

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.94**	**313**	*e*P	Pn	03 04 25.8	-0.7
MKZ	**Mys Kozlova**	**2.13**	**262**	*e*P	Pn	03 04 31.9	+2.9
MKZ				*e*S	Sn	03 04 58.1	+4.0
SMKR	**Semkarok**	**2.77**	**309**	*e*P	Pn	03 04 39.4	+1.6
TUMD	**Tumrok D**	**2.86**	**278**	*e*P	Pn	03 04 42.6	+3.5
KZV	**Kizimen**	**2.92**	**276**	*e*P	Pn	03 04 43.1	+3.1
KZV				*e*S	Sn	03 05 17.9	+4.0
TUMR	**Tumrok**	**3.01**	**279**	*e*P	Pn	03 04 45.0	+3.7
KMNR	**Kamenistaya**	**3.04**	**288**	*e*P	Pn	03 04 46.2	+4.5
SPN	**Mys Shipunski**	**3.62**	**242**	*e*P	Pn	03 04 52.4	+2.8
SPN				*e*S	Sn	03 05 33.5	+2.5
NLC	**Nalytchevo**	**3.94**	**246**	*e*S	Sn	03 05 42.7	+3.9
SDLR	**Sedlovina**	**4.14**	**249**	*e*P	Pn	03 04 59.7	+3.0
SDLR				*e*S	Sn	03 05 46.2	+2.3
SMAR	**Somma**	**4.19**	**250**	*e*P	Pn	03 05 01.5	+4.0
SMAR				*e*S	Sn	03 05 49.6	+4.3
KRER	**Koryakskii**	**4.20**	**250**	*e*P	Pn	03 05 02.5	+4.8
UGLR	**Uglovaya**	**4.20**	**249**	*e*P	Pn	03 05 02.4	+4.8
AVH	**Avacha**	**4.22**	**250**	*e*P	Pn	03 05 03.1	+5.2
AVH				*e*S	Sn	03 05 52.0	+6.1
KRX	**Arik**	**4.23**	**251**	*e*P	Pn	03 05 02.4	+4.4
KRX				*e*S	Sn	03 05 51.4	+5.2
KOK	**Koryaka**	**4.27**	**251**	*e*P	Pn	03 05 03.0	+4.5
GNL	**Ganaly**	**4.50**	**257**	*e*P	Pn	03 05 07.8	+6.1
KRMR	**Karymshinskiy**	**4.75**	**247**	*e*P	Pn	03 05 08.8	+3.8
KRMR				*e*S	Sn	03 06 02.6	+3.9
MTVR	**Mutnovka**	**4.90**	**243**	*e*P	Pn	03 05 11.2	+4.0
MTVR				*e*S	Sn	03 06 06.4	+3.8
GRL	**Gorelyy**	**4.92**	**244**	*e*P	Pn	03 05 12.0	+4.6
KDTR	**Khodutka, Kamc**	**5.34**	**238**	*e*P	Pn	03 05 16.2	+3.1
KDTR				*e*S	Sn	03 06 15.0	+1.7

NAO **11** *03:13:29.3±0.6, 66°.67N×13°.51E, ML3.1*
UPP **11** *03:13:29.6±1.9, 66°.61N×13°.31E, h0km, ML2.8, Suspected explosion*
HEL **11** *03:13:29.6±0.4, 66°.63N×13°.16E, h10km, ML3.1, ML2.8(UPP), Confirmed Earthquake*
IDC **11** *03:13:30.9±1.1, 66°.62N×13°.72E, h0km, mb3.6/2, mb1 3.5/7, mb1mx3.2/41, mbtmp3.5/7, ML2.6/5, Error ellipse: s-maj=17.4km s-min=7.6km az=112.0*
BER **11** *03:13:30.3±0.9, 66°.65N×13°.43E, h5km±4km, ML2.6, ML2.8(UPP), Confirmed Earthquake*
DNK **11** *03:13:31.5±2.8, 66°.75N×13°.17E, h15km±34km, ML2.5(BER), Probable volcanic*
IEPN **11** *03:13:32.0, 66°.72N×13°.58E, h10km*
ISC 11 03:13:29.5±0.8, 66°.68N±0°.02×13°.40E±0°.02, h11km±5km, n135, σ1°.96/195, 6C-8D, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBB15	**Halsa Church**	**0.10**	**46**	ASPG		03 13 31.7	
	comp=Z,143nm,0.3s						
NBB15				⇑*e*P	**Pg**	**03 13 32.1**	**0.0**
NBB15				ASSG		03 13 33.2	
	comp=Z,487nm,0.3s						
NBB15				ATPG		03 13 33.4	
	comp=Z,636nm,0.3s						
NBB15				*e*S	**Sg**	**03 13 33.6**	**-0.4**
NBB15				IAML		03 13 33.8	
	comp=Z,3μm,0.1s						
NBB15				ATSG		03 13 34.1	
	comp=Z,2μm,0.3s						
KONS	**Konsvik**	**0.21**	**212**	Pg	**Pg**	**03 13 34.0**	**0.0**
KONS				Lg	Lg	03 13 36.9	
KONS	**Konsvik**	**0.21**	**212**	*i* P	**Pg**	**03 13 33.8**	**-0.1**
KONS				*e*S	**Sg**	**03 13 36.7**	**-0.3**
KONS				IAML		03 13 37.8	
	comp=Z,1μm,0.3s						
NBB40	**Tonnes**	**0.23**	**224**	ASPG		03 13 33.8	
	comp=Z,60nm,0.3s						
NBB40				⇑*i*P	**Pg**	**03 13 34.2**	**0.0**
NBB40				ATPG		03 13 34.8	
	comp=Z,186nm,0.3s						
NBB40				ASSG		03 13 36.8	
	comp=Z,387nm,0.3s						
NBB40				*e*S	**Sg**	**03 13 37.2**	**-0.2**
NBB40				ATSG		03 13 37.9	
	comp=Z,1μm,0.3s						
NBB40				IAML		03 13 39.3	
	comp=Z,1μm,0.3s						
NBB17	**Glomfjord BYr**	**0.26**	**57**	ASPG		03 13 34.6	
	comp=Z,40nm,0.3s						
NBB17				⇓*i*P	**Pg**	**03 13 35.0**	**+0.3**
NBB17	**Glomfjord BYr**	**0.26**	**57**	ATPG		03 13 36.6	
	comp=Z,149nm,0.4s						
NBB17	**Glomfjord BYr**	**0.26**	**57**	ASSG		03 13 38.4	
	comp=Z,462nm,0.3s						
NBB17				*e*S	**Sg**	**03 13 38.8**	**+0.4**
NBB17				IAML		03 13 39.3	
	comp=Z,2μm,0.2s						
NBB17				ATSG		03 13 39.6	
	comp=Z,2μm,0.3s						
NBB30	**Finnes**	**0.32**	**24**	ASPG		03 13 36.0	
	comp=Z,300nm,0.3s						
NBB30				⇓*i*P	**Pg**	**03 13 36.4**	**+0.4**
NBB30				ATPG		03 13 38.1	
	comp=Z,94nm,0.4s						
NBB30				ASSG		03 13 40.8	
	comp=Z,150nm,0.3s						
NBB30				*e*S	**Sg**	**03 13 41.2**	**+0.9**
NBB30				IAML		03 13 41.7	
	comp=Z,645nm,0.3s						
NBB30				ATSG		03 13 41.9	
	comp=Z,443nm,0.3s						
NBB14	**Nordeng Farm**	**0.38**	**185**	ASPG		03 13 36.2	
	comp=Z,19nm,0.3s						
NBB14	**Nordeng Farm**	**0.38**	**185**	⇑*e*P	**Pg**	**03 13 36.6**	**-0.3**
NBB14				ATPG		03 13 37.1	
	comp=Z,60nm,0.3s						
NBB14	**Nordeng Farm**	**0.38**	**185**	ASSG		03 13 41.1	
	comp=Z,60nm,0.3s						
NBB14				*e*S	**Sg**	**03 13 41.5**	**-0.4**
NBB14				IAML		03 13 42.0	
	comp=Z,1μm,0.2s						
NBB14				ATSG		03 13 42.4	
	comp=Z,182nm,0.4s						
STOK	**Stokkvaagen**	**0.38**	**204**	Pg	**Pg**	**03 13 36.9**	**-0.1**
STOK				Lg	Lg	03 13 41.9	
STK	**Stokkvaagen**	**0.38**	**204**	*e*P	**Pg**	**03 13 41.9**	**-0.1**
STOK				*e*S	**Sg**	**03 13 41.9**	**0.0**
NBB05	**Inndyr**	**0.44**	**34**	ASPG		03 13 38.0	
	comp=Z,13nm,0.3s						
NBB05				⇑*e*P	**Pg**	**03 13 38.4**	**+0.4**
NBB05				ATPG		03 13 39.7	
	comp=Z,48nm,0.3s						
NBB05	**Inndyr**	**0.44**	**34**	ASSG		03 13 44.2	
	comp=Z,175nm,0.3s						
NBB05				*e*S	**Sg**	**03 13 44.6**	**+0.8**
NBB05	**Inndyr**	**0.44**	**34**	IAML		03 13 45.4	
	comp=Z,915nm,0.3s						
NBB05	**Inndyr**	**0.44**	**34**	ATSG		03 13 45.9	
	comp=Z,651nm,0.3s						
MOR8	**Moi Rana**	**0.66**	**140**	Pg	**Pg**	**03 13 41.3**	**-0.9**
MOR8				Lg	Lg	03 13 49.8	
MOR8	**Moi Rana**	**0.66**	**140**	ASPG		03 13 40.9	
	comp=Z,5.0nm,0.3s						
MOR8				⇑*i*P	**Pg**	**03 13 41.3**	**-0.9**
MOR8				ATPG		03 13 42.2	
	comp=Z,16nm,0.3s						
MOR8				ASSG		03 13 50.0	
	comp=Z,25nm,0.3s						
MOR8				*e*S	**Sg**	**03 13 50.4**	**-0.4**
MOR8				IAML		03 13 51.8	
	comp=Z,229nm,0.3s						
MOR8				ATSG		03 13 52.2	
	comp=Z,181nm,0.3s						
NBB28	**Valnes**	**0.66**	**38**	*e*P	**Pg**	**03 13 42.4**	**+0.1**
NBB28	**Valnes**	**0.66**	**38**	*e*S	**Sb**	**03 13 52.1**	**-0.1**
NBB28				IAML		03 13 52.7	
	comp=Z,323nm,0.3s						
NBB03	**Karbol**	**0.75**	**55**	ASPG		03 13 43.2	
	comp=Z,7.6nm,0.3s						
NBB03				⇓*e*P	**Pg**	**03 13 43.6**	**-0.4**
NBB03	**Karbol**	**0.75**	**55**	ATPG		03 13 45.1	
	comp=Z,29nm,0.3s						
NBB03	**Karbol**	**0.75**	**55**	ASSG		03 13 53.1	
	comp=Z,65nm,0.3s						
NBB03				*e*S	**Sg**	**03 13 53.5**	**-0.3**
NBB03				ATSG		03 13 54.7	
	comp=Z,271nm,0.3s						
NBB03				IAML		03 13 55.1	
	comp=Z,394nm,0.4s						
NBB29	**Rokland skole**	**0.82**	**67**	ASPG		03 13 45.3	
	comp=Z,3.7nm,0.3s						
NBB29				*e*P	**Pg**	**03 13 45.7**	**+0.4**
NBB29				ATPG		03 13 46.4	
	comp=Z,15nm,0.3s						
NBB29	**Rokland skole**	**0.82**	**67**	ASSG		03 13 56.6	
	comp=Z,207nm,0.3s						
NBB29				*e*S	**Sb**	**03 13 57.0**	**+0.2**
NBB29				ATSG		03 13 58.6	
	comp=Z,737nm,0.3s						
NBB29				IAML		03 14 08.4	
	comp=Z,1μm,0.2s						
NBB08	**Skaug oppvekst**	**0.86**	**34**	ASPG		03 13 45.5	
	comp=Z,17nm,0.3s						
NBB08				⇑*i*P	**Pg**	**03 13 45.9**	**-0.1**
NBB08	**Skaug oppvekst**	**0.86**	**34**	ATPG		03 13 47.4	
	comp=Z,64nm,0.3s						
NBB08	**Skaug oppvekst**	**0.86**	**34**	ASSG		03 13 56.6	
	comp=Z,93nm,0.2s						
NBB08				*e*S	**Sg**	**03 13 57.0**	**-0.3**
NBB08				ATSG		03 13 58.2	
	comp=Z,270nm,0.2s						
NBB08				IAML		03 14 03.3	
	comp=Z,324nm,0.3s						
N2RO	**R_st**	**0.98**	**330**	⇓*e*P	**Pg**	**03 13 48.1**	**-0.2**
N2RO				*e*S	**Sb**	**03 14 02.0**	**+0.7**
N2RO				IAML		03 14 03.9	
	comp=Z,108nm,0.6s						
FAUS	**Fauske**	**1.02**	**45**	⇓*i*P	**Pg**	**03 13 48.3**	**-0.8**
FAUS				*e*S	**Sg**	**03 14 01.3**	**-1.1**
FAUS				IAML		03 14 04.9	
	comp=Z,145nm,0.2s						
N2VA	**Vr_y**	**1.03**	**345**	⇓*e*P	**Pb**	**03 13 48.9**	**-0.3**
N2VA				*e*S	**Sb**	**03 14 03.6**	**+0.9**
N2VA				IAML		03 14 07.8	
	comp=Z,53nm,0.2s						
N2ST	**Straumen**	**1.09**	**51**	*e*P	**Pb**	**03 13 49.4**	**-0.9**
N2ST				*e*S	**Sb**	**03 14 04.0**	**-0.5**
N2ST				IAML		03 14 07.2	
	comp=Z,128nm,0.3s						
N2TV	**TYrnvik**	**1.12**	**36**	*e*P	**Pb**	**03 13 50.3**	**-0.4**
N2TV				*e*S	**Sn**	**03 14 06.4**	**+0.1**
N2TV				IAML		03 14 12.8	
	comp=Z,202nm,0.3s						
N2SV	**S_rvYgen**	**1.23**	**353**	*e*P	**Pn**	**03 13 51.7**	**-0.8**
N2SV				*e*S	**Sb**	**03 14 08.5**	**0.0**
N2SV				IAML		03 14 10.9	
	comp=Z,104nm,0.3s						
N2NF	**Nordfold**	**1.30**	**32**	⇓*e*P	**Pn**	**03 13 53.5**	**+0.1**
N2NF				*e*S	**Sg**	**03 14 11.4**	**+0.2**
STEI	**Steigen**	**1.45**	**29**	Pg	**Pb**	**03 13 56.3**	**-0.1**
STEI				Lg	Lg	03 14 15.9	
STEI	**Steigen**	**1.45**	**29**	⇓*e*P	**Pb**	**03 13 56.2**	**-0.1**
STEI				*e*Sg	**Sg**	**03 14 17.1**	**+1.2**
STEI				IAML		03 14 19.8	
	comp=Z,97nm,0.4s						
STEI	**Steigen**	**1.45**	**29**	*e*P	**Pn**	**03 13 56.1**	**+0.6**
STEI				*e*S	**Sg**	**03 14 16.5**	**+0.6**
LOF	**Lofoten**	**1.46**	**2**	Pg	**Pn**	**03 13 54.8**	**-0.9**
LOF				Lg	Lg	03 14 13.6	
LOF	**Lofoten**	**1.46**	**2**	*e*P	**Pn**	**03 13 54.9**	**-0.9**
LOF				*e*S	**Sn**	**03 14 13.2**	**-1.6**
LOF				IAML		03 14 19.3	
	comp=Z,129nm,0.3s						
N2IH	**Innhavet**	**1.62**	**36**	*e*Pg	**Pb**	**03 13 59.6**	**+0.2**
N2IH				*e*Sg	**Sg**	**03 14 22.9**	**+1.3**
N2IH				IAML		03 14 26.4	
	comp=Z,164nm,0.4s						
N2HS	**Hamsund**	**1.65**	**29**	*e*P	**Pb**	**03 13 59.5**	**-0.3**
N2HS				*e*S	**Sg**	**03 14 23.3**	**+0.9**
N2HS				IAML		03 14 28.0	
	comp=Z,112nm,0.1s						
N2DI	**Digermulen**	**1.75**	**20**	*e*P	**Pn**	**03 14 00.9**	**+1.2**
N2DI				*e*S	**Sg**	**03 14 25.4**	**-0.3**
N2DI				IAML		03 14 27.6	
	comp=Z,62nm,0.5s						
SALU	**Saltoluokta**	**2.12**	**68**	S	**Sb**	**03 14 35.7**	**+1.5**
SALU	**Saltoluokta**	**2.12**	**68**	S	**Sb**	**03 14 35.7**	**+1.5**
SALU	**Saltoluokta**	**2.12**	**68**	Sg	**Sb**	**03 14 35.7**	**+1.5**
SALU	**Saltoluokta**	**2.12**	**68**	*e*S	**Sb**	**03 14 35.7**	**+1.5**
N2SO	**Sortland**	**2.19**	**20**	*e*P	**Pn**	**03 14 07.2**	**+1.6**
N2SO				*e*S	**Sn**	**03 14 34.3**	**+1.7**
N2SO				IAML		03 14 45.1	
	comp=Z,36nm,0.3s						
NSS	**Namsos**	**2.24**	**196**	Pn	**Pb**	**03 14 08.9**	**-0.9**
NSS				Sn	**Sb**	**03 14 37.5**	**+0.1**
NSS	**Namsos**	**2.24**	**196**	*e*Pg	**Pb**	**03 14 09.1**	**-0.7**
NSS				*e*Sg	**Sb**	**03 14 37.8**	**+0.3**
NSS				IAML		03 14 42.8	
	comp=Z,74nm,0.3s						
N2HA	**Harstad**	**2.43**	**28**	*e*P	**Pn**	**03 14 11.2**	**+2.1**
N2HA				*e*S	**Sb**	**03 14 43.9**	**+0.8**
N2HA				IAML		03 14 51.5	
	comp=Z,58nm,0.3s						
NIKU	**Nikkaluokta**	**2.49**	**59**	P	**Pn**	**03 14 11.6**	**+1.7**
NIKU	**Nikkaluokta**	**2.49**	**59**	P	**Pn**	**03 14 11.6**	**+1.7**
NIKU	**Nikkaluokta**	**2.49**	**59**	P	**Pn**	**03 14 11.6**	**+1.7**
NIKU	**Nikkaluokta**	**2.49**	**59**	*e*P	**Pn**	**03 14 11.6**	**+1.7**
RATU	**Laukkuluspa**	**2.67**	**62**	P	**Pb**	**03 14 15.1**	**-2.0**
RATU	**Laukkuluspa**	**2.67**	**62**	P	**Pb**	**03 14 15.1**	**-2.0**
RATU	**Laukkuluspa**	**2.67**	**62**	P	**Pb**	**03 14 15.1**	**-2.0**
RATU	**Laukkuluspa**	**2.67**	**62**	*e*P	**Pb**	**03 14 15.1**	**-2.0**
DUNU	**Dundret**	**2.86**	**78**	P	**Pn**	**03 14 17.2**	**+2.3**
DUNU				S	**Sn**	**03 14 52.6**	**+3.3**
DUNU	**Dundret**	**2.86**	**78**	P	**Pn**	**03 14 17.2**	**+2.3**
DUNU				S	**Sn**	**03 14 52.6**	**+3.3**
DUNU	**Dundret**	**2.86**	**78**	P	**Pn**	**03 14 17.2**	**+2.3**
DUNU				S	**Sn**	**03 14 52.6**	**+3.3**
DUNU	**Dundret**	**2.86**	**78**	*e*P	**Pn**	**03 14 17.2**	**+2.3**
DUNU				*e*S	**Sn**	**03 14 52.6**	**+3.3**
KUA	**Kurravaara**	**2.98**	**61**	P	**Pn**	**03 14 18.9**	**+2.4**
KUA				S	**Sn**	**03 14 55.4**	**+3.2**
KUA	**Kurravaara**	**2.98**	**61**	P	**Pn**	**03 14 18.9**	**+2.4**
KUA				S	**Sn**	**03 14 55.4**	**+3.2**
KUA	**Kurravaara**	**2.98**	**61**	*e*P	**Pn**	**03 14 18.9**	**+2.4**
KUA				*e*S	**Sn**	**03 14 55.4**	**+3.2**
LILU	**Lilltraesk**	**2.98**	**115**	P	**Pn**	**03 14 18.4**	**+1.8**
LILU	**Lilltraesk**	**2.98**	**115**	P	**Pn**	**03 14 18.4**	**+1.8**
LILU	**Lilltraesk**	**2.98**	**115**	P	**Pn**	**03 14 18.4**	**+1.8**
LILU	**Lilltraesk**	**2.98**	**115**	*e*P	**Pn**	**03 14 18.4**	**+1.8**
HARU	**Harads**	**3.09**	**96**	P	**Pn**	**03 14 19.5**	**+1.4**
HARU				S	**Sn**	**03 14 57.7**	**+2.8**
HARU	**Harads**	**3.09**	**96**	P	**Pn**	**03 14 19.5**	**+1.4**
HARU				S	**Sn**	**03 14 57.7**	**+2.8**
HARU	**Harads**	**3.09**	**96**	P	**Pn**	**03 14 19.5**	**+1.4**
HARU				S	**Sn**	**03 14 57.7**	**+2.8**
HARU	**Harads**	**3.09**	**96**	*e*P	**Pn**	**03 14 19.5**	**+1.4**
HARU				*e*S	**Sn**	**03 14 57.7**	**+2.8**
NOD	**Norderasen**	**3.31**	**169**	*e*P	**Pn**	**03 14 22.1**	**+1.0**
NOD				*e*Sg	**Sb**	**03 15 10.8**	**+2.6**
MASU	**Masugnsbyn**	**3.45**	**73**	P	**Pn**	**03 14 25.7**	**+2.6**
MASU	**Masugnsbyn**	**3.45**	**73**	P	**Pn**	**03 14 25.7**	**+2.6**
MASU	**Masugnsbyn**	**3.45**	**73**	P	**Pn**	**03 14 25.7**	**+2.6**
MASU	**Masugnsbyn**	**3.45**	**73**	*e*P	**Pn**	**03 14 25.7**	**+2.6**
LANU	**Lannavaara**	**3.59**	**64**	P	**Pn**	**03 14 28.0**	**+3.0**
LANU	**Lannavaara**	**3.59**	**64**	P	**Pn**	**03 14 28.0**	**+3.0**
LANU	**Lannavaara**	**3.59**	**64**	P	**Pn**	**03 14 28.0**	**+3.0**
LANU	**Lannavaara**	**3.59**	**64**	*e*P	**Pn**	**03 14 27.7**	**+2.7**
LANU				*e*SG	**Sg**	**03 15 22.6**	**-2.1**
KIF	**Kilpisjarvi**	**3.65**	**47**	*e*P	**Pn**	**03 14 24.6**	**-1.1**
KIF	**Kilpisjarvi**	**3.65**	**47**	*e*P	**Pn**	**03 14 27.5**	**+1.8**
PAJU	**Pajala**	**3.85**	**80**	P	**Pn**	**03 14 30.2**	**+1.7**
PAJU	**Pajala**	**3.85**	**80**	P	**Pn**	**03 14 30.2**	**+1.7**
PAJU	**Pajala**	**3.85**	**80**	P	**Pn**	**03 14 30.2**	**+1.7**
PAJU	**Pajala**	**3.85**	**80**	*e*P	**Pn**	**03 14 30.3**	**+1.7**
PAJU				*e*S	**Sn**	**03 15 16.1**	**+2.4**
JETT	**Jettan, Norway**	**3.90**	**39**	Pn	**Pn**	**03 14 31.0**	**+1.7**
JETT				Sg	**Sg**	**03 15 31.7**	**-2.9**
BURU	**Burvik**	**3.92**	**119**	*e*P	**Pn**	**03 14 31.1**	**+1.7**
KALU	**Kalix**	**4.11**	**97**	*e*P	**Pn**	**03 14 32.8**	**+0.8**
KALU				*e*S	**Sn**	**03 15 20.4**	**+0.5**
UMAU	**Umeaa**	**4.15**	**129**	*e*P	**Pn**	**03 14 34.2**	**+1.6**
UMAU				*e*S	**Sn**	**03 15 21.0**	**+0.1**
HEF	**Hetta**	**4.30**	**62**	*e*P	**Pn**	**03 14 35.8**	**+1.0**
HEF	**Hetta**	**4.30**	**62**	*e*P	**Pn**	**03 14 36.8**	**+2.1**
HEF				*e*S	**Sn**	**03 15 25.3**	**+0.5**
HEF	**Hetta**	**4.30**	**62**	*e*P	**Pn**	**03 14 36.4**	**+1.7**
HEF				*e*S	**Sn**	**03 15 26.3**	**+1.5**
HEF				MSN		03 15 29.9	
	comp=Z,6.1nm,0.2s						
HEF				*e*SG	**Sg**	**03 15 43.9**	**-3.5**
KTK1	**Kautokeino**	**4.40**	**53**	*e*P	**Pn**	**03 14 36.9**	**+0.9**
KTK1				IAML		03 15 48.4	
	comp=Z,9.9nm,0.6s						
KTK1	**Kautokeino**	**4.40**	**53**	*e*P	**Pn**	**03 14 37.1**	**+1.1**
KTK1				*e*S	**Sn**	**03 15 28.7**	**+1.5**
KTK1				*e*SG	**Sg**	**03 15 47.5**	**-3.0**
TOF	**Tornio**	**4.43**	**93**	*e*P	**Pn**	**03 14 37.5**	**+0.9**
TOF				*e*S	**Sn**	**03 15 28.9**	**+0.9**
TOF				MSN		03 15 30.8	
	comp=Z,12nm,0.2s						
HEMU	**Hemsoen**	**4.48**	**152**	*e*P	**Pn**	**03 14 38.7**	**+1.5**
OBF0	**Syolatti, Pyha**	**5.00**	**111**	*e*P	**Pn**	**03 14 45.0**	**+0.7**
OBF0				*e*S	**Sn**	**03 15 40.9**	**-1.0**
OBF0				MSN		03 15 48.7	
	comp=Z,10nm,0.2s						
AKN	**Aaknes**	**5.30**	**215**	Pn	**Pn**	**03 14 49.8**	**+1.3**
AKN				Sn	**Sn**	**03 15 51.2**	**+1.8**
AKN	**Aaknes**	**5.30**	**215**	Pn	**Pn**	**03 14 49.8**	**+1.3**
AKN				Sn	**Sn**	**03 15 51.2**	**+1.8**
ARCES	**ARCESS Array B**	**5.36**	**52**	Pn	**Pn**	**03 14 48.9**	**-0.3**
	baz=242,slow=13,SNR=25						
ARCES				Sn	**Sn**	**03 15 50.6**	**-0.2**
	baz=239,slow=20,SNR=8.5						
ARCES				Lg	Lg	03 16 12.5	
	baz=239,slow=26,SNR=7.9						
ARA0	**ARCESS Array S**	**5.36**	**52**	Pn	**Pn**	**03 14 49.4**	**+0.2**
	baz=235,slow=14						
ARA0				Sn	**Sn**	**03 15 49.9**	**-0.9**
	baz=235,slow=22						
ARA0				Lg	Lg	03 16 13.0	
	baz=243,slow=28						
ARA0	**ARCESS Array S**	**5.36**	**52**	Pn	**Pn**	**03 14 49.4**	**+0.2**
	baz=235,slow=14						
ARA0				Sn	**Sn**	**03 15 49.9**	**-0.9**
	baz=235,slow=22						
NB2	**NORSAR Subarra**	**5.74**	**191**	Pn	**Pn**	**03 14 56.4**	**+1.8**
	baz=7.9,slow=14						
NB2				Lg	Lg	03 16 24.4	
	baz=8.9,slow=37						
NB2	**NORSAR Subarra**	**5.74**	**191**	Pn	**Pn**	**03 14 56.4**	**+1.8**
	baz=7.9,slow=14						
NB2				Sg	**Sb**	**03 16 24.4**	**+6.1**
	baz=8.9,slow=37						
NOA	**NORSAR Array B**	**5.74**	**191**	Pn	**Pn**	**03 14 55.9**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=6.5,slow=11,SNR=7.6						
NOA				Sn	**Sn**	**03 16 01.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=45,slow=22,SNR=4.2						
NOA				Lg	Lg	03 16 24.4	
	comp=Z,0.3nm,0.3s,baz=72,slow=14,SNR=5.7						
KEV	**Kevo**	**5.93**	**52**	*e*P	**Pn**	**03 14 57.2**	**+0.2**
NRA0	**NORESS Array S**	**6.02**	**189**	Pn	**Pn**	**03 14 59.9**	**+1.5**
	baz=4.3,slow=14						
NRA0				Sn	**Sn**	**03 16 07.2**	**-0.1**
	baz=10,slow=22						
NRA0				Lg	Lg	03 16 35.0	
	baz=7.2,slow=28						
NRA0	**NORESS Array S**	**6.02**	**189**	Pn	**Pn**	**03 14 59.9**	**+1.5**
	baz=4.3,slow=14						
NRA0				Sg	**Sg**	**03 16 35.0**	**-7.5**
	baz=7.2,slow=28						
HFS	**Hagfors**	**6.57**	**179**	Pn	**Pn**	**03 15 07.1**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=6.3,slow=12,SNR=24						
HFS				Sn	**Sn**	**03 16 20.9**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=1.5,slow=22,SNR=3.0						
HFS				Lg	Lg	03 16 53.0	
	comp=Z,2.7nm,0.3s,baz=358,slow=24,SNR=3.6						
HFS	**Hagfors**	**6.57**	**179**	Pn	**Pn**	**03 15 06.9**	**+1.0**
	baz=5.5,slow=12						
HFS				Lg	Lg	03 16 54.2	
	baz=358,slow=28						
HFS	**Hagfors**	**6.57**	**179**	Pn	**Pn**	**03 15 06.9**	**+1.0**
	baz=5.5,slow=12						
HFS				Sg	**Sg**	**03 16 54.2**	**-5.9**
	baz=358,slow=28						
FIA0	**FINESS Array S**	**7.63**	**127**	Pn	**Pn**	**03 15 20.7**	**+0.3**
	baz=326,slow=12						
FIA0				Lg	Lg	03 17 24.8	
	baz=327,slow=37						
FIA0	**FINESS Array S**	**7.63**	**127**	Pn	**Pn**	**03 15 20.7**	**+0.3**
	baz=326,slow=12						
FIA0				Sg	Sg	03 17 24.8	-9.4
	baz=327,slow=37						
FINES	**FINESS Array B**	**7.63**	**127**	Pn	**Pn**	**03 15 20.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=321,slow=13,SNR=29						
FINES				Sn	**Sn**	**03 16 45.7**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=325,slow=23,SNR=12						
FINES				Lg	Lg	03 17 24.6	
	comp=Z,2.4nm,0.3s,baz=322,slow=27,SNR=9.9						
APA0	**Apatity Array**	**7.68**	**74**	Pn	**Pn**	**03 15 20.7**	**-0.3**
	baz=264,slow=12						
APA0				Sn	**Sn**	**03 16 43.5**	**-4.3**
	baz=267,slow=22						
APA0				Lg	Lg	03 17 26.8	
	baz=286,slow=18						
APA0	**Apatity Array**	**7.68**	**74**	Pn	**Pn**	**03 15 20.7**	**-0.3**
	baz=264,slow=12						
APA0				Sn	**Sn**	**03 16 43.5**	**-4.3**
	baz=267,slow=22						
APA0				Sg	Sg	03 17 26.8	-8.7
	baz=286,slow=18						
**

RCC				IAML			03 29 03.4	
	comp=N,36nm,0.2s							
LMGC	**Las Mercedes**	**3.45**	**284**	*e*P		**Pn**	**03 28 45.5**	**-0.7**
LMGC				*e*S		**Sn**	**03 29 24.5**	**-2.4**
LMGC				IAML			03 29 34.3	
	comp=N,4.3nm,0.4s							
LMGC				IAML			03 29 35.6	
	comp=E,3.7nm,0.7s							
CCCC	**Cccc**	**4.50**	**296**	*e*P		Pn	03 28 57.6	-2.9
CCCC				*e*S		Sn	03 29 44.3	-8.4
CCCC				IAML			03 29 46.3	
	comp=N,1.0nm,0.4s							
CCCC				IAML			03 29 48.2	
	comp=E,1.0nm,0.5s							

IPEC ***11*** *03:28:47.4±0.1,50°.25N×19°.00E, h0km, ML1.9/4, Error ellipse: s-maj=2.5km s-min=0.7km az=161.0*
IDC ***11*** *03:28:47.4±1.7, 49°.95N×19°.19E, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.1/41, mbtmp3.5/5, ML2.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.1/44, Error ellipse: s-maj=28.6km s-min=8.2km az=141.0*
PRU ***11*** *03:28:48.6±0.0,50°.21N×18°.93E, h0km*
ISC 11 03:28:46.9±0.8,**50°.22N**±0°.04×**19°.04E**±0°.04,**h0**km,**n33**, σ0**89**/55,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.69**	**236**	*e*SG		**Sg**	**03 29 08.2**	**-1.0**
	comp=Z,38nm,0.7s							
MORC	**Moravsky Berou**	**1.06**	**246**	*e*Pg		**Pg**	**03 29 07.6**	**+0.3**
MORC				*e*SG		**Sg**	**03 29 20.4**	**-0.7**
MORC	**Moravsky Berou**	**1.06**	**246**	*e*Pg		**Pg**	**03 29 07.6**	**+0.3**
	baz=63							
MORC				*e*Sg		**Sg**	**03 29 20.3**	**-0.8**
	22nm,0.2s,baz=63							
LANS	**Liptovska Anna**	**1.11**	**165**	*e*PG		**Pb**	**03 29 09.2**	**+0.2**
LANS				*e*SG		**Sb**	**03 29 24.4**	**+0.4**
LANS				eLg		Lg	03 29 30.7	
KRLC	**Kraliky**	**1.46**	**265**	*e*PG		**Pn**	**03 29 14.0**	**-0.6**
KRLC				*e*SG		**Sg**	**03 29 33.0**	**-0.8**
	comp=Z,30nm,0.3s							
JAVC	**Velka Javorina**	**1.63**	**214**	*e*PN		**Pn**	**03 29 17.4**	**+0.5**
JAVC				*e*SG		**Sn**	**03 29 38.8**	**+0.1**
JAVC	**Velka Javorina**	**1.63**	**214**	*e*Pn		**Pn**	**03 29 17.4**	**+0.5**
	baz=31							
JAVC				*e*Sg		**Sn**	**03 29 38.8**	**+0.1**
	10nm,0.3s,baz=31							
VYHS	**Vyhne**	**1.74**	**184**	*e*PN		**Pn**	**03 29 18.3**	**0.0**
VYHS				*e*SN		**Sb**	**03 29 42.2**	**+0.2**
DPC	**Dobruska-Polom**	**1.75**	**275**	*e*PG		**Pn**	**03 29 18.8**	**+0.3**
DPC				*e*SG		**Sb**	**03 29 42.4**	**0.0**
	comp=Z,31nm,0.8s							
VRAC	**Vranov**	**1.83**	**241**	Pg		**Pn**	**03 29 20.4**	**+0.8**
	6.5nm,0.3s,baz=59,slow=15,SNR=41							
VRAC				Lg		Lg	03 29 44.5	
	5.3nm,0.3s,baz=145,slow=21,SNR=14							
VRAC	**Vranov**	**1.83**	**241**	*e*PN		**Pn**	**03 29 19.9**	**+0.2**
VRAC				*e*SG		**Sb**	**03 29 44.6**	**-0.2**
VRAC	**Vranov**	**1.83**	**241**	*e*Pn		**Pn**	**03 29 19.9**	**+0.2**
	baz=58							
VRAC				*e*Sg		**Sb**	**03 29 44.6**	**-0.2**
	11nm,0.2s,baz=58							
OSTC	**Ostas**	**1.84**	**282**	*e*PG		**Pn**	**03 29 20.2**	**+0.4**
OSTC				*e*SG		**Sg**	**03 29 46.5**	**+0.6**
	comp=Z,14nm,0.6s							
KSP	**Ksiaz**	**1.86**	**291**	*e*Pb		**Pn**	**03 29 20.6**	**+0.6**
KSP				*e*Pg		**Pg**	**03 29 22.9**	**+0.4**
KSP				*e*Sg		**Sg**	**03 29 47.3**	**+0.7**
CHVC	**Chvalec**	**1.94**	**282**	*e*PG		**Pn**	**03 29 21.5**	**+0.3**
SMOL	**Smolenice**	**2.01**	**212**	*e*PN		**Pn**	**03 29 22.4**	**+0.3**
CRVS	**Cervenica-Dubn**	**2.06**	**129**	*e*PN		**Pb**	**03 29 25.9**	**+0.7**
KRUC	**Moravsky**	**2.08**	**237**	*e*PN		**Pn**	**03 29 23.5**	**+0.5**
KRUC				*e*SG		**Sb**	**03 29 52.0**	**+0.2**
KRUC	**Moravsky**	**2.08**	**237**	*e*Pn		**Pn**	**03 29 23.4**	**+0.5**
	baz=54							
KRUC				*e*Sg		**Sb**	**03 29 51.9**	**+0.2**
	5.0nm,0.3s,baz=54							
MODS	**Modra-Piesok**	**2.18**	**213**	*e*PN		**Pn**	**03 29 25.7**	**+1.2**
PVCC	**Panska Ves**	**2.88**	**278**	*e*SG		**Sg**	**03 30 19.2**	**-0.1**
	comp=Z,13nm,0.6s							
PRU	**Pruhonice**	**2.91**	**267**	*e*PG		**Pb**	**03 29 39.3**	**-0.3**
PRU				*e*SG		**Sb**	**03 30 17.5**	**+1.9**
	comp=Z,7.8nm,0.8s							
BRG	**Berggiesshubel**	**3.31**	**283**	Pg		**Pg**	**03 29 50.0**	**-0.4**
BRG				Sg		**Sg**	**03 30 33.8**	**+0.4**
BRG				Amp			03 30 39.0	
	comp=Z,4.4nm,0.5s							
CKRC	**Cesky Krumlov**	**3.39**	**247**	*e*PN		**Pn**	**03 29 42.0**	**+1.0**
CKRC				*e*PG		**Pb**	**03 29 47.8**	**0.0**
CKRC				*e*SG		**Sg**	**03 30 32.9**	**-2.8**
	comp=Z,10.0nm,0.7s							
KHC	**Kasperske Hory**	**3.71**	**255**	*e*PN		**Pn**	**03 29 45.8**	**+0.3**
KHC				*e*PG		**Pb**	**03 29 52.4**	**-1.0**
KHC				*e*SG		**Sg**	**03 30 45.0**	**-1.1**
	comp=Z,7.0nm,0.5s							
GERES	**GERESS Array B**	**3.74**	**250**	Pn		**Pn**	**03 29 46.5**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=69,slow=14,SNR=9.4							
GERES				Pg		**Pb**	**03 29 56.3**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=67,slow=18,SNR=12							
GERES				Sn		**Sn**	**03 30 31.4**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=75,slow=24,SNR=1.9							
GERES				Lg		Lg	03 30 45.9	
	comp=Z,1.9nm,0.3s,baz=68,slow=29,SNR=12							
CLL	**Collm**	**3.98**	**288**	*e*Pg		**Pg**	**03 30 04.0**	**+0.8**
CLL				*e*Sg		**Sg**	**03 30 54.0**	**-0.8**
	comp=Z,6.0nm,0.6s							
DAVOX	**Davos/Dischmat**	**6.99**	**244**	Lg		Lg	03 32 30.7	
	comp=Z,0.1nm,0.3s,baz=179,slow=23,SNR=2.5							
HFS	**Hagfors**	**10.39**	**345**	Pn		**Pn**	**03 31 16.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=157,slow=15,SNR=6.8							
FINES	**FINESS Array B**	**11.91**	**17**	Pn		**Pn**	**03 31 35.3**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=196,slow=12,SNR=15							
ARCES	**ARCESS Array B**	**19.62**	**7**	Pn		**P**	**03 33 15.6**	**-0.9**
	baz=193,slow=12,SNR=2.6							
KMBO	**Kilima Mbogo**	**52.48**	**157**	LR		LR	04 02 22.6	
	comp=Z,20nm,18.1s,baz=320,slow=38							
SONM	**Songino Array**	**54.10**	**56**	P		**P**	**03 38 14.8**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=322,slow=9.1,SNR=2.8							

IPEC ***11*** *03:55:40.3±0.3,51°.51N×16°.22E, h0km, ML1.9/4, Error ellipse: s-maj=3.2km s-min=1.6km az=63.0*
PRU ***11*** *03:55:41.6±0.0,51°.43N×16°.10E, h0km*
VIE ***11*** *03:55:43.0±0.8,51°.31N×15°.92E, h0km, mb2.2/3, ml2.5/5, Error ellipse: s-maj=7.5km s-min=5.1km az=75.0 79 km WNW of Wroclaw Suspected Mining induced.*
ISC 11 03:55:39.6±0.8,**51°.54N**±0°.03×**16°.13E**±0°.03,**h0**km,**n31**, σ0**80**/62,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.71**	**171**	*i* Pg		**Pg**	**03 55 53.3**	**+0.2**
KSP				*e*Sg		**Sg**	**03 56 01.9**	**-0.4**
CHVC	**Chvalec**	**0.96**	**183**	*e*PG		**Pg**	**03 55 58.0**	**+0.1**
CHVC				*e*SG		**Sg**	**03 56 09.6**	**-0.6**
	comp=Z,29nm,0.4s							
OSTC	**Ostas**	**0.99**	**177**	*e*PG		**Pg**	**03 55 58.7**	**+0.2**
OSTC				*e*SG		**Sg**	**03 56 10.8**	**-0.5**
	comp=Z,29nm,0.4s							
UPC	**Upice**	**1.04**	**184**	*e*PG		**Pg**	**03 55 59.3**	**-0.1**
UPC				*e*SG		**Sg**	**03 56 12.0**	**-0.9**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG		**Pg**	**03 56 02.1**	**-0.4**
DPC				*e*SG		**Sg**	**03 56 16.7**	**-1.4**
	comp=Z,22nm,0.3s							
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG		**Pn**	**03 56 06.5**	**0.0**
PVCC				*e*SG		**Sg**	**03 56 25.0**	**+0.1**
	comp=Z,71nm,0.4s							
KRLC	**Kraliky**	**1.53**	**164**	*e*PG		**Pn**	**03 56 08.3**	**+0.2**
KRLC				*e*SG		**Sg**	**03 56 26.9**	**-1.7**
	comp=Z,22nm,0.5s							
BRG	**Berggiesshubel**	**1.53**	**245**	Pg		**Pg**	**03 56 09.0**	**+0.1**
BRG				Sg		**Sn**	**03 56 29.2**	**+0.5**
BRG				Amp			03 56 30.1	
	comp=Z,27nm,0.4s							
PRU	**Pruhonice**	**1.85**	**213**	*e*PN		**Pn**	**03 56 12.1**	**-0.5**
PRU				*e*PG		**Pb**	**03 56 13.5**	**-0.8**
PRU				*e*SG		**Sn**	**03 56 36.6**	**-0.1**
	comp=Z,18nm,0.4s							
CLL	**Collm**	**1.97**	**264**	*e*Pn		**Pn**	**03 56 14.0**	**-0.2**
CLL				*e*Pg		**Pb**	**03 56 16.0**	**-0.3**
CLL				*i*			03 56 20.0	
CLL				*i* Sg		**Sg**	**03 56 43.4**	**+0.6**
	comp=Z,12nm,0.4s							
MORC	**Moravsky Berou**	**1.98**	**152**	*e*PN		**Pn**	**03 56 14.2**	**-0.2**
MORC				*e*SG		**Sn**	**03 56 40.6**	**+0.5**
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn		**Pn**	**03 56 14.2**	**-0.2**
	baz=335							
MORC				*e*Sg		**Sn**	**03 56 40.5**	**+0.5**
	comp=Z,10nm,0.3s,baz=335							
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*SG		**Sb**	**03 56 46.0**	**-0.2**
VRAC	**Vranov**	**2.26**	**172**	*e*PN		**Pn**	**03 56 18.4**	**+0.3**
VRAC				*e*SG		**Sb**	**03 56 49.6**	**-0.1**
VRAC	**Vranov**	**2.26**	**172**	*e*Pn		**Pn**	**03 56 18.3**	**+0.2**
	baz=354							
VRAC				*e*Sg		**Sb**	**03 56 49.5**	**-0.1**
	comp=Z,7.7nm,0.2s,baz=354							
TREC	**Trest**	**2.29**	**191**	*e*SG		**Sb**	**03 56 50.6**	**+0.1**
KRUC	**Moravsky**	**2.49**	**176**	*e*PN		**Pn**	**03 56 21.8**	**+0.5**
KRUC				*e*SG		**Sb**	**03 56 57.1**	**+0.8**
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn		**Pn**	**03 56 21.8**	**+0.5**
	baz=358							
KRUC				*e*Sg		**Sb**	**03 56 57.0**	**+0.8**
	comp=Z,6.9nm,0.3s,baz=358							
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN		**Pn**	**03 56 24.3**	**+0.4**
NKC				*e*PG		**Pg**	**03 56 30.5**	**-0.3**
NKC				*e*SG		**Sg**	**03 57 05.3**	**-0.1**
	comp=Z,21nm,0.3s							
JAVC	**Velka Javorina**	**2.86**	**159**	*e*SG		**Sb**	**03 57 08.4**	**+1.3**
JAVC	**Velka Javorina**	**2.86**	**159**	*e*Sg		**Sb**	**03 57 08.3**	**+1.2**
	comp=Z,2.4nm,0.3s,baz=341							
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN		**Pn**	**03 56 27.1**	**-0.1**
KHC				*e*PG		**Pb**	**03 56 33.4**	**+1.0**
KHC				*e*SN		**Sn**	**03 57 01.9**	**-1.0**
KHC				*e*SG		**Sg**	**03 57 12.2**	**-0.9**
	comp=Z,7.5nm,0.4s							
CKRC	**Cesky Krumlov**	**2.96**	**204**	*e*PN		**Pn**	**03 56 28.3**	**+0.4**
CKRC				*e*SG		**Sb**	**03 57 11.2**	**+1.2**
	comp=Z,6.5nm,0.4s							
LANS	**Liptovska Anna**	**3.21**	**137**	*e*PG		**Pg**	**03 56 41.8**	**+0.7**
LANS				*e*SG		**Sg**	**03 57 22.0**	**-0.7**
MODS	**Modra-Piesok**	**3.26**	**166**	*e*SG		**Sb**	**03 57 20.6**	**+2.2**
CONA	**Conrad Observa**	**3.62**	**183**	*i* Pn		**Pn**	**03 56 37.7**	**+0.7**
	comp=Z,0.4nm,0.1s							
CONA				*e*Sg		**Sg**	**03 57 33.9**	**-1.9**
	comp=Z,7.3nm,0.4s							
MOA	**Molln**	**3.89**	**199**	*i* Pn		**Pn**	**03 56 41.2**	**+0.7**
	comp=Z,0.9nm,0.2s							
MOA				*e*Sg		**Sg**	**03 57 42.8**	**-1.6**
	comp=Z,4.3nm,0.3s							
ARSA	**Arzberg**	**4.31**	**185**	Sg		**Sg**	**03 57 57.0**	**-1.1**
	comp=Z,2.4nm,0.4s							
LUNU	**Lund**	**4.40**	**340**	*i* P		**Pn**	**03 56 47.7**	**+0.2**
LUNU				*e*S		**Sn**	**03 57 39.2**	**-0.2**
BLEU	**Blekinge**	**4.78**	**358**	*i* P		**Pn**	**03 56 54.0**	**+1.2**
BLEU				*e*S		**Sn**	**03 57 47.8**	**-0.9**
DEL	**Delary**	**5.11**	**346**	*e*		**Pn**	**03 56 56.4**	**-1.0**
	baz=157,slow=12							
DEL				*i* P		**Pn**	**03 56 57.9**	**+0.6**
DEL				*e*S		**Sn**	**03 57 55.7**	**-1.3**
DEL				IAML			03 57 59.1	
	comp=Z,0.6nm,0.3s							

BGR ***11*** *03:59:02.2±0.0,50°.28N×152°.68E, h33km, mb5.3*
DNK ***11*** *03:59:13.4±0.9,50°.48N×153°.86E, h130km±532km, mb4.8*
KRSC ***11*** *03:59:50.8±1.6,51°.72N×153°.70E, h467km±27km, ML5.5*
BJI ***11*** *03:59:51.1±0.0,52°.03N×153°.24E, h427km, mB4.5/43, mb5.0/70*
MOS ***11*** *03:59:52.5±0.8,52°.04N×153°.18E, h439km, mb4.8/105, Error ellipse: s-maj=5.7km s-min=4.0km az=66.7*
IDC ***11*** *03:59:54.2±0.4,52°.12N×153°.04E, h432km±3km, mb4.3/58, mb1 4.4/66, mb1mx4.3/77, mbtmp5.1/66, Error ellipse: s-maj=5.8km s-min=4.6km az=140.0*
NEIC ***11*** *03:59:54.1±1.6,52°.10N±0°.09×153°.1E±0°.1, h436km±5km, mb4.7/394, Error ellipse: s-maj=13.4km s-min=11.4km az=141.0*
ISC 11 03:59:53.5±0.3,**52°.04N**±0°.03×**153°.20E**±0°.03,**h433**km±2km, **h433**km:**pP-P**,**n1093**,σ1**°31**/1163,**mb4.7**/433,**61C-76D**, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.28**	**126**	*e*PN		**P**	**04 00 52.8**	**-1.3**
SKR				*e*S		**S**	**04 01 39.7**	**-3.6**
SKR				pmax		pmax		
	comp=Z,2μm,0.8s							
SKR				smax		smax		
	comp=E,791nm,0.9s							
SKR				smax		smax		
	comp=N,497nm,0.4s							
SKR				MLR		MLR		
	comp=Z,500nm,13.0s							
SKR	**Severo-Kuril's**	**2.28**	**126**	*e*P		**P**	**04 00 53.0**	**-1.1**
SKR				*e*S		**S**	**04 01 41.3**	**-2.0**
PAU	**Pauzhetka**	**2.32**	**103**	PN		**P**	**04 00 53.8**	**-0.5**
PAU				S		**S**	**04 01 43.4**	**-0.4**
PAU	**Pauzhetka**	**2.32**	**103**	*e*P		**P**	**04 00 53.8**	**-0.5**
PAU				*e*S		**S**	**04 01 42.7**	**-1.1**
APC	**Apacha**	**2.58**	**68**	PN		**P**	**04 00 55.1**	**-0.9**
APC				S		**S**	**04 01 44.7**	**-2.2**
APC	**Apacha**	**2.58**	**68**	P		**P**	**04 00 55.3**	**-0.7**
APC				*e*S		**S**	**04 01 45.2**	**-1.7**
PEA0B	**Petropavlovsk-**	**2.95**	**67**	*d* iPN		**P**	**04 00 58.2**	**-0.5**
PEA0B	**Petropavlovsk-**	**2.95**	**67**	P		**P**	**04 00 58.2**	**-0.5**
PETK	**Petropavlovsk-**	**2.95**	**67**	P		**P**	**04 00 58.4**	**-0.3**
	comp=Z,39nm,0.3s,baz=240,slow=4.0,SNR=451							
PETK				S		**S**	**04 01 51.0**	**-0.8**
	baz=98,slow=11,SNR=1.5							
PETK	**Petropavlovsk-**	**2.95**	**67**	P		**P**	**04 00 58.0**	**-0.7**
KDTR	**Khodutka, Kamc**	**3.03**	**93**	PN		**P**	**04 00 57.8**	**-1.5**
KDTR				S		**S**	**04 01 48.4**	**-4.5**
KDTR	**Khodutka, Kamc**	**3.03**	**93**	*e*P		**P**	**04 00 57.8**	**-1.5**
KDTR				*e*S		**S**	**04 01 48.8**	**-4.1**
GRL	**Gorelyy**	**3.04**	**78**	PN		**P**	**04 00 59.5**	**0.0**
GRL				S		**S**	**04 01 54.5**	**+1.2**
GRL	**Gorelyy**	**3.04**	**78**	*e*P		**P**	**04 00 59.7**	**+0.2**
GRL				*e*S		**S**	**04 01 54.2**	**+0.9**
MTVR	**Mutnovka**	**3.10**	**80**	PN		**P**	**04 00 59.5**	**-0.5**
MTVR				S		**S**	**04 01 54.1**	**-0.1**
MTVR	**Mutnovka**	**3.10**	**80**	*e*P		**P**	**04 00 59.6**	**-0.5**
MTVR				*e*S		**S**	**04 01 54.5**	**+0.3**
KRMR	**Karymshinskiy**	**3.12**	**73**	PN		**P**	**04 00 58.7**	**-1.3**
KRMR				S		**S**	**04 01 54.7**	**+0.5**
KRMR	**Karymshinskiy**	**3.12**	**73**	*e*P		**P**	**04 00 59.0**	**-1.0**
KRMR				*e*S		**S**	**04 01 54.3**	**+0.1**
RUS	**Russkaya**	**3.29**	**81**	PN		**P**	**04 01 00.3**	**-1.1**
RUS				S		**S**	**04 01 53.2**	**-3.5**
RUS	**Russkaya**	**3.29**	**81**	*e*P		**P**	**04 01 00.5**	**-0.9**
RUS				*e*S		**S**	**04 01 53.1**	**-3.6**
GNL	**Ganaly**	**3.32**	**58**	PN		**P**	**04 01 01.2**	**-0.5**
GNL				S		**S**	**04 01 55.5**	**-1.8**
GNL	**Ganaly**	**3.32**	**58**	*e*P		**P**	**04 01 01.4**	**-0.3**
GNL				*e*S		**S**	**04 01 58.1**	**+0.8**
PET	**Petropavlovsk**	**3.47**	**71**	κ *i*PN		**P**	**04 01 02.6**	**-0.2**
PET				*e*S		**S**	**04 01 57.0**	**-2.4**
PET				pmax		pmax		
	comp=Z,3μm,1.3s							
PET				pmax		pmax		
	comp=Z,2μm,1.2s							
PET				pmax		pmax		
	comp=Z,800nm,11.8s							
PET				smax		smax		
	comp=N,2μm,1.0s							
PET				smax		smax		
	comp=E,2μm,0.6s							
PET				MLR		MLR		
	comp=Z,400nm,4.0s							
PET				MLR		MLR		
	comp=Z,1μm,3.0s							
PET	**Petropavlovsk**	**3.47**	**71**	*e*P		**P**	**04 01 03.0**	**+0.2**
PET				*e*S		**S**	**04 01 57.7**	**-1.7**
PET	**Petropavlovsk**	**3.47**	**71**	P		**P**	**04 01 02.0**	**-0.9**
DALK	**Dalny**	**3.53**	**72**	PN		**P**	**04 01 02.8**	**-0.5**
DALK				S		**S**	**04 01 57.5**	**-2.7**
DALK	**Dalny**	**3.53**	**72**	*e*P		**P**	**04 01 02.9**	**-0.4**
DALK				*e*S		**S**	**04 01 57.6**	**-2.7**
KOK	**Koryaka**	**3.54**	**67**	PN		**P**	**04 01 03.9**	**+0.4**
KOK				S		**S**	**04 02 00.2**	**-0.4**
KOK	**Koryaka**	**3.54**	**67**	*e*P		**P**	**04 01 03.8**	**+0.3**
KOK				*e*S		**S**	**04 02 00.6**	**0.0**
KRX	**Arik**	**3.57**	**66**	PN		**P**	**04 01 03.6**	**-0.2**
KRX				S		**S**	**04 02 02.0**	**+0.8**
KRX	**Arik**	**3.57**	**66**	*e*P		**P**	**04 01 03.8**	**0.0**
KRX				*e*S		**S**	**04 02 01.4**	**+0.2**
AVH	**Avacha**	**3.59**	**68**	PN		**P**	**04 01 04.2**	**+0.3**
AVH				S		**S**	**04 02 02.5**	**+1.1**
AVH	**Avacha**	**3.59**	**68**	*e*P		**P**	**04 01 04.3**	**+0.3**
AVH				*e*S		**S**	**04 02 02.5**	**+1.1**
KRER	**Koryakskii**	**3.61**	**67**	PN		**P**	**04 01 04.2**	**0.0**
KRER				S		**S**	**04 02 01.6**	**-0.3**
KRER	**Koryakskii**	**3.61**	**67**	*e*P		**P**	**04 01 04.5**	**+0.3**
KRER				*e*S		**S**	**04 02 01.2**	**-0.7**
UGLR	**Uglovaya**	**3.62**	**69**	PN		**P**	**04 01 04.7**	**+0.5**
UGLR				S		**S**	**04 02 02.8**	**+0.9**
UGLR	**Uglovaya**	**3.62**	**69**	*e*P		**P**	**04 01 04.7**	**+0.5**
UGLR				*e*S		**S**	**04 02 01.9**	**0.0**
SMAR	**Somma**	**3.62**	**68**	PN		**P**	**04 01 04.1**	**-0.3**
SMAR				S		**S**	**04 02 00.6**	**-1.6**
SMAR	**Somma**	**3.62**	**68**	*e*P		**P**	**04 01 04.6**	**+0.2**
SMAR				*e*S		**S**	**04 02 01.1**	**-1.1**
SDLR	**Sedlovina**	**3.68**	**68**	PN		**P**	**04 01 04.2**	**-0.5**
SDLR				S		**S**	**04 02 01.0**	**-1.8**
SDLR	**Sedlovina**	**3.68**	**68**	*e*P		**P**	**04 01 05.0**	**+0.3**
SDLR				*e*S		**S**	**04 02 01.5**	**-1.3**
NLC	**Nalytchevo**	**3.91**	**71**	PN		**P**	**04 01 05.8**	**-0.8**
NLC	**Nalytchevo**	**3.91**	**71**	*e*P		**P**	**04 01 06.2**	**-0.4**
NLC				*e*S		**S**	**04 02 02.8**	**-3.5**
KII	**Karymskiy**	**4.27**	**60**	PN		**P**	**04 01 10.3**	**+0.4**
KII				S		**S**	**04 02 12.4**	**+0.1**
KII	**Karymskiy**	**4.27**	**60**	*e*P		**P**	**04 01 10.4**	**+0.5**
KII				*e*S		**S**	**04 02 13.4**	**+1.1**
SPN	**Mys Shipunski**	**4.30**	**73**	PN		**P**	**04 01 08.6**	**-1.6**
SPN				S		**S**	**04 02 06.6**	**-6.1**
SPN	**Mys Shipunski**	**4.30**	**73**	*e*P		**P**	**04 01 08.5**	**-1.6**
SPN				*e*S		**S**	**04 02 06.6**	**-6.1**
ESO	**Esso**	**5.07**	**38**	PN		**P**	**04 01 19.7**	**+1.6**
ESO				S		**S**	**04 02 27.9**	**+1.7**
ESO	**Esso**	**5.07**	**38**	*e*P		**P**	**04 01 19.3**	**+1.8**
KZV	**Kizimen**	**5.23**	**51**	PN		**P**	**04 01 19.9**	**+0.7**
KZV				S		**S**	**04 02 27.5**	**-1.9**
KZV	**Kizimen**	**5.23**	**51**	*e*P		**P**	**04 01 20.4**	**+1.2**
KZV				*e*S		**S**	**04 02 27.2**	**-2.2**
TUMR	**Tumrok**	**5.25**	**49**	PN		**P**	**04 01 20.5**	**+1.0**
TUMR				S		**S**	**04 02 29.3**	**-0.5**
TUMR	**Tumrok**	**5.25**	**49**	*e*P		**P**	**04 01 21.0**	**+1.5**
TUMR				*e*S		**S**	**04 02 29.8**	**0.0**
TUMD	**Tumrok D**	**5.33**	**51**	*e*P		**P**	**04 01 20.7**	**+0.6**
TUMD				*e*S		**S**	**04 02 28.7**	**-2.3**
KMNR	**Kamenistaya**	**5.58**	**45**	PN		**P**	**04 01 24.0**	**+1.3**
KMNR				S		**S**	**04 02 37.0**	**+1.2**
KMNR	**Kamenistaya**	**5.58**	**45**	*e*P		**P**	**04 01 24.0**	**+1.3**
KMNR				*e*S		**S**	**04 02 36.1**	**+0.3**
MKZ	**Mys Kozlova**	**5.70**	**60**	PN		**P**	**04 01 22.4**	**-1.4**
MKZ				S		**S**	**04 02 30.6**	**-7.2**
MKZ	**Mys Kozlova**	**5.70**	**60**	*e*P		**P**	**04 01 22.5**	**-1.4**
MKZ				*e*S		**S**	**04 02 30.2**	**-7.6**
KPT	**Kopyto**	**5.71**	**44**	PN		**P**	**04 01 25.1**	**+1.0**
KPT				S		**S**	**04 02 39.1**	**+0.9**
KPT	**Kopyto**	**5.71**	**44**	*e*P		**P**	**04 01 25.0**	**+1.0**
KPT				*e*S		**S**	**04 02 39.1**	**+0.9**
SRDR	**Sredinnyy**	**5.74**	**39**	PN		**P**	**04 01 25.7**	**+1.4**
SRDR				S		**S**	**04 02 40.8**	**+2.0**
SRDR	**Sredinnyy**	**5.74**	**39**	*e*P		**P**	**04 01 25.3**	**+1.0**
SRDR				*e*S		**S**	**04 02 40.6**	**+1.9**
KIRR	**Kirishev**	**5.75**	**44**	PN		**P**	**04 01 24.8**	**+0.3**
KIRR				S		**S**	**04 02 38.7**	**-0.4**
KIRR	**Kirishev**	**5.75**	**44**	*e*P		**P**	**04 01 24.8**	**+0.3**
KIRR				*e*S		**S**	**04 02 38.7**	**-0.4**
BZMR	**Bezymyannaya**	**5.80**	**45**	PN		**P**	**04 01 25.9**	**+0.8**
BZMR				S		**S**	**04 02 39.8**	**-0.3**
BZMR	**Bezymyannaya**	**5.80**	**45**	*e*P		**P**	**04 01 25.7**	**+0.6**
BZMR				*e*S		**S**	**04 02 39.7**	**-0.3**
BZWR	**Bezymyannyi-We**	**5.83**	**45**	PN		**P**	**04 01 26.3**	**+1.0**
BZWR				S		**S**	**04 02 40.6**	**+0.1**
BZWR	**Bezymyannyi-We**	**5.83**	**45**	*e*P		**P**	**04 01 26.0**	**+0.7**
BZWR				*e*S		**S**	**04 02 40.6**	**+0.1**
BZGR	**Bezymyannyi-Gr**	**5.90**	**46**	PN		**P**	**04 01 26.

YSS	**Yuzh-Sakhalins**	**8.49**	**237**	α *i*	PN	**P**	**04 01 55.6**	**+1.6**
YSS				*e*	S	**S**	**04 03 33.0**	**-0.1**
YSS					pmax	pmax		
	comp=Z,600nm,3.5s							
YSS					pmax	pmax		
	comp=N,400nm,3.3s							
YSS					pmax	pmax		
	comp=E,400nm,3.5s							
YSS					pmax	pmax		
	comp=Z,240nm,0.7s							
YSS					pmax	pmax		
	comp=N,120nm,0.8s							
YSS					pmax	pmax		
	comp=E,130nm,1.1s							
YSS					smax	smax		
	comp=N,130nm,1.3s							
YSS					smax	smax		
	comp=E,1μm,3.5s							
YSS	**Yuzh-Sakhalins**	**8.49**	**237**		P	**P**	**04 01 54.1**	**+0.1**
OSSR	**Ossora**	**9.12**	**34**		PN	**P**	**04 02 01.7**	**+1.1**
OSSR	**Ossora**	**9.12**	**34**	*e*	P	**P**	**04 02 02.0**	**+1.4**
OSSR				*e*	S	**S**	**04 03 46.6**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**9.39**	**214**	*e*	PN	**P**	**04 02 03.2**	**-0.8**
YUK				*i*	S	**S**	**04 03 45.4**	**-6.1**
YUK					pmax	pmax		
	comp=E,294nm,0.4s							
YUK					pmax	pmax		
	comp=Z,665nm,0.4s							
YUK					pmax	pmax		
	comp=N,107nm,0.3s							
YUK					smax	smax		
	comp=N,1μm,1.4s							
YUK					smax	smax		
	comp=E,1μm,1.1s							
GRPR	**Tuman**	**9.46**	**215**	*e*	PN	**P**	**04 02 04.2**	**-0.5**
GRPR				*e*	S	**S**	**04 03 47.2**	**-5.7**
GRPR					pmax	pmax		
	comp=E,256nm,0.4s							
GRPR					pmax	pmax		
	comp=Z,915nm,0.4s							
GRPR					pmax	pmax		
	comp=N,176nm,0.3s							
RUSJ	**Misakicho**	**9.55**	**217** ⇓	*i*	PN	**P**	**04 02 06.9**	**+1.2**
RUSJ				*e*	S	**S**	**04 03 54.8**	**+0.1**
GLVR	**Golovnino**	**9.77**	**215**	*e*	PN	**P**	**04 02 08.1**	**0.0**
GLVR				*i*	S	**S**	**04 03 53.9**	**-5.2**
GLVR					pmax	pmax		
	comp=E,109nm,0.5s							
GLVR					pmax	pmax		
	comp=Z,624nm,0.5s							
GLVR					pmax	pmax		
	comp=N,121nm,0.4s							
GLVR					smax	smax		
	comp=E,3μm,1.8s							
GLVR					smax	smax		
	comp=N,2μm,0.5s							
NMR	**Nemuro--Hokkai**	**10.03**	**213** ⇓	*i*	PN	P	04 02 05.7	-5.2
GRNR	**Gornyy**	**10.56**	**270** ⇑	*i*	PN	**P**	**04 02 18.3**	**+1.6**
GRNR				*e*	S	**S**	**04 04 13.7**	**-1.2**
GRNR					pmax	pmax		
	comp=N,30nm,0.6s							
GRNR					pmax	pmax		
	comp=E,100nm,0.6s							
GRNR					pmax	pmax		
	comp=Z,140nm,0.6s							
GRNR					smax	smax		
	comp=N,10.0nm,0.9s							
GRNR					MLR	MLR		
	comp=E,200nm,13.0s							
GRNR					MLR	MLR		
	comp=Z,190nm,14.0s							
JKA	**Kamikawa-asahi**	**10.63**	**226**		P	**P**	**04 02 18.6**	**+1.1**
ASAJ	**Asahikawa**	**10.63**	**226**		P	**P**	**04 02 19.6**	**+2.1**
	comp=Z,7.7nm,0.3s,baz=70,slow=9.4,SNR=71							
ASAJ					S	**S**	**04 04 17.8**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=326,slow=32,SNR=21							
ASAJ	**Asahikawa**	**10.63**	**226**		PN	**P**	**04 02 18.7**	**+1.2**
SEY	**Seymchan**	**10.93**	**358**		P	**P**	**04 02 21.8**	**+1.3**
	comp=Z,4.0nm,0.3s,baz=174,slow=8.9,SNR=74							
SEY					S	**S**	**04 04 21.0**	**-0.8**
	baz=216,slow=21,SNR=1.1							
TILK	**Tilichiki**	**11.06**	**35**	*e*	P	**P**	**04 02 24.9**	**+3.0**
ERM	**Erimo**	**12.13**	**218**	*c i*	PN	**P**	**04 02 32.5**	**-1.5**
ERM					pmax	pmax		
	comp=Z,354nm,1.0s							
ERM	**Erimo**	**12.13**	**218**		P	**P**	**04 02 33.0**	**-1.0**
JEW	**Eniwo**	**12.15**	**225**		P	**P**	**04 02 32.5**	**-1.7**
KMSK	**Kamenskaya**	**12.57**	**29**		PN	**P**	**04 02 40.2**	**+1.8**
KMSK	**Kamenskaya**	**12.57**	**29**	*e*	P	**P**	**04 02 40.2**	**+1.8**
SMY	**Shemya**	**12.78**	**79**		PN	**P**	**04 02 41.1**	**+0.3**
SMY	**Shemya**	**12.78**	**79**		P	**P**	**04 02 41.1**	**+0.3**
TEY	**Ternei**	**13.02**	**244** ⇑	*i*	PN	**P**	**04 02 45.5**	**+1.9**
TEY				*e*	S	**S**	**04 05 07.2**	**+3.1**
TEY					pmax	pmax		
	comp=N,130nm,0.8s							
TEY					pmax	pmax		
	comp=Z,270nm,0.8s							
TEY					pmax	pmax		
	comp=E,180nm,0.8s							
TEY					smax	smax		
	comp=N,140nm,1.1s							
KLR	**Kul'dur**	**13.89**	**267**		P	**P**	**04 02 54.5**	**+1.6**
	comp=N,2.9nm,0.3s,baz=71,slow=9.7,SNR=110							
KLR					S	**S**	**04 05 23.3**	**+2.0**
	baz=39,slow=14,SNR=6.8							
KLR					PcP	**PcP**	**04 07 41.7**	**+0.4**
	comp=N,0.2nm,0.3s,baz=58,slow=2.0,SNR=2.3							
KLR					ScP	**ScP**	**04 10 33.9**	**+1.0**
	comp=N,0.1nm,0.3s,baz=17,slow=5.6,SNR=4.5							
KLR	**Kul'dur**	**13.89**	**267**	*c i*	P	**P**	**04 02 54.3**	**+1.4**
ZEA	**Zeya**	**15.73**	**286**	*e*	P	**P**	**04 03 12.1**	**-0.4**
ZEA				*e*	S	**S**	**04 05 51.0**	**-6.0**
ZEA					pmax	pmax		
	comp=N,20nm,0.8s							
ZEA					pmax	pmax		
	comp=Z,30nm,1.2s							
ZEA					smax	smax		
	comp=Z,300nm,2.8s							
ZEA					smax	smax		
	comp=N,200nm,2.3s							
ZEA					smax	smax		
	comp=E,900nm,3.0s							
YAK	**Yakutsk**	**16.14**	**317**		P	**P**	**04 03 17.2**	**+0.4**
	comp=E,0.3nm,0.3s,baz=105,slow=2.2,SNR=7.4							
YAK					S	**S**	**04 06 02.7**	**-2.2**
	comp=E,0.3nm,0.3s,baz=328,slow=21,SNR=26							
YAK	**Yakutsk**	**16.14**	**317**	*e*	P	**P**	**04 03 15.3**	**-1.5**
YAK				*e*	S	**S**	**04 06 01.8**	**-3.1**
YAK					pmax	pmax		
	comp=Z,55nm,1.0s							
YAK					pmax	pmax		
	comp=N,17nm,1.3s							
YAK					pmax	pmax		
	comp=E,26nm,1.3s							
YAK					smax	smax		
	comp=E,268nm,1.2s							
YAK					smax	smax		
	comp=N,429nm,1.4s							
YAK	**Yakutsk**	**16.14**	**317**		IAmb	IAmb	04 03 20.0	
	comp=Z,58nm,0.9s							
USA0B	**Ussuriysk Arra**	**16.15**	**249**	*c i*	P	**P**	**04 03 16.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**16.15**	**249**		P	**P**	**04 03 16.1**	**-1.0**
USA0B					IAmb	IAmb	04 03 17.7	
	comp=Z,41nm,0.9s							
USRK	**Ussuriysk Ar.**	**16.15**	**249**		P	**P**	**04 03 16.5**	**-0.6**
	baz=57,slow=9.3,SNR=53							
USRK					S	**S**	**04 06 02.3**	**-3.2**
	baz=141,slow=34,SNR=1.2							
USRK					ScP	**ScP**	**04 10 37.5**	**+0.3**
	baz=153,slow=0.9,SNR=6.1							
USRK	**Ussuriysk Ar.**	**16.15**	**249**		P	**P**	**04 03 15.8**	**-1.3**
USRK	**Ussuriysk Ar.**	**16.15**	**249**		P	**P**	**04 03 15.8**	**-1.3**
AMKA	**Amchitka**	**16.17**	**82**		P	**P**	**04 03 17.4**	**+0.2**
JMM	**Marumori**	**16.64**	**216**		P	**P**	**04 03 22.4**	**0.0**
BILL	**Bilibino**	**17.25**	**17**	*d i*	P	**P**	**04 03 27.8**	**-0.7**
BILL				*i*	S	**S**	**04 06 25.7**	**-0.5**
BILL					pmax	pmax		
	comp=Z,29nm,0.7s							
BILL	**Bilibino**	**17.25**	**17**		P	**P**	**04 03 27.9**	**-0.7**
BILL					IAmb	IAmb	04 03 28.9	
	comp=Z,29nm,0.6s							
MDJ	**Mudanjiang**	**17.31**	**254**		P	**P**	**04 03 28.4**	**-1.1**
MDJ					S	**S**	**04 06 27.2**	**-0.7**
MDJ					pmax	pmax		
	comp=Z,45nm,1.0s							
MDJ	**Mudanjiang**	**17.31**	**254**		P	**P**	**04 03 28.6**	**-0.9**
MDJ					IAmb	IAmb	04 03 31.6	
	comp=Z,30nm,0.7s							
JSD	**Sado**	**17.49**	**223**		P	**P**	**04 03 31.0**	**-0.4**
MSHR	**Mys Shultsa**	**17.63**	**246**	*c i*	P	**P**	**04 03 30.4**	**-2.4**
MSHR					pmax	pmax		
	comp=Z,27nm,0.7s							
JYT	**Yasato**	**18.31**	**215**		P	**P**	**04 03 39.2**	**-0.7**
MAJO	**Matsushiro**	**18.79**	**220**		P	**P**	**04 03 44.5**	**-0.2**
MAJO					pmax	pmax		
	comp=Z,37nm,0.7s							
MAJO	**Matsushiro**	**18.79**	**220**		P	**P**	**04 03 44.5**	**-0.2**
MAT	**Matsushiro**	**18.79**	**220**		P	**P**	**04 03 44.1**	**-0.5**
MAT					S	**S**	**04 06 54.8**	**+1.0**
MJAR	**Matsushiro Arr**	**18.79**	**220**		P	**P**	**04 03 44.3**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=20,slow=8.9,SNR=56							
MJAR					ScP	**ScP**	**04 10 41.7**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=63,slow=1.1,SNR=8.0							
MJAR	**Matsushiro Arr**	**18.79**	**220**		P	**P**	**04 03 44.4**	**-0.3**
MJAR					IAmb	IAmb	04 03 47.3	
	comp=Z,18nm,0.8s							
MJAR						**ScP**	**04 10 42.7**	**-0.2**
CN2	**Changchun**	**20.25**	**257** ⇓	*i*	P	**P**	**04 03 56.8**	**-1.1**
CN2					pmax	pmax		
	comp=Z,210nm,3.0s							
INU	**Inuyama**	**20.30**	**221**		P	**P**	**04 03 58.4**	**-0.1**
INU					IAmb	IAmb	04 04 02.1	
	comp=Z,21nm,0.6s							
JWT	**Wachi**	**21.03**	**224**		P	**P**	**04 04 05.0**	**-0.3**
JWT					IAmb	IAmb	04 04 08.2	
	comp=Z,20nm,0.6s							
HIA	**Hailar**	**21.29**	**276**		P	**P**	**04 04 05.9**	**-1.5**
HIA					pmax	pmax		
	comp=Z,51nm,0.8s							
HIA	**Hailar**	**21.29**	**276**		P	**P**	**04 04 05.9**	**-1.5**
SPIA	**Saint Paul Isl**	**21.60**	**62**		S		04 07 43.3	
	baz=272							
JHS	**Saijyo**	**22.29**	**228**		P	**P**	**04 04 17.1**	**+0.4**
TIXI	**Tiksi**	**22.45**	**340**		P	**P**	**04 04 17.8**	**+0.2**
	comp=Z,44nm,1.0s,baz=134,slow=8.6,SNR=58							
TIXI					S	**S**	**04 07 51.6**	**-0.1**
	comp=Z,4.9nm,0.7s,baz=285,slow=18,SNR=2.4							
TIXI					ScP	**ScP**	**04 10 50.5**	**-0.7**
	comp=Z,4.4nm,0.7s,baz=99,slow=4.2,SNR=9.1							
TIXI	**Tiksi**	**22.45**	**340**	*d i*	P	**P**	**04 04 17.5**	**-0.1**
TIXI					pmax	pmax		
	comp=Z,206nm,1.0s							
TIXI	**Tiksi**	**22.45**	**340**		P	**P**	**04 04 17.8**	**+0.2**
TIXI					IAmb	IAmb	04 04 18.8	
	comp=Z,40nm,0.9s							
TIXI	**Tiksi**	**22.45**	**340**			**ScP**	**04 10 51.6**	**+0.4**
SNY	**Shenyang**	**22.51**	**255** ⇓		P	**P**	**04 04 18.6**	**+0.1**
SNY					sP	**sP**	**04 06 21.5**	**+2.2**
SNY					S	**S**	**04 07 49.4**	**-4.0**
SNY					pmax	pmax		
	comp=Z,160nm,2.5s							
SNY					pmax	pmax		
	comp=Z,91nm,9.0s							
KS19	**Wonju Array Si**	**22.96**	**241**		P	**P**	**04 04 22.9**	**+0.2**
KS19					IAmb	IAmb	04 04 24.7	
	comp=Z,32nm,0.7s							
KSRS	**Korea Array**	**22.97**	**241**		P	**P**	**04 04 23.2**	**+0.6**
	comp=Z,33nm,0.7s,baz=42,slow=9.3,SNR=91							
KSRS					PcP	**PcP**	**04 07 58.1**	**+0.9**
	comp=Z,7.0nm,0.8s,baz=356,slow=1.6,SNR=15							
KSRS					ScP	**ScP**	**04 10 54.7**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=29,slow=2.8,SNR=4.0							
BOD	**Bodaibo**	**23.00**	**300** ⇑	*i*	P	**P**	**04 04 21.6**	**-1.1**
BOD					pmax	pmax		
	comp=Z,22nm,1.1s							
KSAR	**Wonju Array Be**	**23.00**	**241**		P	**P**	**04 04 22.7**	**-0.3**
KSAR	**Wonju Array Be**	**23.00**	**241**		P	**P**	**04 04 22.7**	**-0.3**
INCN	**Inchon**	**23.65**	**242**		P	**P**	**04 04 28.6**	**-0.2**
INCN					pmax	pmax		
	comp=Z,38nm,0.8s							
INCN	**Inchon**	**23.65**	**242**		P	**P**	**04 04 28.6**	**-0.2**
INCN					IAmb	IAmb	04 04 30.8	
	comp=Z,38nm,0.8s							
INCN	**Inchon**	**23.65**	**242**		P	**P**	**04 04 30.4**	**+1.6**
TNA	**Tin City**	**23.77**	**40**		P	**P**	**04 04 29.9**	**+0.5**
TNA					IAmb	IAmb	04 04 31.6	
	comp=Z,29nm,1.0s							
TNA	**Tin City**	**23.77**	**40**		P		04 04 30.8	
	baz=254,SNR=7.8							
TNA					S		04 08 15.3	
	baz=254							
TJN	**Taejon**	**24.07**	**240**	*ce*	P	**P**	**04 04 33.3**	**+0.7**
ANM	**Nome**	**24.59**	**43**		P		04 04 38.2	
	baz=259							
ANM					S		04 08 26.2	
	baz=259							
JNU	**Nakatsue**	**24.88**	**229**		P	**P**	**04 04 40.6**	**+0.7**
	comp=Z,12nm,0.7s,baz=75,slow=0.4,SNR=9.4							
DL2	**Dalian**	**25.51**	**252**		P	**P**	**04 04 45.3**	**0.0**
DL2					pmax	pmax		
	comp=Z,71nm,1.0s							
JCJ	**Chichijima**	**26.26**	**203**		P	**P**	**04 04 52.5**	**+0.4**
	comp=Z,81nm,0.7s,baz=338,slow=11,SNR=3.3							
JCJ	**Chichijima**	**26.26**	**203**		IAmb	IAmb	04 04 53.9	
	comp=Z,128nm,1.0s							
RDOG	**Red Dog Mine**	**26.35**	**36**		P		04 04 53.4	
	baz=255							
RDOG					S		04 08 54.4	
	baz=255							
BJI	**Beijing**	**28.05**	**259**		P	**P**	**04 05 08.0**	**+0.3**
BJI					PcP	**PcP**	**04 08 09.1**	**+0.1**
BJI					S	**S**	**04 09 20.3**	**-0.1**
BJI					pmax	pmax		
	comp=Z,9.0nm,0.8s							
BJI					pmax	pmax		
	comp=Z,74nm,4.0s							
BJT	**Baijiatuan**	**28.07**	**259**		P	**P**	**04 05 07.2**	**-0.7**
BJT					pmax	pmax		
	comp=Z,16nm,0.5s							
BJT	**Baijiatuan**	**28.07**	**259**		P	**P**	**04 05 07.2**	**-0.7**
BJT					IAmb	IAmb	04 05 09.2	
	comp=Z,16nm,0.5s							
A21K	**Barrow**	**29.32**	**30**		P	**P**	**04 05 18.9**	**+0.5**
A21K					IAmb	IAmb	04 05 19.8	
	comp=Z,27nm,0.8s							
A21K	**Barrow**	**29.32**	**30**		P		04 05 19.1	
	baz=256,SNR=10.0							
A21K					S		04 09 39.6	
	baz=256							
ULN	**Ulaanbaatar**	**29.59**	**280**	*ce*	P	**P**	**04 05 21.2**	**-0.2**
ULN					pmax	pmax		
	comp=Z,9.0nm,0.8s							
ULN	**Ulaanbaatar**	**29.59**	**280**		P	**P**	**04 05 21.1**	**-0.2**
ULN	**Ulaanbaatar**	**29.59**	**280**		P	**P**	**04 05 21.7**	**+0.3**
IMAR	**Indian Mountai**	**29.60**	**41**		P	**P**	**04 05 20.5**	**-0.4**
SONM	**Songino Array**	**30.00**	**281**		P	**P**	**04 05 25.4**	**+0.5**
	comp=Z,3.7nm,0.6s,baz=69,slow=8.0,SNR=36							
SONM					PP	**pwP**	**04 06 46.8**	**+3.3**
	comp=Z,2.8nm,0.8s,baz=67,slow=8.8,SNR=6.1							
SONM					PcP	**PcP**	**04 08 13.7**	**-0.4**
	comp=Z,4.0nm,0.7s,baz=81,slow=1.4,SNR=8.2							
SONM					ScP	**ScP**	**04 11 13.2**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=136,slow=1.5,SNR=7.1							
SONM	**Songino Array**	**30.00**	**281**		IAmb	IAmb	04 05 29.3	
	comp=Z,1.4nm,0.6s							
SONM					ScP	**ScP**	**04 11 14.3**	**+0.1**
TLY	**Talaya**	**30.13**	**289**		P	**P**	**04 05 26.7**	**+0.9**
	comp=Z,11nm,0.7s,baz=64,slow=5.3,SNR=24							
TLY	**Talaya**	**30.13**	**289**	*d i*	P	**P**	**04 05 26.4**	**+0.5**
TLY					pmax	pmax		
	comp=Z,15nm,0.9s							
TLY	**Talaya**	**30.13**	**289**		P	**P**	**04 05 26.4**	**+0.5**
TLY					IAmb	IAmb	04 05 27.8	
	comp=Z,18nm,0.9s							
TLY	**Talaya**	**30.13**	**289**		P	**P**	**04 05 26.8**	**+0.9**
CHUM	**Lake Minchumin**	**30.23**	**46**		P		04 05 28.3	
	baz=273,SNR=11							
PPLA	**Purkeypile**	**30.35**	**48**		P		04 05 29.4	
	baz=275							
HHC	**Hu-ho-hao-te**	**30.39**	**265**	*e*	P	**P**	**04 05 27.8**	**-0.5**
HHC					pP	PP	04 06 50.3	+2.5
HHC					pmax	pmax		
	comp=Z,33nm,1.0s							
HHC					pmax	pmax		
	comp=Z,200nm,4.1s							
SPCR	**Spurr Chakacha**	**30.53**	**51**		P		04 05 31.5	
	baz=278,SNR=6.9							
SKT	**Skwentna**	**30.75**	**49**		P		04 05 32.1	
	baz=277,SNR=6.4							
SKT					S		04 10 01.8	
	baz=277							
BPAW	**Bear Paw Mtn.**	**30.80**	**45**		IAmb	IAmb	04 05 33.8	
	comp=Z,27nm,1.2s							
BPAW	**Bear Paw Mtn.**	**30.80**	**45**		P		04 05 32.8	
	baz=274,SNR=8.9							
ZAK	**Zakamensk**	**30.82**	**287**	*e*	P	**P**	**04 05 31.9**	**0.0**
ZAK				*e*			04 06 51.4	
ZAK					pmax	pmax		
	comp=Z,19nm,1.3s							
ZAK					pmax	pmax		
	comp=Z,9.0nm,1.3s							
MLY	**Manley**	**30.86**	**43**		P	**P**	**04 05 32.8**	**+0.8**
MLY					IAmb	IAmb	04 05 34.4	
	comp=Z,21nm,1.2s							
MLY						**PcP**	**04 08 16.6**	**+0.7**
MLY	**Manley**	**30.86**	**43**		P		04 05 33.2	
	baz=273,SNR=13							
KTH	**Kantishna Hill**	**30.87**	**46**		IAmb	IAmb	04 05 34.8	
	comp=Z,69nm,1.3s							
KDAK	**Kodiak Island**	**30.96**	**58**		P	**P**	**04 05 33.1**	**+0.2**
	comp=Z,15nm,0.4s,baz=280,slow=3.2,SNR=54							
KDAK					ScP	**ScP**	**04 11 18.1**	**+1.1**
	comp=Z,18nm,0.7s,baz=287,slow=4.7,SNR=12							
KDAK	**Kodiak Island**	**30.96**	**58** ⇑	*e*	P	**P**	**04 05 33.3**	**+0.5**
KDAK					pmax	pmax		
	comp=Z,26nm,0.4s							
KDAK	**Kodiak Island**	**30.96**	**58**		P	**P**	**04 05 32.5**	**-0.4**
KDAK					IAmb	IAmb	04 05 33.7	
	comp=Z,44nm,1.1s							
KDAK	**Kodiak Island**	**30.96**	**58**		P		04 05 33.3	
	baz=283							
COLD	**Coldfoot**	**31.04**	**39**		P	**P**	**04 05 32.8**	**-0.7**
COLD	**Coldfoot**	**31.04**	**39**		P		04 05 34.6	
	baz=269,SNR=73							
COLD					S		04 10 07.3	
	baz=269							
CAPN	**Captain Cook N**	**31.10**	**52**		S		04 10 07.7	
	baz=279							
TRF	**Thorofare Moun**	**31.16**	**46**		IAmb	IAmb	04 05 37.1	
	comp=Z,37nm,1.0s							
TRF	**Thorofare Moun**	**31.16**	**46**		P		04 05 35.8	
	baz=276,SNR=11							
SUA	**Susitna One**	**31.19**	**50**		P		04 05 35.7	
	baz=278,SNR=16							
SUA					S		04 10 09.7	
	baz=278							
CNPM	**China Poot**	**31.28**	**54**		IAmb	IAmb	04 05 37.4	
	comp=Z,47nm,0.9s							
CUT	**Chulitna**	**31.29**	**48**		P		04 05 36.5	
	baz=277,SNR=10							
TOLK	**Toolik Lake Re**	**31.32**	**36**		P	**P**	**04 05 36.5**	**+0.5**
TOLK					IAmb	IAmb	04 05 38.0	
	comp=Z,32nm,1.0s							
TOLK	**Toolik Lake Re**	**31.32**	**36**		P		04 05 37.1	
	baz=268,SNR=36							
TOLK					S		04 10 11.6	
	baz=268							
JOW	**Kunigami**	**31.39**	**226**		P	**P**	**04 05 37.3**	**+0.2**
	comp=Z,101nm,0.5s,baz=9.5,slow=9.1,SNR=34							
JOW					S	**S**	**04 10 14.3**	**+1.7**
	comp=Z,30nm,0.8s,baz=101,slow=23,SNR=6.8							
BRLK	**Bradley Lake**	**31.41**	**54**		IAmb	IAmb	04 05 37.8	
	comp=Z,54nm,1.2s							
I23K	**Minto, Yukon-K**	**31.43**	**43**		IAmb	IAmb	04 05 39.3	
	comp=Z,24nm,1.1s							
I23K	**Minto, Yukon-K**	**31.43**	**43**		P		04 05 38.2	
	baz=274,SNR=16							
BTO	**Baotou**	**31.48**	**266**	*e*	P	**P**	**04 05 37.2**	**-0.6**
BTO					pmax	pmax		
	comp=Z,89nm,1.2s							
BRSE	**Bradley Lake S**	**31.48**	**54**		P		04 05 38.0	
	baz=281							
NEA2	**Nenana**	**31.60**	**44**		IAmb	IAmb	04 05 40.5	
	comp=Z,31nm,1.1s							
NEA2	**Nenana**	**31.60**	**44**		P		04 05 39.2	
	baz=275,SNR=24							
MOY	**Mondy**	**31.67**	**290**	*e*	P	**P**	**04 05 40.0**	**+0.7**
MOY					pmax	pmax		
	comp=Z,39nm,1.4s							
RC01	**Rabbit Creek A**	**31.73**	**51**		IAmb	IAmb	04 05 41.2	
	comp=Z,26nm,0.4s							
RC01	**Rabbit Creek A**	**31.73**	**51**		P		04 05 40.3	
	baz=280,SNR=9.9							
MCK	**McKinley**	**31.73**	**46**		IAmb	IAmb	04 05 41.6	
	comp=Z,22nm,0.9s							
MCK	**McKinley**	**31.74**	**46**		P		04 05 40.9	
	baz=276,SNR=11							
TIY	**Taiyuan**	**31.78**	**259**	*e*	P	**P**	**04 05 41.2**	**+0.8**
TIY					pmax	pmax		
	comp=Z,99nm,0.9s							
RND	**Reindeer**	**31.81**	**46**		IAmb	IAmb	04 05 41.7	
	comp=Z,32nm,1.0s							
O22K	**Cooper Landing**	**31.84**	**52**		P		04 05 40.9	
	baz=281							
MDM	**Murphy Dome**	**31.93**	**43**		IAmb	IAmb	04 05 44.0	
	comp=Z,21nm,1.0s							
PMR	**Palmer**	**31.93**	**50**		P	**P**	**04 05 42.1**	**+0.9**
PMR					pmax	pmax		
	comp=Z,22nm,1.2s							
PMR	**Palmer**	**31.93**	**50**		P	**P**	**04 05 42.1**	**+0.9**
PMR					IAmb	IAmb	04 05 42.7	
	comp=Z,22nm,1.2s							
PMR	**Palmer**	**31.93**	**50**		P		04 05 42.2	
	baz=280,SNR=7.5							
NJ2	**Nanjing**	**31.96**	**245** ⇑	*i*	P	**P**	**04 05 42.6**	**+0.8**
NJ2					pmax	pmax		
	comp=Z,80nm,0.9s							
WAT2	**Susitna Watana**	**31.98**	**47**		P		04 05 42.1	
	baz=278							
TCOL	**CIGO, UAF Yank**	**32.09**	**44**		IAmb	IAmb	04 05 44.8	
	comp=Z,38nm,0.9s							
TCOL	**CIGO, UAF Yank**	**32.09**	**44**		P		04 05 43.8	
	baz=275,SNR=8.5							
COLA	**College**	**32.09**	**44**	*c i*	P	**P**	**04 05 43.4**	**+0.9**
COLA					pmax	pmax		
	comp=Z,33nm,1.0s							
COLA	**College**	**32.09**	**44**		P	**P**	**04 05 43.4**	**+0.9**
COLA					IAmb	IAmb	04 05 44.8	
	comp=Z,38nm,0.9s							
COLA	**College**	**32.09**	**44**		P		04 05 43.7	
	baz=275							
CCB	**Clear Creek Bu**	**32.13**	**44**		IAmb	IAmb	04 05 45.0	
	comp=Z,34nm,1.1s							
POKR	**Poker Plat Res**	**32.25**	**43**		IAmb	IAmb	04 05 47.5	
	comp=Z,33nm,1.4s							
POKR	**Poker Plat Res**	**32.25**	**43**		P		04 05 45.4	
	baz=275							
SML	**Sawmill**	**32.27**	**49**		P		04 05 45.3	
	baz=280,SNR=26							
SML					S		04 10 28.1	
	baz=280							
KNK	**Knik Glacier**	**32.28**	**50**		P		04 05 45.3	
	baz=280							
KNK					S		04 10 26.9	
	baz=

comp=Z,43nm,1.2s
M24K Tolsona, Glenn 33.23 48 P 04 05 54.2
baz=281
PAX Paxson 33.39 47 P 04 05 55.3
baz=280
KLU Klutina 33.46 49 IAmb IAmb 04 05 56.7
comp=Z,45nm,1.0s
KLU Klutina 33.46 49 P 04 05 55.6
baz=282,SNR=12
EYAK Cordova Ski Ar 33.75 51 P 04 05 58.1
baz=284
SCRK Sand Creek 33.87 45 IAmb IAmb 04 05 59.0
comp=Z,28nm,1.0s
SCRK Sand Creek 33.87 45 P 04 05 58.1
baz=280,SNR=22
SCRK S 04 10 48.7
baz=280
N25K Chitina, Valde 34.06 49 IAmb IAmb 04 06 01.9
comp=Z,26nm,1.0s
N25K Chitina, Valde 34.06 49 P 04 06 00.9
baz=283,SNR=6.4
BMRM Bremner River 34.20 50 IAmb IAmb 04 06 03.5
comp=Z,46nm,0.8s
BMRM Bremner River 34.20 50 P 04 06 02.0
baz=284,SNR=11
NRIK Noril'sk 34.34 325 P P **04 06 01.6 -0.1**
comp=Z,15nm,0.8s,baz=92,slow=9.6,SNR=13
NRIK PcP PcP **04 08 26.0 +0.4**
comp=Z,5.3nm,0.6s,baz=134,slow=3.3,SNR=3.2
NRIK Noril'sk 34.34 325*d* *i*P P **04 06 01.3 -0.4**
NRIK pmax pmax
comp=Z,14nm,0.9s
NRIK Noril'sk 34.34 325 P P **04 06 01.6 -0.1**
GLB Gilahina Butte 34.46 49 IAmb IAmb 04 06 06.2
comp=Z,23nm,1.1s
VRDI Verde Repeater 34.68 49 IAmb IAmb 04 06 07.2
comp=Z,16nm,0.8s
K27K Chicken 34.69 44 IAmb IAmb 04 06 06.9
comp=Z,59nm,1.2s
K27K Chicken 34.69 44 P 04 06 05.9
baz=281
K27K S 04 11 02.7
baz=281
MCARA McCarthy VSAT 34.84 49 IAmb IAmb 04 06 10.7
comp=Z,18nm,0.8s
MCARA McCarthy VSAT 34.84 49 P 04 06 08.1
baz=284
MCARA S 04 11 03.8
baz=284
EGAK Eagle 34.94 43 IAmb IAmb 04 06 08.2
comp=Z,40nm,1.0s
EGAK Eagle 34.94 43 P 04 06 07.3
baz=281,SNR=28
CRQE Cirque 34.97 50 P 04 06 09.0
baz=285
CRQE S 04 11 07.6
baz=285
BCAR Beaver Creek A 35.02 46 P P **04 06 08.1 +0.6**
BARN Barnard Glacie 35.57 49 IAmb IAmb 04 06 15.2
comp=Z,36nm,0.9s
GRNC Granite Creek 35.61 50 IAmb IAmb 04 06 15.4
comp=Z,46nm,0.8s
YAH Yahtse 35.72 51 IAmb IAmb 04 06 16.5
comp=Z,36nm,0.8s
CTG Chitna Glacier 35.74 49 P 04 06 15.6
baz=286
LOGN Logan Glacier 35.94 50 IAmb IAmb 04 06 17.9
comp=Z,31nm,1.0s
TABL Table Mountain 35.98 50 IAmb IAmb 04 06 18.3
comp=Z,36nm,0.8s
TATO Taipei 36.19 234 P P **04 06 20.6 +2.9**
EPYK Eagle Plains 36.43 40 IAmb IAmb 04 06 21.6
comp=Z,18nm,0.6s
EPYK Eagle Plains 36.43 40 P 04 06 20.6
baz=282,SNR=14
EPYK S 04 11 27.4
baz=282
PINM Pinnacle 36.51 51 P 04 06 21.7
baz=288
PINM S 04 11 29.4
baz=288
INK Inuvik 37.23 36 P P **04 06 26.9 +1.2**
comp=Z,23nm,0.3s,baz=275,slow=6.1,SNR=354
INK PcP **sP** **04 08 35.3 -0.3**
comp=Z,4.4nm,0.6s,baz=314,slow=4.2,SNR=5.9
INK ScP **S** **04 11 40.6 +0.4**
comp=Z,8.5nm,1.0s,baz=318,slow=3.1,SNR=17
INK Inuvik 37.23 36 P P **04 06 26.4 +0.6**
INK ScP **ScP** **04 11 39.6 +0.3**
HYT Haines Junctio 37.57 49 IAmb IAmb 04 06 32.3
comp=Z,54nm,1.0s
YULB Yu-li 37.60 233 IAmb IAmb 04 06 33.9
comp=Z,16nm,0.5s
LZH Lanzhou 38.09 265 *e*P P **04 06 34.6 +1.1**
LZH sP PcP 04 08 39.4 +1.6
LZH pmax pmax
comp=Z,230nm,1.1s
LZH pmax pmax
comp=Z,330nm,4.3s
GTA Gaotai 38.49 273 ⇓P P **04 06 37.4 +0.7**
GTA pP pP 04 08 01.2 +4.5
GTA sP PcP 04 08 39.9 +0.9
GTA S **S** **04 12 02.0 +2.1**
GTA SS **SS** **04 15 05.2 -6.1**
GTA pmax pmax
comp=Z,45nm,1.2s
ENH Enshi 38.67 253 P P **04 06 36.9 -1.3**
ENH **PcP** **04 08 39.1 -0.5**
WHY Whitehorse 38.84 48 IAmb IAmb 04 06 42.5
comp=Z,22nm,1.0s
ZAA0 Zalesovo Array 39.75 301 P P **04 06 45.7 -0.9**
ZALV Zalesovo Beam 39.75 301 P P **04 06 46.0 -0.5**
comp=Z,5.6nm,0.5s,baz=62,slow=6.9,SNR=27
ZALV PcP **PcP** **04 08 42.3 -0.2**
comp=Z,10nm,0.9s,baz=60,slow=3.6,SNR=11
ZALV ScP **ScP** **04 11 48.9 -0.4**
comp=Z,1.5nm,0.7s,baz=57,slow=5.5,SNR=5.3
ZALV Zalesovo Beam 39.75 301 P P **04 06 45.9 -0.7**
ZALV **PcP** **04 08 42.0 -0.5**
ZALV **ScP** **04 11 48.3 -1.0**
C36M Paulatuk 40.27 33 P P **04 06 50.7 +0.2**
C36M IAmb IAmb 04 06 51.7
comp=Z,20nm,0.5s
C36M Paulatuk 40.27 33 P 04 06 51.3
baz=289,SNR=46
C36M S 04 12 23.3
baz=289
DGZ Jazzator, Alta 40.30 294*d* *i*P P **04 06 52.2 +1.0**
DGZ pmax pmax
comp=Z,17nm,0.9s
DLBC Dease Lake 41.99 50 P P **04 07 06.7 +2.1**
comp=Z,12nm,0.8s,baz=297,slow=9.1,SNR=17
DLBC ScP **ScP** **04 11 59.9 +1.7**
comp=Z,3.3nm,1.0s,baz=295,slow=5.5,SNR=3.6
ZSN Zaisan 42.91 292 *e*P P **04 07 12.4 +0.4**
baz=292
ZSN *e*S **S** **04 13 04.9 +0.9**
baz=292
ZSN Zaisan 42.91 292 *e*P P **04 07 12.4 +0.4**
ZSN *e*S **S** **04 13 04.9 +0.9**
SZP Santa 43.00 229 P P **04 07 13.9 +0.9**
GYA Guiyang 43.16 252 ⇑P P **04 07 14.4 +0.1**
GYA pmax pmax
comp=Z,59nm,0.9s
GYA pmax pmax
comp=Z,190nm,3.5s
WMQ Urumqi 43.28 286 *e*P P **04 07 16.2 +1.2**
WMQ sP sP 04 09 26.9 +1.0
WMQ pmax pmax
comp=Z,80nm,1.3s
WMQ pmax pmax
comp=Z,350nm,3.7s
SEM Semipalatinsk 43.92 298 *e*P P **04 07 19.3 -0.9**
baz=298
SEM Semipalatinsk 43.92 298 *e*P P **04 07 19.2 -0.9**
EUNU Eureka 43.93 12 P P **04 07 19.7 +0.1**
EUNU IAmb IAmb 04 07 20.9
comp=Z,17nm,0.8s
KURK Kurchatov 44.64 299 P P **04 07 26.0 +0.6**
KURK 04 08 57.6
KURK S **S** **04 13 29.9 +1.4**
KURBB Kurchatov Arra 44.74 299 P P **04 07 26.0 -0.2**
comp=Z,24nm,0.8s,baz=62,slow=7.6,SNR=74
KURBB PcP **PcP** **04 08 57.6 -1.8**
comp=Z,6.3nm,0.7s,baz=57,slow=3.4,SNR=7.0
KURBB ScP **ScP** **04 12 08.8 -0.7**
comp=Z,2.0nm,0.8s,baz=55,slow=3.6,SNR=4.7
KURBB S **S** **04 13 29.9 0.0**
comp=Z,0.3nm,0.3s,baz=53,slow=14,SNR=4.2
KURBB Kurchatov Arra 44.74 299 P P **04 07 25.7 -0.5**
MK31 Makanchi Array 44.75 293*d* *i*P P **04 07 26.2 -0.1**
MK31 Makanchi Array 44.75 293 P P **04 07 25.8 -0.6**
MK31 IAmb IAmb 04 07 27.4
comp=Z,28nm,1.0s
MKAR Makanchi Array 44.75 293 P P **04 07 26.3 0.0**
comp=Z,24nm,0.9s,baz=60,slow=7.2,SNR=142
MKAR PcP **PcP** **04 08 59.0 -0.6**
comp=Z,4.7nm,1.0s,baz=39,slow=4.1,SNR=2.5
MKAR ScP **ScP** **04 12 08.9 -0.8**
comp=Z,1.7nm,1.0s,baz=74,slow=5.7,SNR=4.2
MKAR S **S** **04 13 29.9 -0.2**
comp=Z,0.2nm,0.4s,baz=117,slow=42,SNR=2.4
MKAR Makanchi Array 44.75 293 P P **04 07 25.9 -0.4**
MKAR **ScP** **04 12 08.3 -1.3**
MAKZ Makanchi 44.92 293 P P **04 07 27.2 -0.4**
MAKZ pmax pmax
comp=Z,25nm,0.9s
MAKZ Makanchi 44.92 293 P P **04 07 27.2 -0.4**
MAKZ IAmb IAmb 04 07 28.6
comp=Z,25nm,0.9s
TGY Tagaytay City 45.80 226 P P **04 07 35.8 +1.0**
comp=Z,126nm,0.3s,baz=270,slow=5.2,SNR=4.5
RES Resolute Bay 45.82 20 P P **04 07 34.4 +0.3**
comp=Z,11nm,0.5s,baz=297,slow=6.7,SNR=138
RES PcP **PcP** **04 09 03.4 +0.6**
comp=Z,5.3nm,0.7s,baz=266,slow=5.5,SNR=6.3
RES ScP **ScP** **04 12 14.2 +0.6**
comp=Z,1.2nm,0.8s,baz=298,slow=6.9,SNR=4.6
RES Resolute Bay 45.82 20 P P **04 07 34.2 +0.1**
RES pmax pmax
comp=Z,14nm,0.6s
RES Resolute Bay 45.82 20 P P **04 07 34.2 +0.1**
RES IAmb IAmb 04 07 35.5
comp=Z,14nm,0.6s
KMI Kunming 46.49 255 ⇓P P **04 07 40.2 0.0**
KMI pP PcP 04 09 06.5 +0.2
KMI PcP **pP** **04 09 08.0 +4.1**
KMI PP **PP** **04 09 35.2 +0.2**
KMI ScS ScS 04 16 45.8 -1.6
KMI pmax pmax
comp=Z,46nm,1.1s
KMI pmax pmax
comp=Z,88nm,3.5s
KMI Kunming 46.49 255 IAmb IAmb 04 07 41.5
comp=Z,52nm,1.1s
NOR Nord 46.49 358 *i*P P **04 07 38.6 -0.6**
NOR IAmb IAmb 04 07 40.8
comp=Z,1.8nm,0.8s
NOR Nord 46.49 358 *i*P P **04 07 38.6 -0.6**
NOR pmax pmax
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 46.72 40 P P **04 07 42.1 +0.9**
comp=Z,16nm,0.7s,baz=302,slow=6.8,SNR=279
YKA PcP **PcP** **04 09 07.1 +0.9**
comp=Z,3.8nm,0.7s,baz=314,slow=3.3,SNR=17
YKA ScP **ScP** **04 12 19.0 +1.5**
comp=Z,4.0nm,0.8s,baz=301,slow=3.9,SNR=25
YKA S **S** **04 13 59.2 +1.8**
comp=Z,2.2nm,1.0s,baz=300,slow=13,SNR=10
KBS Kingsbay 47.27 351 *i*P P **04 07 45.3 +0.1**
KBS IAmb IAmb 04 07 46.2
comp=Z,34nm,0.8s
BVAR Borovoye Array 47.66 306 P P **04 07 48.4 -0.2**
comp=Z,21nm,0.8s
BVAR PcP **PcP** **04 09 09.2 -0.6**
comp=Z,4.8nm,0.6s,baz=134,slow=4.3,SNR=5.9
BVAR ScP **ScP** **04 12 20.5 -1.2**
comp=Z,0.5nm,0.5s,baz=231,slow=28,SNR=3.6
BVAR S **S** **04 14 03.9 -7.0**
comp=Z,0.4nm,0.5s,baz=324,slow=43,SNR=2.3
BRVK Borovoye 47.70 306*d* *i*P P **04 07 48.6 -0.2**
BRVK *i* *PP **PcP** **04 09 09.8 -0.1**
BRVK pmax pmax
comp=Z,45nm,0.8s
BRVK Borovoye 47.70 306 P P **04 07 48.5 -0.2**
BRVK IAmb IAmb 04 07 49.8
comp=Z,45nm,0.9s
BRVK Borovoye 47.70 306 P P **04 07 49.0 +0.2**
TDK Taldyqorghan 47.99 293 *e*P P **04 07 51.9 +0.7**
comp=Z,58nm,0.5s,baz=293
TDK Taldyqorghan 47.99 293 *e*P P **04 07 51.8 +0.6**
TDK pmax pmax
comp=Z,58nm,0.5s
BRZS Berezniki 48.22 301 *e*P P **04 07 52.4 -0.4**
comp=Z,21nm,0.9s,baz=301
BRZS Berezniki 48.22 301 *e*P P **04 07 52.4 -0.4**
BRZS pmax pmax
comp=Z,21nm,0.9s
PDGK Podgornoye 48.38 290 P P **04 07 53.7 -0.5**
SHLS Shalkode 48.50 290 *e*P P **04 07 53.5 -1.7**
comp=Z,26nm,0.7s,baz=290
SHLS *e*S **S** **04 14 20.1 -2.9**
baz=290
SHLS Shalkode 48.50 290 *e*P P **04 07 53.4 -1.7**
SHLS *e*S **S** **04 14 20.1 -2.9**
SHLS pmax pmax
comp=Z,26nm,0.7s
SLVN Son La 48.70 250 P P **04 07 57.3 +0.5**
SLVN IAmb IAmb 04 07 59.1
comp=Z,23nm,0.9s
KPKS Kokpek 48.76 291 *e*P P **04 07 57.4 +0.3**
comp=Z,51nm,1.0s,baz=291
KPKS Kokpek 48.76 291 *e*P P **04 07 57.3 +0.3**
KPKS pmax pmax
comp=Z,51nm,1.0s
UZB Uzynbulak 48.76 291 *e*P P **04 07 57.4 +0.2**
comp=Z,18nm,1.0s,baz=290
UZB Uzynbulak 48.76 291 *e*P P **04 07 57.3 +0.2**
UZB pmax pmax
comp=Z,18nm,1.0s
TULEG Thule 48.92 12 *i*P P **04 07 56.3 -1.3**
SATY Saty 49.17 291 ⇓*i*P P **04 08 00.7 +0.6**
comp=Z,24nm,1.2s,baz=291
SATY Saty 49.17 291*d* *i*P P **04 08 00.7 +0.6**
SATY pmax pmax
comp=Z,24nm,1.2s
KUU Kurty 49.84 293 *e*P P **04 08 04.3 -0.7**
comp=Z,24nm,0.7s,baz=293
KUU Kurty 49.84 293 *e*P P **04 08 04.3 -0.7**
KUU pmax pmax
comp=Z,24nm,0.7s
MDOK Medeo 49.89 292 *i*P P **04 08 05.8 +0.2**
baz=292
MDOK Medeo 49.89 292 *i*P P **04 08 05.7 +0.2**
NEEM North Greenlan 49.89 7 *i*P P **04 08 04.1 -1.1**
NEEM IAmb IAmb 04 08 05.2
comp=Z,12nm,0.6s
AAA Alma-Ata 49.94 292 *e*P P **04 08 06.5 +0.7**
comp=Z,15nm,0.7s,baz=292
AAA Alma-Ata 49.94 292 *e*P P **04 08 06.4 +0.7**
AAA pmax pmax
comp=Z,15nm,0.7s
TNSS Tian-Shan 50.03 292 *e*P P **04 08 06.9 +0.1**
baz=292
TNSS Tian-Shan 50.03 292 *e*P P **04 08 06.9 +0.1**
SVE Sverdlovsk 50.08 314 *e*P P **04 08 06.5 +0.1**
SVE pmax pmax
comp=Z,59nm,1.0s
BJO1 Bjornoya 50.08 345 *e*P P **04 08 04.8 -1.4**
LSA Lhasa 50.24 269 P P **04 08 09.8 +1.2**
LSA Lhasa 50.24 269 P P **04 08 09.9 +1.2**
BTLS Baital 50.43 295 *e*P P **04 08 08.9 -0.3**
baz=295
BTLS Baital 50.43 295 *e*P P **04 08 08.9 -0.3**
MOKO MOKOCHONG 50.58 263 *e*P P **04 08 12.2 +1.4**
MOKO IAmb IAmb 04 08 13.4
comp=Z,136nm,0.7s
MOKO AMP 04 08 16.6
TKM2 Tokmak 2 50.87 292 P P **04 08 13.3 +0.5**
SNR=12
TKM2 Tokmak 2 50.87 292 P P **04 08 12.8 0.0**
ULHL Ulahol 50.93 291 P P **04 08 13.4 +0.2**
SNR=36
SGDS Sogindy 51.09 293 *e*P P **04 08 14.7 +0.5**
comp=Z,20nm,1.0s,baz=293
SGDS Sogindy 51.09 293 *e*P P **04 08 14.7 +0.5**
SGDS pmax pmax
comp=Z,20nm,1.0s
ARU Arti 51.23 315 P P **04 08 14.6 -0.3**
comp=Z,8.8nm,0.4s,baz=37,slow=4.5,SNR=91
ARU PcP **PcP** **04 09 22.2 -0.7**
comp=Z,2.6nm,0.4s,baz=83,slow=4.2,SNR=4.4
ARU Arti 51.23 315*d* *i*P P **04 08 14.4 -0.5**
ARU 04 09 21.1
ARU 04 10 14.7
ARU S **S** **04 15 01.2 +1.6**
ARU SS **SS** **04 18 40.7 -0.4**
ARU pmax pmax
comp=Z,99nm,0.9s
KOHI KOHIMA 51.27 263⇑ *e*P P **04 08 16.6 +0.8**
KOHI IAmb IAmb 04 08 18.0
comp=Z,96nm,0.8s
USP Ospenovka 51.28 293 P P **04 08 16.3 +0.7**
SNR=33
CHMS Chumysh 51.31 293 P P **04 08 16.3 +0.6**
SNR=15
DAG Danmarks Havn 51.35 358 ⇓*i*P P **04 08 14.8 -0.8**
DAG IAmb IAmb 04 08 15.5
comp=Z,13nm,1.0s
DAG Danmarks Havn 51.35 358 ⇓*i*P P **04 08 14.7 -0.8**
DAG pmax pmax
comp=Z,13nm,1.0s
D03D Eldon 51.38 60 P 04 08 18.1
baz=308
KBK Karagaybulak 51.41 292 P P **04 08 17.3 +0.6**
SNR=13
B05A Bryant 51.45 58 P 04 08 17.9
baz=308
AAK Ala-Archa 51.68 293 P P **04 08 19.2 +0.6**
comp=Z,46nm,0.8s,baz=112,slow=4.3,SNR=127
AAK Ala-Archa 51.68 293 P P **04 08 19.2 +0.6**
SNR=48
AAK Ala-Archa 51.68 293 *i*P P **04 08 19.2 +0.6**
SNR=7.8
AAK Ala-Archa 51.68 293*d* *i*P P **04 08 18.9 +0.2**
AAK pmax pmax
comp=Z,151nm,0.7s
AAK Ala-Archa 51.68 293 P P **04 08 18.8 +0.1**
AAK IAmb IAmb 04 08 20.1
comp=Z,53nm,0.8s
NONG Nongkai 51.71 248 P P **04 08 20.0 +1.1**
comp=Z,9µmcomp=Z,47nm,0.9s
UCH Uchtor 51.93 292 P P **04 08 21.4 +0.6**
SNR=12
LVZ Lovozero 51.96 335⇑ *e*P P **04 08 18.7 -1.4**
LVZ pmax pmax
comp=Z,33nm,1.7s
IMP Imphal 52.02 262 *e*P P **04 08 21.5 +0.2**
IMP IAmb IAmb 04 08 22.6
comp=Z,62nm,0.6s
EKS2 Erkin-Say 52.07 293 P P **04 08 22.2 +0.7**
SNR=42
E04D Cinebar 52.27 60 P 04 08 24.6
baz=309
HAMF Hammerfest 52.38 341 *e*P P **04 08 21.7 -1.3**
GUWA GUWAHATI 52.41 265 *e*P P **04 08 23.9 0.0**
GUWA IAmb IAmb 04 08 25.2
comp=Z,112nm,0.7s
AML Almayashu 52.46 293 P P **04 08 25.4 +0.8**
SNR=34
SHL Shillong 52.75 265 *e*P P **04 08 26.5 -0.1**
SHL IAmb IAmb 04 08 27.7
comp=Z,99nm,0.9s
KSH Kashi 52.84 289 P P **04 08 31.2 +4.2**
KSH pmax pmax
comp=Z,40nm,1.0s
KSH pmax pmax
comp=Z,110nm,4.5s
ARCES ARCESS Array B 52.89 340 P P **04 08 26.4 -0.3**
comp=Z,14nm,0.5s,baz=38,slow=8.2,SNR=123
ARCES ARCESS Array B 52.89 340 P P **04 08 26.4 -0.3**
ARCES IAmb IAmb 04 08 27.1
comp=Z,23nm,0.9s
PRGR Permogore 52.99 325 *e*P P **04 08 26.7 -0.9**
PRGR pmax pmax
comp=Z,47nm,0.7s
DZA Taraz 53.30 295 ⇓*e*P P **04 08 30.4 +0.1**
comp=Z,12nm,0.7s,baz=295
DZA Taraz 53.30 295*de*P P **04 08 30.3 +0.1**
DZA pmax pmax
comp=Z,12nm,0.7s
LAMP Lampang 53.39 252 P P **04 08 32.8 +1.8**
comp=Z,59nm,0.8s
SGSI Sangihe 53.41 215 P P 04 08 37.4 +6.2
UTTA Uttaradit 53.46 251 P P **04 08 32.6 +1.1**
comp=Z,44nm,0.8s
CMMT Chiang Mai 53.56 253 P P **04 08 31.7 -0.7**
comp=Z,252nmcomp=Z,26nm,1.2s
CHTO Chiang Mai 53.57 253 P P **04 08 32.5 +0.2**
CHTO pmax pmax
comp=Z,31nm,0.8s
CHTO Chiang Mai 53.57 253 P P **04 08 32.5 +0.2**
CHTO IAmb IAmb 04 08 34.6
comp=Z,31nm,0.8s
CHTO Chiang Mai 53.57 253 P P **04 08 32.9 +0.6**
KK31 Karatay Array 53.63 296 *i*P P **04 08 32.1 -0.4**
KK31 Karatay Array 53.63 296 IAmb IAmb 04 08 33.5
comp=Z,38nm,0.8s
KKAR Karatay Array 53.63 296 P P **04 08 31.7 -0.8**
KKAR Karatay Array 53.63 296 P P **04 08 31.7 -0.8**
KIRV Kirov 53.64 321 P P **04 08 32.1 -0.1**
comp=Z,31nm,0.7s,baz=26,slow=0.5,SNR=12
KIRV Kirov 53.64 321*d* *i*P P **04 08 31.6 -0.6**
J01E Myrtle Point 53.69 64 P 04 08 35.5
baz=311
E07A Sunnyside 53.71 59 P P **04 08 34.8 +1.7**
KTK1 Kautokeino 53.79 340 *i*P P **04 08 33.0 -0.2**
CM31 Chiang Mai Arr 53.84 253 P P **04 08 35.0 +0.7**
CM31 IAmb IAmb 04 08 37.0
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 53.84 253 P P **04 08 35.0 +0.7**
comp=Z,15nm,0.8s,baz=28,slow=6.9,SNR=51
CMAR PcP **PcP** **04 09 34.0 +0.5**
comp=Z,5.5nm,0.8s,baz=11,slow=3.2,SNR=11
CMAR Chiang Mai Arr 53.84 253 P P **04 08 34.9 +0.5**
CMAR 04 09 33.5
CMAR Chiang Mai Arr 53.84 253 P P **04 08 34.9 +0.5**
CMAR PcP **PcP** **04 09 33.5 0.0**
DBG Daneborg 53.86 358 *i*P P **04 08 32.9 -0.8**
DBG IAmb IAmb 04 08 34.1
comp=Z,3.1nm,0.7s
D08A Wollman Farm, 53.88 58 P P **04 08 35.4 +1.2**
JETT Jettan, Norway 53.92 341 *e*P P **04 08 33.8 -0.4**
PHIT Phitsanulok 53.98 250 P P **04 08 37.4 +2.2**
comp=Z,72nm,0.8s
NEW Newport 54.02 56 P P **04 08 36.4 +1.1**
comp=Z,3.6nm,0.6s,baz=320,slow=9.2,SNR=9.6
NEW Newport 54.03 56 P 04 08 36.5
baz=310,SNR=6.9
CHAI Chaiayaphum 54.09 248 P P **04 08 37.1 +1.0**
comp=Z,333nmcomp=Z,21nm,0.7s
F07A Phinny Hill Vi 54.10 59 IAmb IAmb 04 08 38.6
comp=Z,25nm,0.9s
K02D Willamette Mer 54.14 65 P 04 08 37.7
baz=311
SUKH Sukhothai 54.20 251 P P **04 08 38.3 +1.4**
comp=Z,208nmcomp=Z,22nm,0.7s
SAIH SAIHA 54.34 261 *e*P P **04 08 38.0 0.0**
SAIH IAmb IAmb 04 08 39.5
comp=Z,164nm,1.2s
I05D Terrebonne, OR 54.35 62 P 04 08 39.6
baz=311
IUG Iuzhnay 54.52 295 *e*P P **04 08 39.6 +0.7**
comp=Z,49nm,0.6s,baz=295
IUG Iuzhnay 54.52 295 *e*P P **04 08 39.6 +0.7**
IUG pmax pmax
comp=Z,49nm,0.6s
L02E Cave Junction 54.53 65 P 04 08 41.6
baz=311
HUMO Hull Mountain 54.59 64 P P **04 08 40.8 +1.5**
CHM Chimkent 54.65 295 *e*P P **04 08 40.0 +0.3**
comp=Z,9.2nm,0.6s,baz=295
CHM Chimkent 54.65 295 *e*P P **04 08 40.0 +0.3**
CHM pmax pmax
comp=Z,9.0nm,0.6s
J04D Umpqua Nationa 54.65 63 P 04 08 42.5
baz=311,SNR=6.4
MHMT Maesarieng 54.66 253 P P **04 08 41.1 +1.0**
comp=Z,µmcomp=Z,42nm,1.3s
MYLDM Lahad Datu 54.81 224 P P **04 08 43.2 +2.0**
MYLDM IAmb IAmb 04 08 46.4
comp=Z,28nm,1.1s
PINE Pine Mountain 54.93 62 IAmb IAmb 04 08 45.5
comp=Z,33nm,1.1s
J05D Fort Rock, OR 55.10 63 P 04 08 45.9
baz=312,SNR=16
AB31 Akbulak array 55.17 307 P P **04 08 42.2 -1.1**
ABKAR Akbulak array 55.17 307 P P **04 08 42.9 -0.4**
JCC Jacoby Creek, 55.17 67 IAmb IAmb 04 08 47.2

comp=Z,48nm,1.3s
L04D Klamath Falls 55.22 64 P 04 08 46.3
baz=312,SNR=10
K04D Chiloquin, OR 55.25 63 P 04 08 46.7
baz=312
KHMM Horse Mountain 55.31 66 IAmb IAmb 04 08 49.1
comp=Z,54nm,1.3s
AKTO Aktyubinsk 55.32 309 P **P** **04 08 44.0 -0.4**
comp=Z,15nm,0.8s,baz=66,slow=7.9,SNR=35
AKTO Aktyubinsk 55.32 309 P **P** **04 08 44.0 -0.4**
JAY Jayapura 55.38 195 P **P** **04 08 46.4 +1.3**
comp=Z,19nm,0.9s,baz=109,slow=4.2,SNR=3.6
SUMG Summit 55.41 4 *i* P **P** **04 08 44.8 -0.3**
SUMG IAmb IAmb 04 08 46.0
comp=Z,11nm,0.6s
SUMG Summit 55.41 4 P **P** **04 08 44.3 -0.8**
SUMG pmax pmax
comp=Z,25nm,1.1s
SUMG Summit 55.41 4 P **P** **04 08 44.3 -0.8**
SUMG IAmb IAmb 04 08 46.1
comp=Z,25nm,1.1s
M02C Callahan 55.46 65 P 04 08 48.6
baz=312,SNR=7.3
TAS Tashkent 55.48 295 P **P** **04 08 46.0 +0.4**
TAS pmax pmax
comp=Z,112nm,0.5s
TAS Tashkent 55.48 295 P **P** **04 08 46.0 +0.4**
SRAK Srakaew 55.58 246 P **P** **04 08 45.3 -1.3**
comp=Z,2µmcomp=Z,255nm,0.8s
KLMR Klimovskoe 55.64 327 *eP* **P** **04 08 44.8 -1.6**
KLMR *e* 04 10 53.5
KLMR pmax pmax
comp=Z,38nm,0.8s
KLMR Klimovskoe 55.64 327 *eP* **P** **04 08 44.9 -1.5**
KLMR AMP 04 08 47.1
comp=Z,38nm,0.8s
KLMR *ePP* **PP** **04 10 53.6 -2.2**
K05A Summer Lake 55.66 63 IAmb IAmb 04 08 50.8
comp=Z,43nm,1.1s
UMPA Umpang Tak 55.66 251 P **P** **04 08 49.6 +2.4**
comp=Z,36nm,0.9s
M04C Macdoel 55.76 64 P 04 08 50.1
baz=312,SNR=9.9
N02D Trinity Center 55.82 66 P 04 08 50.7
baz=312,SNR=7.9
UTHA Uthaitani 55.83 250 P **P** **04 08 49.0 +0.7**
comp=Z,416nmcomp=Z,27nm,1.0s
SWI Sorong 55.87 207 P **P** **04 08 49.7 +1.1**
comp=Z,43nm,1.3s
SIJI Sorong 55.87 207 P **P** **04 08 49.5 +0.9**
comp=Z,17nm,0.6s,baz=3.6,slow=8.7,SNR=17
RABL Rabaul 56.02 181 P **P** **04 08 51.3 +1.7**
N2IH Innhavet 56.14 342 *eP* **P** **04 08 49.0 -0.8**
STEI Steigen 56.30 342 *eP* **P** **04 08 50.4 -0.4**
O02D Mt. Diablo Mer 56.31 66 P 04 08 54.0
baz=313,SNR=8.5
LOF Lofoten 56.44 343 *eP* **P** **04 08 51.3 -0.5**
J08A Circle Bar Ran 56.55 61 IAmb IAmb 04 08 56.6
comp=Z,19nm,1.0s
MSO Missoula 56.59 55 P 04 08 54.9
baz=313,SNR=22
N2TV TVrnvik 56.64 342 *eP* **P** **04 08 52.8 -0.4**
PLID Pearl Lake 56.70 58 IAmb IAmb 04 08 56.9
comp=Z,27nm,0.9s
FFC Flin Flon 56.70 42 P **P** **04 08 53.9 0.0**
FFC pmax pmax
comp=Z,18nm,0.8s
FFC Flin Flon 56.70 42 P **P** **04 08 53.9 0.0**
FFC IAmb IAmb 04 08 55.8
comp=Z,18nm,0.8s
N2ST Straumen 56.74 342 *eP* **P** **04 08 53.6 -0.3**
N2SV S rvVgen 56.75 343 *eP* **P** **04 08 53.2 -0.7**
FAUS Fauske 56.77 342 *eP* **P** **04 08 53.6 -0.6**
O03E Paynes Creek 56.78 66 P 04 08 56.4
baz=313,SNR=15
FCC Fort Churchill 56.84 35 IAmb IAmb 04 08 55.7
comp=Z,19nm,0.5s
NBB08 Skaug oppvekst 56.89 342 *eP* **P** **04 08 54.6 -0.3**
KHLT Khaolaem Dam 56.93 250 P **P** **04 08 58.3 +2.3**
comp=Z,14nm,0.6s
HOPS Hopland Field 56.95 68 IAmb IAmb 04 08 58.3
comp=Z,27nm,1.1s
N2VA Vr_y 57.01 343 *eP* **P** **04 08 55.2 -0.5**
WVOR Wild Horse Val 57.09 62 IAmb IAmb 04 09 00.2
comp=Z,19nm,1.0s
GTOI Gorontalo 57.15 217 P **P** **04 08 57.1 -0.3**
comp=Z,178nmcomp=Z,8.6nm,0.7s
GDXM Geysers 57.23 68 IAmb IAmb 04 09 01.5
comp=Z,18nm,1.0s
N2RO R_st 57.24 343 *eP* **P** **04 08 56.9 -0.4**
NBB05 Inndyr 57.31 342 *eP* **P** **04 08 57.4 -0.5**
NBB30 Finnes 57.43 342 *eP* **P** **04 08 58.1 -0.5**
NBB17 Glomfjord BVr 57.52 342 *eP* **P** **04 08 58.9 -0.4**
TOLI2 Tolitoli 57.56 219 P **P** **04 09 00.2 -0.1**
TOLI2 IAmb IAmb 04 09 01.5
comp=Z,20nm,0.9s
FAKI Fak Fak 57.57 205 P **P** **04 09 01.1 +0.8**
comp=Z,33nm,0.8s
DHRM DHARAMSHALA 57.57 282 *eP* **P** **04 08 59.4 -1.1**
DHRM AMP 04 09 02.6
MRSI Marisa 57.69 218 P **P** **04 09 01.6 +0.4**
BOK Bokaro 57.74 268⇑ *eP* **P** **04 09 01.7 +0.2**
BOK IAmb IAmb 04 09 03.0
comp=Z,30nm,0.9s
SMLA Simla 57.83 281⇑ *eP* **P** **04 09 01.7 -0.3**
PHET Kaeng Krachan 57.84 248 P **P** **04 09 03.7 +1.4**
comp=Z,416nmcomp=Z,43nm,0.7s
EGMT Eagleton 57.86 52 P 04 09 03.3
baz=314,SNR=7.5
DDI Dehra Dun 57.86 279 *eP* **P** **04 09 02.2 -0.1**
BEKR Beckworth 57.88 65 IAmb IAmb 04 09 05.2
comp=Z,15nm,0.9s
KONS Konsvik 57.96 342 *eP* **P** **04 09 01.8 -0.5**
NBB40 Tonnes 57.97 342 *eP* **P** **04 09 02.3 -0.1**
MOR8 Moi Rana 58.00 342 *eP* **P** **04 09 01.0 -1.6**
DLMT Dillon 58.28 56 IAmb IAmb 04 09 07.9
comp=Z,28nm,1.1s
NIL Nilore 58.42 285 P **P** **04 09 06.8 +0.8**
NIL pmax pmax
comp=Z,210nm,0.9s
NIL Nilore 58.42 285 P **P** **04 09 06.8 +0.8**
NIL Nilore 58.42 285 P **P** **04 09 06.8 +0.8**
PAHR Pah Rah Range 58.54 65 IAmb IAmb 04 09 09.8
comp=Z,18nm,1.0s
HLID Hailey 58.58 58 P 04 09 09.1
baz=314,SNR=10
BCYI Bear Canyon 58.59 57 P **P** **04 09 08.1 +0.8**
SANI Sanana 58.60 212 P **P** **04 09 07.2 -0.2**
comp=Z,42nm,1.0s
BOZ Bozeman (W) 58.60 55 IAmb IAmb 04 09 10.1
comp=Z,19nm,0.9s
BOZ Bozeman (W) 58.61 55 P 04 09 09.1
baz=314,SNR=31
BELG Belogornoye 58.68 316 P **P** **04 09 07.1 -0.3**
comp=Z,90nm,0.8s,baz=324,slow=1.0,SNR=21
BELG Belogornoye 58.68 316 *d* iP **P** **04 09 06.9 -0.5**
BELG pmax pmax
comp=Z,16nm,0.9s
ICESG Greenland Ices 58.81 5 *i* P **P** **04 09 08.2 -0.3**
ICESG IAmb IAmb 04 09 09.2
comp=Z,13nm,0.6s
APSI Ampana 59.08 218 P **P** **04 09 10.6 0.0**
comp=Z,589nmcomp=Z,76nm,1.0s
FIA1 FINESS Array S 59.30 334 P **P** **04 09 10.9 -0.5**
FIA1 IAmb IAmb 04 09 11.8
comp=Z,32nm,0.9s
FINES FINESS Array B 59.30 334 P **P** **04 09 10.8 -0.6**
comp=Z,22nm,0.8s,baz=37,slow=7.4,SNR=116
FINES PcP **PcP** **04 09 53.0 -1.2**
comp=Z,2.8nm,0.6s,baz=53,slow=4.3,SNR=3.8
FINES FINESS Array B 59.30 334 P **P** **04 09 10.1 -1.3**
YHB Horse Butte 59.41 55 IAmb IAmb 04 09 15.8
comp=Z,20nm,0.9s
YMR Madison River 59.59 55 IAmb IAmb 04 09 17.0
comp=Z,25nm,1.2s
YNR Norris Junctio 59.70 55 P **P** **04 09 16.8 +2.0**
SFJD Kangerlussuaq 59.93 11 *i* P **P** **04 09 14.6 -1.0**
SFJD Kangerlussuaq 59.93 11 *i* P **P** **04 09 14.6 -1.0**
NSS Namsos 59.94 342 *eP* **P** **04 09 15.3 -0.4**
H17A Grant Village 59.98 55 IAmb IAmb 04 09 21.1
comp=Z,20nm,1.0s
H17A Grant Village 59.98 55 P 04 09 20.2
baz=315,SNR=21
NVAR Mina Array Bea 60.03 65 P **P** **04 09 19.1 +2.1**
comp=Z,8.5nm,0.8s,baz=296,slow=6.7,SNR=44
NVAR PcP **PcP** **04 09 58.4 +0.4**
comp=Z,0.5nm,0.6s,baz=347,slow=3.7,SNR=1.2
NVAR pP **pP** **04 10 48.1 +1.2**
comp=Z,1.9nm,1.0s,baz=297,slow=7.9,SNR=3.6
NVAR ScP **ScP** **04 13 18.2 +1.9**
comp=Z,0.2nm,0.4s,baz=302,slow=5.2,SNR=3.6
NVAR Mina Array Bea 60.03 65 P **P** **04 09 18.2 +1.2**
LHV Little Huntoon 60.04 65 IAmb IAmb 04 09 20.6
comp=Z,24nm,1.1s
SBUM Sibu 60.05 229 P **P** **04 09 18.6 +1.5**
SBUM IAmb IAmb 04 09 21.3
comp=Z,35nm,0.8s
SBUM Sibu 60.05 229 P **P** **04 09 19.0 +1.8**
ELK Elko 60.10 61 P **P** **04 09 19.2 +1.7**
ELK pmax pmax
comp=Z,5.0nm,1.0s
ELK Elko 60.10 61 P **P** **04 09 19.2 +1.7**
RLMT Red Lodge 60.13 54 IAmb IAmb 04 09 20.8
comp=Z,25nm,1.1s
RLMT Red Lodge 60.13 54 P 04 09 19.8
baz=315,SNR=20
MOS Moscow 60.15 324 *eP* **P** **04 09 15.9 -1.3**
DGMT Dagmar 60.18 48 IAmb IAmb 04 09 19.9
comp=Z,28nm,1.1s
DGMT Dagmar 60.18 48 P 04 09 19.1
baz=316,SNR=5.3
KBL Kabul 60.28 289 P **P** **04 09 17.7 -1.1**
KBL pmax pmax
comp=Z,79nm,0.8s
KBL Kabul 60.28 289 P **P** **04 09 17.7 -1.1**
KBL Kabul 60.28 289 P **P** **04 09 17.7 -1.1**
SNR=30
LAO LASA Array 60.50 51 IAmb IAmb 04 09 22.7
comp=Z,17nm,0.9s
LAO LASA Array 60.50 51 P 04 09 21.8
baz=316,SNR=9.6
LOHW Long Hollow 60.52 56 IAmb IAmb 04 09 23.7
comp=Z,17nm,1.1s
SNOW Snow King Moun 60.55 56 IAmb IAmb 04 09 24.1
comp=Z,20nm,1.3s
AHID Auburn Ather 60.86 57 IAmb IAmb 04 09 25.3
comp=Z,20nm,1.3s
DY2G Dye2 60.89 9 *i* P **P** **04 09 21.3 -1.0**
DY2G IAmb IAmb 04 09 22.5
comp=Z,6.2nm,0.6s
OBN Obninsk 61.01 324 P **P** **04 09 23.3 +0.3**
comp=Z,3.0nm,0.5s,baz=175,slow=1.5,SNR=7.3
OBN Obninsk 61.01 324 *d* iP **P** **04 09 21.9 -1.1**
OBN 04 10 00.0
OBN *SP **sP** **04 11 39.0 -0.5**
OBN S S 04 17 24.0 +17
OBN SS **SS** **04 21 13.0 -1.2**
OBN pmax pmax
comp=Z,50nm,1.3s
OBN Obninsk 61.01 324 P **P** **04 09 22.4 -0.5**
TIN Tinemaha, Big 61.04 66 P 04 09 26.1
baz=315
SMMC Simmler 61.27 69 P 04 09 27.5
baz=316
BKB Balikpapan 61.28 222 P **P** **04 09 26.0 +0.6**
BKB Balikpapan 61.28 222 P **P** **04 09 25.9 +0.6**
comp=Z,3µmcomp=Z,183nm,0.8s
VES Vestal, Richgr 61.42 68 P 04 09 27.2
baz=316
PMG Port Moresby 61.42 187 P **P** **04 09 27.4 +1.2**
comp=Z,16nm,0.4s,baz=18,slow=7.1,SNR=7.7
PMG Port Moresby 61.42 187 *d* iP **P** **04 09 26.9 +0.8**
PMG pmax pmax
comp=Z,7.0nm,0.6s
PMG Port Moresby 61.42 187 P **P** **04 09 27.0 +0.8**
PMG IAmb IAmb 04 09 28.0
comp=Z,22nm,0.8s
TBLU Trondheim 61.42 342 *eP* **P** **04 09 23.3 -2.3**
CWC Cottonwood Cre 61.56 66 P 04 09 29.0
baz=316
VSU Vasula 61.57 331 *eP* **P** **04 09 26.2 -0.4**
VSU Vasula 61.57 331 *i* P **P** **04 09 26.0 -0.6**
VSU pmax pmax
comp=Z,65nm,0.8s
GRAC Grapevine Rang 61.57 66 P 04 09 29.4
baz=316,SNR=9.8
R11A Troy Canyon, C 61.60 63 P 04 09 29.0
baz=316,SNR=8.2
BW06 Boulder Array 61.66 56 IAmb IAmb 04 09 30.2
comp=Z,18nm,1.0s
PD31 Pinedale Array 61.66 56 IAmb IAmb 04 09 30.2
comp=Z,16nm,1.0s
PDAR Pinedale Array 61.66 56 P **P** **04 09 29.2 +1.4**
comp=Z,12nm,0.8s,baz=327,slow=1.9,SNR=93
PDAR pP **pP** **04 11 00.5 +2.3**
comp=Z,1.9nm,0.8s,baz=341,slow=3.1,SNR=4.0
PDAR Pinedale Array 61.66 56 P **P** **04 09 28.4 +0.6**
BW06 Boulder Array 61.66 56 P 04 09 29.4
baz=316,SNR=27
PKM Mcpherson Peak 61.67 69 P 04 09 30.0
baz=316
DUG Dugway, Tooele 61.79 60 P **P** **04 09 29.9 +1.3**
DUG pmax pmax
comp=Z,17nm,1.0s
DUG Dugway, Tooele 61.79 60 P **P** **04 09 29.9 +1.3**
DUG IAmb IAmb 04 09 31.7
comp=Z,17nm,1.0s
DUG Dugway, Tooele 61.79 60 P 04 09 30.7
baz=316,SNR=15
KSM Kuching 61.81 231 P **P** **04 09 29.8 +1.0**
KSM Kuching 61.81 231 P **P** **04 09 31.0 +2.2**
ISA Isabella, Lake 61.89 67 P **P** **04 09 30.1 +0.9**
ISA pmax pmax
comp=Z,6.0nm,1.0s
ISA Isabella, Lake 61.89 67 P **P** **04 09 30.1 +0.9**
ISA Isabella, Lake 61.89 67 P 04 09 30.0
baz=316,SNR=5.4
KRAB Krabi 61.90 245 P **P** **04 09 31.1 +1.7**
VRH Novokhopyorsk 62.03 318 *eP* **P** **04 09 28.3 -1.4**
VRH pmax pmax
comp=Z,60nm,0.7s
LPSR Galich'ya Gora 62.07 321 *eP* **P** **04 09 28.6 -1.4**
LPSR pmax pmax
comp=Z,50nm,0.7s
MTSE Matsula 62.20 333 *eP* **P** **04 09 29.2 -1.5**
TPNV Topopah Spring 62.23 65 IAmb IAmb 04 09 34.4
comp=Z,18nm,0.9s
FURC Furnace Creek, 62.23 66 P 04 09 33.6
baz=316,SNR=11
TPNV Topopah Spring 62.23 65 P 04 09 33.5
baz=316,SNR=18
LRMC Laurel Mtn Rad 62.47 67 P 04 09 34.6
baz=316,SNR=5.2
STKI Sintang 62.49 229 P **P** **04 09 34.1 +0.8**
ULM Lac du Bonnet 62.52 43 P **P** **04 09 33.2 +0.2**
comp=Z,4.9nm,0.4s,baz=318,slow=6.6,SNR=16
ULM PcP **PcP** **04 10 08.2 +0.6**
comp=Z,2.0nm,0.7s,baz=300,slow=7.0,SNR=4.1
ULM Lac du Bonnet 62.52 43 *c* iP **P** **04 09 32.9 -0.1**
MOL Molde 62.56 343 *eP* **P** **04 09 32.3 -0.7**
PRN Pahroc Range 62.57 64 P **P** **04 09 35.0 +1.3**
SPSI Sidrap Palu 62.60 218 P **P** **04 09 34.4 +0.5**
comp=Z,25nm,1.3s
EDW2 Edwards Air Fo 62.72 68 P 04 09 36.4
baz=316,SNR=9.7
MDND Maddock 62.72 46 IAmb IAmb 04 09 36.6
comp=Z,47nm,1.3s
MDND Maddock 62.73 46 P 04 09 35.6
baz=319
DOMB Dombas 62.76 342 *eP* **P** **04 09 34.2 -0.2**
BNSI Bone 62.87 218 P **P** **04 09 36.4 +0.7**
comp=Z,37nm,1.1s
SHOC Shoshone, Teco 62.97 66 P 04 09 37.6
baz=316
AKN Aaknes 63.02 343 *eP* **P** **04 09 36.2 +0.1**
VSR Storozhevoye 63.05 320 *eP* **P** **04 09 35.2 -1.2**
VSR pmax pmax
comp=Z,40nm,0.8s
VORD Divnogorie 63.19 320 *eP* **P** **04 09 36.2 -1.1**
VORD pmax pmax
comp=Z,30nm,0.7s
RDMU Red Mountain 63.24 58 P **P** **04 09 39.4 +1.3**
RDMU IAmb IAmb 04 09 41.0
comp=Z,20nm,1.0s
NB2 NORSAR Subarra 63.24 340 P **P** **04 09 36.8 -0.8**
baz=27,slow=6.5
NOA NORSAR Array B 63.24 340 P **P** **04 09 37.1 -0.5**
comp=Z,20nm,0.7s,baz=27,slow=6.4,SNR=114
NOA PcP **PcP** **04 10 09.0 -1.4**
comp=Z,1.8nm,0.8s,baz=30,slow=2.9,SNR=3.3
K22A Casper 63.28 54 P 04 09 39.4
baz=317,SNR=6.4
TMUT Trail Mountain 63.30 60 IAmb IAmb 04 09 41.4
comp=Z,13nm,0.9s
NBO00 NORSAR Array S 63.34 341 IAmb IAmb 04 09 38.7
comp=Z,36nm,0.9s
BHPL Bhopal 63.37 274 *eP* **P** **04 09 37.3 -1.7**
BHPL IAmb IAmb 04 09 38.5
comp=Z,102nm,0.8s
BFSC Mount Baldy Ra 63.38 68 P 04 09 40.8
baz=316,SNR=5.6
P17A Butcher Ranch, 63.42 59 IAmb IAmb 04 09 42.2
comp=Z,20nm,1.3s
RSSD Black Hills 63.43 52 P **P** **04 09 40.2 +0.9**
RSSD pmax pmax
comp=Z,14nm,0.8s
RSSD Black Hills 63.43 52 P **P** **04 09 40.2 +0.9**
RSSD IAmb IAmb 04 09 41.3
comp=Z,14nm,0.8s
KBKI Kotabaru 63.43 222 P **P** **04 09 39.7 +0.4**
comp=Z,56nm,0.9s
RSSD Black Hills 63.43 52 P 04 09 40.5
baz=318
NC602 NORSAR Array S 63.45 340 IAmb IAmb 04 09 39.5
comp=Z,32nm,1.1s
NORES NORESS Array B 63.45 340 P **P** **04 09 38.3 -0.6**
NAO01 NORSAR Array S 63.49 340 IAmb IAmb 04 09 46.0
comp=Z,26nm,1.1s
TUQ Turquoise Moun 63.50 66 P 04 09 41.7
baz=317,SNR=13
KULM Kulim 63.51 242 P **P** **04 09 39.6 -0.3**
KULM IAmb IAmb 04 09 42.4
comp=Z,18nm,0.6s
HFS Hagfors 63.53 339 P **P** **04 09 38.7 -0.6**
comp=Z,12nm,0.4s,baz=35,slow=3.6,SNR=203
SLIT Slitere, Latvi 63.55 333 *eP* **P** **04 09 39.6 +0.1**
KAPI Kappang 63.57 218 P **P** **04 09 41.3 +1.0**
comp=Z,10.0nm,0.6s,baz=11,slow=2.6,SNR=9.3
KAPI Kappang 63.57 218 P **P** **04 09 41.2 +1.0**
KAPI pmax pmax
comp=Z,32nm,1.3s
KAPI Kappang 63.57 218 P **P** **04 09 41.2 +1.0**
KAPI IAmb IAmb 04 09 42.4
comp=Z,32nm,1.2s
HEC Hector,Ludlow 63.70 67 P 04 09 42.9
baz=317,SNR=16
BBRC Big Bear Solar 63.78 67 P 04 09 43.7
baz=317
SRU San Rafael Swe 63.80 60 IAmb IAmb 04 09 44.3
comp=Z,16nm,0.9s
IPM Ipoh 63.98 241 P **P** **04 09 42.7 -0.3**
IPM Ipoh 63.98 241 P **P** **04 09 43.0 0.0**
GEYT Alibeck 64.01 299 P **P** **04 09 43.5 +0.6**
comp=Z,55nm,0.7s,baz=29,slow=3.4,SNR=66
GEYT Alibeck 64.01 299 P **P** **04 09 43.2 +0.3**
AGMN Agassiz Nation 64.02 44 P 04 09 43.0
baz=320,SNR=5.4
PKCU Pink Cliffs 64.05 62 IAmb IAmb 04 09 47.0
comp=Z,14nm,1.0s
KNB Kanab 64.08 63 IAmb IAmb 04 09 46.9
comp=Z,12nm,1.0s
HYA Hoyanger 64.11 343 *eP* **P** **04 09 43.0 0.0**
MURC Murrieta 64.11 68 P 04 09 45.0
baz=317
GMRC Granite Mounta 64.12 66 P 04 09 45.6
baz=317,SNR=9.9
BBKI Banjar Baru 64.13 224 P **P** **04 09 45.3 +1.4**
comp=Z,5µmcomp=Z,61nm,0.8s
SKAR Skarslia 64.16 342 *eP* **P** **04 09 43.2 -0.3**
ISAL Salakas 64.16 330 *eP* **P** **04 09 43.5 0.0**
IDID Didziasalis 64.19 329 *eP* **P** **04 09 43.7 +0.1**
O20A White River Ci 64.25 57 IAmb IAmb 04 09 46.9
comp=Z,15nm,0.7s
O20A White River Ci 64.25 57 P 04 09 46.0
baz=318,SNR=14
HRA Herat 64.30 293 P **P** **04 09 44.9 -0.1**
IIGN Ignalina 64.32 330 *eP* **P** **04 09 44.8 +0.3**
OSL Oslo 64.35 340 *eP* **P** **04 09 44.6 0.0**
SUE Sulen 64.46 344 *eP* **P** **04 09 44.8 -0.5**
MNK Minsk 64.50 328 *eP* **P** **04 09 46.0 +0.4**
MNK Minsk 64.50 328 *i* P **P** **04 09 44.8 -0.8**
comp=E,3.0nm,0.8s
MNK *i* P **P** **04 09 44.8 -0.8**
comp=N,41nm,0.9s
MNK *i* P **P** **04 09 44.8 -0.8**
comp=Z,68nm,0.8s
MNK *i* pP **pP** **04 11 15.4 -1.2**
MNK *i* sP **sP** **04 12 01.8 -1.3**
MNK *i* PP **PP** **04 12 13.0 -0.5**
MNK *i* PPP PPP 04 13 40.4
MNK *i* S **S** **04 17 49.4 0.0**
MNK *i* sS **sS** **04 20 31.8 +0.1**
MNK *i* SS **SS** **04 22 10.3 +2.1**
MNK *i* SSS SSS 04 25 27.2
MNK *i* LRM MLR 04 41 01.5
comp=E,7.0nm,17.5s
MNK *i* LRM MLR 04 41 01.5
comp=N,150nm,17.5s
MNK *i* LRM MLR 04 41 01.5
comp=Z,39nm,17.5s
BELC Belle Mtn. Jos 64.50 67 P 04 09 47.1
baz=317
NACGM Naroch 64.52 329 *i* P **P** **04 09 44.7 -1.1**
NACGM *i* P **P** **04 09 44.7 -1.1**
NACGM *i* P **P** **04 09 44.7 -1.1**
NACGM *i* pP pP 04 11 03.8 -13
NACGM *i* PP **PP** **04 12 19.3 +5.6**
NACGM *i* S **S** **04 17 43.4 -6.1**
NACGM *i* sS **sS** **04 20 24.3 -7.7**
NACGM *i* SS SS 04 21 51.2 -17
NACGM *i* SSS SSS 04 25 30.7
PFO Pinyon Flats O 64.52 68 *c* iP **P** **04 09 47.3 +1.0**
PFO pmax pmax
comp=Z,8.0nm,1.0s
PFO Pinyon Flats O 64.52 68 P **P** **04 09 47.4 +1.0**
PFO Pinyon Flats O 64.52 68 P 04 09 47.6
baz=317
KONO Kongsberg 64.85 341⇑ *eP* **P** **04 09 48.1 +0.3**
KONO pmax pmax
comp=Z,26nm,1.7s
KONO Kongsberg 64.85 341 *eP* **P** **04 09 47.5 -0.3**
PBKI Pangkalan Bun 64.85 227 P **P** **04 09 49.7 +1.3**
comp=Z,174nm,1.1s
IRM Iron Mountain 64.87 66 P 04 09 50.3
baz=317,SNR=8.0
N23A Red Feather La 64.87 55 P 04 09 50.2
baz=318,SNR=6.1
B35A Bob, Littlefor 64.88 43 IAmb IAmb 04 09 48.9
comp=Z,11nm,0.7s
PABE Paberze 64.88 331 *eP* **P** **04 09 47.8 -0.2**
BER Bergen 64.99 343 *eP* **P** **04 09 48.7 0.0**
PBUR Paburge 65.03 332 *eP* **P** **04 09 48.7 -0.3**
BC3 Big Chuckawall 65.06 67 P 04 09 51.3
baz=317
MONP2 Monument Peak 65.06 68 P 04 09 51.4
baz=317
ODD1 Odda 65.19 342 *i* P **P** **04 09 50.2 +0.1**
PDMCI Parker Dam,Lak 65.33 66 P 04 09 53.2
baz=318,SNR=5.3
IKP In-Ko-Pah, Jac 65.42 68 P 04 09 53.5
baz=317
SMCO Snowmass 65.61 57 P **P** **04 09 54.2 +0.6**
BLS5 Blasjo 65.68 342 *eP* **P** **04 09 53.3 +0.2**
ISCO Idaho Springs 65.85 56 IAmb IAmb 04 09 57.8
comp=Z,12nm,1.1s
ISCO Idaho Springs 65.85 56 P 04 09 56.6
baz=319,SNR=14
GLA Glamis 65.86 67 P 04 09 56.8
baz=318
WUAZ Wupatki 65.97 63 IAmb IAmb 04 09 58.7
comp=Z,14nm,1.1s
WUAZ Wupatki 65.97 63 P 04 09 58.0
baz=318,SNR=8.6
MMRI Maumere 66.02 214 P **P** **04 09 55.8 0.0**
KMY Karmoy 66.10 343 *eP* **P** **04 09 55.5 -0.1**
EYMN Ely 66.13 42 IAmb IAmb 04 09 56.8
comp=Z,8.4nm,0.7s
EYMN Ely 66.13 42 P 04 09 55.9
baz=322,SNR=7.4
GOF Gofitskoye 66.17 313⇓ *i* P **P** **04 09 56.6 +0.2**
GOF pmax pmax
comp=Z,140nm,0.7s
MVCO Mesa Verde 66.28 60 P 04 09 58.9
baz=318,SNR=9.2
DSRI Dabo 66.31 235 P **P** **04 09 59.1 +1.4**
comp=Z,14nm,0.8s
GROC Groznyy 66.33 310 *eP* **P** **04 09 56.9 -0.6**

GROC e 04 10 24.1
GROC e 04 12 26.8
GROC eS S 04 18 16.5 +4.7
GROC pmax pmax
comp=Z,22nm,0.8s
HOMB Homborsund 66.34 341 eP P 04 09 56.7 -0.5
SOEI Soe 66.39 211 P P 04 09 58.2 -0.1
SOEI lAmb lAmb 04 10 03.4
comp=Z,20nm,0.7s
PSI Prapat 66.52 242 P P 04 09 59.5 +0.4
comp=Z,15nm,0.7s,baz=360,slow=5.1,SNR=19
SNART Snartemo 66.54 341 iP P 04 09 58.6 +0.2
RPSI Rantau Prapat 66.61 242 lAmb lAmb 04 10 01.0
comp=Z,18nm,0.6s
Q24A Divide 66.72 56 P 04 10 01.6
baz=319
S22A 4UR Ranch, Cre 66.76 58 P 04 10 02.5
baz=319,SNR=10
OGNE Ogallala 66.79 53 P 04 10 01.8
baz=320,SNR=6.7
PPBI Pangkal Pinang 66.98 233 P P 04 10 03.1 +1.3
K31A O'Neill 67.08 50 lAmb lAmb 04 10 03.8
comp=Z,30nm,1.1s
NCK Nalchik 67.13 312⇓ eP P 04 10 02.7 +0.2
NCK pmax pmax
comp=Z,63nm,0.8s
E38A The Farm, Brul 67.17 43 lAmb lAmb 04 10 03.2
comp=Z,14nm,0.6s
KVAR Kislovodsk Arr 67.19 313 P P 04 10 04.6 +1.7
comp=Z,18nm,0.9s,baz=95,slow=22,SNR=7.3
KIV Kislovodsk 67.19 313 iP P 04 10 03.2 +0.3
SNR=9.9
KIV Kislovodsk 67.19 313 eP P 04 10 03.0 +0.1
KIV pmax pmax
comp=Z,89nm,1.0s
KIV MLR MLR
comp=Z,53nm,17.0s
KIV Kislovodsk 67.19 313 P P 04 10 03.2 +0.3
KIV lAmb lAmb 04 10 06.8
comp=Z,23nm,0.7s
KIV Kislovodsk 67.19 313 P P 04 10 03.1 +0.1
AKASG Malin Array Be 67.20 325 P P 04 10 01.7 -1.0
comp=Z,5.2nm,0.3s,baz=33,slow=6.2,SNR=82
AKASG Malin Array Be 67.20 325 P P 04 10 01.8 -1.0
AKASG lAmb lAmb 04 10 03.0
comp=Z,12nm,1.1s
AKBB Malin Array Si 67.20 325 d iP P 04 10 01.3 -1.4
ECSD EROS Data Cent 67.22 48 lAmb lAmb 04 10 04.2
comp=Z,22nm,0.7s
ECSD EROS Data Cent 67.22 48 P 04 10 03.5
baz=321,SNR=39
KBZ Khabaz 67.27 313 P P 04 10 03.7 +0.5
comp=Z,41nm,0.8s,baz=60,slow=3.4,SNR=76
KBZ Khabaz 67.27 313 d iP P 04 10 03.5 +0.3
KBZ pmax pmax
comp=Z,55nm,0.9s
GOET G??ttrup 67.33 340 iP P 04 10 04.2 +0.9
GOET lAmb lAmb 04 10 04.8
comp=Z,50nm,0.6s
BKNI Bangkinang 67.46 239 P P 04 10 05.7 +0.9
BKNI Bangkinang 67.46 239 P P 04 10 05.0 +0.2
comp=Z,Pumcomp=Z,119nm,0.8s
GUDG Gudauri 67.52 311 P P 04 10 06.1 +1.0
DDFL Dedoflistskaro 67.53 309 P P 04 10 06.8 +1.8
ZEI Tsey 67.54 311 eP P 04 10 03.6 -1.6
ZEI pmax pmax
comp=Z,24nm,0.9s
KMMI Kalianget 67.73 223 P P 04 10 07.3 +0.9
comp=Z,67nm,0.9s
SPMN Marine on St. 67.73 44 lAmb lAmb 04 10 06.9
comp=Z,6.4nm,0.7s
SPMN Marine on St. 67.74 44 P 04 10 06.4
baz=323
BSD Bornholm Skovb 67.74 336⇑ iP P 04 10 05.7 -0.2
BSD lAmb lAmb 04 10 06.3
comp=Z,15nm,0.7s
BSD Bornholm Skovb 67.74 336⇑ iP P 04 10 05.7 -0.2
BSD pmax pmax
comp=Z,15nm,0.7s
214A Organ Pipe Nat 67.81 66 lAmb lAmb 04 10 09.6
comp=Z,10nm,0.9s
214A Organ Pipe Nat 67.81 66 P 04 10 08.7
baz=318,SNR=7.7
PLAI Plampang 67.82 218 P P 04 10 06.0 -0.9
comp=Z,50nm,1.0s
MUD Monsted U'grnd 67.88 339 iP P 04 10 07.2 +0.4
MUD lAmb lAmb 04 10 07.8
comp=Z,11nm,0.6s
MUD Monsted U'grnd 67.88 339 iP P 04 10 07.1 +0.4
MUD pmax pmax
comp=Z,11nm,0.6s
ONI Oni 67.90 311 P P 04 10 08.3 +1.0
TWSI Taliwang, Sumb 68.08 219 P P 04 10 09.2 +0.6
comp=Z,14nm,1.0s
SRBI Singaraja 68.15 221 P P 04 10 09.5 +0.5
LLD Lille Linde 68.21 337 iP P 04 10 08.6 -0.2
LLD Lille Linde 68.21 337 iP P 04 10 08.6 -0.2
KZRT Kazreti 68.39 310 P P 04 10 10.7 +0.4
CHVG Ch'k'valeri 68.43 312 ⇑P P 04 10 11.2 +0.8
GSI Gunungsitoli 68.50 242 P P 04 10 11.9 +0.7
GSI Gunungsitoli 68.50 242 P P 04 10 13.0 +1.8
comp=Z,48nm,0.7s
RGN Rugen 68.65 336 eP P 04 10 11.7 +0.2
comp=Z,79nm,1.1s,baz=25,slow=5.9
TUC Tucson 68.68 65 P P 04 10 14.2 +2.0
TUC pmax pmax
comp=Z,7.0nm,1.2s
TUC Tucson 68.68 65 P P 04 10 14.2 +2.0
TUC Tucson 68.68 65 P 04 10 14.6
baz=319
GKP Gorka Klasztor 68.77 333 eP P 04 10 12.4 +0.1
GKP Gorka Klasztor 68.77 333 eP P 04 10 12.4 +0.1
AKH Akhalkalaki 68.80 311 ⇑P P 04 10 14.2 +1.3
AKH Akhalkalaki 68.80 311 P P 04 10 14.2 +1.3
SOC Sochi 68.81 314 eP P 04 10 11.5 -1.2
SOC e 04 12 48.3
SOC ePPP PPP 04 14 34.2
SOC eS S 04 18 40.6 -0.2
SOC eSS SS 04 23 12.7 -2.4
SOC eSSS SSS 04 26 35.0
SOC pmax pmax
comp=Z,25nm,0.8s
BGD Bogdanovka 68.87 310 P P 04 10 14.9 +1.5
BEL Belsk 69.00 331 eP P 04 10 14.0 +0.3
ANMO Albuquerque 69.06 60 ceP P 04 10 16.2 +1.6
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO Albuquerque 69.06 60 P P 04 10 15.5 +0.9
ANMO Albuquerque 69.06 60 P 04 10 16.4
baz=320
POO Poona 69.10 274 eP P 04 10 14.3 -0.6
POO lAmb lAmb 04 10 15.9
comp=Z,39nm,1.0s
GNI Garni 69.19 309 P P 04 10 16.5 +1.2
comp=Z,19nm,0.7s,baz=346,slow=8.3,SNR=13
GNI Garni 69.19 309 P P 04 10 16.6 +1.2
GNI Garni 69.19 309 d iP P 04 10 16.4 +1.2
GNI pmax pmax
comp=Z,65nm,1.7s
GNI Garni 69.19 309 P P 04 10 15.8 +0.5
GNI Garni 69.19 309 P P 04 10 16.4 +1.2
E43A Lone Tree Farm 69.21 40 P P 04 10 14.9 -0.2
SMRI Semarang 69.25 226 P P 04 10 16.7 +0.9
KRJI Kerinci 69.28 237 P P 04 10 16.3 +0.2
comp=Z,255nm,0.8s
LNIZ Loecknitz 69.38 335 eP P 04 10 15.9 0.0
comp=Z,37nm,0.7s,baz=25,slow=5.9
SKMB Sankelmark Bun 69.42 339 eP P 04 10 17.4 +1.3
comp=Z,40nm,0.7s,baz=25,slow=5.9
HORU Horodok 69.43 326 P P 04 10 15.7 -0.7
SORM Soroca 69.66 324 ⇑P P 04 10 17.0 -0.8
SORM Soroca 69.66 324 P P 04 10 16.9 -0.8
LHSI Lahat 69.72 234 P P 04 10 18.7 +0.2
comp=Z,62nm,0.8s
LVV L'vov 69.73 328 eP P 04 10 17.4 -0.7
MATQ Matagami 69.78 32 P 04 10 18.0
baz=330
SISI Saibi 69.88 240 P P 04 10 20.6 +1.1
comp=Z,57nm,0.7s
BSEG Bad Segeberg 69.94 338 eP P 04 10 19.2 0.0
comp=Z,16nm,0.8s,baz=25,slow=5.9
KMPD K-Podol'skiy 69.97 325 P P 04 10 18.0 -1.6
UGM Wanagama 69.98 226 P P 04 10 19.3 -0.8
comp=Z,61nm,1.4s
121A Cookes Peak, D 70.18 62 P 04 10 23.5
baz=320,SNR=7.2
SCIA State Center 70.19 47 lAmb lAmb 04 10 22.4
comp=Z,19nm,0.8s
SCIA State Center 70.19 47 P 04 10 21.9
baz=323,SNR=6.3
HLG Helgoland 70.26 339 eP P 04 10 21.3 +0.1
comp=Z,45nm,0.7s,baz=25,slow=5.9
KWP Kalwaria Pacla 70.32 328 eP P 04 10 22.0 +0.3
KWP Kalwaria Pacla 70.32 328 P P 04 10 21.9 +0.2
KWP pmax pmax
comp=Z,90nm,0.9s
KWP Kalwaria Pacla 70.32 328 P P 04 10 21.9 +0.2
MORS Morshin 70.36 327 P P 04 10 22.0 +0.1
RUE Ruedersdorf 70.41 335 eP P 04 10 21.9 -0.2
comp=Z,47nm,0.9s,baz=25,slow=5.9
MILM Milestii Mici 70.52 323 ⇑P P 04 10 22.2 -0.7
MILM Milestii Mici 70.52 323 P P 04 10 22.1 -0.7
KSV Kosov 70.67 326 P P 04 10 23.6 -0.2
JFWS Jewell Farm 70.69 44 lAmb lAmb 04 10 24.1
comp=Z,8.0nm,0.7s
JFWS Jewell Farm 70.69 44 P 04 10 23.2
baz=324
KASI Kota Agung 70.70 232 P P 04 10 23.2 -1.2
comp=Z,40nm,1.1s
KNRA Kununurra 70.70 205 P P 04 10 24.1 -0.2
OJC Ojcow 70.72 330 eP P 04 10 24.1 0.0
KSU1 Kansas State U 70.85 51 lAmb lAmb 04 10 25.6
comp=Z,10.0nm,0.8s
KSU1 Kansas State U 70.85 51 P 04 10 25.0
baz=322
FLTG Flechtingen 71.19 336 eP P 04 10 26.0 -0.7
comp=Z,24nm,1.0s,baz=25,slow=5.9
KSP Ksiaz 71.20 333 eP P 04 10 26.8 -0.1
KSP Ksiaz 71.20 333 P P 04 10 26.6 -0.3
EKA Eskdalemuir Ar 71.21 346 P P 04 10 26.6 -0.2
comp=Z,4.1nm,0.5s,baz=20,slow=5.5,SNR=19
BURAR Bucovina Array 71.22 326 ⇑P P 04 10 27.1 -0.1
BURAR Bucovina Array 71.22 326 P P 04 10 27.1 -0.1
BURAR Bucovina Array 71.22 326 P P 04 10 26.4 -0.8
VLDQ Val d'Or 71.26 33 P P 04 10 26.4 -0.8
NIE Niedzica 71.28 330 eP P 04 10 27.8 +0.4
NRDL Niedersach Rie 71.31 337 eP P 04 10 27.2 -0.2
comp=Z,16nm,0.9s,baz=25,slow=5.9
UZH Uzhgorod 71.33 328 ceP P 04 10 26.5 -1.2
UZH e 04 10 46.2
CRVS Cervenica-Dubn 71.36 329 eP P 04 10 27.9 0.0
CRVS pmax pmax
comp=Z,24nm,0.8s
CRVS Cervenica-Dubn 71.36 329 eP P 04 10 27.9 0.0
GLMI Grayling 71.44 39 P 04 10 28.5
baz=327
OSTC Ostas 71.48 333 eP P 04 10 28.7 +0.1
BIZ Bicaz 71.49 325 ⇓P P 04 10 28.5 -0.1
CHVC Chvalec 71.50 333 eP P 04 10 29.0 +0.3
ASSE Asse, Remlinge 71.51 337 eP P 04 10 28.5 -0.1
comp=Z,20nm,1.1s,baz=25,slow=5.9
OKC Ostrava-Krasne 71.56 331 eP P 04 10 29.4 +0.4
OKC Ostrava-Krasne 71.56 331 eP P 04 10 29.4 +0.4
TRSU Trosnyk 71.57 327 P P 04 10 29.6 +0.5
UPC Upice 71.58 333 eP P 04 10 29.4 +0.2
UPC Upice 71.58 333 eP P 04 10 29.4 +0.2
AMTX Amarillo 71.62 57 lAmb lAmb 04 10 31.8
comp=Z,8.4nm,0.6s
AMTX Amarillo 71.62 57 P 04 10 31.1
baz=321
DPC Dobruska-Polom 71.64 333 eP P 04 10 29.8 +0.3
DPC Dobruska-Polom 71.64 333 eP P 04 10 29.8 +0.3
CLL Collm 71.68 335 ⇓ iP P 04 10 29.2 -0.5
comp=Z,39nm,0.9s
CLL e(pP) pP 04 12 01.0 -2.0
CLL Collm 71.68 335 ⇓ iP P 04 10 29.2 -0.5
CLL e*PP pP 04 12 01.0 -2.0
CLL pmax pmax
comp=Z,39nm,0.9s
CLL Collm 71.68 335 eP P 04 10 28.9 -0.7
comp=Z,39nm,0.9s,baz=25,slow=5.9
TRPA Tarpa 71.68 328 ⇓P P 04 10 30.3 +0.6
KRLC Kraliky 71.75 332 eP P 04 10 30.2 0.0
KRLC Kraliky 71.75 332 eP P 04 10 30.2 0.0
BMR Baia Mare 71.76 327 ⇓P P 04 10 30.4 +0.2
MSTX Muleshoe 71.76 58 lAmb lAmb 04 10 32.5
comp=Z,11nm,0.9s
MSTX Muleshoe 71.76 58 P 04 10 31.7
baz=321
LANS Liptovska Anna 71.77 330 eP P 04 10 31.4 +1.1
LANS pmax pmax
comp=Z,33nm,0.9s
LANS Liptovska Anna 71.77 330 eP P 04 10 31.4 +1.1
MORC Moravsky Berou 71.79 332 eP P 04 10 30.6 +0.1
MORC Moravsky Berou 71.79 332 P P 04 10 30.4 -0.1
BRG Berggiesshubel 71.82 334 iP P 04 10 30.1 -0.4
BRG Amp 04 10 31.4
comp=Z,14nm,1.1s
BRG Berggiesshubel 71.82 334 eP P 04 10 29.9 -0.6
comp=Z,14nm,1.1s,baz=25,slow=5.9
CLZ Clausthal 71.85 337 eP P 04 10 30.9 +0.1
comp=Z,44nm,1.1s,baz=25,slow=5.9
P38A Dawn 71.87 48 lAmb lAmb 04 10 32.3
comp=Z,16nm,0.7s
FBE Freiberg 71.94 335 eP P 04 10 31.0 -0.2
comp=Z,30nm,1.1s,baz=25,slow=5.9
PVCC Panska Ves 71.96 334 eP P 04 10 31.6 +0.2
PVCC Panska Ves 71.96 334 eP P 04 10 31.6 +0.2
ARCR ARCALIA 71.97 326 ⇓P P 04 10 32.2 +0.7
TLCR 71.98 322 ⇑P P 04 10 31.3 -0.2
TLCR 71.98 322 P P 04 10 31.3 -0.2
IBBN Ibbenburen 72.03 339 eP P 04 10 31.5 -0.2
comp=Z,27nm,1.0s,baz=25,slow=5.9
KECS Kecovo 72.04 329 eP P 04 10 31.7 -0.2
KECS pmax pmax
comp=Z,15nm,1.1s
KECS Kecovo 72.04 329 eP P 04 10 31.7 -0.2
CTAO Charters Tower 72.08 187 P P 04 10 33.2 +0.9
CTAO pmax pmax
comp=Z,26nm,0.9s
CTAO Charters Tower 72.08 187 P P 04 10 33.2 +0.9
CTAO lAmb lAmb 04 10 34.1
comp=Z,26nm,0.8s
NEUB Neuenburg 72.08 336 eP P 04 10 31.7 -0.3
comp=Z,50nm,1.6s,baz=25,slow=5.9
MNTX Cornudas Mount 72.12 61 P 04 10 34.6
baz=321,SNR=13
VRI Vrincioaia 72.18 324 ⇑P P 04 10 32.8 0.0
VRI Vrincioaia 72.18 324 P P 04 10 32.7 0.0
PLOR Plostina 72.22 324 ⇑P P 04 10 33.0 0.0
PLOR Plostina 72.22 324 P P 04 10 33.0 0.0
GTTG Gottingen 72.22 337 eP P 04 10 32.8 -0.1
comp=Z,12nm,1.0s,baz=25,slow=5.9
CFR Carcaliu 72.24 323 ⇑P P 04 10 32.9 -0.2
CFR Carcaliu 72.24 323 P P 04 10 32.8 -0.2
TPGR Topolog 72.41 322 ⇓P P 04 10 34.1 0.0
PRA Prague 72.42 334 eP P 04 10 34.4 +0.4
PRA Prague 72.42 334 eP P 04 10 34.4 +0.4
KVT Kavak 72.44 315 P P 04 10 35.9 +1.5
PRU Pruhonice 72.46 333 eP P 04 10 34.5 +0.2
PRU Pruhonice 72.46 333 eP P 04 10 34.5 +0.2
VRAC Vranov 72.49 332 P P 04 10 34.9 +0.4
comp=Z,34nm,0.7s,baz=31,slow=5.7,SNR=62
VRAC Vranov 72.49 332 ⇓P P 04 10 34.8 +0.3
VRAC Vranov 72.49 332 eP P 04 10 34.8 +0.3
VYHS Vyhne 72.55 330 eP P 04 10 35.4 +0.6
VYHS Vyhne 72.55 330 eP P 04 10 35.4 +0.6
CJR Cluj-Napoca 72.56 326 ⇑P P 04 10 35.5 +0.6
DOPR Dopca 72.57 325 ⇑P P 04 10 35.7 +0.6
JAVC Velka Javorina 72.57 331 eP P 04 10 36.1 +1.1
P40A Paris 72.63 47 lAmb lAmb 04 10 36.6
comp=Z,19nm,0.6s
TANN Tannenbergstha 72.63 335 eP P 04 10 35.0 -0.3
comp=Z,23nm,1.7s,baz=25,slow=5.9
MOX Moxa 72.64 336 eP P 04 10 35.0 -0.3
comp=Z,22nm,1.1s,baz=25,slow=5.9
WERD Werda 72.64 335 eP P 04 10 35.1 -0.2
comp=Z,20nm,1.1s,baz=25,slow=5.9
PLN Plauen 72.65 335 eP P 04 10 35.2 -0.2
comp=Z,15nm,0.8s,baz=25,slow=5.9
GUNZ Gunzen 72.71 335 eP P 04 10 35.6 -0.2
comp=Z,15nm,0.8s,baz=25,slow=5.9
PSZ Piszkesteto 72.72 329 ⇑P P 04 10 36.7 +0.7
PSZ Piszkesteto 72.72 329 lAmb lAmb 04 10 37.3
comp=Z,21nm,0.9s
HARR Harsova 72.73 322 ⇑P P 04 10 35.9 0.0
HARR Harsova 72.73 322 P P 04 10 35.9 0.0
KRUC Moravsky 72.77 332 eP P 04 10 36.3 +0.2
WERN Wernitzgruen 72.77 335 eP P 04 10 36.0 -0.1
comp=Z,22nm,0.8s,baz=25,slow=5.9
MLR Muntele Rosu 72.78 324 P P 04 10 36.4 0.0
comp=Z,30nm,0.6s,baz=352,slow=5.1,SNR=135
MLR Muntele Rosu 72.78 324 ⇑P P 04 10 36.4 0.0
MLR ⇑P P 04 10 37.2 +0.8
DRGR 72.79 327 ⇓P P 04 10 36.3 0.0
DRGR 72.79 327 P P 04 10 35.8 -0.6
DRGR pmax pmax
comp=Z,22nm,0.8s
NKC Novy Kostel 72.80 335 eP P 04 10 36.0 -0.3
NKC Novy Kostel 72.80 335 eP P 04 10 36.0 -0.3
TLBR Topalu 72.81 322 ⇓P P 04 10 36.2 -0.2
D55A Sainte-Anne-du 72.88 33 P 04 10 36.7
baz=331
ISR Istrita 72.88 324 ⇑P P 04 10 37.2 +0.3
ISR Istrita 72.88 324 P P 04 10 37.2 +0.3
PBCC Pribram 72.89 334 eP P 04 10 37.2 +0.4
UBBA Unterbreizbach 72.89 337 eP P 04 10 36.4 -0.2
comp=Z,7.5nm,0.8s,baz=25,slow=5.9
KASTN Kahler Asten 72.91 338 eP P 04 10 36.7 -0.2
comp=Z,19nm,1.0s,baz=25,slow=5.9
BUG Bochum-Univer 72.95 338 eP P 04 10 36.7 -0.4
comp=Z,30nm,1.2s,baz=25,slow=5.9
SMOL Smolenice 72.95 331 eP P 04 10 38.0 +0.8
SMOL pmax pmax
comp=Z,16nm,0.8s
SMOL Smolenice 72.95 331 eP P 04 10 38.0 +0.8
MFTR Murfatlar 72.98 322 ⇓P P 04 10 37.5 +0.1
HDIL Hopedale 73.02 45 P 04 10 37.7
baz=325
D56A ZEC Mazanza, M 73.08 32 P 04 10 38.4
baz=332
MANZ Manzenberg 73.12 335 eP P 04 10 37.8 -0.3
comp=Z,14nm,0.9s,baz=25,slow=5.9
MODS Modra-Piesok 73.13 331 eP P 04 10 39.1 +0.9
MODS pmax pmax
comp=Z,28nm,0.9s
MODS Modra-Piesok 73.13 331 eP P 04 10 39.1 +0.9
VOIR 73.15 325 ⇓P P 04 10 38.8 +0.3
VOIR 73.15 325 P P 04 10 38.8 +0.3
WMOK Wichita Mounta 73.22 55 P 04 10 39.7
baz=322,SNR=8.4
OK031 S. Brethren Rd 73.22 53 lAmb lAmb 04 10 40.5
comp=Z,19nm,0.9s
OK030 Cody Creek RV 73.27 53 lAmb lAmb 04 10 40.8
comp=Z,12nm,0.8s
ROTZ Rotzenmuhle 73.29 335 eP P 04 10 39.1 0.0
comp=Z,19nm,0.9s,baz=25,slow=5.9
SRO Srobarova 73.31 330 eP P 04 10 39.8 +0.6
SRO pmax pmax
comp=Z,34nm,0.8s
SRO Srobarova 73.31 330 eP P 04 10 39.8 +0.6
SRO2 Moca 73.33 330 eP P 04 10 39.0 -0.3
SRO2 pmax pmax
comp=Z,33nm,1.0s
SRO2 Moca 73.33 330 eP P 04 10 39.0 -0.3
ARR Arges 73.36 325 ⇑P P 04 10 40.7 +1.0
BUD Budapest 73.38 329 P P 04 10 40.3 +0.7
BUD pmax pmax
comp=Z,42nm,0.9s
E56A St. Veronique 73.44 32 P 04 10 39.9
baz=331
KHC Kasperske Hory 73.50 334 d iP P 04 10 40.5 +0.2
KHC pmax pmax
comp=Z,54nm,0.9s
KHC Kasperske Hory 73.50 334 eP P 04 10 40.6 +0.2
KHC Kasperske Hory 73.50 334 lAmb lAmb 04 10 41.7
comp=Z,26nm,0.8s
R40A Maddies Statio 73.53 48 P P 04 10 40.4 -0.3
R40A pP pP 04 12 15.4 +0.6
WRAB Tennant Creek 73.54 198 d iP P 04 10 41.4 +0.6
WRAB pmax pmax
comp=Z,38nm,0.7s
WRAB Tennant Creek 73.54 198 P P 04 10 41.4 +0.6
WRA Warramunga Arr 73.55 198 P P 04 10 41.6 +0.8
comp=Z,38nm,0.5s,baz=15,slow=6.1,SNR=430
WRA Warramunga Arr 73.55 198 P P 04 10 41.0 +0.1
PALK Pallekele 73.55 261 P P 04 10 40.8 -0.3
comp=Z,7.4nm,0.6s,baz=130,slow=6.2,SNR=12
PALK Pallekele 73.55 261 d iP P 04 10 40.6 -0.6
PALK pmax pmax
comp=Z,12nm,0.9s
PALK Pallekele 73.55 261 P P 04 10 40.9 -0.3
PALK lAmb lAmb 04 10 41.3
comp=Z,9.9nm,0.8s
PALK Pallekele 73.55 261 P P 04 10 40.9 -0.2
CKRC Cesky Krumlov 73.58 333 eP P 04 10 40.7 -0.1
SIRR Siria 73.60 327 ⇑P P 04 10 41.2 +0.2
GRF Grafenberg Arr 73.62 335 eP P 04 10 41.1 +0.1
comp=Z,42nm,0.8s,baz=25,slow=5.9
GRFO Grafenberg 73.62 335 P P 04 10 41.2 +0.2
GRFO pmax pmax
comp=Z,37nm,0.8s
GRFO Grafenberg 73.62 335 P P 04 10 41.2 +0.2
MALT Malatya 73.62 312 P P 04 10 42.2 +0.9
I51A Listowel 73.68 38 P 04 10 41.4
baz=329
WET Wettzell 73.68 334 eP P 04 10 41.6 +0.2
comp=Z,31nm,1.1s,baz=25,slow=5.9
O44A Mansfield 73.71 45 lAmb lAmb 04 10 42.1
comp=Z,13nm,0.5s
GEC2 GERESS Array S 73.73 333 lAmb lAmb 04 10 42.5
comp=Z,13nm,0.8s
GEC2 GERESS Array S 73.73 333 eP P 04 10 41.4 -0.4
comp=Z,14nm,0.7s,baz=25,slow=5.9
GERES GERESS Array B 73.73 333 P P 04 10 41.6 -0.2
comp=Z,11nm,0.6s,baz=36,slow=5.4,SNR=112
GERES PP PP 04 13 33.9 +1.4
comp=Z,1.4nm,0.9s,baz=32,slow=7.8,SNR=4.7
TUL1 Leonard 73.77 52 P 04 10 42.9
baz=323
TNS Taunus Mts 73.81 337 eP P 04 10 41.9 -0.3
comp=Z,26nm,0.7s,baz=25,slow=5.9
AHRW Bad Neuenahr-A 73.84 338 eP P 04 10 42.3 +0.1
comp=Z,30nm,1.1s,baz=25,slow=5.9
FITZ Fitzroy Crossi 73.86 207 lAmb lAmb 04 10 44.8
comp=Z,28nm,0.9s
SGRR Ingureni 73.86 323 ⇑P P 04 10 41.7 -0.7
BEBN Eben Emael 73.91 339 dP P 04 10 42.3 -0.2
H53A Bobcaygeon 73.92 36 P 04 10 42.4
baz=330
AAM Ann Arbor 73.93 40 P 04 10 43.4
baz=328
CONA Conrad Observa 73.94 332 i P P 04 10 43.6 +0.6
comp=Z,22nm,0.6s,SNR=17
SOP Sopron 73.96 331 P P 04 10 43.8 +0.9
SOP pmax pmax
comp=Z,34nm,1.0s
GZR Gura Zlata 73.99 326 ⇓P P 04 10 42.9 -0.3
BTNL Ternell 74.01 339 dP P 04 10 42.9 -0.3
BTNL dPcP PcP 04 10 56.6 +0.6
MEM Membach 74.02 339 dP P 04 10 43.0 -0.2
comp=Z,24nm,1.0s
SHME Shamm 74.02 292 i P P 04 10 42.9 -0.7
SNR=16
SHME Shamm 74.02 292 P P 04 10 43.3 -0.4
SNR=9
U38A Gravette 74.03 51 lAmb lAmb 04 10 44.5
comp=Z,7.7nm,0.7s
BANOM Banah 74.03 292 i P P 04 10 43.2 -0.5
SNR=30
BANOM Banah 74.03 292 P P 04 10 44.0 +0.3
SNR=11
SFIN Lafayette 74.12 44 P 04 10 43.9
baz=326
BSTI Sart Tilman 74.14 339 dP P 04 10 44.3 +0.4
BSTI dPcP PcP 04 10 55.8 -0.7
E58A La Victoria 74.16 31 P 04 10 44.1
baz=332
BZS Buzias 74.19 327 ⇑P P 04 10 44.0 -0.3
BZS Buzias 74.19 327 P P 04 10 43.4 -0.9
BZS pmax pmax
comp=Z,50nm,1.2s
CCM Cathedral Cave 74.19 48 P P 04 10 44.6 +0.1
CCM pP pP 04 12 19.0 +0.2
CCM Cathedral Cave 74.19 48 P 04 10 44.5
baz=325
BHOU Houvegnez 74.25 339 dP P 04 10 44.3 -0.3
BCLA Clavier 74.35 339 dP P 04 10 44.9 -0.2
comp=Z,15nm,1.0s
HHAR Hobbs 74.37 51 P P 04 10 45.6 +0.1
HHAR lAmb lAmb 04 10 46.4
comp=Z,9.3nm,0.6s
BGES Gesves 74.43 339 dP P 04 10 45.3 -0.3
MOA Molln 74.48 333 iP P 04 10 46.0 +0.1

comp=Z,12nm,0.7s,SNR=7.7
MDH Madha 74.51 291 *i* P P 04 10 45.4 -1.0
SNR=7.1
MDH Madha 74.51 291 P P 04 10 46.1 -0.4
SNR=5.2
MASF Masafi 74.53 291 P P 04 10 46.5 -0.2
SNR=5.4
MASF P P 04 10 46.5 -0.2
SNR=5.4
MSFE Esma-Masafi 74.54 291 *i* P P 04 10 46.1 -0.6
SNR=6.6
HERR Herculane 74.56 326 ⇓P P 04 10 45.6 -0.8
BMRD Maredsous 74.57 340 *d*P P 04 10 46.2 -0.2
comp=Z,23nm,1.1s
BR131 Keskin Array S 74.59 316 IAmb IAmb 04 10 47.8
comp=Z,27nm,0.8s
BRTR Keskin Array B 74.59 316 P P 04 10 46.8 -0.1
comp=Z,14nm,0.8s,baz=42,slow=2.7,SNR=53
BRTR Keskin Array B 74.59 316 P P 04 10 46.0 -0.9
BRTR Keskin Array B 74.59 316 P P 04 10 46.0 -0.9
FVM French Village 74.62 47 IAmb IAmb 04 10 47.9
comp=Z,14nm,0.6s
MORH Mrgy, Hungar 74.63 329 ⇑P P 04 10 46.3 -0.4
MORH Mrgy, Hungar 74.63 329 ⇓*i*P P 04 10 45.8 -1.0
ARSA Arzberg 74.66 332 *i* P P 04 10 47.4 +0.5
comp=Z,15nm,0.8s,SNR=7.7
G57A Newington 74.72 33 P 04 10 46.9
baz=332
GIVF Givet 74.75 340 *e*P P 04 10 46.4 -1.0
GIVF pmax pmax
comp=Z,16nm,1.0s
DOU Dourbes 74.81 340 *d*P P 04 10 47.8 +0.1
U40A Yellville 74.82 50 P 04 10 48.4
baz=324,SNR=25
UOSS Minazif 74.84 291 *i* P P 04 10 47.4 -0.9
SNR=23
UOSS Minazif 74.84 291 P P 04 10 47.5 -0.9
UOSS Minazif 74.84 291 P P 04 10 47.5 -0.9
ANTO Ankara 74.84 317 P P 04 10 48.1 -0.1
ANTO pmax pmax
comp=Z,31nm,0.7s
ANTO Ankara 74.84 317 P P 04 10 48.1 -0.1
BR231 Keskin MP Arra 74.87 317 IAmb IAmb 04 10 49.6
comp=Z,22nm,0.7s
WLF Walferdange 74.87 339 P P 04 10 49.3 +1.2
WLF pmax pmax
comp=Z,18nm,0.9s
WLF Walferdange 74.87 339 P P 04 10 49.3 +1.2
WLF IAmb IAmb 04 10 50.6
comp=Z,18nm,0.9s
WLF Walferdange 74.87 339 *e*P P 04 10 49.8 +1.8
comp=Z,21nm,0.9s,baz=25,slow=5.9
TX31 Lajitas Ar. Si 74.88 62 IAmb IAmb 04 10 51.2
comp=Z,30nm,1.1s
TXAR Lajitas Array 74.89 62 P P 04 10 50.5 +1.9
comp=Z,4.4nm,0.5s,baz=298,slow=5.1,SNR=42
TXAR pP pP 04 12 24.7 +1.5
comp=Z,1.6nm,0.9s,baz=270,slow=2.5,SNR=5.5
TXAR Lajitas Array 74.89 62 P P 04 10 49.7 +1.1
TXAR pP 04 12 23.7 +0.5
MDVR Moldovita 74.89 326 ⇑P P 04 10 47.4 -0.9
PUNG Punghina 74.91 325 ⇑P P 04 10 47.9 -0.5
BAIF Baives 74.92 340 *e*P P 04 10 47.5 -0.9
BAIF pmax pmax
comp=Z,20nm,1.0s
HATD Hatta, Dubai 74.97 291 *i* P P 04 10 48.6 -0.5
SNR=17
HATD Hatta, Dubai 74.97 291 P P 04 10 48.6 -0.5
SNR=19
STU Stuttgart 74.98 336 P P 04 10 49.2 +0.5
STU Stuttgart 74.98 336 IAmb IAmb 04 10 49.6
comp=Z,21nm,0.8s
STU Stuttgart 74.98 336 *e*P P 04 10 48.4 -0.3
comp=Z,25nm,0.9s,baz=25,slow=5.9
FUR Furstenfeldbru 75.01 335 *e*P P 04 10 48.9 0.0
comp=Z,38nm,0.9s,baz=25,slow=5.9
PLVB Pleven 75.08 324 ⇓P P 04 10 48.9 -0.4
JLN Jalan Bani Buh 75.11 287 P P 04 10 50.0 +0.1
SNR=6.7
NAZ Nazwa, Dubai 75.11 291 *i* P P 04 10 49.3 -0.6
SNR=9.0
NAZ Nazwa, Dubai 75.11 291 P P 04 10 49.2 -0.6
SNR=12
ASHO Ashiyiah 75.12 291 P P 04 10 49.5 -0.4
FRGS Fruska Gora 75.19 328 ⇑P P 04 10 50.0 0.0
FRGS Fruska Gora 75.19 328 ⇓*i*P P 04 10 49.5 -0.5
SMDO Samad 75.21 288 P P 04 10 50.2 -0.4
HOQ Hoqain 75.24 289 P P 04 10 50.0 -0.6
SNR=8.0
SOHO SOHO 75.27 290 *i* P P 04 10 49.7 -1.1
SNR=15
LONY Lake Ozonia 75.28 33 P 04 10 50.1
baz=332
SOKA Soboth 75.32 332 *i* P P 04 10 50.9 +0.1
comp=Z,21nm,0.7s,SNR=26
W39A Magazine 75.32 51 P 04 10 51.3
baz=324
PERS Pernice 75.33 332 *i* P P 04 10 50.9 +0.1
FAQ Al Faqa, Dubai 75.34 291 *i* P P 04 10 50.5 -0.8
SNR=8.9
FAQ Al Faqa, Dubai 75.34 291 P P 04 10 50.4 -0.8
SNR=11
SIUC Southern Illin 75.39 47 IAmb IAmb 04 10 52.2
comp=Z,13nm,0.6s
S44A Carbondale 75.39 47 IAmb IAmb 04 10 52.2
comp=Z,13nm,0.6s
KBA Koelnbreinsper 75.44 333 *i* P P 04 10 52.2 +0.7
comp=Z,58nm,0.6s,SNR=52
KBA Koelnbreinsper 75.44 333 P P 04 10 52.2 +0.7
ERPA Erie 75.52 38 P P 04 10 51.7 -0.1
ERPA Erie 75.52 38 P 04 10 52.0
baz=330
FCAR Ozark Folk Cen 75.55 50 IAmb IAmb 04 10 52.8
comp=Z,7.4nm,0.6s
L53A Girard 75.55 38 P 04 10 52.5
baz=329,SNR=5.5
H59A Cadyville 75.56 33 P 04 10 51.8
baz=332
ASUD Al Ashush, Dub 75.59 291 *i* P P 04 10 52.2 -0.3
SNR=25
ASUD Al Ashush, Dub 75.59 291 P P 04 10 52.1 -0.4
SNR=14
H58A Gabriels 75.59 33 P 04 10 52.2
baz=332
BFO Black Forest 75.60 337 P P 04 10 52.2 -0.1
BFO pmax pmax
comp=Z,19nm,0.8s
BFO Black Forest 75.60 337 P P 04 10 52.2 -0.1
BFO IAmb IAmb 04 10 53.0
comp=Z,19nm,0.8s
BFO Black Forest 75.60 337 *e*P P 04 10 51.8 -0.4
comp=Z,23nm,0.9s,baz=25,slow=5.9
PBMO Poplar Bluff 75.61 48 IAmb IAmb 04 10 53.3
comp=Z,8.0nm,0.6s
OBKA Obir 75.61 332 *i* P P 04 10 52.4 0.0
comp=Z,18nm,0.7s,SNR=13
HPIG 75.65 65 P P 04 10 54.2 +1.1
WATA Walderalm 75.69 334 *i* P P 04 10 53.2 +0.3
comp=Z,17nm,0.6s,SNR=11
JMDO Jabal Madar 75.71 288 P P 04 10 53.0 -0.2
SNR=9.0
WTTA Wattenberg 75.74 334 *i* P P 04 10 53.6 +0.4
comp=Z,36nm,0.8s,SNR=19
WTTA Wattenberg 75.74 334 P P 04 10 53.8 +0.6
UBR Ueberruh 75.76 335 *e*P P 04 10 52.9 -0.3
comp=Z,19nm,1.4s,baz=25,slow=5.9
MYKA Terra Mystica 75.76 333 *i* P P 04 10 53.0 -0.3
comp=Z,16nm,0.9s,SNR=11
RETA Reutte 75.77 335 *i* P P 04 10 53.3 +0.1
comp=Z,12nm,0.8s,SNR=6.9
CDF Champ du Feu 75.78 337 *e*P P 04 10 52.4 -0.9
CDF pmax pmax
comp=Z,33nm,0.9s
ALNE Al Ain 75.78 291 *i* P P 04 10 53.1 -0.5
SNR=5.9
ALNE Al Ain 75.78 291 P P 04 10 53.2 -0.5
SNR=16
E64A Bridgewater 75.79 28 P 04 10 53.9
baz=335
MOTA Moosalm 75.81 334 *i* P P 04 10 53.7 +0.1
comp=Z,31nm,0.9s,SNR=19
TEKS Tekeris 75.83 328 *e*P P 04 10 52.5 -1.1
P49A Miami Univ. Ec 75.83 43 P 04 10 53.6
baz=328
AJN Ajban 75.83 292 *i* P P 04 10 53.0 -0.8
SNR=5.5
AJN Ajban 75.83 292 P P 04 10 53.1 -0.8
SNR=11
M53A WI Miller and 75.83 39 P 04 10 54.1
baz=329
ARQ Araqi 75.89 290 P P 04 10 53.9 -0.4
SNR=7.2
SQTA Sankt Quirin 75.89 334 *i* P P 04 10 54.3 +0.3
comp=Z,24nm,0.7s,SNR=16
BOVS Bovan 75.90 326 ⇑P P 04 10 53.0 -0.9
MIAR Mount Ida 75.94 51 P 04 10 55.3
baz=324,SNR=5.9
BSY Bisya 75.95 289 P P 04 10 54.3 -0.3
SNR=9.7
WHAR Wooly Hollow 75.95 50 P P 04 10 54.5 +0.1
WHAR IAmb IAmb 04 10 55.6
comp=Z,12nm,0.7s
WHAR **pP** 04 12 29.8 +0.5
CRES Cresnjev 75.96 331 ⇓*i*P P 04 10 53.9 -0.4
ABTA Abfaltersbach 75.97 333 *i* P P 04 10 54.1 -0.3
comp=Z,23nm,0.8s,SNR=12
ECH Echery 75.99 337 IAmb IAmb 04 10 55.2
comp=Z,25nm,0.9s
K56A Middlesex 76.00 36 P 04 10 54.5
baz=331
LJU Ljubljana 76.04 332 *i* P P 04 10 54.3 -0.4
WHTX Lake Whitney, 76.07 56 P 04 10 56.2
baz=323
DIVS Divibare 76.07 327 ⇓*i*P P 04 10 54.3 -0.7
W41B Gary Mavity, V 76.07 50 P 04 10 55.7
baz=325,SNR=12
PLD Plovdiv 76.16 323 P P 04 10 55.9 +0.5
PLD pmax pmax
comp=Z,86nm,1.1s
M54A Oil Creek Stat 76.16 38 P 04 10 55.4
baz=330
DAVA Damuels 76.18 335 *i* P P 04 10 55.5 -0.1
comp=Z,22nm,0.9s,SNR=9.5
FETA Feichten 76.20 335 *i* P P 04 10 56.1 +0.3
comp=Z,17nm,0.7s,SNR=12
H61A Lyonville 76.23 31 P 04 10 56.4
baz=333
I59A Olmsteadville 76.25 33 P 04 10 55.7
baz=332
VTS Vitosha 76.25 324 ⇓P P 04 10 56.3 +0.2
VTS Vitosha 76.25 324 P P 04 10 55.9 -0.2
VTS pmax pmax
comp=Z,41nm,0.7s
VTS Vitosha 76.25 324 P P 04 10 55.9 -0.2
WCI Wyandotte Cave 76.25 44 P 04 10 56.5
baz=327
BOJS Bojanci 76.31 331 *i* P P 04 10 55.9 -0.3
J59A Piesco 76.33 34 P 04 10 56.2
baz=332
CEY Cerknica 76.35 332 ⇓*i*P P 04 10 55.8 -0.7
X40A Basin Creek Fa 76.35 51 P 04 10 57.5
baz=325
HAU Haudompre 76.38 338 *e*P P 04 10 56.2 -0.4
HAU pmax pmax
comp=Z,16nm,0.8s
BLY Banja Luka 76.40 329 ⇓*i*P P 04 10 55.9 -0.8
L56A Greenwood 76.41 36 IAmb IAmb 04 10 57.4
comp=Z,12nm,0.6s
L56A Greenwood 76.41 36 P 04 10 56.8
baz=331
HAPS Han Pijesak,Bl 76.43 328 *e*P P 04 10 56.0 -1.0
HINF Hinteralfeld 76.44 337 *e*P P 04 10 55.6 -1.4
HINF pmax pmax
comp=Z,7.0nm,0.9s
EDC Edincik 76.46 320 P P 04 10 57.1 0.0
BBLS Lazići 76.47 328 ⇓*i*P P 04 10 57.0 -0.2
N54A Moraine State 76.51 39 IAmb IAmb 04 10 58.6
comp=Z,9.6nm,0.8s
N54A Moraine State 76.51 39 P 04 10 57.7
baz=330
K58A Earlville 76.55 35 P 04 10 57.5
baz=332
TRI Trieste 76.57 332 P P 04 10 57.9 +0.3
TRI pmax pmax
comp=Z,30nm,0.7s
O53A New Philadelph 76.64 40 P 04 10 58.4
baz=329
DAVOX Dapos/Dischmat 76.65 335 P P 04 10 58.7 +0.4
comp=Z,18nm,0.7s,baz=6.2,slow=2.3,SNR=45
ALN Alexandroupoli 76.69 322 P P 04 10 57.7 -0.7
ALN pmax pmax
comp=Z,25nm,1.0s
ALN Alexandroupoli 76.69 322 P P 04 10 57.7 -0.7
ALN IAmb IAmb 04 10 59.0
comp=Z,25nm,1.0s
RUDO Rudo 76.70 327 *e*P P 04 10 56.8 -1.6
MGRS Mrkonjic Grad 76.73 329 *e*P P 04 10 58.8 +0.2
M56A Emporium 76.74 37 P 04 10 58.6
baz=330
L57A Andrews Acres 76.78 36 P 04 10 59.3
baz=331
K59A Cooperstown 76.81 34 P 04 10 59.1
baz=332
Q51A Peebles 76.82 42 IAmb IAmb 04 11 00.1
comp=Z,11nm,0.6s
CTI Castel Tesino 76.85 334 IAmb IAmb 04 10 59.5
comp=Z,24nm,0.9s
MHTO MHTO 76.86 287 P P 04 10 59.5 -0.1
SNR=19
T47A Sharon Grove 76.93 46 IAmb IAmb 04 11 01.0
comp=Z,11nm,0.7s
PLE Pljevlja 76.95 327 *e*P P 04 10 59.2 -0.8
FLN La Foliniere 77.09 342 *e*P P 04 10 59.5 -1.0
FLN pmax pmax
comp=Z,26nm,1.0s
L58A Harry Jones Me 77.10 35 P 04 11 00.7
baz=332
IVA Berane 77.19 327 *e*P P 04 11 00.7 -0.5
N56A West Decatur 77.19 37 P 04 11 01.3
baz=330
UPM Unac-Piva 77.23 328 *e*P P 04 11 00.7 -0.9
UPM Unac-Piva 77.23 328 *e*P P 04 11 00.2 -1.4
AS31 Alice Springs 77.25 198 P P 04 11 02.8 +1.2
AS31 IAmb IAmb 04 11 03.8
comp=Z,13nm,0.7s
ASAR Alice Springs 77.26 198 P P 04 11 03.1 +1.5
comp=Z,44nm,0.8s,baz=8.3,slow=5.2,SNR=365
ASAR Alice Springs 77.26 198 P P 04 11 02.3 +0.7
ASAR Alice Springs 77.26 198 P P 04 11 02.3 +0.7
M57A Sunshine Farm, 77.26 36 P 04 11 01.5
baz=331
CLF Chambon-Foret 77.26 340 IAmb IAmb 04 11 02.9
comp=Z,26nm,1.0s
L59A Walton 77.26 35 P 04 11 01.4
baz=332
WVT Waverly 77.32 47 P P 04 11 02.2 +0.2
WVT pmax pmax
comp=Z,5.0nm,0.7s
WVT Waverly 77.32 47 P P 04 11 02.1 +0.2
WVT Waverly 77.32 47 P 04 11 02.4
baz=327
KOME Kolasin 77.34 327 *e*P P 04 11 00.8 -1.2
SRS Serrai 77.43 323 P P 04 11 02.0 -0.5
SRS pmax pmax
comp=Z,50nm,0.9s
STIP Stip 77.43 325 ⇑*i*P P 04 11 01.4 -1.1
M58A Price's Panora 77.47 36 P 04 11 02.7
baz=331
GRR Gorron 77.52 343 *e*P P 04 11 02.0 -0.8
GRR pmax pmax
comp=Z,48nm,0.9s
NKY Niksic 77.55 327 *e*P P 04 11 02.1 -1.1
NKME Niksic 77.60 327 *e*P P 04 11 02.3 -1.1
N57A Milroy 77.61 37 P 04 11 03.6
baz=331
BRY Bratogost 77.62 328 ⇓*i*P P 04 11 02.2 -1.4
BRY Bratogost 77.62 328 *e*P P 04 11 02.0 -1.6
VAY Valandovo 77.62 324 P P 04 11 03.7 +0.2
VAY pmax pmax
comp=Z,42nm,0.9s
VAY Valandovo 77.62 324 ⇓*i*P P 04 11 03.4 -0.1
LOR Lormes 77.64 339 *e*P P 04 11 02.5 -1.0
LOR pmax pmax
comp=Z,31nm,0.9s
O56A Blue Knob Stat 77.65 38 IAmb IAmb 04 11 04.4
comp=Z,8.0nm,0.6s
O56A Blue Knob Stat 77.65 38 P 04 11 04.0
baz=330
Q53A Leroy 77.71 41 P 04 11 04.6
baz=329,SNR=8.0
CABF La Chapelle 77.75 337 *e*P P 04 11 03.5 -0.7
CABF pmax pmax
comp=Z,15nm,1.0s
PDG Podgorica 77.80 327 ⇑P P 04 11 04.0 -0.4
PDG Podgorica 77.80 327 ⇓*i*P P 04 11 03.5 -0.9
TTG Podgorica 77.80 327 *e*P P 04 11 03.3 -1.1
CEME Cevo 77.81 327 *e*P P 04 11 03.3 -1.3
TREB Trebinje 77.84 328 *e*P P 04 11 03.5 -1.2
T50A Nancy 77.89 44 IAmb IAmb 04 11 06.0
comp=Z,8.9nm,0.7s
U49A Red Boiling Sp 77.91 45 IAmb IAmb 04 11 06.2
comp=Z,7.6nm,0.6s
DQM DQM 77.93 287 P P 04 11 04.9 -0.6
OXF Oxford 77.94 49 P 04 11 06.0
baz=326
ROSF Rostrenen 78.00 344 *e*P P 04 11 04.7 -0.7
ROSF pmax pmax
comp=Z,23nm,0.8s
CLTN Cedars of Leba 78.02 46 IAmb IAmb 04 11 06.9
comp=Z,9.3nm,0.8s
BUM Brajici-Budva 78.04 327 *e*P P 04 11 04.7 -1.1
HCY Herceg Novi 78.04 327 *e*P P 04 11 04.2 -1.6
HCY Herceg Novi 78.04 327 *e*P P 04 11 04.4 -1.4
DRME Dracevica, Mon 78.04 327 ⇓*i*P P 04 11 04.9 -0.9
DRME Dracevica, Mon 78.04 327 *e*P P 04 11 04.7 -1.1
O57A Amberson 78.05 37 P 04 11 06.2
baz=331
N59A State Game Lan 78.12 36 P 04 11 06.3
baz=332
PLAL Pickwick Lake 78.17 47 P P 04 11 06.9 +0.4
PLAL IAmb IAmb 04 11 07.3
comp=Z,8.1nm,0.7s
AVF Avril sur Loir 78.20 339 *e*P P 04 11 05.8 -0.7
AVF pmax pmax
comp=Z,25nm,0.9s
P56A Dayton Farm, R 78.21 39 P 04 11 07.4
baz=330,SNR=6.4
ULC Ulcinj 78.22 327 *e*P P 04 11 05.8 -1.0
QUIF Quistinic 78.39 344 *e*P P 04 11 06.6 -0.9
QUIF pmax pmax
comp=Z,10.0nm,0.8s
Y45A Yeager Farm, C 78.41 49 IAmb IAmb 04 11 09.7
comp=Z,15nm,0.6s
OHR Ohrid 78.44 325 P P 04 11 08.3 +0.3
OHR pmax pmax
comp=Z,42nm,0.9s
OHR Ohrid 78.44 325 ⇓*i*P P 04 11 07.0 -0.9
R54A Victor 78.50 41 P 04 11 08.8
baz=329
FNA Florina 78.52 325 P P 04 11 07.4 -1.1
FNA pmax pmax
comp=Z,23nm,1.1s
FNA Florina 78.52 325 IAmb IAmb 04 11 08.4
comp=Z,16nm,0.8s
MBWA Marble Bar 78.54 212 P P 04 11 09.2 +0.6
TIR Tirane 78.55 326 ⇑P P 04 11 08.4 -0.2
TIR Tirane 78.55 326 P P 04 11 08.2 -0.3
TIR pmax pmax
comp=Z,89nm,0.7s
LPL La Plagne 78.62 337 *e*P P 04 11 09.0 -0.1
LPL pmax pmax
comp=Z,27nm,0.8s
LPG La Plagne 78.64 337 *e*P P 04 11 09.1 -0.2
LPG pmax pmax
comp=Z,36nm,0.8s
R55A Marlinton 78.76 40 IAmb IAmb 04 11 10.9
comp=Z,10.0nm,0.8s
R55A Marlinton 78.77 40 P 04 11 10.5
baz=330
BNI Bardonecchia 79.07 337 P P 04 11 11.1 -0.3
BNI pmax pmax
comp=Z,15nm,0.8s
BNI Bardonecchia 79.07 337 P P 04 11 11.1 -0.3
BNI IAmb IAmb 04 11 13.0
comp=Z,16nm,0.8s
OSSC Osservatorio P 79.29 333 IAmb IAmb 04 11 12.9
comp=Z,24nm,0.8s
MMAI Mount Meron Ar 79.37 311 P P 04 11 13.5 +0.4
comp=Z,40nm,0.7s,baz=41,slow=7.7,SNR=47
SSB Saint Sauveur 79.37 338 IAmb IAmb 04 11 14.2
comp=Z,21nm,0.9s
V52A Sevierville 79.42 44 IAmb IAmb 04 11 14.2
comp=Z,11nm,0.5s
U54A Nelsons Funny 79.59 42 P 04 11 14.7
baz=329
AGG Agios Georgios 79.73 323 IAmb IAmb 04 11 13.6
comp=Z,12nm,0.8s
AQU L'Aquila 79.73 331 P P 04 11 15.9 +1.0
AQU pmax pmax
comp=Z,47nm,0.9s
AQU L'Aquila 79.73 331 *e*P P 04 11 14.8 -0.1
AQU L'Aquila 79.73 331 IAmb IAmb 04 11 16.6
comp=Z,25nm,0.8s
VIVF Saint-Julien-l 79.74 338 *e*P P 04 11 14.5 -0.3
VIVF pmax pmax
comp=Z,25nm,0.9s
Y49A Blount Mountai 79.86 47 IAmb IAmb 04 11 16.3
comp=Z,7.0nm,0.6s
INTR Introdacqua 79.89 330 P P 04 11 15.0 -0.8
INTR IAmb IAmb 04 11 16.8
comp=Z,22nm,0.8s
LATE Laterza 79.97 332 IAmb IAmb 04 11 16.6
comp=Z,14nm,1.1s
IGT Igoumenitsa 80.00 325 P P 04 11 15.2 -1.1
IGT pmax pmax
comp=Z,21nm,0.9s
RJF Les Rejaudoux 80.01 340 *e*P P 04 11 15.8 -0.4
RJF pmax pmax
comp=Z,24nm,1.3s
S58A Poland Farm, P 80.16 39 P 04 11 17.4
baz=331
MATE Matera 80.24 328 ⇑P P 04 11 16.5 -1.0
CAF Calviac 80.25 340 *e*P P 04 11 17.4 -0.2
CAF pmax pmax
comp=Z,21nm,1.2s
LRAL Lakeview Retre 80.28 48 IAmb IAmb 04 11 18.4
comp=Z,6.6nm,0.6s
LRAL Lakeview Retre 80.28 48 P 04 11 17.9
baz=327,SNR=5.3
PAOL Paolisi 80.58 330 IAmb IAmb 04 11 19.3
comp=Z,9.9nm,0.8s
DOK Doka 80.95 289 P P 04 11 20.7 -0.9
SNR=6.1
KMSC Kings Mountain 80.97 43 P 04 11 21.6
baz=330
DMTO DMTO 81.18 287 P P 04 11 21.2 -1.5
TIP Timpagrande 81.55 327 ⇑P P 04 11 24.4 -0.1
TIP Timpagrande 81.55 327 IAmb IAmb 04 11 25.2
comp=Z,29nm,1.2s
WHFO Wadi Hawf 81.71 288 P P 04 11 24.1 -1.4
RAYN Ar Rayn 81.96 298 *i* P P 04 11 26.5 -0.3
SNR=18
RAYN Ar Rayn 81.96 298 P P 04 11 26.1 -0.7
RAYN pmax pmax
comp=Z,29nm,1.0s
RAYN Ar Rayn 81.96 298 P P 04 11 26.1 -0.7
RAYN IAmb IAmb 04 11 27.6
comp=Z,29nm,1.0s
IDI Anoyia 82.01 320 P P 04 11 24.9 -2.0
comp=Z,13nm,0.7s,baz=20,slow=12,SNR=7.7
EIL Elat 82.36 309 P P 04 11 28.7 0.0
comp=Z,36nm,0.8s,baz=344,slow=5.9,SNR=15
ABTO Aybut 82.43 288 P P 04 11 27.7 -1.6
352A Blakely 82.53 47 IAmb IAmb 04 11 31.2
comp=Z,12nm,0.6s
ETSF Etsaut 82.74 341 *e*P P 04 11 30.6 +0.1
ETSF pmax pmax
comp=Z,6.0nm,0.8s
STKA Stephens Creek 84.18 190 P P 04 11 38.8 +1.3
comp=Z,9.9nm,0.8s,baz=344,slow=7.9,SNR=25
STKA pP **pP** 04 13 16.6 +2.2
comp=Z,1.1nm,0.5s,baz=298,slow=9.6,SNR=1.9
STKA Stephens Creek 84.18 190 P P 04 11 38.0 +0.5
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 84.18 190 P P 04 11 38.0 +0.5
FORT Forrest 85.37 202 P P 04 11 43.5 +0.1
POLO Lamas de Olo 85.51 346 *e*P P 04 11 43.5 -0.8
PVRL Vila Real 85.59 346 *e*P P 04 11 43.8 -0.8
SOCY Socotra 86.08 285 IAmb IAmb 04 11 46.1
comp=Z,19nm,1.3s
PVIS Viseu 86.17 346 *e*P P 04 11 45.9 -1.5
MTE Manteigas 86.42 345 *e*P P 04 11 47.8 -0.8
ESDC Sonseca Array 86.52 343 P P 04 11 47.6 -1.5
comp=Z,3.3nm,1.0s,baz=6.2,slow=4.1,SNR=18
ESDC Sonseca Array 86.52 343 P P 04 11 48.1 -1.0
ESDC IAmb IAmb 04 11 49.1
comp=Z,13nm,1.2s
PCAS Casmilo, Conde 86.91 346 *e*P P 04 11 49.5 -1.4

PCBR	**Castelo Branco**	**86.96**	**345**	*eP*	**P**	**04 11 50.4**	**-0.7**
KEST	**Kesra**	**87.05**	**331**	P	**P**	**04 11 51.7**	**0.0**
	comp=Z,5.3nm,0.7s,baz=116,slow=1.5,SNR=6.2						
NWAO	**Narrogin (SRO)**	**90.29**	**210**	P	**P**	**04 12 06.6**	**+0.2**
MDT	**Midelt**	**93.29**	**341**	P	**P**	**04 12 19.2**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=264,slow=7.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**110.55**	**330**	PKiKP	**PKiKP**	**04 17 34.2**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=25,slow=2.2,SNR=5.9						
TORD				PP	**PP**	**04 18 13.8**	**-5.0**
	comp=Z,2.6nm,1.0s,baz=7.6,slow=7.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**110.55**	**330**		**PKiKP**	**04 17 33.5**	**-2.3**
DBIC	**Dimbokro**	**118.58**	**335**	PKP	**PKPdf**	**04 17 50.3**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=20,slow=2.8,SNR=6.3						
LSZ	**Lusaka**	**123.22**	**289**	PKiKP	**PKPdf**	**04 17 59.8**	**-0.4**
LSZ	**Lusaka**	**123.22**	**289**		**PKPdf**	**04 17 59.8**	**-0.4**
SAML	**Samuel**	**127.79**	**48**	PKiKP	**PKPdf**	**04 18 07.8**	**-1.0**
SAML	**Samuel**	**127.79**	**48**		**PKPdf**	**04 18 07.8**	**-1.0**
VNDA	**Vanda**	**129.40**	**178**	PKP	**PKPdf**	**04 18 10.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=335,slow=4.2,SNR=9.2						
VNDA				SKPbc	SKPbc	04 20 50.3	+0.1
	comp=Z,1.3nm,0.8s,baz=303,slow=6.0,SNR=5.8						
LPAZ	**La Paz**	**131.66**	**58**	PKP	**PKiKP**	**04 18 17.8**	**0.0**
	comp=Z,3.1nm,1.0s,baz=38,slow=2.8,SNR=5.7						
LPAZ				SKPbc	**SKPbc**	**04 21 01.6**	**+0.5**
	comp=Z,8.7nm,0.9s,baz=340,slow=3.8,SNR=19						
LPAZ	**La Paz**	**131.66**	**58**	PKiKP	**PKiKP**	**04 18 17.6**	**-0.3**
LPAZ	**La Paz**	**131.66**	**58**		**PKiKP**	**04 18 17.6**	**-0.3**
LBTB	**Lobatse**	**132.27**	**284**	PKiKP	**PKPdf**	**04 18 16.7**	**-0.4**
LBTB	**Lobatse**	**132.27**	**284**		**PKPdf**	**04 18 16.7**	**-0.4**
BOSA	**Boshof**	**135.12**	**281**	PKP	**PKiKP**	**04 18 23.6**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=54,slow=5.4,SNR=3.7						
BOSA	**Boshof**	**135.12**	**281**	PKiKP	**PKPdf**	**04 18 22.6**	**+0.2**
BOSA	**Boshof**	**135.12**	**281**		**PKPdf**	**04 18 22.6**	**+0.2**
MAW	**Mawson**	**136.70**	**214**	PKP	**PKPdf**	**04 18 24.4**	**+0.5**
	comp=Z,5.0nm,0.7s,baz=115,slow=5.8,SNR=8.0						
MAW				SKPbc	**SKPbc**	**04 21 14.9**	**0.0**
	comp=Z,2.4nm,0.8s,baz=30,slow=14,SNR=2.4						
MAW	**Mawson**	**136.70**	**214**	PKPdf	**PKPdf**	**04 18 24.2**	**+0.4**
BDFB	**Brasilia**	**139.95**	**33**	PKP	**PKPdf**	**04 18 32.7**	**+1.1**
	comp=Z,2.3nm,0.6s,baz=207,slow=6.8,SNR=3.4						
BDFB				pPKP	**pPKPdf**	**04 20 16.7**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=338,slow=2.5,SNR=3.0						
BDFB				SKPbc	**SKPbc**	**04 21 26.0**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=157,slow=27,SNR=2.1						
BDFB	**Brasilia**	**139.95**	**33**	PKiKP	**PKPdf**	**04 18 31.8**	**+0.2**
BDFB	**Brasilia**	**139.95**	**33**		**PKPdf**	**04 18 31.8**	**+0.2**
QSPA	**South Pole Qui**	**141.78**	**180**		**PKPdf**	**04 18 29.9**	**-3.4**
QSPA	**South Pole Qui**	**141.78**	**180**		PKPpre	04 18 28.9	
SYO	**Syowa Base**	**145.36**	**216**	*e*PKPdf	**PKPbc**	**04 18 40.2**	**-0.1**
SYO	**Syowa Base**	**145.36**	**216**	*e*PKPbc	**PKPab**	**04 18 41.8**	**+0.5**
CPUP	**Villa Florida**	**145.53**	**54**	PKPbc	**PKPbc**	**04 18 42.6**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=309,slow=1.7,SNR=16						
CPUP				SKPbc	**SKiKP**	**04 21 39.5**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=355,slow=6.3,SNR=3.9						
PLCA	**Paso Flores**	**148.24**	**87**	PKPbc	**PKPbc**	**04 18 49.3**	**+0.1**
	comp=Z,7.5nm,0.7s,baz=282,slow=2.7,SNR=33						
PLCA				pPKPbc	**pPKPbc**	**04 20 32.6**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=240,slow=5.3,SNR=4.3						
PLCA				SKPbc	**SKiKP**	**04 21 45.3**	**+0.8**
	comp=Z,3.5nm,0.9s,baz=242,slow=5.7,SNR=5.0						
BELA	**Belgrano 2**	**153.90**	**176**		**PKPbc**	**04 18 60.0**	**-0.9**
SNAA	**Sanae**	**157.61**	**200**	PKPab	**PKPab**	**04 19 32.6**	**-0.1**
SNAA	**Sanae**	**157.61**	**200**	PKPdf	PKPdf	04 19 08.6	+11
SNAA	**Sanae**	**157.61**	**200**	PP	PP	04 23 13.8	-0.6
VNA2	**Neumayer--Watz**	**159.11**	**198**	PKPab	**PKPab**	**04 19 38.9**	**-0.2**
VNA2	**Neumayer--Watz**	**159.11**	**198**	PKPdf	PKPdf	04 19 11.1	+12
VNA2	**Neumayer--Watz**	**159.11**	**198**	PP	PP	04 23 19.8	-2.6
VNA3	**Neumayer Olymp**	**159.25**	**196**	PKPab	**PKPab**	**04 19 39.4**	**-0.3**
VNA3	**Neumayer Olymp**	**159.25**	**196**	PKPdf	PKPdf	04 19 10.8	+11
VNA3	**Neumayer Olymp**	**159.25**	**196**	PP	PP	04 23 20.5	-2.6

ROM 11 04:09:59.0±0.0,**43°322N**±0°002×**12°531E**±0°004, **h10km**,**ML1.4**/23,**6C-3D**,**Error ellipse: s-maj=0.2km s-min=0.2km az=27.0**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**34**	⇑P	Pg	04 10 01.1	+0.1
ATFO				S	Sg	04 10 02.6	0.0
ATFO				AML	AML		
	comp=E,1780μm,0.5s						
ATFO				AML	AML		
	comp=N,1495μm,0.3s						
MURB	**Monte Urbino**	**0.06**	**184**	P	Pg	04 10 01.3	+0.2
MURB				S	Sg	04 10 02.7	+0.1
MURB				AML	AML		
	comp=N,2470μm,0.3s						
MURB				AML	AML		
	comp=E,2670μm,0.3s						
MURB				AML	AML		
	comp=N,2470μm,0.3s						
MURB				AML	AML		
	comp=E,3085μm,0.3s						
MURB				AML	AML		
	comp=N,2490μm,0.2s						
ATVO	**AVT- Monte Val**	**0.11**	**304**	⇑P	Pg	04 10 02.0	+0.4
ATVO				S	Sg	04 10 04.2	+0.6
ATVO				AML	AML		
	comp=N,802μm,0.2s						
ATVO				AML	AML		
	comp=E,568μm,0.3s						
ATVO				AML	AML		
	comp=N,802μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.16**	**150**	P	Pg	04 10 03.2	+0.8
ATCC				S	Sg	04 10 06.5	+1.7
ATCC				AML	AML		
	comp=E,392μm,1.1s						
ATCC				AML	AML		
	comp=E,392μm,1.1s						
ATCC				AML	AML		
	comp=N,284μm,0.2s						
ATPI	**Pietralunga -**	**0.16**	**324**	P	Pg	04 10 03.0	+0.5
ATPI				S	Sg	04 10 06.0	+1.1
ATPI				AML	AML		
	comp=N,197μm,0.9s						
ATPI				AML	AML		
	comp=E,208μm,0.7s						
ATPI				AML	AML		
	comp=N,198μm,0.9s						
FOSV	**Fossato di Vic**	**0.17**	**99**	P	Pg	04 10 03.3	+0.7
FOSV				S	Sg	04 10 06.4	+1.2
FOSV				AML	AML		
	comp=E,136μm,0.4s						
FOSV				AML	AML		
	comp=N,128μm,0.6s						
ATTE	**AVT- Monte Tez**	**0.18**	**226**	P	Pg	04 10 03.3	+0.5
ATTE				S	Sg	04 10 06.6	+1.1
ATTE				AML	AML		
	comp=E,118μm,0.3s						
ATTE				AML	AML		
	comp=N,102μm,0.4s						
ATTE				AML	AML		
	comp=N,102μm,0.4s						
ATMI	**Monte Miggiano**	**0.19**	**274**	P	Pg	04 10 03.7	+0.7
ATMI				AML	AML		
	comp=N,186μm,0.8s						
ATMI				AML	AML		
	comp=N,186μm,0.8s						
ATMI				AML	AML		
	comp=E,204μm,0.2s						
SSFR	**Montelago di S**	**0.22**	**58**	P	Pg	04 10 04.1	+0.6
SSFR				S	Sg	04 10 07.8	+1.3
SSFR				AML	AML		
	comp=E,518μm,0.2s						
SSFR				AML	AML		
	comp=N,384μm,0.5s						
FRON	**Frontone**	**0.24**	**36**	⇓P	Pg	04 10 04.5	+0.6
FRON				S	Sg	04 10 08.7	+1.4
FRON				AML	AML		
	comp=E,156μm,0.7s						
FRON				AML	AML		
	comp=N,214μm,0.6s						
APEC	**Apecchio**	**0.25**	**341**	P	Pg	04 10 05.2	+1.1
APEC				S	Sg	04 10 09.3	+1.9
APEC				AML	AML		
	comp=E,105μm,1.4s						
APEC				AML	AML		
	comp=N,74μm,0.2s						
BADI	**Badiali**	**0.28**	**312**	P	Pb	04 10 05.5	-0.7
BADI				AML	AML		
	comp=N,270μm,0.4s						
BADI				AML	AML		
	comp=E,212μm,0.9s						
NARO	**Abbazia di Nar**	**0.29**	**7**	⇑P	Pg	04 10 05.5	+0.6
NARO				AML	AML		
	comp=E,71μm,1.1s						
NARO				AML	AML		
	comp=N,44μm,1.5s						
NARO				AML	AML		
	comp=N,44μm,1.5s						
ASSB	**Assisi San Ben**	**0.29**	**161**	P	Pg	04 10 05.3	+0.5
ASSB				S	Sb	04 10 10.4	-1.0
ASSB				AML	AML		
	comp=N,101μm,1.1s						
ASSB				AML	AML		
	comp=E,96μm,0.9s						
SNTG	**Esanatoglia**	**0.31**	**103**	P	Pg	04 10 05.8	+0.7
SNTG				S	Sb	04 10 10.9	-0.9
SNTG				AML	AML		
	comp=N,98μm,1.2s						
SNTG				AML	AML		
	comp=E,80μm,1.1s						
ARVD	**Arcevia**	**0.35**	**59**	P	Pb	04 10 06.6	-0.7
ARVD				S	Sb	04 10 12.2	-0.7
ARVD				AML	AML		
	comp=N,37μm,1.4s						
ARVD				AML	AML		
	comp=E,58μm,0.7s						
MPAG	**Monte Paganucc**	**0.35**	**28**	⇑P	Pb	04 10 06.8	-0.6
MPAG				AML	AML		
	comp=N,54μm,0.9s						
MPAG				AML	AML		
	comp=E,52μm,0.8s						
PE3	**Peglio**	**0.37**	**356**	⇓P	Pg	04 10 05.6	-0.8
PARC	**Parchiule**	**0.39**	**327**	P	Pb	04 10 07.8	-0.3
PARC				AML	AML		
	comp=N,72μm,0.3s						
PARC				AML	AML		
	comp=E,50μm,0.9s						
EL6	**Elcito**	**0.42**	**89**	S	Sb	04 10 15.0	0.0
CESI	**CESI - Serrava**	**0.42**	**139**	P	Pg	04 10 07.8	+0.6
CESI				AML	AML		
	comp=E,8μm,0.6s						
CESI				AML	AML		
	comp=N,26μm,1.0s						
CING	**Cingoli**	**0.49**	**83**	⇓P	Pb	04 10 10.0	+0.3
CING				AML	AML		
	comp=N,38μm,0.2s						
CING				AML	AML		
	comp=E,32μm,1.2s						
FDMO	**Fiordimonte**	**0.50**	**125**	⇑P	Pg	04 10 09.1	+0.5
FDMO				AML	AML		
	comp=E,26μm,0.5s						
FDMO				AML	AML		
	comp=N,26μm,0.2s						
MGAB	**Montegabbione**	**0.51**	**217**	⇑P	Pb	04 10 09.6	-0.5
MGAB				AML	AML		
	comp=N,69μm,1.4s						
MGAB				AML	AML		
	comp=E,75μm,0.5s						
CRE	**Caprese Michel**	**0.52**	**305**	P	Pg	04 10 09.6	+0.6
CRE				AML	AML		
	comp=E,34μm,1.2s						
CRE				AML	AML		
	comp=N,33μm,1.1s						
MCIV	**Monte Civitell**	**0.83**	**229**	S	Sg	04 10 26.0	+0.3

*IDC **11** 04:11:25.7±5.6,36°.28N×21°.14E,h0km,mb3.9/8, mb1 3.8/9,mb1mx3.5/51,mbtmp3.8/9,ML3.9/1,Error ellipse: s-maj=100.1km s-min=35.9km az=30.0*
*ATH **11** 04:11:34.3,36°.65N×21°.46E,h26km±5km,ML3.1/4,Error ellipse: s-maj=7.2km s-min=1.7km az=59.0*
*THE **11** 04:11:36.8,36°.71N×21°.64E,h22km±1km,ML2.9/7,Error ellipse: s-maj=1.4km s-min=0.5km az=62.0*

ISC 11 04:11:34.4±1.6,**36°67N**±0°06×**21°48E**±0°08,**h31**km±7km, **n39**,σ0**°86**/48,**mb3.8**/8,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.31**	**43**	P	**Pb**	**04 11 41.9**	**-0.1**
PYL				S	**Sb**	**04 11 47.0**	**-0.2**
PYL				AML	AML	04 11 47.8	
	comp=N,15192μm,0.5s						
PYL				AML	AML	04 11 49.1	
	comp=E,10814μm,0.3s						
PYL	**PYLOS**	**0.31**	**43**	P	**Pb**	**04 11 41.9**	**-0.1**
PYL				S	**Sb**	**04 11 46.6**	**-0.6**
	comp=E,7μm,0.4s						
ITM	**Ithomi**	**0.62**	**35**	P	**Pb**	**04 11 46.6**	**-0.3**
ITM				S	**Sb**	**04 11 55.8**	**+0.4**
ITM				AML	AML	04 11 58.9	
	comp=E,3680μm,0.3s						
ITM				AML	AML	04 12 00.0	
	comp=N,3139μm,0.3s						
ITM	**Ithomi**	**0.62**	**35**	P	**Pb**	**04 11 46.7**	**-0.1**
ITM				S	**Sb**	**04 11 55.1**	**-0.2**
	comp=N,2μm,0.3s						
AMT	**Artemida-Makis**	**0.88**	**12**	P	**Pb**	**04 11 51.3**	**+0.2**
AMT				AML	AML	04 12 12.1	
	comp=E,1966μm,0.5s						
AMT				AML	AML	04 12 14.4	
	comp=N,2469μm,0.4s						
AMT	**Artemida-Makis**	**0.88**	**12**	P	**Pn**	**04 11 51.8**	**+1.2**
AMT				S	**Sn**	**04 12 03.9**	**+1.5**
	comp=N,1μm,0.5s						
VLX	**Vlachokerasia**	**1.00**	**46**	P	**Pn**	**04 11 52.8**	**+0.4**
VLX				AML	AML	04 12 12.2	
	comp=E,1639μm,0.4s						
VLX				AML	AML	04 12 13.4	
	comp=N,1841μm,0.5s						
VLX	**Vlachokerasia**	**1.00**	**46**	P	**Pn**	**04 11 52.9**	**+0.5**
VLX				S	**Sb**	**04 12 06.3**	**+0.2**
	comp=N,975nm,0.4s						
VLI	**Veliai**	**1.17**	**87**	P	**Pb**	**04 11 56.1**	**0.0**
VLI	**Veliai**	**1.17**	**87**	P	**Pb**	**04 11 55.9**	**-0.1**
VLI				S	**Sn**	**04 12 09.8**	**+0.3**
	comp=N,390nm,0.6s						
MNVA	**Monemvasia**	**1.25**	**89**	P	**Pb**	**04 11 57.5**	**+0.1**
DRO	**Drossia**	**1.29**	**8**	P	**Pn**	**04 11 57.7**	**+1.4**
DRO	**Drossia**	**1.29**	**8**	P	**Pb**	**04 11 58.3**	**+0.2**
KTHR	**Kythira**	**1.29**	**108**	P	**Pb**	**04 11 57.8**	**-0.3**
KTHR				S	**Sn**	**04 12 13.1**	**+0.5**
	comp=N,425nm,0.5s						
KTHA	**Kythira Island**	**1.34**	**108**	P	**Pb**	**04 11 58.4**	**-0.5**
KTHA	**Kythira Island**	**1.34**	**108**	P	**Pb**	**04 11 58.4**	**-0.5**
KTHA				S	**Sn**	**04 12 14.2**	**+0.5**
	comp=N,318nm,0.7s						
RLS	**Riolos of Patr**	**1.38**	**359**	P	**Pb**	**04 11 59.6**	**0.0**
RLS	**Riolos of Patr**	**1.38**	**359**	P	**Pb**	**04 11 59.6**	**0.0**
KLV	**Kalavryta, Ach**	**1.47**	**21**	P	**Pb**	**04 12 00.8**	**-0.4**
KLV	**Kalavryta, Ach**	**1.47**	**21**	P	**Pb**	**04 12 00.7**	**-0.4**
KRND	**KRANIDI**	**1.51**	**61**	P	**Pn**	**04 12 00.1**	**+0.8**
LAKA	**Lakka**	**1.61**	**14**	P	**Pb**	**04 12 03.2**	**-0.3**
THAL	**Thalero**	**1.66**	**34**	P	**Pn**	**04 12 02.6**	**+1.3**
ANKY	**Antikythira Is**	**1.68**	**118**	P	**Pb**	**04 12 03.5**	**-1.1**
ANKY	**Antikythira Is**	**1.68**	**118**	P	**Pn**	**04 12 03.0**	**+1.5**
LOUT	**Loutraki**	**1.77**	**42**	P	**Pn**	**04 12 03.9**	**+1.0**
KALE	**Kalithea**	**1.79**	**17**	P	**Pb**	**04 12 06.2**	**-0.5**
LTK	**Loutraki**	**1.79**	**41**	P	**Pn**	**04 12 04.0**	**+0.8**
DSF	**Desfina**	**1.93**	**25**	P	**Pn**	**04 12 06.5**	**+1.5**
IDI	**Anoyia**	**3.09**	**116**	Pn	**Pn**	**04 12 23.8**	**+2.8**
	comp=N,0.4nm,0.3s,baz=347,slow=14,SNR=1.3						
AKASG	**Malin Array Be**	**15.09**	**19**	Pn	**Pn**	**04 15 05.2**	**+0.1**
	comp=N,0.5nm,0.3s,baz=212,slow=10,SNR=2.3						
HFS	**Hagfors**	**24.01**	**350**	P	**P**	**04 16 45.0**	**-1.1**
	comp=N,1.7nm,0.9s,baz=162,slow=12,SNR=8.2						
BELG	**Belogornoye**	**24.19**	**41**	P	**P**	**04 16 46.9**	**-0.9**
	comp=N,11nm,0.7s,baz=58,slow=0.2,SNR=4.5						
FINES	**FINESS Array B**	**24.96**	**5**	P	**P**	**04 16 53.7**	**-1.1**
	comp=N,0.7nm,0.5s,baz=154,slow=9.7,SNR=7.5						
NOA	**NORSAR Array B**	**25.24**	**348**	P	**P**	**04 16 56.5**	**-0.9**
	comp=N,0.5nm,0.8s,baz=156,slow=9.0,SNR=2.1						
ARCES	**ARCESS Array B**	**32.99**	**3**	P	**P**	**04 18 05.7**	**-0.4**
	comp=N,3.5nm,1.1s,baz=191,slow=8.8,SNR=1.1						
KURBB	**Kurchatov Arra**	**42.53**	**52**	P	**P**	**04 19 27.7**	**+0.9**
	comp=N,1.2nm,0.2s,baz=289,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**45.45**	**57**	P	**P**	**04 19 49.4**	**-1.0**
	comp=N,0.1nm,0.4s,baz=259,slow=11,SNR=2.3						
ZALV	**Zalesovo Beam**	**46.14**	**47**	P	**P**	**04 19 54.7**	**-1.0**
	comp=N,0.7nm,0.3s,baz=262,slow=10,SNR=2.2						

*RSNC **11** 04:29:00.7±1.5,6°.40N×73°.27W,h2km±5km,ML4.4,Mw4.3, Fault plane solution: NP1,φs105.00000°,δ49.00000°, λ-142.00000°.*
*IDC **11** 04:29:00.5±2.3,6°.46N×73°.14W,h29km±16km,mb4.0/21, mb1 4.3/26,mb1mx4.1/47,mbtmp4.3/26,ML4.4/5,MS3.6/13, Ms1 3.6/13,ms1mx3.3/40,Error ellipse: s-maj=15.6km s-min=10.8km az=55.0*
*VAO **11** 04:29:01.6±0.7,6°.16N×72°.93W,h10km,mb4.4*
*NEIC **11** 04:29:02.7±1.2,6°.39N±0°.07×73°.14W±0°.07,h51km±6km, mb4.5/112,Error ellipse: s-maj=11.0km s-min=9.0km az=134.0*

ISC 11 04:28:59.0±1.3,**6°45N**±0°02×**73°17W**±0°03,**h17**km±8km, **n206**,σ1**°56**/205,**mb4.5**/72,**MS3.6**/8,**2C-14D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUSC	**La Rusia**	**0.56**	**172**	⇓*i*P	**Pb**	**04 29 11.2**	**+0.6**
RUSC				*e*S	**Sb**	**04 29 18.8**	**+0.4**
RUSC				*i*		04 29 21.3	
	comp=Z,10μm,0.7s						
BRRC	**Barranca, Sant**	**0.85**	**320**	⇓*i*P	**Pn**	**04 29 16.0**	**-0.2**
BRRC				*e*S	**Sb**	**04 29 27.2**	**+0.8**
BRRC				*i*		04 29 30.6	
	comp=Z,8μm,0.7s						
PAMC	**Pamplona, Colo**	**1.00**	**28**	⇑*i*P	**Pn**	**04 29 20.4**	**+1.7**
PAMC				*e*S	**Sn**	**04 29 35.0**	**+2.4**
PAMC				*i*		04 29 36.0	
	comp=Z,10μm,0.2s						
SPBC	**San Pablo de B**	**1.20**	**229**	⇑*e*P	**Pn**	**04 29 19.6**	**-1.4**
SPBC				*e*S	**Sb**	**04 29 34.1**	**-2.4**
SPBC				*i*		04 29 41.4	
	comp=Z,12μm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.29**	**274**	⇓*i*P	**Pn**	**04 29 21.8**	**-0.4**
PTBC				*e*S	**Sb**	**04 29 37.4**	**-1.6**
OCAC	**Ocana**	**1.79**	**355**	*e*P	**Pb**	**04 29 31.5**	**+0.1**
OCAC				*e*S	**Sg**	**04 29 57.4**	**+0.7**
NORC	**Norcasia**	**1.91**	**243**	⇓*i*P	**Pn**	**04 29 30.6**	**-0.2**
NORC				*e*S	**Sn**	**04 29 53.4**	**-1.0**
NORC				*i*		04 29 56.9	
	comp=Z,4μm,0.7s						
ROSC	**El Rosal**	**1.97**	**216**	Pn	**Pb**	**04 29 34.2**	**-0.4**
	comp=Z,753nm,0.3s,baz=274,slow=8.9,SNR=593						
ROSC				Sn	**Sg**	**04 30 00.8**	**-1.7**
	comp=Z,1μm,0.3s,baz=331,slow=22,SNR=13						
ROSC	**El Rosal**	**1.97**	**216**		**Pb**	**04 29 34.5**	**-0.1**
ROSC	**El Rosal**	**1.97**	**216**	*e*P	**Pb**	**04 29 34.0**	**-0.6**
ROSC				*e*S	**Sg**	**04 30 02.0**	**-0.5**
ZARC	**Zaragoza, Cauc**	**1.98**	**302**	⇓*e*P	**Pn**	**04 29 32.1**	**+0.5**
ZARC				*e*S	**Sn**	**04 29 57.1**	**+1.1**
ZARC				*i*		04 30 01.3	
	comp=Z,3μm,0.4s						
HELC	**Santa Helena**	**2.36**	**264**	⇓*i*P	**Pn**	**04 29 37.6**	**+0.3**
HELC				*e*P	**Sn**	**04 30 05.0**	**-1.0**
HELC				*e*S	**Sb**	**04 30 05.3**	**-5.1**
HELC				*i*		04 30 06.6	
	comp=Z,3μm,0.4s						
VILC	**Villavicencio,**	**2.38**	**193**	*e*P	**Pb**	**04 29 39.2**	**-2.2**
VILC				*e*S	**Sg**	**04 30 17.6**	**+2.0**
VILC				*i*		04 30 25.7	
	comp=Z,2μm,0.4s						
PTGC	**Puerto Gaitan,**	**2.46**	**155**	*e*P	**Pb**	**04 29 40.5**	**-2.3**
PTGC				*e*S	**Sg**	**04 30 16.9**	**-1.2**
PTGC				*i*		04 30 20.9	
	comp=Z,2μm,0.5s						
GUY2C	**Guyana, Caldas**	**2.50**	**241**	⇓*i*P	**Pn**	**04 29 41.0**	**+1.7**
GUY2C				*e*S	**Sn**	**04 30 10.4**	**+0.7**
SMLC	**San Martn de**	**2.51**	**339**	*e*P	**Pn**	**04 29 39.4**	**+0.4**
SMLC				*e*S	**Sb**	**04 30 15.4**	**+1.3**
SMLC				*i*		04 30 27.0	
	comp=Z,2μm,0.7s						
RREF	**El Recreo**	**2.66**	**235**	*e*S	**Sn**	**04 30 15.6**	**+1.9**
UREC	**San Jos de Ur**	**2.68**	**299**	⇓*e*P	**Pn**	**04 29 43.0**	**+1.6**
UREC				*e*S	**Sn**	**04 30 14.6**	**+1.1**
UREC				*i*		04 30 23.5	
	comp=Z,1μm,0.3s						
CMAN1	**Manizales, Cal**	**2.72**	**240**	*e*P	**Pn**	**04 29 44.1**	**+2.0**
CMAN1				*e*S	**Sn**	**04 30 17.7**	**+3.0**
CBOC	**Ciudad Bolivar**	**2.89**	**259**	⇓*i*P	**Pn**	**04 29 46.2**	**+1.8**
CBOC				*e*S	**Sn**	**04 30 21.0**	**+2.2**
CBOC				*i*		04 30 29.8	
	comp=Z,1μm,0.6s						
DBBC	**Dabeiba**	**3.08**	**281**	*e*P	**Pn**	**04 29 47.6**	**+0.7**
DBBC				*e*S	**Sn**	**04 30 23.7**	**+0.4**
ORTC	**Ortega, Tolima**	**3.26**	**220**	⇓*i*P	**Pn**	**04 29 50.8**	**+1.3**
ORTC				*e*S	**Sn**	**04 30 30.4**	**+2.5**
ORTC				*i*		04 30 43.9	
	comp=Z,1μm,0.5s						
MOTC	**Monteria, Cord**	**3.39**	**313**	⇓*i*P	**Pn**	**04 29 53.4**	**+2.2**
MOTC				*e*S	**Sn**	**04 30 34.6**	**+3.6**
MOTC				*i*		04 30 51.7	
	comp=Z,526nm,0.5s						
SDV	**Santo Domingo**	**3.49**	**46**		**Pb**	**04 29 56.5**	**-3.9**
GUVC	**San Jose del G**	**3.91**	**172**	*e*P	**Pn**	**04 29 59.7**	**+1.3**
GUVC				*e*S	**Sn**	**04 30 46.6**	**+2.7**
GUVC				*i*		04 31 05.3	
	comp=Z,562nm,0.4s						
SJCC	**San Jacinto, C**	**3.96**	**330**	⇓*i*P	**Pn**	**04 30 01.6**	**+2.5**
SJCC				*e*S	**Sn**	**04 30 48.5**	**+3.2**
SJCC				*i*		04 31 13.1	
	comp=Z,294nm,0.6s						
LCBC	**Los crdobas,**	**3.98**	**307**	*e*P	**Pn**	**04 30 00.9**	**+1.8**
LCBC				*e*S	**Sn**	**04 30 50.0**	**+4.6**
YOTC	**Yotoco, Valle**	**4.00**	**232**	⇓*e*P	**Pn**	**04 30 00.7**	**+1.0**
YOTC				*e*S	**Sb**	**04 30 55.7**	**-1.6**
SOLC	**Bahia Solano**	**4.22**	**267**	*e*P	**Pn**	**04 30 04.3**	**+1.7**
SOLC				*e*S	**Sb**	**04 31 06.3**	**+2.7**
MACC	**Macarena, Meta**	**4.33**	**189**	*e*P	**Pn**	**04 30 04.1**	**0.0**
MACC				*e*S	**Sb**	**04 31 06.3**	**-0.3**
MACC				*i*		04 31 28.5	
	comp=Z,680nm,0.6s						
CRJC	**Cerrejon, Guaj**	**4.55**	**4**	*e*P	**Pn**	**04 30 08.7**	**+1.4**
CRJC				*e*S	**Sn**	**04 31 04.7**	**+4.9**
CRJC				*i*		04 31 26.6	
	comp=Z,481nm,0.5s						
**MALC

comp=Z,164nm,19.8s,baz=104,slow=38
TEIG Tepich 20.07 314 P **P** **04 33 30.9 -0.7**
comp=Z,5.4nm,0.4s,baz=67,slow=2.2,SNR=14
TEIG LR LR 04 42 06.5
comp=Z,57nm,19.0s,baz=114,slow=39
TEIG Tepich 20.07 314 IAmb IAmb 04 33 53.4
comp=Z,45nm,1.5s
ITTB Itaituba 20.45 121 *eP* Pn 04 33 37.0 -1.1
MDP Montagnes des 20.46 93 P **P** **04 33 34.1 -1.9**
comp=Z,20nm,1.2s,baz=28,slow=7.8,SNR=1.8
MDP LR LR 04 41 57.9
comp=Z,278nm,21.7s,baz=254,slow=38
MALB Monte Alegre 20.59 113 *eP* **P** **04 33 37.7 +0.3**
MCPB Macapa, AP 22.12 107 *eP* **P** **04 33 54.4 +0.5**
NPGB Novo Progresso 22.25 127 *eP* **P** **04 33 55.4 +0.1**
LPAZ La Paz 23.13 168 P **P** **04 34 04.6 -0.5**
comp=Z,2.4nm,0.7s,baz=18,slow=11,SNR=6.4
LPAZ La Paz 23.13 168 P **P** **04 34 06.4 +1.3**
LPAZ La Paz 23.13 168 *eP* **P** **04 34 04.8 -0.3**
VILB Vilhena 23.18 146 *eP* **P** **04 34 04.4 -0.6**
CLDB Colider 24.39 135 *eP* **P** **04 34 17.4 +0.7**
PB16 IPOC Station P 24.89 172 P **P** **04 34 19.8 -1.9**
SIV San Ignacio 25.30 152 P **P** **04 34 24.3 -0.6**
comp=Z,6.2nm,0.9s,baz=334,slow=9.9,SNR=21
SIV LR LR 04 45 00.5
comp=Z,194nm,20.7s,baz=268,slow=38
PTLB Pontes e Lacer 25.82 148 *eP* **P** **04 34 30.6 +1.1**
PRPB Parauapebas 26.46 118 *eP* **P** **04 34 36.3 +0.9**
TMAB Tom-Au,PA,Br 26.52 109 *eP* **P** **04 34 37.0 +1.0**
SNDB Serra Nova Dou 28.43 130 *eP* **P** **04 34 53.8 +0.8**
Z51A Franklin 28.97 339 P **P** **04 34 58.8 +1.1**
Z51A IAmb IAmb 04 35 00.2
comp=Z,6.7nm,0.7s
CNNC Cliffs of the 28.98 352 P **P** **04 34 55.5 -2.2**
LVC Limon Verde 29.18 172 P **P** **04 35 00.5 +0.5**
comp=Z,1.8nm,0.5s,baz=8.8,slow=8.2,SNR=2.6
LVC Limon Verde 29.18 172 P **P** **04 35 00.1 +0.1**
LVC Limon Verde 29.18 172 *eP* **P** **04 35 01.0 +1.0**
SMTB Santa Maria do 29.69 121 *eP* **P** **04 35 05.2 +0.9**
344A Westbrook Farm 29.82 329 P **P** **04 35 06.7 +1.4**
Z47A Carrollton 30.01 334 P **P** **04 35 07.2 +0.3**
Z47A IAmb IAmb 04 35 20.6
comp=Z,17nm,1.2s
ARAG Araguaiana, MT 30.52 136 *eP* **P** **04 35 10.9 -0.7**
TKL Tuckaleechee C 30.66 343 LR LR 04 47 57.0
comp=Z,69nm,20.8s,baz=166,slow=37
PEXB Peixe 30.84 127 *eP* **P** **04 35 15.5 +1.0**
U54A Nelsons Funny 30.96 346 P 04 35 17.2
baz=163
U54A Nelsons Funny 30.96 346 P **P** **04 35 16.4 +1.0**
T56A Rocky Mt 31.08 349 P 04 35 17.5
baz=167
S57A Dark Hollow, R 31.61 351 P 04 35 22.3
baz=169
V48A Smith Brothers 31.74 339 P **P** **04 35 23.2 +1.0**
V48A IAmb IAmb 04 35 24.6
comp=Z,7.4nm,0.8s
AQDB Aquidauana 31.79 148 *eP* **P** **04 35 23.4 +0.6**
T50A Nancy 32.24 342 P **P** **04 35 27.6 +1.0**
T50A IAmb IAmb 04 35 39.7
comp=Z,5.1nm,0.9s
WVT Waverly 32.46 338 P **P** **04 35 28.8 +0.4**
WVT Waverly 32.46 338 P 04 35 29.5
baz=152
T47A Sharon Grove 32.96 339 P **P** **04 35 33.4 +0.6**
T47A IAmb IAmb 04 35 45.9
comp=Z,14nm,1.2s
Q53A Leroy 33.14 348 P 04 35 36.3
baz=165
BDFB Brasilia 33.20 132 LR LR 04 50 16.3
comp=Z,138nm,21.1s,baz=268,slow=38
R50A Paris 33.27 344 P **P** **04 35 36.7 +1.2**
R50A IAmb IAmb 04 35 49.5
comp=Z,8.5nm,0.9s
X40A Basin Creek Fa 33.30 330 P 04 35 36.7
baz=143
X40A Basin Creek Fa 33.30 330 P **P** **04 35 35.8 0.0**
X40A IAmb IAmb 04 35 37.3
comp=Z,6.7nm,1.0s
435B Jarrell 33.33 320 P **P** **04 35 36.4 +0.3**
435B IAmb IAmb 04 35 37.4
comp=Z,7.2nm,0.8s
NBPS Pedro II - PI 33.45 108 *eP* **P** **04 35 37.8 +0.3**
WHAR Wooly Hollow 33.67 331 P **P** **04 35 39.5 +0.5**
WHAR IAmb IAmb 04 35 53.2
comp=Z,6.3nm,0.8s
SDBA SAO DESIDERIO 33.77 124 *eP* **P** **04 35 40.3 +0.1**
P52A Corning 34.01 348 P 04 35 43.6
baz=164
O56A Blue Knob Stat 34.02 353 P 04 35 44.1
baz=170
PBMO Poplar Bluff 34.06 335 P **P** **04 35 43.0 +0.6**
PBMO IAmb IAmb 04 35 52.2
comp=Z,6.8nm,0.8s
FCAR Ozark Folk Cen 34.08 332 P **P** **04 35 42.6 0.0**
FCAR IAmb IAmb 04 35 51.6
comp=Z,11nm,1.3s
W39A Magazine 34.33 329 P 04 35 45.6
baz=142
W39A Magazine 34.34 329 P **P** **04 35 45.0 +0.2**
W39A IAmb IAmb 04 35 46.0
comp=Z,5.6nm,0.7s
ITRB Iturama 34.34 140 *eP* **P** **04 35 44.7 -0.3**
O53A New Philadelph 34.42 349 P 04 35 47.2
baz=166
NBMO Morrinhos-CE 34.46 105 *eP* **P** **04 35 46.9 +0.7**
IPMB Ipameri, GO 34.58 135 *eP* **P** **04 35 48.1 +0.8**
JCT Junction City 34.60 317 P **P** **04 35 46.2 -1.0**
JCT IAmb IAmb 04 36 03.5
comp=Z,2.8nm,0.5s
N56A West Decatur 34.63 353 P 04 35 49.6
baz=171
U40A Yellville 34.80 332 P **P** **04 35 49.0 +0.1**
U40A Yellville 34.80 332 P 04 35 49.4
baz=144,SNR=14
N54A Moraine State 34.90 351 P 04 35 51.6
baz=168
FVM French Village 35.09 336 P **P** **04 35 51.4 0.0**
M56A Emporium 35.17 353 P 04 35 53.8
baz=171
PCMB Pacaembu 35.20 143 *eP* **P** **04 35 51.8 -0.6**
P46A Rosedale 35.36 341 P **P** **04 35 54.1 +0.5**
M54A Oil Creek Stat 35.39 352 P 04 35 55.8
baz=169
CCM Cathedral Cave 35.49 335 P **P** **04 35 54.8 +0.1**
CCM Cathedral Cave 35.49 335 P 04 35 55.6
baz=148
NBPB Pedra_Branca-C 35.57 109 *eP* **P** **04 35 57.2 +1.4**
L56A Greenwood 35.75 354 P 04 35 58.8
baz=172
L53A Girard 35.92 351 P 04 36 00.2
baz=168
SFIN Lafayette 36.02 342 P 04 36 00.4
baz=156
CPUP Villa Florida 36.02 155 LR LR 04 52 00.7
comp=Z,98nm,18.2s,baz=354,slow=38
S39A Bolivar 36.10 332 P **P** **04 35 60.0 -0.1**
S39A IAmb IAmb 04 36 01.6
comp=Z,4.0nm,0.5s
R40A Maddies Statio 36.12 334 P **P** **04 36 00.5 +0.3**
R40A IAmb IAmb 04 36 09.7
comp=Z,11nm,1.4s
TXAR Lajitas Array 36.68 312 P **P** **04 36 05.1 -0.1**
comp=Z,1.3nm,0.8s,baz=126,slow=9.2,SNR=7.0
TXAR PcP **PcP** **04 38 28.4 +0.4**
comp=Z,0.7nm,0.6s,baz=157,slow=5.3,SNR=4.0
TXAR ScP **ScP** **04 42 12.9 -1.2**
comp=Z,1.3nm,1.0s,baz=79,slow=2.7,SNR=4.0
TX31 Lajitas Ar. Si 36.68 312 IAmb IAmb 04 36 10.0
comp=Z,6.4nm,0.9s
TX32 Lajitas Array 36.68 312 P **P** **04 36 05.2 0.0**
WMOK Wichita Mounta 36.75 323 P 04 36 05.2
baz=134,SNR=6.0
WMOK Wichita Mounta 36.75 323 IAmb IAmb 04 36 06.2
comp=Z,7.4nm,1.2s
HDIL Hopedale 36.91 339 P 04 36 06.9
baz=153
NBMA Muriti-CE 36.96 111 *eP* **P** **04 36 08.6 +0.9**
I51A Listowel 37.84 351 P 04 36 16.2
baz=167
NBTA Tacaratu-PE 38.25 113 *eP* **P** **04 36 19.6 +1.0**
AMTX Amarillo 38.61 321 P 04 36 21.9
baz=131
AMTX Amarillo 38.61 321 P **P** **04 36 21.8 +0.3**
NBLI Livramento-PB 38.65 110 *eP* **P** **04 36 23.0 +1.0**

MSTX Muleshoe 38.73 319 P **P** **04 36 22.5 -0.1**
MSTX IAmb IAmb 04 36 23.6
comp=Z,15nm,1.4s
KSU1 Kansas State U 38.79 330 P 04 36 22.5
baz=141
GDU01 Guandu, BA 38.90 121 *eP* **P** **04 36 24.3 +0.2**
RCBR Riachuelo 39.14 107 P **P** **04 36 27.1 +0.9**
comp=Z,8.3nm,1.1s,baz=287,slow=9.5,SNR=4.6
MNTX Cornudas Mount 39.20 314 P 04 36 26.5
baz=123,SNR=11
MNTX Cornudas Mount 39.20 314 P **P** **04 36 26.6 +0.2**
MNTX IAmb IAmb 04 36 27.1
comp=Z,3.6nm,0.7s
JFWS Jewell Farm 39.33 340 P **P** **04 36 26.9 -0.3**
JFWS Jewell Farm 39.33 340 P 04 36 27.4
baz=153,SNR=6.8
TIJ01 Guaruva-PR 39.36 144 *eP* **P** **04 36 28.3 +0.4**
SCIA State Center 39.55 336 P 04 36 29.3
baz=148
ALGO Algonquin Park 39.59 355 P 04 36 30.6
baz=172
CPSB Cacapava Do Su 41.24 154 *eP* **P** **04 36 44.1 +0.9**
121A Cookes Peak, D 41.37 313 P 04 36 45.5
baz=122
T25A Trinidad 41.75 322 P 04 36 49.0
baz=129
ANMO Albuquerque 41.76 317 P **P** **04 36 48.1 +0.4**
comp=Z,0.9nm,0.6s,baz=77,slow=8.9,SNR=6.3
ANMO Albuquerque 41.76 317 P **P** **04 36 48.5 +0.8**
COWI Conover 41.85 343 P **P** **04 36 48.3 +0.2**
ECSD EROS Data Cent 42.46 335 P **P** **04 36 52.5 -0.6**
ECSD IAmb IAmb 04 36 53.8
comp=Z,4.4nm,0.4s
ECSD EROS Data Cent 42.46 335 P 04 36 52.6
baz=144,SNR=9.1
MATQ Matagami 43.33 356 P 04 37 00.8
baz=174
Q24A Divide 43.37 323 P 04 37 01.8
baz=130
TUC Tucson 43.46 311 P 04 37 02.6
baz=118
TUC Tucson 43.46 311 P **P** **04 37 01.9 +0.4**
S22A 4UR Ranch, Cre 43.64 320 P 04 37 04.3
baz=127,SNR=6.1
SUSD Miller 44.05 333 P 04 37 05.8
baz=142
ISCO Idaho Springs 44.18 324 P 04 37 08.5
baz=130,SNR=6.4
EYMN Ely 44.21 342 P 04 37 06.8
baz=153,SNR=10.0
EYMN Ely 44.21 342 IAmb IAmb 04 37 07.8
comp=Z,9.0nm,0.7s
MVCO Mesa Verde 44.41 319 P 04 37 09.5
baz=125
SMCO Snowmass 44.60 322 P **P** **04 37 11.4 +0.4**
214A Organ Pipe Nat 44.83 310 P 04 37 12.9
baz=116
N23A Red Feather La 45.08 325 P 04 37 15.4
baz=131
B35A Bob, Littlefor 45.28 341 IAmb IAmb 04 37 16.1
comp=Z,4.4nm,0.7s
WUAZ Wupatki 45.45 315 P 04 37 18.5
baz=120,SNR=6.6
WUAZ Wupatki 45.45 315 IAmb IAmb 04 37 19.5
comp=Z,7.0nm,0.9s
AGMN Agassiz Nation 45.95 339 IAmb IAmb 04 37 29.8
comp=Z,5.5nm,0.7s
AGMN Agassiz Nation 45.95 339 P 04 37 20.9
baz=148,SNR=5.4
RWWY Rawlins 46.32 325 P **P** **04 37 24.3 0.0**
RWWY IAmb IAmb 04 37 25.3
comp=Z,6.0nm,1.0s
SRU San Rafael Swe 46.80 320 IAmb IAmb 04 37 29.3
comp=Z,4.4nm,0.7s
PLCA Paso Flores 47.01 177 P **P** **04 37 29.4 -0.1**
comp=Z,1.8nm,1.1s,baz=326,slow=6.4,SNR=3.6
PLCA Paso Flores 47.01 177 *eP* **P** **04 37 28.9 -0.5**
RDMU Red Mountain 47.04 322 IAmb IAmb 04 37 31.4
comp=Z,4.3nm,0.9s
P17A Butcher Ranch, 47.14 320 IAmb IAmb 04 37 32.0
comp=Z,6.0nm,0.9s
KNB Kanab 47.22 316 IAmb IAmb 04 37 33.1
comp=Z,3.9nm,0.8s
LCMT Little Creek M 47.51 316 IAmb IAmb 04 37 35.6
comp=Z,4.1nm,0.8s
ULM Lac du Bonnet 47.62 340 P **P** **04 37 33.4 -0.6**
comp=Z,8.4nm,0.8s,baz=153,slow=6.5,SNR=17
ULM PcP **PcP** **04 39 02.8 -0.7**
comp=Z,3.1nm,1.0s,baz=17,slow=1.9,SNR=3.0
SZCU Shurtz Canyon 47.69 316 IAmb IAmb 04 37 36.0
comp=Z,3.5nm,0.5s
MPU Maple Canyon 48.01 320 IAmb IAmb 04 37 38.7
comp=Z,5.5nm,0.7s
BW06 Boulder Array 48.35 324 P 04 37 40.0
baz=128
PDAR Pinedale Array 48.35 324 P **P** **04 37 39.4 -0.7**
comp=Z,1.9nm,0.8s,baz=133,slow=9.0,SNR=13
PDAR PcP **PcP** **04 39 05.7 -1.0**
comp=Z,0.4nm,0.5s,baz=134,slow=6.4,SNR=3.8
PDAR ScP **ScP** **04 42 59.4 -1.4**
comp=Z,0.1nm,0.5s,baz=82,slow=40,SNR=2.3
PDAR Pinedale Array 48.35 324 P **P** **04 37 40.2 +0.1**
CTU Camp Tracy 48.46 321 IAmb IAmb 04 37 46.0
comp=Z,4.2nm,0.8s
PSUT Pine Spring 48.69 317 IAmb IAmb 04 37 55.5
comp=Z,3.4nm,0.7s
HWUT Hardware Ranch 48.87 322 IAmb IAmb 04 37 45.1
comp=Z,4.0nm,0.8s
DUG Dugway, Tooele 48.87 320 P 04 37 44.8
baz=123,SNR=6.4
DUG Dugway, Tooele 48.87 320 P **P** **04 37 44.2 +0.2**
DUG IAmb IAmb 04 37 45.4
comp=Z,4.6nm,0.8s
REDW Red Top Meadow 49.47 324 IAmb IAmb 04 37 50.2
comp=Z,8.1nm,1.1s
SNOW Snow King Moun 49.47 324 IAmb IAmb 04 37 50.9
comp=Z,4.6nm,0.7s
LOHW Long Hollow 49.48 324 IAmb IAmb 04 37 50.2
comp=Z,3.1nm,0.8s
TPNV Topopah Spring 49.59 314 P 04 37 50.4
baz=117
RLMT Red Lodge 49.67 327 P 04 37 50.3
baz=130
R11A Troy Canyon, C 49.78 316 P 04 37 51.6
baz=119
GCMT Greycliff 50.31 327 P **P** **04 37 55.0 0.0**
YHL Hebgen Lake 50.56 325 IAmb IAmb 04 38 07.4
comp=Z,5.9nm,1.2s
BOZ Bozeman (W) 51.26 326 IAmb IAmb 04 38 03.6
comp=Z,3.4nm,0.9s
BOZ Bozeman (W) 51.26 326 P 04 38 02.7
baz=128,SNR=5.6
HLID Hailey 51.70 322 IAmb IAmb 04 38 07.1
comp=Z,4.8nm,1.1s
HLID Hailey 51.70 322 P 04 38 05.6
baz=124,SNR=7.5
NVAR Mina Array Bea 51.71 315 P **P** **04 38 06.0 +0.3**
comp=Z,1.5nm,0.6s,baz=122,slow=6.9,SNR=17
NVAR ScP **ScP** **04 43 13.4 -1.9**
comp=Z,0.8nm,0.9s,baz=122,slow=5.6,SNR=3.8
NVAR LR LR 05 04 14.3
comp=Z,24nm,18.4s,baz=240,slow=41
NVAR Mina Array Bea 51.71 315 P **P** **04 38 06.0 +0.3**
MFID Camas Ranch 52.49 321 IAmb IAmb 04 38 13.1
comp=Z,4.4nm,0.8s
PLID Pearl Lake 53.49 323 IAmb IAmb 04 38 19.6
comp=Z,4.7nm,0.9s
J08A Circle Bar Ran 54.12 320 IAmb IAmb 04 38 24.3
comp=Z,5.7nm,1.0s
F10A Beach Ranch, E 54.69 324 IAmb IAmb 04 38 27.6
comp=Z,2.6nm,0.7s
O03E Paynes Creek 54.96 315 P 04 38 28.6
baz=114
G08A Pilot Rock 55.38 322 IAmb IAmb 04 38 33.2
comp=Z,5.4nm,0.8s
M04C Macdoel 55.61 317 P 04 38 34.1
baz=115
J05D Fort Rock, OR 55.87 319 P 04 38 36.1
baz=117
NEW Newport 55.88 326 P **P** **04 38 35.6 -0.2**
baz=120,slow=8.1
NEW Newport 55.88 326 IAmb IAmb 04 38 43.8
comp=Z,2.6nm,1.1s
PINE Pine Mountain 55.91 320 P **P** **04 38 37.1 +0.9**
J04D Umpqua Nationa 56.42 319 P 04 38 40.5
baz=116
YKA Yellowknife Ar 63.60 340 P **P** **04 39 28.2 -0.4**
comp=Z,7.7nm,0.7s,baz=132,slow=7.0,SNR=162
DLBC Dease Lake 67.63 332 P **P** **04 39 55.0 +0.1**
comp=Z,1.9nm,0.7s,baz=116,slow=5.6,SNR=4.3
DLBC Dease Lake 67.63 332 IAmb IAmb 04 40 19.4
comp=Z,9.1nm,1.2s
DBIC Dimbokro 67.81 85 P **P** **04 39 56.3 -0.4**
comp=Z,2.9nm,0.6s,baz=245,slow=4.8,SNR=6.4
RES Resolute Bay 69.34 354 P **P** **04 40 04.8 -0.4**
comp=Z,0.8nm,0.6s,baz=162,slow=10.0,SNR=5.7
SUMG Summit 69.36 11 *i* P **P** **04 40 05.0 -0.8**
SUMG IAmb IAmb 04 40 06.2
comp=Z,6.2nm,0.7s
SUMG Summit 69.36 11 P **P** **04 40 05.5 -0.3**
SUMG IAmb IAmb 04 40 06.1
comp=Z,7.5nm,0.8s
NEEM North Greenlan 71.92 5 *i* P **P** **04 40 21.0 -0.3**
NEEM IAmb IAmb 04 40 21.7
comp=Z,8.4nm,0.7s
INK Inuvik 73.37 340 P **P** **04 40 29.1 -0.4**
comp=Z,3.5nm,0.6s,baz=96,slow=5.0,SNR=20
INK Inuvik 73.37 340 IAmb IAmb 04 40 39.1
comp=Z,4.4nm,0.7s
EPYK Eagle Plains 73.71 338 P 04 40 31.8
baz=112
TORD Torodi Ar. Bea 73.86 78 P **P** **04 40 33.0 -0.5**
comp=Z,0.4nm,0.6s,baz=285,slow=6.8,SNR=1.7
BCAR Beaver Creek A 74.68 334 P **P** **04 40 37.7 +0.3**
EGAK Eagle 74.91 336 P 04 40 40.1
baz=107
K27K Chicken 75.07 335 IAmb IAmb 04 40 49.6
comp=Z,6.2nm,0.9s
K27K Chicken 75.07 335 P 04 40 41.1
baz=106
BMRM Bremner River 75.42 331 P 04 40 42.8
baz=103
MENT Mentasta 75.49 334 IAmb IAmb 04 40 52.0
comp=Z,4.5nm,0.9s
N25K Chitina, Valde 75.57 332 P 04 40 43.6
baz=103
SCRK Sand Creek 75.87 335 P **P** **04 40 44.5 +0.1**
SCRK Sand Creek 75.87 335 P 04 40 45.1
baz=105
PAX Paxson 76.28 333 P 04 40 46.9
baz=103
PRP Porcupine Dome 76.89 336 P 04 40 50.2
baz=104
BMAR Burnt Mountain 76.99 338 P **P** **04 40 50.6 0.0**
HDA Harding Lake 77.23 335 P 04 40 51.9
baz=102,SNR=6.2
HDA P 04 40 51.9
baz=102,SNR=6.2
IL31 77.28 335 P **P** **04 40 51.2 -1.0**
IL31 IAmb IAmb 04 40 52.7
comp=Z,4.0nm,0.9s
ILAR Eielson Array 77.28 335 P **P** **04 40 51.9 -0.3**
comp=Z,1.8nm,0.7s,baz=116,slow=4.4,SNR=18
ILAR Eielson Array 77.28 335 P **P** **04 40 51.8 -0.4**
KNK Knik Glacier 77.34 332 P 04 40 53.3
baz=100
SML Sawmill 77.35 332 P 04 40 53.0
baz=100
WAT2 Susitna Watana 77.67 333 P 04 40 54.8
baz=100
PMR Palmer 77.69 332 P 04 40 54.7
baz=99
RC01 Rabbit Creek A 77.90 331 P 04 40 56.0
baz=99
NEA2 Nenana 78.17 335 IAmb IAmb 04 40 57.5
comp=Z,5.2nm,0.8s
NEA2 Nenana 78.17 335 P 04 40 57.3
baz=100
SUA Susitna One 78.44 331 P 04 40 59.0
baz=98,SNR=5.1
TRF Thorofare Moun 78.51 333 P 04 40 59.5
baz=99
SKT Skwentna 78.88 332 P 04 41 01.0
baz=97
BPAW Bear Paw Mtn. 78.92 334 P 04 41 01.1
baz=98
MLY Manley 78.94 335 P 04 41 01.4
baz=99
COLD Coldfoot 79.08 337 P **P** **04 41 02.6 +0.5**
COLD Coldfoot 79.08 337 P 04 41 02.9
baz=100,SNR=5.7
PPLA Purkeypile 79.29 333 P **P** **04 41 03.7 +0.1**
PPLA Purkeypile 79.29 333 P 04 41 03.5
baz=97,SNR=5.8
CHUM Lake Minchumin 79.47 334 P 04 41 04.1
baz=97
ARCES ARCESS Array B 87.04 20 P **P** **04 41 43.3 0.0**
comp=Z,7.2nm,1.1s,baz=305,slow=4.3,SNR=6.6
FINES FINESS Array B 88.79 28 P **P** **04 41 51.5 -0.2**
comp=Z,1.9nm,0.9s,baz=147,slow=32,SNR=2.4
RAR Rarotonga 89.16 249 LR LR 05 12 59.6
comp=Z,165nm,18.0s,baz=95,slow=30
KURK Kurchatov 118.07 20 **PKPdf** **04 47 43.0 -2.1**
KURBB Kurchatov Arra 118.12 20 PKP **PKPdf** **04 47 43.0 -2.2**
comp=Z,0.3nm,0.2s,baz=328,slow=2.0,SNR=1.7
MKAR Makanchi Array 122.69 20 PKP **PKPdf** **04 47 52.7 -1.4**
comp=Z,0.2nm,0.4s,baz=4.5,slow=2.3,SNR=3.1
AS31 Alice Springs 148.85 234 PKPbc **PKPdf** **04 48 44.5 +1.7**
ASAR Alice Springs 148.86 234 PKPbc **PKPdf** **04 48 44.5 +1.7**
comp=Z,4.1nm,0.7s,baz=118,slow=3.6,SNR=51
ASAR Alice Springs 148.86 234 PKPbc **PKPdf** **04 48 44.2 +1.4**
WRA Warramunga Arr 150.12 241 PKPbc **PKPbc** **04 48 47.9 -1.9**
comp=Z,9.9nm,0.6s,baz=109,slow=2.8,SNR=61
CMAR Chiang Mai Arr 154.06 17 PKPbc **PKPbc** **04 48 58.6 -0.2**
comp=Z,0.8nm,0.3s,baz=344,slow=3.0,SNR=1.8

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*SKHL **11** 04:38:31.7±0.2, 44.10N×146.80E, h117km±3km, mb5.0/4, msha5.9/4*
*MOS **11** 04:38:31.0±1.7, 43.67N×147.20E, h91km, mb3.9/1, Error ellipse: s-maj=17.6km s-min=9.0km az=72.9*
*JMA **11** 04:38:32.9±0.3, 43.98N×146.80E, h103km±3km, M3.6*
*IDC **11** 04:38:35.2±2.5, 44.65N×146.61E, h121km±20km, mb3.4/10, mb1 3.5/13, mb1mx3.2/54, mbtmp3.7/13, Error ellipse: s-maj=54.0km s-min=17.6km az=162.0*

ISC 11 04:38:30.6±0.8, 44.04N±0.06×146.88E±0.06, h117km±5km, n63, σ1.950/72, mb3.7/12, 5C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.73**	**270**	*d* iPN	**Pn**	**04 38 50.0**	**+0.1**
YUK				*i* S	**Sn**	**04 39 03.5**	**-0.9**
YUK				pmax	pmax		
	comp=N,219nm,0.1s						
YUK				pmax	pmax		
	comp=E,232nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1μm,0.1s						
YUK				smax	smax		
	comp=N,5μm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.1s						
YUK	**Yuzh-Kuril'sk**	**0.73**	**270**	*i* P	**Pn**	**04 38 50.4**	**+0.5**
YUK				AMB	AMB	04 38 50.5	
	comp=E,220nm,0.3s						
YUK				AMB	AMB	04 38 50.5	
	comp=E,230nm,0.3s						
YUK				AMB	AMB	04 38 50.5	
	comp=E,1μm,0.3s						
YUK				*i* S	**Sn**	**04 39 04.3**	**-0.1**
YUK				A	A	04 39 05.3	
	comp=E,2μm,0.2s						
YUK				A	A	04 39 05.3	
	comp=E,1μm,0.2s						
GRPR	**Tuman**	**0.80**	**267**	*d* iPN	**Pn**	**04 38 50.9**	**+0.5**
GRPR				*i* S	**Sn**	**04 39 04.6**	**-0.8**
GRPR				pmax	pmax		
	comp=Z,503nm,0.4s						
GRPR				pmax	pmax		
	comp=N,69nm,0.2s						
GRPR				pmax	pmax		
	comp=E,85nm,0.2s						
GRPR				smax	smax		
	comp=E,4μm,0.2s						
GRPR				smax	smax		
	comp=N,9μm,0.5s						
GRPR	**Tuman**	**0.80**	**267**	*i* P	**Pn**	**04 38 51.0**	**+0.5**
GRPR				AMB	AMB	04 38 51.0	
	comp=N,70nm,0.3s						
GRPR				AMB	AMB	04 38 51.0	
	comp=N,90nm,0.3s						
GRPR				AMB	AMB	04 38 51.0	
	comp=N,500nm,0.3s						

GRPR			*i* S		**Sn**	**04 39 04.8**	**-0.6**
GRPR			A	A		04 39 05.0	
	comp=N,9μm,0.6s						
GRPR			A	A		04 39 05.0	
	comp=N,4μm,0.6s						
GLVR	**Golovnino**	**1.03 253**	*e*PN	**Pn**		**04 38 53.7**	**+1.1**
GLVR			*i* S	**Sn**		**04 39 09.8**	**+0.6**
GLVR			pmax	pmax			
	comp=Z,890nm,0.1s						
GLVR			smax	smax			
	comp=N,7μm,0.3s						
GLVR			smax	smax			
	comp=E,7μm,0.3s						
GLVR	**Golovnino**	**1.03 253**	*e*P	**Pn**		**04 38 53.7**	**+1.1**
GLVR			AMB	AMB		04 38 54.0	
	comp=E,890nm,0.3s						
GLVR			*i* S	**Sn**		**04 39 09.8**	**+0.6**
GLVR			A	A		04 39 10.0	
	comp=E,7μm,0.6s						
GLVR			A	A		04 39 10.0	
	comp=E,7μm,0.6s						
NEM2	**Nemuro 2**	**1.07 231**	P	**Pn**		**04 38 53.4**	**+0.4**
NEM2			*e*S	**Sn**		**04 39 08.9**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.07 231** ⇑	*i*PN	**Pn**		**04 38 53.5**	**+0.4**
NMR			S	**Sn**		**04 39 09.0**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.07 231**	*i* P	**Pn**		**04 38 53.5**	**+0.4**
NMR			*e*S	**Sn**		**04 39 09.0**	**-1.0**
RUSJ	**Misakicho**	**1.18 274** ⇓	*i*PN	**Pn**		**04 38 55.0**	**+0.8**
JRA	**Rausu**	**1.27 266**	P	**Pn**		**04 38 56.0**	**+0.8**
JRA			*e*S	**Sn**		**04 39 14.1**	**+0.3**
JNSB	**Nemuroshibetsu**	**1.38 259**	P	**Pn**		**04 38 57.7**	**+1.3**
KUR	**Kuril'sk**	**1.38 30**	*e*PN	**Pn**		**04 38 57.2**	**+0.8**
KUR			*e*S	**Sn**		**04 39 15.9**	**-0.2**
KUR			pmax	pmax			
	comp=E,63nm,0.3s						
KUR			pmax	pmax			
	comp=N,20nm,0.1s						
KUR			pmax	pmax			
	comp=E,19nm,0.2s						
KUR			smax	smax			
	comp=E,367nm,0.3s						
KUR			smax	smax			
	comp=N,312nm,0.4s						
KUR	**Kuril'sk**	**1.38 30**	*i* P	**Pn**		**04 38 57.2**	**+0.8**
KUR			AMB	AMB		04 39 00.0	
	comp=N,20nm,0.3s						
KUR			AMB	AMB		04 39 00.0	
	comp=N,20nm,0.3s						
KUR			AMB	AMB		04 39 00.0	
	comp=N,80nm,0.3s						
KUR			*i* S	**Sn**		**04 39 16.5**	**+0.4**
KUR			A	A		04 39 17.0	
	comp=N,310nm,0.3s						
KUR			A	A		04 39 17.0	
	comp=N,370nm,0.3s						
JKHN	**Kushirohamanak**	**1.57 233**	P	**Pn**		**04 38 59.3**	**+0.6**
JKHN			*e*S	**Sn**		**04 39 19.2**	**-0.8**
JNK	**Nakash**	**1.63 254**	P	**Pn**		**04 39 00.3**	**+0.9**
JAK	**Akkeshi**	**1.90 237**	P	**Pn**		**04 39 03.3**	**+0.6**
JAK			*e*S	**Sn**		**04 39 26.6**	**-0.5**
JTKR	**Abashiri--Toko**	**2.14 269**	P	**Pn**		**04 39 06.5**	**+0.8**
JTKR			*e*S	**Sn**		**04 39 33.1**	**+0.6**
JAR	**Ashorobuto**	**2.38 253**	P	**Pn**		**04 39 10.6**	**+1.9**
JOB	**Onbets**	**2.49 244**	P	**Pn**		**04 39 11.6**	**+1.5**
JOB			*e*S	**Sn**		**04 39 40.9**	**+0.4**
JMP	**Maruseppu**	**2.54 270**	P	**Pn**		**04 39 12.1**	**+1.3**
JCH	**Churui**	**2.94 242**	P	**Pn**		**04 39 16.9**	**+1.0**
JKK2	**Kamakawa 2**	**2.99 268**	P	**Pn**		**04 39 18.3**	**+1.7**
JKA	**Kamikawa-asahi**	**3.08 273**	*e*P	**Pn**		**04 39 19.7**	**+1.8**
ASAJ	**Asahikawa**	**3.09 273**	P	**Pn**		**04 39 19.7**	**+1.9**
	comp=N,5.8nm,0.3s,baz=133,slow=9,9,SNR=38						
ASAJ			S	**Sn**		**04 39 56.2**	**+1.8**
	comp=N,1.6nm,0.3s,baz=203,slow=29,SNR=1.8						
ASAJ	**Asahikawa**	**3.09 273**	P	**Pn**		**04 39 19.8**	**+1.9**
ERM	**Erimo**	**3.40 235***c*	*i*PN	**Pn**		**04 39 24.2**	**+2.1**
JNBK	**Urakawa-nobuka**	**3.50 241**	P	**Pn**		**04 39 23.5**	**+0.2**
YSS	**Yuzh-Sakhalins**	**4.11 317**	*e*PN	**Pn**		**04 39 34.2**	**+2.7**
YSS			pmax	pmax			
	comp=Z,10.0nm,1.4s						
YSS	**Yuzh-Sakhalins**	**4.11 317**	*e*P	**Pn**		**04 39 32.5**	**+1.0**
SKR	**Severo-Kuril's**	**9.13 40**	*e*PN	**Pn**		**04 40 38.0**	**-1.2**
SKR	**Severo-Kuril's**	**9.13 40**	*e*P	**Pn**		**04 40 40.1**	**+0.9**
PETK	**Petropavlovsk-**	**11.55 34**	P	**Pn**		**04 41 11.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=2.3						
EKMR	**Ekimchan**	**12.89 319**	*e*P	**Pn**		**04 41 28.2**	**-1.2**
BMKR	**Bomnak**	**15.82 319**	*e*P	**Pn**		**04 42 04.0**	**-2.6**
SEY	**Seymchan**	**19.19 8**	P	**P**		**04 42 42.7**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=350,slow=23,SNR=1.6						
SEY	**Seymchan**	**19.19 8** ⇑	*e*P	**P**		**04 42 42.6**	**-2.3**
HIA	**Hailar**	**19.29 295** ⇑	*e*P	P		04 42 40.1	-6.1
H11N2	**WAKE ISLAND Hy**	**29.45 139**	T	T		05 15 26.3	
	baz=329,slow=75,SNR=98						
H11N1	**WAKE ISLAND Hy**	**29.46 139**	T	T		05 15 27.6	
	baz=329,slow=75,SNR=79						
H11N3	**WAKE ISLAND Hy**	**29.47 139**	T	T		05 15 29.8	
	baz=329,slow=75,SNR=86						
H11S1	**WAKE ISLAND Hy**	**30.42 141**	T	T		05 16 36.3	
	baz=330,slow=76,SNR=186						
H11S3	**WAKE ISLAND Hy**	**30.42 141**	T	T		05 16 43.6	
	baz=330,slow=76,SNR=100						
H11S2	**WAKE ISLAND Hy**	**30.44 141**	T	T		05 16 36.1	
	baz=330,slow=76,SNR=71						
MKAR	**Makanchi Array**	**44.27 297**	P	**P**		**04 46 29.9**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=86,slow=9.0,SNR=2.3						
MKAR	**Makanchi Array**	**44.27 297**	P	**P**		**04 46 30.0**	**+1.6**
MKAR	**Makanchi Array**	**44.27 297**	*e*P	**P**		**04 46 30.0**	**+1.6**
KURK	**Kurchatov**	**45.20 304**	P	**P**		**04 46 36.5**	**+0.8**
KURK	**Kurchatov**	**45.20 304**	*e*P	**P**		**04 46 36.5**	**+0.8**
KURBB	**Kurchatov Arra**	**45.29 304**	P	**P**		**04 46 36.5**	**+0.2**
	comp=Z,0.3nm,0.2s,baz=71,slow=7.8,SNR=1.5						
INK	**Inuvik**	**46.25 30**	P	**P**		**04 46 44.4**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=283,slow=6.5,SNR=9.0						
BRVK	**Borovoye**	**49.21 309** ⇓	*i* P	P		04 47 00.4	-6.3
BRVK			pmax	pmax			
	comp=Z,1.0nm,0.8s						
AAK	**Ala-Archa**	**51.05 295** ⇑	*e*P	P		04 47 16.1	-4.9
AAK			pmax	pmax			
	comp=Z,2.0nm,1.4s						
ARU	**Arti**	**54.00 317**	P	P		04 47 38.7	-3.5
ARU			S	**S**		**04 55 02.4**	**-6.4**
ARU			SS	**SKiKP**		**04 58 38.3**	**-3.7**
RES	**Resolute Bay**	**54.74 17**	P	**P**		**04 47 47.9**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=328,slow=8.5,SNR=6.9						
YKA	**Yellowknife Ar**	**55.67 34**	P	**P**		**04 47 55.9**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=304,slow=7.3,SNR=7.7						
ARCES	**ARCESS Array B**	**58.90 339**	P	**P**		**04 48 16.3**	**-0.5**
	comp=Z,5.8nm,1.2s,baz=47,slow=6.6,SNR=1.4						
FINES	**FINESS Array B**	**64.52 333**	P	**P**		**04 48 53.6**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=48,slow=7.6,SNR=9.0						
FINES	**FINESS Array B**	**64.52 333**	*i* P	**P**		**04 48 54.9**	**+0.4**
FINES			pmax	pmax			
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**69.26 339**	P	**P**		**04 49 24.8**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=32,slow=6.6,SNR=4.3						
AKASG	**Malin Array Be**	**71.23 323**	P	**P**		**04 49 36.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=42,slow=6.3,SNR=4.3						
AKASG	**Malin Array Be**	**71.23 323**	*i* P	**P**		**04 49 37.5**	**+0.8**
TXAR	**Lajitas Array**	**82.65 56**	P	**P**		**04 50 43.9**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=8.9,slow=40,SNR=1.7						

IDC ***11*** *04:55:42.4±0.8, 17.04N×120.17E, h0km, mb3.6/11, mb1 3.9/11, mb1mx3.7/46, mbtmp3.7/11, Error ellipse: s-maj=37.6km s-min=16.4km az=72.0*

MAN ***11*** *04:55:45.5, 17.26N×119.95E, h4km, mb4.7, ML3.6, MS3.4*

ISC 11 04:55:44.3±2.1, 17.11N±0.04×119.97E±0.08, h8km±13km, n21,σ1ᵗ80/29, mb3.6/10, 3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.73**	**185**	*e*P	**Pn**	**04 56 02.0**	**+1.1**
BOLP				*e*S	**Sn**	**04 56 15.4**	**+3.1**
SIPP	**Brgy, Tapao**	**0.93**	**30** ⇓	*i*P	**Pb**	**04 56 02.2**	**-0.5**
SIPP				*i* S	**Sn**	**04 56 16.0**	**-1.2**
APYP	**Conner**	**1.42**	**58**	*e*P	**Pb**	**04 56 11.0**	**-0.2**
APYP				*e*S	**Sn**	**04 56 32.2**	**+2.8**
CVP	**Callao Caves**	**1.86**	**71** ⇓	*e*P	**Pg**	**04 56 19.1**	**-0.9**
CVP				*i* S	**Sg**	**04 56 47.5**	**+3.3**
SGCP	**Mt. Cagua**	**2.27**	**60**	*e*P	**Pb**	**04 56 24.5**	**-1.2**
SGCP				*e*S	**Sb**	**04 56 51.7**	**-2.2**
MACP	**Maragondon, Ca**	**2.92**	**166**	*e*P	**Pb**	**04 56 35.0**	**-1.7**
MACP				*e*S	**Sb**	**04 57 13.8**	**+1.1**
TGY	**Tagaytay City**	**3.13**	**163**	Pn	**Pb**	**04 56 37.9**	**-2.5**
	79nm,0.3s,baz=2.0,slow=1.4,SNR=5.0						
TGY				Sn	**Sb**	**04 57 19.6**	**+0.8**
	81nm,0.3s,baz=148,slow=11,SNR=1.6						
TGY	**Tagaytay City**	**3.13**	**163**	*e*P	**Pb**	**04 56 40.1**	**-0.2**
LQP	**Lukban**	**3.34**	**153** ⇓	*e*P	**Pb**	**04 56 42.8**	**-1.2**
LUBP	**Lubang**	**3.37**	**175**	*e*P	**Pb**	**04 56 42.0**	**-2.3**
LUBP				*e*S	**Sb**	**04 57 25.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**20.07**	**277**	P	**P**	**05 00 20.4**	**+2.1**
	0.4nm,0.5s,baz=97,slow=8.8,SNR=4.5						
KSRS	**Korea Array**	**21.44**	**18**	P	**P**	**05 00 32.9**	**-0.1**
	1.4nm,0.6s,baz=200,slow=11,SNR=6.7						
SONM	**Songino Array**	**32.61**	**343**	P	**P**	**05 02 17.5**	**+0.9**
	0.2nm,0.3s,baz=162,slow=10.0,SNR=1.9						
FITZ	**Fitzroy Crossi**	**35.43**	**171**	P	**P**	**05 02 40.0**	**-1.2**
	0.6nm,0.7s,baz=347,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**39.43**	**158**	P	**P**	**05 03 13.1**	**-2.1**
	0.7nm,0.5s,baz=330,slow=11,SNR=17						
ASAR	**Alice Springs**	**42.75**	**161**	P	**P**	**05 03 40.5**	**-2.0**
	0.6nm,0.5s,baz=340,slow=6.9,SNR=11						
MKAR	**Makanchi Array**	**42.91**	**322**	P	**P**	**05 03 43.7**	**+0.2**
	0.4nm,0.7s,baz=119,slow=9.9,SNR=4.2						
ARCES	**ARCESS Array B**	**75.67**	**339**	P	**P**	**05 07 32.0**	**+2.2**
	6.0nm,1.1s,baz=80,slow=6.5,SNR=1.7						
FINES	**FINESS Array B**	**76.98**	**331**	P	**P**	**05 07 36.9**	**-0.5**
	0.6nm,0.6s,baz=46,slow=4.0,SNR=1.5						
NOA	**NORSAR Array B**	**83.93**	**332**	P	**P**	**05 08 13.0**	**-1.8**
	0.6nm,0.7s,baz=64,slow=4.9,SNR=3.6						
YKA	**Yellowknife Ar**	**89.90**	**22**	P	**P**	**05 08 42.7**	**-1.1**
	0.2nm,0.7s,baz=311,slow=4.4,SNR=6.3						

BJI ***11*** *05:00:38.7±0.0, 1.66N×126.71E, h49km, mB5.2/62, mb5.0/78, Ms5.0/81, Ms7 4.9/77*

MOS ***11*** *05:00:40.2±1.1, 2.13N×126.56E, h41km, mb5.5/52, MS4.7/15, Error ellipse: s-maj=7.4km s-min=3.9km az=115.8*

NEIC ***11*** *05:00:41.8, 2.14N×126.70E, h58km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.49; Mθθ-0.66; Mϕϕ-1.83; Mrθ0.17; Mrϕ-0.72; Mθϕ-0.38; Fault plane solution: M₀2.38000×10¹⁷ NP1:ϕs31.49000°, δ42.01000°, λ,99.51000°. NP2:ϕs198.78000°, δ48.69000°, λ81.53000°. Principal axes: T 2.5401, Plg83.0000°, Azm52.0000°; N -0.3539, Plg6.0000°, Azm204.0000°; P -2.1862, Plg3.0000°, Azm295.0000°;*

NEIC ***11*** *05:00:42.5±2.0, 2.12N±0.06×126.70E±0.06, h50km±1km, mb5.2/124, Ms_20 4.9/147, Mwb5.5/53, Mwc5.6(GCMT) Error ellipse: s-maj=11.2km s-min=8.6km az=230.0*

KLM ***11*** *05:00:43, 2.15N×126.92E, h59km, mb5.3*

DJA ***11*** *05:00:43.9±0.2, 2°N±1°×12°7E±°, h58km±2km, M5.2/112, mB5.7/75, mb5.3/112, MLv5.4/18, Mw(mB)5.2/75, MwMwp5.3/46, Mwp5.5/46*

IDC ***11*** *05:00:43.7±1.4, 2.06N×126.61E, h57km±12km, mb4.8/47, mb1 4.7/52, mb1mx4.7/65, mbtmp5.0/52, MS4.5/53, Ms1 4.5/33, ms1mx4.3/46, Error ellipse: s-maj=11.8km s-min=6.5km az=74.0*

GCMT ***11*** *05:00:44.5±0.1, 2.21N±0.01×126.52E±0.01, h36km, MW5.6/153, Moment Tensor Solution. s153,c279; s143,c281; Duration: 1ᵗ6 Moment tensor: Scale 1017 Nm; Mrr2.85±.04; Mθθ-0.19±.03; Mϕϕ-2.66±.03; Mrθ-0.37±.04; Mrϕ-1.64±.03; Mθϕ-0.94±.05; Best double couple: M₀3.32200×10¹⁷ NP1:ϕs29.00000°, δ36.00000°, λ94.00000°. NP2:ϕs204.00000°, δ54.00000°, λ87.00000°. Principal axes: T 3.0090, Plg81.0000°, Azm102.0000°; N 0.6210, Plg2.0000°, Azm206.0000°; P -3.6340, Plg9.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***11*** *05:00:46, 2.23N×126.56E, h36km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.87; Mθθ-0.11; Mϕϕ-2.75; Mrθ-0.15; Mϕϕ-1.56; Mθϕ-0.95; Fault plane solution: M₀3.36000×10¹⁷ NP1:ϕs32.00000°, δ37.00000°, λ,100.00000°. NP2:ϕs199.00000°, δ53.00000°, λ82.00000°. Principal axes: T 3.0281, Plg80.0000°, Azm77.0000°; N 0.5805, Plg6.0000°, Azm204.0000°; P -3.6086, Plg8.0000°, Azm294.0000°;*

ISC 11 05:00:43.2±0.3, 2.07N±0.03×126.68E±0.04, h56km±2km, h56km:pP-P, n709,σ1ᵗ81/727, mb5.2/190, MS4.9/134, 103C-48D, Fault plane solution: NP1:ϕs355.27365°, δ34.50934°, λ,95.54736°. **NP2:ϕs168.55161°, δ55.67495°,** λ86.19762°. **Principal axes:** T Plg78.9345°, Azm64.4102°; N Plg3.1395°, Azm170.6979°; P Plg10.6000°, Azm261.2860°; **Northern Moluccа Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.46**	**152**	Pn	**Pn**	**05 01 06.7**	**-0.7**
TNTI	**Ternate**	**1.46**	**152**	P	**Pn**	**05 01 07.0**	**-0.4**
SGSI	**Sangihe**	**1.97**	**324**	P	**Pn**	**05 01 13.0**	**-1.3**
SGSI				S	**Sn**	**05 01 38.8**	**+0.9**
KMSI	**Cibinong**	**3.08**	**241**	P	**Pn**	**05 01 30.9**	**+1.4**
GTOI	**Gorontalo**	**3.94**	**249**	P	**Pn**	**05 01 42.2**	**+1.0**
DDMP	**Don Marcelino,**	**4.12**	**346**	*e*P	Pn	05 01 38.8	-4.9
SANI	**Sanana**	**4.15**	**190**	P	**Pn**	**05 01 44.3**	**+0.1**
MATI	**Mati**	**4.86**	**355**	*e*P	**Pn**	**05 01 57.0**	**+3.2**
SKMP	**Bagumbayan, Su**	**4.90**	**334**	*e*P	**Pn**	**05 01 51.6**	**-2.9**
LUWI	**Luwuk**	**4.99**	**232**	Pn	**Pn**	**05 01 58.4**	**+2.9**
LUWI	**Luwuk**	**4.99**	**232**	P	**Pn**	**05 01 57.1**	**+1.5**
	18nm26μm20μm2μm,0.8s						
MRSI	**Marisa**	**5.00**	**252**	P	**Pn**	**05 01 57.0**	**+1.3**
	4.2nm31μm12μm1μm,0.6s						
DAV	**Davao City (W)**	**5.08**	**348**	P	**Pn**	**05 01 57.1**	**+0.2**
	32nm,0.3s,baz=15,slow=2.5,SNR=1.2						
DAV				S	**Sn**	**05 03 01.3**	**+7.0**
	42nm,0.3s,baz=294,slow=17,SNR=5.3						
DAV	**Davao City (W)**	**5.08**	**348**	Pn	**Pn**	**05 01 56.2**	**-0.8**
DAV	**Davao City (W)**	**5.08**	**348**	P	**Pn**	**05 01 57.3**	**+0.3**
KCP	**Kidapawan**	**5.15**	**342** ⇓	*e*P	**Pn**	**05 01 59.0**	**+1.0**
KCP				*i* S	**Sn**	**05 02 59.1**	**+3.0**
NLAI	**Namlea**	**5.29**	**175**	P	**Pn**	**05 02 00.5**	**+0.7**
	1.2nm6μm191nm,0.6s						
SWI	**Sorong**	**5.43**	**122**	P	**Pn**	**05 02 02.9**	**+1.3**
SWI				pmax	pmax		
	comp=Z,271nm,1.0s						
SWI	**Sorong**	**5.43**	**122**	P	**Pn**	**05 02 02.4**	**+0.8**
	comp=Z,1.0nmcomp=Z,43μmcomp=Z,5μmcomp=Z,269nm,0.9s						
SIJI	**Sorong**	**5.44**	**122**	P	**Pn**	**05 02 02.9**	**+1.2**
	comp=Z,20nm,0.3s,baz=288,slow=6.7,SNR=19						
APSI	**Ampana**	**5.84**	**240**	P	**Pn**	**05 02 09.9**	**+2.6**
	comp=Z,9.3nmcomp=Z,15μmcomp=Z,15μmcomp=Z,1μm,0.8s						
TOLI2	**Tolitoli**	**5.97**	**261**	Pn	**Pn**	**05 02 08.6**	**-0.6**
BUKP	**Musuan**	**5.99**	**344**	*e*P	**Pn**	**05 02 10.3**	**+0.9**
PAGZ	**Pagadian**	**6.61**	**330**	*e*P	**Pn**	**05 02 13.5**	**-4.4**
ZCP	**Zamboanga City**	**6.66**	**317** ⇓	*e*P	**Pn**	**05 02 18.3**	**-0.3**
ZCP				*e*S	**Sn**	**05 03 30.3**	**-2.8**
BUTP	**Butuan**	**6.93**	**351**	*e*P	**Pn**	**05 02 23.6**	**+1.3**
KDI	**Kendari**	**7.24**	**214**	P	**Pn**	**05 02 28.2**	**+1.8**
BNDI	**Bandanaira**	**7.30**	**154**	P	**Pn**	**05 02 29.7**	**+2.4**
	comp=Z,2.1nmcomp=Z,22μmcomp=Z,9μmcomp=Z,440nm,1.1s						
FAKI	**Fak Fak**	**7.45**	**132**	Pn	**Pn**	**05 02 29.9**	**+0.5**
FAKI	**Fak Fak**	**7.45**	**132**	P	**Pn**	**05 02 29.7**	**+0.3**
	comp=Z,0.7nmcomp=Z,29μmcomp=Z,3μmcomp=Z,122nm,1.2s						
GLSP	**General Luna,**	**7.68**	**356**	*e*P	**Pn**	**05 02 31.5**	**-1.0**
TTSI	**Tana Toraja**	**8.54**	**233**	P	**Pn**	**05 02 45.2**	**+0.9**
	comp=Z,14μmcomp=Z,4μmcomp=Z,268nm,0.9s						
MYLDM	**Lahad Datu**	**8.73**	**291**	Pn	**Pn**	**05 02 48.6**	**+1.7**
SPSI	**Sidrap Palu**	**9.15**	**229**	P	**Pn**	**05 02 54.0**	**+1.4**
	comp=Z,14μmcomp=Z,2μmcomp=Z,128nm,0.5s						
BNSI	**Bone**	**9.19**	**226**	P	**Pn**	**05 02 55.0**	**+1.8**
	comp=Z,11μmcomp=Z,2μmcomp=Z,222nm,0.8s						
SMKI	**Samarinda**	**9.80**	**255**	P	**Pn**	**05 03 03.5**	**+2.0**
	comp=Z,23μmcomp=Z,14μmcomp=Z,135nm,0.7s						
KAPI	**Kappang**	**9.87**	**225**	P	**Pn**	**05 03 03.7**	**+1.2**
	comp=Z,7.0nm,0.3s,baz=34,slow=5.5,SNR=17						
KAPI				S	**Sn**	**05 04 56.0**	**+4.0**
	comp=Z,1.7nm,0.3s,baz=98,slow=14,SNR=1.3						
KAPI				LR	LR	05 07 37.5	
	comp=Z,4μm,19.7s,baz=70,slow=42						
KAPI	**Kappang**	**9.87**	**225**	Pn	**Pn**	**05 03 04.1**	**+1.6**
KAPI	**Kappang**	**9.87**	**225**	P	**Pn**	**05 03 04.4**	**+1.8**
BAKI	**Biak**	**9.97**	**109**	P	**Pn**	**05 03 06.1**	**+2.3**
BSSI	**Bau Bau, Buton**	**10.24**	**217**	P	**Pn**	**05 03 09.3**	**+1.7**
	comp=Z,3μmcomp=Z,2μmcomp=Z,147nm,0.9s						
SRPI	**Serui, Papua**	**10.33**	**112**	P	**Pn**	**05 03 10.7**	**+1.9**
BKB	**Balikpapan**	**10.33**	**251**		**Pn**	**05 03 12.3**	**+3.5**
BKB	**Balikpapan**	**10.33**	**251**	P	**Pn**	**05 03 08.9**	**+0.1**
	comp=Z,20μmcomp=Z,3μmcomp=Z,233nm,1.2s						
SPMM	**Sapulut**	**10.53**	**285**	P	**Pn**	**05 03 15.0**	**+3.4**
SAUI	**Saumlaki**	**11.00**	**155**	P	**Pn**	**05 03 18.9**	**+0.9**
	comp=Z,12μmcomp=Z,27μmcomp=Z,388nm,1.0s						
BATP	**Bataraza**	**11.08**	**307**	*e*P	**Pn**	**05 03 19.8**	**+0.8**
KKM	**Kota Kinabalu**	**11.16**	**291**	Pn	**Pn**	**05 03 21.4**	**+1.2**
MMRI	**Maumere**	**11.52**	**203**	Pn	**Pn**	**05 03 25.8**	**+0.7**
MMRI	**Maumere**	**11.52**	**203**	P	**Pn**	**05 03 27.3**	**+2.2**
	comp=Z,5μmcomp=Z,3μmcomp=Z,170nm,1.3s						
KBKI	**Kotabaru**	**11.79**	**243**	P	**Pn**	**05 03 31.0**	**+2.3**
	comp=Z,1μmcomp=Z,104nm,1.3s						
SOEI	**Soe**	**11.99**	**192**	Pn	**Pn**	**05 03 35.6**	**+4.0**
SOEI	**Soe**	**11.99**	**192**	P	**Pn**	**05 03 33.7**	**+2.0**
	comp=Z,7μmcomp=Z,7μmcomp=Z,375nm,1.4s						
MTKI	**Muara Teweh, K**	**12.16**	**256**	P	**Pn**	**05 03 35.8**	**+2.0**
BATI	**Baumata**	**12.56**	**194**	P	**Pn**	**05 03 40.9**	**+1.5**
	comp=Z,2.6nm,0.3s,baz=305,slow=15,SNR=1.5						
BATI	**Baumata**	**12.56**	**194**	P	**Pn**	**05 03 42.0**	**+2.6**
	comp=Z,4μmcomp=Z,2μmcomp=Z,115nm,1.2s						
JCNP	**Jose Panganiba**	**12.76**	**342**	*e*P	**Pn**	**05 03 39.4**	**-2.6**
LQP	**Lukban**	**13.00**	**337** ⇓	*e*P	**Pn**	**05 03 47.8**	**+2.4**
BBKI	**Banjar Baru**	**13.05**	**245**	P	**Pn**	**05 03 48.4**	**+2.4**
	comp=Z,4μmcomp=Z,61nm,1.7s						
LUBP	**Lubang**	**13.22**	**332**	*e*P	**Pn**	**05 03 45.8**	**-2.5**
MACP	**Maragondon, Ca**	**13.47**	**334**	*e*P	Pn	05 03 46.7	-5.0
BASI	**Baing, Sumba**	**13.64**	**206**	P	**Pn**	**05 03 55.0**	**+1.0**
	comp=Z,3μmcomp=Z,4μmcomp=Z,244nm,1.5s						
PLAI	**Plampang**	**14.00**	**219**	P	**Pn**	**05 04 00.2**	**+1.3**
	comp=Z,5μmcomp=Z,4μmcomp=Z,313nm,0.8s						
GENI	**Genyem**	**14.26**	**109**	P	**Pn**	**05 04 03.3**	**+1.0**
	comp=Z,11μmcomp=Z,11μmcomp=Z,391nm,1.0s						
SBUM	**Sibu**	**14.46**	**272**	P	**P**	**05 04 07.7**	**-2.5**
SBUM	**Sibu**	**14.46**	**272**	P	**P**	**05 04 08.0**	**-2.2**
TWSI	**Taliwang, Sumb**	**14.52**	**222**	P	**P**	**05 04 08.6**	**-2.3**
	comp=Z,3μmcomp=Z,4μmcomp=Z,504nm,0.9s						
JAY	**Jayapura**	**14.74**	**108**	P	**Pn**	**05 04 09.6**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=316,slow=5.4,SNR=4.8						
JAY				S	**S**	**05 06 59.2**	**-7.6**
	baz=318,slow=22,SNR=1.5						
JAY				LR	LR	05 09 27.6	
	comp=Z,4μm,21.9s,baz=284,slow=35						
JAY	**Jayapura**	**14.74**	**108**	P	**Pn**	**05 04 07.4**	**-1.3**
	comp=Z,1μmcomp=Z,114nm,0.9s						
SRBI	**Singaraja**	**15.25**	**228**	P	**P**	**05 04 18.0**	**-1.1**
	comp=Z,5μmcomp=Z,3μmcomp=Z,288nm,1.4s						
STKI	**Sintang**	**15.33**	**263**	P	**P**	**05 04 19.4**	**-0.6**
	comp=Z,110nm,0.5s						
MTN	**Manton Dam**	**15.46**	**164**	P	**Pn**	**05 04 17.1**	**-0.9**
	baz=16,SNR=13						
MTN	**Manton Dam**	**15.46**	**164**		**Pn**	**05 04 16.7**	**-1.3**
MTN				IAmb	IAmb	05 04 29.3	
	comp=Z,182nm,1.2s						
KMMI	**Kalianget**	**15.59**	**234**	P	**Pn**	**05 04 21.2**	**+1.6**
	comp=Z,4μmcomp=Z,462nm,1.0s						
DNP	**Denpasar**	**15.65**	**227**	P	**P**	**05 04 22.4**	**-1.1**
	comp=Z,1μm,1.2s						
PBKI	**Pangkalan Bun**	**15.74**	**253**	P	**Pn**	**05 04 22.7**	**+1.2**
	comp=Z,30μmcomp=Z,481nm,0.6s						
KDU	**Kakadu**	**15.75**	**159**	P	**Pn**	**05 04 20.3**	**-1.3**
	baz=16,SNR=16						
ABJI	**Asem Bagus**	**15.82**	**232**	P	**Pn**	**05 04 23.8**	**+1.3**
	comp=Z,7μmcomp=Z,3μmcomp=Z,234nm,1.3s						
CVP	**Callao Caves**	**16.25**	**343** ⇓	*e*P	**Pn**	**05 04 28.4**	**+0.5**
JAGI	**Jajag, Banyuwa**	**16.30**	**230**	P	**P**	**05

QZH LR LR
comp=Z,2μm,22.5s
QZH LR LR
comp=Z,1μm,19.4s
QZH LR LR
comp=Z,4μm,25.4s
MBWA Marble Bar 24.07 196 P **P** **05 05 53.7 +0.2**
JRMM Jerantut 24.24 275 P **P** **05 05 56.0 +0.8**
XMIS Christmas Isla 24.36 239 P **P** **05 05 55.0 -1.3**
XMIS IAmb IAmb 05 05 57.9
comp=Z,58nm,0.8s
PSA00 Pilbara Seismi 24.43 196 P **P** **05 05 56.6 -0.3**
PSA00 Pilbara Seismi 24.43 196 P **P** **05 05 56.1 -0.7**
PSA00 IAmb IAmb 05 06 02.1
comp=Z,24nm,0.8s
RGRI Rengat 24.46 265 P **P** **05 05 56.5 -0.7**
comp=Z,41μmcomp=Z,128nm,0.5s
MNAI Manna 24.55 255 P **P** **05 05 58.3 +0.3**
MNAI IAMs_20 IAMs_20 05 16 19.9
comp=Z,3μm,20.0s
MNAI Manna 24.55 255 P **P** **05 05 59.0 +0.9**
comp=Z,274nm,1.3s
JOW Kunigami 24.66 3 P **P** **05 06 00.2 +1.3**
comp=Z,111nm,0.9s,baz=194,slow=7.8,SNR=9.0
JOW LR LR 05 18 44.7
comp=Z,374nm,18.2s,baz=153,slow=44
JOW Kunigami 24.66 3 P **P** **05 05 57.2 -1.7**
UBPT Khong Chiam 24.70 303 P **P** **05 06 00.9 +1.6**
UBPT Khong Chiam 24.70 303 P **P** **05 06 00.2 +0.9**
UBPT IAmb IAmb 05 06 25.2
comp=Z,100nm,1.4s
KSI Kapahiang 24.74 257 P **P** **05 06 01.7 +1.9**
KRJI Kerinci 25.55 261 P **P** **05 06 08.4 +1.2**
comp=Z,7μmcomp=Z,245nm,1.0s
BKNI Bangkinang 25.69 266 P **P** **05 06 08.5 +0.1**
comp=Z,4μmcomp=Z,2μmcomp=Z,76nm,1.0s
IPM Ipoh 25.72 276 P **P** **05 06 08.1 -0.6**
IPM IAmb IAmb 05 06 36.0
comp=Z,109nm,1.4s
IPM Ipoh 25.72 276 P **P** **05 06 13.0 +4.3**
QIS Mount Isa 25.81 151 P **P** **05 06 10.5 +1.1**
baz=26,SNR=75
KULM Kulim 26.17 278 P **P** **05 06 15.1 +2.4**
KULM Kulim 26.17 278 P **P** **05 06 16.0 +3.3**
AS31 Alice Springs 26.53 165 P **P** **05 06 15.9 0.0**
ASAR Alice Springs 26.53 165 P **P** **05 06 15.7 -0.3**
comp=Z,10nm,0.6s,baz=335,slow=6.2,SNR=57
ASAR PcP **PcP** **05 09 39.7 +0.1**
comp=Z,6.1nm,0.6s,baz=357,slow=1.9,SNR=5.7
ASAR S **S** **05 10 49.5 +3.1**
comp=Z,2.3nm,0.8s,baz=350,slow=20,SNR=2.8
ASAR ScP **ScP** **05 13 13.1 -1.9**
comp=Z,0.7nm,0.8s,baz=349,slow=2.2,SNR=1.8
ASAR LR LR 05 18 50.3
comp=Z,1μm,19.6s,baz=342,slow=41
ASAR Alice Springs 26.53 165 P **P** **05 06 15.4 -0.5**
MTSU Mount Surprise 26.55 140 P **P** **05 06 15.7 -0.4**
baz=27,SNR=32
WRKA Warakurna 27.00 177 P **P** **05 06 20.6 +0.5**
baz=27,SNR=136
SRAK Srakaew 27.09 297 P **P** **05 06 18.7 -2.2**
comp=Z,4μmcomp=Z,313nm,0.9s
MNSI Mandailing Nat 27.12 268 P **P** **05 06 22.4 +1.1**
comp=Z,27nm,1.5s
GIRL Giralia 27.40 206 P **P** **05 06 25.7 +2.0**
baz=28,SNR=13
GIRL Giralia 27.40 206 P **P** **05 06 25.1 +1.4**
TRTT Trang 27.48 283 P **P** **05 06 27.6 +3.0**
comp=Z,23nm,1.6s
RPSI Rantau Prapat 27.74 272 P **P** **05 06 26.6 -0.2**
RPSI Rantau Prapat 27.74 272 P **P** **05 06 26.1 -0.7**
RPSI IAmb IAmb 05 06 31.7
comp=Z,61nm,1.2s
PSI Prapat 27.74 272 P **P** **05 06 26.6 -0.4**
comp=Z,39nm,1.2s,baz=175,slow=0.6,SNR=16
PSI PcP **PcP** **05 09 42.3 -0.5**
comp=Z,2.8nm,0.4s,baz=360,slow=6.1,SNR=1.3
PSI LR LR 05 19 39.5
comp=Z,1μm,20.3s,baz=90,slow=41
CHAI Chaiyaphum 27.94 301 P **P** **05 06 29.0 +0.4**
comp=Z,458nmcomp=Z,49nm,0.7s
NONG Nongkai 28.03 306 P **P** **05 06 30.1 +0.7**
comp=Z,10μmcomp=Z,81nm,0.9s
PHET Kaeng Krachan 28.86 293 P P 05 06 42.1 +5.3
comp=Z,499nmcomp=Z,24nm,0.8s
JCJ Chichijima 28.98 29 P **P** **05 06 37.4 -0.3**
comp=Z,45nm,0.4s,baz=291,slow=19,SNR=9.6
GSI Gunungsitoli 29.10 269 P **P** **05 06 38.4 -0.6**
GSI IAMs_20 IAMs_20 05 18 57.2
comp=Z,3μm,22.0s
GSI Gunungsitoli 29.10 269 P **P** **05 06 38.7 -0.3**
comp=Z,2μmcomp=Z,74nm,1.3s
CTA Charters Tower 29.22 140 P **P** **05 06 40.4 +0.5**
comp=Z,13nm,1.0s,baz=326,slow=12,SNR=6.8
CTA LR LR 05 20 01.8
comp=Z,3μm,21.4s,baz=326,slow=40
CTAO Charters Tower 29.22 140 P **P** **05 06 39.2 -0.7**
CTAO pmax pmax
comp=Z,37nm,1.0s
CTAO MLR MLR
comp=Z,3μm,21.0s
CTAO Charters Tower 29.22 140 P **P** **05 06 39.2 -0.7**
CTAO Charters Tower 29.22 140 IAMs_20 IAMs_20 05 19 49.5
comp=Z,3μm,21.0s
SLVN Son La 29.30 312 P **P** **05 06 40.7 0.0**
SSE Sheshan 29.33 350 P **P** **05 06 43.6 +2.9**
SSE S **S** **05 11 31.2 +0.9**
SSE pmax pmax
comp=Z,33nm,0.8s
SSE pmax pmax
comp=Z,150nm,7.7s
SSE LR LR
comp=Z,470nm,26.3s
SSE LR LR
comp=Z,380nm,26.3s
PHIT Phitsanulok 29.86 302 P **P** **05 06 48.4 +2.8**
comp=Z,133nm,0.8s
UTHA Uthaitani 30.00 298 P **P** **05 06 48.0 +1.1**
comp=Z,270nmcomp=Z,23nm,0.6s
UTTA Uttaradit 30.01 303 P **P** **05 06 49.3 +2.4**
comp=Z,312nmcomp=Z,39nm,0.9s
NANT Nan 30.40 305 P **P** **05 06 51.0 +0.6**
comp=Z,66μmcomp=Z,793nm,0.8s
KHLT Khaolaem Dam 30.47 296 P **P** **05 06 54.3 +3.3**
comp=Z,18nm,0.9s
WHN Wuhan 30.63 339 ⇓P **P** **05 06 57.0 +4.7**
WHN pmax pmax
comp=Z,140nm,1.6s
WHN LR LR
comp=Z,530nm,12.0s
WHN LR LR
comp=Z,5μm,20.7s
WHN LR LR
comp=Z,6μm,31.1s
SUKH Sukhothai 30.66 302 P **P** **05 06 55.6 +2.9**
comp=Z,312nmcomp=Z,31nm,0.8s
NJ2 Nanjing 30.72 347 *e*P **P** **05 06 52.9 -0.1**
NJ2 pP **pP** **05 07 05.7 -0.7**
NJ2 S **S** **05 11 53.9 +1.9**
NJ2 sS **sS** **05 12 16.6 +1.9**
NJ2 pmax pmax
comp=Z,15nm,0.5s
NJ2 pmax pmax
comp=Z,310nm,7.4s
NJ2 LR LR
comp=Z,1μm,20.9s
NJ2 LR LR
comp=Z,1μm,20.8s
NJ2 LR LR
comp=Z,2μm,22.7s
UMPA Umpang Tak 30.78 299 P **P** **05 06 58.0 +4.2**
comp=Z,21nm,0.8s
GYA Guiyang 30.94 323 ⇑P **P** **05 06 56.1 +0.8**
GYA sP sP 05 07 14.8 -0.4
GYA S **S** **05 11 54.2 -1.8**
GYA pmax pmax
comp=Z,8.0nm,1.2s
GYA LR LR
comp=Z,1μm,19.7s
GYA LR LR
comp=Z,730nm,20.3s
GYA LR LR
comp=Z,1μm,20.7s
JNU Nakatsue 31.14 7 P **P** **05 06 57.2 +0.4**
comp=Z,27nm,0.8s,baz=131,slow=1.8,SNR=10
JNU Nakatsue 31.14 7 P **P** **05 06 55.0 -1.8**

JNU IAmb IAmb 05 07 10.2
comp=Z,34nm,0.9s
CM31 Chiang Mai Arr 31.69 303 P **P** **05 07 01.5 -0.3**
CMAR Chiang Mai Arr 31.69 303 P **P** **05 07 01.6 -0.2**
comp=Z,8.1nm,0.9s,baz=128,slow=7.8,SNR=26
CMAR PcP **PcP** **05 09 53.0 +0.3**
comp=Z,2.8nm,0.8s,baz=155,slow=1.7,SNR=2.6
CMAR LR LR 05 20 32.7
comp=Z,643nm,19.5s,baz=173,slow=38
CMAR Chiang Mai Arr 31.69 303 *i*P **P** **05 07 02.0 +0.2**
CMAR pmax pmax
comp=Z,8.0nm,0.9s
CMMT Chiang Mai 31.85 303 P **P** **05 07 02.4 -0.9**
comp=Z,292nmcomp=Z,14nm,0.8s
CHTO Chiang Mai 31.86 303 P **P** **05 07 03.0 -0.3**
CHTO pmax pmax
comp=Z,21nm,0.8s
CHTO MLR MLR
comp=Z,1μm,21.0s
CHTO Chiang Mai 31.86 303 P **P** **05 07 03.0 -0.3**
CHTO Chiang Mai 31.86 303 P **P** **05 07 03.5 +0.2**
CHTO P **P** **05 07 03.5 +0.2**
JMN Monobe 32.20 11 P **P** **05 07 04.8 -1.4**
JMN IAmb IAmb 05 07 29.4
comp=Z,72nm,1.1s
MHMT Maesarieng 32.42 301 P **P** **05 07 09.2 +1.0**
ENH Enshi 32.44 332 P **P** **05 07 07.0 -1.3**
ENH IAmb IAmb 05 07 19.1
comp=Z,49nm,0.9s
KMI Kunming 32.53 317 ⇑P **P** **05 07 07.8 -1.5**
KMI pP pP 05 07 20.5 -2.4
KMI sP pwP 05 07 26.9 +1.7
KMI PP **PP** **05 08 22.9 -0.8**
KMI PcP **PcP** **05 09 58.1 +2.9**
KMI S **S** **05 12 12.4 -8.6**
KMI sS sS 05 12 40.3 -3.4
KMI SS **SnSn** **05 14 24.4 +5.1**
KMI pmax pmax
comp=Z,25nm,1.4s
KMI pmax pmax
comp=Z,180nm,4.9s
KMI LR LR
comp=Z,830nm,26.8s
KMI LR LR
comp=Z,2μm,26.6s
KMI LR LR
comp=Z,3μm,26.0s
KMI Kunming 32.53 317 P **P** **05 07 07.6 -1.7**
KMI pmax pmax
comp=Z,59nm,1.5s
KMI Kunming 32.53 317 P **P** **05 07 07.6 -1.7**
KMI IAmb IAmb 05 07 13.9
comp=Z,59nm,1.5s
MORW Morawa 32.60 197 P **P** **05 07 10.3 +0.7**
baz=33,SNR=22
MORW Morawa 32.60 197 P **P** **05 07 09.6 0.0**
MORW IAmb IAmb 05 07 11.8
comp=Z,95nm,1.4s
FORT Forrest 32.70 178 P **P** **05 07 11.6 +1.2**
baz=33,SNR=77
FORT Forrest 32.70 178 P **P** **05 07 10.4 0.0**
QLP Quilpie 33.15 150 P **P** **05 07 15.5 +1.1**
baz=33,SNR=4.8
KMBL Kambalda 33.57 187 P **P** **05 07 19.2 +1.1**
baz=34,SNR=22
BLDU Ballidu 33.87 196 P **P** **05 07 21.2 +0.6**
baz=34,SNR=20
TJN Taejon 34.14 1⇑*e*P **P** **05 07 23.4 +0.5**
INU Inuyama 34.47 15 P **P** **05 07 25.2 -0.6**
KLBR Kellerberrin 34.54 194 P **P** **05 07 27.4 +1.0**
baz=35,SNR=30
JGF Kuroka 34.80 15 P **P** **05 07 28.2 -0.5**
JGF IAmb IAmb 05 07 30.8
comp=Z,37nm,0.8s
KSAR Wonju Array Be 35.21 2 P **P** **05 07 31.5 -0.7**
KSAR Wonju Array Be 35.21 2 P **P** **05 07 31.5 -0.7**
KSRS Korea Array 35.23 2 P **P** **05 07 33.2 +0.9**
comp=Z,10nm,0.6s,baz=179,slow=9.7,SNR=31
KSRS LR LR 05 25 45.3
comp=Z,267nm,18.1s,baz=166,slow=43
KS19 Wonju Array Si 35.27 2 P **P** **05 07 32.7 0.0**
KS19 IAmb IAmb 05 07 48.8
comp=Z,35nm,1.1s
MUN Mundaring 35.29 196 P **P** **05 07 33.8 +0.9**
baz=35,SNR=8.9
RMQ Roma 35.51 145 P **P** **05 07 35.0 +0.2**
baz=36,SNR=3.9
BBOO Buckleboo 35.81 166 P **P** **05 07 37.6 +0.2**
baz=36,SNR=64
BBOO Buckleboo 35.81 166 P **P** **05 07 37.2 -0.1**
BBOO IAmb IAmb 05 07 40.3
comp=Z,32nm,0.8s
XAN Xi'an 35.87 334 P **P** **05 07 37.8 -0.2**
XAN sP pwP 05 07 53.3 -0.8
XAN pmax pmax
comp=Z,21nm,0.5s
XAN Xi'an 35.87 334 P **P** **05 07 37.2 -0.8**
XAN pmax pmax
comp=Z,28nm,0.9s
XAN MLR MLR
comp=Z,900nm,20.0s
XAN Xi'an 35.87 334 P **P** **05 07 37.2 -0.8**
XAN IAmb IAmb 05 07 48.3
comp=Z,28nm,0.9s
MAJO Matsushiro 35.92 16*c**e*P **P** **05 07 37.5 -0.8**
MAJO pmax pmax
comp=Z,36nm,1.0s
MAJO Matsushiro 35.92 16 P **P** **05 07 37.3 -1.0**
MAJO IAmb IAmb 05 07 40.3
comp=Z,65nm,1.2s
MAT Matsushiro 35.92 16 P **P** **05 07 37.4 -0.9**
MAT S **S** **05 13 10.2 -2.4**
MJAR Matsushiro Arr 35.92 16 P **P** **05 07 37.7 -0.5**
comp=Z,15nm,0.6s,baz=186,slow=9.7,SNR=31
MJAR PcP **PcP** **05 10 04.8 +0.4**
comp=Z,2.4nm,0.7s,baz=194,slow=2.3,SNR=4.8
MJAR Matsushiro Arr 35.92 16 P **P** **05 07 36.8 -1.4**
NWAO Narrogin (SRO) 35.94 194 P **P** **05 07 40.0 +1.6**
baz=36,SNR=10
NWAO Narrogin (SRO) 35.94 194 P **P** **05 07 39.2 +0.7**
NWAO pmax pmax
comp=Z,42nm,1.1s
NWAO Narrogin (SRO) 35.94 194 P **P** **05 07 39.2 +0.7**
NWAO IAmb IAmb 05 08 05.5
comp=Z,42nm,1.1s
NWAO Narrogin (SRO) 35.94 194 P **P** **05 07 40.3 +1.8**
CD2 Chengdu 35.96 325 P **P** **05 07 38.5 -0.2**
CD2 pP pP 05 07 51.8 -0.7
CD2 S **S** **05 13 06.0 -7.4**
CD2 sS ScP 05 13 42.4 -3.9
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,240nm,5.9s
CD2 LR LR
comp=Z,3μm,26.0s
CD2 LR LR
comp=Z,2μm,22.6s
CD2 LR LR
comp=Z,2μm,23.5s
EIDS Eidsvold 36.10 141 P **P** **05 07 40.6 +0.7**
baz=36,SNR=16
EIDS Eidsvold 36.10 141 P **P** **05 07 39.3 -0.7**
JYT Yasato 36.21 19 P **P** **05 07 39.6 -1.2**
STKA Stephens Creek 36.61 158 P **P** **05 07 44.4 +0.1**
comp=Z,51nm,0.8s,baz=333,slow=8.4,SNR=70
STKA LR LR 05 26 01.3
comp=Z,997nm,18.3s,baz=345,slow=41
STKA Stephens Creek 36.61 158 P **P** **05 07 44.6 +0.4**
baz=37,SNR=44
STKA Stephens Creek 36.61 158 P **P** **05 07 44.0 -0.2**
DL2 Dalian 36.95 353 P **P** **05 07 48.2 +1.2**
DL2 S **S** **05 13 29.5 +1.3**
DL2 pmax pmax
comp=Z,92nm,0.7s
DL2 pmax pmax
comp=Z,330nm,5.5s
DL2 LR LR
comp=Z,860nm,21.0s
DL2 LR LR
comp=Z,2μm,21.0s
DL2 LR LR
comp=Z,2μm,15.6s
HTT Hallett 37.16 163 P **P** **05 07 49.7 +0.8**
baz=37,SNR=26
JSD Sado 37.34 15 P **P** **05 07 48.9 -1.4**

JMM Marumori 37.91 18 P **P** **05 07 55.5 +0.5**
CMSA Cobar Meteorol 37.99 153 P **P** **05 07 57.5 +1.6**
baz=38,SNR=11
SAIH SAIHA 38.49 304 *e*P **P** **05 07 59.9 -0.5**
SAIH IAmb IAmb 05 08 08.7
comp=Z,58nm,0.7s
IMP Imphal 38.85 308 *e*P **P** **05 08 04.3 +1.0**
IMP IAmb IAmb 05 08 13.3
comp=Z,18nm,0.4s
BJT Baijiatuau 38.96 347 P **P** **05 08 04.3 +0.4**
BJT pmax pmax
comp=Z,43nm,0.8s
BJT Baijiatuau 38.96 347 P **P** **05 08 04.2 +0.4**
BJT IAmb IAmb 05 08 17.7
comp=Z,43nm,0.8s
BJI Beijing 38.98 347 P **P** **05 08 05.4 +1.3**
BJI S **S** **05 13 58.0 -0.9**
BJI pmax pmax
comp=Z,15nm,1.4s
BJI pmax pmax
comp=Z,200nm,5.8s
BJI LR LR
comp=Z,520nm,23.7s
BJI LR LR
comp=Z,620nm,24.6s
BJI LR LR
comp=Z,1μm,26.3s
KOHI KOHIMA 39.18 310 *e*P **P** **05 08 05.4 -0.8**
KOHI IAmb IAmb 05 08 11.1
comp=Z,51nm,0.5s
SNY Shenyang 39.68 356 ⇑P **P** **05 08 10.5 +0.7**
SNY S **S** **05 14 10.4 +1.1**
SNY pmax pmax
comp=Z,20nm,1.3s
SNY pmax pmax
comp=Z,490nm,6.3s
SNY LR LR
comp=Z,640nm,22.4s
SNY LR LR
comp=Z,1μm,24.6s
SNY LR LR
comp=Z,2μm,24.5s
LZH Lanzhou 39.91 331 *e*P **P** **05 08 13.1 +1.0**
LZH pP pP 05 08 22.8 -3.1
LZH sP pwP 05 08 29.2 +0.8
LZH PcP **PcP** **05 10 21.3 +4.4**
LZH S **S** **05 14 13.3 0.0**
LZH SS **SnSn** **05 17 15.5 -1.9**
LZH pmax pmax
comp=Z,64nm,1.1s
LZH pmax pmax
comp=Z,170nm,4.9s
LZH LR LR
comp=Z,710nm,16.8s
LZH LR LR
comp=Z,1μm,13.6s
LZH LR LR
comp=Z,1μm,17.3s
ARMA Armidale 40.13 146 P **P** **05 08 15.4 +1.5**
baz=40,SNR=19
ARMA Armidale 40.13 146 P **P** **05 08 14.4 +0.4**
ZIRO ZIRO 40.34 312 *e*P **P** **05 08 15.5 -0.3**
MSHR Mys Shultsa 40.53 5*c**e*P **P** **05 08 18.5 +1.6**
MSHR pmax pmax
comp=Z,46nm,1.2s
JTM Tenmabayashi 40.68 17 P **P** **05 08 18.7 +0.5**
SHL Shillong 40.83 308 *e*P **P** **05 08 18.9 -1.1**
SHL IAmb IAmb 05 08 25.6
comp=Z,38nm,0.5s
HHC Hu-ho-hao-te 40.95 342 *e*P **P** **05 08 23.6 +3.0**
HHC sP sP 05 08 40.8 +0.2
HHC PP **PnPn** **05 10 05.8 +5.2**
HHC S **S** **05 14 28.6 0.0**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,210nm,4.6s
HHC LR LR
comp=Z,2μm,17.5s
HHC LR LR
comp=Z,820nm,16.6s
HHC LR LR
comp=Z,4μm,16.1s
ARPS Mount Arapiles 41.14 161 P **P** **05 08 23.3 +1.3**
baz=41,SNR=26
YNG Young 41.54 152 P **P** **05 08 27.4 +2.0**
baz=42,SNR=9.1
CN2 Changchun 41.56 359 *e*P **P** **05 08 26.1 +0.7**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,260nm,6.0s
CN2 LR LR
comp=Z,380nm,27.0s
CN2 LR LR
comp=Z,1μm,25.0s
CN2 LR LR
comp=Z,860nm,24.0s
USRK Ussuriysk Ar. 42.21 6 P **P** **05 08 31.7 +1.0**
comp=Z,32nm,0.8s,baz=195,slow=6.2,SNR=32
USRK LR LR 05 28 52.4
comp=Z,175nm,19.7s,baz=190,slow=40
USRK Ussuriysk Ar. 42.21 6 P **P** **05 08 32.0 +1.3**
USRK Ussuriysk Ar. 42.21 6 P **P** **05 08 32.0 +1.3**
USA0B Ussuriysk Arra 42.21 6 *i*P **P** **05 08 31.3 +0.6**
USA0B Ussuriysk Arra 42.21 6 P **P** **05 08 31.0 +0.4**
ERM Erimo 42.43 18⇑*e*P **P** **05 08 31.0 -1.5**
ERM pmax pmax
comp=Z,14nm,0.9s
MDJ Mudanjiang 42.44 3 P **P** **05 08 33.8 +1.2**
MDJ pP pP 05 08 46.4 0.0
MDJ sP sP 05 08 52.2 -0.4
MDJ PP **PP** **05 10 12.8 +0.9**
MDJ S **S** **05 14 52.9 +2.5**
MDJ sS sS 05 15 14.8 +1.2
MDJ SS **SS** **05 18 04.2 +2.7**
MDJ ScS **ScS** **05 18 29.8 +0.6**
MDJ pmax pmax
comp=Z,35nm,0.8s
MDJ pmax pmax
comp=Z,390nm,2.7s
MDJ LR LR
comp=Z,1μm,29.9s
MDJ LR LR
comp=Z,420nm,31.3s
MDJ LR LR
comp=Z,3μm,28.5s
MDJ Mudanjiang 42.44 3 P **P** **05 08 32.7 +0.1**
H11S3 WAKE ISLAND Hy 42.46 65 T T 05 54 02.6
baz=252,slow=75,SNR=51
H11S2 WAKE ISLAND Hy 42.47 65 T T 05 54 03.9
baz=252,slow=75,SNR=38
H11S1 WAKE ISLAND Hy 42.47 65 T T 05 54 09.4
baz=252,slow=75,SNR=47
CAN Canberra 42.66 153 P **P** **05 08 35.4 +0.8**
CAN pmax pmax
comp=Z,86nm,1.1s
CAN Canberra 42.66 153 P **P** **05 08 35.4 +0.8**
CAN IAmb IAmb 05 08 40.4
comp=Z,86nm,1.1s
H11N1 WAKE ISLAND Hy 43.02 63 T T 05 54 44.0
baz=250,slow=75,SNR=13
H11N2 WAKE ISLAND Hy 43.03 63 T T 05 54 46.0
baz=250,slow=75,SNR=8.8
H11N3 WAKE ISLAND Hy 43.04 63 T T 05 54 45.9
baz=250,slow=75,SNR=12
TOO Toolangi 43.13 158 P **P** **05 08 40.8 +2.6**
baz=43,SNR=8.3
TOO Toolangi 43.13 158 P **P** **05 08 39.3 +1.0**
TOO pmax pmax
comp=Z,60nm,1.5s
TOO Toolangi 43.13 158 P **P** **05 08 39.2 +1.0**
TOO IAmb IAmb 05 08 43.8
comp=Z,60nm,1.4s
LSA Lhasa 43.51 313 P **P** **05 08 42.6 +0.6**
LSA pmax pmax
comp=Z,140nm,1.0s
LSA Lhasa 43.51 313 P **P** **05 08 41.8 -0.2**
LSA pmax pmax
comp=Z,70nm,1.3s
LSA Lhasa 43.51 313 P **P** **05 08 41.8 -0.2**
LSA IAmb IAmb 05 08 52.8
comp=Z,70nm,1.3s
TEY Ternei 43.67 10⇑*e*P **P** **05 08 44.0 +1.5**
TEY pmax pmax
comp=N,40nm,0.8s

TEY pmax pmax
comp=Z,50nm,0.9s
SANVU Saraoutou 43.69 115 IAMs_20 IAMs_20 05 26 04.6
comp=Z,2µm,22.0s
ASAJ Asahikawa 44.18 16 P **P** **05 08 48.1 +1.5**
comp=Z,18nm,0.8s,baz=216,slow=7.5,SNR=4.1
ASAJ LR LR 05 29 26.1
comp=Z,440nm,19.4s,baz=228,slow=39
JKA Kamikawa-asahi 44.18 16 P **P** **05 08 47.4 +0.8**
GTK Tadong 44.25 308 *eP* **P** **05 08 47.7 0.0**
GTK IAmb IAmb 05 09 08.1
comp=Z,66nm,1.1s
GTA Gaotai 44.49 330 ⇑P **P** **05 08 50.4 +1.1**
GTA pP pP 05 09 01.6 -1.8
GTA sP sP 05 09 07.8 -1.8
GTA PcP **PP** **05 10 34.1 0.0**
GTA S **S** **05 15 21.5 +0.7**
GTA sS sS 05 15 43.8 -0.4
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,130nm,4.7s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,1µm,20.7s
GTA LR LR
comp=Z,3µm,21.1s
YUK Yuzh-Kuril'sk 45.12 20 P **P** **05 08 51.2 -2.8**
YUK *e* 05 10 29.0
YUK *eS* **S** **05 15 26.1 -3.2**
YUK *eSS* **ScS** **05 18 48.5 +2.5**
YUK pmax pmax
comp=Z,240nm,2.0s
YUK pmax pmax
comp=Z,208nm,1.4s
YUK pmax pmax
comp=N,224nm,0.4s
YUK pmax pmax
comp=E,129nm,0.4s
DZM Mont Dzumac 45.64 124 P **P** **05 08 59.3 +0.6**
comp=E,12nm,1.0s,baz=301,slow=23,SNR=6.0
DZM LR LR 05 29 20.3
comp=E,1µm,20.3s,baz=343,slow=38
PALK Pallekele 46.09 278⇓ *iP* **P** **05 09 01.4 -0.9**
PALK pmax pmax
comp=Z,29nm,1.5s
PALK Pallekele 46.09 278 P **P** **05 09 02.2 -0.2**
PALK Pallekele 46.09 278 IAMs_20 IAMs_20 05 29 11.3
comp=Z,1µm,21.0s
PALK Pallekele 46.09 278 P **P** **05 09 03.5 +1.2**
PALK P **P** **05 09 03.5 +1.2**
PALK P **P** **05 09 03.5 +1.2**
PALK P **P** **05 09 03.5 +1.2**
YSS Yuzh-Sakhalins 46.84 15 *eP* **P** **05 09 07.6 0.0**
YSS *e**PP **pP** **05 09 19.1 -2.4**
YSS *e**SP **sP** **05 09 27.3 -0.4**
YSS *e* 05 11 01.0
YSS *eS* **S** **05 15 53.8 -0.2**
YSS *eSS* **ScS** **05 18 59.6 +2.5**
YSS *eSSS* SSS 05 20 29.9
YSS pmax pmax
comp=N,200nm,3.9s
YSS pmax pmax
comp=Z,400nm,3.9s
YSS pmax pmax
comp=Z,30nm,0.5s
YSS Yuzh-Sakhalins 46.84 15 P **P** **05 09 08.0 +0.5**
YSS IAmb IAmb 05 09 15.1
comp=Z,42nm,1.1s
KUR Kuril'sk 46.85 20 P **P** **05 09 08.1 +0.4**
KUR S **S** **05 16 02.0 +7.7**
KUR pmax pmax
comp=Z,585nm,7.1s
KLR Kul'dur 47.18 5 P **P** **05 09 10.5 +0.3**
comp=Z,13nm,0.8s,baz=210,slow=4.8,SNR=22
HIA Hailar 47.39 354 P **P** **05 09 11.8 -0.1**
HIA pmax pmax
comp=Z,51nm,1.3s
HIA Hailar 47.39 354 P **P** **05 09 11.8 -0.1**
HIA IAmb IAmb 05 09 36.7
comp=Z,51nm,1.3s
ULN Ulaanbaatar 48.67 342*c iP* **P** **05 09 22.2 +0.2**
ULN pmax pmax
comp=Z,34nm,1.3s
ULN Ulaanbaatar 48.67 342 P **P** **05 09 21.8 -0.1**
ULN IAmb IAmb 05 09 30.3
comp=Z,25nm,0.9s
ULN Ulaanbaatar 48.67 342 P **P** **05 09 22.5 +0.6**
SONM Songino Array 48.84 342 P **P** **05 09 23.5 +0.2**
comp=Z,7.0nm,0.7s,baz=155,slow=8.9,SNR=20
SONM PcP **PcP** **05 10 47.4 +0.3**
comp=Z,3.8nm,0.7s,baz=156,slow=3.1,SNR=1.7
SONM LR LR 05 32 11.7
comp=Z,419nm,20.9s,baz=155,slow=39
SONM Songino Array 48.84 342 P **P** **05 09 23.2 -0.1**
GRNR Gornyy 49.22 8⇑ *iP* **P** **05 09 27.2 +1.3**
GRNR pmax pmax
comp=Z,7.0nm,1.2s
HYB Hyderabad 49.65 291 *i* P **P** **05 09 29.0 -0.8**
HYB *ep* **pP** **05 09 44.0 0.0**
HYB Hyderabad 49.65 291 *eP* **P** **05 09 28.1 -1.6**
HYB IAmb IAmb 05 09 31.5
comp=Z,55nm,1.1s
TYV Tymovskoe 50.46 13 *eP* **P** **05 09 36.2 +0.9**
TYV *eS* **S** **05 16 49.4 +4.6**
TYV pmax pmax
comp=Z,500nm,4.4s
TYV pmax pmax
comp=Z,20nm,1.0s
TYV smax smax
comp=E,400nm,5.7s
CIT Chita 50.98 350 *eP* **P** **05 09 40.9 +1.7**
CIT *e* 05 09 51.7
CIT *e* 05 09 55.9
CIT pmax pmax
comp=Z,126nm,2.5s
ZEA Zeya 51.50 0 *eP* **P** **05 09 43.6 +0.6**
ZEA *eS* **S** **05 17 03.3 +4.2**
ZEA pmax pmax
comp=N,100nm,5.3s
ZEA pmax pmax
comp=Z,200nm,5.1s
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA smax smax
comp=N,200nm,14.6s
ZAK Zakamensk 52.06 341 *eP* **P** **05 09 46.0 -1.5**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
BHPL Bhopal 52.12 298 *eP* **P** **05 09 47.3 -0.9**
BHPL IAmb IAmb 05 09 56.7
comp=Z,20nm,0.8s
TLY Talaya 53.08 342*c iP* **P** **05 09 55.6 +0.8**
TLY *eS* **S** **05 17 19.2 -1.7**
TLY pmax pmax
comp=Z,58nm,0.9s
TLY MLR MLR
comp=Z,2µm,19.0s
TLY Talaya 53.08 342 P **P** **05 09 55.7 +0.8**
TLY IAmb IAmb 05 10 00.7
comp=Z,22nm,1.0s
TLY Talaya 53.08 342 P **P** **05 09 56.2 +1.3**
IRK Irkutsk 53.39 343 *eP* **P** **05 09 57.4 +0.3**
IRK pmax pmax
comp=Z,67nm,2.2s
DDI Dehra Dun 53.90 307 *eS* S 05 17 23.7 -9.2
MOY Mondy 53.91 340 *eP* **P** **05 10 02.0 +0.9**
MOY pmax pmax
comp=Z,80nm,2.9s
WMQ Urumqi 54.05 326 *eP* **P** **05 10 04.8 +2.6**
WMQ pP pP 05 10 15.4 -1.2
WMQ sP sP 05 10 21.6 -1.1
WMQ PcP **PcP** **05 11 03.8 -2.8**
WMQ S **S** **05 17 32.7 -1.8**
WMQ ScS **ScS** **05 19 41.2 -5.6**
WMQ pmax pmax
comp=Z,47nm,1.5s
WMQ pmax pmax
comp=Z,390nm,4.7s
WMQ LR LR
comp=Z,2µm,25.9s
WMQ LR LR
comp=Z,1µm,22.1s
WMQ LR LR
comp=Z,3µm,25.9s
WMQ Urumqi 54.05 326 IAMs_20 IAMs_20 05 32 17.2
comp=Z,1µm,22.0s
MSVF Nonsavu 54.28 114 P **P** **05 10 05.8 +1.5**
comp=Z,42nm,0.9s,baz=282,slow=6.6,SNR=17
MSVF Nonsavu 54.28 114‖ *eP* **P** **05 10 05.9 +1.5**
MSVF pmax pmax
comp=Z,56nm,0.9s
MSVF Nonsavu 54.28 114 P **P** **05 10 05.2 +0.9**
SMLA Simla 54.91 307 *eP* **P** **05 10 07.5 -1.0**
SMLA *eS* **S** **05 17 46.1 -0.2**
SMLA AMP 05 18 00.1
comp=N,161nm,0.2s
DHRM DHARAMSHALA 56.01 308 *eP* **P** **05 10 15.1 -1.7**
DHRM IAmb IAmb 05 10 21.5
comp=Z,98nm,0.7s
DHRM *eS* **S** **05 17 57.4 -4.1**
BOD Bodaibo 56.49 352 *eP* **P** **05 10 15.7 -3.6**
BOD pmax pmax
comp=Z,59nm,1.8s
PEA0B Petropavlovsk- 56.97 22‖ *eP* **P** **05 10 22.1 -0.8**
PETK Petropavlovsk- 56.97 22 P **P** **05 10 24.6 +1.7**
comp=Z,12nm,0.7s,baz=197,slow=2.6,SNR=23
PETK LR LR 05 34 43.3
comp=Z,184nm,21.1s,baz=196,slow=36
PETK Petropavlovsk- 56.97 22 P **P** **05 10 22.9 0.0**
PET Petropavlovsk 57.27 22*c iP* **P** **05 10 26.2 +1.3**
PET *eS* **S** **05 18 18.7 +1.9**
PET *eSS* **SS** **05 22 09.0 +2.2**
PET pmax pmax
comp=Z,300nm,15.7s
ZSN Zaisan 57.87 328 *eP* **P** **05 10 28.3 -1.0**
baz=328
ZSN *eS* **S** **05 18 24.7 -0.3**
baz=328
ZSN Zaisan 57.87 328 *eP* **P** **05 10 28.3 -1.0**
ZSN *eS* **S** **05 18 24.7 -0.3**
DGZ Jazzator, Alta 58.01 331‖ *eP* **P** **05 10 30.5 +0.1**
DGZ pmax pmax
comp=Z,18nm,2.5s
SHLS Shalkode 58.59 321 *eP* **P** **05 10 31.6 -3.0**
comp=Z,6.4nm,1.4s,baz=321
SHLS *eS* **S** **05 18 30.8 -4.0**
baz=321
SHLS Shalkode 58.59 321 *eP* **P** **05 10 31.6 -3.0**
SHLS *eS* **S** **05 18 30.7 -4.0**
SHLS pmax pmax
comp=Z,6.0nm,1.4s
PDGK Podgornoye 58.66 321 P **P** **05 10 34.9 -0.2**
UZB Uzynbulak 58.86 321 *eP* **P** **05 10 34.8 -1.7**
baz=321
UZB *eS* **S** **05 18 37.2 -1.1**
baz=321
UZB Uzynbulak 58.86 321 *eP* **P** **05 10 34.8 -1.7**
UZB *eS* **S** **05 18 37.2 -1.1**
MK31 Makanchi Array 58.88 326 *eP* **P** **05 10 36.2 -0.3**
MK31 Makanchi Array 58.88 326 P **P** **05 10 36.2 -0.3**
MKAR Makanchi Array 58.88 326 P **P** **05 10 36.3 -0.2**
comp=Z,12nm,0.4s,baz=121,slow=7.8,SNR=113
MKAR PcP **PcP** **05 11 26.0 +0.6**
comp=Z,6.8nm,0.6s,baz=119,slow=5.9,SNR=1.4
MKAR LR LR 05 37 34.1
comp=Z,1µm,21.9s,baz=112,slow=38
MKAR Makanchi Array 58.88 326 P **P** **05 10 35.5 -1.0**
NIL Nilore 58.90 309 P **P** **05 10 36.9 +0.1**
NIL pmax pmax
comp=Z,27nm,0.6s
NIL MLR MLR
comp=Z,300nm,22.0s
NIL Nilore 58.90 309 P **P** **05 10 36.9 +0.1**
NIL Nilore 58.90 309 P **P** **05 10 38.7 +1.8**
MAKZ Makanchi 59.07 326 P **P** **05 10 37.2 -0.5**
MAKZ Makanchi 59.07 326 P **P** **05 10 36.5 -1.2**
MAKZ IAmb IAmb 05 10 45.1
comp=Z,15nm,0.6s
MAKZ IAMs_20 IAMs_20 05 39 16.2
comp=Z,888nm,22.0s
KSH Kashi 59.18 316 P **P** **05 10 40.6 +1.8**
KSH S **S** **05 18 48.1 +5.5**
KSH pmax pmax
comp=Z,15nm,1.8s
KSH pmax pmax
comp=Z,240nm,5.5s
KSH LR LR
comp=Z,1µm,23.7s
KSH LR LR
comp=Z,960nm,18.9s
KSH LR LR
comp=Z,2µm,23.0s
SATY Saty 59.21 320 *eP* **P** **05 10 37.5 -1.5**
baz=320
SATY Saty 59.21 320 *eP* **P** **05 10 37.4 -1.5**
KPKS Kokpek 59.23 321 *eP* **P** **05 10 37.8 -1.3**
comp=Z,6.0nm,0.8s,baz=321
KPKS Kokpek 59.23 321 *eP* **P** **05 10 37.7 -1.3**
KPKS pmax pmax
comp=Z,6.0nm,0.8s
DCZ Deep Cove 59.37 148 IAMs_20 IAMs_20 05 36 26.9
comp=Z,1µm,22.0s
YAK Yakutsk 59.85 2 P **P** **05 10 43.6 +0.8**
comp=Z,20nm,0.6s,baz=164,slow=2.8,SNR=10
YAK Yakutsk 59.85 2 *eP* **P** **05 10 43.5 +0.7**
YAK *e**PP **pwP** **05 11 01.4 +1.2**
YAK *e* 05 11 29.7
YAK *e* 05 12 53.0
YAK *eS* **S** **05 18 49.7 -0.4**
YAK *e**SS **sS** **05 19 11.5 -3.2**
YAK *e* 05 20 24.7
YAK *eSS* **SS** **05 22 51.5 +4.3**
YAK pmax pmax
comp=Z,50nm,0.8s
YAK pmax pmax
comp=N,19nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,94nm,2.7s
YAK pmax pmax
comp=N,53nm,2.4s
YAK pmax pmax
comp=E,34nm,2.5s
YAK smax smax
comp=N,79nm,3.0s
YAK smax smax
comp=E,158nm,3.0s
YAK Yakutsk 59.85 2 P **P** **05 10 43.1 +0.3**
MDOK Medeo 60.13 320 *eP* **P** **05 10 43.8 -1.5**
baz=320
MDOK *eS* **S** **05 18 53.7 -1.0**
baz=320
MDOK Medeo 60.13 320 *eP* **P** **05 10 43.8 -1.5**
MDOK *eS* **S** **05 18 53.7 -1.0**
TNSS Tian-Shan 60.13 320 *eP* **P** **05 10 44.0 -1.7**
baz=320
TNSS Tian-Shan 60.13 320 *eP* **P** **05 10 43.9 -1.7**
TDK Taldyqorghan 60.19 322 *eP* **P** **05 10 44.4 -1.1**
comp=E,12nm,0.6s,baz=322
TDK Taldyqorghan 60.19 322 *eP* **P** **05 10 44.4 -1.1**
TDK pmax pmax
comp=Z,12nm,0.6s
ULHL Ulahol 60.22 319 P **P** **05 10 46.1 +0.1**
SNR=7.9
AAA Alma-Ata 60.23 320 *eP* **P** **05 10 44.7 -1.2**
baz=320
AAA Alma-Ata 60.23 320 *eP* **P** **05 10 44.7 -1.2**
MA2 Magadan 60.31 14 *iP* **P** **05 10 47.7 +1.7**
comp=Z,36nm,0.7s,baz=199,slow=6.1,SNR=60
MA2 Magadan 60.31 14*c iP* **P** **05 10 47.2 +1.2**
MA2 pmax pmax
comp=Z,36nm,0.9s
MA2 Magadan 60.31 14 P **P** **05 10 47.1 +1.2**
LBZ Lake Benmore 60.35 145 P **P** **05 10 46.6 0.0**
RPZ Rata Peaks 60.45 144 P **P** **05 10 47.3 +0.1**
comp=Z,52nm,0.9s,baz=152,slow=2.8,SNR=12
RPZ Rata Peaks 60.45 144 P **P** **05 10 47.0 -0.2**
TUWZ Tuamarina 60.90 141 P **P** **05 10 49.4 -1.0**
KUU Kurty 60.93 320 *eP* **P** **05 10 49.1 -1.4**
comp=Z,6.0nm,0.7s,baz=320
KUU Kurty 60.93 320 *eP* **P** **05 10 49.1 -1.4**
KUU pmax pmax
comp=Z,6.0nm,0.7s
TKM2 Tokmak 2 60.95 319 P **P** **05 10 54.9 +3.9**
SNR=7.5
TKM2 Tokmak 2 60.95 319 P **P** **05 10 51.0 0.0**
KBK Karagaybulak 61.26 319 P **P** **05 10 57.2 +4.1**
SNR=12
UCH Uchtor 61.36 318 P **P** **05 10 54.5 +0.4**
SNR=34
MQZ McQueen's Vall 61.38 144 IAMs_20 IAMs_20 05 29 54.2
comp=Z,918nm,22.0s
AAK Ala-Archa 61.55 318 P **P** **05 10 55.2 +0.2**
SNR=8.1
AAK Ala-Archa 61.55 318*ceP* **P** **05 10 54.8 -0.2**
AAK pmax pmax
comp=Z,11nm,0.7s
AAK Ala-Archa 61.55 318 P **P** **05 10 54.5 -0.5**
AAK IAmb IAmb 05 11 11.9
comp=Z,22nm,1.1s
AAK Ala-Archa 61.55 318 IAMs_20 IAMs_20 05 40 54.2
comp=Z,795nm,20.0s
AAK Ala-Archa 61.55 318 P **P** **05 10 56.1 +1.1**
SGDS Sogindy 61.82 319 *eP* **P** **05 10 55.8 -0.9**
baz=319
SGDS Sogindy 61.82 319 *eP* **P** **05 10 55.8 -0.9**
USP Ospenovka 61.83 319 P **P** **05 10 56.5 -0.1**
SNR=18
AML Almayashu 61.87 318 P **P** **05 10 57.8 +0.4**
SNR=38
ZAA0 Zalesovo Array 62.04 333 P **P** **05 10 56.7 -1.1**
ZALV Zalesovo Beam 62.04 333 P **P** **05 10 57.0 -0.8**
comp=Z,5.9nm,0.6s,baz=116,slow=5.9,SNR=14
ZALV LR LR 05 40 45.2
comp=Z,284nm,21.3s,baz=124,slow=39
ZALV Zalesovo Beam 62.04 333 P **P** **05 10 56.7 -1.1**
EKS2 Erkin-Say 62.04 318 P **P** **05 11 02.4 +4.2**
SNR=13
SEM Semipalatinsk 62.07 328 *eP* **P** **05 10 56.8 -1.6**
baz=328
SEM Semipalatinsk 62.07 328 *eP* **P** **05 10 56.8 -1.6**
KBL Kabul 62.49 308 P **P** **05 10 59.5 -2.0**
KBL pmax pmax
comp=Z,25nm,0.8s
KBL Kabul 62.49 308 P **P** **05 10 59.5 -2.0**
KBL IAmb IAmb 05 11 07.0
comp=Z,25nm,0.8s
KBL Kabul 62.49 308 P **P** **05 11 01.4 -0.1**
SNR=12
BTLS Baital 62.91 321 *eP* **P** **05 11 02.1 -1.7**
baz=321
BTLS Baital 62.91 321 *eP* **P** **05 11 02.1 -1.7**
GAR Garm 63.01 313 P **P** **05 11 04.2 -0.6**
KURBB Kurchatov Arra 63.10 328 P **P** **05 11 03.9 -1.0**
SEY Seymchan 63.65 13 P **P** **05 11 10.0 +1.7**
comp=Z,20nm,1.0s,baz=219,slow=5.3,SNR=41
SEY Seymchan 63.65 13⇓ *eP* **P** **05 11 07.9 -0.4**
DZA Taraz 63.77 318 *eP* **P** **05 11 08.2 -1.4**
baz=318
DZA Taraz 63.77 318 *eP* **P** **05 11 08.2 -1.4**
IUG luzhnay 64.37 316 *eP* **P** **05 11 12.1 -1.5**
baz=316
IUG *eS* **S** **05 19 47.1 -1.0**
baz=316
IUG luzhnay 64.37 316 *eP* **P** **05 11 12.1 -1.5**
IUG *eS* **S** **05 19 47.0 -1.0**
KK31 Karatay Array 64.41 318 *iP* **P** **05 11 15.3 +1.6**
KK31 Karatay Array 64.41 318 P **P** **05 11 13.4 -0.3**
KK31 IAmb IAmb 05 11 19.4
comp=Z,15nm,0.8s
KKAR Karatay Array 64.41 318 P **P** **05 11 12.8 -1.0**
KKAR pmax pmax
comp=Z,15nm,0.8s
KKAR Karatay Array 64.41 318 P **P** **05 11 12.8 -1.0**
KKAR IAmb IAmb 05 11 19.5
comp=Z,15nm,0.8s
BRZS Berezniki 66.01 325 *eP* **P** **05 11 22.9 -1.1**
comp=Z,4.0nm,0.8s,baz=325
BRZS Berezniki 66.01 325 *eP* **P** **05 11 22.9 -1.1**
BRZS pmax pmax
comp=Z,4.0nm,0.8s
HRA Herat 67.86 306 P **P** **05 11 35.7 -0.6**
BRVK Borovoye 68.75 327*c iP* **P** **05 11 41.0 -0.2**
BRVK pmax pmax
comp=Z,23nm,1.0s
BRVK Borovoye 68.75 327 P **P** **05 11 40.6 -0.6**
BRVK IAmb IAmb 05 11 45.9
comp=Z,24nm,0.9s
BRVK IAMs_20 IAMs_20 05 42 59.2
comp=Z,544nm,22.0s
BRVK Borovoye 68.75 327 P **P** **05 11 41.5 +0.3**
CASY Casey 69.18 187 P **P** **05 11 44.9 +1.4**
CASY IAmb IAmb 05 11 48.0
comp=Z,25nm,0.8s
MHTO MHTO 69.40 292 P **P** **05 11 45.5 -0.4**
JMDO Jabal Madar 69.42 293 P **P** **05 11 48.7 +2.6**
TIXI Tiksi 69.49 1 P **P** **05 11 46.0 +0.6**
comp=Z,5.6nm,0.4s,baz=176,slow=3.3,SNR=16
TIXI Tiksi 69.49 1*c iP* **P** **05 11 44.9 -0.5**
TIXI pmax pmax
comp=Z,219nm,2.5s
TIXI Tiksi 69.49 1 P **P** **05 11 44.5 -0.9**
TIXI IAmb IAmb 05 45 36.3
comp=Z,642nm,22.0s
SMDO Samad 69.55 294 P **P** **05 11 49.2 +2.3**
DQM DQM 69.70 290 P **P** **05 11 49.3 +1.6**
BSY Bisya 70.30 293 P **P** **05 11 52.8 +1.4**
ARQ Araqi 70.98 294 P **P** **05 11 59.9 +4.4**
BILL Bilibino 71.16 15*d iP* **P** **05 11 56.3 +0.6**
BILL *e**PP **pP** **05 12 08.8 -1.7**
BILL *i* 05 12 19.2
BILL 05 14 35.0
BILL *eS* **S** **05 21 08.6 +0.5**
BILL SS **SS** **05 25 49.0 +6.4**
BILL SSS SSS 05 28 54.0
BILL pmax pmax
comp=Z,24nm,2.5s
BILL MLR MLR
comp=Z,441nm,20.0s
BILL Bilibino 71.16 15 P **P** **05 11 56.1 +0.4**
BILL IAMs_20 IAMs_20 05 46 45.6
comp=Z,440nm,20.0s
SHAO Shalim 71.35 288 P **P** **05 11 59.9 +2.1**
BANOM Banah 71.47 297 P **P** **05 11 59.2 +0.7**
MASF Masafi 71.53 296 P **P** **05 12 00.9 +2.1**
ASHO Ashiyiah 71.55 295 P **P** **05 12 00.3 +1.4**
SHME Shamm 71.63 297 P **P** **05 12 01.3 +2.0**
ALNE Al Ain 71.76 295 P **P** **05 12 03.3 +3.1**
SNR=8.9
GEYT Alibeck 71.89 309 P **P** **05 12 01.3 +0.5**
comp=Z,6.7nm,0.7s,baz=157,slow=5.3,SNR=6.5
GEYT Alibeck 71.89 309 P **P** **05 12 00.3 -0.5**
DMTO DMTO 71.98 288 P **P** **05 12 02.3 +0.8**
NRIK Noril'sk 72.02 346 P **P** **05 12 01.4 +0.5**
comp=Z,14nm,0.5s,baz=124,slow=6.0,SNR=24
NRIK LR LR 05 48 46.7
comp=Z,211nm,18.5s,baz=146,slow=40
NRIK Noril'sk 72.02 346*c iP* **P** **05 12 01.3 +0.5**
NRIK pmax pmax
comp=Z,13nm,0.9s
NRIK Noril'sk 72.02 346 P **P** **05 12 00.9 +0.1**
NRIK IAmb IAmb 05 12 24.7
comp=Z,28nm,1.1s
ASUD Al Ashush, Dub 72.20 295 P **P** **05 12 04.8 +2.0**
SNR=6.3
AJN Ajban 72.50 295 P **P** **05 12 06.5 +1.9**
SNR=6.6
SOCY Socotra 72.65 282 P **P** **05 12 04.1 -1.7**
SOCY IAmb IAmb 05 12 08.1
comp=Z,23nm,0.7s
SOCY IAMs_20 IAMs_20 05 43 43.2
comp=Z,876nm,21.0s
SOCY Socotra 72.65 282 P **P** **05 12 04.4 -1.3**
SNR=6.1
DOK Doka 72.81 289 P **P** **05 12 05.4 -1.2**
WHFO Wadi Hawf 73.11 288 P **P** **05 12 06.8 -1.5**
AB31 Akbulak array 73.40 321 P **P** **05 12 09.5 +0.1**
ABKAR Akbulak array 73.40 321 P **P** **05 12 09.1 -0.3**
ABTO Aybut 73.53 287 P **P** **05 12 10.8 0.0**
SVE Sverdlovsk 75.34 329*deP* **P** **05 12 21.0 +0.5**
SVE *eS* **S** **05 21 53.1 -2.7**
SVE pmax pmax
comp=Z,122nm,1.1s
ARU Arti 76.30 328 P **P** **05 12 25.8 -0.3**
comp=Z,13nm,0.6s,baz=115,slow=3.1,SNR=4.5
ARU Arti 76.30 328*c iP* **P** **05 12 25.9 -0.1**
ARU *PP **pP** **05 12 40.3 -0.8**
ARU 05 15 17.8
ARU S **S** **05 22 10.1 +3.6**
ARU pmax pmax
comp=Z,50nm,0.8s
ARU MLR MLR

comp=Z,873nm,27.0s
ARU Arti 76.30 328 P **P** 05 12 25.7 -0.3
SDPT Sand Point 78.59 34 P 05 12 40.7
baz=257
ANM Nome 78.79 24 P 05 12 42.2
baz=251
MAK Makhachkala 80.67 313 *e*P **P** 05 12 49.4 -1.0
MAK *e* 05 15 52.5
MAK *e*PPP PPP 05 17 43.0
MAK *e*S **S** 05 22 50.4 -3.3
MAK *e*SSS SSS 05 31 32.5
MAK pmax pmax
comp=Z,289nm,1.9s
MAK MLR MLR
comp=Z,307nm,14.0s
ABPO Ambohimpanom 80.71 250 P **P** 05 12 51.6 +0.3
ABPO pmax pmax
comp=Z,34nm,1.0s
ABPO Ambohimpanom 80.71 250 P **P** 05 12 51.6 +0.3
ABPO IAmb IAmb 05 12 55.9
comp=Z,34nm,0.9s
RDOG Red Dog Mine 80.84 21 P 05 12 52.9
baz=252
RDOG Red Dog Mine 80.84 21 P **P** 05 12 51.6 +0.8
RAYN Ar Rayn 81.09 293 P **P** 05 12 52.2 -0.9
RAYN pmax pmax
comp=Z,22nm,1.0s
RAYN MLR MLR
comp=Z,600nm,22.0s
RAYN Ar Rayn 81.09 293 P **P** 05 12 52.2 -0.9
RAYN IAmb IAmb 05 12 59.4
comp=Z,22nm,0.9s
RAYN IAMs_20 IAMs_20 05 49 54.9
comp=Z,596nm,22.0s
VOI Vohitsoka 81.40 248 P **P** 05 12 55.7 +0.8
DDFL Dedoflistskaro 81.55 311 P P 05 13 00.3 +5.0
KIRV Kirov 81.61 329 P **P** 05 12 55.1 +0.1
comp=Z,34nm,0.6s,baz=112,slow=5.0,SNR=14
KIRV Kirov 81.61 329*c i*P **P** 05 12 55.2 +0.2
BELG Belogornoye 81.68 323 P **P** 05 12 55.8 +0.2
comp=Z,62nm,0.9s,baz=279,slow=2.9,SNR=20
BELG Belogornoye 81.68 323*ce*P **P** 05 12 55.2 -0.3
BELG pmax pmax
comp=Z,7.0nm,0.9s
VNDA Vanda 81.80 173 P **P** 05 12 56.6 +0.9
comp=Z,14nm,0.6s,baz=313,slow=6.2,SNR=58
VNDA LR LR 05 47 33.1
comp=Z,182nm,21.6s,baz=337,slow=34
VNDA Vanda 81.80 173 P **P** 05 12 56.3 +0.6
VNDA IAmb IAmb 05 12 58.6
comp=Z,20nm,0.9s
GROC Groznyy 81.94 313 *e*P **pP** 05 12 57.7 +0.6
GROC *e**PP **pP** 05 13 11.2 -1.2
GROC *e**SP **sP** 05 13 18.0 -0.3
GROC pmax pmax
comp=Z,22nm,0.7s
MAW Mawson 82.19 200 P **P** 05 12 58.9 +1.1
comp=Z,12nm,0.6s,baz=65,slow=6.2,SNR=17
MAW LR LR 05 48 34.9
comp=Z,107nm,18.8s,baz=58,slow=35
MAW Mawson 82.19 200 P **P** 05 13 00.0 +2.1
baz=82,SNR=12
MAW Mawson 82.19 200 P **P** 05 12 58.7 +0.8
GNI Garni 82.50 310*ce*P **P** 05 13 01.7 +1.3
GNI pmax pmax
comp=Z,17nm,1.5s
SBA Scott Base 82.71 172 P **P** 05 13 01.1 +0.6
SBA pmax pmax
comp=Z,26nm,1.1s
SBA Scott Base 82.71 172 P **P** 05 13 01.1 +0.6
SBA IAmb IAmb 05 13 17.1
comp=Z,26nm,1.1s
KZRT Kazreti 82.84 311 P **P** 05 13 04.1 +2.1
GUDG Gudauri 82.85 312 P **P** 05 13 05.3 +3.1
OHAK Old Harbor 82.86 33 P 05 13 03.1
baz=263
ZEI Tsey 83.29 313 *e*P **P** 05 13 03.9 -0.6
ZEI pmax pmax
comp=Z,85nm,1.3s
KDAK Kodiak Island 83.31 32 P **P** 05 13 05.4 +1.5
comp=Z,17nm,0.8s,baz=265,slow=2.9,SNR=8.2
BGD Bogdanovka 83.43 311 P **P** 05 13 08.3 +3.1
AKH Akhalkalaki 83.52 311 P **P** 05 13 07.6 +2.0
NCK Nalchik 83.56 313⇑ *e*P **P** 05 13 04.9 -0.7
NCK pmax pmax
comp=Z,7.0nm,0.7s
ONI Oni 83.61 312 P **P** 05 13 09.3 +3.4
A21K Barrow 83.80 18 P 05 13 08.6
baz=258,SNR=12
KARS Kars 83.80 310 P P 05 13 12.2 +5.2
IMAR Indian Mountai 83.87 24 P **P** 05 13 08.0 +1.3
SPCR Spurr Chakacha 83.90 29 P 05 13 08.3
baz=263
PRGR Permogore 83.93 332⇑ *i*P **P** 05 13 07.0 0.0
PRGR pmax pmax
comp=Z,70nm,0.9s
GOF Gofitskoye 84.04 315⇑ *e*P **P** 05 13 09.4 +1.4
GOF pmax pmax
comp=Z,131nm,2.2s
KBZ Khabaz 84.08 314 P **P** 05 13 07.5 -0.7
comp=Z,6.5nm,0.9s,baz=98,slow=4.7,SNR=11
KBZ Khabaz 84.08 314*c i*P **P** 05 13 08.5 +0.4
KBZ pmax pmax
comp=Z,10.0nm,1.0s
PPLA Purkeypile 84.11 27 P **P** 05 13 07.5 -0.7
PPLA IAmb IAmb 05 13 33.7
comp=Z,58nm,1.4s
PPLA Purkeypile 84.11 27 P 05 13 09.9
baz=263
CHUM Lake Minchumin 84.18 26 P 05 13 10.7
baz=263,SNR=7.3
NEY Neytrino 84.18 313⇑ *e*P **P** 05 13 08.1 -0.9
NEY pmax pmax
comp=Z,3.0nm,0.8s
KVAR Kislovodsk Arr 84.23 314 P **P** 05 13 09.7 +0.6
comp=Z,3.6nm,0.7s,baz=93,slow=23,SNR=2.1
KVAR LR LR 05 53 28.8
comp=Z,59nm,22.0s,baz=244,slow=38
KIV Kislovodsk 84.24 314 ⇑P **P** 05 13 10.8 +1.7
KIV Kislovodsk 84.24 314 *e*P **P** 05 13 08.6 -0.5
KIV *e* 05 23 26.6
KIV pmax pmax
comp=Z,70nm,1.1s
KIV pmax pmax
comp=Z,273nm,3.4s
KIV Kislovodsk 84.24 314 P **P** 05 13 09.8 +0.7
KIV IAmb IAmb 05 13 16.0
comp=Z,33nm,1.2s
SKT Skwentna 84.31 28 P **P** 05 13 09.0 0.0
SKT IAmb IAmb 05 13 11.9
comp=Z,26nm,0.9s
SKT Skwentna 84.31 28 P 05 13 09.8
baz=264,SNR=11
BRSE Bradley Lake S 84.47 30 P 05 13 10.9
baz=265
CHVG Ch'k'valeri 84.63 313 ⇑P **P** 05 13 13.0 +2.0
CHVG Ch'k'valeri 84.63 313 ⇑P **P** 05 13 13.0 +2.0
SUA Susitna One 84.63 29 P **P** 05 13 10.6 -0.1
SUA Susitna One 84.63 29 P 05 13 11.8
baz=264,SNR=27
PPT Papeete 84.66 108 LR LR 05 47 33.8
comp=Z,306nm,21.9s,baz=266,slow=33
PPT2 Papeete2 84.66 108 *e*S **S** 05 23 32.0 -3.4
comp=Z,297nm,25.5s
PPT2 Papeete2 84.66 108 *e*LR LR 05 40 00.0
comp=Z,2µm,27.2s
KTH Kantishna Hill 84.76 26 P **P** 05 13 12.0 +0.7
KTH IAmb IAmb 05 13 14.9
comp=Z,20nm,1.2s
BPAW Bear Paw Mtn. 84.79 26 P 05 13 13.3
baz=264,SNR=8.3
MLY Manley 84.99 25 P **P** 05 13 11.8 -0.6
MLY Manley 84.99 25 P 05 13 14.2
baz=264,SNR=9.0
TRF Thorofare Moun 85.03 27 P 05 13 14.0
baz=265
O22K Cooper Landing 85.04 30 P **P** 05 13 11.1 -1.5
O22K Cooper Landing 85.04 30 P 05 13 14.0
baz=265
RC01 Rabbit Creek A 85.08 29 P 05 13 14.3
baz=265,SNR=9.3
TBI Tubuai 85.17 114 *e*S **S** 05 23 36.9 -3.3
comp=Z,246nm,25.8s
TBI Tubuai 85.17 114 *e*LR LR 05 40 09.7
comp=Z,1µm,30.0s
VRH Novokhopyorsk 85.23 321 *e*P **P** 05 13 13.3 -0.5
VRH pmax pmax
comp=Z,90nm,0.7s
PMR Palmer 85.41 29 P **P** 05 13 15.3 +0.8
PMR pmax pmax
comp=Z,30nm,1.0s
PMR Palmer 85.41 29 P **P** 05 13 15.3 +0.8
PMR IAmb IAmb 05 13 19.9
comp=Z,30nm,1.0s
PMR Palmer 85.41 29 P 05 13 15.8
baz=266,SNR=10
COLD Coldfoot 85.43 23 P **P** 05 13 15.4 +0.9
COLD IAmb IAmb 05 13 18.2
comp=Z,18nm,0.8s
COLD Coldfoot 85.43 23 P 05 13 16.4
baz=264,SNR=23
I23K Minto, Yukon-K 85.58 25 P **P** 05 13 16.4 +1.1
I23K IAmb IAmb 05 13 19.6
comp=Z,12nm,0.8s
I23K Minto, Yukon-K 85.58 25 P 05 13 16.6
baz=265,SNR=15
MCK McKinley 85.66 26 P **P** 05 13 17.0 +1.2
MCK pmax pmax
comp=Z,16nm,0.8s
MCK McKinley 85.66 26 P **P** 05 13 17.0 +1.2
MCK IAmb IAmb 05 13 19.0
comp=Z,16nm,0.8s
MCK McKinley 85.66 26 P 05 13 16.9
baz=266,SNR=9.9
NEA2 Nenana 85.66 25 P 05 13 17.6
baz=266,SNR=7.6
KNK Knik Glacier 85.72 29 IAMs_20 IAMs_20 05 42 03.5
comp=Z,728nm,21.0s
KNK Knik Glacier 85.72 29 P 05 13 17.9
baz=266
PWL Port Wells 85.75 29 P **P** 05 13 16.3 +0.1
WAT2 Susitna Watana 85.76 27 P 05 13 17.2
baz=266
TOLK Toolik Lake Re 85.80 21 P 05 13 18.3
baz=265,SNR=14
SML Sawmill 85.81 28 P 05 13 18.1
baz=267,SNR=9.3
MDM Murphy Dome 86.05 25 P **P** 05 13 17.6 -0.1
WRH Wood River Hil 86.08 26 P **P** 05 13 17.7 0.0
WAT6 Susitna Watana 86.13 28 P 05 13 19.8
baz=267,SNR=9.8
TCOL CIGO, UAF Yank 86.20 25 IAMs_20 IAMs_20 05 46 35.8
comp=Z,424nm,19.0s
COLA College 86.20 25⇑ *e*P **P** 05 13 18.9 +0.6
COLA pmax pmax
comp=Z,3.0nm,0.9s
COLA College 86.20 25 IAMs_20 IAMs_20 05 46 35.8
comp=Z,425nm,19.0s
SCM Sheep Creek Mo 86.28 28 P **P** 05 13 19.6 +0.6
SCM pmax pmax
comp=Z,26nm,0.9s
SCM Sheep Creek Mo 86.28 28 P **P** 05 13 19.6 +0.6
GLI Glacier Island 86.36 29 P 05 13 20.8
baz=268
SOC Sochi 86.38 313 *e*P **P** 05 13 17.7 -2.0
SOC *e*PPP PPP 05 18 31.0
SOC *e*S **SKSac** 05 23 38.2 -3.4
SOC pmax pmax
comp=Z,86nm,1.0s
SOC MLR MLR
comp=Z,291nm,18.0s
HDA Harding Lake 86.57 26 P 05 13 19.9
baz=268,SNR=9.9
HDA P 05 13 19.9
baz=268,SNR=9.9
ILAR Eielson Array 86.61 25 P **P** 05 13 19.6 -0.8
comp=Z,2.6nm,0.9s,baz=232,slow=5.1,SNR=16
ILAR LR LR 05 50 43.8
comp=Z,56nm,20.3s,baz=264,slow=35
ILAR Eielson Array 86.61 25 P **P** 05 13 19.9 -0.5
ILAR Eielson Array 86.61 25 P **P** 05 13 19.9 -0.5
VORD Divnogorie 86.75 321 *e*P **P** 05 13 21.4 +0.1
VORD pmax pmax
comp=Z,80nm,0.8s
VORR Voronezh 86.81 321 *e*P **P** 05 13 20.0 -1.6
VORR pmax pmax
comp=Z,250nm,2.0s
KLMR Klimovskoe 86.82 331 *e*P **P** 05 13 19.5 -1.9
KLMR pmax pmax
comp=Z,24nm,0.7s
KLMR Klimovskoe 86.82 331 *e*P **P** 05 13 19.6 -1.9
KLMR AMP 05 13 26.3
comp=Z,24nm,0.7s
KLMR LQ LQ 05 43 56.0
KLMR LQ LQ 05 43 56.0
KLMR LR LR 05 49 35.5
VSR Storozhevoye 86.84 321 *e*P **P** 05 13 21.7 0.0
VSR pmax pmax
comp=Z,90nm,0.8s
M24K Tolsona, Glenn 86.84 28 P 05 13 24.3
baz=268
LPSR Galich'ya Gora 87.00 322 *e*P **P** 05 13 23.3 +0.8
LPSR pmax pmax
comp=Z,140nm,1.1s
PAX Paxson 87.19 27 P 05 13 25.1
baz=269
MALT Malatya 87.36 308 P **P** 05 13 26.5 +1.8
BMAR Burnt Mountain 87.61 23 P **P** 05 13 25.3 +0.1
MOS Moscow 87.77 326 *e*P **P** 05 13 26.5 +0.4
MOS *e*S **SKSac** 05 23 52.3 +2.8
MOS pmax pmax
comp=Z,95nm,1.2s
SCRK Sand Creek 87.86 26 P 05 13 28.3
baz=270
ANN Anapa 88.02 315 *e*P **P** 05 13 27.0 -0.6
ANN *e**PP **pP** 05 13 41.8 -1.2
ANN *e* 05 16 55.5
ANN *e* 05 23 47.1
ANN *e* 05 24 01.5
ANN pmax pmax
comp=Z,115nm,0.9s
ANN MLR MLR
comp=Z,1µm,24.0s
ANN MLR MLR
comp=E,986nm,20.0s
MCARA McCarthy VSAT 88.34 29 IAMs_20 IAMs_20 05 45 10.5
comp=Z,537nm,19.0s
OBN Obninsk 88.38 325 P **P** 05 13 28.5 -0.5
comp=Z,4.2nm,0.4s,baz=268,slow=5.5,SNR=6.3
OBN Obninsk 88.38 325⇑ *e*P **P** 05 13 28.6 -0.5
OBN *i**PP **pwP** 05 13 47.1 -0.1
OBN SS SS 05 29 56.0 -4.5
OBN SSS SSS 05 33 36.0
OBN pmax pmax
comp=Z,53nm,1.5s
OBN MLR MLR
comp=Z,702nm,25.0s
OBN Obninsk 88.38 325 P **P** 05 13 28.4 -0.5
K27K Chicken 88.70 26 P 05 13 32.3
baz=272
KIBK Kibwezi 88.72 268 P **P** 05 13 33.7 +2.0
SNR=22
BCAR Beaver Creek A 88.86 27 P **P** 05 13 31.5 +0.3
EGAK Eagle 89.06 25 P 05 13 33.1
baz=273
CTG Chitna Glacier 89.17 29 P 05 13 34.6
baz=273
KMBO Kilima Mbogo 89.47 269 P **P** 05 13 36.4 +1.0
comp=Z,18nm,1.2s,baz=88,slow=5.4,SNR=22
KMBO LR LR 05 51 59.8
comp=Z,226nm,20.0s,baz=91,slow=34
DAWY Dawson 89.88 26 P **P** 05 13 36.3 +0.3
EPYK Eagle Plains 90.77 24 P 05 13 41.2
baz=277
SYO Syowa Base 90.87 201⇑ *e*PcP **PcP** 05 13 43.2 +1.8
SYO Syowa Base 90.87 201‖ *e*pP pP 05 13 55.4 -0.3
BR131 Keskin Array S 91.03 310 *de*P **P** 05 13 41.4 -0.6
BRTR Keskin Array B 91.03 310 P **P** 05 13 41.6 -0.4
comp=Z,1.1nm,0.4s,baz=117,slow=3.5,SNR=13
BRTR PP **PP** 05 17 20.4 +1.4
comp=Z,3.0nm,1.1s,baz=77,slow=5.6,SNR=5.5
BRTR LR LR 06 02 43.2
comp=Z,116nm,19.4s,baz=83,slow=41
BRTR Keskin Array B 91.03 310 P **P** 05 13 41.2 -0.9
INK Inuvik 91.71 22 P **P** 05 13 43.8 -0.5
comp=Z,3.5nm,0.8s,baz=343,slow=2.4,SNR=12
INK Inuvik 91.71 22 P **P** 05 13 43.8 -0.5
INK IAmb IAmb 05 13 52.0
comp=Z,16nm,1.4s
ARCES ARCESS Array B 91.98 340 P **P** 05 13 45.1 -0.5
comp=Z,7.4nm,0.7s,baz=65,slow=3.4,SNR=13
ARCES LR LR 06 01 00.3
comp=Z,290nm,20.0s,baz=75,slow=39
ARCES ARCESS Array B 91.98 340 P **P** 05 13 44.8 -0.8
ARCES IAmb IAmb 05 13 54.2
comp=Z,13nm,1.0s
QSPA South Pole Qui 91.99 180 P **P** 05 13 46.4 +0.6
comp=Z,4.6nm,0.9s,baz=158,slow=1.6,SNR=18
QSPA LR LR 05 55 52.8
comp=Z,176nm,20.4s,baz=359,slow=36
KBS Kingsbay 92.61 350 IAMs_20 IAMs_20 06 00 41.0
comp=Z,449nm,22.0s
AKASG Malin Array Be 93.14 321 P **P** 05 13 50.3 -1.0
comp=Z,1.0nm,0.4s,baz=65,slow=4.6,SNR=9.3
AKASG LR LR 05 59 29.7
comp=Z,392nm,21.2s,baz=90,slow=38
AKBB Malin Array Si 93.14 321⇑ *e*P **P** 05 13 50.0 -1.3
KIEV Kiev 93.15 321 P **P** 05 13 50.0 -1.3
FINES FINESS Array B 93.26 332 P **P** 05 13 51.1 -0.5
comp=Z,2.0nm,0.6s,baz=91,slow=4.8,SNR=16
FINES LR LR 05 59 49.7
comp=Z,229nm,19.2s,baz=74,slow=38
MNK Minsk 93.44 325 *i*P P 05 13 47.4 -5.2
comp=E,5.0nm,1.1s
MNK *i*P P 05 13 47.4 -5.2
comp=N,25nm,0.9s
MNK *i*P P 05 13 47.4 -5.2
comp=Z,14nm,1.0s
MNK *i*pP pP 05 14 02.1 -5.9
MNK *i*sP pwP 05 14 07.9 -2.9
MNK *i*PP **PP** 05 17 31.8 -5.4
MNK *i*PPP PPP 05 19 32.1
MNK *i*SKS 05 23 45.6
MNK *i*S **SKSac** 05 24 16.5 -5.7
MNK *i*sS **SKKSac** 05 24 43.1 +1.3
MNK *i*PS **PS** 05 26 11.5 -4.9
MNK *i*SS **SS** 05 31 06.5 -7.0
MNK *i*SSS SSS 05 34 49.0
MNK *i*SKKS **SKKSdf** 05 37 59.0 -6.8
MNK *i*LR LR 05 45 41.3
MNK *i*LRM MLR 05 58 02.5
comp=Z,256nm,20.4s
MNK *i*LRM MLR 05 58 09.1
comp=E,36nm,20.3s
MNK *i*LRM MLR 05 58 37.3
comp=N,274nm,19.9s
TAOE Nuku Hiva Isla 93.45 99 *e*LR LR 05 44 02.0
comp=N,849nm,24.4s
ISP Isparta 93.61 308 IAMs_20 IAMs_20 05 54 00.6
comp=Z,299nm,19.0s
NACGM Naroch 94.01 325 *i*P P 05 14 00.4 +5.2
NACGM *i*P P 05 14 00.4 +5.2
NACGM *i*P P 05 14 00.4 +5.2
NACGM *i*PP PP 05 17 57.0 +15
NACGM *i*PPP PPP 05 19 55.7
NACGM *i*S **SKSac** 05 23 1.0 +5.7
NACGM *i*PS PS 05 25 26.3 -56
NACGM *i*SS SS 05 31 36.5 +15
NACGM *i*SSS SSS 05 35 33.7
NACGM *i*LQ LQ 05 49 22.8
NACGM *i*LR LR 05 53 34.9
SORM Soroca 94.03 318 ⇑P **P** 05 13 55.5 +0.1
SORM Soroca 94.03 318 ⇑P **P** 05 13 55.5 +0.1
C36M Paulatuk 94.78 20 P **P** 05 13 57.4 -1.0
C36M IAmb IAmb 05 14 00.7
comp=Z,15nm,1.1s
C36M Paulatuk 94.78 20 P 05 13 59.0
baz=289
DLBC Dease Lake 95.18 31 LR LR 05 53 20.1
comp=Z,387nm,20.9s,baz=296,slow=33
KMPD K-Podol'skiy 95.22 319 P **P** 05 14 01.0 +0.1
VRI Vrincioaia 95.45 316 ⇑P **P** 05 14 03.2 +1.2
VRI Vrincioaia 95.45 316 ⇑P **P** 05 14 03.2 +1.2
PLOR Plostina 95.51 316 ⇓P **P** 05 14 02.9 +0.6
PLOR Plostina 95.51 316 ⇓P **P** 05 14 02.9 +0.6
BISRR Bisoca 95.51 316 ⇑P **P** 05 14 03.2 +0.8
BIZ Bicaz 95.71 317 ⇓P **P** 05 14 03.8 +0.6
MBAR Mbarara 95.96 270 IAMs_20 IAMs_20 05 56 21.2
comp=Z,311nm,20.0s
MLR Muntele Rosu 96.05 316 P **P** 05 14 04.0 -1.0
comp=Z,4.9nm,0.8s,baz=173,slow=1.6,SNR=10
MLR PP **PP** 05 17 58.2 +0.2
comp=Z,7.4nm,1.1s,baz=37,slow=5.0,SNR=4.1
MLR Muntele Rosu 96.05 316 ⇑P **P** 05 14 05.7 +0.8
MLR Muntele Rosu 96.05 316 ⇑P **P** 05 14 05.7 +0.8
MLR Muntele Rosu 96.05 316 IAMs_20 IAMs_20 06 03 05.2
comp=Z,381nm,22.0s
BURAR Bucovina Array 96.20 318 ⇓P **P** 05 14 06.5 +1.0
BURAR Bucovina Array 96.20 318 ⇓P **P** 05 14 06.5 +1.0
BURAR Bucovina Array 96.20 318 P **P** 05 14 05.0 -0.5
BUR08 Bucovina Ar. S 96.20 318 P **P** 05 14 04.8 -0.8
BUR08 IAmb IAmb 05 14 11.0
comp=Z,13nm,1.0s
EZN Ezine 96.63 310 P P 05 14 12.4 +4.9
VOIR 96.68 316 ⇑P **P** 05 14 08.0 +0.2
VOIR 96.68 316 ⇑P **P** 05 14 08.0 +0.2
ALN Alexandroupoli 96.68 311 P **P** 05 14 12.4 +4.7
BBB Bella Bella 97.65 37 LR LR 05 52 25.4
comp=Z,149nm,19.6s,baz=265,slow=32
UZH Uzhgorod 97.92 320 *e*P Pdif 05 14 16.3 +3.1
UZH *i* 05 14 25.7
DRGR 98.03 318 ⇑P Pdif 05 14 13.9 +0.1
DRGR 98.03 318 ⇑P Pdif 05 14 13.9 +0.1
GZR Gura Zlata 98.26 316 ⇑P Pdif 05 14 18.9 +4.0
GZR Gura Zlata 98.26 316 ⇑P Pdif 05 14 18.9 +4.0
CRVS Cervenica-Dubn 98.40 320 *e*P Pdif 05 14 17.3 +1.9
CRVS Cervenica-Dubn 98.40 320 *e*PDIFF Pdif 05 14 17.3 +1.9
VTS Vitosha 98.47 313 ⇑P **P** 05 14 15.8 -0.2
VTS Vitosha 98.47 313 ⇑P **P** 05 14 15.8 -0.2
VTS Vitosha 98.47 313 P **P** 05 14 15.0 -1.0
VTS IAmb IAmb 05 14 30.5
comp=Z,7.3nm,1.2s
RKT Rikitea 98.49 113 *e*S **S** 05 25 35.5 -5.5
comp=Z,484nm,32.8s
RKT Rikitea 98.49 113 *e*LR LR 05 46 14.8
comp=Z,1µm,34.0s
PAIG Paliouri 98.62 311 P Pdif 05 14 21.3 +4.8
LSZ Lusaka 98.73 255 P **P** 05 14 16.1 -1.6
LSZ pmax pmax
comp=Z,16nm,1.4s
LSZ MLR MLR
comp=Z,400nm,19.0s
LSZ Lusaka 98.73 255 P **P** 05 14 16.1 -1.6
LSZ IAmb IAmb 05 14 23.0
comp=Z,16nm,1.4s
LSZ Lusaka 98.73 255 IAMs_20 IAMs_20 06 02 05.7
comp=Z,382nm,19.0s
DAG Danmarks Havn 98.88 352 P **P** 05 14 16.3 -0.5
HFS Hagfors 99.45 332 P **Pdif** 05 14 18.5 -1.3
comp=Z,2.7nm,0.8s,baz=249,slow=7.8,SNR=4.3
HFS LR LR 06 03 34.2
comp=Z,363nm,19.3s,baz=72,slow=38
PSZ Piszkesteto 99.65 319 IAMs_20 IAMs_20 06 05 05.0
comp=Z,404nm,21.0s
VYHS Vyhne 100.19 320 *e*P **Pdif** 05 14 21.1 -2.2
VYHS Vyhne 100.19 320 *e*PDIFF **Pdif** 05 14 21.1 -2.2
NB2 NORSAR Subarra 100.24 333 P **Pdif** 05 14 22.1 -1.1
baz=67,slow=4.6
NOA NORSAR Array B 100.24 333 P **Pdif** 05 14 22.2 -1.1
comp=Z,1.3nm,0.7s,baz=67,slow=4.5,SNR=7.8
DIVS Divibare 100.48 315 IAMs_20 IAMs_20 06 00 40.4
comp=Z,268nm,22.0s
TULEG Thule 100.99 4 IAMs_20 IAMs_20 05 57 31.0
comp=Z,524nm,22.0s
YKA Yellowknife Ar 101.02 25 P **Pdif** 05 14 26.6 0.0
comp=Z,1.2nm,0.8s,baz=298,slow=4.4,SNR=17
YKA PKiKP **PKiKP** 05 18 52.7 +1.1
comp=Z,0.8nm,0.8s,baz=298,slow=1.4,SNR=10
YKA PKKPbc **PKKPbc** 05 30 38.1 -2.5
comp=Z,0.4nm,0.8s,baz=116,slow=7.7,SNR=7.0
BRG Berggiesshubel 102.53 323 *e*P **Pdif** 05 14 33.1 -0.5
BRG Amp 05 14 35.8
comp=Z,2.9nm,0.8s
BRG *ex* x 05 37 35.1
BRG Amp 05 37 47.2
comp=Z,2.9nm,0.8s
BRG Amp 06 01 42.0
comp=Z,0.7nm,29.9s
BRG Amp 06 01 50.0
comp=E,0.4nm,18.1s
BRG Amp 06 02 02.0
comp=N,0.4nm,20.7s
CLL Collm 102.94 324 *e*Pdif **Pdif** 05 14 34.0 -1.5
CLL *e*PP **PP** 05 18 52.0 +2.1
CLL *e*(SKSac) 05 25 00.0
CLL *e*SP SP 05 27 52.0 +0.3

CLL				*e*PPS	PPS		05 28 36.0		
CLL				*e*SS	**SS**		**05 33 30.0**	**+3.1**	
CLL				*e*SSS	SSS		05 37 24.0		
CLL				*e*SSSS			05 41 06.0		
CLL	**Collm**	**102.94**	**324**	*eP*	**Pdif**		**05 14 34.0**	**-1.5**	
CLL				*e*			05 18 52.0		
CLL	**Collm**	**102.94**	**324**	IAMs_20	IAMs_20		06 05 57.7		
	comp=Z,479nm,22.0s								
GERES	**GERESS Array B**	**103.34**	**321**	Pdiff	**Pdif**		**05 14 37.8**	**+0.4**	
	comp=Z,0.3nm,0.5s,baz=69,slow=5.6,SNR=2.2								
GERES				PP	**PP**		**05 18 53.9**	**+0.8**	
	comp=Z,0.2nm,0.3s,baz=54,slow=8.6,SNR=1.7								
SNAA	**Sanae**	**103.61**	**195**	Pdiff	**Pdif**		**05 14 37.1**	**-0.9**	
SNAA	**Sanae**	**103.61**	**195**	IAMs_20	IAMs_20		06 09 05.1		
	comp=Z,433nm,20.0s								
TIP	**Timpagrande**	**104.01**	**311**	IAMs_20	IAMs_20		06 10 14.3		
	comp=Z,353nm,22.0s								
CEL	**Celeste**	**104.89**	**310**	IAMs_20	IAMs_20		06 11 36.8		
	comp=Z,251nm,22.0s								
VNA2	**Neumayer--Watz**	**105.22**	**194**	Pdiff	**Pdif**		**05 14 50.9**	**+5.7**	
ORV	**Oroville**	**105.33**	**48**	IAMs_20	IAMs_20		05 54 11.7		
	comp=Z,303nm,20.0s								
MOD	**Modoc Plateau**	**105.53**	**45**	IAMs_20	IAMs_20		05 58 15.8		
	comp=Z,404nm,20.0s								
VNA3	**Neumayer Olymp**	**105.54**	**193**	Pdiff	**Pdif**		**05 14 53.0**	**+6.3**	
AQU	**L'Aquila**	**105.58**	**315**	IAMs_20	IAMs_20		06 07 59.5		
	comp=Z,343nm,22.0s								
VNA1	**Neumayer--Stat**	**105.62**	**194**	Pdiff	**Pdif**		**05 14 52.9**	**+6.0**	
BMO	**Blue Mountains**	**106.65**	**42**	IAMs_20	IAMs_20		05 55 51.9		
	comp=Z,449nm,21.0s								
VLC	**Villacollemand**	**107.08**	**318**	IAMs_20	IAMs_20		06 08 38.8		
	comp=Z,446nm,22.0s								
NVAR	**Mina Array Bea**	**108.04**	**48**	PP	**PP**		**05 19 28.9**	**+0.6**	
	comp=Z,0.7nm,0.8s,baz=276,slow=7.3,SNR=5.5								
NVAR				PKKP	**PKKPab**		**05 30 32.4**	**+0.1**	
	comp=Z,0.5nm,0.6s,baz=123,slow=5.0,SNR=5.4								
MFID	**Camas Ranch**	**108.15**	**43**	IAMs_20	IAMs_20		05 56 32.8		
	comp=Z,487nm,22.0s								
HLID	**Hailey**	**109.05**	**42**	IAMs_20	IAMs_20		05 50 41.7		
	comp=Z,428nm,18.0s								
DLMT	**Dillon**	**109.54**	**40**	IAMs_20	IAMs_20		05 55 16.2		
	comp=Z,461nm,21.0s								
TPNV	**Topopah Spring**	**110.05**	**49**	IAMs_20	IAMs_20		05 54 48.8		
	comp=Z,322nm,19.0s								
BOZ	**Bozeman (W)**	**110.06**	**39**	IAMs_20	IAMs_20		05 59 41.9		
	comp=Z,420nm,21.0s								
FLWY	**Flagg Ranch**	**111.30**	**41**	IAMs_20	IAMs_20		05 58 43.0		
	comp=Z,533nm,22.0s								
DUG	**Dugway, Tooele**	**111.44**	**45**	IAMs_20	IAMs_20		05 52 51.0		
	comp=Z,390nm,22.0s								
SNOW	**Snow King Moun**	**111.53**	**41**	IAMs_20	IAMs_20		06 00 14.1		
	comp=Z,480nm,22.0s								
LOHW	**Long Hollow**	**111.57**	**41**	IAMs_20	IAMs_20		06 04 27.0		
	comp=Z,337nm,20.0s								
HWUT	**Hardware Ranch**	**111.75**	**43**	IAMs_20	IAMs_20		06 01 50.2		
	comp=Z,392nm,22.0s								
BW06	**Boulder Array**	**112.62**	**42**	IAMs_20	IAMs_20		05 54 06.0		
	comp=Z,437nm,22.0s								
PDAR	**Pinedale Array**	**112.62**	**42**	PKiKP	**PKiKP**		**05 19 14.0**	**-0.1**	
	comp=Z,0.3nm,0.6s,baz=304,slow=0.7,SNR=2.8								
PDAR				PKKPbc	**PKKPbc**		**05 30 03.5**	**-0.7**	
	comp=Z,0.3nm,0.5s,baz=104,slow=6.3,SNR=4.2								
LAO	**LASA Array**	**112.89**	**37**	P			05 19 16.7		
	baz=300								
O20A	**White River Ci**	**114.66**	**44**	P			05 19 19.8		
	baz=296								
RSSD	**Black Hills**	**115.52**	**38**	PKiKP	**PKPdf**		**05 19 20.3**	**+0.7**	
RSSD	**Black Hills**	**115.52**	**38**		**PKPdf**		**05 19 20.3**	**+0.7**	
RSSD	**Black Hills**	**115.52**	**38**	P			05 19 20.8		
	baz=301								
MVCO	**Mesa Verde**	**115.72**	**47**	IAMs_20	IAMs_20		06 02 11.5		
	comp=Z,392nm,22.0s								
TUC	**Tucson**	**115.85**	**52**	IAMs_20	IAMs_20		06 00 44.7		
	comp=Z,355nm,20.0s								
PHWY	**Pilot Hill**	**116.01**	**41**	IAMs_20	IAMs_20		05 55 49.6		
	comp=Z,335nm,22.0s								
ULM	**Lac du Bonnet**	**116.42**	**29**	PKP	**PKPdf**		**05 19 20.6**	**-0.2**	
	comp=Z,3.6nm,0.8s,baz=340,slow=2.6,SNR=11								
ULM	**Lac du Bonnet**	**116.42**	**29**	PKiKP	**PKiKP**		**05 19 20.8**	**0.0**	
ULM	**Lac du Bonnet**	**116.42**	**29**	PKPdf	**PKiKP**		**05 19 20.8**	**0.0**	
ISCO	**Idaho Springs**	**116.61**	**43**	IAMs_20	IAMs_20		06 03 22.8		
	comp=Z,258nm,20.0s								
AGMN	**Agassiz Nation**	**117.70**	**31**	IAMs_20	IAMs_20		06 00 40.3		
	comp=Z,348nm,21.0s								
ANMO	**Albuquerque**	**118.16**	**48**	IAMs_20	IAMs_20		05 59 58.5		
	comp=Z,376nm,21.0s								
ANMO	**Albuquerque**	**118.16**	**48**	P			05 19 26.2		
	baz=295								
OGNE	**Ogallala**	**118.43**	**40**	IAMs_20	IAMs_20		06 04 13.5		
	comp=Z,433nm,21.0s								
ESDC	**Sonseca Array**	**118.66**	**318**	PP	PP		05 20 42.2	-1.1	
	comp=Z,0.3nm,0.3s,baz=49,slow=6.7,SNR=4.6								
T25A	**Trinidad**	**118.68**	**45**	IAMs_20	IAMs_20		05 59 47.9		
	comp=Z,432nm,21.0s								
T25A	**Trinidad**	**118.68**	**45**	P			05 19 27.8		
	baz=298								
EYMN	**Ely**	**120.10**	**29**	P			05 19 28.4		
	baz=314								
ECSD	**EROS Data Cent**	**120.17**	**35**	PKPdf	**PKiKP**		**05 19 28.6**	**+0.2**	
ECSD	**EROS Data Cent**	**120.17**	**35**	IAMs_20	IAMs_20		06 05 51.9		
	comp=Z,466nm,22.0s								
ECSD	**EROS Data Cent**	**120.17**	**35**	P			05 19 28.9		
	baz=308								
MNTX	**Cornudas Mount**	**120.33**	**51**	P			05 19 30.7		
	baz=294								
BGNE	**Belgrade**	**120.63**	**38**	PKPdf	**PKiKP**		**05 19 29.3**	**0.0**	
BGNE	**Belgrade**	**120.63**	**38**	P			05 19 30.2		
	baz=305								
E38A	**The Farm, Brul**	**121.01**	**30**		**PKPdf**		**05 19 29.8**	**0.0**	
SPMN	**Marine on St.**	**121.31**	**32**		**PKPdf**		**05 19 30.2**	**-0.2**	
SPMN	**Marine on St.**	**121.31**	**32**	P			05 19 31.5		
	baz=312								
AMTX	**Amarillo**	**121.70**	**46**	IAMs_20	IAMs_20		06 07 00.7		
	comp=Z,327nm,19.0s								
I37A	**Lemond, Waseca**	**121.79**	**33**		**PKiKP**		**05 19 32.1**	**+0.6**	
SFS	**San Fernando**	**121.80**	**316**	IAMs_20	IAMs_20		06 21 52.7		
	comp=Z,434nm,21.0s								
TXAR	**Lajitas Array**	**122.64**	**53**	PKP	**PKiKP**		**05 19 33.8**	**0.0**	
	comp=Z,0.9nm,0.7s,baz=264,slow=1.3,SNR=7.9								
U32A	**Winter Ranch,**	**122.83**	**43**	IAMs_20	IAMs_20		06 13 28.5		
	comp=Z,323nm,19.0s								
KSU1	**Kansas State U**	**122.92**	**39**	IAMs_20	IAMs_20		06 07 53.2		
	comp=Z,375nm,22.0s								
KSU1	**Kansas State U**	**122.92**	**39**	P			05 19 34.8		
	baz=305								
OK032	**Salt Plains WL**	**123.15**	**43**	IAMs_20	IAMs_20		06 08 48.7		
	comp=Z,358nm,20.0s								
TORD	**Torodi Ar. Bea**	**123.37**	**287**	PKP	**PKPdf**		**05 19 35.0**	**-0.2**	
	comp=Z,4.3nm,0.9s,baz=48,slow=1.9,SNR=9.7								
TORD				PKKPbc	**PKKPab**		**05 29 24.8**	**0.0**	
	comp=Z,1.6nm,0.8s,baz=271,slow=3.4,SNR=5.8								
WMOK	**Wichita Mounta**	**123.84**	**45**	IAMs_20	IAMs_20		06 17 39.3		
	comp=Z,362nm,22.0s								
WMOK	**Wichita Mounta**	**123.84**	**45**	P			05 19 36.7		
	baz=301								
JFWS	**Jewell Farm**	**124.23**	**32**	P			05 19 36.4		
	baz=314								
JCT	**Junction City**	**125.16**	**50**	P			05 19 39.8		
	baz=298								
HDIL	**Hopedale**	**126.36**	**34**	IAMs_20	IAMs_20		06 05 58.8		
	comp=Z,320nm,22.0s								
HDIL	**Hopedale**	**126.37**	**34**	P			05 19 41.1		
	baz=313								
CCM	**Cathedral Cave**	**126.89**	**37**	P			05 19 42.5		
	baz=310								
U40A	**Yellville**	**126.94**	**40**	IAMs_20	IAMs_20		06 09 31.7		
	comp=Z,408nm,22.0s								
U40A	**Yellville**	**126.94**	**40**	P			05 19 42.6		
	baz=307								
W39A	**Magazine**	**127.02**	**42**	P			05 19 43.1		
	baz=306								
MIAR	**Mount Ida**	**127.53**	**42**	P			05 19 44.9		
	baz=306								
D56A	**ZEC Mazanza, M**	**127.58**	**18**	P			05 19 43.5		
	baz=333								
WCI	**Wyandotte Cave**	**129.65**	**34**	IAMs_20	IAMs_20		06 04 18.8		
	comp=Z,379nm,20.0s								
M53A	**WI Miller and**	**130.06**	**27**	P			05 19 49.1		
	baz=323								
WVT	**Waverly**	**130.21**	**37**	P			05 19 49.0		
	baz=312								
OXF	**Oxford**	**130.29**	**40**	IAMs_20	IAMs_20		06 13 37.3		
	comp=Z,303nm,21.0s								
M54A	**Oil Creek Stat**	**130.46**	**26**	P			05 19 48.3		
	baz=324								
P52A	**Corning**	**130.80**	**29**	P			05 19 49.4		
	baz=321								

PLAL	**Pickwick Lake**	**130.82**	**38**	IAMs_20	IAMs_20		06 09 27.2		
	comp=Z,295nm,18.0s								
DBIC	**Dimbokro**	**130.85**	**281**	PKP	**PKiKP**		**05 19 50.2**	**-0.2**	
	comp=Z,4.0nm,0.9s,baz=268,slow=14,SNR=2.0								
N56A	**West Decatur**	**131.53**	**25**	P			05 19 51.9		
	baz=326								
P56A	**Dayton Farm, R**	**132.45**	**27**	P			05 19 53.3		
	baz=324								
R54A	**Victor**	**132.48**	**30**	P			05 19 53.0		
	baz=321								
S54A	**Dingess, Beckl**	**132.62**	**30**	P			05 19 54.0		
	baz=320								
LRAL	**Lakeview Retre**	**132.77**	**39**	IAMs_20	IAMs_20		06 29 02.1		
	comp=Z,306nm,21.0s								
LRAL	**Lakeview Retre**	**132.77**	**39**	P			05 19 54.4		
	baz=311								
O58A	**Lewisburry**	**132.78**	**25**	P			05 19 54.0		
	baz=327								
Q58A	**Fox Den Farm,**	**133.43**	**26**	P			05 19 55.1		
	baz=326								
BLA	**Blacksburg**	**133.52**	**30**	P			05 19 55.6		
	baz=321								
S57A	**Dark Hollow, R**	**133.80**	**28**	IAMs_20	IAMs_20		06 24 22.0		
	comp=Z,343nm,20.0s								
T56A	**Rocky Mt**	**133.86**	**30**	P			05 19 56.3		
	baz=322								
R58B	**Mineral**	**134.14**	**27**	P			05 19 58.0		
	baz=325								
U56A	**King**	**134.21**	**31**	P			05 19 58.0		
	baz=321								
KMSC	**Kings Mountain**	**134.62**	**33**	P			05 19 58.7		
	baz=319								
GOGA	**Godfrey**	**134.68**	**36**	IAMs_20	IAMs_20		06 13 54.2		
	comp=Z,293nm,20.0s								
PLCA	**Paso Flores**	**138.48**	**160**	PKhKP	PKPpre		05 19 56.0		
	comp=Z,1.7nm,1.0s,baz=253,slow=3.4,SNR=3.8								
PLCA				PKP	**PKPdf**		**05 20 03.2**	**+0.1**	
	comp=Z,3.0nm,0.7s,baz=216,slow=2.4,SNR=12								
PLCA	**Paso Flores**	**138.48**	**160**	*eP*	**PKPdf**		**05 20 03.5**	**+0.4**	
TEIG	**Tepich**	**139.18**	**55**	IAMs_20	IAMs_20		06 16 17.1		
	comp=Z,310nm,19.0s								
BOAB	**BOACO BROADBAN**	**140.78**	**65**	PKPdf	**PKPab**		**05 20 13.0**	**-0.9**	
VA03	**San Esteban**	**145.44**	**154**		**PKPab**		**05 20 16.3**	**+0.3**	
ESPN	**Las Esperanzas**	**146.11**	**65**	IAMs_20	IAMs_20		06 30 54.9		
	comp=Z,180nm,20.0s								
CBCY	**The Bluff, Cay**	**146.18**	**49**	PKPab	**PKPab**		**05 20 19.3**	**+0.3**	
ZON	**Zonda**	**147.29**	**155**	PKP2	**PKPbc**		**05 20 21.4**	**+0.1**	
ZON	**Zonda**	**147.29**	**155**		**PKPbc**		**05 20 21.4**	**+0.1**	
GO04	**Tololo Observa**	**147.50**	**151**		**PKPbc**		**05 20 21.3**	**-0.8**	
LCO	**Las Campanas**	**148.51**	**150**	PKP2	**PKPbc**		**05 20 23.4**	**-1.5**	
LCO	**Las Campanas**	**148.51**	**150**		**PKPbc**		**05 20 23.4**	**-1.5**	
CPSB	**Cacapava Do Su**	**151.82**	**180**	*eP*	**PKPdf**		**05 20 26.2**	**+0.2**	
PB14	**IPOC Station P**	**152.16**	**145**		**PKPbc**		**05 20 31.3**	**-2.6**	
ATAH	**Atahualpa**	**154.51**	**102**	PKPbc	**PKiKP**		**05 20 40.8**	**+1.4**	
	comp=Z,9.5nm,0.8s,baz=219,slow=2.1,SNR=7.2								
LVC	**Limon Verde**	**154.58**	**145**	PKPbc	**PKiKP**		**05 20 39.3**	**+0.1**	
	comp=Z,3.7nm,0.6s,baz=310,slow=1.6,SNR=5.9								
CPUP	**Villa Florida**	**155.57**	**171**	PKP	**PKPdf**		**05 20 30.3**	**-1.2**	
	comp=Z,1.3nm,0.7s,baz=282,slow=3.0,SNR=3.0								
CPUP				PKPbc	**pPKPdf**		**05 20 41.4**	**-6.0**	
	comp=Z,4.4nm,0.9s,baz=188,slow=0.4,SNR=9.4								
CPUP				PKPab	**PKPab**		**05 20 57.0**	**-0.4**	
	comp=Z,4.7nm,0.8s,baz=119,slow=2.5,SNR=3.9								
PTGB	**Pitanga**	**157.46**	**183**	*eP*	**PKPdf**		**05 20 34.2**	**+0.1**	
ROSC	**El Rosal**	**157.92**	**72**	PKP	**PKPdf**		**05 20 34.6**	**-0.7**	
	comp=Z,3.1nm,0.5s,baz=333,slow=16,SNR=1.0								
ROSC				PKPab	**PKPab**		**05 21 08.9**	**+0.3**	
	comp=Z,10nm,0.7s,baz=337,slow=1.5,SNR=5.6								
LPAZ	**La Paz**	**159.70**	**135**	PKP	**PKPdf**		**05 20 37.3**	**-0.4**	
	comp=Z,2.8nm,0.8s,baz=41,slow=4.1,SNR=8.7								
CZSB	**Cruzeiro do Su**	**159.89**	**107**	*eP*	**PKPdf**		**05 20 37.7**	**+0.5**	
AQDB	**Aquidauana**	**161.56**	**173**	*eP*	**PKPdf**		**05 20 39.2**	**+0.4**	
SIV	**San Ignacio**	**164.20**	**152**	PKP	**PKPdf**		**05 20 41.9**	**+0.4**	
	comp=Z,2.4nm,0.8s,baz=258,slow=1.0,SNR=9.9								
SIV				PKPab	**PKPab**		**05 21 35.8**	**+0.6**	
	comp=Z,5.4nm,0.8s,baz=214,slow=5.2,SNR=8.7								
PTLB	**Pontes e Lacer**	**165.52**	**157**	*eP*	**PKPdf**		**05 20 43.0**	**+0.4**	
BDFB	**Brasilia**	**165.54**	**201**	PKP	**PKPdf**		**05 20 41.7**	**-1.1**	
	comp=Z,0.9nm,0.4s,baz=182,slow=13,SNR=2.2								
BDFB				PKPab	**PKPab**		**05 21 41.8**	**+0.7**	
	comp=Z,3.5nm,0.8s,baz=159,slow=7.9,SNR=4.8								
ARAG	**Araguaiana, MT**	**166.37**	**186**	*eP*	**PKPdf**		**05 20 43.0**	**-0.3**	
BOAV	**Boa Vista**	**171.54**	**58**	*eP*	**PKPdf**		**05 20 47.4**	**+0.8**	
PTGA	**Pitinga**	**173.22**	**79**	PKPab	**PKPab**		**05 22 16.0**	**+0.5**	
	comp=Z,1.8nm,0.3s,baz=167,slow=6.2,SNR=4.1								
ITTB	**Itaituba**	**176.68**	**133**	*eP*	**PKPdf**		**05 20 48.3**	**-0.1**	

IDC ***11*** *05:08:26.3±1.5, 31°.66S×179°.95W, h346km±14km, mb4.0/6, mb1 4.1/8, mb1mx3.6/44, mbtmp4.7/8 Error ellipse: s-maj=18.2km s-min=15.8km az=3.0*

NEIC ***11*** *05:08:27.2±1.9, 31°.7S±0°.1×180°.0W±0°.2, h355km±8km, mb4.1/13, Error ellipse: s-maj=21.5km s-min=16.6km az=108.0*

WEL ***11*** *05:08:32.4±0.5, 32°.5±7°×18°.0W±1°.7, h303km±9km, M4.0/45, mB4.6/22, MLv5.0/45, Mw(mB)3.8/22, Error ellipse: s-maj=0.0km s-min=0.0km az=111.8*

ISC 11 05:08:26.9±0.5, 31°.97S±0°.06×179°.98W±0°.09, h350km, n133, σ2°.79/158, mb4.2/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.23**	**34**	P	**Pn**	**05 09 29.9**	**+1.5**
GLKZ				S	**S**	**05 10 15.5**	**-2.4**
RAO	**Raoul Island**	**3.24**	**34**	P	**Pn**	**05 09 25.2**	**-3.3**
	30nm,0.3s,baz=64,slow=24,SNR=1.9						
RAO				S	**S**	**05 10 17.9**	**-0.2**
	52nm,0.3s,baz=77,slow=23,SNR=1.8						
RAO	**Raoul Island**	**3.24**	**34**	Pn	**Pn**	**05 09 27.3**	**-1.2**
RIZ	**Raoul Island**	**3.24**	**34**	P	**Pn**	**05 09 30.1**	**+1.6**
MXZ	**Matakaoa Point**	**5.75**	**194**	Pn	**Pn**	**05 09 58.1**	**+3.4**
MXZ	**Matakaoa Point**	**5.75**	**194**	P	**Pn**	**05 09 58.9**	**+4.1**
MXZ				S	**S**	**05 11 06.2**	**+0.2**
WMGZ	**Waiomatatini S**	**5.98**	**192**	P	**Pn**	**05 10 01.8**	**+4.5**
WMGZ				S	**S**	**05 11 12.3**	**+1.6**
HAZ	**Te Kaha**	**6.06**	**197**	P	**Pn**	**05 10 02.3**	**+4.1**
HAZ				S	**S**	**05 11 12.3**	**0.0**
PKGZ	**Pakihiroa**	**6.12**	**195**	P	Pn	05 10 04.4	+5.5
PKGZ				S	**S**	**05 11 10.2**	**-3.5**
PUZ	**Puketiti**	**6.26**	**193**	P	**Pn**	**05 10 04.0**	**+3.5**
PUZ				S	**S**	**05 11 15.8**	**-0.7**
OUZ	**Omahuta**	**6.27**	**237**	Pn	**Pn**	**05 10 04.4**	**+3.7**
RUGZ	**Raukumara Rang**	**6.28**	**197**	P	**Pn**	**05 10 04.2**	**+3.3**
RUGZ				S	**S**	**05 11 14.9**	**-2.4**
TWGZ	**Tauwhareparae**	**6.41**	**195**	P	Pn	05 10 07.3	+4.9
TWGZ				S	**S**	**05 11 21.4**	**+1.5**
CNGZ	**Carnagh Statio**	**6.67**	**192**	P	**Pn**	**05 10 08.2**	**+3.0**
MWZ	**Matawai**	**6.67**	**197**	P	**Pn**	**05 10 09.2**	**+3.9**
MWZ				S	**S**	**05 11 23.3**	**-2.0**
URZ	**Urewera**	**6.71**	**200**	P	**Pn**	**05 10 07.6**	**+1.9**
	7.7nm,0.3s,baz=278,slow=5.7,SNR=82						
URZ				S	**S**	**05 11 24.3**	**-1.8**
	4.9nm,0.3s,baz=306,slow=23,SNR=3.0						
URZ	**Urewera**	**6.71**	**200**	Pn	**Pn**	**05 10 08.5**	**+2.7**
URZ	**Urewera**	**6.71**	**200**	P	**Pn**	**05 10 08.3**	**+2.5**
URZ				S	**S**	**05 11 25.2**	**-0.9**
KMRZ	**Kaimai**	**6.75**	**209**	P	Pn	05 10 12.0	+5.8
RAGZ	**Rawiri**	**6.85**	**197**	P	**Pn**	**05 10 10.8**	**+3.3**
RIGZ	**Rimuhau**	**6.97**	**195**	P	**Pn**	**05 10 12.6**	**+3.8**
RIGZ				S	**S**	**05 11 26.6**	**-5.1**
RRRZ	**Republican Roa**	**6.97**	**203**	P	Pn	05 10 15.0	+6.2
MUGZ	**Murupara**	**7.01**	**201**	P	**Pn**	**05 10 12.3**	**+3.0**
MUGZ				S	**S**	**05 11 32.1**	**-0.5**
HSRZ	**Hossack Road**	**7.04**	**205**	P	Pn	05 10 15.9	+6.3
RTZ	**Ruatahuna**	**7.08**	**200**	P	**Pn**	**05 10 13.5**	**+3.3**
GRRZ	**Galatos Road**	**7.12**	**206**	P	**Pn**	**05 10 13.6**	**+3.0**
SNGZ	**Shannon Statio**	**7.14**	**197**	P	**Pn**	**05 10 14.5**	**+3.7**
SNGZ				S	**S**	**05 11 34.5**	**-0.8**
PRGZ	**Paritu Road**	**7.15**	**194**	P	**Pn**	**05 10 15.3**	**+4.4**
PRGZ				S	**S**	**05 11 36.4**	**+0.8**
ALRZ	**Allen Road**	**7.23**	**204**	P	**Pn**	**05 10 15.6**	**+3.8**
MTHZ	**Maungataniwha**	**7.34**	**200**	P	**Pn**	**05 10 15.9**	**+2.8**
MTHZ				S	**S**	**05 11 38.5**	**-1.2**
KUTZ	**Kaahu Road**	**7.35**	**207**	P	Pn	05 10 18.4	+5.1
MRHZ	**Matea Rd**	**7.45**	**202**	P	**Pn**	**05 10 17.4**	**+2.9**
MRHZ				S	**S**	**05 11 40.5**	**-1.6**
NMHZ	**Naumai**	**7.58**	**199**	P	**Pn**	**05 10 20.0**	**+4.0**
NMHZ				S	**S**	**05 11 43.0**	**-1.9**
ARHZ	**Aropaoanui**	**7.68**	**198**	P	**Pn**	**05 10 20.2**	**+3.1**
ARHZ				S	**S**	**05 11 45.7**	**-1.3**
BKZ	**Black Stump Fm**	**7.73**	**201**	Pn	**Pn**	**05 10 20.4**	**+2.6**
BKZ	**Black Stump Fm**	**7.73**	**201**	P	**Pn**	**05 10 20.2**	**+2.4**
BKZ				S	**S**	**05 11 45.9**	**-2.3**

HIZ	**Hauiti**	**7.78**	**211**	P	Pn		05 10 24.0	+5.7	
MCHZ	**McNeill Hill**	**7.93**	**199**	P	**Pn**		**05 10 21.9**	**+1.8**	
MCHZ				S	**S**		**05 11 51.8**	**-0.6**	
NTVZ	**North Tongarir**	**7.94**	**205**	P	**Pn**		**05 10 23.2**	**+2.9**	
TMVZ	**Te Maari**	**7.95**	**205**	P	**Pn**		**05 10 23.6**	**+3.2**	
KRVZ	**Karewarewa**	**7.95**	**205**	P	**Pn**		**05 10 23.2**	**+2.8**	
ETVZ	**East Tongariro**	**7.96**	**205**	P	**Pn**		**05 10 23.3**	**+2.7**	
WTVZ	**West Tongariro**	**7.99**	**206**	P	**Pn**		**05 10 23.7**	**+2.8**	
KWHZ	**Kaweka Forest**	**7.99**	**200**	P	**Pn**		**05 10 22.9**	**+2.1**	
KWHZ				S	**S**		**05 11 51.4**	**-2.4**	
NNVZ	**North Ngauruho**	**8.00**	**205**	P	**P**		**05 10 23.7**	**+2.7**	
OTVZ	**Oturere**	**8.01**	**205**	P	**Pn**		**05 10 21.9**	**+0.8**	
OTVZ				S	**S**		**05 11 54.3**	**+0.1**	
TWVZ	**Taurewa**	**8.01**	**207**	P	**P**		**05 10 24.2**	**0.0**	
SNVZ	**South Ngauruho**	**8.03**	**205**	P	**P**		**05 10 24.3**	**-0.2**	
NGZ	**Ngauruhoe**	**8.04**	**205**	P	**P**		**05 10 24.2**	**-0.4**	
NGZ				S	**S**		**05 11 55.6**	**+0.6**	
FWVZ	**Far West T-bar**	**8.13**	**205**	P	**P**		**05 10 25.0**	**-0.6**	
BHHZ	**Black Hill Sta**	**8.16**	**202**	P	**Pn**		**05 10 23.0**	**+0.1**	
BHHZ				S	**S**		**05 11 53.9**	**-3.6**	
WNVZ	**Wahianoa**	**8.17**	**205**	P	**P**		**05 10 25.3**	**-0.8**	
MOVZ	**Moawhango**	**8.19**	**204**	P	**Pn**		**05 10 24.7**	**+1.5**	
MOVZ				S	**S**		**05 11 55.1**	**-3.1**	
KRHZ	**Kereru**	**8.21**	**200**	P	**P**		**05 10 25.4**	**-0.9**	
KRHZ				S	**S**		**05 11 55.6**	**-2.9**	
KAHZ	**Kahuranaki**	**8.21**	**197**	P	**P**		**05 10 25.3**	**-1.0**	
KAHZ				S	**S**		**05 11 53.5**	**-5.0**	
PKVZ	**Pokaka**	**8.23**	**206**	P	**P**		**05 10 26.1**	**-0.5**	
VRZ	**Vera Road**	**8.33**	**210**	P	**P**		**05 10 28.6**	**+1.1**	
PXZ	**Pawanui**	**8.44**	**197**	P	**P**		**05 10 27.6**	**-1.2**	
PXZ				S	**S**		**05 11 60.0**	**-3.4**	
PNHZ	**Pukenui**	**8.51**	**200**	P	**Pn**		**05 10 27.4**	**+0.5**	
PNHZ				S	**S**		**05 12 00.7**	**-4.4**	
WPHZ	**Waipukurau**	**8.58**	**199**	P	**P**		**05 10 29.9**	**-0.5**	
WPHZ				S	**S**		**05 12 02.9**	**-3.6**	
PRHZ	**Porangahau**	**8.72**	**197**	P	**Pn**		**05 10 30.7**	**+1.2**	
PKE	**Pukeiti**	**8.72**	**213**	P	**P**		**05 10 35.2**	**+3.2**	
NEZ	**North Egmont**	**8.73**	**212**	P	**P**		**05 10 35.2**	**+3.0**	
DVHZ	**Dannevirke**	**8.88**	**199**	P	**Pn**		**05 10 32.3**

ASAR Alice Springs 26.58 165 P P 05 18 31.4 -0.1
0.3nm,0.4s,baz=342,slow=8.8,SNR=5.6
ASAR PcP PcP 05 21 56.1 -0.5
0.2nm,0.4s,baz=344,slow=2.2,SNR=4.1
MKAR Makanchi Array 58.85 326 P P 05 22 51.5 -0.5
0.3nm,0.4s,baz=121,slow=8.5,SNR=9.5
KURBB Kurchatov Arra 63.06 328 P P 05 23 20.8 +0.3
0.7nm,0.5s,baz=128,slow=6.2,SNR=7.0

IDC ***11*** *05:21:08.6±2.0,2.°09N×126.°52E,h35km±15km,mb4.4/40, mb1 4.4/43,mb1mx4.4/54,mbtmp4.6/43,ML3.9/3,MS4.0/4, Ms1 4.0/4,ms1mx3.3/49,Error ellipse: s-maj=15.5km s-min=8.0km az=76.0*
BJI ***11*** *05:21:09.7±0.0,1.°84N×126.°55E,h84km,mB5.2/21, mb4.7/49,Ms4.5/10,Ms7 4.2/9*
KLM ***11*** *05:21:10,2.°15N×126.°87E,h64km,mb4.8*
NEIC ***11*** *05:21:10.6±1.7,2.°01N±0.°04×126.°62E±0.°06,h66km±7km, mb4.9/68,Error ellipse: s-maj=11.0km s-min=2.8km az=58.0*
DJA ***11*** *05:21:11.0±0.2,2.°N±2.°×12.°7E±.°,h54km±2km,M5.0/69, mB5.5/16,mb5.0/69,MLv4.8/13,Mw(mB)5.0/16, MwMwp5.6/1,Mwp5.7/1*
ISC 11 05:21:09.7±0.3,2.°16N±0.°04×126.°66E±0.°05,h47km,n233, σ1°62/235,mb4.8/90,MS4.1/7,4C-2D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.55**	**153**	Pn	**Pn**	**05 21 34.6**	**-0.2**
TNTI				Sn	**Sn**	**05 21 52.6**	**-1.2**
TNTI	**Ternate**	**1.55**	**153**	P	**Pn**	**05 21 35.2**	**+0.4**
TNTI				S	**Sn**	**05 21 55.5**	**+1.7**
SGSI	**Sangihe**	**1.89**	**323**	P	**Pn**	**05 21 39.6**	**+0.1**
SGSI				S	**Sn**	**05 22 02.9**	**+0.8**
KMSI	**Cibinong**	**3.10**	**240**	P	**Pn**	**05 21 58.3**	**+2.1**
DDMP	**Don Marcelino,**	**4.03**	**347**	*eP*	**Pn**	**05 22 07.0**	**-1.9**
SANI	**Sanana**	**4.23**	**189**	P	**Pn**	**05 22 12.1**	**+0.4**
MATI	**Mati**	**4.77**	**355**	*eP*	**Pn**	**05 22 23.6**	**+4.6**
SKMP	**Bagumbayan, Su**	**4.82**	**334**	*eP*	**Pn**	**05 22 20.0**	**+0.3**
DAV	**Davao City (W)**	**5.00**	**348**	Pn	**Pn**	**05 22 26.3**	**+4.2**
MRSI	**Marisa**	**5.00**	**251**	P	**Pn**	**05 22 24.4**	**+2.2**
	1.2nm4μm367nm,0.9s						
LUWI	**Luwuk**	**5.02**	**231**		**Pn**	**05 22 24.1**	**+1.7**
LUWI	**Luwuk**	**5.02**	**231**	P	**Pn**	**05 22 26.0**	**+3.5**
	3.6nm8μm794nm,0.7s						
KCP	**Kidapawan**	**5.06**	**342**	‖*eP*	**Pn**	**05 22 26.7**	**+3.5**
NLAI	**Namlea**	**5.38**	**175**	P	**Pn**	**05 22 30.0**	**+2.6**
	0.6nm78nm,0.7s						
SWI	**Sorong**	**5.50**	**123**	P	**Pn**	**05 22 29.3**	**+0.3**
	0.2nm46nm,0.9s						
SIJI	**Sorong**	**5.50**	**123**	Pn	**Pn**	**05 22 28.2**	**-0.9**
	2.1nm,0.3s,baz=200,slow=23,SNR=3.9						
SIJI				LR	LR	05 24 58.2	
	comp=Z,2μm,21.1s,baz=324,slow=41						
APSI	**Ampana**	**5.86**	**239**	P	**Pn**	**05 22 36.8**	**+2.7**
	2.4nm6μm539nm,1.3s						
BUKP	**Musuan**	**5.90**	**344**	*eP*	Pn	05 22 27.9	-6.7
TOLI2	**Tolitoli**	**5.96**	**260**	Pn	**Pn**	**05 22 35.1**	**-0.3**
FAKI	**Fak Fak**	**7.53**	**132**	Pn	**Pn**	**05 22 57.4**	**+0.5**
FAKI	**Fak Fak**	**7.53**	**132**	P	**Pn**	**05 22 59.5**	**+2.5**
	0.2nm28nm,0.8s						
TTSI	**Tana Toraja**	**8.57**	**233**	P	**Pn**	**05 23 14.4**	**+3.2**
	2μm97nm,0.8s						
MYLDM	**Lahad Datu**	**8.67**	**290**	Pn	**Pn**	**05 23 15.3**	**+2.7**
SPSI	**Sidrap Palu**	**9.19**	**229**	P	**Pn**	**05 23 21.8**	**+2.1**
	43nm,0.7s						
BNSI	**Bone**	**9.24**	**225**	P	**Pn**	**05 23 22.1**	**+1.8**
	736nm54nm,0.9s						
SMKI	**Samarinda**	**9.79**	**255**	P	**Pn**	**05 23 30.8**	**+2.8**
	8μm135nm,0.5s						
BKSI	**Bulukumba**	**9.89**	**221**	P	**Pn**	**05 23 31.8**	**+2.5**
	56nm,0.8s						
KAPI	**Kappang**	**9.92**	**224**	Pn	**Pn**	**05 23 26.7**	**-2.9**
	3.3nm,0.3s,baz=178,slow=18,SNR=2.8						
KAPI				Sn	**Sn**	**05 25 22.6**	**+2.9**
	3.0nm,0.3s,baz=14,slow=22,SNR=1.7						
KAPI	**Kappang**	**9.92**	**224**	Pn	**Pn**	**05 23 29.7**	**+0.1**
BSSI	**Bau Bau, Buton**	**10.29**	**217**	P	**Pn**	**05 23 37.6**	**+2.8**
	861nm60nm,0.8s						
BKB	**Balikpapan**	**10.33**	**251**	P	**Pn**	**05 23 36.2**	**+0.8**
	106nm,0.7s						
SRPI	**Serui, Papua**	**10.38**	**113**	P	**Pn**	**05 23 37.8**	**+1.7**
KKM	**Kota Kinabalu**	**11.11**	**291**	Pn	**Pn**	**05 23 48.5**	**+2.4**
SOEI	**Soe**	**12.07**	**191**	P	**Pn**	**05 24 02.4**	**+3.1**
	63nm,0.7s						
MTKI	**Muara Teweh, K**	**12.15**	**255**	P	**Pn**	**05 24 03.1**	**+2.8**
	6μm46nm,0.4s						
BATI	**Baumata**	**12.64**	**194**	Pn	**P**	**05 24 15.2**	**-1.9**
	6.1nm,0.3s,baz=104,slow=5.7,SNR=2.3						
LQP	**Lukban**	**12.91**	**337**	‖*eP*	**P**	**05 24 15.7**	**-4.6**
BBKI	**Banjar Baru**	**13.06**	**245**	P	**Pn**	**05 24 15.4**	**+2.7**
BASI	**Baing, Sumba**	**13.71**	**206**	P	**Pn**	**05 24 25.4**	**+3.9**
	109nm,1.0s						
PLAI	**Plampang**	**14.05**	**219**	P	**Pn**	**05 24 29.8**	**+3.6**
	1μm123nm,1.0s						
GENI	**Genyem**	**14.31**	**109**	P	**P**	**05 24 39.7**	**+4.0**
SBUM	**Sibu**	**14.43**	**271**	Pn	**Pn**	**05 24 31.4**	**+0.2**
TWSI	**Taliwang, Sumb**	**14.56**	**222**	P	**P**	**05 24 36.7**	**-1.8**
	1μm159nm,1.0s						
JAY	**Jayapura**	**14.79**	**108**	Pn	**Pn**	**05 24 35.1**	**-1.0**
	0.2nm,0.3s,baz=337,slow=12,SNR=1.1						
JAY	**Jayapura**	**14.79**	**108**	P	**P**	**05 24 38.4**	**-2.7**
	31nm,0.9s						
SRBI	**Singaraja**	**15.29**	**228**	P	**Pn**	**05 24 44.8**	**+2.3**
MTN	**Manton Dam**	**15.55**	**164**		**Pn**	**05 24 46.2**	**+0.3**
KMMI	**Kalianget**	**15.62**	**234**	P	**P**	**05 24 50.6**	**+0.3**
	145nm,1.3s						
DNP	**Denpasar**	**15.69**	**227**	P	**P**	**05 24 55.9**	**+4.9**
ABJI	**Asem Bagus**	**15.85**	**231**	P	**P**	**05 24 51.8**	**-1.0**
	59nm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.34**	**230**	P	**Pn**	**05 24 57.3**	**+1.3**
JAGI				IAmb	IAmb	05 25 08.9	
	comp=Z,85nm,0.8s						
JAGI	**Jajag, Banyuwa**	**16.34**	**230**	P	**P**	**05 24 58.3**	**+0.1**
	comp=Z,1μmcomp=Z,122nm,0.9s						
KSM	**Kuching**	**16.35**	**268**	P	**P**	**05 24 57.9**	**-0.6**
KSM				IAmb	IAmb	05 25 01.8	
	comp=Z,40nm,0.8s						
KNRA	**Kununurra**	**17.84**	**173**	P	**Pn**	**05 25 13.7**	**-0.9**
WOJI	**Wonogiri, Jawa**	**18.57**	**238**	P	Pn	05 25 31.8	+8.3
UGM	**Wanagama**	**18.95**	**238**	P	**Pn**	**05 25 29.0**	**+0.9**
	comp=Z,77nm,2.0s						
TPI	**Tanjungpandan**	**19.61**	**256**	P	**P**	**05 25 34.6**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.16**	**183**	P	**P**	**05 25 39.2**	**-0.9**
	comp=Z,8.5nm,0.6s,baz=11,slow=7.0,SNR=61						
FITZ	**Fitzroy Crossi**	**20.16**	**183**	P	**P**	**05 25 39.2**	**-0.9**
CISI	**Cisompet, Garu**	**21.13**	**243**	P	**P**	**05 25 53.0**	**+2.2**
	comp=Z,47nm,0.6s						
CBJI	**Citeko**	**21.53**	**247**	P	**P**	**05 25 57.8**	**+2.7**
YULB	**Yu-li**	**21.74**	**347**	P	**P**	**05 25 55.2**	**-1.9**
MYKOM	**Kota Tinggi**	**22.80**	**269**	P	**P**	**05 26 07.8**	**-0.9**
MYKOM				IAmb	IAmb	05 26 10.1	
	comp=Z,69nm,1.2s						
WB0	**Warramunga Arr**	**23.08**	**161**	P	**P**	**05 26 09.0**	**-2.4**
WB0				IAmb	IAmb	05 26 14.2	
	comp=Z,57nm,0.9s						
WRAB	**Tennant Creek**	**23.22**	**161**	P	**P**	**05 26 10.7**	**-2.1**
WRAB				IAmb	IAmb	05 26 15.7	
	comp=Z,52nm,0.7s						
WRA	**Warramunga Arr**	**23.22**	**161**	P	**P**	**05 26 11.8**	**-1.0**
	comp=Z,52nm,0.7s,baz=339,slow=11,SNR=109						
WRA				PcP	**PcP**	**05 30 00.9**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=346,slow=2.3,SNR=2.9						
WRA				S	**S**	**05 30 21.8**	**+0.2**
	comp=Z,6.8nm,0.9s,baz=328,slow=22,SNR=5.6						
WRA				ScP	**ScP**	**05 33 35.6**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=347,slow=2.8,SNR=2.2						
WRA	**Warramunga Arr**	**23.22**	**161**	P	**P**	**05 26 10.3**	**-2.6**
WB2	**Warramunga Arr**	**23.23**	**161**	P	**P**	**05 26 10.1**	**-2.8**
JMBI	**JAMBI**	**23.32**	**261**	P	**P**	**05 26 15.8**	**+2.0**
KASI	**Kota Agung**	**23.41**	**251**	P	**P**	**05 26 17.2**	**+2.4**
	comp=Z,2μmcomp=Z,182nm,0.9s						
LWLI	**Liwa**	**23.68**	**252**	P	**P**	**05 26 18.5**	**+1.1**
	comp=Z,8μmcomp=Z,99nm,0.7s						
LHSI	**Lahat**	**23.87**	**256**	P	**P**	**05 26 20.2**	**+1.1**
	comp=Z,54nm,0.8s						
JRMM	**Jerantut**	**24.21**	**275**	P	**P**	**05 26 23.0**	**+0.8**
MNAI	**Manna**	**24.55**	**255**	P	**P**	**05 26 25.6**	**+0.3**
	comp=Z,187nm,1.3s						
JOW	**Kunigami**	**24.58**	**3**	P	**P**	**05 26 25.6**	**+0.2**
	comp=Z,39nm,1.0s,baz=209,slow=6.9,SNR=3.1						
JOW	**Kunigami**	**24.58**	**3**	P	**P**	**05 26 25.4**	**+0.1**
JOW				IAmb	IAmb	05 26 29.1	
	comp=Z,66nm,1.1s						
IPM	**Ipoh**	**25.69**	**276**	P	**P**	**05 26 33.8**	**-1.9**
KULM	**Kulim**	**26.13**	**278**	P	**P**	**05 26 37.6**	**-2.0**
AS31	**Alice Springs**	**26.62**	**165**	P	**P**	**05 26 43.2**	**-0.8**
ASAR	**Alice Springs**	**26.62**	**165**	P	**P**	**05 26 44.1**	**+0.1**
	comp=Z,12nm,0.8s,baz=347,slow=13,SNR=32						
ASAR				PcP	**PcP**	**05 30 08.7**	**+1.3**
	comp=Z,1.4nm,0.6s,baz=356,slow=2.2,SNR=4.4						
ASAR				S	**S**	**05 31 15.4**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=351,slow=22,SNR=2.6						
ASAR				ScP	**ScP**	**05 33 44.8**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=332,slow=2.3,SNR=3.0						
ASAR	**Alice Springs**	**26.62**	**165**	P	**P**	**05 26 42.7**	**-1.2**
SRAK	**Srakaew**	**27.02**	**297**	P	**P**	**05 26 50.1**	**+2.5**
	comp=Z,101nm,0.7s						
MNSI	**Mandailing Nat**	**27.10**	**268**	P	**P**	**05 26 51.4**	**+3.0**
	comp=Z,25nm,0.8s						
KHON	**Khomkaen**	**27.36**	**302**	P	**P**	**05 26 54.0**	**+3.3**
RPSI	**Rantau Prapat**	**27.71**	**272**	P	**P**	**05 26 52.4**	**-1.4**
RPSI				IAmb	IAmb	05 26 54.7	
	comp=Z,33nm,1.5s						
RPSI	**Rantau Prapat**	**27.71**	**272**	P	**P**	**05 26 51.6**	**-2.3**
PSI	**Prapat**	**27.71**	**272**	P	**P**	**05 26 51.6**	**-2.4**
	comp=Z,4.6nm,0.5s,baz=180,slow=3.8,SNR=7.6						
CHAI	**Chaiyaphum**	**27.88**	**301**	P	**P**	**05 26 56.1**	**+0.8**
	comp=Z,458nmcomp=Z,24nm,0.7s						
NONG	**Nongkai**	**27.96**	**306**	P	**P**	**05 26 56.0**	**0.0**
	comp=Z,7μmcomp=Z,32nm,1.1s						
KRAB	**Krabi**	**27.99**	**283**	P	P	05 27 10.0	+14
	comp=Z,88μmcomp=Z,1μm,0.8s						
JCJ	**Chichijima**	**28.92**	**30**	P	**P**	**05 27 05.9**	**+1.5**
	comp=Z,69nm,0.9s,baz=268,slow=16,SNR=2.2						
JCJ				LR	LR	05 37 37.8	
	comp=Z,158nm,20.9s,baz=216,slow=34						
JCJ	**Chichijima**	**28.92**	**30**	P	**P**	**05 27 05.0**	**+0.6**
GSI	**Gunungsitoli**	**29.08**	**269**	P	**P**	**05 27 04.9**	**-1.2**
GSI				IAmb	IAmb	05 27 05.3	
	comp=Z,29nm,1.0s						
CTA	**Charters Tower**	**29.30**	**140**	LR	LR	05 40 22.0	
	comp=Z,464nm,20.6s,baz=336,slow=39						
PHIT	**Phitsanulok**	**29.80**	**302**	P	**P**	**05 27 14.8**	**+2.5**
	comp=Z,58nm,0.8s						
UTTA	**Uttaradit**	**29.94**	**303**	P	**P**	**05 27 15.4**	**+1.8**
	comp=Z,12nm,0.8s						
UTHA	**Uthaitani**	**29.94**	**298**	P	**P**	**05 27 16.0**	**+2.4**
	comp=Z,9.0nm,0.6s						
SUKH	**Sukhothai**	**30.60**	**302**	P	**P**	**05 27 21.1**	**+1.6**
	comp=Z,13nm,0.7s						
NJ2	**Nanjing**	**30.63**	**347**	*eP*	**P**	**05 27 22.2**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
JNU	**Nakatsue**	**31.05**	**7**	P	**P**	**05 27 24.4**	**+1.1**
	comp=Z,13nm,0.9s,baz=154,slow=4.9,SNR=5.1						
JNU	**Nakatsue**	**31.05**	**7**	IAmb	IAmb	05 27 38.7	
	comp=Z,16nm,0.9s						
LAMP	**Lampang**	**31.08**	**303**	P	**P**	**05 27 28.0**	**+4.3**
	comp=Z,7.6nm,0.7s						
CM31	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**05 27 27.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**05 27 27.9**	**-0.6**
	comp=Z,4.5nm,0.9s,baz=127,slow=7.9,SNR=20						
CMAR				PcP	**PcP**	**05 30 21.5**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=205,slow=2.3,SNR=5.2						
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**05 27 27.3**	**-1.2**
CMMT	**Chiang Mai**	**31.79**	**303**	P	**P**	**05 27 29.0**	**-0.9**
CHTO	**Chiang Mai**	**31.79**	**303**	P	**P**	**05 27 29.6**	**-0.4**
CHTO				IAmb	IAmb	05 27 32.8	
	comp=Z,13nm,1.1s						
ENH	**Enshi**	**32.35**	**331**	P	**P**	**05 27 33.6**	**-1.2**
ENH				IAmb	IAmb	05 27 43.1	
	comp=Z,13nm,0.6s						
KMI	**Kunming**	**32.45**	**317**	⇑P	**P**	**05 27 36.8**	**+0.9**
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				LR	LR		
	comp=Z,290nm,13.9s						
KMI				LR	LR		
	comp=Z,310nm,21.0s						
KMI				LR	LR		
	comp=Z,360nm,19.2s						
FORT	**Forrest**	**32.78**	**178**	P	**P**	**05 27 36.7**	**-1.8**
JWT	**Wachi**	**33.94**	**13**	P	**P**	**05 27 49.7**	**+1.2**
INU	**Inuyama**	**34.40**	**15**	P	**P**	**05 27 52.5**	**+0.1**
KSRS	**Korea Array**	**35.14**	**2**	P	**P**	**05 27 59.4**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=179,slow=9.9,SNR=11						
XAN	**Xi'an**	**35.78**	**334**	P	**P**	**05 28 05.2**	**+0.7**
XAN				IAmb	IAmb	05 28 12.9	
	comp=Z,7.0nm,0.7s						
MAJO	**Matsushiro**	**35.84**	**16**	P	**P**	**05 28 04.2**	**-0.7**
MAJO				IAmb	IAmb	05 28 07.7	
	comp=Z,17nm,0.9s						
MAT	**Matsushiro**	**35.84**	**16**	P	**P**	**05 28 04.1**	**-0.8**
MJAR	**Matsushiro Arr**	**35.84**	**16**	P	**P**	**05 28 04.9**	**-0.1**
	comp=Z,7.2nm,0.8s,baz=182,slow=9.2,SNR=12						
MJAR	**Matsushiro Arr**	**35.84**	**16**	P	**P**	**05 28 04.8**	**-0.1**
CD2	**Chengdu**	**35.87**	**325**	*eP*	**P**	**05 28 05.0**	**-0.3**
BBOO	**Buckleboo**	**35.90**	**166**	P	**P**	**05 28 04.2**	**-1.3**
BBOO				IAmb	IAmb	05 28 22.3	
	comp=Z,29nm,1.5s						
NWAO	**Narrogin (SRO)**	**36.02**	**194**	P	**P**	**05 28 06.3**	**-0.1**
	comp=Z,13nm,1.0s,baz=45,slow=8.0,SNR=2.5						
EIDS	**Eidsvold**	**36.18**	**141**	P	**P**	**05 28 06.2**	**-1.8**
EIDS				IAmb	IAmb	05 28 09.6	
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**36.70**	**158**	P	**P**	**05 28 12.1**	**-0.2**
	comp=Z,4.2nm,0.6s,baz=336,slow=9.5,SNR=9.9						
STKA				PP	**PP**	**05 29 35.2**	**-1.4**
	comp=Z,11nm,0.9s,baz=335,slow=8.0,SNR=5.1						
STKA	**Stephens Creek**	**36.70**	**158**	P	**P**	**05 28 11.5**	**-0.7**
JMM	**Marumori**	**37.83**	**18**	P	**P**	**05 28 22.2**	**+0.5**
BJI	**Beijing**	**38.89**	**347**	P	**P**	**05 28 32.8**	**+2.2**
BJI				pmax	pmax		
	comp=Z,15nm,1.0s						
BJI				pmax	pmax		
	comp=Z,370nm,11.8s						
LZH	**Lanzhou**	**39.82**	**331**	*eP*	**P**	**05 28 39.3**	**+0.6**
LZH				pP	sP	05 29 00.5	+4.5
LZH				sP	pwP	05 29 09.4	+16
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
ARMA	**Armidale**	**40.21**	**146**	P	**P**	**05 28 40.9**	**-1.0**
ARMA				IAmb	IAmb	05 28 44.8	
	comp=Z,36nm,1.3s						
HHC	**Hu-ho-hao-te**	**40.86**	**342**	*eP*	**P**	**05 28 48.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,4.6s						
HHC				LR	LR		
	comp=Z,270nm,14.3s						
HHC				LR	LR		
	comp=Z,180nm,13.1s						
HHC				LR	LR		
	comp=Z,180nm,15.0s						
USRK	**Ussuriysk Ar.**	**42.13**	**6**	P	**P**	**05 28 58.8**	**+1.5**
	comp=Z,14nm,0.9s,baz=192,slow=7.7,SNR=31						
USRK	**Ussuriysk Ar.**	**42.13**	**6**	P	**P**	**05 28 58.9**	**+1.6**
USA0B	**Ussuriysk Arra**	**42.13**	**6**	P	**P**	**05 28 58.5**	**+1.2**
USA0B				IAmb	IAmb	05 29 00.6	
	comp=Z,20nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**42.44**	**65**	T	T	06 14 36.8	
	baz=252,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy**	**42.46**	**65**	T	T	06 14 44.7	
	baz=252,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**42.46**	**65**	T	T	06 14 37.3	
	baz=252,slow=75,SNR=6.6						
ASAJ	**Asahikawa**	**44.11**	**17**	P	**P**	**05 29 14.6**	**+1.3**
	comp=Z,5.8nm,0.7s,baz=279,slow=8.8,SNR=5.1						
JKA	**Kamikawa-asahi**	**44.11**	**17**	P	**P**	**05 29 13.2**	**-0.2**
JKA				IAmb	IAmb	05 29 18.9	
	comp=Z,30nm,1.3s						
GTA	**Gaotai**	**44.40**	**330**	*eP*	**P**	**05 29 16.2**	**+0.2**
GTA				PcP	**PP**	**05 31 01.0**	**+0.7**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,110nm,4.7s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
GTA				LR	LR		
	comp=Z,140nm,18.2s						
GTA				LR	LR		
	comp=Z,320nm,17.4s						
DZM	**Mont Dzumac**	**45.71**	**124**	P	**P**	**05 29 27.5**	**+0.9**
	comp=Z,7.2nm,1.0s,baz=75,slow=12,SNR=2.7						
KLR	**Kul'dur**	**47.10**	**5**	P	**P**	**05 29 37.5**	**+0.6**
	comp=Z,9.2nm,1.1s,baz=224,slow=4.5,SNR=6.3						
ULN	**Ulaanbaatar**	**48.58**	**342**	P	**P**	**05 29 48.8**	**+0.1**
ULN				IAmb	IAmb	05 29 52.0	
	comp=Z,6.7nm,0.8s						
SONM	**Songino Array**	**48.76**	**342**	P	**P**	**05 29 49.6**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=157,slow=8.2,SNR=18						
SONM	**Songino Array**	**48.76**	**342**	P	**P**	**05 29 49.6**	**-0.3**
HYB	**Hyderabad**	**49.59**	**291**	*i* P	**P**	**05 29 55.0**	**-1.7**
WMQ	**Urumqi**	**53.97**	**326**	*eP*	**P**	**05 30 30.2**	**+1.3**
WMQ				pP	sP	05 30 47.4	+0.7
WMQ				sP	pwP	05 30 56.2	+12
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,340nm,6.5s						
WMQ				LR	LR		
	comp=Z,3μm,29.0s						
WMQ				LR	LR		
	comp=Z,3μm,29.2s						
WMQ				LR	LR		
	comp=Z,360nm,25.3s						
PETK	**Petropavlovsk-**	**56.90**	**22**	P	**P**	**05 30 51.3**	**+1.5**
	comp=Z,2.0nm,0.7s,baz=245,slow=9.4,SNR=1.6						
ZSN	**Zaisan**	**57.78**	**328**	*eP*	**P**	**05 30 55.2**	**-1.0**
	baz=328						
SHLS	**Shalkode**	**58.51**	**321**	*eP*	**P**	**05 30 58.9**	**-2.5**
	comp=Z,5.7nm,1.0s,baz=321						
UZB	**Uzynbulak**	**58.78**	**321**	*eP*	**P**	**05 31 02.6**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=321						
MK31	**Makanchi Array**	**58.80**	**326**	P	**P**	**05 31 03.0**	**-0.3**
MK31				IAmb	IAmb	05 31 06.9	
	comp=Z,11nm,1.3s						
MKAR	**Makanchi Array**	**58.80**	**326**	P	**P**	**05 31 03.3**	**0.0**
	comp=Z,6.8nm,0.6s,baz=120,slow=8.4,SNR=43						
MKAR	**Makanchi Array**	**58.80**	**326**	P	**P**	**05 31 01.9**	**-1.4**
NIL	**Nilore**	**58.83**	**308**	P	**P**	**05 31 03.0**	**-0.8**
MAKZ	**Makanchi**	**58.98**	**326**	P	**P**	**05 31 04.3**	**-0.3**
MAKZ				IAmb	IAmb	05 31 06.2	
	comp=Z,8.5nm,0.7s						
KPKS	**Kokpek**	**59.15**	**321**	*eP*	**P**	**05 31 05.1**	**-0.8**
	comp=Z,5.3nm,0.7s,baz=321						
YAK	**Yakutsk**	**59.77**	**2**	P	**P**	**05 31 09.8**	**+0.3**
MDOK	**Medeo**	**60.04**	**320**	*eP*	**P**	**05 31 11.4**	**-0.7**
	baz=320						
TNSS	**Tian-Shan**	**60.05**	**320**	*eP*	**P**	**05 31 11.8**	**-0.6**
	baz=320						
TDK	**Taldyqorghan**	**60.10**	**322**	*eP*	**P**	**05 31 11.6**	**-0.7**
	baz=322						
MA2	**Magadan**	**60.24**	**14**	P	**P**	**05 31 12.8**	**-0.1**
KUU	**Kurty**	**60.84**	**320**	*eP*	**P**	**05 31 16.7**	**-0.7**
	comp=Z,18nm,1.1s,baz=320						
TUWZ	**Tuamarina**	**60.98**	**141**	P	**P**	**05 31 17.0**	**-1.3**
AAK	**Ala-Archa**	**61.47**	**318**	P	**P**	**05 31 21.9**	**+0.1**
	comp=Z,2.7nm,0.6s,baz=114,slow=7.4,SNR=7.6						
AAK	**Ala-Archa**	**61.47**	**318**	P	**P**	**05 31 21.0**	**-0.9**
AAK				IAmb	IAmb	05 31 24.5	
	comp=Z,12nm,1.4s						
SGDS	**Sogindy**	**61.74**	**319**	*eP*	**P**	**05 31 22.5**	**-1.0**
	baz=319						
ZAA0	**Zalesovo Array**	**61.95**	**333**	P	**P**	**05 31 23.8**	**-0.7**
ZALV	**Zalesovo Beam**	**61.95**	**333**	P	**P**	**05 31 22.9**	**-1.7**
	comp=Z,1.9nm,0.4s,baz=143,slow=6.6,SNR=7.0						
ZALV	**Zalesovo Beam**	**61.95**	**333**	P	**P**	**05 31 23.7**	**-0.8**
SEM	**Semipalatinsk**	**61.99**	**328**	*eP*	**P**	**05 31 23.7**	**-1.5**
	baz=328						
KBL	**Kabul**	**62.42**	**308**	P	**P**	**05 31 27.7**	**-0.7**
KBL				IAmb	IAmb	05 31 36.6	
	comp=Z,8.9nm,0.8s						
BTLS	**Baital**	**62.83**	**321**	*eP*	**P**	**05 31 29.5**	**-1.1**
	baz=321						
GAR	**Garm**	**62.93**	**313**	P	**P**	**05 31 30.6**	**-1.0**
KURBB	**Kurchatov Arra**	**63.02**	**328**	P	**P**	**05 31 31.7**	**-0.1**
	comp=Z,8.6nm,0.5s,baz=130,slow=6.3,SNR=53						
KURK	**Kurchatov**	**63.02**	**328**	P	**P**	**05 31 31.7**	**-0.1**
AFI	**Afiamalu**	**63.06**	**107**	LR	LR	05 56 55.9	
	comp=Z,88nm,21.4s,baz=282,slow=34						
KK31	**Karatay Array**	**64.33**	**318**	P	**P**	**05 31 40.4**	**-0.3**
KK31				IAmb	IAmb	05 31 42.7	
	comp=Z,12nm,1.2s						
KKAR	**Karatay Array**	**64.33**	**318**	P	**P**	**05 31 39.7**	**-0.9**
KKAR				IAmb	IAmb	05 31 42.7	
	comp=Z,12nm,1.2s						
**KKA

CRVS	**Cervenica-Dubn**	**98.32**	**320**	*e*PDIFF	Pdif	05 34 43.1 +0.6
RES	**Resolute Bay**	**99.36**	**10**	P	**Pdif**	**05 34 47.4 +0.9**
	comp=Z,0.7nm,0.7s,baz=257,slow=21,SNR=3.2					
HFS	**Hagfors**	**99.36**	**332**	P	**Pdif**	**05 34 47.7 +0.9**
	comp=Z,2.3nm,1.0s,baz=97,slow=4.9,SNR=2.4					
NOA	**NORSAR Array B**	**100.15**	**333**	P	**Pdif**	**05 34 49.5 -0.9**
	comp=Z,1.2nm,0.9s,baz=70,slow=4.5,SNR=3.2					
YKA	**Yellowknife Ar**	**100.95**	**24**	P	**Pdif**	**05 34 54.4 +0.6**
	comp=Z,0.4nm,0.8s,baz=301,slow=4.0,SNR=3.8					
TXAR	**Lajitas Array**	**122.61**	**53**	PKP	**PKiKP**	**05 40 02.0 +0.8**
	comp=Z,0.2nm,0.6s,baz=132,slow=1.3,SNR=2.4					
TORD	**Torodi Ar. Bea**	**123.32**	**287**	PKP	**PKiKP**	**05 40 03.5 +0.7**
	comp=Z,0.9nm,0.7s,baz=68,slow=2.2,SNR=4.6					
TKL	**Tuckaleechee C**	**132.84**	**34**	PKP	**PKiKP**	**05 40 20.9 -0.5**
	comp=Z,1.2nm,0.5s,baz=102,slow=2.6,SNR=2.5					
PLCA	**Paso Flores**	**138.57**	**160**	PKP	**PKiKP**	**05 40 33.5 +0.5**
	comp=Z,1.1nm,0.9s,baz=175,slow=5.1,SNR=3.9					

*JMA **11** 05:29:44.5±0.2,24˚.47N× 122˚.78E, h93km±2km, M2.7*
*TAP **11** 05:29:45.0,24˚.46N× 122˚.76E, h87km±1km, ML2.9, C*
ISC 11 05:29:44.9±1.5,**24˚.48N**±0˚.06×**122˚.80E**±0˚.03, **h90**km±9km, **n42**,σ**0**:**56**/**72**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.14**	**103**	P		**Pn**	**05 29 57.8**	**+0.1**
JYNG				S		**Sn**	**05 30 07.1**	**0.0**
YOJ	**Yonaguni jima**	**0.20**	**96**	P		**Pn**	**05 29 58.1**	**+0.3**
YOJ				S		**Sn**	**05 30 07.9**	**+0.4**
YOJ	**Yonaguni jima**	**0.20**	**96**	*e*P		**Pn**	**05 29 57.9**	**+0.1**
	baz=88							
YOJ				*e*S		**Sn**	**05 30 07.8**	**+0.4**
	baz=88							
IRIF	**Iriomote-Funau**	**0.86**	**100**	P		**Pn**	**05 30 03.2**	**+0.1**
IRIF				S		**Sn**	**05 30 16.9**	**+0.2**
TWC	**Suao**	**0.87**	**279**	P		**Pn**	**05 30 02.8**	**-0.3**
	baz=279							
EWUT	**Wuta**	**0.93**	**268**	*e*P		**Pn**	**05 30 04.3**	**+0.5**
	baz=268							
NDS	**Dongshan**	**0.99**	**279**	*e*P		**Pn**	**05 30 04.5**	**-0.1**
	baz=280							
NDS				*e*S		**Sn**	**05 30 18.4**	**-0.8**
	baz=280							
TIPB	**Shuangxi**	**1.01**	**299**	P		**Pn**	**05 30 04.7**	**-0.1**
	baz=300							
TIPB				S		**Sn**	**05 30 19.6**	**+0.1**
	baz=300							
HATJ	**Hateruma jima**	**1.01**	**114**	P		**Pn**	**05 30 05.3**	**+0.6**
TWE	**Neicheng**	**1.05**	**283**	*e*P		**Pn**	**05 30 05.2**	**0.0**
	baz=284							
NWF	**Wu-fen Shan**	**1.09**	**303**	P		**Pn**	**05 30 05.9**	**+0.1**
	baz=304							
WFSB	**Wu-fen Shan**	**1.09**	**303**	*e*P		**Pn**	**05 30 05.9**	**+0.2**
	baz=304							
WFSB				*e*S		**Sn**	**05 30 21.8**	**+0.6**
	baz=304							
ENTT	**Nioudou**	**1.13**	**278**	P		**Pn**	**05 30 06.4**	**+0.3**
	baz=279							
JKRS	**Kuro-shima**	**1.13**	**102**	P		**Pn**	**05 30 06.6**	**+0.5**
JKRS				S		**Sn**	**05 30 22.9**	**+0.8**
NACB	**Ninganchiao**	**1.14**	**255**	P		**Pn**	**05 30 05.8**	**-0.4**
	baz=254							
NACB				S		**Sn**	**05 30 21.6**	**-0.6**
	baz=254							
TWD	**Chiawan**	**1.17**	**250**	P		**Pn**	**05 30 06.1**	**-0.4**
	baz=250							
TWD				S		**Sn**	**05 30 22.1**	**-0.6**
	baz=250							
NDT	**Datong Townshi**	**1.17**	**276**	*e*P		**Pn**	**05 30 07.0**	**+0.4**
	baz=276							
NDT				*e*S		**Sn**	**05 30 22.8**	**-0.2**
	baz=276							
NWLT	**Wulai**	**1.21**	**284**	*e*P		**Pn**	**05 30 07.2**	**+0.1**
	baz=285							
NWLT				S		**Sn**	**05 30 23.6**	**-0.2**
	baz=285							
ETLH	**Xiulin Townshi**	**1.23**	**257**	*i* P		**Pn**	**05 30 07.2**	**-0.2**
	baz=257							
ETLH				S		**Sn**	**05 30 23.6**	**-0.7**
	baz=257							
JIJ	**Ishigaki jima**	**1.23**	**95**	P		**Pn**	**05 30 07.3**	**0.0**
JIJ				S		**Sn**	**05 30 23.4**	**-0.8**
NNSB	**Datong**	**1.29**	**268**	P		**Pn**	**05 30 07.9**	**-0.2**
	baz=268							
NNS	**Nan Shan**	**1.30**	**268**	*e*P		**Pn**	**05 30 08.2**	**-0.1**
	baz=268							
NNS				*e*S		**Sn**	**05 30 25.4**	**-0.4**
	baz=268							
YHNB	**Yeheng**	**1.31**	**279**	P		**Pn**	**05 30 08.7**	**+0.4**
	baz=279							
YHNB				S		**Sn**	**05 30 25.6**	**-0.3**
	baz=279							
YM10	**YM10**	**1.31**	**301**	*e*P		**Pn**	**05 30 08.1**	**-0.2**
	baz=302							
NSK	**Sanguang**	**1.32**	**279**	P		**Pn**	**05 30 08.7**	**+0.1**
	baz=279							
NSK				S		**Sn**	**05 30 25.7**	**-0.6**
	baz=279							
YM04	**YM04**	**1.32**	**301**	*e*P		**Pn**	**05 30 08.3**	**-0.2**
	baz=301							
JISG	**Ishigakijimahi**	**1.38**	**85**	P		**Pn**	**05 30 09.0**	**-0.2**
JISG				S		**Sn**	**05 30 26.7**	**-0.8**
ESL	**Shilin**	**1.41**	**242**	*i* P		**Pn**	**05 30 09.2**	**-0.3**
	baz=241							
ESL				*e*S		**Sn**	**05 30 26.4**	**-1.7**
	baz=241							
FUSS	**Fushou**	**1.43**	**261**	*i* P		**Pn**	**05 30 10.4**	**+0.4**
	baz=261							
FUSS				S		**Sn**	**05 30 29.3**	**+0.3**
	baz=261							
WHF	**Hehuan Shan**	**1.44**	**257**	*i* P		**Pn**	**05 30 10.1**	**-0.1**
	baz=256							
WHF				*i* S		**Sn**	**05 30 28.8**	**-0.6**
	baz=256							
TWT	**Tachien**	**1.49**	**262**	*i* P		**Pn**	**05 30 11.4**	**+0.6**
	baz=261							
TWT				*i* S		**Sn**	**05 30 30.4**	**+0.1**
	baz=261							
TDCB	**Techi**	**1.51**	**262**	P		**Pn**	**05 30 11.4**	**+0.5**
	baz=261							
TDCB				S		**Sn**	**05 30 30.0**	**-0.6**
	baz=261							
CHGB	**Renai**	**1.54**	**254**	*i* P		**Pn**	**05 30 11.6**	**+0.2**
	baz=254							
CHGB				S		**Sn**	**05 30 30.8**	**-0.6**
	baz=254							
HGSD	**Ruisui**	**1.59**	**232**	P		**Pn**	**05 30 11.4**	**-0.5**
	baz=231							
HGSD				S		**Sn**	**05 30 31.9**	**-0.4**
	baz=231							
LIOB	**Emei**	**1.63**	**276**	P		**Pn**	**05 30 12.8**	**+0.5**
	baz=276							
LIOB				*e*S		**Sn**	**05 30 32.8**	**-0.3**
	baz=276							
VWDT	**VWDT**	**1.68**	**245**	*i* P		**Pn**	**05 30 13.3**	**+0.4**
	baz=244							
VWDT				S		**Sn**	**05 30 33.8**	**-0.4**
	baz=244							
WHP	**Taichung City**	**1.70**	**264**	*i* P		**Pn**	**05 30 14.6**	**+1.3**
	baz=263							
WHP				S		**Sn**	**05 30 35.4**	**+0.6**
	baz=263							
JTJ	**Tarama**	**1.74**	**84**	P		**Pn**	**05 30 13.2**	**-0.6**
JTJ				S		**Sn**	**05 30 35.4**	**-0.3**
YULB	**Yu-li**	**1.75**	**232**	P		**Pn**	**05 30 13.4**	**-0.4**
	baz=231							
SMLT	**Sun Moon Lake**	**1.83**	**251**	*e*P		**Pn**	**05 30 15.8**	**+0.8**
	baz=251							
ALS	**Alishan**	**2.06**	**242**	*e*P		**Pn**	**05 30 19.2**	**+1.0**
	baz=241							
ALS				*e*S		**Sn**	**05 30 44.3**	**+0.8**
	baz=241							
CHN5	**Tsauling**	**2.13**	**246**	*e*P		**Pn**	**05 30 20.6**	**+1.8**
	baz=245							

*IASPEI **11** 05:30:56.3±0.8,44˚.53N±0˚.01×6˚.73E±0˚.02, h11km±6km, Error ellipse: s-maj=2.5km s-min=2.0km az=70.1, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*STR **11** 05:30:56.5±0.2,44˚.5N±1˚.0×±˚, h8km±1km, MLv2.8/16, smi:scs/0.6/LOCSAT earthModelID*
smi:scs/0.6/alpes_taup-2.11 preliminary
*ROM **11** 05:30:56.1±0.2,44˚.496N×0˚.006×6˚.68E±0˚.01, h16km±2km, ML2.6/18, Error ellipse: s-maj=0.9km s-min=0.3km az=58.0*
*LDG **11** 05:30:57.1±0.0,44˚.52N×6˚.76E, h2km, Md3.1/1, Ml3.1/41, Error ellipse: s-maj=1.0km s-min=0.7km az=65.0*
*IDC **11** 05:30:58.2±2.2,44˚.83N×6˚.50E, h0km, mb3.1/1, mb1 3.3/5, mb1mx3.1/59, mbtmp3.1/5, ML3.5/4, Error ellipse: s-maj=52.2km s-min=18.9km az=146.0*
ISC 11 05:30:56.8±0.8,**44˚.52N**±0˚.01×**6˚.72E**±0˚.01, **h17**km±4km, **n126**,σ**1**:**43**/219, **2C-2D, France**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SURF	**Saint Ours**	**0.08**	**119**	Pg		**Pg**	**05 30 58.7**	**-1.6**
SURF				Sg		**Sg**	**05 31 00.3**	**-2.4**
OGAG	**Argentiere**	**0.14**	**242**	Pg		**Pg**	**05 31 02.3**	**+1.4**
OGAG				Sg		**Sg**	**05 31 06.5**	**+2.9**
MBDF	**Montbardon**	**0.21**	**11**	*e*Pg		**Pg**	**05 31 00.9**	**-1.0**
MBDF				*e*Sg		**Sg**	**05 31 04.8**	**-0.6**
	2µm,0.5s							
PZZ	**Stroppo**	**0.29**	**92**	P		**Pb**	**05 31 02.4**	**-1.2**
PZZ				S		**Sb**	**05 31 07.5**	**-0.7**
PZZ				AML		AML		
	comp=E,2395µm,0.9s							
PZZ				AML		AML		
	comp=N,2440µm,0.6s							
RRL	**Rocca Remolon**	**0.40**	**8**	P		**Pg**	**05 31 04.5**	**-0.7**
RRL				S		**Sb**	**05 31 11.1**	**-0.6**
RRL				AML		AML		
	comp=E,988µm,0.4s							
RRL				AML		AML		
	comp=N,922µm,0.4s							
RRL				AML		AML		
	comp=N,923µm,0.4s							
OGDI	**Digne**	**0.51**	**216**	Pg		**Pb**	**05 31 07.2**	**-0.1**
OGDI				Sg		**Sb**	**05 31 14.8**	**+0.4**
BHB	**Bricherasio**	**0.51**	**50**	P		**Pb**	**05 31 06.4**	**-0.9**
BHB				S		**Sb**	**05 31 13.7**	**-0.7**
BHB				AML		AML		
	comp=E,835µm,0.6s							
BHB				AML		AML		
	comp=N,958µm,0.4s							
STV	**Sant Anna di V**	**0.52**	**122**	P		**Pb**	**05 31 06.4**	**-1.1**
STV				S		**Sg**	**05 31 13.2**	**-0.9**
STV				AML		AML		
	comp=E,750µm,0.4s							
STV				AML		AML		
	comp=N,746µm,0.2s							
BNI	**Bardonecchia**	**0.53**	**357**	P		**Pg**	**05 31 06.7**	**-0.8**
BNI				S		**Sb**	**05 31 14.7**	**-0.6**
BNI				AML		AML		
	comp=E,158µm,0.3s							
BNI				AML		AML		
	comp=N,200µm,0.6s							
BNI				AML		AML		
	comp=E,210µm,0.4s							
BNI				AML		AML		
	comp=N,226µm,0.6s							
BNI				AML		AML		
	comp=E,158µm,0.3s							
ENR	**Entracque**	**0.58**	**120**	P		**Pb**	**05 31 07.5**	**-1.1**
ENR				S		**Sb**	**05 31 15.4**	**-1.3**
ENR				AML		AML		
	comp=N,1224µm,1.2s							
ENR				AML		AML		
	comp=E,1029µm,0.2s							
ENR				AML		AML		
	comp=E,1030µm,0.2s							
ENR				AML		AML		
	comp=N,1224µm,1.2s							
OGMO	**Fort Saint-Gob**	**0.69**	**358**	Pg		**Pg**	**05 31 09.4**	**-0.9**
OGMO				Sg		**Sg**	**05 31 19.2**	**-0.3**
ORIF	**Oris-en-Rattie**	**0.72**	**304**	*e*Pg		**Pg**	**05 31 09.7**	**-1.2**
ORIF				*e*Sg		**Sg**	**05 31 18.5**	**-1.9**
	comp=N,285nm,0.2s							
ORIF				*e*Sn		**Sn**	**05 31 23.8**	**+0.9**
ORIF	**Oris-en-Rattie**	**0.72**	**304**	Pg		**Pg**	**05 31 09.6**	**-1.2**
ORIF				Sg		**Sg**	**05 31 18.7**	**-1.7**
ORIF	**Oris-en-Rattie**	**0.72**	**304**	P		**Pg**	**05 31 09.5**	**-1.3**
ORIF				S		**Sg**	**05 31 19.5**	**-0.8**
ORIF				AML		AML		
	comp=E,740µm,1.0s							
ORIF				AML		AML		
	comp=N,680µm,0.4s							
TURF	**col de Turini**	**0.73**	**138**	Pg		**Pb**	**05 31 10.3**	**-0.9**
TURF				Sg		**Sb**	**05 31 19.8**	**-1.1**
RSP	**Reno Superiore**	**0.74**	**32**	P		**Pb**	**05 31 10.9**	**-0.4**
RSP				S		**Sb**	**05 31 21.5**	**+0.3**
RSP				AML		AML		
	comp=E,490µm,1.5s							
RSP				AML		AML		
	comp=N,548µm,0.4s							
RSP				AML		AML		
	comp=N,548µm,0.4s							
RSP				AML		AML		
	comp=E,490µm,1.5s							
BLAF	**les Blancs**	**0.74**	**220**	Pg		**Pb**	**05 31 10.8**	**-0.5**
BLAF				Sg		**Sb**	**05 31 21.4**	**+0.1**
CALF	**Calern**	**0.78**	**169**	Pg		**Pb**	**05 31 11.5**	**-0.5**
CALF				Sg		**Sb**	**05 31 21.8**	**-0.6**
GDM	**Grand'Maison**	**0.81**	**328**	Pg		**Pg**	**05 31 11.5**	**-1.1**
GDM				Sg		**Sg**	**05 31 21.9**	**-1.3**
SAOF	**Saorge**	**0.81**	**131**	Pg		**Pb**	**05 31 11.8**	**-0.6**
SAOF				Sg		**Sb**	**05 31 22.4**	**-0.6**
SAOF	**Saorge**	**0.81**	**131**	⇑P		**Pb**	**05 31 11.8**	**-0.6**
SAOF				S		**Sb**	**05 31 22.7**	**-0.3**
SAOF	**Saorge**	**0.81**	**131**	AML		AML		
	comp=E,373µm,0.4s							
SAOF				AML		AML		
	comp=N,622µm,1.5s							
ESCA	**l'Escarene**	**0.84**	**145**	Pg		**Pb**	**05 31 12.3**	**-0.6**
ESCA				Sg		**Sb**	**05 31 23.5**	**-0.4**
SBF	**Sospel**	**0.84**	**141**	*e*Pg		**Pb**	**05 31 12.2**	**-0.7**
SBF				*e*Sg		**Sb**	**05 31 23.4**	**-0.5**
	comp=N,307nm,0.3s							
GBOS	**Grotte di Boss**	**0.85**	**109**	⇑P		**Pb**	**05 31 12.6**	**-0.6**
GBOS				S		**Sb**	**05 31 23.8**	**-0.6**
GBOS				AML		AML		
	comp=E,373µm,0.7s							
GBOS				AML		AML		
	comp=N,392µm,0.4s							
MON	**Monaco**	**0.94**	**147**	Pg		**Pb**	**05 31 14.3**	**-0.3**
MON				Sg		**Sn**	**05 31 27.8**	**-0.5**
FRF	**La Foret Royal**	**0.96**	**183**	*e*Pg		**Pb**	**05 31 14.7**	**-0.3**
FRF	**La Foret Royal**	**0.96**	**183**	*e*Pn		**Pn**	**05 31 16.2**	**+0.7**
FRF				*e*Sg		**Sb**	**05 31 27.1**	**-0.3**
FRF				*e*Sn		**Sn**	**05 31 29.8**	**+1.0**
	comp=N,195nm,0.2s							
LPG	**La Plagne**	**0.98**	**2**	*e*Pg		**Pg**	**05 31 15.0**	**-0.8**
LPG	**La Plagne**	**0.98**	**2**	*e*Pn		**Pn**	**05 31 16.7**	**+0.6**
LPG				*e*Sg		**Sb**	**05 31 28.3**	**+0.1**
	comp=N,147nm,0.4s							
SMRF	**Simiane la Rot**	**0.98**	**237**	*e*Pg		**Pn**	**05 31 15.6**	**-0.3**
SMRF				*e*Sg		**Sb**	**05 31 29.2**	**+1.1**
	comp=N,152nm,0.3s							
LSD	**Lago del Serru**	**0.99**	**17**	P		**Pg**	**05 31 15.1**	**-0.9**
LSD				S		**Sb**	**05 31 29.2**	**+0.7**
LSD				AML		AML		
	comp=E,351µm,0.3s							
LSD				AML		AML		
	comp=N,298µm,0.3s							
LPL	**La Plagne**	**1.00**	**1**	*e*Pg		**Pg**	**05 31 15.3**	**-0.9**
LPL				*e*Sg		**Sb**	**05 31 29.4**	**+0.7**
	comp=N,78nm,0.4s							
GRN	**Grenoble**	**1.00**	**317**	Pg		**Pg**	**05 31 15.4**	**-0.8**
GRN				Sg		**Sb**	**05 31 29.2**	**+0.6**
BSTF	**la Bastide-des**	**1.00**	**231**	Pg		**Pn**	**05 31 17.1**	**+1.0**
BSTF				Sg		**Sn**	**05 31 31.4**	**+1.6**
EILF	**Villa Eilenroc**	**1.02**	**163**	Pg		**Pn**	**05 31 16.6**	**+0.3**
MONC	**Moncucco Torin**	**1.03**	**57**	AML		AML		
	comp=E,518µm,0.4s							
MONC				AML		AML		
	comp=N,557µm,0.4s							
MONC				AML		AML		
	comp=E,518µm,0.4s							
MONC				AML		AML		
	comp=N,558µm,0.4s							
IMI	**Imperia**	**1.04**	**125**	P		**Pb**	**05 31 16.1**	**-0.4**
IMI				S		**Sn**	**05 31 30.6**	**-0.4**
IMI				AML		AML		
	comp=E,779µm,0.7s							
IMI				AML		AML		
	comp=N,1190µm,0.6s							
RORO	**Rocca Rossa**	**1.05**	**112**	P		**Pg**	**05 31 15.8**	**-1.3**
RORO				S		**Sb**	**05 31 29.9**	**-0.2**
RORO				AML		AML		
	comp=N,322µm,0.7s							
RORO				AML		AML		
	comp=E,333µm,1.2s							
RUSF	**Rustrel**	**1.06**	**237**	Pg		**Pn**	**05 31 17.1**	**+0.2**
RUSF				Sn		**Sn**	**05 31 33.3**	**+2.0**
ARTF	**Artigues**	**1.14**	**215**	Pg		**Pn**	**05 31 18.2**	**+0.2**
ARTF				Sn		**Sn**	**05 31 35.0**	**+1.7**
RSL	**Roselend**	**1.17**	**357**	Pg		**Pn**	**05 31 19.0**	**+0.5**
QLNO	**Quiliano**	**1.19**	**99**	P		**Pb**	**05 31 18.4**	**-0.4**
QLNO				S		**Sn**	**05 31 34.6**	**+0.2**
QLNO				AML		AML		
	comp=N,138µm,1.6s							
QLNO				AML		AML		
	comp=E,217µm,0.3s							
LMR	**La Mourre**	**1.20**	**187**	*e*Pg		**Pn**	**05 31 19.2**	**+0.5**
LMR	**La Mourre**	**1.20**	**187**	*e*P		**Pn**	**05 31 20.6**	**+1.9**
LMR				*e*Sg		**Sn**	**05 31 34.5**	**-0.1**
	comp=E,160nm,0.3s							
ROTM	**Rocchetta Tana**	**1.21**	**74**	AML		AML		
	comp=E,654µm,0.8s							
ROTM				AML		AML		
	comp=N,1052µm,0.4s							
TRAV	**Traversella**	**1.23**	**36**	P		**Pg**	**05 31 19.6**	**-1.0**
TRAV				S		**Sn**	**05 31 36.8**	**+1.1**
CIRO	**Champorcher**	**1.24**	**29**	P		**Pg**	**05 31 19.6**	**-1.1**
CIRO				S		**Sg**	**05 31 36.0**	**-1.0**
CIRO				AML		AML		
	comp=N,150µm,0.4s							
CIRO				AML		AML		
	comp=E,168µm,0.5s							
MRGE	**Morge**	**1.27**	**11**	P		**Pg**	**05 31 20.6**	**-0.8**
MRGE				S		**Sg**	**05 31 37.4**	**-0.7**
MRGE				AML		AML		
	comp=E,215µm,0.5s							
MRGE				AML		AML		
	comp=N,200µm,1.5s							
OGSM	**Saint Maurice**	**1.31**	**327**	Pg		**Pg**	**05 31 21.3**	**-0.7**
OGSM				Sg		**Sn**	**05 31 39.2**	**+1.8**
PCP	**Piancastagn**	**1.31**	**88**	P		**Pb**	**05 31 20.4**	**-0.5**
PCP				S		**Sn**	**05 31 38.6**	**+1.0**
PCP				AML		AML		
	comp=N,128µm,0.5s							
PCP				AML		AML		
	comp=E,124µm,0.5s							
VIVF	**Saint-Julien-l**	**1.50**	**284**	*e*Pn		**Pn**	**05 31 23.6**	**+0.7**
VIVF				*e*Sn		**Sn**	**05 31 43.2**	**+1.1**
	comp=E,79nm,0.3s							
OG35	**Corcelles**	**1.73**	**333**	Pg		**Pb**	**05 31 28.1**	**0.0**
OG35				Sg		**Sg**	**05 31 53.2**	**+0.8**
LASF	**Ste Croix**	**2.10**	**259**	*e*Pn		**Pn**	**05 31 31.7**	**+0.5**
LASF	**Ste Croix**	**2.10**	**259**	*e*Pg		**Pg**	**05 31 36.6**	**-0.5**
LASF				*e*Sn		**Sn**	**05 31 56.2**	**-0.8**
	comp=E,17nm,0.3s							
CABF	**La Chapelle**	**2.14**	**348**	*e*P		**Pb**	**05 31 33.9**	**-1.2**
CABF	**La Chapelle**	**2.14**	**348**	*e*Pg		**Pg**	**05 31 37.3**	**-0.5**
CABF				*e*Sg		**Sg**	**05 32 05.1**	**-0.5**
	comp=E,36nm,0.6s							
BRANT	**Les Verrieres**	**2.42**	**356**	Pn		**Pn**	**05 31 38.0**	**+2.2**
EQUI	**Equi**	**2.49**	**97**	⇓P		**Pn**	**05 31 37.2**	**+0.7**
GROG	**Isola di Gorgo**	**2.54**	**114**	⇓P		**Pn**	**05 31 38.7**	**+1.5**
PGF	**Pioggiola**	**2.58**	**139**	*e*Pn		**Pn**	**05 31 38.2**	**+0.3**
PGF				*e*Sn		**Sn**	**05 32 08.0**	**-0.9**
	comp=E,19nm,0.2s							
PGF	**Pioggiola**	**2.58**	**139**	Pn		**Pn**	**05 31 38.3**	**+0.5**
PGF	**Pioggiola**	**2.58**	**139**	P		**Pn**	**05 31 38.4**	**+0.6**
PGF				S		**Sn**	**05 32 10.0**	**+1.1**
PGF				AML		AML		
	comp=E,71µm,0.2s							
PGF				AML		AML		
	comp=N,59µm,1.1s							
CHMF	**Charmoille**	**2.73**	**359**	Pn		**Pn**	**05 31 41.5**	**+1.6**
CHMF				Sg		**Sg**	**05 32 27.6**	**+3.1**
SMF	**Signal de Mont**	**2.93**	**318**	*e*Pn		**Pn**	**05 31 43.4**	**+0.8**
SMF	**Signal de Mont**	**2.93**	**318**	*e*Pg		**Pg**	**05 31 51.6**	**-1.3**
SMF				*e*Sn		**Sn**	**05 32 16.5**	**-0.9**
SMF				*e*Sg		**Sg**	**05 32 29.0**	**-1.9**
	comp=N,17nm,0.3s							
DAVOX	**Davos/Dischmat**	**3.17**	**43**	Pn		**Pn**	**05 31 48.4**	**+2.3**
	comp=N,0.6nm,0.3s,baz=224,slow=6.5,SNR=6.1							
DAVOX				Sn		**Sn**	**05 32 23.7**	**+0.1**
	comp=N,0.8nm,0.3s,baz=200,slow=22,SNR=2.1							
DAVOX				Lg		Lg	05 32 34.0	
	comp=N,1.3nm,0.3s,baz=310,slow=20,SNR=3.0							
AVF	**Avril sur Loir**	**3.27**	**315**	*e*Pn		**Pn**	**05 31 48.5**	**+1.2**
AVF	**Avril sur Loir**	**3.27**	**315**	*e*Pg		**Pg**	**05 31 58.1**	**-1.4**
AVF				*e*Sn		**Sn**	**05 32 25.7**	**-0.1**
AVF				*e*Sg		**Sg**	**05 32 40.6**	**-1.3**
	comp=N,15nm,0.3s							
HINF	**Hinteralfeld**	**3.30**	**2**	*e*Pn		**Pn**	**05 31 48.3**	**+0.6**
HINF	**Hinteralfeld**	**3.30**	**2**	*e*P		**Pn**	**05 31 51.0**	**+3.3**
HINF	**Hinteralfeld**	**3.30**	**2**	*e*Pg		**Pg**	**05 31 58.5**	**-1.5**
HINF				*e*Sn		**Sn**	**05 32 25.7**	**-0.9**
HINF				*e*Sg		**Sg**	**05 32 41.1**	**-1.6**
	comp=N,5.6nm,0.3s							
CAF	**Calviac**	**3.34**	**279**	*e*Pn		**Pn**	**05 31 49.4**	**+1.1**
CAF	**Calviac**	**3.34**	**279**	*e*Pg		**Pg**	**05 31 59.6**	**-1.2**
CAF				*e*Sn		**Sn**	**05 32 27.8**	**+0.2**
	comp=N,4.1nm,0.2s							
SSF	**Saint Saulge**	**3.39**	**320**	*e*Pn		**Pn**	**05 31 49.6**	**+0.7**
SSF	**Saint Saulge**	**3.39**	**320**	*e*P		**Pn**	**05 31 52.5**	**+3.6**
SSF	**Saint Saulge**	**3.39**	**320**	*e*Pg		**Pg**	**05 32 00.0**	**-1.7**
SSF				*e*Sn		**Sn**	**05 32 28.9**	**+0.1**
SSF				*e*Sg		**Sg**	**05 32 43.7**	**-2.0**
	comp=N,22nm,0.4s							
LOR	**Lormes**	**3.40**	**325**	*e*Pn		**Pn**	**05 31 50.2**	**+1.2**
	baz=146							
LOR	**Lormes**	**3.40**	**325**	*e*Pg		**Pg**	**05 32 00.2**	**-1.6**
	baz=144							
LOR				*e*Sn		**Sn**	**05 32 28.5**	**-0.4**
LOR				*e*Sg		**Sg**	**05 32 44.0**	**-1.8**
	comp=N,17nm,0.4s							
LOR	**Lormes**	**3.40**	**325**	Pn		**Pn**	**05 31 50.8**	**+1.8**
LOR	**Lormes**	**3.40**	**325**	Sn		**Sn**	**05 32 29.8**	**+0.9**
BGF	**Bois d'Agland**	**3.40**	**308**	*e*Pn		**Pn**	**05 31 50.5**	**+1.5**
BGF	**Bois d'Agland**	**3.40**	**308**	*e*Pg		**Pg**	**05 32 01.0**	**-0.9**
BGF				*e*Sn		**Sn**	**05 32 28.6**	**-0.3**

comp=N,12nm,0.6s
GUT Gutenstein 3.92 24 Pn **Pn** 05 31 57.6 +1.4
GUT Gutenstein 3.92 24 Sn **Sn** 05 32 43.9 +2.0
HYF Humbligny 3.96 315 *e*Pn **Pn** 05 31 57.8 +1.1
HYF *e*Sg **Sg** 05 33 02.4 -1.4
PAGF Fort de Pagny 4.09 351 *e*Pn **Pn** 05 31 59.2 +0.6
PAGF *e*Sn **Sn** 05 32 44.8 -1.3
comp=N,9.5nm,0.5s
MEZF Maizieres J'vi 4.14 345 *e*Pn **Pn** 05 32 00.7 +1.4
baz=164
MEZF Maizieres J'vi 4.14 345 *e*Pg **Pg** 05 32 13.9 -2.2
baz=165
MEZF *e*Sn **Sn** 05 32 46.5 -0.8
comp=N,7.7nm,0.4s
MEZF *e*Sg **Sg** 05 33 07.9 -1.9
comp=N,17nm,0.5s
SAVF Savonnieres en 4.24 346 *e*P **Pn** 05 32 03.1 +2.5
SAVF *e*Sg **Sg** 05 33 10.7 -2.2
comp=N,15nm,0.6s
LFF La Frestale 4.28 278 *e*Pn **Pn** 05 32 02.3 +1.2
LFF La Frestale 4.28 278 *e*P **Pn** 05 32 05.7 +4.6
LFF La Frestale 4.28 278 *e*Pg **Pg** 05 32 17.3 -1.4
LFF *e*Sn **Sn** 05 32 49.8 -0.8
LFF *e*Sg **Sg** 05 33 12.7 -1.4
comp=N,9.9nm,0.4s
MTL1 Matelica 4.72 103 P **Pn** 05 32 11.6 +4.4
EPF Esparros 4.85 254 *e*Pn **Pn** 05 32 10.1 +1.1
EPF Esparros 4.85 254 *e*Pg **Pg** 05 32 27.6 -2.0
EPF *e*Sg **Sg** 05 33 29.8 -2.6
comp=N,2.9nm,0.3s
VIVA Pratoni del Vi 5.22 120 P Pg 05 32 31.5 -5.3
MFF Saint Martin d 5.25 296 *e*Pn **Pn** 05 32 14.3 -0.1
MFF *e*Sn **Sn** 05 33 13.3 -1.2
MFF *e*Sg **Sg** 05 33 43.2 -2.0
comp=N,2.9nm,0.3s
ETSF Etsaut 5.52 255 *e*P **Pn** 05 32 22.0 +3.8
ETSF *e*Sn **Sn** 05 33 19.9 -1.4
BAIF Baives 5.80 344 *e*Pn **Pn** 05 32 23.0 +1.0
BAIF *e*Sn **Sn** 05 33 26.1 -1.9
comp=N,1.3nm,0.3s
SJPF Ste Jean 5.91 259 *e*Pn **Pn** 05 32 24.3 +0.7
SJPF *e*Sn **Sn** 05 33 29.2 -1.8
comp=N,1.5nm,0.3s
SJPF *e*Sg **Sg** 05 34 03.1 -3.4
comp=N,0.6nm,0.3s
LDF La Druitiere 6.23 313 *e*Pn **Pn** 05 32 29.0 +1.1
LDF *e*Sn **Sn** 05 33 36.8 -1.9
comp=N,0.9nm,0.3s
GERES GERESS Array B 6.46 46 Pn **Pn** 05 32 32.5 +1.3
comp=N,0.5nm,0.3s,baz=227,slow=13,SNR=8.6
GERES Sn **Sn** 05 33 45.5 +0.9
comp=N,0.6nm,0.3s,baz=239,slow=24,SNR=6.6
GRR Gorron 6.50 309 *e*Pn **Pn** 05 32 31.5 -0.2
GRR *e*Sn **Sn** 05 33 43.6 -1.9
comp=N,2.7nm,0.3s
FLN La Foliniere 6.52 313 *e*Pn **Pn** 05 32 32.2 +0.3
FLN *e*Sn **Sn** 05 33 43.1 -2.8
ESDC Sonseca Array 9.29 242 Pn **Pn** 05 33 12.7 +2.6
comp=N,0.1nm,0.3s,baz=55,slow=14,SNR=3.5
EKA Eskdalemuir Ar 12.54 333 Pn **Pn** 05 33 53.5 -0.8
baz=140,slow=15,SNR=4.1
MKAR Makanchi Array 50.94 59 P **P** 05 40 01.1 +4.0
comp=N,0.4nm,0.9s,baz=290,slow=4.3,SNR=2.1

IDC 11 05:31:46.2±2.1, 1°87N×126°22E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/51, mbtmp3.2/4, ML3.5/1, Error ellipse: s-maj=123.1km s-min=27.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.85**	**182**	P	P	05 36 19.1	+0.3
	0.1nm,0.3s,baz=4.4,slow=13,SNR=1.0						
WRA	**Warramunga Arr**	**23.09**	**160**	P	P	05 36 53.3	-0.4
	0.4nm,0.4s,baz=338,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**26.46**	**164**	P	P	05 37 25.6	+0.5
	0.2nm,0.3s,baz=350,slow=9.6,SNR=2.1						
MKAR	**Makanchi Array**	**58.80**	**326**	P	P	05 41 46.1	-0.2
	0.1nm,0.4s,baz=117,slow=7.9,SNR=1.7						

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*ROM **11** 05:33:13.4±0.3, 44°.494N×0°.007×6°.68E±0°.01, h10km±1km, ML3.2/39, Error ellipse: s-maj=0.8km s-min=0.7km az=52.0*
*STR **11** 05:33:14.3±0.2, 44°.5N±0°.8×°±°, h7km±1km, mb8.2/2, MLv3.5/9, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **11** 05:33:14.5±0.1, 44°.52N×6°.75E, h2km, Md3.4/2, Ml3.6/62, Error ellipse: s-maj=1.1km s-min=0.9km az=59.0*
*BGR **11** 05:33:14.6±0.8, 44°.41N×6°.33E, h10km, ML3.7/11, Error ellipse: s-maj=18.9km s-min=10.0km az=123.0*
*IDC **11** 05:33:15.3±1.3, 44°.79N×6°.46E, h0km, mb3.3/5, mb1 3.7/10, mb1mx3.4/59, mbtmp3.5/10, ML4.0/5, Error ellipse: s-maj=27.8km s-min=15.5km az=143.0*
*PRU **11** 05:33:16.6±0.0, 44°.70N×6°.44E, h14km*
ISC 11 05:33:14.7±0.7, 44°.54N±0°.01×6°.68E±0°.01, h16km±4km, n210, σ1ł92/336, mb3.4/3, 11C-11D, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SURF	**Saint Ours**	**0.11**	**120**	Pg	**Pg**	**05 33 16.1**	**-2.4**
SURF				Sg	**Sg**	**05 33 18.1**	**-2.9**
OGAG	**Argentiere**	**0.13**	**231**	Pg	**Pg**	**05 33 20.3**	**+1.6**
OGAG				Sg	**Sg**	**05 33 24.3**	**+3.1**
MBDF	**Montbardon**	**0.20**	**18**	*e*Pg	**Pg**	**05 33 18.2**	**-1.5**
MBDF				*e*Sg	**Sg**	**05 33 21.1**	**-1.9**
	3μm,0.2s						
PZZ	**Stroppo**	**0.31**	**95**	P	**Pg**	**05 33 19.7**	**-1.7**
PZZ				S	**Sg**	**05 33 25.1**	**-0.9**
PZZ				AML	AML		
	comp=E,13750μm,0.2s						
PZZ				AML	AML		
	comp=N,15050μm,0.4s						
RRL	**Rocca Remolon**	**0.39**	**11**	P	**Pg**	**05 33 22.4**	**-0.5**
RRL				S	**Sg**	**05 33 28.4**	**0.0**
RRL				AML	AML		
	comp=E,5000μm,1.6s						
RRL				AML	AML		
	comp=N,6460μm,0.4s						
OGDI	**Digne**	**0.51**	**213**	Pg	**Pb**	**05 33 24.9**	**-0.3**
OGDI				Sg	**Sb**	**05 33 31.8**	**-0.5**
BHB	**Bricherasio**	**0.52**	**53**	P	**Pg**	**05 33 23.7**	**-1.3**
BHB				S	**Sg**	**05 33 31.5**	**-0.4**
BHB				AML	AML		
	comp=E,4140μm,1.4s						
BHB				AML	AML		
	comp=N,5150μm,0.7s						
BNI	**Bardonecchia**	**0.52**	**360**	P	**Pg**	**05 33 24.5**	**-0.6**
BNI				S	**Sb**	**05 33 32.6**	**-0.2**
BNI				AML	AML		
	comp=N,770μm,0.4s						
BNI				AML	AML		
	comp=E,1160μm,0.2s						
BNI				AML	AML		
	comp=N,928μm,0.3s						
BNI				AML	AML		
	comp=E,898μm,0.6s						
STV	**Sant Anna di V**	**0.55**	**122**	P	**Pg**	**05 33 23.7**	**-1.9**
STV				S	**Sg**	**05 33 31.2**	**-1.6**
STV				AML	AML		
	comp=N,2525μm,0.4s						
STV				AML	AML		
	comp=E,2700μm,0.4s						
ENR	**Entracque**	**0.61**	**120**	P	**Pg**	**05 33 25.1**	**-1.8**
ENR				S	**Sg**	**05 33 34.1**	**-0.9**
ENR				AML	AML		
	comp=N,3680μm,0.8s						
ENR				AML	AML		
	comp=E,3075μm,0.6s						
OGMO	**Fort Saint-Gob**	**0.67**	**0**	Pg	**Pg**	**05 33 27.5**	**-0.4**
OGMO				Sg	**Sb**	**05 33 37.5**	**+0.2**
ORIF	**Oris-en-Rattie**	**0.69**	**304**	*e*Pg	**Pg**	**05 33 26.8**	**-1.4**
ORIF				*e*Sg	**Sg**	**05 33 35.4**	**-2.0**
ORIF	**Oris-en-Rattie**	**0.69**	**304**	Pg	**Pg**	**05 33 27.4**	**-0.9**
ORIF				Sg	**Sg**	**05 33 37.1**	**-0.2**
ORIF	**Oris-en-Rattie**	**0.69**	**304**	P	**Pg**	**05 33 26.8**	**-1.4**
ORIF				S	**Sg**	**05 33 36.8**	**-0.6**
ORIF				AML	AML		
	comp=N,2530μm,1.6s						
ORIF				AML	AML		
	comp=E,3075μm,1.0s						
RSP	**Reno Superiore**	**0.74**	**34**	P	**Pg**	**05 33 28.1**	**-1.1**
RSP				S	**Sg**	**05 33 38.8**	**-0.3**
RSP				AML	AML		
	comp=N,2770μm,0.9s						
RSP				AML	AML		
	comp=E,3095μm,0.9s						
RSP				AML	AML		
	comp=N,2990μm,0.9s						
RSP				AML	AML		
	comp=N,2765μm,0.9s						
RSP				AML	AML		
	comp=E,2965μm,0.4s						
BLAF	**les Blancs**	**0.74**	**218**	Pg	**Pg**	**05 33 28.6**	**-0.6**
TURF	**col de Turini**	**0.76**	**137**	P	**Pg**	**05 33 27.9**	**-1.6**
TURF				Pg	**Pb**	**05 33 28.4**	**-1.2**
TURF				Sg	**Sg**	**05 33 38.3**	**-1.3**
GDM	**Grand'Maison**	**0.78**	**329**	Pg	**Pg**	**05 33 29.4**	**-0.6**
GDM				Sg	**Sg**	**05 33 39.8**	**-0.5**
CALF	**Calern**	**0.80**	**167**	Pg	**Pg**	**05 33 28.9**	**-1.5**
CALF				Sg	**Sg**	**05 33 40.3**	**-0.7**
SAOF	**Saorge**	**0.83**	**131**	Pg	**Pg**	**05 33 29.3**	**-1.7**
SAOF				Sg	**Sg**	**05 33 40.8**	**-1.2**
SAOF	**Saorge**	**0.83**	**131**	⇑P	**Pg**	**05 33 29.1**	**-1.8**
SAOF				S	**Sg**	**05 33 40.7**	**-1.2**
SAOF	**Saorge**	**0.83**	**131**	AML	AML		
	comp=N,1945μm,0.4s						
SAOF				AML	AML		
	comp=E,1630μm,0.7s						
ESCA	**l'Escarene**	**0.86**	**144**	P	**Pg**	**05 33 29.8**	**-1.7**
ESCA				Pg	**Pb**	**05 33 30.4**	**-0.9**
ESCA				Sg	**Sg**	**05 33 41.4**	**-1.5**
SBF	**Sospel**	**0.86**	**141**	*e*Pg	**Pg**	**05 33 29.7**	**-1.8**
SBF	**Sospel**	**0.86**	**141**	*e*Pn	**Pn**	**05 33 32.0**	**-0.2**
SBF				*e*Sg	**Sg**	**05 33 40.8**	**-2.1**
	comp=E,417nm,0.2s						
SBF				*e*Sn	**Sb**	**05 33 43.4**	**+0.8**
GBOS	**Grotte di Boss**	**0.88**	**109**	P	**Pg**	**05 33 29.7**	**-2.1**
GBOS				S	**Sg**	**05 33 41.5**	**-1.9**
GBOS				AML	AML		
	comp=N,1315μm,0.8s						
GBOS				AML	AML		
	comp=E,1730μm,0.3s						
LPG	**La Plagne**	**0.96**	**3**	*e*Pg	**Pg**	**05 33 32.4**	**-1.1**
LPG				*e*Sg	**Sb**	**05 33 46.2**	**+0.4**
	comp=E,428nm,0.3s						
MON	**Monaco**	**0.97**	**146**	Pg	**Pg**	**05 33 32.3**	**-1.1**
MON				Sg	**Sb**	**05 33 45.9**	**+0.3**
GRN	**Grenoble**	**0.97**	**317**	Pg	**Pg**	**05 33 32.8**	**-0.7**
GRN				Sg	**Sb**	**05 33 46.9**	**+1.2**
SMRF	**Simiane la Rot**	**0.97**	**235**	*e*Pg	**Pg**	**05 33 32.8**	**-0.7**
SMRF				*e*Sg	**Sb**	**05 33 46.4**	**+0.7**
	comp=E,491nm,0.3s						
FRF	**La Foret Royal**	**0.97**	**181**	*e*Pg	**Pg**	**05 33 31.9**	**-1.7**
FRF				*e*Sg	**Sg**	**05 33 45.1**	**-1.3**
	comp=E,615nm,0.2s						
LSD	**Lago del Serru**	**0.98**	**19**	P	**Pg**	**05 33 32.8**	**-0.9**
LSD				S	**Sb**	**05 33 47.2**	**+1.1**
LSD				AML	AML		
	comp=E,2260μm,1.3s						
LSD				AML	AML		
	comp=N,1705μm,0.3s						
LPL	**La Plagne**	**0.98**	**2**	*e*Pg	**Pg**	**05 33 32.7**	**-1.1**
LPL				*e*Sg	**Sb**	**05 33 47.0**	**+0.8**
	comp=N,571nm,0.3s						
LPL				*e*Sn	**Sn**	**05 33 48.8**	**+1.1**
BSTF	**la Bastide-des**	**0.99**	**229**	Pg	**Pn**	**05 33 34.0**	**0.0**
BSTF				Sg	**Sn**	**05 33 48.1**	**+0.5**
MONC	**Moncucco Torin**	**1.04**	**58**	AML	AML		
	comp=N,2365μm,0.3s						
MONC				AML	AML		
	comp=E,2770μm,1.0s						
EILF	**Villa Eilenroc**	**1.04**	**162**	Pg	**Pg**	**05 33 33.8**	**-1.0**
EILF				Sg	**Sb**	**05 33 48.1**	**+0.6**
RUSF	**Rustrel**	**1.05**	**236**	Pn	**Pn**	**05 33 35.0**	**+0.4**
RUSF				Sn	**Sn**	**05 33 50.4**	**+1.5**
IMI	**Imperia**	**1.07**	**125**	P	**Pg**	**05 33 33.3**	**-2.2**
IMI				S	**Sg**	**05 33 47.8**	**-1.6**
IMI				AML	AML		
	comp=E,3550μm,0.7s						
IMI				AML	AML		
	comp=N,4665μm,0.6s						
RORO	**Rocca Rossa**	**1.08**	**113**	P	**Pg**	**05 33 33.3**	**-2.3**
RORO				S	**Sg**	**05 33 48.1**	**-1.6**
RORO				AML	AML		
	comp=E,1035μm,0.7s						
RORO				AML	AML		
	comp=N,1125μm,1.6s						
ARTF	**Artigues**	**1.14**	**214**	Pn	**Pn**	**05 33 36.4**	**+0.5**
ARTF				Sn	**Sn**	**05 33 52.4**	**+1.2**
RSL	**Roselend**	**1.15**	**358**	Pn	**Pn**	**05 33 36.9**	**+0.6**
RSL				Sn	**Sn**	**05 33 53.4**	**+1.6**
LMR	**La Mourre**	**1.21**	**186**	*e*Pg	**Pb**	**05 33 36.2**	**-0.9**
LMR	**La Mourre**	**1.21**	**186**	*e*P	**Pg**	**05 33 38.3**	**+0.3**
LMR				*e*Sg	**Sb**	**05 33 52.3**	**-0.2**
	comp=N,233nm,0.2s						
QLNO	**Quiliano**	**1.21**	**99**	P	**Pn**	**05 33 35.9**	**-1.1**
QLNO				S	**Sb**	**05 33 52.6**	**0.0**
QLNO				AML	AML		
	comp=N,634μm,0.4s						
QLNO				AML	AML		
	comp=E,954μm,0.9s						
ROTM	**Rocchetta Tana**	**1.23**	**75**	P	**Pn**	**05 33 36.8**	**-0.5**
ROTM				S	**Sb**	**05 33 52.4**	**-0.8**
ROTM				AML	AML		
	comp=E,2375μm,0.3s						
ROTM				AML	AML		
	comp=N,5110μm,0.4s						
ROTM				AML	AML		
	comp=E,2920μm,0.7s						
TRAV	**Traversella**	**1.23**	**37**	P	**Pn**	**05 33 36.5**	**-0.8**
TRAV				S	**Sb**	**05 33 53.8**	**+0.4**
TRAV				AML	AML		
	comp=N,1240μm,1.5s						
TRAV				AML	AML		
	comp=E,1170μm,0.3s						
CIRO	**Champorcher**	**1.24**	**30**	P	**Pn**	**05 33 37.0**	**-0.6**
CIRO				S	**Sb**	**05 33 54.1**	**+0.4**
CIRO				AML	AML		
	comp=E,984μm,1.4s						
CIRO				AML	AML		
	comp=N,962μm,0.3s						
CIRO				AML	AML		
	comp=E,985μm,1.4s						
MRGE	**Morge**	**1.26**	**12**	P	**Pn**	**05 33 37.7**	**-0.1**
MRGE				AML	AML		
	comp=E,764μm,0.6s						
MRGE				AML	AML		
	comp=N,916μm,0.7s						
MRGE				AML	AML		
	comp=E,765μm,0.6s						
OGSM	**Saint Maurice**	**1.28**	**327**	Pn	**Pg**	**05 33 39.3**	**-0.1**
OGSM				Sn	**Sg**	**05 33 55.9**	**-0.2**
PCP	**Piancastagn**	**1.33**	**89**	P	**Pn**	**05 33 37.7**	**-0.9**
PCP				S	**Sb**	**05 33 55.4**	**-0.7**
PCP				AML	AML		
	comp=N,634μm,0.8s						
PCP				AML	AML		
	comp=N,634μm,0.8s						
PCP				AML	AML		
	comp=E,478μm,0.4s						
REMY	**Saint-Rhmy-en**	**1.34**	**14**	AML	AML		
	comp=E,1060μm,0.4s						
REMY				AML	AML		
	comp=E,1062μm,0.4s						
REMY				AML	AML		
	comp=N,1114μm,0.7s						
REMY				AML	AML		
	comp=N,1114μm,0.7s						
ARBF	**Arbois**	**1.43**	**223**	Pn	**Pb**	**05 33 40.9**	**0.0**
ARBF				Sn	**Sg**	**05 33 59.5**	**-1.2**
VIVF	**Saint-Julien-l**	**1.47**	**283**	*e*Pn	**Pn**	**05 33 40.9**	**+0.4**
VIVF				*e*Sn	**Sn**	**05 34 00.0**	**+0.6**
	comp=N,328nm,0.3s						
VIVF				*e*Sg	**Sg**	**05 34 02.2**	**+0.1**
SATI	**Passo dei Sala**	**1.58**	**32**	P	**Pb**	**05 33 43.4**	**-0.4**
SATI				S	**Sg**	**05 34 04.8**	**-1.0**
SATI				AML	AML		
	comp=N,480μm,0.9s						
SATI				AML	AML		
	comp=E,428μm,0.8s						
OG35	**Corcelles**	**1.70**	**333**	Pn	**Pn**	**05 33 44.6**	**+0.8**
OG35				Sn	**Sb**	**05 34 06.6**	**-0.2**
MMK	**Mattmark**	**1.77**	**30**	⇓P	**Pn**	**05 33 45.7**	**+0.9**
MMK				AML	AML		
	comp=E,537μm,0.5s						
MMK				AML	AML		
	comp=N,478μm,0.5s						
ASEAF	**Site Antares,**	**1.78**	**192**	Pn	**Pb**	**05 33 45.8**	**-0.9**
GORR	**Gorreto**	**1.87**	**87**	P	**Pb**	**05 33 47.5**	**-0.9**
GORR				AML	AML		
	comp=E,412μm,0.6s						
GORR				AML	AML		
	comp=N,374μm,0.4s						
VARE	**Varese**	**1.99**	**47**	⇑P	**Pn**	**05 33 48.1**	**+0.4**
VARE				AML	AML		
	comp=N,288μm,0.8s						
VARE				AML	AML		
	comp=E,380μm,0.5s						
MSSA	**Maissana**	**2.04**	**95**	⇑P	**Pn**	**05 33 47.1**	**-1.4**
MSSA				AML	AML		
	comp=E,184μm,0.7s						
MSSA				AML	AML		
	comp=N,172μm,0.8s						
LASF	**Ste Croix**	**2.08**	**258**	*e*Pn	**Pn**	**05 33 49.0**	**+0.1**
LASF	**Ste Croix**	**2.08**	**258**	*e*Pg	**Pg**	**05 33 54.1**	**-0.5**
LASF				*e*Sn	**Sn**	**05 34 14.4**	**0.0**
	comp=N,160nm,0.6s						
CABF	**La Chapelle**	**2.12**	**349**	*e*Pn	**Pb**	**05 33 51.3**	**-1.4**
CABF	**La Chapelle**	**2.12**	**349**	*e*Pg	**Pg**	**05 33 54.3**	**-1.0**
CABF				*e*Sn	**Sn**	**05 34 15.1**	**-0.4**
CABF				*e*Sg	**Sg**	**05 34 22.0**	**-0.8**
	comp=N,64nm,0.3s						
TORNY	**Torny/Romont**	**2.25**	**5**	Pn	**Pn**	**05 33 53.0**	**+1.8**
FUSIO	**Fusio**	**2.37**	**35**	⇑P	**Pb**	**05 33 55.5**	**-1.5**
FUSIO				AML	AML		
	comp=N,213μm,1.5s						
FUSIO				AML	AML		
	comp=E,180μm,1.4s						
BRANT	**Les Verrieres**	**2.41**	**357**	Pn	**Pn**	**05 33 55.5**	**+2.0**
GRAM	**Graiana**	**2.42**	**90**	P	**Pn**	**05 33 51.9**	**-1.7**
GRAM				AML	AML		
	comp=E,412μm,0.3s						
GRAM				AML	AML		
	comp=N,334μm,0.3s						
EQUI	**Equi**	**2.52**	**97**	P	**Pn**	**05 33 55.0**	**+0.1**
EQUI				AML	AML		
	comp=E,118μm,1.4s						
EQUI				AML	AML		
	comp=N,124μm,1.6s						
LBL	**Lubilhac**	**2.54**	**287**	Pn	**Pn**	**05 33 56.5**	**+1.2**
GROG	**Isola di Gorgo**	**2.57**	**114**	⇑P	**Pn**	**05 33 56.6**	**+1.1**
GROG				AML	AML		
	comp=E,226μm,0.5s						
GROG				AML	AML		
	comp=N,145μm,1.2s						
PGF	**Pioggiola**	**2.60**	**139**	*e*Pn	**Pn**	**05 33 55.9**	**-0.3**
PGF				*e*Sn	**Sn**	**05 34 26.0**	**-1.5**
	comp=N,76nm,0.3s						
PGF	**Pioggiola**	**2.60**	**139**	P	**Pn**	**05 33 55.7**	**-0.5**
PGF				AML	AML		
	comp=N,192μm,1.0s						
PGF				AML	AML		
	comp=E,197μm,1.4s						
LEOD	**Capriano del C**	**2.61**	**68**	⇓P	**Pg**	**05 34 02.9**	**-1.8**
BNALP	**Bannalp**	**2.64**	**27**	⇑P	**Pb**	**05 34 00.8**	**-0.8**
ERBM	**Eremo**	**2.67**	**91**	⇓P	**Pb**	**05 34 00.1**	**-2.1**
ERBM				AML	AML		
	comp=N,254μm,1.1s						
ERBM				AML	AML		
	comp=E,198μm,1.2s						
SARO	**Sassorosso**	**2.69**	**96**	⇓P	**Pn**	**05 33 57.9**	**+0.6**
SARO				AML	AML		
	comp=E,50μm,0.5s						
SARO				AML	AML		
	comp=N,69μm,0.6s						
TUE	**Stuetta**	**2.69**	**43**	⇑P	**Pn**	**05 33 58.1**	**+0.6**
TUE				AML	AML		
	comp=E,306μm,0.3s						
TUE				AML	AML		
	comp=N,202μm,0.3s						
TUE				AML	AML		
	comp=E,240μm,0.3s						
TUE				AML	AML		
	comp=N,165μm,0.4s						
CHMF	**Charmoille**	**2.71**	**360**	Pn	**Pn**	**05 33 59.0**	**+1.3**
MAIM	**Mastiano**	**2.81**	**101**	P	**Pn**	**05 33 59.3**	**+0.4**
MAIM				AML	AML		
	comp=N,103μm,0.6s						
MAIM				AML	AML		
	comp=E,169μm,1.5s						
LOMF	**Lomont**	**2.82**	**2**	Pn	**Pn**	**05 34 01.3**	**+2.1**
LOMF	**Lomont**	**2.82**	**2**	Sn	**Sn**	**05 34 33.2**	**+0.5**
PYM	**Petit Puy Mans**	**2.87**	**296**	Pn	**Pn**	**05 34 00.9**	**+1.1**
PII	**Pisa**	**2.88**	**105**	⇓P	**Pn**	**05 34 00.4**	**+0.5**
PII				AML	AML		
	comp=N,110μm,0.5s						
PII				AML	AML		
	comp=E,150μm,0.4s						
BOURR	**Bourrignon**	**2.88**	**7**	Pn	**Pn**	**05 34 01.4**	**+1.4**
BALST	**Balsthal**	**2.89**	**14**	Pn	**Pn**	**05 34 01.2**	**+1.1**
BALST	**Balsthal**	**2.89**	**14**	*e*Pn	**Pn**	**05 34 02.0**	**+1.9**
SMF	**Signal de Mont**	**2.90**	**318**	*e*Pn	**Pn**	**05 34 01.8**	**+1.6**
SMF	**Signal de Mont**	**2.90**	**318**	*e*Pg	**Pg**	**05 34 09.2**	**-1.1**
SMF				*e*Sn	**Sn**	**05 34 34.2**	**-0.6**
	comp=E,20nm,0.2s						
SMF				*e*Sg	**Sg**	**05 34 46.3**	**-1.7**
	comp=E,70nm,0.3s						
AGO	**Saint Agoulin**	**2.93**	**302**	Pn	**Pn**	**05 34 02.0**	**+1.4**
POPM	**Popiglio**	**2.97**	**98**	⇑P	**Pn**	**05 34 01.8**	**+0.7**
POPM				AML	AML		
	comp=E,194μm,0.4s						
POPM				AML	AML		
	comp=N,116μm,0.8s						
AJAC	**Base Areonaval**	**3.02**	**149**	Pn	**Pn**	**05 34 02.6**	**+0.9**
AJAC				Sn	**Sn**	**05 34 37.3**	**-0.2**
MAGA	**Magasa**	**3.06**	**65**	⇑P	**Pb**	**05 34 08.8**	**0.0**
MTCR	**Monte La Croce**	**3.14**	**98**	⇓P	**Pn**	**05 34 04.7**	**+1.1**
PLONS	**Plons/SG**	**3.14**	**36**	*e*Pn	**Pn**	**05 34 06.6**	**+3.0**
SULZ	**Cheisacher**	**3.15**	**18**	Pn	**Pn**	**05 34 04.9**	**+1.2**
SULZ	**Cheisacher**	**3.15**	**18**	*e*Pn	**Pn**	**05 34 05.4**	**+1.7**
DAVOX	**Davos/Dischmat**	**3.17**	**44**	Pn	**Pn**	**05 34 05.7**	**+1.6**
	comp=N,3.2nm,0.3s,baz=226,slow=5.8,SNR=16						
DAVOX				Sn	**Sn**	**05 34 42.3**	**+0.6**
	comp=N,2.4nm,0.3s,baz=193,slow=15,SNR=1.8						
DAVOX				Lg	Lg	05 34 53.2	
	comp=N,7.0nm,0.3s,baz=323,slow=22,SNR=5.8						
DAVOX	**Davos/Dischmat**	**3.17**	**44**	⇓P	**Pn**	**05 34 06.0**	**+2.0**
DAVOX				AML	AML		
	comp=E,70μm,1.1s						
DAVOX				AML	AML		
	comp=N,157μm,0.4s						
AVF	**Avril sur Loir**	**3.25**	**315**	*e*Pn	**Pn**	**05 34 06.5**	**+1.6**
AVF	**Avril sur Loir**	**3.25**	**315**	*e*Pg	**Pg**	**05 34 16.8**	**-0.1**
AVF				*e*Sn	**Sn**	**05 34 41.9**	**-1.3**
	comp=N,11nm,0.3s						
AVF				*e*Sg	**Sg**	**05 34 57.2**	**-1.7**
	comp=N,39nm,0.4s						
WILA	**Wila**	**3.27**	**28**	*e*Pn	**Pn**	**05 34 08.2**	**+2.9**
HINF	**Hinteralfeld**	**3.28**	**2**	*e*Pn	**Pn**	**05 34 06.6**	**+1.1**
HINF				*e*Sn	**Sn**	**05 34 42.9**	**-1.3**
	comp=N,26nm,0.3s						
HINF				*e*Sg	**Sg**	**05 34 58.6**	**-1.6**
	comp=N,24nm,0.2s						
CAF	**Calviac**	**3.31**	**278**	*e*Pn	**Pn**	**05 34 06.7**	**+0.8**
CAF	**Calviac**	**3.31**	**278**	*e*Pg	**Pg**	**05 34 16.7**	**-1.5**
CAF				*e*Sn	**Sn**	**05 34 44.8**	**-0.1**
CAF				*e*Sg	**Sg**	**05 34 59.1**	**-2.0**
	comp=N,60nm,0.6s						
METMA	**Mettma DE**	**3.36**	**18**	*e*Pn	**Pn**	**05 34 08.0**	**+1.5**
METMA				*e*Sn	**Sn**	**05 34 47.3**	**+1.2**
SSF	**Saint Saulge**	**3.36**	**320**	*e*Pn	**Pn**	**05 34 08.1**	**+1.6**
SSF	**Saint Saulge**	**3.36**	**320**	*e*Pg	**Pg**	**05 34 17.5**	**-1.6**
SSF				*e*Sn	**Sn**	**05 34 45.4**	**-0.7**
	comp=N,45nm,0.4s						
SSF				*e*Sg	**Sg**	**05 35 01.0**	**-1.7**
	comp=N,107nm,0.4s						
BGF	**Bois d'Agland**	**3.37**	**308**	*e*Pn	**Pn**	**05 34 08.2**	**+1.6**
BGF	**Bois d'Agland**	**3.37**	**308**	*e*Pg	**Pg**	**05 34 17.3**	**-1.9**
BGF				*e*Sn	**Sn**	**05 34 45.9**	**

comp=N,36nm,0.2s
LOR eSg Sg 05 35 00.7 -2.2
comp=N,63nm,0.4s
MTLF Montolieu 3.44 251 ePn Pn 05 34 08.0 +0.5
MTLF Montolieu 3.44 251 eP Pn 05 34 10.4 +2.8
MTLF eSn Sn 05 34 45.3 -2.6
comp=N,33nm,0.3s
MTLF eSg Sg 05 35 03.0 -2.1
comp=N,39nm,0.5s
MTLF Montolieu 3.44 251 Pn Pn 05 34 08.1 +0.5
SJAF Saint Jean de 3.44 235 Pn Pn 05 34 08.3 +0.7
OSSC Osservatorio P 3.44 105 P Pn 05 34 08.3 +0.6
OSSC AML AML
comp=E,70µm,0.7s
OSSC AML AML
comp=N,54µm,0.3s
FELD Feldberg im Sc 3.47 15 Pn Pn 05 34 09.0 +0.9
SLE Schleitheim 3.47 21 Pn Pn 05 34 09.4 +1.4
SLE Schleitheim 3.47 21 ePn Pn 05 34 09.1 +1.2
SLE eSn Sn 05 34 50.6 +1.9
HAU Haudompre 3.48 356 ePn Pn 05 34 09.4 +1.3
HAU eSn Sn 05 34 47.2 -1.8
comp=N,65nm,0.3s
HAU eSg Sg 05 35 04.0 -2.4
comp=N,34nm,0.3s
CSNT Castellina Chi 3.49 106 ⇓P Pn 05 34 09.2 +0.9
CSNT AML AML
comp=N,39µm,0.7s
CSNT AML AML
comp=E,32µm,0.3s
BERGE Lenzkirch (DE) 3.50 17 ePn Pn 05 34 09.3 +0.9
BERGE eSn Sn 05 34 50.2 +0.7
CASP Castiglione de 3.50 118 ⇑P Pn 05 34 09.7 +1.3
CASP AML AML
comp=N,106µm,0.5s
CASP AML AML
comp=E,104µm,1.4s
KIZ Kirchzarten 3.53 14 Pn Pn 05 34 09.7 +0.9
DAVA Damuels 3.54 38 ePn Pn 05 34 11.5 +2.4
comp=E,5.2nm,0.2s,SNR=8.1
DAVA i Sn Sn 05 34 55.8 +5.1
comp=E,34nm,0.3s
TCF Toulx Ste Croi 3.60 301 ePn Pn 05 34 11.9 +2.0
TCF eSn Sn 05 34 50.8 -1.3
comp=E,16nm,0.2s
TCF eSg Sg 05 35 08.7 -1.7
comp=E,20nm,0.3s
WALHA Wallhausen, DE 3.64 27 ePn Pn 05 34 12.8 +2.5
WALHA eSn Sn 05 34 55.3 +2.5
EMING Emmingen-Lipti 3.68 23 ePn Pn 05 34 12.6 +1.7
EMING eSn Sn 05 34 55.5 +1.6
ECH Echery 3.70 5 Pn Pn 05 34 11.8 +0.7
ECH Sn Sn 05 34 54.1 -0.2
ECH Echery 3.70 5 ePn Pn 05 34 12.4 +1.3
RJF Les Rejaudoux 3.75 284 ePn Pn 05 34 13.9 +2.1
RJF Les Rejaudoux 3.75 284 ePg Pg 05 34 24.4 -2.1
RJF eSn Sn 05 34 55.5 -0.1
RJF eSg Sg 05 35 13.2 -1.8
comp=E,24nm,0.4s
FETA Feichten 3.77 47 i Pn Pn 05 34 15.2 +2.9
comp=E,2.1nm,0.3s,SNR=4.5
FETA eSn Sn 05 34 60.0 +3.7
comp=E,14nm,0.5s
OBER Oberstdorf 3.82 40 ePn Pn 05 34 16.9 +4.1
SFTF Sexfontaines 3.84 343 ePn Pn 05 34 14.6 +1.5
baz=153
SFTF Sexfontaines 3.84 343 ePg Pg 05 34 25.8 -2.5
SFTF eSn Sn 05 34 56.4 -1.5
comp=E,20nm,0.3s
SFTF eSg Sg 05 35 15.7 -2.3
comp=E,47nm,0.4s
CDF Champ du Feu 3.90 6 ePn Pn 05 34 14.1 +0.1
CDF Champ du Feu 3.90 6 eP Pn 05 34 16.8 +2.8
comp=E,33nm,0.6s
CDF Champ du Feu 3.90 6 ePg Pg 05 34 26.8 -2.6
CDF eSn Sn 05 34 56.9 -2.5
comp=E,17nm,0.3s
CDF eSg Sg 05 35 17.1 -2.8
comp=E,17nm,0.3s
CRE Caprese Michel 3.91 102 ⇓P Pn 05 34 15.1 +1.0
WLS Welschbruch 3.91 7 Pn Pn 05 34 15.0 +0.9
GUT Gutenstein 3.92 25 Pn Pn 05 34 15.5 +1.3
HYF Humbligny 3.93 316 ePn Pn 05 34 14.5 +0.2
HYF Humbligny 3.93 316 eP Pn 05 34 16.9 +2.6
HYF eSn Sn 05 34 58.5 -1.5
HYF eSg Sg 05 35 17.3 -3.5
MONQ Montcuq 3.93 269 Pn Pn 05 34 15.6 +1.3
UBR Ueberruh 3.95 36 ePn Pn 05 34 16.8 +2.2
UBR eSn Sn 05 35 02.6 +2.1
BFO Black Forest 3.96 16 ePn Pn 05 34 15.5 +0.7
PAGF Fort de Pagny 4.08 351 eP Pn 05 34 18.2 +1.9
baz=171
PAGF eSn Sn 05 35 01.9 -1.7
comp=E,23nm,0.3s
OPP Oppenau 4.10 14 Pn Pn 05 34 17.2 +0.6
RETA Reutte 4.10 42 i Pn Pn 05 34 18.7 +2.0
comp=E,2.2nm,0.3s
RETA i Sn Sn 05 35 07.8 +3.5
comp=E,5.0nm,0.2s
MEZF Maizieres J'vi 4.12 345 ePn Pn 05 34 19.4 +2.4
baz=154
MEZF Maizieres J'vi 4.12 345 ePg Pg 05 34 30.6 -3.1
baz=164
MEZF eSn Sn 05 35 03.0 -1.8
comp=E,23nm,0.3s
MEZF eSg Sg 05 35 24.9 -2.1
comp=E,50nm,0.5s
SQTA Sankt Quirin 4.15 48 i Pn Pn 05 34 20.2 +2.8
comp=E,1.8nm,0.1s
SQTA eSn Sn 05 35 08.9 +3.3
comp=E,19nm,0.4s
BRES Bressanone 4.15 57 P Pn 05 34 19.7 +2.1
MOTA Moosalm 4.17 46 ePn Pn 05 34 19.7 +2.0
comp=E,5.1nm,0.3s,SNR=5.4
MOTA eSn Sn 05 35 08.6 +2.3
comp=E,17nm,0.4s
SAVF Savonnieres en 4.22 346 ePn Pn 05 34 17.8 -0.5
SAVF Savonnieres en 4.22 346 eP Pn 05 34 21.3 +3.0
baz=162
SAVF eSn Sn 05 35 05.9 -1.3
comp=E,24nm,0.3s
SAVF eSg Sg 05 35 27.4 -2.7
comp=E,47nm,0.6s
LFF La Frestale 4.25 278 eP Pn 05 34 22.0 +3.3
LFF La Frestale 4.25 278 ePg Pg 05 34 34.5 -1.6
LFF eSn Sn 05 35 06.7 -1.3
comp=E,27nm,0.5s
LFF eSg Sg 05 35 29.3 -1.9
comp=E,33nm,0.5s
WTTA Wattenberg 4.41 50 ePn Pn 05 34 23.7 +2.7
comp=E,4.8nm,0.3s,SNR=8.2
WTTA i Sn Sn 05 35 17.5 +5.5
comp=E,12nm,0.4s
WATA Walderalm 4.42 49 i Pn Pn 05 34 23.8 +2.7
comp=E,3.9nm,0.3s
WATA eSn Sn 05 35 17.1 +4.8
comp=E,12nm,0.5s
ABTA Abfaltersbach 4.65 60 i Pn Pn 05 34 26.3 +2.0
comp=E,1.1nm,0.2s
ABTA eSn Sn 05 35 22.7 +4.8
comp=E,10nm,0.5s
EPF Esparros 4.83 254 ePn Pn 05 34 26.8 +0.1
EPF Esparros 4.83 254 eP Pn 05 34 29.3 +2.6
EPF Esparros 4.83 254 ePg Pg 05 34 45.1 -2.1
EPF eSg Sg 05 35 47.4 -2.4
comp=E,15nm,0.5s
CING Cingoli 4.84 102 ⇓P Pn 05 34 29.9 +3.0
CSP1 Cessapalombo 4.94 105 P Pn 05 34 31.5 +3.3
RIVT Riveris 5.18 1 ePn Pn 05 34 33.3 +1.9
MFF Saint Martin d 5.22 296 eP Pn 05 34 34.3 +2.3
MFF eSn Sn 05 35 29.7 -2.1
comp=E,12nm,0.6s
MFF eSg Sg 05 36 00.1 -2.1
comp=E,22nm,0.5s
MFF Saint Martin d 5.22 296 Pn Pn 05 34 34.3 +2.3
LAV9 Lanuvio 5.25 121 ⇓P Pg 05 34 51.5 -3.7
KBA Koelnbreinsper 5.31 59 ePn Pn 05 34 35.6 +2.2
comp=E,3.9nm,0.5s,SNR=7.8
KBA eSn Sn 05 35 36.0 +1.8
comp=E,2.6nm,0.5s
MYKA Terra Mystica 5.32 64 i Pn Pn 05 34 35.4 +2.0
comp=E,1.5nm,0.2s
ABH Alteburg 5.38 6 Pn Pn 05 34 35.4 +1.2
VSL Villasalto 5.42 157 ⇑P Pn 05 34 37.0 +2.2
ETSF Etsaut 5.50 255 eP Pn 05 34 39.7 +3.8
ETSF eSn Sn 05 35 36.7 -2.1
comp=E,4.8nm,0.3s
ETSF eSg Sg 05 36 07.6 -3.5
comp=E,2.8nm,0.3s
GIVF Givet 5.71 348 ePn Pn 05 34 38.0 -0.7
GIVF Givet 5.71 348 eP Pn 05 34 42.2 +3.5
GIVF Givet 5.71 348 ePg Pg 05 35 00.0 -4.0
GIVF eSn Sn 05 35 40.3 -3.6
comp=E,11nm,0.3s
DOU Dourbes 5.74 346 Pn Pn 05 34 41.4 +2.2
BAIF Baives 5.78 344 ePn Pn 05 34 40.5 +0.9
BAIF eSn Sn 05 35 42.6 -2.9
comp=E,12nm,0.4s
BAIF eSg Sg 05 36 15.9 -4.1
comp=E,9.5nm,0.4s
OBKA Obir 5.87 68 i Pn Pn 05 34 42.1 +1.0
comp=E,1.2nm,0.5s
OBKA eSn Sn 05 35 50.3 +2.3
comp=E,4.2nm,0.5s
SJPF Ste Jean 5.89 259 ePn Pn 05 34 40.5 -0.8
SJPF Ste Jean 5.89 259 eP Pn 05 34 45.0 +3.7
SJPF Ste Jean 5.89 259 ePg Pg 05 35 04.0 -3.5
SJPF eSn Sn 05 35 45.1 -3.4
comp=E,3.5nm,0.3s
SJPF eSg Sg 05 36 20.2 -3.6
comp=E,4.0nm,0.4s
AHRW Bad Neuenahr-A 6.01 2 ePn Pn 05 34 45.1 +2.2
LDF La Druitiere 6.20 313 ePn Pn 05 34 47.6 +2.1
LDF La Druitiere 6.20 313 eP Pn 05 34 49.9 +4.4
LDF eSn Sn 05 35 53.3 -2.7
comp=E,7.2nm,0.3s
LDF eSg Sg 05 36 30.2 -3.4
comp=E,4.0nm,0.3s
MOA Molln 6.22 55 ePn Pn 05 34 48.4 +2.6
comp=E,2.0nm,0.3s
MOA eSn Sn 05 35 58.9 +2.4
comp=E,2.3nm,0.2s
GERES GERESS Array B 6.47 46 Pn Pn 05 34 50.0 +0.7
comp=E,3.1nm,0.3s,baz=226,slow=13,SNR=28
GERES Sn Sn 05 36 03.6 +0.8
comp=E,2.9nm,0.3s,baz=239,slow=23,SNR=9.1
GRR Gorron 6.48 309 ePn Pn 05 34 51.2 +1.9
GRR eSn Sn 05 35 59.4 -3.4
comp=E,8.0nm,0.4s
GRR eSg Sg 05 36 38.4 -4.0
comp=E,6.1nm,0.3s
FLN La Foliniere 6.49 313 ePn Pn 05 34 51.0 +1.5
baz=132
FLN eSn Sn 05 36 00.0 -3.2
comp=E,3.7nm,0.3s
FLN eSg Sg 05 36 38.6 -4.4
comp=E,9.9nm,0.4s
KHC Kasperske Hory 6.59 43 ePN Pn 05 34 52.1 +1.2
KHC eSN Sn 05 36 04.2 -1.5
ARSA Arzberg 6.74 63 ePn Pn 05 34 54.7 +1.8
comp=E,3.7nm,0.3s
CKRC Cesky Krumlov 6.77 48 ePN Pn 05 34 53.6 +0.2
CKRC eSN Sn 05 36 09.6 -0.5
CONA Conrad Observa 7.21 59 i Pn Pn 05 35 02.0 +2.5
comp=E,0.5nm,0.2s
CONA eSn Sn 05 36 24.9 +3.9
comp=E,1.3nm,0.2s
SGMF Saint Gilles 7.39 303 ePn Pn 05 35 03.3 +1.5
SGMF Saint Gilles 7.39 303 eP Pn 05 35 05.3 +3.5
QUIF Quistinic 7.62 300 eP Pn 05 35 08.9 +4.0
ROSF Rostrenen 7.86 302 eP Pn 05 35 11.3 +3.1
ROSF eSn Sn 05 36 33.3 -3.4
comp=E,1.4nm,0.3s
CLL Collm 7.99 30 eSg 05 37 30.0
comp=Z,11nm,1.1s
KEST Kesra 9.03 166 Pn Pn 05 35 31.3 +6.9
comp=Z,0.3nm,0.3s,baz=326,slow=7.4,SNR=4.2
ESDC Sonseca Array 9.28 242 Pn Pn 05 35 29.4 +1.5
comp=Z,0.4nm,0.3s,baz=55,slow=14,SNR=24
EKA Eskdalemuir Ar 12.51 333 Pn Pn 05 36 11.5 -0.4
baz=141,slow=15,SNR=11
FINES FINESS Array B 20.43 27 P Pn 05 37 52.8 -0.2
comp=Z,2.1nm,0.8s,baz=216,slow=14,SNR=2.8
BRTR Keskin Array B 20.52 94 P Pn 05 37 57.3 +2.8
comp=Z,0.5nm,0.5s,baz=289,slow=9.0,SNR=2.3
ZALV Zalesovo Beam 49.41 50 P P 05 42 06.7 +3.4
comp=Z,0.6nm,0.3s,baz=13,slow=29,SNR=1.5
MKAR Makanchi Array 50.95 59 P P 05 42 18.0 +2.9
comp=Z,0.2nm,0.5s,baz=305,slow=5.1,SNR=2.0
YKA Yellowknife Ar 63.47 334 P P 05 43 44.3 +0.9
comp=Z,0.2nm,0.7s,baz=55,slow=5.4,SNR=4.6

*IDC **11** 05:41:08.7±1.6,5.1°11S×152.9°5E,h0km,mb3.7/5, mb1 3.9/6,mb1mx3.6/43,mbtmp3.8/6,Error ellipse: s-maj=50.0km s-min=29.7km az=126.0*
ISC 11 05:41:14.9±1.4,5.2°2S±0.3°×152.9°E±0.2,h43km,n7,σ1s11/8, mb3.6/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.11**	**233**	Pn	**Pn**	**Pn**	**05 42 55.2**	**-1.3**
	baz=222,slow=19,SNR=1.1							
PMG				Sn	**Sn**	**Sn**	**05 44 17.6**	**+1.6**
	1.9nm,0.3s,baz=320,slow=12,SNR=3.6							
WRA	**Warramunga Arr**	**23.30**	**229**	P	**P**	**P**	**05 46 18.9**	**-0.4**
	2.4nm,0.7s,baz=53,slow=9.9,SNR=16							
ASAR	**Alice Springs**	**25.97**	**223**	P	**P**	**P**	**05 46 44.5**	**+0.7**
	0.5nm,0.5s,baz=54,slow=9.3,SNR=6.5							
FITZ	**Fitzroy Crossi**	**29.60**	**242**	P	**P**	**P**	**05 47 15.6**	**-0.7**
	0.6nm,0.5s,baz=62,slow=11,SNR=1.8							
MKAR	**Makanchi Array**	**80.69**	**319**	P	**P**	**P**	**05 53 24.4**	**+0.7**
	0.2nm,0.5s,baz=125,slow=7.4,SNR=2.7							
QSPA	**South Pole Qui**	**84.79**	**180**	P	**P**	**P**	**05 53 45.1**	**+0.4**
	0.9nm,0.6s,baz=342,slow=3.2,SNR=8.5							
TORD	**Torodi Ar. Bea**	**150.55**	**288**	PKPbc		**PKPbc**	**06 01 02.8**	**-0.4**
	1.3nm,0.8s,baz=75,slow=1.7,SNR=5.6							

*IDC **11** 05:44:45.7±1.0,43.5°50N×127.1°1W,h0km,mb3.9/11, mb1 4.1/19,mb1mx3.9/52,mbtmp4.0/19,ML3.5/7,Error ellipse: s-maj=21.6km s-min=9.0km az=39.0*
*ANF **11** 05:44:49.0±1.0,43.3°9N×126.9°5W,h10km,ML4.0/22, Error ellipse: s-maj=10.6km s-min=5.5km az=72.0, Hypocentre not reviewed by the ISC*
*NEIC **11** 05:44:48.7±2.2,43.3°9N±0.7°×127.1°0W±0.1°,h10km±2km, mb4.1/43,ML3.3/38,Mwr4.2/30,Error ellipse: s-maj=13.9km s-min=9.8km az=231.0*
*NEIC **11** 05:44:50.6,43.4°43N×126.8°8W,h22km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=0.65; Mθθ=-2.18; Mφφ 1.53; Mrθ=0.69; Mθφ-1.10; Mφr-0.93; Fault plane solution: M=2.51000×10^15^ NP1:φs213.73000°, δ62.39000°,λ17.38000°. NP2:φs115.48000°,δ74.65000°, λ151.27000°. Principal axes: T 2.4795, Plg31.0000°, Azm72.0000°; N 0.0622, Plg58.0000°, Azm270.0000°; P -2.5417, Plg8.0000°, Azm167.0000°;*
ISC 11 05:44:48.1±0.8,43.2°42N±0.0°09×127.2°12W±0.0°09,h14km, n167,σ1s12/162,mb4.2/23,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.11**	**104**	Pn	**Pn**	**Pn**	**05 45 21.4**	**-1.7**
KEBM				Sn	**Sn**	**Sn**	**05 45 47.0**	**-2.2**
KEBM				IAML			05 45 53.3	
	comp=N,303nm,0.6s							
J01E	**Myrtle Point**	**2.34**	**95**	P			05 45 24.5	
	baz=277,SNR=51							
J01E				S			05 45 53.4	
	baz=277							
KBO	**Bosley Butte**	**2.45**	**119**	Pn	**Pn**	**Pn**	**05 45 26.2**	**-1.5**
KBO				IAML			05 46 02.9	
	comp=E,116nm,1.6s							
KBO				IAML			05 46 19.9	
	comp=N,133nm,2.1s							
I02D	**Swisshome**	**2.47**	**73**	P			05 45 26.9	
	baz=254,SNR=680							
K02D	**Willamette Mer**	**2.63**	**105**	P			05 45 28.6	
	baz=287,SNR=149							
K02D				S			05 46 00.6	
	baz=287							
I03D	**Drain, OR**	**2.76**	**83**	P			05 45 30.9	
	baz=265,SNR=570							
I03D				S			05 46 04.8	
	baz=265							
L02E	**Cave Junction**	**2.88**	**115**	P			05 45 33.0	
	baz=298,SNR=19							
L02E				S			05 46 08.7	
	baz=298							
COR	**Corvallis**	**2.99**	**66**			**Pn**	**05 45 35.0**	**-0.1**
COR				IAML			05 45 59.4	
	comp=N,130nm,0.7s							
COR				IAML			05 46 20.2	
	comp=N,151nm,1.6s							
KRMB	**Red Mountain**	**3.04**	**127**			**Pn**	**05 45 34.7**	**-1.2**
HUMO	**Hull Mountain**	**3.16**	**103**			**Pn**	**05 45 36.7**	**-0.8**
HUMO				IAML			05 46 17.6	
	comp=E,61nm,0.6s							
HUMO				IAML			05 46 22.5	
	comp=N,49nm,0.8s							
G03D	**McMinnville, O**	**3.30**	**56**	P			05 45 39.0	
	baz=238,SNR=156							
H04D	**Lebanon**	**3.35**	**69**	P			05 45 40.5	
	baz=252,SNR=235							
I04A	**Tendick Farm,**	**3.44**	**82**	P			05 45 41.2	
	baz=265,SNR=70							
JCC	**Jacoby Creek,**	**3.47**	**137**	Pn		**Pn**	**05 45 42.5**	**+0.8**
KHMM	**Horse Mountain**	**3.58**	**134**			**Pn**	**05 45 44.9**	**+1.5**
J04D	**Umpqua Nationa**	**3.66**	**91**	P			05 45 45.2	
	baz=274,SNR=37							
YBH	**Yreka Blue Hor**	**3.67**	**116**	Pn		**Pn**	**05 45 45.4**	**+0.8**
	comp=N,3.2nm,0.3s,baz=293,slow=13,SNR=102							
YBH				Sn		**Sn**	**05 46 29.4**	**+1.8**
	comp=N,1.0nm,0.3s,baz=126,slow=18,SNR=7.5							
YBH	**Yreka Blue Hor**	**3.67**	**116**			**Pn**	**05 45 45.3**	**+0.8**
YBH				IAML			05 46 33.2	
	comp=E,23nm,1.9s							
L04D	**Klamath Falls**	**3.74**	**107**	P			05 45 45.8	
	baz=291,SNR=43							
M02C	**Callahan**	**3.75**	**121**	P			05 45 45.7	
	baz=305							
M02C				S			05 46 29.6	
	baz=305							
H04A	**Detroit Lake**	**3.77**	**69**			**Pn**	**05 45 46.7**	**+0.8**
H04A				IAML			05 46 20.8	
	comp=E,91nm,0.5s							
H04A				IAML			05 46 22.3	
	comp=N,92nm,0.4s							
F04D	**Rainier, OR**	**3.96**	**46**	P			05 45 48.5	
	baz=228,SNR=41							
F04D				S			05 46 35.7	
	baz=228							
K04D	**Chiloquin, OR**	**4.01**	**100**	P			05 45 49.5	
	baz=283,SNR=12							
E03A	**Lebam**	**4.02**	**38**	Pn		**Pn**	**05 45 49.1**	**-0.1**
N02D	**Trinity Center**	**4.09**	**125**	P			05 45 50.3	
	baz=309							
M04C	**Macdoel**	**4.23**	**111**	P			05 45 53.4	
	baz=295,SNR=7.0							
I05D	**Terrebonne, OR**	**4.28**	**76**	P			05 45 53.1	
	baz=259,SNR=49							
J05D	**Fort Rock, OR**	**4.29**	**90**	P			05 45 53.1	
	baz=274,SNR=23							
WDC	**Whiskeytown Da**	**4.44**	**128**	Pn		**Pn**	**05 45 55.8**	**+0.8**
E04D	**Cinebar**	**4.50**	**44**	P			05 45 56.1	
	baz=227,SNR=257							
E04D				S			05 46 50.2	
	baz=227							
PINE	**Pine Mountain**	**4.50**	**83**			**Pn**	**05 45 56.4**	**+0.3**
PINE				IAML			05 46 30.3	
	comp=E,41nm,0.8s							
PINE				IAML			05 46 39.7	
	comp=N,35nm,0.8s							
G05D	**Wamic, OR**	**4.54**	**64**	P			05 45 57.4	
	baz=248,SNR=27							
KCPM	**Cahto Peak**	**4.58**	**143**	Pn		**Pn**	**05 45 56.8**	**-0.2**
KCPM				IAML			05 46 31.1	
	comp=N,24nm,2.4s							
KCPM				IAML			05 48 10.9	
	comp=E,26nm,4.2s							
NLWA	**Neilton Lookou**	**4.58**	**29**			**Pn**	**05 45 57.4**	**+0.4**
K05A	**Summer Lake**	**4.61**	**97**			**Pn**	**05 45 57.8**	**+0.2**
K05A				IAML			05 48 08.7	
	comp=E,26nm,4.1s							
K05A				IAML			05 48 44.5	
	comp=N,27nm,3.5s							
F05D	**White Salmon**	**4.73**	**57**	P			05 46 00.4	
	baz=240,SNR=54							
D04E	**Lakebay**	**4.85**	**38**	P			05 46 01.7	
	baz=220,SNR=60							
D04E				S			05 46 59.3	
	baz=220							
D03D	**Eldon**	**5.00**	**33**	P			05 46 02.5	
	baz=215,SNR=136							
D03D				S			05 46 59.7	
	baz=215							
LON	**Longmire**	**5.02**	**47**			**Pn**	**05 46 04.5**	**+1.3**
D05A	**Enumclaw**	**5.22**	**42**			**Pn**	**05 46 07.4**	**+1.6**
MOD	**Modoc Plateau**	**5.25**	**104**			**Pn**	**05 46 06.5**	**+0.2**
MOD				IAML			05 47 25.7	
	comp=E,11nm,4.4s							
MOD				IAML			05 47 38.7	
	comp=N,7.6nm,2.5s							
HOPS	**Hopland Field**	**5.37**	**144**			**Pn**	**05 46 09.2**	**+1.3**
HOPS				IAML			05 48 40.5	
	comp=E,23nm,2.5s							
HOPS				IAML			05 48 41.4	
	comp=N,24nm,3.7s							
I07A	**Izee**	**5.56**	**81**			**Pn**	**05 46 10.5**	**0.0**
F07A	**Phinny Hill Vi**	**5.70**	**62**			**Pn**	**05 46 12.7**	**+0.4**
ORV	**Oroville**	**5.72**	**131**			**Pn**	**05 46 14.4**	**+1.7**
LTY	**Liberty**	**5.95**	**48**			**Pn**	**05 46 16.9**	**+1.1**
B05A	**Bryant**	**5.98**	**34**	P			05 46 16.8	
	baz=217,SNR=23							
B05A				S			05 47 24.2	
	baz=217							
E07A	**Sunnyside**	**6.03**	**56**			**Pn**	**05 46 17.3**	**+0.3**
A04D	**Lummi Island**	**6.13**	**29**	P			05 46 19.4	
	baz=211,SNR=11							
A04D				S			05 47 28.4	
	baz=211							
G08A	**Pilot Rock**	**6.14**	**69**			**Pn**	**05 46 19.0**	**+0.4**
HAWA	**Hanford**	**6.15**	**58**			**Pn**	**05 46 19.1**	**+0.5**
BEKR	**Beckworth**	**6.18**	**123**			**Pn**	**05 46 20.6**	**+1.4**
C06D	**Leavenworth**	**6.27**	**42**	P			05 46 21.1	
	baz=226,SNR=27							
J08A	**Circle Bar Ran**	**6.30**	**88**			**Pn**	**05 46 20.9**	**+0.2**
WVOR	**Wild Horse Val**	**6.31**	**96**			**Pn**	**05 46 20.5**	**-0.3**
B06A	**Marblemount**	**6.43**	**36**			**Pn**	**05 46 23.2**	**+0.8**
AFDM	**Forest Hills D**	**6.44**	**132**	Pn		**Pn**	**05 46 24.1**	**+1.6**
E08A	**Dider Farm, El**	**6.49**	**59**	Pn		**Pn**	**05 46 24.5**	**+1.3**
A05A	**Maple Falls**	**6.58**	**30**			**Pn**	**05 46 25.7**	**+1.3**
D08A	**Hollman Farm,**	**6.84**	**55**	Pn		**Pn**	**05 46 28.8**	**+0.9**
PAHR	**Pah Rah Range**	**6.88**	**120**	Pn		**Pn**	**05 46 28.6**	**-0.2**
VCNR	**Virginia City**	**6.97**	**124**	Pn		**Pn**	**05 46 30.9**	**+1.0**
E09A	**Wood Farm, Sta**	**7.08**	**61**			**Pn**	**05 46 30.9**	**-0.3**
PNTR	**Pine Nut**	**7.13**	**125**			**Pn**	**05 46 33.2**	**+1.0**
BMO	**Blue Mountains**	**7.21**	**75**			**Pn**	**05 46 33.5**	**+0.4**
B08A	**Colville Reser**	**7.34**	**45**			**Pn**	**05 46 34.9**	**0.0**
YERR	**Yerington**	**7.41**	**124**			**Pn**	**05 46 38.0**	**+2.0**
CMB	**Columbia Colle**	**7.42**	**134**			**Pn**	**05 46 38.2**	**+2.2**
F10A	**Beach Ranch, E**	**7.50**	**67**			**Pn**	**05 46 36.9**	**-0.2**
C09A	**Chrisman Ranch**	**7.59**	**52**	Pn		**Pn**	**05 46 38.3**	**0.0**
RYN	**Ryan**	**8.07**	**123**	Pn		**Pn**	**05 46 47.0**	**+1.9**
KVN	**Kaiserville**	**8.08**	**120**			**Pn**	**05 46 43.9**	**-1.3**
PLID	**Pearl Lake**	**8.16**	**74**			**Pn**	**05 46 45.9**	**-0.4**
MFID	**Camas Ranch**	**8.22**	**86**			**Pn**	**05 46 46.5**	**-0.6**
NVAR	**Mina Array Bea**	**8.33**	**124**	Pn		**Pn**	**05 46 50.7**	**+2.0**
	comp=N,0.2nm,0.3s,baz=300,slow=14,SNR=13							
NV11	**Mina Array Sit**	**8.42**	**123**			**Pn**	**05 46 50.5**	**+0.8**
NEW	**Newport**	**8.49**	**52**	Pn		**Pn**	**05 46 50.9**	**+0.2**
	comp=N,3.9nm,0.3s,baz=259,slow=11,SNR=34							
NEW	**Newport**	**8.49**	**52**	Pn		**Pn**	**05 46 50.7**	**0.0**
NEW	**Newport**	**8.49**	**52**	P			05 46 51.1	
	baz=238							
BBB	**Bella Bella**	**8.80**	**356**	Pn		**Pn**	**05 46 54.7**	**-0.1**
	comp=N,1.7nm,0.3s,baz=209,slow=8.7,SNR=10.0							
BBB	**Bella Bella**	**8.80**	**356**	Pn		**Pn**	**05 46 57.6**	**+2.9**
ELK	**Elko**	**9.23**	**103**	Pn		**Pn**	**05 47 02.5**	**+1.5**
	comp=N,0.2nm,0.3s,baz=306,slow=10,SNR=12							
HLID	**Hailey**	**9.24**	**85**	Pn		**Pn**	**05 47 02.3**	**+1.2**
MSO	**Missoula**	**9.92**	**65**			**Pn**	**05 47 10.8**	**+0.5**
MSO	**Missoula**	**9.92**	**65**	P			05 47 10.8	
	baz=254							
JTMT	**Jette**	**9.98**	**60**	Pn		**Pn**	**05 47 11.6**	**+0.4**
ISA	**Isabella, Lake**	**10.22**	**136**	Pn		**Pn**	**05 47 16.5**	**+2.1**
MCMT	**McKenzie Canyo**	**10.36**	**77**	Pn		**Pn**	**05 47 17.1**	**+0.6**
DIB	**Dawson Inlet,**	**10.42**	**342**	Pn		**Pn**	**05 47 20.3**	**+3.4**
ARVC	**Arvin**	**10.48**	**139**	P			05 47 20.5	
	baz=325							
DLMT	**Dillon**	**10.58**	**74**	Pn		**Pn**	**05 47 20.3**	**+1.0**
HVU	**Hansel Valley**	**10.71**	**94**	Pn		**Pn**	**05 47 20.9**	**-0.3**
LRM	**Limekiln Ridge**	**10.73**	**72**	Pn		**Pn**	**05 47 22.0**	**+0.5**
WALA	**Waterton Lakes**	**10.74**	**54**	Pn		**Pn**	**05 47 22.6**	**+1.1**
BGU	**Big Grassy Mou**	**10.75**	**99**	Pn		**Pn**	**05 47 22.8**	**+1.0**

OSI	Osito Audit: C	10.95	141	Pn		Pn	05 47 25.5	+1.2
PRN	Pahroc Range	10.98	119	Pn		Pn	05 47 24.7	-0.3
SPUT	South Promonto	11.06	96	Pn		Pn	05 47 27.4	+1.4
EDW2	Edwards Air Fo	11.08	137	P			05 47 29.7	
	baz=323							
PSUT	Pine Spring	11.15	111	Pn		Pn	05 47 27.4	+0.1
DUG	Dugway, Tooele	11.15	102	P			05 47 29.6	
	baz=292							
BOZ	Bozeman (W)	11.28	74			Pn	05 47 30.1	+1.2
BOZ	Bozeman (W)	11.28	74	P			05 47 30.0	
	baz=264							
HRY	Holter Researc	11.30	68			Pn	05 47 29.2	0.0
QLMT	Earthquake Lak	11.37	77			Pn	05 47 31.3	+1.0
SHPR	Sheep Range	11.48	123			Pn	05 47 31.2	-0.6
YHB	Horse Butte	11.54	78			Pn	05 47 34.3	+1.8
YHL	Hebgen Lake	11.55	77			Pn	05 47 34.2	+1.5
HWUT	Hardware Ranch	11.63	94			Pn	05 47 33.5	-0.2
YMR	Madison River	11.70	78			Pn	05 47 36.8	+2.0
AHID	Auburn Hatcher	11.74	88			Pn	05 47 37.0	+1.8
BFSC	Mount Baldy Ra	11.76	138	P			05 47 39.4	
	baz=324							
TUQ	Turquoise Moun	11.76	129	P			05 47 40.9	
	baz=316							
YHH	Holmes Hill	11.78	78			Pn	05 47 37.6	+1.6
REDW	Red Top Meadow	11.84	85			Pn	05 47 37.7	+1.0
FLWY	Flagg Ranch	11.90	81			Pn	05 47 38.7	+1.2
YNR	Norris Junctio	11.90	78			Pn	05 47 38.3	+0.8
H17A	Grant Village	11.98	80			Pn	05 47 39.4	+0.7
H17A	Grant Village	11.98	80	P			05 47 43.1	
	baz=271							
HEC	Hector,Ludlow	11.98	132	P			05 47 43.4	
	baz=319							
JLU	Jordanelle	11.99	98	Pn		Pn	05 47 40.0	+1.1
CCUT	Cedar City	12.00	115	Pn		Pn	05 47 39.0	0.0
LOHW	Long Hollow	12.00	83			Pn	05 47 40.1	+1.2
MPU	Maple Canyon	12.06	101	Pn		Pn	05 47 41.2	+1.5
LKWY	Lake	12.10	79			Pn	05 47 41.6	+1.3
SZCU	Shurtz Canyon	12.16	114			Pn	05 47 41.3	+0.3
YMP	Mirror Lake Pl	12.28	78			Pn	05 47 44.7	+1.9
MSU	Marysvale	12.31	108			Pn	05 47 44.3	+1.1
GMRC	Granite Mounta	12.38	130	P			05 47 48.6	
	baz=318							
YNE	Yellowstone No	12.38	77			Pn	05 47 42.9	-1.2
BW06	Boulder Array	12.86	87			Pn	05 47 52.4	+1.7
BW06	Boulder Array	12.86	87	P			05 47 53.1	
	baz=279							
PD31	Pinedale Array	12.86	87			Pn	05 47 51.9	+1.3
PDAR	Pinedale Array	12.86	87	Pn		Pn	05 47 52.9	+2.2
	comp=N,0.1nm,0.3s,baz=276,slow=11,SNR=28							
PDAR	Pinedale Array	12.86	87			Pn	05 47 51.8	+1.1
RLMT	Red Lodge	12.91	76	Pn		Pn	05 47 52.3	+0.9
RLMT	Red Lodge	12.91	76	P			05 47 53.3	
	baz=269							
EGMT	Eagleton	12.97	63	Pn		Pn	05 47 52.8	+0.7
EGMT	Eagleton	12.97	63	P			05 47 52.1	
	baz=255							
IRM	Iron Mountain	13.13	131	P			05 47 58.5	
	baz=319							
MONP2	Monument Peak	13.45	138	P			05 48 02.0	
	baz=325							
PDMCI	Parker Dam,Lak	13.59	128	P			05 48 05.0	
	baz=316							
O20A	White River Ci	14.46	97	Pn		Pn	05 48 13.6	+1.0
O20A	White River Ci	14.46	97	P			05 48 15.4	
	baz=289							
K22A	Casper	15.08	86	Pn		Pn	05 48 21.3	+0.4
K22A				IAmb		IAmb	05 48 30.8	
	comp=Z,4.4nm,0.8s							
LAO	LASA Array	15.12	70	Pn		Pn	05 48 21.5	+0.3
LAO				IAmb		IAmb	05 48 31.0	
	comp=Z,11nm,0.8s							
LAO	LASA Array	15.12	70	P			05 48 21.2	
	baz=265							
DLBC	Dease Lake	15.15	354	Pn		Pn	05 48 19.1	-2.4
	comp=Z,0.1nm,0.3s,baz=269,slow=7.4,SNR=2.6							
DLBC	Dease Lake	15.15	354	Pn		Pn	05 48 22.0	+0.5
DLBC				IAmb		IAmb	05 48 29.8	
	comp=Z,7.8nm,0.8s							
SMCO	Snowmass	15.72	99	Pn		Pn	05 48 30.2	+0.8
W18A	Petrified Fore	15.79	116	P		P	05 48 33.2	-0.8
W18A				IAmb		IAmb	05 48 45.2	
	comp=Z,11nm,0.9s							
N23A	Red Feather La	15.90	92	P			05 48 32.2	
	baz=286							
214A	Organ Pipe Nat	16.07	131	Pn		Pn	05 48 33.8	0.0
214A	Organ Pipe Nat	16.07	131	P			05 48 37.0	
	baz=320							
PHWY	Pilot Hill	16.15	90	Pn		Pn	05 48 34.2	-0.7
S22A	4UR Ranch, Cre	16.41	103	P			05 48 40.2	
	baz=297							
ISCO	Idaho Springs	16.48	95	Pn		Pn	05 48 38.3	-0.8
ISCO				IAmb		IAmb	05 48 46.5	
	comp=Z,9.4nm,0.9s							
ISCO	Idaho Springs	16.48	95	P			05 48 39.9	
	baz=290							
RSSD	Black Hills	16.68	80	Pn		Pn	05 48 42.6	+1.0
DGMT	Dagmar	16.70	64	Pn		Pn	05 48 42.0	+0.4
DGMT				IAmb		IAmb	05 48 47.5	
	comp=Z,16nm,1.1s							
DGMT	Dagmar	16.70	64	P			05 48 43.8	
	baz=261							
TUC	Tucson	16.98	125	Pn		Pn	05 48 44.5	-0.7
ANMO	Albuquerque	18.08	111	P		Pn	05 48 59.3	+0.2
	comp=Z,0.1nm,0.3s,baz=310,slow=12,SNR=14							
ANMO	Albuquerque	18.08	111	P		Pn	05 48 58.5	-0.6
ANMO	Albuquerque	18.08	111	P			05 49 01.3	
	baz=304							
T25A	Trinidad	18.40	102	P			05 49 05.1	
	baz=297							
121A	Cookes Peak, D	18.68	119	P			05 49 10.7	
	baz=311							
KSCO	Kaye Shedlock'	18.92	95	P		Pn	05 49 10.2	+1.0
KSCO				IAmb		IAmb	05 49 12.2	
	comp=Z,13nm,0.8s							
YKA	Yellowknife Ar	20.47	17	P		P	05 49 25.2	+0.1
	comp=Z,1.9nm,0.8s,baz=205,slow=11,SNR=22							
MNTX	Cornudas Mount	20.76	117	P		P	05 49 28.9	+0.3
MNTX	Cornudas Mount	20.76	117	P			05 49 32.0	
	baz=311							
N25K	Chitina, Valde	20.96	336	P		P	05 49 31.0	+0.4
N25K				IAmb		IAmb	05 49 36.0	
	comp=Z,6.7nm,0.8s							
N25K	Chitina, Valde	20.97	336	P			05 49 35.4	
	baz=142							
GDL2	Guadalupe Moun	21.11	114	P		P	05 49 34.3	+1.8
AMTX	Amarillo	21.43	105	P		P	05 49 37.8	+2.0
AMTX				IAmb		IAmb	05 49 45.6	
	comp=Z,9.9nm,0.8s							
BCAR	Beaver Creek A	21.45	342	P		P	05 49 36.7	+1.0
KDAK	Kodiak Island	21.45	321	P		P	05 49 34.2	-1.4
	comp=Z,10.0nm,0.8s,baz=124,slow=7.5,SNR=2.3							
MENT	Mentasta	21.81	339	P		P	05 49 40.6	+1.1
MENT				IAmb		IAmb	05 49 44.0	
	comp=Z,9.5nm,0.9s							
DAWY	Dawson	21.84	345	P		P	05 49 40.8	+0.8
DAWY				IAmb		IAmb	05 49 58.1	
	comp=Z,6.0nm,1.1s							
R32A	Long Quarter,	21.98	93	P		P	05 49 41.6	-0.1
R32A				IAmb		IAmb	05 49 44.8	
	comp=Z,9.0nm,0.8s							
ECSD	EROS Data Cent	22.05	79	P			05 49 43.6	
	baz=280							
AGMN	Agassiz Nation	22.22	66	P			05 49 45.4	
	baz=269							
ULM	Lac du Bonnet	22.32	61	P		P	05 49 44.4	-0.8
	comp=Z,9.6nm,1.0s,baz=269,slow=11,SNR=16							
K27K	Chicken	22.35	343	P		P	05 49 44.6	-0.7
K27K				IAmb		IAmb	05 49 49.0	
	comp=Z,11nm,1.1s							
K27K	Chicken	22.35	343	P			05 49 46.6	
	baz=150							
WAT6	Susitna Watana	22.66	335	P			05 49 49.8	
	baz=138							
SCRK	Sand Creek	22.74	341	P			05 49 50.5	
	baz=147							
SUA	Susitna One	22.88	330	P		P	05 49 52.6	+1.5
SUA				IAmb		IAmb	05 49 55.8	
	comp=Z,9.1nm,1.0s							
SUA	Susitna One	22.88	330	P			05 49 52.2	
	baz=131							
KSU1	Kansas State U	23.27	90	P			05 49 56.1	
	baz=291							
N35A	Tabor	23.41	85	P		P	05 49 58.8	+2.2
TX31	Lajitas Ar. Si	23.44	119	P		P	05 49 58.3	+1.3
TX31				IAmb		IAmb	05 50 17.1	
	comp=Z,7.0nm,1.1s							
TX32	Lajitas Array	23.44	119	P		P	05 49 57.9	+0.8
TXAR	Lajitas Array	23.44	119	P		P	05 49 57.2	+0.2
	comp=Z,1.0nm,0.8s,baz=299,slow=8.4,SNR=10							
TXAR	Lajitas Array	23.44	119	P		P	05 49 57.1	0.0
WMOK	Wichita Mounta	23.56	102	P		P	05 50 00.0	+1.9
WMOK	Wichita Mounta	23.56	102	P			05 49 60.0	
	baz=300							
EPYK	Eagle Plains	23.60	350	P		P	05 49 59.0	+0.8
EPYK				IAmb		IAmb	05 49 59.8	
	comp=Z,7.0nm,0.8s							
EPYK	Eagle Plains	23.60	350	P			05 49 59.1	
	baz=162							
RND	Reindeer	23.62	335	P		P	05 49 59.2	+0.7
RND				IAmb		IAmb	05 50 14.9	
	comp=Z,6.8nm,1.1s							
B35A	Bob, Littlefor	23.64	66	P		P	05 49 60.0	+1.2
B35A				IAmb		IAmb	05 50 12.5	
	comp=Z,5.3nm,1.0s							
MCK	McKinley	23.89	336	P			05 50 01.7	
	baz=138							
BCOK	Bluff Creek, N	23.95	99	P		P	05 50 03.0	+1.1
OK029	Liberty Lake	24.00	98	P		P	05 50 02.9	+0.5
ABTX	Abilene, Hawle	24.08	107	P		P	05 50 03.2	+0.1
ABTX				IAmb		IAmb	05 50 08.3	
	comp=Z,7.4nm,1.1s							
TRF	Thorofare Moun	24.09	334	P		P	05 50 03.7	+0.5
TRF	Thorofare Moun	24.09	334	P			05 50 04.2	
	baz=135							
ILAR	Eielson Array	24.12	339	P		P	05 50 02.7	-0.5
	comp=Z,3.4nm,0.8s,baz=152,slow=8.9,SNR=28							
CCB	Clear Creek Bu	24.27	338	P		P	05 50 04.8	+0.3
PPLA	Purkeypile	24.34	332	P			05 50 06.3	
	baz=131							
NEA2	Nenana	24.57	337	P			05 50 07.6	
	baz=139							
BPAW	Bear Paw Mtn.	24.78	335	P			05 50 09.0	
	baz=135							
CHUM	Lake Minchumin	25.05	334	P			05 50 11.5	
	baz=133							
I23K	Minto, Yukon-K	25.08	338	P			05 50 12.5	
	baz=139							
INK	Inuvik	25.18	354	P		P	05 50 11.7	-1.0
	comp=Z,2.9nm,0.8s,baz=161,slow=10,SNR=11							
N38A	Joes South For	25.18	84	P		P	05 50 13.2	+0.2
E38A	The Farm, Brul	25.21	70	P		P	05 50 13.2	0.0
P38A	Dawn	25.33	87	P		P	05 50 15.2	+0.8
MLY	Manley	25.38	337	P		P	05 50 14.2	-0.4
MLY	Manley	25.38	337	P			05 50 15.0	
	baz=137							
FCC	Fort Churchill	25.46	41	P		P	05 50 16.4	+1.1
BMAR	Burnt Mountain	25.83	345	P		P	05 50 19.3	+0.6
U38A	Gravette	25.93	94	P		P	05 50 19.2	-0.7
C36M	Paulatuk	26.04	2	P			05 50 20.4	
	baz=185							
HHAR	Hobbs	26.33	94	P		P	05 50 24.4	+0.9
HHAR				IAmb		IAmb	05 50 29.7	
	comp=Z,7.8nm,1.1s							
R40A	Maddies Statio	26.73	89	P		P	05 50 28.0	+1.0
R40A				IAmb		IAmb	05 50 38.2	
	comp=Z,9.1nm,1.1s							
IMAR	Indian Mountai	26.94	336	P		P	05 50 28.5	-0.2
TOLK	Toolik Lake Re	27.87	343	P			05 50 38.6	
	baz=143							
A21K	Barrow	31.49	342	P			05 51 10.9	
	baz=136							
SEY	Seymchan	48.39	323	P		P	05 53 28.1	-1.1
	comp=Z,0.8nm,0.4s,baz=75,slow=8.5,SNR=7.8							
MA2	Magadan	50.17	319	P		P	05 53 41.7	-1.1
	comp=Z,1.3nm,0.4s,baz=98,slow=8.1,SNR=3.8							
H11N3	WAKE ISLAND Hy	59.39	269	T		T	06 58 45.4	
	baz=50,slow=75,SNR=101							
H11N2	WAKE ISLAND Hy	59.39	269	T		T	06 58 44.3	
	baz=50,slow=75,SNR=82							
H11N1	WAKE ISLAND Hy	59.40	269	T		T	06 58 53.3	
	baz=50,slow=75,SNR=69							
H11S1	WAKE ISLAND Hy	60.31	268	T		T	06 59 57.5	
	baz=50,slow=75,SNR=677							
H11S2	WAKE ISLAND Hy	60.31	268	T		T	06 59 56.2	
	baz=50,slow=75,SNR=542							
H11S3	WAKE ISLAND Hy	60.33	268	T		T	07 00 02.9	
	baz=50,slow=75,SNR=329							
FINES	FINESS Array B	73.25	13	P		P	05 56 17.7	-0.6
	comp=Z,4.1nm,1.2s,baz=354,slow=5.6,SNR=1.2							
SONM	Songino Array	77.63	326	P		P	05 56 42.8	-1.1
	comp=Z,0.6nm,0.8s,baz=68,slow=4.0,SNR=3.8							
SONM	Songino Array	77.63	326	IAmb		IAmb	05 56 50.9	
	comp=Z,1.1nm,1.0s							
KURBB	Kurchatov Arra	83.71	344	P		P	05 57 15.6	-0.6
	comp=Z,0.4nm,0.6s,baz=15,slow=5.0,SNR=2.7							

MAN 11 06:10:50.3, 9.08N×126.22E, h14km, mb3.7, ML2.5, MS2.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BUTP	Butuan	0.60	260	eP		Pg		06 11 02.0	-0.1
BUTP				eS		Sn		06 11 14.5	+0.4
GLSP	General Luna,	0.71	352	eP		Pg		06 11 03.8	-0.3
GLSP				eS		Sn		06 11 16.7	+0.1

IDC 11 06:25:32.0±1.3, 12.79N×124.97E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/54, mbtmp3.8/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/42, Error ellipse: s-maj=72.2km s-min=20.1km az=59.0

MAN 11 06:25:37.8, 12.95N×125.01E, h37km, mb4.4, ML3.3, MS3.1

ISC 11 06:25:34.9±2.2, 12.97N±0.05×125.05E±0.08, h17km±13km, n18,σ1°45/22, mb3.7/5, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BESP	Borongan	1.41	165	eP			Pb	06 26 01.0	+0.1
BESP				eS			Sb	06 26 18.9	+0.3
SCSP	San Jose Seism	1.64	295	eP			Pb	06 26 05.1	+0.3
SCSP				eS			Sn	06 26 23.9	+0.1
OCLP	Ormoc	1.96	193	eP			Pn	06 26 08.6	+1.2
OCLP				eS			Sn	06 26 32.6	+1.1
JCNP	Jose Panganiba	2.64	300	eP			Pn	06 26 18.4	+1.6
JCNP				eS			Sn	06 26 49.6	+1.2
RCP	Roxas	2.66	238	eP			Pb	06 26 21.0	-1.1
MSLP	Maasin	2.83	184	eP			Pn	06 26 21.8	+2.5
MSLP				eS			Sn	06 26 55.0	+1.9
LLP	Lapu-Lapu	2.84	202	eP			Pg	06 26 29.2	-0.3
LLP				eS			Sb	06 26 58.5	-1.4
GUIM	Jordan	3.35	226	eP			Pn	06 26 29.1	+2.4
GUIM				eS			Sn	06 27 06.7	+0.6
DAV	Davao City (W)	5.89	175	LR			LR	06 29 32.2	
	comp=Z,83nm,20.0s,baz=308,slow=42								
JCJ	Chichijima	21.33	46	LR			LR	06 39 30.1	
	comp=Z,31nm,18.9s,baz=330,slow=39								
CMAR	Chiang Mai Arr	25.70	286	P			P	06 31 03.6	-0.9
	0.7nm,0.3s,baz=78,slow=7.8,SNR=4.1								
WRA	Warramunga Arr	33.96	164	P			P	06 32 15.2	-2.5
	0.4nm,0.6s,baz=343,slow=9.1,SNR=6.5								
WRA				PcP			PcP	06 34 54.7	-1.2
	0.4nm,0.5s,baz=343,slow=2.7,SNR=6.7								
ASAR	Alice Springs	37.43	167	P			P	06 32 46.5	-1.0
	0.4nm,0.4s,baz=348,slow=7.4,SNR=18								
ASAR				PcP			PcP	06 35 05.1	-1.0
	0.4nm,0.4s,baz=339,slow=3.1,SNR=6.8								
H11N1	WAKE ISLAND Hy	40.62	75	T			T	07 17 12.9	
	baz=267,slow=74,SNR=7.6								
H11N2	WAKE ISLAND Hy	40.63	75	T			T	07 17 01.5	
	baz=267,slow=74,SNR=5.5								
H11N3	WAKE ISLAND Hy	40.64	75	T			T	07 17 12.1	
	baz=267,slow=74,SNR=5.7								
MKAR	Makanchi Array	49.17	322	P			P	06 34 23.2	+1.1
	1.7nm,1.0s,baz=119,slow=9.5,SNR=8.7								
ZALV	Zalesovo Beam	51.70	331	P			P	06 34 41.0	-0.1
	0.5nm,0.3s,baz=116,slow=6.6,SNR=1.7								

JMA 11 06:39:27.2±0.2, 24.86N×122.40E, h120km±2km, M2.1
TAP 11 06:39:27.3, 24.90N×122.48E, h116km±1km, ML3.4, D

ISC 11 06:39:28.1±1.7, 24.87N±0.06×122.44E±0.03, h115km±10km, n64,σ0.57/118, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.43	289	eP			Pn	06 39 44.3	-0.7
TWB1	baz=284			eS			Sn	06 39 58.1	+0.4
NTC	Toucheng	0.55	268	eP			Pn	06 39 45.6	-0.2
NTC	baz=265			eS			Sn	06 39 58.4	-0.6
TIPB	Shuangxi	0.56	280	eP			Pn	06 39 45.8	-0.1
TIPB	baz=277			eS			Sn	06 39 59.8	+0.5
TWC	Suao	0.59	244	eP			Pn	06 39 46.5	+0.4
TWC	baz=243			eS			Sn	06 39 59.2	-0.4
JYNG	Yonagunijimaku	0.62	132	P			Pn	06 39 46.3	0.0
NDS	Dongshan	0.70	250	eP			Pn	06 39 46.8	0.0
NDS	baz=249			S			Sn	06 40 01.0	0.0
TWE	Neicheng	0.71	258	P			Pn	06 39 47.0	0.0
TWE	baz=256			S			Sn	06 40 01.3	+0.1
EWUT	Wuta	0.73	235	eP			Pn	06 39 47.2	+0.1
EWUT	baz=234			S			Sn	06 40 02.1	+0.5
ENTT	Nioudou	0.82	254	P			Pn	06 39 48.3	+0.3
ENTT	baz=252			eS			Sn	06 40 03.6	+0.6
NHDH	Xindian Distri	0.83	276	eP			Pn	06 39 47.7	-0.3
NHDH	baz=274			eS			Sn	06 40 02.6	-0.5
YM10	YM10	0.84	290	eP			Pn	06 39 48.3	+0.1
YM10	baz=287			eS			Sn	06 40 03.6	+0.2
NWLT	Wulai	0.85	264	P			Pn	06 39 47.7	-0.5
NWLT	baz=262			S			Sn	06 40 03.7	+0.2
YM04	YM04	0.86	289	eP			Pn	06 39 48.0	-0.4
YM04	baz=286			eS			Sn	06 40 03.0	-0.7
NDT	Datong Townshi	0.88	253	P			Pn	06 39 49.1	+0.6
NDT	baz=251			S			Sn	06 40 04.9	+1.0
YHNB	Yeheng	0.98	258	P			Pn	06 39 49.5	-0.1
YHNB	baz=257			S			Sn	06 40 05.8	0.0
NSK	Sanguang	1.00	259	P			Pn	06 39 49.5	-0.2
NSK	baz=257			S			Sn	06 40 06.0	-0.1
NACB	Ninganchiao	1.03	228	P			Pn	06 39 49.5	-0.5
NACB	baz=228			S			Sn	06 40 06.7	+0.1
NTY	Taoyuan	1.04	277	eP			Pn	06 39 49.6	-0.4
NTY	baz=275			eS			Sn	06 40 07.5	+0.8
NNSB	Datong	1.05	246	P			Pn	06 39 50.6	+0.2
NNSB	baz=245			S			Sn	06 40 07.9	+0.7
NNS	Nan Shan	1.06	246	P			Pn	06 39 50.8	+0.4
NNS	baz=245			S			Sn	06 40 07.7	+0.4
ETLH	Xiulin Townshi	1.09	233	eP			Pn	06 39 50.5	-0.2
ETLH	baz=232			S			Sn	06 40 07.8	0.0
TWD	Chiawan	1.10	224	eP			Pn	06 39 50.6	0.0
TWD	baz=224			eS			Sn	06 40 07.8	+0.1
FUSS	Fushou	1.25	240	eP			Pn	06 39 53.0	+0.4
FUSS	baz=240			S			Sn	06 40 11.2	+0.1
WHF	Hehuan Shan	1.29	236	eP			Pn	06 39 53.5	+0.3
WHF	baz=235			S			Sn	06 40 11.8	-0.4
IRIF	Iriomote-Funau	1.29	114	P			Pn	06 39 52.6	-0.2
IRIF				S			Sn	06 40 11.5	0.0
TWT	Tachien	1.30	242	eP			Pn	06 39 54.0	+1.0
TWT	baz=241			S			Sn	06 40 12.7	+0.7
LIOB	Emei	1.31	260	P			Pn	06 39 52.8	-0.2
LIOB	baz=259			S			Sn	06 40 12.0	+0.1
TDCB	Techi	1.32	242	eP			Pn	06 39 53.7	+0.5
TDCB	baz=241			S			Sn	06 40 12.6	+0.3
NSTT	Nanjuang	1.33	260	eP			Pn	06 39 52.5	-0.6
NSTT	baz=258			S			Sn	06 40 11.7	-0.5
ESL	Shilin	1.40	221	eP			Pn	06 39 53.6	-0.4
ESL	baz=221			eS			Sn	06 40 12.3	-1.3
CHGB	Renai	1.41	235	eP			Pn	06 39 54.7	+0.4
CHGB	baz=235			S			Sn	06 40 14.2	+0.1
WHP	Taichung City	1.48	247	P			Pn	06 39 55.4	+0.4
WHP	baz=246			eS			Sn	06 40 15.5	0.0
EGFH	Guangfu	1.51	218	eP			Pn	06 39 55.9	+0.6
EGFH	baz=218			eS			Sn	06 40 15.6	-0.4
JKRS	Kuro-shima	1.56	113	P			Pn	06 39 56.5	+0.6
JKRS				S			Sn	06 40 17.6	+0.5
NSY	Sanyi	1.59	254	eP			Pn	06 39 56.1	-0.1
NSY	baz=252			eS			Sn	06 40 17.7	0.0
WPL	Puli Township	1.60	238	eP			Pn	06 39 57.1	+0.8
WPL	baz=237			eS			Sn	06 40 18.9	+1.0
DPDB	Guoxing	1.61	239	eP			Pn	06 39 57.1	+0.6
DPDB	baz=238			eS			Sn	06 40 18.9	+0.7
VWDT	VWDT	1.62	227	eP			Pn	06 39 57.2	+0.5
VWDT	baz=227			eS			Sn	06 40 18.0	-0.3
JIJ	Ishigaki jima	1.63	108	P			Pn	06 39 57.0	+0.3
JIJ				S			Sn	06 40 18.2	-0.4
HGSD	Ruisui	1.66	214	eP			Pn	06 39 56.8	-0.2
HGSD	baz=214			eS			Sn	06 40 18.8	-0.2
EHY	Hungye	1.70	217	eP			Pn	06 39 57.2	-0.4
EHY	baz=217			eS			Sn	06 40 17.7	-2.3
SMLT	Sun Moon Lake	1.71	235	eP			Pn	06 39 58.2	+0.3
SMLT	baz=234			eS			Sn	06 40 20.9	+0.4
WDJ	Dajia District	1.72	253	eP			Pn	06 39 58.0	+0.3
WDJ	baz=251			eS			Sn	06 40 20.0	-0.3
JISG	Ishigakijimahi	1.73	99	P			Pn	06 39 57.8	-0.1
JISG				S			Sn	06 40 20.9	+0.3
SSLB	Suanglung	1.73	232	eP			Pn	06 39 58.8	+0.8
SSLB	baz=231			eS			Sn	06 40 22.0	+1.3
WWF	Wufeng	1.79	243	eS			Sn	06 40 21.0	-0.9
	baz=242								

YULB	**Yu-li**	**1.80**	**215**	*eP*	**Pn**	**06 39 58.5**	**-0.3**
	baz=215						
YULB				*eS*	**Sn**	**06 40 22.1**	**-0.2**
	baz=215						
EYUL	**Yuli**	**1.83**	**214**	*eP*	**Pn**	**06 40 00.2**	**+1.1**
	baz=214						
EYUL				*eS*	**Sn**	**06 40 23.6**	**+0.7**
	baz=214						
TWF1	**Yuli**	**1.84**	**215**	*eP*	**Pn**	**06 39 58.6**	**-0.6**
	baz=214						
TWF1				*eS*	**Sn**	**06 40 21.4**	**-1.6**
	baz=214						
WNT	**Mingjian**	**1.88**	**239**	*eP*	**Pn**	**06 39 59.6**	**-0.1**
	baz=238						
WNT				*eS*	**Sn**	**06 40 23.5**	**-0.4**
	baz=238						
YUS	**Yu-Shan**	**1.93**	**225**	*eS*	**Sn**	**06 40 26.2**	**+0.3**
	baz=224						
FULB	**Fuli**	**1.97**	**212**	*eP*	**Pn**	**06 40 01.0**	**+0.1**
	baz=212						
FULB				*eS*	**Sn**	**06 40 25.7**	**-0.2**
	baz=212						
ALS	**Alishan**	**2.01**	**228**	*eP*	**Pn**	**06 40 02.1**	**+0.4**
	baz=227						
ALS				*eS*	**Sn**	**06 40 27.9**	**+0.5**
	baz=227						
CHN5	**Tsauling**	**2.05**	**232**	*eP*	**Pn**	**06 40 02.5**	**+0.6**
	baz=231						
CHN5				*eS*	**Sn**	**06 40 28.6**	**+0.8**
	baz=231						
WDLH	**Douliu**	**2.09**	**236**	*eS*	**Sn**	**06 40 29.5**	**+0.7**
	baz=235						
WRL	**Guolierlin Hig**	**2.11**	**243**	*eS*	**Sn**	**06 40 29.2**	**0.0**
	baz=242						
EDH	**Donghe**	**2.16**	**209**	*eP*	**Pn**	**06 40 03.0**	**-0.3**
	baz=209						
EDH				*eS*	**Sn**	**06 40 29.1**	**-1.0**
	baz=209						
WTK	**Tuku**	**2.21**	**238**	*eS*	**Sn**	**06 40 31.4**	**0.0**
	baz=237						
TPUB	**Ta-pu**	**2.27**	**227**	*eS*	**Sn**	**06 40 33.4**	**+0.5**
	baz=226						
WTP	**Ta-pu**	**2.32**	**226**	*eP*	**Pn**	**06 40 05.6**	**+0.2**
	baz=225						
WTP				*eS*	**Sn**	**06 40 34.6**	**+0.5**
	baz=225						
LDUT	**Ludao**	**2.36**	**202**	*eS*	**Sn**	**06 40 33.3**	**-1.6**
	baz=202						
TWK	**Hsinying**	**2.39**	**229**	*eP*	**Pn**	**06 40 06.0**	**-0.3**
	baz=228						
TWK				*eS*	**Sn**	**06 40 36.0**	**+0.4**
	baz=228						
CHN1	**Nanshi**	**2.42**	**227**	*eS*	**Sn**	**06 40 36.9**	**+0.6**
	baz=226						
VWUC	**VWUC**	**2.71**	**273**	*eP*	**Pn**	**06 40 09.9**	**-0.5**
	baz=271						

JMA 11 06:41:12.8±0.1, 24°16N×122°81E, h53km, M1.1, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.32**	**23**	P	Pn	06 41 22.3	-0.1
JYNG				S	Sn	06 41 28.8	-0.4
YOJ	**Yonaguni jima**	**0.35**	**31**	P	Pn	06 41 22.7	0.0
YOJ				S	Sn	06 41 29.7	-0.1
IRIF	**Iriomote-Funau**	**0.86**	**78**	P	Pn	06 41 28.8	+0.1
IRIF				*eS*	Sn	06 41 40.7	+0.3
JKRS	**Kuro-shima**	**1.10**	**86**	*eS*	Sn	06 41 47.5	+1.4
JIJ	**Ishigaki jima**	**1.23**	**80**	S	Sn	06 41 48.8	-0.5
JISG	**Ishigakijimahi**	**1.43**	**72**	P	Pn	06 41 36.6	+0.2

TAP 11 06:41:43.1, 23°67N×121°54E, h15km, ML0.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.21**	**210**	P	Pb	06 41 48.6	0.0
	baz=210						
HGSD				*i* S	Sb	06 41 52.6	+0.3
	baz=210						
YULB	**Yu-li**	**0.36**	**219**	P	Pb	06 41 51.2	+0.1
	baz=218						
YULB				*i* S	Sb	06 41 57.1	+0.5
	baz=218						
VWDT	**VWDT**	**0.37**	**283**	*eP*	Pb	06 41 51.5	+0.1
	baz=282						
EYUL	**Yuli**	**0.38**	**212**	*eP*	Pb	06 41 51.5	-0.1
	baz=211						
EYUL				*eS*	Sb	06 41 57.9	+0.6
	baz=211						

*BUT **11** 06:45:49.2±1.5, 48°41N±0°04×114°24W±0°06, h13km±6km, Md3.5, ML3.7/59(NEIC), Error ellipse: s-maj=6.6km s-min=4.5km az=143.0*

NEIC 11 06:45:49.1±1.0, 48°40N±0°02×114°32W±0°07, h4km±6km, Error ellipse: s-maj=7.3km s-min=2.5km az=104.0, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTMT	**Jette**	**0.65**	**178**	Pg	Pg	06 46 01.5	-0.1
JTMT				Sg	Sg	06 46 09.8	-0.3
WALA	**Waterton Lakes**	**0.72**	**22**		Pg	06 46 02.5	-0.4
MSO	**Missoula**	**1.59**	**171**	Pn	Pn	06 46 17.3	-0.8
MSO				Sn	Sn	06 46 38.6	-0.5
MSO				IAML		06 46 39.8	
	725nm,0.5s						
NEW	**Newport**	**1.87**	**267**	Pn	Pn	06 46 21.7	-0.3
NEW				IAML		06 46 51.2	
	540nm,0.7s						
HRY	**Holter Researc**	**2.38**	**134**		Pn	06 46 29.2	+0.1
C09A	**Chrisman Ranch**	**2.71**	**259**	Pn	Pn	06 46 33.3	-0.2
LRM	**Limekiln Ridge**	**2.87**	**153**		Pn	06 46 35.5	-0.4
EGMT	**Eagleton**	**3.08**	**95**		Pn	06 46 38.7	+0.1
F10A	**Beach Ranch, E**	**3.13**	**220**		Pn	06 46 39.8	+0.5
E09A	**Wood Farm, Sta**	**3.21**	**235**		Pn	06 46 40.0	-0.2
E09A				IAML		06 47 37.6	
	comp=N,150nm,0.7s						
E09A				IAML		06 47 38.2	
	comp=E,149nm,0.2s						
DLMT	**Dillon**	**3.26**	**158**		Pn	06 46 41.2	+0.1
DLMT				IAML		06 47 32.4	
	comp=E,146nm,0.5s						
B08A	**Colville Reser**	**3.34**	**271**	Pn	Pn	06 46 41.8	-0.3
B08A				IAML		06 47 39.3	
	comp=N,108nm,0.6s						
BOZ	**Bozeman (W)**	**3.35**	**146**		Pn	06 46 42.0	-0.4
BOZ				IAML		06 47 33.5	
	comp=N,213nm,0.3s						
D08A	**Wollman Farm,**	**3.38**	**248**	Pn	Pn	06 46 42.0	-0.6
D08A				IAML		06 47 42.4	
	comp=N,114nm,0.6s						
PLID	**Pearl Lake**	**3.50**	**200**	Pn	Pn	06 46 44.6	0.0
PLID				IAML		06 47 41.4	
	comp=N,120nm,0.3s						
PLID				IAML		06 47 42.7	
	comp=N,101nm,0.6s						
MCMT	**McKenzie Canyo**	**3.71**	**164**		Pn	06 46 47.2	-0.2
E08A	**Dider Farm, El**	**3.74**	**241**	Pn	Pn	06 46 48.0	+0.4
E08A				IAML		06 47 56.9	
	comp=E,99nm,0.6s						
E08A				IAML		06 47 59.0	
	comp=N,89nm,0.6s						
HAWA	**Hanford**	**4.07**	**242**		Pn	06 46 52.3	+0.2
HAWA				IAML		06 48 08.4	
	comp=N,66nm,0.5s						
HAWA				IAML		06 48 10.8	
	comp=N,75nm,0.7s						
QLMT	**Earthquake Lak**	**4.08**	**150**		Pn	06 46 53.1	+0.5
BMO	**Blue Mountains**	**4.10**	**211**		Pn	06 46 52.7	+0.1
BMO				IAML		06 48 00.9	
	comp=N,62nm,0.9s						
GCMT	**Greycliff**	**4.11**	**128**		Pn	06 46 53.0	+0.2
BCYI	**Bear Canyon**	**4.13**	**171**		Pn	06 46 52.6	-0.6
YHL	**Hebgen Lake**	**4.15**	**147**		Pn	06 46 53.0	-0.5
YHL				IAML		06 48 00.4	
	comp=E,150nm,0.8s						
YHL				IAML		06 48 03.1	
	comp=N,125nm,0.5s						
E07A	**Sunnyside**	**4.18**	**246**	Pn	Pn	06 46 52.8	-0.8
E07A				IAML		06 48 19.8	
	comp=E,122nm,0.7s						
YHB	**Horse Butte**	**4.23**	**148**		Pn	06 46 54.1	-0.5
YHB				IAML		06 48 02.4	
	comp=E,104nm,0.4s						
YHB				IAML		06 48 03.0	
	comp=N,112nm,0.3s						
YHH	**Holmes Hill**	**4.33**	**145**		Pn	06 46 56.0	0.0
YHH				IAML		06 48 05.2	
	comp=N,70nm,0.3s						
YHH				IAML		06 48 07.5	
	comp=E,74nm,0.3s						
YMR	**Madison River**	**4.39**	**147**		Pn	06 46 57.3	+0.6
YMR				IAML		06 48 31.7	
	comp=E,86nm,0.9s						
LTY	**Liberty**	**4.43**	**257**		Pn	06 46 56.6	-0.5
LTY				IAML		06 48 19.8	
	comp=N,65nm,0.9s						
LTY				IAML		06 48 21.8	
	comp=E,61nm,0.6s						
G08A	**Pilot Rock**	**4.45**	**227**	Pn	Pn	06 46 57.6	+0.2
YNE	**Yellowstone No**	**4.50**	**137**		Pn	06 46 59.5	+1.2
F07A	**Phinny Hill Vi**	**4.57**	**239**	Pn	Pn	06 46 59.0	0.0
RLMT	**Red Lodge**	**4.77**	**131**		Pn	06 47 02.5	+0.5
HLID	**Hailey**	**4.83**	**181**		Pn	06 47 02.8	0.0
HLID				IAML		06 48 23.0	
	comp=E,67nm,0.5s						
HLID				IAML		06 48 25.4	
	comp=E,65nm,0.3s						
MFID	**Camas Ranch**	**5.09**	**192**		Pn	06 47 06.6	+0.3
D05A	**Enumclaw**	**5.31**	**260**	Pn	Pn	06 47 09.2	+0.1
D05A				IAML		06 48 48.9	
	comp=E,59nm,1.5s						
D05A				IAML		06 48 48.9	
	comp=N,35nm,1.6s						
LON	**Longmire**	**5.33**	**255**	Pn	Pn	06 47 09.5	0.0
I07A	**Izee**	**5.62**	**222**	Pn	Pn	06 47 13.9	+0.5
LAO	**LASA Array**	**5.74**	**104**		Pn	06 47 15.7	+0.5
WVOR	**Wild Horse Val**	**6.69**	**209**		Pn	06 47 26.1	-2.1
DGMT	**Dagmar**	**6.74**	**86**	Pn	Pn	06 47 28.0	-0.8

*NOU **11** 07:06:33.2, 41°76S×174°82E, h17km, MLv3.6, Cook Strait, New Zealand*

WEL 11 07:06:35.0, 42°S±1°×17°5E±°, h40km±2km, M3.3/18, ML3.7/18, MLv3.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=122.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHW	**Baring Head**	**0.23**	**39**	P	Pn	07 06 42.6	+0.1
BHW				S	Sn	07 06 47.7	0.0
WEL	**Wellington**	**0.31**	**12**	P	Pn	07 06 43.7	+0.3
CMWZ	**Cape Campbell**	**0.39**	**244**	P	Pn	07 06 44.7	+0.4
CMWZ				S	Sn	07 06 51.9	+1.1
PLWZ	**Palliser**	**0.43**	**88**	P	Pn	07 06 45.4	+0.5
PLWZ				S	Sn	07 06 53.0	+1.2
MSWZ	**Moikau Station**	**0.46**	**69**	P	Pn	07 06 45.9	+0.7
MSWZ				S	Sn	07 06 54.0	+1.6
TCW	**Tory Channel**	**0.48**	**321**	P	Pn	07 06 45.8	+0.3
TCW				S	Sn	07 06 53.2	+0.3
CAW	**Cannon Point**	**0.56**	**32**	P	Pn	07 06 47.5	+1.0
CAW				S	Sn	07 06 56.1	+1.5
TUWZ	**Tuamarina**	**0.57**	**285**	P	Pn	07 06 46.8	0.0
TUWZ				S	Sn	07 06 54.8	-0.3
PAWZ	**Paruwai Farm**	**0.60**	**71**	P	Pn	07 06 47.6	+0.6
PAWZ				S	Sn	07 06 57.1	+1.4
BSWZ	**Blackbirch Sta**	**0.62**	**257**	P	Pn	07 06 47.8	+0.4
BSWZ				S	Sn	07 06 57.4	+1.2
KIW	**Kapiti Island**	**0.74**	**14**	P	Pn	07 06 50.2	+1.2
KIW				S	Sn	07 07 00.9	+1.7
MTW	**Mount Morrison**	**0.75**	**56**	P	Pn	07 06 49.8	+0.7
MTW				S	Sn	07 07 00.6	+1.2
TRWZ	**Traveller**	**0.78**	**77**	P	Pn	07 06 50.0	+0.4
OGWZ	**Otaki Gorge**	**0.85**	**26**	P	Pn	07 06 51.6	+1.1
OGWZ				S	Sn	07 07 03.3	+1.5
HOWZ	**Holdsworth Sta**	**0.93**	**43**	P	Pn	07 06 52.5	+0.9
HOWZ				S	Sn	07 07 05.1	+1.4
DUWZ	**D'Urville Isla**	**0.97**	**323**	P	Pn	07 06 53.4	+1.2
DUWZ				S	Sn	07 07 06.5	+1.8
TMWZ	**Te Maipa**	**1.03**	**63**	P	Pn	07 06 53.4	+0.4
NNZ	**Nelson**	**1.04**	**290**	P	Pn	07 06 53.7	+0.6
MRZ	**Mangatainoka R**	**1.14**	**37**	P	Pn	07 06 55.6	+1.0
MRZ				S	Sn	07 07 10.5	+1.5
KHZ	**Kahutara**	**1.19**	**225**	P	Pn	07 06 55.0	-0.2
TIWZ	**Tintock**	**1.22**	**49**	P	Pn	07 06 56.3	+0.7
TIWZ				S	Sn	07 07 12.2	+1.4
THZ	**Tophouse**	**1.34**	**262**	P	Pn	07 06 57.6	+0.3
THZ				S	Sn	07 07 14.4	+0.4
PRWZ	**Pori Road**	**1.42**	**44**	P	Pn	07 06 58.9	+0.7
POWZ	**Post Office Ro**	**1.45**	**35**	P	Pn	07 06 59.6	+1.0
OHWZ	**Ohakea**	**1.46**	**19**	P	Pn	07 07 01.6	+2.8
BFZ	**Birch Farm**	**1.49**	**53**	P	Pn	07 06 59.3	+0.1
DVHZ	**Dannevirke**	**1.71**	**42**	P	Pn	07 07 02.4	+0.2
ANWZ	**Angora Road**	**1.76**	**51**	P	Pn	07 07 03.0	0.0
QRZ	**Quartz Range**	**1.79**	**294**	P	Pn	07 07 05.2	+1.8
TSZ	**Takapari Road**	**1.81**	**33**	P	Pn	07 07 02.9	-0.8
WAZ	**Wanganui**	**1.84**	**7**	P	Pn	07 07 07.3	+3.2
GVZ	**Greta Valley S**	**1.85**	**221**	P	Pn	07 07 03.6	-0.5
PRHZ	**Poroporohau**	**1.98**	**49**	P	Pn	07 07 06.5	+0.5
WPHZ	**Waipukurau**	**2.02**	**42**	P	Pn	07 07 07.7	+1.2
PNHZ	**Pukenui**	**2.03**	**35**	P	Pn	07 07 07.2	+0.5
LREZ	**Lake Rotokare**	**2.13**	**354**	P	Pn	07 07 12.5	+4.4
LTZ	**Lake Taylor**	**2.15**	**235**	P	Pn	07 07 08.1	-0.4
DSZ	**Denniston Nort**	**2.16**	**265**	P	Pn	07 07 09.1	+0.6
AMCZ	**Amberley**	**2.19**	**223**	P	Pn	07 07 08.0	-0.9
NMEZ	**Namu Road**	**2.25**	**344**	P	Pn	07 07 15.1	+5.4
PREZ	**Palmer Road**	**2.27**	**350**	P	Pn	07 07 14.4	+4.3
MOVZ	**Moawhango**	**2.32**	**21**	P	Pn	07 07 12.1	+1.4
KRHZ	**Kereru**	**2.33**	**34**	P	Pn	07 07 11.0	+0.2
BHHZ	**Black Hill Sta**	**2.34**	**27**	P	Pn	07 07 11.9	+0.9
KHEZ	**Kahui Hut**	**2.34**	**347**	P	Pn	07 07 14.9	+3.8
PKVZ	**Pokaka**	**2.35**	**13**	P	Pn	07 07 13.7	+2.6
NEZ	**North Egmont**	**2.35**	**349**	P	Pn	07 07 15.4	+4.2
WNVZ	**Wahianoa**	**2.36**	**18**	P	Pn	07 07 13.2	+1.8
TRVZ	**Turoa**	**2.38**	**16**	P	Pn	07 07 14.4	+2.7
NBZ	**Newall Road No**	**2.39**	**345**	P	Pn	07 07 16.6	+4.9
FWVZ	**Far West T-bar**	**2.42**	**16**	P	Pn	07 07 14.5	+2.2
TUVZ	**Tukino**	**2.43**	**18**	P	Pn	07 07 14.4	+2.0
PKE	**Pukeiti**	**2.44**	**347**	P	Pn	07 07 16.2	+3.8
KAHZ	**Kahuranaki**	**2.44**	**44**	P	Pn	07 07 12.5	0.0
OKCZ	**Okains Bay**	**2.45**	**209**	P	Pn	07 07 11.1	-1.4
VRZ	**Vera Road**	**2.46**	**1**	P	Pn	07 07 15.5	+2.9
SNVZ	**South Ngauruho**	**2.50**	**17**	P	Pn	07 07 15.4	+2.0
NGZ	**Ngauruhoe**	**2.50**	**17**	P	Pn	07 07 15.6	+2.2
OTVZ	**Oturere**	**2.53**	**18**	P	Pn	07 07 15.7	+2.0
NNVZ	**North Ngauruho**	**2.55**	**17**	P	Pn	07 07 16.2	+2.1
WTVZ	**West Tongariro**	**2.56**	**16**	P	Pn	07 07 16.1	+2.0
ETVZ	**East Tongariro**	**2.57**	**18**	P	Pn	07 07 16.1	+1.8
TWVZ	**Taurewa**	**2.58**	**13**	P	Pn	07 07 16.1	+1.9
TMVZ	**Te Maari**	**2.58**	**18**	P	Pn	07 07 16.3	+1.9
KRVZ	**Karewarewa**	**2.59**	**17**	P	Pn	07 07 16.8	+2.3
NTVZ	**North Tongarir**	**2.59**	**17**	P	Pn	07 07 16.5	+1.9
MQZ	**McQueen's Vall**	**2.60**	**214**	P	Pn	07 07 12.5	+1.0
OXZ	**Oxford**	**2.62**	**227**	P	Pn	07 07 13.2	-1.6
MCHZ	**McNeill Hill**	**2.63**	**36**	P	Pn	07 07 18.4	+3.4
AKCZ	**Akaroa Harbour**	**2.63**	**209**	P	Pn	07 07 13.4	-1.6
INZ	**Inchbonnie**	**2.66**	**244**	P	Pn	07 07 15.2	-0.2
BKZ	**Black Stump Fm**	**2.78**	**30**	P	Pn	07 07 16.8	-0.3
RACZ	**Rakaia**	**2.85**	**220**	P	Pn	07 07 16.1	-1.8
MRHZ	**Matea Rd**	**3.05**	**26**	P	Pn	07 07 21.1	+0.3
HIZ	**Hauiti**	**3.07**	**3**	P	Pn	07 07 23.9	+2.9
WACZ	**Wakanui South**	**3.15**	**221**	P	Pn	07 07 20.8	-1.3
RPZ	**Rata Peaks**	**3.42**	**230**	P	Pn	07 07 25.1	-0.7
ARCZ	**Arundel**	**3.50**	**226**	P	Pn	07 07 25.6	-1.3
TMZ	**Timaru**	**3.89**	**223**	P	Pn	07 07 30.8	-1.4
MWZ	**Matawai**	**3.91**	**35**	P	Pn	07 07 32.3	-0.4
LBZ	**Lake Benmore**	**4.33**	**228**	P	Pn	07 07 38.2	-0.1
AWAZ	**Awhitu Peninsu**	**4.51**	**360**	P	Pn	07 07 43.6	+2.8
ODZ	**Otahua Downs**	**4.54**	**219**	P	Pn	07 07 39.4	-1.8
WIAZ	**Waiheke Island**	**4.80**	**4**	P	Pn	07 07 47.7	+3.0
JCZ	**Jackson Bay**	**5.00**	**238**	P	Pn	07 07 47.6	0.0
EAZ	**Earnscleugh**	**5.35**	**225**	P	Pn	07 07 51.0	-1.3
CTZ	**Chatham Island**	**6.77**	**111**	P	Pn	07 08 11.3	-0.4

IDC 11 07:13:38.9±2.8, 6°75S×129°97E, h144km±39km, mb3.1/1, mb1 2.9/5, mb1mx2.8/42, mbtmp3.3/5, Error ellipse: s-maj=70.7km s-min=21.5km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.98**	**13**	P	Pn	07 15 05.6	+0.3
	0.7nm,0.3s,baz=201,slow=22,SNR=9.2						
SIJI				S	Sn	07 16 06.8	-6.0
	1.1nm,0.3s,baz=291,slow=24,SNR=1.4						
FITZ	**Fitzroy Crossi**	**12.05**	**200**	P	Pn	07 16 25.3	-0.7
	0.1nm,0.3s,baz=21,slow=8.6,SNR=1.5						
FITZ				S	Sn	07 18 33.3	-5.8
	0.1nm,0.3s,baz=241,slow=18,SNR=1.5						
WRA	**Warramunga Arr**	**13.79**	**163**	P	Pn	07 16 47.6	-0.8
	0.0nm,0.3s,baz=349,slow=13,SNR=2.1						
WRA				S	Sn	07 19 12.8	-8.3
	0.1nm,0.3s,baz=334,slow=22,SNR=1.8						
ASAR	**Alice Springs**	**17.24**	**168**	P	Pn	07 17 31.5	+0.5
	0.1nm,0.3s,baz=342,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	07 24 22.4	-0.1
	0.2nm,0.4s,baz=123,slow=6.7,SNR=2.4						

*IDC **11** 07:19:07.8±21.0, 38°39N×72°57E, h344km±131km, mb2.9/2, mb1 2.9/4, mb1mx2.6/45, mbtmp3.6/4, Error ellipse: s-maj=214.4km s-min=68.0km az=9.0*

ISC 11 07:18:50.1±2.2, 37°7N±0°2×72°1E±0°2, h200km, n6, σ1°00/8, 3C-1D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.27**	**20**	⇑Pn	**Pn**	**07 20 08.5**	**+0.5**
	3.2nm,0.6s						
AAK				⇑Sn	**Sn**	**07 21 09.6**	**-0.1**
	9.4nm,0.8s						
KK31	**Karatay Array**	**5.52**	**348**	⇓Pn	**Pn**	**07 20 11.8**	**+0.7**
	0.6nm,0.2s,baz=169,slow=14,SNR=19						
KK31				⇑Sn	**Sn**	**07 21 14.1**	**-1.1**
	5.3nm,0.3s,baz=176,slow=24,SNR=17						
MKAR	**Makanchi Array**	**11.82**	**37**	P	**P**	**07 21 37.6**	**0.0**
	0.1nm,0.3s,baz=216,slow=11,SNR=2.5						
ZALV	**Zalesovo Beam**	**18.47**	**24**	P	**P**	**07 22 51.3**	**+0.5**
	0.5nm,0.3s,baz=227,slow=9.7,SNR=13						
ARCES	**ARCESS Array B**	**40.36**	**337**	P	**P**	**07 26 08.8**	**+0.9**
	3.3nm,1.0s,baz=104,slow=7.6,SNR=3.9						
YKA	**Yellowknife Ar**	**80.00**	**3**	P	**P**	**07 30 35.3**	**-1.4**
	0.1nm,0.5s,baz=354,slow=5.3,SNR=5.9						

*DJA **11** 07:21:48.7±1.1, 7°3S±4°×107°5E±°, h16km±10km, M4.5/12, mb5.0/2, mB5.6/1, MLv4.2/12, Mw(mB)5.1/1*
*NEIC **11** 07:21:50.6±1.7, 7°23S±0°07×105°13E±0°07, h50km±8km, mb4.2/9, Error ellipse: s-maj=10.9km s-min=9.3km az=203.0*
*IDC **11** 07:21:50.8±4.4, 6°77S×105°27E, h56km±37km, mb3.7/11, mb1 3.8/12, mb1mx3.5/55, mbtmp4.0/12, ML4.6/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/39, Error ellipse: s-maj=34.1km s-min=16.7km az=59.0*

ISC 11 07:21:45.1±1.5, 7°05S±0°05×105°06E±0°04, h17km±9km, n58, σ1°34/59, mb4.2/15, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.48**	**88**	P	**Pg**	**07 22 13.4**	**-0.3**
SKJI				S	**Sn**	**07 22 30.5**	**+0.4**
KASI	**Kota Agung**	**1.62**	**340**	P	**Pg**	**07 22 17.4**	**+1.1**
KASI				S	**Sg**	**07 22 40.4**	**+3.0**
BLSI	**Bandar Lampung**	**1.68**	**6**	P	**Pg**	**07 22 17.4**	**-0.1**
BLSI				S	**Sg**	**07 22 39.9**	**+0.5**
DBJI	**Dramaga**	**1.75**	**74**	P	**Pb**	**07 22 16.5**	**-0.3**
DBJI				S	**Sb**	**07 22 37.7**	**-0.8**
TNG	**Tangerang**	**1.80**	**61**	P	**Pb**	**07 22 17.3**	**-0.4**
TNG				S	**Sb**	**07 22 39.3**	**-0.7**
CBJI	**Citeko**	**1.88**	**71**	P	**Pg**	**07 22 19.3**	**-2.1**
CBJI				S	**Sb**	**07 22 41.7**	**-0.7**
LWLI	**Liwa**	**2.25**	**334**	P	**Pg**	**07 22 27.4**	**-1.0**
LWLI				S	**Sg**	**07 22 57.4**	**-0.3**
LEM	**Lembang**	**2.55**	**85**	P	**Pn**	**07 22 27.8**	**+1.9**
	25nm,0.3s,baz=163,slow=22,SNR=3.3						
LEM				S	**Sb**	**07 23 00.3**	**-1.4**
	39nm,0.3s,baz=152,slow=23,SNR=9.6						
LEM				LR	LR	07 23 35.2	
	comp=Z,170nm,19.9s,baz=257,slow=45						
LEM	**Lembang**	**2.55**	**85**	P	**Pn**	**07 22 27.4**	**+1.5**
CISI	**Cisompet, Garu**	**2.78**	**101**	Pn	**Pb**	**07 22 32.7**	**-1.7**
CISI	**Cisompet, Garu**	**2.78**	**101**	P	**Pn**	**07 22 29.0**	**+0.1**
JCJI	**Jatiwangi**	**3.23**	**80**	P	**Pn**	**07 22 37.1**	**+1.9**
MNAI	**Manna**	**3.40**	**322**	Pn	**Pb**	**07 22 43.5**	**-1.4**
MNAI	**Manna**	**3.40**	**322**	P	**Pb**	**07 22 43.6**	**-1.4**
XMIS	**Christmas Isla**	**3.46**	**170**	Pn	**Pn**	**07 22 38.6**	**+0.4**
LHSI	**Lahat**	**3.55**	**334**	P	**Pb**	**07 22 45.6**	**-1.9**
PMBI	**Palembang**	**4.11**	**356**	Pn	**Pb**	**07 22 54.9**	**-2.2**
TPI	**Tanjungpandan**	**4.99**	**31**	P	**Pn**	**07 23 01.7**	**+2.4**
UGM	**Wanagama**	**5.48**	**99**	Pn	**Pn**	**07 23 09.6**	**+3.4**
JAGI	**Jajag, Banyuwa**	**9.12**	**99**	Pn	**Pn**	**07 23 58.5**	**+2.5**
ABJI	**Asem Bagus**	**9.13**	**95**	P	**Pn**	**07 23 57.3**	**+1.1**
GSI	**Gunungsitoli**	**11.17**	**318**	Pn	Pn	07 24 28.3	+4.2
BATI	**Baumata**	**18.66**	**101**	P	**Pn**	**07 26 03.3**	**+0.5**
	11nm,0.3s,baz=350,slow=16,SNR=2.5						
SOEI	**Soe**	**19.19**	**99**	P	**Pn**	**07 26 09.2**	**-0.2**
SOEI				IAmb	IAmb	07 26 27.1	
	comp=Z,13nm,0.6s						
FITZ	**Fitzroy Crossi**	**22.86**	**121**	P	**P**	**07 26 49.0**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=319,slow=8.0,SNR=10						
FITZ	**Fitzroy Crossi**	**22.86**	**121**	P	**P**	**07 26 48.8**	**+0.9**
KNRA	**Kununurra**	**24.74**	**112**	P	**P**	**07 27 06.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**26.06**	**347**	LR	LR	07 37 33.7	
	comp=Z,26nm,19

*IDC **11** 07:26:24.6±3.1,37°.50N×71°.25E,h98$^{km}_{\pm 26}$,mb3.2/9, mb1 3.4/16,mb1mx3.2/58,mbtmp3.6/16,MS3.8/1, Ms1 3.8/1,ms1mx2.4/33,Error ellipse: s-maj=25.6km s-min=17.8km az=171.0*

*NNC **11** 07:26:25.4±3.4,37°.76N×71°.32E,h0^{km},mb4.2,mpv3.8, Error ellipse: s-maj=26.3km s-min=18.2km az=171.0*

ISC 11 07:26:24.0±0.6,37°.31N±0°.05×71°.35E±0°.06,h109^{km},n32, σ1§87/41,mb3.5/9,4C-5D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.50**	**172**	P	**Pn**	**07 27 18.0**	**+1.2**
CEP				S	**Sn**	**07 27 57.0**	**-0.6**
CHCP	**Chirah Chowk**	**3.96**	**156**	P	**Pn**	**07 27 23.1**	**+0.3**
THW	**Thamme Wali**	**4.51**	**176**	P	**Pn**	**07 27 30.0**	**-0.2**
AML	**Almayashu** SNR=40	**5.15**	**20**	P	**Pn**	**07 27 39.3**	**+0.3**
UCH	**Uchtor** SNR=11	**5.49**	**25**	P	**Pn**	**07 27 43.8**	**+0.1**
EKS2	**Erkin-Say** SNR=8.2	**5.66**	**18**	P	**Pn**	**07 27 47.5**	**+1.7**
KK31	**Karatay Array** 7.5nm,0.4s,baz=179,slow=13,SNR=91	**5.83**	**354**	⇑P	**Pn**	**07 27 48.7**	**+0.8**
KK31				⇓S	**Sn**	**07 28 51.5**	**-1.9**
	6.9nm,0.3s,baz=182,slow=24,SNR=6.6						
AAK	**Ala-Archa** 2.7nm,0.3s,baz=164,slow=6.2,SNR=17	**5.85**	**23**	P	**Pn**	**07 27 48.3**	**0.0**
AAK				S	**Sn**	**07 28 51.5**	**-2.6**
	1.5nm,0.3s,baz=328,slow=19,SNR=2.1						
AAK	**Ala-Archa** SNR=10	**5.85**	**23**	P	**Pn**	**07 27 48.8**	**+0.5**
AAK	**Ala-Archa** 5.0nm,0.5s	**5.85**	**23**	P	**Pn**	**07 27 48.6**	**+0.3**
AAK				⇑S	**Sn**	**07 28 51.9**	**-2.2**
	27nm,0.8s						
THN	**Thein Dam**	**6.04**	**142**	*e*P	**Pn**	**07 27 51.0**	**+0.2**
THN				*ex*	**Sn**	**07 28 52.0**	**-6.6**
USP	**Ospenovka** SNR=6.3	**6.42**	**21**	P	**Pn**	**07 27 56.1**	**+0.1**
TKM2	**Tokmak 2** SNR=6.0	**6.48**	**29**	P	**Pn**	**07 27 57.0**	**0.0**
TKM2	**Tokmak 2** 9.2nm,1.1s	**6.48**	**29**	⇓P	**Pn**	**07 27 56.9**	**-0.1**
TKM2				⇓S	**Sn**	**07 29 08.6**	**-1.0**
	15nm,1.1s						
GEYT	**Alibeck** 1.4nm,0.3s,baz=104,slow=9.7,SNR=8.0	**10.52**	**277**	P	**Pn**	**07 28 49.8**	**-1.8**
GEYT				S	**Sn**	**07 30 44.0**	**-3.4**
	0.9nm,0.3s,baz=105,slow=26,SNR=1.9						
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=221,slow=13,SNR=8.6	**12.48**	**37**	P	**Pn**	**07 29 16.3**	**-1.3**
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=208,slow=11,SNR=1.5	**14.27**	**19**	P	**Pn**	**07 29 38.6**	**-2.2**
AB31	**Akbulak array** 1.0nm,0.3s,baz=162,slow=9.8,SNR=99	**14.53**	**329**	⇑P	**Pn**	**07 29 43.2**	**-0.9**
AB31				⇑S	**Sn**	**07 32 24.2**	**0.0**
	2.4nm,0.5s,baz=151,slow=22,SNR=8.4						
BVAR	**Borovoye Array** 0.2nm,0.3s,baz=191,slow=20,SNR=1.6	**15.73**	**358**	P	**Pn**	**07 29 58.2**	**-1.1**
AKTO	**Aktyubinsk** 0.7nm,0.3s,baz=114,slow=6.1,SNR=7.9	**16.23**	**328**	P	**P**	**07 30 06.1**	**-0.4**
AKTO	**Aktyubinsk** 2.9nm,0.6s	**16.23**	**328**	⇓P	**P**	**07 30 08.0**	**+1.5**
AKTO				⇓S	**Sn**	**07 33 05.6**	**+0.3**
	3.9nm,0.8s						
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=223,slow=10,SNR=4.0	**19.07**	**25**	P	**P**	**07 30 36.9**	**-0.6**
SONM	**Songino Array** 0.2nm,0.5s,baz=253,slow=8.6,SNR=2.6	**27.65**	**56**	P	**P**	**07 32 02.2**	**+0.7**
FINES	**FINESS Array B** 0.4nm,0.4s,baz=116,slow=9.4,SNR=1.3	**36.98**	**325**	P	**P**	**07 33 22.5**	**+0.1**
ARCES	**ARCESS Array B** 1.5nm,0.8s,baz=108,slow=7.9,SNR=5.1	**40.51**	**337**	P	**P**	**07 33 52.5**	**+0.8**
NOA	**NORSAR Array B** 0.5nm,0.7s,baz=105,slow=11,SNR=2.0	**43.91**	**323**	P	**P**	**07 34 20.1**	**+0.6**
JOW	**Kunigami** comp=Z,93nm,19.2s,baz=292,slow=38	**48.72**	**85**	LR	LR	07 57 29.1	
ESDC	**Sonseca Array** 0.3nm,0.6s,baz=62,slow=7.3,SNR=2.6	**57.33**	**298**	P	**P**	**07 36 01.4**	**+0.8**
TORD	**Torodi Ar. Bea** 0.4nm,0.6s,baz=54,slow=5.3,SNR=2.6	**66.02**	**268**	P	**P**	**07 36 59.3**	**+0.2**
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=354,slow=5.3,SNR=8.0	**80.43**	**3**	P	**P**	**07 38 22.9**	**-0.1**
YKA				sP	**pP**	**07 38 56.0**	**+3.7**
	0.3nm,0.7s,baz=353,slow=5.2,SNR=6.4						
WRA	**Warramunga Arr** 1.1nm,1.2s,baz=321,slow=5.1,SNR=2.3	**82.18**	**122**	P	**P**	**07 38 36.0**	**+3.0**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=317,slow=5.3,SNR=1.9	**84.49**	**125**	P	**P**	**07 38 48.6**	**+3.9**

*NEIC **11** 07:27:43.9±0.5,62°.90N±0°.04×150°.8W±0°.1,h101$^{km}_{\pm 8}$, Error ellipse: s-maj=7.5km s-min=4.3km az=123.0*

AEIC 11 07:27:44±0.7,62°.88N±0°.04×150°.80W±0°.06,h90$^{km}_{\pm 6}$, ML2.6,ML2.8/28(NEIC),Error ellipse: s-maj=5.8km s-min=3.9km az=195.0,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUT	**Chulitna**	**0.54**	**152**		Pn	07 28 00.2	+1.3
TRF	**Thorofare Moun**	**0.62**	**22**		Pn	07 28 01.2	+1.2
PPLA	**Purkeypile**	**0.64**	**272**		Pn	07 28 00.7	+0.6
PPLA	**Purkeypile**	**0.64**	**272**		Sn	07 28 13.7	+1.7
KTH	**Kantishna Hill**	**0.68**	**356**		Pn	07 28 01.3	+0.9
KTH					Sn	07 28 14.0	+1.4
WAT7	**Susitna Watana**	**0.90**	**92**		Pn	07 28 03.5	+0.9
SKT	**Skwentna**	**0.96**	**201**		Pn	07 28 04.0	+0.7
SKT					Sn	07 28 18.8	+1.1
WAT2	**Susitna Watana**	**1.02**	**84**		Pn	07 28 04.8	+0.8
WAT1	**Susitna Watana**	**1.03**	**92**		Pn	07 28 05.0	+0.9
BPAW	**Bear Paw Mtn.**	**1.23**	**356**		Pn	07 28 06.9	+0.5
GHO	**Glory Hole Cre**	**1.42**	**141**		Pn	07 28 10.0	+1.3
SUA	**Susitna One**	**1.42**	**179**		Pn	07 28 10.0	+1.1
WAT6	**Susitna Watana**	**1.44**	**101**		Pn	07 28 09.8	+0.6
PMR	**Palmer**	**1.51**	**148**	Pn	Pn	07 28 10.6	+0.8
SML	**Sawmill**	**1.58**	**132**	Pn	Pn	07 28 11.5	+0.7
SCM	**Sheep Creek Mo**	**1.93**	**121**	Pn	Pn	07 28 15.5	+0.2
PWL	**Port Wells**	**2.34**	**149**	Pn	Pn	07 28 20.8	+0.2
MDM	**Murphy Dome**	**2.38**	**27**	Pn	Pn	07 28 21.4	+0.3

*NEIC **11** 07:28:02.1±0.9,63°.50N±0°.01×149°.02W±0°.04,h11$^{km}_{\pm 7}$, Error ellipse: s-maj=2.8km s-min=1.9km az=70.0*

AEIC 11 07:28:02±1.1,63°.50N±0°.01×149°.03W±0°.04,h8$^{km}_{\pm 6}$, ML2.6,ML2.8/63(NEIC),Error ellipse: s-maj=2.8km s-min=1.5km az=71.0,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RND	**Reindeer**	**0.12**	**140**		Pg	07 28 05.2	+0.4
RND	**Reindeer**	**0.12**	**140**		Sg	07 28 07.3	+0.6
RND				IAML		07 28 07.5	
	comp=E,4μm,0.2s						
RND				IAML		07 28 07.6	
	comp=N,5μm,0.4s						
MCK	**McKinley**	**0.24**	**10**		Pg	07 28 07.3	+0.6
MCK	**McKinley**	**0.24**	**10**		Sg	07 28 10.9	+0.9
MCK				IAML		07 28 11.4	
	comp=N,801nm,0.7s						
MCK				IAML		07 28 11.4	
	comp=E,1μm,0.2s						
MCK	**McKinley** baz=190,SNR=284	**0.24**	**10**	P		07 28 07.4	
TRF	**Thorofare Moun**	**0.57**	**266**		Pg	07 28 12.9	-0.1
TRF	**Thorofare Moun**	**0.57**	**266**		Sg	07 28 20.7	+0.2
TRF				IAML		07 28 21.4	
	comp=N,875nm,0.3s						
TRF				IAML		07 28 21.4	
	comp=E,2μm,0.5s						
TRF	**Thorofare Moun** baz=84,SNR=52	**0.57**	**266**	P		07 28 13.0	
HUR	**Hurricane**	**0.59**	**208**		Pg	07 28 13.4	0.0
HUR					Sg	07 28 21.4	+0.3
BWN	**Browne**	**0.70**	**344**		Pg	07 28 15.6	+0.1
BWN					Sg	07 28 25.3	+0.6
BWN	**Browne**	**0.70**	**344**	IAML		07 28 26.3	
	comp=N,557nm,0.4s						
BWN				IAML		07 28 28.8	
	comp=E,680nm,0.6s						
WAT1	**Susitna Watana**	**0.71**	**162**		Pg	07 28 15.5	-0.1
KTH	**Kantishna Hill**	**0.85**	**275**	IAML		07 28 34.4	
	comp=E,282nm,0.6s						
KTH				IAML		07 28 34.9	
	comp=N,220nm,0.4s						
KTH	**Kantishna Hill**	**0.85**	**275**		Pg	07 28 17.9	-0.5
KTH	**Kantishna Hill**	**0.85**	**275**	IAML		07 28 34.4	
	comp=E,282nm,0.6s						
KTH				IAML		07 28 34.9	
	comp=N,220nm,0.4s						
BPAW	**Bear Paw Mtn.**	**1.06**	**306**	IAML		07 28 37.5	
	comp=N,175nm,0.5s						
BPAW				IAML		07 28 38.7	
	comp=E,120nm,0.3s						
BPAW	**Bear Paw Mtn.**	**1.06**	**306**		Pg	07 28 22.1	-0.2
BPAW	**Bear Paw Mtn.**	**1.06**	**306**	IAML		07 28 37.4	
	comp=N,175nm,0.5s						
BPAW				IAML		07 28 38.7	
	comp=E,120nm,0.3s						
BPAW	**Bear Paw Mtn.** baz=124,SNR=19	**1.06**	**306**	P		07 28 21.8	
WRH	**Wood River Hil**	**1.06**	**23**		Pg	07 28 22.0	-0.3
WRH					Sg	07 28 36.1	0.0
WAT6	**Susitna Watana** baz=328,SNR=8.9	**1.09**	**147**	P		07 28 22.3	
NEA2	**Nenana**	**1.10**	**359**		Pg	07 28 22.7	-0.4
NEA2	**Nenana**	**1.10**	**359**	IAML		07 28 38.3	
	comp=N,146nm,0.6s						
NEA2				IAML		07 28 39.3	
	comp=E,150nm,0.4s						
NEA2	**Nenana** baz=179,SNR=47	**1.10**	**359**	P		07 28 22.5	
CUT	**Chulitna**	**1.24**	**208**		Pn	07 28 25.1	-0.4
CUT					Sg	07 28 41.8	+0.1
CUT	**Chulitna**	**1.24**	**208**	IAML		07 28 43.3	
	comp=N,280nm,0.3s						
CUT				IAML		07 28 43.7	
	comp=E,290nm,0.4s						
CUT	**Chulitna** baz=27,SNR=11	**1.24**	**208**	P		07 28 25.1	
CCB	**Clear Creek Bu**	**1.27**	**24**		Pn	07 28 25.5	-0.5
HDA	**Harding Lake**	**1.29**	**44**		Pn	07 28 26.1	-0.3
HDA	**Harding Lake** baz=226,SNR=58	**1.29**	**44**	P		07 28 26.1	
HDA				P		07 28 26.1	
	baz=226,SNR=58						
PS08	**TAPS Pump Stn8**	**1.43**	**42**		Pn	07 28 28.2	0.0
PS08					Sb	07 28 47.2	+0.1
TCOL	**CIGO, UAF Yank**	**1.47**	**20**		Pn	07 28 28.4	-0.3
TCOL	**CIGO, UAF Yank** baz=201,SNR=40	**1.47**	**20**	P		07 28 28.4	
COLA	**College**	**1.47**	**20**		Pn	07 28 28.4	-0.3
MDM	**Murphy Dome**	**1.51**	**13**		Pn	07 28 28.9	-0.4
MDM					Sb	07 28 49.6	+0.1
MDM	**Murphy Dome** comp=E,32nm,0.4s	**1.51**	**13**	IAML		07 28 50.0	
MDM				IAML		07 28 50.8	
	comp=N,47nm,0.3s						
CHUM	**Lake Minchumin** baz=103,SNR=8.6	**1.52**	**286**	P		07 28 28.9	
PPLA	**Purkeypile**	**1.56**	**249**		Pn	07 28 30.4	+0.3
PPLA	**Purkeypile** baz=66,SNR=14	**1.56**	**249**	P		07 28 30.6	
IL31		**1.59**	**35**		Pn	07 28 30.0	-0.3
ILAR	**Eielson Array**	**1.59**	**35**		Pn	07 28 30.1	-0.3
I23K	**Minto, Yukon-K**	**1.66**	**355**		Pn	07 28 31.1	-0.2
I23K					Sb	07 28 54.6	+0.7
I23K	**Minto, Yukon-K** comp=E,115nm,0.7s	**1.66**	**355**	IAML		07 28 54.8	
I23K				IAML		07 28 55.0	
	comp=N,143nm,0.7s						
I23K	**Minto, Yukon-K** baz=175,SNR=24	**1.66**	**355**	P		07 28 31.3	
PAX	**Paxson**	**1.69**	**107**		Pn	07 28 32.5	+0.6
PAX	**Paxson** baz=290,SNR=12	**1.69**	**107**	P		07 28 32.4	
MLY	**Manley**	**1.71**	**335**		Pn	07 28 31.6	-0.5
MLY	**Manley** baz=153,SNR=25	**1.71**	**335**	P		07 28 31.4	
SML	**Sawmill**	**1.73**	**169**		Pn	07 28 32.1	-0.2
SML	**Sawmill** comp=E,115nm,0.8s	**1.73**	**169**	IAML		07 28 56.1	
SML				IAML		07 28 57.2	
	comp=N,127nm,0.7s						
SML	**Sawmill** comp=E,115nm,0.8s	**1.73**	**169**	IAML		07 28 56.1	
SML				IAML		07 28 57.2	
	comp=N,127nm,0.7s						
SML	**Sawmill** baz=350,SNR=6.4	**1.73**	**169**	P		07 28 31.9	
GHO	**Glory Hole Cre** comp=E,70nm,0.4s	**1.73**	**178**	IAML		07 28 58.0	
GHO				IAML		07 28 58.9	
	comp=N,74nm,0.6s						
GHO	**Glory Hole Cre**	**1.73**	**178**		Pn	07 28 31.9	-0.6
GHO					Sn	07 28 55.3	+0.5
GHO	**Glory Hole Cre** comp=E,70nm,0.4s	**1.73**	**178**	IAML		07 28 58.0	
GHO				IAML		07 28 58.9	
	comp=N,74nm,0.6s						
POKR	**Poker Plat Res**	**1.77**	**22**		Pn	07 28 32.6	-0.2
POKR	**Poker Plat Res** baz=204,SNR=5.8	**1.77**	**22**	P		07 28 32.3	
SCM	**Sheep Creek Mo**	**1.85**	**154**		Pn	07 28 34.2	+0.2
SCM	**Sheep Creek Mo** comp=E,112nm,0.8s	**1.85**	**154**	IAML		07 29 02.4	
PS07	**TAPS Pump Stn7**	**1.85**	**10**		Pn	07 28 33.9	-0.1
SKT	**Skwentna**	**1.91**	**218**		Pn	07 28 35.3	+0.5
SKT	**Skwentna** comp=E,122nm,0.7s	**1.91**	**218**	IAML		07 29 01.8	
SKT	**Skwentna** baz=36,SNR=5.4	**1.91**	**218**	P		07 28 34.7	
PMR	**Palmer**	**1.91**	**181**		Pn	07 28 35.5	+0.7
PMR	**Palmer** comp=E,66nm,0.3s	**1.91**	**181**	IAML		07 29 02.5	
PMR	**Palmer** comp=E,66nm,0.3s	**1.91**	**181**	IAML		07 29 02.5	
PMR	**Palmer** baz=1.4,SNR=9.1	**1.91**	**181**	P		07 28 34.6	
M24K	**Tolsona, Glenn**	**1.92**	**136**		Pn	07 28 35.5	+0.6
M24K	**Tolsona, Glenn** comp=N,127nm,0.4s	**1.92**	**136**	IAML		07 29 03.6	
M24K	**Tolsona, Glenn** baz=318,SNR=8.7	**1.92**	**136**	P		07 28 36.4	
SUA	**Susitna One** baz=21,SNR=6.8	**2.19**	**202**	P		07 28 39.0	
DOT	**Dot Lake**	**2.23**	**84**		Pn	07 28 39.7	+0.6
SCRK	**Sand Creek**	**2.29**	**76**		Pn	07 28 40.1	0.0
SCRK	**Sand Creek** comp=N,59nm,0.6s	**2.29**	**76**	IAML		07 29 14.3	
SCRK				IAML		07 29 14.5	
	comp=E,47nm,0.5s						
SCRK	**Sand Creek** baz=260,SNR=12	**2.29**	**76**	P		07 28 40.1	
KLU	**Klutina** baz=326,SNR=5.4	**2.48**	**143**	P		07 28 45.6	
PRP	**Porcupine Dome**	**2.53**	**35**		Pn	07 28 43.5	0.0
PRP	**Porcupine Dome** comp=E,36nm,0.7s	**2.53**	**35**	IAML		07 29 22.8	
PWL	**Port Wells**	**2.67**	**173**		Pn	07 28 46.4	+1.2
PWL				IAML		07 29 30.1	
	comp=N,45nm,0.5s						
PWL				IAML		07 29 58.5	
	comp=E,39nm,3.5s						
PWL	**Port Wells** comp=N,45nm,0.5s	**2.67**	**173**	IAML		07 29 30.1	
PWL				IAML		07 29 58.5	
	comp=E,39nm,3.5s						
BCAR	**Beaver Creek A**	**3.30**	**94**		Pn	07 28 54.0	0.0
FYU	**Fort Yukon**	**3.48**	**26**		Pn	07 28 56.6	+0.3
COLD	**Coldfoot**	**3.78**	**353**	Pn	Pn	07 29 01.1	+0.7
BRLK	**Bradley Lake**	**3.85**	**194**	Pn	Pn	07 29 00.4	-1.1
HMT	**Hamilton**	**3.89**	**142**	Pn	Pn	07 29 01.1	-1.0
DAWY	**Dawson**	**4.31**	**78**	Pn	Pn	07 29 08.8	+0.9
DAWY				IAML		07 30 20.4	
	comp=E,16nm,0.8s						
BMAR	**Burnt Mountain**	**4.36**	**23**	Pn	Pn	07 29 08.4	0.0
TOLK	**Toolik Lake Re**	**5.17**	**358**	Pn	Pn	07 29 21.0	+1.4
TOLK				IAML		07 32 11.2	
	comp=N,7.2nm,3.9s						
TOLK	**Toolik Lake Re** baz=177,SNR=5.5	**5.17**	**358**	P		07 29 21.3	
EPYK	**Eagle Plains**	**5.97**	**56**	Pn	Pn	07 29 31.2	+0.7
ANM	**Nome**	**7.25**	**286**	Pn	Pn	07 29 47.5	-0.6

*BJI **11** 07:45:10.7±0.0,41°.19N×142°.94E,h50^{km},mB4.9/35, mb4.6/48,Ms3.8/15,Ms7 3.7/17*

*MOS **11** 07:45:10.9±1.0,41°.10N×142°.79E,h39^{km},mb4.8/34,Error ellipse: s-maj=7.1km s-min=4.9km az=95.2*

*NIED **11** 07:45:11.1,41°.04N×142°.83E,h24^{km},MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.94; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-1.75; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.38; $M_{\phi r}$4.02; Fault plane solution: $M_0$4.50000×10^{15} NP1:φ$_s$11.00000°, δ78.00000°, λ89.00000°. NP2:φ$_s$195.00000°, δ12.00000°, λ94.00000°.*

*JMA **11** 07:45:11.0±0.1,41°.03N×142°.83E,h24^{km},M4.3*

JMA Felt I J1.

*NEIC **11** 07:45:12.8±2.1,41°.08N±0°.04×142°.9E±0°.1,h40$^{km}_{\pm 4}$, mb4.6/58,Error ellipse: s-maj=11.2km s-min=5.6km az=97.0*

*IDC **11** 07:45:14.1±1.7,41°.07N×142°.73E,h54$^{km}_{\pm 14}$,mb3.9/25, mb1 4.1/32,mb1mx4.0/45,mbtmp4.2/32,ML4.4/4,MS3.5/26, Ms1 3.5/26,ms1mx3.3/47,Error ellipse: s-maj=14.3km s-min=9.8km az=113.0*

ISC 11 07:45:12.4±0.5,41°.07N±0°.04×142°.90E±0°.04,h36$^{km}_{\pm 1}$, h37^{km}:pP-P,n259,σ1§20/268,mb4.6/86,MS3.7/29, 17C-26D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERM	**Erimo**	**0.96**	**12**	*d*iP	**Pn**	**07 45 29.7**	**+0.3**
ERM	**Erimo**	**0.96**	**12**	Pn	**Pn**	**07 45 29.9**	**+0.5**
ERM				Sn	**Sn**	**07 45 42.8**	**+1.0**
JEM	**Erimo**	**0.96**	**12**	P	**Pn**	**07 45 29.4**	**0.0**
JEM				S	**Sn**	**07 45 42.7**	**+0.8**
JARK	**Aomorirokkasho**	**1.16**	**267**	⇓P	**Pn**	**07 45 30.8**	**-1.2**
JAHD	**Aomorihigashid**	**1.19**	**280**	⇓P	**Pn**	**07 45 31.4**	**-1.1**
JNBK	**Urakawa-nobuka**	**1.21**	**355**	⇓P	**Pn**	**07 45 33.4**	**+0.6**
JNBK				*e*S	**Sn**	**07 45 49.5**	**+1.5**
JKEN	**Kujiedanarisaw**	**1.25**	**227**	⇓P	**Pn**	**07 45 31.7**	**-1.6**
JANG	**Nango**	**1.26**	**237**	⇓P	**Pn**	**07 45 32.3**	**-1.1**
JTM	**Tenmabayashi**	**1.41**	**259**	⇓P	**Pn**	**07 45 35.1**	**-0.4**
JTM				*e*S	**Sn**	**07 45 52.3**	**-0.6**
JOT	**Ohata**	**1.43**	**283**	⇓P	**Pn**	**07 45 34.9**	**-0.8**
JCH	**Churui**	**1.58**	**13**	⇓P	**Pn**	**07 45 38.2**	**+0.3**
JCH				*e*S	**Sn**	**07 45 58.4**	**+1.3**
JKB	**Kayabe**	**1.62**	**301**	⇓P	**Pn**	**07 45 37.7**	**-0.7**
JKB				*e*S	**Sn**	**07 45 57.1**	**-0.9**
JIAM	**Iburiatsuma**	**1.71**	**335**	P	**Pn**	**07 45 41.4**	**+1.7**
JBT2	**Biratori 2**	**1.75**	**347**	⇑P	**Pn**	**07 45 40.8**	**+0.6**
JOM	**Ohasama**	**2.01**	**218**	⇓P	**Pn**	**07 45 44.1**	**+0.3**
JOM				*e*S	**Sn**	**07 46 08.4**	**+0.7**
JEW	**Eniwo**	**2.07**	**329**	⇑P	**Pn**	**07 45 45.5**	**+0.9**
JEW				*e*S	**Sn**	**07 46 11.9**	**+2.8**
JEW	**Eniwo**	**2.07**	**329**		**Pn**	**07 45 45.9**	**+1.3**
JOMM	**Oshimamatsumae**	**2.22**	**283**	P	**Pn**	**07 45 46.7**	**0.0**
JOMM				*e*S	**Sn**	**07 46 12.4**	**-0.4**
JAR	**Ashorobuto**	**2.32**	**16**	P	**Pn**	**07 45 47.9**	**-0.1**
JAR				*e*S	**Sn**	**07 46 15.2**	**0.0**
JAK	**Akkeshi**	**2.35**	**34**	⇓P	**Pn**	**07 45 48.2**	**-0.2**
JAK				*e*S	**Sn**	**07 46 15.2**	**-0.7**
JKA	**Kamikawa-asahi**	**3.05**	**356**		**Pn**	**07 45 59.6**	**+1.5**
ASAJ	**Asahikawa** 23nm,0.3s,baz=195,slow=11,SNR=101	**3.05**	**356**	P	**Pn**	**07 45 59.6**	**+1.5**
ASAJ				S	**Sn**	**07 46 36.0**	**+2.6**
	35nm,0.3s,baz=323,slow=28,SNR=4.8						
NMR	**Nemuro--Hokkai**	**3.12**	**42**	⇓*i*P	**Pn**	**07 45 58.2**	**-0.7**
NMR				*i* S	**Sn**	**07 46 32.7**	**-2.1**
GLVR	**Golovnino**	**3.30**	**35**	⇓*i*P	**Pn**	**07 46 00.9**	**-0.6**
GLVR				*e*S	**Sn**	**07 46 38.4**	**-1.0**
GLVR				pmax	pmax		
	comp=Z,239nm,0.5s						
GLVR				pmax	pmax		
	comp=N,125nm,0.1s						
GLVR				pmax	pmax		
	comp=E,266nm,0.4s						
GLVR				smax	smax		
	comp=E,989nm,0.4s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
RUSJ	**Misakicho**	**3.49**	**29**	*e*P	**Pn**	**07 46 04.3**	**+0.2**
RUSJ				*e*S	**Sn**	**07 46 43.9**	**-0.3**
JMM	**Marumori**	**3.59**	**208**		**Pn**	**07 46 05.9**	**+0.4**
GRPR	**Tuman**	**3.61**	**35**	*e*P	**Pn**	**07 46 05.3**	**-0.5**
GRPR				*e*S	**Sn**	**07 46 44.2**	**-2.9**
GRPR				pmax	pmax		
	comp=E,105nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,269nm,0.4s						
GRPR				pmax	pmax		
	comp=N,87nm,0.2s						
GRPR				smax	smax		
	comp=N,589nm,0.4s						
GRPR				smax	smax		
	comp=E,2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.69**	**36**	⇑*i*P	**Pn**	**07 46 06.6**	**-0.1**
YUK				*i* S	**Sn**	**07 46 46.1**	**-2.8**
YUK				pmax	pmax		
	comp=Z,394nm,0.3s						
YUK				smax	smax		
	comp=N,786nm,0.5s						
YUK				smax	smax		
	comp=E,2μm,0.5s						
YUK				MLR	MLR		
	comp=Z,430nm,16.0s						
YUK				MLR	MLR		
	comp=E,426nm,11.0s						
YUK				MLR	MLR		
	comp=N,447nm,16.0s						
JSD	**Sado**	**4.69**	**231**		**Pn**	**07 46 22.2**	**+1.6**
JYT	**Yasato**	**5.28**	**204**		**Pn**	**07 46 29.3**	**+0.7**
KUR	**Kuril'sk**	**5.53**	**39**	*d*iP	**Pn**	**07 46 32.7**	**+0.7**
KUR				*e*S	**Sn**	**07 47 34.0**	**-0.2**
KUR				pmax	pmax		
	comp=Z,535nm,1.1s						
KUR				pmax	pmax		
	comp=Z,129nm,0.6s						
KUR				pmax	pmax		
	comp=N,37nm,0.4s						
KUR				smax	smax		
	comp=E,193nm,0.7s						
KUR				smax	smax		
	comp=N,319nm,1.5s						
KUR				smax	smax		
	comp=N,47nm,0.2s						
KUR				smax	smax		
	comp=E,214nm,0.4s						
MJAR	**Matsushiro Arr** comp=E,0.5nm,0.3s,baz=30,slow=14,SNR=26	**5.82**	**220**	P	**Pn**	**07 46 38.0**	**+1.9**
MJAR				LR	LR	07 49 05.4	
	comp=E,372nm,20.8s,baz=40,slow=40						
MJAR	**Matsushiro Arr**	**5.82**	**220**	P	**Pn**	**07 46 37.8**	**+1.7**
MJAR	**Matsushiro Arr**	**5.82**	**220**		**Pn**	**07 46 37.8**	**+1.7**
MAJO	**Matsushiro**	**5.82**	**221**	*i* P	**Pn**	**07 46 36.9**	**+0.8**
MAJO	**Matsushiro**	**5.82**	**221**		**Pn**	**07 46 36.5**	**+0.4**
MAT	**Matsushiro**	**5.82**	**221**	P	**Pn**	**07 46 38.3**	**+2.2**
MAT				S	**S

comp=Z,180nm,21.4s
MDJ LR LR
comp=Z,320nm,17.1s
MDJ LR LR
comp=Z,490nm,18.5s
KLR Kul'dur 11.32 320 P **Pn 07 47 52.3 +0.8**
comp=Z,0.2nm,0.3s,baz=131,slow=14,SNR=8.0
KLR LR LR 07 52 32.7
comp=Z,191nm,18.8s,baz=148,slow=39
KLR Kul'dur 11.32 320 *i* P **Pn 07 47 51.6 +0.1**
KLR pmax pmax
comp=Z,9.0nm,1.1s
KSRS Korea Array 12.15 258 P **Pn 07 48 02.6 -0.3**
comp=Z,1.1nm,0.3s,baz=66,slow=14,SNR=20
KSRS LR LR 07 52 25.4
comp=Z,279nm,18.8s,baz=67,slow=36
KSAR Wonju Array Be 12.19 258 P **Pn 07 48 03.0 -0.3**
KSAR Wonju Array Be 12.19 258 Pn **Pn 07 48 03.0 -0.3**
JNU Nakatsue 12.44 234 LR LR 07 53 35.3
comp=Z,160nm,19.5s,baz=57,slow=41
PETK Petropavlovsk- 15.66 35 LR LR 07 55 10.7
comp=Z,100nm,19.1s,baz=231,slow=38
ZEA Zeya 16.47 326 *e*P **Pn 07 48 57.8 -2.6**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=Z,200nm,15.0s
HIA Hailar 18.21 305 P **P 07 49 19.6 -2.6**
HIA pmax pmax
comp=Z,9.0nm,0.8s
HIA Hailar 18.21 305 P **P 07 49 19.6 -2.6**
MA2 Magadan 19.17 12 P **P 07 49 31.7 -0.8**
comp=Z,0.4nm,0.3s,baz=196,slow=12,SNR=5.9
MA2 LR LR 07 57 42.7
comp=Z,70nm,18.1s,baz=160,slow=39
MA2 Magadan 19.17 12 *ce*P **P 07 49 32.7 +0.2**
MA2 pmax pmax
comp=Z,7.0nm,1.7s
MA2 Magadan 19.17 12 P **P 07 49 31.3 -1.2**
BJI Beijing 20.31 276 P **P 07 49 43.2 -1.8**
BJI pmax pmax
comp=Z,7.0nm,1.6s
BJI pmax pmax
comp=Z,98nm,5.5s
BJI LR LR
comp=Z,52nm,8.8s
BJI LR LR
comp=Z,150nm,19.8s
NJ2 Nanjing 21.25 253 *e*P **P 07 49 55.8 +0.5**
NJ2 pmax pmax
comp=Z,22nm,0.8s
YAK Yakutsk 22.45 344 LR LR 07 59 28.9
comp=Z,53nm,18.8s,baz=266,slow=38
YAK Yakutsk 22.45 344 *e*P **P 07 50 02.3 -5.6**
YAK pmax pmax
comp=Z,24nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.6s
YAK pmax pmax
comp=E,4.0nm,1.4s
SEY Seymchan 22.61 11 P **P 07 50 06.6 -3.0**
comp=E,4.3nm,0.7s,baz=195,slow=7.8,SNR=24
SEY Seymchan 22.61 11 *i* P **P 07 50 07.3 -2.3**
HHC Hu-ho-hao-te 23.60 280 *e*P **P 07 50 20.7 +0.8**
HHC pmax pmax
comp=E,13nm,0.9s
HHC pmax pmax
comp=E,71nm,4.2s
HHC LR LR
comp=E,170nm,12.2s
HHC LR LR
comp=E,210nm,13.0s
HHC LR LR
comp=E,190nm,13.3s
BOD Bodaibo 24.89 322 *e*P **P 07 50 29.6 -1.9**
BOD pmax pmax
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 26.29 297 *ce*P **P 07 50 44.2 -0.3**
ULN pmax pmax
comp=Z,8.0nm,0.6s
ULN Ulaanbaatar 26.29 297 P **P 07 50 43.8 -0.7**
ULN IAmb IAmb 07 50 45.1
comp=Z,8.2nm,0.8s
SONM Songino Array 26.73 297 P **P 07 50 47.8 -0.7**
comp=Z,6.8nm,0.6s,baz=81,slow=8.8,SNR=48
SONM LR LR 08 02 00.2
comp=Z,150nm,19.4s,baz=68,slow=38
TLY Talaya 28.75 305 P **P 07 51 05.7 -0.6**
comp=Z,1.3nm,0.3s,baz=87,slow=5.9,SNR=4.3
TLY LR LR 08 03 24.4
comp=Z,103nm,18.6s,baz=12,slow=38
TLY Talaya 28.75 305 *e*P **P 07 51 05.6 -0.8**
TLY pmax pmax
comp=Z,5.0nm,0.6s
TLY MLR MLR
comp=Z,289nm,20.0s
TLY Talaya 28.75 305 P **P 07 51 05.5 -0.8**
ZAK Zakamensk 28.88 302 *e*P **P 07 51 06.4 -1.1**
ZAK pmax pmax
comp=Z,4.0nm,1.3s
H11N2 WAKE ISLAND Hy 29.51 129 T T 08 22 49.1
baz=322,slow=75,SNR=146
H11N1 WAKE ISLAND Hy 29.52 129 T T 08 23 03.1
baz=322,slow=75,SNR=144
H11N3 WAKE ISLAND Hy 29.52 129 T T 08 22 52.7
baz=322,slow=75,SNR=115
BILL Bilibino 29.84 17⇑ *e*P **P 07 51 18.7 +3.0**
BILL *e**PP **pP 07 51 26.3 +0.8**
BILL *e**SP **sP 07 51 33.0 +2.6**
BILL pmax pmax
comp=Z,6.0nm,1.8s
BILL MLR MLR
comp=Z,192nm,21.0s
H11S1 WAKE ISLAND Hy 30.35 131 T T 08 23 47.6
baz=324,slow=76,SNR=140
H11S3 WAKE ISLAND Hy 30.36 131 T T 08 23 47.7
baz=324,slow=76,SNR=91
H11S2 WAKE ISLAND Hy 30.37 131 T T 08 23 48.4
baz=324,slow=76,SNR=83
TIXI Tiksi 31.45 352 P **P 07 51 29.2 -0.7**
comp=Z,0.6nm,0.3s,baz=104,slow=4.2,SNR=2.0
TIXI Tiksi 31.45 352 *i* P **P 07 51 31.9 +2.0**
TIXI Tiksi 31.45 352 IAmb IAmb 07 51 33.5
comp=Z,1.5nm,0.5s
GTA Gaotai 32.68 282 *e*P **P 07 51 43.2 +1.9**
GTA pP pwP 07 51 53.2 +2.0
GTA sP sP 07 51 57.0 +1.3
GTA pmax pmax
comp=Z,4.0nm,0.7s
GTA pmax pmax
comp=Z,68nm,4.7s
GTA LR LR
comp=Z,88nm,17.1s
GTA LR LR
comp=Z,190nm,17.1s
GTA LR LR
comp=Z,160nm,17.5s
KMI Kunming 36.85 257 ⇑P **P 07 52 16.6 -0.9**
KMI pmax pmax
comp=Z,11nm,1.2s
KMI LR LR
comp=Z,110nm,10.5s
KMI LR LR
comp=Z,130nm,15.1s
KMI LR LR
comp=Z,170nm,21.5s
SLVN Son La 38.32 251 P **P 07 52 28.9 -0.8**
SLVN IAmb IAmb 07 52 32.5
comp=Z,6.3nm,1.0s
DGZ Jazzator, Alta 39.10 302 *i* P **P 07 52 35.9 -0.2**
DGZ pmax pmax
comp=Z,12nm,0.8s
NRIK Noril'sk 40.14 333 P **P 07 52 43.4 -1.0**
comp=Z,1.8nm,0.6s,baz=96,slow=5.6,SNR=4.8
NRIK Noril'sk 40.14 333 *ce*P **P 07 52 43.3 -1.0**
NRIK pmax pmax
comp=Z,8.0nm,1.5s
NRIK Noril'sk 40.14 333 P **P 07 52 43.1 -1.2**
ZAA0 Zalesovo Array 40.16 309 P **P 07 52 43.0 -1.7**
ZAA0 IAmb IAmb 07 52 47.7
comp=Z,9.1nm,0.6s
ZALV Zalesovo Beam 40.16 309 P **P 07 52 43.9 -0.7**
comp=Z,8.8nm,0.5s,baz=87,slow=8.6,SNR=18
ZALV PcP **PcP 07 54 47.7 -0.6**
comp=Z,1.0nm,0.4s,baz=96,slow=1.4,SNR=1.8
ZALV LR LR 08 10 24.3
comp=Z,109nm,18.5s,baz=60,slow=38
ZALV Zalesovo Beam 40.16 309 *i* P **P 07 52 47.2 +2.5**
ZALV pmax pmax
comp=Z,9.0nm,0.5s
WMQ Urumqi 40.19 293 *e*P **P 07 52 45.5 +0.4**
WMQ pP pwP 07 52 58.3 +1.0
WMQ pmax pmax
comp=Z,29nm,1.3s
WMQ pmax pmax
comp=Z,31nm,6.3s
WMQ LR LR
comp=Z,300nm,16.1s
WMQ LR LR
comp=Z,660nm,23.1s
WMQ LR LR
comp=Z,310nm,25.3s
A21K Barrow 42.30 25 P **P 07 53 02.6 +0.6**
MK31 Makanchi Array 43.07 299 *i* P **P 07 53 07.9 -0.7**
MK31 Makanchi Array 43.07 299 P **P 07 53 07.1 -1.5**
MKAR Makanchi Array 43.07 299 P **P 07 53 07.8 -0.8**
comp=Z,4.1nm,0.5s,baz=85,slow=10.0,SNR=43
MKAR LR LR 08 12 05.4
comp=Z,101nm,19.2s,baz=50,slow=38
MKAR Makanchi Array 43.07 299 P **P 07 53 06.9 -1.8**
KDAK Kodiak Island 43.38 45 P **P 07 53 12.1 +1.2**
comp=Z,5.6nm,0.9s,baz=288,slow=9.6,SNR=1.0
CHTO Chiang Mai 43.50 253 P **P 07 53 12.2 -0.2**
CHTO pmax pmax
comp=Z,8.0nm,0.7s
CHTO Chiang Mai 43.50 253 P **P 07 53 12.2 -0.2**
CHTO IAmb IAmb 07 53 27.9
comp=Z,8.3nm,0.7s
CMAR Chiang Mai Arr 43.73 252 P **P 07 53 13.0 -1.2**
comp=Z,1.6nm,0.5s,baz=42,slow=7.5,SNR=10
CMAR LR LR 08 11 29.3
comp=Z,46nm,20.9s,baz=51,slow=36
CMAR Chiang Mai Arr 43.73 252 *i* P **P 07 53 14.3 +0.1**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 43.73 252 P **P 07 53 13.6 -0.6**
MLY Manley 43.84 34 P **P 07 53 16.1 +1.5**
TOLK Toolik Lake Re 44.37 29 P **P 07 53 18.8 0.0**
RC01 Rabbit Creek A 44.49 40 P **P 07 53 20.9 +1.1**
RC01 IAmb IAmb 07 53 32.0
comp=Z,13nm,1.0s
NEA2 Nenana 44.57 35 P **P 07 53 21.9 +1.6**
RND Reindeer 44.72 36 P **P 07 53 23.4 +1.7**
RND pmax pmax
comp=Z,14nm,1.3s
RND Reindeer 44.72 36 P **P 07 53 23.4 +1.7**
RND IAmb IAmb 07 53 41.9
comp=Z,14nm,1.3s
GHO Glory Hole Cre 44.82 39 P **P 07 53 24.2 +1.7**
MDM Murphy Dome 44.91 34 P **P 07 53 24.9 +1.8**
MDM IAmb IAmb 07 53 39.0
comp=Z,6.6nm,1.1s
ILAR Eielson Array 45.49 34 P **P 07 53 27.6 -0.2**
comp=Z,0.8nm,0.8s,baz=265,slow=5.6,SNR=8.7
ILAR Eielson Array 45.49 34 P **P 07 53 28.9 +1.1**
ILAR Eielson Array 45.49 34 P **P 07 53 28.9 +1.1**
PRP Porcupine Dome 46.01 33 P **P 07 53 30.6 -1.4**
PRP IAmb IAmb 07 53 48.9
comp=Z,10nm,1.3s
FYU Fort Yukon 46.06 32 P **P 07 53 33.5 +1.4**
FYU IAmb IAmb 07 53 46.5
comp=Z,12nm,1.4s
BMAR Burnt Mountain 46.26 31 P **P 07 53 34.5 +0.7**
EGAK Eagle 47.93 34 P **P 07 53 47.5 +0.7**
EGAK IAmb IAmb 07 54 14.4
comp=Z,13nm,1.5s
BCAR Beaver Creek A 47.94 36 P **P 07 53 46.8 -0.1**
BRVK Borovoye 48.84 310 *ce*P **P 07 53 54.2 +0.3**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 48.84 310 P **P 07 53 54.5 +0.6**
EPYK Eagle Plains 49.47 32 P **P 07 54 00.4 +1.8**
AAK Ala-Archa 49.68 296 LR LR 08 16 15.4
comp=Z,88nm,20.9s,baz=84,slow=38
AAK Ala-Archa 49.68 296 *ce*P **P 07 54 00.6 -0.1**
AAK pmax pmax
comp=Z,8.0nm,0.6s
INK Inuvik 50.28 29 P **P 07 54 05.0 +0.3**
comp=Z,1.5nm,0.6s,baz=264,slow=5.7,SNR=12
INK Inuvik 50.28 29 P **P 07 54 05.7 +1.0**
INK pmax pmax
comp=Z,7.0nm,1.2s
INK Inuvik 50.28 29 P **P 07 54 05.7 +1.0**
INK IAmb IAmb 07 54 23.9
comp=Z,7.5nm,1.1s
KULM Kulim 51.88 238 P **P 07 54 17.2 -0.2**
KULM IAmb IAmb 07 54 18.9
comp=Z,7.4nm,0.8s
KK31 Karatay Array 52.18 298 P **P 07 54 18.2 -1.1**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 52.18 298 P **P 07 54 18.2 -1.1**
KK31 IAmb IAmb 07 54 34.2
comp=Z,5.5nm,0.9s
KKAR Karatay Array 52.18 298 P **P 07 54 18.2 -1.2**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 52.18 298 P **P 07 54 18.2 -1.2**
KKAR IAmb IAmb 07 54 34.2
comp=Z,5.5nm,0.9s
KKAR Karatay Array 52.18 298 P **P 07 54 18.1 -1.2**
SVE Sverdlovsk 52.94 317 *e*P **P 07 54 28.8 +4.1**
SVE pmax pmax
comp=Z,11nm,0.9s
C36M Paulatuk 53.30 26 P **P 07 54 27.2 +0.1**
ARU Arti 54.15 317 *d i*P **P 07 54 33.2 -0.4**
ARU *PP **pwP 07 54 45.5 -0.6**
ARU 07 56 32.0
ARU S **S 08 02 08.0 +0.4**
ARU SS **SS 08 05 45.4 -3.6**
ARU pmax pmax
comp=Z,8.0nm,1.3s
ARU MLR MLR
comp=Z,129nm,17.0s
ARU Arti 54.15 317 P **P 07 54 33.3 -0.4**
NIL Nilore 54.52 286 P **P 07 54 36.3 -0.4**
NIL pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 54.52 286 P **P 07 54 36.2 -0.4**
CHGR Chuyangaron 55.05 294 P **P 07 54 40.0 -0.5**
BKNI Bangkinang 55.47 234 P **P 07 54 44.6 +1.0**
EUNU Eureka 56.03 9 P **P 07 54 46.8 -0.1**
EUNU IAmb IAmb 07 54 47.8
comp=Z,4.2nm,0.8s
ABKAR Akbulak array 56.27 309 P **P 07 54 47.7 -1.3**
ABKAR IAmb IAmb 07 54 56.9
comp=Z,4.4nm,0.6s
NOR Nord 57.10 356 *e*P **P 07 54 52.4 -2.0**
NOR IAmb IAmb 07 54 55.3
comp=Z,1.9nm,0.6s
NOR Nord 57.10 356 *e*P **P 07 54 52.4 -2.0**
NOR pmax pmax
comp=Z,2.0nm,0.6s
KBL Kabul 57.11 289 P **P 07 54 53.6 -1.9**
KBL pmax pmax
comp=Z,5.0nm,0.7s
KBL Kabul 57.11 289 P **P 07 54 53.6 -1.9**
KBL IAmb IAmb 07 55 13.9
comp=Z,4.8nm,0.7s
PRGR Permogore 58.04 326 *e*P **P 07 54 59.7 -1.5**
PRGR pmax pmax
comp=Z,6.0nm,0.8s
RES Resolute Bay 58.41 15 P **P 07 55 03.4 -0.2**
comp=Z,1.8nm,0.5s,baz=308,slow=5.6,SNR=23
RES Resolute Bay 58.41 15 P **P 07 55 02.7 -0.9**
RES IAmb IAmb 07 55 28.1
comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 59.76 32 P **P 07 55 13.7 +0.6**
comp=Z,0.5nm,1.0s,baz=298,slow=6.0,SNR=4.4
YKA LR LR 08 22 30.0
comp=Z,29nm,19.0s,baz=0.0,slow=37
ARCES ARCESS Array B 60.64 339 P **P 07 55 18.3 -0.8**
comp=Z,2.3nm,0.8s,baz=46,slow=7.7,SNR=4.6
TULEG Thule 60.95 8 P **P 07 55 20.4 -0.7**
TULEG IAmb IAmb 07 55 36.7
comp=Z,4.3nm,0.8s
WR0 Warramunga Arr 61.21 189 P **P 07 55 23.0 -0.5**
WR0 IAmb IAmb 07 55 42.7
comp=Z,7.9nm,1.3s
WB2 Warramunga Arr 61.22 189 P **P 07 55 22.9 -0.7**
WB2 IAmb IAmb 07 55 40.7
comp=Z,4.2nm,0.9s
WRA Warramunga Arr 61.22 189 P **P 07 55 22.8 -0.7**
comp=Z,1.0nm,0.4s,baz=6.2,slow=7.0,SNR=23
WRA Warramunga Arr 61.22 189 *i* P **P 07 55 23.1 -0.5**
WRA pmax pmax
comp=Z,1.0nm,0.4s
NEEM North Greenlan 61.44 3 *e*P **P 07 55 24.9 +0.1**
DAG Danmarks Havn 61.85 355 *i* P **P 07 55 26.5 -0.8**
DAG IAmb IAmb 07 55 27.7
comp=Z,1.9nm,0.8s
DAG Danmarks Havn 61.85 355 *i* P **P 07 55 26.4 -0.8**
DAG pmax pmax
comp=Z,2.0nm,0.8s
GEYT Alibeck 62.93 298 P **P 07 55 34.3 -0.8**
comp=Z,1.4nm,0.5s,baz=81,slow=4.5,SNR=2.0
GEYT LR LR 08 25 18.9
comp=Z,75nm,19.7s,baz=355,slow=38
GEYT Alibeck 62.93 298 IAmb IAmb 07 55 35.1
comp=Z,2.1nm,0.7s
ASAR Alice Springs 64.94 189 P **P 07 55 48.0 -0.3**
comp=Z,1.1nm,0.8s,baz=6.0,slow=7.6,SNR=13
ASAR Alice Springs 64.94 189 P **P 07 55 48.0 -0.3**
OBN Obninsk 65.57 323 LR LR 08 26 07.8
comp=Z,7.6nm,18.8s,baz=288,slow=38
OBN Obninsk 65.57 323⇓ *e*P **P 07 55 51.6 -0.4**
OBN *PP **pwP 07 56 05.0 +0.2**
OBN 07 56 20.0
OBN pmax pmax
comp=Z,5.0nm,0.7s
OBN MLR MLR
comp=Z,27nm,9.0s
FIA1 FINESS Array S 65.79 332 P **P 07 55 52.8 -0.5**
FINES FINESS Array B 65.79 332 P **P 07 55 52.3 -1.0**
comp=Z,8.7nm,0.5s,baz=52,slow=7.2,SNR=83
FINES LR LR 08 27 18.7
comp=Z,86nm,19.2s,baz=36,slow=38
FINES FINESS Array B 65.79 332 *i* P **P 07 55 52.7 -0.6**
FINES pmax pmax
comp=Z,9.0nm,0.5s
FINES FINESS Array B 65.79 332 P **P 07 55 52.8 -0.6**
SUMG Summit 66.65 0⇑ *i*P **P 07 55 59.8 +0.5**
SUMG IAmb IAmb 07 56 00.7
comp=Z,5.8nm,0.7s
SUMG Summit 66.65 0⇑ *i*P **P 07 55 59.7 +0.5**
SUMG pmax pmax
comp=Z,6.0nm,0.7s
SUMG Summit 66.65 0 P **P 07 55 59.6 +0.4**
KIV Kislovodsk 69.15 310 *e*P **P 07 56 15.6 +0.6**
KIV pmax pmax
comp=Z,39nm,1.1s
KIV MLR MLR
comp=Z,131nm,17.0s
KBZ Khabaz 69.17 310 P **P 07 56 15.1 +0.1**
comp=Z,3.9nm,0.8s,baz=49,slow=3.5,SNR=7.0
BEKR Beckworth 69.54 55 P **P 07 56 18.2 +0.5**
BEKR IAmb IAmb 07 56 34.2
comp=Z,6.0nm,0.8s
NACGM Naroch 70.00 327 *i* P **P 07 56 20.2 +0.4**
NACGM *i* P **P 07 56 20.2 +0.4**
NACGM *i* P **P 07 56 20.2 +0.4**
NACGM *i* PP PP 07 58 21.3 -33
NACGM *i* PPP PPP 08 01 25.8
NACGM *i* S **S 08 05 30.0 +2.6**
NACGM *i* SS **SS 08 09 58.8 +2.7**
NACGM *i* SSS SSS 08 14 03.8
NACGM *i* LQ LQ 08 21 24.9
NACGM *i* LR LR 08 26 14.1
ICESG Greenland Ices 70.14 1 *i* P **P 07 56 21.4 +0.4**
ICESG IAmb IAmb 07 56 22.2
comp=Z,5.6nm,0.9s
GNI Garni 70.24 306 *ce*P **P 07 56 22.6 +0.7**
GNI pmax pmax
comp=Z,19nm,1.7s
DLMT Dillon 70.69 46 P **P 07 56 26.1 +1.6**
NC405 NORSAR Array S 70.71 337 P **P 07 56 23.7 -0.5**
NC405 IAmb IAmb 07 56 27.1
comp=Z,6.3nm,0.9s
YERR Yerington 70.77 55 P **P 07 56 26.6 +1.5**
YERR IAmb IAmb 07 56 42.0
comp=Z,7.4nm,1.0s
NB201 NORSAR Array S 70.88 337 P **P 07 56 24.7 -0.5**
NOA NORSAR Array B 70.91 337 P **P 07 56 24.6 -0.9**
comp=Z,3.1nm,0.7s,baz=37,slow=6.1,SNR=16
NOA LR LR 08 33 06.0
comp=Z,27nm,18.9s,baz=30,slow=40
NVAR Mina Array Bea 71.68 55 P **P 07 56 31.4 +0.7**
comp=Z,0.8nm,0.7s,baz=292,slow=6.4,SNR=9.2
NVAR LR LR 08 25 22.8
comp=Z,10nm,19.7s,baz=326,slow=34
NVAR Mina Array Bea 71.68 55 P **P 07 56 31.5 +0.8**
AKASG Malin Array Be 71.82 322 P **P 07 56 30.3 -0.7**
comp=Z,4.7nm,0.5s,baz=45,slow=6.0,SNR=19
AKBB Malin Array Si 71.82 322 *ce*P **P 07 56 30.7 -0.3**
AKBB Malin Array Si 71.82 322 P **P 07 56 29.9 -1.1**
STKA Stephens Creek 72.59 181 LR LR 08 29 29.7
comp=Z,9.9nm,20.2s,baz=23,slow=37
PDAR Pinedale Array 74.04 47 P **P 07 56 45.4 +0.7**
comp=Z,0.6nm,0.7s,baz=226,slow=1.0,SNR=6.3
PDAR LR LR 08 29 09.8
comp=Z,14nm,19.6s,baz=316,slow=36
BUR08 Bucovina Ar. S 75.84 322 P **P 07 56 54.6 -0.2**
BUR08 IAmb IAmb 07 56 55.6
comp=Z,5.1nm,0.8s
BURAR Bucovina Array 75.86 322⇓ P **P 07 56 54.7 -0.2**
BURAR Bucovina Array 75.86 322 P **P 07 56 54.7 -0.2**
BURAR Bucovina Array 75.86 322 P **P 07 56 55.0 +0.1**
CFR Carcaliu 76.19 319⇑ P **P 07 56 56.5 -0.2**
CFR Carcaliu 76.19 319 P **P 07 56 56.4 -0.2**
TPGR Topolog 76.28 318⇓ P **P 07 56 57.8 +0.6**
OJC Ojcow 76.33 326 P **P 07 56 57.1 -0.3**
OJC pmax pmax
comp=Z,11nm,0.9s
OJC Ojcow 76.33 326 P **P 07 56 57.1 -0.3**
CRVS Cervenica-Dubn 76.61 325 *e*P **P 07 56 59.3 +0.2**
CRVS Cervenica-Dubn 76.61 325 *e*P **P 07 56 59.2 +0.2**
BRTR Keskin Array B 77.04 312 P **P 07 57 01.7 -0.1**
comp=Z,1.1nm,0.7s,baz=64,slow=6.8,SNR=4.3
BRTR LR LR 08 38 02.1
comp=Z,22nm,18.9s,baz=56,slow=41
VOIR 77.52 320⇓ P **P 07 57 04.5 +0.1**
VOIR 77.52 320 P **P 07 57 04.4 +0.1**
MORC Moravsky Berou 77.60 327 P **P 07 57 04.5 -0.1**
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 77.60 327 P **P 07 57 04.5 -0.1**
MORC IAmb IAmb 07 57 06.3
comp=Z,4.9nm,0.8s
DRGR 77.62 323⇓ P **P 07 57 04.5 -0.4**
DRGR 77.62 323 P **P 07 57 04.4 -0.4**
DPC Dobruska-Polom 77.65 328 *e*P **P 07 57 05.5 +0.6**
DPC Dobruska-Polom 77.65 328 *e*P **P 07 57 05.5 +0.6**
CLL Collm 78.17 331⇓ *i*P **P 07 57 07.5 -0.1**
comp=Z,5.0nm,0.8s
CLL Collm 78.17 331⇓ *i*P **P 07 57 07.5 -0.1**
CLL pmax pmax
comp=Z,5.0nm,0.8s
GZR Gura Zlata 78.63 322⇓ P **P 07 57 10.5 +0.1**
GZR Gura Zlata 78.63 322 P **P 07 57 10.5 +0.1**
PRU Pruhonice 78.64 329 *e*P **P 07 57 10.8 +0.5**
PRU Pruhonice 78.64 329 *e*P **P 07 57 10.8 +0.5**
CKRC Cesky Krumlov 79.66 328 *e*P **P 07 57 16.1 +0.2**
KHC Kasperske Hory 79.70 329 *e*P **P 07 57 16.0 -0.2**
KHC Kasperske Hory 79.70 329 *e*P **P 07 57 16.0 -0.2**
CONA Conrad Observa 79.74 327 *e*P **P 07 57 17.0 +0.5**
comp=Z,6nm,0.9s
GERES GERESS Array B 79.88 329 P **P 07 57 16.5 -0.7**
comp=Z,0.8nm,0.4s,baz=33,slow=5.1,SNR=9.5
GERES LR LR 08 36 27.6
comp=Z,57nm,18.2s,baz=84,slow=38
GERES GERESS Array B 79.88 329 P **P 07 57 16.0 -1.2**
VTS Vitosha 80.48 319⇑ P **P 07 57 20.8 +0.1**
VTS Vitosha 80.48 319 P **P 07 57 19.6 -1.1**
VTS pmax pmax
comp=Z,6.0nm,0.8s
VTS Vitosha 80.48 319 P **P 07 57 19.6 -1.1**
VTS IAmb IAmb 07 57 21.9
comp=Z,5.8nm,0.8s
SOKA Soboth 81.08 327 *e*P **P 07 57 23.8 +0.1**
comp=Z,7.1nm,0.8s,SNR=7.4
MEM Membach 81.21 334 *d*P **P 07 57 24.0 -0.2**
MEM *dp*P **pP 07 57 36.0 +1.0**

OBKA	**Obir**	**81.41**	**327**	*e*P		**P**	**07 57 25.9**	**+0.4**
	comp=Z,7.7nm,0.8s,SNR=4.4							
KBA	**Koelnbreinsper**	**81.45**	**328**	*e*P		**P**	**07 57 25.9**	**+0.2**
	comp=Z,4.9nm,0.8s							
MYKA	**Terra Mystica**	**81.69**	**327**	*i* P		**P**	**07 57 26.4**	**-0.5**
	comp=Z,2.6nm,0.6s							
WTTA	**Wattenberg**	**81.97**	**329**	*i* P		**P**	**07 57 28.7**	**+0.2**
	comp=Z,5.9nm,0.7s							
MOTA	**Moosalm**	**82.11**	**329**	*i* P		**P**	**07 57 29.2**	**0.0**
	comp=Z,7.7nm,0.8s							
RETA	**Reutte**	**82.13**	**329**	*i* P		**P**	**07 57 29.5**	**+0.3**
	comp=Z,6.2nm,0.8s							
SQTA	**Sankt Quirin**	**82.18**	**329**	*i* P		**P**	**07 57 29.5**	**0.0**
	comp=Z,5.0nm,0.8s							
FETA	**Feichten**	**82.53**	**329**	*e*P		**P**	**07 57 31.1**	**-0.3**
	comp=Z,5.7nm,0.9s							
DAVA	**Damuels**	**82.63**	**330**	*i* P		**P**	**07 57 31.8**	**-0.2**
	comp=Z,4.9nm,0.8s							
NRCA	**Norcia**	**84.98**	**325**	P		**P**	**07 57 43.4**	**-0.5**
PPT	**Papeete**	**85.45**	**118**	LR		LR	08 30 36.8	
	comp=Z,67nm,19.4s,baz=274,slow=32							
PPT2	**Papeete2**	**85.47**	**118**	*e*LR		LR	08 24 32.3	
	comp=Z,65nm,21.2s							
TAOE	**Nuku Hiva Isla**	**86.07**	**105**	*e*LR		LR	08 24 48.9	
	comp=Z,64nm,23.0s							
TXAR	**Lajitas Array**	**86.77**	**53**	P		**P**	**07 57 53.7**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=292,slow=4.8,SNR=2.4							
TBI	**Tubuai**	**89.63**	**122**	*e*T		T	09 37 19.0	
	comp=Z,4.3nm,0.4s							
ESDC	**Sonseca Array**	**94.15**	**335**	LR		LR	08 47 15.3	
	comp=Z,14nm,20.2s,baz=340,slow=40							
SNAA	**Sanae**	**144.94**	**198**	PKPdf		PKPbc	08 04 43.8	0.0
H03N2	**Juan Fernandez**	**146.10**	**91**	T		T	10 48 06.7	
	baz=299,slow=72							
H03N3	**Juan Fernandez**	**146.12**	**91**	T		T	10 48 10.9	
	baz=299,slow=72							
H03N1	**Juan Fernandez**	**146.12**	**91**	T		T	10 48 08.8	
	baz=299,slow=72							
VNA2	**Neumayer--Watz**	**146.51**	**197**	PKPdf		**PKPbc**	**08 04 48.2**	**-0.3**
VNA3	**Neumayer Olymp**	**146.76**	**196**	PKPdf		**PKPbc**	**08 04 48.7**	**-0.6**

*IDC **11** 08:04:55.2±1.3,28°.54S×177°.80W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/25, mbtmp3.9/4, Error ellipse: s-maj=34.0km s-min=16.4km az=87.0*

ISC 11 08:04:55.9±1.3, 28°.43S±0°.09×177°.7W±0°.2, h10km, n10, σ0s.34/12, mb3.9/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.84**	**193**	Pn	**Pg**	**08 05 12.2**	**+0.1**
	548nm,0.3s,baz=93,slow=3.8,SNR=18						
RAO				Sn	**Sn**	**08 05 26.1**	**-0.1**
	1µm,0.3s,baz=95,slow=23,SNR=13						
CTA	**Charters Tower**	**33.79**	**276**	P	**P**	**08 11 38.4**	**+0.1**
	2.5nm,1.0s,baz=100,slow=13,SNR=1.6						
STKA	**Stephens Creek**	**35.22**	**254**	P	**P**	**08 11 50.2**	**-0.3**
	0.7nm,0.5s,baz=115,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**43.51**	**265**	P	**P**	**08 12 59.7**	**-0.2**
	0.8nm,0.7s,baz=104,slow=7.4,SNR=11						
ASAR				PcP	**PcP**	**08 14 48.5**	**+0.7**
	0.2nm,0.6s,baz=122,slow=3.4,SNR=2.3						
WRA	**Warramunga Arr**	**44.32**	**270**	P	**P**	**08 13 06.6**	**+0.2**
	0.9nm,0.3s,baz=110,slow=8.0,SNR=36						
KURBB	**Kurchatov Arra**	**119.91**	**314**	PKP	**PKPdf**	**08 23 45.8**	**-0.5**
	0.2nm,0.3s,baz=18,slow=31,SNR=2.1						
FINES	**FINESS Array B**	**143.38**	**341**	PKP	**PKPdf**	**08 24 29.7**	**-0.2**
	3.3nm,0.5s,baz=65,slow=2.9,SNR=44						
NOA	**NORSAR Array B**	**146.85**	**352**	PKPbc	**PKPbc**	**08 24 38.1**	**+0.3**
	0.7nm,0.7s,baz=13,slow=4.2,SNR=3.6						
HFS	**Hagfors**	**147.37**	**349**	PKPbc	**PKPab**	**08 24 40.9**	**-0.2**
	1.8nm,0.7s,baz=97,slow=3.6,SNR=3.5						
AKASG	**Malin Array Be**	**149.87**	**325**	PKPbc	**PKiKP**	**08 24 47.0**	**+0.1**
	0.4nm,0.4s,baz=56,slow=3.5,SNR=1.9						

*THR **11** 08:18:01.8±0.4,28°.25N×51°.64E, h24km±5km, ML3.4*
*TEH **11** 08:18:02.0,28°.31N×51°.74E, h9km, ML3.8*
*DSN **11** 08:18:06.7±1.1,28°.16N×52°.02E, h10km, ML3.7/6, Error ellipse: s-maj=20.7km s-min=7.7km az=15.0*
*OMAN **11** 08:18:08.3,28°.05N×51°.96E, h14km, mb5.0/6, ml3.5/8*

ISC 11 08:18:02.4±1.1, 28°.31N±0°.08×51°.76E±0°.09, h10km, n57, σ1s.38/67, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.69**	**324**	*e*Pg	**Pg**	**08 18 15.0**	**-0.6**
QIR1	**Qir**	**1.15**	**81**	*e*Pg	**Pb**	**08 18 24.5**	**+0.2**
KAZ1	**Kazerun**	**1.31**	**356**	*e*Pg	**Pn**	**08 18 27.3**	**+0.4**
KAZ1				*e*		08 18 54.4	
	comp=Z,99nm,0.3s						
SHI	**Shiraz**	**1.48**	**26**	*e*Pg	**Pn**	**08 18 30.2**	**+0.9**
LMD1	**Lamerd**	**1.58**	**127**	*e*Pg	**Pn**	**08 18 32.8**	**+2.4**
LMD1				*e*		08 19 03.6	
	comp=Z,99nm,0.5s						
JHRM	**Jahrom**	**1.62**	**83**	*e*Pg	**Pn**	**08 18 32.9**	**+1.9**
JHRM				*e*		08 19 00.4	
	comp=Z,99nm,0.5s						
LAR1	**LAR**	**2.40**	**105**	*e*Pn	**Pn**	**08 18 44.2**	**+2.4**
KLNJ	**Kolanjah**	**2.69**	**357**	*e*Pn	**Pn**	**08 18 47.0**	**+0.9**
IRAM	**Ramesheh**	**3.53**	**9**	*e*Pn	**Pn**	**08 18 58.1**	**+0.6**
IMEH	**Mehriz**	**3.95**	**38**	*e*Pn	**Pn**	**08 19 05.4**	**+2.2**
SHME	**Shamm**	**4.51**	**119**	P	**Pn**	**08 19 11.4**	**+0.7**
SHME	**Shamm**	**4.51**	**119**	*e*Pn	**Pn**	**08 19 11.4**	**+0.7**
SHME	**Shamm**	**4.51**	**119**	P	**Pn**	**08 19 11.7**	**+0.9**
	SNR=7.0						
NASN	**Na'in**	**4.56**	**11**	*e*Pn	**Pn**	**08 19 13.3**	**+1.5**
NASN	**Na'in**	**4.56**	**11**	*e*Pn	**Pn**	**08 19 13.3**	**+1.5**
IZEF	**Zefreh**	**4.60**	**6**	*e*Pn	**Pn**	**08 19 13.2**	**+1.0**
KRBR	**Kerman**	**4.68**	**68**	*e*Pn	**Pn**	**08 19 15.0**	**+1.6**
KRBR				IAML		08 20 16.6	
	comp=E,13nm,0.5s						
KRBR	**Kerman**	**4.68**	**68**	*e*Pn	**Pn**	**08 19 15.0**	**+1.6**
BANOM	**Banah**	**4.70**	**119**	P	**Pn**	**08 19 14.0**	**+0.7**
BANOM				S	**Sn**	**08 20 06.5**	**-1.5**
BANOM	**Banah**	**4.70**	**119**	*e*Pn	**Pn**	**08 19 14.1**	**+0.7**
BANOM	**Banah**	**4.70**	**119**	P	**Pn**	**08 19 14.3**	**+0.9**
	SNR=8.0						
BANOM				S	**Sn**	**08 20 06.4**	**-1.5**
NAZ	**Nazwa, Dubai**	**4.81**	**133**	*e*Pn	**Pn**	**08 19 16.7**	**+1.8**
ASUD	**Al Ashush, Dub**	**4.87**	**138**	P	**Pn**	**08 19 16.7**	**+1.0**
ASUD	**Al Ashush, Dub**	**4.87**	**138**	*e*Pn	**Pn**	**08 19 17.7**	**+2.0**
ASUD	**Al Ashush, Dub**	**4.87**	**138**	P	**Pn**	**08 19 18.6**	**+2.9**
	SNR=6.5						
MASF	**Masafi**	**4.90**	**126**	P	**Pn**	**08 19 17.5**	**+1.3**
MASF				S	**Sn**	**08 20 12.0**	**-1.1**
MSFE	**Esma-Masafi**	**4.91**	**126**	*e*Pn	**Pn**	**08 19 17.4**	**+1.1**
FAQ	**Al Faqa, Dubai**	**4.94**	**135**	P	**Pn**	**08 19 18.6**	**+1.9**
FAQ				S	**Sn**	**08 20 13.1**	**-0.8**
MDH	**Madha**	**5.05**	**125**	P	**Pn**	**08 19 18.9**	**+0.7**
MDH	**Madha**	**5.05**	**125**	*e*Pn	**Pn**	**08 19 19.5**	**+1.4**
MDH	**Madha**	**5.05**	**125**	P	**Pn**	**08 19 21.0**	**+2.9**
	SNR=5.3						
UOSS	**Minazif**	**5.20**	**129**	P	**Pn**	**08 19 20.4**	**+0.1**
UOSS	**Minazif**	**5.20**	**129**	*e*Pn	**Pn**	**08 19 21.0**	**+0.7**
UOSS	**Minazif**	**5.20**	**129**	P	**Pn**	**08 19 21.2**	**+0.8**
UOSS				S	**Sn**	**08 20 17.8**	**-2.6**
HATD	**Hatta, Dubai**	**5.23**	**131**	P	**Pn**	**08 19 20.8**	**+0.1**
HATD	**Hatta, Dubai**	**5.23**	**131**	*e*Pn	**Pn**	**08 19 22.2**	**+1.5**
HATD	**Hatta, Dubai**	**5.23**	**131**	P	**Pn**	**08 19 23.2**	**+2.5**
HATD				S	**Sn**	**08 20 20.1**	**-1.1**
ASHO	**Ashiyiah**	**5.28**	**132**	P	**Pn**	**08 19 22.5**	**+1.1**
ASHO	**Ashiyiah**	**5.28**	**132**	*e*Pn	**Pn**	**08 19 22.7**	**+1.3**
ASHO	**Ashiyiah**	**5.28**	**132**	P	**Pn**	**08 19 22.7**	**+1.3**
ASHO				S	**Sn**	**08 20 22.1**	**-0.3**
KHMZ	**Khomeyn**	**5.63**	**345**	*e*Pn	**Pn**	**08 19 26.7**	**+0.4**
KHMZ	**Khomeyn**	**5.63**	**345**	*e*Pn	**Pn**	**08 19 26.7**	**+0.4**
KRSH	**Karshahi**	**5.65**	**3**	*e*Pn	**Pn**	**08 19 26.7**	**+0.1**
SOHO	**SOHO**	**5.97**	**133**	P	**Pn**	**08 19 31.9**	**+1.0**
ISFB	**Sefidab**	**6.04**	**4**	*e*Pn	**Pn**	**08 19 31.4**	**-0.4**
UMZA	**Um Al Zommool**	**6.36**	**150**	P	**Pn**	**08 19 37.5**	**+1.2**
ASAO	**Ashtian**	**6.39**	**347**	*e*Pn	**Pn**	**08 19 37.4**	**+0.6**
ASAO				IAML		08 20 53.5	
	comp=N,4.4nm,0.8s						
ASAO				IAML		08 20 55.7	
	comp=E,5.6nm,0.5s						
ASAO	**Ashtian**	**6.39**	**347**	*e*Pn	**Pn**	**08 19 37.4**	**+0.6**
IQOM	**Qom**	**6.54**	**355**	*e*Pn	**Pn**	**08 19 38.8**	**-0.1**
ARQ	**Araqi**	**6.55**	**138**	P	**Pn**	**08 19 40.3**	**+1.4**
ARQ				S	**Sn**	**08 20 53.5**	**-0.2**
HOQ	**Hoqain**	**6.87**	**132**	P	**Pn**	**08 19 44.5**	**+1.4**
BSY	**Bisya**	**7.41**	**137**	P	**Pn**	**08 19 51.7**	**+1.1**
BSY				S	**Sn**	**08 21 12.0**	**-2.7**
SMDO	**Samad**	**7.72**	**131**	P	**Pn**	**08 19 56.4**	**+1.5**
	SNR=6.1						
SMDO				S	**Sn**	**08 21 20.8**	**-1.7**
SNGE	**Sanandaj**	**7.73**	**332**	*e*Pn	**Pn**	**08 19 55.8**	**+0.6**
SNGE				IAML		08 21 30.1	
	comp=E,5.9nm,0.7s						
SNGE	**Sanandaj**	**7.73**	**332**	*e*Pn	**Pn**	**08 19 55.8**	**+0.6**
WBK	**Wadi Bani Khal**	**8.64**	**129**	P	**Pn**	**08 20 07.3**	**-0.2**
MHTO	**MHTO**	**9.22**	**141**	P	**Pn**	**08 20 16.2**	**+0.8**
	SNR=7.6						

*SOF **11** 08:22:17.5,40°.93N×22°.46E, h16km, MD2.4*
*ATH **11** 08:22:17.9,40°.91N×22°.46E, h10km±31km, ML2.5/3, Error ellipse: s-maj=31.6km s-min=1.2km az=0.0*
*SKO **11** 08:22:17.0,40°.91N×22°.47E, h15km*
*IASPEI **11** 08:22:17.6±0.8,40°.93N±0°.02×22°.47E±0°.02, h8km±5km, Error ellipse: s-maj=3.8km s-min=2.9km az=24.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*THE **11** 08:22:18.2,40°.91N×22°.47E, h2km±1km, ML2.2/5, Error ellipse: s-maj=1.4km s-min=0.4km az=6.0*
*BEO **11** 08:22:19.1±0.4,41°.00N×22°.45E, h5km±2km, ML2.1/10*

ISC 11 08:22:17.7±0.8, 40°.92N±0°.02×22°.47E±0°.02, h8km±5km, n51, σ0s.64/79, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.06**	**308**	P	**Pg**	**08 22 19.7**	**+0.1**
GRG				S	**Sg**	**08 22 20.9**	**0.0**
GRG				AML	AML	08 22 21.1	
	comp=E,43653µm,0.1s						
GRG				AML	AML	08 22 21.2	
	comp=N,68911µm,0.2s						
GRG	**Griva**	**0.06**	**308**	P	**Pg**	**08 22 19.7**	**+0.1**
GRG				S	**Sg**	**08 22 20.9**	**0.0**
GRG	**Griva**	**0.06**	**308**	*i* Pg	**Pg**	**08 22 19.7**	**+0.1**
GRG				*i* Sg	**Sg**	**08 22 20.9**	**0.0**
KNT	**Kendrikon**	**0.41**	**53**	P	**Pg**	**08 22 26.0**	**+0.4**
KNT				S	**Sg**	**08 22 32.1**	**+1.0**
KNT				AML	AML	08 22 33.1	
	comp=E,1214µm,0.2s						
KNT				AML	AML	08 22 33.1	
	comp=N,1703µm,0.1s						
KNT	**Kendrikon**	**0.41**	**53**	P	**Pg**	**08 22 26.1**	**+0.4**
KNT				S	**Sg**	**08 22 32.4**	**+1.3**
	comp=N,742nm,0.1s						
KNT	**Kendrikon**	**0.41**	**53**	*i* Pg	**Pg**	**08 22 26.1**	**+0.4**
KNT				*i* Sg	**Sg**	**08 22 32.5**	**+1.4**
VAY	**Valandovo**	**0.41**	**11**	*e*Pg	**Pg**	**08 22 25.6**	**-0.1**
VAY				*e*Sg	**Sg**	**08 22 32.0**	**+0.9**
VAY	**Valandovo**	**0.41**	**11**	*i* Pg	**Pg**	**08 22 25.7**	**-0.1**
VAY				*i* Sg	**Sg**	**08 22 31.7**	**+0.6**
VAY				*e*Lg	Lg	08 22 31.9	
	comp=E,444nm,0.6s						
THE	**Thessaloniki**	**0.48**	**127**	P	**Pg**	**08 22 27.0**	**+0.1**
THE				S	**Sg**	**08 22 33.7**	**+0.5**
THE				AML	AML	08 22 34.1	
	comp=E,342µm,0.2s						
THE				AML	AML	08 22 34.1	
	comp=N,456µm,0.2s						
THE	**Thessaloniki**	**0.48**	**127**	P	**Pg**	**08 22 27.0**	**+0.1**
THE				S	**Sg**	**08 22 33.7**	**+0.5**
THE	**Thessaloniki**	**0.48**	**127**	*i* Pg	**Pg**	**08 22 27.0**	**+0.1**
THE				*i* Sg	**Sg**	**08 22 33.8**	**+0.7**
HORT	**Hortiatis**	**0.58**	**123**	P	**Pg**	**08 22 28.8**	**-0.2**
HORT	**Hortiatis**	**0.58**	**123**	P	**Pg**	**08 22 29.1**	**+0.2**
SOH	**Sokhos**	**0.68**	**98**	P	**Pg**	**08 22 31.1**	**+0.3**
SOH				S	**Sg**	**08 22 39.8**	**+0.1**
SOH	**Sokhos**	**0.68**	**98**	P	**Pg**	**08 22 31.3**	**+0.4**
SOH				S	**Sg**	**08 22 40.5**	**+0.7**
	comp=N,295nm,0.4s						
SOH	**Sokhos**	**0.68**	**98**	*i* Pg	**Pg**	**08 22 31.3**	**+0.4**
SOH				*i* Sg	**Sg**	**08 22 40.7**	**+1.0**
STIP	**Stip**	**0.80**	**345**	*i* Pg	**Pg**	**08 22 32.8**	**-0.4**
FNA	**Florina**	**0.84**	**261**	P	**Pg**	**08 22 33.9**	**0.0**
FNA	**Florina**	**0.84**	**261**	P	**Pg**	**08 22 33.8**	**0.0**
FNA	**Florina**	**0.84**	**261**	*e*Pg	**Pg**	**08 22 34.2**	**+0.4**
FNA				*e*Sg	**Sb**	**08 22 45.6**	**-0.4**
FNA	**Florina**	**0.84**	**261**	*i* Pg	**Pg**	**08 22 34.2**	**+0.4**
SRS	**Serrai**	**0.88**	**77**	P	**Pg**	**08 22 34.3**	**-0.2**
SRS	**Serrai**	**0.88**	**77**	P	**Pg**	**08 22 34.4**	**-0.2**
SRS	**Serrai**	**0.88**	**77**	*e*Pg	**Pg**	**08 22 34.1**	**-0.5**
SRS				*e*Sg	**Sg**	**08 22 46.1**	**+0.1**
SRS	**Serrai**	**0.88**	**77**	*i* Pg	**Pg**	**08 22 34.4**	**-0.2**
SRS				*i* Sg	**Sg**	**08 22 46.4**	**+0.5**
PLG	**Polygyros**	**0.92**	**126**	P	**Pg**	**08 22 35.1**	**-0.3**
PLG	**Polygyros**	**0.92**	**126**	P	**Pg**	**08 22 35.2**	**-0.3**
PLG				S	**Sb**	**08 22 48.3**	**-0.2**
	comp=N,158nm,0.4s						
KKB	**Krupnik**	**1.05**	**26**	P	**Pg**	**08 22 37.4**	**-0.6**
NVR	**Nevrokopi**	**1.14**	**67**	P	**Pb**	**08 22 39.3**	**-0.5**
NVR				S	**Sn**	**08 22 55.7**	**-0.3**
	comp=N,62nm,0.4s						
MMB	**Musomiste**	**1.16**	**54**	P	**Pb**	**08 22 39.6**	**-0.6**
OHR	**Ohrid**	**1.27**	**279**	*e*Pg	**Pn**	**08 22 41.5**	**-0.5**
OHR				*i* Sg	**Sn**	**08 23 00.3**	**+0.9**
OHR				*e*Lg	Lg	08 23 05.9	
	comp=E,36nm,0.6s						
SKO	**Skopje**	**1.30**	**324**	*e*Pg	**Pn**	**08 22 40.8**	**-1.5**
SKO				*e*Sg	**Sb**	**08 22 57.7**	**-1.8**
SKO	**Skopje**	**1.30**	**324**	*i* Pg	**Pn**	**08 22 42.0**	**-0.4**
SKO				*e*Sg	**Sb**	**08 22 59.1**	**-0.3**
SKO				*e*Lg	Lg	08 23 00.9	
	comp=E,3.5nm,0.6s						
PAIG	**Paliouri**	**1.36**	**136**	P	**Pb**	**08 22 43.3**	**-0.1**
PAIG				S	**Sg**	**08 23 01.7**	**+0.3**
	comp=E,92nm,0.4s						
KAVA	**Kavala**	**1.55**	**86**	P	**Pb**	**08 22 46.3**	**-0.5**
BOSS	**Bosilegrad**	**1.58**	**0**	*e*Pn	**Pn**	**08 22 45.9**	**-0.2**
BOSS				*e*Sg	**Sn**	**08 23 06.4**	**-0.3**
PRVS	**Prvonek**	**1.61**	**350**	*e*Pn	**Pn**	**08 22 46.8**	**+0.2**
PRVS				*e*Sg	**Sb**	**08 23 08.4**	**0.0**
VTS	**Vitosha**	**1.79**	**18**	*e*Pn	**Pn**	**08 22 49.8**	**+0.6**
VTS				*e*Sg	**Sn**	**08 23 12.8**	**+0.6**
VTS	**Vitosha**	**1.79**	**18**	P	**Pn**	**08 22 49.8**	**+0.6**
VTS	**Vitosha**	**1.79**	**18**	*i* Pn	**Pn**	**08 22 49.7**	**+0.6**
VTS				*e*Sg	**Sn**	**08 23 12.4**	**+0.1**
PRZK	**Prizren**	**1.82**	**316**	*i* Pn	**Pb**	**08 22 51.6**	**+0.3**
RZN	**Rozhen**	**1.86**	**65**	P	**Pn**	**08 22 49.4**	**-0.8**
BARS	**Barje**	**1.96**	**346**	*e*Pn	**Pb**	**08 22 52.2**	**-0.5**
PLD	**Plovdiv**	**2.06**	**54**	*e*Sg	**Sg**	**08 23 23.4**	**-0.4**
PGB	**Panagyurishte**	**2.07**	**37**	P	**Pn**	**08 22 50.7**	**-2.2**
IGT	**Igoumenitsa**	**2.14**	**230**	*e*Pn	**Pb**	**08 22 56.9**	**+0.1**
ZAPS	**Zavoj**	**2.36**	**3**	*e*Pn	**Pn**	**08 22 58.3**	**+1.5**
ZAPS				*e*Sg	**Sb**	**08 23 30.6**	**+0.8**
SELS	**Selova**	**2.51**	**337**	*e*Pn	**Pn**	**08 22 58.8**	**-0.1**
BLKB	**Belogradchik**	**2.71**	**3**	*e*Pn	**Pn**	**08 23 02.8**	**+1.2**
ZAGS	**Zajecar**	**2.90**	**357**	*e*Pn	**Pn**	**08 23 04.4**	**+0.2**
IVAS	**Ivanjica**	**3.16**	**328**	*e*Pn	**Pn**	**08 23 08.7**	**+0.8**

*IDC **11** 08:28:24.1±1.9,36°.92N×24°.33E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.1/45, mbtmp3.2/3, Error ellipse: s-maj=62.4km s-min=31.0km az=158.0*
*ATH **11** 08:28:27.6,36°.93N×24°.09E, h17km±3km, ML3.3/3, Error ellipse: s-maj=3.5km s-min=0.8km az=151.0*
*ISK **11** 08:28:27.7,36°.96N×24°.11E, h86km, ML3.4/4*
*THE **11** 08:28:27.9,36°.93N×24°.09E, h15km, ML3.2/9, Error ellipse: s-maj=0.9km s-min=0.4km az=120.0*

ISC 11 08:28:27.5±1.0, 36°.93N±0°.02×24°.10E±0°.02, h18km±6km, n58, σ0s.50/75, mb3.1/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHLA	**Plaka, Milos I**	**0.32**	**126**	P	**Pg**	**08 28 34.2**	**-0.2**
MHLA				S	**Sg**	**08 28 38.8**	**-0.3**
MHLA				AML	AML	08 28 40.9	
	comp=N,6712µm,0.3s						
MHLA				AML	AML	08 28 48.8	
	comp=E,4812µm,0.3s						
MHLO	**Agia Marina, M**	**0.34**	**135**	P	**Pb**	**08 28 35.2**	**0.0**
MHLO				S	**Sb**	**08 28 40.1**	**-0.2**
MHLO				AML	AML	08 28 40.7	
	comp=N,47824µm,0.2s						
MHLO				AML	AML	08 28 40.8	
	comp=E,40454µm,0.4s						
MHLO	**Agia Marina, M**	**0.34**	**135**	P	**Pg**	**08 28 35.0**	**+0.2**
MHLO				S	**Sg**	**08 28 39.9**	**+0.2**
	comp=E,23µm,0.2s						
YDRA	**Hydra**	**0.65**	**310**	P	**Pg**	**08 28 40.4**	**0.0**
YDRA				S	**Sg**	**08 28 49.3**	**+0.1**
YDRA				AML	AML	08 28 53.9	
	comp=E,3337µm,0.3s						
YDRA				AML	AML	08 28 54.0	
	comp=N,5606µm,0.3s						
KRND	**KRANIDI**	**0.88**	**301**	P	**Pb**	**08 28 44.1**	**-0.2**
KRND	**KRANIDI**	**0.88**	**301**	P	**Pb**	**08 28 44.6**	**+0.4**
MNVA	**Monemvasia**	**0.89**	**254**	P	**Pb**	**08 28 44.1**	**-0.2**
VLY	**Voula,Athens**	**0.95**	**345**	P	**Pb**	**08 28 44.9**	**-0.6**
VLY	**Voula,Athens**	**0.95**	**345**	P	**Pb**	**08 28 45.1**	**-0.3**
VLI	**Veliai**	**0.95**	**257**	P	**Pb**	**08 28 45.0**	**-0.6**
VLI	**Veliai**	**0.95**	**257**	P	**Pb**	**08 28 45.1**	**-0.4**
VLI				S	**Sb**	**08 28 58.7**	**+0.9**
	comp=N,1µm,0.4s						
TNSA	**Tinos**	**1.04**	**54**	P	**Pb**	**08 28 46.8**	**-0.3**
ATHU	**Athens Univers**	**1.06**	**347**	P	**Pb**	**08 28 47.0**	**-0.4**
KTHA	**Kythira Island**	**1.07**	**231**	P	**Pb**	**08 28 46.9**	**-0.6**
KTHA	**Kythira Island**	**1.07**	**231**	P	**Pb**	**08 28 47.1**	**-0.4**
KTHA				S	**Sn**	**08 29 02.2**	**+0.1**
	comp=N,2µm,0.4s						
ATH	**Athens Observa**	**1.08**	**344**	P	**Pb**	**08 28 47.6**	**-0.1**
ATH	**Athens Observa**	**1.08**	**344**	P	**Pb**	**08 28 47.1**	**-0.6**
SAP3	**Santorini-Thir**	**1.12**	**116**	P	**Pb**	**08 28 48.1**	**-0.2**
SAP3	**Santorini-Thir**	**1.12**	**116**	P	**Pb**	**08 28 48.3**	**0.0**
SAP4	**Santorini-Oia**	**1.12**	**114**	P	**Pb**	**08 28 48.4**	**+0.1**
PTL	**Penteli**	**1.13**	**351**	P	**Pn**	**08 28 48.0**	**-0.5**
PTL				S	**Sn**	**08 29 03.7**	**+0.1**
	comp=N,1µm,0.5s						
KARY	**Karystos**	**1.13**	**14**	P	**Pn**	**08 28 48.2**	**-0.3**
KARY				S	**Sn**	**08 29 03.8**	**+0.3**
	comp=N,672nm,0.2s						
THR5	**Thira Island,**	**1.13**	**117**	P	**Pn**	**08 28 48.6**	**+0.2**
DION	**Dionisos Attik**	**1.15**	**354**	P	**Pn**	**08 28 48.7**	**-0.1**
DION	**Dionisos Attik**	**1.15**	**354**	P	**Pn**	**08 28 48.4**	**-0.4**
APE	**Apeiranthos**	**1.16**	**83**	P	**Pn**	**08 28 48.3**	**-0.5**
APE	**Apeiranthos**	**1.16**	**83**	P	**Pn**	**08 28 48.5**	**-0.3**
APE				S	**Sn**	**08 29 04.5**	**+0.3**
	comp=N,2µm,0.2s						
APE	**Apeiranthos**	**1.16**	**83**	PN	**Pg**	**08 28 49.7**	**-0.2**
APE				SN	**Sg**	**08 29 05.6**	**+0.6**
THT2	**Imerovigli**	**1.18**	**115**	PN	**Pg**	**08 28 49.9**	**-0.3**
THT2				SN	**Sg**	**08 29 06.4**	**+0.8**
SANT	**Santorini**	**1.23**	**117**	PN	**Pb**	**08 28 50.8**	**+0.5**
SANT				SN	**Sg**	**08 29 07.8**	**+0.4**
ANKY	**Antikythira Is**	**1.24**	**211**	P	**Pn**	**08 28 49.3**	**-0.7**
ANKY				S	**Sn**	**08 29 06.8**	**+0.5**
VILL	**Villia**	**1.38**	**333**	P	**Pn**	**08 28 51.6**	**-0.3**
VILL				S	**Sb**	**08 29 10.7**	**+0.6**
	comp=N,822nm,0.6s						
LTK	**Loutraki**	**1.41**	**321**	P	**Pn**	**08 28 52.4**	**+0.1**
LTK	**Loutraki**	**1.41**	**321**	P	**Pn**	**08 28 52.6**	**+0.3**
VLX	**Vlachokerasia**	**1.44**	**288**	P	**Pn**	**08 28 52.7**	**-0.1**
IMMV	**Iera Moni Meta**	**1.47**	**184**	P	**Pn**	**08 28 52.4**	**-0.8**
IMMV				S	**Sn**	**08 29 11.9**	**-0.1**
	comp=N,2µm,0.3s						
EREA	**Eretria**	**1.49**	**355**	P	**Pn**	**08 28 53.4**	**0.0**
VAM	**Vamos**	**1.53**	**177**	P	**Pn**	**08 28 54.0**	**+0.1**
KYMI	**Kymi, Euboea I**	**1.70**	**0**	P	**Pn**	**08 28 56.2**	**-0.1**
KYMI				S	**Sn**	**08 29 18.4**	**+0.9**
	comp=N,242nm,0.4s						
IDI	**Anoyia**	**1.76**	**158**	P	**Pn**	**08 28 56.7**	**-0.5**
IDI	**Anoyia**	**1.76**	**158**	PN	**Pn**	**08 28 57.9**	**+0.7**
HRKL	**Herakleio**	**1.81**	**153**	PN	**Pn**	**08 28 58.7**	**+

ML2.7/31,ML2.6/34(NEIC),Error ellipse: s-maj=2.3km s-min=1.7km az=157.0
MEX ***11*** *09:56:38.3±0.4,32°.54N×115°.09W,h16km±8km,MD4.0*
ISC 11 09:56:35.3±0.8,**32°.39N**±0°.02×**115°.21W**±0°.02,**h16**km±3km**, n65,**σ**92**/85**,4C-1D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.02**	**29**	*eP*		**Pg**	**09 56 36.8**	**-1.4**
MBIG				*eS*		**Sg**	**09 56 39.4**	**-0.7**
CPBX	**Cerro Prieto**	**0.09**	**292**			**Pg**	**09 56 38.6**	**0.0**
CPBX						**Sg**	**09 56 38.9**	**-1.9**
CPBX	**Cerro Prieto**	**0.09**	**292**	*eP*		**Pg**	**09 56 38.8**	**+0.2**
CPBX				*eS*		**Sb**	**09 56 43.0**	**+2.2**
CPBX				IAML			09 56 43.8	
	comp=N,34μm,0.3s							
CPBX				⇑*e*			09 56 43.8	
CTLX	**Tlaxcala, TLX**	**0.10**	**33**	⇑*iP*		**Pg**	**09 56 38.7**	**-0.1**
CTLX				*eS*		**Sg**	**09 56 41.6**	**+0.6**
GUVIX	**Guadalupe Vict**	**0.14**	**126**			**Pb**	**09 56 39.9**	**+0.4**
GUVIX						**Sb**	**09 56 43.4**	**+1.0**
GUVIX	**Guadalupe Vict**	**0.14**	**126**	⇑*iP*		**Pb**	**09 56 40.0**	**+0.4**
GUVIX				*i* S		**Sb**	**09 56 43.5**	**+1.0**
UABX	**UABC, Campus M**	**0.31**	**322**			**Pb**	**09 56 42.7**	**+0.2**
EMSC	**East Mesa**	**0.40**	**28**			**Pb**	**09 56 44.0**	**+0.1**
EMSC						**Sb**	**09 56 50.9**	**+1.1**
EMSC	**East Mesa**	**0.40**	**28**	*eP*		**Pb**	**09 56 44.1**	**+0.1**
DREC	**Desert Rsrch C**	**0.46**	**335**			**Pb**	**09 56 45.7**	**+0.7**
COA	**Coachella**	**0.48**	**9**			**Pb**	**09 56 45.6**	**+0.2**
COA						**Sn**	**09 56 53.7**	**-1.8**
COA	**Coachella**	**0.48**	**9**	*eP*		**Pb**	**09 56 45.6**	**+0.2**
SGL	**Mount Signal**	**0.51**	**301**			**Pg**	**09 56 45.6**	**+0.2**
SGL						**Sg**	**09 56 52.4**	**+0.2**
SGL	**Mount Signal**	**0.51**	**301**	*eP*		**Pg**	**09 56 45.6**	**+0.2**
SNR	**Schaffner Ranc**	**0.51**	**338**			**Pb**	**09 56 46.2**	**+0.3**
SNR						**Sn**	**09 56 55.0**	**-1.3**
WESC	**Westside Schoo**	**0.57**	**310**			**Pb**	**09 56 47.3**	**+0.3**
WESC	**Westside Schoo**	**0.57**	**310**	*eP*		**Pg**	**09 56 46.9**	**+0.2**
YMD	**Yuma Desert**	**0.59**	**73**			**Pb**	**09 56 46.9**	**-0.3**
RUN	**Ruthven**	**0.62**	**19**			**Pb**	**09 56 47.3**	**-0.4**
RUN						**Sb**	**09 56 55.6**	**-0.5**
COK2	**Cook Ranch 2**	**0.64**	**317**			**Sn**	**09 56 58.7**	**-0.7**
YUH	**Yuha Desert**	**0.66**	**294**			**Pg**	**09 56 48.1**	**-0.1**
YUH						**Sg**	**09 56 57.4**	**+0.5**
ESJX	**Sierra Juarez**	**0.73**	**239**			**Pb**	**09 56 50.4**	**+0.6**
ESJX						**Sb**	**09 57 00.6**	**+1.0**
ESJX				IAML			09 57 02.0	
	comp=N,348nm,0.2s							
ESJX				IAML			09 57 02.6	
	comp=E,389nm,0.2s							
GLA	**Glamis**	**0.74**	**26**			**Pg**	**09 56 49.1**	**-0.6**
GLA						**Sb**	**09 56 59.9**	**+0.3**
GLA	**Glamis**	**0.74**	**26**	Pg		**Pg**	**09 56 48.9**	**-0.9**
GLA	**Glamis**	**0.74**	**26**	IAML			09 57 08.6	
	comp=N,412nm,0.5s							
GLA	**Glamis**	**0.74**	**26**	*eP*		**Pg**	**09 56 49.2**	**-0.6**
SWSC	**Sam W. Stewart**	**0.75**	**318**			**Pb**	**09 56 49.4**	**-0.4**
SWSC						**Sb**	**09 56 59.9**	**+0.1**
SWSC	**Sam W. Stewart**	**0.75**	**318**	*eP*		**Pb**	**09 56 49.1**	**-0.8**
RMX	**La Rumorosa**	**0.76**	**287**			**Pb**	**09 56 49.4**	**-0.9**
RMX						**Sb**	**09 56 59.1**	**-1.4**
RMX				IAML			09 56 59.6	
	comp=E,216nm,0.5s							
RMX	**La Rumorosa**	**0.76**	**287**	*eP*		**Pb**	**09 56 49.2**	**-1.1**
IKP	**In-Ko-Pah, Jac**	**0.80**	**289**			**Pb**	**09 56 50.8**	**-0.1**
IKP						**Sb**	**09 57 01.9**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**0.80**	**289**	*eP*		**Pb**	**09 56 50.8**	**-0.1**
CRR	**Carrizo Plain**	**0.81**	**308**			**Pb**	**09 56 50.4**	**-0.6**
SJX	**San Joaquin**	**0.89**	**226**	⇓*eP*		**Pb**	**09 56 50.4**	**-1.9**
SJX				*eS*		**Sb**	**09 57 00.8**	**-3.1**
SJX				IAML			09 57 02.0	
	comp=N,550nm,0.2s							
SJX				⇑*e*			09 57 02.0	
SJX				IAML			09 57 02.4	
	comp=E,591nm,0.1s							
ERRC	**Elmore Ranch**	**0.89**	**325**			**Pb**	**09 56 52.1**	**-0.2**
ECBX	**El Chinero**	**0.92**	**172**	*eP*		**Pg**	**09 56 52.6**	**-0.6**
ECBX				*eS*		**Sg**	**09 57 04.7**	**-0.6**
MONP2	**Monument Peak**	**1.14**	**297**			**Pn**	**09 56 55.5**	**-1.2**
MONP2	**Monument Peak**	**1.14**	**297**	*eP*		**Pn**	**09 56 55.2**	**-1.5**
TKX	**Tecate**	**1.19**	**279**			**Pg**	**09 56 58.6**	**+0.3**
TKX				IAML			09 57 14.6	
	comp=N,137nm,0.3s							
CBX	**Cerro Bola**	**1.23**	**267**			**Pb**	**09 56 58.5**	**+0.3**
CBX				IAML			09 57 18.4	
	comp=E,95nm,0.6s							
CBX	**Cerro Bola**	**1.23**	**267**	IAML			09 57 18.5	
	comp=E,182nm,0.6s							
TJIG	**Tijuana**	**1.24**	**273**	*eP*		**Pb**	**09 56 58.9**	**+0.6**
TJIG				*eS*		**Sn**	**09 57 14.8**	**+0.5**
TJIG	**Tijuana**	**1.24**	**273**			**Pb**	**09 56 58.9**	**+0.6**
TJIG						**Sn**	**09 57 14.8**	**+0.5**
BAR	**Barrett**	**1.27**	**284**			**Pb**	**09 56 59.0**	**+0.2**
BAR	**Barrett**	**1.27**	**284**			**Sn**	**09 57 16.1**	**+1.1**
BAR	**Barrett**	**1.27**	**284**			**Pb**	**09 56 59.2**	**+0.4**
BAR	**Barrett**	**1.27**	**284**	IAML			09 57 17.3	
	comp=N,93nm,0.4s							
BAR				IAML			09 57 18.4	
	comp=E,62nm,0.2s							
CCX	**Cicese**	**1.34**	**248**			**Pb**	**09 57 00.1**	**+0.2**
CCX				IAML			09 57 20.6	
	comp=N,100nm,0.3s							
CCX				IAML			09 57 38.5	
	comp=E,119nm,0.5s							
SPIG	**San Pedro Mart**	**1.35**	**189**	*eP*		**Pg**	**09 57 01.9**	**+0.4**
SPIG				*eS*		**Sg**	**09 57 19.8**	**+0.6**
SPIG	**San Pedro Mart**	**1.35**	**189**			**Pg**	**09 57 01.9**	**+0.4**
SPIG						**Sg**	**09 57 19.8**	**+0.6**
SPX	**San Pedro Mart**	**1.36**	**189**			**Pg**	**09 57 01.8**	**+0.1**
SPX				IAML			09 57 20.9	
	comp=E,126nm,0.5s							
SPX				IAML			09 57 21.5	
	comp=N,90nm,0.2s							
SFX	**San Felipe**	**1.38**	**167**			**Pg**	**09 57 01.9**	**0.0**
SFX				IAML			09 57 29.6	
	comp=N,65nm,0.6s							
SFX				IAML			09 57 31.8	
	comp=E,70nm,0.7s							
MATG	**Mataguay Scout**	**1.46**	**304**	*eP*		**Pn**	**09 57 00.0**	**-1.0**
SDRC	**San Diego Road**	**1.50**	**284**			**Sb**	**09 57 22.8**	**+1.2**
TJX	**Tijuana**	**1.56**	**275**			**Pn**	**09 57 02.8**	**+0.4**
DPP	**Dos Picos Cty**	**1.58**	**293**			**Sb**	**09 57 25.6**	**+1.7**
PFO	**Pinyon Flats O**	**1.61**	**320**			**Pb**	**09 57 04.3**	**-0.4**
109C	**Camp Elliot, M**	**1.68**	**288**			**Pb**	**09 57 05.5**	**-0.2**
109C				IAML			09 57 30.0	
	comp=E,62nm,0.4s							
109C				IAML			09 57 30.4	
	comp=N,85nm,0.5s							
PIX	**Pinacate**	**1.70**	**119**			**Pb**	**09 57 05.6**	**-0.6**
214A	**Organ Pipe Nat**	**2.08**	**101**	*eP*		**Pn**	**09 57 08.4**	**-1.1**
214A	**Organ Pipe Nat**	**2.08**	**101**			**Pn**	**09 57 08.7**	**-0.8**
214A				IAML			09 58 06.7	
	comp=E,46nm,0.7s							
214A				IAML			09 58 07.7	
	comp=N,37nm,1.1s							
KNB	**Kanab**	**5.02**	**22**			**Pn**	**09 57 51.5**	**+1.4**
KNB				IAML			09 59 42.9	
	comp=E,7.4nm,2.1s							
W18A	**Petrified Fore**	**5.31**	**58**	Pn		**Pn**	**09 57 56.4**	**+2.3**
R11A	**Troy Canyon, C**	**5.96**	**357**	Pn		**Pn**	**09 58 03.1**	**+0.1**
121A	**Cookes Peak, D**	**6.28**	**87**	Pn		**Pn**	**09 58 08.5**	**+1.1**

SOME ***11*** *10:07:21.1,40°.85N×78°.72E,h10km*
KRNET ***11*** *10:07:21.3±0.1,40°.88N×78°.74E,mb3.4*
NNC ***11*** *10:07:23.2±1.3,40°.88N×78°.63E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=9.3km s-min=6.4km az=166.0*
IDC ***11*** *10:07:24.3±3.1,41°.02N×79°.06E,h0km,mb2.9/1, mb1 3.2/5,mb1mx3.0/48,mbtmp3.2/5,ML3.0/2,Error ellipse: s-maj=35.2km s-min=23.1km az=167.0*
ISC 11 10:07:23.8±1.4,**40°.91N**±0°.07×**78°.69E**±0°.04,**h10**km**,n51,** σ**1°68/80,27C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.58**	**352**	⇑*iP*		**Pn**	**10 07 52.0**	**-0.1**
	baz=51							
PRZ				⇑*iS*		**Sb**	**10 08 14.2**	**+0.7**
	baz=51							
KDJ	**Kajisay**	**1.66**	**317**	⇓*iP*		**Pn**	**10 07 53.2**	**0.0**
	baz=18							
KDJ				⇓*iS*		**Sb**	**10 08 16.6**	**+0.9**
ANVS	**Anan'yevo**	**2.02**	**338**	⇑*iP*		**Pb**	**10 07 59.4**	**-1.3**
	baz=38							
ANVS				⇑*iS*		**Sb**	**10 08 27.3**	**+1.3**
	baz=38							
SATY	**Saty**	**2.16**	**354**	*eP*		**Pb**	**10 08 03.0**	**0.0**
	38nm,0.5s							
SATY				*eS*		**Sg**	**10 08 33.2**	**+0.1**
	91nm,0.4s							
SATY	**Saty**	**2.16**	**354**	*eP*		**Pb**	**10 08 03.0**	**0.0**
	38nm,0.5s							
SATY				Lg		Lg	10 08 33.2	
	91nm,0.4s							
UZB	**Uzynbulak**	**2.25**	**6**	*eP*		**Pb**	**10 08 04.5**	**0.0**
	42nm,0.4s							
UZB				*eS*		**Sg**	**10 08 35.7**	**-0.2**
	69nm,0.5s							
UZB	**Uzynbulak**	**2.25**	**6**	Pg		**Pb**	**10 08 04.8**	**+0.3**
	42nm,0.4s							
UZB				Lg		Lg	10 08 36.0	
	69nm,0.5s							
ULHL	**Ulahol**	**2.27**	**307**	⇑*eP*		**Pn**	**10 08 02.6**	**+1.1**
	baz=7.0							
ULHL				⇑*iS*		**Sb**	**10 08 32.7**	**-0.5**
	baz=7.0							
SHLS	**Shalkode**	**2.31**	**14**	*eP*		**Pg**	**10 08 07.0**	**-1.1**
	132nm,0.3s							
SHLS				*eS*		**Sg**	**10 08 40.2**	**+2.0**
	175nm,0.5s							
SHLS	**Shalkode**	**2.31**	**14**	Pg		**Pg**	**10 08 07.0**	**-1.1**
	132nm,0.3s							
SHLS				Lg		Lg	10 08 40.2	
	175nm,0.5s							
PDGK	**Podgornoye**	**2.49**	**14**	Pg		**Pb**	**10 08 08.9**	**+0.3**
	22nm,0.6s							
PDGK				Lg		Lg	10 08 43.8	
	43nm,0.6s							
PDGK	**Podgornoye**	**2.49**	**14**	⇑Pn		**Pb**	**10 08 06.0**	**-2.6**
	24nm,0.4s							
PDGK				⇓Lg		Lg	10 08 43.9	
	53nm,0.5s							
TNSS	**Tian-Shan**	**2.49**	**329**	*eP*		**Pb**	**10 08 08.4**	**-0.4**
	19nm,0.3s							
TNSS				*eS*		**Sg**	**10 08 42.4**	**-1.4**
	43nm,0.4s							
TNSS	**Tian-Shan**	**2.49**	**329**	Pg		**Pb**	**10 08 08.4**	**-0.4**
	19nm,0.3s							
TNSS				Lg		Lg	10 08 42.4	
	43nm,0.4s							
KPKS	**Kokpek**	**2.55**	**360**	*eP*		**Pb**	**10 08 10.7**	**+1.0**
	38nm,0.2s							
KPKS				*eS*		**Sg**	**10 08 46.0**	**+0.3**
	297nm,0.5s							
MDOK	**Medeo**	**2.56**	**332**	*eP*		**Pb**	**10 08 09.7**	**-0.2**
	26nm,0.6s							
MDOK				*eS*		**Sb**	**10 08 44.2**	**+2.7**
	147nm,0.8s							
MDOK	**Medeo**	**2.56**	**332**	Pn		**Pb**	**10 08 07.4**	**-2.5**
	25nm,0.6s							
MDOK				⇑Lg		Lg	10 08 45.4	
	144nm,0.8s							
MDOK	**Medeo**	**2.56**	**332**	Pg		**Pb**	**10 08 09.7**	**-0.2**
	26nm,0.6s							
MDOK				Lg		Lg	10 08 44.2	
	147nm,0.8s							
BOOM	**Boomskoye usch**	**2.59**	**308**	⇑*iP*		**Pn**	**10 08 07.2**	**+1.2**
	baz=9.0							
BOOM				⇑*iS*		**Sb**	**10 08 40.5**	**-2.0**
	baz=9.0							
KOTS	**Kotyrbulak**	**2.60**	**334**	*eP*		**Pb**	**10 08 10.8**	**+0.2**
	66nm,0.6s							
KOTS				*eS*		**Sg**	**10 08 46.8**	**-0.6**
	179nm,0.6s							
KOTS	**Kotyrbulak**	**2.60**	**334**	Pg		**Pb**	**10 08 10.8**	**+0.2**
	66nm,0.6s							
KOTS				Lg		Lg	10 08 46.8	
	179nm,0.6s							
IZV	**Izvestkoviy**	**2.63**	**325**	*eP*		**Pb**	**10 08 11.3**	**+0.3**
	7.3nm,0.5s							
IZV				*eS*		**Sg**	**10 08 47.2**	**-1.0**
	46nm,0.7s							
IZV	**Izvestkoviy**	**2.63**	**325**	Pg		**Pb**	**10 08 11.3**	**+0.3**
	7.3nm,0.5s							
IZV				Lg		Lg	10 08 47.2	
	46nm,0.7s							
MTBS	**Maitube**	**2.78**	**323**	*eP*		**Pb**	**10 08 14.0**	**+0.3**
	6.5nm,0.3s							
MTBS				*eS*		**Sg**	**10 08 51.6**	**-1.6**
	28nm,0.3s							
MTBS	**Maitube**	**2.78**	**323**	Pg		**Pb**	**10 08 14.0**	**+0.3**
	6.5nm,0.3s							
MTBS				Lg		Lg	10 08 51.6	
	28nm,0.3s							
KTMS	**Ketmen**	**2.82**	**25**	*eP*		**Pb**	**10 08 13.7**	**-0.6**
	69nm,0.6s							
KTMS				*eS*		**Sg**	**10 08 51.8**	**-2.5**
	40nm,0.7s							
KTMS	**Ketmen**	**2.82**	**25**	Pg		**Pb**	**10 08 13.7**	**-0.6**
	70nm,0.7s							
KTMS				Lg		Lg	10 08 51.6	
	72nm,0.8s							
KST	**Kastek**	**2.94**	**317**	*eP*		**Pb**	**10 08 16.0**	**-0.4**
	9.0nm,1.0s							
KST				*eS*		**Sb**	**10 08 55.2**	**+2.7**
	63nm,0.8s							
KST	**Kastek**	**2.94**	**317**	Pg		**Pb**	**10 08 16.0**	**-0.4**
	9.0nm,1.0s							
KST				Lg		Lg	10 08 55.2	
	63nm,0.8s							
TKM2	**Tokmak 2**	**3.06**	**312**	⇑*iP*		**Pn**	**10 08 13.7**	**+1.3**
	baz=12							
TKM2				⇑*iS*		**Sn**	**10 08 51.8**	**+2.6**
	baz=12							
TKM2	**Tokmak 2**	**3.06**	**312**	⇑Pn		**Pn**	**10 08 14.4**	**+2.0**
	5.2nm,0.3s							
TKM2				⇑Lg		Lg	10 08 59.6	
	26nm,0.5s							
DGS	**Degeres**	**3.19**	**318**	*eP*		**Pb**	**10 08 20.9**	**+0.4**
	10nm,0.6s							
DGS				*eS*		**Sg**	**10 09 03.7**	**-2.4**
	39nm,0.8s							
DGS	**Degeres**	**3.19**	**318**	Pg		**Pb**	**10 08 20.9**	**+0.4**
	10nm,0.6s							
DGS				Lg		Lg	10 09 03.7	
	39nm,0.8s							
ARXS	**Arharly**	**3.36**	**349**	*eP*		**Pb**	**10 08 24.9**	**+1.4**
	40nm,0.6s							
ARXS				*eS*		**Sg**	**10 09 10.5**	**-1.2**
	38nm,0.6s							
ARXS	**Arharly**	**3.36**	**349**	Pg		**Pb**	**10 08 24.9**	**+1.4**
	40nm,0.6s							
ARXS				Lg		Lg	10 09 10.5	
	38nm,0.6s							
UCH	**Uchtor**	**3.40**	**294**	⇑*iP*		**Pn**	**10 08 18.3**	**+1.0**
	baz=94							
UCH				⇑*iS*		**Sn**	**10 09 00.0**	**+2.1**
	baz=94							
ARLS	**Aral**	**3.42**	**288**	⇑*iP*		**Pn**	**10 08 18.5**	**+1.2**
	baz=88							
ARLS				⇑*iS*		**Sn**	**10 09 00.4**	**+2.4**
	baz=88							
KUU	**Kurty**	**3.45**	**330**	*eP*		**Pb**	**10 08 25.7**	**+0.7**
	4.8nm,0.6s							
KUU				*eS*		**Sg**	**10 09 11.7**	**-2.8**
	34nm,0.8s							
KUU	**Kurty**	**3.45**	**330**	Pg		**Pb**	**10 08 25.7**	**+0.7**
	4.8nm,0.6s							
KUU				Lg		Lg	10 09 11.7	
	34nm,0.8s							
AAK	**Ala-Archa**	**3.58**	**300**	Pn		**Pb**	**10 08 25.6**	**-1.7**
	1.5nm,0.3s,baz=125,slow=7.3,SNR=13							
AAK				Sn		**Sb**	**10 09 13.3**	**+2.5**
	0.9nm,0.3s,baz=264,slow=15,SNR=5.1							
AAK	**Ala-Archa**	**3.58**	**300**	⇑*iP*		**Pn**	**10 08 20.9**	**+1.4**
	baz=0.0							
AAK				⇑*iS*		**Sn**	**10 09 04.6**	**+2.6**
	baz=0.0							
AAK	**Ala-Archa**	**3.58**	**300**	⇑Pg		**Pb**	**10 08 26.7**	**-0.5**
	8.2nm,0.8s							
AAK				⇑Lg		Lg	10 09 16.6	
	32nm,0.8s							
AML	**Almayashu**	**3.94**	**290**	⇓*iP*		**Pn**	**10 08 26.1**	**+1.4**
	baz=90							
AML				⇓*iS*		**Sn**	**10 09 13.1**	**+1.8**
	baz=90							
MRKS	**Merke**	**4.48**	**296**	*eP*		**Pb**	**10 08 44.2**	**+1.7**
	3.6nm,0.5s							
MRKS				*eS*		**Sg**	**10 09 44.5**	**-2.9**
	7.0nm,0.9s							
BTLS	**Baital**	**5.35**	**322**	*eP*		**Pg**	**10 09 01.6**	**-4.6**
	1.5nm,0.3s							
BTLS				*eS*		**Sg**	**10 10 13.4**	**-2.1**
	5.4nm,0.6s							
MK31	**Makanchi Array**	**6.43**	**23**	⇑Pn		**Pn**	**10 09 00.5**	**+2.0**
	0.2nm,0.3s,baz=203,slow=12,SNR=11							
MK31				⇑Pg		**Pg**	**10 09 22.7**	**-4.1**
	1.0nm,0.5s,baz=186,slow=15,SNR=4.5							
MK31				⇓Sn		**Sn**	**10 10 16.3**	**+4.4**
	0.8nm,0.5s							
MK31				⇑Lg		Lg	10 10 51.4	
	1.7nm,0.6s							
MKAR	**Makanchi Array**	**6.43**	**23**	Pn		**Pn**	**10 08 58.6**	**+0.1**
	0.3nm,0.3s,baz=203,slow=12,SNR=6.8							
MKAR				Lg		Lg	10 10 40.5	
	0.2nm,0.3s,baz=204,slow=27,SNR=1.5							
KK31	**Karatay Array**	**6.47**	**292**	⇑Pg		**Pb**	**10 09 19.2**	**+2.7**
	0.5nm,0.4s,baz=110,slow=16							
KK31				⇑Lg		Lg	10 10 48.4	
	2.5nm,0.8s,baz=114,slow=27,SNR=4.3							
KURBB	**Kurchatov Arra**	**9.71**	**359**	Pn		**Pn**	**10 09 43.8**	**+0.3**
	baz=188,slow=12,SNR=0.9							
KURBB				Lg		Lg	10 12 31.1	
	0.0nm,0.3s,baz=185,slow=30,SNR=4.0							
ZALV	**Zalesovo Beam**	**13.68**	**15**	Pn		**Pn**	**10 10 36.7**	**-1.0**
	baz=200,slow=12,SNR=1.0							
SONM	**Songino Array**	**20.90**	**61**	P		**P**	**10 12 05.4**	**-0.9**
	0.4nm,0.7s,baz=268,slow=9.8,SNR=4.2							

IDC ***11*** *10:07:23.0±0.5,15°.48S×172°.89W,h0km,mb4.3/16, mb1 4.5/16,mb1mx4.3/35,mbtmp4.3/16,MS3.6/16, Ms1 3.6/16,ms1mx3.4/37,Error ellipse: s-maj=22.9km s-min=14.7km az=132.0*
NEIC ***11*** *10:07:23.4±1.5,15°.70S±0°.10×172°.85W±0°.09,h10km±1km, mb4.6/105,Error ellipse: s-maj=16.9km s-min=13.8km az=197.0*
ISC 11 10:07:24.8±0.4,**15°.5S**±0°.1×**173°.02W**±0°.10,**h10**km**,n195,** σ**1°54/166,mb4.6/68,MS3.7/16,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.98**	**38**	Pn		Pn	10 07 51.1	-7.3
	36nm,0.3s,baz=195,slow=1.6,SNR=49							
AFI				Sn		Sn	10 08 09.1	-14
	232nm,0.3s,baz=231,slow=23,SNR=12							
NIUE	**Niue**	**4.63**	**141**			Pn	10 08 27.9	-6.9
NIUE						Sn	10 09 15.2	-14
MSVF	**Nonsavu**	**8.85**	**254**	LR		LR	10 12 03.5	
	comp=Z,99nm,21.3s,baz=119,slow=31							
MSVF	**Nonsavu**	**8.85**	**254**	Pn		**Pn**	**10 09 31.2**	**-1.7**
RAR	**Rarotonga**	**13.80**	**116**	Pn		Pn	10 10 31.6	-9.0
	4.2nm,0.3s,baz=268,slow=8.0,SNR=5.9							
RAR				LR		LR	10 13 31.7	
	comp=Z,37nm,21.9s,baz=280,slow=27							
DZM	**Mont Dzumac**	**20.50**	**248**	P		**P**	**10 12 05.3**	**+2.0**
	7.1nm,0.8s,baz=69,slow=18,SNR=3.3							
DZM				LR		LR	10 19 04.0	
	comp=Z,217nm,18.8s,baz=36,slow=34							
PAE	**Paea**	**22.57**	**99**	*eT*		T	10 35 22.0	
	1.7nm,0.4s							
PPT	**Papeete**	**22.57**	**99**	LR		LR	10 19 07.1	
	comp=Z,103nm,18.0s,baz=305,slow=31							
PPT2	**Papeete2**	**22.57**	**99**	*e*LR		LR	10 17 49.1	
	comp=Z,113nm,22.2s							
PPT2	**Papeete2**	**22.57**	**99**	*eT*		T	10 35 23.0	
	2.8nm,0.4s							
OUZ	**Omahuta**	**23.02**	**209**	P		**P**	**10 12 29.4**	**-0.6**
TBI	**Tubuai**	**23.53**	**113**	*eT*		T	10 36 31.2	
	6.1nm,0.4s							
URZ	**Urewera**	**24.30**	**199**	P		**P**	**10 12 43.1**	**+0.7**
	12nm,0.5s,baz=118,slow=22,SNR=13							
URZ	**Urewera**	**24.30**	**199**	P		**P**	**10 12 42.2**	**-0.2**
HNR	**Honiara**	**27.06**	**280**	LR		LR	10 22 36.8	
	comp=Z,198nm,18.3s,baz=122,slow=34							
TAOE	**Nuku Hiva Isla**	**32.77**	**82**	*eT*		T	10 48 09.9	
	15nm,0.2s							
ARMA	**Armidale**	**35.61**	**239**	P		**P**	**10 14 22.9**	**-0.1**
ARMA						IAmb	10 14 34.2	
	comp=Z,14nm,1.2s							
H11S2	**WAKE ISLAND Hy**	**39.23**	**329**	T		T	10 57 13.0	
	baz=146,slow=75,SNR=15							
H11S3	**WAKE ISLAND Hy**	**39.24**	**329**	T		T	10 57 13.0	
	baz=146,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**39.25**	**329**	T		T	10 57 13.0	
	baz=146,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy**	**40.17**	**330**	T		T	10 58 23.1	
	baz=142							
H11N1	**WAKE ISLAND Hy**	**40.17**	**330**	T		T	10 58 43.1	
	baz=142							
H11N2	**WAKE ISLAND Hy**	**40.19**	**330**	T		T	10 58 46.7	
	baz=142							
COEN	**Coen**	**42.34**	**266**	P		**P**	**10 15 19.1**	**-0.4**
TOO	**Toolangi**	**42.69**	**231**	P		**P**	**10 15 22.0**	**0.0**
STKA	**Stephens Creek**	**44.31**	**240**	P		**P**	**10 15 35.2**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=103,slow=12,SNR=13							
STKA				LR		LR	10 32 38.1	
	comp=Z,61nm,18.5s,baz=26,slow=34							
STKA	**Stephens Creek**	**44.31**	**240**	P		**P**	**10 15 34.6**	**-0.5**
BBOO	**Buckleboo**	**49.08**	**240**	P		**P**	**10 16 12.3**	**-0.3**
WR0	**Warramunga Arr**	**49.99**	**257**	P		**P**	**10 16 19.7**	**0.0**
WR0				IAmb		IAmb	10 16 26.7	
	comp=Z,7.9nm,1.2s							
WB0	**Warramunga Arr**	**50.14**	**257**	P		**P**	**10 16 20.7**	**-0.1**
WB2	**Warramunga Arr**	**50.

YERR IAmb IAmb 10 19 00.9
comp=Z,8.0nm,1.5s
NVAR Mina Array Bea 74.15 42 P P 10 19 01.3 -0.6
comp=Z,2.3nm,0.8s,baz=227,slow=9.8,SNR=22
NVAR LR LR 10 46 17.7
comp=Z,60nm,19.5s,baz=236,slow=32
PAHR Pah Rah Range 74.21 40 P P 10 19 01.0 -1.2
PAHR IAmb IAmb 10 19 03.0
comp=Z,7.1nm,1.3s
NV11 Mina Array Sit 74.25 42 P P 10 19 01.6 -0.8
NV11 IAmb IAmb 10 19 03.3
comp=Z,7.9nm,1.2s
214A Organ Pipe Nat 74.49 50 P P 10 19 01.5 -2.3
QSPA South Pole Qui 74.56 180 P P 10 19 01.0 -2.8
QSPA IAmb IAmb 10 19 05.2
comp=Z,8.0nm,1.0s
KVN Kaiserville 74.64 41 P P 10 19 04.1 -0.6
KVN IAmb IAmb 10 19 05.3
comp=Z,5.6nm,1.1s
TPH Tonopah 74.65 43 P P 10 19 03.3 -1.5
TPNV Topopah Spring 74.67 44 P P 10 19 04.1 -0.8
TPNV IAmb IAmb 10 19 05.7
comp=Z,5.1nm,1.0s
MOD Modoc Plateau 74.97 38 P P 10 19 05.9 -0.6
MOD IAmb IAmb 10 19 26.6
comp=Z,5.8nm,1.2s
SHPR Sheep Range 75.16 45 P P 10 19 05.8 -2.0
SHPR IAmb IAmb 10 19 08.7
comp=Z,6.2nm,1.2s
PRN Pahroc Range 75.72 44 P P 10 19 10.3 -0.6
PRN IAmb IAmb 10 19 12.0
comp=Z,8.5nm,1.2s
PINE Pine Mountain 75.75 36 P P 10 19 10.0 -1.0
R11A Troy Canyon, C 75.87 43 P P 10 19 10.3 -1.5
R11A IAmb IAmb 10 19 12.5
comp=Z,5.1nm,1.2s
TUC Tucson 76.16 51 P P 10 19 11.3 -2.1
TUC IAmb IAmb 10 19 14.6
comp=Z,5.1nm,1.1s
WVOR Wild Horse Val 76.28 38 P P 10 19 12.2 -1.8
WVOR IAmb IAmb 10 19 33.9
comp=Z,14nm,1.5s
KSRS Korea Array 76.48 315 LR LR 10 46 30.9
comp=Z,20nm,19.9s,baz=140,slow=31
LCMT Little Creek M 76.74 45 P P 10 19 15.4 -1.3
CCUT Cedar City 76.94 45 P P 10 19 15.0 -2.9
CCUT IAmb IAmb 10 19 19.1
comp=Z,8.9nm,1.4s
KNB Kanab 77.03 45 P P 10 19 16.0 -2.4
KNB IAmb IAmb 10 19 20.6
comp=Z,4.2nm,0.9s
PSUT Pine Spring 77.12 44 P P 10 19 17.1 -1.9
PSUT IAmb IAmb 10 19 19.5
comp=Z,4.1nm,0.8s
SZCU Shurtz Canyon 77.15 45 P P 10 19 18.6 -0.5
SZCU IAmb IAmb 10 19 36.6
comp=Z,7.1nm,1.4s
ELK Elko 77.41 41 P P 10 19 19.6 -0.9
USRK Ussuriysk Ar. 77.67 323 P P 10 19 22.6 +1.0
comp=Z,1.4nm,0.9s,baz=267,slow=40,SNR=4.4
USRK LR LR 10 50 31.0
comp=Z,32nm,18.3s,baz=150,slow=33
USRK Ussuriysk Ar. 77.67 323 P P 10 19 21.2 -0.4
MTPU Mount Pierson 77.99 45 P P 10 19 21.5 -2.5
MTPU IAmb IAmb 10 19 25.6
comp=Z,12nm,1.5s
TCRU Three Creeks R 78.10 44 P P 10 19 22.9 -1.6
TCRU IAmb IAmb 10 19 25.8
comp=Z,5.9nm,0.9s
MSU Marysvale 78.23 44 P P 10 19 25.1 0.0
W18A Petrified Fore 78.27 48 P P 10 19 23.6 -1.8
W18A IAmb IAmb 10 19 29.6
comp=Z,6.7nm,1.5s
121A Cookes Peak, D 78.51 52 P P 10 19 24.7 -2.1
F10A Beach Ranch, E 79.17 36 P P 10 19 29.0 -1.0
F10A IAmb IAmb 10 19 54.0
comp=Z,9.9nm,1.4s
HLID Hailey 79.46 39 P P 10 19 31.7 -0.1
HVU Hansel Valley 79.53 41 P P 10 19 30.8 -1.3
SRU San Rafael Swe 79.65 45 P P 10 19 31.4 -1.5
C09A Chrisman Ranch 79.68 34 P P 10 19 31.3 -1.3
P17A Butcher Ranch, 79.68 44 P P 10 19 31.6 -1.4
P17A IAmb IAmb 10 19 34.2
comp=Z,7.1nm,1.1s
JLU Jordanelle 79.78 43 P P 10 19 32.4 -1.2
Y22D IRIS PASSCAL I 79.85 50 P P 10 19 32.4 -1.7
MNTX Cornudas Mount 79.98 53 P P 10 19 33.4 -1.3
TCUT Toone Canyon 80.07 42 P P 10 19 33.8 -1.4
BNM Barren Site 80.10 50 P P 10 19 34.5 -1.0
BESE Bessie Mountai 80.15 19 P P 10 19 34.0 -0.9
TX31 Lajitas Ar. Si 80.36 56 P P 10 19 34.6 -2.2
TX32 Lajitas Array 80.36 56 P P 10 19 35.2 -1.6
TX32 IAmb IAmb 10 19 37.8
comp=Z,10nm,1.3s
TXAR Lajitas Array 80.36 56 P P 10 19 36.3 -0.5
comp=Z,3.1nm,1.0s,baz=224,slow=6.5,SNR=23
TXAR Lajitas Array 80.36 56 P P 10 19 35.2 -1.6
NJ2 Nanjing 80.51 307 *eP* **P 10 19 38.0 +0.6**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
ANMO Albuquerque 80.58 50 P P 10 19 37.0 -1.0
KTH Kantishna Hill 80.64 10 P P 10 19 37.1 -0.4
KTH IAmb IAmb 10 19 47.0
comp=Z,7.6nm,1.2s
TRF Thorofare Moun 80.65 10 P P 10 19 37.4 -0.3
TRF IAmb IAmb 10 19 42.0
comp=Z,12nm,1.1s
GDL2 Guadalupe Moun 80.98 53 P P 10 19 40.3 +0.1
RDMU Red Mountain 81.01 44 P P 10 19 39.5 -0.7
RDMU IAmb IAmb 10 19 42.8
comp=Z,6.8nm,1.4s
MCMT McKenzie Canyo 81.09 39 P P 10 19 40.3 -0.3
MCK McKinley 81.14 11 P P 10 19 40.0 -0.1
DLMT Dillon 81.53 38 P P 10 19 41.2 -1.6
DLMT IAmb IAmb 10 19 44.9
comp=Z,9.0nm,1.4s
SNOW Snow King Moun 81.67 41 P P 10 19 41.8 -1.9
LOHW Long Hollow 81.84 41 P P 10 19 42.7 -1.9
NEA2 Nenana 81.91 10 P P 10 19 43.3 -0.9
NEA2 IAmb IAmb 10 19 45.1
comp=Z,6.2nm,1.1s
QLMT Earthquake Lak 81.96 39 P P 10 19 44.5 -0.6
WRH Wood River Hil 81.97 11 P P 10 19 43.9 -0.6
BCAR Beaver Creek A 82.00 14 P P 10 19 44.1 -0.6
DOT Dot Lake 82.01 13 P P 10 19 44.3 -0.4
DOT IAmb IAmb 10 19 45.3
comp=Z,5.7nm,0.9s
FLWY Flagg Ranch 82.02 40 P P 10 19 44.7 -0.8
FLWY IAmb IAmb 10 19 49.2
comp=Z,6.3nm,1.1s
MLY Manley 82.05 9 P P 10 19 44.3 -0.6
MLY IAmb IAmb 10 19 44.9
comp=Z,5.3nm,1.0s
PD31 Pinedale Array 82.09 42 P P 10 19 44.0 -1.9
PDAR Pinedale Array 82.09 42 P P 10 19 44.8 -1.1
comp=Z,0.8nm,0.6s,baz=220,slow=3.2,SNR=9.5
PDAR Pinedale Array 82.09 42 P P 10 19 44.2 -1.7
SMCO Snowmass 82.11 46 P P 10 19 44.1 -2.2
CCB Clear Creek Bu 82.18 11 P P 10 19 45.0 -0.6
BOZ Bozeman (W) 82.23 38 P P 10 19 45.4 -1.1
H17A Grant Village 82.26 40 P P 10 19 45.5 -1.2
YHH Holmes Hill 82.29 39 P P 10 19 46.1 -0.9
YHH IAmb IAmb 10 20 02.8
comp=Z,5.6nm,1.3s
SCRK Sand Creek 82.32 12 P P 10 19 47.0 +0.6
SCRK IAmb IAmb 10 19 47.4
comp=Z,3.5nm,0.8s
I23K Minto, Yukon-K 82.38 10 P P 10 19 46.8 +0.3
I23K IAmb IAmb 10 19 51.7
comp=Z,6.8nm,1.1s
TCOL CIGO, UAF Yank 82.38 11 P P 10 19 46.1 -0.4
COLA College 82.38 11 P P 10 19 46.1 -0.4
MDM Murphy Dome 82.39 10 P P 10 19 46.1 -0.6
MDM IAmb IAmb 10 19 47.6
comp=Z,7.2nm,1.1s
IL31 82.46 11 P P 10 19 46.0 -0.9
IL31 IAmb IAmb 10 20 05.4
comp=Z,6.0nm,1.2s
ILAR Eielson Array 82.46 11 P P 10 19 46.4 -0.7
comp=Z,2.1nm,0.7s,baz=226,slow=6.3,SNR=25
ILAR Eielson Array 82.46 11 P P 10 19 45.9 -1.1
IMAR Indian Mountai 82.51 8 P P 10 19 47.7 +0.4
POKR Poker Plat Res 82.68 11 P P 10 19 47.7 -0.4
HRY Holter Researc 82.69 37 P P 10 19 48.6 -0.2

WALA Waterton Lakes 82.78 35 P P 10 19 48.6 -0.6
RWWY Rawlins 83.11 43 P P 10 19 49.5 -1.8
PRP Porcupine Dome 83.39 11 P P 10 19 51.8 -0.2
DAWY Dawson 83.42 14 P P 10 19 52.0 0.0
DAWY IAmb IAmb 10 19 53.1
comp=Z,4.7nm,0.8s
GCMT Greycliff 83.52 39 P P 10 19 52.8 -0.4
COLD Coldfoot 84.17 9 P P 10 19 56.0 +0.2
COLD IAmb IAmb 10 19 58.0
comp=Z,6.9nm,1.1s
ABTX Abilene, Hawle 84.82 54 P P 10 19 58.5 -1.4
KSCO Kaye Shedlock' 85.08 47 P P 10 20 00.2 -1.0
TOLK Toolik Lake Re 85.58 8 P P 10 20 03.1 +0.2
TOLK IAmb IAmb 10 20 07.2
comp=Z,4.8nm,1.0s
LAO LASA Array 86.04 39 P P 10 20 03.7 -2.0
LAO IAmb IAmb 10 20 30.2
comp=Z,5.0nm,1.1s
INK Inuvik 88.27 14 P P 10 20 15.9 +0.1
INK IAmb IAmb 10 20 26.9
comp=Z,6.4nm,1.2s
PLCA Paso Flores 89.18 132 P P 10 20 20.1 -1.1
comp=Z,0.7nm,0.7s,baz=210,slow=3.4,SNR=3.4
YAK Yakutsk 89.34 337 P P 10 20 20.5 -0.6
HHC Hu-ho-hao-te 89.36 313 *eP* **P 10 20 21.6 -0.2**
HHC Hu-ho-hao-te 89.36 313 S S 10 31 03.1 -9.0
HHC pmax pmax
comp=Z,7.0nm,1.3s
HHC pmax pmax
comp=Z,76nm,7.1s
HHC LR LR
comp=N,260nm,17.3s
HHC LR LR
comp=E,160nm,17.1s
HHC LR LR
comp=Z,120nm,17.9s
YKA Yellowknife Ar 90.03 23 P P 10 20 24.0 -0.3
comp=Z,1.9nm,0.8s,baz=235,slow=4.5,SNR=40
YKA LR LR 10 55 43.8
comp=Z,28nm,19.3s,baz=0.0,slow=32
VNA3 Neumayer Olymp 92.73 175 P P 10 20 36.7 -0.2
VNA3 Neumayer Olymp 92.73 175 PKiKP **PKiKP 10 25 30.9 +5.9**
SNAA Sanae 92.80 177 P P 10 20 36.2 -1.1
CMAR Chiang Mai Arr 92.98 288 LR LR 10 58 03.2
comp=Z,11nm,21.3s,baz=205,slow=33
VNA2 Neumayer--Watz 93.23 175 P P 10 20 39.4 +0.2
baz=172,slow=3.4
VNA2 Neumayer--Watz 93.23 175 PKiKP **PKiKP 10 25 31.2 +5.4**
SONM Songino Array 95.16 318 P P 10 20 49.3 +0.8
comp=Z,0.4nm,0.8s,baz=129,slow=3.9,SNR=2.5
TLY Talaya 97.93 321 LR LR 11 02 56.1
comp=Z,26nm,18.3s,baz=66,slow=34
ARCES ARCESS Array B 124.75 352 PKP **PKPdf 10 26 24.1 -0.1**
comp=Z,3.0nm,0.8s,baz=340,slow=6.8,SNR=5.2
DPC Dobruska-Polom 144.41 350 *e*PKP **PKPab 10 26 59.3 -0.2**
GRF Grafenberg Arr 145.71 355 *e*PKP **PKPdf 10 27 04.6 +1.0**
baz=7.0,slow=3.1
KHC Kasperske Hory 146.02 352 *e*PKP **PKPdf 10 27 05.8 +1.6**
GERES GERESS Array B 146.28 352 PKPbc **PKPdf 10 27 05.8 +1.1**
comp=Z,0.9nm,0.7s,baz=2.9,slow=2.7,SNR=7.5
GERES GERESS Array B 146.28 352 PKPdf 10 27 06.3 +1.6
BRTR Keskin Array B 146.46 321 PKPbc **PKPdf 10 27 07.5 +2.1**
comp=Z,5.4nm,0.9s,baz=102,slow=2.6,SNR=18
BRTR Keskin Array B 146.46 321 PKPdf 10 27 08.1 +2.7
CONA Conrad Observa 146.83 349 *eP* **PKPdf 10 27 07.8 +2.1**
comp=Z,4.2nm,0.8s
MOA Molln 147.17 351 *i* P **PKPdf 10 27 08.2 +2.1**
comp=Z,4.3nm,1.0s
ARSA Arzberg 147.54 349 *i* P **PKPbc 10 27 10.6 +1.2**
comp=Z,5.9nm,1.2s
WATA Walderalm 148.02 354 *i* P **PKPdf 10 27 11.6 +3.9**
comp=Z,2.0nm,0.4s
MOTA Moosalm 148.05 355 *eP* **PKPbc 10 27 11.7 +0.8**
comp=Z,5.5nm,0.8s
KBA Koelnbreinsper 148.06 352 *eP* **PKPdf 10 27 11.4 +3.5**
comp=Z,4.3nm,0.9s
SOKA Soboth 148.19 349 *eP* **PKPdf 10 27 10.0 +2.0**
comp=Z,3.8nm,0.9s
DAVA Damuels 148.20 356 *eP* **PKPdf 10 27 11.6 +3.5**
comp=Z,5.8nm,0.9s
FETA Feichten 148.41 355 *i* P **PKPdf 10 27 11.9 +3.5**
comp=Z,2.8nm,1.0s
ABTA Abtertersbach 148.49 353 *eP* **PKPdf 10 27 11.3 +2.8**
comp=Z,3.9nm,0.7s
PCAB Cabril 150.83 23 *e*PKPbc **PKPbc 10 27 18.2 +0.3**
POLO Lamas de Olo 151.21 23 *e*PKPbc **PKPbc 10 27 19.1 +0.3**
PVRL Vila Real 151.32 23 *e*PKPbc **PKPbc 10 27 19.6 +0.6**
MVO Moncorvo 151.68 23 *e*PKPbc **PKPbc 10 27 20.3 +0.4**
MTE Manteigas 152.14 24 *e*PKPbc **PKPbc 10 27 21.3 +0.3**
PSBE So Bento 152.36 27 *e*PKPdf **PKPdf 10 27 12.3 -2.3**
PMRV Marv??o 153.03 25 *e*PKPbc **PKPbc 10 27 23.1 +0.2**
PNCL Nicolau / Gran 153.63 28 *e*PKPbc **PKPbc 10 27 23.6 -0.6**
ESDC Sonseca Array 154.07 20 PKPbc **PKPbc 10 27 24.6 -0.7**
comp=Z,0.6nm,0.7s,baz=312,slow=2.6,SNR=7.2
ESDC PKPab **sPKPbc 10 27 36.0 +6.9**
comp=Z,0.7nm,0.6s,baz=326,slow=3.4,SNR=5.5
ESDC Sonseca Array 154.07 20 PKPbc 10 27 25.7 +0.5
TORD Torodi Ar. Bea 174.37 114 PKPab **PKPab 10 29 06.2 -2.0**
comp=Z,0.9nm,0.8s,baz=253,slow=4.5,SNR=2.7

*IDC **11** 10:19:05.4±1.9, 7.°01S×128.°66E, h205km±23km, mb3.3/2, mb1 3.6/6, mb1mx3.2/24, mbtmp4.1/6, Error ellipse: s-maj=22.6km s-min=17.6km az=87.0*
*DJA **11** 10:19:05.2±0.4, 7.°S×12.°9E±.°, h245km±13km, M4.0/7, mb3.7/6, mB4.3/2, MLv4.2/7, Mw(mB)3.4/2*
ISC 11 10:19:04.3±0.8, 7.°00S±0.°07×128.°74E±0.°09, h200km, n11, σ2°99/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.72**	**111**	P		**Pn**	**10 19 54.9 +4.2**
SOEI	**Soe**	**5.20**	**238**	P		**Pn**	**10 20 23.7 +2.3**
	0.4nm17nm,0.7s						
FAKI	**Fak Fak**	**5.36**	**41**	P		**Pn**	**10 20 24.0 +0.7**
	0.2nm14nm,0.9s						
BATI	**Baumata**	**5.94**	**237**	P		**Pn**	**10 20 32.2 +1.3**
	7.8nm,0.3s,baz=240,slow=0.8,SNR=4.8						
BATI				S		**Sn**	**10 21 38.9 -0.5**
	13nm,0.3s,baz=68,slow=19,SNR=7.7						
BATI	**Baumata**	**5.94**	**237**	P		**Pn**	**10 20 32.5 +1.6**
	0.2nm25nm,0.7s						
SIJI	**Sorong**	**6.59**	**23**	P		**Pn**	**10 20 40.9 +1.6**
	1.7nm,0.3s,baz=203,slow=20,SNR=4.1						
SIJI				S		**Sn**	**10 21 51.7 -2.9**
	1.0nm,0.3s,baz=243,slow=23,SNR=2.0						
PLAI	**Plampang**	**11.01**	**260**	P		**Pn**	**10 21 36.0 -0.6**
	13nm,1.0s						
WRA	**Warramunga Arr**	**13.97**	**158**	P		**Pn**	**10 22 13.8 -0.1**
	1.1nm,0.3s,baz=334,slow=13,SNR=79						
WRA				S		S	10 24 39.2 -10
	0.0nm,0.3s,baz=327,slow=24,SNR=2.6						
ASAR	**Alice Springs**	**17.30**	**164**	P		**P**	**10 22 54.3 +1.7**
	1.5nm,0.3s,baz=344,slow=11,SNR=194						
ASAR				S		**S**	**10 25 54.8 -7.5**
	baz=223,slow=13,SNR=1.5						
STKA	**Stephens Creek**	**27.51**	**156**	P		**P**	**10 24 32.6 +0.4**
	1.1nm,0.5s,baz=310,slow=8.9,SNR=4.4						
MKAR	**Makanchi Array**	**67.54**	**327**	P		**P**	**10 29 39.5 +0.5**
	0.4nm,0.5s,baz=122,slow=7.8,SNR=5.0						

*IDC **11** 10:32:41.1±0.5, 8.°97S×113.°91E, h0km, mb4.2/19, mb1 4.3/21, mb1mx4.1/44, mbtmp4.2/21, ML4.7/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/48, Error ellipse: s-maj=21.2km s-min=11.2km az=48.0*
*DJA **11** 10:32:47.7±1.2, 9.°S±4.°×11.°4E±.°, h10km±10km, M4.6/13, mb4.8/11, mB5.2/7, MLv4.5/13, Mw(mB)4.5/7*
*NEIC **11** 10:32:50.4±1.7, 9.°02S±0.°06×114.°09E±0.°08, h82km±5km, mb4.2/16, Error ellipse: s-maj=12.4km s-min=7.8km az=57.0*
ISC 11 10:32:51.0±0.4, 9.°18S±0.°06×114.°03E±0.°06, h82km, n78, σ1°47/76, mb4.1/23, South of Bali

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.72**	**10**		**Pn**	**10 33 06.8**	**-0.2**
JAGI	**Jajag, Banyuwa**	**0.72**	**10**	P	**Pn**	**10 33 07.0**	**0.0**
DNP	**Denpasar**	**1.27**	**67**	P	**Pn**	**10 33 13.9**	**+0.4**
ABJI	**Asem Bagus**	**1.39**	**8**	P	**Pn**	**10 33 18.2**	**+3.2**
SRBI	**Singaraja**	**1.60**	**47**	P	**Pn**	**10 33 19.0**	**+1.3**
KMMI	**Kalianget**	**2.12**	**358**	P	**Pn**	**10 33 27.5**	**+2.9**
TWSI	**Taliwang, Sumb**	**2.85**	**81**	P	**Pn**	**10 33 35.0**	**+0.6**
UGM	**Wanagama**	**3.69**	**290**		**Pn**	**10 33 46.7**	**+0.9**

UGM Wanagama 3.69 290 P **Pn 10 33 46.2 +0.4**
PLAI Plampang 3.72 85 P **Pn 10 33 46.8 +0.6**
SMRI Semarang 4.14 301 Pn 10 33 51.0 -0.8
CISI Cisompet, Garu 6.36 284 Pn 10 34 19.9 -2.3
CISI Cisompet, Garu 6.36 284 P **Pn 10 34 22.2 0.0**
0.7nm4µm97nm,0.9s
BASI Baing, Sumba 6.54 100 P **Pn 10 34 25.4 +0.8**
0.3nm1µm57nm,0.6s
LEM Lembang 6.77 290 LR LR 10 37 33.6
comp=Z,62nm,18.4s,baz=40,slow=44
KAPI Kappang 7.03 54 Pn **Pn 10 34 30.6 -0.6**
2.5nm,0.3s,baz=226,slow=11,SNR=12
KAPI Sn **Sn 10 35 49.1 -0.7**
3.3nm,0.3s,baz=84,slow=20,SNR=7.4
KAPI LR LR 10 37 44.8
comp=Z,36nm,20.6s,baz=238,slow=43
KAPI Kappang 7.03 54 Pn **Pn 10 34 32.6 +1.3**
BSSI Bau Bau, Buton 7.08 65 P **Pn 10 34 33.5 +1.5**
0.1nm42nm,0.6s
BNSI Bone 7.68 52 P **Pn 10 34 43.9 +3.7**
0.1nm671nm27nm,0.5s
MMRI Maumere 8.13 87 Pn **Pn 10 34 43.8 -2.5**
XMIS Christmas Isla 8.36 260 Pn **Pn 10 34 46.5 -2.9**
TTSI Tana Toraja 8.38 44 P **Pn 10 34 53.3 +3.5**
BATI Baumata 9.55 97 Pn **Pn 10 35 04.3 -1.5**
14nm,0.3s,baz=115,slow=2.4,SNR=6.7
BATI Baumata 9.55 97 P **Pn 10 35 06.4 +0.6**
25nm,0.9s
SOEI Soe 10.12 94 Pn 10 35 12.1 -1.4
SOEI Soe 10.12 94 P **Pn 10 35 14.9 +1.3**
38nm,0.7s
GIRL Giralia 13.39 179 Pn Pn 10 35 53.7 -3.9
SANI Sanana 13.85 60 P **Pn 10 36 06.2 +2.5**
FITZ Fitzroy Crossi 14.34 129 Pn Pn 10 36 06.2 -3.9
1.0nm,0.3s,baz=303,slow=8.0,SNR=25
FITZ Sn Sn 10 38 32.4 -16
1.5nm,0.3s,baz=56,slow=22,SNR=6.4
FITZ Fitzroy Crossi 14.34 129 Pn Pn 10 36 06.0 -4.2
KNRA Kununurra 15.77 116 Pn 10 36 25.8 -2.6
MTN Manton Dam 17.18 104 Pn 10 36 45.4 -0.5
MTN IAmb IAmb 10 36 49.6
comp=Z,29nm,1.1s
SIJI Sorong 19.04 65 P **P 10 37 05.6 -1.2**
comp=Z,1.1nm,0.3s,baz=263,slow=7.5,SNR=3.1
FAKI Fak Fak 19.15 72 P **P 10 37 05.7 -2.3**
FAKI IAmb IAmb 10 37 10.7
comp=Z,12nm,0.6s
PSI Prapat 19.19 308 LR LR 10 44 28.0
comp=Z,72nm,19.4s,baz=90,slow=37
WB0 Warramunga Arr 22.32 120 P **P 10 37 41.6 -0.5**
WB0 IAmb IAmb 10 37 48.8
comp=Z,5.4nm,0.7s
WRA Warramunga Arr 22.35 121 P **P 10 37 42.1 -0.4**
comp=Z,2.9nm,0.4s,baz=294,slow=12,SNR=49
WRA S **S 10 41 43.3 +0.3**
comp=Z,0.9nm,0.6s,baz=290,slow=24,SNR=3.2
WRA Warramunga Arr 22.35 121 P **P 10 37 42.3 -0.2**
WRAB Tennant Creek 22.36 121 P **P 10 37 42.4 -0.1**
WRAB IAmb IAmb 10 37 50.7
comp=Z,5.9nm,0.8s
WB2 Warramunga Arr 22.36 121 P **P 10 37 41.8 -0.8**
WB2 IAmb IAmb 10 37 44.4
comp=Z,23nm,1.5s
WR0 Warramunga Arr 22.53 121 P **P 10 37 43.9 -0.5**
WR0 IAmb IAmb 10 38 07.9
comp=Z,8.0nm,1.0s
NWAO Narrogin (SRO) 23.82 173 P **P 10 37 57.5 +1.1**
AS31 Alice Springs 23.84 130 P **P 10 37 57.5 +0.5**
ASAR Alice Springs 23.84 130 P **P 10 37 57.5 +0.6**
comp=Z,2.4nm,0.7s,baz=304,slow=9.0,SNR=50
ASAR PcP **PcP 10 41 39.6 +1.4**
comp=Z,1.1nm,0.5s,baz=312,slow=1.6,SNR=12
ASAR S S 10 42 20.1 +13
comp=Z,1.7nm,0.8s,baz=306,slow=22,SNR=8.4
FORT Forrest 25.16 151 P **P 10 38 09.4 +0.7**
BBOO Buckleboo 31.10 142 P **P 10 39 02.1 +0.4**
CMAR Chiang Mai Arr 31.24 332 P **P 10 39 00.7 -2.3**
comp=Z,0.5nm,0.4s,baz=165,slow=7.5,SNR=5.0
CMAR Chiang Mai Arr 31.24 332 P **P 10 39 01.1 -1.9**
STKA Stephens Creek 34.11 135 P **P 10 39 29.3 +1.2**
comp=Z,1.5nm,0.3s,baz=316,slow=8.5,SNR=8.3
STKA PcP **PcP 10 42 05.5 +1.7**
comp=Z,0.6nm,0.4s,baz=309,slow=12,SNR=2.9
STKA LR LR 10 54 40.7
comp=Z,29nm,19.2s,baz=22,slow=38
USRK Ussuriysk Ar. 55.57 16 P **P 10 42 16.9 -1.0**
comp=Z,1.5nm,0.8s,baz=162,slow=7.4,SNR=4.6
USRK Ussuriysk Ar. 55.57 16 P **P 10 42 15.9 -2.0**
SONM Songino Array 57.17 354 P **P 10 42 28.4 -1.0**
comp=Z,1.0nm,0.5s,baz=177,slow=8.6,SNR=10
MKAR Makanchi Array 62.50 336 P **P 10 43 05.1 -0.8**
comp=Z,0.9nm,0.5s,baz=152,slow=7.3,SNR=12
MKAR Makanchi Array 62.50 336 P **P 10 43 04.5 -1.4**
WSAR Wadi Sarin 63.03 302 P **P 10 43 10.2 +0.3**
comp=Z,2.9nm,0.6s,baz=138,slow=6.2,SNR=4.3
ZALV Zalesovo Beam 67.57 342 P **P 10 43 37.5 -1.0**
comp=Z,0.6nm,0.3s,baz=163,slow=6.2,SNR=3.8
GEYT Alibeck 70.09 316 P **P 10 43 54.0 -0.6**
comp=Z,3.3nm,0.7s,baz=185,slow=13,SNR=3.9
GEYT Alibeck 70.09 316 P **P 10 43 53.1 -1.5**
GEYT IAmb IAmb 10 43 56.6
comp=Z,3.2nm,0.8s
PETK Petropavlovsk- 72.30 26 P **P 10 44 06.5 -1.1**
comp=Z,1.8nm,1.0s,baz=218,slow=6.8,SNR=1.5
PETK Petropavlovsk- 72.30 26 P **P 10 44 06.0 -1.6**
VNDA Vanda 72.61 170 P **P 10 44 10.3 +1.2**
ABKAR Akbulak array 74.95 327 P **P 10 44 23.7 +0.6**
QSPA South Pole Qui 80.82 180 P **P 10 44 57.1 +1.4**
comp=Z,1.9nm,1.0s,baz=6.3,slow=2.3,SNR=6.2
QSPA South Pole Qui 80.82 180 P **P 10 44 56.1 +0.4**
QSPA IAmb IAmb 10 44 58.4
comp=Z,3.4nm,1.1s
MATP Matopo 82.69 251 P **P 10 45 07.3 +0.9**
comp=Z,1.6nm,0.7s,baz=98,slow=8.4,SNR=5.4
KBZ Khabaz 82.98 316 P **P 10 45 07.7 +0.5**
comp=Z,1.0nm,0.5s,baz=108,slow=7.8,SNR=5.7
BOSA Boshof 84.60 242 P **P 10 45 17.3 +1.2**
comp=Z,2.1nm,0.8s,baz=78,slow=9.3,SNR=2.9
BR131 Keskin Array S 88.50 310 P **P 10 45 33.4 -1.4**
BRTR Keskin Array B 88.50 310 P **P 10 45 35.6 +0.8**
comp=Z,1.0nm,0.8s,baz=146,slow=9.0,SNR=4.6
SNAA Sanae 89.47 196 P **P 10 45 40.8 +2.1**
comp=Z,2.3nm,0.9s,baz=150,slow=8.2,SNR=6.1
AKASG Malin Array Be 93.75 321 P **P 10 45 58.2 -0.5**
comp=Z,0.2nm,0.3s,baz=90,slow=4.8,SNR=5.1
FINES FINESS Array B 97.01 331 P **P 10 46 12.5 -0.8**
comp=Z,1.2nm,0.9s,baz=87,slow=7.1,SNR=1.2
YKA Yellowknife Ar 116.32 23 PKP **PKiKP 10 51 25.0 +0.3**
comp=Z,0.2nm,0.5s,baz=343,slow=0.7,SNR=7.9
NVAR Mina Array Bea 124.89 49 PKP **PKiKP 10 51 44.0 +1.4**
comp=Z,0.3nm,0.7s,baz=30,slow=10,SNR=2.4
PDAR Pinedale Array 129.34 41 PKP **PKiKP 10 51 52.6 +1.2**
comp=Z,0.2nm,0.4s,baz=159,slow=4.5,SNR=2.1
TXAR Lajitas Array 139.42 55 PKhKP PKPpre 10 52 03.0
comp=Z,0.1nm,0.7s,baz=284,slow=3.6,SNR=1.6
BDFB Brasilia 149.59 216 PKPbc **PKiKP 10 52 34.2 +0.9**
comp=Z,0.8nm,0.4s,baz=184,slow=15,SNR=3.1
LPAZ La Paz 154.60 175 PKPab **PKPab 10 53 00.4 +1.5**
comp=Z,1.6nm,0.7s,baz=133,slow=1.0,SNR=6.2

*SKO **11** 11:16:30.3, 41.°49N×20.°32E, h12km*
TIR 11 11:16:30.4, 41.°49N×20.°32E, h17km±4km, Md2.4, Ml2.0, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.22**	**25**	P	Pg	11 16 35.6	0.0
	baz=25						
PHP				S	Sg	11 16 38.9	-0.2
	baz=25						
PHP				AMP			
	comp=N,1.2nm,0.1s,baz=25						
TIR	**Tirane**	**0.37**	**248**	P	Pg	11 16 37.9	0.0
	baz=249						
TIR				S	Sb	11 16 43.9	+0.1
	baz=249						
TIR				AMP			
	comp=E,0.4nm,0.6s,baz=249						
TIR	**Tirane**	**0.37**	**248**	*i* Pg	Pg	11 16 38.0	0.0
OHR	**Ohrid**	**0.52**	**136**	*i* Pg	Pb	11 16 41.0	-0.1
OHR				*i* Sg	Sn	11 16 50.1	-1.4
OHR				*e*Lg	Lg	11 16 52.3	
	comp=E,22nm,0.4s						
PUK	**Puka**	**0.64**	**331**	P	Pg	11 16 42.8	-0.2
	baz=331						

PUK				S	Sb	11 16 52.7	+0.9	
	baz=331							
PUK				AMP				
	comp=E,0.3nm,0.1s,baz=331							
PRZK	**Prizren**	**0.80**	**24**	*i* Pg	Pn	11 16 47.4	+0.5	
PRZK				*i* Sg	Sn	11 16 57.8	-0.6	
ULC	**Ulcinj**	**0.93**	**301**	*i* Pg	Pb	11 16 47.4	-0.7	
SKO	**Skopje**	**0.97**	**60**	*i* Pg	Pg	11 16 49.2	0.0	
SKO				*i* Sg	Sn	11 17 03.2	+0.6	
SKO				*e*Lg	Lg	11 17 03.5		
	comp=N,8.3nm,0.4s							
FNA	**Florina**	**1.06**	**131**	P	Pg	11 16 51.2	+0.3	
	baz=130							
FNA				S	Sn	11 17 07.0	+2.1	
	baz=130							
FNA	**Florina**	**1.06**	**131**	*i* Pg	Pg	11 16 51.1	+0.1	
FNA				*i* Sg	Sn	11 17 06.5	+1.5	
PDG	**Podgorica**	**1.23**	**320**	*i* Pg	Pb	11 16 53.0	-0.1	
PDG				*i* Sg	Sg	11 17 13.9	+3.7	
STIP	**Stip**	**1.42**	**81**	*i* Pn	Pg	11 17 00.3	+2.6	
STIP				*i* Sn	Sg	11 17 22.1	+5.9	
STIP				*e*Lg	Lg	11 17 23.0		
	comp=N,1.6nm,0.3s							
BEY	**Berane**	**1.42**	**347**	*i* Pn	Pg	11 16 57.7	-0.1	
SMRK	**Smrekonice**	**1.46**	**18**	*i* Pn	Pg	11 16 58.2	-0.3	
GRG	**Griva**	**1.66**	**108**	*i* Pn	Pb	11 17 01.1	+0.6	

ROM 11 11:16:39.3±0.2, 43°52N±0°01×13°41E±0°01, h33km±1km, ML1.4/7, 10C-10D, Error ellipse: s-maj=1.5km s-min=0.5km az=318.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AOI	**Ancona**	**0.14**	**79**	P		Pb	11 16 45.5	+0.2
AOI				S		Sb	11 16 49.8	+0.3
AOI				AML		AML		
	comp=E,140μm,0.2s							
AOI				AML		AML		
	comp=N,142μm,0.1s							
CING	**Cingoli**	**0.22**	**227**	↑P		Pn	11 16 46.1	-0.1
CING	**Cingoli**	**0.22**	**227**	↑P		Pn	11 16 46.1	-0.1
CING				S		Sb	11 16 51.2	+0.6
CING				AML		AML		
	comp=N,66μm,0.1s							
CING				AML		AML		
	comp=E,68μm,0.1s							
CSP1	**Cessapalombo**	**0.46**	**199**	↑P		Pb	11 16 49.2	-0.1
CSP1				S		Sn	11 16 56.5	-0.2
CSP1				AML		AML		
	comp=E,104μm,1.5s							
CSP1				AML		AML		
	comp=N,110μm,0.4s							
CSP1	**Cessapalombo**	**0.46**	**199**	↑P		Pb	11 16 49.2	-0.1
SSFR	**Montelago di S**	**0.47**	**260**	P		Pn	11 16 50.0	+0.3
SSFR				AML		AML		
	comp=E,102μm,0.2s							
SSFR				AML		AML		
	comp=N,79μm,1.0s							
FSSB	**Fossombrone**	**0.49**	**290**	P		Pn	11 16 51.6	+1.5
FSSB				AML		AML		
	comp=E,128μm,0.2s							
FSSB				AML		AML		
	comp=N,178μm,1.3s							
FSSB				AML		AML		
	comp=N,178μm,1.3s							
FSSB				AML		AML		
	comp=E,128μm,0.2s							
FSSB	**Fossombrone**	**0.49**	**290**	P		Pn	11 16 51.6	+1.5
FDMO	**Fiordimonte**	**0.54**	**206**	P		Pb	11 16 50.3	-0.2
FDMO				S		Sn	11 16 58.7	0.0
FDMO				AML		AML		
	comp=N,38μm,0.1s							
FDMO				AML		AML		
	comp=E,38μm,0.5s							
GUMA	**Gualdo di Mace**	**0.60**	**140**	P		Pb	11 16 49.5	-1.9
GUMA				S		Sb	11 16 57.3	-2.4
GUMA				AML		AML		
	comp=E,213μm,0.4s							
GUMA				AML		AML		
	comp=N,138μm,1.5s							
GUMA				AML		AML		
	comp=N,139μm,1.5s							
CESI	**CESI - Serrava**	**0.64**	**216**	P		Pn	11 16 52.0	0.0
CESI				AML		AML		
	comp=E,9μm,0.4s							
CESI				AML		AML		
	comp=N,22μm,0.9s							
ASSB	**Assisi San Ben**	**0.73**	**229**	↑P		Pb	11 16 54.4	+0.8
ASSB	**Assisi San Ben**	**0.73**	**229**	↑P		Pb	11 16 54.4	+0.8
ASSB				AML		AML		
	comp=N,57μm,0.7s							
ASSB				AML		AML		
	comp=E,54μm,1.5s							
TERO	**Teramo**	**0.91**	**171**	P		Pb	11 16 56.5	-0.1
TERO				AML		AML		
	comp=E,10μm,0.3s							
TERO				AML		AML		
	comp=N,7μm,1.5s							
TERO				AML		AML		
	comp=N,7μm,1.5s							
MGAB	**Montegabbione**	**1.13**	**238**	↑P		Pb	11 17 01.6	+1.3
MGAB	**Montegabbione**	**1.13**	**238**	↑P		Pb	11 17 01.6	+1.3
MGAB				AML		AML		
	comp=N,38μm,0.6s							
MGAB				AML		AML		
	comp=E,36μm,0.5s							
FIU	**Minerbio Fiu**	**1.78**	**310**	↓P		Pb	11 17 15.5	+4.3
FIU	**Minerbio Fiu**	**1.78**	**310**	↓P		Pb	11 17 15.5	+4.3
RMP	**Rome, Mte Porz**	**1.79**	**197**	S		Sb	11 17 32.0	-1.5
RMP	**Rome, Mte Porz**	**1.79**	**197**	S		Sb	11 17 32.0	-1.5
ZCCA	**Zocca**	**1.94**	**296**	↓P		Pn	11 17 11.7	+1.6
ZCCA	**Zocca**	**1.94**	**296**	↓P		Pn	11 17 11.7	+1.6
ZCCA				AML		AML		
	comp=N,232μm,0.1s							
ZCCA				AML		AML		
	comp=E,157μm,1.4s							
POPM	**Popiglio**	**1.99**	**286**	↑P		Pb	11 17 13.6	-1.3
POPM	**Popiglio**	**1.99**	**286**	↑P		Pb	11 17 13.6	-1.3
CARD	**Cardoso**	**2.18**	**284**	S		Sb	11 17 46.0	+1.3
CARD	**Cardoso**	**2.18**	**284**	S		Sb	11 17 46.0	+1.3
TRI	**Trieste**	**2.20**	**6**	P		Pb	11 17 21.2	+2.8
TRI	**Trieste**	**2.20**	**6**	P		Pb	11 17 21.2	+2.8
PTRJ	**Pietraroja**	**2.31**	**159**	S		Sb	11 17 47.0	-1.5
PTRJ	**Pietraroja**	**2.31**	**159**	S		Sb	11 17 47.0	-1.5
CAPR	**Capriolo**	**3.26**	**312**	↓P		Pb	11 17 37.3	+0.9
CAPR	**Capriolo**	**3.26**	**312**	↓P		Pb	11 17 37.3	+0.9
EUCT	**Pavia**	**3.50**	**300**	P		Pb	11 17 36.2	-4.3
EUCT				S		Sb	11 18 19.0	-3.4
EUCT	**Pavia**	**3.50**	**300**	P		Pb	11 17 36.2	-4.3
EUCT	**Pavia**	**3.50**	**300**	S		Sb	11 18 19.0	-3.4
SCHR	**S. Chirico Rap**	**3.87**	**148**	↓P		Pb	11 17 50.9	+4.0
SCHR	**S. Chirico Rap**	**3.87**	**148**	↓P		Pb	11 17 50.9	+4.0
TUE	**Stuetta**	**4.12**	**317**	↓P		Pn	11 17 43.6	+3.5
TUE	**Stuetta**	**4.12**	**317**	↓P		Pn	11 17 43.6	+3.5
MEU	**Monte Lauro**	**6.52**	**169**	P		Pb	11 18 31.9	0.0
MEU	**Monte Lauro**	**6.52**	**169**	P		Pb	11 18 31.9	0.0

*NEIC **11** 11:42:49.7±1.7, 53°4N±0°1×179°3E±0°1, h16km±8km, Error ellipse: s-maj=15.0km s-min=10.4km az=174.0*

*AEIC **11** 11:42:51±1.4, 53°2N±0°1×178°8E±0°2, h115km±9km, ML3.2/10, Error ellipse: s-maj=18.7km s-min=15.5km az=178.0*

*IDC **11** 11:42:55.8±6.6, 52°70N×175°92E, h83km±56km, mb3.3/5, mb1 3.5/6, mb1mx3.3/39, mbtmp3.6/6, ML2.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.3/36, Error ellipse: s-maj=194.0km s-min=26.4km az=177.0*

ISC 11 11:42:49.1±1.3, 52°3N±0°2×175°97E±0°09, h35km, n14, σ1°37/15, mb3.6/5, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**1.61**	**101**			**Pn**	**11 43 16.5**	**+1.5**
LSNW						**Sn**	**11 43 35.0**	**+0.5**
LSSA	**Little Sitkin**	**1.61**	**102**			**Pn**	**11 43 16.4**	**+1.4**
LSPA	**Little Sitkin**	**1.65**	**102**			**Pn**	**11 43 16.4**	**+0.9**
LSPA						**Sn**	**11 43 36.4**	**+1.0**
LSSE	**Little Sitkin**	**1.65**	**102**			**Pn**	**11 43 16.8**	**+1.3**
LSSE						**Sn**	**11 43 36.0**	**+0.5**
CESW	**Semis' Southwe**	**2.26**	**99**			Pn	11 43 17.8	-6.1
AMKA	**Amchitka**	**2.27**	**113**			**Pn**	**11 43 24.9**	**+0.8**
AMKA						**Sn**	**11 43 47.7**	**-3.1**
PETK	**Petropavlovsk-**	**11.11**	**281**	P		Pn	11 45 31.5	+6.2
	0.1nm,0.3s,baz=93,slow=18,SNR=6.3							
PETK				S		**Sn**	**11 47 29.3**	**+1.1**
	0.1nm,0.3s,baz=122,slow=7.5,SNR=4.8							
KTH	**Kantishna Hill**	**20.60**	**44**	P		P	11 47 01.4	-23
ILAR	**Eielson Array**	**22.64**	**42**	P		**P**	**11 47 46.7**	**0.0**
	0.4nm,0.9s,baz=246,slow=9.7,SNR=2.7							
USRK	**Ussuriysk Ar.**	**29.98**	**272**	LR		LR	12 02 01.0	
	comp=Z,38nm,18.6s,baz=27,slow=38							
YKA	**Yellowknife Ar**	**36.94**	**46**	P		**P**	**11 49 53.6**	**-0.6**
	0.1nm,0.5s,baz=286,slow=7.2,SNR=9.5							
ARCES	**ARCESS Array B**	**56.55**	**348**	P		**P**	**11 52 27.0**	**-0.5**
	5.3nm,1.0s,baz=36,slow=2.3,SNR=2.2							
FINES	**FINESS Array B**	**64.08**	**344**	P		**P**	**11 53 17.4**	**-1.4**
	1.7nm,0.9s,baz=15,slow=7.9,SNR=7.5							
NOA	**NORSAR Array B**	**66.34**	**352**	P		**P**	**11 53 32.9**	**-0.7**
	0.5nm,1.0s,baz=2.7,slow=5.4,SNR=4.5							

*BJI **11** 11:42:50.2±0.0, 4°52N×125°21E, h301km, mB4.7/49, mb4.8/78*

*MAN **11** 11:42:50.0, 4°37N×125°19E, h270km, mb5.2, ML4.1, MS4.2*

*NEIC **11** 11:42:52.3±1.7, 4°77N±0°06×124°93E±0°07, h281km±1km, mb5.1/190, Mwb5.2/25, Error ellipse: s-maj=11.2km s-min=10.0km az=260.0*

*MOS **11** 11:42:53.4±0.9, 4°82N×124°81E, h303km, mb4.7/67, Error ellipse: s-maj=7.5km s-min=4.2km az=106.3*

*NEIC **11** 11:42:53.8, 4°77N×124°91E, h281km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-5.70; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$ 5.76; $M_{r\theta}$-2.63; $M_{\theta\phi}$-1.41; $M_{\phi r}$ 2.77; Fault plane solution: M_0 7.03000×10^{16} NP1:ϕ_s2.55000°, δ32.39000°, λ-62.81000°. NP2:ϕ_s151.24000°, δ61.54000°, λ-106.16000°. Principal axes: T 6.9716, Plg15.0000°, Azm253.0000°; N 0.1091, Plg14.0000°, Azm159.0000°; P -7.0807, Plg69.0000°, Azm28.0000°;*

*GCMT **11** 11:42:54.3±0.3, 4°85N±0°03×124°93E±0°03, h294km±2km, MW5.2/84, Moment Tensor Solution. s84.c106; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.22±.23; $M_{\theta\theta}$-1.72±.41; $M_{\phi\phi}$ 5.95±.39; $M_{r\theta}$-3.57±.42; $M_{\theta\phi}$ 1.00±.34; $M_{\phi r}$ 4.91±.36; Best double couple: M_o8.11500×10^{16} NP1:ϕ_s36.00000°, δ32.00000°, λ-35.00000°. NP2:ϕ_s157.00000°, δ72.00000°, λ-117.00000°. Principal axes: T 7.9530, Plg23.0000°, Azm267.0000°; N 0.3340, Plg26.0000°, Azm165.0000°; P -8.2770, Plg54.0000°, Azm33.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*IDC **11** 11:42:54.3±0.5, 4°79N×124°87E, h300km±4km, mb4.5/40, mb1 4.5/46, mb1mx4.5/49, mbtmp5.1/46 Error ellipse: s-maj=8.5km s-min=5.0km az=83.0*

*KLM **11** 11:42:54, 4°81N×125°10E, h294km, mb5.1*

*DJA **11** 11:42:54.8±0.2, 5°N±2°×12°5E±°, h297km±2km, M4.9/83, mB5.4/55, mb5.1/83, MLv5.6/11, Mw(mB)4.8/55, MwMwp4.7/10, Mwp5.1/10*

ISC 11 11:42:53.7±0.3, 4°77N±0°03×124°92E±0°04, h297km±2km, h298km; pP-P, n674, σ1°31/776, mb4.9/207, 83C-104D, Fault plane solution: NP1:ϕ_s122.26677°, δ71.23457°, λ-128.36931°. NP2:ϕ_s10.15367°, δ42.06801°, λ-28.69403°. Principal axes: T Plg17.3044°, Azm239.6364°; N Plg35.9962°, Azm136.5557°; P Plg48.7981°, Azm350.4824°; **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.23**	**151**	P		Pn	**11 43 34.8**	**-0.2**
DDMP	**Don Marcelino,**	**1.54**	**31**	*e*P		**Pn**	**11 43 33.5**	**-3.3**
DDMP				*e*S		**S**	**11 44 09.2**	**-2.0**
SKMP	**Bagumbayan, Su**	**1.78**	**348**	*e*P		**Pn**	**11 43 36.1**	**-2.5**
KCP	**Kidapawan**	**2.23**	**4**	↑*i*P		**Pn**	**11 43 43.0**	**+0.8**
KCP				*i* S		**S**	**11 44 19.1**	**-1.8**
DAV	**Davao City (W)**	**2.38**	**16**	P		**Pn**	**11 43 44.1**	**+0.7**
	213nm,0.3s,baz=95,slow=1.5,SNR=49							
DAV				S		**S**	**11 44 23.1**	**+0.1**
	447nm,0.3s,baz=295,slow=22,SNR=22							
DAV	**Davao City (W)**	**2.38**	**16**			**Pn**	**11 43 44.5**	**+1.1**
DAV						**S**	**11 44 19.1**	**-3.9**
MATI	**Mati**	**2.54**	**32**	*e*P		**Pn**	**11 43 42.0**	**-2.8**
MATI				*e*S		**S**	**11 44 22.4**	**-3.3**
BUKP	**Musuan**	**3.09**	**3**	*e*P		**Pn**	**11 43 49.7**	**-0.6**
BUKP				*e*S		**S**	**11 44 35.9**	**+0.5**
PAGZ	**Pagadian**	**3.42**	**334**	*e*P		**Pn**	**11 43 52.0**	**-1.5**
CGP	**Cagayan de Oro**	**3.67**	**357**	↓*e*P		**Pn**	**11 43 58.1**	**+1.9**
BUTP	**Butuan**	**4.23**	**9**	*e*P		**Pn**	**11 44 01.7**	**-0.6**
BUTP				*e*S		**S**	**11 44 59.0**	**+1.6**
KMSI	**Cibinong**	**4.27**	**193**	P		**Pn**	**11 44 04.0**	**+1.2**
GTOI	**Gorontalo**	**4.53**	**205**	P		**Pn**	**11 44 05.9**	**+0.2**
TNTI	**Ternate**	**4.66**	**148**	Pn		**Pn**	**11 44 06.4**	**-0.9**
TNTI	**Ternate**	**4.66**	**148**	P		**Pn**	**11 44 07.0**	**-0.3**
GLSP	**General Luna,**	**5.12**	**13**	*e*P		**Pn**	**11 44 10.8**	**-1.9**
GLSP				*e*S		**S**	**11 45 12.6**	**-3.4**
MRSI	**Marisa**	**5.20**	**215**	P		**Pn**	**11 44 15.4**	**+1.9**
	2.8nm2μm8μm622nm,1.0s							
MSLP	**Maasin**	**5.33**	**359**	*e*P		**Pn**	**11 44 15.6**	**+0.6**
MSLP				*e*S		**S**	**11 45 20.6**	**+0.2**
TOLI2	**Tolitoli**	**5.50**	**229**	↓*e*P		**Pn**	**11 44 17.7**	**+0.6**
TOLI2				S		**S**	**11 45 23.1**	**-1.0**
LLP	**Lapu-Lapu**	**5.59**	**350**	↓*e*P		**Pn**	**11 44 19.6**	**+1.5**
LLP				*i* S		**S**	**11 45 27.1**	**+1.0**
LUWI	**Luwuk**	**6.16**	**200**	Pn		**Pn**	**11 44 25.4**	**+0.5**
LUWI	**Luwuk**	**6.16**	**200**	P		**Pn**	**11 44 26.5**	**+1.6**
	8.5nm5μm17μm2μm,1.0s							
MYLDM	**Lahad Datu**	**6.41**	**274**	Pn		**Pn**	**11 44 30.3**	**+2.4**
APSI	**Ampana**	**6.52**	**210**	P		**Pn**	**11 44 31.2**	**+1.9**
	1.9nm2μm5μm566nm,0.8s							
RCP	**Roxas**	**7.08**	**342**	↓*e*P		**Pn**	**11 44 39.2**	**+3.1**
NLAI	**Namlea**	**8.25**	**165**	P		**Pn**	**11 44 49.5**	**-0.9**
	20μm572nm,0.5s							
SPMM	**Sapulut**	**8.43**	**270**	P		**Pn**	**11 44 55.0**	**+2.4**
SWI	**Sorong**	**8.45**	**131**	P		**Pn**	**11 44 54.0**	**+1.1**
SWI				pmax	pmax			
	comp=Z,128nm,1.2s							
SWI	**Sorong**	**8.45**	**131**	P		**Pn**	**11 44 53.4**	**+0.5**
	comp=Z,2μmcomp=Z,2μmcomp=Z,129nm,1.2s							
SIJI	**Sorong**	**8.46**	**131**	P		**Pn**	**11 44 53.8**	**+0.8**
	comp=Z,7.9nm,0.3s,baz=326,slow=11,SNR=22							
SIJI				S		**S**	**11 46 26.9**	**-3.0**
	baz=190,slow=23,SNR=7.5							
KKM	**Kota Kinabalu**	**8.76**	**279**	Pn		**Pn**	**11 44 57.9**	**+1.2**
TTSI	**Tana Toraja**	**9.29**	**213**	P		**Pn**	**11 45 04.9**	**+1.8**
	comp=Z,2μmcomp=Z,228nm,0.8s							
LQP	**Lukban**	**9.86**	**340**	↓*e*P		**P**	**11 45 12.5**	**-1.8**
BKB	**Balikpapan**	**10.01**	**233**	Pn		**P**	**11 45 13.9**	**-1.8**
BKB	**Balikpapan**	**10.01**	**233**	P		**P**	**11 45 13.9**	**-1.8**
	comp=Z,2μmcomp=Z,11μmcomp=Z,1μm,1.0s							
TGY	**Tagaytay City**	**10.07**	**337**	P		**Pn**	**11 45 13.8**	**+0.9**
	comp=Z,15nm,0.3s,baz=222,slow=7.1,SNR=7.4							
SPSI	**Sidrap Palu**	**10.09**	**211**	P		**P**	**11 45 15.4**	**-1.2**
	comp=Z,1μmcomp=Z,73nm,0.6s							
BNSI	**Bone**	**10.30**	**208**	P		**P**	**11 45 17.9**	**-1.1**
	comp=Z,2μmcomp=Z,172nm,0.7s							
BNDI	**Bandanaira**	**10.49**	**152**	P		**Pn**	**11 45 18.2**	**+0.3**
	comp=Z,10μmcomp=Z,636nm,0.9s							
FAKI	**Fak Fak**	**10.58**	**136**	Pn		**Pn**	**11 45 18.1**	**-1.0**
FAKI	**Fak Fak**	**10.58**	**136**	P		**Pn**	**11 45 19.5**	**+0.4**
	comp=Z,2μmcomp=Z,235nm,0.8s							
KAPI	**Kappang**	**11.00**	**208**	P		**Pn**	**11 45 24.8**	**+0.5**
	comp=Z,3.5nm,0.3s,baz=38,slow=6.1,SNR=43							
KAPI	**Kappang**	**11.00**	**208**			**Pn**	**11 45 23.4**	**-0.8**
MTKI	**Muara Teweh, K**	**11.51**	**241**	P		**P**	**11 45 32.0**	**-0.5**
	comp=Z,1μmcomp=Z,199nm,0.9s							
BSSI	**Bau Bau, Buton**	**11.71**	**202**	P		**P**	**11 45 33.8**	**-0.8**
	comp=Z,848nmcomp=Z,66nm,0.8s							
KBKI	**Kotabaru**	**11.86**	**228**	P		**P**	**11 45 35.7**	**-0.7**
	comp=Z,4μmcomp=Z,459nm,1.3s							
BAKI	**Biak**	**12.65**	**118**	P		**P**	**11 45 46.2**	**+1.1**
	comp=Z,5μmcomp=Z,449nm,1.1s							
SBUM	**Sibu**	**12.88**	**260**			**P**	**11 45 49.6**	**+1.9**
BBKI	**Banjar Baru**	**12.97**	**231**	P		**P**	**11 45 50.3**	**+1.6**
	comp=Z,5μmcomp=Z,216nm,1.2s							
SRPI	**Serui, Papua**	**13.09**	**120**	P		**P**	**11 45 51.8**	**+1.8**
	comp=Z,358nm,0.8s							
CVP	**Callao Caves**	**13.21**	**347**	↑*e*P		**P**	**11 45 52.4**	**+1.2**
MMRI	**Maumere**	**13.58**	**191**			**P**	**11 45 52.9**	**-2.5**
MMRI	**Maumere**	**13.58**	**191**	P		**Pn**	**11 45 56.9**	**+1.4**
	comp=Z,3μmcomp=Z,179nm,0.8s							
STKI	**Sintang**	**14.22**	**251**	P		**Pn**	**11 46 05.8**	**+2.7**
	comp=Z,24μmcomp=Z,222nm,0.7s							
SOEI	**Soe**	**14.44**	**183**			**Pn**	**11 46 06.7**	**+0.8**
SOEI	**Soe**	**14.44**	**183**	P		**Pn**	**11 46 06.5**	**+0.6**
	comp=Z,3μmcomp=Z,349nm,0.8s							
BATI	**Baumata**	**14.93**	**185**	P		**Pn**	**11 46 11.3**	**-0.2**
	comp=Z,45nm,0.3s,baz=333,slow=1.6,SNR=34							
BATI				S		**S**	**11 48 53.8**	**+0.3**
	comp=Z,11nm,0.3s,baz=284,slow=22,SNR=2.2							
BATI	**Baumata**	**14.93**	**185**	P		**Pn**	**11 46 11.8**	**+0.3**
	comp=Z,3μmcomp=Z,309nm,0.7s							
KSM	**Kuching**	**14.95**	**258**			**Pn**	**11 46 13.3**	**+1.5**
PBKI	**Pangkalan Bun**	**15.18**	**241**	P		**Pn**	**11 46 14.7**	**+0.2**
	comp=Z,9μmcomp=Z,1μm,1.1s							
PLAI	**Plampang**	**15.27**	**208**	P		**Pn**	**11 46 15.3**	**-0.2**
	comp=Z,3μmcomp=Z,330nm,0.7s							
BASI	**Baing, Sumba**	**15.50**	**196**	P		**P**	**11 46 16.6**	**0.0**
	comp=Z,1μmcomp=Z,73nm,0.7s							
TWSI	**Taliwang, Sumb**	**15.63**	**211**	P		**Pn**	**11 46 19.2**	**-0.5**
	comp=Z,2μmcomp=Z,322nm,0.8s							
SRBI	**Singaraja**	**16.02**	**217**	P		**Pn**	**11 46 24.3**	**0.0**
	comp=Z,3μmcomp=Z,284nm,1.3s							
KMMI	**Kalianget**	**16.04**	**223**	P		**Pn**	**11 46 24.3**	**-0.2**
	comp=Z,5μmcomp=Z,506nm,1.4s							
DNP	**Denpasar**	**16.50**	**216**	P		**Pn**	**11 46 30.0**	**+0.2**
	comp=Z,379nm,0.7s							
GENI	**Genyem**	**16.90**	**115**	P		**Pn**	**11 46 34.6**	**0.0**
	comp=Z,4μmcomp=Z,460nm,1.1s							
JAGI	**Jajag, Banyuwa**	**16.98**	**219**	P		**P**	**11 46 32.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**16.98**	**219**	P		**Pn**	**11 46 34.7**	**-0.8**
	comp=Z,5μmcomp=Z,268nm,0.6s							
JAY	**Jayapura**	**17.35**	**114**	P		**Pn**	**11 46 38.4**	**-1.5**
	comp=Z,1.9nm,0.3s,baz=252,slow=9.6,SNR=11							
JAY	**Jayapura**	**17.35**	**114**	P		**Pn**	**11 46 38.2**	**-1.7**
	comp=Z,387nmcomp=Z,36nm,0.9s							
DLV	**T Lat**	**17.74**	**295**	P		**Pn**	**11 46 43.4**	**-1.3**
DLV				IAmb		IAmb	11 46 49.6	
	comp=Z,94nm,0.9s							
TWG	**Pinlang**	**18.33**	**349**	P		**P**	**11 46 46.4**	**-0.7**
TWG				IAmb		IAmb	11 46 49.9	
	comp=Z,78nm,1.0s							
MTN	**Manton Dam**	**18.55**	**161**	P		**P**	**11 46 49.9**	**+0.3**
MTN				IAmb		IAmb	11 46 55.9	
	comp=Z,34nm,0.7s							
SMRI	**Semarang**	**18.62**	**231**	P		**P**	**11 46 47.4**	**-2.9**
SMRI	**Semarang**	**18.62**	**231**	P		**P**	**11 46 52.3**	**+2.0**
	comp=Z,3μmcomp=Z,198nm,1.4s							
TPI	**Tanjungpandan**	**18.80**	**247**	P		**P**	**11 46 53.3**	**+1.0**
YULB	**Yu-li**	**18.84**	**350**	P		**P**	**11 46 50.4**	**-2.3**
YULB				IAmb		IAmb	11 46 54.6	
	comp=Z,82nm,1.2s							
TPUB	**Ta-pu**	**18.88**	**348**	P		**P**	**11 46 51.7**	**-1.3**
UGM	**Wanagama**	**19.10**	**229**	P		**P**	**11 46 54.9**	**-0.6**
UGM	**Wanagama**	**19.10**	**229**	P		**P**	**11 46 56.6**	**+1.1**
	comp=Z,4μmcomp=Z,415nm,1.2s							
SSLB	**Suanglung**	**19.29**	**349**	P		**P**	**11 46 55.5**	**-1.9**
SSLB				IAmb		IAmb	11 47 02.5	
	comp=Z,98nm,1.2s							
PPBI	**Pangkal Pinang**	**19.99**	**250**	P		**P**	**11 47 05.6**	**+0.7**
	comp=Z,12μmcomp=Z,136nm,0.7s							
JCJI	**Jatiwangi**	**20.03**	**236**	P		Pn	11 47 08.7	-2.0
	comp=Z,402nm,1.1s							
YHNB	**Yeheng**	**20.08**	**351**	P		**P**	**11 47 02.8**	**-3.0**
YHNB				IAmb		IAmb	11 47 07.2	
	comp=Z,92nm,1.0s							
QIZ	**Qiongzhong**	**20.43**	**315**	P		**P**	**11 47 09.5**	**+0.2**
QIZ				S		**S**	**11 50 42.2**	**+2.4**
QIZ				LR		LR		
	comp=Z,240nm,11.0s							
QIZ				LR		LR		
	comp=Z,280nm,8.8s							
QIZ				LR		LR		
	comp=Z,310nm,21.5s							
KNMB	**Chin-men Tao**	**20.57**	**343**	P		**P**	**11 47 09.2**	**-1.4**
KNMB				IAmb		IAmb	11 47 13.3	
	comp=Z,147nm,1.1s							
KNRA	**Kununurra**	**20.67**	**169**	P		**P**	**11 47 11.4**	**-0.3**
LEM	**Lembang**	**20.76**	**236**	P		**P**	**11 47 13.7**	**+0.9**
	comp=Z,200nm,0.8s,baz=42,slow=8.0,SNR=38							
LEM	**Lembang**	**20.76**	**236**	P		**P**	**11 47 15.0**	**+2.2**
	comp=Z,2μmcomp=Z,160nm,1.6s							
QZH	**Quanzhou**	**20.96**	**344**	↓*i*P		**P**	**11 47 14.4**	**-0.1**
QZH				S		**S**	**11 50 49.2**	**+1.0**
QZH				pmax	pmax			
	comp=Z,89nm,0.8s							
QZH				pmax	pmax			
	comp=Z,280nm,3.0s							
CISI	**Cisompet, Garu**	**21.00**	**234**	P		**P**	**11 47 13.1**	**-2.0**
CISI				IAmb		IAmb	11 47 16.3	
	comp=Z,102nm,0.8s							
CBJI	**Citeko**	**21.19**	**239**	P		**P**	**11 47 18.0**	**+1.2**
	comp=Z,311nm,0.9s							
MYKOM	**Kota Tinggi**	**21.24**	**263**	P		**P**	**11 47 18.3**	**+1.0**
DBJI	**Dramaga**	**21.34**	**238**	P		**P**	**11 47

comp=Z,28nm,1.0s
PMG Port Moresby 26.26 122 P **P** **11 48 00.8 -1.7**
PMG IAmb IAmb 11 48 04.8
comp=Z,27nm,1.0s
SURT Suratani 26.26 281 P P 11 48 13.4 +11
WR0 Warramunga Arr 26.33 159 P **P** **11 48 03.0 -0.2**
PSA00 Pilbara Seismi 26.65 191 P **P** **11 48 05.2 -0.7**
PSA00 IAmb IAmb 11 48 06.4
comp=Z,52nm,0.5s
PHIT Phitsanulok 26.99 299 P **P** **11 48 12.0 +3.0**
comp=Z,119nm,0.9s
JSU Suzuyama 27.10 10 P **P** **11 48 09.4 -0.5**
JSU IAmb IAmb 11 48 11.3
comp=Z,69nm,0.9s
UTTA Uttaradit 27.10 300 P **P** **11 48 12.5 +2.5**
comp=Z,20nm,1.0s
UTHA Uthaitani 27.23 295 P **P** **11 48 15.3 +4.0**
comp=Z,229nmcomp=Z,14nm,0.8s
WHN Wuhan 27.51 340 ⇑P **P** **11 48 15.3 +1.9**
WHN sP **sP** **11 49 45.7 +0.9**
WHN S **S** **11 52 30.8 -1.3**
WHN pmax pmax
comp=Z,220nm,1.2s
WHN LR LR
comp=Z,610nm,5.6s
WHN LR LR
comp=Z,410nm,10.9s
WHN LR LR
comp=Z,820nm,17.8s
GSI Gunungsitoli 27.52 264 P **P** **11 48 12.8 -1.0**
GSI IAmb IAmb 11 48 15.3
comp=Z,63nm,1.0s
JCJ Chichijima 27.65 35 P **P** **11 48 14.6 -0.2**
comp=Z,199nm,0.5s,baz=284,slow=22,SNR=53
JCJ Chichijima 27.65 35 P **P** **11 48 14.7 0.0**
TPTI 27.71 268 P **P** **11 48 14.6 -0.9**
comp=Z,12nm,1.6s
NJ2 Nanjing 27.73 349 *e*P **P** **11 48 17.5 +2.1**
NJ2 pmax pmax
comp=Z,42nm,0.9s
GYA Guiyang 27.75 323 *e*P **P** **11 48 18.2 +2.4**
GYA pP pP 11 49 14.1 +2.9
GYA PcP **PcP** **11 51 25.0 +0.7**
GYA S **S** **11 52 39.5 +3.3**
GYA ScP **ScP** **11 54 36.3 -0.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
KHLT Khaolaem Dam 27.76 293 P **P** **11 48 20.5 +4.6**
comp=Z,12nm,0.7s
SUKH Sukhothai 27.79 299 P **P** **11 48 19.6 +3.4**
comp=Z,19nm,0.8s
UMPA Umpang Tak 27.99 296 P **P** **11 48 25.0 +7.1**
comp=Z,19nm,1.0s
LAMP Lampang 28.23 301 P **P** **11 48 22.8 +2.7**
comp=Z,23nm,1.1s
PAYA Payao 28.40 303 P **P** **11 48 23.5 +2.0**
comp=Z,211nm,0.8s
RABL Rabaul 28.63 108 P **P** **11 48 23.4 -0.3**
RABL IAmb IAmb 11 48 28.9
comp=Z,85nm,0.9s
CM36 Chiang Mai Arr 28.69 301 P **P** **11 48 26.0 +1.9**
CM35 Chiang Mai Arr 28.70 301 P **P** **11 48 26.0 +1.8**
CM04 Chiang Mai Arr 28.74 300 P **P** **11 48 26.9 +2.4**
comp=Z,81nmcomp=Z,10.0nm,0.9s
CM09 Chiang Mai Arr 28.75 300 P **P** **11 48 26.9 +2.3**
comp=Z,90nmcomp=Z,13nm,0.8s
JNU Nakatsue 28.75 10 P **P** **11 48 24.7 +0.2**
comp=Z,90nm,0.9s,baz=185,slow=2.5,SNR=24
JNU Nakatsue 28.75 10 P **P** **11 48 25.2 +0.7**
CM01 Chiang Mai Arr 28.76 300 P **P** **11 48 27.1 +2.4**
comp=Z,98nmcomp=Z,11nm,0.9s
CM05 Chiang Mai Arr 28.77 300 P **P** **11 48 27.0 +2.2**
comp=Z,80nmcomp=Z,7.9nm,1.0s
CM02 Chiang Mai Arr 28.78 300 P **P** **11 48 27.3 +2.4**
comp=Z,83nmcomp=Z,10nm,0.8s
CM34 Chiang Mai Arr 28.78 301 P **P** **11 48 26.0 +1.1**
CM31 Chiang Mai Arr 28.79 300 P **P** **11 48 27.0 +2.0**
comp=Z,230nm,0.7s
CM31 Chiang Mai Arr 28.79 300 P **P** **11 48 26.2 +1.2**
CMAR Chiang Mai Arr 28.79 300 P **P** **11 48 25.9 +0.9**
comp=Z,5.9nm,0.8s,baz=114,slow=7.1,SNR=40
CMAR S **S** **11 52 54.6 +2.0**
comp=Z,0.5nm,0.3s,baz=109,slow=13,SNR=2.0
CMAR ScP **ScP** **11 54 40.2 +0.5**
comp=Z,34nm,1.0s,baz=144,slow=1.8,SNR=65
CMAR Chiang Mai Arr 28.79 300 *i*P **P** **11 48 27.1 +2.1**
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 28.79 300 P **P** **11 48 26.2 +1.2**
CM15 Chiang Mai Arr 28.81 300 P **P** **11 48 27.4 +2.3**
comp=Z,12nm,0.8s
CM13 Chiang Mai Arr 28.81 300 P **P** **11 48 27.4 +2.2**
comp=Z,80nmcomp=Z,8.6nm,0.8s
CMMT Chiang Mai 28.94 301 P **P** **11 48 27.0 +0.6**
comp=Z,183nmcomp=Z,8.3nm,1.3s
CM33 Chiang Mai Arr 28.94 301 P **P** **11 48 27.0 +0.7**
CHTO Chiang Mai 28.94 301 P **P** **11 48 26.1 -0.3**
CHTO pmax pmax
comp=Z,17nm,1.1s
CHTO Chiang Mai 28.94 301 P **P** **11 48 26.1 -0.3**
CM32 Chiang Mai Arr 28.96 301 P **P** **11 48 28.0 +1.5**
ENH Enshi 29.25 332 P **P** **11 48 29.0 +0.1**
ENH IAmb IAmb 11 48 31.1
comp=Z,99nm,1.0s
KMI Kunming 29.38 316 ⇑P **P** **11 48 32.4 +2.1**
KMI S **S** **11 52 58.7 -3.3**
KMI ScP **ScP** **11 54 41.7 -0.1**
KMI pmax pmax
comp=Z,17nm,1.1s
KMI pmax pmax
comp=Z,96nm,5.6s
KMI LR LR
comp=Z,290nm,14.8s
KMI LR LR
comp=Z,210nm,18.1s
KMI LR LR
comp=Z,250nm,17.2s
MHMT Maesarieng 29.55 299 P **P** **11 48 33.0 +1.3**
AS31 Alice Springs 29.59 163 P **P** **11 48 32.7 +0.7**
ASAR Alice Springs 29.59 163 P **P** **11 48 32.5 +0.5**
comp=Z,1.9nm,0.3s,baz=342,slow=7.6,SNR=170
ASAR S **S** **11 53 04.4 -0.6**
comp=Z,9.1nm,0.8s,baz=350,slow=22,SNR=9.9
ASAR ScP **ScP** **11 54 41.9 -0.3**
comp=Z,13nm,0.8s,baz=349,slow=2.8,SNR=16
ASAR Alice Springs 29.59 163 P **P** **11 48 32.4 +0.4**
JMN Monobe 30.00 15 P **P** **11 48 36.0 +0.6**
JHS Saijyo 31.02 13 P **P** **11 48 44.9 +0.5**
TJN Taejon 31.54 4*ce*P **P** **11 48 49.7 +0.9**
JWT Wachi 31.87 16 P **P** **11 48 52.3 +0.5**
JSG Sagara 32.20 21 P **P** **11 48 55.8 +1.2**
INU Inuyama 32.42 19 P **P** **11 48 57.2 +0.8**
KSAR Wonju Array Be 32.63 4 P **P** **11 48 58.5 +0.2**
KSAR Wonju Array Be 32.63 4 P **P** **11 48 58.5 +0.2**
KSRS Korea Array 32.65 4 P **P** **11 48 58.5 +0.1**
comp=Z,29nm,0.9s,baz=182,slow=10,SNR=70
KSRS PcP **PcP** **11 51 37.2 +0.5**
comp=Z,8.0nm,0.9s,baz=186,slow=3.0,SNR=12
KSRS ScP **ScP** **11 54 51.8 -0.3**
comp=Z,4.7nm,0.9s,baz=194,slow=3.5,SNR=12
KS19 Wonju Array Si 32.69 4 P **P** **11 48 58.8 0.0**
KS19 IAmb IAmb 11 49 00.5
comp=Z,39nm,1.0s
XAN Xi'an 32.70 335 P **P** **11 48 59.2 +0.2**
XAN S **S** **11 53 49.7 -3.4**
XAN pmax pmax
comp=Z,410nm,4.1s
XAN LR LR
comp=Z,320nm,6.0s
XAN LR LR
comp=Z,290nm,8.7s
XAN LR LR
comp=Z,220nm,5.4s
XAN Xi'an 32.70 335 P **P** **11 48 59.3 +0.2**
XAN pmax pmax
comp=Z,59nm,1.0s
XAN Xi'an 32.70 335 P **P** **11 48 59.3 +0.3**
XAN IAmb IAmb 11 49 00.3
comp=Z,59nm,1.0s
CD2 Chengdu 32.75 325 P **P** **11 49 00.8 +1.3**
CD2 pmax pmax
comp=Z,50nm,1.0s
JGF Kuroka 32.76 19 P **P** **11 48 59.7 +0.2**
JGF IAmb IAmb 11 49 02.1
comp=Z,72nm,0.8s
MAJO Matsushiro 33.90 19*d i*P **P** **11 49 08.8 -0.4**
MAJO pmax pmax
comp=Z,27nm,0.9s
MAJO Matsushiro 33.90 19 P **P** **11 49 09.1 -0.1**
MAT Matsushiro 33.90 19 P **P** **11 49 08.8 -0.4**
MJAR Matsushiro Arr 33.90 19 P **P** **11 49 08.9 -0.2**
comp=Z,98nm,0.9s,baz=194,slow=9.2,SNR=160
MJAR ScP **ScP** **11 54 56.2 -0.4**
comp=Z,3.1nm,0.9s,baz=194,slow=3.6,SNR=5.3
MJAR Matsushiro Arr 33.90 19 P **P** **11 49 09.0 -0.2**
MJAR Matsushiro Arr 33.90 19 P **P** **11 49 08.6 -0.6**
MJAR IAmb IAmb 11 49 10.2
comp=Z,34nm,0.8s
DL2 Dalian 34.11 355 P **P** **11 49 11.6 +0.6**
DL2 pmax pmax
comp=Z,82nm,1.0s
JYT Yasato 34.32 22 P **P** **11 49 11.3 -1.5**
JYT IAmb IAmb 11 49 13.9
comp=Z,93nm,1.1s
MORW Morawa 34.71 194 P **P** **11 49 15.8 -0.4**
MORW IAmb IAmb 11 49 17.1
comp=Z,40nm,0.8s
TIY Taiyuan 34.72 342 *e*P **P** **11 49 17.5 +1.2**
JSD Sado 35.28 18 P **P** **11 49 20.7 -0.2**
FORT Forrest 35.47 175 P **P** **11 49 22.6 -0.1**
FORT IAmb IAmb 11 49 24.1
comp=Z,49nm,0.7s
BJT Baijiatuan 35.97 349 P **P** **11 49 26.6 -0.2**
BJT pmax pmax
comp=Z,97nm,1.1s
BJT Baijiatuan 35.97 349 P **P** **11 49 26.6 -0.2**
BJT IAmb IAmb 11 49 28.9
comp=Z,97nm,1.1s
JMM Marumori 35.99 22 P **P** **11 49 28.2 +1.3**
BJI Beijing 35.99 349 P **P** **11 49 27.2 +0.3**
BJI PcP **PcP** **11 51 47.8 +1.4**
BJI S **S** **11 54 43.9 +0.9**
BJI ScP **ScP** **11 55 04.3 +0.3**
BJI pmax pmax
comp=Z,42nm,0.8s
BJI pmax pmax
comp=Z,170nm,6.0s
LZH Lanzhou 36.71 331 *e*P **P** **11 49 34.7 +1.4**
LZH pP pwP 11 50 34.8 -0.2
LZH S **S** **11 54 54.6 +0.2**
LZH sS sS 11 56 49.0 +11
LZH SS **SS** **11 57 47.2 -2.2**
LZH pmax pmax
comp=Z,140nm,1.1s
LZH pmax pmax
comp=Z,270nm,4.9s
SNY Shenyang 36.92 358 ⇓P **P** **11 49 34.6 -0.1**
SNY sP **PP** **11 51 04.4 -1.7**
SNY S **S** **11 54 53.6 -3.4**
SNY ScS **ScS** **11 59 15.6 +0.2**
SNY pmax pmax
comp=Z,68nm,0.9s
SNY pmax pmax
comp=Z,81nm,5.6s
SNY LR LR
comp=Z,100nm,11.9s
SNY LR LR
comp=Z,130nm,9.7s
SNY LR LR
comp=Z,150nm,8.6s
HHC Hu-ho-hao-te 37.87 343 *e*P **P** **11 49 44.1 +1.3**
HHC sS sS 11 57 04.0 +8.8
HHC ScS **ScS** **11 59 20.9 -0.4**
HHC pmax pmax
comp=Z,41nm,0.9s
HHC pmax pmax
comp=Z,180nm,5.0s
MSHR Mys Shultsa 38.06 7*de*P **P** **11 49 45.5 +1.3**
MSHR pmax pmax
comp=Z,71nm,1.1s
BTO Baotou 38.11 342 *e*P **P** **11 49 47.2 +2.4**
NWAO Narrogin (SRO) 38.19 190 P **P** **11 49 45.4 0.0**
NWAO pmax pmax
comp=Z,81nm,1.1s
NWAO Narrogin (SRO) 38.19 190 P **P** **11 49 45.4 0.0**
NWAO IAmb IAmb 11 49 47.0
comp=Z,81nm,1.1s
NWAO Narrogin (SRO) 38.19 190 P **P** **11 49 44.2 -1.2**
NWAO IAmb IAmb 11 49 47.0
comp=Z,65nm,1.1s
JTM Tenmabayashi 38.69 20 P **P** **11 49 50.3 +0.9**
BBOO Buckleboo 38.84 165 P **P** **11 49 51.6 +0.8**
CN2 Changchun 38.88 1 *e*P **P** **11 49 49.9 -1.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
EIDS Eidsvold 39.28 141 P **P** **11 49 54.3 -0.3**
STKA Stephens Creek 39.75 158 P **P** **11 49 59.1 +0.7**
comp=Z,27nm,0.7s,baz=331,slow=8.1,SNR=78
STKA ScP **ScP** **11 55 17.1 -1.4**
comp=Z,8.1nm,0.9s,baz=357,slow=5.8,SNR=4.9
STKA S **S** **11 55 40.1 +0.4**
comp=Z,5.4nm,0.8s,baz=124,slow=22,SNR=5.6
STKA Stephens Creek 39.75 158*d i*P **P** **11 49 59.8 +1.5**
STKA Stephens Creek 39.75 158 P **P** **11 49 59.0 +0.7**
USA0B Ussuriysk Arra 39.76 8 *i*P **P** **11 49 58.9 +0.7**
USA0B Ussuriysk Arra 39.76 8 P **P** **11 49 58.6 +0.4**
USA0B IAmb IAmb 11 50 00.4
comp=Z,42nm,1.0s
USRK Ussuriysk Ar. 39.76 8 P **P** **11 49 59.0 +0.8**
comp=Z,14nm,0.6s,baz=192,slow=7.7,SNR=59
USRK PP **PnPn** **11 51 41.5 -1.6**
comp=Z,8.6nm,1.0s,baz=187,slow=11,SNR=5.7
USRK ScP **ScP** **11 55 18.3 0.0**
comp=Z,0.6nm,0.7s,baz=146,slow=11,SNR=4.0
USRK Ussuriysk Ar. 39.76 8 P **P** **11 49 58.0 -0.2**
MDJ Mudanjiang 39.90 5 P **P** **11 50 00.1 +0.8**
MDJ pP pP 11 50 58.9 -0.3
MDJ sP sP 11 51 31.3 -1.9
MDJ S **S** **11 55 46.7 +5.2**
MDJ sS sS 11 57 31.7 +5.9
MDJ ScS **ScS** **11 59 31.3 -1.4**
MDJ pmax pmax
comp=Z,35nm,0.8s
MDJ Mudanjiang 39.90 5 P **P** **11 49 59.9 +0.5**
LSA Lhasa 40.40 312 P **P** **11 50 05.6 +1.3**
LSA pmax pmax
comp=Z,74nm,0.8s
LSA Lhasa 40.40 312 P **P** **11 50 05.0 +0.7**
LSA pmax pmax
comp=Z,14nm,0.6s
LSA Lhasa 40.40 312 P **P** **11 50 05.0 +0.7**
ERM Erimo 40.50 21*de*P **P** **11 50 06.0 +1.8**
ERM pmax pmax
comp=Z,47nm,1.0s
ERM Erimo 40.50 21 P **P** **11 50 05.6 +1.3**
ERM IAmb IAmb 11 50 07.4
comp=Z,45nm,1.0s
JEW Eniwo 40.65 19 P **P** **11 50 05.5 0.0**
JEW IAmb IAmb 11 50 08.5
comp=Z,195nm,1.3s
GTA Gaotai 41.29 330 ⇓P **P** **11 50 11.7 +0.8**
GTA PcP **PcP** **11 52 01.9 -1.5**
GTA ScP **ScP** **11 55 24.5 -0.2**
GTA S **S** **11 56 03.5 +1.0**
GTA sS sS 11 57 54.1 +6.8
GTA SS **SS** **11 59 18.8 -0.6**
GTA ScS **ScS** **11 59 42.4 +0.7**
GTA pmax pmax
comp=Z,28nm,1.1s
GTA pmax pmax
comp=Z,140nm,5.5s
GTA LR LR
comp=Z,120nm,14.5s
GTA LR LR
comp=Z,140nm,15.3s
GTA LR LR
comp=Z,140nm,16.0s
TEY Ternei 41.39 13⇑*i*P **P** **11 50 12.7 +1.3**
TEY *e* 11 51 12.6
TEY pmax pmax
comp=Z,300nm,1.7s
TEY pmax pmax
comp=E,10.0nm,0.7s
TEY pmax pmax
comp=N,100nm,1.0s
TEY pmax pmax
comp=Z,170nm,1.0s
ASAJ Asahikawa 42.17 19 P **P** **11 50 19.1 +1.4**
comp=Z,55nm,0.8s,baz=216,slow=11,SNR=77
JKA Kamikawa-asahi 42.17 19 P **P** **11 50 17.9 +0.2**
JKA IAmb IAmb 11 50 20.5
comp=Z,88nm,0.9s
H11N1 WAKE ISLAND Hy 43.47 66 T T 12 37 33.5
baz=255,slow=75,SNR=7.6
H11N2 WAKE ISLAND Hy 43.48 66 T T 12 37 33.7
baz=255,slow=75,SNR=3.9
H11N3 WAKE ISLAND Hy 43.49 66 T T 12 37 35.8
baz=255,slow=75,SNR=4.0
HIA Hailar 44.56 355*d i*P **P** **11 50 36.7 0.0**
HIA pmax pmax
comp=Z,15nm,0.8s
HIA Hailar 44.56 355 P **P** **11 50 37.3 +0.6**
KLR Kul'dur 44.68 6 P **P** **11 50 37.9 +0.2**
comp=Z,19nm,0.8s,baz=207,slow=5.5,SNR=56
KLR PcP **PcP** **11 52 14.8 +0.4**
comp=Z,11nm,0.9s,baz=269,slow=3.9,SNR=6.9
KLR Kul'dur 44.68 6*de*P **P** **11 50 37.8 +0.2**
KLR pmax pmax
comp=Z,26nm,1.0s
YSS Yuzh-Sakhalins 44.76 17κ *i*P **P** **11 50 39.0 +0.8**
YSS *e* 11 52 15.2
YSS *e* 11 52 30.8
YSS *e*S **S** **11 56 57.3 +5.1**
YSS *e* 11 59 57.7
YSS pmax pmax
comp=Z,200nm,2.9s
YSS pmax pmax
comp=Z,50nm,1.1s
YSS Yuzh-Sakhalins 44.76 17 P **P** **11 50 38.4 +0.2**
YSS IAmb IAmb 11 50 41.1
comp=Z,68nm,1.1s
KUR Kuril'sk 45.02 23 *i*P **P** **11 50 41.0 +0.8**
ULN Ulaanbaatar 45.59 343*ce*P **P** **11 50 44.9 -0.1**
ULN pmax pmax
comp=Z,73nm,1.0s
ULN Ulaanbaatar 45.59 343 P **P** **11 50 44.8 -0.1**
ULN IAmb IAmb 11 50 47.9
comp=Z,78nm,1.1s
SONM Songino Array 45.76 343 P **P** **11 50 46.2 0.0**
comp=Z,39nm,1.0s,baz=160,slow=8.5,SNR=109
SONM PcP **PcP** **11 52 18.2 -0.2**
comp=Z,5.7nm,1.0s,baz=163,slow=6.9,SNR=4.5
SONM ScP **ScP** **11 55 42.2 -0.5**
comp=Z,9.4nm,0.8s,baz=158,slow=5.0,SNR=18
SONM Songino Array 45.76 343 P **P** **11 50 45.9 -0.4**
CAN Canberra 45.85 152 P **P** **11 50 49.7 +2.7**
CAN pmax pmax
comp=Z,36nm,0.8s
CAN Canberra 45.85 152 P **P** **11 50 49.7 +2.7**
CAN IAmb IAmb 11 50 50.5
comp=Z,36nm,0.8s
TOO Toolangi 46.27 157 P **P** **11 50 51.1 +0.9**
TOO pmax pmax
comp=Z,23nm,0.9s
TOO Toolangi 46.27 157 P **P** **11 50 51.1 +0.9**
GRNR Gornyy 46.85 10⇓*i*P **P** **11 50 55.7 +1.3**
GRNR pmax pmax
comp=N,30nm,1.0s
GRNR pmax pmax
comp=Z,50nm,1.1s
GRNR MLR MLR
comp=N,140nm,11.0s
GRNR MLR MLR
comp=E,110nm,11.0s
HYB Hyderabad 47.07 289 *i*P **P** **11 50 56.0 -0.7**
HYB *ep*P **pP** **11 51 56.0 -1.0**
TYV Tymovskoe 48.28 15 *e*P **P** **11 51 06.7 +1.3**
TYV pmax pmax
comp=Z,500nm,2.8s
TYV pmax pmax
comp=Z,29nm,1.3s
ZEA Zeya 48.85 2 *e*P **P** **11 51 09.4 -0.2**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZAK Zakamensk 48.97 342 *e*P **P** **11 51 10.3 -0.4**
ZAK *e* 11 52 29.4
ZAK *e* 11 57 43.2
ZAK pmax pmax
comp=Z,15nm,1.4s
ZAK pmax pmax
comp=Z,8.0nm,1.3s
TLY Talaya 50.00 343*d i*P **P** **11 51 18.6 +0.3**
TLY *e*S **S** **11 58 06.1 +0.4**
TLY pmax pmax
comp=Z,113nm,1.1s
TLY Talaya 50.00 343 P **P** **11 51 18.9 +0.6**
TLY IAmb IAmb 11 51 21.0
comp=Z,47nm,1.1s
IRK Irkutsk 50.32 344 *e*P **P** **11 51 20.1 -0.6**
IRK pmax pmax
comp=Z,102nm,3.1s
MOY Mondy 50.81 341 *e*P **P** **11 51 24.9 +0.5**
MOY pmax pmax
comp=Z,97nm,1.6s
WMQ Urumqi 50.85 326 *e*P **P** **11 51 26.0 +1.2**
WMQ S **S** **11 58 16.4 -1.3**
WMQ pmax pmax
comp=Z,82nm,1.5s
WMQ pmax pmax
comp=Z,200nm,3.7s
WMQ LR LR
comp=Z,280nm,19.9s
WMQ LR LR
comp=Z,130nm,29.9s
WMQ LR LR
comp=Z,240nm,19.9s
WMQ Urumqi 50.85 326 P **P** **11 51 25.3 +0.5**
WMQ pmax pmax
comp=Z,58nm,1.1s
WMQ Urumqi 50.85 326 P **P** **11 51 25.3 +0.5**
WMQ IAmb IAmb 11 51 27.0
comp=Z,58nm,1.1s
BOD Bodaibo 53.60 353 *e*P **P** **11 51 44.1 -0.5**
BOD pmax pmax
comp=Z,46nm,1.4s
ZSN Zaisan 54.66 328 *e*P **P** **11 51 52.5 0.0**
comp=Z,17nm,1.2s,baz=328
ZSN *e*S **S** **11 59 09.7 +0.8**
baz=328
ZSN Zaisan 54.66 328 *e*P **P** **11 51 52.5 0.0**
ZSN *e*S **S** **11 59 09.6 +0.8**
ZSN pmax pmax
comp=Z,17nm,1.2s
DGZ Jazzator, Alta 54.81 331 *i*P **P** **11 51 54.1 +0.4**
DGZ pmax pmax
comp=Z,19nm,1.1s
PEA0B Petropavlovsk- 55.18 23*ce*P **P** **11 51 57.7 +1.7**
PEA0B Petropavlovsk- 55.18 23 P **P** **11 51 56.1 +0.2**
PETK Petropavlovsk- 55.18 23 P **P** **11 51 57.0 +1.0**
comp=Z,88nm,0.9s,baz=196,slow=2.9,SNR=113
PETK PcP **PcP** **11 52 53.5 +0.4**
comp=Z,3.3nm,0.4s,baz=259,slow=9.8,SNR=21
PETK Petropavlovsk- 55.18 23 P **P** **11 51 57.2 +1.2**
PETK Petropavlovsk- 55.18 23 P **P** **11 51 57.2 +1.2**
SHLS Shalkode 55.40 321 *i*P **P** **11 51 56.7 -1.3**
comp=Z,40nm,1.4s,baz=321
SHLS *e*S **S** **11 59 16.6 -2.4**
baz=321
SHLS Shalkode 55.40 321 *i*P **P** **11 51 56.6 -1.3**
SHLS *e*S **S** **11 59 16.6 -2.4**
SHLS pmax pmax
comp=Z,40nm,1.4s
PET Petropavlovsk 55.50 24 *e*P **P** **11 51 58.6 +0.4**
PET *e**SP **sP** **11 53 36.6 +1.7**
PET *e*S **S** **11 59 18.3 -1.3**
PET *e**SS **ScS** **12 01 14.5 -1.7**
PET pmax pmax
comp=Z,160nm,1.2s
PET pmax pmax
comp=Z,200nm,14.5s
PET MLR MLR
comp=Z,100nm,17.0s
PET Petropavlovsk 55.50 24 P **P** **11 51 58.4 +0.2**
PET IAmb IAmb 11 52 01.5
comp=Z,130nm,1.1s
UZB Uzynbulak 55.67 320⇓*i*P **P** **11 52 00.4 +0.5**
comp=Z,16nm,0.9s,baz=320
UZB *e*S **S** **11 59 23.7 +1.0**
baz=320
UZB Uzynbulak 55.67 320*d i*P **P** **11 52 00.4 +0.5**
UZB *e*S **S** **11 59 23.6 +1.0**
UZB pmax pmax
comp=Z,16nm,0.9s
MK31 Makanchi Array 55.68 326*d i*P **P** **11 51 59.6 -0.1**
MK31 Makanchi Array 55.68 326 P **P** **11 52 00.0 +0.3**
MKAR Makanchi Array 55.68 326 P **P** **11 51 59.9 +0.2**

comp=Z,8.9nm,0.3s,baz=120,slow=7.3,SNR=141
MKAR PcP **PcP** **11 52 54.6 -0.7**
comp=Z,4.1nm,0.7s,baz=110,slow=4.9,SNR=5.6
MKAR ScP **ScP** **11 56 23.8 -1.5**
comp=Z,1.7nm,0.5s,baz=119,slow=5.4,SNR=4.5
MKAR S **S** **11 59 22.8 +0.4**
comp=Z,3.3nm,1.2s,baz=111,slow=17,SNR=8.6
MKAR Makanchi Array 55.68 326 P **P** **11 51 59.2 -0.5**
MAKZ Makanchi 55.87 326 P **P** **11 52 00.8 -0.2**
MAKZ pmax pmax
comp=Z,39nm,1.0s
MAKZ Makanchi 55.87 326 P **P** **11 52 00.8 -0.2**
MAKZ IAmb IAmb 11 52 02.6
comp=Z,39nm,1.0s
NIL Nilore 55.87 308 P **P** **11 52 02.2 +0.9**
NIL pmax pmax
comp=Z,67nm,1.5s
NIL Nilore 55.87 308 P **P** **11 52 02.2 +0.9**
NIL IAmb IAmb 11 52 03.1
comp=Z,67nm,1.5s
SATY Saty 56.02 320⇓ *i*P **P** **11 52 02.9 +0.6**
comp=Z,28nm,1.0s,baz=320
SATY *e*S **S** **11 59 28.2 +1.0**
baz=320
SATY Saty 56.02 320 *d i*P **P** **11 52 02.9 +0.6**
SATY *e*S **S** **11 59 28.2 +1.0**
SATY pmax pmax
comp=Z,28nm,1.0s
KSH Kashi 56.04 315 P **P** **11 52 03.9 +1.4**
KSH S **S** **11 59 29.0 +1.5**
KSH pmax pmax
comp=Z,17nm,0.9s
KSH pmax pmax
comp=Z,120nm,6.6s
KSH LR LR
comp=Z,170nm,6.9s
KSH LR LR
comp=Z,100nm,6.6s
KSH LR LR
comp=Z,140nm,9.0s
KPKS Kokpek 56.05 321 *e*P **P** **11 52 02.8 +0.3**
comp=Z,22nm,0.9s,baz=320
KPKS Kokpek 56.05 321 *e*P **P** **11 52 02.8 +0.3**
KPKS pmax pmax
comp=Z,22nm,0.9s
MDOK Medeo 56.95 320 *i* P **P** **11 52 09.5 +0.6**
baz=320
MDOK Medeo 56.95 320 *i* P **P** **11 52 09.4 +0.6**
TNSS Tian-Shan 56.95 319 *e*P **P** **11 52 10.0 +0.7**
baz=319
TNSS Tian-Shan 56.95 319 *e*P **P** **11 52 09.9 +0.7**
MSVF Nonsavu 56.98 115 P **P** **11 52 09.6 +0.2**
MSVF pmax pmax
comp=Z,18nm,0.8s
MSVF Nonsavu 56.98 115 P **P** **11 52 09.6 +0.2**
TDK Taldyqorghan 56.99 322 *e*P **P** **11 52 09.3 +0.3**
comp=Z,32nm,0.8s,baz=322
TDK Taldyqorghan 56.99 322 *e*P **P** **11 52 09.2 +0.3**
TDK pmax pmax
comp=Z,32nm,0.8s
ULHL Ulahol 57.05 318 P **P** **11 52 10.4 +0.8**
SNR=18
AAA Alma-Ata 57.05 320⇓ *e*P **P** **11 52 10.0 +0.5**
comp=Z,24nm,0.8s,baz=320
AAA Alma-Ata 57.05 320 *de*P **P** **11 52 10.0 +0.5**
AAA pmax pmax
comp=Z,24nm,0.8s
YAK Yakutsk 57.24 3 P **P** **11 52 10.6 +0.3**
comp=Z,12nm,0.4s,baz=196,slow=1.4,SNR=15
YAK PcP **PcP** **11 53 01.3 +0.3**
comp=Z,6.7nm,0.4s,baz=358,slow=3.3,SNR=5.9
YAK Yakutsk 57.24 3 *d i*P **P** **11 52 10.4 +0.1**
YAK *e* 11 53 01.1
YAK *e**PP **pP** **11 53 17.0 +1.9**
YAK *e* 11 54 21.2
YAK *e*S **S** **11 59 42.4 +0.3**
YAK *e* 12 01 24.7
YAK *e*SS **SS** **12 03 41.2 +4.6**
YAK pmax pmax
comp=Z,73nm,0.9s
YAK pmax pmax
comp=N,42nm,1.3s
YAK pmax pmax
comp=E,14nm,1.3s
YAK pmax pmax
comp=Z,26nm,1.1s
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK smax smax
comp=N,32nm,1.6s
YAK smax smax
comp=E,64nm,1.8s
YAK Yakutsk 57.24 3 P **P** **11 52 10.3 0.0**
YAK IAmb IAmb 11 52 11.7
comp=Z,67nm,0.9s
YAK PcP **PcP** **11 53 01.3 +0.3**
KUU Kurty 57.74 320 *e*P **P** **11 52 14.2 0.0**
comp=Z,98nm,1.1s,baz=320
KUU *e*S **S** **11 59 49.8 +0.4**
baz=320
KUU Kurty 57.74 320 *e*P **P** **11 52 14.2 0.0**
KUU *e*S **S** **11 59 49.7 +0.4**
KUU pmax pmax
comp=Z,98nm,1.1s
TKM2 Tokmak 2 57.78 319 P **P** **11 52 15.3 +0.6**
SNR=18
MA2 Magadan 58.16 15 P **P** **11 52 18.0 +1.3**
comp=Z,138nm,0.8s,baz=204,slow=6.6,SNR=336
MA2 PcP **PcP** **11 53 05.4 +0.7**
comp=Z,24nm,0.8s,baz=98,slow=1.5,SNR=4.8
MA2 Magadan 58.16 15 *ce*P **P** **11 52 18.1 +1.3**
MA2 pmax pmax
comp=Z,157nm,0.9s
MA2 Magadan 58.16 15 P **P** **11 52 18.3 +1.5**
UCH Uchtor 58.19 318 P **P** **11 52 19.1 +1.2**
SNR=46
AAK Ala-Archa 58.38 318 P **P** **11 52 19.4 +0.6**
SNR=9.2
AAK Ala-Archa 58.38 318 *d i*P **P** **11 52 19.2 +0.4**
AAK pmax pmax
comp=Z,35nm,1.2s
AAK Ala-Archa 58.38 318 P **P** **11 52 19.5 +0.6**
SGDS Sogindy 58.65 319 *e*P **P** **11 52 20.6 0.0**
baz=319
SGDS Sogindy 58.65 319 *e*P **P** **11 52 20.5 0.0**
USP Ospenovka 58.65 319 P **P** **11 52 20.9 +0.4**
SNR=31
AML Almayashu 58.70 317 P **P** **11 52 22.2 +0.9**
SNR=48
ZAA0 Zalesovo Array 58.85 334 P **P** **11 52 20.8 -0.7**
ZAA0 IAmb IAmb 11 52 23.0
comp=Z,29nm,1.0s
ZALV Zalesovo Beam 58.85 334 P **P** **11 52 20.6 -1.0**
comp=Z,17nm,0.7s,baz=116,slow=6.8,SNR=46
ZALV S **S** **12 00 01.5 -1.7**
comp=Z,0.8nm,0.5s,baz=109,slow=8.0,SNR=5.5
EKS2 Erkin-Say 58.87 318 P **P** **11 52 23.1 +1.0**
SNR=19
SEM Semipalatinsk 58.87 328 *e*P **P** **11 52 20.9 -1.2**
baz=328
SEM Semipalatinsk 58.87 328 *e*P **P** **11 52 20.8 -1.2**
KBL Kabul 59.46 307 P **P** **11 52 26.0 -0.4**
KBL pmax pmax
comp=Z,28nm,1.3s
KBL Kabul 59.46 307 P **P** **11 52 26.0 -0.4**
BTLS Baital 59.73 320⇓ *i*P **P** **11 52 27.6 -0.1**
baz=320
BTLS Baital 59.73 320 *d i*P **P** **11 52 27.6 -0.1**
GAR Garm 59.90 313 P **P** **11 52 29.1 0.0**
GAR IAmb IAmb 11 52 30.5
comp=Z,60nm,0.9s
DZA Taraz 60.61 317⇓ *i*P **P** **11 52 33.8 0.0**
baz=317
DZA Taraz 60.61 317 *d i*P **P** **11 52 33.8 0.0**
IUG Iuzhnay 61.22 316⇓ *i*P **P** **11 52 38.3 +0.3**
comp=Z,14nm,1.0s,baz=316
IUG Iuzhnay 61.22 316 *d i*P **P** **11 52 38.2 +0.3**
IUG pmax pmax
comp=Z,14nm,1.0s
KK31 Karatay Array 61.25 317 P **P** **11 52 37.9 -0.1**
KK31 pmax pmax
comp=Z,33nm,1.1s
KK31 Karatay Array 61.25 317 P **P** **11 52 37.9 -0.1**
KK31 IAmb IAmb 11 52 39.2
comp=Z,33nm,1.1s
KKAR Karatay Array 61.25 317 P **P** **11 52 37.8 -0.2**
KKAR pmax pmax
comp=Z,33nm,1.1s
KKAR Karatay Array 61.25 317 P **P** **11 52 37.8 -0.2**
KKAR IAmb IAmb 11 52 39.2
comp=Z,33nm,1.1s
SEY Seymchan 61.45 14 P **P** **11 52 40.2 +1.4**
comp=Z,31nm,0.7s,baz=226,slow=6.5,SNR=148
SEY Seymchan 61.45 14 *d i*P **P** **11 52 40.6 +1.7**
BRZS Berezniki 62.80 325 *e*P **P** **11 52 48.4 +0.2**
comp=Z,28nm,1.9s,baz=325
BRZS Berezniki 62.80 325 *e*P **P** **11 52 48.4 +0.2**
BRZS pmax pmax
comp=Z,28nm,1.9s
LBZ Lake Benmore 63.55 145 P **P** **11 52 54.8 +1.6**
LBZ IAmb IAmb 11 52 55.3
comp=Z,32nm,0.7s
RPZ Rata Peaks 63.65 144 P **P** **11 52 55.4 +1.6**
RPZ IAmb IAmb 11 52 56.6
comp=Z,40nm,0.9s
AFI Afiamalu 65.48 108 P **P** **11 53 08.7 +2.6**
AFI pmax pmax
comp=Z,75nm,1.0s
BRVK Borovoye 65.55 327 *ce*P **P** **11 53 05.5 -0.3**
BRVK pmax pmax
comp=Z,45nm,1.3s
BRVK Borovoye 65.55 327 P **P** **11 53 05.3 -0.5**
BRVK IAmb IAmb 11 53 07.7
comp=Z,36nm,1.1s
TIXI Tiksi 66.84 1 P **P** **11 53 12.4 -1.2**
comp=Z,14nm,0.3s,baz=160,slow=5.2,SNR=77
TIXI S **S** **12 01 38.2 -3.2**
comp=Z,0.9nm,0.7s,baz=289,slow=22,SNR=10
TIXI Tiksi 66.84 1 *d i*P **P** **11 53 12.6 -1.0**
TIXI Tiksi 66.84 1 P **P** **11 53 12.9 -0.7**
TIXI IAmb IAmb 11 53 14.3
comp=Z,54nm,1.1s
ATKA Atka Island 68.68 35 P **P** **11 53 25.6 +0.2**
UOSS Minazif 68.71 295 P **P** **11 53 25.3 -0.9**
GEYT Alibeck 68.84 309 P **P** **11 53 27.0 +0.2**
comp=Z,4.6nm,0.6s,baz=142,slow=5.1,SNR=10
GEYT Alibeck 68.84 309 P **P** **11 53 25.8 -0.9**
GYA0B ALIBECK ARRAY 68.84 309 P **P** **11 53 26.5 -0.2**
NRIK Noril'sk 69.00 347 P **P** **11 53 26.8 -0.3**
comp=Z,14nm,0.6s,baz=137,slow=6.2,SNR=18
NRIK Noril'sk 69.00 347 *ce*P **P** **11 53 26.6 -0.4**
NRIK pmax pmax
comp=Z,29nm,1.0s
NRIK Noril'sk 69.00 347 P **P** **11 53 26.8 -0.3**
NRIK IAmb IAmb 11 53 27.8
comp=Z,26nm,1.0s
BILL Bilibino 69.03 15 *c i*P **P** **11 53 27.4 +0.2**
BILL 11 56 08.0
BILL pmax pmax
comp=Z,50nm,1.7s
BILL Bilibino 69.03 15 P **P** **11 53 27.4 +0.2**
BILL IAmb IAmb 11 53 28.9
comp=Z,36nm,1.2s
ABKAR Akbulak array 70.21 321 P **P** **11 53 34.2 -0.5**
ABKAR Akbulak array 70.21 321 P **P** **11 53 34.1 -0.7**
SOCY Socotra 70.39 281 P **P** **11 53 35.2 -1.5**
SVE Sverdlovsk 72.14 329 *e*P **P** **11 53 45.5 -0.6**
SVE pmax pmax
comp=Z,22nm,1.3s
ARU Arti 73.10 328 *c i*P **P** **11 53 50.5 -1.3**
ARU 11 54 05.0
ARU S **S** **12 02 54.1 -0.2**
ARU pmax pmax
comp=Z,10.0nm,0.7s
ARU Arti 73.10 328 P **P** **11 53 50.5 -1.3**
ARU IAmb IAmb 11 53 51.5
comp=Z,11nm,0.6s
AKUT Akutan 74.10 35 P **P** **11 53 56.4 -1.1**
FALS False Pass 75.60 35 P **P** **11 54 06.5 +0.4**
FALS False Pass 75.60 35 P 11 54 07.2
baz=258
TNA Tin City 76.35 23 P **P** **11 54 10.8 +0.7**
TNA Tin City 76.35 23 P 11 54 11.1
baz=251
ANM Nome 77.07 25 P **P** **11 54 14.3 +0.1**
ANM pmax pmax
comp=Z,19nm,0.9s
ANM Nome 77.07 25 P **P** **11 54 14.3 +0.1**
ANM IAmb IAmb 11 54 16.8
comp=Z,19nm,0.9s
ANM Nome 77.07 25 P 11 54 15.9
baz=254
SDPT Sand Point 77.36 34 P **P** **11 54 15.6 -0.3**
SDPT Sand Point 77.36 34 P 11 54 16.5
baz=260
XMAS Kiritimati 77.51 89 P **P** **11 54 17.2 -0.4**
KIRV Kirov 78.40 329 *ce*P **P** **11 54 20.9 -0.7**
RAYN Ar Rayn 78.42 293 P **P** **11 54 21.5 -1.0**
RAYN pmax pmax
comp=Z,12nm,1.0s
RAYN Ar Rayn 78.42 293 P **P** **11 54 21.5 -1.0**
BELG Belogornoye 78.49 322 *i*P **P** **11 54 20.8 -1.3**
BELG pmax pmax
comp=Z,3.0nm,0.9s
RDOG Red Dog Mine 78.98 21 P **P** **11 54 25.6 +1.0**
RDOG IAmb IAmb 11 54 27.2
comp=Z,70nm,1.4s
RDOG Red Dog Mine 78.98 21 P 11 54 26.0
baz=255
GNI Garni 79.44 310 *i*P **P** **11 54 28.2 +0.4**
OPO Ambohidratompo 79.94 250 P **P** **11 54 30.1 -0.7**
comp=Z,9.1nm,0.9s
ABPO Ambohimpanom 79.97 250 P **P** **11 54 31.1 +0.1**
ABPO pmax pmax
comp=Z,13nm,0.8s
ABPO Ambohimpanom 79.97 250 P **P** **11 54 31.1 +0.1**
ABPO IAmb IAmb 11 54 32.2
comp=Z,13nm,0.8s
ZEI Tsey 80.19 312 *e*P **P** **11 54 29.2 -2.6**
ZEI pmax pmax
comp=Z,8.0nm,1.4s
PRGR Permogore 80.74 332 *e*P **P** **11 54 32.0 -2.0**
PRGR *e*S **S** **12 04 09.9 -6.3**
PRGR pmax pmax
comp=Z,29nm,1.0s
SVW2 Sparrevohn 80.77 29 P **P** **11 54 36.2 +1.9**
SVW2 IAmb IAmb 11 54 37.4
comp=Z,66nm,1.1s
KBZ Khabaz 80.96 313 *i*P **P** **11 54 35.5 -0.1**
KBZ pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 81.12 314 *e*P **P** **11 54 36.3 -0.3**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,72nm,19.0s
OHAK Old Harbor 81.56 33 P 11 54 39.8
baz=266
A21K Barrow 81.81 19 P **P** **11 54 41.0 +1.6**
A21K Barrow 81.81 19 P 11 54 41.0
baz=261,SNR=36
KDAK Kodiak Island 81.98 32 P **P** **11 54 41.3 +0.7**
comp=Z,44nm,0.9s,baz=310,slow=0.9,SNR=36
KDAK Kodiak Island 81.98 32 *i*P **P** **11 54 41.7 +1.1**
KDAK pmax pmax
comp=Z,112nm,1.3s
KDAK Kodiak Island 81.98 32 P **P** **11 54 41.5 +0.9**
KDAK Kodiak Island 81.98 32 P 11 54 42.1
baz=266
RSO Redoubt South 82.09 30 P **P** **11 54 42.2 +0.8**
IMAR Indian Mountai 82.14 24 P **P** **11 54 42.1 +0.9**
SPCR Spurr Chakacha 82.41 29 P 11 54 43.7
baz=266,SNR=17
PPLA Purkeypile 82.54 27 P **P** **11 54 43.9 +0.3**
PPLA IAmb IAmb 11 54 45.3
comp=Z,41nm,1.0s
PPLA Purkeypile 82.54 27 P 11 54 44.5
baz=266,SNR=10.0
CHUM Lake Minchumin 82.55 26 P 11 54 45.1
baz=266,SNR=26
SKT Skwentna 82.78 28 P **P** **11 54 44.9 +0.2**
SKT IAmb IAmb 11 54 46.0
comp=Z,52nm,1.1s
SKT Skwentna 82.78 28 P 11 54 45.0
baz=267,SNR=12
CNPM China Poot 82.79 31 P **P** **11 54 45.1 +0.3**
BRLK Bradley Lake 82.98 30 P **P** **11 54 45.7 0.0**
BRSE Bradley Lake S 83.05 31 P 11 54 46.8
baz=268
SUA Susitna One 83.13 29 P **P** **11 54 46.9 +0.3**
SUA Susitna One 83.13 29 P 11 54 47.2
baz=267,SNR=21
KTH Kantishna Hill 83.15 27 P **P** **11 54 46.9 +0.3**
KTH IAmb IAmb 11 54 48.6
comp=Z,64nm,1.2s
BPAW Bear Paw Mtn. 83.15 26 P **P** **11 54 47.5 +0.9**
BPAW Bear Paw Mtn. 83.15 26 P 11 54 47.5
baz=267,SNR=36
MLY Manley 83.31 25 P **P** **11 54 48.0 +0.6**
MLY Manley 83.31 25 P 11 54 48.8
baz=267,SNR=71
CUT Chulitna 83.39 28 P **P** **11 54 47.6 -0.2**
CUT IAmb IAmb 11 54 49.2
comp=Z,72nm,1.3s
CUT Chulitna 83.39 28 P 11 54 48.6
baz=268
TRF Thorofare Moun 83.43 27 P **P** **11 54 48.0 -0.1**
TRF IAmb IAmb 11 54 49.8
comp=Z,49nm,1.0s
TRF Thorofare Moun 83.43 27 P 11 54 48.5
baz=268,SNR=15
O22K Cooper Landing 83.59 30 P **P** **11 54 49.0 +0.2**
O22K Cooper Landing 83.59 30 P 11 54 49.6
baz=268,SNR=5.2
RC01 Rabbit Creek A 83.60 29 P **P** **11 54 49.5 +0.7**
RC01 Rabbit Creek A 83.60 29 P 11 54 49.4
baz=268,SNR=10
KLMR Klimovskoe 83.62 331 *e*P **P** **11 54 46.8 -2.1**
KLMR *e**PP **pP** **11 55 56.8 -0.5**
KLMR pmax pmax
comp=Z,41nm,1.0s
KLMR Klimovskoe 83.62 331 *e*P **P** **11 54 46.9 -2.0**
KLMR AMP 11 54 48.9
comp=Z,41nm,1.0s
KLMR *e*pP **pP** **11 55 56.9 -0.4**
COLD Coldfoot 83.64 23 P **P** **11 54 50.7 +1.8**
COLD Coldfoot 83.64 23 P 11 54 50.8
baz=267,SNR=106
BWN Browne 83.82 26 P **P** **11 54 51.1 +1.2**
I23K Minto, Yukon-K 83.90 25 P **P** **11 54 51.6 +1.4**
I23K Minto, Yukon-K 83.90 25 P 11 54 51.7
baz=268,SNR=55
PMR Palmer 83.90 29 P **P** **11 54 51.0 +0.7**
PMR pmax pmax
comp=Z,33nm,1.0s
PMR Palmer 83.90 29 P **P** **11 54 51.0 +0.7**
PMR IAmb IAmb 11 54 52.5
comp=Z,32nm,1.0s
PMR Palmer 83.90 29 P 11 54 51.0
baz=269,SNR=13
TOLK Toolik Lake Re 83.95 22 P **P** **11 54 52.1 +1.6**
TOLK Toolik Lake Re 83.95 22 P 11 54 52.3
baz=268,SNR=57
GHO Glory Hole Cre 84.01 28 P **P** **11 54 51.9 +0.9**
GHO IAmb IAmb 11 55 11.2
comp=Z,28nm,1.4s
NEA2 Nenana 84.01 26 P **P** **11 54 51.5 +0.7**
NEA2 IAmb IAmb 11 54 53.8
comp=Z,54nm,1.0s
NEA2 Nenana 84.01 26 P 11 54 51.6
baz=268,SNR=42
MCK McKinley 84.04 27 P **P** **11 54 51.7 +0.6**
MCK pmax pmax
comp=Z,87nm,1.2s
MCK McKinley 84.04 27 P **P** **11 54 51.7 +0.6**
MCK McKinley 84.04 27 P 11 54 51.4
baz=269,SNR=31
RND Reindeer 84.07 27 P **P** **11 54 51.6 +0.4**
RND pmax pmax
comp=Z,38nm,1.0s
RND Reindeer 84.07 27 P **P** **11 54 51.6 +0.4**
RND IAmb IAmb 11 54 52.5
comp=Z,38nm,1.0s
MAW Mawson 84.10 200 P **P** **11 54 51.6 +0.5**
comp=Z,4.8nm,0.6s,baz=74,slow=4.2,SNR=7.9
MAW Mawson 84.10 200 IAmb IAmb 11 54 54.6
comp=Z,1.3nm,0.8s
WAT2 Susitna Watana 84.19 27 P 11 54 52.0
baz=269
KNK Knik Glacier 84.22 29 P **P** **11 54 52.9 +0.9**
KNK IAmb IAmb 11 54 54.1
comp=Z,68nm,1.2s
KNK Knik Glacier 84.22 29 P 11 54 53.1
baz=269
PWL Port Wells 84.28 29 P **P** **11 54 52.2 -0.1**
SML Sawmill 84.29 28 P **P** **11 54 53.2 +0.8**
SML pmax pmax
comp=Z,68nm,1.2s
SML Sawmill 84.29 28 P **P** **11 54 52.8 +0.4**
SML Sawmill 84.29 28 P 11 54 52.6
baz=269,SNR=11
MALT Malatya 84.32 308 P **P** **11 54 56.3 +3.2**
MDM Murphy Dome 84.37 25 P **P** **11 54 53.0 +0.3**
MDM IAmb IAmb 11 54 56.1
comp=Z,26nm,1.1s
WRH Wood River Hil 84.43 26 P **P** **11 54 53.4 +0.5**
WRH IAmb IAmb 11 54 55.1
comp=Z,36nm,1.2s
TCOL CIGO, UAF Yank 84.53 25 P **P** **11 54 53.0 -0.4**
TCOL CIGO, UAF Yank 84.53 25 P 11 54 54.3
baz=270
COLA College 84.53 25 *i*P **P** **11 54 54.1 +0.7**
COLA pmax pmax
comp=Z,7.0nm,0.9s
COLA College 84.53 25 P **P** **11 54 53.3 -0.1**
COLA College 84.53 25 P 11 54 53.6
baz=270
CCB Clear Creek Bu 84.55 26 P **P** **11 54 53.4 -0.1**
CCB IAmb IAmb 11 54 55.5
comp=Z,24nm,1.1s
MOS Moscow 84.57 325 *e*P **P** **11 54 51.8 -1.9**
MOS *e**PP **pP** **11 55 59.9 -2.4**
MOS *e* 11 58 13.4
MOS *e*S **S** **12 04 48.1 -6.9**
MOS pmax pmax
comp=Z,43nm,0.8s
WAT6 Susitna Watana 84.57 28 P 11 54 54.2
baz=270,SNR=13
VNDA Vanda 84.68 172 P **P** **11 54 54.2 +0.3**
comp=Z,4.2nm,0.9s,baz=302,slow=6.5,SNR=14
VNDA Vanda 84.68 172 P **P** **11 54 54.4 +0.5**
VNDA pmax pmax
comp=Z,7.0nm,1.1s
VNDA Vanda 84.68 172 P **P** **11 54 54.4 +0.5**
SCM Sheep Creek Mo 84.77 28 P **P** **11 54 55.6 +0.8**
SCM pmax pmax
comp=Z,51nm,1.3s
SCM Sheep Creek Mo 84.77 28 P **P** **11 54 55.6 +0.8**
SCM IAmb IAmb 11 54 57.6
comp=Z,51nm,1.3s
GLI Glacier Island 84.88 29 P **P** **11 54 55.9 +0.6**
GLI IAmb IAmb 11 54 57.3
comp=Z,41nm,1.1s
GLI Glacier Island 84.88 29 P 11 54 56.1
baz=271
HDA Harding Lake 84.92 26 P 11 54 54.5
baz=270,SNR=14
HDA P 11 54 54.5
baz=270,SNR=14
IL31 84.95 25 P **P** **11 54 54.7 -0.7**
ILAR Eielson Array 84.95 25 P **P** **11 54 54.7 -0.8**
comp=Z,2.3nm,0.4s,baz=261,slow=4.3,SNR=61
ILAR Eielson Array 84.95 25 P **P** **11 54 54.3 -1.2**
OBN Obninsk 85.18 325 *d i*P **P** **11 54 55.3 -1.5**
OBN *e* 11 56 11.7
OBN S **S** **12 05 02.0 +1.1**
OBN pmax pmax
comp=Z,70nm,2.1s
OBN Obninsk 85.18 325 P **P** **11 54 55.7 -1.0**
OBN IAmb IAmb 11 54 57.4
comp=Z,24nm,0.5s
M24K Tolsona, Glenn 85.31 28 P 11 54 58.4
baz=271
KLU Klutina 85.44 29 P **P** **11 54 59.1 +1.0**
KLU IAmb IAmb 11 55 00.4
comp=Z,8.8nm,0.6s
KLU Klutina 85.44 29 P 11 54 58.7
baz=272
PRP Porcupine Dome 85.51 25 P **P** **11 54 58.0 -0.4**
PRP Porcupine Dome 85.51 25 P 11 54 58.7
baz=272
FYU Fort Yukon 85.60 24 P **P** **11 54 59.5 +0.9**
FYU IAmb IAmb 11 55 00.7
comp=Z,14nm,0.8s

PAX Paxson 85.61 27 P P 11 54 59.3 +0.4
PAX pmax pmax
comp=Z,13nm,1.0s
PAX Paxson 85.61 27 P P 11 54 59.3 +0.4
PAX Paxson 85.61 27 P 11 54 59.4
baz=272,SNR=6.1
BMAR Burnt Mountain 85.82 23 P P 11 55 01.3 +1.5
N25K Chitina, Valde 86.07 29 P P 11 55 01.2 0.0
N25K IAmb IAmb 11 55 02.6
comp=Z,17nm,1.1s
N25K Chitina, Valde 86.07 29 P 11 55 02.1
baz=273
DOT Dot Lake 86.22 27 P P 11 55 02.3 +0.5
SCRK Sand Creek 86.23 26 P P 11 55 02.8 +0.8
SCRK Sand Creek 86.23 26 P 11 55 02.4
baz=273
MENT Mentasta 86.41 27 P P 11 55 03.6 +0.9
GLB Gilahina Butte 86.46 29 P P 11 55 03.4 +0.4
GLB IAmb IAmb 11 55 05.3
comp=Z,16nm,1.0s
VRDI Verde Repeater 86.64 29 P P 11 55 03.2 -0.9
VRDI IAmb IAmb 11 55 05.7
comp=Z,12nm,1.0s
MCARA McCarthy VSAT 86.84 29 P P 11 55 05.8 +1.0
MCARA IAmb IAmb 11 55 09.6
comp=Z,16nm,1.0s
K27K Chicken 87.07 26 P P 11 55 07.4 +1.6
K27K IAmb IAmb 11 55 08.5
comp=Z,23nm,1.0s
K27K Chicken 87.07 26 P 11 55 07.0
baz=275
PPT2 Papeete2 87.15 108 eS S 12 05 22.2 +0.7
comp=Z,82nm,28.8s
PPT2 eLR LR 12 23 13.6
comp=Z,53nm,26.0s
BCAR Beaver Creek A 87.28 27 P P 11 55 07.9 +1.0
EGAK Eagle 87.40 25 P P 11 55 07.9 +0.6
EGAK Eagle 87.40 25 P 11 55 07.6
baz=276
GRNC Granite Creek 87.51 29 P P 11 55 09.1 +0.9
GRNC IAmb IAmb 11 55 10.4
comp=Z,26nm,1.0s
BARN Barnard Glacie 87.52 29 P P 11 55 09.5 +1.2
BARN IAmb IAmb 11 55 10.5
comp=Z,32nm,1.0s
YAH Yahtse 87.54 30 P P 11 55 09.6 +1.2
YAH IAmb IAmb 11 55 10.7
comp=Z,25nm,0.9s
CTG Chitna Glacier 87.69 29 P 11 55 10.2
baz=276
CTGM Chitina Glacie 87.69 29 P P 11 55 09.6 +0.6
CTGM IAmb IAmb 11 55 11.3
comp=Z,42nm,1.0s
KMBO Kilima Mbogo 87.77 269 P P 11 55 10.5 0.0
comp=Z,3.7nm,0.7s,baz=43,slow=8.4,SNR=9.8
KMBO Kilima Mbogo 87.77 269 i P P 11 55 11.3 +0.8
KMBO pmax pmax
comp=Z,4.0nm,0.6s
LOGN Logan Glacier 87.86 29 P P 11 55 10.9 +1.1
LOGN IAmb IAmb 11 55 13.2
comp=Z,25nm,1.1s
BR131 Keskin Array S 87.97 310 P P 11 55 09.4 -1.4
BR131 pmax pmax
comp=Z,8.0nm,1.0s
BR131 Keskin Array S 87.97 310 P P 11 55 09.4 -1.4
BRTR Keskin Array B 87.97 310 P P 11 55 09.4 -1.4
comp=Z,2.5nm,0.8s,baz=108,slow=5.6,SNR=10
BRTR Keskin Array B 87.97 310 P P 11 55 10.0 -0.8
BRTR Keskin Array B 87.97 310 P P 11 55 09.9 -0.8
DAWY Dawson 88.24 26 P P 11 55 12.6 +1.2
ARA0 ARCESS Array S 88.86 340 eP P 11 55 13.5 -0.7
ARCES ARCESS Array B 88.86 340 P P 11 55 12.5 -1.7
comp=Z,6.3nm,0.8s,baz=87,slow=4.9,SNR=18
ARCES ARCESS Array B 88.86 340 P P 11 55 13.2 -0.9
ARCES ARCESS Array B 88.86 340 P P 11 55 13.2 -0.9
EPYK Eagle Plains 89.02 24 P P 11 55 15.5 +0.5
EPYK IAmb IAmb 11 55 16.4
comp=Z,31nm,0.9s
EPYK Eagle Plains 89.02 24 P 11 55 15.0
baz=280
SPA0 Spitsbergen Ar 89.12 349 eP P 11 55 15.0 -0.2
HAMF Hammerfest 89.25 341 eP P 11 55 14.7 -1.2
HYT Haines Junctio 89.56 29 P P 11 55 19.0 +1.3
HYT IAmb IAmb 11 55 19.9
comp=Z,20nm,0.9s
BJO1 Bjornoya 89.65 345 eP P 11 55 19.2 +1.5
KTK1 Kautokeino 89.75 339 eP P 11 55 17.4 -0.9
INK Inuvik 89.86 21 P P 11 55 18.6 -0.2
comp=Z,8.1nm,0.9s,baz=285,slow=3.9,SNR=26
INK Inuvik 89.86 21 P P 11 55 18.8 0.0
INK pmax pmax
comp=Z,18nm,1.1s
INK Inuvik 89.86 21 P P 11 55 18.8 0.0
INK IAmb IAmb 11 55 20.1
comp=Z,18nm,1.1s
AKASG Malin Array Be 89.95 321 P P 11 55 17.4 -2.1
comp=Z,2.7nm,0.8s,baz=71,slow=4.2,SNR=7.4
AKASG Malin Array Be 89.95 321 ceP P 11 55 18.0 -1.6
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 89.95 321 P P 11 55 17.9 -1.7
AKBB Malin Array Si 89.95 321 ceP P 11 55 18.5 -1.1
FINES FINESS Array B 90.07 332 P P 11 55 18.4 -1.4
comp=Z,4.0nm,0.9s,baz=76,slow=4.5,SNR=14
FINES FINESS Array B 90.07 332 ceP P 11 55 18.3 -1.6
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 90.07 332 P P 11 55 18.6 -1.3
JETT Jettan, Norway 90.60 340 eP P 11 55 22.2 -0.1
NACGM Naroch 90.81 325 i P P 11 55 22.6 -0.8
NACGM i P P 11 55 22.6 -0.8
NACGM i P P 11 55 22.6 -0.8
NACGM i PP PP 11 58 49.9 -14
NACGM i PPP PPP 12 00 53.5
NACGM i S S 12 05 33.2 -21
NACGM i SS SS 12 12 02.7 -0.9
NACGM i SSS SSS 12 16 14.2
WHY Whitehorse 90.86 29 P P 11 55 24.6 +0.9
WHY IAmb IAmb 11 55 26.1
comp=Z,31nm,1.0s
JIS Juneau Island 91.58 31 P P 11 55 27.6 +0.6
JIS IAmb IAmb 11 55 29.5
comp=Z,36nm,1.2s
NOR Nord 91.90 355 i P P 11 55 27.5 -0.6
NOR IAmb IAmb 11 55 28.4
comp=Z,13nm,1.0s
NOR Nord 91.90 355 i P P 11 55 27.4 -0.6
NOR pmax pmax
comp=Z,13nm,1.0s
VRI Vrincioaia 92.30 316 ⇓P P 11 55 30.7 0.0
BIZ Bicaz 92.55 317 ⇓P P 11 55 30.1 -1.6
SYO Syowa Base 92.74 201 ⇓eX P 11 55 37.1 +5.1
C36M Paulatuk 92.84 19 P P 11 55 32.5 0.0
C36M IAmb IAmb 11 55 33.7
comp=Z,22nm,0.9s
C36M Paulatuk 92.84 19 P 11 55 32.4
baz=291
STEI Steigen 92.89 339 eP P 11 55 31.1 -1.7
BURAR Bucovina Array 93.03 318 ⇑P P 11 55 33.7 -0.3
BURAR Bucovina Array 93.03 318 P P 11 55 33.1 -0.9
BUR08 Bucovina Ar. S 93.03 318 P P 11 55 33.0 -1.0
FAUS Fauske 93.06 339 eP P 11 55 31.9 -1.7
WRAK Wrangell Islan 93.06 33 P P 11 55 34.4 +0.6
WRAK Wrangell Islan 93.06 33 P 11 55 34.7
baz=283
DLBC Dease Lake 93.78 31 P P 11 55 38.0 +0.7
comp=Z,18nm,0.9s,baz=294,slow=5.9,SNR=20
DLBC Dease Lake 93.78 31 P P 11 55 38.5 +1.3
DLBC IAmb IAmb 11 55 39.7
comp=Z,27nm,1.0s
EUNU Eureka 93.82 5 P P 11 55 37.2 +0.2
KONS Konsvik 94.17 338 eP P 11 55 38.5 -0.2
STOK Stokkvaagen 94.27 338 eP P 11 55 39.6 +0.5
QSPA South Pole Qui 94.67 180 P P 11 55 41.0 -0.1
comp=Z,3.7nm,1.0s,baz=285,slow=1.5,SNR=10
QSPA South Pole Qui 94.67 180 P P 11 55 41.4 +0.3
QSPA IAmb IAmb 11 55 48.1
comp=Z,7.8nm,1.3s
DRGR 94.86 318 ⇑P P 11 55 41.7 -0.7
CRVS Cervenica-Dubn 95.22 320 eP P 11 55 43.6 -0.3
CRVS Cervenica-Dubn 95.22 320 ePDIFF P 11 55 43.6 -0.3
NSS Namsos 95.37 336 eP P 11 55 44.6 +0.4
DAG Danmarks Havn 95.99 352 i P P 11 55 45.0 -1.8
DAG IAmb IAmb 11 55 46.4
comp=Z,12nm,1.2s
DAG Danmarks Havn 95.99 352 i P P 11 55 45.0 -1.8
DAG pmax pmax
comp=Z,12nm,1.2s
NB2 NORSAR Subarra 97.06 333 P P 11 55 49.6 -2.4
baz=68,slow=4.6
NOA NORSAR Array B 97.06 333 P P 11 55 50.2 -1.8
comp=Z,2.3nm,0.9s,baz=67,slow=4.5,SNR=5.8
NOA PKPPKP 12 20 44.9
comp=Z,1.5nm,1.0s,baz=51,slow=1.8,SNR=3.5
RES Resolute Bay 97.11 10 P P 11 55 51.6 -0.3
comp=Z,6.4nm,0.8s,baz=322,slow=5.2,SNR=38
RES PP PP 11 59 52.4 +0.7
comp=Z,5.5nm,1.1s,baz=304,slow=7.0,SNR=7.1
RES Resolute Bay 97.11 10 P Pdif 11 55 52.2 +0.3
RES pmax pmax
comp=Z,11nm,1.0s
RES Resolute Bay 97.11 10 P Pdif 11 55 52.2 +0.3
RES IAmb IAmb 11 55 53.2
comp=Z,11nm,0.9s
DOMB Dombas 97.58 335 ePdif P 11 55 53.6 -0.8
LSZ Lusaka 97.72 255 P P 11 55 54.6 -1.4
LSZ pmax pmax
comp=Z,4.0nm,1.1s
LSZ Lusaka 97.72 255 P P 11 55 54.6 -1.4
MORH Mrgy, Hungar 97.73 318 ⇑P P 11 55 54.7 -0.6
NEEM North Greenlan 97.87 359 ⇓i P P 11 55 55.5 -0.2
NEEM IAmb IAmb 11 55 56.4
comp=Z,20nm,0.9s
KONO Kongsberg 98.36 332 ePdif P 11 55 58.4 +0.7
YKA Yellowknife Ar 99.30 24 P Pdif 11 56 01.5 -0.4
comp=Z,5.1nm,0.9s,baz=300,slow=4.6,SNR=54
YKA PP PP 12 00 07.3 -1.2
comp=Z,1.8nm,1.1s,baz=275,slow=7.7,SNR=3.9
YKA PKKPbc PKKPbc 12 12 23.9 -3.8
comp=Z,0.3nm,0.6s,baz=81,slow=1.5,SNR=9.4
YKA Yellowknife Ar 99.30 24 ce P Pdif 11 56 02.2 +0.3
YKA pmax pmax
comp=Z,5.0nm,0.9s
GERES GERESS Array B 100.15 321 P Pdif 11 56 04.9 -1.2
comp=Z,1.4nm,1.0s,baz=76,slow=5.6,SNR=4.5
GERES PP PP 12 00 17.0 +1.3
comp=Z,1.0nm,0.9s,baz=110,slow=16,SNR=4.3
NVAR Mina Array Bea 107.55 47 Pdiff Pdif 11 56 40.6 +1.1
comp=Z,1.5nm,0.9s,baz=263,slow=5.8,SNR=8.3
NVAR PKiKP PKiKP 12 00 46.0 0.0
comp=Z,1.1nm,0.7s,baz=233,slow=2.3,SNR=10.0
NVAR PKKPbc PKKPbc 12 12 02.3 -0.3
comp=Z,0.3nm,0.6s,baz=136,slow=3.6,SNR=6.2
FURC Furnace Creek, 109.33 49 P 12 00 51.0
baz=292
PFO Pinyon Flats O 110.66 52 P 12 00 53.6
baz=291
DUG Dugway, Tooele 110.76 44 P 12 00 53.7
baz=296
GMRC Granite Mounta 110.86 50 P 12 00 54.1
baz=292
BELC Belle Mtn. Jos 110.88 51 P 12 00 53.1
baz=291
MONP2 Monument Peak 110.95 52 P 12 00 54.3
baz=291
BC3 Big Chuckawall 111.43 51 P 12 00 55.6
baz=292
LAO LASA Array 111.75 35 P 12 00 55.1
baz=303
PDAR Pinedale Array 111.75 40 PKiKP PKiKP 12 00 54.9 +1.0
comp=Z,0.2nm,0.3s,baz=232,slow=1.0,SNR=2.6
PDAR PP PP 12 01 35.0 -5.8
comp=Z,0.6nm,0.9s,baz=336,slow=3.3,SNR=4.0
PDAR PKKPbc PKKPab 12 11 54.8 -4.4
comp=Z,0.9nm,0.7s,baz=124,slow=5.9,SNR=7.3
WUAZ Wupatki 113.79 48 P 12 00 59.8
baz=295
O20A White River Ci 113.90 42 P 12 00 59.3
baz=299
ULM Lac du Bonnet 114.90 28 PKP PKiKP 12 00 58.5 -0.9
comp=Z,1.7nm,0.8s,baz=327,slow=1.8,SNR=4.2
MVCO Mesa Verde 115.12 45 PKiKP 12 01 00.2 -0.3
MVCO Mesa Verde 115.12 45 P 12 01 02.4
baz=298
ESDC Sonseca Array 115.49 318 SKP 12 04 07.3
comp=Z,0.8nm,1.0s,baz=356,slow=4.0,SNR=5.6
TUC Tucson 115.57 51 P 12 01 03.5
baz=294
S22A 4UR Ranch, Cre 116.03 44 P 12 01 03.7
baz=300
LENM Lemitar 117.63 47 PKiKP 12 01 07.6 +2.2
ANMO Albuquerque 117.64 46 c i PKiKP PKPdf 12 01 05.0 -0.4
ANMO pmax pmax
comp=Z,9.0nm,1.3s
ANMO Albuquerque 117.64 46 PKPdf PKiKP 12 01 06.1 +0.7
ANMO Albuquerque 117.64 46 P 12 01 06.9
baz=299
121A Cookes Peak, D 117.77 49 PKPdf PKiKP 12 01 07.2 +1.4
121A Cookes Peak, D 117.77 49 P 12 01 07.4
baz=296
BNM Barren Site 117.89 47 PKiKP 12 01 06.7 +0.7
T25A Trinidad 117.99 43 P 12 01 07.3
baz=301
EYMN Ely 118.56 27 P 12 01 06.7
baz=318
ECSD EROS Data Cent 118.94 33 PKiKP 12 01 07.3 -0.1
ECSD EROS Data Cent 118.94 33 P 12 01 07.6
baz=311
F36A Milaca 119.10 30 PKPdf PKPdf 12 01 07.4 -0.2
MDT Midelt 119.31 312 SKP 12 04 14.9
comp=Z,1.1nm,0.5s,baz=34,slow=1.4,SNR=3.9
E38A The Farm, Brul 119.52 28 PKPdf 12 01 07.8 -0.6
MNTX Cornudas Mount 119.96 49 PKPdf PKiKP 12 01 10.7 +0.9
MNTX Cornudas Mount 119.96 49 P 12 01 11.0
baz=298
I37A Lemond, Waseca 120.46 31 PKPdf PKiKP 12 01 10.9 +0.5
MSTX Muleshoe 120.77 46 PKPdf PKPdf 12 01 11.1 -0.2
MSTX Muleshoe 120.77 46 P 12 01 12.2
baz=301
TOA0 Torodi Ar. Sit 120.88 288 PKPdf PKPdf 12 01 10.9 -1.0
TORD Torodi Ar. Bea 120.88 288 PKP PKPdf 12 01 10.9 -0.9
comp=Z,5.4nm,0.8s,baz=42,slow=2.2,SNR=24
TORD SKP 12 04 17.5
comp=Z,5.6nm,0.8s,baz=52,slow=2.2,SNR=14
TORD PKKPbc PKKPab 12 11 17.6 -0.8
comp=Z,0.9nm,0.8s,baz=272,slow=3.8,SNR=3.9
TORD Torodi Ar. Bea 120.88 288 PKPdf 12 01 11.2 -0.6
R32A Long Quarter, 121.03 39 PKiKP 12 01 12.1 +0.3
G40A Rib Lake 121.14 28 PKPdf 12 01 11.2 -0.4
E43A Lone Tree Farm 121.74 25 PKiKP 12 01 12.7 -0.1
KSU1 Kansas State U 121.91 37 PKiKP 12 01 13.5 +0.1
KSU1 Kansas State U 121.91 37 P 12 01 13.5
baz=309
MATQ Matagami 122.28 17 P 12 01 13.2
baz=333
TX31 Lajitas Ar. Si 122.37 51 PKiKP 12 01 15.4 +0.7
TX32 Lajitas Array 122.37 51 PKiKP 12 01 15.4 +0.7
TXAR Lajitas Array 122.37 51 PKP PKiKP 12 01 15.1 +0.4
comp=Z,3.9nm,0.7s,baz=226,slow=1.1,SNR=61
TXAR PKKPbc PKKPbc 12 11 10.8 -0.7
comp=Z,0.6nm,0.9s,baz=125,slow=6.6,SNR=5.8
JFWS Jewell Farm 122.85 30 PKiKP PKPdf 12 01 14.3 -0.6
JFWS Jewell Farm 122.85 30 PKPdf PKPdf 12 01 14.3 -0.6
JFWS Jewell Farm 122.85 30 P 12 01 14.5
baz=317
E46A Sault Ste Mari 122.87 24 PKiKP 12 01 15.3 +0.3
L40A Anamosa 122.97 32 PKPdf 12 01 14.4 -0.7
WMOK Wichita Mounta 123.13 43 P 12 01 16.4
baz=305
P38A Dawn 123.39 35 PKPdf PKPdf 12 01 15.6 -0.4
OK030 Cody Creek RV 123.75 40 PKiKP 12 01 17.6 +0.4
L42A Oliver, Polo 123.81 31 PKPdf 12 01 16.3 -0.5
X34A Smith Ranch, M 123.85 42 PKiKP 12 01 17.2 -0.2
JCT Junction City 124.72 48 PKiKP PKiKP 12 01 19.7 +0.4
JCT Junction City 124.72 48 PKPdf PKiKP 12 01 19.7 +0.4
JCT Junction City 124.72 48 P 12 01 19.9
baz=302
S39A Bolivar 124.80 37 PKPdf PKPdf 12 01 18.9 +0.1
U38A Gravette 124.96 39 PKPdf 12 01 19.1 -0.1
R40A Maddies Statio 125.01 36 PKPdf 12 01 19.0 -0.2
HDIL Hopedale 125.06 32 P 12 01 19.6
baz=317
J47A Sunmer 125.17 26 PKiKP 12 01 19.7 0.0
HHAR Hobbs 125.34 38 PKPdf 12 01 19.6 -0.3
D55A Sainte-Anne-du 125.37 17 P 12 01 20.2
baz=335
D56A ZEC Mazanza, M 125.55 16 P 12 01 20.6
baz=336
CCM Cathedral Cave 125.77 35 P 12 01 20.8
baz=314
LATQ La Tuque 125.77 15 P 12 01 21.0
baz=338
MGMO Mountain Grove 125.78 37 PKPdf 12 01 20.8 0.0
KOWA Kowa 125.88 292 PKP PKPdf 12 01 21.5 0.0
comp=Z,5.4nm,0.8s,baz=80,slow=0.4,SNR=9.0
KOWA PKKPbc PKKPbc 12 10 58.4 +1.3
comp=Z,0.4nm,0.3s,baz=253,slow=5.7,SNR=3.8
KOWA Kowa 125.88 292 PKPdf PKiKP 12 01 21.7 -0.1
E56A St. Veronique 125.93 17 P 12 01 20.9
baz=335
U40A Yellville 125.95 38 PKPdf PKPdf 12 01 20.8 -0.3
U40A Yellville 125.96 38 P 12 01 21.1
baz=311
G54A Lake Saint Pet 125.99 20 P 12 01 21.2
baz=331
W39A Magazine 126.13 39 PKiKP 12 01 21.6 -0.3
W39A Magazine 126.13 39 P 12 01 21.9
baz=310
833A Chaparral WMA, 126.14 50 P 12 01 23.4
baz=301
FVM French Village 126.28 35 PKiKP PKiKP 12 01 21.8 -0.3
FVM French Village 126.28 35 PKiKP 12 01 21.8 -0.3
L48A N Adams 126.37 27 PKPdf PKPdf 12 01 20.1 -1.6
E58A La Victoria 126.58 16 P 12 01 21.3
baz=337
N47A Urbana 126.62 29 PKPdf 12 01 21.9 -0.2
MIAR Mount Ida 126.67 40 PKiKP PKPdf 12 01 22.6 +0.1
MIAR Mount Ida 126.67 40 PKPdf PKPdf 12 01 22.6 +0.1
MIAR Mount Ida 126.67 40 P 12 01 23.7
baz=310
FCAR Ozark Folk Cen 126.71 38 PKPdf 12 01 22.1 -0.4
LCAR Lake Charles 127.17 37 PKPdf 12 01 23.0 -0.4
E61A Lac Etchemin 127.22 13 P 12 01 24.2
baz=341
G57A Newington 127.25 18 P 12 01 23.9
baz=335
O49A Covington 127.81 28 PKPdf 12 01 24.6 +0.1
P48A Milroy 127.84 30 PKPdf PKPdf 12 01 24.7 +0.1
HKT Hockley 127.89 46 PKiKP PKiKP 12 01 25.7 +0.3
HKT Hockley 127.89 46 PKPdf PKiKP 12 01 25.7 +0.3
P49A Miami Univ. Ec 128.14 29 P 12 01 25.7
baz=321
WCI Wyandotte Cave 128.34 31 P 12 01 26.9
baz=319
ACSO Alum Creek Sta 128.40 27 P 12 01 26.7
baz=324
M53A WI Miller and 128.41 24 P 12 01 26.2
baz=327
DBIC Dimbokro 128.59 282 PKP PKPdf 12 01 26.3 -0.3
comp=Z,4.3nm,0.8s,baz=283,slow=0.4,SNR=4.4
DBIC Dimbokro 128.59 282 PKiKP PKPdf 12 01 26.5 -0.2
DBIC Dimbokro 128.59 282 PKPdf 12 01 26.4 -0.2
M54A Oil Creek Stat 128.76 24 PKPdf 12 01 26.3 0.0
M54A Oil Creek Stat 128.77 24 P 12 01 26.9
baz=328
T47A Sharon Grove 128.83 33 PKPdf 12 01 25.8 -0.7
J59A Piesco 128.88 18 P 12 01 27.6
baz=335
L56A Greenwood 129.03 21 P 12 01 27.7
baz=331
WVT Waverly 129.06 34 PKiKP PKPdf 12 01 27.2 +0.2
WVT Waverly 129.06 34 PKPdf PKPdf 12 01 27.2 +0.2
WVT Waverly 129.06 34 P 12 01 27.2
baz=316
O53A New Philadelph 129.17 26 P 12 01 27.9
baz=326
P52A Corning 129.27 27 P 12 01 28.2
baz=324
H09N1 TRISTAN DA CUN 129.40 225 T T 14 25 01.6
SNR=14
P53A Whipple 129.72 26 PKiKP 12 01 29.1 +0.1
M57A Sunshine Farm, 129.88 22 P 12 01 29.8
baz=331
U49A Red Boiling Sp 129.90 32 PKPdf PKPdf 12 01 28.9 +0.3
T50A Nancy 130.01 31 PKPdf 12 01 29.1 +0.3
SSPA Standing Stone 130.21 23 P 12 01 30.1
baz=330
O56A Blue Knob Stat 130.26 24 P 12 01 30.5
baz=329
N58A Sunbury 130.47 22 P 12 01 30.6
baz=331
PLCA Paso Flores 141.59 161 PKhKP PKPpre 12 01 46.6
comp=Z,6.5nm,1.0s,baz=183,slow=3.0,SNR=13
PLCA SKP 12 04 58.7
comp=Z,6.6nm,0.9s,baz=217,slow=2.5,SNR=11
PLCA Paso Flores 141.59 161 eP PKiKP 12 01 51.9 -1.2
CRIN San Cristobal 143.80 61 PKPdf 12 01 54.4 -0.4
BI02 San Fabin de 144.95 157 PKPab 12 01 57.5 +1.1
BOAB BOACO BROADBAND 146.12 60 PKPbc 12 01 57.1 0.0
LCCY Blossom Villag 145.44 45 PKPdf 12 01 57.3 -0.1
CBCY The Bluff, Cay 145.62 44 PKPdf 12 01 57.6 -0.1
ACON Acoyapa 145.76 61 PKPab 12 02 00.1 +0.1
ORTG Ortega, Santa 146.22 63 PKPbc 12 02 00.5 -0.1
ESPN Las Esperanzas 146.41 60 PKPab 12 02 02.5 0.0
JTS Las Juntas de 146.70 63 PKiKP PKPdf 12 01 59.9 +0.2
JTS Las Juntas de 146.70 63 PKPdf PKPdf 12 01 59.9 +0.2
BO02 Sierra Bellavi 146.77 156 PKPab 12 02 03.0 -0.5
COVE Coope Vega, Sa 147.00 62 PKPbc 12 02 02.5 -0.2
MT02 Curacav 147.94 154 PKPdf 12 02 05.6 -0.7
MT05 Renca 148.00 155 PKPdf 12 02 06.0 -0.5
PEL Peldehue 148.24 155 PKP2 PKiKP 12 02 06.4 -0.6
PEL Peldehue 148.24 155 PKiKP 12 02 06.4 -0.6
GTBY Guantanamo Bay 148.53 38 PKiKP 12 02 08.0 +0.2
VA03 San Esteban 148.62 154 PKiKP 12 02 07.5 -0.4
CO03 El Pedregal 150.19 152 PKiKP 12 02 10.8 -0.3
ZON Zonda 150.46 156 PKiKP PKiKP 12 02 12.0 +0.4
ZON Zonda 150.46 156 PKiKP 12 02 12.0 +0.4
GO04 Tololo Observa 150.70 151 PKiKP 12 02 12.2 -0.2
BCIP Isla Barro Col 151.70 61 PKiKP PKiKP 12 02 14.9 +0.3
BCIP Isla Barro Col 151.70 61 PKiKP 12 02 14.8 +0.3
LCO Las Campanas 151.70 150 PKiKP PKiKP 12 02 15.2 +0.7
LCO Las Campanas 151.70 150 PKiKP 12 02 15.2 +0.7
AC04 Llanos de Chal 152.17 149 PKiKP 12 02 16.3 +1.1
DR12 Loma Pena Alta 152.68 31 PKPab 12 02 28.2 +0.1
PLTB Pedras Altas 153.11 183 eP PKPdf 12 02 10.1 +0.8
AC02 Maricunga 154.28 150 PKiKP 12 02 21.4 +1.2
GCPR Guaynabo City 154.63 25 PKPab 12 02 35.4 -0.9
GO02 Mina Guanaco 155.40 147 PKPdf 12 02 12.6 -0.5
GO02 PKPab 12 02 41.1 +1.2
OTAV Otavalo 156.13 79 PKiKP PKPdf 12 02 15.8 +1.3
OTAV Otavalo 156.13 79 PKPdf PKPdf 12 02 15.8 +1.3
OTAV Otavalo 156.13 79 eP PKPdf 12 02 15.6 +1.1
CPUP Villa Florida 158.45 174 PKP PKPdf 12 02 17.1 +0.7
comp=Z,0.6nm,0.3s,baz=334,slow=3.1,SNR=4.8
CPUP PKPab PKPab 12 02 53.6 +1.1
comp=Z,2.6nm,0.8s,baz=193,slow=2.3,SNR=4.4
CPUP Villa Florida 158.45 174 PKPdf 12 02 16.3 -0.2
CPUP PKPab PKPab 12 02 53.2 +0.7
ROSC El Rosal 158.54 64 PKP PKPdf 12 02 18.0 +0.6
comp=Z,9.4nm,0.3s,baz=335,slow=20,SNR=4.6
ROSC PKPab PKPab 12 02 56.3 +2.3
comp=Z,7.7nm,0.4s,baz=56,slow=8.6,SNR=6.2
ROSC El Rosal 158.54 64 PKiKP PKPdf 12 02 18.0 +0.6
PB01 IPOC Station P 158.61 140 PKPdf 12 02 17.6 +0.7
SDV Santo Domingo 159.40 49 PKPdf 12 02 17.4 -0.7
SDV PKPab 12 02 57.4 0.0
PB11 IPOC Station P 159.42 138 PKPdf 12 02 18.1 +0.2
MNMC Minye Minye 159.89 136 PKPdf PKPdf 12 02 18.1 -0.6
CZSB Cruzeiro do Su 162.24 100 eP PKPdf 12 02 21.8 +0.8
LPAZ La Paz 162.82 133 PKP PKPdf 12 02 22.4 +0.2
comp=Z,5.8nm,1.0s,baz=12,slow=1.8,SNR=14
LPAZ PKPab PKPab 12 03 15.0 +2.2
comp=Z,2.0nm,0.8s,baz=202,slow=5.4,SNR=3.9
LPAZ La Paz 162.82 133 PKPdf 12 02 20.6 -1.6
AQDB Aquidauana 164.38 178 eP PKPdf 12 02 23.3 +0.5
BDFB Brasilia 167.16 212 PKP PKPdf 12 02 25.0 -0.3
comp=Z,3.3nm,0.7s,baz=119,slow=7.2,SNR=4.1
BDFB PKPab PKPab 12 03 31.8 +0.6
comp=Z,1.0nm,0.3s,baz=127,slow=6.9,SNR=3.4
BDFB Brasilia 167.16 212 PKPdf 12 02 22.8 -2.5
BDFB PKPab PKPab 12 03 31.6 +0.4
ETMB Extrema 167.87 115 eP PKPdf 12 02 26.2 +0.5
PTLB Pontes e Lacer 168.66 160 eP PKPdf 12 02 26.8 +0.7
SAML Samuel 170.95 118 PKiKP PKPdf 12 02 26.9 -0.6
SAML Samuel 170.95 118 PKPdf 12 02 26.6 -0.9
SNDB Serra Nova Dou 171.92 207 eP PKPdf 12 02 28.8 +0.8
ITTB Itaituba 179.24 59 eP PKPdf 12 02 30.6 +0.7

*IDC **11** 12:26:23.9±1.6,9°.58S×122°.11E,h0km,mb4.0/3, mb1 4.1/4,mb1mx3.6/36,mbtmp4.1/4,ML4.0/1,MS2.7/3, Ms1 2.7/3,ms1mx2.4/51 Error ellipse: s-maj=57.1km s-min=20.9km az=39.0*

DJA ***11*** *12:26:31.3±0.3,9˚S±4˚×12˚4E±˚, h96km±10km, M4.1/7, mb4.3/7, mB5.1/2, MLv4.0/7, Mw(mB)4.5/2*

ISC 11 12:26:32.9±0.9, 8˚98S±0.07˚×123˚55E±0.09, h86km, n18, σ3°36/20, mb3.8/4, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.04**	**138**	P	**Pn**	**12 26 51.4**	**-1.6**
BATI	**Baumata**	**1.22**	**175**	Pn	**Pn**	**12 26 55.2**	**+0.1**
	106nm,0.3s,baz=239,slow=1.1,SNR=106						
BATI				Sn	**Sn**	**12 27 16.6**	**+4.9**
	131nm,0.3s,baz=36,slow=14,SNR=9.9						
BATI				LR	LR	12 27 39.5	
	comp=Z,408nm,21.9s,baz=291,slow=46						
BATI	**Baumata**	**1.22**	**175**	P	**Pn**	**12 26 54.7**	**-0.3**
BASI	**Baing, Sumba**	**3.18**	**247**	P	**Pn**	**12 27 19.4**	**-1.4**
BSSI	**Bau Bau, Buton**	**4.14**	**313**	P	**Pn**	**12 27 30.7**	**-3.2**
KAPI	**Kappang**	**5.46**	**316**	Pn	Pn	12 27 47.0	-4.7
	1.9nm,0.3s,baz=135,slow=12,SNR=5.8						
KAPI				LR	LR	12 29 36.9	
	comp=Z,30nm,19.1s,baz=130,slow=38						
PLAI	**Plampang**	**5.71**	**271**	P	**Pn**	**12 27 52.7**	**-2.5**
	0.1nm35nm,0.9s						
TWSI	**Taliwang, Sumb**	**6.60**	**272**	P	**Pn**	**12 28 06.6**	**-0.7**
	0.1nm7.0nm,0.6s						
SANI	**Sanana**	**7.30**	**20**	P	**Pn**	**12 28 15.1**	**-1.8**
	0.1nm16nm,0.6s						
LUWI	**Luwuk**	**7.93**	**354**	P	**Pn**	**12 28 24.5**	**-1.0**
	0.2nm2μm52nm,0.8s						
APSI	**Ampana**	**8.24**	**347**	P	**Pn**	**12 28 28.4**	**-1.3**
	16nm,0.8s						
FITZ	**Fitzroy Crossi**	**9.29**	**168**	Pn	**Pn**	**12 28 41.8**	**-2.2**
	1.1nm,0.3s,baz=11,slow=10,SNR=40						
FITZ				Sn	**Sn**	**12 30 22.8**	**-4.0**
	1.8nm,0.3s,baz=139,slow=8.7,SNR=11						
FITZ				LR	LR	12 32 26.3	
	comp=Z,51nm,20.4s,baz=10,slow=40						
WRA	**Warramunga Arr**	**15.08**	**137**	Pn	**Pn**	**12 29 58.3**	**-3.2**
	0.8nm,0.3s,baz=319,slow=13,SNR=39						
WRA				Sn	**Sn**	**12 32 40.9**	**-7.0**
	0.6nm,0.3s,baz=300,slow=24,SNR=5.6						
ASAR	**Alice Springs**	**17.64**	**147**	P	**Pn**	**12 30 34.1**	**+0.8**
	0.6nm,0.3s,baz=320,slow=11,SNR=103						
ASAR				S	**Sn**	**12 33 45.1**	**-4.6**
	0.3nm,0.3s,baz=312,slow=20,SNR=7.4						
PMG	**Port Moresby**	**23.31**	**93**	P	P	12 31 46.7	+13
	5.5nm,0.8s,baz=69,slow=8.9,SNR=3.1						
CTA	**Charters Tower**	**24.56**	**119**	P	**P**	**12 31 49.5**	**+4.6**
	3.1nm,0.8s,baz=273,slow=6.5,SNR=2.0						
STKA	**Stephens Creek**	**28.28**	**146**	P	**P**	**12 32 22.4**	**+4.1**
	0.6nm,0.3s,baz=317,slow=7.1,SNR=4.2						
STKA				LR	LR	12 46 04.9	
	comp=Z,39nm,18.1s,baz=29,slow=41						
MKAR	**Makanchi Array**	**66.58**	**330**	P	**P**	**12 37 14.7**	**+0.8**
	0.4nm,0.4s,baz=134,slow=7.1,SNR=6.4						

NEIC ***11*** *12:44:37.0±2.1,6˚65S±0˚06×104˚34E±0˚07, h35km±1km, mb5.1/98, Error ellipse: s-maj=13.2km s-min=9.3km az=240.0*

BJI ***11*** *12:44:38.0±0.0, 6˚60S×104˚50E, h51km, mB5.0/39, mb5.2/62, Ms4.5/32, Ms7 4.3/32*

KLM ***11*** *12:44:39, 6˚69S×104˚20E, h79km, mb4.9*

DJA ***11*** *12:44:39.0±0.3, 7˚S±3˚×107˚4E±˚, h54km±3km, M4.9/62, mb5.1/62, mB5.4/35, MLv5.2/18, Mw(mB)4.8/35, MwMwp4.9/2, Mwp5.2/2*

MOS ***11*** *12:44:40.2±1.3, 6˚10S×104˚68E, h59km, mb5.3/59, Error ellipse: s-maj=7.5km s-min=4.1km az=117.0*

IDC ***11*** *12:44:42.7±1.7, 6˚22S×104˚63E, h70km±14km, mb4.8/35, mb1 4.8/38, mb1mx4.6/56, mbtmp5.0/38, MS3.8/30, Ms1 3.8/30, ms1mx3.6/49, Error ellipse: s-maj=15.6km s-min=7.3km az=41.0*

ISC 11 12:44:39.6±0.5, 6˚54S±0.05×104˚46E±0.04, h53km±4km, n631, σ1°48/645, mb5.1/154, MS4.0/37, 41C-9D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.01**	**2**	P	**Pn**	**12 44 57.2**	**-0.3**
BLSI	**Bandar Lampung**	**1.40**	**34**	P	**Pn**	**12 45 03.4**	**+0.6**
LWLI	**Liwa**	**1.56**	**345**	P	**Pn**	**12 45 06.0**	**+0.9**
TNG	**Tangerang**	**2.20**	**81**	P	**Pn**	**12 45 14.8**	**+1.1**
DBJI	**Dramaga**	**2.27**	**91**	P	**Pn**	**12 45 15.8**	**+1.1**
CBJI	**Citeko**	**2.38**	**87**	P	**Pn**	**12 45 18.9**	**+2.8**
LHSI	**Lahat**	**2.85**	**341**	P	**Pn**	**12 45 24.5**	**+1.9**
LEM	**Lembang**	**3.15**	**95**	P	**Pn**	**12 45 29.2**	**+2.4**
	166nm,0.3s,baz=175,slow=9.9,SNR=72						
LEM				S	**Sn**	**12 46 06.4**	**+3.1**
	114nm,0.3s,baz=200,slow=16,SNR=2.0						
LEM				LR	LR	12 46 56.8	
	comp=Z,2μm,20.1s,baz=294,slow=44						
LEM	**Lembang**	**3.15**	**95**	P	**Pn**	**12 45 28.9**	**+2.1**
KSI	**Kapahiang**	**3.42**	**327**	P	**Pn**	**12 45 32.0**	**+1.5**
CISI	**Cisompet, Garu**	**3.48**	**107**	Pn	**Pn**	**12 45 31.2**	**0.0**
CISI				Sn	**Sn**	**12 46 09.7**	**-1.6**
CISI	**Cisompet, Garu**	**3.48**	**107**	P	**Pn**	**12 45 31.1**	**-0.2**
PMBI	**Palembang**	**3.60**	**5**		**Pn**	**12 45 33.1**	**+0.2**
PMBI	**Palembang**	**3.60**	**5**	P	**Pn**	**12 45 34.8**	**+1.9**
JCJI	**Jatiwangi**	**3.78**	**90**	P	**Pn**	**12 45 36.7**	**+1.3**
XMI	**Christmas Isla**	**4.07**	**163**	P	Pn	12 45 34.5	-4.9
XMIS	**Christmas Isla**	**4.09**	**163**	Pn	Sn	12 45 34.5	-5.1
XMIS				Sn	Sn	12 46 16.7	-10
XMIS	**Christmas Isla**	**4.09**	**163**	Pn	Pn	12 45 34.4	-5.2
PPBI	**Pangkal Pinang**	**4.66**	**21**	P	**Pn**	**12 45 49.6**	**+2.2**
TPI	**Tanjungpandan**	**4.92**	**40**	P	**Pn**	**12 45 51.9**	**+0.9**
JMBI	**JAMBI**	**4.94**	**350**	P	**Pn**	**12 45 53.7**	**+2.4**
	1.5nm5μm399nm,0.8s						
SMRI	**Semarang**	**5.96**	**95**	Pn	**Pn**	**12 46 04.0**	**-1.3**
UGM	**Wanagama**	**6.17**	**103**		**Pn**	**12 46 09.4**	**+1.3**
UGM	**Wanagama**	**6.17**	**103**	P	**Pn**	**12 46 09.3**	**+1.2**
	1.2nm4μm298nm,0.8s						
BKNI	**Bangkinang**	**7.63**	**333**		**Pn**	**12 46 23.8**	**-4.4**
BKNI	**Bangkinang**	**7.63**	**333**	P	**Pn**	**12 46 27.7**	**-0.4**
	1.0nm2μm229nm,0.7s						
PBKI	**Pangkalan Bun**	**8.13**	**62**	P	**Pn**	**12 46 36.7**	**+1.7**
	159nm,0.9s						
MYKOM	**Kota Tinggi**	**8.29**	**356**		**Pn**	**12 46 36.5**	**-0.8**
MYKOM	**Kota Tinggi**	**8.29**	**356**	P	**Pn**	**12 46 40.0**	**+2.7**
MNSI	**Mandailing Nat**	**8.76**	**326**	P	**Pn**	**12 46 41.0**	**-2.7**
	1μm58nm,0.8s						
COCO	**West Island**	**9.39**	**233**		**Pn**	**12 46 51.5**	**-0.8**
KMMI	**Kalianget**	**9.45**	**94**	P	**Pn**	**12 46 54.4**	**+1.3**
	95nm,0.6s						
ABJI	**Asem Bagus**	**9.78**	**98**	P	**Pn**	**12 47 00.0**	**+2.4**
	16μm2μm,0.7s						
JAGI	**Jajag, Banyuwa**	**9.80**	**102**		**Pn**	**12 46 54.6**	**-3.3**
JAGI	**Jajag, Banyuwa**	**9.80**	**102**	P	**Pn**	**12 46 58.2**	**+0.3**
	6μm338nm,0.9s						
KSM	**Kuching**	**9.87**	**36**	Pn	**Pn**	**12 46 57.0**	**-1.8**
KSM	**Kuching**	**9.87**	**36**	P	**Pn**	**12 47 01.0**	**+2.2**
GSI	**Gunungsitoli**	**10.39**	**318**		**Pn**	**12 47 02.5**	**-3.5**
JRMM	**Jerantut**	**10.54**	**349**	P	**Pn**	**12 47 11.0**	**+2.9**
RPSI	**Rantau Prapat**	**10.71**	**329**		**Pn**	**12 47 09.4**	**-1.0**
RPSI	**Rantau Prapat**	**10.71**	**329**		Pn	12 47 04.7	-5.7
SRBI	**Singaraja**	**10.77**	**99**	P	**Pn**	**12 47 12.0**	**+0.8**
	3μm278nm,0.6s						
BBKI	**Banjar Baru**	**10.78**	**74**	P	**Pn**	**12 47 14.1**	**+2.8**
	3μm35nm,0.8s						
PSI	**Prapat**	**10.80**	**329**	P	**Pn**	**12 47 09.4**	**-2.3**
	1.2nm,0.3s,baz=179,slow=5.2,SNR=5.4						
PSI				LR	LR	12 51 53.8	
	comp=Z,474nm,21.4s,baz=90,slow=41						
DNP	**Denpasar**	**10.86**	**102**	P	**Pn**	**12 47 13.1**	**+0.6**
DNP				pmax	pmax		
	comp=Z,565nm,0.7s						
DNP	**Denpasar**	**10.86**	**102**	P	**Pn**	**12 47 12.9**	**+0.4**
	comp=Z,19μmcomp=Z,572nm,0.7s						
IPM	**Ipoh**	**11.47**	**343**	Pn	**Pn**	**12 47 19.0**	**-1.7**
IPM	**Ipoh**	**11.47**	**343**	P	**Pn**	**12 47 22.0**	**+1.2**
MTKI	**Muara Teweh, K**	**11.80**	**62**	P	**Pn**	**12 47 28.6**	**+3.3**
	comp=Z,24nm,0.5s						
SBUM	**Sibu**	**11.82**	**41**	Pn	**Pn**	**12 47 27.8**	**+2.3**
SBUM	**Sibu**	**11.82**	**41**	P	**Pn**	**12 47 29.0**	**+3.5**
KBKI	**Kotabaru**	**12.10**	**75**	P	**Pn**	**12 47 31.9**	**+2.6**
	comp=Z,55nm,0.8s						
TPTI		**12.15**	**323**	P	**Pn**	**12 47 25.9**	**-4.1**
	comp=Z,288nmcomp=Z,14nm,0.5s						
KULM	**Kulim**	**12.35**	**342**	Pn	**Pn**	**12 47 32.3**	**-0.5**
TWSI	**Taliwang, Sumb**	**12.50**	**101**	P	**Pn**	**12 47 32.5**	**-2.4**
	comp=Z,1μmcomp=Z,42nm,0.6s						
PLAI	**Plampang**	**13.39**	**101**	P	**Pn**	**12 47 44.3**	**-2.7**
	comp=Z,1μmcomp=Z,127nm,0.7s						
TRTT	**Trang**	**15.05**	**341**	P	**P**	**12 48 15.4**	**+2.0**
	comp=Z,8μmcomp=Z,76nm,1.3s						
KAPI	**Kappang**	**15.29**	**85**	P	**Pn**	**12 48 11.9**	**-0.2**
	comp=Z,4.7nm,0.3s,baz=273,slow=10,SNR=11						
KAPI				LR	LR	12 54 50.0	
	comp=Z,659nm,18.1s,baz=238,slow=40						
KAPI	**Kappang**	**15.29**	**85**	P	**Pn**	**12 48 12.1**	**-0.1**
KAPI				pmax	pmax		
	comp=Z,21nm,0.8s						
KAPI	**Kappang**	**15.29**	**85**	Pn	**Pn**	**12 48 12.1**	**-0.1**
KAPI	**Kappang**	**15.29**	**85**	P	**Pn**	**12 48 12.3**	**+0.2**
KAPI				P	**Pn**	**12 48 12.3**	**+0.2**
SPSI	**Sidrap Palu**	**15.45**	**81**	P	**P**	**12 48 16.4**	**-1.5**
	comp=Z,22nm,0.7s						
TTSI	**Tana Toraja**	**15.69**	**78**	P	**P**	**12 48 19.0**	**-1.5**
	comp=Z,60nm,1.1s						
BNSI	**Bone**	**15.72**	**83**	P	**P**	**12 48 19.5**	**-1.3**
	comp=Z,1μmcomp=Z,135nm,0.9s						
BSSI	**Bau Bau, Buton**	**15.94**	**89**	P	**Pn**	**12 48 20.8**	**+0.3**
	comp=Z,578nmcomp=Z,47nm,0.8s						
BASI	**Baing, Sumba**	**16.36**	**104**	P	**Pn**	**12 48 24.0**	**-1.8**
	comp=Z,2μmcomp=Z,176nm,0.7s						
KKM	**Kota Kinabalu**	**17.14**	**43**	P	**Pn**	**12 48 36.1**	**+0.5**
MMRI	**Maumere**	**17.74**	**98**	P	**Pn**	**12 48 40.2**	**-2.9**
MMRI				IAmb	IAmb	12 48 51.6	
	comp=Z,133nm,0.6s						
MMRI	**Maumere**	**17.74**	**98**	P	**Pn**	**12 48 40.1**	**-2.9**
	comp=Z,2μmcomp=Z,196nm,0.7s						
TOLI2	**Tolitoli**	**17.97**	**66**		**Pn**	**12 48 46.6**	**+0.7**
TOLI2				IAmb	IAmb	12 48 48.5	
	comp=Z,63nm,0.7s						
APSI	**Ampana**	**18.03**	**73**	P	**Pn**	**12 48 48.0**	**+1.5**
	comp=Z,2μmcomp=Z,177nm,0.9s						
MYLDM	**Lahad Datu**	**18.21**	**51**	P	**Pn**	**12 48 50.1**	**+1.3**
MYLDM				IAmb	IAmb	12 48 56.4	
	comp=Z,77nm,0.7s						
GIRL	**Giralia**	**18.58**	**151**	P	**P**	**12 48 49.3**	**-3.1**
	baz=19,SNR=27						
GIRL	**Giralia**	**18.58**	**151**	P	**P**	**12 48 50.2**	**-2.2**
GIRL				IAmb	IAmb	12 49 11.8	
	comp=Z,177nm,1.2s						
MRSI	**Marisa**	**18.78**	**69**	P	**P**	**12 48 54.8**	**+0.1**
	comp=Z,1μmcomp=Z,90nm,0.7s						
LUWI	**Luwuk**	**19.06**	**74**	P	**P**	**12 48 58.3**	**+0.5**
LUWI				IAmb	IAmb	12 49 19.9	
	comp=Z,84nm,0.7s						
LUWI	**Luwuk**	**19.06**	**74**	P	**Pn**	**12 48 58.6**	**-0.4**
	comp=Z,2μmcomp=Z,116nm,1.0s						
BATI	**Baumata**	**19.34**	**102**	P	**P**	**12 49 01.1**	**+0.2**
	comp=Z,95nm,0.3s,baz=227,slow=0.5,SNR=38						
BATI				S	**S**	**12 52 34.3**	**-2.8**
	comp=Z,9.3nm,0.3s,baz=54,slow=21,SNR=5.7						
BATI	**Baumata**	**19.34**	**102**	P	**Pn**	**12 49 02.1**	**-0.2**
	comp=Z,3μmcomp=Z,233nm,0.8s						
GTOI	**Gorontalo**	**19.84**	**70**	P	**P**	**12 49 04.5**	**-1.7**
	comp=Z,660nmcomp=Z,65nm,0.8s						
SOEI	**Soe**	**19.86**	**101**	P	**P**	**12 49 06.5**	**-0.2**
SOEI	**Soe**	**19.86**	**101**	P	**P**	**12 49 06.0**	**-0.6**
	comp=Z,5μmcomp=Z,590nm,0.8s						
PHET	**Kaeng Krachan**	**19.91**	**346**	P	**Pn**	**12 49 08.9**	**-0.1**
	comp=Z,45nm,0.7s						
KMSI	**Cibinong**	**20.72**	**71**	P	**P**	**12 49 16.5**	**+0.7**
	comp=Z,65nm,0.8s						
MBWA	**Marble Bar**	**20.73**	**136**	P	Pn	12 49 22.3	+3.6
MBWA				P	Pn	12 49 22.3	+3.6
PSA00	**Pilbara Seismi**	**21.09**	**137**	P	**P**	**12 49 18.1**	**-1.7**
UBPT	**Khong Chiam**	**21.70**	**3**	P	**P**	**12 49 28.9**	**+2.6**
	comp=Z,12nm,1.0s						
UBPT	**Khong Chiam**	**21.70**	**3**	P	**P**	**12 49 24.3**	**-2.0**
SANI	**Sanana**	**21.92**	**79**	P	**P**	**12 49 27.6**	**-1.1**
	comp=Z,48nm,0.7s						
KHLT	**Khaolaem Dam**	**21.98**	**345**	P	**P**	**12 49 29.6**	**+0.3**
	comp=Z,13nm,0.7s						
UTHA	**Uthaitani**	**22.51**	**347**	P	**P**	**12 49 34.0**	**-1.0**
	comp=Z,395nmcomp=Z,22nm,0.7s						
KHON	**Khomkaen**	**22.79**	**356**	P	**P**	**12 49 38.7**	**+0.8**
	comp=Z,89nm,0.8s						
NLAI	**Namlea**	**22.79**	**83**	P	**P**	**12 49 38.6**	**+0.6**
	comp=Z,3μmcomp=Z,56nm,0.7s						
UMPA	**Umpang Tak**	**23.27**	**346**	P	**P**	**12 49 40.8**	**-2.0**
	comp=Z,3μmcomp=Z,47nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.63**	**121**	P	**P**	**12 49 46.8**	**+0.6**
	comp=Z,24nm,0.7s,baz=310,slow=6.0,SNR=114						
FITZ				LR	LR	13 01 04.1	
	comp=Z,110nm,18.9s,baz=310,slow=42						
FITZ	**Fitzroy Crossi**	**23.63**	**121**	P	**P**	**12 49 46.7**	**+0.6**
	baz=24,SNR=57						
FITZ	**Fitzroy Crossi**	**23.63**	**121**	P	**P**	**12 49 45.8**	**-0.4**
FITZ				IAmb	IAmb	12 49 48.6	
	comp=Z,25nm,0.7s						
PHIT	**Phitsanulok**	**23.91**	**350**	P	**P**	**12 49 47.8**	**-0.9**
	comp=Z,2μmcomp=Z,162nm,0.8s						
TNTI	**Ternate**	**23.98**	**73**	P	**P**	**12 49 48.7**	**-0.8**
TNTI				IAmb	IAmb	12 49 53.2	
	comp=Z,62nm,0.6s						
TNTI	**Ternate**	**23.98**	**73**	P	**P**	**12 49 49.5**	**0.0**
	comp=Z,105nm,1.0s						
LOEI	**Loei**	**24.10**	**353**	P	**P**	**12 49 50.5**	**0.0**
	comp=Z,17nm,0.8s						
SUKH	**Sukhothai**	**24.34**	**349**	P	**P**	**12 49 51.7**	**-0.9**
	comp=Z,374nmcomp=Z,43nm,0.8s						
NONG	**Nongkai**	**24.48**	**357**	P	**P**	**12 49 54.3**	**+0.4**
	comp=Z,28nm,0.8s						
MORW	**Morawa**	**24.94**	**155**	P	**P**	**12 49 55.6**	**-2.4**
DAV	**Davao City (W)**	**25.03**	**58**	P	**P**	**12 49 58.0**	**-1.0**
	comp=Z,122nm,0.3s,baz=5.6,slow=2.2,SNR=4.5						
DAV				LR	LR	13 01 13.8	
	comp=Z,167nm,21.5s,baz=283,slow=40						
DAV	**Davao City (W)**	**25.03**	**58**	P	**P**	**12 49 58.6**	**-0.4**
CM13	**Chiang Mai Arr**	**25.40**	**348**	P	**P**	**12 50 00.0**	**-2.3**
	comp=Z,188nmcomp=Z,24nm,0.9s						
CM02	**Chiang Mai Arr**	**25.40**	**348**	P	**P**	**12 50 01.3**	**-1.0**
	comp=Z,157nmcomp=Z,26nm,0.8s						
CM09	**Chiang Mai Arr**	**25.40**	**348**	P	**P**	**12 50 00.7**	**-1.6**
	comp=Z,218nmcomp=Z,30nm,0.8s						
CM15	**Chiang Mai Arr**	**25.43**	**348**	P	**P**	**12 50 00.4**	**-2.1**
	comp=Z,226nmcomp=Z,31nm,0.7s						
CM31	**Chiang Mai Arr**	**25.43**	**348**	P	**P**	**12 50 01.6**	**-0.9**
	comp=Z,8μmcomp=Z,663nm,0.8s						
CM31	**Chiang Mai Arr**	**25.43**	**348**	P	**P**	**12 49 60.0**	**-2.5**
CMAR	**Chiang Mai Arr**	**25.43**	**348**	P	**P**	**12 50 00.4**	**-2.1**
	comp=Z,15nm,0.8s,baz=182,slow=8.8,SNR=75						
CMAR				ScP	**ScP**	**12 57 08.3**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=208,slow=2.6,SNR=7.6						
CMAR				LR	LR	13 01 08.8	
	comp=Z,234nm,18.7s,baz=218,slow=39						
CMAR	**Chiang Mai Arr**	**25.43**	**348**	P	**P**	**12 50 00.1**	**-2.4**
KNRA	**Kununurra**	**25.49**	**113**	P	**P**	**12 50 02.9**	**-0.2**
CM35	**Chiang Mai Arr**	**25.60**	**348**	P	**P**	**12 50 02.0**	**-2.1**
CM32	**Chiang Mai Arr**	**25.64**	**348**	P	**P**	**12 50 03.0**	**-1.4**
CHTO	**Chiang Mai**	**25.77**	**348**	P	**P**	**12 50 03.0**	**-2.7**
CHTO				pmax	pmax		
	comp=Z,22nm,0.8s						
CHTO	**Chiang Mai**	**25.77**	**348**	P	**P**	**12 50 03.0**	**-2.7**
CHTO	**Chiang Mai**	**25.77**	**348**	P	**P**	**12 50 03.6**	**-2.0**
QIZ	**Qiongzhong**	**25.95**	**12**	P	**P**	**12 50 08.2**	**+0.9**
QIZ				S	**S**	**12 54 39.4**	**+5.3**
QIZ				LR	LR		
	comp=Z,670nm,16.9s						
QIZ				LR	LR		
	comp=Z,310nm,18.1s						
QIZ				LR	LR		
	comp=Z,750nm,20.8s						
MTN	**Manton Dam**	**27.01**	**105**	P	**P**	**12 50 16.5**	**-0.5**
	baz=27,SNR=58						
MTN	**Manton Dam**	**27.01**	**105**	P	**P**	**12 50 16.0**	**-0.9**
SWI	**Sorong**	**27.32**	**79**	P	**P**	**12 50 18.3**	**-1.4**
	comp=Z,37nm,0.8s						
SIJI	**Sorong**	**27.32**	**79**	P	**P**	**12 50 18.2**	**-1.5**
	comp=Z,21nm,0.8s,baz=283,slow=5.8,SNR=9.3						
PALK	**Pallekele**	**27.39**	**300**	LR	LR	13 00 02.9	
	comp=Z,102nm,20.6s,baz=225,slow=34						
SLVN	**Son La**	**27.70**	**359**	P	**P**	**12 50 22.2**	**-0.9**
FAKI	**Fak Fak**	**27.92**	**84**	P	**P**	**12 50 23.8**	**-1.3**
KDU	**Kakadu**	**28.27**	**105**	P	**P**	**12 50 27.3**	**-0.9**
	baz=28,SNR=73						
NWAO	**Narrogin (SRO)**	**28.82**	**157**	LR	LR	13 00 54.5	
	comp=Z,496nm,21.3s,baz=314,slow=34						
WRKA	**Warakurna**	**29.30**	**132**	P	**P**	**12 50 35.9**	**-1.4**
	baz=29,SNR=9.1						
H01W3	**Cape Leeuwin H**	**29.59**	**164**	T	T	13 21 57.1	
	baz=343,slow=76,SNR=165						
H01W1	**Cape Leeuwin H**	**29.60**	**164**	T	T	13 21 57.8	
	baz=343,slow=76,SNR=155						
H01W2	**Cape Leeuwin H**	**29.60**	**164**	T	T	13 21 46.6	
	baz=343,slow=76,SNR=217						
SAIH	**SAIHA**	**30.96**	**339**	*e*P	**P**	**12 50 51.1**	**-1.0**
KMI	**Kunming**	**31.51**	**357**	⇑P	**P**	**12 50 56.3**	**-0.7**
KMI				PP	**PnPn**	**12 52 03.6**	**+1.7**
KMI				S	**S**	**12 55 55.7**	**-6.2**
KMI				pmax	pmax		
	comp=Z,34nm,0.7s						
KMI				pmax	pmax		
	comp=Z,110nm,6.2s						
KMI				LR	LR		
	comp=Z,780nm,16.4s						
KMI				LR	LR		
	comp=Z,360nm,16.9s						
KMI				LR	LR		
	comp=Z,840nm,17.2s						
KMI	**Kunming**	**31.51**	**357**	P	**P**	**12 50 55.5**	**-1.5**
KMI				pmax	pmax		
	comp=Z,25nm,0.6s						
KMI	**Kunming**	**31.51**	**357**	P	**P**	**12 50 55.5**	**-1.5**
KMI				IAmb	IAmb	12 50 59.4	
	comp=Z,25nm,0.6s						
H08S2	**Diego Garcia H**	**31.74**	**266**	T	T	13 24 46.9	
	baz=89,slow=76,SNR=172						
H08S3	**Diego Garcia H**	**31.75**	**266**	T	T	13 24 47.6	
	baz=89,slow=76,SNR=169						
H08S1	**Diego Garcia H**	**31.76**	**266**	T	T	13 24 48.4	
	baz=89,slow=76,SNR=44						
WB0	**Warramunga Arr**	**31.90**	**117**	P	**P**	**12 50 58.7**	**-1.6**
WB0				IAmb	IAmb	12 51 19.2	
	comp=Z,22nm,0.7s						
WRA	**Warramunga Arr**	**31.91**	**118**	P	**P**	**12 51 01.1**	**+0.7**
	comp=Z,11nm,0.6s,baz=285,slow=12,SNR=144						
WRA				PcP	**PcP**	**12 53 51.3**	**+1.3**
	comp=Z,2.3nm,0.7s,baz=309,slow=2.2,SNR=2.0						
WRA	**Warramunga Arr**	**31.91**	**118**	P	**P**	**12 51 00.0**	**-0.4**
WRAB	**Tennant Creek**	**31.92**	**118**	*ce*P	**P**	**12 51 00.6**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,36nm,1.3s						
WRAB	**Tennant Creek**	**31.92**	**118**	P	**P**	**12 50 59.6**	**-0.8**
WRAB				IAmb	IAmb	12 51 19.5	
	comp=Z,31nm,0.8s						
WB2	**Warramunga Arr**	**31.92**	**118**	P	**P**	**12 50 59.4**	**-1.1**
WB2				IAmb	IAmb	12 51 19.5	
	comp=Z,31nm,0.8s						
WR0	**Warramunga Arr**	**32.10**	**117**	P	**P**	**12 51 00.7**	**-1.3**
GYA	**Guiyang**	**32.87**	**4**	*e*P	**P**	**12 51 13.1**	**+4.4**
GYA				pmax	pmax		
	comp=Z,16nm,0.7s						
GYA				LR	LR		
	comp=Z,280nm,16.9s						
AS31	**Alice Springs**	**33.02**	**124**	P	**P**	**12 51 06.7**	**-3.4**
ASAR	**Alice Springs**	**33.02**	**124**	P	**P**	**12 51 10.4**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=77,slow=8.9,SNR=40						
ASAR				PcP	**PcP**	**12 53 54.5**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=274,slow=2.0,SNR=4.3						
ASAR				S	**S**	**12 56 26.8**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=298,slow=14,SNR=6.0						
ASAR				LR	LR	13 06 17.1	
	comp=Z,114nm,21.0s,baz=306,slow=39						
ASAR	**Alice Springs**	**33.02**	**124**	P	**P**	**12 51 08.5**	**-1.5**
KOHI	**KOHIMA**	**33.61**	**343**	*e*P	**P**	**12 51 12.8**	**-2.4**
KOHI				IAmb	IAmb	12 51 16.3	
	comp=Z,24nm,0.7s						
MOKO	**MOKOCHONG**	**34.06**	**344**	*e*P	**P**	**12 51 17.4**	**-1.8**
MOKO				IAmb	IAmb	12 51 20.6	
	comp=Z,48nm,0.5s						
SHL	**Shillong**	**34.17**	**340**	*e*P	**P**	**12 51 17.9**	**-2.3**
SHL				IAmb	IAmb	12 51 19.5	
	comp=Z,37nm,0.4s						
HYB	**Hyderabad**	**34.95**	**313**	*i* P	**P**	**12 51 27.0**	**+0.1**
BOK	**Bokaro**	**35.18**	**330**	*e*P	**P**	**12 51 28.9**	**+0.1**
BOK				IAmb	IAmb	12 51 30.0	
	comp=Z,39nm,0.8s						
ZIRO	**ZIRO**	**35.38**	**344**	*e*P	**P**	**12 51 28.2**	**-2.4**
GENI	**Genyem**	**35.80**	**85**	P	**P**	**12 51 32.2**	**-2.0**
	comp=Z,48nm,0.7s						
JAY	**Jayapura**	**36.34**	**85**	P	**P**	**12 51 36.3**	**-2.6**

BTO Baotou 47.19 6 *e*P P **P 12 53 08.2 +1.1**
BTO pmax pmax
comp=E,29nm,1.0s
BTO pmax pmax
comp=E,220nm,5.6s
BJT Baijiatuau 47.57 12 P **P 12 53 10.0 +0.1**
BJT pmax pmax
comp=Z,21nm,0.7s
BJT Baijiatuau 47.57 12 P **P 12 53 10.0 +0.1**
BJT IAmb IAmb 12 53 10.7
comp=Z,21nm,0.7s
BJI Beijing 47.59 12 P **P 12 53 09.9 -0.2**
BJI pmax pmax
comp=Z,23nm,0.6s
BJI pmax pmax
comp=Z,64nm,5.0s
BJI LR LR
comp=Z,150nm,17.7s
BJI LR LR
comp=Z,140nm,15.0s
HHC Hu-ho-hao-te 47.60 7 *e*P **P 12 53 10.0 -0.4**
HHC pmax pmax
comp=Z,36nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.7s
HHC LR LR
comp=Z,420nm,13.8s
HHC LR LR
comp=Z,440nm,16.5s
HHC LR LR
comp=Z,280nm,14.6s
EIDS Eidsvold 48.27 118 P **P 12 53 14.5 -1.2**
baz=48,SNR=4.5
EIDS Eidsvold 48.27 118 P **P 12 53 17.4 +1.6**
EIDS IAmb IAmb 12 53 40.5
comp=Z,28nm,1.4s
TOO Toolangi 48.38 136 P **P 12 53 18.5 +2.1**
TOO pmax pmax
comp=Z,14nm,1.5s
TOO Toolangi 48.38 136 P **P 12 53 18.4 +2.1**
JMN Monobe 48.79 33 P **P 12 53 19.1 -0.5**
KSAR Wonju Array Be 48.91 25 P **P 12 53 21.3 +0.9**
KSAR Wonju Array Be 48.91 25 P **P 12 53 21.3 +0.9**
KSRS Korea Array 48.94 25 P **P 12 53 19.8 -0.8**
comp=Z,11nm,0.6s,baz=223,slow=7.4,SNR=56
KSRS LR LR 13 14 25.0
comp=Z,44nm,19.4s,baz=196,slow=37
KS19 Wonju Array Si 48.96 25 P **P 12 53 21.6 +0.8**
KS19 IAmb IAmb 12 53 22.1
comp=Z,15nm,0.8s
JHS Saijyo 49.37 31 P **P 12 53 23.5 -0.4**
JCJ Chichijima 49.50 46 P **P 12 53 22.6 -2.5**
NIL Nilore 49.73 325 P **P 12 53 26.4 -0.3**
NIL pmax pmax
comp=Z,73nm,1.1s
NIL Nilore 49.73 325 P **P 12 53 26.4 -0.3**
CAN Canberra 49.89 131 IAmb IAmb 12 53 31.6
comp=Z,26nm,1.2s
ARMA Armidale 50.17 124 P **P 12 53 29.1 -1.2**
JWT Wachi 50.79 33 P **P 12 53 33.8 -0.9**
INU Inuyama 51.72 34 P **P 12 53 39.9 -1.8**
INU IAmb IAmb 12 53 41.1
comp=Z,11nm,0.6s
JGF Kuroka 52.09 34 P **P 12 53 42.5 -2.0**
JGF IAmb IAmb 12 53 50.7
comp=Z,21nm,1.0s
WMQ Urumqi 52.37 345 *e*P **P 12 53 47.1 +0.7**
WMQ sP sP 12 54 06.4 +0.4
WMQ pmax pmax
comp=Z,66nm,1.3s
WMQ pmax pmax
comp=Z,180nm,3.7s
WMQ LR LR
comp=Z,260nm,7.3s
WMQ LR LR
comp=Z,35nm,11.1s
WMQ LR LR
comp=Z,220nm,29.0s
WMQ Urumqi 52.37 345 P **P 12 53 47.3 +0.9**
WMQ pmax pmax
comp=Z,54nm,0.8s
WMQ Urumqi 52.37 345 P **P 12 53 47.3 +0.9**
JLN Jalan Bani Buh 52.53 304 P **P 12 53 49.9 +1.9**
JLN P **P 12 53 49.9 +1.9**
KBL Kabul 52.80 323 P **P 12 53 50.2 +0.2**
KBL pmax pmax
comp=Z,12nm,0.6s
KBL Kabul 52.80 323 P **P 12 53 50.2 +0.2**
KBL IAmb IAmb 12 53 51.6
comp=Z,12nm,0.6s
KBL Kabul 52.80 323 P **P 12 53 50.0 0.0**
SNR=6.2
KSH Kashi 52.86 332 P **P 12 53 48.8 -1.4**
KSH pP pP 12 54 00.0 -4.1
KSH pmax pmax
comp=Z,34nm,0.9s
KSH pmax pmax
comp=Z,150nm,7.6s
WBK Wadi Bani Khal 53.10 305 P **P 12 53 54.7 +2.5**
MHTO MHTO 53.21 302 P **P 12 53 54.3 +1.3**
MAJO Matsushiro 53.25 34 *i* P **P 12 53 51.0 -2.0**
MAJO pmax pmax
comp=Z,15nm,0.8s
MAJO Matsushiro 53.25 34 P **P 12 53 50.9 -2.0**
MAJO IAmb IAmb 12 53 54.0
comp=Z,13nm,0.8s
MAT Matsushiro 53.25 34 P **P 12 53 50.7 -2.3**
MAT *e*S **S 13 01 25.2 +4.6**
MJAR Matsushiro Arr 53.25 34 P **P 12 53 50.9 -2.1**
comp=Z,12nm,0.7s,baz=209,slow=7.4,SNR=34
MJAR LR LR 13 16 36.7
comp=Z,48nm,20.6s,baz=220,slow=36
MJAR Matsushiro Arr 53.25 34 P **P 12 53 51.0 -2.1**
MJAR pmax pmax
comp=Z,6.0nm,0.7s
MJAR Matsushiro Arr 53.25 34 P **P 12 53 51.0 -2.1**
CN2 Changchun 53.58 19 *e*P **P 12 53 54.0 -1.3**
CN2 pmax pmax
comp=Z,40nm,0.9s
SMDO Samad 54.06 305 P **P 12 54 01.6 +2.3**
SONM Songino Array 54.16 2 P **P 12 53 59.3 -0.4**
comp=Z,11nm,0.7s,baz=176,slow=8.4,SNR=59
SONM PcP **PcP 12 55 04.1 +0.5**
comp=Z,13nm,0.5s,baz=180,slow=4.3,SNR=21
SONM LR LR 13 17 41.0
comp=Z,92nm,18.8s,baz=179,slow=37
SONM Songino Array 54.16 2 P **P 12 53 59.7 +0.1**
SONM pmax pmax
comp=Z,9.0nm,0.8s
SONM Songino Array 54.16 2 P **P 12 53 59.7 +0.1**
BIDO Bidbid 54.21 305 P **P 12 54 03.0 +2.7**
BIDO P **P 12 54 03.0 +2.7**
ULN Ulaanbaatar 54.22 2*ce*P **P 12 53 58.9 -1.1**
ULN pmax pmax
comp=Z,22nm,1.7s
ULN Ulaanbaatar 54.22 2 P **P 12 53 59.6 -0.4**
ULN IAmb IAmb 12 54 00.9
comp=Z,9.0nm,0.8s
ULN PcP **PcP 12 55 04.4 +0.5**
JSD Sado 54.37 33 P **P 12 53 59.5 -1.6**
SHLS Shalkode 54.42 338 *e*P **P 12 53 59.0 -2.6**
comp=Z,26nm,0.7s,baz=338
SHLS Shalkode 54.42 338 *e*P **P 12 53 58.9 -2.6**
SHLS pmax pmax
comp=Z,26nm,0.7s
DMTO DMTO 54.50 297 P **P 12 54 04.4 +1.9**
PDGK Podgornoye 54.55 338 P **P 12 54 02.0 -0.6**
UZB Uzynbulak 54.58 337 *e*P **P 12 54 00.9 -1.8**
comp=Z,12nm,0.6s,baz=337
UZB Uzynbulak 54.58 337 *e*P **P 12 54 00.9 -1.8**
UZB pmax pmax
comp=Z,12nm,0.6s
MSHR Mys Shultsa 54.59 24*ce*P **P 12 54 02.8 +0.2**
MSHR pmax pmax
comp=Z,20nm,0.8s
BSY Bisya 54.62 304 P **P 12 54 05.6 +2.3**
BSY P **P 12 54 05.6 +2.3**
SATY Saty 54.74 337 *e*P **P 12 54 02.3 -1.7**
comp=Z,9.3nm,0.6s,baz=336
SATY Saty 54.74 337 *e*P **P 12 54 02.2 -1.7**
SATY pmax pmax
comp=Z,9.0nm,0.6s
HOQ Hoqain 54.91 305 P **P 12 54 06.2 +0.9**
ULHL Ulahol 54.95 335 P **P 12 54 05.2 -0.3**
SNR=20

HNR Honiara 54.98 97 P **P 12 54 06.1 +0.2**
comp=Z,69nm,0.7s,baz=350,slow=2.3,SNR=5.7
HNR LR LR 13 19 51.4
comp=Z,52nm,18.9s,baz=243,slow=38
KPKS Kokpek 54.98 337 *e*P **P 12 54 03.8 -1.8**
comp=Z,14nm,0.7s,baz=337
KPKS Kokpek 54.98 337 *e*P **P 12 54 03.8 -1.8**
KPKS pmax pmax
comp=Z,14nm,0.7s
GAR Garm 55.26 328 P **P 12 54 06.6 -1.2**
MDOK Medeo 55.37 336 *e*P **P 12 54 06.9 -1.6**
baz=336
MDOK Medeo 55.37 336 *e*P **P 12 54 06.9 -1.6**
ARQ Araqi 55.44 304 P **P 12 54 11.2 +2.0**
ARQ P **P 12 54 11.2 +2.0**
AAA Alma-Ata 55.46 336 *e*P **P 12 54 07.9 -1.2**
comp=Z,18nm,0.6s,baz=336
AAA Alma-Ata 55.46 336 *e*P **P 12 54 07.8 -1.2**
AAA pmax pmax
comp=Z,17nm,0.6s
DOK Doka 55.56 298 P **P 12 54 11.8 +1.7**
SNR=11
WHFO Wadi Hawf 55.62 297 P **P 12 54 12.0 +1.5**
SNR=11
UCH Uchtor 55.69 333 P **P 12 54 11.1 -0.1**
SNR=22
MDJ Mudanjiang 55.72 22 P **P 12 54 10.0 -0.7**
MDJ pmax pmax
comp=Z,15nm,0.7s
MDJ Mudanjiang 55.72 22 P **P 12 54 10.0 -0.7**
MDJ IAmb IAmb 12 54 11.0
comp=Z,12nm,0.9s
TKM2 Tokmak 2 55.78 335 P **P 12 54 11.2 -0.2**
SNR=68
TKM2 Tokmak 2 55.78 335 P **P 12 54 10.5 -1.0**
SOHO SOHO 55.79 305 P **P 12 54 13.8 +2.2**
SOHO P **P 12 54 13.8 +2.2**
ABTO Aybut 55.84 296 P **P 12 54 14.1 +1.9**
KBK Karagaybulak 55.84 334 P **P 12 54 12.3 +0.4**
SNR=13
AML Almayashu 55.98 333 P **P 12 54 13.4 +0.2**
SNR=10
AAK Ala-Archa 56.02 334 P **P 12 54 13.2 +0.1**
SNR=10
AAK Ala-Archa 56.02 334 *i* P **P 12 54 13.3 +0.1**
SNR=14
AAK Ala-Archa 56.02 334 P **P 12 54 12.8 -0.4**
AAK Ala-Archa 56.02 334 P **P 12 54 11.5 -1.7**
AAK IAmb IAmb 12 54 14.3
comp=Z,30nm,1.5s
KUU Kurty 56.26 336 *e*P **P 12 54 12.4 -2.3**
comp=Z,33nm,0.6s,baz=336
KUU Kurty 56.26 336 *e*P **P 12 54 12.4 -2.3**
KUU pmax pmax
comp=Z,33nm,0.6s
USA0B Ussuriysk Arra 56.28 24*c i*P **P 12 54 13.8 -0.9**
USA0B Ussuriysk Arra 56.28 24 P **P 12 54 14.2 -0.5**
USRK Ussuriysk Ar. 56.28 24 P **P 12 54 14.2 -0.5**
comp=Z,57nm,0.6s,baz=211,slow=6.0,SNR=195
UMZA Um Al Zommool 56.30 303 P **P 12 54 16.9 +1.6**
EKS2 Erkin-Say 56.36 333 P **P 12 54 15.8 +0.3**
SNR=23
TDK Taldyqorghan 56.39 338 *e*P **P 12 54 14.3 -1.3**
comp=Z,20nm,0.5s,baz=338
TDK Taldyqorghan 56.39 338 *e*P **P 12 54 14.2 -1.3**
TDK pmax pmax
comp=Z,20nm,0.5s
ALNE Al Ain 56.39 304 P **P 12 54 18.2 +2.2**
ASHO Ashiyiah 56.42 305 P **P 12 54 18.1 +1.9**
ASHO Ashiyiah 56.42 305 P **P 12 54 18.2 +1.9**
SNR=6.6
UOSS Minazif 56.42 306 P **P 12 54 13.9 -2.3**
UOSS Minazif 56.42 306 P **P 12 54 17.8 +1.6**
HATD Hatta, Dubai 56.43 305 P **P 12 54 18.3 +2.1**
HATD Hatta, Dubai 56.43 305 P **P 12 54 18.3 +2.1**
HATD P **P 12 54 18.3 +2.1**
ZSN Zaisan 56.48 344 *e*P **P 12 54 14.6 -1.6**
comp=Z,25nm,0.7s,baz=344
ZSN Zaisan 56.48 344 *e*P **P 12 54 14.5 -1.6**
ZSN pmax pmax
comp=Z,25nm,0.7s
MDH Madha 56.51 306 P **P 12 54 17.5 +0.8**
MDH Madha 56.51 306 P **P 12 54 17.7 +0.9**
USP Ospenovka 56.53 334 P **P 12 54 16.3 -0.4**
SNR=15
SGDS Sogindy 56.62 334 *e*P **P 12 54 15.4 -1.9**
comp=Z,9.3nm,1.5s,baz=334
SGDS Sogindy 56.62 334 *e*P **P 12 54 15.4 -1.9**
SGDS pmax pmax
comp=Z,9.0nm,1.5s
MK31 Makanchi Array 56.63 342*c i*P **P 12 54 16.2 -1.1**
MK31 Makanchi Array 56.63 342 P **P 12 54 16.4 -0.8**
MKAR Makanchi Array 56.63 342 P **P 12 54 16.6 -0.7**
comp=Z,40nm,0.6s,baz=144,slow=7.7,SNR=522
MSFE Esma-Masafi 56.65 306 *i* P **P 12 54 20.0 +2.2**
SNR=5.5
MASF Masafi 56.65 306 P **P 12 54 20.1 +2.3**
SNR=5.5
ZAK Zakamensk 56.70 359 *e*P **P 12 54 16.8 -0.9**
ZAK *e* 12 55 12.3
ZAK pmax pmax
comp=Z,9.0nm,0.9s
ZAK pmax pmax
comp=Z,3.0nm,0.8s
MAKZ Makanchi 56.74 342 P **P 12 54 17.2 -0.8**
MAKZ pmax pmax
comp=Z,10.0nm,0.7s
MAKZ Makanchi 56.74 342 P **P 12 54 17.2 -0.8**
MAKZ IAmb IAmb 12 54 19.8
comp=Z,10nm,0.7s
BANOM Banah 56.80 307 *i* P **P 12 54 20.1 +1.2**
SNR=8.1
BANOM Banah 56.80 307 P **P 12 54 20.0 +1.2**
SNR=8.5
FAQ Al Faqa, Dubai 56.83 305 *i* P **P 12 54 20.9 +1.9**
SNR=13
FAQ Al Faqa, Dubai 56.83 305 P **P 12 54 21.0 +1.9**
NAZ Nazwa, Dubai 56.88 305 P **P 12 54 21.5 +2.1**
HRA Herat 56.98 318 P **P 12 54 19.2 -1.0**
SHME Shamm 56.98 307 *i* P **P 12 54 22.2 +2.1**
SNR=6.5
SHME Shamm 56.98 307 P **P 12 54 22.2 +2.1**
SNR=6.6
ASUD Al Ashush, Dub 56.99 305 P **P 12 54 22.6 +2.5**
ASUD Al Ashush, Dub 56.99 305 P **P 12 54 22.7 +2.5**
HIA Hailar 57.15 12 P **P 12 54 19.9 -1.0**
HIA pmax pmax
comp=Z,14nm,0.7s
HIA Hailar 57.15 12 P **P 12 54 19.9 -1.0**
HIA IAmb IAmb 12 54 20.7
comp=Z,14nm,0.7s
DZA Taraz 57.67 332 *e*P **P 12 54 23.2 -1.5**
baz=331
DZA Taraz 57.67 332 *e*P **P 12 54 23.2 -1.5**
IUG Iuzhnay 57.74 330 *e*P **P 12 54 24.0 -1.3**
comp=Z,11nm,0.8s,baz=330
IUG Iuzhnay 57.74 330 *e*P **P 12 54 24.0 -1.3**
IUG pmax pmax
comp=Z,11nm,0.8s
DGZ Jazzator, Alta 57.94 347*c i*P **P 12 54 26.6 0.0**
DGZ pmax pmax
comp=Z,98nm,0.7s
TLY Talaya 57.99 359*ce*P **P 12 54 27.1 +0.4**
TLY pmax pmax
comp=Z,14nm,0.6s
TLY Talaya 57.99 359 P **P 12 54 26.5 -0.3**
TLY IAmb IAmb 12 54 28.2
comp=Z,16nm,0.7s
MOY Mondy 58.05 357 *e*P **P 12 54 27.1 -0.2**
MOY pmax pmax
comp=Z,21nm,2.1s
BTLS Baital 58.15 335 *e*P **P 12 54 25.8 -2.2**
comp=Z,4.2nm,0.7s,baz=335
BTLS Baital 58.15 335 *e*P **P 12 54 25.7 -2.2**
BTLS pmax pmax
comp=Z,4.0nm,0.7s
KK31 Karatay Array 58.22 331 *i* P **P 12 54 27.7 -0.8**
KK31 Karatay Array 58.22 331 P **P 12 54 27.2 -1.3**
KKAR Karatay Array 58.22 331 P **P 12 54 27.2 -1.3**
KKAR pmax pmax
comp=Z,10.0nm,1.1s
KKAR Karatay Array 58.22 331 P **P 12 54 27.3 -1.2**
KKAR Karatay Array 58.22 331 P **P 12 54 27.2 -1.3**
KKAR IAmb IAmb 12 54 28.7
comp=Z,10.0nm,1.1s

TEY Ternei 58.88 26⇑ *i*P **P 12 54 32.1 -0.9**
TEY pmax pmax
comp=N,30nm,0.5s
TEY pmax pmax
comp=E,20nm,0.5s
TEY pmax pmax
comp=Z,90nm,0.5s
KLR Kul'dur 60.43 20*ce*P **P 12 54 42.6 -1.0**
KLR pmax pmax
comp=Z,20nm,0.8s
SEM Semipalatinsk 60.47 342 *i* P **P 12 54 41.7 -2.4**
comp=Z,12nm,0.6s,baz=342
SEM Semipalatinsk 60.47 342 *i* P **P 12 54 41.7 -2.4**
SEM pmax pmax
comp=Z,12nm,0.6s
ASAJ Asahikawa 61.02 31 P **P 12 54 46.7 -1.1**
ASAJ pmax pmax
comp=Z,12nm,0.8s
JKA Kamikawa-asahi 61.02 31 P **P 12 54 46.7 -1.1**
JKA IAmb IAmb 12 54 47.8
comp=Z,12nm,0.8s
KURBB Kurchatov Arra 61.19 341 P **P 12 54 48.0 -0.7**
GEYT Alibeck 61.76 320 P **P 12 54 53.5 +0.6**
comp=Z,8.4nm,0.4s,baz=147,slow=6.0,SNR=15
GEYT LR LR 13 23 39.5
comp=Z,61nm,21.7s,baz=205,slow=38
GEYT Alibeck 61.76 320 P **P 12 54 52.9 0.0**
GEYT IAmb IAmb 12 54 54.0
comp=Z,11nm,0.6s
GYA0B ALIBECK ARRAY 61.76 320 P **P 12 54 53.2 +0.3**
GYA0B IAmb IAmb 12 54 54.0
comp=Z,17nm,0.6s
ZAA0 Zalesovo Array 62.49 347 P **P 12 54 56.4 -1.0**
ZALV Zalesovo Beam 62.49 347 P **P 12 54 56.5 -0.9**
comp=Z,50nm,0.3s,baz=157,slow=5.2,SNR=194
ZALV LR LR 13 24 42.8
comp=Z,206nm,19.3s,baz=132,slow=39
BRZS Berezniki 62.69 337 *e*P **P 12 54 57.0 -1.8**
comp=Z,5.8nm,0.9s,baz=337
BRZS Berezniki 62.69 337 *e*P **P 12 54 57.0 -1.8**
BRZS pmax pmax
comp=Z,6.0nm,0.9s
ZEA Zeya 63.05 15 *e*P **P 12 55 01.2 +0.1**
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,30nm,0.8s
YSS Yuzh-Sakhalins 63.14 28 *e*P **P 12 55 01.0 -0.9**
YSS *e* 12 55 19.0
YSS pmax pmax
comp=Z,40nm,1.1s
YSS Yuzh-Sakhalins 63.14 28 P **P 12 55 01.2 -0.7**
ATD Arta Tunnel 63.87 286 LR LR 13 19 01.6
comp=Z,17nm,21.4s,baz=32,slow=32
BOD Bodaibo 64.61 6⇓ *i*P **P 12 55 10.1 -1.2**
BOD pmax pmax
comp=Z,22nm,0.9s
RAYN Ar Rayn 64.83 300 P **P 12 55 14.8 +1.3**
BRVK Borovoye 66.05 338*ce*P **P 12 55 20.2 -0.5**
BRVK pmax pmax
comp=Z,31nm,1.7s
BRVK Borovoye 66.05 338 P **P 12 55 19.6 -1.1**
BRVK IAmb IAmb 12 55 20.8
comp=Z,13nm,0.8s
MAW Mawson 67.09 196 LR LR 13 17 53.8
comp=Z,172nm,21.5s,baz=56,slow=30
KMBO Kilima Mbogo 67.23 272 LR LR 13 20 02.9
comp=Z,85nm,20.6s,baz=94,slow=32
AB31 Akbulak array 67.75 330 *i* P **P 12 55 31.3 -0.3**
ABKAR Akbulak array 67.75 330 P **P 12 55 31.7 +0.1**
ABKAR Akbulak array 67.75 330 P **P 12 55 31.8 +0.2**
ABKAR IAmb IAmb 12 55 32.4
comp=Z,60nm,0.7s
RPZ Rata Peaks 68.65 134 P **P 12 55 39.3 +1.8**
comp=Z,9.6nm,0.6s,baz=279,slow=3.5,SNR=6.6
AKTO Aktyubinsk 69.46 330 P **P 12 55 42.2 -0.1**
comp=Z,10nm,0.5s,baz=117,slow=5.1,SNR=40
AKTO LR LR 13 31 05.4
comp=Z,46nm,18.5s,baz=131,slow=40
YAK Yakutsk 71.09 12*c i*P **P 12 55 51.0 -1.0**
YAK *e* 12 56 08.6
YAK *e*PPP PPP 13 00 14.9
YAK *e*S **S 13 05 03.9 -0.4**
YAK *e**SS **sS 13 05 33.8 +4.7**
YAK *e* 13 05 49.8
YAK *e*SS **SS 13 09 40.7 +1.9**
YAK pmax pmax
comp=Z,62nm,0.8s
YAK pmax pmax
comp=N,6.0nm,0.7s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=Z,71nm,3.8s
YAK pmax pmax
comp=N,62nm,3.7s
YAK pmax pmax
comp=E,39nm,3.4s
YAK smax smax
comp=N,63nm,4.6s
YAK smax smax
comp=E,29nm,4.9s
YAK Yakutsk 71.09 12 P **P 12 55 51.3 -0.7**
GNI Garni 71.86 316 P **P 12 55 58.8 +1.4**
comp=E,8.8nm,0.6s,baz=72,slow=2.7,SNR=4.7
GNI Garni 71.86 316 P **P 12 55 59.4 +2.0**
GNI Garni 71.86 316 *i* P **P 12 55 56.7 -0.6**
GNI pmax pmax
comp=Z,11nm,1.0s
SKR Severo-Kuril's 72.25 32 *e*P P 12 56 06.2 +7.0
SKR *e*S **SKiKP 13 05 37.2 +6.3**
SKR pmax pmax
comp=Z,300nm,2.2s
SKR pmax pmax
comp=Z,100nm,2.1s
SKR pmax pmax
comp=Z,29nm,0.9s
SKR MLR MLR
comp=Z,100nm,18.0s
GROC Groznyy 72.50 319 *e*P **P 12 56 01.4 +0.5**
GROC *e* 12 56 19.1
GROC *e* 12 58 43.1
GROC *e*S **S 13 05 22.5 +1.2**
GROC pmax pmax
comp=Z,18nm,0.5s
SVE Sverdlovsk 72.57 336*de*P **P 12 56 01.6 +0.6**
SVE pmax pmax
comp=Z,25nm,0.6s
KZRT Kazreti 72.63 317 P **P 12 56 02.9 +1.2**
GUDG Gudauri 73.04 318 P **P 12 56 07.0 +2.6**
ARU Arti 73.14 335 P **P 12 56 04.6 +0.3**
comp=Z,6.3nm,0.4s,baz=116,slow=3.5,SNR=43
ARU Arti 73.14 335*c i*P **P 12 56 04.5 +0.2**
ARU S **SKiKP 13 05 34.3 +2.2**
ARU SS **SS 13 10 11.6 +1.3**
ARU pmax pmax
comp=Z,19nm,0.6s
ARU Arti 73.14 335 P **P 12 56 04.1 -0.2**
ARU IAmb IAmb 12 56 05.4
comp=Z,29nm,0.9s
AKH Akhalkalaki 73.25 317 P **P 12 56 08.7 +3.1**
ZEI Tsey 73.56 318 *e*P **P 12 56 07.8 +0.3**
ZEI pmax pmax
comp=Z,14nm,0.6s
MBAR Mbarara 73.76 271 LR LR 13 23 07.5
comp=Z,96nm,20.7s,baz=122,slow=31
ONI Oni 73.78 318 P **P 12 56 10.3 +1.8**
NCK Nalchik 74.07 319 *i* P **P 12 56 09.8 -0.4**
NCK pmax pmax
comp=Z,14nm,0.8s
PETK Petropavlovsk- 74.44 30 P **P 12 56 11.2 -0.9**
comp=Z,12nm,0.7s,baz=262,slow=1.1,SNR=44
NEY Neytrino 74.54 318 *i* P **P 12 56 14.2 +1.1**
NEY pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 74.63 319 P **P 12 56 14.3 +1.0**
comp=Z,14nm,0.8s,baz=112,slow=5.0,SNR=28
KBZ LR LR 13 33 22.7
comp=Z,17nm,18.6s,baz=158,slow=39
KBZ Khabaz 74.63 319*ce*P **P 12 56 13.7 +0.4**
KBZ pmax pmax
comp=Z,16nm,0.9s
KIV Kislovodsk 74.86 319 x **P 12 56 15.5 +0.7**

KIV Kislovodsk 74.86 319 eP P 12 56 15.6 +0.7
KIV pmax pmax
comp=Z,40nm,1.0s
KIV Kislovodsk 74.86 319 P P 12 56 14.3 -0.5
KIV IAmb IAmb 12 56 17.3
comp=Z,11nm,0.7s
PET Petropavlovsk 74.87 30 eP P 12 56 14.2 -0.3
PET pmax pmax
comp=Z,124nm,0.6s
PET Petropavlovsk 74.87 30 P P 12 56 14.2 -0.3
SYO Syowa Base 75.08 200|| eP P 12 56 16.0 +0.5
SYO Syowa Base 75.08 200|| esP sP 12 56 32.6 -2.8
MA2 Magadan 75.41 22 ceP P 12 56 17.4 -0.1
MA2 pmax pmax
comp=Z,20nm,0.8s
MA2 Magadan 75.41 22 P P 12 56 17.6 +0.1
MA2 IAmb IAmb 12 56 18.3
comp=Z,21nm,0.8s
MALT Malatya 75.66 312 P P 12 56 21.3 +1.7
EIL Elat 75.70 303 P P 12 56 20.9 +1.0
comp=Z,6.0nm,0.6s,baz=74,slow=5.2,SNR=5.4
BELG Belogornoye 75.90 328 P P 12 56 20.5 +0.1
comp=Z,27nm,0.7s,baz=251,slow=3.7,SNR=5.2
BELG Belogornoye 75.90 328 iP P 12 56 20.2 -0.2
BELG pmax pmax
comp=Z,6.0nm,0.9s
MMAI Mount Meron Ar 76.29 306 P P 12 56 24.9 +1.7
comp=Z,2.0nm,0.5s,baz=96,slow=7.6,SNR=5.6
NRIK Noril'sk 76.61 354 P P 12 56 23.5 -0.6
comp=Z,7.6nm,0.3s,baz=153,slow=5.0,SNR=17
NRIK LR LR 13 33 43.2
comp=Z,84nm,18.3s,baz=166,slow=38
NRIK Noril'sk 76.61 354 ceP P 12 56 22.5 -1.6
NRIK pmax pmax
comp=Z,22nm,1.1s
NRIK Noril'sk 76.61 354 P P 12 56 23.6 -0.6
NRIK IAmb IAmb 12 56 24.6
comp=Z,24nm,1.1s
SOC Sochi 76.68 318 eP P 12 56 23.3 -1.8
SOC e 12 59 17.5
SOC eS S 13 06 11.1 +3.1
SOC eSS SS 13 11 02.7 -2.1
SOC pmax pmax
comp=Z,31nm,0.8s
VNDA Vanda 76.89 169 P P 12 56 29.6 +4.0
comp=Z,0.7nm,0.7s,baz=311,slow=6.3,SNR=3.7
VNDA LR LR 13 25 15.1
comp=Z,81nm,21.2s,baz=310,slow=32
VNDA Vanda 76.89 169 P P 12 56 23.5 -2.2
BOSA Boshof 77.44 242 P P 12 56 34.5 +4.5
comp=Z,1.8nm,0.8s,baz=114,slow=10.0,SNR=2.3
BOSA LR LR 13 25 17.5
comp=Z,80nm,18.0s,baz=83,slow=31
SEY Seymchan 78.23 20 iP P 12 56 33.2 -0.1
KIRV Kirov 78.36 334 P P 12 56 34.4 +0.3
comp=Z,41nm,0.7s,baz=109,slow=7.0
KIRV Kirov 78.36 334 ceP P 12 56 35.0 +0.9
CSS Mathiatis 78.50 308 P P 12 56 37.0 +1.5
CSS IAmb IAmb 12 56 55.0
comp=Z,37nm,1.0s
VRH Novokhopyorsk 78.56 325 eP P 12 56 35.4 0.0
VRH pmax pmax
comp=Z,60nm,0.6s
BR131 Keskin Array S 79.65 312 P P 12 56 42.4 +0.6
BR131 pmax pmax
comp=Z,28nm,0.8s
BR131 Keskin Array S 79.65 312 P P 12 56 42.4 +0.6
BR131 IAmb IAmb 12 56 43.2
comp=Z,28nm,0.8s
BRTR Keskin Array B 79.65 312 P P 12 56 42.4 +0.6
comp=Z,14nm,0.7s,baz=138,slow=7.0,SNR=67
BRTR LR LR 13 34 20.0
comp=Z,37nm,20.8s,baz=119,slow=37
TIXI Tiksi 79.67 8 ciP P 12 56 39.6 -1.4
TIXI Tiksi 79.67 8 P P 12 56 40.1 -0.9
TIXI IAmb IAmb 12 56 40.9
comp=Z,6.7nm,0.4s
VORD Divnogorie 79.85 324 eP P 12 56 42.2 -0.2
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 80.02 325 eP P 12 56 43.0 -0.4
VSR pmax pmax
comp=Z,40nm,0.6s
LPSR Galich'ya Gora 80.71 326 eP P 12 56 47.5 +0.5
LPSR pmax pmax
comp=Z,30nm,1.0s
PRGR Permogore 81.59 336 eP P 12 56 51.2 -0.3
PRGR e*PP pP 12 57 02.9 -3.1
PRGR pmax pmax
comp=Z,25nm,0.6s
MDUB Mudurnu 81.66 312 P P 12 56 51.8 -0.7
MOS Moscow 82.66 328 eP P 12 56 57.1 -0.1
OBN Obninsk 82.98 328 deP P 12 57 00.0 +1.1
OBN pmax pmax
comp=Z,59nm,1.7s
OBN Obninsk 82.98 328 P P 12 56 58.6 -0.2
KLMR Klimovskoe 83.84 334 eP P 12 57 01.8 -1.4
KLMR pmax pmax
comp=Z,22nm,1.0s
KLMR Klimovskoe 83.84 334 eP P 12 57 01.9 -1.3
KLMR AMP 12 57 06.7
comp=Z,22nm,1.0s
CFR Carcaliu 85.06 316 ⇑P P 12 57 11.1 +1.4
CFR Carcaliu 85.06 316 ⇑P P 12 57 11.1 +1.4
HARR Harsova 85.08 316 ⇓P P 12 57 11.5 +1.7
HARR Harsova 85.08 316 ⇓P P 12 57 11.5 +1.7
SORM Soroca 85.65 319 ⇑P P 12 57 13.5 +0.9
SORM Soroca 85.65 319 ⇑P P 12 57 13.5 +0.9
AKASG Malin Array Be 85.77 322 P P 12 57 13.5 +0.4
comp=Z,2.2nm,0.3s,baz=85,slow=4.7,SNR=22
AKASG PP PP 13 00 31.0 -2.1
comp=Z,1.4nm,0.6s,baz=85,slow=6.2,SNR=4.2
AKASG LR LR 13 39 35.1
comp=Z,32nm,21.4s,baz=315,slow=38
AKASG Malin Array Be 85.77 322 P P 12 57 12.6 -0.6
AKBB Malin Array Si 85.77 322 ceP P 12 57 13.7 +0.5
AKBB Malin Array Si 85.77 322 P P 12 57 13.4 +0.2
AKBB IAmb IAmb 12 57 17.1
comp=Z,8.1nm,0.7s
BILL Bilibino 85.88 19 diP P 12 57 12.7 -0.7
BILL i *PP sP 12 57 36.5 +2.3
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL MLR MLR
comp=Z,55nm,16.0s
BILL Bilibino 85.88 19 P P 12 57 12.7 -0.7
BILL IAmb IAmb 12 57 13.2
comp=Z,6.6nm,0.8s
VRI Vrincioaia 86.18 317 ⇑P P 12 57 17.4 +2.0
VRI Vrincioaia 86.18 317 ⇑P P 12 57 17.4 +2.0
PLOR Plostina 86.23 317 ⇑P P 12 57 18.1 +2.5
PLOR Plostina 86.23 317 ⇑P P 12 57 18.1 +2.5
MLR Muntele Rosu 86.63 316 P P 12 57 18.4 +0.7
comp=Z,23nm,1.1s,baz=227,slow=0.3,SNR=26
MLR Muntele Rosu 86.63 316 ⇑P P 12 57 19.4 +1.6
MLR Muntele Rosu 86.63 316 P P 12 57 19.3 +1.6
BIZ Bicaz 86.85 318 ⇑P P 12 57 20.3 +1.7
PRAR RASCA 86.86 318 ⇑P P 12 57 20.2 +1.6
DOPR Dopca 87.12 317 ⇑P P 12 57 22.0 +2.1
ARR Arges 87.51 316 ⇑P P 12 57 23.1 +1.2
MNK Minsk 87.56 325 iP P 12 57 22.6 +0.8
comp=E,2.0nm,0.8s
MNK i P P 12 57 22.6 +0.8
comp=N,11nm,0.9s
MNK i P P 12 57 22.6 +0.8
comp=Z,23nm,0.9s
MNK i PP PP 13 00 32.8 -15
MNK i PPP PPP 13 02 43.4
MNK i S S 13 07 48.0 -11
MNK i SS SS 13 13 23.4 -22
MNK i SSS SSS 13 17 33.3
MNK i LQ LQ 13 22 58.7
MNK i LR LR 13 28 42.4
MNK i LRM MLR 13 37 12.8
comp=Z,59nm,19.7s
MNK i LRM MLR 13 37 17.4
comp=N,119nm,19.7s
MNK i LRM MLR 13 37 25.2
comp=E,4.0nm,19.7s
BURAR Bucovina Array 87.58 318 ⇑P P 12 57 24.6 +2.4
BURAR Bucovina Array 87.58 318 ⇑P P 12 57 24.6 +2.4
BURAR Bucovina Array 87.58 318 P P 12 57 24.2 +2.0
BUR08 Bucovina Ar. S 87.60 318 P P 12 57 24.1 +1.7
BUR08 IAmb IAmb 12 57 25.5
comp=Z,14nm,0.9s
VTS Vitosha 87.96 313 ⇓P P 12 57 25.8 +1.5
VTS Vitosha 87.96 313 P P 12 57 24.8 +0.5
VTS pmax pmax
comp=Z,8.0nm,0.9s
VTS Vitosha 87.96 313 P P 12 57 24.8 +0.5
VTS IAmb IAmb 12 57 26.5
comp=Z,8.2nm,0.9s
LIT Litokhoron 88.06 311 P P 12 57 23.8 -0.8
LIT pmax pmax
comp=Z,12nm,0.9s
LIT Litokhoron 88.06 311 P P 12 57 23.8 -0.8
LIT IAmb IAmb 12 57 26.1
comp=Z,12nm,0.9s
NACGM Naroch 88.27 326 i P P 12 57 26.5 +1.3
NACGM i P P 12 57 26.5 +1.3
NACGM i P P 12 57 26.5 +1.3
NACGM i PP PP 13 01 15.8 +23
NACGM i PPP PPP 13 02 44.6
NACGM i S S 13 07 50.0 -16
NACGM i SS SS 13 14 15.2 +19
NACGM i SSS SSS 13 17 45.2
NACGM i LQ LQ 13 31 23.8
NACGM i LR LR 13 35 47.0
IDID Didziasalis 88.40 326 eP P 12 57 26.7 +1.0
IIGN Ignalina 88.69 326 eP P 12 57 28.1 +1.0
ISAL Salakas 88.80 326 eP P 12 57 28.5 +0.9
GZR Gura Zlata 88.80 316 ⇑P P 12 57 30.1 +2.1
DEV Deva 88.80 316 ⇑P P 12 57 30.3 +2.4
DEV Deva 88.80 316 ⇑P P 12 57 30.3 +2.4
HERR Herculane 88.96 315 ⇑P P 12 57 30.4 +1.7
DRGR 89.10 317 ⇑P P 12 57 31.0 +1.6
DRGR 89.10 317 ⇑P P 12 57 31.0 +1.6
VSU Vasula 89.15 329 eP P 12 57 30.0 +0.8
SNAA Sanae 89.21 198 P P 12 57 39.0 +10
MDVR Moldovita 89.43 315 ⇑P P 12 57 32.6 +1.7
BZS Buzias 89.64 316 P P 12 57 33.5 +1.6
FINES FINESS Array B 90.18 332 P P 12 57 34.4 +0.4
comp=Z,5.1nm,0.6s,baz=110,slow=5.5,SNR=36
FINES FINESS Array B 90.18 332 P P 12 57 33.6 -0.3
CRVS Cervenica-Dubn 90.29 319 eP P 12 57 36.7 +1.9
CRVS Cervenica-Dubn 90.29 319 eP P 12 57 36.7 +1.9
DIVS Divibare 90.54 314 P P 12 57 36.0 -0.2
DIVS IAmb IAmb 12 57 38.8
comp=Z,6.7nm,1.1s
PDG Podgorica 90.83 312 P P 12 57 37.6 +0.2
PDG IAmb IAmb 12 57 39.5
comp=Z,7.7nm,1.0s
VNA2 Neumayer--Watz 90.85 198 P P 12 57 46.3 +9.3
VNA3 Neumayer Olymp 91.40 197 P P 12 57 47.8 +8.2
ARCES ARCESS Array B 92.23 340 P P 12 57 43.3 -0.1
comp=Z,5.4nm,0.6s,baz=94,slow=5.5,SNR=28
ARCES LR LR 13 44 35.3
comp=Z,97nm,18.5s,baz=50,slow=39
GERES GERESS Array B 95.37 318 P P 12 57 59.1 +0.7
comp=Z,0.6nm,0.6s,baz=104,slow=5.6,SNR=4.0
NOA NORSAR Array B 97.25 331 PP PP 13 02 02.1 -1.4
comp=Z,0.8nm,0.8s,baz=102,slow=7.0,SNR=3.8
NOA LR LR 13 47 22.2
comp=Z,38nm,19.2s,baz=75,slow=39
TOLK Toolik Lake Re 101.85 21 P 12 58 27.2
baz=283
ILAR Eielson Array 103.79 25 PP PKiKP 13 02 50.9 -2.4
comp=Z,0.5nm,0.9s,baz=278,slow=7.2,SNR=4.5
YKA Yellowknife Ar 117.28 19 PKP PKPdf 13 03 18.5 -0.3
comp=Z,0.8nm,0.8s,baz=347,slow=1.9,SNR=19
YKA PKKPbc PKKPab 13 13 49.4 +2.9
comp=Z,0.1nm,0.3s,baz=115,slow=6.3,SNR=3.7
L04D Klamath Falls 125.54 42 P 13 03 36.9
baz=297
J05D Fort Rock, OR 125.73 40 P 13 03 37.8
baz=299
N02D Trinity Center 125.83 43 P 13 03 37.8
baz=296
O02D Mt. Diablo Mer 126.12 44 P 13 03 38.9
baz=295
O03E Paynes Creek 126.74 44 P 13 03 38.8
baz=296
PLID Pearl Lake 127.98 36 PKiKP 13 03 41.6 +0.9
MSO Missoula 128.09 33 PKPdf PKiKP 13 03 41.3 +0.6
MSO Missoula 128.09 33 P 13 03 41.3
baz=308
PNTR Pine Nut 128.80 44 PKiKP 13 03 43.9 +1.3
EGMT Eagleton 129.45 29 PKiKP 13 03 44.0 +0.6
EGMT Eagleton 129.45 29 P 13 03 44.1
baz=314
MCMT McKenzie Canyo 129.93 34 PKiKP 13 03 45.9 +1.2
NVAR Mina Array Bea 130.01 44 PKP PKiKP 13 03 45.5 +0.5
comp=Z,0.8nm,0.6s,baz=334,slow=3.1,SNR=11
NVAR Mina Array Bea 130.01 44 PKiKP 13 03 45.7 +0.6
YHL Hebgen Lake 130.83 33 PKiKP 13 03 47.8 +1.2
ELK Elko 130.87 40 PKIKP PKiKP 13 03 47.7 +1.0
ELK Elko 130.87 40 PKPdf PKiKP 13 03 47.7 +1.0
PD31 Pinedale Array 133.07 34 PKiKP 13 03 51.5 +0.4
PDAR Pinedale Array 133.07 34 PKP PKiKP 13 03 51.2 +0.1
comp=Z,1.0nm,0.6s,baz=131,slow=1.1,SNR=13
ULM Lac du Bonnet 133.22 18 PKP PKiKP 13 03 50.3 -0.6
comp=Z,1.8nm,0.6s,baz=350,slow=4.2,SNR=5.6
GMRC Granite Mounta 133.60 47 P 13 03 54.6
baz=298
RSSD Black Hills 135.02 29 PKIKP PKiKP 13 03 54.3 -0.7
RSSD Black Hills 135.02 29 PKPdf PKiKP 13 03 54.3 -0.7
RSSD Black Hills 135.02 29 P 13 03 54.3
baz=318
O20A White River Ci 135.53 36 PKiKP 13 03 56.4 +0.2
O20A White River Ci 135.53 36 P 13 03 56.2
baz=310
WUAZ Wupatki 136.26 44 P 13 03 57.9
baz=303
ANMO Albuquerque 139.88 41 P 13 04 05.0
baz=308
T35A Sooner Cattle 144.21 29 PKPbc 13 04 08.9 +0.5
ERPA Erie 144.35 6 PKPbc 13 04 08.7 +0.1
ERPA Erie 144.35 6 P 13 04 08.4
baz=353
L53A Girard 144.48 6 P 13 04 08.9
baz=352
BINY Binghamton 144.48 1 P 13 04 09.1
baz=360
L59A Walton 144.49 359 P 13 04 09.4
baz=1.1
L56A Greenwood 144.50 3 PKPbc 13 04 09.1 0.0
L56A Greenwood 144.50 3 P 13 04 09.1
baz=357
OK029 Liberty Lake 144.61 32 PKPdf 13 04 10.4 -0.4
N47A Urbana 144.62 13 PKPbc 13 04 09.7 +0.2
BCOK Bluff Creek, N 144.63 32 PKPbc 13 04 10.1 +0.3
L58A Harry Jones Me 144.64 0 P 13 04 10.0
baz=360,SNR=8.7
M50A Fremont 144.64 10 PKPab 13 04 09.3 0.0
L57A Andrews Acres 144.67 2 P 13 04 09.8
baz=358
WMOK Wichita Mounta 144.69 34 PKIKP PKPbc 13 04 10.0 +0.1
WMOK Wichita Mounta 144.69 34 PKPbc 13 04 10.0 +0.1
WMOK Wichita Mounta 144.69 34 P 13 04 10.2
baz=317
QUOK Quay 144.70 30 PKPdf 13 04 10.6 -0.4
SFIN Lafayette 144.75 15 PKPbc 13 04 10.4 +0.5
SFIN Lafayette 144.75 15 P 13 04 10.3
baz=340,SNR=7.1
M52A Chesterland 144.76 8 PKPdf PKPbc 13 04 10.4 +0.4
UCCT U. Connecticut 144.77 356 PKPbc 13 04 10.2 +0.3
OK031 S. Brethren Rd 144.80 31 PKPdf 13 04 10.9 -0.2
OK025 Westminster Rd 144.84 32 PKPab 13 04 10.0 -0.3
M51A Elyria 144.85 9 P 13 04 10.2
baz=349
OK030 Cody Creek RV 144.85 31 PKPab 13 04 08.4 -1.9
N49A Columbus Grove 144.90 11 PKPab 13 04 09.6 -0.7
KSCT Kent School, K 144.91 357 PKPab 13 04 08.5 -1.8
R40A Maddies Statio 144.94 23 PKPab 13 04 10.4 -0.2
M53A WI Miller and 144.94 7 PKPbc 13 04 10.7 +0.2
M53A WI Miller and 144.94 7 P 13 04 10.4
baz=351,SNR=7.6
M54A Oil Creek Stat 144.98 5 PKPab 13 04 10.6 -0.1
M54A Oil Creek Stat 144.98 5 P 13 04 10.7
baz=353,SNR=11
S39A Bolivar 145.02 25 PKPbc 13 04 10.8 -0.1
FNO Franklin 145.05 32 PKPdf 13 04 12.6 +1.0
TX31 Lajitas Ar. Si 145.11 46 PKPdf 13 04 12.8 +0.8
TX32 Lajitas Array 145.11 46 PKPdf 13 04 12.8 +0.8
TXAR Lajitas Array 145.11 46 PKP PKPdf 13 04 12.8 +0.7
comp=Z,20nm,0.6s,baz=278,slow=1.2,SNR=314
TXAR Lajitas Array 145.11 46 PKPdf 13 04 12.7 +0.6
M56A Emporium 145.12 3 PKPbc 13 04 11.0 -0.1
M56A Emporium 145.12 3 P 13 04 11.1
baz=356,SNR=7.7
KSPA Keystone Colle 145.13 0 PKPdf 13 04 11.6 0.0
M59A Waymart 145.14 360 P 13 04 11.3
baz=0.4
N51A Ashland 145.22 9 PKPbc 13 04 11.3 -0.1
M58A Price's Panora 145.30 1 P 13 04 12.1
baz=359,SNR=21
M57A Sunshine Farm, 145.32 2 PKPdf 13 04 12.3 +0.4
M57A Sunshine Farm, 145.32 2 P 13 04 12.0
baz=358,SNR=12
M61A Granite Spring 145.34 358 P 13 04 11.5
baz=3.3
M60A Port Jervis 145.35 359 P 13 04 11.9
baz=1.8,SNR=5.1
TUL1 Leonard 145.36 30 P 13 04 12.7
baz=323
P46A Rosedale 145.43 16 PKPab 13 04 12.3 0.0
N54A Moraine State 145.49 6 PKPab 13 04 12.4 -0.1
N54A Moraine State 145.49 6 P 13 04 12.7
baz=352,SNR=6.5
CCM Cathedral Cave 145.54 22 PKIKP PKPab 13 04 12.7 -0.1
CCM Cathedral Cave 145.54 22 PKPab 13 04 12.7 -0.1
CCM Cathedral Cave 145.54 22 P 13 04 12.4
baz=332
N53A Lisbon 145.55 7 PKPab 13 04 12.8 +0.1
Q44A Meyer Farm, Va 145.55 19 PKPbc 13 04 12.6 +0.1
O49A Covington 145.58 12 PKPbc 13 04 12.5 -0.1
ODNJ Ogdensburg 145.59 359 PKPab 13 04 13.0 +0.2
U38A Gravette 145.60 27 PKPbc 13 04 12.9 +0.1
PAL Palisades 145.65 358 PKIKP PKPab 13 04 13.0 -0.1
PAL Palisades 145.65 358 PKPab 13 04 13.0 -0.1
PAL Palisades 145.65 358 P 13 04 12.6
baz=3.1,SNR=5.7
N56A West Decatur 145.68 4 P 13 04 13.2
baz=355,SNR=8.6
ABTX Abilene, Hawle 145.69 38 PKPab 13 04 14.2 +0.6
ABTX Abilene, Hawle 145.69 38 P 13 04 14.4
baz=314
N59A State Game Lan 145.77 0 PKPab 13 04 13.9 +0.3
N59A State Game Lan 145.77 0 P 13 04 13.8
baz=360,SNR=15
ACSO Alum Creek Sta 145.79 10 PKPbc 13 04 13.3 +0.1
ACSO Alum Creek Sta 145.79 10 P 13 04 13.3
baz=347,SNR=5.2
N60A Cedar Hill Far 145.81 359 P 13 04 13.5
baz=1.0,SNR=5.3
N58A Sunbury 145.83 2 PKPbc 13 04 13.5 +0.2
N58A Sunbury 145.83 2 P 13 04 13.7
baz=358,SNR=19
N57A Milroy 145.88 3 P 13 04 13.6
baz=357,SNR=9.3
N61A South Mountain 145.91 358 P 13 04 14.5
baz=2.4
MGMO Mountain Grove 145.92 24 PKPbc 13 04 13.5 -0.3
HHAR Hobbs 145.93 27 PKPbc 13 04 13.7 -0.1
SSPA Standing Stone 145.98 3 PKPbc 13 04 13.8 0.0
SSPA Standing Stone 145.98 3 P 13 04 14.0
baz=356
OLIL Olney 145.99 18 PKPab 13 04 14.3 -0.1
BLO Bloomington 146.03 15 PKP2 PKPbc 13 04 14.2 +0.2
BLO Bloomington 146.03 15 PKPbc 13 04 14.2 +0.2
P48A Milroy 146.03 14 PKPbc 13 04 14.1 +0.1
O53A New Philadelph 146.05 8 PKPbc 13 04 14.2 +0.2
O53A New Philadelph 146.05 8 P 13 04 14.7
baz=350,SNR=9.9
LUPA Lehigh Univers 146.09 360 PKPab 13 04 15.2 +0.5
O52A Adamsville 146.09 9 PKPab 13 04 15.0 +0.3
P49A Miami Univ. Ec 146.12 13 PKPbc 13 04 14.1 -0.2
P49A Miami Univ. Ec 146.12 13 P 13 04 14.1
baz=344,SNR=9.4
O54A Avella 146.22 7 PKPab 13 04 15.1 -0.2
O56A Blue Knob Stat 146.31 4 PKPbc 13 04 15.0 +0.2
O56A Blue Knob Stat 146.31 4 P 13 04 15.1
baz=355,SNR=15
U40A Yellville 146.35 26 PKPbc 13 04 15.2 +0.2
U40A Yellville 146.35 26 P 13 04 14.7
baz=328
O60A Telford 146.37 360 P 13 04 15.3
baz=0.5
O59A Robesonia 146.37 1 P 13 04 15.1
baz=359,SNR=8.3
O57A Amberson 146.42 3 P 13 04 15.2
baz=356,SNR=6.4
PAGS Pennsylvania G 146.44 2 PKPbc 13 04 14.8 -0.4
P51A Williamsport 146.51 11 PKPbc 13 04 15.5 +0.1
P52A Corning 146.52 9 PKPdf 13 04 12.6 -1.4
P52A Corning 146.52 9 P 13 04 15.0
baz=348,SNR=8.8
O58A Lewisberry 146.54 2 P 13 04 15.5
baz=358
X37A Clayton 146.62 31 PKPbc 13 04 16.2 +0.3
MVL Millersville 146.68 1 PKiKP 13 04 18.1 -0.5
P53A Whipple 146.77 8 PKPbc 13 04 16.3 +0.1
MCWV Mont Chateau 146.80 6 P 13 04 17.1
baz=352,SNR=6.3
P60A Greenville 146.87 0 PKPbc 13 04 16.8 +0.4
P60A Greenville 146.87 0 P 13 04 17.0
baz=0.1,SNR=5.6
Q51A Peebles 146.90 11 PKPbc 13 04 16.6 0.0
W39A Magazine 146.90 28 PKPbc 13 04 17.3 +0.6
W39A Magazine 146.90 28 P 13 04 16.4
baz=325
PBMO Poplar Bluff 146.97 22 PKPbc 13 04 16.7 -0.1
WCI Wyandotte Cave 146.98 16 PKP2 PKPbc 13 04 16.9 +0.1
WCI Wyandotte Cave 146.98 16 PKPbc 13 04 16.9 +0.1
WCI Wyandotte Cave 146.98 16 P 13 04 16.9
baz=340
JCT Junction City 147.04 41 PKP2 PKPbc 13 04 16.9 -0.4
JCT Junction City 147.04 41 PKPbc 13 04 16.9 -0.4
JCT Junction City 147.04 41 P 13 04 18.4
baz=311
P56A Dayton Farm, R 147.04 5 P 13 04 17.4
baz=354,SNR=10.0
FCAR Ozark Folk Cen 147.06 25 PKPbc 13 04 16.9 -0.2
P59A Jarrettsville 147.06 1 P 13 04 18.4
baz=359
P57A Homestead Farm 147.12 4 PKPbc 13 04 17.4 +0.3
P57A Homestead Farm 147.12 4 P 13 04 17.3
baz=356,SNR=9.6
Q52A Bidwell 147.15 10 PKPbc 13 04 17.1 -0.1
R49A Shelbyville 147.20 14 PKPbc 13 04 17.6 +0.2
SDMD Soldier's Deli 147.25 2 PKPbc 13 04 19.3 0.0
LCAR Lake Charles 147.31 24 PKPbc 13 04 17.8 0.0
Q54A Coxs Mills 147.34 8 PKPbc 13 04 18.9 +0.3
Q53A Leroy 147.37 9 P 13 04 18.2
baz=349,SNR=5.6
R50A Paris 147.41 13 PKPbc 13 04 18.0 0.0
WHTX Lake Whitney, 147.44 36 PKPab 13 04 19.7 -0.6
WHTX Lake Whitney, 147.44 36 P 13 04 19.5
baz=316
Q56A Snyder Ridge, 147.47 5 P 13 04 18.4
baz=354
WHAR Wooly Hollow 147.50 26 PKPbc PKPbc 13 04 18.4 +0.1
WHAR PKPab PKiKP 13 04 20.9 +0.4
MIAR Mount Ida 147.53 28 PKP2 PKPbc 13 04 18.9 +0.4
MIAR Mount Ida 147.53 28 PKPbc 13 04 18.9 +0.4
MIAR Mount Ida 147.53 28 P 13 04 18.8
baz=325
Q57A Strasburg 147.54 4 P 13 04 18.4
baz=355,SNR=8.1
W41B Gary Mavity, V 147.61 26 P 13 04 18.3
baz=328
R53A Hurricane 147.82 9 PKPbc 13 04 19.3 +0.2
T47A Sharon Grove 147.90 18 PKPbc 13 04 19.8 +0.4
R56A Bull Pasture M 148.08 6 P 13 04 17.8
baz=353
R54A Victor 148.11 8 P 13 04 21.5
baz=350
R55A Marlinton 148.13 7 PKPab 13 04 22.9 +0.1
R55A Marlinton 148.13 7 P 13 04 21.8
baz=352
S51A Beattyville 148.18 12 PKPbc 13 04 20.1 -0.1
R57A Stanardsville 148.27 4 P 13 04 21.1
baz=355
R58A Rapidan 148.30 4 P 13 04 20.4
baz=356
237A Washetta, Mont 148.38 34 PKiKP 13 04 22.2 -0.2
S54A Dingess, Beckl 148.44 9 PKiKP 13 04 21.9 -0.5
S54A Dingess, Beckl 148.44 9 P 13 04 20.8
baz=349
WLAR White Oak Lake 148.45 29 PKiKP 13 04 22.2 -0.3
WVT Waverly 148.46 19 PKP2 PKPbc 13 04 21.3 +0.4
WVT Waverly 148.46 19 PKPbc 13 04 21.3 +0.4

WVT	**Waverly**	**148.47**	**19**	P			13 04 21.1	
	baz=336							
T50A	**Nancy**	**148.49**	**14**			**PKPbc**	**13 04 20.9**	**0.0**
R58B	**Mineral**	**148.64**	**4**			**PKPbc**	**13 04 21.9**	**+0.6**
R58B				PKPab		**PKPab**	**13 04 25.0**	**+0.2**
R58B	**Mineral**	**148.65**	**4**	P			13 04 21.7	
	baz=356							
U49A	**Red Boiling Sp**	**148.73**	**16**			**PKPbc**	**13 04 21.7**	**+0.1**
S57A	**Dark Hollow, R**	**148.76**	**5**			**PKPbc**	**13 04 22.1**	**+0.5**
S57A				PKPab		**PKPab**	**13 04 25.9**	**+0.5**
S57A	**Dark Hollow, R**	**148.76**	**5**	P			13 04 22.0	
	baz=354							
S59A	**Mechanicsville**	**148.88**	**3**	P			13 04 22.6	
	baz=357							
CCAR	**Cane Creek**	**148.88**	**27**			**PKPbc**	**13 04 21.6**	**-0.4**
CLTN	**Cedars of Leba**	**148.97**	**17**			**PKPbc**	**13 04 22.7**	**+0.5**
V48A	**Smith Brothers**	**149.14**	**18**			**PKPbc**	**13 04 22.9**	**+0.3**
NATX	**Nacogdoches**	**149.19**	**33**			**PKiKP**	**13 04 24.4**	**+0.4**
OXF	**Oxford**	**149.35**	**23**	PKPdf		**PKPdf**	**13 04 17.7**	**-1.1**
OXF						**PKPbc**	**13 04 23.6**	**+0.4**
OXF	**Oxford**	**149.35**	**23**	P			13 04 23.4	
	baz=332							
T56A	**Rocky Mt**	**149.37**	**7**	P			13 04 23.2	
	baz=352							
PLAL	**Pickwick Lake**	**149.42**	**21**	PKPdf		**PKPdf**	**13 04 16.9**	**-2.0**
PLAL						**PKPbc**	**13 04 23.4**	**+0.1**
V51A	**Loudon**	**149.77**	**14**			**PKiKP**	**13 04 24.8**	**-0.4**
SWET	**Sewanee**	**149.90**	**17**	PKPdf		**PKPdf**	**13 04 17.2**	**-2.5**
SWET						**PKPbc**	**13 04 24.6**	**0.0**
V52A	**Sevierville**	**149.91**	**13**	PKPdf		**PKPdf**	**13 04 18.0**	**-1.6**
V52A						**PKPbc**	**13 04 24.7**	**+0.2**
TKL	**Tuckaleechee C**	**150.04**	**14**	PKP2		**PKiKP**	**13 04 25.4**	**-0.4**
TKL	**Tuckaleechee C**	**150.04**	**14**			**PKiKP**	**13 04 25.4**	**-0.4**
CPCT	**Cooper Cave**	**150.06**	**15**			**PKPbc**	**13 04 25.1**	**+0.2**
V53A	**Saluda**	**150.25**	**12**			**PKiKP**	**13 04 25.9**	**-0.3**
X48A	**Hartselle**	**150.26**	**19**			**PKPbc**	**13 04 25.2**	**-0.2**
LVC	**Limon Verde**	**150.31**	**192**	PKPbc		**PKPbc**	**13 04 26.0**	**-0.3**
	comp=Z,8.5nm,0.8s,baz=282,slow=3.3,SNR=6.1							
LVC	**Limon Verde**	**150.31**	**192**	PKPdf		**PKPdf**	**13 04 17.4**	**-3.8**
LVC						**PKiKP**	**13 04 29.7**	**+2.5**
W52A	**Murphy**	**150.55**	**14**			**PKPbc**	**13 04 26.3**	**+0.1**
BG3	**Lake Jocassee**	**150.87**	**13**			**PKiKP**	**13 04 27.9**	**+0.4**
Y49A	**Blount Mountai**	**151.01**	**19**			**PKPbc**	**13 04 27.1**	**-0.1**
KMSC	**Kings Mountain**	**151.04**	**10**			**PKPbc**	**13 04 27.0**	**-0.2**
KMSC				PKPab		**PKPab**	**13 04 34.4**	**-0.3**
KMSC	**Kings Mountain**	**151.04**	**10**	P			13 04 27.7	
	baz=348							
PAULI	**Pauline**	**151.26**	**11**			**PKPbc**	**13 04 27.9**	**+0.1**
LRAL	**Lakeview Retre**	**151.56**	**21**	P			13 04 28.4	
	baz=336							
Y52A	**Lilburn**	**151.68**	**15**			**PKiKP**	**13 04 29.6**	**+0.4**
Y52A				PKPab		**pPKPdf**	**13 04 38.4**	**+0.6**
HODGE	**Hodges**	**151.75**	**12**			**PKiKP**	**13 04 29.7**	**+0.4**
HODGE				PKPab		**PKPab**	**13 04 37.4**	**-0.3**
GOGA	**Godfrey**	**152.26**	**14**	P			13 04 30.7	
	baz=343							
152A	**Waverly Hall**	**152.63**	**17**			**PKiKP**	**13 04 31.9**	**+0.8**
SIV	**San Ignacio**	**153.43**	**212**	PKPbc		**PKiKP**	**13 04 33.9**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=208,slow=1.0,SNR=5.0							
LPAZ	**La Paz**	**156.17**	**198**	PKPab		**PKPab**	**13 05 01.2**	**+3.7**
	comp=Z,1.4nm,1.0s,baz=153,slow=2.3,SNR=2.3							

IASPEI ***11*** *12:47:31.3±0.8, 44.°52N±0.°01×6.°73E±0.°02, h12km±6km, Error ellipse: s-maj=2.6km s-min=2.0km az=65.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

ROM ***11*** *12:47:31.4±0.2, 44.°510N±0.°006×6.°73E±0.°02, h9km±1km, ML1.9/14, Error ellipse: s-maj=1.3km s-min=0.1km az=65.0*

LDG ***11*** *12:47:31.6±0.0, 44.°52N×6.°72E, h2km, Md2.7/1, Ml2.4/20, Error ellipse: s-maj=1.2km s-min=0.8km az=57.0*

STR ***11*** *12:47:31.6±0.2, 45.°N±1.°×±.°, h8km±3km, MLv1.9/9, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

GEN ***11*** *12:47:31.3, 44.°50N×6.°68E, h5km±1km, Ml1.9*

ISC 11 12:47:32.0±0.8, 44°51N±0.°01×6°75E±0.°02, h14km±5km, n83, σ1°50/149, 1C-2D, France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SURF	**Saint Ours**	**0.06**	**126**	Pg		**Pg**	**12 47 33.8**	**-1.1**
OGAG	**Argentiere**	**0.16**	**249**	Pg		**Pg**	**12 47 37.3**	**+1.2**
OGAG				Sg		**Sb**	**12 47 41.5**	**+1.4**
MBDF	**Montbardon**	**0.21**	**4**	*e*Pg		**Pg**	**12 47 35.8**	**-1.1**
MBDF				*e*Sg		**Sg**	**12 47 38.7**	**-1.5**
	96nm,0.3s							
PZZ	**Stroppo**	**0.26**	**91**	P		**Pg**	**12 47 37.4**	**-0.2**
PZZ				S		**Sg**	**12 47 41.7**	**+0.3**
PZZ	**Stroppo**	**0.26**	**91**	P		**Pg**	**12 47 37.4**	**-0.2**
PZZ				S		**Sg**	**12 47 42.0**	**+0.5**
PZZ				AML		AML		
	comp=E,648μm,0.7s							
PZZ				AML		AML		
	comp=N,690μm,0.8s							
RRL	**Rocca Remolon**	**0.41**	**4**	P		**Pg**	**12 47 39.6**	**-0.7**
RRL				S		**Sg**	**12 47 45.8**	**-0.1**
RRL	**Rocca Remolon**	**0.41**	**4**	P		**Pg**	**12 47 39.6**	**-0.7**
RRL				S		**Sg**	**12 47 46.0**	**+0.2**
RRL				AML		AML		
	comp=E,166μm,0.2s							
RRL				AML		AML		
	comp=N,167μm,1.0s							
BHB	**Bricherasio**	**0.49**	**48**	P		**Pg**	**12 47 41.4**	**-0.3**
BHB				S		**Sg**	**12 47 48.3**	**0.0**
BHB	**Bricherasio**	**0.49**	**48**	P		**Pg**	**12 47 41.4**	**-0.3**
BHB				S		**Sg**	**12 47 48.8**	**+0.5**
BHB				AML		AML		
	comp=E,150μm,0.4s							
BHB				AML		AML		
	comp=N,182μm,0.6s							
STV	**Sant Anna di V**	**0.49**	**123**	P		**Pg**	**12 47 41.5**	**-0.3**
STV				S		**Sg**	**12 47 48.2**	**-0.1**
STV	**Sant Anna di V**	**0.49**	**123**	P		**Pg**	**12 47 41.4**	**-0.3**
STV				S		**Sg**	**12 47 48.4**	**+0.1**
STV				AML		AML		
	comp=E,128μm,0.3s							
STV				AML		AML		
	comp=N,131μm,0.4s							
STV				AML		AML		
	comp=N,131μm,0.4s							
OGDI	**Digne**	**0.52**	**219**	Pg		**Pg**	**12 47 42.5**	**+0.3**
BNI	**Bardonecchia**	**0.54**	**355**	P		**Pg**	**12 47 41.9**	**-0.8**
BNI				S		**Sg**	**12 47 49.9**	**-0.1**
BNI				AML		AML		
	comp=E,45μm,0.4s							
BNI				AML		AML		
	comp=N,49μm,0.6s							
BNI				AML		AML		
	comp=E,45μm,0.4s							
ENR	**Entracque**	**0.56**	**121**	P		**Pg**	**12 47 42.7**	**-0.2**
ENR	**Entracque**	**0.56**	**121**	P		**Pg**	**12 47 42.6**	**-0.4**
ENR				S		**Sg**	**12 47 50.4**	**0.0**
ENR				AML		AML		
	comp=E,207μm,1.2s							
ENR				AML		AML		
	comp=N,208μm,1.2s							
OGMO	**Fort Saint-Gob**	**0.70**	**356**	Pg		**Pg**	**12 47 44.6**	**-1.0**
OGMO				Sg		**Sg**	**12 47 54.3**	**-0.5**
TURF	**col de Turini**	**0.71**	**139**	Pg		**Pg**	**12 47 45.3**	**-0.5**
TURF				Pn		**Pn**	**12 47 47.4**	**-0.4**
TURF				Sg		**Sg**	**12 47 55.5**	**+0.3**
RSP	**Reno Superiore**	**0.73**	**30**	P		**Pb**	**12 47 45.9**	**-0.7**
RSP				S		**Sb**	**12 47 56.6**	**0.0**
RSP	**Reno Superiore**	**0.73**	**30**	P		**Pb**	**12 47 45.8**	**-0.8**
RSP				S		**Sb**	**12 47 56.6**	**0.0**
RSP				AML		AML		
	comp=E,139μm,0.3s							
RSP				AML		AML		
	comp=N,122μm,0.1s							
ORIF	**Oris-en-Rattie**	**0.74**	**303**	*e*Pg		**Pb**	**12 47 44.4**	**-2.4**
ORIF				*e*Sg		**Sb**	**12 47 53.6**	**-3.2**
	comp=N,60nm,0.3s							
ORIF	**Oris-en-Rattie**	**0.74**	**303**	Pg		**Pb**	**12 47 44.5**	**-2.2**
ORIF	**Oris-en-Rattie**	**0.74**	**303**	P		**Pb**	**12 47 44.6**	**-2.2**
ORIF				S		**Sb**	**12 47 53.6**	**-3.2**
ORIF				AML		AML		
	comp=N,100μm,0.2s							
ORIF				AML		AML		
	comp=E,93μm,1.0s							
CALF	**Calern**	**0.77**	**171**	Pg		**Pb**	**12 47 46.4**	**-0.8**
CALF				Sg		**Sb**	**12 47 56.9**	**-0.7**
SAOF	**Saorge**	**0.78**	**132**	Pg		**Pb**	**12 47 46.8**	**-0.6**
SAOF				Sg		**Sb**	**12 47 57.4**	**-0.5**
SAOF	**Saorge**	**0.78**	**132**	P		**Pb**	**12 47 46.8**	**-0.6**
SAOF				S		**Sb**	**12 47 57.5**	**-0.4**
SBF	**Sospel**	**0.81**	**143**	*e*Pg		**Pb**	**12 47 47.0**	**-1.0**
SBF				*e*Sg		**Sb**	**12 47 58.5**	**-0.4**
ESCA	**l'Escarene**	**0.82**	**146**	Pg		**Pb**	**12 47 47.3**	**-0.7**
ESCA				Sg		**Sb**	**12 47 58.2**	**-0.6**
GDM	**Grand'Maison**	**0.82**	**327**	Pg		**Pb**	**12 47 46.5**	**-1.8**
GDM				Sg		**Sb**	**12 47 57.0**	**-2.3**
GBOS	**Grotte di Boss**	**0.83**	**109**	P		**Pb**	**12 47 47.6**	**-0.6**
GBOS				S		**Sb**	**12 47 59.0**	**-0.2**
GBOS	**Grotte di Boss**	**0.83**	**109**	P		**Pb**	**12 47 47.5**	**-0.6**
GBOS				S		**Sb**	**12 47 58.9**	**-0.3**
GBOS				AML		AML		
	comp=E,78μm,0.8s							
GBOS				AML		AML		
	comp=N,78μm,0.4s							
FRF	**La Foret Royal**	**0.95**	**185**	*e*Pg		**Pb**	**12 47 49.3**	**-1.0**
FRF				*e*Sg		**Sb**	**12 48 01.7**	**-1.1**
LPG	**La Plagne**	**0.98**	**0**	*e*Pg		**Pb**	**12 47 50.3**	**-0.7**
LPG				*e*Sg		**Sb**	**12 48 02.8**	**-1.2**
	comp=N,14nm,0.2s							
LSD	**Lago del Serru**	**0.98**	**16**	P		**Pb**	**12 47 50.3**	**-0.7**
LSD				S		**Sb**	**12 48 03.8**	**-0.2**
LSD	**Lago del Serru**	**0.98**	**16**	P		**Pb**	**12 47 50.3**	**-0.7**
LSD				S		**Sb**	**12 48 03.8**	**-0.2**
LSD				AML		AML		
	comp=N,54μm,0.9s							
LSD				AML		AML		
	comp=E,62μm,1.1s							
SMRF	**Simiane la Rot**	**1.00**	**238**	*e*Pg		**Pb**	**12 47 50.3**	**-0.8**
SMRF				*e*Sg		**Sb**	**12 48 03.2**	**-1.0**
	comp=E,22nm,0.3s							
LPL	**La Plagne**	**1.00**	**359**	*e*Pg		**Pb**	**12 47 50.3**	**-1.0**
LPL				*e*Sg		**Sb**	**12 48 04.2**	**-0.3**
	comp=E,9.9nm,0.3s							
MONC	**Moncucco Torin**	**1.01**	**56**	P		**Pb**	**12 47 50.9**	**-0.4**
MONC				AML		AML		
	comp=N,86μm,0.9s							
MONC				AML		AML		
	comp=E,92μm,1.1s							
IMI	**Imperia**	**1.02**	**126**	P		**Pb**	**12 47 51.1**	**-0.4**
IMI				S		**Sb**	**12 48 03.3**	**-1.4**
IMI	**Imperia**	**1.02**	**126**	P		**Pb**	**12 47 51.0**	**-0.4**
IMI				S		**Sb**	**12 48 04.4**	**-0.3**
IMI				AML		AML		
	comp=E,91μm,0.9s							
IMI				AML		AML		
	comp=N,163μm,0.5s							
GRN	**Grenoble**	**1.02**	**316**	Pg		**Pb**	**12 47 50.3**	**-1.2**
GRN				Sg		**Sb**	**12 48 04.0**	**-0.9**
RORO	**Rocca Rossa**	**1.02**	**113**	P		**Pb**	**12 47 51.0**	**-0.5**
RORO				S		**Sb**	**12 48 03.6**	**-1.3**
RORO	**Rocca Rossa**	**1.02**	**113**	P		**Pb**	**12 47 51.0**	**-0.5**
RORO				S		**Sb**	**12 48 04.8**	**0.0**
RORO				AML		AML		
	comp=E,66μm,0.5s							
RORO				AML		AML		
	comp=N,72μm,0.6s							
RUSF	**Rustrel**	**1.08**	**238**	Pg		**Pb**	**12 47 52.3**	**-0.1**
RUSF				Sg		**Sn**	**12 48 07.2**	**-0.3**
ARTF	**Artigues**	**1.15**	**217**	Pg		**Pn**	**12 47 53.8**	**+0.1**
ARTF				Sg		**Sn**	**12 48 09.1**	**-0.2**
QLNO	**Quiliano**	**1.16**	**99**	P		**Pn**	**12 47 53.8**	**0.0**
QLNO				AML		AML		
	comp=N,56μm,1.2s							
QLNO				AML		AML		
	comp=E,52μm,1.5s							
RSL	**Roselend**	**1.18**	**356**	Pg		**Pn**	**12 47 54.6**	**+0.4**
RSL				Sg		**Sb**	**12 48 10.1**	**+0.6**
LMR	**La Mourre**	**1.19**	**189**	*e*Pg		**Pn**	**12 47 53.8**	**-0.4**
LMR				*e*Sg		**Sb**	**12 48 09.2**	**-0.4**
	comp=E,20nm,0.3s							
CIRO	**Champorcher**	**1.23**	**28**	P		**Pn**	**12 47 54.7**	**-0.4**
CIRO				S		**Sb**	**12 48 11.6**	**+0.4**
CIRO				AML		AML		
	comp=N,28μm,1.1s							
CIRO				AML		AML		
	comp=E,29μm,0.6s							
PCP	**Piancastagn**	**1.28**	**88**	P		**Pn**	**12 47 55.6**	**0.0**
PCP				S		**Sb**	**12 48 12.7**	**+0.3**
OGSM	**Saint Maurice**	**1.33**	**326**	Pn		**Pn**	**12 47 56.3**	**+0.1**
OGSM				Sg		**Sn**	**12 48 13.8**	**+0.1**
VIVF	**Saint-Julien-l**	**1.52**	**284**	*e*Pg		**Pn**	**12 47 58.3**	**-0.5**
VIVF				*e*Sg		**Sn**	**12 48 18.6**	**+0.1**
	comp=E,14nm,0.3s							
OG35	**Corcelles**	**1.74**	**332**	Pg		**Pb**	**12 48 04.1**	**+0.3**
OG35				Sg		**Sg**	**12 48 27.9**	**-0.2**
LASF	**Ste Croix**	**2.12**	**259**	*e*Pn		**Pn**	**12 48 06.6**	**-0.5**
LASF	**Ste Croix**	**2.12**	**259**	*e*Pg		**Pb**	**12 48 11.0**	**+0.7**
LASF				*e*Sn		**Sn**	**12 48 31.1**	**-2.2**
	comp=E,3.5nm,0.2s							
CABF	**La Chapelle**	**2.15**	**348**	*e*PKIKP		**Pn**	**12 48 08.6**	**+1.1**
CABF	**La Chapelle**	**2.15**	**348**	*e*Pg		**Pb**	**12 48 11.3**	**+0.5**
CABF				*e*Sg		**Sb**	**12 48 39.0**	**+1.7**
	comp=E,5.0nm,0.5s							
PGF	**Pioggiola**	**2.56**	**139**	*e*Pn		**Pn**	**12 48 12.9**	**-0.2**
PGF				*e*Sn		**Sn**	**12 48 43.0**	**-1.1**
	comp=E,3.0nm,0.2s							
TUE	**Stuetta**	**2.68**	**42**	S		**Sn**	**12 48 49.0**	**+1.7**
SMF	**Signal de Mont**	**2.95**	**317**	*e*PKIKP		**Pn**	**12 48 19.6**	**+1.1**
SMF	**Signal de Mont**	**2.95**	**317**	*e*Pg		**Pb**	**12 48 26.1**	**+1.7**
SMF				*e*Sn		**Sn**	**12 48 51.2**	**-2.6**
SMF				*e*Sg		**Sb**	**12 49 03.5**	**+3.1**
	comp=E,1.9nm,0.2s							
AVF	**Avril sur Loir**	**3.30**	**315**	*e*PKIKP		**Pn**	**12 48 24.2**	**+1.0**
AVF	**Avril sur Loir**	**3.30**	**315**	*e*Pg		**Pb**	**12 48 32.1**	**+1.9**
AVF				*e*Sn		**Sn**	**12 48 59.2**	**-3.0**
AVF				*e*Sg		**Sb**	**12 49 12.5**	**+2.3**
	comp=E,2.4nm,0.4s							
HINF	**Hinteralfeld**	**3.31**	**1**	*e*Pn		**Pn**	**12 48 23.0**	**-0.4**
HINF				*e*Sg		**Sg**	**12 49 15.2**	**-2.9**
	comp=E,1.8nm,0.5s							
CAF	**Calviac**	**3.37**	**279**	*e*Pn		**Pn**	**12 48 23.7**	**-0.5**
CAF				*e*Sn		**Sn**	**12 49 01.8**	**-2.2**
CAF				*e*Sg		**Sb**	**12 49 16.0**	**+3.7**
	comp=E,1.1nm,0.3s							
SSF	**Saint Saulge**	**3.41**	**319**	*e*PKIKP		**Pn**	**12 48 26.2**	**+1.4**
SSF	**Saint Saulge**	**3.41**	**319**	*e*Pg		**Pb**	**12 48 34.3**	**+2.1**
SSF				*e*Sn		**Sn**	**12 49 02.2**	**-2.9**
SSF				*e*Sg		**Sb**	**12 49 17.9**	**+4.3**
	comp=E,1.4nm,0.3s							
LOR	**Lormes**	**3.42**	**325**	*e*Pn		**Pn**	**12 48 24.4**	**-0.5**
	baz=146							
LOR	**Lormes**	**3.42**	**325**	*e*Pg		**Pb**	**12 48 34.5**	**+2.2**
	baz=144							
LOR				*e*Sn		**Sn**	**12 49 02.1**	**-3.1**
LOR				*e*Sg		**Sb**	**12 49 18.1**	**+4.4**
	comp=E,2.1nm,0.3s,baz=157							
BGF	**Bois d'Agland**	**3.42**	**308**	*e*Pn		**Pn**	**12 48 23.6**	**-1.3**
BGF	**Bois d'Agland**	**3.42**	**308**	*e*PKIKP		**Pn**	**12 48 26.3**	**+1.4**
BGF	**Bois d'Agland**	**3.42**	**308**	*e*Pg		**Pb**	**12 48 34.4**	**+2.0**
BGF				*e*Sn		**Sn**	**12 49 01.9**	**-3.4**
BGF				*e*Sg		**Sb**	**12 49 18.1**	**+4.3**
	comp=E,6.2nm,0.4s							
MTLF	**Montolieu**	**3.48**	**252**	*e*Pn		**Pn**	**12 48 24.5**	**-1.2**
MTLF	**Montolieu**	**3.48**	**252**	*e*PKIKP		**Pn**	**12 48 28.1**	**+2.4**
MTLF				*e*Sn		**Sn**	**12 49 04.1**	**-2.6**
	comp=E,1.6nm,0.3s							
HAU	**Haudompre**	**3.50**	**356**	*e*PKIKP		**Pn**	**12 48 27.5**	**+1.4**
HAU				*e*Sn		**Sn**	**12 49 04.9**	**-2.5**
	comp=E,3.0nm,0.3s							
TCF	**Toulx Ste Croi**	**3.66**	**301**	*e*PKIKP		**Pn**	**12 48 29.8**	**+1.6**
TCF	**Toulx Ste Croi**	**3.66**	**301**	*e*Pg		**Pb**	**12 48 39.0**	**+2.6**
CDF	**Champ du Feu**	**3.92**	**5**	*e*PKIKP		**Pn**	**12 48 34.2**	**+2.4**
APEC	**Apecchio**	**4.20**	**101**	P		**Pb**	**12 48 47.5**	**+1.8**
FOSV	**Fossato di Vic**	**4.51**	**104**	⇑P		**Pn**	**12 48 40.4**	**+0.5**
ARVD	**Arcevia**	**4.58**	**101**	⇓P		**Pn**	**12 48 43.9**	**+3.0**
CESX	**Cesi**	**4.64**	**112**	P		**Pb**	**12 48 56.4**	**+3.2**
PP3	**Marolino**	**5.08**	**101**	⇓P		**Pg**	**12 49 10.0**	**+0.8**
TRI	**Trieste**	**5.11**	**74**	P		**Pb**	**12 48 59.8**	**-1.3**
TRI				P		**Pg**	**12 49 10.4**	**+0.7**

IDC ***11*** *12:57:08.5±0.9, 29.°02N×131.°41E, h0km, mb3.7/13, mb1 3.8/16, mb1mx3.6/74, mbtmp3.7/16, ML3.3/3, Error ellipse: s-maj=24.1km s-min=19.4km az=101.0*

JMA ***11*** *12:57:11.9±0.1, 29.°00N×131.°30E, h79km±3km, M3.5*

ISC 11 12:57:14.6±0.8, 28°94N±0.°03×131°34E±0.°06, h71km, n39, σ3°18/54, mb3.7/13, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JZK	**Kikaishima**	**1.36**	**243**	P		**Pn**	**12 57 35.6**	**-2.1**
JZK				*e*S		**Sn**	**12 57 53.4**	**-1.7**
JYAK	**Yakushimahirau**	**1.48**	**331**	P		**Pn**	**12 57 36.5**	**-2.9**
JYAK				S		**Sn**	**12 57 54.1**	**-3.9**
JMTN	**Minamitane**	**1.50**	**345**	P		**Pn**	**12 57 36.6**	**-3.0**
JMTN				*e*S		**Sn**	**12 57 54.6**	**-3.9**
JNN	**Nakanoshima**	**1.57**	**305**	P		**Pn**	**12 57 37.7**	**-2.8**
JNN				*e*S		**Sn**	**12 57 57.1**	**-2.9**
JAM	**Amami Oshima**	**1.61**	**251**	P		**Pn**	**12 57 38.7**	**-2.4**
JAM				S		**Sn**	**12 57 58.7**	**-2.4**
JTN	**Tanegashima 3**	**1.74**	**350**	P		**Pn**	**12 57 39.8**	**-3.0**
JTN				S		**Sn**	**12 58 00.4**	**-3.7**
JKC	**Kuchinoerabu**	**1.82**	**327**	P		**Pn**	**12 57 41.3**	**-2.5**
JKC				*e*S		**Sn**	**12 58 02.8**	**-3.1**
JTAJ	**Takarajima**	**1.89**	**277**	P		**Pn**	**12 57 42.4**	**-2.3**
JTAJ				*e*S		**Sn**	**12 58 05.0**	**-2.6**
JAMN	**Amaminishikomi**	**2.03**	**251**	P		**Pn**	**12 57 44.6**	**-2.0**
JAMN				S		**Sn**	**12 58 08.6**	**-2.4**
JTSR	**Tashiro 2**	**2.25**	**351**	P		**Pn**	**12 57 47.2**	**-2.5**
JTSR				S		**Sn**	**12 58 13.0**	**-3.5**
JTK	**Tokunoshima**	**2.40**	**242**	P		**Pn**	**12 57 49.8**	**-1.9**
JTK				S		**Sn**	**12 58 18.1**	**-2.0**
JOKE	**Okinoerabujima**	**2.91**	**238**	P		**Pn**	**12 57 56.5**	**-2.1**
JOKE				S		**Sn**	**12 58 29.7**	**-2.8**
JTZ	**Takazaki**	**2.96**	**356**	P		**Pn**	**12 57 56.8**	**-2.5**
JTZ				S		**Sn**	**12 58 30.4**	**-3.3**
JKDJ	**Kitadaitoujima**	**2.98**	**181**	*e*S		**Sn**	**12 58 28.9**	**-5.2**
JSJ	**Shimokoshiki**	**3.07**	**333**	P		**Pn**	**12 57 57.6**	**-3.2**
JSJ				S		**Sn**	**12 58 31.3**	**-5.1**
JMZ	**Minamidaito 2**	**3.11**	**182**	P		**Pn**	**12 57 58.4**	**-2.9**
JMZ				*e*S		**Sn**	**12 58 32.4**	**-4.9**
JYRO	**Yoronjima**	**3.19**	**234**	P		**Pn**	**12 57 59.9**	**-2.5**
JYRO				S		**Sn**	**12 58 35.4**	**-3.9**
JOW	**Kunigami**	**3.43**	**233**	Pn		**Pn**	**12 58 03.2**	**-2.6**
	10nm,0.3s,baz=108,slow=22,SNR=54							
JOW				Sn		**Sn**	**12 58 39.0**	**-6.3**
	7.9nm,0.3s,baz=65,slow=11,SNR=3.7							
JOW	**Kunigami**	**3.43**	**233**	P		**Pn**	**12 58 03.1**	**-2.6**
JOW				*e*S		**Sn**	**12 58 42.2**	**-3.0**
JIH	**Iheya**	**3.54**	**238**	P		**Pn**	**12 58 04.6**	**-2.5**
JIH				S		**Sn**	**12 58 43.5**	**-4.3**
JIU3	**Izumi3**	**3.63**	**353**	P		**Pn**	**12 58 05.9**	**-2.5**
JIU3				S		**Sn**	**12 58 45.5**	**-4.5**
JNTH	**Nagotoyohara**	**3.81**	**231**	P		**Pn**	**12 58 08.2**	**-2.6**
JNU	**Nakatsue**	**4.19**	**355**	Pn		**Pn**	**12 58 13.5**	**-2.5**
	1.4nm,0.3s,baz=192,slow=12,SNR=23							
JNU				Sn		**Sn**	**12 58 58.1**	**-5.6**
	3.6nm,0.3s,baz=132,slow=21,SNR=9.8							
JKE	**Kume jima 2**	**4.81**	**238**	P		**Pn**	**12 58 21.7**	**-2.8**
MJAR	**Matsushiro Arr**	**9.53**	**36**	Pn		**Pn**	**12 59 27.2**	**-1.8**
	0.3nm,0.3s,baz=177,slow=29,SNR=24							
USRK	**Ussuriysk Ar.**	**15.24**	**2**	Pn		**P**	**13 00 49.1**	**+0.2**
	baz=178,slow=7.4,SNR=5.5							
MKAR	**Makanchi Array**	**41.89**	**309**	P		**P**	**13 04 59.2**	**+1.3**
	0.2nm,0.4s,baz=74,slow=8.9,SNR=2.2							
KURBB	**Kurchatov Arra**	**44.88**	**314**	P		**P**	**13 05 23.6**	**+1.7**
	0.7nm,0.5s,baz=96,slow=9.0,SNR=8.1							
WRA	**Warramunga Arr**	**48.68**	**176**	P		P	13 05 55.5	+3.7
	0.3nm,0.9s,baz=353,slow=8.7,SNR=1.7							
BVAR	**Borovoye Array**	**50.16**	**317**	P		**P**	**13 06 05.9**	**+3.2**
	0.4nm,0.5s,baz=156,slow=11,SNR=4.3							
ASAR	**Alice Springs**	**52.36**	**177**	P		P	13 06 23.2	+3.8
	0.2nm,0.9s,baz=16,slow=37,SNR=2.3							
ARU	**Arti**	**57.02**	**321**	P		P	13 06 56.7	+3.9
	1.5nm,0.2s,baz=264,slow=21,SNR=3.2							
ILAR	**Eielson Array**	**60.74**	**29**	P		**P**	**13 07 20.3**	**+1.8**
	0.2nm,0.7s,baz=289,slow=5.4,SNR=2.9							
INK	**Inuvik**	**65.31**	**24**	P		**P**	**13 07 50.5**	**+1.8**
	2.0nm,1.2s,baz=311,slow=9.4,SNR=4.4							
FINES	**FINESS Array B**	**71.86

0.2nm,0.3s,baz=118,slow=23,SNR=2.2
URZ Sn Sn 13 10 03.7 -12
0.2nm,0.3s,baz=120,slow=23,SNR=2.0
PMG Port Moresby 39.02 294 LR LR 13 28 24.6
comp=Z,22nm,19.4s,baz=3.0,slow=34
ASAR Alice Springs 43.84 266 P P 13 14 15.1 -0.3
0.5nm,0.9s,baz=104,slow=7.1,SNR=6.3
WRA Warramunga Arr 44.78 271 P P 13 14 22.9 0.0
0.3nm,0.3s,baz=110,slow=8.1,SNR=16
FINES FINESS Array B 144.88 341 PKP PKPbc 13 25 44.6 0.0
0.9nm,0.5s,baz=64,slow=3.2,SNR=11

*IDC **11** 13:25:31.4±2.3,5.6S×152.9E,h0km,mb3.5/5, mb1 3.8/5,mb1mx3.4/47,mbtmp3.6/5,Error ellipse: s-maj=109.5km s-min=22.7km az=124.0*
ISC 11 13:25:35.7±1.9,5°9'S±0.4'×153°2'E±0.4',h35km,n6,σ0°93/7, mb3.4/5,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.93**	**239**	Pn		**Pn**	**Pn**	**13 27 15.9**	**+1.2**
	0.4nm,0.3s,baz=163,slow=22,SNR=2.4								
PMG				Sn			**Sn**	**13 28 31.3**	**-1.1**
	0.6nm,0.3s,baz=264,slow=18,SNR=1.5								
WRA	**Warramunga Arr**	**23.05**	**231**	P			**P**	**13 30 38.1**	**0.0**
	0.8nm,0.8s,baz=54,slow=10,SNR=5.0								
ASAR	**Alice Springs**	**25.64**	**224**	P			**P**	**13 31 02.4**	**+0.1**
	0.3nm,0.6s,baz=57,slow=9.1,SNR=9.5								
FITZ	**Fitzroy Crossi**	**29.50**	**243**	P			**P**	**13 31 36.5**	**-0.4**
	0.6nm,0.5s,baz=64,slow=9.3,SNR=1.8								
PETK	**Petropavlovsk-**	**58.88**	**3**	P			**P**	**13 35 31.4**	**+0.5**
	0.9nm,0.6s,baz=131,slow=6.3,SNR=6.8								
ILAR	**Eielson Array**	**83.01**	**22**	P			**P**	**13 37 56.3**	**-0.7**
	0.3nm,1.0s,baz=241,slow=6.3,SNR=2.2								

*TEH **11** 13:41:44.0,26.83N×57.91E,h16km,ML3.4*
*OMAN **11** 13:41:45.4,26.74N×58.25E,h30km,mb4.4/1,ml3.4/15*
ISC 11 13:41:42.9±1.0,26°74N±0.04'×58°13E±0.06',h10km,n33, σ1°47/43,1C-1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JSK1	**Jask**	**1.15**	**196**	*e*Pg		**Pg**	**Pg**	**13 42 06.9**	**+2.0**
KHNJ	**Kahnooj**	**1.26**	**343**	*e*Pg		**Pg**	**Pb**	**13 42 05.0**	**-1.8**
BANOM	**Banah**	**1.83**	**244**	*e*Pn		**Pn**	**Pn**	**13 42 14.2**	**-0.3**
BANOM	**Banah**	**1.83**	**244**	P		**Pn**	**Pn**	**13 42 15.7**	**+1.2**
	SNR=22								
BANOM				S			**Sb**	**13 42 39.9**	**+0.3**
GENO	**Geno**	**1.86**	**291**	*e*Pn		**Pn**	**Pn**	**13 42 15.2**	**+0.2**
SHME	**Shamm**	**1.91**	**249**	*e*Pn		**Pn**	**Pn**	**13 42 15.6**	**+0.1**
SHME	**Shamm**	**1.91**	**249**	P		**Pn**	**Pn**	**13 42 15.7**	**+0.1**
	SNR=35								
SHME				S			**Sb**	**13 42 42.1**	**+0.3**
MDH	**Madha**	**2.18**	**229**	*e*Pn		**Pn**	**Pn**	**13 42 17.6**	**-1.7**
MDH	**Madha**	**2.18**	**229**	P		**Pn**	**Pn**	**13 42 18.4**	**-0.9**
	SNR=6.4								
MASF	**Masafi**	**2.23**	**233**	P		**Pn**	**Pn**	**13 42 21.3**	**+1.3**
MASF				S			**Sb**	**13 42 50.7**	**-0.5**
MSFE	**Esma-Masafi**	**2.24**	**233**	*e*Pn		**Pn**	**Pn**	**13 42 19.2**	**-0.9**
KBAM	**BAM**	**2.40**	**7**	*e*Pn		**Pn**	**Pn**	**13 42 24.0**	**+1.6**
KBAM				*e*				13 42 28.4	
	comp=Z,99nm,0.4s								
UOSS	**Minazif**	**2.49**	**224**	*e*Pn		**Pn**	**Pn**	**13 42 22.6**	**-0.9**
UOSS	**Minazif**	**2.49**	**224**	P		**Pn**	**Pn**	**13 42 23.2**	**-0.4**
HATD	**Hatta, Dubai**	**2.62**	**224**	*e*Pn		**Pn**	**Pn**	**13 42 25.4**	**0.0**
HATD	**Hatta, Dubai**	**2.62**	**224**	⇑P		**Pn**	**Pn**	**13 42 27.8**	**+2.5**
HATD				S			**Sn**	**13 42 55.8**	**-1.5**
FAQ	**Al Faqa, Dubai**	**3.03**	**230**	*e*Pn		**Pn**	**Pn**	**13 42 31.0**	**+0.1**
FAQ	**Al Faqa, Dubai**	**3.03**	**230**	P		**Pn**	**Pn**	**13 42 33.3**	**+2.3**
NGRK	**Negar Kerman**	**3.14**	**337**	*e*Pn		**Pn**	**Pb**	**13 42 35.7**	**-3.4**
NGRK				*e*				13 43 29.2	
	comp=Z,99nm,0.8s								
BIDO	**Bidbid**	**3.21**	**180**	*e*Pn		**Pn**	**Pn**	**13 42 33.0**	**-0.4**
BIDO	**Bidbid**	**3.21**	**180**	P		**Pn**	**Pn**	**13 42 33.2**	**-0.2**
	SNR=5.5								
HOQ	**Hoqain**	**3.23**	**193**	P		**Pn**	**Pn**	**13 42 32.3**	**-1.5**
HOQ				S			**Sn**	**13 43 13.4**	**+1.1**
ASUD	**Al Ashush, Dub**	**3.29**	**231**	*e*Pn		**Pn**	**Pn**	**13 42 35.3**	**+0.8**
ASUD	**Al Ashush, Dub**	**3.29**	**231**	P		**Pn**	**Pn**	**13 42 35.7**	**+1.2**
SMDO	**Samad**	**3.67**	**181**	P		**Pn**	**Pn**	**13 42 40.5**	**+0.6**
	SNR=8.6								
SMDO				S			**Sn**	**13 43 23.4**	**+0.1**
ARQ	**Araqi**	**3.69**	**204**	P		**Pn**	**Pn**	**13 42 42.7**	**+2.7**
	SNR=7.9								
ARQ				S			**Sn**	**13 43 25.8**	**+2.2**
KHGB	**Koh Gabri**	**3.90**	**339**	*e*Pn		**Pn**	**Pn**	**13 42 45.3**	**+2.1**
KHGB				*e*				13 44 00.0	
	comp=Z,99nm,0.6s								
BSY	**Bisya**	**4.07**	**192**	P		**Pn**	**Pn**	**13 42 46.3**	**+1.0**
	SNR=6.9								
WBK	**Wadi Bani Khal**	**4.18**	**169**	P		**Pn**	**Pn**	**13 42 47.6**	**+0.7**
WBK				S			**Sn**	**13 43 35.4**	**-0.5**
JMDO	**Jabal Madar**	**4.35**	**180**	P		**Pn**	**Pn**	**13 42 51.1**	**+1.9**
JLN	**Jalan Bani Buh**	**4.72**	**165**	P		**Pn**	**Pn**	**13 42 54.8**	**+0.6**
JLN				S			**Sn**	**13 43 48.4**	**-0.7**
IKOO	**Kooshah**	**5.71**	**7**	*e*Pn		**Pn**	**Pn**	**13 43 11.2**	**+3.1**
MHTO	**MHTO**	**5.73**	**181**	⇓P		**Pn**	**Pn**	**13 43 09.7**	**+1.6**
MHTO				S			**Sn**	**13 44 13.2**	**-0.8**

*IDC **11** 14:56:17.3±1.6,16.28S×166.56E,h0km,mb3.9/5, mb1 4.0/6,mb1mx3.7/37,mbtmp3.8/6,ML3.6/1,Error ellipse: s-maj=47.9km s-min=30.1km az=122.0*
ISC 11 14:56:22.9±1.1,16°43S±0.10'×166°4E±0.2',h35km,n10, σ1°36/11,mb3.7/5,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MARNC	**Mare, Loyalty**	**5.25**	**163**	P		**Pn**	**Pn**	**14 57 40.6**	**+1.6**
DZM	**Mont Dzumac**	**5.61**	**180**	Pn		**Pn**	**Pn**	**14 57 44.3**	**+0.3**
	1.7nm,0.3s,baz=67,slow=7.0,SNR=24								
DZM				Sn			**Sn**	**14 58 45.4**	**-2.0**
	0.4nm,0.3s,baz=176,slow=16,SNR=1.5								
YATNC	**Mamie plateau,**	**5.62**	**176**	P		**Pn**	**Pn**	**14 57 43.8**	**-0.2**
OUENC	**Ouen Island, N**	**5.97**	**176**	P		**Pn**	**Pn**	**14 57 50.6**	**+1.7**
PINNC	**Pines Island,**	**6.23**	**171**	P		**Pn**	**Pn**	**14 57 53.6**	**+1.2**
WRA	**Warramunga Arr**	**30.66**	**259**	P			**P**	**15 02 34.4**	**0.0**
	0.5nm,0.7s,baz=83,slow=7.7,SNR=3.3								
ASAR	**Alice Springs**	**31.34**	**251**	P			**P**	**15 02 41.4**	**+1.0**
	1.8nm,0.6s,baz=77,slow=8.7,SNR=27								
SONM	**Songino Array**	**83.38**	**324**	P			**P**	**15 08 47.3**	**+0.7**
	0.4nm,0.6s,baz=134,slow=6.2,SNR=2.8								
ILAR	**Eielson Array**	**88.38**	**18**	P			**P**	**15 09 09.4**	**-1.4**
	0.2nm,0.5s,baz=239,slow=5.4,SNR=8.6								
MKAR	**Makanchi Array**	**97.87**	**316**	P			**P**	**15 09 54.6**	**-0.4**
	0.3nm,0.7s,baz=99,slow=7.4,SNR=2.8								

IDC 11 14:58:14.0±2.9,6.65S×129.82E,h142km±40km,mb3.1/1, mb1 3.0/5,mb1mx2.8/39,mbtmp3.4/5,Error ellipse: s-maj=70.6km s-min=21.2km az=88.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.92**	**14**	P			Pn	14 59 39.9	+0.2
	0.6nm,0.3s,baz=342,slow=24,SNR=7.1								
SIJI				S			Sn	15 00 42.0	-4.7
	1.5nm,0.3s,baz=270,slow=24,SNR=10.0								
FITZ	**Fitzroy Crossi**	**12.08**	**199**	P			Pn	15 01 01.5	-0.1
	0.1nm,0.3s,baz=26,slow=11,SNR=2.0								
FITZ				S			Sn	15 03 04.0	-11
	0.1nm,0.3s,baz=206,slow=23,SNR=1.5								
WRA	**Warramunga Arr**	**13.92**	**162**	P			Pn	15 01 24.0	-1.3
	0.2nm,0.3s,baz=346,slow=13,SNR=11								
WRA				S			Sn	15 03 48.8	-11
	0.1nm,0.3s,baz=348,slow=21,SNR=3.5								
ASAR	**Alice Springs**	**17.37**	**167**	P			Pn	15 02 08.2	+0.4
	0.2nm,0.3s,baz=343,slow=9.4,SNR=14								
ASAR				S			S	15 05 15.1	-5.7
	0.0nm,0.3s,baz=220,slow=24,SNR=1.3								
MKAR	**Makanchi Array**	**67.84**	**327**	P			P	15 08 56.7	-0.1
	0.3nm,0.5s,baz=128,slow=8.1,SNR=3.9								

*AUST **11** 15:22:13.5±0.2,33.35S×138.55E,h7km±1km,Error ellipse: s-maj=2.2km s-min=1.6km az=17.0*
*IDC **11** 15:22:16.5±6.5,32.87S×138.45E,h0km,mb1 3.1/3, mb1mx3.1/23,mbtmp2.9/3,ML2.8/3,Error ellipse: s-maj=75.9km s-min=21.7km az=10.0*
ISC 11 15:22:13.3±1.1,33°31S±0.05'×138°53E±0.04',h14km±6km, n12,σ2°27/19,Near coast of South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AUJCS	**Jamestown Cent**	**0.13**	**30**	P		**Pg**	**Pg**	**15 22 17.2**	**+0.3**
	baz=0.2								
AUJCS				S			**Sg**	**15 22 19.5**	**+0.2**
	baz=0.2								
HTT	**Hallett**	**0.35**	**110**	P			**Pg**	**15 22 19.7**	**-0.7**
	baz=0.3								
HTT				S			**Sg**	**15 22 24.2**	**-1.0**
	baz=0.3								
AUMAR	**Marden Senior**	**1.57**	**177**	P			**Pn**	**15 22 42.3**	**+1.5**
	baz=1.5								
AUMAR				S			**Sn**	**15 23 02.9**	**+1.8**
	baz=1.5								
BBOO	**Buckleboo**	**2.14**	**283**	P			**Pn**	**15 22 50.3**	**+1.8**
	baz=2.2								
BBOO				S			**Sn**	**15 23 17.2**	**+2.2**
	baz=2.2								
LCRK	**Leigh Creek**	**2.87**	**355**	P			**Pn**	**15 23 00.7**	**+2.0**
	baz=2.9								
STKA	**Stephens Creek**	**2.96**	**62**	Pn			**Pn**	**15 23 03.0**	**+3.2**
	0.8nm,0.3s,baz=246,slow=15,SNR=12								
STKA				Sn			**Sn**	**15 23 38.5**	**+3.4**
	1.6nm,0.3s,baz=246,slow=20,SNR=4.7								
STKA				Lg			Lg	15 23 47.1	
	2.7nm,0.3s,baz=322,slow=24,SNR=7.7								
STKA	**Stephens Creek**	**2.96**	**62**	P			**Pn**	**15 23 00.7**	**+0.9**
	baz=3.0								
STKA				S			**Sn**	**15 23 37.7**	**+2.6**
	baz=3.0								
ARPS	**Mount Arapiles**	**4.39**	**143**	P			Pn	15 23 19.5	0.0
	baz=4.4								
ARPS				S			Sn	15 24 08.6	-1.8
	baz=4.4								
MULG	**Mulgathing**	**4.86**	**307**	P			**Pn**	**15 23 27.6**	**+1.6**
	baz=4.9								
CMSA	**Cobar Meteorol**	**6.31**	**76**	P			**Pn**	**15 23 46.9**	**+1.0**
	baz=6.3								
CMSA				S			**Sn**	**15 24 56.5**	**-1.3**
	baz=6.3								
ASAR	**Alice Springs**	**10.44**	**336**	Pn			**Pn**	**15 24 42.7**	**+0.1**
	0.1nm,0.3s,baz=168,slow=8.2,SNR=10								
ASAR				Sn			**Sn**	**15 26 35.4**	**-4.1**
	0.1nm,0.3s,baz=158,slow=22,SNR=2.3								
WRA	**Warramunga Arr**	**13.83**	**343**	Pn			**Pn**	**15 25 26.3**	**-2.7**
	0.1nm,0.3s,baz=159,slow=12,SNR=4.6								

*IDC **11** 16:28:25.8±2.5,12.33N×125.05E,h0km,mb3.3/4, mb1 3.5/4,mb1mx3.2/48,mbtmp3.3/4,Error ellipse: s-maj=101.6km s-min=25.4km az=55.0*
*MAN **11** 16:28:27.6,12.83N×125.64E,h22km,mb4.8,ML3.7, MS3.6*
ISC 11 16:28:27.4±1.3,12°80N±0.06'×125°32E±0.10',h28km,n14, σ1°89/17,mb3.2/4,3C-1D,Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.19**	**174**	*e*P			**Pb**	**16 28 49.1**	**-0.3**
OCLP	**Ormoc**	**1.87**	**202**	*e*P			**Pb**	**16 29 01.0**	**0.0**
OCLP				*e*S			**Sb**	**16 29 26.1**	**+2.2**
SCSP	**San Jose Seism**	**1.95**	**296**	*e*P			**Pb**	**16 29 04.6**	**+2.3**
MSLP	**Maasin**	**2.69**	**190**	*e*P			**Pb**	**16 29 12.8**	**-2.0**
MSLP				*e*S			**Sb**	**16 29 46.3**	**-1.0**
LLP	**Lapu-Lapu**	**2.80**	**208**	‖*e*P			**Pb**	**16 29 19.5**	**+2.7**
LLP				*e*S			**Sb**	**16 29 47.0**	**-3.6**
RCP	**Roxas**	**2.80**	**244**	‖*e*P			**Pb**	**16 29 15.6**	**-1.2**
JCNP	**Jose Panganiba**	**2.95**	**300**	*e*P			**Pb**	**16 29 17.0**	**-2.3**
JCNP				*e*S			**Sb**	**16 29 55.0**	**0.0**
GLSP	**General Luna,**	**3.10**	**165**	*e*P			**Pn**	**16 29 15.0**	**+0.5**
GLSP				*e*S			**Sn**	**16 29 52.7**	**+2.1**
JAP	**San Jose, Anti**	**3.88**	**239**	‖*e*P			Pn	16 29 15.2	-10
LQP	**Lukban**	**3.90**	**290**	‖*e*P			**Pb**	**16 29 35.1**	**-0.6**
CMAR	**Chiang Mai Arr**	**26.00**	**286**	P			**P**	**16 33 59.1**	**+0.9**
	0.6nm,0.8s,baz=92,slow=8.1,SNR=4.4								
WRA	**Warramunga Arr**	**33.72**	**165**	P			**P**	**16 35 05.5**	**-1.1**
	0.1nm,0.6s,baz=348,slow=9.4,SNR=1.1								
ASAR	**Alice Springs**	**37.20**	**167**	P			**P**	**16 35 35.9**	**-0.6**
	0.2nm,0.5s,baz=344,slow=7.1,SNR=5.0								
MKAR	**Makanchi Array**	**49.47**	**322**	P			P	16 37 19.6	+4.4
	0.3nm,0.6s,baz=108,slow=9.3,SNR=2.9								

*IDC **11** 16:37:59.1±1.7,1.44S×125.78E,h0km,mb3.1/3, mb1 3.4/4,mb1mx3.2/37,mbtmp3.2/4,ML3.1/1,Error ellipse: s-maj=37.5km s-min=28.1km az=53.0*
*DJA **11** 16:38:02.6±1.0,1°S±6'×12°6E±°,h13km±8km,M3.7/6, mb4.1/1,MLv3.6/6*
ISC 11 16:38:04.9±1.0,1°47S±0.06'×125°87E±0.06',h35km,n12, σ1°53/14,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SANI	**Sanana**	**0.59**	**169**	P			**Pn**	**16 38 16.3**	**-0.6**
SANI				S			**Sn**	**16 38 25.4**	**+0.1**
NLAI	**Namlea**	**2.15**	**145**	P			**Pn**	**16 38 38.6**	**+0.4**
TNTI	**Ternate**	**2.68**	**34**	P			**Pn**	**16 38 44.0**	**-1.5**
KMSI	**Cibinong**	**2.77**	**317**	P			**Pn**	**16 38 46.0**	**-0.8**
LUWI	**Luwuk**	**3.13**	**278**	P			**Pn**	**16 38 51.1**	**-0.6**
GTOI	**Gorontalo**	**3.54**	**306**	P			**Pn**	**16 38 59.7**	**+2.3**
APSI	**Ampana**	**4.26**	**277**	P			**Pn**	**16 39 08.1**	**+0.8**
SIJI	**Sorong**	**5.42**	**84**	Pn			**Pn**	**16 39 23.4**	**+0.1**
	0.6nm,0.3s,baz=336,slow=19,SNR=7.7								
SIJI				Sn			**Sn**	**16 40 28.1**	**+3.6**
	0.3nm,0.3s,baz=204,slow=23,SNR=1.7								
SPSI	**Sidrap Palu**	**6.58**	**248**	P			**Pn**	**16 39 40.3**	**+1.0**
WRA	**Warramunga Arr**	**20.14**	**156**	P			**P**	**16 42 35.2**	**-1.0**
	0.4nm,0.7s,baz=337,slow=12,SNR=5.2								
ASAR	**Alice Springs**	**23.40**	**161**	P			**P**	**16 43 10.6**	**-0.3**
	0.3nm,0.6s,baz=349,slow=12,SNR=8.4								
MKAR	**Makanchi Array**	**61.38**	**327**	P			**P**	**16 48 16.4**	**-1.0**
	0.5nm,0.8s,baz=114,slow=8.3,SNR=2.8								

IDC 11 17:03:44.4±7.7,26°96S×178°85W,h0km,mb3.3/2, mb1 3.6/2,mb1mx3.4/17,mbtmp3.3/2,Error ellipse: s-maj=373.7km s-min=64.9km az=156.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.65**	**264**	P			P	17 11 43.0	0.0
	0.2nm,0.6s,baz=101,slow=7.7,SNR=5.2								
WRA	**Warramunga Arr**	**43.32**	**269**	P			P	17 11 48.1	-0.3
	0.2nm,0.4s,baz=108,slow=8.0,SNR=1.7								
AKASG	**Malin Array Be**	**148.09**	**326**	PKPbc			PKPbc	17 23 31.1	-0.7
	0.3nm,0.4s,baz=39,slow=2.5,SNR=4.3								

*IDC **11** 17:17:36.3±2.2,12.84S×167.07E,h0km,mb3.9/5, mb1 4.2/5,mb1mx3.8/47,mbtmp3.9/5,Error ellipse: s-maj=86.1km s-min=47.4km az=176.0*
ISC 11 17:18:04.7±2.2,12°3S±0.6'×166°9E±0.3',h220km,n8, σ1°00/9,mb3.6/5,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**55.62**	**332**	P			**P**	**17 27 18.4**	**+0.4**
	1.1nm,0.7s,baz=170,slow=8.9,SNR=2.4								
CMAR	**Chiang Mai Arr**	**73.65**	**294**	P			**P**	**17 29 13.6**	**-1.1**
	0.3nm,0.6s,baz=128,slow=4.4,SNR=0.9								
ILAR	**Eielson Array**	**84.37**	**18**	P			**P**	**17 30 12.1**	**+0.2**
	2.6nm,0.6s,baz=231,slow=5.3,SNR=68								
NVAR	**Mina Array Bea**	**86.00**	**49**	P			**P**	**17 30 20.6**	**-0.3**
	0.3nm,0.6s,baz=216,slow=5.4,SNR=2.8								
YKA	**Yellowknife Ar**	**95.60**	**27**	P			**P**	**17 31 03.5**	**-1.2**
	0.3nm,0.8s,baz=256,slow=4.5,SNR=4.6								
ARCES	**ARCESS Array B**	**117.85**	**346**	PKP			**PKiKP**	**17 36 25.3**	**+0.9**
	6.3nm,1.1s,baz=59,slow=2.0,SNR=7.1								
FINES	**FINESS Array B**	**123.37**	**339**	PKP			**PKiKP**	**17 36 36.4**	**+0.9**
	0.9nm,0.9s,baz=138,slow=46,SNR=1.7								
ESDC	**Sonseca Array**	**151.59**	**345**	PKPbc			**PKiKP**	**17 37 34.6**	**+1.0**
	0.2nm,0.4s,baz=354,slow=3.7,SNR=2.8								
ESDC				PKPab			**PKPab**	**17 37 43.2**	**+0.6**
	0.3nm,0.7s,baz=7.4,slow=3.8,SNR=4.6								

*BJI **11** 17:18:40.4±0.0,6.39S×147.70E,h62km,mB5.0/23, mb4.7/30,Ms4.2/1,Ms7 4.0/3*
*DJA **11** 17:18:41.4±1.7,7°S±3'×14°7E±°,h22km±14km,M4.5/18, mB5.0/6,mb4.6/18,MLv4.6/4,Mw(mB)4.3/6*
*IDC **11** 17:18:43.9±1.9,6.46S×147.03E,h59km±18km,mb4.0/18, mb1 4.1/24,mb1mx4.0/46,mbtmp4.3/24,MS3.4/17,*

Ms1 3.4/17,ms1mx3.2/37,Error ellipse: s-maj=18.3km s-min=10.9km az=79.0
*NEIC **11** 17:18:43.6±2.3,6°48S±0.06'×146°99E±0.09,h59km±7km, mb4.8/44,Error ellipse: s-maj=13.2km s-min=8.5km az=94.0*
ISC 11 17:18:42.9±0.4,6°49S±0.05'×147°02E±0.06',h49km,n100, σ1°61/103,mb4.6/45,MS3.5/15,1C,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.91**	**177**	P			**Pn**	**17 19 26.8**	**+0.1**
	70nm,0.3s,baz=11,slow=10,SNR=161								
PMG				S			**Sn**	**17 20 02.9**	**+2.5**
	55nm,0.3s,baz=269,slow=20,SNR=1.8								
PMG				LR			LR	17 20 53.9	
	comp=Z,1μm,18.4s,baz=16,slow=44								
PMG	**Port Moresby**	**2.91**	**177**	P			**Pn**	**17 19 27.2**	**+0.5**
MANU	**Manus Island**	**4.43**	**5**				**Pn**	**17 19 50.2**	**+2.6**
RABL	**Rabaul**	**5.61**	**66**	Pn			**Pn**	**17 20 03.0**	**-0.9**
JAY	**Jayapura**	**7.42**	**302**	P			**Pn**	**17 20 31.1**	**+2.3**
	0.4nm,0.3s,baz=140,slow=16,SNR=1.0								
JAY				LR			LR	17 23 53.9	
	comp=Z,302nm,20.2s,baz=173,slow=42								
JAY	**Jayapura**	**7.42**	**302**	P			**Pn**	**17 20 31.9**	**+3.1**
GENI	**Genyem**	**7.84**	**299**	P			**Pn**	**17 20 35.0**	**+0.5**
	0.2nm38nm,0.9s								
COEN	**Coen**	**8.33**	**207**	Pn			**Pn**	**17 20 40.6**	**-0.6**
HNR	**Honiara**	**13.14**	**104**	P			**Pn**	**17 21 49.4**	**+2.5**
	2.8nm,0.3s,baz=112,slow=13,SNR=1.8								
HNR				LR			LR	17 26 37.4	
	comp=Z,52nm,19.9s,baz=207,slow=36								
HNR	**Honiara**	**13.14**	**104**	Pn			**Pn**	**17 21 48.5**	**+1.6**
CTA	**Charters Tower**	**13.54**	**183**	P			**Pn**	**17 21 54.0**	**+1.5**
	0.4nm,0.3s,baz=23,slow=12,SNR=2.5								
CTAO	**Charters Tower**	**13.54**	**183**	Pn			**Pn**	**17 21 53.7**	**+1.2**
FAKI	**Fak Fak**	**15.14**	**283**				**P**	**17 22 16.4**	**-1.6**
SIJI	**Sorong**	**16.67**	**289**	P			**Pn**	**17 22 34.2**	**+0.8**
	1.8nm,0.3s,baz=104,slow=11,SNR=17								
SIJI				LR			LR	17 29 40.0	
	comp=Z,88nm,20.1s,baz=104,slow=39								
SWI	**Sorong**	**16.68**	**289**	P			**P**	**17 22 34.5**	**-0.6**
	59nm,0.9s								
MTN	**Manton Dam**	**16.88**	**247**				**Pn**	**17 22 35.1**	**-0.7**
WB0	**Warramunga Arr**	**18.02**	**222**	P			**P**	**17 22 49.0**	**-1.0**
WR0	**Warramunga Arr**	**18.06**	**221**				**P**	**17 22 49.5**	**-0.9**
WRAB	**Tennant Creek**	**18.17**	**221**	P			**P**	**17 22 50.2**	**-1.4**
WB2	**Warramunga Arr**	**18.17**	**221**	P			**P**	**17 22 50.6**	**-1.0**
WRA	**Warramunga Arr**	**18.18**	**221**	P			**P**	**17 22 50.9**	**-0.9**
	0.7nm,0.3s,baz=48,slow=11,SNR=82								
WRA				S			**Sn**	**17 26 13.6**	**-0.6**
	0.1nm,0.3s,baz=47,slow=22,SNR=3.5								
WRA	**Warramunga Arr**	**18.18**	**221**	P			**P**	**17 22 49.7**	**-2.0**
EIDS	**Eidsvold**	**19.18**	**169**	P			**Pn**	**17 23 03.4**	**-0.5**
KNRA	**Kununurra**	**20.09**	**241**	P			**P**	**17 23 10.4**	**-2.2**
AS31	**Alice Springs**	**21.23**	**215**	P			**P**	**17 23 24.8**	**-0.1**
ASAR	**Alice Springs**	**21.23**	**215**	P			**P**	**17 23 25.4**	**+0.4**
	3.9nm,0.5s,baz=48,slow=8.9,SNR=65								
ASAR				S			**S**	**17 27 13.9**	**-4.5**
	0.6nm,1.0s,baz=38,slow=21,SNR=2.2								
ASAR				LR			LR	17 32 37.5	
	comp=Z,117nm,18.4s,baz=27,slow=39								
ASAR	**Alice Springs**	**21.23**	**215**	P			**P**	**17 23 24.6**	**-0.3**
SANI	**Sanana**	**21.42**	**281**	P			**P**	**17 23 29.5**	**+2.5**
	14nm,0.6s								
SOEI	**Soe**	**22.75**	**260**	P			**P**	**17 23 42.5**	**+1.1**
SOEI							IAmb	IAmb	17 24 18.0
	comp=Z,47nm,1.5s								
BATI	**Baumata**	**23.40**	**259**	P			**P**	**17 23 48.5**	**+0.8**
	comp=Z,8.4nm,0.7s,baz=90,slow=12,SNR=1.9								
BATI				LR			LR	17 35 28.3	
	comp=Z,155nm,19.3s,baz=114,slow=43								
FITZ	**Fitzroy Crossi**	**23.83**	**239**	P			**P**	**17 23 50.8**	**-0.9**
	comp=Z,3.1nm,0.5s,baz=58,slow=8.4,SNR=22								
FITZ				LR			LR	17 34 48.4	
	comp=Z,136nm,18.8s,baz=61,slow=40								
FITZ	**Fitzroy Crossi**	**23.83**	**239**	P			**P**	**17 23 49.4**	**-2.

	comp=Z,1.5nm,0.6s,baz=174,slow=7.4,SNR=6.6							
MDJ	**Mudanjiang**	**53.23**	**345**	P	**P**	**17 27 56.1**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,89nm,3.3s						
KMI	**Kunming**	**53.30**	**308**	⇑P	P	17 27 49.0	-8.6
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CMAR	**Chiang Mai Arr**	**53.49**	**299**	P	**P**	**17 28 00.1**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=119,slow=5.8,SNR=8.9						
CMAR				LR	LR	17 52 51.3	
	comp=Z,9.7nm,18.3s,baz=115,slow=38						
CMAR	**Chiang Mai Arr**	**53.49**	**299**	P	**P**	**17 28 00.7**	**+1.9**
CD2	**Chengdu**	**55.62**	**314**	*eP*	**P**	**17 28 14.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**57.25**	**328**	*eP*	**P**	**17 28 29.1**	**+3.5**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC				LR	LR		
	comp=Z,62nm,15.6s						
PEA0B	**Petropavlovsk-**	**60.05**	**7**	P	**P**	**17 28 45.0**	**+0.3**
PEA0B				PcP	**PcP**	**17 29 24.8**	**-5.4**
PETK	**Petropavlovsk-**	**60.05**	**7**	P	**P**	**17 28 45.1**	**+0.4**
	comp=Z,3.2nm,0.5s,baz=161,slow=6.1,SNR=41						
PETK				LR	LR	17 51 02.6	
	comp=Z,41nm,21.3s,baz=190,slow=32						
PETK	**Petropavlovsk-**	**60.05**	**7**	P	**P**	**17 28 45.1**	**+0.4**
PETK				PcP	**PcP**	**17 29 23.1**	**-7.1**
SONM	**Songino Array**	**64.83**	**331**	P	**P**	**17 29 16.6**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=163,slow=6.5,SNR=6.5						
SONM				LR	LR	17 57 29.2	
	comp=Z,22nm,20.3s,baz=123,slow=36						
SONM	**Songino Array**	**64.83**	**331**	P	**P**	**17 29 16.7**	**-0.2**
KIWB	**Kanaga Island**	**65.69**	**23**	P	**P**	**17 29 20.0**	**-2.2**
MA2	**Magadan**	**65.92**	**2**	P	**P**	**17 29 23.1**	**-0.4**
MA2				IAmb	IAmb	17 29 24.4	
	comp=Z,6.7nm,0.9s						
VNDA	**Vanda**	**71.43**	**177**	P	**P**	**17 29 58.1**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=328,slow=6.0,SNR=9.8						
VNDA	**Vanda**	**71.43**	**177**	P	**P**	**17 29 58.3**	**+0.7**
VNDA				IAmb	IAmb	17 29 59.1	
	comp=Z,10nm,1.4s						
WMQ	**Urumqi**	**73.17**	**319**	*eP*	**P**	**17 30 09.8**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.8s						
WMQ				LR	LR		
	comp=Z,240nm,17.7s						
MK31	**Makanchi Array**	**77.88**	**321**	P	**P**	**17 30 35.0**	**-0.5**
MK31				IAmb	IAmb	17 31 05.9	
	comp=Z,3.1nm,1.1s						
MKAR	**Makanchi Array**	**77.88**	**321**	P	**P**	**17 30 35.2**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=97,slow=8.6,SNR=10						
MAKZ	**Makanchi**	**78.08**	**320**	P	**P**	**17 30 36.2**	**-0.5**
MAKZ				IAmb	IAmb	17 32 33.6	
	comp=Z,9.3nm,1.6s						
ZALV	**Zalesovo Beam**	**79.43**	**328**	P	**P**	**17 30 42.3**	**-1.5**
	comp=Z,1.7nm,0.5s,baz=115,slow=6.4,SNR=7.2						
ZALV				LR	LR	18 05 15.8	
	comp=Z,19nm,21.6s,baz=33,slow=35						
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**17 31 05.4**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=167,slow=2.2,SNR=35						
QSPA	**South Pole Qui**	**83.49**	**180**	P	**P**	**17 31 05.4**	**+0.1**
QSPA				IAmb	IAmb	17 31 14.1	
	comp=Z,27nm,1.6s						
KTH	**Kantishna Hill**	**83.79**	**23**	P	**P**	**17 31 05.9**	**-0.9**
KTH				IAmb	IAmb	17 34 16.0	
	comp=Z,33nm,1.8s						
SML	**Sawmill**	**84.07**	**26**	P	**P**	**17 31 06.9**	**-1.4**
ILAR	**Eielson Array**	**85.92**	**23**	P	**P**	**17 31 15.5**	**-1.9**
	comp=Z,1.3nm,0.7s,baz=254,slow=5.2,SNR=12						
YKA	**Yellowknife Ar**	**99.59**	**28**	P	**Pdif**	**17 32 21.3**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=255,slow=4.5,SNR=4.0						
YKA				LR	LR	18 15 12.6	
	comp=Z,14nm,20.2s,baz=0.0,slow=34						
GERES	**GERESS Array B**	**122.31**	**325**	PKP	**PKPdf**	**17 37 31.6**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=40,slow=1.7,SNR=2.8						
TORD	**Torodi Ar. Bea**	**145.22**	**284**	PKPbc	**PKPdf**	**17 38 16.5**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=78,slow=3.8,SNR=44						
DBIC	**Dimbokro**	**152.06**	**272**	PKPab	**PKPab**	**17 38 44.3**	**+0.8**
	comp=Z,3.9nm,0.7s,baz=127,slow=5.1,SNR=4.7						

DJA 11 17:40:45.3±0.4, **7°S**±4°×**12°9E**±°, **h208**km±10km, **M3.7/7, mb3.5/6, mB4.1/1, MLv3.8/7, Mw(mB)3.1/1, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.03**	**117**	P	Pn	17 41 25.4	+0.7
SAUI				S	S	17 41 55.5	+0.5
BNDI	**Bandanaira**	**2.55**	**10**	P	Pn	17 41 30.7	+0.5
FAKI	**Fak Fak**	**4.94**	**34**	P	Pn	17 41 58.6	-0.7
SOEI	**Soe**	**5.82**	**242**	P	Pn	17 42 10.5	0.0
	0.1nm14nm,0.7s						
BATI	**Baumata**	**6.55**	**241**	P	Pn	17 42 20.0	+0.1
	0.1nm12nm,0.7s						
PLAI	**Plampang**	**11.73**	**261**	P	Pn	17 43 25.7	-0.9
TWSI	**Taliwang, Sumb**	**12.59**	**262**	P	Pn	17 43 37.9	+0.4

*IDC **11** 17:58:24.0±3.3, 21°.59S×178°.73W, h595km±29km, mb3.2/3, mb1 3.3/5, mb1mx2.9/25, mbtmp4.2/5, Error ellipse: s-maj=65.8km s-min=35.3km az=71.0*
*NEIC **11** 17:58:25.2±2.2, 21°.9S±0°.2×179°.1W±0°.3, h570km±19km, mb4.2/20, Error ellipse: s-maj=37.0km s-min=22.8km az=75.0*

ISC 11 17:58:24.7±1.9, **21°.8S**±0°.1×**178°.9W**±0°.3, **h576**km, **n25, σ1s30/26, mb4.2/14, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.94**	**324**	P	**P**	**17 59 56.2**	**+0.5**
	1.2nm,0.3s,baz=256,slow=23,SNR=8.2						
URZ	**Urewera**	**16.76**	**191**	P	**P**	**18 01 49.5**	**-0.3**
	1.2nm,0.3s,baz=300,slow=23,SNR=8.7						
URZ				S	**S**	**18 04 40.7**	**+3.8**
	0.3nm,0.3s,baz=301,slow=23,SNR=1.5						
BKZ	**Black Stump Fm**	**17.75**	**192**	P	**P**	**18 01 57.7**	**-1.3**
THZ	**Tophouse**	**21.06**	**197**	P	**P**	**18 02 30.0**	**+1.1**
EIDS	**Eidsvold**	**27.68**	**257**	P	**P**	**18 03 28.1**	**+0.4**
EIDS				IAmb	IAmb	18 03 44.6	
	comp=Z,15nm,1.2s						
ARMA	**Armidale**	**27.73**	**246**	P	**P**	**18 03 29.9**	**+1.7**
ARMA				IAmb	IAmb	18 04 06.0	
	comp=Z,20nm,1.5s						
CTAO	**Charters Tower**	**32.52**	**267**	P	**P**	**18 04 09.5**	**+0.2**
STKA	**Stephens Creek**	**36.45**	**246**	P	**P**	**18 04 42.8**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=80,slow=12,SNR=3.5						
MCQ	**Macquarie Isla**	**36.67**	**202**	P	**P**	**18 04 41.5**	**-1.8**
COEN	**Coen**	**36.82**	**276**	P	**P**	**18 04 45.2**	**+0.1**
COEN				IAmb	IAmb	18 04 57.6	
	comp=Z,9.1nm,1.2s						
BBOO	**Buckleboo**	**41.20**	**245**	P	**P**	**18 05 20.4**	**+0.2**
BBOO				IAmb	IAmb	18 05 20.7	
	comp=Z,23nm,1.6s						
WR0	**Warramunga Arr**	**43.38**	**264**	P	**P**	**18 05 36.6**	**-0.8**
WR0				IAmb	IAmb	18 05 37.3	
	comp=Z,4.0nm,1.1s						
AS31	**Alice Springs**	**43.38**	**258**	P	**P**	**18 05 37.2**	**-0.2**
ASAR	**Alice Springs**	**43.38**	**258**	P	**P**	**18 05 37.2**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=88,slow=8.0,SNR=113						
ASAR				PcP	**PcP**	**18 07 11.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=116,slow=3.1,SNR=2.7						
WB0	**Warramunga Arr**	**43.55**	**264**	P	**P**	**18 05 37.9**	**-0.9**
WB0				IAmb	IAmb	18 05 38.6	
	comp=Z,4.1nm,0.6s						
WB2	**Warramunga Arr**	**43.56**	**264**	P	**P**	**18 05 37.9**	**-0.9**
WB2				IAmb	IAmb	18 05 38.7	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**43.57**	**264**	P	**P**	**18 05 38.0**	**-1.0**
	comp=Z,2.7nm,0.6s,baz=96,slow=7.7,SNR=75						
WRA	**Warramunga Arr**	**43.57**	**264**	P	**P**	**18 05 37.8**	**-1.2**
MTN	**Manton Dam**	**48.32**	**272**	P	**P**	**18 06 13.9**	**-1.0**
MTN				IAmb	IAmb	18 06 14.0	
	comp=Z,2.9nm,0.8s						
KNRA	**Kununurra**	**49.72**	**268**	P	**P**	**18 06 24.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**52.00**	**264**	P	**P**	**18 06 41.8**	**+0.1**
SOEI	**Soe**	**55.68**	**273**	P	P	18 07 12.6	+4.7
SOEI				IAmb	IAmb	18 07 13.3	
	comp=Z,6.7nm,0.6s						
MORW	**Morawa**	**58.53**	**248**	P	**P**	**18 07 25.7**	**-1.3**
MORW				IAmb	IAmb	18 07 46.9	
	comp=Z,24nm,1.4s						
KSAR	**Wonju Array Be**	**77.30**	**319**	P	**P**	**18 09 21.8**	**+1.3**
KS19	**Wonju Array Si**	**77.35**	**319**	P	**P**	**18 09 22.6**	**+1.8**
KS19				IAmb	IAmb	18 09 23.8	
	comp=Z,12nm,0.9s						

*GUC **11** 18:19:32.1±0.8, 19°.87S×70°.92W, h35km±3km, ML3.7*
*IDC **11** 18:19:41.9±1.9, 19°.87S×69°.62W, h86km±17km, mb3.3/6, mb1 3.4/8, mb1mx3.3/23, mbtmp3.6/8, MS2.8/2, Ms1 2.8/2, ms1mx2.5/10, Error ellipse: s-maj=35.2km s-min=10.2km az=96.0*

ISC 11 18:19:33.6±1.6, **19°.88S**±0°.03×**70°.7W**±0°.1, **h54**km±13km, **n32, σ2s26/31, mb3.8/5, 5C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.64**	**64**	↓*i*P	**Pn**	**18 19 45.5**	**-1.4**
PSGC				*i* S	**Sn**	**18 19 56.4**	**-0.1**
PSGC				IAML		18 19 58.6	
	comp=N,2μm,0.6s						
TA02	**Huaiquique**	**0.69**	**125**	*e*P	**Pn**	**18 19 46.3**	**-1.1**
TA02				*i* S	**Sn**	**18 19 58.4**	**+1.0**
TA02				IAML		18 20 01.4	
	comp=N,3μm,0.4s						
TA01	**Diego Aracena**	**0.86**	**143**	↓*i*P	**Pn**	**18 19 48.7**	**-0.9**
TA01				*i* S	**Sn**	**18 20 01.5**	**+0.2**
TA01				IAML		18 20 07.3	
	comp=E,2μm,0.3s						
PB11	**IPOC Station P**	**1.02**	**84**	↓*i*P	**Pn**	**18 19 52.1**	**+0.3**
PB11				*i* S	**Sn**	**18 20 08.0**	**+2.6**
PB11				IAML		18 20 13.4	
	comp=N,3μm,0.4s						
PATCX	**Punta Patache**	**1.08**	**150**	⇑*i*P	**Pn**	**18 19 51.9**	**-0.8**
PATCX				*i* S	**Sn**	**18 20 06.9**	**+0.1**
PATCX				IAML		18 20 13.0	
	comp=E,1μm,0.1s						
MNMC	**Minye Minye**	**1.30**	**55**	↓*i*P	**Pn**	**18 19 56.6**	**+0.7**
MNMC				*i* S	**Sn**	**18 20 15.7**	**+3.3**
MNMC				IAML		18 20 22.7	
	comp=N,4μm,0.3s						
PB08	**IPOC Station P**	**1.51**	**100**	⇑*i*P	**Pn**	**18 19 59.8**	**+1.1**
PB08				*i* S	Sn	18 20 21.5	+4.1
PB08				IAML		18 20 30.7	
	comp=N,915nm,0.3s						
AP01	**Chacalluta**	**1.54**	**14**	*e*P	**Pn**	**18 19 58.5**	**-0.3**
AP01				*i* S	**Sn**	**18 20 20.4**	**+2.7**
AP01				IAML		18 20 25.4	
	comp=E,5μm,0.4s						
PB01	**IPOC Station P**	**1.65**	**135**	⇑*i*P	**Pn**	**18 20 00.7**	**+0.4**
PB01				*i* S	**Sn**	**18 20 25.4**	**+5.0**
PB01				IAML		18 20 29.8	
	comp=E,1μm,0.5s						
PB16	**IPOC Station P**	**1.92**	**37**	⇑*i*P	**Pn**	**18 20 05.1**	**+0.6**
PB16				*i* S	**Sn**	**18 20 31.8**	**+4.0**
PB16				IAML		18 20 38.5	
	comp=E,1μm,0.4s						
PB07	**IPOC Station P**	**2.00**	**157**	*e*P	**Pn**	**18 20 04.3**	**-0.9**
PB07				*i* S	**Sn**	**18 20 30.6**	**+1.4**
PB07				IAML		18 20 41.7	
	comp=E,675nm,0.6s						
PB03	**IPOC Station P**	**2.35**	**157**	IAML		18 20 53.5	
	comp=E,388nm,0.5s						
PB09	**IPOC Station P**	**2.36**	**144**	⇑*i*P	**Pn**	**18 20 11.2**	**+1.0**
PB09				*i* S	Sn	18 20 46.1	+8.0
PB09				IAML		18 20 53.0	
	comp=E,1μm,0.7s						
PB04	**IPOC Station P**	**2.50**	**168**	IAML		18 20 58.0	
	comp=N,470nm,0.8s						
PB05	**IPOC Station P**	**3.00**	**171**	IAML		18 21 21.3	
	comp=N,148nm,0.6s						
PB06	**IPOC Station P**	**3.02**	**159**	IAML		18 21 16.8	
	comp=N,203nm,0.5s						
LVC	**Limon Verde**	**3.21**	**148**	P	**Pn**	**18 20 23.3**	**+1.4**
	comp=N,4.7nm,0.3s,baz=325,slow=9.4,SNR=21						
LVC				S	**Sn**	**18 20 59.6**	**+0.6**
	comp=N,7.6nm,0.3s,baz=25,slow=2.5,SNR=3.0						
LPAZ	**La Paz**	**4.34**	**35**	P	**Pn**	**18 20 40.6**	**+2.9**
	comp=N,1.5nm,0.3s,baz=156,slow=1.5,SNR=23						
LPAZ				S	**Sn**	**18 21 23.9**	**-3.5**
	comp=N,0.7nm,0.3s,baz=107,slow=14,SNR=3.6						
LPAZ				LR	LR	18 22 00.9	
	comp=N,39nm,21.7s,baz=248,slow=36						
SIV	**San Ignacio**	**9.97**	**69**	P	**Pn**	**18 21 53.6**	**-0.7**
	comp=N,0.6nm,0.3s,baz=285,slow=12,SNR=9.9						
H03N1	**Juan Fernandez**	**15.35**	**207**	T	T	18 38 50.6	
	baz=32,slow=73						
H03N2	**Juan Fernandez**	**15.36**	**207**	T	T	18 38 56.5	
	baz=32,slow=73						
H03N3	**Juan Fernandez**	**15.37**	**207**	T	T	18 39 04.5	
	baz=32,slow=73						
PLCA	**Paso Flores**	**20.79**	**180**	P	Pn	18 24 15.2	+1.9
	comp=N,0.9nm,0.7s,baz=5.7,slow=10,SNR=3.6						
PTGA	**Pitinga**	**21.75**	**30**	P	**P**	**18 24 20.6**	**-0.1**
	comp=N,1.9nm,0.3s,baz=27,slow=2.3,SNR=1.3						
BDFB	**Brasilia**	**22.04**	**83**	P	**P**	**18 24 18.5**	**-5.5**
	comp=N,0.8nm,0.4s,baz=174,slow=9.2,SNR=1.2						
NVAR	**Mina Array Bea**	**73.17**	**323**	P	P	18 31 07.1	+8.1
	comp=N,0.3nm,0.8s,baz=110,slow=5.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P	**P**	**18 31 28.7**	**-0.6**
	comp=N,0.9nm,0.6s,baz=257,slow=5.1,SNR=3.0						
TORD				LR	LR	19 03 30.2	
	comp=N,17nm,21.2s,baz=235,slow=34						
YKA	**Yellowknife Ar**	**89.10**	**341**	P	P	18 32 30.0	+7.4
	comp=N,0.4nm,0.8s,baz=134,slow=5.3,SNR=4.2						
H11S2	**WAKE ISLAND Hyl**	**25.96**	**279**	T	T	20 57 53.9	
	baz=100,slow=74,SNR=2.9						
H11S1	**WAKE ISLAND Hyl**	**25.97**	**279**	T	T	20 57 54.4	
	baz=100,slow=74,SNR=4.6						
H11S3	**WAKE ISLAND Hyl**	**25.98**	**279**	T	T	20 57 49.5	
	baz=100,slow=74,SNR=4.5						
MKAR	**Makanchi Array**	**145.27**	**33**	PKP	**PKPdf**	**18 39 07.5**	**+2.1**
	comp=N,0.4nm,0.7s,baz=334,slow=1.9,SNR=2.5						

*NEIC **11** 18:26:50.7±2.1, 6°.19S±0°.09×146°.80E±0°.09, h97km±5km, mb4.3/12, Error ellipse: s-maj=14.2km s-min=11.5km az=46.0*
*IDC **11** 18:26:51.3±2.4, 6°.18S×146°.86E, h107km±23km, mb3.7/10, mb1 3.7/14, mb1mx3.6/37, mbtmp4.0/14, Error ellipse: s-maj=26.8km s-min=16.7km az=109.0*

ISC 11 18:26:50.8±0.6, **6°.23S**±0°.06×**146°.78E**±0°.08, **h100**km, **n37, σ1s57/40, mb4.1/12, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.18**	**173**	P	**Pn**	**18 27 40.3**	**+1.3**
	25nm,0.3s,baz=22,slow=4.9,SNR=179						
PMG	**Port Moresby**	**3.18**	**173**	P	**Pn**	**18 27 40.6**	**+1.6**
JAY	**Jayapura**	**7.09**	**301**	P	**Pn**	**18 28 33.2**	**+1.2**
	1.1nm,0.3s,baz=169,slow=8.8,SNR=12						
COEN	**Coen**	**8.46**	**204**		**Pn**	**18 28 52.9**	**+2.2**
COEN					**Sn**	**18 30 23.8**	**-0.7**
HNR	**Honiara**	**13.43**	**105**	Pn	**Pn**	**18 29 58.0**	**+0.6**
CTA	**Charters Tower**	**13.79**	**182**	P	**P**	**18 30 06.2**	**-1.0**
	0.9nm,0.3s,baz=358,slow=14,SNR=11						
CTAO	**Charters Tower**	**13.79**	**182**		**P**	**18 30 06.9**	**-0.3**
SIJI	**Sorong**	**16.37**	**288**	P	**Pn**	**18 30 35.0**	**+0.2**
	0.5nm,0.3s,baz=101,slow=12,SNR=3.8						
MTN	**Manton Dam**	**16.76**	**246**	P	**Pn**	**18 30 40.4**	**+0.7**
MTN				IAmb	IAmb	18 30 41.8	
	comp=Z,5.3nm,0.6s						
WB0	**Warramunga Arr**	**18.06**	**221**	P	**P**	**18 30 54.5**	**+0.1**
WR0	**Warramunga Arr**	**18.10**	**220**	P	**P**	**18 30 53.9**	**-1.1**
WR0				IAmb	IAmb	18 31 04.3	
	comp=Z,12nm,1.6s						
WRAB	**Tennant Creek**	**18.21**	**220**	P	**P**	**18 30 56.9**	**+0.8**
WB2	**Warramunga Arr**	**18.21**	**220**	P	**P**	**18 30 54.9**	**-1.3**
WB2				IAmb	IAmb	18 31 15.1	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**18.22**	**220**	P	**P**	**18 30 57.4**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=42,slow=12,SNR=27						
WRA				S	**S**	**18 34 14.4**	**-5.2**
	comp=Z,0.1nm,0.3s,baz=38,slow=24,SNR=2.4						
WRA	**Warramunga Arr**	**18.22**	**220**	P	**P**	**18 30 56.5**	**+0.2**
KNRA	**Kununurra**	**20.01**	**241**	P	**P**	**18 31 14.8**	**-0.9**
AS31	**Alice Springs**	**21.31**	**214**	P	**P**	**18 31 30.9**	**+1.3**
ASAR	**Alice Springs**	**21.31**	**214**	P	**P**	**18 31 31.1**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=50,slow=9.0,SNR=55						
ASAR				S	**S**	**18 35 16.6**	**-4.3**
	comp=Z,0.1nm,0.7s,baz=39,slow=17,SNR=1.5						
ASAR	**Alice Springs**	**21.31**	**214**	P	**P**	**18 31 30.5**	**+0.8**
BATI	**Baumata**	**23.21**	**259**	P	**P**	**18 31 49.5**	**+0.1**
	comp=Z,9.6nm,0.6s,baz=126,slow=23,SNR=4.0						
FITZ	**Fitzroy Crossi**	**23.76**	**238**	P	**P**	**18 31 55.0**	**+0.7**
	comp=Z,8.3nm,0.5s,baz=55,slow=9.6,SNR=73						
FITZ	**Fitzroy Crossi**	**23.76**	**238**	P	**P**	**18 31 54.7**	**+0.5**
FITZ				IAmb	IAmb	18 31 57.0	
	comp=Z,9.7nm,0.6s						
MORW	**Morawa**	**36.86**	**228**	P	**P**	**18 33 50.7**	**+1.0**
MORW				IAmb	IAmb	18 33 57.3	
	comp=Z,16nm,1.3s						
JMM	**Marumori**	**44.22**	**353**	P	**P**	**18 34 48.1**	**-1.9**
KSRS	**Korea Array**	**46.88**	**339**	P	**P**	**18 35 11.1**	**0.0**
	comp=Z,1.4nm,0.6s,baz=156,slow=9.0,SNR=9.2						
KULM	**Kulim**	**47.45**	**283**	P	**P**	**18 35 17.4**	**+1.5**
KULM				IAmb	IAmb	18 35 19.4	
	comp=Z,14nm,1.4s						
JKA	**Kamikawa-asahi**	**50.25**	**356**	P	**P**	**18 35 36.1**	**-0.6**
ASAJ	**Asahikawa**	**50.25**	**356**	P	**P**	**18 35 36.1**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=9.6,slow=27,SNR=5.7						
USRK	**Uusuriysk Ar.**	**51.94**	**347**	P	**P**	**18 35 47.6**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=154,slow=6.6,SNR=2.9						
PEA0B	**Petropavlovsk-**	**59.83**	**8**	P	**P**	**18 36 46.5**	**+0.9**
PETK	**Petropavlovsk-**	**59.83**	**8**	P	**P**	**18 36 46.1**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=161,slow=5.5,SNR=8.6						
MKAR	**Makanchi Array**	**77.53**	**321**	P	**P**	**18 38 34.5**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=102,slow=8.5,SNR=1.7						
MKAR	**Makanchi Array**	**77.53**	**321**	P	**P**	**18 38 35.3**	**-0.4**
ZALV	**Zalesovo Beam**	**79.08**	**328**	P	**P**	**18 38 41.9**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=116,slow=6.6,SNR=1.7						
ILAR	**Eielson Array**	**85.78**	**23**	P	**P**	**18 39 17.0**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=254,slow=4.7,SNR=18						
TORD	**Torodi Ar. Bea**	**144.93**	**284**	PKPbc	**PKPdf**	**18 46 17.8**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=70,slow=3.9,SNR=7.0						
TORD	**Torodi Ar. Bea**	**144.93**	**284**		**PKPab**	**18 46 17.6**	**+0.8**

*JMA **11** 19:08:57.5±0.3, 44°.04N×148°.12E, h0km, M3.6*
*SKHL **11** 19:08:58.3±0.3, 44°.50N×148°.30E, h61km±5km, mb4.2/4*

ISC 11 19:08:55.4±2.9, **44°.34N**±0°.08×**148°.5E**±0°.2, **h32**km±23km, **n20, σ1s79/30, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.00**	**333**	*i* P	**Pb**	**19 09 13.5**	**-0.7**
KUR				AMB	AMB	19 09 14.0	
	10.0nm,0.1s						
KUR				AMB	AMB	19 09 14.0	
	30nm,0.1s						
KUR				*i* S	**Sn**	**19 09 25.0**	**-1.3**
KUR				A	A	19 09 25.8	
	940nm,0.2s						
KUR				A	A	19 09 25.8	
	400nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.93**	**262**	*e*P	**Pn**	**19 09 27.2**	**+1.3**
YUK				AMB	AMB	19 09 29.0	
	90nm,0.2s						
YUK				*e*S	**Sn**	**19 09 49.0**	**-0.1**
YUK				A	A	19 09 52.2	
	220nm,0.3s						
YUK				A	A	19 09 52.2	
	350nm,0.3s						
GRPR	**Tuman**	**2.00**	**261**	*e*P	**Pn**	**19 09 26.5**	**-0.4**
GRPR				AMB	AMB	19 09 27.0	
	70nm,0.3s						
GRPR				*e*S	**Sn**	**19 09 48.9**	**-1.9**
GRPR				A	A	19 09 53.0	
	190nm,0.4s						
GRPR				A	A	19 09 53.0	
	90nm,0.4s						
NEM2	**Nemuro 2**	**2.22**	**245**	P	**Pn**	**19 09 30.9**	**+0.9**
NEM2				*e*S	**Sn**	**19 09 55.2**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.23**	**245**	*i* P	**Pn**	**19 09 31.0**	**+0.9**
NMR				*i* S	**Sn**	**19 09 55.2**	**-1.4**
GLVR	**Golovnino**	**2.24**	**255**	*e*P	**Pn**	**19 09 31.6**	**+1.4**
GLVR				AMB	AMB	19 09 35.0	
	80nm,0.7s						
GLVR				*e*S	**Sn**	**19 09 56.6**	**-0.1**
GLVR				A	A	19 10 02.0	
	340nm,0.3s						
GLVR				A	A	19 10 02.0	
	180nm,0.3s						
JRA	**Rausu**	**2.47**	**262**	P	**Pn**	**19 09 35.4**	**+2.0**
JNSB	**Nemuroshibetsu**	**2.59**	**259**	P	**Pn**	**19 09 36.9**	**+1.9**
JKHN	**Kushirohamanak**	**2.73**	**244**	P	**Pn**	**19 09 38.4**	**+1.4**
JNK	**Nakash**	**2.84**	**256**	P	**Pn**	**19 09 40.4**	**+1.9**
JNK				*e*S	**Sn**	**19 10 11.1**	**-0.4**
AKK	**Akkeshi**	**2.97**	**245**	*i* P	**Pn**	**19 09 41.5**	**+1.2**
AKK				*e*S	**Sn**	**19 10 14.0**	**-0.8**
JAK	**Akkeshi**	**3.07**	**245**	P	**Pn**	**19 09 42.9**	**+1.2**
JTKR	**Abashiri--Toko**	**3.33**	**265**	P	**Pn**	**19 09 48.4**	**+3.2**
JAR	**Ashorobuto**	**3.58**	**255**	P	**Pn**	**19 09 51.2**	**+2.5**
JCH	**Churui**	**4.12**	**247**	P	**

W57A IAmb IAmb 19 13 43.7
comp=Z,30nm,1.4s
WHAR Wooly Hollow 19.23 345 P **P** **19 13 39.9 -0.3**
WHAR IAmb IAmb 19 13 55.0
comp=Z,12nm,1.3s
TXAR Lajitas Array 20.36 311 P **P** **19 13 54.6 +1.8**
comp=Z,4.2nm,0.8s,baz=130,slow=11,SNR=50
TXAR S 19 17 30.4 -11
comp=Z,0.1nm,0.4s,baz=117,slow=25,SNR=1.8
TX32 Lajitas Array 20.36 311 P **P** **19 13 54.4 +1.7**
TX32 IAmb IAmb 19 13 55.7
comp=Z,5.3nm,0.8s
WCI Wyandotte Cave 21.36 360 P **P** **19 14 04.0 +0.6**
WCI IAmb IAmb 19 14 04.9
comp=Z,8.0nm,0.8s
MNTX Cornudas Mount 22.93 314 P **P** **19 14 19.9 -0.2**
PV13 Radium Mtn., P 29.15 321 P **P** **19 15 17.1 -0.4**
PDAR Pinedale Array 32.70 327 P **P** **19 15 48.8 0.0**
comp=Z,0.2nm,0.5s,baz=136,slow=9.5,SNR=2.8
NVAR Mina Array Bea 35.45 314 P **P** **19 16 13.9 +1.2**
comp=Z,1.4nm,0.8s,baz=122,slow=8.6,SNR=12
PB11 IPOC Station P 39.77 155 P **P** **19 16 48.8 -0.4**
YKA Yellowknife Ar 49.82 343 P **P** **19 18 07.4 -1.3**
comp=Z,0.5nm,0.8s,baz=137,slow=8.0,SNR=8.7
ILAR Eielson Array 62.62 335 P **P** **19 19 40.5 +0.4**
comp=Z,0.3nm,0.8s,baz=113,slow=6.9,SNR=3.1
BORG Borgarnes 64.27 26 LR LR 19 48 36.8
comp=Z,34nm,18.4s,baz=348,slow=37
FINES FINESS Array B 85.55 26 P P 19 21 52.2 -1.9
comp=Z,0.7nm,0.8s,baz=286,slow=5.6,SNR=1.1

MAN 11 19:29:54.8, 9.72N×124.07E, h23km, mb3.6, ML2.3, MS1.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.60**	**350**	⇓*iP*	Pb	19 30 06.8	0.0
LLP				*i* S	Sb	19 30 13.3	-1.5
MSLP	**Maasin**	**0.88**	**62**	*eP*	Pb	19 30 11.4	0.0
MSLP				*eS*	Sn	19 30 23.6	-0.3
OCLP	**Ormoc**	**1.43**	**22**	*eP*	Pn	19 30 19.1	-0.3
OCLP				*eS*	Sb	19 30 38.3	-0.2

*NEIC **11** 19:49:33.9±2.8, 16°.21S±0°.09×69°.6W±0°.1, h211km±3km, mb4.3/18, Error ellipse: s-maj=17.7km s-min=10.3km az=118.0*
*VAO **11** 19:49:35.9±0.5, 16°.21S×69°.58W, h214km±4km, mb4.1*
*IDC **11** 19:49:35.5±1.0, 16°.24S×69°.49W, h212km±6km, mb3.6/8, mb1 3.7/12, mb1mx3.5/33, mbtmp4.1/12, Error ellipse: s-maj=17.0km s-min=15.0km az=81.0*

ISC 11 19:49:33.7±0.5, 16°25S±0°.05×69°.70W±0°.07, h200km, n112, σ1§22/118, mb4.2/11, 2C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.50**	**91**	P	**Pn**	**19 50 10.5**	**+2.4**
LPAZ	173nm,0.3s,baz=293,slow=6.5,SNR=2865			S	**Sn**	**19 50 36.1**	**+1.4**
	16nm,0.3s,baz=327,slow=25,SNR=6.2						
LPAZ	**La Paz**	**1.50**	**91**	*i* P	**Pn**	**19 50 10.5**	**+2.4**
LPAZ	**La Paz**	**1.50**	**91**	*eP*	**Pn**	**19 50 10.7**	**+2.5**
PB16	**IPOC Station P**	**2.08**	**175**	⇑*iP*	**Pn**	**19 50 16.6**	**+2.9**
PB16				*i* S	**Sn**	**19 50 47.9**	**+3.1**
PB16	comp=N,330nm,0.3s			IAML		19 50 50.4	
PB16	**IPOC Station P**	**2.08**	**175**		**Pn**	**19 50 16.4**	**+2.8**
AP01	**Chacalluta**	**2.19**	**196**	*eP*	**Pn**	**19 50 15.5**	**+1.3**
AP01				*i* S	**Sn**	**19 50 45.7**	**-0.2**
AP01	**Chacalluta**	**2.19**	**196**		**Pn**	**19 50 15.7**	**+1.5**
MNMC	**Minye Minye**	**2.86**	**178**	⇑*iP*	**Pn**	**19 50 23.7**	**+1.7**
MNMC				*i* S	**Sn**	**19 50 59.5**	**-0.4**
MNMC	**Minye Minye**	**2.86**	**178**	Pn	**Pn**	**19 50 23.4**	**+1.5**
PSGCX	**Pisagua**	**3.35**	**187**		**Pn**	**19 50 27.9**	**+0.3**
PB11	**IPOC Station P**	**3.49**	**179**		**Pn**	**19 50 30.2**	**+0.9**
PB08	**IPOC Station P**	**3.90**	**172**		**Pn**	**19 50 36.0**	**+1.4**
TA01	**Diego Aracena**	**4.31**	**186**	Pn	**Pn**	**19 50 39.2**	**-0.2**
PATCX	**Punta Patache**	**4.56**	**185**		**Pn**	**19 50 42.5**	**-0.1**
PB01	**IPOC Station P**	**4.77**	**178**		**Pn**	**19 50 45.4**	**+0.2**
PB07	**IPOC Station P**	**5.45**	**182**		**Pn**	**19 50 53.9**	**0.0**
PB09	**IPOC Station P**	**5.53**	**176**		**Pn**	**19 50 55.7**	**+0.7**
PB04	**IPOC Station P**	**6.06**	**184**		**Pn**	**19 51 02.2**	**+0.3**
LVC	**Limon Verde**	**6.37**	**173**	P	**Pn**	**19 51 07.3**	**+1.3**
LVC	comp=N,5.2nm,0.3s,baz=16,slow=7.8,SNR=28			S	**Sn**	**19 52 15.4**	**-3.8**
	comp=N,12nm,0.3s,baz=102,slow=22,SNR=14						
LVC	**Limon Verde**	**6.37**	**173**	Pn	**Pn**	**19 51 06.7**	**+0.7**
LVC	**Limon Verde**	**6.37**	**173**	*eP*	**Pn**	**19 51 08.0**	**+1.9**
PB06	**IPOC Station P**	**6.42**	**179**		**Pn**	**19 51 05.9**	**-0.6**
PB15	**IPOC Station P**	**6.92**	**178**		**Pn**	**19 51 13.0**	**0.0**
ETMB	**Extrema**	**7.24**	**28**	*eP*	**Pn**	**19 51 18.4**	**+1.2**
PB10	**IPOC Station P**	**7.27**	**186**		**Pn**	**19 51 16.9**	**-0.4**
SIV	**San Ignacio**	**8.29**	**89**	P	**Pn**	**19 51 29.5**	**-1.4**
	comp=N,0.3nm,0.3s,baz=284,slow=14,SNR=8.5						
PB14	**IPOC Station P**	**8.36**	**184**	Pn	**Pn**	**19 51 30.9**	**-1.0**
GO02	**Mina Guanaco**	**8.86**	**179**		**Pn**	**19 51 38.0**	**-0.5**
SAML	**Samuel**	**9.65**	**42**		**Pn**	**19 51 45.2**	**-3.2**
SAML	**Samuel**	**9.65**	**42**	*eP*	**Pn**	**19 51 49.3**	**+0.9**
VILB	**Vilhena**	**9.76**	**72**	*eP*	**Pn**	**19 51 48.6**	**-1.3**
PTLB	**Pontes e Lacer**	**10.19**	**87**	*eP*	**Pn**	**19 51 54.8**	**-0.7**
LCO	**Las Campanas**	**12.73**	**184**	Pn	**Pn**	**19 52 28.7**	**+0.6**
AQDB	**Aquidauana**	**13.93**	**110**	*eP*	**Pn**	**19 52 43.2**	**+0.4**
PP1B	**Ponte de Pedra**	**14.24**	**98**	*eP*	**Pn**	**19 52 47.6**	**+0.9**
CLDB	**Colider**	**14.53**	**70**	*eP*	**Pn**	**19 52 51.5**	**+1.3**
CO03	**El Pedregal**	**14.55**	**183**		**Pn**	**19 52 51.4**	**+1.0**
CPUP	**Villa Florida**	**15.26**	**133**	P	**Pn**	**19 52 58.8**	**-0.3**
	comp=N,0.1nm,0.3s,baz=314,slow=15,SNR=3.2						
CPUP	**Villa Florida**	**15.26**	**133**	P	**Pn**	**19 52 58.6**	**-0.5**
CPUP	**Villa Florida**	**15.26**	**133**	*eP*	**P**	**19 53 01.2**	**+1.8**
MACA	**Manacapuru-AM**	**15.74**	**35**	*eP*	**P**	**19 53 04.6**	**-0.3**
NPGB	**Novo Progresso**	**16.75**	**59**	*eP*	**P**	**19 53 16.1**	**0.0**
MT02	**Curacav**	**16.98**	**184**	P	**P**	**19 53 18.6**	**+0.2**
MT02	comp=Z,30nm,1.5s			IAmb	IAmb	19 53 29.3	
ARAG	**Araguaiana, MT**	**17.20**	**91**	*eP*	**P**	**19 53 21.5**	**+0.5**
ITQB	**Itaqui**	**17.95**	**140**	*eP*	**P**	**19 53 30.2**	**+1.2**
ITTB	**Itaituba**	**18.10**	**51**	*eP*	**P**	**19 53 31.1**	**+0.4**
PTGA	**Pitinga**	**18.16**	**33**	P	**P**	**19 53 31.8**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=212,slow=12,SNR=22						
PTGA	**Pitinga**	**18.16**	**33**	P	**Pn**	**19 53 30.5**	**-0.9**
PTGA	comp=Z,11nm,0.7s			IAmb	IAmb	19 53 32.5	
PTGA	**Pitinga**	**18.16**	**33**	*eP*	**P**	**19 53 31.6**	**+0.1**
PCMB	**Pacaembu**	**18.23**	**110**	*eP*	**P**	**19 53 33.2**	**+1.1**
SNDB	**Serra Nova Dou**	**18.34**	**79**	*eP*	**P**	**19 53 33.8**	**+0.4**
BO02	**Sierra Bellavi**	**18.49**	**183**	P	**P**	**19 53 36.2**	**+1.4**
PTGB	**Pitanga**	**18.52**	**120**	*eP*	**P**	**19 53 35.7**	**+0.3**
OTAV	**Otavalo**	**18.52**	**331**	*eP*	**P**	**19 53 36.9**	**+1.1**
ITRB	**Iturama**	**18.71**	**103**	*eP*	**P**	**19 53 37.8**	**+0.5**
ITAB	**Concordia**	**19.61**	**127**	*eP*	**P**	**19 53 48.4**	**+1.4**
FRTB	**Fartura**	**20.20**	**114**	*eP*	**P**	**19 53 52.9**	**-0.5**
CPSB	**Cacapava Do Su**	**20.49**	**136**	*eP*	**P**	**19 53 57.2**	**+1.0**
IPMB	**Ipameri, GO**	**20.60**	**98**	*eP*	**P**	**19 53 56.1**	**-1.7**
BB19B	**Bebedouro**	**20.61**	**107**	*eP*	**P**	**19 53 57.6**	**-0.2**
BOAV	**Boa Vista**	**20.63**	**27**	*eP*	**P**	**19 53 58.9**	**+1.0**
BDFB	**Brasilia**	**20.86**	**91**	P	**P**	**19 53 59.3**	**-1.1**
	comp=Z,6.1nm,0.6s,baz=258,slow=13,SNR=12						
BDFB	**Brasilia**	**20.86**	**91**	P	**P**	**19 53 59.1**	**-1.4**
BDFB	comp=Z,7.6nm,0.8s			IAmb	IAmb	19 54 01.6	
MALB	**Monte Alegre**	**20.88**	**48**	*eP*	**P**	**19 54 01.6**	**+1.1**
PEXB	**Peixe**	**21.14**	**82**	*eP*	**P**	**19 54 02.5**	**-1.0**
SPB	**Sao Paulo**	**22.15**	**113**	*eP*	**P**	**19 54 15.1**	**+1.7**
VAO	**Valinhos**	**22.42**	**111**	*eP*	**P**	**19 54 16.8**	**+0.8**
SMTB	**Santa Maria do**	**22.78**	**74**	*eP*	**P**	**19 54 18.9**	**-0.3**
MCPB	**Macapa, AP**	**23.50**	**49**	*eP*	**P**	**19 54 26.2**	**+0.5**
PLCA	**Paso Flores**	**24.40**	**182**	P	**P**	**19 54 34.2**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=22,slow=7.5,SNR=6.0						
PLCA	**Paso Flores**	**24.40**	**182**	P	**P**	**19 54 33.9**	**+0.1**
PLCA	comp=Z,6.9nm,1.4s			IAmb	IAmb	19 54 35.3	
PLCA	**Paso Flores**	**24.40**	**182**	*eP*	**P**	**19 54 34.3**	**+0.5**
JANB	**Januaria**	**24.47**	**91**	*eP*	**P**	**19 54 33.4**	**-1.3**
DIAM	**Diamantina, MG**	**24.92**	**98**	*eP*	**P**	**19 54 39.5**	**+0.7**
VAS01	**Vassouras-RJ**	**25.48**	**108**	*eP*	**P**	**19 54 45.3**	**+1.7**
NBPS	**Pedro II - PI**	**30.14**	**70**	*eP*	**P**	**19 55 25.3**	**+0.1**
NBPB	**Pedra_Branca-C**	**31.38**	**74**	*eP*	**P**	**19 55 36.2**	**+0.2**
NBMO	**Morrinhos-CE**	**31.86**	**69**	*eP*	**P**	**19 55 39.9**	**-0.4**
NBAN	**Anadia - AL**	**33.19**	**83**	*eP*	**P**	**19 55 50.0**	**-1.9**
PDPR	**Patillas Dam,**	**34.25**	**6**	P	**P**	**19 55 59.8**	**-1.0**
RCBR	**Riachuelo**	**34.69**	**76**	P	**P**	**19 56 04.5**	**-0.3**
RCBR	comp=Z,6.3nm,0.7s			IAmb	IAmb	19 56 05.0	
RCBR	**Riachuelo**	**34.69**	**76**	*eP*	**P**	**19 56 04.6**	**-0.2**
NBPV	**Pedro Velho**	**35.07**	**78**	*eP*	**P**	**19 56 07.7**	**-0.3**
TXAR	**Lajitas Array**	**55.95**	**324**	P	**P**	**19 58 51.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=146,slow=8.7,SNR=2.6						
TXAR	**Lajitas Array**	**55.95**	**324**	P	**P**	**19 58 52.2**	**+0.8**
FCAR	**Ozark Folk Cen**	**56.04**	**338**	P	**P**	**19 58 50.8**	**-1.0**
PBMO	**Poplar Bluff**	**56.26**	**340**	P	**P**	**19 58 52.2**	**-1.0**
PBMO	comp=Z,3.6nm,0.5s			IAmb	IAmb	19 58 52.9	
F64A	**Sherman**	**61.83**	**1**	P	**P**	**19 59 30.6**	**-0.7**
DBIC	**Dimbokro**	**68.06**	**76**	P	**P**	**20 00 11.2**	**-1.0**
	comp=Z,4.3nm,0.5s,baz=235,slow=5.9,SNR=9.9						
DBIC	**Dimbokro**	**68.06**	**76**	P	**P**	**20 00 10.9**	**-1.4**
ULM	**Lac du Bonnet**	**70.12**	**342**	P	**P**	**20 00 23.5**	**-0.5**
	comp=Z,2.3nm,0.5s,baz=166,slow=6.8,SNR=8.2						
ULM	**Lac du Bonnet**	**70.12**	**342**	P	**P**	**20 00 23.3**	**-0.8**
ULM	comp=Z,2.9nm,0.7s			IAmb	IAmb	20 00 24.0	
KOWA	**Kowa**	**71.70**	**68**	P	**P**	**20 00 32.9**	**-1.4**
KOWA	comp=Z,5.3nm,1.0s			IAmb	IAmb	20 00 35.1	
TOA0	**Torodi Ar. Sit**	**76.37**	**72**	P	**P**	**20 01 00.1**	**-1.3**
TOA0	comp=Z,5.8nm,0.8s			IAmb	IAmb	20 01 00.9	
TORD	**Torodi Ar. Bea**	**76.37**	**72**	P	**P**	**20 01 00.2**	**-1.2**
	comp=Z,4.7nm,0.6s,baz=261,slow=5.4,SNR=18						
TORD	**Torodi Ar. Bea**	**76.37**	**72**	P	**P**	**20 00 59.1**	**-2.3**
TORD	comp=Z,4.3nm,0.8s			IAmb	IAmb	20 01 00.9	
PAB	**San Pablo**	**82.33**	**45**	P	**P**	**20 01 32.9**	**-0.3**
ESDC	**Sonseca Array**	**82.66**	**45**	P	**P**	**20 01 34.6**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=251,slow=5.5,SNR=9.5						
ESDC	**Sonseca Array**	**82.66**	**45**	P	**P**	**20 01 34.9**	**0.0**
YKA	**Yellowknife Ar**	**86.02**	**341**	P	**P**	**20 01 51.8**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=131,slow=5.1,SNR=12						
ASAR	**Alice Springs**	**134.11**	**211**	PKP	**PKPdf**	**20 08 28.5**	**+0.4**
ASAR	comp=Z,0.1nm,0.4s,baz=130,slow=2.4,SNR=1.7			SKPbc	**SKPbc**	**20 11 38.2**	**-0.5**
	comp=Z,0.5nm,1.0s,baz=141,slow=4.8,SNR=4.3						
ASAR	**Alice Springs**	**134.11**	**211**	PKPdf	**PKPdf**	**20 08 28.3**	**+0.2**
WRA	**Warramunga Arr**	**136.97**	**214**	PKP	**PKPdf**	**20 08 34.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=137,slow=1.5,SNR=7.9						
WRA				SKP		20 11 47.7	
	comp=Z,1.2nm,0.8s,baz=145,slow=2.7,SNR=8.1						
WRA	**Warramunga Arr**	**136.97**	**214**		**PKPdf**	**20 08 34.2**	**+0.7**
ZALV	**Zalesovo Beam**	**137.47**	**22**	PKP	**PKPdf**	**20 08 33.8**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=289,slow=2.5,SNR=8.9						
ZALV				SKP		20 11 49.1	
	comp=Z,0.8nm,0.6s,baz=335,slow=6.6,SNR=3.9						
ZALV	**Zalesovo Beam**	**137.47**	**22**		**PKPdf**	**20 08 34.2**	**+0.9**
MKAR	**Makanchi Array**	**141.70**	**31**	PKP	**PKPdf**	**20 08 42.4**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=337,slow=0.3,SNR=4.0						
MKAR				SKPbc	**SKPbc**	**20 11 58.1**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=343,slow=3.8,SNR=7.3						
FITZ	**Fitzroy Crossi**	**142.67**	**205**	PKhKP	PKPpre	20 08 41.0	
	comp=Z,1.1nm,0.6s,baz=13,slow=1.2,SNR=6.2						
USRK	**Ussuriysk Ar.**	**146.64**	**331**	PKPbc	**PKPbc**	**20 08 53.3**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=16,slow=2.9,SNR=3.7						
SONM	**Songino Array**	**148.34**	**5**	PKPbc	**PKPbc**	**20 08 58.0**	**+1.5**
	comp=Z,5.7nm,0.6s,baz=324,slow=1.8,SNR=41						
SONM	**Songino Array**	**148.34**	**5**		**PKPbc**	**20 08 58.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**168.93**	**77**	PKPab	**PKPab**	**20 10 29.3**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=274,slow=5.9,SNR=6.3						

*IDC **11** 19:56:14.7±1.0, 32°.17N×129°.87E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.5/46, mbtmp3.5/9, ML3.3/2, MS2.7/3, Ms1 2.7/3, ms1mx2.3/44, Error ellipse: s-maj=24.0km s-min=13.8km az=127.0*
*NIED **11** 19:56:17.0, 32°.28N×129°.86E, h13km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-7.75; $M_{\theta\theta}$8.09; $M_{\phi\phi}$-0.34; $M_{r\theta}$-1.47; $M_{r\phi}$2.14; $M_{\theta\phi}$1.14; Fault plane solution: $M_0$8.40000×10^{14} NP1:φ87.00000°, δ50.00000°, λ-75.00000°. NP2:φ245.00000°, δ42.00000°, λ-107.00000°.*
*JMA **11** 19:56:16.9, 32°.28N×129°.86E, h13km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φ75.00000°, δ39.00000°, λ-85.00000°. NP2:φ248.00000°, δ51.00000°, λ-94.00000°. Principal axes: T Plg6.0000°, Azm341.0000°; N Plg3.0000°, Azm251.0000°; P Plg83.0000°, Azm134.0000°;*
JMA Felt II J1.

ISC 11 19:56:16.7±1.1, 32°27N±0°.03×129°84E±0°.04, h10km±8km, n21, σ1§02/29, mb3.5/7, 8C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHD	**Hondo**	**0.32**	**53**	⇑P	**Pg**	**19 56 23.3**	**+0.3**
JHD				S	**Sg**	**19 56 27.5**	**+0.2**
NGSJ	**Nagasakinomoza**	**0.36**	**355**	⇑P	**Pg**	**19 56 24.2**	**+0.4**
NGSJ				S	**Sg**	**19 56 28.9**	**+0.3**
JSJ	**Shimokoshiki**	**0.60**	**190**	⇑P	**Pg**	**19 56 27.9**	**-0.4**
JSJ				S	**Sg**	**19 56 36.3**	**+0.1**
JZO	**Okuchi**	**0.66**	**101**	⇑P	**Pg**	**19 56 29.5**	**+0.1**
JZO				S	**Sg**	**19 56 38.0**	**-0.1**
JIU3	**Izumi3**	**0.87**	**71**	⇑P	**Pg**	**19 56 32.5**	**-0.9**
JIU3				S	**Sg**	**19 56 43.7**	**-1.1**
JTA	**Tamana**	**0.91**	**40**	⇑P	**Pg**	**19 56 33.5**	**-0.6**
JTA				S	**Sg**	**19 56 45.6**	**-0.3**
JSU	**Suzuyama**	**0.93**	**145**	⇑P	**Pg**	**19 56 34.3**	**-0.2**
JSU				S	**Sg**	**19 56 46.6**	**0.0**
JFU	**Fukue jima 2**	**0.99**	**293**	⇑P	**Pb**	**19 56 36.1**	**+0.1**
JFU				S	**Sn**	**19 56 50.4**	**-0.4**
JTZ	**Takazaki**	**1.13**	**109**	⇓P	**Pb**	**19 56 37.9**	**-0.3**
JNU	**Nakatsue**	**1.22**	**46**	Pg	**Pn**	**19 56 39.1**	**-0.7**
JNU	153nm,0.3s,baz=232,slow=7.9,SNR=1344			Lg	Lg	19 56 55.2	
	542nm,0.3s,baz=263,slow=11,SNR=20						
KSRS	**Korea Array**	**5.40**	**344**	Pn	**Pn**	**19 57 38.6**	**+1.3**
	3.2nm,0.3s,baz=166,slow=14,SNR=53						
KSRS				Pg	**Pg**	**19 57 57.3**	**-2.8**
	1.6nm,0.3s,baz=162,slow=17,SNR=6.9						
KSRS				Lg	Lg	19 59 06.3	
	3.5nm,0.3s,baz=166,slow=31,SNR=9.9						
KSRS				LR	LR	19 59 08.2	
	comp=Z,66nm,18.9s,baz=165,slow=32						
MJAR	**Matsushiro Arr**	**8.12**	**56**	Pn	**Pn**	**19 58 16.4**	**+1.7**
	0.1nm,0.3s,baz=243,slow=14,SNR=12						
KLR	**Kul'dur**	**17.00**	**4**	P	**P**	**20 00 17.7**	**+1.3**
	0.1nm,0.3s,baz=180,slow=6.1,SNR=4.5						
KLR				LR	LR	20 07 05.1	
	comp=Z,12nm,19.9s,baz=186,slow=38						
SONM	**Songino Array**	**23.61**	**318**	P	**P**	**20 01 29.4**	**+1.6**
	1.0nm,1.0s,baz=144,slow=11,SNR=4.2						
SIJI	**Sorong**	**32.99**	**177**	LR	LR	20 16 30.0	
	comp=Z,19nm,18.5s,baz=166,slow=37						
WRA	**Warramunga Arr**	**52.10**	**175**	P	**P**	**20 05 26.3**	**-0.7**
	0.7nm,1.1s,baz=353,slow=8.6,SNR=3.0						
ASAR	**Alice Springs**	**55.76**	**175**	P	**P**	**20 05 52.1**	**-1.7**
	0.3nm,0.6s,baz=352,slow=5.6,SNR=5.4						
ILAR	**Eielson Array**	**58.49**	**30**	P	**P**	**20 06 13.7**	**+1.0**
	0.3nm,0.8s,baz=307,slow=6.6,SNR=2.5						
FINES	**FINESS Array B**	**68.33**	**330**	P	**P**	**20 07 17.6**	**-0.2**
	0.6nm,0.5s,baz=69,slow=6.3,SNR=10.0						
YKA	**Yellowknife Ar**	**72.48**	**26**	P	**P**	**20 07 43.3**	**+0.1**
	0.2nm,0.7s,baz=296,slow=5.1,SNR=3.1						
NOA	**NORSAR Array B**	**74.53**	**334**	P	**P**	**20 07 54.5**	**-0.9**
	1.0nm,0.9s,baz=51,slow=5.8,SNR=2.3						

*MAN **11** 20:04:33.6, 5°.48N×126°.68E, h184km, mb4.6, ML3.5, MS3.4*
*NEIC **11** 20:04:41.6±1.3, 5°.70N±0°.08×126°.4E±0°.2, h83km±10km, mb4.1/7, Error ellipse: s-maj=22.8km s-min=9.0km az=70.0*
*IDC **11** 20:04:44.6±1.6, 5°.76N×126°.55E, h114km±13km, mb3.5/7, mb1 3.7/9, mb1mx3.3/48, mbtmp4.0/9, MS3.0/1, Ms1 3.0/1, ms1mx2.2/35, Error ellipse: s-maj=61.1km s-min=12.0km az=66.0*

ISC 11 20:04:42.7±0.6, 5°70N±0°.05×126°50E±0°.08, h100km, n36, σ1§76/44, mb3.9/9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.64**	**326**	P	**Pn**	**20 05 12.4**	**+1.7**
	36nm,0.3s,baz=286,slow=12,SNR=1.7			S	**Sn**	**20 05 35.3**	**+3.2**
DAV	63nm,0.3s,baz=253,slow=22,SNR=3.9						
DAV	**Davao City (W)**	**1.64**	**326**		**Pn**	**20 05 08.7**	**-2.1**
KCP	**Kidapawan**	**1.91**	**313**	⇑*eP*	**Pn**	**20 05 13.8**	**-0.4**
KCP				*i* S	**Sn**	**20 05 37.0**	**-1.3**
SKMP	**Bagumbayan, Su**	**2.11**	**293**	*eP*	**Pn**	**20 05 15.7**	**-1.0**
SKMP				*eS*	**Sn**	**20 05 45.9**	**+3.2**
BUKP	**Musuan**	**2.59**	**327**	*eP*	**Pn**	**20 05 21.1**	**-2.0**
BUKP				*eS*	**Sn**	**20 05 58.2**	**+4.0**
CGP	**Cagayan de Oro**	**3.27**	**327**	*eP*	**Pn**	**20 05 33.7**	**+1.6**
CGP				*eS*	**Sn**	**20 06 11.7**	**+1.4**
PAGZ	**Pagadian**	**3.76**	**305**	*eP*	**Pn**	**20 05 35.6**	**-3.1**
PAGZ				*eS*	**Sn**	**20 06 24.5**	**+2.4**
GLSP	**General Luna,**	**4.08**	**355**	*eP*	**Pn**	**20 05 39.1**	**-3.8**
GLSP				*eS*	**Sn**	**20 06 31.1**	**+1.5**
TNTI	**Ternate**	**4.97**	**170**	Pn	**Pn**	**20 05 54.7**	**-0.3**
TOLI2	**Tolitoli**	**7.30**	**232**	Pn	**Pn**	**20 06 24.8**	**-2.0**
LUWI	**Luwuk**	**7.66**	**209**	Pn	**Pn**	**20 06 30.4**	**-1.2**
MYLDM	**Lahad Datu**	**7.98**	**267**	Pn	**Pn**	**20 06 34.0**	**-1.9**
SIJI	**Sorong**	**8.08**	**144**	P	Pn	20 06 38.6	+1.3
	0.5nm,0.3s,baz=254,slow=22,SNR=7.7						
SIJI				S	**Sn**	**20 08 06.5**	**-0.5**
	0.3nm,0.3s,baz=159,slow=22,SNR=1.4						
KAPI	**Kappang**	**12.60**	**212**	Pn	**Pn**	**20 07 35.5**	**-2.8**
SBUM	**Sibu**	**14.60**	**258**		**P**	**20 08 09.5**	**+1.4**
SOEI	**Soe**	**15.51**	**188**		**P**	**20 08 17.9**	**-0.5**
SOEI				IAmb	IAmb	20 08 24.0	
	comp=Z,25nm,1.5s						
BATI	**Baumata**	**16.05**	**190**	P	**P**	**20 08 24.3**	**+0.1**
	comp=Z,3.9nm,0.3s,baz=104,slow=1.3,SNR=12						
TWG	**Pinlang**	**17.81**	**343**	P	**P**	**20 08 41.1**	**-2.5**
TWG	comp=Z,17nm,1.1s			IAmb	IAmb	20 08 48.2	
KNRA	**Kununurra**	**21.36**	**174**	P	**P**	**20 09 22.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**23.66**	**182**	P	**P**	**20 09 45.8**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=5.9,slow=7.0,SNR=12						
FITZ	**Fitzroy Crossi**	**23.66**	**182**	P	**P**	**20 09 46.0**	**+0.7**
WB0	**Warramunga Arr**	**26.47**	**163**	P	**P**	**20 10 11.5**	**+0.8**
WRA	**Warramunga Arr**	**26.62**	**163**	P	**P**	**20 10 12.8**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=342,slow=9.9,SNR=8.6						
WB2	**Warramunga Arr**	**26.62**	**163**	P	**P**	**20 10 11.4**	**-0.6**
WB2	comp=Z,5.6nm,1.4s			IAmb	IAmb	20 10 27.4	
ASAR	**Alice Springs**	**30.07**	**166**	P	**P**	**20 10 43.9**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=345,slow=7.0,SNR=18						
ASAR				PcP	**PcP**	**20 13 43.9**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=342,slow=2.8,SNR=6.4						
ASAR				LR	LR	20 23 23.9	
	comp=Z,27nm,19.5s,baz=130,slow=37						
ASAR	**Alice Springs**	**30.07**	**166**	P	**P**	**20 10 42.9**	**+0.3**
USRK	**Ussuriysk Ar.**	**38.65**	**6**	P	**P**	**20 11 57.0**	**+0.6**
BBOO	**Buckleboo**	**39.36**	**167**	P	**P**	**20 12 03.5**	**+1.0**
STKA	**Stephens Creek**	**40.04**	**160**	P	**P**	**20 12 09.8**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=332,slow=15,SNR=1.6						
STKA	**Stephens Creek**	**40.04**	**160**	P	**P**	**20 12 09.4**	**+1.2**
STKA	comp=Z,1.2nm,1.4s			IAmb	IAmb	20 12 18.0	
MK31	**Makanchi Array**	**55.82**	**325**	P	**P**	**20 14 09.6**	**-0.1**
MK31	comp=Z,4.5nm,1.5s			IAmb	IAmb	20 14 16.2	
MKAR	**Makanchi Array**	**55.82**	**325**	P	**P**	**20 14 09.7**	**0.0**
	comp=Z,0.4nm,0.3s,baz=117,slow=7.4,SNR=11						
MKAR	**Makanchi Array**	**55.82**	**325**	P	**P**	**20 14 09.6**	**-0.1**
**ARCES

	comp=Z,7.1nm,1.5s							
MMRI	**Maumere**	**32.58**	**264**	P	**P**	**20 14 45.7**	**-0.5**
BKZ	**Black Stump Fm**	**38.01**	**152**	P	**P**	**20 15 32.9**	**+0.3**
TPUB	**Ta-pu**	**44.67**	**312**	P	**P**	**20 16 27.2**	**-0.2**
SSLB	**Suanglung**	**44.73**	**313**	P	**P**	**20 16 27.7**	**-0.1**
SSLB				IAmb	IAmb	20 16 31.2	
	comp=Z,12nm,0.9s						
PEA0B	**Petropavlovsk-**	**59.24**	**2**	P	**P**	**20 18 16.0**	**+0.8**
PETK	**Petropavlovsk-**	**59.24**	**2**	P	**P**	**20 18 17.0**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=152,slow=4.4,SNR=4.5						
PETK				LR	LR	20 44 22.5	
	comp=Z,7.9nm,19.0s,baz=243,slow=36						
PETK	**Petropavlovsk-**	**59.24**	**2**	P	**P**	**20 18 17.3**	**+2.0**
CM31	**Chiang Mai Arr**	**60.52**	**295**	P	**P**	**20 18 25.3**	**+0.6**
CM31				IAmb	IAmb	20 18 41.8	
	comp=Z,4.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.52**	**295**	P	**P**	**20 18 25.6**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=120,slow=5.4,SNR=23						
CMAR				pP	**pP**		
	comp=Z,2.9nm,0.8s,baz=119,slow=5.6,SNR=16						
MA2	**Magadan**	**65.77**	**358**	P	**P**	**20 18 59.2**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=185,slow=8.7,SNR=7.4						
MA2	**Magadan**	**65.77**	**358**	P	**P**	**20 18 59.2**	**+0.5**
MA2				IAmb	IAmb	20 19 02.4	
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**68.78**	**327**	P	**P**	**20 19 18.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=149,slow=5.3,SNR=8.3						
SONM	**Songino Array**	**68.78**	**327**	P	**P**	**20 19 18.5**	**+0.3**
ILAR	**Eielson Array**	**82.74**	**22**	P	**P**	**20 20 37.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=43,slow=14,SNR=4.1						
MKAR	**Makanchi Array**	**82.92**	**319**	P	**P**	**20 20 38.8**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=99,slow=5.1,SNR=10.0						
MKAR				pP	**pP**	**20 20 53.9**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=100,slow=5.5,SNR=7.3						
ZALV	**Zalesovo Beam**	**83.64**	**326**	P	**P**	**20 20 40.6**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=102,slow=6.1,SNR=3.6						
ZALV				pP	**pP**	**20 20 56.3**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=133,slow=8.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**83.64**	**326**	P	**P**	**20 20 40.9**	**-1.2**
QSPA	**South Pole Qui**	**83.65**	**180**	LR	LR	20 53 27.4	
	comp=Z,60nm,21.1s,baz=250,slow=32						
QSPA	**South Pole Qui**	**83.65**	**180**	P	**P**	**20 20 41.9**	**-0.3**
QSPA				IAmb	IAmb	20 20 44.4	
	comp=Z,5.3nm,1.4s						
MAW	**Mawson**	**85.03**	**203**	P	**P**	**20 20 48.6**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=116,slow=5.1,SNR=2.4						
YKA	**Yellowknife Ar**	**95.73**	**28**	P	**P**	**20 21 39.8**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=261,slow=4.1,SNR=5.4						
YKA				pP	**pP**	**20 21 55.4**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=262,slow=4.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**152.87**	**286**	PKPbc	**PKPbc**	**20 28 10.2**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=85,slow=2.4,SNR=3.1						

IDC 11 20:17:15.0±7.2, 31°.62S×179°.44E, h470km±93km, mb2.9/3, mb1 3.1/4, mb1mx2.8/32, mbtmp3.8/4, Error ellipse: s-maj=101.4km s-min=45.2km az=6.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.89**	**195**	P	P	20 19 00.4	+1.5
	2.8nm,0.3s,baz=122,slow=23,SNR=20						
URZ				S	S	20 20 22.4	-1.8
	0.4nm,0.3s,baz=119,slow=23,SNR=1.3						
ASAR	**Alice Springs**	**40.88**	**270**	P	P	20 24 15.1	-0.1
	0.4nm,0.4s,baz=107,slow=7.2,SNR=9.2						
WRA	**Warramunga Arr**	**41.98**	**275**	P	P	20 24 23.6	-0.3
	0.7nm,0.3s,baz=113,slow=8.1,SNR=26						
FITZ	**Fitzroy Crossi**	**50.19**	**272**	P	P	20 25 27.1	+0.4
	0.8nm,0.7s,baz=135,slow=5.7,SNR=1.5						
FINES	**FINESS Array B**	**145.49**	**338**	PKPbc	PKPdf	20 35 57.9	-0.1
	1.7nm,1.0s,baz=327,slow=34,SNR=2.0						

*NOU **11** 21:00:28.8, 40°.58S×175°.06E, h90km, MLv3.7, North Island, New Zealand*
WEL 11 21:00:30.5, 40°.5S±0°.9×17°.5E±°, h52km±3km, M3.5/47, ML3.9/47, MLv3.5/47, Error ellipse: s-maj=0.0km s-min=0.0km az=74.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.37**	**181**	P	Pn	21 00 40.4	-0.1
KIW				S	Sn	21 00 47.4	-0.3
OGWZ	**Otaki Gorge**	**0.38**	**149**	P	Pn	21 00 40.7	+0.1
OGWZ				S	Sn	21 00 48.7	+0.9
OHWZ	**Ohakea**	**0.42**	**47**	P	Pn	21 00 40.8	-0.2
OHWZ				S	Sn	21 00 49.0	+0.5
MRZ	**Mangatainoka R**	**0.53**	**109**	P	Pn	21 00 42.6	+0.3
MRZ				S	Sn	21 00 51.8	+1.1
HOWZ	**Holdsworth Sta**	**0.61**	**132**	P	Pn	21 00 43.8	+0.6
HOWZ				S	Sn	21 00 54.1	+1.6
CAW	**Cannon Point**	**0.62**	**170**	P	Pn	21 00 43.9	+0.5
CAW				S	Sn	21 00 53.8	+1.1
POWZ	**Post Office Ro**	**0.66**	**81**	P	Pn	21 00 44.2	+0.3
POWZ				S	Sn	21 00 54.1	+0.6
WAZ	**Wanganui**	**0.74**	**4**	P	Pn	21 00 45.0	+0.1
TIWZ	**Tintock**	**0.79**	**111**	P	Pn	21 00 46.3	+0.8
TIWZ				S	Sn	21 00 58.5	+2.0
MTW	**Mount Morrison**	**0.80**	**146**	P	Pn	21 00 46.4	+0.8
MTW				S	Sn	21 00 59.3	+2.6
WEL	**Wellington**	**0.80**	**188**	P	Pn	21 00 46.2	+0.6
WEL				S	Sn	21 00 57.8	+1.2
PRWZ	**Pori Road**	**0.80**	**95**	P	Pn	21 00 46.1	+0.4
PRWZ				S	Sn	21 00 58.4	+1.5
DUWZ	**D'Urville Isla**	**0.82**	**248**	P	Pn	21 00 45.8	-0.1
TCW	**Tory Channel**	**0.87**	**214**	P	Pn	21 00 47.0	+0.5
TCW				S	Sn	21 00 59.2	+1.0
TSZ	**Takapari Road**	**0.91**	**62**	P	Pn	21 00 47.4	+0.3
BHW	**Baring Head**	**0.91**	**182**	P	Pn	21 00 47.9	+0.7
BHW				S	Sn	21 00 59.8	+0.4
MSWZ	**Moikau Station**	**0.95**	**165**	P	Pn	21 00 48.7	+0.9
TMWZ	**Te Maipa**	**0.96**	**130**	P	Pn	21 00 48.6	+0.9
PAWZ	**Paruwai Farm**	**0.97**	**157**	P	Pn	21 00 48.9	+1.0
DVHZ	**Dannevirke**	**0.97**	**79**	P	Pn	21 00 47.8	-0.2
DVHZ				S	Sn	21 01 01.3	+0.5
BFZ	**Birch Farm**	**1.03**	**101**	P	Pn	21 00 48.3	-0.3
BFZ				S	Sn	21 01 02.2	+0.1
CPWZ	**Castlepoint**	**1.06**	**113**	P	Pn	21 00 49.3	+0.3
TRWZ	**Traveller**	**1.07**	**147**	P	Pn	21 00 51.1	+1.8
PLWZ	**Palliser**	**1.10**	**167**	P	Pn	21 00 50.2	+0.4
LREZ	**Lake Rotokare**	**1.11**	**339**	P	Pn	21 00 50.2	+0.5
PNHZ	**Pukenui**	**1.14**	**60**	P	Pn	21 00 49.9	-0.3
MTVZ	**Mangateitei**	**1.19**	**21**	P	Pn	21 00 51.4	+0.5
ANWZ	**Angora Road**	**1.19**	**89**	P	Pn	21 00 50.9	+0.1
TUWZ	**Tuamarina**	**1.19**	**218**	P	Pn	21 00 51.5	+0.7
WPHZ	**Waipukurau**	**1.24**	**70**	P	Pn	21 00 51.3	-0.3
PKVZ	**Pokaka**	**1.25**	**15**	P	Pn	21 00 52.1	+0.4
MOVZ	**Moawhango**	**1.26**	**31**	P	Pn	21 00 51.9	0.0
WHAZ	**Wahianoa**	**1.28**	**24**	P	Pn	21 00 52.7	+0.5
TRVZ	**Turoa**	**1.29**	**22**	P	Pn	21 00 52.9	+0.5
PREZ	**Palmer Road**	**1.29**	**333**	P	Pn	21 00 53.2	+1.0
WHVZ	**Whangaehu Hut**	**1.31**	**23**	P	Pn	21 00 53.7	+1.0
PRHZ	**Porangahau**	**1.33**	**81**	P	Pn	21 00 53.4	+0.6
BHHZ	**Black Hill Sta**	**1.33**	**42**	P	Pn	21 00 53.2	+0.3
NMEZ	**Namu Road**	**1.34**	**323**	P	Pn	21 00 53.8	+0.9
TUVZ	**Tukino**	**1.35**	**25**	P	Pn	21 00 54.0	+0.8
NNZ	**Nelson**	**1.37**	**238**	P	Pn	21 00 53.7	+0.4
VRZ	**Vera Road**	**1.37**	**355**	P	Pn	21 00 53.7	+0.4
NEZ	**North Egmont**	**1.38**	**332**	P	Pn	21 00 54.2	+0.8
KHEZ	**Kahui Hut**	**1.39**	**330**	P	Pn	21 00 54.4	+0.8
KRHZ	**Kereru**	**1.40**	**53**	P	Pn	21 00 53.4	-0.3
NGZ	**Ngauruhoe**	**1.42**	**22**	P	Pn	21 00 54.9	+0.8
SNVZ	**South Ngauruho**	**1.42**	**23**	P	Pn	21 00 55.1	+0.9
OTVZ	**Oturere**	**1.45**	**24**	P	Pn	21 00 54.7	+0.2
BSWZ	**Blackbirch Sta**	**1.45**	**213**	P	Pn	21 00 54.9	+0.5
NNVZ	**North Ngauruho**	**1.46**	**22**	P	Pn	21 00 55.1	+0.4
NBEZ	**Newall Road No**	**1.47**	**326**	P	Pn	21 00 55.7	+1.1
WTVZ	**West Tongariro**	**1.47**	**21**	P	Pn	21 00 55.1	+0.3
TWVZ	**Taurewa**	**1.48**	**16**	P	Pn	21 00 55.0	+0.1
PKE	**Pukeiti**	**1.48**	**331**	P	Pn	21 00 55.9	+1.0
ETVZ	**East Tongariro**	**1.49**	**24**	P	Pn	21 00 55.7	+0.7
MHEZ	**Mangahewa**	**1.49**	**342**	P	Pn	21 00 56.1	+1.3
KRVZ	**Karewarewa**	**1.50**	**22**	P	Pn	21 00 56.0	+0.7
TMVZ	**Te Maari**	**1.50**	**24**	P	Pn	21 00 56.0	+0.8
NTVZ	**North Tongariro**	**1.51**	**23**	P	Pn	21 00 56.4	+1.0
PXZ	**Pawanui**	**1.56**	**73**	P	Pn	21 00 55.1	-0.7
KWHZ	**Kaweka Forest**	**1.57**	**48**	P	Pn	21 00 55.9	-0.2
KATZ	**Kakaramea**	**1.63**	**22**	P	Pn	21 00 58.8	+1.8
KAHZ	**Kahuranaki**	**1.66**	**66**	P	Pn	21 00 56.6	-0.6
RITZ	**Rihia Road**	**1.68**	**26**	P	Pn	21 00 58.2	+0.7
MCHZ	**McNeill Hill**	**1.72**	**53**	P	Pn	21 00 58.1	0.0
RATZ	**Rangitukua**	**1.75**	**22**	P	Pn	21 01 00.1	+1.5
BKZ	**Black Stump Fm**	**1.80**	**43**	P	Pn	21 00 58.7	-0.4
QRZ	**Quartz Range**	**1.85**	**259**	P	Pn	21 00 59.7	-0.1
WATZ	**Wairara**	**1.89**	**20**	P	Pn	21 01 01.6	+1.2
HIZ	**Hauiti**	**1.98**	**359**	P	Pn	21 01 02.4	+0.8
THZ	**Tophouse**	**1.98**	**230**	P	Pn	21 01 01.9	+0.3
NMHZ	**Naumai**	**2.02**	**47**	P	Pn	21 01 01.7	-0.4
ARHZ	**Aropaoanui**	**2.02**	**53**	P	Pn	21 01 01.6	-0.4
MRHZ	**Matea Rd**	**2.02**	**35**	P	Pn	21 01 01.4	-0.8
KUTZ	**Kaahu Road**	**2.12**	**20**	P	Pn	21 01 06.1	+2.5
KHZ	**Kahutara**	**2.18**	**208**	P	Pn	21 01 04.1	-0.2
MTHZ	**Maungataniwha**	**2.21**	**43**	P	Pn	21 01 08.5	+3.7
TLZ	**Tolley Road**	**2.21**	**13**	P	Pn	21 01 06.0	+1.2
MUGZ	**Murupara**	**2.47**	**36**	P	Pn	21 01 11.0	+2.7
MHGZ	**Mahia Peninsul**	**2.66**	**61**	P	Pn	21 01 09.3	-1.6
DSZ	**Denniston Nort**	**2.66**	**241**	P	Pn	21 01 11.0	0.0
PRGZ	**Paritu Road**	**2.77**	**56**	P	Pn	21 01 11.5	-1.0
TOZ	**Tahuroa Road**	**2.80**	**10**	P	Pn	21 01 13.6	+0.8
URZ	**Urewera**	**2.81**	**38**	P	Pn	21 01 10.9	-2.0
RIGZ	**Rimuhau**	**2.83**	**52**	P	Pn	21 01 16.9	+3.6
MWZ	**Matawai**	**2.96**	**44**	P	Pn	21 01 13.2	-1.8
LTZ	**Lake Taylor**	**3.03**	**220**	P	Pn	21 01 15.2	-0.8
CNGZ	**Carnagh Statio**	**3.24**	**53**	P	Pn	21 01 16.6	-2.2
RUGZ	**Raukumara Rang**	**3.31**	**41**	P	Pn	21 01 18.8	-1.1
INZ	**Inchbonnie**	**3.43**	**228**	P	Pn	21 01 20.9	-0.5
AWAZ	**Awhitu Peninsu**	**3.43**	**356**	P	Pn	21 01 22.4	+0.9
ETAZ	**East Tamaki Re**	**3.54**	**0**	P	Pn	21 01 24.4	+1.5
PKGZ	**Pakihiroa**	**3.58**	**44**	P	Pn	21 01 21.6	-2.0
AKCZ	**Akaroa Harbour**	**3.69**	**203**	P	Pn	21 01 23.7	-1.3
MBAZ	**Motutapu North**	**3.72**	**360**	P	Pn	21 01 26.3	+0.9
GCSZ	**Gaunt Creek Bo**	**4.44**	**229**	P	Pn	21 01 37.1	+1.9
WCZ	**Waipu Caves**	**4.57**	**354**	P	Pn	21 01 37.6	+0.5
FOZ	**Fox Glacier**	**4.87**	**230**	P	Pn	21 01 41.2	+0.1
CTZ	**Chatham Island**	**7.08**	**120**	P	Pn	21 02 10.7	-0.7

SKO 11 21:26:08.8, 41°.02N×22°.32E, h0km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.09**	**136**	*i* Pg	Pg	21 26 10.2	-0.2
GRG				*i* Sg	Sg	21 26 11.7	+0.1
KNT	**Kendrikon**	**0.46**	**72**	*i* Pg	Pg	21 26 17.9	+0.3
KNT				*i* Sg	Sg	21 26 23.0	-0.6
STIP	**Stip**	**0.68**	**352**	*i* Pg	Pg	21 26 22.1	+0.2
STIP				*i* Sg	Sg	21 26 26.4	-4.3
STIP				*e*Lg	Lg	21 26 28.0	
	comp=N,1.1nm,0.3s						

*ATH **11** 21:26:29.3, 39°.72N×20°.45E, h13km±3km, ML2.0/3, Error ellipse: s-maj=3.1km s-min=1.1km az=183.0*
THE 11 21:26:29.2, 39°.72N×20°.45E, h14km±1km, ML2.1/3, Error ellipse: s-maj=1.1km s-min=0.4km az=210.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.20**	**206**	P	Pg	21 26 33.5	-0.3
IGT				S	Sg	21 26 37.2	+0.2
IGT				AML	AML	21 26 38.3	
	comp=N,1583μm,0.3s						
IGT				AML	AML	21 26 38.3	
	comp=E,1051μm,0.3s						
IGT	**Igoumenitsa**	**0.20**	**206**	P	Pg	21 26 33.5	-0.3
IGT				S	Sg	21 26 37.4	+0.4
	comp=E,655nm,0.3s						
JAN	**Janina**	**0.32**	**101**	P	Pg	21 26 35.8	0.0
JAN				S	Sb	21 26 41.1	-0.5
JAN				AML	AML	21 26 41.5	
	comp=N,1374μm,0.3s						
JAN				AML	AML	21 26 41.8	
	comp=E,1350μm,0.2s						
JAN	**Janina**	**0.32**	**101**	P	Pg	21 26 35.7	-0.1
JAN				S	Sg	21 26 40.7	+0.5
	comp=E,685nm,0.2s						
SRN	**Sarande**	**0.38**	**296**	P	Pg	21 26 36.6	-0.3
SRN				S	Sb	21 26 42.9	-0.6
KASA	**Kassiopi**	**0.40**	**275**	P	Pg	21 26 37.3	+0.1
LSK	**Leskovik**	**0.45**	**15**	P	Pg	21 26 37.8	-0.4
KEK	**Kerkira**	**0.50**	**270**	P	Pg	21 26 38.7	-0.4
KEK				AML	AML	21 26 51.4	
	comp=N,243μm,0.3s						
KEK				AML	AML	21 26 54.0	
	comp=E,205μm,0.4s						
KEK	**Kerkira**	**0.50**	**270**	P	Pg	21 26 38.7	-0.4
KEK				S	Sb	21 26 46.8	-0.1
KPRO	**Kipourio**	**0.74**	**71**	P	Pg	21 26 43.0	-0.7
KPRO	**Kipourio**	**0.74**	**71**	P	Pg	21 26 42.9	-0.8
KPRO				S	Sb	21 26 54.5	+0.5
	comp=E,150nm,0.3s						
NEST	**Nestorio**	**0.84**	**33**	P	Pg	21 26 45.1	-0.3
NEST	**Nestorio**	**0.84**	**33**	P	Pg	21 26 45.1	-0.4
LKD2	**Lefkada island**	**0.94**	**170**	P	Pb	21 26 46.8	-0.4
NYDR	**Nydri-Lefkada**	**1.02**	**169**	P	Pb	21 26 48.3	-0.2
NYDR	**Nydri-Lefkada**	**1.02**	**169**	P	Pb	21 26 48.3	-0.3
DRAG	**Dragano-Lefkad**	**1.03**	**175**	P	Pb	21 26 49.0	+0.2
THL	**Klokotos Trika**	**1.22**	**97**	P	Pn	21 26 50.8	-0.9
FSK	**Fiskardo**	**1.26**	**176**	P	Pg	21 26 53.1	-0.3

WEL 11 21:31:10.9, 46°.3±8°.×16°.7E±1°.1, h18km±7km, M3.6/13, ML3.4/9, MLv3.6/13, Error ellipse: s-maj=0.0km s-min=0.0km az=54.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLZ	**Mavora Lakes**	**0.55**	**76**	P	Pb	21 31 22.6	+0.4
WHZ	**Wether Hill Ro**	**0.57**	**133**	P	Pb	21 31 23.2	+0.8
PYZ	**Puysegur Point**	**0.81**	**215**	P	Pb	21 31 21.4	-5.2
MSZ	**Milford Sound**	**0.92**	**26**	P	Pb	21 31 23.7	-4.7
WKZ	**Wanaka**	**1.36**	**61**	P	Pn	21 31 34.5	-0.5
APZ	**The Paps**	**1.40**	**162**	P	Pb	21 31 36.3	-0.3
EAZ	**Earnscleugh**	**1.40**	**79**	P	Pb	21 31 36.1	+0.4
SYZ	**Scrubby Hill**	**1.61**	**130**	P	Pb	21 31 39.6	-0.7
TUZ	**Tuapeka**	**1.66**	**107**	P	Pb	21 31 40.6	-0.3
JCZ	**Jackson Bay**	**1.76**	**36**	P	Pn	21 31 40.3	-0.3
HHSZ	**Highcliff Hill**	**2.30**	**101**	P	Pb	21 31 52.0	0.0
ODZ	**Otahua Downs**	**2.37**	**80**	P	Pn	21 31 48.3	-0.6
FOZ	**Fox Glacier**	**2.64**	**43**	P	Pn	21 31 51.1	-1.5
GCSZ	**Gaunt Creek Bo**	**3.05**	**45**	P	Pn	21 31 59.3	+1.0
ARCZ	**Arundel**	**3.14**	**62**	P	Pn	21 31 56.9	-2.6
WACZ	**Wakanui South**	**3.56**	**66**	P	Pn	21 32 04.6	-0.6
MQZ	**McQueen's Vall**	**4.19**	**66**	P	Pn	21 32 12.9	-1.0
DSZ	**Denniston Nort**	**4.95**	**42**	P	Pn	21 32 21.3	-3.2
THZ	**Tophouse**	**5.50**	**49**	P	Pn	21 32 31.2	-0.7
QRZ	**Quartz Range**	**6.01**	**41**	P	Pn	21 32 35.6	-3.5

*NIED **11** 21:42:58.6, 40°.38N×142°.27E, h40km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.42; Mθθ0.27; Mϕϕ-3.69; Mrθ2.34; Mθϕ-1.04; Mϕr3.97; Fault plane solution: M₀5.91000×10¹⁴ NP1:ϕ₀27.00000°, δ71.00000°, λ100.00000°. NP2:ϕs178.00000°, δ21.00000°, λ63.00000°.*
*JMA **11** 21:42:58.6±0.1, 40°.38N×142°.27E, h40km±1km, M3.7*
JMA Felt I J1.
*IDC **11** 21:43:00.2±2.4, 40°.36N×142°.31E, h68km±20km, mb3.4/11, mb1 3.4/15, mb1mx3.3/50, mbtmp3.6/15, MS2.3/2, Ms1 2.3/2, ms1mx2.1/24, Error ellipse: s-maj=24.2km s-min=16.8km az=106.0*
ISC 11 21:42:58.9±1.1, 40°.35N±0°.04×142°.22E±0°.08, h51km±9km, n32, σ1°36/37, mb3.5/11, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.42**	**251**	P	**Pn**	**21 43 08.7**	**-0.5**
JKEN				*e*S	**Sn**	**21 43 15.7**	**-0.9**
JTH	**Tanohata**	**0.49**	**214**	P	**Pn**	**21 43 09.7**	**-0.4**
JTH				*e*S	**Sn**	**21 43 17.5**	**-0.6**
JANG	**Nango**	**0.54**	**273**	P	**Pn**	**21 43 10.4**	**-0.3**
JANG				S	**Sn**	**21 43 18.8**	**-0.4**
JKZ	**Kuzumaki**	**0.77**	**243**	P	**Pn**	**21 43 14.0**	**+0.3**
JKZ				*e*S	**Sn**	**21 43 24.8**	**+0.4**
JARK	**Aomorirokkasho**	**0.93**	**316**	P	**Pn**	**21 43 15.0**	**-0.7**
JARK				S	**Sn**	**21 43 26.7**	**-1.3**
JTM	**Tenmabayashi**	**0.98**	**297**	P	**Pn**	**21 43 16.0**	**-0.4**
JTM				*e*S	**Sn**	**21 43 29.0**	**-0.3**
JOM	**Ohasama**	**1.13**	**220**	P	**Pn**	**21 43 18.9**	**+0.5**
JOM				*e*S	**Sn**	**21 43 33.7**	**+0.9**
JAH	**Hinai**	**1.23**	**263**	P	**Pn**	**21 43 20.1**	**+0.5**
JAH				*e*S	**Sn**	**21 43 35.3**	**+0.2**
JOT	**Ohata**	**1.37**	**320**	P	**Pn**	**21 43 21.0**	**-0.6**
ASAJ	**Asahikawa**	**3.78**	**4**	P	**Pn**	**21 43 54.8**	**+0.2**
	1.4nm,0.3s,baz=181,slow=11,SNR=12						
ASAJ				S	**Sn**	**21 44 41.8**	**+4.1**
	1.9nm,0.3s,baz=45,slow=9.9,SNR=4.4						
ASAJ				LR	LR	21 45 48.6	
	comp=Z,67nm,18.1s,baz=204,slow=45						
MJAR	**Matsushiro Arr**	**4.93**	**221**	P	**Pn**	**21 44 13.4**	**+2.9**
	0.1nm,0.3s,baz=29,slow=14,SNR=9.6						
USRK	**Ussuriysk Ar.**	**8.51**	**300**	P	**Pn**	**21 45 02.5**	**+3.2**
	baz=102,slow=16,SNR=8.4						
KSRS	**Korea Array**	**11.51**	**260**	P	**Pn**	**21 45 43.8**	**+3.3**
	0.0nm,0.3s,baz=78,slow=18,SNR=1.5						
KSRS				LR	LR	21 50 23.5	
	comp=Z,8.9nm,18.9s,baz=104,slow=38						
MA2	**Magadan**	**19.99**	**13**	P	**P**	**21 47 26.2**	**-0.6**
	0.2nm,0.3s,baz=174,slow=10,SNR=3.6						
SEY	**Seymchan**	**23.42**	**12**	P	**P**	**21 48 01.9**	**-1.2**
	0.9nm,0.5s,baz=199,slow=7.6,SNR=4.9						
SONM	**Songino Array**	**26.61**	**298**	P	**P**	**21 48 32.7**	**+0.1**
	0.2nm,0.4s,baz=60,slow=7.9,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**29.46**	**127**	T	T	22 19 57.3	
	baz=319,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	22 19 51.7	
	baz=319,slow=75,SNR=60						
H11N3	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	22 20 00.8	
	baz=319,slow=75,SNR=43						
H11S1	**WAKE ISLAND Hy**	**30.28**	**129**	T	T	22 21 01.1	
	baz=321,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**30.29**	**129**	T	T	22 20 56.6	
	baz=321,slow=76,SNR=5.5						
H11S2	**WAKE ISLAND Hy**	**30.30**	**129**	T	T	22 21 03.8	
	baz=321,slow=76,SNR=9.8						
ZALV	**Zalesovo Beam**	**40.22**	**310**	P	**P**	**21 50 29.4**	**-0.9**
	0.9nm,0.4s,baz=94,slow=5.9,SNR=4.2						
ZALV				PcP	**PcP**	**21 52 33.8**	**+0.5**
	0.6nm,0.4s,baz=73,slow=4.8,SNR=1.7						
MKAR	**Makanchi Array**	**42.98**	**299**	P	**P**	**21 50 52.5**	**-0.4**
	1.4nm,0.7s,baz=86,slow=8.9,SNR=9.2						
KURBB	**Kurchatov Arra**	**44.53**	**305**	P	**P**	**21 51 04.8**	**-0.5**
	1.6nm,0.6s,baz=81,slow=8.7,SNR=8.3						
KURBB				PcP	**PcP**	**21 52 46.6**	**-1.1**
	0.3nm,0.5s,baz=81,slow=2.6,SNR=2.3						
ILAR	**Eielson Array**	**46.38**	**34**	P	**P**	**21 51 19.8**	**+0.1**
	0.2nm,0.8s,baz=266,slow=7.1,SNR=1.7						
WRA	**Warramunga Arr**	**60.42**	**189**	P	**P**	**21 53 02.8**	**-0.4**
	0.3nm,0.7s,baz=6.0,slow=7.0,SNR=2.1						
ASAR	**Alice Springs**	**64.15**	**188**	P	**P**	**21 53 26.2**	**-1.9**
	0.4nm,1.0s,baz=359,slow=3.8,SNR=2.8						
FINES	**FINESS Array B**	**66.19**	**332**	P	**P**	**21 53 40.3**	**-0.5**
	1.5nm,0.8s,baz=44,slow=5.8,SNR=4.9						
NOA	**NORSAR Array B**	**71.38**	**337**	P	**P**	**21 54 13.3**	**+0.1**
	0.3nm,0.7s,baz=15,slow=14,SNR=1.7						
AKASG	**Malin Array Be**	**72.07**	**322**	P	**P**	**21 54 17.0**	**-0.5**
	0.9nm,0.5s,baz=43,slow=6.3,SNR=6.0						
CPUP	**Villa Florida**	**158.57**	**55**	PKP	**PKPdf**	**22 02 50.7**	**-0.1**
	1.1nm,0.4s,baz=326,slow=3.6,SNR=2.2						

*IDC **11** 21:48:19.8±1.2, 10°.62N×92°.00E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.5/52, mbtmp3.6/9, ML3.5/2, MS3.1/4, Ms1 3.1/4, ms1mx2.6/43, Error ellipse: s-maj=36.5km s-min=19.0km az=63.0*
**ISC

	comp=E,2µm,0.3s							
SLHN				IAML		22 01 46.0		
	comp=N,1µm,0.4s							
AKDA	**Akdag**	**0.97**	**322**	*i* P	**Pg**	**22 01 24.3**	**-1.0**	
ERCV	**ERCiS-VAN**	**0.98**	**108**	PG	**Pg**	**22 01 24.5**	**-0.9**	
ERCV				SG	**Sg**	**22 01 38.3**	**+0.1**	
VMUR	**Van-Muradiye**	**1.16**	**107**	*i* P	**Pg**	**22 01 27.6**	**-1.2**	
VMUR				*i* S	**Sg**	**22 01 44.1**	**+0.1**	
VMUR				IAML		22 01 45.0		
	comp=E,1µm,0.7s							
VMUR				IAML		22 01 47.0		
	comp=N,1µm,0.8s							
BNGB	**Bingl**	**1.19**	**254**	PN	**Pn**	**22 01 28.9**	**+0.1**	
BNGB				SN	**Sn**	**22 01 46.1**	**+1.3**	
AKDM	**Akdamar-Van**	**1.20**	**147**	PN	**Pg**	**22 01 27.9**	**-1.6**	
AKDM				SN	**Sb**	**22 01 45.3**	**+0.8**	
DYDN	**Diyadin**	**1.21**	**80**	*i* P	**Pg**	**22 01 27.6**	**-2.2**	
DYDN				IAML		22 01 44.0		
	comp=N,992nm,0.3s							
DYDN				IAML		22 01 44.0		
	comp=E,1µm,0.3s							
DYDN				*i* S	**Sg**	**22 01 44.1**	**-1.6**	
VANB	**Van**	**1.22**	**127**	PN	**Pb**	**22 01 29.8**	**+0.4**	
GEVA	**Gevas**	**1.25**	**145**	*i* P	**Pg**	**22 01 28.6**	**-1.8**	
GEVA				*i* S	**Sn**	**22 01 47.7**	**+1.4**	
GEVA				IAML		22 01 49.0		
	comp=E,1µm,0.9s							
GEVA				IAML		22 01 52.0		
	comp=N,706nm,0.7s							
TVAN	**Van**	**1.27**	**129**	*i* P	**Pg**	**22 01 29.8**	**-1.2**	
TVAN				*i* S	**Sn**	**22 01 48.2**	**+1.2**	
TVAN				IAML		22 01 50.0		
	comp=E,1µm,0.5s							
TVAN				IAML		22 01 51.0		
	comp=N,848nm,0.4s							
SRTM	**Siirt_Merkez**	**1.35**	**187**	*i* P	**Pn**	**22 01 31.1**	**+0.1**	
SRTM				IAML		22 01 58.0		
	comp=N,830nm,0.9s							
SRTM				IAML		22 02 06.0		
	comp=E,594nm,0.9s							
KRIK	**Erzurum-spir**	**1.37**	**317**	*i* P	**Pb**	**22 01 32.2**	**+0.1**	
KRIK				IAML		22 01 54.0		
	comp=N,239nm,0.6s							
KRIK				IAML		22 01 54.0		
	comp=E,360nm,0.8s							
CLDR	**Caldiran**	**1.39**	**97**	*i* P	**Pn**	**22 01 30.9**	**-0.8**	
CLDR				IAML		22 01 58.0		
	comp=N,275nm,0.4s							
CLDR				IAML		22 01 59.0		
	comp=E,368nm,0.6s							
CLDR	**Caldiran**	**1.39**	**97**	PN	**Pn**	**22 01 31.4**	**-0.2**	
PERV	**Siirt/Pervari-**	**1.42**	**167**	*i* P	**Pn**	**22 01 31.9**	**-0.1**	
PERV				IAML		22 01 56.0		
	comp=N,762nm,0.5s							
PERV				IAML		22 01 57.0		
	comp=E,675nm,0.5s							
KOPT	**Kop Dagi**	**1.44**	**299**	*i* P	**Pg**	**22 01 33.2**	**-0.9**	
KOPT				IAML		22 01 58.0		
	comp=N,962nm,0.9s							
KOPT				IAML		22 02 05.0		
	comp=E,997nm,0.6s							
KARS	**Kars**	**1.48**	**29**	PN	**Pn**	**22 01 32.9**	**+0.1**	
VNNZ	**Vanand**	**1.50**	**59**	*i* P	**Pb**	**22 01 34.2**	**0.0**	
VNNZ				*i* S	**Sg**	**22 01 57.1**	**+2.2**	
OZAP	**Van, Ozalp-Mer**	**1.59**	**114**	*i* P	**Pb**	**22 01 36.2**	**+0.5**	
OZAP				*i* S	**Sg**	**22 02 00.3**	**+2.6**	
METS	**Metsamor**	**1.70**	**61**	*i* P	**Pb**	**22 01 37.5**	**0.0**	
METS				*i* S	**Sg**	**22 02 01.8**	**+0.7**	
TASB	**TASBURUN-IGDIR**	**1.74**	**68**	PN	**Pn**	**22 01 36.5**	**+0.2**	
EAK	**Akyaka**	**1.75**	**39**	*i* P	**Pn**	**22 01 37.1**	**+0.5**	
ARUZ	**Aruch**	**1.77**	**57**	*i* P	**Pb**	**22 01 38.9**	**+0.1**	
ARUZ				*i* S	**Sg**	**22 02 06.1**	**+2.6**	
SIRN	**Sırnak**	**1.85**	**173**	*i* P	**Pn**	**22 01 39.2**	**+1.3**	
ERZN	**Erzincan**	**1.89**	**278**	PN	**Pn**	**22 01 38.9**	**+0.4**	
NRKZ	**NAREK**	**2.05**	**70**	*i* P	**Pn**	**22 01 41.7**	**+1.0**	
NRKZ				*i* S	**Sb**	**22 02 10.7**	**+1.7**	
DYBB	**Diyarbakir**	**2.09**	**229**	PN	**Pn**	**22 01 42.0**	**+0.9**	
HAKT	**HAKKARI**	**2.16**	**145**	*i* P	**Pb**	**22 01 44.5**	**-0.9**	
GNI	**Garni**	**2.16**	**67**	Pn	**Pn**	**22 01 43.1**	**+0.9**	
	comp=E,46nm,0.3s,baz=272,slow=4.0,SNR=71							
GNI				Pg	**Pb**	**22 01 45.7**	**+0.2**	
	comp=E,46nm,0.3s,baz=283,slow=4.2,SNR=69							
GNI				Lg	Lg	22 02 15.1		
	comp=E,10.0nm,0.3s,baz=217,slow=20,SNR=3.8							
GNI	**Garni**	**2.16**	**67**	*e*P	**Pb**	**22 01 45.4**	**0.0**	
GNI				⇓S	**Sg**	**22 02 17.1**	**+1.1**	
KAPZ	**Kaputan**	**2.20**	**63**	*i* P	**Pb**	**22 01 46.4**	**+0.3**	
KAPZ				*i* S	**Sg**	**22 02 18.7**	**+1.5**	
KBZ	**Khabaz**	**4.42**	**7**	Pn	**Pn**	**22 02 14.3**	**+1.2**	
	comp=E,0.1nm,0.3s,baz=219,slow=6.5,SNR=2.8							
KBZ				Pg	**Pb**	**22 02 23.9**	**0.0**	
	comp=E,0.2nm,0.3s,baz=179,slow=5.9,SNR=6.9							
KBZ				LR	LR	22 04 05.3		
	comp=E,115nm,18.6s,baz=188,slow=41							
KVAR	**Kislovodsk Arr**	**4.63**	**5**	Pn	**Pn**	**22 02 17.3**	**+1.1**	
	baz=193,slow=18,SNR=2.0							
BRTR	**Keskin Array B**	**6.59**	**276**	Pn	**Pn**	**22 02 43.7**	**+0.7**	
	comp=E,0.1nm,0.3s,baz=106,slow=17,SNR=3.6							
MMAI	**Mount Meron Ar**	**8.33**	**223**	Pn	**Pn**	**22 03 07.2**	**+0.3**	
	comp=E,0.3nm,0.3s,baz=68,slow=13,SNR=1.3							
MMAI				Lg	Lg	22 05 25.7		
	comp=E,0.2nm,0.3s,baz=19,slow=23,SNR=2.9							
MLR	**Muntele Rosu**	**13.45**	**302**	Pn	**Pn**	**22 04 15.5**	**-1.4**	
	comp=E,0.1nm,0.3s,baz=120,slow=20,SNR=1.6							
BELG	**Belogornoye**	**13.60**	**14**	Pn	**Pn**	**22 04 17.0**	**-1.7**	
	comp=E,0.3nm,0.3s,baz=208,slow=18,SNR=1.6							
AKASG	**Malin Array Be**	**14.55**	**326**	Pn	**Pn**	**22 04 29.9**	**-2.0**	
	comp=E,0.2nm,0.3s,baz=138,slow=12,SNR=8.7							
CRVS	**Cervenica-Dubn**	**17.61**	**310**	*e*P	**P**	**22 05 15.5**	**+3.2**	
CONA	**Conrad Observa**	**20.79**	**303**	*e*P	Pn	22 05 52.6	+3.0	
	comp=E,7.0nm,1.4s							
WSAR	**Wadi Sarin**	**21.30**	**134**	LR	LR	22 15 39.3		
	comp=E,27nm,20.4s,baz=90,slow=41							
MOA	**Molln**	**21.82**	**302**	*i* P	**P**	**22 06 02.2**	**+4.1**	
	comp=E,5.1nm,1.4s							
KBA	**Koelnbreinsper**	**22.28**	**300**	*e*P	**P**	**22 06 06.9**	**+3.5**	
	comp=E,3.3nm,1.1s							
GERES	**GERESS Array B**	**22.42**	**304**	P	**P**	**22 06 03.5**	**-1.2**	
	comp=E,0.3nm,0.5s,baz=95,slow=11,SNR=2.9							
ABTA	**Abfaltersbach**	**22.79**	**299**	*e*P	**P**	**22 06 11.5**	**+2.8**	
	comp=E,2.3nm,0.9s							
WTTA	**Wattenberg**	**23.46**	**300**	*e*P	**P**	**22 06 18.8**	**+3.2**	
	comp=E,3.4nm,1.1s							
WATA	**Walderalm**	**23.51**	**300**	*i* P	**P**	**22 06 17.4**	**+1.3**	
	comp=E,4.0nm,1.2s							
SQTA	**Sankt Quirin**	**23.74**	**300**	*e*P	**P**	**22 06 18.8**	**+0.6**	
	comp=E,3.6nm,0.9s							
MOTA	**Moosalm**	**23.83**	**300**	*i* P	**P**	**22 06 20.3**	**+1.1**	
	comp=E,4.8nm,1.0s							
FINES	**FINESS Array B**	**24.25**	**341**	P	**P**	**22 06 22.3**	**-0.5**	
	comp=E,0.8nm,0.6s,baz=148,slow=11,SNR=6.8							
DAVOX	**Davos/Dischmat**	**24.59**	**298**	P	**P**	**22 06 24.7**	**-1.5**	
	comp=E,1.3nm,0.7s,baz=104,slow=8.3,SNR=4.9							
HFS	**Hagfors**	**27.40**	**329**	P	**P**	**22 06 51.8**	**+0.6**	
	comp=E,2.5nm,0.9s,baz=204,slow=6.3,SNR=2.3							
ESDC	**Sonseca Array**	**35.27**	**286**	P	**P**	**22 08 00.2**	**-0.6**	
	comp=E,0.7nm,0.6s,baz=65,slow=8.4,SNR=10							

*DDA **11** 22:29:31.7,40°.28N×41°.01E,h23km±1km,ML2.4*
*ISK **11** 22:29:32.1,40°.20N×40°.97E,h15km,ML2.9/8*
ISC 11 22:29:32.3±1.1,40°.21N±0°.04×40°.99E±0°.03,h19km±3km, n12,σ0°68/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRIK	**Erzurum-spir**	**0.13**	**340**	*i* P	**Pg**	**22 29 36.3**	**-0.4**
KRIK				IAML		22 29 39.0	
	comp=N,415nm,0.2s						
KRIK				*i* S	**Sg**	**22 29 39.3**	**-0.4**
KRIK				IAML		22 29 41.0	
	comp=E,512nm,0.4s						
AKDA	**Akdag**	**0.31**	**111**	*i* P	**Pb**	**22 29 39.1**	**-0.2**
KOPT	**Kop Dagi**	**0.42**	**243**	*i* P	**Pb**	**22 29 41.5**	**+0.1**
KOPT				*i* S	**Sn**	**22 29 50.2**	**-0.9**
KOPT				IAML		22 29 52.0	
	comp=N,282nm,0.4s						
KOPT				IAML		22 29 56.0	
	comp=E,386nm,0.5s						
BAYB	**BAYBURT**	**0.56**	**275**	*i* P	**Pg**	**22 29 43.8**	**+0.2**
BAYB				IAML		22 29 52.0	
	comp=E,694nm,0.3s						
BAYB				IAML		22 29 52.0	
	comp=N,435nm,0.3s						
BAYB				*i* S	**Sg**	**22 29 52.2**	**+1.0**

KOPR	**Koprukoy-ERZUR**	**0.70**	**108**	PG	**Pg**	**22 29 46.2**	**0.0**	
KOPR				SG	**Sn**	**22 29 56.9**	**-0.9**	
YEDI	**Yedisu-Bingol**	**0.85**	**204**	PG	**Pb**	**22 29 47.5**	**-1.0**	
YEDI				SG	**Sg**	**22 30 00.6**	**+0.5**	
CHAY	**Cayeli-Rize**	**0.90**	**347**	PG	**Pn**	**22 29 50.2**	**+0.3**	
CHAY				SG	**Sn**	**22 30 03.2**	**+0.9**	
CHOM	**Cayeli-Rize**	**0.90**	**349**	PG	**Pn**	**22 29 50.1**	**+0.1**	
CHOM				SG	**Sn**	**22 30 03.4**	**+0.9**	
KARO	**Karliova-Bingo**	**0.90**	**177**	PG	**Pb**	**22 29 49.8**	**+0.3**	
KARO				SG	**Sg**	**22 30 02.7**	**+0.8**	
SENK	**Senkaya-Erzuru**	**1.10**	**71**	PN	**Pg**	**22 29 53.7**	**+0.1**	
KTUT	**Trabzon**	**1.21**	**310**	PN	**Pg**	**22 29 54.9**	**-0.8**	
HOPA	**Hopa-Artvin**	**1.22**	**16**	PN	**Pg**	**22 29 55.5**	**-0.5**	

*BGR **11** 22:36:34.6±0.0,22°.95S×177°.64W,h33km*
*NEIC **11** 22:37:39.6±1.4,22°.1S±0°.1×179°.5W±0°.2,h592km±8km, mb4.3/29, Error ellipse: s-maj=23.8km s-min=17.3km az=91.0*
*IDC **11** 22:37:39.7±0.9,22°.10S×179°.57W,h589km±10km, mb3.2/12, mb1 3.4/16, mb1mx3.3/26, mbtmp4.2/16, Error ellipse: s-maj=13.9km s-min=12.0km az=127.0*
ISC 11 22:37:39.6±0.4,22°.13S±0°.07×179°.55W±0°.08,h592km, n109,σ0°95/115,mb4.2/26,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.93**	**332**	P	**P**	**22 39 11.3**	**-0.4**
	5.4nm,0.3s,baz=108,slow=19,SNR=15						
MSVF				S	**S**	**22 40 26.7**	**+0.2**
	0.1nm,0.3s,baz=143,slow=20,SNR=11						
MSVF	**Nonsavu**	**4.93**	**332**	P	**P**	**22 39 11.4**	**-0.2**
RAO	**Raoul Island**	**7.24**	**169**	P	**P**	**22 39 31.5**	**+0.2**
	46nm,0.3s,baz=49,slow=20,SNR=2.2						
AFI	**Afiamalu**	**11.02**	**43**	P	**P**	**22 40 08.0**	**-0.6**
	4.7nm,0.3s,baz=196,slow=19,SNR=5.6						
OUZ	**Omahuta**	**14.35**	**203**	P	**P**	**22 40 43.1**	**+1.3**
URZ	**Urewera**	**16.33**	**189**	P	**P**	**22 40 58.7**	**-1.4**
	0.8nm,0.3s,baz=301,slow=23,SNR=15						
URZ				S	**S**	**22 43 38.4**	**-5.1**
	0.3nm,0.3s,baz=119,slow=23,SNR=3.5						
URZ	**Urewera**	**16.33**	**189**	P	**P**	**22 40 58.8**	**-1.3**
URZ				IAmb	IAmb	22 40 59.7	
	comp=Z,14nm,0.9s						
BKZ	**Black Stump Fm**	**17.31**	**190**	P	**P**	**22 41 07.5**	**-1.7**
RAR	**Rarotonga**	**18.40**	**91**	P	**P**	**22 41 18.0**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=349,slow=5.2,SNR=2.0						
TUWZ	**Tuamarina**	**20.01**	**194**	P	**P**	**22 41 35.2**	**+1.6**
RPZ	**Rata Peaks**	**22.89**	**198**	P	**P**	**22 41 58.2**	**-1.2**
	comp=Z,13nm,0.7s,baz=71,slow=14,SNR=2.3						
MLZ	**Mavora Lakes**	**25.28**	**201**	P	**P**	**22 42 21.5**	**+1.0**
ARMA	**Armidale**	**27.07**	**246**	P	**P**	**22 42 38.2**	**+1.7**
CTA	**Charters Tower**	**31.93**	**267**	P	**P**	**22 43 18.2**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=104,slow=8.7,SNR=2.0						
CTAO	**Charters Tower**	**31.93**	**267**	P	**P**	**22 43 18.7**	**+0.3**
TOO	**Toolangi**	**33.78**	**235**	P	**P**	**22 43 34.8**	**+1.0**
TOO				IAmb	IAmb	22 43 53.4	
	comp=Z,14nm,1.3s						
STKA	**Stephens Creek**	**35.80**	**246**	P	**P**	**22 43 50.9**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=86,slow=9.9,SNR=8.3						
STKA	**Stephens Creek**	**35.80**	**246**	P	**P**	**22 43 51.6**	**+1.1**
BBOO	**Buckleboo**	**40.54**	**245**	P	**P**	**22 44 29.2**	**+0.2**
BBOO				IAmb	IAmb	22 44 39.8	
	comp=Z,9.3nm,1.1s						
AS31	**Alice Springs**	**42.76**	**259**	P	**P**	**22 44 46.6**	**+0.1**
ASAR	**Alice Springs**	**42.76**	**259**	P	**P**	**22 44 46.9**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=101,slow=7.7,SNR=27						
ASAR				PcP	**PcP**	**22 46 24.8**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=103,slow=4.2,SNR=10						
ASAR				S	**S**	**22 50 27.8**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=82,slow=16,SNR=5.9						
ASAR	**Alice Springs**	**42.76**	**259**	P	**P**	**22 44 46.8**	**+0.2**
WB0	**Warramunga Arr**	**42.96**	**264**	P	**P**	**22 44 47.8**	**-0.3**
WB0				IAmb	IAmb	22 45 01.2	
	comp=Z,7.2nm,1.3s						
WB2	**Warramunga Arr**	**42.96**	**264**	P	**P**	**22 44 47.7**	**-0.4**
WB2				IAmb	IAmb	22 44 52.3	
	comp=Z,9.2nm,1.4s						
WRA	**Warramunga Arr**	**42.97**	**264**	P	**P**	**22 44 47.7**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=100,slow=7.0,SNR=13						
WRA				PcP	**PcP**	**22 46 25.2**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=97,slow=3.3,SNR=3.6						
WRA				S	**S**	**22 50 27.2**	**-4.6**
	comp=Z,0.5nm,1.0s,baz=100,slow=14,SNR=2.2						
WRA	**Warramunga Arr**	**42.97**	**264**	P	**P**	**22 44 48.0**	**-0.2**
FORT	**Forrest**	**47.34**	**248**	P	**P**	**22 45 21.2**	**-0.1**
KNRA	**Kununurra**	**49.14**	**268**	P	**P**	**22 45 34.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**51.40**	**264**	P	**P**	**22 45 51.4**	**+0.1**
PSA00	**Pilbara Seismi**	**55.91**	**258**	P	**P**	**22 46 22.6**	**-0.4**
PSA00				IAmb	IAmb	22 46 31.4	
	comp=Z,16nm,1.4s						
SBA	**Scott Base**	**56.16**	**183**	P	**P**	**22 46 24.3**	**+0.6**
VNDA	**Vanda**	**56.17**	**185**	P	**P**	**22 46 25.7**	**+1.9**
	comp=Z,1.3nm,0.7s,baz=346,slow=5.9,SNR=7.6						
VNDA	**Vanda**	**56.17**	**185**	P	**P**	**22 46 24.8**	**+1.0**
MORW	**Morawa**	**57.89**	**249**	P	**P**	**22 46 36.4**	**0.0**
QSPA	**South Pole Qui**	**67.94**	**180**	P	**P**	**22 47 41.6**	**+1.4**
QSPA				IAmb	IAmb	22 47 42.4	
	comp=Z,6.4nm,0.8s						
MJAR	**Matsushiro Arr**	**70.69**	**325**	P	**P**	**22 47 56.9**	**0.0**
	comp=Z,0.8nm,0.5s,baz=164,slow=7.6,SNR=4.5						
JSD	**Sado**	**71.78**	**326**	P	**P**	**22 48 04.4**	**+1.2**
JSD				IAmb	IAmb	22 48 18.0	
	comp=Z,14nm,1.4s						
KSM	**Kuching**	**72.23**	**279**	P	**P**	**22 48 06.9**	**+0.6**
KSM				IAmb	IAmb	22 48 07.8	
	comp=Z,15nm,1.2s						
SSLB	**Suanglung**	**73.69**	**305**	P	**P**	**22 48 13.8**	**-0.7**
KSRS	**Korea Array**	**77.17**	**320**	P	**P**	**22 48 34.1**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=129,slow=4.5,SNR=1.9						
PEA0B	**Petropavlovsk-**	**77.49**	**346**	P	**P**	**22 48 34.9**	**+0.1**
PEA0B				IAmb	IAmb	22 48 48.6	
	comp=Z,22nm,1.2s						
PETK	**Petropavlovsk-**	**77.49**	**346**	P	**P**	**22 48 34.3**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=132,slow=6.0,SNR=6.3						
PETK	**Petropavlovsk-**	**77.49**	**346**	P	**P**	**22 48 34.5**	**-0.2**
SUA	**Susitna One**	**86.47**	**13**	P	**P**	**22 49 19.7**	**-0.5**
SUA				IAmb	IAmb	22 49 20.7	
	comp=Z,12nm,1.4s						
VNA3	**Neumayer Olymp**	**86.61**	**177**	P	**P**	**22 49 20.7**	**-0.1**
VNA2	**Neumayer--Watz**	**87.03**	**177**	P	**P**	**22 49 22.9**	**+0.2**
	baz=193,slow=3.3						
GHO	**Glory Hole Cre**	**87.14**	**14**	P	**P**	**22 49 22.1**	**-1.1**
GHO				IAmb	IAmb	22 49 37.2	
	comp=Z,5.1nm,1.0s						
VNA1	**Neumayer--Stat**	**87.27**	**177**	P	**P**	**22 49 22.3**	**-1.5**
SCM	**Sheep Creek Mo**	**87.56**	**15**	P	**P**	**22 49 25.4**	**+0.2**
RND	**Reindeer**	**88.61**	**13**	P	**P**	**22 49 29.9**	**-0.1**
RND				IAmb	IAmb	22 49 41.6	
	comp=Z,4.8nm,1.1s						
TXAR	**Lajitas Array**	**89.14**	**58**	P	**P**	**22 49 34.5**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=242,slow=2.7,SNR=3.5						
CM31	**Chiang Mai Arr**	**89.31**	**290**	P	**P**	**22 49 35.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**89.31**	**290**	P	**P**	**22 49 36.2**	**+2.0**
	comp=Z,2.0nm,0.7s,baz=134,slow=3.4,SNR=13						
CMAR	**Chiang Mai Arr**	**89.31**	**290**	P	**P**	**22 49 35.2**	**+1.0**
CHTO	**Chiang Mai**	**89.45**	**290**	P	**P**	**22 49 36.0**	**+1.1**
CHTO				IAmb	IAmb	22 49 37.6	
	comp=Z,2.8nm,0.8s						
CCB	**Clear Creek Bu**	**89.92**	**13**	P	**P**	**22 49 35.0**	**-1.0**
CCB				IAmb	IAmb	22 49 37.7	
	comp=Z,4.6nm,1.4s						
IMAR	**Indian Mountai**	**90.01**	**10**	P	**P**	**22 49 36.5**	**+0.1**
ILAR	**Eielson Array**	**90.22**	**13**	P	**P**	**22 49 37.1**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=201,slow=4.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**110.85**	**321**	PKiKP	**PKiKP**	**22 55 04.2**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=40,slow=4.7,SNR=1.5						
MKAR	**Makanchi Array**	**111.26**	**313**	PKiKP	**PKiKP**	**22 55 05.9**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=243,slow=2.2,SNR=5.1						
ARCES	**ARCESS Array B**	**130.25**	**349**	PKP	**PKPdf**	**22 55 42.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=2.7,slow=1.4,SNR=9.3						
ARCES	**ARCESS Array B**	**130.25**	**349**	PKP	**PKPdf**	**22 55 42.0**	**-0.6**
FINES	**FINESS Array B**	**136.90**	**342**	PKP	**PKiKP**	**22 55 56.6**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=98,slow=2.8,SNR=7.0						
KMBO	**Kilima Mbogo**	**137.31**	**242**	PKP	**PKPdf**	**22 55 58.0**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=115,slow=11,SNR=5.8						
AKASG	**Malin Array Be**	**143.70**	**329**	PKP	PKPbc	22 56 06.3	-0.7
	comp=Z,1.7nm,0.3s,baz=41,slow=4.4,SNR=22						
AKASG	**Malin Array Be**	**143.70**	**329**		PKPbc	22 56 06.0	-1.0
AKBB	**Malin Array Si**	**143.70**	**329**		PKPbc	22 56 06.2	-0.8
BR131	**Keskin Array S**	**146.81**	**310**		**PKPbc**	**22 56 16.5**	**-0.1**
BRTR	**Keskin Array B**	**146.81**	**310**	PKPbc	**PKPbc**	**22 56 16.6**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=131,slow=4.9,SNR=10						
BRTR	**Keskin Array B**	**146.81**	**310**		**PKPbc**	**22 56 16.4**	**-0.2**

BURAR	**Bucovina Array**	**147.72**	**328**		**PKPbc**	**22 56 19.1**	**+0.5**	
OSTC	**Ostas**	**149.06**	**340**	*e*PKP	**PKPbc**	**22 56 22.1**	**+0.4**	
CHVC	**Chvalec**	**149.08**	**341**	*e*PKP	**PKPbc**	**22 56 22.1**	**+0.3**	
CHVC				*ex*	x	22 56 29.2		
DPC	**Dobruska-Polom**	**149.20**	**340**	*e*PKP	**PKPbc**	**22 56 22.2**	**+0.1**	
CLL	**Collm**	**149.28**	**345**	*i* PKPbc	**PKPbc**	**22 56 22.6**	**+0.4**	
	comp=Z,9.0nm,0.9s							
CLL				*e*PKPab	**PKPab**	**22 56 29.0**	**-0.3**	
	comp=Z,3.0nm,0.8s							
CLL	**Collm**	**149.28**	**345**		**PKPbc**	**22 56 22.3**	**+0.1**	
CLL	**Collm**	**149.28**	**345**	*e*PKPbc	**PKPbc**	**22 56 22.5**	**+0.4**	
	baz=18,slow=2.3							
BRG	**Berggiesshubel**	**149.44**	**343**	*e*PKPbc	**PKPbc**	**22 56 22.9**	**+0.3**	
	baz=18,slow=2.3							
CHRS	**Christianenhau**	**149.50**	**347**	*e*PKPbc	**PKiKP**	**22 56 23.2**	**-0.3**	
	baz=18,slow=2.3							
FBE	**Freiberg**	**149.55**	**344**	*e*PKPbc	**PKiKP**	**22 56 23.6**	**+0.1**	
	baz=18,slow=2.3							
PVCC	**Panska Ves**	**149.57**	**342**	*e*PKP	**PKiKP**	**22 56 23.3**	**-0.3**	
ABG1	**Leinawald**	**149.70**	**345**	*e*PKPbc	**PKiKP**	**22 56 23.9**	**+0.1**	
	baz=18,slow=2.3							
MODW	**Modelwitz**	**149.75**	**345**	*e*PKPbc	**PKiKP**	**22 56 23.8**	**-0.2**	
	baz=18,slow=2.3							
HKWD	**Heukewalde**	**149.90**	**345**	*e*PKPbc	**PKiKP**	**22 56 24.3**	**0.0**	
	baz=18,slow=2.3							
MLFH	**Mildenfurth**	**149.98**	**345**	*e*PKPbc	**PKiKP**	**22 56 24.2**	**-0.2**	
	baz=18,slow=2.3							
PRU	**Pruhonice**	**150.06**	**342**	*e*PKP	**PKiKP**	**22 56 24.4**	**-0.2**	
MOX	**Moxa**	**150.23**	**346**	*e*PKPbc	**PKiKP**	**22 56 24.8**	**-0.2**	
	baz=18,slow=2.3							
TANN	**Tannenbergstha**	**150.24**	**344**	*e*PKPbc	**PKiKP**	**22 56 25.0**	**-0.1**	
	baz=18,slow=2.3							
WERD	**Werda**	**150.25**	**345**	*e*PKPbc	**PKiKP**	**22 56 25.0**	**-0.1**	
	baz=18,slow=2.3							
PLN	**Plauen**	**150.25**	**345**	*e*PKPbc	**PKiKP**	**22 56 25.0**	**-0.1**	
	baz=18,slow=2.3							
MULD	**Muldenberg**	**150.26**	**345**	*e*PKPbc	**PKiKP**	**22 56 25.1**	**0.0**	
	baz=18,slow=2.3							
HWTS	**Hohenwarte Tal**	**150.31**	**346**	*e*PKPbc	**PKPbc**	**22 56 24.8**	**+0.1**	
	baz=18,slow=2.3							
GUNZ	**Gunzen**	**150.32**	**345**	*e*PKPbc	**PKiKP**	**22 56 25.1**	**-0.1**	
	baz=18,slow=2.3							
KASTN	**Kahler Asten**	**150.33**	**350**	*e*PKPbc	**PKiKP**	**22 56 25.0**	**-0.2**	
	baz=18,slow=2.3							
VITZ	**Vitzeroda**	**150.33**	**348**	*e*PKPbc	**PKPbc**	**22 56 24.8**	**+0.2**	
	baz=18,slow=2.3							
WERN	**Wernitzgruen**	**150.38**	**344**	*e*PKPbc	**PKiKP**	**22 56 25.6**	**+0.2**	
	baz=18,slow=2.3							
NKC	**Novy Kostel**	**150.41**	**344**	*e*PKPbc	**PKiKP**	**22 56 25.5**	**+0.1**	
	baz=18,slow=2.3							
ROHR	**Rohrbach**	**150.44**	**344**	*e*PKPbc	**PKiKP**	**22 56 25.7**	**+0.2**	
	baz=18,slow=2.3							
CRUX	**Bergwerk Schwa**	**150.45**

CTU	**Camp Tracy**	**5.76**	**240**	Pn	**Pn**	**23 51 00.6**	**-0.5**
PV07	**Paradox Valley**	**5.91**	**208**		**Pn**	**23 51 05.5**	**+2.4**
SPUT	**South Promonto**	**5.91**	**248**		**Pn**	**23 51 04.7**	**+1.7**
P17A	**Butcher Ranch,**	**5.96**	**226**		**Pn**	**23 51 04.9**	**+1.0**
SRU	**San Rafael Swe**	**6.13**	**223**	Pn	**Pn**	**23 51 06.4**	**+0.3**
TMUT	**Trail Mountain**	**6.34**	**228**		**Pn**	**23 51 10.9**	**+1.7**
Q16A	**Castle Valley**	**6.60**	**225**		**Pn**	**23 51 14.0**	**+1.4**
MSO	**Missoula**	**6.93**	**300**	Pn	**Pn**	**23 51 18.7**	**+1.7**
ANMO	**Albuquerque**	**8.83**	**187**	Pn	**Pn**	**23 51 41.3**	**-1.9**
	comp=N,0.7nm,0.3s,baz=338,slow=8.0,SNR=6.1						
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	**Pn**	**23 51 48.0**	**+1.4**
	comp=N,0.9nm,0.3s,baz=237,slow=12,SNR=11						
ULM				Sn	**Sn**	**23 53 24.8**	**-4.8**
	comp=N,0.3nm,0.3s,baz=195,slow=20,SNR=1.9						
ULM				Lg	Lg	23 54 18.1	
	comp=N,0.1nm,0.3s,baz=160,slow=20,SNR=1.0						
YKA	**Yellowknife Ar**	**19.59**	**347**	P	**P**	**23 54 05.3**	**+1.7**
	comp=N,0.1nm,0.3s,baz=156,slow=8.5,SNR=4.8						
ARCES	**ARCESS Array B**	**61.40**	**18**	P	**P**	**23 59 52.5**	**+0.9**
	comp=N,2.6nm,1.0s,baz=320,slow=5.4,SNR=1.2						

ATH 12 00:05:31.6, 38°.33N × 20°.48E, h17km ± 2km, ML1.1/2, Error ellipse: s-maj=3.1km s-min=1.0km az=270.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.08**	**214**	P	Pg	00 05 34.8	-0.1
KEF4				S	Sg	00 05 37.2	+0.1
DMLN	**Damoulianata-K**	**0.12**	**225**	P	Pg	00 05 35.4	0.0
DMLN				S	Sb	00 05 38.2	+0.1
FSK	**Fiskardo**	**0.15**	**25**	P	Pg	00 05 35.4	-0.2
FSK				S	Sg	00 05 38.2	-0.2
FSK				AML	AML	00 05 38.2	
	comp=N,84μm,0.2s						
FSK				AML	AML	00 05 38.6	
	comp=E,203μm,0.1s						
KEF3	**Kipouria, Keph**	**0.16**	**221**	P	Pg	00 05 35.4	-0.4
KEF3				S	Sg	00 05 38.3	-0.4
VLS	**Valsamata**	**0.17**	**151**	P	Pg	00 05 35.8	-0.2
VLS				S	Sg	00 05 38.8	-0.1
VLS				AML	AML	00 05 39.2	
	comp=N,139μm,0.1s						
VLS				AML	AML	00 05 39.3	
	comp=E,345μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.23**	**160**	P	Pg	00 05 36.7	-0.1
PSDA				S	Sg	00 05 40.6	+0.3
EVGI	**Lefkada island**	**0.32**	**25**	P	Pg	00 05 38.3	-0.1
EVGI				S	Sb	00 05 43.5	-0.4
NYDR	**Nydri-Lefkada**	**0.42**	**23**	P	Pg	00 05 39.8	-0.4

*PRU **12** 00:05:29.4±0.0, 43°.62N × 18°.78E, h0km, M4.1*
*PDG **12** 00:05:30.7±0.6, 43°.79N × 18°.58E, h0km±11km, MD4.0/13, ML4.0/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **12** 00:05:31.8±0.3, 43°.76N × 18°.52E, h3km±2km, ML4.1/14*
*KRSZO **12** 00:05:31.2±0.4, 43°.77N × 18°.52E, h1km±2km, ML4.4/48, Error ellipse: s-maj=2.3km s-min=2.0km az=102.0*
*TIR **12** 00:05:31.0, 43°.48N × 18°.26E, h0km±6km, Md4.2, Ml4.4*
*RHSSO **12** 00:05:31.9±0.2, 43°.75N × 18°.56E, h4km±2km, ML4.2/18*
*MED_RC **12** 00:05:31.0±0.3, 43°.76N × 18°.56E, h20km±1km, MW4.2/17, Moment Tensor Solution.Mantle waves: s17,c26; Duration: 1s0 Moment tensor: Scale 10^15^Nm; Mrr=0.08±.18; Mθθ=1.88±.14; Mϕϕ=1.97±.16; Mrθ=0.55±.19; Mθϕ=0.89±.11; Mϕr=0.43±.19; Best double couple: M=2.23000×10^15^ NP1:ϕs=147.00000°, δ72.00000°, λ180.00000°. NP2:ϕs=237.00000°, δ90.00000°, λ18.00000°. Principal axes: T 2.2900, Plg13.0000°, Azm104.0000°; N -0.1100, Plg72.0000°, Azm239.0000°; P -2.1700, Plg12.0000°, Azm11.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*LDG **12** 00:05:31.8±0.1, 43°.79N × 18°.63E, h10km, Ml3.8/35 Error ellipse: s-maj=3.9km s-min=2.5km az=32.0*
*NEIC **12** 00:05:32.8±1.9, 43°.78N±0°.02×18°.56E±0°.03, h10km±1km, Error ellipse: s-maj=4.0km s-min=3.1km az=134.0*
*IDC **12** 00:05:32.3±0.7, 43°.87N × 18°.54E, h0km, mb4.0/12, mb1 4.0/26, mb1mx3.8/67, mbtmp3.9/26, ML3.8/12, MS3.2/17, Ms1 3.2/17, ms1mx2.9/64, Error ellipse: s-maj=11.1km s-min=8.1km az=34.0*
*BGR **12** 00:05:34.4±0.5, 43°.71N × 18°.66E, h10km, ML4.2, Error ellipse: s-maj=8.9km s-min=5.6km az=9.0*

ISC 12 00:05:31.7±1.0, 43°.77N±0°.01×18°.54E±0°.01, h5km±6km, n530, σ1≥83/716, mb4.0/17, MS3.5/6, 32C-28D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAPS	**Han Pijesak,BI**	**0.43**	**43**	*e*Pg	**Pg**	**00 05 39.3**	**-0.9**
HAPS				*e*Sg	**Sg**	**00 05 46.1**	**+0.3**
HAPS	**Han Pijesak,BI**	**0.43**	**43**	⇑*i*Pg	**Pg**	**00 05 39.2**	**-0.9**
HAPS				*e*Sg	**Sg**	**00 05 46.2**	**+0.4**
HAPS	**Han Pijesak,BI**	**0.43**	**43**	Pg	**Pg**	**00 05 39.0**	**-1.1**
HAPS				Sg	**Sg**	**00 05 45.0**	**-0.8**
RUDO	**Rudo**	**0.62**	**104**	⇓*i*Pg	**Pg**	**00 05 42.2**	**-1.5**
RUDO				*e*Sg	**Sg**	**00 05 51.3**	**-0.4**
RUDO	**Rudo**	**0.62**	**104**	Pg	**Pg**	**00 05 42.0**	**-1.7**
UPM	**Unac-Piva**	**0.63**	**155**	⇓*i*Pg	**Pg**	**00 05 43.1**	**-0.7**
UPM				*e*Sg	**Sg**	**00 05 51.3**	**-0.6**
UPM	**Unac-Piva**	**0.63**	**155**	Pg	**Pg**	**00 05 43.0**	**-0.7**
UPM	**Unac-Piva**	**0.63**	**155**	⇓*i*Pg	**Pg**	**00 05 42.1**	**-1.7**
UPM				*i* Sg	**Sg**	**00 05 51.5**	**-0.4**
BBLS	**Lazići**	**0.63**	**81**	*e*Pg	**Pg**	**00 05 43.9**	**0.0**
BBLS				*e*Sg	**Sg**	**00 05 52.6**	**+0.4**
BBLS	**Lazići**	**0.63**	**81**	⇑*i*Pg	**Pg**	**00 05 43.8**	**-0.1**
BBLS				*e*Sg	**Sg**	**00 05 52.0**	**-0.2**
BBLS	**Lazići**	**0.63**	**81**	Pg	**Pg**	**00 05 43.0**	**-0.9**
BBLS				Sg	**Sg**	**00 05 52.0**	**-0.2**
BBLS	**Lazići**	**0.63**	**81**	Pg	**Pg**	**00 05 43.0**	**-0.9**
BBLS				x	x	00 05 43.6	
	comp=Z,142nm,SNR=1000						
BBLS				Pb	**Pg**	**00 05 43.8**	**-0.1**
BBLS				Pg	**Pg**	**00 05 43.9**	**0.0**
BBLS				Sb	**Sg**	**00 05 51.8**	**-0.3**
BBLS				Lg	Lg	00 05 52.0	
BBLS				Sg	**Sg**	**00 05 52.6**	**+0.4**
PLE	**Pljevlja**	**0.76**	**125**	⇓*i*Pg	**Pg**	**00 05 44.3**	**-2.0**
PLE				*i* Sg	**Sg**	**00 05 56.0**	**-0.1**
BRY	**Bratogost**	**0.87**	**180**	⇓*i*Pg	**Pg**	**00 05 46.7**	**-1.7**
BRY				*e*Sg	**Sg**	**00 05 59.7**	**-0.4**
BRY	**Bratogost**	**0.87**	**180**	⇓Pg	**Pg**	**00 05 46.7**	**-1.7**
BRY				*i* Sg	**Sb**	**00 06 00.6**	**-0.7**
NKY	**Niksic**	**1.01**	**161**	⇑*i*Pg	**Pg**	**00 05 49.2**	**-1.9**
NKY				*i* Sg	**Sb**	**00 06 05.2**	**-0.3**
NKME	**Niksic**	**1.05**	**163**	⇓*i*Pg	**Pg**	**00 05 49.9**	**-1.9**
NKME				*i* Sg	**Sb**	**00 06 06.4**	**0.0**
TEKS	**Tekeris**	**1.06**	**42**	*e*Pg	**Pg**	**00 05 52.0**	**0.0**
TEKS				*e*Sg	**Sb**	**00 06 07.1**	**+0.4**
TEKS	**Tekeris**	**1.06**	**42**	*e*Sg	**Sg**	**00 06 06.1**	**+0.4**
TEKS	**Tekeris**	**1.06**	**42**	Pg	**Pg**	**00 05 52.0**	**0.0**
RICI	**Ricice**	**1.06**	**255**	*e*Pg	**Pg**	**00 05 51.0**	**-1.0**
RICI				Sg	**Sb**	**00 06 06.6**	**0.0**
TREB	**Trebinje**	**1.06**	**188**	*e*Pg	**Pg**	**00 05 50.5**	**-1.6**
TREB				*e*Sg	**Sg**	**00 06 05.3**	**-0.5**
TREB	**Trebinje**	**1.06**	**188**	*e*Pg	**Pg**	**00 05 49.9**	**-2.1**
TREB				*e*Sg	**Sg**	**00 06 05.9**	**+0.1**
TREB	**Trebinje**	**1.06**	**188**	Pg	**Pg**	**00 05 50.0**	**-2.1**
TREB				Sg	**Sg**	**00 06 06.0**	**+0.1**
STON	**Ston**	**1.09**	**215**	*e*Pg	**Pg**	**00 05 51.4**	**-1.2**
STON				Sg	**Sg**	**00 06 06.1**	**-0.5**
DIVS	**Divibare**	**1.10**	**72**	*e*Pg	**Pg**	**00 05 52.3**	**-0.6**
DIVS				*e*Sg	**Sg**	**00 06 06.5**	**-0.6**
DIVS	**Divibare**	**1.10**	**72**	⇑*i*Pg	**Pg**	**00 05 52.2**	**-0.6**
DIVS				*e*Sg	**Sg**	**00 06 06.3**	**-0.8**
DIVS	**Divibare**	**1.10**	**72**		**Pg**	**00 05 51.5**	**-1.3**
DIVS				Sg	**Sg**	**00 06 06.4**	**-0.6**
DIVS	**Divibare**	**1.10**	**72**	Pg	**Pg**	**00 05 52.0**	**-0.8**
	comp=Z,27nm,SNR=963						
DIVS				Pb	**Pg**	**00 05 52.2**	**-0.6**
DIVS				Pb	**Pg**	**00 05 52.3**	**-0.6**
DIVS				Lg	Lg	00 06 06.1	
DIVS				Sg	**Sg**	**00 06 06.3**	**-0.8**
DIVS				Sb	**Sg**	**00 06 06.4**	**-0.6**
DIVS				Sb	**Sg**	**00 06 06.5**	**-0.6**
KOME	**Kolasin**	**1.16**	**142**	⇓*i*Pg	**Pg**	**00 05 51.9**	**-2.1**
KOME				*i* Sg	**Sb**	**00 06 10.0**	**+0.2**
IVAS	**Ivanjica**	**1.19**	**99**	*e*Pg	**Pg**	**00 05 52.8**	**-1.7**
IVAS				*e*Sg	**Sb**	**00 06 11.0**	**+0.6**
MAKA	**Makarska**	**1.21**	**247**	*i* Pg	**Pg**	**00 05 53.6**	**-1.2**
MAKA				Sg	**Sg**	**00 06 10.6**	**+0.2**
MGRS	**Mrkonjic Grad**	**1.23**	**302**	⇑*i*Pg	**Pg**	**00 05 53.9**	**-1.4**
MGRS				*e*Sg	**Sg**	**00 06 11.5**	**+0.2**
MGRS	**Mrkonjic Grad**	**1.23**	**302**	Pg	**Pg**	**00 05 54.0**	**-1.4**
MGRS				Sg	**Sg**	**00 06 10.0**	**-1.3**
CEME	**Cevo**	**1.25**	**167**	⇑*i*Pg	**Pg**	**00 05 53.8**	**-1.9**
CEME				*i* Sg	**Sn**	**00 06 13.5**	**+0.2**
HCY	**Herceg Novi**	**1.32**	**181**	*e*Pg	**Pn**	**00 05 55.4**	**-1.5**
HCY				*e*Sg	**Sg**	**00 06 14.0**	**-0.2**
HCY	**Herceg Novi**	**1.32**	**181**	⇑*i*Pg	**Pn**	**00 05 55.1**	**-1.8**
HCY				*i* Sg	**Sn**	**00 06 16.2**	**+1.3**
IVA	**Berane**	**1.33**	**132**	⇓*i*Pg	**Pn**	**00 05 55.0**	**-2.1**
IVA				*i* Sg	**Sn**	**00 06 15.7**	**+0.4**
BLY	**Banja Luka**	**1.38**	**316**	*e*Pg	**Pn**	**00 05 58.0**	**0.0**
BLY				*e*Sg	**Sn**	**00 06 16.8**	**+0.4**
BLY	**Banja Luka**	**1.38**	**316**	⇓*i*Pg	**Pn**	**00 05 57.2**	**-0.4**
BLY				*e*Sg	**Sn**	**00 06 16.7**	**+0.4**
BLY	**Banja Luka**	**1.38**	**316**	Pg	**Pn**	**00 05 57.3**	**-0.4**
	comp=Z,10nm,SNR=437						
BLY				Pn	**Pb**	**00 05 58.0**	**0.0**
BLY				Sg	**Sb**	**00 06 14.1**	**-1.9**
BLY				Sn	**Sn**	**00 06 16.7**	**+0.4**
BLY				Sn	**Sn**	**00 06 16.8**	**+0.4**
TRUS	**Trudelj**	**1.42**	**71**	*e*Pn	**Pn**	**00 05 58.1**	**-0.1**
TRUS				*e*Sn	**Sg**	**00 06 17.6**	**+0.2**
PDG	**Podgorica**	**1.44**	**158**	*e*Pg	**Pn**	**00 05 57.0**	**-1.4**
PDG				*e*Sg	**Sg**	**00 06 18.4**	**+0.5**
PDG	**Podgorica**	**1.44**	**158**	*e*Pg	**Pn**	**00 05 56.5**	**-1.9**
PDG				*e*Sg	**Sb**	**00 06 17.6**	**0.0**
PDG	**Podgorica**	**1.44**	**158**	Pn	**Pn**	**00 05 56.8**	**-1.6**
TTG	**Podgorica**	**1.44**	**158**	⇑*i*Pg	**Pn**	**00 05 57.1**	**-1.4**
TTG				*i* Sg	**Sg**	**00 06 19.7**	**+1.8**
BUM	**Brajici-Budva**	**1.49**	**170**	⇑*i*Pg	**Pn**	**00 05 58.3**	**-0.9**
BUM				*i* Sg	**Sg**	**00 06 21.7**	**+2.1**
KIJV	**Kijevo**	**1.56**	**279**	*i* Pg	**Pb**	**00 06 00.7**	**-0.4**
KIJV				Sn	**Sg**	**00 06 24.4**	**+2.5**
PVY	**Plav**	**1.57**	**138**	⇓*i*Pg	**Pn**	**00 05 59.3**	**-1.1**
PVY				*i* Sg	**Sg**	**00 06 23.8**	**+1.7**
GRUS	**Gruza**	**1.58**	**85**	*e*Pg	**Pn**	**00 06 00.9**	**+0.5**
GRUS				*e*Sg	**Sb**	**00 06 21.9**	**+0.2**
HVAR	**Hvar**	**1.63**	**249**	*e*Pg	**Pg**	**00 06 03.3**	**+0.3**
HVAR				Sn	**Sg**	**00 06 24.7**	**+0.5**
DRME	**Dracevica, Mon**	**1.65**	**163**	*e*Pn	**Pn**	**00 06 01.0**	**-0.4**
DRME				*e*Sn	**Sn**	**00 06 22.6**	**-0.4**
DRME	**Dracevica, Mon**	**1.65**	**163**	Pn	**Pn**	**00 06 01.0**	**-0.4**
DRME				Sn	**Sn**	**00 06 22.0**	**-1.0**
DRME	**Dracevica, Mon**	**1.65**	**163**	⇑*i*Pn	**Pn**	**00 06 01.1**	**-0.4**
DRME				*i* Sn	**Sg**	**00 06 27.0**	**+2.2**
FRGS	**Fruska Gora**	**1.66**	**33**	*e*Pg	**Pn**	**00 06 00.6**	**-0.9**
FRGS				*e*Sg	**Sg**	**00 06 25.4**	**+0.4**
FRGS	**Fruska Gora**	**1.66**	**33**	⇓Pg	**Pn**	**00 06 00.8**	**-0.8**
FRGS	**Fruska Gora**	**1.66**	**33**	⇓*i*Pn	**Pn**	**00 06 00.7**	**-0.8**
FRGS				*e*Sn	**Sb**	**00 06 23.8**	**-0.2**
FRGS	**Fruska Gora**	**1.66**	**33**	Pn	**Pn**	**00 06 00.0**	**-1.5**
FRGS				Sn	**Sn**	**00 06 23.0**	**-0.2**
MRAK	**Mrakovica**	**1.71**	**317**	*e*Pn	**Pn**	**00 06 01.9**	**-0.4**
BEO	**Beograd**	**1.73**	**53**	Pn	**Pn**	**00 06 00.2**	**-2.3**
	comp=Z,9.3nm,SNR=149						
BEO				Sn	**Sn**	**00 06 22.4**	**-2.6**
PRIJ	**Prijedor**	**1.78**	**313**	*e*Pn	**Pb**	**00 06 04.3**	**-0.5**
PRIJ				*e*Sn	**Sb**	**00 06 27.2**	**-0.2**
BCI	**Bajram Curri**	**1.79**	**141**	P	**Pb**	**00 06 04.3**	**-0.8**
	baz=129						
BCI				S	**Sg**	**00 06 29.9**	**+0.5**
	baz=129						
BCI				AMP			
	comp=N,7.9nm,0.8s,baz=129						
ULC	**Ulcinj**	**1.88**	**164**	⇓*i*Pn	**Pn**	**00 06 05.1**	**+0.6**
ULC				*i* Sn	**Sg**	**00 06 32.7**	**+0.7**
SELS	**Selova**	**1.96**	**105**	*e*Pn	**Pn**	**00 06 05.2**	**-0.4**
SELS				*e*Sn	**Sb**	**00 06 31.8**	**-0.8**
PUK	**Puka**	**1.99**	**150**	P	**Pb**	**00 06 08.0**	**-0.5**
	baz=139						
PUK				S	**Sb**	**00 06 34.4**	**+0.8**
	baz=139						
PUK				AMP			
	comp=N,13nm,0.6s,baz=139						
SVIS	**Svilajnac**	**1.99**	**75**	*e*Pn	**Pn**	**00 06 06.1**	**0.0**
SVIS				*e*Sn	**Sb**	**00 06 32.6**	**-1.0**
MORI	**Morici**	**2.05**	**274**	*e*Pg	**Pg**	**00 06 10.4**	**-0.7**
MORI				Sn	**Sb**	**00 06 36.2**	**+1.0**
ZIRJ	**Zirje**	**2.10**	**268**	*e*Pg	**Pg**	**00 06 11.2**	**-0.8**
ZIRJ				Sn	**Sb**	**00 06 37.4**	**+0.7**
UDBI	**Udbina**	**2.14**	**292**	*i* Pn	**Pb**	**00 06 09.7**	**-1.2**
UDBI				Sn	**Sb**	**00 06 37.7**	**0.0**
MOSL	**Moslavina**	**2.24**	**326**	*e*Pn	**Pb**	**00 06 11.4**	**-1.3**
BOVS	**Bovan**	**2.30**	**92**	*e*Pn	**Pn**	**00 06 10.0**	**-0.3**
BOVS	**Bovan**	**2.30**	**92**	⇑Pn	**Pn**	**00 06 09.8**	**-0.5**
BOVS	**Bovan**	**2.30**	**92**		**Pn**	**00 06 09.8**	**-0.5**
KOVH	**Kovagotottos**	**2.34**	**352**	Pn	**Pn**	**00 06 10.4**	**-0.5**
	comp=Z,1.4nm,SNR=56						
KUBS	**Kucevo**	**2.35**	**73**	*e*Pn	**Pn**	**00 06 10.9**	**-0.1**
KUBS				*e*Sn	**Sn**	**00 06 41.9**	**+1.7**
MORH	**Mrgy, Hungar**	**2.45**	**2**	⇓Pn	**Pn**	**00 06 11.8**	**-0.5**
MORH	**Mrgy, Hungar**	**2.45**	**2**		**Pn**	**00 06 11.8**	**-0.5**
MORH	**Mrgy, Hungar**	**2.45**	**2**	Pg	**Pn**	**00 06 11.5**	**-0.8**
	comp=Z,1.6nm,SNR=103						
MORH				Pn	**Pn**	**00 06 11.8**	**-0.5**
MORH				Lg	Lg	00 06 42.0	
MORH				Sn	**Sn**	**00 06 42.9**	**+0.3**
BANR	**Banloc**	**2.46**	**48**	⇓P	**Pn**	**00 06 12.1**	**-0.3**
BANR	**Banloc**	**2.46**	**48**		**Pn**	**00 06 12.1**	**-0.3**
BANR	**Banloc**	**2.46**	**48**	Pg	**Pn**	**00 06 11.9**	**-0.6**
	comp=Z,3.1nm,SNR=51						
BANR				Pn	**Pn**	**00 06 12.1**	**-0.3**
MDVR	**Moldovita**	**2.49**	**65**	⇑P	**Pn**	**00 06 12.7**	**-0.3**
MDVR	**Moldovita**	**2.49**	**65**		**Pn**	**00 06 12.7**	**-0.3**
PHP	**Peshkopia**	**2.51**	**145**	P	**Pb**	**00 06 15.8**	**-1.5**
PHP	**Peshkopia**	**2.51**	**145**	P	**Pb**	**00 06 16.5**	**-0.8**
	baz=137						
PHP				S	**Sb**	**00 06 49.4**	**+0.9**
	baz=137						
PHP				AMP			
	comp=N,6.3nm,0.7s,baz=137						
DUGI	**Dugi Otok**	**2.53**	**276**	*e*Pg	**Pg**	**00 06 19.1**	**-1.0**
DUGI				Sn	**Sb**	**00 06 47.1**	**-1.9**
BARS	**Barje**	**2.58**	**111**	*e*Pn	**Pn**	**00 06 12.6**	**-1.5**
TIR	**Tirane**	**2.61**	**158**	P	**Pb**	**00 06 17.8**	**-1.2**
TIR	**Tirane**	**2.61**	**158**		**Pn**	**00 06 16.4**	**+1.8**
TIR	**Tirane**	**2.61**	**158**	P	**Pn**	**00 06 16.7**	**+2.1**
	baz=150						
TIR				S	**Sb**	**00 06 49.9**	**-1.5**
	baz=150						
TIR				AMP			
	comp=E,3.5nm,1.0s,baz=150						
TIR	**Tirane**	**2.61**	**158**	Pn	**Pn**	**00 06 16.7**	**+2.1**
	comp=Z,4.1nm,SNR=114						
TIR				Pg	**Sb**	**00 06 47.7**	**-3.7**
TIR				Lg	Lg	00 07 20.9	
ZAGS	**Zajecar**	**2.67**	**88**	*e*Pn	**Pn**	**00 06 14.8**	**-0.7**
NVLJ	**Novalja**	**2.76**	**288**	*e*Pn	**Pn**	**00 06 18.7**	**+2.1**
KAL	**Kalocsa**	**2.78**	**6**	*e*Pn	**Pn**	**00 06 16.7**	**-0.1**
KALN	**Kalnik**	**2.79**	**329**	*e*Pn	**Pn**	**00 06 18.2**	**+1.2**
SKO	**Skopje**	**2.79**	**129**	*i* Pn	**Pn**	**00 06 17.9**	**+0.9**
PTJ	**Puntijarka**	**2.81**	**320**	*i* Pn	**Pn**	**00 06 18.8**	**+1.4**
PTJ				Sn	**Sb**	**00 06 54.7**	**-2.5**
BZS	**Buzias**	**2.87**	**49**	⇑P	**Pn**	**00 06 17.6**	**-0.5**
BZS	**Buzias**	**2.87**	**49**		**Pn**	**00 06 17.6**	**-0.5**
BZS	**Buzias**	**2.87**	**49**	Sn	**Sn**	**00 06 50.9**	**-2.1**
BZS				Pg	**Pn**	**00 06 17.1**	**-1.0**
	comp=Z,1.8nm,SNR=108						
BZS				Pn	**Pn**	**00 06 17.6**	**-0.5**
SGRT	**San Giovanni R**	**2.88**	**227**	Pn	**Pn**	**00 06 18.4**	**0.0**
BOJS	**Bojanci**	**2.92**	**308**	*i* Pn	**Pn**	**00 06 19.8**	**+1.0**
BOJS				*e*Sn	**Sn**	**00 06 53.1**	**-1.2**
BOJS				IAML		00 07 17.2	
	comp=Z,437nm,0.7s						
BEHE	**Becsehely**	**2.98**	**336**	*e*Pn	**Pn**	**00 06 20.8**	**+1.2**
BEHE				*e*Sn	**Sn**	**00 06 56.4**	**+0.8**
BEHE	**Becsehely**	**2.98**	**336**	Pn	**Pn**	**00 06 20.8**	**+1.2**
BEHE				Pg	**Pb**	**00 06 22.5**	**-2.7**
	comp=Z,3.6nm,SNR=65						
BEHE				Lg	Lg	00 06 55.9	
BEHE				Sn	**Sn**	**00 06 56.4**	**+0.8**
HERR	**Herculane**	**3.00**	**67**	⇓P	**Pn**	**00 06 20.1**	**+0.3**
HERR	**Herculane**	**3.00**	**67**		**Pn**	**00 06 20.1**	**+0.3**
DJES	**Djerdap**	**3.00**	**71**	⇑P	**Pn**	**00 06 20.1**	**+0.1**
DJES	**Djerdap**	**3.00**	**71**		**Pn**	**00 06 20.1**	**+0.1**
DJES	**Djerdap**	**3.00**	**71**	Pn	**Pn**	**00 06 20.1**	**+0.1**
	comp=Z,2.0nm,SNR=27						
CRES	**Cresnjev**	**3.01**	**314**	*i* Pn	**Pn**	**00 06 20.7**	**+0.6**
CRES	**Cresnjev**	**3.01**	**314**	⇑*i*Pn	**Pn**	**00 06 20.4**	**+0.4**
CRES				*e*Sn	**Sn**	**00 06 56.4**	**0.0**
CRES	**Cresnjev**	**3.01**	**314**	Pn	**Pn**	**00 06 21.0**	**+1.0**
CRES				Sn	**Sn**	**00 06 57.0**	**+0.6**
CRES	**Cresnjev**	**3.01**	**314**	Pn	**Pn**	**00 06 21.0**	**+1.0**
CRES				Pg	**Pn**	**00 06 20.4**	**+0.4**
CRES				Pb	**Pn**	**00 06 20.7**	**+0.6**
CRES				Lg	Lg	00 06 56.4	
CRES				Sg	**Sn**	**00 06 57.0**	**+0.6**
AMBH	**Ambrzfalva**	**3.01**	**30**	Pn	**Pn**	**00 06 21.0**	**+1.0**
	comp=Z,2.8nm,SNR=35						
AMBH				Sn	**Sn**	**00 06 56.9**	**+0.4**
ZAPS	**Zavoj**	**3.02**	**98**	*e*Pn	**Pn**	**00 06 20.9**	**+0.7**
ZAPS				*e*Sn	**Sn**	**00 06 58.2**	**+1.4**
KOGS	**Kog**	**3.13**	**330**	*i* Pn	**Pn**	**00 06 22.0**	**+0.3**
KOGS				*e*Sn	**Sn**	**00 06 57.9**	**-1.6**
KOGS	**Kog**	**3.13**	**330**	Pn	**Pn**	**00 06 22.0**	**+0.3**
KOGS				Sn	**Sn**	**00 06 57.9**	**-1.6**
OHR	**Ohrid**	**3.14**	**147**	*i* Pn	**Pb**	**00 06 26.1**	**-2.0**
OHR				*e*Sn	**Sb**	**00 07 05.2**	**-1.4**
BOSS	**Bosilegrad**	**3.15**	**112**	*e*Pn	**Pn**	**00 06 21.9**	**-0.1**
TIH	**Tihany**	**3.16**	**352**	Pn	**Pn**	**00 06 22.0**	**-0.1**
	comp=Z,4.1nm,SNR=58						
PUNG	**Punghina**	**3.21**	**79**	⇓P	**Pn**	**00 06 22.6**	**-0.1**
PUNG	**Punghina**	**3.21**	**79**		**Pn**	**00 06 22.6**	**-0.1**
RIY	**Rijeka**	**3.29**	**300**	*i* Pn	**Pn**	**00 06 25.8**	**+1.9**
VISS	**Visnje**	**3.33**	**309**	*i* Pn	**Pn**	**00 06 25.4**	**+0.9**
SIRR	**Siria**	**3.34**	**40**	⇑P	**Pn**	**00 06 23.7**	**-0.8**
SIRR	**Siria**	**3.34**	**40**		**Pn**	**00 06 23.7**	**-0.8**
SIRR	**Siria**	**3.34**	**40**	Sn	**Sn**	**00 07 02.0**	**-2.6**
SIRR				Pn	**Pn**	**00 06 23.4**	**-1.1**
	comp=Z,1.6nm,SNR=75						
SIRR				Pg	**Pn**	**00 06 23.7**	**-0.8**
VLO	**Vlora**	**3.38**	**168**	P	**Pn**	**00 06 26.8**	**+1.8**
	baz=162						
VLO				S	**Sn**	**00 07 07.6**	**+2.1**
	baz=162						
STIP	**Stip**	**3.39**	**126**	*i* Pn	**Pn**	**00 06 27.7**	**+2.3**
PDKS	**Podkum**	**3.40**	**314**	*i* Pn	**Pn**	**00 06 26.2**	**+0.7**
PDKS				IAML		00 07 40.8	
	comp=Z,715nm,1.3s						
MATE	**Matera**	**3.40**	**204**	⇑P	**Pn**	**00 06 25.4**	**-0.1**
MATE	**Matera**	**3.40**	**204**		**Pn**	**00 06 25.4**	**-0.1**
MATE	**Matera**	**3.40**	**204**	Pn	**Pn**	**00 06 25.3**	**-0.1**
	comp=Z,1.3nm,SNR=30						
GZR	**Gura Zlata**	**3.44**	**60**	⇑P	**Pn**	**00 06 25.8**	**-0.2**
GZR	**Gura Zlata**	**3.44**	**60**		**Pn**	**00 06 25.8**	**-0.2**
GZR	**Gura Zlata**	**3.44**	**60**	Pn	**Pn**	**00 06 25.8**	**-0.2**
GZR				Pg	Pb	00 06 25.9	-7.1
	comp=Z,1.2nm,SNR=103						
KNDS	**Knezji Dol**	**3.45**	**302**	*e*Pn	**Pn**	**00 06 27.4**	**+1.2**
SRE	**Strehaia**	**3.47**	**73**	⇑P	**Pn**	**00 06 27.3**	**+0.9**
SRE	**Strehaia**	**3.47**	**73**		**Pn**	**00 06 27.3**	**+0.9

SOP	**Sopron**	**4.15**	**341**	*e*Pn		**Pn**	**00 06 35.6**	**-0.1**
KEK	**Kerkira**	**4.16**	**166**	P		**Pn**	**00 06 36.2**	**+0.3**
KZN	**Kozani**	**4.21**	**144**	P		**Pn**	**00 06 38.4**	**+1.7**
DRGR		**4.22**	**43**	⇓P		**Pn**	**00 06 36.0**	**-0.8**
DRGR		**4.22**	**43**			**Pn**	**00 06 36.0**	**-0.8**
DRGR		**4.22**	**43**	Pn		**Pn**	**00 06 35.9**	**-0.8**
	comp=Z,0.5nm,SNR=19							
PSZ	**Piszkesteto**	**4.26**	**12**	⇓P		**Pn**	**00 06 37.0**	**-0.2**
PSZ	**Piszkesteto**	**4.26**	**12**	Pn		**Pn**	**00 06 36.6**	**-0.6**
PSZ	**Piszkesteto**	**4.26**	**12**			**Pn**	**00 06 37.0**	**-0.2**
PSZ	**Piszkesteto**	**4.26**	**12**	Pg		**Pn**	**00 06 36.6**	**-0.6**
	comp=Z,0.4nm,SNR=14							
PSZ				Pn		**Pn**	**00 06 37.0**	**-0.2**
PSZ	**Piszkesteto**	**4.26**	**12**	*e*Pn		**Pn**	**00 06 36.7**	**-0.6**
PSZ				*e*Sn		**Sn**	**00 07 25.0**	**-2.3**
PSZ	**Piszkesteto**	**4.26**	**12**	*e*Pn		**Pn**	**00 06 36.7**	**-0.6**
PSZ				*e*Sn		**Sn**	**00 07 25.0**	**-2.3**
LTVH	**Ltavrtes, Hu**	**4.32**	**32**	⇑P		**Pn**	**00 06 39.1**	**+1.1**
LTVH	**Ltavrtes, Hu**	**4.32**	**32**			**Pn**	**00 06 39.1**	**+1.1**
LTVH	**Ltavrtes, Hu**	**4.32**	**32**	Pn		**Pn**	**00 06 39.1**	**+1.1**
LTVH				Pg		**Pg**	**00 06 52.7**	**-1.7**
KPRO	**Kipourio**	**4.36**	**150**	P		**Pn**	**00 06 40.7**	**+2.1**
MURB	**Monte Urbino**	**4.40**	**265**			**Pn**	**00 06 40.5**	**+1.2**
IGT	**Igoumenitsa**	**4.44**	**162**	P		**Pn**	**00 06 40.1**	**+0.3**
MYKA	**Terra Mystica**	**4.49**	**311**	*i* Pn		**Pn**	**00 06 42.0**	**+1.5**
	comp=Z,20nm,0.4s,SNR=17							
MYKA				*e*Sn		**Sn**	**00 07 32.9**	**-0.2**
	comp=Z,27nm,0.4s							
MYKA	**Terra Mystica**	**4.49**	**311**			**Pn**	**00 06 42.0**	**+1.5**
CONA	**Conrad Observa**	**4.56**	**337**	*i* Pn		**Pn**	**00 06 41.6**	**+0.2**
	comp=Z,18nm,0.4s,SNR=43							
CONA				*e*Sn		**Sn**	**00 07 36.3**	**+1.4**
	comp=Z,112nm,0.6s							
CONA	**Conrad Observa**	**4.56**	**337**			**Pn**	**00 06 41.6**	**+0.2**
NVR	**Nevrokopi**	**4.62**	**120**	P		**Pn**	**00 06 42.8**	**+0.6**
CJR	**Cluj-Napoca**	**4.63**	**49**	Pn		**Pn**	**00 06 42.0**	**-0.3**
	comp=Z,1.4nm,SNR=18							
MODS	**Modra-Piesok**	**4.69**	**350**	*e*PN		**Pn**	**00 06 42.7**	**-0.4**
MODS				*e*SN		**Sn**	**00 07 37.1**	**-0.8**
HUMR	**Humele**	**4.70**	**78**	⇓P		**Pn**	**00 06 43.1**	**-0.1**
HUMR	**Humele**	**4.70**	**78**			**Pn**	**00 06 43.1**	**-0.1**
LIT	**Litokhoron**	**4.70**	**140**			**Pn**	**00 06 43.9**	**+0.5**
VYHS	**Vyhne**	**4.73**	**2**	*e*PN		**Pn**	**00 06 43.5**	**-0.2**
VYHS				*e*PG		**Pg**	**00 07 03.0**	**+0.7**
VYHS				*e*SN		**Sn**	**00 07 38.6**	**-0.3**
VYHS	**Vyhne**	**4.73**	**2**	Pg		**Pn**	**00 06 43.5**	**-0.2**
VYHS				Pn		**Pn**	**00 06 43.9**	**+0.2**
	comp=Z,0.1nm,SNR=13							
VYHS				Pb		**Pg**	**00 07 03.0**	**+0.7**
VYHS				Sn		**Sn**	**00 07 38.6**	**-0.3**
TIP	**Timpagrande**	**4.78**	**197**	⇑P		**Pn**	**00 06 44.8**	**+0.4**
TIP	**Timpagrande**	**4.78**	**197**	Pn		**Pn**	**00 06 44.4**	**0.0**
SMOL	**Smolenice**	**4.81**	**351**	*e*PN		**Pn**	**00 06 45.6**	**+0.8**
SMOL				*e*SN		**Sn**	**00 07 39.2**	**-1.6**
SMOL				*e*LG		Lg	00 08 01.1	
KOLL	**Kolacno**	**4.81**	**359**	*e*PN		**Pn**	**00 06 44.5**	**-0.3**
KOLL				*e*SN		**Sn**	**00 07 38.9**	**-2.0**
ZOU	**Zoufplan**	**4.82**	**307**	Pn		**Pn**	**00 06 46.6**	**+1.4**
KECS	**Kecovo**	**4.91**	**15**	*e*PN		**Pn**	**00 06 46.2**	**+0.1**
KECS				*e*SN		**Sn**	**00 07 41.1**	**-2.1**
KECS	**Kecovo**	**4.91**	**15**	Pn		**Pn**	**00 06 46.2**	**+0.1**
	comp=Z,1.3nm,SNR=11							
KECS				Sn		**Sn**	**00 07 41.1**	**-2.1**
KBA	**Koelnbreinsper**	**4.93**	**314**	*i* Pn		**Pn**	**00 06 47.9**	**+1.3**
	comp=Z,9.1nm,0.3s,SNR=44							
KBA				*e*Sn		**Sn**	**00 07 42.7**	**-1.4**
	comp=Z,40nm,0.5s							
KBA	**Koelnbreinsper**	**4.93**	**314**			**Pn**	**00 06 47.9**	**+1.3**
KBA	**Koelnbreinsper**	**4.93**	**314**	*e*Pn		**Pn**	**00 06 48.2**	**+1.6**
KBA	**Koelnbreinsper**	**4.93**	**314**	*e*Pn		**Pn**	**00 06 48.2**	**+1.6**
VOIR		**4.94**	**68**	⇑P		**Pn**	**00 06 47.5**	**+0.9**
VOIR		**4.94**	**68**			**Pn**	**00 06 47.5**	**+0.9**
THL	**Klokotos Trika**	**4.94**	**147**	P		**Pn**	**00 06 47.7**	**+1.1**
PLG	**Polygyros**	**4.98**	**131**	P		**Pn**	**00 06 48.1**	**+0.9**
MOA	**Molln**	**5.06**	**325**	*i* Pn		**Pn**	**00 06 49.3**	**+1.1**
	comp=Z,16nm,0.3s,SNR=30							
MOA				*e*Sn		**Sn**	**00 07 46.1**	**-0.8**
	comp=Z,58nm,0.4s							
MOA	**Molln**	**5.06**	**325**			**Pn**	**00 06 49.3**	**+1.1**
MOA	**Molln**	**5.06**	**325**	*e*Pn		**Pn**	**00 06 49.6**	**+1.4**
MOA	**Molln**	**5.06**	**325**	*e*Pn		**Pn**	**00 06 49.6**	**+1.4**
LATE	**Laterza**	**5.06**	**259**			**Pn**	**00 06 49.5**	**+1.3**
JAVC	**Velka Javorina**	**5.13**	**354**	*e*PN		**Pn**	**00 06 49.9**	**+0.7**
JAVC	**Velka Javorina**	**5.13**	**354**	*e*Pn		**Pn**	**00 06 50.3**	**+1.1**
JAVC	**Velka Javorina**	**5.13**	**354**	*e*Pn		**Pn**	**00 06 50.3**	**+1.1**
TEOL	**Teolo**	**5.16**	**290**			**Pn**	**00 06 49.7**	**+0.1**
TRPA	**Tarpa**	**5.18**	**31**	⇓P		**Pn**	**00 06 49.8**	**0.0**
TRPA	**Tarpa**	**5.18**	**31**			**Pn**	**00 06 49.8**	**0.0**
TRPA	**Tarpa**	**5.18**	**31**	Pn		**Pn**	**00 06 48.4**	**-1.4**
	comp=Z,25nm,0.7s,SNR=6.6							
TRPA				Pg		**Pn**	**00 06 49.8**	**0.0**
TRPA				x		**Pn**	**00 06 49.8**	**0.0**
	comp=Z,25nm,0.7s							
TRPA				Pn				
ABTA	**Abfaltersbach**	**5.19**	**307**	*i* Pn		**Pn**	**00 06 51.4**	**+1.3**
	comp=Z,17nm,0.3s,SNR=63							
ABTA	**Abfaltersbach**	**5.19**	**307**			**Pn**	**00 06 51.4**	**+1.3**
KAVA	**Kavala**	**5.22**	**120**	P		**Pn**	**00 06 50.9**	**+0.5**
ARCR	**ARCALIA**	**5.27**	**49**	⇓P		**Pn**	**00 06 51.2**	**+0.1**
ARCR	**ARCALIA**	**5.27**	**49**			**Pn**	**00 06 51.2**	**+0.1**
ARCR	**ARCALIA**	**5.27**	**49**	Pn		**Pn**	**00 06 50.8**	**-0.3**
	comp=Z,60nm,0.8s,SNR=14							
ARCR				x	x		00 06 50.9	
	comp=Z,60nm,0.8s							
ARCR				Pg		**Pn**	**00 06 51.2**	**+0.1**
ARCR				Pn				
OSSC	**Osservatorio P**	**5.30**	**270**			**Pn**	**00 06 52.7**	**+1.2**
DOPR	**Dopca**	**5.34**	**63**	⇑P		**Pn**	**00 06 52.3**	**+0.2**
DOPR	**Dopca**	**5.34**	**63**			**Pn**	**00 06 52.3**	**+0.2**
SGRR	**Singureni**	**5.38**	**83**	⇓P		**Pn**	**00 06 52.8**	**+0.2**
SGRR	**Singureni**	**5.38**	**83**			**Pn**	**00 06 52.8**	**+0.2**
CTI	**Castel Tesino**	**5.40**	**297**	Pn		**Pn**	**00 06 53.5**	**+0.5**
LANS	**Liptovska Anna**	**5.42**	**6**	*e*PN		**Pn**	**00 06 54.0**	**+0.8**
LANS	**Liptovska Anna**	**5.42**	**6**	Pn		**Pn**	**00 06 54.0**	**+0.7**
	comp=Z,59nm,1.0s,SNR=9.4							
LANS				Pn				
LANS				Pn				
EVR	**Evrytania**	**5.44**	**152**	P		**Pn**	**00 06 55.1**	**+1.6**
MAKR	**Makrakomi, Fth**	**5.47**	**149**	P		**Pn**	**00 06 55.5**	**+1.6**
ZCCA	**Zocca**	**5.48**	**279**			**Pn**	**00 06 56.4**	**+2.3**
KRUC	**Moravsky**	**5.50**	**345**	*e*PN		**Pn**	**00 06 53.5**	**-0.7**
KRUC				*e*SN		**Sn**	**00 07 57.8**	**0.0**
CRVS	**Cervenica-Dubn**	**5.52**	**20**	*e*PN		**Pn**	**00 06 54.5**	**-0.1**
CRVS				*e*PG		Pg	00 07 22.8	+5.4
CRVS	**Cervenica-Dubn**	**5.52**	**20**	Pn		**Pn**	**00 06 54.4**	**-0.1**
	comp=Z,8.4nm,1.0s,SNR=7.9							
CRVS				x	x		00 06 55.5	
	comp=Z,10.0nm,0.8s							
CRVS				Pg	Pg		00 07 22.8	+5.4
CRVS				Pn				
AGG	**Agios Georgios**	**5.53**	**148**	Pn		**Pn**	**00 06 56.1**	**+1.3**
MLR	**Muntele Rosu**	**5.56**	**69**	Pn		**Pn**	**00 06 56.8**	**+1.6**
	comp=Z,1.1nm,0.3s,baz=320,slow=9.9,SNR=18							
MLR				Sn		**Sn**	**00 07 59.5**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=273,slow=10,SNR=3.3							
MLR				Lg	Lg		00 08 33.6	
	comp=Z,1.1nm,0.3s,baz=60,slow=24,SNR=3.2							
MLR				LR	LR		00 09 46.0	
	comp=Z,216nm,20.6s,baz=258,slow=46							
MLR	**Muntele Rosu**	**5.56**	**69**	⇓P		**Pn**	**00 06 56.3**	**+1.1**
MLR	**Muntele Rosu**	**5.56**	**69**			**Pn**	**00 06 55.9**	**+0.7**
MLR	**Muntele Rosu**	**5.56**	**69**	Pg		**Pn**	**00 06 56.4**	**+1.1**
	comp=Z,24nm,0.7s,SNR=8.1							
MLR				Pn		**Pn**	**00 06 56.8**	**+1.6**
	comp=Z,1.1nm,0.3s,SNR=18							
MLR				x	x		00 06 58.4	
	comp=Z,33nm,0.8s							
MLR				Sn		**Sn**	**00 07 59.5**	**-0.1**
	comp=Z,2.3nm,0.3s,SNR=3.3							
MLR				Lg	Lg		00 08 33.6	
	comp=Z,1.1nm,0.3s,SNR=3.2							
MLR				LR	LR		00 09 46.0	
	comp=Z,216nm,20.6s							
MLR				Pg				
MLR	**Muntele Rosu**	**5.56**	**69**	*e*Pn		**Pn**	**00 06 56.3**	**+1.1**
SULR		**5.62**	**78**	⇑P		**Pn**	**00 06 56.0**	**+0.2**
SULR		**5.62**	**78**			**Pn**	**00 06 56.0**	**+0.2**
CASP	**Castiglione de**	**5.69**	**263**	Pn		**Pn**	**00 06 57.4**	**+0.5**
VRAC	**Vranov**	**5.70**	**347**	Pn		**Pn**	**00 06 56.4**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=188,slow=13,SNR=16							
VRAC				Sn		**Sn**	**00 08 02.3**	**-0.6**
	comp=Z,3.2nm,0.3s,baz=158,slow=7.5,SNR=6.6							
VRAC				LR	LR		00 09 19.3	
	comp=Z,165nm,20.9s,baz=176,slow=40							
VRAC	**Vranov**	**5.70**	**347**	⇑P		**Pn**	**00 06 56.1**	**-0.9**
VRAC	**Vranov**	**5.70**	**347**	*e*PN		**Pn**	**00 06 56.2**	**-0.9**
VRAC				*e*SN		**Sn**	**00 08 02.8**	**0.0**
VRAC	**Vranov**	**5.70**	**347**			**Pn**	**00 06 56.1**	**-0.9**
NIE	**Niedzica**	**5.78**	**11**	*e*P		**Pn**	**00 06 59.5**	**+1.4**
NIE	**Niedzica**	**5.78**	**11**	Pg		**Pn**	**00 06 59.4**	**+1.2**
	comp=Z,13nm,0.6s,SNR=8.1							
NIE				Pn		**Pn**	**00 06 59.5**	**+1.4**
NIE				x		**Pn**	**00 06 59.7**	**+1.6**
	comp=Z,13nm,0.6s							
NIE				Pg				
NEHR	**Nehoiu**	**5.78**	**71**	⇑P		**Pn**	**00 06 58.5**	**+0.4**
NEHR	**Nehoiu**	**5.78**	**71**			**Pn**	**00 06 58.5**	**+0.4**
CKRC	**Cesky Krumlov**	**5.84**	**331**	*e*PN		**Pn**	**00 06 59.6**	**+0.7**
CKRC				*e*SN		**Sn**	**00 08 07.8**	**+1.5**
CEL	**Celeste**	**5.86**	**201**			**Pn**	**00 06 59.2**	**-0.1**
AXAR	**Agios Charalam**	**5.88**	**147**	P		**Pn**	**00 07 01.6**	**+2.0**
VLC	**Villacollemand**	**5.90**	**277**	Pn		**Pn**	**00 07 01.0**	**+1.2**
WTTA	**Wattenberg**	**5.98**	**308**	*i* Pn		**Pn**	**00 07 02.9**	**+1.9**
	comp=Z,56nm,0.4s,SNR=67							
WTTA	**Wattenberg**	**5.98**	**308**			**Pn**	**00 07 02.9**	**+1.9**
WTTA	**Wattenberg**	**5.98**	**308**	*e*Pn		**Pn**	**00 07 02.9**	**+1.9**
WTTA	**Wattenberg**	**5.98**	**308**	*e*Pn		**Pn**	**00 07 02.9**	**+1.9**
PRMA	**PARMA**	**5.99**	**282**			**Pn**	**00 07 02.2**	**+1.2**
SALO	**Salr**	**6.00**	**291**	Pn		**Pn**	**00 07 01.5**	**+0.3**
KW1	**Garching a.d.**	**6.01**	**318**	*e*Pn		**Pn**	**00 07 02.7**	**+1.4**
KW1	**Garching a.d.**	**6.01**	**318**	*e*Pn		**Pn**	**00 07 02.7**	**+1.4**
MORC	**Moravsky Berou**	**6.05**	**354**	*e*PN		**Pn**	**00 07 01.6**	**-0.2**
MORC				*e*SN		**Sn**	**00 08 08.7**	**-2.7**
MORC	**Moravsky Berou**	**6.05**	**354**			**Pn**	**00 07 01.4**	**-0.4**
WATA	**Walderalm**	**6.05**	**309**	*i* Pn		**Pn**	**00 07 04.2**	**+2.2**
	comp=Z,9.9nm,0.2s,SNR=36							
WATA				*e*Sn		**Sn**	**00 08 13.2**	**+1.5**
	comp=Z,18nm,0.3s							
WATA	**Walderalm**	**6.05**	**309**			**Pn**	**00 07 04.2**	**+2.2**
BURAR	**Bucovina Array**	**6.05**	**48**	⇑P		**Pn**	**00 07 03.3**	**+1.3**
BURAR	**Bucovina Array**	**6.05**	**48**			**Pn**	**00 07 02.7**	**+0.8**
BURAR	**Bucovina Array**	**6.05**	**48**			**Pn**	**00 07 03.3**	**+1.3**
BUR08	**Bucovina Ar. S**	**6.06**	**48**			**Pn**	**00 07 02.5**	**+0.5**
OKC	**Ostrava-Krasne**	**6.08**	**358**	*e*PN		**Pn**	**00 07 02.2**	**0.0**
OKC				*e*SN		**Sn**	**00 08 11.1**	**-0.9**
OKC	**Ostrava-Krasne**	**6.08**	**358**	Pg		**Pn**	**00 07 02.1**	**-0.1**
	comp=Z,15nm,0.7s,SNR=3.1							
OKC				Pn		**Pn**	**00 07 02.2**	**0.0**
OKC				x		**Pn**	**00 07 03.2**	**+1.0**
	comp=Z,15nm,0.7s							
OKC				Sn		**Sn**	**00 08 11.1**	**-0.9**
OKC				Pg				
GEC2	**GERESS Array S**	**6.08**	**328**	Pn		**Pn**	**00 07 03.5**	**+1.2**
GEC2	**GERESS Array S**	**6.08**	**328**	*e*Pn		**Pn**	**00 07 03.4**	**+1.1**
GEC2	**GERESS Array S**	**6.08**	**328**	*e*Pn		**Pn**	**00 07 03.4**	**+1.1**
GERES	**GERESS Array B**	**6.08**	**328**	Pn		**Pn**	**00 07 03.3**	**+1.0**
	comp=Z,5.0nm,0.3s,baz=152,slow=13,SNR=116							
GERES				Sn		**Sn**	**00 08 11.8**	**-0.6**
	comp=Z,6.4nm,0.3s,baz=151,slow=22,SNR=8.5							
GERES				LR	LR		00 09 51.2	
	comp=Z,107nm,19.6s,baz=202,slow=43							
BISRR	**Bisoca**	**6.09**	**70**	Pn		**Pn**	**00 07 04.2**	**+1.7**
	comp=Z,47nm,0.7s,SNR=3.4							
BISRR				Pn				
BISRR				Pn				
ATAL	**Atalanti**	**6.09**	**145**	P		**Pn**	**00 07 04.1**	**+1.7**
PLOR	**Plostina**	**6.13**	**67**	⇑P		**Pn**	**00 07 03.6**	**+0.5**
PLOR	**Plostina**	**6.13**	**67**			**Pn**	**00 07 03.6**	**+0.5**
VRI	**Vrincioaia**	**6.19**	**67**	⇓P		**Pn**	**00 07 04.8**	**+1.0**
VRI	**Vrincioaia**	**6.19**	**67**			**Pn**	**00 07 04.8**	**+1.0**
VRI	**Vrincioaia**	**6.19**	**67**	Pn		**Pn**	**00 07 04.4**	**+0.7**
	comp=Z,16nm,0.7s,SNR=3.8							
VRI				Pg		**Pn**	**00 07 04.8**	**+1.0**
VRI				Pn				
SQTA	**Sankt Quirin**	**6.20**	**306**	*i* Pn		**Pn**	**00 07 05.9**	**+1.9**
	comp=Z,24nm,0.3s,SNR=40							
SQTA	**Sankt Quirin**	**6.20**	**306**			**Pn**	**00 07 05.9**	**+1.9**
ALN	**Alexandroupoli**	**6.26**	**115**	P		**Pn**	**00 07 05.5**	**+0.8**
ALN	**Alexandroupoli**	**6.26**	**115**			**Pn**	**00 07 05.5**	**+0.8**
MOTA	**Moosalm**	**6.33**	**307**	*i* Pn		**Pn**	**00 07 07.7**	**+1.9**
	comp=Z,77nm,0.5s,SNR=55							
MOTA	**Moosalm**	**6.33**	**307**			**Pn**	**00 07 07.7**	**+1.9**
KHC	**Kasperske Hory**	**6.36**	**329**	*e*PN		**Pn**	**00 07 07.0**	**+0.8**
KHC				*e*SN		**Sn**	**00 08 19.0**	**-0.2**
KHC				AMS	AMS		00 09 40.0	
	comp=Z,500nm,7.0s							
KHC	**Kasperske Hory**	**6.36**	**329**			**Pn**	**00 07 07.5**	**+1.3**
FETA	**Feichten**	**6.39**	**303**	*i* Pn		**Pn**	**00 07 08.5**	**+1.9**
	comp=Z,3.9nm,0.3s,SNR=22							
FETA	**Feichten**	**6.39**	**303**			**Pn**	**00 07 08.5**	**+1.9**
PART	**Garmisch-Parte**	**6.40**	**308**	*e*Pn		**Pn**	**00 07 08.6**	**+1.9**
PART	**Garmisch-Parte**	**6.40**	**308**	*e*Pn		**Pn**	**00 07 08.6**	**+1.9**
KRLC	**Kraliky**	**6.42**	**350**	*e*PN		**Pn**	**00 07 07.1**	**+0.1**
KRLC				*e*SN		**Sn**	**00 08 20.3**	**-0.3**
KRLC				AMS	AMS		00 09 50.0	
	comp=Z,500nm,10.4s							
ZUGS	**Zugspitze, Sch**	**6.44**	**307**	*e*PN		**Pn**	**00 07 09.4**	**+2.0**
ZUGS	**Zugspitze, Sch**	**6.44**	**307**	*e*Pn		**Pn**	**00 07 09.4**	**+2.0**
OJC	**Ojcow**	**6.51**	**7**	*e*P		**Pn**	**00 07 08.4**	**+0.3**
OJC	**Ojcow**	**6.51**	**7**			**Pn**	**00 07 08.7**	**+0.6**
OJC	**Ojcow**	**6.51**	**7**	Pn		**Pn**	**00 07 08.0**	**-0.1**
	comp=Z,24nm,0.6s,SNR=6.1							
OJC				Pg		**Pn**	**00 07 08.4**	**+0.3**
OJC				x		**Pn**	**00 07 08.9**	**+0.8**
	comp=Z,24nm,0.6s							
OJC				Pn				
MSSA	**Maissana**	**6.53**	**278**			**Pn**	**00 07 09.1**	**+0.6**
KWP	**Kalwaria Pacla**	**6.53**	**25**			**Pn**	**00 07 09.3**	**+1.0**
BE1	**Monatshausen**	**6.58**	**312**	*e*Pn		**Pn**	**00 07 10.6**	**+1.5**
BE1	**Monatshausen**	**6.58**	**312**	*e*Pn		**Pn**	**00 07 10.6**	**+1.5**
RETA	**Reutte**	**6.60**	**307**	*e*Pn		**Pn**	**00 07 10.9**	**+1.5**
	comp=Z,13nm,0.4s,SNR=15							
RETA	**Reutte**	**6.60**	**307**			**Pn**	**00 07 10.9**	**+1.5**
WET	**Wettzell**	**6.64**	**326**	*e*Pn		**Pn**	**00 07 11.3**	**+1.3**
WET				*e*Sn		**Sn**	**00 08 22.4**	**-3.7**
WET	**Wettzell**	**6.64**	**326**	*e*Pn		**Pn**	**00 07 11.3**	**+1.3**
WET				*e*Sn		**Sn**	**00 08 22.4**	**-3.7**
PBCC	**Pribram**	**6.69**	**334**	*e*PN		**Pn**	**00 07 11.3**	**+0.7**
FUR	**Furstenfeldbru**	**6.70**	**314**	*e*Pn		**Pn**	**00 07 11.9**	**+1.1**
FUR	**Furstenfeldbru**	**6.70**	**314**	*e*Pn		**Pn**	**00 07 11.9**	**+1.1**
DPC	**Dobruska-Polom**	**6.75**	**348**	*e*PN		**Pn**	**00 07 11.2**	**-0.3**
DPC				*e*SN		**Sn**	**00 08 28.4**	**-0.4**
DPC				AMS	AMS		00 10 00.0	
	comp=Z,400nm,8.7s							
PRU	**Pruhonice**	**6.80**	**338**	*e*PN		**Pn**	**00 07 12.5**	**+0.5**
PRU				*e*SN		**Sn**	**00 08 28.9**	**-0.9**
PRU				AMS	AMS		00 09 50.0	
	comp=Z,500nm,9.1s							
DAVOX	**Davos/Dischmat**	**6.81**	**299**	Pn		**Pn**	**00 07 13.6**	**+1.1**
	comp=Z,7.7nm,0.3s,baz=116,slow=11,SNR=62							
DAVOX				Sn		**Sn**	**00 08 27.7**	**-2.7**
	baz=116,slow=18,SNR=1.1							
DAVOX				LR	LR		00 10 19.7	
	comp=Z,314nm,19.6s,baz=110,slow=42							
HARR	**Harsova**	**6.81**	**79**	⇑P		**Pn**	**00 07 11.1**	**-1.2**
HARR	**Harsova**	**6.81**	**79**			**Pn**	**00 07 11.1**	**-1.2**
OBER	**Oberstdorf**	**6.83**	**305**	*e*Pn		**Pn**	**00 07 14.3**	**+1.7**
OBER	**Oberstdorf**	**6.83**	**305**	*e*Pn		**Pn**	**00 07 14.3**	**+1.7**
UPC	**Upice**	**6.96**	**347**	*e*PN		**Pn**	**00 07 13.8**	**-0.5**
UPC				AMS	AMS		00 10 00.0	
	comp=Z,600nm,5.9s							
OSTC	**Ostas**	**6.97**	**348**	*e*PN		**Pn**	**00 07 14.2**	**-0.3**
OSTC				AMS	AMS		00 10 00.0	
	comp=Z,400nm,9.9s							
CFR	**Carcaliu**	**7.01**	**75**	⇑P		**Pn**	**00 07 14.2**	**-0.8**
CFR	**Carcaliu**	**7.01**	**75**			**Pn**	**00 07 14.2**	**-0.8**
DAVA	**Damuels**	**7.02**	**303**	*i* Pn		**Pn**	**00 07 17.0**	**+1.6**
	comp=Z,6.1nm,0.3s							
DAVA	**Damuels**	**7.02**	**303**			**Pn**	**00 07 17.0**	**+1.6**
DAVA	**Damuels**	**7.02**	**303**	*e*Pn		**Pn**	**00 07 17.0**	**+1.6**
DAVA	**Damuels**	**7.02**	**303**	*e*Pn		**Pn**	**00 07 17.0**	**+1.6**
VAE	**Valguarnera**	**7.02**	**208**	Pn		**Pn**	**00 07 19.2**	**+3.9**
	comp=Z,1.5nm,0.3s,baz=2.6,slow=6.1,SNR=2.6							
CHVC	**Chvalec**	**7.03**	**347**	*e*PN		**Pn**	**00 07 14.8**	**-0.5**
CHVC				AMS	AMS		00 10 00.0	
	comp=Z,400nm,11.3s							
TUE	**Stuetta**	**7.04**	**296**	Pn		**Pn**	**00 07 16.7**	**+1.1**
ITM	**Ithomi**	**7.07**	**157**			**Pn**	**00 07 16.9**	**+1.0**
UBR	**Ueberruh**	**7.08**	**306**	*e*Pn		**Pn**	**00 07 17.3**	**+1.3**
UBR	**Ueberruh**	**7.08**	**306**	*e*Pn		**Pn**	**00 07 17.3**	**+1.3**
PGF	**Pioggiola**	**7.08**	**263**	*e*Pn		**Pn**	**00 07 15.7**	**-0.4**
PGF	**Pioggiola**	**7.08**	**263**	*e*P		**Pn**	**00 07 20.2**	**+4.1**
PGF				*e*Sn		**Sn**	**00 08 31.5**	**-5.5**
	comp=Z,14nm,0.7s							
CORL	**Corleone**	**7.08**	**216**	Pn		**Pn**	**00 07 16.2**	**+0.1**
TIRR	**Tirgusor**	**7.14**	**81**			**Pn**	**00 07 16.1**	**-0.7**
TIRR	**Tirgusor**	**7.14**	**81**	Pn		**Pn**	**00 07 16.1**	**-0.7**
	comp=Z,31nm,0.7s,SNR=4.0							
TIRR				x	x		00 07 16.5	
	comp=Z,31nm,0.7s							
TIRR				Pn				
TIRR	**Tirgusor**	**7.14**	**81**	*e*Pn		**Pn**	**00 07 15.9**	**-0.8**
TIRR	**Tirgusor**	**7.14**	**81**	*e*Pn		**Pn**	**00 07 15.9**	**-0.8**
TPGR	**Topolog**	**7.17**	**78**	⇓P		**Pn**	**00 07 16.8**	**-0.4**
TPGR	**Topolog**	**7.17**	**78**			**Pn**	**00 07 16.8**	**-0.4**
KSP	**Ksiaz**	**7.24**	**349**	Pn		**Pn**	**00 07 14.9**	**-3.3**
	comp=Z,11nm,0.7s,SNR=3.9							
KSP				x	x		00 07 17.2	
	comp=Z,11nm,0.7s							
KSP				Pn				
RAFF	**Raffo Rosso**	**7.27**	**207**			**Pn**	**00 07 19.3**	**+0.7**
PVCC	**Panska Ves**	**7.28**	**340**	AMS	AMS		00 10 00.0	
	comp=Z,300nm,11.3s							
CLTB	**Caltabellotta**	**7.39**	**215**	Pn		**Pn**	**00 07 22.9**	**+2.6**
NORI	**Noerdlinger Ri**	**7.39**	**315**	*e*Pn		**Pn**	**00 07 20.6**	**+0.4**
NORI	**Noerdlinger Ri**	**7.39**	**315**	*e*Pn		**Pn**	**00 07 20.6**	**+0.4**
ROTZ	**Rotzenmuhle**	**7.41**	**326**	*e*Pn		**Pn**	**00 07 21.3**	**+0.8**
ROTZ	**Rotzenmuhle**	**7.41**	**326**	*e*Pn		**Pn**	**00 07 21.3**	**+0.8**
MANZ	**Manzenberg**	**7.62**	**327**	*e*Pn		**Pn**	**00 07 23.9**	**+0.6**
MANZ				*e*Sn		**Sn**	**00 08 46.3**	**-3.8**
MANZ	**Manzenberg**	**7.62**	**327**	*e*Pn		**Pn**	**00 07 23

AVF				*e*Sn		**Sn**	**00 10 09.2**	**-6.7**
	comp=Z,2.7nm,0.5s							
GIVF	**Givet**	**11.31**	**309**	*e*Pn		**Pn**	**00 08 15.1**	**+1.2**
BGF	**Bois d'Agland**	**11.43**	**290**	*e*Pn		**Pn**	**00 08 15.0**	**-0.5**
BGF	**Bois d'Agland**	**11.43**	**290**	*e*P		Pn	00 08 20.5	+5.0
BGF				*e*Sn		**Sn**	**00 10 16.8**	**-6.7**
	comp=Z,13nm,0.4s							
BAIF	**Baives**	**11.64**	**308**	*e*Pn		**Pn**	**00 08 19.0**	**+0.6**
BAIF				*e*Sn		**Sn**	**00 10 21.8**	**-6.8**
	comp=Z,3.4nm,0.6s							
HYF	**Humbligny**	**11.69**	**293**	*e*Pn		**Pn**	**00 08 19.3**	**+0.2**
HYF	**Humbligny**	**11.69**	**293**	*e*P		Pn	00 08 24.6	+5.5
HYF				*e*Sn		**Sn**	**00 10 23.5**	**-6.4**
TCF	**Toulx Ste Croi**	**11.83**	**288**	*e*Pn		**Pn**	**00 08 20.5**	**-0.5**
TCF				*e*Sn		**Sn**	**00 10 25.8**	**-7.5**
	comp=Z,16nm,0.9s							
MTLF	**Montolieu**	**11.85**	**274**	*e*Pn		**Pn**	**00 08 21.0**	**-0.4**
CAF	**Calviac**	**11.86**	**281**	*e*Pn		**Pn**	**00 08 20.1**	**-1.3**
CAF				*e*Sn		**Sn**	**00 10 25.8**	**-8.3**
	comp=Z,0.5nm,0.2s							
BRTR	**Keskin Array B**	**11.98**	**105**	Pn		**Pn**	**00 08 27.1**	**+3.9**
	comp=Z,0.0nm,0.3s,baz=283,slow=11,SNR=6.3							
BRTR				LR		LR	00 13 43.2	
	comp=Z,129nm,19.0s,baz=284,slow=41							
CLF	**Chambon-Foret**	**12.11**	**296**	Pn		**Pn**	**00 08 25.4**	**+0.6**
RJF	**Les Rejaudoux**	**12.25**	**283**	*e*Pn		**Pn**	**00 08 26.4**	**-0.3**
RJF	**Les Rejaudoux**	**12.25**	**283**	*e*P		Pn	00 08 31.8	+5.1
RJF				*e*Sn		Sn	00 10 34.3	-9.3
	comp=Z,0.8nm,0.3s							
LFF	**La Frestale**	**12.80**	**281**	*e*Pn		**Pn**	**00 08 34.3**	**+0.1**
MFF	**Saint Martin d**	**13.48**	**289**	*e*Pn		**Pn**	**00 08 43.5**	**0.0**
LDF	**La Druitiere**	**13.79**	**297**	*e*Pn		**Pn**	**00 08 47.6**	**-0.2**
FLN	**La Foliniere**	**14.06**	**297**	*e*Pn		**Pn**	**00 08 50.8**	**-0.7**
	baz=116							
GRR	**Gorron**	**14.22**	**296**	*e*Pn		**Pn**	**00 08 53.1**	**-0.6**
GRR				*e*Sn		**Sn**	**00 11 23.1**	**-8.7**
	comp=Z,0.2nm,0.2s							
SGMF	**Saint Gilles**	**15.31**	**294**	*e*Pn		**Pn**	**00 09 08.0**	**-0.4**
SGMF				*e*Sn		**Sn**	**00 11 49.5**	**-8.9**
	comp=Z,0.2nm,0.3s							
QUIF	**Quistinic**	**15.67**	**293**	*e*Pn		**Pn**	**00 09 12.9**	**-0.2**
ROSF	**Rostrenen**	**15.80**	**294**	*e*Pn		**Pn**	**00 09 14.4**	**-0.4**
HFS	**Hagfors**	**16.65**	**352**	Pn		**Pn**	**00 09 24.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=148,slow=8.7,SNR=2.0							
HFS				LR		LR	00 15 12.4	
	comp=Z,44nm,20.5s,baz=172,slow=35							
MMAI	**Mount Meron Ar**	**17.00**	**124**	P		**P**	**00 09 31.7**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=310,slow=11,SNR=9.2							
ESDC	**Sonseca Array**	**17.28**	**264**	P		**P**	**00 09 35.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=64,slow=12,SNR=14							
ESDC				LR		LR	00 16 28.8	
	comp=Z,45nm,18.5s,baz=60,slow=38							
KIV	**Kislovodsk**	**17.41**	**81**			**Pn**	**00 09 35.1**	**-0.2**
KBZ	**Khabaz**	**17.59**	**82**	P		**P**	**00 09 40.6**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=297,slow=7.8,SNR=4.7							
PAB	**San Pablo**	**17.60**	**264**			**P**	**00 09 38.5**	**-0.3**
NOA	**NORSAR Array B**	**17.84**	**348**	LR		LR	00 16 28.8	
	comp=Z,62nm,18.4s,baz=170,slow=37							
EKA	**Eskdalemuir Ar**	**18.13**	**317**	P		**P**	**00 09 46.3**	**+1.8**
	baz=122,slow=12,SNR=2.3							
FINES	**FINESS Array B**	**18.26**	**12**	P		**P**	**00 09 46.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=195,slow=11,SNR=12							
FINES				LR		LR	00 17 29.4	
	comp=Z,102nm,19.8s,baz=200,slow=40							
FINES	**FINESS Array B**	**18.26**	**12**			**Pn**	**00 09 45.3**	**-0.3**
FIA1	**FINESS Array S**	**18.26**	**12**			**Pn**	**00 09 45.5**	**-0.1**
FIA1				IAmb		IAmb	00 10 00.8	
	comp=Z,12nm,1.2s							
MTE	**Manteigas**	**19.62**	**269**	*e*P		**Pn**	**00 10 01.9**	**-0.5**
MTE	**Manteigas**	**19.62**	**269**	P		**P**	**00 10 01.4**	**+0.4**
MTE				IAmb		IAmb	00 10 20.2	
	comp=Z,22nm,1.4s							
PCBR	**Castelo Branco**	**19.76**	**268**	*e*P		**P**	**00 10 02.9**	**+0.5**
PMRV	**Marv??o**	**19.84**	**266**	*e*P		**P**	**00 10 04.1**	**+0.7**
PESTR	**Estremoz**	**20.19**	**265**	*e*P		**P**	**00 10 07.2**	**0.0**
PESTR	**Estremoz**	**20.19**	**265**	P		**P**	**00 10 07.1**	**-0.1**
PCAS	**Casmilo, Conde**	**20.43**	**269**	*e*P		**P**	**00 10 10.6**	**+0.9**
PMTG	**Montargil**	**20.57**	**266**	*e*P		Pn	00 10 12.6	-0.9
EVO	**Evora**	**20.62**	**264**	*e*P		**P**	**00 10 12.5**	**+0.6**
PSBE	**So Bento**	**20.82**	**268**	*e*P		**P**	**00 10 14.4**	**+0.3**
PVAQ	**Vaqueiros**	**20.88**	**261**	P		**P**	**00 10 15.0**	**+0.3**
PVAQ				IAmb		IAmb	00 10 19.0	
	comp=Z,14nm,1.3s							
KIRV	**Kirov**	**24.09**	**41**	LR		LR	00 19 57.5	
	comp=Z,54nm,20.5s,baz=172,slow=36							
ARCES	**ARCESS Array B**	**26.08**	**6**	P		**P**	**00 11 06.6**	**+0.7**
	comp=Z,4.3nm,1.0s,baz=187,slow=6.4,SNR=5.1							
ARCES				LR		LR	00 21 10.5	
	comp=Z,48nm,19.8s,baz=150,slow=36							
ARCES	**ARCESS Array B**	**26.08**	**6**	P		**P**	**00 11 06.0**	**+0.1**
ARCES				IAmb		IAmb	00 11 18.4	
	comp=Z,9.4nm,1.2s							
ARU	**Arti**	**28.19**	**49**	P		**P**	**00 11 26.3**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=251,slow=6.0,SNR=4.0							
ABKAR	**Akbulak array**	**28.74**	**64**	P		**P**	**00 11 29.8**	**-0.1**
ABKAR	**Akbulak array**	**28.74**	**64**	P		**P**	**00 11 30.2**	**+0.3**
GEYT	**Alibeck**	**30.29**	**87**	P		**P**	**00 11 43.7**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=310,slow=9.5,SNR=4.5							
TOA0	**Torodi Ar. Sit**	**33.78**	**211**	P		**P**	**00 12 15.1**	**+0.6**
TOA0				IAmb		IAmb	00 12 18.4	
	comp=Z,8.7nm,1.5s							
TORD	**Torodi Ar. Bea**	**33.78**	**211**	P		**P**	**00 12 16.7**	**+2.2**
	comp=Z,0.5nm,0.5s,baz=12,slow=9.8,SNR=5.5							
BRVK	**Borovoye**	**34.88**	**56**	P		**P**	**00 12 24.4**	**+0.6**
KK31	**Karatay Array**	**37.23**	**72**	P		**P**	**00 12 45.3**	**+1.2**
KK31				IAmb		IAmb	00 12 48.6	
	comp=Z,1.7nm,0.7s							
KKAR	**Karatay Array**	**37.23**	**72**	P		**P**	**00 12 45.8**	**+1.7**
DBIC	**Dimbokro**	**42.27**	**216**	P		**P**	**00 13 26.6**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=6.2,slow=10,SNR=1.4							
DBIC	**Dimbokro**	**42.27**	**216**	P		**P**	**00 13 26.5**	**+0.3**
NRIK	**Noril'sk**	**42.56**	**29**	LR		LR	00 32 31.1	
	comp=Z,52nm,18.6s,baz=277,slow=38							
ZALV	**Zalesovo Beam**	**43.26**	**52**	P		**P**	**00 13 33.5**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=286,slow=7.7,SNR=6.4							
MK31	**Makanchi Array**	**43.86**	**63**	P		**P**	**00 13 39.0**	**+0.2**
MK31				IAmb		IAmb	00 13 56.1	
	comp=Z,4.2nm,1.4s							
MKAR	**Makanchi Array**	**43.86**	**63**	P		**P**	**00 13 39.7**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=286,slow=7.1,SNR=8.9							
MKAR	**Makanchi Array**	**43.86**	**63**	P		**P**	**00 13 38.9**	**+0.1**
EUNU	**Eureka**	**49.73**	**347**	P		**P**	**00 14 26.1**	**+1.7**
EUNU				IAmb		IAmb	00 14 34.5	
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**58.15**	**52**	P		**P**	**00 15 27.8**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=291,slow=8.9,SNR=6.8							
SONM	**Songino Array**	**58.15**	**52**	P		**P**	**00 15 27.1**	**+0.7**
SONM				IAmb		IAmb	00 15 31.7	
	comp=Z,0.7nm,0.8s							
INK	**Inuvik**	**66.30**	**349**	P		**P**	**00 16 20.6**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=199,slow=8.7,SNR=3.1							
INK	**Inuvik**	**66.30**	**349**	P		**P**	**00 16 21.9**	**+1.4**
INK				IAmb		IAmb	00 16 22.9	
	comp=Z,4.7nm,1.4s							
SEY	**Seymchan**	**67.45**	**21**	P		**P**	**00 16 28.8**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=338,slow=6.7,SNR=7.0							
YKA	**Yellowknife Ar**	**67.63**	**339**	P		**P**	**00 16 29.7**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=40,slow=5.6,SNR=23							
E43A	**Lone Tree Farm**	**68.71**	**314**	P		**P**	**00 16 36.8**	**+0.6**
IMAR	**Indian Mountai**	**70.42**	**357**	P		**P**	**00 16 47.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**70.64**	**83**	P		**P**	**00 16 49.4**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=305,slow=7.4,SNR=8.9							
DAWY	**Dawson**	**71.10**	**350**	P		**P**	**00 16 51.6**	**+1.0**
BOSA	**Boshof**	**72.29**	**174**	P		**P**	**00 16 58.8**	**+0.6**
HYT	**Haines Junctio**	**73.95**	**348**	P		**P**	**00 17 09.8**	**+2.1**
HYT				IAmb		IAmb	00 17 10.5	
	comp=Z,3.2nm,1.0s							
PETK	**Petropavlovsk-**	**77.32**	**24**	LR		LR	00 55 42.0	
	comp=Z,26nm,18.0s,baz=329,slow=39							
BBB	**Bella Bella**	**80.18**	**340**	LR		LR	00 56 26.7	
	comp=Z,27nm,18.3s,baz=136,slow=38							
LEM	**Lembang**	**94.00**	**96**	LR		LR	01 05 01.1	
	comp=Z,18nm,18.2s,baz=168,slow=38							
ASAR	**Alice Springs**	**124.03**	**91**	PKP		**PKiKP**	**00 24 31.8**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=323,slow=2.3,SNR=1.3							

IDC ***12*** *00:31:05.8±0.8,20°.27N×122°.36E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.6/50, mbtmp3.9/11, MS3.6/2, Ms1 3.6/2, ms1mx2.6/47, Error ellipse: s-maj=43.0km s-min=15.6km az=69.0*

ISC 12 00:31:10.9±0.8, 20°.2N±0°.1×122°.3E±0°.3, h35km, n13, σ0=0.91/11, mb3.9/11, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**14.95**	**29**	LR	LR	00 39 49.3	
	comp=Z,199nm,18.3s,baz=32,slow=35						
SONM	**Songino Array**	**30.39**	**339**	P	**P**	**00 37 20.6**	**+0.9**
	0.2nm,0.3s,baz=159,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**41.65**	**163**	P	**P**	**00 38 55.9**	**-0.2**
	1.5nm,0.7s,baz=345,slow=9.4,SNR=19						
MKAR	**Makanchi Array**	**41.91**	**319**	P	**P**	**00 38 59.2**	**+1.2**
	1.8nm,0.5s,baz=110,slow=8.7,SNR=25						
PETK	**Petropavlovsk-**	**42.64**	**31**	P	**P**	**00 39 04.8**	**+1.0**
	1.2nm,0.7s,baz=242,slow=3.1,SNR=2.4						
ZALV	**Zalesovo Beam**	**44.11**	**329**	P	**P**	**00 39 15.2**	**-0.5**
	0.7nm,0.3s,baz=120,slow=8.5,SNR=1.7						
ASAR	**Alice Springs**	**45.09**	**165**	P	**P**	**00 39 24.2**	**+0.4**
	0.6nm,0.5s,baz=348,slow=7.8,SNR=21						
KURBB	**Kurchatov Arra**	**45.79**	**322**	P	**P**	**00 39 29.5**	**+0.4**
	0.7nm,0.5s,baz=43,slow=9,SNR=6.0						
NRIK	**Noril'sk**	**53.46**	**345**	P	**P**	**00 40 26.6**	**-0.5**
	0.7nm,0.4s,baz=92,slow=7.1,SNR=3.6						
STKA	**Stephens Creek**	**55.03**	**160**	P	**P**	**00 40 39.3**	**+0.2**
	1.6nm,0.6s,baz=7.2,slow=13,SNR=3.3						
BELG	**Belogornoye**	**64.91**	**319**	LR	LR	01 11 53.2	
	comp=Z,44nm,18.5s,baz=113,slow=38						
FINES	**FINESS Array B**	**75.35**	**330**	P	**P**	**00 42 49.2**	**-1.3**
	1.5nm,1.0s,baz=69,slow=7.6,SNR=1.9						
YKA	**Yellowknife Ar**	**86.20**	**23**	P	**P**	**00 43 47.5**	**-0.9**
	0.2nm,0.4s,baz=308,slow=4.4,SNR=13						

TAP ***12*** *00:35:00.8,24°.88N×122°.19E, h104km, ML3.0, C*
JMA ***12*** *00:35:00.8±0.1,24°.77N×122°.19E, h108km±1km, M2.2*

ISC 12 00:35:00.4±1.5, 24°.90N±0°.04×122°.19E±0°.03, h106km±7km, n75, σ0=0.80/137, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.21**	**300**	*e*P	**Pn**	**00 35 15.4**	**0.0**
	baz=295						
TWB1				*e*S	**Sn**	**00 35 26.2**	**-0.4**
	baz=295						
EGS		**0.24**	**257**	*e*P	**Pn**	**00 35 16.5**	**+1.0**
	baz=268						
EGS				*e*S	**Sn**	**00 35 26.7**	**-0.1**
	baz=268						
NTC	**Toucheng**	**0.33**	**262**	*e*P	**Pn**	**00 35 15.6**	**-0.3**
	baz=261						
TIPB	**Shuangxi**	**0.34**	**282**	P	**Pn**	**00 35 16.2**	**+0.2**
	baz=285						
TIPB				S	**Sn**	**00 35 27.4**	**-0.3**
	baz=285						
WFSB	**Wu-fen Shan**	**0.41**	**295**	*e*P	**Pn**	**00 35 16.4**	**0.0**
	baz=291						
TWC	**Suao**	**0.43**	**227**	P	**Pn**	**00 35 16.5**	**+0.1**
	baz=231						
TWC				S	**Sn**	**00 35 27.7**	**-0.7**
	baz=231						
NDS	**Dongshan**	**0.51**	**239**	*e*P	**Pn**	**00 35 17.4**	**+0.4**
	baz=239						
NDS				*e*S	**Sn**	**00 35 29.1**	**-0.2**
	baz=239						
TWE	**Neicheng**	**0.51**	**250**	*e*P	**Pn**	**00 35 17.0**	**+0.1**
	baz=255						
TWE				*e*S	**Sn**	**00 35 29.1**	**-0.2**
	baz=255						
TWA	**Mucha**	**0.56**	**278**	*e*P	**Pn**	**00 35 17.3**	**0.0**
	baz=280						
TWA				*e*S	**Sn**	**00 35 29.2**	**-0.8**
	baz=280						
EWUT	**Wuta**	**0.59**	**220**	*e*P	**Pn**	**00 35 17.9**	**+0.4**
	baz=218						
EWUT				*e*S	**Sn**	**00 35 30.4**	**+0.1**
	baz=218						
NHDH	**Xindian Distri**	**0.61**	**276**	*e*P	**Pn**	**00 35 17.7**	**+0.1**
	baz=278						
YM01	**YM01**	**0.62**	**294**	P	**Pn**	**00 35 17.9**	**+0.1**
	baz=290						
YM01				*e*S	**Sn**	**00 35 30.3**	**-0.5**
	baz=290						
YM08	**YM08**	**0.62**	**298**	*e*P	**Pn**	**00 35 17.9**	**+0.1**
	baz=293						
ENTT	**Nioudou**	**0.63**	**246**	*e*P	**Pn**	**00 35 18.8**	**+1.0**
	baz=245						
ENTT				*e*S	**Sn**	**00 35 32.1**	**+1.2**
	baz=245						
YM10	**YM10**	**0.63**	**294**	P	**Pn**	**00 35 17.9**	**0.0**
	baz=289						
YM10				S	**Sn**	**00 35 30.8**	**-0.3**
	baz=289						
NWLT	**Wulai**	**0.64**	**259**	P	**Pn**	**00 35 17.9**	**0.0**
	baz=264						
NWLT				S	**Sn**	**00 35 30.3**	**-0.8**
	baz=264						
TATO	**Taipei**	**0.64**	**277**	*e*P	**Pn**	**00 35 17.9**	**-0.1**
	baz=278						
TATO				*e*S	**Sn**	**00 35 30.0**	**-1.1**
	baz=278						
YM04	**YM04**	**0.65**	**293**	P	**Pn**	**00 35 18.1**	**+0.1**
	baz=288						
YM04				S	**Sn**	**00 35 30.5**	**-0.8**
	baz=288						
TWY	**Chenhua**	**0.66**	**305**	*e*P	**Pn**	**00 35 18.5**	**+0.4**
	baz=300						
NDT	**Datong Townshi**	**0.69**	**245**	P	**Pn**	**00 35 19.1**	**+0.7**
	baz=244						
NDT				S	**Sn**	**00 35 32.6**	**+0.8**
	baz=244						
TWS1	**Kuangyinshan**	**0.73**	**286**	*e*P	**Pn**	**00 35 18.8**	**+0.1**
	baz=288						
YHNB	**Yeheng**	**0.78**	**253**	P	**Pn**	**00 35 19.5**	**+0.2**
	baz=253						
YHNB				S	**Sn**	**00 35 33.2**	**-0.1**
	baz=253						
NSK	**Sanguang**	**0.79**	**254**	P	**Pn**	**00 35 19.8**	**+0.4**
	baz=254						
NSK				S	**Sn**	**00 35 33.5**	**-0.1**
	baz=254						
YOJ	**Yonaguni jima**	**0.86**	**120**	*e*P	**Pn**	**00 35 20.0**	**0.0**
	baz=128						
YOJ				S	**Sn**	**00 35 35.0**	**+0.4**
	baz=128						
NNSB	**Datong**	**0.87**	**238**	P	**Pn**	**00 35 20.9**	**+0.7**
	baz=244						
NNSB				S	**Sn**	**00 35 35.2**	**+0.2**
	baz=244						
NNS	**Nan Shan**	**0.88**	**239**	P	**Pn**	**00 35 21.0**	**+0.8**
	baz=245						
NNS				S	**Sn**	**00 35 35.0**	**-0.1**
	baz=245						
NACB	**Ninganchiao**	**0.91**	**217**	P	**Pn**	**00 35 20.1**	**-0.3**
	baz=209						
NACB				S	**Sn**	**00 35 35.0**	**-0.4**
	baz=209						
ETLH	**Xiulin Townshi**	**0.95**	**223**	*e*P	**Pn**	**00 35 21.1**	**+0.2**
	baz=231						
ETLH				*e*S	**Sn**	**00 35 35.4**	**-0.9**
	baz=231						
TWD	**Chiawan**	**0.98**	**214**	P	**Pn**	**00 35 21.2**	**+0.1**
	baz=224						
TWD				*e*S	**Sn**	**00 35 36.3**	**-0.4**
	baz=224						
HSN1	**Hsinchu**	**1.07**	**264**	*e*P	**Pn**	**00 35 22.8**	**+0.7**
	baz=256						
HSN1				*e*S	**Sn**	**00 35 39.2**	**+0.7**
	baz=256						
FUSS	**Fushou**	**1.08**	**233**	*e*P	**Pn**	**00 35 23.2**	**+0.7**
	baz=224						
FUSS				S	**Sn**	**00 35 39.4**	**+0.3**
	baz=224						
LIOB	**Emei**	**1.10**	**257**	P	**Pn**	**00 35 22.9**	**+0.5**
	baz=249						
LIOB				S	**Sn**	**00 35 39.0**	**0.0**
	baz=249						
NSTT	**Nanjuang**	**1.12**	**256**	*e*P	**Pn**	**00 35 22.6**	**0.0**
	baz=248						
NSTT				*e*S	**Sn**	**00 35 39.1**	**-0.3**
	baz=248						
TWT	**Tachien**	**1.13**	**235**	P	**Pn**	**00 35 24.2**	**+1.3**
	baz=227						
TWT				S	**Sn**	**00 35 40.8**	**+0.9**
	baz=227						
WHF	**Hehuan Shan**	**1.13**	**229**	P	**Pn**	**00 35 23.6**	**+0.3**
	baz=226						
WHF				*i* S	**Sn**	**00 35 40.2**	**-0.2**
	baz=226						
TDCB	**Techi**	**1.14**	**236**	P	**Pn**	**00 35 24.1**	**+1.1**
	baz=227						
TDCB				*e*S	**Sn**	**00 35 40.2**	**+0.2**
	baz=227						
CHGB	**Renai**	**1.25**	**228**	P	**Pn**	**00 35 25.3**	**+0.9**
	baz=226						
CHGB				S	**Sn**	**00 35 42.3**	**-0.1**
	baz=226						
ESL	**Shilin**	**1.28**	**213**	*e*P	**Pn**	**00 35 24.0**	**-0.5**
	baz=216						
ESL				*e*S	**Sn**	**00 35 41.6**	**-1.1**
	baz=216						
WHP	**Taichung City**	**1.29**	**242**	P	**Pn**	**00 35 25.6**	**+0.9**
	baz=241						
WHP				*i* S	**Sn**	**00 35 43.3**	**+0.3**
	baz=241						
TWQ1	**Liyutan**	**1.40**	**247**	*e*P	**Pn**	**00 35 26.4**	**+0.5**
	baz=247						
TWQ1				*e*S	**Sn**	**00 35 45.1**	**-0.1**
	baz=247						
EGFH	**Guangfu**	**1.41**	**210**	P	**Pn**	**00 35 25.7**	**-0.3**
	baz=206						
EGFH				S	**Sn**	**00 35 44.5**	**-0.9**
	baz=206						
WPL	**Puli Township**	**1.43**	**232**	*e*P	**Pn**	**00 35 27.8**	**+1.5**
	baz=240						
WPL				*e*S	**Sn**	**00 35 46.9**	**+1.1**
	baz=240						
WCS	**Beigang Elemen**	**1.44**	**235**	*e*P	**Pn**	**00 35 27.2**	**+0.9**
	baz=241						
WCS				*e*S	**Sn**	**00 35 46.3**	**+0.4**
	baz=241						
VWDT	**VWDT**	**1.49**	**220**	*e*P	**Pn**	**00 35 27.6**	**+0.6**
	baz=212						
VWDT				*e*S	**Sn**	**00 35 47.4**	**+0.4**
	baz=212						
IRIF	**Iriomote-Funau**	**1.51**	**112**	P	**Pn**	**00 35 27.3**	**+0.2**
IRIF				*e*S	**Sn**	**00 35 47.6**	**+0.2**
SMLT	**Sun Moon Lake**	**1.55**	**230**	*e*P	**Pn**	**00 35 29.2**	**+1.3**
	baz=235						
SMLT				*e*S	**Sn**	**00 35 50.0**	**+1.4**
	baz=235						
HGSD	**Ruisui**	**1.57**	**207**	P	**Pn**	**00 35 27.7**	**-0.2**
	baz=211						
HGSD				*e*S	**Sn**	**00 35 48.7**	**0.0**
	baz=211						
TYC	**Yuchr**	**1.57**	**231**	*e*P	**Pn**	**00 35 29.3**	**+1.4**
	baz=237						
TYC				*e*S	**Sn**	**00 35 49.3**	**+0.5**
	baz=237						
EHY	**Hungye**	**1.60**	**210**	*e*P	**Pn**	**00 35 27.6**	**-0.7**
	baz=206						
EHY				*e*S	**Sn**	**00 35 48.1**	**-1.4**
	baz=206						
YULB	**Yu-li**	**1.71**	**209**	P	**Pn**	**00 35 28.4**	**-1.3**
	baz=205						
YULB				S	**Sn**	**00 35 50.1**	**-1.8**
	baz=205						
WJS	**Zhushan**	**1.71**	**232**	*e*P	**Pn**	**00 35 30.3**	**+0.6**
	baz=241						
WJS				*e*S	**Sn**	**00 35 52.6**	**+0.7**
	baz=241						
TWF1	**Yuli**	**1.75**	**208**	P	**Pn**	**00 35 29.5**	**-0.6**
	baz=209						
TWF1				*e*S	**Sn**	**00 35 50.6**	**-2.0**
	baz=209						
JKRS	**Kuro-shima**	**1.78**	**111**	P	**Pn**	**00 35 30.9**	**+0.4**
JKRS				*e*S	**Sn**	**00 35 53.8**	**+0.4**
JIJ	**Ishigaki jima**	**1.85**	**106**	P	**Pn**	**00 35 31.5**	**+0.1**
JIJ				*e*S	**Sn**	**00 35 54.6**	**-0.4**
ALS	**Alishan**	**1.88**	**223**	*e*P	**Pn**	**00 35 33.3**	**+1.3**
	baz=230						
ALS				S	**Sn**	**00 35 57.8**	**+1.8**
	baz=230						
FULB	**Fuli**	**1.88**	**206**	*e*P	**Pn**	**00 35 32.2**	**+0.4**
	baz=211						
FULB				S	**Sn**	**00 35 55.7**	**-0.1**
	baz=211						
CHN5	**Tsauling**	**1.90**	**227**	*e*P	**Pn**	**00 35 33.5**	**+1.5**
	baz=224						
CHN5				*e*S	**Sn**	**00 35 57.0**	**+0.9**
	baz=224						
JISG	**Ishigakijimahi**	**1.95**	**99**	P	**Pn**	**00 35 33.2**	**+0.6**
JISG				*e*S	**Sn**	**00 35 57.3**	**+0.1**
ELDTW	**Lidau**	**2.01**	**212**	*e*P	**Pn**	**00 35 33.5**	**-0.1**
	baz=202						
ELDTW				*e*S	**Sn**	**00 35 58.3**	**-0.6**
	baz=202						
EDH	**Donghe**	**2.08**	**203**	*e*P	**Pn**	**00 35 33.9**	**-0.4**
	baz=206						
EDH				*e*S	**Sn**	**00 35 59.1**	**-1.2**
	baz=206						
TPUB	**Ta-pu**	**2.14**	**222**	*e*P	**Pn**	**00 35 32.9**	**-2.2**
	baz=230						
STYT	**Tauyuan**	**2.17**	**217**	*e*P	**Pn**	**00 35 36.8**	**+1.2**
	baz=205						
STYT				S	**Sn**	**00 36 03.4**	**+1.0**
	baz=205						
WTP	**Ta-pu**	**2.19**	**222**	*e*P	**Pn**	**00 35 36.1**	**+0.3**
	baz=228						
WTP				*e*S	**Sn**	**00 36 03.6**	**+0.8**
	baz=228						
TWK	**Hsinying**	**2.25**	**224**	P	**Pn**	**00 35 37.5**	**+0.9**
	baz=219						
TWK				S	**Sn**	**00 36 05.2**	**+0.9**
	baz=219						
CHN1	**Nanshi**	**2.29**	**222**	*e*P	**Pn**	**00 35 37.4**	**+0.4**
	baz=228						
CHN1				*e*S	**Sn**	**00 36 05.5**	**+0.4**
	baz=228						
**J

n129,σ0$59/115, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.36**	**164**		**Pg**	**00 42 10.2**	**0.0**
OK029				Sg	**Sg**	**00 42 15.1**	**+0.3**
BCOK	**Bluff Creek, N**	**0.48**	**183**	Pg	**Pg**	**00 42 12.6**	**+0.1**
BCOK				Sg	**Sg**	**00 42 19.2**	**+0.4**
OK009	**Oakdale Elemen**	**0.57**	**167**		**Pg**	**00 42 14.2**	**0.0**
OK005	**Luther M Schoo**	**0.58**	**147**	Pg	**Pg**	**00 42 14.5**	**+0.2**
OK025	**Westminster Rd**	**0.59**	**161**	Pg	**Pg**	**00 42 14.5**	**0.0**
OK025	comp=Z,892nm,1.0s			IAmb_Lg		00 42 20.9	
OK025				Sg	**Sg**	**00 42 22.6**	**+0.4**
OK001	**Jones High Sch**	**0.62**	**158**		**Pg**	**00 42 15.2**	**0.0**
OK031	**S. Brethren Rd**	**0.63**	**107**		**Pg**	**00 42 15.4**	**+0.1**
OK030	**Cody Creek RV**	**0.68**	**108**		**Pg**	**00 42 16.2**	**0.0**
QUOK	**Quay**	**0.70**	**87**		**Pg**	**00 42 16.9**	**+0.2**
OKCFA	**Oklahoma City**	**0.73**	**172**	Pg	**Pg**	**00 42 17.0**	**-0.2**
OKCFA	comp=Z,468nm,0.7s			IAmb_Lg		00 42 26.9	
OKCFA	**Oklahoma City** baz=353,SNR=22	**0.73**	**172**	P	**Pg**	**00 42 17.0**	**-0.2**
OKCFA	baz=353			S	**Sg**	**00 42 26.9**	**+0.2**
OKCFA	**Oklahoma City** baz=353,SNR=22	**0.73**	**172**	P		00 42 17.0	
OKCFA	baz=353			S		00 42 26.9	
GC02	**Grant County #**	**0.74**	**342**	Pg	**Pg**	**00 42 17.9**	**+0.5**
OK032	**Salt Plains WL**	**0.83**	**323**	Pg	**Pg**	**00 42 19.5**	**+0.3**
KAN14	**Manchester OK**	**0.87**	**339**	Pg	**Pg**	**00 42 20.2**	**+0.3**
KAN13	**South Haven SW**	**0.87**	**5**	Pg	**Pg**	**00 42 20.3**	**+0.3**
KAN09	**Caldwell North**	**0.99**	**358**	Pg	**Pg**	**00 42 22.5**	**+0.2**
KAN05	**Bluff City Nor**	**0.99**	**346**	Pg	**Pg**	**00 42 22.6**	**+0.3**
KAN01	**Argonia South**	**1.02**	**352**	Pg	**Pg**	**00 42 23.0**	**+0.2**
KAN10	**Anthony SW Sta**	**1.06**	**337**		**Pg**	**00 42 23.7**	**+0.1**
KAN08	**Anthony NE Sta**	**1.13**	**344**		**Pg**	**00 42 24.9**	**+0.1**
T35A	**Sooner Cattle**	**1.16**	**48**		**Pg**	**00 42 25.1**	**-0.3**
T35B	**Sooner Cattle** baz=227,SNR=187	**1.16**	**48**	P	**Pg**	**00 42 25.0**	**-0.3**
T35B	baz=227			S	**Sg**	**00 42 40.2**	**-0.2**
T35B	**Sooner Cattle** baz=227,SNR=187	**1.16**	**48**	P		00 42 25.0	
T35B	baz=227			S		00 42 40.2	
U32A	**Winter Ranch,** baz=102	**1.18**	**282**		**Pg**	**00 42 25.4**	**-0.2**
U32A	**Winter Ranch,** baz=102	**1.18**	**282**	P	**Pg**	**00 42 25.5**	**-0.2**
U32A	baz=102			S	**Sb**	**00 42 42.1**	**+0.6**
U32A	**Winter Ranch,** baz=102	**1.18**	**282**	P		00 42 25.5	
U32A	baz=102			S		00 42 42.1	
KAN12	**Harper NE Stat**	**1.20**	**344**		**Pg**	**00 42 26.2**	**-0.1**
TUL1	**Leonard** baz=279	**1.47**	**98**	P	**Pn**	**00 42 29.7**	**-0.6**
TUL1	baz=279			S	**Sg**	**00 42 50.2**	**-0.1**
TUL1	**Leonard** baz=279,SNR=102	**1.47**	**98**	P		00 42 29.6	
TUL1	baz=279			S		00 42 49.7	
TUL1	**Leonard** baz=279	**1.47**	**98**	P		00 42 29.7	
TUL1	baz=279			S		00 42 50.2	
X34A	**Smith Ranch, M**	**1.55**	**188**	Pn	**Pn**	**00 42 31.7**	**+0.3**
X34A	comp=Z,170nm,0.9s			IAmb_Lg		00 42 51.4	
WMOK	**Wichita Mounta**	**1.71**	**215**	Pn	**Pn**	**00 42 33.8**	**+0.2**
WMOK	comp=Z,248nm,0.9s			IAmb_Lg		00 42 57.4	
WMOK	**Wichita Mounta** baz=35,SNR=268	**1.71**	**215**	P	**Pn**	**00 42 33.8**	**+0.2**
WMOK	baz=35			S	**Sn**	**00 42 56.7**	**+0.8**
WMOK	**Wichita Mounta** baz=35	**1.71**	**215**	P		00 42 33.8	
WMOK	baz=35			S		00 42 56.3	
WMOK	**Wichita Mounta** baz=35,SNR=268	**1.71**	**215**	P		00 42 33.8	
WMOK	baz=35			S		00 42 56.7	
X37A	**Clayton**	**2.38**	**130**		**Pn**	**00 42 43.2**	**+0.4**
X37A	comp=Z,136nm,0.7s			IAmb_Lg		00 43 22.3	
X37A	**Clayton** baz=311,SNR=153	**2.38**	**130**	P	**Pn**	**00 42 43.2**	**+0.4**
X37A	**Clayton** baz=311,SNR=153	**2.38**	**130**	P		00 42 43.2	
R32A	**Long Quarter,**	**2.45**	**339**		**Pn**	**00 42 45.1**	**+1.2**
R32A	comp=Z,148nm,0.7s			IAmb_Lg		00 43 25.8	
U38A	**Gravette**	**2.60**	**82**		**Pn**	**00 42 46.0**	**+0.2**
U38A	comp=Z,99nm,0.9s			IAmb_Lg		00 43 25.0	
U38A	**Gravette** baz=264,SNR=99	**2.60**	**82**	P	**Pn**	**00 42 46.2**	**+0.4**
U38A	**Gravette** baz=264,SNR=99	**2.60**	**82**	P		00 42 46.2	
Z35A	**Perchaven, San**	**2.82**	**174**		**Pn**	**00 42 49.6**	**+0.7**
Z35A	**Perchaven, San** baz=355	**2.82**	**174**	P	**Pn**	**00 42 49.6**	**+0.7**
Z35A	baz=355			S	**Sn**	**00 43 24.8**	**+1.6**
Z35A	**Perchaven, San** baz=355	**2.82**	**174**	P		00 42 49.6	
Z35A	baz=355			S		00 43 24.8	
HHAR	**Hobbs**	**2.94**	**86**		**Pn**	**00 42 50.9**	**+0.2**
HHAR	**Hobbs** baz=268,SNR=12	**2.94**	**86**	P	**Pn**	**00 42 50.9**	**+0.2**
HHAR	**Hobbs** baz=268,SNR=12	**2.95**	**86**	P		00 42 50.9	
KSU1	**Kansas State U**	**3.05**	**14**		**Pn**	**00 42 53.0**	**+0.8**
KSU1	**Kansas State U** baz=194,SNR=28	**3.05**	**14**	Pn		00 42 53.9	
KSU1	baz=194			Pb		00 42 59.9	
CBKS	**Cedar Bluff**	**3.17**	**328**		**Pn**	**00 42 54.6**	**+0.8**
CBKS	**Cedar Bluff** baz=147	**3.17**	**328**	Pn		00 42 55.9	
CBKS	baz=147			Pb		00 43 02.1	
CBKS	baz=147			Sb		00 43 43.2	
W39A	**Magazine**	**3.23**	**106**		**Pn**	**00 42 54.6**	**0.0**
W39A	comp=Z,77nm,0.8s			IAmb_Lg		00 43 46.7	
W39A	**Magazine** baz=288,SNR=46	**3.23**	**106**	P	**Pn**	**00 42 54.7**	**+0.2**
W39A	**Magazine** baz=288,SNR=24	**3.23**	**106**	P		00 42 54.9	
W39A	baz=288			S		00 43 34.8	
W39A	**Magazine** baz=288,SNR=46	**3.23**	**106**	P		00 42 54.7	
AMTX	**Amarillo**	**3.57**	**251**		**Pn**	**00 42 59.9**	**+0.5**
AMTX	comp=Z,95nm,0.8s			IAmb_Lg		00 44 03.8	
AMTX	**Amarillo** baz=69	**3.57**	**251**	P	**Pn**	**00 42 59.7**	**+0.3**
AMTX	**Amarillo** baz=69	**3.57**	**251**	P		00 43 00.3	
AMTX	baz=69			Sb		00 43 54.4	
AMTX	**Amarillo** baz=69	**3.57**	**251**	P		00 42 59.7	
Z38A	**Mt. Pleasant**	**3.58**	**143**		**Pn**	**00 42 59.1**	**-0.3**
MIAR	**Mount Ida**	**3.64**	**115**		**Pn**	**00 43 00.7**	**+0.5**
MIAR	comp=Z,154nm,1.0s			IAmb_Lg		00 44 02.7	
MIAR	**Mount Ida** baz=297,SNR=53	**3.64**	**115**	P	**Pn**	**00 43 00.6**	**+0.5**
MIAR	baz=297			S	**Sn**	**00 43 44.8**	**+1.3**
MIAR	**Mount Ida** baz=297,SNR=14	**3.64**	**115**	P		00 43 00.7	
MIAR	baz=297			S		00 43 44.7	
MIAR	**Mount Ida** baz=297,SNR=53	**3.64**	**115**	P		00 43 00.6	
MIAR	baz=297			S		00 43 44.8	
S39A	**Bolivar**	**3.75**	**64**		**Pn**	**00 43 02.1**	**+0.5**
S39A	comp=Z,111nm,0.8s			IAmb_Lg		00 44 05.9	
S39A	**Bolivar** baz=246,SNR=31	**3.75**	**64**	P	**Pn**	**00 43 02.3**	**+0.7**
S39A	**Bolivar** baz=246,SNR=31	**3.75**	**64**	P		00 43 02.3	
U40A	**Yellville**	**3.83**	**85**		**Pn**	**00 43 02.4**	**-0.4**
U40A	**Yellville** baz=268,SNR=6.7	**3.83**	**85**	P		00 43 03.3	
ABTX	**Abilene, Hawle**	**3.90**	**207**		**Pn**	**00 43 04.2**	**+0.4**
ABTX	comp=Z,105nm,1.0s			IAmb_Lg		00 44 08.5	
ABTX	**Abilene, Hawle** baz=26	**3.90**	**207**	Pn		00 43 04.4	
ABTX	baz=26			Pb		00 43 11.9	
WHTX	**Lake Whitney,**	**4.14**	**179**		**Pn**	**00 43 06.2**	**-0.9**
WHTX	**Lake Whitney,** baz=359	**4.14**	**179**	P		00 43 08.0	
WHTX	baz=359			Sb		00 44 08.7	
X40A	**Basin Creek Fa**	**4.21**	**112**		**Pn**	**00 43 08.5**	**+0.4**
X40A	**Basin Creek Fa** baz=294	**4.21**	**112**	P		00 43 09.1	
237A	**Washetta, Mont**	**4.38**	**160**		**Pn**	**00 43 09.9**	**-0.4**
237A	comp=Z,98nm,1.1s			IAmb_Lg		00 44 30.5	
237A	**Washetta, Mont** baz=341	**4.38**	**160**	P	**Pn**	**00 43 10.1**	**-0.3**
237A	**Washetta, Mont** baz=341	**4.38**	**160**	P		00 43 10.1	
MGMO	**Mountain Grove**	**4.39**	**75**		**Pn**	**00 43 10.5**	**+0.1**
MGMO	comp=Z,73nm,0.8s			IAmb_Lg		00 44 24.6	
WHAR	**Wooly Hollow**	**4.39**	**100**		**Pn**	**00 43 09.8**	**-0.7**
WHAR	comp=Z,101nm,0.7s			IAmb_Lg		00 44 24.7	
WLAR	**White Oak Lake**	**4.41**	**122**		**Pn**	**00 43 10.7**	**0.0**
WLAR	comp=Z,71nm,0.8s			IAmb_Lg		00 44 29.2	
FCAR	**Ozark Folk Cen**	**4.43**	**92**		**Pn**	**00 43 10.3**	**-0.7**
FCAR	comp=Z,60nm,0.8s			IAmb_Lg		00 44 34.1	
W41B	**Gary Mavity, V** baz=284,SNR=23	**4.45**	**101**	P	**Pn**	**00 43 11.1**	**-0.2**
W41B	**Gary Mavity, V** baz=284,SNR=7.6	**4.45**	**101**	P		00 43 11.3	
W41B	baz=284			Sn		00 44 02.6	
W41B	baz=284			Sb		00 44 20.5	
W41B	**Gary Mavity, V** baz=284,SNR=23	**4.45**	**101**	P		00 43 11.1	
N33A	**J Bar K, Exete**	**4.59**	**1**		**Pn**	**00 43 13.6**	**+0.3**
N33A	comp=Z,68nm,0.8s			IAmb_Lg		00 44 41.8	
P38A	**Dawn**	**4.73**	**41**		**Pn**	**00 43 15.0**	**-0.1**
P38A	comp=Z,70nm,0.7s			IAmb_Lg		00 44 40.1	
R40A	**Maddies Statio**	**4.75**	**62**		**Pn**	**00 43 15.2**	**-0.2**
R40A	comp=Z,124nm,0.8s			IAmb_Lg		00 44 31.6	
R40A	**Maddies Statio** baz=244,SNR=28	**4.75**	**62**	P	**Pn**	**00 43 15.8**	**+0.4**
R40A	**Maddies Statio** baz=244,SNR=28	**4.75**	**62**	P		00 43 15.8	
MSTX	**Muleshoe**	**4.78**	**245**		**Pn**	**00 43 15.2**	**-0.7**
MSTX	**Muleshoe** baz=62	**4.78**	**245**	P		00 43 16.8	
Z41A	**Richland Creek** baz=308	**4.87**	**125**	P		00 43 17.3	
Z41A	baz=308			S		00 44 12.6	
KSCO	**Kaye Shedlock'**	**4.93**	**307**		**Pn**	**00 43 20.3**	**+2.2**
KSCO	comp=Z,60nm,0.8s			IAmb_Lg		00 44 50.2	
KSCO	**Kaye Shedlock'** baz=124	**4.93**	**307**	P		00 43 20.6	
N35A	**Tabor**	**4.95**	**17**		**Pn**	**00 43 19.7**	**+1.5**
NATX	**Nacogdoches** comp=Z,59nm,1.0s	**5.00**	**150**	IAmb_Lg		00 44 51.6	
NATX	**Nacogdoches** baz=332	**5.00**	**150**	S		00 44 15.5	
LCAR	**Lake Charles**	**5.20**	**89**	Pn	**Pn**	**00 43 21.7**	**+0.1**
LCAR	comp=Z,48nm,0.8s			IAmb_Lg		00 44 52.7	
CCAR	**Cane Creek**	**5.25**	**113**	Pn	**Pn**	**00 43 22.8**	**+0.4**
BGNE	**Belgrade**	**5.28**	**355**		**Pn**	**00 43 22.4**	**-0.3**
BGNE	comp=Z,96nm,0.8s			IAmb_Lg		00 44 57.8	
BGNE	**Belgrade** baz=175	**5.28**	**355**	P		00 43 23.3	
435B	**Jarrell**	**5.34**	**180**		**Pn**	**00 43 23.4**	**-0.3**
435B	comp=Z,75nm,0.8s			IAmb_Lg		00 44 59.4	
435B	**Jarrell** baz=0.2	**5.34**	**180**	P	**Pn**	**00 43 23.6**	**0.0**
435B	**Jarrell** baz=0.2	**5.34**	**180**	P		00 43 23.4	
435B	**Jarrell** baz=0.2	**5.34**	**180**	P		00 43 23.6	
CCM	**Cathedral Cave**	**5.41**	**67**		**Pn**	**00 43 25.4**	**+0.9**
CCM	comp=Z,41nm,0.8s			IAmb_Lg		00 45 06.7	
P40A	**Paris**	**5.53**	**51**		**Pn**	**00 43 27.2**	**+1.1**
P40A	comp=Z,92nm,0.8s			IAmb_Lg		00 45 03.5	
T25A	**Trinidad**	**5.58**	**282**		**Pn**	**00 43 27.5**	**+0.4**
T25A	comp=Z,60nm,1.0s			IAmb_Lg		00 45 08.6	
T25A	**Trinidad** baz=98	**5.58**	**282**	P		00 43 28.1	
HBAR	**Harrisburg** comp=Z,82nm,0.8s	**5.65**	**94**	IAmb_Lg		00 45 09.7	
N38A	**Joes South For**	**5.76**	**35**		**Pn**	**00 43 29.5**	**+0.1**
OGNE	**Ogallala**	**5.93**	**325**		**Pn**	**00 43 32.4**	**+0.7**
OGNE	comp=Z,76nm,0.7s			IAmb_Lg		00 45 23.2	
OGNE	**Ogallala** baz=143,SNR=5.6	**5.93**	**325**	P		00 43 33.6	
JCT	**Junction City**	**5.95**	**199**		**Pn**	**00 43 30.8**	**-1.1**
FVM	**French Village** comp=Z,45nm,0.7s	**6.01**	**70**	IAmb_Lg		00 45 14.9	
GNAR	**Gosnell** comp=Z,84nm,0.8s	**6.13**	**89**	IAmb_Lg		00 45 23.0	
143A	**Socs Landing,** comp=Z,71nm,0.8s	**6.15**	**122**	IAmb_Lg		00 45 25.9	
SLM	**Saint Louis** comp=Z,50nm,0.7s	**6.35**	**65**	IAmb_Lg		00 45 33.6	
LNXT	**Lenox** comp=Z,77nm,0.8s	**6.55**	**88**	IAmb_Lg		00 45 44.7	
HENM	**Henderson Moun** comp=Z,82nm,0.7s	**6.56**	**83**	IAmb_Lg		00 45 46.7	
SCIA	**State Center** baz=212	**6.68**	**29**	P		00 43 43.2	
S44A	**Carbondale**	**6.84**	**74**	Pn	**Pn**	**00 43 44.8**	**+0.6**
S44A	comp=Z,77nm,0.8s			IAmb_Lg		00 45 39.2	
OXF	**Oxford**	**6.87**	**101**		**Pn**	**00 43 43.3**	**-1.3**
OXF	comp=Z,39nm,0.9s			IAmb_Lg		00 45 45.4	
OXF	**Oxford** baz=286	**6.87**	**101**	P		00 43 43.3	
OXF	baz=286			S		00 45 03.2	
SIUC	**Southern Illin**	**6.88**	**74**	Pn	**Pn**	**00 43 44.7**	**0.0**
SIUC	comp=Z,60nm,0.7s			IAmb_Lg		00 45 40.4	
W45A	**Hickory Valley** comp=Z,40nm,0.8s	**6.90**	**96**	IAmb_Lg		00 45 53.5	
N41A	**Harden Midland**	**6.97**	**47**		**Pn**	**00 43 46.3**	**+0.3**
P43A	**Skaggs, Pawnee**	**7.26**	**59**		**Pn**	**00 43 50.5**	**+0.5**
ISCO	**Idaho Springs**	**7.32**	**302**	Pn	**Pn**	**00 43 51.5**	**+0.5**
ANMO	**Albuquerque** comp=Z,0.3nm,0.3s,baz=79,slow=17,SNR=6.0	**7.34**	**263**	Pg	Pg	00 44 18.9	-4.8
ANMO	comp=Z,1.1nm,0.3s,baz=47,slow=13,SNR=3.3			Lg	Lg	00 45 52.8	
ECSD	**EROS Data Cent**	**7.62**	**5**	Pn	**Pn**	**00 43 55.2**	**+0.3**
ECSD	**EROS Data Cent** baz=186,SNR=8.2	**7.62**	**5**	P	**Pn**	**00 43 54.2**	**-0.7**
ECSD	**EROS Data Cent** baz=186	**7.62**	**5**	P		00 43 55.0	
ECSD	baz=186			S		00 45 18.1	
ECSD	**EROS Data Cent**	**7.62**	**5**	P		00 43 54.2	
BNM	**Barren Site** baz=186,SNR=8.2	**7.67**	**258**	Pn	**Pn**	**00 43 54.7**	**-1.1**
L40A	**Anamosa**	**7.71**	**38**	Pn	**Pn**	**00 43 55.4**	**-0.6**
L40A	comp=Z,45nm,0.8s			IAmb_Lg		00 46 16.4	
MNTX	**Cornudas Mount**	**7.85**	**238**	Pn	**Pn**	**00 43 58.5**	**+0.4**
MNTX	**Cornudas Mount** baz=54	**7.85**	**238**	P		00 43 58.7	
HDIL	**Hopedale**	**7.86**	**53**		**Pn**	**00 43 58.0**	**-0.1**
HDIL	**Hopedale** baz=238,SNR=5.1	**7.86**	**53**	P		00 43 58.5	
HDIL	baz=238			S		00 45 25.1	
146A	**Union** comp=Z,26nm,1.1s	**7.86**	**114**	IAmb_Lg		00 46 29.2	
WVT	**Waverly**	**7.89**	**87**	Pn	**Pn**	**00 43 58.2**	**-0.4**
PHWY	**Pilot Hill**	**8.03**	**312**	Pn	**Pn**	**00 44 01.4**	**+0.7**
PHWY	comp=Z,26nm,0.7s			IAmb_Lg		00 46 30.4	
USIN	**University of** comp=Z,46nm,0.9s	**8.13**	**74**	IAmb_Lg		00 46 26.3	
O44A	**Mansfield** comp=Z,50nm,0.8s	**8.22**	**58**	IAmb_Lg		00 46 26.5	
SUSD	**Miller** comp=Z,34nm,0.7s	**8.36**	**353**	IAmb_Lg		00 46 48.3	
Z47A	**Carrollton** comp=Z,30nm,1.2s	**8.36**	**108**	IAmb_Lg		00 46 37.1	
I37A	**Lemond, Waseca** comp=Z,38nm,0.8s	**8.49**	**21**	IAmb_Lg		00 46 45.5	
L42A	**Oliver, Polo** comp=Z,54nm,1.1s	**8.49**	**44**	Pn	**Pn**	**00 44 06.5**	**-0.3**
L42A				IAmb_Lg		00 46 39.5	
TX32	**Lajitas Array**	**8.51**	**219**		**Pn**	**00 44 06.1**	**-1.1**
TXAR	**Lajitas Array** comp=Z,0.2nm,0.3s,baz=38,slow=14,SNR=14	**8.51**	**219**	Pn	**Pn**	**00 44 06.4**	**-0.7**
TXAR	comp=Z,1.6nm,0.3s,baz=44,slow=30,SNR=6.0			Lg	Lg	00 46 32.9	
TXAR	**Lajitas Array**	**8.51**	**219**		**Pn**	**00 44 07.0**	**-0.2**
JFWS	**Jewell Farm** comp=Z,46nm,0.8s	**8.82**	**38**	Pn	**Pn**	**00 44 11.0**	**-0.2**
JFWS				IAmb_Lg		00 46 52.5	
P46A	**Rosedale**	**8.90**	**64**	Pn	**Pn**	**00 44 12.8**	**+0.3**
M44A	**Midewin, Midew** comp=Z,53nm,1.1s	**9.10**	**52**	IAmb_Lg		00 46 56.7	
WCI	**Wyandotte Cave** comp=Z,44nm,1.1s	**9.24**	**74**	Pn	**Pn**	**00 44 16.8**	**-0.3**
WCI	comp=Z,40nm,0.7s			IAmb_Lg		00 47 02.4	
SFIN	**Lafayette**	**9.26**	**60**	Pn	**Pn**	**00 44 17.5**	**+0.1**
SFIN	comp=Z,28nm,1.1s			IAmb_Lg		00 46 55.9	
RWWY	**Rawlins**	**9.33**	**309**	IAmb_Lg		00 47 08.6	
HQIL	**Hanson Quary C** comp=Z,30nm,0.8s	**9.45**	**50**	IAmb_Lg		00 47 16.7	
K22A	**Casper** comp=Z,45nm,1.1s	**9.49**	**316**	IAmb_Lg		00 47 26.3	
SWET	**Sewanee** comp=Z,23nm,1.2s	**9.52**	**92**	IAmb_Lg		00 47 23.7	
K43A	**Burlington** comp=Z,37nm,0.8s	**9.70**	**45**	Pn	**Pn**	**00 44 24.0**	**+0.7**
K43A				IAmb_Lg		00 47 19.7	
F33A	**5 Mile Ranch,** comp=Z,21nm,0.9s	**9.74**	**5**	IAmb_Lg		00 47 15.0	
SPMN	**Marine on St.** comp=Z,31nm,1.1s	**9.77**	**20**	IAmb_Lg		00 47 21.6	
P48A	**Milroy**	**10.17**	**67**	Pn	**Pn**	**00 44 29.1**	**-0.7**
G40A	**Rib Lake**	**10.69**	**29**	Pn	**Pn**	**00 44 36.4**	**-0.6**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.3s,baz=120,slow=15,SNR=4.0	**11.38**	**309**	Pn	**Pn**	**00 44 47.2**	**+0.7**
PDAR	comp=Z,0.5nm,0.3s,baz=116,slow=37,SNR=4.8			Lg	Lg	00 48 05.2	
ULM	**Lac du Bonnet** comp=Z,0.1nm,0.3s,baz=169,slow=15,SNR=1.4	**14.16**	**4**	Pn	**Pn**	00 45 17.9	-6.3
ULM	comp=Z,0.2nm,0.3s,baz=261,slow=22,SNR=3.5			Sn	Sn	00 47 47.1	-14
ULM	comp=Z,0.2nm,0.3s,baz=106,slow=22,SNR=3.4			Lg	Lg	00 49 24.5	
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=146,slow=9.1,SNR=4.7	**28.43**	**343**	P	**P**	**00 47 57.6**	**-0.9**

IDC ***12*** *00:45:24.3±0.5, 18°.57S×174°.27W, h0km, mb4.8/25, mb1 4.9/27, mb1mx4.8/45, mbtmp4.8/27, ML4.5/2, MS3.4/14, Ms1 3.4/14, ms1mx3.2/25, Error ellipse: s-maj=19.8km s-min=13.0km az=126.0*

BJI ***12*** *00:45:26.1±0.0, 18°.26S×174°.15W, h15km, mB5.2/20, mb5.2/39, Ms4.6/1, Ms7 4.4/8*

NEIC ***12*** *00:45:29.3±1.2, 18°.58S±0°.09×174°.3W±0°.1, h35km±3km, mb5.1/97, Error ellipse: s-maj=14.1km s-min=13.1km az=80.0*

NOU ***12*** *00:45:36.8, 18°.44S×173°.74W, h140km, mb5.1, Tonga Islands*

GCMT ***12*** *00:45:39.3±0.3, 18°.86S±0°.02×173°.80W±0°.02, h110km±4km, MW4.9/106, Moment Tensor Solution. s29,c33; s106,c133; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr0.68±.11; Mθθ-1.65±.16; Mϕϕ0.96±.15; Mrθ1.15±.08; Mθϕ-1.28±.14; Mϕr1.91±.06; Best double couple: M₀2.92700×10^16 NP1:ϕ290.00000°, δ37.00000°, λ166.00000°. NP2:ϕ31.00000°, δ82.00000°, λ54.00000°. Principal axes: T 2.7450, Plg42.0000°, Azm267.0000°; N 0.3610, Plg36.0000°, Azm37.0000°; P -3.1100, Plg27.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 00:45:30.1±0.7, 18°.68S±0°.05×174°.20W±0°.05, h45km±6km, n412, σ1°70/409, mb5.0/79, MS3.6/19, 27C-22D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue** baz=3.8,SNR=114	**4.07**	**96**	P	**Pn**	**00 46 30.3**	**+0.5**
NIUE	baz=3.8			S	**Sn**	**00 47 10.8**	**-5.3**
NIUE	**Niue**	**4.07**	**96**	Pn	**Pn**	**00 46 30.4**	**+0.5**
NIUE	**Niue**	**4.07**	**96**	P	**Pn**	**00 46 31.0**	**+1.2**
AFI	**Afiamalu** 25nm,0.3s,baz=261,slow=2.3,SNR=20	**5.28**	**26**	Pn	**Pn**	**00 46 45.5**	**-1.1**
AFI	99nm,0.3s,baz=133,slow=18,SNR=11			Sn	**Sn**	**00 47 39.9**	**-6.4**
AFI	**Afiamalu**	**5.28**	**26**		**Pn**	**00 46 45.4**	**-1.2**
MSVF	**Nonsavu** 5.2nm,0.3s,baz=107,slow=12,SNR=44	**7.43**	**276**	Pn	Pn	00 47 28.9	+13
MSVF	**Nonsavu**	**7.43**	**276**	P	Pn	00 47 29.2	+13
GLKZ	**Green Lake**	**11.07**	**197**	P	**Pn**	**00 48 09.6**	**+3.7**
GLKZ				S	**Sn**	**00 50 03.0**	**-5.3**
RAR	**Rarotonga** 14nm,0.3s,baz=188,slow=5.4,SNR=17	**13.80**	**103**	Pn	**Pn**	**00 48 43.7**	**+0.5**
RAR	**Rarotonga**	**13.80**	**103**	Pn	**Pn**	**00 48 43.2**	**+0.1**
RAR	**Rarotonga**	**13.80**	**103**	P	**Pn**	**00 48 43.6**	**+0.4**
SANVU	**Saraoutou**	**18.07**	**277**	P	**P**	**00 49 36.4**	**-1.5**
SANVU	comp=Z,162nm,0.9s			IAmb	IAmb	00 49 46.9	
DZM	**Mont Dzumac** comp=Z,3.7nm,0.3s,baz=76,slow=18,SNR=26	**18.46**	**256**	P	**Pn**	**00 49 46.9**	**+4.1**
OUZ	**Omahuta**	**19.71**	**211**	P	**Pn**	**00 49 57.9**	**+0.3**
GRZ	**Great Barrier**	**19.74**	**205**	P	**Pn**	**00 50 00.2**	**+2.3**
MXZ	**Matakaoa Point**	**19.93**	**198**	P	**Pn**	**00 50 02.7**	**+2.7**
MXZ				S	S	00 53 25.5	-14
WCZ	**Waipu Caves**	**19.95**	**208**	P	**Pn**	**00 49 59.6**	**-0.8**
OPRZ	**Ohinepanea**	**20.74**	**201**	P	Pn	00 50 11.7	+2.0
EDRZ	**Edgecumbe**	**20.91**	**200**	P	Pn	00 50 12.3	+0.4
URZ	**Urewera** comp=Z,47nm,0.4s,baz=120,slow=23,SNR=107	**20.93**	**199**	P	**P**	**00 50 09.9**	**+0.9**
URZ	comp=Z,17nm,0.6s,baz=300,slow=24,SNR=5.2			S	**S**	**00 53 57.0**	**-2.8**
URZ	**Urewera**	**20.93**	**199**	P	**P**	**00 50 10.2**	**+1.2**
URZ	comp=Z,214nm,1.4s			IAmb	IAmb	00 50 12.9	
KMRZ	**Kaimai**	**20.95**	**202**	P	Pn	00 50 14.3	+2.0
OMRZ	**Omania**	**21.04**	**201**	P	**P**	**00 50 14.4**	**+4.2**
RRRZ	**Republican Roa**	**21.20**	**201**	P	**P**	**00 50 15.5**	**+3.5**
MUGZ	**Murupara**	**21.24**	**200**	P	**P**	**00 50 15.0**	**+2.7**
MUGZ				S	**S**	**00 54 00.0**	**-5.9**
HSRZ	**Hossack Road**	**21.26**	**201**	P	**P**	**00 50 16.1**	**+3.5**
RTZ	**Ruatahuna**	**21.30**	**199**	P	**P**	**00 50 16.3**	**+3.2**
PRGZ	**Paritu Road**	**21.31**	**197**	P	**P**	**00 50 17.8**	**+4.6**
PRGZ				S	**S**	**00 53 57.0**	**-10**
HRRZ	**Handcock Road**	**21.32**	**201**	P	**P**	**00 50 18.0**	**+4.8**
MHGZ	**Mahia Peninsul**	**21.52**	**197**	P	**P**	**00 50 20.4**	**+5.0**
MHGZ				S	**S**	**00 54 07.2**	**-4.4**
WHHZ	**Waihua**	**21.64**	**198**	P	**P**	**00 50 19.8**	**+3.2**

WHHZ S **S** **00 54 09.3 -4.6**
MRHZ Matea Rd 21.68 200 P **P** 00 50 27.2 +10
NMHZ Naumai 21.79 199 P **P** **00 50 21.2 +2.9**
NMHZ S S 00 54 04.0 -13
WATZ Wairara 21.80 202 P **P** **00 50 21.0 +2.7**
ARHZ Aropaoanui 21.89 199 P **P** **00 50 22.4 +3.1**
RATZ Rangitukua 21.92 201 P **P** **00 50 21.9 +2.2**
HIZ Hauiti 21.94 203 P **P** **00 50 21.8 +1.9**
BKZ Black Stump Fm 21.95 200 P **P** **00 50 20.5 +0.5**
BKZ IAmb IAmb 00 50 26.7
comp=Z,39nm,0.7s
MCHZ McNeill Hill 22.14 199 P **P** **00 50 24.5 +2.4**
TMVZ Te Maari 22.17 201 P **P** **00 50 24.4 +2.0**
ETVZ East Tongariro 22.19 201 P **P** **00 50 24.0 +1.3**
WTVZ West Tongariro 22.21 201 P **P** **00 50 24.4 +1.5**
KWHZ Kaweka Forest 22.21 200 P **P** **00 50 25.1 +2.3**
KWHZ S **S** **00 54 18.1 -6.6**
OTVZ Oturere 22.23 201 P **P** **00 50 24.6 +1.5**
BHHZ Black Hill Sta 22.39 200 P **P** **00 50 25.6 +0.9**
KAHZ Kahuranaki 22.41 198 P **P** **00 50 28.3 +3.3**
MOVZ Moawhango 22.41 201 P **P** **00 50 26.6 +1.5**
MOVZ S **S** **00 54 19.6 -8.8**
KRHZ Kereru 22.43 199 P **P** **00 50 26.2 +1.1**
PKVZ Pokaka 22.45 202 P **P** **00 50 24.7 -0.7**
MTVZ Mangateitei 22.49 201 P **P** **00 50 31.0 +5.1**
VRZ Vera Road 22.52 203 P **P** **00 50 28.8 +2.8**
PXZ Pawanui 22.64 198 P **P** **00 50 29.3 +2.0**
PNHZ Pukenui 22.73 199 P **P** **00 50 29.3 +1.0**
NEZ North Egmont 22.89 204 P **P** **00 50 33.9 +3.8**
TSZ Takapari Road 22.94 200 P **P** **00 50 32.5 +2.1**
PAE Paea 23.41 91 *eT* T 01 14 30.2
comp=Z,20nm,0.4s
PPT2 Papeete2 23.42 91 *e*LQ LQ 00 55 03.0
comp=Z,260nm,24.0s
PPT2 *e*LR LR 00 55 57.1
comp=Z,770nm,32.2s,baz=253
PPT2 Papeete2 23.42 91 *eT* T 01 14 32.5
comp=Z,14nm,0.3s
PPT Papeete 23.43 91 LR LR 00 58 06.3
comp=Z,54nm,18.5s,baz=226,slow=32
TBI Tubuai 23.54 106 *e*LR LR 00 56 10.1
comp=Z,436nm,36.5s
TBI Tubuai 23.54 106 *eT* T 01 14 47.4
comp=Z,55nm,0.4s
MRZ Mangatainoka R 23.61 200 P **P** **00 50 38.0 +1.1**
HOWZ Holdsworth Sta 23.84 200 P **P** **00 50 41.4 +2.3**
OGWZ Otaki Gorge 23.88 200 P **P** **00 50 40.2 +0.7**
TRWZ Traveller 24.24 199 P **P** **00 50 45.9 +3.0**
DUWZ D'Urville Isla 24.30 202 P **P** **00 50 44.4 +1.1**
PAWZ Paruwai Farm 24.31 199 P **P** **00 50 40.0 -3.5**
MSWZ Moikau Station 24.39 199 P **P** **00 50 46.2 +1.9**
TCW Tory Channel 24.53 201 P **P** **00 50 46.5 +1.0**
QRZ Quartz Range 24.84 204 P **P** **00 50 51.9 +3.7**
TUWZ Tuamarina 24.84 202 P **P** **00 50 50.3 +2.1**
NNZ Nelson 24.86 203 P **P** **00 50 49.2 +0.9**
BSWZ Blackbirch Sta 25.12 201 P **P** **00 50 54.6 +3.8**
RPZ Rata Peaks 27.88 203 P **P** **00 51 18.3 +2.7**
comp=Z,33nm,0.5s,baz=31,slow=3.3,SNR=22
RPZ Rata Peaks 27.88 203 P **P** **00 51 18.3 +2.7**
RPZ IAmb IAmb 00 51 32.5
comp=Z,125nm,1.4s
EIDS Eidsvold 32.80 252 P **P** **00 52 00.7 +1.3**
baz=33,SNR=3.8
EIDS Eidsvold 32.80 252 P **P** **00 51 59.0 -0.3**
EIDS IAmb IAmb 00 52 01.6
comp=Z,19nm,0.8s
ARMA Armidale 33.08 243 P **P** **00 52 03.0 +1.0**
baz=33,SNR=12
ARMA Armidale 33.08 243 P **P** **00 52 02.9 +1.0**
ARMA IAmb IAmb 00 52 04.2
comp=Z,36nm,1.4s
TAOE Nuku Hiva Isla 34.42 78 *e*LR LR 01 00 58.8
comp=Z,315nm,29.3s
TAOE Nuku Hiva Isla 34.42 78 *eT* T 01 28 11.0
comp=Z,91nm,0.4s
RMQ Roma 34.98 250 P **P** **00 52 19.2 +0.9**
baz=35,SNR=16
CAN Canberra 36.49 235 P **P** **00 52 33.5 +2.3**
CAN IAmb IAmb 00 52 52.4
comp=Z,51nm,1.7s
RKT Rikitea 36.84 104 *e*LR LR 01 02 10.5
comp=Z,345nm,33.0s
CTAO Charters Tower 37.27 261 P **P** **00 52 38.3 +0.3**
CMSA Cobar Meteorol 38.30 243 P **P** **00 52 46.4 -0.2**
baz=38,SNR=16
PMG Port Moresby 38.53 278 P **P** **00 52 49.2 +0.6**
PMG IAmb IAmb 00 52 51.8
comp=Z,42nm,0.8s
QLP Quilpie 39.03 251 P **P** **00 52 52.6 -0.1**
baz=39,SNR=16
MTSU Mount Surprise 39.30 264 P **P** **00 52 55.0 -0.1**
baz=40,SNR=14
TOO Toolangi 39.86 233 P **P** **00 53 00.0 +0.5**
baz=40,SNR=4.7
TOO Toolangi 39.86 233 P **P** **00 52 59.9 +0.4**
COEN Coen 41.11 270 P **P** **00 53 09.9 -0.2**
MANU Manus Island 41.12 289 P **P** **00 53 10.2 +0.1**
STKA Stephens Creek 41.80 243 P **P** **00 53 15.6 0.0**
comp=Z,16nm,1.0s,baz=93,slow=9.4,SNR=16
STKA LR LR 01 08 45.7
comp=Z,46nm,18.6s,baz=29,slow=34
STKA Stephens Creek 41.80 243 P **P** **00 53 15.9 +0.3**
baz=42,SNR=14
STKA Stephens Creek 41.80 243 P **P** **00 53 15.6 0.0**
QIS Mount Isa 43.45 260 P **P** **00 53 28.6 -0.5**
baz=44,SNR=5.6
HTT Hallett 44.24 241 P **P** **00 53 35.5 +0.1**
baz=44,SNR=9.0
BBOO Buckleboo 46.56 242 P **P** **00 53 53.0 -0.7**
baz=47,SNR=8.6
BBOO Buckleboo 46.56 242 P **P** **00 53 53.4 -0.3**
BBOO IAmb IAmb 00 53 54.0
comp=Z,38nm,1.2s
JAY Jayapura 46.97 285 P **P** **00 53 58.1 +1.0**
comp=Z,26nm,0.9s
GENI Genyem 47.43 284 P **P** **00 54 02.0 +1.4**
comp=Z,94nm,0.9s
WB2 Warramunga Arr 48.42 260 P **P** **00 54 07.5 -0.8**
WRAB Tennant Creek 48.42 260 P **P** **00 54 07.5 -0.8**
WRA Warramunga Arr 48.43 260 P **P** **00 54 07.5 -0.9**
comp=Z,28nm,0.7s,baz=97,slow=8.3,SNR=350
WRA PcP **PcP** **00 55 34.5 +0.2**
comp=Z,5.9nm,0.9s,baz=94,slow=3.5,SNR=4.7
WRA S S 01 00 56.2 -10
comp=Z,0.5nm,0.9s,baz=91,slow=12,SNR=2.2
WRA Warramunga Arr 48.43 260 P **P** **00 54 06.8 -1.6**
WRA PcP **PcP** **00 55 34.3 +0.1**
AS31 Alice Springs 48.44 255 P **P** **00 54 07.7 -0.7**
AS31 IAmb IAmb 00 54 09.3
comp=Z,11nm,0.9s
ASAR Alice Springs 48.44 255 P **P** **00 54 08.0 -0.5**
comp=Z,38nm,0.7s,baz=89,slow=8.2,SNR=398
ASAR PcP **PcP** **00 55 34.5 +0.2**
comp=Z,6.5nm,0.7s,baz=101,slow=3.9,SNR=8.8
ASAR S **S** **01 00 59.4 -7.0**
comp=Z,2.0nm,1.0s,baz=93,slow=15,SNR=9.8
ASAR LR LR 01 13 49.3
comp=Z,56nm,18.3s,baz=97,slow=35
ASAR Alice Springs 48.44 255 P **P** **00 54 07.2 -1.2**
ASAR PcP **PcP** **00 55 33.9 -0.4**
KDU Kakadu 51.54 268 P **P** **00 54 31.5 -0.4**
baz=52,SNR=28
MTN Manton Dam 52.77 268 P **P** **00 54 40.4 -0.8**
baz=53,SNR=47
MTN Manton Dam 52.77 268 P **P** **00 54 40.4 -0.8**
FORT Forrest 53.30 245 P **P** **00 54 44.1 -0.8**
baz=54,SNR=14
FORT Forrest 53.30 245 P **P** **00 54 44.1 -0.8**
WRKA Warakurna 53.42 252 P **P** **00 54 45.3 -0.6**
baz=54,SNR=24
KNRA Kununurra 54.39 264 P **P** **00 54 52.7 -0.3**
FAKI Fak Fak 54.65 280 P **P** **00 54 54.6 -0.4**
FAKI IAmb IAmb 00 55 20.4
comp=Z,22nm,1.1s
FITZ Fitzroy Crossi 56.84 260 P **P** **00 55 10.5 -0.1**
comp=Z,3.7nm,0.6s,baz=58,slow=4.1
FITZ Fitzroy Crossi 56.84 260 P **P** **00 55 10.3 -0.3**
baz=57,SNR=8.0
FITZ Fitzroy Crossi 56.84 260 P **P** **00 55 10.5 -0.1**
SBA Scott Base 59.94 185 P **P** **00 55 33.7 +2.5**
VNDA Vanda 60.06 186 P **P** **00 55 34.2 +2.2**
comp=Z,1.3nm,0.7s,baz=351,slow=7.6,SNR=5.2
VNDA LR LR 01 20 26.5
comp=Z,12nm,19.1s,baz=287,slow=35
VNDA Vanda 60.06 186 P **P** **00 55 34.3 +2.2**

SOEI Soe 60.07 269 P **P** **00 55 34.1 +0.8**
BATI Baumata 60.52 269 P **P** **00 55 37.1 +0.8**
comp=Z,22nm,0.6s,baz=142,slow=1.3,SNR=3.2
TNTI Ternate 60.53 282 P **P** **00 55 36.2 -0.1**
PSA00 Pilbara Seismi 61.58 255 P **P** **00 55 41.6 -1.8**
PSA00 Pilbara Seismi 61.58 255 P **P** **00 55 42.3 -1.0**
PSA00 IAmb IAmb 00 55 43.4
comp=Z,11nm,0.8s
KLBR Kellerberrin 62.07 244 P **P** **00 55 46.4 -0.1**
baz=62,SNR=5.5
MMRI Maumere 62.30 270 P **P** **00 55 47.0 -1.3**
NWAO Narrogin (SRO) 62.38 242 P **P** **00 55 48.5 -0.1**
BLDU Ballidu 63.07 245 P **P** **00 55 53.2 0.0**
baz=63,SNR=7.6
MUN Mundaring 63.34 243 P **P** **00 55 55.7 +0.8**
baz=64,SNR=3.6
MORW Morawa 63.84 246 P **P** **00 55 57.2 -1.1**
baz=64,SNR=4.9
MORW Morawa 63.84 246 P **P** **00 55 57.0 -1.3**
MORW IAmb IAmb 00 57 31.0
comp=Z,38nm,1.5s
GIRL Giralia 66.50 253 P **P** **00 56 15.6 -0.1**
TOLI2 Tolitoli 66.79 280 P **P** **00 56 17.2 -0.4**
TOLI2 IAmb IAmb 00 57 04.8
comp=Z,13nm,0.7s
ADK Adak 70.29 358 P **P** **00 56 38.2 -0.3**
JGF Kuroka 70.85 320 P **P** **00 56 41.2 -1.3**
JGF IAmb IAmb 00 59 07.4
comp=Z,24nm,1.4s
MJAR Matsushiro Arr 70.96 321 P **P** **00 56 43.2 +0.2**
comp=Z,6.8nm,0.9s,baz=157,slow=6.0,SNR=20
MJAR LR LR 01 21 55.2
comp=Z,19nm,21.7s,baz=190,slow=31
MJAR Matsushiro Arr 70.96 321 P **P** **00 56 42.3 -0.8**
MAT Matsushiro 70.97 321 P **P** **00 56 43.1 0.0**
MAT *e*S **S** **01 05 57.6 +1.9**
QSPA South Pole Qui 71.38 180 P **P** **00 56 46.9 +1.5**
H06S1 SOCORRO T 72.37 63 T T 02 16 13.3
SNR=6.8
JNU Nakatsue 73.50 314 P **P** **00 56 58.9 +0.5**
comp=Z,10nm,0.7s,baz=158,slow=2.3,SNR=4.9
JNU Nakatsue 73.50 314 P **P** **00 56 57.9 -0.4**
UGM Wanagama 73.61 267 P **P** **00 56 58.7 -0.7**
ASAJ Asahikawa 73.92 329 P **P** **00 57 01.7 +1.1**
comp=Z,17nm,0.9s,baz=199,slow=9.2,SNR=12
SBUM Sibu 75.27 278 P **P** **00 57 09.5 +0.4**
SBUM Sibu 75.27 278 P **P** **00 57 11.0 +2.0**
PEA0B Petropavlovsk- 75.51 343 P **P** **00 57 09.5 0.0**
PEA0B IAmb IAmb 00 57 11.0
comp=Z,20nm,0.9s
PETK Petropavlovsk- 75.51 343 P **P** **00 57 09.8 +0.3**
comp=Z,13nm,0.8s,baz=139,slow=9.0,SNR=28
PETK LR LR 01 22 39.6
comp=Z,25nm,21.7s,baz=150,slow=30
PETK Petropavlovsk- 75.51 343 P **P** **00 57 09.6 +0.1**
YSS Yuzh-Sakhalins 75.95 331 P **P** **00 57 11.8 -0.4**
YSS IAmb IAmb 00 57 14.2
comp=Z,19nm,0.9s
TPUB Ta-pu 76.07 301 P **P** **00 57 13.2 -0.2**
M02C Callahan 76.36 37 P 00 57 16.3
baz=230
KSM Kuching 76.75 276 P **P** **00 57 17.5 0.0**
KSM IAmb IAmb 00 57 20.5
comp=Z,31nm,1.0s
KSM Kuching 76.75 276 P **P** **00 57 19.0 +1.6**
NVAR Mina Array Bea 77.27 42 P **P** **00 57 22.0 +1.9**
comp=Z,2.2nm,0.9s,baz=221,slow=8.5,SNR=7.7
NVAR Mina Array Bea 77.27 42 P **P** **00 57 20.9 +0.8**
KSRS Korea Array 77.97 316 P **P** **00 57 25.9 +2.2**
comp=Z,10nm,0.9s,baz=133,slow=6.0,SNR=39
KSRS LR LR 01 25 08.9
comp=Z,12nm,21.8s,baz=50,slow=31
KSAR Wonju Array Be 77.99 316 P **P** **00 57 24.7 +0.9**
KS19 Wonju Array Si 78.04 316 P **P** **00 57 24.5 +0.4**
KS19 IAmb IAmb 00 57 26.6
comp=Z,18nm,1.0s
USA0B Ussuriysk Arra 79.55 324 P **P** **00 57 32.4 +0.2**
USRK Ussuriysk Ar. 79.55 324 P **P** **00 57 33.6 +1.4**
comp=Z,3.5nm,0.9s,baz=174,slow=5.7,SNR=7.2
USRK LR LR 01 25 59.4
comp=Z,54nm,21.6s,baz=144,slow=31
USRK Ussuriysk Ar. 79.55 324 P **P** **00 57 32.5 +0.3**
MDJ Mudanjiang 81.16 323 P **P** **00 57 42.3 +1.4**
MDJ pmax pmax
comp=Z,10.0nm,0.8s
MDJ pmax pmax
comp=Z,58nm,3.6s
MDJ Mudanjiang 81.16 323 P **P** **00 57 40.6 -0.3**
MDJ IAmb IAmb 00 57 43.5
comp=Z,32nm,1.6s
NJ2 Nanjing 81.54 308 *e*P **P** **00 57 44.2 +1.0**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
BMO Blue Mountains 81.69 37 P **P** **00 57 44.1 +0.3**
SUA Susitna One 82.04 11 P 00 57 45.3
baz=202
SUA Susitna One 82.05 11 P **P** **00 57 45.2 -0.2**
SUA IAmb IAmb 00 57 46.4
comp=Z,38nm,1.8s
GAMB Gambell 82.21 1 P 00 57 46.9
baz=182
GAMB Gambell 82.21 1 P **P** **00 57 46.3 +0.4**
GLI Glacier Island 82.23 13 P 00 57 46.0
baz=206
GLI Glacier Island 82.23 13 P **P** **00 57 46.0 -0.2**
GLI IAmb IAmb 00 57 58.0
comp=Z,16nm,1.0s
PLID Pearl Lake 82.58 37 P **P** **00 57 49.0 +0.4**
HLID Hailey 82.63 39 P **P** **00 57 48.6 -0.3**
HLID Hailey 82.63 39 P 00 57 50.3
baz=236
GHO Glory Hole Cre 82.67 12 P **P** **00 57 48.3 -0.3**
MESA MESA 82.82 16 P **P** **00 57 50.0 +0.5**
KLR Kul'dur 82.85 328 P **P** **00 57 50.5 +0.8**
comp=Z,3.5nm,0.9s,baz=91,slow=3.2,SNR=9.4
BMRM Bremner River 82.86 14 P 00 57 49.6
baz=208
BMRM Bremner River 82.86 14 P **P** **00 57 49.6 0.0**
BMRM IAmb IAmb 01 00 42.9
comp=Z,26nm,1.2s
CUT Chulitna 83.00 11 P 00 57 50.1
baz=203
MA2 Magadan 83.05 343 P **P** **00 57 49.4 -1.1**
comp=Z,5.6nm,0.8s,baz=124,slow=5.8,SNR=13
MA2 Magadan 83.05 343 P **P** **00 57 49.6 -0.8**
MA2 IAmb IAmb 00 57 51.3
comp=Z,15nm,1.3s
SCM Sheep Creek Mo 83.05 12 P **P** **00 57 50.4 -0.2**
SCM IAmb IAmb 00 58 03.7
comp=Z,21nm,1.2s
TXAR Lajitas Array 83.07 56 P **P** **00 57 53.0 +1.6**
comp=Z,0.6nm,1.0s,baz=240,slow=5.0,SNR=4.4
TXAR LR LR 01 28 27.2
comp=Z,17nm,19.8s,baz=0.0,slow=31
TXAR Lajitas Array 83.07 56 P **P** **00 57 52.0 +0.6**
ANM Nome 83.25 4 P 00 57 52.3
baz=188
N25K Chitina, Valde 83.43 14 P 00 57 52.8
baz=208
N25K Chitina, Valde 83.43 14 P **P** **00 57 52.6 +0.1**
N25K IAmb IAmb 01 00 06.6
comp=Z,47nm,1.8s
ANMO Albuquerque 83.48 50 P 00 57 55.2
baz=242
M24K Tolsona, Glenn 83.53 13 P 00 57 52.4
baz=207
WAT6 Susitna Watana 83.64 12 P 00 57 53.6
baz=205
CTGM Chitina Glacie 83.65 15 P **P** **00 57 53.9 +0.1**
CTGM IAmb IAmb 00 59 21.3
comp=Z,41nm,1.7s
WAT2 Susitna Watana 83.83 11 P 00 57 54.3
baz=204
KTH Kantishna Hill 83.95 10 P **P** **00 57 54.3 -0.8**
TRF Thorofare Moun 83.97 11 P 00 57 54.9
baz=203
CHUM Lake Minchumin 84.03 10 P 00 57 54.7
baz=201
H03S2 Juan Fernandez 84.04 124 T T 02 30 42.0
baz=249,slow=75,SNR=129
H03S1 Juan Fernandez 84.05 124 T T 02 30 43.0
baz=249,slow=75,SNR=138
H03S3 Juan Fernandez 84.05 124 T T 02 30 41.7
baz=249,slow=75,SNR=105
TNA Tin City 84.11 3 P 00 57 56.8
baz=186,SNR=5.2

TNA Tin City 84.11 3 P **P** **00 57 56.2 +0.5**
TNA IAmb IAmb 00 57 57.7
comp=Z,16nm,1.0s
H03N2 Juan Fernandez 84.16 123 T T 02 30 41.6
baz=257,slow=73,SNR=57
H03N3 Juan Fernandez 84.16 123 T T 02 30 47.4
baz=257,slow=73,SNR=43
H03N1 Juan Fernandez 84.17 123 T T 02 30 54.4
baz=257,slow=73,SNR=42
RND Reindeer 84.18 11 P **P** **00 57 56.4 +0.1**
RND IAmb IAmb 00 57 58.2
comp=Z,23nm,1.2s
MCMT McKenzie Canyo 84.27 39 P **P** **00 57 58.1 +0.7**
BPAW Bear Paw Mtn. 84.45 10 P 00 57 56.6
baz=202
MAW Mawson 84.46 199 LR LR 01 33 34.4
comp=Z,41nm,18.4s,baz=50,slow=34
MAW Mawson 84.46 199 P **P** **00 57 58.4 +0.6**
MCK McKinley 84.47 11 P 00 57 57.8
baz=204,SNR=9.1
MCK McKinley 84.47 11 P **P** **00 57 57.6 -0.1**
MCK IAmb IAmb 00 57 58.7
comp=Z,23nm,1.1s
S22A 4UR Ranch, Cre 84.54 47 P 00 58 00.9
baz=242
JRMM Jerantut 84.92 276 P **P** **00 58 03.0 +1.9**
BKNI Bangkinang 85.14 272 P **P** **00 58 01.8 -0.4**
PDAR Pinedale Array 85.20 42 P **P** **00 58 02.5 +0.4**
comp=Z,0.9nm,0.7s,baz=232,slow=3.6,SNR=7.2
PDAR LR LR 01 33 21.3
comp=Z,19nm,18.9s,baz=350,slow=34
NEA2 Nenana 85.23 11 P 00 58 01.5
baz=204,SNR=7.9
NEA2 Nenana 85.23 11 P **P** **00 58 01.5 0.0**
NEA2 IAmb IAmb 00 58 02.8
comp=Z,8.4nm,0.9s
WRH Wood River Hil 85.30 11 P **P** **00 58 01.9 +0.1**
L27K Beaver Creek, 85.34 14 P 00 58 02.6
baz=211
L27K Beaver Creek, 85.34 14 P **P** **00 58 02.3 +0.3**
BCAR Beaver Creek A 85.35 14 P **P** **00 58 02.3 +0.1**
DOT Dot Lake 85.35 13 P **P** **00 58 02.1 0.0**
DOT IAmb IAmb 00 58 03.5
comp=Z,16nm,1.1s
MLY Manley 85.36 10 P 00 58 01.6
baz=202,SNR=13
MLY Manley 85.36 10 P **P** **00 58 01.8 -0.4**
MLY IAmb IAmb 00 58 02.7
comp=Z,13nm,1.0s
BOZ Bozeman (W) 85.41 39 P 00 58 04.0
baz=238
BOZ Bozeman (W) 85.42 39 P **P** **00 58 03.0 0.0**
HDA Harding Lake 85.45 12 P 00 58 02.6
baz=206,SNR=14
HDA P 00 58 02.6
baz=206,SNR=14
SEY Seymchan 85.47 345 P **P** **00 58 02.3 -0.3**
comp=Z,3.7nm,0.4s,baz=144,slow=5.7,SNR=39
CCB Clear Creek Bu 85.51 11 P **P** **00 58 02.5 -0.3**
CCB IAmb IAmb 00 58 03.6
comp=Z,17nm,0.8s
SCRK Sand Creek 85.66 13 P 00 58 04.1
baz=209,SNR=5.6
SCRK Sand Creek 85.66 13 P **P** **00 58 03.7 -0.1**
SCRK IAmb IAmb 00 58 05.1
comp=Z,12nm,1.2s
I23K Minto, Yukon-K 85.69 10 P 00 58 03.6
baz=204,SNR=6.4
I23K Minto, Yukon-K 85.69 10 P **P** **00 58 03.5 -0.2**
I23K IAmb IAmb 00 58 04.7
comp=Z,17nm,1.2s
TCOL CIGO, UAF Yank 85.70 11 P 00 58 04.0
baz=205,SNR=5.7
TCOL CIGO, UAF Yank 85.70 11 P **P** **00 58 03.5 -0.2**
COLA College 85.71 11 P 00 58 04.0
baz=205
COLA College 85.71 11 P **P** **00 58 03.4 -0.3**
MDM Murphy Dome 85.72 11 P **P** **00 58 03.4 -0.5**
MDM IAmb IAmb 00 58 04.7
comp=Z,26nm,1.2s
IL31 85.79 11 P **P** **00 58 03.9 -0.3**
IL31 IAmb IAmb 00 58 05.2
comp=Z,31nm,1.6s
ILAR Eielson Array 85.79 11 P **P** **00 58 04.0 -0.3**
comp=Z,3.9nm,0.7s,baz=233,slow=6.4,SNR=30
ILAR Eielson Array 85.79 11 P **P** **00 58 03.8 -0.5**
IMAR Indian Mountai 85.81 8 P **P** **00 58 04.5 +0.2**
POKR Poker Plat Res 86.00 11 P 00 58 05.4
baz=205
POKR Poker Plat Res 86.00 11 P **P** **00 58 05.3 +0.1**
POKR IAmb IAmb 00 58 06.2
comp=Z,20nm,0.9s
K27K Chicken 86.12 14 P 00 58 06.6
baz=210,SNR=5.1
IPM Ipoh 86.48 276 P **P** **00 58 09.6 +0.7**
IPM Ipoh 86.48 276 P **P** **00 58 10.0 +1.1**
PRP Porcupine Dome 86.72 12 P 00 58 09.1
baz=207
PRP Porcupine Dome 86.72 12 P **P** **00 58 08.8 -0.2**
PRP IAmb IAmb 00 58 10.3
comp=Z,17nm,1.1s
DAWY Dawson 86.77 15 P **P** **00 58 09.7 +0.5**
DAWY IAmb IAmb 00 58 10.9
comp=Z,18nm,1.1s
EGAK Eagle 86.97 14 P 00 58 10.6
baz=211,SNR=7.0
EGAK Eagle 86.97 14 P **P** **00 58 10.3 +0.3**
EGAK IAmb IAmb 00 58 11.6
comp=Z,12nm,1.1s
KULM Kulim 87.10 277 P **P** **00 58 11.9 +0.1**
KULM IAmb IAmb 00 58 14.3
comp=Z,12nm,1.1s
KULM Kulim 87.10 277 P **P** **00 58 13.0 +1.2**
BJI Beijing 87.17 314 P **P** **00 58 13.0 +1.5**
BJI pmax pmax
comp=Z,7.0nm,0.8s
COLD Coldfoot 87.48 9 P 00 58 13.3
baz=203,SNR=5.4
COLD Coldfoot 87.48 9 P **P** **00 58 12.6 +0.2**
BILL Bilibino 87.64 353 P **P** **00 58 13.1 -0.1**
BILL IAmb IAmb 00 58 14.6
comp=Z,15nm,1.1s
PLCA Paso Flores 87.88 132 LR LR 01 31 54.9
comp=Z,30nm,18.0s,baz=174,slow=32
RPSI Rantau Prapat 87.89 274 P **P** **00 58 15.5 -0.1**
PSI Prapat 87.93 274 P **P** **00 58 16.4 +0.4**
comp=Z,15nm,0.9s,baz=180,slow=5.5,SNR=13
ENH Enshi 88.03 303 P **P** **00 58 16.6 +0.6**
BMAR Burnt Mountain 88.60 11 P **P** **00 58 18.6 +0.8**
GSI Gunungsitoli 88.73 272 P **P** **00 58 20.4 +0.7**
TOLK Toolik Lake Re 88.88 9 P 00 58 19.9
baz=203
TOLK Toolik Lake Re 88.88 9 P **P** **00 58 19.6 +0.5**
TOLK IAmb IAmb 00 58 20.5
comp=Z,5.2nm,0.7s
GYA Guiyang 88.91 298 P **P** **00 58 21.7 +1.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
HIA Hailar 89.34 323 P **P** **00 58 21.9 +0.2**
HIA IAmb IAmb 00 58 23.5
comp=Z,7.0nm,0.8s
VNA3 Neumayer Olymp 89.68 175 P **P** **00 58 23.5 +0.5**
XAN Xi'an 89.92 306 P **P** **00 58 24.9 +0.1**
XAN IAmb IAmb 00 58 28.0
comp=Z,32nm,1.4s
VNA2 Neumayer--Watz 90.16 176 P **P** **00 58 26.2 +0.9**
baz=174,slow=3.5
VNA1 Neumayer--Stat 90.37 175 P **P** **00 58 27.0 +0.8**
HHC Hu-ho-hao-te 90.69 313 *e*P **P** **00 58 30.0 +1.7**
HHC SKS **SKSac** **01 08 51.8 -4.7**
HHC S **ScS** **01 09 27.6 +3.1**
HHC pmax pmax
comp=Z,25nm,1.4s
HHC pmax pmax
comp=Z,110nm,6.9s
HHC LR LR
comp=Z,99nm,17.1s
INK Inuvik 91.61 14 P **P** **00 58 32.1 +0.3**
INK IAmb IAmb 00 58 33.0
comp=Z,7.3nm,1.1s
KMI Kunming 91.75 296 ⇑P **P** **00 58 35.5 +1.7**
KMI pP PcP 00 58 39.2 +4.6
KMI pmax pmax
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 92.91 288 P **P** **00 58 40.6 +1.7**
comp=Z,3.6nm,0.9s,baz=102,slow=2.9,SNR=26

CMAR				LR	LR	01 37 00.6	
	comp=Z,7.5nm,21.6s,baz=190,slow=33						
CMAR	**Chiang Mai Arr**	**92.91**	**288**	P	**P**	**00 58 39.7**	**+0.7**
CHTO	**Chiang Mai**	**93.03**	**289**	P	**P**	**00 58 40.3**	**+0.8**
CHTO				IAmb	IAmb	00 58 41.9	
	comp=Z,8.3nm,1.0s						
YKA	**Yellowknife Ar**	**93.39**	**24**	P	**P**	**00 58 40.0**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=229,slow=4.2,SNR=18						
LZH	**Lanzhou**	**94.54**	**306**	*e*P	**P**	**00 58 47.3**	**+1.0**
LZH				pP	PcP	00 58 52.9	+6.2
LZH				sP	pP	00 58 55.5	-3.9
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
SONM	**Songino Array**	**96.77**	**318**	P	**P**	**00 58 56.8**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=131,slow=5.6,SNR=6.6						
TIXI	**Tiksi**	**97.94**	**344**	P	**P**	**00 59 00.4**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=108,slow=3.8,SNR=6.2						
TIXI	**Tiksi**	**97.94**	**344**	P	**P**	**00 59 00.0**	**-0.6**
GTA	**Gaotai**	**98.62**	**309**	*e*P	Pdif	00 59 06.2	+1.5
GTA				pP	pP	00 59 11.5	-6.3
GTA				sP	sP	00 59 15.2	-7.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LPAZ	**La Paz**	**99.40**	**111**	LR	LR	01 35 11.3	
	comp=Z,23nm,21.2s,baz=228,slow=30						
ZALV	**Zalesovo Beam**	**111.31**	**321**	PKiKP	**PKiKP**	**01 03 57.5**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=153,slow=0.3,SNR=3.7						
MKAR	**Makanchi Array**	**112.55**	**314**	PKiKP	**PKiKP**	**01 04 00.8**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=61,slow=1.3,SNR=16						
KURBB	**Kurchatov Arra**	**115.13**	**318**	PKP	**PKiKP**	**01 04 05.3**	**-1.0**
	comp=Z,1.6nm,0.7s,baz=94,slow=1.7,SNR=23						
AAK	**Ala-Archa**	**117.97**	**309**		**PKPdf**	**01 04 11.9**	**-0.4**
BVAR	**Borovoye Array**	**119.96**	**321**	PKP	**PKPdf**	**01 04 14.9**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=170,slow=10,SNR=21						
BRVK	**Borovoye**	**120.02**	**321**	PKPdf	**PKPdf**	**01 04 14.8**	**-0.8**
KKAR	**Karatay Array**	**120.89**	**309**	PKPdf	**PKPdf**	**01 04 16.9**	**-0.8**
CHGR	**Chuyangaron**	**122.06**	**304**		**PKiKP**	**01 04 21.5**	**+1.1**
ARU	**Arti**	**125.69**	**327**	PKP	**PKPdf**	**01 04 25.9**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=343,slow=3.2,SNR=10						
ARU	**Arti**	**125.69**	**327**	PKPdf	**PKPdf**	**01 04 25.0**	**-1.4**
ABKAR	**Akbulak array**	**127.18**	**318**	PKPdf	**PKPdf**	**01 04 28.6**	**-0.9**
ARCES	**ARCESS Array B**	**127.72**	**351**	PKP	**PKPdf**	**01 04 29.4**	**-0.5**
	comp=Z,3.8nm,0.8s,baz=29,slow=2.8,SNR=8.0						
AKTO	**Aktyubinsk**	**128.03**	**320**	PKP	**PKiKP**	**01 04 31.5**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=344,slow=1.3,SNR=6.5						
KIRV	**Kirov**	**129.10**	**332**	PKP	**PKPdf**	**01 04 31.1**	**-1.7**
	comp=Z,14nm,0.6s,baz=331,slow=5.4,SNR=3.9						
GEYT	**Alibeck**	**130.78**	**304**	PKP	**PKiKP**	**01 04 38.2**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=17,slow=1.5,SNR=3.8						
KLMR	**Klimovskoe**	**131.57**	**339**	*e*PKPdf	**PKPdf**	**01 04 31.6**	**-5.9**
KLMR				AMP		01 04 38.1	
	comp=Z,21nm,1.4s						
BELG	**Belogornoye**	**133.19**	**326**	PKP	**PKPdf**	**01 04 41.3**	**+0.5**
	comp=Z,14nm,0.9s,baz=103,slow=4.0,SNR=5.1						
FINES	**FINESS Array B**	**134.95**	**346**	PKhKP	PKPpre	01 04 40.1	
	comp=Z,3.1nm,1.0s,baz=80,slow=2.1,SNR=6.6						
HFS	**Hagfors**	**138.21**	**354**	PKP	**PKPdf**	**01 04 48.7**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=86,slow=6.2,SNR=2.0						
EKA	**Eskdalemuir Ar**	**142.78**	**8**	PKhKP	PKPpre	01 04 53.4	
	comp=Z,1.1nm,0.6s,baz=324,slow=4.1,SNR=4.6						
AKASG	**Malin Array Be**	**143.02**	**335**	PKhKP	PKPpre	01 04 55.5	
	comp=Z,2.1nm,0.6s,baz=32,slow=3.9,SNR=12						
KMBO	**Kilima Mbogo**	**143.35**	**241**	PKhKP	PKPpre	01 04 58.6	
	comp=Z,3.5nm,0.9s,baz=73,slow=4.2,SNR=14						
MARD	**Mardin**	**144.24**	**309**	PKPdf	PKPbc	01 05 00.3	+0.4
SORM	**Soroca**	**145.37**	**333**	⇓P	**PKPbc**	**01 05 02.4**	**-0.6**
TOKA	**Tokat**	**145.95**	**316**		**PKPbc**	**01 05 05.3**	**+0.2**
MILM	**Milestii Mici**	**146.09**	**331**	⇓P	**PKPbc**	**01 05 05.4**	**+0.2**
KWP	**Kalwaria Pacla**	**146.26**	**340**	*e*PKP	**PKPab**	**01 05 06.3**	**-0.2**
KWP	**Kalwaria Pacla**	**146.26**	**340**		**PKPbc**	**01 05 05.5**	**-0.3**
OJC	**Ojcow**	**146.60**	**344**	*e*PKP	**PKPbc**	**01 05 07.0**	**+0.3**
OJC	**Ojcow**	**146.60**	**344**	PKPdf	**PKPbc**	**01 05 06.0**	**-0.6**
VASR	**Vaslui**	**146.76**	**332**	⇓P	**PKPbc**	**01 05 07.8**	**+0.6**
KSP	**Ksiaz**	**146.84**	**348**	*e*PKP	**PKPab**	**01 05 08.2**	**-0.5**
GAZ	**Gaziantep**	**146.91**	**310**		**PKPbc**	**01 05 07.6**	**-0.5**
CLL	**Collm**	**146.94**	**352**	⇑*i*PKPbc	**PKPbc**	**01 05 07.9**	**+0.3**
	comp=Z,38nm,0.9s						
CLL				*e*pPKPdf	**pPKPdf**	**01 05 15.0**	**-4.1**
CLL	**Collm**	**146.94**	**352**		**PKPbc**	**01 05 07.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**147.05**	**336**		**PKPbc**	**01 05 08.3**	**+0.1**
BURAR	**Bucovina Array**	**147.07**	**336**	⇓P	**PKPbc**	**01 05 08.3**	**0.0**
OSTC	**Ostas**	**147.13**	**348**	*e*PKP	**PKPab**	**01 05 09.1**	**-0.7**
CHVC	**Chvalec**	**147.13**	**348**	*e*PKP	**PKPbc**	**01 05 07.4**	**-0.8**
NIE	**Niedzica**	**147.19**	**342**	*e*PKP	**PKPab**	**01 05 09.4**	**-0.7**
UPC	**Upice**	**147.21**	**348**	*e*PKP	**PKPbc**	**01 05 09.2**	**+0.8**
BRG	**Berggiesshubel**	**147.23**	**350**	*e*PKP	**PKPbc**	**01 05 08.6**	**+0.1**
BRG				Amp		01 05 10.2	
	comp=Z,18nm,1.0s						
BRG				*ex*	x	01 05 15.4	
BRG				Amp		01 05 17.7	
	comp=Z,7.5nm,1.1s						
BRG				*ex*	x	01 05 36.4	
BRG				Amp		01 05 37.2	
	comp=Z,13nm,1.2s						
BIZ	**Bicaz**	**147.25**	**334**	⇑P	**PKPab**	**01 05 09.6**	**-0.8**
DPC	**Dobruska-Polom**	**147.30**	**347**	*e*PKP	**PKPbc**	**01 05 09.1**	**+0.4**
TLCR		**147.36**	**329**	⇓P	**PKPbc**	**01 05 08.6**	**-0.4**
GHRR		**147.37**	**332**	⇑P	**PKPab**	**01 05 10.1**	**-0.8**
PVCC	**Panska Ves**	**147.46**	**350**	*e*PKP	**PKPbc**	**01 05 09.7**	**+0.6**
MORC	**Moravsky Berou**	**147.57**	**346**	*e*PKP	**PKPbc**	**01 05 10.0**	**+0.5**
MORC	**Moravsky Berou**	**147.57**	**346**		**PKPbc**	**01 05 09.8**	**+0.3**
TRPA	**Tarpa**	**147.62**	**339**	⇑P	**PKPbc**	**01 05 10.0**	**+0.4**
JURR	**Jurilovca**	**147.64**	**329**	⇑P	**PKPbc**	**01 05 10.2**	**+0.5**
LANS	**Liptovska Anna**	**147.66**	**343**	*e*PKP	**PKiKP**	**01 05 10.9**	**-0.9**
CFR	**Carcaliu**	**147.69**	**330**	⇑P	**PKPbc**	**01 05 10.2**	**+0.3**
TPGR	**Topolog**	**147.79**	**329**	⇓P	**PKPbc**	**01 05 10.7**	**+0.5**
VRI	**Vrincioaia**	**147.82**	**332**	⇑P	**PKPbc**	**01 05 10.1**	**-0.2**
ARCR	**ARCALIA**	**147.84**	**336**	⇑P	**PKPbc**	**01 05 10.9**	**+0.7**
PLOR	**Plostina**	**147.87**	**332**	⇓P	**PKPbc**	**01 05 10.7**	**+0.3**
PRA	**Prague**	**147.93**	**350**	*e*PKP	**PKiKP**	**01 05 11.4**	**-0.8**
UCC	**Uccle**	**147.93**	**2**		**PKPbc**	**01 05 10.8**	**+0.5**
PRU	**Pruhonice**	**147.99**	**349**	*e*PKP	**PKPbc**	**01 05 09.7**	**-0.8**
NKC	**Novy Kostel**	**148.07**	**352**	*e*PKP	**PKPbc**	**01 05 11.0**	**+0.2**
TIRR	**Tirgusor**	**148.09**	**329**		**PKPbc**	**01 05 11.0**	**0.0**
BR131	**Keskin Array S**	**148.12**	**317**		**PKPbc**	**01 05 10.9**	**-0.5**
BRTR	**Keskin Array B**	**148.12**	**317**	PKPbc	**PKPbc**	**01 05 11.6**	**+0.2**
	comp=Z,7.5nm,0.8s,baz=134,slow=2.8,SNR=41						
MEM	**Membach**	**148.14**	**360**	*d*PKiKP	**PKPbc**	**01 05 11.3**	**+0.4**
HARR	**Harsova**	**148.15**	**329**	⇑P	**PKPbc**	**01 05 11.8**	**+0.7**
BTNL	**Ternell**	**148.16**	**360**	*d*PKP	**PKPbc**	**01 05 11.4**	**+0.4**
BSTI	**Sart Tilman**	**148.17**	**0**	*d*PKP	**PKPbc**	**01 05 11.5**	**+0.5**
TLBR	**Topalu**	**148.20**	**329**	⇓P	**PKPbc**	**01 05 12.0**	**+0.8**
SNF	**Seneffe**	**148.22**	**2**	*d*PKiKP	**PKPbc**	**01 05 11.8**	**+0.7**
VRAC	**Vranov**	**148.23**	**347**	PKPbc	**PKPbc**	**01 05 11.6**	**+0.3**
	comp=Z,4.3nm,0.9s,baz=237,slow=1.2,SNR=7.5						
VRAC	**Vranov**	**148.23**	**347**	⇑P	**PKPbc**	**01 05 12.0**	**+0.8**
VRAC	**Vranov**	**148.23**	**347**	*e*PKP	**PKPbc**	**01 05 11.5**	**+0.3**
DOPR	**Dopca**	**148.32**	**334**	⇑P	**PKiKP**	**01 05 12.8**	**-0.5**
BCLA	**Clavier**	**148.33**	**1**	*d*pPKP	**PKPab**	**01 05 14.4**	**-0.1**
NEHR	**Nehoiu**	**148.36**	**332**	⇑P	**PKPbc**	**01 05 11.9**	**+0.2**
BGES	**Gesves**	**148.36**	**1**	*d*pPKP	**PKPab**	**01 05 14.6**	**-0.1**
PBCC	**Pribram**	**148.37**	**350**	*e*PKP	**PKPbc**	**01 05 11.8**	**+0.2**
JAVC	**Velka Javorina**	**148.40**	**345**	*e*PKP	**PKiKP**	**01 05 13.1**	**-0.2**
VYHS	**Vyhne**	**148.43**	**343**	*e*PKP	**PKPbc**	**01 05 12.3**	**+0.5**
CJR	**Cluj-Napoca**	**148.44**	**336**	⇑P	**PKPbc**	**01 05 11.2**	**-0.7**
BMRD	**Maredsous**	**148.44**	**1**	*d*PKiKP	**PKPbc**	**01 05 12.4**	**+0.8**
MLR	**Muntele Rosu**	**148.46**	**332**	PKPbc	**PKPbc**	**01 05 12.0**	**-0.1**
	comp=Z,7.8nm,1.0s,baz=1,6,slow=2.4,SNR=3.1						
MLR	**Muntele Rosu**	**148.46**	**332**	⇑P	**PKPdf**	**01 05 08.8**	**+0.3**
MLR	**Muntele Rosu**	**148.46**	**332**		**PKPbc**	**01 05 12.3**	**+0.2**
LTVH	**Ltavrtes, Hu**	**148.48**	**339**	⇑P	**PKPbc**	**01 05 12.3**	**+0.4**
KRUC	**Moravsky**	**148.50**	**347**	*e*PKP	**PKPbc**	**01 05 12.3**	**+0.4**
ANTO	**Ankara**	**148.58**	**318**		**PKPbc**	**01 05 12.7**	**+0.2**
BR231	**Keskin MP Arra**	**148.60**	**318**		**PKPbc**	**01 05 12.5**	**-0.1**
DOU	**Dourbes**	**148.64**	**1**	*d*PKP	**PKPbc**	**01 05 12.9**	**+0.7**
DOU				*dp*PKP	**PKPab**	**01 05 15.7**	**-0.2**
PSZ	**Piszkesteto**	**148.65**	**342**		**PKPbc**	**01 05 12.5**	**+0.1**
DRGR		**148.70**	**337**	⇑P	**PKPbc**	**01 05 11.0**	**-1.6**
GRA1	**Grafenberg Arr**	**148.75**	**353**		**PKiKP**	**01 05 13.7**	**-0.3**
GRF	**Grafenberg Arr**	**148.75**	**353**	*e*PKPbc	**PKPbc**	**01 05 12.8**	**+0.2**
	baz=10,slow=1.8						
GRF				*e*PKPab	**PKPab**	**01 05 17.1**	**+0.8**
	baz=18,slow=3.6						
GRFO	**Grafenberg**	**148.75**	**353**		**PKPbc**	**01 05 13.2**	**+0.7**
LEHL	**Lehliu**	**148.84**	**330**	⇓P	**PKiKP**	**01 05 13.9**	**-0.4**
VOIR		**148.89**	**333**	⇑P	**PKPbc**	**01 05 13.2**	**0.0**
MBAR	**Mbarara**	**148.90**	**235**		**PKPbc**	**01 05 14.7**	**+0.5**
MODS	**Modra-Piesok**	**148.94**	**345**	*e*PKP	**PKiKP**	**01 05 14.0**	**-0.4**
KHC	**Kasperske Hory**	**148.98**	**350**	*e*PKP	**PKPbc**	**01 05 13.5**	**+0.3**
KHC	**Kasperske Hory**	**148.98**	**350**		**PKPbc**	**01 05 13.5**	**+0.3**
WLF	**Walferdange**	**149.09**	**360**	*d*PKP	**PKiKP**	**01 05 14.3**	**-0.3**
WLF	**Walferdange**	**149.09**	**360**		**PKPbc**	**01 05 13.7**	**+0.4**
CKRC	**Cesky Krumlov**	**149.15**	**349**	*e*PKP	**PKPbc**	**01 05 13.7**	**+0.1**
MDUB	**Mudurnu**	**149.22**	**320**		**PKPbc**	**01 05 13.7**	**-0.5**
GEC2	**GERESS Array S**	**149.23**	**350**		**PKPbc**	**01 05 14.0**	**+0.2**
GERES	**GERESS Array B**	**149.23**	**350**	PKPbc	**PKPbc**	**01 05 14.3**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=321,slow=1.7,SNR=3.6						
GERES	**GERESS Array B**	**149.23**	**350**		**PKPbc**	**01 05 14.1**	**+0.2**
DEV	**Deva**	**149.39**	**336**	⇑P	**PKiKP**	**01 05 14.9**	**-0.5**
HUMR	**Humele**	**149.64**	**332**	⇓P	**PKPbc**	**01 05 14.7**	**-0.2**
CONA	**Conrad Observa**	**149.69**	**347**	*e*P	**PKPbc**	**01 05 15.5**	**+0.4**
	comp=Z,16nm,0.9s,SNR=12						
GZR	**Gura Zlata**	**149.85**	**336**	⇑P	**PKPbc**	**01 05 14.8**	**-0.7**
MOA	**Molln**	**150.09**	**349**	*i* P	**PKPbc**	**01 05 16.2**	**+0.2**
	comp=Z,6.6nm,0.7s						
BZS	**Buzias**	**150.10**	**337**	⇓P	**PKPdf**	**01 05 11.3**	**+0.3**
SRE	**Strehaia**	**150.29**	**334**	⇓P	**PKPbc**	**01 05 16.2**	**-0.3**
BFO	**Black Forest**	**150.35**	**357**		**PKPbc**	**01 05 16.6**	**+0.1**
HERR	**Herculane**	**150.42**	**336**	⇑P	**PKPbc**	**01 05 16.8**	**0.0**
ECH	**Echery**	**150.52**	**358**		**PKPbc**	**01 05 16.7**	**-0.3**
MORH	**Mrgy, Hungar**	**150.56**	**342**	⇑P	**PKPdf**	**01 05 12.0**	**+0.4**
PLVB	**Pleven**	**150.70**	**331**	⇑P	**PKPbc**	**01 05 17.2**	**-0.3**
MDVR	**Moldovita**	**150.78**	**336**	⇑P	**PKPbc**	**01 05 17.4**	**-0.3**
RETA	**Reutte**	**150.98**	**353**	*i* P	**PKPbc**	**01 05 18.3**	**+0.1**
	comp=Z,9.3nm,0.8s						
KBA	**Koelnbreinsper**	**151.00**	**349**	*i* P	**PKPbc**	**01 05 18.0**	**-0.3**
	comp=Z,7nm,0.6s,SNR=9.6						
WATA	**Walderalm**	**151.03**	**352**	*i* P	**PKPbc**	**01 05 18.3**	**0.0**
	comp=Z,9.2nm,0.6s,SNR=8.3						
SOKA	**Soboth**	**151.06**	**347**	*i* P	**PKPbc**	**01 05 18.0**	**-0.4**
	comp=Z,12nm,0.9s,SNR=9.7						
MOTA	**Moosalm**	**151.08**	**353**	*i* P	**PKPbc**	**01 05 18.4**	**-0.1**
	comp=Z,16nm,0.9s,SNR=8.5						
PERS	**Pernice**	**151.08**	**347**	*i* PKPdf	**PKPdf**	**01 05 12.2**	**-0.3**
PERS				*i* PKPbc	**PKPbc**	**01 05 18.0**	**-0.3**
WTTA	**Wattenberg**	**151.09**	**352**	*i* P	**PKPbc**	**01 05 18.7**	**+0.2**
	comp=Z,24nm,0.7s,SNR=14						
FRGS	**Fruska Gora**	**151.13**	**339**	⇑P	**PKiKP**	**01 05 18.9**	**-0.1**
SQTA	**Sankt Quirin**	**151.19**	**352**	*i* P	**PKPbc**	**01 05 18.8**	**+0.1**
	comp=Z,13nm,0.7s,SNR=10						
DAVA	**Damuels**	**151.27**	**354**	*i* P	**PKiKP**	**01 05 19.3**	**-0.1**
	comp=Z,12nm,0.7s,SNR=5.9						
OBKA	**Obir**	**151.32**	**347**	*i* P	**PKPbc**	**01 05 18.5**	**-0.5**
	comp=Z,6.1nm,0.8s						
MYKA	**Terra Mystica**	**151.38**	**349**	*i* P	**PKPbc**	**01 05 18.5**	**-0.6**
	comp=Z,11nm,0.7s,SNR=7.3						
FETA	**Feichten**	**151.44**	**353**	*i* P	**PKiKP**	**01 05 19.6**	**-0.2**
	comp=Z,19nm,0.9s,SNR=10						
ABTA	**Abfaltersbach**	**151.47**	**350**	*i* P	**PKPbc**	**01 05 18.9**	**-0.4**
	comp=Z,22nm,0.7s,SNR=15						
GOLS	**Golise**	**151.55**	**346**	*i* PKPbc	**PKPbc**	**01 05 19.5**	**0.0**
ZOU	**Zoufplan**	**151.57**	**350**		**PKPbc**	**01 05 19.2**	**-0.5**
BOVS	**Bovan**	**151.74**	**335**	⇑P	**PKPbc**	**01 05 18.8**	**-1.2**
DAVOX	**Davos/Dischmat**	**151.77**	**354**	PKPbc	**PKiKP**	**01 05 20.7**	**+0.1**
	comp=Z,16nm,0.7s,baz=305,slow=2.0,SNR=46						
VOJS	**Vojsko**	**151.91**	**348**	*i* PKPbc	**PKPbc**	**01 05 19.8**	**-0.5**
VTS	**Vitosha**	**151.93**	**332**	⇑P	**PKiKP**	**01 05 21.1**	**+0.2**
VTS	**Vitosha**	**151.93**	**332**		**PKPbc**	**01 05 20.3**	**-0.3**
VTS				PKPab	**PKPab**	**01 05 30.3**	**+0.5**
DIVS	**Divibare**	**152.00**	**338**		**PKPbc**	**01 05 20.7**	**+0.1**
DIVS				PKPab	**PKPab**	**01 05 30.4**	**+0.5**
MANT	**Manisa**	**152.04**	**320**		**PKPbc**	**01 05 20.7**	**-0.4**
MANT				PKPab	**PKPab**	**01 05 31.1**	**+0.6**
TUE	**Stuetta**	**152.13**	**355**		**PKPbc**	**01 05 21.1**	**+0.1**
TRI	**Trieste**	**152.25**	**348**		**PKPbc**	**01 05 20.5**	**-0.5**
CTI	**Castel Tesino**	**152.28**	**351**		**PKPbc**	**01 05 20.7**	**-0.5**
SENIN	**Lac Senin/Sane**	**152.36**	**358**		**PKiKP**	**01 05 22.1**	**+0.2**
SSB	**Saint Sauveur**	**153.45**	**2**		**PKiKP**	**01 05 24.1**	**+0.2**
BNI	**Bardonecchia**	**153.69**	**359**	PKPbc	**PKiKP**	**01 05 25.1**	**+0.6**
BNI					**pPKPbc**	**01 05 38.2**	**+0.3**
PDG	**Podgorica**	**153.71**	**337**	PKPbc	**PKPbc**	**01 05 23.9**	**-0.3**
PDG				PKPab	**PKPab**	**01 05 37.0**	**0.0**
FNA	**Florina**	**154.23**	**332**		**PKPbc**	**01 05 24.8**	**-0.7**
OSSC	**Osservatorio P**	**154.81**	**351**	PKPbc	**PKPbc**	**01 05 26.0**	**-0.7**
NRCA	**Norcia**	**155.13**	**347**		**PKPdf**	**01 05 25.9**	**+7.3**
NRCA				PKPab	**PKPab**	**01 05 43.8**	**+0.6**
ESDC	**Sonseca Array**	**157.44**	**20**	PKPab	**PKPab**	**01 05 54.7**	**+1.5**
	comp=Z,1.7nm,1.1s,baz=338,slow=4.0,SNR=7.0						
ESDC	**Sonseca Array**	**157.44**	**20**		**PKPab**	**01 05 53.7**	**+0.5**

IDC ***12*** *00:53:10.9±1.6, 32.°12S×69.°03W, h0km, mb3.7/3, mb1 3.9/7, mb1mx3.8/26, mbtmp3.7/7, ML3.7/4, Error ellipse: s-maj=42.8km s-min=36.0km az=27.0*
NEIC ***12*** *00:53:27.7±1.7, 31.°32S±0.°06×68.°76W±0.°10, h117km±4km, Error ellipse: s-maj=12.3km s-min=8.7km az=72.0*
ISC 12 00:53:27.5±0.7,**31.°29S**±0.05×**68.°71W**±0.06,**h113**km±7km,
n46,σ1§**42**/55,**mb4.2**/8,**4C**,**San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZON	**Zonda**	**0.26**	**174**	Pn		**Pn**	**00 53 44.2**	**+0.7**
ZON				Sn		Sn	**00 53 56.4**	**+0.8**
CO03	**El Pedregal**	**1.76**	**284**	*e*P		**Pn**	**00 53 58.3**	**+0.7**
CO03				*e*S		**Sn**	**00 54 21.4**	**+0.8**
CO03				IAML			00 54 22.9	
	comp=N,4μm,0.4s							
CO03	**El Pedregal**	**1.76**	**284**	Pn		**Pn**	**00 53 58.0**	**+0.4**
CO03				Sn		Sn	**00 54 21.4**	**+0.8**
CO02	**Combarbal**	**1.96**	**272**	⇑*e*P		**Pn**	**00 54 00.4**	**+0.1**
CO02				*e*S		**Sn**	**00 54 25.4**	**+0.1**
CO02				IAML			00 54 27.2	
	comp=E,5μm,0.4s							
CO02	**Combarbal**	**1.96**	**272**			**Pn**	**00 54 00.2**	**-0.1**
GO04	**Tololo Observa**	**2.12**	**301**	⇑*e*P		**Pn**	**00 54 02.7**	**+0.4**
GO04				*e*S		**Sn**	**00 54 29.7**	**+0.8**
GO04				IAML			00 54 34.1	
	comp=N,4μm,0.4s							
GO04	**Tololo Observa**	**2.12**	**301**			**Pn**	**00 54 02.6**	**+0.3**
VA03	**San Esteban**	**2.15**	**226**	⇑*i*P		**Pn**	**00 54 02.5**	**0.0**
VA03				*i* S		**Sn**	**00 54 29.6**	**+0.3**
VA03				IAML			00 54 34.3	
	comp=E,897nm,0.3s							
VA03	**San Esteban**	**2.15**	**226**			**Pn**	**00 54 02.4**	**-0.1**
PEL	**Peldehue**	**2.50**	**222**			**Pn**	**00 54 05.5**	**-1.5**
VCA	**Vinchina**	**2.58**	**10**	⇑*e*P		**Pn**	**00 54 09.9**	**+1.7**
VCA				*e*S		**Sn**	**00 54 42.8**	**+3.3**
VCA				IAML			00 54 48.7	
	comp=E,444nm,0.3s							
MT03	**Universidad Ad**	**2.67**	**214**	Pn		**Pn**	**00 54 09.7**	**+0.3**
MT05	**Renca**	**2.71**	**219**			**Pn**	**00 54 09.6**	**-0.2**
MT02	**Curacav**	**2.84**	**226**	Pn		**Pn**	**00 54 09.9**	**-1.6**
LCO	**Las Campanas**	**2.85**	**322**	Pn		**Pn**	**00 54 12.2**	**+0.3**
MT09	**Talagante**	**3.14**	**217**	Pn		**Pn**	**00 54 14.0**	**-1.5**
VA05	**Santo Domingo**	**3.41**	**225**	Pn		**Pn**	**00 54 16.7**	**-2.2**
AC04	**Llanos de Chal**	**3.70**	**326**	Pn		**Pn**	**00 54 22.8**	**-0.1**
BO02	**Sierra Bellavi**	**3.90**	**206**	Pn		**Pn**	**00 54 24.9**	**-0.8**
GO03	**Copiap**	**3.92**	**340**			**Pn**	**00 54 25.9**	**+0.1**
AC02	**Maricunga**	**4.45**	**355**			**Pn**	**00 54 35.2**	**+1.8**
ML02	**Panimavida**	**5.00**	**206**	Pn		**Pn**	**00 54 37.6**	**-2.7**
AC01	**Pan de Azucar**	**5.38**	**342**			**Pn**	**00 54 44.9**	**-0.6**
BI02	**San Fabin de**	**5.77**	**201**	Pn		**Pn**	**00 54 49.7**	**-1.0**
GO02	**Mina Guanaco**	**6.15**	**353**			**Pn**	**00 54 56.1**	**-0.1**
PB14	**IPOC Station P**	**6.80**	**347**	Pn		**Pn**	**00 55 03.7**	**-1.3**
PB10	**IPOC Station P**	**7.92**	**348**	Pn		**Pn**	**00 55 20.4**	**+0.6**
PB15	**IPOC Station P**	**8.08**	**355**			**Pn**	**00 55 21.1**	**-1.1**
PB06	**IPOC Station P**	**8.58**	**355**	Pn		**Pn**	**00 55 28.0**	**-1.0**
LVC	**Limon Verde**	**8.65**	**359**	Pn		**Pn**	**00 55 28.7**	**-1.4**
	comp=E,0.9nm,0.3s,baz=181,slow=7.1,SNR=10							
LVC				Sn		**Sn**	**00 56 59.7**	**-6.4**
	comp=E,0.5nm,0.3s,baz=6.5,slow=21,SNR=1.7							
CPUP	**Villa Florida**	**11.13**	**66**	Pn		**Pn**	**00 56 00.5**	**-2.8**
	comp=E,0.3nm,0.3s,baz=241,slow=10.0,SNR=5.4							
LPAZ	**La Paz**	**14.94**	**2**	Pn		**P**	**00 56 56.1**	**-0.2**
	comp=E,0.1nm,0.3s,baz=182,slow=11,SNR=2.8							
SIV	**San Ignacio**	**16.75**	**26**	P		**P**	**00 57 16.7**	**+1.0**
	comp=E,0.1nm,0.3s,baz=246,slow=13,SNR=4.6							
SNAA	**Sanae**	**53.06**	**159**	P		**P**	**01 02 32.4**	**-0.2**
SNAA				IAmb		IAmb	01 02 43.6	
	comp=Z,6.7nm,1.5s							
QSPA	**South Pole Qui**	**58.94**	**180**	P		**P**	**01 03 15.1**	**+0.4**
TXAR	**Lajitas Array**	**68.85**	**328**	P		**P**	**01 04 20.9**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=150,slow=7.5,SNR=4.3							
TXAR	**Lajitas Array**	**68.85**	**328**	P		**P**	**01 04 20.5**	**+0.6**
WVT	**Waverly**	**69.42**	**344**	P		**P**	**01 04 23.4**	**+0.2**
WVT				IAmb		IAmb	01 04 23.6	
	comp=Z,2.0nm,0.7s							
LCAR	**Lake Charles**	**70.24**	**341**	P		**P**	**01 04 28.9**	**+0.7**
LCAR				IAmb		IAmb	01 04 29.2	
	comp=Z,4.3nm,0.7s							
R40A	**Maddies Statio**	**72.63**	**341**	P		**P**	**01 04 42.9**	**+0.4**
R40A				IAmb		IAmb	01 04 43.5	
	comp=Z,3.2nm,0.6s							
TOA0	**Torodi Ar. Sit**	**80.62**	**68**	P		**P**	**01 05 28.6**	**+0.5**
TOA0				IAmb		IAmb	01 05 34.5	
	comp=Z,5.9nm,1.2s							
TORD	**Torodi Ar. Bea**	**80.62**	**68**	P		**P**	**01 05 28.9**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=273,slow=5.6,SNR=7.9							
TORD	**Torodi Ar. Bea**	**80.62**	**68**	P		**P**	**01 05 28.5**	**+0.5**
PDAR	**Pinedale Array**	**82.69**	**331**	P		**P**	**01 05 39.6**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=151,slow=7.7,SNR

1.4nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.80 299 P **Pn 00 57 07.7 +0.8**
0.9nm,0.2s,SNR=11
EMIN S **Sn 00 58 00.3 -1.4**
3.8nm,0.4s,SNR=7.9
ZHG ZHG 4.84 246 P
EMOS Mosqueruela 4.85 8 P **Pn 00 57 09.6 +1.8**
0.8nm,0.2s,SNR=8.4
EMOS S **Sn 00 58 01.7 -1.5**
1.9nm,0.3s,SNR=7.9
PBAR Barrancos 5.25 302 P **Pn 00 57 13.8 +0.7**
PBAR S **Sn 00 58 11.3 -1.4**
2.8nm,0.4s
PBAR Barrancos 5.25 302 *e*Pn **Pn 00 57 13.8 +0.7**
PBAR *e*Sn **Sn 00 58 11.3 -1.4**
PBAR A A 00 58 15.3
2.8nm,0.4s
ETOR Torete 5.28 354 P **Pn 00 57 15.5 +1.8**
11nm,0.2s,SNR=26
ETOR S **Sn 00 58 13.3 -0.4**
5.6nm,0.3s,SNR=7.9
EGRO El Granado 5.31 294 P **Pn 00 57 15.2 +1.3**
0.8nm,0.1s,SNR=11
EGRO S **Sn 00 58 11.6 -2.5**
2.5nm,0.2s,SNR=7.9
ETOS Mallorca 5.36 37 P **Pn 00 57 15.2 +0.7**
1.1nm,0.1s,SNR=11
ETOS S **Sn 00 58 13.1 -2.3**
5.3nm,0.3s,SNR=7.9
PVAQ Vaqueiros 5.44 292 P **Pn 00 57 16.1 +0.4**
PVAQ S **Sn 00 58 15.8 -1.6**
3.1nm,0.3s
PVAQ Vaqueiros 5.44 292 *e*Pn **Pn 00 57 16.1 +0.4**
PVAQ *e*Sn **Sn 00 58 15.8 -1.6**
PVAQ A A 00 58 20.3
3.1nm,0.3s
PVAQ Vaqueiros 5.44 292 P 00 57 17.4
PVAQ S 00 58 14.1
GUD Guadarrama 5.54 337 P **Pn 00 57 19.0 +1.9**
0.2nm,0.1s,SNR=5.9
ERTA Horta de San J 5.56 13 P **Pn 00 57 18.8 +1.5**
2.2nm,0.2s,SNR=12
ERTA S **Sn 00 58 18.6 -1.7**
1.8nm,0.3s,SNR=7.9
PBDV Barranco-do-Ve 5.56 290 P **Pn 00 57 17.5 +0.1**
PBDV S **Sn 00 58 19.2 -1.2**
3.5nm,0.6s
PBDV Barranco-do-Ve 5.56 290 *e*Pn **Pn 00 57 17.5 +0.1**
PBDV *e*Sn **Sn 00 58 19.2 -1.2**
PBDV A A 00 58 33.2
3.5nm,0.6s
PCVE Castro Verde 5.75 293 P **Pn 00 57 20.9 +0.8**
PCVE S **Sn 00 58 24.0 -1.2**
2.5nm,0.4s
PCVE Castro Verde 5.75 293 *e*Pn **Pn 00 57 20.9 +0.8**
PCVE *e*Sn **Sn 00 58 24.0 -1.2**
PCVE A A 00 58 31.3
2.5nm,0.4s
PBEJ Beja 5.77 297 P **Pn 00 57 21.2 +0.9**
PBEJ Beja 5.77 297 *e*Pn **Pn 00 57 21.2 +0.9**
EPLA Plasencia 5.85 322 P **Pn 00 57 22.6 +1.3**
0.8nm,0.1s,SNR=5.7
EPLA S **Sn 00 58 25.5 -2.0**
2.4nm,0.5s,SNR=7.9
TZRR Tazzarine 5.92 218 P 00 57 24.7
MESJ Messejana 5.96 294 *e*P **Pn 00 57 23.2 +0.3**
MESJ Messejana 5.96 294 P **Pn 00 57 23.2 +0.3**
PESTR Estremoz 5.97 305 *e*Pn **Pn 00 57 23.1 +0.1**
PESTR *e*Sn **Sn 00 58 29.1 -1.3**
PESTR A A 00 58 58.0
3.2nm,0.7s
PESTR Estremoz 5.97 305 P 00 57 21.8
EVO Evora 6.09 301 P **Pn 00 57 25.2 +0.5**
EVO Evora 6.09 301 *e*Pn **Pn 00 57 25.2 +0.5**
EPOB Poblet 6.10 18 P **Pn 00 57 25.8 +1.0**
0.7nm,0.1s,SNR=7.9
EPOB S **Sn 00 58 30.2 -3.5**
2.2nm,0.4s,SNR=7.9
MORF Marmelete 6.13 289 *e*P **Pn 00 57 25.3 +0.1**
MORF Marmelete 6.13 289 P **Pn 00 57 25.3 +0.1**
PMRV Marv??o 6.16 311 P **Pn 00 57 26.2 +0.6**
PMRV S **Sn 00 58 33.0 -2.1**
2.1nm,0.4s
PMRV Marv??o 6.16 311 *e*Pn **Pn 00 57 26.2 +0.6**
PMRV *e*Sn **Sn 00 58 33.0 -2.1**
PMRV A A 00 59 16.6
2.1nm,0.4s
PFVI Vila Bisbo 6.22 287 P **Pn 00 57 27.2 +0.8**
0.9nm,0.1s,SNR=5.7
PFVI S **Sn 00 58 33.1 -3.6**
2.8nm,0.2s,SNR=7.9
PFVI Vila Bisbo 6.22 287 *e*Pn **Pn 00 57 27.3 +0.8**
PFVI *e*Sn **Sn 00 58 35.5 -1.3**
PFVI Vila Bisbo 6.22 287 P 00 57 26.5
PTEO Sao Teotonio 6.25 291 P **Pn 00 57 28.9 +2.1**
PTEO S **Sn 00 58 36.0 -1.3**
PTEO Sao Teotonio 6.25 291 *e*Pn **Pn 00 57 28.9 +2.1**
PTEO *e*Sn **Sn 00 58 36.0 -1.3**
PCBR Castelo Branco 6.46 313 P **Pn 00 57 30.7 +0.9**
PCBR S **Sn 00 58 40.3 -2.3**
0.9nm,0.3s
PCBR Castelo Branco 6.46 313 *e*Pn **Pn 00 57 30.7 +0.9**
PCBR *e*Sn **Sn 00 58 40.3 -2.3**
PCBR A A 00 58 41.6
1.9nm,0.3s
PMTG Montargil 6.50 305 P **Pn 00 57 30.7 +0.5**
PMTG S **Sn 00 58 40.6 -2.8**
2.1nm,0.5s
PMTG Montargil 6.50 305 *e*Pn **Pn 00 57 30.7 +0.5**
PMTG *e*Sn **Sn 00 58 40.6 -2.8**
PMTG A A 00 58 53.3
2.1nm,0.5s
MTE Manteigas 6.87 317 P **Pn 00 57 36.9 +1.5**
MTE S **Sn 00 58 51.6 -1.1**
1.6nm,0.7s
MTE Manteigas 6.87 317 *e*Pn **Pn 00 57 36.9 +1.5**
MTE *e*Sn **Sn 00 58 51.6 -1.1**
MTE A A 00 58 56.2
3.2nm,0.7s
CFON Fontmartina 6.87 24 P **Pn 00 57 35.8 +0.3**
3.4nm,0.2s,SNR=13
CFON S **Sn 00 58 48.1 -4.7**
3.5nm,0.3s,SNR=7.9
PSBE So Bento 7.10 306 *e*Pn **Pn 00 57 40.1 +1.5**
MVO Moncorvo 7.15 323 P **Pn 00 57 41.0 +1.7**
0.7nm,0.1s,SNR=7.9
MVO S **Sn 00 58 57.7 -1.9**
2.6nm,0.3s,SNR=7.9
MVO Moncorvo 7.15 323 *e*Pn **Pn 00 57 41.0 +1.7**
MVO *e*Sn **Sn 00 58 58.2 -1.5**
MVO A A 00 59 04.2
2.4nm,0.5s
PVIS Viseu 7.28 317 P **Pn 00 57 42.3 +1.3**
PVIS Viseu 7.28 317 *e*Pn **Pn 00 57 42.3 +1.3**
EORO Oroz-Betelu 7.33 0 P **Pn 00 57 43.1 +1.4**
SNR=7.9
ETSF Etsaut 7.36 5 P **Pn 00 57 43.5 +1.4**
ETSF S **Sn 00 59 02.9 -1.9**
0.5nm,0.3s
ETSF Etsaut 7.36 5 *e*Pn **Pn 00 57 43.5 +1.4**
ETSF Etsaut 7.36 5 *e*P Pn 00 57 48.9 +6.8
ETSF *e*Sn **Sn 00 59 02.9 -1.9**
1.0nm,0.3s
CLLI Llivia 7.39 20 P **Pn 00 57 44.4 +1.9**
0.1nm,0.2s,SNR=7.9
CLLI S **Sn 00 59 02.0 -3.5**
0.1nm,0.2s,SNR=7.9
PBRG Braganca 7.52 328 P **Pn 00 57 46.3 +1.9**
PBRG Braganca 7.52 328 *e*Pn **Pn 00 57 46.3 +1.9**
ATE Arette 7.54 4 P **Pn 00 57 47.1 +2.5**
0.6nm,0.1s,SNR=7.9
SJPF Ste Jean 7.55 1 P **Pn 00 57 46.7 +2.0**
SJPF S **Sn 00 59 08.3 -1.0**
0.2nm,0.5s
SJPF Ste Jean 7.55 1 *e*Pn **Pn 00 57 46.7 +2.0**
SJPF *e*Sn **Sn 00 59 08.3 -1.0**
0.5nm,0.5s
EPF Esparros 7.58 10 P **Pn 00 57 47.4 +2.2**
EPF S **Sn 00 59 08.9 -1.3**
0.2nm,0.2s
EPF Esparros 7.58 10 *e*Pn **Pn 00 57 47.4 +2.2**
EPF *e*Sn **Sn 00 59 08.9 -1.3**
0.5nm,0.2s
POLO Lamas de Olo 7.69 321 P **Pn 00 57 48.1 +1.4**
POLO Lamas de Olo 7.69 321 *e*Pn **Pn 00 57 48.1 +1.4**
baz=226,slow=75,SNR=93
H08S3 Diego Garcia H 9.49 45 T T 01 36 52.8
baz=226,slow=75,SNR=80
H01W3 Cape Leeuwin H 47.87 124 T T 02 26 37.4
baz=285,slow=75,SNR=5.3
H01W2 Cape Leeuwin H 47.87 124 T T 02 26 40.6
baz=285,slow=75,SNR=5.7
H01W1 Cape Leeuwin H 47.89 124 T T 02 26 41.2
baz=285,slow=75,SNR=4.4
ASAR Alice Springs 64.52 110 P P 01 37 19.7 -0.2
0.3nm,0.9s,baz=278,slow=6.5,SNR=4.2
WRA Warramunga Arr 65.33 105 P P 01 37 25.5 +0.3
0.8nm,1.1s,baz=265,slow=6.5,SNR=2.1
YKA Yellowknife Ar 132.08 0 PKP PKPdf 01 45 55.5 -0.5
0.1nm,0.6s,baz=337,slow=2.3,SNR=2.0

ELAN Lanestosa 7.83 349 P **Pn 00 57 50.5 +1.9**
1.2nm,0.2s,SNR=18
PCAB Cabril 8.06 322 P **Pn 00 57 52.8 +1.1**
PCAB S **Sn 00 59 20.5 -1.4**
PCAB Cabril 8.06 322 *e*Pn **Pn 00 57 52.8 +1.1**
PCAB *e*Sn **Sn 00 59 20.5 -1.4**
ELOB Lobios 8.19 322 P **Pn 00 57 54.9 +1.4**
0.3nm,0.1s,SNR=7.9
ELOB S **Sn 00 59 21.8 -3.5**
1.5nm,0.3s,SNR=4.0
MTLF Montolieu 8.25 19 P **Pn 00 57 54.2 -0.1**
MTLF S **Sn 00 59 23.7 -3.0**
0.1nm,0.2s
MTLF Montolieu 8.25 19 *e*Pn **Pn 00 57 54.2 -0.1**
MTLF *e*Sn **Sn 00 59 23.7 -3.0**
0.1nm,0.2s
EARI Arriondas 8.29 340 P **Pn 00 57 56.8 +2.0**
0.3nm,0.2s,SNR=4.0
EARI S **Sn 00 59 24.8 -2.8**
0.3nm,0.3s,SNR=7.9
PGAV Gavieira, Arco 8.37 322 P **Pn 00 57 57.5 +1.5**
PGAV S **Sn 00 59 28.2 -1.4**
1.4nm,0.3s
PGAV Gavieira, Arco 8.37 322 *e*Pn **Pn 00 57 57.5 +1.5**
PGAV *e*Sn **Sn 00 59 28.2 -1.4**
PGAV A A 00 59 30.3
1.4nm,0.3s
CAF Calviac 9.72 15 P **Pn 00 58 16.6 +2.2**
CAF S **Sn 01 00 00.7 -2.0**
0.2nm,0.3s
CAF Calviac 9.72 15 *e*Pn **Pn 00 58 16.6 +2.2**
CAF *e*Sn **Sn 01 00 00.7 -2.0**
0.4nm,0.3s
LMR La Mourre 9.87 36 P **Pn 00 58 18.3 +1.9**
LMR S **Sn 01 00 02.4 -3.8**
0.4nm,0.3s
LMR La Mourre 9.87 36 *e*Pn **Pn 00 58 18.3 +1.9**
LMR *e*Sn **Sn 01 00 02.4 -3.8**
0.9nm,0.3s
SMRF Simiane la Rot 9.96 30 P Pn 00 58 24.0 +6.3
SMRF Simiane la Rot 9.96 30 *e*P Pn 00 58 24.0 +6.3
FRF La Foret Royal 10.10 35 S **Sn 01 00 08.4 -3.7**
0.4nm,0.3s
FRF La Foret Royal 10.10 35 *e*Sn **Sn 01 00 08.4 -3.7**
0.8nm,0.3s
PGF Pioggiola 10.66 46 P **Pn 00 58 28.3 +0.9**
PGF S **Sn 01 00 23.0 -2.8**
0.1nm,0.2s
PGF Pioggiola 10.66 46 *e*Pn **Pn 00 58 28.3 +0.9**
PGF *e*Sn **Sn 01 00 23.0 -2.8**
0.2nm,0.2s
SBF Sospel 10.71 37 P **Pn 00 58 29.9 +1.9**
SBF Sospel 10.71 37 *e*Pn **Pn 00 58 29.9 +1.9**
SBF Sospel 10.71 37 *e*P Pn 00 58 34.8 +6.8
MFF Saint Martin d 11.07 4 P **Pn 00 58 34.6 +1.6**
MFF Saint Martin d 11.07 4 *e*Pn **Pn 00 58 34.6 +1.6**
QUIF Quistinic 12.42 354 P **Pn 00 58 52.7 +1.3**
QUIF Quistinic 12.42 354 *e*Pn **Pn 00 58 52.7 +1.3**
SGMF Saint Gilles 12.72 356 P **Pn 00 58 55.5 +0.1**
SGMF Saint Gilles 12.72 356 *e*Pn **Pn 00 58 55.5 +0.1**
GRR Gorron 12.83 2 P **Pn 00 58 58.3 +1.4**
GRR Gorron 12.83 2 *e*Pn **Pn 00 58 58.3 +1.4**
ROSF Rostrenen 12.85 354 P **Pn 00 58 58.0 +0.8**
ROSF Rostrenen 12.85 354 *e*Pn **Pn 00 58 58.0 +0.8**

BER ***12*** *01:24:48.6±1.8, 71°.50N×3°.22W, h10km, ML2.3, Confirmed Earthquake*
IDC ***12*** *01:24:51.6±8.1, 72°.16N×0°.69W, h0km, mb3.4/2, mb1 3.5/5, mb1mx3.2/39, mbtmp3.5/5, ML2.5/3, MS2.8/1, Ms1 2.9/1, ms1mx2.2/39, Error ellipse: s-maj=113.8km s-min=56.2km az=135.0*
DNK ***12*** *01:24:58.7±0.3, 72°.21N×5°.27W, h15km*
ISC 12 01:24:45.7±1.0, 71°.64N±0°.10×2°.75W±0°.07, h10km, n37, σ2s51/39, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBG	**Daneborg**	**5.77**	**306**	*i* P		**Pn**	**01 26 10.9**	**-0.3**
DBG	**Daneborg**	**5.77**	**306**	*e*P		**Pn**	**01 26 11.1**	**-0.1**
DBG				*e*S		**Sn**	**01 27 11.1**	**-6.3**
SCO	**Scoresbysund**	**6.35**	**269**	*i* P		**Pn**	**01 26 21.8**	**+2.7**
LOF	**Lofoten**	**6.62**	**114**	*e*P		**Pn**	**01 26 24.8**	**+1.9**
LOF				*e*S		**Sn**	**01 27 33.3**	**-4.8**
LOF				IAML			01 27 39.9	
	comp=Z,5.3nm,0.6s							
N2SV	**S rv gen**	**6.62**	**117**	*e*P		**Pn**	**01 26 23.7**	**+0.8**
N2SV				IAML			01 27 35.5	
	comp=Z,4.8nm,0.7s							
N2RO	**R st**	**6.63**	**121**	*e*P		**Pn**	**01 26 23.9**	**+0.8**
N2RO				*e*S		**Sn**	**01 27 33.2**	**-5.3**
N2RO				IAML			01 27 37.4	
	comp=Z,6.4nm,0.7s							
N2VA	**Vr y**	**6.69**	**119**	*e*P		**Pn**	**01 26 25.0**	**+1.3**
N2VA				IAML			01 27 40.0	
	comp=Z,3.8nm,0.6s							
DAG	**Danmarks Havn**	**6.71**	**327**	*i* P		**Pn**	**01 26 24.2**	**+0.2**
DAG	**Danmarks Havn**	**6.71**	**327**	*e*P		**Pn**	**01 26 24.5**	**+0.5**
DAG				*e*			01 27 13.3	
STEI	**Steigen**	**7.24**	**112**	*e*P		**Pn**	**01 26 32.6**	**+1.3**
STEI				*e*S		**Sn**	**01 27 48.1**	**-5.3**
STEI				IAML			01 27 52.6	
	comp=Z,4.0nm,0.5s							
HSPB	**Hornsund (broa**	**7.27**	**34**	*e*P		**Pn**	**01 26 33.2**	**+1.5**
N2IH	**Innhavet**	**7.42**	**111**	*e*P		**Pn**	**01 26 35.4**	**+1.5**
N2IH				IAML			01 27 55.0	
	comp=Z,4.8nm,1.0s							
N2TV	**T rnvik**	**7.44**	**115**	*e*P		**Pn**	**01 26 36.0**	**+1.9**
NBB30	**Finnes**	**7.46**	**121**	*e*P		**Pn**	**01 26 35.7**	**+1.3**
NBB30				IAML			01 27 56.7	
	comp=Z,4.9nm,0.7s							
NBB05	**Inndyr**	**7.50**	**120**	*e*P		**Pn**	**01 26 35.7**	**+0.8**
NBB28	**Valnes**	**7.51**	**118**	*e*P		**Pn**	**01 26 35.6**	**+0.6**
NBB28				IAML			01 28 11.2	
	comp=Z,5.1nm,0.4s							
FAUS	**Fauske**	**7.61**	**115**	*e*P		**Pn**	**01 26 37.9**	**+1.4**
FAUS				IAML			01 28 07.3	
	comp=Z,2.5nm,0.5s							
KONS	**Konsvik**	**7.65**	**125**	*e*P		**Pn**	**01 26 37.7**	**+0.7**
KONS				IAML			01 28 00.7	
	comp=Z,4.1nm,0.6s							
STOK	**Stokkvaagen**	**7.75**	**126**	*e*P		**Pn**	**01 26 40.1**	**+1.7**
BRBA	**Barentsburg A**	**7.78**	**27**	*e*P		**Pn**	**01 26 42.3**	**+3.6**
BRBB	**Barentsburg B**	**7.80**	**26**	*e*P		**Pn**	**01 26 42.6**	**+3.6**
JETT	**Jettan, Norway**	**7.96**	**94**	*e*P		**Pn**	**01 26 42.2**	**+0.9**
KBS	**Kingsbay**	**8.18**	**20**	*e*P		**Pn**	**01 26 45.4**	**+1.3**
SPA0	**Spitsbergen Ar**	**8.18**	**28**	*e*P		**Pn**	**01 26 47.0**	**+2.7**
MOR8	**Moi Rana**	**8.25**	**123**	*e*P		**Pn**	**01 26 45.1**	**-0.1**
MOR8				IAML			01 28 15.4	
	comp=Z,2.6nm,0.5s							
KIF	**Kilpisjarvi**	**8.34**	**97**	*e*P		**Pn**	**01 26 47.3**	**+0.9**
SALU	**Saltoluokta**	**8.56**	**110**	*e*P		**Pn**	**01 26 48.8**	**-0.7**
HAMF	**Hammerfest**	**8.58**	**84**	*e*P		**Pn**	**01 26 49.2**	**-0.5**
HOPEN	**Hopen**	**8.96**	**45**	*e*P		**Pn**	**01 26 57.1**	**+2.2**
NSS	**Namsos**	**8.98**	**135**	*e*P		**Pn**	**01 26 53.3**	**-1.9**
NSS				IAML			01 28 39.1	
	comp=Z,2.1nm,0.6s							
KTK1	**Kautokeino**	**9.11**	**94**	*e*P		**Pn**	**01 26 56.7**	**-0.2**
ARA0	**ARCESS Array S**	**9.59**	**89**	*e*P		**Pn**	**01 27 03.0**	**-0.5**
ARCES	**ARCESS Array B**	**9.59**	**89**	Pn		**Pn**	**01 27 02.6**	**-0.9**
	baz=294,slow=12,SNR=1.8							
NOA	**NORSAR Array B**	**11.98**	**146**	Pn		Pn	01 27 47.7	+11
	comp=Z,0.0nm,0.3s,baz=353,slow=15,SNR=1.7							
NOA				LR		LR	01 32 13.2	
	comp=Z,38nm,18.1s,baz=330,slow=36							
FINES	**FINESS Array B**	**15.16**	**118**	Pn		**Pn**	**01 28 21.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=323,slow=8.9,SNR=2.9							
AKASG	**Malin Array Be**	**25.46**	**128**	P		**P**	**01 30 18.3**	**+5.0**
	comp=Z,0.1nm,0.3s,baz=336,slow=9.5,SNR=1.8							
BRTR	**Keskin Array B**	**36.82**	**130**	P		P	01 32 00.2	+6.6
	comp=Z,0.5nm,0.7s,baz=352,slow=7.6,SNR=3.8							

IDC 12 01:26:40.7±8.0, 14°.51S×65°.78E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.2/36, mbtmp3.5/2, Error ellipse: s-maj=673.1km s-min=73.4km az=32.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.47**	**45**	T		T	01 36 53.1	
	baz=226,slow=75,SNR=26							
H08S2	**Diego Garcia H**	**9.49**	**45**	T		T	01 36 52.4	

ROM ***12*** *01:43:46.0±0.2, 38°.96N±0°.01×15°.72E±0°.03, h222km±1km, ML3.1/41, Error ellipse: s-maj=2.6km s-min=0.4km az=114.0*
LDG ***12*** *01:43:47.5, 38°.90N×15°.79E, h218km*
IDC ***12*** *01:43:47.4±1.4, 39°.22N×15°.48E, h218km±21km, mb3.0/7, mb1 3.0/9, mb1mx2.8/50, mbtmp3.4/9, MS2.8/1, Ms1 2.8/1, ms1mx2.0/21, Error ellipse: s-maj=28.4km s-min=25.5km az=65.0*
ISC 12 01:43:45.8±0.8, 38°.96N±0°.05×15°.76E±0°.06, h222km±6km, n79, σ1s34/111, mb3.4/6, 33D, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOPP	**Joppolo**	**0.36**	**164**	⇓P		**Pn**	**01 44 15.6**	**+0.4**
JOPP				S		**S**	**01 44 36.9**	**-1.2**
JOPP				AML		AML		
	comp=E,512μm,0.4s							
JOPP				AML		AML		
	comp=N,435μm,1.5s							
JOPP				AML		AML		
	comp=E,512μm,0.4s							
IST3	**Stromboli F**	**0.44**	**250**	⇓P		**Pn**	**01 44 15.8**	**+0.5**
CAR1	**CAROLEI**	**0.46**	**50**	⇓P		**Pn**	**01 44 15.9**	**+0.5**
CAR1				S		**S**	**01 44 37.4**	**-1.1**
CAR1				AML		AML		
	comp=E,1190μm,0.6s							
CAR1				AML		AML		
	comp=N,1275μm,0.7s							
CAR1				AML		AML		
	comp=E,1235μm,0.6s							
CAR1				AML		AML		
	comp=N,1150μm,0.8s							
CAR1				AML		AML		
	comp=E,1240μm,0.6s							
CAR1				AML		AML		
	comp=N,1273μm,0.7s							
GRI	**Girifalco**	**0.53**	**104**	P		**Pn**	**01 44 16.9**	**+1.3**
GRI				S		**S**	**01 44 39.0**	**+0.2**
GRI				AML		AML		
	comp=E,342μm,0.7s							
GRI				AML		AML		
	comp=N,335μm,0.6s							
GRI				AML		AML		
	comp=E,343μm,0.7s							
GRI				AML		AML		
	comp=N,334μm,0.6s							
CET2	**Cetraro**	**0.59**	**15**	⇓P		**Pn**	**01 44 16.3**	**+0.5**
CET2				S		**S**	**01 44 37.7**	**-1.7**
CET2				AML		AML		
	comp=N,1535μm,0.7s							
CET2				AML		AML		
	comp=E,1120μm,0.9s							
CET2				AML		AML		
	comp=N,1540μm,0.7s							
CEL	**Celeste**	**0.70**	**171**	P		**Pn**	**01 44 16.8**	**+0.4**
CEL				S		**S**	**01 44 39.2**	**-1.0**
CEL				AML		AML		
	comp=N,234μm,0.5s							
CEL				AML		AML		
	comp=E,210μm,0.6s							
MSRU	**Castanea**	**0.72**	**196**	⇓P		**Pn**	**01 44 16.5**	**+0.1**
MSRU				S		**S**	**01 44 38.9**	**-1.3**
MSRU				AML		AML		
	comp=N,314μm,1.0s							
MSRU				AML		AML		
	comp=E,496μm,0.4s							
MSCL	**Scilla**	**0.72**	**178**	P		**Pn**	**01 44 16.8**	**+0.3**
MSCL				S		**S**	**01 44 39.9**	**-0.5**
MSCL				AML		AML		
	comp=E,534μm,0.9s							
MSCL				AML		AML		
	comp=N,469μm,1.0s							
MSCL				AML		AML		
	comp=N,468μm,1.0s							
MSCL				AML		AML		
	comp=E,533μm,0.9s							
SERS	**Sersale**	**0.73**	**83**	⇓P		**Pn**	**01 44 17.9**	**+1.4**
SERS				S		**S**	**01 44 40.4**	**-0.1**
SERS				AML		AML		
	comp=E,296μm,0.4s							
SERS				AML		AML		
	comp=N,248μm,1.2s							
SERS				AML		AML		
	comp=E,257μm,1.2s							
SERS				AML		AML		
	comp=N,254μm,1.2s							
PLAC	**Placanica**	**0.73**	**133**	⇓P		**Pn**	**01 44 17.7**	**+1.2**
PLAC				S		**S**	**01 44 39.7**	**-0.6**
PLAC				AML		AML		
	comp=E,238μm,0.6s							
PLAC				AML		AML		
	comp=N,338μm,0.6s							
PLAC				AML		AML		
	comp=N,254μm,0.6s							
PLAC				AML		AML		
	comp=E,348μm,0.6s							
CELI	**Celico**	**0.73**	**52**	P		**Pn**	**01 44 18.2**	**+1.7**
CELI				S		**S**	**01 44 41.5**	**+1.0**
CELI				AML		AML		
	comp=N,699μm,0.5s							
CELI				AML		AML		
	comp=E,642μm,1.6s							
GMB	**Gambarie**	**0.79**	**176**	P		**Pn**	**01 44 17.3**	**+0.4**
GMB				S		**S**	**01 44 40.5**	**-0.5**
GMB				AML		AML		
	comp=N,1510μm,0.2s							
GMB				AML		AML		
	comp=E,2080μm,0.2s							
MILZ	**Milazzo**	**0.80**	**211**	⇓P		**Pn**	**01 44 16.9**	**+0.1**
MILZ				S		**S**	**01 44 40.1**	**-0.7**
MILZ				AML		AML		
	comp=N,456μm,0.9s							
MILZ				AML		AML		
	comp=E,484μm,0.4s							
MILZ				AML		AML		
	comp=N,456μm,0.9s							
T0702	**Acquaformosa (**	**0.80**	**18**	⇓P		**Pn**	**01 44 17.3**	**+0.5**
T0702				S		**S**	**01 44 39.6**	**-1.6**
T0702				AML		AML		
	comp=E,393μm,0.6s							
T0702				AML		AML		
	comp=N,278μm,1.3s							
TIP	**Timpagrande**	**0.81**	**74**	⇓P		**Pn**	**01 44 18.3**	**+1.5**
TIP				S		**S**	**01 44 41.2**	**+0.2**
TIP				AML		AML		
	comp=E,198μm,0.7s							
TIP				AML		AML		
	comp=N,124μm,0.9s							
TIP				AML		AML		
	comp=E,219μm,0.7s							
TIP				AML		AML		
	comp=E,198μm,0.7s							
TIP				AML		AML		
	comp=N,158μm,0.9s							
TIP				AML		AML		
	comp=N,124μm,0.9s							
TDS	**Terranova Siba**	**0.83**	**32**	⇓P		**Pn**	**01 44 18.2**	**+1.3**
TDS				S		**S**	**01 44 41.2**	**0.0**
TDS				AML		AML		
	comp=N,107μm,0.6s							
TDS				AML		AML		
	comp=N,107μm,0.6s							
TDS				AML		AML		
	comp=E,166μm,0.7s							
VPL	**Vulcano Piano**	**0.84**	**227**	⇓P		**Pn**	**01 44 17.6**	**+0.6**
VPL				AML		AML		
	comp=N,790μm,0.4s							
VPL				AML		AML		

comp=E,760μm,0.6s
MPNC Port Mandanici 0.87 202 ⇓P Pn 01 44 17.2 0.0
MPNC S S 01 44 40.5 -1.0
SOI Samo 0.91 165 ⇓P Pn 01 44 18.2 +0.8
SOI S S 01 44 42.7 +0.8
SOI AML AML
comp=E,133μm,0.6s
SOI AML AML
comp=N,131μm,0.3s
SOI AML AML
comp=N,130μm,0.3s
SOI AML AML
comp=E,133μm,0.6s
MMN Mormanno 0.95 11 ⇓P Pn 01 44 18.6 +1.2
MMN AML AML
comp=E,51μm,0.2s
MMN AML AML
comp=E,51μm,0.2s
MMN AML AML
comp=N,76μm,0.4s
MTTG Motta San Giov 0.95 183 ⇓P Pn 01 44 18.6 +0.9
MTTG S S 01 44 42.4 0.0
MTTG AML AML
comp=E,220μm,0.6s
MTTG AML AML
comp=E,220μm,0.6s
MTTG AML AML
comp=N,312μm,0.8s
MCSR Castroreale 0.98 204 ⇓P Pn 01 44 18.3 +0.4
MCSR S S 01 44 42.9 +0.1
MCSR AML AML
comp=N,753μm,0.3s
MCSR AML AML
comp=E,728μm,0.3s
IFIL Filicudi I Eol 1.01 248 P Pn 01 44 18.6 +0.6
IFIL AML AML
comp=E,402μm,1.4s
IFIL AML AML
comp=E,401μm,1.4s
IFIL AML AML
comp=N,150μm,0.5s
MPAZ Palizzi 1.02 169 ⇓P Pn 01 44 18.9 +0.8
MPAZ S S 01 44 42.9 -0.3
MPAZ AML AML
comp=E,218μm,1.5s
MPAZ AML AML
comp=N,248μm,0.8s
SALB San Lorenzo Be 1.03 26 ⇓P Pn 01 44 19.5 +1.4
SALB S S 01 44 43.3 -0.1
SALB AML AML
comp=E,435μm,0.9s
SALB AML AML
comp=N,184μm,0.6s
CUC Castrocucco 1.04 2 P Pn 01 44 18.7 +0.6
CUC S S 01 44 41.9 -1.6
CUC AML AML
comp=E,92μm,0.6s
CUC AML AML
comp=E,92μm,0.6s
CUC AML AML
comp=N,61μm,1.1s
NOV Novara 1.05 208 ⇓P Pn 01 44 19.2 +0.9
NOV S S 01 44 44.4 +0.9
NOV AML AML
comp=N,348μm,0.9s
NOV AML AML
comp=E,362μm,0.7s
NOV AML AML
comp=N,347μm,0.9s
MUCR Ucria 1.15 218 ⇓P Pn 01 44 19.2 +0.3
MUCR S S 01 44 44.2 -0.5
MUCR AML AML
comp=E,116μm,0.4s
MUCR AML AML
comp=N,115μm,1.0s
MUCR AML AML
comp=N,115μm,1.0s
MGR Morigerati 1.19 352 ⇓P Pn 01 44 20.0 +1.0
MGR S S 01 44 45.2 +0.1
MGR AML AML
comp=E,52μm,0.4s
MGR AML AML
comp=N,48μm,1.1s
SCHR S. Chirico Rap 1.27 11 P Pn 01 44 21.4 +1.6
SCHR AML AML
comp=E,74μm,0.5s
SCHR AML AML
comp=N,50μm,1.2s
EMSG Monte Spagnolo 1.30 210 P Pn 01 44 21.7 +1.5
MSFR San Fratello 1.30 225 ⇓P Pn 01 44 20.7 +0.7
MSFR S S 01 44 46.8 +0.2
MSFR AML AML
comp=E,54μm,0.3s
MSFR AML AML
comp=N,82μm,0.3s
EPZF Pizzo Felice 1.33 212 P Pn 01 44 21.7 +1.3
EPZF AML AML
comp=E,184μm,0.4s
EPZF AML AML
comp=N,201μm,0.8s
CMPR Campora 1.41 346 S S 01 44 49.0 +0.9
CRAC Craco 1.50 20 ⇓P Pn 01 44 22.7 +1.2
CRAC S S 01 44 50.6 +1.2
CRAC AML AML
comp=N,464μm,0.3s
CRAC AML AML
comp=E,619μm,0.3s
GALF Gagliano Caste 1.56 217 P Pn 01 44 23.7 +1.6
GALF AML AML
comp=E,87μm,0.5s
GALF AML AML
comp=N,88μm,0.5s
GALF AML AML
comp=N,88μm,0.5s
GALF AML AML
comp=E,87μm,0.5s
CAGR Agira 1.66 217 P Pn 01 44 25.1 +2.1
CAGR AML AML
comp=N,199μm,1.1s
CAGR AML AML
comp=E,186μm,1.6s
PETRA Petralia Sopra 1.71 230 ⇓P Pn 01 44 24.2 +0.7
PETRA AML AML
comp=N,66μm,1.6s
PETRA AML AML
comp=E,57μm,1.5s
HAGA Augusta 1.73 196 ⇓P Pn 01 44 23.4 -0.2
AGST Augusta-Monte 1.75 194 P Pn 01 44 23.4 -0.3
HLNI Lentini 1.75 204 ⇓P Pn 01 44 24.0 +0.3
HLNI AML AML
comp=E,53μm,0.2s
HLNI AML AML
comp=N,76μm,0.5s
VAE Valguarnera 1.82 216 P Pn 01 44 26.8 +2.5
comp=N,2.6nm,0.3s,baz=222,slow=1.8,SNR=16
MATE Matera 1.84 23 ⇓P Pn 01 44 24.4 0.0
MATE S S 01 44 53.3 -1.2
MATE AML AML
comp=E,120μm,1.0s
MATE AML AML
comp=N,138μm,0.3s
SSY Sortino 1.88 197 ⇓P Pn 01 44 25.0 0.0
MEU Monte Lauro 1.96 200 P Pn 01 44 26.5 +0.7
MEU AML AML
comp=E,236μm,0.3s
MEU AML AML
comp=N,372μm,0.3s
RAFF Raffo Rosso 2.05 213 ⇓P Pn 01 44 28.0 +1.4
RAFF AML AML
comp=E,70μm,1.6s
RAFF AML AML
comp=N,65μm,0.7s
HAVL Avola 2.06 194 ⇓P Pn 01 44 26.8 +0.2
HAVL AML AML
comp=N,194μm,0.3s
HAVL AML AML
comp=E,135μm,1.1s
NOCI Noci 2.09 28 P Pn 01 44 26.8 0.0
NOCI S S 01 44 57.5 -1.4
NOCI AML AML
comp=E,84μm,0.9s
NOCI AML AML
comp=N,140μm,1.4s
HMDC Modica 2.14 202 ⇓P Pn 01 44 28.4 +0.9
HMDC AML AML
comp=N,221μm,0.2s
HMDC AML AML
comp=E,147μm,0.5s
HPAC Pachino 2.31 193 ⇓P Pn 01 44 30.1 +0.9
HPAC AML AML
comp=E,129μm,1.4s
HPAC AML AML
comp=N,164μm,1.3s
SCTE Santa Cesarea 2.37 61 P Pn 01 44 31.0 +1.3
SCTE S S 01 45 03.3 -0.6
SCTE AML AML
comp=E,255μm,0.4s
SCTE AML AML
comp=N,152μm,1.2s
LMR La Mourre 8.24 305 eP Pn 01 45 46.1 +4.1
MBDF Montbardon 8.84 314 eP Pn 01 45 54.3 +4.3
DAVOX Davos/Dischmat 8.93 333 P Pn 01 45 54.1 +3.0
comp=N,0.2nm,0.3s,baz=135,slow=14,SNR=5.9
LPG La Plagne 9.34 317 eP Pn 01 46 00.7 +4.2
LPG eSn S 01 47 40.7 -1.0
comp=N,0.5nm,0.3s
LPL La Plagne 9.37 317 eP P 01 46 01.1 -3.7
LPL eSn S 01 47 43.1 +1.0
comp=N,0.6nm,0.4s
ORIF Oris-en-Rattie 9.47 312 ePn P 01 46 03.7 -2.0
ORIF eSn S 01 47 44.0 -0.3
comp=N,0.5nm,0.3s
GERES GERESS Array B 10.00 352 P Pn 01 46 03.6 -1.0
comp=N,0.2nm,0.3s,baz=168,slow=12,SNR=6.1
VIVF Saint-Julien-l 10.15 309 eP P 01 46 11.2 -2.2
LASF Ste Croix 10.29 304 eP P 01 46 12.5 -2.4
CABF La Chapelle 10.44 320 eP Pn 01 46 11.8 +1.5
HINF Hinteralfeld 10.97 327 eP P 01 46 23.1 +0.6
CDF Champ du Feu 11.27 330 eP Pn 01 46 23.2 +2.4
SMF Signal de Mont 11.64 315 eP Pn 01 46 25.5 0.0
SSF Saint Saulge 12.08 316 eP P 01 46 35.6 +0.8
MEZF Maizieres J'vi 12.28 324 eP Pn 01 46 32.6 -0.8
LFF La Frestale 12.67 303 eP P 01 46 42.4 +1.0
ETSF Etsaut 12.95 293 eP P 01 46 45.2 +0.6
MFF Saint Martin d 13.94 308 eP P 01 46 55.8 +0.3
LDF La Druitiere 14.95 315 eP Pn 01 47 06.1 -0.3
ESDC Sonseca Array 15.29 279 P P 01 47 10.2 -0.3
comp=N,0.0nm,0.3s,baz=84,slow=13,SNR=1.6
EKA Eskdalemuir Ar 20.72 328 P P 01 48 06.5 -2.6
comp=N,0.4nm,0.3s,baz=142,slow=11,SNR=7.5
HFS Hagfors 21.24 357 P P 01 48 13.2 -1.2
comp=N,2.0nm,0.4s,baz=174,slow=10,SNR=23
NOA NORSAR Array B 22.29 354 P P 01 48 24.2 -0.4
comp=N,0.6nm,0.9s,baz=158,slow=9.6,SNR=3.8
FINES FINESS Array B 23.40 13 P P 01 48 35.0 +0.5
comp=N,1.0nm,0.3s,baz=186,slow=8.9,SNR=20
KOWA Kowa 29.96 221 LR LR 02 03 01.3
comp=N,20nm,20.3s,baz=152,slow=38
ARCES ARCESS Array B 31.08 7 P P 01 49 42.3 -0.6
comp=N,1.3nm,0.8s,baz=192,slow=9.5,SNR=1.5
MKAR Makanchi Array 48.06 58 P P 01 52 04.6 +1.8
comp=N,0.1nm,0.3s,baz=288,slow=6.8,SNR=1.4
YKA Yellowknife Ar 71.33 338 P P 01 54 41.3 +0.4
comp=N,0.2nm,0.6s,baz=40,slow=5.7,SNR=5.0

*IDC **12** 02:18:07.0±2.3,6.85S×130.03E,h135km±25km,mb3.7/1, mb1 3.7/5,mb1mx3.2/36,mbtmp4.1/5,Error ellipse: s-maj=38.0km s-min=22.2km az=92.0*
ISC 12 02:18:04.5±0.9,6.95S±0.06×130.2E±0.1,h100km,n5, σ2s74/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.14**	**10**	P	**Pn**	**02 19 34.6**	**+1.8**
	1.6nm,0.3s,baz=126,slow=3.5,SNR=39						
SIJI				S	**Sn**	**02 20 39.6**	**-2.1**
	4.8nm,0.3s,baz=104,slow=23,SNR=14						
BATI	**Baumata**	**7.20**	**243**	P	**Pn**	**02 19 49.0**	**+1.9**
	10nm,0.3s,baz=274,slow=0.5,SNR=12						
BATI				S	**Sn**	**02 21 05.6**	**-1.8**
	4.3nm,0.3s,baz=70,slow=22,SNR=6.5						
WRA	**Warramunga Arr**	**13.54**	**163**	P	**Pn**	**02 21 13.5**	**+0.9**
	0.5nm,0.3s,baz=343,slow=13,SNR=20						
WRA				S	**Sn**	**02 23 38.8**	**-2.8**
	1.0nm,0.3s,baz=343,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.00**	**168**	P	**P**	**02 21 59.5**	**+2.9**
	0.8nm,0.3s,baz=348,slow=12,SNR=87						
ASAR				S	**Sn**	**02 25 02.6**	**-2.8**
	0.3nm,0.3s,baz=348,slow=26,SNR=5.0						
MKAR	**Makanchi Array**	**68.27**	**327**	P	**P**	**02 28 52.3**	**-2.4**
	0.7nm,0.4s,baz=116,slow=7.9,SNR=14						

*NEIC **12** 02:23:04.8±1.7,41.71N±0.01×80.99W±0.02,h3km±7km, Error ellipse: s-maj=3.0km s-min=0.8km az=133.0*
*OTT **12** 02:23:05.3±0.1,41.74N×81.00W,h5km,MN2.5/9,South shore Lake Erie. 104km south from Port Stanley, On Eastern Background Seismic Zone.*
*OGSO **12** 02:23:05.2±2.2, 41.74N±0.02×81.00W±0.02,h5km±2km, mb_Lg2.3,mb_Lg2.4/3(NEIC),mb_Lg2.5(OTT), ML2.3/18(LDO),Error ellipse: s-maj=3.8km s-min=3.0km az=320.0*
*LDO **12** 02:23:05.7±1.9,41.74N±0.02×81.01W±0.02,h5km±2km, Error ellipse: s-maj=4.0km s-min=3.0km az=335.0*
ISC 12 02:23:04.4±1.2,41.74N±0.03×81.00W±0.02,h3km±11km, n40,σ0s87/55,Ohio

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
M52A	**Chesterland**	**0.33**	**234**		**Sg**	**02 23 15.8**	**+0.7**
M52A	**Chesterland**	**0.33**	**234**	Pg	**Pg**	**02 23 10.5**	**-0.3**
M53A	**WI Miller and**	**0.38**	**140**		**Pg**	**02 23 12.3**	**+0.6**
M53A					**Sg**	**02 23 17.5**	**+0.8**
L53A	**Girard**	**0.59**	**68**		**Pg**	**02 23 15.9**	**+0.1**
L53A					**Sg**	**02 23 23.8**	**+0.2**
ALLY	**Alegheny Colle**	**0.65**	**97**	PG	**Pg**	**02 23 17.0**	**+0.2**
ALLY				SG	**Sg**	**02 23 25.4**	**+0.2**
ALLY	**Alegheny Colle**	**0.65**	**97**		**Sg**	**02 23 25.3**	**+0.1**
ALLY	**Alegheny Colle**	**0.65**	**97**	Pg	**Pg**	**02 23 17.6**	**+0.8**
ERPA	**Erie**	**0.84**	**63**	PG	**Pg**	**02 23 20.4**	**-0.2**
ERPA				SG	**Sg**	**02 23 31.8**	**+0.3**
ERPA	**Erie**	**0.84**	**63**		**Pg**	**02 23 20.4**	**-0.2**
ERPA					**Sg**	**02 23 31.6**	**0.0**
N53A	**Lisbon**	**0.94**	**172**		**Sg**	**02 23 33.2**	**-1.2**
N53A	**Lisbon**	**0.94**	**172**		**Pg**	**02 23 22.0**	**-0.3**
N53A	**Lisbon**	**0.94**	**172**		**Pg**	**02 23 22.2**	**-0.1**
M54A	**Oil Creek Stat**	**1.03**	**102**		**Pg**	**02 23 23.8**	**-0.3**
M54A					**Sg**	**02 23 36.8**	**-0.6**
N54A	**Moraine State**	**1.08**	**135**		**Pg**	**02 23 24.1**	**-1.0**
N54A					**Sg**	**02 23 38.7**	**-0.5**
PLIO	**Pelee Island,**	**1.22**	**271**	PG	**Pg**	**02 23 27.1**	**-0.7**
PLIO				SG	**Sg**	**02 23 43.1**	**-0.4**
PLIO				Trac		02 23 43.8	
	comp=Z,13nm,0.1s						
N51A	**Ashland**	**1.32**	**232**	Pn	**Pn**	**02 23 29.2**	**-0.5**
ELFO	**Elginfield**	**1.48**	**351**	PG	**Pn**	**02 23 31.5**	**-0.4**
ELFO				SG	**Sn**	**02 23 51.0**	**-0.7**
ELFO				Trac		02 23 54.8	
	comp=Z,19nm,0.1s						
O53A	**New Philadelph**	**1.49**	**186**		**Pn**	**02 23 31.9**	**-0.2**
O54A	**Avella**	**1.62**	**163**	Pn	**Pn**	**02 23 34.8**	**+0.9**
O52A	**Adamsville**	**1.74**	**202**	Pn	**Pn**	**02 23 36.1**	**+0.6**
O52A				IAmb_Lg		02 24 01.8	
	comp=Z,5.6nm,0.7s						
WVNY	**West Valley, N**	**1.91**	**69**	Pn	**Pn**	**02 23 38.5**	**+0.7**
ACTO	**Acton**	**2.00**	**20**	PN	**Pn**	**02 23 39.9**	**+0.8**
ACTO				SG	**Sb**	**02 24 07.2**	**+0.6**
ACTO				Trac		02 24 09.5	
	comp=Z,8.3nm,0.1s						
STCO	**Saint Catharin**	**2.00**	**42**	PN	**Pn**	**02 23 39.5**	**+0.5**
STCO				SN	**Sn**	**02 24 04.9**	**+0.3**
STCO				Trac		02 24 09.7	
	comp=Z,9.0nm,0.1s						
ACSO	**Alum Creek Sta**	**2.12**	**226**	IAmb_Lg		02 24 16.5	
	comp=Z,7.9nm,0.9s						
M56A	**Emporium**	**2.13**	**96**	Pn	**Pn**	**02 23 41.6**	**+0.7**
P53A	**Whipple**	**2.27**	**188**	Pn	**Pn**	**02 23 43.4**	**+0.6**
P52A	**Corning**	**2.27**	**203**	Pn	**Pn**	**02 23 43.9**	**+1.1**
J54A	**Appleton**	**2.33**	**48**	Pn	**Pn**	**02 23 45.1**	**+1.5**
BASO	**Ashfield**	**2.33**	**348**	PN	**Pn**	**02 23 45.8**	**+2.2**
BASO				SN	**Sn**	**02 24 12.8**	**+0.1**
BASO				Trac		02 24 18.6	
	comp=Z,6.6nm,0.2s						
O56A	**Blue Knob Stat**	**2.35**	**128**	Pn	**Pb**	**02 23 46.5**	**-0.9**
BWLO	**Walkerton**	**2.38**	**358**	PN	**Pn**	**02 23 44.7**	**+0.4**
BWLO				SN	**Sn**	**02 24 14.1**	**0.0**
BWLO				LG	Lg	02 24 19.3	
BWLO				Trac		02 24 19.7	
	comp=Z,6.8nm,0.2s						
L48A	**N Adams**	**2.57**	**276**	Pn	**Pn**	**02 23 48.5**	**+1.6**
PKRO	**Pickering**	**2.64**	**32**	PN	**Pn**	**02 23 48.4**	**+0.5**
PKRO				SN	**Sn**	**02 24 20.2**	**-0.2**
PKRO				Trac		02 24 26.9	
	comp=Z,20nm,0.2s						
PKRO				LG	Lg	02 24 27.4	
BMRO	**Meriville Lake**	**2.86**	**357**	PN	**Pn**	**02 23 51.4**	**+0.4**
BMRO				SN	**Sn**	**02 24 25.6**	**-0.4**
BMRO				LG	Lg	02 24 33.0	
BMRO				Trac		02 24 39.2	
	comp=Z,2.8nm,0.2s						
WLVO	**Wesleyville**	**2.91**	**40**	PN	**Pn**	**02 23 52.3**	**+0.8**
WLVO				SN	**Sn**	**02 24 26.8**	**-0.1**
WLVO				LG	Lg	02 24 35.0	
WLVO				Trac		02 24 35.3	
	comp=Z,3.2nm,0.1s						
O49A	**Covington**	**2.96**	**240**	Pn	**Pn**	**02 23 54.7**	**+2.4**
Q51A	**Peebles**	**3.25**	**214**	Pn	**Pn**	**02 23 58.4**	**+2.1**
SADO	**Sadowa**	**3.32**	**23**	PN	**Pn**	**02 23 56.2**	**-1.0**
SADO				SN	**Sn**	**02 24 35.5**	**-1.7**
SADO				LG	Lg	02 24 48.4	
SADO				Trac		02 24 51.8	
	comp=Z,12nm,0.5s						
SADO	**Sadowa**	**3.32**	**23**	Pn	**Pn**	**02 23 57.4**	**+0.2**
HALT	**Halls**	**8.72**	**231**	IAmb_Lg		02 28 05.3	
	comp=Z,152nm,0.7s						

*TAP **12** 02:27:40.0,24.74N×122.78E,h13km,ML2.9,C*
*JMA **12** 02:27:40.3±0.1,24.73N×122.80E,h19km±1km,M2.2*
ISC 12 02:27:39.8±1.0,24.76N±0.05×122.80E±0.02,h17km±8km, n43,σ0s41/68,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.33**	**156**	P	**Pg**	**02 27 46.9**	**+0.1**
JYNG				S	**Sg**	**02 27 51.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.35**	**147**	P	**Pg**	**02 27 47.1**	**0.0**
YOJ				S	**Sg**	**02 27 51.9**	**-0.1**
YOJ	**Yonaguni jima**	**0.35**	**147**	P	**Pg**	**02 27 47.3**	**+0.2**
	baz=134						
YOJ				S	**Sg**	**02 27 52.2**	**+0.2**
	baz=134						
TWB1	**Santiao Chiao**	**0.78**	**289**	eP	**Pb**	**02 27 54.6**	**-0.3**
	baz=291						
TWC	**Suao**	**0.88**	**261**	P	**Pb**	**02 27 55.8**	**-0.8**
	baz=262						
TWC				*i* S	**Sb**	**02 28 07.2**	**-0.8**
	baz=262						
NTC	**Toucheng**	**0.89**	**277**	P	**Pb**	**02 27 56.6**	**-0.2**
	baz=278						
TIPB	**Shuangxi**	**0.91**	**284**	P	**Pb**	**02 27 56.8**	**-0.5**
	baz=285						
TIPB				eS	**Sb**	**02 28 09.3**	**+0.2**
	baz=285						
IRIF	**Iriomote-Funau**	**0.94**	**116**	P	**Pb**	**02 27 57.3**	**-0.5**
IRIF				S	**Sb**	**02 28 10.1**	**+0.1**
NWF	**Wu-fen Shan**	**0.98**	**289**	eP	**Pn**	**02 27 59.2**	**+0.3**
	baz=290						
WFSB	**Wu-fen Shan**	**0.98**	**289**	eP	**Pb**	**02 27 57.9**	**-0.5**
	baz=290						
EWUT	**Wuta**	**0.98**	**252**	P	**Pb**	**02 27 58.0**	**-0.4**
	baz=254						
EWUT				*i* S	**Sb**	**02 28 10.6**	**-0.4**
	baz=254						
NDS	**Dongshan**	**0.99**	**263**	eP	**Pb**	**02 27 58.2**	**-0.4**
	baz=265						
NDS				eS	**Sg**	**02 28 12.0**	**-0.1**
	baz=265						
TNOU	**National Taiwa**	**1.01**	**293**	eP	**Pn**	**02 27 59.7**	**+0.4**
	baz=294						
TWE	**Neicheng**	**1.03**	**268**	P	**Pb**	**02 27 58.7**	**-0.6**
	baz=270						
TWE				eS	**Sb**	**02 28 12.5**	**0.0**
	baz=270						
TWA	**Mucha**	**1.13**	**282**	eP	**Pb**	**02 28 00.3**	**-0.6**
	baz=284						
ENTT	**Nioudou**	**1.13**	**264**	P	**Pb**	**02 28 00.9**	**0.0**
	baz=266						
ENTT				S	**Sb**	**02 28 15.3**	**0.0**
	baz=266						
HATJ	**Hateruma jima**	**1.15**	**127**	P	**Pn**	**02 28 01.3**	**+0.1**
HATJ				eS	**Sb**	**02 28 16.4**	**+0.4**
NWLT	**Wulai**	**1.18**	**271**	P	**Pn**	**02 28 01.8**	**+0.1**
	baz=273						
NWLT				eS	**Sb**	**02 28 16.4**	**-0.5**
	baz=273						
YM08	**YM08**	**1.18**	**292**	eP	**Pg**	**02 28 02.6**	**-0.1**
	baz=292						
NDT	**Datong Townshi**	**1.18**	**263**	P	**Pn**	**02 28 01.9**	**+0.2**
	baz=265						
NDT				S	**Sb**	**02 28 16.7**	**-0.2**
	baz=265						
YM01	**YM01**	**1.18**	**289**	eP	**Pg**	**02 28 02.7**	**0.0**
	baz=290						
YM11	**YM11**	**1.19**	**290**	eP	**Pg**	**02 28 03.3**	**+0.6**
	baz=291						
YM10	**YM10**	**1.19**	**290**	eP	**Pg**	**02 28 03.0**	**+0.1**
	baz=290						
TWY	**Chenhua**	**1.21**	**296**	eP	**Pb**	**02 28 02.8**	**+0.5**
	baz=296						
JKRS	**Kuro-shima**	**1.22**	**115**	P	**Pn**	**02 28 02.1**	**0.0**
JKRS				eS	**Sn**	**02 28 18.6**	**+0.4**
NACB	**Ninganchiao**	**1.24**	**242**	P	**Pn**	**02 28 02.5**	**+0.1**
	baz=244						
NACB				S	**Sb**	**02 28 18.2**	**-0.4**
	baz=244						
JIJ	**Ishigaki jima**	**1.28**	**107**	P	**Pn**	**02 28 03.0**	**0.0**
JIJ				S	**Sn**	**02 28 20.8**	**+0.9**
TWD	**Chiawan**	**1.29**	**239**	eP	**Pb**	**02 28 03.9**	**+0.2**
	baz=249						
YHNB	**Yeheng**	**1.30**	**267**	P	**Pn**	**02 28 03.2**	**-0.1**
	baz=270						
YHNB				eS	**Sb**	**02 28 20.1**	**-0.3**
	baz=270						
NSK	**Sanguang**	**1.31**	**267**	P	**Pn**	**02 28 03.6**	**0.0**
	baz=270						
NSK				eS	**Sb**	**02 28 20.2**	**-0.5**
	baz=270						
ETLH	**Xiulin Townshi**	**1.32**	**246**	eP	**Pb**	**02 28 04.3**	**0.0**
	baz=248						
ETLH				*i* S	**Sn**	**02 28 21.2**	**+0.3**
	baz=248						
NNSB	**Datong**	**1.33**	**256**	P	**Pn**	**02 28 04.0**	**+0.2**
	baz=258						
NNSB				eS	**Sb**	**02 28 21.1**	**-0.2**
	baz=258						
NNS	**Nan Shan**	**1.34**	**257**	P	**Pn**	**02 28 04.3**	**+0.4**
	baz=259						
NNS				eS	**Sn**	**02 28 21.3**	**-0.1**
	baz=259						
JISG	**Ishigakijimahi**	**1.39**	**97**	S	**Sn**	**02 28 21.3**	**-1.1**
FUSS	**Fushou**	**1.50**	**251**	P	**Pb**	**02 28 07.4**	**-0.1**
	baz=263						
FUSS				S	**Sb**	**02 28 26.6**	**+0.2**
	baz=263						
WHF	**Hehuan Shan**	**1.52**	**247**	eP	**Pn**	**02 28 07.2**	**+0.5**
	baz=250						
WHF				eS	**Sb**	**02 28 27.2**	**0.0**
	baz=250						
TDCB	**Techi**	**1.58**	**252**	eP	**Pb**	**02 28 08.8**	**+0.2**
	baz=264						
TDCB				eS	**Sb**	**02 28 28.3**	**-0.1**
	baz=264						
CHGB	**Renai**	**1.64**	**245**	eP	**Pb**	**02 28 09.8**	**+0.1**
	baz=248						
NSTT	**Nanjuang**	**1.64**	**266**	eP	**Pb**	**02 28 09.3**	**-0.4**
	baz=284						
WHP	**Taichung City**	**1.75**	**255**	eP	**Pb**	**02 28 12.2**	**+0.6**
	baz=243						
HGSD	**Ruisui**	**1.78**	**225**	eP	**Pb**	**02 28 11.0**	**-1.0**
	baz=227						
VWDT	**VWDT**	**1.81**	**237**	eP	**Pn**	**02 28 11.1**	**+0.8**
	baz=240						
VWDT				eS	**Sn**	**02 28 33.1**	**+0.2**
	baz=240						
YULB	**Yu-li**	**1.93**	**226**	eP	**Pn**	**02 28 12.0**	**0.0**
	baz=216						

*JMA **12** 02:45:37.2±0.1,24.13N×122.67E,h21km±3km,M2.1*
*TAP **12** 02:45:37.0,24.14N×122.66E,h19km,ML2.5,C*
ISC 12 02:45:36.4±1.1,24.07N±0.03×122.67E±0.02,h19km±3km, n47,σ0s77/86,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.46**	**33**	P	**Pg**	**02 45 45.5**	**-0.4**
JYNG				*e*S	**Sg**	**02 45 51.1**	**-1.1**
YOJ	**Yonaguni jima**	**0.50**	**38**	P	**Pg**	**02 45 46.4**	**-0.3**
YOJ				S	**Sg**	**02 45 52.9**	**-0.6**
YOJ	**Yonaguni jima**	**0.50**	**38**	*i* P	**Pg**	**02 45 46.6**	**-0.1**
	baz=43						
YOJ				*i* S	**Sg**	**02 45 53.1**	**-0.5**
	baz=43						
EWUT	**Wuta**	**0.90**	**295**	*i* P	**Pb**	**02 45 52.9**	**-0.5**
	baz=292						
EWUT				*e*S	**Sb**	**02 46 04.2**	**-0.8**
	baz=292						
TWC	**Suao**	**0.92**	**306**	*e*P	**Pb**	**02 45 52.3**	**-1.6**
	baz=295						
TWC				*e*S	**Sb**	**02 46 03.7**	**-2.0**
	baz=295						
TWD	**Chiawan**	**0.98**	**271**	P	**Pn**	**02 45 55.7**	**+0.5**
	baz=268						
TWD				*i* S	**Sg**	**02 46 09.2**	**+0.8**
	baz=268						
NACB	**Ninganchiao**	**0.99**	**277**	*i* P	**Pb**	**02 45 55.0**	**0.0**
	baz=255						
NACB				*e*S	**Sb**	**02 46 08.1**	**+0.5**
	baz=255						
IRIF	**Iriomote-Funau**	**1.01**	**74**	P	**Pb**	**02 45 55.3**	**0.0**
NDS	**Dongshan**	**1.04**	**303**	*i* P	**Pb**	**02 45 55.8**	**-0.1**
	baz=301						
NDS				*i* S	**Sb**	**02 46 09.1**	**+0.1**
	baz=301						
HATJ	**Hateruma jima**	**1.04**	**90**	P	**Pb**	**02 45 56.0**	**+0.2**
HATJ				S	**Sg**	**02 46 10.5**	**+0.2**
NTC	**Toucheng**	**1.10**	**316**	*e*P	**Pg**	**02 45 57.6**	**-0.2**
	baz=315						
NTC				*e*S	**Sb**	**02 46 10.2**	**-0.6**
	baz=315						
TWE	**Neicheng**	**1.12**	**306**	*e*P	**Pg**	**02 45 58.2**	**0.0**
	baz=304						
TWE				*i* S	**Sb**	**02 46 11.3**	**-0.2**
	baz=304						
ENTT	**Nioudou**	**1.16**	**300**	*i* P	**Pn**	**02 45 57.9**	**+0.2**
	baz=298						
ENTT				*e*S	**Sb**	**02 46 12.1**	**-0.4**
	baz=298						
NDT	**Datong Townshi**	**1.18**	**297**	*i* P	**Pn**	**02 45 58.4**	**+0.4**
	baz=296						
NDT				*e*S	**Sb**	**02 46 13.2**	**-0.1**
	baz=296						
TIPB	**Shuangxi**	**1.19**	**320**	*e*P	**Pb**	**02 45 58.9**	**+0.5**
	baz=319						
TIPB				*e*S	**Sn**	**02 46 14.0**	**+0.3**
	baz=319						
NNSB	**Datong**	**1.23**	**287**	P	**Pb**	**02 45 59.4**	**+0.2**
	baz=286						
NNSB				*e*S	**Sb**	**02 46 14.7**	**0.0**
	baz=286						
JKRS	**Kuro-shima**	**1.24**	**82**	P	**Pb**	**02 45 59.7**	**+0.5**
NNS	**Nan Shan**	**1.24**	**288**	*i* P	**Pn**	**02 45 58.7**	**-0.2**
	baz=287						
NNS				S	**Sn**	**02 46 15.5**	**+0.3**
	baz=287						
HGSD	**Ruisui**	**1.27**	**244**	*e*P	**Pg**	**02 46 01.6**	**+0.5**
	baz=241						
HGSD				*e*S	**Sn**	**02 46 14.5**	**-1.3**
	baz=241						
NWLT	**Wulai**	**1.28**	**304**	*i* P	**Pb**	**02 46 00.5**	**+0.6**
	baz=303						
NWLT				*i* S	**Sg**	**02 46 17.5**	**-0.4**
	baz=303						
WHF	**Hehuan Shan**	**1.28**	**274**	P	**Pn**	**02 46 00.0**	**+0.2**
	baz=272						
WHF				S	**Sn**	**02 46 17.9**	**+1.2**
	baz=272						
FUSS	**Fushou**	**1.31**	**278**	P	**Pn**	**02 46 00.6**	**+0.6**
	baz=277						
FUSS				*e*S	**Sn**	**02 46 16.6**	**-0.6**
	baz=277						
YHNB	**Yeheng**	**1.32**	**297**	*i* P	**Pb**	**02 46 01.1**	**+0.4**
	baz=304						
YHNB				*e*S	**Sn**	**02 46 17.2**	**+0.1**
	baz=304						
NSK	**Sanguang**	**1.34**	**297**	*i* P	**Pb**	**02 46 01.1**	**+0.1**
	baz=297						
NSK				S	**Sb**	**02 46 18.9**	**+1.0**
	baz=297						
EHY	**Hungye**	**1.35**	**246**	P	**Pn**	**02 46 00.3**	**0.0**
	baz=244						
EHY				S	**Sn**	**02 46 18.2**	**+0.4**
	baz=244						
JIJ	**Ishigaki jima**	**1.38**	**77**	P	**Pn**	**02 46 01.0**	**+0.3**
JIJ				S	**Sb**	**02 46 19.2**	**+0.3**
TDCB	**Techi**	**1.39**	**278**	P	**Pn**	**02 46 01.8**	**+0.8**
	baz=262						
TDCB				S	**Sb**	**02 46 19.8**	**+0.4**
	baz=262						
TATO	**Taipei**	**1.41**	**310**	*e*P	**Pb**	**02 46 02.6**	**+0.5**
	baz=310						
TATO				*e*S	**Sn**	**02 46 18.4**	**-0.7**
	baz=310						
YULB	**Yu-li**	**1.42**	**242**	P	**Pn**	**02 46 01.1**	**-0.2**
	baz=240						
YULB				*e*S	**Sn**	**02 46 18.9**	**-0.7**
	baz=240						
EYUL	**Yuli**	**1.43**	**240**	*e*P	**Pn**	**02 46 01.0**	**-0.4**
	baz=238						
EYUL				*e*S	**Sn**	**02 46 19.0**	**-0.6**
	baz=238						
VWDT	**VWDT**	**1.43**	**258**	*e*P	**Pn**	**02 46 02.3**	**+0.9**
	baz=256						
VWDT				*e*S	**Sn**	**02 46 20.0**	**+0.3**
	baz=256						
TWF1	**Yuli**	**1.44**	**241**	P	**Pn**	**02 46 01.4**	**-0.1**
	baz=238						
TWF1				*e*S	**Sn**	**02 46 20.2**	**+0.1**
	baz=238						
YM01	**YM01**	**1.47**	**317**	*e*P	**Pb**	**02 46 04.2**	**+1.0**
	baz=331						
YM01				*e*S	**Sn**	**02 46 20.6**	**-0.1**
	baz=331						
FULB	**Fuli**	**1.53**	**236**	P	**Pn**	**02 46 02.2**	**-0.5**
	baz=219						
FULB				*e*S	**Sn**	**02 46 21.3**	**-0.8**
	baz=219						
JISG	**Ishigakijimahi**	**1.59**	**71**	P	**Pn**	**02 46 03.7**	**+0.2**
JISG				*e*S	**Sn**	**02 46 23.7**	**+0.1**
WHP	**Taichung City**	**1.59**	**278**	P	**Pb**	**02 46 06.0**	**+0.7**
	baz=263						
WHP				*e*S	**Sg**	**02 46 27.6**	**-0.2**
	baz=263						
EDH	**Donghe**	**1.66**	**229**	*e*S	**Sn**	**02 46 22.9**	**-2.4**
	baz=214						
TYC	**Yuchr**	**1.66**	**265**	*e*P	**Pb**	**02 46 07.9**	**+1.4**
	baz=264						
YUS	**Yu-Shan**	**1.67**	**250**	P	**Pn**	**02 46 06.0**	**+0.8**
	baz=249						
YUS				S	**Sn**	**02 46 26.0**	**-0.4**
	baz=249						
ELDTW	**Lidau**	**1.75**	**240**	P	**Pn**	**02 46 05.6**	**-0.2**
	baz=238						
ELDTW				*e*S	**Sn**	**02 46 26.3**	**-1.4**
	baz=238						
LDUT	**Ludao**	**1.77**	**219**	*e*S	**Sn**	**02 46 25.8**	**-2.3**
	baz=216						
WJS	**Zhushan**	**1.79**	**263**	*e*S	**Sg**	**02 46 34.8**	**+0.6**
	baz=262						
WNT	**Mingjian**	**1.82**	**265**	*e*S	**Sg**	**02 46 34.5**	**-0.8**
	baz=264						
JTJ	**Tarama**	**1.94**	**72**	P	**Pn**	**02 46 09.3**	**+0.9**
JTJ				*e*S	**Sn**	**02 46 33.4**	**+1.1**
TPUB	**Ta-pu**	**2.02**	**248**	*e*P	**Pb**	**02 46 12.9**	**+0.3**
	baz=248						
TPUB				S	**Sb**	**02 46 37.6**	**+0.3**
	baz=248						
CHN1	**Nanshi**	**2.15**	**246**	S	**Sb**	**02 46 40.5**	**-0.6**
	baz=245						
TWK	**Hsinying**	**2.15**	**249**	P	**Pn**	**02 46 13.5**	**+2.2**
	baz=247						
TWK				S	**Sb**	**02 46 40.8**	**-0.4**
	baz=247						

IDC ***12*** *02:48:36.9±3.0,56°.68N×154°.77W,h0km,mb3.4/2, mb1 3.7/4,mb1mx3.2/53,mbtmp3.5/4,ML3.6/2,MS3.3/1, Ms1 3.3/1,ms1mx2.4/26,Error ellipse: s-maj=62.9km s-min=16.2km az=149.0*

NEIC ***12*** *02:48:47.2±1.6,57°.53N±0°.03×154°.96W±0°.06,h58km±9km, Error ellipse: s-maj=4.6km s-min=3.7km az=124.0*

AEIC ***12*** *02:48:48±1.9,57°.53N±0°.03×154°.98W±0°.06,h56km±6km, ML3.2,ML3.3/32(NEIC),Error ellipse: s-maj=4.3km s-min=4.0km az=83.0*

ISC 12 02:48:46.8±1.0,57°.55N±0°.05×154°.95W±0°.05,h73km±9km, n113,σ1§03/110,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAHL	**Cahill**	**0.54**	**340**		**Pn**	**02 49 00.1**	**-0.3**
KABR	**Katmai Barrier**	**0.59**	**359**		**Pn**	**02 49 00.6**	**-0.3**
KABR					**Sn**	**02 49 10.5**	**-0.7**
KJL	**Kejulik**	**0.61**	**327**		**Pn**	**02 49 00.9**	**-0.1**
KCE	**Katmai Mt Cerb**	**0.71**	**350**		**Pn**	**02 49 02.3**	**+0.2**
KCE					**Sn**	**02 49 13.1**	**-0.3**
PLK3	**Peulik 3**	**0.72**	**282**		**Pn**	**02 49 02.1**	**-0.1**
PLK3					**Sn**	**02 49 12.8**	**-0.9**
KBM	**Katmai Bkd Mtn**	**0.74**	**350**		**Pn**	**02 49 02.6**	**+0.1**
PLK2	**Peulik 2**	**0.77**	**287**		**Pn**	**02 49 02.7**	**0.0**
KVTA	**Katmai Vly 10**	**0.86**	**348**		**Pn**	**02 49 03.6**	**-0.1**
PLK1	**Peulik 1**	**0.93**	**287**		**Pn**	**02 49 04.4**	**-0.1**
OHAK	**Old Harbor**	**0.95**	**109**		**Pn**	**02 49 04.7**	**-0.2**
OHAK				IAML		02 49 19.6	
	comp=N,457nm,0.2s						
OHAK	**Old Harbor**	**0.95**	**109**		**Sn**	**02 49 18.5**	**+0.2**
OHAK	**Old Harbor**	**0.95**	**109**	P		02 49 05.0	
	baz=289						
OHAK				S		02 49 18.4	
	baz=289						
KARR	**Katmai Rainbow**	**0.96**	**8**		**Pn**	**02 49 05.4**	**+0.4**
KARR					**Sn**	**02 49 19.1**	**+0.5**
KELA	**Mount Kelaz**	**0.99**	**335**		**Pn**	**02 49 05.3**	**-0.1**
SII	**Sitkinak Islan**	**1.07**	**157**	Pn	**Pn**	**02 49 06.2**	**-0.1**
SII				IAML		02 49 21.6	
	comp=N,986nm,0.3s						
SII				IAML		02 49 22.4	
	comp=E,993nm,0.3s						
SII	**Sitkinak Islan**	**1.07**	**157**		**Sn**	**02 49 21.2**	**+0.3**
SII	**Sitkinak Islan**	**1.07**	**157**	P		02 49 06.5	
	baz=336						
SII				S		02 49 20.9	
	baz=336						
KAHC	**Katmai Hardscr**	**1.11**	**358**		**Pn**	**02 49 07.1**	**+0.3**
KDAK	**Kodiak Island**	**1.29**	**78**	Pg	**Pn**	**02 49 09.6**	**+0.5**
	comp=E,35nm,0.3s,baz=279,slow=9.8,SNR=360						
KDAK				Lg	Lg	02 49 26.6	
	comp=E,42nm,0.3s,baz=2.7,slow=21,SNR=31						
KDAK	**Kodiak Island**	**1.29**	**78**	Pn	**Pn**	**02 49 09.3**	**+0.2**
KDAK	**Kodiak Island**	**1.29**	**78**	P		02 49 09.8	
	baz=260						
KDAK				S		02 49 26.6	
	baz=260						
CHIR	**Chirikof Islan**	**1.77**	**192**		**Pn**	**02 49 15.0**	**-0.4**
CHIR					**Sn**	**02 49 36.4**	**-0.6**
CHIR	**Chirikof Islan**	**1.77**	**192**	IAML		02 49 36.8	
	comp=N,190nm,1.1s						
CHIR	**Chirikof Islan**	**1.77**	**192**	P		02 49 14.9	
	baz=12						
CHIR				S		02 49 36.2	
	baz=12						
AUH	**Augustine H**	**1.99**	**23**		**Pn**	**02 49 19.6**	**+1.2**
AUP	**Augustine Pinn**	**1.99**	**23**		**Pn**	**02 49 20.0**	**+1.6**
AUL	**Augustine Lava**	**2.01**	**23**		**Pn**	**02 49 20.0**	**+1.4**
OPT	**Oil Point**	**2.30**	**22**		**Pn**	**02 49 24.1**	**+1.6**
ILS	**Iliamna Low So**	**2.61**	**21**		**Pn**	**02 49 28.2**	**+1.4**
VNHG	**Veniaminof 1**	**2.67**	**242**		**Pn**	**02 49 28.6**	**+1.0**
IVE	**Iliamna Volcan**	**2.67**	**21**		**Pn**	**02 49 28.9**	**+1.2**
ILW	**Iliamna West**	**2.69**	**20**		**Pn**	**02 49 29.5**	**+1.5**
HOM	**Homer**	**2.73**	**38**	Pn	**Pn**	**02 49 30.0**	**+1.7**
HOM	**Homer**	**2.73**	**38**	P		02 49 29.5	
	baz=220						
CNPM	**China Poot**	**2.78**	**43**	Pn	**Pn**	**02 49 29.0**	**0.0**
CNPM				IAML		02 50 01.8	
	comp=N,69nm,1.5s						
BRLK	**Bradley Lake**	**3.07**	**42**		**Pn**	**02 49 33.5**	**+0.5**
BRLK	**Bradley Lake**	**3.07**	**42**	IAML		02 50 08.5	
	comp=E,101nm,0.2s						
RED	**Redoubt Volcan**	**3.09**	**20**		**Pn**	**02 49 35.0**	**+1.7**
BRSE	**Bradley Lake S**	**3.11**	**43**		**Pn**	**02 49 34.0**	**+0.5**
BRSE	**Bradley Lake S**	**3.11**	**43**	P		02 49 34.1	
	baz=227						
RSO	**Redoubt South**	**3.14**	**20**	Pn	**Pn**	**02 49 35.2**	**+1.2**
NCT	**North Crescent**	**3.20**	**18**		**Pn**	**02 49 36.2**	**+1.5**
DFR	**Drift River**	**3.27**	**20**		**Pn**	**02 49 37.4**	**+1.6**
SVW2	**Sparrevohn**	**3.58**	**355**	Pn	**Pn**	**02 49 40.2**	**+0.4**
CAPN	**Captain Cook N**	**3.78**	**30**	Pn	**Pn**	**02 49 44.9**	**+2.4**
SDPT	**Sand Point**	**3.78**	**237**		**Pn**	**02 49 42.8**	**+0.3**
SDPT	**Sand Point**	**3.78**	**237**	IAML		02 51 17.2	
	comp=E,74nm,2.3s						
SDPT	**Sand Point**	**3.78**	**237**	P		02 49 44.1	
	baz=52						
SLKM	**Skilak Lake**	**3.84**	**37**		**Pn**	**02 49 44.4**	**+0.8**
SPBG	**Spurr Blockage**	**3.95**	**18**		**Pn**	**02 49 46.6**	**+1.7**
SPCN	**Chakachatna No**	**3.95**	**20**		**Pn**	**02 49 46.1**	**+1.1**
SPCP	**Crater Peak Br**	**4.00**	**20**		**Pn**	**02 49 47.3**	**+1.6**
STLK	**Strandline Lak**	**4.27**	**20**		**Pn**	**02 49 50.8**	**+1.5**
RC01	**Rabbit Creek A**	**4.44**	**35**		**Pn**	**02 49 52.3**	**+0.7**
RC01	**Rabbit Creek A**	**4.44**	**35**	IAML		02 51 04.7	
	comp=N,30nm,3.7s						
RC01				IAML		02 51 08.2	
	comp=E,24nm,3.2s						
SUA	**Susitna One**	**4.47**	**27**		**Pn**	**02 49 53.3**	**+1.2**
SUA	**Susitna One**	**4.47**	**27**	IAML		02 50 41.8	
	comp=E,32nm,3.9s						
SUA				IAML		02 51 56.6	
	comp=N,32nm,3.9s						
PWL	**Port Wells**	**4.75**	**43**		**Pn**	**02 49 55.7**	**-0.1**
PWL	**Port Wells**	**4.75**	**43**	IAML		02 51 04.0	
	comp=N,29nm,1.6s						
PWL				IAML		02 51 13.3	
	comp=E,30nm,4.4s						
SKT	**Skwentna**	**4.77**	**20**		**Pn**	**02 49 56.8**	**+0.7**
SKT	**Skwentna**	**4.77**	**20**	IAML		02 51 24.2	
	comp=E,16nm,3.3s						
KNK	**Knik Glacier**	**5.10**	**38**		**Pn**	**02 50 00.5**	**0.0**
GHO	**Glory Hole Cre**	**5.22**	**33**		**Pn**	**02 50 02.4**	**+0.1**
GHO	**Glory Hole Cre**	**5.22**	**33**	IAML		02 50 55.2	
	comp=E,21nm,3.4s						
GHO				IAML		02 51 18.0	
	comp=N,24nm,4.4s						
GLI	**Glacier Island**	**5.24**	**47**		**Pn**	**02 50 01.8**	**-0.7**
TT01	**Tatalina**	**5.41**	**355**		**Pn**	**02 50 05.8**	**+1.0**
FID	**Port Fidalgo**	**5.41**	**50**		**Pn**	**02 50 03.8**	**-1.1**
SML	**Sawmill**	**5.43**	**35**		**Pn**	**02 50 05.4**	**+0.2**
JPK	**Jack Peak**	**5.54**	**47**		**Pn**	**02 50 06.5**	**-0.1**
SCM	**Sheep Creek Mo**	**5.78**	**39**		**Pn**	**02 50 10.1**	**+0.2**
DIV	**Divide**	**5.91**	**49**		**Pn**	**02 50 11.6**	**-0.1**
RAGM	**Ragged Mountai**	**6.03**	**57**		**Pn**	**02 50 13.8**	**+0.6**
KLU	**Klutina**	**6.06**	**45**		**Pn**	**02 50 14.4**	**+0.6**
GOAT	**Goat Mountain**	**6.08**	**56**		**Pn**	**02 50 14.5**	**+0.4**
WAT7	**Susitna Watana**	**6.11**	**27**		**Pn**	**02 50 14.6**	**+0.1**
WAT1	**Susitna Watana**	**6.18**	**28**		**Pn**	**02 50 15.6**	**+0.2**
WAT6	**Susitna Watana**	**6.20**	**33**		**Pn**	**02 50 15.8**	**0.0**
WAT2	**Susitna Watana**	**6.29**	**28**		**Pn**	**02 50 16.7**	**-0.2**
BMRM	**Bremner River**	**6.31**	**53**		**Pn**	**02 50 17.2**	**0.0**
TRF	**Thorofare Moun**	**6.35**	**19**		**Pn**	**02 50 18.3**	**+0.5**
M24K	**Tolsona, Glenn**	**6.36**	**40**		**Pn**	**02 50 18.4**	**+0.6**
GRIN	**Grindle Hills**	**6.62**	**61**		**Pn**	**02 50 21.7**	**+0.4**
N25K	**Chitina, Valde**	**6.64**	**48**		**Pn**	**02 50 22.1**	**+0.4**
BPAW	**Bear Paw Mtn.**	**6.85**	**15**		**Pn**	**02 50 24.4**	**-0.1**
GLB	**Gilahina Butte**	**6.88**	**51**		**Pn**	**02 50 25.2**	**+0.3**
VRDI	**Verde Repeater**	**6.93**	**53**		**Pn**	**02 50 25.7**	**0.0**
BWN	**Browne**	**7.16**	**20**	Pn	**Pn**	**02 50 27.7**	**-1.0**
PAX	**Paxson**	**7.19**	**37**		**Pn**	**02 50 29.6**	**+0.3**
KIAG	**Kiagna River**	**7.29**	**57**		**Pn**	**02 50 31.0**	**+0.4**
BALM	**Baldy**	**7.34**	**56**		**Pn**	**02 50 31.4**	**+0.2**
YAH	**Yahtse**	**7.39**	**62**	Pn	**Pn**	**02 50 31.4**	**-0.6**
GRNC	**Granite Creek**	**7.50**	**59**		**Pn**	**02 50 34.0**	**+0.5**
CHX	**Chaix Hills**	**7.61**	**65**		**Pn**	**02 50 35.7**	**+0.8**
NEA2	**Nenana**	**7.62**	**19**		**Pn**	**02 50 34.0**	**-0.9**
BARN	**Barnard Glacie**	**7.66**	**57**		**Pn**	**02 50 36.3**	**+0.7**
TABL	**Table Mountain**	**7.70**	**62**		**Pn**	**02 50 36.2**	**0.0**
WRH	**Wood River Hil**	**7.70**	**23**		**Pn**	**02 50 35.1**	**-0.9**
CTGM	**Chitina Glacie**	**7.77**	**58**		**Pn**	**02 50 37.9**	**+0.7**
MLY	**Manley**	**7.78**	**13**		**Pn**	**02 50 36.2**	**-0.9**
LOGN	**Logan Glacier**	**7.88**	**60**		**Pn**	**02 50 38.8**	**+0.2**
CCB	**Clear Creek Bu**	**7.92**	**23**		**Pn**	**02 50 38.5**	**-0.4**
PCA	**Pinnacle**	**8.04**	**65**		**Pn**	**02 50 41.0**	**+0.3**
I23K	**Minto, Yukon-K**	**8.08**	**17**		**Pn**	**02 50 40.8**	**-0.4**
MDM	**Murphy Dome**	**8.11**	**21**	Pn	**Pn**	**02 50 41.0**	**-0.6**
DOT	**Dot Lake**	**8.12**	**37**	Pn	**Pn**	**02 50 42.0**	**+0.2**
IL31		**8.22**	**25**		**Pn**	**02 50 42.5**	**-0.6**
ILAR	**Eielson Array**	**8.22**	**25**	Pn	**Pn**	**02 50 42.3**	**-0.9**
	comp=N,0.4nm,0.3s,baz=215,slow=14,SNR=15						
ILAR				Sn	**Sn**	**02 52 08.0**	**-6.4**
	comp=N,0.1nm,0.3s,baz=263,slow=30,SNR=1.8						
YUK2	**White River**	**8.30**	**53**		**Pn**	**02 50 45.7**	**+1.4**
YUK3	**Moose Creek**	**8.46**	**54**		**Pn**	**02 50 47.4**	**+0.7**
IM03		**8.49**	**3**		**Pn**	**02 50 47.5**	**+0.8**
IMAR	**Indian Mountai**	**8.49**	**3**	Pn	**Pn**	**02 50 47.5**	**+0.7**
BC03		**8.55**	**44**		**Pn**	**02 50 48.4**	**+0.8**
BCAR	**Beaver Creek A**	**8.55**	**44**	Pn	**Pn**	**02 50 47.6**	**-0.1**
PRP	**Porcupine Dome**	**9.16**	**25**	Pn	**Pn**	**02 50 56.5**	**+0.4**
YUK5	**Granite Creek**	**9.43**	**60**		**Pn**	**02 51 01.3**	**+1.5**
INK	**Inuvik**	**14.44**	**33**	Pn	**P**	**02 52 11.9**	**+0.1**
	comp=N,0.2nm,0.3s,baz=236,slow=13,SNR=2.4						
C36M	**Paulatuk**	**17.90**	**36**	P	**P**	**02 52 50.6**	**+0.5**
YKA	**Yellowknife Ar**	**20.49**	**59**	P	**P**	**02 53 19.9**	**+1.6**
	comp=N,0.9nm,0.8s,baz=271,slow=10,SNR=13						
PETK	**Petropavlovsk-**	**26.86**	**281**	P	**P**	**02 54 20.8**	**+0.6**
	comp=N,0.3nm,0.3s,baz=78,slow=11,SNR=6.2						
RES	**Resolute Bay**	**27.94**	**29**	LR	LR	03 06 39.3	
	comp=N,55nm,20.4s,baz=112,slow=38						

BJI ***12*** *02:49:28.6±0.0,24°.95N×128°.33E,h17km,mB4.6/24, mb4.4/34,Ms3.8/9,Ms7 3.6/4*

IDC ***12*** *02:49:28.2±0.5,25°.07N×128°.09E,h0km,mb4.2/24, mb1 4.3/28,mb1mx4.2/49,mbtmp4.2/28,ML3.6/4,MS3.1/12, Ms1 3.2/12,ms1mx2.9/51,Error ellipse: s-maj=18.0km s-min=11.9km az=94.0*

MOS ***12*** *02:49:30.3±1.1,25°.11N×128°.11E,h23km,mb4.8/25,Error ellipse: s-maj=9.5km s-min=5.9km az=94.6*

NEIC ***12*** *02:49:30.3±1.9,25°.10N±0°.07×128°.30E±0°.07,h10km±1km, mb4.6/48,Error ellipse: s-maj=11.7km s-min=11.4km az=207.0*

NIED ***12*** *02:49:32.3,25°.20N×128°.09E,h76km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.14; $M_{\theta\theta}$0.64; $M_{\phi\phi}$ 1.51; $M_{r\theta}$-0.73; $M_{\theta\phi}$0.96; $M_{\phi r}$1.29; Fault plane solution: $M_0$2.55000×10^{15} NP1: ϕ_s187.00000°,δ60.00000°,λ-117.00000°. NP2: ϕ_s52.00000°,δ40.00000°,λ-52.00000°.*

JMA ***12*** *02:49:32.2±0.3,25°.20N×128°.09E,h76km,M4.3*

ISC 12 02:49:30.3±0.8,25°.10N±0°.04×128°.19E±0°.04,h11km±4km, n177,σ1§84/199,mb4.6/67,MS3.2/14,9C,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**1.10**	**340**	P	**Pb**	**02 49 51.2**	**-0.1**
JJT3				S	**Sb**	**02 50 05.1**	**-0.6**
JNTH	**Nagotoyohara**	**1.42**	**354**	P	**Pn**	**02 49 55.1**	**-0.9**
JNTH				*e*S	**Sn**	**02 50 10.9**	**-3.8**
JAGN	**Aguni-jima**	**1.71**	**330**	P	**Pn**	**02 49 59.6**	**-0.4**
JAGN				S	**Sn**	**02 50 19.3**	**-2.6**
JOW	**Kunigami**	**1.73**	**2**	Pn	**Pn**	**02 49 59.6**	**-0.6**
	88nm,0.3s,baz=140,slow=24,SNR=183						
JOW				Sn	**Sn**	**02 50 19.2**	**-3.1**
	136nm,0.3s,baz=131,slow=24,SNR=6.2						
JOW				LR	LR	02 50 30.1	
	comp=Z,268nm,18.7s,baz=92,slow=35						
JOW	**Kunigami**	**1.73**	**2**	P	**Pn**	**02 49 59.6**	**-0.6**
JOW				*e*S	**Sn**	**02 50 19.0**	**-3.2**
JOW	**Kunigami**	**1.73**	**2**	Pn	**Pn**	**02 49 59.5**	**-0.7**
JKE	**Kume jima 2**	**1.76**	**314**	P	**Pn**	**02 49 59.7**	**-1.0**
JKE				S	**Sn**	**02 50 20.2**	**-2.9**
JYRO	**Yoronjima**	**1.93**	**7**	P	**Pn**	**02 50 02.2**	**-0.8**
JYRO				S	**Sn**	**02 50 23.5**	**-3.7**
JIH	**Iheya**	**1.94**	**354**	P	**Pn**	**02 50 02.9**	**-0.2**
JIH				*e*S	**Sn**	**02 50 24.8**	**-2.6**
JOKE	**Okinoerabujima**	**2.28**	**8**	P	**Pn**	**02 50 07.3**	**-0.5**
JOKE				*e*S	**Sn**	**02 50 32.0**	**-3.8**
JOGS	**Gusukube**	**2.55**	**263**	P	**Pn**	**02 50 10.6**	**-1.0**
JOGS				*e*S	**Sn**	**02 50 38.6**	**-4.1**
JMJ2	**Miyako jima3**	**2.63**	**263**	P	**Pn**	**02 50 11.4**	**-1.2**
JMJ2				*e*S	**Sn**	**02 50 40.3**	**-4.2**
JIKM	**Ikemajima**	**2.68**	**267**	P	**Pn**	**02 50 12.0**	**-1.3**
JIKM				*e*S	**Sn**	**02 50 42.8**	**-2.9**
JIRB	**Irabujima**	**2.75**	**265**	P	**Pn**	**02 50 12.8**	**-1.6**
JIRB				S	**Sn**	**02 50 43.3**	**-4.3**
JTK	**Tokunoshima**	**2.76**	**14**	P	**Pn**	**02 50 14.1**	**-0.3**
JTK				S	**Sn**	**02 50 43.6**	**-4.1**
JMZ	**Minamidaito 2**	**2.83**	**75**	P	**Pn**	**02 50 13.1**	**-2.3**
JMZ				S	**Sn**	**02 50 44.3**	**-5.1**
JMZ	**Minamidaito 2**	**2.83**	**75**	Pn	**Pn**	**02 50 12.9**	**-2.4**
JKDJ	**Kitadaitoujima**	**2.93**	**73**	P	**Pn**	**02 50 14.8**	**-2.0**
JKDJ				S	**Sn**	**02 50 46.7**	**-5.2**
JTJ	**Tarama**	**3.20**	**263**	P	**Pn**	**02 50 18.9**	**-1.6**
JTJ				*e*S	**Sn**	**02 50 53.5**	**-5.2**
JAMN	**Amaminishikomi**	**3.25**	**15**	P	**Pn**	**02 50 21.1**	**-0.1**
JAMN				S	**Sn**	**02 50 56.4**	**-3.4**
JAM	**Amami Oshima**	**3.53**	**21**	P	**Pn**	**02 50 25.2**	**+0.2**
JAM				S	**Sn**	**02 51 02.0**	**-4.8**
JISG	**Ishigakijimahi**	**3.56**	**263**	P	**Pn**	**02 50 23.5**	**-2.0**
JISG				S	**Sn**	**02 51 02.8

comp=Z,19nm,1.0s
YSS Yuzh-Sakhalins 24.70 24 *e*P **P 02 54 52.7 +1.4**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 24.70 24 P **P 02 54 52.1 +0.8**
TOLI2 Tolitoli 24.90 198 P **P 02 54 55.4 +2.0**
HIA Hailar 25.01 347 *i* P **P 02 54 54.7 +0.6**
HIA pmax pmax
comp=Z,2.0nm,0.8s
GTA Gaotai 27.78 308 *e*P **P 02 55 19.6 +0.2**
GTA pP sP 02 55 25.1 +3.7
GTA sP pwP 02 55 28.6 -1.0
GTA pmax pmax
comp=Z,4.0nm,0.7s
GTA pmax pmax
comp=Z,96nm,5.5s
GTA LR LR
comp=Z,80nm,14.2s
GTA LR LR
comp=Z,76nm,14.9s
CMAR Chiang Mai Arr 27.92 262 P **P 02 55 18.8 -1.9**
comp=Z,0.2nm,0.4s,baz=64,slow=8.1,SNR=1.6
CMAR LR LR 03 08 12.6
comp=Z,67nm,18.1s,baz=140,slow=40
TYV Tymovskoe 28.03 20 *e*P P 02 55 30.9 +10
TYV pmax pmax
comp=Z,12nm,1.2s
TYV pmax pmax
comp=Z,100nm,4.3s
SONM Songino Array 28.49 328 P **P 02 55 24.4 -1.2**
comp=Z,1.4nm,0.7s,baz=143,slow=10,SNR=8.2
SONM LR LR 03 08 54.1
comp=Z,45nm,19.4s,baz=88,slow=41
SONM Songino Array 28.49 328 P **P 02 55 27.2 +1.6**
SONM pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 28.49 328 P **P 02 55 27.2 +1.6**
JAY Jayapura 30.02 154 LR LR 03 08 41.0
comp=Z,20nm,18.2s,baz=146,slow=38
PETK Petropavlovsk- 35.68 31 P **P 02 56 29.1 +0.7**
comp=Z,3.6nm,0.9s,baz=149,slow=3.1,SNR=4.7
PETK LR LR 03 13 02.3
comp=Z,27nm,18.5s,baz=259,slow=40
PET Petropavlovsk 36.07 31 *ce*P **P 02 56 31.4 -0.3**
PET pmax pmax
comp=Z,123nm,2.5s
YAK Yakutsk 36.93 1 *e*P **P 02 56 38.6 -0.3**
YAK pmax pmax
comp=Z,26nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK Yakutsk 36.93 1 P **P 02 56 38.6 -0.3**
WMQ Urumqi 37.80 310 *e*P **P 02 56 50.3 +3.6**
WMQ pP pwP 02 56 53.7 -3.2
WMQ pmax pmax
comp=N,13nm,1.3s
WMQ pmax pmax
comp=N,150nm,5.7s
MTN Manton Dam 37.82 175 P **P 02 56 46.9 -0.1**
MTN IAmb IAmb 02 56 48.3
comp=Z,8.8nm,1.0s
MA2 Magadan 37.89 19 P **P 02 56 46.9 -0.2**
comp=Z,1.8nm,0.7s,baz=196,slow=7.1,SNR=5.5
MA2 Magadan 37.89 19 *ce*P **P 02 56 46.6 -0.5**
MA2 pmax pmax
comp=Z,2.0nm,0.8s
MA2 Magadan 37.89 19 P **P 02 56 46.9 -0.2**
KNRA Kununurra 40.53 179 P **P 02 57 10.1 +0.5**
SEY Seymchan 41.11 17 P **P 02 57 14.1 +0.2**
comp=Z,2.6nm,0.7s,baz=211,slow=6.7,SNR=16
COEN Coen 41.48 158 P **P 02 57 18.5 +1.0**
MK31 Makanchi Array 42.27 313 *i* P **P 02 57 24.1 +0.4**
MK31 Makanchi Array 42.27 313 P **P 02 57 24.4 +0.7**
MKAR Makanchi Array 42.27 313 P **P 02 57 22.9 -0.8**
comp=Z,1.2nm,0.5s,baz=98,slow=10,SNR=14
MKAR PcP **PcP 02 59 17.3 -0.1**
comp=Z,0.7nm,0.6s,baz=82,slow=3.7,SNR=4.1
MKAR LR LR 03 14 42.5
comp=Z,30nm,18.3s,baz=54,slow=36
MKAR Makanchi Array 42.27 313 P **P 02 57 23.3 -0.4**
MKAR Makanchi Array 42.27 313 P **P 02 57 23.2 -0.4**
FITZ Fitzroy Crossi 43.01 184 P **P 02 57 28.9 -1.0**
comp=Z,3.7nm,0.7s,baz=11,slow=8.4,SNR=15
FITZ Fitzroy Crossi 43.01 184 P **P 02 57 31.1 +1.3**
ZAA0 Zalesovo Array 43.13 324 P **P 02 57 31.1 +0.6**
ZALV Zalesovo Beam 43.13 324 P **P 02 57 30.2 -0.3**
comp=Z,3.7nm,0.5s,baz=114,slow=8.8,SNR=14
ZALV LR LR 03 15 48.7
comp=Z,30nm,21.5s,baz=42,slow=37
ZALV Zalesovo Beam 43.13 324 *i* P **P 02 57 30.7 +0.2**
ZALV pmax pmax
comp=Z,4.0nm,0.5s
ZALV Zalesovo Beam 43.13 324 P **P 02 57 30.7 +0.2**
WRAB Tennant Creek 45.16 172 *i* P **P 02 57 47.2 0.0**
WRAB pmax pmax
comp=Z,4.0nm,1.0s
WRA Warramunga Arr 45.17 172 P **P 02 57 46.4 -0.8**
comp=Z,3.4nm,0.8s,baz=352,slow=8.8,SNR=10
WRA PcP **PcP 02 59 26.3 -1.2**
comp=Z,0.4nm,0.7s,baz=347,slow=3.8,SNR=1.2
WRA Warramunga Arr 45.17 172 *ce*P **P 02 57 48.7 +1.5**
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRA Warramunga A 45.17 172 IAmb IAmb 02 57 49.7
comp=Z,0.3nm,1.1s
WB2 Warramunga Arr 45.17 172 P **P 02 57 48.2 +1.0**
WB2 IAmb IAmb 02 57 49.6
comp=Z,8.5nm,1.0s
KURK Kurchatov 45.62 317 P **P 02 57 50.0 -0.5**
KURK 02 59 27.6
KURK Kurchatov 45.62 317 P **P 02 57 50.0 -0.5**
KURK **PcP 02 59 27.6 -1.1**
KURBB Kurchatov Arra 45.65 317 P **P 02 57 50.0 -0.8**
comp=Z,1.0nm,0.7s,baz=103,slow=8.2,SNR=8.8
KURBB PcP **PcP 02 59 27.6 -1.3**
comp=Z,0.7nm,0.7s,baz=106,slow=4.1,SNR=4.3
PSA00 Pilbara Seismi 47.10 191 P **P 02 58 05.3 +3.0**
NIL Nilore 48.16 294 P **P 02 58 12.8 +2.1**
NIL pmax pmax
comp=Z,4.0nm,0.7s
NIL Nilore 48.16 294 P **P 02 58 12.8 +2.1**
NIL IAmb IAmb 02 58 15.0
comp=Z,3.7nm,0.7s
BILL Bilibino 48.75 18 *e*P **P 02 58 14.8 +0.1**
BILL *e* 02 59 39.0
BILL *e* 03 00 04.4
BILL *e*PPP PPP 03 00 55.1
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL Bilibino 48.75 18 P **P 02 58 15.1 +0.5**
BILL IAmb IAmb 02 58 19.8
comp=Z,3.6nm,0.9s
ASAR Alice Springs 48.79 173 P **P 02 58 15.1 -0.5**
comp=Z,1.2nm,0.8s,baz=352,slow=6.2,SNR=11
ASAR PcP **PcP 02 59 40.0 -0.3**
comp=Z,0.9nm,0.9s,baz=351,slow=2.9,SNR=2.9
KK31 Karatay Array 50.04 306 P **P 02 58 26.4 +1.5**
KK31 pmax pmax
comp=Z,2.0nm,1.1s
KK31 Karatay Array 50.04 306 P **P 02 58 26.4 +1.5**
KKAR Karatay Array 50.04 306 P **P 02 58 26.3 +1.3**
KKAR Karatay Array 50.04 306 P **P 02 58 26.3 +1.3**
NRIK Noril'sk 50.31 343 P **P 02 58 24.8 -1.8**
comp=Z,3.6nm,0.5s,baz=127,slow=8.5,SNR=4.2
NRIK Noril'sk 50.31 343 *ce*P **P 02 58 26.6 +0.1**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
NRIK Noril'sk 50.31 343 P **P 02 58 26.7 +0.1**
NRIK IAmb IAmb 02 58 27.1
comp=Z,5.6nm,0.9s
BRVK Borovoye 51.16 319 *ce*P **P 02 58 33.7 +0.5**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK Borovoye 51.16 319 P **P 02 58 33.8 +0.6**
BRVK IAmb IAmb 02 58 34.3
comp=Z,6.1nm,1.1s
KBL Kabul 51.54 295 P **P 02 58 36.8 +0.1**
KBL pmax pmax
comp=Z,5.0nm,0.7s
KBL Kabul 51.54 295 P **P 02 58 36.8 +0.1**
KBL IAmb IAmb 02 58 38.0
comp=Z,4.9nm,0.7s
HRA Herat 57.13 296 P **P 02 59 18.3 +1.0**
ABKAR Akbulak array 57.40 314 P **P 02 59 18.9 +0.2**
ABKAR IAmb IAmb 02 59 19.8
comp=Z,3.0nm,0.7s
ARU Arti 58.26 322 P **P 02 59 23.5 -1.1**
ARU S **S 03 07 27.5 +1.1**
ARU SS **SS 03 11 12.5 -5.3**
NWAO Narrogin (SRO) 58.64 191 LR LR 03 22 59.2
comp=Z,18nm,21.4s,baz=68,slow=34
GYA0B ALIBECK ARRAY 59.83 301 P **P 02 59 36.8 +0.9**
GYA0B IAmb IAmb 02 59 37.6
comp=Z,7.3nm,1.1s
KIRV Kirov 63.14 325 *ce*P **P 02 59 58.1 +0.3**
MLY Manley 63.78 28 P **P 03 00 02.7 +0.6**
MLY IAmb IAmb 03 00 04.8
comp=Z,4.9nm,1.0s
I23K Minto, Yukon-K 64.36 28 P **P 03 00 06.5 +0.8**
I23K IAmb IAmb 03 00 27.0
comp=Z,9.9nm,1.4s
BWN Browne 64.39 29 P **P 03 00 07.1 +1.0**
MCK McKinley 64.67 29 P **P 03 00 08.2 +0.3**
MCK pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 64.67 29 P **P 03 00 08.2 +0.3**
RND Reindeer 64.73 30 P **P 03 00 08.2 -0.2**
RND pmax pmax
comp=Z,7.0nm,0.8s
RND Reindeer 64.73 30 P **P 03 00 08.2 -0.2**
RND IAmb IAmb 03 00 09.3
comp=Z,7.1nm,0.8s
PRGR Permogore 64.74 328 *e*P **P 03 00 07.6 -0.7**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
POKR Poker Plat Res 65.17 28 IAmb IAmb 03 00 13.2
comp=Z,8.2nm,1.1s
ILAR Eielson Array 65.44 28 P **P 03 00 12.4 -0.5**
comp=Z,0.8nm,0.8s,baz=268,slow=6.7,SNR=11
BMAR Burnt Mountain 66.04 25 P **P 03 00 17.3 +0.6**
DOT Dot Lake 66.83 29 IAmb IAmb 03 00 22.6
comp=Z,4.5nm,0.9s
KLMR Klimovskoe 67.78 328 *e*P **P 03 00 24.6 -3.2**
KLMR *e* 03 02 54.6
KLMR pmax pmax
comp=Z,16nm,1.5s
KLMR Klimovskoe 67.78 328 *e*P **P 03 00 24.6 -3.2**
KLMR AMP 03 00 35.4
comp=Z,16nm,1.5s
KLMR *e*PP **PP 03 02 54.7 -2.2**
VRH Novokhopyorsk 68.71 318 *e*P **P 03 00 32.3 -1.6**
VRH pmax pmax
comp=Z,8.0nm,0.8s
ZEI Tsey 69.39 309 *e*P **P 03 00 36.7 -1.9**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 69.85 310 P **P 03 00 41.6 +0.6**
comp=Z,5.1nm,0.9s,baz=150,slow=3.4,SNR=16
INK Inuvik 69.93 23 P **P 03 00 41.6 +0.5**
comp=Z,3.6nm,0.9s,baz=269,slow=6.6,SNR=8.3
INK Inuvik 69.93 23 IAmb IAmb 03 00 42.6
comp=Z,7.1nm,1.1s
KIV Kislovodsk 69.93 310 *e*P **P 03 00 40.6 -1.1**
KIV pmax pmax
comp=Z,28nm,1.1s
KIV MLR MLR
comp=Z,84nm,17.0s
KIV Kislovodsk 69.93 310 P **P 03 00 42.8 +1.1**
KIV IAmb IAmb 03 00 47.3
comp=Z,8.7nm,1.0s
LPSR Galich'ya Gora 70.04 320 *e*P **P 03 00 41.4 -0.6**
LPSR pmax pmax
comp=Z,8.0nm,0.8s
VORD Divnogorie 70.25 318 *e*P **P 03 00 42.0 -1.4**
VORD pmax pmax
comp=Z,4.0nm,0.7s
VSR Storozhevoye 70.26 318 *e*P **P 03 00 42.6 -0.8**
VSR pmax pmax
comp=Z,8.0nm,1.0s
OBN Obninsk 70.70 323 LR LR 03 32 28.7
comp=Z,19nm,19.6s,baz=172,slow=36
OBN Obninsk 70.70 323 *e*P **P 03 00 44.2 -1.8**
OBN *e* 03 01 05.5
OBN *e* 03 03 21.8
OBN *e*PPP PPP 03 05 04.7
OBN pmax pmax
comp=Z,5.0nm,0.9s
SOC Sochi 72.10 310 *e*P **P 03 00 52.2 -2.5**
SOC *e* 03 03 31.4
SOC *e*PPP PPP 03 05 10.9
SOC *e*S **S 03 10 16.6 -0.2**
SOC *e*SS **SS 03 14 52.5 -1.0**
SOC pmax pmax
comp=Z,4.0nm,0.3s
C36M Paulatuk 72.75 21 IAmb IAmb 03 00 59.4
comp=Z,8.2nm,1.1s
EUNU Eureka 73.40 6 IAmb IAmb 03 01 02.1
comp=Z,3.3nm,0.8s
FINES FINESS Array B 73.83 331 P **P 03 01 04.4 -0.2**
comp=Z,3.0nm,0.7s,baz=74,slow=6.3,SNR=16
NACGM Naroch 76.06 324 *i* P **P 03 01 18.3 +0.6**
NACGM *i* P **P 03 01 18.3 +0.6**
NACGM *i* P **P 03 01 18.3 +0.6**
NACGM *i* Pb **sP 03 01 19.5 0.0**
comp=Z,9.0nm,0.8s
NACGM *i* PcP **pwP 03 01 28.5 -0.1**
NACGM *i* PP **PP 03 04 12.3 +4.3**
NACGM *i* PPP PPP 03 05 59.8
NACGM *i* S **S 03 11 06.3 +5.4**
NACGM *i* PS PnS 03 12 22.2 +45
NACGM *i* SS SS 03 15 40.1 -13
NACGM *i* SSS SSS 03 19 14.2
NACGM *i* LQ LQ 03 30 04.4
NACGM *i* LR LR 03 36 15.4
AKASG Malin Array Be 76.37 320 P **P 03 01 19.0 -0.5**
comp=Z,2.1nm,0.6s,baz=57,slow=6.0,SNR=11
AKASG Malin Array Be 76.37 320 P **P 03 01 19.4 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 76.37 320 P **P 03 01 19.4 -0.1**
AKBB Malin Array Si 76.37 320 *ce*P **P 03 01 19.3 -0.2**
AKBB Malin Array Si 76.37 320 P **P 03 01 19.5 0.0**
AKBB IAmb IAmb 03 01 19.9
comp=Z,3.8nm,0.8s
RES Resolute Bay 76.66 11 P **P 03 01 20.9 +0.2**
comp=Z,3.1nm,0.7s,baz=304,slow=6.0,SNR=19
RES Resolute Bay 76.66 11 IAmb IAmb 03 01 21.7
comp=Z,3.9nm,0.8s
BR131 Keskin Array S 77.70 308 IAmb IAmb 03 01 42.4
comp=Z,4.4nm,1.1s
BRTR Keskin Array B 77.70 308 P **P 03 01 27.4 0.0**
comp=Z,1.8nm,1.0s,baz=97,slow=5.0,SNR=9.7
BRTR Keskin Array B 77.70 308 P **P 03 01 26.9 -0.5**
YKA Yellowknife Ar 79.56 25 P **P 03 01 37.4 +0.4**
comp=Z,1.6nm,0.8s,baz=301,slow=4.9,SNR=25
BURAR Bucovina Array 80.04 318 P **P 03 01 40.5 +0.4**
BURAR Bucovina Array 80.04 318 P **P 03 01 40.2 +0.1**
NOA NORSAR Array B 80.31 334 P **P 03 01 40.4 -0.7**
comp=Z,2.4nm,0.8s,baz=52,slow=5.3,SNR=6.7
SUMG Summit 82.15 356 *i* P **P 03 01 51.6 +0.4**
SUMG IAmb IAmb 03 01 53.0
comp=Z,4.1nm,0.9s
SUMG Summit 82.15 356 *i* P **P 03 01 51.6 +0.4**
SUMG pmax pmax
comp=Z,4.0nm,0.9s
SUMG Summit 82.15 356 P **P 03 01 51.1 -0.1**
VTS Vitosha 83.58 314 IAmb IAmb 03 02 13.2
comp=Z,3.6nm,0.8s
CLL Colln 85.06 325 *e*P **P 03 02 06.0 0.0**
GERES GERESS Array B 86.08 323 P **P 03 02 11.1 -0.1**
comp=Z,0.3nm,0.7s,baz=57,slow=4.9,SNR=4.5
GERES GERESS Array B 86.08 323 P **P 03 02 11.8 +0.5**
GERES GERESS Array B 86.08 323 P **P 03 02 11.8 +0.5**
MOD Modoc Plateau 88.13 44 P **P 03 02 21.8 +0.4**
MOD IAmb IAmb 03 02 23.2
comp=Z,4.2nm,0.9s
NVAR Mina Array Bea 91.31 46 P **P 03 02 37.5 +1.0**
comp=Z,0.9nm,0.8s,baz=276,slow=4.9,SNR=7.1
NVAR Mina Array Bea 91.31 46 P **P 03 02 36.8 +0.3**
TPH Tonopah 92.21 46 P **P 03 02 41.2 +0.5**
TPH pmax pmax
comp=Z,17nm,1.1s
TPH Tonopah 92.21 46 P **P 03 02 41.2 +0.5**
TPNV Topopah Spring 93.49 46 P **P 03 02 47.1 +0.6**
TPNV pmax pmax
comp=Z,4.0nm,1.0s
TPNV Topopah Spring 93.49 46 P **P 03 02 47.1 +0.6**
TPNV IAmb IAmb 03 02 48.0
comp=Z,4.3nm,1.0s

SOF **12** *02:54:39.1,40˚.92N×22˚.44E,h5km,MD2.8*
SKO **12** *02:54:39.4,40˚.95N×22˚.48E,h15km*
IASPEI **12** *02:54:40.9±0.8,40˚.93N±0˚.02×22˚.46E±0˚.02,h8km±4km, Error ellipse: s-maj=2.8km s-min=2.5km az=164.4,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISK **12** *02:54:40.8,40˚.94N×22˚.48E,h5km,ML2.8/3*
BEO **12** *02:54:41.9±0.4,40˚.99N×22˚.46E,h4km±2km,ML2.5/9*
ATH **12** *02:54:41.1,40˚.92N×22˚.46E,h7km±2km,ML2.6/5,Error ellipse: s-maj=2.2km s-min=0.8km az=352.0*
THE **12** *02:54:41.1,40˚.92N×22˚.48E,h3km,ML2.6/10,Error ellipse: s-maj=0.8km s-min=0.3km az=331.0*
ISC 12 02:54:41.0±0.8, 40˚.93N±0˚.02×22˚.47E±0˚.01, h7km±4km, n93, σ0.971/132, 7C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRG	**Griva**	**0.06**	**299**	P	**Pg**	**02 54 42.6**	**0.0**
GRG				S	**Sg**	**02 54 43.9**	**0.0**
GRG				AML	AML	02 54 44.4	
	comp=N,57510μm,0.1s						
GRG				AML	AML	02 54 44.8	
	comp=E,41653μm,0.1s						
GRG	**Griva**	**0.06**	**299**	P	**Pg**	**02 54 42.7**	**0.0**
GRG				S	**Sg**	**02 54 44.0**	**0.0**
GRG	**Griva**	**0.06**	**299**	PG	**Pg**	**02 54 42.7**	**0.0**
GRG				SG	**Sg**	**02 54 44.0**	**0.0**
GRG	**Griva**	**0.06**	**299**	↑*i*Pg	**Pg**	**02 54 42.6**	**0.0**
GRG				*i* Sg	**Sg**	**02 54 43.9**	**0.0**
VAY	**Valandovo**	**0.40**	**11**	*e*Pg	**Pg**	**02 54 48.6**	**-0.2**
VAY				*e*Sg	**Sg**	**02 54 53.3**	**-0.7**
VAY	**Valandovo**	**0.40**	**11**	↑*i*Pg	**Pg**	**02 54 48.7**	**0.0**
VAY				*i* Sg	**Sg**	**02 54 54.7**	**+0.7**
VAY				*e*Lg	Lg	02 54 54.9	
	comp=E,835nm,0.7s						
VAY				*e*Lg	Lg	02 54 55.8	
	comp=N,652nm,0.8s						
KNT	**Kendrikon**	**0.40**	**54**	P	**Pg**	**02 54 49.2**	**+0.4**
KNT				S	**Sg**	**02 54 55.0**	**+0.9**
KNT				AML	AML	02 54 55.3	
	comp=N,3293μm,0.6s						
KNT				AML	AML	02 54 56.4	
	comp=E,2460μm,0.2s						
KNT	**Kendrikon**	**0.40**	**54**	P	**Pg**	**02 54 49.1**	**+0.4**
KNT				S	**Sg**	**02 54 54.5**	**+0.4**
	comp=E,1μm,0.4s						
KNT	**Kendrikon**	**0.40**	**54**	PG	**Pg**	**02 54 48.7**	**-0.1**
KNT				SG	**Sg**	**02 54 54.7**	**+0.6**
KNT	**Kendrikon**	**0.40**	**54**	↑*i*Pg	**Pg**	**02 54 49.2**	**+0.4**
KNT				*i* Sg	**Sb**	**02 54 55.1**	**-1.6**
THE	**Thessaloniki**	**0.48**	**128**	P	**Pg**	**02 54 49.8**	**-0.5**
THE				AML	AML	02 54 56.8	
	comp=N,1569μm,0.4s						
THE				S	**Sg**	**02 54 56.8**	**+0.3**
THE				AML	AML	02 54 58.7	
	comp=E,1078μm,0.3s						
THE	**Thessaloniki**	**0.48**	**128**	P	**Pg**	**02 54 50.0**	**-0.2**
THE				S	**Sg**	**02 54 56.5**	**0.0**
	comp=E,588nm,0.2s						
THE	**Thessaloniki**	**0.48**	**128**	*i* Pg	**Pg**	**02 54 49.9**	**-0.4**
THE				*i* Sg	**Sg**	**02 54 56.8**	**+0.3**
HORT	**Hortiatis**	**0.58**	**124**	P	**Pg**	**02 54 51.6**	**-0.6**
HORT				S	**Sg**	**02 55 00.5**	**+0.7**
HORT				AML	AML	02 55 05.5	
	comp=E,1058μm,0.3s						
HORT				AML	AML	02 55 05.8	
	comp=N,1817μm,0.4s						
HORT	**Hortiatis**	**0.58**	**124**	P	**Pg**	**02 54 51.8**	**-0.4**
HORT	**Hortiatis**	**0.58**	**124**	PG	**Pg**	**02 54 52.6**	**+0.4**
KTI	**Kastanea**	**0.60**	**207**	P	**Pg**	**02 54 52.2**	**-0.3**
SOH	**Sokhos**	**0.68**	**99**	P	**Pg**	**02 54 54.1**	**+0.1**
SOH				S	**Sg**	**02 55 03.5**	**+0.5**
SOH	**Sokhos**	**0.68**	**99**	P	**Pg**	**02 54 54.2**	**+0.1**
SOH				S	**Sg**	**02 55 03.4**	**+0.5**
	comp=N,932nm,0.3s						
SOH	**Sokhos**	**0.68**	**99**	↓*e*Pg	**Pg**	**02 54 54.3**	**+0.2**
SOH				*i* Sg	**Sg**	**02 55 03.8**	**+0.9**
STIP	**Stip**	**0.79**	**345**	↑*e*Pg	**Pg**	**02 54 55.7**	**-0.5**
STIP				*i* Sg	**Sb**	**02 55 09.1**	**+1.0**
KZN	**Kozani**	**0.82**	**221**	P	**Pg**	**02 54 56.0**	**-0.6**
KZN	**Kozani**	**0.82**	**221**	P	**Pg**	**02 54 56.0**	**-0.6**
KZN				S	**Sg**	**02 55 08.5**	**+1.2**
	comp=N,520nm,0.4s						
LIT	**Litokhoron**	**0.83**	**179**	P	**Pg**	**02 54 56.5**	**-0.4**
LIT				S	**Sg**	**02 55 07.2**	**-0.4**
LIT				AML	AML	02 55 12.2	
	comp=E,628μm,0.3s						
LIT				AML	AML	02 55 13.7	
	comp=N,635μm,0.4s						
LIT	**Litokhoron**	**0.83**	**179**	P	**Pg**	**02 54 56.8**	**0.0**
LIT				S	**Sg**	**02 55 08.3**	**+0.7**
	comp=N,312nm,0.3s						
LIT	**Litokhoron**	**0.83**	**179**	*e*Pg	**Pg**	**02 54 56.8**	**0.0**
LIT				*i* Sg	**Sb**	**02 55 09.1**	**+0.1**
FNA	**Florina**	**0.84**	**260**	P	**Pg**	**02 54 56.9**	**-0.2**
FNA	**Florina**	**0.84**	**260**	P	**Pg**	**02 54 56.9**	**-0.2**
FNA				S	**Sg**	**02 55 09.1**	**+1.1**
	comp=N,488nm,0.7s						
FNA	**Florina**	**0.84**	**260**	*e*Pg	**Pg**	**02 54 57.0**	**-0.2**
FNA				*e*Sg	**Sg**	**02 55 09.2**	**+1.2**
FNA	**Florina**	**0.84**	**260**	PG	**Pg**	**02 54 57.3**	**+0.2**
FNA	**Florina**	**0.84**	**260**	*i* Pg	**Pg**	**02 54 57.0**	**-0.2**
FNA				*i* Sg	**Sb**	**02 55 11.0**	**+1.6**
SRS	**Serrai**	**0.87**	**77**	P	**Pg**	**02 54 57.3**	**-0.4**
SRS	**Serrai**	**0.87**	**77**	P	**Pg**	**02 54 57.3**	**-0.4**
SRS				S	**Sb**	**02 55 09.8**	**-0.5**
SRS	**Serrai**	**0.87**	**77**	*e*Pg	**Pg**	**02 54 57.4**	**-0.3**
SRS				*e*Sg	**Sg**	**02 55 09.5**	**+0.4**
SRS	**Serrai**	**0.87**	**77**	*e*Pg	**Pg**	**02 54 57.3**	**-0.4**
SRS				*i* Sg	**Sg**	**02 55 09.4**	**+0.4**
PLG	**Polygyros**	**0.93**	**126**	P	**Pg**	**02 54 58.1**	**-0.6**
PLG	**Polygyros**	**0.93**	**126**	P	**Pg**	**02 54 58.2**	**-0.6**
KKB	**Krupnik**	**1.04**	**26**	*i* Pg	**Pg**	**02 55 00.3**	**-0.7**
NVR	**Nevrokopi**	**1.14**	**68**	P	**Pg**	**02 55 02.2**	**-0.6**
NVR	**Nevrokopi**	**1.14**	**68**	P	**Pg**	**02 55 02.1**	**-0.6**
NVR				S	**Sn**	**02 55 18.6**	**-0.5**
	comp=N,172nm,0.6s						
MMB	**Musomiste**	**1.16**	**55**	Pg	**Pg**	**02 55 02.5**	**-0.7**
NEST	**Nestorio**	**1.20**	**245**	P	**Pg**	**02 55 03.3**	**-0.6**
NEST	**Nestorio**	**1.20**	**245**	P	**Pg**	**02 55 03.5**	**-0.4**
PENT	**Pentalofos**	**1.25**	**235**	P	**Pg**	**02 55 04.4**	**-0.5**
OHR	**Ohrid**	**1.27**	**279**	*e*Pg	**Pg**	**02 55 04.3**	**-1.1**
OHR				*e*Sg	**Sn**	**02 55 23.2**	**+0.6**
OHR				*e*Lg	Lg	02 55 27.3	
	comp=E,77nm,0.5s						
OHR				*e*Lg	Lg	02 55 27.4	
	comp=N,114nm,0.6s						
KPRO	**Kipourio**	**1.29**	**221**	P	**Pn**	**02 55 04.6**	**-0.8**
KPRO	**Kipourio**	**1.29**	**221**	P	**Pn**	**02 55 04.9**	**-0.5**
OUR	**Ouranopolis**	**1.30**	**117**	P	**Pn**	**02 55 05.1**	**-0.3**
OUR	**Ouranopolis**	**1.30**	**117**	P	**Pn**	**02 55 04.8**	**-0.7**
OUR				S	**Sn**	**02 55 23.9**	**+0.9**
	comp=N,342nm,0.4s						
OUR	**Ouranopolis**	**1.30**	**117**	PN	**Pg**	**02 55 05.9**	**+0.1**
OUR				SN	**Sn**	**02 55 24.3**	**+1.3**
SKO	**Skopje**	**1.30**	**324**	*e*Pn	**Pn**	**02 55 04.8**	**-0.7**
SKO				*e*Sg	**Sg**	**02 55 22.3**	**-0.4**
SKO	**Skopje**	**1.30**	**324**	*e*Pg	**Pn**	**02 55 04.8**	**-0.7**
SKO				*e*Sg	**Sg**	**02 55 22.4**	**-0.2**
PAIG	**Paliouri**	**1.36**	**137**	P	**Pn**	**02 55 05.6**	**-0.7**
PAIG	**Paliouri**	**1.36**	**137**	P	**Pn**	**02 55 06.0**	**-0.4**
PAIG				S	**Sb**	**02 55 24.8**	**+0.4**
	comp=N,315nm,0.5s						
THL	**Klokotos Trika**	**1.41**	**194**	P	**Pn**	**02 55 07.2**	**+0.2**
THL	**Klokotos Trika**	**1.41**	**194**	P	**Pn**	**02 55 07.1**	**+0.2**
KAVA	**Kavala**	**1.55**	**87**	P	**Pn**	**02 55 08.9**	**-0.1**
KAVA	**Kavala**	**1.55**	**87**	P	**Pn**	**02 55 08.9**	**-0.1**
BOSS	**Bosilegrad**	**1.57**	**0**	*e*Pg	**Pn**	**02 55 09.5**	**+0.3**
BOSS				*e*Sg	**Sb**	**02 55 30.1**	**-0.2**
XOR	**Xorichti**	**1.66**	**160**	P	**Pn**	**02 55 09.9**	**-0.6**
GJIK	**Gjilan**	**1.71**	**334**	*i* Pn	**Pb**	**02 55 12.3**	**-0.6**
NEO	**Neokhori**	**1.72**	**160**	P	**Pn**	**02 55 10.7**	**-0.6**
THAS	**Thassos island**	**1.74**	**100**	P	**Pn**	**02 55 11.5**	**-0.1**
THAS				S	**Sb**	**02 55 35.0**	**-0.3**
	comp=N,138nm,0.6s						
VTS	**Vitosha**	**1.78**	**19**	*e*Pg	**Pn**	**02 55 12.5**	**+0.2**
VTS				*e*Sg	**Sn**	**02 55 35.9**	**+0.6**

VTS	**Vitosha**	**1.78**	**19**	⇑P	**Pn**	**02 55 12.4**	**+0.1**
VTS	**Vitosha**	**1.78**	**19**	P	**Pn**	**02 55 12.6**	**+0.2**
VTS	**Vitosha**	**1.78**	**19**	*i* Pn	**Pn**	**02 55 12.3**	**-0.1**
PRZK	**Prizren**	**1.81**	**316**	*i* Pn	**Pb**	**02 55 14.2**	**-0.3**
RZN	**Rozhen**	**1.86**	**65**	P	**Pn**	**02 55 13.7**	**+0.3**
AGG	**Agios Georgios**	**1.91**	**183**	PN	**Pb**	**02 55 15.6**	**-0.5**
BARS	**Barje**	**1.95**	**346**	*e*Pn	**Pn**	**02 55 14.2**	**-0.3**
BARS	**Barje**	**1.95**	**346**	*i* Pn	**Pb**	**02 55 13.3**	**-1.2**
PLD	**Plovdiv**	**2.05**	**54**	*e*Pn	**Pb**	**02 55 17.4**	**-1.1**
PLD				*e*Sg	**Sg**	**02 55 45.6**	**-1.2**
PLD	**Plovdiv**	**2.05**	**54**	P	**Pg**	**02 55 19.7**	**-0.5**
IGT	**Igoumenitsa**	**2.15**	**230**	*e*Pn	**Pb**	**02 55 19.3**	**-0.9**
RDO	**Rodhopi**	**2.33**	**84**	P	**Pn**	**02 55 19.6**	**-0.1**
RDO	**Rodhopi**	**2.33**	**84**	PN	**Pn**	**02 55 20.7**	**+1.0**
ZAPS	**Zavoj**	**2.35**	**3**	*e*Pn	**Pn**	**02 55 21.2**	**+1.2**
SELS	**Selova**	**2.50**	**337**	*e*Pn	**Pn**	**02 55 21.9**	**-0.2**
MPEP	**Malo Peshtene**	**2.60**	**21**	P	**Pb**	**02 55 27.1**	**-0.9**
BLKB	**Belogradchik**	**2.70**	**3**	*e*Pn	**Pn**	**02 55 25.6**	**+0.8**
ALN	**Alexandroupoli**	**2.71**	**90**	PN	**Pn**	**02 55 26.3**	**+1.4**
ZAGS	**Zajecar**	**2.89**	**357**	*e*Pn	**Pn**	**02 55 27.6**	**+0.3**
PLVB	**Pleven**	**2.93**	**32**	⇑P	**Pg**	**02 55 36.3**	**-0.8**
IVAS	**Ivanjica**	**3.15**	**328**	*e*Pn	**Pn**	**02 55 31.1**	**0.0**
GRUS	**Gruza**	**3.23**	**337**	*e*Pn	**Pn**	**02 55 32.1**	**0.0**
TRUS	**Trudelj**	**3.63**	**336**	*e*Pn	**Pn**	**02 55 37.3**	**-0.2**
DIVS	**Divibare**	**3.66**	**331**	*e*Pn	**Pn**	**02 55 38.7**	**+0.7**
MDVR	**Moldovita**	**3.89**	**352**	⇑P	**Pn**	**02 55 40.6**	**-0.5**
GZR	**Gura Zlata**	**4.47**	**3**	⇓P	**Pn**	**02 55 50.0**	**+0.9**
BZS	**Buzias**	**4.73**	**353**	⇓P	**Pn**	**02 55 52.1**	**-0.5**
MLR	**Muntele Rosu**	**5.22**	**28**	⇓P	**Pn**	**02 56 03.4**	**+3.9**
MORH	**Mrgy, Hungar**	**5.97**	**334**	⇓P	**Pn**	**02 56 11.1**	**+1.5**

IDC ***12*** *03:13:25.9±1.3,50°22S×112°48E,h0km,mb3.8/5, mb1 4.1/5,mb1mx3.8/23,mbtmp3.8/5,MS3.1/3,Ms1 3.1/3, ms1mx2.7/23,Error ellipse: s-maj=58.0km s-min=21.6km az=99.0*

ISC 12 03:13:27.2±1.2,50°2S±0.1×112°5E±0.4,h10km,n13, σ0°69/8,mb3.9/5,MS3.1/3,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.38**	**5**	T	T	03 32 43.7	
	baz=183,slow=74,SNR=257						
H01W1	**Cape Leeuwin H**	**15.38**	**5**	T	T	03 32 44.0	
	baz=183,slow=74,SNR=383						
H01W3	**Cape Leeuwin H**	**15.39**	**5**	T	T	03 32 46.3	
	baz=183,slow=74,SNR=362						
STKA	**Stephens Creek**	**28.32**	**61**	LR	LR	03 28 15.7	
	comp=Z,34nm,21.5s,baz=208,slow=31						
ASAR	**Alice Springs**	**31.33**	**40**	P	**P**	**03 19 47.6**	**0.0**
	0.8nm,0.8s,baz=209,slow=7.8,SNR=12						
ASAR				LR	LR	03 32 06.9	
	comp=Z,36nm,18.4s,baz=194,slow=36						
VNDA	**Vanda**	**32.94**	**162**	P	**P**	**03 20 00.7**	**-0.5**
	1.3nm,0.7s,baz=291,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	**34.84**	**38**	P	**P**	**03 20 17.9**	**-0.4**
	1.4nm,0.9s,baz=203,slow=8.8,SNR=7.0						
QSPA	**South Pole Qui**	**39.89**	**180**	P	**P**	**03 21 00.9**	**+0.1**
	1.0nm,0.7s,baz=326,slow=2.5,SNR=6.1						
PMG	**Port Moresby**	**49.78**	**47**	LR	LR	03 43 08.6	
	comp=Z,24nm,18.2s,baz=130,slow=36						
CMAR	**Chiang Mai Arr**	**69.44**	**346**	P	**P**	**03 24 35.3**	**0.0**
	0.4nm,0.3s,baz=176,slow=4.4,SNR=4.2						
TXAR	**Lajitas Array**	**145.71**	**114**	PKPbc	**PKPab**	**03 33 07.7**	**+1.2**
	0.4nm,0.7s,baz=180,slow=2.3,SNR=4.1						
PDAR	**Pinedale Array**	**150.42**	**88**	PKPbc	**PKiKP**	**03 33 19.7**	**+0.5**
	0.1nm,0.3s,baz=162,slow=0.3,SNR=2.2						
YKA	**Yellowknife Ar**	**151.86**	**46**	PKPbc	**PKiKP**	**03 33 20.8**	**-0.5**
	0.2nm,0.7s,baz=278,slow=2.0,SNR=4.0						

IDC ***12*** *03:24:15.9±0.6,38°79N×71°02E,h0km,mb4.1/24, mb1 4.2/31,mb1mx4.0/60,mbtmp4.1/31,ML3.4/7,MS3.4/19, Ms1 3.4/19,ms1mx3.2/46,Error ellipse: s-maj=12.4km s-min=10.0km az=4.0*

SOME ***12*** *03:24:15.6,39°13N×71°52E,h25km,MS3.5*

NNC ***12*** *03:24:17.4±1.7,38°99N×70°65E,h0km,mb4.9,mpv4.7, Error ellipse: s-maj=13.3km s-min=9.3km az=12.0*

KRNET ***12*** *03:24:18.1±0.1,39°07N×71°01E,mb4.7*

BJI ***12*** *03:24:21.6±0.0,39°13N×70°94E,h55km,mB4.7/21, mb4.6/30,ML4.2/4,Ms4.0/11,Ms7 3.8/8*

MOS ***12*** *03:24:22.7±1.1,39°03N×71°00E,h60km,mb4.5/26,Error ellipse: s-maj=7.3km s-min=4.7km az=85.4*

NEIC ***12*** *03:24:23.4±1.4,39°02N±0°06×71°04E±0°09,h49km±8km, mb4.3/26,Error ellipse: s-maj=10.6km s-min=8.4km az=101.0*

ISC 12 03:24:18.3±0.4,39°02N±0°03×70°98E±0°03,h10km,n218, σ2°51/266,mb4.2/51,MS3.4/19,44C-34D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.78**	**54**	⇑*i*P	**Pg**	**03 24 32.5**	**-0.9**
	baz=56						
DRK				⇑*i*S	**Sg**	**03 24 42.8**	**-0.9**
	baz=56						
BTK	**Batken**	**1.04**	**353**	⇑*i*P	**Pg**	**03 24 37.0**	**-1.3**
	baz=51						
BTK				⇑*i*S	**Sg**	**03 24 51.2**	**-0.7**
	baz=51						
OHH	**Osh**	**2.04**	**42**	⇑*i*P	**Pb**	**03 24 55.3**	**-0.2**
	baz=43						
OHH				⇑*i*S	**Sb**	**03 25 22.1**	**+1.1**
	baz=43						
SFK	**Sufi-Kurgan**	**2.19**	**62**	⇑*i*P	**Pb**	**03 24 57.5**	**-0.6**
	baz=63						
SFK				⇑*i*S	**Sb**	**03 25 25.5**	**+0.2**
	baz=63						
TRKS	**Terek-Say**	**2.51**	**3**	⇓*i*P	**Pn**	**03 25 01.3**	**+2.0**
	baz=3.0						
TRKS				⇓*i*S	**Sn**	**03 25 32.1**	**+2.1**
	baz=3.0						
ARSB	**Arslanbob**	**2.76**	**33**	⇓*i*P	**Pn**	**03 25 05.2**	**+2.4**
	baz=33						
ARSB				⇓*i*S	**Sn**	**03 25 39.1**	**+2.9**
	baz=33						
IUG	**Iuzhnay**	**3.20**	**347**	*e*P	**Pb**	**03 25 14.0**	**-1.4**
	323nm,0.4s						
IUG				*e*S	**Sb**	**03 25 54.8**	**+0.4**
	2μm,0.8s						
IUG	**Iuzhnay**	**3.20**	**347**	*e*PN	**Pb**	**03 25 14.0**	**-1.4**
IUG				*e*S	**Sb**	**03 25 54.8**	**+0.4**
CHM	**Chimkent**	**3.46**	**343**	*e*P	**Pb**	**03 25 17.7**	**-1.9**
	65nm,0.2s						
CHM				*e*S	**Sb**	**03 26 00.8**	**-0.8**
	1μm,0.8s						
CHM	**Chimkent**	**3.46**	**343**	*e*PN	**Pb**	**03 25 17.7**	**-1.9**
CHM				*e*S	**Sb**	**03 26 00.8**	**-0.8**
MNAS	**Manas**	**3.65**	**18**	⇑*i*P	**Pn**	**03 25 17.7**	**+2.8**
	baz=18						
MNAS				⇑*i*S	**Sn**	**03 26 00.8**	**+2.7**
	baz=18						
AML	**Almayashu**	**3.73**	**33**	⇓*i*P	**Pn**	**03 25 18.4**	**+2.1**
	baz=33						
AML				⇓*i*S	**Sn**	**03 26 02.6**	**+2.2**
	baz=33						
AML	**Almayashu**	**3.73**	**33**	P	**Pn**	**03 25 19.7**	**+3.5**
	SNR=186						
ARLS	**Aral**	**3.81**	**41**	⇑*i*P	**Pn**	**03 25 19.8**	**+2.6**
	baz=41						
ARLS				⇑*i*S	**Sn**	**03 26 04.8**	**+2.6**
	baz=41						
DZA	**Taraz**	**3.87**	**4**	*e*P	**Pb**	**03 25 23.0**	**-3.7**
	376nm,0.1s						
DZA				*e*S	**Sb**	**03 26 10.2**	**-3.5**
	3μm,0.5s						
DZA	**Taraz**	**3.87**	**4**	*e*PN	**Pb**	**03 25 23.0**	**-3.7**
DZA				*e*S	**Sb**	**03 26 10.2**	**-3.5**
KSH	**Kashi**	**3.90**	**81**	P	**Pn**	**03 25 18.7**	**+0.3**
KSH				S	**Sn**	**03 26 02.5**	**-1.9**
KSH				smax	smax		
	comp=N,780nm,0.4s						
KSH				smax	smax		
	comp=E,730nm,0.5s						
KK31	**Karatay Array**	**4.09**	**355**	⇑Pn	**Pn**	**03 25 23.2**	**+2.3**
	34nm,0.5s,baz=172,slow=12,SNR=464						
KK31				⇑Sn	**Sn**	**03 26 11.6**	**+2.7**
	87nm,0.5s,baz=184,slow=22,SNR=6.0						
KK31				⇓Lg	Lg	03 26 25.9	
	531nm,0.7s						
KK31	**Karatay Array**	**4.09**	**355**	*i* PN	**Pn**	**03 25 23.2**	**+2.3**
KK31				pmax	pmax		
	comp=Z,10.0nm,0.2s						
KK31	**Karatay Array**	**4.09**	**355**		**Pn**	**03 25 23.6**	**+2.7**
KKAR	**Karatay Array**	**4.09**	**355**	PN	**Pn**	**03 25 23.7**	**+2.8**
KKAR	**Karatay Array**	**4.09**	**355**	Pn	**Pn**	**03 25 23.2**	**+2.3**
KKAR	**Karatay Array**	**4.09**	**355**	Pn	**Pn**	**03 25 23.6**	**+2.8**
BRLS	**Boroldav**	**4.09**	**348**	*e*P	**Pn**	**03 25 23.1**	**+2.1**
	comp=Z,43nm,0.3s						
BRLS				*e*S	**Sn**	**03 26 09.7**	**+0.7**
	comp=Z,305nm,0.7s						
BRLS	**Boroldav**	**4.09**	**348**	*e*PN	**Pn**	**03 25 23.1**	**+2.1**
UCH	**Uchtor**	**4.18**	**39**	⇓*i*P	**Pn**	**03 25 24.5**	**+2.0**
	baz=39						
UCH				⇓*i*S	**Sn**	**03 26 13.9**	**+2.3**
	baz=39						
UCH	**Uchtor**	**4.18**	**39**	P	**Pn**	**03 25 26.6**	**+4.1**
	SNR=225						
EKS2	**Erkin-Say**	**4.21**	**29**	⇓*i*P	**Pn**	**03 25 25.0**	**+2.4**
	baz=29						
EKS2				⇓*i*S	**Sn**	**03 26 14.6**	**+2.7**
	baz=29						
EKS2	**Erkin-Say**	**4.21**	**29**	P	**Pn**	**03 25 26.3**	**+3.7**
	SNR=148						
AAK	**Ala-Archa**	**4.49**	**35**	⇑*i*P	**Pn**	**03 25 28.7**	**+2.2**
	baz=35						
AAK				⇑*i*S	**Sn**	**03 26 21.5**	**+2.7**
	baz=35						
AAK	**Ala-Archa**	**4.49**	**35**	P	**Pn**	**03 25 30.7**	**+4.2**
	SNR=233						
AAK	**Ala-Archa**	**4.49**	**35**	⇓Pn	**Pn**	**03 25 28.9**	**+2.4**
	comp=Z,88nm,0.5s						
AAK				⇑Sn	**Sb**	**03 26 25.9**	**-5.5**
	comp=Z,148nm,0.6s						
AAK				⇓Lg	Lg	03 26 47.0	
	comp=Z,328nm,1.1s						
AAK	**Ala-Archa**	**4.49**	**35**	*i* PN	**Pn**	**03 25 30.4**	**+3.9**
AAK				pmax	pmax		
	comp=Z,88nm,0.5s						
AAK	**Ala-Archa**	**4.49**	**35**		**Pn**	**03 25 29.9**	**+3.4**
KBK	**Karagaybulak**	**4.71**	**38**	⇑*i*P	**Pn**	**03 25 31.8**	**+2.2**
	baz=39						
KBK				⇑*i*S	**Sn**	**03 26 26.4**	**+2.0**
	baz=39						
KBK	**Karagaybulak**	**4.71**	**38**	P	**Pn**	**03 25 34.3**	**+4.7**
	SNR=195						
KBL	**Kabul**	**4.74**	**200**	PN	**Pn**	**03 25 33.3**	**+3.3**
KBL	**Kabul**	**4.74**	**200**	Pn	**Pn**	**03 25 33.2**	**+3.3**
CHMS	**Chumysh**	**4.89**	**34**	⇑*i*P	**Pn**	**03 25 34.2**	**+2.3**
	baz=35						
CHMS				⇑*i*S	**Sn**	**03 26 30.6**	**+2.1**
	baz=35						
CHMS	**Chumysh**	**4.89**	**34**	P	**Pn**	**03 25 36.0**	**+4.1**
	SNR=110						
USP	**Ospenovka**	**5.00**	**31**	⇑*i*P	**Pn**	**03 25 35.9**	**+2.5**
	baz=31						
USP				⇑*i*S	**Sn**	**03 26 33.5**	**+2.2**
	baz=31						
USP	**Ospenovka**	**5.00**	**31**	P	**Pn**	**03 25 37.0**	**+3.6**
	SNR=334						
BOOM	**Boomskoye usch**	**5.11**	**46**	⇓*i*P	**Pn**	**03 25 37.0**	**+1.9**
	baz=46						
BOOM				⇓*i*S	**Sn**	**03 26 35.3**	**+1.0**
	baz=46						
ULHL	**Ulahol**	**5.13**	**50**	⇑*i*P	**Pn**	**03 25 37.3**	**+1.9**
	baz=50						
ULHL				⇑*i*S	**Sn**	**03 26 36.3**	**+1.5**
	baz=50						
ULHL	**Ulahol**	**5.13**	**50**	P	**Pn**	**03 25 38.8**	**+3.3**
	SNR=30						
TKM2	**Tokmak 2**	**5.23**	**40**	⇓*i*P	**Pn**	**03 25 38.9**	**+2.2**
	baz=41						
TKM2				⇓*i*S	**Sn**	**03 26 38.5**	**+1.3**
	baz=41						
TKM2	**Tokmak 2**	**5.23**	**40**	P	**Pn**	**03 25 40.6**	**+3.8**
	SNR=146						
TKM2	**Tokmak 2**	**5.23**	**40**	⇑Pn	**Pn**	**03 25 40.5**	**+3.8**
	comp=Z,117nm,0.6s						
TKM2				⇓Pg	**Pb**	**03 25 53.2**	**+3.3**
	comp=Z,43nm,0.5s						
TKM2				⇓Sn	**Sn**	**03 26 45.3**	**+8.2**
	comp=Z,138nm,1.1s						
TKM2				⇑Lg	Lg	03 27 07.2	
	comp=Z,122nm,0.8s						
TKM2	**Tokmak 2**	**5.23**	**40**	PN	**Pn**	**03 25 40.5**	**+3.8**
CEP	**Cherat**	**5.24**	**172**	P	**Pn**	**03 25 41.2**	**+4.3**
KST	**Kastek**	**5.50**	**42**	*e*P	Pb	03 25 48.2	-6.4
	comp=Z,28nm,0.5s						
KST				*e*S	**Sb**	**03 26 53.2**	**-7.5**
	comp=Z,60nm,0.7s						
KST	**Kastek**	**5.50**	**42**	*e*PN	Pb	03 25 48.2	-6.4
KST				*e*S	**Sb**	**03 26 53.2**	**-7.5**
DGS	**Degeres**	**5.55**	**39**	*e*P	**Pb**	**03 25 51.9**	**-3.4**
	comp=Z,32nm,0.7s						
DGS				*e*S	**Sb**	**03 26 59.7**	**-2.4**
	comp=Z,72nm,0.5s						
DGS	**Degeres**	**5.55**	**39**	*e*PN	**Pb**	**03 25 51.9**	**-3.4**
CHCP	**Chirah Chowk**	**5.66**	**160**	P	**Pn**	**03 25 47.0**	**+4.5**
NIL	**Nilore**	**5.67**	**160**	PN	**Pn**	**03 25 45.6**	**+3.0**
NIL	**Nilore**	**5.67**	**160**	Pn	**Pn**	**03 25 45.6**	**+3.0**
IZV	**Izvestkoviy**	**5.85**	**45**	*e*P	**Pb**	**03 25 57.1**	**-3.3**
	comp=Z,24nm,0.7s						
IZV				*e*S	**Sb**	**03 27 08.6**	**-2.0**
	comp=Z,44nm,0.9s						
KRBS	**Karabastau**	**5.85**	**36**	*e*P	**Pb**	**03 26 01.3**	**+0.9**
	comp=Z,36nm,0.5s						
KRBS				*e*S	**Sb**	**03 27 15.8**	**+5.3**
	comp=Z,79nm,0.8s						
TNSS	**Tian-Shan**	**6.03**	**46**	*e*P	**Pb**	**03 26 01.7**	**-2.1**
	comp=Z,23nm,0.8s						
TNSS				*e*S	**Sb**	**03 27 17.4**	**+1.2**
	comp=Z,55nm,0.5s						
KNDC	**Almaty**	**6.16**	**45**	⇑Pg	**Pg**	**03 26 13.1**	**-3.1**
	comp=Z,117nm,0.7s						
KNDC				⇓Lg	Lg	03 27 40.4	
	comp=Z,313nm,0.8s						
MDOK	**Medeo**	**6.17**	**46**	*e*P	**Pb**	**03 26 02.0**	**-4.0**
	comp=Z,18nm,0.6s						
MDOK				*e*S	**Sb**	**03 27 16.5**	**-3.4**
	comp=Z,31nm,0.6s						
MDOK	**Medeo**	**6.17**	**46**	⇓Pn	**Pn**	**03 25 53.3**	**+3.7**
	comp=Z,36nm,0.7s						
MDOK				⇑Pg	**Pg**	**03 26 12.6**	**-3.9**
	comp=Z,44nm,0.6s						
MDOK				⇑Lg	Lg	03 27 38.9	
	comp=Z,80nm,0.7s						
MDOK	**Medeo**	**6.17**	**46**	PN	**Pn**	**03 25 53.3**	**+3.7**
THW	**Thamme Wali**	**6.25**	**174**	P	**Pn**	**03 25 53.5**	**+2.9**
KOTS	**Kotyrbulak**	**6.25**	**46**	*e*P	**Pb**	**03 26 07.7**	**+0.4**
	comp=Z,64nm,0.5s						
KOTS				*e*S	**Sb**	**03 27 26.6**	**+4.4**
	comp=Z,58nm,1.0s						
ANVS	**Anan'yevo**	**6.30**	**51**	⇓*i*P	**Pn**	**03 25 54.9**	**+3.4**
	baz=52						
ANVS				⇓*i*S	**Sn**	**03 27 04.5**	**+0.9**
	baz=52						
KUU	**Kurty**	**6.31**	**38**	*e*P	**Pb**	**03 26 06.2**	**-2.0**
	comp=Z,29nm,0.5s						
KUU				*e*S	**Sb**	**03 27 24.3**	**+0.5**
	comp=Z,63nm,0.5s						
KTBS	**Karatobe**	**6.35**	**41**	*e*P	**Pb**	**03 26 05.0**	**-3.8**
	comp=Z,20nm,0.5s						
KTBS				*e*S	**Sb**	**03 27 22.6**	**-2.2**
	comp=Z,74nm,0.6s						
BTLS	**Baital**	**6.43**	**20**	*e*P	**Pb**	**03 26 12.1**	**+1.9**
	comp=Z,12nm,0.4s						
BTLS				*e*S	**Sb**	**03 27 34.6**	**+7.4**
	comp=Z,37nm,0.6s						
SATY	**Saty**	**6.91**	**52**	*e*P	**Pb**	**03 26 15.8**	**-2.7**
	comp=Z,26nm,0.6s						
SATY				*e*S	**Sb**	**03 27 40.9**	**-0.1**
	comp=Z,95nm,1.0s						
KPKS	**Kokpek**	**7.30**	**50**	*e*P	**Pb**	**03 26 21.5**	**-3.7**
PDGK	**Podgornoye**	**7.72**	**53**	⇓Pn	**Pn**	**03 26 14.1**	**+3.2**
	comp=Z,19nm,0.7s						
PDGK				⇓Lg	Lg	03 28 26.7	
	comp=Z,70nm,0.9s						
PDGK	**Podgornoye**	**7.72**	**53**	*i* P	**Pn**	**03 26 14.6**	**+3.7**
PDGK				pmax	pmax		
	comp=Z,19nm,0.6s						
DHRM	**DHARAMSHALA**	**8.02**	**146**	*e*P	**Pn**	**03 26 16.7**	**+1.6**
DHRM				*e*S	**Sn**	**03 27 45.6**	**-0.5**
DHRM				*e*S	**Sn**	**03 27 45.7**	**-0.3**
DHRM				IAML		03 27 52.0	
	comp=N,243nm,0.6s						
DHRM				IAML		03 27 53.2	
	comp=E,309nm,0.4s						
HRA	**Herat**	**8.40**	**239**	Pn	**Pn**	**03 26 23.3**	**+2.9**
SMLA	**Simla**	**9.36**	**145**	*e*P	**Pn**	**03 26 34.0**	**+0.8**
SMLA				*e*S	**Sn**	**03 28 15.7**	**-2.9**
SMLA				IAML		03 28 19.3	
	comp=N,99nm,0.7s						
SMLA				IAML		03 28 20.3	
	comp=E,147nm,0.4s						
GEYT	**Alibeck**	**10.15**	**268**	Pn	**Pn**	**03 26 41.7**	**-2.4**
	comp=E,0.6nm,0.3s,baz=109,slow=11,SNR=2.4						
GEYT				Sn	**Sn**	**03 28 38.7**	**+0.7**
	comp=E,1.1nm,0.3s,baz=63,slow=26,SNR=1.2						
GYA0B	**ALIBECK ARRAY**	**10.15**	**268**	Pn	**Pn**	**03 26 47.3**	**+3.2**
DDI	**Dehra Dun**	**10.45**	**144**	*e*P	**Pn**	**03 26 48.9**	**+0.7**
DDI				*e*S	**Sn**	**03 28 40.6**	**-4.8**
MAKZ	**Makanchi**	**11.19**	**42**	P	**Pn**	**03 26 59.3**	**+1.0**
MAKZ	**Makanchi**	**11.19**	**42**		**Pn**	**03 26 59.3**	**+1.0**
MK31	**Makanchi Array**	**11.35**	**43**	⇑Pn	**Pn**	**03 27 02.8**	**+2.3**
	comp=E,15nm,0.8s,baz=228,slow=9.5,SNR=124						
MK31				⇓Lg	Lg	03 30 24.6	
	comp=E,13nm,0.8s						
MK31	**Makanchi Array**	**11.35**	**43**	*d* iP	**Pn**	**03 27 03.6**	**+3.1**
MK31	**Makanchi Array**	**11.35**	**43**	Pn	**Pn**	**03 27 02.6**	**+2.1**
MKAR	**Makanchi Array**	**11.35**	**43**	Pn	**Pn**	**03 27 03.2**	**+2.7**
	comp=E,0.6nm,0.3s,baz=230,slow=11,SNR=113						
MKAR				Lg	Lg	03 30 22.5	
	comp=E,0.1nm,0.3s,baz=258,slow=29,SNR=2.4						
MKAR	**Makanchi Array**	**11.35**	**43**		**Pn**	**03 27 02.6**	**+2.1**
KURBB	**Kurchatov Arra**	**12.77**	**22**	Pn	**Pn**	**03 27 19.3**	**-0.4**
	comp=E,0.2nm,0.3s,baz=216,slow=13,SNR=23						
KURBB				Lg	Lg	03 31 08.4	
	comp=E,0.2nm,0.3s,baz=357,slow=18,SNR=6.6						
KURBB	**Kurchatov Arra**	**12.77**	**22**	⇓Pn	**Pn**	**03 27 18.2**	**-1.5**
	comp=E,6.0nm,0.6s						
KURBB				⇓Lg	Lg	03 31 08.2	
	comp=E,55nm,0.8s						
KURBB	**Kurchatov Arra**	**12.77**	**22**	P	**Pn**	**03 27 18.2**	**-1.5**
KURK	**Kurchatov**	**12.87**	**22**	P	**Pn**	**03 27 19.3**	**-1.9**
KURK	**Kurchatov**	**12.87**	**22**		**Pn**	**03 27 19.3**	**-1.9**
AB31	**Akbulak array**	**12.93**	**326**	⇑Pn	**Pn**	**03 27 20.0**	**-1.9**
	comp=E,8.5nm,0.7s,baz=129,slow=13,SNR=124						
AB31				⇓Sn	**Sn**	**03 29 44.4**	**-1.4**
	comp=E,100nm,0.9s						
AB31	**Akbulak array**	**12.93**	**326**	P	**Pn**	**03 27 20.0**	**-1.9**
AB31						03 29 38.5	
ABKAR	**Akbulak array**	**12.93**	**326**	Pn	**Pn**	**03 27 21.5**	**-0.5**
WMQ	**Urumqi**	**13.42**	**64**	*e*P	**Pn**	**03 27 31.6**	**+2.8**
WMQ				pP	P	03 27 39.2	+0.9
WMQ				PP	**PnPn**	**03 27 42.9**	**+6.3**
WMQ				sP		03 27 47.3	
WMQ				pmax	pmax		
	comp=E,41nm,0.7s						
WMQ				pmax	pmax		
	comp=E,160nm,4.7s						
BVAR	**Borovoye Array**	**14.01**	**359**	Pn	**Pn**	**03 27 36.6**	**-0.2**
	comp=E,0.3nm,0.3s,baz=161,slow=22,SNR=9.9						
BVAR				Sn	**Sn**	**03 30 10.1**	**-2.1**
	comp=E,0.5nm,0.3s,baz=159,slow=29,SNR=4.5						
BRVK	**Borovoye**	**14.05**	**358**	⇓Pn	**Pn**	**03 27 37.1**	**-0.2**
	comp=E,5.5nm,0.8s						
BRVK				⇓Sn	**Sn**	**03 30 14.0**	**+0.9**
	comp=E,12nm,0.9s						
BRVK	**Borovoye**	**14.05**	**358**	*i* P	**Pn**	**03 27 38.8**	**+1.6**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRVK	**Borovoye**	**14.05**	**358**	Pn	**Pn**	**03 27 37.4**	**+0.2**
AKTO	**Aktyubinsk**	**14.64**	**325**	Pn	**Pn**	**03 27 45.8**	**+0.4**
	comp=E,0.7nm,0.3s,baz=143,slow=13,SNR=10						
AKTO				Sn	**Sn**	**03 30 23.6**	**-4.0**
	comp=E,0.5nm,0.3s,baz=24,slow=17,SNR=8.9						
AKTO				LR	LR	03 33 49.8	
	comp=E,224nm,18.2s,baz=151,slow=39						
AKTO	**Aktyubinsk**	**14.64**	**325**	⇓Pn	**Pn**	**03 27 44.2**	**-1.2**
	comp=E,19nm,1.0s						
AKTO				⇑Sn	**Sn**	**03 30 26.6**	**-1.0**
	comp=E,71nm,1.2s						
PYUN	**Piuthan**	**14.78**	**134**	*e*P	**Pn**	**03 27 44.9**	**-2.7**
	comp=Z,32nm,0.3s						
KOLN	**Koldanda**	**15.38**	**133**	*e*P	**Pn**	**03 27 52.0**	**-3.5**
	comp=Z,9.3nm,0.3s						
GKN	**Gorkha**	**15.81**	**130**	*e*P	**Pn**	**03 27 57.3**	**-3.8**
	comp=Z,6.8nm,0.2s						
DGZ	**Jazzator, Alta**	**15.85**	**42**	*c i*P	**Pn**	**03 28 01.5**	**0.0**
DGZ				pmax	pmax		
	comp=Z,16nm,0.7s						
DMN	**Daman**	**16.38**	**130**	*e*P	**Pn**	**03 28 05.1**	**-3.4**
	comp=Z,7.7nm,0.3s						
PKIN	**Phulchoki**	**16.57**	**129**	*e*P	**Pn**	**03 28 07.1**	**-4.0**
	comp=Z,17nm,0.5s						
PKI	**Pulchoki**	**16.59**	**129**	*e*P	**Pn**	**03 28 07.9**	**-3.4**
	comp=Z,17nm,0.5s						
GUN	**Gumba**	**16.63**	**127**	*e*P	**Pn**	**03 28 07.5**	**-4.3**
	comp=Z,8.5nm,0.4s						
BHPL	**Bhopal**	**16.66**	**159**	*e*P	**Pn**	**03 28 11.9**	**

KVAR **Kislovodsk Arr** 21.70 292 LR LR 03 37 57.9
comp=Z,170nm,21.7s,baz=243,slow=38
KIV **Kislovodsk** 21.71 292 *e*P **P** **03 29 10.2 +0.7**
KIV *e*S **S** **03 33 08.9 -0.8**
KIV pmax pmax
comp=Z,26nm,1.0s
KIV MLR MLR
comp=Z,141nm,14.0s
KIV **Kislovodsk** 21.71 292 P **P** **03 29 12.7 +3.2**
KIV IAmb IAmb 03 29 24.0
comp=Z,8.2nm,0.6s
GTA **Gaotai** 22.30 80 *e*P **P** **03 29 19.1 +3.1**
GTA pP sP 03 29 24.7 +3.3
GTA pmax pmax
comp=Z,5.0nm,0.9s
GTA pmax pmax
comp=Z,48nm,6.2s
GTA LR LR
comp=Z,160nm,14.9s
GTA LR LR
comp=Z,170nm,16.0s
GTA LR LR
comp=Z,130nm,17.8s
MARD **Mardin** 23.76 275 P **P** **03 29 33.4 +2.4**
MARD IAmb IAmb 03 29 40.6
comp=Z,13nm,1.3s
VRH **Novokhopyorsk** 23.80 310 *e*P **P** **03 29 30.3 -0.7**
VRH pmax pmax
comp=Z,6.0nm,0.4s
KIRV **Kirov** 23.99 332 LR LR 03 38 57.3
comp=Z,90nm,18.4s,baz=133,slow=36
MOY **Mondy** 24.40 49 *e*P **P** **03 29 38.4 +1.6**
MOY pmax pmax
comp=Z,22nm,2.2s
VSR **Storozhevoye** 25.33 309 *e*P **P** **03 29 43.2 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.6s
ZAK **Zakamensk** 25.41 53 *e*P **P** **03 29 46.7 +0.8**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
ANN **Anapa** 25.51 294 *e*P **P** **03 29 43.8 -2.9**
ANN pmax pmax
comp=Z,31nm,1.2s
TLY **Talaya** 25.97 50 LR LR 03 39 39.3
comp=Z,27nm,18.0s,baz=235,slow=35
TLY **Talaya** 25.97 50 *i* P **P** **03 29 54.2 +3.3**
TLY pmax pmax
comp=Z,4.0nm,0.7s
LZH **Lanzhou** 26.14 86 *e*P **P** **03 29 53.5 +0.7**
LZH pP sP 03 30 01.4 +3.1
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,64nm,5.4s
LZH LR LR
comp=Z,230nm,12.6s
LZH LR LR
comp=Z,190nm,13.0s
LZH LR LR
comp=Z,170nm,14.6s
RAYN **Ar Rayn** 26.58 242 P **P** **03 29 58.4 +1.7**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
RAYN **Ar Rayn** 26.58 242 P **P** **03 29 58.4 +1.7**
SONM **Songino Arbay** 26.98 59 P **P** **03 30 01.0 +0.8**
comp=Z,2.3nm,0.6s,baz=252,slow=9.2,SNR=9.8
SONM LR LR 03 41 36.6
comp=Z,143nm,20.8s,baz=144,slow=38
SONM **Songino Arbay** 26.98 59 P **P** **03 30 00.7 +0.4**
ULN **Ulaanbaatar** 27.43 59 *ce*P **P** **03 30 05.4 +1.1**
ULN pmax pmax
comp=Z,5.0nm,1.7s
ULN **Ulaanbaatar** 27.43 59 P **P** **03 30 04.8 +0.5**
OBN **Obninsk** 28.06 316 *e*P **P** **03 30 10.6 +1.0**
OBN *e**PP sP 03 30 30.3 +15
OBN *e* 03 31 02.3
OBN *e* 03 33 21.3
OBN pmax pmax
comp=Z,4.0nm,0.9s
BR131 **Keskin Array S** 28.74 283 *i* P **P** **03 30 16.4 +0.3**
BR131 **Keskin Array S** 28.74 283 P **P** **03 30 18.5 +2.4**
BRTR **Keskin Array B** 28.74 283 P **P** **03 30 17.7 +1.7**
comp=Z,2.0nm,1.0s,baz=96,slow=4.1,SNR=5.5
BRTR **Keskin Array B** 28.74 283 *ce*P **P** **03 30 18.7 +2.6**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR **Keskin Array B** 28.74 283 P **P** **03 30 16.7 +0.7**
HHC **Hu-ho-hao-te** 30.98 73 *e*P **P** **03 30 35.8 0.0**
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,46nm,4.1s
AKASG **Malin Array Be** 31.41 306 P **P** **03 30 40.7 +1.3**
comp=Z,0.2nm,0.2s,baz=81,slow=8.1,SNR=5.9
AKASG LR LR 03 46 04.0
comp=Z,58nm,18.2s,baz=90,slow=41
NRIK **Noril'sk** 31.65 11 P **P** **03 30 42.1 +0.9**
comp=Z,2.7nm,0.5s,baz=168,slow=6.7,SNR=2.4
NRIK **Noril'sk** 31.65 11 *ce*P **P** **03 30 41.8 +0.5**
NRIK pmax pmax
comp=Z,16nm,2.8s
CMAR **Chiang Mai Arr** 31.74 122 P **P** **03 30 42.4 -0.2**
comp=Z,0.6nm,0.5s,baz=330,slow=8.4,SNR=1.3
CMAR LR LR 03 44 54.5
comp=Z,35nm,19.6s,baz=13,slow=39
BOD **Bodaibo** 33.44 42 *e*P **P** **03 30 57.1 +0.1**
BOD pmax pmax
comp=Z,10.0nm,1.0s
MLR **Muntele Rosu** 33.60 296 P **P** **03 30 60.0 +1.2**
comp=Z,3.4nm,0.9s,baz=97,slow=11,SNR=8.0
MLR **Muntele Rosu** 33.60 296 P **P** **03 31 00.0 +1.2**
BURAR **Bucovina Array** 33.96 300 P **P** **03 31 03.0 +1.1**
BURAR **Bucovina Array** 33.96 300 P **P** **03 31 03.0 +1.1**
FINES **FINESS Array B** 35.41 324 P **P** **03 31 13.6 -0.4**
comp=Z,1.8nm,0.8s,baz=114,slow=9.2,SNR=6.8
FINES LR LR 03 47 29.4
comp=Z,57nm,18.1s,baz=70,slow=39
DIVS **Divibare** 37.99 295 IAmb IAmb 03 31 39.2
comp=Z,3.8nm,1.1s
ARCES **ARCESS Array B** 38.82 336 P **P** **03 31 42.4 -0.5**
comp=Z,5.0nm,1.0s,baz=115,slow=9.2,SNR=6.3
ARCES LR LR 03 49 07.6
comp=Z,60nm,20.1s,baz=140,slow=38
HFS **Hagfors** 41.10 320 LR LR 03 50 52.2
comp=Z,94nm,19.1s,baz=24,slow=39
GERES **GERESS Array B** 41.50 303 P **P** **03 32 06.3 +0.7**
comp=Z,0.2nm,0.3s,baz=66,slow=12,SNR=3.5
YAK **Yakutsk** 41.94 37 *ce*P **P** **03 32 09.2 +0.4**
YAK pmax pmax
comp=Z,11nm,0.7s
NOA **NORSAR Array B** 42.38 321 P **P** **03 32 11.2 -1.3**
comp=Z,0.9nm,0.7s,baz=119,slow=7.2,SNR=3.5
NOA LR LR 03 51 10.4
comp=Z,38nm,19.2s,baz=85,slow=38
TIXI **Tiksi** 43.45 23 ⇑*i*P **P** **03 32 20.9 0.0**
TIXI **Tiksi** 43.45 23 P **P** **03 32 21.0 +0.1**
TEOL **Teolo** 43.53 298 P **P** **03 32 22.5 +0.5**
KLR **Kul'dur** 43.70 56 P **P** **03 32 23.6 +0.3**
comp=Z,2.2nm,0.5s,baz=277,slow=8.0,SNR=15
KSRS **Korea Array** 44.12 73 LR LR 03 52 41.3
comp=Z,49nm,18.1s,baz=252,slow=39
USRK **Ussuriysk Ar.** 44.99 63 P **P** **03 32 33.3 -0.3**
comp=Z,1.1nm,0.5s,baz=312,slow=7.6,SNR=3.3
USRK LR LR 03 53 18.8
comp=Z,52nm,18.6s,baz=327,slow=39
JMIC **Jan Mayen** 50.28 335 LR LR 03 52 26.7
comp=Z,33nm,18.4s,baz=106,slow=34
KMBO **Kilima Mbogo** 50.55 226 LR LR 03 54 52.9
comp=Z,31nm,19.2s,baz=92,slow=36
MAT **Matsushiro** 52.08 70 P **P** **03 33 27.3 -1.1**
MJAR **Matsushiro Arr** 52.08 70 P **P** **03 33 27.8 -0.6**
comp=Z,2.3nm,0.8s,baz=293,slow=9.9,SNR=9.2
MJAR **Matsushiro Arr** 52.08 70 P **P** **03 33 28.1 -0.3**
MJAR pmax pmax
comp=Z,2.0nm,0.8s
MJAR **Matsushiro Arr** 52.08 70 P **P** **03 33 28.1 -0.3**
MJAR IAmb IAmb 03 33 31.5
comp=Z,1.6nm,0.8s
DAG **Danmarks Havn** 52.31 343 *i* P **P** **03 33 29.4 -0.2**
DAG IAmb IAmb 03 33 30.2
comp=Z,2.5nm,0.7s
DAG **Danmarks Havn** 52.31 343 *i* P **P** **03 33 29.3 -0.2**
DAG pmax pmax
comp=Z,3.0nm,0.7s
MA2 **Magadan** 52.40 39 *ce*P **P** **03 33 30.5 +0.1**
MA2 pmax pmax
comp=Z,3.0nm,1.0s
ESDC **Sonseca Array** 56.30 296 P **P** **03 34 00.1 +1.0**
comp=Z,0.3nm,0.5s,baz=54,slow=6.5,SNR=3.4
BILL **Bilibino** 56.36 27 *e*P **P** **03 34 01.6 +2.5**
BILL *e**PP sP 03 34 23.9 +19
BILL *e* 03 34 57.9
BILL pmax pmax
comp=Z,2.0nm,1.0s
PETK **Petropavlovsk-** 58.18 45 P **P** **03 34 11.6 -0.6**
comp=Z,3.6nm,1.0s,baz=289,slow=8.7,SNR=3.3
SUMG **Summit** 58.68 341 *i* P **P** **03 34 15.8 0.0**
SUMG IAmb IAmb 03 34 17.6
comp=Z,3.9nm,0.8s
SUMG **Summit** 58.68 341 P **P** **03 34 16.1 +0.3**
SUMG pmax pmax
comp=Z,9.0nm,1.0s
SUMG **Summit** 58.68 341 P **P** **03 34 16.1 +0.3**
TORD **Torodi Ar. Bea** 65.79 267 P **P** **03 35 02.4 -1.5**
comp=Z,0.9nm,0.7s,baz=51,slow=5.1,SNR=4.9
TOLK **Toolik Lake Re** 68.49 15 P **P** **03 35 20.2 -0.1**
COLD **Coldfoot** 69.55 16 P **P** **03 35 26.9 +0.1**
COLD IAmb IAmb 03 35 28.3
comp=Z,3.4nm,0.8s
C36M **Paulatuk** 71.37 6 P **P** **03 35 37.8 0.0**
C36M IAmb IAmb 03 35 37.9
comp=Z,3.4nm,0.7s
INK **Inuvik** 71.42 9 P **P** **03 35 38.1 -0.1**
comp=Z,2.6nm,0.8s,baz=18,slow=5.9,SNR=7.2
INK **Inuvik** 71.42 9 P **P** **03 35 38.3 +0.1**
INK pmax pmax
comp=Z,9.0nm,1.4s
INK **Inuvik** 71.42 9 P **P** **03 35 38.2 +0.1**
INK IAmb IAmb 03 35 43.0
comp=Z,8.9nm,1.4s
COLA **College** 72.06 16 P **P** **03 35 41.1 -1.0**
COLA pmax pmax
comp=Z,8.0nm,1.1s
COLA **College** 72.06 16 P **P** **03 35 41.0 -1.0**
COLA IAmb IAmb 03 35 43.0
comp=Z,7.6nm,1.1s
ILAR **Eielson Array** 72.36 16 P **P** **03 35 43.0 -1.0**
comp=Z,0.9nm,0.8s,baz=325,slow=5.7,SNR=13
ILAR **Eielson Array** 72.36 16 P **P** **03 35 43.5 -0.4**
ILAR **Eielson Array** 72.36 16 P **P** **03 35 43.5 -0.4**
YKA **Yellowknife Ar** 78.73 3 P **P** **03 36 20.4 -0.1**
comp=Z,1.4nm,0.7s,baz=353,slow=5.5,SNR=40
WRA **Warramunga Arr** 83.34 122 P **P** **03 36 44.3 -1.3**
comp=Z,1.7nm,0.6s,baz=326,slow=4.8,SNR=25
WRAB **Tennant Creek** 83.34 122 *ce*P **P** **03 36 47.3 +1.7**
WRAB pmax pmax
comp=Z,4.0nm,0.9s
WB2 **Warramunga Arr** 83.35 122 P **P** **03 36 44.9 -0.8**
WB2 IAmb IAmb 03 36 47.7
comp=Z,3.1nm,0.8s
WR0 **Warramunga Arr** 83.48 122 P **P** **03 36 45.0 -1.4**
WR0 IAmb IAmb 03 36 45.9
comp=Z,3.1nm,0.8s
ASAR **Alice Springs** 85.71 125 P **P** **03 36 56.4 -1.1**
comp=Z,1.4nm,0.8s,baz=311,slow=4.5,SNR=16

SOME ***12*** *03:48:28.7, 41.˙88N×79.˙67E, h10km*
NNC ***12*** *03:48:29.8±1.2, 41.˙94N×79.˙73E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=7.8km s-min=4.5km az=149.0*
KRNET ***12*** *03:48:30.0±0.1, 41.˙91N×79.˙66E, h18km, mb3.3*
ISC 12 03:48:30.8±1.7, 41.˙99N±0.˙06×79.˙61E±0.˙05, h7km±7km, n59, σ1°80/96, 39C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.03**	**299**	⇑*i*P		**Pn**		**03 48 51.0**	**-0.8**
baz=2.0									
PRZ				⇑*i*S		**Sn**		**03 49 06.8**	**+0.2**
baz=2.0									
SHLS	**Shalkode**	**1.18**	**355**	⇓*e*P		**Pb**		**03 48 53.0**	**-0.6**
36nm,0.1s									
SHLS				*e*S		**Sn**		**03 49 10.8**	**+0.6**
210nm,0.2s									
SHLS	**Shalkode**	**1.18**	**355**	P		**Pb**		**03 48 53.1**	**-0.6**
51nm,0.2s									
SHLS				S		**Sn**		**03 49 11.0**	**+0.8**
296nm,0.4s									
UZB	**Uzynbulak**	**1.24**	**340**	*e*P		**Pg**		**03 48 54.5**	**-0.2**
18nm,0.1s									
UZB				*e*S		**Sg**		**03 49 12.7**	**+1.9**
93nm,0.2s									
UZB	**Uzynbulak**	**1.24**	**340**	P		**Pb**		**03 48 54.3**	**-0.4**
18nm,0.1s									
UZB				S		**Sg**		**03 49 12.7**	**+1.9**
93nm,0.2s									
PDGK	**Podgornoye**	**1.35**	**356**	P		**Pb**		**03 48 55.6**	**-0.9**
18nm,0.2s									
PDGK				S		**Sg**		**03 49 15.0**	**+0.8**
47nm,0.3s									
PDGK	**Podgornoye**	**1.35**	**356**	⇑P		**Pn**		**03 48 55.4**	**-0.8**
8.5nm,0.2s									
PDGK				⇑S		**Sb**		**03 49 14.8**	**+0.8**
56nm,0.4s									
SATY	**Saty**	**1.39**	**321**	⇓*e*P		**Pg**		**03 48 57.3**	**-0.4**
9.4nm,0.2s									
SATY				*e*S		**Sg**		**03 49 17.8**	**+2.1**
126nm,0.1s									
SATY	**Saty**	**1.39**	**321**	P		**Pg**		**03 48 57.2**	**-0.4**
9.4nm,0.2s									
SATY				S		**Sg**		**03 49 17.8**	**+2.1**
126nm,0.1s									
KTMS	**Ketmen**	**1.56**	**20**	*e*P		**Pb**		**03 48 58.8**	**-1.3**
94nm,0.2s									
KTMS				*e*S		**Sb**		**03 49 20.2**	**+0.1**
132nm,0.3s									
KTMS	**Ketmen**	**1.56**	**20**	P		**Pb**		**03 48 58.8**	**-1.3**
94nm,0.2s									
KTMS				S		**Sb**		**03 49 20.2**	**+0.1**
132nm,0.3s									
KPKS	**Kokpek**	**1.63**	**336**	⇓*e*P		**Pg**		**03 49 01.5**	**-0.6**
107nm,0.2s									
KPKS				*e*S		**Sg**		**03 49 24.8**	**+1.6**
272nm,0.1s									
ANVS	**Anan'yevo**	**1.65**	**300**	⇑*i*P		**Pg**		**03 49 02.2**	**-0.2**
baz=1.0									
ANVS				⇑*i*S		**Sg**		**03 49 25.7**	**+1.9**
baz=1.0									
KDJ	**Kajisay**	**1.81**	**275**	⇑*i*P		**Pg**		**03 49 04.2**	**-1.5**
baz=77									
KDJ				⇑*i*S		**Sg**		**03 49 29.5**	**+0.3**
baz=77									
KOTS	**Kotyrbulak**	**2.23**	**305**	*e*P		**Pg**		**03 49 12.5**	**-1.0**
35nm,0.1s									
KOTS				*e*S		**Sg**		**03 49 43.7**	**+1.3**
165nm,0.6s									
KOTS	**Kotyrbulak**	**2.23**	**305**	Pg		**Pg**		**03 49 12.7**	**-0.8**
35nm,0.1s									
KOTS				Lg		Lg		03 49 44.2	
165nm,0.6s									
MDOK	**Medeo**	**2.23**	**303**	*e*P		**Pg**		**03 49 12.0**	**-1.6**
22nm,0.4s									
MDOK				*e*S		**Sg**		**03 49 43.1**	**+0.6**
166nm,0.4s									
MDOK	**Medeo**	**2.23**	**303**	Pn		**Pb**		**03 49 10.8**	**-0.7**
14nm,0.5s									
MDOK				⇑Sn		**Sg**		**03 49 43.1**	**+0.6**
149nm,0.6s									
MDOK	**Medeo**	**2.23**	**303**	Pg		**Pg**		**03 49 12.0**	**-1.6**
22nm,0.4s									
MDOK				Lg		Lg		03 49 43.1	
166nm,0.4s									
TNSS	**Tian-Shan**	**2.23**	**299**	*e*P		**Pb**		**03 49 11.7**	**-0.1**
12nm,0.2s									
TNSS				*e*S		**Sg**		**03 49 42.8**	**+0.2**
85nm,0.3s									
TNSS	**Tian-Shan**	**2.23**	**299**	Pg		**Pb**		**03 49 11.8**	**+0.1**
12nm,0.2s									
TNSS				Lg		Lg		03 49 42.9	
85nm,0.3s									
AAA	**Alma-Ata**	**2.34**	**302**	*e*P		**Pg**		**03 49 14.8**	**-0.8**
29nm,0.2s									
AAA				*e*S		**Sg**		**03 49 47.8**	**+1.9**
140nm,0.1s									
AAA	**Alma-Ata**	**2.34**	**302**	Pg		**Pg**		**03 49 14.8**	**-0.8**
29nm,0.2s									
AAA				Lg		Lg		03 49 47.8	
140nm,0.1s									
DJR	**Jarkent**	**2.35**	**3**	*e*P		**Pb**		**03 49 13.4**	**-0.1**
17nm,0.4s									
DJR				*e*S		**Sg**		**03 49 45.6**	**-0.8**
138nm,0.2s									
DJR	**Jarkent**	**2.35**	**3**	Pg		**Pb**		**03 49 13.4**	**-0.1**
17nm,0.4s									
DJR				Lg		Lg		03 49 45.6	
138nm,0.2s									
IZV	**Izvestkoviy**	**2.45**	**296**	*e*P		**Pb**		**03 49 15.6**	**+0.2**
11nm,0.4s									
IZV				*e*S		**Sg**		**03 49 49.1**	**-0.5**
106nm,0.3s									
IZV	**Izvestkoviy**	**2.45**	**296**	Pg		**Pb**		**03 49 15.6**	**+0.2**
11nm,0.4s									
IZV				Lg		Lg		03 49 49.1	
106nm,0.3s									
ULHL	**Ulahol**	**2.52**	**277**	⇑*e*P		**Pb**		**03 49 15.1**	**-1.4**
baz=79									
ULHL				⇑*i*S		**Sb**		**03 49 47.4**	**-0.4**
baz=79									
ARXS	**Arharly**	**2.58**	**330**	*e*P		**Pb**		**03 49 18.2**	**+0.7**
17nm,0.3s									
ARXS				*e*S		**Sg**		**03 49 53.7**	**-0.1**
114nm,0.4s									
ARXS	**Arharly**	**2.58**	**330**	Pg		**Pb**		**03 49 18.2**	**+0.7**
17nm,0.3s									
ARXS				Lg		Lg		03 49 53.7	
114nm,0.4s									
KTBS	**Karatobe**	**2.76**	**310**	*e*P		**Pb**		**03 49 21.4**	**+0.9**
12nm,0.3s									
KTBS				*e*S		**Sg**		**03 49 59.5**	**0.0**
207nm,0.3s									
KTBS	**Karatobe**	**2.76**	**310**	Pg		**Pb**		**03 49 21.4**	**+0.9**
12nm,0.3s									
KTBS				Lg		Lg		03 49 59.5	
207nm,0.3s									
BOOM	**Boomskoye usch**	**2.77**	**282**	⇑*e*P		**Pb**		**03 49 18.4**	**-2.4**
baz=83									
BOOM				⇑*i*S		**Sb**		**03 49 53.8**	**-1.2**
baz=83									
KST	**Kastek**	**2.90**	**293**	*e*P		**Pb**		**03 49 23.5**	**+0.6**
12nm,0.3s									
KST				⇑*i*S		**Sg**		**03 50 03.2**	**-0.7**
52nm,0.7s									
KST	**Kastek**	**2.90**	**293**	Pg		**Pb**		**03 49 23.5**	**+0.6**
12nm,0.3s									
KST				Lg		Lg		03 50 03.2	
52nm,0.7s									
KUU	**Kurty**	**3.07**	**310**	*e*P		**Pb**		**03 49 26.7**	**+0.9**
2.8nm,0.3s									
KUU				*e*S		**Sg**		**03 50 08.1**	**-1.2**
58nm,0.2s									
KUU	**Kurty**	**3.07**	**310**	Pg		**Pb**		**03 49 26.7**	**+0.9**
2.8nm,0.3s									
KUU				Lg		Lg		03 50 08.1	
58nm,0.2s									
DGS	**Degeres**	**3.10**	**295**	*e*P		**Pb**		**03 49 27.0**	**+0.6**
5.2nm,0.4s									
DGS				*e*S		**Sg**		**03 50 08.4**	**-1.9**
43nm,0.3s									
DGS	**Degeres**	**3.10**	**295**	Pg		**Pb**		**03 49 27.0**	**+0.6**
5.2nm,0.4s									
DGS				Lg		Lg		03 50 08.5	
43nm,0.3s									
TKM2	**Tokmak 2**	**3.11**	**289**	⇑*e*P		**Pb**		**03 49 23.4**	**-3.2**
baz=90									
TKM2				⇑*i*S		**Sb**		**03 50 02.1**	**-2.8**
baz=90									
TKM2	**Tokmak 2**	**3.11**	**289**	⇓Pg		**Pb**		**03 49 22.4**	**-4.2**
3.4nm,0.4s									
TKM2				⇓Lg		Lg		03 50 09.4	
27nm,0.7s									
TDK	**Taldyqorghan**	**3.14**	**344**	*e*P		**Pb**		**03 49 27.9**	**+0.9**
42nm,0.2s									
TDK				*e*S		**Sg**		**03 50 10.0**	**-1.7**
66nm,0.2s									
TDK	**Taldyqorghan**	**3.14**	**344**	Pg		**Pb**		**03 49 27.9**	**+0.9**
42nm,0.2s									
TDK				Lg		Lg		03 50 10.0	
66nm,0.2s									
KRBS	**Karabastau**	**3.36**	**302**	*e*P		**Pb**		**03 49 31.8**	**+1.0**
3.1nm,0.3s									
KRBS				*e*S		**Sg**		**03 50 16.9**	**-1.9**
85nm,0.3s									
KRBS	**Karabastau**	**3.36**	**302**	Pg		**Pb**		**03 49 31.8**	**+1.0**
3.1nm,0.3s									
KRBS				Lg		Lg		03 50 16.9	
85nm,0.3s									
KBK	**Karagaybulak**	**3.52**	**283**	⇑*i*P		Pb		03 49 29.0	-4.6
baz=84									
KBK				⇑*i*S		**Sb**		**03 50 11.6**	**-5.0**
baz=84									
CHMS	**Chumysh**	**3.73**	**287**	⇑*e*P		Pb		03 49 31.8	-5.3
baz=88									
CHMS				⇑*i*S		**Sb**		**03 50 17.3**	**-5.2**
baz=88									
UCH	**Uchtor**	**3.80**	**275**	⇑*i*P		Pb		03 49 33.0	-5.5
baz=76									
UCH				⇑*i*S		**Sn**		**03 50 18.8**	**+3.4**
baz=76									
AAK	**Ala-Archa**	**3.85**	**281**	⇑*i*P		Pb		03 49 33.5	-5.7
baz=82									
AAK				⇑*i*S		**Sn**		**03 50 20.0**	**+3.8**
baz=82									
AAK	**Ala-Archa**	**3.85**	**281**	⇑Pg		**Pb**		**03 49 39.8**	**+0.6**
3.4nm,0.6s									
AAK				⇑Lg		Lg		03 50 30.8	
7.1nm,0.5s									
SGDS	**Sogindy**	**3.95**	**293**	Pg		**Pb**		**03 49 42.0**	**+1.2**
4.8nm,0.5s									
SGDS				Lg		Lg		03 50 34.5	
9.2nm,0.5s									
USP	**Ospenovka**	**3.98**	**290**	⇑*e*P		**Pn**		**03 49 35.4**	**+3.1**
baz=91									
USP				⇑*i*S		**Sn**		**03 50 23.1**	**+3.8**
baz=91									
EKS2	**Erkin-Say**	**4.38**	**281**	⇑*i*P		**Pn**		**03 49 40.7**	**+2.9**
baz=82									
EKS2				⇑*i*S		**Sn**		**03 50 32.4**	**+3.3**
baz=82									
AML	**Almayashu**	**4.41**	**274**	⇑*i*P		**Pn**		**03 49 41.4**	**+2.9**
baz=75									
AML				⇑*i*S		**Sn**		**03 50 33.6**	**+3.4**
baz=75									
BTLS	**Baital**	**5.07**	**309**	*e*P		**Pb**		**03 50 03.1**	**+3.3**
2.2nm,0.5s									
BTLS				*e*S		**Sg**		**03 51 10.9**	**-2.6**
4.6nm,0.5s									
BTLS	**Baital**	**5.07**	**309**	Pg		**Pb**		**03 50 03.1**	**+3.3**
2.2nm,0.5s									
BTLS				Lg		Lg		03 51 10.9	
4.6nm,0.5s									
MAKZ	**Makanchi**	**5.11**	**19**	⇑Pn		**Pn**		**03 49 49.0**	**+1.2**
2.8nm,0.7s									
MAKZ				⇓Sn		**Sn**		**03 50 47.3**	**+0.3**
3.7nm,0.6s									
MAKZ				⇑Lg		Lg		03 51 11.7	
2.5nm,0.6s									
MK31	**Makanchi Array**	**5.18**	**21**	⇑Pn		**Pn**		**03 49 49.4**	**+0.7**
0.3nm,0.2s,baz=203,slow=14,SNR=28									
MK31				⇑Sn		**Sn**		**03 50 50.4**	**+1.8**
0.6nm,0.2s,baz=205,slow=24,SNR=5.0									
MK31				⇑Lg		Lg		03 51 13.4	
0.6nm,0.3s,baz=204,slow=30,SNR=4.2									
KK31	**Karatay Array**	**6.81**	**282**	⇑Pg		**Pb**		**03 50 31.6**	**+2.0**
0.5nm,0.5s,baz=96,slow=16,SNR=4.7									
KK31				Lg		Lg		03 52 05.0	
0.9nm,0.5s,baz=96,slow=27,SNR=5.4									

MOS ***12*** *04:33:14.9±1.0, 38.˚33N×141.˚95E, h48km, mb4.7/26, Error ellipse: s-maj=8.8km s-min=5.1km az=103.5*
BJI ***12*** *04:33:15.3±0.0, 38.˚31N×141.˚91E, h61km, mB4.8/29, mb4.6/43, Ms4.1/7, Ms7 3.7/2*
NIED ***12*** *04:33:16.9, 38.˚31N×141.˚83E, h47km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}2.14; $M_{\theta\theta}$-0.19; $M_{\phi\phi}$-1.95; $M_{r\theta}$0.43; $M_{\theta\phi}$-0.66; $M_{\phi r}$1.76; Fault plane solution: $M_0$2.81000×10^{15} NP1:ϕ_s15.00000°, δ65.00000°, λ87.00000°. NP2:ϕ_s202.00000°, δ25.00000°, λ96.00000°.*
JMA ***12*** *04:33:16.9±0.1, 38.˚31N×141.˚83E, h47km±1km, M4.3 JMA Felt II J1.*
NEIC ***12*** *04:33:16.9±1.3, 38.˚29N±0.˚06×141.˚8E±0.˚1, h49km±5km, mb4.5/35, Mwr4.1/12, Error ellipse: s-maj=12.5km s-min=7.3km az=116.0*
IDC ***12*** *04:33:17.4±0.5, 38.˚30N×141.˚78E, h52km±4km, mb3.9/26, mb1 4.1/31, mb1mx4.0/48, mbtmp4.2/31, MS3.2/14, Ms1 3.2/14, ms1mx3.0/38, Error ellipse: s-maj=13.0km s-min=10.2km az=111.0*

NEIC ***12*** *04:33:17.6, 38°.27N, 141°.83E, h44km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.36; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-1.42; $M_{r\theta}$-0.01; $M_{r\phi}$-0.00; $M_{\theta\phi}$1.42; Fault plane solution: $M_0$1.98000×10^{15} NP1:ϕ_s180.49000°, δ22.24000°, λ90.69000°. NP2:ϕ_s359.75000°, δ67.76000°, λ89.72000°. Principal axes: T 1.9528, Plg67.0000°, Azm269.0000°; N 0.0617, Plg0.0000°, Azm360.0000°; P -2.0144, Plg23.0000°, Azm90.0000°;*

ISC 12 04:33:16.7±0.4, 38°.28N±0°.04×141°.95E±0°.04, h51km±3km, h51km:pP-P, n226, σ1s20/250, mb4.4/66, MS3.4/10, 13C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
JIKH	**Ishinomakikobu**	**0.38**	**275**	P		**Pn**	**04 33 25.6**	**-1.2**
JIKH				S		**Sn**	**04 33 31.6**	**-2.4**
JIO	**Ouri**	**0.51**	**291**	P		**Pn**	**04 33 26.8**	**-1.3**
JIO				S		**Sn**	**04 33 33.7**	**-2.6**
JKMT	**Kesennumamotoy**	**0.65**	**325**	P		**Pn**	**04 33 28.9**	**-1.0**
JKMT				S		**Sn**	**04 33 37.2**	**-2.3**
OFUJ	**Ofunato**	**0.83**	**345**	P		**Pn**	**04 33 31.4**	**-0.9**
OFUJ				S		**Sn**	**04 33 41.6**	**-2.0**
JOFO	**Osakifurukawao**	**0.88**	**292**	P		**Pn**	**04 33 32.0**	**-0.9**
JMK	**Ichinoseki**	**0.89**	**320**	P		**Pn**	**04 33 32.0**	**-0.9**
JMK				S		**Sn**	**04 33 42.7**	**-2.1**
JMM	**Marumori**	**1.00**	**246**	P		**Pn**	**04 33 33.1**	**-1.4**
JMM				S		**Sn**	**04 33 44.2**	**-3.4**
JMM	**Marumori**	**1.00**	**246**			**Pn**	**04 33 33.1**	**-1.4**
JOU	**Okura**	**1.02**	**275**	P		**Pn**	**04 33 33.6**	**-1.1**
JOU				S		**Sn**	**04 33 46.1**	**-1.9**
JFK	**Kawauchi**	**1.25**	**224**	P		**Pn**	**04 33 36.9**	**-0.9**
JFK				S		**Sn**	**04 33 51.8**	**-1.8**
JOM	**Ohasama**	**1.30**	**337**	P		**Pn**	**04 33 38.1**	**-0.5**
JOM				eS		**Sn**	**04 33 53.3**	**-1.6**
JYK	**Kaneyama**	**1.40**	**298**	P		**Pn**	**04 33 38.9**	**-1.0**
JFT	**Otama**	**1.48**	**240**	P		**Pn**	**04 33 40.6**	**-0.5**
JFT				eS		**Sn**	**04 33 57.5**	**-1.8**
JYS	**Shirataka**	**1.48**	**268**	P		**Pn**	**04 33 40.2**	**-0.9**
JRG	**Rokugo**	**1.52**	**318**	P		**Pn**	**04 33 40.9**	**-0.6**
JYT	**Yasato**	**2.48**	**215**	Pn		**Pn**	**04 33 53.8**	**-0.8**
JTM	**Tenmabayashi**	**2.60**	**345**	Pn		**Pn**	**04 33 56.2**	**-0.1**
JSD	**Sado**	**2.92**	**266**	Pn		**Pn**	**04 33 59.2**	**-1.4**
MAJO	**Matsushiro**	**3.45**	**241**	*i* P		**Pn**	**04 34 09.1**	**+1.2**
MAJO	**Matsushiro**	**3.45**	**241**	Pn		**Pn**	**04 34 07.5**	**-0.4**
MAT	**Matsushiro**	**3.45**	**241**	P		**Pn**	**04 34 08.8**	**+0.9**
MAT				eS		**Sn**	**04 34 48.7**	**+1.2**
MJAR	**Matsushiro Arr**	**3.45**	**241**	P		**Pn**	**04 34 08.3**	**+0.4**
	2.3nm,0.3s,baz=52,slow=9.9,SNR=116							
MJAR				S		**Sn**	**04 34 46.1**	**-1.4**
	1.3nm,0.3s,baz=56,slow=21,SNR=4.6							
MJAR				LR		LR	04 35 50.6	
	comp=Z,374nm,19.6s,baz=50,slow=46							
MJAR	**Matsushiro Arr**	**3.45**	**241**	P		**Pn**	**04 34 08.3**	**+0.4**
MJAR	**Matsushiro Arr**	**3.45**	**241**			**Pn**	**04 34 07.8**	**-0.1**
MJB9	**Matsu-Tunnel**	**3.45**	**241**			**Pn**	**04 34 08.0**	**+0.1**
ERM	**Erimo**	**3.85**	**14**	*i* P		**Pn**	**04 34 13.7**	**+0.3**
ERM	**Erimo**	**3.85**	**14**	Pn		**Pn**	**04 34 13.0**	**-0.3**
JGF	**Kuroka**	**4.55**	**235**			**Pn**	**04 34 25.0**	**+2.0**
JEW	**Eniwo**	**4.58**	**355**	Pn		**Pn**	**04 34 24.2**	**+0.9**
INU	**Inuyama**	**4.92**	**235**	Pn		**Pn**	**04 34 29.7**	**+1.6**
JHJ	**Hachijo jima 2**	**5.44**	**200**	P		**Pn**	**04 34 35.6**	**+0.4**
	21nm,0.3s,baz=49,slow=17,SNR=1.2							
JHJ				S		**Sn**	**04 35 32.6**	**-3.9**
	58nm,0.3s,baz=95,slow=23,SNR=5.7							
JHJ	**Hachijo jima 2**	**5.44**	**200**			**Pn**	**04 34 35.6**	**+0.4**
NMR	**Nemuro--Hokkai**	**5.84**	**28**	*i* P		**Pn**	**04 34 39.1**	**-1.6**
NMR				*i* S		**Sn**	**04 35 41.3**	**-4.9**
ASAJ	**Asahikawa**	**5.86**	**5**	P		**Pn**	**04 34 40.5**	**-0.3**
	2.8nm,0.3s,baz=216,slow=20,SNR=23							
ASAJ				S		**Sn**	**04 35 46.0**	**-0.7**
	3.7nm,0.3s,baz=175,slow=22,SNR=3.8							
ASAJ	**Asahikawa**	**5.86**	**5**	P		**Pn**	**04 34 40.6**	**-0.3**
ASAJ							04 35 46.0	
JKA	**Kamikawa-asahi**	**5.86**	**5**	Pn		**Pn**	**04 34 40.6**	**-0.3**
JKA	**Kamikawa-asahi**	**5.86**	**5**			**Sn**	**04 35 46.0**	**-0.7**
JWT	**Wachi**	**6.05**	**242**	Pn		**Pn**	**04 34 45.4**	**+1.8**
RUSJ	**Misakicho**	**6.33**	**22**	*e*P		**Pn**	**04 34 47.2**	**-0.2**
RUSJ				eS		**Sn**	**04 35 56.2**	**-2.1**
GRPR	**Tuman**	**6.40**	**26**	*e*P		**Pn**	**04 34 46.6**	**-1.7**
GRPR				eS		**Sn**	**04 35 54.9**	**-5.1**
JHS	**Saijyo**	**7.82**	**248**			**Pn**	**04 35 09.1**	**+1.2**
TEY	**Ternei**	**7.85**	**331**	⇑*e*P		**Pn**	**04 35 12.7**	**+4.5**
TEY					pmax	pmax		
	comp=N,70nm,0.7s							
TEY					pmax	pmax		
	comp=E,50nm,0.7s							
TEY					pmax	pmax		
	comp=Z,80nm,0.6s							
YSS	**Yuzh-Sakhalins**	**8.69**	**4**	*e*P		**Pn**	**04 35 19.4**	**-0.3**
MSHR	**Mys Shultsa**	**9.28**	**301**	*i* P		**Pn**	**04 35 28.4**	**+0.6**
USA0B	**Ussuriysk Arra**	**9.55**	**311**	P		**Pn**	**04 35 34.2**	**+2.7**
USA0B	**Ussuriysk Arra**	**9.55**	**311**			**Pn**	**04 35 34.2**	**+2.7**
USRK	**Ussuriysk Ar.**	**9.55**	**311**	P		**Pn**	**04 35 31.6**	**+0.1**
	baz=123,slow=13,SNR=25							
USRK				LR		LR	04 39 08.9	
	comp=Z,125nm,18.3s,baz=149,slow=37							
USRK	**Ussuriysk Ar.**	**9.55**	**311**	P		**Pn**	**04 35 34.0**	**+2.5**
USRK	**Ussuriysk Ar.**	**9.55**	**311**	Pn		**Pn**	**04 35 34.0**	**+2.5**
JNU	**Nakatsue**	**10.37**	**244**	P		**Pn**	**04 35 44.6**	**+1.9**
	comp=Z,0.5nm,0.3s,baz=71,slow=9.9,SNR=2.8							
JNU				LR		LR	04 40 11.7	
	comp=Z,214nm,19.1s,baz=40,slow=40							
KSRS	**Korea Array**	**11.12**	**270**	P		**Pn**	**04 35 55.1**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=75,slow=15,SNR=8.7							
KSRS				LR		LR	04 39 48.0	
	comp=Z,112nm,21.4s,baz=72,slow=35							
JCJ	**Chichijima**	**11.15**	**179**	P		**Pn**	**04 35 51.1**	**-2.3**
	comp=Z,3.6nm,0.3s,baz=321,slow=23,SNR=1.4							
JCJ				S		Sn	04 37 46.2	-11
	comp=Z,5.8nm,0.3s,baz=81,slow=19,SNR=1.5							
MDJ	**Mudanjiang**	**11.23**	**308**	P		**Pn**	**04 35 55.4**	**+1.0**
MDJ					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MDJ					pmax	pmax		
	comp=Z,100nm,3.7s							
KLR	**Kul'dur**	**13.19**	**329**	P		**Pn**	**04 36 20.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=139,slow=13,SNR=2.1							
KLR				LR		LR	04 41 17.9	
	comp=Z,121nm,18.9s,baz=149,slow=37							
KLR	**Kul'dur**	**13.19**	**329**	*i* P		**Pn**	**04 36 19.7**	**-1.4**
KLR					pmax	pmax		
	comp=Z,4.0nm,1.0s							
KLR	**Kul'dur**	**13.19**	**329**			**Pn**	**04 36 20.3**	**-0.8**
PETK	**Petropavlovsk-**	**18.40**	**31**	LR		LR	04 44 45.8	
	comp=Z,16nm,21.1s,baz=211,slow=37							
ZEA	**Zeya**	**18.47**	**332**	*e*P		**P**	**04 37 26.1**	**-2.0**
ZEA					pmax	pmax		
	comp=N,10.0nm,1.0s							
ZEA					pmax	pmax		
	comp=Z,10.0nm,0.8s							
NJ2	**Nanjing**	**19.85**	**259**	*e*P		**P**	**04 37 43.1**	**-0.3**
NJ2					pmax	pmax		
	comp=Z,13nm,0.5s							
MA2	**Magadan**	**22.05**	**12**	P		**P**	**04 38 07.1**	**+0.2**
	comp=Z,7.5nm,0.6s,baz=199,slow=9.8,SNR=19							
MA2				LR		LR	04 45 51.8	
	comp=Z,36nm,20.7s,baz=215,slow=34							
MA2	**Magadan**	**22.05**	**12**	*ce*P		**P**	**04 38 07.8**	**+0.9**
MA2					pmax	pmax		
	comp=Z,11nm,1.0s							
MA2	**Magadan**	**22.05**	**12**	P		**P**	**04 38 07.0**	**+0.1**
MA2					lAmb	lAmb	04 38 09.9	
	comp=Z,8.5nm,0.7s							
HHC	**Hu-ho-hao-te**	**23.51**	**286**	*e*P		**P**	**04 38 20.6**	**-1.6**
HHC					pmax	pmax		
	comp=Z,17nm,0.7s							
HHC					pmax	pmax		
	comp=Z,52nm,4.2s							
HHC				LR		LR		
	comp=Z,270nm,11.7s							
HHC				LR		LR		
	comp=Z,170nm,12.8s							
YAK	**Yakutsk**	**24.96**	**346**	P		**P**	**04 38 32.7**	**-2.3**
	comp=Z,4.4nm,0.4s,baz=80,slow=0.8,SNR=2.0							
YAK	**Yakutsk**	**24.96**	**346**	*ce*P		**P**	**04 38 35.1**	**+0.1**
YAK					pmax	pmax		
	comp=Z,19nm,1.0s							
YAK	**Yakutsk**	**24.96**	**346**	P		**P**	**04 38 35.2**	**+0.2**
YAK					lAmb	lAmb	04 38 36.6	
	comp=Z,15nm,0.9s							
SEY	**Seymchan**	**25.49**	**11**	P		**P**	**04 38 41.1**	**+1.3**
	comp=Z,4.3nm,0.9s,baz=211,slow=6.5,SNR=16							
SEY	**Seymchan**	**25.49**	**11**	*i* P		**P**	**04 38 41.7**	**+1.9**
BOD	**Bodaibo**	**26.72**	**326**	*e*P		**P**	**04 38 50.3**	**-0.7**
BOD					pmax	pmax		
	comp=Z,11nm,0.8s							
XAN	**Xi'an**	**26.92**	**271**	P		**P**	**04 38 52.0**	**-1.1**
XAN					pmax	pmax		
	comp=Z,8.0nm,0.7s							
ULN	**Ulaanbaatar**	**27.03**	**302**	*ce*P		**P**	**04 38 55.0**	**+0.9**
ULN					pmax	pmax		
	comp=Z,6.0nm,1.7s							
ULN	**Ulaanbaatar**	**27.03**	**302**	P		**P**	**04 38 54.4**	**+0.3**
SONM	**Songino Array**	**27.47**	**302**	P		**P**	**04 38 57.9**	**0.0**
	comp=Z,1.9nm,1.0s,baz=92,slow=7.6,SNR=7.6							
SONM	**Songino Array**	**27.47**	**302**	P		**P**	**04 38 58.0**	**0.0**
SONM					pmax	pmax		
	comp=Z,3.0nm,1.2s							
SONM	**Songino Array**	**27.47**	**302**	P		**P**	**04 38 58.0**	**0.0**
ENH	**Enshi**	**27.88**	**263**	P		**P**	**04 39 00.3**	**-1.5**
H11N2	**WAKE ISLAND Hy**	**28.45**	**123**	T		T	05 09 18.4	
	baz=316,slow=75,SNR=2315							
H11N1	**WAKE ISLAND Hy**	**28.45**	**124**	T		T	05 09 19.0	
	baz=316,slow=75,SNR=5477							
H11N3	**WAKE ISLAND Hy**	**28.46**	**123**	T		T	05 09 20.5	
	baz=316,slow=75,SNR=2748							
H11S1	**WAKE ISLAND Hy**	**29.20**	**125**	T		T	05 10 21.3	
	baz=318,slow=76,SNR=981							
H11S3	**WAKE ISLAND Hy**	**29.20**	**126**	T		T	05 10 20.8	
	baz=318,slow=76,SNR=1575							
H11S2	**WAKE ISLAND Hy**	**29.22**	**126**	T		T	05 10 22.9	
	baz=318,slow=76,SNR=1003							
ZAK	**Zakamensk**	**29.85**	**307**	*e*P		**P**	**04 39 18.2**	**-0.9**
ZAK					pmax	pmax		
	comp=Z,4.0nm,1.0s							
TLY	**Talaya**	**29.86**	**309**	P		**P**	**04 39 18.6**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=127,slow=15,SNR=6.4							
TLY					LR	LR	04 51 54.3	
	comp=Z,59nm,18.4s,baz=116,slow=38							
TLY	**Talaya**	**29.86**	**309**	*ce*P		**P**	**04 39 19.5**	**+0.4**
TLY					pmax	pmax		
	comp=Z,3.0nm,0.7s							
TLY	**Talaya**	**29.86**	**309**	P		**P**	**04 39 18.0**	**-1.1**
GTA	**Gaotai**	**32.62**	**285**	*e*P		**P**	**04 39 45.2**	**+1.5**
GTA					pP	pP	04 39 54.5	-2.4
GTA					pmax	pmax		
	comp=Z,3.0nm,1.1s							
GTA					pmax	pmax		
	comp=Z,64nm,5.1s							
GTA					LR	LR		
	comp=Z,85nm,14.5s							
GTA					LR	LR		
	comp=Z,93nm,16.0s							
GTA					LR	LR		
	comp=Z,150nm,16.4s							
BILL	**Bilibino**	**32.72**	**17**	*e*P		**P**	**04 39 43.9**	**-0.1**
BILL				*e**PP		**sP**	**04 40 02.4**	**-0.7**
BILL				*e*			04 40 54.9	
BILL				*e*			04 42 29.0	
BILL					pmax	pmax		
	comp=Z,13nm,3.2s							
TIXI	**Tiksi**	**34.11**	**353**	P		**P**	**04 39 55.2**	**-0.8**
	comp=Z,2.0nm,0.3s,baz=171,slow=3.1,SNR=7.4							
TIXI	**Tiksi**	**34.11**	**353**	*e*P		**P**	**04 39 55.5**	**-0.5**
KMI	**Kunming**	**35.58**	**260**	⇑P		**P**	**04 40 10.0**	**+0.4**
KMI				pP		pP	04 40 25.8	+3.0
KMI				sP		sP	04 40 30.3	+1.4
KMI				pmax		pmax		
	comp=Z,7.0nm,0.5s							
DGZ	**Jazzator, Alta**	**40.02**	**305**	*c* *i* P		**P**	**04 40 47.2**	**+0.5**
DGZ					pmax	pmax		
	comp=Z,18nm,0.8s							
SIJI	**Sorong**	**40.18**	**197**	P		**P**	**04 40 49.0**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=335,slow=20,SNR=3.5							
SIJI	**Sorong**	**40.18**	**197**	P		**P**	**04 40 49.0**	**+0.9**
WMQ	**Urumqi**	**40.67**	**296**	*e*P		**P**	**04 40 52.0**	**0.0**
WMQ				pP		pP	04 41 07.2	+1.7
WMQ				sP		sP	04 41 13.5	+2.0
WMQ				pmax		pmax		
	comp=Z,35nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,140nm,4.9s							
ZAA0	**Zalesovo Array**	**41.40**	**311**	P		**P**	**04 40 57.1**	**-0.6**
ZAA0					lAmb	lAmb	04 40 58.2	
	comp=Z,6.3nm,0.8s							
ZALV	**Zalesovo Beam**	**41.40**	**311**	P		**P**	**04 40 57.5**	**-0.3**
	comp=Z,4.7nm,0.6s,baz=84,slow=7.3,SNR=17							
ZALV				PcP		**PcP**	**04 42 54.5**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=107,slow=5.0,SNR=2.9							
ZALV				LR		LR	04 58 09.3	
	comp=Z,29nm,18.7s,baz=45,slow=36							
ZALV	**Zalesovo Beam**	**41.40**	**311**	P		**P**	**04 40 57.5**	**-0.3**
ZALV							04 42 54.5	
ZALV	**Zalesovo Beam**	**41.40**	**311**	P		**P**	**04 40 56.5**	**-1.3**
CM31	**Chiang Mai Arr**	**42.23**	**254**	P		**P**	**04 41 05.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**42.23**	**254**	P		**P**	**04 41 05.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=46,slow=5.6,SNR=6.7							
CMAR				LR		LR	05 01 12.6	
	comp=Z,7.5nm,19.5s,baz=50,slow=40							
CMAR	**Chiang Mai Arr**	**42.23**	**254**	*ce*P		**P**	**04 41 06.5**	**+1.5**
CMAR					pmax	pmax		
	comp=Z,1.0nm,0.3s							
CMAR	**Chiang Mai Arr**	**42.23**	**254**	P		**P**	**04 41 04.9**	**-0.1**
NRIK	**Noril'sk**	**42.32**	**335**	LR		LR	04 59 42.9	
	comp=Z,72nm,19.1s,baz=150,slow=38							
MK31	**Makanchi Array**	**43.83**	**301**	*d* *i* P		**P**	**04 41 17.4**	**-0.2**
MK31	**Makanchi Array**	**43.83**	**301**	P		**P**	**04 41 17.5**	**-0.2**
MK31					lAmb	lAmb	04 41 18.8	
	comp=Z,5.2nm,0.8s							
MKAR	**Makanchi Array**	**43.83**	**301**	P		**P**	**04 41 17.2**	**-0.4**
	comp=Z,5.5nm,0.7s,baz=86,slow=9.5,SNR=52							
MKAR	**Makanchi Array**	**43.83**	**301**	P		**P**	**04 41 17.2**	**-0.4**
MKAR	**Makanchi Array**	**43.83**	**301**	P		**P**	**04 41 16.7**	**-1.0**
MAKZ	**Makanchi**	**44.04**	**301**	P		**P**	**04 41 18.8**	**-0.5**
MAKZ					pmax	pmax		
	comp=Z,5.0nm,1.0s							
MAKZ	**Makanchi**	**44.04**	**301**	P		**P**	**04 41 18.8**	**-0.5**
KURK	**Kurchatov**	**45.51**	**307**	P		**P**	**04 41 30.8**	**-0.1**
KURK	**Kurchatov**	**45.51**	**307**	P		**P**	**04 41 30.8**	**-0.1**
KURBB	**Kurchatov Arra**	**45.58**	**307**	P		**P**	**04 41 30.8**	**-0.6**
	comp=Z,13nm,0.8s,baz=82,slow=8.2,SNR=118							
JIRN	**Jiri**	**47.34**	**274**	*e*P		**P**	**04 41 46.0**	**0.0**
	comp=Z,3.6nm,0.2s							
RAMN	**Ramite**	**47.35**	**273**	*e*P		**P**	**04 41 45.0**	**-0.9**
	comp=Z,28nm,1.0s							
GUN	**Gumba**	**47.47**	**275**	*e*P		**P**	**04 41 46.7**	**-0.2**
PKI	**Pulchoki**	**47.99**	**275**	*e*P		**P**	**04 41 50.6**	**-0.4**
PKIN	**Phulchoki**	**48.00**	**275**	*e*P		**P**	**04 41 50.4**	**-0.6**
IL31		**48.22**	**33**	P		**P**	**04 41 53.0**	**+1.2**
IL31					lAmb	lAmb	04 41 53.2	
	comp=Z,5.2nm,1.3s							
ILAR	**Eielson Array**	**48.22**	**33**	P		**P**	**04 41 53.0**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=277,slow=6.5,SNR=9.6							
ILAR	**Eielson Array**	**48.22**	**33**	P		**P**	**04 41 53.0**	**+1.2**
ILAR	**Eielson Array**	**48.22**	**33**	P		**P**	**04 41 53.0**	**+1.2**
GKN	**Gorkha**	**48.40**	**276**	*e*P		**P**	**04 41 53.4**	**-0.5**
	comp=Z,16nm,0.5s							
KOLN	**Koldanda**	**49.32**	**276**	*e*P		**P**	**04 42 00.7**	**-0.3**
	comp=Z,25nm,1.0s							
PYUN	**Piuthan**	**49.64**	**277**	*e*P		**P**	**04 42 03.0**	**-0.5**
	comp=Z,9.1nm,0.3s							
BRVK	**Borovoye**	**50.11**	**312**	*ce*P		**P**	**04 42 06.9**	**+0.4**
BRVK					pmax	pmax		
	comp=Z,2.0nm,0.6s							
BRVK	**Borovoye**	**50.11**	**312**	P		**P**	**04 42 06.1**	**-0.4**
BRVK					lAmb	lAmb	04 42 07.1	
	comp=Z,4.0nm,1.1s							
SOEI	**Soe**	**50.56**	**203**	P		**P**	**04 42 09.8**	**-0.5**
MTN	**Manton Dam**	**51.85**	**193**	P		**P**	**04 42 20.0**	**+0.2**
PSI	**Prapat**	**52.80**	**239**	P		**P**	**04 42 27.3**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=0.0,slow=5.1,SNR=1.9							
PSI	**Prapat**	**52.80**	**239**	P		**P**	**04 42 27.3**	**+0.2**
KK31	**Karatay Array**	**52.88**	**299**	P		**P**	**04 42 26.7**	**-0.6**
KK31					pmax	pmax		
	comp=Z,4.0nm,1.0s							
KK31	**Karatay Array**	**52.88**	**299**	P		**P**	**04 42 26.7**	**-0.6**
KK31					lAmb	lAmb	04 42 45.9	
	comp=Z,3.7nm,1.0s							
KKAR	**Karatay Array**	**52.88**	**299**	P		**P**	**04 42 26.4**	**-0.9**
KKAR	**Karatay Array**	**52.88**	**299**	P		**P**	**04 42 26.4**	**-0.9**
INK	**Inuvik**	**53.09**	**28**	P		**P**	**04 42 29.7**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=290,slow=8.4,SNR=6.2							
INK					pP	**pP**	**04 42 43.9**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=265,slow=5.5,SNR=2.4							
INK	**Inuvik**	**53.09**	**28**	P		**P**	**04 42 29.7**	**+1.3**
INK				*PP		**pP**	**04 42 43.9**	**+1.7**
INK	**Inuvik**	**53.09**	**28**	P		**P**	**04 42 29.7**	**+1.3**
INK	**Inuvik**	**53.09**	**28**	lAmb		lAmb	04 42 33.4	
	comp=Z,3.6nm,1.2s							
NIL	**Nilore**	**54.64**	**288**	P		**P**	**04 42 40.6**	**+0.3**
NIL					pmax	pmax		
	comp=Z,9.0nm,0.7s							
NIL	**Nilore**	**54.64**	**288**	P		**P**	**04 42 40.6**	**+0.3**
ARU	**Arti**	**55.72**	**318**	*c* *i* P		**P**	**04 42 47.6**	**-0.1**
ARU							04 43 43.8	
ARU							04 44 48.9	
ARU				S		**S**	**04 50 30.6**	**+0.4**
ARU				SS		**SS**	**04 54 12.4**	**-3.1**
ARU					pmax	pmax		
	comp=Z,6.0nm,0.7s							
ARU	**Arti**	**55.72**	**318**	P		**P**	**04 42 47.1**	**-0.6**
ARU					lAmb	lAmb	04 42 47.9	
	comp=Z,6.0nm,0.8s							
C36M	**Paulatuk**	**56.12**	**25**	P		**P**	**04 42 51.7**	**+1.3**
C36M					lAmb	lAmb	04 42 52.8	
	comp=Z,3.9nm,0.9s							
KBL	**Kabul**	**57.38**	**290**	P		**P**	**04 42 59.5**	**-0.6**
KBL					pmax	pmax		
	comp=Z,7.0nm,0.9s							
KBL	**Kabul**	**57.38**	**290**	P		**P**	**04 42 59.5**	**-0.6**
KBL					lAmb	lAmb	04 43 01.3	
	comp=Z,6.7nm,0.8s							
ABKAR	**Akbulak array**	**57.47**	**310**	P		**P**	**04 42 58.9**	**-1.4**
CTA	**Charters Tower**	**58.19**	**175**	P		**P**	**04 43 06.9**	**+1.4**
CTA					pmax	pmax		
	comp=Z,23nm,0.6s							
CTAO	**Charters Tower**	**58.19**	**175**	P		**P**	**04 43 06.9**	**+1.4**
CTAO					pmax	pmax		
	comp=Z,19nm,0.6s							
WR0	**Warramunga Arr**	**58.34**	**188**	P		**P**	**04 43 06.6**	**0.0**
WR0					lAmb	lAmb	04 43 26.2	
	comp=Z,3.6nm,0.7s							
WRA	**Warramunga Arr**	**58.35**	**188**	P		**P**	**04 43 06.7**	**0.0**
	comp=Z,2.8nm,0.6s,baz=5.8,slow=7.1,SNR=46							
WRA	**Warramunga Arr**	**58.35**	**188**	*i* P		**P**	**04 43 06.6**	**0.0**
WRA					pmax	pmax		
	comp=Z,3.0nm,0.6s							
AS31	**Alice Springs**	**62.08**	**188**	P		**P**	**04 43 31.8**	**-0.3**
ASAR	**Alice Springs**	**62.08**	**188**	P		**P**	**04 43 32.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=8.9,slow=6.0,SNR=20							
ASAR					pP	**pP**	**04 43 46.2**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=2.8,slow=6.7,SNR=4.3							
ASAR	**Alice Springs**	**62.08**	**188**	P		**P**	**04 43 32.4**	**+0.3**
ASAR					*PP	**pP**	**04 43 46.2**	**-0.1**
ASAR	**Alice Springs**	**62.08**	**188**	P		**P**	**04 43 32.4**	**+0.3**
YKA	**Yellowknife Ar**	**62.52**	**31**	P		**P**	**04 43 35.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=302,slow=6.3,SNR=14							
YKA					pP	**pP**	**04 43 49.1**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=304,slow=6.4,SNR=4.1							
YKA	**Yellowknife Ar**	**62.52**	**31**	P		**P**	**04 43 35.4**	**+0.8**
YKA					*PP	**pP**	**04 43 49.2**	**+0.5**
ARCES	**ARCESS Array B**	**62.99**	**339**	P		**P**	**04 43 37.6**	**0.0**
	comp=Z,5.3nm,1.0s,baz=57,slow=8.8,SNR=9.3							
ARCES	**ARCESS Array B**	**62.99**	**339**	P		**P**	**04 43 37.7**	**0.0**
ARCES	**ARCESS Array B**	**62.99**	**339**	P		**P**	**04 43 37.6**	**0.0**
TULEG	**Thule**	**63.81**	**8**	P		**P**	**04 43 44.7**	**+1.7**
OBN	**Obninsk**	**67.36**	**323**	*e*P		**P**	**04 44 05.3**	**-0.8**
OBN				*e**PP		**sP**	**04 44 26.0**	**-0.3**
OBN				*e*			04 44 33.3	
OBN				*e*			04 46 32.9	
OBN					pmax	pmax		
	comp=Z,5.0nm,0.9s							
FINES	**FINESS Array B**	**67.92**	**332**	P		**P**	**04 44 09.1**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=54,slow=9.8,SNR=9.6							
FINES					LR	LR	05 14 19.6	
	comp=Z,23nm,18.1s,baz=66,slow=36							
FINES	**FINESS Array B**	**67.92**	**332**	*i* P		**P**	**04 44 09.6**	**0.0**
FINES					pmax	pmax		
	comp=Z,3.0nm,0.7s			

GERES				pP		**pP**	**04 45 46.2**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=46,slow=5.6,SNR=3.5							
GERES	**GERESS Array B**	**81.88**	**328**	P		**P**	**04 45 30.8**	**+0.2**
GERES	**GERESS Array B**	**81.88**	**328**	P		**P**	**04 45 30.8**	**+0.2**
VTS	**Vitosha**	**82.12**	**319**	P		**P**	**04 45 32.3**	**+0.3**
VTS				pmax	pmax			
	comp=Z,4.0nm,0.9s							
VTS	**Vitosha**	**82.12**	**319**	P		**P**	**04 45 32.3**	**+0.3**
VTS				IAmb	IAmb		04 45 33.7	
	comp=Z,3.6nm,0.9s							
KBA	**Koelnbreinsper**	**83.41**	**327**	P		**P**	**04 45 39.9**	**+1.2**
KBA				pmax	pmax			
	comp=Z,7.0nm,2.0s							
PDG	**Podgorica**	**84.27**	**321**	P		**P**	**04 45 42.7**	**-0.1**
BFO	**Black Forest**	**84.43**	**331**	P		**P**	**04 45 43.8**	**+0.2**
BFO				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BFO	**Black Forest**	**84.43**	**331**	P		**P**	**04 45 43.8**	**+0.2**
BFO				IAmb	IAmb		04 45 44.7	
	comp=Z,5.2nm,0.9s							
TXAR	**Lajitas Array**	**89.03**	**53**	P		**P**	**04 46 07.5**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=302,slow=3.0,SNR=8.9							
TXAR				pP		**pP**	**04 46 22.2**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=293,slow=3.4,SNR=15							
TXAR	**Lajitas Array**	**89.03**	**53**	P		**P**	**04 46 07.7**	**+1.2**
TXAR	**Lajitas Array**	**89.03**	**53**	P		**P**	**04 46 07.7**	**+1.2**
ESDC	**Sonseca Array**	**96.36**	**334**	LR		LR	05 32 48.9	
	comp=Z,8.1nm,21.6s,baz=350,slow=37							
VNA2	**Neumayer--Watz**	**143.63**	**196**	PKPdf		PKPbc	04 52 42.7	+0.5
VNA3	**Neumayer Olymp**	**143.87**	**195**	PKPdf		PKPbc	04 52 43.3	+0.3
LPAZ	**La Paz**	**145.69**	**59**	PKPbc		**PKPab**	**04 52 51.8**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=292,slow=3.8,SNR=6.6							
LPAZ				pPKPbc		pPKPab	04 53 06.4	0.0
	comp=Z,1.7nm,0.6s,baz=19,slow=3.7,SNR=5.1							
LPAZ	**La Paz**	**145.69**	**59**	PKP2		**PKPab**	**04 52 51.8**	**+0.4**

IDC 12 04:56:26.7±2.1, 1°43N×125°76E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/24, mbtmp3.2/3, Error ellipse: s-maj=189.3km s-min=27.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.84**	**159**	P	P	05 01 30.9	-0.8
	0.5nm,0.7s,baz=337,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**26.17**	**163**	P	P	05 02 03.9	+0.8
	0.1nm,0.3s,baz=338,slow=7.0,SNR=2.8						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	05 06 27.7	0.0
	0.1nm,0.4s,baz=123,slow=8.0,SNR=4.4						

*JMA **12** 05:25:16.8±0.1, 36.87N×141.06E, h51km±1km, M3.9*
JMA Felt II J1.
*NEIC **12** 05:25:16.7±1.9, 36.87N±0.04×141.2E±0.1, h47km±9km, mb4.0/6, Error ellipse: s-maj=11.6km s-min=6.2km az=88.0*
*NIED **12** 05:25:16.8, 36.87N×141.06E, h51km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.65; $M_{\theta\theta}$-1.52; $M_{\phi\phi}$5.17; $M_{r\theta}$3.86; $M_{\theta\phi}$-0.39; $M_{\phi r}$3.48; Fault plane solution: $M_0$6.91000×10^{14} NP1: ϕ_s210.00000°, δ72.00000°, λ-60.00000°. NP2: ϕ_s329.00000°, δ34.00000°, λ-147.00000°.*
*IDC **12** 05:25:17.9±0.8, 36.83N×141.04E, h53km±7km, mb3.4/14, mb1 3.7/17, mb1mx3.5/44, mbtmp3.8/17, MS2.7/4, Ms1 2.8/4, ms1mx2.4/42 Error ellipse: s-maj=18.1km s-min=14.1km az=105.0*

ISC 12 05:25:17.0±0.6, 36.85N±0.04×141.12E±0.06, h48km±5km, n69, σ1s07/74, mb3.8/17, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.36**	**315**	P	**Pn**	**05 25 26.0**	**-0.6**
ONAJ				S	**Sn**	**05 25 32.5**	**-1.0**
JHO	**Hitachi**	**0.50**	**242**	P	**Pn**	**05 25 27.7**	**-0.4**
JHO				S	**Sn**	**05 25 35.1**	**-1.0**
JFFD	**Fukushimafurud**	**0.51**	**299**	P	**Pn**	**05 25 27.6**	**-0.7**
JFFD				S	**Sn**	**05 25 34.9**	**-1.4**
JFK	**Kawauchi**	**0.55**	**340**	P	**Pn**	**05 25 28.1**	**-0.8**
JFK				S	**Sn**	**05 25 35.9**	**-1.5**
JHYU	**Hitachinakayam**	**0.66**	**220**	P	**Pn**	**05 25 29.7**	**-0.5**
JHYU				S	**Sn**	**05 25 38.9**	**-0.8**
JFT	**Otama**	**0.91**	**317**	P	**Pn**	**05 25 33.6**	**0.0**
JFT				S	**Sn**	**05 25 45.1**	**-0.6**
JYT	**Yasato**	**0.97**	**230**		**Pn**	**05 25 33.8**	**-0.5**
JMM	**Marumori**	**1.05**	**346**	P	**Pn**	**05 25 34.6**	**-0.8**
JMM				S	**Sn**	**05 25 47.4**	**-1.4**
JMM	**Marumori**	**1.05**	**346**		**Pn**	**05 25 34.6**	**-0.8**
JMM				Sn	**Sn**	**05 25 47.5**	**-1.4**
JFY	**Yanaizu**	**1.26**	**297**	P	**Pn**	**05 25 37.7**	**-0.5**
JFY				S	**Sn**	**05 25 53.9**	**-0.1**
JAG	**Ashikaga**	**1.40**	**253**	P	**Pn**	**05 25 39.6**	**-0.6**
JAG				S	**Sn**	**05 25 56.4**	**-1.1**
JKT	**Katashina**	**1.50**	**267**	P	**Pn**	**05 25 41.5**	**-0.1**
MJAR	**Matsushiro Arr**	**2.36**	**263**	P	**Pn**	**05 25 53.5**	**+0.3**
	7.9nm,0.3s,baz=84,slow=15,SNR=251						
MJAR				S	**Sn**	**05 26 18.6**	**-2.3**
	3.1nm,0.3s,baz=73,slow=21,SNR=3.5						
MJAR				LR	LR	05 27 02.2	
	comp=Z,104nm,20.0s,baz=85,slow=46						
MJAR	**Matsushiro Arr**	**2.36**	**263**		**Pn**	**05 25 52.5**	**-0.7**
MAJO	**Matsushiro**	**2.36**	**263**		**Pn**	**05 25 54.0**	**+0.8**
MAT	**Matsushiro**	**2.36**	**263**	P	**Pn**	**05 25 54.0**	**+0.7**
MAT				eS	**Sn**	**05 26 20.0**	**-1.0**
MJB9	**Matsu-Tunnel**	**2.36**	**264**		**Pn**	**05 25 53.9**	**+0.6**
JSD	**Sado**	**2.56**	**298**		**Pn**	**05 25 55.0**	**-1.0**
JGF	**Kuroka**	**3.28**	**249**		**Pn**	**05 26 07.7**	**+1.7**
INU	**Inuyama**	**3.64**	**247**		**Pn**	**05 26 12.0**	**+1.2**
JHJ	**Hachijo jima 2**	**3.88**	**197**	P	**Pn**	**05 26 14.4**	**+0.3**
	55nm,0.3s,baz=328,slow=21,SNR=18						
JHJ				S	**Sn**	**05 26 57.4**	**-1.0**
	40nm,0.3s,baz=58,slow=23,SNR=6.1						
JHJ2	**Mitsune**	**3.88**	**196**	Pn	**Pn**	**05 26 14.2**	**+0.2**
JTM	**Tenmabayashi**	**3.93**	**359**		**Pn**	**05 26 15.0**	**+0.2**
JWT	**Wachi**	**4.88**	**253**		**Pn**	**05 26 29.0**	**+1.0**
ERM	**Erimo**	**5.40**	**16**	Pn	**Pn**	**05 26 34.9**	**0.0**
JEW	**Eniwo**	**5.99**	**2**	Pn	**Pn**	**05 26 43.1**	**0.0**
JMN	**Monobe**	**6.69**	**244**	Pn	**Pn**	**05 26 54.0**	**+1.3**
JHS	**Saijyo**	**6.75**	**257**		**Pn**	**05 26 55.0**	**+1.5**
ASAJ	**Asahikawa**	**7.35**	**8**	P	**Pn**	**05 27 01.3**	**-0.4**
	0.6nm,0.3s,baz=209,slow=19,SNR=1.9						
JKA	**Kamikawa-asahi**	**7.35**	**8**		**Pn**	**05 27 01.6**	**0.0**
JCJ	**Chichijima**	**9.77**	**174**	P	**Pn**	**05 27 31.8**	**-3.0**
	10nm,0.3s,baz=287,slow=17,SNR=11						
JCJ				S	Sn	05 29 13.4	-10
	3.5nm,0.3s,baz=306,slow=19,SNR=1.8						
JCJ	**Chichijima**	**9.77**	**174**	Pn	**Pn**	**05 27 32.5**	**-2.3**
USRK	**Ussuriysk Ar.**	**10.10**	**319**	P	Pn	05 27 43.5	+4.2
	baz=134,slow=12,SNR=13						
USRK	**Ussuriysk Ar.**	**10.10**	**319**		**Pn**	**05 27 38.9**	**-0.5**
KSRS	**Korea Array**	**10.55**	**277**	P	**Pn**	**05 27 48.5**	**+3.1**
	0.3nm,0.3s,baz=87,slow=15,SNR=8.6						
KSRS				LR	LR	05 31 47.8	
	comp=Z,35nm,18.1s,baz=136,slow=37						
MA2	**Magadan**	**23.59**	**12**	P	**P**	**05 30 23.2**	**+0.2**
	0.9nm,0.4s,baz=170,slow=19,SNR=1.7						
SONM	**Songino Array**	**27.69**	**304**	P	**P**	**05 31 00.6**	**0.0**
	1.9nm,0.6s,baz=105,slow=9.3,SNR=11						
SONM	**Songino Array**	**27.69**	**304**	P	**P**	**05 31 00.4**	**-0.2**
SONM				IAmb	IAmb	05 31 04.2	
	comp=Z,1.5nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**28.26**	**120**	T	T	06 00 43.0	
	baz=313,slow=75,SNR=117						
H11N1	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	06 00 44.6	
	baz=313,slow=75,SNR=149						
H11N3	**WAKE ISLAND Hy**	**28.28**	**120**	T	T	06 01 04.7	
	baz=313,slow=75,SNR=128						
H11S1	**WAKE ISLAND Hy**	**28.96**	**122**	T	T	06 01 55.5	
	baz=314,slow=76,SNR=187						
H11S3	**WAKE ISLAND Hy**	**28.96**	**122**	T	T	06 02 02.5	
	baz=314,slow=76,SNR=143						
H11S2	**WAKE ISLAND Hy**	**28.98**	**122**	T	T	06 02 03.6	
	baz=314,slow=76,SNR=114						
TLY	**Talaya**	**30.27**	**311**	LR	LR	05 43 40.4	
	comp=Z,18nm,19.7s,baz=202,slow=36						
CMAR	**Chiang Mai Arr**	**41.22**	**255**	LR	LR	05 50 27.5	
	comp=Z,13nm,19.6s,baz=45,slow=37						
ZAA0	**Zalesovo Array**	**41.86**	**313**	P	**P**	**05 33 01.4**	**-0.7**
ZAA0				IAmb	IAmb	05 33 04.0	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**41.86**	**313**	P	**P**	**05 33 01.4**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=92,slow=10,SNR=4.0						
MKAR	**Makanchi Array**	**44.02**	**302**	P	**P**	**05 33 19.4**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=88,slow=10,SNR=6.5						
ILAR	**Eielson Array**	**49.78**	**32**	P	**P**	**05 34 04.5**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=274,slow=5.3,SNR=2.4						
ILAR				pP	**pP**	**05 34 18.9**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=270,slow=5.9,SNR=4.6						
FITZ	**Fitzroy Crossi**	**56.57**	**198**	P	**P**	**05 34 55.4**	**+0.7**
FITZ				IAmb	IAmb	05 35 24.2	
	comp=Z,5.0nm,1.4s						
WR0	**Warramunga Arr**	**56.84**	**187**	P	**P**	**05 34 56.2**	**-0.5**
WB2	**Warramunga Arr**	**56.84**	**188**	P	**P**	**05 34 56.3**	**-0.3**
WB2				IAmb	IAmb	05 34 57.0	
	comp=Z,2.0nm,0.7s						
WRA	**Warramunga Arr**	**56.84**	**188**	P	**P**	**05 34 56.2**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=5.6,slow=7.4,SNR=31						
WRA				PcP	**PcP**	**05 35 52.5**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=2.0,slow=4.4,SNR=2.1						
WRA	**Warramunga Arr**	**56.84**	**188**	P	**P**	**05 34 56.6**	**0.0**
ABKAR	**Akbulak array**	**57.88**	**310**	P	**P**	**05 35 02.3**	**-1.4**
ASAR	**Alice Springs**	**60.57**	**188**	P	**P**	**05 35 22.4**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=8.7,slow=6.7,SNR=10						
ASAR	**Alice Springs**	**60.57**	**188**	P	**P**	**05 35 22.8**	**+0.2**
ARCES	**ARCESS Array B**	**64.09**	**339**	P	**P**	**05 35 46.6**	**+1.1**
	comp=Z,3.3nm,1.1s,baz=50,slow=8.4,SNR=4.2						
YKA	**Yellowknife Ar**	**64.09**	**30**	P	**P**	**05 35 45.6**	**0.0**
	comp=Z,0.2nm,0.8s,baz=308,slow=6.1,SNR=4.6						
FINES	**FINESS Array B**	**68.87**	**332**	P	**P**	**05 36 16.8**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=39,slow=7.1,SNR=1.1						
AKASG	**Malin Array Be**	**74.30**	**322**	P	**P**	**05 36 49.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=32,slow=5.6,SNR=2.5						
NVAR	**Mina Array Bea**	**75.29**	**53**	P	**P**	**05 36 56.9**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=308,slow=4.0,SNR=3.6						
PDAR	**Pinedale Array**	**77.97**	**45**	P	**P**	**05 37 10.9**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=307,slow=4.5,SNR=2.0						
TXAR	**Lajitas Array**	**90.42**	**52**	P	**P**	**05 38 14.4**	**+0.7**
	comp=Z,0.2nm,0.8s,baz=336,slow=2.0,SNR=2.6						
TXAR				pP	**pP**	**05 38 30.3**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=300,slow=2.4,SNR=4.5						
LPAZ	**La Paz**	**146.99**	**59**	PKPbc	**PKPab**	**05 44 55.9**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=346,slow=8.3,SNR=2.0						
LPAZ				pPKPbc	**pPKPbc**	**05 45 10.8**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=319,slow=4.9,SNR=2.9						
H03N2	**Juan Fernandez**	**147.24**	**96**	T	T	08 29 50.2	
	baz=291,slow=76,SNR=26						
H03N3	**Juan Fernandez**	**147.25**	**96**	T	T	08 29 56.1	
	baz=291,slow=76,SNR=40						
H03N1	**Juan Fernandez**	**147.26**	**96**	T	T	08 29 51.2	
	baz=291,slow=76,SNR=43						

SKO 12 05:30:49.6, 40.97N×22.06E, h15km, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRG	**Griva**	**0.26**	**93**	*i* Pg	Pg	05 30 55.2	0.0
GRG				*i* Sg	Sg	05 30 59.2	+0.2
VAY	**Valandovo**	**0.52**	**48**	*i* Pg	Pg	05 31 00.2	+0.2
VAY				*i* Sg	Sg	05 31 06.6	-0.3
VAY				*e*Lg	Lg	05 31 07.1	
	comp=E,6.2nm,0.5s						
VAY				*e*Lg	Lg	05 31 08.2	
	comp=N,5.7nm,0.5s						
FNA	**Florina**	**0.55**	**250**	*i* Pg	Pg	05 31 00.7	+0.1
FNA				*i* Sg	Sn	05 31 10.6	-1.4
KNT	**Kendrikon**	**0.66**	**73**	*i* Pg	Pg	05 31 02.7	+0.1
STIP	**Stip**	**0.73**	**7**	*i* Pg	Pn	05 31 06.4	+1.0
STIP				*i* Sg	Sn	05 31 15.7	-0.6

ATH 12 05:30:58.2, 41.19N×23.90E, h16km±7km, ML0.6/2, Error ellipse: s-maj=8.0km s-min=1.5km az=342.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	**0.16**	**350**	P	Pg	05 31 02.0	-0.4
NVR				S	Sg	05 31 04.9	-0.3
NVR				AML	AML	05 31 05.1	
	comp=N,35μm,0.2s						
NVR				AML	AML	05 31 05.5	
	comp=E,34μm,0.1s						
SRS	**Serrai**	**0.24**	**253**	P	Pg	05 31 03.6	0.0
SRS				S	Sg	05 31 07.2	-0.1
SRS				AML	AML	05 31 07.8	
	comp=E,60μm,0.2s						
SRS				AML	AML	05 31 08.3	
	comp=N,67μm,0.1s						
KAVA	**Kavala**	**0.50**	**112**	P	Pg	05 31 08.2	0.0
KAVA				S	Sg	05 31 14.6	-0.4
SOH	**Sokhos**	**0.55**	**228**	P	Pg	05 31 09.0	-0.2

*ANF **12** 05:43:28.7±0.5, 36.64N×89.60W, h1km±3km, ML3.4/18, Error ellipse: s-maj=3.0km s-min=2.5km az=107.0*
*IASPEI **12** 05:43:29.2±0.9, 36.64N±0.02×89.60W±0.02, h17km±4km, Error ellipse: s-maj=3.1km s-min=3.0km az=37.8, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*SLM **12** 05:43:29.4±1.1, 36.634N±0.008×89.61W±0.01, h10km±5km, Md2.9/50, mb_Lg2.9/116(NEIC), Error ellipse: s-maj=1.5km s-min=1.1km az=66.0*
*NEIC **12** 05:43:29.6±0.7, 36.631N±0.009×89.599W±0.006, h11km±5km, Error ellipse: s-maj=1.4km s-min=0.5km az=203.0*

ISC 12 05:43:29.6±0.8, 36.63N±0.02×89.60W±0.02, h16km±4km, n158, σ0s82/147, New Madrid region, Missouri

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CATM	**Catron**	**0.04**	**242**		**Pg**	**05 43 33.3**	**+0.7**
NMMO	**New Madrid**	**0.06**	**140**		**Pg**	**05 43 33.7**	**+1.0**
NMEM	**New Madrid Sch**	**0.06**	**169**		**Pg**	**05 43 31.8**	**-0.9**
KEWM	**Kewanee**	**0.07**	**5**		**Pg**	**05 43 33.8**	**+1.1**
SJMO	**Saint John's B**	**0.10**	**92**		**Pg**	**05 43 32.4**	**-0.7**
SJMO					**Sg**	**05 43 34.7**	**-0.6**
WALK	**Watson Lake**	**0.10**	**154**		**Pg**	**05 43 32.4**	**-0.7**
WALK					**Sg**	**05 43 34.7**	**-0.7**
MARMO	**Marston**	**0.12**	**208**		**Pg**	**05 43 32.5**	**-0.7**
MARMO					**Sg**	**05 43 34.9**	**-0.7**
PARMO	**Parma**	**0.13**	**284**		**Pg**	**05 43 32.7**	**-0.7**
PARMO				Sg	**Sg**	**05 43 35.1**	**-0.7**
COKM	**Charter Oak**	**0.13**	**307**		**Pg**	**05 43 32.8**	**-0.6**
COKM					**Sg**	**05 43 35.2**	**-0.6**
HENM	**Henderson Moun**	**0.13**	**51**		**Pg**	**05 43 32.8**	**-0.6**
HENM				Sg	**Sg**	**05 43 35.5**	**-0.4**
MATM	**Matthews**	**0.14**	**358**		**Pg**	**05 43 33.0**	**-0.5**
DWDM	**Dogwood**	**0.18**	**28**		**Pg**	**05 43 33.8**	**-0.4**
PENMO	**Penman**	**0.18**	**187**		**Pg**	**05 43 33.6**	**-0.5**
PENMO				Sg	**Sg**	**05 43 36.7**	**-0.4**
PGVM	**Portageville**	**0.20**	**211**		**Pg**	**05 43 33.9**	**-0.5**
EPRM	**East Prairie**	**0.21**	**67**		**Pg**	**05 43 34.2**	**-0.4**
POBM	**Portage Bay**	**0.23**	**193**		**Pg**	**05 43 34.4**	**-0.5**
POBM					**Sg**	**05 43 38.1**	**-0.3**
PPLM	**Point Pleasant**	**0.23**	**177**		**Pg**	**05 43 34.4**	**-0.4**
PPLM					**Sg**	**05 43 38.2**	**-0.2**
PVMO	**Portageville**	**0.23**	**200**		**Pg**	**05 43 34.4**	**-0.5**
PVMO				Sg	**Sg**	**05 43 38.0**	**-0.4**
TOPM	**Tallapoosa**	**0.26**	**245**		**Pg**	**05 43 34.8**	**-0.5**
TOPM					**Sb**	**05 43 40.2**	**+0.2**
MLDM	**Malden**	**0.26**	**268**		**Pg**	**05 43 34.8**	**-0.5**
CHRM	**Charleston**	**0.29**	**41**		**Pg**	**05 43 35.5**	**-0.4**
CHRM					**Sg**	**05 43 39.9**	**-0.2**
WYBT	**Wynnburg**	**0.30**	**164**		**Pg**	**05 43 35.7**	**-0.3**
WADM	**Wardell**	**0.31**	**211**		**Pg**	**05 43 35.8**	**-0.3**
WADM					**Sg**	**05 43 40.5**	**-0.2**
HICK	**Hickman**	**0.31**	**107**		**Pg**	**05 43 35.9**	**-0.4**
HICK				Sg	**Sg**	**05 43 40.8**	**+0.1**
FLPT	**Flippin**	**0.32**	**135**		**Pg**	**05 43 36.0**	**-0.3**
FLPT					**Sg**	**05 43 41.0**	**+0.1**
GUAMO	**Guam**	**0.32**	**323**		**Pg**	**05 43 35.9**	**-0.4**
GUAMO					**Sg**	**05 43 40.8**	**-0.2**
BRNM	**Bernie**	**0.33**	**286**		**Pg**	**05 43 36.2**	**-0.4**
BRNM					**Sg**	**05 43 41.1**	**-0.3**
BETM	**Bethany**	**0.37**	**267**		**Pg**	**05 43 36.8**	**-0.5**
BETM					**Sg**	**05 43 42.2**	**-0.3**
GLAT	**Glass**	**0.44**	**145**		**Pg**	**05 43 38.3**	**-0.3**
GLAT				Sg	**Sg**	**05 43 44.1**	**-0.5**
MIST	**Miston**	**0.47**	**170**		**Pg**	**05 43 38.7**	**-0.3**
BRGM	**Braggadocio**	**0.48**	**206**		**Pg**	**05 43 38.8**	**-0.3**
LNXT	**Lenox**	**0.54**	**171**		**Pg**	**05 43 40.0**	**-0.2**
LNXT	**Lenox**	**0.54**	**171**	P	**Pg**	**05 43 40.1**	**-0.2**
	baz=350,SNR=34						
LNXT	**Lenox**	**0.54**	**171**	P		05 43 40.1	
	baz=350,SNR=34						
CWPT	**Cottonwood Poi**	**0.62**	**182**		**Pg**	**05 43 41.6**	**-0.3**
RELT	**Roellen**	**0.65**	**158**		**Pg**	**05 43 42.1**	**-0.2**
CHNM	**Channel**	**0.65**	**204**		**Pg**	**05 43 42.1**	**-0.2**
FPST	**Four Points**	**0.66**	**170**		**Pg**	**05 43 42.4**	**-0.3**
PBMO	**Poplar Bluff**	**0.68**	**283**		**Pg**	**05 43 42.2**	**-0.9**
PBMO	**Poplar Bluff**	**0.68**	**283**	P	**Pg**	**05 43 42.3**	**-0.8**
	baz=102,SNR=34						
PBMO				S	**Sg**	**05 43 51.1**	**-1.0**
	baz=102						
PBMO	**Poplar Bluff**	**0.68**	**282**	P		05 43 42.3	
	baz=102,SNR=34						
PBMO				S		05 43 51.1	
	baz=102						
GNAR	**Gosnell**	**0.75**	**207**		**Pg**	**05 43 43.9**	**-0.3**
HALT	**Halls**	**0.75**	**164**		**Pg**	**05 43 43.8**	**-0.5**
T45B	**Paducah**	**0.85**	**63**	P	**Pg**	**05 43 45.3**	**-0.9**
	baz=244,SNR=17						
T45B				S	**Sg**	**05 43 56.9**	**-0.6**
	baz=244						
T45B	**Paducah**	**0.85**	**63**	P		05 43 45.3	
	baz=244,SNR=17						
T45B				S		05 43 56.9	
	baz=244						
T45A	**Paducah**	**0.86**	**63**		**Pg**	**05 43 45.4**	**-0.9**
S44A	**Carbondale**	**1.09**	**14**		**Pb**	**05 43 49.5**	**-0.6**
S44A	**Carbondale**	**1.09**	**14**	P	**Pb**	**05 43 49.6**	**-0.6**
	baz=195,SNR=30						
S44A				S	**Sg**	**05 44 04.0**	**-1.1**
	baz=195						
S44A	**Carbondale**	**1.09**	**14**	P		05 43 49.6	
	baz=195,SNR=30						
S44A				S		05 44 04.0	
	baz=195						
SIUC	**Southern Illin**	**1.12**	**16**	Pg	**Pb**	**05 43 49.9**	**-0.8**
LPAR	**Lepanto**	**1.18**	**209**		**Pb**	**05 43 51.1**	**-0.4**
HBAR	**Harrisburg**	**1.38**	**219**		**Pn**	**05 43 54.2**	**0.0**
HBAR	**Harrisburg**	**1.38**	**219**	P	**Pn**	**05 43 54.2**	**0.0**
	baz=38,SNR=11						
HBAR				S	**Sn**	**05 44 13.4**	**+1.4**
	baz=38						
HBAR	**Harrisburg**	**1.38**	**219**	P		05 43 54.2	
	baz=38,SNR=11						
HBAR				S		05 44 13.4	
	baz=38						
LCAR	**Lake Charles**	**1.38**	**246**		**Pn**	**05 43 54.0**	**-0.2**
LCAR	**Lake Charles**	**1.38**	**246**	P	**Pn**	**05 43 53.9**	**-0.2**
	baz=65						
LCAR	**Lake Charles**	**1.38**	**246**	P		05 43 53.9	
	baz=65						
FVM	**French Village**	**1.50**	**334**		**Pn**	**05 43 56.1**	**+0.2**
FVM	**French Village**	**1.50**	**334**	P	**Pn**	**05 43 56.1**	**+0.2**
	baz=154,SNR=107						
FVM				S	**Sn**	**05 44 16.0**	**+0.9**
	baz=154						
FVM	**French Village**	**1.50**	**334**	P		05 43 56.1	
	baz=154,SNR=107						
FVM				S		05 44 16.0	
	baz=154						
EBZ	**Ebenezer Churc**	**1.50**	**172**		**Pn**	**05 43 56.7**	**+0.8**
W45A	**Hickory Valley**	**1.51**	**167**		**Pn**	**05 43 56.3**	**+0.3**
W45A	**Hickory Valley**	**1.51**	**167**	P	**Pn**	**05 43 56.4**	**+0.4**
	baz=347,SNR=63						
W45A				S	**Sb**	**05 44 17.2**	**+1.0**
	baz=347						
W45A	**Hickory Valley**	**1.51**	**167**	P		05 43 56.4	
	baz=347,SNR=63						
W45A				S		05 44 17.2	
	baz=347						
WVT	**Waverly**	**1.51**	**109**		**Pn**	**05 43 56.5**	**+0.4**
WVT	**Waverly**	**1.51**	**109**	P	**Pn**	**05 43 56.3**	**+0.3**
	baz=290,SNR=68						
WVT				S	**Sn**	**05 44 16.3**	**+0.9**
	baz=290						
WVT	**Waverly**	**1.51**	**109**	P		05 43 56.3	
	baz=290,SNR=68						
WVT				S		05 44 16.3	
	baz=290						
CCM	**Cathedral Cave**	**1.93**	**318**		**Pn**	**05 44 02.0**	**+0.2**
CCM	**Cathedral Cave**	**1.93**	**318**	P	**Pn**	**05 44 03.1**	**+1.3**
	baz=137,SNR=71						
CCM	**Cathedral Cave**	**1.93**	**318**	P		05 44 03.1	
	baz=137,SNR=71						
T47A	**Sharon Grove**	**2.03**	**79**		**Pn**	**05 44 03.4**	**+0.2**
T47A				IAmb_Lg		05 44 31.9	
	comp=Z,76nm,0.8s						
T47A	**Sharon Grove**	**2.03**	**79**	P	**Pn**	**05 44 04.3**	**+1.1**
	baz=261,SNR=98						
T47A	**Sharon Grove**	**2.03**	**79**	P		05 44 04.3	
	baz=261,SNR=98

CCAR	**Cane Creek**	**3.24**	**214**	Pn	**Pn**	**05 44 19.8**	**0.0**
SWET	**Sewanee**	**3.29**	**114**		**Pn**	**05 44 21.2**	**+0.6**
X40A	**Basin Creek Fa**	**3.40**	**232**		**Pn**	**05 44 23.3**	**+1.4**
X40A				IAmb_Lg		05 45 16.5	
	comp=Z,38nm,1.2s						
P40A	**Paris**	**3.48**	**327**		**Pn**	**05 44 23.5**	**+0.4**
BLO	**Bloomington**	**3.51**	**43**	IAmb_Lg		05 45 19.1	
	comp=Z,35nm,0.8s						
HHAR	**Hobbs**	**3.52**	**266**		**Pn**	**05 44 25.0**	**+1.3**
P46A	**Rosedale**	**3.53**	**32**	IAmb_Lg		05 45 28.3	
	comp=Z,36nm,0.9s						
O44A	**Mansfield**	**3.62**	**14**		**Pn**	**05 44 27.4**	**+2.3**
Z47A	**Carrollton**	**3.65**	**159**		**Pn**	**05 44 25.7**	**+0.2**
Z47A				IAmb_Lg		05 45 26.5	
	comp=Z,44nm,0.8s						
W39A	**Magazine**	**3.69**	**248**		**Pn**	**05 44 27.0**	**+1.1**
W50A	**Signal Mountai**	**3.76**	**111**		**Pn**	**05 44 26.4**	**-0.6**
Y49A	**Blount Mountai**	**3.80**	**136**		**Pn**	**05 44 28.1**	**+0.6**
T50A	**Nancy**	**3.84**	**83**	Pn	**Pn**	**05 44 28.2**	**+0.2**
T50A				IAmb_Lg		05 45 35.4	
	comp=Z,21nm,0.7s						
MIAR	**Mount Ida**	**3.85**	**238**		**Pn**	**05 44 29.7**	**+1.5**
MIAR				IAmb_Lg		05 45 34.6	
	comp=Z,39nm,1.0s						
MIAR	**Mount Ida**	**3.85**	**238**	P	**Pn**	**05 44 29.3**	**+1.1**
	baz=56,SNR=20						
MIAR	**Mount Ida**	**3.85**	**238**	P		05 44 29.3	
	baz=56,SNR=20						
U38A	**Gravette**	**3.86**	**269**	Pn	**Pn**	**05 44 29.8**	**+1.5**
U38A				IAmb_Lg		05 45 31.0	
	comp=Z,30nm,0.9s						
FPAL	**Fort Paine**	**3.86**	**122**	IAmb_Lg		05 45 33.9	
	comp=Z,32nm,0.7s						
R49A	**Shelbyville**	**3.89**	**64**	Pn	**Pn**	**05 44 29.4**	**+0.7**
HDIL	**Hopedale**	**3.92**	**3**		**Pn**	**05 44 29.8**	**+0.6**
146A	**Union**	**4.01**	**173**	IAmb_Lg		05 45 38.3	
	comp=Z,28nm,0.8s						
LRAL	**Lakeview Retre**	**4.18**	**148**		**Pn**	**05 44 33.0**	**+0.2**
LRAL				IAmb_Lg		05 45 50.0	
	comp=Z,21nm,0.8s						
N41A	**Harden Midland**	**4.18**	**347**	IAmb_Lg		05 45 49.4	
	comp=Z,22nm,1.0s						
143A	**Socs Landing,**	**4.19**	**201**	IAmb_Lg		05 45 51.4	
	comp=Z,30nm,0.9s						
SFIN	**Lafayette**	**4.22**	**27**	IAmb_Lg		05 45 50.7	
	comp=Z,22nm,0.7s						
CPCT	**Cooper Cave**	**4.28**	**105**		**Pn**	**05 44 36.3**	**+2.2**
P38A	**Dawn**	**4.30**	**315**		**Pn**	**05 44 34.4**	**0.0**
P38A				IAmb_Lg		05 45 43.9	
	comp=Z,33nm,0.7s						
P38A	**Dawn**	**4.30**	**315**	P	**Pn**	**05 44 35.2**	**+0.7**
	baz=133,SNR=14						
P38A	**Dawn**	**4.30**	**315**	P		05 44 35.2	
	baz=133,SNR=14						
V51A	**Loudon**	**4.32**	**99**		**Pn**	**05 44 35.8**	**+1.1**
V51A				IAmb_Lg		05 45 47.9	
	comp=Z,23nm,0.9s						
P48A	**Milroy**	**4.34**	**48**	IAmb_Lg		05 45 45.3	
	comp=Z,31nm,1.0s						
W52A	**Murphy**	**4.86**	**107**	IAmb_Lg		05 46 04.3	
	comp=Z,19nm,0.8s						
M44A	**Midewin, Midew**	**4.90**	**14**	IAmb_Lg		05 46 07.9	
	comp=Z,19nm,0.7s						
S51A	**Beattyville**	**4.90**	**76**	Pn	**Pn**	**05 44 44.0**	**+1.3**
S51A				IAmb_Lg		05 46 17.2	
	comp=Z,19nm,0.8s						
Z51A	**Franklin**	**4.91**	**131**		**Pn**	**05 44 44.2**	**+1.3**
V52A	**Sevierville**	**4.92**	**97**	IAmb_Lg		05 46 06.5	
	comp=Z,21nm,0.9s						
N38A	**Joes South For**	**5.03**	**327**	Pn	**Pn**	**05 44 45.5**	**+1.1**
N38A				IAmb_Lg		05 46 07.0	
	comp=Z,26nm,0.8s						
X37A	**Clayton**	**5.12**	**248**		**Pn**	**05 44 47.9**	**+2.2**
X37A				IAmb_Lg		05 46 26.3	
	comp=Z,16nm,0.8s						
N47A	**Urbana**	**5.22**	**35**	Pn	**Pn**	**05 44 47.6**	**+0.5**
N47A				IAmb_Lg		05 46 18.4	
	comp=Z,28nm,0.8s						
346A	**Big Creek Wild**	**5.23**	**179**	IAmb_Lg		05 46 26.4	
	comp=Z,23nm,0.8s						
Y52A	**Lilburn**	**5.31**	**120**	IAmb_Lg		05 46 18.2	
	comp=Z,26nm,0.8s						
L42A	**Oliver, Polo**	**5.36**	**359**	IAmb_Lg		05 46 17.4	
	comp=Z,28nm,0.7s						
250A	**Grady**	**5.40**	**148**	IAmb_Lg		05 46 20.2	
	comp=Z,16nm,0.9s						
Q51A	**Peebles**	**5.50**	**62**	IAmb_Lg		05 46 33.2	
	comp=Z,18nm,0.7s						
L40A	**Anamosa**	**5.57**	**347**	Pn	**Pn**	**05 44 52.8**	**+1.0**
V53A	**Saluda**	**5.58**	**98**	IAmb_Lg		05 46 33.3	
	comp=Z,15nm,0.8s						
152A	**Waverly Hall**	**5.64**	**133**	Pn	**Pn**	**05 44 52.0**	**-0.8**
152A				IAmb_Lg		05 46 29.7	
	comp=Z,17nm,0.8s						
QUOK	**Quay**	**5.75**	**268**	IAmb_Lg		05 46 37.9	
	comp=Z,20nm,1.0s						
OK030	**Cody Creek RV**	**5.85**	**265**	IAmb_Lg		05 46 47.3	
	comp=Z,17nm,0.8s						
OK031	**S. Brethren Rd**	**5.89**	**266**	IAmb_Lg		05 46 47.2	
	comp=Z,18nm,0.9s						
SCIA	**State Center**	**5.97**	**333**	IAmb_Lg		05 46 52.3	
	comp=Z,12nm,0.8s						
GOGA	**Godfrey**	**5.97**	**121**	IAmb_Lg		05 46 34.1	
	comp=Z,16nm,0.9s						
N49A	**Columbus Grove**	**6.02**	**43**	IAmb_Lg		05 46 40.4	
	comp=Z,15nm,0.9s						
K43A	**Burlington**	**6.14**	**9**	IAmb_Lg		05 46 49.0	
	comp=Z,20nm,0.8s						
Q52A	**Bidwell**	**6.25**	**66**	IAmb_Lg		05 46 58.1	
	comp=Z,14nm,0.9s						
U54A	**Nelsons Funny**	**6.26**	**89**	IAmb_Lg		05 46 55.0	
	comp=Z,23nm,0.8s						
ACSO	**Alum Creek Sta**	**6.32**	**53**	IAmb_Lg		05 46 48.7	
	comp=Z,20nm,0.8s						
N35A	**Tabor**	**6.33**	**314**	Pn	**Pn**	**05 45 00.9**	**-1.4**
OK025	**Westminster Rd**	**6.35**	**263**	IAmb_Lg		05 46 56.9	
	comp=Z,12nm,1.2s						
PAULI	**Pauline**	**6.58**	**104**	IAmb_Lg		05 46 59.2	
	comp=Z,14nm,0.9s						
P52A	**Corning**	**6.60**	**61**	IAmb_Lg		05 46 56.5	
	comp=Z,13nm,0.9s						
S54A	**Dingess, Beckl**	**6.72**	**78**	IAmb_Lg		05 47 04.6	
	comp=Z,15nm,0.8s						
O52A	**Adamsville**	**7.02**	**58**	IAmb_Lg		05 47 17.8	
	comp=Z,15nm,1.0s						
N51A	**Ashland**	**7.08**	**51**	IAmb_Lg		05 47 14.1	
	comp=Z,17nm,0.8s						
AAM	**Ann Arbor**	**7.29**	**37**	IAmb_Lg		05 47 26.5	
	comp=Z,17nm,0.9s						
R32A	**Long Quarter,**	**7.46**	**287**	IAmb_Lg		05 47 35.2	
	comp=Z,11nm,0.9s						
N53A	**Lisbon**	**8.02**	**56**	IAmb_Lg		05 47 45.9	
	comp=Z,11nm,0.7s						
M52A	**Chesterland**	**8.07**	**50**	IAmb_Lg		05 47 48.2	
	comp=Z,13nm,0.8s						
ECSD	**EROS Data Cent**	**8.89**	**325**	P	**Pn**	**05 45 37.1**	**-0.3**
	baz=141,SNR=5.8						
ECSD	**EROS Data Cent**	**8.89**	**325**	P		05 45 37.1	
	baz=141,SNR=5.8						
G45A	**Suttons Bay**	**8.91**	**18**	IAmb_Lg		05 48 32.0	
	comp=Z,14nm,0.8s						
S58A	**Poland Farm, P**	**9.28**	**80**	IAmb_Lg		05 48 20.0	
	comp=Z,7.0nm,1.1s						

IDC ***12*** *05:59:28.1±1.6,5.˙27S×152.˙40E,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.7/37,mbtmp3.8/9,ML1.7/1,MS2.6/2, Ms1 2.6/2,ms1mx2.3/40,Error ellipse: s-maj=57.0km s-min=20.2km az=125.0*

ISC 12 05:59:34.1±1.4,**5.˙3S**×0.˙2×**152.˙3E**±0.˙3,**h40**km,**n10,** σ**0991/11,mb3.7/8,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.55**	**231**	Pn	**Pn**	**06 01 09.1**	**+1.0**
	0.9nm,0.3s,baz=23,slow=15,SNR=1.7						
PMG				Sn	**Sn**	**06 02 20.9**	**-0.8**
	6.2nm,0.3s,baz=82,slow=16,SNR=8.5						
PMG				LR	LR	06 03 52.2	
	comp=Z,44nm,19.7s,baz=17,slow=40						
WRA	**Warramunga Arr**	**22.77**	**229**	P	**P**	**06 04 33.0**	**-0.3**
	0.7nm,0.5s,baz=54,slow=10.0,SNR=15						
WRA				LR	LR	06 14 20.2	
	comp=Z,20nm,19.1s,baz=230,slow=39						
ASAR	**Alice Springs**	**25.47**	**222**	P	**P**	**06 04 59.0**	**+0.3**
	0.8nm,0.7s,baz=60,slow=8.6,SNR=14						
FITZ	**Fitzroy Crossi**	**29.01**	**242**	P	**P**	**06 05 29.3**	**-1.2**
	1.0nm,0.5s,baz=68,slow=11,SNR=9.7						
CMAR	**Chiang Mai Arr**	**57.67**	**296**	P	**P**	**06 09 22.2**	**+1.2**
	0.3nm,0.4s,baz=114,slow=4.4,SNR=2.1						
SONM	**Songino Array**	**66.50**	**328**	P	**P**	**06 10 19.8**	**-0.1**
	0.5nm,0.6s,baz=131,slow=5.9,SNR=3.2						
ZALV	**Zalesovo Beam**	**81.31**	**326**	P	**P**	**06 11 45.6**	**-0.7**
	0.7nm,0.5s,baz=114,slow=6.5,SNR=2.2						
ILAR	**Eielson Array**	**82.80**	**22**	P	**P**	**06 11 53.0**	**-0.8**
	0.6nm,0.7s,baz=245,slow=5.8,SNR=6.7						
YKA	**Yellowknife Ar**	**96.08**	**28**	P	**P**	**06 12 58.1**	**+0.9**
	0.2nm,0.7s,baz=269,slow=4.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**150.02**	**287**	PKPbc	**PKPbc**	**06 19 21.3**	**-0.2**
	0.4nm,0.7s,baz=76,slow=3.1,SNR=1.8						

IDC ***12*** *06:20:15.1±0.7,51.˙49N×176.˙73E,h0km,mb4.0/20, mb1 4.2/21,mb1mx4.0/50,mbtmp4.0/21,ML4.6/1,MS2.9/4, Ms1 2.9/4,ms1mx2.6/47,Error ellipse: s-maj=22.6km s-min=13.0km az=170.0*

AEIC ***12*** *06:20:17±2.0,51.˙4N±0.˙1×176.˙82E±0.˙09,h10km±5km, ML4.0,mb4.4/88(NEIC),Error ellipse: s-maj=18.7km s-min=8.2km az=177.0*

NEIC ***12*** *06:20:19.0±2.4,51.˙45N±0.˙06×176.˙67E±0.˙09,h28km±5km, Error ellipse: s-maj=8.4km s-min=7.7km az=200.0*

ISC 12 06:20:19.7±0.5,**51.˙44N**±0.˙09×**176.˙71E**±0.˙04,**h31**km,**n156,** σ**1829/159,mb4.3/58,MS2.8/5,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.23**	**65**		**Pn**	**06 20 39.3**	**-1.5**
LSNW	**Little Sitkin**	**1.25**	**64**		**Pn**	**06 20 39.4**	**-1.5**
LSSE	**Little Sitkin**	**1.26**	**66**		**Pn**	**06 20 40.0**	**-1.2**
LSPA	**Little Sitkin**	**1.27**	**65**		**Pn**	**06 20 39.6**	**-1.8**
LSPA					**Sb**	**06 20 58.7**	**-0.4**
AMKA	**Amchitka**	**1.62**	**91**	Pn	**Pn**	**06 20 44.1**	**-2.1**
AMKA				Sn	**Sn**	**06 21 04.4**	**-1.6**
CESW	**Semis' Southwe**	**1.84**	**74**		**Pn**	**06 20 48.2**	**-0.9**
CEAP	**Semis' Anvil P**	**1.87**	**71**		**Pn**	**06 20 49.4**	**-0.2**
CEAP					**Sb**	**06 21 14.1**	**-2.1**
CERB	**Semis' Cerberu**	**1.88**	**74**		**Pn**	**06 20 50.2**	**+0.5**
CERAA	**Semis' Rag'd T**	**1.91**	**75**		**Pn**	**06 20 50.4**	**+0.2**
SMY	**Shemya**	**2.07**	**310**	Pn	**Pn**	**06 20 51.8**	**-0.5**
SMY	**Shemya**	**2.07**	**310**		**Sb**	**06 21 21.7**	**-0.1**
TASE	**Tanaga Southea**	**3.30**	**81**		**Pn**	**06 21 10.0**	**+0.8**
TAFP	**Tanaga Falls P**	**3.34**	**80**		**Pn**	**06 21 10.1**	**+0.4**
TAFP					**Sn**	**06 21 49.7**	**+1.4**
KIMD	**Kanaga Island**	**3.79**	**83**		**Pn**	**06 21 16.6**	**+0.7**
KIWB	**Kanaga Island**	**3.85**	**81**	Pn	**Pn**	**06 21 14.8**	**-2.0**
KIRH	**Kanaga Island**	**3.89**	**81**		**Pn**	**06 21 18.2**	**+0.9**
ADK	**Adak**	**4.14**	**81**	Pn	**Pn**	**06 21 21.4**	**+0.7**
GSTD	**Great Sitkin T**	**4.48**	**79**		**Pn**	**06 21 26.4**	**+0.8**
GSTD					**Sn**	**06 22 19.1**	**+2.5**
GSMY	**Great Sitkin M**	**4.54**	**79**		**Pn**	**06 21 26.8**	**+0.6**
ATKA	**Atka Island**	**5.69**	**79**	Pn	**Pn**	**06 21 43.3**	**+1.3**
ATKA	**Atka Island**	**5.69**	**79**		**Sn**	**06 22 47.3**	**+1.1**
KOKL	**Mount Kliuchef**	**5.70**	**77**		**Pn**	**06 21 43.1**	**+0.9**
KOFP	**Korovin Flat P**	**5.76**	**78**		**Pn**	**06 21 44.0**	**+1.0**
NIKH	**Nikolski High**	**9.00**	**75**	Pn	**Pn**	**06 22 27.0**	**-0.4**
SPIA	**Saint Paul Isl**	**9.54**	**48**	Pn	**Pn**	**06 22 34.2**	**-0.6**
AKUT	**Akutan**	**10.95**	**69**	Pn	**Pn**	**06 22 55.4**	**+1.3**
PEA0B	**Petropavlovsk-**	**11.77**	**286**	Pn	**Pn**	**06 22 59.8**	**-5.4**
PETK	**Petropavlovsk-**	**11.77**	**286**	Pn	**Pn**	**06 23 07.1**	**+1.8**
	0.2nm,0.3s,baz=100,slow=18,SNR=4.9						
PETK				Sn	**Sn**	**06 25 07.4**	**-7.9**
	0.0nm,0.3s,baz=107,slow=20,SNR=1.6						
FALS	**False Pass**	**12.40**	**66**	Pn	**Pn**	**06 23 14.7**	**+0.8**
GAMB	**Gambell**	**13.81**	**22**		**Pn**	**06 23 34.8**	**+1.8**
SDPT	**Sand Point**	**14.14**	**65**	Pn	**Pn**	**06 23 36.4**	**-1.2**
ANM	**Nome**	**16.14**	**29**	Pn	**Pn**	**06 24 03.5**	**-0.5**
TNA	**Tin City**	**16.20**	**23**		**P**	**06 24 08.9**	**+1.3**
TNA				IAmb	IAmb	06 24 12.8	
	comp=Z,19nm,0.8s						
CHIR	**Chirikof Islan**	**16.93**	**64**	Pn	**Pn**	**06 24 13.0**	**-1.0**
OHAK	**Old Harbor**	**18.33**	**60**	P	**P**	**06 24 28.9**	**-2.2**
OHAK				IAmb	IAmb	06 24 38.5	
	comp=Z,40nm,1.5s						
KDAK	**Kodiak Island**	**18.77**	**58**	P	**P**	**06 24 33.6**	**-2.4**
	comp=Z,1.7nm,0.3s,baz=292,slow=8.0,SNR=16						
KDAK	**Kodiak Island**	**18.77**	**58**	P	**P**	**06 24 34.1**	**-1.9**
CNPM	**China Poot**	**19.72**	**53**	P	**P**	**06 24 45.6**	**-0.8**
CNPM				IAmb	IAmb	06 24 59.2	
	comp=Z,17nm,1.0s						
BRLK	**Bradley Lake**	**19.93**	**53**	P	**P**	**06 24 47.6**	**-1.2**
BRLK				IAmb	IAmb	06 24 57.6	
	comp=Z,29nm,1.0s						
SKT	**Skwentna**	**20.15**	**46**	P	**P**	**06 24 51.6**	**+0.5**
SKT				IAmb	IAmb	06 25 07.3	
	comp=Z,9.2nm,0.7s						
PPLA	**Purkeypile**	**20.16**	**43**	P	Pn	06 24 52.2	-1.1
PPLA				IAmb	IAmb	06 25 13.2	
	comp=Z,20nm,1.2s						
SUA	**Susitna One**	**20.37**	**48**	P	**P**	**06 24 53.2**	**-0.3**
SUA				IAmb	IAmb	06 25 04.9	
	comp=Z,15nm,1.1s						
O22K	**Cooper Landing**	**20.64**	**51**	P	**P**	**06 24 55.1**	**-1.3**
RC01	**Rabbit Creek A**	**20.76**	**49**	P	**P**	**06 24 57.6**	**0.0**
RC01				IAmb	IAmb	06 25 12.0	
	comp=Z,29nm,1.4s						
CUT	**Chulitna**	**20.84**	**45**	P	**P**	**06 24 57.4**	**-1.1**
CUT				IAmb	IAmb	06 25 09.6	
	comp=Z,38nm,1.4s						
IMAR	**Indian Mountai**	**20.86**	**35**	P	**P**	**06 24 58.6**	**-0.1**
KTH	**Kantishna Hill**	**20.93**	**42**	P	**P**	**06 24 58.8**	**-0.7**
KTH				IAmb	IAmb	06 25 03.9	
	comp=Z,13nm,0.8s						
BPAW	**Bear Paw Mtn.**	**21.09**	**41**	P	**P**	**06 25 00.3**	**-0.9**
TRF	**Thorofare Moun**	**21.16**	**43**	P	**P**	**06 25 01.5**	**-0.6**
GHO	**Glory Hole Cre**	**21.29**	**48**	P	**P**	**06 25 01.1**	**-2.3**
PWL	**Port Wells**	**21.38**	**50**	P	**P**	**06 25 03.8**	**-0.6**
PWL				IAmb	IAmb	06 25 09.9	
	comp=Z,11nm,0.6s						
KNK	**Knik Glacier**	**21.43**	**49**	P	**P**	**06 25 03.8**	**-1.1**
KNK				IAmb	IAmb	06 25 10.1	
	comp=Z,8.8nm,0.7s						
MLY	**Manley**	**21.55**	**38**	P	**P**	**06 25 06.4**	**+0.2**
SML	**Sawmill**	**21.57**	**48**	P	**P**	**06 25 06.1**	**-0.4**
SML				IAmb	IAmb	06 25 12.0	
	comp=Z,16nm,1.0s						
RND	**Reindeer**	**21.76**	**43**	P	**P**	**06 25 06.8**	**-1.6**
MCK	**McKinley**	**21.82**	**42**	P	**P**	**06 25 07.7**	**-1.3**
GLI	**Glacier Island**	**21.98**	**51**	P	**P**	**06 25 09.5**	**-1.3**
GLI				IAmb	IAmb	06 25 13.5	
	comp=Z,11nm,0.6s						
SCM	**Sheep Creek Mo**	**22.05**	**48**	P	**P**	**06 25 10.8**	**-0.7**
NEA2	**Nenana**	**22.05**	**40**	P	**P**	**06 25 11.4**	**0.0**
NEA2				IAmb	IAmb	06 25 13.6	
	comp=Z,18nm,1.1s						
I23K	**Minto, Yukon-K**	**22.14**	**39**	P	**P**	**06 25 13.3**	**+1.0**
FID	**Port Fidalgo**	**22.26**	**51**	P	**P**	**06 25 12.1**	**-1.7**
FID				IAmb	IAmb	06 25 17.2	
	comp=Z,19nm,1.0s						
WRH	**Wood River Hil**	**22.41**	**41**	P	**P**	**06 25 13.9**	**-1.4**
MDM	**Murphy Dome**	**22.52**	**40**	P	**P**	**06 25 15.4**	**-1.1**
CCB	**Clear Creek Bu**	**22.58**	**41**	P	**P**	**06 25 15.5**	**-1.7**
M24K	**Tolsona, Glenn**	**22.63**	**48**	P	**P**	**06 25 16.6**	**-1.2**
COLD	**Coldfoot**	**22.70**	**33**	P	**P**	**06 25 18.0**	**-0.5**
IL31		**23.00**	**41**	P	**P**	**06 25 20.5**	**-0.9**
ILAR	**Eielson Array**	**23.00**	**41**	P	**P**	**06 25 18.7**	**-2.8**
	comp=Z,1.6nm,0.5s,baz=244,slow=8.4,SNR=14						
ILAR				LR	LR	06 34 35.0	
	comp=Z,32nm,19.6s,baz=216,slow=38						
ILAR	**Eielson Array**	**23.00**	**41**	P	**P**	**06 25 20.1**	**-1.4**
RAGM	**Ragged Mountai**	**23.10**	**52**	P	**P**	**06 25 20.4**	**-2.3**
PAX	**Paxson**	**23.13**	**45**	P	**P**	**06 25 22.4**	**-0.6**
PAX				IAmb	IAmb	06 25 22.6	
	comp=Z,10nm,1.2s						
BMRM	**Bremner River**	**23.20**	**51**	P	**P**	**06 25 21.3**	**-2.4**
BMRM				IAmb	IAmb	06 25 22.9	
	comp=Z,26nm,1.5s						
N25K	**Chitina, Valde**	**23.29**	**49**	P	**P**	**06 25 23.4**	**-1.1**
A21K	**Barrow**	**23.29**	**21**	P	**P**	**06 25 26.7**	**+2.3**
A21K				IAmb	IAmb	06 25 27.4	
	comp=Z,13nm,0.6s						
TOLK	**Toolik Lake Re**	**23.60**	**31**	P	**P**	**06 25 27.3**	**-0.1**
TOLK				IAmb	IAmb	06 25 31.8	
	comp=Z,5.8nm,0.6s						
GLB	**Gilahina Butte**	**23.64**	**50**	P	**P**	**06 25 27.6**	**-0.3**
GLB				IAmb	IAmb	06 25 32.2	
	comp=Z,5.6nm,0.6s						
PRP	**Porcupine Dome**	**23.77**	**39**	P	**P**	**06 25 30.2**	**+0.9**
VRDI	**Verde Repeater**	**23.79**	**50**	P	**P**	**06 25 27.2**	**-2.3**
VRDI				IAmb	IAmb	06 25 33.9	
	comp=Z,7.5nm,0.9s						
CRQM	**Cirque**	**23.89**	**51**	P	**P**	**06 25 31.2**	**+0.7**
CRQM				IAmb	IAmb	06 25 42.0	
	comp=Z,20nm,1.2s						
DOT	**Dot Lake**	**23.89**	**44**	P	**P**	**06 25 29.0**	**-1.3**
ASAJ	**Asahikawa**	**23.90**	**266**	P	**P**	**06 25 32.8**	**+2.3**
	comp=Z,4.8nm,0.8s,baz=78,slow=7.1,SNR=2.2						
MENT	**Mentasta**	**23.91**	**46**	P	**P**	**06 25 30.5**	**+0.1**
MENT				IAmb	IAmb	06 25 35.2	
	comp=Z,15nm,0.8s						
SCRK	**Sand Creek**	**24.00**	**43**	P	**P**	**06 25 29.6**	**-1.8**
SCRK				IAmb	IAmb	06 25 31.1	
	comp=Z,14nm,1.5s						
MCARA	**McCarthy VSAT**	**24.01**	**50**	P	**P**	**06 25 31.1**	**-0.3**
MCARA				IAmb	IAmb	06 25 58.8	
	comp=Z,16nm,1.0s						
FYU	**Fort Yukon**	**24.23**	**37**	P	**P**	**06 25 33.6**	**+0.3**
FYU				IAmb	IAmb	06 25 38.0	
	comp=Z,5.7nm,0.6s						
MESA	**MESA**	**24.44**	**53**	P	**P**	**06 25 34.9**	**-0.7**
YAH	**Yahtse**	**24.55**	**52**	P	**P**	**06 25 36.0**	**-0.6**
GRNC	**Granite Creek**	**24.57**	**52**	P	**P**	**06 25 36.5**	**-0.3**
BARN	**Barnard Glacie**	**24.64**	**51**	P	**P**	**06 25 36.0**	**-1.4**
BARN				IAmb	IAmb	06 25 39.7	
	comp=Z,12nm,0.9s						
BMAR	**Burnt Mountain**	**24.77**	**35**	P	**P**	**06 25 38.6**	**+0.2**
L27K	**Beaver Creek,**	**24.78**	**46**	P	**P**	**06 25 39.1**	**+0.7**
BCAR	**Beaver Creek A**	**24.80**	**46**	P	**P**	**06 25 39.5**	**+0.8**
K27K	**Chicken**	**24.83**	**44**	P	**P**	**06 25 38.6**	**-0.3**
K27K				IAmb	IAmb	06 25 42.1	
	comp=Z,13nm,1.2s						
LOGN	**Logan Glacier**	**24.94**	**51**	P	**P**	**06 25 41.2**	**+1.2**
LOGN				IAmb	IAmb	06 26 04.1	
	comp=Z,13nm,1.0s						
EGAK	**Eagle**	**25.37**	**42**	P	**P**	**06 25 42.7**	**-1.0**
EGAK				IAmb	IAmb	06 25 47.0	
	comp=Z,7.2nm,0.7s						
DAWY	**Dawson**	**26.00**	**44**	P	**P**	**06 25 49.3**	**-0.2**
DAWY				IAmb	IAmb	06 25 53.6	
	comp=Z,10nm,0.8s						
YAK	**Yakutsk**	**27.26**	**311**	LR	LR	06 36 51.8	
	comp=Z,26nm,20.2s,baz=104,slow=37						
EPYK	**Eagle Plains**	**27.48**	**39**	P	**P**	**06 26 02.4**	**-0.4**
EPYK				IAmb	IAmb	06 26 06.2	
	comp=Z,4.7nm,0.6s						
KLR	**Kul'dur**	**28.44**	**283**	P	**P**	**06 26 12.8**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=41,slow=11,SNR=2.1						
KLR				LR	LR	06 36 49.0	
	comp=Z,16nm,21.0s,baz=343,slow=35						
INK	**Inuvik**	**29.04**	**36**	P	**P**	**06 26 16.2**	**-0.4**
	comp=Z,1.8nm,0.4s,baz=259,slow=7.6,SNR=20						
INK	**Inuvik**	**29.04**	**36**	P	**P**	**06 26 16.1**	**-0.4**
C36M	**Paulatuk**	**32.56**	**34**	P	**P**	**06 26 47.1**	**-0.5**
C36M				IAmb	IAmb	06 26 51.1	
	comp=Z,5.6nm,1.2s						
KS19	**Wonju Array Si**	**36.83**	**267**	P	**P**	**06 27 23.5**	**-1.3**
YKA	**Yellowknife Ar**	**37.22**	**46**	P	**P**	**06 27 27.1**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=282,slow=8.2,SNR=35						
YKA				PcP	**PcP**	**06 29 46.7**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=287,slow=3.0,SNR=3.8						
RES	**Resolute Bay**	**40.84**	**24**	P	**P**	**06 27 59.2**	**+1.3**
EUNU	**Eureka**	**40.98**	**15**	P	**P**	**06 27 59.1**	**0.0**
NRIK	**Noril'sk**	**42.91**	**329**	P	**P**	**06 28 14.2**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=117,slow=2.3,SNR=3.6						
TLY	**Talaya**	**43.63**	**300**	P	**P**	**06 28 20.4**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=29,slow=10,SNR=2.2						
TLY				LR	LR	06 48 05.8	
	comp=Z,19nm,18.3s,baz=347,slow=38						
JOW	**Kunigami**	**43.84**	**255**	P	**P**	**06 28 21.6**	**-1.4**
	comp=Z,23nm,0.6s,baz=58,slow=11,SNR=7.6						
JOW	**Kunigami**	**43.84**	**255**	P	**P**	**06 28 22.1**	**-0.8**
SONM	**Songino Array**	**44.08**	**294**	P	**P**	**06 28 25.6**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=53,slow=9.0,SNR=4.5						
SONM	**Songino Array**	**44.08**	**294**	P	**P**	**06 28 25.8**	**+1.

mb4.7/52
MOS ***12*** *06:25:13.2±1.0,36°.41N×138°.84E,h144km,mb4.7/59, Error ellipse: s-maj=7.4km s-min=4.0km az=116.4*
IDC ***12*** *06:25:14.9±0.4,36°.40N×138°.75E,h143km±2km,mb4.2/34, mb1 4.3/36,mb1mx4.2/51,mbtmp4.7/36,Error ellipse: s-maj=9.7km s-min=8.5km az=69.0*
NEIC ***12*** *06:25:15.3±1.3,36°.42N±0°.05×138°.81E±0°.07, h147km±3km,mb4.6/107,Error ellipse: s-maj=8.4km s-min=6.2km az=115.0*
JMA ***12*** *06:25:15.5±0.1,36°.38N×138°.92E,h144km±1km,M4.3 Broadband fault plane solution: P waves. NP1: ϕs317.00000°,δ44.00000°,λ-30.00000°. NP2:ϕs69.00000°, δ70.00000°,λ-130.00000°. Principal axes: T Plg15.0000°, Azm187.0000°; N Plg37.0000°, Azm85.0000°; P Plg49.0000°, Azm296.0000°;*
JMA Felt II J1.
NIED ***12*** *06:25:15.6,36°.38N×138°.93E,h144km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.28; Mθθ3.17; Mϕϕ-1.88; Mrθ-2.45; Mθϕ-1.96; Mϕr-2.64; Fault plane solution: M₀4.86000×10¹⁵ NP1: ϕs67.00000°,δ77.00000°,λ-135.00000°. NP2: ϕs325.00000°,δ46.00000°,λ-18.00000°.*
ISC 12 06:25:14.7±0.4,36°.41N±0°.04×138°.92E±0°.04,h146km±3km, h146kmpP-P,n499,σ1§25/539,mb4.6/146,68C-76D,Fault plane solution: NP1:ϕs53.33812°,δ55.89653°, λ-122.42149°. **NP2:**ϕs281.90094°,δ45.65643°, λ-51.62862°. **Principal axes:** T Plg5.6109°, Azm165.7298°; N Plg26.3556°, Azm72.9399°; P Plg62.9621°, Azm266.8283°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JGK	**Kuni**	**0.27**	**303**	⇓P	**Pn**	**06 25 35.6**	**+0.9**
JRY	**Ryogami san**	**0.40**	**182**	⇓P	**Pn**	**06 25 35.9**	**+0.8**
JAG	**Ashikaga**	**0.43**	**88**	⇓P	**Pn**	**06 25 35.9**	**+0.8**
JAG				S	**Sn**	**06 25 51.4**	**+0.7**
JKT	**Katashina**	**0.44**	**36**	⇓P	**Pn**	**06 25 36.3**	**+0.9**
MJAR	**Matsushiro Arr**	**0.59**	**283**	P	**Pn**	**06 25 35.6**	**-0.5**
	320nm,0.3s,baz=96,slow=4.6						
MJAR				S	**Sn**	**06 25 52.1**	**-0.2**
	89nm,0.3s,baz=116,slow=8.3,SNR=8.1						
MJAR	**Matsushiro Arr**	**0.59**	**283**		**Pn**	**06 25 36.3**	**+0.3**
MJAR					**Sn**	**06 25 52.7**	**+0.5**
MAJO	**Matsushiro**	**0.59**	**283**	*i* P	**Pn**	**06 25 35.9**	**-0.1**
MAJO	**Matsushiro**	**0.59**	**283**	Pn	**Pn**	**06 25 36.6**	**+0.6**
MAT	**Matsushiro**	**0.59**	**283**	P	**Pn**	**06 25 36.6**	**+0.6**
MAT				S	**Sn**	**06 25 52.5**	**+0.3**
MAT	**Matsushiro**	**0.59**	**283**	P	**Pn**	**06 25 36.6**	**+0.6**
MAT				S	**Sn**	**06 25 52.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**0.59**	**283**		**Pn**	**06 25 36.6**	**+0.6**
JYN	**Shimob**	**0.96**	**199**	⇓P	**Pn**	**06 25 39.3**	**+0.5**
JYN				S	**Sn**	**06 25 57.6**	**+0.4**
JYT	**Yasato**	**1.04**	**100**	Pn	**Pn**	**06 25 39.9**	**+0.5**
JOD2	**Odawara 2**	**1.15**	**173**	⇓P	**Pn**	**06 25 40.6**	**+0.1**
JFNN	**Fujinakano**	**1.23**	**189**	P	**Pn**	**06 25 42.3**	**+1.1**
JNS	**Sasagawa**	**1.44**	**13**	⇑P	**Pn**	**06 25 44.5**	**+1.3**
JNS				S	**Sn**	**06 26 06.4**	**+1.3**
JGF	**Kuroka**	**1.50**	**238**		**Pn**	**06 25 44.8**	**+0.8**
JFT	**Otama**	**1.58**	**45**	⇑P	**Pn**	**06 25 46.7**	**+1.9**
JFT				*e*S	**Sn**	**06 26 10.0**	**+2.1**
JSZ	**Suzu**	**1.62**	**310**	⇑P	**Pn**	**06 25 45.8**	**+0.6**
JSD	**Sado**	**1.71**	**342**	⇑P	**Pn**	**06 25 46.9**	**+0.8**
JSD	**Sado**	**1.71**	**342**	Pn	**Pn**	**06 25 47.0**	**+0.8**
JSG	**Sagara**	**1.83**	**199**		**Pn**	**06 25 49.5**	**+1.9**
INU	**Inuyama**	**1.88**	**236**	Pn	**Pn**	**06 25 48.2**	**+0.1**
JMM	**Marumori**	**2.08**	**45**		**Pn**	**06 25 51.9**	**+1.4**
JWT	**Wachi**	**3.07**	**250**	Pn	**Pn**	**06 26 03.4**	**+0.6**
JHJ	**Hachijo jima 2**	**3.36**	**168**	P	**Pn**	**06 26 06.9**	**+0.4**
	353nm,0.3s,baz=269,slow=23,SNR=44						
JHJ				S	**Sn**	**06 26 45.3**	**-1.3**
	251nm,0.3s,baz=56,slow=18,SNR=2.6						
JHJ2	**Mitsune**	**3.37**	**167**	Pn	**Pn**	**06 26 06.9**	**+0.2**
JTM	**Tenmabayashi**	**4.68**	**20**	Pn	**Pn**	**06 26 23.9**	**+0.2**
JMN	**Monobe**	**4.93**	**239**	Pn	**Pn**	**06 26 26.8**	**-0.3**
JHS	**Saijyo**	**4.93**	**255**	Pn	**Pn**	**06 26 27.3**	**+0.2**
ERM	**Erimo**	**6.49**	**29**	*ce*P	**Pn**	**06 26 45.5**	**-2.2**
ERM				pmax	pmax		
	comp=Z,124nm,0.6s						
ERM	**Erimo**	**6.49**	**29**	Pn	**Pn**	**06 26 46.1**	**-1.6**
JEW	**Eniwo**	**6.71**	**16**	Pn	**Pn**	**06 26 50.8**	**+0.1**
JNU	**Nakatsue**	**7.39**	**246**	P	**Pn**	**06 27 01.1**	**+1.1**
	comp=Z,1.4nm,0.3s,baz=84,slow=3.8,SNR=10						
JNU	**Nakatsue**	**7.39**	**246**		**Pn**	**06 26 59.8**	**-0.1**
ASAJ	**Asahikawa**	**8.19**	**19**	P	**Pn**	**06 27 07.7**	**-2.8**
	comp=Z,18nm,0.3s,baz=225,slow=11,SNR=111						
ASAJ				S	**Sn**	**06 28 36.5**	**-5.1**
	comp=Z,1.5nm,0.3s,baz=209,slow=19,SNR=1.4						
ASAJ	**Asahikawa**	**8.19**	**19**	P	**Pn**	**06 27 08.7**	**-1.8**
JKA	**Kamikawa-asahi**	**8.19**	**19**	Pn	**Pn**	**06 27 08.7**	**-1.8**
MSHR	**Mys Shultsa**	**8.60**	**318**	*ce*P	**Pn**	**06 27 16.1**	**+0.2**
MSHR				pmax	pmax		
	comp=Z,22nm,0.8s						
NMR	**Nemuro--Hokkai**	**8.69**	**35**	⇑*i*P	**Pn**	**06 27 13.5**	**-3.7**
TEY	**Ternei**	**8.79**	**349**	⇓*e*P	**Pn**	**06 27 20.9**	**+2.4**
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=Z,20nm,0.7s						
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
KSRS	**Korea Array**	**8.87**	**280**	P	**Pn**	**06 27 22.2**	**+2.6**
	comp=N,1.2nm,0.3s,baz=96,slow=14,SNR=78						
KSAR	**Wonju Array Be**	**8.90**	**280**	P	**Pn**	**06 27 16.0**	**-4.0**
KSAR	**Wonju Array Be**	**8.90**	**280**	Pn	**Pn**	**06 27 16.0**	**-4.0**
KS19	**Wonju Array Si**	**8.92**	**280**		**Pn**	**06 27 18.1**	**-2.2**
RUSJ	**Misakicho**	**9.07**	**30**	*e*P	**Pn**	**06 27 19.4**	**-2.9**
RUSJ				*e*S	**Sn**	**06 28 56.4**	**-6.4**
YUK	**Yuzh-Kuril'sk**	**9.28**	**33**	*i* P	**Pn**	**06 27 21.2**	**-3.8**
TJN	**Taejon**	**9.32**	**273**	*ce*P	**Pn**	**06 27 27.8**	**+2.2**
USA0B	**Ussuriysk Arra**	**9.41**	**328**	*i* P	**Pn**	**06 27 27.9**	**+1.2**
USA0B	**Ussuriysk Arra**	**9.41**	**328**		**Pn**	**06 27 26.2**	**-0.5**
USRK	**Ussuriysk Ar.**	**9.41**	**328**	P	**Pn**	**06 27 28.1**	**+1.3**
	baz=148,slow=11,SNR=30						
USRK	**Ussuriysk Ar.**	**9.41**	**328**	Pn	**Pn**	**06 27 26.6**	**-0.1**
JCJ	**Chichijima**	**9.69**	**162**	P	Pn	06 27 24.9	-5.8
	comp=N,30nm,0.3s,baz=32,slow=18,SNR=31						
JCJ				S	Sn	06 29 04.9	-13
	comp=N,60nm,0.3s,baz=286,slow=21,SNR=11						
JCJ	**Chichijima**	**9.69**	**162**	Pn	Pn	06 27 25.2	-5.5
MDJ	**Mudanjiang**	**10.84**	**322**	P	**Pn**	**06 27 46.6**	**+0.9**
MDJ				sP		06 28 20.8	
MDJ				S	**Sn**	**06 29 48.0**	**+2.6**
MDJ				pmax	pmax		
	comp=N,7.0nm,1.0s						
MDJ	**Mudanjiang**	**10.84**	**322**	Pn	**Pn**	**06 27 46.4**	**+0.7**
YSS	**Yuzh-Sakhalins**	**10.91**	**14**	⇓*i*P	**Pn**	**06 27 44.8**	**-1.9**
YSS				pmax	pmax		
	comp=Z,160nm,0.3s						
YSS	**Yuzh-Sakhalins**	**10.91**	**14**	Pn	**Pn**	**06 27 44.6**	**-2.0**
KUR	**Kuril'sk**	**11.11**	**35**	*de*P	**Pn**	**06 27 47.6**	**-1.6**
KUR				S	**Sn**	**06 29 46.2**	**-5.7**
KUR				pmax	pmax		
	comp=N,41nm,0.4s						
KUR				pmax	pmax		
	comp=E,41nm,0.4s						
KUR				pmax	pmax		
	comp=Z,199nm,0.4s						
KUR				pmax	pmax		
	comp=Z,274nm,1.5s						
KUR				smax	smax		
	comp=N,17nm,0.5s						
KUR				smax	smax		
	comp=E,35nm,0.5s						
KLR	**Kul'dur**	**13.84**	**340**	P	**Pn**	**06 28 22.3**	**-2.2**
	comp=E,0.8nm,0.3s,baz=151,slow=9.6,SNR=14						
KLR	**Kul'dur**	**13.84**	**340**	*ce*P	**Pn**	**06 28 24.2**	**-0.3**
DL2	**Dalian**	**13.93**	**285**	P	**P**	**06 28 29.2**	**0.0**
DL2				pmax	pmax		
	comp=E,130nm,1.2s						
GRNR	**Gornyy**	**14.46**	**354**	⇑*i*P	**P**	**06 28 35.2**	**+0.2**
GRNR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,120nm,13.0s						
GRNR				MLR	MLR		
	comp=N,70nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,90nm,13.0s						
NJ2	**Nanjing**	**17.15**	**261**	*e*P	**P**	**06 29 04.1**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI	**Beijing**	**18.23**	**288**	P	**Pn**	**06 29 17.8**	**-0.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BJT	**Baijiatuau**	**18.23**	**288**	P	**P**	**06 29 15.8**	**-0.8**
BJT				pmax	pmax		
	comp=Z,24nm,0.8s						
BJT	**Baijiatuau**	**18.23**	**288**		**P**	**06 29 15.8**	**-0.8**
BJT				IAmb	IAmb	06 29 20.9	
	comp=Z,24nm,0.8s						
ZEA	**Zeya**	**19.14**	**338**	*e*P	**P**	**06 29 25.7**	**-0.7**
ZEA				pmax	pmax		
	comp=E,10.0nm,0.5s						
ZEA				pmax	pmax		
	comp=N,10.0nm,0.6s						
ZEA				pmax	pmax		
	comp=Z,30nm,0.7s						
NACB	**Ninganchiao**	**19.27**	**236**	P	**P**	**06 29 27.4**	**-0.7**
NACB				IAmb	IAmb	06 29 36.9	
	comp=Z,19nm,1.0s						
PEA0B	**Petropavlovsk-**	**21.26**	**32**	P	**P**	**06 29 49.4**	**+0.2**
PEA0B				pmax	pmax		
	comp=Z,28nm,1.5s						
PEA0B	**Petropavlovsk-**	**21.26**	**32**	P	**P**	**06 29 49.4**	**+0.2**
PEA0B				IAmb	IAmb	06 29 50.5	
	comp=Z,28nm,1.4s						
PETK	**Petropavlovsk-**	**21.26**	**32**	P	**P**	**06 29 50.0**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=226,slow=11,SNR=18						
PETK	**Petropavlovsk-**	**21.26**	**32**	P	**P**	**06 29 50.2**	**+1.1**
PETK	**Petropavlovsk-**	**21.26**	**32**	P	**P**	**06 29 50.2**	**+1.1**
HHC	**Hu-ho-hao-te**	**21.79**	**290**	*e*P	**P**	**06 29 53.9**	**-1.1**
HHC				pP	pP	06 30 26.2	+5.0
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,65nm,4.9s						
BTO	**Baotou**	**22.95**	**289**	*e*P	**P**	**06 30 06.2**	**-0.2**
BTO				S	**S**	**06 34 00.5**	**-4.9**
GUMO	**Guam**	**23.34**	**165**	P	**P**	**06 30 10.2**	**+0.2**
GUMO				pmax	pmax		
	comp=Z,341nm,1.4s						
GUMO	**Guam**	**23.34**	**165**	P	**P**	**06 30 10.2**	**+0.2**
MA2	**Magadan**	**24.42**	**15**	P	**P**	**06 30 20.0**	**+0.7**
	comp=Z,16nm,0.7s,baz=199,slow=9.3,SNR=40						
MA2	**Magadan**	**24.42**	**15**	*ce*P	**P**	**06 30 19.1**	**-0.3**
MA2				pmax	pmax		
	comp=Z,12nm,0.7s						
MA2	**Magadan**	**24.42**	**15**	P	**P**	**06 30 20.1**	**+0.7**
MA2				IAmb	IAmb	06 30 21.8	
	comp=Z,14nm,0.7s						
XAN	**Xi'an**	**24.58**	**273**	P	**P**	**06 30 19.5**	**-1.7**
XAN				pmax	pmax		
	comp=Z,15nm,0.5s						
XAN	**Xi'an**	**24.58**	**273**	P	**P**	**06 30 19.5**	**-1.7**
XAN				IAmb	IAmb	06 30 20.4	
	comp=Z,15nm,0.5s						
ENH	**Enshi**	**25.28**	**265**	P	**P**	**06 30 25.9**	**-1.6**
ULN	**Ulaanbaatar**	**26.07**	**306**	*ce*P	**P**	**06 30 34.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,11nm,1.3s						
YAK	**Yakutsk**	**26.29**	**350**	P	**P**	**06 30 35.0**	**-1.2**
	comp=Z,11nm,0.4s,baz=160,slow=1.0,SNR=5.2						
YAK	**Yakutsk**	**26.29**	**350**	*e*P	**P**	**06 30 36.2**	**0.0**
YAK				*e**PP	**pP**	**06 31 09.9**	**+3.2**
YAK				*e*		06 33 59.1	
YAK				*e*S	**S**	**06 34 58.3**	**+0.5**
YAK				*e**SS	sS	06 36 15.2	+23
YAK				*e*		06 41 11.0	
YAK				pmax	pmax		
	comp=Z,25nm,0.8s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
YAK				smax	smax		
	comp=E,29nm,13.4s						
YAK				smax	smax		
	comp=N,85nm,19.4s						
YAK	**Yakutsk**	**26.29**	**350**	P	**P**	**06 30 35.8**	**-0.4**
SONM	**Songino Array**	**26.50**	**306**	P	**P**	**06 30 37.2**	**-1.3**
	comp=N,2.9nm,0.6s,baz=106,slow=8.5,SNR=16						
SONM				PcP	**PcP**	**06 34 00.2**	**+0.8**
	comp=N,1.0nm,0.5s,baz=105,slow=2.0,SNR=6.4						
SONM				ScP	**ScP**	**06 37 26.0**	**+0.3**
	comp=N,1.3nm,1.0s,baz=112,slow=2.4,SNR=5.6						
SONM	**Songino Array**	**26.50**	**306**	P	**P**	**06 30 37.1**	**-1.4**
SEY	**Seymchan**	**27.82**	**13**	P	**P**	**06 30 51.1**	**+1.3**
	comp=N,0.5nm,0.3s,baz=186,slow=4.8,SNR=4.8						
SEY	**Seymchan**	**27.82**	**13**	*i* P	**P**	**06 30 49.8**	**-0.1**
LZH	**Lanzhou**	**28.20**	**280**	⇓P	P	06 30 44.1	-10
LZH				sP	pP	06 31 25.0	0.0
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
TLY	**Talaya**	**29.25**	**313**	P	**P**	**06 31 03.5**	**+0.7**
	comp=Z,2.1nm,0.5s,baz=119,slow=6.2,SNR=6.2						
TLY	**Talaya**	**29.25**	**313**	*c* iP	**P**	**06 31 03.3**	**+0.5**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TLY	**Talaya**	**29.25**	**313**	P	**P**	**06 31 01.5**	**-1.2**
GTA	**Gaotai**	**30.84**	**288**	⇑P	**P**	**06 31 18.6**	**+1.6**
GTA				pP	pP	06 31 50.4	+1.8
GTA				sP	sP	06 32 06.8	+1.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,100nm,4.4s						
GTA				LR	LR		
	comp=Z,86nm,14.2s						
GTA				LR	LR		
	comp=Z,100nm,15.3s						
GTA				LR	LR		
	comp=Z,62nm,15.3s						
BILL	**Bilibino**	**35.20**	**17**	*e*P	**P**	**06 31 53.7**	**-0.7**
BILL				*e*		06 34 22.9	
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	**Tiksi**	**35.69**	**355**	*ce*P	**P**	**06 31 57.2**	**-1.3**
TIXI	**Tiksi**	**35.69**	**355**	P	**P**	**06 31 58.6**	**+0.1**
TIXI				IAmb	IAmb	06 31 58.7	
	comp=Z,7.0nm,0.5s						
MRSI	**Marisa**	**39.07**	**208**	P	**P**	**06 32 27.0**	**-0.6**
DGZ	**Jazzator, Alta**	**39.14**	**306**	*c* iP	**P**	**06 32 28.8**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,25nm,0.6s						
CHTO	**Chiang Mai**	**39.20**	**254**	P	**P**	**06 32 26.6**	**-2.0**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CHTO	**Chiang Mai**	**39.20**	**254**	P	**P**	**06 32 26.6**	**-2.0**
CHTO				IAmb	IAmb	06 32 28.9	
	comp=Z,5.3nm,0.6s						
WMQ	**Urumqi**	**39.34**	**297**	*e*P	**P**	**06 32 31.2**	**+1.6**
WMQ				sP	sP	06 33 20.1	+1.7
WMQ				pmax	pmax		
	comp=Z,44nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,270nm,6.3s						
WMQ	**Urumqi**	**39.34**	**297**	P	**P**	**06 32 28.5**	**-1.1**
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ	**Urumqi**	**39.34**	**297**	P	**P**	**06 32 28.5**	**-1.1**
CM31	**Chiang Mai Arr**	**39.40**	**254**	P	**P**	**06 32 29.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**39.40**	**254**	P	**P**	**06 32 30.1**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=44,slow=8.9,SNR=12						
CMAR	**Chiang Mai Arr**	**39.40**	**254**	*i* P	**P**	**06 32 30.2**	**-0.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**39.40**	**254**	P	**P**	**06 32 29.8**	**-0.5**
FAKI	**Fak Fak**	**39.62**	**190**	P	**P**	**06 32 30.2**	**-1.9**
FAKI				IAmb	IAmb	06 32 33.0	
	comp=Z,12nm,0.7s						
FAKI	**Fak Fak**	**39.62**	**190**	P	**P**	**06 32 32.0**	**-0.1**
	comp=Z,18nm,0.8s						
SANI	**Sanana**	**40.12**	**200**	P	**P**	**06 32 34.9**	**-1.3**
	comp=Z,58nm,0.7s						
LSA	**Lhasa**	**40.27**	**275**	P	**P**	**06 32 37.0**	**-0.9**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LSA	**Lhasa**	**40.27**	**275**	P	**P**	**06 32 37.0**	**-0.9**
LSA				IAmb	IAmb	06 32 40.5	
	comp=Z,8.9nm,0.6s						
ZAA0	**Zalesovo Array**	**40.86**	**313**	P	**P**	**06 32 41.5**	**-0.4**
ZALV	**Zalesovo Beam**	**40.86**	**313**	P	**P**	**06 32 41.6**	**-0.3**
	comp=Z,18nm,0.5s,baz=89,slow=6.4,SNR=71						
ZALV				PcP	**PcP**	**06 34 39.7**	**0.0**
	comp=Z,6.9nm,0.5s,baz=99,slow=2.9,SNR=15						
ZALV	**Zalesovo Beam**	**40.86**	**313**	*i* P	**P**	**06 32 41.9**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,18nm,0.5s						
ZALV	**Zalesovo Beam**	**40.86**	**313**	P	**P**	**06 32 41.8**	**-0.1**
ZSN	**Zaisan**	**40.94**	**303**	*e*P	**P**	**06 32 42.9**	**+0.1**
	baz=303						
ZSN	**Zaisan**	**40.94**	**303**	*e*P	**P**	**06 32 42.8**	**+0.1**
MK31	**Makanchi Array**	**42.76**	**302**	*e*P	**P**	**06 32 57.1**	**-0.4**
MK31	**Makanchi Array**	**42.76**	**302**	P	**P**	**06 32 57.4**	**-0.1**
MKAR	**Makanchi Array**	**42.76**	**302**	P	**P**	**06 32 57.3**	**-0.2**
	comp=Z,8.2nm,0.6s,baz=83,slow=10,SNR=90						
MKAR				PcP	**PcP**	**06 34 46.4**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=115,slow=2.9,SNR=4.7						
MKAR	**Makanchi Array**	**42.76**	**302**	*i* P	**P**	**06 32 57.5**	**0.0**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MKAR	**Makanchi Array**	**42.76**	**302**	P	**P**	**06 32 57.2**	**-0.3**
MAKZ	**Makanchi**	**42.97**	**302**	P	**P**	**06 32 58.9**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAKZ	**Makanchi**	**42.97**	**302**	P	**P**	**06 32 58.9**	**-0.3**
MAKZ				IAmb	IAmb	06 33 00.0	
	comp=Z,10nm,0.9s						
NRIK	**Noril'sk**	**43.01**	**336**	P	**P**	**06 32 58.7**	**-0.5**
	comp=Z,5.9nm,0.5s,baz=116,slow=11,SNR=12						
NRIK	**Noril'sk**	**43.01**	**336**	*ce*P	**P**	**06 32 58.9**	**-0.2**
NRIK				pmax	pmax		
	comp=Z,17nm,1.0s						
NRIK	**Noril'sk**	**43.01**	**336**	P	**P**	**06 32 58.9**	**-0.2**
NRIK				IAmb	IAmb	06 33 00.7	
	comp=Z,16nm,1.1s						
SEM	**Semipalatinsk**	**43.73**	**308**	*e*P	**P**	**06 33 04.2**	**-1.4**
	baz=308						
SEM	**Semipalatinsk**	**43.73**	**308**	*e*P	**P**	**06 33 04.1**	**-1.4**
TAPN	**Taplejung**	**43.98**	**273**	*e*P	**P**	**06 33 07.7**	**-0.2**
	comp=Z,18nm,0.4s						
ODAN	**Odare**	**44.45**	**273**	*e*P	**P**	**06 33 11.3**	**-0.2**
	comp=Z,35nm,0.8s						
KURK	**Kurchatov**	**44.74**	**308**	P	**P**	**06 33 13.5**	**+0.3**
KURK	**Kurchatov**	**44.74**	**308**	P	**P**	**06 33 13.5**	**+0.3**
KURBB	**Kurchatov Arra**	**44.81**	**308**	P	**P**	**06 33 13.5**	**-0.3**
	comp=Z,38nm,0.4s,baz=85,slow=7.9,SNR=395						
KURBB	**Kurchatov Arra**	**44.81**	**308**	P	**P**	**06 33 13.0**	**-0.8**
KAPI	**Kappang**	**44.95**	**208**	P	**P**	**06 33 14.6**	**-0.6**
KAPI				pmax	pmax		
	comp=Z,15nm,0.9s						
KAPI	**Kappang**	**44.95**	**208**	P	**P**	**06 33 14.6**	**-0.6**
KAPI				IAmb	IAmb	06 33 15.5	
	comp=Z,15nm,0.8s						
RAMN	**Ramite**	**45.05**	**273**	*e*P	**P**	**06 33 16.3**	**0.0**
	comp=Z,96nm,0.6s						
JIRN	**Jiri**	**45.08**	**274**	*e*P	**P**	**06 33 17.0**	**+0.4**
	comp=Z,51nm,0.4s						
GUN	**Gumba**	**45.22**	**275**	*e*P	**P**	**06 33 17.9**	**+0.1**
	comp=Z,49nm,0.5s						
PDGK	**Podgornoye**	**45.30**	**298**	P	**P**	**06 33 16.8**	**-1.1**
SHLS	**Shalkode**	**45.35**	**298**	*e*P	**P**	**06 33 15.4**	**-3.0**
	baz=297						
SHLS	**Shalkode**	**45.35**	**298**	*e*P	**P**	**06 33 15.3**	**-3.0**
UZB	**Uzynbulak**	**45.67**	**298**	*e*P	**P**	**06 33 20.4**	**-0.5**
	baz=298						
UZB	**Uzynbulak**	**45.67**	**298**	*e*P	**P**	**06 33 20.3**	**-0.5**
TDK	**Taldyqorghan**	**45.72**	**300**	*e*P	**P**	**06 33 20.7**	**-0.4**
	comp=Z,14nm,0.5s,baz=300						
TDK	**Taldyqorghan**	**45.72**	**300**	*e*P	**P**	**06 33 20.6**	**-0.4**
TDK				pmax	pmax		
	comp=Z,14nm,0.5s						
PKI	**Pulchoki**	**45.74**	**275**	*e*P	**P**	**06 33 21.5**	**-0.3**
	comp=Z,34nm,0.5s						
PKIN	**Phulchoki**	**45.75**	**275**	*e*P	**P**	**06 33 21.5**	**-0.3**
	comp=Z,37nm,0.5s						
KKN	**Kakani**	**45.75**	**275**	*e*P	**P**	**06 33 21.7**	**-0.1**
	comp=Z,70nm,0.9s						
KPKS	**Kokpek**	**45.84**	**298**	*e*P	**P**	**06 33 21.6**	**-0.6**
	baz=298						
KPKS	**Kokpek**	**45.84**	**298**	*e*P	**P**	**06 33 21.5**	**-0.6**
DMN	**Daman**	**45.97**	**275**	*e*P	**P**	**06 33 23.3**	**-0.2**
	comp=Z,13nm,0.5s						
SATY	**Saty**	**46.13**	**298**	*e*P	**P**	**06 33 24.0**	**-0.4**
	baz=298						
SATY	**Saty**	**46.13**	**298**	*e*P	**P**	**06 33 24.0**	**-0.4**
GKN	**Gorkha**	**46.18**	**276**	*e*P	**P**	**06 33 25.1**	**0.0**
	comp=Z,159nm,0.8s						
DANN	**Dangsing**	**46.74**	**277**	*e*P	**P**	**06 33 30.0**	**+0.4**
	comp=Z,202nm,0.7s						
MDOK	**Medeo**	**47.07**	**298**	*e*P	**P**	**06 33 31.8**	**0.0**
	baz=298						
MDOK	**Medeo**	**47.07**	**298**	*e*P	**P**	**06 33 31.8**	**0.0**
KOLN	**Koldanda**	**47.11**	**276**	*e*P	**P**	**06 33 32.5**	**+0.1**
	comp=Z,102nm,1.1s						
AAA	**Alma-Ata**	**47.16**	**298**	*e*P	**P**	**06 33 32.8**	**+0.4**
	comp=Z,10nm,0.7s,baz=298						
AAA	**Alma-Ata**	**47.16**	**298**	*e*P	**P**	**06 33 32.7**	**+0.4**
AAA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TNSS	**Tian-Shan**	**47.17**	**298**	*e*P	**P**	**06 33 33.3**	**+0.3**
	baz=298						
TNSS	**Tian-Shan**	**47.17**	**298**	*e*P	**P**	**06 33 32.2**	**+0.3**
KUU	**Kurty**	**47.40**	**299**	*e*P	**P**	**06 33 33.6**	**-0.6**
	comp=Z,15nm,1.3s,baz=299						
KUU	**Kurty**	**47.40**	**299**	*e*P	**P**	**06 33 33.6**	**-0.6**
KUU				pmax	pmax		

baz=299
DZA Taraz 51.19 299 *e*P **P** 06 34 02.7 -0.2
KK31 Karatay Array 51.70 300 *e*P **P** 06 34 06.6 -0.1
KK31 Karatay Array 51.70 300 P **P** 06 34 06.8 0.0
KK31 IAmb IAmb 06 34 07.9
comp=Z,15nm,1.1s
KKAR Karatay Array 51.70 300 P **P** 06 34 06.5 -0.2
KKAR pmax pmax
comp=Z,15nm,1.1s
KKAR Karatay Array 51.70 300 P **P** 06 34 05.7 -1.1
KKAR Karatay Array 51.70 300 P **P** 06 34 06.5 -0.2
KKAR IAmb IAmb 06 34 07.9
comp=Z,15nm,1.1s
BMAR Burnt Mountain 51.84 29 P **P** 06 34 08.5 +1.1
IUG luzhnay 52.33 299 *e*P **P** 06 34 11.7 +0.2
comp=Z,13nm,0.9s,baz=299
IUG luzhnay 52.33 299 *e*P **P** 06 34 11.7 +0.2
IUG pmax pmax
comp=Z,13nm,0.9s
SCRK Sand Creek 52.42 33 P **P** 06 34 12.8 +0.9
KNRA Kununurra 52.69 192 P **P** 06 34 14.4 +0.3
NIL Nilore 52.90 288 P **P** 06 34 15.7 -0.1
NIL pmax pmax
comp=Z,14nm,0.6s
NIL Nilore 52.90 288 P **P** 06 34 15.7 -0.1
TAS Tashkent 53.11 298 P **P** 06 34 17.9 +0.7
TAS pmax pmax
comp=Z,116nm,0.3s
TAS Tashkent 53.11 298 P **P** 06 34 17.9 +0.7
GAR Garm 53.15 295 P **P** 06 34 17.0 -0.7
K27K Chicken 53.24 33 P **P** 06 34 20.1 +2.3
L27K Beaver Creek, 53.51 34 P **P** 06 34 22.0 +2.2
EGAK Eagle 53.52 32 P **P** 06 34 21.3 +1.6
BCAR Beaver Creek A 53.53 34 P **P** 06 34 22.2 +2.3
EPYK Eagle Plains 55.05 29 P **P** 06 34 33.5 +2.6
EPYK IAmb IAmb 06 34 33.8
comp=Z,16nm,1.4s
ARU Arti 55.50 318 P **P** 06 34 34.0 -0.1
comp=Z,3.4nm,0.5s,baz=72,slow=1.9,SNR=18
ARU Arti 55.50 318*d* *i*P **P** 06 34 34.2 +0.1
ARU 06 36 36.5
ARU S **S** 06 42 09.4 +1.7
ARU SS **SS** 06 45 51.9 -2.1
ARU pmax pmax
comp=Z,34nm,0.7s
ARU Arti 55.50 318 P **P** 06 34 34.3 +0.2
FITZ Fitzroy Crossi 55.65 195 P **P** 06 34 36.2 +0.6
KBL Kabul 55.76 290 P **P** 06 34 35.6 -1.0
KBL pmax pmax
comp=Z,14nm,1.1s
KBL Kabul 55.76 290 P **P** 06 34 35.6 -1.0
KBL IAmb IAmb 06 34 39.9
comp=Z,14nm,1.1s
INK Inuvik 55.84 27 P **P** 06 34 38.0 +1.6
INK pmax pmax
comp=Z,6.0nm,1.5s
INK Inuvik 55.84 27 P **P** 06 34 38.0 +1.6
WB0 Warramunga Arr 56.04 185 P **P** 06 34 38.0 -0.3
WRAB Tennant Creek 56.20 185*ce*P **P** 06 34 39.2 -0.3
WRAB pmax pmax
comp=Z,15nm,1.3s
WRAB Tennant Creek 56.20 185 P **P** 06 34 39.5 0.0
WB2 Warramunga Arr 56.22 185 P **P** 06 34 39.5 -0.1
WB2 IAmb IAmb 06 34 40.2
comp=Z,9.9nm,0.8s
WRA Warramunga Arr 56.22 185 P **P** 06 34 39.4 -0.2
comp=Z,7.4nm,0.5s,baz=0.6,slow=7.7,SNR=269
WRA pP **pP** 06 35 12.5 -1.3
comp=Z,2.0nm,0.6s,baz=0.8,slow=7.5,SNR=1.9
WRA ScP **ScP** 06 39 21.8 +0.9
comp=Z,0.6nm,0.9s,baz=9.0,slow=4.0,SNR=2.7
WRA Warramunga Arr 56.22 185 P **P** 06 34 39.8 +0.2
WRA Warramunga Arr 56.22 185 P **P** 06 34 39.8 +0.2
WR0 Warramunga Arr 56.22 185 P **P** 06 34 39.6 0.0
CTA Charters Tower 56.62 172 P **P** 06 34 43.1 +0.6
comp=Z,3.3nm,0.6s,baz=349,slow=7.1,SNR=3.1
AB31 Akbulak array 56.80 310 *e*P **P** 06 34 43.0 -0.5
ABKAR Akbulak array 56.80 310 P **P** 06 34 43.6 +0.1
AKTO Aktyubinsk 57.59 312 P **P** 06 34 48.8 -0.2
comp=Z,6.7nm,0.4s,baz=80,slow=11,SNR=8.7
C36M Paulatuk 58.83 24 P **P** 06 34 58.8 +1.5
C36M IAmb IAmb 06 35 00.1
comp=Z,5.1nm,0.8s
KIRV Kirov 59.53 323 P **P** 06 35 02.4 +0.2
comp=Z,40nm,0.6s,baz=69,slow=1.7,SNR=8.4
KIRV Kirov 59.53 323*ce*P **P** 06 35 02.3 +0.1
AS31 Alice Springs 59.94 185 P **P** 06 35 05.8 +0.3
AS31 IAmb IAmb 06 35 08.7
comp=Z,3.1nm,0.5s
ASAR Alice Springs 59.94 185 P **P** 06 35 05.5 0.0
comp=Z,1.9nm,0.4s,baz=358,slow=5.4,SNR=50
ASAR Alice Springs 59.94 185 P **P** 06 35 05.7 +0.2
ASAR Alice Springs 59.94 185 P **P** 06 35 05.7 +0.2
PRGR Permogore 60.19 327 *e*P **P** 06 35 04.8 -1.9
PRGR pmax pmax
comp=Z,9.0nm,0.8s
PSA00 Pilbara Seismi 60.42 200 P **P** 06 35 08.5 -0.2
PSA00 IAmb IAmb 06 35 09.8
comp=Z,13nm,1.1s
SPA0 Spitsbergen Ar 60.74 349 P **P** 06 35 11.2 +0.9
SPA0 Spitsbergen Ar 60.74 349 *e*P **P** 06 35 10.2 0.0
HRA Herat 60.92 293 P **P** 06 35 12.7 +0.3
EUNU Eureka 61.09 8 P **P** 06 35 13.6 +0.9
EUNU IAmb IAmb 06 35 13.8
comp=Z,5.7nm,0.7s
GEYT Alibeck 62.37 298 P **P** 06 35 22.0 +0.1
comp=Z,6.6nm,0.8s,baz=42,slow=4.6,SNR=9.7
GEYT Alibeck 62.37 298 P **P** 06 35 21.5 -0.4
GYA0B ALIBECK ARRAY 62.37 298 P **P** 06 35 21.2 -0.7
EIDS Eidsvold 62.51 168 P **P** 06 35 23.7 +1.0
EIDS IAmb IAmb 06 35 49.3
comp=Z,8.4nm,1.1s
BELG Belogornoye 62.88 317 P **P** 06 35 24.1 -0.8
comp=Z,22nm,0.7s,baz=44,slow=2.7,SNR=3.8
BELG Belogornoye 62.88 317 *i* P **P** 06 35 23.8 -1.1
BELG pmax pmax
comp=Z,3.0nm,0.6s
KLMR Klimovskoe 63.20 327 *e*P **P** 06 35 25.5 -1.4
KLMR pmax pmax
comp=Z,13nm,0.7s
KLMR Klimovskoe 63.20 327 *e*P **P** 06 35 25.6 -1.4
KLMR AMP 06 35 27.3
comp=Z,13nm,0.7s
RES Resolute Bay 63.69 14 P **P** 06 35 30.8 +0.9
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 63.69 14 P **P** 06 35 30.8 +0.9
RES IAmb IAmb 06 35 32.0
comp=Z,5.9nm,0.9s
HAMF Hammerfest 63.74 340 *e*P **P** 06 35 30.5 +0.3
ARA0 ARCESS Array S 63.86 339 *e*P **P** 06 35 31.5 +0.4
ARCES ARCESS Array B 63.86 339 P **P** 06 35 31.4 +0.2
comp=Z,3.9nm,0.6s,baz=47,slow=6.9,SNR=41
ARCES ARCESS Array B 63.86 339 P **P** 06 35 31.5 +0.3
ARCES pmax pmax
comp=Z,20nm,1.5s
ARCES ARCESS Array B 63.86 339 P **P** 06 35 31.5 +0.3
ARCES IAmb IAmb 06 35 46.8
comp=Z,20nm,1.5s
KTK1 Kautokeino 64.83 339 *e*P **P** 06 35 37.5 +0.1
JETT Jettan, Norway 65.29 340 *e*P **P** 06 35 40.9 +0.4
YKA Yellowknife Ar 65.34 29 P **P** 06 35 41.4 +0.6
comp=Z,0.8nm,0.7s,baz=303,slow=5.4,SNR=20
YKA pP **pP** 06 36 16.0 -0.1
comp=Z,0.7nm,0.7s,baz=302,slow=5.5,SNR=4.9
TULEG Thule 65.97 7 P **P** 06 35 45.2 +0.6
TULEG IAmb IAmb 06 35 45.7
comp=Z,7.1nm,0.9s
DAG Danmarks Havn 66.21 354 *i* P **P** 06 35 46.5 +0.3
DAG IAmb IAmb 06 35 47.4
comp=Z,3.7nm,0.6s
DAG Danmarks Havn 66.21 354 *i* P **P** 06 35 46.4 +0.3
DAG pmax pmax
comp=Z,4.0nm,0.6s
NEEM North Greenlan 66.24 2⇓ *i*P **P** 06 35 47.5 +0.7
NEEM IAmb IAmb 06 35 48.2
comp=Z,6.5nm,0.6s
MOS Moscow 66.55 323 *e*P **P** 06 35 47.6 -1.0
MOS pmax pmax
comp=Z,34nm,1.0s
VALR Valaam 66.58 330 *i* P **P** 06 35 48.7 0.0
VALR pmax pmax
comp=Z,24nm,0.8s
VRH Novokhopyorsk 66.69 317 *e*P **P** 06 35 48.7 -0.9
VRH pmax pmax
comp=Z,20nm,0.7s
OBN Obninsk 67.38 323 P **P** 06 35 53.8 -0.1
comp=Z,4.1nm,0.5s,baz=346,slow=12
OBN Obninsk 67.38 323 *e*P **P** 06 35 54.1 +0.2
OBN *e* 06 38 23.3
OBN pmax pmax
comp=Z,7.0nm,0.6s
LPSR Galich'ya Gora 67.48 319 *e*P **P** 06 35 54.1 -0.5
LPSR pmax pmax
comp=Z,30nm,0.7s
ARMA Armidale 67.54 168 P **P** 06 35 56.6 +1.3
ARMA IAmb IAmb 06 36 11.1
comp=Z,10nm,1.4s
N2IH Innhavet 67.57 340 *e*P **P** 06 35 55.4 +0.6
FORT Forrest 67.61 190 P **P** 06 35 56.1 +0.6
STEI Steigen 67.78 340 *e*P **P** 06 35 56.5 +0.4
STKA Stephens Creek 67.98 178 P **P** 06 35 58.2 +0.4
comp=Z,2.7nm,0.7s,baz=356,slow=8.9,SNR=6.1
STKA Stephens Creek 67.98 178 P **P** 06 35 58.3 +0.4
N2TV Tvrnvik 68.07 340 *e*P **P** 06 35 58.6 +0.6
VSR Storozhevoye 68.07 318 *e*P **P** 06 35 57.5 -0.8
VSR pmax pmax
comp=Z,30nm,0.9s
LOF Lofoten 68.10 341 *e*P **P** 06 35 58.6 +0.4
FAUS Fauske 68.15 340 *e*P **P** 06 35 59.1 +0.6
NBB08 Skaug oppvekst 68.33 340 *e*P **P** 06 35 59.9 +0.3
FIA1 FINESS Array S 68.42 332 P **P** 06 36 00.3 0.0
FIA1 IAmb IAmb 06 36 01.5
comp=Z,18nm,1.1s
FINES FINESS Array B 68.42 332 P **P** 06 36 00.3 0.0
comp=Z,6.3nm,0.4s,baz=62,slow=6.1,SNR=134
FINES FINESS Array B 68.42 332 P **P** 06 36 00.6 +0.3
FINES FINESS Array B 68.42 332 P **P** 06 36 00.6 +0.3
NBB28 Valnes 68.51 340 *e*P **P** 06 36 01.3 +0.5
N2VA Vr_y 68.66 341 *e*P **P** 06 36 02.1 +0.5
NBB05 Inndyr 68.74 340 *e*P **P** 06 36 02.7 +0.6
NBB30 Finnes 68.87 340 *e*P **P** 06 36 03.5 +0.5
BBOO Buckleboo 68.92 183 P **P** 06 36 03.2 -0.4
BBOO IAmb IAmb 06 36 22.4
comp=Z,18nm,1.4s
N2RO R_st 68.92 341 *e*P **P** 06 36 04.0 +0.7
MOR8 Moi Rana 69.24 339 *e*P **P** 06 36 04.4 -0.9
KONS Konsvik 69.38 340 *e*P **P** 06 36 06.8 +0.6
NBB40 Tonnes 69.40 340 *e*P **P** 06 36 06.8 +0.5
STOK Stokkvaagen 69.53 340 *e*P **P** 06 36 07.6 +0.6
KBZ Khabaz 69.78 310 P **P** 06 36 09.5 +0.6
comp=Z,5.8nm,0.8s,baz=71,slow=2.2,SNR=16
KVAR Kislovodsk Arr 69.78 310 P **P** 06 36 10.4 +1.2
comp=Z,5.0nm,0.7s,baz=119,slow=17
KIV Kislovodsk 69.79 310⇑ P **P** 06 36 10.0 +0.8
KIV Kislovodsk 69.79 310 *e*P **P** 06 36 10.2 +1.0
KIV pmax pmax
comp=Z,45nm,1.0s
KIV MLR MLR
comp=Z,134nm,17.0s
KIV Kislovodsk 69.79 310 P **P** 06 36 10.3 +1.1
KIV IAmb IAmb 06 36 12.3
comp=Z,11nm,0.7s
VSU Vasula 69.96 329 *e*P **P** 06 36 10.0 +0.2
UOSS Minazif 70.08 287 P **P** 06 36 11.7 +0.5
UOSS IAmb IAmb 06 36 12.0
comp=Z,6.6nm,0.6s
AKH Akhalkalaki 70.61 307⇓ P **P** 06 36 15.9 +1.6
AKH Akhalkalaki 70.61 307 P **P** 06 36 15.9 +1.6
MTSE Matsula 71.00 330 *e*P **P** 06 36 14.1 -2.0
NSS Namsos 71.14 339 *e*P **P** 06 36 17.5 +0.7
SUMG Summit 71.29 359 *i* P **P** 06 36 19.4 +1.2
SUMG IAmb IAmb 06 36 20.2
comp=Z,13nm,0.6s
SUMG Summit 71.29 359 *i* P **P** 06 36 19.4 +1.2
SUMG pmax pmax
comp=Z,13nm,0.6s
SUMG Summit 71.29 359 P **P** 06 36 19.6 +1.5
MNK Minsk 71.87 325 *i* P **P** 06 36 22.0 +0.6
comp=E,4.0nm,1.4s
MNK *i* P **P** 06 36 22.0 +0.6
comp=N,15nm,0.7s
MNK *i* P **P** 06 36 22.0 +0.6
comp=Z,31nm,1.0s
MNK *i* pP **pP** 06 36 58.6 +1.4
MNK *i* PP PP 06 38 33.8 -29
MNK *i* PPP PPP 06 40 38.9
MNK *i* S **SKiKP** 06 45 38.3 -5.7
MNK *i* SS **SS** 06 50 18.4 +10
MNK *i* SSS SSS 06 54 00.0
MNK *i* LR LR 07 08 35.9
MNK *i* LRM MLR 07 10 15.5
comp=E,29nm,32.9s
MNK *i* LRM MLR 07 10 21.3
comp=N,239nm,25.1s
MNK *i* LRM MLR 07 10 43.2
comp=Z,96nm,15.8s
IDID Didziasalis 71.89 326 *e*P **P** 06 36 22.5 +1.0
ISAL Salakas 72.01 327 *e*P **P** 06 36 23.3 +1.1
IIGN Ignalina 72.10 326 *e*P **P** 06 36 23.9 +1.1
NACGM Naroch 72.13 326 *i* P **P** 06 36 23.5 +0.6
NACGM *i* P **P** 06 36 23.5 +0.6
NACGM *i* P **P** 06 36 23.5 +0.6
NACGM *i* pP **pP** 06 36 60.0 +1.2
NACGM *i* sP sP 06 37 27.6 +13
NACGM *i* PP **PP** 06 39 10.1 +5.6
NACGM *i* PPP PPP 06 41 15.5
NACGM *i* S **S** 06 45 29.5 -3.5
NACGM *i* sS **SKKSac** 06 46 13.9 +0.5
NACGM *i* SS SS 06 50 39.3 +27
NACGM *i* SSS SSS 06 53 27.8
ANN Anapa 72.50 313 *e*P **P** 06 36 23.8 -1.6
ANN *e*PP **pP** 06 36 57.1 -4.0
ANN pmax pmax
comp=Z,27nm,1.1s
SCO Scoresbysund 72.51 353 P **P** 06 36 26.3 +1.3
SCO pmax pmax
comp=Z,14nm,1.4s
SCO Scoresbysund 72.51 353 P **P** 06 36 26.3 +1.3
SCO IAmb IAmb 06 36 45.8
comp=Z,14nm,1.4s
TBLU Trondheim 72.60 338 *e*P **P** 06 36 24.3 -1.3
K05A Summer Lake 72.88 49 P **P** 06 36 30.6 +2.7
PABE Paberze 73.00 327 *e*P **P** 06 36 28.8 +0.7
AKASG Malin Array Be 73.55 321 P **P** 06 36 31.2 -0.1
comp=Z,12nm,0.5s,baz=48,slow=6.3,SNR=54
AKASG Malin Array Be 73.55 321 P **P** 06 36 31.3 -0.1
AKASG IAmb IAmb 06 36 32.2
comp=Z,4.2nm,0.6s
AKBB Malin Array Si 73.55 321 P **P** 06 36 31.3 -0.1
AKBB pmax pmax
comp=Z,19nm,0.7s
AKBB Malin Array Si 73.55 321 P **P** 06 36 31.3 -0.1
NC405 NORSAR Array S 73.75 336 P **P** 06 36 32.9 +0.4
DOMB Dombas 73.88 338 *e*P **P** 06 36 33.4 +0.2
MOL Molde 73.92 339 *e*P **P** 06 36 33.2 -0.2
NC204 NORSAR Array S 73.94 337 P **P** 06 36 34.1 +0.6
NB2 NORSAR Subarra 73.97 336 P **P** 06 36 33.6 -0.1
baz=42,slow=6.2
NOA NORSAR Array B 73.97 336 P **P** 06 36 33.9 +0.1
comp=Z,9.0nm,0.8s,baz=41,slow=5.8,SNR=25
NC602 NORSAR Array S 74.09 336 *e*P **P** 06 36 34.3 -0.1
NORES NORESS Array B 74.09 336 P **P** 06 36 34.2 -0.2
ICESG Greenland Ices 74.81 359 *i* P **P** 06 36 39.6 +0.8
ICESG IAmb IAmb 06 36 40.9
comp=Z,8.2nm,0.6s
BEKR Beckworth 74.82 52 P **P** 06 36 41.0 +1.7
SKAR Skarslia 75.17 337 *e*P **P** 06 36 41.1 +0.4
KONO Kongsberg 75.55 336 *e*P **P** 06 36 42.9 +0.2
SORM Soroca 75.58 320⇓ P **P** 06 36 42.9 -0.3
SORM Soroca 75.58 320 P **P** 06 36 42.8 -0.3
SFJD Kangerlussuaq 76.66 4 P **P** 06 36 49.7 +0.8
SFJD pmax pmax
comp=Z,6.0nm,0.8s
SFJD Kangerlussuaq 76.66 4 P **P** 06 36 49.7 +0.8
KVN Kaiserville 76.72 51 P **P** 06 36 51.2 +1.2
KVN pmax pmax
comp=Z,4.0nm,1.2s
KVN Kaiserville 76.72 51 P **P** 06 36 51.2 +1.2
VASR Vaslui 76.82 319⇑ P **P** 06 36 50.9 +0.7
NVAR Mina Array Bea 76.95 52 P **P** 06 36 53.7 +2.3
comp=Z,1.6nm,0.7s,baz=306,slow=5.4,SNR=8.6
NVAR pP **pP** 06 37 28.8 +0.8
comp=Z,2.4nm,0.7s,baz=283,slow=5.8,SNR=8.6
NVAR Mina Array Bea 76.95 52 P **P** 06 36 52.7 +1.2
GAZ Gaziantep 77.01 307 P **P** 06 36 52.0 +0.5
GAZ IAmb IAmb 06 36 53.6
comp=Z,13nm,0.8s
DY2G Dye2 77.36 2 *i* P **P** 06 36 54.4 +1.2
DY2G IAmb IAmb 06 36 55.0
comp=Z,20nm,0.5s
KWP Kalwaria Pacla 77.45 323 P **P** 06 36 53.8 +0.1
KWP pmax pmax
comp=Z,22nm,0.8s
KWP Kalwaria Pacla 77.45 323 P **P** 06 36 53.8 +0.1
BIZ Bicaz 77.52 320⇑ P **P** 06 36 55.2 +1.0
BUR08 Bucovina Ar. S 77.53 321 P **P** 06 36 54.4 +0.1
BUR08 IAmb IAmb 06 36 55.8
comp=Z,8.5nm,0.9s
BURAR Bucovina Array 77.54 321⇑ P **P** 06 36 55.2 +0.8
BURAR Bucovina Array 77.54 321 P **P** 06 36 55.1 +0.8
BURAR Bucovina Array 77.54 321 P **P** 06 36 54.7 +0.3
CFR Carcaliu 77.57 317⇑ P **P** 06 36 54.6 +0.3
CFR Carcaliu 77.57 317 P **P** 06 36 54.6 +0.3
TPGR Topolog 77.61 317⇓ P **P** 06 36 55.2 +0.5
BR131 Keskin Array S 77.75 310 P **P** 06 36 55.2 -0.5
BR131 pmax pmax
comp=Z,14nm,1.1s
BR131 Keskin Array S 77.75 310 P **P** 06 36 55.2 -0.5
BR131 IAmb IAmb 06 36 57.8
comp=Z,14nm,1.1s
BRTR Keskin Array B 77.75 310 P **P** 06 36 56.1 +0.4
comp=Z,21nm,1.2s,baz=92,slow=4.2,SNR=25
BRTR Keskin Array B 77.75 310 *i* P **P** 06 36 56.4 +0.7
BRTR pmax pmax
comp=Z,22nm,1.2s
BRTR Keskin Array B 77.75 310 P **P** 06 36 55.9 +0.2
YNE Yellowstone No 77.83 43 P **P** 06 36 55.7 -0.5
TPH Tonopah 77.85 52 P **P** 06 36 56.5 +0.1
TPH pmax pmax
comp=Z,13nm,1.1s
TPH Tonopah 77.85 52 P **P** 06 36 56.5 +0.1
TPH IAmb IAmb 06 37 02.7
comp=Z,12nm,1.1s
TIRR Tirgusor 77.87 317 P **P** 06 36 55.8 -0.3
TIRR pmax pmax
comp=Z,12nm,0.9s
TIRR Tirgusor 77.87 317 P **P** 06 36 55.8 -0.3
TIRR IAmb IAmb 06 36 56.6
comp=Z,12nm,0.9s
VRI Vrincioaia 77.89 319⇑ P **P** 06 36 57.1 +0.9
VRI Vrincioaia 77.89 319 P **P** 06 36 57.1 +0.9
PLOR Plostina 77.94 319⇑ P **P** 06 36 57.4 +0.8
PLOR Plostina 77.94 319 P **P** 06 36 57.3 +0.8
HARR Harsova 77.99 317⇑ P **P** 06 36 57.4 +0.6
HARR Harsova 77.99 317 P **P** 06 36 57.3 +0.6
OJC Ojcow 78.42 325 *e*P **P** 06 36 59.8 +0.7
OJC Ojcow 78.42 325 P **P** 06 36 57.0 -2.0
OJC pmax pmax
comp=Z,14nm,0.9s
OJC Ojcow 78.42 325 P **P** 06 36 57.0 -2.0
OJC IAmb IAmb 06 37 00.6
comp=Z,14nm,0.9s
ISR Istrita 78.47 318⇑ P **P** 06 37 00.8 +1.4
ISR Istrita 78.47 318 P **P** 06 37 00.8 +1.4
DOPR Dopca 78.53 319⇑ P **P** 06 37 01.2 +1.5
MLR Muntele Rosu 78.55 319⇑ P **P** 06 36 59.8 -0.1
MLR Muntele Rosu 78.55 319 P **P** 06 36 59.9 -0.1
MLR pmax pmax
comp=Z,5.0nm,1.2s
MLR Muntele Rosu 78.55 319 P **P** 06 36 59.9 -0.1
NIE Niedzica 78.74 324 *e*P **P** 06 37 02.1 +1.3
SOCY Socotra 78.84 277 P **P** 06 37 00.3 -1.7
SOCY IAmb IAmb 06 37 01.2
comp=Z,14nm,0.9s
RAYN Ar Rayn 79.03 291 P **P** 06 37 02.4 -0.5
RAYN pmax pmax
comp=Z,9.0nm,0.8s
RAYN Ar Rayn 79.03 291 P **P** 06 37 02.4 -0.5
RAYN IAmb IAmb 06 37 04.0
comp=Z,9.2nm,0.8s
VOIR 79.06 319⇑ P **P** 06 37 03.4 +0.7
VOIR 79.06 319 P **P** 06 37 03.4 +0.7
LANS Liptovska Anna 79.32 324 *e*P **P** 06 37 05.7 +1.7
LANS pmax pmax
comp=Z,5.0nm,0.7s
LANS Liptovska Anna 79.32 324 *e*P **P** 06 37 05.6 +1.6
DRGR 79.36 321⇑ P **P** 06 37 05.1 +0.7
DRGR 79.36 321 P **P** 06 37 05.0 +0.7
PDAR Pinedale Array 79.52 44 P **P** 06 37 06.8 +1.3
comp=Z,0.2nm,0.4s,baz=176,slow=1.2,SNR=4.2
PDAR pP **pP** 06 37 42.7 +0.5
comp=Z,0.9nm,0.7s,baz=227,slow=1.3,SNR=4.6
PDAR Pinedale Array 79.52 44 P **P** 06 37 05.9 +0.4
KSP Ksiaz 79.56 327 *e*P **P** 06 37 06.0 +0.8
MORC Moravsky Berou 79.77 326 *e*P **P** 06 37 07.2 +0.8
MORC Moravsky Berou 79.77 326 P **P** 06 37 06.5 +0.1
MORC pmax pmax
comp=Z,6.0nm,0.8s
MORC Moravsky Berou 79.77 326 P **P** 06 37 06.5 +0.1
CHVC Chvalec 79.84 327 *e*P **P** 06 37 07.7 +0.9
KRLC Kraliky 79.89 326 *e*P **P** 06 37 07.9 +0.8
KRLC Kraliky 79.89 326 *e*P **P** 06 37 07.9 +0.8
DPC Dobruska-Polom 79.90 327 *e*P **P** 06 37 07.7 +0.6
DPC Dobruska-Polom 79.90 327 *e*P **P** 06 37 07.7 +0.6
PSZ Piszkesteto 79.98 323⇑ P **P** 06 37 08.7 +1.1
PSZ Piszkesteto 79.98 323 P **P** 06 37 08.4 +0.8
VYHS Vyhne 80.08 324 *e*P **P** 06 37 08.7 +0.6
VYHS Vyhne 80.08 324 *e*P **P** 06 37 08.6 +0.5
SIRR Síria 80.25 321⇑ P **P** 06 37 09.0 -0.1
GZR Gura Zlata 80.28 320⇑ P **P** 06 37 10.2 +0.9
JAVC Velka Javorina 80.36 325 *e*P **P** 06 37 11.6 +1.9
VRAC Vranov 80.53 326⇓ P **P** 06 37 12.0 +1.4
VRAC Vranov 80.53 326 *e*P **P** 06 37 11.5 +1.0
VRAC Vranov 80.53 326 P **P** 06 37 11.9 +1.4
BRG Berggiesshubel 80.55 328 *i* P **P** 06 37 10.8 +0.3
BRG Amp 06 37 12.0
comp=Z,6.5nm,0.8s
CLL Collm 80.62 329 *i* P **P** 06 37 10.8 -0.1
comp=Z,16nm,1.0s
CLL *i* PP **PP** 06 40 16.1 +0.4
CLL Collm 80.62 329 *i* P **P** 06 37 10.8 -0.1
CLL pmax pmax
comp=Z,16nm,1.0s
CLL Collm 80.62 329 P **P** 06 37 10.3 -0.6
CLL IAmb IAmb 06 37 12.0
comp=Z,14nm,1.0s
PLVB Pleven 80.65 318⇑ P **P** 06 37 12.0 +0.8
BZS Buzias 80.72 321⇓ P **P** 06 37 11.6 0.0
BZS Buzias 80.72 321 P **P** 06 37 11.5 0.0
KRUC Moravsky 80.80 326 *e*P **P** 06 37 12.6 +0.7
HERR Herculane 80.81 320⇑ P **P** 06 37 12.4 +0.3
MODS Modra-Piesok 80.89 325 *e*P **P** 06 37 13.8 +1.4
MODS Modra-Piesok 80.89 325 *e*P **P** 06 37 13.8 +1.4
PRU Pruhonice 80.95 327 *e*P **P** 06 37 13.2 +0.6
PRU Pruhonice 80.95 327 *e*P **P** 06 37 13.2 +0.6
TREC Trest 81.04 326 *e*P **P** 06 37 13.6 +0.4
TREC Trest 81.04 326 *e*P **P** 06 37 13.6 +0.4
MDVR Moldovita 81.25 320⇑ P **P** 06 37 14.8 +0.4
CONA Conrad Observa 81.87 325 *i* P **P** 06 37 19.0 +1.4
comp=Z,5.3nm,0.9s,SNR=5.0
CKRC Cesky Krumlov 81.91 327 *e*P **P** 06 37 18.6 +0.8
VTS Vitosha 81.92 318⇓ P **P** 06 37 19.1 +1.0
VTS Vitosha 81.92 318 P **P** 06 37 18.9 +0.8
VTS pmax pmax
comp=Z,5.0nm,0.8s
KHC Kasperske Hory 82.00 327 *e*P **P** 06 37 18.7 +0.4
KHC Kasperske Hory 82.00 327 *e*P **P** 06 37 18.7 +0.4
GERES GERESS Array B 82.16 327 P **P** 06 37 19.2 0.0
comp=Z,1.6nm,0.6s,baz=38,slow=5.9,SNR=17
GERES GERESS Array B 82.16 327 P **P** 06 37 19.6 +0.4
GERES GERESS Array B 82.16 327 P **P** 06 37 19.6 +0.4
GRA1 Grafenberg Arr 82.58 329 P **P** 06 37 20.6 -0.7
GRA1 IAmb IAmb 06 37 23.1
comp=Z,11nm,0.9s
GRF Grafenberg Arr 82.58 329 P **P** 06 37 20.6 -0.7
GRF pmax pmax
comp=Z,11nm,0.9s
GRF Grafenberg Arr 82.58 329 *e*P **P** 06 37 22.0 +0.8
comp=Z,8.4nm,0.9s,baz=44,slow=4.5
GRFO Grafenberg 82.59 329 P **P** 06 37 20.5 -0.8
GRFO pmax pmax
comp=Z,10.0nm,0.8s
GRFO Grafenberg 82.59 329 P **P** 06 37 20.5 -0.8
GRFO IAmb IAmb 06 37 23.1
comp=Z,9.9nm,0.8s
DIVS Divibare 82.61 321 P **P** 06 37 21.3 -0.3
MOA Molln 82.65 326 *e*P **P** 06 37 22.8 +1.2
comp=Z,5.5nm,1.3s
SOKA Soboth 83.17 325 *e*P **P** 06 37 24.9 +0.5

	comp=Z,7.7nm,0.7s						
OBKA	**Obir**	**83.52**	**325**	*e*P	**P**	06 37 26.7	**+0.4**
	comp=Z,2.9nm,0.9s						
KBA	**Koelnbreinsper**	**83.65**	**326**	*i* P	**P**	06 37 28.1	**+1.1**
	comp=Z,5.9nm,0.8s						
MYKA	**Terra Mystica**	**83.85**	**326**	*i* P	**P**	06 37 27.7	**-0.1**
	comp=Z,3.0nm,0.4s						
PDG	**Podgorica**	**84.16**	**320**	⇑P	**P**	06 37 30.1	**+0.6**
PDG	**Podgorica**	**84.16**	**320**	P	**P**	06 37 29.7	**+0.3**
FNA	**Florina**	**84.19**	**317**	P	**P**	06 37 29.9	**+0.2**
FNA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FNA	**Florina**	**84.19**	**317**	P	**P**	06 37 29.9	**+0.2**
ZOU	**Zoufplan**	**84.21**	**326**	P	**P**	06 37 29.4	**-0.4**
ABTA	**Abfaltersbach**	**84.27**	**326**	*e*P	**P**	06 37 29.5	**-0.5**
	comp=Z,6.7nm,1.2s						
KARP	**Karpathos**	**84.36**	**310**	P	**P**	06 37 28.9	**-1.8**
RETA	**Reutte**	**84.47**	**328**	*i* P	**P**	06 37 31.6	**+0.6**
	comp=Z,5.2nm,0.7s						
BMRD	**Maredsous**	**84.66**	**332**	*d*P	**P**	06 37 31.8	**0.0**
SNF	**Seneffe**	**84.67**	**333**	*d*P	**P**	06 37 31.9	**+0.1**
BFO	**Black Forest**	**84.84**	**329**	P	**P**	06 37 33.1	**+0.3**
BFO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BFO	**Black Forest**	**84.84**	**329**	P	**P**	06 37 33.0	**+0.3**
BFO				IAmb	IAmb	06 37 33.9	
	comp=Z,9.1nm,1.0s						
FETA	**Feichten**	**84.85**	**327**	*e*P	**P**	06 37 33.1	**+0.1**
	comp=Z,1.8nm,0.7s,SNR=7.4						
AGG	**Agios Georgios**	**84.88**	**316**	P	**P**	06 37 32.3	**-0.9**
AGG				pmax	pmax		
	comp=Z,13nm,1.4s						
AGG	**Agios Georgios**	**84.88**	**316**	P	**P**	06 37 32.3	**-0.9**
AGG				IAmb	IAmb	06 37 34.1	
	comp=Z,13nm,1.4s						
DOU	**Dourbes**	**84.89**	**332**	*d*P	**P**	06 37 32.9	**0.0**
DAVA	**Damuels**	**85.01**	**328**	*i* P	**P**	06 37 34.3	**+0.5**
	comp=Z,4.6nm,0.7s						
CTI	**Castel Tesino**	**85.19**	**326**	P	**P**	06 37 34.2	**-0.5**
CTI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CTI	**Castel Tesino**	**85.19**	**326**	P	**P**	06 37 34.2	**-0.5**
ECH	**Echery**	**85.41**	**330**	P	**P**	06 37 36.2	**+0.6**
ECH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ECH	**Echery**	**85.41**	**330**	P	**P**	06 37 36.1	**+0.6**
ECH				IAmb	IAmb	06 37 36.5	
	comp=Z,5.1nm,0.8s						
NRCA	**Norcia**	**86.95**	**323**	P	**P**	06 37 43.6	**+0.3**
NRCA				IAmb	IAmb	06 37 44.2	
	comp=Z,6.6nm,0.7s						
INTR	**Introdacqua**	**87.19**	**322**	P	**P**	06 37 44.2	**-0.3**
INTR				IAmb	IAmb	06 37 46.1	
	comp=Z,6.5nm,0.6s						
OSSC	**Osservatorio P**	**87.31**	**325**	P	**P**	06 37 44.8	**-0.1**
OSSC				IAmb	IAmb	06 37 45.2	
	comp=Z,4.1nm,0.6s						
BNI	**Bardonecchia**	**88.14**	**328**	P	**P**	06 37 49.4	**+0.3**
BNI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BNI	**Bardonecchia**	**88.14**	**328**	P	**P**	06 37 49.4	**+0.3**
TX31	**Lajitas Ar. Si**	**92.07**	**51**	P	**P**	06 38 09.3	**+1.7**
TX31				IAmb	IAmb	06 38 14.0	
	comp=Z,7.3nm,1.5s						
TX32	**Lajitas Array**	**92.08**	**51**	P	**P**	06 38 09.3	**+1.7**
TXAR	**Lajitas Array**	**92.08**	**51**	P	**P**	06 38 09.3	**+1.7**
	comp=Z,0.6nm,0.5s,baz=286,slow=2.6,SNR=27						
TXAR				pP	**pP**	06 38 45.0	**0.0**
	comp=Z,0.7nm,0.7s,baz=300,slow=3.0,SNR=4.8						
ESDC	**Sonseca Array**	**96.93**	**332**	PP	**PP**	06 42 25.5	**-0.3**
	comp=Z,0.9nm,0.9s,baz=26,slow=9.1,SNR=4.8						
TORD	**Torodi Ar. Bea**	**116.31**	**312**	PKP	**PKPdf**	06 43 40.7	**-0.7**
	comp=Z,0.6nm,0.7s,baz=360,slow=2.5,SNR=2.1						
BOSA	**Boshof**	**124.49**	**258**	PKP	**PKPdf**	06 43 56.9	**+0.1**
	comp=Z,1.0nm,0.6s,baz=344,slow=4.1,SNR=4.1						
BOSA	**Boshof**	**124.49**	**258**		**PKiKP**	06 43 57.0	**-0.1**
QSPA	**South Pole Qui**	**126.16**	**180**	PKP	**PKPdf**	06 43 58.5	**-0.3**
	comp=Z,2.4nm,1.0s,baz=54,slow=2.4,SNR=3.4						
LPAZ	**La Paz**	**148.72**	**57**	PKPbc	**PKiKP**	06 44 47.4	**0.0**
	comp=Z,1.9nm,0.6s,baz=0.0,slow=2.0,SNR=12						
SIV	**San Ignacio**	**152.99**	**46**	PKPbc	**PKiKP**	06 44 56.0	**+0.6**
	comp=Z,1.7nm,0.5s,baz=319,slow=2.6,SNR=12						

IDC ***12*** *06:28:28.1±2.0,21°.03S×178°.43W,h605km±23km,mb3.0/7, mb1 3.2/9,mb1mx2.9/30,mbtmp3.9/9 Error ellipse: s-maj=28.2km s-min=21.6km az=124.0*

ISC 12 06:28:28.0±1.0,21°.0S±0°.2×178°.5W±0°.2,h600km,n10, σ0§80/9,mb3.5/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.66**	**314**	P	**P**	06 29 58.5	**+0.1**
	2.6nm,0.3s,baz=185,slow=1.5,SNR=18						
URZ	**Urewera**	**17.59**	**192**	P	**P**	06 31 59.7	**+0.1**
	0.3nm,0.3s,baz=302,slow=19,SNR=1.2						
URZ				S	S	06 34 40.1	-11
	0.2nm,0.3s,baz=307,slow=20,SNR=1.9						
CTA	**Charters Tower**	**33.02**	**265**	P	**P**	06 34 16.2	**+0.7**
	1.8nm,0.5s,baz=89,slow=12,SNR=5.5						
ASAR	**Alice Springs**	**43.98**	**257**	P	**P**	06 35 43.9	**0.0**
	1.5nm,0.6s,baz=84,slow=8.8,SNR=12						
WRA	**Warramunga Arr**	**44.10**	**263**	P	**P**	06 35 44.5	**-0.3**
	1.4nm,0.5s,baz=96,slow=7.5,SNR=4.9						
QSPA	**South Pole Qui**	**59.03**	**180**	P	**P**	06 38 34.0	**-0.6**
	1.4nm,0.8s,baz=95,slow=8.9,SNR=2.5						
PETK	**Petropavlovsk-**	**76.68**	**345**	P	**P**	06 39 17.2	**-0.9**
	0.7nm,0.7s,baz=190,slow=7.3,SNR=1.5						
ILAR	**Eielson Array**	**88.93**	**13**	P	**P**	06 40 18.5	**-0.6**
	0.2nm,0.5s,baz=219,slow=5.2,SNR=2.4						
PDAR	**Pinedale Array**	**89.64**	**43**	P	**P**	06 40 24.6	**+1.3**
	0.1nm,0.3s,baz=225,slow=3.6,SNR=2.1						
AKASG	**Malin Array Be**	**143.27**	**330**	PKP	PKPab	06 46 52.6	-0.4
	1.2nm,0.5s,baz=41,slow=4.1,SNR=9.2						

NOU ***12*** *06:42:59.6,21°.37S×169°.06E,h1km,MLv4.2,Southeast of Loyalty Islands*

IDC ***12*** *06:43:01.8±3.2,22°.50S×168°.94E,h0km,mb3.4/2, mb1 3.7/3,mb1mx3.4/43,mbtmp3.5/3,ML3.5/1,MS2.9/1, Ms1 2.9/1,ms1mx2.4/15,Error ellipse: s-maj=118.3km s-min=49.1km az=169.0*

ISC 12 06:43:06.6±2.2,21°.5S±0°.1×168°.6E±0°.2,h20km,n12, σ1§08/12,Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**0.50**	**268**	P	**Pn**	06 43 18.1	**-0.6**
LIFNC	**LIFOU**	**1.42**	**299**	P	**Pn**	06 43 31.3	**0.0**
PINNC	**Pines Island,**	**1.55**	**222**	P	**Pb**	06 43 33.5	**-1.1**
YATNC	**Mamie plateau,**	**1.67**	**249**	P	**Pn**	06 43 35.7	**+0.9**
OUENC	**Ouen Island, N**	**1.87**	**239**	P	**Pb**	06 43 39.0	**-1.0**
DZM	**Mont Dzumac**	**2.07**	**253**	Pn	**Pn**	06 43 41.2	**+0.9**
	12nm,0.3s,baz=83,slow=18,SNR=74						
DZM				Sn	**Sn**	06 44 06.7	**+1.1**
	20nm,0.3s,baz=143,slow=20,SNR=6.0						
ONTNC	**Ouen Toro**	**2.14**	**246**	P	**Pb**	06 43 43.0	**-1.7**
KOUNC	**Koumac, New Ca**	**4.11**	**282**	P	**Pn**	06 44 09.5	**+1.2**
MSVF	**Nonsavu**	**9.67**	**69**	LR	LR	06 48 34.5	
	comp=Z,82nm,21.9s,baz=64,slow=34						
WRA	**Warramunga Arr**	**32.02**	**266**	P	**P**	06 49 31.8	**-0.2**
	0.4nm,0.8s,baz=102,slow=8.3,SNR=4.8						
ASAR	**Alice Springs**	**32.04**	**259**	P	**P**	06 49 32.9	**+0.7**
	0.6nm,0.9s,baz=94,slow=8.5,SNR=5.5						
GERES	**GERESS Array B**	**146.12**	**330**	PKPbc	**PKPab**	07 02 46.1	**+0.1**
	0.5nm,0.7s,baz=53,slow=3.9,SNR=4.4						

IDC ***12*** *06:48:40.1±0.8,28°.07N×104°.57E,h0km,mb3.8/12, mb1 4.0/13,mb1mx3.8/53,mbtmp3.8/13,ML3.6/1,MS2.9/4, Ms1 2.9/4,ms1mx2.6/39,Error ellipse: s-maj=26.5km s-min=16.5km az=50.0*

ISC 12 06:48:42.4±0.8,28°.30N±0°.10×104°.6E±0°.1,h10km,n30, σ1§69/23,mb3.8/12,MS2.7/3,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAMP	**Lampang**	**10.73**	**206**	P	**Pn**	06 51 17.1	**+0.8**
CM35	**Chiang Mai Arr**	**10.79**	**209**	P	Pn	06 51 25.0	+8.0
CM36	**Chiang Mai Arr**	**10.96**	**208**	P	**Pn**	06 51 24.0	**+4.7**
CM09	**Chiang Mai Arr**	**11.07**	**209**	P	Pn	06 51 28.8	+7.9
CMAR	**Chiang Mai Arr**	**11.07**	**209**	LR	LR	06 56 01.4	
	comp=Z,49nm,18.8s,baz=25,slow=41						
CM02	**Chiang Mai Arr**	**11.09**	**209**	P	Pn	06 51 28.0	+6.8
CM04	**Chiang Mai Arr**	**11.11**	**209**	P	Pn	06 51 28.6	+7.1
SUKH	**Sukhothai**	**11.69**	**204**	P	**Pn**	06 51 31.0	**+1.7**
TAPN	**Taplejung**	**14.96**	**270**	*e*P	**P**	06 52 17.1	**-2.8**
ODAN	**Odare**	**15.31**	**269**	*e*P	**Pn**	06 52 19.4	**+0.5**
RAMN	**Ramite**	**15.99**	**269**	*e*P	**Pn**	06 52 28.1	**+0.3**
JIRN	**Jiri**	**16.26**	**272**	*e*P	**P**	06 52 33.0	**-1.4**
GUN	**Gumba**	**16.51**	**273**	*e*P	**Pn**	06 52 35.0	**+0.5**
PKI	**Pulchoki**	**16.96**	**272**	*e*P	**Pn**	06 52 38.5	**-1.7**
PKIN	**Phulchoki**	**16.97**	**272**	*e*P	**Pn**	06 52 39.4	**-0.8**
SONM	**Songino Array**	**19.56**	**4**	P	**Pn**	06 53 13.3	**+1.6**
	0.2nm,0.3s,baz=188,slow=13,SNR=3.3						
JOW	**Kunigami**	**21.05**	**88**	LR	LR	07 02 42.0	
	comp=Z,29nm,19.5s,baz=324,slow=40						
KSRS	**Korea Array**	**21.59**	**59**	P	**P**	06 53 32.0	**-0.3**
	1.0nm,0.3s,baz=242,slow=11,SNR=4.7						
KSRS				LR	LR	07 03 58.0	
	comp=Z,19nm,18.1s,baz=60,slow=42						
MKAR	**Makanchi Array**	**25.41**	**323**	P	**P**	06 54 11.7	**+1.6**
	1.8nm,0.6s,baz=129,slow=9.1,SNR=17						
USRK	**Ussuriysk Ar.**	**27.04**	**47**	P	**P**	06 54 25.1	**+0.2**
	2.5nm,0.8s,baz=252,slow=7.4,SNR=5.8						
ZALV	**Zalesovo Beam**	**29.43**	**336**	P	**P**	06 54 46.9	**+0.8**
	0.5nm,0.3s,baz=139,slow=11,SNR=3.0						
MJAR	**Matsushiro Arr**	**29.44**	**65**	LR	LR	07 07 47.2	
	comp=Z,37nm,18.5s,baz=295,slow=39						
GEYT	**Alibeck**	**39.73**	**296**	P	**P**	06 56 15.4	**+0.1**
	1.3nm,0.5s,baz=133,slow=6.1,SNR=2.3						
WRA	**Warramunga Arr**	**55.92**	**146**	P	**P**	06 58 18.4	**-2.4**
	2.2nm,0.7s,baz=334,slow=8.5,SNR=19						
BRTR	**Keskin Array B**	**58.51**	**301**	P	**P**	06 58 37.7	**-1.6**
	0.6nm,0.8s,baz=109,slow=7.8,SNR=2.8						
ASAR	**Alice Springs**	**58.89**	**148**	P	**P**	06 58 40.2	**-1.5**
	2.1nm,0.8s,baz=328,slow=6.8,SNR=22						
AKASG	**Malin Array Be**	**59.62**	**315**	P	**P**	06 58 46.5	**0.0**
	0.4nm,0.5s,baz=69,slow=6.5,SNR=4.3						
ARCES	**ARCESS Array B**	**59.98**	**336**	P	**P**	06 58 49.7	**+0.9**
	1.7nm,0.8s,baz=88,slow=7.6,SNR=1.7						
GERES	**GERESS Array B**	**69.81**	**315**	P	**P**	06 59 53.3	**+0.1**
	0.4nm,0.7s,baz=72,slow=6.3,SNR=2.2						
YKA	**Yellowknife Ar**	**84.24**	**17**	P	**P**	07 01 14.2	**+0.2**
	0.2nm,0.6s,baz=325,slow=4.5,SNR=6.9						

VAO ***12*** *06:54:53.4±0.9,28°.30S×67°.81W,h10km,mb4.3*

IDC ***12*** *06:55:04.0±2.5,28°.33S×67°.40W,h112km±20km,mb3.9/6, mb1 3.9/11,mb1mx3.7/28,mbtmp4.1/11,Error ellipse: s-maj=24.1km s-min=21.9km az=68.0*

NEIC ***12*** *06:55:04.0±1.5,28°.30S±0°.03×67°.37W±0°.09,h119km±6km, mb4.6/50,Md4.2(SJA),Error ellipse: s-maj=11.9km s-min=4.9km az=85.0*

SJA ***12*** *06:55:05.1±0.7,28°.31S×67°.51W,h145km±3km,ML4.4, MW4.1*

GUC ***12*** *06:55:06.0±0.4,28°.31S×67°.66W,h126km±2km,ML4.5*

ISC 12 06:55:05.2±0.6,28°.23S±0°.03×67°.56W±0°.04,h127km±5km, n177,σ1§51/209,mb4.6/30,6C,La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCA	**Vinchina**	**0.76**	**228**	⇑P	**Pn**	06 55 28.0	**+2.2**
VCA				*e*S	**Sn**	06 55 42.2	**+0.7**
VCA	**Vinchina**	**0.76**	**228**	*e*P	**Pn**	06 55 28.1	**+2.2**
VCA				*e*S	**Sn**	06 55 45.0	**+3.5**
VCA				IAML		06 55 47.2	
	comp=Z,13μm,0.3s						
ACLC	**CERRO LA CRUZ**	**1.30**	**156**	*e*P	**Pn**	06 55 32.3	**+1.3**
ACLC				*e*S	**Sn**	06 55 52.0	**+1.2**
ACLC				IAML		06 55 52.3	
	comp=Z,2μm,1.1s						
AGUA	**GUANDACOL**	**1.49**	**213**	*e*P	**Pn**	06 55 34.7	**+1.6**
AGUA				*e*S	**Sn**	06 55 56.7	**+2.4**
AGUA				IAML		06 55 58.4	
	comp=Z,8μm,0.3s						
AC02	**Maricunga**	**1.97**	**315**	⇑P	**Pn**	06 55 42.1	**+3.0**
AC02				*e*S	**Sn**	06 56 08.7	**+3.8**
AC02				IAML		06 56 19.2	
	comp=E,614nm,0.3s						
AC02	**Maricunga**	**1.97**	**315**	Pn	**Pn**	06 55 42.1	**+3.0**
APLL	**PUNTA DE LOS L**	**2.33**	**157**	*e*P	**Pn**	06 55 43.8	**+0.6**
APLL				IAML		06 56 15.8	
	comp=Z,7μm,1.9s						
ACDV	**Cuesta del Vie**	**2.36**	**215**	*e*P	**Pn**	06 55 45.3	**+1.6**
ACDV				*e*S	**Sn**	06 56 15.8	**+2.6**
ACDV				IAML		06 56 16.4	
	comp=Z,1μm,0.8s						
AVFE	**Valle Fertil**	**2.42**	**178**	*e*P	**Pn**	06 55 45.0	**+0.7**
AVFE				*e*S	**Sn**	06 56 14.9	**+0.5**
GO03	**Copiap**	**2.45**	**284**	⇑*e*P	**Pn**	06 55 46.2	**+1.5**
GO03				*e*S	**Sn**	06 56 15.9	**+0.9**
GO03				IAML		06 56 17.0	
	comp=N,2μm,0.3s						
GO03	**Copiap**	**2.45**	**284**		**Pn**	06 55 46.5	**+1.8**
GO03				Sn	**Sn**	06 56 16.2	**+1.2**
GO03	**Copiap**	**2.45**	**284**	*e*P	**Pn**	06 55 46.2	**+1.6**
GO03				*e*S	**Sn**	06 56 16.5	**+1.5**
FSA	**Cafayete**	**2.54**	**34**	*e*P	**Pn**	06 55 48.5	**+2.5**
FSA				*e*S	**Sn**	06 56 20.5	**+3.2**
AROD	**Rodeo**	**2.55**	**220**	*e*P	**Pn**	06 55 48.0	**+1.8**
AROD				*e*S	**Sn**	06 56 20.3	**+2.6**
ACCO	**Cerro Coronel**	**2.69**	**209**	*e*P	**Pn**	06 55 49.3	**+1.3**
ACCO				*e*S	**Sn**	06 56 22.7	**+1.8**
ACCO				IAML		06 56 24.7	
	comp=Z,1μm,1.3s						
LCO	**Las Campanas**	**2.87**	**254**	*e*S	**Sn**	06 56 24.9	**+0.1**
LCO	**Las Campanas**	**2.87**	**254**	Pn	**Pn**	06 55 51.4	**+1.2**
ACHE	**Chepes**	**3.02**	**165**	*e*P	**Pn**	06 55 52.9	**+0.8**
AC04	**Llanos de Chal**	**3.10**	**270**	⇑*e*P	**Pn**	06 55 53.5	**+0.5**
AC04				*e*S	**Sn**	06 56 29.9	**+0.1**
AC04				IAML		06 56 32.3	
	comp=E,704nm,0.5s						
AC04	**Llanos de Chal**	**3.10**	**270**	Pn	**Pn**	06 55 53.6	**+0.5**
RTLL	**Cerro Villicun**	**3.19**	**194**	*e*P	**Pn**	06 55 54.8	**+0.7**
RTLL				*e*S	**Sn**	06 56 29.3	**-2.7**
RTLL	**Cerro Villicun**	**3.19**	**194**	*e*P	**Pn**	06 55 54.8	**+0.7**
RTLL				*e*S	**Sn**	06 56 32.7	**+0.7**
RTLL				IAML		06 56 34.1	
	comp=Z,605nm,0.4s						
AC01	**Pan de Azucar**	**3.41**	**307**	*e*P	**Pn**	06 55 58.1	**+1.0**
AC01				*e*S	**Sn**	06 56 35.0	**-2.2**
AC01				IAML		06 56 37.5	
	comp=E,894nm,0.4s						
AC01	**Pan de Azucar**	**3.41**	**307**	Pn	**Pn**	06 55 58.3	**+1.2**
GO04	**Tololo Observa**	**3.43**	**235**	⇑*i*P	**Pn**	06 55 58.0	**+0.5**
GO04				*e*S	**Sn**	06 56 38.0	**+0.1**
GO04				IAML		06 56 41.4	
	comp=E,5μm,0.4s						
GO04	**Tololo Observa**	**3.43**	**235**		**Pn**	06 55 57.8	**+0.3**
GO04	**Tololo Observa**	**3.43**	**235**	*e*P	**Pn**	06 55 58.1	**+0.6**
GO04				*e*S	**Sn**	06 56 38.6	**+0.7**
ZON	**Zonda**	**3.44**	**196**	Pn	**Pn**	06 55 58.0	**+0.5**
ZON	**Zonda**	**3.44**	**196**	*e*P	**Pn**	06 55 58.2	**+0.7**
ZON				*e*S	**Sn**	06 56 38.0	**+0.1**
ZON				*e*S		06 56 38.2	
ZON				IAML		06 56 40.1	
	comp=Z,365nm,1.1s						
GO02	**Mina Guanaco**	**3.56**	**329**	⇑*e*P	**Pn**	06 56 01.3	**+1.9**
GO02				*e*S	**Sn**	06 56 42.3	**+1.1**
GO02	**Mina Guanaco**	**3.56**	**329**	Pn	**Pn**	06 56 01.1	**+1.8**
RTCV	**Cerro Valdivia**	**3.71**	**193**	*e*P	**Pn**	06 56 01.6	**+0.5**
RTCV				*e*S	**Sn**	06 56 43.8	**-0.6**
RTCV				IAML		06 56 45.0	
	comp=Z,212nm,0.8s						
CO03	**El Pedregal**	**3.76**	**226**	*e*P	**Pn**	06 56 02.1	**+0.3**
CO03				*e*S	**Sn**	06 56 44.8	**-0.8**
CO03	**El Pedregal**	**3.76**	**226**	Pn	**Pn**	06 56 02.6	**+0.8**
CO02	**Combarbal**	**4.21**	**224**	*e*P	**Pn**	06 56 07.3	**-0.4**
CO02				*e*S	**Sn**	06 56 55.3	**-1.0**
CO02	**Combarbal**	**4.21**	**224**	Pn	**Pn**	06 56 07.8	**0.0**
PB14	**IPOC Station P**	**4.41**	**324**	Pn	**Pn**	06 56 12.4	**+1.9**
ASAL	**Salagasta**	**4.48**	**194**	*e*P	**Pn**	06 56 11.6	**+0.3**
ASAL				*e*S	**Sn**	06 57 02.4	**-0.3**
ASAL				IAML		06 57 03.9	
	comp=Z,296nm,0.7s						
ARCO	**CERRO ARCO**	**4.74**	**194**	*e*P	**Pn**	06 56 15.1	**+0.2**
ARCO				*e*S	**Sn**	06 57 08.5	**-0.7**
ARCO				IAML		06 57 10.2	
	comp=Z,262nm,0.8s						
AAGR	**Agrelo**	**4.96**	**192**	*e*P	**Pn**	06 56 17.8	**0.0**
AAGR				IAML		06 57 38.0	
	comp=Z,199nm,1.4s						
VA03	**San Esteban**	**5.20**	**209**		**Pn**	06 56 21.2	**+0.3**
PB15	**IPOC Station P**	**5.29**	**341**		**Pn**	06 56 23.8	**+1.4**
PB10	**IPOC Station P**	**5.42**	**330**	Pn	**Pn**	06 56 24.5	**+0.6**
PEL	**Peldehue**	**5.58**	**208**		**Pn**	06 56 25.8	**-0.3**
PEL	**Peldehue**	**5.58**	**208**	*e*P	**Pn**	06 56 26.2	**+0.1**
PEL				*e*S	**Sn**	06 57 29.0	**-0.2**
LVC	**Limon Verde**	**5.73**	**347**	P	**Pn**	06 56 30.0	**+1.6**
	comp=Z,7.6nm,0.3s,baz=167,slow=11,SNR=28						
LVC				S	**Sn**	06 57 29.5	**-3.7**
	comp=Z,5.5nm,0.3s,baz=320,slow=15,SNR=5.7						
LVC	**Limon Verde**	**5.73**	**347**		**Pn**	06 56 29.6	**+1.2**
PB06	**IPOC Station P**	**5.80**	**341**		**Pn**	06 56 29.8	**+0.7**
MT05	**Renca**	**5.82**	**207**		**Pn**	06 56 28.3	**-1.0**
MT03	**Universidad Ad**	**5.82**	**205**	Pn	**Pn**	06 56 29.4	**+0.1**
MT02	**Curacav**	**5.88**	**211**	Pn	**Pn**	06 56 28.4	**-1.6**
MT09	**Talagante**	**6.26**	**207**	Pn	**Pn**	06 56 33.7	**-1.5**
YJA	**Yavi**	**6.31**	**18**	*e*P	**Pn**	06 56 39.2	**+2.9**
YJA				*e*S	**Sn**	06 57 40.3	**-7.1**
PB04	**IPOC Station P**	**6.32**	**338**		**Pn**	06 56 35.5	**-0.7**
VA05	**Santo Domingo**	**6.43**	**212**	Pn	**Pn**	06 56 35.1	**-2.3**
RFA	**San Rafael**	**6.56**	**187**	*e*P	**Pn**	06 56 38.2	**-1.1**
RFA				*e*S	Sn	06 57 33.8	-19
RFA				IAML		06 58 23.6	
	comp=Z,43nm,0.7s						
PB09	**IPOC Station P**	**6.59**	**346**	Pn	**Pn**	06 56 40.9	**+1.1**
PB07	**IPOC Station P**	**6.81**	**341**		**Pn**	06 56 42.5	**-0.4**
COIS	**El Sosneado**	**7.07**	**194**	*e*P	**Pn**	06 56 44.3	**-1.8**
BO02	**Sierra Bellavi**	**7.09**	**202**	Pn	**Pn**	06 56 45.4	**-1.0**
PB01	**IPOC Station P**	**7.37**	**346**		**Pn**	06 56 50.2	**0.0**
EDS3	**Malargue**	**7.67**	**191**	*e*P	**Pn**	06 56 53.6	**-0.7**
PB08	**IPOC Station P**	**8.19**	**349**		**Pn**	06 57 01.3	**-0.3**
ML02	**Panimavida**	**8.19**	**203**	Pn	**Pn**	06 56 58.4	**-2.8**
PB11	**IPOC Station P**	**8.65**	**347**		**Pn**	06 57 06.8	**-0.8**
PSGCX	**Pisagua**	**8.91**	**344**	Pn	**Pn**	06 57 09.2	**-1.8**
BI02	**San Fabin de**	**8.97**	**200**	Pn	**Pn**	06 57 09.4	**-2.4**
MNMC	**Minye Minye**	**9.25**	**348**	Pn	**Pn**	06 57 15.2	**-0.6**
CPUP	**Villa Florida**	**9.30**	**81**	P	**Pn**	06 57 14.1	**-2.0**
	comp=Z,0.6nm,0.3s,baz=258,slow=13,SNR=12						
CPUP	**Villa Florida**	**9.30**	**81**		**Pn**	06 57 12.9	**-3.3**
LPAZ	**La Paz**	**11.90**	**357**	P	**Pn**	06 57 51.8	**+0.3**
	comp=Z,0.5nm,0.3s,baz=166,slow=6.8,SNR=14						
LPAZ	**La Paz**	**11.90**	**357**		**Pn**	06 57 52.0	**+0.5**
PLTB	**Pedras Altas**	**12.60**	**110**	*e*P	**Pn**	06 57 56.4	**-3.6**
PLCA	**Paso Flores**	**12.71**	**190**	P	**Pn**	06 57 59.9	**-1.5**
	comp=Z,0.1nm,0.3s,baz=10,slow=11,SNR=4.0						
PLCA	**Paso Flores**	**12.71**	**190**		**Pn**	06 57 59.1	**-2.3**
AQDB	**Aquidauana**	**13.28**	**57**	*e*P	**Pn**	06 58 05.7	**-3.2**
SIV	**San Ignacio**	**13.58**	**28**	P	**Pn**	06 58 10.7	**-2.1**
	comp=Z,0.2nm,0.3s,baz=236,slow=12,SNR=11						
ITAB	**Concordia**	**13.71**	**89**	*e*P	**Pn**	06 58 10.4	**-3.8**
PTGB	**Pitanga**	**14.31**	**79**	*e*P	**Pn**	06 58 19.5	**-2.7**
CNLB	**Canela**	**14.70**	**98**	*e*P	**Pn**	06 58 24.7	**-2.2**
PTLB	**Pontes e Lacer**	**14.93**	**33**	*e*P	**Pn**	06 58 27.9	**-1.9**
PP1B	**Ponte de Pedra**	**15.75**	**50**	*e*P	**Pn**	06 58 37.0	**-3.1**
PCMB	**Pacaembu**	**16.18**	**70**	*e*P	**Pn**	06 58 44.8	**-0.6**
TER01	**Tubaro-SC**	**16.23**	**95**	*e*P	**Pn**	06 58 44.4	**-1.6**
VILB	**Vilhena**	**16.68**	**26**	*e*P	**Pn**	06 58 50.3	**-1.3**
FRTB	**Fartura**	**16.92**	**77**	*e*P	**Pn**	06 58 53.9	**-0.5**
ITRB	**Iturama**	**17.85**	**65**	*e*P

N47A					IAmb	IAmb	07 06 08.2	
	comp=Z,9.4nm,1.1s							
P40A	**Paris**	**71.17**	**340**	P		**P**	**07 06 10.2**	**+0.2**
P40A					IAmb	IAmb	07 06 11.3	
	comp=Z,6.8nm,0.7s							
L40A	**Anamosa**	**73.28**	**342**	P		**P**	**07 06 22.6**	**+0.1**
L40A					IAmb	IAmb	07 06 23.6	
	comp=Z,8.9nm,0.8s							
ECSD	**EROS Data Cent**	**76.41**	**339**	P		**P**	**07 06 40.3**	**-0.1**
SMCO	**Snowmass**	**76.48**	**330**	P		**P**	**07 06 42.8**	**+1.3**
KNB	**Kanab**	**77.58**	**324**	P		**P**	**07 06 50.0**	**+2.5**
P17A	**Butcher Ranch,**	**78.46**	**327**	P		**P**	**07 06 53.8**	**+1.6**
TOA0	**Torodi Ar. Sit**	**78.58**	**68**	P		**P**	**07 06 53.9**	**+0.8**
TOA0					IAmb	IAmb	07 06 54.3	
	comp=Z,5.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**78.58**	**68**	P		**P**	**07 06 53.6**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=270,slow=5.6,SNR=14							
RWWY	**Rawlins**	**78.64**	**331**	P		**P**	**07 06 53.8**	**+0.5**
RWWY					IAmb	IAmb	07 06 54.8	
	comp=Z,7.0nm,0.8s							
HWUT	**Hardware Ranch**	**80.52**	**328**	P		**P**	**07 07 03.8**	**+0.5**
BW06	**Boulder Array**	**80.53**	**330**	P		**P**	**07 07 04.0**	**+0.6**
PDAR	**Pinedale Array**	**80.53**	**330**	P		**P**	**07 07 04.3**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=114,slow=5.4,SNR=9.1							
PDAR	**Pinedale Array**	**80.53**	**330**	P		**P**	**07 07 04.1**	**+0.7**
NVAR	**Mina Array Bea**	**81.53**	**322**	P		**P**	**07 07 11.0**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=169,slow=5.1,SNR=3.9							
NVAR					pP	**pP**	**07 07 40.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=131,slow=16,SNR=1.8							
YHH	**Holmes Hill**	**82.71**	**331**	P		**P**	**07 07 15.4**	**+0.5**
HLID	**Hailey**	**83.37**	**328**	P		**P**	**07 07 18.8**	**+0.7**
EGMT	**Eagleton**	**84.83**	**333**	P		**P**	**07 07 25.1**	**-0.3**
YKA	**Yellowknife Ar**	**97.91**	**340**	P		Pdif	07 08 26.1	+0.2
	comp=Z,0.5nm,0.8s,baz=138,slow=4.8,SNR=9.6							
ASAR	**Alice Springs**	**124.41**	**204**	PKP		**PKPdf**	**07 13 49.4**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=169,slow=1.5,SNR=5.3							
ASAR					pPKP	**pPKPdf**	**07 14 24.9**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=135,slow=1.5,SNR=3.2							
ASAR	**Alice Springs**	**124.41**	**204**			**PKPdf**	**07 13 49.1**	**-0.8**
WRA	**Warramunga Arr**	**127.63**	**206**	PKP		**PKPdf**	**07 13 55.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=152,slow=1.8,SNR=5.8							
WRA					pPKP	**pPKPdf**	**07 14 31.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=161,slow=1.6,SNR=2.6							
WRA	**Warramunga Arr**	**127.63**	**206**			**PKiKP**	**07 13 56.0**	**-0.7**
ZALV	**Zalesovo Beam**	**147.32**	**30**	PKP		**PKPdf**	**07 14 31.6**	**+0.8**
	comp=Z,9.3nm,0.8s,baz=310,slow=3.3,SNR=21							
ZALV					PKPbc	**PKPbc**	**07 14 34.1**	**+0.6**
	comp=Z,9.6nm,0.8s,baz=293,slow=4.1,SNR=12							
ZALV	**Zalesovo Beam**	**147.32**	**30**			**PKiKP**	**07 14 34.6**	**-1.0**
MKAR	**Makanchi Array**	**150.02**	**44**	PKPbc		**PKiKP**	**07 14 41.1**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=314,slow=2.3,SNR=33							
MKAR	**Makanchi Array**	**150.02**	**44**			**PKiKP**	**07 14 41.5**	**+0.1**
SONM	**Songino Array**	**159.87**	**12**	PKPab		**PKPab**	**07 15 29.7**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=142,slow=46,SNR=3.6							

*IDC **12** 07:01:23.6±2.3,5°.20S×152°.93E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.5/27,mbtmp3.6/4,MS2.5/1,Ms1 2.5/1, ms1mx2.2/32,Error ellipse: s-maj=110.1km s-min=29.3km az=128.0*

ISC 12 07:01:29.6±2.2,5.0S±0.6×152.7E±0.6,h35km,n6,σ1§35/7, mb3.5/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.03**	**231**	Pn		**Pn**	**07 03 12.0**	**+1.9**
	1.0nm,0.3s,baz=61,slow=5.7,SNR=5.8							
PMG						Sn	**Sn**	**07 04 27.9**	**-1.0**
	1.2nm,0.3s,baz=216,slow=13,SNR=3.1							
PMG						LR	LR	07 05 34.2	
	comp=Z,37nm,21.4s,baz=79,slow=35							
WRA	**Warramunga Arr**	**23.24**	**229**	P		**P**	**07 06 32.7**	**-1.3**
	1.4nm,0.8s,baz=54,slow=9.7,SNR=13							
ASAR	**Alice Springs**	**25.93**	**223**	P		**P**	**07 06 58.5**	**-0.4**
	0.7nm,0.6s,baz=58,slow=9.0,SNR=11							
FITZ	**Fitzroy Crossi**	**29.48**	**242**	P		**P**	**07 07 30.0**	**-0.7**
	0.7nm,0.6s,baz=79,slow=7.1,SNR=5.3							
ILAR	**Eielson Array**	**82.40**	**22**	P		**P**	**07 13 47.7**	**-0.2**
	0.2nm,0.7s,baz=250,slow=5.9,SNR=1.6							
TORD	**Torodi Ar. Bea**	**150.31**	**288**	PKPab		**PKPab**	**07 21 25.1**	**+0.5**
	0.5nm,0.7s,baz=72,slow=2.2,SNR=2.2							

*IDC **12** 07:06:01.8±0.9,35°.61N×138°.30E,h149km±11km,mb3.2/3, mb1 3.4/3,mb1mx2.9/36,mbtmp3.6/3,Error ellipse: s-maj=41.9km s-min=24.4km az=79.0*

*JMA **12** 07:06:02.3±0.2,35°.74N×138°.79E,h160km±2km,M3.1*

ISC 12 07:06:02.0±1.0,35°.78N±0°.10×138°.8E±0°.1,h160km±7km, n12,σ0§59/17,mb3.5/3,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JRY	**Ryogami san**	**0.26**	**26**	P		**Pn**	**07 06 24.4**	**+0.7**
JRY				S		**Sn**	**07 06 40.9**	**+0.5**
JYN	**Shimob**	**0.34**	**212**	P		**Pn**	**07 06 24.0**	**0.0**
JOD2	**Odawara 2**	**0.58**	**153**	P		**Pn**	**07 06 25.1**	**+0.1**
JOD2				S		**Sn**	**07 06 42.6**	**+0.1**
JAG	**Ashikaga**	**0.85**	**41**	P		**Pn**	**07 06 26.9**	**+0.3**
MJAR	**Matsushiro Arr**	**0.88**	**329**	P		**Pn**	**07 06 26.8**	**0.0**
	2.6nm,0.3s,baz=172,slow=8.4,SNR=121							
MJAR				S		**Sn**	**07 06 44.7**	**-1.3**
	1.1nm,0.3s,baz=176,slow=13,SNR=15							
MAT	**Matsushiro**	**0.88**	**329**	P		**Pn**	**07 06 27.1**	**+0.3**
MAT				S		**Sn**	**07 06 45.4**	**-0.6**
MAT	**Matsushiro**	**0.88**	**329**	P		**Pn**	**07 06 27.1**	**+0.3**
MAT				S		**Sn**	**07 06 45.7**	**-0.3**
JSZ	**Suzu**	**2.01**	**326**	P		**Pn**	**07 06 38.0**	**+0.2**
JKG	**Kaga**	**2.03**	**285**	P		**Pn**	**07 06 38.9**	**+0.8**
WRA	**Warramunga Arr**	**55.58**	**185**	P		**P**	**07 15 20.2**	**-0.7**
	0.4nm,0.5s,baz=0.2,slow=7.5,SNR=8.1							
ASAR	**Alice Springs**	**59.31**	**185**	P		**P**	**07 15 46.8**	**-0.2**
	0.1nm,0.5s,baz=9.6,slow=6.1,SNR=1.6							
FINES	**FINESS Array B**	**68.91**	**332**	P		**P**	**07 16 49.5**	**+0.4**
	2.2nm,1.1s,baz=79,slow=7.2,SNR=1.6							

*IDC **12** 07:16:43.0±1.0,14°.90N×122°.09E,h0km,mb3.5/8, mb1 3.7/8,mb1mx3.5/44,mbtmp3.5/8,MS2.9/2,Ms1 2.9/2, ms1mx2.4/33,Error ellipse: s-maj=22.1km s-min=13.7km az=130.0*

*MAN **12** 07:16:44.8,15°.06N×121°.83E,h6km,MS3.6*

ISC 12 07:16:44.5±2.3,14°.99N±0°.05×121°.94E±0°.04,h8km±16km, n22,σ1§11/27,mb3.6/8,2C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LQP	**Lukban**	**0.95**	**204**	⇑*eP*		**Pb**	**07 17 03.0**	**-0.4**
LQP				*i* S		**Sn**	**07 17 18.7**	**+0.6**
JCNP	**Jose Panganiba**	**1.01**	**133**	*eP*		**Pn**	**07 17 04.9**	**0.0**
JCNP				*eS*		**Sb**	**07 17 17.5**	**-0.2**
GQP	**Guinayangan**	**1.19**	**155**	⇑*eP*		**Pn**	**07 17 07.0**	**-2.4**
GQP				*i* S		**Sn**	**07 17 24.0**	**+0.3**
TGY	**Tagaytay City**	**1.31**	**228**	Pg		**Pb**	**07 17 09.5**	**+0.1**
	439nm,0.3s,baz=27,slow=2.4,SNR=28							
TGY				Lg		Lg	07 17 27.3	
	314nm,0.3s,baz=323,slow=20,SNR=7.4							
TGY	**Tagaytay City**	**1.31**	**228**	⇓*eP*		**Pb**	**07 17 09.6**	**+0.3**
TGY				*i* S		**Sn**	**07 17 29.2**	**+2.5**
SCSP	**San Jose Seism**	**2.03**	**131**	*eP*		**Pb**	**07 17 21.4**	**-0.2**
SCSP				*eS*		**Sg**	**07 17 50.1**	**+0.4**
LUBP	**Lubang**	**2.06**	**233**	*eP*		**Pn**	**07 17 19.0**	**-0.4**
LUBP				*eS*		**Sb**	**07 17 47.7**	**-0.2**
SCZP	**Santa Cruz**	**2.10**	**292**	*eP*		**Pn**	**07 17 19.2**	**-0.8**
SCZP				*eS*		**Sn**	**07 17 43.9**	**-2.4**
BOLP	**Bolinao**	**2.39**	**306**	*eP*		**Pn**	**07 17 24.1**	**+0.3**
BOLP				*eS*		**Sn**	**07 17 53.8**	**+0.4**
SJMP	**San Jose**	**2.64**	**198**	*eP*		**Pb**	**07 17 31.2**	**-0.8**
SJMP				*eS*		**Sb**	**07 18 05.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**22.28**	**282**	P		**P**	**07 21 43.3**	**+1.0**
	0.4nm,0.5s,baz=92,slow=8.1,SNR=4.4							
KSRS	**Korea Array**	**23.00**	**12**	P		**P**	**07 21 51.6**	**+2.0**
	0.7nm,0.5s,baz=237,slow=9.2,SNR=1.9							
KSRS						LR	LR	07 31 11.0	
	comp=Z,19nm,19.3s,baz=218,slow=38							
WRA	**Warramunga Arr**	**36.80**	**160**	P		**P**	**07 23 50.2**	**-2.7**
	0.4nm,0.8s,baz=345,slow=8.9,SNR=1.2							
TLY	**Talaya**	**39.43**	**342**	LR		LR	07 41 57.6	
	comp=Z,25nm,18.5s,baz=97,slow=38							
ASAR	**Alice Springs**	**40.16**	**163**	P		**P**	**07 24 20.3**	**-1.0**
	0.2nm,0.5s,baz=338,slow=8.5,SNR=5.4							
H11S3	**WAKE ISLAND Hy**	**42.92**	**79**	T		T	08 11 27.1	
	baz=274,slow=75,SNR=7.6							
H11S1	**WAKE ISLAND Hy**	**42.93**	**79**	T		T	08 11 31.0	
	baz=274,slow=75,SNR=57							
H11S2	**WAKE ISLAND Hy**	**42.93**	**79**	T		T	08 11 30.5	
	baz=274,slow=75,SNR=9.2							
MKAR	**Makanchi Array**	**45.73**	**322**	P		**P**	**07 25 06.8**	**+0.6**
	0.9nm,0.8s,baz=113,slow=8.9,SNR=8.4							
PETK	**Petropavlovsk-**	**47.33**	**29**	P		**P**	**07 25 18.9**	**+0.4**
	2.5nm,0.8s,baz=189,slow=5.6,SNR=4.6							
ZALV	**Zalesovo Beam**	**48.48**	**332**	P		**P**	**07 25 27.2**	**-0.3**
	0.3nm,0.3s,baz=127,slow=9.6,SNR=1.5							
YKA	**Yellowknife Ar**	**91.13**	**23**	P		**P**	**07 29 49.6**	**+0.1**
	0.3nm,0.9s,baz=308,slow=4.2,SNR=4.4							

*IDC **12** 07:23:28.7±3.8,17°.03N×98°.92W,h0km,mb3.7/3, mb1 4.0/8,mb1mx3.7/48,mbtmp3.7/8,ML3.3/5,MS3.1/8, Ms1 3.1/8,ms1mx2.9/31,Error ellipse: s-maj=77.1km s-min=17.6km az=21.0*

*NEIC **12** 07:23:33.5±1.5,17°.06N±0°.04×98°.75W±0°.07,h38km±14km, Error ellipse: s-maj=10.2km s-min=5.6km az=78.0*

*MEX **12** 07:23:34.2±0.8,17°.03N×98°.94W,h38km±9km,MD4.3*

ISC 12 07:23:32.5±1.2,17°.01N±0°.04×98°.86W±0°.05,h34km±3km, n60,σ1§26/65,mb3.9/10,MS3.2/5,Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.38**	**224**	*eP*		**Pb**	**07 23 41.1**	**-0.3**
CRIG				*eS*		**Sb**	**07 23 47.5**	**0.0**
TLIG	**Tlapa**	**0.61**	**27**	*iP*		**Pn**	**07 23 44.9**	**+0.1**
TLIG				*i* S		**Sn**	**07 23 53.6**	**0.0**
TLIG	**Tlapa**	**0.61**	**27**	Pn		**Pn**	**07 23 44.6**	**-0.2**
TLIG				Sn		**Sn**	**07 23 53.2**	**-0.4**
PNIG	**Pinotepa**	**0.93**	**131**	*iP*		**Pn**	**07 23 49.5**	**+0.3**
PNIG				*eS*		**Sn**	**07 24 02.5**	**+1.2**
PNIG	**Pinotepa**	**0.93**	**131**			**Pn**	**07 23 49.5**	**+0.3**
PNIG						**Sn**	**07 24 02.5**	**+1.2**
TXIG	**Tlaxiaco**	**1.07**	**77**	*eP*		**Pn**	**07 23 52.1**	**+0.8**
FTIG	**Fresnillo de T**	**1.13**	**38**	*eP*		**Pn**	**07 23 52.9**	**+0.9**
FTIG				*eS*		**Sn**	**07 24 07.4**	**+1.0**
YOIG	**Yosondua**	**1.27**	**97**	*eP*		**Pb**	**07 23 55.7**	**-0.3**
HLIG	**Huajuapan de L**	**1.29**	**51**	*eP*		**Pn**	**07 23 55.4**	**+1.1**
CAIG	**El Cayaco**	**1.35**	**272**	*eP*		**Pn**	**07 23 53.8**	**-1.1**
CAIG	**El Cayaco**	**1.35**	**272**			**Pn**	**07 23 53.8**	**-1.1**
PEIG	**Puerto Escondi**	**1.93**	**121**	*eP*		**Pn**	**07 24 03.8**	**+0.9**
UNM	**Universidad Na**	**2.32**	**353**	Pn		**Pn**	**07 24 09.2**	**+0.6**
MOIG	**Morelia**	**3.45**	**320**			**Pn**	**07 24 26.1**	**+2.0**
CMIG	**Matias Romero**	**3.80**	**88**	Pn		**Pn**	**07 24 30.3**	**+1.6**
	1.0nm,0.3s,baz=272,slow=13,SNR=19							
CMIG						Sn	**Sn**	**07 25 13.5**	**+1.3**
	7.4nm,0.3s,baz=252,slow=5.3,SNR=4.7							
CMIG						Lg	Lg	07 25 31.5	
	9.6nm,0.3s,baz=318,slow=16,SNR=4.5							
CMIG						LR	LR	07 26 24.6	
	comp=Z,68nm,20.1s,baz=239,slow=46							
ZAIG	**Zacatecas**	**6.71**	**329**	Pn		**Pn**	**07 25 10.2**	**+1.4**
APG	**El Apazote**	**8.31**	**103**	Pn		**Pn**	**07 25 31.6**	**+0.7**
	0.4nm,0.3s,baz=270,slow=20,SNR=6.0							
APG						Sn	**Sn**	**07 27 01.5**	**-2.3**
	0.3nm,0.3s,baz=288,slow=20,SNR=1.7							
APG						LR	LR	07 28 49.0	
	comp=Z,72nm,21.8s,baz=291,slow=38							
TEIG	**Tepich**	**10.53**	**71**	Pn		**Pn**	**07 26 02.1**	**+1.1**
	0.5nm,0.3s,baz=319,slow=14,SNR=2.4							
TEIG						Sn	**Sn**	**07 27 52.3**	**-5.5**
	baz=351,slow=19,SNR=1.3							
TX31	**Lajitas Ar. Si**	**13.04**	**341**			**Pn**	**07 26 36.5**	**+1.1**
TX32	**Lajitas Array**	**13.04**	**341**			**Pn**	**07 26 36.5**	**+1.1**
TXAR	**Lajitas Array**	**13.04**	**341**	Pn		**Pn**	**07 26 37.9**	**+2.5**
	0.0nm,0.3s,baz=161,slow=14,SNR=6.1							
TXAR	**Lajitas Array**	**13.04**	**341**	Pn		**Pn**	**07 26 37.0**	**+1.6**
JCT	**Junction City**	**13.43**	**356**			**Pn**	**07 26 42.0**	**+1.2**
435B	**Jarrell**	**13.76**	**5**	Pn		**Pn**	**07 26 43.4**	**-1.8**
WHTX	**Lake Whitney,**	**14.97**	**5**			**Pn**	**07 27 02.4**	**+0.8**
MNTX	**Cornudas Mount**	**15.78**	**339**			**Pn**	**07 27 12.8**	**+0.6**
GDL2	**Guadalupe Moun**	**15.92**	**343**	Pn		**Pn**	**07 27 15.5**	**+1.3**
Z35A	**Perchaven, San**	**16.31**	**5**	Pn		**Pn**	**07 27 18.8**	**-0.2**
MSTX	**Muleshoe**	**17.25**	**349**			**Pn**	**07 27 30.7**	**-0.1**
MSTX					IAmb	IAmb	07 27 33.4	
	comp=Z,5.6nm,0.8s							
X37A	**Clayton**	**17.78**	**9**			**Pn**	**07 27 37.1**	**-0.2**
X37A					IAmb	IAmb	07 27 39.7	
	comp=Z,17nm,1.5s							
AMTX	**Amarillo**	**17.98**	**352**			**P**	**07 27 40.4**	**+0.2**
OK025	**Westminster Rd**	**18.54**	**4**	P		**P**	**07 27 45.6**	**-0.6**
OK025					IAmb	IAmb	07 27 48.0	
	comp=Z,7.3nm,0.8s							
ANMO	**Albuquerque**	**19.11**	**341**	P		**Pn**	**07 27 54.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=12							
ANMO					LR	LR	07 36 14.8	
	comp=Z,76nm,18.8s,baz=154,slow=40							
ANMO	**Albuquerque**	**19.11**	**341**			**P**	**07 27 52.6**	**0.0**
WHAR	**Wooly Hollow**	**19.12**	**17**	P		**P**	**07 27 52.6**	**0.0**
WHAR					IAmb	IAmb	07 28 04.1	
	comp=Z,7.5nm,1.3s							
FCAR	**Ozark Folk Cen**	**19.73**	**16**	P		**P**	**07 27 58.9**	**-0.4**
FCAR					IAmb	IAmb	07 28 09.2	
	comp=Z,3.2nm,0.7s							
T35A	**Sooner Cattle**	**19.93**	**6**	P		**P**	**07 28 00.9**	**-0.5**
T35A					IAmb	IAmb	07 28 04.4	
	comp=Z,9.3nm,1.1s							
KAN13	**South Haven SW**	**19.96**	**3**	P		**P**	**07 28 01.2**	**-0.6**
U40A	**Yellville**	**19.99**	**14**	P		**P**	**07 28 01.7**	**-0.3**
U40A					IAmb	IAmb	07 28 12.0	
	comp=Z,3.4nm,0.7s							
WVT	**Waverly**	**21.41**	**25**	P		**P**	**07 28 16.3**	**-1.1**
WVT					IAmb	IAmb	07 28 29.5	
	comp=Z,3.5nm,0.8s							
WUAZ	**Wupatki**	**21.54**	**331**	P		**P**	**07 28 19.4**	**+0.4**
MVCO	**Mesa Verde**	**21.85**	**339**	P		**P**	**07 28 23.6**	**+1.3**
MVCO					IAmb	IAmb	07 28 24.1	
	comp=Z,3.4nm,0.8s							
R40A	**Maddies Statio**	**21.97**	**14**	P		**P**	**07 28 25.5**	**+2.1**
R40A					IAmb	IAmb	07 28 28.5	
	comp=Z,3.4nm,0.7s							
T47A	**Sharon Grove**	**22.45**	**25**	P		**P**	**07 28 27.9**	**-0.6**
PFO	**Pinyon Flats O**	**22.89**	**320**	LR		LR	07 38 27.6	
	comp=Z,43nm,18.1s,baz=148,slow=39							
KNB	**Kanab**	**23.44**	**331**	P		**P**	**07 28 40.6**	**+1.7**
KNB					IAmb	IAmb	07 28 50.7	
	comp=Z,3.7nm,1.1s							
LCMT	**Little Creek M**	**23.63**	**330**	P		**P**	**07 28 42.3**	**+1.6**
MTPU	**Mount Pierson**	**24.00**	**333**	P		**P**	**07 28 44.6**	**+0.2**
MTPU					IAmb	IAmb	07 28 47.7	
	comp=Z,3.9nm,0.8s							
Q16A	**Castle Valley**	**24.34**	**336**	P		**P**	**07 28 47.6**	**+0.3**
Q16A					IAmb	IAmb	07 28 50.1	
	comp=Z,4.4nm,0.9s							
BW06	**Boulder Array**	**27.25**	**343**	P		**P**	**07 29 13.9**	**+0.3**
PD31	**Pinedale Array**	**27.25**	**343**	P		**P**	**07 29 13.0**	**-0.7**
PDAR	**Pinedale Array**	**27.25**	**343**	P		**P**	**07 29 14.4**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=146,slow=9.8,SNR=7.7							
PDAR					LR	LR	07 41 05.4	
	comp=Z,62nm,19.5s,baz=134,slow=39							
PDAR	**Pinedale Array**	**27.25**	**343**	P		**P**	**07 29 13.7**	**0.0**
NVAR	**Mina Array Bea**	**27.30**	**325**	P		**P**	**07 29 15.9**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=135,slow=10,SNR=2.9							
ELK	**Elko**	**27.56**	**332**	LR		LR	07 41 26.2	
	comp=Z,65nm,19.9s,baz=143,slow=39							
SNOW	**Snow King Moun**	**28.23**	**342**	P		**P**	**07 29 23.1**	**+0.5**
LOHW	**Long Hollow**	**28.33**	**342**	P		**P**	**07 29 23.9**	**+0.6**
LOHW					IAmb	IAmb	07 29 25.3	
	comp=Z,3.1nm,0.9s							
SDV	**Santo Domingo**	**28.64**	**103**	LR		LR	07 40 48.9	
	comp=Z,45nm,18.6s,baz=308,slow=36							
YKA	**Yellowknife Ar**	**46.76**	**350**	P		**P**	**07 31 57.7**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=156,slow=7.5,SNR=22							
FRB	**Frobisher Bay**	**51.11**	**17**	LR		LR	07 54 41.4	
	comp=Z,30nm,18.9s,baz=16,slow=37							

*NNC **12** 07:25:17.7±0.9,49°.97N×78°.52E,h0km,mb3.4,mpv2.9, Error ellipse: s-maj=15.1km s-min=5.0km az=75.0, Suspected Mining explosion.*

ISC 12 07:25:18.3±1.2,50°.05N±0°.06×78°.62E±0°.07,h0km,n10, σ1§28/13,8C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.57**	**355**	⇑P		**Pb**	**07 25 30.4**	**-0.8**
	41nm,0.5s							
KURBB				⇑S		**Sb**	**07 25 39.5**	**-0.4**
	172nm,0.6s							
MAKZ	**Makanchi**	**3.94**	**144**	⇓Pn		**Pn**	**07 26 20.4**	**+0.3**
	1.0nm,0.6s							
MAKZ				⇑Pg		**Pb**	**07 26 26.8**	**-1.9**
	5.8nm,0.9s							
MAKZ				⇑Lg		Lg	07 27 19.3	
	24nm,0.6s							
UKR	**Ust'-Kan**	**4.03**	**75**	P		**Pn**	**07 26 21.6**	**+0.4**
UKR				S		**Sb**	**07 27 19.3**	**-0.1**
MK31	**Makanchi Array**	**4.08**	**142**	⇑Pn		**Pn**	**07 26 22.6**	**+0.7**
	0.1nm,0.1s,baz=354,slow=14,SNR=76							
MK31				⇑Pg		**Pb**	**07 26 31.0**	**+0.1**
	2.4nm,0.5s,baz=321,slow=16,SNR=22							
MK31				⇓Lg		Lg	07 27 25.6	
	12nm,0.5s,baz=322,slow=28,SNR=18							
DGZ	**Jazzator, Alta**	**5.71**	**90**	S		**Sn**	**07 27 50.2**	**-0.5**
CHBI	**Chibit, Altay**	**5.72**	**84**	S		**Sn**	**07 27 49.9**	**-0.8**
ARTR	**Artybash**	**5.75**	**69**	S		**Sb**	**07 28 08.2**	**-0.6**
BRVK	**Borovoye**	**6.00**	**303**	⇑Sn		**Sn**	**07 27 58.4**	**+0.7**
	1.9nm,0.6s							
BRVK				⇓Lg		Lg	07 28 30.1	
	2.7nm,0.6s							
CUR	**Chagan-Uzun**	**6.27**	**86**	S		**Sn**	**07 28 07.5**	**+3.1**
KK31	**Karatay Array**	**8.91**	**222**	⇑Lg		Lg	07 29 58.0	
	2.0nm,0.6s,baz=32,slow=24,SNR=4.4							

*SJA **12** 07:28:10.9±0.6,32°.96S×67°.54W,h186km±4km,ML4.7, MW4.3*

*NEIC **12** 07:28:11.4±1.3,32°.98S±0°.06×67°.5W±0°.1,h173km±5km, Error ellipse: s-maj=12.5km s-min=8.3km az=93.0*

*IDC **12** 07:28:11.9±0.5,32°.99S×67°.52W,h174km±3km,mb4.2/20, mb1 4.2/25,mb1mx4.1/37,mbtmp4.6/25,Error ellipse: s-maj=14.1km s-min=9.0km az=77.0*

*VAO **12** 07:28:14.1±1.7,33°.06S×67°.37W,h192km±12km,mb4.3*

ISC 12 07:28:11.7±0.4,32°.96S±0°.04×67°.52W±0°.04,h175km±3km, h175km:pP-P,n294,σ0§98/349,mb4.6/77,1C,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AAGR	**Agrelo**	**1.10**	**263**	*eP*		**Pn**	**07 28 40.7**	**+0.8**
ASAL	**Salagasta**	**1.17**	**288**	*eP*		**Pn**	**07 28 41.1**	**+0.7**
ASAL				*eS*		**Sn**	**07 29 03.7**	**+1.3**
ARCO	**CERRO ARCO**	**1.19**	**275**	*eP*		**Pn**	**07 28 41.2**	**+0.6**
ARCO				*eS*		**Sn**	**07 29 02.6**	**-0.3**
ARCO					IAML		07 29 04.4	
	comp=Z,2µm,0.6s							
RTCV	**Cerro Valdivia**	**1.40**	**322**	*eP*		**Pn**	**07 28 42.7**	**+0.3**
MRA	**San Martin**	**1.62**	**71**	*eP*		**Pn**	**07 28 45.5**	**+1.0**
MRA				*eS*		**Sn**	**07 29 10.5**	**+0.7**
ZON	**Zonda**	**1.72**	**325**	Pn		**Pn**	**07 28 45.9**	**+0.3**
ZON				Sn		**Sn**	**07 29 11.8**	**0.0**
ZON	**Zonda**	**1.72**	**325**	*eP*		**Pn**	**07 28 46.0**	**+0.4**
ZON				*eS*		**Sn**	**07 29 12.0**	**+0.3**
ZON					IAML		07 29 12.7	
	comp=Z,2µm,0.2s							
AUSP	**Uspallata**	**1.74**	**295**	*eP*		**Pn**	**07 28 46.3**	**+0.3**
AUSP				*eS*		**Sn**	**07 29 11.9**	**-0.5**
RTLL	**Cerro Villicun**	**1.82**	**333**	*eP*		**Pn**	**07 28 47.0**	**+0.4**
RTLL				*eS*		**Sn**	**07 29 13.7**	**+0.1**
RTLL					IAML		07 29 16.0	
	comp=Z,5µm,0.4s							
RTLS	**Leoncito**	**1.90**	**307**	*eP*		**Pn**	**07 28 48.4**	**+0.7**
RTLS				*eS*		**Sn**	**07 29 15.9**	**+0.4**
RTLS					IAML		07 29 17.8	
	comp=Z,5µm,0.3s	

comp=Z,30nm,0.8s
PP1B **Ponte de Pedra** 19.07 40 eP P 07 32 22.4 -1.3
PET01 **Itanhaem-SP** 19.74 69 eP P 07 32 28.8 +0.7
EFI **East Falkland** 19.93 163 P P 07 32 29.2 -0.6
SPB **Sao Paulo** 19.98 67 eP P 07 32 31.7 +1.1
MG04 **Isla Riesco** 20.10 187 P P 07 32 32.6 +1.0
ITRB **Iturama** 20.23 53 eP P 07 32 34.1 +0.6
GO10 **Punta Arenas** 20.34 186 P P 07 32 35.4 +1.1
RCLB **Rio Claro- Sao** 20.55 64 eP P 07 32 37.1 +0.3
BB19B **Bebedouro** 20.62 60 eP P 07 32 37.3 -0.2
VAO **Valinhos** 20.66 67 eP P 07 32 38.5 +0.5
VILB **Vilhena** 21.01 26 eP P 07 32 42.9 +1.1
PARB **Paraibuna** 21.52 69 eP P 07 32 47.2 0.0
USHA **Ushuaia** 21.87 181 P P 07 32 50.5 +0.1
comp=Z,30nm,0.8s,baz=293,slow=0.3,SNR=10
ARAG **Araguaiana, MT** 22.31 43 eP P 07 32 54.7 -0.3
IPMB **Ipameri, GO** 22.89 54 eP P 07 32 59.9 -0.5
ETMB **Extrema** 23.07 3 eP P 07 33 03.2 +1.3
MAN01 **Angra dos Reis** 23.07 70 eP P 07 33 02.1 +0.1
BSCB **Bom Sucesso** 23.46 65 eP P 07 33 05.6 0.0
VAS01 **Vassouras-RJ** 23.79 70 eP P 07 33 08.6 +0.1
SAML **Samuel** 24.23 10 P P 07 33 12.5 0.0
SAML **Samuel** 24.23 10 eP P 07 33 13.6 +1.1
BDFB **Brasilia** 24.70 50 P P 07 33 16.4 -0.4
comp=Z,10.0nm,0.6s,baz=223,slow=9.4,SNR=22
BDFB **Brasilia** 24.70 50 P P 07 33 16.8 -0.1
BDFB IAmb IAmb 07 33 18.6
comp=Z,14nm,0.8s
DUB01 **Friburgo-RJ** 24.74 70 eP P 07 33 15.9 -1.2
CZSB **Cruzeiro do Su** 25.57 348 eP P 07 33 25.7 +1.2
SNDB **Serra Nova Dou** 25.65 39 eP P 07 33 27.2 +1.9
PEXB **Peixe** 27.22 45 eP P 07 33 40.1 +0.7
SJMB **Sao Joao De Ma** 27.54 65 eP P 07 33 42.6 +0.4
JANB **Januaria** 27.59 55 eP P 07 33 42.7 -0.1
ATAH **Atahualpa** 27.61 336 P P 07 33 44.7 +1.4
comp=Z,2.5nm,0.6s,baz=83,slow=9.2,SNR=2.2
BSFB **Barra de Sao F** 27.72 66 eP P 07 33 43.9 +0.1
RIB01 **Linhares ES** 27.79 67 eP P 07 33 45.1 +0.6
NPGB **Novo Progresso** 28.16 26 eP P 07 33 49.8 +2.1
NAN01 **Guarapari, ES** 28.85 65 eP P 07 33 56.1 -0.4
SDBA **SAO DESIDERIO** 29.10 51 eP P 07 33 58.0 -0.2
SMTB **Santa Maria do** 30.25 42 eP P 07 34 07.0 +0.8
GDU01 **Guandu, BA** 31.86 60 eP P 07 34 19.7 -0.6
PTGA **Pitinga** 32.84 14 P P 07 34 29.1 +0.3
comp=Z,2.6nm,0.3s,baz=301,slow=20,SNR=5.1
PTGA **Pitinga** 32.84 14 P P 07 34 28.4 -0.4
PTGA IAmb IAmb 07 34 37.1
comp=Z,14nm,1.4s
PTGA **Pitinga** 32.84 14 eP P 07 34 29.6 +0.7
MALB **Monte Alegre** 33.36 25 eP P 07 34 34.4 +1.0
OTAV **Otavalo** 34.59 340 P P 07 34 43.2 -1.4
OTAV **Otavalo** 34.59 340 eP P 07 34 46.9 +2.4
NBLA **Lagarto - SE** 34.98 58 eP P 07 34 46.8 -0.5
NBTA **Tacaratu-PE** 36.09 58 eP P 07 34 56.8 -0.1
POPC **Popayan, Colom** 36.36 344 eP P 07 35 01.0 +1.6
NBMA **Muriti-CE** 36.87 53 eP P 07 35 03.7 +0.1
NBAN **Anadia - AL** 36.96 58 eP P 07 35 03.9 -0.3
ORTC **Ortega, Tolima** 37.40 347 eP P 07 35 09.5 +1.6
YOTC **Yotoco, Valle** 37.69 346 eP P 07 35 11.0 +0.6
NBLI **Livramento-PB** 38.10 55 eP P 07 35 14.3 +0.4
ROSC **El Rosal** 38.15 349 P P 07 35 12.8 -1.7
ROSC IAmb IAmb 07 35 18.1
comp=Z,6.8nm,0.5s
PAYG **Puerto Ayora** 38.60 322 P P 07 35 16.7 -1.3
GUY2C **Guyana, Caldas** 38.70 347 eP P 07 35 20.3 +1.1
RUSC **La Rusia** 39.00 351 eP P 07 35 21.9 +0.1
NBPA **Parau_RN** 39.17 53 eP P 07 35 23.2 +0.5
CBOC **Ciudad Bolivar** 39.45 347 eP P 07 35 25.9 +0.7
HELC **Santa Helena** 39.67 347 eP P 07 35 27.7 +0.4
PTBC **PUERTO BERRIO,** 39.83 349 eP P 07 35 29.6 -1.5
DBBC **Dabeiba** 40.61 347 eP P 07 35 35.9 +1.3
ZARC **Zaragoza, Cauc** 40.83 349 eP P 07 35 35.4 -1.0
UREC **San Jos de Ur** 41.20 348 eP P 07 35 38.8 -0.5
SDV **Santo Domingo** 41.72 355 P P 07 35 42.9 -0.9
comp=Z,4.8nm,0.4s,baz=87,slow=21,SNR=3.1
SDV **Santo Domingo** 41.72 355 P P 07 35 42.7 -1.0
SJCC **San Jacinto, C** 43.24 349 eP P 07 35 56.5 +0.7
JTS **Las Juntas de** 46.11 336 P P 07 36 20.5 +2.0
comp=Z,4.8nm,0.7s,baz=156,slow=20,SNR=4.1
JTS **Las Juntas de** 46.11 336 P P 07 36 16.9 -1.6
VNA3 **Neumayer Olymp** 48.92 159 P P 07 36 40.0 +0.5
VNA1 **Neumayer--Stat** 49.17 158 P P 07 36 42.2 +0.9
VNA2 **Neumayer--Watz** 49.53 158 P P 07 36 44.6 +0.5
baz=286,slow=8.5
TGUH **Tegucigalpa,Un** 50.42 335 P P 07 36 51.4 -0.3
MLPR **Magueyes Islan** 50.65 1 P P 07 36 52.9 -0.1
PDPR **Patillas Dam,** 50.71 2 P P 07 36 53.4 -0.1
PDPR IAmb IAmb 07 37 08.3
comp=Z,11nm,0.9s
OBIP **Obispado Ponce** 50.73 1 P P 07 36 53.5 -0.1
SJG **San Juan** 50.80 2 P P 07 36 53.8 -0.4
comp=Z,3.9nm,0.3s,baz=221,slow=9.3,SNR=2.3
SJG **San Juan** 50.80 2 P P 07 36 53.7 -0.6
SJG IAmb IAmb 07 37 16.5
comp=Z,32nm,1.5s
GCPR **Guaynabo City** 51.00 2 P P 07 36 55.3 -0.4
GCPR IAmb IAmb 07 36 57.9
comp=Z,27nm,1.3s
SNAA **Sanae** 51.14 158 P P 07 36 56.6 +0.4
SNAA **Sanae** 51.14 158 P P 07 36 56.7 +0.4
comp=Z,16nm,0.6s,baz=288,slow=7.2,SNR=46
SNAA **Sanae** 51.14 158 P P 07 36 56.9 +0.6
MTO3 **Montecristo** 51.51 333 P P 07 37 01.1 +1.3
MTO3 IAmb IAmb 07 37 01.8
comp=Z,14nm,0.7s
ESQI **Esquipulas** 51.65 333 P P 07 37 02.4 +1.7
MTDJ **Mount Denham** 51.79 348 P P 07 37 01.1 -0.6
PETF **Flores** 54.01 333 P P 07 37 18.0 +0.2
CCIG **Comitan** 54.33 331 P P 07 37 21.0 +0.6
CCIG IAmb IAmb 07 37 21.9
comp=Z,20nm,1.3s
TEIG **Tepich** 56.49 336 P P 07 37 36.0 +0.5
QSPA **South Pole Qui** 57.27 180 P P 07 37 41.7 +1.0
SOR **Soroa** 57.38 343 P P 07 37 41.9 +0.1
SOR IAmb IAmb 07 38 01.4
comp=Z,10nm,1.1s
SHEL **Horse Pasture** 57.97 89 P P 07 37 45.4 -0.8
656A **Willston** 63.61 345 P P 07 38 24.2 +0.5
553A **Crawfordville** 64.82 344 P P 07 38 32.5 +0.9
SYO **Syowa Base** 65.42 158 eP P 07 38 31.1 -4.0
VNDA **Vanda** 65.83 190 P P 07 38 38.1 +0.5
comp=Z,1.7nm,0.6s,baz=144,slow=6.4,SNR=3.3
352A **Blakely** 66.17 344 P P 07 38 40.4 +0.1
352A IAmb IAmb 07 38 40.7
comp=Z,9.5nm,0.6s
GOGA **Godfrey** 67.71 346 P P 07 38 50.1 +0.1
344A **Westbrook Farm** 67.72 339 P P 07 38 50.0 -0.1
344A IAmb IAmb 07 38 51.9
comp=Z,12nm,0.8s
X58A **Rowland** 68.08 350 P P 07 38 52.7 +0.5
HKT **Hockley** 68.08 334 P P 07 38 52.3 0.0
LRAL **Lakeview Retre** 68.17 342 P P 07 38 52.9 +0.1
BIRD **Birdtown, Kers** 68.34 349 P P 07 38 54.5 +0.6
Z47A **Carrollton** 68.60 342 P P 07 38 56.0 +0.5
W57A **Gilead** 68.76 349 P P 07 38 57.0 +0.6
143A **Socs Landing,** 69.09 339 P P 07 38 58.2 -0.3
X51A **Calhoun** 69.12 345 P P 07 38 58.6 -0.1
BG3 **Lake Jocassee** 69.13 346 P P 07 38 58.7 -0.1
V58A **Windy Hill, Pi** 69.26 350 P P 07 39 00.2 +0.7
V58A IAmb IAmb 07 39 00.7
comp=Z,8.6nm,0.7s
FPAL **Fort Paine** 69.27 344 P P 07 38 59.0 -0.7
FPAL IAmb IAmb 07 39 00.5
comp=Z,7.9nm,0.6s
W52A **Murphy** 69.43 346 P P 07 39 00.6 0.0
W52A IAmb IAmb 07 39 01.8
comp=Z,8.9nm,0.9s
X48A **Hartselle** 69.52 343 P P 07 39 01.1 -0.1
X48A IAmb IAmb 07 39 02.5
comp=Z,24nm,1.4s
V53A **Saluda** 69.76 347 P P 07 39 02.4 -0.3
V53A IAmb IAmb 07 39 03.6
comp=Z,7.5nm,0.7s
W50A **Signal Mountai** 69.83 345 P P 07 39 03.0 -0.2
W50A IAmb IAmb 07 39 04.3
comp=Z,12nm,0.8s
CPCT **Cooper Cave** 69.90 345 P P 07 39 03.1 -0.4
CPCT IAmb IAmb 07 39 04.3
comp=Z,11nm,0.9s
CPCT pP 07 39 45.0 -0.5
TKL **Tuckaleechee C** 69.94 346 P P 07 39 03.6 -0.1
comp=Z,5.1nm,0.6s,baz=159,slow=8.0,SNR=16
TKL **Tuckaleechee C** 69.94 346 P P 07 39 03.6 -0.1
SWET **Sewanee** 69.99 344 P P 07 39 04.0 0.0
SWET IAmb IAmb 07 39 05.0
comp=Z,18nm,1.0s
V52A **Sevierville** 70.08 346 P P 07 39 04.1 -0.5
V52A IAmb IAmb 07 39 05.2
comp=Z,6.7nm,0.6s
JCT **Junction City** 70.11 331 P P 07 39 05.1 +0.1
JCT IAmb IAmb 07 39 06.6
comp=Z,7.3nm,0.7s
OXF **Oxford** 70.20 341 P P 07 39 05.7 +0.3
OXF IAmb IAmb 07 39 06.1
comp=Z,18nm,1.1s
PLAL **Pickwick Lake** 70.29 342 P P 07 39 05.7 -0.1
PLAL IAmb IAmb 07 39 06.8
comp=Z,10nm,1.1s
U54A **Nelsons Funny** 70.41 348 P P 07 39 05.9 -0.7
U54A IAmb IAmb 07 39 07.6
comp=Z,10nm,0.8s
WLAR **White Oak Lake** 70.54 338 P P 07 39 07.0 -0.3
V48A **Smith Brothers** 70.70 343 P P 07 39 06.3 -2.0
V48A IAmb IAmb 07 39 09.4
comp=Z,9.9nm,0.9s
V48A pP pP 07 39 49.5 -0.9
W45A **Hickory Valley** 70.75 341 P P 07 39 08.2 -0.4
TXAR **Lajitas Array** 70.80 327 P P 07 39 09.9 +0.7
comp=Z,1.7nm,0.7s,baz=160,slow=7.6,SNR=32
TXAR pP pP 07 39 51.1 -0.2
comp=Z,0.9nm,0.6s,baz=147,slow=7.0,SNR=3.8
TXAR **Lajitas Array** 70.80 327 P P 07 39 10.0 +0.7
TXAR pP pP 07 39 51.0 -0.3
TX31 **Lajitas Ar. Si** 70.80 327 P P 07 39 10.2 +0.9
TX32 **Lajitas Array** 70.80 327 P P 07 39 09.7 +0.4
CLTN **Cedars of Leba** 70.92 344 P P 07 39 09.4 -0.2
CLTN IAmb IAmb 07 39 10.2
comp=Z,7.2nm,0.9s
CLTN pP pP 07 39 51.7 0.0
HDBT **Hernando Brdge** 70.98 341 P P 07 39 08.4 -1.6
DBIC **Dimbokro** 71.28 69 P P 07 39 12.9 +0.6
comp=Z,9.6nm,0.6s,baz=214,slow=7.3,SNR=18
DBIC **Dimbokro** 71.28 69 IAmb IAmb 07 39 13.8
comp=Z,12nm,0.8s
WVT **Waverly** 71.31 343 P P 07 39 12.0 0.0
WVT IAmb IAmb 07 39 12.9
comp=Z,16nm,0.8s
T50A **Nancy** 71.48 345 P P 07 39 12.8 -0.2
Z35A **Perchaven, San** 71.64 334 P P 07 39 14.1 0.0
S51A **Beattyville** 71.82 347 P P 07 39 14.7 -0.3
S51A IAmb IAmb 07 39 15.8
comp=Z,8.3nm,0.8s
T47A **Sharon Grove** 71.95 344 P P 07 39 15.1 -0.8
T47A IAmb IAmb 07 39 16.4
comp=Z,8.7nm,0.7s
SUR **Sutherland** 71.98 117 P P 07 39 18.2 +1.6
SUR IAmb IAmb 07 39 18.9
comp=Z,15nm,0.7s
W39A **Magazine** 72.14 338 P P 07 39 17.5 +0.5
W39A IAmb IAmb 07 39 18.5
comp=Z,9.3nm,0.6s
LCAR **Lake Charles** 72.15 340 P P 07 39 17.1 +0.2
LCAR IAmb IAmb 07 39 18.1
comp=Z,10nm,0.7s
FCAR **Ozark Folk Cen** 72.27 339 P P 07 39 17.4 -0.3
PARMO **Parma** 72.32 341 P P 07 39 17.9 -0.1
PARMO pP 07 39 59.6 -0.6
T45A **Paducah** 72.36 342 P P 07 39 17.0 -1.2
T45A pP pP 07 40 00.5 +0.1
PBMO **Poplar Bluff** 72.61 341 P P 07 39 19.5 -0.2
PBMO IAmb IAmb 07 39 20.7
comp=Z,12nm,0.6s
U40A **Yellville** 72.92 339 P P 07 39 21.5 0.0
U40A IAmb IAmb 07 39 22.7
comp=Z,7.8nm,0.7s
X34A **Smith Ranch, M** 72.99 334 P P 07 39 21.8 -0.3
X34A IAmb IAmb 07 39 23.6
comp=Z,13nm,0.7s
X34A pP pP 07 40 03.5 -0.8
MAW **Mawson** 73.06 162 P P 07 39 22.4 +0.4
comp=Z,13nm,0.6s,baz=198,slow=6.5,SNR=20
MAW **Mawson** 73.06 162 P P 07 39 22.1 +0.1
HHAR **Hobbs** 73.19 338 P P 07 39 22.8 -0.3
HHAR pP 07 40 04.8 -0.7
MGMO **Mountain Grove** 73.48 340 P P 07 39 24.8 0.0
MNTX **Cornudas Mount** 73.58 327 P P 07 39 24.9 -0.7
MNTX pP 07 40 06.8 -1.2
FVM **French Village** 73.74 341 P P 07 39 25.5 -0.8
FVM IAmb IAmb 07 39 27.3
comp=Z,12nm,0.6s
FVM pP 07 40 07.8 -0.9
BLO **Bloomington** 73.91 345 P P 07 39 27.2 -0.1
BLO IAmb IAmb 07 39 27.7
comp=Z,9.4nm,0.6s
CCM **Cathedral Cave** 74.03 341 P P 07 39 28.4 +0.4
CCM IAmb IAmb 07 39 29.0
comp=Z,22nm,1.3s
CCM pP 07 40 09.9 -0.5
S39A **Bolivar** 74.29 339 P P 07 39 30.2 +0.7
S39A IAmb IAmb 07 39 31.0
comp=Z,22nm,1.2s
S39A pP pP 07 40 12.8 +0.8
MSTX **Muleshoe** 74.37 330 P P 07 39 30.6 +0.4
MSTX IAmb IAmb 07 39 31.6
comp=Z,11nm,0.9s
MSTX pP pP 07 40 12.5 -0.2
N54A **Moraine State** 74.45 350 P P 07 39 31.3 +0.9
P46A **Rosedale** 74.49 344 P P 07 39 29.9 -0.7
P46A IAmb IAmb 07 39 31.1
comp=Z,8.5nm,0.7s
P46A pP pP 07 40 12.8 -0.2
R40A **Maddies Statio** 74.54 340 P P 07 39 30.6 -0.4
R40A IAmb IAmb 07 39 32.0
comp=Z,16nm,0.8s
R40A pP pP 07 40 12.7 -0.7
AMTX **Amarillo** 74.72 331 P P 07 39 31.0 -1.2
AMTX IAmb IAmb 07 39 33.2
comp=Z,6.3nm,0.6s
P43A **Skaggs, Pawnee** 75.06 343 P P 07 39 33.0 -0.9
P43A IAmb IAmb 07 39 34.5
comp=Z,12nm,0.7s
P43A pP pP 07 40 16.1 -0.3
N47A **Urbana** 75.37 346 P P 07 39 35.3 -0.3
N47A IAmb IAmb 07 39 35.6
comp=Z,10nm,0.6s
P40A **Paris** 75.63 341 P P 07 39 36.8 -0.3
P40A pP pP 07 40 18.9 -0.8
HDIL **Hopedale** 75.87 343 P P 07 39 38.2 -0.3
HDIL IAmb IAmb 07 39 38.9
comp=Z,11nm,0.6s
N41A **Harden Midland** 76.41 342 P P 07 39 40.9 -0.6
KSU1 **Kansas State U** 76.62 337 P P 07 39 42.6 -0.1
KSU1 IAmb IAmb 07 39 43.7
comp=Z,6.6nm,0.6s
KOWA **Kowa** 76.79 63 P P 07 39 45.2 +1.0
KOWA IAmb IAmb 07 39 45.5
comp=Z,8.6nm,0.6s
ANMO **Albuquerque** 76.80 328 P P 07 39 45.0 +0.9
ANMO pP pP 07 40 27.1 +0.3
N38A **Joes South For** 77.14 340 P P 07 39 45.7 +0.1
N38A IAmb IAmb 07 39 46.4
comp=Z,14nm,0.9s
BOSA **Boshof** 77.16 116 P P 07 39 46.5 +0.1
comp=Z,13nm,0.6s,baz=249,slow=4.1,SNR=48
BOSA **Boshof** 77.16 116 P P 07 39 46.7 +0.3
BOSA IAmb IAmb 07 39 47.2
comp=Z,13nm,0.7s
L40A **Anamosa** 77.78 342 P P 07 39 49.2 +0.1
L40A pP 07 40 31.1 -0.8
T25A **Trinidad** 77.78 331 P P 07 39 49.7 +0.2
T25A IAmb IAmb 07 39 52.0
comp=Z,7.3nm,0.8s
T25A pP pP 07 40 32.2 -0.1
N35A **Tabor** 77.91 339 P P 07 39 49.6 -0.3
LBTB **Lobatse** 79.27 113 P P 07 39 57.9 -0.1
TOA0 **Torodi Ar. Sit** 80.32 68 P P 07 40 04.2 +0.6
TOA0 IAmb IAmb 07 40 05.1
comp=Z,14nm,0.8s
TORD **Torodi Ar. Bea** 80.32 68 P P 07 40 03.8 +0.2
comp=Z,10nm,0.7s,baz=252,slow=4.3,SNR=46
TORD pP pP 07 40 48.2 +1.6
comp=Z,3.8nm,0.8s,baz=267,slow=5.3,SNR=4.5
TORD **Torodi Ar. Bea** 80.32 68 P P 07 40 04.3 +0.8
TORD IAmb IAmb 07 40 05.0
comp=Z,11nm,0.7s
E46A **Sault Ste Mari** 80.41 348 P P 07 40 03.6 +0.3
E46A IAmb IAmb 07 40 04.5
comp=Z,12nm,1.2s
ISCO **Idaho Springs** 80.53 331 P P 07 40 04.9 +0.4
SMCO **Snowmass** 80.57 330 P P 07 40 05.4 +0.5
PFO **Pinyon Flats O** 80.65 320 P P 07 40 06.5 +1.4
comp=Z,1.4nm,0.5s,baz=132,slow=3.4,SNR=4.0
ECSD **EROS Data Cent** 80.83 339 P P 07 40 05.3 -0.3
ECSD IAmb IAmb 07 40 06.4
comp=Z,9.5nm,0.5s
ECSD pP 07 40 49.4 +0.7
KNB **Kanab** 81.45 325 P P 07 40 11.3 +2.0
KNB pP 07 40 53.6 +1.1
PHWY **Pilot Hill** 81.75 332 P P 07 40 12.1 +1.2
PHWY IAmb IAmb 07 40 12.5
comp=Z,7.1nm,0.6s
PHWY pP 07 40 54.3 +0.2
D41A **Chassel** 81.88 346 P P 07 40 11.7 +0.7
D41A IAmb IAmb 07 40 12.9
comp=Z,16nm,0.8s
F36A **Milaca** 81.92 342 P P 07 40 11.5 +0.2
EYMN **Ely** 83.36 344 P P 07 40 19.1 +0.4
RSSD **Black Hills** 83.63 334 P P 07 40 20.4 -0.1
PDAR **Pinedale Array** 84.64 330 P P 07 40 25.9 +0.3
comp=Z,0.8nm,0.6s,baz=128,slow=7.9,SNR=8.8
PDAR pP pP 07 41 08.2 -0.9
comp=Z,1.2nm,0.7s,baz=129,slow=5.3,SNR=6.6
NVAR **Mina Array Bea** 85.28 322 P P 07 40 30.2 +1.3
comp=Z,1.9nm,0.7s,baz=146,slow=5.0,SNR=12
NVAR pP pP 07 41 12.1 -0.3
comp=Z,1.9nm,0.8s,baz=158,slow=4.7,SNR=6.6
ELK **Elko** 85.55 326 P P 07 40 30.9 +0.7
comp=Z,1.1nm,0.6s,baz=87,slow=14,SNR=6.6
ELK pP pP 07 41 12.7 -1.0
comp=Z,3.0nm,0.9s,baz=105,slow=1.8,SNR=6.3
FLWY **Flagg Ranch** 86.19 330 P P 07 40 33.6 +0.3
FLWY IAmb IAmb 07 40 35.3
comp=Z,6.1nm,0.7s
RLMT **Red Lodge** 86.47 332 P P 07 40 35.6 +1.0
RLMT IAmb IAmb 07 40 36.3
comp=Z,5.5nm,0.6s
LSZ **Lusaka** 86.50 106 P P 07 40 36.0 +0.7
LSZ IAmb IAmb 07 40 38.1
comp=Z,14nm,1.5s
ULM **Lac du Bonnet** 86.58 342 P P 07 40 34.5 -0.1
comp=Z,3.3nm,0.7s,baz=119,slow=3.8,SNR=8.8
ULM pP pP 07 41 17.2 -1.1
comp=Z,1.7nm,0.8s,baz=146,slow=2.6,SNR=3.2
ULM **Lac du Bonnet** 86.58 342 P P 07 40 34.7 +0.1
YMR **Madison River** 86.78 331 P P 07 40 36.7 +0.6
YMR IAmb IAmb 07 40 38.5
comp=Z,8.4nm,0.8s
YMR pP 07 41 20.0 +0.3
YHH **Holmes Hill** 86.83 331 P P 07 40 36.4 0.0
YHH pP 07 41 19.9 -0.3
HLID **Hailey** 87.38 328 P P 07 40 39.5 +0.6
HLID pP pP 07 41 22.8 +0.1
DGMT **Dagmar** 87.45 337 P P 07 40 38.3 -0.6
MCMT **McKenzie Canyo** 87.70 330 P P 07 40 40.3 -0.3
MCMT pP 07 41 24.6 +0.3
J08A **Circle Bar Ran** 89.09 325 P P 07 40 48.1 +1.2
J08A IAmb IAmb 07 40 49.4
comp=Z,8.5nm,0.7s
J08A pP 07 41 31.6 +0.8
PLID **Pearl Lake** 89.28 328 P P 07 40 49.1 +1.2
PLID pP pP 07 41 31.6 -0.2
YKA **Yellowknife Ar** 102.35 340 P Pdif 07 41 47.0 +0.5
comp=Z,0.3nm,0.6s,baz=141,slow=4.5,SNR=9.7
YKA pP pPdif 07 42 30.2 -0.4
comp=Z,0.3nm,0.8s,baz=139,slow=4.4,SNR=4.0
ASAR **Alice Springs** 120.09 203 PKP PKPdf 07 46 41.3 -0.9
comp=Z,0.3nm,0.5s,baz=150,slow=1.5,SNR=4.9
ASAR SKP SKPdf 07 49 59.8 -1.2
comp=Z,0.4nm,0.8s,baz=137,slow=1.3,SNR=5.1
WRA **Warramunga Arr** 123.39 205 PKP PKPdf 07 46 47.9 -0.6
comp=Z,0.9nm,0.4s,baz=166,slow=1.6,SNR=26
WRA SKP SKPdf 07 50 05.8 -1.6
comp=Z,1.0nm,1.1s,baz=175,slow=1.9,SNR=4.9
WRA **Warramunga Arr** 123.39 205 PKPdf 07 46 48.1 -0.4
BVAR **Borovoye Array** 143.94 43 PKP PKPdf 07 47 25.4 -0.2
comp=Z,0.5nm,0.5s,baz=352,slow=4.5,SNR=4.5
KURBB **Kurchatov Arra** 149.50 45 PKP PKPdf 07 47 36.5 +1.5
comp=Z,3.2nm,0.7s,baz=297,slow=3.0,SNR=22
KURBB PKPbc PKiKP 07 47 40.8 +0.1
comp=Z,3.8nm,0.6s,baz=297,slow=3.1,SNR=32
KURBB pPKPbc pPKPbc 07 48 25.1 -0.3
comp=Z,1.6nm,0.6s,baz=296,slow=3.1,SNR=3.9
KURK **Kurchatov** 149.52 44 PKiKP 07 47 40.8 0.0
ZALV **Zalesovo Beam** 151.28 35 PKPbc PKiKP 07 47 44.7 +0.5
comp=Z,5.5nm,0.4s,baz=299,slow=2.8,SNR=30
ZALV pPKPbc pPKPbc 07 48 29.3 -0.3
comp=Z,6.5nm,0.6s,baz=311,slow=3.0,SNR=7.1
MKAR **Makanchi Array** 153.22 50 PKPbc PKiKP 07 47 48.7 +0.2
comp=Z,1.0nm,0.7s,baz=278,slow=2.0,SNR=11
MKAR pPKPbc pPKPbc 07 48 34.5 +0.2
comp=Z,0.8nm,0.6s,baz=262,slow=2.4,SNR=3.0
MKAR **Makanchi Array** 153.22 50 PKiKP 07 47 49.1 +0.5
CMAR **Chiang Mai Arr** 161.12 137 PKP PKPdf 07 47 51.9 +0.3
comp=Z,0.6nm,0.3s,baz=232,slow=1.0,SNR=1.6
CMAR PKPab PKPab 07 48 35.1 -0.6
comp=Z,0.3nm,0.3s,baz=244,slow=5.2,SNR=5.5
CMAR **Chiang Mai Arr** 161.12 137 PKPdf 07 47 50.1 -1.5
SONM **Songino Array** 164.45 15 pPKPab pPKPab 07 49 34.0 +0.1
comp=Z,1.0nm,0.8s,baz=356,slow=2.0,SNR=3.8

SOME **12** *07:29:12.2,44.77N×81.85E,h5km*
NNC **12** *07:29:14.9±1.1,44.76N×81.80E,h0km,mb3.5,mpv3.3,*
Error ellipse: s-maj=15.3km s-min=3.4km az=120.0
ISC 12 07:29:11.3±1.7,44.73N±0.06×82.1E±0.1,h4km±16km,n17,
σ0°67/29,5C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.68**	**257**	*eP*		**Pb**	**07 29 42.3**	**-0.7**
DJR	7.9nm,0.2s			*eS*		**Sb**	**07 30 04.1**	**-0.4**
DJR	8.5nm,0.3s **Jarkent**	**1.68**	**257**	P		**Pb**	**07 29 42.3**	**-0.7**
DJR	7.9nm,0.2s			S		**Sb**	**07 30 04.1**	**-0.4**
KTMS	8.5nm,0.3s **Ketmen**	**1.79**	**225**	*eP*		**Pb**	**07 29 45.1**	**+0.4**
KTMS	4.6nm,0.1s			*eS*		**Sg**	**07 30 08.9**	**+0.2**
KTMS	21nm,0.3s **Ketmen**	**1.79**	**225**	P		**Pb**	**07 29 45.1**	**+0.4**
KTMS	4.6nm,0.1s			S		**Sg**	**07 30 08.9**	**+0.2**
MK31	21nm,0.3s **Makanchi Array**	**2.07**	**4**	⇑Pn		**Pg**	**07 29 50.7**	**-0.2**
MK31	1.1nm,0.1s,baz=186,slow=15,SNR=151			⇑Sn		**Sg**	**07 30 18.6**	**+0.9**
MAKZ	2.0nm,0.1s,baz=182,slow=26,SNR=12 **Makanchi**	**2.08**	**358**	⇑Pn		**Pg**	**07 29 50.6**	**-0.5**
MAKZ	2.9nm,0.3s			⇑Sn		**Sg**	**07 30 18.0**	**0.0**
PDGK	6.6nm,0.6s **Podgornoye**	**2.33**	**234**	Pg		**Pb**	**07 29 53.4**	**-0.6**
PDGK	2.5nm,0.2s			Lg		Lg	07 30 23.4	
PDGK	5.6nm,0.3s **Podgornoye**	**2.33**	**234**	⇓Pn		**Pb**	**07 29 52.9**	**-1.1**
PDGK	2.7nm,0.5s			⇑Sn		**Sb**	**07 30 23.1**	**-0.1**
SHLS	4.9nm,0.6s **Shalkode**	**2.46**	**231**	*eP*		**Pn**	**07 29 52.7**	**+0.3**
SHLS	11nm,0.1s			*eS*		**Sn**	**07 30 21.9**	**-0.9**
SHLS	20nm,0.3s **Shalkode**	**2.46**	**231**	Pg		**Pn**	**07 29 52.7**	**+0.3**
SHLS	11nm,0.1s			Lg		Lg	07 30 21.9	
UZB	20nm,0.3s **Uzynbulak**	**2.72**	**235**	*eP*		**Pb**	**07 29 60.0**	**-0.6**
UZB	2.6nm,0.2s			*eS*		**Sb**	**07 30 34.3**	**+0.1**
UZB	2.3nm,0.2s **Uzynbulak**	**2.72**	**235**	Pg		**Pb**	**07 29 60.0**	**-0.6**
UZB	2.6nm,0.2s			Lg		Lg	07 30 34.3	
KPKS	2.3nm,0.2s **Kokpek**	**2.75**	**244**	*eP*		**Pb**	**07 30 01.1**	**-0.1**
KPKS	8.3nm,0.2s			*eS*		**Sb**	**07 30 36.3**	**+1.0**
ARXS	17nm,0.3s **Arharly**	**3.09**	**262**	*eP*		**Pb**	**07 30 06.9**	**+0.1**

	4.5nm,0.2s							
ARXS				*e*S		**Sb**	**07 30 46.5**	**+1.7**
	7.8nm,0.4s							
ARXS	**Arharly**	**3.09**	**262**	Pg		**Pb**	**07 30 06.9**	**+0.1**
	4.5nm,0.2s							
ARXS				Lg		Lg	07 30 46.5	
	7.8nm,0.4s							
SATY	**Saty**	**3.14**	**239**	*e*P		**Pb**	**07 30 07.5**	**-0.2**
	1.9nm,0.1s							
SATY				*e*S		**Sb**	**07 30 47.6**	**+1.2**
	8.3nm,0.2s							
SATY	**Saty**	**3.14**	**239**	Pg		**Pb**	**07 30 07.5**	**-0.2**
	1.9nm,0.1s							
SATY				Lg		Lg	07 30 47.6	
	8.3nm,0.2s							

IDC ***12*** *07:32:13.8±4.9,39°.40N×96°.81E,h0km,mb3.6/1, mb1 3.6/4,mb1mx3.2/74,mbtmp3.5/4,ML3.2/3,Error ellipse: s-maj=88.1km s-min=48.3km az=162.0,Gansu*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**10.92**	**36**	Pn	Pn	07 34 51.3	-0.1
	0.4nm,0.3s,baz=218,slow=15,SNR=7.4						
SONM				Lg	Lg	07 37 51.3	
	0.1nm,0.3s,baz=228,slow=28,SNR=2.6						
MKAR	**Makanchi Array**	**12.92**	**310**	Pn	Pn	07 35 13.6	-5.1
	0.1nm,0.3s,baz=116,slow=14,SNR=5.2						
MKAR				Sn	Sn	07 37 30.3	-13
	0.2nm,0.3s,baz=111,slow=23,SNR=2.1						
MKAR				Lg	Lg	07 38 56.3	
	0.1nm,0.3s,baz=118,slow=25,SNR=2.7						
ZALV	**Zalesovo Beam**	**16.68**	**335**	Pn	Pn	07 36 09.5	+0.7
	0.3nm,0.3s,baz=139,slow=12,SNR=2.6						
ESDC	**Sonseca Array**	**73.13**	**308**	P	P	07 43 46.3	+0.1
	0.3nm,0.5s,baz=41,slow=5.0,SNR=2.6						

JMA ***12*** *07:36:04.9±0.1,35°.51N×136°.82E,h308km±1km,M3.4*
IDC ***12*** *07:36:04.6±0.7,35°.38N×136°.94E,h306km±5km,mb3.0/17, mb1 3.2/21,mb1mx3.0/74,mbtmp3.7/21,Error ellipse: s-maj=14.7km s-min=12.1km az=117.0*

ISC 12 07:36:05.1±0.7,35°.54N±0°.08×136°.87E±0°.07,h306km±6km, n36,σt‰19/40,mb3.2/17,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYTA	**Yamagatataniai**	**0.12**	**296**	P	**Pn**	**07 36 44.0**	**+0.2**
JKG	**Kaga**	**0.85**	**329**	P	**Pn**	**07 36 45.7**	**+0.2**
JKG				*e*S	**S**	**07 37 17.5**	**-0.1**
JIE	**Ise**	**1.16**	**187**	P	**Pn**	**07 36 47.0**	**0.0**
JWT	**Wachi**	**1.23**	**258**	P	**Pn**	**07 36 47.3**	**0.0**
JWT				S	**S**	**07 37 20.2**	**-0.7**
JYN	**Shimob**	**1.37**	**91**	P	**Pn**	**07 36 48.2**	**0.0**
MAT	**Matsushiro**	**1.48**	**47**	P	**Pn**	**07 36 49.1**	**+0.4**
MAT				S	**S**	**07 37 24.2**	**+0.7**
MJAR	**Matsushiro Arr**	**1.48**	**47**	P	**Pn**	**07 36 49.4**	**+0.6**
	0.6nm,0.3s,baz=223,slow=7.0,SNR=35						
MJAR				S	**S**	**07 37 24.1**	**+0.6**
	0.0nm,0.3s,baz=210,slow=12,SNR=5.9						
JWY	**Kouya**	**1.69**	**219**	P	**Pn**	**07 36 50.1**	**-0.2**
JRY	**Ryogami san**	**1.72**	**73**	P	**Pn**	**07 36 50.7**	**+0.3**
TTO1	**TONANKAI O.B.S**	**1.92**	**182**	P	**Pn**	**07 36 51.9**	**+0.3**
JTNC	**Tanabenakahech**	**2.01**	**211**	P	**Pn**	**07 36 52.1**	**-0.5**
JAG	**Ashikaga**	**2.27**	**66**	P	**Pn**	**07 36 55.5**	**+0.9**
JAI	**Aioi**	**2.65**	**229**	P	**Pn**	**07 36 57.4**	**-0.6**
JNU	**Nakatsue**	**5.51**	**246**	P	**Pn**	**07 37 28.8**	**-0.2**
	1.8nm,0.3s,baz=36,slow=2.8,SNR=10						
KSRS	**Korea Array**	**7.45**	**287**	P	**Pn**	**07 37 53.1**	**+1.1**
	0.1nm,0.3s,baz=100,slow=13,SNR=5.5						
USRK	**Ussuriysk Ar.**	**9.42**	**338**	P	**Pn**	**07 38 17.0**	**+1.0**
	baz=149,slow=10,SNR=5.4						
JCJ	**Chichijima**	**9.57**	**150**	P	Pn	07 38 10.8	-7.2
	5.5nm,0.3s,baz=299,slow=19,SNR=12						
JCJ				S	S	07 39 52.3	-14
	3.5nm,0.3s,baz=282,slow=19,SNR=2.1						
ASAJ	**Asahikawa**	**9.63**	**25**	P	**Pn**	**07 38 17.6**	**-0.9**
	1.2nm,0.3s,baz=240,slow=10,SNR=13						
ASAJ				S	**S**	**07 40 02.1**	**-5.2**
	0.1nm,0.3s,baz=270,slow=20,SNR=2.3						
KLR	**Kul'dur**	**14.19**	**346**	P	**P**	**07 39 11.8**	**-1.0**
	0.5nm,0.3s,baz=165,slow=9.3,SNR=11						
PETK	**Petropavlovsk-**	**22.89**	**33**	P	**P**	**07 40 43.3**	**+0.8**
	1.2nm,0.7s,baz=227,slow=5.0,SNR=4.2						
SONM	**Songino Array**	**25.68**	**308**	P	**P**	**07 41 08.6**	**+0.7**
	0.4nm,0.4s,baz=100,slow=8.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**40.25**	**314**	P	**P**	**07 43 14.4**	**+1.8**
	0.6nm,0.5s,baz=76,slow=9.0,SNR=1.4						
MKAR	**Makanchi Array**	**41.82**	**303**	P	**P**	**07 43 27.0**	**+1.5**
	0.3nm,0.6s,baz=90,slow=10,SNR=2.5						
KURBB	**Kurchatov Arra**	**44.05**	**309**	P	**P**	**07 43 43.2**	**+0.1**
	0.5nm,0.7s,baz=90,slow=8.2,SNR=3.4						
ILAR	**Eielson Array**	**52.70**	**32**	P	**P**	**07 44 49.2**	**+0.7**
	0.3nm,0.8s,baz=264,slow=5.6,SNR=5.7						
WRA	**Warramunga Arr**	**55.23**	**183**	P	**P**	**07 45 05.2**	**-1.9**
	0.3nm,0.4s,baz=0.0,slow=7.6,SNR=24						
INK	**Inuvik**	**57.36**	**26**	P	**P**	**07 45 22.2**	**+0.7**
	0.6nm,0.5s,baz=278,slow=7.1,SNR=1.8						
ASAR	**Alice Springs**	**58.95**	**183**	P	**P**	**07 45 31.3**	**-1.7**
	0.2nm,0.7s,baz=15,slow=11,SNR=1.8						
ARCES	**ARCESS Array B**	**64.07**	**339**	P	**P**	**07 46 06.9**	**+0.5**
	1.6nm,0.8s,baz=70,slow=7.8,SNR=1.4						
RES	**Resolute Bay**	**64.93**	**13**	P	**P**	**07 46 12.2**	**+0.4**
	1.4nm,0.8s,baz=307,slow=5.9,SNR=5.1						
YKA	**Yellowknife Ar**	**66.91**	**29**	P	**P**	**07 46 24.9**	**+0.3**
	0.1nm,0.4s,baz=302,slow=5.6,SNR=7.0						
FINES	**FINESS Array B**	**68.38**	**331**	P	**P**	**07 46 33.6**	**-0.1**
	0.8nm,0.4s,baz=61,slow=7.0,SNR=9.0						
NOA	**NORSAR Array B**	**74.09**	**336**	P	**P**	**07 47 07.6**	**-0.2**
	0.2nm,0.5s,baz=44,slow=5.6,SNR=1.4						
FRB	**Frobisher Bay**	**79.00**	**11**	P	**P**	**07 47 35.4**	**+0.4**
	1.0nm,0.6s,baz=45,slow=8.6,SNR=5.4						
EKA	**Eskdalemuir Ar**	**83.23**	**338**	P	**P**	**07 47 57.4**	**+0.1**
	1.4nm,0.7s,baz=30,slow=5.8,SNR=1.5						
TXAR	**Lajitas Array**	**93.91**	**50**	P	**P**	**07 48 48.8**	**+0.2**
	0.4nm,0.9s,baz=233,slow=1.3,SNR=4.2						

SOME ***12*** *07:45:53.1,40°.87N×79°.95E,h5km*
NNC ***12*** *07:45:55.2±5.4,40°.83N×79°.75E,h0km,mb3.6,mpv3.1, Error ellipse: s-maj=44.0km s-min=34.7km az=98.0*

ISC 12 07:45:56.3±2.7,41°.0N±0°.1×79°.96E±0°.07,h10km,n12, σ0‰73/18,2D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.18**	**350**	*e*P	**Pb**	**07 46 36.5**	**+0.6**
	12nm,0.2s						
SHLS				*e*S	**Sg**	**07 47 07.7**	**+1.3**
	13nm,0.2s						
SHLS	**Shalkode**	**2.18**	**350**	Pg	**Pb**	**07 46 36.5**	**+0.6**
	12nm,0.2s						
SHLS				Lg	Lg	07 47 07.7	
	13nm,0.2s						
UZB	**Uzynbulak**	**2.25**	**342**	*e*P	**Pb**	**07 46 37.1**	**0.0**
	3.5nm,0.2s						
UZB				*e*S	**Sg**	**07 47 08.8**	**+0.2**
	2.6nm,0.3s						
UZB	**Uzynbulak**	**2.25**	**342**	Pg	**Pb**	**07 46 37.1**	**0.0**
	3.5nm,0.2s						
UZB				Lg	Lg	07 47 08.8	
	2.6nm,0.3s						
PDGK	**Podgornoye**	**2.35**	**352**	Pg	**Pb**	**07 46 39.3**	**+0.5**
	1.1nm,0.2s						
PDGK				Lg	Lg	07 47 12.6	
	1.8nm,0.4s						
PDGK	**Podgornoye**	**2.35**	**352**	⇓Pn	**Pb**	**07 46 38.3**	**-0.5**
	1.1nm,0.5s						
PDGK				⇓Sn	**Sg**	**07 47 11.7**	**-0.1**
	2.8nm,0.6s						
KPKS	**Kokpek**	**2.63**	**339**	*e*P	**Pb**	**07 46 43.8**	**+0.1**
	9.1nm,0.2s						
KPKS				*e*S	**Sg**	**07 47 20.4**	**-0.5**
	8.5nm,0.3s						
TNSS	**Tian-Shan**	**3.03**	**313**	*e*P	**Pb**	**07 46 50.9**	**+0.4**
	1.8nm,0.3s						
TNSS				*e*S	**Sg**	**07 47 32.5**	**-1.0**
	1.4nm,0.4s						
TNSS	**Tian-Shan**	**3.03**	**313**	Pg	**Pb**	**07 46 50.9**	**+0.4**
	1.8nm,0.3s						
TNSS				Lg	Lg	07 47 32.5	
	1.4nm,0.4s						
DJR	**Jarkent**	**3.33**	**358**	*e*P	**Pb**	**07 46 56.0**	**+0.6**
	0.7nm,0.2s						
DJR				*e*S	**Sg**	**07 47 41.4**	**-1.7**
	1.1nm,0.3s						
DJR	**Jarkent**	**3.33**	**358**	Pg	**Pb**	**07 46 56.0**	**+0.6**
	0.7nm,0.2s						
DJR				Lg	Lg	07 47 41.4	
	1.1nm,0.3s						
WMQ	**Urumqi**	**6.38**	**61**	*e*P	**Pb**	**07 47 47.4**	**0.0**
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						

MEX ***12*** *07:50:40.6±1.4,14°.92N×92°.55W,h111km±16km,MD4.2*
GCG ***12*** *07:50:44.2±0.6,14°.87N×92°.74W,h17km±9km,MD3.9*

ISC 12 07:50:39.4±3.7,14°.87N±0°.09×93°.04W±0°.08,h16km±25km, n9,σt‰09/16,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.75**	**87**	*e*P	**Pb**	**07 50 54.5**	**+0.4**
THIG				*i* S	**Sb**	**07 51 06.7**	**+2.6**
PCIG		**0.85**	**348**	*e*P	**Pn**	**07 50 57.2**	**+0.4**
PCIG				*e*S	**Sn**	**07 51 09.1**	**+0.3**
ERG	**Entre ros, C**	**1.49**	**106**	*e*P	**Pn**	**07 51 05.6**	**+0.1**
CCIG	**Comitan**	**1.65**	**32**	*e*P	**Pb**	**07 51 09.3**	**-0.3**
CCIG				*e*S	**Sn**	**07 51 28.6**	**-0.4**
TGIG		**1.90**	**358**	*e*P	**Pn**	**07 51 12.0**	**+0.7**
TGIG				*i* S	**Sn**	**07 51 35.9**	**+1.0**
FUG	**Fuego 3**	**2.17**	**101**	*e*P	**Pn**	**07 51 15.6**	**+0.5**
FUG				*e*S	**Sn**	**07 51 40.9**	**-0.9**
PCG	**Pacaya**	**2.40**	**101**	*e*P	**Pn**	**07 51 19.9**	**+1.6**
PCG				*e*S	**Sn**	**07 51 47.1**	**-0.5**
CMIG	**Matias Romero**	**2.83**	**322**	*e*P	**Pn**	**07 51 24.8**	**+0.7**
CMIG				*i* S	**Sn**	**07 51 57.9**	**0.0**
MRL	**Marmol**	**3.25**	**86**	*e*P	**Pn**	**07 51 31.1**	**+1.1**

IDC ***12*** *07:51:51.6±1.6,0°.62N×146°.63E,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.6/39,mbtmp3.7/6,MS3.0/6,Ms1 3.0/6, ms1mx2.7/30,Error ellipse: s-maj=50.9km s-min=23.6km az=105.0*

ISC 12 07:51:53.2±1.6,0°.7N±0°.2×146°.6E±0°.3,h10km,n9,σ0‰74/6, mb3.6/6,MS2.9/4,Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**6.69**	**242**	LR	LR	07 55 42.1	
	comp=Z,125nm,18.5s,baz=164,slow=34						
HNR	**Honiara**	**16.67**	**127**	LR	LR	08 01 38.8	
	comp=Z,64nm,20.3s,baz=310,slow=35						
WRA	**Warramunga Arr**	**23.77**	**210**	P	**P**	**07 57 05.7**	**-0.4**
	1.4nm,0.5s,baz=33,slow=10,SNR=32						
ASAR	**Alice Springs**	**27.17**	**206**	P	**P**	**07 57 37.5**	**+0.4**
	0.5nm,0.7s,baz=39,slow=7.4,SNR=8.3						
ASAR				LR	LR	08 08 30.3	
	comp=Z,56nm,19.9s,baz=1.5,slow=37						
FITZ	**Fitzroy Crossi**	**27.81**	**227**	P	**P**	**07 57 42.5**	**-0.3**
	0.6nm,0.4s,baz=41,slow=12,SNR=2.0						
FITZ				LR	LR	08 07 32.7	
	comp=Z,16nm,21.8s,baz=57,slow=34						
CMAR	**Chiang Mai Arr**	**49.97**	**294**	P	**P**	**08 00 48.6**	**+0.7**
	1.1nm,0.7s,baz=106,slow=6.5,SNR=6.5						
CMAR				LR	LR	08 19 38.4	
	comp=Z,5.6nm,21.6s,baz=320,slow=33						
MKAR	**Makanchi Array**	**72.15**	**319**	P	**P**	**08 03 17.3**	**-0.9**
	0.2nm,0.4s,baz=111,slow=6.9,SNR=3.0						
VNDA	**Vanda**	**78.57**	**177**	LR	LR	08 35 24.6	
	comp=Z,20nm,18.6s,baz=198,slow=33						
ILAR	**Eielson Array**	**79.54**	**24**	P	**P**	**08 04 00.3**	**+0.3**
	0.3nm,0.7s,baz=248,slow=5.9,SNR=1.9						

JMA ***12*** *08:01:00.0±0.1,23°.74N×121°.66E,h38km±2km,M3.4*
TAP ***12*** *08:01:00.5,23°.75N×121°.66E,h38km,ML3.6,C*

ISC 12 08:01:00.6±0.9,23°.75N±0°.02×121°.69E±0°.02,h33km±6km, n125,σt‰03/226,6C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.24**	**342**	⇑*i*P	**Pn**	**08 01 08.1**	**+0.9**
	baz=356						
HWA				S	**Sb**	**08 01 14.4**	**+2.0**
	baz=356						
ESL	**Shilin**	**0.24**	**285**	⇑*i*P	**Pn**	**08 01 07.6**	**+0.3**
	baz=288						
ESL				*i* S	**Sb**	**08 01 12.7**	**+0.2**
	baz=288						
EGFH	**Guangfu**	**0.25**	**251**	⇓*i*P	**Pn**	**08 01 08.1**	**+0.6**
	baz=259						
EGFH				*i* S	**Sn**	**08 01 13.7**	**+2.5**
	baz=259						
TWD	**Chiawan**	**0.34**	**346**	⇑*i*P	**Pn**	**08 01 08.9**	**-0.3**
	baz=358						
TWD				*i* S	**Sn**	**08 01 15.4**	**+0.9**
	baz=358						
HGSD	**Ruisui**	**0.35**	**223**	P	**Pb**	**08 01 09.4**	**+0.3**
	baz=223						
HGSD				S	**Sb**	**08 01 15.8**	**+0.9**
	baz=223						
EHY	**Hungye**	**0.41**	**234**	⇓*i*P	**Pb**	**08 01 09.3**	**-0.7**
	baz=240						
EHY				S	**Sb**	**08 01 15.1**	**-1.2**
	baz=240						
NACB	**Ninganchiao**	**0.43**	**349**	⇑*i*P	**Pn**	**08 01 10.0**	**-0.5**
	baz=357						
NACB				*i* S	**Sn**	**08 01 16.7**	**-0.4**
	baz=357						
ETLH	**Xiulin Townshi**	**0.49**	**338**	P	**Pn**	**08 01 11.0**	**-0.4**
	baz=332						
ETLH				S	**Sn**	**08 01 17.7**	**-1.1**
	baz=332						
VWDT	**VWDT**	**0.50**	**270**	⇓*i*P	**Pb**	**08 01 11.1**	**0.0**
	baz=271						
VWDT				S	**Sb**	**08 01 18.1**	**-0.4**
	baz=271						
YULB	**Yu-li**	**0.51**	**225**	⇓*i*P	**Pb**	**08 01 10.5**	**-0.8**
	baz=233						
YULB				S	**Sb**	**08 01 16.7**	**-1.9**
	baz=233						
EYUL	**Yuli**	**0.53**	**220**	*e*P	**Pb**	**08 01 11.0**	**-0.6**
	baz=228						
TWF1	**Yuli**	**0.54**	**222**	⇓*i*P	**Pb**	**08 01 11.0**	**-0.8**
	baz=228						
TWF1				S	**Sb**	**08 01 18.2**	**-1.2**
	baz=228						
WHF	**Hehuan Shan**	**0.55**	**316**	⇓*i*P	**Pb**	**08 01 11.7**	**-0.6**
	baz=311						
WHF				*i* S	**Sn**	**08 01 20.1**	**-0.5**
	baz=311						
CHGB	**Renai**	**0.56**	**303**	*i* P	**Pn**	**08 01 12.1**	**-0.2**
	baz=305						
CHGB				*i* S	**Sb**	**08 01 19.9**	**-0.5**
	baz=305						
FUSS	**Fushou**	**0.64**	**321**	P	**Pn**	**08 01 13.3**	**-0.2**
	baz=332						
FUSS				S	**Sn**	**08 01 22.1**	**-0.5**
	baz=332						
FULB	**Fuli**	**0.66**	**213**	P	**Pb**	**08 01 13.4**	**-0.4**
	baz=222						
FULB				*e*S	**Sb**	**08 01 23.4**	**+0.6**
	baz=222						
SSLB	**Suanglung**	**0.67**	**273**	⇓*i*P	**Pb**	**08 01 13.2**	**-0.8**
	baz=273						
SSLB				S	**Sb**	**08 01 21.7**	**-1.5**
	baz=273						
TWT	**Tachien**	**0.68**	**317**	⇓*i*P	**Pn**	**08 01 14.2**	**+0.2**
	baz=314						
TWT				*i* S	**Sn**	**08 01 23.1**	**-0.5**
	baz=314						
TDCB	**Techi**	**0.69**	**316**	⇓*i*P	**Pn**	**08 01 14.2**	**+0.1**
	baz=314						
TDCB				S	**Sn**	**08 01 23.3**	**-0.5**
	baz=314						
EWUT	**Wuta**	**0.69**	**7**	*e*P	**Pn**	**08 01 13.9**	**-0.2**
	baz=18						
EWUT				*e*S	**Sn**	**08 01 23.7**	**+0.1**
	baz=18						
CHKT	**Chengkung**	**0.71**	**204**	*e*P	**Pb**	**08 01 13.8**	**-0.9**
	baz=191						
CHKT				*e*S	**Sb**	**08 01 22.6**	**-1.6**
	baz=191						
WPL	**Puli Township**	**0.72**	**291**	*i* P	**Pb**	**08 01 14.2**	**-0.5**
	baz=297						
WPL				*e*S	**Sb**	**08 01 23.4**	**-0.9**
	baz=297						
NNSB	**Datong**	**0.73**	**338**	*i* P	**Pn**	**08 01 14.4**	**-0.2**
	baz=340						
NNSB				S	**Sb**	**08 01 23.6**	**-1.2**
	baz=340						
SMLT	**Sun Moon Lake**	**0.73**	**280**	⇓*i*P	**Pb**	**08 01 14.5**	**-0.6**
	baz=285						
SMLT				S	**Sn**	**08 01 25.0**	**+0.3**
	baz=285						
NNS	**Nan Shan**	**0.74**	**337**	⇑*i*P	**Pn**	**08 01 14.6**	**-0.2**
	baz=341						
NNS				S	**Sn**	**08 01 24.5**	**-0.5**
	baz=341						
DPDB	**Guoxing**	**0.75**	**292**	P	**Pb**	**08 01 14.8**	**-0.5**
	baz=295						
DPDB				S	**Sb**	**08 01 24.5**	**-0.8**
	baz=295						
WHYT	**Xinyi Township**	**0.77**	**266**	*e*P	**Pb**	**08 01 14.8**	**-0.7**
	baz=260						
WHYT				*e*S	**Sb**	**08 01 25.0**	**-0.7**
	baz=260						
TYC	**Yuchr**	**0.77**	**281**	⇓*i*P	**Pb**	**08 01 15.0**	**-0.7**
	baz=286						
TYC				S	**Sb**	**08 01 25.4**	**-0.5**
	baz=286						
ELDTW	**Lidau**	**0.83**	**228**	P	**Pb**	**08 01 15.1**	**-1.7**
	baz=223						
ELDTW				*e*S	**Sb**	**08 01 25.8**	**-1.9**
	baz=223						
ALS	**Alishan**	**0.84**	**254**	⇓*i*P	**Pb**	**08 01 16.5**	**-0.5**
	baz=259						
ALS				*i* S	**Sb**	**08 01 27.0**	**-1.2**
	baz=259						
EDH	**Donghe**	**0.85**	**204**	*e*P	**Pn**	**08 01 15.3**	**-0.9**
	baz=193						
EDH				*e*S	**Sb**	**08 01 26.6**	**-1.5**
	baz=193						
WHP	**Taichung City**	**0.85**	**308**	*e*P	**Pn**	**08 01 16.8**	**+0.5**
	baz=315						
WHP				*e*S	**Sn**	**08 01 27.8**	**+0.1**
	baz=315						
NDT	**Datong Townshi**	**0.86**	**349**	*e*P	**Pn**	**08 01 16.5**	**+0.2**
	baz=344						
NDT				*e*S	**Sn**	**08 01 27.5**	**-0.3**
	baz=344						
TWC	**Suao**	**0.87**	**10**	P	**Pn**	**08 01 16.9**	**+0.5**
	baz=14						
TWC				S	**Sn**	**08 01 28.6**	**+0.8**
	baz=14						
NDS	**Dongshan**	**0.88**	**2**	*e*P	**Pn**	**08 01 17.0**	**+0.4**
	baz=354						
NDS				*e*S	**Sn**	**08 01 30.1**	**+2.0**
	baz=354						
WJS	**Zhushan**	**0.88**	**275**	*e*P	**Pn**	**08 01 17.3**	**-0.2**
	baz=275						
WJS				*e*S	**Sn**	**08 01 30.3**	**+2.1**
	baz=275						
ENTT	**Nioudou**	**0.89**	**353**	⇑*i*P	**Pn**	**08 01 16.9**	**+0.1**
	baz=348						
ENTT				*e*S	**Sn**	**08 01 28.4**	**-0.1**
	baz=348						
WNT	**Mingjian**	**0.93**	**278**	*e*P	**Pb**	**08 01 18.2**	**0.0**
	baz=279						
WNT1	**Nantou City**	**0.93**	**280**	*e*P	**Pb**	**08 01 18.6**	**+0.3**
	baz=280						
CHN5	**Tsauling**	**0.94**	**261**	P	**Pb**	**08 01 17.9**	**+0.5**
	baz=255						
CHN5				S	**Sb**	**08 01 30.4**	**-0.2**
	baz=255						
WWF	**Wufeng**	**0.95**	**288**	*e*P	**Pb**	**08 01 18.8**	**+0.2**
	baz=292						
WWF				*e*S	**Sn**	**08 01 34.9**	**+4.9**
	baz=292						
YHNB	**Yeheng**	**0.96**	**343**	⇓*i*P	**Pb**	**08 01 18.0**	**-0.8**
	baz=346						
YHNB				S	**Sn**	**08 01 29.9**	**-0.3**
	baz=346						
TWE	**Neicheng**	**0.96**	**359**	*e*P	**Pb**	**08 01 17.9**	**-0.9**
	baz=353						
TWE				*e*S	**Sn**	**08 01 30.7**	**+0.4**
	baz=353						
NSK	**Sanguang**	**0.97**	**342**	⇓*i*P	**Pb**	**08 01 18.2**	**-0.8**
	baz=346						
NSK				*i* S	**Sn**	**08 01 30.1**	**-0.3**
	baz=346						
LONT	**Longtian**	**0.98**	**211**	*e*P	**Pn**	**08 01 17.2**	**-0.9**
	baz=209						
LONT				*e*S	**Sn**	**08 01 32.0**	**+1.2**
	baz=209						
TCU	**Taichung**	**1.00**	**293**	*e*P	**Pb**	**08 01 19.5**	**0.0**
	baz=294						
TCU				*e*S	**Sn**	**08 01 34.4**	**+3.1**
	baz=294						
STYH	**Taoyuan**	**1.02**	**235**	*e*P	**Pn**	**08 01 18.7**	**+0.3**
	baz=229						
STYH				*e*S	**Sn**	**08 01 31.9**	**+0.3**
	baz=229						
WGK	**Gukeng**	**1.03**	**267**	*e*P	**Pb**	**08 01 20.5**	**+0.5**
	baz=266						
WGK				*e*S	**Sb**	**08 01 33.8**	**+0.6**
	baz=266						
NWLT	**Wulai**	**1.03**	**351**	*e*P	**Pb**	**08 01 19.4**	**-0.6**
	baz=347						
NWLT				*e*S	**Sn**	**08 01 32.2**	**+0.1**
	baz=347						
STYT	**Tauyuan**	**1.03**	**236**	*e*P	**Pn**	**08 01 18.8**	**0.0**
	baz=229						
STYT				*e*S	**Sn**	**08 01 32.2**	**+0.1**
	baz=229						
WDLH	**Douliu**	**1.05**	**267**	*e*P	**Pb**	**08 01 21.3**	**+0.9**
	baz=266						
WDLH				*e*S	**Sb**	**08 01 35.4**	**+1.5**
	baz=266						
TPUB	**Ta-pu**	**1.07**	**245**	*e*P	**Pn**	**08 01 19.8**	**+0.6**
	baz=244						
TPUB				*e*S	**Sn**	**08 01 34.1**	**+1.2**
	baz=244						
NSY	**Sanyi**	**1.07**	**308**	⇓*i*P	**Pb**	**08 01 20.6**	**-0.1**
	baz=310						
NSY				*e*S	**Sb**	**08 01 34.8**	**+0.4**
	baz=310						
NSTT	**Nanjuang**	**1.07**	**325**	P	**Pb**	**08 01 20.5**	**-0.2**
	baz=327						
NSTT				S	**Sb**	**08 01 34.1**	**-0.4**
	baz=327						
LIOB	**Emei**	**1.08**	**326**	P	**Pb**	**08 01 20.8**	**0.0**
	baz=328						
LIOB				*e*S	**Sb**	**08 01 34.6**	**0.0**
	baz=328						
WCHH	**Zhanghua**	**1.08**	**288**	*e*P	**Pb**	**08 01 20.7**	**-0.1**
	baz=288						
WCHH				*e*S	**Sb**	**08 01 37.3**	**+2.7**
	baz=288						
TWGBT	**Beinan**	**1.08**	**211**	*e*P	**Pn**	**08 01 18.4**	**-1.0**
	baz=209						
TWGBT				*e*S	**Sn**	**08 01 31.6**	**-1.7**
	baz=209						
LDUT	**Ludao**	**1.09**	**191**	*e*P	**Pn**	**08 01 17.9**	**-1.7**
	baz=182						
LDUT				*e*S	**Sn**	**08 01 31.3**	**-2.2**
	baz=182						
NTC	**Toucheng**	**1.10**	**7**	*e*P	**Pb**	**08 01 22.1**	**+0.9**
	baz=20

TWK				*eS*		**Sb**	**08 01 38.1**	**0.0**
	baz=245							
CHN1	**Nanshi**	**1.20**	**242**	P		**Pb**	**08 01 22.7**	**-0.2**
	baz=241							
CHN1				S		**Sb**	**08 01 38.6**	**+0.5**
	baz=241							
WRL	**Guolierlin Hig**	**1.21**	**277**	*eP*		**Pb**	**08 01 22.8**	**-0.1**
	baz=277							
WRL				*eS*		**Sb**	**08 01 38.0**	**-0.2**
	baz=277							
SGST	**Jiashian**	**1.21**	**237**	*eP*		**Pn**	**08 01 22.0**	**+0.8**
	baz=229							
SGST				*eS*		**Sn**	**08 01 38.0**	**+1.5**
	baz=229							
NHDH	**Xindian Distri**	**1.21**	**353**	*eP*		**Pb**	**08 01 22.5**	**-0.5**
	baz=357							
NHDH				*eS*		**Sb**	**08 01 37.1**	**-1.4**
	baz=357							
SBCB	**Hsinchu**	**1.22**	**328**	*eP*		**Pb**	**08 01 22.9**	**-0.2**
	baz=331							
SBCB				*eS*		**Sb**	**08 01 39.8**	**+1.3**
	baz=331							
SLGT	**Liugui**	**1.22**	**232**	*eP*		**Pn**	**08 01 22.1**	**+0.8**
	baz=240							
SLGT				*eS*		**Sb**	**08 01 39.0**	**+0.4**
	baz=240							
TIPB	**Shuangxi**	**1.22**	**6**	*eP*		**Pb**	**08 01 22.7**	**-0.5**
	baz=360							
TIPB				*eS*		**Sb**	**08 01 38.9**	**+0.2**
	baz=360							
TWA	**Mucha**	**1.23**	**356**	*eP*		**Pb**	**08 01 22.2**	**-1.1**
	baz=352							
TWA				*eS*		**Sb**	**08 01 38.0**	**-0.8**
	baz=352							
TATO	**Taipei**	**1.23**	**352**	*eP*		**Pb**	**08 01 22.1**	**-1.2**
	baz=356							
TATO				*eS*		**Sb**	**08 01 37.4**	**-1.5**
	baz=356							
HSN	**Hsinchu**	**1.23**	**328**	*eP*		**Pb**	**08 01 23.1**	**-0.2**
	baz=333							
HSN				*eS*		**Sb**	**08 01 39.9**	**+1.0**
	baz=333							
TWB1	**Santiao Chiao**	**1.28**	**12**	*eP*		**Pb**	**08 01 23.6**	**-0.6**
	baz=15							
WTCT	**Ta-ch'eng**	**1.29**	**275**	*eP*		**Pb**	**08 01 23.4**	**-0.9**
	baz=275							
WTCT				*eS*		**Sb**	**08 01 41.2**	**+0.6**
	baz=275							
NWF	**Wu-fen Shan**	**1.32**	**4**	*eP*		**Pn**	**08 01 22.0**	**-0.7**
	baz=354							
WFSB	**Wu-fen Shan**	**1.32**	**4**	*eP*		**Pn**	**08 01 22.1**	**-0.5**
	baz=356							
WFSB				*eS*		**Sb**	**08 01 43.3**	**+2.0**
	baz=356							
ECL	**Taimali**	**1.33**	**211**	*eP*		**Pn**	**08 01 22.4**	**-0.4**
	baz=201							
JYNG	**Yonaguni jima**	**1.34**	**59**	P		**Pn**	**08 01 24.0**	**+1.0**
JYNG				S		**Sb**	**08 01 40.8**	**-1.3**
ICHU	**Yijhu**	**1.35**	**253**	*eP*		**Pn**	**08 01 24.0**	**+1.0**
	baz=252							
ICHU				*eS*		**Sb**	**08 01 40.6**	**+0.8**
	baz=252							
TWS1	**Kuangyinshan**	**1.36**	**350**	*eP*		**Pb**	**08 01 24.8**	**-0.8**
	baz=355							
TWS1				*eS*		**Sb**	**08 01 42.0**	**-0.7**
	baz=355							
YM01	**YM01**	**1.39**	**356**	*eP*		**Pb**	**08 01 24.6**	**-1.4**
	baz=358							
SSD	**Sandimen**	**1.39**	**224**	*eP*		**Pn**	**08 01 24.9**	**+1.2**
	baz=222							
SSD				*eS*		**Sn**	**08 01 43.0**	**+2.1**
	baz=222							
SCST	**Cishan**	**1.40**	**232**	*eP*		**Pb**	**08 01 25.9**	**-0.2**
	baz=242							
SCST				*eS*		**Sb**	**08 01 44.2**	**+0.6**
	baz=242							
YOJ	**Yonaguni jima**	**1.40**	**59**	P		**Pn**	**08 01 24.6**	**+0.8**
YOJ				S		**Sn**	**08 01 41.8**	**+0.7**
YOJ	**Yonaguni jima**	**1.40**	**59**	*eP*		**Pb**	**08 01 25.1**	**-1.1**
	baz=60							
YOJ				*eS*		**Sn**	**08 01 41.8**	**+0.7**
	baz=60							
TSMG	**Majia**	**1.42**	**223**	*eP*		**Pn**	**08 01 25.7**	**+1.7**
	baz=221							
TSMG				*eS*		**Sn**	**08 01 43.2**	**+1.8**
	baz=221							
TWM1	**Shoushan**	**1.48**	**232**	*eP*		**Pb**	**08 01 27.6**	**-0.1**
	baz=231							
MASBT	**Mashibuluo**	**1.49**	**221**	*eP*		**Pn**	**08 01 25.5**	**+0.4**
	baz=218							
MASBT				*eS*		**Sn**	**08 01 45.1**	**+1.7**
	baz=218							
EAST	**Anshuo**	**1.57**	**210**	*eP*		**Pn**	**08 01 28.0**	**+1.9**
	baz=201							
SCZT	**Fangliau**	**1.69**	**216**	*eP*		**Pn**	**08 01 29.8**	**+2.0**
	baz=213							
SCZT				*eS*		**Sn**	**08 01 50.0**	**+1.8**
	baz=213							
LAY	**Lan-yu**	**1.71**	**184**	*eP*		**Pn**	**08 01 26.4**	**-1.6**
	baz=182							
SLIU	**Shizi**	**1.73**	**208**	*eP*		**Pn**	**08 01 30.3**	**+1.9**
	baz=200							
WDGT	**Dungji**	**1.92**	**256**	*eP*		**Pn**	**08 01 30.8**	**-0.2**
	baz=254							
WDGT				*eS*		**Sn**	**08 01 53.3**	**-0.7**
	baz=254							
PHUB	**P'eng-hu**	**1.95**	**263**	*eP*		**Pn**	**08 01 31.8**	**+0.4**
	baz=250							
PHUB				*eS*		**Sn**	**08 01 53.9**	**-0.9**
	baz=250							
IRIF	**Iriomote-Funau**	**1.96**	**72**	P		**Pn**	**08 01 32.4**	**+1.0**
IRIF				*eS*		**Sn**	**08 01 56.0**	**+1.2**
HATJ	**Hateruma jima**	**1.96**	**81**	P		**Pn**	**08 01 32.2**	**+0.7**
HATJ				S		**Sn**	**08 01 55.3**	**+0.3**
PNG	**Penghu**	**1.96**	**265**	*eP*		**Pn**	**08 01 31.8**	**+0.4**
	baz=251							
PNG				*eS*		**Sn**	**08 01 54.6**	**-0.3**
	baz=251							
TWKBT	**Hengchun**	**1.98**	**204**	*eP*		**Pn**	**08 01 30.9**	**-0.8**
	baz=194							
VCHM	**Qimei**	**2.14**	**256**	*eP*		**Pn**	**08 01 33.6**	**-0.4**
	baz=256							
JKRS	**Kuro-shima**	**2.18**	**77**	P		**Pn**	**08 01 35.5**	**+1.0**
JKRS				*eS*		**Sn**	**08 02 01.8**	**+1.5**
JIJ	**Ishigaki jima**	**2.33**	**74**	P		**Pn**	**08 01 37.1**	**+0.6**
JIJ				*eS*		**Sn**	**08 02 03.8**	**-0.2**
VWUC	**VWUC**	**2.38**	**302**	*eP*		**Pn**	**08 01 37.1**	**-0.2**
	baz=301							
VWUC				*eS*		**Sn**	**08 02 04.0**	**-1.4**
	baz=301							
JISG	**Ishigakijimahi**	**2.54**	**70**	P		**Pn**	**08 01 39.9**	**+0.5**
JISG				S		**Sn**	**08 02 09.1**	**0.0**
PTMZ	**Houxiangcun**	**2.67**	**299**	*eP*		**Pn**	**08 01 40.9**	**-0.3**
	baz=298							
PTMZ				*eS*		**Sn**	**08 02 10.9**	**-1.5**
	baz=298							
MATB	**Ma-tsu**	**2.86**	**327**	*eP*		**Pn**	**08 01 43.4**	**-0.5**
	baz=326							
MSUT	**Lienchiang**	**2.89**	**327**	*eP*		**Pn**	**08 01 43.6**	**-0.6**
	baz=327							
JTJ	**Tarama**	**2.89**	**72**	P		**Pn**	**08 01 44.9**	**+0.6**
JTJ				*eS*		**Sn**	**08 02 17.9**	**0.0**
KNM	**Kinmen**	**3.04**	**283**	*eP*		**Pn**	**08 01 47.9**	**+1.5**
	baz=283							
KNMB	**Chin-men Tao**	**3.10**	**284**	*eP*		**Pn**	**08 01 46.6**	**-0.5**
	baz=283							
KNMB				*eS*		**Sn**	**08 02 20.9**	**-2.1**
	baz=283							
LYJJ	**Jianjiangzhen**	**3.29**	**328**	*eP*		**Pn**	**08 01 49.5**	**-0.2**
	baz=328							
JIRB	**Irabujima**	**3.36**	**71**	P		**Pn**	**08 01 51.4**	**+0.7**
JIRB				S		**Sn**	**08 02 29.3**	**-0.1**
MHZQ	**Yeshan**	**3.36**	**315**	*eP*		**Pn**	**08 01 50.0**	**-0.7**
	baz=314							
XPSS	**Dashiqiu**	**3.44**	**337**	*eP*		**Pn**	**08 01 51.1**	**-0.7**
	baz=348							
JIKM	**Ikemajima**	**3.45**	**70**	S		**Sn**	**08 02 31.8**	**+0.1**
JMJ	**Miyako jima 2**	**3.46**	**71**	*eP*		**Pn**	**08 01 53.4**	**+1.4**
	baz=82							
JMJ2	**Miyako jima3**	**3.47**	**73**	P		**Pn**	**08 01 53.6**	**+1.4**
JMJ2				*eS*		**Sn**	**08 02 33.1**	**+1.0**
JOGS	**Gusukube**	**3.54**	**73**	P		**Pn**	**08 01 55.1**	**+1.9**
JOGS				*eS*		**Sn**	**08 02 34.9**	**+1.0**
AXDP	**Jialang**	**3.58**	**289**	*eP*		**Pn**	**08 01 53.4**	**-0.3**
	baz=288							
AXDP				*eS*		**Sn**	**08 02 32.6**	**-2.2**
	baz=288							
ZPLA	**Ao Xicun**	**3.61**	**274**	*eP*		**Pn**	**08 01 54.4**	**+0.2**
	baz=274							
POO	**Poona**	**44.76**	**273**	*eP*		P	08 09 18.0	+6.7

SNET **12** *08:06:32.7±1.2, 12.°97N×88.°74W, h51km±12km, ML3.7*
UCR **12** *08:06:32.8±1.1, 12.°98N×88.°74W, h54km±10km, ML3.7*
INET **12** *08:06:32.9, 12.°96N×88.°73W, h50km, MW3.3*
ISC 12 08:06:32.8±1.9**, 12.°9N**±0.°1×**88.°73W**±0.°04**, h53**km±18km**,**
n53, σ0**946/75, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
COEB	**Comit de Eme**	**0.59**	**19**	*eP*		**Pn**		**08 06 45.1**	**-0.3**
COEB				*eS*		**Sn**		**08 06 54.8**	**+0.2**
COEB	**Comit de Eme**	**0.59**	**19**	*eP*		**Pn**		**08 06 45.1**	**-0.3**
COEB				*eS*		**Sn**		**08 06 54.8**	**+0.2**
TECA	**Tecapa**	**0.59**	**22**	*eP*		**Pn**		**08 06 45.4**	**-0.2**
TECA				*eS*		**Sn**		**08 06 54.8**	**0.0**
TECA	**Tecapa**	**0.59**	**22**	*eP*		**Pn**		**08 06 45.4**	**-0.2**
TECA				*eS*		**Sn**		**08 06 54.8**	**0.0**
PACA	**Pacayal**	**0.66**	**37**	*eP*		**Pn**		**08 06 46.3**	**-0.1**
PACA	**Pacayal**	**0.66**	**37**	*eP*		**Pn**		**08 06 46.3**	**-0.1**
COEG	**Centro de Oper**	**0.69**	**348**	*eP*		**Pn**		**08 06 46.4**	**-0.4**
COEG				*eS*		**Sn**		**08 06 56.7**	**-0.1**
COEG				IAML				08 06 59.4	
	comp=Z,3μm,0.2s								
COEG	**Centro de Oper**	**0.69**	**348**	*eP*		**Pn**		**08 06 46.4**	**-0.4**
COEG				*eS*		**Sn**		**08 06 56.7**	**-0.1**
COEG				IAML				08 06 59.4	
	comp=Z,3μm,0.2s								
UESV	**Universidad de**	**0.69**	**355**	*eP*		**Pn**		**08 06 46.4**	**-0.3**
UESV	**Universidad de**	**0.69**	**355**	*eP*		**Pn**		**08 06 46.4**	**-0.3**
PQSS	**Presa 15 de Se**	**0.70**	**14**	*eP*		**Pn**		**08 06 46.8**	**+0.1**
PQSS				*eS*		**Sn**		**08 06 57.7**	**+0.9**
LFRS	**El Faro**	**0.75**	**335**	*eP*		**Pn**		**08 06 47.0**	**-0.5**
LFRS	**El Faro**	**0.75**	**335**	*eP*		**Pn**		**08 06 47.0**	**-0.5**
CNRM	**Centro Naciona**	**0.76**	**46**	*eP*		**Pn**		**08 06 47.5**	**0.0**
CNRM				*eS*		**Sn**		**08 06 58.8**	**+0.6**
CNRM	**Centro Naciona**	**0.76**	**46**	*eP*		**Pn**		**08 06 47.5**	**0.0**
CNRM				*eS*		**Sn**		**08 06 58.8**	**+0.6**
PAVA	**Las Pavas**	**0.80**	**345**	*eS*		**Sn**		**08 07 00.3**	**+1.2**
PAVA	**Las Pavas**	**0.80**	**345**	*eS*		**Sn**		**08 07 00.3**	**+1.2**
AEIL	**Aeropuerto Ilo**	**0.84**	**333**	IAML				08 07 05.7	
	comp=Z,2μm,0.2s								
AEIL	**Aeropuerto Ilo**	**0.84**	**333**	IAML				08 07 05.7	
	comp=Z,2μm,0.2s								
LBRS	**Las Brisas**	**0.85**	**339**	*eP*		**Pn**		**08 06 48.6**	**-0.2**
LBRS	**Las Brisas**	**0.85**	**339**	*eP*		**Pn**		**08 06 48.6**	**-0.2**
IGN	**Direccin Gen**	**0.88**	**331**	*eP*		**Pn**		**08 06 48.7**	**-0.4**
IGN				*eS*		**Sn**		**08 07 01.1**	**0.0**
IGN	**Direccin Gen**	**0.88**	**331**	*eP*		**Pn**		**08 06 48.7**	**-0.4**
IGN				*eS*		**Sn**		**08 07 01.1**	**0.0**
SNET	**Serv Nac Est T**	**0.89**	**327**	*eP*		**Pn**		**08 06 49.0**	**-0.3**
SNET				*eS*		**Sn**		**08 07 00.8**	**-0.5**
SNET	**Serv Nac Est T**	**0.89**	**327**	*eP*		**Pn**		**08 06 49.0**	**-0.3**
SNET				*eS*		**Sn**		**08 07 00.8**	**-0.5**
OPAM	**Oficina de Pla**	**0.89**	**329**	IAML				08 07 04.7	
	comp=Z,1μm,0.2s								
OPAM	**Oficina de Pla**	**0.89**	**329**	IAML				08 07 04.7	
	comp=Z,1μm,0.2s								
LCND	**La Caada**	**0.90**	**66**	*eP*		**Pn**		**08 06 49.1**	**-0.2**
LCND				*eS*		**Sn**		**08 07 01.7**	**+0.3**
LCND				IAML				08 07 03.6	
	comp=Z,3μm,0.2s								
LCND	**La Caada**	**0.90**	**66**	*eP*		**Pn**		**08 06 49.1**	**-0.2**
LCND				*eS*		**Sn**		**08 07 01.7**	**+0.3**
LCND				IAML				08 07 03.6	
	comp=Z,3μm,0.2s								
SEMO	**Seminario San**	**0.90**	**328**	*eS*		**Sn**		**08 07 01.6**	**0.0**
CNCH	**Conchagua**	**0.94**	**69**	*eP*		**Pn**		**08 06 49.5**	**-0.4**
CNCH				*eS*		**Sn**		**08 07 02.8**	**+0.3**
CNCH	**Conchagua**	**0.94**	**69**	*eP*		**Pn**		**08 06 49.5**	**-0.4**
CNCH				*eS*		**Sn**		**08 07 02.8**	**+0.3**
BOQS	**Boqueron**	**0.95**	**326**	*eS*		**Sn**		**08 07 03.8**	**+0.7**
BOQS	**Boqueron**	**0.95**	**326**	*eS*		**Sn**		**08 07 03.8**	**+0.7**
PMON	**Piamonte**	**0.96**	**324**	*eP*		**Pn**		**08 06 50.1**	**-0.1**
PMON				*eS*		**Sn**		**08 07 02.2**	**-0.7**
PMON				*eS*				08 07 03.2	
PMON	**Piamonte**	**0.96**	**324**	*eP*		**Pn**		**08 06 50.1**	**-0.1**
PMON				*eS*		**Sn**		**08 07 02.2**	**-0.7**
PMON				*eS*				08 07 03.2	
FAGO	**Alcalda de S**	**0.96**	**39**	*eP*		**Pn**		**08 06 49.7**	**-0.5**
FAGO				*eS*		**Sn**		**08 07 02.7**	**-0.3**
FAGO	**Alcalda de S**	**0.96**	**39**	*eP*		**Pn**		**08 06 49.7**	**-0.5**
FAGO				*eS*		**Sn**		**08 07 02.7**	**-0.3**
JAYA	**Jayaque - finc**	**1.00**	**315**	*eP*		**Pn**		**08 06 50.3**	**-0.4**
JAYA				*eS*		**Sn**		**08 07 03.7**	**-0.3**
JAYA	**Jayaque - finc**	**1.00**	**315**	*eP*		**Pn**		**08 06 50.3**	**-0.4**
JAYA				*eS*		**Sn**		**08 07 03.7**	**-0.3**
CEDA	**San Andres**	**1.07**	**323**	*eS*		**Sn**		**08 07 06.1**	**+0.5**
CEDA	**San Andres**	**1.07**	**323**	*eS*		**Sn**		**08 07 06.1**	**+0.5**
LLGN	**La Laguna**	**1.23**	**350**	*eP*		**Pn**		**08 06 53.4**	**-0.5**
LLGN	**La Laguna**	**1.23**	**350**	*eP*		**Pn**		**08 06 53.4**	**-0.5**
CEVE	**Cerro Verde**	**1.24**	**316**	*eP*		**Pn**		**08 06 54.4**	**+0.2**
CEVE				*eS*		**Sn**		**08 07 11.1**	**+1.2**
CEVE				IAML				08 07 16.2	
	comp=Z,1μm,0.3s								
CEVE	**Cerro Verde**	**1.24**	**316**	*eP*		**Pn**		**08 06 54.4**	**+0.2**
CEVE				*eS*		**Sn**		**08 07 11.1**	**+1.2**
CEVE				IAML				08 07 16.2	
	comp=Z,1μm,0.3s								
SBLS	**San Blas**	**1.25**	**316**	*eS*		**Sn**		**08 07 10.3**	**+0.3**
SBLS	**San Blas**	**1.25**	**316**	*eS*		**Sn**		**08 07 10.3**	**+0.3**
MTO3	**Montecristo**	**1.57**	**337**	*eP*		**Pn**		**08 06 58.4**	**-0.3**
MTO3	**Montecristo**	**1.57**	**337**	*eP*		**Pn**		**08 06 58.4**	**-0.3**
ESQI	**Esquipulas**	**1.72**	**340**	*i P*		**Pn**		**08 07 00.7**	**+0.2**
ESQI				*eS*		**Sn**		**08 07 21.4**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.80**	**52**	*eP*		**Pn**		**08 07 01.3**	**-0.3**
TGUH	**Tegucigalpa,Un**	**1.80**	**52**	*eP*		**Pn**		**08 07 01.3**	**-0.3**

DDA **12** *08:06:56.2, 39.°30N×42.°16E, h7km±2km, ML1.8*
ISK **12** *08:06:56.6, 39.°34N×42.°17E, h12km, ML2.5/5*
ISC 12 08:06:57.0±0.9**, 39.°33N**±0.°03×**42.°18E**±0.°03**, h15**km±6km**,**
n15, σ0**°89/25, Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
EKAR	**Karacoban**	**0.11**	**229**	*i P*		**Pg**		**08 06 60.0**	**-0.7**
EKAR				IAML				08 07 04.0	
	comp=E,2μm,0.4s								
EKAR				*i S*		**Sg**		**08 07 04.7**	**+1.5**
MLAZ	**Malazgirt-MUS**	**0.35**	**123**	PG		**Pb**		**08 07 04.2**	**-0.8**
MLAZ				SG		**Sb**		**08 07 09.5**	**-0.8**
EATA	**Eleskirt**	**0.58**	**25**	*i P*		**Pg**		**08 07 07.9**	**-0.7**
EATA				IAML				08 07 17.0	
	comp=E,108nm,0.7s								
EATA				IAML				08 07 17.0	
	comp=N,84nm,0.3s								
EATA				*i S*		**Sb**		**08 07 17.4**	**+0.1**
VRTB	**Varto-Mus**	**0.58**	**253**	PG		**Pb**		**08 07 08.6**	**-0.4**
VRTB				SG		**Sb**		**08 07 17.2**	**+0.1**
AGRB	**Hanur-Agry**	**0.68**	**69**	PG		**Pg**		**08 07 10.1**	**-0.2**
AGRB				SG		**Sb**		**08 07 20.0**	**+0.1**
KOPR	**Koprukoy-ERZUR**	**0.70**	**339**	PG		**Pg**		**08 07 10.5**	**-0.3**
HOMI	**Horasan**	**0.74**	**344**	*i P*		**Pg**		**08 07 09.8**	**-1.7**
HOMI				*i S*		**Sb**		**08 07 21.8**	**0.8**
GURO	**Guroymak-BITLI**	**0.79**	**188**	PG		**Pg**		**08 07 11.4**	**-0.9**
MUSM	**Mu-Merkez**	**0.80**	**221**	*i P*		**Pg**		**08 07 11.3**	**-1.2**
MUSM				*i S*		**Sb**		**08 07 22.7**	**-0.5**
MUSM				IAML				08 07 24.0	
	comp=N,21nm,0.6s								
MUSM				IAML				08 07 26.0	
	comp=E,42nm,0.4s								
KARO	**Karliova-Bingo**	**0.87**	**269**	PG		**Pb**		**08 07 13.9**	**-0.1**
KOTA	**Agri, Merkez-K**	**0.93**	**59**	*i P*		**Pg**		**08 07 14.3**	**-0.7**
KOTA				IAML				08 07 29.0	
	comp=E,15nm,0.4s								
KOTA				IAML				08 07 29.0	
	comp=N,19nm,0.5s								
ECAT	**Cat-ERZURUM**	**0.97**	**287**	*i P*		**Pg**		**08 07 14.5**	**-1.3**
ECAT				*i S*		**Sb**		**08 07 29.1**	**+0.8**
ECAT				IAML				08 07 30.0	
	comp=N,26nm,0.5s								
ECAT				IAML				08 07 32.0	
	comp=E,27nm,0.4s								
AKDM	**Akdamar-Van**	**1.18**	**148**	PN		**Pn**		**08 07 19.6**	**+0.5**
AKDM				SN		**Sn**		**08 07 36.3**	**+1.3**
BNGB	**Bingl**	**1.21**	**254**	PN		**Pg**		**08 07 19.9**	**-0.5**
BNGB				SN		**Sn**		**08 07 36.9**	**+1.2**
YEDI	**Yedisu-Bingol**	**1.27**	**275**	PN		**Pn**		**08 07 20.1**	**-0.2**

IDC **12** *08:09:50.1±1.7, 60.°95S×42.°17W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/17, mbtmp3.8/4, Error ellipse: s-maj=77.0km s-min=28.4km az=25.0*
NEIC **12** *08:09:52.4±1.8, 60.°9S±0.°1×42.°4W±0.°2, h15km±1km, mb4.6/15, Error ellipse: s-maj=17.9km s-min=14.0km az=140.0*
ISC 12 08:09:51.2±0.6**, 60.°9S**±0.°1×**42.°34W**±0.°10**, h10**km**, n31,**
σ1°**08/29, mb4.3/9, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
HOPE	**Hope Point**	**7.37**	**28**		Pn		**Pn**	**08 11 36.2**	**-2.5**
PMSA	**Palmer Station**	**10.61**	**239**		Pn		**Pn**	**08 12 22.9**	**-0.1**
MG04	**Isla Riesco**	**17.77**	**284**		P		**Pn**	**08 13 55.9**	**-2.4**
MG04					IAmb		IAmb	08 14 09.3	
	comp=Z,74nm,0.9s								
SNAA	**Sanae**	**18.73**	**141**		P		**P**	**08 14 09.1**	**-0.5**
PLCA	**Paso Flores**	**26.59**	**307**		P		**P**	**08 15 30.4**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=142,slow=6.9,SNR=3.5								
PLCA	**Paso Flores**	**26.59**	**307**		P		**P**	**08 15 28.7**	**-0.7**
BI02	**San Fabin de**	**30.41**	**310**		P		**P**	**08 16 03.7**	**+0.3**
BI02					IAmb		IAmb	08 16 03.8	
	comp=Z,11nm,1.5s								
BO02	**Sierra Bellavi**	**31.89**	**312**		P		**P**	**08 16 16.4**	**0.0**
BO02					IAmb		IAmb	08 16 25.9	
	comp=Z,4.8nm,0.9s								
MT09	**Talagante**	**32.88**	**313**		P		**P**	**08 16 25.4**	**+0.1**
MT05	**Renca**	**33.13**	**313**		P		**P**	**08 16 27.9**	**+0.5**
MT02	**Curacav**	**33.40**	**313**		P		**P**	**08 16 30.0**	**+0.4**
MT02					IAmb		IAmb	08 16 44.3	
	comp=Z,20nm,1.4s								
VA03	**San Esteban**	**33.64**	**314**		P		**P**	**08 16 32.8**	**+1.0**
VA03					IAmb		IAmb	08 17 00.9	
	comp=Z,7.9nm,1.0s								
CPUP	**Villa Florida**	**36.07**	**337**		P		**P**	**08 16 54.9**	**+2.2**
GO04	**Tololo Observa**	**36.08**	**316**		P		**P**	**08 16 55.1**	**+2.0**
SPB	**Sao Paulo**	**37.49**	**352**		P		**P**	**08 17 04.6**	**-0.2**
SIV	**San Ignacio**	**46.87**	**335**		P		**P**	**08 18 21.7**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=178,slow=3.7								
SUR	**Sutherland**	**49.33**	**84**		P		**P**	**08 18 41.6**	**+1.2**
SUR					IAmb		IAmb	08 19 03.5	
	comp=Z,3.9nm,1.1s								
BOSA	**Boshof**	**54.59**	**86**		P		**P**	**08 19 19.8**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=226,slow=2.9,SNR=4.0								
BOSA	**Boshof**	**54.59**	**86**		P		**P**	**08 19 19.9**	**+0.3**
BOSA					IAmb		IAmb	08 19 47.1	
	comp=Z,9.2nm,1.4s								
TORD	**Torodi Ar. Bea**	**81.68**	**43**		P		**P**	**08 22 10.4**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=196,slow=5.7,SNR=4.1								
NWAO	**Narrogin (SRO)**	**84.99**	**163**		P		**P**	**08 22 26.0**	**-0.5**
H08S1	**Diego Carcia H**	**95.03**	**115**		T		T	10 09 42.4	
	baz=207,slow=76,SNR=3.8								
H08S2	**Diego Garcia H**	**95.04**	**115**		T		T	10 09 39.0	
	baz=207								
H08S3	**Diego Garcia H**	**95.06**	**115**		T		T	10 09 39.7	
	baz=207,slow=76,SNR=3.8								
YKA	**Yellowknife Ar**	**134.74**	**321**		PKP		**PKPdf**	**08 29 08.7**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=133,slow=2.6,SNR=5.6								
MKAR	**Makanchi Array**	**145.56**	**89**		PKPbc		**PKPdf**	**08 29 27.5**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=208,slow=2.3,SNR=5.4								
MKAR	**Makanchi Array**	**145.56**	**89**				**PKPbc**	**08 29 28.8**	**+0.2**
ILAR	**Eielson Array**	**147.25**	**310**		PKPbc		**PKPab**	**08 29 34.5**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=150,slow=2.4,SNR=6.5								
ILAR	**Eielson Array**	**147.25**	**310**				**PKPab**	**08 29 34.7**	**-0.2**
ZALV	**Zalesovo Beam**	**151.43**	**80**		PKPbc		**PKPbc**	**08 29 43.1**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=225,slow=1.0,SNR=3.5								
ZALV	**Zalesovo Beam**	**151.43**	**80**				**PKPdf**	**08 29 38.0**	**+0.3**
ZALV							**sPKPbc**	**08 29 49.1**	**+1.3**

IDC **12** *08:14:32.0±1.6, 22.°63N×95.°76E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/35, mbtmp3.4/4, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/35, Error ellipse: s-maj=47.8km s-min=19.1km az=59.0*
ISC 12 08:14:32.6±1.4**, 22.°4N**±0.°2×**95.°4E**±0.°2**, h10**km**, n31,**
σ2°**00/36, mb3.4/3, Myanmar**

| Code | Station

NEIC ***12*** *08:18:36.4±0.3,35°.84N±0°.02×97°.44W±0°.02,h6km±7km, Error ellipse: s-maj=3.0km s-min=1.9km az=158.0*

ISC 12 08:18:36.4±0.9,35°.84N±0°.02×97°.44W±0°.02,h5km±6km, n78,σ0≥45/57,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.04**	**194**		**Pg**	**08 18 37.7**	**+0.1**
OK029				Sg	**Sg**	**08 18 38.5**	**0.0**
BCOK	**Bluff Creek, N**	**0.23**	**217**		**Pg**	**08 18 41.0**	**+0.2**
BCOK				Sg	**Sg**	**08 18 44.4**	**+0.6**
OK025	**Westminster Rd**	**0.27**	**162**	Pg	**Pg**	**08 18 41.4**	**-0.2**
OK025				Sg	**Sg**	**08 18 45.2**	**0.0**
OK001	**Jones High Sch**	**0.30**	**156**	Pg	**Pg**	**08 18 42.0**	**-0.3**
OKCFA	**Oklahoma City**	**0.42**	**181**		**Pg**	**08 18 44.2**	**-0.3**
OKCFA				Sg	**Sg**	**08 18 50.1**	**+0.1**
OKCFA	**Oklahoma City** baz=1.5,SNR=39	**0.42**	**181**	P	**Pg**	**08 18 44.2**	**-0.3**
OKCFA	baz=1.5			S	**Sg**	**08 18 50.2**	**+0.1**
OKCFA	**Oklahoma City** baz=1.5,SNR=39	**0.42**	**181**	P		08 18 44.2	
OKCFA	baz=1.5			S		08 18 50.2	
OK031	**S. Brethren Rd**	**0.50**	**77**		**Pg**	**08 18 46.0**	**0.0**
OK031				Sg	**Sg**	**08 18 53.0**	**+0.4**
OK030	**Cody Creek RV**	**0.54**	**80**		**Pg**	**08 18 46.7**	**0.0**
OK030				Sg	**Sg**	**08 18 54.1**	**+0.2**
QUOK	**Quay**	**0.68**	**61**		**Pg**	**08 18 49.4**	**0.0**
QUOK				Sg	**Sg**	**08 18 58.7**	**+0.4**
GC02	**Grant County #**	**1.06**	**342**		**Pg**	**08 18 56.8**	**0.0**
OK032	**Salt Plains WL**	**1.15**	**327**		**Pg**	**08 18 58.3**	**0.0**
KAN13	**South Haven SW**	**1.17**	**359**		**Pg**	**08 18 58.9**	**+0.1**
KAN14	**Manchester OK**	**1.19**	**339**		**Pg**	**08 18 59.1**	**-0.1**
KAN09	**Caldwell North**	**1.30**	**354**	Pn	**Pn**	**08 19 01.1**	**-0.1**
T35A	**Sooner Cattle**	**1.31**	**35**		**Pn**	**08 19 00.7**	**-0.6**
T35B	**Sooner Cattle** baz=215	**1.31**	**35**	P	**Pn**	**08 19 00.7**	**-0.6**
T35B	baz=215			S	**Sb**	**08 19 18.6**	**0.0**
T35B	**Sooner Cattle** baz=215	**1.31**	**35**	P		08 19 00.7	
T35B	baz=215			S		08 19 18.6	
KAN05	**Bluff City Nor**	**1.31**	**345**		**Pn**	**08 19 01.4**	**0.0**
KAN01	**Argonia South**	**1.34**	**349**	Pn	**Pn**	**08 19 01.6**	**0.0**
TUL1	**Leonard** baz=267	**1.34**	**86**	P	**Pn**	**08 19 00.2**	**-1.5**
TUL1	baz=267			S	**Sb**	**08 19 18.6**	**-0.8**
TUL1	**Leonard** baz=267	**1.34**	**86**	P		08 19 00.2	
TUL1	baz=267			S		08 19 18.6	
U32A	**Winter Ranch,**	**1.37**	**294**	Pn	**Pn**	**08 19 01.8**	**-0.4**
U32A	**Winter Ranch,** baz=113,SNR=13	**1.37**	**294**	P	**Pn**	**08 19 01.9**	**-0.2**
U32A	baz=113			S	**Sn**	**08 19 21.3**	**+0.6**
U32A	**Winter Ranch,** baz=113,SNR=13	**1.37**	**294**	P		08 19 01.9	
U32A	baz=113			S		08 19 21.3	
KAN10	**Anthony SW Sta**	**1.39**	**338**		**Pn**	**08 19 02.3**	**0.0**
KAN08	**Anthony NE Sta**	**1.45**	**343**		**Pb**	**08 19 03.6**	**-0.2**
KAN12	**Harper NE Stat**	**1.52**	**343**		**Pb**	**08 19 04.8**	**-0.2**
WMOK	**Wichita Mounta**	**1.55**	**225**		**Pn**	**08 19 04.6**	**0.0**
WMOK	**Wichita Mounta** baz=45,SNR=37	**1.55**	**225**	P	**Pn**	**08 19 04.4**	**-0.2**
WMOK	baz=45			S	**Sn**	**08 19 24.9**	**-0.2**
WMOK	**Wichita Mounta** baz=45,SNR=37	**1.55**	**225**	P		08 19 04.4	
WMOK	baz=45			S		08 19 24.9	
X37A	**Clayton**	**2.10**	**126**		**Pn**	**08 19 12.0**	**-0.2**
X37A	comp=Z,91nm,0.8s			IAmb_Lg		08 19 44.7	
X37A	**Clayton** baz=307,SNR=22	**2.10**	**126**	P	**Pn**	**08 19 12.2**	**0.0**
X37A	baz=307			S	**Sn**	**08 19 39.8**	**+1.1**
X37A	**Clayton** baz=307,SNR=22	**2.10**	**126**	P		08 19 12.2	
X37A	baz=307			S		08 19 39.8	
Z35A	**Perchaven, San**	**2.51**	**176**		**Pn**	**08 19 17.9**	**+0.2**
Z35A	**Perchaven, San** baz=357	**2.51**	**176**	P	**Pn**	**08 19 18.0**	**+0.3**
Z35A	**Perchaven, San** baz=357	**2.51**	**176**	P		08 19 18.0	
U38A	**Gravette** baz=257,SNR=13	**2.54**	**75**	P	**Pn**	**08 19 20.0**	**+1.7**
U38A	**Gravette** baz=257,SNR=13	**2.54**	**75**	P		08 19 20.0	
HHAR	**Hobbs**	**2.87**	**80**		**Pn**	**08 19 23.1**	**+0.3**
W39A	**Magazine**	**3.05**	**101**		**Pn**	**08 19 25.0**	**-0.2**
W39A	comp=Z,34nm,0.8s			IAmb_Lg		08 20 15.3	
W39A	**Magazine** baz=283,SNR=22	**3.05**	**101**	P	**Pn**	**08 19 24.9**	**-0.4**
W39A	**Magazine** baz=283,SNR=22	**3.05**	**101**	P		08 19 24.9	
KSU1	**Kansas State U** comp=Z,30nm,0.7s	**3.32**	**11**	IAmb_Lg		08 20 25.6	
MIAR	**Mount Ida**	**3.42**	**111**		**Pn**	**08 19 30.8**	**+0.5**
MIAR	comp=Z,34nm,0.8s			IAmb_Lg		08 20 31.1	
MIAR	**Mount Ida** baz=293,SNR=12	**3.42**	**111**	P	**Pn**	**08 19 30.7**	**+0.4**
MIAR	baz=293			S	**Sn**	**08 20 11.2**	**+0.1**
MIAR	**Mount Ida** baz=293,SNR=12	**3.42**	**111**	P		08 19 30.7	
MIAR	baz=293			S		08 20 11.2	
CBKS	**Cedar Bluff** comp=Z,44nm,0.8s	**3.49**	**329**	IAmb_Lg		08 20 30.1	
S39A	**Bolivar**	**3.79**	**60**	Pn	**Pn**	**08 19 35.4**	**0.0**
S39A	comp=Z,28nm,0.7s			IAmb_Lg		08 20 43.8	
S39A	**Bolivar** baz=242	**3.79**	**60**	P	**Pn**	**08 19 35.4**	**0.0**
S39A	**Bolivar** baz=242	**3.79**	**60**	P		08 19 35.4	
X40A	**Basin Creek Fa**	**4.01**	**108**	Pn	**Pn**	**08 19 38.8**	**+0.4**
X40A	comp=Z,39nm,0.7s			IAmb_Lg		08 20 48.8	
X40A	**Basin Creek Fa** baz=291	**4.01**	**108**	P	**Pn**	**08 19 38.8**	**+0.4**
X40A	**Basin Creek Fa** baz=291	**4.01**	**108**	P		08 19 38.8	
X40A	baz=291			P		08 19 38.8	
WLAR	**White Oak Lake** comp=Z,37nm,0.8s	**4.16**	**120**	IAmb_Lg		08 20 57.3	
WHAR	**Wooly Hollow**	**4.24**	**96**	Pn	**Pn**	**08 19 41.5**	**0.0**
WHAR	comp=Z,39nm,1.0s			IAmb_Lg		08 20 55.4	
W41B	**Gary Mavity, V** baz=280,SNR=15	**4.29**	**97**	P	**Pn**	**08 19 42.2**	**-0.1**
W41B	**Gary Mavity, V** baz=280,SNR=15	**4.29**	**97**	P		08 19 42.2	
FCAR	**Ozark Folk Cen** comp=Z,24nm,0.8s	**4.32**	**88**	IAmb_Lg		08 20 50.5	
MGMO	**Mountain Grove** comp=Z,36nm,0.9s	**4.37**	**71**	IAmb_Lg		08 20 54.9	
R40A	**Maddies Statio**	**4.81**	**58**	Pn	**Pn**	**08 19 49.1**	**-0.2**
R40A	comp=Z,27nm,0.8s			IAmb_Lg		08 21 09.9	
N33A	**J Bar K, Exete** comp=Z,45nm,1.1s	**4.89**	**360**	IAmb_Lg		08 21 22.0	
CCAR	**Cane Creek** comp=Z,38nm,0.8s	**5.04**	**111**	IAmb_Lg		08 21 22.5	
435B	**Jarrell** comp=Z,24nm,0.7s	**5.04**	**181**	IAmb_Lg		08 21 17.7	
LCAR	**Lake Charles** comp=Z,18nm,0.9s	**5.11**	**86**	IAmb_Lg		08 21 22.5	
KSCO	**Kaye Shedlock'** comp=Z,18nm,0.7s	**5.20**	**309**	IAmb_Lg		08 21 36.2	
CCM	**Cathedral Cave** comp=Z,21nm,0.7s	**5.43**	**64**	IAmb_Lg		08 21 36.1	
BGNE	**Belgrade** comp=Z,36nm,0.8s	**5.59**	**355**	IAmb_Lg		08 21 48.1	
P40A	**Paris** comp=Z,40nm,0.8s	**5.64**	**48**	IAmb_Lg		08 21 40.9	
JCT	**Junction City** comp=Z,27nm,0.8s	**5.70**	**201**	IAmb_Lg		08 21 40.1	
PBMO	**Poplar Bluff** comp=Z,22nm,0.9s	**5.74**	**79**	IAmb_Lg		08 21 51.4	
T25A	**Trinidad** comp=Z,27nm,0.8s	**5.76**	**285**	IAmb_Lg		08 21 45.9	
143A	**Socs Landing,** comp=Z,16nm,0.7s	**5.90**	**120**	IAmb_Lg		08 21 42.8	
OGNE	**Ogallala** comp=Z,30nm,0.7s	**6.24**	**326**	IAmb_Lg		08 22 04.7	
SLM	**Saint Louis** comp=Z,25nm,0.9s	**6.39**	**62**	IAmb_Lg		08 22 01.5	
OXF	**Oxford** comp=Z,18nm,0.9s	**6.71**	**99**	IAmb_Lg		08 22 13.3	
W45A	**Hickory Valley** comp=Z,20nm,0.7s	**6.77**	**93**	IAmb_Lg		08 22 24.7	
S44A	**Carbondale** comp=Z,18nm,0.7s	**6.83**	**72**	IAmb_Lg		08 22 21.0	
SIUC	**Southern Illin** comp=Z,20nm,0.8s	**6.86**	**72**	IAmb_Lg		08 22 16.2	
T45A	**Paducah** comp=Z,30nm,0.8s	**7.19**	**78**	IAmb_Lg		08 22 41.2	
L40A	**Anamosa** comp=Z,18nm,0.8s	**7.88**	**36**	IAmb_Lg		08 22 52.9	
Y22D	**IRIS PASSCAL I** comp=Z,17nm,0.8s	**7.98**	**260**	IAmb_Lg		08 22 58.9	
PHWY	**Pilot Hill** comp=Z,14nm,1.1s	**8.31**	**313**	IAmb_Lg		08 23 08.1	
T47A	**Sharon Grove** comp=Z,19nm,1.2s	**8.41**	**79**	IAmb_Lg		08 23 17.7	
L42A	**Oliver, Polo** comp=Z,20nm,0.7s	**8.63**	**42**	IAmb_Lg		08 23 20.3	
P46A	**Rosedale** comp=Z,19nm,0.9s	**8.94**	**62**	IAmb_Lg		08 23 22.5	
JFWS	**Jewell Farm** comp=Z,19nm,0.7s	**8.99**	**36**	IAmb_Lg		08 23 20.3	
SFIN	**Lafayette** comp=Z,14nm,0.7s	**9.33**	**58**	IAmb_Lg		08 23 46.8	
RSSD	**Black Hills** comp=Z,7.8nm,1.1s	**9.69**	**331**	IAmb_Lg		08 23 49.4	
K22A	**Casper** comp=Z,17nm,1.2s	**9.79**	**317**	IAmb_Lg		08 24 02.0	
W50A	**Signal Mountai** comp=Z,14nm,1.2s	**9.91**	**90**	IAmb_Lg		08 24 04.9	

IDC 12 08:39:49.0±2.8,6°.41S×153°.14E,h0km,mb3.3/2, mb1 3.7/3,mb1mx3.2/48,mbtmp3.5/3,ML1.4/1,Error ellipse: s-maj=108.1km s-min=42.0km az=140.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 0.5nm,0.3s,baz=46,slow=7.5,SNR=4.2	**6.63**	**243**	Pn	Pn	08 41 29.8	+2.0
PMG	1.2nm,0.3s,baz=153,slow=14,SNR=1.9			Sn	Sn	08 42 46.0	+1.8
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=53,slow=9.8,SNR=8.5	**22.68**	**232**	P	P	08 44 51.8	-0.6
ASAR	**Alice Springs** 0.6nm,0.7s,baz=60,slow=9.0,SNR=12	**25.23**	**225**	P	P	08 45 16.1	-0.7
TORD	**Torodi Ar. Bea** 0.5nm,0.7s,baz=29,slow=3.3,SNR=2.2	**151.10**	**286**	PKPbc	PKiKP	08 59 45.7	-0.1

IDC 12 08:49:19.1±2.1,0°.86N×126°.70E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/37,mbtmp3.3/3,Error ellipse: s-maj=175.1km s-min=25.7km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=339,slow=11,SNR=16	**21.98**	**160**	P	P	08 54 14.9	-0.1
ASAR	**Alice Springs** 0.2nm,0.4s,baz=348,slow=8.5,SNR=6.6	**25.36**	**164**	P	P	08 54 48.2	+0.1
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=119,slow=7.6,SNR=5.9	**59.90**	**326**	P	P	08 59 26.9	-0.1

IDC ***12*** *09:01:19.5±0.7,15°.18S×173°.68W,h0km,mb4.2/11, mb1 4.4/11,mb1mx4.2/25,mbtmp4.2/11,MS3.6/25, Ms1 3.6/25,ms1mx3.6/28,Error ellipse: s-maj=38.2km s-min=16.6km az=137.0*

NEIC ***12*** *09:01:21.6±1.2,15°.11S±0°.07×173°.58W±0°.07,h10km±1km, mb4.5/49,Error ellipse: s-maj=13.5km s-min=10.8km az=144.0*

ISC 12 09:01:23.7±0.4,15°.08S±0°.06×173°.49W±0°.07,h30km, n141,σ1≥35/117,mb4.5/35,MS3.7/25,4C-3D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu** 333nm,0.3s,baz=181,slow=1.4,SNR=339	**2.02**	**55**	Pn	**Pn**	**09 01 54.7**	**-1.2**
AFI	403nm,0.3s,baz=106,slow=16,SNR=7.3			Sn	**Sn**	**09 02 14.6**	**-5.6**
AFI	comp=Z,2μm,19.6s,baz=166,slow=35			LR	LR	09 02 38.5	
AFI	**Afiamalu**	**2.02**	**55**	Pn	**Pn**	**09 01 54.9**	**-1.0**
NIUE	**Niue**	**5.24**	**140**		**Pn**	**09 02 39.1**	**-0.9**
MSVF	**Nonsavu** 0.9nm,0.3s,baz=97,slow=13,SNR=21	**8.54**	**251**	Pn	Pn	09 03 35.0	+10
MSVF	comp=Z,853nm,20.5s,baz=85,slow=37			LR	LR	09 06 26.0	
MSVF	**Nonsavu**	**8.54**	**251**	Pn	**Pn**	**09 03 23.5**	**-2.0**
FUNA	**Funafuti**	**9.67**	**311**	Pn	**Pn**	**09 03 39.4**	**-1.6**
KNTN	**Kanton**	**12.35**	**8**	Pn	**Pn**	**09 04 16.6**	**-1.0**
RAR	**Rarotonga** comp=Z,142nm,21.0s,baz=290,slow=30	**14.39**	**117**	LR	LR	09 08 32.1	
RAR	**Rarotonga**	**14.39**	**117**	Pn	**Pn**	**09 04 45.1**	**-0.4**
RAO	**Raoul Island** comp=Z,49nm,19.0s,baz=5.5,slow=30	**14.69**	**195**	LR	LR	09 08 29.2	
DZM	**Mont Dzumac** comp=Z,84nm,18.0s,baz=92,slow=31	**20.24**	**247**	LR	LR	09 11 39.3	
PPT	**Papeete** comp=Z,36nm,18.7s,baz=196,slow=32	**23.08**	**99**	LR	LR	09 13 34.9	
PAE	**Paea** 3.4nm,0.2s	**23.08**	**100**	*e*T	T	09 29 36.9	
PPT2	**Papeete2** comp=Z,96nm,26.2s	**23.08**	**100**	*e*LR	LR	09 11 51.3	
PPT2	**Papeete2** 3.5nm,0.2s	**23.08**	**100**	*e*T	T	09 29 37.3	
TBI	**Tubuai** comp=Z,100nm,25.5s	**24.11**	**114**	*e*LR	LR	09 12 22.4	
TBI	**Tubuai** 8.9nm,0.2s	**24.11**	**114**	*e*T	T	09 31 03.0	
URZ	**Urewera** 7.0nm,0.7s,baz=126,slow=23,SNR=1.9	**24.54**	**198**	P	**P**	**09 06 39.7**	**-1.1**
URZ	comp=Z,459nm,20.1s,baz=31,slow=33			LR	LR	09 14 50.0	
URZ	**Urewera**	**24.54**	**198**	P	**P**	**09 06 39.7**	**-1.1**
HNR	**Honiara** comp=Z,63nm,19.8s,baz=126,slow=31	**26.54**	**279**	LR	LR	09 14 58.1	
TAOE	**Nuku Hiva Isla** comp=Z,252nm,31.9s	**33.17**	**83**	*e*LR	LR	09 16 21.8	
TAOE	**Nuku Hiva Isla** 20nm,0.2s	**33.17**	**83**	*e*T	T	09 42 04.9	
WHZ	**Wether Hill Ro**	**34.46**	**203**	P	**P**	**09 08 08.6**	**-0.1**
PYZ	**Puysegur Point**	**35.17**	**204**	P	**P**	**09 08 14.0**	**-1.0**
ARMA	**Armidale**	**35.44**	**238**	P	**P**	**09 08 17.2**	**-0.3**
ARMA	comp=Z,16nm,1.5s			IAmb	IAmb	09 08 22.4	
RKT	**Rikitea** comp=Z,6.6nm,0.3s	**37.18**	**108**	*e*T	T	09 47 18.5	
H11N3	**WAKE ISLAND Hy** baz=149,slow=76,SNR=7.4	**39.59**	**330**	T	T	09 51 01.1	
H11N1	**WAKE ISLAND Hy** baz=149,slow=76,SNR=14	**39.59**	**330**	T	T	09 51 00.5	
H11N2	**WAKE ISLAND Hy** baz=149,slow=76,SNR=42	**39.60**	**330**	T	T	09 51 02.2	
TOO	**Toolangi**	**42.60**	**230**	P	**P**	**09 09 16.9**	**-0.5**
TOO	comp=Z,8.0nm,1.0s			IAmb	IAmb	09 09 18.0	
STKA	**Stephens Creek** comp=Z,2.1nm,0.7s,baz=86,slow=11,SNR=5.7	**44.12**	**240**	P	**P**	**09 09 28.1**	**-1.6**
STKA	comp=Z,68nm,21.3s,baz=27,slow=33			LR	LR	09 25 29.1	
STKA	**Stephens Creek**	**44.12**	**240**	P	**P**	**09 09 29.1**	**-0.5**
BBOO	**Buckleboo**	**48.90**	**240**	P	**P**	**09 10 06.7**	**-0.5**
WR0	**Warramunga Arr**	**49.64**	**256**	P	**P**	**09 10 12.4**	**-0.6**
WB0	**Warramunga Arr**	**49.79**	**257**	P	**P**	**09 10 13.3**	**-0.9**
WB2	**Warramunga Arr**	**49.82**	**256**	P	**P**	**09 10 13.1**	**-1.3**
WB2	comp=Z,10.0nm,1.4s			IAmb	IAmb	09 10 20.0	
WRAB	**Tennant Creek**	**49.82**	**257**	P	**P**	**09 10 15.2**	**+0.8**
WRAB	comp=Z,8.1nm,1.2s			IAmb	IAmb	09 10 31.9	
WRA	**Warramunga Arr** comp=Z,0.6nm,0.3s,baz=96,slow=7.8,SNR=35	**49.83**	**256**	P	**P**	**09 10 12.8**	**-1.7**
WRA	comp=Z,0.5nm,0.7s,baz=98,slow=3.4,SNR=2.4			PcP	**PcP**	**09 11 34.4**	**-0.5**
WRA	**Warramunga Arr**	**49.83**	**256**	P	**P**	**09 10 14.5**	**0.0**
AS31	**Alice Springs**	**50.13**	**252**	P	**P**	**09 10 15.4**	**-1.3**
ASAR	**Alice Springs** comp=Z,7.4nm,0.7s,baz=86,slow=7.8,SNR=129	**50.13**	**252**	P	**P**	**09 10 15.1**	**-1.7**
ASAR	comp=Z,132nm,21.9s,baz=97,slow=34			LR	LR	09 29 44.5	
ASAR	**Alice Springs**	**50.13**	**252**	P	**P**	**09 10 15.0**	**-1.7**
SBA	**Scott Base**	**63.56**	**185**	P	**P**	**09 11 51.8**	**+0.7**
VNDA	**Vanda** comp=Z,17nm,18.6s,baz=328,slow=35	**63.69**	**186**	LR	LR	09 38 25.9	
VNDA	**Vanda** comp=Z,2.8nm,0.9s	**63.69**	**186**	P	**P**	**09 11 53.2**	**+1.3**
VNDA	comp=Z,29nm,21.7s,baz=180,slow=32			IAmb	IAmb	09 11 53.9	
MJAR	**Matsushiro Arr**	**68.64**	**320**	LR	LR	09 37 16.9	
JAGI	**Jajag, Banyuwa**	**70.89**	**266**	P	**P**	**09 12 37.6**	**-1.0**
PETK	**Petropavlovsk-** comp=Z,1.4nm,0.7s,baz=123,slow=9.2,SNR=3.5	**72.30**	**342**	P	**P**	**09 12 47.7**	**+1.5**
PETK	comp=Z,19nm,20.8s,baz=129,slow=30			LR	LR	09 37 15.5	
PETK	**Petropavlovsk-**	**72.30**	**342**	P	**P**	**09 12 47.3**	**+1.1**
AFDM	**Forest Hills D**	**72.75**	**40**	P	**P**	**09 12 49.5**	**+0.2**
AFDM	comp=Z,4.6nm,1.1s			IAmb	IAmb	09 12 51.7	
YBH	**Yreka Blue Hor** comp=Z,6.8nm,1.2s	**73.39**	**37**	P	**P**	**09 12 55.1**	**+2.0**
YBH				IAmb	IAmb	09 13 07.6	
WAKR	**Walker**	**73.46**	**41**	P	**P**	**09 12 54.9**	**+1.2**
WAKR	comp=Z,6.0nm,1.1s			IAmb	IAmb	09 12 57.6	
BEKR	**Beckworth** comp=Z,6.1nm,1.2s	**73.68**	**40**	P	**P**	**09 12 56.6**	**+1.7**
BEKR				IAmb	IAmb	09 12 57.8	
PNTR	**Pine Nut**	**73.69**	**41**	P	**P**	**09 12 56.9**	**+1.8**
NVAR	**Mina Array Bea** comp=Z,2.3nm,0.8s,baz=227,slow=9.9,SNR=15	**74.15**	**42**	P	**P**	**09 12 59.4**	**+1.6**
NVAR	comp=Z,88nm,19.1s,baz=253,slow=30			LR	LR	09 38 15.4	
NVAR	**Mina Array Bea**	**74.15**	**42**	P	**P**	**09 12 59.1**	**+1.3**
NV11	**Mina Array Sit**	**74.25**	**42**	P	**P**	**09 12 59.9**	**+1.6**
NV11	comp=Z,8.9nm,1.2s			IAmb	IAmb	09 13 02.6	
KVN	**Kaiserville**	**74.63**	**42**	P	**P**	**09 13 01.9**	**+1.3**
TPH	**Tonopah**	**74.66**	**43**	P	**P**	**09 13 01.8**	**+1.1**
MOD	**Modoc Plateau**	**74.92**	**38**	P	**P**	**09 13 03.8**	**+1.7**
QSPA	**South Pole Qui**	**74.97**	**180**	P	**P**	**09 13 03.4**	**+1.4**
SHPR	**Sheep Range**	**75.19**	**45**	P	**P**	**09 13 05.1**	**+1.3**
SHPR	comp=Z,6.0nm,1.3s			IAmb	IAmb	09 13 07.7	
PINE	**Pine Mountain**	**75.69**	**36**	P	**P**	**09 13 08.3**	**+1.7**
PRN	**Pahroc Range**	**75.74**	**44**	P	**P**	**09 13 07.4**	**+0.5**
PRN	comp=Z,6.0nm,1.3s			IAmb	IAmb	09 13 09.6	
KSRS	**Korea Array** comp=Z,30nm,21.8s,baz=116,slow=30	**75.87**	**316**	LR	LR	09 39 07.8	
KS19	**Wonju Array Si**	**75.93**	**316**	P	**P**	**09 13 08.8**	**+1.0**
J08A	**Circle Bar Ran**	**76.87**	**38**	P	**P**	**09 13 15.1**	**+2.0**
J08A	comp=Z,6.2nm,1.1s			IAmb	IAmb	09 13 16.8	
KNB	**Kanab**	**77.07**	**46**	P	**P**	**09 13 15.7**	**+1.3**
USRK	**Ussuriysk Ar.** comp=Z,48nm,20.0s,baz=116,slow=31	**77.07**	**323**	LR	LR	09 41 38.7	
SZCU	**Shurtz Canyon**	**77.18**	**45**	P	**P**	**09 13 15.3**	**+0.1**
SZCU	comp=Z,4.4nm,1.3s			IAmb	IAmb	09 13 19.2	
MSU	**Marysvale**	**78.26**	**45**	P	**P**	**09 13 22.8**	**+1.6**
BMO	**Blue Mountains**	**78.42**	**37**	P	**P**	**09 13 23.7**	**+1.9**
BMO	comp=Z,7.7nm,1.4s			IAmb	IAmb	09 13 25.2	
MFID	**Camas Ranch**	**78.49**	**39**	P	**P**	**09 13 23.7**	**+1.5**
MFID	comp=Z,7.4nm,1.4s			IAmb	IAmb	09 13 25.7	
GAMB	**Gambell**	**78.61**	**1**		**P**	**09 13 23.6**	**+1.5**
HLID	**Hailey**	**79.43**	**39**	P	**P**	**09 13 29.2**	**+1.8**
HLID	comp=Z,6.1nm,1.1s			IAmb	IAmb	09 13 31.3	
NJ2	**Nanjing**	**79.90**	**307**	*e*P	P	09 13 37.2	+7.2
NJ2	comp=Z,10.0nm,0.5s			pmax	pmax		
TCUT	**Toone Canyon**	**80.07**	**43**	P	**P**	**09 13 32.5**	**+1.5**
TNA	**Tin City**	**80.50**	**2**	P	**P**	**09 13 33.9**	**+1.5**
TX31	**Lajitas Ar. Si**	**80.50**	**56**	P	**P**	**09 13 34.9**	**+1.4**
TXAR	**Lajitas Array** comp=Z,1.9nm,1.1s,baz=232,slow=6.2,SNR=13	**80.50**	**56**	P	**P**	**09 13 35.6**	**+2.2**
TXAR	comp=Z,51nm,18.7s,baz=0.0,slow=31			LR	LR	09 43 09.9	
TXAR	**Lajitas Array**	**80.50**	**56**	P	**P**	**09 13 34.9**	**+1.4**
ANMO	**Albuquerque**	**80.66**	**50**	P	**P**	**09 13 35.8**	**+1.5**
MCK	**McKinley**	**80.82**	**11**	P	**P**	**09 13 36.1**	**+1.8**
MCK	comp=Z,8.5nm,1.2s			IAmb	IAmb	09 13 54.1	
MCMT	**McKenzie Canyo**	**81.06**	**39**	P	**P**	**09 13 38.0**	**+1.7**
CCB	**Clear Creek Bu**	**81.86**	**11**	P	**P**	**09 13 41.0**	**+1.3**
CCB	comp=Z,4.3nm,0.8s			IAmb	IAmb	09 13 42.0	
PDAR	**Pinedale Array** comp=Z,1.0nm,0.7s,baz=216,slow=3.3,SNR=11	**82.08**	**42**	P	**P**	**09 13 43.0**	**+1.3**
PDAR	comp=Z,73nm,20.4s,baz=237,slow=32			LR	LR	09 44 37.4	
PDAR	**Pinedale Array**	**82.08**	**42**	P	**P**	**09 13 42.9**	**+1.3**
YHL	**Hebgen Lake**	**82.09**	**39**	P	**P**	**09 13 43.3**	**+1.6**
ILAR	**Eielson Array** comp=Z,0.6nm,0.6s,baz=223,slow=6.3,SNR=9.4	**82.15**	**11**	P	**P**	**09 13 41.8**	**+0.5**
ILAR	comp=Z,68nm,20.7s,baz=211,slow=30			LR	LR	09 42 15.9	
ILAR	**Eielson Array**	**82.15**	**11**	P	**P**	**09 13 42.9**	**+1.7**
SMCO	**Snowmass**	**82.15**	**46**	P	**P**	**09 13 43.9**	**+1.6**
IMAR	**Indian Mountai**	**82.17**	**8**	P	**P**	**09 13 42.3**	**+1.0**
BOZ	**Bozeman (W)**	**82.19**	**39**	P	**P**	**09 13 44.0**	**+1.9**
BOZ	comp=Z,6.9nm,1.4s			IAmb	IAmb	09 13 46.0	
YHH	**Holmes Hill** comp=Z,4.8nm,1.3s	**82.26**	**40**	P	**P**	**09 13 44.2**	**+1.6**
YHH				IAmb	IAmb	09 13 46.2	
RDOG	**Red Dog Mine**	**83.26**	**4**	P	**P**	**09 13 48.2**	**+1.3**
ABTX	**Abilene, Hawle**	**84.94**	**54**	P	**P**	**09 13 57.5**	**+1.2**
BMAR	**Burnt Mountain**	**84.95**	**11**	P	**P**	**09 13 56.9**	**+1.2**
MAW	**Mawson** comp=Z,4.6nm,0.7s,baz=127,slow=6.3,SNR=7.9	**88.07**	**199**	P	**P**	**09 14 10.9**	**-0.1**
MAW	comp=Z,88nm,20.1s,baz=64,slow=34			LR	LR	09 51 02.9	
HHC	**Hu-ho-hao-te** comp=Z,19nm,1.2s	**88.74**	**313**	*e*P	P	09 14 19.5	+4.7
HHC	comp=Z,71nm,6.7s			pmax	pmax		
HHC	comp=N,340nm,19.4s			LR	LR		
HHC	comp=E,210nm,17.8s			LR	LR		
HHC	comp=Z,140nm,17.6s			LR	LR	09 47 14.0	
PLCA	**Paso Flores** comp=Z,26nm,18.3s,baz=188,slow=31	**89.79**	**132**	LR	LR	09 47 14.0	
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.8s,baz=235,slow=4.7,SNR=8.9	**89.84**	**23**	P	**P**	**09 14 19.2**	**0.0**
YKA	comp=Z,61nm,20.4s,baz=0.0,slow=31			LR	LR	09 48 05.0	
CMAR	**Chiang Mai Arr** comp=Z,16nm,20.8s,baz=163,slow=32	**92.43**	**288**	LR	LR	09 49 48.6	
LZH	**Lanzhou**	**92.96**	**306**	*e*P	**P**	**09 14 37.2**	**+2.6**
LZH				pP	sP	09 14 47.5	+0.7
LZH				sP	pwP	09 14 50.6	+4.3

JAVC	**Velka Javorina**	**145.08**	**347**	*e*PKP	**PKiKP**	**09 21 00.1**	**-2.1**
KRUC	**Moravsky**	**145.15**	**349**	*e*PKP	**PKPdf**	**09 20 59.0**	**+0.6**
KRUC				*e*		09 21 11.6	
GRF	**Grafenberg Arr**	**145.26**	**355**	*e*PKP	PKiKP	09 21 12.5	+10
	baz=7.3,slow=2.9						
DOPR	**Dopca**	**145.36**	**337**	⇑P	**PKiKP**	**09 21 00.8**	**-2.0**
MLR	**Muntele Rosu**	**145.54**	**336**	⇑P	**PKiKP**	**09 21 01.1**	**-2.3**
KHC	**Kasperske Hory**	**145.55**	**352**	*e*PKP	**PKPab**	**09 21 00.0**	**+0.5**
DRGR		**145.61**	**340**	⇓P	**PKPab**	**09 21 00.5**	**+0.7**
MODS	**Modra-Piesok**	**145.63**	**347**	*e*PKP	**PKiKP**	**09 21 01.6**	**-1.7**
CKRC	**Cesky Krumlov**	**145.74**	**351**	*e*PKP	**PKPab**	**09 21 00.5**	**+0.3**
GERES	**GERESS Array B**	**145.81**	**352**	PKPbc	**PKPab**	**09 21 00.9**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=31,slow=3.6,SNR=6.4						
BRTR	**Keskin Array B**	**145.85**	**321**	PKPbc	**PKPab**	**09 21 01.5**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=116,slow=2.4,SNR=22						
VOIR		**145.94**	**336**	⇓P	**PKPab**	**09 21 01.4**	**+0.3**
CONA	**Conrad Observa**	**146.34**	**349**	*e*P	**PKPab**	**09 21 02.9**	**+0.3**
	comp=Z,3.0nm,0.9s						
SIRR	**Siria**	**146.41**	**341**	⇑P	**PKPab**	**09 21 02.8**	**0.0**
MOA	**Molln**	**146.69**	**350**	*i* P	**PKPab**	**09 21 03.9**	**+0.1**
	comp=Z,5.4nm,1.0s						
GZR	**Gura Zlata**	**146.81**	**339**	⇓P	**PKPab**	**09 21 03.9**	**-0.5**
RETA	**Reutte**	**147.49**	**355**	*e*P	**PKPab**	**09 21 06.7**	**-0.4**
	comp=Z,5.3nm,1.2s						
WATA	**Walderalm**	**147.56**	**354**	*e*P	**PKiKP**	**09 21 06.7**	**-0.7**
	comp=Z,2.3nm,0.8s						
KBA	**Koelnbreinsper**	**147.59**	**351**	*e*P	**PKPbc**	**09 21 05.7**	**+0.3**
	comp=Z,1.2nm,0.6s						
MOTA	**Moosalm**	**147.60**	**354**	*e*P	**PKiKP**	**09 21 06.1**	**-1.4**
	comp=Z,4.5nm,1.0s						
WTTA	**Wattenberg**	**147.62**	**353**	*e*P	**PKiKP**	**09 21 06.5**	**-1.1**
	comp=Z,1.9nm,0.5s						
SOKA	**Soboth**	**147.70**	**349**	*e*P	**PKPbc**	**09 21 05.1**	**-0.5**
	comp=Z,3.6nm,0.9s						
SQTA	**Sankt Quirin**	**147.71**	**354**	*e*P	**PKiKP**	**09 21 06.5**	**-1.2**
	comp=Z,2.5nm,0.8s						
OBKA	**Obir**	**147.95**	**350**	*e*P	**PKiKP**	**09 21 07.6**	**-0.6**
	comp=Z,2.3nm,0.8s						
FETA	**Feichten**	**147.96**	**355**	*e*P	**PKiKP**	**09 21 08.2**	**-0.1**
	comp=Z,4.0nm,1.1s						
ABTA	**Abfaltersbach**	**148.03**	**352**	*e*P	**PKPbc**	**09 21 06.8**	**+0.3**
	comp=Z,3.2nm,0.7s						
ESDC	**Sonseca Array**	**153.83**	**19**	PKPab	**PKPab**	**09 21 35.7**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=304,slow=2.3,SNR=2.5						
ESDC	**Sonseca Array**	**153.83**	**19**	PKPdf	**PKPdf**	**09 21 12.5**	**-0.1**
ESDC				PKPbc	**pPKPdf**	**09 21 21.4**	**-0.5**
ESDC					**PKPab**	**09 21 34.1**	**+0.7**

TRN 12 09:25:48.2, 17.03N×61.61W, h68km, MD3.9, 3D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANBD	**Bethesda, Anti**	**0.15**	**277**	⇓*e*P		Pn	09 25 59.3	+0.9
BPA	**Boggy Peak**	**0.24**	**274**	⇓*e*P		Pn	09 25 59.7	+0.8
ABD	**La Joyeuse, An**	**0.56**	**168**	⇓*e*P		Pn	09 26 02.6	+1.2
MLYT	**Lee's Yard**	**0.64**	**241**	*e*P		Pn	09 26 04.3	+2.0
MLYT				*e*S		Sn	09 26 15.8	+3.1
ANWB	**Willy Bob**	**0.66**	**345**	*e*P		Pn	09 26 03.9	+1.4
ANWB				*e*S		Sn	09 26 14.5	+1.5
CBE	**Ff, Capester**	**0.95**	**180**	*e*P		Pn	09 26 07.2	+1.2
MAGL	**Barre de l'ile**	**1.12**	**164**	*e*P		Pn	09 26 09.5	+1.4
TDBA	**Terre de Bas,**	**1.17**	**181**	*e*P		Pn	09 26 10.0	+1.2
SEUS	**St. Eustatius**	**1.39**	**290**	*e*P		Pn	09 26 10.7	+2.1
SEUS				*e*S		Sn	09 26 30.4	+1.0
DSLB	**Salisbury**	**1.59**	**174**	*e*P		Pn	09 26 15.8	+1.5
DLPL	**La Plaine**	**1.72**	**168**	*e*P		Pn	09 26 16.9	+0.8
DLPL				*e*S		Sn	09 26 38.3	+1.1
SVN	**Savane Anatole**	**2.21**	**169**	*e*P		Pn	09 26 24.6	+1.8
PCM	**Pelee Case Pet**	**2.23**	**170**	*e*P		Pn	09 26 24.4	+1.4
BAMF	**Morne Balai**	**2.24**	**169**	*e*P		Pn	09 26 25.0	+1.8
CXM	**Morne La Croix**	**2.25**	**169**	*e*P		Pn	09 26 25.1	+1.8
GBMF	**Grand Be**	**2.26**	**169**	*e*P		Pn	09 26 24.7	+1.2
PML	**Morne Lenard**	**2.27**	**170**	*e*P		Pn	09 26 25.2	+1.6
FDF	**Fort de France**	**2.32**	**169**	*e*P		Pn	09 26 26.0	+1.7
FDF				*e*S		Sn	09 26 52.4	+0.6
ILAM	**Ilet Lapin Mar**	**2.35**	**162**	*e*P		Pn	09 26 26.0	+1.4
ILAM				*e*S		Sn	09 26 53.2	+0.9
ZAM	**Aeronautique**	**2.50**	**167**	*e*P		Pn	09 26 28.1	+1.4
LPMF	**Morne Lapointe**	**2.52**	**166**	*e*P		Pn	09 26 27.8	+0.9
BIM	**Bigot**	**2.55**	**168**	*e*P		Pn	09 26 29.3	+2.0
BIM				*e*S		Sn	09 26 58.4	+1.1
MVM	**Montagne Vaucl**	**2.55**	**164**	*e*P		Pn	09 26 28.8	+1.4
MPOM	**Morne Pois Mar**	**2.67**	**164**	*e*P		Pn	09 26 30.1	+1.2
MPOM				*e*S		Sn	09 27 00.4	+0.3
SLBI	**Saint Lucia, B**	**3.05**	**168**	*e*P		Pn	09 26 35.9	+1.8
SLBI				*e*S		Sn	09 27 10.3	+0.9
SLCP	**Castries, St.**	**3.06**	**169**	*e*		Pn	09 26 36.3	+2.1
SLCP				*e*S		Sn	09 27 10.6	+0.9
MCLT	**Moule a Chique**	**3.36**	**169**	*e*P		Pn	09 26 40.4	+2.1
MCLT				*e*S		Sn	09 27 17.7	+0.6
SVB	**Belmont**	**3.75**	**175**	*e*P		Pn	09 26 44.3	+0.6
SVB				*e*S		Sn	09 27 27.8	+1.1
BBGH	**Gun Hill**	**4.34**	**153**	*e*P		Pn	09 26 53.7	+1.9
BBSP	**Saint Philip**	**4.42**	**152**	*e*P		Pn	09 26 53.5	+0.7
GCMP	**Grenada, Carri**	**4.52**	**178**	*e*P		Pn	09 26 55.2	+1.0
GRGR	**Grenville**	**4.87**	**181**	*e*		Pn	09 26 58.8	-0.2
TOSP	**Speyside**	**5.79**	**170**	*e*		Pn	09 27 13.2	+1.7
TRN	**Trinidad (W)**	**6.35**	**178**	*e*P		Pn	09 27 20.1	+0.9
BAUV	**El Baul**	**10.19**	**219**	*e*P		Pn	09 28 12.6	+0.8
BAUV	**El Baul**	**10.19**	**219**	*e*S		Sn	09 29 57.7	-6.8

PRU **12** *09:39:58.0±0.0, 44.25N×17.91E, h0km*
KRSZO **12** *09:39:58.8±0.9, 44.38N×17.82E, h10km±7km, ML3.0/14, Error ellipse: s-maj=2.5km s-min=2.2km az=47.0*
RHSSO **12** *09:39:59.8±0.2, 44.39N×17.79E, h6km±1km, ML2.7/17*
PDG **12** *09:39:59.5±0.3, 44.32N×17.76E, h4km, ML2.8/13, Error ellipse: s-maj=0.6km s-min=1.0km az=0.0*
BEO **12** *09:39:59.6±0.3, 44.34N×17.74E, h8km±3km, ML2.5/9*
ISC 12 09:39:59.2±1.0, 44.39N±0.01×17.81E±0.01, h8km±9km, n94, σ1s02/179, 22C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGRS	**Mrkonjic Grad**	**0.52**	**273**	⇑*i*Pg	**Pg**	**09 40 09.0**	**-0.2**
MGRS				*e*Sg	**Sg**	**09 40 16.6**	**+0.5**
BLY	**Banja Luka**	**0.57**	**309**	*e*Pg	**Pg**	**09 40 10.7**	**+0.4**
BLY				*e*Sg	**Sb**	**09 40 19.2**	**-0.5**
BLY	**Banja Luka**	**0.57**	**309**	⇑*i*Pg	**Pg**	**09 40 10.6**	**+0.3**
BLY				*e*Sg	**Sg**	**09 40 18.4**	**+0.7**
BLY	**Banja Luka**	**0.57**	**309**	Pg	**Pg**	**09 40 10.6**	**+0.3**
BLY				Pb	**Pg**	**09 40 10.7**	**+0.4**
BLY				⇓x	x	09 40 10.9	
	comp=Z,1.0nm,SNR=56						
BLY				Sg	**Sg**	**09 40 18.5**	**+0.7**
BLY				Lg	Lg	09 40 19.2	
HAPS	**Han Pijesak,BI**	**0.88**	**110**	*e*Pg	**Pg**	**09 40 15.5**	**-0.6**
HAPS				*e*Sg	**Sb**	**09 40 28.3**	**-0.3**
HAPS	**Han Pijesak,BI**	**0.88**	**110**	⇑*i*Pg	**Pg**	**09 40 15.5**	**-0.6**
HAPS				*e*Sg	**Sg**	**09 40 27.8**	**+0.3**
MRAK	**Mrakovica**	**0.90**	**314**	*e*Pg	**Pg**	**09 40 14.9**	**-1.6**
PRIJ	**Prijedor**	**0.97**	**307**	*e*Pg	**Pg**	**09 40 17.5**	**-0.4**
PRIJ				*e*Sg	**Sg**	**09 40 30.8**	**+0.2**
RICI	**Ricice**	**1.02**	**209**	*e*Pg	**Pg**	**09 40 17.6**	**-1.2**
RICI				Sg	**Sg**	**09 40 31.9**	**-0.1**
KIJV	**Kijevo**	**1.08**	**250**	*e*Pg	**Pg**	**09 40 18.8**	**-1.1**
KIJV				Sg	**Sb**	**09 40 34.1**	**-0.2**
MAKA	**Makarska**	**1.24**	**208**	*i* Pg	**Pn**	**09 40 21.5**	**-1.3**
MAKA				Sg	**Sn**	**09 40 39.3**	**-0.3**
TEKS	**Tekeris**	**1.24**	**82**	*e*Pg	**Pg**	**09 40 23.4**	**+0.3**
TEKS				*e*Sg	**Sn**	**09 40 42.0**	**+2.2**
TEKS	**Tekeris**	**1.24**	**82**	*e*P	**Pb**	**09 40 23.0**	**+0.1**
TEKS				*e*Sg	**Sn**	**09 40 40.0**	**+0.2**
BBLS	**Lazići**	**1.26**	**114**	⇑*i*Pg	**Pn**	**09 40 22.9**	**-0.3**
BBLS				*e*Sg	**Sn**	**09 40 40.5**	**+0.1**
BBLS	**Lazići**	**1.26**	**114**	Pn	**Pn**	**09 40 22.9**	**-0.3**
BBLS				Pb	**Pb**	**09 40 23.1**	**-0.2**
	comp=Z,1.3nm,SNR=16						
BBLS				Pg	**Pg**	**09 40 23.3**	**-0.2**
BBLS				Sg	**Sn**	**09 40 40.2**	**-0.1**
BBLS				Lg	Lg	09 40 40.5	
BBLS				Lg	Lg	09 40 40.6	
RUDO	**Rudo**	**1.37**	**124**	⇑*i*Pg	**Pn**	**09 40 24.4**	**-0.1**
RUDO				*e*Sg	**Sg**	**09 40 43.7**	**+0.6**
UPM	**Unac-Piva**	**1.43**	**146**	*e*Pg	**Pn**	**09 40 24.9**	**-0.6**
UPM				*e*Sg	**Sg**	**09 40 45.9**	**+0.8**
UPM	**Unac-Piva**	**1.43**	**146**	⇑*i*Pg	**Pn**	**09 40 25.0**	**-0.6**
UPM				*i* Sg	**Sg**	**09 40 46.4**	**+1.3**
MOSL	**Moslavina**	**1.43**	**329**	*e*Pg	**Pg**	**09 40 27.1**	**+0.4**
MOSL				Sg	**Sg**	**09 40 45.5**	**+0.2**
STON	**Ston**	**1.52**	**183**	*e*Pg	**Pg**	**09 40 28.5**	**+0.2**
STON				Sg	**Sg**	**09 40 48.3**	**+0.3**
PLE	**Pljevlja**	**1.56**	**132**	⇓*i*Pg	**Pb**	**09 40 27.8**	**-0.5**
PLE				*i* Sg	**Sg**	**09 40 51.2**	**+1.9**
HVAR	**Hvar**	**1.56**	**220**	*e*Pn	**Pb**	**09 40 27.7**	**-0.6**
BRY	**Bratogost**	**1.58**	**160**	*e*Pn	**Pn**	**09 40 27.8**	**+0.2**
BRY				*e*Sn	**Sb**	**09 40 48.9**	**+0.1**
BRY	**Bratogost**	**1.58**	**160**	⇓*i*Pg	**Pn**	**09 40 27.5**	**-0.1**
BRY				*i* Sg	**Sg**	**09 40 50.8**	**+0.8**
DIVS	**Divibare**	**1.60**	**100**	*e*Pn	**Pn**	**09 40 28.1**	**+0.3**
DIVS				*e*Sn	**Sb**	**09 40 49.8**	**+0.5**
DIVS	**Divibare**	**1.60**	**100**	Pn	**Pn**	**09 40 28.1**	**+0.3**
DIVS				Pb	**Pb**	**09 40 29.1**	**+0.1**
	comp=Z,0.2nm,SNR=9.7						
DIVS				Pg	**Pg**	**09 40 29.2**	**-0.6**
DIVS				Lg	Lg	09 40 49.8	
DIVS				Sb	**Sg**	**09 40 50.3**	**-0.2**
DIVS				Sg	**Sb**	**09 40 51.4**	**+2.1**
MORI	**Morici**	**1.60**	**252**	*e*Pn	**Pn**	**09 40 27.9**	**+0.2**
MORI				Sn	**Sg**	**09 40 50.8**	**+0.2**
FRGS	**Fruska Gora**	**1.62**	**61**	*e*Pg	**Pn**	**09 40 28.5**	**+0.4**
FRGS				*e*Sg	**Sg**	**09 40 53.9**	**+2.6**
FRGS	**Fruska Gora**	**1.62**	**61**	⇓P	**Pn**	**09 40 28.5**	**+0.4**
FRGS				⇑S	**Sn**	**09 40 47.5**	**-1.7**
FRGS	**Fruska Gora**	**1.62**	**61**	*e*Pn	**Pn**	**09 40 28.3**	**+0.2**
FRGS				*e*Sn	**Sb**	**09 40 49.9**	**0.0**
FRGS	**Fruska Gora**	**1.62**	**61**	Pb	**Pn**	**09 40 28.1**	**+0.1**
	comp=Z,0.4nm,SNR=19						
FRGS				Pn	**Pn**	**09 40 28.3**	**+0.2**
FRGS				Pg	**Pn**	**09 40 28.5**	**+0.4**
FRGS				Pg	**Pn**	**09 40 28.5**	**+0.4**
FRGS				Sn	**Sn**	**09 40 47.5**	**-1.7**
FRGS				Lg	Lg	09 40 49.9	
FRGS				Sb	**Sg**	**09 40 50.9**	**-0.3**
FRGS				Sg	**Sg**	**09 40 53.9**	**+2.6**
KOVH	**Kovagototos**	**1.71**	**7**	Pn	**Pb**	**09 40 30.4**	**-0.4**
	comp=Z,0.1nm,SNR=4.9						
KOVH				Sn	**Sn**	**09 40 50.8**	**-0.5**
TREB	**Trebinje**	**1.72**	**167**	*e*Pg	**Pb**	**09 40 30.2**	**-0.8**
TREB				*e*Sg	**Sg**	**09 40 54.6**	**+0.2**
TREB	**Trebinje**	**1.72**	**167**	⇑*i*Pn	**Pn**	**09 40 29.7**	**+0.3**
TREB				*e*Sn	**Sb**	**09 40 53.8**	**+0.3**
ZIRJ	**Zirje**	**1.72**	**246**	*e*Pn	**Pb**	**09 40 30.7**	**-0.4**
ZIRJ				Sn	**Sg**	**09 40 54.9**	**+0.3**
NKY	**Niksic**	**1.80**	**151**	⇓*i*Pn	**Pb**	**09 40 31.6**	**-0.8**
NKY				*i* Sn	**Sg**	**09 40 56.9**	**0.0**
NKME	**Niksic**	**1.82**	**152**	⇑*i*Pn	**Pb**	**09 40 32.0**	**-0.8**
NKME				*i* Sn	**Sg**	**09 40 57.5**	**-0.3**
TRUS	**Trudelj**	**1.87**	**94**	*e*Pn	**Pb**	**09 40 33.2**	**-0.4**
IVAS	**Ivanjica**	**1.88**	**115**	*e*Pn	**Pb**	**09 40 32.7**	**-1.1**
MORH	**Mrgy, Hungar**	**1.92**	**18**	⇑S	**Sb**	**09 40 58.8**	**+0.3**
MORH	**Mrgy, Hungar**	**1.92**	**18**	Pg	**Pn**	**09 40 32.3**	**+0.1**
	comp=Z,0.1nm,SNR=4.1						
MORH				Pn	**Pb**	**09 40 33.5**	**-0.9**
MORH				Sn	**Sb**	**09 40 58.1**	**-0.4**
MORH				Lg	Lg	09 40 58.8	
MORH				Sg	**Sg**	**09 40 58.9**	**-1.9**
KOME	**Kolasin**	**1.98**	**141**	*e*Pn	**Pb**	**09 40 34.5**	**-0.9**
KOME				*e*Sn	**Sg**	**09 41 01.5**	**-1.2**
KALN	**Kalnik**	**1.99**	**332**	*e*Pn	**Pn**	**09 40 33.6**	**+0.5**
KALN				Sn	**Sb**	**09 41 01.0**	**+0.5**
HCY	**Herceg Novi**	**2.00**	**165**	*e*Pn	**Pb**	**09 40 34.7**	**-1.2**
HCY				*e*Sn	**Sn**	**09 40 59.1**	**+0.5**
HCY	**Herceg Novi**	**2.00**	**165**	⇑*i*Pn	**Pb**	**09 40 34.6**	**-1.3**
HCY				*i* Sn	**Sb**	**09 41 01.5**	**+0.5**
CEME	**Cevo**	**2.01**	**156**	⇑*i*Pn	**Pb**	**09 40 34.9**	**-1.1**
CEME				*i* Sn	**Sb**	**09 41 01.9**	**+0.7**
DUGI	**Dugi Otok**	**2.02**	**260**	*e*Pg	**Pb**	**09 40 36.5**	**+0.4**
DUGI				Sn	**Sb**	**09 41 01.2**	**-0.1**
IVA	**Berane**	**2.14**	**134**	⇓*i*Pn	**Pb**	**09 40 37.0**	**-1.3**
IVA				*i* Sn	**Sb**	**09 41 05.7**	**+0.7**
GRUS	**Gruza**	**2.15**	**102**	*e*Pn	**Pn**	**09 40 36.4**	**+1.1**
CRES	**Cresnjev**	**2.20**	**312**	*e*Pn	**Pn**	**09 40 36.1**	**+0.1**
CRES				*e*Sn	**Sn**	**09 41 03.7**	**+0.3**
CRES	**Cresnjev**	**2.20**	**312**	Pg	**Pn**	**09 40 36.1**	**+0.1**
CRES				Lg	Lg	09 41 03.7	
BEHE	**Becsehely**	**2.20**	**341**	*e*Pn	**Pn**	**09 40 36.7**	**+0.6**
BEHE				*e*Sn	**Sn**	**09 41 04.3**	**+0.8**
BEHE	**Becsehely**	**2.20**	**341**	Pn	**Pn**	**09 40 36.7**	**+0.6**
BEHE				Sn	**Sn**	**09 41 04.3**	**+0.8**
BEHE				Lg	Lg	09 41 06.0	
PDG	**Podgorica**	**2.23**	**151**	*e*Pn	**Pn**	**09 40 37.0**	**+0.7**
PDG				*e*Sg	**Sb**	**09 41 08.5**	**+1.2**
PDG	**Podgorica**	**2.23**	**151**	⇓P	**Pb**	**09 40 40.0**	**+0.4**
PDG				⇓S	**Sb**	**09 41 08.2**	**+1.0**
PDG	**Podgorica**	**2.23**	**151**	*e*Pn	**Pn**	**09 40 37.9**	**+1.6**
PDG				*e*Sn	**Sn**	**09 41 05.5**	**+1.6**
TTG	**Podgorica**	**2.23**	**151**	⇑*i*Pn	**Pn**	**09 40 37.8**	**+1.5**
TTG				*i* Sn	**Sb**	**09 41 07.1**	**-0.2**
BUM	**Brajici-Budva**	**2.23**	**159**	*e*Pn	**Pn**	**09 40 37.9**	**+1.4**
BUM				*i* Sn	**Sb**	**09 41 07.1**	**-0.5**
KOGS	**Kog**	**2.33**	**333**	Sn	**Sb**	**09 41 09.5**	**-0.9**
PVY	**Plav**	**2.38**	**136**	⇓*i*Pn	**Pn**	**09 40 40.1**	**+1.6**
PVY				*i* Sn	**Sb**	**09 41 11.2**	**-0.7**
DRME	**Dracevica, Mon**	**2.42**	**155**	*e*Pn	**Pn**	**09 40 40.6**	**+1.5**
DRME				*e*Sn	**Sn**	**09 41 10.0**	**+1.2**
DRME	**Dracevica, Mon**	**2.42**	**155**	⇓*i*Pn	**Pn**	**09 40 40.5**	**+1.5**
DRME				*i* Sn	**Sb**	**09 41 11.7**	**-1.2**
ULC	**Ulcinj**	**2.64**	**156**	*e*Pn	**Pn**	**09 40 43.5**	**+1.4**
ULC				*i* Sn	**Sb**	**09 41 17.1**	**-2.2**
SELS	**Selova**	**2.67**	**115**	*e*Pn	**Pn**	**09 40 42.7**	**+0.2**
CEY	**Cerknica**	**2.75**	**301**	*e*Pn	**Pn**	**09 40 44.8**	**+1.2**
CEY				*e*Sn	**Sn**	**09 41 17.4**	**+0.4**
MPLH	**Magyarpolny**	**2.79**	**356**	Pn	**Pn**	**09 40 45.4**	**+1.3**
	comp=Z,0.1nm,SNR=2.6						
MPLH				Sn	**Sb**	**09 41 21.1**	**-2.3**
MDVR	**Moldovita**	**2.82**	**81**	⇓P	**Pn**	**09 40 44.9**	**+0.3**
MDVR				⇑S	**Sn**	**09 41 17.4**	**-1.3**
BZS	**Buzias**	**2.97**	**64**	⇑P	**Pn**	**09 40 46.8**	**+0.2**
BZS				⇑S	**Sn**	**09 41 21.8**	**-0.5**
BZS	**Buzias**	**2.97**	**64**	Pn	**Pn**	**09 40 46.8**	**+0.2**
	SNR=2.4						
BZS				Sn	**Sn**	**09 41 21.8**	**-0.5**
BZS				Lg	Lg	09 41 22.0	
SOKA	**Soboth**	**3.01**	**321**	Pn	**Pn**	**09 40 47.6**	**+0.4**
	comp=Z,0.6nm,0.2s						
OBKA	**Obir**	**3.12**	**314**	*e*Pn	**Pn**	**09 40 50.2**	**+1.4**
	comp=Z,0.4nm,0.1s						
OBKA	**Obir**	**3.12**	**314**	Pn	**Pn**	**09 40 50.2**	**+1.4**
	comp=Z,0.4nm,0.1s						
OBKA				Pg	**Pb**	**09 40 51.2**	**-3.7**
	comp=Z,0.1nm,SNR=2.1						
TRI	**Trieste**	**3.15**	**296**	Pn	**Pn**	**09 40 51.7**	**+2.6**
	comp=Z,0.1nm,SNR=2.3						
ZAGS	**Zajecar**	**3.24**	**99**	*e*Pn	**Pn**	**09 40 50.3**	**0.0**
ARSA	**Arzberg**	**3.28**	**332**	*i* Pn	**Pn**	**09 40 51.4**	**+0.6**
	comp=Z,2.9nm,0.4s						
ARSA	**Arzberg**	**3.28**	**332**	Pn	**Pn**	**09 40 51.5**	**+0.6**
	comp=Z,0.1nm,SNR=2.5						
SIRR	**Siria**	**3.30**	**54**	⇑P	**Pn**	**09 40 52.0**	**+0.8**
SIRR				⇓S	**Sn**	**09 41 29.8**	**-0.8**
SIRR	**Siria**	**3.30**	**54**	Pn	**Pn**	**09 40 52.0**	**+0.8**
SIRR				Pg	Pb	09 40 53.1	-5.0
	SNR=2.7						
SIRR				Sn	**Sn**	**09 41 29.8**	**-0.8**
HERR	**Herculane**	**3.33**	**80**	⇑P	**Pn**	**09 40 52.0**	**+0.5**
HERR				⇑S	**Sn**	**09 41 29.4**	**-1.8**
BLKB	**Belogradchik**	**3.59**	**101**	⇑S	**Sn**	**09 41 36.8**	**-1.0**
ZAPS	**Zavoj**	**3.67**	**106**	*e*Pn	**Pn**	**09 40 57.1**	**+0.9**
GZR	**Gura Zlata**	**3.67**	**72**	⇑P	**Pn**	**09 40 56.7**	**+0.4**
GZR				⇓S	**Sn**	**09 41 38.4**	**-1.4**
GZR	**Gura Zlata**	**3.67**	**72**	Sn	**Sn**	**09 41 38.4**	**-1.4**
GZR				Pn	**Pn**	**09 40 56.7**	**+0.4**
GZR				Pg	**Pn**	**09 40 57.6**	**+1.3**
	SNR=1.7						
GZR				Lg	Lg	09 41 39.0	
CONA	**Conrad Observa**	**3.79**	**340**	*e*Pn	**Pn**	**09 40 58.2**	**+0.3**
	comp=Z,1.0nm,0.3s						
PSZ	**Piszkesteto**	**3.82**	**22**	Pn	**Pn**	**09 40 58.4**	**+0.1**
	SNR=1.5						
MODS	**Modra-Piesok**	**4.00**	**355**	*e*PN	**Pn**	**09 41 02.6**	**+1.8**
MODS				*e*SN	**Sn**	**09 41 49.4**	**+1.5**
KBA	**Koelnbreinsper**	**4.12**	**312**	*e*Pn	**Pn**	**09 41 03.7**	**+1.1**
	comp=Z,0.3nm,0.2s						
VYHS	**Vyhne**	**4.17**	**9**	*e*PN	**Pn**	**09 41 04.6**	**+1.6**
VYHS				*e*SN	**Sn**	**09 41 51.9**	**0.0**
DRGR		**4.20**	**53**	⇓P	**Pn**	**09 41 04.5**	**+0.9**
DRGR				⇑S	**Sn**	**09 41 52.3**	**-0.5**
KOLL	**Kolacno**	**4.21**	**5**	*e*PN	**Pn**	**09 41 05.0**	**+1.4**
KOLL				*e*SN	**Sn**	**09 41 52.6**	**-0.4**
MOA	**Molln**	**4.25**	**326**	*e*Pn	**Pn**	**09 41 05.9**	**+1.7**
	comp=Z,2.1nm,0.3s						
ABTA	**Abfaltersbach**	**4.40**	**304**	*e*Pn	**Pn**	**09 41 07.9**	**+1.5**
	comp=Z,0.8nm,0.4s						
WTTA	**Wattenberg**	**5.18**	**306**	*i* Pn	**Pn**	**09 41 19.3**	**+2.1**
	comp=Z,1.4nm,0.3s						
KHC	**Kasperske Hory**	**5.56**	**330**	*e*PN	**Pn**	**09 41 22.8**	**+0.6**
KHC				*e*SN	**Sn**	**09 42 28.2**	**+1.9**

IDC **12** *09:57:19.0±1.5, 41.16N×48.24E, h0km, mb3.9/2, mb1 3.4/7, mb1mx3.3/42, mbtmp3.4/7, ML2.0/3, MS3.3/1, Ms1 3.3/1, ms1mx2.2/56, Error ellipse: s-maj=25.3km s-min=12.4km az=152.0*
MOS **12** *09:57:24.4±0.0, 41.31N×48.38E, h13km, MPVA4.5*
DRS **12** *09:57:25.3±0.0, 41.05N×48.49E, h23km*
AZER **12** *09:57:25.1±0.1, 41.11N×48.07E, h41km, ml3.6/35, Error ellipse: s-maj=1.3km s-min=0.9km az=314.0*
IASPEI **12** *09:57:27.3±1.0, 41.12N±0.02×48.06E±0.03, h33km±3km, Error ellipse: s-maj=4.0km s-min=3.3km az=52.9, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISC 12 09:57:25.5±1.0, 41.11N±0.02×48.07E±0.02, h36km±1km, n79, σ2s59/122, 1C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
XNQ	**Khinaliq**	**0.08**	**41**	P	**Pn**	**09 57 32.8**	**+0.9**
	SNR=472						
XNQ				S	**Sn**	**09 57 39.0**	**+2.8**
QBL	**Gabala**	**0.24**	**227**	P	**Pn**	**09 57 33.8**	**+0.1**
	SNR=80						
QBL				S	**Sn**	**09 57 40.7**	**0.0**
IML	**Ismayilli**	**0.33**	**165**	P	**Pn**	**09 57 34.5**	**+0.7**
	SNR=139						
IML				S	**Sn**	**09 57 42.3**	**+1.8**
QUBA	**Quba, Azerbaij**	**0.40**	**53**	P	**Pn**	**09 57 35.9**	**+1.3**
	SNR=740						
QUBA				S	**Sn**	**09 57 44.4**	**+3.0**
QSAR	**Qusar**	**0.43**	**20**	P	**Pn**	**09 57 36.0**	**+1.0**
	SNR=742						
QSAR				S	**Sn**	**09 57 44.7**	**+2.8**
AKT	**Akhty**	**0.45**	**325**	⇑*i*PG	**Pn**	**09 57 35.9**	**+0.5**
AKT				*e*		09 57 44.1	
AKT	

DBC	**Dubki**	**2.12 335**	⇓	*i* PN		**Pn**	**09 58 00.3**	**+1.8**
DBC				*e*			09 58 27.8	
DBC				pmax	pmax			
	comp=Z,65nm,0.6s							
DBC				smax	smax			
	comp=N,93nm,0.3s							
YRD	**Yardimli**	**2.20 177**		Pn		**Pn**	**09 57 59.5**	**-0.1**
	SNR=105							
YRD				Sn		**Sn**	**09 58 27.3**	**+1.7**
DLMR	**Dylym**	**2.23 332**		*e*Pg		**Pn**	**09 58 01.3**	**+1.4**
DLMR				*e*Sg		**Sn**	**09 58 29.2**	**+3.0**
DVE	**Vedeno**	**2.34 322**		*e*Pn		Pn	09 58 08.8	+7.2
DVE				*e*Sn		**Sn**	**09 58 33.4**	**+4.3**
LKRN	**Lenkeran, Azer**	**2.46 167**		PN		**Pn**	**09 58 02.2**	**-0.9**
LKRN	**Lenkeran, Azer**	**2.46 167**		Pn		**Pn**	**09 58 02.4**	**-0.7**
	SNR=3.0							
LKRN				Sn		**Sn**	**09 58 34.1**	**+2.2**
LRK	**Lerik**	**2.48 175**		Pn		**Pn**	**09 58 03.4**	**0.0**
	SNR=26							
LRK				Sn		**Sn**	**09 58 33.4**	**+0.9**
BTNK	**Botanikuri**	**2.53 284**		PN		**Pn**	**09 58 04.4**	**+0.4**
BTNK	**Botanikuri**	**2.53 284**		Pn		**Pn**	**09 58 04.4**	**+0.4**
BTNK				Sn		**Sn**	**09 58 35.7**	**+2.1**
SBZ	**Shahbuz**	**2.58 229**		Pn		**Pn**	**09 58 06.0**	**+1.2**
	SNR=6.3							
SBZ				Sn		**Sn**	**09 58 38.4**	**+3.4**
ASTR	**Astara**	**2.61 168**		Pn		**Pn**	**09 58 04.3**	**-0.8**
	SNR=12							
ASTR				Sn		**Sn**	**09 58 39.7**	**+4.1**
ORD	**Ordubad**	**2.70 217**		Pn		**Pn**	**09 58 07.8**	**+1.3**
	SNR=16							
ORD				Sn		**Sn**	**09 58 41.3**	**+3.3**
GNI	**Garni**	**2.71 250**		Pn		**Pn**	**09 58 07.4**	**+0.8**
	comp=N,1.4nm,0.3s,baz=341,slow=18,SNR=2.4							
GNI				Pg			09 58 15.0	
	comp=N,5.0nm,0.3s,baz=79,slow=2.1,SNR=6.1							
GNI				Lg		Lg	09 58 51.3	
	comp=N,5.7nm,0.3s,baz=319,slow=18,SNR=1.9							
GNI	**Garni**	**2.71 250**		*e*Pn		Pn	09 58 15.3	+8.6
GNI				*e*Sn		Sn	09 58 52.2	+14
NAX	**Nakhchivan**	**2.77 226**		PN		**Pn**	**09 58 08.9**	**+1.6**
NAX	**Nakhchivan**	**2.77 226**		Pn		**Pn**	**09 58 09.0**	**+1.6**
NAX				Sg		Sn	09 58 51.9	+12
HYR	**Heyderabad**	**2.83 242**		Pn		**Pn**	**09 58 10.1**	**+1.9**
HYR				Sn		**Sn**	**09 58 43.0**	**+2.0**
LACR	**Lac**	**3.29 303**		*e*Pn		Pn	09 58 20.0	+5.3
KORR	**Kora**	**3.57 305**		*e*Sn		**Sn**	**09 59 05.2**	**+5.9**
ONI	**Oni**	**3.75 295**		*e*Pn		Pn	09 58 26.4	+5.5
ONI				*e*Sn		**Sn**	**09 59 12.0**	**+8.1**
DIGR	**Digorskoe uzhe**	**3.79 300**		*e*Pn		**Pn**	**09 58 26.1**	**+4.5**
DIGR				*e*Sn		**Sn**	**09 59 10.3**	**+5.3**
KBZ	**Khabaz**	**4.64 306**		Pn		**Pn**	**09 58 32.7**	**-0.2**
	comp=N,0.2nm,0.3s,baz=133,slow=13,SNR=3.2							
KBZ				Pg			09 58 43.0	
	comp=N,0.3nm,0.3s,baz=135,slow=10,SNR=6.8							
KBZ				Sn		**Sn**	**09 59 24.9**	**-0.6**
	comp=N,0.4nm,0.3s,baz=59,slow=14,SNR=1.9							
KBZ	**Khabaz**	**4.64 306**		*e*Pn		Pn	09 58 39.4	+6.4
KVAR	**Kislovodsk Arr**	**4.88 307**		Pn		**Pn**	**09 58 38.3**	**+1.9**
	baz=121,slow=18,SNR=1.5							
KVAR				Pg			09 58 45.9	
	baz=107,slow=19,SNR=2.3							
KVAR				Sn		**Sn**	**09 59 31.1**	**-0.7**
	baz=273,slow=23,SNR=2.8							
KIV	**Kislovodsk**	**4.89 307**		*e*PN		Pn	09 58 47.6	+11
KIV				pmax	pmax			
	comp=Z,16nm,1.0s							
AKASG	**Malin Array Be**	**16.21 313**		Pn		**Pn**	**10 01 06.3**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=112,slow=12,SNR=2.1							
BVAR	**Borovoye Array**	**19.22 44**		P		**P**	**10 01 43.6**	**-2.7**
	comp=Z,0.3nm,0.3s,baz=235,slow=23,SNR=5.4							
FINES	**FINESS Array B**	**24.34 334**		P		**P**	**10 02 36.7**	**-2.9**
	comp=Z,1.2nm,0.3s,baz=139,slow=9.2,SNR=23							
MKAR	**Makanchi Array**	**25.15 65**		P		**P**	**10 02 45.3**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=271,slow=8.2,SNR=12							
SFJD	**Kangerlussuaq**	**56.12 332**		LR		LR	10 31 01.5	
	comp=Z,24nm,19.0s,baz=106,slow=36							

IDC ***12*** *10:15:22.9±1.4, 14˚.82N×122˚.54E, h0km, mb3.2/3, mb1 3.6/4, mb1mx3.3/51, mbtmp3.5/4, ML4.2/1, MS4.0/1, Ms1 4.0/1, ms1mx2.5/19, Error ellipse: s-maj=32.7km s-min=26.4km az=83.0*

MAN ***12*** *10:15:28.2, 15˚.06N×121˚.93E, h21km, MS3.3*

ISC 12 10:15:27.3±1.6, 15˚.1N±0˚.1×122˚.02E±0˚.09, h66km±18km, n13, σ2ᵖ36/15, mb3.2/3, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
LQP	**Lukban**	**1.07 206**	⇑	*e*P		**Pn**	**10 15 46.3**		**-0.5**
LQP				*i* S		**Sn**	**10 16 02.1**		**+1.0**
QVP	**Quezon City--P**	**1.09 245**		*e*P		**Pn**	**10 15 44.8**		**-1.9**
QVP				*e*S		**Sn**	**10 15 58.7**		**-2.4**
GQP	**Guinayangan**	**1.24 161**	⇑	*e*P		Pn	10 15 50.5		+1.7
GQP				*e*S		**Sn**	**10 16 06.2**		**+1.5**
TGY	**Tagaytay City**	**1.43 227**		Pn		Pn	10 15 53.2		+1.9
	344nm,0.3s,baz=121,slow=4.1,SNR=14								
TGY				Sn		**Sn**	**10 16 11.3**		**+1.9**
	799nm,0.3s,baz=296,slow=23,SNR=18								
TGY	**Tagaytay City**	**1.43 227**		*e*P		**Pn**	**10 15 51.9**		**+0.5**
TGY				*i* S		**Sn**	**10 16 12.2**		**+2.8**
MACP	**Maragondon, Ca**	**1.50 237**		*e*P		**Pn**	**10 15 52.6**		**+0.5**
MACP				*e*S		**Sn**	**10 16 12.7**		**+1.7**
LUBP	**Lubang**	**2.18 232**		*e*P		Pn	10 16 03.1		+1.8
LUBP				*e*S		**Sn**	**10 16 28.2**		**+0.9**
SJMP	**San Jose**	**2.75 199**		*e*P		Pn	10 16 15.1		+6.0
SJMP				*e*S		**Sn**	**10 16 35.5**		**-5.6**
JNU	**Nakatsue**	**19.68 23**		P		**Pn**	**10 19 52.9**		**-0.2**
	0.5nm,0.3s,baz=223,slow=22,SNR=2.2								
ASAJ	**Asahikawa**	**33.82 27**		LR		LR	10 35 58.9		
	comp=Z,220nm,19.5s,baz=196,slow=36								
WRA	**Warramunga Arr**	**36.85 160**		P		**P**	**10 22 30.1**		**+0.6**
	0.9nm,1.2s,baz=342,slow=9.1,SNR=2.7								
ASAR	**Alice Springs**	**40.23 163**		P		**P**	**10 22 57.9**		**+0.2**
	0.2nm,1.0s,baz=338,slow=7.2,SNR=2.5								
MKAR	**Makanchi Array**	**45.71 322**		P		P	10 23 50.8		+8.9
	0.2nm,0.6s,baz=113,slow=9.7,SNR=1.9								

IDC ***12*** *10:28:41.9±0.5, 35˚.50N×140˚.87E, h0km, mb4.0/27, mb1 4.2/32, mb1mx4.1/49, mbtmp4.1/32, ML3.6/3, MS3.7/21, Ms1 3.7/21, ms1mx3.5/46, Error ellipse: s-maj=16.0km s-min=10.6km az=96.0*

MOS ***12*** *10:28:45.8±1.0, 35˚.58N×141˚.12E, h44km, mb4.7/28, Error ellipse: s-maj=10.6km s-min=5.5km az=112.3*

NEIC ***12*** *10:28:46.4±1.5, 35˚.49N±0˚.06×141˚.21E±0˚.09, h37km±6km, mb4.4/42, Error ellipse: s-maj=10.3km s-min=8.1km az=98.0*

JMA ***12*** *10:28:46.4±0.2, 35˚.56N×141˚.05E, h37km±1km, M3.7*

JMA Felt I J1.

NIED ***12*** *10:28:46.5, 35˚.56N×141˚.05E, h37km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr4.47; Mθθ-0.69; Mφφ-3.78; Mrθ0.59; Mθφ-0.36; Mφr5.81; Fault plane solution: M₀7.16000×10¹⁵ NP1:φ₁6.00000°, δ72.00000°, λ90.00000°. NP2:φ₂187.00000°, δ18.00000°, λ91.00000°.*

ISC 12 10:28:46.3±0.4, 35˚.51N±0˚.04×141˚.09E±0˚.05, h33km, n189, σ1ᵖ17/185, mb4.4/59, MS3.8/16, 12C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
CHOJ	**Chosi**	**0.27 317**	⇓	P		**Pn**	**10 28 53.5**		**-0.3**
CHOJ				S		**Sb**	**10 28 58.4**		**-0.2**
JSMT	**Sammumatsuo**	**0.54 285**	⇓	P		**Pb**	**10 28 57.4**		**0.0**
JIHU	**Itakohorinouch**	**0.65 315**		P		**Pb**	**10 28 58.8**		**-0.4**
KTR	**Katsuura**	**0.72 241**	⇓	P		**Pn**	**10 29 00.4**		**+0.3**
JCN	**Nagara**	**0.73 263**	⇓	P		**Pb**	**10 29 01.0**		**+0.5**
BSO4	**Boso 4**	**0.80 230**		P		**Pn**	**10 29 01.7**		**+0.6**
BSO3	**Boso 3**	**0.85 214**		P		**Pn**	**10 29 02.2**		**+0.6**
BSO1	**Boso 1**	**0.86 186**		P		**Pn**	**10 29 02.4**		**+0.9**
JYT	**Yasato**	**1.02 315**	⇓	P		**Pn**	**10 29 03.5**		**-0.7**
JYT	**Yasato**	**1.02 315**				**Pn**	**10 29 04.1**		**-0.1**
JIM2	**Oshima 3**	**1.57 240**		P		**Pn**	**10 29 12.5**		**+0.7**
JIM2				*e*S		**Sn**	**10 29 32.2**		**+1.2**
JAG	**Ashikaga**	**1.61 305**		P		**Pn**	**10 29 12.0**		**-0.4**
JOD2	**Odawara 2**	**1.65 262**		P		**Pn**	**10 29 13.3**		**+0.4**
JMM	**Marumori**	**2.37 354**				**Pn**	**10 29 23.6**		**+0.9**
JSG	**Sagara**	**2.52 252**				**Pn**	**10 29 26.9**		**+2.1**
MJAR	**Matsushiro Arr**	**2.55 295**		Pn		**Pn**	**10 29 26.6**		**+1.3**
	1.4nm,0.3s,baz=102,slow=9.1,SNR=104								
MJAR				LR		LR	10 30 32.8		
	comp=Z,1μm,19.8s,baz=125,slow=47								
MJAR	**Matsushiro Arr**	**2.55 295**		P		**Pn**	**10 29 26.4**		**+1.1**
MJAR	**Matsushiro Arr**	**2.55 295**				**Pn**	**10 29 26.4**		**+1.1**
MAJO	**Matsushiro**	**2.55 295**		*c* iP		**Pn**	**10 29 27.0**		**+1.7**
MAJO	**Matsushiro**	**2.55 295**		Pn		**Pn**	**10 29 27.2**		**+1.9**
MAT	**Matsushiro**	**2.55 295**		P		**Pn**	**10 29 27.0**		**+1.7**
MAT				*e*S		**Sn**	**10 29 52.3**		**-2.9**
MJB9	**Matsu-Tunnel**	**2.56 295**				**Pn**	**10 29 27.4**		**+2.0**
JHJ	**Hachijo jima 2**	**2.62 205**		Pn		**Pn**	**10 29 26.4**		**+0.2**
	31nm,0.3s,baz=306,slow=23,SNR=11								
JHJ				Sn		**Sn**	**10 29 56.0**		**-0.8**
	89nm,0.3s,baz=64,slow=21,SNR=4.3								
JGF	**Kuroka**	**3.04 273**				**Pn**	**10 29 33.9**		**+1.8**
INU	**Inuyama**	**3.33 268**		Pn		**Pn**	**10 29 38.0**		**+2.1**
JSD	**Sado**	**3.39 319**		Pn		**Pn**	**10 29 38.0**		**+1.1**
JWT	**Wachi**	**4.65 269**		Pn		**Pn**	**10 29 55.5**		**+1.4**
JTM	**Tenmabayashi**	**5.27 360**		Pn		**Pn**	**10 30 03.6**		**+1.0**
JHS	**Saijyo**	**6.54 268**		Pn		**Pn**	**10 30 21.5**		**+1.4**
ERM	**Erimo**	**6.70 13**		*i* P		**Pn**	**10 30 22.4**		**+0.2**
ERM	**Erimo**	**6.70 13**		Pn		**Pn**	**10 30 21.8**		**-0.4**
JEW	**Eniwo**	**7.33 2**		Pn		**Pn**	**10 30 31.0**		**+0.1**
JCJ	**Chichijima**	**8.44 173**		Pn		**Pn**	**10 30 45.8**		**-0.4**
	13nm,0.3s,baz=349,slow=20,SNR=12								
JCJ				Sn		**Sn**	**10 32 12.3**		**-8.0**
	9.4nm,0.3s,baz=128,slow=21,SNR=2.5								
JCJ	**Chichijima**	**8.44 173**		Pn		**Pn**	**10 30 45.5**		**-0.7**
JKA	**Kamikawa-asahi**	**8.68 7**		Pn		**Pn**	**10 30 48.9**		**-0.5**
ASAJ	**Asahikawa**	**8.68 7**		Pn		**Pn**	**10 30 48.3**		**-1.1**
	1.3nm,0.3s,baz=202,slow=7.8,SNR=14								
ASAJ				Sn		**Sn**	**10 32 23.5**		**-2.5**
	baz=272,slow=21,SNR=1.9								
ASAJ	**Asahikawa**	**8.68 7**		P		**Pn**	**10 30 48.9**		**-0.5**
JNU	**Nakatsue**	**8.77 257**		LR		LR	10 34 36.3		
	comp=Z,844nm,20.7s,baz=94,slow=41								
KSRS	**Korea Array**	**10.78 284**		Pn		**Pn**	**10 31 20.7**		**+2.6**
	0.2nm,0.3s,baz=93,slow=13,SNR=5.8								
KSRS				LR		LR	10 35 30.1		
	comp=Z,629nm,20.5s,baz=100,slow=38								
KSAR	**Wonju Array Be**	**10.80 284**		P		**Pn**	**10 31 20.2**		**+1.6**
KSAR	**Wonju Array Be**	**10.80 284**				**Pn**	**10 31 20.2**		**+1.6**
USA0B	**Ussuriysk Arra**	**11.14 324**		*i* P		**Pn**	**10 31 22.5**		**-0.6**
USA0B	**Ussuriysk Arra**	**11.14 324**				**Pn**	**10 31 23.4**		**+0.3**
USRK	**Ussuriysk Ar.**	**11.14 324**		Pn		**Pn**	**10 31 21.0**		**-2.1**
	baz=134,slow=12,SNR=14								
USRK				LR		LR	10 35 30.4		
	comp=Z,335nm,19.0s,baz=136,slow=37								
USRK	**Ussuriysk Ar.**	**11.14 324**		P		**Pn**	**10 31 24.0**		**+0.9**
USRK	**Ussuriysk Ar.**	**11.14 324**		Pn		**Pn**	**10 31 24.0**		**+0.9**
YSS	**Yuzh-Sakhalins**	**11.51 6**		*e*P		**Pn**	**10 31 27.2**		**-0.9**
YSS				pmax	pmax				
	comp=Z,10.0nm,0.8s								
YSS				MLR	MLR				
	comp=Z,300nm,14.0s								
KLR	**Kul'dur**	**15.33 336**		Pn		**Pn**	**10 32 20.0**		**-0.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=12,SNR=2.4								
KLR				LR		LR	10 38 14.1		
	comp=Z,225nm,18.9s,baz=149,slow=37								
KLR	**Kul'dur**	**15.33 336**		*i* P		**P**	**10 32 22.2**		**-2.3**
KLR				pmax	pmax				
	comp=Z,12nm,3.3s								
ZEA	**Zeya**	**20.65 336**		*e*P		**P**	**10 33 22.8**		**-0.1**
ZEA				pmax	pmax				
	comp=N,10.0nm,0.6s								
ZEA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
PEA0B	**Petropavlovsk-**	**21.14 29**		P		**P**	**10 33 27.6**		**-0.7**
PEA0B				pmax	pmax				
	comp=Z,17nm,1.2s								
PEA0B	**Petropavlovsk-**	**21.14 29**		P		**P**	**10 33 27.6**		**-0.7**
PEA0B				IAmb	IAmb		10 33 56.3		
	comp=Z,17nm,1.2s								
PETK	**Petropavlovsk-**	**21.14 29**		P		**P**	**10 33 31.3**		**+3.1**
	comp=Z,3.6nm,0.9s,baz=219,slow=4.6,SNR=4.8								
PETK				LR		LR	10 41 42.1		
	comp=Z,86nm,21.6s,baz=218,slow=37								
PETK	**Petropavlovsk-**	**21.14 29**		P		**P**	**10 33 27.3**		**-1.0**
MA2	**Magadan**	**24.90 12**		P		**P**	**10 34 06.4**		**+0.5**
	comp=Z,8.3nm,0.8s,baz=195,slow=9.8,SNR=20								
MA2				LR		LR	10 43 58.2		
	comp=Z,65nm,22.0s,baz=192,slow=37								
MA2	**Magadan**	**24.90 12**	⇑	*e*P		**P**	**10 34 06.4**		**+0.5**
MA2				pmax	pmax				
	comp=Z,12nm,1.0s								
MA2	**Magadan**	**24.90 12**		P		**P**	**10 34 05.8**		**-0.1**
MA2				IAmb	IAmb		10 34 10.0		
	comp=Z,10nm,0.8s								
YAK	**Yakutsk**	**27.50 348**		*i* P		**P**	**10 34 29.4**		**+0.1**
YAK				pmax	pmax				
	comp=Z,14nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**27.63 118**		T		T	11 03 33.7		
	baz=310,slow=75,SNR=81								
H11N1	**WAKE ISLAND Hy**	**27.64 118**		T		T	11 03 35.9		
	baz=310,slow=75,SNR=81								
H11N3	**WAKE ISLAND Hy**	**27.65 118**		T		T	11 03 33.8		
	baz=310,slow=75,SNR=65								
ULN	**Ulaanbaatar**	**28.02 307**		*c*eP		**P**	**10 34 36.1**		**+1.8**
ULN				pmax	pmax				
	comp=Z,5.0nm,1.3s								
H11S1	**WAKE ISLAND Hy**	**28.29 120**		T		T	11 04 22.5		
	baz=312,slow=75,SNR=284								
H11S3	**WAKE ISLAND Hy**	**28.29 120**		T		T	11 04 21.4		
	baz=312,slow=75,SNR=218								
H11S2	**WAKE ISLAND Hy**	**28.31 120**		T		T	11 04 23.4		
	baz=312,slow=75,SNR=202								
SEY	**Seymchan**	**28.34 11**		P		**P**	**10 34 38.4**		**+1.6**
	comp=Z,1.0nm,0.6s,baz=204,slow=8.2,SNR=10								
SEY	**Seymchan**	**28.34 11**		*i* P		**P**	**10 34 37.8**		**+1.1**
SONM	**Songino Array**	**28.45 306**		P		**P**	**10 34 37.7**		**-0.4**
	comp=Z,1.6nm,0.7s,baz=100,slow=8.7,SNR=11								
SONM				LR		LR	10 46 23.2		
	comp=Z,112nm,18.3s,baz=80,slow=38								
SONM	**Songino Array**	**28.45 306**		P		**P**	**10 34 38.6**		**+0.5**
SONM				pmax	pmax				
	comp=Z,1.0nm,0.8s								
SONM	**Songino Array**	**28.45 306**		P		**P**	**10 34 38.5**		**+0.5**
BOD	**Bodaibo**	**28.69 330**		*e*P		**P**	**10 34 39.3**		**-0.7**
BOD				pmax	pmax				
	comp=Z,6.0nm,2.0s								
ZAK	**Zakamensk**	**31.03 310**		*e*P		**P**	**10 34 59.4**		**-1.5**
ZAK				pmax	pmax				
	comp=Z,10.0nm,0.9s								
TLY	**Talaya**	**31.15 313**		P		**P**	**10 35 00.9**		**-0.9**
	comp=Z,0.8nm,0.4s,baz=94,slow=6.3,SNR=1.8								
TLY	**Talaya**	**31.15 313**		*i* P		**P**	**10 35 01.6**		**-0.3**
TLY				pmax	pmax				
	comp=Z,2.0nm,0.8s								
TLY	**Talaya**	**31.15 313**		P		**P**	**10 35 01.8**		**-0.1**
BILL	**Bilibino**	**35.56 16**		*e*P		**P**	**10 35 41.2**		**+1.2**
BILL				*e*			10 37 04.0		
BILL				*e*PPP		PPP	10 37 15.7		
BILL				*e*			10 38 05.8		
BILL				pmax	pmax				
	comp=Z,2.0nm,1.1s								
TIXI	**Tiksi**	**36.77 354**		P		**P**	**10 35 50.7**		**+0.4**
	comp=Z,2.9nm,0.8s,baz=142,slow=6.9,SNR=10								
TIXI	**Tiksi**	**36.77 354**		*i* P		**P**	**10 35 49.6**		**-0.7**
TIXI	**Tiksi**	**36.77 354**		P		**P**	**10 35 50.2**		**-0.1**
TIXI				IAmb	IAmb		10 35 51.6		
	comp=Z,3.7nm,0.8s								
MANU	**Manus Island**	**37.81 170**		P		**P**	**10 36 00.1**		**+0.3**
CM31	**Chiang Mai Arr**	**40.87 257**		P		**P**	**10 36 24.7**		**-0.5**
CMAR	**Chiang Mai Arr**	**40.87 257**		P		**P**	**10 36 24.2**		**-1.0**
	comp=Z,0.8nm,0.8s,baz=42,slow=7.1,SNR=5.8								
CMAR				LR		LR	10 55 06.9		
	comp=Z,114nm,18.4s,baz=126,slow=39								
CMAR	**Chiang Mai Arr**	**40.87 257**		*i* P		**P**	**10 36 27.0**		**+1.7**
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**40.87 257**		P		**P**	**10 36 25.6**		**+0.3**
DGZ	**Jazzator, Alta**	**41.09 307**		*c* iP		**P**	**10 36 28.1**		**+1.2**
DGZ				pmax	pmax				
	comp=Z,18nm,0.9s								
ZAA0	**Zalesovo Array**	**42.76 314**		P		**P**	**10 36 39.7**		**-0.6**
ZALV	**Zalesovo Beam**	**42.76 314**		P		**P**	**10 36 40.1**		**-0.2**
	comp=Z,3.3nm,0.5s,baz=93,slow=7.3,SNR=16								
ZALV				LR		LR	10 53 59.9		
	comp=Z,44nm,21.1s,baz=80,slow=36								
ZALV	**Zalesovo Beam**	**42.76 314**		*i* P		**P**	**10 36 40.5**		**+0.2**
ZALV				pmax	pmax				
	comp=Z,3.0nm,0.5s								
ZALV	**Zalesovo Beam**	**42.76 314**		P		**P**	**10 36 39.9**		**-0.3**
NRIK	**Noril'sk**	**44.55 336**		P		**P**	**10 36 53.9**		**-0.6**
	comp=Z,1.4nm,0.4s,baz=90,slow=5.7,SNR=4.4								
NRIK				LR		LR	10 57 17.6		
	comp=Z,96nm,18.6s,baz=218,slow=39								
NRIK	**Noril'sk**	**44.55 336**		*ce*P		**P**	**10 36 54.8**		**+0.4**
NRIK				pmax	pmax				
	comp=Z,8.0nm,1.3s								
NRIK	**Noril'sk**	**44.55 336**		P		**P**	**10 36 54.5**		**+0.1**
NRIK				IAmb	IAmb		10 36 56.4		
	comp=Z,7.2nm,1.2s								
MK31	**Makanchi Array**	**44.72 303**		*c* iP		**P**	**10 36 56.0**		**-0.2**
MK31	**Makanchi Array**	**44.72 303**		P		**P**	**10 36 56.1**		**-0.1**
MK31				IAmb	IAmb		10 36 57.3		
	comp=Z,5.5nm,1.0s								
MKAR	**Makanchi Array**	**44.72 303**		P		**P**	**10 36 56.3**		**+0.1**
	comp=Z,3.6nm,0.8s,baz=88,slow=9.7,SNR=28								
MKAR				PcP		**PcP**	**10 38 38.3**		**+0.2**
	comp=Z,0.6nm,0.8s,baz=98,slow=5.8,SNR=1.9								
MKAR				LR		LR	10 55 57.9		
	comp=Z,79nm,21.2s,baz=90,slow=37								
MKAR	**Makanchi Array**	**44.72 303**		*i* P		**P**	**10 36 56.5**		**+0.3**
MKAR				pmax	pmax				
	comp=Z,4.0nm,0.8s								
MKAR	**Makanchi Array**	**44.72 303**		P		**P**	**10 36 55.7**		**-0.5**
MAKZ	**Makanchi**	**44.93 303**		P		**P**	**10 36 57.6**		**-0.3**
MAKZ				pmax	pmax				
	comp=Z,5.0nm,1.0s								
MAKZ	**Makanchi**	**44.93 303**		P		**P**	**10 36 57.6**		**-0.3**
MAKZ				IAmb	IAmb		10 36 59.1		
	comp=Z,4.9nm,0.9s								
KURK	**Kurchatov**	**46.68 309**		P		**P**	**10 37 11.8**		**+0.3**
KURK							10 38 44.6		
KURBB	**Kurchatov Arra**	**46.74 309**		P		**P**	**10 37 11.8**		**-0.2**
	comp=Z,6.7nm,0.8s,baz=84,slow=7.9,SNR=29								
KURBB				PcP		**PcP**	**10 38 44.6**		**-0.4**
	comp=Z,0.4nm,0.5s,baz=95,slow=3.3,SNR=1.6								
SOEI	**Soe**	**47.74 203**		P		**P**	**10 37 21.1**		**+0.9**
A21K	**Barrow**	**47.97 23**		P		**P**	**10 37 22.1**		**+0.9**
IMAR	**Indian Mountai**	**48.10 30**		P		**P**	**10 37 21.4**		**-1.0**
COEN	**Coen**	**49.23 177**		P		**P**	**10 37 30.8**		**-0.8**
COEN				IAmb	IAmb		10 37 36.8		
	comp=Z,7.0nm,1.2s								
MLY	**Manley**	**49.28 31**		P		**P**	**10 37 30.9**		**-0.7**
MLY				IAmb	IAmb		10 37 42.5		
	comp=Z,3.4nm,1.1s								
TOLK	**Toolik Lake Re**	**49.95 27**		P		**P**	**10 37 36.7**		**+0.1**
TOLK				IAmb	IAmb		10 38 01.4		
	comp=Z,6.2nm,1.4s								
NEA2	**Nenana**	**49.99 32**		P		**P**	**10 37 36.9**		**0.0**
NEA2				IAmb	IAmb		10 37 49.9		
	comp=Z,7.5nm,1.5s								
MDM	**Murphy Dome**	**50.35 31**		P		**P**	**10 37 39.0**		**-0.6**
MDM				IAmb	IAmb		10 37 55.9		
	comp=Z,8.0nm,1.4s								
IL31		**50.93 32**		P		**P**	**10 37 44.0**		**+0.1**
IL31				IAmb	IAmb		10 38 04.5		
	comp=Z,6.9nm,1.3s								
ILAR	**Eielson Array**	**50.93 32**		P		**P**	**10 37 44.9**		**+0.9**
	comp=Z,0.6nm,0.7s,baz=265,slow=6.0,SNR=9.6								
ILAR	**Eielson Array**	**50.93 32**		P		**P**	**10 37 43.8**		**-0.2**
BRVK	**Borovoye**	**51.47 313**		*ce*P		**P**	**10 37 48.3**		**+0.1**
BRVK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
BRVK	**Borovoye**	**51.47 313**		P		**P**	**10 37

AKASG **Malin Array Be** 75.34 322 P **P** 10 40 25.9 -0.3
comp=Z,2.0nm,0.5s,baz=46,slow=6.2,SNR=14
AKASG LR LR 11 16 09.4
comp=Z,106nm,19.1s,baz=60,slow=38
AKASG Malin Array Be 75.34 322 *i* P **P** 10 40 26.2 +0.1
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 75.34 322 P **P** 10 40 25.5 -0.6
AKBB Malin Array Si 75.34 322 *e* P **P** 10 40 25.5 -0.6
NC204 NORSAR Array S 75.45 338 P **P** 10 40 27.0 +0.3
NC204 IAmb IAmb 10 40 36.2
comp=Z,2.4nm,0.6s
NOA NORSAR Array B 75.49 337 P **P** 10 40 27.4 +0.5
comp=Z,1.9nm,0.7s,baz=40,slow=5.7,SNR=5.9
NOA LR LR 11 16 36.4
comp=Z,72nm,19.6s,baz=5.0,slow=38
NVAR Mina Array Bea 76.12 53 P **P** 10 40 34.2 +3.1
comp=Z,0.2nm,0.5s,baz=305,slow=5.2,SNR=3.6
NVAR LR LR 11 07 20.3
comp=Z,33nm,21.2s,baz=39,slow=30
PDAR Pinedale Array 78.93 45 P **P** 10 40 48.9 +2.1
comp=Z,0.3nm,0.7s,baz=335,slow=1.5,SNR=2.2
PDAR Pinedale Array 78.93 45 P **P** 10 40 45.9 -0.8
BURAR Bucovina Array 79.34 322 P **P** 10 40 48.0 -0.7
BR131 Keskin Array S 79.66 312 *i* P **P** 10 40 51.2 +0.5
BRTR Keskin Array B 79.66 312 P **P** 10 40 51.9 +1.2
comp=Z,1.3nm,0.8s,baz=92,slow=7.4,SNR=6.9
BRTR Keskin Array B 79.66 312 P **P** 10 40 50.4 -0.3
MLR Muntele Rosu 80.38 320 LR LR 11 17 40.7
comp=Z,80nm,18.2s,baz=70,slow=37
CLL Collm 82.28 330 *i* P **P** 10 41 04.6 +0.4
comp=Z,6.0nm,0.9s
CLL *i* 10 41 08.5
CLL Collm 82.28 330 *i* P **P** 10 41 04.6 +0.4
CLL pmax pmax
comp=Z,6.0nm,0.9s
KHC Kasperske Hory 83.70 328 *i* P **P** 10 41 11.2 -0.5
KHC pmax pmax
comp=Z,8.0nm,1.3s
VTS Vitosha 83.76 319 P **P** 10 41 12.9 +0.6
VTS pmax pmax
comp=Z,4.0nm,1.0s
VTS Vitosha 83.76 319 P **P** 10 41 12.8 +0.6
VTS IAmb IAmb 10 41 14.3
comp=Z,4.3nm,1.0s
GERES GERESS Array B 83.86 328 P **P** 10 41 12.1 -0.5
GERES LR LR 11 22 39.3
comp=Z,31nm,20.4s,baz=60,slow=39
DAVOX Davos/Dischmat 87.09 329 LR LR 11 26 07.4
comp=Z,46nm,18.4s,baz=79,slow=40
TXAR Lajitas Array 91.26 52 P **P** 10 41 51.2 +2.5
comp=Z,0.1nm,0.4s,baz=322,slow=2.5,SNR=2.7
TXAR LR LR 11 18 48.9
comp=Z,36nm,20.0s,baz=0.0,slow=33
H03N2 Juan Fernandez 147.10 98 T T 13 32 54.8
baz=289,slow=76,SNR=20
H03N3 Juan Fernandez 147.11 98 T T 13 32 59.0
baz=289,slow=76,SNR=28
H03N1 Juan Fernandez 147.12 98 T T 13 32 54.9
baz=289,slow=76,SNR=24
LPAZ La Paz 147.68 61 PKPbc **PKPab** 10 48 30.4 -0.6
baz=349,slow=4.4
LPAZ La Paz 147.68 61 **PKPab** 10 48 30.6 -0.4

*IDC **12** 11:07:44.4±0.8, 6.01S×103.54E, h0km, mb4.2/21, mb1 4.3/21, mb1mx4.1/61, mbtmp4.2/21, MS3.2/10, Ms1 3.2/10, ms1mx2.9/40, Error ellipse: s-maj=31.6km s-min=12.4km az=50.0*
*NEIC **12** 11:07:47.2±1.8, 6.24S±0.04×103.42E±0.08, h27km±5km, mb4.3/30, Error ellipse: s-maj=11.0km s-min=5.4km az=102.0*
*DJA **12** 11:07:49.1±0.4, 6˚S±4˚×10˚4E±˚, h10km, M4.5/11, mb4.7/4, mB5.4/1, MLv4.5/11, Mw(mB)4.8/1*
ISC 12 11:07:45.1±0.5, **6.18S**±0.05×**103.54E**±0.05, **h10**km, **n116, s109/107, mb4.4/46, MS3.3/8, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.15**	**56**	P		**Pn**	**11 08 07.2**	**-0.1**
KASI				S		**Sg**	**11 08 20.3**	**-2.0**
LWLI	**Liwa**	**1.26**	**24**	P		**Pg**	**11 08 09.5**	**+0.1**
BLSI	**Bandar Lampung**	**1.88**	**65**	P		**Pg**	**11 08 20.5**	**-0.7**
LHSI	**Lahat**	**2.33**	**360**	P		**Pb**	**11 08 26.1**	**-1.2**
KSI	**Kapahiang**	**2.68**	**339**	P		**Pb**	**11 08 30.6**	**-2.6**
DBJI	**Dramaga**	**3.21**	**97**	P		**Pb**	**11 08 40.4**	**-1.9**
CBJI	**Citeko**	**3.30**	**94**	P		**Pb**	**11 08 42.0**	**-1.8**
PMBI	**Palembang**	**3.46**	**21**	Pn		**Pn**	**11 08 39.9**	**+0.8**
LEM	**Lembang**	**4.11**	**99**	Pn		**Pb**	**11 08 54.7**	**-2.9**
	7.2nm,0.3s,baz=151,slow=20,SNR=5.6							
LEM				Sn		**Sn**	**11 09 37.3**	**+1.0**
	8.4nm,0.3s,baz=128,slow=22,SNR=4.3							
LEM				LR		LR	11 10 52.7	
	comp=Z,251nm,18.0s,baz=226,slow=46							
LEM	**Lembang**	**4.11**	**99**	P		**Pb**	**11 08 54.0**	**-3.6**
CISI	**Cisompet, Garu**	**4.46**	**108**			**Pn**	**11 08 54.4**	**+1.5**
JMBI	**JAMBI**	**4.51**	**1**	P		**Pn**	**11 08 54.8**	**+1.2**
XMIS	**Christmas Isla**	**4.76**	**154**	Pn		**Pn**	**11 08 55.4**	**-1.6**
UGM	**Wanagama**	**7.14**	**104**			**Pn**	**11 09 30.9**	**+1.1**
UGM	**Wanagama**	**7.14**	**104**	P		**Pn**	**11 09 32.0**	**+2.2**
	0.3nm50nm,0.6s							
GSI	**Gunungsitoli**	**9.52**	**321**	Pn		**Pn**	**11 10 02.0**	**-0.4**
GSI	**Gunungsitoli**	**9.52**	**321**	P		**Pn**	**11 10 02.3**	**-0.1**
TWSI	**Taliwang, Sumb**	**13.47**	**102**	P		**Pn**	**11 10 57.5**	**+1.0**
KAPI	**Kappang**	**16.18**	**87**	LR		LR	11 18 24.1	
	comp=Z,39nm,18.9s,baz=275,slow=40							
TOLI2	**Tolitoli**	**18.68**	**68**			**Pn**	**11 12 04.9**	**+1.0**
MYLDM	**Lahad Datu**	**18.72**	**53**			**Pn**	**11 12 06.5**	**+2.1**
BATI	**Baumata**	**20.32**	**103**	P		Pn	11 12 23.1	-0.5
	36nm,0.4s,baz=293,slow=3.8,SNR=5.8							
SOEI	**Soe**	**20.83**	**101**	P		**P**	**11 12 27.7**	**+0.4**
SUKH	**Sukhothai**	**23.82**	**351**	P		**P**	**11 12 59.2**	**+0.7**
FITZ	**Fitzroy Crossi**	**24.61**	**121**	P		**P**	**11 13 07.1**	**+1.3**
	6.6nm,0.7s,baz=278,slow=6.8,SNR=25							
FITZ	**Fitzroy Crossi**	**24.61**	**121**	P		**P**	**11 13 07.0**	**+1.2**
FITZ				IAmb		IAmb	11 13 08.9	
	comp=Z,6.4nm,0.8s							
CM04	**Chiang Mai Arr**	**24.83**	**350**	P		**P**	**11 13 07.1**	**-0.7**
	comp=Z,0.0nmcomp=Z,104nmcomp=Z,13nm,0.7s							
CM05	**Chiang Mai Arr**	**24.84**	**350**	P		**P**	**11 13 07.0**	**-0.9**
	comp=Z,0.0nmcomp=Z,59nmcomp=Z,6.7nm,0.7s							
CM01	**Chiang Mai Arr**	**24.86**	**350**	P		**P**	**11 13 07.8**	**-0.2**
	comp=Z,0.0nmcomp=Z,104nmcomp=Z,13nm,0.8s							
CM13	**Chiang Mai Arr**	**24.86**	**349**	P		**P**	**11 13 07.4**	**-0.7**
	comp=Z,0.0nmcomp=Z,80nmcomp=Z,10nm,0.8s							
CM02	**Chiang Mai Arr**	**24.87**	**350**	P		**P**	**11 13 07.0**	**-1.1**
	comp=Z,0.0nmcomp=Z,79nmcomp=Z,11nm,0.8s							
CM09	**Chiang Mai Arr**	**24.87**	**350**	P		**P**	**11 13 07.0**	**-1.2**
	comp=Z,0.0nmcomp=Z,103nmcomp=Z,13nm,0.7s							
CM15	**Chiang Mai Arr**	**24.89**	**350**	P		**P**	**11 13 08.0**	**-0.4**
	comp=Z,0.0nmcomp=Z,161nmcomp=Z,13nm,0.8s							
CM31	**Chiang Mai Arr**	**24.89**	**350**	P		**P**	**11 13 08.2**	**-0.2**
	comp=Z,1.2nmcomp=Z,3µmcomp=Z,346nm,0.7s							
CM31	**Chiang Mai Arr**	**24.89**	**350**	P		**P**	**11 13 07.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**24.89**	**350**	P		**P**	**11 13 07.4**	**-1.0**
	comp=Z,6.0nm,0.7s,baz=181,slow=9.4,SNR=56							
CMAR				LR		LR	11 24 02.7	
	comp=Z,58nm,18.2s,baz=184,slow=40							
CM36	**Chiang Mai Arr**	**24.93**	**350**	P		**P**	**11 13 08.0**	**-0.6**
CM35	**Chiang Mai Arr**	**25.07**	**350**	P		**P**	**11 13 09.0**	**-1.0**
CM32	**Chiang Mai Arr**	**25.10**	**349**	P		**P**	**11 13 10.0**	**-0.2**
CMMT	**Chiang Mai**	**25.24**	**350**	P		**P**	**11 13 09.8**	**-1.7**
	comp=Z,0.0nmcomp=Z,3.4nm,0.8s							
CHTO	**Chiang Mai**	**25.24**	**350**	P		**P**	**11 13 10.6**	**-0.9**
CHTO				IAmb		IAmb	11 13 12.3	
	comp=Z,9.1nm,1.2s							
CM34	**Chiang Mai Arr**	**25.24**	**350**	P		**P**	**11 13 11.0**	**-0.5**
CM33	**Chiang Mai Arr**	**25.25**	**350**	P		**P**	**11 13 10.0**	**-1.5**
KNRA	**Kununurra**	**26.48**	**113**	P		**P**	**11 13 23.4**	**+0.6**
KNRA				IAmb		IAmb	11 13 39.0	
	comp=Z,6.2nm,0.7s							
MTN	**Manton Dam**	**27.99**	**106**	P		**P**	**11 13 36.8**	**+0.4**
MTN				IAmb		IAmb	11 13 50.1	
	comp=Z,3.8nm,0.8s							
NWAO	**Narrogin (SRO)**	**29.51**	**156**	LR		LR	11 24 49.5	
	comp=Z,64nm,20.1s,baz=314,slow=35							
H01W3	**Cape Leeuwin H**	**30.20**	**163**	T		T	11 45 49.8	
	baz=343,slow=76,SNR=12							
H01W2	**Cape Leeuwin H**	**30.21**	**163**	T		T	11 45 51.9	
	baz=343,slow=76,SNR=8.9							
H01W1	**Cape Leeuwin H**	**30.21**	**162**	T		T	11 45 54.9	
	baz=343,slow=76,SNR=12							
H08S2	**Diego Garcia H**	**30.85**	**265**	T		T	11 46 30.2	
	baz=91							
H08S3	**Diego Garcia H**	**30.86**	**265**	T		T	11 46 29.9	
	baz=91							
H08S1	**Diego Garcia H**	**30.87**	**265**	T		T	11 46 28.4	
	baz=91							
WB0	**Warramunga Arr**	**32.88**	**117**	P		**P**	**11 14 20.2**	**+0.6**
WB0				IAmb		IAmb	11 14 33.7	
	comp=Z,5.5nm,1.2s							
WRA	**Warramunga Arr**	**32.89**	**117**	P		**P**	**11 14 20.6**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=288,slow=10.0,SNR=24							
WRA				PcP		**PcP**	**11 17 05.5**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=304,slow=2.0,SNR=10							
WRA	**Warramunga Arr**	**32.89**	**117**	P		**P**	**11 14 20.7**	**+1.0**
WRAB	**Tennant Creek**	**32.90**	**117**	P		**P**	**11 14 20.6**	**+0.8**
WRAB				IAmb		IAmb	11 14 21.6	
	comp=Z,3.6nm,0.7s							
WB2	**Warramunga Arr**	**32.91**	**117**	P		**P**	**11 14 20.4**	**+0.5**
WB2				IAmb		IAmb	11 14 21.5	
	comp=Z,4.3nm,0.8s							
WR0	**Warramunga Arr**	**33.08**	**117**	P		**P**	**11 14 22.3**	**+0.9**
WR0				IAmb		IAmb	11 14 36.6	
	comp=Z,3.8nm,0.6s							
FORT	**Forrest**	**33.59**	**140**	P		**P**	**11 14 26.4**	**+0.7**
AS31	**Alice Springs**	**33.98**	**124**	P		**P**	**11 14 29.6**	**+0.4**
ASAR	**Alice Springs**	**33.98**	**124**	P		**P**	**11 14 30.7**	**+1.5**
	comp=Z,1.7nm,0.8s,baz=300,slow=8.0,SNR=23							
ASAR				PcP		**PcP**	**11 17 08.5**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=296,slow=3.4,SNR=6.4							
ASAR				LR		LR	11 29 31.0	
	comp=Z,43nm,21.6s,baz=320,slow=38							
ASAR	**Alice Springs**	**33.98**	**124**	P		**P**	**11 14 30.3**	**+1.0**
ODAN	**Odare**	**36.38**	**335**	*eP*		**P**	**11 14 50.9**	**+0.9**
	comp=Z,19nm,0.5s							
TAPN	**Taplejung**	**36.68**	**336**	*eP*		**P**	**11 14 53.4**	**+0.8**
	comp=Z,17nm,0.5s							
RAMN	**Ramite**	**36.79**	**334**	*eP*		**P**	**11 14 54.7**	**+1.2**
	comp=Z,13nm,0.6s							
JIRN	**Jiri**	**37.59**	**334**	*eP*		**P**	**11 15 01.3**	**+0.9**
	comp=Z,31nm,0.6s							
PKI	**Pulchoki**	**37.85**	**333**	*eP*		**P**	**11 15 02.8**	**+0.2**
PKIN	**Phulchoki**	**37.86**	**333**	*eP*		**P**	**11 15 02.8**	**+0.1**
	comp=Z,10nm,0.4s							
GUN	**Gumba**	**37.94**	**334**	*eP*		**P**	**11 15 04.1**	**+0.7**
	comp=Z,42nm,0.5s							
GKN	**Gorkha**	**38.57**	**333**	*eP*		**P**	**11 15 09.3**	**+0.8**
KOLN	**Koldanda**	**38.86**	**331**	*eP*		**P**	**11 15 11.6**	**+0.6**
	comp=Z,25nm,0.8s							
JOW	**Kunigami**	**40.63**	**35**	LR		LR	11 32 05.0	
	comp=Z,7.5nm,21.9s,baz=182,slow=36							
STKA	**Stephens Creek**	**43.76**	**131**	P		**P**	**11 15 52.7**	**+1.6**
	comp=Z,5.0nm,0.6s,baz=297,slow=8.3,SNR=15							
STKA	**Stephens Creek**	**43.76**	**131**	P		**P**	**11 15 51.9**	**+0.9**
MANU	**Manus Island**	**43.90**	**87**	P		**P**	**11 15 52.3**	**-0.1**
MANU				IAmb		IAmb	11 16 07.0	
	comp=Z,8.6nm,1.4s							
NIL	**Nilore**	**48.91**	**326**	P		**P**	**11 16 31.8**	**+0.3**
KSAR	**Wonju Array Be**	**48.98**	**26**	P		**P**	**11 16 32.0**	**+0.1**
KSRS	**Korea Array**	**49.01**	**26**	P		**P**	**11 16 32.1**	**0.0**
	comp=Z,2.2nm,0.7s,baz=221,slow=7.4,SNR=11							
KS19	**Wonju Array Si**	**49.03**	**26**	P		**P**	**11 16 31.7**	**-0.6**
JHS	**Saijyo**	**49.55**	**32**	P		**P**	**11 16 37.0**	**+0.6**
WSAR	**Wadi Sarin**	**52.71**	**305**	LR		LR	11 37 37.5	
	comp=Z,29nm,18.6s,baz=164,slow=34							
SONM	**Songino Array**	**53.84**	**2**	P		**P**	**11 17 08.6**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=177,slow=9.0,SNR=23							
SONM	**Songino Array**	**53.84**	**2**	P		**P**	**11 17 08.2**	**-0.1**
SONM				IAmb		IAmb	11 17 20.8	
	comp=Z,2.6nm,0.8s							
MK31	**Makanchi Array**	**56.01**	**343**	P		**P**	**11 17 23.8**	**-0.2**
MK31				IAmb		IAmb	11 17 24.9	
	comp=Z,2.8nm,0.8s							
MKAR	**Makanchi Array**	**56.01**	**343**	P		**P**	**11 17 24.0**	**0.0**
	comp=Z,3.3nm,0.6s,baz=143,slow=8.0,SNR=45							
MKAR	**Makanchi Array**	**56.01**	**343**	P		**P**	**11 17 22.6**	**-1.3**
USRK	**Ussuriysk Ar.**	**56.32**	**24**	P		**P**	**11 17 26.2**	**0.0**
	comp=Z,2.4nm,0.6s,baz=218,slow=6.5,SNR=9.2							
USRK	**Ussuriysk Ar.**	**56.32**	**24**	P		**P**	**11 17 25.4**	**-0.8**
KKAR	**Karatay Array**	**57.47**	**332**	P		**P**	**11 17 33.1**	**-1.2**
KLR	**Kul'dur**	**60.42**	**21**	P		**P**	**11 17 54.4**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=231,slow=6.2,SNR=5.6							
KURBB	**Kurchatov Arra**	**60.56**	**342**	P		**P**	**11 17 55.5**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=159,slow=6.4,SNR=3.6							
ZAA0	**Zalesovo Array**	**61.94**	**348**	P		**P**	**11 18 04.3**	**-0.6**
ZALV	**Zalesovo Beam**	**61.94**	**348**	P		**P**	**11 18 04.3**	**-0.6**
	comp=Z,5.9nm,0.6s,baz=156,slow=4.8,SNR=26							
ZALV				LR		LR	11 48 06.6	
	comp=Z,32nm,18.0s,baz=89,slow=39							
ZALV	**Zalesovo Beam**	**61.94**	**348**	P		**P**	**11 18 03.8**	**-1.1**
BVAR	**Borovoye Array**	**65.31**	**339**	P		**P**	**11 18 26.2**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=140,slow=18,SNR=12							
BRVK	**Borovoye**	**65.38**	**339**	P		**P**	**11 18 27.4**	**-0.2**
BRVK				IAmb		IAmb	11 18 29.0	
	comp=Z,2.3nm,0.7s							
ABKAR	**Akbulak array**	**66.98**	**331**	P		**P**	**11 18 38.2**	**+0.2**
ABKAR	**Akbulak array**	**66.98**	**331**	P		**P**	**11 18 38.3**	**+0.3**
MAW	**Mawson**	**67.19**	**196**	LR		LR	11 45 05.7	
	comp=Z,34nm,19.7s,baz=112,slow=33							
AKTO	**Aktyubinsk**	**68.70**	**331**	P		**P**	**11 18 49.7**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=124,slow=11,SNR=2.2							
ARU	**Arti**	**72.43**	**336**	P		**P**	**11 19 10.9**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=145,slow=8.4,SNR=3.1							
BKZ	**Black Stump Fm**	**72.92**	**129**	P		**P**	**11 19 14.3**	**-0.6**
BRTR	**Keskin Array B**	**76.73**	**312**	P		**P**	**11 19 49.1**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=124,slow=6.1,SNR=4.1							
TIXI	**Tiksi**	**79.44**	**8**	P		**P**	**11 19 49.3**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=297,slow=2.3,SNR=1.5							
TIXI	**Tiksi**	**79.44**	**8**	P		**P**	**11 19 50.6**	**-0.6**
TIXI				IAmb		IAmb	11 20 02.5	
	comp=Z,1.8nm,0.8s							
AKASG	**Malin Array Be**	**84.92**	**322**	P		**P**	**11 20 20.7**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=88,slow=4.6,SNR=4.8							
AKASG	**Malin Array Be**	**84.92**	**322**	P		**P**	**11 20 19.0**	**-1.4**
MLR	**Muntele Rosu**	**85.74**	**316**	P		**P**	**11 20 25.1**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=169,slow=9.1,SNR=3.4							
MLR	**Muntele Rosu**	**85.74**	**316**	P		**P**	**11 20 24.5**	**-0.3**
MLR				IAmb		IAmb	11 20 29.1	
	comp=Z,2.2nm,0.8s							
BUR08	**Bucovina Ar. S**	**86.72**	**318**	P		**P**	**11 20 27.6**	**-2.0**
FINES	**FINESS Array B**	**89.43**	**332**	P		**P**	**11 20 43.6**	**+1.6**
	comp=Z,1.6nm,0.8s,baz=126,slow=3.7,SNR=7.3							
NOA	**NORSAR Array B**	**96.49**	**331**	LR		LR	12 09 26.3	
	comp=Z,9.4nm,18.9s,baz=310,slow=38							
BDFB	**Brasilia**	**144.45**	**232**	PKP		**PKPdf**	**11 27 23.2**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=5.7,slow=2.5,SNR=3.4							
BDFB	**Brasilia**	**144.45**	**232**			**PKPdf**	**11 27 23.0**	**+0.1**
TXAR	**Lajitas Array**	**145.51**	**45**	PKPbc		**PKPab**	**11 27 25.5**	**+0.8**
	comp=Z,2.2nm,0.5s,baz=260,slow=1.0,SNR=48							
TXAR	**Lajitas Array**	**145.51**	**45**	PKPdf		**PKPbc**	**11 27 24.0**	**-0.5**

*HEL **12** 11:11:00.8±0.3, 66.62N×13.17E, h10km, ML2.3, ML2.2(UPP), Confirmed Earthquake*
*NAO **12** 11:11:00.3±0.7, 66.69N×13.44E, ML2.1*
*BER **12** 11:11:01.5±1.1, 66.65N×13.43E, h2km±18km, ML1.7, ML2.3(HEL), Confirmed Earthquake*
*UPP **12** 11:11:02.8±2.1, 66.57N×13.72E, h0km, ML2.2, Suspected explosion*
*IDC **12** 11:11:03.8±1.7, 66.64N×14.01E, h0km, mb1 3.1/4, mb1mx2.9/64, mbtmp3.0/4, ML1.8/4, Error ellipse: s-maj=20.6km s-min=12.0km az=116.0*
ISC 12 11:11:01.3±0.9, **66.64N**±0.01×**13.53E**±0.02, **h9**km±6km, **n98, s77/148, 2C, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NBB13	**Alf Garage**	**0.08**	**261**	*eP*		Pg	11 10 50.9	-12
NBB13				*eS*		Sg	11 10 51.8	-13
NBB13				IAML			11 10 52.6	
	comp=Z,4.4nm,0.2s							
NBB15	**Halsa Church**	**0.11**	**11**	*eP*		**Pg**	**11 11 03.3**	**-0.5**
NBB15				*eS*		**Sg**	**11 11 04.8**	**-0.8**
NBB15				IAML			11 11 05.0	
	comp=Z,410nm,0.1s							
KONS	**Konsvik**	**0.21**	**229**	Pg		**Pg**	**11 11 04.9**	**-0.7**
KONS				Lg		Lg	11 11 07.7	
KONS	**Konsvik**	**0.21**	**229**	*eP*		**Pg**	**11 11 04.9**	**-0.7**
KONS				*eS*		**Sg**	**11 11 07.8**	**-0.8**
KONS				IAML			11 11 08.1	
	comp=Z,259nm,0.3s							
NBB40	**Tonnes**	**0.24**	**239**	*iP*		**Pg**	**11 11 05.3**	**-0.9**
NBB40				*eS*		**Sg**	**11 11 08.3**	**-1.1**
NBB40				IAML			11 11 09.4	
	comp=Z,248nm,0.2s							
NBB17	**Glomfjord BYr**	**0.25**	**44**	*eP*		**Pg**	**11 11 06.2**	**-0.1**
NBB17	**Glomfjord BYr**	**0.25**	**44**	*eS*		**Sg**	**11 11 09.9**	**+0.3**
NBB17	**Glomfjord BYr**	**0.25**	**44**	IAML			11 11 13.3	
	comp=Z,245nm,0.1s							
NBB30	**Finnes**	**0.34**	**14**	*eP*		**Pg**	**11 11 07.6**	**-0.5**
NBB30				*eS*		**Sg**	**11 11 12.2**	**-0.4**
NBB14	**Nordeng Farm**	**0.35**	**193**	*iP*		**Pg**	**11 11 07.8**	**-0.3**
NBB14	**Nordeng Farm**	**0.35**	**193**	*eS*		**Sg**	**11 11 12.4**	**-0.3**
NBB14				IAML			11 11 13.1	
	comp=Z,176nm,0.2s							
STOK	**Stokkvaagen**	**0.37**	**214**	Pg		**Pg**	**11 11 07.9**	**-0.6**
STOK				Lg		Lg	11 11 13.0	
STOK	**Stokkvaagen**	**0.37**	**214**	*eP*		**Pg**	**11 11 07.9**	**-0.6**
STOK				*eS*		**Sg**	**11 11 12.9**	**-0.5**
NBB05	**Inndyr**	**0.45**	**26**	*eP*		**Pg**	**11 11 10.2**	**+0.2**
NBB05	**Inndyr**	**0.45**	**26**	*eS*		**Sg**	**11 11 15.8**	**0.0**
NBB05				IAML			11 11 17.7	
	comp=Z,110nm,0.1s							
MOR8	**Moi Rana**	**0.60**	**142**	Pg		**Pg**	**11 11 12.5**	**-0.3**
MOR8				Lg		Lg	11 11 20.9	
MOR8	**Moi Rana**	**0.60**	**142**	*eP*		**Pg**	**11 11 12.5**	**-0.3**
MOR8				*eS*		**Sg**	**11 11 20.9**	**+0.3**
MOR8				IAML			11 11 22.6	
	comp=Z,52nm,0.7s							
NBB28	**Valnes**	**0.67**	**33**	*eP*		**Pg**	**11 11 13.5**	**-0.7**
NBB28	**Valnes**	**0.67**	**33**	*eS*		**Sg**	**11 11 22.3**	**-0.5**
NBB28				IAML			11 11 27.2	
	comp=Z,31nm,0.3s							
NBB03	**Karbol**	**0.74**	**50**	*eP*		**Pg**	**11 11 14.8**	**-0.6**
NBB03	**Karbol**	**0.74**	**50**	*eS*		**Sg**	**11 11 24.6**	**-0.4**
NBB03				IAML			11 11 26.0	
	comp=Z,38nm,0.2s							
NBB29	**Rokland skole**	**0.80**	**63**	*eP*		**Pg**	**11 11 16.7**	**+0.1**
NBB29	**Rokland skole**	**0.80**	**63**	*eS*		**Sb**	**11 11 28.8**	**+0.7**
NBB29				IAML			11 11 39.5	
	comp=Z,219nm,0.2s							
NBB08	**Skaug oppvekst**	**0.87**	**30**	*eP*		**Pg**	**11 11 17.9**	**0.0**
NBB08	**Skaug oppvekst**	**0.87**	**30**	*eS*		**Sg**	**11 11 28.6**	**-0.6**
NBB08				IAML			11 11 36.8	
	comp=Z,91nm,0.1s							
FAUS	**Fauske**	**1.02**	**42**	*eP*		**Pg**	**11 11 19.4**	**-1.4**
FAUS				*eS*		**Sg**	**11 11 34.3**	**+0.3**
FAUS				IAML			11 11 39.8	
	comp=Z,21nm,0.1s							
N2RO	**R¸st**	**1.04**	**329**	*eP*		**Pg**	**11 11 19.2**	**-2.1**
N2RO				*eS*		**Sg**	**11 11 32.5**	**-2.2**
N2VA	**Vr¸y**	**1.08**	**343**	*eP*		**Pg**	**11 11 20.8**	**-1.1**
N2VA				*eS*		**Sg**	**11 11 34.9**	**-1.1**
N2ST	**Straumen**	**1.08**	**48**	*eS*		**Sb**	**11 11 36.9**	**+0.6**
N2TV	**TYrnvik**	**1.12**	**33**	*eP*		**Pg**	**11 11 22.0**	**-0.8**
N2TV				*eS*		**Sb**	**11 11 38.1**	**+0.6**
N2TV				IAML			11 11 45.3	
	comp=Z,22nm,0.3s							
N2SV	**S¸rvYgen**	**1.27**	**351**	*ePg*		**Pg**	**11 11 23.3**	**-2.4**
N2SV				*eS*		**Sg**	**11 11 38.9**	**-3.3**
N2SV				*eSg*		**Sb**	**11 11 41.6**	**-0.3**
N2SV				IAML			11 11 43.6	
	comp=Z,15nm,0.3s							
N2NF	**Nordfold**	**1.31**	**30**	*ePg*		**Pg**	**11 11 24.9**	**-1.4**
N2NF				*eSg*		**Sb**	**11 11 44.0**	**+1.1**
N2NF				IAML			11 11 47.1	
	comp=Z,18nm,0.2s							
STEI	**Steigen**	**1.46**	**26**	*eP*		**Pn**	**11 11 27.5**	**-0.2**
STEI				*eS*		**Sg**	**11 11 47.6**	**-0.5**
STEI				*e*			11 11 49.8	
STEI				IAML			11 11 51.2	
	comp=Z,16nm,0.4s							
STEI	**Steigen**	**1.46**	**26**	*eP*		**Pn**	**11 11 27.3**	**-0.4**
STEI				*eS*		**Sg**	**11 11 47.8**	**-0.3**
LOF	**Lofoten**	**1.50**	**0**	Pg		**Pn**	**11 11 26.1**	**-2.3**
LOF				Lg		Lg	11 11 44.6	
LOF	**Lofoten**	**1.50**	**0**	*eP*		**Pn**	**11 11 26.4**	**-1.9**
LOF				*eS*		**Sb**	**11 11 44.6**	**-3.7**
LOF				IAML			11 11 52.5	
	comp=Z

TOF				MSN			11 13 01.9	
	comp=Z,1.6nm,0.2s							
TOF				eSG		Sg	**11 13 20.6**	**-1.3**
HEMU	**Hemsoen**	**4.43**	**152**	*eP*		**Pn**	**11 12 09.1**	**+0.6**
HEMU				eSG		**Sg**	**11 13 19.2**	**-4.0**
OBF0	**Syolatti, Pyha**	**4.94**	**111**	*eS*		**Sn**	**11 13 11.4**	**-1.3**
OBF0				MSN			11 13 15.2	
	comp=Z,1.5nm,0.2s							
OBF0	**Syolatti, Pyha**	**4.94**	**111**	*eS*		**Sn**	**11 13 11.4**	**-1.3**
OBF0				MSN			11 13 15.2	
	comp=Z,1.5nm,0.2s							
RNF	**Rovaniemi**	**4.97**	**85**	*eS*		**Sn**	**11 13 13.5**	**-0.1**
RNF				eSG		**Sg**	**11 13 37.2**	**-3.6**
RNF	**Rovaniemi**	**4.97**	**85**	*eS*		**Sn**	**11 13 13.5**	**-0.1**
RNF				eSG		**Sg**	**11 13 37.2**	**-3.6**
OUF	**Merijarvi**	**5.19**	**111**	*eS*		**Sn**	**11 13 18.0**	**-0.9**
OUF				MSN			11 13 21.3	
	comp=Z,0.7nm,0.1s							
OUF	**Merijarvi**	**5.19**	**111**	*eS*		**Sn**	**11 13 18.0**	**-0.9**
OUF				MSN			11 13 21.3	
	comp=Z,0.7nm,0.1s							
VAF	**Ylistaro**	**5.31**	**129**	*eP*		**Pn**	**11 12 21.6**	**+0.9**
VAF				eS		**Sn**	**11 13 21.3**	**-0.7**
VAF				MSN			11 13 26.4	
	comp=Z,1.0nm,0.1s							
VAF				eSG		**Sg**	**11 13 45.6**	**-6.1**
VAF	**Ylistaro**	**5.31**	**129**	*eP*		**Pn**	**11 12 21.6**	**+0.9**
VAF				eS		**Sn**	**11 13 21.3**	**-0.7**
VAF				MSN			11 13 26.4	
	comp=Z,1.0nm,0.1s							
VAF				eSG		**Sg**	**11 13 45.6**	**-6.1**
ARA0	**ARCESS Array S**	**5.34**	**52**	Pn		**Pn**	**11 12 19.5**	**-1.6**
	baz=233,slow=14							
ARA0				Sn		**Sn**	**11 13 21.2**	**-1.5**
	baz=235,slow=22							
ARCES	**ARCESS Array B**	**5.34**	**52**	Pn		**Pn**	**11 12 21.1**	**0.0**
	baz=235,slow=11,SNR=6.4							
ARCES				Sn		**Sn**	**11 13 20.5**	**-2.2**
	baz=238,slow=22,SNR=2.2							
NOA	**NORSAR Array B**	**5.71**	**191**	Pn		**Pn**	**11 12 30.3**	**+4.0**
	comp=Z,0.0nm,0.3s,baz=14,slow=13,SNR=1.6							
NOA				Lg		Lg	11 13 53.6	
	comp=Z,0.0nm,0.3s,baz=34,slow=15,SNR=1.4							
NRA0	**NORESS Array S**	**5.99**	**189**	Pn		**Pn**	**11 12 30.9**	**+0.8**
	baz=10.0,slow=16							
HFS	**Hagfors**	**6.53**	**179**	Pn		**Pn**	**11 12 38.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=3.2,slow=13,SNR=1.7							
HFS				Lg		Lg	11 14 22.4	
	comp=Z,0.2nm,0.3s,baz=23,slow=27,SNR=1.2							
HFS	**Hagfors**	**6.53**	**179**	Pn		**Pn**	**11 12 38.8**	**+1.3**
	baz=9.5,slow=12							
FIA0	**FINESS Array S**	**7.57**	**128**	Pn		**Pn**	**11 12 51.9**	**+0.2**
	baz=317,slow=12							
FINES	**FINESS Array B**	**7.57**	**128**	Pn		**Pn**	**11 12 51.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=320,slow=13,SNR=1.9							
FINES				Sn		**Sn**	**11 14 15.2**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=321,slow=24,SNR=1.6							
FINES				Lg		Lg	11 14 54.5	
	comp=Z,0.3nm,0.3s,baz=322,slow=25,SNR=5.8							

IDC ***12*** *11:14:45.2±2.6, 46.91N×152.80E, h86km±22km, mb3.3/7, mb1 3.4/13, mb1mx3.2/60, mbtmp3.7/13, MS2.7/1, Ms1 2.7/1, ms1mx2.1/21, Error ellipse: s-maj=33.6km s-min=15.9km az=122.0*

ISC 12 11:14:46.0±1.6, 46.9N±0.2×152.6E±0.2, h100km, n24, σ1§32/13, mb3.5/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.98**	**26**	P		**Pn**	**11 16 24.1**	**-1.3**
	0.1nm,0.3s,baz=201,slow=9.7,SNR=5.0							
PETK				S		**Sn**	**11 17 43.2**	**0.0**
	baz=192,slow=14,SNR=1.5							
ASAJ	**Asahikawa**	**7.59**	**252**	P		**Pn**	**11 16 33.5**	**-0.3**
	0.5nm,0.3s,baz=226,slow=4.2,SNR=6.9							
MA2	**Magadan**	**12.70**	**356**	P		**Pn**	**11 17 42.8**	**+0.1**
	0.5nm,0.3s,baz=183,slow=10,SNR=4.8							
KLR	**Kul'dur**	**14.14**	**287**	P		**P**	**11 18 04.2**	**-1.8**
	0.4nm,0.3s,baz=215,slow=6.2,SNR=13							
MJAR	**Matsushiro Arr**	**14.94**	**231**	P		**P**	**11 18 14.3**	**-0.6**
	0.0nm,0.3s,baz=45,slow=8.8,SNR=4.1							
SEY	**Seymchan**	**16.03**	**360**	P		**P**	**11 18 24.9**	**-1.9**
	0.0nm,0.3s,baz=163,slow=18,SNR=1.0							
KSRS	**Korea Array**	**20.54**	**251**	P		Pn	11 19 18.4	-1.1
	0.8nm,0.7s,baz=66,slow=9.7,SNR=4.2							
H11N2	**WAKE ISLAND Hy**	**29.54**	**152**	T		T	11 52 00.6	
	baz=340,slow=76,SNR=132							
H11N1	**WAKE ISLAND Hy**	**29.56**	**152**	T		T	11 52 01.6	
	baz=340,slow=76,SNR=104							
H11N3	**WAKE ISLAND Hy**	**29.56**	**152**	T		T	11 52 01.7	
	baz=340,slow=76,SNR=98							
H11S1	**WAKE ISLAND Hy**	**30.63**	**153**	T		T	11 53 21.0	
	baz=341,slow=77,SNR=133							
H11S3	**WAKE ISLAND Hy**	**30.64**	**153**	T		T	11 53 27.9	
	baz=341,slow=76,SNR=137							
H11S2	**WAKE ISLAND Hy**	**30.65**	**153**	T		T	11 53 24.6	
	baz=341,slow=76,SNR=147							
TLY	**Talaya**	**31.80**	**297**	LR		LR	11 34 35.2	
	comp=Z,11nm,18.6s,baz=154,slow=37							
MKAR	**Makanchi Array**	**46.56**	**297**	P		**P**	**11 23 04.6**	**+1.1**
	0.1nm,0.5s,baz=54,slow=8.0,SNR=2.2							
KURBB	**Kurchatov Arra**	**47.08**	**303**	P		**P**	**11 23 08.1**	**+0.8**
	0.3nm,0.6s,baz=50,slow=6.2,SNR=2.2							
YKA	**Yellowknife Ar**	**50.97**	**37**	PcP		**PcP**	**11 24 52.0**	**+0.4**
	0.1nm,0.5s,baz=304,slow=3.4,SNR=2.0							
FINES	**FINESS Array B**	**63.72**	**335**	P		**P**	**11 25 07.8**	**+1.4**
	0.8nm,0.3s,baz=30,slow=6.1,SNR=11							
NOA	**NORSAR Array B**	**67.94**	**341**	P		**P**	**11 25 35.2**	**+1.6**
	0.8nm,0.7s,baz=45,slow=6.9,SNR=1.5							
AKASG	**Malin Array Be**	**71.20**	**326**	P		**P**	**11 25 54.9**	**+1.2**
	0.6nm,0.3s,baz=38,slow=6.2,SNR=5.1							
ASAR	**Alice Springs**	**72.29**	**198**	P		P	11 26 01.1	+0.7
	0.3nm,0.6s,baz=14,slow=5.3,SNR=6.7							
H03N2	**Juan Fernandez**	**139.08**	**90**	T		T	14 09 27.7	
	baz=308,slow=77,SNR=12							
H03N1	**Juan Fernandez**	**139.10**	**90**	T		T	14 09 25.3	
	baz=308,slow=77,SNR=17							
H03N3	**Juan Fernandez**	**139.10**	**90**	T		T	14 09 29.1	
	baz=308,slow=77,SNR=17							

TUL ***12*** *12:10:35.5±0.9, 36.72N±0.01×97.93W±0.02, h7km±7km, ML3.2, mb_Lg3.1/77(NEIC), Error ellipse: s-maj=2.5km s-min=1.8km az=94.0*

ANF ***12*** *12:10:35.5±0.6, 36.71N×97.94W, h5km±4km, ML3.8/18, Error ellipse: s-maj=3.1km s-min=2.5km az=41.0*

NEIC ***12*** *12:10:35.5±0.7, 36.71N±0.01×97.92W±0.02, h6km±4km, Error ellipse: s-maj=1.9km s-min=1.8km az=48.0*

ISC 12 12:10:35.4±1.0, 36.71N±0.02×97.92W±0.02, h8km±8km, n136, σ0§51/154, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GC02	**Grant County #**	**0.15**	**19**	Pg		**Pg**	**12 10 38.8**	**+0.2**
GC02				Sg		**Sg**	**12 10 40.9**	**+0.1**
OK032	**Salt Plains WL**	**0.25**	**293**	Pg		**Pg**	**12 10 40.5**	**+0.1**
OK032				Sg		**Sg**	**12 10 43.8**	**0.0**
KAN14	**Manchester OK**	**0.25**	**353**	Pg		**Pg**	**12 10 40.6**	**+0.1**
KAN14				Sg		**Sg**	**12 10 44.0**	**+0.1**
KAN05	**Bluff City Nor**	**0.41**	**6**	Pg		**Pg**	**12 10 43.4**	**+0.1**
KAN05				Sg		**Sg**	**12 10 48.8**	**+0.1**
KAN10	**Anthony SW Sta**	**0.44**	**342**	Pg		**Pg**	**12 10 44.0**	**0.0**
KAN10				Sg		**Sg**	**12 10 49.5**	**-0.3**
KAN01	**Argonia South**	**0.47**	**16**	Pg		**Pg**	**12 10 44.5**	**+0.1**
KAN01				Sg		**Sg**	**12 10 50.5**	**-0.1**
KAN13	**South Haven SW**	**0.47**	**49**	Pg		**Pg**	**12 10 44.7**	**+0.1**
KAN13				Sg		**Sg**	**12 10 50.7**	**-0.1**
KAN09	**Caldwell North**	**0.49**	**29**	Pg		**Pg**	**12 10 45.0**	**0.0**
KAN09				Sg		**Sg**	**12 10 51.4**	**-0.1**
KAN08	**Anthony NE Sta**	**0.52**	**356**	Pg		**Pg**	**12 10 45.5**	**0.0**
KAN08				Sg		**Sg**	**12 10 52.3**	**0.0**
KAN12	**Harper NE Stat**	**0.59**	**354**	Pg		**Pg**	**12 10 46.8**	**-0.1**
KAN12				Sg		**Sg**	**12 10 54.3**	**-0.3**
U32A	**Winter Ranch,**	**0.93**	**250**			**Pg**	**12 10 53.1**	**-0.1**
U32A				Sg		**Sg**	**12 11 05.2**	**-0.1**
U32A	**Winter Ranch,**	**0.93**	**250**	P		**Pg**	**12 10 53.1**	**-0.1**
	baz=68,SNR=19							
U32A	**Winter Ranch,**	**0.93**	**250**	P			12 10 53.1	
	baz=68,SNR=19							
OK029	**Liberty Lake**	**0.98**	**157**			**Pg**	**12 10 54.2**	**-0.1**
OK029				Sg		**Sg**	**12 11 07.1**	**+0.1**
BCOK	**Bluff Creek, N**	**1.08**	**166**			**Pg**	**12 10 55.6**	**-0.4**
BCOK				Sg		**Sg**	**12 11 10.2**	**+0.2**
QUOK	**Quay**	**1.11**	**118**	Pg		**Pg**	**12 10 56.6**	**-0.2**
QUOK				Sg		**Sg**	**12 11 11.1**	**-0.2**
T35A	**Sooner Cattle**	**1.15**	**79**	Pg		**Pg**	**12 10 57.2**	**-0.3**
T35A				Sg		**Sg**	**12 11 12.3**	**-0.1**
T35B	**Sooner Cattle**	**1.15**	**79**	P		**Pg**	**12 10 57.2**	**-0.3**
	baz=261							
T35B				S		**Sg**	**12 11 12.6**	**+0.1**
	baz=261							
T35B	**Sooner Cattle**	**1.15**	**79**	P			12 10 57.2	
	baz=261							
T35B				S			12 11 12.6	
	baz=261							
OK031	**S. Brethren Rd**	**1.15**	**130**			**Pg**	**12 10 57.2**	**-0.3**
OK031				Sg		**Sg**	**12 11 12.5**	**0.0**
OK009	**Oakdale Elemen**	**1.19**	**160**	Pg		**Pg**	**12 10 58.3**	**0.0**
OK009				Sg		**Sn**	**12 11 15.0**	**+0.1**
OK030	**Cody Creek RV**	**1.20**	**130**			**Pg**	**12 10 58.0**	**-0.4**
OK030				Sg		**Sg**	**12 11 13.9**	**-0.2**
OK025	**Westminster Rd**	**1.22**	**157**	Pn		**Pg**	**12 10 58.6**	**-0.2**
OK025				Sg		**Sg**	**12 11 14.6**	**+0.1**
OKCFA	**Oklahoma City**	**1.34**	**163**	Pn		**Pn**	**12 11 00.9**	**+0.4**
OKCFA	**Oklahoma City**	**1.34**	**163**	P		**Pn**	**12 11 00.4**	**-0.1**
	baz=344,SNR=17							
OKCFA				S		**Sn**	**12 11 19.3**	**+0.7**
	baz=344							
OKCFA	**Oklahoma City**	**1.34**	**163**	P			12 11 00.4	
	baz=344,SNR=17							
OKCFA				S			12 11 19.3	
	baz=344							
R32A	**Long Quarter,**	**1.82**	**340**	Pn		**Pn**	**12 11 07.4**	**+0.3**
R32A	**Long Quarter,**	**1.82**	**340**	P		**Pn**	**12 11 07.9**	**+0.7**
	baz=160,SNR=39							
R32A				S		**Sb**	**12 11 32.5**	**+0.4**
	baz=160							
R32A	**Long Quarter,**	**1.82**	**340**	P			12 11 07.9	
	baz=160,SNR=39							
R32A				S			12 11 32.5	
	baz=160							
TUL1	**Leonard**	**1.90**	**114**	P		**Pn**	**12 11 08.5**	**+0.4**
	baz=296,SNR=48							
TUL1				S		**Sb**	**12 11 34.7**	**+0.5**
	baz=296							
TUL1	**Leonard**	**1.90**	**114**	P			12 11 08.5	
	baz=296,SNR=48							
TUL1				S			12 11 34.7	
	baz=296							
WMOK	**Wichita Mounta**	**2.08**	**200**	Pn		**Pn**	**12 11 11.2**	**+0.5**
WMOK				lAmb_Lg			12 11 40.4	
	comp=Z,72nm,0.8s							
WMOK	**Wichita Mounta**	**2.08**	**200**	P		**Pn**	**12 11 11.6**	**+0.9**
	baz=19,SNR=98							
WMOK	**Wichita Mounta**	**2.08**	**200**	P			12 11 11.6	
	baz=19,SNR=98							
X34A	**Smith Ranch, M**	**2.10**	**178**	Pn		**Pn**	**12 11 11.8**	**+0.8**
X34A				lAmb_Lg			12 11 43.4	
	comp=Z,109nm,0.9s							
CBKS	**Cedar Bluff**	**2.55**	**326**	Pn		**Pn**	**12 11 17.2**	**+0.1**
CBKS				lAmb_Lg			12 12 01.8	
	comp=Z,58nm,0.8s							
CBKS	**Cedar Bluff**	**2.55**	**326**	S		**Sn**	**12 11 49.0**	**+0.6**
	baz=145							
CBKS	**Cedar Bluff**	**2.55**	**326**	S			12 11 49.0	
	baz=145							
KSU1	**Kansas State U**	**2.61**	**23**			**Pn**	**12 11 18.4**	**+0.5**
KSU1				lAmb_Lg			12 12 02.3	
	comp=Z,88nm,0.9s							
KSU1	**Kansas State U**	**2.61**	**23**	P		**Pn**	**12 11 18.9**	**+0.9**
	baz=204							
KSU1	**Kansas State U**	**2.61**	**23**	P			12 11 18.9	
	baz=204							
U38A	**Gravette**	**2.86**	**94**	Pn		**Pn**	**12 11 22.2**	**+0.8**
U38A	**Gravette**	**2.86**	**94**	P		**Pn**	**12 11 22.9**	**+1.5**
	baz=277							
U38A	**Gravette**	**2.86**	**94**	P			12 11 22.9	
	baz=277							
X37A	**Clayton**	**2.96**	**135**	Pn		**Pn**	**12 11 23.5**	**+0.7**
X37A				lAmb_Lg			12 12 15.9	
	comp=Z,72nm,0.9s							
X37A	**Clayton**	**2.96**	**135**	P		**Pn**	**12 11 23.8**	**+1.0**
	baz=316,SNR=46							
X37A	**Clayton**	**2.96**	**135**	P			12 11 23.8	
	baz=316,SNR=46							
HHAR	**Hobbs**	**3.24**	**96**			**Pn**	**12 11 27.2**	**+0.6**
HHAR				lAmb_Lg			12 12 25.2	
	comp=Z,44nm,0.8s							
HHAR	**Hobbs**	**3.24**	**96**	P		**Pn**	**12 11 27.8**	**+1.3**
	baz=279							
HHAR	**Hobbs**	**3.24**	**96**	P			12 11 27.8	
	baz=279							
Z35A	**Perchaven, San**	**3.41**	**171**	Pn		**Pn**	**12 11 29.1**	**+0.2**
AMTX	**Amarillo**	**3.56**	**240**	Pn		**Pn**	**12 11 31.2**	**+0.2**
AMTX				lAmb_Lg			12 12 36.4	
	comp=Z,46nm,0.8s							
W39A	**Magazine**	**3.68**	**113**	Pn		**Pn**	**12 11 32.6**	**0.0**
W39A				lAmb_Lg			12 12 39.9	
	comp=Z,40nm,0.8s							
W39A	**Magazine**	**3.68**	**113**	S		**Sn**	**12 12 17.1**	**+0.9**
	baz=296							
W39A	**Magazine**	**3.68**	**113**	S			12 12 17.1	
	baz=296							
S39A	**Bolivar**	**3.80**	**74**			**Pn**	**12 11 35.0**	**+0.7**
S39A	**Bolivar**	**3.80**	**74**	P		**Pn**	**12 11 35.2**	**+0.8**
	baz=257,SNR=16							
S39A	**Bolivar**	**3.80**	**74**	P			12 11 35.2	
	baz=257,SNR=16							
N33B	**J Bar K, Exete**	**4.04**	**5**	S		**Sn**	**12 12 24.5**	**-0.8**
	baz=186							
N33B	**J Bar K, Exete**	**4.04**	**5**	S			12 12 24.5	
	baz=186							
N33A	**J Bar K, Exete**	**4.04**	**5**	lAmb_Lg			12 12 47.7	
	comp=Z,36nm,0.7s							
U40A	**Yellville**	**4.10**	**93**			**Pn**	**12 11 39.2**	**+0.8**
U40A				lAmb_Lg			12 12 45.0	
	comp=Z,43nm,0.8s							
U40A	**Yellville**	**4.10**	**93**	P		**Pn**	**12 11 39.2**	**+0.8**
	baz=277,SNR=27							
U40A	**Yellville**	**4.10**	**93**	P			12 11 39.2	
	baz=277,SNR=27							
U40A				P			12 11 39.2	
	baz=277,SNR=27							
MIAR	**Mount Ida**	**4.14**	**120**			**Pn**	**12 11 39.3**	**+0.3**
MIAR				lAmb_Lg			12 12 55.6	
	comp=Z,36nm,0.8s							
MIAR	**Mount Ida**	**4.14**	**120**	P		**Pn**	**12 11 39.9**	**+0.8**
	baz=303							
MIAR	**Mount Ida**	**4.14**	**120**	P			12 11 39.9	
	baz=303							
Z38A	**Mt. Pleasant**	**4.20**	**144**			**Pn**	**12 11 40.2**	**+0.4**
Z38A				lAmb_Lg			12 12 50.5	
	comp=Z,54nm,0.8s							
ABTX	**Abilene, Hawle**	**4.31**	**200**	Pn		**Pn**	**12 11 42.1**	**+0.7**
ABTX				lAmb_Lg			12 12 54.6	
	comp=Z,44nm,1.2s							
KSCO	**Kaye Shedlock'**	**4.38**	**303**			**Pn**	**12 11 42.8**	**+0.5**
KSCO				lAmb_Lg			12 13 01.7	
	comp=Z,29nm,0.7s							
KSCO	**Kaye Shedlock'**	**4.38**	**303**	S		**Sn**	**12 12 34.2**	**+0.5**
	baz=120							
KSCO	**Kaye Shedlock'**	**4.38**	**303**	S			12 12 34.2	
	baz=120							
N35A	**Tabor**	**4.52**	**23**			**Pn**	**12 11 43.9**	**-0.2**
P38A	**Dawn**	**4.52**	**49**			**Pn**	**12 11 44.1**	**-0.1**
P38A				lAmb_Lg			12 13 03.2	
	comp=Z,28nm,0.7s							
P38A	**Dawn**	**4.52**	**49**	P		**Pn**	**12 11 45.0**	**+0.7**
	baz=231,SNR=5.6							
P38A	**Dawn**	**4.52**	**49**	P			12 11 45.0	
	baz=231,SNR=5.6							
MGMO	**Mountain Grove**	**4.55**	**83**			**Pn**	**12 11 44.9**	**+0.2**
MGMO				lAmb_Lg			12 13 02.9	
	comp=Z,27nm,0.8s							
BGNE	**Belgrade**	**4.70**	**358**			**Pn**	**12 11 46.6**	**-0.1**
X40A	**Basin Creek Fa**	**4.70**	**117**	Pn		**Pn**	**12 11 47.3**	**+0.7**
WHTX	**Lake Whitney,**	**4.72**	**175**	P		**Pn**	**12 11 47.6**	**+0.7**
WHTX	**Lake Whitney,**	**4.72**	**175**	P		**Pn**	**12 11 47.8**	**+0.9**
	baz=355,SNR=18							
WHTX	**Lake Whitney,**	**4.72**	**175**	P			12 11 47.8	
	baz=355,SNR=18							
FCAR	**Ozark Folk Cen**	**4.75**	**98**	Pn		**Pn**	**12 11 47.5**	**+0.1**
R40A	**Maddies Statio**	**4.77**	**69**			**Pn**	**12 11 48.0**	**+0.4**
R40A	**Maddies Statio**	**4.77**	**69**	P		**Pn**	**12 11 48.0**	**+0.4**
	baz=252,SNR=19							
R40A	**Maddies Statio**	**4.77**	**69**	P			12 11 48.0	
	baz=252,SNR=19							
WHAR	**Wooly Hollow**	**4.78**	**106**			**Pn**	**12 11 48.2**	**+0.4**
WHAR				lAmb_Lg			12 13 07.5	
	comp=Z,32nm,0.9s							
MSTX	**Muleshoe**	**4.81**	**237**			**Pn**	**12 11 48.9**	**+0.6**
WLAR	**White Oak Lake**	**4.96**	**126**	Pn		**Pn**	**12 11 50.8**	**+0.6**
WLAR				lAmb_Lg			12 13 23.0	
	comp=Z,27nm,0.9s							
T25A	**Trinidad**	**5.22**	**277**			**Pn**	**12 11 54.4**	**+0.4**
T25A				lAmb_Lg			12 13 31.6	
	comp=Z,26nm,0.9s							
OGNE	**Ogallala**	**5.31**	**324**			**Pn**	**12 11 55.6**	**+0.5**
OGNE				lAmb_Lg			12 13 29.2	
	comp=Z,39nm,0.9s							
L34A	**Svendsen Farm,**	**5.39**	**12**	Pn		**Pn**	**12 11 56.3**	**+0.2**
P40A	**Paris**	**5.42**	**57**			**Pn**	**12 11 56.9**	**+0.4**
P40A				lAmb_Lg			12 13 30.9	
	comp=Z,23nm,0.8s							
P40A	**Paris**	**5.42**	**57**	P		**Pn**	**12 11 57.1**	**+0.6**
	baz=241,SNR=6.3							
P40A	**Paris**	**5.42**	**57**	P			12 11 57.1	
	baz=241,SNR=6.3							
N38A	**Joes South For**	**5.48**	**40**			**Pn**	**12 11 57.9**	**+0.5**
CCM	**Cathedral Cave**	**5.49**	**74**			**Pn**	**12 11 57.4**	**0.0**
LCAR	**Lake Charles**	**5.50**	**95**	Pn		**Pn**	**12 11 58.0**	**+0.4**
NATX	**Nacogdoches**	**5.62**	**150**	lAmb_Lg			12 13 47.3	
	comp=Z,22nm,0.8s							
CCAR	**Cane Creek**	**5.75**	**117**	Pn		**Pn**	**12 12 00.6**	**-0.5**
435B	**Jarrell**	**5.91**	**177**	Pn		**Pn**	**12 12 03.7**	**+0.4**
K31A	**O'Neill**	**5.95**	**354**	Pn		**Pn**	**12 12 03.9**	**+0.1**
HBAR	**Harrisburg**	**5.99**	**99**	Pn		**Pn**	**12 12 04.9**	**+0.5**
PBMO	**Poplar Bluff**	**6.02**	**87**	Pn		**Pn**	**12 12 05.2**	**+0.5**
PBMO				lAmb_Lg			12 13 47.8	
	comp=Z,31nm,0.8s							
FVM	**French Village**	**6.11**	**76**	Pn		**Pn**	**12 12 06.5**	**+0.4**
FVM				lAmb_Lg			12 13 46.7	
	comp=Z,21nm,0.8s							
LPAR	**Lepanto**	**6.26**	**98**	Pn		**Pn**	**12 12 08.3**	**+0.1**
LPAR				lAmb_Lg			12 13 59.7	
	comp=Z,29nm,0.8s							
SCIA	**State Center**	**6.35**	**34**	Pn		**Pn**	**12 12 09.8**	**+0.5**
SCIA				lAmb_Lg			12 14 02.6	
	comp=Z,27nm,0.7s							
JCT	**Junction City**	**6.40**	**195**	Pn		**Pn**	**12 12 10.6**	**+0.5**
JCT				lAmb_Lg			12 14 13.3	
	comp=Z,20nm,0.8s							
PARMO	**Parma**	**6.57**	**88**	Pn		**Pn**	**12 12 12.6**	**+0.3**
143A	**Socs Landing,**	**6.69**	**125**	Pn		**Pn**	**12 12 13.9**	**0.0**
143A				lAmb_Lg			12 14 27.4	
	comp=Z,21nm,1.0s							
ISCO	**Idaho Springs**	**6.79**	**299**	Pn		**Pn**	**12 12 15.6**	**-0.1**
N41A	**Harden Midland**	**6.82**	**52**			**Pn**	**12 12 16.0**	**+0.3**
N41A				lAmb_Lg			12 14 11.5	
	comp=Z,30nm,0.7s							
S44A	**Carbondale**	**6.99**	**79**	Pn		**Pn**	**12 12 18.3**	**+0.2**
S44A				lAmb_Lg			12 14 14.0	
	comp=Z,17nm,0.9s							
S44A	**Carbondale**	**6.99**	**79**	P		**Pn**	**12 12 18.7**	**+0.6**
	baz=265,SNR=5.9							
S44A	**Carbondale**	**6.99**	**79**	P			12 12 18.7	
	baz=265,SNR=5.9							
HICK	**Hickman**	**6.99**	**89**	Pn		**Pn**	**12 12 18.0**	**-0.2**
ECSD	**EROS Data Cent**	**7.09**	**8**	Pn		**Pn**	**12 12 19.3**	**-0.3**
ANMO	**Albuquerque**	**7.15**	**258**	Pn		**Pn**	**12 12 20.2**	**-0.3**
P43A	**Skaggs, Pawnee**	**7.24**	**64**	Pn		**Pn**	**12 12 22.1**	**+0.6**
OXF	**Oxford**	**7.27**	**105**	Pn		**Pn**	**12 12 22.7**	**+0.8**
OXF				lAmb_Lg			12 14 42.2	
	comp=Z,20nm,1.1s							
Q44A	**Meyer Farm, Va**	**7.38**	**70**	Pn		**Pn**	**12 12 24.4**	**+0.9**
T45A	**Paducah**	**7.45**	**85**	Pn		**Pn**	**12 12 24.6**	**+0.3**
T45A				lAmb_Lg			12 14 40.6	
	comp=Z,26nm,0.8s							
PHWY	**Pilot Hill**	**7.45**	**310**	Pn		**Pn**	**12 12 25.0**	**+0.3**
L40A	**Anamosa**	**7.45**	**42**			**Pn**	**12 12 24.4**	**0.0**
BNM	**Barren Site**	**7.55**	**253**	Pn		**Pn**	**12 12 26.3**	**+0.3**
SMCO	**Snowmass**	**7.57**	**292**	Pn		**Pn**	**12 12 24.9**	**-1.5**
HDIL	**Hopedale**	**7.77**	**58**			**Pn**	**12 12 28.8**	**0.0**
MNTX	**Cornudas Mount**	**7.94**	**233**	Pn		**Pn**	**12 12 31.6**	**+0.4**
OLIL	**Olney**	**8.04**	**72**	lAmb_Lg			12 15 09.4	
	comp=Z,23nm,1.1s							
WVT	**Waverly**	**8.16**	**91**	Pn		**Pn**	**12 12 34.0**	**-0.1**
O44A	**Mansfield**	**8.18**	**62**	Pn		**Pn**	**12 12 34.4**	**0.0**
USIN	**University of**	**8.27**	**78**	lAmb_Lg			12 15 07.2	
	comp=Z,14nm,0.9s							
L42A	**Oliver, Polo**	**8.30

0.9nm,0.3s,baz=120,slow=23,SNR=2.6
URZ Urewera 12.61 189 P P 12 37 49.0 -1.8
DZM Mont Dzumac 12.64 284 P P 12 37 52.9 +1.5
0.6nm,0.3s,baz=144,slow=20,SNR=7.9
BKZ Black Stump Fm 13.60 191 P P 12 37 59.4 -1.8
EIDS Eidsvold 25.76 265 P P 12 39 55.7 -0.4
EIDS IAmb IAmb 12 39 56.2
comp=Z,15nm,1.4s
CTAO Charters Tower 31.23 274 P P 12 40 43.9 0.0
STKA Stephens Creek 33.77 251 P P 12 41 06.5 +1.2
comp=Z,3.8nm,0.5s,baz=102,slow=12,SNR=17
STKA Stephens Creek 33.77 251 P P 12 41 05.1 -0.3
COEN Coen 36.15 282 P P 12 41 25.8 +0.3
BBOO Buckleboo 38.45 249 P P 12 41 44.3 +0.2
BBOO IAmb IAmb 12 41 45.0
comp=Z,11nm,0.9s
AS31 Alice Springs 41.45 263 P P 12 42 08.8 +0.3
AS31 IAmb IAmb 12 42 10.2
comp=Z,4.0nm,0.5s
ASAR Alice Springs 41.45 263 P P 12 42 09.2 +0.7
comp=Z,7.0nm,0.4s,baz=91,slow=7.6,SNR=111
ASAR S S 12 47 48.0 +0.9
comp=Z,1.4nm,0.8s,baz=100,slow=16,SNR=11
ASAR Alice Springs 41.45 263 P P 12 42 08.6 +0.2
WR0 Warramunga Arr 41.82 268 P P 12 42 11.2 -0.2
WR0 IAmb IAmb 12 42 11.9
comp=Z,6.1nm,0.6s
WB2 Warramunga Arr 41.99 268 P P 12 42 12.8 0.0
WB2 IAmb IAmb 12 42 13.7
comp=Z,11nm,0.8s
WRAB Tennant Creek 42.00 268 P P 12 42 12.9 +0.1
WRAB IAmb IAmb 12 42 13.7
comp=Z,10nm,0.9s
WRA Warramunga Arr 42.00 268 P P 12 42 13.0 +0.2
comp=Z,7.4nm,0.5s,baz=104,slow=8.0,SNR=63
WRA S S 12 47 53.4 -1.7
comp=Z,0.3nm,0.3s,baz=132,slow=18,SNR=2.4
WRA Warramunga Arr 42.00 268 P P 12 42 12.6 -0.2
WB0 Warramunga Arr 42.01 269 P P 12 42 12.8 0.0
FORT Forrest 45.38 251 P P 12 42 39.0 0.0
MTN Manton Dam 47.32 276 P P 12 42 54.1 +0.3
KNRA Kununurra 48.40 272 P P 12 43 02.4 +0.5
FITZ Fitzroy Crossi 50.40 267 P P 12 43 17.0 +0.2
FITZ IAmb IAmb 12 43 18.9
comp=Z,5.6nm,0.8s
QSPA South Pole Qui 64.30 180 P P 12 44 51.6 +0.5
QSPA IAmb IAmb 12 44 59.3
comp=Z,9.3nm,1.5s
BELA Belgrano 2 74.60 173 P P 12 45 53.3 +0.7
NVAR Mina Array Bea 86.33 44 P P 12 46 55.5 +1.0
comp=Z,0.8nm,0.8s,baz=216,slow=8.6,SNR=8.1
NVAR Mina Array Bea 86.33 44 P P 12 46 55.0 +0.5
TXAR Lajitas Array 91.69 58 P P 12 47 20.9 +1.4
comp=Z,0.5nm,0.8s,baz=213,slow=6.4,SNR=6.3
RND Reindeer 92.32 14 P P 12 47 20.8 -0.8
MLY Manley 93.39 12 P P 12 47 27.2 +0.8
YKA Yellowknife Ar 102.20 26 P Pdif 12 48 05.9 0.0
comp=Z,0.1nm,0.6s,baz=220,slow=3.0,SNR=2.5
NOA NORSAR Array B 143.89 350 PKP PKPbc 12 53 42.7 +0.5
comp=Z,1.2nm,0.6s,baz=22,slow=3.8,SNR=4.7
BRTR Keskin Array B 148.43 305 PKPbc PKPbc 12 53 55.3 -0.5
comp=Z,0.2nm,0.4s,baz=111,slow=3.7,SNR=2.1

*IPEC **12** 12:40:19.4±0.3,51.50N×16.25E,h0km,ML2.3/3,Error ellipse: s-maj=3.2km s-min=1.7km az=66.0*
*PRU **12** 12:40:20.7±0.0,51.45N×16.10E,h0km*
*IDC **12** 12:40:20.4±0.9,51.55N×15.92E,h0km,mb1 3.4/4, mb1mx3.1/40,mbtmp3.2/4,ML2.6/4,Error ellipse: s-maj=18.3km s-min=7.9km az=118.0*
*VIE **12** 12:40:22.0±0.7,51.34N×15.95E,h0km,mb2.4/5,ml2.7/6, Error ellipse: s-maj=8.1km s-min=2.3km az=49.0 78 km WNW of Wroclaw Suspected Mining induced.*
ISC 12 12:40:18.1±0.8,51.57N±0.04×16.14E±0.03,h0km,n39, σ1s12/74,2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.73**	**172**	*e*Pg	**Pg**	**12 40 32.4**	**+0.3**
KSP				*e*Sg	**Sg**	**12 40 40.9**	**-0.6**
CHVC	**Chvalec**	**0.98**	**183**	*e*PG	**Pg**	**12 40 37.2**	**+0.4**
CHVC				*e*SG	**Sg**	**12 40 48.7**	**-0.8**
comp=Z,39nm,0.6s							
OSTC	**Ostas**	**1.01**	**177**	*e*PG	**Pg**	**12 40 37.5**	**+0.1**
OSTC				*e*SG	**Sg**	**12 40 49.4**	**-1.1**
comp=Z,33nm,0.4s							
UPC	**Upice**	**1.06**	**184**	*e*PG	**Pg**	**12 40 38.5**	**+0.1**
UPC				*e*SG	**Sg**	**12 40 51.2**	**-1.0**
comp=Z,109nm,0.4s							
DPC	**Dobruska-Polom**	**1.22**	**175**	*e*PG	**Pg**	**12 40 41.1**	**-0.4**
DPC				*e*SG	**Sg**	**12 40 55.9**	**-1.4**
comp=Z,31nm,0.4s							
PVCC	**Panska Ves**	**1.44**	**224**	*e*PG	**Pg**	**12 40 45.7**	**+0.1**
PVCC				*e*SG	**Sg**	**12 41 03.9**	**-0.3**
comp=Z,132nm,0.3s							
BRG	**Berggiesshubel**	**1.55**	**244**	Pn	**Pn**	**12 40 46.9**	**0.0**
BRG				Pg	**Pb**	**12 40 48.1**	**+0.5**
BRG				Sg	**Sn**	**12 41 08.3**	**+0.7**
BRG				Amp		12 41 08.9	
comp=Z,41nm,0.3s							
KRLC	**Kraliky**	**1.55**	**165**	*e*PG	**Pn**	**12 40 46.5**	**-0.4**
KRLC				*e*SG	**Sg**	**12 41 05.5**	**-2.2**
comp=Z,72nm,0.9s							
PRA	**Prague**	**1.85**	**217**	*e*SG	**Sg**	**12 41 16.6**	**-0.8**
comp=Z,29nm,0.8s							
PRU	**Pruhonice**	**1.88**	**213**	*e*PG	**Pn**	**12 40 52.2**	**+0.8**
PRU				*e*SG	**Sn**	**12 41 16.1**	**+0.3**
comp=Z,26nm,0.5s							
CLL	**Collm**	**1.98**	**264**	*e*Pn	**Pn**	**12 40 53.0**	**+0.2**
CLL				*e*Pg	**Pb**	**12 40 56.0**	**+1.0**
CLL				*i*		12 40 59.1	
CLL				*i*		12 41 11.0	
CLL				*e*Sg	**Sg**	**12 41 22.0**	**+0.3**
comp=Z,16nm,0.8s							
MORC	**Moravsky Berou**	**2.00**	**153**	*e*PN	**Pn**	**12 40 53.3**	**+0.1**
MORC				*e*SG	**Sn**	**12 41 19.5**	**+0.6**
MORC	**Moravsky Berou**	**2.00**	**153**	*e*Pn	**Pn**	**12 40 53.2**	**+0.1**
baz=335							
MORC				*e*Sg	**Sn**	**12 41 19.5**	**+0.6**
comp=Z,22nm,0.3s,baz=335							
OKC	**Ostrava-Krasne**	**2.15**	**143**	*e*PG	**Pb**	**12 40 58.0**	**+0.2**
OKC				*e*SG	**Sb**	**12 41 25.2**	**+0.2**
comp=Z,44nm,0.7s							
VRAC	**Vranov**	**2.28**	**173**	⇑P	**Pn**	**12 40 58.4**	**+1.5**
VRAC				⇓S	**Sb**	**12 41 28.6**	**-0.1**
VRAC	**Vranov**	**2.28**	**173**	*e*PN	**Pn**	**12 40 57.2**	**+0.3**
VRAC				*e*SG	**Sb**	**12 41 28.7**	**-0.1**
VRAC	**Vranov**	**2.28**	**173**	*e*Pn	**Pn**	**12 40 57.2**	**+0.3**
baz=354							
VRAC				*e*Sg	**Sb**	**12 41 28.6**	**-0.1**
comp=Z,16nm,0.4s,baz=354							
TREC	**Trest**	**2.31**	**191**	*e*PG	**Pb**	**12 41 01.1**	**+0.5**
TREC				*e*SG	**Sb**	**12 41 29.8**	**+0.1**
comp=Z,24nm,0.6s							
PBCC	**Pribram**	**2.33**	**217**	*e*PG	**Pb**	**12 41 00.9**	**0.0**
PBCC				*e*SG	**Sb**	**12 41 30.8**	**+0.7**
KRUC	**Moravsky**	**2.51**	**176**	*e*PN	**Pn**	**12 41 00.7**	**+0.6**
KRUC				*e*SG	**Sb**	**12 41 36.0**	**+0.5**
KRUC	**Moravsky**	**2.51**	**176**	*e*Pn	**Pn**	**12 41 00.7**	**+0.6**
baz=358							
KRUC				*e*Sg	**Sb**	**12 41 36.0**	**+0.5**
comp=Z,12nm,0.4s,baz=358							
NKC	**Novy Kostel**	**2.69**	**242**	*e*PN	**Pn**	**12 41 03.7**	**+1.1**
NKC				*e*PG	**Pb**	**12 41 08.5**	**+1.4**
NKC				*e*SG	**Sg**	**12 41 44.2**	**-0.3**
comp=Z,24nm,0.3s							
KHC	**Kasperske Hory**	**2.94**	**215**	*e*PN	**Pn**	**12 41 06.9**	**+0.9**
KHC				*e*PG	**Pb**	**12 41 12.1**	**+0.8**
KHC				*e*SN	**Sn**	**12 41 41.0**	**-1.0**
KHC				*e*SG	**Sg**	**12 41 50.9**	**-1.5**
comp=Z,13nm,0.4s							
CKRC	**Cesky Krumlov**	**2.99**	**204**	*e*PN	**Pn**	**12 41 07.5**	**+0.8**
CKRC				*e*PG	**Pb**	**12 41 12.2**	**0.0**
CKRC				*e*SG	**Sg**	**12 41 51.4**	**-2.7**
GERES	**GERESS Array B**	**3.14**	**211**	Pn	**Pn**	**12 41 10.1**	**+1.2**
comp=Z,0.8nm,0.3s,baz=28,slow=12,SNR=24							
GERES				Pg	**Pb**	**12 41 15.9**	**+1.1**
comp=Z,3.1nm,0.3s,baz=31,slow=17,SNR=50							
GERES				Sn	**Sn**	**12 41 46.6**	**-0.6**
comp=Z,1.5nm,0.3s,baz=30,slow=27,SNR=4.8							
GERES				Lg	Lg	12 41 55.6	
comp=Z,2.9nm,0.3s,baz=28,slow=26,SNR=5.8							
SMOL	**Smolenice**	**3.17**	**164**	*e*PG	**Pg**	**12 41 20.5**	**+1.8**
SMOL				*e*SG	**Sg**	**12 41 59.8**	**+0.1**
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**12 41 20.6**	**+0.8**
LANS				*e*SG	**Sg**	**12 42 01.4**	**-0.1**
MODS	**Modra-Piesok**	**3.28**	**167**	*e*PG	**Pg**	**12 41 22.2**	**+1.3**
MODS				*e*SG	**Sg**	**12 42 00.6**	**-2.7**
MODS				*e*LG	Lg	12 42 07.6	
VYHS	**Vyhne**	**3.53**	**149**	*e*PG	**Pg**	**12 41 24.9**	**-0.8**
VYHS				*e*SG	**Sb**	**12 42 08.0**	**+3.2**
CONA	**Conrad Observa**	**3.65**	**183**	Pn	**Pn**	**12 41 16.1**	**+0.3**
comp=Z,1.6nm,0.4s,SNR=5.4							
MOA	**Molln**	**3.91**	**199**	*i* Pn	**Pn**	**12 41 19.5**	**0.0**
comp=Z,1.1nm,0.2s,SNR=4.5							
MOA				Sg	**Sg**	**12 42 22.0**	**-1.8**
comp=Z,6.4nm,0.4s							
ARSA	**Arzberg**	**4.34**	**186**	*i* Pn	**Pn**	**12 41 26.7**	**+1.5**
comp=Z,1.0nm,0.3s							
KBA	**Koelnbreinsper**	**4.85**	**203**	*i* Pn	**Pn**	**12 41 33.3**	**+0.9**
comp=Z,1.4nm,0.5s							
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	**Pn**	**12 42 20.8**	**+1.5**
comp=Z,0.5nm,0.3s,baz=275,slow=12,SNR=2.3							
VOIR		**8.52**	**133**	⇑P	Pg	12 43 06.6	+5.5
MLR	**Muntele Rosu**	**8.90**	**129**	⇓P	**Pg**	**12 43 11.6**	**+3.2**
NOA	**NORSAR Array B**	**9.88**	**346**	Pn	**Pn**	**12 42 41.3**	**+0.1**
comp=Z,0.0nm,0.3s,baz=176,slow=13,SNR=1.0							
FINES	**FINESS Array B**	**11.30**	**25**	Pn	**Pn**	**12 42 58.2**	**-2.4**
comp=Z,0.2nm,0.3s,baz=210,slow=8.3,SNR=4.5							
FINES				Sn	Sn	12 45 00.8	-6.7
comp=Z,0.1nm,0.3s,baz=223,slow=28,SNR=1.5							
ARCES	**ARCESS Array B**	**18.56**	**10**	Pn	**P**	**12 44 34.5**	**-1.7**
baz=196,slow=11,SNR=6.9							

*SOF **12** 12:41:51.4,41.10N×23.46E,h6km,MD2.8*
*ATH **12** 12:41:53.9,41.22N×23.48E,h10km±2km,ML2.1/9, Error ellipse: s-maj=2.8km s-min=1.2km az=92.0*
*ISK **12** 12:41:53.8,41.23N×23.46E,h7km,ML2.5/7*
*THE **12** 12:41:54.1,41.21N×23.49E,h4km±1km,ML2.0/7,Error ellipse: s-maj=1.2km s-min=0.3km az=191.0*
*BEO **12** 12:41:54.7±0.3,41.21N×23.49E,h0km,ML2.3/7*
ISC 12 12:41:54.0±0.9,41.22N±0.02×23.47E±0.02,h7km±7km, n66,σ0s77/89,4C-2D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRS	**Serrai**	**0.14**	**139**	P	**Pg**	**12 41 56.9**	**0.0**
SRS				S	**Sg**	**12 41 58.9**	**+0.1**
SRS				AML	AML	12 41 59.3	
comp=E,4442μm,0.1s							
SRS				AML	AML	12 41 59.5	
comp=N,2623μm,0.1s							
SRS	**Serrai**	**0.14**	**139**	P	**Pg**	**12 41 56.9**	**0.0**
SRS				S	**Sg**	**12 41 58.5**	**-0.3**
comp=N,2μm,0.1s							
SRS	**Serrai**	**0.14**	**139**	*e*Pg	**Pg**	**12 41 56.9**	**0.0**
SRS				*e*Sg	**Sg**	**12 41 58.6**	**-0.3**
NVR	**Nevrokopi**	**0.32**	**66**	P	**Pg**	**12 42 00.4**	**+0.1**
NVR	**Nevrokopi**	**0.32**	**66**	P	**Pg**	**12 42 00.3**	**+0.1**
NVR				S	**Sg**	**12 42 04.8**	**+0.3**
comp=N,305nm,0.3s							
SOH	**Sokhos**	**0.41**	**193**	P	**Pg**	**12 42 01.9**	**0.0**
SOH				S	**Sg**	**12 42 07.6**	**+0.4**
SOH				AML	AML	12 42 08.7	
comp=N,914μm,0.5s							
SOH				AML	AML	12 42 08.7	
comp=E,1452μm,0.3s							
SOH	**Sokhos**	**0.41**	**193**	P	**Pg**	**12 42 01.9**	**0.0**
SOH				S	**Sg**	**12 42 07.5**	**+0.3**
comp=E,482nm,0.4s							
MMB	**Musomiste**	**0.42**	**27**	*i* Pg	**Pg**	**12 42 01.6**	**-0.5**
KNT	**Kendrikon**	**0.44**	**263**	P	**Pg**	**12 42 02.1**	**-0.3**
KNT				S	**Sg**	**12 42 08.4**	**+0.3**
KNT	**Kendrikon**	**0.44**	**263**	P	**Pg**	**12 42 02.5**	**+0.1**
KNT				S	**Sg**	**12 42 08.9**	**+0.7**
comp=E,230nm,0.2s							
KNT	**Kendrikon**	**0.44**	**263**	PG	**Pg**	**12 42 02.6**	**+0.1**
KNT				SG	**Sg**	**12 42 08.9**	**+0.7**
HORT	**Hortiatis**	**0.68**	**205**	P	**Pg**	**12 42 07.1**	**+0.1**
HORT				AML	AML	12 42 17.8	
comp=E,339μm,0.2s							
HORT				AML	AML	12 42 18.4	
comp=N,347μm,0.2s							
HORT	**Hortiatis**	**0.68**	**205**	P	**Pg**	**12 42 07.2**	**+0.1**
HORT				S	**Sb**	**12 42 16.9**	**-1.0**
comp=N,170nm,0.2s							
HORT	**Hortiatis**	**0.68**	**205**	PG	**Pg**	**12 42 07.0**	**-0.1**
HORT				SG	**Sb**	**12 42 17.4**	**-0.5**
VAY	**Valandovo**	**0.69**	**279**	*e*Pg	**Pg**	**12 42 07.0**	**-0.2**
VAY				*e*Sg	**Sg**	**12 42 17.1**	**+1.0**
THE	**Thessaloniki**	**0.70**	**213**	P	**Pg**	**12 42 07.3**	**-0.1**
THE				AML	AML	12 42 18.1	
comp=E,442μm,0.2s							
THE				AML	AML	12 42 18.4	
comp=N,293μm,0.2s							
THE	**Thessaloniki**	**0.70**	**213**	P	**Pg**	**12 42 07.4**	**-0.1**
THE				S	**Sg**	**12 42 17.4**	**+0.8**
comp=N,142nm,0.2s							
KKB	**Krupnik**	**0.71**	**336**	Pg	**Pg**	**12 42 07.0**	**-0.6**
KAVA	**Kavala**	**0.82**	**105**	P	**Pg**	**12 42 09.0**	**-0.6**
KAVA	**Kavala**	**0.82**	**105**	P	**Pg**	**12 42 09.3**	**-0.4**
KAVA				S	**Sg**	**12 42 20.8**	**+0.5**
PLG	**Polygyros**	**0.84**	**181**	P	**Pg**	**12 42 09.6**	**-0.6**
PLG				AML	AML	12 42 23.5	
comp=N,222μm,0.3s							
PLG				AML	AML	12 42 26.1	
comp=E,190μm,0.3s							
PLG	**Polygyros**	**0.84**	**181**	P	**Pg**	**12 42 09.6**	**-0.6**
GRG	**Griva**	**0.85**	**252**	P	**Pg**	**12 42 09.9**	**-0.4**
GRG				AML	AML	12 42 24.9	
comp=E,178μm,0.3s							
GRG				AML	AML	12 42 28.8	
comp=N,164μm,0.4s							
GRG	**Griva**	**0.85**	**252**	P	**Pg**	**12 42 10.1**	**-0.2**
GRG				S	**Sb**	**12 42 22.8**	**+0.1**
comp=N,80nm,0.2s							
GRG	**Griva**	**0.85**	**252**	PG	**Pg**	**12 42 10.3**	**0.0**
GRG				SG	**Sb**	**12 42 22.8**	**+0.1**
OUR	**Ouranopolis**	**0.96**	**156**	P	**Pg**	**12 42 12.4**	**-0.1**
OUR				AML	AML	12 42 27.9	
comp=N,895μm,0.5s							
OUR				AML	AML	12 42 28.3	
comp=E,802μm,0.3s							
OUR	**Ouranopolis**	**0.96**	**156**	P	**Pg**	**12 42 12.4**	**-0.1**
OUR	**Ouranopolis**	**0.96**	**156**	PG	**Pb**	**12 42 13.1**	**+0.1**
RZN	**Rozhen**	**1.04**	**63**	Pg	**Pg**	**12 42 13.9**	**-0.1**
THAS	**Thassos island**	**1.13**	**123**	P	**Pg**	**12 42 15.1**	**-0.4**
THAS				AML	AML	12 42 33.1	
comp=N,314μm,0.3s							
THAS				AML	AML	12 42 33.7	
comp=E,267μm,0.4s							
THAS	**Thassos island**	**1.13**	**123**	P	**Pg**	**12 42 15.2**	**-0.4**
PLD	**Plovdiv**	**1.28**	**46**	*e*Pg	**Pg**	**12 42 18.5**	**0.0**
PLD				*e*SG	**Sb**	**12 42 34.9**	**0.0**
PLD	**Plovdiv**	**1.28**	**46**	PN	**Pg**	**12 42 18.7**	**+0.2**
PLD	**Plovdiv**	**1.28**	**46**	P	**Pg**	**12 42 18.5**	**0.0**
PAIG	**Paliouri**	**1.30**	**173**	P	**Pn**	**12 42 17.7**	**-0.8**
PAIG				AML	AML	12 42 37.1	
comp=N,115μm,0.3s							
PAIG				AML	AML	12 42 37.4	
comp=E,121μm,0.4s							
PAIG	**Paliouri**	**1.30**	**173**	P	**Pn**	**12 42 17.9**	**-0.6**
VTS	**Vitosha**	**1.41**	**353**	*e*Pg	**Pn**	**12 42 20.2**	**+0.1**
VTS				*e*Sg	**Sg**	**12 42 39.9**	**+0.6**
VTS	**Vitosha**	**1.41**	**353**	⇓P	**Pg**	**12 42 21.1**	**+0.1**
VTS				⇓S	**Sb**	**12 42 35.1**	**-3.8**
PGB	**Panagyurishte**	**1.43**	**21**	P	**Pn**	**12 42 20.3**	**0.0**
BOSS	**Bosilegrad**	**1.48**	**330**	*e*Pg	**Pn**	**12 42 21.1**	**+0.2**
BOSS				*e*Sg	**Sg**	**12 42 42.4**	**+1.0**
KDZ	**Kurdzhali**	**1.52**	**73**	PN	**Pn**	**12 42 21.5**	**-0.1**
KDZ				SN	**Sn**	**12 42 41.7**	**0.0**
KDZ	**Kurdzhali**	**1.52**	**73**	*i* Pg	**Pn**	**12 42 21.3**	**-0.3**
RDO	**Rodhopi**	**1.56**	**92**	P	**Pn**	**12 42 21.7**	**-0.4**
RDO	**Rodhopi**	**1.56**	**92**	PN	**Pb**	**12 42 22.9**	**-0.2**
FNA	**Florina**	**1.65**	**255**	PN	**Pn**	**12 42 23.6**	**+0.3**
SMTH	**Samothraki Isl**	**1.73**	**115**	P	**Pn**	**12 42 24.0**	**-0.4**
DIM	**Dimitrovgrad**	**1.75**	**61**	P	**Pg**	**12 42 27.4**	**-0.2**
LIA	**Limnos Island**	**1.85**	**135**	P	**Pn**	**12 42 25.5**	**-0.6**
XOR	**Xorichti**	**1.86**	**187**	P	**Pn**	**12 42 26.3**	**0.0**
ALN	**Alexandroupoli**	**1.97**	**99**	P	**Pn**	**12 42 27.6**	**-0.1**
ALN	**Alexandroupoli**	**1.97**	**99**	PN	**Pn**	**12 42 28.8**	**+1.1**
BARS	**Barje**	**2.02**	**323**	*e*Sg	**Pg**	**12 42 31.2**	**-1.4**
BARS	**Barje**	**2.02**	**323**	*e*Pn	**Sg**	**12 42 58.4**	**-0.4**
ENEZ	**Enez**	**2.09**	**103**	PN	**Pn**	**12 42 30.4**	**+1.1**
GADA	**Gvkgeada**	**2.11**	**118**	PN	**Pn**	**12 42 30.8**	**+1.2**
MPEP	**Malo Peshtene**	**2.14**	**5**	P	**Pg**	**12 42 34.5**	**-0.5**
ZAPS	**Zavoj**	**2.15**	**343**	*e*Pn	**Pb**	**12 42 31.9**	**-1.2**
ZAPS				*e*Sg	**Sg**	**12 43 03.6**	**+0.7**
PLVB	**Pleven**	**2.33**	**21**	⇑P	**Pg**	**12 42 38.8**	**+0.2**
PLVB				⇑S	**Sb**	**12 43 06.9**	**+1.8**
AGG	**Agios Georgios**	**2.36**	**202**	PN	**Pn**	**12 42 34.3**	**+1.1**
ERIK	**Erikli-Kesan**	**2.37**	**102**	PN	**Pn**	**12 42 34.4**	**+1.3**
BLKB	**Belogradchik**	**2.47**	**346**	*e*Pn	**Pn**	**12 42 35.6**	**+0.9**
BLKB	**Belogradchik**	**2.47**	**346**	⇑S	**Sn**	**12 43 04.7**	**-0.5**
EDRB	**Edirne**	**2.54**	**75**	PN	**Pn**	**12 42 36.6**	**+1.1**
MAR4	**Marsite Statio**	**2.93**	**97**	PN	**Pn**	**12 42 42.3**	**+1.3**
IVAS	**Ivanjica**	**3.41**	**315**	*e*Sg	**Sg**	**12 43 44.1**	**+0.8**
BZS	**Buzias**	**4.60**	**344**	⇑P	**Pn**	**12 43 06.4**	**+2.5**

*GUC **12** 12:57:09.2±0.6, 19.64S×71.06W,h32km±2km,ML3.4*
*IDC **12** 12:57:13.8±3.7, 19.80S×70.98W,h68km±32km,mb3.2/3, mb1 3.5/6,mb1mx3.3/26,mbtmp3.5/6,ML3.4/3,MS2.6/1, Ms1 2.6/1,ms1mx2.3/8,Error ellipse: s-maj=48.2km s-min=19.8km az=81.0*
ISC 12 12:57:08.8±2.4,19.65S±0.04×71.05W±0.08,h25km±17km, n21,σ1s30/35,mb3.6/3,8C-3D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.88**	**87**	⇓*i*P	**Pn**	**12 57 24.0**	**-1.6**
PSGC				*i* S	**Sn**	**12 57 35.7**	**-2.0**
PSGC				IAML		12 57 38.8	
comp=N,797nm,0.6s							
TA02	**Huaiquique**	**1.06**	**126**	*e*P	**Pn**	**12 57 27.5**	**-0.6**
TA02				*e*S	**Sn**	**12 57 41.4**	**-0.7**
TA02				IAML		12 57 43.4	
comp=N,1μm,0.2s							
TA01	**Diego Aracena**	**1.22**	**138**	⇑*i*P	**Pn**	**12 57 29.9**	**-0.4**
TA01				*i* S	**Sn**	**12 57 45.6**	**-0.5**
TA01				IAML		12 57 51.7	
comp=E,1μm,0.6s							
PB11	**IPOC Station P**	**1.32**	**95**	⇑*i*P	**Pn**	**12 57 31.7**	**-0.1**
PB11				*i* S	**Sn**	**12 57 48.5**	**-0.2**
PB11				IAML		12 57 51.4	
comp=N,1μm,0.3s							
PATCX	**Punta Patache**	**1.44**	**144**	⇑*i*P	**Pn**	**12 57 32.9**	**-0.4**
PATCX				*i* S	**Sn**	**12 57 51.6**	**+0.1**
PATCX				IAML		12 58 03.1	
comp=E,620nm,0.7s							
MNMC	**Minye Minye**	**1.47**	**70**	⇑*i*P	**Pn**	**12 57 34.2**	**+0.3**
MNMC				*i* S	**Sb**	**12 57 53.7**	**-0.3**
MNMC				IAML		12 58 08.2	
comp=N,1μm,0.5s							
PB08	**IPOC Station P**	**1.85**	**106**	⇑*i*P	**Pn**	**12 57 39.6**	**+0.3**
PB08				*i* S	**Sn**	**12 58 04.0**	**+1.8**
PB08				IAML		12 58 08.2	
comp=N,397nm,0.4s							
PB16	**IPOC Station P**	**1.96**	**48**	⇓*i*P	**Pn**	**12 57 41.8**	**+0.7**
PB16				*i* S	**Sb**	**12 58 07.2**	**-1.2**
PB16				IAML		12 58 14.4	
comp=N,332nm,0.3s							
PB01	**IPOC Station P**	**2.02**	**134**	⇑*i*P	**Pn**	**12 57 41.6**	**+0.2**
PB01				*i* S	**Sn**	**12 58 05.2**	**-0.6**
PB01				IAML		12 58 16.0	
comp=N,304nm,0.5s							
PB07	**IPOC Station P**	**2.33**	**152**	⇑*i*P	**Pn**	**12 57 45.4**	**-0.4**
PB07				*e*S	**Sb**	**12 58 18.3**	**-0.4**
PB07				IAML		12 58 27.1	
comp=N,245nm,0.6s							
PB03	**IPOC Station P**	**2.67**	**153**	*e*P	**Pn**	**12 57 50.4**	**-0.1**
PB03				*e*S	**Sb**	**12 58 31.0**	**+2.4**
PB03				IAML		12 58 41.6	
comp=E,157nm,0.5s							
PB09	**IPOC Station P**	**2.72**	**142**	⇑*i*P	**Pn**	**12 57 52.0**	**+0.8**
PB09				*e*S	**Sb**	**12 58 28.3**	**-1.7**
PB09				IAML		12 58 40.0	
comp=E,1μm,0.9s							
PB04	**IPOC Station P**	**2.80**	**163**	*i* P	**Pn**	**12 57 51.5**	**-0.7**
PB04				*e*S	**Sn**	**12 58 21.8**	**-3.5**
PB04				IAML		12 58 45.1	
comp=E,150nm,0.7s							
PB05	**IPOC Station P**	**3.28**	**166**	⇓*i*P	**Pn**	**12 57 57.7**	**-1.1**
PB05				IAML		12 59 03.6	
comp=N,82nm,0.7s							
LVC	**Limon Verde**	**3.56**	**146**	P	**Pn**	**12 58 04.6**	**+1.8**
comp=N,4.1nm,0.3s,baz=354,slow=8.2,SNR=26							
LVC				S	**Sn**	**12 58 44.6**	**+0.4**
comp=N,6.6nm,0.3s,baz=75,slow=10,SNR=2.7							
LVC				LR	LR	12 59 22.2	
comp=N,89nm,18.9s,baz=324,slow=38							
LPAZ	**La Paz**	**4.35**	**40**	P	Pb	12 58 19.9	-5.0
comp=N,0.9nm,0.3s,baz=238,slow=6.2,SNR=16							
LPAZ				S	**Sb**	**12 59 17.1**	**-0.1**
baz=140,slow=8.5,SNR=1.6							
SIV	**San Ignacio**	**10.18**	**71**	P	**Pn**	**12 59 36.1**	**+2.7**
comp=N,0.5nm,0.3s,baz=270,slow=11,SNR=12							
PDAR	**Pinedale Array**	**71.52**	**331**	P	**P**	**13 08 27.3**	**-0.5**
comp=N,0.1nm,0.3s,baz=141,slow=5.8,SNR=1.7							
TORD	**Torodi Ar. Bea**	**78.65**	**72**	P	**P**	**13 09 08.0**	**-1.3**
comp=N,0.8nm,0.6s,baz=262,slow=5.3,SNR=4.0							
YKA	**Yellowknife Ar**	**88.80**	**341**	P	**P**	**13 10 01.2**	**+1.2

PAMC *i* 13 45 40.3
comp=Z,629nm,0.6s
BRRC **Barranca, Sant** **0.68 292**⇑*iP* **Pn** **13 45 19.7 +0.2**
BRRC *eS* **Sn** **13 45 37.1 -0.6**
BRRC *i* 13 45 40.3
comp=Z,423nm,0.5s
RUSC **La Rusia** **0.96 180**⇓*eP* **Pn** **13 45 21.6 -0.4**
RUSC *eS* **Sn** **13 45 40.0 -2.2**
RUSC *i* 13 45 41.4
comp=Z,498nm,0.3s
OCAC **Ocana** **1.40 350**⇑*iP* **Pn** **13 45 25.9 +0.4**
OCAC *eS* **Sn** **13 45 48.5 +0.1**
OCAC *i* 13 45 53.4
comp=Z,1μm,0.3s
PTBC **PUERTO BERRIO,** **1.40 257** *eP* **Pn** **13 45 24.3 -1.1**
PTBC *eS* **Sn** **13 45 46.8 -1.3**
PTBC *i* 13 45 52.9
comp=Z,1μm,0.4s
SPBC **San Pablo de B** **1.55 220** *eP* **Pn** **13 45 26.7 -0.3**
SPBC *eS* **Sn** **13 45 48.6 -2.3**
SPBC *i* 13 45 51.3
comp=Z,771nm,0.3s
ZARC **Zaragoza, Cauc** **1.88 290** *eP* **Pn** **13 45 30.1 -0.2**
ZARC *eS* **Sn** **13 45 56.4 -0.5**
ZARC *i* 13 46 03.0
comp=Z,602nm,0.2s
SMLC **San Martn de** **2.17 333** *eP* **Pn** **13 45 33.8 +0.2**
SMLC *eS* **Sn** **13 46 03.3 +0.4**
SMLC *i* 13 46 09.8
comp=Z,454nm,0.4s
NORC **Norcasia** **2.19 234** *eP* **Pn** **13 45 33.3 -0.7**
NORC *eS* **Sn** **13 46 02.7 -0.8**
NORC *i* 13 46 06.0
comp=Z,228nm,0.3s
ROSC **El Rosal** **2.35 212** P **Pn** **13 45 37.1 +1.0**
comp=Z,85nm,0.3s,baz=280,slow=3.9,SNR=63
ROSC S **Sn** **13 46 08.9 +1.5**
comp=Z,73nm,0.3s,baz=210,slow=23,SNR=7.0
ROSC **El Rosal** **2.35 212**⇓*eP* **Pn** **13 45 37.0 +0.8**
ROSC *eS* **Sn** **13 46 08.0 +0.5**
HELC **Santa Helena** **2.52 255** *eP* **Pn** **13 45 39.1 +0.9**
HELC *eS* **Sn** **13 46 11.4 +0.5**
HELC *i* 13 46 16.1
comp=Z,335nm,0.3s
UREC **San Jos de Ur** **2.59 290** *eP* **Pn** **13 45 38.2 -0.5**
UREC *eS* **Sn** **13 46 09.7 -2.2**
GUY2C **Guyana, Caldas** **2.79 235** *eP* **Pn** **13 45 42.0 +0.4**
GUY2C *eS* **Sn** **13 46 17.4 +0.4**
GUY2C *i* 13 46 22.4
comp=Z,186nm,0.3s
VILC **Villavicencio,** **2.79 193** *eP* **Pn** **13 45 40.6 -0.7**
VILC *eS* **Sn** **13 46 16.7 +0.1**
VILC *i* 13 46 25.6
comp=Z,211nm,0.5s
PTGC **Puerto Gaitan,** **2.80 160**⇓*eP* **Pn** **13 45 40.6 -0.6**
PTGC *eS* **Sn** **13 46 13.4 -3.1**
PTGC *i* 13 46 21.3
comp=Z,77nm,0.3s
RREF **El Recreo** **2.98 229** *eS* **Sn** **13 46 21.9 +0.6**
CBOC **Ciudad Bolivar** **3.08 252** *eP* **Pn** **13 45 45.6 +0.8**
CBOC *eS* **Sn** **13 46 22.8 0.0**
CBOC *i* 13 46 37.8
comp=Z,111nm,0.6s
DBBC **Dabeiba** **3.11 273** *eP* **Pn** **13 45 45.2 0.0**
DBBC *i* 13 46 36.2
comp=Z,422nm,0.3s
SDV **Santo Domingo** **3.15 50** P **Pn** **13 45 46.6 +0.8**
comp=Z,15nm,0.3s,baz=235,slow=5.1,SNR=32
SDV S **Sn** **13 46 24.1 -0.5**
comp=Z,35nm,0.3s,baz=239,slow=23,SNR=32
SDV **Santo Domingo** **3.15 50** *eP* **Pn** **13 45 46.9 +1.2**
SDV *eS* **Sn** **13 46 24.7 +0.2**
SDV *i* 13 46 26.4
comp=Z,67nm,0.3s
MOTC **Monteria, Cord** **3.20 307** *eP* **Pn** **13 45 44.9 -1.3**
MOTC *eS* **Sn** **13 46 23.1 -2.1**
MOTC *i* 13 46 39.1
comp=Z,160nm,0.5s
ORTC **Ortega, Tolima** **3.64 217** *eP* **Pn** **13 45 51.5 -0.3**
ORTC *eS* **Sn** **13 46 34.8 -0.6**
ORTC *i* 13 46 41.3
comp=Z,135nm,0.4s
SJCC **San Jacinto, C** **3.67 326** *eP* **Pn** **13 45 51.5 -0.7**
SJCC *eS* **Sn** **13 46 32.9 -3.2**
SJCC *i* 13 46 37.7
comp=Z,76nm,0.5s
CRJC **Cerrejon, Guaj** **4.14 3** *eP* **Pn** **13 45 57.5 -0.9**
CRJC *eS* **Sn** **13 46 43.3 -3.9**
YOTC **Yotoco, Valle** **4.33 229** *eP* **Pn** **13 46 00.3 -0.4**
SMRC **Santa Marta, M** **4.43 345** *eP* **Pn** **13 46 02.4 +0.5**
SMRC *eS* **Sn** **13 46 48.8 -4.9**
MACC **Macarena, Meta** **4.74 189** *eP* **Pn** **13 46 04.1 -2.0**
MACC *eS* **Sn** **13 46 55.8 -5.2**
MACC *i* 13 47 27.6
comp=Z,24nm,0.5s
LPAZ **La Paz** **23.51 168** P **P** **13 49 53.4 +1.5**
comp=Z,1.2nm,0.3s,baz=5.2,slow=11,SNR=8.6
TXAR **Lajitas Array** **36.47 312** P **P** **13 51 46.6 +1.1**
comp=Z,0.3nm,0.7s,baz=120,slow=8.4,SNR=3.5
YKA **Yellowknife Ar** **63.25 340** P **P** **13 55 07.1 +0.5**
comp=Z,0.2nm,0.6s,baz=131,slow=7.1,SNR=8.9
YKA pP **pP** **13 55 45.5 +0.4**
comp=Z,0.3nm,0.8s,baz=132,slow=7.0,SNR=3.9
ASAR **Alice Springs** **149.16 234** PKPbc **PKPbc** **14 04 25.8 -0.2**
comp=Z,0.8nm,0.5s,baz=124,slow=3.1,SNR=12
WRA **Warramunga Arr** **150.39 241** PKPbc **PKPbc** **14 04 29.0 +0.1**
comp=Z,0.9nm,0.5s,baz=112,slow=2.6,SNR=5.3

*IDC **12** 13:59:15.7±1.1,38°.25N×91°.21E,h0km,mb3.6/15, mb1 3.8/17,mb1mx3.7/56,mbtmp3.7/17,ML3.2/2,MS3.4/3, Ms1 3.4/3,ms1mx2.7/42,Error ellipse: s-maj=26.2km s-min=18.9km az=0.0*
ISC 12 13:59:21.4±0.8,38°.42N±0°.10×91°.22E±0°.09,h35km,n20, σ1$39/22,mb3.7/14,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**10.64**	**325**	Pn	**Pn**	**14 01 52.1**	**+0.8**
	2.2nm,0.3s,baz=134,slow=14,SNR=145						
MKAR				Sn	**Sn**	**14 03 49.3**	**+0.2**
	2.6nm,0.3s,baz=139,slow=24,SNR=11						
MKAR				Lg	Lg	14 04 52.2	
	baz=150,slow=23,SNR=1.4						
SONM	**Songino Array**	**14.51**	**45**	Pn	**Pn**	**14 02 43.4**	**-0.9**
	0.3nm,0.3s,baz=235,slow=15,SNR=5.7						
SONM				Lg	Lg	14 06 53.9	
	0.1nm,0.3s,baz=236,slow=21,SNR=4.8						
SONM				LR	LR	14 08 40.4	
	comp=Z,82nm,18.2s,baz=258,slow=39						
KURBB	**Kurchatov Arra**	**15.16**	**328**	Pn	**Pn**	**14 02 51.7**	**-1.0**
	0.1nm,0.3s,baz=134,slow=13,SNR=14						
KURBB				Sn	**Sn**	**14 05 36.2**	**-3.2**
	0.1nm,0.3s,baz=128,slow=27,SNR=3.2						
ZALV	**Zalesovo Beam**	**16.14**	**346**	Pn	**Pn**	**14 03 06.6**	**+1.2**
	0.2nm,0.3s,baz=173,slow=13,SNR=6.1						
ZALV				Sn	**Sn**	**14 05 59.8**	**-3.2**
	0.2nm,0.3s,baz=168,slow=22,SNR=4.0						
ZALV				Lg	Lg	14 07 51.1	
	0.1nm,0.3s,baz=164,slow=42,SNR=2.0						
ZALV				LR	LR	14 09 44.3	
	comp=Z,34nm,20.9s,baz=140,slow=39						
BVAR	**Borovoye Array**	**20.50**	**322**	P	**P**	**14 03 57.8**	**+1.6**
	1.1nm,0.8s,baz=129,slow=21,SNR=7.9						
CMAR	**Chiang Mai Arr**	**21.00**	**159**	P	**P**	**14 04 00.1**	**-1.7**
	0.7nm,0.8s,baz=344,slow=9.0,SNR=6.5						
GEYT	**Alibeck**	**25.95**	**279**	P	**P**	**14 04 51.1**	**+0.5**
	1.2nm,0.5s,baz=60,slow=3.6,SNR=4.0						
AKTO	**Aktyubinsk**	**26.35**	**308**	P	**P**	**14 04 54.6**	**+0.6**
	0.5nm,0.3s,baz=82,slow=12,SNR=3.9						
KLR	**Kul'dur**	**30.82**	**56**	P	**P**	**14 05 34.7**	**+0.9**
	0.6nm,0.6s,baz=255,slow=10,SNR=3.6						
BRTR	**Keskin Array B**	**44.05**	**291**	P	**P**	**14 07 26.1**	**+0.1**
	1.2nm,0.8s,baz=109,slow=7.1,SNR=7.8						
AKASG	**Malin Array Be**	**44.59**	**307**	P	**P**	**14 07 29.6**	**-0.3**
	0.2nm,0.3s,baz=71,slow=7.3,SNR=1.9						
ARCES	**ARCESS Array B**	**46.13**	**334**	P	**P**	**14 07 42.8**	**+0.9**
	2.0nm,0.8s,baz=88,slow=8.2,SNR=3.7						
PETK	**Petropavlovsk-**	**46.94**	**49**	P	**P**	**14 07 48.4**	**-0.1**
	3.6nm,1.0s,baz=283,slow=13,SNR=2.3						
NOA	**NORSAR Array B**	**52.63**	**323**	P	**P**	**14 08 31.6**	**0.0**
	0.4nm,0.5s,baz=78,slow=7.7,SNR=1.8						
GERES	**GERESS Array B**	**54.78**	**308**	P	**P**	**14 08 48.3**	**+0.7**
	0.2nm,0.4s,baz=82,slow=10.0,SNR=1.8						
ILAR	**Eielson Array**	**67.58**	**23**	P	**P**	**14 10 15.3**	**+1.3**
	0.4nm,0.7s,baz=292,slow=5.2,SNR=5.8						
ESDC	**Sonseca Array**	**70.20**	**305**	P	**P**	**14 10 30.3**	**-0.4**
	0.6nm,0.8s,baz=37,slow=7.6,SNR=6.3						
YKA	**Yellowknife Ar**	**77.30**	**12**	P	**P**	**14 11 11.7**	**-0.1**
	0.2nm,0.7s,baz=335,slow=5.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**81.59**	**280**	P	**P**	**14 11 34.6**	**-1.4**
	0.8nm,0.5s,baz=38,slow=4.5,SNR=7.5						
BBB	**Bella Bella**	**83.48**	**23**	LR	LR	14 53 46.4	
	comp=Z,100nm,19.6s,baz=248,slow=39						

*IDC **12** 14:01:26.8±3.3,5°.16S×152°.05E,h0km,mb3.7/4, mb1 3.9/5,mb1mx3.5/45,mbtmp3.8/5,ML2.0/1,Error ellipse: s-maj=105.3km s-min=29.6km az=114.0*
*NEIC **12** 14:01:31.6±2.2,5°.66S±0°.08×152°.44E±0°.06,h46km±11km, mb4.0/11,Error ellipse: s-maj=11.2km s-min=8.7km az=198.0*
ISC 12 14:01:30.3±1.3,5°.7S±0°.1×152°.5E±0°.2,h35km,n20, σ1$57/20,mb3.8/10,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.52**	**349**	Pn	**Pn**	**14 01 55.7**	**+0.6**
MANU	**Manus Island**	**6.24**	**305**	Pn	**Pn**	**14 03 01.7**	**+1.8**
PMG	**Port Moresby**	**6.42**	**235**	Pn	**Pn**	**14 03 03.6**	**+1.3**
	1.8nm,0.3s,baz=58,slow=8.1,SNR=6.9						
PMG				Sn	**Sn**	**14 04 11.5**	**-2.8**
	1.1nm,0.3s,baz=61,slow=23,SNR=1.7						
PMG	**Port Moresby**	**6.42**	**235**		**Pn**	**14 03 03.1**	**+0.8**
KWAJ	**Kwajalein Atol**	**20.88**	**46**	P	**P**	**14 06 09.4**	**-0.2**
SAUI	**Saumlaki**	**21.12**	**263**	P	P	14 06 05.9	-6.4
MTN	**Manton Dam**	**22.20**	**250**	P	**P**	**14 06 24.1**	**+0.4**
MTN				IAmb	IAmb	14 06 28.9	
	comp=Z,11nm,0.3s						
WB0	**Warramunga Arr**	**22.46**	**230**	P	**P**	**14 06 27.3**	**+0.7**
WB0				IAmb	IAmb	14 06 36.4	
	comp=Z,2.7nm,0.8s						
WR0	**Warramunga Arr**	**22.46**	**229**	P	**P**	**14 06 27.8**	**+1.2**
WR0				IAmb	IAmb	14 06 49.3	
	comp=Z,6.3nm,1.4s						
WRAB	**Tennant Creek**	**22.59**	**230**	P	**P**	**14 06 28.3**	**+0.3**
WRAB				IAmb	IAmb	14 06 36.6	
	comp=Z,2.1nm,0.7s						
WB2	**Warramunga Arr**	**22.59**	**230**	P	**P**	**14 06 27.9**	**-0.1**
WB2				IAmb	IAmb	14 06 45.4	
	comp=Z,7.9nm,1.5s						
WRA	**Warramunga Arr**	**22.60**	**230**	P	**P**	**14 06 28.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=54,slow=11,SNR=1.5						
AS31	**Alice Springs**	**25.26**	**223**	P	**P**	**14 06 55.0**	**+1.6**
ASAR	**Alice Springs**	**25.26**	**223**	P	**P**	**14 06 56.5**	**+3.1**
	comp=Z,1.5nm,0.8s,baz=56,slow=9.1,SNR=17						
ASAR	**Alice Springs**	**25.26**	**223**	P	**P**	**14 06 55.3**	**+1.9**
KNRA	**Kununurra**	**25.28**	**245**	P	**P**	**14 06 55.3**	**+1.7**
KNRA				IAmb	IAmb	14 06 57.5	
	comp=Z,9.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**28.93**	**242**	P	**P**	**14 07 27.1**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=57,slow=9.9,SNR=10						
FITZ	**Fitzroy Crossi**	**28.93**	**242**	P	**P**	**14 07 26.0**	**-0.5**
FITZ				IAmb	IAmb	14 07 36.7	
	comp=Z,3.2nm,0.9s						
SONM	**Songino Array**	**66.89**	**328**	P	**P**	**14 12 16.7**	**-2.4**
	comp=Z,0.3nm,0.6s,baz=119,slow=8.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**150.24**	**287**	PKPbc	**PKPbc**	**14 21 19.3**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=83,slow=2.3,SNR=7.1						

*TAP **12** 14:03:56.0,23°.74N×121°.53E,h6km,ML3.1,C*
*JMA **12** 14:03:56.0±0.1,23°.72N×121°.54E,h11km±4km,M2.8*
ISC 12 14:03:56.8±1.0,23°.75N±0°.01×121°.55E±0°.02,h4km±8km, n90,σ0$91/151,4C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESL	**Shilin**	**0.13**	**301**	⇓*iP*	**Pg**	**14 03 58.8**	**-0.6**
	baz=303						
ESL				S	**Sg**	**14 04 00.4**	**-0.8**
	baz=303						
EGFH	**Guangfu**	**0.14**	**236**	⇓*iP*	**Pg**	**14 03 58.8**	**-0.8**
	baz=241						
EGFH				*i* S	**Sg**	**14 04 00.4**	**-1.0**
	baz=241						
HWA	**Hwalien**	**0.23**	**12**	*eP*	**Pg**	**14 04 02.3**	**+1.0**
	baz=4.0						
HWA				*eS*	**Sg**	**14 04 06.7**	**+2.2**
	baz=4.0						
HGSD	**Ruisui**	**0.28**	**205**	⇓*iP*	**Pg**	**14 04 02.1**	**-0.1**
	baz=217						
HGSD				S	**Sg**	**14 04 07.8**	**+1.9**
	baz=217						
EHY	**Hungye**	**0.32**	**221**	⇑*iP*	**Pg**	**14 04 02.1**	**-0.9**
	baz=228						
EHY				S	**Sg**	**14 04 06.8**	**-0.5**
	baz=228						
TWD	**Chiawan**	**0.33**	**7**	⇓*iP*	**Pg**	**14 04 03.4**	**+0.2**
	baz=356						
TWD				*i* S	**Sg**	**14 04 08.1**	**+0.5**
	baz=356						
VWDT	**VWDT**	**0.38**	**271**	⇓*iP*	**Pg**	**14 04 03.6**	**-0.5**
	baz=272						
VWDT				S	**Sg**	**14 04 09.0**	**-0.1**
	baz=272						
YULB	**Yu-li**	**0.42**	**214**	P	**Pg**	**14 04 04.1**	**-0.9**
	baz=224						
YULB				*eS*	**Sg**	**14 04 10.8**	**+0.3**
	baz=224						
NACB	**Ninganchiao**	**0.43**	**5**	⇓*iP*	**Pg**	**14 04 04.8**	**-0.2**
	baz=354						
NACB				S	**Sg**	**14 04 10.7**	**+0.1**
	baz=354						
EYUL	**Yuli**	**0.45**	**208**	*eP*	**Pg**	**14 04 06.5**	**+0.9**
	baz=212						
TWF1	**Yuli**	**0.46**	**211**	P	**Pg**	**14 04 05.0**	**-0.7**
	baz=223						
TWF1				S	**Sg**	**14 04 13.1**	**+1.5**
	baz=223						
ETLH	**Xiulin Townshi**	**0.46**	**352**	P	**Pg**	**14 04 05.5**	**-0.3**
	baz=350						
ETLH				S	**Sg**	**14 04 11.4**	**-0.3**
	baz=350						
CHGB	**Renai**	**0.47**	**312**	⇓*iP*	**Pg**	**14 04 05.5**	**-0.3**
	baz=311						
CHGB				S	**Sg**	**14 04 11.8**	**-0.2**
	baz=311						
WHF	**Hehuan Shan**	**0.47**	**326**	⇓*iP*	**Pg**	**14 04 05.6**	**-0.4**
	baz=314						
WHF				*eS*	**Sg**	**14 04 12.3**	**0.0**
	baz=314						
SSLB	**Suanglung**	**0.55**	**274**	⇓*iP*	**Pg**	**14 04 06.6**	**-0.8**
	baz=274						
SSLB				*eS*	**Sg**	**14 04 13.4**	**-1.2**
	baz=274						
FUSS	**Fushou**	**0.57**	**330**	P	**Pg**	**14 04 07.6**	**-0.2**
	baz=318						
FUSS				*eS*	**Sg**	**14 04 15.5**	**+0.2**
	baz=318						
FULB	**Fuli**	**0.60**	**204**	*eP*	**Pb**	**14 04 10.3**	**+0.5**
	baz=218						
WPL	**Puli Township**	**0.61**	**296**	*eP*	**Pg**	**14 04 08.2**	**-0.3**
	baz=304						
YUS	**Yu-Shan**	**0.61**	**245**	*eP*	**Pg**	**14 04 08.8**	**+0.2**
	baz=255						
YUS				*eS*	**Sg**	**14 04 17.2**	**+0.7**
	baz=255						
TWT	**Tachien**	**0.61**	**326**	P	**Pg**	**14 04 08.5**	**0.0**
	baz=314						
TWT				*eS*	**Sg**	**14 04 16.1**	**-0.5**
	baz=314						
SMLT	**Sun Moon Lake**	**0.61**	**283**	⇓*iP*	**Pg**	**14 04 08.1**	**-0.5**
	baz=283						
SMLT				*eS*	**Sg**	**14 04 16.7**	**+0.1**
	baz=283						
TDCB	**Techi**	**0.62**	**324**	P	**Pg**	**14 04 08.6**	**-0.2**
	baz=314						
TDCB				*eS*	**Sg**	**14 04 15.8**	**-1.0**
	baz=314						
DPDB	**Guoxing**	**0.64**	**297**	*eP*	**Pg**	**14 04 09.0**	**-0.1**
	baz=296						
DPDB				*eS*	**Sg**	**14 04 17.2**	**-0.3**
	baz=296						
WHYT	**Xinyi Township**	**0.64**	**266**	*eP*	**Pg**	**14 04 09.4**	**+0.2**
	baz=265						
TYC	**Yuchr**	**0.66**	**284**	⇓*iP*	**Pg**	**14 04 08.7**	**-0.7**
	baz=284						
CHKT	**Chengkung**	**0.67**	**195**	*eP*	**Pg**	**14 04 09.6**	**0.0**
	baz=195						
CHKT				*eS*	**Sb**	**14 04 21.8**	**+1.2**
	baz=195						
NNSB	**Datong**	**0.69**	**347**	⇓*iP*	**Pg**	**14 04 10.0**	**-0.2**
	baz=346						
NNSB				S	**Sg**	**14 04 18.9**	**-0.4**
	baz=346						
NNS	**Nan Shan**	**0.71**	**347**	⇓*iP*	**Pg**	**14 04 10.3**	**-0.1**
	baz=345						
NNS				S	**Sg**	**14 04 19.3**	**-0.4**
	baz=345						
ALS	**Alishan**	**0.72**	**251**	⇑*iP*	**Pg**	**14 04 10.5**	**-0.2**
	baz=251						
ALS				S	**Sg**	**14 04 20.1**	**-0.1**
	baz=251						
EWUT	**Wuta**	**0.72**	**16**	*eP*	**Pg**	**14 04 10.2**	**-0.5**
	baz=4.0						
EWUT				*eS*	**Sg**	**14 04 20.9**	**+0.7**
	baz=4.0						
ELDTW	**Lidau**	**0.74**	**222**	⇑*iP*	**Pg**	**14 04 09.7**	**-1.4**
	baz=222						
ELDTW				*eS*	**Sg**	**14 04 18.5**	**-2.2**
	baz=222						
WJS	**Zhushan**	**0.76**	**276**	*eP*	**Pg**	**14 04 12.2**	**+0.8**
	baz=276						
WJS				*eS*	**Sn**	**14 04 24.8**	**-1.4**
	baz=276						
WHP	**Taichung City**	**0.77**	**314**	P	**Pg**	**14 04 11.3**	**-0.2**
	baz=312						
WHP				*eS*	**Sg**	**14 04 22.0**	**+0.5**
	baz=312						
EDH	**Donghe**	**0.81**	**197**	*eP*	**Pg**	**14 04 12.7**	**+0.4**
	baz=184						
EDH				*eS*	**Sb**	**14 04 25.8**	**+1.2**
	baz=184						
WNT	**Mingjian**	**0.81**	**279**	*eP*	**Pg**	**14 04 13.1**	**+0.8**
	baz=285						
WNT				*eS*	**Sn**	**14 04 26.8**	**-0.5**
	baz=285						
CHN5	**Tsauling**	**0.82**	**260**	⇓*iP*	**Pg**	**14 04 12.4**	**0.0**
	baz=251						
CHN5				S	**Sb**	**14 04 24.6**	**-0.3**
	baz=251						
NDT	**Datong Townshi**	**0.85**	**358**	*eP*	**Pg**	**14 04 12.9**	**-0.3**
	baz=346						
NDT				*eS*	**Sg**	**14 04 23.9**	**-0.4**
	baz=346						
ENTT	**Nioudou**	**0.89**	**1**	P	**Pg**	**14 04 13.8**	**-0.1**
	baz=349						
ENTT				*eS*	**Sg**	**14 04 25.1**	**-0.3**
	baz=349						
NDS	**Dongshan**	**0.90**	**10**	*eP*	**Pg**	**14 04 13.8**	**-0.1**
	baz=6.0						
NDS				*eS*	**Sg**	**14 04 26.3**	**+0.7**
	baz=6.0						
TCU	**Taichung**	**0.90**	**297**	*eP*	**Pg**	**14 04 15.0**	**+1.0**
	baz=296						
WGK	**Gukeng**	**0.91**	**266**	*eP*	**Pg**	**14 04 15.0**	**+0.7**
	baz=266						
WGK				*eS*	**Sb**	**14 04 28.6**	**+1.0**
	baz=266						
STYH	**Taoyuan**	**0.92**	**231**	*eP*	**Pg**	**14 04 13.6**	**-0.7**
	baz=228						
STYH				*eS*	**Sb**	**14 04 27.6**	**-0.1**
	baz=228						
LONT	**Longtian**	**0.92**	**205**	*eP*	**Pn**	**14 04 16.3**	**-0.2**
	baz=217						
TWQ1	**Liyutan**	**0.93**	**310**	*eP*	**Pb**	**14 04 15.9**	**+0.4**
	baz=317						
TWQ1				*eS*	**Sb**	**14 04 28.2**	**0.0**
	baz=317						
WDLH	**Douliu**	**0.93**	**267**	*eP*	**Pg**	**14 04 15.2**	**+0.5**
	baz=266						
WDLH				*eS*	**Sb**	**14 04 28.9**	**+0.7**
	baz=266						
YHNB	**Yeheng**	**0.93**	**350**	⇓*iP*	**Pg**	**14 04 14.6**	**-0.1**
	baz=335						
YHNB				S	**Sg**	**14 04 26.2**	**-0.6**
	baz=335						
STYT	**Tauyuan**	**0.93**	**232**	P	**Pg**	**14 04 14.1**	**-0.6**
	baz=226						
STYT				*eS*	**Sb**	**14 04 28.5**	**+0.2**
	baz=226						
NSK	**Sanguang**	**0.94**	**349**	⇓*iP*	**Pg**	**14 04 14.9**	**0.0**
	baz=335						
NSK				*i* S	**Sg**	**14 04 26.4**	**-0.7**
	baz=335						
TPUB	**Ta-pu**	**0.96**	**242**	*eP*	**Pg**	**14 04 14.9**	**-0.3**
	baz=251						
TPUB				*eS*	**Sg**	**14 04 28.4**	**+0.8**
	baz=251						
TWE	**Neicheng**	**0.97**	**6**	P	**Pg**	**14 04 15.3**	**-0.2**
	baz=3.0						
TWE				*eS*	**Sb**	**14 04 29.7**	**+0.3**
	baz=3.0						
NSY	**Sanyi**	**0.98**	**313**	*eP*	**Pb**	**14 04 17.1**	**+0.7**
	baz=311						
NSY				*eS*	**Sn**	**14 04 32.2**	**+0.5**
	baz=311						
WTP	**Ta-pu**	**1.00**	**240**	P	**Pg**	**14 04 15.6**	**-0.3**
	baz=250						
WTP				*eS*	**Sg**	**14 04 29.4**	**+0.5**
	baz=250						
NSTT	**Nanjuang**	**1.01**	**330**	*eP*	**Pg**	**14 04 17.1**	**+0.8**
	baz=320						
NSTT				*eS*	**Sb**	**14 04 30.9**	**+0.3**
	baz=320						
LIOB	**Emei**	**1.02**	**331**	*eP*	**Pb**	**14 04 17.5**	**+0.4**
	baz=318						
TWG	**Pinlang**	**1.02**	**206**	*eP*	**Pg**	**14 04 15.9**	**-0.5**
	baz=219						
TWG				*eS*	**Sg**	**14 04 30.2**	**+0.5**
	baz=219						
TWGBT	**Beinan**	**1.02**	**205**	*eP*	**Pg**	**14 04 16.1**	**-0.3**
	baz=204						
NWLT	**Wulai**	**1.03**	**357**	P	**Pg**	**14 04 16.3**	**-0.2**
	baz=353						
NWLT				*eS*	**Sg**	**14 04 28.7**	**-1.1**
	baz=353						
WDJ	**Dajia District**	**1.03**	**306**	*eP*	**Pb**	**14 04 17.8**	**+0.7**
	baz=305						
NMLH	**Miaoli**	**1.05**	**319**	*eP*	**Pb**	**14 04 18.2**	**+0.6**
	baz=316						
NMLH				*eS*	**Sn**	**14 04 33.6**	**+0.2**
	baz=316						
CHY	**Chiayi**	**1.06**	**257**	*eP*	**Pg**	**14 04 17.3**	**+0.1**
	baz=257						
CHY				*eS*	**Sb**	**14 04 32.3**	**+0.2**
	baz=257						
WTK	**Tuku**	**1.07**	**267**	*eP*	**Pg**	**14 04 17.5**	**+0.1**
	baz=267						
WTK				*eS*	**Sb**	**14 04 32.9**	**+0.8**
	baz=267						
TWK	**Hsinying**	**1.09**	**244**	⇑*iP*	**Pg**	**14 04 17.4**	**-0.3**
	baz=245						
TWK				S	**Sb**	**14 04 33.0**	**+0.2**
	baz=245						
CHN1	**Nanshi**	**1.09**	**239**	*eP*	**Pb**	**14 04 17.7**	**-0.6**
	baz=241						
CHN1				*eS*	**Sn**	**14 04 33.8**	**-0.7**
	baz=241						
SGST	**Jiashian**	**1.11**	**234**	⇓*iP*	**Pb**	**14 04 16.9**	**-1.7**
	baz=235						
SGST				S	**Sg**	**14 04 33.4**	**+0.9**
	baz=235						
NTC	**Toucheng**	**1.13**	**13**	*eP*	**Pb**	**14 04 19.0**	**+0.1**
	baz=355						
EGS		**1.15**	**17**	*eP*	**Pb**	**14 04 17.9**	**-1.2**
	baz=1.0						
SBCB	**Hsinchu**	**1.16**	**334**	*eP*	**Pn**	**14 04 20.0**	**+0.2**
	baz=332						
NHDH	**Xindian Distri**	**1.21**	**359**	*eP*	**Pn**	**14 04 20.5**	**0.0**
	baz=357						
TWA	**Mucha**	**1.23**	**1**	*eP*	**Pn**	**14 04 20.8**	**0.0**
	baz=360						
ECL	**Taimali**	**1.27**	**206**	*eP*	**Pn**	**14 04 20.0**	**-1.3**
	baz=194						
CHN3	**Shinhua**	**1.28**	**239**	*eP*	**Pg**	**14 04 22.4**	**+1

TSMG *eS* **Sg** **14 04 40.8 +1.1**
baz=216
NWF **Wu-fen Shan** **1.33 9** *eP* **Pb** **14 04 23.1 +0.6**
NWF *eS* **Sg** **14 04 41.4 +1.7**
WFSB **Wu-fen Shan** **1.33 9** *eP* **Pb** **14 04 22.9 +0.5**
baz=7.0
TWS1 **Kuangyinshan** **1.35 355** *eP* **Pg** **14 04 23.7 +1.0**
baz=9.0
YM01 **YM01** **1.39 1** *eP* **Pb** **14 04 24.0 +0.5**
baz=359
YM04 **YM04** **1.40 359** *eP* **Pn** **14 04 23.3 +0.2**
baz=357
YM10 **YM10** **1.40 0** *eP* **Pg** **14 04 24.6 +0.9**
baz=358
YM05 **YM05** **1.41 0** *eP* **Pn** **14 04 23.4 +0.1**
baz=358
MASBT **Mashibuluo** **1.41 217** *eP* **Pn** **14 04 22.6 -0.6**
baz=205
YM08 **YM08** **1.43 1** *eP* **Pn** **14 04 24.0 +0.4**
baz=359
EAST **Anshuo** **1.50 206** *eP* **Pn** **14 04 24.7 +0.1**
baz=196
YOJ **Yonaguni jima** **1.51 62** P **Pn** **14 04 23.5 -1.1**
YOJ *eS* **Sn** **14 04 43.2 -1.5**
SCZT **Fangliau** **1.62 212** *eP* **Pn** **14 04 26.3 +0.3**
baz=211
IRIF **Iriomote-Funau** **2.08 73** *eS* **Sn** **14 04 58.3 -0.3**
JIJ **Ishigaki jima** **2.45 75** P **Pn** **14 04 37.3 -0.2**
JIJ S **Sn** **14 05 06.2 -1.6**
JISG **Ishigakijimahi** **2.65 71** P **Pn** **14 04 40.1 -0.2**
JISG *eS* **Sn** **14 05 11.2 -1.8**

NEIC **12** *14:04:30.3±1.7,20.9S±0.1×178.6W±0.2,h600km±8km, mb4.4/33,Error ellipse: s-maj=21.0km s-min=16.9km az=104.0*
IDC **12** *14:04:32.2±2.1,20.75S×178.76W,h611km±20km, mb3.3/16,mb1 3.5/17,mb1mx3.3/43,mbtmp4.3/17,Error ellipse: s-maj=39.2km s-min=13.7km az=154.0*
ISC 12 14:04:30.3±0.5,20.87S±0.09×178.58W±0.09,h600km, n79,σ0⁰90/77,mb4.2/30,3C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.46**	**314**	P	**P**	**14 05 59.9**	**+0.6**
	6.6nm,0.3s,baz=260,slow=22,SNR=50						
MSVF	**Nonsavu**	**4.46**	**314**	P	**P**	**14 05 59.6**	**+0.4**
DZM	**Mont Dzumac**	**14.00**	**262**	S	**S**	**14 09 58.0**	**+2.2**
	0.5nm,0.3s,baz=101,slow=16,SNR=1.9						
SANVU	**Saraoutou**	**14.55**	**289**	P	**P**	**14 07 34.7**	**+0.3**
OUZ	**Omahuta**	**15.86**	**204**	P	**P**	**14 07 49.0**	**+2.7**
OUZ				IAmb	IAmb	14 07 50.0	
	comp=Z,17nm,0.8s						
RAR	**Rarotonga**	**17.56**	**94**	P	P	14 08 09.2	+7.2
	comp=Z,1.6nm,0.3s,baz=161,slow=22,SNR=2.3						
URZ	**Urewera**	**17.72**	**191**	P	**P**	**14 08 01.9**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=299,slow=23,SNR=11						
URZ				S	**S**	**14 10 54.2**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=116,slow=23,SNR=1.2						
URZ	**Urewera**	**17.72**	**191**	IAmb	IAmb	14 08 02.7	
	comp=Z,27nm,1.3s						
THZ	**Tophouse**	**22.04**	**197**	P	**P**	**14 08 41.4**	**-0.7**
KHZ	**Kahutara**	**22.48**	**195**	P	**P**	**14 08 45.0**	**-1.0**
LTZ	**Lake Taylor**	**23.16**	**197**	P	**P**	**14 08 50.9**	**-1.2**
WHZ	**Wether Hill Ro**	**27.30**	**201**	P	**P**	**14 09 29.8**	**+1.3**
CTA	**Charters Tower**	**32.92**	**265**	P	**P**	**14 10 17.5**	**+0.5**
	comp=Z,2.2nm,0.4s,baz=88,slow=10,SNR=11						
CTAO	**Charters Tower**	**32.92**	**265**	P	**P**	**14 10 17.3**	**+0.3**
CTAO				IAmb	IAmb	14 10 24.6	
	comp=Z,14nm,1.4s						
STKA	**Stephens Creek**	**37.14**	**244**	P	**P**	**14 10 52.1**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=95,slow=12,SNR=1.3						
BBOO	**Buckleboo**	**41.90**	**244**	P	**P**	**14 11 29.7**	**-0.1**
BBOO				IAmb	IAmb	14 11 47.6	
	comp=Z,32nm,1.4s						
JAY	**Jayapura**	**43.65**	**289**	P	**P**	**14 11 43.5**	**-0.2**
	comp=Z,8.2nm,0.6s,baz=111,slow=4.0,SNR=4.9						
WR0	**Warramunga Arr**	**43.83**	**263**	P	**P**	**14 11 44.5**	**-0.5**
WR0				IAmb	IAmb	14 11 55.0	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**43.91**	**257**	P	**P**	**14 11 45.5**	**-0.1**
ASAR	**Alice Springs**	**43.91**	**257**	P	**P**	**14 11 45.6**	**+0.1**
	comp=Z,4.7nm,0.6s,baz=91,slow=7.6,SNR=26						
ASAR	**Alice Springs**	**43.91**	**257**	P	**P**	**14 11 45.3**	**-0.3**
WB0	**Warramunga Arr**	**43.99**	**263**	P	**P**	**14 11 45.9**	**-0.4**
WB0				IAmb	IAmb	14 11 46.4	
	comp=Z,7.7nm,0.3s						
WB2	**Warramunga Arr**	**44.00**	**263**	P	**P**	**14 11 45.9**	**-0.5**
WB2				IAmb	IAmb	14 11 46.7	
	comp=Z,6.2nm,0.9s						
WRAB	**Tennant Creek**	**44.01**	**263**	P	**P**	**14 11 45.7**	**-0.6**
WRA	**Warramunga Arr**	**44.02**	**263**	P	**P**	**14 11 46.0**	**-0.4**
	comp=Z,2.8nm,0.4s,baz=97,slow=7.7,SNR=8.9						
WRA	**Warramunga Arr**	**44.02**	**263**	P	**P**	**14 11 45.7**	**-0.8**
MTN	**Manton Dam**	**48.63**	**271**	P	**P**	**14 12 20.8**	**-0.5**
MTN				IAmb	IAmb	14 12 21.4	
	comp=Z,6.7nm,0.8s						
FORT	**Forrest**	**48.65**	**247**	P	**P**	**14 12 21.1**	**-0.1**
FORT				IAmb	IAmb	14 12 24.2	
	comp=Z,14nm,1.0s						
KNRA	**Kununurra**	**50.10**	**267**	P	**P**	**14 12 31.9**	**-0.1**
KNRA				IAmb	IAmb	14 12 32.1	
	comp=Z,7.8nm,0.6s						
FAKI	**Fak Fak**	**51.06**	**284**	P	**P**	**14 12 37.0**	**-2.0**
FAKI				IAmb	IAmb	14 12 45.9	
	comp=Z,11nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.44**	**263**	P	**P**	**14 12 48.7**	**-0.1**
	comp=Z,3.0nm,1.0s,baz=100,slow=11,SNR=1.5						
SIJI	**Sorong**	**52.81**	**285**	P	**P**	**14 12 51.4**	**-0.1**
	comp=Z,9.7nm,0.6s,baz=119,slow=8.2,SNR=7.6						
SOEI	**Soe**	**55.97**	**272**	P	**P**	**14 13 14.5**	**+0.7**
SOEI				IAmb	IAmb	14 13 15.9	
	comp=Z,14nm,0.8s						
PSA00	**Pilbara Seismi**	**57.06**	**257**	P	**P**	**14 13 20.5**	**-0.5**
QSPA	**South Pole Qui**	**69.20**	**180**	P	**P**	**14 14 39.0**	**+1.1**
QSPA				IAmb	IAmb	14 14 40.5	
	comp=Z,10nm,1.5s						
KKM	**Kota Kinabalu**	**69.33**	**285**	P	**P**	**14 14 39.1**	**-0.4**
KKM				IAmb	IAmb	14 14 40.5	
	comp=Z,12nm,1.0s						
UGM	**Wanagama**	**69.42**	**269**	P	**P**	**14 14 40.4**	**+0.4**
MJAR	**Matsushiro Arr**	**70.19**	**324**	P	**P**	**14 14 43.9**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=167,slow=7.0,SNR=6.5						
MAJO	**Matsushiro**	**70.19**	**324**	P	**P**	**14 14 43.8**	**-0.3**
JEM	**Erimo**	**71.88**	**331**	P	P	14 15 04.1	+10
JEM				IAmb	IAmb	14 15 26.5	
	comp=Z,20nm,1.1s						
JHS	**Saijyo**	**72.04**	**320**	P	**P**	**14 14 54.5**	**-0.3**
ADK	**Adak**	**72.46**	**1**	P	**P**	**14 14 56.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**78.97**	**326**	P	**P**	**14 15 34.1**	**+1.2**
SII	**Sitkinak Islan**	**79.83**	**13**	P	**P**	**14 15 37.5**	**+0.3**
YBH	**Yreka Blue Hor**	**80.92**	**39**	P	**P**	**14 15 45.1**	**+1.9**
	comp=Z,2.3nm,0.8s,baz=154,slow=1.9,SNR=5.8						
YBH	**Yreka Blue Hor**	**80.92**	**39**	P	**P**	**14 15 44.1**	**+0.9**
NVAR	**Mina Array Bea**	**81.67**	**44**	P	**P**	**14 15 48.6**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=225,slow=8.0,SNR=10.0						
NVAR	**Mina Array Bea**	**81.67**	**44**	P	**P**	**14 15 48.5**	**+1.2**
RPSI	**Rantau Prapat**	**83.95**	**275**	P	**P**	**14 15 57.9**	**-1.1**
PSI	**Prapat**	**83.99**	**275**	P	**P**	**14 15 57.9**	**-1.4**
	comp=Z,3.5nm,0.8s,baz=359,slow=3.5,SNR=3.5						
F10A	**Beach Ranch, E**	**86.63**	**38**	P	**P**	**14 16 12.1**	**+0.9**
F10A				IAmb	IAmb	14 16 12.6	
	comp=Z,3.6nm,0.8s						
RND	**Reindeer**	**87.18**	**13**	P	**P**	**14 16 13.0**	**-0.4**
RND				IAmb	IAmb	14 16 14.3	
	comp=Z,7.1nm,0.9s						
TXAR	**Lajitas Array**	**87.71**	**58**	P	**P**	**14 16 18.4**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=220,slow=7.4,SNR=9.7						
ILAR	**Eielson Array**	**88.80**	**13**	P	**P**	**14 16 20.2**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=218,slow=5.0,SNR=11						
ILAR	**Eielson Array**	**88.80**	**13**	P	**P**	**14 16 19.9**	**-0.9**
PDAR	**Pinedale Array**	**89.60**	**43**	P	**P**	**14 16 26.2**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=224,slow=3.7,SNR=8.4						
PDAR	**Pinedale Array**	**89.60**	**43**	P	**P**	**14 16 25.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P	**P**	**14 16 27.1**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=104,slow=2.8,SNR=6.5						
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P	**P**	**14 16 25.2**	**-1.0**
YKA	**Yellowknife Ar**	**97.08**	**25**	P	**P**	**14 16 58.8**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=246,slow=4.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**110.44**	**321**	PKiKP	**PKiKP**	**14 21 54.6**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=93,slow=2.9,SNR=1.9						
MKAR	**Makanchi Array**	**111.06**	**313**	PKiKP	**PKiKP**	**14 21 56.2**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=126,slow=1.4,SNR=6.0						
MKAR	**Makanchi Array**	**111.06**	**313**		**PKiKP**	**14 21 55.4**	**-1.1**
ARCES	**ARCESS Array B**	**129.19**	**349**	PKP	**PKPdf**	**14 22 30.2**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=20,slow=4.0,SNR=7.6						
ARCES	**ARCESS Array B**	**129.19**	**349**		**PKPdf**	**14 22 30.1**	**-0.5**
FINES	**FINESS Array B**	**135.97**	**343**	PKP	**PKiKP**	**14 22 44.5**	**-0.8**
	comp=Z,3.2nm,1.0s,baz=90,slow=1.4,SNR=5.6						
FINES	**FINESS Array B**	**135.97**	**343**	PKPdf	**PKiKP**	**14 22 44.4**	**-0.9**
KBZ	**Khabaz**	**138.76**	**313**	PKP	**PKPdf**	**14 22 48.5**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=153,slow=6.8,SNR=1.8						
NOA	**NORSAR Array B**	**139.28**	**353**	PKP	**PKiKP**	**14 22 51.4**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=27,slow=3.9,SNR=1.7						
AKASG	**Malin Array Be**	**143.07**	**330**	PKhKP	PKPpre	14 22 53.8	
	comp=Z,3.6nm,0.4s,baz=42,slow=4.3,SNR=27						
AKASG	**Malin Array Be**	**143.07**	**330**		PKPpre	14 22 53.5	
AKBB	**Malin Array Si**	**143.07**	**330**		PKPpre	14 22 53.8	
BRTR	**Keskin Array B**	**146.69**	**312**	PKPbc	**PKPbc**	**14 23 05.9**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=133,slow=5.2,SNR=7.3						
BUR08	**Bucovina Ar. S**	**147.10**	**330**		**PKPbc**	**14 23 07.2**	**+0.2**
CLL	**Collm**	**148.30**	**346**	*i* PKPbc	**PKPbc**	**14 23 10.0**	**+0.3**
	comp=Z,7.0nm,1.1s						
CLL				*i* PKPab	**PKPab**	**14 23 14.4**	**-0.8**
DPC	**Dobruska-Polom**	**148.31**	**342**	*e*PKPDF	**PKPdf**	**14 23 04.9**	**-0.7**
DPC				⇑*e*PKP	**PKiKP**	**14 23 10.6**	**-0.5**
KHC	**Kasperske Hory**	**150.18**	**344**	⇑*e*PKP	**PKPbc**	**14 23 14.3**	**-0.1**
KHC				*e*PKPAB	**PKPab**	**14 23 23.3**	**+0.1**
CKRC	**Cesky Krumlov**	**150.26**	**343**	⇑*e*PKP	**PKPbc**	**14 23 13.7**	**-0.9**
GERES	**GERESS Array B**	**150.41**	**343**	PKPbc	**PKPbc**	**14 23 15.0**	**0.0**
	comp=Z,1.2nm,0.8s,baz=40,slow=2.3,SNR=7.7						

IDC 12 14:04:43.0±2.2,2.27S×141.70E,h0km,mb3.8/2, mb1 4.0/3,mb1mx3.5/40,mbtmp3.8/3,ML3.9/1,MS3.4/3, Ms1 3.4/3,ms1mx2.7/35,Error ellipse: s-maj=43.5km s-min=28.2km az=96.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.02**	**256**	Pn	Pn	14 05 04.8	+0.1
	275nm,0.3s,baz=243,slow=12,SNR=2223						
JAY				Sn	Sg	14 05 15.6	-0.3
	316nm,0.3s,baz=146,slow=20,SNR=14						
WRA	**Warramunga Arr**	**18.98**	**202**	P	P	14 09 05.6	-0.7
	0.4nm,0.3s,baz=21,slow=12,SNR=8.9						
FITZ	**Fitzroy Crossi**	**22.26**	**224**	LR	LR	14 18 43.1	
	comp=Z,74nm,20.3s,baz=44,slow=38						
ASAR	**Alice Springs**	**22.57**	**199**	P	P	14 09 45.6	+0.4
	1.4nm,0.6s,baz=29,slow=9.2,SNR=13						
ASAR				LR	LR	14 19 21.1	
	comp=Z,77nm,20.6s,baz=35,slow=39						
STKA	**Stephens Creek**	**29.45**	**180**	LR	LR	14 24 21.4	
	comp=Z,120nm,18.4s,baz=22,slow=40						
H11S3	**WAKE ISLAND Hy**	**32.10**	**49**	T	T	14 46 39.2	
	baz=231,slow=74,SNR=7.2						
H11S2	**WAKE ISLAND Hy**	**32.11**	**49**	T	T	14 46 41.3	
	baz=231,slow=74,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**32.12**	**49**	T	T	14 46 42.2	
	baz=231,slow=74,SNR=5.5						
MKAR	**Makanchi Array**	**71.28**	**321**	P	P	14 16 04.5	0.0
	1.1nm,0.8s,baz=113,slow=7.8,SNR=9.9						

NEIC **12** *14:05:18.3±2.0,5.47S±0.07×153.06E±0.07,h47km±3km, mb4.5/19,Error ellipse: s-maj=10.2km s-min=9.2km az=217.0*
IDC **12** *14:05:20.4±4.8,5.32S×152.72E,h58km±40km,mb3.7/13, mb1 3.9/15,mb1mx3.7/49,mbtmp4.0/15,ML2.8/2,MS3.2/4, Ms1 3.2/4,ms1mx2.7/36,Error ellipse: s-maj=33.5km s-min=18.2km az=95.0*
ISC 12 14:05:17.4±0.4,5.43S±0.06×153.05E±0.07,h37km,n48, σ1⁰19/44,mb4.3/21,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.52**	**324**		**Pn**	**14 05 42.9**	**+0.9**
PMG	**Port Moresby**	**7.05**	**236**	P	**Pn**	**14 06 58.6**	**+0.5**
	2.4nm,0.3s,baz=38,slow=12,SNR=7.9						
PMG				S	**Sn**	**14 08 19.3**	**+2.3**
	1.9nm,0.3s,baz=98,slow=20,SNR=7.2						
PMG				LR	LR	14 09 49.4	
	comp=Z,35nm,20.3s,baz=331,slow=39						
PMG	**Port Moresby**	**7.05**	**236**	Pn	**Pn**	**14 06 58.3**	**+0.2**
HNR	**Honiara**	**7.91**	**121**	LR	LR	14 10 18.2	
	comp=Z,119nm,18.1s,baz=275,slow=36						
HNR	**Honiara**	**7.91**	**121**	Pn	**Pn**	**14 07 09.9**	**+0.1**
PATS	**Pohnpei**	**13.27**	**23**	Pn	**Pn**	**14 08 24.5**	**+1.2**
CTA	**Charters Tower**	**16.00**	**204**	P	**Pn**	**14 09 00.1**	**+0.3**
	0.1nm,0.3s,baz=28,slow=17,SNR=1.7						
CTAO	**Charters Tower**	**16.00**	**204**	Pn	**Pn**	**14 08 59.8**	**0.0**
SANVU	**Saraoutou**	**17.10**	**127**	P	**Pn**	**14 09 14.2**	**+0.5**
SANVU				IAmb	IAmb	14 09 42.6	
	comp=Z,54nm,1.3s						
EIDS	**Eidsvold**	**19.91**	**185**	Pn	**Pn**	**14 09 47.2**	**-0.6**
EIDS				IAmb	IAmb	14 09 47.8	
	comp=Z,13nm,1.1s						
MTN	**Manton Dam**	**22.84**	**250**	P	**P**	**14 10 18.2**	**+0.6**
MTN				IAmb	IAmb	14 10 39.6	
	comp=Z,9.7nm,0.6s						
WB0	**Warramunga Arr**	**23.08**	**230**	P	**P**	**14 10 20.5**	**+0.5**
WB0				IAmb	IAmb	14 10 23.2	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	**23.08**	**230**	P	**P**	**14 10 20.9**	**+0.9**
WRA	**Warramunga Arr**	**23.22**	**230**	P	**P**	**14 10 22.2**	**+0.8**
	comp=Z,3.6nm,0.7s,baz=55,slow=10,SNR=8.9						
ASAR	**Alice Springs**	**25.86**	**224**	P	**P**	**14 10 46.0**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=54,slow=9.3,SNR=1.9						
KNRA	**Kununurra**	**25.92**	**245**	P	**P**	**14 10 47.5**	**+1.1**
KNRA				IAmb	IAmb	14 11 04.0	
	comp=Z,13nm,0.9s						
MSVF	**Nonsavu**	**27.32**	**119**	LR	LR	14 21 44.6	
	comp=Z,77nm,18.8s,baz=33,slow=36						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	P	**P**	**14 11 16.1**	**-3.0**
	comp=Z,6.9nm,0.8s,baz=64,slow=8.6,SNR=3.7						
FITZ	**Fitzroy Crossi**	**29.58**	**242**	P	**P**	**14 11 17.1**	**-2.0**
FITZ				IAmb	IAmb	14 11 21.1	
	comp=Z,9.7nm,0.9s						
BFZ	**Birch Farm**	**40.80**	**153**	P	**P**	**14 12 55.5**	**+0.3**
LTZ	**Lake Taylor**	**40.91**	**158**	P	**P**	**14 12 56.5**	**+0.3**
RAR	**Rarotonga**	**48.30**	**114**	P	**P**	**14 13 54.8**	**-0.6**
RAR				IAmb	IAmb	14 13 57.3	
	comp=Z,9.9nm,1.1s						
USRK	**Ussuriysk Ar.**	**52.92**	**341**	P	**P**	**14 14 28.5**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=163,slow=10,SNR=1.6						
CMAR	**Chiang Mai Arr**	**58.37**	**295**	P	**P**	**14 15 07.0**	**-2.5**
	comp=Z,2.2nm,0.4s,baz=111,slow=4.9,SNR=2.2						
CMAR	**Chiang Mai Arr**	**58.37**	**295**	P	**P**	**14 15 11.6**	**+2.1**
PET	**Petropavlovsk**	**58.43**	**4**	P	**P**	**14 15 10.2**	**+1.1**
PETK	**Petropavlovsk-**	**58.45**	**3**	P	**P**	**14 15 09.5**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=165,slow=6.0,SNR=17						
MA2	**Magadan**	**64.83**	**359**	P	**P**	**14 15 52.1**	**-0.2**
MA2				IAmb	IAmb	14 15 55.8	
	comp=Z,17nm,1.5s						
SONM	**Songino Array**	**66.99**	**328**	P	**P**	**14 16 05.1**	**-1.5**
	comp=Z,1.4nm,0.9s,baz=125,slow=12,SNR=2.8						
SONM	**Songino Array**	**66.99**	**328**	IAmb	IAmb	14 16 10.4	
	comp=Z,0.9nm,0.7s						
CASY	**Casey**	**67.49**	**197**	P	**P**	**14 16 08.1**	**-1.1**
VNDA	**Vanda**	**72.19**	**178**	P	**P**	**14 16 39.4**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=316,slow=5.9,SNR=3.6						
VNDA	**Vanda**	**72.19**	**178**	IAmb	IAmb	14 16 46.6	
	comp=Z,1.9nm,1.0s						
BILL	**Bilibino**	**73.89**	**5**	P	**P**	**14 16 48.8**	**+0.6**
BILL				IAmb	IAmb	14 17 01.1	
	comp=Z,2.8nm,0.7s						
MKAR	**Makanchi Array**	**80.96**	**319**	P	**P**	**14 17 28.8**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=107,slow=5.5,SNR=7.5						
ZALV	**Zalesovo Beam**	**81.81**	**326**	P	**P**	**14 17 31.6**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=112,slow=5.0,SNR=12						
ZALV	**Zalesovo Beam**	**81.81**	**326**	P	**P**	**14 17 32.0**	**-0.5**
ILAR	**Eielson Array**	**82.65**	**22**	P	**P**	**14 17 37.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=258,slow=3.6,SNR=2.8						
QSPA	**South Pole Qui**	**84.53**	**180**	P	**P**	**14 17 45.1**	**-1.4**
QSPA				IAmb	IAmb	14 17 48.9	
	comp=Z,8.0nm,0.9s						
MAW	**Mawson**	**85.09**	**203**	P	**P**	**14 17 50.4**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=101,slow=3.0,SNR=1.8						
BRVK	**Borovoye**	**89.96**	**323**	P	**P**	**14 18 13.6**	**+0.7**
BRVK				IAmb	IAmb	14 18 15.4	
	comp=Z,2.9nm,0.9s						
YKA	**Yellowknife Ar**	**95.87**	**28**	P	**P**	**14 18 40.9**	**+1.1**
	comp=Z,0.2nm,0.9s,baz=259,slow=5.2,SNR=3.8						
PDAR	**Pinedale Array**	**99.09**	**48**	LR	LR	15 01 14.4	
	comp=Z,26nm,18.3s,baz=306,slow=34						
GERES	**GERESS Array B**	**124.72**	**328**	PKP	**PKPdf**	**14 24 12.4**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=17,slow=1.3,SNR=3.9						
LPAZ	**La Paz**	**133.90**	**119**	PKP	**PKiKP**	**14 24 35.1**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=206,slow=4.9,SNR=4.7						
BDFB	**Brasilia**	**150.44**	**135**	PKPbc	**PKiKP**	**14 25 05.9**	**-1.0**
	comp=Z,11nm,0.9s,baz=238,slow=1.4,SNR=14						
TORD	**Torodi Ar. Bea**	**150.74**	**287**	PKPbc	**PKPbc**	**14 25 05.9**	**-0.9**
	comp=Z,4.9nm,0.7s,baz=60,slow=2.2,SNR=20						
TORD	**Torodi Ar. Bea**	**150.74**	**287**		**PKPbc**	**14 25 05.5**	**-1.3**

JMA **12** *14:10:18.9±0.1,23.74N×121.57E,h2km,M3.1*
TAP **12** *14:10:19.1,23.75N×121.51E,h5km,ML3.6,C*
ISC 12 14:10:19.2±0.9,23.73N±0.01×121.55E±0.02,h9km±6km, n135,σ0⁰61/188,3C-23D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.13**	**241**	*i* P	**Pg**	**14 10 21.8**	**-0.4**
	baz=236						
EGFH				S	**Sg**	**14 10 23.4**	**-0.8**
	baz=236						
ESL	**Shilin**	**0.14**	**308**	⇓*e*P	**Pg**	**14 10 21.6**	**-0.7**
	baz=313						
HWA	**Hwalien**	**0.25**	**11**	*e*P	**Pg**	**14 10 25.0**	**+0.7**
	baz=12						
HWA				S	**Sg**	**14 10 29.7**	**+2.0**
	baz=12						
HGSD	**Ruisui**	**0.27**	**206**	P	**Pg**	**14 10 25.4**	**+0.8**
	baz=212						
HGSD				S	**Sb**	**14 10 31.3**	**+0.5**
	baz=212						
EHY	**Hungye**	**0.31**	**223**	P	**Pg**	**14 10 25.1**	**-0.3**
	baz=226						
EHY				*e*S	**Sg**	**14 10 30.1**	**+0.7**
	baz=226						
TWD	**Chiawan**	**0.35**	**7**	⇓*i*P	**Pg**	**14 10 26.2**	**+0.1**
	baz=358						
TWD				*e*S	**Sg**	**14 10 31.0**	**+0.2**
	baz=358						
VWDT	**VWDT**	**0.38**	**274**	P	**Pg**	**14 10 26.6**	**-0.1**
	baz=272						
VWDT				*e*S	**Sg**	**14 10 31.5**	**-0.1**
	baz=272						
YULB	**Yu-li**	**0.41**	**215**	*e*P	**Pg**	**14 10 27.3**	**0.0**
	baz=223						
YULB				*e*S	**Sg**	**14 10 33.4**	**+0.7**
	baz=223						
EYUL	**Yuli**	**0.44**	**209**	*e*P	**Pb**	**14 10 28.5**	**-0.6**
	baz=214						
NACB	**Ninganchiao**	**0.44**	**5**	⇓P	**Pg**	**14 10 27.6**	**-0.3**
	baz=352						
NACB				*e*S	**Sg**	**14 10 34.4**	**+0.7**
	baz=352						
TWF1	**Yuli**	**0.44**	**212**	*e*P	**Pg**	**14 10 28.1**	**+0.2**
	baz=220						
CHGB	**Renai**	**0.48**	**314**	⇓P	**Pg**	**14 10 28.4**	**-0.2**
	baz=324						
CHGB				S	**Sg**	**14 10 34.2**	**-0.7**
	baz=324						
ETLH	**Xiulin Townshi**	**0.48**	**352**	⇓*e*P	**Pg**	**14 10 28.4**	**-0.2**
	baz=351						
ETLH				*e*S	**Sg**	**14 10 34.7**	**-0.3**
	baz=351						
WHF	**Hehuan Shan**	**0.49**	**328**	⇓P	**Pg**	**14 10 28.4**	**-0.4**
	baz=327						
WHF				*e*S	**Sg**	**14 10 35.2**	**-0.1**
	baz=327						
SSLB	**Suanglung**	**0.55**	**276**	⇓P	**Pg**	**14 10 29.5**	**-0.4**
	baz=275						
SSLB				S	**Sg**	**14 10 36.4**	**-0.8**
	baz=275						
FULB	**Fuli**	**0.58**	**204**	*e*P	**Pb**	**14 10 31.5**	**-0.1**
	baz=218						
FUSS	**Fushou**	**0.59**	**331**	⇓*i*P	**Pg**	**14 10 30.6**	**-0.1**
	baz=320						
FUSS				*e*S	**Sg**	**14 10 38.6**	**+0.1**
	baz=320						
YUS	**Yu-Shan**	**0.60**	**246**	*e*P	**Pg**	**14 10 31.0**	**+0.1**
	baz=243						
WPL	**Puli Township**	**0.61**	**297**	⇓P	**Pg**	**14 10 31.1**	**0.0**
	baz=296						
WPL				S	**Sg**	**14 10 38.8**	**-0.3**
	baz=296						
SMLT	**Sun Moon Lake**	**0.61**	**284**	⇓*i*P	**Pg**	**14 10 30.9**	**-0.2**
	baz=283						
SMLT				S	**Sg**	**14 10 39.1**	**-0.2**
	baz=283						
TWT	**Tachien**	**0.62**	**327**	P

	baz=226										
STYT					*e*S		**Sb**	**14 10 50.0**	**+0.1**		
	baz=226										
WDLH	**Douliu**	**0.93**	**268**	⇓	*e*P		**Pb**	**14 10 37.9**	**+0.3**		
	baz=266										
TWQ1	**Liyutan**	**0.94**	**311**		*e*P		**Pn**	**14 10 38.3**	**-0.4**		
	baz=318										
TWQ1					*e*S		**Sb**	**14 10 50.8**	**+0.4**		
	baz=318										
TPUB	**Ta-pu**	**0.95**	**243**	⇓	P		**Pb**	**14 10 37.7**	**-0.2**		
	baz=252										
TPUB					S		**Sg**	**14 10 50.0**	**+0.2**		
	baz=252										
YHNB	**Yeheng**	**0.95**	**350**	⇓	P		**Pb**	**14 10 37.5**	**-0.4**		
	baz=357										
NSK	**Sanguang**	**0.96**	**349**	⇓	*i*P		**Pb**	**14 10 37.6**	**-0.4**		
	baz=335										
NSK					S		**Sg**	**14 10 49.5**	**-0.7**		
	baz=335										
WCHH	**Zhanghua**	**0.97**	**291**		*e*P		**Pn**	**14 10 39.2**	**+0.1**		
	baz=290										
WTP	**Ta-pu**	**0.99**	**241**	⇑	*i*P		**Pb**	**14 10 38.6**	**+0.1**		
	baz=250										
WTP					*e*S		**Sg**	**14 10 51.1**	**+0.1**		
	baz=250										
TWE	**Neicheng**	**0.99**	**6**		P		**Pg**	**14 10 38.0**	**-0.3**		
	baz=4.0										
TWE					S		**Sg**	**14 10 51.2**	**-0.1**		
	baz=4.0										
NSY	**Sanyi**	**0.99**	**314**		*e*P		**Pn**	**14 10 39.6**	**+0.2**		
	baz=312										
NSY					*e*S		**Sn**	**14 10 53.2**	**-0.4**		
	baz=312										
CHN2	**Minshiung**	**1.01**	**259**		*e*P		**Pb**	**14 10 38.7**	**-0.1**		
	baz=257										
TWG	**Pinlang**	**1.01**	**206**		*e*P		**Pg**	**14 10 38.6**	**-0.1**		
	baz=217										
TWGBT	**Beinan**	**1.01**	**206**		*e*P		**Pb**	**14 10 38.9**	**+0.1**		
	baz=217										
NSTT	**Nanjuang**	**1.03**	**331**		*e*P		**Pb**	**14 10 38.8**	**-0.4**		
	baz=321										
NSTT					S		**Sg**	**14 10 52.0**	**-0.4**		
	baz=321										
LIOB	**Emei**	**1.03**	**332**		*e*P		**Pb**	**14 10 39.2**	**-0.2**		
	baz=320										
LIOB					*e*S		**Sb**	**14 10 52.5**	**-0.6**		
	baz=320										
WDJ	**Dajia District**	**1.03**	**307**		P		**Pn**	**14 10 40.4**	**+0.5**		
	baz=313										
WDJ					*e*S		**Sn**	**14 10 54.5**	**-0.1**		
	baz=313										
NWLT	**Wulai**	**1.04**	**358**		*e*P		**Pg**	**14 10 39.1**	**-0.2**		
	baz=345										
LDUT	**Ludao**	**1.05**	**184**		*e*P		**Pg**	**14 10 39.0**	**-0.6**		
	baz=172										
LDUT					*e*S		**Sg**	**14 10 53.8**	**+0.6**		
	baz=172										
CHY	**Chiayi**	**1.06**	**258**		*e*P		**Pb**	**14 10 39.9**	**+0.2**		
	baz=256										
NMLH	**Miaoli**	**1.06**	**319**		P		**Pn**	**14 10 40.8**	**+0.5**		
	baz=318										
WTK	**Tuku**	**1.07**	**268**		*e*P		**Pb**	**14 10 39.9**	**0.0**		
	baz=267										
TWK	**Hsinying**	**1.08**	**245**		P		**Pb**	**14 10 40.2**	**0.0**		
	baz=245										
TWK					S		**Sn**	**14 10 56.1**	**+0.3**		
	baz=245										
CHN1	**Nanshi**	**1.08**	**240**		*e*P		**Pb**	**14 10 40.6**	**+0.4**		
	baz=238										
NJD	**Zhudong**	**1.09**	**337**		*e*P		**Pg**	**14 10 39.7**	**-0.4**		
	baz=336										
WRL	**Guolierlin Hig**	**1.09**	**279**		*e*P		**Pg**	**14 10 39.5**	**-0.7**		
	baz=278										
SNST	**Tainan City**	**1.09**	**242**		*e*P		**Pb**	**14 10 40.3**	**-0.1**		
	baz=244										
SNST					*e*S		**Sn**	**14 10 56.8**	**+0.8**		
	baz=244										
SGST	**Jiashian**	**1.10**	**234**	⇓	*e*P		**Pg**	**14 10 39.8**	**-0.6**		
	baz=234										
SGST					*e*S		**Sb**	**14 10 55.7**	**+0.9**		
	baz=234										
SLGT	**Liugui**	**1.11**	**229**		*e*P		**Pg**	**14 10 40.2**	**-0.3**		
	baz=227										
NTC	**Toucheng**	**1.15**	**13**		*e*P		**Pb**	**14 10 41.1**	**-0.2**		
	baz=11										
HSN1	**Hsinchu**	**1.15**	**335**		*e*P		**Pn**	**14 10 42.3**	**+0.8**		
	baz=333										
EGS		**1.16**	**17**		*e*P		**Pg**	**14 10 41.1**	**-0.5**		
SBCB	**Hsinchu**	**1.18**	**334**		*e*P		**Pn**	**14 10 42.7**	**+0.8**		
	baz=323										
SBCB					*e*S		**Sn**	**14 10 58.9**	**+0.9**		
	baz=323										
HSN	**Hsinchu**	**1.19**	**334**		*e*P		**Pn**	**14 10 43.1**	**+1.0**		
	baz=343										
ICHU	**Yijhu**	**1.22**	**253**		*e*P		**Pb**	**14 10 42.6**	**0.0**		
	baz=265										
NHDH	**Xindian Distri**	**1.23**	**359**		*e*P		**Pg**	**14 10 41.8**	**-1.1**		
	baz=356										
TATO	**Taipei**	**1.24**	**357**		*e*P		**Pb**	**14 10 42.9**	**+0.1**		
	baz=355										
TWA	**Mucha**	**1.24**	**1**		*e*P		**Pg**	**14 10 42.7**	**-0.5**		
	baz=359										
ECL	**Taimali**	**1.25**	**206**		*e*P		**Pg**	**14 10 41.5**	**-1.8**		
	baz=188										
TIPB	**Shuangxi**	**1.26**	**11**		*e*P		**Pg**	**14 10 43.0**	**-0.5**		
	baz=9.0										
CHN3	**Shinhua**	**1.27**	**239**		*e*P		**Pg**	**14 10 43.0**	**-0.7**		
	baz=237										
NCUH	**Zhongli**	**1.28**	**345**		*e*P		**Pn**	**14 10 43.9**	**+0.7**		
	baz=355										
NCU	**National Centr**	**1.28**	**345**		*e*P		**Pg**	**14 10 43.0**	**-0.8**		
	baz=355										
NTY	**Taoyuan**	**1.28**	**350**		*e*P		**Pg**	**14 10 43.1**	**-0.8**		
	baz=347										
SCST	**Cishan**	**1.28**	**229**		*e*P		**Pn**	**14 10 44.0**	**+0.7**		
	baz=215										
CHN8	**Yiju**	**1.29**	**253**		*e*P		**Pn**	**14 10 43.9**	**+0.4**		
	baz=251										
SSD	**Sandimen**	**1.29**	**221**		*e*P		**Pg**	**14 10 42.8**	**-1.4**		
	baz=210										
TSMG	**Majia**	**1.32**	**219**		*e*P		**Pn**	**14 10 44.0**	**+0.2**		
	baz=216										
TSMG					*e*S		**Sn**	**14 11 02.5**	**+1.0**		
	baz=216										
TWB1	**Santiao Chiao**	**1.33**	**17**		*e*P		**Pb**	**14 10 45.6**	**+1.2**		
NWF	**Wu-fen Shan**	**1.35**	**9**		*e*P		**Pb**	**14 10 45.1**	**+0.3**		
	baz=6.0										
WFSB	**Wu-fen Shan**	**1.35**	**9**		*e*P		**Pb**	**14 10 45.5**	**+0.8**		
	baz=6.0										
SCLT	**Jiali**	**1.36**	**246**		*e*P		**Pn**	**14 10 44.1**	**-0.3**		
	baz=243										
TWS1	**Kuangyinshan**	**1.37**	**355**		*e*P		**Pg**	**14 10 45.5**	**-0.1**		
	baz=10.0										
TWM1	**Shoushan**	**1.38**	**229**		*e*P		**Pg**	**14 10 46.4**	**+0.7**		
	baz=227										
MASBT	**Mashibuluo**	**1.40**	**217**		*e*P		**Pn**	**14 10 45.2**	**+0.2**		
	baz=208										
YM01	**YM01**	**1.41**	**1**		*e*P		**Pn**	**14 10 45.5**	**+0.3**		
	baz=358										
YM04	**YM04**	**1.42**	**359**		*e*P		**Pb**	**14 10 45.7**	**-0.1**		
	baz=357										
YM10	**YM10**	**1.42**	**0**		*e*P		**Pn**	**14 10 45.2**	**0.0**		
	baz=358										
TNOU	**National Taiwa**	**1.43**	**8**		*e*P		**Pn**	**14 10 45.8**	**+0.4**		
	baz=6.0										
YM05	**YM05**	**1.43**	**1**		*e*P		**Pb**	**14 10 45.9**	**-0.2**		
	baz=358										
YM11	**YM11**	**1.43**	**1**		*e*P		**Pg**	**14 10 46.3**	**-0.4**		
	baz=358										
ANP	**Anpu**	**1.45**	**359**		*e*P		**Pn**	**14 10 46.0**	**+0.3**		
	baz=357										
YM08	**YM08**	**1.45**	**1**		*e*P		**Pn**	**14 10 45.9**	**+0.2**		
	baz=359										
JYNG	**Yonagunijimaku**	**1.46**	**60**		S		**Sb**	**14 11 05.0**	**-0.3**		
EAST	**Anshuo**	**1.49**	**206**		*e*P		**Pn**	**14 10 46.2**	**0.0**		
	baz=191										
YOJ	**Yonaguni jima**	**1.52**	**61**		P		**Pn**	**14 10 46.5**	**-0.2**		
YOJ					S		**Sn**	**14 11 06.9**	**+0.4**		
YOJ	**Yonaguni jima**	**1.52**	**61**		*e*P		**Pn**	**14 10 46.4**	**-0.2**		
	baz=61										
SCZT	**Fangliau**	**1.60**	**213**		*e*P		**Pb**	**14 10 49.1**	**+0.1**		
	baz=211										
SLIU	**Shizi**	**1.66**	**205**		*e*P		**Pb**	**14 10 49.8**	**-0.2**		
	baz=192										
LAY	**Lan-yu**	**1.68**	**180**		*e*P		**Pn**	**14 10 47.1**	**-1.8**		
	baz=169										
WDGT	**Dungji**	**1.80**	**255**		*e*P		**Pn**	**14 10 50.5**	**0.0**		
	baz=253										
PHUB	**P'eng-hu**	**1.83**	**264**		*e*P		**Pn**	**14 10 50.8**	**0.0**		
	baz=263										
PHUB					*e*S		**Sb**	**14 11 15.9**	**0.0**		
	baz=263										
PNG	**Penghu**	**1.84**	**265**		*e*P		**Pn**	**14 10 51.0**	**0.0**		
	baz=264										
PNG					*e*S		**Sb**	**14 11 15.8**	**-0.3**		
	baz=264										
TWK1	**Hengchun**	**1.91**	**201**		*e*P		**Pn**	**14 10 53.5**	**+1.6**		
	baz=188										
TWKBT	**Hengchun**	**1.91**	**201**		*e*P		**Pn**	**14 10 52.3**	**+0.4**		
	baz=188										
VCHM	**Qimei**	**2.02**	**255**		*e*P		**Pn**	**14 10 53.0**	**-0.4**		
	baz=252										
IRIF	**Iriomote-Funau**	**2.08**	**73**		*e*S		**Sn**	**14 11 21.4**	**+1.0**		
VWUC	**VWUC**	**2.29**	**304**		*e*P		**Pn**	**14 10 57.3**	**+0.1**		
	baz=302										
JKRS	**Kuro-shima**	**2.30**	**77**		*e*S		**Sn**	**14 11 26.2**	**+0.3**		
JIJ	**Ishigaki jima**	**2.45**	**75**		P		**Pn**	**14 10 58.3**	**-1.1**		
JIJ					S		**Sn**	**14 11 28.7**	**-0.8**		
PTMZ	**Houxiangcun**	**2.57**	**301**		*e*P		**Pn**	**14 11 01.0**	**0.0**		
	baz=300										
JISG	**Ishigakijimahi**	**2.66**	**71**		P		**Pn**	**14 11 01.6**	**-0.7**		
JISG					*e*S		**Sn**	**14 11 32.8**	**-1.9**		
MATB	**Ma-tsu**	**2.82**	**329**		*e*P		**Pn**	**14 11 04.5**	**+0.1**		
	baz=325										
KNM	**Kinmen**	**2.93**	**284**		*e*P		**Pn**	**14 11 08.1**	**+2.1**		
	baz=283										
KNMB	**Chin-men Tao**	**2.98**	**285**	⇑	*e*P		**Pn**	**14 11 06.8**	**+0.1**		
	baz=269										
LYJJ	**Jianjiangzhen**	**3.24**	**330**		*e*P		**Pn**	**14 11 11.4**	**+1.1**		
	baz=326										
MHZQ	**Yeshan**	**3.29**	**316**		*e*P		**Pn**	**14 11 11.7**	**+0.8**		
	baz=314										
XPSS	**Dashiqiu**	**3.42**	**339**		*e*P		**Pn**	**14 11 13.1**	**+0.4**		
	baz=322										
AXDP	**Jialang**	**3.47**	**290**		*e*P		**Pn**	**14 11 13.7**	**+0.3**		
	baz=303										
ZPLA	**Ao Xicun**	**3.49**	**274**		*e*P		**Pn**	**14 11 13.9**	**+0.2**		
	baz=274										
JMJ	**Miyako jima 2**	**3.58**	**72**		*e*P		**Pn**	**14 11 17.2**	**+2.2**		
	baz=74										

IDC ***12*** *14:10:08.4±2.8, 19.°05N×66.°15W, h0km, mb3.4/4, mb1 3.8/4, mb1mx3.5/30, mbtmp3.4/4, Error ellipse: s-maj=119.9km s-min=31.7km az=14.0*
NEIC ***12*** *14:10:20.1±1.5, 19.°10N±0.°05×66.°19W±0.°04, h29km±6km, Error ellipse: s-maj=7.8km s-min=5.4km az=198.0*
RSPR ***12*** *14:10:21.4, 19.°14N×66.°17W, h30km±21km, MD3.6/6*
ISC 12 14:10:20.4±1.1, 19.°12N±0.°07×66.°18W±0.°05, h35km, n48, σ1§03/48, mb3.6/5, 9C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°		Phase	ID		Time	Res
					Op		ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.72**	**207**	⇑	*e*P		**Pn**	**14 10 34.7**	**+0.6**
EMPR	**Esperanza - Ma**	**0.72**	**207**				**Pn**	**14 10 34.7**	**+0.6**
GCPR	**Guaynabo City**	**0.81**	**173**	⇑	*e*P		**Pn**	**14 10 34.9**	**-0.5**
GCPR	**Guaynabo City**	**0.81**	**173**				**Pn**	**14 10 34.9**	**-0.5**
CBYP	**Canovanas**	**0.90**	**160**	⇑	*e*P		**Pn**	**14 10 36.1**	**-0.5**
CBYP	**Canovanas**	**0.90**	**160**		*e*S		**Sn**	**14 10 48.6**	**+0.1**
CBYP	**Canovanas**	**0.90**	**160**				**Pn**	**14 10 36.1**	**-0.5**
CBYP							**Sn**	**14 10 48.6**	**+0.1**
AOPR	**Arecibo Observ**	**0.94**	**215**	⇓	*e*P		**Pn**	**14 10 37.4**	**+0.1**
AOPR	**Arecibo Observ**	**0.94**	**215**		*e*S		**Sn**	**14 10 49.4**	**-0.1**
AOPR	**Arecibo Observ**	**0.94**	**215**				**Pn**	**14 10 37.4**	**+0.1**
AOPR							**Sn**	**14 10 49.4**	**-0.1**
SJG	**San Juan**	**1.01**	**178**				**Pn**	**14 10 37.7**	**-0.3**
SJG						IAML		14 11 05.5	
	391nm,0.6s								
HUMP	**Col San Antoni**	**1.02**	**162**	⇑	*e*P		**Pn**	**14 10 37.7**	**-0.6**
HUMP	**Col San Antoni**	**1.02**	**162**				**Pn**	**14 10 37.7**	**-0.6**
AGPR	**Aguadilla, PR**	**1.10**	**234**	⇑	*e*P		**Pn**	**14 10 38.8**	**-0.5**
AGPR	**Aguadilla, PR**	**1.10**	**234**				**Pn**	**14 10 38.8**	**-0.5**
OBIP	**Obispado Ponce**	**1.15**	**201**	⇓	*e*P		**Pn**	**14 10 40.5**	**+0.5**
OBIP	**Obispado Ponce**	**1.15**	**201**		*e*S		**Sn**	**14 10 54.4**	**-0.1**
OBIP	**Obispado Ponce**	**1.15**	**201**				**Pn**	**14 10 40.5**	**+0.5**
OBIP							**Sn**	**14 10 54.4**	**-0.1**
IGPR	**InterUniversit**	**1.15**	**176**	⇑	*e*P		**Pn**	**14 10 40.2**	**+0.1**
CUPR	**Culebra, Puert**	**1.18**	**133**	⇑	*e*P		**Pn**	**14 10 40.2**	**-0.2**
CUPR	**Culebra, Puert**	**1.18**	**133**				**Pn**	**14 10 40.2**	**-0.2**
MTP	**Monte Pirata**	**1.18**	**150**	⇑	*e*P		**Pn**	**14 10 40.4**	**0.0**
MTP	**Monte Pirata**	**1.18**	**150**				**Pn**	**14 10 40.4**	**0.0**
LSP	**Las Mesas**	**1.27**	**222**	⇑	*e*P		**Pn**	**14 10 41.6**	**-0.2**
LSP	**Las Mesas**	**1.27**	**222**		*e*S		**Sn**	**14 10 57.3**	**-0.4**
LSP	**Las Mesas**	**1.27**	**222**				**Pn**	**14 10 41.6**	**-0.2**
LSP							**Sn**	**14 10 57.3**	**-0.4**
MLPR	**Magueyes Islan**	**1.41**	**216**	⇓	*e*P		**Pn**	**14 10 44.5**	**+0.9**
MLPR	**Magueyes Islan**	**1.41**	**216**				**Pn**	**14 10 44.5**	**+0.9**
BANI	**BANI**	**4.02**	**260**		P		**Pn**	**14 11 21.1**	**+1.3**
SDDR	**Presa de Saban**	**4.83**	**269**				**Pn**	**14 11 28.4**	**-2.3**
SDDR						IAML		14 13 05.9	
	46nm,1.4s								
BCIP	**Isla Barro Col**	**16.52**	**235**		Pn		**Pn**	**14 14 08.3**	**-1.3**
BCIP					IAmb		IAmb	14 14 15.0	
	comp=Z,37nm,1.2s								
NHSC	**New Hope**	**18.73**	**321**		P		**P**	**14 14 34.3**	**-1.9**
Y58A	**Scranton**	**19.01**	**323**		P		**P**	**14 14 37.9**	**-1.3**
255A	**Hazlehurst**	**19.43**	**314**		P		**P**	**14 14 42.7**	**-1.1**
255A					IAmb		IAmb	14 14 54.9	
	comp=Z,22nm,0.9s								
W57A	**Gilead**	**20.11**	**325**		P		**P**	**14 14 52.0**	**+0.8**
JSC	**Jenkinsville**	**20.20**	**321**		P		**P**	**14 14 52.6**	**+0.5**
154A	**Montrose**	**20.27**	**315**		P		**P**	**14 14 54.3**	**+1.3**
T59A	**Double "B" Far**	**20.39**	**333**		P		**P**	**14 14 55.4**	**+1.2**
T59A					IAmb		IAmb	14 15 07.8	
	comp=Z,14nm,1.3s								
HODGE	**Hodges**	**20.76**	**320**		P		**P**	**14 15 00.5**	**+2.2**
HODGE					IAmb		IAmb	14 15 03.1	
	comp=Z,14nm,1.4s								
KMSC	**Kings Mountain**	**20.85**	**323**				**P**	**14 15 02.0**	**+2.7**
KMSC					IAmb		IAmb	14 15 17.0	
	comp=Z,12nm,1.4s								
GOGA	**Godfrey**	**21.00**	**316**		P		**P**	**14 15 02.7**	**+1.8**
JSRW	**J. Sargeant Re**	**21.14**	**334**		P		**P**	**14 15 04.2**	**+1.9**
R58B	**Mineral**	**21.37**	**334**		P		**P**	**14 15 06.7**	**+1.9**
R58B					IAmb		IAmb	14 15 32.0	
	comp=Z,16nm,1.4s								
BLA	**Blacksburg**	**21.91**	**328**		P		**P**	**14 15 11.2**	**+0.4**
TXAR	**Lajitas Array**	**35.53**	**294**		P		P	14 17 08.9	-5.5
	comp=Z,0.7nm,0.9s,baz=104,slow=11,SNR=6.6								
NVAR	**Mina Array Bea**	**48.89**	**305**		P		P	14 18 55.0	-8.2
	comp=Z,0.3nm,0.7s,baz=98,slow=11,SNR=4.5								
YKA	**Yellowknife Ar**	**54.57**	**335**		P		P	14 19 39.4	-5.6
	comp=Z,0.3nm,0.9s,baz=107,slow=7.6,SNR=2.7								
TORD	**Torodi Ar. Bea**	**65.14**	**84**		P		P	14 20 51.6	-6.7
	comp=Z,0.4nm,0.7s,baz=272,slow=5.2,SNR=1.9								

IDC ***12*** *14:12:50.3±3.1, 22.°63N×121.°62E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.3/42, mbtmp3.5/6, ML3.2/2, MS2.8/1, Ms1 3.0/1, ms1mx2.3/22, Error ellipse: s-maj=70.5km s-min=30.6km az=158.0*
TAP ***12*** *14:12:56.1, 23.°76N×121.°54E, h3km, ML3.7, C*
JMA ***12*** *14:12:56.2±0.2, 23.°73N×121.°58E, h1km±2km, M3.1*
ISC 12 14:12:56.7±0.9, 23.°74N±0.°01×121.°55E±0.°02, h8km±6km, n151, σ1§22/209, mb3.1/4, 1C-27D, Taiwan

Code	Station Name	Δ°	AZ°		Phase	ID		Time	Res
					Op		ISC	h m s	ISC
EGFH	**Guangfu**	**0.14**	**236**	⇓	P		**Pg**	**14 12 59.4**	**-0.2**
	baz=239								
EGFH					S		**Sg**	**14 13 01.8**	**+0.2**
	baz=239								
HWA	**Hwalien**	**0.24**	**12**		*e*P		**Pg**	**14 13 02.5**	**+1.0**
	baz=5.0								
HWA					*e*S		**Sg**	**14 13 07.0**	**+2.3**
	baz=5.0								
HGSD	**Ruisui**	**0.28**	**205**	⇓	P		**Pb**	**14 13 03.2**	**-0.6**
	baz=219								
HGSD					S		**Sb**	**14 13 09.0**	**+0.3**
	baz=219								
EHY	**Hungye**	**0.32**	**221**		P		**Pg**	**14 13 02.8**	**-0.1**
	baz=228								
TWD	**Chiawan**	**0.34**	**7**	⇓	*i*P		**Pb**	**14 13 03.8**	**-1.1**
	baz=356								
TWD					S		**Sb**	**14 13 08.8**	**-1.6**
	baz=356								
VWDT	**VWDT**	**0.37**	**272**	⇓	P		**Pb**	**14 13 04.2**	**-1.4**
	baz=272								
VWDT					S		**Sb**	**14 13 09.4**	**-2.1**
	baz=272								
YULB	**Yu-li**	**0.42**	**213**		P		**Pg**	**14 13 05.0**	**+0.1**
	baz=231								
YULB					S		**Sb**	**14 13 11.6**	**-1.3**
	baz=231								
NACB	**Ninganchiao**	**0.43**	**6**	⇓	P		**Pb**	**14 13 05.1**	**-1.4**
	baz=349								
NACB					*e*S		**Sb**	**14 13 12.4**	**-0.7**
	baz=349								
EYUL	**Yuli**	**0.45**	**208**		*e*P		**Pb**	**14 13 06.0**	**-0.8**
	baz=218								
TWF1	**Yuli**	**0.45**	**211**		P		**Pg**	**14 13 05.7**	**+0.2**
	baz=229								
ETLH	**Xiulin Townshi**	**0.47**	**352**		P		**Pb**	**14 13 05.8**	**-1.3**
	baz=344								
CHGB	**Renai**	**0.47**	**313**	⇓	P		**Pb**	**14 13 06.1**	**-1.2**
	baz=311								
CHGB					S		**Sb**	**14 13 12.1**	**-2.3**
	baz=311								
WHF	**Hehuan Shan**	**0.48**	**327**	⇓	*i*P		**Pb**	**14 13 06.0**	**-1.5**
	baz=322								
SSLB	**Suanglung**	**0.55**	**275**	⇓	P		**Pb**	**14 13 07.2**	**-1.4**
	baz=276								
SSLB					S		**Sg**	**14 13 14.2**	**-0.3**
	baz=276								
FUSS	**Fushou**	**0.57**	**331**		P		**Pb**	**14 13 08.1**	**-1.0**
	baz=316								
FUSS					*e*S		**Sb**	**14 13 15.6**	**-1.9**
	baz=316								
FULB	**Fuli**	**0.59**	**203**		P		**Pn**	**14 13 10.0**	**-1.4**
	baz=224								
WPL	**Puli Township**	**0.60**	**296**	⇓	P		**Pb**	**14 13 08.7**	**-0.8**
	baz=296								
WPL					S		**Sb**	**14 13 16.8**	**-1.4**
	baz=296								
YUS	**Yu-Shan**	**0.60**	**245**		P		**Pb**	**14 13 08.6**	**-1.1**
	baz=259								
YUS					S		**Sg**	**14 13 16.7**	**+0.3**
	baz=259								
SMLT	**Sun Moon Lake**	**0.61**	**283**	⇓	*i*P		**Pb**	**14 13 08.6**	**-1.1**
	baz=283								
SMLT					*i* S		**Sb**	**14 13 17.2**	**-1.3**
	baz=283								
TWT	**Tachien**	**0.61**	**326**	⇓	*i*P		**Pb**	**14 13 09.0**	**-0.7**
	baz=311								
TWT					S		**Sb**	**14 13 16.7**	**-1.8**
	baz=311								
TDCB	**Techi**	**0.62**	**325**	⇓	P		**Pb**	**14 13 09.0**	**-0.8**
	baz=311								
TDCB					S		**Sg**	**14 13 16.4**	**-0.4**
	baz=311								
DPDB	**Guoxing**	**0.64**	**297**		P		**Pb**	**14 13 09.7**	**-0.4**
	baz=296								
DPDB					*e*S		**Sb**	**14 13 18.2**	**-1.0**
	baz=296								
WHYT	**Xinyi Township**	**0.64**	**266**		*e*P		**Pb**	**14 13 09.6**	**-0.6**
	baz=266								
TYC	**Yuchr**	**0.65**	**284**	⇓	*i*P		**Pb**	**14 13 09.2**	**-1.2**
	baz=285								
TYC					*i* S		**Sb**	**14 13 18.6**	**-1.0**
	baz=285								
CHKT	**Chengkung**	**0.66**	**195**		*e*P		**Pb**	**14 13 10.4**	**-0.1**
	baz=192								
CHKT					*e*S		**Sn**	**14 13 22.5**	**-0.4**
	baz=192								
NNSB	**Datong**	**0.70**	**347**	⇓	P		**Pb**	**14 13 10.5**	**-0.7**
	baz=346								
NNSB					S		**Sg**	**14 13 18.9**	**-0.4**
	baz=346								
NNS	**Nan Shan**	**0.71**	**347**	⇓	*i*P		**Pb**	**14 13 10.7**	**-0.7**
	baz=346								
NNS					S		**Sb**	**14 13 19.7**	**-1.6**
	baz=346								
ALS	**Alishan**	**0.72**	**251**		P		**Pb**	**14 13 10.9**	**-0.7**
	baz=253								
ALS					*e*S		**Sb**	**14 13 20.2**	**-1.6**
	baz=253								
EWUT	**Wuta**	**0.73**	**17**		P		**Pb**	**14 13 10.9**	**-0.6**
	baz=2.0								
EWUT					*e*S		**Sn**	**14 13 22.4**	**-2.2**
	baz=2.0								
ELDTW	**Lidau**	**0.74**	**222**		P		**Pg**	**14 13 10.6**	**-0.3**
	baz=222								
WJS	**Zhushan**	**0.76**	**276**	⇓	*e*P		**Pn**	**14 13 12.5**	**-1.1**
	baz=277								
WJS					*e*S		**Sn**	**14 13 24.0**	**-1.2**
	baz=277								
WHP	**Taichung City**	**0.

TWGBT	**Beinan** baz=201	1.02	205	*e*P		Pn	14 13 16.5	-0.7
TWG	**Pinlang** baz=201	1.02	206	*e*P		Pn	14 13 16.8	-0.4
LIOB	**Emei** baz=324	1.02	332	*e*P		Pn	14 13 17.1	-0.2
WDJ	**Dajia District** baz=313	1.02	306	*e*P		Pn	14 13 17.6	+0.3
WDJ	baz=313			*e*S		Sn	14 13 32.1	+0.2
NWLT	**Wulai** baz=347	1.03	358	⇓*e*P		Pn	14 13 16.6	-0.9
NMLH	**Miaoli** baz=316	1.05	319	*e*P		Pn	14 13 18.4	+0.7
NMLH	baz=316			*e*S		Sn	14 13 32.7	+0.2
TTN	**Taitung** baz=198	1.05	201	*e*P		Pn	14 13 18.0	+0.3
CHY	**Chiayi** baz=260	1.06	257	*e*P		Pn	14 13 18.1	+0.3
CHY	baz=260			*e*S		Sn	14 13 33.5	+0.7
WTK	**Tuku** baz=270	1.06	267	*e*P		Pn	14 13 18.7	+0.8
WTK	baz=270			*e*S		Sn	14 13 33.4	+0.5
LDUT	**Ludao** baz=167	1.07	184	*e*P		Pg	14 13 16.1	-1.0
LDUT	baz=167			*e*S		Sn	14 13 32.5	-0.5
NJD	**Zhudong** baz=329	1.07	337	*e*P		Pn	14 13 18.1	+0.1
TWK	**Hsinying** baz=249	1.08	244	P		Pn	14 13 18.1	-0.1
TWK	baz=249			S		Sn	14 13 33.8	+0.4
WRL	**Guolierlin Hig** baz=280	1.08	279	*e*P		Pn	14 13 18.3	+0.2
WRL	baz=280			*e*S		Sn	14 13 33.8	+0.5
CHN1	**Nanshi** baz=245	1.09	240	P		Pn	14 13 18.6	+0.3
CHN1	baz=245			S		Sn	14 13 34.2	+0.6
SNST	**Tainan City** baz=247	1.10	242	P		Pn	14 13 18.4	0.0
SNST	baz=247			*e*S		Sn	14 13 34.6	+0.9
SGST	**Jiashian** baz=239	1.11	234	⇑*i*P		Pn	14 13 18.0	-0.5
SGST	baz=239			*i* S		Sn	14 13 34.4	+0.5
SLGT	**Liugui** baz=233	1.12	228	*e*P		Pn	14 13 19.0	+0.4
NTC	**Toucheng** baz=345	1.13	13	*e*P		Pn	14 13 18.9	+0.1
HSN1	**Hsinchu** baz=327	1.14	335	*e*P		Pn	14 13 20.0	+1.2
EGS	baz=347	1.15	18	*e*P		Pn	14 13 19.8	+0.8
SBCB	**Hsinchu** baz=326	1.16	334	⇓P		Pn	14 13 20.4	+1.1
WTCT	**Ta-ch'eng** baz=276	1.17	276	*e*P		Pn	14 13 20.0	+0.7
HSN	**Hsinchu** baz=342	1.18	333	*e*P		Pg	14 13 20.5	+1.2
HSN	baz=342			*e*S		Sn	14 13 37.2	+1.6
NHDH	**Xindian Distri** baz=348	1.21	359	*e*P		Pg	14 13 20.4	+0.5
WSF	**Szhu** baz=268	1.22	265	*e*P		Pg	14 13 20.7	+0.6
WSF	baz=268			*e*S		Sn	14 13 37.1	+0.4
TATO	**Taipei** baz=346	1.23	357	⇓*e*P		Pg	14 13 20.5	+0.3
TWA	**Mucha** baz=341	1.23	1	P		Pg	14 13 20.9	+0.5
TIPB	**Shuangxi** baz=12	1.25	12	*e*P		Pg	14 13 20.9	+0.2
NCUH	**Zhongli** baz=351	1.26	345	*e*P		Pg	14 13 22.3	+1.3
ECL	**Taimali** baz=188	1.27	206	*e*P		Pn	14 13 20.1	-0.6
NTY	**Taoyuan** baz=340	1.27	350	*e*P		Pg	14 13 21.9	+0.8
CHN3	**Shinhua** baz=243	1.27	239	*e*P		Pg	14 13 22.2	+1.1
CHN3	baz=243			*e*S		Sn	14 13 42.2	+4.2
CHN8	**Yiju** baz=257	1.29	252	P		Pg	14 13 21.6	+0.1
CHN8	baz=257			S		Sg	14 13 40.5	+2.3
SCST	**Cishan** baz=236	1.29	229	⇓*e*P		Pg	14 13 22.8	+1.3
SCST	baz=236			*e*S		Sg	14 13 42.8	+4.6
SSD	**Sandimen** baz=213	1.30	221	*e*P		Pb	14 13 20.9	-0.5
TWB1	**Santiao Chiao** baz=356	1.32	18	*e*P		Pg	14 13 22.9	+0.9
TSMG	**Majia** baz=225	1.33	219	*e*P		Pg	14 13 22.7	+0.5
NWF	**Wu-fen Shan** baz=3.0	1.34	9	*e*P		Pg	14 13 23.2	+0.8
WFSB	**Wu-fen Shan** baz=3.0	1.34	9	*e*P		Pg	14 13 23.0	+0.7
TWS1	**Kuangyinshan** baz=342	1.36	355	*e*P		Pg	14 13 23.6	+0.9
SCLT	**Jiali** baz=248	1.37	246	*e*P		Pg	14 13 23.9	+1.0
TWM1	**Shoushan** baz=232	1.38	229	⇓P		Pg	14 13 24.6	+1.4
YM01	**YM01** baz=347	1.40	1	*e*P		Pg	14 13 23.6	+0.1
YM04	**YM04** baz=346	1.40	360	*e*P		Pg	14 13 23.4	-0.2
YM10	**YM10** baz=351	1.41	0	*e*P		Pg	14 13 23.8	+0.1
YM10	baz=351			*e*S		Sg	14 13 43.3	+1.4
SGLT	**Jiouru** baz=229	1.41	224	*e*P		Pg	14 13 25.3	+1.6
MASBT	**Mashibuluo** baz=226	1.41	217	*e*P		Pb	14 13 22.8	-0.4
MASBT	baz=226			*e*S		Sg	14 13 43.8	+1.8
YM05	**YM05** baz=346	1.41	1	*e*P		Pg	14 13 23.6	-0.3
TNOU	**National Taiwa** baz=4.0	1.41	8	*e*P		Pg	14 13 24.4	+0.6
YM11	**YM11** baz=347	1.42	1	*e*P		Pg	14 13 23.8	-0.1
ANP	**Anpu** baz=346	1.44	359	*e*P		Pg	14 13 24.5	+0.3
YM08	**YM08** baz=347	1.44	1	*e*P		Pg	14 13 24.2	-0.1
EAST	**Anshuo** baz=190	1.50	206	*e*P		Pb	14 13 24.2	-0.6
YOJ	**Yonaguni jima**	1.51	62	P		Pb	14 13 24.1	-0.9
YOJ				S		Sg	14 13 45.1	-0.3
YOJ	**Yonaguni jima** baz=62	1.51	62	*e*P		Pb	14 13 24.5	-0.5
YOJ	baz=62			*e*S		Sg	14 13 44.7	-0.7
TWY	**Chenhua** baz=347	1.52	2	*e*P		Pg	14 13 26.1	+0.1
SCZT	**Fangliau** baz=222	1.61	212	P		Pg	14 13 26.9	-0.7
SCZT	baz=222			S		Sg	14 13 49.1	+0.6
SLIU	**Shizi** baz=190	1.67	205	*e*P		Pg	14 13 28.2	-0.5
LAY	**Lan-yu** baz=180	1.70	180	*e*P		Pn	14 13 25.2	-1.4
WLCH	**Liuqiu** baz=223	1.76	218	*e*P		Pg	14 13 30.1	-0.3
WDGT	**Dungji** baz=255	1.80	255	*e*P		Pb	14 13 28.2	-1.6
PHUB	**P'eng-hu** baz=267	1.83	263	*e*P		Pb	14 13 28.6	-1.7
PHUB	baz=267			S		Sg	14 13 54.4	-1.1
PNG	**Penghu** baz=265	1.84	265	*e*P		Pb	14 13 28.8	-1.7
HEN	**Hengchun** baz=190	1.89	204	*e*P		Pg	14 13 31.7	-1.1
TWK1	**Hengchun** baz=188	1.92	201	*e*P		Pb	14 13 30.2	-1.7
TWKBT	**Hengchun** baz=188	1.92	201	*e*P		Pb	14 13 30.4	-1.5
VCHM	**Qimei** baz=256	2.02	255	*e*P		Pn	14 13 31.3	+0.3
IRIF	**Iriomote-Funau**	2.08	73	P		Pn	14 13 32.4	+0.6
IRIF				*e*S		Sb	14 13 59.0	-1.6
VWUC	**VWUC** baz=299	2.28	303	*e*P		Pn	14 13 34.9	+0.2
JKRS	**Kuro-shima**	2.30	77	*e*S		Sb	14 14 05.5	-1.5
JIJ	**Ishigaki jima**	2.45	75	P		Pn	14 13 38.1	+1.2
JIJ				S		Sn	14 14 06.5	-0.5
PTMZ	**Houxiangcun** baz=297	2.56	301	*e*P		Pn	14 13 38.8	+0.3
JISG	**Ishigakijimahi**	2.66	71	P		Pn	14 13 39.8	0.0
JISG				*e*S		Sn	14 14 11.0	-1.2
MATB	**Ma-tsu** baz=319	2.80	329	*e*P		Pn	14 13 43.0	+1.2
KNM	**Kinmen** baz=283	2.93	284	*e*P		Pb	14 13 46.0	-3.1
KNMB	**Chin-men Tao** baz=272	2.98	285	*e*P		Pn	14 13 44.6	+0.4
JTJ	**Tarama**	3.01	72	*e*S		Sn	14 14 23.1	+2.1
LYJJ	**Jianjiangzhen** baz=320	3.23	330	*e*P		Pn	14 13 48.2	+0.6
MHZQ	**Yeshan** baz=310	3.28	316	*e*P		Pn	14 13 49.3	+1.0
XPSS	**Dashiqiu** baz=317	3.40	339	*e*P		Pn	14 13 50.7	+0.7
AXDP	**Jialang** baz=301	3.46	290	*e*P		Pn	14 13 51.3	+0.5
ZPLA	**Ao Xicun** baz=275	3.48	274	*e*P		Pn	14 13 51.6	+0.5
JMJ	**Miyako jima 2** baz=72	3.58	72	*e*P		Pn	14 13 53.5	+1.0
JOW	**Kunigami** 0.9nm,0.3s,baz=140,slow=30,SNR=2.0	6.82	62	Pn		Pn	14 14 36.9	-0.2
KSRS	**Korea Array** 0.1nm,0.3s,baz=200,slow=12,SNR=3.3	14.72	20	Pn		P	14 16 32.4	+1.1
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=66,slow=9.9,SNR=1.1	21.73	260	P		P	14 17 41.8	-6.7
CMAR	comp=Z,25nm,18.6s,baz=166,slow=40			LR		LR	14 27 14.7	
SONM	**Songino Array** 0.2nm,0.3s,baz=149,slow=6.7,SNR=3.8	26.90	337	P		P	14 18 43.3	+5.1
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=102,slow=12,SNR=1.6	38.88	316	P		P	14 20 23.5	+0.9
H11N1	**WAKE ISLAND Hy** baz=283,slow=74,SNR=19	42.18	86	T		T	15 05 43.8	
H11N2	**WAKE ISLAND Hy** baz=283,slow=74,SNR=20	42.18	86	T		T	15 05 44.8	
H11N3	**WAKE ISLAND Hy** baz=283,slow=74,SNR=18	42.20	86	T		T	15 05 45.1	
H11S3	**WAKE ISLAND Hy** baz=284,slow=74,SNR=29	42.30	88	T		T	15 05 53.4	
H11S1	**WAKE ISLAND Hy** baz=284,slow=74,SNR=23	42.30	88	T		T	15 05 56.1	
H11S2	**WAKE ISLAND Hy** baz=284,slow=74,SNR=19	42.31	88	T		T	15 05 53.7	
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=317,slow=4.4,SNR=5.2	83.24	23	P		P	14 25 24.5	+1.1

IDC 12 14:21:29.3±3.1, 22°.36S×111°.59W, h0km, mb3.5/1, mb1 4.0/1, mb1mx3.4/16, mbtmp3.5/1, Error ellipse: s-maj=255.0km s-min=72.5km az=103.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVAR	**Mina Array Bea** 0.6nm,1.0s,baz=184,slow=9.8,SNR=2.9	60.80	354	P	P	14 31 43.4	0.0
BVAR	**Borovoye Array** 0.6nm,0.7s,baz=29,slow=3.3,SNR=2.4	149.35	358	PKPbc	PKPbc	14 41 20.1	+0.1
KURBB	**Kurchatov Arra** 0.4nm,0.7s,baz=18,slow=1.5,SNR=5.1	150.70	347	PKPbc	PKPbc	14 41 22.4	-0.8
CMAR	**Chiang Mai Arr** 0.3nm,0.7s,baz=75,slow=1.0,SNR=4.2	151.14	268	PKPbc	PKPbc	14 41 25.2	-0.1
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=17,slow=1.5,SNR=7.5	153.16	339	PKPbc	PKPbc	14 41 28.9	-0.2

IDC 12 14:35:31.8±20.0, 35°.43N×69°.85E, h212km±124km, mb3.0/1, mb1 2.8/4, mb1mx2.6/50, mbtmp3.5/4, Error ellipse: s-maj=390.7km s-min=56.3km az=164.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEYT	**Alibeck** 0.6nm,0.3s,baz=122,slow=9.3,SNR=6.6	9.74	288	P	Pn	14 37 47.5	0.0
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=212,slow=12,SNR=7.1	14.71	36	P	Pn	14 38 49.9	+0.2
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=209,slow=11,SNR=4.8	16.44	20	P	P	14 39 08.9	-0.5
ZALV	**Zalesovo Beam** 0.9nm,0.5s,baz=218,slow=11,SNR=6.1	21.28	25	P	P	14 40 01.6	+0.1

*IDC **12** 14:45:42.5±2.7, 4°.20S×152°.66E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.4/38, mbtmp3.7/4, MS3.0/2, Ms1 3.0/2, ms1mx2.4/32, Error ellipse: s-maj=78.1km s-min=43.9km az=119.0*

ISC 12 14:45:40.5±2.0, 3°.6S±0°.3×153°.2E±0°.3, h35km, n8, σ1§10/6, mb3.7/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 2.4nm,0.3s,baz=166,slow=15,SNR=7.2	8.31	226	Sn	Sn	14 49 10.6	-0.7
HNR	**Honiara** comp=Z,84nm,18.2s,baz=142,slow=36	8.84	131	LR	LR	14 51 06.3	
SIJI	**Sorong** comp=Z,31nm,18.1s,baz=70,slow=40	22.09	277	LR	LR	15 00 08.5	
WRA	**Warramunga Arr** 1.4nm,0.6s,baz=54,slow=10.0,SNR=19	24.53	227	P	P	14 50 57.5	+0.5
ASAR	**Alice Springs** 0.2nm,0.3s,baz=55,slow=9.1,SNR=13	27.29	221	P	P	14 51 22.8	+0.7
STKA	**Stephens Creek** 0.8nm,0.5s,baz=13,slow=13,SNR=3.1	30.15	200	P	P	14 51 47.0	-0.3
FITZ	**Fitzroy Crossi** 0.7nm,0.4s,baz=62,slow=7.7,SNR=2.5	30.58	240	P	P	14 51 52.2	+0.9
TORD	**Torodi Ar. Bea** 0.9nm,0.9s,baz=75,slow=2.3,SNR=3.5	150.31	290	PKPbc	PKPab	15 05 34.2	-1.2

*INET **12** 15:12:10.6, 12°.85N×89°.26W, h4km, MW3.4*
*SNET **12** 15:12:13.4±0.8, 12°.97N×89°.21W, h35km±278km, ML4.3*
*UCR **12** 15:12:13.5±0.8, 12°.97N×89°.22W, h35km±235km, ML4.3, mb4.2(NEIC)*
*NEIC **12** 15:12:13.8±1.6, 12°.99N±0°.08×89°.2W±0°.1, h54km±10km, mb4.2/12, Md4.3(SNET), Error ellipse: s-maj=19.6km s-min=1.7km az=53.0*
*GCG **12** 15:12:13.0±0.3, 12°.86N×89°.27W, h65km±263km, MD4.1*
*IDC **12** 15:12:14.9±2.4, 12°.98N×89°.13W, h64km±19km, mb3.2/5, mb1 3.6/9, mb1mx3.4/35, mbtmp3.6/9, MS2.9/2, Ms1 2.9/2, ms1mx2.4/19, Error ellipse: s-maj=33.7km s-min=21.1km az=55.0*

ISC 12 15:12:12.9±1.3, 12°.94N±0°.07×89°.20W±0°.05, h44km±10km, n102, σ1§35/115, mb4.1/10, 3C-10D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	0.56	347	⇓*e*P	Pn	15 12 24.7	0.0
LALI				*e*S	Sn	15 12 32.6	-0.3
LALI	**Alcalda de L**	0.56	347	⇓*e*P	Pn	15 12 24.7	0.0
LALI				*e*S	Sn	15 12 32.6	-0.3
LFRS	**El Faro**	0.69	11	*e*P	Pn	15 12 26.5	0.0
LFRS	**El Faro**	0.69	11	*e*P	Pn	15 12 26.5	0.0
ITCA	**Escuela Especi**	0.73	354	*e*P	Pn	15 12 27.1	0.0
ITCA				*e*S	Sn	15 12 37.7	+0.4
ITCA	**Escuela Especi**	0.73	354	*e*P	Pn	15 12 27.1	0.0
ITCA				*e*S	Sn	15 12 37.7	+0.4
COEG	**Centro de Oper**	0.74	24	*e*P	Pn	15 12 27.2	0.0
COEG	**Centro de Oper**	0.74	24	*e*P	Pn	15 12 27.2	0.0
SNET	**Serv Nac Est T**	0.74	357	Pn	Pn	15 12 27.0	-0.2
MAGS	**Ministerio de**	0.74	353	*e*P	Pn	15 12 27.2	-0.1
MAGS				*e*S	Sn	15 12 37.7	+0.2
MAGS	comp=Z,7μm,0.3s			IAML		15 12 42.7	
JAYA	**Jayaque - finc**	0.75	341	⇓*e*P	Pn	15 12 27.2	-0.1
JAYA				*e*S	Sn	15 12 37.5	-0.2
JAYA	comp=Z,39μm,0.2s			IAML		15 12 38.6	
JAYA	**Jayaque - finc**	0.75	341	⇓*e*P	Pn	15 12 27.2	-0.1
JAYA				*e*S	Sn	15 12 37.5	-0.2
JAYA	comp=Z,39μm,0.2s			IAML		15 12 38.6	
AEIL	**Aeropuerto Ilo**	0.76	6	*e*P	Pn	15 12 27.6	+0.3
AEIL	**Aeropuerto Ilo**	0.76	6	*e*P	Pn	15 12 27.6	+0.3
OPAM	**Oficina de Pla**	0.77	360	*e*P	Pn	15 12 27.6	+0.1
OPAM	comp=Z,7μm,0.2s			IAML		15 12 41.4	
OPAM	**Oficina de Pla**	0.77	360	*e*P	Pn	15 12 27.6	+0.1
OPAM	comp=Z,7μm,0.2s			IAML		15 12 41.4	
IGN	**Direccin Gen**	0.77	2	*e*P	Pn	15 12 27.6	+0.1
IGN	**Direccin Gen**	0.77	2	*e*P	Pn	15 12 27.6	+0.1
PMON	**Piamonte**	0.78	351	⇑*e*P	Pn	15 12 27.7	0.0
PMON	**Piamonte**	0.78	351	⇑*e*P	Pn	15 12 27.7	0.0
BOQS	**Boqueron**	0.79	354	*e*P	Pn	15 12 28.2	+0.2
BOQS	**Boqueron**	0.79	354	*e*P	Pn	15 12 28.2	+0.2
LBRS	**Las Brisas**	0.81	11	*e*P	Pn	15 12 28.5	+0.4
LBRS	**Las Brisas**	0.81	11	*e*P	Pn	15 12 28.5	+0.4
LFU	**La Fuente**	0.81	6	*e*P	Pn	15 12 28.4	+0.3
LFU	**La Fuente**	0.81	6	*e*P	Pn	15 12 28.4	+0.3
PAVA	**Las Pavas**	0.81	18	⇓*e*P	Pn	15 12 28.4	+0.3
PAVA	comp=Z,9μm,0.3s			IAML		15 12 41.0	
PAVA	**Las Pavas**	0.81	18	⇓*e*P	Pn	15 12 28.4	+0.3
PAVA	comp=Z,9μm,0.3s			IAML		15 12 41.0	
COEB	**Comit de Eme**	0.85	49	*e*P	Pn	15 12 28.8	+0.1
COEB	**Comit de Eme**	0.85	49	*e*P	Pn	15 12 28.8	+0.1
CEDA	**San Andres**	0.88	347	*e*P	Pn	15 12 29.0	+0.1
CEDA				*e*S	Sn	15 12 40.9	+0.2
CEDA	comp=Z,8μm,0.3s			IAML		15 12 44.9	
CEDA	**San Andres**	0.88	347	*e*P	Pn	15 12 29.0	+0.1
CEDA				*e*S	Sn	15 12 40.9	+0.2
CEDA	comp=Z,8μm,0.3s			IAML		15 12 44.9	
QUEZ	**Alcaldia de Qu**	0.89	355	*e*P	Pn	15 12 29.5	+0.3
PQSS	**Presa 15 de Se**	0.92	42	⇑*e*P	Pn	15 12 29.9	+0.4
JUCU	**Jucuarįn**	0.97	71	*e*P	Pn	15 12 30.3	0.0
JUCU	**Jucuarįn**	0.97	71	*e*P	Pn	15 12 30.3	0.0
CEVE	**Cerro Verde**	0.97	335	*e*P	Pn	15 12 30.4	0.0
CEVE	comp=Z,8μm,0.3s			IAML		15 12 49.4	
CEVE	**Cerro Verde**	0.97	335	*e*P	Pn	15 12 30.4	0.0
CEVE	comp=Z,8μm,0.3s			IAML		15 12 49.4	
SBLS	**San Blas**	0.98	335	*e*P	Pn	15 12 30.5	-0.1
SBLS	**San Blas**	0.98	335	*e*P	Pn	15 12 30.5	-0.1
PACA	**Pacayal**	1.00	58	*e*P	Pn	15 12 31.7	+1.0
PACA	**Pacayal**	1.00	58	*e*P	Pn	15 12 31.7	+1.0
LCY	**Lacayo**	1.00	61	*e*P	Pn	15 12 31.2	+0.5
LCY	**Lacayo**	1.00	61	*e*P	Pn	15 12 31.2	+0.5
RTR	**El Retiro**	1.05	335	*e*P	Pn	15 12 31.5	+0.1
RTR	**El Retiro**	1.05	335	*e*P	Pn	15 12 31.5	+0.1
LLGN	**La Laguna**	1.24	11	*e*P	Pn	15 12 34.5	+0.6
LLGN	**La Laguna**	1.24	11	*e*P	Pn	15 12 34.5	+0.6
FAGO	**Alcalda de S**	1.30	55	⇓*e*P	Pn	15 12 35.5	+0.8
FAGO	**Alcalda de S**	1.30	55	⇓*e*P	Pn	15 12 35.5	+0.8
LCND	**La Caada**	1.32	74	*e*P	Pn	15 12 35.6	+0.6
LCND	comp=Z,3μm,0.3s			IAML		15 12 57.5	
LCND	**La Caada**	1.32	74	*e*P	Pn	15 12 35.5	+0.5
LCND				*e*P		15 12 35.6	
LCND	comp=Z,3μm,0.3s			IAML		15 12 57.5	
CNCH	**Conchagua**	1.37	76	*e*P	Pn	15 12 36.3	+0.6
CNCH	**Conchagua**	1.37	76	*e*P	Pn	15 12 36.3	+0.6
MTO3	**Montecristo**	1.46	354	⇓*e*P	Pn	15 12 37.7	+0.6
MTO3	**Montecristo**	1.46	354	⇓*e*P	Pn	15 12 37.7	+0.6
MTO3	**Montecristo**	1.46	354	Pn	Pn	15 12 37.5	+0.4
ESQI	**Esquipulas**	1.62	355	*e*P	Pn	15 12 40.2	+1.1
ESQI	**Esquipulas**	1.62	355	Pn	Pn	15 12 40.1	+0.9
NBG	**Las Nubes**	1.98	326	*e*P	Pn	15 12 45.9	+1.6
NBG				*e*S	Sn	15 13 11.5	+3.4
PCG	**Pacaya**	1.99	317	*e*S	Sn	15 13 11.1	+2.8
CRIN	**San Cristobal**	2.11	96	Pn	Pn	15 12 46.4	+0.6
TGUH	**Tegucigalpa,Un**	2.17	59	Pn	Pn	15 12 47.2	+0.4
MRL	**Marmol**	2.18	348	*e*P	Pn	15 12 48.8	+1.8
FUG	**Fuego 3**	2.19	313	*e*P	Pn	15 12 48.1	+1.0
APG	**El Apazote** comp=Z,3.6nm,0.3s,baz=260,slow=22,SNR=9.5	2.39	329	P	Pn	15 12 50.5	+0.6
APG				S	Sn	15 13 27.0	+8.9
BOAB	**BOACO BROADBAN** comp=Z,10.0nm,0.3s,baz=86,slow=21,SNR=5.8	3.48	98	Pn	Pn	15 13 04.3	-0.3
PETF	**Flores**	4.00	351	Pn	Pn	15 13 12.5	+0.6
ACON	**Acoyapa**	4.05	103	Pn	Pn	15 13 12.5	+0.2
ESPN	**Las Esperanzas**	4.84	98	Pn	Pn	15 13 23.8	+0.6
JTS	**Las Juntas de** comp=Z,1.9nm,0.3s,baz=161,slow=23,SNR=8.5	4.92	122	P	Pn	15 13 27.0	+2.5
JTS				S	Sn	15 14 19.6	-0.6
JTS	**Las Juntas de** comp=Z,0.5nm,0.3s,baz=351,slow=23,SNR=1.0	4.92	122	Pn	Pn	15 13 27.2	+2.8
CMIG	**Matias Romero** comp=Z,0.6nm,0.3s,baz=90,slow=9.3,SNR=5.4	6.87	308	P	Pn	15 13 52.3	+1.1
CMIG				S	Sn	15 15 05.9	-2.3
TEIG	**Tepich** comp=Z,1.9nm,0.3s,baz=217,slow=1.1,SNR=10	7.30	7	P	Pn	15 13 58.7	+1.7
TEIG				S	Sn	15 15 21.4	+2.8
TEIG	comp=Z,0.3nm,0.3s,baz=246,slow=22,SNR=0.8			LR	LR	15 17 21.4	
SOR	comp=Z,91nm,20.0s,baz=98,slow=42 **Soroa**	11.43	30	Pn	Pn	15 14 54.2	+0.6
SDV	**Santo Domingo** comp=Z,29nm,18.5s,baz=270,slow=40	18.66	101	LR	LR	15 24 45.3	
Z47A	**Carrollton**	20.19	3	P	P	15 16 43.4	-0.5
Z47A	comp=Z,17nm,1.4s			IAmb	IAmb	15 17 04.5	
TXAR	**Lajitas Array** comp=Z,0.3nm,0.5s,baz=146,slow=12,SNR=7.2	21.14	323	P	P	15 16 55.8	+1.5
TXAR	**Lajitas Array**	21.14	323	P	P	15 16 54.2	-0.1
TX31	**Lajitas Ar. Si**	21.14	323	P	P	15 16 54.8	+0.5
TX31	comp=Z,14nm,1.4s			IAmb	IAmb	15 16 60.0	
PDAR	**Pinedale Array** comp=Z,0.2nm,0.6s,baz=116,slow=8.1,SNR=1.9	34.55	333	P	P	15 18 58.7	+1.1
PDAR				PcP	PcP	15 21 31.4	-0.3
REDW	comp=Z,0.2nm,0.5s,baz=125,slow=6.0,SNR=3.9 **Red Top Meadow**	35.60	332	P	P	15 19 07.3	+0.7
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.7s,baz=129,slow=8.7,SNR=2.6	36.22	320	P	P	15 19 13.8	+1.9
NVAR				PcP	PcP	15 21 37.5	+0.9
RLMT	comp=Z,0.5nm,0.7s,baz=153,slow=3.3,SNR=5.3 **Red Lodge**	36.35	336	P	P	15 19 13.3	+0.4
BCYI	**Bear Canyon**	37.51	331	P	P	15 19 22.4	-0.4
MOD	**Modoc Plateau**	39.54	323	P	P	15 19 39.4	-0.4
MOD				IAmb	IAmb	15 19 53.7	
H03N2	comp=Z,5.4nm,1.5s **Juan Fernandez** baz=347,slow=76,SNR=5.5	47.15	168	T	T	16 11 01.6	
H03N1	**Juan Fernandez** baz=347,slow=76,SNR=8.5	47.15	168	T	T	16 11 01.0	
H03N3	**Juan Fernandez** baz=347,slow=76,SNR=7.1	47.16	168	T	T	16 11 01.0	
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.3s,baz=143,slow=7.1,SNR=26	52.70	345	P	P	15 21 21.3	-1.5
JIS	**Juneau Island**	56.50	333	P	P	15 21 49.8	-0.5
L27K	**Beaver Creek,**	62.12	336	P	P	15 22 28.9	-0.3
L27K	comp=Z,3.3nm,1.4s			IAmb	IAmb	15 22 37.7	
INK	**Inuvik**	62.23	343	P	P	15 22 28.8	-1.0
INK	comp=Z,4.3nm,1.5s			IAmb	IAmb	15 22 41.8	
BPAW	**Bear Paw Mtn.**	66.28	335	P	P	15 22 54.6	-1.8
BPAW	comp=Z,4.0nm,1.4s			IAmb	IAmb	15 23 23.3	
PPLA	**Purkeypile**	66.39	334	P	P	15 22 55.2	-2.1
MLY	**Manley**	66.51	336	P	P	15 22 56.5	-1.4
EUNU	**Eureka**	67.14	1	P	P	15 23 00.1	-1.7
NOR	**Nord** baz=82,slow=22	74.

CMAR	**Chiang Mai Arr**	**147.78**	**345**	PKPbc		**PKPdf**	**15 31 52.0**		**+1.0**
	comp=Z,0.6nm,0.6s,baz=349,slow=2.1,SNR=8.0								

IDC ***12*** *15:31:07.0±1.0,27°.20N×103°.57E,h0km,mb3.4/7, mb1 3.5/8,mb1mx3.4/46,mbtmp3.4/8,ML3.2/1,MS3.0/3, Ms1 3.0/3,ms1mx2.5/50,Error ellipse: s-maj=33.2km s-min=19.6km az=65.0*

ISC 12 15:31:08.7±0.9,27°.2N±0°.1×103°.6E±0°.2,h10km,n9, σ1§12/9,mb3.7/7,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.73**	**207**	Pn	**Pn**	**15 33 29.5**	**+0.6**
	0.1nm,0.3s,baz=15,slow=13,SNR=4.2						
CMAR				Pg		15 34 09.2	
	0.0nm,0.3s,baz=5.7,slow=17,SNR=4.9						
CMAR				Lg	Lg	15 36 12.7	
	0.1nm,0.3s,baz=47,slow=32,SNR=1.3						
CMAR				LR	LR	15 37 44.9	
	comp=Z,40nm,18.8s,baz=343,slow=41						
SONM	**Songino Array**	**20.69**	**5**	P	**P**	**15 35 49.8**	**+0.8**
	0.2nm,0.5s,baz=200,slow=7.7,SNR=3.1						
KSRS	**Korea Array**	**22.86**	**57**	P	**P**	**15 36 12.3**	**0.0**
	3.6nm,1.3s,baz=240,slow=13,SNR=1.3						
KSRS				LR	LR	15 46 45.1	
	comp=Z,30nm,19.8s,baz=215,slow=41						
MKAR	**Makanchi Array**	**25.77**	**325**	P	**P**	**15 36 37.5**	**-2.1**
	0.3nm,0.6s,baz=127,slow=9.2,SNR=3.0						
KURBB	**Kurchatov Arra**	**30.18**	**327**	P	**P**	**15 37 19.4**	**+0.5**
	2.8nm,0.2s,baz=132,slow=5.0,SNR=1.3						
WRA	**Warramunga Arr**	**55.54**	**144**	P	**P**	**15 40 44.0**	**-0.4**
	0.5nm,0.5s,baz=334,slow=8.3,SNR=3.0						
ASAR	**Alice Springs**	**58.44**	**147**	P	**P**	**15 41 04.4**	**-0.5**
	0.2nm,0.7s,baz=326,slow=7.0,SNR=6.7						
AKASG	**Malin Array Be**	**59.77**	**315**	P	**P**	**15 41 13.0**	**-0.8**
	0.1nm,0.3s,baz=69,slow=6.5,SNR=2.1						
AKASG				LR	LR	16 08 24.7	
	comp=Z,29nm,19.1s,baz=350,slow=38						
ARCES	**ARCESS Array B**	**60.63**	**337**	P	**P**	**15 41 20.3**	**+0.8**
	1.4nm,0.8s,baz=83,slow=7.5,SNR=1.3						

IDC ***12*** *15:41:01.8±1.2,13°.86S×65°.84E,h0km,mb3.8/12, mb1 3.9/12,mb1mx3.6/70,mbtmp3.8/12,MS3.2/5, Ms1 3.2/5,ms1mx2.8/43,Error ellipse: s-maj=38.6km s-min=21.5km az=25.0*

NEIC ***12*** *15:41:04.3±1.9,13°.8S±0°.1×65°.9E±0°.2,h15km±5km, mb4.2/7,Error ellipse: s-maj=30.9km s-min=13.1km az=54.0*

ISC 12 15:41:03.9±1.0,13°.9S±0°.2×65°.8E±0°.2,h15km,n32, σ0§87/20,mb4.0/14,MS3.2/5,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.99**	**47**	T	T	15 52 10.7	
	baz=227,slow=75,SNR=88						
H08S2	**Diego Garcia H**	**9.01**	**47**	T	T	15 52 15.1	
	baz=227,slow=75,SNR=329						
H08S3	**Diego Garcia H**	**9.01**	**47**	T	T	15 52 12.7	
	baz=227,slow=75,SNR=321						
PALK	**Pallekele**	**25.68**	**36**	LR	LR	15 54 33.1	
	comp=Z,64nm,19.4s,baz=315,slow=32						
KMBO	**Kilima Mbogo**	**31.00**	**292**	P	**P**	**15 47 22.4**	**+1.0**
	1.2nm,0.7s,baz=187,slow=4.8,SNR=5.0						
BOSA	**Boshof**	**40.35**	**242**	LR	LR	16 02 01.2	
	comp=Z,33nm,20.8s,baz=33,slow=31						
CMAR	**Chiang Mai Arr**	**45.80**	**46**	P	**P**	**15 49 25.7**	**+0.3**
	0.4nm,0.8s,baz=235,slow=7.2,SNR=4.9						
CMAR				LR	LR	16 06 07.8	
	comp=Z,34nm,20.2s,baz=220,slow=33						
H01W3	**Cape Leeuwin H**	**48.16**	**125**	T	T	16 41 21.9	
	baz=284,slow=75,SNR=16						
H01W2	**Cape Leeuwin H**	**48.16**	**125**	T	T	16 41 20.6	
	baz=284,slow=75,SNR=19						
H01W1	**Cape Leeuwin H**	**48.18**	**125**	T	T	16 41 18.2	
	baz=284,slow=75,SNR=21						
BRTR	**Keskin Array B**	**61.19**	**332**	P	**P**	**15 51 16.6**	**-1.7**
	0.6nm,0.8s,baz=148,slow=8.5,SNR=2.7						
MKAR	**Makanchi Array**	**62.19**	**13**	P	**P**	**15 51 24.4**	**-0.3**
	0.3nm,0.6s,baz=190,slow=6.2,SNR=3.7						
ABKAR	**Akbulak array**	**63.08**	**356**	P	**P**	**15 51 29.7**	**-0.8**
AKTO	**Aktyubinsk**	**64.42**	**354**	P	**P**	**15 51 39.3**	**0.0**
	1.4nm,0.8s,baz=211,slow=7.8,SNR=5.3						
ASAR	**Alice Springs**	**64.66**	**110**	P	**P**	**15 51 40.3**	**-1.4**
	0.6nm,0.8s,baz=274,slow=5.0,SNR=3.1						
WRA	**Warramunga Arr**	**65.43**	**106**	P	**P**	**15 51 47.5**	**+0.9**
	0.9nm,0.6s,baz=271,slow=5.9,SNR=7.7						
WB2	**Warramunga Arr**	**65.44**	**106**	P	**P**	**15 51 46.8**	**+0.1**
WB2				IAmb	IAmb	15 51 51.3	
	comp=Z,4.3nm,1.2s						
WR0	**Warramunga Arr**	**65.62**	**106**	P	**P**	**15 51 48.6**	**+0.7**
WR0				IAmb	IAmb	15 51 59.7	
	comp=Z,4.1nm,1.1s						
ZALV	**Zalesovo Beam**	**69.49**	**12**	P	**P**	**15 52 11.7**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=224,slow=14,SNR=2.3						
STKA	**Stephens Creek**	**70.81**	**119**	LR	LR	16 18 59.2	
	comp=Z,19nm,20.1s,baz=212,slow=32						
SONM	**Songino Array**	**71.28**	**28**	P	**P**	**15 52 23.7**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=222,slow=1.9,SNR=8.4						
SONM	**Songino Array**	**71.28**	**28**	IAmb	IAmb	15 52 26.7	
	comp=Z,1.0nm,0.8s						
AKASG	**Malin Array Be**	**71.85**	**336**	P	**P**	**15 52 25.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=136,slow=5.4,SNR=4.3						
AKASG	**Malin Array Be**	**71.85**	**336**	IAmb	IAmb	15 52 27.8	
	comp=Z,0.7nm,1.0s						
CTAO	**Charters Tower**	**76.50**	**108**	P	**P**	**15 52 53.1**	**-0.8**
KSRS	**Korea Array**	**77.44**	**46**	LR	LR	16 28 50.1	
	comp=Z,8.8nm,18.1s,baz=155,slow=37						
ESDC	**Sonseca Array**	**83.86**	**313**	P	**P**	**15 53 34.0**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=99,slow=4.3,SNR=7.6						
ESDC	**Sonseca Array**	**83.86**	**313**	P	**P**	**15 53 33.9**	**+0.8**
ESDC				IAmb	IAmb	15 53 34.9	
	comp=Z,1.8nm,1.0s						
MJAR	**Matsushiro Arr**	**84.52**	**50**	P	**P**	**15 53 37.9**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=240,slow=4.1,SNR=2.5						
PDAR	**Pinedale Array**	**150.95**	**353**	PKPbc	**PKiKP**	**16 00 57.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=99,slow=2.9,SNR=8.6						
PDAR	**Pinedale Array**	**150.95**	**353**		**PKPbc**	**16 00 56.5**	**-0.1**
TXAR	**Lajitas Array**	**161.82**	**329**	PKPab	**PKPab**	**16 01 50.2**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=79,slow=6.5,SNR=4.4						

NEIC ***12*** *15:51:39.7±1.6,2°.64N±0°.08×128°.62E±0°.08,h227km±4km, mb4.2/22,Error ellipse: s-maj=13.2km s-min=9.4km az=222.0*

IDC ***12*** *15:51:40.8±1.5,2°.58N×128°.65E,h238km±17km,mb3.4/13, mb1 3.5/15,mb1mx3.3/44,mbtmp4.0/15,Error ellipse: s-maj=18.5km s-min=11.0km az=73.0*

DJA ***12*** *15:51:41.8±0.4,3°.N±3°×12°.8E±°,h221km±4km,M4.4/11, mB4.9/4,mb4.2/6,MLv4.6/11,Mw(mB)4.1/4*

ISC 12 15:51:40.1±0.5,2°.60N±0°.04×128°.53E±0°.06,h227km,n83, σ1§36/91,mb4.0/30,1C,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.16**	**213**	Pn	**Pn**	**15 52 23.1**	**+0.8**
TNTI				S	**S**	**15 52 54.5**	**-0.7**
TNTI	**Ternate**	**2.16**	**213**	P	**Pn**	**15 52 23.3**	**+1.0**
TNTI				S	**S**	**15 52 55.5**	**+0.3**
SGSI	**Sangihe**	**3.19**	**290**	P	**Pn**	**15 52 33.4**	**+0.1**
SGSI				S	**S**	**15 53 14.6**	**-0.4**
SIJI	**Sorong**	**4.40**	**142**	P	**Pn**	**15 52 49.7**	**+1.8**
	1.0nm,0.3s,baz=172,slow=23,SNR=6.3						
SIJI				S	**S**	**15 53 40.4**	**-0.9**
	1.9nm,0.3s,baz=294,slow=23,SNR=5.5						
DDMP	**Don Marcelino,**	**4.47**	**321**	*e*P	**Pn**	**15 52 48.1**	**-0.7**
KMSI	**Cibinong**	**4.97**	**246**	P	**Pn**	**15 52 55.0**	**+0.1**
KMSI				S	**S**	**15 53 53.0**	**-1.1**
SANI	**Sanana**	**5.27**	**209**	P	**Pn**	**15 52 57.9**	**-0.8**
	0.6nm3μm110nm,0.7s						
SANI				S	**S**	**15 53 55.5**	**-5.4**
	0.6nm3μm110nm,0.7s						
DAV	**Davao City (W)**	**5.33**	**327**	S	**S**	**15 54 00.5**	**-1.6**
	71nm,0.3s,baz=68,slow=11,SNR=2.8						
DAV	**Davao City (W)**	**5.33**	**327**	Pn	**Pn**	**15 53 00.7**	**+1.4**
KCP	**Kidapawan**	**5.56**	**322**	i P	**Pn**	**15 53 02.9**	**+0.5**
SKMP	**Bagumbayan, Su**	**5.56**	**315**	*e*P	**Pn**	**15 53 01.2**	**-1.2**
GTOI	**Gorontalo**	**5.85**	**251**	P	**Pn**	**15 53 06.0**	**0.0**
	0.2nm20nm,0.6s						
GTOI				S	**S**	**15 54 14.7**	**+0.5**
	0.2nm20nm,0.6s						
BUKP	**Musuan**	**6.28**	**327**	*e*P	**Pn**	**15 53 11.6**	**+0.1**
LUWI	**Luwuk**	**6.80**	**238**	Pn	**Pn**	**15 53 18.2**	**+0.2**
LUWI	**Luwuk**	**6.80**	**238**	P	**Pn**	**15 53 17.6**	**-0.5**
	1.0nm3μm46nm,0.7s						
LUWI				S	**S**	**15 54 32.1**	**-4.1**
	1.0nm3μm46nm,0.7s						
MRSI	**Marisa**	**6.92**	**252**	P	**Pn**	**15 53 20.7**	**+1.2**
	0.2nm26nm,0.7s						
PAGZ	**Pagadian**	**7.31**	**316**	*e*P	**Pn**	**15 53 23.3**	**-1.3**
APSI	**Ampana**	**7.71**	**243**	P	**Pn**	**15 53 30.1**	**+0.3**
	0.2nm383nm28nm,1.2s						
APSI				S	**S**	**15 54 56.1**	**-1.4**
	0.2nm383nm28nm,1.2s						
TOLI2	**Tolitoli**	**7.88**	**259**	Pn	**Pn**	**15 53 31.9**	**-0.1**
KAPI	**Kappang**	**11.58**	**229**	P	**P**	**15 54 25.6**	**+2.1**
	0.5nm,0.3s,baz=347,slow=5.6,SNR=3.5						
KAPI				S	**S**	**15 56 25.0**	**-2.4**
	0.5nm,0.3s,baz=86,slow=22,SNR=1.5						
GENI	**Genyem**	**12.73**	**114**	P	**P**	**15 54 37.4**	**+1.2**
	1μm124nm,1.2s						
KKM	**Kota Kinabalu**	**12.75**	**286**	P	**P**	**15 54 37.6**	**+1.1**
SOEI	**Soe**	**12.99**	**199**		**P**	**15 54 38.6**	**-0.6**
JAY	**Jayapura**	**13.19**	**113**	P	**P**	**15 54 42.8**	**+1.4**
	1.0nm,0.3s,baz=290,slow=6.0,SNR=16						
JAY	**Jayapura**	**13.19**	**113**	P	**P**	**15 54 40.5**	**-0.9**
BATI	**Baumata**	**13.62**	**201**	P	**Pn**	**15 54 45.3**	**+0.8**
	2.0nm,0.3s,baz=9.8,slow=4.1,SNR=5.9						
MTN	**Manton Dam**	**15.56**	**170**	P	**P**	**15 55 06.6**	**-1.0**
MTN				IAmb	IAmb	15 55 16.8	
	comp=Z,5.0nm,0.6s						
SBUM	**Sibu**	**16.30**	**270**	Pn	**Pn**	**15 55 18.4**	**+1.5**
KNRA	**Kununurra**	**18.16**	**179**	P	**P**	**15 55 36.4**	**+0.4**
KNRA				IAmb	IAmb	15 55 42.9	
	comp=Z,6.2nm,0.8s						
KSM	**Kuching**	**18.25**	**267**	P	**P**	**15 55 38.5**	**+1.4**
FITZ	**Fitzroy Crossi**	**20.76**	**188**	P	**P**	**15 56 03.7**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=29,slow=7.3,SNR=5.5						
FITZ	**Fitzroy Crossi**	**20.76**	**188**	P	**P**	**15 56 03.7**	**-0.3**
FITZ				IAmb	IAmb	15 56 07.7	
	comp=Z,6.2nm,1.4s						
TPUB	**Ta-pu**	**21.95**	**340**	P	**P**	**15 56 14.5**	**-1.3**
LEM	**Lembang**	**22.88**	**246**	P	**P**	**15 56 23.5**	**-1.0**
	comp=Z,27nm,0.9s,baz=315,slow=19,SNR=3.7						
WB0	**Warramunga Arr**	**22.96**	**166**	P	**P**	**15 56 23.8**	**-1.2**
WB0				IAmb	IAmb	15 56 26.9	
	comp=Z,5.1nm,0.8s						
WRAB	**Tennant Creek**	**23.11**	**166**	P	**P**	**15 56 25.8**	**-0.5**
WRAB				IAmb	IAmb	15 56 49.6	
	comp=Z,7.5nm,1.1s						
WRA	**Warramunga Arr**	**23.12**	**166**	P	**P**	**15 56 25.6**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=343,slow=10,SNR=20						
WRA	**Warramunga Arr**	**23.12**	**166**	P	**P**	**15 56 26.3**	**-0.1**
WB2	**Warramunga Arr**	**23.12**	**166**	P	**P**	**15 56 26.4**	**0.0**
WB2				IAmb	IAmb	15 56 37.5	
	comp=Z,7.0nm,1.2s						
WR0	**Warramunga Arr**	**23.18**	**166**	P	**P**	**15 56 26.9**	**-0.1**
WR0				IAmb	IAmb	15 56 28.1	
	comp=Z,11nm,1.3s						
AS31	**Alice Springs**	**26.63**	**169**	P	**P**	**15 56 57.8**	**-0.3**
ASAR	**Alice Springs**	**26.63**	**169**	P	**P**	**15 56 57.5**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=354,slow=7.9,SNR=66						
ASAR				PcP	**PcP**	**16 00 15.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=340,slow=2.6,SNR=4.7						
KULM	**Kulim**	**27.94**	**276**	P	**P**	**15 57 10.4**	**+0.5**
KULM				IAmb	IAmb	15 57 12.4	
	comp=Z,16nm,1.2s						
PSI	**Prapat**	**29.57**	**271**	P	**P**	**15 57 25.2**	**+0.8**
	comp=Z,6.1nm,0.9s,baz=360,slow=3.8,SNR=4.7						
RPSI	**Rantau Prapat**	**29.57**	**271**	P	**P**	**15 57 25.2**	**+0.9**
SLVN	**Son La**	**30.35**	**310**	P	**P**	**15 57 30.5**	**-0.6**
SLVN				IAmb	IAmb	15 57 34.0	
	comp=Z,6.5nm,1.5s						
GSI	**Gunungsitoli**	**30.96**	**268**	P	**P**	**15 57 36.1**	**-0.4**
CM35	**Chiang Mai Arr**	**32.90**	**301**	P	**P**	**15 57 54.0**	**+0.6**
CM04	**Chiang Mai Arr**	**32.94**	**301**	P	**P**	**15 57 56.4**	**+2.8**
	comp=Z,3.3nm,1.0s						
CM09	**Chiang Mai Arr**	**32.94**	**301**	P	**P**	**15 57 55.0**	**+1.3**
	comp=Z,50nmcomp=Z,5.2nm,0.9s						
CM01	**Chiang Mai Arr**	**32.96**	**301**	P	**P**	**15 57 56.7**	**+2.8**
	comp=Z,41nmcomp=Z,4.3nm,1.0s						
CM05	**Chiang Mai Arr**	**32.97**	**301**	P	**P**	**15 57 56.6**	**+2.7**
	comp=Z,2.8nm,1.0s						
CM02	**Chiang Mai Arr**	**32.98**	**301**	P	**P**	**15 57 56.8**	**+2.7**
	comp=Z,3.8nm,1.1s						
CM34	**Chiang Mai Arr**	**32.98**	**301**	P	**P**	**15 57 55.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**32.99**	**301**	P	**P**	**15 57 56.0**	**+1.8**
	comp=Z,1.9nm,0.8s,baz=120,slow=7.2,SNR=24						
CMAR	**Chiang Mai Arr**	**32.99**	**301**	P	**P**	**15 57 54.4**	**+0.2**
CM15	**Chiang Mai Arr**	**33.00**	**301**	P	**P**	**15 57 56.8**	**+2.5**
	comp=Z,3.5nm,0.8s						
CM13	**Chiang Mai Arr**	**33.01**	**301**	P	**P**	**15 57 56.0**	**+1.7**
	comp=Z,3.5nm,0.9s						
CMMT	**Chiang Mai**	**33.14**	**301**	P	**P**	**15 57 56.0**	**+0.6**
	comp=Z,2.9nm,1.0s						
CM33	**Chiang Mai Arr**	**33.14**	**301**	P	**P**	**15 57 57.0**	**+1.6**
CHTO	**Chiang Mai**	**33.14**	**301**	P	**P**	**15 57 56.0**	**+0.6**
CHTO				IAmb	IAmb	15 57 57.2	
	comp=Z,3.3nm,0.8s						
CM32	**Chiang Mai Arr**	**33.16**	**301**	P	**P**	**15 57 58.0**	**+2.5**
FORT	**Forrest**	**33.20**	**181**	P	**P**	**15 57 55.8**	**+0.1**
MHMT	**Maesarieng**	**33.75**	**299**	P	**P**	**15 58 01.0**	**+0.3**
MJAR	**Matsushiro Arr**	**34.94**	**14**	P	**P**	**15 58 09.2**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=187,slow=9.3,SNR=4.4						
MJAR	**Matsushiro Arr**	**34.94**	**14**	IAmb	IAmb	15 58 09.9	
	comp=Z,2.1nm,1.1s						
BBOO	**Buckleboo**	**35.93**	**169**	P	**P**	**15 58 18.9**	**-0.2**
BBOO				IAmb	IAmb	15 58 37.2	
	comp=Z,20nm,1.3s						
STKA	**Stephens Creek**	**36.47**	**161**	P	**P**	**15 58 22.9**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=349,slow=8.9,SNR=5.1						
STKA	**Stephens Creek**	**36.47**	**161**	P	**P**	**15 58 22.6**	**-1.0**
H11S3	**WAKE ISLAND Hy**	**40.56**	**64**	T	T	16 43 15.1	
	baz=253,slow=74,SNR=6.9						
H11S2	**WAKE ISLAND Hy**	**40.58**	**64**	T	T	16 43 16.3	
	baz=253,slow=74,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**40.58**	**64**	T	T	16 43 11.7	
	baz=253,slow=74,SNR=3.2						
HHC	**Hu-ho-hao-te**	**41.04**	**340**	*e*P	**P**	**15 59 03.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.3s						
SONM	**Songino Array**	**48.95**	**340**	P	**P**	**16 00 03.4**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=151,slow=12,SNR=3.5						
WMQ	**Urumqi**	**54.68**	**325**	*e*P	**P**	**16 00 47.0**	**+1.1**
PETK	**Petropavlovsk-**	**55.82**	**21**	P	**P**	**16 00 54.2**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=225,slow=6.6,SNR=1.5						
MK31	**Makanchi Array**	**59.51**	**325**	P	**P**	**16 01 19.2**	**-0.4**
MKAR	**Makanchi Array**	**59.51**	**325**	P	**P**	**16 01 19.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=118,slow=8.5,SNR=18						
MKAR				pP	**pwP**	**16 02 12.7**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=118,slow=8.5,SNR=4.1						
MKAR	**Makanchi Array**	**59.51**	**325**	P	**P**	**16 01 19.2**	**-0.4**
MAKZ	**Makanchi**	**59.69**	**325**	P	**P**	**16 01 20.6**	**-0.2**
MAKZ				IAmb	IAmb	16 01 21.4	
	comp=Z,1.3nm,0.7s						
PLWZ	**Palliser**	**61.05**	**141**	P	**P**	**16 01 28.7**	**-1.4**
ZALV	**Zalesovo Beam**	**62.41**	**333**	P	**P**	**16 01 38.0**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=90,slow=7.2,SNR=2.4						
BVAR	**Borovoye Array**	**69.24**	**327**	P	**P**	**16 02 22.2**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=135,slow=15,SNR=5.1						

IDC 12 16:14:04.9±1.7,2°.93S×135°.57E,h0km,mb3.3/2, mb1 3.6/5,mb1mx3.3/54,mbtmp3.5/5,ML3.3/3,MS2.7/1, Ms1 2.7/1,ms1mx2.3/13,Error ellipse: s-maj=37.3km s-min=27.7km az=55.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.77**	**295**	Pn	Pn	16 15 19.8	+1.7
	2.4nm,0.3s,baz=200,slow=22,SNR=18						
SIJI				Sn	Sn	16 16 11.1	-3.0
	3.4nm,0.3s,baz=180,slow=20,SNR=17						
JAY	**Jayapura**	**5.14**	**85**	Pn	Pn	16 15 24.2	+1.0
	0.4nm,0.3s,baz=215,slow=12,SNR=1.6						
WRA	**Warramunga Arr**	**16.95**	**184**	Pn	P	16 18 05.0	-0.7
	0.1nm,0.3s,baz=5.5,slow=13,SNR=5.2						
ASAR	**Alice Springs**	**20.68**	**184**	P	P	16 18 46.0	-0.7
	0.6nm,0.5s,baz=8.8,slow=11,SNR=16						
MJAR	**Matsushiro Arr**	**39.35**	**3**	LR	LR	16 35 55.9	
	comp=Z,9.0nm,18.6s,baz=220,slow=33						
MKAR	**Makanchi Array**	**68.08**	**324**	P	P	16 25 05.8	-0.8
	0.1nm,0.4s,baz=120,slow=7.2,SNR=2.4						

ATH ***12*** *16:30:54.7,38°.53N×26°.40E,h38km±4km,ML2.9/5,Error ellipse: s-maj=5.3km s-min=1.5km az=265.0*

ISK ***12*** *16:30:54.5,38°.55N×26°.51E,h7km,ML2.9/10*

DDA ***12*** *16:30:54.2,38°.56N×26°.46E,h12km±2km,ML3.0*

THE ***12*** *16:30:55.8,38°.57N×26°.42E,h11km±1km,ML2.9/5,Error ellipse: s-maj=1.5km s-min=0.5km az=252.0*

ISC 12 16:30:53.6±0.9,38°.59N±0°.02×26°.51E±0°.02,h15km±7km, n53,σ1§24/87,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.21**	**54**	PG	**Pb**	**16 30 59.6**	**+0.4**
FOCM				SG	**Sb**	**16 31 03.8**	**+0.9**
URLA	**Izmir**	**0.24**	**164**	*i* P	**Pg**	**16 30 58.2**	**-0.7**
URLA				*i* S	**Sg**	**16 31 01.4**	**-1.1**
URLA	**Izmir**	**0.24**	**164**	PG	**Pg**	**16 30 58.4**	**-0.5**
URLA				SG	**Sg**	**16 31 03.1**	**+0.6**
ZEYE	**Izmir, Urla-Ze**	**0.35**	**181**	*i* P	**Pg**	**16 31 01.3**	**+0.5**
ZEYE				*i* S	**Sg**	**16 31 04.9**	**-0.8**
ZEYE				IAML		16 31 07.0	
	comp=E,2μm,0.5s						
ZEYE				IAML		16 31 12.0	
	comp=N,2μm,0.6s						
CHOS	**Chios island**	**0.41**	**241**	P	**Pb**	**16 31 02.9**	**+0.3**
CHOS				S	**Sb**	**16 31 08.7**	**0.0**
CHOS				AML	AML	16 31 08.8	
	comp=E,3968μm,0.4s						
CHOS				AML	AML	16 31 11.2	
	comp=N,2965μm,0.5s						
CHOS	**Chios island**	**0.41**	**241**	P	**Pb**	**16 31 02.8**	**+0.2**
CHOS				S	**Sg**	**16 31 08.5**	**+0.9**
	comp=N,2μm,0.3s						
CHOS	**Chios island**	**0.41**	**241**	PG	**Pb**	**16 31 02.7**	**+0.2**
CHOS				SG	**Sb**	**16 31 08.7**	**0.0**
DKL	**Dikili**	**0.57**	**32**	PG	**Pb**	**16 31 06.1**	**+0.8**
DKL				SG	**Sn**	**16 31 16.1**	**-0.2**
ZEDA	**zmir-Bergama**	**0.58**	**49**	*i* P	**Pb**	**16 31 06.3**	**+0.8**
ZEDA				*i* S	**Sb**	**16 31 15.1**	**+1.6**
DGB	**zmir**	**0.61**	**151**	*i* P	**Pb**	**16 31 06.1**	**+0.1**
DGB				*i* S	**Sg**	**16 31 12.1**	**-1.6**
PRK	**Paraskevi**	**0.68**	**344**	P	**Pn**	**16 31 08.8**	**+0.1**
PRK				S	**Sn**	**16 31 19.1**	**0.0**
PRK				AML	AML	16 31 22.1	
	comp=N,2530μm,0.6s						
PRK				AML	AML	16 31 24.4	
	comp=E,2430μm,0.4s						
PRK	**Paraskevi**	**0.68**	**344**	P	**Pn**	**16 31 08.8**	**+0.1**
PRK				S	**Sn**	**16 31 19.1**	**0.0**
	comp=E,1μm,0.5s						
AYVA	**Ayvalik**	**0.73**	**11**	*i* P	**Pb**	**16 31 08.8**	**+0.8**
AYVA				*i* S	**Sb**	**16 31 18.1**	**+0.2**
AYVA				IAML		16 31 23.0	
	comp=N,582nm,0.4s						
PSRA	**Psara**	**0.74**	**267**	P	**Pg**	**16 31 08.5**	**+0.4**
SIGR	**SIGRI**	**0.81**	**321**	P	**Pg**	**16 31 10.0**	**+0.7**
SIGR				AML	AML	16 31 24.4	
	comp=N,1901μm,0.5s						
SIGR				AML	AML	16 31 24.6	
	comp=E,2795μm,0.6s						
SIGR	**SIGRI**	**0.81**	**321**	P	**Pn**	**16 31 10.5**	**+0.1**
SIGR				S	**Sn**	**16 31 21.8**	**-0.3**
	comp=E,1μm,0.6s						
SIGR	**SIGRI**	**0.81**	**321**	PG	**Pn**	**16 31 11.1**	**+0.7**
SIGR				SG	**Sn**	**16 31 23.4**	**+1.3**
SMG	**Samos**	**0.92**	**164**	P	**Pg**	**16 31 11.7**	**+0.4**
SMG				AML	AML	16 31 28.2	
	comp=E,2350μm,0.5s						
SMG				AML	AML	16 31 28.7	
	comp=N,2370μm,0.4s						
SMG	**Samos**	**0.92**	**164**	P	**Pn**	**16 31 12.7**	**+0.8**
SMG				S	**Sn**	**16 31 26.6**	**+1.8**
	comp=N,1μm,0.4s						
KOCA	**Canakkale, Ayv**	**0.96**	**342**	*i* P	**Pn**	**16 31 13.2**	**+0.7**
KOCA				*i* S	**Sb**	**16 31 23.7**	**-0.7**
KOCA				IAML		16 31 29.0	
	comp=E,400nm,0.5s						
KOCA				IAML		16 31 30.0	
	comp=N,503nm,0.3s						
BUHA	**Balikesir, Bur**	**1.01**	**26**	*i* P	**Pn**	**16 31 14.0**	**+0.7**
BUHA				*i* S	**Sb**	**

MOS ***12*** *16:48:14.8±1.1,27.2°09N×53.0°00E,h10km,mb5.0/60, MS4.3/13,Error ellipse: s-maj=4.3km s-min=2.9km az=109.5*

IDC ***12*** *16:48:15.1±0.3,27.3°35N×53.0°03E,h0km,mb4.6/41, mb1 4.7/48,mb1mx4.7/52,mbtmp4.6/48,ML4.1/7,MS4.4/33, Ms1 4.4/33,ms1mx4.2/51,Error ellipse: s-maj=9.1km s-min=8.2km az=67.0*

BJI ***12*** *16:48:16.0±0.0,27.4°40N×53.0°00E,h10km,mB5.0/45, mb4.9/61,Ms4.9/48,Ms7 4.7/46*

NEIC ***12*** *16:48:16.4±1.3,27.3°34N±0.06°×52.95E±0.07,h10km±1km, mb4.9/156,mb_Lg4.8(TEH),Error ellipse: s-maj=11.3km s-min=9.3km az=213.0*

GCMT ***12*** *16:48:16.4±0.2,27.06°N±0.02°×52.88E±0.02,h12km, MW4.9/93,Moment Tensor Solution. s31,c36; s93,c134; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.18±.08; Mθθ-1.92±.07; Mϕϕ-0.25±.07; Mrθ1.15±.24; Mrϕ1.49±.06; Mθϕ0.36±.29; Best double couple: Mo2.80700×10¹⁶ NP1:ϕs323.00000°,δ41.00000°,λ126.00000°. NP2: ϕs99.00000°,δ58.00000°,λ63.00000°. Principal axes: T 2.6840, Plg66.0000°, Azm319.0000°; N 0.2470, Plg22.0000°, Azm114.0000°; P -2.9300, Plg9.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

OMAN ***12*** *16:48:17.4,27.20N×52.82E,h10km,mb6.2/15,ml5.0/12, Mwp4.6/3*

DSN ***12*** *16:48:17.6±0.5,27.28N×52.91E,h10km,mb5.3/2, ML5.2/12,Error ellipse: s-maj=6.8km s-min=4.7km az=28.0*

BGR ***12*** *16:48:25.1±0.0,28.81N×53.82E,h33km,mb4.3*

ISC 12 16:48:16.7±0.7,27.30N±0.03×52.95E±0.03,h12km±4km, n793,σ1§41/882,mb4.9/255,MS4.6/56,35C-21D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.20**	**77**	*e*Pg	**Pg**	**16 48 19.9**	**-1.0**
QIR1	**Qir**	**1.18**	**4**	*e*Pg	**Pg**	**16 48 39.3**	**-0.1**
QIR1				*e*		16 49 10.6	
	comp=Z,99nm,0.6s						
LAR1	**LAR**	**1.32**	**73**	*e*Pg	**Pb**	**16 48 41.6**	**+0.2**
LAR1				*e*Sg	**Sg**	**16 49 05.5**	**+6.3**
JHRM	**Jahrom**	**1.33**	**25**	*e*Pg	**Pb**	**16 48 41.4**	**-0.2**
JHRM				*e*		16 49 08.8	
	comp=Z,99nm,0.6s						
AHBU	**AHRAM**	**2.14**	**317**	*e*Pn	**Pn**	**16 48 52.8**	**+0.5**
SHI	**Shiraz**	**2.37**	**351**	*e*Pn	**Pn**	**16 48 56.5**	**+0.9**
SHI				*e*		16 49 47.0	
	comp=Z,99nm,0.8s						
KAZ1	**Kazerun**	**2.59**	**334**	*e*Pn	**Pn**	**16 48 59.5**	**+0.9**
KAZ1				*e*		16 49 59.1	
	comp=Z,99nm,0.9s						
GENO	**Geno**	**2.87**	**87**	*e*Pn	**Pn**	**16 49 03.0**	**+0.6**
GENO				*e*		16 49 57.0	
	comp=Z,99nm,0.6s						
SHME	**Shamm**	**3.11**	**113**	*i* P	**Pn**	**16 49 06.6**	**+1.0**
	SNR=28						
SHME	**Shamm**	**3.11**	**113**	*e*Pn	**Pn**	**16 49 07.7**	**+2.1**
SHME	**Shamm**	**3.11**	**113**	P	**Pn**	**16 49 07.9**	**+2.3**
	SNR=28						
SHME				S	**Sn**	**16 49 45.2**	**+2.4**
AJN	**Ajban**	**3.28**	**146**	*i* P	**Pn**	**16 49 09.7**	**+1.8**
	SNR=9.4						
AJN	**Ajban**	**3.28**	**146**	*e*Pn	**Pn**	**16 49 10.5**	**+2.5**
AJN	**Ajban**	**3.28**	**146**	P	**Pn**	**16 49 10.3**	**+2.3**
	SNR=9.5						
AJN				S	**Sn**	**16 49 49.1**	**+2.2**
BANOM	**Banah**	**3.29**	**114**	*i* P	**Pn**	**16 49 10.0**	**+1.8**
	SNR=32						
BANOM	**Banah**	**3.29**	**114**	*e*Pn	**Pn**	**16 49 10.0**	**+1.8**
BANOM	**Banah**	**3.29**	**114**	P	**Pn**	**16 49 09.9**	**+1.8**
	SNR=27						
BANOM				P	Pb	16 49 10.0	-5.2
	SNR=31						
BANOM				S	**Sb**	**16 49 51.4**	**-3.9**
NAZ	**Nazwa, Dubai**	**3.35**	**133**	*i* P	**Pn**	**16 49 11.1**	**+2.2**
	SNR=44						
NAZ				S	**Sn**	**16 49 52.0**	**+3.4**
NAZ	**Nazwa, Dubai**	**3.35**	**133**	*e*Pn	**Pn**	**16 49 11.1**	**+2.2**
NAZ	**Nazwa, Dubai**	**3.35**	**133**	P	**Pn**	**16 49 11.0**	**+2.1**
	SNR=44						
NAZ				P	**Pn**	**16 49 11.0**	**+2.1**
	SNR=44						
NAZ				S	**Sn**	**16 49 52.1**	**+3.4**
NAZ				S	**Sn**	**16 49 52.1**	**+3.4**
SLWR	**Sila**	**3.41**	**200**	*e*Pn	**Pn**	**16 49 10.5**	**+0.8**
SLWR	**Sila**	**3.41**	**200**	P	**Pn**	**16 49 10.4**	**+0.7**
SLWR				S	**Sn**	**16 49 53.1**	**+3.0**
ASUD	**Al Ashush, Dub**	**3.41**	**141**	*i* P	**Pn**	**16 49 12.1**	**+2.2**
	SNR=86						
ASUD	**Al Ashush, Dub**	**3.41**	**141**	P	**Pn**	**16 49 12.0**	**+2.2**
	SNR=86						
MASF	**Masafi**	**3.46**	**123**	P	**Pn**	**16 49 12.2**	**+1.7**
	SNR=58						
MASF				S	**Sn**	**16 49 52.2**	**+0.8**
MSFE	**Esma-Masafi**	**3.46**	**123**	*i* P	**Pn**	**16 49 12.1**	**+1.6**
	SNR=62						
MSFE				*i* P	**Pn**	**16 49 12.1**	**+1.6**
	SNR=46						
MSFE	**Esma-Masafi**	**3.46**	**123**	*e*Pn	**Pn**	**16 49 12.1**	**+1.6**
FAQ	**Al Faqa, Dubai**	**3.48**	**136**	*i* P	**Pn**	**16 49 13.4**	**+2.7**
	SNR=20						
FAQ	**Al Faqa, Dubai**	**3.48**	**136**	*e*Pn	**Pn**	**16 49 13.0**	**+2.3**
FAQ	**Al Faqa, Dubai**	**3.48**	**136**	P	**Pn**	**16 49 12.7**	**+2.0**
	SNR=20						
FAQ				S	**Sn**	**16 49 55.5**	**+3.7**
MDH	**Madha**	**3.60**	**123**	*i* P	**Pn**	**16 49 13.6**	**+1.2**
	SNR=16						
MDH	**Madha**	**3.60**	**123**	*e*Pn	**Pn**	**16 49 13.8**	**+1.4**
MDH	**Madha**	**3.60**	**123**	P	**Pn**	**16 49 13.8**	**+1.4**
	SNR=17						
MZWR	**Madinat Zayed**	**3.62**	**166**	P	**Pn**	**16 49 14.7**	**+2.1**
MZWR				S	**Sn**	**16 49 56.3**	**+1.0**
UOSS	**Minazif**	**3.75**	**128**	*i* P	**Pn**	**16 49 15.5**	**+1.1**
	SNR=43						
UOSS	**Minazif**	**3.75**	**128**	Pn	**Pn**	**16 49 15.2**	**+0.8**
UOSS	**Minazif**	**3.75**	**128**	*e*Pn	**Pn**	**16 49 15.5**	**+1.1**
UOSS	**Minazif**	**3.75**	**128**	P	**Pn**	**16 49 15.3**	**+0.9**
UOSS				S	**Sn**	**16 50 01.5**	**+3.1**
HATD	**Hatta, Dubai**	**3.77**	**130**	*i* P	**Pn**	**16 49 16.3**	**+1.6**
	SNR=38						
HATD	**Hatta, Dubai**	**3.77**	**130**	*e*Pn	**Pn**	**16 49 16.4**	**+1.6**
HATD	**Hatta, Dubai**	**3.77**	**130**	P	**Pn**	**16 49 16.8**	**+2.0**
	SNR=38						
HATD				S	**Sn**	**16 50 00.1**	**+1.0**
KLNJ	**Kolanjah**	**3.89**	**343**	*e*Pn	**Pn**	**16 49 16.4**	**-0.2**
ABEH	**Behbahan**	**4.05**	**325**	*e*Pn	**Pn**	**16 49 19.4**	**+0.8**
NGRK	**Negar Kerman**	**4.07**	**54**	*e*Pn	**Pn**	**16 49 20.3**	**+1.2**
NGRK				*e*		16 50 52.1	
	comp=Z,99nm,1.0s						
ALNE	**Al Ain**	**4.10**	**141**	*i* P	**Pn**	**16 49 22.1**	**+2.9**
	SNR=28						
ALNE	**Al Ain**	**4.10**	**141**	*e*Pn	**Pn**	**16 49 20.9**	**+1.7**
ALNE	**Al Ain**	**4.10**	**141**	P	**Pn**	**16 49 21.4**	**+2.2**
	SNR=29						
ALNE				P	**Pn**	**16 49 21.4**	**+2.2**
	SNR=29						
ALNE				S	**Sn**	**16 50 09.8**	**+2.6**
ALNE				S	**Sn**	**16 50 09.8**	**+2.6**
KHNJ	**Kahnooj**	**4.27**	**80**	*e*Pn	**Pn**	**16 49 22.0**	**+0.4**
KRBR	**Kerman**	**4.29**	**50**	*e*Pn	**Pn**	**16 49 23.5**	**+1.4**
TVBK	**TV Kerman**	**4.29**	**50**	*e*Pn	**Pn**	**16 49 23.6**	**+1.5**
KHGB	**Koh Gabri**	**4.36**	**44**	*e*Pn	**Pn**	**16 49 24.7**	**+1.7**
KHGB				*e*		16 50 31.0	
	comp=Z,99nm,0.9s						
SOHO	**SOHO**	**4.51**	**133**	*i* P	**Pn**	**16 49 25.7**	**+0.8**
	SNR=28						
SOHO	**SOHO**	**4.51**	**133**	*e*Pn	**Pn**	**16 49 26.3**	**+1.4**
SOHO	**SOHO**	**4.51**	**133**	P	**Pn**	**16 49 27.2**	**+2.3**
IRAM	**Ramesheh**	**4.53**	**354**	*e*Pn	**Pn**	**16 49 26.5**	**+1.2**
CHMN	**Cheshme madani**	**4.78**	**57**	*e*Pn	**Pn**	**16 49 30.8**	**+2.0**
CHMN				*e*		16 49 36.1	
	comp=Z,99nm,0.3s						
IBRJ	**Brojen**	**4.83**	**343**	*e*Pn	**Pg**	**16 49 47.6**	**-1.5**
IBAF	**Bafgh**	**4.85**	**27**	*e*Pn	**Pn**	**16 49 31.7**	**+2.0**
UMZA	**Um Al Zommool**	**4.98**	**156**	*e*Pn	**Pn**	**16 49 32.3**	**+0.9**
UMZA	**Um Al Zommool**	**4.98**	**156**	P	**Pn**	**16 49 33.5**	**+2.2**
UMZA				S	**Sn**	**16 50 28.6**	**-0.3**
ICHK	**Chekchek**	**5.09**	**14**	*e*Pn	**Pn**	**16 49 34.7**	**+1.6**
ARQ	**Araqi**	**5.10**	**140**	P	**Pn**	**16 49 34.9**	**+1.9**
	SNR=55						
IGAR	**Gharneh**	**5.15**	**351**	*e*Pn	**Pn**	**16 49 35.9**	**+2.0**
KBAM	**BAM**	**5.19**	**68**	*e*Pn	**Pn**	**16 49 36.1**	**+1.8**
YZKH	**Yazd**	**5.27**	**15**	*e*Pn	**Pn**	**16 49 37.0**	**+1.6**
SHK1	**Shahrekord**	**5.33**	**341**	*e*Pn	**Pn**	**16 49 34.5**	**-1.8**
HOQ	**Hoqain**	**5.40**	**132**	P	**Pn**	**16 49 38.8**	**+1.6**
	SNR=90						
NASN	**Na'in**	**5.49**	**359**	*e*Pn	**Pn**	**16 49 39.8**	**+1.2**
AHWZ	**Ahwaz**	**5.50**	**318**	*e*Pn	**Pn**	**16 49 39.6**	**+1.1**
IZEH	**Zefreh**	**5.61**	**355**	*e*Pn	**Pn**	**16 49 40.4**	**+0.2**
IPIR	**Pirpir**	**5.66**	**342**	*e*Pn	**Pn**	**16 49 40.5**	**-0.4**
ANAR	**Anarak**	**5.91**	**6**	*e*Pn	**Pn**	**16 49 45.0**	**+0.7**
BSY	**Bisya**	**5.95**	**139**	P	**Pn**	**16 49 46.0**	**+1.3**
	SNR=124						
BSY				S	**Sn**	**16 50 51.6**	**-1.2**
BIDO	**Bidbid**	**6.00**	**128**	P	**Pn**	**16 49 46.5**	**+1.1**
	SNR=10						
BIDO				S	**Sn**	**16 50 53.9**	**-0.1**
IKLH	**Kolahrood**	**6.12**	**349**	*e*Pn	**Pn**	**16 49 48.0**	**+0.8**
SMDO	**Samad**	**6.25**	**131**	P	**Pn**	**16 49 50.3**	**+1.3**
	SNR=26						
SMDO				P	**Pn**	**16 49 50.3**	**+1.3**
	SNR=26						
SMDO				S	**Sn**	**16 51 02.5**	**+2.1**
SMDO				S	**Sn**	**16 51 02.5**	**+2.1**
WSAR	**Wadi Sarin**	**6.54**	**127**	Pn	**Pn**	**16 49 53.7**	**+0.9**
	comp=Z,5.4nm,0.3s,baz=329,slow=13,SNR=67						
WSAR				Sn	**Sn**	**16 51 07.6**	**+0.3**
	comp=Z,16nm,0.3s,baz=46,slow=22,SNR=7.0						
WSAR				Lg	Lg	16 51 42.2	
	comp=Z,4.7nm,0.3s,baz=341,slow=18,SNR=1.7						
WSAR				LR	LR	16 52 58.6	
	comp=Z,2μm,21.8s,baz=325,slow=44						
TPRV	**Parvadeh(Tabas**	**6.56**	**29**	*e*Pn	**Pn**	**16 49 54.0**	**+0.8**
QAM	**Ghamsar**	**6.57**	**349**	*e*Pn	**Pn**	**16 49 54.4**	**+1.0**
KRSH	**Karshahi**	**6.69**	**354**	*e*Pn	**Pn**	**16 49 55.0**	**0.0**
JMDO	**Jabal Madar**	**6.78**	**135**	P	**Pn**	**16 49 56.6**	**+0.6**
	SNR=20						
KHMZ	**Khomeyn**	**6.92**	**339**	*e*Pn	**Pn**	**16 49 59.1**	**+0.9**
ISFB	**Sefidab**	**7.06**	**355**	*e*Pn	**Pn**	**16 49 59.4**	**-0.6**
BSRN	**Basiran**	**7.11**	**48**	*e*Pn	**Pn**	**16 50 02.1**	**+1.4**
WBK	**Wadi Bani Khal**	**7.18**	**129**	P	**Pn**	**16 50 02.4**	**+0.8**
	SNR=33						
WBK				S	**Sn**	**16 51 23.8**	**+0.6**
TKDS	**Koohdasht(Taba**	**7.25**	**29**	*e*Pn	**Pn**	**16 50 02.7**	**+0.1**
IKOO	**Kooshah**	**7.33**	**44**	*e*Pn	**Pn**	**16 50 05.6**	**+1.8**
TNSJ	**Nastanj**	**7.35**	**24**	*e*Pn	**Pn**	**16 50 04.7**	**+0.7**
NHDN	**Nehbandan**	**7.42**	**55**	*e*Pn	**Pn**	**16 50 06.7**	**+1.7**
ITEG	**Tejag**	**7.51**	**41**	*e*Pn	Pn	16 49 56.9	-9.3
IKFM	**Kafar-mosalman**	**7.61**	**326**	*e*Pn	**Pn**	**16 50 08.4**	**+1.0**
RAYN	**Ar Rayn**	**7.71**	**242**	*i* P	**Pn**	**16 50 08.4**	**-0.5**
	SNR=71						
RAYN	**Ar Rayn**	**7.71**	**242**	P	**Pn**	**16 50 08.1**	**-0.8**
RAYN	**Ar Rayn**	**7.71**	**242**	Pn	**Pn**	**16 50 08.1**	**-0.8**
MHTO	**MHTO**	**7.77**	**143**	P	**Pn**	**16 50 10.8**	**+1.1**
	SNR=24						
JLN	**Jalan Bani Buh**	**7.79**	**130**	P	**Pn**	**16 50 11.1**	**+1.2**
	SNR=15						
HSAM	**Samen**	**7.84**	**333**	*e*Pn	**Pn**	**16 50 11.3**	**+0.4**
AFRZ	**Afriz**	**8.05**	**39**	*e*Pn	**Pn**	**16 50 14.3**	**+0.7**
IANJ	**Anjilo**	**8.19**	**6**	*e*Pn	**Pn**	**16 50 15.6**	**0.0**
IMON	**Monand**	**8.26**	**43**	*e*Pn	**Pn**	**16 50 18.9**	**+2.3**
DQM	**DQM**	**8.45**	**149**	P	**Pn**	**16 50 19.8**	**+0.8**
	SNR=16						
IRAZ	**Razeghan**	**8.49**	**343**	*e*Pn	**Pn**	**16 50 18.8**	**-0.9**
KCHF	**Cheshme Sefid,**	**8.61**	**325**	*e*Pn	**Pn**	**16 50 20.4**	**-1.0**
KER	**Kermanshah**	**8.65**	**326**	*e*Pn	**Pn**	**16 50 20.7**	**-1.2**
DOK	**Doka**	**8.71**	**173**	P	**Pn**	**16 50 22.4**	**-0.1**
	SNR=27						
QABG	**Abgarm-Qazvin**	**8.87**	**342**	*e*Pn	**Pn**	**16 50 22.4**	**-2.5**
IPRN	**Peran**	**8.93**	**357**	*e*Pn	**Pn**	**16 50 25.9**	**+0.2**
IGLO	**Ghaloghah**	**9.21**	**4**	*e*Pn	**Pn**	**16 50 31.9**	**+2.3**
IDHR	**Dehrash**	**9.28**	**324**	*e*Pn	**Pn**	**16 50 30.1**	**-0.5**
QALM	**Alamut, Qazvin**	**9.32**	**348**	*e*Pn	**Pn**	**16 50 29.5**	**-1.6**
WHFO	**Wadi Hawf**	**9.36**	**175**	P	**Pn**	**16 50 31.0**	**-0.6**
	SNR=47						
SHAO	**Shalim**	**9.55**	**164**	*i* P	**Pn**	**16 50 34.0**	**-0.2**
	SNR=36						
SHAO	**Shalim**	**9.55**	**164**	P	**Pn**	**16 50 34.0**	**-0.2**
	SNR=34						
DMTO	**DMTO**	**9.71**	**169**	P	**Pn**	**16 50 35.1**	**-1.2**
	SNR=42						
RBK	**Rabkut**	**9.81**	**173**	P	**Pn**	**16 50 36.8**	**-1.0**
	SNR=14						
SBZV	**Sabzevar**	**9.89**	**22**	*e*Pn	**Pn**	**16 50 38.6**	**-0.3**
ABTO	**Aybut**	**9.90**	**178**	P	**Pn**	**16 50 38.5**	**-0.5**
	SNR=9.7						
ZNJK	**Zanjan**	**10.02**	**340**	*e*Pn	**Pn**	**16 50 41.6**	**+0.9**
IMND	**Minoodasht**	**10.15**	**11**	*e*Pn	**Pn**	**16 50 43.6**	**+1.4**
IPAY	**Payeh**	**10.47**	**28**	*e*Pn	**Pn**	**16 50 48.2**	**+1.3**
ISFR	**Sfrayin**	**10.62**	**22**	*e*Pn	**Pn**	**16 50 50.9**	**+1.9**
HRA	**Herat**	**10.66**	**46**	Pn	**Pn**	**16 50 49.2**	**-0.2**
IMYA	**Miami**	**10.87**	**32**	*e*Pn	**Pn**	**16 50 53.6**	**+1.3**
ISRB	**Sarab**	**11.40**	**338**	*e*Pn	**Pn**	**16 51 00.7**	**+1.1**
GEYT	**Alibeck**	**11.46**	**21**	Pn	**Pn**	**16 51 00.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=204,slow=14,SNR=15						
GEYT				Lg	Lg	16 54 21.2	
	comp=Z,0.3nm,0.3s,baz=264,slow=24,SNR=1.4						
GEYT	**Alibeck**	**11.46**	**21**	Pn	**Pn**	**16 51 00.9**	**+0.7**
GYA0	**ALIBECK ARRAY**	**11.46**	**21**	P	**Pn**	**16 51 01.8**	**+1.6**
GYA0B	**ALIBECK ARRAY**	**11.46**	**21**	Pn	**Pn**	**16 51 00.7**	**+0.5**
CUKT	**Cukurca**	**12.68**	**324**	*e*P	**Pn**	**16 51 13.9**	**-3.1**
IMRD	**Marand**	**12.90**	**334**	*e*Pn	**Pn**	**16 51 19.8**	**-0.3**
AKDM	**Akdamar-Van**	**13.82**	**325**	*e*P	**Pn**	**16 51 30.6**	**-2.0**
VANB	**Van**	**13.82**	**327**	*e*P	**Pn**	**16 51 30.2**	**-2.4**
CLDR	**Caldiran**	**14.02**	**330**	*e*P	**Pn**	**16 51 35.9**	**+0.6**
GURO	**Guroymak-BITLI**	**14.48**	**324**	*e*P	**Pn**	**16 51 39.4**	**-2.2**
GNI	**Garni**	**14.52**	**334**	Pn	**P**	**16 51 48.1**	**-0.7**
	comp=Z,2.8nm,0.3s,baz=191,slow=10,SNR=13						
GNI				Lg	Lg	16 56 03.8	
	comp=Z,0.3nm,0.3s,baz=120,slow=20,SNR=3.4						
GNI				LR	LR	16 57 33.2	
	comp=Z,637nm,18.5s,baz=137,slow=38						
GNI	**Garni**	**14.52**	**334**	*e*P	**P**	**16 51 46.8**	**-2.0**
GNI	**Garni**	**14.52**	**334**	*i* P	**Pn**	**16 51 44.9**	**+2.8**
GNI	**Garni**	**14.52**	**334**		**P**	**16 51 47.8**	**-1.0**
AGRB	**Hanur-Agry**	**14.79**	**328**	*e*P	**Pn**	**16 51 45.7**	**-0.2**
SOCY	**Socotra**	**15.06**	**176**	Pn	**Pn**	**16 51 45.9**	**-3.7**
SOCY	**Socotra**	**15.06**	**176**	P	**Pn**	**16 51 45.4**	**-4.1**
	SNR=8.4						
DYBB	**Diyarbakir**	**15.13**	**318**	*e*P	**Pn**	**16 51 48.6**	**-1.8**
DDFL	**Dedoflistskaro**	**15.19**	**340**	P	**P**	**16 51 54.8**	**-1.4**
LGD	**Lagodekhi**	**15.51**	**341**	P	**Pn**	**16 51 57.3**	**+2.0**
BNGB	**Bingl**	**15.53**	**322**	*e*P	**Pn**	**16 51 53.7**	**-1.9**
KBL	**Kabul**	**15.57**	**58**	P	**Pn**	**16 51 56.3**	**0.0**
KBL				pmax	pmax		
	comp=Z,72nm,1.0s						
KBL	**Kabul**	**15.57**	**58**	Pn	**Pn**	**16 51 56.3**	**0.0**
KBL				IAmb	IAmb	16 52 02.6	
	comp=Z,72nm,1.0s						
KARS	**Kars**	**15.60**	**331**	*e*P	**Pn**	**16 51 57.7**	**+1.1**
KARS	**Kars**	**15.60**	**331**	P	**Pn**	**16 51 58.4**	**+1.8**
KZRT	**Kazreti**	**15.72**	**336**	P	**P**	**16 52 00.4**	**-1.6**
SEAG	**Tbilisi Sea**	**15.90**	**337**	P	**P**	**16 52 06.7**	**+2.6**
BGD	**Bogdanovka**	**15.92**	**333**	P	**P**	**16 52 04.8**	**+0.4**
YEDI	**Yedisu-Bingol**	**15.92**	**323**	*e*P	**Pn**	**16 51 58.8**	**-1.9**
EIL	**Elat**	**16.00**	**283**	Pn	**P**	**16 52 04.2**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=101,slow=6.4,SNR=11						
EIL				Sn	**Sn**	**16 55 02.9**	**+3.7**
	comp=Z,0.3nm,0.3s,baz=103,slow=18,SNR=1.6						
EIL				Lg	Lg	16 56 51.4	
	comp=Z,0.2nm,0.3s,baz=68,slow=19,SNR=2.0						
EIL				LR	LR	16 59 23.2	
	comp=Z,751nm,20.7s,baz=97,slow=42						
AKH	**Akhalkalaki**	**16.08**	**334**	P	**P**	**16 52 05.3**	**-0.9**
MMAI	**Mount Meron Ar**	**16.21**	**295**	Pn	**P**	**16 52 06.2**	**-1.3**
	comp=Z,3.0nm,0.3s,baz=104,slow=13,SNR=34						
MMAI				Sn	**Sn**	**16 54 58.6**	**-5.5**
	comp=Z,1.1nm,0.3s,baz=128,slow=33,SNR=2.2						
MMAI				Lg	Lg	16 57 08.7	
	comp=Z,0.6nm,0.3s,baz=77,slow=22,SNR=1.5						
MMAI				LR	LR	16 58 52.1	
	comp=Z,160nm,18.1s,baz=190,slow=39						
MAK	**Makhachkala**	**16.25**	**346**	*e*P	**Pn**	**16 52 00.3**	**-4.4**
MAK				*e*S	**Sn**	**16 55 00.4**	**-4.4**
MAK				pmax	pmax		
	comp=Z,31nm,0.3s						
MAK				MLR	MLR		
	comp=Z,792nm,12.0s						
MALT	**Malatya**	**16.40**	**316**	*e*P	**Pn**	**16 52 05.5**	**-1.4**
ERZN	**Erzincan**	**16.47**	**321**	*e*P	**Pn**	**16 52 06.5**	**-1.3**
GAZ	**Gaziantep**	**16.54**	**310**	Pn	**Pn**	**16 52 08.2**	**-0.5**
GUDG	**Gudauri**	**16.64**	**338**	P	**P**	**16 52 13.4**	**+1.0**
BATM	**Batumi**	**17.00**	**330**	*e*P	**P**	**16 52 15.9**	**-0.3**
BATM	**Batumi**	**17.00**	**330**	P	**P**	**16 52 20.0**	**+3.8**
CHOM	**Cayeli-Rize**	**17.04**	**327**	*e*P	**Pn**	**16 52 14.9**	**+0.1**
ILIC	**ilic-Erzincan**	**17.04**	**319**	*e*P	**Pn**	**16 52 13.9**	**-1.1**
ONI	**Oni**	**17.11**	**336**	P	**P**	**16 52 17.3**	**-0.2**
ZEI	**Tsey**	**17.12**	**337**	*e*P	**Pn**	**16 52 15.6**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,58nm,0.7s						
DARE	**Darende-Malaty**	**17.15**	**315**	*e*P	**Pn**	**16 52 16.5**	**+0.2**
THW	**Thamme Wali**	**17.16**	**67**	P	**Pn**	**16 52 15.2**	**-1.2**
KTUT	**Trabzon**	**17.45**	**325**	*e*P	**Pn**	**16 52 19.8**	**-0.2**
CEP	**Cherat**	**17.57**	**64**	↑P	**Pn**	**16 52 21.5**	**-0.1**
CEP				S	**S**	**16 55 42.0**	**-3.1**
NCK	**Nalchik**	**17.85**	**337**	↑*i* P	**P**	**16 52 26.6**	**+1.0**
NEY	**Neytrino**	**17.95**	**335**	*i* P	**P**	**16 52 27.1**	**+0.2**
KBZ	**Khabaz**	**18.30**	**336**	P	**P**	**16 52 31.9**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=139,slow=8.6,SNR=56						
KBZ				S	**Sn**	**16 55 53.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=183,slow=17,SNR=1.6						
KBZ				ScP	**ScP**	**17 00 37.5**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=151,slow=3.0,SNR=4.9						
KBZ	**Khabaz**	**18.30**	**336**	*c*eP	**P**	**16 52 32.2**	**+1.7**
ATD	**Arta Tunnel**	**18.33**	**213**	P	**P**	**16 52 33.2**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=12,slow=4.4,SNR=8.7						
ATD				Lg	Lg	16 58 05.8	
	comp=Z,0.8nm,0.3s,baz=13,slow=20,SNR=2.1						
ATD				LR	LR	17 00 35.4	
	comp=Z,4μm,19.8s,baz=23,slow=40						
ATD	**Arta Tunnel**	**18.33**	**213**	P	**P**	**16 52 31.5**	**+0.4**
ATD				IAmb	IAmb	16 52 34.3	
	comp=Z,114nm,1.4s						
CSS	**Mathiatis**	**18.44**	**299**	P	**P**	**16 52 31.9**	**-0.2**
KVAR	**Kislovodsk Arr**	**18.57**	**336**	P	**Pn**	**16 52 34.7**	**+0.9**
	baz=90,slow=19,SNR=8.8						
KVAR				S	**Sn**	**16 56 03.3**	**+1.9**
	baz=208,slow=9.0,SNR=1.6						
KIV	**Kislovodsk**	**18.57**	**336**	*i* P	**Pn**	**16 52 35.9**	**+2.0**
	SNR=9.2						
KIV	**Kislovodsk**	**18.57**	**336**	*e*P	**Pn**	**16 52 34.9**	**+1.1**
KIV				*e*S	**S**	**16 56 04.6**	**-0.7**
KIV				pmax	pmax		
	comp=Z,171nm,1.0s						
KIV				MLR	MLR		
	comp=Z,785nm,14.0s						
KIV	**Kislovodsk**	**18.57**	**336**		**P**	**16 52 33.4**	**-0.2**
KIV				IAmb	IAmb	16 52 46.2	
	comp=Z,83nm,1.2s						
NIL	**Nilore**	**18.60**	**65**	P	**P**	**16 52 33.7**	**-0.2**
NIL				pmax	pmax		
	comp=Z,101nm,0.9s						
NIL	**Nilore**	**18.60**	**65**	P	**P**	**16 52 33.7**	**-0.2**
NIL				IAmb	IAmb	16 52 38.3	
	comp=Z,100nm,0.9s						
CHCP	**Chirah Chowk**	**18.61**	**65**	P	**P**	**16 52 34.0**	**0.0**
GOF	**Gofitskoye**	**19.42**	**338**	‖*e*P	**Pn**	**16 52 43.6**	**-0.3**
GOF				pmax	pmax		
	comp=Z,86nm,2.1s						
SOC	**Sochi**	**19.46**	**330**	*e*P	**P**	**16 52 42.1**	**-1.1**
SOC				*e*		16 56 22.2	
SOC				pmax	pmax		
	comp=Z,19nm,0.7s						
SOC				MLR	MLR		
	comp=Z,792nm,11.0s						
CHM	**Chimkent**	**20.23**	**38**	*e*P	**P**	**16 52 52.1**	**+0.4**
	comp=Z,22nm,1.2s,baz=38						
CHM				*i* S	Sn	16 56 40

UCH Uchtor 23.05 44 P P 16 53 24.7 +2.3
SNR=30
SIM Simferopol' 23.18 324 eP P 16 53 21.8 -1.4
SIM S S 16 57 30.6 -4.1
SIM pmax pmax
comp=Z,38nm,0.9s
SIM smax smax
comp=E,24nm,1.1s
SIM smax smax
comp=N,17nm,1.2s
AAK Ala-Archa 23.27 43 P P 16 53 25.7 +1.4
SNR=13
AAK Ala-Archa 23.27 43 P P 16 53 25.7 +1.4
AKTO Aktyubinsk 23.43 8 P P 16 53 25.5 -0.1
comp=N,5.5nm,0.4s,baz=204,slow=11,SNR=18
AKTO ScP ScP 17 00 48.1 -1.7
comp=N,0.9nm,0.6s,baz=189,slow=9.8,SNR=2.5
AKTO LR LR 17 04 49.3
comp=N,3μm,18.2s,baz=181,slow=42
AKTO Aktyubinsk 23.43 8 P P 16 53 26.5 +0.9
KARP Karpathos 23.45 297 P P 16 53 26.2 +0.1
KARP IAmb IAmb 16 53 30.0
comp=Z,54nm,0.9s
KBK Karagaybulak 23.56 44 P P 16 53 30.6 +3.3
SNR=12
CHMS Chumysh 23.63 43 P P 16 53 29.0 +1.2
SNR=11
USP Ospenovka 23.63 42 P P 16 53 29.1 +1.3
SNR=23
SGDS Sogindy 23.82 42 eP P 16 53 30.0 +0.3
baz=42
SGDS Sogindy 23.82 42 eP P 16 53 29.9 +0.3
TKM2 Tokmak 2 24.10 44 P P 16 53 33.1 +0.7
SNR=10.0
TKM2 Tokmak 2 24.10 44 P P 16 53 32.7 +0.2
ULHL Ulahol 24.15 46 P P 16 53 36.0 +3.0
SNR=20
SANT Santorini 24.98 298 ⇑P P 16 53 40.8 +0.5
SANT Santorini 24.98 298 P P 16 53 40.6 +0.3
TNSS Tian-Shan 25.00 45 eP P 16 53 42.0 +1.0
baz=45
TNSS Tian-Shan 25.00 45 eP P 16 53 41.9 +1.0
AAA Alma-Ata 25.07 44 eP P 16 53 41.9 +0.8
baz=44
AAA eS S 16 58 07.5 +2.1
baz=44
AAA LR LR 17 03 52.2
comp=Z,1μm,15.4s,baz=44
AAA Alma-Ata 25.07 44 eP P 16 53 41.9 +0.8
AAA eS S 16 58 07.5 +2.1
AAA MLR MLR
comp=Z,1μm,15.0s
KUU Kurty 25.09 43 eP P 16 53 40.7 -0.5
comp=Z,17nm,1.0s,baz=42
KUU Kurty 25.09 43 eP P 16 53 40.7 -0.5
KUU pmax pmax
comp=Z,17nm,1.0s
MDOK Medeo 25.13 45 eP P 16 53 41.7 -0.1
baz=44
MDOK Medeo 25.13 45 eP P 16 53 41.7 -0.1
IDI Anoyia 25.21 295 P P 16 53 43.6 +1.1
comp=Z,40nm,0.9s,baz=94,slow=8.7,SNR=13
IDI PcP PcP 16 57 16.4 +0.4
comp=Z,8.8nm,0.8s,baz=21,slow=5.8,SNR=2.6
IDI Anoyia 25.21 295 P P 16 53 43.3 +0.9
VRH Novokhopyorsk 25.35 343 eP P 16 53 43.7 +0.3
VRH eS S 16 58 08.5 -0.9
VRH pmax pmax
comp=Z,410nm,0.7s
VRH smax smax
comp=E,70nm,1.3s
EZN Ezine 25.36 306 P P 16 53 45.6 +2.0
BELG Belogornoye 25.38 352 P P 16 53 44.0 +0.3
comp=E,152nm,0.9s,baz=146,slow=3.6,SNR=64
BELG PcP PcP 16 57 15.6 -0.3
comp=E,14nm,0.8s,baz=135,slow=2.2,SNR=2.7
BELG ScP ScP 17 00 54.1 -0.9
comp=E,8.9nm,0.8s,baz=187,slow=2.5,SNR=2.8
BELG LR LR 17 06 26.2
comp=E,714nm,19.2s,baz=162,slow=43
BELG Belogornoye 25.38 352 iP P 16 53 44.0 +0.3
BELG pmax pmax
comp=Z,25nm,0.9s
HYB Hyderabad 25.59 107 iP P 16 53 46.0 0.0
VORD Divnogorie 25.82 340 eP P 16 53 47.0 -0.7
VORD pmax pmax
comp=Z,90nm,0.7s
MFTR Murfatlar 25.93 317 ⇑P P 16 53 50.0 +1.2
SATY Saty 25.94 46 eP P 16 53 48.8 -0.4
baz=46
SATY eS S 16 58 20.2 +0.8
baz=46
SATY Saty 25.94 46 eP P 16 53 48.7 -0.4
SATY eS S 16 58 20.1 +0.8
ALN Alexandroupoli 25.96 308 P P 16 53 50.0 +0.9
ALN pmax pmax
comp=Z,21nm,0.8s
ALN Alexandroupoli 25.96 308 P P 16 53 50.0 +0.9
ALN IAmb IAmb 16 53 53.4
comp=Z,21nm,0.8s
JURR Jurilovca 25.98 318 ⇑P P 16 53 50.0 +0.8
VSR Storozhevoye 26.08 340 eP P 16 53 49.4 -0.6
VSR eS S 16 58 20.5 -0.4
VSR pmax pmax
comp=Z,60nm,0.5s
VSR smax smax
comp=N,60nm,1.2s
TIRR Tirgusor 26.09 317 P P 16 53 50.3 +0.1
TIRR pmax pmax
comp=Z,77nm,1.4s
TIRR Tirgusor 26.09 317 P P 16 53 50.3 +0.1
TLCR 26.26 319 ⇓P P 16 53 53.1 +1.4
TLCR 26.26 319 P P 16 53 53.1 +1.4
TPGR Topolog 26.30 318 ⇑P P 16 53 53.4 +1.2
KPKS Kokpek 26.32 45 eP P 16 53 52.3 -0.1
comp=Z,21nm,0.7s,baz=45
KPKS Kokpek 26.32 45 eP P 16 53 52.3 -0.1
KPKS pmax pmax
comp=Z,21nm,0.7s
UZB Uzynbulak 26.38 46 eP P 16 53 52.8 -0.3
comp=Z,16nm,0.8s,baz=46
UZB Uzynbulak 26.38 46 eP P 16 53 52.8 -0.3
UZB pmax pmax
comp=Z,16nm,0.8s
VORR Voronezh 26.46 341 eP P 16 53 54.0 +0.5
VORR pmax pmax
comp=Z,250nm,0.6s
HARR Harsova 26.50 317 ⇑P P 16 53 55.2 +1.2
HARR Harsova 26.50 317 P P 16 53 55.1 +1.2
CFR Carcaliu 26.65 319 ⇓P P 16 53 56.1 +0.8
CFR Carcaliu 26.65 319 P P 16 53 57.7 +2.4
SHLS Shalkode 26.67 47 eP P 16 53 57.9 +2.2
comp=Z,19nm,0.8s,baz=47
SHLS Shalkode 26.67 47 eP P 16 53 57.8 +2.2
SHLS pmax pmax
comp=Z,19nm,0.8s
PDGK Podgornoye 26.77 46 P P 16 53 56.6 +0.1
TDK Taldyqorghan 26.93 42 eP P 16 53 58.2 +0.3
comp=Z,21nm,0.8s,baz=42
TDK LR LR 17 05 16.4
comp=Z,2μm,13.7s,baz=42
TDK Taldyqorghan 26.93 42 eP P 16 53 58.2 +0.3
TDK pmax pmax
comp=Z,21nm,0.8s
TDK MLR MLR
comp=Z,2μm,14.0s
OUR Ouranopolis 27.22 306 P P 16 54 04.3 +3.8
DANN Dangsing 27.23 81 eP P 16 54 01.8 +0.7
comp=Z,195nm,0.8s
BRZS Berezniki 27.23 28 eP P 16 54 01.6 +1.1
comp=Z,16nm,1.2s,baz=28
BRZS Berezniki 27.23 28 eP P 16 54 01.6 +1.1
BRZS pmax pmax
comp=Z,16nm,1.2s
MILM Milestii Mici 27.28 322 ⇓P P 16 54 01.4 +0.5
PAIG Paliouri 27.31 305 P P 16 54 03.9 +2.6
LPSR Galich'ya Gora 27.37 341 eP P 16 54 02.7 +1.1
LPSR eS S 16 58 42.2 +0.9
LPSR pmax pmax
comp=Z,90nm,1.8s
LPSR smax smax
comp=N,90nm,1.5s
PLD Plovdiv 27.37 310 P P 16 54 03.6 +1.8
ISR Istrita 27.57 317 ⇑P P 16 54 04.6 +1.0
ISR Istrita 27.57 317 P P 16 54 06.5 +2.9

ISR pmax pmax
comp=Z,33nm,1.1s
SRS Serrai 27.77 307 P P 16 54 06.8 +1.4
SRS pmax pmax
comp=Z,29nm,1.2s
SOH Sokhos 27.84 307 P P 16 54 08.3 +2.2
SOH pmax pmax
comp=Z,22nm,0.9s
VRI Vrincioaia 27.86 319 ⇑P P 16 54 07.2 +1.1
VRI Vrincioaia 27.86 319 P P 16 54 08.1 +2.0
VRI pmax pmax
comp=Z,13nm,1.0s
PLOR Plostina 27.89 319 ⇑P P 16 54 07.7 +1.2
PLOR Plostina 27.89 319 P P 16 54 07.7 +1.2
ITM Ithomi 27.92 298 P P 16 54 07.2 +0.4
GKN Gorkha 28.04 81 eP P 16 54 08.0 -0.1
comp=Z,48nm,0.9s
MLR Muntele Rosu 28.12 317 P P 16 54 10.9 +2.2
comp=Z,5.6nm,0.8s,baz=143,slow=8.0,SNR=14
MLR PcP PcP 16 57 23.0 +0.3
comp=Z,2.9nm,0.7s,baz=157,slow=10,SNR=2.2
MLR ScP ScP 17 01 03.4 -0.2
comp=Z,2.2nm,0.8s,baz=233,slow=3.8,SNR=4.1
MLR Muntele Rosu 28.12 317 ⇑P P 16 54 09.7 +1.0
MLR Muntele Rosu 28.12 317 P P 16 54 08.3 -0.3
LIT Litokhoron 28.23 305 P P 16 54 09.6 0.0
LIT pmax pmax
comp=Z,9.0nm,0.7s
LIT Litokhoron 28.23 305 P P 16 54 09.6 0.0
SORM Soroca 28.27 324 ⇑P P 16 54 10.0 +0.2
SORM Soroca 28.27 324 P P 16 54 10.0 +0.2
DMN Daman 28.50 82 eP P 16 54 12.4 +0.1
comp=Z,45nm,0.9s
GRG Griva 28.56 306 P P 16 54 13.9 +1.4
VAY Valandovo 28.56 307 iP P 16 54 19.7 +7.2
VTS Vitosha 28.57 310 ⇓P P 16 54 13.7 +1.0
VOIR 28.64 317 ⇓P P 16 54 14.0 +0.8
VOIR 28.64 317 P P 16 54 14.0 +0.8
DOPR Dopca 28.70 318 ⇑P P 16 54 14.9 +1.2
PKIN Phulchoki 28.75 82 eP P 16 54 14.6 -0.1
comp=Z,51nm,0.8s
PKI Pulchoki 28.77 82 eP P 16 54 14.5 -0.3
comp=Z,64nm,0.9s
BRVK Borovoye 28.79 22 iP P 16 54 13.7 -0.6
BRVK pmax pmax
comp=Z,13nm,0.6s
BRVK Borovoye 28.79 22 P P 16 54 14.4 +0.1
BRVK IAmb IAmb 16 54 16.3
comp=Z,16nm,0.8s
BVAR Borovoye Array 28.79 22 P P 16 54 14.6 +0.2
comp=Z,16nm,0.7s,baz=165,slow=12,SNR=65
BVAR PcP PcP 16 57 24.2 +0.1
comp=Z,3.7nm,0.7s,baz=189,slow=7.3,SNR=5.8
BIZ Bicaz 28.80 320 ⇓P P 16 54 15.5 +1.0
STIP Stip 28.96 308 iP P 16 54 16.2 +0.1
PRAR RASCA 28.97 321 ⇓P P 16 54 16.9 +0.9
GUN Gumba 29.14 81 eP P 16 54 18.0 -0.2
comp=Z,85nm,0.9s
FNA Florina 29.25 306 P P 16 54 18.8 +0.2
FNA pmax pmax
comp=Z,14nm,0.7s
FNA Florina 29.25 306 P P 16 54 18.8 +0.2
FNA IAmb IAmb 16 54 21.7
comp=Z,14nm,0.7s
ARU Arti 29.39 6 P P 16 54 21.1 +1.5
comp=Z,2.1nm,0.7s,baz=204,slow=7.9,SNR=11
ARU PcP PcP 16 57 25.8 +0.3
comp=Z,1.7nm,0.6s,baz=270,slow=6.1,SNR=2.6
ARU LR LR 17 08 07.4
comp=Z,2μm,19.6s,baz=184,slow=41
ARU Arti 29.39 6d iP P 16 54 21.9 +2.3
ARU 16 55 17.0
ARU PPP PPP 16 55 25.6
ARU S S 16 59 20.3 +7.2
ARU SS SnSn 17 00 47.3 +7.8
ARU pmax pmax
comp=Z,6.0nm,0.8s
ARU MLR MLR
comp=Z,1μm,17.0s
ARU Arti 29.39 6 P P 16 54 19.5 -0.1
JIRN Jiri 29.44 82 eP P 16 54 20.8 -0.1
comp=Z,62nm,0.8s
AKASG Malin Array Be 29.53 329 P P 16 54 20.4 -0.5
comp=Z,9.8nm,0.8s,baz=131,slow=7.6,SNR=28
AKASG PcP PcP 16 57 26.6 +0.7
comp=Z,2.2nm,0.6s,baz=102,slow=1.9,SNR=4.9
AKASG S S 16 59 08.7 -6.7
comp=Z,0.1nm,0.2s,baz=60,slow=25,SNR=1.3
AKASG Malin Array Be 29.53 329 P P 16 54 19.5 -1.4
AKBB Malin Array Si 29.53 329 eP P 16 54 19.2 -1.7
AKBB Malin Array Si 29.53 329 P P 16 54 19.3 -1.6
AKBB IAmb IAmb 16 54 23.5
comp=Z,20nm,0.9s
KIEV Kiev 29.53 329 P P 16 54 19.0 -1.9
KMPD K-Podol'skiy 29.54 323 P P 16 54 22.0 +1.0
SKO Skopje 29.58 308 iP P 16 54 21.5 -0.1
IGT Igoumenitsa 29.67 303 P P 16 54 24.2 +1.8
IGT pmax pmax
comp=Z,13nm,1.1s
BURAR Bucovina Array 29.68 321 ⇑P P 16 54 23.3 +0.9
BURAR Bucovina Array 29.68 321 P P 16 54 23.3 +0.9
BURAR Bucovina Array 29.68 321 P P 16 54 22.5 0.0
BUR08 Bucovina Ar. S 29.70 321 P P 16 54 22.6 -0.1
RAMN Ramite 29.90 83 eP P 16 54 24.9 +0.1
comp=Z,78nm,0.9s
MAKZ Makanchi 30.00 42 P P 16 54 25.1 -0.1
MAKZ Makanchi 30.00 42 P P 16 54 25.1 -0.1
MAKZ IAmb IAmb 16 54 29.6
comp=Z,21nm,0.8s
SVE Sverdlovsk 30.02 8 eP P 16 54 27.5 +2.3
SVE pmax pmax
comp=Z,20nm,1.5s
SVE MLR MLR
comp=Z,1μm,16.0s
GZR Gura Zlata 30.03 315 ⇓P P 16 54 26.5 +1.0
HERR Herculane 30.04 314 ⇑P P 16 54 26.6 +1.1
KSV Kosov 30.15 322 P P 16 54 26.9 +0.4
MK31 Makanchi Array 30.18 42 iP P 16 54 26.9 0.0
MK31 pmax pmax
comp=Z,12nm,0.7s
MK31 Makanchi Array 30.18 42 P P 16 54 26.8 0.0
MKAR Makanchi Array 30.18 42 P P 16 54 27.2 +0.4
comp=Z,8.0nm,0.6s,baz=224,slow=8.8,SNR=57
MKAR PcP PcP 16 57 27.9 +0.1
comp=Z,2.5nm,0.7s,baz=239,slow=2.1,SNR=4.9
MKAR S S 16 59 25.1 -0.7
comp=Z,0.2nm,0.6s,baz=221,slow=15,SNR=1.5
MKAR ScP ScP 17 01 09.2 -0.8
comp=Z,0.6nm,0.8s,baz=197,slow=1.3,SNR=3.7
MKAR LR LR 17 08 37.1
comp=Z,2μm,18.3s,baz=242,slow=41
MKAR Makanchi Array 30.18 42 P P 16 54 26.6 -0.2
OBN Obninsk 30.25 341 ⇑P P 16 54 26.7 -0.5
OBN Obninsk 30.25 341 eP P 16 54 27.2 0.0
OBN e 16 55 25.2
OBN pmax pmax
comp=Z,47nm,1.7s
OBN MLR MLR
comp=Z,323nm,18.0s
OBN Obninsk 30.25 341 P P 16 54 27.0 -0.2
OBN IAmb IAmb 16 54 28.5
comp=Z,24nm,0.8s
KURBB Kurchatov Arra 30.35 33 P P 16 54 29.0 +0.8
comp=Z,4.0nm,0.8s,baz=232,slow=9.1,SNR=21
KURBB PcP PcP 16 57 28.0 0.0
comp=Z,2.1nm,0.6s,baz=232,slow=3.5,SNR=8.4
MDVR Moldovita 30.45 313 ⇓P P 16 54 30.2 +1.0
KURK Kurchatov 30.46 33 P P 16 54 29.0 -0.1
KURK 16 57 28.0
KURK Kurchatov 30.46 33 P P 16 54 29.0 -0.1
KURK PcP 16 57 28.0 -0.3
MOS Moscow 30.50 343 eP P 16 54 27.8 -1.7
MOS e 16 55 50.9
MOS eS S 16 59 29.5 -1.0
MOS pmax pmax
comp=Z,40nm,1.0s
MOS MLR MLR
comp=Z,500nm,19.0s
ODAN Odare 30.61 83 eP P 16 54 30.5 -0.6
comp=Z,39nm,0.8s
DRGR 30.72 317 ⇓P P 16 54 32.5 +0.8
DRGR 30.72 317 P P 16 54 33.2 +1.6
DRGR pmax pmax
comp=Z,13nm,1.0s
TAPN Taplejung 30.82 82 eP P 16 54 32.4 -0.6

comp=Z,21nm,0.7s
BZS Buzias 30.86 315 ⇓P P 16 54 33.5 +0.7
SEM Semipalatinsk 31.07 35 eP P 16 54 34.4 -0.5
baz=34
SEM Semipalatinsk 31.07 35 eP P 16 54 34.3 -0.5
SIRR Siria 31.12 316 ⇑P P 16 54 36.0 +0.9
KIRV Kirov 31.37 356 P P 16 54 37.6 +0.6
comp=Z,22nm,0.5s,baz=180,slow=6.4,SNR=6.7
KIRV Kirov 31.37 356 eP P 16 54 37.2 +0.1
TRPA Tarpa 31.48 320 ⇑P P 16 54 39.1 +0.8
FRGS Fruska Gora 31.84 313 ⇓P P 16 54 42.4 +1.0
UZH Uzhgorod 31.88 320 eP P 16 54 45.0 +3.3
UZH e 16 54 48.8
UZH ePPP PPP 16 56 06.5
UZH e 16 57 40.1
UZH eS S 16 59 55.0 +2.8
ZSN Zaisan 32.04 43 eP P 16 54 43.9 +0.6
baz=42
ZSN eS S 16 59 56.9 +2.0
baz=42
ZSN Zaisan 32.04 43 eP P 16 54 43.8 +0.6
ZSN eS S 16 59 56.8 +2.0
KMBO Kilima Mbogo 32.05 211 P P 16 54 46.4 +2.6
comp=Z,1.9nm,0.9s,baz=2.4,slow=9.2,SNR=8.2
KMBO LR LR 17 08 45.6
comp=Z,2μm,18.1s,baz=40,slow=38
TIP Timpagrande 32.30 301 ⇓P P 16 54 46.6 +0.9
TIP Timpagrande 32.30 301 P P 16 54 46.6 +0.9
WMQ Urumqi 32.43 50 eP P 16 54 47.3 +0.6
WMQ pP sP 16 54 52.3 +0.4
WMQ sP pP 16 54 58.7 +8.4
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,260nm,6.9s
WMQ LR LR
comp=Z,2μm,18.7s
WMQ LR LR
comp=Z,1μm,17.1s
WMQ LR LR
comp=Z,2μm,20.9s
WMQ Urumqi 32.43 50 P P 16 54 47.4 +0.6
WMQ pmax pmax
comp=Z,18nm,0.8s
WMQ Urumqi 32.43 50 P P 16 54 47.4 +0.6
WMQ IAmb IAmb 16 54 49.2
comp=Z,18nm,0.8s
CRVS Cervenica-Dubn 32.49 320 eP P 16 54 48.0 +0.9
CRVS pmax pmax
comp=Z,19nm,1.0s
CRVS Cervenica-Dubn 32.49 320 eP P 16 54 48.0 +0.9
MATE Matera 32.64 303 ⇑P P 16 54 49.3 +0.8
MNK Minsk 32.79 333 iP P 16 54 48.2 -1.4
comp=E,6.0nm,0.9s
MNK iP P 16 54 48.2 -1.4
comp=N,9.0nm,0.8s
MNK iP P 16 54 48.2 -1.4
comp=Z,32nm,0.8s
MNK iPP PnPn 16 55 56.5 -1.4
MNK iS S 17 00 06.5 +0.2
MNK iSS SnSn 17 02 03.0 +0.9
MNK iLQ LQ 17 05 36.2
MNK iLR LR 17 08 06.0
MNK iLRM MLR 17 09 25.2
comp=E,42nm,17.5s
MNK iLRM MLR 17 09 25.2
comp=N,211nm,14.3s
MNK iLRM MLR 17 09 25.2
comp=Z,249nm,15.3s
KECS Kecovo 32.85 319 eP P 16 54 51.6 +1.3
KECS pmax pmax
comp=Z,9.0nm,1.2s
KECS Kecovo 32.85 319 eP P 16 54 51.5 +1.3
MORH Mrgy, Hungar 33.00 314 ⇓P P 16 54 52.1 +0.6
PALK Pallekele 33.00 122 P P 16 54 52.3 +0.4
comp=Z,5.8nm,0.8s,baz=5.3,slow=7.6,SNR=4.3
NIE Niedzica 33.41 320 P P 16 54 58.4 +3.2
NACGM Naroch 33.52 333 iP P 16 54 56.1 +0.1
NACGM iP P 16 54 56.1 +0.1
NACGM iP P 16 54 56.1 +0.1
NACGM iPb pP 16 54 57.9 -1.9
comp=Z,19nm,0.6s
NACGM iPP PnPn 16 55 48.6 -19
NACGM iPPP PPP 16 56 14.6
NACGM iS S 17 00 16.3 -1.3
NACGM iSS SnSn 17 01 51.2 -29
NACGM iSSS SSS 17 02 24.8
NACGM iLQ LQ 17 05 44.5
NACGM iLR LR 17 08 26.6
LSA Lhasa 33.56 77 P P 16 54 55.9 -1.3
LSA pmax pmax
comp=Z,4.0nm,0.7s
LSA Lhasa 33.56 77 P P 16 54 55.9 -1.3
LANS Liptovska Anna 33.76 319 eP P 16 54 59.6 +1.4
LANS pmax pmax
comp=Z,9.0nm,0.8s
LANS Liptovska Anna 33.76 319 eP P 16 54 59.6 +1.4
VYHS Vyhne 33.83 318 eP P 16 54 59.0 +0.2
VYHS e 16 54 59.7
VYHS Vyhne 33.83 318 eP P 16 54 59.0 +0.2
VYHS Vyhne 33.83 318 eP P 16 54 59.7 +0.9
IDID Didziasalis 33.83 333 eP P 16 54 58.5 -0.2
RAFF Raffo Rosso 33.90 297 P P 16 55 01.3 +1.7
IIGN Ignalina 34.07 333 eP P 16 55 01.1 +0.4
OJC Ojcow 34.09 321 eP P 16 55 02.0 +1.0
OJC Ojcow 34.09 321 P P 16 55 01.2 +0.2
OJC pmax pmax
comp=Z,19nm,0.9s
OJC Ojcow 34.09 321 P P 16 55 01.2 +0.2
OJC IAmb IAmb 16 55 02.9
comp=Z,19nm,0.9s
ISAL Salakas 34.26 333 eP P 16 55 02.2 -0.2
SUW Suwalki 34.50 329 eP P 16 55 05.5 +1.0
SUW Suwalki 34.50 329 P P 16 55 04.2 -0.3
SUW pmax pmax
comp=Z,57nm,1.1s
SUW Suwalki 34.50 329 P P 16 55 04.2 -0.3
DGZ Jazzator, Alta 34.59 40c iP P 16 55 06.4 +0.8
DGZ pmax pmax
comp=Z,18nm,0.6s
JAVC Velka Javorina 34.69 318 eP P 16 55 08.2 +1.9
PRGR Permogore 34.69 354 eP P 16 55 05.6 -0.4
PRGR pmax pmax
comp=Z,12nm,0.9s
MODS Modra-Piesok 34.72 317 eP P 16 55 06.9 +0.4
MODS Modra-Piesok 34.72 317 eP P 16 55 06.9 +0.4
KLMR Klimovskoe 34.77 348 eP P 16 55 04.8 -1.9
KLMR e 16 56 21.3
KLMR e 16 57 37.9
KLMR pmax pmax
comp=Z,27nm,0.9s
KLMR Klimovskoe 34.77 348 eP P 16 55 04.9 -1.8
KLMR AMP 16 55 07.7
comp=Z,27nm,0.9s
KLMR ePP PnPn 16 56 21.3 -1.5
KLMR ePcP PcP 16 57 37.9 -2.1
KLMR LQ LQ 17 07 03.0
KLMR LQ LQ 17 07 03.0
KLMR LR LR 17 09 09.6
CORL Corleone 34.80 298 P P 16 55 07.6 +0.2
CLTB Caltabellotta 34.84 297 P P 16 55 08.5 +0.7
INTR Introdacqua 34.99 305 P P 16 55 09.7 +0.7
INTR IAmb IAmb 16 55 11.8
comp=Z,12nm,0.7s
MBAR Mbarara 35.01 221 P P 16 55 11.6 +2.0
comp=Z,2.5nm,0.3s,baz=50,slow=6.4,SNR=5.5
MBAR LR LR 17 10 58.1
comp=Z,2μm,19.1s,baz=22,slow=39
MBAR Mbarara 35.01 221 P P 16 55 09.7 +0.2
PABE Paberze 35.11 331 eP P 16 55 09.9 +0.1
MORC Moravsky Berou 35.16 319 eP P 16 55 10.2 -0.2
MORC Moravsky Berou 35.16 319 P P 16 55 10.1 -0.3
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 35.16 319 P P 16 55 10.1 -0.3
ARSA Arzberg 35.38 314 eP P 16 55 13.2 +1.0
comp=Z,4.9nm,0.8s
CONA Conrad Observa 35.41 316 eP P 16 55 12.9 +0.3
comp=Z,6.0nm,1.2s
ZAA0 Zalesovo Array 35.45 33 P P 16 55 12.3 -0.4
ZAA0 IAmb IAmb 16 55 14.2
comp=Z,15nm,0.8s
ZALV Zalesovo Beam 35.45 33 P P 16 55 12.5 -0.2
comp=Z,15nm,0.7s,baz=241,slow=8.8,SNR=63

ZALV PcP **PcP** **16 57 41.3 -0.8**
comp=Z,2.6nm,0.7s,baz=269,slow=5.9,SNR=2.2
ZALV S **S** **17 00 44.3 -3.1**
comp=Z,0.5nm,0.5s,baz=193,slow=19,SNR=1.1
ZALV ScP **ScP** **17 01 26.9 -1.1**
comp=Z,0.3nm,0.3s,baz=250,slow=4.3,SNR=2.2
ZALV Zalesovo Beam 35.45 33 P **P** **16 55 12.3 -0.4**
SOKA Soboth 35.49 313 *eP* **P** **16 55 13.4 +0.1**
comp=Z,3.4nm,0.8s
SOKA *eS* **ScP** **17 01 28.3 -0.1**
comp=Z,3.5nm,0.8s
VRAC Vranov 35.52 318 ⇑P **P** **16 55 13.6 +0.2**
VRAC Vranov 35.52 318 *eP* **P** **16 55 14.4 +1.0**
VRAC Vranov 35.52 318 P **P** **16 55 13.6 +0.2**
KRUC Moravsky 35.53 318 *eP* **P** **16 55 14.1 +0.6**
KRLC Kraliky 35.74 319 *eP* **P** **16 55 13.9 -1.4**
KRLC Kraliky 35.74 319 *eP* **P** **16 55 13.9 -1.4**
NRCA Norcia 35.74 306 P **P** **16 55 16.0 +0.6**
NRCA IAmb IAmb 16 55 21.6
comp=Z,12nm,0.8s
OBKA Obir 35.75 313 *eP* **P** **16 55 17.7 +2.1**
comp=Z,11nm,1.5s
DPC Dobruska-Polom 36.12 320 *eP* **P** **16 55 17.7 -0.9**
DPC Dobruska-Polom 36.12 320 *eP* **P** **16 55 17.7 -0.9**
VSU Vasula 36.13 337 *eP* **P** **16 55 18.8 +0.3**
OSTC Ostas 36.27 320 *eP* **P** **16 55 20.5 +0.6**
KSP Ksiaz 36.35 320 *eP* **P** **16 55 22.2 +1.7**
KSP Ksiaz 36.35 320 P **P** **16 55 22.1 +1.6**
UPC Upice 36.37 320 *eP* **P** **16 55 21.0 +0.3**
UPC Upice 36.37 320 *eP* **P** **16 55 21.0 +0.3**
CHVC Chvalec 36.38 320 *eP* **P** **16 55 20.6 -0.2**
MOA Molln 36.38 315 *eP* **P** **16 55 21.8 +1.0**
comp=Z,5.6nm,0.8s
LATE Laterza 36.64 306 P **P** **16 55 23.2 +0.1**
CKRC Cesky Krumlov 36.71 316 *eP* **P** **16 55 24.4 +0.8**
KBA Koelnbreinsper 36.72 313 *eP* **P** **16 55 24.2 +0.3**
comp=Z,13nm,1.0s,SNR=8.8
KBA Koelnbreinsper 36.72 313 P **P** **16 55 25.1 +1.2**
ZOU Zoufplan 36.80 312 P **P** **16 55 23.8 -0.8**
ZOU IAmb IAmb 16 55 49.9
comp=Z,22nm,1.4s
PRU Pruhonice 37.01 318 *eP* **P** **16 55 28.7 +2.6**
PRU Pruhonice 37.01 318 *eP* **P** **16 55 28.7 +2.6**
GERES GERESS Array B 37.09 316 P **P** **16 55 26.6 -0.4**
comp=Z,0.9nm,0.7s,baz=106,slow=9.8,SNR=8.5
GERES PcP **PcP** **16 57 47.1 -0.2**
comp=Z,1.5nm,0.7s,baz=117,slow=4.7,SNR=7.3
GERES ScP **ScP** **17 01 34.1 -0.2**
comp=Z,0.9nm,0.8s,baz=149,slow=2.8,SNR=5.7
GERES GERESS Array B 37.09 316 P **P** **16 55 25.8 -1.1**
GERES **PcP** **16 57 47.0 -0.3**
ABTA Abfaltersbach 37.16 312 *eP* **P** **16 55 27.4 -0.2**
comp=Z,9.9nm,0.9s,SNR=12
PBCC Pribram 37.22 318 *eP* **P** **16 55 28.4 +0.5**
KHC Kasperske Hory 37.27 317 P **P** **16 55 28.1 -0.3**
KHC pmax pmax
comp=Z,5.0nm,0.9s
KHC Kasperske Hory 37.27 317 *eP* **P** **16 55 27.2 -1.2**
KHC Kasperske Hory 37.27 317 P **P** **16 55 28.1 -0.3**
MTSE Matsula 37.37 335 *eP* **P** **16 55 29.8 +0.8**
CTI Castel Tesino 37.54 311 P **P** **16 55 30.4 -0.4**
CTI pmax pmax
comp=Z,11nm,0.8s
CTI Castel Tesino 37.54 311 P **P** **16 55 30.4 -0.4**
ZCCA Zocca 37.59 308 P **P** **16 55 32.7 +1.5**
ZCCA IAmb IAmb 16 55 55.4
comp=Z,21nm,1.1s
BRG Berggiesshubel 37.72 319 *eP* **P** **16 55 31.6 -0.5**
BRG Amp 16 55 34.1
comp=Z,4.4nm,0.9s
KEST Kesra 37.86 294 P **P** **16 55 34.1 +0.5**
comp=Z,15nm,1.0s,baz=114,slow=3.3,SNR=12
KEST PcP **PcP** **16 57 51.1 +1.2**
comp=Z,4.9nm,0.8s,baz=178,slow=1.5,SNR=3.3
KEST Kesra 37.86 294 P **P** **16 55 34.9 +1.3**
KEST IAmb IAmb 16 55 37.1
comp=Z,20nm,1.1s
WTTA Wattenberg 37.89 313 *eP* **P** **16 55 33.2 -0.6**
comp=Z,34nm,1.2s,SNR=16
WTTA Wattenberg 37.89 313 P **P** **16 55 34.4 +0.6**
WATA Walderalm 37.95 313 *eP* **P** **16 55 32.8 -1.5**
comp=Z,22nm,0.8s,SNR=10
VSL Villasalto 38.02 300 P **P** **16 55 36.6 +1.8**
VSL IAmb IAmb 16 55 56.0
comp=Z,20nm,0.9s
SQTA Sankt Quirin 38.15 313 *eP* **P** **16 55 34.8 -1.2**
comp=Z,10nm,0.6s,SNR=14
SALO Salr 38.19 310 P **P** **16 55 36.7 +0.5**
MOTA Moosalm 38.26 313 *eP* **P** **16 55 36.0 -0.9**
comp=Z,20nm,1.0s,SNR=13
MOTA *eS* **S** **17 01 38.9 +8.1**
comp=Z,6.6nm,1.2s
FETA Feichten 38.41 312 *eP* **P** **16 55 37.9 -0.3**
comp=Z,23nm,1.0s,SNR=19
FETA *eS* **S** **17 01 31.9 -1.2**
comp=Z,4.1nm,1.0s
CLL Collm 38.43 320 *i* P **P** **16 55 38.7 +0.6**
comp=Z,14nm,1.1s
CLL *e* 16 55 55.0
CLL *ePP* **PnPn** **16 57 07.0 -0.8**
CLL *ePPPP* 16 57 38.0
CLL *e*(S) S 17 01 57.0 +24
CLL *eSS* **SS** **17 04 24.0 +2.0**
CLL *eSSSS* 17 04 54.0
CLL Lm MLR 17 14 00.0
comp=N,300nm,19.5s
CLL Lm MLR 17 14 00.0
comp=E,100nm,18.1s
CLL Lm MLR 17 14 00.0
comp=Z,200nm,19.8s
CLL Collm 38.43 320 P **P** **16 55 38.5 +0.4**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 38.43 320 P **P** **16 55 38.5 +0.4**
RETA Reutte 38.52 313 *eP* **P** **16 55 38.0 -1.0**
comp=Z,8.7nm,0.6s
FIA1 FINESS Array S 38.60 340 P **P** **16 55 39.2 -0.2**
FIA1 IAmb IAmb 16 55 40.8
comp=Z,23nm,0.8s
FINES FINESS Array B 38.60 340 P **P** **16 55 39.0 -0.4**
comp=Z,18nm,0.8s,baz=142,slow=10,SNR=38
FINES LR LR 17 15 18.6
comp=Z,271nm,20.4s,baz=141,slow=42
FINES FINESS Array B 38.60 340 P **P** **16 55 39.0 -0.4**
MSSA Maissana 38.61 308 P **P** **16 55 39.2 -0.6**
PGF Pioggiola 38.67 305 *eP* **P** **16 55 40.2 -0.2**
PGF pmax pmax
comp=Z,16nm,1.3s
GRA1 Grafenberg Arr 38.91 317 P **P** **16 55 42.7 +0.5**
GRF Grafenberg Arr 38.91 317 P **P** **16 55 42.7 +0.5**
GRF pmax pmax
comp=Z,10.0nm,0.9s
GRF Grafenberg Arr 38.91 317 *eP* **P** **16 55 42.8 +0.7**
comp=Z,6.6nm,1.0s,baz=113,slow=9.3
GRFO Grafenberg 38.91 317 P **P** **16 55 42.6 +0.4**
GRFO pmax pmax
comp=Z,9.0nm,0.9s
GRFO Grafenberg 38.91 317 P **P** **16 55 42.6 +0.4**
DAVA Damuels 39.04 312 *eP* **P** **16 55 42.7 -0.8**
comp=Z,29nm,0.6s,SNR=20
DAVA *eS* **S** **17 01 41.1 -1.5**
comp=Z,2.5nm,0.6s
BSD Bornholm Skovb 39.10 326 *eP* **P** **16 55 43.5 -0.2**
BSD Bornholm Skovb 39.10 326 *i* P **P** **16 55 42.3 -1.3**
BSD IAmb IAmb 16 55 44.3
comp=Z,71nm,0.7s
BSD Bornholm Skovb 39.10 326 *i* P **P** **16 55 42.3 -1.3**
BSD pmax pmax
comp=Z,71nm,0.7s
TUE Stuetta 39.19 311 P **P** **16 55 44.3 -0.5**
BLEU Blekinge 39.27 328 *i* P **P** **16 55 46.1 +1.0**
SBF Sospel 40.00 307 *eP* **P** **16 55 51.4 -0.1**
SBF pmax pmax
comp=Z,19nm,0.9s
LUNU Lund 40.09 326 *i* P **P** **16 55 52.8 +1.0**
DEL Delary 40.29 327 *i* P **P** **16 55 52.9 -0.6**
BFO Black Forest 40.32 314 P **P** **16 55 54.3 +0.3**
BFO pmax pmax
comp=Z,6.0nm,1.1s
BFO Black Forest 40.32 314 P **P** **16 55 54.2 +0.3**
SENIN Lac Senin/Sane 40.55 310 P **P** **16 55 55.5 -0.6**
GTA Gaotai 40.55 60 ⇑P **P** **16 55 56.9 +0.7**
GTA pmax pmax
comp=Z,14nm,0.9s
GTA pmax pmax
comp=Z,120nm,5.1s
GTA LR LR
comp=Z,790nm,17.1s
GTA LR LR
comp=Z,730nm,16.7s
GTA LR LR
comp=Z,750nm,17.1s
LLD Lille Linde 40.57 325 *i* P **P** **16 55 57.9 +2.1**
LLD Lille Linde 40.57 325 *i* P **P** **16 55 57.9 +2.1**
MBDF Montbardon 40.61 308 *eP* **P** **16 55 55.9 -0.7**
MBDF pmax pmax
comp=Z,8.0nm,0.7s
COP Copenhagen 40.62 326 *i* P **P** **16 55 58.1 +1.8**
COP IAmb IAmb 16 55 58.9
comp=Z,81nm,0.9s
COP Copenhagen 40.62 326 *i* P **P** **16 55 58.0 +1.8**
COP pmax pmax
comp=Z,81nm,0.9s
BNI Bardonecchia 40.73 308 P **P** **16 55 56.8 -0.8**
BNI pmax pmax
comp=Z,11nm,0.9s
BNI Bardonecchia 40.73 308 P **P** **16 55 56.8 -0.8**
LPG La Plagne 40.76 309 *eP* **P** **16 55 57.8 -0.2**
LPG pmax pmax
comp=Z,10.0nm,0.7s
LPL La Plagne 40.77 309 *eP* **P** **16 55 57.1 -0.9**
LPL pmax pmax
comp=Z,10.0nm,0.9s
ECH Echery 41.05 313 P **P** **16 55 59.4 -0.6**
ECH pmax pmax
comp=Z,18nm,1.0s
ECH Echery 41.05 313 P **P** **16 55 59.4 -0.6**
ECH IAmb IAmb 16 56 01.8
comp=Z,18nm,1.0s
FABU Falkenberg 41.10 327 *i* P **P** **16 55 60.0 -0.3**
HINF Hinteralfeld 41.16 312 *eP* **P** **16 56 00.1 -0.8**
HINF pmax pmax
comp=Z,18nm,1.2s
BORU Boraas 41.39 328 *i* P **P** **16 56 02.5 0.0**
HAU Haudompre 41.53 313 *eP* **P** **16 56 03.0 -1.0**
HAU pmax pmax
comp=Z,8.0nm,1.0s
WLF Walferdange 42.05 315 *dx* **P** **16 56 08.0 -0.1**
WLF Walferdange 42.05 315 P **P** **16 56 07.5 -0.6**
WLF pmax pmax
comp=Z,19nm,1.1s
WLF Walferdange 42.05 315 P **P** **16 56 07.5 -0.6**
WLF IAmb IAmb 16 56 09.6
comp=Z,19nm,1.1s
LVZ Lovozero 42.10 350 P **P** **16 56 07.4 -0.9**
LVZ pmax pmax
comp=Z,49nm,1.3s
LVZ Lovozero 42.10 350 P **P** **16 56 07.4 -0.9**
LVZ IAmb IAmb 16 56 27.1
comp=Z,49nm,1.3s
VIVF Saint-Julien-l 42.11 308 *eP* **P** **16 56 07.9 -0.8**
VIVF pmax pmax
comp=Z,9.0nm,1.1s
SSB Saint Sauveur 42.26 308 P **P** **16 56 09.0 -1.0**
SSB pmax pmax
comp=Z,5.0nm,1.0s
SSB Saint Sauveur 42.26 308 P **P** **16 56 09.0 -1.0**
MHMT Maesarieng 42.28 93 P **P** **16 56 11.8 +1.4**
comp=Z,26nm,0.9s
MUD Monsted U'grnd 42.60 325 *i* P **P** **16 56 13.7 +1.3**
MUD IAmb IAmb 16 56 15.0
comp=Z,20nm,0.7s
MUD Monsted U'grnd 42.60 325 *i* P **P** **16 56 13.7 +1.3**
MUD pmax pmax
comp=Z,21nm,0.7s
CHTO Chiang Mai 42.96 91 P **P** **16 56 15.9 0.0**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 42.96 91 P **P** **16 56 15.9 0.0**
CMMT Chiang Mai 42.96 91 P **P** **16 56 17.0 +1.0**
comp=Z,5.6nm,1.0s
TAM Tamanrasset 43.01 275 P **P** **16 56 16.4 -0.1**
TAM pmax pmax
comp=Z,17nm,0.9s
TAM Tamanrasset 43.01 275 P **P** **16 56 16.4 -0.1**
TAM IAmb IAmb 16 56 19.3
comp=Z,17nm,0.9s
CM15 Chiang Mai Arr 43.06 92 P **P** **16 56 18.9 +2.1**
comp=Z,44nmcomp=Z,5.2nm,0.9s
BMRD Maredsous 43.07 316 *dp*P pP 16 56 18.5 -1.6
CMAR Chiang Mai Arr 43.08 92 P **P** **16 56 17.1 +0.2**
comp=Z,1.8nm,0.8s,baz=288,slow=8.3,SNR=20
CMAR PcP **PcP** **16 58 07.2 +0.3**
comp=Z,2.0nm,0.7s,baz=285,slow=4.6,SNR=7.3
CMAR LR LR 17 16 40.2
comp=Z,131nm,21.2s,baz=338,slow=40
CMAR Chiang Mai Arr 43.08 92 P **P** **16 56 16.1 -0.8**
CM01 Chiang Mai Arr 43.11 92 P **P** **16 56 19.9 +2.8**
comp=Z,40nmcomp=Z,5.9nm,0.9s
DOU Dourbes 43.13 315 *dp*P **P** **16 56 18.5 +1.6**
SNF Seneffe 43.42 316 *dp*P **P** **16 56 20.9 +1.6**
UCC Uccle 43.44 316 P **P** **16 56 19.3 -0.1**
UCC pmax pmax
comp=Z,25nm,0.9s
UCC Uccle 43.44 316 P **P** **16 56 19.3 -0.1**
UCC IAmb IAmb 16 56 21.8
comp=Z,25nm,0.9s
OSL Oslo 43.46 331 *eP* **P** **16 56 19.9 +0.5**
NC602 NORSAR Array S 43.51 332 P **P** **16 56 19.1 -0.7**
NC602 IAmb IAmb 16 56 36.1
comp=Z,28nm,1.2s
NC602 NORSAR Array S 43.51 332 *eP* **P** **16 56 20.4 +0.5**
NC405 NORSAR Array S 43.64 332 P **P** **16 56 19.9 -1.0**
HOMB Homborsund 43.70 328 *eP* **P** **16 56 22.2 +0.9**
LZH Lanzhou 43.77 65 *eP* **P** **16 56 23.6 +1.1**
LZH *pP* pP 16 56 25.7 -0.6
LZH *sP* sP 16 56 28.2 +0.5
LZH *eS* **S** **17 02 53.5 +0.5**
LZH pmax pmax
comp=Z,50nm,1.2s
LZH pmax pmax
comp=Z,140nm,5.4s
LZH LR LR
comp=Z,710nm,14.1s
LZH LR LR
comp=Z,850nm,14.7s
LZH LR LR
comp=Z,780nm,17.4s
NB201 NORSAR Array S 43.78 332 P **P** **16 56 21.2 -0.9**
NB2 NORSAR Subarra 43.81 332 P **P** **16 56 21.1 -1.2**
baz=120,slow=8.6
NOA NORSAR Array B 43.81 332 P **P** **16 56 21.1 -1.2**
comp=Z,13nm,0.7s,baz=121,slow=8.1,SNR=54
NOA PcP **PcP** **16 58 07.7 -0.9**
comp=Z,1.1nm,0.7s,baz=128,slow=7.0,SNR=3.3
NOA LR LR 17 16 23.2
comp=Z,263nm,21.4s,baz=130,slow=38
KONO Kongsberg 43.82 330 P **P** **16 56 21.7 -0.6**
KONO pmax pmax
comp=Z,18nm,0.9s
KONO Kongsberg 43.82 330 P **P** **16 56 21.7 -0.6**
KONO IAmb IAmb 16 56 27.1
comp=Z,18nm,0.8s
KONO Kongsberg 43.82 330 *eP* **P** **16 56 22.6 +0.4**
UMPA Umpang Tak 43.83 95 P **P** **16 56 25.0 +2.0**
comp=Z,26nm,0.8s
NC303 NORSAR Array S 43.84 332 P **P** **16 56 21.7 -0.8**
NC303 IAmb IAmb 16 56 24.7
comp=Z,34nm,0.9s
NAO01 NORSAR Array S 43.84 332 P **P** **16 56 21.9 -0.6**
CAF Calviac 43.96 307 *eP* **P** **16 56 23.7 0.0**
CAF pmax pmax
comp=Z,14nm,0.9s
NBO00 NORSAR Array S 43.98 332 P **P** **16 56 22.9 -0.7**
NBO00 IAmb IAmb 16 56 25.0
comp=Z,23nm,0.8s
SUKH Sukhothai 44.04 93 P **P** **16 56 26.6 +2.0**
comp=Z,12nm,0.9s
NC204 NORSAR Array S 44.12 332 P **P** **16 56 24.1 -0.7**
KHLT Khaolaem Dam 44.14 97 P **P** **16 56 27.4 +1.9**
comp=Z,8.4nm,0.8s
CD2 Chengdu 44.23 73 P **P** **16 56 26.0 -0.1**
CD2 pmax pmax
comp=Z,30nm,0.6s
RJF Les Rejaudoux 44.38 308 *eP* **P** **16 56 27.4 +0.3**
RJF pmax pmax
comp=Z,17nm,0.9s
ZAK Zakamensk 44.43 45 *eP* **P** **16 56 27.6 +0.1**
ZAK *e* 16 58 09.9
ZAK pmax pmax
comp=Z,7.0nm,1.0s
ZAK pmax pmax
comp=Z,4.0nm,0.9s
KMI Kunming 44.49 81 ⇑P **P** **16 56 28.3 -0.1**
KMI *pP* sP 16 56 33.7 0.0
KMI *sP* pP 16 56 35.2 +2.9
KMI S **S** **17 03 00.6 -3.2**
KMI SS **SS** **17 06 13.5 -10**
KMI pmax pmax
comp=Z,31nm,0.8s
KMI pmax pmax
comp=Z,160nm,3.7s
KMI LR LR
comp=Z,430nm,19.6s
KMI LR LR
comp=Z,230nm,18.3s
KMI LR LR
comp=Z,300nm,16.0s
KMI Kunming 44.49 81 P **P** **16 56 27.9 -0.6**
KMI pmax pmax
comp=Z,23nm,0.8s
KMI Kunming 44.49 81 P **P** **16 56 27.9 -0.6**
KMI IAmb IAmb 16 56 30.5
comp=Z,23nm,0.8s
NANT Nan 44.52 90 P P 16 56 38.0 +9.4
comp=Z,18μmcomp=Z,192nm,0.5s
UTTA Uttaradit 44.76 92 P **P** **16 56 32.4 +2.0**
comp=Z,166nmcomp=Z,14nm,0.8s
PHIT Phitsanulok 44.84 93 P P 16 56 36.4 +5.4
SKAR Skarslia 44.87 331 *eP* **P** **16 56 31.5 +0.6**
TLY Talaya 44.93 43 *eP* **P** **16 56 35.1 +3.7**
TLY *eS* S 17 03 19.6 +10
TLY pmax pmax
comp=Z,22nm,0.6s
TLY MLR MLR
comp=Z,5μm,15.0s
TLY Talaya 44.93 43 P **P** **16 56 31.1 -0.3**
TLY IAmb IAmb 16 56 36.9
comp=Z,9.5nm,0.8s
KEV Kevo 45.08 348 P **P** **16 56 32.5 +0.3**
KEV pmax pmax
comp=Z,24nm,0.9s
KEV Kevo 45.08 348 P **P** **16 56 32.5 +0.3**
BLS5 Blasjo 45.15 328 *eP* **P** **16 56 33.9 +0.9**
ARA0 ARCESS Array S 45.19 347 *eP* **P** **16 56 33.6 +0.5**
ARCES ARCESS Array B 45.19 347 P **P** **16 56 32.6 -0.5**
comp=Z,5.5nm,0.7s,baz=146,slow=8.7,SNR=23
ARCES PcP **PcP** **16 58 13.2 0.0**
comp=Z,4.0nm,0.8s,baz=116,slow=2.8,SNR=3.5
ARCES LR LR 17 16 35.1
comp=Z,322nm,20.0s,baz=130,slow=38
DOMB Dombas 45.20 333 *eP* **P** **16 56 34.0 +0.6**
KTK1 Kautokeino 45.25 345 *eP* **P** **16 56 34.0 +0.4**
ODD1 Odda 45.28 329 *eP* **P** **16 56 34.9 +0.8**
NSS Namsos 45.43 337 *eP* **P** **16 56 35.9 +0.8**
IRK Irkutsk 45.44 42 *eP* **P** **16 56 34.2 -1.2**
IRK pmax pmax
comp=Z,29nm,2.0s
KMY Karmoy 45.63 328 *eP* **P** **16 56 37.1 +0.3**
OPO Ambohidratompo 45.94 188 P **P** **16 56 40.5 +0.7**
comp=Z,3.3nm,0.8s,baz=310,slow=14,SNR=2.6
OPO LR LR 17 15 20.3
comp=Z,293nm,18.1s,baz=186,slow=35
HYA Hoyanger 46.01 331 *eP* **P** **16 56 40.6 +0.8**
SONM Songino Array 46.04 49 P **P** **16 56 40.3 0.0**
comp=Z,6.6nm,0.8s,baz=262,slow=7.8,SNR=28
SONM PcP **PcP** **16 58 17.0 +0.3**
comp=Z,0.3nm,0.4s,baz=251,slow=4.4,SNR=2.1
SONM LR LR 17 18 28.8
comp=Z,1μm,19.3s,baz=264,slow=40
SONM Songino Array 46.04 49 P **P** **16 56 40.1 -0.2**
BER Bergen 46.06 329 *eP* **P** **16 56 40.8 +0.6**
FAUS Fauske 46.12 341 *eP* **P** **16 56 41.2 +0.6**
AKN Aaknes 46.12 332 *eP* **P** **16 56 41.6 +0.9**
STOK Stokkvaagen 46.15 339 *eP* **P** **16 56 41.0 +0.3**
ASK Askoy 46.17 329 *eP* **P** **16 56 41.8 +0.8**
SJPF Ste Jean 46.21 305 *eP* **P** **16 56 42.1 +0.5**
SJPF pmax pmax
comp=Z,6.0nm,0.6s
KONS Konsvik 46.22 339 *eP* **P** **16 56 42.0 +0.8**
JETT Jettan, Norway 46.32 345 *eP* **P** **16 56 42.7 +0.6**
N2IH Innhavet 46.33 342 *eP* **P** **16 56 42.9 +0.8**
GRR Gorron 46.35 312 *eP* **P** **16 56 42.9 +0.3**
GRR pmax pmax
comp=Z,16nm,1.0s
HAMF Hammerfest 46.46 347 *eP* **P** **16 56 43.5 +0.4**
ULN Ulaanbaatar 46.48 49 *ce*P **P** **16 56 44.0 +0.1**
ULN pmax pmax
comp=Z,9.0nm,0.8s
ULN Ulaanbaatar 46.48 49 P **P** **16 56 43.7 -0.2**
ULN IAmb IAmb 16 56 48.0
comp=Z,8.1nm,0.8s
STEI Steigen 46.50 341 *eP* **P** **16 56 43.9 +0.4**
SLVN Son La 46.56 86 P **P** **16 56 44.5 -0.2**
SLVN IAmb IAmb 16 56 51.7
comp=Z,11nm,1.1s
SUE Sulen 46.60 330 *eP* **P** **16 56 45.3 +1.0**
NRIK Noril'sk 46.65 16 P **P** **16 56 45.3 +0.6**
comp=Z,3.4nm,0.8s,baz=234,slow=6.0,SNR=11
NRIK LR LR 17 19 59.6
comp=Z,836nm,19.9s,baz=228,slow=41
NRIK Noril'sk 46.65 16 *ce*P **P** **16 56 45.5 +0.8**
NRIK pmax pmax
comp=Z,15nm,1.5s
NRIK Noril'sk 46.65 16 P **P** **16 56 44.9 +0.2**
NRIK IAmb IAmb 16 56 49.3
comp=Z,20nm,1.5s
GYA Guiyang 47.60 78 P **P** **16 56 53.0 +0.1**
GYA pP pP 16 56 57.0 +0.2
GYA pmax pmax
comp=Z,11nm,0.8s
GYA LR LR
comp=Z,340nm,17.2s
QUIF Quistinic 47.84 311 *eP* **P** **16 56 53.3 -0.9**
QUIF pmax pmax
comp=Z,85nm,1.9s
XAN Xi'an 48.11 68 P **P** **16 56 56.9 +0.3**
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,18nm,5.5s
XAN Xi'an 48.11 68 P **P** **16 56 55.5 -1.1**
XAN pmax pmax
comp=Z,12nm,0.9s
XAN Xi'an 48.11 68 P **P** **16 56 55.5 -1.1**
XAN IAmb IAmb 16 57 01.8
comp=Z,12nm,0.9s
ESBB Sonseca Array 48.32 300 P **P** **16 56 57.8 -0.4**
ESDC Sonseca Array 48.32 300 P **P** **16 56 58.0 -0.2**
comp=Z,6.0nm,0.8s,baz=74,slow=7.6,SNR=34
ESDC Sonseca Array 48.32 300 P **P** **16 56 57.7 -0.5**
BTO Baotou 48.39 59 *eP* **P** **16 56 58.7 -0.1**
BTO S **S** **17 03 59.9 +0.7**
BTO LR LR
comp=Z,890nm,20.1s
BTO LR LR
comp=Z,2μm,22.5s
BTO LR LR
comp=Z,3μm,24.5s
PAB San Pablo 48.62 300 P **P** **16 56 59.9 -0.7**
PAB pmax pmax
comp=Z,10.0nm,0.7s
PAB San Pablo 48.62 300 P **P** **16 56 59.9 -0.7**
PAB IAmb IAmb 16 57 02.1
comp=Z,10nm,0.7s
LSZ Lusaka 48.67 213 P **P** **16 57 02.9 +1.9**
comp=Z,1.3nm,0.5s,baz=50,slow=5.6,SNR=5.6
ESK Eskdalemuir 48.88 321 P **P** **16 57 02.3 +0.1**
ESK pmax pmax
comp=Z,44nm,1.3s
ESK Eskdalemuir 48.88 321 P **P** **16 57 02.3 +0.1**
ENH Enshi 49.21 72 P **P** **16 57 05.2 +0.1**
HHC Hu-ho-hao-te 49.55 58 *eP* **P** **16 57 08.4 +0.7**
HHC S **S** **17 04 16.7 +1.2**
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,100nm,4.6s
HHC LR LR
comp=Z,570nm,16.6s
HHC LR LR
comp=Z,610nm,14.9s
HHC LR LR
comp=Z,760nm,16.9s
TOA0 Torodi Ar. Sit 49.79 264 P **P** **16 57 09.2 -0.5**

TOA0 IAmb IAmb 16 57 12.3
comp=Z,20nm,1.1s
TORD Torodi Ar. Bea 49.79 264 P **P** **16 57 09.2 -0.5**
comp=Z,12nm,0.8s,baz=55,slow=6.4,SNR=50
TORD LR LR 17 20 19.9
comp=Z,664nm,20.6s,baz=45,slow=39
GSI Gunungsitoli 49.95 113 P **P** **16 57 09.9 -0.9**
GSI IAmb IAmb 16 57 13.4
comp=Z,16nm,0.8s
PSI Prapat 50.22 111 P **P** **16 57 14.9 +1.9**
comp=Z,7.7nm,0.7s,baz=0.2,slow=9.0,SNR=6.5
RPSI Rantau Prapat 50.27 111 P **P** **16 57 14.9 +1.6**
PBRG Braganca 50.31 303 *e*P **P** **16 57 13.3 0.0**
comp=Z,20nm,1.1s
KULM Kulim 50.34 107 P **P** **16 57 14.0 +0.1**
KULM IAmb IAmb 16 57 16.9
comp=Z,13nm,1.0s
BJO1 Bjornoya 50.37 349 *e*P **P** **16 57 13.3 +0.1**
DSB Dublin 50.40 318 P **P** **16 57 13.5 -0.3**
MVO Moncorvo 50.56 302 *e*P **P** **16 57 15.9 +0.6**
comp=Z,34nm,0.8s
PBAR Barrancos 50.84 298 *e*P **P** **16 57 17.8 +0.5**
comp=Z,24nm,1.6s
PMRV Marv??o 50.98 300 *e*P **P** **16 57 19.3 +0.9**
comp=Z,22nm,1.6s
PCBR Castelo Branco 51.01 301 *e*P **P** **16 57 19.3 +0.7**
comp=Z,24nm,1.6s
MTE Manteigas 51.01 301 *e*P **P** **16 57 19.8 +1.1**
MTE Manteigas 51.01 301 P **P** **16 57 19.1 +0.4**
MTE IAmb IAmb 16 57 21.9
comp=Z,11nm,0.8s
PVRL Vila Real 51.07 302 *e*P **P** **16 57 19.7 +0.6**
comp=Z,32nm,1.9s
IPM Ipoh 51.08 108 P **P** **16 57 18.1 -1.3**
IPM IAmb IAmb 16 57 20.0
comp=Z,10nm,0.7s
POLO Lamas de Olo 51.12 302 *e*P **P** **16 57 21.1 +1.5**
comp=Z,15nm,1.8s
PESTR Estremoz 51.19 299 P **P** **16 57 19.4 -0.6**
PVIS Viseu 51.25 302 *e*P **P** **16 57 21.7 +1.2**
comp=Z,27nm,1.3s
PCAB Cabril 51.27 303 *e*P **P** **16 57 21.7 +1.1**
comp=Z,30nm,1.7s
PGAV Gavieira, Arco 51.44 303 *e*P **P** **16 57 23.7 +1.8**
comp=Z,34nm,1.8s
EVO Evora 51.56 299 *e*P **P** **16 57 23.9 +1.2**
comp=Z,21nm,1.8s
PMTG Montargil 51.66 300 *e*P **P** **16 57 23.5 0.0**
comp=Z,11nm,2.0s
COI Coimbra 51.69 301 *e*P **P** **16 57 25.8 +2.1**
comp=Z,24nm,1.4s
PCAS Casmilo, Conde 51.77 301 *e*P **P** **16 57 25.8 +1.5**
comp=Z,27nm,1.6s
MNSI Mandailing Nat 51.88 112 P **P** **16 57 25.3 -0.1**
comp=Z,18nm,0.9s
BOD Bodaibo 51.99 36 *e*P **P** **16 57 25.5 -0.1**
BOD pmax pmax
comp=Z,54nm,1.0s
PNCL Nicolau / Gran 52.01 298 *e*P **P** **16 57 27.5 +1.4**
comp=Z,31nm,1.7s
PSBE So Bento 52.05 300 *e*P **P** **16 57 27.7 +1.2**
comp=Z,52nm,1.7s
QIZ Qiongzhong 52.58 86 P **P** **16 57 29.3 -1.3**
QIZ S **S** **17 04 56.5 -1.2**
QIZ LR LR
comp=Z,290nm,9.4s
QIZ LR LR
comp=Z,160nm,11.0s
QIZ LR LR
comp=Z,210nm,9.6s
MATP Matopo 53.02 209 P **P** **16 57 34.7 +0.9**
comp=Z,4.6nm,0.8s,baz=28,slow=8.9,SNR=11
SPA0 Spitsbergen Ar 53.58 351 P **P** **16 57 37.3 +0.1**
SPA0 Spitsbergen Ar 53.58 351 *e*P **P** **16 57 38.1 +1.0**
KOWA Kowa 54.32 269 P **P** **16 57 42.4 -1.0**
KOWA IAmb IAmb 16 57 44.6
comp=Z,16nm,0.8s
KBS Kingsbay 54.73 351 P **P** **16 57 45.8 +0.3**
KBS pmax pmax
comp=Z,29nm,1.2s
KBS Kingsbay 54.73 351 P **P** **16 57 45.8 +0.3**
MYKOM Kota Tinggi 54.89 109 P **P** **16 57 47.2 -0.4**
MYKOM IAmb IAmb 16 57 48.9
comp=Z,16nm,1.0s
NJ2 Nanjing 56.67 68 *e*P **P** **16 58 00.2 +0.1**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
NJ2 LR LR
comp=Z,370nm,16.1s
NJ2 LR LR
comp=Z,280nm,15.2s
NJ2 LR LR
comp=Z,500nm,15.2s
LBTB Lobatse 58.31 209 P **P** **16 58 13.1 +1.3**
LBTB pmax pmax
comp=Z,13nm,0.9s
LBTB Lobatse 58.31 209 P **P** **16 58 13.1 +1.3**
LBTB IAmb IAmb 16 58 14.3
comp=Z,13nm,0.9s
DBIC Dimbokro 58.43 261 P **P** **16 58 12.4 -0.3**
comp=Z,14nm,0.8s,baz=47,slow=8.7,SNR=11
DBIC LR LR 17 24 14.1
comp=Z,409nm,18.7s,baz=42,slow=37
DBIC Dimbokro 58.43 261 P **P** **16 58 12.2 -0.5**
LWLI Liwa 58.87 115 P **P** **16 58 15.6 -0.3**
comp=Z,4μmcomp=Z,73nm,0.8s
ZEA Zeya 59.34 42 *e*P **P** **16 58 18.8 +0.3**
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,500nm,16.0s
ZEA MLR MLR
comp=Z,500nm,14.0s
DBG Daneborg 59.40 342 *i* P **P** **16 58 19.9 +1.3**
DBG IAmb IAmb 16 58 21.5
comp=Z,4.6nm,0.9s
DAG Danmarks Havn 59.43 345 *i* P **P** **16 58 18.4 -0.4**
DAG IAmb IAmb 16 58 19.8
comp=Z,3.8nm,0.6s
DAG Danmarks Havn 59.43 345 *i* P **P** **16 58 18.3 -0.4**
DAG pmax pmax
comp=Z,4.0nm,0.6s
SCO Scoresbysund 59.50 338 P **P** **16 58 20.5 +1.2**
SCO pmax pmax
comp=Z,18nm,1.5s
SCO Scoresbysund 59.50 338 P **P** **16 58 20.5 +1.2**
SCO IAmb IAmb 16 58 23.7
comp=Z,18nm,1.5s
KASI Kota Agung 59.52 115 P **P** **16 58 19.7 -0.6**
comp=Z,46nm,0.9s
TIXI Tiksi 59.92 21 *ce*P **P** **16 58 21.9 -0.3**
TIXI Tiksi 59.92 21 P **P** **16 58 21.4 -0.7**
TIXI IAmb IAmb 16 58 25.0
comp=Z,6.0nm,0.8s
YAK Yakutsk 60.09 32 *e*P **P** **16 58 22.2 -1.3**
YAK pmax pmax
comp=Z,15nm,0.7s
YAK MLR MLR
comp=Z,2μm,15.0s
YAK MLR MLR
comp=E,1μm,13.0s
YAK MLR MLR
comp=N,208nm,12.0s
YAK Yakutsk 60.09 32 P **P** **16 58 22.3 -1.3**
NOR Nord 60.22 351 *i* P **P** **16 58 24.1 -0.1**
NOR IAmb IAmb 16 58 26.9
comp=Z,2.8nm,0.8s
NOR Nord 60.22 351 *i* P **P** **16 58 24.0 -0.1**
NOR pmax pmax
comp=Z,3.0nm,0.8s
YHNB Yeheng 60.85 76 P **P** **16 58 28.9 -0.5**
BOSA Boshof 61.61 208 P **P** **16 58 35.4 +1.0**
comp=Z,2.5nm,0.7s,baz=23,slow=7.1,SNR=7.7
BOSA LR LR 17 26 57.4
comp=Z,433nm,20.1s,baz=26,slow=38
BOSA Boshof 61.61 208 P **P** **16 58 34.9 +0.5**
BOSA IAmb IAmb 16 58 45.9
comp=Z,8.2nm,1.3s
SBUM Sibu 61.73 103 P **P** **16 58 35.0 -0.3**
SBUM IAmb IAmb 16 58 36.8
comp=Z,6.4nm,0.8s
MDJ Mudanjiang 62.22 52 P **P** **16 58 37.0 -1.3**
MDJ pmax pmax
comp=Z,2.0nm,0.7s
MDJ pmax pmax
comp=Z,120nm,4.4s
KS19 Wonju Array Si 62.57 60 P **P** **16 58 39.8 -0.9**
KS19 IAmb IAmb 16 58 42.8
comp=Z,14nm,0.9s
KSAR Wonju Array Be 62.59 60 P **P** **16 58 40.5 -0.4**
KSAR Wonju Array Be 62.59 60 P **P** **16 58 40.5 -0.4**
KSRS Korea Array 62.62 60 P **P** **16 58 40.1 -0.9**
comp=Z,6.6nm,0.8s,baz=276,slow=6.6,SNR=22
KSRS LR LR 17 29 55.8
comp=Z,275nm,18.3s,baz=286,slow=40
KLR Kul'dur 62.76 46 *ce*P **P** **16 58 41.3 -0.5**
KLR pmax pmax
comp=Z,6.0nm,0.9s
CISI Cisompet, Garu 63.37 115 P **P** **16 58 44.8 -1.7**
KKM Kota Kinabalu 63.52 97 P **P** **16 58 47.0 -0.5**
MSHR Mys Shultsa 63.78 54 *ce*P **P** **16 58 48.6 -0.1**
MSHR pmax pmax
comp=Z,12nm,0.8s
USA0B Ussuriysk Arra 63.98 52 *i* P **P** **16 58 47.8 -2.2**
USA0B Ussuriysk Arra 63.98 52 P **P** **16 58 49.1 -0.9**
USA0B IAmb IAmb 16 58 52.5
comp=Z,7.6nm,0.9s
USRK Ussuriysk Ar. 63.98 52 P **P** **16 58 48.9 -1.1**
comp=Z,6.0nm,0.8s,baz=277,slow=6.3,SNR=22
USRK LR LR 17 29 51.8
comp=Z,711nm,18.4s,baz=283,slow=39
USRK Ussuriysk Ar. 63.98 52 P **P** **16 58 48.1 -1.9**
SUMG Summit 64.64 341 *i* P **P** **16 58 55.2 +0.9**
SUMG IAmb IAmb 16 58 58.1
comp=Z,15nm,0.9s
SUMG Summit 64.64 341 *i* P **P** **16 58 55.2 +0.9**
SUMG pmax pmax
comp=Z,15nm,0.9s
SUMG Summit 64.64 341 P **P** **16 58 54.6 +0.3**
ICESG Greenland Ices 65.72 337 *i* P **P** **16 59 01.4 +0.1**
ICESG IAmb IAmb 16 59 04.2
comp=Z,17nm,0.8s
UGM Wanagama 65.77 114 P **P** **16 59 01.1 -0.9**
MYLDM Lahad Datu 65.94 97 P **P** **16 59 04.4 +1.2**
MYLDM IAmb IAmb 16 59 28.2
comp=Z,14nm,1.0s
JOW Kunigami 66.03 71 LR LR 17 32 22.7
comp=Z,212nm,20.4s,baz=244,slow=40
JOW Kunigami 66.03 71 P **P** **16 59 01.1 -2.5**
JNU Nakatsue 66.15 64 LR LR 17 33 14.1
comp=Z,254nm,18.6s,baz=293,slow=41
NEEM North Greenlan 66.55 347 *i* P **P** **16 59 06.3 -0.1**
NEEM IAmb IAmb 16 59 09.3
comp=Z,15nm,0.9s
SUR Sutherland 66.77 209 P **P** **16 59 09.4 +1.2**
SUR IAmb IAmb 16 59 25.5
comp=Z,17nm,1.4s
JMN Monobe 68.34 62 P **P** **16 59 18.4 +0.2**
DY2G Dye2 68.86 335 *i* P **P** **16 59 21.3 +0.1**
DY2G IAmb IAmb 16 59 23.3
comp=Z,40nm,0.6s
UPNV Upernavik 69.59 343 *i* P **P** **16 59 25.9 +0.6**
UPNV IAmb IAmb 16 59 27.2
comp=Z,6.3nm,0.8s
SEY Seymchan 70.19 29 *i* P **P** **16 59 28.8 -0.3**
INU Inuyama 70.25 60 P **P** **16 59 29.4 -0.6**
SFJD Kangerlussuaq 70.28 336 *e*P **P** **16 59 29.6 +0.1**
SFJD Kangerlussuaq 70.28 336 *e*P **P** **16 59 29.6 +0.1**
SFJD Kangerlussuaq 70.28 336 P **P** **16 59 29.7 +0.1**
SFJD IAmb IAmb 16 59 31.8
comp=Z,11nm,0.8s
JGF Kuroka 70.42 59 P **P** **16 59 30.0 -1.1**
JGF IAmb IAmb 16 59 30.9
comp=Z,10nm,0.9s
YSS Yuzh-Sakhalins 70.46 47‖ *e*P **P** **16 59 30.4 -0.6**
YSS pmax pmax
comp=N,20nm,0.9s
YSS pmax pmax
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 70.46 47 P **P** **16 59 30.1 -1.0**
TULEG Thule 70.51 348 P **P** **16 59 29.8 -1.0**
TULEG IAmb IAmb 16 59 32.1
comp=Z,11nm,0.8s
EUNU Eureka 70.62 353 P **P** **16 59 31.6 0.0**
EUNU IAmb IAmb 16 59 34.0
comp=Z,6.2nm,0.8s
MA2 Magadan 70.67 32 *ce*P **P** **16 59 31.8 -0.3**
MA2 pmax pmax
comp=Z,16nm,0.8s
MA2 Magadan 70.67 32 P **P** **16 59 31.7 -0.3**
MAJO Matsushiro 70.75 58 *c i* P **P** **16 59 31.3 -1.7**
MAJO pmax pmax
comp=Z,11nm,1.0s
MAT Matsushiro 70.75 58 P **P** **16 59 32.2 -0.8**
MJAR Matsushiro Arr 70.75 58 P **P** **16 59 31.7 -1.4**
comp=Z,2.8nm,0.8s,baz=284,slow=7.4,SNR=8.0
MJAR LR LR 17 34 34.9
comp=Z,291nm,18.4s,baz=300,slow=39
MJAR Matsushiro Arr 70.75 58 P **P** **16 59 32.7 -0.3**
MJAR pmax pmax
comp=Z,4.0nm,1.1s
MJAR Matsushiro Arr 70.75 58 P **P** **16 59 32.7 -0.3**
MRSI Marisa 71.17 99 P **P** **16 59 36.1 +0.3**
APSI Ampana 71.58 101 P **P** **16 59 44.4 +6.1**
KAPI Kappang 71.96 106 LR LR 17 35 47.6
comp=Z,41nm,18.2s,baz=287,slow=40
GTOI Gorontalo 72.03 99 P **P** **16 59 38.1 -3.0**
JMM Marumori 72.22 56 P **P** **16 59 41.2 -0.6**
JMM IAmb IAmb 16 59 44.9
comp=Z,19nm,1.1s
BILL Bilibino 73.13 21 *e*P **P** **16 59 47.2 +0.5**
BILL *e* 17 00 06.0
BILL *e* 17 02 26.9
BILL *e*PPP PPP 17 04 15.8
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,402nm,14.0s
BILL Bilibino 73.13 21 P **P** **16 59 46.9 +0.1**
BILL IAmb IAmb 16 59 49.5
comp=Z,10nm,1.0s
JHJ Hachijo jima 2 73.18 61 LR LR 17 35 28.0
comp=Z,175nm,18.5s,baz=287,slow=39
TNTI Ternate 75.81 97 P **P** **17 00 02.2 -1.0**
TNTI Ternate 75.81 97 P **P** **17 00 04.8 +1.6**
SANI Sanana 75.92 100 P **P** **17 00 04.9 +1.1**
RES Resolute Bay 76.14 352 P **P** **17 00 03.9 -0.2**
comp=Z,1.9nm,0.9s,baz=21,slow=6.5,SNR=6.9
RES Resolute Bay 76.14 352 P **P** **17 00 03.6 -0.5**
PETK Petropavlovsk- 76.86 37 P **P** **17 00 06.8 -1.8**
comp=Z,9.4nm,0.9s,baz=340,slow=2.2,SNR=6.1
PETK LR LR 17 37 49.0
comp=Z,603nm,19.4s,baz=299,slow=39
PETK Petropavlovsk- 76.86 37 P **P** **17 00 07.5 -1.0**
PETK Petropavlovsk- 76.86 37 P **P** **17 00 07.5 -1.0**
PET Petropavlovsk 77.41 37 *e*P **P** **17 00 13.0 +1.4**
PET pmax pmax
comp=Z,28nm,2.4s
PET MLR MLR
comp=Z,700nm,21.0s
BATI Baumata 77.93 108 LR LR 17 35 48.0
comp=Z,63nm,21.6s,baz=244,slow=37
BATI Baumata 77.93 108 P **P** **17 00 15.0 -0.2**
SOEI Soe 78.22 107 P **P** **17 00 16.5 -0.4**
SOEI Soe 78.22 107 P **P** **17 00 19.2 +2.4**
FRB Frobisher Bay 78.36 337 P **P** **17 00 16.5 -0.1**
comp=Z,14nm,0.7s,baz=49,slow=5.1,SNR=39
TNA Tin City 82.25 16 P **P** **17 00 37.3 -0.3**
GAMB Gambell 82.68 18 P **P** **17 00 39.6 -0.2**
TOLK Toolik Lake Re 82.92 8 P **P** **17 00 41.1 0.0**
TOLK IAmb IAmb 17 00 44.2
comp=Z,7.2nm,1.0s
C36M Paulatuk 83.62 359 P **P** **17 00 43.7 -0.9**
C36M IAmb IAmb 17 00 45.8
comp=Z,10nm,0.8s
FITZ Fitzroy Crossi 83.63 114 P **P** **17 00 45.3 -0.2**
ANM Nome 83.69 16 P **P** **17 00 44.8 -0.3**
ANM pmax pmax
comp=Z,11nm,0.9s
ANM Nome 83.69 16 P **P** **17 00 44.8 -0.3**
ANM IAmb IAmb 17 00 47.7
comp=Z,11nm,0.9s
COLD Coldfoot 84.17 9 P **P** **17 00 46.9 -0.6**
KNRA Kununurra 84.97 110 P **P** **17 00 51.5 -0.9**
FYU Fort Yukon 85.41 7 P **P** **17 00 54.4 +0.7**
MLY Manley 86.15 10 P **P** **17 00 57.5 -0.1**
MLY IAmb IAmb 17 00 59.5
comp=Z,5.5nm,0.8s
I23K Minto, Yukon-K 86.24 9 P **P** **17 00 57.7 -0.2**
I23K IAmb IAmb 17 01 02.3
comp=Z,8.7nm,1.3s
MDM Murphy Dome 86.58 9 P **P** **17 00 59.8 +0.1**
MDM IAmb IAmb 17 01 02.5
comp=Z,14nm,1.2s
ILAR Eielson Array 86.94 8 P **P** **17 01 00.5 -0.9**
comp=Z,2.0nm,0.8s,baz=321,slow=3.3,SNR=19
ILAR LR LR 17 47 25.9
comp=Z,122nm,18.1s,baz=328,slow=41
BPAW Bear Paw Mtn. 86.98 10 P **P** **17 01 01.3 -0.3**
BPAW IAmb IAmb 17 01 03.3
comp=Z,13nm,1.0s
EGAK Eagle 87.57 6 P **P** **17 01 03.5 -0.9**
EGAK IAmb IAmb 17 01 08.3
comp=Z,6.2nm,0.9s
MCK McKinley 87.65 10 P **P** **17 01 05.0 +0.2**
MCK pmax pmax
comp=Z,14nm,1.3s
MCK McKinley 87.65 10 P **P** **17 01 05.0 +0.2**
MCK IAmb IAmb 17 01 23.0
comp=Z,14nm,1.3s
SCRK Sand Creek 88.06 7 P **P** **17 01 07.6 +0.6**
SCRK IAmb IAmb 17 01 10.6
comp=Z,9.9nm,1.2s
K27K Chicken 88.22 7 P **P** **17 01 07.8 +0.3**
K27K IAmb IAmb 17 01 09.9
comp=Z,5.0nm,0.9s
DAWY Dawson 88.43 5 P **P** **17 01 08.6 0.0**
DAWY IAmb IAmb 17 01 10.9
comp=Z,13nm,1.4s
YKA Yellowknife Ar 89.97 354 P **P** **17 01 15.9 +0.2**
comp=Z,9.5nm,0.8s,baz=8.9,slow=4.7,SNR=128
YKA LR LR 17 48 22.2
comp=Z,89nm,19.1s,baz=0.0,slow=40
FCC Fort Churchill 89.99 344 P **P** **17 01 15.8 -0.1**
FCC pmax pmax
comp=Z,5.0nm,0.9s
FCC Fort Churchill 89.99 344 P **P** **17 01 15.8 -0.1**
WRA Warramunga Arr 91.68 111 P **P** **17 01 23.8 -0.7**
comp=Z,2.3nm,0.8s,baz=310,slow=4.1,SNR=16
WRA PKKPbc **PKKPbc** **17 18 44.5 +1.3**
comp=Z,0.7nm,0.7s,baz=122,slow=2.2,SNR=5.8
WRA Warramunga Arr 91.68 111 P **P** **17 01 23.7 -0.7**
WRAB Tennant Creek 91.68 111 P **P** **17 01 24.0 -0.5**
WRAB pmax pmax
comp=Z,7.0nm,1.1s
WRAB Tennant Creek 91.68 111 P **P** **17 01 23.9 -0.5**
WRAB IAmb IAmb 17 01 29.1
comp=Z,6.8nm,1.1s
WB2 Warramunga Arr 91.69 111 P **P** **17 01 23.9 -0.5**
WB2 IAmb IAmb 17 01 25.6
comp=Z,7.3nm,1.0s
KDAK Kodiak Island 92.58 13 P **P** **17 01 28.2 +0.3**
comp=Z,4.6nm,0.8s,baz=23,slow=9.7,SNR=1.7
ASAR Alice Springs 93.08 115 P **P** **17 01 29.9 -0.9**
comp=Z,2.6nm,0.7s,baz=305,slow=4.8,SNR=36
ASAR PKKPbc **PKKPbc** **17 18 40.2 +0.4**
comp=Z,0.2nm,0.9s,baz=137,slow=3.1,SNR=4.2
AS31 Alice Springs 93.08 115 P **P** **17 01 29.8 -1.0**
MAW Mawson 94.90 176 LR LR 17 37 15.6
comp=Z,245nm,21.2s,baz=48,slow=31
FFC Flin Flon 95.51 346 P **P** **17 01 41.6 +0.1**
FFC pmax pmax
comp=Z,3.0nm,0.9s
FFC Flin Flon 95.51 346 P **P** **17 01 41.6 +0.1**
SYO Syowa Base 96.52 185‖ *e*P **P** **17 01 46.8 +1.4**
NVAR Mina Array Bea 114.11 352 PKiKP PKPdf 17 06 57.1 +0.6
comp=Z,1.1nm,0.8s,baz=72,slow=0.3,SNR=7.3
CPUP Villa Florida 118.56 253 PKP **PKiKP** **17 07 05.0 0.0**
comp=Z,1.0nm,0.7s,baz=23,slow=3.7,SNR=3.6
TXAR Lajitas Array 119.40 337 PKP **PKPdf** **17 07 06.1 -0.7**
comp=Z,0.5nm,0.7s,baz=98,slow=2.1,SNR=8.2
LPAZ La Paz 124.64 268 PKP **PKPdf** **17 07 17.4 -0.3**
comp=Z,1.3nm,0.8s,baz=351,slow=3.4,SNR=5.8
PLCA Paso Flores 132.05 239 PKP **PKiKP** **17 07 31.9 +0.4**
comp=Z,2.6nm,1.0s,baz=82,slow=4.8,SNR=4.6
PPT2 Papeete2 157.08 70 *e*LR LR 18 01 06.2
comp=Z,232nm,24.0s
TAOE Papeete2 157.87 36 *e*LR LR 18 01 24.7
comp=Z,332nm,24.4s
TBI Tubuai 159.37 84 *e*LR LR 18 02 09.5
comp=Z,159nm,24.2s

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*IDC **12** 16:59:14.4±1.1,27°.23N×52°.94E,h0km,mb3.8/14,*
mb1 3.9/17,mb1mx3.7/41,mbtmp3.8/17,ML3.4/3,Error
ellipse: s-maj=26.9km s-min=16.6km az=31.0
*TEH **12** 16:59:16.1,27°.31N×52°.97E,h9km,ML3.8*
*NEIC **12** 16:59:19.3±0.9,27°.23N±0°.04×52°.90E±0°.09,h37km±9km,*
Error ellipse: s-maj=12.3km s-min=3.8km az=112.0
ISC 12 16:59:16.7±1.5,**27°.31N**±0°.05×**52°.96E**±0°.06,**h11**km±9km,
n79,σ18s15/77,mb3.9/17,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
LMD1	**Lamerd**	**0.18**	**81**	*e*Pg	**Pg**	**16 59 19.9**	**-0.8**
QIR1	**Qir**	**1.16**	**4**	*e*Pg	**Pb**	**16 59 38.8**	**0.0**
QIR1				*e*Sg	**Sb**	**16 59 53.8**	**-0.2**
LAR1	**LAR**	**1.30**	**74**	*e*Pg	**Pn**	**16 59 42.3**	**+1.4**
JHRM	**Jahrom**	**1.31**	**24**	*e*Pn	**Pn**	**16 59 41.1**	**+0.1**
SHI	**Shiraz**	**2.35**	**350**	*e*Pn	**Pn**	**16 59 57.6**	**+2.1**
KAZ1	**Kazerun**	**2.58**	**334**	*e*Pn	**Pn**	**17 00 00.7**	**+2.2**
GENO	**Geno**	**2.86**	**88**	*e*Pn	**Pn**	**17 00 03.1**	**+0.7**
SHME	**Shamm**	**3.11**	**113**	*e*Pn	**Pn**	**17 00 07.8**	**+2.1**
BANOM	**Banah**	**3.29**	**114**	*e*Pn	**Pn**	**17 00 09.5**	**+1.3**
NAZ	**Nazwa, Dubai**	**3.35**	**133**	*e*Pn	**Pn**	**17 00 11.0**	**+2.0**
ASUD	**Al Ashush, Dub**	**3.42**	**141**	*e*Pn	**Pn**	**17 00 11.5**	**+1.5**
SLWR	**Sila**	**3.43**	**200**	*e*Pn	**Pn**	**17 00 12.4**	**+2.4**
MSFE	**Esma-Masafi**	**3.47**	**123**	*e*Pn	**Pn**	**17 00 12.0**	**+1.4**
FAQ	**Al Faqa, Dubai**	**3.48**	**137**	*e*Pn	**Pn**	**17 00 12.1**	**+1.3**
MDH	**Madha**	**3.60**	**123**	*e*Pn	**Pn**	**17 00 13.8**	**+1.3**
MZWR	**Madinat Zayed**	**3.63**	**167**	*e*Pn	**Pn**	**17 00 14.2**	**+1.3**
UOSS	**Minazif**	**3.75**	**128**	Pn	**Pn**	**17 00 14.8**	**+0.3**
UOSS	**Minazif**	**3.75**	**128**	*e*Pn	**Pn**	**17 00 15.2**	**+0.7**
HATD	**Hatta, Dubai**	**3.78**	**130**	*e*Pn	**Pn**	**17 00 16.0**	**+1.1**
ASHO	**Ashiyiah**	**3.82**	**133**	*e*Pn	**Pn**	**17 00 16.1**	**+0.6**
ALNE	**Al Ain**	**4.10**	**142**	*e*Pn	**Pn**	**17 00 20.6**	**+1.2**
TVBK	**TV Kerman**	**4.27**	**51**	*e*Pn	**Pn**	**17 00 23.9**	**+1.9**
IMEH	**Mehriz**	**4.31**	**19**	*e*Pn	**Pn**	**17 00 24.6**	**+2.2**
KHGB	**Koh Gabri**	**4.34**	**44**	*e*Pn	**Pn**	**17 00 24.3**	**+1.5**
IRAM	**Ramesheh**	**4.51**	**354**	*e*Pn	**Pn**	**17 00 25.4**	**+0.2**
SOHO	**SOHO**	**4.52**	**134**	*e*Pn	**Pn**	**17 00 26.5**	**+1.5**
ISAD	**Sadrabad**	**4.63**	**8**	*e*Pn	**Pn**	**17 00 28.6**	**+1.8**
CHMN	**Cheshme madani**	**4.76**	**57**	*e*Pn	**Pn**	**17 00 31.1**	**+2.4**
UMZA	**Um Al Zommool**	**4.99**	**156**	*e*Pn	**Pn**	**17 00 32.3**	**+0.7**
KBAM	**BAM**	**5.17**	**68**	*e*Pn	**Pn**	**17 00 36.3**	**+2.1**
IZEF	**Zefreh**	**5.59**	**355**	*e*Pn	**Pn**	**17 00 40.2**	**+0.1**
IPIR	**Pirpir**	**5.65**	**342**	*e*Pn	**Pn**	**17 00 41.9**	**+1.1**
WSAR	**Vladi Sarin**	**6.54**	**127**	Pn	**Pn**	**17 00 53.3**	**+0.4**
	1.5nm,0.3s,baz=309,slow=11,SNR=21						
WSAR				Sn	**Sn**	**17 02 06.2**	**-1.3**
	0.5nm,0.3s,baz=302,slow=15,SNR=1.5						
TPRV	**Parvadeh(Tabas**	**6.54**	**29**	*e*Pn	**Pn**	**17 00 54.6**	**+1.6**
KRSH	**Karshahi**	**6.67**	**354**	*e*Pn	**Pn**	**17 00 55.6**	**+0.8**
ISFB	**Sefidab**	**7.04**	**355**	*e*Pn	**Pn**	**17 00 59.6**	**-0.2**
TKDS	**Koohdasht(Taba**	**7.23**	**29**	*e*Pn	**Pn**	**17 01 03.3**	**+0.8**
TNSJ	**Nastanj**	**7.34**	**24**	*e*Pn	**Pn**	**17 01 04.7**	**+0.8**
RAYN	**Ar Rayn**	**7.73**	**242**	Pn	**Pn**	**17 01 08.1**	**-1.1**
GEYT	**Alibeck**	**11.44**	**21**	Pn	**Pn**	**17 02 00.9**	**+0.9**
	0.2nm,0.3s,baz=237,slow=10,SNR=3.9						
GEYT	**Alibeck**	**11.44**	**21**		**Pn**	**17 02 01.5**	**+1.5**
GYA0B	**ALIBECK ARRAY**	**11.44**	**21**	Pn	**Pn**	**17 02 01.8**	**+1.7**
SOCY	**Socotra**	**15.08**	**176**	P	**Pn**	**17 02 49.9**	**0.0**
KBL	**Kabul**	**15.56**	**58**			**17 02 57.8**	**+1.5**
KBZ	**Khabaz**	**18.29**	**336**	P	**Pn**	**17 03 30.9**	**+0.5**
	0.1nm,0.3s,baz=175,slow=9.2,SNR=4.5						
NIL	**Nilore**	**18.58**	**65**	P	**P**	**17 03 34.3**	**+0.5**
NIL				IAmb	IAmb	17 03 35.9	
	comp=Z,21nm,1.2s						
GAR	**Garm**	**18.59**	**47**	P	**P**	**17 03 34.1**	**+0.1**
GAR				IAmb	IAmb	17 03 35.8	
	comp=Z,16nm,1.1s						
BRTR	**Keskin Array B**	**20.27**	**313**	P	**P**	**17 03 52.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=138,slow=12,SNR=12						
BRTR	**Keskin Array B**	**20.27**	**313**	P	**P**	**17 03 53.1**	**+0.8**
BR131	**Keskin Array S**	**20.27**	**313**	P	**P**	**17 03 51.5**	**-0.9**
BR231	**Keskin MP Arra**	**20.90**	**312**	P	**P**	**17 03 58.9**	**-0.2**
BR231				IAmb	IAmb	17 03 59.9	
	comp=Z,6.3nm,0.5s						
KK31	**Karatay Array**	**21.24**	**38**	P	**P**	**17 04 03.2**	**+0.5**
KK31				IAmb	IAmb	17 04 07.4	

	comp=Z,6.9nm,1.2s							
KKAR	**Karatay Array**	**21.24**	**38**	P	**P**	**17 04 02.4**	**-0.2**
KKAR				IAmb	IAmb	17 04 07.4	
	comp=Z,6.9nm,1.2s							
KKAR	**Karatay Array**	**21.24**	**38**	P	**P**	**17 04 02.2**	**-0.5**
ABKAR	**Akbulak array**	**22.56**	**12**	P	**P**	**17 04 16.6**	**-0.2**
AAK	**Ala-Archa**	**23.25**	**43**	P	**P**	**17 04 24.5**	**+0.3**
BELG	**Belogornoye**	**25.37**	**352**	P	**P**	**17 04 44.6**	**+1.0**
	comp=Z,8.4nm,0.8s,baz=180,slow=6.1,SNR=3.9							
BRVK	**Borovoye**	**28.77**	**22**	P	**P**	**17 05 12.9**	**-1.4**
BRVK				IAmb	IAmb	17 05 21.2		
	comp=Z,3.1nm,0.7s							
AKASG	**Malin Array Be**	**29.52**	**329**	P	**P**	**17 05 21.3**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=99,slow=7.0,SNR=2.8							
MAKZ	**Makanchi**	**29.98**	**42**	P	**P**	**17 05 25.5**	**+0.3**
MAKZ				IAmb	IAmb	17 05 26.9		
	comp=Z,5.4nm,1.3s							
MK31	**Makanchi Array**	**30.16**	**42**	P	**P**	**17 05 26.6**	**-0.2**
MKAR	**Makanchi Array**	**30.16**	**42**	P	**P**	**17 05 26.4**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=233,slow=9.9,SNR=11							
MKAR	**Makanchi Array**	**30.16**	**42**	P	**P**	**17 05 26.6**	**-0.2**
ZALV	**Zalesovo Beam**	**35.43**	**33**	P	**P**	**17 06 11.9**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=242,slow=8.2,SNR=6.2							
ZALV	**Zalesovo Beam**	**35.43**	**33**	P	**P**	**17 06 11.6**	**-1.0**
NRCA	**Norcia**	**35.74**	**306**	P	P	17 06 13.3	-2.3
CLL	**Collm**	**38.43**	**320**	*e*P	**P**	**17 06 38.0**	**-0.2**
FIA1	**FINESS Array S**	**38.59**	**340**	P	**P**	**17 06 39.5**	**0.0**
FINES	**FINESS Array B**	**38.59**	**340**	P	**P**	**17 06 39.2**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=151,slow=8.7,SNR=7.5							
CMAR	**Chiang Mai Arr**	**43.07**	**92**	P	**P**	**17 07 17.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=305,slow=14,SNR=1.5							
NOA	**NORSAR Array B**	**43.80**	**332**	P	**P**	**17 07 21.5**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=123,slow=8.5,SNR=3.6							
ARCES	**ARCESS Array B**	**45.17**	**347**	P	**P**	**17 07 33.0**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=155,slow=6.3,SNR=4.4							
SONM	**Songino Array**	**46.02**	**49**	P	**P**	**17 07 40.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=238,slow=8.4,SNR=5.1							
TORD	**Torodi Ar. Bea**	**49.80**	**264**	P	**P**	**17 08 08.5**	**-1.4**
	comp=Z,1.1nm,1.1s,baz=39,slow=9.0,SNR=3.6							
TORD	**Torodi Ar. Bea**	**49.80**	**264**	IAmb	IAmb	17 08 11.9		
	comp=Z,1.3nm,1.1s							
KSAR	**Wonju Array Be**	**62.58**	**60**	P	P	17 09 37.8	-3.1	
KSRS	**Korea Array**	**62.61**	**60**	P	P	17 09 39.5	-1.6	
	comp=Z,0.7nm,0.6s,baz=276,slow=8.0,SNR=1.8							
YKA	**Yellowknife Ar**	**89.95**	**354**	P	**P**	**17 12 16.1**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=12,slow=4.5,SNR=11							
ASAR	**Alice Springs**	**93.08**	**115**	P	**P**	**17 12 29.9**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=295,slow=4.2,SNR=4.7							

TEH ***12*** *17:02:39.7,27°.28N×52°.96E,h7km,ML3.5*
IDC ***12*** *17:02:43.7±4.1,27°.15N×52°.92E,h47km±61km,mb3.1/3, mb1 3.4/4,mb1mx3.0/41,mbtmp3.4/4,ML3.1/1,Error ellipse: s-maj=78.9km s-min=29.8km az=26.0*
ISC 12 17:02:39.8±1.3,27°.25N±0°.09×52°.95E±0°.10,h10km,n10, σ1§05/11,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.21**	**63**	*e*Pg	**Pg**	**17 02 43.3**	**-1.0**
QIR1	**Qir**	**1.23**	**4**	*e*Pg	**Pg**	**17 03 03.2**	**-0.3**
LAR1	**LAR**	**1.33**	**71**	*e*Pg	**Pg**	**17 03 05.4**	**0.0**
JHRM	**Jahrom**	**1.37**	**24**	*e*Pg	**Pg**	**17 03 05.9**	**-0.3**
TVBK	**TV Kerman**	**4.32**	**50**	*e*Pn	**Pn**	**17 03 47.9**	**+2.0**
KBAM	**BAM**	**5.21**	**68**	*e*Pn	**Pn**	**17 03 58.5**	**+0.6**
WSAR	**Wadi Sarin**	**6.51**	**127**	P	**Pn**	**17 04 17.2**	**+1.5**
	0.4nm,0.3s,baz=296,slow=19,SNR=0.8							
WSAR				S	**Sn**	**17 05 29.3**	**-0.7**
	0.4nm,0.3s,baz=109,slow=6.9,SNR=1.6							
BRTR	**Keskin Array B**	**20.31**	**313**	P	**P**	**17 07 16.1**	**0.0**
	0.6nm,0.5s,baz=131,slow=12,SNR=5.4							
MKAR	**Makanchi Array**	**30.22**	**42**	P	**P**	**17 08 50.1**	**-0.5**
	0.2nm,0.5s,baz=232,slow=9.3,SNR=2.3							
YKA	**Yellowknife Ar**	**90.02**	**354**	P	**P**	**17 15 38.8**	**-0.6**
	0.3nm,0.6s,baz=5.9,slow=4.6,SNR=5.7							

TEH ***12*** *17:06:09.7,27°.24N×52°.96E,h11km,ML3.7*
IDC ***12*** *17:06:12.7±3.2,27°.16N×53°.01E,h40km±30km,mb3.4/9, mb1 3.6/12,mb1mx3.3/47,mbtmp3.7/12,ML3.4/2,Error ellipse: s-maj=35.3km s-min=17.3km az=46.0*
ISC 12 17:06:09.3±0.8,27°.21N±0°.06×52°.96E±0°.06,h10km,n41, σ2§06/42,mb3.7/9,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.22**	**55**	*e*Pg	**Pg**	**17 06 13.6**	**-0.3**
LAR1	**LAR**	**1.33**	**70**	*e*Sg	**Sg**	**17 06 55.4**	**+3.1**
SHI	**Shiraz**	**2.45**	**351**	*e*Pn	**Pn**	**17 06 51.8**	**+2.2**
GENO	**Geno**	**2.86**	**86**	*e*Pn	**Pn**	**17 06 57.2**	**+2.0**
SHME	**Shamm**	**3.07**	**111**	*e*Pn	**Pn**	**17 06 56.9**	**-1.0**
AJN	**Ajban**	**3.21**	**145**	*e*Pn	**Pn**	**17 07 02.9**	**+3.1**
BANOM	**Banah**	**3.25**	**113**	*e*Pn	**Pn**	**17 07 01.6**	**+1.1**
NAZ	**Nazwa, Dubai**	**3.29**	**132**	*e*Pn	**Pn**	**17 07 03.5**	**+2.6**
SLWR	**Sila**	**3.33**	**200**	*e*Pn	**Pn**	**17 07 04.2**	**+2.6**
ASUD	**Al Ashush, Dub**	**3.34**	**140**	*e*Pn	**Pn**	**17 07 05.0**	**+3.3**
FAQ	**Al Faqa, Dubai**	**3.41**	**136**	*e*Pn	**Pn**	**17 07 05.5**	**+2.9**
MSFE	**Esma-Masafi**	**3.41**	**122**	*e*Pn	**Pn**	**17 07 04.9**	**+2.2**
MZWR	**Madinat Zayed**	**3.54**	**166**	*e*Pn	**Pn**	**17 07 07.5**	**+3.2**
MDH	**Madha**	**3.55**	**122**	*e*Pn	**Pn**	**17 07 07.1**	**+2.6**
UOSS	**Minazif**	**3.69**	**127**	*e*Pn	**Pn**	**17 07 08.1**	**+1.7**
HATD	**Hatta, Dubai**	**3.71**	**129**	*e*Pn	**Pn**	**17 07 08.3**	**+1.5**
ASHO	**Ashiyiah**	**3.76**	**131**	*e*Pn	**Pn**	**17 07 09.0**	**+1.6**
ALNE	**Al Ain**	**4.03**	**141**	*e*Pn	**Pn**	**17 07 14.0**	**+2.9**
TVBK	**TV Kerman**	**4.33**	**50**	*e*Pn	**Pn**	**17 07 18.0**	**+2.4**
IMEH	**Mehriz**	**4.40**	**19**	*e*Pn	**Pn**	**17 07 18.5**	**+2.0**
KHGB	**Koh Gabri**	**4.41**	**44**	*e*Pn	**Pn**	**17 07 18.2**	**+1.7**
SOHO	**SOHO**	**4.45**	**133**	*e*Pn	**Pn**	**17 07 19.5**	**+2.6**
CHMN	**Cheshme madani**	**4.81**	**56**	*e*Pn	**Pn**	**17 07 24.8**	**+2.6**
UMZA	**Um Al Zommool**	**4.90**	**156**	*e*Pn	**Pn**	**17 07 26.2**	**+3.0**
KBAM	**BAM**	**5.21**	**67**	*e*Pn	**Pn**	**17 07 29.3**	**+1.9**
WSAR	**Wadi Sarin**	**6.48**	**126**	P	**Pn**	**17 07 46.2**	**+1.3**
	0.9nm,0.3s,baz=316,slow=10,SNR=3.0							
WSAR				S	**Sn**	**17 08 56.2**	**-2.7**
	1.5nm,0.3s,baz=181,slow=22,SNR=3.2							
TPRV	**Parvadeh(Tabas**	**6.63**	**28**	*e*Pn	**Pn**	**17 07 48.4**	**+1.4**
TKDS	**Koohdasht(Taba**	**7.32**	**28**	*e*Pn	**Pn**	**17 07 57.2**	**+0.8**
TNSJ	**Nastanj**	**7.42**	**24**	*e*Pn	**Pn**	**17 07 58.7**	**+0.8**
GEYT	**Alibeck**	**11.53**	**21**	P	**Pn**	**17 08 55.2**	**+1.1**
	0.2nm,0.3s,baz=212,slow=5.3,SNR=3.7							
KBZ	**Khabaz**	**18.33**	**336**	P	**P**	**17 10 26.1**	**+1.8**
	baz=158,slow=9.0,SNR=3.6							
BRTR	**Keskin Array B**	**20.34**	**313**	P	**P**	**17 10 46.4**	**+0.5**
	0.8nm,0.8s,baz=127,slow=12,SNR=4.1							
AKTO	**Aktyubinsk**	**23.51**	**8**	P	**P**	**17 11 19.7**	**+0.4**
	0.6nm,0.4s,baz=232,slow=8.2,SNR=3.5							
BELG	**Belogornoye**	**25.47**	**352**	P	**P**	**17 11 36.9**	**-0.5**
	21nm,1.1s,baz=26,slow=5.6,SNR=4.5							
BVAR	**Borovoye Array**	**28.86**	**22**	P	**P**	**17 12 07.0**	**-1.0**
	0.9nm,0.7s,baz=186,slow=12,SNR=3.7							
MKAR	**Makanchi Array**	**30.23**	**42**	P	**P**	**17 12 19.2**	**-1.0**
	0.6nm,0.6s,baz=233,slow=9.4,SNR=6.8							
ZALV	**Zalesovo Beam**	**35.51**	**32**	P	**P**	**17 13 05.4**	**-0.7**
	1.6nm,0.7s,baz=237,slow=7.9,SNR=7.3							
NOA	**NORSAR Array B**	**43.88**	**332**	P	**P**	**17 14 13.7**	**-2.1**
	1.5nm,0.9s,baz=119,slow=7.4,SNR=2.8							
SONM	**Songino Array**	**46.08**	**49**	P	**P**	**17 14 33.5**	**-0.1**
	0.6nm,0.7s,baz=260,slow=8.9,SNR=5.5							
YKA	**Yellowknife Ar**	**90.05**	**354**	P	**P**	**17 19 08.8**	**-0.3**
	0.7nm,0.9s,baz=13,slow=4.2,SNR=7.4							
ASAR	**Alice Springs**	**93.04**	**115**	P	**P**	**17 19 22.1**	**-1.5**
	0.2nm,0.8s,baz=293,slow=3.9,SNR=1.3							

TEH ***12*** *17:15:02.8,27°.27N×52°.90E,h5km,ML3.7*
OMAN ***12*** *17:15:05.0,27°.51N×52°.68E,h104km,mb4.1/2,ml3.5/2*
IDC ***12*** *17:15:09.5±3.5,27°.01N×52°.95E,h64km±47km,mb3.5/9, mb1 3.6/11,mb1mx3.3/54,mbtmp3.8/11,ML3.3/2,Error ellipse: s-maj=49.7km s-min=21.2km az=28.0*
ISC 12 17:15:04.7±0.8,27°.24N±0°.06×52°.89E±0°.06,h10km,n47, σ1§47/49,mb3.7/8,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.27**	**67**	*e*Pg	**Pg**	**17 15 08.4**	**-1.7**
QIR1	**Qir**	**1.25**	**6**	*e*Pg	**Pn**	**17 15 27.8**	**-0.4**
LAR1	**LAR**	**1.39**	**72**	*e*Pg	**Pn**	**17 15 31.3**	**+1.1**
LAR1				*e*Sg	**Sg**	**17 15 52.4**	**+3.0**
JHRM	**Jahrom**	**1.41**	**26**	*e*Pg	**Pn**	**17 15 30.6**	**+0.1**
SHI	**Shiraz**	**2.42**	**352**	*e*Pn	**Pn**	**17 15 45.1**	**+0.6**
KAZ1	**Kazerun**	**2.62**	**335**	*e*Pn	**Pn**	**17 15 47.8**	**+0.6**
GENO	**Geno**	**2.93**	**86**	*e*Pn	**Pn**	**17 15 51.8**	**+0.3**
SHME	**Shamm**	**3.14**	**111**	*e*Pn	**Pn**	**17 15 54.2**	**0.0**
BANOM	**Banah**	**3.32**	**112**	*e*Pn	**Pn**	**17 15 58.2**	**+1.4**
BANOM	**Banah**	**3.32**	**112**	P	**Pn**	**17 15 58.9**	**+2.1**
	SNR=5.5							
NAZ	**Nazwa, Dubai**	**3.35**	**131**	*e*Pn	**Pn**	**17 15 58.5**	**+1.4**
ASUD	**Al Ashush, Dub**	**3.40**	**139**	*e*Pn	**Pn**	**17 16 00.1**	**+2.3**
ASUD	**Al Ashush, Dub**	**3.40**	**139**	P	**Pn**	**17 16 00.7**	**+2.9**
	SNR=8.9							
FAQ	**Al Faqa, Dubai**	**3.47**	**135**	*e*Pn	**Pn**	**17 15 59.8**	**+1.0**
MDH	**Madha**	**3.62**	**121**	*e*Pn	**Pn**	**17 16 02.0**	**+1.2**
UOSS	**Minazif**	**3.75**	**127**	*e*Pn	**Pn**	**17 16 03.2**	**+0.5**
HATD	**Hatta, Dubai**	**3.78**	**129**	*e*Pn	**Pn**	**17 16 04.5**	**+1.5**
ASHO	**Ashiyiah**	**3.82**	**131**	*e*Pn	**Pn**	**17 16 05.1**	**+1.5**
ALNE	**Al Ain**	**4.08**	**140**	*e*Pn	**Pn**	**17 16 07.2**	**-0.1**
IMEH	**Mehriz**	**4.41**	**20**	*e*Pn	**Pn**	**17 16 12.7**	**+0.8**
KHGB	**Koh Gabri**	**4.44**	**44**	*e*Pn	**Pn**	**17 16 13.1**	**+0.8**
SOHO	**SOHO**	**4.51**	**132**	*e*Pn	**Pn**	**17 16 13.8**	**+0.7**
IRAM	**Rameshen**	**4.58**	**355**	*e*Pn	**Pn**	**17 16 14.8**	**+0.6**
CHMN	**Cheshme madani**	**4.86**	**56**	*e*Pn	**Pn**	**17 16 19.3**	**+1.1**
UMZA	**Um Al Zommool**	**4.95**	**155**	*e*Pn	**Pn**	**17 16 20.4**	**+1.3**
ARQ	**Araqi**	**5.09**	**139**	P	**Pn**	**17 16 23.5**	**+2.5**
	SNR=8.4							
KBAM	**BAM**	**5.26**	**68**	*e*Pn	**Pn**	**17 16 24.9**	**+1.4**
HOQ	**Hoqain**	**5.40**	**131**	P	**Pn**	**17 16 28.0**	**+2.6**
	SNR=7.9							
BSY	**Bisya**	**5.94**	**138**	P	**Pn**	**17 16 35.1**	**+2.3**
	SNR=14							
ANAR	**Anarak**	**5.98**	**7**	*e*Pn	**Pn**	**17 16 33.9**	**+0.5**
WSAR	**Wadi Sarin**	**6.55**	**126**	P	**Pn**	**17 16 41.6**	**+0.5**
	0.6nm,0.3s,baz=308,slow=9.5,SNR=10							
WSAR				S	**Sn**	**17 17 52.2**	**-3.6**
	0.2nm,0.3s,baz=24,slow=21,SNR=2.4							
TPRV	**Parvadeh(Tabas**	**6.64**	**29**	*e*Pn	**Pn**	**17 16 42.7**	**+0.2**
KRSH	**Karshahi**	**6.74**	**355**	*e*Pn	**Pn**	**17 16 44.9**	**+1.0**
ISFB	**Sefidab**	**7.12**	**356**	*e*Pn	**Pn**	**17 16 49.4**	**+0.4**
TKDS	**Koohdasht(Taba**	**7.33**	**29**	*e*Pn	**Pn**	**17 16 52.0**	**0.0**
AFRZ	**Afriz**	**8.13**	**39**	*e*Pn	**Pn**	**17 17 03.9**	**+1.0**
WHFO	**Wadi Hawf**	**9.31**	**175**	P	**Pn**	**17 17 20.8**	**+1.8**
	SNR=5.1							
KBZ	**Khabaz**	**18.33**	**336**	P	**P**	**17 19 21.6**	**+2.6**
	0.1nm,0.3s,baz=152,slow=9.3,SNR=7.6							
BRTR	**Keskin Array B**	**20.27**	**313**	P	**P**	**17 19 41.4**	**+0.8**
	0.5nm,0.6s,baz=136,slow=11,SNR=5.2							
AKTO	**Aktyubinsk**	**23.50**	**8**	P	**P**	**17 20 16.2**	**+1.6**
	0.4nm,0.4s,baz=154,slow=5.6,SNR=1.9							
BELG	**Belogornoye**	**25.44**	**352**	P	**P**	**17 20 33.2**	**+0.8**
	9.8nm,0.9s,baz=173,slow=8.1,SNR=3.7							
BVAR	**Borovoye Array**	**28.87**	**22**	P	**P**	**17 21 03.5**	**+0.1**
	0.7nm,0.5s,baz=160,slow=14,SNR=3.4							
MKAR	**Makanchi Array**	**30.26**	**42**	P	**P**	**17 21 15.5**	**-0.3**
	0.6nm,0.5s,baz=230,slow=8.4,SNR=11							
ZALV	**Zalesovo Beam**	**35.53**	**33**	P	**P**	**17 22 01.0**	**-0.6**
	1.0nm,0.4s,baz=247,slow=8.3,SNR=7.2							
FINES	**FINESS Array B**	**38.64**	**340**	P	**P**	**17 22 27.6**	**-0.4**
	3.3nm,1.1s,baz=141,slow=12,SNR=1.4							
SONM	**Songino Array**	**46.12**	**49**	P	**P**	**17 23 28.0**	**-1.2**
	0.4nm,0.8s,baz=262,slow=10.0,SNR=2.7							
YKA	**Yellowknife Ar**	**90.02**	**354**	P	**P**	**17 28 03.2**	**-1.1**
	0.4nm,0.8s,baz=10,slow=4.3,SNR=7.3							

IDC ***12*** *17:18:44.9±1.4,19°.46S×177°.34W,h557km±15km, mb3.5/11,mb1 3.6/14,mb1mx3.3/38,mbtmp4.5/14,Error ellipse: s-maj=20.2km s-min=14.0km az=150.0*
NEIC ***12*** *17:18:45.1±1.6,19°.3S±0°.2×177°.4W±0°.2,h562km±10km, mb4.3/28,Error ellipse: s-maj=25.4km s-min=20.4km az=188.0*
NOU ***12*** *17:18:45.7,19°.29S×177°.32W,h579km,mb4.3,Fiji Islands Region*
ISC 12 17:18:44.0±0.5,19°.44S±0°.09×177°.31W±0°.08,h550km, n64,σ1§45/69,mb4.3/25,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.71**	**290**	P	**P**	**17 20 14.5**	**+2.9**
	3.6nm,0.3s,baz=258,slow=23,SNR=30						
MSVF	**Nonsavu**	**4.71**	**290**	P	**P**	**17 20 14.7**	**+3.1**
MSVF	**Nonsavu**	**4.71**	**290**	P	**P**	**17 20 14.6**	**+3.0**
NIUE	**Niue**	**6.99**	**88**	P	**P**	**17 20 33.3**	**+1.4**
NIUE	**Niue**	**6.99**	**88**	P	**P**	**17 20 35.0**	**+3.1**
AFI	**Afiamalu**	**7.64**	**45**	P	**P**	**17 20 38.9**	**+0.5**
	3.1nm,0.3s,baz=36,slow=18,SNR=4.9						
AFI				S	**S**	**17 22 07.3**	**-4.7**
	0.8nm,0.3s,baz=249,slow=17,SNR=2.5						
AFI	**Afiamalu**	**7.64**	**45**	P	**P**	**17 20 38.4**	**-0.1**
SANVU	**Saraoutou**	**15.30**	**283**	P	**P**	**17 21 57.0**	**+0.4**
DZM	**Mont Dzumac**	**15.41**	**257**	P	**P**	**17 21 58.9**	**+1.1**
	1.2nm,0.3s,baz=216,slow=19,SNR=14						
URZ	**Urewera**	**19.37**	**193**	P	**P**	**17 22 33.7**	**-0.4**
	2.0nm,0.3s,baz=121,slow=23,SNR=14						
URZ				S	**S**	**17 25 35.0**	**-6.0**
	0.3nm,0.3s,baz=296,slow=23,SNR=1.0						
ARMA	**Armidale**	**30.11**	**243**	P	**P**	**17 24 09.9**	**+0.3**
ARMA				IAmb	IAmb	17 24 19.6	
	comp=Z,8.5nm,1.1s						
RABL	**Rabaul**	**33.41**	**293**	P	**P**	**17 24 38.0**	**+0.2**
CAN	**Canberra**	**33.64**	**235**	P	**P**	**17 24 40.0**	**+0.6**
CAN				IAmb	IAmb	17 24 40.9	
	comp=Z,5.4nm,0.8s						
CTA	**Charters Tower**	**34.25**	**263**	P	**P**	**17 24 44.6**	**-0.2**
	comp=Z,7.6nm,0.6s,baz=91,slow=9.5,SNR=22						
CTAO	**Charters Tower**	**34.25**	**263**	P	**P**	**17 24 44.2**	**-0.5**
CTAO				IAmb	IAmb	17 24 45.5	
	comp=Z,8.2nm,0.7s						
PMG	**Port Moresby**	**35.75**	**281**	P	**P**	**17 24 56.1**	**-1.2**
	comp=Z,14nm,0.9s,baz=100,slow=8.4,SNR=4.0						
TOO	**Toolangi**	**37.04**	**233**	P	**P**	**17 25 05.9**	**-1.8**
TOO				IAmb	IAmb	17 25 09.2	
	comp=Z,9.3nm,0.8s						
COEN	**Coen**	**38.17**	**272**	P	**P**	**17 25 16.4**	**-0.7**
COEN				IAmb	IAmb	17 25 18.3	
	comp=Z,6.3nm,0.7s						
STKA	**Stephens Creek**	**38.83**	**243**	P	**P**	**17 25 23.4**	**+1.1**
	comp=Z,3.7nm,0.5s,baz=86,slow=11,SNR=14						
STKA	**Stephens Creek**	**38.83**	**243**	P	**P**	**17 25 23.2**	**+0.9**
BBOO	**Buckleboo**	**43.60**	**243**	P	**P**	**17 26 00.6**	**+0.6**
JAY	**Jayapura**	**44.34**	**287**	P	**P**	**17 26 05.9**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=143,slow=5.5,SNR=5.7						
WR0	**Warramunga Arr**	**45.20**	**261**	P	**P**	**17 26 12.0**	**-0.6**
WB0	**Warramunga Arr**	**45.37**	**261**	P	**P**	**17 26 13.4**	**-0.4**
WB0				IAmb	IAmb	17 26 13.6	
	comp=Z,6.0nm,0.8s						
WB2	**Warramunga Arr**	**45.38**	**261**	P	**P**	**17 26 12.3**	**-1.6**
WB2				IAmb	IAmb	17 26 14.3	
	comp=Z,5.5nm,0.7s						
WRAB	**Tennant Creek**	**45.38**	**261**	P	**P**	**17 26 13.2**	**-0.7**
WRA	**Warramunga Arr**	**45.39**	**261**	P	**P**	**17 26 13.3**	**-0.7**
	comp=Z,3.9nm,0.4s,baz=98,slow=7.8,SNR=141						
WRA				PcP	**PcP**	**17 27 42.0**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=94,slow=3.3,SNR=4.5						
WRA	**Warramunga Arr**	**45.39**	**261**	P	**P**	**17 26 12.5**	**-1.6**
AS31	**Alice Springs**	**45.40**	**256**	P	**P**	**17 26 13.8**	**-0.2**
AS31				IAmb	IAmb	17 26 15.9	
	comp=Z,3.0nm,0.5s						
ASAR	**Alice Springs**	**45.40**	**256**	P	**P**	**17 26 14.0**	**0.0**
	comp=Z,5.2nm,0.4s,baz=86,slow=8.2,SNR=293						
ASAR				PcP	**PcP**	**17 27 41.8**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=109,slow=3.4,SNR=8.2						
ASAR	**Alice Springs**	**45.40**	**256**	P	**P**	**17 26 12.2**	**-1.8**
MTN	**Manton Dam**	**49.81**	**269**	P	**P**	**17 26 46.4**	**-0.7**
MTN				IAmb	IAmb	17 26 47.3	
	comp=Z,6.8nm,0.7s						
FORT	**Forrest**	**50.31**	**246**	P	**P**	**17 26 50.2**	**-0.4**
KNRA	**Kununurra**	**51.38**	**265**	P	**P**	**17 26 57.9**	**-0.6**
KNRA				IAmb	IAmb	17 26 59.0	
	comp=Z,10nm,0.7s						
SIJI	**Sorong**	**53.60**	**284**	P	**P**	**17 27 14.3**	**-0.1**
	comp=Z,15nm,0.5s,baz=111,slow=3.9,SNR=16						
FITZ	**Fitzroy Crossi**	**53.81**	**261**	P	**P**	**17 27 16.1**	**+0.2**
SOEI	**Soe**	**57.12**	**271**	P	**P**	**17 27 39.9**	**+0.8**
BATI	**Baumata**	**57.56**	**270**	P	**P**	**17 27 43.0**	**+1.0**
	comp=Z,11nm,0.6s,baz=83,slow=0.3,SNR=4.9						
PSA00	**Pilbara Seismi**	**58.54**	**256**	P	**P**	**17 27 47.9**	**-0.6**
PSA00				IAmb	IAmb	17 27 48.9	
	comp=Z,16nm,0.7s						
MMRI	**Maumere**	**59.36**	**271**	P	**P**	**17 27 52.8**	**-1.3**
MMRI				IAmb	IAmb	17 27 55.0	
	comp=Z,11nm,0.5s						
NWAO	**Narrogin (SRO)**	**59.42**	**243**	P	**P**	**17 27 53.0**	**-1.2**
NWAO				IAmb	IAmb	17 27 55.6	
	comp=Z,19nm,1.1s						
MORW	**Morawa**	**60.83**	**247**	P	**P**	**17 28 03.1**	**-0.4**
KKM	**Kota Kinabalu**	**70.12**	**284**	P	**P**	**17 29 01.5**	**-0.5**
KKM				IAmb	IAmb	17 29 07.3	
	comp=Z,12nm,1.1s						
QSPA	**South Pole Qui**	**70.62**	**180**	P	**P**	**17 29 05.7**	**+1.7**
UGM	**Wanagama**	**70.63**	**268**	P	**P**	**17 29 04.6**	**-0.4**
TXAR	**Lajitas Array**	**85.94**	**57**	P	**P**	**17 30 28.7**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=224,slow=5.2,SNR=3.6						
ILAR	**Eielson Array**	**87.15**	**13**	P	**P**	**17 30 30.8**	**-0.5**
	comp=Z,0.1nm,0.7s,baz=205,slow=4.0,SNR=1.2						
PDAR	**Pinedale Array**	**87.75**	**43**	P	**P**	**17 30 34.3**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=282,slow=1.8,SNR=2.4						
SNAA	**Sanae**	**89.04**	**178**	P	**P**	**17 30 41.3**	**+1.0**
VNA3	**Neumayer Olymp**	**89.15**	**176**	P	**P**	**17 30 41.9**	**+1.2**
VNA2	**Neumayer--Watz**	**89.60**	**177**	P	**P**	**17 30 43.9**	**+1.1**
	baz=198,slow=3.7						
VNA1	**Neumayer--Stat**	**89.82**	**176**	P	**P**	**17 30 43.8**	**0.0**
CMAR	**Chiang Mai Arr**	**90.37**	**289**	P	**P**	**17 30 48.6**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=120,slow=2.5,SNR=11						
MKAR	**Makanchi Array**	**110.94**	**314**	PKiKP	**PKiKP**	**17 36 13.8**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=130,slow=2.1,SNR=4.9						
ARCES	**ARCESS Array B**	**128.00**	**350**	PKP	**PKPdf**	**17 36 46.8**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=27,slow=3.0,SNR=8.8						
BR131	**Keskin Array S**	**146.59**	**314**		**PKPbc**	**17 37 24.4**	**-0.2**
BRTR	**Keskin Array B**	**146.59**	**314**	PKPbc	**PKPbc**	**17 37 24.0**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=138,slow=4.4,SNR=10						
BRTR	**Keskin Array B**	**146.59**	**314**		**PKPbc**	**17 37 24.4**	**-0.2**
CLL	**Collm**	**147.18**	**348**	*i* PKPbc	**PKPbc**	**17 37 25.6**	**+0.1**
	comp=Z,3.0nm,0.6s						
CLL				*e*PKPab	**PKPab**	**17 37 29.0**	**0.0**
GERES	**GERESS Array B**	**149.35**	**346**	PKPbc	**PKPbc**	**17 37 31.2**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=31,slow=0.8,SNR=8.8						
CONA	**Conrad Observa**	**149.63**	**342**	*e*P	**PKiKP**	**17 37 32.6**	**+0.1**
	comp=Z,5.9nm,1.3s						
WATA	**Walderalm**	**151.25**	**347**	*i* P	**PKPbc**	**17 37 35.7**	**0.0**
	comp=Z,1.0nm,0.4s						
WTTA	**Watt

	baz=243							
NNSB				S		Sb	17 29 23.9	+0.9
	baz=243							
NNS	**Nan Shan**	**1.01**	**246**	*i* P		**Pg**	17 29 10.2	+0.1
	baz=243							
NNS				*i* S		**Sb**	17 29 24.1	+0.9
	baz=243							
ETLH	**Xiulin Townshi**	**1.05**	**233**	P		**Pb**	17 29 10.7	+0.2
	baz=230							
ETLH				S		**Sb**	17 29 24.2	+0.1
	baz=230							
TWD	**Chiawan**	**1.05**	**224**	*i* P		**Pb**	17 29 10.8	+0.2
	baz=228							
TWD				S		**Sg**	17 29 25.0	+0.3
	baz=228							
FUSS	**Fushou**	**1.20**	**240**	*i* P		**Pn**	17 29 13.2	-0.1
	baz=238							
FUSS				*i* S		**Sg**	17 29 29.5	0.0
	baz=238							
WHF	**Hehuan Shan**	**1.24**	**236**	*i* P		**Pg**	17 29 14.4	-0.2
	baz=245							
WHF				*i* S		**Sn**	17 29 31.1	+0.4
	baz=245							
TWT	**Tachien**	**1.26**	**242**	*i* P		**Pg**	17 29 14.6	-0.1
	baz=240							
TWT				S		**Sg**	17 29 32.8	+1.7
	baz=240							
LIOB	**Emei**	**1.27**	**261**	*i* P		**Pn**	17 29 13.9	0.0
	baz=258							
TDCB	**Techi**	**1.27**	**242**	P		**Pb**	17 29 14.7	+0.4
	baz=240							
TDCB				S		**Sg**	17 29 31.7	+0.1
	baz=240							
NSTT	**Nanjuang**	**1.28**	**261**	P		**Pn**	17 29 13.7	-0.4
	baz=257							
NSTT				S		**Sb**	17 29 30.8	0.0
	baz=257							
IRIF	**Iriomote-Funau**	**1.32**	**113**	P		**Pg**	17 29 15.9	-0.1
IRIF				*e*S		**Sg**	17 29 34.1	+0.9
ESL	**Shilin**	**1.35**	**221**	*i* P		**Pn**	17 29 14.8	-0.2
	baz=220							
ESL				*e*S		**Sn**	17 29 33.4	+0.6
	baz=220							
CHGB	**Renai**	**1.36**	**235**	P		**Pg**	17 29 16.8	+0.1
	baz=244							
CHGB				S		**Sg**	17 29 35.6	+1.1
	baz=244							
WHP	**Taichung City**	**1.43**	**247**	*i* P		**Pg**	17 29 17.9	-0.3
	baz=245							
WHP				S		**Sg**	17 29 36.6	-0.2
	baz=245							
HATJ	**Hateruma jima**	**1.51**	**121**	P		**Pg**	17 29 19.5	-0.1
WPL	**Puli Township**	**1.55**	**238**	P		**Pb**	17 29 19.5	+0.5
	baz=236							
WPL				*e*S		**Sb**	17 29 39.2	+0.6
	baz=236							
TWQ1	**Liyutan**	**1.56**	**252**	*e*P		**Pb**	17 29 19.7	+0.5
	baz=250							
TWQ1				*e*S		**Sb**	17 29 39.5	+0.8
	baz=250							
DPDB	**Guoxing**	**1.56**	**239**	P		**Pg**	17 29 20.4	-0.2
	baz=237							
DPDB				*e*S		**Sb**	17 29 40.0	+1.0
	baz=237							
VWDT	**VWDT**	**1.58**	**227**	P		**Pb**	17 29 19.4	-0.2
	baz=210							
VWDT				*e*S		**Sn**	17 29 38.9	+0.5
	baz=210							
JKRS	**Kuro-shima**	**1.59**	**112**	P		**Pg**	17 29 21.2	0.0
JKRS				*e*S		**Sg**	17 29 41.5	-0.4
HGSD	**Ruisui**	**1.61**	**213**	P		**Pn**	17 29 18.7	+0.1
	baz=200							
EHY	**Hungye**	**1.66**	**216**	*i* P		**Pn**	17 29 18.9	-0.3
	baz=217							
EHY				S		**Sb**	17 29 42.3	+0.7
	baz=217							
JIJ	**Ishigaki jima**	**1.67**	**107**	P		**Pb**	17 29 21.5	+0.5
JIJ				*e*S		**Sg**	17 29 43.7	-0.5
SMLT	**Sun Moon Lake**	**1.67**	**235**	*i* P		**Pb**	17 29 21.0	-0.1
	baz=234							
SMLT				S		**Sb**	17 29 42.8	+0.8
	baz=234							
SSLB	**Suanglung**	**1.68**	**231**	P		**Pb**	17 29 21.7	+0.3
	baz=216							
SSLB				S		**Sb**	17 29 43.5	+1.1
	baz=216							
SSLB	**Suanglung**	**1.68**	**231**	P		**Pb**	17 29 21.4	+0.1
TYC	**Yuchr**	**1.69**	**236**	*i* P		**Pb**	17 29 21.9	+0.6
	baz=235							
TYC				*e*S		**Sb**	17 29 42.2	-0.2
	baz=235							
YULB	**Yu-li**	**1.76**	**215**	P		**Pn**	17 29 20.5	-0.2
	baz=216							
YULB				*e*S		**Sn**	17 29 43.1	+0.2
	baz=216							
JISG	**Ishigakijimahi**	**1.77**	**98**	P		**Pn**	17 29 21.3	+0.6
JISG				*e*S		**Sb**	17 29 45.4	+0.7
TWF1	**Yuli**	**1.79**	**214**	*e*P		**Pn**	17 29 21.2	+0.1
	baz=214							
WHYT	**Xinyi Township**	**1.81**	**231**	P		**Pb**	17 29 24.3	+0.8
	baz=215							
WHYT				S		**Sb**	17 29 47.5	+1.3
	baz=215							
WJS	**Zhushan**	**1.83**	**236**	*i* P		**Pb**	17 29 24.7	+0.9
	baz=253							
WJS				*i* S		**Sg**	17 29 49.9	+0.5
	baz=253							
WNT	**Mingjian**	**1.83**	**239**	*e*P		**Pb**	17 29 23.9	0.0
	baz=255							
WNT				*e*S		**Sg**	17 29 48.5	-1.0
	baz=255							
FULB	**Fuli**	**1.93**	**212**	*i* P		**Pn**	17 29 22.9	0.0
	baz=198							
ALS	**Alishan**	**1.97**	**228**	*i* P		**Pb**	17 29 25.7	-0.6
	baz=213							
ALS				*e*S		**Sb**	17 29 51.5	+0.6
	baz=213							
CHN5	**Tsauling**	**2.00**	**232**	*i* P		**Pb**	17 29 26.7	-0.1
	baz=217							
CHN5				*e*S		**Sb**	17 29 51.9	+0.3
	baz=217							
WDLH	**Douliu**	**2.05**	**236**	*e*S		**Sb**	17 29 54.0	+1.1
	baz=252							
ELDTW	**Lidau**	**2.08**	**218**	*i* P		**Pn**	17 29 25.0	-0.1
	baz=205							
ELDTW				*e*S		**Sn**	17 29 49.4	-1.5
	baz=205							
EDH	**Donghe**	**2.12**	**208**	P		**Pn**	17 29 24.0	-1.5
	baz=198							
EDH				S		**Sn**	17 29 51.2	-0.4
	baz=198							
WTK	**Tuku**	**2.16**	**238**	P		**Pn**	17 29 27.6	+1.4
	baz=254							
WTK				*e*S		**Sb**	17 29 55.2	-1.0
	baz=254							
TPUB	**Ta-pu**	**2.23**	**227**	P		**Pb**	17 29 29.7	-1.0
	baz=213							
TPUB				S		**Sn**	17 29 56.5	+2.0
	baz=213							
STYT	**Tauyuan**	**2.25**	**222**	*i* P		**Pb**	17 29 29.5	-1.5
	baz=209							
STYT				*e*S		**Sb**	17 29 57.4	-1.3
	baz=209							
WTP	**Ta-pu**	**2.28**	**226**	*i* P		**Pb**	17 29 30.2	-1.3
	baz=213							
WTP				*e*S		**Sn**	17 29 57.9	+2.2
	baz=213							
TWK	**Hsinying**	**2.35**	**228**	*i* P		**Pb**	17 29 31.2	-1.4
	baz=215							
TWK				S		**Sb**	17 30 01.2	-0.3
	baz=215							
TWGBT	**Beinan**	**2.35**	**211**	*e*S		**Sn**	17 29 56.3	-1.2
	baz=212							
CHN1	**Nanshi**	**2.38**	**226**	P		**Pb**	17 29 32.1	-1.1
	baz=214							
CHN1				S		**Sb**	17 30 01.7	-0.6
	baz=214							
SGST	**Jiashian**	**2.42**	**224**	P		**Pb**	17 29 32.0	-1.8
	baz=211							
SGST				S		**Sb**	17 30 02.9	-0.6
	baz=211							
SLGT	**Liugui**	**2.44**	**221**	*i* P		**Pn**	17 29 31.6	+1.6
	baz=222							
SLGT				S		**Sb**	17 30 02.7	-1.5
	baz=222							
SSD	**Sandimen**	**2.64**	**218**	P		**Pb**	17 29 35.6	-2.0
	baz=219							
SSD				S		**Sb**	17 30 08.2	-1.8
	baz=219							
TSMG	**Majia**	**2.67**	**217**	P		**Pb**	17 29 36.0	-2.1
	baz=205							
TSMG				*e*S		**Sb**	17 30 08.4	-2.3
	baz=205							
VWUC	**VWUC**	**2.67**	**274**	*e*P		**Pn**	17 29 32.0	-1.2
	baz=272							
MASBT	**Mashibuluo**	**2.75**	**216**	P		**Pn**	17 29 35.5	+1.2
	baz=206							
MASBT				*e*S		**Sn**	17 30 09.3	+2.1
	baz=206							
EAST	**Anshuo**	**2.83**	**210**	*e*P		**Pn**	17 29 34.8	-0.6
	baz=212							
EAST				*e*S		**Sn**	17 30 07.9	-1.5
	baz=212							
XPSS	**Dashiqiu**	**2.87**	**317**	*e*P		**Pn**	17 29 35.6	-0.2
	baz=314							

IDC ***12*** *17:35:31.1±0.7, 18°.47S×172°.96W, h0km, mb4.2/15, mb1 4.5/17, mb1mx4.4/29, mbtmp4.3/17, ML5.3/3, MS3.6/16, Ms1 3.6/16, ms1mx3.4/51, Error ellipse: s-maj=25.2km s-min=15.2km az=121.0*

NEIC ***12*** *17:35:33.7±1.8, 18°.37S±0°.07×172°.84W±0°.07, h35km±6km, mb4.8/27, Error ellipse: s-maj=11.8km s-min=8.5km az=135.0*

NOU ***12*** *17:35:37.4, 18°.33S×172°.52W, h85km, mb4.9, Tonga Islands Region*

ISC 12 17:35:33.0±0.4, 18°.67S±0°.05×172°.96W±0°.06, h19km, n136, σ3°27/120, mb4.8/30, MS3.6/15, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.90**	**99**	Pn		**Pn**	**17 36 16.2**	**-1.9**
NIUE	**Niue**	**2.90**	**99**	P		**Pn**	**17 36 16.4**	**-1.7**
AFI	**Afiamalu**	**4.87**	**14**	Pn		**Pn**	**17 36 41.1**	**-4.1**
	73nm,0.3s,baz=201,slow=2.0,SNR=61							
AFI				Sn		Sn	17 37 29.1	-12
	136nm,0.3s,baz=217,slow=20,SNR=6.8							
AFI	**Afiamalu**	**4.87**	**14**	Pn		**Pn**	**17 36 41.3**	**-3.9**
AFI				Sn		Sn	17 37 28.9	-12
AFI	**Afiamalu**	**4.87**	**14**	P		**Pn**	**17 36 41.4**	**-3.9**
MSVF	**Nonsavu**	**8.60**	**275**	Pn		Pn	17 37 44.5	+8.0
	4.8nm,0.3s,baz=103,slow=18,SNR=57							
MSVF				LR		LR	17 40 35.7	
	comp=Z,474nm,21.6s,baz=109,slow=36							
MSVF	**Nonsavu**	**8.60**	**275**	P		Pn	17 37 45.1	+8.6
RIZ	**Raoul Island**	**11.47**	**202**	P		**Pn**	**17 38 18.8**	**+3.1**
RAO	**Raoul Island**	**11.47**	**202**	Pn		**Pn**	**17 38 19.1**	**+3.4**
	150nm,0.3s,baz=52,slow=19,SNR=7.1							
RAO				Sn		**Sn**	**17 40 18.6**	**-4.7**
	70nm,0.3s,baz=82,slow=23,SNR=2.4							
GLKZ	**Green Lake**	**11.48**	**202**	P		**Pn**	**17 38 18.4**	**+2.5**
GLKZ				S		**Sn**	**17 40 19.0**	**-4.6**
RAR	**Rarotonga**	**12.65**	**104**	Pn		**Pn**	**17 38 28.9**	**-3.1**
	10.0nm,0.3s,baz=269,slow=9.3,SNR=17							
RAR				Sn		Sn	17 40 39.2	-13
	1.3nm,0.3s,baz=323,slow=20,SNR=1.4							
RAR				LR		LR	17 42 11.9	
	comp=Z,216nm,21.8s,baz=240,slow=32							
RAR	**Rarotonga**	**12.65**	**104**	Pn		**Pn**	**17 38 29.8**	**-2.2**
RAR	**Rarotonga**	**12.65**	**104**	P		**Pn**	**17 38 30.4**	**-1.6**
MARNC	**Mare, Loyalty**	**18.08**	**258**	P		**P**	**17 39 46.2**	**+2.7**
	2.1nm,1.0s							
PINNC	**Pines Island,**	**18.75**	**255**	P		**Pn**	**17 39 54.4**	**+3.0**
YATNC	**Mamie plateau,**	**19.19**	**256**	P		**Pn**	**17 39 59.4**	**+2.7**
	29nm,1.5s							
SANVU	**Saraoutou**	**19.23**	**277**	P		**P**	**17 39 56.6**	**+0.3**
SANVU	**Saraoutou**	**19.23**	**277**	P		**Pn**	**17 40 00.3**	**+3.0**
DZM	**Mont Dzumac**	**19.60**	**257**	P		**Pn**	**17 40 03.0**	**+1.3**
	2.2nm,0.3s,baz=79,slow=16,SNR=28							
DZM				LR		LR	17 46 01.8	
	comp=Z,164nm,19.6s,baz=104,slow=32							
GRZ	**Great Barrier**	**20.28**	**208**	P		Pn	17 40 11.3	+1.8
OUZ	**Omahuta**	**20.35**	**213**			Pn	17 40 12.4	+2.1
OUZ				IAmb		IAmb	17 40 14.4	
	comp=Z,33nm,0.8s							
OUZ	**Omahuta**	**20.35**	**213**	P		Pn	17 40 13.0	+2.7
WCZ	**Waipu Caves**	**20.54**	**211**	P		Pn	17 40 15.1	+2.6
HAZ	**Te Kaha**	**20.67**	**201**	P		Pn	17 40 15.6	+1.5
HAZ				S		**S**	**17 43 53.3**	**-8.6**
PKGZ	**Pakihiroa**	**20.69**	**200**	P		Pn	17 40 19.1	+4.7
PKGZ				S		**S**	**17 43 54.5**	**-7.9**
PUZ	**Puketiti**	**20.80**	**200**	P		Pn	17 40 16.6	+1.0
RUGZ	**Raukumara Rang**	**20.89**	**201**	P		Pn	17 40 18.9	+2.0
TWGZ	**Tauwhareparae**	**20.98**	**200**	P		**P**	**17 40 21.6**	**+6.5**
TWGZ				S		**S**	**17 43 59.6**	**-8.6**
MWZ	**Matawai**	**21.28**	**201**	P		**P**	**17 40 22.6**	**+4.3**
MWZ				S		**S**	**17 44 07.5**	**-6.6**
URZ	**Urewera**	**21.36**	**202**	P		**P**	**17 40 21.8**	**+2.7**
	comp=Z,18nm,0.3s,baz=121,slow=24,SNR=25							
URZ				S		**S**	**17 44 06.2**	**-9.2**
	comp=Z,6.4nm,0.4s,baz=122,slow=23,SNR=1.8							
URZ	**Urewera**	**21.36**	**202**	P		**P**	**17 40 20.6**	**+1.5**
URZ				IAmb		IAmb	17 40 24.8	
	comp=Z,34nm,1.0s							
URZ	**Urewera**	**21.36**	**202**	P		**P**	**17 40 21.9**	**+2.7**
URZ				S		**S**	**17 44 07.6**	**-7.9**
TOZ	**Tahuroa Road**	**21.51**	**206**	P		**P**	**17 40 25.3**	**+4.5**
PRGZ	**Paritu Road**	**21.70**	**200**	P		**P**	**17 40 27.2**	**+4.4**
PRGZ				S		**S**	**17 44 18.5**	**-3.7**
SNGZ	**Shannon Statio**	**21.75**	**201**	P		**P**	**17 40 28.1**	**+4.8**
SNGZ				S		**S**	**17 44 18.2**	**-5.0**
KNZ	**Kokohu**	**21.85**	**200**	P		**P**	**17 40 30.3**	**+5.9**
KNZ				S		**S**	**17 44 20.7**	**-4.4**
PAE	**Paea**	**22.23**	**91**	*e*T		T	18 02 32.3	
	comp=Z,13nm,0.2s							
PPT2	**Papeete2**	**22.25**	**91**	*e*LR		LR	17 45 41.1	
	comp=Z,328nm,25.0s							
PPT2	**Papeete2**	**22.25**	**91**	*e*T		T	18 02 33.8	
	comp=Z,7.4nm,0.2s							
PPT	**Papeete**	**22.25**	**91**	LR		LR	17 46 44.9	
	comp=Z,118nm,20.7s,baz=224,slow=30							
TBI	**Tubuai**	**22.41**	**106**	*e*LQ		LQ	17 44 46.0	
	comp=Z,333nm,28.2s							
TBI				*e*LR		LR	17 45 41.7	
	comp=Z,310nm,26.5s							
TBI	**Tubuai**	**22.41**	**106**	*e*T		T	18 02 52.8	
	comp=Z,10.0nm,0.4s							
HIZ	**Hauiti**	**22.44**	**206**	P		**P**	**17 40 33.1**	**+2.4**
HIZ	**Hauiti**	**22.44**	**206**	P		**P**	**17 40 36.9**	**+6.1**
MCHZ	**McNeill Hill**	**22.56**	**201**	P		**P**	**17 40 35.0**	**+2.9**
MCHZ				S		**S**	**17 44 35.3**	**-3.2**
KAHZ	**Kahuranaki**	**22.81**	**201**	P		**P**	**17 40 40.7**	**+6.0**
KAHZ				S		**S**	**17 44 39.4**	**-3.7**
BHHZ	**Black Hill Sta**	**22.82**	**202**	P		**P**	**17 40 36.8**	**+1.9**
BHHZ				S		**S**	**17 44 37.2**	**-6.1**
PXZ	**Pawanui**	**23.03**	**200**	P		**P**	**17 40 40.7**	**+3.7**
PXZ				S		**S**	**17 44 42.3**	**-4.4**
PRHZ	**Porangahau**	**23.32**	**200**	P		**P**	**17 40 46.4**	**+6.5**
TSZ	**Takapari Road**	**23.36**	**202**	P		**P**	**17 40 44.9**	**+4.5**
BFZ	**Birch Farm**	**23.82**	**201**	P		**P**	**17 40 50.7**	**+5.9**
RPZ	**Rata Peaks**	**28.37**	**205**	P		P	17 41 35.9	+10
	comp=Z,14nm,0.5s,baz=33,slow=11,SNR=13							
TAOE	**Nuku Hiva Isla**	**33.27**	**77**	*e*T		T	18 16 09.1	
	comp=Z,36nm,0.3s							
EIDS	**Eidsvold**	**33.92**	**252**	P		**P**	**17 42 12.7**	**-2.5**
EIDS				IAmb		IAmb	17 42 16.6	
	comp=Z,14nm,1.1s							
ARMA	**Armidale**	**34.13**	**243**	P		**P**	**17 42 13.0**	**-4.0**
ARMA				IAmb		IAmb	17 42 25.4	
	comp=Z,26nm,1.4s							
RKT	**Rikitea**	**35.69**	**104**	*e*T		T	18 19 32.4	
	comp=Z,1.3nm,0.4s							
CTAO	**Charters Tower**	**38.44**	**261**	P		**P**	**17 42 53.4**	**-0.4**
CTAO				IAmb		IAmb	17 42 54.9	
	comp=Z,19nm,0.6s							
TOO	**Toolangi**	**40.81**	**234**	P		**P**	**17 43 12.6**	**-0.8**
TOO				IAmb		IAmb	17 43 16.4	
	comp=Z,10nm,1.1s							
COEN	**Coen**	**42.28**	**270**	P		**P**	**17 43 25.6**	**-0.1**
STKA	**Stephens Creek**	**42.86**	**243**	P		**P**	**17 43 30.6**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=96,slow=12,SNR=5.5							
STKA				LR		LR	18 00 04.3	
	comp=Z,99nm,18.4s,baz=43,slow=34							
STKA	**Stephens Creek**	**42.86**	**243**	P		**P**	**17 43 31.3**	**+1.1**
BBOO	**Buckleboo**	**47.61**	**242**	P		**P**	**17 44 09.0**	**+1.1**
BBOO				IAmb		IAmb	17 44 23.5	
	comp=Z,18nm,1.1s							
WR0	**Warramunga Arr**	**49.40**	**259**	P		**P**	**17 44 21.7**	**-0.2**
WR0				IAmb		IAmb	17 44 23.2	
	comp=Z,6.9nm,0.8s							
WB0	**Warramunga Arr**	**49.56**	**260**	P		**P**	**17 44 22.8**	**-0.3**
AS31	**Alice Springs**	**49.58**	**255**	P		**P**	**17 44 23.7**	**+0.5**
AS31				IAmb		IAmb	17 44 28.3	
	comp=Z,3.6nm,0.8s							
WB2	**Warramunga Arr**	**49.58**	**259**	P		**P**	**17 44 23.2**	**0.0**
WB2				IAmb		IAmb	17 44 23.9	
	comp=Z,16nm,0.7s							
ASAR	**Alice Springs**	**49.58**	**255**	P		**P**	**17 44 23.6**	**+0.3**
	comp=Z,14nm,0.8s,baz=90,slow=7.9,SNR=237							
ASAR				S		**S**	**17 51 25.9**	**-4.9**
	comp=Z,1.7nm,0.9s,baz=91,slow=15,SNR=10							
ASAR	**Alice Springs**	**49.58**	**255**	P		**P**	**17 44 23.1**	**-0.1**
WRAB	**Tennant Creek**	**49.58**	**259**	P		**P**	**17 44 22.8**	**-0.4**
WRAB				IAmb		IAmb	17 44 23.8	
	comp=Z,12nm,0.7s							
WRA	**Warramunga Arr**	**49.59**	**259**	P		**P**	**17 44 23.1**	**-0.2**
	comp=Z,9.9nm,0.6s,baz=97,slow=8.5,SNR=122							
WRA				S		S	17 51 18.5	-12
	comp=Z,0.4nm,0.9s,baz=88,slow=14,SNR=2.3							
WRA	**Warramunga Arr**	**49.59**	**259**	P		**P**	**17 44 23.2**	**-0.1**
MTN	**Manton Dam**	**53.95**	**267**	P		**P**	**17 44 55.9**	**-0.1**
MTN				IAmb		IAmb	17 44 57.6	
	comp=Z,12nm,0.8s							
FORT	**Forrest**	**54.38**	**245**	P		**P**	**17 45 00.3**	**+1.4**
KNRA	**Kununurra**	**55.56**	**263**	P		**P**	**17 45 08.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**58.01**	**260**	LR		LR	18 08 57.8	
	comp=Z,56nm,21.1s,baz=97,slow=35							
FITZ	**Fitzroy Crossi**	**58.01**	**260**	P		**P**	**17 45 25.9**	**+0.9**
RPN	**Rapa Nui**	**58.69**	**111**	LR		LR	18 04 03.2	
	comp=Z,45nm,21.1s,baz=208,slow=29							
SBA	**Scott Base**	**60.05**	**185**	P		**P**	**17 45 42.4**	**+4.2**
SBA				IAmb		IAmb	17 45 43.0	
	comp=Z,8.1nm,0.8s							
VNDA	**Vanda**	**60.19**	**186**	P		**P**	**17 45 42.6**	**+3.5**
	comp=Z,5.3nm,0.9s,baz=2.4,slow=6.5,SNR=24							
VNDA	**Vanda**	**60.19**	**186**	P		**P**	**17 45 40.9**	**+1.7**
VNDA				IAmb		IAmb	17 45 43.7	
	comp=Z,8.5nm,1.0s							
SOEI	**Soe**	**61.24**	**269**	P		**P**	**17 45 46.1**	**-1.4**
SOEI	**Soe**	**61.24**	**269**	P		**P**	**17 45 50.6**	**+3.1**
PSA00	**Pilbara Seismi**	**62.72**	**255**	P		**P**	**17 45 55.0**	**-2.2**
H06S1	**SOCORRO T**	**71.32**	**62**	T		T	19 04 12.3	
	SNR=9							
H06E1	**SOCORRO T-PHAS**	**71.37**	**62**	T		T	19 04 17.6	
	SNR=90							
QSPA	**South Pole Qui**	**71.39**	**180**	P		**P**	**17 46 53.2**	**+1.5**
QSPA				IAmb		IAmb	17 46 54.5	
	comp=Z,7.6nm,0.8s							
MJAR	**Matsushiro Arr**	**71.70**	**320**	P		**P**	**17 46 54.7**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=156,slow=6.0,SNR=8.5							
MJAR				LR		LR	18 12 43.7	
	comp=Z,13nm,21.9s,baz=70,slow=31							
MJAR	**Matsushiro Arr**	**71.70**	**320**	P		**P**	**17 46 50.9**	**-3.0**
MAT	**Matsushiro**	**71.70**	**320**	P		**P**	**17 46 56.0**	**+2.2**
LPIG	**La Paz**	**74.41**	**57**	LR		LR	18 10 58.0	
	comp=Z,82nm,19.7s,baz=280,slow=29							
PETK	**Petropavlovsk-**	**75.86**	**342**	P		**P**	**17 47 19.0**	**+1.2**
	comp=Z,3.2nm,1.0s,baz=140,slow=9.2,SNR=1.9							
YBH	**Yreka Blue Hor**	**75.95**	**36**	LR		LR	18 12 56.3	
	comp=Z,66nm,19.0s,baz=262,slow=30							
NVAR	**Mina Array Bea**	**76.48**	**41**	P		**P**	**17 47 22.9**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=235,slow=9.5,SNR=3.3							
KSRS	**Korea Array**	**78.78**	**316**	P		**P**	**17 47 37.0**	**+2.5**
	comp=Z,2.1nm,0.9s,baz=132,slow=5.8,SNR=5.9							
KSRS				LR		LR	18 18 45.8	
	comp=Z,26nm,19.0s,baz=104,slow=33							
TXAR	**Lajitas Array**	**82.09**	**56**	P		**P**	**17 47 53.5**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=230,slow=8.2,SNR=3.9							
NJ2	**Nanjing**	**82.47**	**307**	*e*P		**P**	**17 47 53.5**	**-0.9**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
H03S2	**Juan Fernandez**	**83.06**	**123**	T		T	19 18 58.5	
	baz=250,slow=75,SNR=92							
H03S1	**Juan Fernandez**	**83.07**	**123**	T		T	19 18 59.5	
	baz=250,slow=75,SNR=68							
H03S3	**Juan Fernandez**	**83.07**	**123**	T		T	19 18 58.2	
	baz=250,slow=75,SNR=69							
H03N2	**Juan Fernandez**	**83.17**	**123**	T		T	19 19 04.5	
	baz=256,slow=72,SNR=36							
H03N3	**Juan Fernandez**	**83.17**	**123**	T		T	19 19 01.0	
	baz=256,slow=72,SNR=32							
H03N1	**Juan Fernandez**	**83.19**	**123**	T		T	19 19 06.8	
	baz=256,slow=72,SNR=26							
PDAR	**Pinedale Array**	**84.41**	**41**	P		**P**	**17 48 03.9**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=217,slow=6.8,SNR=1.5							
DLBC	**Dease Lake**	**84.58**	**21**	LR		LR	18 17 33.6	
	comp=Z,33nm,19.9s,baz=278,slow=30							
MAW	**Mawson**	**84.85**	**199**	P		**P**	**17 48 07.9**	**+1.8**
	comp=Z,3.7nm,0.8s,baz=117,slow=2.3,SNR=4.1							
MAW				LR		LR	18 22 03.0	
	comp=Z,27nm,21.9s,baz=70,slow=33							
ILAR	**Eielson Array**	**85.56**	**11**	P		**P**	**17 48 08.2**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=216,slow=6.7,SNR=4.2							
ILAR				LR		LR	18 21 29.7	
	comp=Z,28nm,18.4s,baz=256,slow=32							
VNA3	**Neumayer Olymp**	**89.58**	**175**	P		**P**	**17 48 29.9**	**+0.9**
SNAA	**Sanae**	**89.64**	**177**	P		**P**	**17 48 30.1**	**+0.8**
VNA2	**Neumayer--Watz**	**90.08**	**175**	P		**P**	**17 48 32.6**	**+1.3**
	baz=183,slow=2.9							
VNA1	**Neumayer--Stat**	**90.28**	**175**	P		**P**	**17 48 33.0**	**+0.9**
HHC	**Hu-ho-hao-te**	**91.55**	**313**	*e*P		**P**	**17 48 36.1**	**-2.6**
HHC				PP		PKiKP	17 53 19.1	-11

RLMT				IAML		17 42 51.7	
	98nm,0.4s						
RSSD	**Black Hills**	**2.50**	**133**	IAML		17 43 10.6	
	88nm,0.6s						
RSSD	**Black Hills**	**2.50**	**133**		**Pg**	**17 42 28.7**	**-0.2**
EGMT	**Eagleton**	**3.08**	**316**	Pn	**Pn**	**17 42 32.1**	**+1.2**
DGMT	**Dagmar**	**3.10**	**31**	Pn	**Pb**	**17 42 35.8**	**-1.2**
YHH	**Holmes Hill**	**3.18**	**252**		**Pb**	**17 42 35.8**	**-2.7**
YHH				IAML		17 43 29.9	
	comp=N,33nm,1.6s						
YHH				IAML		17 43 31.6	
	comp=E,37nm,1.3s						
K22A	**Casper**	**3.19**	**179**		**Pb**	**17 42 37.5**	**-1.1**
K22A				IAML		17 43 36.6	
	comp=N,38nm,0.8s						
K22A				IAML		17 43 38.7	
	comp=E,42nm,0.8s						
YPP	**Pitchstone Pla**	**3.37**	**244**	Pn	**Pb**	**17 42 38.6**	**-3.1**
YHL	**Hebgen Lake**	**3.38**	**255**		**Pn**	**17 42 37.7**	**+2.3**
YHL				IAML		17 43 47.0	
	comp=N,53nm,1.2s						
FLWY	**Flagg Ranch**	**3.40**	**240**		**Pb**	**17 42 40.0**	**-2.2**
FLWY				IAML		17 43 46.6	
	comp=N,41nm,1.3s						
YHB	**Horse Butte**	**3.42**	**253**		**Pb**	**17 42 40.2**	**-2.4**
YHB				IAML		17 43 37.8	
	comp=E,36nm,1.2s						
YHB				IAML		17 43 47.3	
	comp=N,32nm,2.5s						
BOZ	**Bozeman (W)**	**3.54**	**268**		**Pn**	**17 42 39.9**	**+2.6**
BOZ				IAML		17 43 37.4	
	comp=N,32nm,2.2s						
BOZ				IAML		17 43 41.5	
	comp=N,32nm,1.4s						
LOHW	**Long Hollow**	**3.62**	**233**		**Pn**	**17 42 41.1**	**+2.5**
LOHW				IAML		17 43 49.0	
	comp=N,21nm,1.5s						
PD31	**Pinedale Array**	**3.74**	**216**		**Pn**	**17 42 43.3**	**+3.1**
PDAR	**Pinedale Array**	**3.74**	**216**	Pn	**Pb**	**17 42 45.5**	**-2.5**
	comp=N,0.8nm,0.3s,baz=45,slow=14,SNR=29						
PDAR				Lg	Lg	17 43 38.8	
	comp=N,3.2nm,0.3s,baz=42,slow=45,SNR=8.4						
PDAR	**Pinedale Array**	**3.74**	**216**		**Pb**	**17 42 46.0**	**-2.0**
RWWY	**Rawlins**	**4.17**	**186**	Pn	**Pn**	**17 42 47.3**	**+1.1**
RWWY				IAML		17 44 13.4	
	comp=N,27nm,1.1s						
JTMT	**Jette**	**5.61**	**293**	Pn	**Pn**	**17 43 10.3**	**+4.5**
I56US	**NEWPORT INFRAS**	**7.59**	**292**	*i*		18 29 30.0	
	baz=105,slow=325,SNR=2.2						
ULM	**Lac du Bonnet**	**8.43**	**55**	Pn	**Pn**	**17 43 46.0**	**+1.8**
	comp=N,0.4nm,0.3s,baz=245,slow=11,SNR=6.2						
ULM				Pg	**Pg**	**17 44 19.6**	**-2.7**
	comp=N,0.3nm,0.3s,baz=247,slow=14,SNR=4.3						
ULM				Lg	Lg	17 46 04.0	
	comp=N,0.2nm,0.3s,baz=202,slow=19,SNR=2.3						
YKA	**Yellowknife Ar**	**17.31**	**347**	P	**P**	**17 45 46.1**	**+0.9**
	comp=N,0.0nm,0.3s,baz=159,slow=13,SNR=4.8						

*GUC **12** 17:41:50.6±0.7,21°.82S×70°.11W,h71km±2km, ML3.8*
*IDC **12** 17:41:52.2±2.3,21°.88S×70°.04W,h87km±18km, mb3.4/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.7/6, Error ellipse: s-maj=35.6km s-min=22.8km az=65.0*

ISC 12 17:41:50.1±0.8,21°.79S±0°.03×70°.18W±0°.06, h69km±6km, n36,σ1ºs35/44, mb3.6/5, 7C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	**0.28**	**77**	*e*P	**Pn**	**17 42 01.5**	**+0.2**
PB07				*i* S	**Sn**	**17 42 09.3**	**-0.2**
PB07				IAML		17 42 10.2	
	comp=N,14μm,0.2s						
PB03	**IPOC Station P**	**0.47**	**123**	*e*P	**Pn**	**17 42 02.8**	**-0.1**
PB03				*i* S	**Sn**	**17 42 11.5**	**-0.6**
PB03				IAML		17 42 12.0	
	comp=E,8μm,0.2s						
PB04	**IPOC Station P**	**0.54**	**177**	*e*P	**Pn**	**17 42 03.3**	**-0.3**
PB04				*i* S	**Sn**	**17 42 13.1**	**-0.2**
PB04				IAML		17 42 15.7	
	comp=N,5μm,0.1s						
PB09	**IPOC Station P**	**0.88**	**91**	⇑*i*P	**Pn**	**17 42 07.4**	**+0.1**
PB09				*i* S	**Sn**	**17 42 19.3**	**-0.6**
PB09				IAML		17 42 19.9	
	comp=N,4μm,0.2s						
PATCX	**Punta Patache**	**0.97**	**2**	⇓*i*P	**Pn**	**17 42 08.7**	**+0.4**
PATCX				*i* S	**Sn**	**17 42 22.2**	**+0.5**
PATCX				IAML		17 42 23.2	
	comp=E,4μm,0.5s						
PB01	**IPOC Station P**	**0.99**	**41**	⇑*i*P	**Pn**	**17 42 08.7**	**+0.2**
PB01				*i* S	**Sn**	**17 42 22.0**	**-0.2**
PB06	**IPOC Station P**	**1.07**	**148**	⇓*i*P	**Pn**	**17 42 09.1**	**-0.6**
PB06				*i* S	**Sn**	**17 42 23.1**	**-1.1**
TA01	**Diego Aracena**	**1.22**	**0**	⇓*i*P	**Pn**	**17 42 11.5**	**+0.1**
TA01				*i* S	**Sn**	**17 42 27.4**	**+0.1**
TA01				IAML		17 42 28.4	
	comp=N,2μm,0.5s						
LVC	**Limon Verde**	**1.44**	**125**	P	**Pn**	**17 42 15.0**	**+0.4**
	comp=N,44nm,0.3s,baz=12,slow=7.9,SNR=1030						
LVC				S	**Sn**	**17 42 32.6**	**-0.3**
	comp=N,240nm,0.3s,baz=326,slow=8.2,SNR=22						
LVC	**Limon Verde**	**1.44**	**125**	*e*P	**Pn**	**17 42 14.2**	**-0.4**
LVC				*i* S	**Sn**	**17 42 32.1**	**-0.8**
TA02	**Huaiquique**	**1.51**	**2**	*e*P	**Pn**	**17 42 15.6**	**+0.3**
TA02				*i* S	**Sn**	**17 42 34.4**	**+0.2**
TA02				IAML		17 42 34.7	
	comp=N,3μm,0.2s						
PB15	**IPOC Station P**	**1.56**	**155**	*e*P	**Pn**	**17 42 15.8**	**-0.2**
PB15				*i* S	**Sn**	**17 42 35.5**	**-0.1**
PB15				IAML		17 42 43.2	
	comp=E,2μm,0.3s						
PB10	**IPOC Station P**	**1.75**	**191**	⇑*i*P	**Pn**	**17 42 18.0**	**-0.4**
PB10				*i* S	**Sn**	**17 42 39.7**	**-0.1**
PB08	**IPOC Station P**	**1.90**	**31**	⇑*i*P	**Pn**	**17 42 21.5**	**+0.6**
PB08				*i* S	**Sn**	**17 42 43.6**	**-0.4**
PB08				IAML		17 42 47.5	
	comp=N,1μm,0.2s						
PB11	**IPOC Station P**	**2.08**	**14**	⇑*i*P	**Pn**	**17 42 22.9**	**-0.1**
PB11				*i* S	**Sn**	**17 42 46.8**	**-1.2**
PSGC	**Pisagua**	**2.18**	**2**	⇑*i*P	**Pn**	**17 42 24.1**	**-0.3**
PSGC				*i* S	**Sn**	**17 42 43.9**	**-6.6**
MNMC	**Minye Minye**	**2.70**	**12**	⇑*i*P	**Pn**	**17 42 31.7**	**+0.1**
MNMC				*i* S	**Sn**	**17 43 02.2**	**-1.1**
MNMC				IAML		17 43 13.1	
	comp=N,661nm,0.5s						
GO02	**Mina Guanaco**	**3.40**	**171**	⇓*i*P	**Pn**	**17 42 40.9**	**-0.2**
GO02				IAML		17 43 41.3	
	comp=E,168nm,0.3s						
LPAZ	**La Paz**	**5.81**	**20**	P	**Pn**	**17 43 16.7**	**+2.4**
	comp=E,1.0nm,0.3s,baz=169,slow=3.3,SNR=32						
SIV	**San Ignacio**	**10.37**	**58**	P	**Pn**	**17 44 13.1**	**-3.1**
	comp=E,1.0nm,0.3s,baz=254,slow=9.6,SNR=19						
H03N1	**Juan Fernandez**	**13.94**	**212**	T	T	17 59 30.9	
	baz=37,slow=72,SNR=84						
H03N2	**Juan Fernandez**	**13.95**	**212**	T	T	17 59 29.8	
	baz=37,slow=72,SNR=156						
H03N3	**Juan Fernandez**	**13.96**	**212**	T	T	17 59 29.2	
	baz=37,slow=72,SNR=176						
BDFB	**Brasília**	**21.86**	**78**	P	**P**	**17 46 38.9**	**+1.4**
	comp=E,1.8nm,0.5s,baz=243,slow=12,SNR=4.0						
PTGA	**Pitinga**	**23.18**	**27**	P	**P**	**17 46 51.6**	**+0.5**
	comp=E,2.0nm,0.4s,baz=207,slow=16,SNR=7.8						
NVAR	**Mina Array Bea**	**75.00**	**323**	P	**P**	**17 53 26.0**	**+1.6**
	comp=E,0.3nm,0.7s,baz=122,slow=4.4,SNR=2.3						
TORD	**Torodi Ar. Bea**	**78.57**	**71**	P	**P**	**17 53 43.5**	**-1.3**
	comp=E,0.2nm,0.3s,baz=257,slow=5.0,SNR=7.9						
YKA	**Yellowknife Ar**	**91.07**	**341**	P	**P**	**17 54 46.3**	**-0.2**
	comp=E,0.2nm,0.6s,baz=129,slow=4.9,SNR=2.9						
H11S2	**WAKE ISLAND Hyl**	**26.74**	**277**	T	T	20 20 34.3	
	baz=102,slow=74,SNR=43						
H11S1	**WAKE ISLAND Hyl**	**26.75**	**277**	T	T	20 20 34.7	
	baz=102,slow=74,SNR=51						
H11S3	**WAKE ISLAND Hyl**	**26.75**	**277**	T	T	20 20 35.7	
	baz=102,slow=74,SNR=52						
H11N3	**WAKE ISLAND Hyl**	**26.83**	**279**	T	T	20 20 36.1	
	baz=103,slow=75,SNR=42						
H11N2	**WAKE ISLAND Hyl**	**26.84**	**279**	T	T	20 20 41.6	
	baz=103,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hyl**	**26.85**	**279**	T	T	20 20 35.3	
	baz=103,slow=75,SNR=18						
WRA	**Warramunga Arr**	**132.09**	**212**	PKP	**PKPdf**	**18 00 57.0**	**+0.2**
	comp=E,0.6nm,1.2s,baz=153,slow=1.7,SNR=5.0						
MKAR	**Makanchi Array**	**146.56**	**35**	PKPbc	**PKPdf**	**18 01 22.5**	**+0.3**
	comp=E,0.2nm,0.7s,baz=29,slow=2.8,SNR=2.2						
MKAR				pPKPbc	pPKPbc	18 01 43.5	+0.1

	comp=E,0.6nm,0.8s,baz=330,slow=6.1,SNR=3.9						

*NEIC **12** 17:59:25.5±1.2,20°.7S±0°.1×178°.8W±0°.1, h590km±8km, mb4.3/32, Error ellipse: s-maj=18.4km s-min=15.4km az=62.0*
*IDC **12** 17:59:27.6±1.4,20°.88S×178°.84W, h606km±12km, mb3.5/20, mb1 3.6/23, mb1mx3.5/53, mbtmp4.4/23, Error ellipse: s-maj=20.9km s-min=11.4km az=144.0*

ISC 12 17:59:25.8±0.5,20°.91S±0°.09×178°.70W±0°.07, h600km, n116,σ1ºs12/122, mb4.1/35, 12C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.40**	**315**	P	**P**	**18 00 55.8**	**+1.4**
	13nm,0.3s,baz=263,slow=24,SNR=85						
MSVF				S	**S**	**18 02 08.4**	**+2.0**
	baz=93,slow=23,SNR=0.6						
MSVF	**Nonsavu**	**4.40**	**315**		**P**	**18 00 55.6**	**+1.3**
NIUE	**Niue**	**8.45**	**79**	P	**P**	**18 01 28.5**	**-1.0**
AFI	**Afiamalu**	**9.60**	**45**	P	**P**	**18 01 40.0**	**-0.8**
	2.4nm,0.3s,baz=223,slow=20,SNR=2.2						
AFI				S	**S**	**18 03 26.2**	**-5.3**
	2.2nm,0.3s,baz=25,slow=21,SNR=3.0						
AFI	**Afiamalu**	**9.60**	**45**	P	**P**	**18 01 39.4**	**-1.4**
DZM	**Mont Dzumac**	**13.88**	**263**	P	**P**	**18 02 23.2**	**-0.4**
	1.7nm,0.3s,baz=90,slow=20,SNR=15						
SANVU	**Saraoutou**	**14.45**	**290**	P	**P**	**18 02 28.3**	**-0.7**
URZ	**Urewera**	**17.67**	**191**	P	**P**	**18 02 58.4**	**+0.2**
	0.3nm,0.3s,baz=304,slow=22,SNR=1.5						
URZ				S	**S**	**18 05 47.6**	**-3.2**
	0.2nm,0.3s,baz=120,slow=23,SNR=1.2						
CTA	**Charters Tower**	**32.80**	**265**	P	**P**	**18 05 12.1**	**+0.6**
	3.8nm,0.7s,baz=82,slow=11,SNR=9.4						
PMG	**Port Moresby**	**34.80**	**284**	P	**P**	**18 05 28.5**	**+0.3**
	8.9nm,0.8s,baz=148,slow=9.5,SNR=2.9						
PMG	**Port Moresby**	**34.80**	**284**	P	**P**	**18 05 26.5**	**-1.7**
PMG				IAmb	IAmb	18 05 31.3	
	comp=Z,14nm,1.1s						
COEN	**Coen**	**36.95**	**274**	P	**P**	**18 05 45.3**	**-0.7**
COEN				IAmb	IAmb	18 05 48.0	
	comp=Z,5.7nm,1.1s						
STKA	**Stephens Creek**	**37.02**	**245**	P	**P**	**18 05 47.4**	**+1.0**
	comp=Z,3.6nm,1.1s,baz=73,slow=10,SNR=6.6						
STKA	**Stephens Creek**	**37.02**	**245**	P	**P**	**18 05 44.3**	**-2.0**
BBOO	**Buckleboo**	**41.78**	**244**	P	**P**	**18 06 24.7**	**+0.4**
BBOO				IAmb	IAmb	18 06 27.2	
	comp=E,5.0nm,1.1s						
JAY	**Jayapura**	**43.55**	**289**	P	**P**	**18 06 38.8**	**+0.3**
	comp=Z,13nm,0.5s,baz=149,slow=4.6,SNR=18						
WR0	**Warramunga Arr**	**43.70**	**263**	P	**P**	**18 06 39.0**	**-0.5**
AS31	**Alice Springs**	**43.78**	**257**	P	**P**	**18 06 40.6**	**+0.4**
ASAR	**Alice Springs**	**43.79**	**257**	P	**P**	**18 06 40.6**	**+0.4**
	comp=Z,6.3nm,0.7s,baz=93,slow=7.7,SNR=186						
ASAR				PcP	**PcP**	**18 08 13.7**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=99,slow=4.1,SNR=12						
ASAR				ScP	**ScP**	**18 11 10.1**	**+1.7**
	comp=Z,0.5nm,1.0s,baz=89,slow=5.0,SNR=4.5						
ASAR				S	**S**	**18 12 24.4**	**-4.2**
	comp=E,1.2nm,0.9s,baz=89,slow=16,SNR=10						
ASAR	**Alice Springs**	**43.79**	**257**	P	**P**	**18 06 40.0**	**-0.1**
WB0	**Warramunga Arr**	**43.87**	**263**	P	**P**	**18 06 40.8**	**0.0**
WB0				IAmb	IAmb	18 06 41.0	
	comp=Z,4.7nm,0.7s						
WB2	**Warramunga Arr**	**43.88**	**263**	P	**P**	**18 06 40.9**	**0.0**
WB2				IAmb	IAmb	18 06 41.0	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**43.89**	**263**	P	**P**	**18 06 40.9**	**-0.1**
	comp=Z,2.7nm,0.5s,baz=96,slow=7.5,SNR=41						
WRA	**Warramunga Arr**	**43.89**	**263**	P	**P**	**18 06 40.1**	**-0.9**
FORT	**Forrest**	**48.53**	**247**	P	**P**	**18 07 15.7**	**0.0**
KNRA	**Kununurra**	**49.98**	**267**	P	**P**	**18 07 26.9**	**+0.3**
KNRA				IAmb	IAmb	18 07 27.4	
	comp=Z,6.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.32**	**263**	P	**P**	**18 07 44.1**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=78,slow=2.9,SNR=21						
FITZ	**Fitzroy Crossi**	**52.32**	**263**	P	**P**	**18 07 44.0**	**+0.6**
SIJI	**Sorong**	**52.71**	**286**	P	**P**	**18 07 46.5**	**+0.2**
	comp=Z,15nm,0.7s,baz=109,slow=6.2,SNR=12						
SOEI	**Soe**	**55.86**	**272**	P	**P**	**18 08 09.0**	**+0.5**
BATI	**Baumata**	**56.28**	**272**	P	**P**	**18 08 12.2**	**+0.9**
	comp=Z,7.2nm,0.6s,baz=109,slow=2.8,SNR=2.4						
PSA00	**Pilbara Seismi**	**56.94**	**257**	P	**P**	**18 08 14.7**	**-0.9**
PSA00				IAmb	IAmb	18 08 16.4	
	comp=Z,8.2nm,0.8s						
MMRI	**Maumere**	**58.11**	**273**	P	**P**	**18 08 22.9**	**-0.8**
MMRI				IAmb	IAmb	18 08 24.7	
	comp=Z,8.6nm,0.6s						
MORW	**Morawa**	**59.07**	**248**	P	**P**	**18 08 30.2**	**+0.3**
GIRL	**Giralia**	**61.81**	**255**	P	**P**	**18 08 47.4**	**-0.6**
QSPA	**South Pole Qui**	**69.16**	**180**	P	**P**	**18 09 35.4**	**+2.3**
KKM	**Kota Kinabalu**	**69.23**	**285**	P	**P**	**18 09 34.2**	**-0.2**
KKM				IAmb	IAmb	18 09 35.4	
	comp=Z,6.0nm,0.6s						
UGM	**Wanagama**	**69.30**	**269**	P	**P**	**18 09 34.9**	**+0.1**
MJAR	**Matsushiro Arr**	**70.15**	**324**	P	**P**	**18 09 39.3**	**0.0**
	comp=Z,3.1nm,0.6s,baz=152,slow=5.8,SNR=13						
MJAR	**Matsushiro Arr**	**70.15**	**324**	P	**P**	**18 09 39.0**	**-0.3**
MAJO	**Matsushiro**	**70.15**	**324**	P	**P**	**18 09 38.4**	**-0.9**
MAJO				IAmb	IAmb	18 09 39.9	
	comp=Z,4.9nm,0.8s						
ADK	**Adak**	**72.50**	**1**	P	**P**	**18 09 52.5**	**0.0**
NACB	**Ninganchiao**	**73.36**	**305**	P	**P**	**18 09 57.1**	**-1.0**
NACB				IAmb	IAmb	18 09 58.0	
	comp=Z,14nm,0.8s						
TPUB	**Ta-pu**	**73.65**	**303**	P	**P**	**18 09 58.5**	**-1.3**
SSLB	**Suanglung**	**73.65**	**304**	P	**P**	**18 09 58.9**	**-0.9**
SSLB				IAmb	IAmb	18 09 59.6	
	comp=Z,8.5nm,0.6s						
PETK	**Petropavlovsk-**	**76.50**	**346**	P	**P**	**18 10 15.7**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=235,slow=3.6,SNR=13						
PETK	**Petropavlovsk-**	**76.50**	**346**	P	**P**	**18 10 15.1**	**+0.1**
KSRS	**Korea Array**	**76.76**	**319**	P	**P**	**18 10 17.8**	**+1.1**
	comp=Z,1.5nm,1.0s,baz=130,slow=5.5,SNR=4.3						
USRK	**Ussuriysk Ar.**	**78.93**	**326**	P	**P**	**18 10 29.7**	**+1.5**
	comp=Z,2.9nm,0.7s,baz=118,slow=3.6,SNR=7.2						
YBH	**Yreka Blue Hor**	**81.02**	**39**	P	**P**	**18 10 41.8**	**+2.5**
	comp=Z,2.5nm,0.6s,baz=304,slow=3.6,SNR=6.7						
NVAR	**Mina Array Bea**	**81.77**	**44**	P	**P**	**18 10 45.5**	**+2.2**
	comp=Z,1.1nm,0.6s,baz=225,slow=7.7,SNR=11						
KLR	**Kul'dur**	**82.54**	**330**	P	**P**	**18 10 47.5**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=176,slow=2.6,SNR=4.7						
TRF	**Thorofare Moun**	**86.98**	**12**	P	**P**	**18 11 08.0**	**-0.1**
TRF				IAmb	IAmb	18 11 09.1	
	comp=Z,9.3nm,0.8s						
RND	**Reindeer**	**87.24**	**13**	P	**P**	**18 11 08.8**	**-0.3**
MCK	**McKinley**	**87.51**	**13**	P	**P**	**18 11 08.9**	**-1.4**
MCK				IAmb	IAmb	18 11 12.3	
	comp=Z,4.0nm,0.7s						
TXAR	**Lajitas Array**	**87.83**	**58**	P	**P**	**18 11 15.5**	**+2.7**
	comp=Z,0.9nm,0.8s,baz=225,slow=6.7,SNR=10						
WRH	**Wood River Hil**	**88.34**	**13**	P	**P**	**18 11 14.3**	**+0.1**
WRH				IAmb	IAmb	18 11 14.8	
	comp=Z,5.4nm,0.7s						
CCB	**Clear Creek Bu**	**88.55**	**13**	P	**P**	**18 11 14.9**	**-0.3**
IMAR	**Indian Mountai**	**88.67**	**10**	P	**P**	**18 11 16.1**	**+0.5**
MDM	**Murphy Dome**	**88.74**	**12**	P	**P**	**18 11 15.9**	**-0.2**
MDM				IAmb	IAmb	18 11 16.8	
	comp=Z,3.1nm,0.7s						
ILAR	**Eielson Array**	**88.86**	**13**	P	**P**	**18 11 16.4**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=217,slow=5.1,SNR=31						
ILAR	**Eielson Array**	**88.86**	**13**	P	**P**	**18 11 15.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P	**P**	**18 11 23.1**	**+1.9**
	comp=Z,2.5nm,0.9s,baz=126,slow=3.0,SNR=21						
YKA	**Yellowknife Ar**	**97.16**	**25**	P	**P**	**18 11 55.1**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=238,slow=4.1,SNR=6.6						
ZALV	**Zalesovo Beam**	**110.39**	**321**	PKiKP	**PKiKP**	**18 16 49.6**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=73,slow=0.9,SNR=4.4						
MKAR	**Makanchi Array**	**111.00**	**313**	PKiKP	**PKiKP**	**18 16 51.2**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=143,slow=0.6,SNR=20						
KKAR	**Karatay Array**	**118.98**	**308**		**PKiKP**	**18 17 07.4**	**0.0**
ARCES	**ARCESS Array B**	**129.20**	**349**	PKP	**PKiKP**	**18 17 26.0**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=42,slow=2.0,SNR=16						
ARCES	**ARCESS Array B**	**129.20**	**349**		**PKiKP**	**18 17 26.3**	**-0.6**
FINES	**FINESS Array B**	**135.97**	**343**	PKhKP	PKPpre	18 17 26.8	
	comp=Z,3.3nm,1.0s,baz=42,slow=2.3,SNR=3.3						
FINES				PKP	**PKiKP**	**18 17 40.0**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=93,slow=3.8,SNR=5.8						
AKASG	**Malin Array Be**	**143.04**	**330**	PKhKP	PKPpre	18 17 49.7	
	comp=Z,8.0nm,0.4s,baz=43,slow=4.3,SNR=93						
AKBB	**Malin Array Si**	**143.04**	**330**		**PKPdf**	**18 17 49.9**	**-2.2**
LUNU	**Lund**	**144.15**	**348**	*i* P	**PKPdf**	**18 17 54.1**	**+0.2**
BR131	**Keskin Array S**	**146.62**	**311**		**PKiKP**	**18 18 01.9**	**-1.6**
BRTR	**Keskin Array B**	**146.62**	**311**	PKPbc	**PKPbc**	**18 18 01.6**	**0.0**
	comp=Z,3.1nm,0.6s,baz=140,slow=4.4,SNR=22						
BRTR	**Keskin Array B**	**146.62**	**311**		**PKPbc**	**18 18 01.8**	**+0.2**
TLCR		**146.85**	**323**	⇑P	**PKPbc**	**18 18 01.7**	**-0.1**
JURR	**Jurilovca**	**147.07**	**323**	⇑P	**PKiKP**	**18 18 03.1**	**-0.9**
BURAR	**Bucovina Array**	**147.09**	**330**		**PKPab**	**18 18 04.4**	**-1.6**
ANTO	**Ankara**	**147.15**	**312**		**PKiKP**	**18 18 03.6**	**-0.9**
TPGR	**Topolog**	**147.27**	**323**	⇑P	**PKiKP**	**18 18 04.2**	**-0.3**
VRI	**Vrincioaia**	**147.54**	**326**	⇑P	**PKiKP**	**18 18 04.1**	**-0.9**
PLOR	**Plostina**	**147.59**	**326**	⇑P	**PKiKP**	**18 18 04.0**	**-1.2**
HARR	**Harsova**	**147.65**	**323**	⇓P	**PKiKP**	**18 18 04.8**	**-0.5**
TRPA	**Tarpa**	**147.91**	**333**	⇑P	**PKiKP**	**18 18 04.7**	**-0.9**
NEHR	**Nehoiu**	**148.06**	**326**	⇑P	**PKPbc**	**18 18 04.6**	**-0.3**
OSTC	**Ostas**	**148.16**	**342**	*e*PKP	**PKiKP**	**18 18 06.2**	**0.0**
CHVC	**Chvalec**	**148.17**	**342**	*e*PKP	**PKiKP**	**18 18 06.0**	**-0.2**
MLR	**Muntele Rosu**	**148.20**	**326**	⇑P	**PKiKP**	**18 18 05.8**	**-0.8**
MLR	**Muntele Rosu**	**148.20**	**326**		**PKiKP**	**18 18 05.8**	**-0.8**
CLL	**Collm**	**148.30**	**346**	⇓*i*PKPbc	**PKiKP**	**18 18 05.9**	**-0.5**
	comp=Z,11nm,1.1s						
CLL				⇓*i*PKPab	**PKPab**	**18 18 10.9**	**+0.2**
	comp=Z,4.0nm,0.6s						
DPC	**Dobruska-Polom**	**148.31**	**342**	*e*PKP	**PKiKP**	**18 18 06.2**	**-0.3**
DPC				*ex*	x	18 18 11.3	
KRLC	**Kraliky**	**148.41**	**341**	*e*PKP	**PKiKP**	**18 18 06.2**	**-0.6**
MORC	**Moravsky Berou**	**148.43**	**340**	*e*PKP	**PKiKP**	**18 18 06.8**	**0.0**
MORC				*e*		18 18 12.2	
VOIR		**148.70**	**327**	⇑P	**PKiKP**	**18 18 06.6**	**-0.9**
PRU	**Pruhonice**	**149.14**	**343**	*e*PKP	**PKiKP**	**18 18 07.8**	**-0.4**
VRAC	**Vranov**	**149.15**	**340**	*e*PKP	**PKiKP**	**18 18 08.5**	**+0.2**
KRUC	**Moravsky**	**149.42**	**340**	*e*PKP	**PKiKP**	**18 18 08.9**	**+0.1**
KRUC				*e*		18 18 15.8	
KHC	**Kasperske Hory**	**150.18**	**344**	*e*PKP	**PKiKP**	**18 18 10.3**	**-0.1**
KHC				*ex*	x	18 18 19.5	
CKRC	**Cesky Krumlov**	**150.26**	**343**	*e*PKP	**PKiKP**	**18 18 10.2**	**-0.4**
PLVB	**Pleven**	**150.31**	**324**	⇑P	**PKiKP**	**18 18 11.3**	**+0.5**
GERES	**GERESS Array B**	**150.41**	**343**	PKPbc	**PKiKP**	**18 18 11.1**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=40,slow=3.0,SNR=19						
HERR	**Herculane**	**150.41**	**329**	⇓P	**PKiKP**	**18 18 11.0**	**+0.1**
CONA	**Conrad Observa**	**150.59**	**340**	*i* P	**PKiKP**	**18 18 11.8**	**+0.5**
	comp=Z,2.1nm,0.5s,SNR=6.7						
MDVR	**Moldovita**	**150.82**	**329**	⇑P	**PKiKP**	**18 18 11.8**	**-0.1**
MORH	**Mrgy, Hungar**	**151.04**	**335**	⇓P	**PKiKP**	**18 18 12.3**	**+0.1**
MOA	**Molln**	**151.15**	**342**	*i* P	**PKiKP**	**18 18 12.4**	**-0.1**
	comp=Z,0.8nm,0.4s						
VTS	**Vitosha**	**151.58**	**325**	⇑P	**PKiKP**	**18 18 14.1**	**+0.4**
SOKA	**Soboth**	**151.96**	**340**	*i* P	**PKiKP**	**18 18 13.9**	**-0.3**
	comp=Z,0.9nm,0.4s						
KBA	**Koelnbreinsper**	**152.12**	**342**	*i* P	**PKiKP**	**18 18 14.2**	**-0.5**
	comp=Z,1.8nm,0.6s						
WATA	**Walderalm**	**152.35**	**345**	*i* P	**PKiKP**	**18 18 15.1**	**0.0**
	comp=Z,2.1nm,0.4s						
WTTA	**Wattenberg**	**152.40**	**345**	*i* P	**PKiKP**	**18 18 15.4**	**+0.1**
	comp=Z,4.1nm,0.3s,SNR=8.4						
MYKA	**Terra Mystica**	**152.44**	**341**	*i* P	**

JOW	**Kunigami**	**13.20 258**	LR	LR	18 48 29.9		
	comp=Z,48nm,21.4s,baz=290,slow=35						
ASAJ	**Asahikawa**	**13.61 360**	Pn	**Pn**	**18 43 55.8**	**-3.2**	
	0.4nm,0.3s,baz=302,slow=25,SNR=2.0						
ASAJ			Sn	Sn	18 46 12.6	-18	
	0.1nm,0.3s,baz=359,slow=22,SNR=1.4						
KSRS	**Korea Array**	**14.10 303**	Pn	**Pn**	**18 44 07.3**	**+1.5**	
	0.1nm,0.3s,baz=111,slow=12,SNR=5.4						
KSRS			LR	LR	18 49 35.1		
	comp=Z,37nm,18.9s,baz=120,slow=37						
YOJ	**Yonaguni jima**	**18.48 256**	P	**P**	**18 45 01.6**	**-0.5**	
NACB	**Ninganchiao**	**19.78 257**	P	**P**	**18 45 16.6**	**+0.1**	
NACB			IAmb	IAmb	18 45 41.3		
	comp=Z,24nm,1.2s						
YULB	**Yu-li**	**20.35 255**	P	**P**	**18 45 23.1**	**+0.5**	
YULB			IAmb	IAmb	18 45 29.7		
	comp=Z,27nm,1.1s						
KLR	**Kul'dur**	**20.49 339**	P	**P**	**18 45 25.2**	**+1.2**	
	comp=Z,1.2nm,0.5s,baz=132,slow=11,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**24.80 113**	T	T	19 11 54.6		
	baz=304						
H11S1	**WAKE ISLAND Hy**	**24.80 113**	T	T	19 11 58.8		
	baz=304						
H11S2	**WAKE ISLAND Hy**	**24.82 113**	T	T	19 11 52.7		
	baz=304						
SONM	**Songino Array**	**32.69 312**	P	**P**	**18 47 20.8**	**+2.2**	
	comp=Z,1.5nm,0.8s,baz=112,slow=9.0,SNR=11						
SONM	**Songino Array**	**32.69 312**	P	**P**	**18 47 17.4**	**-1.2**	
SEY	**Seymchan**	**33.05 8**	P	**P**	**18 47 22.1**	**+0.7**	
	comp=Z,0.9nm,0.5s,baz=214,slow=5.8,SNR=8.6						
CMAR	**Chiang Mai Arr**	**41.37 264**	P	**P**	**18 48 33.0**	**+0.5**	
	comp=Z,0.4nm,0.7s,baz=61,slow=6.0,SNR=6.7						
CMAR	**Chiang Mai Arr**	**41.37 264**	P	**P**	**18 48 33.5**	**+0.9**	
ZALV	**Zalesovo Beam**	**47.29 317**	P	**P**	**18 49 20.0**	**+0.6**	
	comp=Z,0.4nm,0.5s,baz=90,slow=10,SNR=1.9						
ZALV			PcP	**PcP**	**18 50 51.0**	**+0.6**	
	comp=Z,0.6nm,0.4s,baz=64,slow=3.4,SNR=3.1						
MK31	**Makanchi Array**	**48.74 307**	P	**P**	**18 49 31.1**	**+0.3**	
MKAR	**Makanchi Array**	**48.74 307**	P	**P**	**18 49 30.1**	**-0.8**	
	comp=Z,0.7nm,0.6s,baz=83,slow=9.9,SNR=14						
MKAR	**Makanchi Array**	**48.74 307**	P	**P**	**18 49 32.4**	**+1.5**	
WB0	**Warramunga Arr**	**50.60 190**	P	**P**	**18 49 45.6**	**+0.4**	
WR0	**Warramunga Arr**	**50.77 190**	P	**P**	**18 49 46.7**	**+0.3**	
WR0			IAmb	IAmb	18 49 47.5		
	comp=Z,3.7nm,0.7s						
WB2	**Warramunga Arr**	**50.78 190**	P	**P**	**18 49 47.0**	**+0.5**	
WRA	**Warramunga Arr**	**50.78 190**	P	**P**	**18 49 46.9**	**+0.4**	
	comp=Z,4.2nm,0.6s,baz=11,slow=7.9,SNR=44						
WRA			PcP	**PcP**	**18 51 03.8**	**+0.4**	
	comp=Z,0.7nm,0.8s,baz=358,slow=3.4,SNR=1.9						
WRA	**Warramunga Arr**	**50.78 190**	P	**P**	**18 49 45.9**	**-0.6**	
AS31	**Alice Springs**	**54.50 190**	P	**P**	**18 50 14.5**	**+0.4**	
AS31			IAmb	IAmb	18 50 18.0		
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**54.50 190**	P	**P**	**18 50 14.4**	**+0.3**	
	comp=Z,2.4nm,0.5s,baz=5.2,slow=6.6,SNR=103						
ASAR	**Alice Springs**	**54.50 190**	P	**P**	**18 50 14.3**	**+0.2**	
ILAR	**Eielson Array**	**54.53 30**	P	**P**	**18 50 13.3**	**-0.5**	
	comp=Z,0.5nm,0.6s,baz=258,slow=5.9,SNR=7.9						
KKAR	**Karatay Array**	**57.53 304**	P	**P**	**18 50 35.4**	**-0.3**	
INK	**Inuvik**	**59.77 25**	P	**P**	**18 50 50.5**	**-0.2**	
	comp=Z,0.9nm,0.4s,baz=276,slow=4.4,SNR=5.3						
INK	**Inuvik**	**59.77 25**	P	**P**	**18 50 50.5**	**-0.2**	
INK			IAmb	IAmb	18 50 56.1		
	comp=Z,2.5nm,1.3s						
ABKAR	**Akbulak array**	**63.10 313**	P	**P**	**18 51 13.9**	**+0.2**	
ABKAR			IAmb	IAmb	18 51 16.9		
	comp=Z,1.5nm,0.8s						
ABKAR	**Akbulak array**	**63.10 313**	P	**P**	**18 51 12.8**	**-0.8**	
YKA	**Yellowknife Ar**	**68.95 29**	P	**P**	**18 51 51.0**	**0.0**	
	comp=Z,1.0nm,0.7s,baz=292,slow=6.0,SNR=17						
FINES	**FINESS Array B**	**75.13 334**	P	**P**	**18 52 28.6**	**+0.6**	
	comp=Z,6.0nm,1.0s,baz=97,slow=4.6,SNR=8.4						
KBZ	**Khabaz**	**76.06 313**	P	**P**	**18 52 34.2**	**+0.5**	
	comp=Z,2.2nm,0.8s,baz=30,slow=2.7,SNR=9.2						
NVAR	**Mina Array Bea**	**78.07 52**	P	**P**	**18 52 46.0**	**+0.6**	
	comp=Z,1.5nm,0.7s,baz=290,slow=5.5,SNR=11						
NVAR	**Mina Array Bea**	**78.07 52**	P	**P**	**18 52 45.8**	**+0.3**	
AKASG	**Malin Array Be**	**80.17 324**	P	**P**	**18 52 56.9**	**+0.5**	
	comp=Z,1.0nm,0.5s,baz=50,slow=5.9,SNR=5.1						
NOA	**NORSAR Array B**	**80.65 338**	P	**P**	**18 52 58.8**	**-0.1**	
	comp=Z,3nm,1.0s,baz=3,slow=3.2,SNR=2.1						
PDAR	**Pinedale Array**	**81.49 45**	P	**P**	**18 53 04.1**	**+0.2**	
	comp=Z,0.2nm,0.4s,baz=255,slow=1.8,SNR=3.5						
BRTR	**Keskin Array B**	**84.05 313**	P	**P**	**18 53 18.2**	**+1.0**	
	comp=Z,1.3nm,0.8s,baz=114,slow=3.8,SNR=9.5						
TXAR	**Lajitas Array**	**93.20 53**	P	**P**	**18 54 00.9**	**-0.2**	
	comp=Z,0.5nm,0.5s,baz=305,slow=3.1,SNR=9.7						
LPAZ	**La Paz**	**148.47 70**	PKPbc	**PKPbc**	**19 00 34.0**	**-0.4**	
	comp=Z,2.8nm,0.8s,baz=56,slow=3.5,SNR=11						
PLCA	**Paso Flores**	**151.23 120**	PKPbc	**PKiKP**	**19 00 41.0**	**+0.7**	
	comp=Z,0.9nm,0.6s,baz=259,slow=3.5,SNR=3.1						

IDC ***12*** *18:49:08.0±2.0,5˚.51S×153˚.38E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/41, mbtmp3.6/8, ML1.4/1, Error ellipse: s-maj=67.4km s-min=22.2km az=122.0*

ISC 12 18:49:14.2±1.8,5˚.5S±0˚.3×153˚.1E±0˚.3, h35km, n9, σ1°36/10, mb3.5/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.08 236**		Pn	**Pn**	**18 50 57.1**	**+1.7**
	0.3nm,0.3s,baz=263,slow=10,SNR=1.0						
PMG				Sn	**Sn**	**18 52 12.1**	**-2.6**
	1.4nm,0.3s,baz=172,slow=23,SNR=5.1						
WRA	**Warramunga Arr**	**23.25 230**		P	**P**	**18 54 19.0**	**+0.4**
	1.1nm,0.8s,baz=54,slow=9.6,SNR=7.3						
ASAR	**Alice Springs**	**25.87 224**		P	**P**	**18 54 43.0**	**+0.2**
	0.5nm,0.9s,baz=57,slow=9.4,SNR=5.8						
CMAR	**Chiang Mai Arr**	**58.48 295**		P	**P**	**18 59 07.4**	**+0.2**
	0.3nm,0.5s,baz=110,slow=5.2,SNR=3.4						
PETK	**Petropavlovsk-**	**58.50 3**		P	**P**	**18 59 06.2**	**-0.6**
	2.1nm,0.9s,baz=156,slow=6.2,SNR=5.9						
SONM	**Songino Array**	**67.07 328**		P	**P**	**19 00 04.2**	**0.0**
	0.2nm,0.5s,baz=130,slow=4.2,SNR=2.0						
MKAR	**Makanchi Array**	**81.05 319**		P	**P**	**19 01 26.8**	**+1.1**
	0.3nm,0.7s,baz=96,slow=6.2,SNR=2.8						
ILAR	**Eielson Array**	**82.67 22**		P	**P**	**19 01 32.8**	**-1.0**
	0.3nm,0.7s,baz=249,slow=5.1,SNR=2.3						
TORD	**Torodi Ar. Bea**	**150.82 287**		PKPbc	**PKPbc**	**19 09 03.4**	**-0.6**
	0.7nm,0.8s,baz=80,slow=1.4,SNR=2.4						

MAN ***12*** *18:49:13.1,5˚.99N×126˚.70E, h99km, MS4.3*
DJA ***12*** *18:49:20.3±0.6,6˚.N±3˚×12˚.6E±˚, h10km, M4.5/9, mB5.0/5, mb4.8/8, MLv4.6/9, Mw(mB)4.3/5*
IDC ***12*** *18:49:20.2±2.4,6˚.62N×126˚.66E, h49km±23km, mb3.7/7, mb1 3.9/10, mb1mx3.5/46, mbtmp4.1/10, ML3.9/3, MS4.1/1, Ms1 4.1/1, ms1mx2.5/48, Error ellipse: s-maj=33.9km s-min=12.3km az=60.0*

ISC 12 18:49:19.8±0.7,6˚.53N±0˚.04×126˚.62E±0˚.07, h35km, n36, σ2°73/44, mb3.8/8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.00 245**		*e*P	**Pn**	**18 49 34.9**	**-2.4**
DDMP				*e*S	**Sn**	**18 49 48.4**	**-1.7**
DAV	**Davao City (W)**	**1.16 297**		P	**Pn**	**18 49 39.4**	**-0.2**
	95nm,0.3s,baz=94,slow=2.4,SNR=45						
DAV				S	**Sn**	**18 49 55.1**	**+0.9**
	130nm,0.3s,baz=289,slow=23,SNR=5.3						
DAV				LR	LR	18 50 08.0	
	comp=Z,234nm,21.8s,baz=360,slow=41						
KCP	**Kidapawan**	**1.59 287**		⇓*i*P	**Pn**	**18 49 44.7**	**-0.8**
KCP				*i* S	**Sn**	**18 49 58.8**	**-6.1**
BUKP	**Musuan**	**2.04 311**		*e*P	**Pn**	**18 49 51.2**	**-0.6**
BUKP				*e*S	**Sn**	**18 50 18.3**	**+2.2**
BUTP	**Butuan**	**2.62 338**		*e*P	**Pn**	**18 50 02.5**	**+3.0**
BUTP				*e*S	Sn	18 50 41.2	+11
CGP	**Cagayan de Oro**	**2.70 315**		⇓*e*P	**Pn**	**18 50 03.8**	**+3.1**
SGSI	**Sangihe**	**3.03 201**		P	**Pn**	**18 50 07.6**	**+2.4**
SGSI				S	**Sn**	**18 50 42.9**	**+2.6**
GLSP	**General Luna,**	**3.27 351**		*e*P	**Pn**	**18 50 10.2**	**+1.7**
GLSP				*e*S	**Sn**	**18 50 49.6**	**+3.4**
PAGZ	**Pagadian**	**3.47 292**		*e*P	**Pn**	**18 50 10.2**	**-1.1**
PAGZ				*e*S	Sn	18 50 35.3	-16
MSLP	**Maasin**	**3.98 334**		*e*P	**Pn**	**18 50 19.1**	**+0.7**
MSLP				*e*S	**Sn**	**18 51 11.0**	**+7.2**
LLP	**Lapu-Lapu**	**4.59 325**		*e*P	**Pn**	**18 50 29.5**	**+2.8**
LLP				*e*S	**Sn**	**18 51 21.8**	**+3.0**
TNTI	**Ternate**	**5.77 173**		P	**Pn**	**18 50 46.1**	**+3.2**
	0.2nm485nm38nm,0.8s						
KMSI	**Cibinong**	**6.48 204**		P	**Pn**	**18 50 53.9**	**+1.2**
	0.4nm111nm,0.8s						

GTOI	**Gorontalo**	**6.87 212**		P	**Pn**	**18 50 57.5**	**-0.6**
	0.3nm886nm115nm,0.7s						
GTOI				S	**Sn**	**18 52 10.1**	**-5.1**
	0.3nm886nm115nm,0.7s						
MRSI	**Marisa**	**7.61 218**		P	**Pn**	**18 51 09.0**	**+0.7**
	0.3nm747nm87nm,0.8s						
LUWI	**Luwuk**	**8.45 207**		P	**Pn**	**18 51 23.1**	**+3.4**
	1µm187nm,0.9s						
LUWI				S	**Sn**	**18 52 56.7**	**+2.8**
	1µm187nm,0.9s						
SANI	**Sanana**	**8.55 184**		P	**Pn**	**18 51 21.0**	**-0.1**
	16nm,0.8s						
SIJI	**Sorong**	**8.69 148**		P	**Pn**	**18 51 25.2**	**+2.1**
	0.8nm,0.3s,baz=259,slow=23,SNR=8.2						
SIJI				S	**Sn**	**18 52 55.5**	**-4.5**
	baz=28,slow=23,SNR=1.2						
APSI	**Ampana**	**8.90 214**		P	**Pn**	**18 51 28.5**	**+2.5**
LQP	**Lukban**	**9.04 327**	⇑	*e*P	**Pn**	**18 51 27.1**	**-1.0**
KAPI	**Kappang**	**13.36 211**		P	**Pn**	**18 52 27.5**	**+0.5**
	1.5nm,0.3s,baz=51,slow=13,SNR=4.1						
SOEI	**Soe**	**16.35 188**		P	**P**	**18 53 12.5**	**+3.1**
BATI	**Baumata**	**16.89 190**		P	**Pn**	**18 53 13.8**	**+0.2**
	0.2nm,0.3s,baz=12,slow=23,SNR=1.1						
TWSI	**Taliwang, Sumb**	**18.01 213**		P	**P**	**18 53 32.9**	**+5.2**
LEM	**Lembang**	**23.14 235**		P	**P**	**18 54 23.9**	**+0.5**
	14nm,0.8s,baz=331,slow=22,SNR=4.4						
FITZ	**Fitzroy Crossi**	**24.49 182**		P	**P**	**18 54 36.4**	**+0.5**
	1.8nm,0.5s,baz=26,slow=10,SNR=7.4						
WRA	**Warramunga Arr**	**27.38 164**		P	**P**	**18 55 01.1**	**-1.0**
	1.1nm,0.6s,baz=342,slow=10,SNR=11						
ASAR	**Alice Springs**	**30.84 167**		P	**P**	**18 55 33.0**	**+0.2**
	0.4nm,0.5s,baz=336,slow=6.7,SNR=10						
ASAR				PcP	**PcP**	**18 58 28.3**	**-1.1**
	0.3nm,0.6s,baz=351,slow=1.9,SNR=1.8						
STKA	**Stephens Creek**	**40.78 160**		P	**P**	**18 56 56.9**	**-0.9**
	3.0nm,1.0s,baz=342,slow=14,SNR=2.2						
H11N1	**WAKE ISLAND Hy**	**41.23 68**		T	T	19 41 49.1	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**41.24 68**		T	T	19 41 53.5	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**41.25 68**		T	T	19 41 50.3	
	baz=265						
SONM	**Songino Array**	**44.63 341**		P	**P**	**18 57 27.6**	**-1.4**
	0.1nm,0.3s,baz=150,slow=6.7,SNR=2.0						
MKAR	**Makanchi Array**	**55.22 324**		P	**P**	**18 58 46.9**	**-2.4**
	0.3nm,0.5s,baz=118,slow=6.3,SNR=6.7						
NRIK	**Noril'sk**	**67.70 346**		P	**P**	**19 00 12.1**	**-1.1**
	1.1nm,0.5s,baz=166,slow=8.3,SNR=1.5						
ARU	**Arti**	**72.53 327**		LR	LR	19 35 10.4	
	comp=Z,105nm,18.3s,baz=174,slow=38						

IDC ***12*** *18:54:51.6±0.7,23˚.71N×125˚.61E, h0km, mb4.0/19, mb1 4.1/23, mb1mx4.0/40, mbtmp4.0/23, ML3.7/4, MS3.3/12, Ms1 3.3/12, ms1mx3.0/53, Error ellipse: s-maj=19.0km s-min=12.9km az=99.0*
BJI ***12*** *18:54:55.5±0.0, 23˚.72N×125˚.46E, h19km, mB4.6/16, mb4.2/22, Ms4.1/9, Ms7 4.0/7*
JMA ***12*** *18:54:55.9±0.1, 23˚.78N×125˚.48E, h81km, MS3.7*
NIED ***12*** *18:54:55.9, 23˚.78N×125˚.48E, h81km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr-0.31; Mθθ0.42; Mφφ-0.11; Mrθ2.62; Mθφ2.45; Mφr-0.53; Fault plane solution: M₀3.64000×10¹⁵ NP1: φs272.00000°, δ86.00000°, λ-47.00000°. NP2:φs7.00000°, δ43.00000°, λ-174.00000°.*
NEIC ***12*** *18:54:56.2±1.7, 23˚.68N±0˚.09×125˚.59E±0˚.08, h32km±5km, mb4.3/26 Error ellipse: s-maj=13.9km s-min=9.3km az=151.0*

ISC 12 18:54:55.3±2.2, 23˚.70N±0˚.05×125˚.56E±0˚.05, h24km±16km, n101, σ1°32/106, mb4.1/33, MS3.3/12, 1D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ2	**Miyako jima3**	**1.06 348**		P	**Pn**	**18 55 14.6**	**-0.1**
JMJ2				*e*S	**Sb**	**18 55 29.1**	**+0.6**
JOGS	**Gusukube**	**1.07 352**		P	**Pn**	**18 55 15.0**	**+0.2**
JIRB	**Irabujima**	**1.18 343**		P	**Pn**	**18 55 16.0**	**-0.4**
JIRB				*e*S	**Sn**	**18 55 31.1**	**-0.6**
JTJ	**Tarama**	**1.23 320**		P	**Pn**	**18 55 16.5**	**-0.5**
JTJ				S	**Sn**	**18 55 32.1**	**-0.7**
JIKM	**Ikemajima**	**1.25 347**		P	**Pn**	**18 55 17.2**	**-0.3**
JIKM				*e*S	**Sn**	**18 55 32.6**	**-0.9**
JISG	**Ishigakijimahi**	**1.45 308**		P	**Pn**	**18 55 19.5**	**-0.5**
JISG				*e*S	**Sn**	**18 55 36.5**	**-1.8**
JIJ	**Ishigaki jima**	**1.46 297**		P	**Pn**	**18 55 19.6**	**-0.6**
JIJ				S	**Sn**	**18 55 36.7**	**-1.8**
JKRS	**Kuro-shima**	**1.52 291**		P	**Pn**	**18 55 20.8**	**-0.2**
JKRS				*e*S	**Sn**	**18 55 39.5**	**-0.6**
HATJ	**Hateruma jima**	**1.65 283**		P	**Pn**	**18 55 22.1**	**-0.7**
HATJ				S	**Sn**	**18 55 41.9**	**-1.3**
IRIF	**Iriomote-Funau**	**1.79 291**		P	**Pn**	**18 55 24.4**	**-0.4**
IRIF				*e*S	**Sn**	**18 55 45.5**	**-1.3**
YOJ	**Yonaguni jima**	**2.45 289**		P	**Pn**	**18 55 33.5**	**-0.4**
YOJ				*e*S	**Sn**	**18 56 00.7**	**-2.4**
YOJ	**Yonaguni jima**	**2.45 289**		Pn	**Pn**	**18 55 33.5**	**-0.4**
JYNG	**Yonaguniji maku**	**2.51 288**		P	**Pn**	**18 55 34.2**	**-0.4**
JYNG				*e*S	**Sn**	**18 56 02.3**	**-2.2**
JKE	**Kume jima 2**	**2.84 23**		P	**Pn**	**18 55 38.7**	**-0.5**
JKE				*e*S	**Sn**	**18 56 11.3**	**-1.4**
NACB	**Ninganchiao**	**3.66 278**			**Pn**	**18 55 49.2**	**-1.3**
YULB	**Yu-li**	**3.93 266**		Pn	**Pn**	**18 55 51.9**	**-2.3**
TATO	**Taipei**	**3.93 290**			**Pn**	**18 55 54.5**	**+0.4**
YHNB	**Yeheng**	**3.94 285**		Pn	**Pn**	**18 55 54.7**	**+0.2**
JOW	**Kunigami**	**3.97 38**		Pn	**Pn**	**18 55 54.0**	**-0.7**
	41nm,0.3s,baz=166,slow=12,SNR=218						
JOW				Sn	**Sn**	**18 56 37.4**	**-3.2**
	19nm,0.3s,baz=104,slow=27,SNR=12						
JOW	**Kunigami**	**3.97 38**			**Pn**	**18 55 54.3**	**-0.4**
TWG	**Pinlang**	**4.22 259**			**Pn**	**18 55 55.5**	**-2.7**
SSLB	**Suanglung**	**4.22 272**		Pn	**Pn**	**18 55 58.5**	**+0.2**
TPUB	**Ta-pu**	**4.55 266**			**Pn**	**18 56 02.1**	**-0.6**
JMZ	**Minamidaito 2**	**5.56 67**			**Pn**	**18 56 13.8**	**-2.8**
SGCP	**Mt. Cagua**	**6.34 212**		*e*P	**Pn**	**18 56 24.5**	**-2.9**
APYP	**Conner**	**7.07 216**		*e*P	**Pn**	**18 56 34.3**	**-3.1**
CAUP	**Cauayan**	**7.58 208**		*e*P	**Pn**	**18 56 47.8**	**+3.4**
JSU	**Suzuyama**	**8.90 28**		Pn	**Pn**	**18 57 03.2**	**+0.6**
JCNP	**Jose Panganiba**	**9.74 197**		*e*P	**Pn**	**18 57 10.3**	**-3.8**
QVP	**Quezon City--P**	**10.00 206**		*e*P	**Pn**	**18 57 16.8**	**-0.8**
LQP	**Lukban**	**10.27 202**		⇓*i*P	**Pn**	**18 57 20.9**	**-0.6**
JNU	**Nakatsue**	**10.49 25**		Pn	**Pn**	**18 57 22.2**	**-2.0**
	0.6nm,0.3s,baz=214,slow=7.3,SNR=1.5						
JNU	**Nakatsue**	**10.49 25**		Pn	**Pn**	**18 57 23.8**	**-0.5**
BOAC	**Boac**	**10.78 200**		*e*P	**Pn**	**18 57 32.0**	**+3.8**
LUBP	**Lubang**	**11.11 208**		*e*P	**Pn**	**18 57 34.6**	**+1.8**
BUSP	**Coron**	**12.70 205**		*e*P	**Pn**	**18 57 54.9**	**+0.4**
KSRS	**Korea Array**	**13.86 8**		Pn	**Pn**	**18 58 09.4**	**-0.9**
	0.1nm,0.3s,baz=190,slow=13,SNR=10						
KSRS				LR	LR	19 03 24.1	
	comp=Z,66nm,20.3s,baz=190,slow=37						
DAV	**Davao City (W)**	**16.53 180**		LR	LR	19 06 28.1	
	comp=Z,66nm,18.4s,baz=317,slow=42						
MAT	**Matsushiro**	**16.82 38**		P	**P**	**18 58 52.0**	**+0.8**
MJAR	**Matsushiro Arr**	**16.82 38**		Pn	**Pn**	**18 58 47.5**	**-1.7**
	0.0nm,0.3s,baz=220,slow=10,SNR=1.9						
MJAR	**Matsushiro Arr**	**16.82 38**		P	**P**	**18 58 50.6**	**-0.6**
MJB9	**Matsu-Tunnel**	**16.82 38**		Pn	**Pn**	**18 58 46.7**	**-2.5**
MJB9				IAmb	IAmb	18 59 06.5	
	comp=Z,21nm,0.7s						
HHC	**Hu-ho-hao-te**	**20.75 329**		*e*P	Pn	18 59 37.3	+0.4
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.4s						
HHC				LR	LR		
	comp=Z,270nm,11.1s						
HHC				LR	LR		
	comp=Z,250nm,11.3s						
HHC				LR	LR		
	comp=Z,320nm,10.9s						
USRK	**Ussuriysk Ar.**	**21.12 13**		P	**P**	**18 59 38.0**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=183,slow=10.0,SNR=9.0						
USRK	**Ussuriysk Ar.**	**21.12 13**		P	**P**	**18 59 38.6**	**+0.4**
TNTI	**Ternate**	**22.86 175**		P	**P**	**18 59 59.3**	**+2.2**
	comp=Z,14nm,1.2s						
TOLI2	**Tolitoli**	**22.93 192**		P	**P**	**18 59 57.3**	**-0.5**
TOLI2				IAmb	IAmb	19 00 00.0	
	comp=Z,10nm,0.9s						
JEW	**Emiwo**	**23.18 31**		P	**P**	**18 59 59.9**	**-0.3**
ASAJ	**Asahikawa**	**24.70 30**		P	**P**	**19 00 13.9**	**-0.7**
	comp=Z,7.6nm,0.7s,baz=167,slow=6.5,SNR=11						
ASAJ				LR	LR	19 11 09.5	

	comp=Z,83nm,18.2s,baz=80,slow=40						
JKA	**Kamikawa-asahi**	**24.70 30**		P	**P**	**19 00 14.4**	**-0.1**
JKA				IAmb	IAmb	19 00 29.4	
	comp=Z,9.3nm,0.9s						
SBUM	**Sibu**	**24.76 213**		P	**P**	**19 00 13.3**	**-2.0**
SBUM				IAmb	IAmb	19 00 17.0	
	comp=Z,15nm,1.0s						
SIJI	**Sorong**	**25.04 166**		LR	LR	19 08 12.9	
	comp=Z,49nm,20.1s,baz=336,slow=32						
CHTO	**Chiang Mai**	**25.26 264**		P	**P**	**19 00 18.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**25.36 263**		P	**P**	**19 00 21.4**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=63,slow=8.6,SNR=18						
CMAR				LR	LR	19 11 56.1	
	comp=Z,63nm,18.8s,baz=70,slow=40						
KLR	**Kul'dur**	**25.95 9**		P	**P**	**19 00 24.6**	**-1.2**
	comp=Z,4.9nm,0.9s,baz=238,slow=5.7,SNR=13						
GTA	**Gaotai**	**26.83 312**		P	P	19 00 42.8	+8.7
GTA				pP	pwP	19 00 52.5	+8.8
GTA				sP	sP	19 00 56.8	+14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,84nm,5.8s						
GTA				LR	LR		
	comp=N,120nm,16.4s						
GTA				LR	LR		
	comp=E,140nm,17.1s						
GTA				LR	LR		
	comp=Z,100nm,15.3s						
SONM	**Songino Array**	**28.52 332**		P	**P**	**19 00 48.3**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=151,slow=12,SNR=9.9						
SONM				LR	LR	19 13 44.9	
	comp=Z,109nm,18.0s,baz=122,slow=40						
SONM	**Songino Array**	**28.52 332**		P	**P**	**19 00 48.4**	**-0.7**
KAPI	**Kappang**	**29.09 192**		LR	LR	19 12 09.3	
	comp=Z,22nm,20.9s,baz=48,slow=36						
TLY	**Talaya**	**32.63 334**		LR	LR	19 16 18.3	
	comp=Z,86nm,19.1s,baz=131,slow=39						
PSI	**Prapat**	**33.09 235**		P	**P**	**19 01 30.0**	**+0.3**
	comp=Z,8.0nm,0.9s,baz=0.2,slow=6.8,SNR=5.2						
GSI	**Gunungsitoli**	**35.09 235**		P	**P**	**19 01 47.1**	**+0.2**
WMQ	**Urumqi**	**36.91 312**		*e*P	**P**	**19 02 03.3**	**+0.9**
KNRA	**Kununurra**	**39.26 175**		P	**P**	**19 02 21.3**	**-0.9**
KNRA				IAmb	IAmb	19 02 26.1	
	comp=Z,6.2nm,1.1s						
MK31	**Makanchi Array**	**41.50 315**		P	**P**	**19 02 41.1**	**+0.5**
MK31				IAmb	IAmb	19 02 42.1	
	comp=Z,5.7nm,1.4s						
MKAR	**Makanchi Array**	**41.50 315**		P	**P**	**19 02 40.5**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=97,slow=9.2,SNR=39						
MKAR	**Makanchi Array**	**41.50 315**		P	**P**	**19 02 41.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**41.54 180**		P	**P**	**19 02 39.9**	**-1.2**
	comp=Z,3.6nm,0.8s,baz=22,slow=7.7,SNR=9.0						
FITZ				LR	LR	19 22 32.8	
	comp=Z,4.3nm,18.4s,baz=124,slow=40						
FITZ	**Fitzroy Crossi**	**41.54 180**		P	**P**	**19 02 40.4**	**-0.6**
FITZ				IAmb	IAmb	19 02 44.8	
	comp=Z,4.1nm,0.9s						
ZAA0	**Zalesovo Array**	**42.87 325**		P	**P**	**19 02 51.1**	**-0.5**
ZALV	**Zalesovo Beam**	**42.87 325**		P	**P**	**19 02 51.0**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=112,slow=8.1,SNR=8.4						
ZALV				LR	LR	19 21 31.4	
	comp=Z,44nm,19.6s,baz=190,slow=37						
ZALV	**Zalesovo Beam

	SNR=11								
KST	**Kastek**	**5.45**	**22**	*e*P		Pn	19 14 37.4	+4.8	
	5.9nm,0.7s								
KST				*e*S		Sn	19 15 58.6	+24	
	16nm,0.5s								
KK31	**Karatay Array**	**5.50**	**339**	⇓P		**Pn**	**19 14 31.1**	**-2.1**	
	6.4nm,0.3s,baz=162,slow=14,SNR=122								
KK31				⇓S		Sn	19 15 27.4	-8.3	
	28nm,0.3s,baz=169,slow=25,SNR=28								
DGS	**Degeres**	**5.58**	**19**	*e*P		Pn	19 14 41.8	+7.5	
	4.8nm,0.3s								
DGS				*e*S		Sn	19 16 06.3	+29	
	8.7nm,0.9s								
TNSS	**Tian-Shan**	**5.77**	**28**	*e*P		Pn	19 14 44.6	+7.5	
	2.4nm,0.4s								
TNSS				*e*S		Sn	19 16 11.6	+29	
	4.8nm,0.7s								
MDOK	**Medeo**	**5.92**	**28**	*e*P		Pn	19 14 44.2	+5.4	
	1.5nm,0.7s								
MDOK				*e*S		Sn	19 16 10.2	+24	
	5.2nm,0.5s								
THN	**Thein Dam**	**5.92**	**159**	*e*P		**Pn**	**19 14 43.5**	**+4.8**	
THN				*e*S		**Sn**	**19 15 45.5**	**-0.1**	
KRBS	**Karabastau**	**5.98**	**17**	*e*P		Pn	19 14 49.6	+10	
	3.0nm,0.6s								
KRBS				*e*S		Sn	19 16 19.9	+33	
	4.1nm,0.7s								
KOTS	**Kotyrbulak**	**6.00**	**28**	*e*P		Pn	19 14 47.7	+7.7	
	5.2nm,0.6s								
KOTS				*e*S		Sn	19 16 16.3	+28	
	12nm,0.8s								
DHRM	**DHARAMSHALA**	**6.26**	**155**	*e*P		**Pn**	**19 14 44.8**	**+1.1**	
DHRM				*e*S		**Sn**	**19 15 51.1**	**-3.2**	
DHRM				IAML			19 15 53.3		
	comp=E,163nm,0.4s								
DHRM				IAML			19 15 55.1		
	comp=N,187nm,0.3s								
KTBS	**Karatobe**	**6.27**	**24**	*e*P		Pn	19 14 49.9	+6.4	
	comp=N,1.8nm,0.6s								
KTBS				*e*S		Sn	19 16 20.5	+26	
	comp=N,12nm,0.5s								
KUU	**Kurty**	**6.33**	**21**	*e*P		Pn	19 14 54.9	+11	
	comp=N,2.8nm,0.8s								
KUU				*e*S		Sn	19 16 28.9	+33	
	comp=N,4.6nm,0.4s								
SMLA	**Simla**	**7.58**	**154**	*e*P		**Pn**	**19 15 02.7**	**+1.7**	
SMLA				*e*S		**Sn**	**19 16 21.2**	**-4.5**	
SMLA				IAML			19 16 23.8		
	comp=E,175nm,0.5s								
SMLA				IAML			19 16 26.2		
	comp=N,155nm,0.4s								
DDI	**Dehra Dun**	**8.64**	**151**	*e*S		**Sn**	**19 16 46.3**	**-4.9**	
DDI				IAML			19 16 50.1		
	comp=N,110nm,0.3s								
DDI				IAML			19 16 50.6		
	comp=E,96nm,0.4s								
MKAR	**Makanchi Array**	**11.04**	**34**	P		**Pn**	**19 15 46.6**	**-0.1**	
	comp=E,0.2nm,0.3s,baz=226,slow=14,SNR=13								
GEYT	**Alibeck**	**11.94**	**274**	P		Pn	19 15 51.8	-6.8	
	comp=E,1.3nm,0.3s,baz=120,slow=8.5,SNR=21								
PYUN	**Piuthan**	**12.81**	**138**	*e*P		**Pn**	**19 16 10.8**	**+0.6**	
KURBB	**Kurchatov Arra**	**13.17**	**15**	P		**Pn**	**19 16 12.3**	**-2.0**	
	comp=E,0.1nm,0.3s,baz=206,slow=12,SNR=8.2								
KOLN	**Koldanda**	**13.40**	**137**	*e*P		**Pn**	**19 16 18.9**	**+1.2**	
	comp=E,13nm,0.4s								
GKN	**Gorkha**	**13.81**	**133**	*e*P		**Pn**	**19 16 23.2**	**+0.4**	
	comp=E,16nm,0.4s								
KKN	**Kakani**	**14.34**	**132**	*e*P		**Pn**	**19 16 29.9**	**+0.3**	
	comp=E,19nm,0.5s								
DMN	**Daman**	**14.38**	**133**	*e*P		**Pn**	**19 16 30.3**	**+0.3**	
PKIN	**Phulchoki**	**14.57**	**132**	*e*P		**Pn**	**19 16 32.9**	**+0.4**	
	comp=E,12nm,0.4s								
PKI	**Pulchoki**	**14.58**	**132**	*e*P		**Pn**	**19 16 33.6**	**+0.9**	
	comp=E,17nm,0.5s								
GUN	**Gumba**	**14.61**	**130**	*e*P		**Pn**	**19 16 33.5**	**+0.4**	
AB31	**Akbulak array**	**14.78**	**324**	⇓P		**Pn**	**19 16 31.8**	**-2.8**	
	comp=E,1.1nm,0.4s,baz=130,slow=13,SNR=37								
AB31				⇑S		Sn	19 18 57.0	-22	
	comp=E,2.3nm,0.5s,baz=244,slow=64,SNR=7.6								
JIRN	**Jiri**	**14.98**	**130**	*e*P		**Pn**	**19 16 38.7**	**+1.0**	
	comp=E,9.9nm,0.3s								
BHPL	**Bhopal**	**15.15**	**165**	*e*P		Pn	19 16 33.9	-5.6	
BHPL				IAmb		IAmb	19 16 34.6		
	comp=Z,4.8nm,0.3s								
BHPL				*e*S		Sn	19 19 13.4	-14	
BVAR	**Borovoye Array**	**15.15**	**353**	P		**Pn**	**19 16 37.4**	**-1.8**	
	comp=Z,0.2nm,0.3s,baz=163,slow=26,SNR=10								
RAMN	**Ramite**	**15.75**	**131**	*e*P		**Pn**	**19 16 47.9**	**+0.8**	
TAPN	**Taplejung**	**16.14**	**127**	*e*P		**P**	**19 16 53.1**	**+0.8**	
	comp=Z,13nm,0.6s								
AKTO	**Aktyubinsk**	**16.50**	**324**	P		**P**	**19 16 54.4**	**-1.3**	
	comp=Z,0.4nm,0.3s,baz=123,slow=11,SNR=9.2								
ZALV	**Zalesovo Beam**	**17.82**	**23**	P		**Pn**	**19 17 12.0**	**+0.4**	
	comp=Z,0.7nm,0.3s,baz=211,slow=11,SNR=28								
ARU	**Arti**	**20.88**	**337**	P		**P**	**19 17 43.0**	**-0.2**	
	comp=Z,0.6nm,0.5s,baz=154,slow=7.3,SNR=4.9								
SONM	**Songino Array**	**26.02**	**57**	P		**P**	**19 18 35.0**	**+2.8**	
	comp=Z,0.3nm,0.7s,baz=262,slow=10.0,SNR=2.8								
FINES	**FINESS Array B**	**37.27**	**324**	P		**P**	**19 20 10.6**	**+0.5**	
	comp=Z,2.5nm,1.0s,baz=122,slow=10,SNR=6.9								
ARCES	**ARCESS Array B**	**40.46**	**336**	P		**P**	**19 20 37.4**	**+0.9**	
	comp=Z,0.5nm,0.5s,baz=116,slow=8.1,SNR=5.9								
NOA	**NORSAR Array B**	**44.28**	**322**	P		**P**	**19 21 07.8**	**+0.3**	
	comp=Z,0.3nm,0.5s,baz=110,slow=7.4,SNR=1.1								
YKA	**Yellowknife Ar**	**79.65**	**4**	P		**P**	**19 25 05.0**	**+1.5**	
	comp=Z,0.3nm,0.4s,baz=354,slow=5.4,SNR=12								

IDC ***12*** *19:13:51.9±2.5,5˙.40S×147˙.68E, h178km±22km, mb3.6/7, mb1 3.7/11, mb1mx3.3/46, mbtmp4.0/11, Error ellipse: s-maj=27.4km s-min=18.3km az=94.0*

NEIC ***12*** *19:13:54.5±2.5,5˙.6S±0˙.1×147˙.8E±0˙.2, h209km±9km, mb4.5/16, Error ellipse: s-maj=28.2km s-min=12.1km az=133.0*

ISC 12 19:13:50.7±0.8,**5˚.42S**±0˙.07×**147˚.7E**±0˙.1,**h170**km,**n31,** σ1º**17**/32,**mb4.3**/12,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.99**	**187**	P		**Pn**		**19 14 53.4**	**+2.0**
	6.0nm,0.3s,baz=18,slow=10,SNR=27								
PMG				S		**Sn**		**19 15 37.2**	**-1.6**
	12nm,0.3s,baz=259,slow=23,SNR=16								
RABL	**Rabaul**	**4.63**	**75**	Pn		Pn		19 15 05.0	+5.3
JAY	**Jayapura**	**7.53**	**292**	P		**Pn**		**19 15 38.7**	**+0.8**
	0.5nm,0.3s,baz=142,slow=6.4,SNR=7.6								
JAY				S		**Sn**		**19 17 01.5**	**-1.0**
	0.4nm,0.3s,baz=26,slow=19,SNR=1.4								
COEN	**Coen**	**9.57**	**207**	Pn		**Pn**		**19 16 06.5**	**+1.7**
CTA	**Charters Tower**	**14.64**	**185**	P		**P**		**19 17 12.2**	**+0.5**
	0.2nm,0.3s,baz=353,slow=8.4,SNR=2.0								
PATS	**Pohnpei**	**16.16**	**41**	P		**P**		**19 17 27.5**	**-0.9**
MTN	**Manton Dam**	**17.91**	**245**	P		**Pn**		**19 17 48.8**	**-0.6**
WB0	**Warramunga Arr**	**19.25**	**221**	P		**P**		**19 18 03.2**	**+1.0**
WB0				IAmb		IAmb		19 18 07.3	
	comp=Z,9.6nm,0.7s								
WR0	**Warramunga Arr**	**19.29**	**220**	P		**P**		**19 18 03.7**	**+1.0**
WR0				IAmb		IAmb		19 18 04.0	
	comp=Z,11nm,0.6s								
WRAB	**Tennant Creek**	**19.39**	**221**	P		**P**		**19 18 04.5**	**+0.8**
WB2	**Warramunga Arr**	**19.40**	**221**	P		**P**		**19 18 04.8**	**+0.9**
WRA	**Warramunga Arr**	**19.41**	**221**	P		**P**		**19 18 04.8**	**+0.9**
	comp=Z,3.3nm,0.3s,baz=48,slow=11,SNR=212								
WRA	**Warramunga Arr**	**19.41**	**221**	P		**P**		**19 18 03.5**	**-0.5**
KNRA	**Kununurra**	**21.18**	**240**	P		**P**		**19 18 22.4**	**-0.5**
KNRA				IAmb		IAmb		19 18 26.0	
	comp=Z,16nm,1.0s								
AS31	**Alice Springs**	**22.47**	**215**	P		**P**		**19 18 37.1**	**+1.1**
AS31				IAmb		IAmb		19 18 37.9	
	comp=Z,4.4nm,0.3s								
ASAR	**Alice Springs**	**22.47**	**215**	P		**P**		**19 18 37.0**	**+1.0**
	comp=Z,5.5nm,0.5s,baz=46,slow=8.9,SNR=140								
ASAR	**Alice Springs**	**22.47**	**215**	P		**P**		**19 18 35.5**	**-0.5**
BATI	**Baumata**	**24.25**	**257**	P		**P**		**19 18 53.1**	**+0.9**
	comp=Z,8.9nm,0.4s,baz=88,slow=5.4,SNR=8.7								
FITZ	**Fitzroy Crossi**	**24.94**	**238**	P		**P**		**19 18 59.0**	**+0.6**
	comp=Z,6.7nm,0.4s,baz=56,slow=11,SNR=59								
FITZ	**Fitzroy Crossi**	**24.94**	**238**	P		**P**		**19 18 59.0**	**+0.6**
FITZ				IAmb		IAmb		19 19 01.6	
	comp=Z,8.0nm,0.5s								
MMRI	**Maumere**	**25.45**	**261**	P		**P**		**19 19 01.9**	**-1.2**
MMRI				IAmb		IAmb		19 19 13.4	
	comp=Z,5.6nm,0.6s								
STKA	**Stephens Creek**	**26.93**	**191**	P		**P**		**19 19 16.3**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=335,slow=12,SNR=3.1								
STKA	**Stephens Creek**	**26.93**	**191**	P		**P**		**19 19 13.7**	**-2.5**
BBOO	**Buckleboo**	**29.33**	**200**	P		**P**		**19 19 35.7**	**-1.8**
BBOO				IAmb		IAmb		19 19 39.9	
	comp=Z,8.3nm,1.1s								
CAN	**Canberra**	**29.78**	**178**	P		**P**		**19 19 39.1**	**-2.3**
CAN				IAmb		IAmb		19 19 52.4	
	comp=Z,5.5nm,0.9s								
FORT	**Forrest**	**31.25**	**214**	P		**P**		**19 19 55.0**	**+0.6**
MORW	**Morawa**	**38.06**	**228**	P		**P**		**19 20 51.6**	**-1.2**
SONM	**Songino Array**	**64.23**	**330**	P		**P**		**19 24 08.3**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=134,slow=4.2,SNR=2.6								
MKAR	**Makanchi Array**	**77.48**	**320**	P		**P**		**19 25 27.5**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=101,slow=6.3,SNR=4.7								
ILAR	**Eielson Array**	**84.69**	**23**	P		**P**		**19 26 05.3**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=266,slow=4.8,SNR=6.3								
TORD	**Torodi Ar. Bea**	**145.59**	**285**	PKPbc		**PKPbc**		**19 33 10.2**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=89,slow=3.3,SNR=2.0								

SKO ***12*** *19:17:55.1,40˙.92N×22˙.22E, h15km*
ISK ***12*** *19:17:55.7,40˙.98N×22˙.19E, h8km, ML2.6/2*
ATH ***12*** *19:17:56.3,40˙.89N×22˙.23E, h8km±3km, ML2.3/15, Error ellipse: s-maj=3.4km s-min=0.9km az=347.0*
THE ***12*** *19:17:56.2,40˙.91N×22˙.22E, h0km±1km, ML2.4/9, Error ellipse: s-maj=1.1km s-min=0.3km az=331.0*
BEO ***12*** *19:17:57.0±0.3,40˙.95N×22˙.21E, h0km, ML2.3/10*

ISC 12 19:17:56.3±0.8,**40˚.92N**±0˙.02×**22˚.22E**±0˙.01,**h10**km±6km, **n84,** σ0º**95**/129,**11C-13D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.14**	**75**	P		**Pg**		**19 17 59.2**	**-0.3**
GRG				S		**Sg**		**19 18 01.7**	**-0.2**
GRG				AML		AML		19 18 03.1	
	comp=N,16066μm,0.4s								
GRG				AML		AML		19 18 03.2	
	comp=E,7982μm,0.2s								
GRG	**Griva**	**0.14**	**75**	P		**Pg**		**19 17 59.2**	**-0.3**
GRG				S		**Sg**		**19 18 01.5**	**-0.3**
	comp=E,6μm,0.3s								
GRG	**Griva**	**0.14**	**75**	PG		**Pg**		**19 17 59.3**	**-0.3**
GRG				SG		**Sg**		**19 18 02.3**	**+0.5**
GRG	**Griva**	**0.14**	**75**	⇓*i*Pg		**Pg**		**19 17 59.2**	**-0.3**
GRG				*i* Sg		**Sg**		**19 18 02.1**	**+0.2**
VAY	**Valandovo**	**0.48**	**33**	*e*Pg		**Pg**		**19 18 05.5**	**-0.2**
VAY				*e*Sg		**Sg**		**19 18 12.5**	**+0.4**
VAY	**Valandovo**	**0.48**	**33**	⇑*i*Pg		**Pg**		**19 18 05.5**	**-0.2**
VAY				*i* Sg		**Sg**		**19 18 12.6**	**+0.6**
VAY				*e*Lg		Lg		19 18 13.6	
	comp=E,423nm,0.5s								
VAY				*e*Lg		Lg		19 18 14.0	
	comp=N,569nm,0.5s								
KTI	**Kastanea**	**0.53**	**189**	P		**Pg**		**19 18 06.6**	**-0.1**
KNT	**Kendrikon**	**0.57**	**64**	P		**Pg**		**19 18 07.2**	**-0.2**
KNT				S		**Sg**		**19 18 15.0**	**+0.2**
KNT				AML		AML		19 18 16.2	
	comp=E,484μm,0.3s								
KNT				AML		AML		19 18 20.0	
	comp=N,641μm,0.4s								
KNT	**Kendrikon**	**0.57**	**64**	P		**Pg**		**19 18 07.2**	**-0.2**
KNT				S		**Sg**		**19 18 15.4**	**+0.6**
	comp=N,268nm,0.2s								
KNT	**Kendrikon**	**0.57**	**64**	PG		**Pg**		**19 18 07.1**	**-0.2**
KNT				SG		**Sg**		**19 18 15.4**	**+0.6**
KNT	**Kendrikon**	**0.57**	**64**	⇓*i*Pg		**Pg**		**19 18 07.2**	**-0.2**
KNT				*i* Sg		**Sg**		**19 18 15.6**	**+0.8**
THE	**Thessaloniki**	**0.63**	**117**	P		**Pg**		**19 18 07.9**	**-0.6**
THE				AML		AML		19 18 22.8	
	comp=E,386μm,0.3s								
THE				AML		AML		19 18 22.9	
	comp=N,499μm,0.5s								
THE	**Thessaloniki**	**0.63**	**117**	P		**Pg**		**19 18 08.0**	**-0.6**
THE	**Thessaloniki**	**0.63**	**117**	*i* Pg		**Pg**		**19 18 08.2**	**-0.3**
THE				*i* Sg		**Sg**		**19 18 17.3**	**+0.4**
FNA	**Florina**	**0.66**	**258**	P		**Pg**		**19 18 08.5**	**-0.5**
FNA				AML		AML		19 18 26.9	
	comp=N,586μm,0.4s								
FNA				AML		AML		19 18 28.2	
	comp=E,585μm,0.3s								
FNA	**Florina**	**0.66**	**258**	P		**Pg**		**19 18 08.4**	**-0.5**
FNA				S		**Sg**		**19 18 17.8**	**+0.2**
FNA	**Florina**	**0.66**	**258**	*e*Pg		**Pg**		**19 18 08.3**	**-0.7**
FNA				*e*Sg		**Sg**		**19 18 16.4**	**-1.2**
FNA	**Florina**	**0.66**	**258**	PG		**Pg**		**19 18 08.5**	**-0.5**
FNA				SG		**Sg**		**19 18 17.9**	**+0.2**
FNA	**Florina**	**0.66**	**258**	⇓*i*Pg		**Pg**		**19 18 08.5**	**-0.5**
FNA				*i* Sg		**Sg**		**19 18 17.9**	**+0.2**
KZN	**Kozani**	**0.70**	**209**	P		**Pg**		**19 18 09.3**	**-0.6**
KZN				S		**Sg**		**19 18 19.7**	**+0.6**
	comp=E,332nm,0.6s								
HORT	**Hortiatis**	**0.74**	**115**	P		**Pg**		**19 18 09.7**	**-1.0**
HORT				AML		AML		19 18 27.4	
	comp=E,531μm,0.6s								
HORT				AML		AML		19 18 29.6	
	comp=N,338μm,0.6s								
HORT	**Hortiatis**	**0.74**	**115**	P		**Pg**		**19 18 09.8**	**-0.8**
HORT				S		**Sg**		**19 18 20.6**	**+0.3**
	comp=N,220nm,0.5s								
HORT	**Hortiatis**	**0.74**	**115**	PG		**Pb**		**19 18 11.2**	**-0.2**
HORT				SG		**Sb**		**19 18 22.7**	**+1.1**
STIP	**Stip**	**0.78**	**358**	⇑*i*Pg		**Pb**		**19 18 11.9**	**-0.1**
STIP				*i* Sg		**Sn**		**19 18 24.5**	**-0.5**
LIT	**Litokhoron**	**0.84**	**166**	P		**Pg**		**19 18 11.0**	**-1.5**
LIT				AML		AML		19 18 30.4	
	comp=E,244μm,0.3s								
LIT				AML		AML		19 18 32.8	
	comp=N,190μm,0.3s								
LIT	**Litokhoron**	**0.84**	**166**	P		**Pg**		**19 18 11.7**	**-0.9**
LIT	**Litokhoron**	**0.84**	**166**	*i* Pg		**Pg**		**19 18 11.8**	**-0.7**
SOH	**Sokhos**	**0.86**	**96**	P		**Pg**		**19 18 12.3**	**-0.6**
SOH				AML		AML		19 18 31.7	
	comp=E,1929μm,0.4s								
SOH				AML		AML		19 18 32.5	
	comp=N,786μm,0.3s								
SOH	**Sokhos**	**0.86**	**96**	P		**Pg**		**19 18 12.4**	**-0.6**
SOH				S		**Sb**		**19 18 25.2**	**+0.1**
	comp=N,545nm,0.4s								
SOH	**Sokhos**	**0.86**	**96**	*i* Pg		**Pg**		**19 18 12.4**	**-0.6**
SOH				*i* Sg		**Sb**		**19 18 25.1**	**0.0**
NEST	**Nestorio**	**1.02**	**241**	P		**Pg**		**19 18 15.2**	**-0.8**
NEST				AML		AML		19 18 35.3	
	comp=N,669μm,0.8s								
NEST				AML		AML		19 18 36.1	
	comp=E,302μm,0.5s								
NEST	**Nestorio**	**1.02**	**241**	P		**Pg**		**19 18 15.3**	**-0.8**
NEST				S		**Sb**		**19 18 30.3**	**+0.5**
	comp=E,182nm,0.7s								
SRS	**Serrai**	**1.06**	**79**	P		**Pg**		**19 18 15.5**	**-1.2**
SRS				AML		AML		19 18 35.1	
	comp=N,190μm,0.4s								
SRS				AML		AML		19 18 37.3	
	comp=E,205μm,0.6s								
SRS	**Serrai**	**1.06**	**79**	P		**Pg**		**19 18 15.8**	**-0.8**
SRS	**Serrai**	**1.06**	**79**	*e*Pg		**Pg**		**19 18 15.4**	**-1.2**
SRS				*e*Sg		**Sg**		**19 18 29.6**	**-0.8**
SRS	**Serrai**	**1.06**	**79**	*i* Pg		**Pg**		**19 18 15.8**	**-0.8**
SRS				*i* Sg		**Sn**		**19 18 32.2**	**+0.2**
PLG	**Polygyros**	**1.08**	**120**	P		**Pg**		**19 18 16.4**	**-0.7**
PLG				AML		AML		19 18 37.5	
	comp=N,565μm,0.6s								
PLG				AML		AML		19 18 38.4	
	comp=E,336μm,0.4s								
PLG	**Polygyros**	**1.08**	**120**	P		**Pg**		**19 18 16.7**	**-0.4**
PLG				S		**Sb**		**19 18 31.9**	**+0.6**
	comp=E,232nm,0.5s								
OHR	**Ohrid**	**1.09**	**281**	*i* Pg		**Pg**		**19 18 16.3**	**-1.0**
OHR				*i* Sg		**Sb**		**19 18 32.4**	**+0.7**
OHR				*e*Lg		Lg		19 18 34.0	
	comp=N,66nm,0.6s								
OHR				*e*Lg		Lg		19 18 35.1	
	comp=E,112nm,0.7s								
PENT	**Pentalofos**	**1.10**	**229**	P		**Pg**		**19 18 17.1**	**-0.3**
PENT	**Pentalofos**	**1.10**	**229**	P		**Pg**		**19 18 17.1**	**-0.3**
KPRO	**Kipourio**	**1.17**	**214**	P		**Pg**		**19 18 18.0**	**-0.7**
SKO	**Skopje**	**1.21**	**331**	*e*Pg		**Pb**		**19 18 19.2**	**-0.1**
SKO				*e*Sg		**Sg**		**19 18 33.9**	**-1.2**
SKO	**Skopje**	**1.21**	**331**	*i* Pg		**Pb**		**19 18 19.1**	**-0.1**
SKO				*i* Sg		**Sg**		**19 18 34.5**	**-0.6**
NVR	**Nevrokopi**	**1.31**	**70**	P		**Pn**		**19 18 20.6**	**-0.2**
NVR				AML		AML		19 18 42.6	
	comp=E,133μm,0.6s								
NVR				AML		AML		19 18 44.6	
	comp=N,147μm,0.8s								
NVR	**Nevrokopi**	**1.31**	**70**	P		**Pn**		**19 18 20.6**	**-0.2**
THL	**Klokotos Trika**	**1.36**	**187**	P		**Pn**		**19 18 21.2**	**-0.1**
THL				AML		AML		19 18 46.6	
	comp=E,312μm,0.6s								
THL				AML		AML		19 18 49.4	
	comp=N,158μm,1.2s								
THL	**Klokotos Trika**	**1.36**	**187**	P		**Pn**		**19 18 21.7**	**+0.3**
OUR	**Ouranopolis**	**1.46**	**113**	P		**Pn**		**19 18 23.2**	**+0.5**
OUR				AML		AML		19 18 48.8	
	comp=N,520μm,0.5s								
OUR				AML		AML		19 18 50.5	
	comp=E,356μm,0.4s								
OUR	**Ouranopolis**	**1.46**	**113**	P		**Pb**		**19 18 23.4**	**-0.1**
OUR				S		**Sg**		**19 18 43.9**	**+0.6**
	comp=E,195nm,0.7s								
OUR	**Ouranopolis**	**1.46**	**113**	PN		**Pb**		**19 18 23.5**	**-0.1**
PAIG	**Paliouri**	**1.49**	**131**	P		**Pn**		**19 18 22.6**	**-0.6**
PAIG				AML		AML		19 18 50.5	
	comp=E,185μm,0.5s								
PAIG				AML		AML		19 18 51.5	
	comp=N,378μm,0.6s								
PAIG	**Paliouri**	**1.49**	**131**	P		**Pn**		**19 18 22.9**	**-0.3**
PAIG				S		**Sg**		**19 18 44.2**	**0.0**
	comp=N,142nm,0.6s								
BOSS	**Bosilegrad**	**1.59**	**7**	*e*Pg		**Pb**		**19 18 25.3**	**-0.5**
BOSS				*e*Sg		**Sg**		**19 18 46.8**	**-0.6**
GJIK	**Gjilan**	**1.65**	**339**	*i* Pn		**Pb**		**19 18 26.9**	**0.0**
GJIK				*i* Sg		**Sg**		**19 18 48.9**	**-0.5**
PRZK	**Prizren**	**1.69**	**320**	*i* Pn		**Pb**		**19 18 27.7**	**+0.1**
PRZK				*i* Sg		**Sg**		**19 18 51.4**	**+0.6**
KAVA	**Kavala**	**1.74**	**87**	P		**Pn**		**19 18 27.0**	**+0.5**
KAVA				AML		AML		19 18 56.7	
	comp=N,184μm,0.5s								
KAVA				AML		AML		19 19 00.6	
	comp=E,146μm,0.5s								
KAVA	**Kavala**	**1.74**	**87**	P		**Pn**		**19 18 26.9**	**+0.3**
VTS	**Vitosha**	**1.86**	**24**	*e*Pg		**Pb**		**19 18 29.6**	**-0.9**
VTS				*e*Sg		**Sb**		**19 18 53.9**	**0.0**
VTS	**Vitosha**	**1.86**	**24**	⇑P		**Pb**		**19 18 30.4**	**-0.1**
VTS				⇓S		**Sb**		**19 18 54.4**	**+0.5**
VTS	**Vitosha**	**1.86**	**24**	*i* Pn		**Pn**		**19 18 29.4**	**+1.0**
VTS				*i* Sg		**Sb**		**19 18 53.6**	**-0.3**
AGG	**Agios Georgios**	**1.90**	**177**	PN		**Pb**		**19 18 30.4**	**-0.6**
BARS	**Barje**	**1.92**	**351**	*e*Pn		**Pn**		**19 18 29.7**	**+0.6**
BARS				*e*Sg		**Sb**		**19 18 56.3**	**+0.8**
BARS	**Barje**	**1.92**	**351**	*i* Pn		**Pn**		**19 18 28.6**	**-0.5**
THAS	**Thassos island**	**1.92**	**99**	P		**Pn**		**19 18 29.0**	**-0.1**
IGT	**Igoumenitsa**	**2.00**	**227**	*e*Pn		**Pb**		**19 18 33.7**	**+0.9**
PLD	**Plovdiv**	**2.21**	**57**	*e*Pn		**Pn**		**19 18 34.7**	**+1.7**
PLD				*e*Sn		**Sn**		**19 19 01.6**	**+1.2**
ZAPS	**Zavoj**	**2.37**	**7**	*e*Pn		**Pn**		**19 18 37.7**	**-1.5**
SELS	**Selova**	**2.44**	**341**	*e*Pn		**Pn**		**19 18 36.5**	**+0.2**
PDG	**Podgorica**	**2.69**	**305**	⇓P		**Pn**		**19 18 41.4**	**+1.8**
PDG				⇑S		**Sn**		**19 19 11.7**	**-0.5**
BLKB	**Belogradchik**	**2.72**	**7**	*e*Pn		**Pn**		**19 18 41.5**	**+1.3**
BLKB				*e*Sn		**Sn**		**19 19 14.8**	**+1.6**
BLKB	**Belogradchik**	**2.72**	**7**	⇑S		**Sn**		**19 19 12.9**	**-0.3**
PLVB	**Pleven**	**3.04**	**35**	⇓P		**Pb**		**19 18 48.6**	**-2.0**
PLVB				⇓S		**Sb**		**19 19 24.7**	**-3.1**
IVAS	**Ivanjica**	**3.07**	**331**	*e*Pn		**Pn**		**19 18 46.7**	**+1.8**
GRUS	**Gruza**	**3.17**	**340**	*e*Pn		**Pn**		**19 18 47.8**	**+1.5**
DIVS	**Divibare**	**3.58**	**333**	*e*Pn		**Pn**		**19 18 52.8**	**+0.8**
MDVR	**Moldovita**	**3.88**	**355**	⇑P		**Pn**		**19 18 56.9**	**+0.8**
MDVR				⇓S		**Sn**		**19 19 40.5

JHO	**Hitachi**	**2.71**	**258**	⇓	P		**Pn**	**19**	**25**	**43.3**	**-1.8**
JMK	**Ichinoseki**	**2.73**	**311**		P		**Pn**	**19**	**25**	**44.3**	**-1.0**
JMK					S		**Sn**	**19**	**26**	**14.3**	**-3.9**
JOU	**Okura**	**2.80**	**296**	⇓	P		**Pn**	**19**	**25**	**45.6**	**-0.6**
JFT	**Otama**	**2.84**	**278**	⇓	P		**Pn**	**19**	**25**	**46.4**	**-0.4**
JFT					*e*S		**Sn**	**19**	**26**	**17.9**	**-3.0**
JOM	**Ohasama**	**3.04**	**319**	⇓	P		**Pn**	**19**	**25**	**48.8**	**-0.8**
JOM					S		**Sn**	**19**	**26**	**22.4**	**-3.6**
JYT	**Yasato**	**3.11**	**253**		Pn		**Pn**	**19**	**25**	**49.1**	**-1.5**
JYK	**Kaneyama**	**3.26**	**303**	⇓	P		**Pn**	**19**	**25**	**52.1**	**-0.5**
JYK					S		**Sn**	**19**	**26**	**29.3**	**-2.0**
BSO1	**Boso 1**	**3.46**	**224**	⇓	P		**Pn**	**19**	**25**	**53.8**	**-1.0**
BSO1					*e*S		**Sn**	**19**	**26**	**32.7**	**-2.8**
JAG	**Ashikaga**	**3.63**	**259**	⇓	P		**Pn**	**19**	**25**	**56.7**	**-1.0**
JAG					S		**Sn**	**19**	**26**	**35.8**	**-4.7**
JANG	**Nango**	**3.67**	**331**		P		**Pn**	**19**	**25**	**56.9**	**-1.3**
JANG					S		**Sn**	**19**	**26**	**36.3**	**-5.0**
JNS	**Sasagawa**	**3.67**	**281**		P		**Pn**	**19**	**25**	**58.4**	**+0.1**
JRY	**Ryogami san**	**4.17**	**255**		P		**Pn**	**19**	**26**	**04.0**	**-1.1**
JRY					S		**Sn**	**19**	**26**	**48.4**	**-5.4**
JTM	**Tenmabayashi**	**4.20**	**329**		Pn		**Pn**	**19**	**26**	**05.5**	**0.0**
JOD2	**Odawara 2**	**4.32**	**245**		P		**Pn**	**19**	**26**	**06.2**	**-1.0**
JOD2					*e*S		**Sn**	**19**	**26**	**52.5**	**-5.1**
JSD	**Sado**	**4.53**	**282**	⇑	P		**Pn**	**19**	**26**	**09.8**	**-0.3**
JSD	**Sado**	**4.53**	**282**		Pn		**Pn**	**19**	**26**	**10.2**	**+0.1**
JJN	**Nakama**	**4.56**	**271**	⇓	P		**Pn**	**19**	**26**	**11.4**	**+0.9**
MJAR	**Matsushiro Arr**	**4.59**	**263**		Pn		**Pn**	**19**	**26**	**11.0**	**+0.1**
	27nm,0.3s,baz=53,slow=13,SNR=526										
MJAR					Sn		**Sn**	**19**	**27**	**02.3**	**-1.9**
	9.6nm,0.3s,baz=94,slow=26,SNR=6.0										
MJAR					LR		LR	19	28	06.8	
	comp=Z,4μm,19.7s,baz=95,slow=41										
MJAR	**Matsushiro Arr**	**4.59**	**263**		P		**Pn**	**19**	**26**	**11.0**	**+0.1**
MJAR	**Matsushiro Arr**	**4.59**	**263**				**Pn**	**19**	**26**	**10.2**	**-0.7**
MAJO	**Matsushiro**	**4.59**	**263**	*d*	*i*P		**Pn**	**19**	**26**	**11.4**	**+0.5**
MAJO	**Matsushiro**	**4.59**	**263**		Pn		**Pn**	**19**	**26**	**11.5**	**+0.5**
MAT	**Matsushiro**	**4.59**	**263**		P		**Pn**	**19**	**26**	**11.3**	**+0.4**
MAT					S		**Sn**	**19**	**27**	**01.0**	**-3.2**
MAT	**Matsushiro**	**4.59**	**263**		P		**Pn**	**19**	**26**	**11.3**	**+0.4**
MJB9	**Matsu-Tunnel**	**4.59**	**264**				**Pn**	**19**	**26**	**11.6**	**+0.6**
JOT	**Ohata**	**4.72**	**333**		P		**Pn**	**19**	**26**	**12.1**	**-0.5**
JOT					*e*S		**Sn**	**19**	**27**	**02.1**	**-5.1**
ERM	**Erimo**	**4.84**	**354**	*ce*	P		**Pn**	**19**	**26**	**12.8**	**-1.5**
ERM					pmax	pmax					
	comp=Z,2μm,1.0s										
ERM	**Erimo**	**4.84**	**354**		Pn		**Pn**	**19**	**26**	**12.9**	**-1.5**
JKB	**Kayabe**	**5.17**	**336**	⇑	P		**Pn**	**19**	**26**	**18.5**	**-0.3**
JKB					S		**Sn**	**19**	**27**	**12.1**	**-6.3**
JSG	**Sagara**	**5.26**	**243**				**Pn**	**19**	**26**	**21.2**	**+1.2**
JHJ2	**Mitsune**	**5.26**	**220**		P		**Pn**	**19**	**26**	**18.1**	**-2.0**
JHJ2					*e*S		**Sn**	**19**	**27**	**13.5**	**-7.1**
JHJ2	**Mitsune**	**5.26**	**220**		Pn		**Pn**	**19**	**26**	**17.9**	**-2.1**
JHJ	**Hachijo jima 2**	**5.27**	**221**		Pn		**Pn**	**19**	**26**	**18.1**	**-2.1**
	comp=Z,186nm,0.3s,baz=91,slow=21,SNR=47										
JHJ					Sn		**Sn**	**19**	**27**	**14.3**	**-6.6**
	comp=Z,785nm,0.3s,baz=261,slow=23,SNR=12										
JHJ					LR		LR	19	28	43.4	
	comp=Z,2μm,20.6s,baz=357,slow=43										
JGN	**Niukaw**	**5.36**	**261**		P		**Pn**	**19**	**26**	**22.4**	**+0.9**
JCH	**Churui**	**5.42**	**356**	⇓	P		**Pn**	**19**	**26**	**20.8**	**-1.5**
JCH					S		**Sn**	**19**	**27**	**17.9**	**-6.7**
JGF	**Kuroka**	**5.49**	**255**				**Pn**	**19**	**26**	**24.6**	**+1.3**
INU	**Inuyama**	**5.84**	**254**		Pn		**Pn**	**19**	**26**	**28.3**	**+0.3**
JEW	**Eniwo**	**5.93**	**342**		Pn		**Pn**	**19**	**26**	**29.0**	**-0.3**
JOSM	**Okushiri--Mats**	**5.94**	**327**		P		**Pn**	**19**	**26**	**29.4**	**0.0**
JOSM					*e*S		**Sn**	**19**	**27**	**32.3**	**-5.1**
NEM2	**Nemuro 2**	**6.32**	**12**		P		**Pn**	**19**	**26**	**31.4**	**-3.2**
NEM2					S		**Sn**	**19**	**27**	**38.1**	**-8.6**
NMR	**Nemuro--Hokkai**	**6.32**	**12**	⇑	*i*P		**Pn**	**19**	**26**	**31.3**	**-3.4**
NMR					*i* S		**Sn**	**19**	**27**	**38.1**	**-8.7**
JIE	**Ise**	**6.46**	**246**		P		**Pn**	**19**	**26**	**36.9**	**+0.3**
JHR	**Hokuryu**	**6.74**	**347**	⇑	P		**Pn**	**19**	**26**	**40.5**	**+0.1**
JHR					S		**Sn**	**19**	**27**	**51.3**	**-5.7**
TTO1	**TONANKAI O.B.S**	**6.80**	**240**		P		**Pn**	**19**	**26**	**41.7**	**+0.7**
GRPR	**Tuman**	**6.94**	**11**	*c*	*i*P		**Pn**	**19**	**26**	**39.9**	**-3.2**
GRPR					*i* S		Sn	19	27	52.0	-10
GRPR					pmax	pmax					
	comp=Z,1μm,0.3s										
GRPR					pmax	pmax					
	comp=N,615nm,0.4s										
GRPR					pmax	pmax					
	comp=E,485nm,0.4s										
GRPR					smax	smax					
	comp=E,7μm,0.9s										
GRPR					smax	smax					
	comp=N,4μm,0.8s										
RUSJ	**Misakicho**	**6.98**	**8**		*i* P		**Pn**	**19**	**26**	**41.2**	**-2.4**
RUSJ					*i* S		**Sn**	**19**	**27**	**56.5**	**-6.3**
ASAJ	**Asahikawa**	**6.98**	**352**		Pn		**Pn**	**19**	**26**	**42.7**	**-1.0**
	comp=N,74nm,0.3s,baz=199,slow=9.2,SNR=253										
ASAJ					Sn		**Sn**	**19**	**27**	**56.5**	**-6.4**
	comp=N,39nm,0.3s,baz=65,slow=29,SNR=8.7										
ASAJ					LR		LR	19	30	17.1	
	comp=N,4μm,18.7s,baz=194,slow=45										
ASAJ	**Asahikawa**	**6.98**	**352**		P		**Pn**	**19**	**26**	**42.8**	**-0.8**
JKA	**Kamikawa-asahi**	**6.98**	**352**		Pn		**Pn**	**19**	**26**	**42.8**	**-0.9**
JWT	**Wachi**	**7.11**	**257**				**Pn**	**19**	**26**	**47.0**	**+1.5**
KUR	**Kuril'sk**	**8.57**	**19**	*d*	*i*P		**Pn**	**19**	**27**	**04.0**	**-1.5**
KUR					*i* S		Sn	19	28	32.6	-9.4
KUR					pmax	pmax					
	comp=Z,397nm,0.4s										
KUR					pmax	pmax					
	comp=E,134nm,0.2s										
KUR					pmax	pmax					
	comp=N,126nm,0.3s										
KUR					smax	smax					
	comp=N,1μm,0.5s										
KUR					smax	smax					
	comp=E,758nm,0.4s										
JMN	**Monobe**	**8.86**	**250**				**Pn**	**19**	**27**	**09.8**	**+0.3**
JHS	**Saijyo**	**8.98**	**259**				**Pn**	**19**	**27**	**12.0**	**+0.8**
TEY	**Ternei**	**9.55**	**327**	⇑	*i*P		**Pn**	**19**	**27**	**19.2**	**+0.2**
TEY					*e*			19	29	01.9	
TEY					pmax	pmax					
	comp=N,600nm,0.9s										
TEY					pmax	pmax					
	comp=E,500nm,0.9s										
TEY					pmax	pmax					
	comp=Z,700nm,0.9s										
TEY					pmax	pmax					
	comp=Z,570nm,0.7s										
TEY					pmax	pmax					
	comp=N,510nm,0.7s										
TEY					pmax	pmax					
	comp=E,430nm,0.7s										
YSS	**Yuzh-Sakhalins**	**9.78**	**355**	⇑	*e*P		**Pn**	**19**	**27**	**20.5**	**-1.6**
YSS					*e*S		**Sn**	**19**	**29**	**04.7**	**-7.1**
YSS					pmax	pmax					
	comp=Z,700nm,2.3s										
YSS					pmax	pmax					
	comp=Z,250nm,0.9s										
YSS					MLR	MLR					
	comp=Z,4μm,14.0s										
YSS	**Yuzh-Sakhalins**	**9.78**	**355**				**Pn**	**19**	**27**	**20.6**	**-1.5**
JCJ	**Chichijima**	**10.18**	**189**		Pn		Pn	19	27	22.1	-5.5
	comp=Z,114nm,0.3s,baz=276,slow=21,SNR=111										
JCJ					Sn		Sn	19	29	05.2	-16
	comp=Z,52nm,0.3s,baz=289,slow=23,SNR=2.4										
JCJ					LR		LR	19	32	12.2	
	comp=Z,1μm,20.2s,baz=360,slow=43										
JCJ	**Chichijima**	**10.18**	**189**				Pn	19	27	22.6	-5.0
MSHR	**Mys Shultsa**	**11.15**	**303**	*ce*	P		**Pn**	**19**	**27**	**41.6**	**+0.8**
MSHR					pmax	pmax					
	comp=Z,540nm,1.7s										
JNU	**Nakatsue**	**11.39**	**253**		Pn		**Pn**	**19**	**27**	**42.4**	**-1.8**
	comp=Z,2.4nm,0.3s,baz=60,slow=8.7,SNR=29										
JNU	**Nakatsue**	**11.39**	**253**				**Pn**	**19**	**27**	**44.6**	**+0.4**
USA0B	**Ussuriysk Arra**	**11.41**	**311**	*d*	*i*P		**Pn**	**19**	**27**	**44.7**	**+0.4**
USA0B	**Ussuriysk Arra**	**11.41**	**311**				**Pn**	**19**	**27**	**44.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**11.41**	**311**		Pn		**Pn**	**19**	**27**	**45.5**	**+1.1**
	baz=119,slow=14,SNR=90										
USRK					LR		LR	19	31	58.5	
	comp=Z,5μm,18.7s,baz=118,slow=37										
USRK	**Ussuriysk Ar.**	**11.41**	**311**		P		**Pn**	**19**	**27**	**45.7**	**+1.4**
USRK	**Ussuriysk Ar.**	**11.41**	**311**				**Pn**	**19**	**27**	**45.7**	**+1.4**
UGL	**Uglegorsk**	**11.95**	**354**		*e*P		**Pn**	**19**	**27**	**47.5**	**-4.2**
UGL					S		**Sn**	**19**	**29**	**58.1**	**-6.7**
UGL					pmax	pmax					
	comp=Z,191nm,0.9s										
JSU	**Suzuyama**	**12.45**	**247**				**Pn**	**19**	**27**	**58.7**	**0.0**
KSRS	**Korea Array**	**12.70**	**276**		Pn		**Pn**	**19**	**28**	**03.8**	**+1.7**
	comp=Z,2.6nm,0.3s,baz=88,slow=13,SNR=118										
KSRS					LR		LR	19	32	48.2	
	comp=Z,2μm,18.1s,baz=75,slow=37										
KSRS					PcP		**PcP**	**19**	**33**	**39.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=192,slow=0.2,SNR=5.0										
KSAR	**Wonju Array Be**	**12.73**	**276**		P		**Pn**	**19**	**28**	**03.1**	**+0.6**
KSAR	**Wonju Array Be**	**12.73**	**276**				**Pn**	**19**	**28**	**03.1**	**+0.6**
KS19	**Wonju Array Si**	**12.74**	**276**				**Pn**	**19**	**28**	**03.6**	**+1.0**
MDJ	**Mudanjiang**	**13.09**	**309**		P		**Pn**	**19**	**28**	**07.5**	**+0.2**
MDJ					pP		P	19	28	09.9	-7.7
MDJ					sP			19	28	11.4	
MDJ					PP		**PnPn**	**19**	**28**	**15.2**	**+0.1**
MDJ					S		**Sn**	**19**	**30**	**33.0**	**+0.2**
MDJ					SS		**SnSn**	**19**	**30**	**46.1**	**+1.2**
MDJ					pmax	pmax					
	comp=Z,76nm,0.9s										
MDJ					pmax	pmax					
	comp=Z,740nm,3.1s										
MDJ					LR	LR					
	comp=Z,4μm,17.9s										
MDJ					LR	LR					
	comp=Z,4μm,13.7s										
MDJ					LR	LR					
	comp=Z,7μm,17.5s										
MDJ	**Mudanjiang**	**13.09**	**309**				**Pn**	**19**	**28**	**07.3**	**0.0**
TJN	**Taejon**	**13.26**	**271**	*ce*	P		**Pn**	**19**	**28**	**10.3**	**+0.6**
TYV	**Tymovskoe**	**13.69**	**357**	*e*	P		**Pn**	**19**	**28**	**14.0**	**-1.4**
TYV					*e*S		**Sn**	**19**	**30**	**46.6**	**-0.7**
TYV					pmax	pmax					
	comp=Z,500nm,2.4s										
TYV					pmax	pmax					
	comp=Z,125nm,1.2s										
TYV					smax	smax					
	comp=E,200nm,2.4s										
TYV					smax	smax					
	comp=E,22nm,1.3s										
GRNR	**Gornyy**	**14.57**	**341**	⇑	*i*P		**Pn**	**19**	**28**	**26.2**	**-1.4**
GRNR					*e*S		**Sn**	**19**	**31**	**09.9**	**+0.9**
GRNR					pmax	pmax					
	comp=E,40nm,0.8s										
GRNR					pmax	pmax					
	comp=N,60nm,0.9s										
GRNR					pmax	pmax					
	comp=Z,60nm,1.0s										
GRNR					smax	smax					
	comp=E,5.0nm,0.9s										
KLR	**Kul'dur**	**14.90**	**328**		Pn		**Pn**	**19**	**28**	**28.6**	**-3.5**
	comp=E,2.5nm,0.3s,baz=135,slow=12,SNR=61										
KLR					LR		LR	19	34	13.0	
	comp=E,3μm,18.7s,baz=142,slow=37										
KLR	**Kul'dur**	**14.90**	**328**	*ce*	P		**Pn**	**19**	**28**	**31.1**	**-0.9**
CN2	**Changchun**	**15.47**	**301**	⇑	P		**Pn**	**19**	**28**	**35.0**	**-4.7**
CN2					*es*P		P	19	28	42.0	-2.1
CN2					*e*S		**Sn**	**19**	**31**	**24.0**	**-7.0**
CN2					pmax	pmax					
	comp=E,20nm,0.8s										
CN2					pmax	pmax					
	comp=E,800nm,5.0s										
CN2					LR	LR					
	comp=E,2μm,15.0s										
CN2					LR	LR					
	comp=E,3μm,15.0s										
CN2					LR	LR					
	comp=E,3μm,17.0s										
SKR	**Severo-Kuril's**	**16.07**	**29**	*e*	P		**P**	**19**	**28**	**49.3**	**-1.4**
SKR					pmax	pmax					
	comp=Z,100nm,3.5s										
SKR					pmax	pmax					
	comp=Z,256nm,1.2s										
SKR					MLR	MLR					
	comp=Z,1μm,18.0s										
NKL	**Nikolayevsk**	**16.11**	**353**	*e*	P		**Pn**	**19**	**28**	**46.7**	**-1.0**
NKL					*e*S		**Sn**	**19**	**31**	**50.0**	**+3.9**
NKL					pmax	pmax					
	comp=N,1.0nm,0.7s										
NKL					pmax	pmax					
	comp=E,54nm,0.7s										
NKL					pmax	pmax					
	comp=Z,94nm,1.0s										
NKL					smax	smax					
	comp=E,112nm,4.7s										
NKL					MLR	MLR					
	comp=E,1μm,20.0s										
NKL					MLR	MLR					
	comp=Z,1μm,15.0s										
SNY	**Shenyang**	**16.32**	**293**	⇑	P		**Pn**	**19**	**28**	**48.9**	**-1.7**
SNY					S		**Sn**	**19**	**31**	**51.8**	**+0.3**
SNY					pmax	pmax					
	comp=Z,44nm,1.7s										
SNY					pmax	pmax					
	comp=Z,550nm,4.3s										
SNY					LR	LR					
	comp=Z,4μm,12.3s										
SNY					LR	LR					
	comp=Z,4μm,15.8s										
SNY					LR	LR					
	comp=Z,7μm,15.5s										
JOW	**Kunigami**	**16.77**	**236**		LR		LR	19	35	15.9	
	comp=Z,874nm,20.6s,baz=72,slow=37										
DL2	**Dalian**	**17.60**	**282**		P		**Pn**	**19**	**29**	**04.8**	**-1.9**
DL2					S		**Sn**	**19**	**32**	**21.3**	**-1.3**
DL2					pmax	pmax					
	comp=Z,220nm,1.0s										
DL2					pmax	pmax					
	comp=Z,490nm,4.5s										
DL2					LR	LR					
	comp=Z,2μm,13.6s										
DL2					LR	LR					
	comp=Z,1μm,14.8s										
DL2					LR	LR					
	comp=Z,2μm,13.4s										
PEA0B	**Petropavlovsk-**	**18.60**	**27**	*ce*	P		**Pn**	**19**	**29**	**19.6**	**+0.7**
PEA0B	**Petropavlovsk-**	**18.60**	**27**		P		**P**	**19**	**29**	**18.1**	**-0.6**
PETK	**Petropavlovsk-**	**18.60**	**27**		P		**P**	**19**	**29**	**18.1**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=201,slow=7.9,SNR=28										
PETK					LR		LR	19	38	16.7	
	comp=Z,548nm,18.1s,baz=216,slow=43										
PETK	**Petropavlovsk-**	**18.60**	**27**		P		**P**	**19**	**29**	**18.6**	**-0.1**
PETK	**Petropavlovsk-**	**18.60**	**27**		P		**P**	**19**	**29**	**18.6**	**-0.1**
PET	**Petropavlovsk**	**18.89**	**28**	*b*	*i*P		**Pn**	**19**	**29**	**22.1**	**-0.3**
PET					*e*S		**Sn**	**19**	**32**	**48.4**	**-5.1**
PET					pmax	pmax					
	comp=Z,102nm,1.0s										
PET					pmax	pmax					
	comp=Z,2μm,4.9s										
PET					pmax	pmax					
	comp=Z,1μm,8.4s										
PET					MLR	MLR					
	comp=Z,1μm,18.0s										
PET					MLR	MLR					
	comp=Z,1μm,16.0s										
SSE	**Sheshan**	**19.72**	**259**		P		**P**	**19**	**29**	**31.4**	**+0.4**
SSE					sP		**pwP**	**19**	**29**	**42.4**	**+0.8**
SSE					S		**Sn**	**19**	**33**	**17.3**	**+3.4**
SSE					pmax	pmax					
	comp=Z,22nm,0.7s										
SSE					pmax	pmax					
	comp=Z,170nm,4.1s										
ZEA	**Zeya**	**20.15**	**330**	*e*	P		**P**	**19**	**29**	**35.9**	**+0.3**
ZEA					*e*S		S	19	33	08.9	-13
ZEA					pmax	pmax					
	comp=E,800nm,2.9s										
ZEA					pmax	pmax					
	comp=N,1μm,2.6s										
ZEA					pmax	pmax					
	comp=Z,2μm,2.6s										
ZEA					pmax	pmax					
	comp=N,170nm,0.9s										
ZEA					pmax	pmax					
	comp=E,110nm,0.9s										
ZEA					pmax	pmax					
	comp=Z,270nm,0.9s										
ZEA					smax	smax					
	comp=N,500nm,3.9s										
ZEA					smax	smax					
	comp=E,500nm,6.9s										
ZEA					MLR	MLR					
	comp=E,1μm,13.0s										
ZEA					MLR	MLR					
	comp=N,1μm,16.0s										
ZEA					MLR	MLR					
	comp=Z,2μm,15.0s										
NJ2	**Nanjing**	**21.19**	**263**	*e*	P		**P**	**19**	**29**	**45.2**	**-1.8**
NJ2					pP		**sP**	**19**	**29**	**50.2**	**+0.9**
NJ2					sP		**pwP**	**19**	**29**	**54.6**	**-3.0**
NJ2					PP		**PnPn**	**19**	**30**	**09.2**	**+2.9**
NJ2					S		**S**	**19**	**33**	**37.7**	**-4.8**
NJ2					sS		**pS**	**19**	**33**	**48.0**	**-0.5**
NJ2					PcP		**PcP**	**19**	**33**	**51.8**	**-0.5**
NJ2					pmax	pmax					
	comp=Z,49nm,0.9s										
NJ2					pmax	pmax					
	comp=Z,250nm,3.5s										
NJ2					LR	LR					
	comp=Z,2μm,14.2s										
NJ2					LR	LR					
	comp=Z,1μm,13.7s										
NJ2					LR	LR					
	comp=Z,2μm,16.6s										
HIA	**Hailar**	**21.22**	**312**		P		**P**	**19**	**29**	**45.6**	**-1.6**
HIA					pmax	pmax					
	comp=Z,124nm,0.8s										
HIA					MLR	MLR					
	comp=Z,4μm,18.0s										
HIA	**Hailar**	**21.22**	**312**		P		**P**	**19**	**29**	**45.6**	**-1.6**
HIA	**Hailar**	**21.22**	**312**		IAMs_20	IAMs_20		19	38	12.6	
	comp=Z,4μm,18.0s										
TIA	**Tai'an**	**21.45**	**275**		P		**P**	**19**	**29**	**48.2**	**-1.6**
TIA					S		**S**	**19**	**33**	**48.8**	**+1.3**
TIA					pmax	pmax					
	comp=Z,63nm,1.1s										
TIA					pmax	pmax					
	comp=Z,360nm,4.1s										
TIA					LR	LR					
	comp=Z,1μm,15.7s										
TIA					LR	LR					
	comp=Z,2μm,16.2s										
TIA					LR	LR					
	comp=Z,2μm,16.9s										
BJI	**Beijing**	**21.79**	**286**		P		**P**	**19**	**29**	**51.7**	**-1.7**
BJI					S		**S**	**19**	**33**	**56.6**	**+2.4**
BJI					pmax	pmax					
	comp=Z,38nm,1.5s										
BJI					pmax	pmax					
	comp=Z,490nm,4.3s										
BJI					LR	LR					
	comp=Z,2μm,16.4s										
BJI					LR	LR					
	comp=Z,720nm,15.2s										
BJI					LR	LR					
	comp=Z,740nm,25.2s										
BJT	**Baijiatuau**	**21.80**	**286**		P		**P**	**19**	**29**	**51.9**	**-1.6**
BJT					pmax	pmax					
	comp=Z,116nm,1.2s										
BJT					MLR	MLR					
	comp=Z,800nm,20.0s										
BJT	**Baijiatuau**	**21.80**	**286**		P		**P**	**19**	**29**	**51.9**	**-1.6**
MA2	**Magadan**	**22.83**	**9**		P		**P**	**19**	**30**	**04.4**	**+0.1**
	comp=Z,137nm,0.9s,baz=196,slow=9.4,SNR=94										
MA2					LR		LR	19	38	25.6	
	comp=Z,493nm,21.6s,baz=198,slow=35										
MA2	**Magadan**	**22.83**	**9**	*d*	*i*P		**P**	**19**	**30**	**04.3**	**0.0**
MA2					MLR	MLR					
	comp=Z,704nm,15.0s										
MA2	**Magadan**	**22.83**	**9**		P		**P**	**19**	**30**	**04.4**	**+0.1**
MA2					IAmb	IAmb		19	30	07.1	
	comp=Z,216nm,1.1s										
YHNB	**Yeheng**	**22.92**	**243**		P		**P**	**19**	**30**	**05.4**	**-0.2**
YHNB					IAMs_20	IAMs_20		19	39	56.2	
	comp=Z,1μm,20.0s										
NACB	**Ninganchiao**	**23.07**	**242**		P		**P**	**19**	**30**	**05.4**	**-1.8**
SSLB	**Suanglung**	**23.77**	**242**		P		**P**	**19**	**30**	**13.1**	**-1.0**
SSLB					IAMs_20	IAMs_20		19	40	55.7	
	comp=Z,2μm,19.0s										
YULB	**Yu-li**	**23.78**	**241**		P		**P**	**19**	**30**	**12.5**	**-1.8**
TPUB	**Ta-pu**	**24.31**	**242**		P		**P**	**19**	**30**	**18.1**	**-1.1**
TPUB					IAmb	IAmb		19	30	32.0	
	comp=Z,159nm,1.0s										
TPUB					IAMs_20	IAMs_20		19	41	31.0	
	comp=Z,2μm,18.0s										
TWG	**Pinlang**	**24.31**	**240**		P		**P**	**19**	**30**	**17.9**	**-1.3**
QZH	**Quanzhou**	**24.78**	**248**		P		**P**	**19**	**30**	**22.2**	**-1.2**
QZH					S		**S**	**19**	**34**	**47.2**	**+1.7**
QZH					LR	LR					
	comp=Z,730nm,13.7s										
QZH					LR	LR					
	comp=Z,940nm,14.3s										
QZH					LR	LR					
	comp=Z,1μm,12.7s										
TIY	**Taiyuan**	**24.91**	**281**	*e*	P		**P**	**19**	**30**	**23.7**	**-0.8**
TIY					pP		**pP**	**19**	**30**	**26.0**	**-0.1**
TIY					S		**S**	**19**	**34**	**53.1**	**+5.5**
TIY					pmax	pmax					
	comp=Z,42nm,0.6s										
TIY					pmax	pmax					
	comp=Z,770nm,4.3s										
TIY					LR	LR					
	comp=Z,1μm,14.7s										

comp=Z,8μm,14.9s
BTO LR LR
comp=Z,9μm,15.8s
H11N2 WAKE ISLAND Hy 26.58 125 T T 19 57 29.4
baz=317,slow=75,SNR=59
H11N1 WAKE ISLAND Hy 26.59 125 T T 19 57 45.2
baz=317,slow=75,SNR=50
H11N3 WAKE ISLAND Hy 26.60 125 T T 19 57 42.4
baz=317,slow=75,SNR=54
H11S1 WAKE ISLAND Hy 27.34 127 T T 19 59 22.1
baz=318,slow=74
H11S3 WAKE ISLAND Hy 27.34 127 T T 19 59 22.2
baz=318
H11S2 WAKE ISLAND Hy 27.36 127 T T 19 59 24.0
baz=318,slow=74
BOD Bodaibo 28.46 326 *e*P **P** **19 30 56.2 -0.1**
BOD pmax pmax
comp=Z,232nm,1.3s
XAN Xi'an 28.49 274 P **P** **19 30 59.5 +2.7**
XAN S **S** **19 35 45.3 +1.0**
XAN pmax pmax
comp=Z,1μm,4.0s
XAN LR LR
comp=Z,2μm,15.7s
XAN LR LR
comp=Z,1μm,16.1s
XAN LR LR
comp=Z,1μm,13.4s
XAN Xi'an 28.49 274 P **P** **19 30 56.5 -0.3**
XAN pmax pmax
comp=Z,116nm,1.0s
XAN MLR MLR
comp=Z,700nm,18.0s
XAN Xi'an 28.49 274 P **P** **19 30 56.5 -0.3**
XAN IAmb IAmb 19 31 00.9
comp=Z,116nm,1.0s
ULN Ulaanbaatar 28.90 303*d i*P **P** **19 31 01.3 +0.9**
ULN pmax pmax
comp=Z,104nm,1.0s
ULN Ulaanbaatar 28.90 303 P **P** **19 31 01.4 +0.9**
ULN IAmb IAmb 19 31 05.8
comp=Z,75nm,0.9s
ULN Ulaanbaatar 28.90 303 IAMs_20 IAMs_20 19 42 39.6
comp=Z,1μm,18.0s
ENH Enshi 29.31 267 IAMs_20 IAMs_20 19 43 20.8
comp=Z,901nm,18.0s
SONM Songino Array 29.33 303 P **P** **19 31 05.5 +1.2**
comp=Z,68nm,0.9s,baz=94,slow=8.0,SNR=170
SONM PcP **PcP** **19 34 10.6 +0.1**
comp=Z,9.2nm,0.9s,baz=137,slow=1.6,SNR=5.0
SONM LR LR 19 43 05.9
comp=Z,1μm,18.8s,baz=119,slow=37
SONM Songino Array 29.33 303 P **P** **19 31 05.0 +0.7**
SONM IAmb IAmb 19 31 08.9
comp=Z,82nm,1.0s
SONM PcP **PcP** **19 34 11.0 +0.5**
ADK Adak 31.28 49 P **P** **19 31 20.1 -1.1**
ADK pmax pmax
comp=Z,163nm,1.5s
ADK Adak 31.28 49 P **P** **19 31 20.1 -1.1**
ADK IAmb IAmb 19 31 23.3
comp=Z,163nm,1.4s
IRK Irkutsk 31.45 311 *e*P **P** **19 31 23.0 +0.2**
IRK pmax pmax
comp=Z,82nm,2.4s
GSTR Great Sitkin T 31.70 49 P **P** **19 31 24.4 -0.6**
TLY Talaya 31.72 310 P **P** **19 31 25.0 -0.1**
comp=Z,17nm,1.0s,baz=121,slow=5.4,SNR=18
TLY PcP **PcP** **19 34 16.5 0.0**
comp=Z,13nm,0.8s,baz=117,slow=5.6,SNR=4.2
TLY LR LR 19 45 02.1
comp=Z,3μm,18.1s,baz=110,slow=38
TLY Talaya 31.72 310 *e*P **P** **19 31 25.5 +0.3**
TLY *e* 19 32 33.6
TLY *e*S **S** **19 36 37.8 +3.3**
TLY pmax pmax
comp=Z,91nm,1.1s
TLY MLR MLR
comp=Z,8μm,17.0s
TLY Talaya 31.72 310 IAMs_20 IAMs_20 19 44 58.3
comp=Z,3μm,18.0s
ZAK Zakamensk 31.72 308 *e*P **P** **19 31 26.1 +0.8**
ZAK pmax pmax
comp=Z,55nm,1.1s
LZH Lanzhou 31.98 280 ⇑P **P** **19 31 28.6 +0.8**
LZH pP sP 19 31 32.1 +2.0
LZH sP pwP 19 31 34.6 -4.0
LZH S **S** **19 36 35.8 -3.3**
LZH sS sS 19 36 47.7 +6.0
LZH SS **SnSn** **19 38 30.2 +2.4**
LZH pmax pmax
comp=Z,76nm,1.3s
LZH pmax pmax
comp=Z,470nm,6.0s
LZH LR LR
comp=Z,3μm,14.2s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,2μm,16.8s
ATKA Atka Island 32.85 49 P **P** **19 31 35.3 +0.3**
ATKA IAmb IAmb 19 31 38.4
comp=Z,107nm,1.2s
ATKA PcP **PcP** **19 34 20.2 +0.7**
GYA Guiyang 33.19 262 ⇑P **P** **19 31 38.0 -0.4**
GYA pP sP 19 31 42.1 +1.3
GYA PcP **PcP** **19 34 21.8 +0.7**
GYA S **S** **19 36 58.8 +0.7**
GYA pmax pmax
comp=Z,27nm,1.4s
GYA pmax pmax
comp=Z,170nm,3.5s
GYA LR LR
comp=Z,1μm,15.6s
GYA LR LR
comp=Z,880nm,15.4s
GYA LR LR
comp=Z,640nm,20.5s
BILL Bilibino 33.33 15*c i*P **P** **19 31 39.4 +0.4**
BILL *e* 19 32 49.1
BILL *e* 19 34 21.0
BILL *e*S **S** **19 37 01.0 +1.8**
BILL *e*SS SS 19 39 03.0 -20
BILL pmax pmax
comp=Z,199nm,1.0s
BILL Bilibino 33.33 15 P **P** **19 31 39.5 +0.4**
BILL PcP **PcP** **19 34 22.5 +1.9**
MOY Mondy 33.34 310 *e*P **P** **19 31 39.9 +0.4**
MOY pmax pmax
comp=Z,105nm,2.4s
CD2 Chengdu 33.64 271 P **P** **19 31 41.7 -0.5**
CD2 PP **PP** **19 32 56.9 -1.4**
CD2 S **S** **19 37 04.1 -0.7**
CD2 sS sS 19 37 09.1 +1.7
CD2 pmax pmax
comp=Z,80nm,0.9s
CD2 pmax pmax
comp=Z,590nm,8.1s
CD2 LR LR
comp=Z,2μm,15.2s
CD2 LR LR
comp=Z,2μm,15.6s
CD2 LR LR
comp=Z,2μm,17.5s
DAV Davao City (W) 34.30 214 IAMs_20 IAMs_20 19 47 56.2
comp=Z,615nm,18.0s
GTA Gaotai 34.39 287 ⇓P **P** **19 31 49.5 +0.7**
GTA pP sP 19 31 54.1 +3.0
GTA sP pwP 19 31 57.3 -2.3
GTA PcP **PcP** **19 34 25.7 +1.3**
GTA S **S** **19 37 18.2 +1.7**
GTA sS sS 19 37 30.5 +11
GTA ScP **ScP** **19 38 08.7 -0.6**
GTA PcS **PcS** **19 38 11.4 +0.6**
GTA ScS **ScS** **19 42 10.1 -1.9**
GTA pmax pmax
comp=Z,50nm,1.2s
GTA pmax pmax
comp=Z,530nm,5.8s
GTA LR LR
comp=Z,2μm,18.5s
GTA LR LR
comp=Z,2μm,18.2s
GTA LR LR
comp=Z,2μm,18.5s
QIZ Qiongzhong 34.80 248 P **P** **19 31 51.1 -1.2**
QIZ S **S** **19 37 22.3 -0.6**
QIZ LR LR
comp=Z,920nm,18.1s
QIZ LR LR
comp=Z,1μm,18.4s
QIZ LR LR
comp=Z,680nm,17.0s
TIXI Tiksi 35.38 352 P **P** **19 31 56.7 -0.1**
comp=Z,19nm,0.6s,baz=142,slow=7.2,SNR=104
TIXI Tiksi 35.38 352*d i*P **P** **19 31 56.5 -0.3**
TIXI Tiksi 35.38 352 P **P** **19 31 56.6 -0.1**
TIXI IAMs_20 IAMs_20 19 47 46.2
comp=Z,710nm,19.0s
KMI Kunming 36.93 263 ⇓P **P** **19 32 10.7 -0.1**
KMI pP sP 19 32 15.3 +2.1
KMI sP pwP 19 32 17.3 -4.4
KMI PP **PP** **19 33 32.9 -2.0**
KMI PcP **PcP** **19 34 33.1 +0.9**
KMI S **S** **19 37 56.3 +0.4**
KMI SS **SnSn** **19 40 26.0 -2.3**
KMI pmax pmax
comp=Z,51nm,1.0s
KMI pmax pmax
comp=Z,240nm,5.7s
KMI LR LR
comp=Z,2μm,16.6s
KMI LR LR
comp=Z,910nm,16.5s
KMI LR LR
comp=Z,950nm,13.7s
KMI Kunming 36.93 263 IAMs_20 IAMs_20 19 47 05.9
comp=Z,924nm,22.0s
GAMB Gambell 37.56 31 P **P** **19 32 16.0 +0.6**
GAMB PcP **PcP** **19 34 33.0 -0.1**
GAMB Gambell 37.56 31 P 19 32 16.7
baz=246,SNR=12
SLVN Son La 37.98 257 IAMs_20 IAMs_20 19 50 51.7
comp=Z,1μm,20.0s
TNTI Ternate 39.33 207 P **P** **19 32 30.2 -0.6**
comp=Z,1μmcomp=Z,90nm,1.7s
SRPI Serui, Papua 39.51 192 P **P** **19 32 33.4 +1.1**
comp=Z,2μmcomp=Z,90nm,1.3s
JAY Jayapura 39.62 185 P **P** **19 32 33.0 -0.3**
comp=Z,55nm,0.8s,baz=340,slow=3.2,SNR=21
JAY Jayapura 39.62 185 P **P** **19 32 33.0 -0.3**
SWI Sorong 39.63 200 P **P** **19 32 32.9 -0.4**
comp=Z,733nmcomp=Z,47nm,1.1s
SIJI Sorong 39.64 200 P **P** **19 32 32.8 -0.7**
comp=Z,31nm,1.1s,baz=5.9,slow=9.5,SNR=19
TNA Tin City 39.75 29 P **P** **19 32 35.6 +1.8**
TNA Tin City 39.75 29 P 19 32 35.7
baz=245,SNR=57
UBPT Khong Chiam 40.40 248 P **P** **19 32 42.0 +2.2**
comp=Z,16nm,1.0s
UBPT Khong Chiam 40.40 248 P **P** **19 32 40.0 +0.3**
NONG Nongkai 40.43 253 P **P** **19 32 41.0 +1.0**
comp=Z,7μmcomp=Z,54nm,0.9s
ANM Nome 40.44 31 P **P** **19 32 40.9 +1.4**
ANM 19 34 42.3
ANM pmax pmax
comp=Z,113nm,1.0s
ANM Nome 40.44 31 P **P** **19 32 40.9 +1.4**
ANM IAmb IAmb 19 32 42.9
comp=Z,113nm,1.0s
ANM PcP **PcP** **19 34 42.3 +0.2**
ANM Nome 40.44 31 P 19 32 41.8
baz=252,SNR=68
KMSI Cibinong 40.82 211 P **P** **19 32 44.4 +1.2**
GTOI Gorontalo 41.17 213 P **P** **19 32 45.0 -1.1**
FAKI Fak Fak 41.35 198 P **P** **19 32 47.2 -0.4**
FAKI IAMs_20 IAMs_20 19 50 42.1
comp=Z,530nm,18.0s
FAKI Fak Fak 41.35 198 P **P** **19 32 48.5 +0.9**
comp=Z,962nmcomp=Z,52nm,1.9s
LKP Lekhapani 41.41 271⇑*e*P **P** **19 32 48.9 +0.9**
LKP IAmb IAmb 19 32 50.6
comp=Z,185nm,1.0s
KHON Khomkaen 41.72 251 P **P** **19 32 51.0 +0.4**
comp=Z,34nm,0.8s
TOLI2 Tolitoli 41.76 216 P **P** **19 32 50.7 -0.2**
MRSI Marisa 41.78 214 P **P** **19 32 51.7 +0.6**
comp=Z,2μmcomp=Z,181nm,1.3s
DGZ Jazzator, Alta 41.89 306*d i*P **P** **19 32 53.1 +1.2**
DGZ pmax pmax
comp=Z,174nm,0.9s
RABL Rabaul 41.90 168 P **P** **19 32 50.6 -1.5**
SANI Sanana 42.44 207 P **P** **19 32 55.2 -1.2**
comp=Z,2μmcomp=Z,182nm,0.8s
RDOG Red Dog Mine 42.48 26 P 19 32 58.1
baz=251
WMQ Urumqi 42.52 297 P **P** **19 32 58.4 +1.4**
WMQ pP sP 19 33 02.1 +2.8
WMQ sP pwP 19 33 05.7 -2.1
WMQ PP **PP** **19 34 37.8 +2.4**
WMQ PcP **PcP** **19 34 50.3 +0.8**
WMQ S **S** **19 39 24.8 +5.8**
WMQ pmax pmax
comp=Z,140nm,0.9s
WMQ pmax pmax
comp=Z,700nm,5.7s
WMQ LR LR
comp=Z,3μm,19.1s
WMQ LR LR
comp=Z,2μm,16.7s
WMQ LR LR
comp=Z,1μm,23.7s
WMQ Urumqi 42.52 297 IAMs_20 IAMs_20 19 50 50.8
comp=Z,718nm,19.0s
UTTA Uttaradit 42.61 255 P **P** **19 32 59.4 +1.5**
comp=Z,208nmcomp=Z,29nm,0.9s
CHAI Chaiyaphum 42.62 252 P **P** **19 32 58.5 +0.5**
comp=Z,416nmcomp=Z,42nm,0.8s
LAMP Lampang 42.87 257 P **P** **19 33 01.3 +1.3**
comp=Z,582nmcomp=Z,73nm,0.9s
ZIRO ZIRO 42.92 272 *e*P **P** **19 33 01.4 +0.9**
ZIRO IAmb IAmb 19 33 02.7
comp=Z,128nm,0.9s
MOKO MOKOCHONG 42.92 270⇑*e*P **P** **19 33 01.4 +0.9**
MOKO IAmb IAmb 19 33 07.6
comp=Z,277nm,0.7s
JORH JORHAT 42.94 271 *e*P **P** **19 33 01.8 +1.2**
JORH IAmb IAmb 19 33 02.7
comp=Z,178nm,0.8s
CM34 Chiang Mai Arr 43.06 257 P **P** **19 33 02.0 +0.4**
APSI Ampana 43.15 214 P **P** **19 33 01.8 -0.4**
comp=Z,1μmcomp=Z,126nm,1.2s
NLAI Namlea 43.15 205 P **P** **19 33 03.5 +1.3**
comp=Z,51nm,1.4s
CM35 Chiang Mai Arr 43.16 257 P **P** **19 33 02.0 -0.3**
CM33 Chiang Mai Arr 43.24 258 P **P** **19 33 03.0 0.0**
CMMT Chiang Mai 43.24 258 P **P** **19 33 02.0 -1.0**
comp=Z,263nmcomp=Z,24nm,1.1s
CHTO Chiang Mai 43.24 258 P **P** **19 33 03.9 +0.9**
CHTO pmax pmax
comp=Z,40nm,1.0s
CHTO MLR MLR
comp=Z,1μm,18.0s
CHTO Chiang Mai 43.24 258 P **P** **19 33 03.9 +0.9**
CHTO Chiang Mai 43.24 258 IAMs_20 IAMs_20 19 54 21.1
comp=Z,969nm,18.0s
ZAA0 Zalesovo Array 43.26 312 P **P** **19 33 03.3 +0.6**
ZAA0 IAmb IAmb 19 33 04.2
comp=Z,104nm,1.1s
ZAA0 PcP **PcP** **19 34 52.4 +0.7**
ZALV Zalesovo Beam 43.26 312 P **P** **19 33 02.9 +0.2**
comp=Z,81nm,1.0s,baz=89,slow=6.1,SNR=168
ZALV PcP **PcP** **19 34 52.0 +0.4**
comp=Z,50nm,0.6s,baz=91,slow=3.2,SNR=17
ZALV LR LR 19 51 48.9
comp=Z,2μm,18.4s,baz=88,slow=37
ZALV Zalesovo Beam 43.26 312 *i* P **P** **19 33 02.9 +0.2**
ZALV pmax pmax
comp=Z,80nm,1.0s
ZALV Zalesovo Beam 43.26 312 P **P** **19 33 03.5 +0.8**
ZALV PcP **PcP** **19 34 52.4 +0.7**
CM36 Chiang Mai Arr 43.29 257 P **P** **19 33 04.0 +0.6**
CM32 Chiang Mai Arr 43.41 257 P **P** **19 33 05.0 +0.6**
CM09 Chiang Mai Arr 43.42 257 P **P** **19 33 05.0 +0.6**
comp=Z,201nmcomp=Z,24nm,1.2s
CM31 Chiang Mai Arr 43.45 257 P **P** **19 33 05.0 +0.3**
comp=Z,5μmcomp=Z,578nm,0.7s
CM31 Chiang Mai Arr 43.45 257 P **P** **19 33 06.0 +1.3**
CMAR Chiang Mai Arr 43.45 257 P **P** **19 33 05.0 +0.4**
comp=Z,13nm,0.7s,baz=45,slow=6.6,SNR=163
CMAR PcP **PcP** **19 34 53.0 +0.2**
comp=Z,2.6nm,0.7s,baz=46,slow=2.7,SNR=3.6
CMAR LR LR 19 54 30.8
comp=Z,519nm,19.0s,baz=84,slow=41
CMAR Chiang Mai Arr 43.45 257 *i* P **P** **19 33 05.4 +0.7**
CMAR pmax pmax
comp=Z,15nm,0.8s
CMAR Chiang Mai Arr 43.45 257 P **P** **19 33 05.5 +0.9**
CMAR PcP **PcP** **19 34 54.2 +1.3**
CM04 Chiang Mai Arr 43.45 257 P **P** **19 33 05.8 +1.1**
comp=Z,253nmcomp=Z,31nm,0.9s
CM01 Chiang Mai Arr 43.45 257 P **P** **19 33 06.0 +1.2**
comp=Z,237nmcomp=Z,26nm,0.9s
CM02 Chiang Mai Arr 43.46 257 P **P** **19 33 05.0 +0.2**
comp=Z,247nmcomp=Z,34nm,0.9s
CM15 Chiang Mai Arr 43.46 257 P **P** **19 33 05.0 +0.2**
comp=Z,191nmcomp=Z,22nm,0.7s
SUKH Sukhothai 43.47 255 P **P** **19 33 06.0 +1.2**
comp=Z,354nmcomp=Z,40nm,1.0s
CM05 Chiang Mai Arr 43.48 257 P **P** **19 33 06.0 +1.1**
comp=Z,193nmcomp=Z,22nm,0.8s
CM13 Chiang Mai Arr 43.49 257 P **P** **19 33 06.1 +1.0**
comp=Z,213nmcomp=Z,25nm,0.9s
KOHI KOHIMA 43.52 269 *e*P **P** **19 33 05.0 -0.5**
KOHI IAmb IAmb 19 33 23.0
comp=Z,130nm,1.2s
SRAK Srakaew 43.75 249 P **P** **19 33 04.7 -2.4**
comp=Z,3μmcomp=Z,287nm,0.9s
ZSN Zaisan 43.85 303⇓*i*P **P** **19 33 08.7 +1.0**
comp=Z,65nm,1.0s,baz=302
ZSN *e*S **S** **19 39 40.4 +2.1**
baz=302
ZSN Zaisan 43.85 303*d i*P **P** **19 33 08.6 +1.0**
ZSN *e*S **S** **19 39 40.3 +2.0**
ZSN pmax pmax
comp=Z,65nm,1.0s
NRIK Noril'sk 43.95 335 P **P** **19 33 08.4 +0.3**
comp=Z,22nm,0.7s,baz=110,slow=9.2,SNR=49
NRIK LR LR 19 52 36.9
comp=Z,2μm,18.2s,baz=105,slow=38
NRIK Noril'sk 43.95 335*d i*P **P** **19 33 08.2 +0.1**
NRIK pmax pmax
comp=Z,99nm,1.4s
NRIK Noril'sk 43.95 335 P **P** **19 33 08.3 +0.3**
NRIK IAmb IAmb 19 33 09.7
comp=Z,123nm,1.4s
LSA Lhasa 44.15 276 P **P** **19 33 11.6 +0.8**
LSA S **S** **19 39 42.0 -2.0**
LSA pmax pmax
comp=Z,59nm,1.6s
LSA pmax pmax
comp=Z,880nm,7.8s
LSA LR LR
comp=Z,1μm,13.5s
LSA LR LR
comp=Z,2μm,16.4s
LSA LR LR
comp=Z,3μm,17.1s
LSA Lhasa 44.15 276 P **P** **19 33 11.7 +1.0**
LSA Lhasa 44.15 276 IAMs_20 IAMs_20 19 53 18.6
comp=Z,634nm,19.0s
SVW2 Sparrevohn 44.20 37 P **P** **19 33 11.1 +0.9**
SVW2 IAmb IAmb 19 33 13.7
comp=Z,93nm,1.1s
SVW2 PcP **PcP** **19 34 56.3 +1.6**
MHMT Maesarieng 44.39 258 P **P** **19 33 12.5 +0.2**
comp=Z,747nmcomp=Z,80nm,1.1s
UTHA Uthaitani 44.76 253 P **P** **19 33 16.6 +1.4**
comp=Z,229nmcomp=Z,22nm,0.9s
UMPA Umpang Tak 44.82 255 P **P** **19 33 18.2 +2.4**
comp=Z,97nm,1.0s
SILR SILCHAR 45.01 269 *e*P **P** **19 33 18.7 +1.6**
SBUM Sibu 45.20 228 P **P** **19 33 20.0 +1.3**
GUWA GUWAHATI 45.24 272 *e*P **P** **19 33 19.1 +0.2**
GUWA IAmb IAmb 19 33 20.0
comp=Z,74nm,0.7s
OHAK Old Harbor 45.30 43 P **P** **19 33 19.7 +0.7**
OHAK PcP **PcP** **19 34 59.5 +1.0**
OHAK Old Harbor 45.30 43 P 19 33 19.5
baz=272,SNR=5.3
PATY Pattaya 45.33 249 P **P** **19 33 21.1 +1.4**
comp=Z,1μmcomp=Z,54nm,0.9s
SHL Shillong 45.37 271 *e*P **P** **19 33 20.0 -0.3**
SHL IAmb IAmb 19 33 32.9
comp=Z,39nm,0.7s
IMAR Indian Mountai 45.51 31 P **P** **19 33 21.2 +0.6**
IMAR PcP **PcP** **19 35 01.2 +2.0**
A21K Barrow 45.54 23 P **P** **19 33 21.6 +0.9**
A21K Barrow 45.54 23 P 19 33 22.3
baz=255,SNR=17
KDAK Kodiak Island 45.66 42 P **P** **19 33 22.6 +0.8**
comp=Z,55nm,0.6s,baz=286,slow=4.7,SNR=67
KDAK Kodiak Island 45.66 42 P **P** **19 33 22.7 +0.8**
KDAK pmax pmax
comp=Z,149nm,1.3s
KDAK Kodiak Island 45.66 42 P **P** **19 33 22.6 +0.8**
KDAK IAmb IAmb 19 33 23.6
comp=Z,149nm,1.3s
KDAK Kodiak Island 45.66 42 P 19 33 22.5
baz=272
MK31 Makanchi Array 45.69 302 *i* P **P** **19 33 22.6 +0.2**
MK31 Makanchi Array 45.69 302 P **P** **19 33 22.8 +0.5**
MK31 IAmb IAmb 19 33 23.9
comp=Z,68nm,0.8s
MKAR Makanchi Array 45.69 302 P **P** **19 33 22.7 +0.4**
comp=Z,65nm,0.8s,baz=87,slow=9.3,SNR=477
MKAR LR LR 19 53 56.2
comp=Z,743nm,20.0s,baz=78,slow=38
MKAR Makanchi Array 45.69 302 P **P** **19 33 23.0 +0.7**
MKAR Makanchi Array 45.69 302 P **P** **19 33 23.0 +0.7**
SRDT SRDT 45.74 252 P **P** **19 33 24.0 +0.9**
comp=Z,24nm,1.1s
SPCR Spurr Chakacha 45.84 37 P 19 33 25.3
baz=269,SNR=28
KHLT Khaolaem Dam 45.88 253 P **P** **19 33 24.0 -0.1**
comp=Z,22nm,1.0s
MAKZ Makanchi 45.90 302 P **P** **19 33 24.4 +0.4**
MAKZ pmax pmax
comp=Z,68nm,0.9s
MAKZ MLR MLR
comp=Z,900nm,20.0s
MAKZ Makanchi 45.90 302 P **P** **19 33 24.4 +0.4**
MAKZ IAmb IAmb 19 33 25.6
comp=Z,68nm,0.9s
MAKZ IAMs_20 IAMs_20 19 53 50.5
comp=Z,855nm,20.0s
PPLA Purkeypile 45.91 35 P **P** **19 33 24.2 +0.3**
PPLA Purkeypile 45.91 35 P 19 33 26.2
baz=267,SNR=30
CHUM Lake Minchumin 45.91 34 P 19 33 26.0
baz=266,SNR=42
SAIH SAIHA 45.98 266⇑*e*P **P** **19 33 24.9 -0.1**
SAIH IAmb IAmb 19 33 29.1
comp=Z,140nm,0.9s
SKT Skwentna 46.18 36 PcP **PcP** **19 35 01.8 +0.2**
SKT Skwentna 46.18 36 P 19 33 27.0
baz=269,SNR=14
PHET Kaeng Krachan 46.26 250 P **P** **19 33 28.0 +0.9**
comp=Z,1μmcomp=Z,179nm,0.8s
SEM Semipalatinsk 46.40 308⇓*i*P **P** **19 33 27.7 -0.4**
comp=Z,38nm,1.0s,baz=307
SEM *e*S **S** **19 40 16.0 +0.4**
baz=307
SEM LR LR 19 52 40.7
comp=Z,562nm,15.0s,baz=307
SEM Semipalatinsk 46.40 308*d i*P **P** **19 33 27.7 -0.4**
SEM *e*S **S** **19 40 15.9 +0.4**
SEM pmax pmax
comp=Z,38nm,1.0s
SEM MLR MLR
comp=Z,562nm,15.0s
PMG Port Moresby 46.46 176 P **P** **19 33 27.3 -1.3**
comp=Z,43nm,0.9s,baz=352,slow=5.3,SNR=11
PMG Port Moresby 46.46 176 P **P** **19 33 27.9 -0.7**
PMG pmax pmax
comp=Z,55nm,1.0s
PMG Port Moresby 46.46 176 P **P** **19 33 27.9 -0.7**
PMG IAmb IAmb 19 33 29.6
comp=Z,55nm,0.9s
MTKI Muara Teweh, K 46.48 222 P **P** **19 33 29.7 +0.9**
comp=Z,844nmcomp=Z,29nm,1.7s
BPAW Bear Paw Mtn. 46.51 33 P **P** **19 33 30.0 +1.5**
BPAW PcP **PcP** **19 35 03.7 +1.0**
BPAW Bear Paw Mtn. 46.51 33 P 19 33 30.1
baz=267,SNR=28
SUA Susitna One 46.54 37 IAmb IAmb 19 33 32.3
comp=Z,38nm,0.8s
SUA Susitna One 46.54 37 P 19 33 29.6

baz=270,SNR=15
BRSE Bradley Lake S 46.56 39 P 19 33 29.9
baz=271
MLY Manley 46.67 32 PcP **PcP** **19 35 04.9 +1.6**
MLY Manley 46.67 32 P 19 33 31.7
baz=266,SNR=154
AGT Agartala 46.68 269 *e*P **P** **19 33 32.4 +2.1**
AGT IAmb IAmb 19 33 33.3
comp=Z,182nm,0.7s
SPSI Sidrap Palu 46.70 214 P **P** **19 33 30.0 -0.5**
comp=Z,469nmcomp=Z,40nm,1.0s
CUT Chulitna 46.78 36 IAmb IAmb 19 33 32.6
comp=Z,87nm,1.2s
CUT PcP **PcP** **19 35 04.3 +0.6**
CUT Chulitna 46.78 36 P 19 33 31.6
baz=269,SNR=9.8
TRF Thorofare Moun 46.79 34 IAmb IAmb 19 33 49.5
comp=Z,51nm,1.1s
TRF PcP **PcP** **19 35 04.8 +0.9**
TRF Thorofare Moun 46.79 34 P 19 33 32.1
baz=268,SNR=13
BELO BELONIA 46.83 268 *e*P **P** **19 33 33.3 +1.8**
BNSI Bone 46.94 213 P **P** **19 33 33.5 +1.1**
comp=Z,840nmcomp=Z,49nm,1.3s
RC01 Rabbit Creek A 47.03 37 P **P** **19 33 32.3 -0.4**
RC01 IAmb IAmb 19 33 34.6
comp=Z,76nm,1.0s
RC01 PcP **PcP** **19 35 05.7 +1.1**
RC01 Rabbit Creek A 47.03 37 P 19 33 33.8
baz=271,SNR=11
COLD Coldfoot 47.05 29 P 19 33 34.3
baz=265,SNR=30
O22K Cooper Landing 47.05 38 P **P** **19 33 32.2 -0.6**
O22K Cooper Landing 47.05 38 P 19 33 34.0
baz=272,SNR=7.8
KSM Kuching 47.12 229 P **P** **19 33 35.0 +1.2**
GTK Tadong 47.19 275 *e*P **P** **19 33 34.7 +0.2**
GTK IAmb IAmb 19 33 44.6
comp=Z,27nm,0.9s
I23K Minto, Yukon-K 47.26 32 IAmb IAmb 19 33 38.2
comp=Z,65nm,1.1s
I23K PcP **PcP** **19 35 06.9 +1.7**
I23K Minto, Yukon-K 47.26 32 P 19 33 36.2
baz=268,SNR=41
PMR Palmer 47.32 37 PcP **PcP** **19 35 06.7 +1.2**
PMR Palmer 47.32 37 P 19 33 35.6
baz=271
NEA2 Nenana 47.36 33 PcP **PcP** **19 35 06.5 +0.8**
NEA2 Nenana 47.36 33 P 19 33 36.8
baz=268,SNR=150
MCK McKinley 47.40 34 IAmb IAmb 19 33 37.8
comp=Z,72nm,1.0s
MCK McKinley 47.40 34 P 19 33 36.5
baz=269,SNR=22
TOLK Toolik Lake Re 47.42 27 PcP **PcP** **19 35 07.8 +1.9**
TOLK Toolik Lake Re 47.43 27 P 19 33 37.2
baz=264,SNR=114
RND Reindeer 47.43 34 PcP **PcP** **19 35 06.9 +0.8**
KURBB Kurchatov Arra 47.45 308 P **P** **19 33 35.5 -0.5**
WAT2 Susitna Watana 47.56 35 P 19 33 37.4
baz=270
SML Sawmill 47.69 36 P 19 33 39.0
baz=272,SNR=23
PWL Port Wells 47.72 38 IAmb IAmb 19 33 39.9
comp=Z,86nm,1.0s
PWL PcP **PcP** **19 35 08.2 +1.1**
WRH Wood River Hil 47.78 33 IAmb IAmb 19 33 41.0
comp=Z,37nm,0.8s
WRH PcP **PcP** **19 35 08.0 +0.9**
TCOL CIGO, UAF Yank 47.88 32 P 19 33 40.9
baz=269,SNR=11
TAPN Taplejung 47.89 275 *e*P **P** **19 33 40.7 +0.6**
comp=Z,100nm,1.0s
COLA College 47.89 32 P 19 33 40.8
baz=269
CCB Clear Creek Bu 47.91 33 PcP **PcP** **19 35 07.6 0.0**
WAT6 Susitna Watana 47.95 35 P 19 33 40.8
baz=271,SNR=15
POKR Poker Plat Res 48.07 32 P 19 33 42.6
baz=269,SNR=68
HDA Harding Lake 48.28 33 P 19 33 42.8
baz=270,SNR=58
HDA P 19 33 42.8
baz=270,SNR=58
ILAR Eielson Array 48.30 32 P **P** **19 33 43.0 +0.6**
comp=Z,66nm,0.8s,baz=264,slow=6.3,SNR=498
ILAR PcP **PcP** **19 35 08.8 -0.3**
comp=Z,8.9nm,0.8s,baz=271,slow=3.2,SNR=5.7
ILAR LR LR 19 55 28.6
comp=Z,82nm,19.8s,baz=300,slow=38
ILAR P4KP 20 13 37.1
comp=Z,0.5nm,1.0s,baz=280,slow=6.0,SNR=4.2
ILAR Eielson Array 48.30 32 P **P** **19 33 43.5 +1.1**
ILAR 19 35 08.8
ILAR Eielson Array 48.30 32 P **P** **19 33 43.5 +1.1**
ILAR PcP **PcP** **19 35 08.8 -0.3**
GLI Glacier Island 48.33 38 IAmb IAmb 19 33 44.7
comp=Z,50nm,0.9s
GLI IAMs_20 IAMs_20 19 57 08.4
comp=Z,369nm,20.0s
GLI Glacier Island 48.33 38 P 19 33 43.4
baz=274,SNR=5.5
ODAN Odare 48.36 275 *e*P **P** **19 33 44.2 +0.5**
comp=Z,182nm,1.0s
PDGK Podgornoye 48.43 298 P **P** **19 33 43.4 -0.5**
SHLS Shalkode 48.50 298⇓ *i*P **P** **19 33 42.3 -2.1**
comp=Z,24nm,0.9s,baz=298
SHLS Shalkode 48.50 298 *d* *i*P **P** **19 33 42.3 -2.1**
SHLS pmax pmax
comp=Z,24nm,0.9s
FID Port Fidalgo 48.64 38 P **P** **19 33 44.6 -0.5**
FID IAmb IAmb 19 33 48.1
comp=Z,92nm,1.4s
BBKI Banjar Baru 48.64 220 P **P** **19 33 46.0 +0.4**
comp=Z,595nmcomp=Z,49nm,1.1s
M24K Tolsona, Glenn 48.70 36 P 19 33 47.4
baz=273,SNR=12
TDK Taldyqorghan 48.74 301 *i* P **P** **19 33 46.9 +0.8**
comp=Z,116nm,1.1s,baz=301
TDK *e*S **S** **19 40 50.3 +1.8**
baz=301
TDK Taldyqorghan 48.74 301 *i* P **P** **19 33 46.9 +0.8**
TDK *e*S **S** **19 40 50.3 +1.8**
TDK pmax pmax
comp=Z,116nm,1.1s
HNR Honiara 48.77 159 LR LR 19 52 24.4
comp=Z,552nm,21.8s,baz=326,slow=34
UZB Uzynbulak 48.81 298 *e*P **P** **19 33 47.1 +0.2**
comp=Z,26nm,1.5s,baz=298
UZB *e*S **S** **19 40 50.8 +0.9**
baz=298
UZB Uzynbulak 48.81 298 *e*P **P** **19 33 47.0 +0.2**
UZB *e*S **S** **19 40 50.7 +0.9**
UZB pmax pmax
comp=Z,26nm,1.5s
KLU Klutina 48.86 37 IAmb IAmb 19 33 49.5
comp=Z,94nm,1.0s
KLU Klutina 48.86 37 P 19 33 48.5
baz=274,SNR=19
PRP Porcupine Dome 48.87 31 P 19 33 47.5
baz=271
RAMN Ramite 48.95 275 *e*P **P** **19 33 48.7 +0.5**
comp=Z,202nm,1.0s
JIRN Jiri 48.96 276 *e*P **P** **19 33 48.9 +0.5**
comp=Z,152nm,1.1s
KPKS Kokpek 48.96 299 *i* P **P** **19 33 48.3 +0.3**
comp=Z,53nm,1.5s,baz=298
KPKS *e*S **S** **19 40 52.9 +1.1**
baz=298
KPKS Kokpek 48.96 299 *i* P **P** **19 33 48.2 +0.3**
KPKS *e*S **S** **19 40 52.9 +1.1**
KPKS pmax pmax
comp=Z,53nm,1.5s
PAX Paxson 48.98 35 P **P** **19 33 48.7 +0.9**
PAX Paxson 48.98 35 P **P** **19 33 48.7 +0.9**
PAX PcP **PcP** **19 35 13.1 +1.5**
PAX Paxson 48.98 35 P 19 33 49.0
baz=273,SNR=16
EYAK Cordova Ski Ar 49.01 38 P **P** **19 33 49.2 +1.3**
EYAK IAmb IAmb 19 33 50.9
comp=Z,80nm,0.9s
EYAK Cordova Ski Ar 49.01 38 P 19 33 49.3
baz=275
GUN Gumba 49.09 277 *e*P **P** **19 33 49.9 +0.5**
comp=Z,210nm,0.8s
BMAR Burnt Mountain 49.24 29 P **P** **19 33 50.5 +0.8**
BMAR PcP **PcP** **19 35 14.6 +2.1**
SATY Saty 49.27 298⇓ *i*P **P** **19 33 50.8 +0.4**
comp=Z,52nm,2.4s,baz=298
SATY *e*S **S** **19 40 57.7 +1.5**
baz=298
SATY Saty 49.27 298 *d* *i*P **P** **19 33 50.7 +0.4**
SATY *e*S **S** **19 40 57.7 +1.5**
SATY pmax pmax
comp=Z,52nm,2.4s
SURT Suratani 49.45 247 P **P** **19 33 55.1 +3.3**
comp=Z,1.9nm,1.2s
N25K Chitina, Valde 49.48 37 PcP **PcP** **19 35 15.3 +1.8**
N25K Chitina, Valde 49.48 37 P 19 33 53.2
baz=275,SNR=7.0
BMRM Bremner River 49.53 37 IAmb IAmb 19 33 54.9
comp=Z,76nm,1.0s
BMRM PcP **PcP** **19 35 15.5 +1.8**
BMRM Bremner River 49.54 37 P 19 33 53.9
baz=276,SNR=12
SCRK Sand Creek 49.59 33 IAmb IAmb 19 33 54.5
comp=Z,81nm,0.9s
SCRK Sand Creek 49.59 33 P 19 33 53.0
baz=274,SNR=60
PKI Pulchoki 49.62 277 *e*P **P** **19 33 53.4 0.0**
KKN Kakani 49.62 277 *e*P **P** **19 33 53.7 +0.4**
comp=Z,141nm,0.8s
PKIN Phulchoki 49.62 277 *e*P **P** **19 33 53.4 0.0**
comp=Z,68nm,1.1s
KRAB Krabi 49.64 246 P **P** **19 33 55.0 +1.7**
comp=Z,12µmcomp=Z,772nm,0.7s
DMN Daman 49.84 277 *e*P **P** **19 33 55.4 +0.4**
comp=Z,105nm,1.1s
MMRI Maumere 49.90 208 P **P** **19 33 55.0 -0.2**
comp=Z,1µmcomp=Z,101nm,1.3s
GKN Gorkha 50.03 278 *e*P **P** **19 33 56.7 +0.3**
comp=Z,335nm,1.0s
MDOK Medeo 50.19 299 *i* P **P** **19 33 58.1 +0.8**
baz=299
MDOK LR LR 19 54 04.8
comp=Z,661nm,15.7s,baz=299
MDOK Medeo 50.19 299 *i* P **P** **19 33 58.1 +0.8**
MDOK MLR MLR
comp=Z,661nm,16.0s
SOEI Soe 50.20 206 IAmb IAmb 19 34 17.4
comp=Z,80nm,0.8s
SOEI Soe 50.20 206 P **P** **19 33 56.9 -0.7**
comp=Z,1µmcomp=Z,110nm,1.0s
MCARA McCarthy VSAT 50.25 37 PcP **PcP** **19 35 18.5 +2.3**
MCARA McCarthy VSAT 50.25 37 P 19 33 59.2
baz=276
AAA Alma-Ata 50.27 299⇓ *i*P **P** **19 33 58.8 +0.9**
comp=Z,17nm,0.9s,baz=299
AAA LR LR 19 54 25.3
comp=Z,522nm,15.1s,baz=299
AAA Alma-Ata 50.27 299 *d* *i*P **P** **19 33 58.8 +0.9**
AAA pmax pmax
comp=Z,17nm,0.9s
AAA MLR MLR
comp=Z,521nm,15.0s
CRQE Cirque 50.30 38 P 19 33 59.6
baz=277
TNSS Tian-Shan 50.30 299⇓ *i*P **P** **19 33 59.6 +1.1**
baz=298
TNSS Tian-Shan 50.30 299⇓ *i*P **P** **19 33 59.5 +1.1**
JRMM Jerantut 50.34 239 P **P** **19 34 00.0 +1.4**
K27K Chicken 50.42 33 IAmb IAmb 19 34 02.9
comp=Z,66nm,1.1s
TGL Tana Glacier 50.42 38 IAmb IAmb 19 34 01.7
comp=Z,96nm,1.0s
TGL PcP **PcP** **19 35 18.9 +1.9**
K27K Chicken 50.42 33 P 19 34 00.2
baz=275
KUU Kurty 50.47 300⇓ *i*P **P** **19 33 59.4 0.0**
comp=Z,105nm,1.1s,baz=300
KUU *e*S **S** **19 41 13.8 +1.0**
baz=300
KUU Kurty 50.47 300 *d* *i*P **P** **19 33 59.3 0.0**
KUU *e*S **S** **19 41 13.8 +1.0**
KUU pmax pmax
comp=Z,105nm,1.1s
PKDT Phuket 50.49 246 P **P** **19 34 00.4 +0.6**
DANN Dangsing 50.58 278 *e*P **P** **19 34 01.4 +0.8**
comp=Z,209nm,0.6s
KULM Kulim 50.61 242 IAMs_20 IAMs_20 19 56 43.5
comp=Z,418nm,20.0s
KULM Kulim 50.61 242 P **P** **19 34 02.0 +1.3**
L27K Beaver Creek, 50.63 35 P 19 34 02.2
baz=276
BCAR Beaver Creek A 50.65 35 P **P** **19 34 01.7 +1.3**
EGAK Eagle 50.75 32 P 19 34 01.7
baz=275,SNR=10
BATI Baumata 50.83 206 P **P** **19 34 01.7 -0.5**
comp=Z,506nmcomp=Z,53nm,1.0s
IPM Ipoh 50.92 241 IAMs_20 IAMs_20 19 56 19.7
comp=Z,421nm,19.0s
IPM Ipoh 50.92 241 P **P** **19 34 04.0 +1.0**
MESA MESA 50.93 38 P 19 34 04.6
baz=278
BARN Barnard Glacie 50.95 37 PcP **PcP** **19 35 21.3 +2.3**
GRNC Granite Creek 50.95 38 IAmb IAmb 19 34 05.6
comp=Z,95nm,0.9s
KOLN Koldanda 50.96 278 *e*P **P** **19 34 03.8 +0.3**
comp=Z,162nm,1.0s
BOK Bokaro 51.01 272 *e*P **P** **19 34 04.1 +0.5**
BOK IAmb IAmb 19 34 05.5
comp=Z,33nm,0.8s
ULHL Ulahol 51.03 298 P **P** **19 34 04.4 +0.6**
SNR=27
CTG Chitna Glacier 51.12 37 P 19 34 05.7
baz=278
CTGM Chitina Glacie 51.12 37 IAmb IAmb 19 34 06.8
comp=Z,61nm,1.0s
MTN Manton Dam 51.20 196 IAmb IAmb 19 34 05.3
comp=Z,89nm,0.8s
MTN PcP **PcP** **19 35 23.1 +2.9**
DGPR DIGLIPUR 51.21 256⇑ *e*P **P** **19 34 06.3 +1.1**
DGPR IAmb IAmb 19 34 07.8
comp=Z,83nm,0.9s
BRZS Berezniki 51.25 308⇓ *i*P **P** **19 34 05.0 -0.1**
comp=Z,42nm,1.5s,baz=308
BRZS Berezniki 51.25 308 *d* *i*P **P** **19 34 05.0 -0.1**
BRZS pmax pmax
comp=Z,42nm,1.5s
TKM2 Tokmak 2 51.27 299 P **P** **19 34 06.9 +1.2**
SNR=45
TKM2 Tokmak 2 51.27 299 P **P** **19 34 06.0 +0.4**
TABL Table Mountain 51.29 38 IAmb IAmb 19 34 07.9
comp=Z,48nm,0.8s
PYUN Piuthan 51.29 278 *e*P **P** **19 34 06.5 +0.5**
comp=Z,343nm,1.3s
SGDS Sogindy 51.78 300⇓ *i*P **P** **19 34 09.7 +0.5**
comp=Z,46nm,1.6s,baz=300
SGDS *e*S **S** **19 41 32.5 +1.4**
baz=300
SGDS Sogindy 51.78 300 *d* *i*P **P** **19 34 09.7 +0.5**
SGDS *e*S **S** **19 41 32.5 +1.4**
SGDS pmax pmax
comp=Z,47nm,1.6s
KBK Karagaybulak 51.81 299 P **P** **19 34 10.6 +1.0**
SNR=80
CHMS Chumysh 51.84 299 P **P** **19 34 10.3 +0.6**
SNR=19
PLAI Plampang 51.91 214 P **P** **19 34 09.2 -1.1**
comp=Z,521nmcomp=Z,39nm,1.0s
USP Ospenovka 51.93 300 P **P** **19 34 11.0 +0.7**
SNR=45
BRVK Borovoye 51.97 313 P **P** **19 34 09.5 -0.9**
BRVK Borovoye 51.97 313 P **P** **19 34 10.9 +0.5**
BRVK IAmb IAmb 19 34 12.0
comp=Z,61nm,0.9s
BRVK PcP **PcP** **19 35 23.1 +0.4**
BRVK Borovoye 51.97 313 IAMs_20 IAMs_20 19 56 56.8
comp=Z,1µm,19.0s
KSH Kashi 52.13 295 P **P** **19 34 16.1 +4.2**
KSH S **S** **19 41 40.8 +4.8**
KSH sS sS 19 41 46.7 +8.1
KSH pmax pmax
comp=Z,35nm,1.5s
KSH pmax pmax
comp=Z,670nm,4.6s
KSH LR LR
comp=Z,1µm,12.6s
KSH LR LR
comp=Z,2µm,14.0s
KSH LR LR
comp=Z,2µm,10.4s
AAK Ala-Archa 52.13 299 P **P** **19 34 12.5 +0.5**
SNR=24
AAK Ala-Archa 52.13 299 P **P** **19 34 12.1 +0.1**
AAK pmax pmax
comp=Z,27nm,0.9s
AAK MLR MLR
comp=Z,1µm,18.0s
AAK Ala-Archa 52.13 299 P **P** **19 34 12.1 +0.1**
AAK Ala-Archa 52.13 299 IAMs_20 IAMs_20 19 57 45.4
comp=Z,1µm,18.0s
TWSI Taliwang, Sumb 52.23 215 P **P** **19 34 11.9 -0.8**
comp=Z,417nmcomp=Z,36nm,1.0s
UCH Uchtor 52.25 298 P **P** **19 34 14.3 +1.1**
SNR=21
EPYK Eagle Plains 52.40 30 P 19 34 15.4
baz=278,SNR=92
SRBI Singaraja 52.44 217 P **P** **19 34 15.6 +1.4**
comp=Z,2µmcomp=Z,129nm,1.1s
EKS2 Erkin-Say 52.63 299 P **P** **19 34 16.3 +0.7**
SNR=26
AML Almayashu 52.86 299 P **P** **19 34 18.7 +1.0**
SNR=144
HYT Haines Junctio 52.99 37 IAmb IAmb 19 34 22.4
comp=Z,124nm,0.9s
INK Inuvik 53.34 27 P **P** **19 34 20.8 +0.5**
comp=Z,61nm,0.8s,baz=287,slow=6.1,SNR=130
INK PcP **PcP** **19 35 27.4 -0.2**
comp=Z,18nm,0.9s,baz=297,slow=4.5,SNR=5.1
INK Inuvik 53.34 27 IAmb IAmb 19 34 22.7
comp=Z,75nm,0.8s
PSI Prapat 53.58 241 P **P** **19 34 22.1 -0.8**
comp=Z,18nm,0.8s,baz=0.0,slow=4.3,SNR=9.9
BKNI Bangkinang 53.92 237 IAMs_20 IAMs_20 19 58 34.0
comp=Z,346nm,22.0s
BKNI Bangkinang 53.92 237 P **P** **19 34 25.7 +0.5**
comp=Z,1µmcomp=Z,136nm,1.1s
DDI Dehra Dun 54.18 283 *e*P **P** **19 34 27.4 +0.3**
DZA Taraz 54.25 300⇓ *i*P **P** **19 34 28.1 +0.6**
comp=Z,47nm,0.8s,baz=300
DZA Taraz 54.25 300 *d* *i*P **P** **19 34 28.0 +0.6**
DZA pmax pmax
comp=Z,47nm,0.8s
KNRA Kununurra 54.49 198 IAmb IAmb 19 34 32.2
comp=Z,85nm,0.9s
SMLA Simla 54.52 285⇑ *e*P **P** **19 34 29.3 -0.2**
SMLA IAmb IAmb 19 34 30.5
comp=Z,78nm,0.6s
MNSI Mandailing Nat 54.56 239 P **P** **19 34 29.3 -0.6**
comp=Z,33nm,1.1s
UGM Wanagama 54.66 222 P **P** **19 34 31.0 +0.4**
comp=Z,3µmcomp=Z,258nm,1.5s
DHRM DHARAMSHALA 54.70 286 *e*P **P** **19 34 29.7 -1.4**
DHRM IAmb IAmb 19 34 32.8
comp=Z,46nm,0.9s
KK31 Karatay Array 54.74 301 *i* P **P** **19 34 30.8 -0.1**
KKAR Karatay Array 54.74 301 P **P** **19 34 31.4 +0.5**
KKAR Karatay Array 54.74 301 P **P** **19 34 31.4 +0.5**
LEM Lembang 55.37 226 P **P** **19 34 35.5 -0.4**
comp=Z,50nm,0.8s,baz=83,slow=6.1,SNR=14
IUG Iuzhnay 55.41 300⇓ *i*P **P** **19 34 36.7 +0.8**
comp=Z,64nm,1.1s,baz=300
IUG Iuzhnay 55.41 300 *d* *i*P **P** **19 34 36.7 +0.8**
IUG pmax pmax
comp=Z,64nm,1.1s
LHSI Lahat 55.44 232 P **P** **19 34 37.0 +0.8**
comp=Z,1µmcomp=Z,87nm,1.0s
NDI New Delhi 55.57 282 *e*P **P** **19 34 39.0 +1.9**
GSI Gunungsitoli 55.59 241 IAmb IAmb 19 35 00.2
comp=Z,135nm,1.3s
GSI Gunungsitoli 55.59 241 P **P** **19 34 38.3 +0.9**
comp=Z,2µmcomp=Z,92nm,1.0s
CHM Chimkent 55.64 300⇓ *i*P **P** **19 34 38.1 +0.6**
comp=Z,15nm,0.9s,baz=300
CHM Chimkent 55.64 300 *d* *i*P **P** **19 34 38.1 +0.6**
CHM pmax pmax
comp=Z,15nm,0.9s
CISI Cisompet, Garu 55.85 225 P P 19 34 48.9 +10
LWLI Liwa 56.03 230 P **P** **19 34 42.1 +1.5**
SVE Sverdlovsk 56.32 319 *c* *e*P **P** **19 34 43.0 +1.0**
SVE pmax pmax
comp=Z,206nm,0.9s
SVE MLR MLR
comp=Z,3µm,17.0s
C36M Paulatuk 56.45 25 P 19 34 43.8
baz=287,SNR=127
WRAK Wrangell Islan 56.73 41 P 19 34 47.3
baz=288
CTA Charters Tower 57.02 177 P **P** **19 34 46.7 -0.7**
comp=Z,8.7nm,0.7s,baz=0.2,slow=8.4,SNR=13
CTAO Charters Tower 57.02 177 P **P** **19 34 46.6 -0.7**
CTAO pmax pmax
comp=Z,17nm,1.0s
CTAO Charters Tower 57.02 177 P **P** **19 34 46.6 -0.7**
WB0 Warramunga Arr 57.36 191 IAmb IAmb 19 34 49.7
comp=Z,64nm,0.8s
WR0 Warramunga Arr 57.53 190 IAmb IAmb 19 34 53.1
comp=Z,102nm,1.2s
WRAB Tennant Creek 57.53 191 *c* *i*P **P** **19 34 50.1 -0.9**
WRAB pmax pmax
comp=Z,67nm,0.8s
WRAB Tennant Creek 57.53 191 P **P** **19 34 49.9 -1.1**
WRAB IAmb IAmb 19 35 02.4
comp=Z,83nm,0.9s
ARU Arti 57.53 319 P **P** **19 34 51.2 +0.5**
comp=Z,50nm,0.8s,baz=75,slow=4.0,SNR=202
ARU Arti 57.53 319 *d* *i*P **P** **19 34 51.0 +0.4**
ARU 19 35 43.4
ARU 19 36 55.8
ARU PPP PPP 19 38 19.3
ARU S **S** **19 42 51.5 +3.7**
ARU SS **SS** **19 46 34.1 -3.0**
ARU pmax pmax
comp=Z,227nm,1.2s
ARU MLR MLR
comp=Z,2µm,17.0s
ARU Arti 57.53 319 P **P** **19 34 51.3 +0.7**
ARU PcP **PcP** **19 35 43.7 -0.3**
WB2 Warramunga Arr 57.54 191 IAmb IAmb 19 34 51.1
comp=Z,68nm,0.8s
WRA Warramunga Arr 57.54 191 P **P** **19 34 50.0 -1.0**
comp=Z,53nm,0.7s,baz=12,slow=7.3,SNR=404
WRA PKPPKP 20 04 35.3
comp=Z,1.4nm,1.0s,baz=182,slow=1.7,SNR=3.7
WRA Warramunga Arr 57.54 191 *i* P **P** **19 34 50.0 -1.0**
WRA pmax pmax
comp=Z,52nm,0.7s
WRA Warramunga Arr 57.54 191 P **P** **19 34 49.1 -2.0**
FITZ Fitzroy Crossi 57.62 201 P **P** **19 34 51.4 -0.3**
comp=Z,22nm,0.9s,baz=17,slow=7.3,SNR=74
FITZ Fitzroy Crossi 57.62 201 P **P** **19 34 51.9 +0.3**
BHPL Bhopal 58.02 276⇑ *e*P **P** **19 34 53.3 -1.3**
BHPL IAmb IAmb 19 34 54.8
comp=Z,101nm,1.5s
KBL Kabul 59.19 292 P **P** **19 35 02.2 -0.6**
KBL Kabul 59.19 292 P **P** **19 35 02.9 0.0**
SNR=26
AB31 Akbulak array 59.33 311 *i* P **P** **19 35 02.9 -0.4**
ABKAR Akbulak array 59.33 311 P **P** **19 35 03.5 +0.2**
ABKAR Akbulak array 59.33 311 IAmb IAmb 19 35 04.5
comp=Z,59nm,0.8s
EUNU Eureka 59.73 9 IAmb IAmb 19 35 07.1
comp=Z,46nm,0.8s
AKTO Aktyubinsk 60.02 313 P **P** **19 35 08.1 0.0**
comp=Z,52nm,0.8s,baz=76,slow=7.7,SNR=99
AKTO PcP **PcP** **19 35 54.1 +0.1**
comp=Z,25nm,0.8s,baz=34,slow=3.3,SNR=4.6
HYB Hyderabad 60.17 270 *i* P P 19 35 20.0 +10
HYB *e*PcP **PcP** **19 35 54.0 -1.2**
HYB *e*PP **PP** **19 37 22.0 -0.2**
HYB Hyderabad 60.17 270 *e*P **P** **19 35 08.6 -1.0**
HYB IAmb IAmb 19 35 10.2
comp=Z,91nm,0.7s
SPA0 Spitsbergen Ar 60.74 349 *e*P **P** **19 35 13.4 +0.9**
KBS Kingsbay 60.82 351 *i* P **P** **19 35 14.4 +1.3**
KBS Kingsbay 60.82 351 P **P** **19 35 13.3 +0.2**
KBS pmax pmax
comp=Z,37nm,0.9s
KBS Kingsbay 60.82 351 P **P** **19 35 13.3 +0.2**
KBS IAmb IAmb 19 35 14.7
comp=Z,37nm,0.9s
NOR Nord 61.00 357⇓ *i*P **P** **19 35 14.7 +0.4**
NOR IAmb IAmb 19 35 15.6
comp=Z,44nm,0.9s
NOR Nord 61.00 357⇓ *i*P **P** **19 35 14.7 +0.4**
NOR pmax pmax
comp=Z,45nm,0.9s
AS31 Alice Springs 61.26 190 P **P** **19 35 16.3 -0.5**

ASAR Alice Springs 61.27 190 P **P** **19 35 15.7 -1.1**
comp=Z,29nm,0.7s,baz=16,slow=8.8,SNR=323
ASAR LR LR 20 01 00.7
comp=Z,313nm,21.9s,baz=0.5,slow=35
ASAR PKPPKP 20 04 29.8
comp=Z,0.9nm,1.0s,baz=151,slow=3.2,SNR=4.2
ASAR Alice Springs 61.27 190 P **P** **19 35 16.3 -0.5**
ASAR Alice Springs 61.27 190 P **P** **19 35 16.3 -0.5**
KIRV Kirov 61.29 323 P **P** **19 35 17.4 +0.8**
comp=Z,171nm,0.8s,baz=72,slow=2.9,SNR=65
PRGR Permogore 61.69 328⇓*iP* **P** **19 35 19.3 +0.1**
PRGR *e* 19 35 58.0
PRGR pmax pmax
comp=Z,133nm,1.0s
RES Resolute Bay 61.94 15 P **P** **19 35 21.2 +0.5**
comp=Z,72nm,0.9s,baz=314,slow=6.5,SNR=296
YKA Yellowknife Ar 62.67 31 P **P** **19 35 26.1 +0.4**
comp=Z,20nm,1.1s,baz=293,slow=6.1,SNR=101
YKA PcP **PcP** **19 36 05.3 +0.8**
comp=Z,13nm,0.7s,baz=299,slow=4.0,SNR=25
YKA PKPPKP 20 04 25.8
comp=Z,0.4nm,0.9s,baz=120,slow=3.3,SNR=4.4
PSA00 Pilbara Seismi 62.69 205 P **P** **19 35 26.0 -0.3**
PSA00 PcP **PcP** **19 36 00.2 -4.8**
LVZ Lovozero 62.76 336 P **P** **19 35 26.5 +0.2**
LVZ pmax pmax
comp=Z,57nm,1.0s
LVZ Lovozero 62.76 336 P **P** **19 35 26.5 +0.2**
LVZ IAmb IAmb 19 35 27.6
comp=Z,57nm,1.0s
POO Poona 63.32 274 *eP* **P** **19 35 31.0 +0.2**
POO IAmb IAmb 19 35 32.4
comp=Z,101nm,1.0s
APA Apatity 63.34 336⇓*iP* **P** **19 35 29.6 -0.5**
APA pmax pmax
comp=Z,46nm,0.9s
MSVF Nonsavu 63.43 143 P **P** **19 35 31.5 +0.1**
comp=Z,6.3nm,0.9s,baz=160,slow=16,SNR=3.9
MSVF LR LR 19 57 41.8
comp=Z,445nm,19.9s,baz=332,slow=31
KEV Kevo 63.98 340 P **P** **19 35 33.2 -1.1**
KEV pmax pmax
comp=Z,66nm,1.1s
KEV Kevo 63.98 340 P **P** **19 35 33.1 -1.1**
KEV IAmb IAmb 19 35 36.0
comp=Z,66nm,1.1s
HAMF Hammerfest 64.30 341 *eP* **P** **19 35 36.8 +0.4**
PALK Pallekele 64.33 259 P **P** **19 35 37.0 -0.5**
PALK pmax pmax
comp=Z,15nm,0.9s
PALK MLR MLR
comp=Z,400nm,18.0s
PALK Pallekele 64.33 259 P **P** **19 35 37.0 -0.5**
PALK Pallekele 64.33 259 IAMs_20 IAMs_20 20 08 40.9
comp=Z,411nm,18.0s
ARA0 ARCESS Array S 64.52 340 *eP* **P** **19 35 38.4 +0.4**
ARCES ARCESS Array B 64.53 340 P **P** **19 35 38.4 +0.4**
comp=Z,16nm,0.8s,baz=56,slow=7.6,SNR=33
ARCES LR LR 20 09 35.4
comp=Z,672nm,18.0s,baz=30,slow=41
ARCES ARCESS Array B 64.53 340 P **P** **19 35 38.7 +0.7**
ARCES pmax pmax
comp=Z,23nm,1.0s
ARCES ARCESS Array B 64.53 340 P **P** **19 35 38.6 +0.7**
KLMR Klimovskoe 64.66 328 *eP* **P** **19 35 36.7 -2.2**
KLMR *e* 19 37 58.0
KLMR pmax pmax
comp=Z,71nm,0.8s
KLMR Klimovskoe 64.66 328 *eP* **P** **19 35 36.7 -2.2**
KLMR AMP 19 35 39.9
comp=Z,71nm,0.8s
KLMR *e*PP **PP** **19 37 58.1 -2.5**
KLMR LQ LQ 19 58 42.3
KLMR LQ LQ 19 58 42.3
KLMR LR LR 20 02 26.8
TULEG Thule 64.67 8 *iP* **P** **19 35 37.0 -1.8**
TULEG ⇓*iP* **pP** **19 35 38.8 -1.7**
TULEG IAmb IAmb 19 35 39.5
comp=Z,64nm,0.9s
BELG Belogornoye 65.01 318*diP* **P** **19 35 41.7 +0.4**
BELG pmax pmax
comp=Z,30nm,0.9s
GOA Goa 65.01 271 *eP* **P** **19 35 42.3 +0.4**
GOA IAmb IAmb 19 35 43.5
comp=Z,142nm,0.8s
NEEM North Greenlan 65.25 4⇓*iP* **P** **19 35 43.4 +0.4**
NEEM IAmb IAmb 19 35 44.1
comp=Z,132nm,1.1s
GEYT Alibeck 65.47 300 P **P** **19 35 45.0 +0.4**
comp=Z,40nm,1.0s,baz=68,slow=4.0,SNR=60
GEYT LR LR 20 07 45.0
comp=Z,366nm,18.2s,baz=70,slow=39
GEYT Alibeck 65.47 300 P **P** **19 35 45.1 +0.4**
GEYT IAmb IAmb 19 35 46.2
comp=Z,39nm,1.1s
GYA0 ALIBECK ARRAY 65.47 300 P **P** **19 35 44.4 -0.2**
GYA0B ALIBECK ARRAY 65.47 300 IAmb IAmb 19 35 46.2
comp=Z,67nm,1.1s
KTK1 Kautokeino 65.48 340 *eP* **P** **19 35 44.8 +0.7**
D03D Eldon 65.54 48 P 19 35 47.3
baz=299,SNR=18
DAG Danmarks Havn 65.77 356⇓*iP* **P** **19 35 46.0 +0.1**
DAG IAmb IAmb 19 35 46.9
comp=Z,37nm,0.9s
DAG Danmarks Havn 65.77 356⇓*iP* **P** **19 35 45.9 +0.1**
DAG pmax pmax
comp=Z,37nm,0.9s
B05A Bryant 65.77 47 P 19 35 48.0
baz=299,SNR=7.9
JETT Jettan, Norway 65.86 341 *eP* **P** **19 35 47.5 +0.8**
D04E Lakebay 65.90 48 P 19 35 49.8
baz=299
F04D Rainier, OR 66.30 49 P 19 35 52.4
baz=300
E04D Cinebar 66.33 49 P 19 35 51.9
baz=300,SNR=12
G03D McMinnville, O 66.57 50 P 19 35 53.9
baz=300
COR Corvallis 66.86 51 P **P** **19 35 56.2 +2.8**
J01E Myrtle Point 67.17 52 P 19 35 57.9
baz=300
H04D Lebanon 67.24 51 P 19 35 58.0
baz=300,SNR=6.1
I03D Drain, OR 67.27 52 P 19 35 58.5
baz=300,SNR=10
F05D White Salmon 67.33 49 P 19 35 58.2
baz=300,SNR=5.2
K02D Willamette Mer 67.58 53 P 19 35 60.0
baz=300,SNR=12
G05D Wamic, OR 67.74 50 P 19 36 00.9
baz=301,SNR=7.4
I04A Tendick Farm, 67.81 51 P 19 36 01.0
baz=301
VALR Valaam 67.83 331 *iP* **P** **19 35 59.7 +0.5**
VALR pmax pmax
comp=Z,215nm,0.8s
L02E Cave Junction 67.89 53 P 19 36 02.1
baz=301,SNR=6.7
N2IH Innhavet 68.14 341 *eP* **P** **19 36 01.5 +0.4**
I05D Terrebonne, OR 68.19 50 P 19 36 03.6
baz=301,SNR=6.9
DBG Daneborg 68.27 355⇓*iP* **P** **19 36 01.6 -0.2**
DBG IAmb IAmb 19 36 02.8
comp=Z,31nm,1.2s
MOS Moscow 68.28 324 *eP* **P** **19 35 59.6 -2.5**
MOS *e* 19 38 32.5
MOS *e* 19 40 05.7
MOS pmax pmax
comp=Z,300nm,1.7s
MOS pmax pmax
comp=Z,155nm,1.4s
MOS MLR MLR
comp=Z,1μm,16.0s
J04D Umpqua Nationa 68.28 52 P 19 36 04.7
baz=301,SNR=15
STEI Steigen 68.35 341 *eP* **P** **19 36 03.2 +0.9**
LOF Lofoten 68.62 342 *eP* **P** **19 36 05.0 +0.9**
NEW Newport 68.63 45 P 19 36 05.6
baz=302,SNR=15
N2TV TVrnvik 68.65 341 *eP* **P** **19 36 05.0 +0.8**
L04D Klamath Falls 68.69 53 P 19 36 07.0
baz=301,SNR=25
FAUS Fauske 68.74 341 *eP* **P** **19 36 05.6 +0.7**
STKA Stephens Creek 68.75 182 P **P** **19 36 04.8 -0.5**
comp=Z,9.6nm,0.7s,baz=357,slow=6.3,SNR=32
STKA LR LR 20 05 14.8
comp=Z,196nm,21.7s,baz=12,slow=35
M02C Callahan 68.76 54 P 19 36 07.5
baz=301,SNR=14
VRH Novokhopyorsk 68.76 319 *eP* **P** **19 36 04.7 -0.6**
VRH pmax pmax
comp=Z,60nm,0.8s
VRH MLR MLR
comp=Z,2μm,18.0s
J05D Fort Rock, OR 68.81 51 P 19 36 08.1
baz=302,SNR=25
K04D Chiloquin, OR 68.82 52 P 19 36 08.0
baz=301,SNR=5.1
NBB08 Skaug oppvekst 68.91 341 *eP* **P** **19 36 06.7 +0.9**
PUL Pulkovo 69.03 330 *iP* **P** **19 36 07.8 +1.0**
PUL pmax pmax
comp=Z,106nm,0.9s
N02D Trinity Center 69.08 54 P 19 36 09.7
baz=302,SNR=16
NBB28 Valnes 69.10 341 *eP* **P** **19 36 07.8 +0.7**
OBN Obninsk 69.13 324⇑P **P** **19 36 08.1 +0.7**
OBN Obninsk 69.13 324*diP* **P** **19 36 07.5 +0.1**
OBN *e**PP **sP** **19 36 09.7 -0.1**
OBN *e* 19 36 18.3
OBN *e* 19 36 31.9
OBN *e* 19 38 43.2
OBN *e*PPP PPP 19 40 20.4
OBN *e*S **S** **19 45 13.8 +1.3**
OBN *e*SS **SS** **19 49 40.9 +3.2**
OBN pmax pmax
comp=Z,130nm,1.3s
OBN MLR MLR
comp=Z,954nm,15.0s
OBN Obninsk 69.13 324 IAMs_20 IAMs_20 20 12 18.5
comp=Z,1μm,19.0s
N2VA Vr,y 69.19 342 *eP* **P** **19 36 08.2 +0.6**
M04C Macdoel 69.21 53 P 19 36 10.2
baz=302,SNR=16
NBB05 Inndyr 69.33 341 *eP* **P** **19 36 09.2 +0.8**
LPSR Galich'ya Gora 69.42 321 *eP* **P** **19 36 09.5 +0.2**
LPSR pmax pmax
comp=Z,90nm,1.0s
LPSR MLR MLR
comp=Z,2μm,15.0s
UPNV Upernavik 69.44 6⇓*iP* **P** **19 36 09.3 +0.2**
UPNV IAmb IAmb 19 36 10.1
comp=Z,48nm,1.0s
O02D Mt. Diablo Mer 69.44 55 P 19 36 11.8
baz=302,SNR=13
NBB30 Finnes 69.45 341 *eP* **P** **19 36 09.9 +0.7**
NBB17 Glomfjord BVr 69.51 341 *eP* **P** **19 36 10.2 +0.5**
FINES FINESS Array B 69.57 333 P **P** **19 36 10.5 +0.4**
comp=Z,124nm,0.8s,baz=52,slow=7.5,SNR=211
FINES PP **PP** **19 38 43.8 +0.4**
comp=Z,11nm,0.9s,baz=52,slow=9.0,SNR=3.7
FINES LR LR 20 10 19.2
comp=Z,815nm,18.5s,baz=44,slow=39
MNCY Minicoy 69.80 265 *eP* **P** **19 36 12.1 -0.1**
MNCY IAmb IAmb 19 36 13.7
comp=Z,70nm,1.0s
VORR Voronezh 69.81 320 P **P** **19 36 10.0 -1.7**
VORR pmax pmax
comp=Z,250nm,0.6s
MOR8 Moi Rana 69.88 340 *eP* **P** **19 36 11.1 -0.9**
MAK Makhachkala 69.89 309 *eP* P 19 36 07.0 -5.4
MAK *e*PPP PPP 19 40 21.9
MAK *e*S **S** **19 45 14.9 -7.0**
MAK *e*SS **SS** **19 49 44.5 -5.6**
MAK pmax pmax
comp=Z,134nm,1.3s
MAK MLR MLR
comp=Z,1μm,17.0s
KONS Konsvik 69.97 341 *eP* **P** **19 36 13.3 +0.8**
O03E Paynes Creek 70.02 54 P 19 36 14.4
baz=302,SNR=32
VSR Storozhevoye 70.09 320 *eP* **P** **19 36 13.1 -0.4**
VSR pmax pmax
comp=Z,120nm,1.7s
VSR MLR MLR
comp=Z,2μm,17.0s
STOK Stokkvaagen 70.13 341 *eP* **P** **19 36 14.5 +1.0**
VORD Divnogorie 70.17 319 *eP* **P** **19 36 13.5 -0.4**
VORD pmax pmax
comp=Z,50nm,1.1s
BMO Blue Mountains 70.36 48 P **P** **19 36 16.2 +0.8**
BMO pmax pmax
comp=Z,30nm,1.2s
BMO Blue Mountains 70.36 48 P **P** **19 36 16.2 +0.8**
SUMG Summit 70.51 1 IAmb IAmb 19 36 18.2
comp=Z,102nm,1.0s
SUMG Summit 70.51 1⇓*iP* **P** **19 36 17.4 +1.2**
SUMG pmax pmax
comp=Z,100nm,1.0s
SUMG Summit 70.51 1⇓*iP* **P** **19 36 17.4 +1.2**
ORV Oroville 70.61 55 IAmb IAmb 19 36 18.9
comp=Z,44nm,1.2s
GROC Groznyy 70.81 310 *eP* **P** **19 36 17.5 -0.6**
GROC *e* 19 36 37.9
GROC *e* 19 39 03.5
GROC *e*S **S** **19 45 29.8 -2.9**
GROC pmax pmax
comp=Z,44nm,1.0s
NUUG Nuugaatsiaq 70.88 6 *iP* **P** **19 36 18.7 +0.7**
BEKR Beckworth 71.18 54 IAmb IAmb 19 36 22.9
comp=Z,42nm,1.0s
MSO Missoula 71.22 45 P 19 36 21.3
baz=305,SNR=16
LGD Lagodekhi 71.29 309 P **P** **19 36 21.1 +0.1**
VSU Vasula 71.29 330 *eP* **P** **19 36 21.0 +0.4**
VSU Vasula 71.29 330⇓*eP* **P** **19 36 20.1 -0.6**
VSU pmax pmax
comp=Z,367nm,0.9s
GOF Gofitskoye 71.44 313⇓*iP* **P** **19 36 22.6 +0.8**
GOF pmax pmax
comp=Z,156nm,0.8s
DDFL Dedoflistskaro 71.58 308 P **P** **19 36 24.9 +2.1**
NSS Namsos 71.81 340 *eP* **P** **19 36 24.5 +0.8**
GUDG Gudauri 72.03 310 P **P** **19 36 27.3 +1.6**
PNTR Pine Nut 72.10 54 P **P** **19 36 27.1 +0.9**
SCO Scoresbysund 72.13 355 *iP* **P** **19 36 25.9 +0.3**
SCO IAmb IAmb 19 36 28.1
comp=Z,61nm,1.2s
SCO Scoresbysund 72.13 355 *iP* **P** **19 36 25.8 +0.3**
SCO pmax pmax
comp=Z,61nm,1.2s
CMB Columbia Colle 72.16 56 IAmb IAmb 19 36 28.9
comp=Z,90nm,1.5s
ZEI Tsey 72.20 310 *eP* **P** **19 36 25.5 -1.2**
ZEI pmax pmax
comp=Z,40nm,1.0s
SEAG Tbilisi Sea 72.22 309 P **P** **19 36 29.5 +2.9**
MTSE Matsula 72.25 332 *eP* **P** **19 36 23.6 -2.9**
KIV Kislovodsk 72.27 312 *iP* **P** **19 36 27.9 +0.9**
SNR=80
KIV Kislovodsk 72.27 312 *eP* **P** **19 36 27.4 +0.4**
KIV *e*S **S** **19 45 50.6 +0.8**
KIV *e*SS **SS** **19 50 30.3 +3.5**
KIV pmax pmax
comp=Z,557nm,1.1s
KIV pmax pmax
comp=Z,252nm,3.9s
KIV MLR MLR
comp=Z,2μm,18.0s
KIV Kislovodsk 72.27 312 P **P** **19 36 28.1 +1.1**
KIV IAMs_20 IAMs_20 20 13 39.0
comp=Z,641nm,18.0s
KBZ Khabaz 72.27 312 P **P** **19 36 27.7 +0.9**
comp=Z,84nm,0.9s,baz=64,slow=4.7,SNR=203
KBZ LR LR 20 11 17.8
comp=Z,542nm,18.1s,baz=48,slow=38
KBZ Khabaz 72.27 312*diP* **P** **19 36 27.8 +0.9**
KBZ pmax pmax
comp=Z,128nm,1.0s
FFC Flin Flon 72.49 34 P **P** **19 36 28.8 +0.9**
FFC pmax pmax
comp=Z,59nm,1.0s
FFC Flin Flon 72.49 34 P **P** **19 36 28.8 +0.9**
FFC IAmb IAmb 19 36 29.7
comp=Z,59nm,0.9s
ONI Oni 72.59 310 P **P** **19 36 30.1 +1.3**
KZRT Kazreti 72.69 309 P **P** **19 36 30.2 +0.8**
JLN Jalan Bani Buh 72.72 285 P **P** **19 36 30.6 +0.8**
SNR=9.8
JLN P **P** **19 36 30.6 +0.8**
SNR=9.8
WBK Wadi Bani Khal 72.80 286 P **P** **19 36 31.6 +1.2**
SNR=15
WBK P **P** **19 36 31.6 +1.2**
SNR=15
HLID Hailey 72.81 48 P 19 36 31.5
baz=305,SNR=18
BIDO Bidbid 72.95 287 P **P** **19 36 32.0 +0.8**
SNR=18
FCC Fort Churchill 72.96 28 IAmb IAmb 19 36 32.1
comp=Z,84nm,1.1s
BANOM Banah 73.01 290 *iP* **P** **19 36 31.8 +0.2**
SNR=18
BANOM Banah 73.01 290 P **P** **19 36 32.5 +0.9**
SNR=13
SHME Shamm 73.06 290 *iP* **P** **19 36 32.0 +0.2**
SNR=14
SHME Shamm 73.06 290 P **P** **19 36 32.5 +0.6**
SNR=8.3
SHME P **P** **19 36 32.5 +0.6**
SNR=8.3
KVN Kaiserville 73.09 54 IAmb IAmb 19 36 34.7
comp=Z,54nm,1.1s
GNI Garni 73.17 308 P **P** **19 36 33.6 +1.1**
GNI Garni 73.17 308*diP* **P** **19 36 33.8 +1.3**
GNI pmax pmax
comp=Z,51nm,1.0s
GNI Garni 73.17 308 IAMs_20 IAMs_20 20 12 32.0
comp=Z,755nm,18.0s
AKH Akhalkalaki 73.23 309⇑P **P** **19 36 34.3 +1.5**
AKH Akhalkalaki 73.23 309 P **P** **19 36 34.3 +1.5**
BOZ Bozeman (W) 73.24 45 P 19 36 34.0
baz=306,SNR=28
SMDO Samad 73.26 286 P **P** **19 36 34.7 +1.5**
SNR=14
SMDO P **P** **19 36 34.7 +1.5**
SNR=14
LHV Little Huntoon 73.28 55 IAmb IAmb 19 36 36.2
comp=Z,92nm,1.1s
TBLU Trondheim 73.28 340 *eP* **P** **19 36 31.5 -1.0**
NVAR Mina Array Bea 73.31 54 P **P** **19 36 34.4 +1.1**
comp=Z,23nm,0.9s,baz=284,slow=6.4,SNR=151
NVAR LR LR 20 04 00.6
comp=Z,104nm,20.4s,baz=298,slow=32
NVAR Mina Array Bea 73.31 54 P **P** **19 36 34.9 +1.5**
CHVG Ch'k'valeri 73.34 311⇑P **P** **19 36 34.5 +1.3**
MDH Madha 73.36 289 P **P** **19 36 32.8 -0.8**
IDID Didziasalis 73.39 328 *eP* **P** **19 36 33.1 -0.1**
NV11 Mina Array Sit 73.40 54 P **P** **19 36 34.1 +0.2**
MLAC Mammoth, Mammo 73.41 55 P 19 36 36.1
baz=304,SNR=6.7
MASF Masafi 73.42 289 P **P** **19 36 34.7 +0.7**
SNR=11
MASF P **P** **19 36 34.7 +0.7**
SNR=11
MSFE Esma-Masafi 73.43 289 *iP* **P** **19 36 34.3 +0.2**
SNR=13
MNK Minsk 73.45 327⇑*eP* **P** **19 36 36.0 +2.4**
MNK pmax pmax
comp=Z,600nm,1.0s
MNK Minsk 73.45 327 *iP* **P** **19 36 34.8 +1.2**
comp=E,15nm,1.3s
MNK *iP* **P** **19 36 34.8 +1.2**
comp=N,80nm,1.1s
MNK *iP* **P** **19 36 34.8 +1.2**
comp=Z,187nm,1.1s
MNK *i*PP **PP** **19 39 17.5 +0.8**
MNK *i*PPP PPP 19 41 02.1
MNK *i*S **SKiKP** **19 46 04.2 +0.2**
MNK *i*SS SS 19 51 14.1 +30
MNK *i*SSS SSS 19 54 28.3
MNK *i*LQ LQ 20 09 48.4
MNK *i*LR LR 20 09 22.6
MNK *i*LRM MLR 20 11 10.8
comp=E,88nm,20.8s
MNK *i*LRM MLR 20 11 10.8
comp=N,549nm,15.6s
MNK *i*LRM MLR 20 11 10.8
comp=Z,881nm,18.9s
ISAL Salakas 73.48 328 *eP* **P** **19 36 34.3 +0.5**
HOQ Hoqain 73.54 287 P **P** **19 36 35.3 +0.6**
SNR=18
HOQ P **P** **19 36 35.3 +0.6**
SNR=18
IIGN Ignalina 73.59 328 *eP* **P** **19 36 35.0 +0.6**
SLIT Slitere, Latvi 73.59 331 *eP* **P** **19 36 34.7 +0.4**
JMDO Jabal Madar 73.60 286 P **P** **19 36 35.8 +0.7**
SNR=13
JMDO P **P** **19 36 35.8 +0.7**
SNR=13
UOSS Minazif 73.62 289 *iP* **P** **19 36 34.8 -0.4**
SNR=6.2
NACGM Naroch 73.65 328 *iP* **P** **19 36 36.0 +1.2**
NACGM *iP* **P** **19 36 36.0 +1.2**
NACGM *iP* **P** **19 36 36.0 +1.2**
NACGM *i*PP PP 19 39 29.2 +11
NACGM *i*PPP PPP 19 41 32.8
NACGM *i*S **S** **19 46 07.5 +2.6**
NACGM *i*SS SS 19 51 00.3 +13
NACGM *i*SSS SSS 19 54 22.3
NACGM *i*LQ LQ 20 02 29.9
NACGM *i*LR LR 20 09 30.6
HATD Hatta, Dubai 73.74 289 *iP* **P** **19 36 35.9 0.0**
SNR=25
HATD Hatta, Dubai 73.74 289 P **P** **19 36 36.5 +0.6**
SNR=20
HATD P **P** **19 36 36.5 +0.6**
SNR=20
SOHO SOHO 73.82 288 *iP* **P** **19 36 35.9 -0.5**
SNR=15
SOHO SOHO 73.82 288 P **P** **19 36 36.7 +0.4**
SOHO P **P** **19 36 36.7 +0.4**
ASHO Ashiyiah 73.88 289 *iP* **P** **19 36 36.7 0.0**
SNR=20
ASHO Ashiyiah 73.88 289 P **P** **19 36 37.2 +0.5**
SNR=17
ASHO P **P** **19 36 37.2 +0.5**
SNR=17
ELK Elko 73.93 51 LR LR 20 09 28.0
comp=Z,85nm,18.2s,baz=316,slow=36
KARS Kars 73.94 309 P **P** **19 36 38.6 +1.6**
ICESG Greenland Ices 73.99 1⇓*iP* **P** **19 36 38.2 +1.2**
ICESG IAmb IAmb 19 36 38.9
comp=Z,149nm,1.0s
NAZ Nazwa, Dubai 74.01 289 *iP* **P** **19 36 37.3 -0.1**
SNR=6.5
BSY Bisya 74.09 287 P **P** **19 36 38.4 +0.4**
SNR=17
BSY P **P** **19 36 38.4 +0.4**
SNR=17
FAQ Al Faqa, Dubai 74.19 289 *iP* **P** **19 36 38.4 -0.1**
SNR=18
FAQ Al Faqa, Dubai 74.19 289 P **P** **19 36 38.8 +0.3**
SNR=11
FAQ P **P** **19 36 38.8 +0.3**
SNR=11
SOC Sochi 74.24 313 *eP* **P** **19 36 37.3 -1.1**
SOC *e* 19 39 21.2
SOC *e*PPP PPP 19 41 08.1
SOC *i*S **S** **19 46 13.5 +1.7**
SOC *e*SS **SS** **19 50 49.9 -6.7**
SOC pmax pmax
comp=Z,44nm,0.8s
SOC MLR MLR
comp=Z,614nm,16.0s
VES Vestal, Richgr 74.25 57 P 19 36 39.6
baz=305,SNR=12
ARQ Araqi 74.27 287 P **P** **19 36 39.7 +0.6**
SNR=14
ARQ P **P** **19 36 39.7 +0.6**
SNR=14
PKM Mcpherson Peak 74.30 58 P 19 36 41.1
baz=305,SNR=7.4
PABE Paberze 74.42 329 *eP* **P** **19 36 39.6 +0.3**
ALNE Al Ain 74.46 288 *iP* **P** **19 36 40.2 +0.1**
SNR=9.0
ALNE Al Ain 74.46 288 P **P** **19 36 40.6 +0.5**
SNR=15
ALNE P **P** **19 36 40.6 +0.5**
SNR=15
ASUD Al Ashush, Dub 74.46 289 *iP* **P** **19 36 40.4 +0.3**
SNR=19
ASUD Al Ashush, Dub 74.46 289 P **P** **19 36 40.7 +0.7**
SNR=12
MHTO MHTO 74.48 285 P **P** **19 36 40.9 +0.7**
SNR=24
MHTO P **P** **19 36 40.9 +0.7**
SNR=24

H17A	**Grant Village**	**74.56**	**46**	*e*P				19 36 43.8		
	baz=307,SNR=61									
MOL	**Molde**	**74.57**	**341**	*e*P		**P**		**19 36 40.3**	**+0.3**	
CWC	**Cottonwood Cre**	**74.58**	**56**	P				19 36 41.8		
	baz=305									
DOMB	**Dombas**	**74.59**	**340**	*e*P		**P**		**19 36 40.6**	**+0.4**	
GRAC	**Grapevine Rang**	**74.73**	**55**	P				19 36 43.2		
	baz=305,SNR=19									
AJN	**Ajban**	**74.75**	**289**	*i* P		**P**		**19 36 41.4**	**-0.4**	
	SNR=9.9									
ISA	**Isabella, Lake**	**74.76**	**57**	P				19 36 42.2		
	baz=305,SNR=12									
NB2	**NORSAR Subarra**	**74.78**	**338**	P		**P**		**19 36 41.7**	**+0.4**	
	baz=38,slow=5.9									
NOA	**NORSAR Array B**	**74.78**	**338**	P		**P**		**19 36 41.8**	**+0.4**	
	comp=Z,46nm,0.8s,baz=38,slow=5.8,SNR=100									
NOA				PP		**PP**		**19 39 24.4**	**-3.5**	
	comp=Z,3.3nm,0.8s,baz=35,slow=8.0,SNR=3.4									
NOA				LR		LR		20 13 48.6		
	comp=Z,671nm,19.1s,baz=35,slow=39									
ANN	**Anapa**	**74.82**	**315**	*e*P		**P**		**19 36 41.0**	**-0.8**	
ANN				pmax		pmax				
	comp=Z,103nm,1.5s									
ANN				MLR		MLR				
	comp=Z,762nm,18.0s									
ARVC	**Arvin**	**74.83**	**57**	P				19 36 43.8		
	baz=305									
RLMT	**Red Lodge**	**74.86**	**45**	P				19 36 43.8		
	baz=308,SNR=16									
PBUR	**Paburge**	**74.87**	**330**	*e*P		**P**		**19 36 42.1**	**+0.3**	
NC602	**NORSAR Array S**	**74.92**	**338**	*e*P		**P**		**19 36 42.5**	**+0.4**	
NORES	**NORESS Array B**	**74.92**	**338**	P		**P**		**19 36 44.0**	**+1.9**	
NAO01	**NORSAR Array S**	**75.03**	**338**	IAmb		IAmb		19 36 43.8		
	comp=Z,97nm,0.9s									
AKN	**Aaknes**	**75.04**	**341**	*e*P		**P**		**19 36 43.7**	**+0.9**	
R11A	**Troy Canyon, C**	**75.10**	**53**	P				19 36 45.1		
	baz=306,SNR=15									
OSI	**Osito Audit: C**	**75.19**	**58**	P				19 36 45.8		
	baz=305									
AKASG	**Malin Array Be**	**75.35**	**323**	P		**P**		**19 36 44.9**	**+0.2**	
	comp=Z,48nm,0.8s,baz=44,slow=6.0,SNR=149									
AKASG				PP		**PP**		**19 39 34.1**	**+1.2**	
	comp=Z,3.7nm,0.7s,baz=40,slow=9.2,SNR=3.6									
AKASG				LR		LR		20 12 44.2		
	comp=Z,958nm,18.3s,baz=60,slow=38									
AKASG	**Malin Array Be**	**75.35**	**323**	P		**P**		**19 36 45.2**	**+0.4**	
AKASG				pmax		pmax				
	comp=Z,34nm,1.0s									
AKASG	**Malin Array Be**	**75.35**	**323**	P		**P**		**19 36 45.2**	**+0.4**	
AKBB	**Malin Array Si**	**75.35**	**323**	P		**P**		**19 36 44.5**	**-0.2**	
AKBB				pmax		pmax				
	comp=Z,78nm,1.0s									
AKBB	**Malin Array Si**	**75.35**	**323**	P		**P**		**19 36 44.5**	**-0.2**	
AKBB				IAmb		IAmb		19 36 46.1		
	comp=Z,78nm,0.9s									
KIEV	**Kiev**	**75.37**	**323**	P		**P**		**19 36 44.0**	**-0.8**	
FURC	**Furnace Creek,**	**75.37**	**55**	P				19 36 46.5		
	baz=306,SNR=22									
LRMC	**Laurel Mtn Rad**	**75.40**	**57**	P				19 36 46.4		
	baz=305,SNR=17									
DQM	**DQM**	**75.40**	**284**	P		**P**		**19 36 45.9**	**+0.3**	
	SNR=5.9									
DQM				P		**P**		**19 36 45.9**	**+0.3**	
	SNR=5.9									
DGMT	**Dagmar**	**75.47**	**40**	P				19 36 46.1		
	baz=310									
TPNV	**Topopah Spring**	**75.49**	**55**	P				19 36 47.1		
	baz=306,SNR=30									
EDW2	**Edwards Air Fo**	**75.53**	**57**	P				19 36 47.5		
	baz=305,SNR=19									
SFJD	**Kangerlussuaq**	**75.54**	**6**	*i* P		**P**		**19 36 46.0**	**+0.4**	
SFJD				IAmb		IAmb		19 36 47.2		
	comp=Z,17nm,0.8s									
SFJD	**Kangerlussuaq**	**75.54**	**6**	*i* P		**P**		**19 36 45.9**	**+0.4**	
SFJD				pmax		pmax				
	comp=Z,17nm,0.8s									
SFJD	**Kangerlussuaq**	**75.54**	**6**	P		**P**		**19 36 46.0**	**+0.4**	
SFJD				IAmb		IAmb		19 36 47.4		
	comp=Z,126nm,1.3s									
UMZA	**Um Al Zommool**	**75.66**	**288**	P		**P**		**19 36 46.8**	**-0.2**	
DECC	**Green Verdugo**	**75.66**	**58**	P				19 36 47.9		
	baz=305,SNR=5.3									
DUG	**Dugway, Tooele**	**75.75**	**50**	P		**P**		**19 36 47.9**	**+0.5**	
DUG				pmax		pmax				
	comp=Z,22nm,0.8s									
DUG	**Dugway, Tooele**	**75.75**	**50**	P		**P**		**19 36 47.9**	**+0.5**	
DUG	**Dugway, Tooele**	**75.75**	**50**	P				19 36 48.8		
	baz=307,SNR=34									
KTUT	**Trabzon**	**75.76**	**311**	⇓P		**P**		**19 36 47.8**	**+0.5**	
SUW	**Suwalki**	**75.79**	**328**	*e*P		**P**		**19 36 47.6**	**+0.4**	
SUW	**Suwalki**	**75.79**	**328**	*e*P		**P**		**19 36 47.4**	**+0.2**	
OSL	**Oslo**	**75.81**	**338**	*e*P		**P**		**19 36 48.1**	**+0.9**	
SKAR	**Skarslia**	**75.91**	**339**	*e*P		**P**		**19 36 48.8**	**+0.9**	
FOO	**Floro**	**76.03**	**341**	*e*P		**P**		**19 36 49.1**	**+0.7**	
SHOC	**Shoshone, Teco**	**76.08**	**56**	P				19 36 50.4		
	baz=306									
HYA	**Hoyanger**	**76.09**	**340**	*e*P		**P**		**19 36 49.8**	**+1.0**	
BFSC	**Mount Baldy Ra**	**76.13**	**58**	P				19 36 50.8		
	baz=306,SNR=10									
PDAR	**Pinedale Array**	**76.14**	**47**	P		**P**		**19 36 50.3**	**+0.6**	
	comp=Z,10nm,0.7s,baz=266,slow=1.8,SNR=131									
PDAR	**Pinedale Array**	**76.14**	**47**	P		**P**		**19 36 50.6**	**+0.9**	
BW06	**Boulder Array**	**76.14**	**47**	P				19 36 50.5		
	baz=308,SNR=13									
DY2G	**Dye2**	**76.36**	**4**	⇓*i*P		**P**		**19 36 51.4**	**+0.9**	
DY2G				IAmb		IAmb		19 36 52.3		
	comp=Z,86nm,1.0s									
KONO	**Kongsberg**	**76.38**	**338**	P		**P**		**19 36 50.2**	**-0.2**	
KONO				pmax		pmax				
	comp=Z,56nm,1.0s									
KONO	**Kongsberg**	**76.38**	**338**	P		**P**		**19 36 50.2**	**-0.2**	
KONO				IAmb		IAmb		19 36 52.2		
	comp=Z,56nm,0.9s									
KONO	**Kongsberg**	**76.38**	**338**	*e*P		**P**		**19 36 51.2**	**+0.8**	
STRU	**Stroemstad**	**76.39**	**337**	*i* P		**P**		**19 36 51.5**	**+1.0**	
SUE	**Sulen**	**76.56**	**341**	*e*P		**P**		**19 36 52.5**	**+1.1**	
SIM	**Simferopol'**	**76.57**	**317**	*d* iP		**P**		**19 36 51.1**	**-0.7**	
SIM				S		**S**		**19 46 38.8**	**+1.1**	
SIM				pmax		pmax				
	comp=Z,54nm,1.0s									
TUQ	**Turquoise Moun**	**76.59**	**56**	P				19 36 53.5		
	baz=306,SNR=25									
HEC	**Hector,Ludlow**	**76.67**	**56**	P				19 36 53.8		
	baz=306,SNR=6.9									
MURC	**Murrieta**	**76.81**	**58**	P				19 36 54.5		
	baz=306,SNR=7.0									
ASK	**Askoy**	**76.93**	**340**	*e*P		**P**		**19 36 54.4**	**+0.9**	
BLEU	**Blekinge**	**76.97**	**333**	*i* P		**P**		**19 36 54.0**	**+0.2**	
BER	**Bergen**	**76.98**	**340**	*e*P		**P**		**19 36 54.8**	**+1.0**	
BORU	**Boraas**	**76.99**	**335**	*i* P		**P**		**19 36 54.2**	**+0.3**	
CCUT	**Cedar City**	**76.99**	**53**	IAmb		IAmb		19 36 57.4		
	comp=Z,60nm,1.5s									
ODD1	**Odda**	**77.02**	**339**	*e*P		**P**		**19 36 54.9**	**+0.8**	
TJOU	**Tjoern**	**77.05**	**336**	*i* P		**P**		**19 36 54.9**	**+0.7**	
GMRC	**Granite Mounta**	**77.14**	**56**	P				19 36 56.2		
	baz=306,SNR=14									
109C	**Camp Elliot, M**	**77.29**	**58**	P				19 36 57.6		
	baz=306									
PFO	**Pinyon Flats O**	**77.30**	**57**	LR		LR		20 10 10.6		
	comp=Z,278nm,18.5s,baz=272,slow=35									
PFO	**Pinyon Flats O**	**77.30**	**57**	P		**P**		**19 36 56.2**	**-0.1**	
PFO				pmax		pmax				
	comp=Z,31nm,1.1s									
PFO	**Pinyon Flats O**	**77.30**	**57**	P		**P**		**19 36 56.2**	**-0.1**	
PFO	**Pinyon Flats O**	**77.30**	**57**	P				19 36 57.2		
	baz=306,SNR=13									
BELC	**Belle Mtn. Jos**	**77.38**	**57**	P				19 36 57.4		
	baz=306,SNR=10									
P17A	**Butcher Ranch,**	**77.46**	**50**	IAmb		IAmb		19 36 59.2		
	comp=Z,32nm,0.8s									
ONAU	**Onsala**	**77.46**	**336**	*i* P		**P**		**19 36 56.3**	**-0.3**	
ONAU				*i* P		**pP**		**19 36 56.9**	**-1.4**	
BLS5	**Blasjo**	**77.48**	**339**	*e*P		**P**		**19 36 57.3**	**+0.6**	
RDMU	**Red Mountain**	**77.48**	**48**	IAmb		IAmb		19 36 59.8		
	comp=Z,79nm,1.0s									
SORM	**Soroca**	**77.50**	**322**	⇑P		**P**		**19 36 57.4**	**+0.5**	
SORM	**Soroca**	**77.50**	**322**	P		**P**		**19 36 57.4**	**+0.5**	
FABU	**Falkenberg**	**77.50**	**335**	*i* P		**P**		**19 36 57.0**	**+0.2**	
ANGG	**Ammassalik, Gr**	**77.51**	**1**	*i* P		**P**		**19 36 57.1**	**+0.4**	
ANGG				IAmb		IAmb		19 36 58.1		
	comp=Z,39nm,0.8s									
DEL	**Delary**	**77.53**	**334**	*i* P		**P**		**19 36 57.0**	**0.0**	
DEL				*i* P		**pP**		**19 36 57.3**	**-1.5**	
ISOG	**Isortoq, Green**	**77.56**	**1**	*i* P		**P**		**19 36 57.4**	**+0.5**	
ISOG				IAmb		IAmb		19 36 58.6		
	comp=Z,75nm,0.9s									
KNB	**Kanab**	**77.65**	**53**	IAmb		IAmb		19 37 01.4		
	comp=Z,117nm,1.5s									
HORU	**Horodok**	**77.69**	**323**	P		**P**		**19 36 58.4**	**+0.3**	
BORG	**Borgarnes**	**77.72**	**354**	P		**P**		**19 36 58.6**	**+0.7**	
BORG				pmax		pmax				
	comp=Z,150nm,1.0s									
BORG	**Borgarnes**	**77.72**	**354**	P		**P**		**19 36 58.6**	**+0.7**	
MONP2	**Monument Peak**	**77.75**	**58**	P				19 36 59.9		
	baz=306,SNR=8.5									
SRU	**San Rafael Swe**	**77.81**	**50**	IAmb		IAmb		19 37 01.4		
	comp=Z,46nm,0.8s									
HOMB	**Homborsund**	**77.83**	**338**	*i* P		**P**		**19 36 59.5**	**+0.9**	
HOMB	**Homborsund**	**77.83**	**338**	*e*P		**P**		**19 36 59.4**	**+0.9**	
IRM	**Iron Mountain**	**77.86**	**56**	P				19 37 00.5		
	baz=307,SNR=16									
KVT	**Kavak**	**77.92**	**313**	P		**P**		**19 37 01.0**	**+1.5**	
K22A	**Casper**	**77.95**	**45**	P				19 37 00.6		
	baz=310,SNR=17									
BC3	**Big Chuckawall**	**77.95**	**57**	P				19 37 00.9		
	baz=307,SNR=21									
SHAO	**Shalim**	**77.97**	**283**	P		**P**		**19 37 00.2**	**+0.1**	
SHAO	**Shalim**	**77.97**	**283**	P		**P**		**19 36 59.9**	**-0.2**	
KMY	**Karmoy**	**77.99**	**340**	*e*P		**P**		**19 37 00.6**	**+1.1**	
DIKM	**Dikmen**	**78.02**	**313**	⇑P		**P**		**19 37 01.0**	**+1.0**	
KIS	**Kishinev**	**78.03**	**321**	⇓*i*P		**P**		**19 37 00.0**	**+0.1**	
	comp=Z,250nm,5.6s									
KIS	**Kishinev**	**78.03**	**321**	*e*PP		PP		19 40 08.0	+12	
KIS				*e*S		**S**		**19 46 50.0**	**-3.4**	
MILM	**Milestii Mici**	**78.08**	**321**	⇑P		**P**		**19 37 00.6**	**+0.4**	
IKP	**In-Ko-Pah, Jac**	**78.11**	**58**	P				19 37 02.0		
	baz=307,SNR=15									
KMPD	**K-Podol'skiy**	**78.12**	**323**	P		**P**		**19 37 01.0**	**+0.6**	
SWSC	**Sam W. Stewart**	**78.14**	**58**	P				19 37 02.1		
	baz=307,SNR=6.7									
SNART	**Snartemo**	**78.16**	**338**	*i* P		**P**		**19 37 00.0**	**-0.5**	
SNART				*i* P		**pP**		**19 37 01.8**	**-0.4**	
SNART	**Snartemo**	**78.16**	**338**	*e*P		**P**		**19 37 01.5**	**+1.0**	
MDND	**Maddock**	**78.18**	**38**	P				19 37 01.8		
	baz=313									
NUUK	**Nuuk**	**78.20**	**7**	*i* P		**P**		**19 37 01.9**	**+1.3**	
NUUK				IAmb		IAmb		19 37 02.9		
	comp=Z,63nm,0.9s									
MALT	**Malatya**	**78.21**	**309**	P		**P**		**19 37 02.8**	**+1.5**	
BSD	**Bornholm Skovb**	**78.21**	**333**	*e*P		**P**		**19 37 00.1**	**-0.8**	
BSD	**Bornholm Skovb**	**78.21**	**333**	*i* P		**P**		**19 37 00.0**	**-0.8**	
BSD				⇓*i*P		**P**		**19 37 01.1**	**+0.2**	
BSD				IAmb		IAmb		19 37 02.1		
	comp=Z,196nm,1.0s									
BSD	**Bornholm Skovb**	**78.21**	**333**	⇓*i*P		**P**		**19 37 01.0**	**+0.2**	
BSD				pmax		pmax				
	comp=Z,200nm,1.0s									
ULM	**Lac du Bonnet**	**78.27**	**34**	P		**P**		**19 37 01.2**	**0.0**	
	comp=Z,24nm,0.9s,baz=311,slow=6.6,SNR=40									
ULM				LR		LR		20 14 53.6		
	comp=Z,80nm,19.3s,baz=292,slow=38									
LUNU	**Lund**	**78.33**	**334**	*i* P		**P**		**19 37 02.0**	**+0.5**	
LUNU				*i* P		**pP**		**19 37 02.4**	**-0.8**	
BEL	**Belsk**	**78.37**	**328**	*e*P		**P**		**19 37 03.2**	**+1.5**	
BEL	**Belsk**	**78.37**	**328**	P		**P**		**19 37 03.4**	**+1.7**	
RSSD	**Black Hills**	**78.38**	**43**	P		**P**		**19 37 02.6**	**+0.3**	
RSSD				pmax		pmax				
	comp=Z,33nm,1.0s									
RSSD	**Black Hills**	**78.38**	**43**	P		**P**		**19 37 02.5**	**+0.3**	
RSSD	**Black Hills**	**78.38**	**43**	P				19 37 02.8		
	baz=311									
LVV	**L'vov**	**78.39**	**325**	*e*P		**P**		**19 37 02.4**	**+0.5**	
LVV				*e*S		S		19 46 45.7	-12	
LVV				*e*				19 47 06.7		
LVV				pmax		pmax				
	comp=Z,200nm,1.5s									
PDMCI	**Parker Dam,Lak**	**78.44**	**56**	P				19 37 03.6		
	baz=307,SNR=10									
IAS	**Iasi**	**78.53**	**321**	⇑P		**P**		**19 37 03.2**	**+0.4**	
IAS	**Iasi**	**78.53**	**321**	P		**P**		**19 37 03.1**	**+0.4**	
BZK	**Bozkurt**	**78.55**	**314**	⇓P		**P**		**19 37 03.6**	**+0.8**	
O20A	**White River Ci**	**78.55**	**48**	P				19 37 04.2		
	baz=309,SNR=14									
GOET	**G??ttrup**	**78.62**	**337**	*i* P		**P**		**19 37 04.5**	**+1.5**	
GOET				*i* P		**pP**		**19 37 04.7**	**-0.1**	
GOET				IAmb		IAmb		19 37 05.4		
	comp=Z,178nm,0.7s									
COP	**Copenhagen**	**78.64**	**334**	⇓*i*P		**P**		**19 37 04.2**	**+1.0**	
COP				*i* P		**pP**		**19 37 04.4**	**-0.6**	
COP				IAmb		IAmb		19 37 05.0		
	comp=Z,178nm,0.9s									
COP	**Copenhagen**	**78.64**	**334**	⇓*i*P		**P**		**19 37 04.2**	**+1.0**	
COP				pmax		pmax				
	comp=Z,180nm,0.9s									
GLA	**Glamis**	**78.73**	**57**	P				19 37 05.6		
	baz=307,SNR=7.7									
GKP	**Gorka Klasztor**	**78.75**	**331**	*e*P		**P**		**19 37 04.7**	**+0.9**	
GKP	**Gorka Klasztor**	**78.75**	**331**	*e*P		**P**		**19 37 03.8**	**0.0**	
GKP	**Gorka Klasztor**	**78.75**	**331**	P		**P**		**19 37 04.7**	**+0.9**	
VASR	**Vaslui**	**78.79**	**321**	⇑P		**P**		**19 37 05.5**	**+1.3**	
DOK	**Doka**	**78.79**	**285**	P		**P**		**19 37 04.5**	**-0.2**	
	SNR=8.6									
DOK				P		**P**		**19 37 04.5**	**-0.2**	
	SNR=8.6									
MORS	**Morshin**	**78.94**	**325**	P		**P**		**19 37 06.4**	**+1.5**	
KSV	**Kosov**	**78.96**	**323**	P		**P**		**19 37 05.3**	**+0.2**	
LLD	**Lille Linde**	**79.00**	**334**	*i* P		**P**		**19 37 06.3**	**+1.2**	
LLD	**Lille Linde**	**79.00**	**334**	*i* P		**P**		**19 37 06.3**	**+1.2**	
PRAR	**RASCA**	**79.07**	**322**	⇓P		**P**		**19 37 06.3**	**+0.6**	
MUD	**Monsted U'grnd**	**79.11**	**336**	*i* P		**P**		**19 37 06.9**	**+1.2**	
MUD				*i* P		**P**		**19 37 07.0**	**+1.3**	
MUD				IAmb		IAmb		19 37 07.5		
	comp=Z,103nm,1.1s									
MUD	**Monsted U'grnd**	**79.11**	**336**	*i* P		**P**		**19 37 07.0**	**+1.3**	
MUD				pmax		pmax				
	comp=Z,100nm,1.1s									
KWP	**Kalwaria Pacla**	**79.12**	**325**	*e*P		**P**		**19 37 07.2**	**+1.1**	
KWP	**Kalwaria Pacla**	**79.12**	**325**	P		**P**		**19 37 07.1**	**+1.1**	
BIR	**Birlad**	**79.13**	**321**	⇑P		**P**		**19 37 07.6**	**+1.5**	
BIR	**Birlad**	**79.13**	**321**	P		**P**		**19 37 07.5**	**+1.5**	
RGN	**Rugen**	**79.23**	**333**	*e*P		**P**		**19 37 08.7**	**+1.4**	
	comp=Z,186nm,1.0s,baz=96,slow=5.2									
TLCR		**79.25**	**319**	⇓P		**P**		**19 37 07.7**	**+0.9**	
TLCR		**79.25**	**319**	P		**P**		**19 37 07.6**	**+0.9**	
VARL	**Varlezi**	**79.27**	**320**	⇓P		**P**		**19 37 07.7**	**+1.0**	
BUR08	**Bucovina Ar. S**	**79.37**	**323**	IAmb		IAmb		19 37 09.5		
	comp=Z,40nm,0.8s									
GHRR		**79.38**	**321**	⇓P		**P**		**19 37 08.6**	**+1.2**	
BURAR	**Bucovina Array**	**79.38**	**323**	⇓P		**P**		**19 37 08.2**	**+0.7**	
BURAR	**Bucovina Array**	**79.38**	**323**	P		**P**		**19 37 08.2**	**+0.7**	
BURAR	**Bucovina Array**	**79.38**	**323**	P		**P**		**19 37 08.5**	**+0.9**	
BURAR				IAmb		IAmb		19 37 09.4		
	comp=Z,37nm,0.8s									
N23A	**Red Feather La**	**79.41**	**46**	P				19 37 09.5		
	baz=310,SNR=19									
BIZ	**Bicaz**	**79.42**	**322**	⇑P		**P**		**19 37 08.6**	**+0.9**	
PHWY	**Pilot Hill**	**79.43**	**46**	IAMs_20		IAMs_20		20 02 17.2		
	comp=Z,196nm,18.0s									
WHFO	**Wadi Hawf**	**79.47**	**284**	P		**P**		**19 37 07.9**	**-0.5**	
	SNR=5.8									
WHFO				P		**P**		**19 37 07.9**	**-0.5**	
	SNR=5.8									
WUAZ	**Wupatki**	**79.50**	**53**	P				19 37 09.8		
	baz=308,SNR=11									
JURR	**Jurilovca**	**79.50**	**319**	⇓P		**P**		**19 37 08.6**	**+0.6**	
CFR	**Carcaliu**	**79.61**	**320**	⇑P		**P**		**19 37 09.0**	**+0.3**	
CFR	**Carcaliu**	**79.61**	**320**	P		**P**		**19 37 09.0**	**+0.3**	
AGMN	**Agassiz Nation**	**79.67**	**36**	P				19 37 08.7		
	baz=316,SNR=18									
TPGR	**Topolog**	**79.68**	**319**	⇓P		**P**		**19 37 09.9**	**+0.8**	
LNIZ	**Loecknitz**	**79.73**	**332**	*e*P		**P**		**19 37 10.4**	**+1.2**	
	comp=Z,380nm,1.2s,baz=36,slow=5.2									
VRI	**Vrincioaia**	**79.86**	**321**	⇓P		**P**		**19 37 11.0**	**+1.0**	
VRI	**Vrincioaia**	**79.86**	**321**	P		**P**		**19 37 11.0**	**+1.0**	
PLOR	**Plostina**	**79.91**	**321**	⇓P		**P**		**19 37 11.3**	**+0.9**	
PLOR	**Plostina**	**79.91**	**321**	P		**P**		**19 37 11.2**	**+0.9**	
TIRR	**Tirgusor**	**79.96**	**319**	P		**P**		**19 37 11.2**	**+0.6**	
OJC	**Ojcow**	**79.98**	**327**	*e*P		**P**		**19 37 11.6**	**+1.0**	
UZH	**Uzhgorod**	**80.03**	**325**	*c* iP		**P**		**19 37 11.0**	**+0.1**	
UZH				*i*				19 37 13.9		
UZH				*i*				19 37 19.6		
UZH				*i*				19 37 24.6		
HARR	**Harsova**	**80.05**	**319**	⇑P		**P**		**19 37 11.9**	**+0.8**	
HARR	**Harsova**	**80.05**	**319**	P		**P**		**19 37 11.9**	**+0.8**	
TRSU	**Trosnyk**	**80.11**	**324**	P		**P**		**19 37 12.7**	**+1.4**	
MFTR	**Murfatlar**	**80.14**	**319**	⇑P		**P**		**19 37 11.9**	**+0.4**	
BMR	**Baia Mare**	**80.16**	**324**	⇑P		**P**		**19 37 12.8**	**+1.2**	
BMR	**Baia Mare**	**80.16**	**324**	P		**P**		**19 37 12.8**	**+1.2**	
ABTO	**Aybut**	**80.17**	**284**	P		**P**		**19 37 12.1**	**-0.2**	
	SNR=11									
ABTO				P		**P**		**19 37 12.1**	**-0.2**	
	SNR=11									
ARCR	**ARCALIA**	**80.17**	**323**	⇓P		**P**		**19 37 13.3**	**+1.6**	
BR131	**Keskin Array S**	**80.20**	**313**	*d* iP		**P**		**19 37 12.6**	**+0.4**	
BR131	**Keskin Array S**	**80.20**	**313**	P		**P**		**19 37 12.8**	**+0.6**	
BRTR	**Keskin Array B**	**80.20**	**313**	P		**P**		**19 37 12.7**	**+0.4**	
	comp=Z,17nm,1.0s,baz=103,slow=4.4,SNR=61									
BRTR				PP		**PP**		**19 40 14.5**	**+0.5**	
	comp=Z,3.7nm,1.1s,baz=73,slow=4.1,SNR=3.7									
BRTR				LR		LR		20 17 18.1		
	comp=Z,418nm,18.7s,baz=54,slow=39									
BRTR	**Keskin Array B**	**80.20**	**313**	P		**P**		**19 37 12.9**	**+0.8**	
CRVS	**Cervenica-Dubn**	**80.22**	**326**	*e*P		**P**		**19 37 13.0**	**+1.1**	
CRVS				pmax		pmax				
	comp=Z,182nm,1.7s									
CRVS	**Cervenica-Dubn**	**80.22**	**326**	*e*P		**P**		**19 37 13.0**	**+1.1**	
CRVS				*e*PP		**PP**		**19 40 13.7**	**0.0**	
MVCO	**Mesa Verde**	**80.25**	**51**	P				19 37 13.7		
	baz=310,SNR=14									
TRPA	**Tarpa**	**80.28**	**325**	⇓P		**P**		**19 37 13.4**	**+1.2**	
ISCO	**Idaho Springs**	**80.31**	**47**	P				19 37 14.3		
	baz=311,SNR=18									
NIE	**Niedzica**	**80.36**	**327**	*e*P		**P**		**19 37 14.4**	**+1.7**	
NIE	**Niedzica**	**80.36**	**327**	P		**P**		**19 37 13.9**	**+1.2**	
NEHR	**Nehoiu**	**80.38**	**321**	⇓P		**P**		**19 37 14.6**	**+1.7**	
AMRR	**Amara**	**80.41**	**320**	⇓P		**P**		**19 37 14.2**	**+1.2**	
SKMB	**Sankelmark Bun**	**80.44**	**335**	*e*P		**P**		**19 37 14.7**	**+1.7**	
	comp=Z,180nm,0.8s,baz=36,slow=5.2									
ISR	**Istrita**	**80.47**	**320**	⇓P		**P**		**19 37 14.8**	**+1.4**	
ISR	**Istrita**	**80.47**	**320**	P		**P**		**19 37 14.8**	**+1.4**	
MLR	**Muntele Rosu**	**80.51**	**321**	⇓P		**P**		**19 37 14.4**	**+0.7**	
MLR	**Muntele Rosu**	**80.51**	**321**	P		**P**		**19 37 14.4**	**+0.7**	
MLR				pmax		pmax				
	comp=Z,43nm,1.4s									
MLR	**Muntele Rosu**	**80.51**	**321**	IAmb		IAmb		19 37 16.5		
	comp=Z,62nm,1.3s									
ANTO	**Ankara**	**80.60**	**313**	P		**P**		**19 37 15.3**	**+1.1**	
RUE	**Ruedersdorf**	**80.69**	**332**	*e*P		**P**		**19 37 15.5**	**+1.2**	
	comp=Z,208nm,1.3s,baz=36,slow=5.2									
214A	**Organ Pipe Nat**	**80.75**	**57**	P				19 37 16.2		
	baz=308,SNR=10.0									
SECR		**80.77**	**321**	⇑P		**P**		**19 37 16.0**	**+1.0**	
LEHL	**Lehliu**	**80.78**	**320**	⇓P		**P**		**19 37 16.0**	**+1.0**	
BSEG	**Bad Segeberg**	**80.78**	**334**	*e*P		**P**		**19 37 16.0**	**+1.1**	
	comp=Z,147nm,1.0s,baz=36,slow=5.2									
W18A	**Petrified Fore**	**80.79**	**53**	P				19 37 17

EYMN **Ely** 81.92 34 P 19 37 21.1
baz=318,SNR=12
NRDL **Niedersach Rie** 82.03 334 eP P 19 37 22.4 +1.0
comp=Z,90nm,1.3s,baz=36,slow=5.2
VRAC **Vranov** 82.03 328 ⇓P P 19 37 22.8 +1.2
VRAC **Vranov** 82.03 328 ⇓iP P 19 37 22.7 +1.1
SIRR **Siria** 82.05 324 ⇓P P 19 37 22.4 +0.6
FBE **Freiberg** 82.08 331 eP P 19 37 22.9 +1.1
comp=Z,179nm,0.9s,baz=36,slow=5.2
ZIMR 82.09 320 ⇑P P 19 37 23.6 +1.7
ASSE **Asse, Remlinge** 82.12 333 eP P 19 37 22.9 +1.0
comp=Z,89nm,1.1s,baz=36,slow=5.2
GZR **Gura Zlata** 82.15 322 ⇓P P 19 37 22.8 +0.5
KAC **Achnashellach** 82.15 344 eP P 19 37 23.3 +1.3
SMOL **Smolenice** 82.28 327 eP P 19 37 24.3 +1.4
SMOL pmax pmax
comp=Z,56nm,1.0s
SMOL **Smolenice** 82.28 327 eP P 19 37 24.3 +1.4
SMOL ePP PP 19 40 30.3 -0.5
KRUC **Moravsky** 82.31 328 ⇓iP P 19 37 23.9 +0.9
KRUC **Moravsky** 82.31 328 P P 19 37 24.0 +0.9
PRA **Prague** 82.33 330 eP P 19 37 23.9 +0.8
PRA MLR MLR
comp=Z,1µm,18.9s
PRA **Prague** 82.33 330 eP P 19 37 23.9 +0.8
PRA AMS AMS 20 16 50.0
comp=Z,1µm,18.9s
VLAD **Vladila** 82.34 321 ⇑P P 19 37 23.8 +0.5
PRU **Pruhonice** 82.35 330 eP P 19 37 23.8 +0.6
PRU MLR MLR
comp=Z,900nm,19.2s
PRU **Pruhonice** 82.35 330 eP P 19 37 23.8 +0.6
PRU AMS AMS 20 15 40.0
comp=Z,900nm,19.2s
BUD **Budapest** 82.36 326 P P 19 37 24.9 +1.6
BUD pmax pmax
comp=Z,47nm,1.4s
KPL **Plockton** 82.38 344 eP P 19 37 24.3 +1.1
KPL IAmb IAmb 19 37 25.5
comp=Z,551nm,1.5s
RAYN **Ar Rayn** 82.40 294 iP P 19 37 24.2 +0.2
SNR=13
RAYN **Ar Rayn** 82.40 294 P P 19 37 22.8 -1.2
RAYN pmax pmax
comp=Z,35nm,1.1s
RAYN MLR MLR
comp=Z,700nm,18.0s
RAYN **Ar Rayn** 82.40 294 P P 19 37 22.8 -1.2
RAYN IAMs_20 IAMs_20 20 17 57.0
comp=Z,659nm,18.0s
SRO **Srobarova** 82.43 326 eP P 19 37 25.0 +1.3
SRO pmax pmax
comp=Z,101nm,1.1s
SRO **Srobarova** 82.43 326 eP P 19 37 25.0 +1.3
SRO2 **Moca** 82.43 326 eP P 19 37 23.9 +0.2
SRO2 pmax pmax
comp=Z,45nm,0.9s
SRO2 **Moca** 82.43 326 eP P 19 37 23.9 +0.2
MODS **Modra-Piesok** 82.46 327 eP P 19 37 25.3 +1.5
MODS pmax pmax
comp=Z,106nm,1.1s
MODS **Modra-Piesok** 82.46 327 eP P 19 37 25.3 +1.5
MODS ePP PP 19 40 34.5 +2.3
NEUB **Neuenburg** 82.46 332 eP P 19 37 24.6 +0.8
comp=Z,226nm,1.0s,baz=36,slow=5.2
CLZ **Clausthal** 82.46 333 eP P 19 37 25.0 +1.2
comp=Z,180nm,1.2s,baz=36,slow=5.2
TREC **Trest** 82.50 329 eP P 19 37 25.0 +0.9
TREC e 19 37 36.2
TREC MLR MLR
comp=Z,800nm,17.6s
TREC **Trest** 82.50 329 eP P 19 37 25.0 +0.9
TREC ex x 19 37 36.2
TREC AMS AMS 20 16 50.0
comp=Z,800nm,17.6s
BZS **Buzias** 82.55 323 ⇓P P 19 37 24.7 +0.3
ECSD **EROS Data Cent** 82.55 40 P P 19 37 24.5 0.0
ECSD IAmb IAmb 19 37 25.7
comp=Z,45nm,0.9s
ECSD **EROS Data Cent** 82.56 40 P 19 37 24.6
baz=316,SNR=38
KSCO **Kaye Shedlock'** 82.57 46 P 19 37 25.3
baz=312
SOCY **Socotra** 82.66 280 P P 19 37 24.0 -1.5
SOCY **Socotra** 82.66 280 P P 19 37 24.3 -1.2
SNR=24
SOCY P P 19 37 24.3 -1.2
PLVB **Pleven** 82.67 320 ⇓P P 19 37 25.7 +0.7
HERR **Herculane** 82.70 322 ⇑P P 19 37 25.8 +0.7
T25A **Trinidad** 82.77 48 P 19 37 27.0
baz=312,SNR=31
PBCC **Pribram** 82.81 330 eP P 19 37 25.6 0.0
TANN **Tannenbergstha** 82.83 331 eP P 19 37 26.7 +0.8
comp=Z,39nm,1.0s,baz=36,slow=5.2
GTTG **Gottingen** 82.85 333 eP P 19 37 26.8 +1.0
comp=Z,108nm,1.0s,baz=36,slow=5.2
BAIL **Bailesti** 82.86 321 ⇓P P 19 37 27.6 +1.6
WERD **Werda** 82.86 331 eP P 19 37 26.9 +0.9
comp=Z,53nm,1.0s,baz=36,slow=5.2
PUNG **Punghina** 82.89 322 ⇑P P 19 37 27.1 +1.0
PLN **Plauen** 82.89 331 eP P 19 37 27.0 +0.9
comp=Z,48nm,1.0s,baz=36,slow=5.2
GUNZ **Gunzen** 82.92 331 eP P 19 37 27.2 +1.0
comp=Z,79nm,1.0s,baz=36,slow=5.2
BANR **Banloc** 82.95 323 ⇓P P 19 37 27.4 +1.0
ESY **Stoneypath** 82.95 342 eP P 19 37 26.8 +0.6
PPT **Papeete** 82.96 118 LR LR 20 08 20.2
comp=Z,234nm,19.8s,baz=327,slow=31
ANMO **Albuquerque** 82.96 51 dP P 19 37 28.3 +1.3
ANMO pmax pmax
comp=Z,49nm,1.3s
ANMO **Albuquerque** 82.96 51 P P 19 37 26.1 -0.8
ANMO IAmb IAmb 19 37 29.6
comp=Z,48nm,1.2s
ANMO **Albuquerque** 82.97 51 P 19 37 28.1
baz=311
WERN **Wernitzgruen** 82.97 331 eP P 19 37 27.5 +1.0
comp=Z,90nm,1.0s,baz=36,slow=5.2
MOX **Moxa** 82.97 332 P P 19 37 27.1 +0.6
MOX **Moxa** 82.97 332 eP P 19 37 27.4 +0.9
comp=Z,84nm,1.2s,baz=36,slow=5.2
PPT2 **Papeete2** 82.98 118 eS S 19 47 44.0 -2.1
comp=Z,111nm,24.8s
PPT2 **Papeete2** 82.98 118 eLR LR 20 03 14.4
comp=Z,688nm,25.0s,baz=306
NKC **Novy Kostel** 82.98 331 eP P 19 37 27.1 +0.6
NKC MLR MLR
comp=Z,1µm,18.3s
NKC **Novy Kostel** 82.98 331 eP P 19 37 27.1 +0.6
NKC AMS AMS 20 17 00.0
comp=Z,1µm,18.3s
IBBN **Ibbenburen** 83.00 335 eP P 19 37 27.3 +0.8
comp=Z,143nm,0.8s,baz=36,slow=5.2
MDVR **Moldovita** 83.11 323 ⇑P P 19 37 27.6 +0.2
EBL **Broad Law** 83.19 342 eP P 19 37 28.7 +1.3
ISP **Isparta** 83.28 313 IAMs_20 IAMs_20 20 18 11.2
comp=Z,343nm,20.0s
SOP **Sopron** 83.30 327 P P 19 37 29.3 +1.1
SOP pmax pmax
comp=Z,133nm,1.2s
LAWE **Loch Awe, Argy** 83.31 343 eP P 19 37 29.1 +1.1
LAWE IAmb IAmb 19 37 30.2
comp=Z,174nm,1.3s
MANZ **Manzenberg** 83.31 331 eP P 19 37 29.2 +0.9
comp=Z,55nm,1.0s,baz=36,slow=5.2
SPMN **Marine on St.** 83.34 36 P 19 37 28.9
baz=318
CKRC **Cesky Krumlov** 83.36 329 eP P 19 37 27.9 -0.6
BGNE **Belgrade** 83.40 42 P 19 37 29.1
baz=315,SNR=8.7
CONA **Conrad Observa** 83.41 328 iP P 19 37 29.1 +0.2
comp=Z,31nm,0.8s,SNR=45
CONA eP PP 19 40 40.9 +0.9
comp=Z,8,8nm,1.0s
KHC **Kasperske Hory** 83.41 330 diP P 19 37 29.8 +1.0
KHC **Kasperske Hory** 83.41 330 eP P 19 37 29.1 +0.3
KHC ex x 19 37 41.0
KHC AMS AMS 20 17 10.0
comp=Z,800nm,16.5s
UBBA **Unterbreizbach** 83.43 333 eP P 19 37 29.7 +1.0
comp=Z,32nm,1.0s,baz=36,slow=5.2
ROTZ **Rotzenmuhle** 83.45 331 eP P 19 37 30.3 +1.3
comp=Z,165nm,1.5s,baz=36,slow=5.2
MMAI **Mount Meron Ar** 83.46 307 LR LR 20 17 19.4
comp=Z,383nm,20.4s,baz=30,slow=38

MORH **Mrgy, Hungar** 83.49 325 ⇓P P 19 37 29.4 +0.2
MORH **Mrgy, Hungar** 83.49 325 ⇓iP P 19 37 28.9 -0.3
CSS **Mathiatis** 83.50 309 IAmb IAmb 19 37 31.0
comp=Z,58nm,0.9s
PGBU **Glenifferbraes** 83.50 343 eP P 19 37 30.1 +1.0
PGBU IAmb IAmb 19 37 31.5
comp=Z,234nm,1.0s
PLD **Plovdiv** 83.54 319 P P 19 37 30.7 +1.2
PLD pmax pmax
comp=Z,97nm,1.9s
GEC2 **GERESS Array S** 83.59 329 IAmb IAmb 19 37 31.4
comp=Z,50nm,0.9s
GEC2 **GERESS Array S** 83.59 329 eP P 19 37 30.4 +0.6
comp=Z,62nm,1.1s,baz=36,slow=5.2
GERES **GERESS Array B** 83.59 329 P P 19 37 30.1 +0.4
comp=Z,31nm,0.8s,baz=39,slow=5.1,SNR=216
GERES PP PP 19 40 41.7 +0.2
comp=Z,1.5nm,0.7s,baz=44,slow=5.9,SNR=3.8
GERES LR LR 20 17 36.2
comp=Z,521nm,19.5s,baz=27,slow=38
GERES **GERESS Array B** 83.59 329 P P 19 37 30.4 +0.6
GERES **GERESS Array B** 83.59 329 P P 19 37 30.4 +0.6
ESK **Eskdalemuir** 83.64 342 P P 19 37 30.0 +0.2
ESK pmax pmax
comp=Z,70nm,1.1s
ESK **Eskdalemuir** 83.64 342 P P 19 37 30.0 +0.2
ESK IAmb IAmb 19 37 32.2
comp=Z,70nm,1.1s
ALN **Alexandroupoli** 83.68 318 IAmb IAmb 19 37 32.1
comp=Z,65nm,1.1s
WET **Wettzell** 83.68 330 P P 19 37 31.0 +0.8
WET **Wettzell** 83.68 330 eP P 19 37 31.4 +1.2
comp=Z,84nm,1.2s,baz=36,slow=5.2
121A **Cookes Peak, D** 83.69 54 P 19 37 32.0
baz=310,SNR=27
KASTN **Kahler Asten** 83.69 334 eP P 19 37 31.0 +0.8
comp=Z,92nm,1.5s,baz=36,slow=5.2
FRGS **Fruska Gora** 83.74 324 ⇑P P 19 37 31.2 +0.6
FRGS **Fruska Gora** 83.74 324 ⇓iP P 19 37 30.9 +0.3
GRF **Grafenberg Arr** 83.89 331 eP P 19 37 32.6 +1.4
comp=Z,240nm,1.3s,baz=36,slow=5.2
GRF eL L 20 18 05.8
comp=Z,590nm,18.5s
GRFO **Grafenberg** 83.89 331 P P 19 37 32.3 +1.1
GRFO pmax pmax
comp=Z,166nm,1.1s
GRFO **Grafenberg** 83.89 331 P P 19 37 32.3 +1.1
BUG **Bochum--Univer** 83.89 334 eP P 19 37 31.8 +0.6
comp=Z,105nm,1.2s,baz=36,slow=5.2
VTS **Vitosha** 83.93 320 ⇓P P 19 37 32.8 +1.0
NEWG **New Galloway** 84.07 342 eP P 19 37 32.5 +0.6
NEWG IAmb IAmb 19 37 33.9
comp=Z,97nm,1.0s
ARSA **Arzberg** 84.08 328 iP P 19 37 33.0 +0.7
comp=Z,7.5nm,0.7s,SNR=7.8
MOA **Molln** 84.14 329 iP P 19 37 33.2 +0.7
comp=Z,14nm,1.1s,SNR=30
MOA eP PP 19 40 47.1 +1.1
comp=Z,15nm,1.4s
RPZ **Rata Peaks** 84.23 161 LR LR 20 09 04.1
comp=Z,314nm,21.8s,baz=280,slow=31
KESW **Keswick, Cumbr** 84.27 341 eP P 19 37 34.4 +1.4
KESW IAmb IAmb 19 37 35.3
comp=Z,356nm,1.3s
EZN **Ezine** 84.28 317 P P 19 37 34.0 +0.7
TAOE **Nuku Hiva Isla** 84.31 106 eLR LR 20 03 57.8
comp=Z,670nm,30.8s
TEKS **Tekeris** 84.33 324 ⇓iP P 19 37 34.0 +0.4
CBKS **Cedar Bluff** 84.35 45 P 19 37 33.8
baz=314
KOGS **Kog** 84.38 327 eP P 19 37 33.5 -0.3
GAL1 **Galloway** 84.42 342 eP P 19 37 34.2 +0.5
GAL1 IAmb IAmb 19 37 35.6
comp=Z,176nm,1.0s
HPK **Haverah Park** 84.45 340 eP P 19 37 35.1 +1.2
HPK IAmb IAmb 19 37 36.0
comp=Z,537nm,1.8s
DIVS **Divibare** 84.45 323 ⇓iP P 19 37 33.9 -0.3
DIVS **Divibare** 84.45 323 IAmb IAmb 19 37 35.9
comp=Z,67nm,1.1s
TNS **Taunus Mts** 84.49 333 eP P 19 37 35.2 +0.9
comp=Z,102nm,1.4s,baz=36,slow=5.2
GROS **Grobnik** 84.70 327 eP P 19 37 35.6 +0.1
AHRW **Bad Neuenahr-A** 84.71 334 eP P 19 37 36.4 +1.0
comp=Z,139nm,1.1s,baz=36,slow=5.2
SOKA **Soboth** 84.73 327 iP P 19 37 36.0 +0.3
comp=Z,109nm,1.4s,SNR=61
SOKA eP PP 19 40 50.8 -0.1
comp=Z,6.6nm,1.2s
BBLS **Lazići** 84.90 323 ⇓iP P 19 37 37.3 +0.8
WACR **West Acre** 84.91 339 eP P 19 37 37.4 +1.1
WACR IAmb IAmb 19 37 38.5
comp=Z,138nm,0.9s
IOMK **Kirk Michael** 84.93 342 eP P 19 37 37.0 +0.6
IOMK IAmb IAmb 19 37 38.3
comp=Z,392nm,1.3s
HAPS **Han Pijesak,Bl** 84.95 324 ⇓iP P 19 37 36.2 -0.6
LBWR **Ladybower, Pea** 84.97 340 eP P 19 37 37.7 +1.1
LBWR IAmb IAmb 19 37 38.7
comp=Z,310nm,1.0s
BEBN **Eben Emael** 84.98 335 dP P 19 37 37.3 +0.6
comp=Z,138nm,1.1s
BTNL **Ternell** 85.00 335 dP P 19 37 37.3 +0.5
comp=Z,87nm,1.2s
MEM **Memach** 85.03 335 dP P 19 37 37.3 +0.4
comp=Z,84nm,1.1s
MEM **Memach** 85.03 335 P P 19 37 37.9 +1.0
WIM **Isle of Man** 85.06 342 eP P 19 37 38.1 +1.1
OBKA **Obir** 85.07 328 iP P 19 37 37.1 -0.3
comp=Z,18nm,1.0s,SNR=9.8
E43A **Lone Tree Farm** 85.09 33 IAmb IAmb 19 37 38.5
comp=Z,37nm,0.8s
FUR **Furstenfeldbru** 85.10 330 P P 19 37 38.3 +0.9
FUR **Furstenfeldbru** 85.10 330 eP P 19 37 38.4 +0.9
comp=Z,202nm,0.9s,baz=36,slow=5.2
KBA **Koelnbreinsper** 85.13 329 eP P 19 37 37.9 +0.1
comp=Z,21nm,0.8s,SNR=35
KBA eP PP 19 40 54.2 -0.1
comp=Z,12nm,1.0s
KBA **Koelnbreinsper** 85.13 329 P P 19 37 37.7 -0.1
STIP **Stip** 85.14 320 ⇓iP P 19 37 37.2 -0.4
BSTI **Sart Tilman** 85.20 335 dP P 19 37 38.5 +0.8
MRAK **Mrakovica** 85.20 325 eP P 19 37 41.8 +3.8
VAY **Valandovo** 85.21 320 P P 19 37 38.8 +0.8
VAY pmax pmax
comp=Z,85nm,1.2s
VAY **Valandovo** 85.21 320 iP P 19 37 38.6 +0.6
CRES **Cresnjev** 85.21 327 ⇓iP P 19 37 37.7 -0.3
BHOU **Houvegnez** 85.24 334 dP P 19 37 38.6 +0.6
comp=Z,65nm,1.2s
BLY **Banja Luka** 85.27 325 ⇓iP P 19 37 38.3 0.0
GMM **Mts of Mourne** 85.28 343 eP P 19 37 38.8 +0.7
SKO **Skopje** 85.31 321 P P 19 37 39.8 +1.2
SKO pmax pmax
comp=Z,133nm,1.5s
SKO **Skopje** 85.31 321 ⇓iP P 19 37 39.7 +1.2
PLE **Pljevlja** 85.31 323 eP P 19 37 39.5 +0.8
MYKA **Terra Mystica** 85.36 328 iP P 19 37 38.3 -0.5
comp=Z,26nm,1.0s,SNR=16
KTD **Kalmit** 85.37 333 P P 19 37 38.4 -0.3
IVA **Berane** 85.41 322 eP P 19 37 39.5 +0.4
STU **Stuttgart** 85.41 332 P P 19 37 39.5 +0.6
STU **Stuttgart** 85.41 332 eP P 19 37 39.8 +0.9
comp=Z,170nm,0.9s,baz=36,slow=5.2
UCC **Uccle** 85.42 336 dP P 19 37 39.2 +0.4
BCLA **Clavier** 85.43 335 dP P 19 37 38.4 -0.5
comp=Z,60nm,1.0s
CWF **Charnwood Fore** 85.45 340 eP P 19 37 39.0 +0.1
CWF IAmb IAmb 19 37 39.7
comp=Z,120nm,1.0s
LJU **Ljubljana** 85.45 327 eP P 19 37 38.9 -0.2
BGES **Gesves** 85.53 335 dP P 19 37 39.7 +0.2
comp=Z,60nm,1.0s
BOJS **Bojanci** 85.56 327 eP P 19 37 39.6 -0.1
MGRS **Mrkonjic Grad** 85.57 325 ⇓iP P 19 37 40.7 +0.9
KOME **Kolasin** 85.61 322 eP P 19 37 40.2 +0.1
UPM **Unac-Piva** 85.64 323 eP P 19 37 40.4 0.0
UPM **Unac-Piva** 85.64 323 eP P 19 37 39.9 -0.5
WATA **Walderalm** 85.65 330 eP P 19 37 40.3 0.0
comp=Z,40nm,1.1s,SNR=19
WATA eP PP 19 40 58.7 +0.3
comp=Z,11nm,1.0s
WME **Myndd Eilian** 85.65 342 eP P 19 37 41.3 +1.3
RCHB **Rochefort** 85.67 335 dP P 19 37 40.3 +0.2
comp=Z,94nm,1.2s

WTTA **Wattenberg** 85.69 330 iP P 19 37 40.5 0.0
comp=Z,35nm,1.1s,SNR=17
WTTA eP PP 19 40 57.7 -1.0
comp=Z,6.8nm,1.0s
WTTA **Wattenberg** 85.69 330 P P 19 37 40.9 +0.4
SNF **Seneffe** 85.69 335 dP P 19 37 40.9 +0.7
ZOU **Zoufplan** 85.70 328 IAmb IAmb 19 37 41.1
comp=Z,50nm,1.3s
BMRD **Maredsous** 85.71 335 dP P 19 37 40.9 +0.6
comp=Z,114nm,1.1s
CEY **Cerknica** 85.73 327 ⇓iP P 19 37 39.9 -0.7
ABTA **Abfaltersbach** 85.74 329 iP P 19 37 39.8 -0.9
comp=Z,36nm,1.2s,SNR=17
WLF **Walferdange** 85.77 334 dP P 19 37 41.4 +0.7
comp=Z,75nm,1.6s
WLF **Walferdange** 85.77 334 eP P 19 37 42.0 +1.3
comp=Z,200nm,1.5s,baz=36,slow=5.2
MNTX **Cornudas Mount** 85.77 53 P 19 37 41.8
baz=312,SNR=32
FOEL **Foel Wylfa** 85.83 341 eP P 19 37 41.2 +0.3
FOEL IAmb IAmb 19 37 42.0
comp=Z,220nm,0.9s
MOTA **Moosalm** 85.83 330 iP P 19 37 41.3 0.0
comp=Z,89nm,1.2s,SNR=31
MOTA eP PP 19 40 59.3 -0.6
comp=Z,10nm,1.0s
YLL **Llanberis** 85.85 341 eP P 19 37 42.0 +1.1
RETA **Reutte** 85.85 330 iP P 19 37 41.7 +0.5
comp=Z,84nm,0.9s,SNR=34
GIVF **Givet** 85.86 335 eP P 19 37 40.8 -0.3
GIVF pmax pmax
comp=Z,55nm,1.0s
KSU1 **Kansas State U** 85.87 43 P 19 37 41.4
baz=316,SNR=15
MSTX **Muleshoe** 85.89 50 P 19 37 42.0
baz=313,SNR=7.4
SQTA **Sankt Quirin** 85.89 330 iP P 19 37 41.7 +0.2
comp=Z,33nm,1.0s,SNR=21
SQTA eP PP 19 40 59.1 -1.2
comp=Z,12nm,1.1s
AMTX **Amarillo** 85.92 49 P 19 37 43.0
baz=313
DOU **Dourbes** 85.94 335 dP P 19 37 41.6 +0.1
comp=Z,25nm,1.1s
NKME **Niksic** 85.94 323 eP P 19 37 41.7 0.0
UBR **Ueberruh** 85.95 331 eP P 19 37 42.2 +0.5
comp=Z,45nm,1.1s,baz=36,slow=5.2
MATQ **Matagami** 85.96 26 P 19 37 41.4
baz=328,SNR=18
LLW **Llanuwchllyn** 85.98 341 eP P 19 37 42.6 +0.9
TRI **Trieste** 86.04 328 P P 19 37 41.9 -0.1
TRI pmax pmax
comp=Z,42nm,1.2s
TRI **Trieste** 86.04 328 IAmb IAmb 19 37 42.6
comp=Z,39nm,1.0s
BRY **Bratogost** 86.04 323 eP P 19 37 42.1 -0.2
BRY **Bratogost** 86.04 323 eP P 19 37 41.9 -0.4
PDG **Podgorica** 86.05 322 ⇓P P 19 37 42.2 0.0
PDG **Podgorica** 86.05 322 ⇓iP P 19 37 42.2 0.0
PDG **Podgorica** 86.05 322 IAMs_20 IAMs_20 20 18 39.2
comp=Z,536nm,20.0s
TTG **Podgorica** 86.05 322 eP P 19 37 42.1 0.0
HLM1 **Long Mynd** 86.07 340 eP P 19 37 43.1 +1.0
HLM1 IAmb IAmb 19 37 44.6
comp=Z,110nm,1.4s
BFO **Black Forest** 86.10 332 P P 19 37 43.0 +0.6
BFO pmax pmax
comp=Z,138nm,1.0s
BFO **Black Forest** 86.10 332 P P 19 37 43.0 +0.6
BFO **Black Forest** 86.10 332 eP P 19 37 43.1 +0.7
comp=Z,154nm,1.0s,baz=36,slow=5.2
CEME **Cevo** 86.13 323 eP P 19 37 42.4 -0.3
LIT **Litokhoron** 86.14 319 P P 19 37 41.9 -0.8
LIT pmax pmax
comp=Z,34nm,0.9s
LIT **Litokhoron** 86.14 319 P P 19 37 41.9 -0.8
LIT IAmb IAmb 19 37 43.0
comp=Z,34nm,0.9s
I42A **Draeger Farm,** 86.17 35 IAmb IAmb 19 37 44.1
comp=Z,50nm,0.8s
FNA **Florina** 86.22 320 IAmb IAmb 19 37 44.1
comp=Z,48nm,1.1s
E46A **Sault Ste Mari** 86.24 31 IAmb IAmb 19 37 44.2
comp=Z,62nm,1.1s
FETA **Feichten** 86.25 330 iP P 19 37 43.4 +0.1
comp=Z,55nm,1.0s,SNR=30
FETA eP PP 19 40 58.2 -5.0
comp=Z,6.8nm,1.2s
OHR **Ohrid** 86.27 321 ⇓iP P 19 37 43.5 +0.1
DRME **Dracevica, Mon** 86.27 322 ⇓iP P 19 37 43.3 0.0
DRME **Dracevica, Mon** 86.27 322 eP P 19 37 43.5 +0.2
TREB **Trebinje** 86.27 323 eP P 19 37 41.1 -2.2
JFWS **Jewell Farm** 86.30 37 P 19 37 43.5
baz=320,SNR=9.4
BUM **Brajici-Budva** 86.33 322 eP P 19 37 44.0 +0.4
DAVA **Damuels** 86.36 331 iP P 19 37 44.1 +0.3
comp=Z,108nm,1.1s,SNR=42
ULC **Ulcinj** 86.41 322 eP P 19 37 44.3 +0.3
HCY **Herceg Novi** 86.41 323 eP P 19 37 43.6 -0.4
HCY **Herceg Novi** 86.41 323 eP P 19 37 43.9 -0.1
STRD **Stroud** 86.55 340 eP P 19 37 45.4 +1.0
STRD IAmb IAmb 19 37 46.3
comp=Z,241nm,0.9s
TIR **Tirane** 86.56 321 ⇑P P 19 37 45.0 +0.3
MCH1 **Michaelchurch** 86.58 340 eP P 19 37 45.4 +0.9
MCH1 IAmb IAmb 19 37 46.5
comp=Z,67nm,0.8s
APE **Apeiranthos** 86.67 315 ⇑P P 19 37 45.2 -0.2
WOL **Wolverton** 86.69 339 eP P 19 37 45.9 +0.8
LSQQ **Lebel-sur-Quev** 86.78 26 P 19 37 45.5
baz=329
TBI **Tubuai** 86.94 122 eS S 19 48 22.6 -2.4
comp=Z,103nm,28.0s
TBI **Tubuai** 86.94 122 eLR LR 20 04 36.6
comp=Z,425nm,32.0s,baz=312
TBI **Tubuai** 86.94 122 eT T 21 13 07.9
comp=Z,15nm,0.4s
TUE **Stuetta** 87.24 330 IAmb IAmb 19 37 53.7
comp=Z,45nm,0.9s
L42A **Oliver, Polo** 87.27 37 IAmb IAmb 19 37 49.0
comp=Z,53nm,0.9s
GLMI **Grayling** 87.34 32 P 19 37 49.2
baz=323,SNR=6.9
LPIG **La Paz** 87.39 62 LR LR 20 16 17.9
comp=Z,110nm,18.0s,baz=233,slow=35
WMOK **Wichita Mounta** 87.74 47 IAmb IAmb 19 37 52.3
comp=Z,46nm,1.4s
WMOK **Wichita Mounta** 87.74 47 P 19 37 51.1
baz=315,SNR=22
L44A **Lake County Fo** 87.96 36 P 19 37 51.7
baz=321,SNR=6.1
IDI **Anoyia** 88.30 314 LR LR 20 22 34.6
comp=Z,259nm,18.5s,baz=34,slow=39
TX32 **Lajitas Array** 88.45 54 IAmb IAmb 19 37 55.9
comp=Z,29nm,0.8s
TXAR **Lajitas Array** 88.45 54 P P 19 37 54.7 +0.5
comp=Z,24nm,0.7s,baz=300,slow=3.4,SNR=224
TXAR LR LR 20 17 20.7
comp=Z,168nm,18.0s,baz=0.0,slow=36
TXAR **Lajitas Array** 88.45 54 P P 19 37 55.1 +0.9
TXAR **Lajitas Array** 88.45 54 P P 19 37 55.1 +0.9
HDIL **Hopedale** 88.56 38 P 19 37 55.1
baz=320,SNR=20
ITM **Ithomi** 88.58 317 IAmb IAmb 19 37 54.1
comp=Z,36nm,1.0s
NRCA **Norcia** 88.61 326 IAmb IAmb 19 37 56.2
comp=Z,48nm,0.9s
TUL1 **Leonard** 88.62 44 P 19 37 55.4
baz=316,SNR=12
MATE **Matera** 88.65 323 ⇓P P 19 37 54.4 -0.3
S39A **Bolivar** 88.66 42 IAmb IAmb 19 37 55.6
comp=Z,38nm,0.9s
ABTX **Abilene, Hawle** 88.71 49 P 19 37 56.0
baz=314,SNR=11
AQU **L'Aquila** 88.86 326 P P 19 37 56.6 +0.8
AQU pmax pmax
comp=Z,77nm,0.9s
AQU **L'Aquila** 88.86 326 ⇓iP P 19 37 55.8 0.0
INTR **Introdacqua** 88.90 325 IAmb IAmb 19 37 57.9
comp=Z,43nm,0.9s
ALGO **Algonquin Park** 89.04 28 P 19 37 56.3
baz=328,SNR=12
LPL **La Plagne** 89.05 331 eP P 19 37 56.9 0.0
LPL pmax pmax
comp=Z,15nm,0.7s
D55A **Sainte-Anne-du** 89.05 26 P 19 37 56.5

baz=330,SNR=15
LPG La Plagne 89.06 331 *e*P P 19 37 57.1 +0.1
LPG pmax pmax
comp=Z,29nm,1.0s
AVF Avril sur Loir 89.20 334 *e*P P 19 37 57.0 -0.2
AVF pmax pmax
comp=Z,43nm,1.0s
D56A ZEC Mazanza, M 89.27 25 P 19 37 57.9
baz=330,SNR=24
E55A Montcerf-Lytto 89.33 26 P 19 37 58.0
baz=329
CCM Cathedral Cave 89.48 40 P P 19 37 58.5 -0.2
CCM pmax pmax
comp=Z,104nm,1.0s
CCM Cathedral Cave 89.48 40 P P 19 37 58.5 -0.2
CCM Cathedral Cave 89.48 40 P 19 37 59.1
baz=319
G54A Lake Saint Pet 89.49 28 P 19 37 58.4
baz=328,SNR=18
E56A St. Veronique 89.62 26 P 19 37 59.2
baz=330,SNR=12
MGMO Mountain Grove 89.62 42 IAmb IAmb 19 38 00.4
comp=Z,64nm,1.0s
LATQ La Tuque 89.64 24 P 19 37 59.6
baz=332
I51A Listowel 89.67 31 P 19 38 00.5
baz=326,SNR=15
SFIN Lafayette 89.75 36 P 19 38 00.6
baz=322,SNR=13
TIP Timpagrande 89.75 322 ‖P P 19 37 60.0 -0.1
AAM Ann Arbor 89.79 33 P 19 38 00.9
baz=324
X37A Clayton 89.81 45 IAmb IAmb 19 38 01.9
comp=Z,33nm,1.1s
D58A Chemin du LacG 89.86 24 P 19 38 00.6
baz=332,SNR=10
U40A Yellville 89.90 42 P 19 38 00.8
baz=318,SNR=80
ROSF Rostrenen 89.95 339 *e*P P 19 38 01.5 +0.8
H53A Bobcaygeon 90.00 29 P 19 38 01.2
baz=328,SNR=27
JCT Junction City 90.11 51 P 19 38 02.3
baz=314,SNR=15
PLVO Plevna 90.17 28 IAmb IAmb 19 38 03.0
comp=Z,44nm,0.9s
W39A Magazine 90.25 44 IAmb IAmb 19 38 03.8
comp=Z,68nm,1.4s
W39A Magazine 90.25 44 P 19 38 02.6
baz=318,SNR=12
QUIF Quistinic 90.30 339 *e*P P 19 38 02.1 -0.2
QUIF pmax pmax
comp=Z,48nm,1.3s
E58A La Victoria 90.36 25 P 19 38 02.9
baz=331,SNR=13
DELO Deloro Mine 90.41 28 IAmb IAmb 19 38 04.2
comp=Z,45nm,0.9s
WHTX Lake Whitney, 90.47 48 P 19 38 04.5
baz=316,SNR=26
F58A St-Lin Laurent 90.62 25 P 19 38 01.8
baz=331,SNR=13
D60A Saint Jean D'O 90.64 23 P 19 38 04.3
baz=333,SNR=5.7
MIAR Mount Ida 90.85 44 P 19 38 05.8
baz=318,SNR=52
G57A Newington 90.88 26 P 19 38 05.1
baz=330,SNR=18
CEL Celeste 90.89 322 IAMs_20 IAMs_20 20 21 39.4
comp=Z,622nm,22.0s
F59A Saint Guilaume 90.98 25 P 19 38 06.3
baz=332,SNR=5.6
D62A Allapoint, All 91.06 22 IAmb IAmb 19 38 07.0
comp=Z,28nm,0.9s
D62A Allapoint, All 91.06 22 P 19 38 06.1
baz=334
W41B Gary Mavity, V 91.11 43 P 19 38 06.3
baz=319,SNR=27
F60A Warwick 91.16 24 P 19 38 06.8
baz=332
G58A Ormstown 91.17 26 P 19 38 06.3
baz=331,SNR=13
O49A Covington 91.19 35 IAmb IAmb 19 38 08.0
comp=Z,32nm,0.8s
E61A Lac Etchemin 91.21 23 P 19 38 07.2
baz=333,SNR=5.1
435B Jarrell 91.25 49 P 19 38 07.6
baz=316
CAF Calviac 91.27 334 *e*P P 19 38 07.4 +0.4
CAF pmax pmax
comp=Z,52nm,1.1s
H57A Richville 91.29 27 P 19 38 07.0
baz=330,SNR=15
X40A Basin Creek Fa 91.30 44 IAmb IAmb 19 38 08.9
comp=Z,28nm,0.9s
X40A Basin Creek Fa 91.30 44 P 19 38 08.0
baz=318,SNR=21
D63A Stockholm 91.38 21 P 19 38 07.9
baz=335,SNR=8.1
LONY Lake Ozonia 91.44 26 P 19 38 07.7
baz=330,SNR=7.4
F61A St Evariste 91.46 24 P 19 38 08.7
baz=333,SNR=14
ERPA Erie 91.50 31 P 19 38 08.9
baz=326,SNR=5.7
L53A Girard 91.52 31 P 19 38 08.8
baz=326,SNR=12
P49A Miami Univ. Ec 91.53 35 P 19 38 08.8
baz=323,SNR=8.4
I57A Carthage 91.64 27 P 19 38 08.6
baz=330,SNR=5.8
ATD Arta Tunnel 91.73 286 LR LR 20 22 23.5
comp=Z,78nm,20.8s,baz=52,slow=38
H59A Cadyville 91.73 26 P 19 38 09.4
baz=331,SNR=8.9
BATG Bathurst New B 91.73 20 IAmb IAmb 19 38 10.9
comp=Z,33nm,0.8s
PQI Presque Isle 91.74 21 IAmb IAmb 19 38 10.3
comp=Z,27nm,0.9s
H58A Gabriels 91.76 26 P 19 38 09.5
baz=331,SNR=15
J56A Wolcott 91.76 28 P 19 38 09.4
baz=329,SNR=9.1
ACSO Alum Creek Sta 91.76 34 P 19 38 09.7
baz=324,SNR=9.7
M53A WI Miller and 91.77 32 P 19 38 09.8
baz=326,SNR=5.6
G60A Masonville 91.80 25 P 19 38 09.4
baz=332
WCI Wyandotte Cave 91.83 37 P 19 38 10.1
baz=322
E63A Oxbow 91.85 22 P 19 38 09.7
baz=335,SNR=5.5
833A Chaparral WMA, 91.86 52 P 19 38 11.1
baz=315
G61A St-Isidore-de- 91.90 24 P 19 38 10.9
baz=332,SNR=9.9
J57A Williamstown 91.97 28 P 19 38 10.2
baz=329,SNR=10
E64A Bridgewater 92.02 21 P 19 38 10.9
baz=335,SNR=7.5
K56A Middlesex 92.07 29 P 19 38 11.1
baz=328,SNR=5.8
I58A Old Forge 92.11 27 P 19 38 10.6
baz=330
M54A Oil Creek Stat 92.14 31 IAmb IAmb 19 38 12.3
comp=Z,17nm,0.7s
M54A Oil Creek Stat 92.14 31 P 19 38 11.7
baz=327,SNR=8.2
H60A Morristown 92.15 25 P 19 38 11.6
baz=332,SNR=5.6
Z41A Richland Creek 92.23 44 P 19 38 12.4
baz=318
G62A West of Eustis 92.28 24 P 19 38 12.7
baz=333,SNR=7.0
F63A Nahmakanta, Br 92.29 22 P 19 38 12.1
baz=334
K57A Scipio Center 92.36 29 P 19 38 12.5
baz=329
F64A Sherman 92.37 22 P 19 38 12.7
baz=335
I59A Olmsteadville 92.41 26 P 19 38 12.7
baz=331,SNR=5.4
H61A Lyndonville 92.43 25 P 19 38 13.4
baz=332,SNR=8.4
N54A Moraine State 92.46 32 IAmb IAmb 19 38 13.9
comp=Z,22nm,0.8s
L56A Greenwood 92.46 30 IAmb IAmb 19 38 13.3
comp=Z,20nm,0.9s
L56A Greenwood 92.46 30 P 19 38 13.1
baz=328,SNR=5.9
N54A Moraine State 92.46 32 P 19 38 13.0
baz=326,SNR=7.2
J59A Piesco 92.47 27 IAmb IAmb 19 38 13.8
comp=Z,26nm,1.2s
J59A Piesco 92.47 27 P 19 38 12.7
baz=330,SNR=8.6
O53A New Philadelph 92.52 33 IAmb IAmb 19 38 14.1
comp=Z,31nm,1.1s
O53A New Philadelph 92.53 33 P 19 38 13.3
baz=326,SNR=7.2
I60A Shoreham 92.57 26 P 19 38 13.6
baz=331,SNR=8.9
P52A Corning 92.63 34 IAmb IAmb 19 38 13.8
comp=Z,18nm,0.8s
P52A Corning 92.63 34 P 19 38 13.4
baz=325,SNR=7.7
PKME Peaks-Kenny Pk 92.63 23 P 19 38 14.2
baz=334
H62A Milan 92.65 24 IAmb IAmb 19 38 15.4
comp=Z,36nm,1.0s
H62A Milan 92.65 24 P 19 38 14.5
baz=333,SNR=11
K58A Earlville 92.66 28 IAmb IAmb 19 38 14.9
comp=Z,36nm,1.2s
K58A Earlville 92.66 28 P 19 38 13.8
baz=330,SNR=8.3
G63A Kingsbury 92.66 23 P 19 38 14.3
baz=334,SNR=6.5
WVT Waverly 92.71 39 P P 19 38 13.6 -0.1
WVT pmax pmax
comp=Z,28nm,0.9s
WVT Waverly 92.71 39 P P 19 38 13.6 -0.1
WVT IAmb IAmb 19 38 15.1
comp=Z,28nm,0.9s
WVT Waverly 92.71 40 P 19 38 14.2
baz=321
M56A Emporium 92.76 30 IAmb IAmb 19 38 15.3
comp=Z,25nm,1.1s
M56A Emporium 92.76 30 P 19 38 14.4
baz=328,SNR=7.5
G64A Maxfield 92.80 22 P 19 38 15.1
baz=335,SNR=7.4
L57A Andrews Acres 92.85 29 P 19 38 14.7
baz=329
I61A Oroboro, Fairl 92.87 25 P 19 38 15.2
baz=332
H63A New Sharon 92.94 23 P 19 38 15.9
baz=334
O54A Avella 92.94 32 IAmb IAmb 19 38 16.2
comp=Z,28nm,0.8s
K59A Cooperstown 92.94 27 P 19 38 15.2
baz=330,SNR=10.0
BINY Binghamton 93.01 28 P 19 38 15.5
baz=325
J60A Lant Hill Farm 93.05 26 P 19 38 15.6
baz=331
OXF Oxford 93.14 42 P 19 38 16.3
baz=320,SNR=26
N56A West Decatur 93.19 31 P 19 38 16.5
baz=328,SNR=6.8
L58A Harry Jones Me 93.20 28 P 19 38 16.6
baz=329,SNR=7.6
G65A Princeton 93.21 22 P 19 38 16.9
baz=335
J61A Chester 93.27 26 P 19 38 16.8
baz=332
I63A Otisfield 93.31 24 P 19 38 17.2
baz=333
M57A Sunshine Farm, 93.31 30 IAmb IAmb 19 38 18.0
comp=Z,31nm,0.9s
M57A Sunshine Farm, 93.31 30 P 19 38 16.9
baz=328,SNR=9.6
L59A Walton 93.38 28 IAmb IAmb 19 38 18.1
comp=Z,20nm,0.8s
L59A Walton 93.38 28 P 19 38 16.8
baz=330,SNR=8.4
H65A Eastbrook 93.46 22 P 19 38 17.3
baz=335
T50A Nancy 93.48 37 IAmb IAmb 19 38 18.6
comp=Z,31nm,0.8s
V48A Smith Brothers 93.52 39 IAmb IAmb 19 38 18.6
comp=Z,25nm,0.9s
Q53A Leroy 93.53 34 P 19 38 17.4
baz=325,SNR=8.2
M58A Price's Panora 93.54 29 P 19 38 18.0
baz=329,SNR=5.4
S51A Beattyville 93.58 36 IAmb IAmb 19 38 18.8
comp=Z,26nm,0.8s
SSPA Standing Stone 93.60 31 P P 19 38 17.8 +0.1
SSPA IAmb IAmb 19 38 19.1
comp=Z,23nm,1.1s
SSPA Standing Stone 93.60 31 P 19 38 17.8
baz=328
MCWV Mont Chateau 93.60 32 P 19 38 18.6
baz=327,SNR=5.3
K61A Williamstown 93.61 26 P 19 38 18.4
baz=331,SNR=5.4
O56A Blue Knob Stat 93.63 31 IAmb IAmb 19 38 19.2
comp=Z,29nm,0.8s
O56A Blue Knob Stat 93.63 31 P 19 38 18.1
baz=327,SNR=13
N57A Milroy 93.63 30 P 19 38 18.1
baz=328,SNR=11
EMMW East Machias 93.68 22 IAMs_20 IAMs_20 20 08 32.1
comp=Z,412nm,18.0s
Q54A Coxs Mills 93.73 33 IAmb IAmb 19 38 19.9
comp=Z,36nm,1.1s
M59A Waymart 93.79 28 P 19 38 18.9
baz=330
L60A Shokan 93.86 27 P 19 38 18.7
baz=330
N58A Sunbury 93.89 30 P 19 38 18.9
baz=329
L61A Hillsdale 1, H 93.92 27 P 19 38 19.6
baz=331
O57A Amberson 94.06 31 P 19 38 19.7
baz=328
P56A Dayton Farm, R 94.16 32 P 19 38 21.0
baz=327,SNR=9.3
N59A State Game Lan 94.20 29 P 19 38 21.0
baz=329,SNR=5.0
K63A Dunstable 94.20 25 P 19 38 21.3
baz=332
M60A Port Jervis 94.28 28 P 19 38 21.2
baz=330
R54A Victor 94.33 34 P 19 38 21.6
baz=326
SWET Sewanee 94.38 39 IAmb IAmb 19 38 22.2
comp=Z,35nm,0.8s
Q56A Snyder Ridge, 94.40 32 P 19 38 21.9
baz=327
O58A Lewisberry 94.42 30 P 19 38 21.5
baz=329
N60A Cedar Hill Far 94.50 29 P 19 38 22.1
baz=330
S54A Dingess, Beckl 94.50 34 P 19 38 22.0
baz=326
P57A Homestead Farm 94.52 31 P 19 38 22.3
baz=328
O59A Robesonia 94.55 30 P 19 38 22.4
baz=329
M61A Granite Spring 94.61 27 P 19 38 22.7
baz=331
R55A Marlinton 94.63 33 IAmb IAmb 19 38 23.9
comp=Z,28nm,0.8s
R55A Marlinton 94.63 33 P 19 38 23.2
baz=326,SNR=8.6
W50A Signal Mountai 94.70 38 IAmb IAmb 19 38 23.9
comp=Z,15nm,0.8s
Q57A Strasburg 94.73 32 P 19 38 23.0
baz=328
PAL Palisades 94.83 28 P 19 38 23.5
baz=331
O60A Telford 94.85 29 P 19 38 23.6
baz=330
V52A Sevierville 95.03 37 IAmb IAmb 19 38 25.7
comp=Z,17nm,0.9s
TKL Tuckaleechee C 95.09 37 P P 19 38 25.0 +0.3
comp=Z,18nm,0.8s,baz=198,slow=0.7,SNR=19
TKL Tuckaleechee C 95.09 37 P P 19 38 25.0 +0.3
TKL Tuckaleechee C 95.09 37 IAmb IAmb 19 38 25.8
comp=Z,24nm,0.8s
Q58A Fox Den Farm, 95.11 31 P 19 38 24.9
baz=328
P60A Greenville 95.20 29 P 19 38 25.1
baz=329
R57A Stanardsville 95.31 32 P 19 38 26.0
baz=327
U54A Nelsons Funny 95.31 35 P 19 38 26.1
baz=325
S56A Natural Bridge 95.37 33 P 19 38 26.1
baz=327
BLA Blacksburg 95.38 34 P 19 38 25.6
baz=326
S57A Dark Hollow, R 95.57 33 P 19 38 27.2
baz=327
KEST Kesra 96.06 324 P P 19 38 28.8 -0.5
comp=Z,9.7nm,1.1s,baz=288,slow=5.7,SNR=6.0
KEST PP PP 19 42 21.5 +0.6
comp=Z,6.7nm,1.0s,baz=4.5,slow=6.2,SNR=3.8
KEST LR LR 20 26 32.8
comp=Z,685nm,18.3s,baz=316,slow=38
KMSC Kings Mountain 96.67 36 P 19 38 31.9
baz=325
PBRG Braganca 96.91 338 *e*P P 19 38 33.1 +0.2
comp=Z,27nm,1.4s
RKT Rikitea 97.01 114 *e*LR LR 20 09 59.0
comp=Z,312nm,24.0s
PGAV Gavieira, Arco 97.20 339 *e*P P 19 38 34.3 0.0
PGAV Gavieira, Arco 97.20 339 A A 20 30 23.9
comp=Z,320nm,18.0s
MVO Moncorvo 97.59 338 *e*P Pdif 19 38 36.6 +0.5
MVO Moncorvo 97.59 338 A A 20 28 25.8
comp=Z,562nm,18.0s
POLO Lamas de Olo 97.62 339 *e*P Pdif 19 38 36.3 +0.1
comp=Z,15nm,1.1s
ESDC Sonseca Array 97.98 335 P P 19 38 37.8 0.0
comp=Z,2.3nm,0.8s,baz=14,slow=4.5,SNR=18
ESDC PP PP 19 42 36.0 +0.5
comp=Z,3.4nm,1.0s,baz=18,slow=7.2,SNR=5.7
ESDC LR LR 20 28 05.3
comp=Z,652nm,18.7s,baz=0.0,slow=39
MTE Manteigas 98.44 338 *e*P Pdif 19 38 40.0 +0.1
MTE Manteigas 98.44 338 A A 20 29 01.6
comp=Z,634nm,18.0s
CART Cartagena 98.81 332 IAMs_20 IAMs_20 20 32 10.5
comp=Z,384nm,19.0s
PCAS Casmilo, Conde 99.04 339 *e*P **Pdif 19 38 43.3 +0.8**
PMRV Marv??o 99.29 338 A A 20 29 36.8
comp=Z,502nm,18.0s
PVAQ Vaqueiros 101.25 337 A A 20 29 07.9
comp=Z,666nm,20.0s
KMBO Kilima Mbogo 103.89 279 PP **PKiKP 19 43 21.8 -0.7**
comp=Z,2.0nm,0.3s,baz=70,slow=5.6,SNR=3.5
PMOZ Porto Moniz, M 108.13 343 A A 20 31 13.7
comp=Z,172nm,20.0s
TAM Tamanrasset 108.59 320 IAMs_20 IAMs_20 20 38 03.0
comp=Z,285nm,18.0s
BOAB BOACO BROADBAND 112.16 53 IAMs_20 IAMs_20 20 27 24.6
comp=Z,437nm,18.0s
ESPN Las Esperanzas 113.22 52 IAMs_20 IAMs_20 20 31 01.7
comp=Z,271nm,18.0s
TORD Torodi Ar. Bea 118.58 317 PKP **PKPdf 19 43 49.2 -0.8**
comp=Z,3.1nm,0.7s,baz=5.5,slow=2.3,SNR=12
TORD PP **PP 19 45 02.1 -4.2**
comp=Z,5.5nm,0.9s,baz=24,slow=7.6,SNR=10.0
TORD PKKPbc **PKKPbc 19 54 05.8 +0.5**
comp=Z,0.3nm,0.4s,baz=212,slow=2.8,SNR=2.6
TORD Torodi Ar. Bea 118.58 317 PKPdf 19 43 49.6 -0.4
KOWA Kowa 120.35 323 PKiKP 19 43 53.5 0.0
MAW Mawson 120.55 206 PKP **PKiKP 19 43 52.3 +0.1**
comp=Z,3.9nm,0.7s,baz=100,slow=2.7,SNR=8.3
MAW PKKPbc **PKKPbc 19 53 58.6 -0.3**
comp=Z,0.6nm,0.3s,baz=288,slow=7.5,SNR=4.0
SDV Santo Domingo 123.91 42 PKP **PKPdf 19 44 00.4 -0.1**
comp=Z,14nm,0.7s,baz=205,slow=2.0,SNR=11
ROSC El Rosal 125.09 49 PKP **PKiKP 19 44 03.5 +0.1**
comp=Z,6.0nm,0.5s,baz=123,slow=4.3,SNR=4.9
LBTB Lobatse 126.61 264 PKIKP **PKiKP 19 44 06.0 +0.3**
LBTB Lobatse 126.61 264 PKiKP 19 44 06.0 +0.3
QSPA South Pole Qui 126.94 180 PKPdf 19 44 04.1 -0.4
DBIC Dimbokro 127.48 319 PKP **PKPdf 19 44 06.6 -0.5**
comp=Z,8.0nm,0.8s,baz=321,slow=2.8,SNR=5.8
DBIC PP **PP 19 46 04.8 -1.6**
comp=Z,21nm,1.0s,baz=3.4,slow=7.9,SNR=7.3
BOSA Boshof 128.54 261 PKP **PKPdf 19 44 08.0 -0.8**
comp=Z,5.9nm,1.1s,baz=3.8,slow=4.0,SNR=6.6
BOSA PP **PP 19 46 15.4 +0.7**
comp=Z,2.1nm,0.8s,baz=63,slow=12,SNR=3.7
SYO Syowa Base 129.24 207 ‖*e*PKPdf **PKiKP 19 44 11.0 +1.6**
ATAH Atahualpa 131.35 63 PKP **PKPdf 19 44 15.4 +0.5**
comp=Z,10nm,0.9s,baz=336,slow=3.2,SNR=6.3
MDP Montagnes des 135.18 24 PKP **PKPdf 19 44 22.4 +0.7**
comp=Z,58nm,1.3s,baz=76,slow=8.7,SNR=2.0
PTGA Pitinga 137.56 37 PKhKP PKPpre 19 44 14.1
comp=Z,1.5nm,0.3s,baz=323,slow=22,SNR=1.5
PTGA PKP **PKPdf 19 44 26.4 +0.3**
comp=Z,3.2nm,0.4s,baz=322,slow=5.1,SNR=6.9
SNAA Sanae 141.47 196 PKPdf **PKPdf 19 44 25.0 -6.5**
VNA2 Neumayer--Watz 143.01 195 PKPdf PKPbc 19 44 30.8 -0.2
baz=120,slow=2.6
VNA3 Neumayer Olymp 143.22 194 PKPdf PKPab 19 44 30.6 +0.3
VNA1 Neumayer--Stat 143.41 195 PKPdf PKPbc 19 44 32.4 +0.4
H10N2 ASCENSION HYDR 144.77 321 PKP PKPbc 19 44 38.0 +0.5
baz=60,slow=2.5,SNR=6.3
H10N1 ASCENSION HYDR 144.78 321 PKP PKPbc 19 44 37.7 +0.1
baz=60,slow=2.5,SNR=5.9
H10N3 ASCENSION HYDR 144.79 321 PKP **PKPdf 19 44 38.3 -0.4**
baz=60,slow=2.5,SNR=3.1
LPAZ La Paz 144.89 62 PKP PKPbc 19 44 39.1 +0.1
comp=Z,22nm,0.8s,baz=333,slow=4.2,SNR=48
H03N2 Juan Fernandez 145.09 97 PKPbc **PKPbc 19 44 35.4 -2.6**
baz=164,slow=16,SNR=7.2
H03N2 T T 22 26 44.3
baz=292
H03N3 Juan Fernandez 145.10 97 PKPbc **PKPbc 19 44 37.1 -1.1**
baz=164,slow=16,SNR=4.1
H03N3 T T 22 26 53.2
baz=292
H03N1 Juan Fernandez 145.10 97 PKPbc **PKPbc 19 44 37.4 -0.8**
baz=164,slow=16,SNR=4.8
H03N1 T T 22 26 57.0
baz=292
PB16 IPOC Station P 145.24 66 PKPbc **PKPdf 19 44 42.1 +1.7**
MNMC Minye Minye 145.68 68 PKPab 19 44 42.7 +1.3
LVC Limon Verde 148.26 72 PKPbc **PKPdf 19 44 46.7 +1.6**
comp=Z,15nm,0.8s,baz=252,slow=1.7,SNR=9.7
RCBR Riachuelo 148.77 360 PKP **PKPdf 19 44 45.9 +0.1**
comp=Z,68nm,1.0s,baz=284,slow=4.2,SNR=11
RCBR PKPbc **PKPbc 19 44 49.9 +0.3**
comp=Z,61nm,0.9s,baz=24,slow=1.9,SNR=20
RCBR Riachuelo 148.77 360 PKPbc 19 44 50.2 +0.6
SIV San Ignacio 149.45 53 PKP **PKPdf 19 44 47.1 +0.4**
comp=Z,36nm,0.9s,baz=332,slow=1.5,SNR=20
SIV PKPbc **PKPbc 19 44 51.3 +0.1**
comp=Z,35nm,0.9s,baz=300,slow=1.4,SNR=58
SIV PKPab **PKPab 19 44 56.3 +0.4**
comp=Z,14nm,0.5s,baz=294,slow=6.1,SNR=11
GO03 Copiap 149.79 81 PKiKP 19 44 52.6 -0.2
LCO Las Campanas 150.04 84 PKIKP **PKiKP 19 44 54.0 +0.5**
LCO Las Campanas 150.04 84 PKiKP 19 44 54.0 +0.5
GO09 Cerro Castillo 150.82 130 PKiKP 19 44 54.6 +0.5
BO02 Sierra Bellavi 151.95 96 PKPbc **PKiKP 19 44 57.8 +0.7**
BI02 San Fabin de 151.99 100 PKPbc **PKiKP 19 44 57.4 +0.4**
PLCA Paso Flores 153.11 108 PKPbc **PKPbc 19 44 58.3 -0.8**
comp=Z,8.0nm,0.9s,baz=214,slow=4.3,SNR=8.4
PLCA PKPab **PKPab 19 45 10.8 +0.1**
comp=Z,10.0nm,0.8s,baz=253,slow=4.5,SNR=9.3
BDFB Brasilia 156.08 29 PKP **PKPdf 19 44 55.5 -1.1**
comp=Z,1.4nm,0.7s,baz=319,slow=11,SNR=1.5
BDFB PKPbc **sPKPdf 19 45 06.2 +7.2**
comp=Z,1.6nm,0.5s,baz=52,slow=21,SNR=5.5
BDFB PKPab **PKPab 19 45 24.2 +0.4**
comp=Z,12nm,0.7s,baz=324,slow=3.1,SNR=17
BDFB PP **PP 19 48 59.1 -1.1**
comp=Z,3.4nm,0.8s,baz=348,slow=3.5,SNR=4.0
CPUP Villa Florida 159.01 65 PKP **PKPdf 19 44 59.5 -0.4**
comp=Z,2.4nm,0.9s,baz=171,slow=3.2,SNR=6.1
CPUP PKPab **PKPab 19 45 36.0 -0.3**
comp=Z,9.7nm,1.0s,baz=312,slow=5.5,SNR=10

DNK 12 19:34:18.5±0.6, 65°.80N×37°.32W, h13km±10km, ML0.9,
Eastern Kalaallit Nunaat

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
ANGG	**Ammassalik, Gr** baz=35,slow=16	**0.23**	**215**	*e*	P	Pg	19 34 22.6	-0.8
ANGG				*i*	P	Pb	19 34 22.8	-1.6
ANGG				*i*	S	Sg	19 34 26.7	0.0
ANGG					IAML		19 34 28.3	
ISOG	**Isortoq, Green** comp=Z,6.9nm,0.3s	**0.73**	**250**	*e*	P	Pg	19 34 32.1	-0.6

ISOG *i* 19 34 33.3
ISOG *i* S Sg 19 34 41.4 -0.8
ISOG IAML 19 34 43.1
comp=Z,3.3nm,0.3s

IDC 12 20:01:59.6±2.9, 31°18N×92°54E, h0km, mb3.2/2, mb1 3.2/5, mb1mx3.1/55, mbtmp3.2/5, ML3.2/2, Error ellipse: s-maj=72.9km s-min=35.4km az=64.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.93**	**154**	Pn	Pn	20 05 18.4	-0.1
	0.0nm,0.3s,baz=319,slow=13,SNR=6.0						
MKAR	**Makanchi Array**	**17.48**	**336**	P	Pn	20 06 04.8	-0.1
	baz=144,slow=12,SNR=2.7						
SONM	**Songino Array**	**19.72**	**29**	P	P	20 06 31.2	+0.4
	0.1nm,0.3s,baz=216,slow=12,SNR=5.0						
KURBB	**Kurchatov Arra**	**22.05**	**336**	P	P	20 06 56.5	+0.6
	0.9nm,0.9s,baz=141,slow=12,SNR=3.3						
ZALV	**Zalesovo Beam**	**23.43**	**348**	P	P	20 07 09.4	-0.8
	0.4nm,0.6s,baz=144,slow=12,SNR=1.6						

*DJA **12** 20:06:36.1±1.6, 8°S±11°×12°4E±°, h12km±19km, M4.4/6, mB5.3/2, mb4.6/2, MLv4.3/6, Mw(mB)4.7/2*
*IDC **12** 20:06:41.6±1.2, 8°18S×123°92E, h170km±13km, mb3.2/5, mb1 3.4/9, mb1mx3.1/49, mbtmp3.8/9, MS2.7/1, Ms1 2.7/1, ms1mx2.3/18, Error ellipse: s-maj=28.4km s-min=11.4km az=64.0*
ISC 12 20:06:40.4±0.8, 8°15S±0.07°×124°05E±0.08°, h150km, n16, σ3s11/22, mb3.4/5, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.61**	**172**	P	**Pn**	**20 07 15.1**	**+3.8**
SOEI				S	**Sn**	**20 07 39.1**	**+4.0**
MMRI	**Maumere**	**1.85**	**255**	P	**Pn**	**20 07 15.2**	**+1.3**
MMRI				S	**Sn**	**20 07 42.1**	**+2.5**
BATI	**Baumata**	**2.08**	**190**	P	**Pn**	**20 07 18.8**	**+2.3**
	118nm,0.3s,baz=13,slow=4.2,SNR=161						
BATI				S	**Sn**	**20 07 47.4**	**+3.0**
	71nm,0.3s,baz=170,slow=3.0,SNR=6.7						
BATI	**Baumata**	**2.08**	**190**	P	**Pn**	**20 07 18.7**	**+2.2**
BATI				S	**Sn**	**20 07 47.5**	**+3.1**
BASI	**Baing, Sumba**	**4.00**	**239**	P	**Pn**	**20 07 39.5**	**-1.1**
KAPI	**Kappang**	**5.28**	**306**	LR	LR	20 10 08.4	
	comp=Z,71nm,19.8s,baz=284,slow=40						
PLAI	**Plampang**	**6.24**	**263**	P	**Pn**	**20 08 09.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**10.01**	**171**	P	**Pn**	**20 08 59.8**	**-0.8**
	0.5nm,0.3s,baz=358,slow=8.2,SNR=33						
FITZ				S	**Sn**	**20 10 44.9**	**-6.6**
	3.8nm,0.3s,baz=114,slow=18,SNR=12						
SIJI	**Sorong**	**10.20**	**45**	P	**Pn**	**20 09 05.3**	**+2.1**
	0.7nm,0.3s,baz=322,slow=5.6,SNR=6.9						
WRA	**Warramunga Arr**	**15.39**	**141**	P	**Pn**	**20 10 10.8**	**+1.0**
	0.7nm,0.3s,baz=318,slow=13,SNR=25						
WRA				S	**Sn**	**20 12 53.7**	**-7.3**
	0.6nm,0.3s,baz=313,slow=24,SNR=8.8						
ASAR	**Alice Springs**	**18.09**	**150**	P	**P**	**20 10 42.4**	**+1.6**
	0.3nm,0.3s,baz=330,slow=12,SNR=24						
ASAR				S	**S**	**20 14 00.6**	**+0.1**
	0.2nm,0.3s,baz=310,slow=21,SNR=6.3						
CMAR	**Chiang Mai Arr**	**36.23**	**317**	P	**P**	**20 13 28.3**	**-0.9**
	0.4nm,0.7s,baz=146,slow=8.3,SNR=4.5						
SONM	**Songino Array**	**57.89**	**346**	P	**P**	**20 16 15.6**	**-1.1**
	0.5nm,0.9s,baz=163,slow=7.2,SNR=3.8						
MKAR	**Makanchi Array**	**66.10**	**330**	P	**P**	**20 17 10.3**	**-1.2**
	0.8nm,0.4s,baz=129,slow=7.8,SNR=18						
ZALV	**Zalesovo Beam**	**70.14**	**337**	P	**P**	**20 17 34.9**	**-1.5**
	0.4nm,0.3s,baz=144,slow=5.2,SNR=2.9						
KURBB	**Kurchatov Arra**	**70.53**	**331**	P	**P**	**20 17 37.6**	**-1.3**
	0.3nm,0.5s,baz=145,slow=5.5,SNR=5.6						

*IDC **12** 20:08:12.1±2.1, 5°30S×152°72E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/41, mbtmp3.6/6, ML1.7/1, Error ellipse: s-maj=78.8km s-min=28.5km az=120.0*
ISC 12 20:08:18.7±1.9, 5°4S±0.3°×152°4E±0.4°, h40km, n7, σ1s95/8, mb3.4/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.58**	**232**	Pn	**Pn**	**20 09 55.1**	**+2.1**
	0.8nm,0.3s,baz=65,slow=14,SNR=2.4						
PMG				Sn	**Sn**	**20 11 03.7**	**-3.0**
	1.4nm,0.3s,baz=248,slow=19,SNR=1.8						
ASAR	**Alice Springs**	**25.48**	**223**	P	**P**	**20 13 43.6**	**+0.3**
	0.4nm,0.5s,baz=51,slow=9.1,SNR=5.6						
SONM	**Songino Array**	**66.58**	**328**	P	**P**	**20 19 05.4**	**+0.4**
	0.2nm,0.5s,baz=132,slow=7.2,SNR=2.1						
MKAR	**Makanchi Array**	**80.48**	**319**	P	**P**	**20 20 27.5**	**+0.9**
	0.3nm,0.8s,baz=105,slow=4.1,SNR=4.0						
ILAR	**Eielson Array**	**82.82**	**22**	P	**P**	**20 20 36.7**	**-1.8**
	0.4nm,0.8s,baz=246,slow=4.4,SNR=4.9						
BVAR	**Borovoye Array**	**89.45**	**323**	P	**P**	**20 21 10.6**	**-0.7**
	0.3nm,0.8s,baz=148,slow=8.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**150.10**	**287**	PKPbc	**PKiKP**	**20 28 07.8**	**+0.7**
	0.4nm,0.8s,baz=74,slow=2.6,SNR=1.6						

*IDC **12** 20:15:10.9±1.0, 50°28S×112°73E, h0km, mb4.1/7, mb1 4.3/7, mb1mx3.9/39, mbtmp4.1/7, MS3.5/2, Ms1 3.5/2, ms1mx3.0/23, Error ellipse: s-maj=47.5km s-min=16.9km az=102.0*
*NEIC **12** 20:15:11.0±2.8, 50°2S±0.1°×112°8E±0.3°, h10km±1km, mb4.3/13, Error ellipse: s-maj=35.2km s-min=7.4km az=299.0*
ISC 12 20:15:11.5±0.8, 50°28S±0.1°×112°9E±0.3°, h10km, n28, σ1s66/23, mb4.2/12, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.40**	**4**	T	T	20 34 30.1	
	baz=183,slow=74,SNR=211						
H01W1	**Cape Leeuwin H**	**15.40**	**4**	T	T	20 34 33.5	
	baz=183,slow=74,SNR=68						
H01W3	**Cape Leeuwin H**	**15.41**	**4**	T	T	20 34 35.4	
	baz=183,slow=74,SNR=56						
CASY	**Casey**	**16.09**	**183**	Pn	**Pn**	**20 18 55.4**	**-2.2**
NWAO	**Narrogin (SRO)**	**17.63**	**12**	LR	LR	20 24 43.0	
	comp=Z,91nm,18.6s,baz=44,slow=32						
MORW	**Morawa**	**21.32**	**8**	P	**P**	**20 19 57.5**	**-0.9**
ASAR	**Alice Springs**	**31.21**	**39**	P	**P**	**20 21 32.2**	**+1.3**
	1.7nm,0.8s,baz=209,slow=8.1,SNR=15						
ASAR	**Alice Springs**	**31.21**	**39**	P	**P**	**20 21 30.6**	**-0.4**
AS31	**Alice Springs**	**31.21**	**39**	P	**P**	**20 21 29.3**	**-1.6**
VNDA	**Vanda**	**32.83**	**162**	P	**P**	**20 21 46.0**	**+1.4**
	2.2nm,0.8s,baz=292,slow=7.9,SNR=12						
VNDA	**Vanda**	**32.83**	**162**	P	**P**	**20 21 46.0**	**+1.4**
VNDA				IAmb	IAmb	20 21 46.3	
	comp=Z,7.9nm,1.5s						
FITZ	**Fitzroy Crossi**	**33.69**	**22**	P	**P**	**20 21 54.2**	**+1.6**
	comp=Z,5.7nm,0.9s,baz=202,slow=9.0,SNR=9.7						
FITZ	**Fitzroy Crossi**	**33.69**	**22**	P	**P**	**20 21 53.6**	**+1.0**
WRA	**Warramunga Arr**	**34.73**	**37**	P	**P**	**20 22 03.0**	**+1.3**
	comp=Z,2.9nm,0.9s,baz=204,slow=8.5,SNR=7.7						
WRA	**Warramunga Arr**	**34.73**	**37**	P	**P**	**20 21 57.4**	**-4.3**
WB2	**Warramunga Arr**	**34.73**	**37**	P	**P**	**20 22 02.0**	**+0.3**
WB2				IAmb	IAmb	20 22 03.9	
	comp=Z,2.2nm,0.8s						
WRAB	**Tennant Creek**	**34.74**	**37**	P	**P**	**20 22 00.5**	**-1.3**
WRAB				IAmb	IAmb	20 22 03.4	
	comp=Z,4.9nm,1.0s						
WR0	**Warramunga Arr**	**34.79**	**37**	P	**P**	**20 22 00.9**	**-1.3**
WR0				IAmb	IAmb	20 22 03.8	
	comp=Z,2.9nm,0.9s						
QSPA	**South Pole Qui**	**39.85**	**180**	P	**P**	**20 22 45.7**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=287,slow=3.0,SNR=12						
QSPA	**South Pole Qui**	**39.85**	**180**	P	**P**	**20 22 44.9**	**0.0**
QSPA				IAmb	IAmb	20 23 12.3	
	comp=Z,9.9nm,1.4s						
MTN	**Manton Dam**	**40.21**	**28**	P	**P**	**20 22 45.2**	**-2.9**
MTN				IAmb	IAmb	20 22 51.0	
	comp=Z,7.8nm,1.3s						
SOEI	**Soe**	**41.48**	**17**	P	**P**	**20 23 00.1**	**+1.3**
SNAA	**Sanae**	**50.24**	**202**	P	**P**	**20 24 07.6**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=155,slow=7.4,SNR=5.2						
BELA	**Belgrano 2**	**50.56**	**188**	P	**P**	**20 24 09.0**	**-0.5**
BELA				IAmb	IAmb	20 24 10.5	
	comp=Z,4.4nm,0.9s						
CMAR	**Chiang Mai Arr**	**69.53**	**346**	P	**P**	**20 26 21.1**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=188,slow=5.9,SNR=7.2						
CMAR	**Chiang Mai Arr**	**69.53**	**346**	P	**P**	**20 26 18.7**	**-1.6**
JNU	**Nakatsue**	**84.55**	**15**	LR	LR	21 08 29.9	
	comp=Z,44nm,18.0s,baz=179,slow=38						
YKA	**Yellowknife Ar**	**151.72**	**46**	PKPbc	**PKiKP**	**20 35 05.7**	**+0.4**
	comp=Z,0.1nm,0.6s,baz=289,slow=1.9,SNR=3.5						

*IDC **12** 20:16:08.8±1.7, 2°85N×126°14E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.4/52, mbtmp3.9/5, Error ellipse: s-maj=104.4km s-min=23.5km az=67.0*
*NEIC **12** 20:16:26.3±0.6, 2°1N±0°1×125°48E±0°04, h120km±13km, mb4.1/12, Error ellipse: s-maj=20.9km s-min=5.0km az=189.0*
ISC 12 20:16:24.8±1.0, 1°9N±0°1×125°2E±0°2, h100km, n21, σ0s46/19, mb4.0/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.45**	**117**		**Pn**	**20 17 03.4**	**+0.2**
TOLI2	**Tolitoli**	**4.48**	**260**	Pn	Pn	20 17 36.4	+5.9
KNRA	**Kununurra**	**17.82**	**169**	P	**P**	**20 20 25.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.89**	**179**	P	**Pn**	**20 20 50.9**	**0.0**
	1.2nm,0.6s,baz=9.2,slow=9.9,SNR=8.7						
FITZ	**Fitzroy Crossi**	**19.89**	**179**	P	**Pn**	**20 20 50.2**	**-0.7**
WB0	**Warramunga Arr**	**23.36**	**158**	P	**P**	**20 21 24.5**	**-0.2**
WB0				IAmb	IAmb	20 21 25.7	
	comp=Z,5.1nm,0.4s						
WRAB	**Tennant Creek**	**23.49**	**158**	P	**P**	**20 21 26.5**	**+0.6**
WRA	**Warramunga Arr**	**23.50**	**158**	P	**P**	**20 21 25.8**	**-0.1**
	comp=Z,2.8nm,0.4s,baz=343,slow=10,SNR=106						
WRA	**Warramunga Arr**	**23.50**	**158**	P	**P**	**20 21 26.3**	**+0.4**
WB2	**Warramunga Arr**	**23.50**	**158**	P	**P**	**20 21 25.7**	**-0.3**
WB2				IAmb	IAmb	20 21 27.6	
	comp=Z,5.1nm,0.7s						
WR0	**Warramunga Arr**	**23.59**	**158**	P	**P**	**20 21 26.6**	**-0.1**
WR0				IAmb	IAmb	20 21 28.0	
	comp=Z,3.2nm,0.6s						
AS31	**Alice Springs**	**26.80**	**162**	P	**P**	**20 21 55.3**	**-0.4**
AS31				IAmb	IAmb	20 21 57.8	
	comp=Z,1.1nm,0.4s						
ASAR	**Alice Springs**	**26.80**	**162**	P	**P**	**20 21 56.2**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=341,slow=7.0,SNR=24						
ASAR	**Alice Springs**	**26.80**	**162**	P	**P**	**20 21 54.9**	**-0.9**
FORT	**Forrest**	**32.62**	**175**	P	**P**	**20 22 48.0**	**+0.8**
BBOO	**Buckleboo**	**36.03**	**164**	P	**P**	**20 23 16.9**	**+0.3**
BBOO				IAmb	IAmb	20 23 18.7	
	comp=Z,5.3nm,0.9s						
STKA	**Stephens Creek**	**37.03**	**156**	P	**P**	**20 23 25.3**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=342,slow=9.4,SNR=9.8						
STKA	**Stephens Creek**	**37.03**	**156**	P	**P**	**20 23 24.9**	**-0.2**
BJT	**Baijiatuau**	**38.81**	**349**	P	**P**	**20 23 39.7**	**-0.3**
BJT				IAmb	IAmb	20 23 48.3	
	comp=Z,3.6nm,0.5s						
PALK	**Pallekele**	**44.65**	**278**	P	**P**	**20 24 28.2**	**+0.2**
MKAR	**Makanchi Array**	**58.20**	**327**	P	P	20 26 03.1	-5.4
	comp=Z,0.2nm,0.4s,baz=122,slow=7.4,SNR=5.3						

LDG 12 20:24:34.2±0.1, 43°54N×6°90E, h25km, Md0.8/3, Error ellipse: s-maj=8.1km s-min=2.1km az=147.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRF	**La Foret Royal**	**0.19**	**278**	*e*Pg	Pb	20 24 39.7	0.0
LMR	**La Mourre**	**0.35**	**235**	*e*Pg	Pb	20 24 42.1	+0.1
LMR				*e*Sg	Sb	20 24 47.6	+0.4
	0.6nm,0.3s						
SBF	**Sospel**	**0.51**	**50**	*e*Pg	Pb	20 24 45.0	+0.4
SBF				*e*Sg	Sb	20 24 51.6	-0.1
	0.6nm,0.2s						

LDG 12 20:24:38.6±0.1, 43°54N×6°92E, h25km, Md1.2/2, Error ellipse: s-maj=2.5km s-min=0.9km az=142.0, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRF	**La Foret Royal**	**0.20**	**277**	*e*Pg	Pb	20 24 44.3	0.0
FRF				*e*Sg	Sb	20 24 48.4	+0.3
	2.9nm,0.2s						
FRF	**La Foret Royal**	**0.20**	**277**	*e*Sg	Pb	20 24 43.9	-0.4
	2.7nm,0.2s						
LMR	**La Mourre**	**0.36**	**236**	*e*Pg	Pb	20 24 46.7	+0.2
LMR				*e*Sg	Sb	20 24 52.3	+0.4
	1.0nm,0.2s						
SBF	**Sospel**	**0.50**	**49**	*e*Sg	Sb	20 24 56.2	+0.4
	0.6nm,0.3s						

*SOME **12** 20:26:28.2, 40°02N×77°82E, h10km, MS3.3*
*IDC **12** 20:26:32.5±0.8, 40°01N×77°72E, h0km, mb3.6/14, mb1 3.8/19, mb1mx3.6/43, mbtmp3.7/19, ML3.1/5, Error ellipse: s-maj=15.8km s-min=13.5km az=93.0*
*KRNET **12** 20:26:32.6±0.1, 40°12N×77°83E, mb4.3*
*BJI **12** 20:26:33.3±0.0, 40°10N×77°80E, h8km, mB4.1/5, mb4.0/10, ML4.0/7*
*NNC **12** 20:26:37.7±0.8, 40°34N×77°77E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=6.2km s-min=5.2km az=165.0*
ISC 12 20:26:36.2±1.3, 40°09N±0°04×77°87E±0°03, h24km±10km, n110, σ2s17/149, mb3.7/13, 46C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.57**	**249**	Pn	**Pn**	**20 27 08.7**	**+4.1**
KSH				Sn	Sb	20 27 36.8	+13
KSH				smax	smax		
	comp=N,4μm,0.7s						
KSH				smax	smax		
	comp=E,2μm,0.7s						
KDJ	**Kajisay**	**2.10**	**346**	⇑*iP*	**Pn**	**20 27 11.1**	**+1.1**
	baz=47						
KDJ				⇑*iS*	**Sb**	**20 27 37.4**	**-2.1**
	baz=47						
PRZ	**Przheval'sk**	**2.42**	**9**	⇑*iP*	**Pb**	**20 27 16.7**	**-2.5**
	baz=10.0						
PRZ				⇑*iS*	**Sb**	**20 27 47.2**	**-1.5**
	baz=10.0						
ULHL	**Ulahol**	**2.48**	**331**	⇑*iP*	**Pn**	**20 27 16.6**	**+1.4**
	baz=31						
ULHL				⇑*iS*	**Sn**	**20 27 46.8**	**+2.0**
	baz=31						
ULHL	**Ulahol**	**2.48**	**331**	P	**Pn**	**20 27 17.3**	**+2.0**
	SNR=269						
ANVS	**Anan'yevo**	**2.69**	**357**	⇑*iP*	**Pb**	**20 27 20.3**	**-3.5**
	baz=57						
ANVS				⇑*iS*	**Sb**	**20 27 53.0**	**-3.5**
	baz=57						
BOOM	**Boomskoye usch**	**2.80**	**329**	⇑*iP*	**Pn**	**20 27 21.1**	**+1.5**
	baz=30						
BOOM				⇑*iS*	**Sn**	**20 27 54.5**	**+1.8**
	baz=30						
SATY	**Saty**	**2.99**	**8**	*e*P	**Pb**	**20 27 25.3**	**-3.6**
	252nm,1.0s						
SATY				*e*S	**Sb**	**20 28 07.0**	**+2.0**
	263nm,0.5s						
SATY	**Saty**	**2.99**	**8**	Pg	**Pb**	**20 27 28.1**	**-0.8**
	252nm,1.0s						
SATY				Lg	Lg	20 28 06.4	
	263nm,0.5s						
TNSS	**Tian-Shan**	**3.02**	**347**	*e*P	**Pn**	**20 27 25.1**	**+2.3**
	140nm,0.5s						
TNSS				*e*S	**Sb**	**20 28 06.7**	**+0.5**
	231nm,1.0s						
TNSS	**Tian-Shan**	**3.02**	**347**	Pg	**Pb**	**20 27 27.6**	**-1.9**
TNSS				Lg	Lg	20 28 06.0	
IZV	**Izvestkoviy**	**3.09**	**343**	⇑*eP*	**Pn**	**20 27 26.1**	**+2.5**
	124nm,0.5s						
IZV				*e*S	**Sb**	**20 28 08.2**	**+0.3**
	558nm,0.8s						
IZV	**Izvestkoviy**	**3.09**	**343**	Pg	**Pb**	**20 27 28.8**	**-1.7**
	124nm,0.5s						
IZV				Lg	Lg	20 28 08.0	
	558nm,0.8s						
MDOK	**Medeo**	**3.13**	**349**	*e*P	**Pn**	**20 27 26.4**	**+2.3**
	103nm,0.9s						
MDOK				*e*S	**Sb**	**20 28 08.9**	**-0.1**
	334nm,0.6s						
MDOK	**Medeo**	**3.13**	**349**	⇓Pn	**Pn**	**20 27 26.4**	**+2.3**
	150nm,0.7s						
MDOK				⇑Lg	Lg	20 28 10.6	
	311nm,0.6s						
MDOK	**Medeo**	**3.13**	**349**	Pg	**Pb**	**20 27 29.9**	**-1.3**
	103nm,0.9s						
MDOK				Lg	Lg	20 28 09.9	
	334nm,0.6s						
UZB	**Uzunbulak**	**3.17**	**15**	*e*P	**Pb**	**20 27 27.7**	**-4.2**
	114nm,0.8s						
UZB				*e*S	**Sb**	**20 28 11.0**	**+0.8**
	100nm,0.8s						
UZB	**Uzunbulak**	**3.17**	**15**	Pg	**Pb**	**20 27 31.4**	**-0.5**
UZB				Lg	Lg	20 28 12.4	
KOTS	**Kotyrbulak**	**3.19**	**350**	*e*P	**Pn**	**20 27 27.7**	**+2.8**
	208nm,0.4s						
KOTS				*e*S	**Sb**	**20 28 11.0**	**+0.3**
	377nm,0.5s						
KOTS	**Kotyrbulak**	**3.19**	**350**	Pg	**Pb**	**20 27 31.7**	**-0.6**
	208nm,0.4s						
KOTS				Lg	Lg	20 28 12.8	
	377nm,0.5s						
KNDC	**Almaty**	**3.20**	**348**	⇓Pn	**Pn**	**20 27 27.5**	**+2.5**
	176nm,0.7s						
KNDC				⇑Lg	Lg	20 28 13.3	
	1μm,0.8s						
ARLS	**Aral**	**3.21**	**305**	⇓*iP*	**Pn**	**20 27 26.8**	**+1.5**
	baz=4.0						
ARLS				⇓*iS*	**Sn**	**20 28 04.6**	**+1.7**
	baz=4.0						
MTBS	**Maitube**	**3.22**	**341**	⇑*eP*	**Pn**	**20 27 27.8**	**+2.5**
	62nm,0.3s						
MTBS				*e*S	**Sb**	**20 28 11.2**	**-0.4**
	189nm,0.7s						
MTBS	**Maitube**	**3.22**	**341**	Pg	**Pb**	**20 27 31.5**	**-1.2**
	62nm,0.3s						
MTBS				Lg	Lg	20 28 12.7	
	189nm,0.7s						
KST	**Kastek**	**3.28**	**335**	*e*P	**Pn**	**20 27 28.1**	**+2.0**
	80nm,0.7s						
KST				*e*S	**Sb**	**20 28 11.8**	**-1.4**
	238nm,0.8s						
KST	**Kastek**	**3.28**	**335**	Pg	**Pb**	**20 27 32.3**	**-1.4**
	80nm,0.7s						
KST				Lg	Lg	20 28 14.1	
	238nm,0.8s						
SHLS	**Shalkode**	**3.29**	**21**	⇑*eP*	**Pn**	**20 27 31.4**	**-2.4**
	120nm,0.7s						
SHLS				*e*S	**Sb**	**20 28 17.4**	**+3.9**
	283nm,0.7s						
SHLS	**Shalkode**	**3.29**	**21**	Pg	**Pb**	**20 27 36.0**	**+2.1**
	120nm,0.7s						
SHLS				Lg	Lg	20 28 19.9	
	283nm,0.7s						
TKM2	**Tokmak 2**	**3.30**	**330**	⇑*iP*	**Pn**	**20 27 28.0**	**+1.5**
	baz=30						
TKM2				⇑*iS*	**Sn**	**20 28 06.5**	**+1.4**
	baz=30						
TKM2	**Tokmak 2**	**3.30**	**330**	P	**Pn**	**20 27 28.7**	**+2.2**
	SNR=12						
TKM2	**Tokmak 2**	**3.30**	**330**	⇓Pn	**Pn**	**20 27 28.5**	**+2.0**
	64nm,0.8s						
TKM2				⇓Lg	Lg	20 28 15.5	
	156nm,0.7s						
UCH	**Uchtor**	**3.31**	**311**	⇑*iP*	**Pn**	**20 27 28.0**	**+1.1**
	baz=11						
UCH				⇑*iS*	**Sn**	**20 28 07.3**	**+1.6**
	baz=11						
UCH	**Uchtor**	**3.31**	**311**	P	**Pn**	**20 27 28.2**	**+1.3**
	SNR=24						
KBK	**Karagaybulak**	**3.38**	**320**	⇑*iP*	**Pn**	**20 27 29.1**	**+1.6**
	baz=20						
KBK				⇑*iS*	**Sn**	**20 28 08.1**	**+1.2**
	baz=20						
KBK	**Karagaybulak**	**3.38**	**320**	P	**Pn**	**20 27 29.6**	**+2.1**
	SNR=74						
KPKS	**Kokpek**	**3.43**	**10**	*e*P	Pb	20 27 31.2	-5.0
	112nm,0.6s						
KPKS				*e*S	**Sb**	**20 28 17.2**	**-0.3**
	272nm,0.6s						
PDGK	**Podgornoye**	**3.46**	**20**	Pg	**Pb**	**20 27 36.8**	**0.0**
	50nm,0.6s						
PDGK				Lg	Lg	20 28 21.8	
	106nm,0.7s						
PDGK	**Podgornoye**	**3.46**	**20**	⇑Pn	**Pn**	**20 27 31.1**	**+2.5**
	112nm,0.7s						
PDGK				⇑Lg	Lg	20 28 23.0	
	242nm,0.8s						
DGS	**Degeres**	**3.52**	**334**	⇑*eP*	**Pn**	**20 27 31.8**	**+2.4**
	56nm,0.5s						
DGS				*e*S	**Sb**	**20 28 18.1**	**-2.0**
	250nm,0.6s						
DGS	**Degeres**	**3.52**	**334**	Pg	**Pb**	**20 27 36.6**	**-1.2**
	56nm,0.5s						
DGS				Lg	Lg	20 28 21.3	
	250nm,0.6s						
AAK	**Ala-Archa**	**3.59**	**316**	⇑*eP*	**Pn**	**20 27 32.2**	**+1.7**
	baz=16						
AAK				⇑*iS*	**Sn**	**20 28 13.3**	**+1.1**
	baz=16						
AAK	**Ala-Archa**	**3.59**	**316**	P	**Pn**	**20 27 32.3**	**+1.7**
	SNR=22						
AAK	**Ala-Archa**	**3.59**	**316**	⇑Pn	**Pn**	**20 27 32.1**	**+1.7**
	63nm,0.6s						
AAK				⇑Lg	Lg	20 28 24.9	
	288nm,0.7s						
FRU1	**Bishkek**	**3.65**	**319**	⇑*iP*	**Pn**	**20 27 32.8**	**+1.7**
	baz=19						
FRU1				⇑*iS*	**Sn**	**20 28 14.6**	**+1.2**
	baz=19						
KTBS	**Karatobe**	**3.73**	**347**	*e*P	**Pb**	**20 27 36.9**	**-4.3**
	59nm,0.6s						
KTBS				*e*S	**Sb**	**20 28 26.9**	**+0.9**
	202nm,0.7s						
KTBS	**Karatobe**	**3.73**	**347**	Pg	**Pb**	**20 27 40.2**	**-1.1**
	59nm,0.6s						
KTBS				Lg	Lg	20 28 27.4	
	202nm,0.7s						
CHMS	**Chumysh**	**3.73**	**322**	⇑*iP*	**Pn**	**20 27 33.9**	**+1.7**
	baz=22						
CHMS				⇑*iS*	**Sn**	**20 28 16.6**	**+1.2**
	baz=22						
CHMS	**Chumysh**	**3.73**	**322**	P	**Pn**	**20 27 34.4**	**+2.2**
	SNR=5.8						
AML	**Almayashu**	**3.75**	**304**	⇓*iP*	**Pn**	**20 27 34.7**	**+1.8**
	baz=4.0						
AML				⇓*iS*	**Sn**	**20 28 18.1**	**+1.6**
	baz=4.0						
AML	**Almayashu**	**3.75**	**304**	P	**Pn**	**20 27 34.1**	**+1.2**
	SNR=141						
KTMS	**Ketmen**	**3.83**	**28**	*e*P	**Pb**	**20 27 40.0**	**-3.1**
	17nm,0.5s						
KTMS				*e*S	**Sb**	**20 28 32.2**	**+3.1**
	52nm,0.5s						
KTMS	**Ketmen**	**3.83**	**28**	Pg	**Pb**	**20 27 43.3**	**+0.2**
	17nm,0.5s						
KTMS				L

	81nm,0.5s						
DJR	**Jarkent**	**4.47**	**18**	Pg	**Pb**	**20 27 55.2**	**+1.2**
	23nm,0.8s						
DJR				Lg	Lg	20 28 52.7	
	81nm,0.5s						
MNAS	**Manas**	**4.70**	**302**	⇑*i*P	**Pn**	**20 27 47.4**	**+1.8**
	baz=2.0						
MNAS				⇑*i*S	**Sn**	**20 28 40.3**	**+0.9**
	baz=2.0						
TDK	**Taldyqorghan**	**4.92**	**4**	*e*P	**Pb**	**20 28 00.1**	**-1.6**
	113nm,0.6s						
TDK				*e*S	**Sb**	**20 29 06.5**	**+6.1**
	150nm,0.5s						
TDK	**Taldyqorghan**	**4.92**	**4**	Pg	**Pb**	**20 28 03.3**	**+1.7**
	113nm,0.6s						
TDK				Lg	Lg	20 29 06.8	
	150nm,0.5s						
KK31	**Karatay Array**	**6.28**	**301**	⇓Pn	**Pn**	**20 28 08.4**	**+1.1**
	2.1nm,0.6s,baz=87,slow=10,SNR=10						
KK31				⇑Pg	**Pb**	**20 28 25.9**	**+1.1**
	5.5nm,0.6s,baz=128,slow=15,SNR=18						
KK31				⇑Lg	Lg	20 29 52.4	
	24nm,0.8s,baz=118,slow=28,SNR=6.9						
MAKZ	**Makanchi**	**7.35**	**23**	⇑Pn	**Pn**	**20 28 23.9**	**+2.0**
	5.2nm,1.1s						
MAKZ				⇑Lg	Lg	20 30 25.6	
	22nm,1.6s						
CHCP	**Chirah Chowk**	**7.40**	**211**	P	**Pn**	**20 28 25.1**	**+2.4**
MK31	**Makanchi Array**	**7.43**	**24**	Pn	**Pn**	**20 28 24.2**	**+1.2**
	1.2nm,0.5s,baz=204,slow=13,SNR=27						
MK31				⇑Pg	Pb	20 28 50.2	+5.9
	3.1nm,0.6s						
MK31				⇑Sn	**Sn**	**20 29 46.4**	**-0.2**
	7.3nm,0.8s						
MK31				⇑Lg	Lg	20 30 25.6	
	7.2nm,0.7s						
MKAR	**Makanchi Array**	**7.43**	**24**	Pn	**Pn**	**20 28 24.8**	**+1.7**
	0.6nm,0.3s,baz=192,slow=14,SNR=23						
MKAR				Sn	**Sn**	**20 29 49.2**	**+2.7**
	0.5nm,0.3s,baz=181,slow=13,SNR=5.0						
MKAR				Lg	Lg	20 30 32.5	
	0.7nm,0.3s,baz=203,slow=25,SNR=4.4						
CEP	**Cherat**	**7.87**	**219**	P	**Pn**	**20 28 29.7**	**+0.5**
DHRM	**DHARAMSHALA**	**7.93**	**190**	*e*P	**Pn**	**20 28 30.2**	**+0.1**
DHRM				*e*S	**Sn**	**20 29 57.2**	**-1.9**
DHRM				IAML		20 30 04.7	
	comp=N,32nm,0.5s						
DHRM				IAML		20 30 05.0	
	comp=E,49nm,0.4s						
WMQ	**Urumqi**	**8.21**	**60**	*e*P	**Pn**	**20 28 33.6**	**-0.3**
WMQ				S	**Sn**	**20 30 06.4**	**+0.5**
WMQ				smax	smax		
	comp=E,34nm,1.1s						
WMQ				smax	smax		
	comp=E,46nm,1.1s						
THW	**Thamme Wali**	**8.79**	**216**	P	**Pn**	**20 28 41.2**	**-0.6**
SMLA	**Simla**	**8.96**	**184**	*e*P	**Pn**	**20 28 44.1**	**0.0**
SMLA				*e*S	**Sn**	**20 30 18.8**	**-5.3**
SMLA				*e*S		20 30 19.0	
SMLA				IAML		20 30 25.2	
	comp=N,25nm,0.5s						
SMLA				IAML		20 30 27.1	
	comp=E,40nm,0.4s						
DDI	**Dehra Dun**	**9.75**	**179**	*e*P	**Pn**	**20 28 55.0**	**+0.1**
DDI				*e*S	**Sn**	**20 30 38.0**	**-5.6**
DDI				IAML		20 30 45.5	
	comp=E,54nm,0.3s						
DDI				IAML		20 30 45.9	
	comp=N,61nm,0.4s						
KURBB	**Kurchatov Arra**	**10.54**	**2**	Pn	**Pn**	**20 29 05.3**	**-0.3**
	comp=N,0.1nm,0.3s,baz=193,slow=12,SNR=14						
KURBB				Lg	Lg	20 32 08.3	
	comp=N,0.1nm,0.3s,baz=194,slow=32,SNR=11						
KURBB	**Kurchatov Arra**	**10.54**	**2**	⇑Pn	**Pn**	**20 29 05.7**	**+0.1**
	comp=N,4.7nm,0.7s						
KURBB				⇓Lg	Lg	20 32 05.6	
	comp=N,31nm,0.9s						
PYUN	**Piuthan**	**12.69**	**159**	*e*P	**Pn**	**20 29 32.3**	**-3.0**
KOLN	**Koldanda**	**13.17**	**157**	*e*P	**Pn**	**20 29 39.3**	**-2.6**
GKN	**Gorkha**	**13.29**	**153**	*e*P	**Pn**	**20 29 40.8**	**-2.7**
KKN	**Kakani**	**13.72**	**151**	*e*P	**Pn**	**20 29 46.8**	**-2.5**
	comp=N,6.0nm,0.4s						
DMN	**Daman**	**13.82**	**152**	*e*P	**Pn**	**20 29 48.2**	**-2.6**
GUN	**Gumba**	**13.84**	**149**	*e*P	**Pn**	**20 29 49.1**	**-2.0**
	comp=N,12nm,0.5s						
BVAR	**Borovoye Array**	**13.91**	**341**	Pn	**Pn**	**20 29 49.7**	**-1.9**
	comp=N,0.1nm,0.3s,baz=146,slow=22,SNR=13						
BVAR				Lg	Lg	20 33 50.3	
	comp=N,0.1nm,0.3s,baz=207,slow=23,SNR=3.6						
PKIN	**Phulchoki**	**13.95**	**151**	*e*P	**Pn**	**20 29 49.7**	**-2.9**
	comp=N,13nm,0.6s						
PKI	**Pulchoki**	**13.96**	**151**	*e*P	**Pn**	**20 29 50.0**	**-2.8**
	comp=N,6.5nm,0.4s						
BRVK	**Borovoye**	**13.97**	**341**	⇑Pn	**Pn**	**20 29 49.2**	**-3.2**
	comp=N,2.1nm,0.8s						
BRVK				⇑Lg	Lg	20 33 52.9	
	comp=N,7.7nm,0.9s						
JIRN	**Jiri**	**14.19**	**148**	*e*P	**Pn**	**20 29 53.4**	**-2.5**
	comp=N,17nm,0.5s						
ZALV	**Zalesovo Beam**	**14.64**	**16**	Pn	**Pn**	**20 30 00.3**	**-1.2**
	comp=N,0.1nm,0.3s,baz=205,slow=10,SNR=9.1						
ZALV				Lg	Lg	20 34 21.9	
	comp=N,0.1nm,0.3s,baz=208,slow=23,SNR=1.5						
RAMN	**Ramite**	**14.98**	**148**	*e*P	**Pn**	**20 30 03.5**	**-3.1**
	comp=N,18nm,0.6s						
TAPN	**Taplejung**	**15.10**	**144**	*e*P	**Pn**	**20 30 05.5**	**-2.7**
	comp=N,5.2nm,0.5s						
ODAN	**Odare**	**15.39**	**146**	*e*P	**Pn**	**20 30 08.8**	**-3.1**
GTA	**Gaotai**	**16.89**	**85**	*e*P	**P**	**20 30 36.5**	**+3.6**
GTA				pP	sP	20 30 40.2	-3.1
GTA				sP	pP	20 30 43.3	+3.3
GTA				pmax	pmax		
	comp=N,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=N,110nm,4.4s						
AKTO	**Aktyubinsk**	**17.33**	**313**	P	**Pn**	**20 30 36.5**	**+0.2**
	comp=N,0.2nm,0.3s,baz=125,slow=14,SNR=5.1						
ARU	**Arti**	**20.68**	**329**	P	**P**	**20 31 13.5**	**-0.6**
	comp=N,0.7nm,0.5s,baz=118,slow=9.8,SNR=1.8						
SONM	**Songino Array**	**21.85**	**60**	P	**P**	**20 31 29.2**	**+2.2**
	comp=N,0.5nm,0.6s,baz=265,slow=12,SNR=7.1						
CMAR	**Chiang Mai Arr**	**28.20**	**134**	P	**P**	**20 32 27.4**	**+0.4**
	comp=N,0.2nm,0.6s,baz=320,slow=9.5,SNR=1.3						
BRTR	**Keskin Array B**	**33.67**	**284**	P	**P**	**20 33 15.1**	**-0.1**
	comp=N,0.7nm,0.8s,baz=98,slow=7.6,SNR=5.4						
FINES	**FINESS Array B**	**37.76**	**322**	P	**P**	**20 33 49.6**	**-0.2**
	comp=N,2.5nm,0.8s,baz=118,slow=7.3,SNR=9.9						
ARCES	**ARCESS Array B**	**40.07**	**334**	P	**P**	**20 34 09.5**	**+0.4**
	comp=N,1.2nm,0.4s,baz=102,slow=7.7,SNR=18						
NOA	**NORSAR Array B**	**44.90**	**321**	P	**P**	**20 34 48.2**	**-0.3**
	comp=N,0.7nm,0.6s,baz=88,slow=8.0,SNR=3.1						
GERES	**GERESS Array B**	**45.38**	**303**	P	**P**	**20 34 52.2**	**-0.4**
	comp=N,0.7nm,0.7s,baz=82,slow=8.0,SNR=6.0						
ESDC	**Sonseca Array**	**60.53**	**299**	P	**P**	**20 36 43.8**	**-0.6**
	comp=N,0.6nm,0.6s,baz=50,slow=6.5,SNR=6.6						
ILAR	**Eielson Array**	**69.75**	**19**	P	**P**	**20 37 44.8**	**+1.1**
	comp=N,0.3nm,0.8s,baz=325,slow=4.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**71.12**	**271**	P	**P**	**20 37 52.1**	**-0.7**
	comp=N,1.1nm,0.5s,baz=47,slow=5.1,SNR=12						
YKA	**Yellowknife Ar**	**77.27**	**6**	P	**P**	**20 38 27.9**	**0.0**
	comp=N,0.4nm,0.6s,baz=348,slow=5.2,SNR=8.8						
WRA	**Warramunga Arr**	**79.56**	**127**	P	**P**	**20 38 41.9**	**+0.8**
	comp=N,0.5nm,0.8s,baz=317,slow=5.5,SNR=5.2						
ASAR	**Alice Springs**	**82.13**	**130**	P	**P**	**20 38 55.4**	**+0.5**
	comp=N,0.4nm,0.8s,baz=318,slow=5.2,SNR=5.3						

UPA **12** *20:42:13.7±1.4, 8.37N×82.86W, h16km±7km, MW4.1*
UCR **12** *20:42:14.1±0.9, 8.29N×83.10W, h5km, MW3.8*
ISC 12 20:42:10.0±2.7, **8.2N**±0.1×**82.90W**±0.06, **h28**km±14km, **n16, s90/21, 2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CDITO	**Canoas**	**0.40**	**4**	*e*P		**Pb**	**20 42 18.8**	**0.0**
BAGA3	**Bagala, Chiriq**	**0.47**	**52**	*e*P		**Pn**	**20 42 21.4**	**+0.4**
DVD	**David**	**0.52**	**59**	*e*P		**Pn**	**20 42 22.1**	**+0.5**
DVD				*e*S		**Sn**	**20 42 29.2**	**-0.3**
BRU2	**Volcan**	**0.66**	**19**	*e*P		**Pn**	**20 42 23.7**	**0.0**
BRU2				*e*S		**Sn**	**20 42 32.2**	**-0.9**
BCO2	**Palmira**	**0.66**	**34**	*e*P		**Pn**	**20 42 23.9**	**+0.2**
BCO2				*e*S		**Sb**	**20 42 30.8**	**-1.3**
BC3P	**Paso Ancho**	**0.70**	**24**	*e*P		**Pn**	**20 42 24.1**	**-0.3**
DRK0	**Durika**	**1.14**	**343**	*e*P		**Pb**	**20 42 32.0**	**+0.8**
DRK0				*e*S		**Sb**	**20 42 44.6**	**-1.1**
CNI2	**El Empalme, Bo**	**1.32**	**19**	*e*S		**Sb**	**20 42 52.0**	**+1.3**
PEZE	**Perez Zeledon,**	**1.43**	**328**	*e*P		**Pb**	**20 42 36.8**	**+0.7**
CDM	**Cerro de Muert**	**1.62**	**328**	⇓*e*P		**Pb**	**20 42 40.0**	**+0.5**
CDM				*e*S		**Sb**	**20 43 00.7**	**+1.0**
MRVA	**Moravia de Chi**	**1.73**	**342**	⇓*e*P		**Pb**	**20 42 41.5**	**+0.3**
RIMA	**Rio Macho**	**1.85**	**329**	*e*P		**Pb**	**20 42 43.9**	**+0.5**
LCR2	**La Lucha 2**	**1.90**	**325**	*e*P		**Pb**	**20 42 43.7**	**-0.5**
CVTR	**Volcan Turrial**	**2.02**	**335**	*e*P		**Pb**	**20 42 46.3**	**-0.1**
ARE1	**Arenal 1**	**2.90**	**322**	*e*P		**Pb**	**20 43 02.6**	**+1.6**
PLVR	**Palo Verde**	**3.24**	**312**	*e*P		**Pb**	**20 43 05.6**	**-1.5**

DJA **12** *20:44:57.9±1.2, 14.7°N±19.7°×14.7°E±0.8°, h80km±4km, M4.8/6, mB5.3/2, mb4.9/6, MLv4.7/1, Mw(mB)4.7/2*
BJI **12** *20:45:00.2±0.0, 13.61°N×145.56°E, h124km, mB4.9/28, mb4.6/44*
NEIC **12** *20:45:01.5±1.4, 13.72°N±0.08°×145.39°E±0.10, h102km±6km, mb4.6/46, ML4.7/6, Error ellipse: s-maj=15.0km s-min=9.4km az=124.0*
IDC **12** *20:45:02.5±4.4, 13.77°N×145.39E, h109km±40km, mb4.0/25, mb1 4.1/25, mb1mx4.0/44, mbtmp4.3/25, MS3.1/8, Ms1 3.2/8, ms1mx2.8/53, Error ellipse: s-maj=19.0km s-min=10.8km az=94.0*
ISC 12 20:45:00.8±1.0, **13.68N**±0.06×**145.41E**±0.08, **h98**km±9km, **n145, σ1§04/131, mb4.6/62, 1C, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.54**	**260**	IAML			20 45 28.1	
	17μm,0.8s							
GUMO	**Guam**	**0.54**	**260**	Pn		**Pn**	**20 45 16.4**	**-0.2**
GUMO	**Guam**	**0.54**	**260**	P		**Pn**	**20 45 16.4**	**-0.2**
ANA2	**Anatahan**	**2.66**	**6**	Pn		**Pn**	**20 45 43.9**	**+1.9**
ANA2	**Anatahan**	**2.66**	**6**	P		**Pn**	**20 45 44.1**	**+2.0**
SARN	**Sarigan**	**3.02**	**7**	P		**Pn**	**20 45 49.2**	**+2.3**
PATS	**Pohnpei**	**14.40**	**117**	Pn		**Pn**	**20 48 19.6**	**-0.4**
SIJI	**Sorong**	**20.14**	**225**	P		Pn	20 49 30.0	0.0
	27nm,0.9s,baz=29,slow=11,SNR=20							
SWI	**Sorong**	**20.14**	**225**	P		Pn	20 49 28.7	-1.3
	55nm,1.2s							
JOW	**Kunigami**	**20.70**	**312**	P		**P**	**20 49 33.5**	**+0.3**
	30nm,0.7s,baz=157,slow=11,SNR=4.2							
JOW				LR		LR	20 56 37.9	
	comp=Z,45nm,20.0s,baz=196,slow=34							
JOW	**Kunigami**	**20.70**	**312**	P		**P**	**20 49 34.4**	**+1.2**
JOW				IAmb		IAmb	20 49 37.2	
	comp=Z,33nm,0.8s							
H11S3	**WAKE ISLAND Hy**	**20.99**	**74**	T		T	21 11 19.4	
	baz=261,slow=75,SNR=14							
H11S1	**WAKE ISLAND Hy**	**21.00**	**74**	T		T	21 11 41.9	
	baz=261,slow=75,SNR=11							
H11S2	**WAKE ISLAND Hy**	**21.01**	**74**	T		T	21 11 47.3	
	baz=261,slow=75,SNR=6.8							
FAKI	**Fak Fak**	**21.04**	**219**	P		**P**	**20 49 38.8**	**+1.8**
FAKI				IAmb		IAmb	20 49 41.8	
	comp=Z,40nm,0.9s							
FAKI	**Fak Fak**	**21.04**	**219**	P		**P**	**20 49 39.3**	**+2.3**
	comp=Z,486nmcomp=Z,53nm,1.0s							
H11N1	**WAKE ISLAND Hy**	**21.42**	**71**	T		T	21 12 51.4	
	baz=257,slow=75,SNR=9.0							
H11N2	**WAKE ISLAND Hy**	**21.43**	**71**	T		T	21 12 50.1	
	baz=257,slow=75,SNR=6.1							
H11N3	**WAKE ISLAND Hy**	**21.44**	**71**	T		T	21 12 55.9	
	baz=257,slow=75,SNR=11							
JGF	**Kuroka**	**23.00**	**343**	P		**P**	**20 49 57.0**	**-0.4**
JGF				IAmb		IAmb	20 49 58.2	
	comp=Z,37nm,1.0s							
MJAR	**Matsushiro Arr**	**23.66**	**345**	P		**P**	**20 50 02.9**	**-0.6**
	comp=Z,9.5nm,0.8s,baz=179,slow=11,SNR=20							
MJAR				LR		LR	20 58 30.9	
	comp=Z,60nm,18.9s,baz=175,slow=34							
MJAR	**Matsushiro Arr**	**23.66**	**345**	P		**P**	**20 50 01.3**	**-2.1**
MAJO	**Matsushiro**	**23.67**	**345**	P		**P**	**20 50 01.5**	**-2.0**
MAJO				IAmb		IAmb	20 50 04.7	
	comp=Z,18nm,0.8s							
MAT	**Matsushiro**	**23.67**	**345**	P		**P**	**20 50 03.1**	**-0.4**
MAT				S		**S**	**20 54 12.2**	**+1.2**
KMSI	**Cibinong**	**24.89**	**240**	P		**P**	**20 50 15.6**	**+0.8**
MRSI	**Marisa**	**26.68**	**242**	P		**P**	**20 50 30.6**	**-0.4**
LUWI	**Luwuk**	**26.78**	**239**	P		**P**	**20 50 31.5**	**-0.4**
	comp=Z,120nm,1.1s							
KSRS	**Korea Array**	**28.35**	**330**	P		**P**	**20 50 45.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=142,slow=9.2,SNR=6.7							
KSRS				PcP		**PcP**	**20 53 56.0**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=102,slow=1.8,SNR=4.5							
NJ2	**Nanjing**	**30.41**	**311**	*e*P		**P**	**20 51 04.5**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
SOEI	**Soe**	**31.34**	**223**	P		**P**	**20 51 14.3**	**+1.9**
BATI	**Baumata**	**32.08**	**223**	LR		LR	21 05 18.7	
	comp=Z,27nm,19.2s,baz=157,slow=38							
USA0B	**Ussuriysk Arra**	**32.51**	**342**	P		**P**	**20 51 21.0**	**-1.2**
USA0B				IAmb		IAmb	20 51 24.6	
	comp=Z,5.8nm,0.8s							
USRK	**Ussuriysk Ar.**	**32.51**	**342**	P		**P**	**20 51 22.6**	**+0.4**
	comp=Z,4.2nm,0.7s,baz=148,slow=6.7,SNR=13							
KNRA	**Kununurra**	**33.49**	**210**	P		**P**	**20 51 29.9**	**-1.1**
KNRA				IAmb		IAmb	20 51 38.3	
	comp=Z,6.5nm,0.9s							
MDJ	**Mudanjiang**	**33.66**	**339**	P		**P**	**20 51 33.2**	**+1.0**
MDJ				pmax		pmax		
	comp=Z,8.0nm,0.6s							
MDJ				pmax		pmax		
	comp=Z,120nm,6.1s							
SBUM	**Sibu**	**34.65**	**254**	P		**P**	**20 51 41.6**	**+0.5**
SBUM				IAmb		IAmb	20 51 42.3	
	comp=Z,9.6nm,0.8s							
WB0	**Warramunga Arr**	**34.96**	**198**	P		**P**	**20 51 44.4**	**+0.7**
WR0	**Warramunga Arr**	**35.10**	**198**	P		**P**	**20 51 45.4**	**+0.5**
WB2	**Warramunga Arr**	**35.14**	**198**	P		**P**	**20 51 45.8**	**+0.5**
WB2				IAmb		IAmb	20 51 57.4	
	comp=Z,5.4nm,0.9s							
WRA	**Warramunga Arr**	**35.14**	**198**	P		**P**	**20 51 46.1**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=23,slow=9.2,SNR=16							
WRA	**Warramunga Arr**	**35.14**	**198**	P		**P**	**20 51 46.2**	**+1.0**
ENH	**Enshi**	**36.98**	**302**	P		**P**	**20 52 00.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**37.11**	**212**	P		**P**	**20 52 02.8**	**+0.7**
FITZ				IAmb		IAmb	20 52 12.8	
	comp=Z,5.5nm,1.0s							
KLR	**Kul'dur**	**37.19**	**345**	P		**P**	**20 52 02.4**	**0.0**
	comp=Z,2.6nm,0.7s,baz=156,slow=5.4,SNR=8.2							
KLR				PcP		**PcP**	**20 54 20.2**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=194,slow=2.7,SNR=6.6							
GYA	**Guiyang**	**38.40**	**295**	P		**P**	**20 52 14.4**	**+1.3**
GYA				pmax		pmax		
	comp=Z,8.0nm,0.8s							
AS31	**Alice Springs**	**38.78**	**197**	P		**P**	**20 52 16.4**	**+0.3**
ASAR	**Alice Springs**	**38.78**	**197**	P		**P**	**20 52 17.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=20,slow=11,SNR=15							
ASAR				PcP		**PcP**	**20 54 26.1**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=31,slow=3.8,SNR=2.1							
ASAR	**Alice Springs**	**38.78**	**197**	P		**P**	**20 52 18.1**	**+2.0**
HHC	**Hu-ho-hao-te**	**40.05**	**319**	*e*P		**P**	**20 52 26.4**	**-0.2**
HHC				pmax		pmax		
	comp=Z,10.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,100nm,4.8s							
PETK	**Petropavlovsk-**	**40.53**	**11**	P		**P**	**20 52 30.5**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=164,slow=5.6,SNR=2.0							
PETK	**Petropavlovsk-**	**40.53**	**11**	P		**P**	**20 52 30.1**	**-0.1**
PET	**Petropavlovsk**	**40.64**	**12**	P		**P**	**20 52 28.9**	**-2.2**
PET				IAmb		IAmb	20 52 41.4	
	comp=Z,12nm,1.1s							
DZM	**Mont Dzumac**	**41.08**	**150**	LR		LR	21 10 07.2	
	comp=Z,19nm,18.1s,baz=250,slow=37							
MYKOM	**Kota Tinggi**	**42.76**	**258**	P		**P**	**20 52 47.0**	**-1.9**
LZH	**Lanzhou**	**43.38**	**309**	⇑P		**P**	**20 52 54.0**	**+0.1**
LZH				pP		pP	20 53 17.8	+1.3
LZH				pmax		pmax		
	comp=Z,24nm,1.3s							
CMAR	**Chiang Mai Arr**	**44.81**	**282**	P		**P**	**20 53 05.5**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=82,slow=6.2,SNR=14							
CMAR				PcP		**PcP**	**20 54 47.5**	**+1.6**
	comp=Z,5.8nm,0.8s,baz=94,slow=1.6,SNR=32							
CMAR	**Chiang Mai Arr**	**44.81**	**282**	P		**P**	**20 53 05.7**	**+0.3**
CMAR				PcP		**PcP**	**20 54 48.2**	**+2.3**
KULM	**Kulim**	**44.86**	**264**	P		**P**	**20 53 04.2**	**-1.7**
KULM				PcP		**PcP**	**20 54 48.4**	**+2.3**
STKA	**Stephens Creek**	**45.44**	**185**	P		**P**	**20 53 11.0**	**+1.0**
	comp=Z,2.7nm,0.7s,baz=354,slow=10,SNR=7.1							
STKA	**Stephens Creek**	**45.44**	**185**	P		**P**	**20 53 10.1**	**+0.1**
SONM	**Songino Array**	**46.96**	**325**	P		**P**	**20 53 21.9**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=146,slow=6.7,SNR=18							
SONM				PcP		**PcP**	**20 54 53.6**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=145,slow=3.9,SNR=7.8							
SONM				LR		LR	21 12 22.9	
	comp=Z,28nm,20.8s,baz=119,slow=35							
SONM	**Songino Array**	**46.96**	**325**	P		**P**	**20 53 21.6**	**-0.5**
SONM				PcP		**PcP**	**20 54 53.2**	**+0.2**
PSI	**Prapat**	**47.17**	**261**	P		**P**	**20 53 23.7**	**-0.4**
	comp=Z,8.7nm,0.7s,baz=0.6,slow=2.8,SNR=6.1							
GTA	**Gaotai**	**47.51**	**311**	*e*P		**P**	**20 53 26.8**	**+0.4**
GTA				pP		pP	20 53 50.6	+1.3
GTA				PcP		**PcP**	**20 54 56.2**	**+1.1**
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,61nm,4.4s							
GTA				LR		LR		
	comp=Z,85nm,15.3s							
GTA				LR		LR		
	comp=Z,97nm,15.3s							
GTA				LR		LR		
	comp=Z,87nm,15.6s							
YAK	**Yakutsk**	**49.59**	**350**	LR		LR	21 14 57.2	
	comp=Z,27nm,20.5s,baz=232,slow=36							
YAK	**Yakutsk**	**49.59**	**350**	P		**P**	**20 53 40.9**	**-0.9**
TLY	**Talaya**	**50.56**	**328**	LR		LR	21 14 54.2	
	comp=Z,17nm,18.7s,baz=162,slow=36							
LSA	**Lhasa**	**52.42**	**297**	P		**P**	**20 54 04.7**	**+0.5**
TAPN	**Taplejung**	**55.30**	**294**	*e*P		**P**	**20 54 24.3**	**-0.6**
ODAN	**Odare**	**55.56**	**293**	*e*P		**P**	**20 54 25.9**	**-0.9**
RAMN	**Ramite**	**56.27**	**293**	*e*P		**P**	**20 54 31.5**	**-0.4**
JIRN	**Jiri**	**56.65**	**294**	*e*P		**P**	**20 54 34.3**	**-0.4**
	comp=Z,11nm,0.6s							
GUN	**Gumba**	**56.94**	**294**	*e*P		**P**	**20 54 35.7**	**-1.0**
	comp=Z,23nm,0.7s							
PKI	**Pulchoki**	**57.34**	**294**	*e*P		**P**	**20 54 38.2**	**-1.3**
	comp=Z,7.3nm,0.7s							
PKIN	**Phulchoki**	**57.36**	**294**	*e*P		**P**	**20 54 38.3**	**-1.2**
	comp=Z,6.8nm,0.6s							
WMQ	**Urumqi**	**57.46**	**313**	*e*P		**P**	**20 54 41.8**	**+2.1**
WMQ				pP		pP	20 55 04.9	+1.4
WMQ				sP		sP	20 55 20.5	+6.3
WMQ				pmax		pmax		
	comp=N,18nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,180nm,5.5s							
KKN	**Kakani**	**57.46**	**294**	*e*P		**P**	**20 54 39.4**	**-0.8**
	comp=Z,7.0nm,0.6s							
DMN	**Daman**	**57.61**	**294**	*e*P		**P**	**20 54 40.7**	**-0.6**
GKN	**Gorkha**	**58.04**	**295**	*e*P		**P**	**20 54 43.3**	**-0.9**
	comp=Z,17nm,0.6s							
ZSN	**Zaisan**	**60.20**	**317**	*e*P		**P**	**20 54 58.1**	**-0.5**
	baz=317							
TNA	**Tin City**	**60.58**	**20**	P		**P**	**20 55 01.0**	**+0.2**
TNA				IAmb		IAmb	20 55 02.0	
	comp=Z,2.6nm,0.7s							
ANM	**Nome**	**60.91**	**22**	P		**P**	**20 55 02.6**	**-0.5**
ANM				IAmb		IAmb	20 55 04.7	
	comp=Z,4.0nm,0.6s							
MK31	**Makanchi Array**	**61.79**	**316**	P		**P**	**20 55 09.5**	**+0.1**
MK31				IAmb		IAmb	20 55 11.2	
	comp=Z,4.2nm,0.6s							
MKAR	**Makanchi Array**	**61.79**	**316**	P		**P**	**20 55 09.5**	**+0.1**
	comp=Z,5.3nm,0.5s,baz=90,slow=8.0,SNR=49							
MKAR	**Makanchi Array**	**61.79**	**316**	P		**P**	**20 55 09.4**	**0.0**
ZALV	**Zalesovo Beam**	**61.86**	**324**	P		**P**	**20 55 09.0**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=105,slow=7.3,SNR=5.2							
MAKZ	**Makanchi**	**62.01**	**316**	P		**P**	**20 55 10.9**	**+0.1**
SHLS	**Shalkode**	**63.25**	**312**	*e*P		**P**	**20 55 16.6**	**-2.7**
	baz=312							
SEM	**Semipalatinsk**	**63.78**	**320**	*e*P		**P**	**20 55 22.1**	**-0.6**
	baz=320							
KPKS	**Kokpek**	**63.85**	**312**	*e*P		**P**	**20 55 22.5**	**-0.7**
	baz=312							
SATY	**Saty**	**64.01**	**311**	*e*P		**P**	**20 55 23.7**	**-0.6**
	baz=311							
TDK	**Taldyqorghan**	**64.22**	**314**	*e*P		**P**	**20 55 25.4**	**-0.1**
	comp=

*IDC **12** 20:53:29.2±1.1,2°.03N×126°.43E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/43, mbtmp3.7/8, ML3.0/1, MS3.1/6, Ms1 3.1/6, ms1mx2.7/44, Error ellipse: s-maj=54.5km s-min=16.3km az=63.0*

*DJA **12** 20:53:34.0±0.3,2°N±2°×12°.7E±°, h10km, M4.3/11, mb4.7/4, mB4.8/3, MLv4.1/11, Mw(mB)4.0/3*

ISC 12 20:53:34.5±0.8,2°.11N±0°.06×126°.87E±0°.06, h35km, n21, σ2°08/21, mb3.8/6, MS3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.42**	**160**	P	**Pn**	**20 53 58.5**	**+0.7**
TNTI				S	**Sn**	**20 54 19.1**	**+3.9**
TNTI	**Ternate**	**1.42**	**160**	P	**Pn**	**20 53 58.3**	**+0.5**
SGSI	**Sangihe**	**2.06**	**320**	P	**Pn**	**20 54 09.0**	**+2.2**
SGSI				S	**Sn**	**20 54 34.3**	**+3.0**
KMSI	**Cibinong**	**3.27**	**242**	P	**Pn**	**20 54 24.0**	**+0.7**
KMSI				S	**Sn**	**20 55 01.7**	**+0.7**
GTOI	**Gorontalo**	**4.13**	**249**	P	**Pn**	**20 54 36.3**	**+1.2**
GTOI				S	**Sn**	**20 55 25.1**	**+2.9**
SANI	**Sanana**	**4.22**	**192**	P	**Pn**	**20 54 36.6**	**+0.2**
LUWI	**Luwuk**	**5.16**	**233**	P	**Pn**	**20 54 50.2**	**+0.9**
	0.8nm1μm146nm,1.0s						
MRSI	**Marisa**	**5.19**	**252**	P	**Pn**	**20 54 51.3**	**+1.6**
	0.2nm654nm53nm,0.6s						
SIJI	**Sorong**	**5.29**	**124**	Pn	**Pn**	**20 54 55.1**	**+3.9**
	0.5nm,0.3s,baz=274,slow=23,SNR=3.3						
SIJI				LR	LR	20 57 29.0	
	comp=Z,293nm,19.5s,baz=344,slow=43						
APSI	**Ampana**	**6.02**	**240**	P	**Pn**	**20 55 02.8**	**+1.6**
KAPI	**Kappang**	**10.03**	**225**	LR	LR	20 59 00.8	
	comp=Z,23nm,19.0s,baz=44,slow=34						
JAY	**Jayapura**	**14.57**	**108**	LR	LR	21 02 07.2	
	comp=Z,105nm,19.7s,baz=116,slow=35						
FITZ	**Fitzroy Crossi**	**20.11**	**183**	P	**P**	**20 58 05.1**	**-0.4**
	1.1nm,0.5s,baz=18,slow=9.7,SNR=9.0						
WRA	**Warramunga Arr**	**23.11**	**162**	P	**P**	**20 58 36.1**	**-1.5**
	4.0nm,0.6s,baz=338,slow=11,SNR=32						
JOW	**Kunigami**	**24.62**	**3**	LR	LR	21 09 37.9	
	comp=Z,40nm,18.4s,baz=285,slow=39						
ASAR	**Alice Springs**	**26.52**	**165**	P	**P**	**20 59 09.4**	**+0.4**
	1.0nm,0.5s,baz=348,slow=13,SNR=18						
PSI	**Prapat**	**27.93**	**272**	LR	LR	21 11 06.4	
	comp=Z,52nm,21.5s,baz=100,slow=38						
CMAR	**Chiang Mai Arr**	**31.84**	**303**	P	**P**	**20 59 53.0**	**-3.3**
	0.5nm,1.0s,baz=105,slow=6.8,SNR=2.4						
STKA	**Stephens Creek**	**36.57**	**159**	P	**P**	**21 00 37.7**	**+0.4**
	0.9nm,0.4s,baz=350,slow=8.5,SNR=5.8						
SONM	**Songino Array**	**48.87**	**342**	P	**P**	**21 02 16.5**	**-0.4**
	0.3nm,0.5s,baz=153,slow=8.5,SNR=4.3						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**21 03 29.0**	**-1.6**
	0.4nm,0.4s,baz=119,slow=7.5,SNR=13						
MKAR				LR	LR	21 30 03.2	
	comp=Z,20nm,21.7s,baz=86,slow=37						

*MOS **12** 21:16:08.1±1.2,48°.75N×156°.60E, h38km, mb4.0/1, Error ellipse: s-maj=28.1km s-min=4.8km az=71.6*

*SKHL **12** 21:16:12.4±0.5,48°.90N×155°.40E, h97km±4km, mb4.0/1, msha5.1/3*

*KRSC **12** 21:16:12.9±3.2,48°.81N×156°.66E, h30km±29km, ML4.3*

*IDC **12** 21:16:15.9±2.5,49°.04N×154°.73E, h94km±21km, mb3.3/10, mb1 3.5/12, mb1mx3.2/61, mbtmp3.6/12, MS3.1/2, Ms1 3.1/2, ms1mx2.5/23, Error ellipse: s-maj=29.3km s-min=15.0km az=134.0*

ISC 12 21:16:12.1±1.5,48°.8N±0°.1×155°.29E±0°.10, h72km±12km, n77, σ1°89/83, mb3.5/10, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.97**	**15**	*e*PN	**Pn**	**21 16 42.4**	**-1.0**
SKR				*e*S	**Sn**	**21 17 04.8**	**-2.4**
SKR				pmax	pmax		
	comp=Z,59nm,0.7s						
SKR				smax	smax		
	comp=N,115nm,0.3s						
SKR				smax	smax		
	comp=E,194nm,0.4s						
SKR	**Severo-Kuril's**	**1.97**	**15**	*e*P	**Pn**	**21 16 42.2**	**-1.2**
SKR				*e*S	**Sn**	**21 17 05.0**	**-2.2**
SKR	**Severo-Kuril's**	**1.97**	**15**	*e*P	**Pn**	**21 16 42.7**	**-0.7**
SKR				AMB	AMB	21 16 43.5	
	comp=E,60nm,0.6s						
SKR				*e*S	**Sn**	**21 17 05.1**	**-2.2**
SKR				A	A	21 17 07.7	
	comp=E,120nm,0.4s						
SKR				A	A	21 17 07.7	
	comp=E,190nm,0.4s						
PAU	**Pauzhetka**	**2.86**	**19**	PN	**Pn**	**21 16 57.2**	**+1.9**
PAU				S	**Sn**	**21 17 30.2**	**+1.6**
PAU	**Pauzhetka**	**2.86**	**19**	*e*P	**Pn**	**21 16 57.2**	**+1.9**
PAU				*e*S	**Sn**	**21 17 30.2**	**+1.6**
PAU	**Pauzhetka**	**2.86**	**19**	*i* P	**Pn**	**21 16 55.9**	**+0.6**
PAU				*e*S	**Sn**	**21 17 28.9**	**+0.3**
PAU				A	A	21 17 34.1	
	comp=E,160nm,0.3s						
PAU				A	A	21 17 34.1	
	comp=E,260nm,0.3s						
KDTR	**Khodutka, Kamc**	**3.51**	**29**	PN	**Pn**	**21 17 03.9**	**-0.4**
KDTR	**Khodutka, Kamc**	**3.51**	**29**	*e*P	**Pn**	**21 17 03.9**	**-0.4**
KDTR				*e*S	**Sn**	**21 17 43.4**	**-1.2**
MIPR	**Malaya Ipel'ka**	**3.62**	**14**	PN	**Pn**	**21 17 07.7**	**+2.0**
MIPR	**Malaya Ipel'ka**	**3.62**	**14**	*e*P	**Pn**	**21 17 07.7**	**+2.0**
MTVR	**Mutnovka**	**4.13**	**25**	PN	**Pn**	**21 17 13.7**	**+0.8**
MTVR	**Mutnovka**	**4.13**	**25**	*e*P	**Pn**	**21 17 13.7**	**+0.8**
MTVR				*e*S	**Sn**	**21 18 00.2**	**+0.2**
GRL	**Gorelyy**	**4.17**	**24**	PN	**Pn**	**21 17 14.1**	**+0.8**
GRL	**Gorelyy**	**4.17**	**24**	*e*P	**Pn**	**21 17 14.1**	**+0.8**
GRL				*e*S	**Sn**	**21 18 01.8**	**+1.1**
RUS	**Russkaya**	**4.19**	**28**	PN	**Pn**	**21 17 12.8**	**-0.7**
RUS	**Russkaya**	**4.19**	**28**	*e*P	**Pn**	**21 17 12.8**	**-0.7**
RUS				*e*S	**Sn**	**21 17 59.2**	**-1.9**
RUS	**Russkaya**	**4.19**	**28**	*e*P	**Pn**	**21 17 12.8**	**-0.7**
KRMR	**Karymshinskiy**	**4.43**	**23**	PN	**Pn**	**21 17 19.4**	**+2.6**
KRMR	**Karymshinskiy**	**4.43**	**23**	*e*P	**Pn**	**21 17 19.4**	**+2.6**
PETK	**Petropavlovsk-**	**4.59**	**18**	P	**Pn**	**21 17 20.6**	**+1.7**
	comp=E,1.1nm,0.3s,baz=175,slow=12,SNR=21						
PETK				S	**Sn**	**21 18 13.1**	**+2.2**
	baz=24,slow=33,SNR=1.3						
PET	**Petropavlovsk**	**4.75**	**25**	*e*S	**Sn**	**21 18 15.7**	**+1.0**
PET	**Petropavlovsk**	**4.75**	**25**	*i* S	**Sn**	**21 18 15.0**	**+0.3**
PET				A	A	21 18 35.0	
	comp=E,20nm,0.5s						
PET				A	A	21 18 35.0	
	comp=E,50nm,0.5s						
DALK	**Dalny**	**4.78**	**26**	PN	**Pn**	**21 17 22.2**	**+0.7**
DALK	**Dalny**	**4.78**	**26**	*e*P	**Pn**	**21 17 22.2**	**+0.7**
UGLR	**Uglovaya**	**4.96**	**25**	PN	**Pn**	**21 17 25.2**	**+1.1**
UGLR	**Uglovaya**	**4.96**	**25**	*e*P	**Pn**	**21 17 25.2**	**+1.1**
KOK	**Koryaka**	**4.98**	**24**	PN	**Pn**	**21 17 26.4**	**+2.0**
KOK	**Koryaka**	**4.98**	**24**	*e*P	**Pn**	**21 17 26.4**	**+2.0**
KOK	**Koryaka**	**4.98**	**24**	*e*P	**Pn**	**21 17 26.4**	**+2.0**
AVH	**Avacha**	**4.98**	**25**	PN	**Pn**	**21 17 26.3**	**+1.9**
AVH	**Avacha**	**4.98**	**25**	*e*P	**Pn**	**21 17 26.3**	**+1.9**
SMAR	**Somma**	**5.00**	**25**	PN	**Pn**	**21 17 25.8**	**+1.0**
SMAR	**Somma**	**5.00**	**25**	*e*P	**Pn**	**21 17 25.8**	**+1.0**
KRER	**Koryakskii**	**5.02**	**24**	PN	**Pn**	**21 17 27.1**	**+2.1**
KRER	**Koryakskii**	**5.02**	**24**	*e*P	**Pn**	**21 17 27.1**	**+2.1**
SDLR	**Sedlovina**	**5.04**	**25**	PN	**Pn**	**21 17 25.6**	**+0.4**
SDLR	**Sedlovina**	**5.04**	**25**	*e*P	**Pn**	**21 17 25.6**	**+0.4**
SDLR				*e*S	**Sn**	**21 18 21.3**	**-0.7**
KRX	**Arik**	**5.04**	**24**	PN	**Pn**	**21 17 27.2**	**+1.9**
KRX	**Arik**	**5.04**	**24**	*e*P	**Pn**	**21 17 27.2**	**+1.9**
NLC	**Nalytchevo**	**5.08**	**29**	*e*S	**Sn**	**21 18 18.7**	**-4.2**
GNL	**Ganaly**	**5.19**	**18**	PN	**Pn**	**21 17 29.1**	**+1.8**
GNL	**Ganaly**	**5.19**	**18**	*e*P	**Pn**	**21 17 29.1**	**+1.8**
SPN	**Mys Shipunski**	**5.25**	**33**	PN	**Pn**	**21 17 27.8**	**-0.2**
SPN	**Mys Shipunski**	**5.25**	**33**	*e*P	**Pn**	**21 17 27.8**	**-0.2**
SPN				*e*S	**Sn**	**21 18 25.1**	**-2.0**
SPN	**Mys Shipunski**	**5.25**	**33**	*e*P	**Pn**	**21 17 27.8**	**-0.2**
KUR	**Kuril'sk**	**6.20**	**238**	*e*P	**Pn**	**21 17 43.6**	**+2.7**
MKZ	**Mys Kozlova**	**7.03**	**32**	PN	**Pn**	**21 17 50.5**	**-1.7**
MKZ	**Mys Kozlova**	**7.03**	**32**	*e*P	**Pn**	**21 17 50.5**	**-1.7**
MKZ				*e*S	**Sn**	**21 19 05.6**	**-4.9**
KZV	**Kizimen**	**7.05**	**24**	PN	**Pn**	**21 17 56.2**	**+3.5**
KZV	**Kizimen**	**7.05**	**24**	*e*P	**Pn**	**21 17 56.2**	**+3.5**
TUMR	**Tumrok**	**7.16**	**23**	PN	**Pn**	**21 17 58.2**	**+4.0**
TUMR	**Tumrok**	**7.16**	**23**	*e*P	**Pn**	**21 17 58.2**	**+4.0**
TYV	**Tymovskoe**	**8.43**	**289**	*e*P	**Pn**	**21 18 12.3**	**+0.9**
KBTR	**Krutoberegovo**	**8.73**	**29**	PN	**Pn**	**21 18 15.8**	**+0.3**
KBTR	**Krutoberegovo**	**8.73**	**29**	*e*P	**Pn**	**21 18 15.8**	**+0.3**
JKA	**Kamikawa-asahi**	**9.93**	**247**	*e*P	**Pn**	**21 18 32.8**	**+1.0**
ASAJ	**Asahikawa**	**9.93**	**247**	P	**Pn**	**21 18 32.8**	**+0.9**
	comp=E,1.1nm,0.3s,baz=58,slow=12,SNR=16						
SEY	**Seymchan**	**14.27**	**355**	P	**Pn**	**21 19 32.0**	**+1.7**
	comp=E,0.1nm,0.3s,baz=249,slow=17,SNR=1.3						
EKMR	**Ekimchan**	**14.71**	**295**	*e*P	**Pn**	**21 19 33.0**	**-3.1**
JCJ	**Chichijima**	**23.93**	**210**	LR	LR	21 29 46.2	
	comp=E,76nm,20.7s,baz=116,slow=34						
TIXI	**Tiksi**	**25.97**	**341**	P	**P**	**21 21 35.4**	**-2.1**
	comp=E,0.3nm,0.3s,baz=133,slow=8.9,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**30.46**	**158**	T	T	21 54 42.8	
	baz=343,slow=74						
H11N1	**WAKE ISLAND Hy**	**30.47**	**158**	T	T	21 54 49.2	
	baz=343						
H11N3	**WAKE ISLAND Hy**	**30.47**	**158**	T	T	21 54 47.1	
	baz=343,slow=74						
H11S1	**WAKE ISLAND Hy**	**31.59**	**159**	T	T	21 56 09.0	
	baz=345,slow=76,SNR=276						
H11S3	**WAKE ISLAND Hy**	**31.59**	**159**	T	T	21 56 13.6	
	baz=345,slow=76,SNR=273						
H11S2	**WAKE ISLAND Hy**	**31.60**	**159**	T	T	21 56 10.3	
	baz=345,slow=76,SNR=230						
SONM	**Songino Array**	**32.09**	**287**	LR	LR	21 36 22.9	
	comp=E,22nm,18.2s,baz=170,slow=38						
INK	**Inuvik**	**39.14**	**34**	P	**P**	**21 23 34.1**	**+2.0**
	comp=E,0.8nm,0.8s,baz=259,slow=6.2,SNR=3.4						
MKAR	**Makanchi Array**	**47.33**	**297**	P	**P**	**21 24 36.0**	**-2.4**
	comp=E,0.1nm,0.5s,baz=75,slow=7.2,SNR=1.9						
YKA	**Yellowknife Ar**	**48.41**	**38**	P	**P**	**21 24 48.4**	**+1.9**
	comp=E,0.3nm,0.7s,baz=300,slow=7.5,SNR=4.2						
CMAR	**Chiang Mai Arr**	**54.27**	**257**	P	**P**	**21 25 30.9**	**0.0**
	comp=E,0.8nm,0.6s,baz=36,slow=7.0,SNR=11						
FINES	**FINESS Array B**	**62.81**	**335**	P	**P**	**21 26 27.8**	**-1.9**
	comp=E,1.3nm,0.6s,baz=25,slow=6.3,SNR=7.3						
NOA	**NORSAR Array B**	**66.76**	**342**	P	**P**	**21 26 54.1**	**-1.3**
	comp=E,0.9nm,0.8s,baz=30,slow=6.4,SNR=1.7						
AKASG	**Malin Array Be**	**70.66**	**327**	P	**P**	**21 27 18.4**	**-1.3**
	comp=E,0.3nm,0.3s,baz=34,slow=6.1,SNR=4.2						
WRA	**Warramunga Arr**	**70.93**	**201**	P	**P**	**21 27 22.1**	**+0.5**
	comp=E,0.4nm,0.8s,baz=16,slow=6.5,SNR=2.6						
TXAR	**Lajitas Array**	**75.23**	**62**	P	**P**	**21 27 49.9**	**+2.7**
	comp=E,0.2nm,0.5s,baz=322,slow=5.7,SNR=3.6						

*IDC **12** 21:19:14.0±2.5,5°.69S×153°.33E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/48, mbtmp3.8/8, ML2.0/1, Error ellipse: s-maj=84.1km s-min=20.1km az=121.0*

ISC 12 21:19:18.3±2.0,5°.8S±0°.3×153°.5E±0°.3, h35km, n9, σ0s57/10, mb3.6/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.21**	**240**	Pn	**Pn**	**21 21 00.6**	**-0.8**
	1.7nm,0.3s,baz=108,slow=19,SNR=2.2						
PMG				Sn	**Sn**	**21 22 22.9**	**+0.8**
	2.8nm,0.3s,baz=241,slow=14,SNR=9.7						
WRA	**Warramunga Arr**	**23.31**	**231**	P	**P**	**21 24 23.4**	**-0.1**
	0.5nm,0.3s,baz=56,slow=8.0,SNR=7.1						
ASAR	**Alice Springs**	**25.88**	**225**	P	**P**	**21 24 48.0**	**+0.9**
	0.4nm,0.6s,baz=61,slow=9.0,SNR=6.4						
FITZ	**Fitzroy Crossi**	**29.79**	**243**	P	**P**	**21 25 21.8**	**-0.3**
	1.3nm,0.4s,baz=63,slow=7.9,SNR=9.1						
PETK	**Petropavlovsk-**	**58.83**	**3**	P	**P**	**21 29 13.3**	**+0.1**
	3.5nm,1.0s,baz=164,slow=6.4,SNR=5.4						
SONM	**Songino Array**	**67.56**	**328**	P	**P**	**21 30 11.6**	**+0.2**
	0.3nm,0.5s,baz=147,slow=6.7,SNR=3.8						
MKAR	**Makanchi Array**	**81.55**	**319**	P	**P**	**21 31 32.8**	**+0.2**
	0.5nm,0.8s,baz=101,slow=7.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**82.39**	**326**	P	**P**	**21 31 36.3**	**-0.4**
	0.6nm,0.4s,baz=120,slow=5.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**151.27**	**287**	PKPbc	**PKiKP**	**21 39 09.8**	**+0.1**
	1.7nm,0.9s,baz=66,slow=2.5,SNR=6.1						

*IDC **12** 22:08:43.7±1.9,5°.46S×152°.40E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.5/45, mbtmp3.7/6, Error ellipse: s-maj=78.1km s-min=22.6km az=125.0*

ISC 12 22:08:49.6±2.0,5°.5S±0°.3×152°.4E±0°.4, h40km, n6, σ0s84/7, mb3.5/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.45**	**233**	Pn	**Pn**	**22 10 22.9**	**+0.9**
	baz=182,slow=1.9,SNR=3.5						
PMG				Sn	**Sn**	**22 11 34.4**	**-0.1**
	0.9nm,0.3s,baz=179,slow=14,SNR=1.5						
WRA	**Warramunga Arr**	**22.65**	**229**	P	**P**	**22 13 47.9**	**+0.4**
	0.7nm,0.6s,baz=54,slow=9.7,SNR=9.2						
ASAR	**Alice Springs**	**25.33**	**223**	P	**P**	**22 14 12.8**	**-0.2**
	0.3nm,0.4s,baz=54,slow=9.4,SNR=13						
FITZ	**Fitzroy Crossi**	**28.94**	**242**	P	**P**	**22 14 44.0**	**-1.3**
	0.9nm,0.9s,baz=70,slow=12,SNR=1.6						
SONM	**Songino Array**	**66.70**	**328**	P	**P**	**22 19 36.8**	**+0.2**
	0.2nm,0.5s,baz=136,slow=5.5,SNR=2.1						
ILAR	**Eielson Array**	**82.98**	**22**	P	**P**	**22 21 10.4**	**+0.2**
	0.9nm,0.7s,baz=251,slow=5.1,SNR=12						

*NAO **12** 22:11:34.3±2.0, 79°.58N×3°.95E, ML3.3*

*IDC **12** 22:11:37.4±0.8, 79°.36N×3°.83E, h0km, mb3.6/8, mb1 3.8/11, mb1mx3.4/49, mbtmp3.6/11, ML2.8/2, MS2.9/14, Ms1 2.9/14, ms1mx2.7/45, Error ellipse: s-maj=29.7km s-min=13.3km az=27.0*

*BER **12** 22:11:38.8±4.2, 79°.25N×3°.55E, h28km±37km, ML2.4, ML2.9(DNK), Confirmed Earthquake*

*IEPN **12** 22:11:39.0, 79°.20N×4°.69E, h10km*

ISC 12 22:11:36.9±0.6, 79°.17N±0°.06×3°.71E±0°.04, h10km, n63, σ3s14/83, mb3.6/9, MS3.0/9, 4C, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.59**	**95**	*i* P	**Pn**	**22 12 03.3**	**-1.8**
KBS				IAML		22 12 28.2	
	comp=Z,160nm,0.3s						
KBS	**Kingsbay**	**1.59**	**95**	Pn	**Pn**	**22 12 03.1**	**-1.9**
KBS				Sn	**Sn**	**22 12 21.1**	**-4.5**
KBS	**Kingsbay**	**1.59**	**95**	*i* P	**Pn**	**22 12 03.3**	**-1.8**
KBS				*e*S	**Sn**	**22 12 21.1**	**-4.5**
KBS				IAML		22 12 23.8	
	comp=Z,68nm,0.5s						
KBS	**Kingsbay**	**1.59**	**95**	*i* P	**Pn**	**22 12 02.8**	**-2.3**
KBS				*e*S	**Sn**	**22 12 20.8**	**-4.8**
BRBB	**Barentsburg B**	**2.34**	**112**	Pn	**Pn**	**22 12 14.8**	**-0.6**
BRBB				Sn	**Sn**	**22 12 41.1**	**-3.1**
BRBB	**Barentsburg B**	**2.34**	**112**	*e*P	**Pn**	**22 12 14.6**	**-0.8**
BRBB				*e*		22 12 15.8	
BRBB				*e*S	**Sn**	**22 12 40.6**	**-3.5**
BRBA	**Barentsburg A**	**2.36**	**113**	Pn	**Pn**	**22 12 14.9**	**-0.7**
BRBA				Sn	**Sn**	**22 12 41.7**	**-2.9**
BRBA	**Barentsburg A**	**2.36**	**113**	*e*P	**Pn**	**22 12 15.0**	**-0.7**
BRBA				*e*		22 12 16.4	
BRBA				*e*S	**Sn**	**22 12 41.1**	**-3.5**
BRBA				IAML		22 12 44.9	
	comp=Z,80nm,0.2s						
SPA0	**Spitsbergen Ar**	**2.69**	**105**	Pn	**Pn**	**22 12 19.5**	**-0.6**
	baz=280,slow=5.9						
SPA0				Sn	**Sn**	**22 12 52.3**	**-0.4**
	baz=275,slow=22						
SPA0	**Spitsbergen Ar**	**2.69**	**105**	Pn	**Pn**	**22 12 19.5**	**-0.6**
	baz=280,slow=5.9						
SPA0				Sn	**Sn**	**22 12 52.3**	**-0.4**
	baz=275,slow=22						
SPA0	**Spitsbergen Ar**	**2.69**	**105**	*i* P	**Pn**	**22 12 19.8**	**-0.3**
SPA0				*e*S	**Sn**	**22 12 49.4**	**-3.3**
SPITS	**Spitsbergen Ar**	**2.69**	**105**	Pn	**Pn**	**22 12 19.9**	**-0.3**
	baz=278,slow=11,SNR=9507						
SPITS				Sn	**Sn**	**22 12 49.5**	**-3.2**
	baz=242,slow=8.4,SNR=1.7						
SPITS				LR	LR	22 13 32.5	
	comp=Z,249nm,21.0s,baz=140,slow=42						
HSPB	**Hornsund (broa**	**3.27**	**126**	Pn	**Pn**	**22 12 28.1**	**0.0**
HSPB				Sn	**Sn**	**22 13 04.8**	**-2.3**
HSPB	**Hornsund (broa**	**3.27**	**126**	*e*P	**Pn**	**22 12 28.0**	**-0.2**
HSPB				*e*S	**Sn**	**22 13 04.5**	**-2.7**
HSPB				IAML		22 13 07.1	
	comp=Z,32nm,0.2s						
HSPB	**Hornsund (broa**	**3.27**	**126**	*e*P	**Pn**	**22 12 27.9**	**-0.2**
HSPB				*e*S	**Sn**	**22 13 03.8**	**-3.3**
NOR	**Nord**	**4.17**	**315**	*i* P	**Pn**	**22 12 37.0**	**-3.5**
NOR				*i* P	Pb	22 12 37.5	-13
NOR	**Nord**	**4.17**	**315**	Pn	**Pn**	**22 12 37.2**	**-3.3**
NOR	**Nord**	**4.17**	**315**	*i* P	**Pn**	**22 12 37.0**	**-3.5**
NOR				*e*S	**Sn**	**22 13 21.4**	**-7.8**
HOPEN	**Hopen**	**5.21**	**110**	Pn	**Pn**	**22 12 53.9**	**-0.8**
HOPEN				Sn	**Sn**	**22 13 49.1**	**-5.5**
HOPEN	**Hopen**	**5.21**	**110**	*e*P	**Pn**	**22 12 53.9**	**-0.8**
HOPEN				*e*S	**Sn**	**22 13 49.5**	**-5.1**
HOPEN				IAML		22 13 52.2	
	comp=Z,10nm,0.4s						
HOPEN	**Hopen**	**5.21**	**110**	*e*P	**Pn**	**22 12 53.8**	**-0.8**
HOPEN				*e*S	**Sn**	**22 13 48.9**	**-5.7**
DAG	**Danmarks Havn**	**5.23**	**254**	*e*	**Pn**	**22 12 53.0**	**-2.0**
	baz=57,slow=16						
DAG				*i* P	**Pn**	**22 12 53.0**	**-2.0**
DAG				*i* P	**Pn**	**22 12 53.8**	**-1.2**
DAG				*i* S	**Sn**	**22 13 48.0**	**-7.2**
DAG				IAML		22 13 55.3	
	comp=Z,7.1nm,0.3s						
DAG	**Danmarks Havn**	**5.23**	**254**	*e*	**Pn**	**22 12 53.0**	**-2.0**
	baz=57,slow=16						
DAG				*i* P	**Pn**	**22 12 53.0**	**-2.0**
DAG				*i* S	**Sn**	**22 13 48.0**	**-7.2**
DAG				IAML		22 13 55.3	
	comp=Z,7.1nm,0.3s						
BJO1	**Bjornoya**	**5.82**	**136**	Pn	**Pn**	**22 13 04.2**	**+1.0**
BJO1	**Bjornoya**	**5.82**	**136**	*e*P	**Pn**	**22 13 03.5**	**+0.4**
BJO1	**Bjornoya**	**5.82**	**136**	*e*P	**Pn**	**22 13 03.5**	**+0.4**
BJO1				*e*S	**Sn**	**22 14 06.3**	**-3.5**
DBG	**Daneborg**	**7.28**	**241**	*i* P	**Pn**	**22 13 21.7**	**-1.5**
DBG				*i* S	Sn	22 14 36.4	-9.3
DBG				IAML		22 14 43.0	
	comp=Z,5.1nm,0.3s						
DBG	**Daneborg**	**7.28**	**241**	Pn	**Pn**	**22 13 22.5**	**-0.7**
DBG	**Daneborg**	**7.28**	**241**	*i* P	**Pn**	**22 13 21.7**	**-1.5**
DBG				*i* S	Sn	22 14 36.4	-9.3
DBG				IAML		22 14 43.0	
	comp=Z,5.1nm,0.3s						
ZFI	**Zemlya Franca-**	**7.66**	**57**	*e*P	**Pn**	**22 13 26.1**	**-2.3**
ZFI				*e*S	Sn	22 14 44.1	-11
	comp=Z,35nm,0.8s						
HAMF	**Hammerfest**	**9.93**	**139**	*e*P	**Pn**	**22 13 59.9**	**+0.5**
JETT	**Jettan, Norway**	**10.58**	**147**	Pn	**Pn**	**22 14 13.0**	**+4.6**
KIF	**Kilpisjarvi**	**11.15**	**147**	Pn	**Pn**	**22 14 20.3**	**+4.2**
KIF	**Kilpisjarvi**	**11.15**	**147**	Pn	**Pn**	**22 14 20.3**	**+4.2**
KEV	**Kevo**	**11.19**	**135**	Pn	**Pn**	**22 14 19.2**	**+2.7**
KEV	**Kevo**	**11.19**	**135**	Pn	**Pn**	**22 14 19.2**	**+2.7**
ARA0	**ARCESS Array S**	**11.19**	**138**	Pn	**Pn**	**22 14 17.7**	**+1.0**
	baz=350,slow=14						
ARA0				Sn	**Sn**	**22 16 14.4**	**-7.3**
	baz=349,slow=22						
ARA0	**ARCESS Array S**	**11.19**	**138**	Pn	**Pn**	**22 14 17.7**	**+1.0**
	baz=350,slow=14						
ARA0				*e*P	**Pn**	**22 14 17.8**	**+1.0**
ARA0				Sn	**Sn**	**22 16 14.4**	**-7.3**
	baz=349,slow=22						
ARCES	**ARCESS Array B**	**11.19**	**138**	Pn	**Pn**	**22 14 17.4**	**+0.7**
	baz=351,slow=12,SNR=18						
ARCES				Sn	**Sn**	**22 16 16.2**	**-5.5**
	baz=358,slow=21,SNR=1.7						
ARCES				LR	LR	22 18 35.0	
	comp=Z,51nm,18.2s,baz=335,slow=37						
KTK1	**Kautokeino**	**11.41**	**143**	*e*P	**Pn**	**22 14 21.2**	**+1.5**
SUMG	**Summit**	**11.88**	**259**	*i* P	**Pn**	**22 14 24.3**	**-2.2**
SUMG				*e*		22 16 28.0	
SUMG				IAML		22 16 40.6	
	comp=Z,0.8nm,0.4s						
SUMG	**Summit**	**11.88**	**259**	*i* P	**Pn**	**22 14 24.3**	**-2.2**
SUMG				*e*		22 16 28.0	
SUMG				IAML		22 16 40.6	
	comp=Z,0.8nm,0.4s						
HEF	**Hetta**	**12.04**	**143**	*e*P	**Pn**	**22 14 31.5**	**+3.2**
NOA	**NORSAR Array B**	**18.37**	**168**	LR	LR	22 22 35.0	
	comp=Z,11nm,21.1s,baz=10.0,slow=36						
SFJD	**Kangerlussuaq**	**18.87**	**261**	LR	LR	22 23 29.7

HUMO	**Hull Mountain**	**2.76**	**104**			**Pn**		22 45 46.5	-0.5
H04D	**Lebanon**	**3.02**	**66**	P				22 45 51.6	
	baz=248,SNR=152								
G03D	**McMinnville, O**	**3.04**	**51**	P				22 45 50.9	
	baz=232,SNR=85								
G03D				S				22 46 29.4	
	baz=232								
I04A	**Tendick Farm,**	**3.07**	**80**	P				22 45 52.0	
	baz=263,SNR=89								
JCC	**Jacoby Creek,**	**3.16**	**142**	Pn		**Pn**		**22 45 54.2**	**+1.8**
JCC				IAML				22 47 11.4	
	comp=E,50nm,3.6s								
JCC				IAML				22 47 34.7	
	comp=N,48nm,2.0s								
KHMM	**Horse Mountain**	**3.25**	**138**	Pn		**Pn**		**22 45 54.8**	**+1.0**
KHMM				IAML				22 46 48.4	
	comp=N,42nm,4.7s								
KHMM				IAML				22 47 54.9	
	comp=E,42nm,3.3s								
J04D	**Umpqua Nationa**	**3.27**	**90**	P				22 45 55.6	
	baz=274,SNR=55								
YBH	**Yreka Blue Hor**	**3.28**	**118**	Pn		**Pn**		**22 45 54.8**	**+0.6**
	comp=E,3.2nm,0.3s,baz=294,slow=13,SNR=54								
YBH				Sn		**Sn**		**22 46 31.7**	**-1.7**
	comp=E,0.6nm,0.3s,baz=281,slow=19,SNR=1.5								
YBH	**Yreka Blue Hor**	**3.28**	**118**			**Pn**		**22 45 54.6**	**+0.4**
YBH				Sn		**Sn**		**22 46 32.0**	**-1.3**
L04D	**Klamath Falls**	**3.35**	**108**	P				22 45 55.8	
	baz=292,SNR=88								
M02C	**Callahan**	**3.38**	**124**	P				22 45 55.0	
	baz=308,SNR=13								
H04A	**Detroit Lake**	**3.45**	**66**			**Pn**		**22 45 57.5**	**+1.0**
H04A				IAML				22 46 51.5	
	comp=N,57nm,0.3s								
N02D	**Trinity Center**	**3.73**	**128**	P				22 45 59.6	
	baz=312								
F04D	**Rainier, OR**	**3.75**	**42**	P				22 46 01.4	
	baz=223,SNR=5.8								
F04D				S				22 46 48.6	
	baz=223								
M04C	**Macdoel**	**3.84**	**112**	P				22 46 02.2	
	baz=296								
E03A	**Lebam**	**3.86**	**33**			**Pn**		**22 46 01.5**	**-0.5**
E03A						**Sn**		**22 46 45.2**	**-2.2**
J05D	**Fort Rock, OR**	**3.91**	**89**	P				22 46 03.6	
	baz=273,SNR=31								
I05D	**Terrebonne, OR**	**3.93**	**73**	P				22 46 03.9	
	baz=257,SNR=14								
WDC	**Whiskeytown Da**	**4.09**	**131**	Pn		**Pn**		**22 46 06.0**	**+0.8**
PINE	**Pine Mountain**	**4.13**	**82**			**Pn**		**22 46 06.8**	**+0.9**
PINE				IAML				22 47 14.1	
	comp=N,21nm,4.5s								
PINE				IAML				22 48 46.0	
	comp=E,22nm,4.2s								
K05A	**Summer Lake**	**4.22**	**96**			**Pn**		**22 46 07.4**	**+0.2**
K05A				IAML				22 47 05.0	
	comp=N,23nm,4.9s								
K05A				IAML				22 48 50.7	
	comp=E,19nm,4.9s								
G05D	**Wamic, OR**	**4.24**	**61**	P				22 46 08.8	
	baz=245,SNR=24								
E04D	**Cinebar**	**4.30**	**40**	P				22 46 08.7	
	baz=222,SNR=20								
E04D				S				22 47 01.6	
	baz=222								
F05D	**White Salmon**	**4.46**	**53**	P				22 46 11.9	
	baz=237,SNR=33								
F05D				S				22 47 07.1	
	baz=237								
NLWA	**Neilton Lookou**	**4.48**	**24**			**Pn**		**22 46 10.3**	**-0.4**
NLWA						**Sn**		**22 47 02.4**	**-0.4**
D04E	**Lakebay**	**4.69**	**34**	P				22 46 14.4	
	baz=216								
D04E				S				22 47 12.4	
	baz=216								
LON	**Longmire**	**4.81**	**43**			**Pn**		**22 46 16.4**	**+1.3**
LON				IAML				22 47 17.1	
	comp=N,18nm,0.3s								
LON				IAML				22 47 18.6	
	comp=E,16nm,0.7s								
MOD	**Modoc Plateau**	**4.86**	**105**	Pn		**Pn**		**22 46 15.8**	**-0.1**
D03D	**Eldon**	**4.87**	**29**	P				22 46 15.4	
	baz=211,SNR=23								
D03D				S				22 47 12.3	
	baz=211								
D05A	**Enumclaw**	**5.04**	**39**			**Pn**		**22 46 19.6**	**+1.4**
HOPS	**Hopland Field**	**5.09**	**147**	Pn		**Pn**		**22 46 20.0**	**+1.1**
I07A	**Izee**	**5.19**	**79**			**Pn**		**22 46 21.2**	**+0.8**
I07A				IAML				22 47 41.3	
	comp=E,11nm,4.6s								
I07A				IAML				22 49 03.6	
	comp=N,11nm,4.6s								
ORV	**Oroville**	**5.38**	**133**			**Pn**		**22 46 24.9**	**+2.0**
ORV				IAML				22 47 31.6	
	comp=N,6.3nm,4.0s								
ORV				IAML				22 48 17.6	
	comp=E,7.0nm,4.8s								
F07A	**Phinny Hill Vi**	**5.40**	**59**			**Pn**		**22 46 24.2**	**+1.0**
F07A				IAML				22 47 42.2	
	comp=E,14nm,3.5s								
LTY	**Liberty**	**5.73**	**45**			**Pn**		**22 46 28.8**	**+1.1**
PGC	**Sidney**	**5.75**	**21**	Pn		**Pn**		**22 46 27.8**	**-0.1**
E07A	**Sunnyside**	**5.76**	**54**			**Pn**		**22 46 29.0**	**+0.8**
G08A	**Pilot Rock**	**5.81**	**68**			**Pn**		**22 46 29.9**	**+0.9**
BEKR	**Beckworth**	**5.81**	**124**			**Pn**		**22 46 30.6**	**+1.5**
B05A	**Bryant**	**5.84**	**31**	P				22 46 29.8	
	baz=214,SNR=8.9								
B05A				S				22 47 38.3	
	baz=214								
HAWA	**Hanford**	**5.87**	**56**			**Pn**		**22 46 30.7**	**+1.1**
WVOR	**Wild Horse Val**	**5.91**	**96**			**Pn**		**22 46 30.5**	**+0.2**
J08A	**Circle Bar Ran**	**5.92**	**87**			**Pn**		**22 46 30.8**	**+0.4**
A04D	**Lummi Island**	**6.02**	**25**	P				22 46 32.0	
	baz=207,SNR=13								
E08A	**Dider Farm, El**	**6.21**	**57**			**Pn**		**22 46 35.3**	**+1.0**
B06A	**Marblemount**	**6.29**	**33**			**Pn**		**22 46 35.6**	**+0.3**
A05A	**Maple Falls**	**6.47**	**27**			**Pn**		**22 46 38.6**	**+0.8**
D08A	**Wollman Farm,**	**6.57**	**53**			**Pn**		**22 46 40.3**	**+1.0**
PNTR	**Pine Nut**	**6.76**	**126**			**Pn**		**22 46 44.0**	**+1.8**
BMO	**Blue Mountains**	**6.85**	**74**			**Pn**		**22 46 44.2**	**+1.0**
CMB	**Columbia Colle**	**7.09**	**136**	Pn		**Pn**		**22 46 48.6**	**+2.1**
B08A	**Colville Reser**	**7.13**	**43**	Pn		**Pn**		**22 46 47.5**	**+0.5**
F10A	**Beach Ranch, E**	**7.18**	**65**			**Pn**		**22 46 48.1**	**+0.4**
WAKR	**Walker**	**7.25**	**129**			**Pn**		**22 46 50.4**	**+1.6**
C09A	**Chrisman Ranch**	**7.34**	**50**	Pn		**Pn**		**22 46 50.6**	**+0.7**
PLID	**Pearl Lake**	**7.81**	**73**	Pn		**Pn**		**22 46 57.0**	**+0.6**
NVAR	**Mina Array Bea**	**7.96**	**125**	Pn		**Pn**		**22 47 01.4**	**+2.8**
	comp=E,0.3nm,0.3s,baz=295,slow=14,SNR=9.5								
NVAR	**Mina Array Bea**	**7.96**	**125**			**Pn**		**22 47 00.3**	**+1.7**
NEW	**Newport**	**8.24**	**50**	Pn		**Pn**		**22 47 03.0**	**+0.7**
	comp=E,0.6nm,0.3s,baz=237,slow=15,SNR=5.5								
NEW				LR		LR		22 50 32.0	
	comp=E,122nm,21.2s,baz=277,slow=40								
NEW	**Newport**	**8.24**	**50**	Pn		**Pn**		**22 47 03.1**	**+0.8**
NEW	**Newport**	**8.24**	**50**	P				22 47 03.4	
	baz=236								
ELK	**Elko**	**8.83**	**103**	Pn		**Pn**		**22 47 12.2**	**+1.7**
	comp=E,0.1nm,0.3s,baz=291,slow=14,SNR=4.8								
ELK				LR		LR		22 49 59.8	
	comp=E,47nm,18.4s,baz=280,slow=34								
ELK	**Elko**	**8.83**	**103**			**Pn**		**22 47 11.8**	**+1.2**
BBB	**Bella Bella**	**8.91**	**354**	LR		LR		22 50 02.3	
	comp=E,44nm,21.7s,baz=221,slow=34								
MSO	**Missoula**	**9.60**	**64**	P				22 47 22.3	
	baz=253								
PDAR	**Pinedale Array**	**12.47**	**87**	Pn		**Pn**		**22 48 03.5**	**+3.1**
	comp=E,0.1nm,0.3s,baz=279,slow=13,SNR=11								
PDAR				LR		LR		22 53 10.7	
	comp=E,102nm,19.4s,baz=289,slow=39								
PFO	**Pinyon Flats O**	**12.53**	**137**	LR		LR		22 52 55.3	
	comp=E,61nm,19.5s,baz=224,slow=38								
DLBC	**Dease Lake**	**15.27**	**353**	Pn		**Pn**		**22 48 38.2**	**0.0**
	comp=E,0.2nm,0.3s,baz=155,slow=14,SNR=1.2								
W18A	**Petrified Fore**	**15.41**	**117**	Pn		**Pn**		**22 48 40.7**	**+0.5**
ANMO	**Albuquerque**	**17.69**	**112**	P		**Pn**		**22 49 10.3**	**+1.1**
	comp=E,0.1nm,0.3s,baz=293,slow=9.9,SNR=5.0								
ANMO				LR		LR		22 56 12.0	
	comp=E,46nm,20.8s,baz=296,slow=38								
FFC	**Flin Flon**	**19.64**	**46**	P		**P**		**22 49 31.2**	**0.0**
YKA	**Yellowknife Ar**	**20.44**	**16**	P		**P**		**22 49 40.0**	**+0.1**
	comp=E,1.8nm,0.7s,baz=201,slow=10,SNR=28								
AMTX	**Amarillo**	**21.03**	**105**	P		**P**		**22 49 46.4**	**-0.2**
AMTX				IAmb		IAmb		22 49 58.6	
	comp=Z,4.9nm,0.8s								
KDAK	**Kodiak Island**	**21.76**	**321**	LR		LR		22 55 41.8	
	comp=Z,39nm,20.4s,baz=183,slow=30								
ULM	**Lac du Bonnet**	**22.02**	**61**	P		**P**		**22 49 57.5**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=267,slow=9.6,SNR=7.7								
ULM				LR		LR		22 58 59.3	
	comp=Z,82nm,19.5s,baz=253,slow=38								
ULM	**Lac du Bonnet**	**22.02**	**61**	P		**P**		**22 49 57.7**	**+0.7**
ULM				IAmb		IAmb		22 49 58.8	
	comp=Z,7.0nm,1.1s								
TXAR	**Lajitas Array**	**23.06**	**120**	P		**P**		**22 50 09.8**	**+1.5**
	comp=E,0.5nm,0.9s,baz=338,slow=3.9,SNR=4.9								
WMOK	**Wichita Mounta**	**23.16**	**102**	P		**P**		**22 50 09.7**	**+0.5**
WMOK				IAmb		IAmb		22 50 11.8	
	comp=Z,4.7nm,0.8s								
LPIG	**La Paz**	**23.41**	**140**	LR		LR		23 00 12.3	
	comp=Z,34nm,18.1s,baz=12,slow=39								
ILAR	**Eielson Array**	**24.34**	**339**	P		**P**		**22 50 18.6**	**-1.7**
	comp=Z,2.0nm,1.0s,baz=156,slow=7.9,SNR=14								
ILAR				LR		LR		22 58 14.7	
	comp=Z,34nm,19.6s,baz=277,slow=33								
INK	**Inuvik**	**25.30**	**354**	P		**P**		**22 50 27.3**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=170,slow=6.4,SNR=2.9								
H11N3	**WAKE ISLAND Hy**	**59.77**	**269**	T		T		23 59 21.9	
	baz=51,slow=75								
H11N2	**WAKE ISLAND Hy**	**59.77**	**269**	T		T		23 59 18.9	
	baz=51,slow=75								
H11N1	**WAKE ISLAND Hy**	**59.79**	**269**	T		T		23 59 28.7	
	baz=51,slow=75								
H11S1	**WAKE ISLAND Hy**	**60.69**	**268**	T		T		00 00 28.6	
	baz=50,slow=75								
H11S2	**WAKE ISLAND Hy**	**60.70**	**268**	T		T		00 00 30.4	
	baz=50,slow=75								
H11S3	**WAKE ISLAND Hy**	**60.71**	**268**	T		T		00 00 30.5	
	baz=50,slow=75								

TUL ***12*** *22:55:56.1±0.8, 35°.95N±0°.02×96°.78W±0°.03, h4km±2km, ML3.5,mb_Lg3.3/95(NEIC), Error ellipse: s-maj=4.5km s-min=1.5km az=124.0*

ANF ***12*** *22:55:56.6±0.2, 35°.98N×96°.79W, h5km, ML3.6/13, Error ellipse: s-maj=3.1km s-min=2.1km az=155.0*

NEIC ***12*** *22:55:56.4±0.9, 35°.96N±0°.02×96°.79W±0°.03, h4km±3km, Error ellipse: s-maj=4.5km s-min=1.9km az=124.0*

ISC 12 22:55:56.5±0.9, 35°.97N±0°.02×96°.79W±0°.02, h5km±6km, n83,σ0°48/54, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OK030	**Cody Creek RV**	**0.04**	**177**	Pg		**Pg**	**22 55 57.4**	**-0.2**
OK030				Sg		**Sg**	**22 55 58.1**	**-0.2**
OK031	**S. Brethren Rd**	**0.04**	**253**	Pg		**Pg**	**22 55 57.8**	**+0.1**
OK031				Sg		**Sg**	**22 55 58.8**	**+0.3**
QUOK	**Quay**	**0.21**	**17**	Pg		**Pg**	**22 56 01.0**	**+0.4**
QUOK				Sg		**Sg**	**22 56 04.4**	**+0.9**
OK029	**Liberty Lake**	**0.57**	**253**	Pg		**Pg**	**22 56 07.5**	**+0.1**
OK029				Sg		**Sg**	**22 56 15.4**	**+0.7**
OK001	**Jones High Sch**	**0.57**	**226**	Pg		**Pg**	**22 56 07.3**	**-0.2**
OK025	**Westminster Rd**	**0.59**	**230**			**Pg**	**22 56 07.6**	**-0.2**
OK025				Sg		**Sg**	**22 56 15.9**	**+0.5**
BCOK	**Bluff Creek, N**	**0.74**	**245**			**Pg**	**22 56 10.4**	**-0.2**
OKCFA	**Oklahoma City**	**0.77**	**225**			**Pg**	**22 56 10.7**	**-0.7**
OKCFA	**Oklahoma City**	**0.77**	**225**	P		**Pg**	**22 56 10.6**	**-0.7**
	baz=46							
OKCFA				S		**Sg**	**22 56 21.6**	**+0.3**
	baz=46							
OKCFA	**Oklahoma City**	**0.77**	**225**	P			22 56 10.6	
	baz=46							
OKCFA				S			22 56 21.6	
	baz=46							
TUL1	**Leonard**	**0.81**	**94**	P		**Pg**	**22 56 11.4**	**-0.6**
	baz=273,SNR=443							
TUL1				S		**Sg**	**22 56 22.1**	**-0.3**
	baz=273							
TUL1	**Leonard**	**0.81**	**94**	P			22 56 11.4	
	baz=273,SNR=443							
TUL1				S			22 56 22.1	
	baz=273							
T35A	**Sooner Cattle**	**0.97**	**13**	Pg		**Pg**	**22 56 14.9**	**-0.3**
T35A				Sg		**Sg**	**22 56 28.4**	**+0.6**
T35B	**Sooner Cattle**	**0.97**	**13**	P		**Pg**	**22 56 14.9**	**-0.3**
	baz=192,SNR=313							
T35B				S		**Sg**	**22 56 27.8**	**0.0**
	baz=192							
T35B	**Sooner Cattle**	**0.97**	**13**	P			22 56 14.9	
	baz=192,SNR=313							
T35B				S			22 56 27.8	
	baz=192							
KAN13	**South Haven SW**	**1.18**	**332**	Pg		**Pg**	**22 56 18.8**	**-0.4**
GC02	**Grant County #**	**1.24**	**316**			**Pg**	**22 56 19.6**	**-0.6**
KAN14	**Manchester OK**	**1.37**	**317**			**Pn**	**22 56 22.0**	**-0.3**
OK032	**Salt Plains WL**	**1.42**	**306**			**Pn**	**22 56 22.5**	**-0.5**
KAN10	**Anthony SW Sta**	**1.56**	**318**	IAmb_Lg			22 56 44.8	
	comp=Z,122nm,1.0s							
KAN08	**Anthony NE Sta**	**1.58**	**323**			**Pb**	**22 56 25.8**	**-0.4**
X34A	**Smith Ranch, M**	**1.61**	**212**	IAmb_Lg			22 56 50.0	
	comp=Z,167nm,1.1s							
X37A	**Clayton**	**1.80**	**139**			**Pn**	**22 56 28.3**	**+0.2**
X37A	**Clayton**	**1.80**	**139**	P		**Pn**	**22 56 28.4**	**+0.2**
	baz=320,SNR=92							
X37A				S		**Sb**	**22 56 52.9**	**+0.1**
	baz=320							
X37A	**Clayton**	**1.80**	**139**	P			22 56 28.4	
	baz=320,SNR=92							
X37A				S			22 56 52.9	
	baz=320							
U32A	**Winter Ranch,**	**1.84**	**284**			**Pn**	**22 56 29.0**	**+0.2**
U32A				IAmb_Lg			22 56 57.9	
	comp=Z,102nm,0.7s							
U32A	**Winter Ranch,**	**1.84**	**284**	P		**Pn**	**22 56 29.0**	**+0.2**
	baz=103							
U32A				Sb		**Sg**	**22 56 55.1**	**-0.5**
	baz=103							
U32A	**Winter Ranch,**	**1.84**	**284**	P			22 56 29.0	
	baz=103							
U32A				Sb			22 56 55.1	
	baz=103							
U38A	**Gravette**	**2.00**	**76**			**Pn**	**22 56 31.4**	**+0.5**
U38A	**Gravette**	**2.00**	**76**	P		**Pn**	**22 56 31.4**	**+0.5**
	baz=256,SNR=68							
U38A				S		**Sb**	**22 56 58.8**	**+0.3**
	baz=256							
U38A	**Gravette**	**2.00**	**76**	P			22 56 31.4	
	baz=256,SNR=68							
U38A				S			22 56 58.8	
	baz=256							
WMOK	**Wichita Mounta**	**2.04**	**234**			**Pn**	**22 56 32.1**	**+0.6**
WMOK				IAmb_Lg			22 56 60.0	
	comp=Z,95nm,1.1s							
WMOK	**Wichita Mounta**	**2.04**	**234**	P		**Pn**	**22 56 32.1**	**+0.6**
	baz=53							
WMOK				S		**Sb**	**22 56 59.6**	**-0.1**
	baz=53							
WMOK	**Wichita Mounta**	**2.04**	**234**	P			22 56 32.1	
	baz=53							
WMOK				S			22 56 59.6	
	baz=53							
HHAR	**Hobbs**	**2.33**	**81**			**Pn**	**22 56 34.9**	**-0.5**
W39A	**Magazine**	**2.56**	**107**			**Pn**	**22 56 38.8**	**+0.1**
W39A	**Magazine**	**2.56**	**107**	P		**Pn**	**22 56 39.0**	**+0.3**
	baz=288,SNR=38							
W39A	**Magazine**	**2.56**	**107**	P			22 56 39.0	
	baz=288,SNR=38							
Z35A	**Perchaven, San**	**2.66**	**188**	P		**Pn**	**22 56 40.5**	**+0.5**
	baz=8.4,SNR=6.2							
Z35A	**Perchaven, San**	**2.66**	**188**	P			22 56 40.5	
	baz=8.4,SNR=6.2							
MIAR	**Mount Ida**	**2.98**	**117**			**Pn**	**22 56 43.8**	**-0.7**
MIAR				IAmb_Lg			22 57 37.1	
	comp=Z,72nm,1.0s							
MIAR	**Mount Ida**	**2.98**	**117**	P		**Pn**	**22 56 44.8**	**+0.3**
	baz=299,SNR=40							
MIAR	**Mount Ida**	**2.98**	**117**	P			22 56 44.8	
	baz=299,SNR=40							
Z38A	**Mt. Pleasant**	**3.08**	**151**	IAmb_Lg			22 57 38.5	
	comp=Z,82nm,0.7s							
U40A	**Yellville**	**3.21**	**82**			**Pn**	**22 56 47.6**	**0.0**
U40A	**Yellville**	**3.21**	**82**	P		**Pn**	**22 56 48.1**	**+0.5**
	baz=264,SNR=34							
U40A				S		**Sn**	**22 57 26.6**	**+0.5**
	baz=264							
U40A				S		**Sn**	**22 57 26.6**	**+0.5**
	baz=264							
U40A	**Yellville**	**3.21**	**82**	P			22 56 48.1	
	baz=264,SNR=34							
U40A				P			22 56 48.1	
	baz=264,SNR=34							
U40A				S			22 57 26.6	
	baz=264							
U40A				S			22 57 26.6	
	baz=264							
S39A	**Bolivar**	**3.27**	**57**			**Pn**	**22 56 49.0**	**+0.6**
S39A	**Bolivar**	**3.27**	**57**	P		**Pn**	**22 56 49.1**	**+0.6**
	baz=239,SNR=18							
S39A	**Bolivar**	**3.27**	**57**	P			22 56 49.1	
	baz=239,SNR=18							
WHAR	**Wooly Hollow**	**3.73**	**99**			**Pn**	**22 56 54.7**	**0.0**
WHAR				IAmb_Lg			22 57 53.8	
	comp=Z,46nm,0.9s							
W41B	**Gary Mavity, V**	**3.78**	**101**	P		**Pn**	**22 56 55.7**	**+0.2**
	baz=283,SNR=11							
W41B	**Gary Mavity, V**	**3.78**	**101**	P			22 56 55.7	
	baz=283,SNR=11							
AMTX	**Amarillo**	**4.14**	**256**	IAmb_Lg			22 58 16.9	
	comp=Z,69nm,0.8s							
R40A	**Maddies Statio**	**4.29**	**56**			**Pn**	**22 57 00.9**	**-1.6**
R40A				IAmb_Lg			22 58 12.0	
	comp=Z,76nm,1.0s							
R40A	**Maddies Statio**	**4.29**	**56**	P		**Pn**	**22 57 02.5**	**0.0**
	baz=238,SNR=14							
R40A	**Maddies Statio**	**4.29**	**56**	P			22 57 02.5	
	baz=238,SNR=14							
LCAR	**Lake Charles**	**4.57**	**87**	IAmb_Lg			22 58 24.3	
	comp=Z,60nm,0.7s							
CCM	**Cathedral Cave**	**4.90**	**63**	IAmb_Lg			22 58 39.5	
	comp=Z,65nm,0.9s							
N35A	**Tabor**	**4.97**	**10**	IAmb_Lg			22 58 39.7	
	comp=Z,74nm,0.8s							
P40A	**Paris**	**5.17**	**45**	IAmb_Lg			22 58 44.4	
	comp=Z,57nm,0.8s							
PBMO	**Poplar Bluff**	**5.19**	**79**	IAmb_Lg			22 58 48.4	
	comp=Z,81nm,0.8s							
FVM	**French Village**	**5.48**	**67**	IAmb_Lg			22 58 56.1	
	comp=Z,57nm,0.9s							
143A	**Socs Landing,**	**5.51**	**125**	IAmb_Lg			22 58 57.3	
	comp=Z,26nm,0.8s							
BGNE	**Belgrade**	**5.54**	**349**	IAmb_Lg			22 59 02.8	
	comp=Z,80nm,0.8s							
KSCO	**Kaye Shedlock'**	**5.55**	**305**	IAmb_Lg			22 58 55.8	
	comp=Z,29nm,0.8s							
N38A	**Joes South For**	**5.57**	**29**	IAmb_Lg			22 59 03.2	
	comp=Z,46nm,0.8s							
JCT	**Junction City**	**6.03**	**206**	IAmb_Lg			22 59 23.5	
	comp=Z,33nm,1.0s							
OXF	**Oxford**	**6.21**	**101**	IAmb_Lg			22 59 27.5	
	comp=Z,28nm,0.8s							
W45A	**Hickory Valley**	**6.25**	**95**	IAmb_Lg			22 59 11.8	
	comp=Z,42nm,0.7s							
OGNE	**Ogallala**	**6.45**	**322**	IAmb_Lg			22 59 30.6	
	comp=Z,49nm,0.7s							
SCIA	**State Center**	**6.55**	**24**	IAmb_Lg			22 59 38.1	
	comp=Z,27nm,0.7s							
K31A	**O'Neill**	**6.82**	**348**	IAmb_Lg			22 59 44.8	
	comp=Z,61nm,0.7s							
P43A	**Skaggs, Pawnee**	**6.82**	**55**	IAmb_Lg			22 59 37.5	
	comp=Z,56nm,0.8s							
K38A	**Parkersburg**	**7.36**	**24**	IAmb_Lg			23 00 01.0	
	comp=Z,30nm,0.9s							
L40A	**Anamosa**	**7.47**	**34**	IAmb_Lg			22 59 49.9	
	comp=Z,26nm,0.8s							
O44A	**Mansfield**	**7.78**	**55**	IAmb_Lg			23 00 04.7	
	comp=Z,38nm,0.7s							
V48A	**Smith Brothers**	**8.09**	**89**	IAmb_Lg			23 00 12.1	
	comp=Z,17nm,0.8s							
L42A	**Oliver, Polo**	**8.19**	**40**	IAmb_Lg			23 00 22.3	
	comp=Z,44nm,0.8s							
JFWS	**Jewell Farm**	**8.58**	**34**	IAmb_Lg			23 00 37.0	
	comp=Z,18nm,0.7s							
SUSD	**Miller**	**8.63**	**350**	IAmb_Lg			23 00 42.8	
	comp=Z,39nm,1.0s							
WCI	**Wyandotte Cave**	**8.68**	**72**	IAmb_Lg			23 00 28.3	
	comp=Z,39nm,0.8s							
M44A	**Midewin, Midew**	**8.72**	**49**	IAmb_Lg			23 00 31.6	
	comp=Z,33nm,0.9s							
SFIN	**Lafayette**	**8.81**	**57**	IAmb_Lg			23 00 38.1	
	comp=Z,33nm,0.7s							
SWET	**Sewanee**	**8.87**	**92**	IAmb_Lg			23 00 33.2	
	comp=Z,18nm,0.7s							
U49A	**Red Boiling Sp**	**8.91**	**83**	IAmb_Lg			23 00 37.4	
	comp=Z,20nm,1.0s							
FPAL	**Fort Paine**	**9.25**	**96**	IAmb_Lg			23 00 58.2	
	comp=Z,15nm,0.8s							
L44A	**Lake County Fo**	**9.28**	**45**	IAmb_Lg			23 00 51.4	
	comp=Z,27nm,0.7s							
W50A	**Signal Mountai**	**9.38**	**91**	IAmb_Lg			23 00 57.1	
	comp=Z,28nm,0.9s							
K43A	**Burlington**	**9.38**	**42**	IAmb_Lg			23 00 54.7	
	comp=Z,37nm,1.0s							
R49A	**Shelbyville**	**9.56**	**73**	IAmb_Lg			23 00 54.7	
	comp=Z,14nm,0.8s							
P48A	**Milroy**	**9.65**	**65**	IAmb_Lg			23 01 05.9	
	comp=Z,30nm,0.8s							
T50A	**Nancy**	**9.68**	**80**	IAmb_Lg			23 01 03.6	
	comp=Z,14nm,0.8s							
X51A	**Calhoun**	**9.85**	**95**	IAmb_Lg			23 01 22.2	
	comp=Z,20nm,0.8s							
RSSD	**Black Hills**	**9.86**	**328**	IAmb_Lg			23 01 25.8	
	comp=Z,32nm,0.7s							
N47A	**Urbana**	**9.99**	**57**	IAmb_Lg			23 01 11.6	
	comp=Z,27nm,0.9s							
CPCT	**Cooper Cave**	**9

RM33					S	Sg	23 15 52.6	+0.4	
RM33					AML	AML			
	comp=E,272µm,0.2s								
RM33					AML	AML			
	comp=E,272µm,0.2s								
RM33					AML	AML			
	comp=N,368µm,0.1s								
CAMP	**Campotosto**	**0.10**	**62**		P	Pg	23 15 50.8	+0.2	
CAMP					S	Sg	23 15 53.2	+0.3	
CAMP					AML	AML			
	comp=E,77µm,0.6s								
CAMP					AML	AML			
	comp=N,118µm,0.4s								
SMA1	**SAN MARTINO**	**0.14**	**12**	⇑	P	Pg	23 15 51.5	+0.2	
SMA1	**SAN MARTINO**	**0.14**	**12**	⇑	P	Pg	23 15 51.5	+0.2	
SMA1					S	Sb	23 15 54.4	-0.6	
SMA1					AML	AML			
	comp=E,1330µm,0.3s								
SMA1					AML	AML			
	comp=N,1360µm,0.3s								
AQU	**L'Aquila**	**0.16**	**150**		P	Pg	23 15 51.7	+0.4	
AQU					S	Sb	23 15 54.9	-0.5	
AQU					AML	AML			
	comp=N,99µm,1.0s								
AQU					AML	AML			
	comp=E,106µm,1.2s								
AQU					AML	AML			
	comp=N,99µm,1.0s								
GIGS	**Gran Sasso**	**0.21**	**101**		P	Pg	23 15 52.3	+0.2	
GIGS					S	Sg	23 15 55.9	+0.5	
LNSS	**Leonessa**	**0.22**	**301**	⇓	P	Pg	23 15 52.5	+0.2	
LNSS	**Leonessa**	**0.22**	**301**	⇓	P	Pg	23 15 52.5	+0.2	
LNSS					S	Sg	23 15 56.0	+0.3	
LNSS					AML	AML			
	comp=N,323µm,0.3s								
LNSS					AML	AML			
	comp=E,220µm,0.2s								
LNSS					AML	AML			
	comp=N,322µm,0.3s								
FIAM	**Fiamignano**	**0.26**	**211**		P	Pg	23 15 53.3	+0.3	
FIAM					S	Sb	23 15 57.6	-0.7	
FIAM					AML	AML			
	comp=E,64µm,1.0s								
FIAM					AML	AML			
	comp=N,113µm,0.3s								
TERO	**Teramo**	**0.26**	**60**		P	Pg	23 15 53.0	0.0	
TERO					S	Sg	23 15 57.2	+0.4	
TERO					AML	AML			
	comp=N,79µm,0.2s								
TERO					AML	AML			
	comp=E,64µm,0.2s								
FAGN	**Fagnano**	**0.31**	**136**		P	Pg	23 15 54.2	+0.3	
FAGN					S	Sb	23 16 00.1	+0.4	
FAGN					AML	AML			
	comp=E,91µm,0.4s								
FAGN					AML	AML			
	comp=E,91µm,0.4s								
FAGN					AML	AML			
	comp=N,67µm,0.4s								
NRCA	**Norcia**	**0.37**	**339**		P	Pg	23 15 54.8	-0.2	
NRCA					S	Sg	23 16 00.5	+0.5	
NRCA					AML	AML			
	comp=N,214µm,0.2s								
NRCA					AML	AML			
	comp=E,236µm,0.2s								
ARRO	**Arrone**	**0.40**	**283**		P	Pg	23 15 55.4	-0.1	
OFFI	**Offida**	**0.53**	**33**		P	Pb	23 15 58.5	0.0	
FDMO	**Fiordimonte**	**0.57**	**344**		P	Pg	23 15 58.1	-0.4	
FDMO					S	Sb	23 16 06.8	-0.3	
FDMO					AML	AML			
	comp=E,22µm,1.5s								
FDMO					AML	AML			
	comp=E,22µm,1.5s								
FDMO					AML	AML			
	comp=N,25µm,1.3s								
CSP1	**Cessapalombo**	**0.60**	**354**	⇑	P	Pg	23 15 58.9	-0.4	
CSP1	**Cessapalombo**	**0.60**	**354**	⇑	P	Pg	23 15 58.9	-0.4	
CSP1					S	Sb	23 16 08.1	-0.2	
MOMA	**Monte Martano**	**0.62**	**301**		P	Pb	23 15 59.9	-0.2	
MOMA					S	Sb	23 16 09.0	+0.3	
GUMA	**Gualdo di Mace**	**0.74**	**39**		P	Pg	23 15 58.6	-3.2	
GUMA					S	Sg	23 16 08.0	-3.6	
GUMA					AML	AML			
	comp=N,105µm,1.5s								
GUMA					AML	AML			
	comp=E,102µm,0.3s								
CING	**Cingoli**	**0.89**	**355**		P	Pg	23 16 03.9	-0.7	

NDI ***12*** *23:39:35.8±2.4, 24°.01N×93°.85E, h90km±42km, ML3.8*
IDC ***12*** *23:39:38.5±4.3, 24°.01N×94°.33E, h91km±38km, mb3.2/5, mb1 3.3/6, mb1mx3.0/39, mbtmp3.4/6, MS2.7/1, Ms1 2.7/1, ms1mx2.2/17, Error ellipse: s-maj=87.7km s-min=18.1km az=65.0*

ISC 12 23:39:36.5±0.9, 24°.03N±0°.05×93°.82E±0°.07, h100km, n15, σ2s80/21, mb3.3/5, 2C, Myanmar-India border region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
SILR	**SILCHAR**	**1.19**	**309**		*e*P	**Pn**	**23 39 59.1**	**0.0**
SAIH	**SAIHA**	**1.71**	**207**		*e*P	**Pn**	**23 40 03.8**	**-1.8**
SAIH					*e*S	**Sn**	**23 40 24.8**	**-2.9**
SAIH					IAML		23 40 29.9	
	comp=N,380nm,0.4s							
SAIH					IAML		23 40 30.5	
	comp=E,439nm,0.4s							
SHL	**Shillong**	**2.33**	**311**		*e*P	**Pn**	**23 40 14.3**	**+0.7**
SHL					*e*S	**Sn**	**23 40 40.2**	**-1.8**
SHL					IAML		23 40 42.1	
	comp=E,2µm,0.2s							
SHL					IAML		23 40 44.3	
	comp=N,1µm,0.2s							
MOKO	**MOKOCHONG**	**2.37**	**15**		*e*P	**Pn**	**23 40 13.0**	**-1.0**
MOKO					*e*S	**Sn**	**23 40 41.2**	**-1.5**
GUWA	**GUWAHATI**	**2.89**	**319**	⇑	*e*P	**Pn**	**23 40 19.6**	**-1.2**
GUWA					*e*S	**Sn**	**23 40 51.1**	**-3.8**
GUWA					IAML		23 40 54.1	
	comp=N,2µm,0.4s							
GUWA					IAML		23 40 54.8	
	comp=E,2µm,0.4s							
ITAN	**ITANAGAR**	**3.10**	**358**	⇑	*e*P	**Pn**	**23 40 22.4**	**-1.3**
ITAN					*e*S	**Sn**	**23 40 57.2**	**-2.8**
ITAN					IAML		23 41 01.2	
	comp=N,437nm,0.3s							
ZIRO	**ZIRO**	**3.48**	**0**		*e*P	**Pn**	**23 40 27.3**	**-1.6**
ZIRO					*e*S	**Sn**	**23 41 03.6**	**-5.7**
ZIRO					IAML		23 41 06.8	
	comp=E,557nm,0.4s							
GTK	**Tadong**	**5.74**	**306**		*e*P	**Pn**	**23 40 59.6**	**+0.2**
GTK					*e*S	**Sn**	**23 41 59.4**	**-4.5**
GTK					IAML		23 42 10.2	
	comp=N,56nm,0.4s							
GTK					IAML		23 42 10.3	
	comp=E,48nm,0.4s							
CMAR	**Chiang Mai Arr**	**7.32**	**138**		P	**Pn**	**23 41 18.4**	**-2.3**
	comp=E,0.4nm,0.3s,baz=314,slow=14,SNR=15							
PALK	**Pallekele**	**20.88**	**219**		LR	LR	23 54 32.2	
	comp=E,19nm,19.0s,baz=30,slow=42							
MKAR	**Makanchi Array**	**24.53**	**341**		P	**P**	**23 44 51.3**	**+4.6**
	comp=E,0.5nm,0.5s,baz=157,slow=10,SNR=9.0							
SONM	**Songino Array**	**25.78**	**20**		P	**P**	**23 44 59.8**	**+1.7**
	comp=E,0.4nm,0.8s,baz=199,slow=12,SNR=3.0							
ZALV	**Zalesovo Beam**	**30.63**	**350**		P	**P**	**23 45 44.4**	**+3.3**
	comp=E,0.3nm,0.5s,baz=157,slow=7.8,SNR=1.8							
WRA	**Warramunga Arr**	**58.90**	**134**		P	**P**	**23 49 25.6**	**+0.3**
	comp=E,0.5nm,0.7s,baz=321,slow=7.5,SNR=9.0							
ASAR	**Alice Springs**	**61.33**	**138**		P	**P**	**23 49 42.9**	**+1.0**
	comp=E,0.3nm,0.4s,baz=314,slow=6.7,SNR=2.0							

IDC ***13*** *00:04:58.1±3.3, 25°.00S×179°.88E, h485km±34km, mb3.3/5, mb1 3.5/6, mb1mx3.1/36, mbtmp4.2/6, Error ellipse: s-maj=40.7km s-min=25.8km az=173.0*
NEIC ***13*** *00:04:58.3±1.6, 24°.98S±0°.08×180°.0W±0°.2, h508km±22km, mb4.2/17, Error ellipse: s-maj=27.0km s-min=11.5km az=85.0*

ISC 13 00:04:58.7±0.7, 25°.00S±0°.09×179°.9E±0°.1, h501km, n32, σ1s09/33, mb4.0/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.44**	**346**	P	**P**	**00 06 50.1**	**+0.5**
NIUE	**Niue**	**11.09**	**60**	P	**P**	**00 07 26.4**	**-1.3**
URZ	**Urewera**	**13.44**	**190**	P	**P**	**00 07 51.7**	**-0.5**
	0.6nm,0.3s,baz=107,slow=19,SNR=1.0						
URZ				S	**S**	**00 10 15.4**	**0.0**
	0.3nm,0.3s,baz=128,slow=20,SNR=2.0						
URZ	**Urewera**	**13.44**	**190**	P	**P**	**00 07 51.1**	**-1.2**
SANVU	**Saraoutou**	**15.26**	**306**	P	**P**	**00 08 10.8**	**-0.9**
FUNA	**Funafuti**	**16.40**	**357**	P	**P**	**00 08 22.1**	**-1.5**
QRZ	**Quartz Range**	**16.95**	**200**	P	**P**	**00 08 29.7**	**+0.7**
THZ	**Tophouse**	**17.71**	**198**	P	**P**	**00 08 37.0**	**+0.8**
THZ				IAmb	IAmb	00 08 42.0	
	comp=Z,10nm,0.8s						
KHZ	**Kahutara**	**18.16**	**195**	P	**P**	**00 08 39.0**	**-1.2**
LTZ	**Lake Taylor**	**18.83**	**198**	P	**P**	**00 08 46.6**	**+0.1**
LTZ				IAmb	IAmb	00 09 05.7	
	comp=Z,17nm,1.2s						
EIDS	**Eidsvold**	**26.10**	**263**	P	**P**	**00 09 53.0**	**+1.1**
CTA	**Charters Tower**	**31.44**	**272**	P	**P**	**00 10 39.4**	**+0.8**
	comp=Z,3.0nm,0.3s,baz=89,slow=7.9,SNR=6.0						
CTAO	**Charters Tower**	**31.44**	**272**	P	**P**	**00 10 39.5**	**+0.9**
CTAO				IAmb	IAmb	00 10 41.0	
	comp=Z,4.1nm,0.7s						
TOO	**Toolangi**	**31.82**	**238**	P	**P**	**00 10 41.7**	**+0.1**
TOO				IAmb	IAmb	00 10 58.3	
	comp=Z,5.7nm,1.1s						
STKA	**Stephens Creek**	**34.27**	**250**	P	**P**	**00 11 01.9**	**-0.6**
	comp=Z,0.6nm,0.2s,baz=97,slow=8.1,SNR=2.9						
BBOO	**Buckleboo**	**38.97**	**248**	P	**P**	**00 11 41.0**	**-0.3**
BBOO				IAmb	IAmb	00 11 59.6	
	comp=Z,6.3nm,1.1s						
AS31	**Alice Springs**	**41.81**	**262**	P	**P**	**00 12 03.9**	**-0.3**
ASAR	**Alice Springs**	**41.81**	**262**	P	**P**	**00 12 04.3**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=93,slow=7.7,SNR=13						
WR0	**Warramunga Arr**	**42.10**	**267**	P	**P**	**00 12 06.3**	**-0.2**
WR0				IAmb	IAmb	00 12 15.9	
	comp=Z,5.1nm,1.1s						
WB2	**Warramunga Arr**	**42.28**	**267**	P	**P**	**00 12 07.6**	**-0.3**
WB2				IAmb	IAmb	00 12 09.4	
	comp=Z,3.2nm,0.6s						
WB0	**Warramunga Arr**	**42.29**	**268**	P	**P**	**00 12 07.8**	**-0.2**
WRA	**Warramunga Arr**	**42.29**	**267**	P	**P**	**00 12 07.6**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=99,slow=6.9,SNR=48						
WRA				ScP	**ScP**	**00 16 56.1**	**+3.0**
	comp=Z,0.6nm,0.7s,baz=104,slow=3.8,SNR=3.6						
WRA	**Warramunga Arr**	**42.29**	**267**	P	**P**	**00 12 07.7**	**-0.3**
FORT	**Forrest**	**45.88**	**251**	P	**P**	**00 12 33.1**	**-2.6**
FORT				IAmb	IAmb	00 12 43.6	
	comp=Z,24nm,1.1s						
KNRA	**Kununurra**	**48.63**	**271**	P	**P**	**00 12 56.7**	**+0.1**
KNRA				IAmb	IAmb	00 12 59.0	
	comp=Z,5.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**50.70**	**267**	P	**P**	**00 13 12.2**	**+0.4**
TXAR	**Lajitas Array**	**91.06**	**58**	P	**P**	**00 17 12.1**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=198,slow=7.6,SNR=4.8						
ARCES	**ARCESS Array B**	**132.94**	**348**	PKP	**PKPdf**	**00 23 16.2**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=352,slow=1.8,SNR=5.2						
FINES	**FINESS Array B**	**139.46**	**341**	PKP	**PKPdf**	**00 23 28.5**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=35,slow=3.4,SNR=1.2						
NOA	**NORSAR Array B**	**143.15**	**351**	PKP	PKPbc	00 23 32.8	0.0
	comp=Z,0.5nm,0.8s,baz=20,slow=4.3,SNR=1.6						
AKASG	**Malin Array Be**	**145.85**	**326**	PKPbc	**PKPbc**	**00 23 41.0**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=46,slow=3.5,SNR=5.0						
BRTR	**Keskin Array B**	**148.18**	**306**	PKPbc	**PKPbc**	**00 23 48.2**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=145,slow=4.1,SNR=4.8						

SNET ***13*** *00:09:11.9±1.1, 13°.11N×89°.59W, h44km±12km, ML3.9*
UCR ***13*** *00:09:12.1±1.0, 13°.12N×89°.58W, h43km±11km, ML3.9*
INET ***13*** *00:09:13.6, 13°.20N×89°.51W, h15km, MW3.3*
IDC ***13*** *00:09:13.6±2.1, 13°.14N×89°.44W, h65km±17km, mb3.1/3, mb1 3.6/7, mb1mx3.3/35, mbtmp3.5/7, MS2.9/5, Ms1 2.9/5, ms1mx2.6/15, Error ellipse: s-maj=45.4km s-min=10.8km az=46.0*
GCG ***13*** *00:09:14.8±0.5, 13°.25N×89°.69W, h56km±186km, MD4.0*

ISC 13 00:09:12.6±1.4, 13°.13N±0°.07×89°.55W±0°.04, h43km±11km, n80, σ0s85/104, MS3.0/3, 4D, El Salvador

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.43**	**32**		*e*P	**Pn**	**00 09 22.4**	**-0.1**
LALI					*e*S	**Sn**	**00 09 29.8**	**+0.2**
LALI					IAML		00 09 30.0	
	comp=Z,6µm,0.4s							
LALI	**Alcalda de L**	**0.43**	**32**		*e*P	**Pn**	**00 09 22.4**	**-0.1**
LALI					*e*S	**Sn**	**00 09 29.8**	**+0.2**
LALI					IAML		00 09 30.0	
	comp=Z,6µm,0.4s							
JAYA	**Jayaque - finc**	**0.54**	**11**	⇓	*i*P	**Pn**	**00 09 23.6**	**-0.5**
JAYA					*e*S	**Sn**	**00 09 32.6**	**+0.4**
JAYA					IAML		00 09 33.1	
	comp=Z,9µm,0.2s							
JAYA	**Jayaque - finc**	**0.54**	**11**	⇓	*i*P	**Pn**	**00 09 23.6**	**-0.5**
JAYA					*e*S	**Sn**	**00 09 32.6**	**+0.4**
JAYA					IAML		00 09 33.1	
	comp=Z,9µm,0.2s							
MAGS	**Ministerio de**	**0.61**	**25**		*e*P	**Pn**	**00 09 24.9**	**-0.2**
PMON	**Piamonte**	**0.63**	**22**		*e*P	**Pn**	**00 09 24.9**	**-0.4**
PMON	**Piamonte**	**0.63**	**22**		*e*P	**Pn**	**00 09 24.9**	**-0.4**
SNET	**Serv Nac Est T**	**0.64**	**29**		*e*P	**Pn**	**00 09 25.0**	**-0.4**
SNET					*e*S	**Sn**	**00 09 35.6**	**+1.0**
SNET					IAML		00 09 38.9	
	comp=Z,4µm,0.2s							
SNET	**Serv Nac Est T**	**0.64**	**29**		*e*P	**Pn**	**00 09 25.0**	**-0.4**
SNET					*e*S	**Sn**	**00 09 35.6**	**+1.0**
SNET					IAML		00 09 38.9	
	comp=Z,4µm,0.2s							
BOQS	**Boqueron**	**0.66**	**24**		*e*P	**Pn**	**00 09 25.6**	**-0.2**
BOQS	**Boqueron**	**0.66**	**24**		*e*P	**Pn**	**00 09 25.6**	**-0.2**
OPAM	**Oficina de Pla**	**0.68**	**31**		*e*P	**Pn**	**00 09 25.8**	**-0.1**
OPAM					*e*S	**Sn**	**00 09 36.6**	**+1.2**
OPAM	**Oficina de Pla**	**0.68**	**31**		*e*P	**Pn**	**00 09 25.8**	**-0.1**
OPAM					*e*S	**Sn**	**00 09 36.6**	**+1.2**
LFRS	**El Faro**	**0.69**	**44**	⇓	*i*P	**Pn**	**00 09 26.0**	**-0.1**
LFRS	**El Faro**	**0.69**	**44**	⇓	*i*P	**Pn**	**00 09 26.0**	**-0.1**
CEDA	**San Andres**	**0.69**	**13**		*i* P	**Pn**	**00 09 25.8**	**-0.3**
CEDA					*e*S	**Sn**	**00 09 36.3**	**+0.6**
CEDA					IAML		00 09 38.1	
	comp=Z,4µm,0.3s							
CEDA	**San Andres**	**0.69**	**13**		*i* P	**Pn**	**00 09 25.8**	**-0.3**
CEDA					*e*S	**Sn**	**00 09 36.3**	**+0.6**
CEDA					IAML		00 09 38.1	
	comp=Z,4µm,0.3s							
IGN	**Direccin Gen**	**0.69**	**33**		*e*P	**Pn**	**00 09 26.0**	**-0.1**
IGN					*e*S	**Sn**	**00 09 36.8**	**+1.0**
IGN	**Direccin Gen**	**0.69**	**33**		*e*P	**Pn**	**00 09 26.0**	**-0.1**
IGN					*e*S	**Sn**	**00 09 36.8**	**+1.0**
CEVE	**Cerro Verde**	**0.70**	**354**		*i* P	**Pn**	**00 09 26.0**	**-0.4**
CEVE					IAML		00 09 42.4	
	comp=Z,8µm,0.4s							
CEVE	**Cerro Verde**	**0.70**	**354**		*i* P	**Pn**	**00 09 26.0**	**-0.4**
CEVE					IAML		00 09 42.4	
	comp=Z,8µm,0.4s							
UDBS	**Universidad Do**	**0.70**	**33**		*e*P	**Pn**	**00 09 26.2**	**0.0**
UDBS	**Universidad Do**	**0.70**	**33**		*e*P	**Pn**	**00 09 26.2**	**0.0**
SBLS	**San Blas**	**0.71**	**355**		*i* P	**Pn**	**00 09 26.1**	**-0.4**
SBLS	**San Blas**	**0.71**	**355**		*i* P	**Pn**	**00 09 26.1**	**-0.4**
SNJE	**San Jose**	**0.74**	**356**		*e*P	**Pn**	**00 09 26.4**	**-0.4**
SNJE	**San Jose**	**0.74**	**356**		*e*P	**Pn**	**00 09 26.4**	**-0.4**
LFU	**La Fuente**	**0.75**	**35**		*e*P	**Pn**	**00 09 27.1**	**+0.2**
LFU	**La Fuente**	**0.75**	**35**		*e*P	**Pn**	**00 09 27.1**	**+0.2**
RTR	**El Retiro**	**0.77**	**353**		*e*P	**Pn**	**00 09 27.0**	**-0.3**
RTR	**El Retiro**	**0.77**	**353**		*e*P	**Pn**	**00 09 27.0**	**-0.3**
LBRS	**Las Brisas**	**0.79**	**39**		*i* P	**Pn**	**00 09 27.5**	**+0.2**
LBRS	**Las Brisas**	**0.79**	**39**		*i* P	**Pn**	**00 09 27.5**	**+0.2**
COEG	**Centro de Oper**	**0.82**	**53**		*i* P	**Pn**	**00 09 27.7**	**-0.1**
COEG					*e*S	**Sn**	**00 09 39.9**	**+1.0**
COEG					IAML		00 09 43.1	
	comp=Z,5µm,0.3s							
COEG	**Centro de Oper**	**0.82**	**53**		*i* P	**Pn**	**00 09 27.7**	**-0.1**
COEG					*e*S	**Sn**	**00 09 39.9**	**+1.0**
COEG					IAML		00 09 43.1	
	comp=Z,5µm,0.3s							
PAVA	**Las Pavas**	**0.84**	**46**		*e*P	**Pn**	**00 09 28.4**	**+0.3**
PAVA					*e*S	**Sn**	**00 09 41.0**	**+1.7**
PAVA					IAML		00 09 42.2	
	comp=Z,7µm,0.3s							
PAVA	**Las Pavas**	**0.84**	**46**		*e*P	**Pn**	**00 09 28.4**	**+0.3**
PAVA					*e*S	**Sn**	**00 09 41.0**	**+1.7**
PAVA					IAML		00 09 42.2	
	comp=Z,7µm,0.3s							
UESV	**Universidad de**	**0.90**	**56**		*e*P	**Pn**	**00 09 28.9**	**0.0**
UESV					*e*S	**Sn**	**00 09 41.6**	**+0.8**
UESV	**Universidad de**	**0.90**	**56**		*e*P	**Pn**	**00 09 28.9**	**0.0**
UESV					*e*S	**Sn**	**00 09 41.6**	**+0.8**
COEB	**Comit de Eme**	**1.06**	**69**		*e*P	**Pn**	**00 09 31.1**	**-0.1**
COEB					*e*S	**Sn**	**00 09 46.5**	**+1.6**
COEB					IAML		00 09 47.0	
	comp=Z,2µm,0.3s							
COEB	**Comit de Eme**	**1.06**	**69**		*e*P	**Pn**	**00 09 31.1**	**-0.1**
COEB					*e*S	**Sn**	**00 09 46.5**	**+1.6**
COEB					IAML		00 09 47.0	
	comp=Z,2µm,0.3s							
PQSS	**Presa 15 de Se**	**1.09**	**63**		*e*P	**Pn**	**00 09 31.4**	**0.0**
PQSS					*e*S	**Sn**	**00 09 46.3**	**+1.1**
PQSS					IAML		00 09 48.1	
	comp=Z,722nm,0.2s							
TECA	**Tecapa**	**1.09**	**70**		*e*P	**Pn**	**00 09 31.6**	**+0.1**
TECA	**Tecapa**	**1.09**	**70**		*e*P	**Pn**	**00 09 31.6**	**+0.1**
RANC	**El Ranchito**	**1.27**	**76**		*e*P	**Pn**	**00 09 34.5**	**+0.5**
RANC					*e*S	**Sn**	**00 09 51.3**	**+1.3**
RANC	**El Ranchito**	**1.27**	**76**		*e*P	**Pn**	**00 09 34.5**	**+0.5**
RANC					*e*S	**Sn**	**00 09 51.3**	**+1.3**
JUCU	**Jucuarn**	**1.28**	**84**		*e*P	**Pn**	**00 09 33.9**	**-0.1**
JUCU					*e*S	**Sn**	**00 09 50.8**	**+0.7**
JUCU					IAML		00 09 54.5	
	comp=Z,3µm,0.3s							
JUCU	**Jucuarn**	**1.28**	**84**		*e*P	**Pn**	**00 09 33.9**	**-0.1**
JUCU					*e*S	**Sn**	**00 09 50.8**	**+0.7**
JUCU					IAML		00 09 54.5	
	comp=Z,3µm,0.3s							
MTO3	**Montecristo**	**1.28**	**8**		*e*P	**Pn**	**00 09 34.2**	**0.0**
MTO3					IAML		00 09 53.2	
	comp=Z,394nm,0.5s							
MTO3	**Montecristo**	**1.28**	**8**		*e*P	**Pn**	**00 09 34.2**	**0.0**
MTO3					IAML		00 09 53.2	
	comp=Z,394nm,0.5s							
VSM	**San Miguel**	**1.28**	**76**		*e*P	**Pn**	**00 09 35.0**	**+0.7**
VSM	**San Miguel**	**1.28**	**76**		*e*P	**Pn**	**00 09 35.0**	**+0.7**
ESQI	**Esquipulas**	**1.44**	**8**		*e*P	**Pn**	**00 09 36.7**	**+0.4**
CAHU	**Cacacuatique**	**1.46**	**64**		*e*P	**Pn**	**00 09 35.1**	**-1.5**
CAHU	**Cacacuatique**	**1.46**	**64**		*e*P	**Pn**	**00 09 35.1**	**-1.5**
FAGO	**Alcalda de S**	**1.52**	**68**		*e*P	**Pn**	**00 09 37.1**	**-0.2**
FAGO	**Alcalda de S**	**1.52**	**68**		*e*P	**Pn**	**00 09 37.1**	**-0.2**
PCG	**Pacaya**	**1.62**	**321**		*e*P	**Pn**	**00 09 39.4**	**+0.5**
LCND	**La Caada**	**1.63**	**83**		*e*P	**Pn**	**00 09 39.3**	**+0.5**
LCND					*e*S	**Sn**	**00 09 59.8**	**+1.2**
LCND					IAML		00 10 02.9	
	comp=Z,2µm,0.4s							
LCND	**La Caada**	**1.63**	**83**		*e*P	**Pn**	**00 09 39.3**	**+0.5**
LCND					*e*S	**Sn**	**00 09 59.8**	**+1.2**
LCND					IAML		00 10 02.9	
	comp=Z,2µm,0.4s							
NBG	**Las Nubes**	**1.65**	**332**		*e*P	**Pn**	**00 09 40.5**	**+1.2**
CNCH	**Conchagua**	**1.68**	**85**		*e*P	**Pn**	**00 09 40.3**	**+0.6**
CNCH	**Conchagua**	**1.68**	**85**		*e*P	**Pn**	**00 09 40.3**	**+0.6**
FUG	**Fuego 3**	**1.81**	**317**		*e*P	**Pn**	**00 09 42.1**	**+0.5**
FUG					*e*S	**Sn**	**00 10 03.1**	**+0.3**
MRL	**Marmol**	**1.95**	**356**		*e*P	**Pn**	**00 09 44.6**	**+1.2**
APG	**El Apazote**	**2.07**	**335**		P	**Pn**	**00 09 45.0**	**0.0**
	comp=Z,4.4nm,0.3s,baz=160,slow=23,SNR=21							
APG					S	**Sn**	**00 10 12.9**	**+3.3**
	comp=Z,16nm,0.3s,baz=184,slow=24,SNR=7.1							
JTS	**Las Juntas de**	**5.32**	**122**		P	**Pn**	**00 10 30.9**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=324,slow=14,SNR=2.3							
JTS					S	**Sn**	**00 11 28.6**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=49,slow=19,SNR=1.3							
JTS					LR	LR	00 12 46.1	
	comp=Z,59nm,20.9s,baz=19,slow=41							
CMIG	**Matias Romero**	**6.48**	**308**		P	**Pn**	**00 10 46.7**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=91,slow=11,SNR=6.7							
CMIG					S	**Sn**	**00 11 58.7**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=315,slow=20,SNR=1.5							
TEIG	**Tepich**	**7.17**	**10**		P	**Pn**	**00 10 56.3**	**+1.5**
	comp=Z,3.3nm,0.3s,baz=213,slow=2.8,SNR=12							
TEIG					LR	LR	00 14 19.2	
	comp=Z,40nm,19.6s,baz=122,slow=43							
TXAR	**Lajitas Array**	**20.78**	**323**		P	Pn	00 13 51.5	-1.4
	comp=Z,0.6nm,0.6s,baz=144,slow=11,SNR=8.3							
TKL	**Tuckaleechee C**	**23.03**	**12**		LR	LR	00 23 11.1	
	comp=Z,56nm,18.2s,baz=356,slow=36							
PFO	**Pinyon Flats O**	**31.86**	**314**		LR	LR	00 28 25.0	
	comp=Z,57nm,20.9s,baz=200,slow=36							
SADO	**Sadowa**	**32.77**	**14**		LR	LR	00 28 36.3	
	comp=Z,23nm,18.5s,baz=6.5,slow=36							
NVAR	**Mina Array Bea**	**35.86**	**320**		P	**P**	**00 16 09.7**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=144,slow=7.7,SNR=2.9							
H03N2	**Juan Fernandez**	**47.40**	**168**		T	T	01 08 21.3	
	baz=347							
H03N1	**Juan Fernandez**	**47.41**	**168**		T	T	01 08 26.7	
	baz=347							
H03N3	**Juan Fernandez**	**47.42**	**168**		T

DBOC					IAML		00 45 21.0	
	comp=E,30nm,0.3s							
DBAD	**Bademkaya**	**1.38**	**251**	*i* P	**Pn**	**00 45 02.5**	**+1.1**	
DBAD				*i* S	**Sb**	**00 45 15.3**	**-4.3**	
DBAD				IAML		00 45 23.0		
	comp=N,45nm,0.2s							
DBAD				IAML		00 45 27.0		
	comp=E,42nm,0.7s							
DIGR	**Digorskoe uzhe**	**1.42**	**5**	*e*Pg	**Pn**	**00 45 02.7**	**+0.5**	
DIGR				*e*Sg	**Sn**	**00 45 21.9**	**+1.1**	
PNSH	**Pansheti**	**1.46**	**38**	P	**Pn**	**00 45 02.7**	**+0.1**	
PNSH				S	**Sn**	**00 45 22.4**	**+0.8**	
LACR	**Lac**	**1.50**	**26**	*e*Pg	**Pn**	**00 45 03.6**	**+0.5**	
LACR				*e*Sg	**Sg**	**00 45 24.7**	**0.0**	
CHVG	**Ch'k'valeri**	**1.58**	**322**	P	**Pb**	**00 45 06.0**	**+0.4**	
CHVG				S	**Sg**	**00 45 28.0**	**+0.6**	
KORR	**Kora**	**1.67**	**17**	*e*Pg	**Pg**	**00 45 08.3**	**-0.3**	
KORR				*e*Sg	**Sg**	**00 45 30.8**	**+0.5**	
VLKR	**Vladikavkaz**	**1.82**	**31**	*e*Pg	**Pg**	**00 45 10.4**	**-1.0**	
VLKR				*e*Sg	**Sg**	**00 45 36.7**	**+1.6**	
NEY	**Neytrino**	**1.84**	**344**	*e*Pg	**Pb**	**00 45 10.2**	**+0.2**	
NEY				*e*Sg	**Sb**	**00 45 33.6**	**+0.6**	
KOPR	**Koprukoy-ERZUR**	**1.90**	**219**	PN	**Pn**	**00 45 10.9**	**+2.2**	
KMGR	**Komgaron**	**1.91**	**34**	*e*Pg	**Pg**	**00 45 12.4**	**-0.7**	
KMGR				*e*Sg	**Sg**	**00 45 39.0**	**+1.2**	
DDFL	**Dedoflistskaro**	**2.03**	**90**	*i* P	**Pb**	**00 45 13.3**	**0.0**	
DDFL				*i* S	**Sn**	**00 45 35.0**	**-0.7**	
CHOM	**Cayeli-Rize**	**2.04**	**260**	PN	**Pn**	**00 45 12.9**	**+2.5**	
LGD	**Lagodekhi**	**2.15**	**80**	P	**Pn**	**00 45 14.1**	**+2.1**	
LGD				S	**Sb**	**00 45 42.6**	**+0.9**	
SHA1	**Shidzhatmaz**	**2.32**	**346**	*e*Pg	**Pb**	**00 45 19.2**	**+0.9**	
SHA1				*e*Sg	**Sg**	**00 45 49.5**	**-1.6**	

ANF ***13*** *00:58:08.4±0.2,63.˚57N×151.˚02W,h10km±2km, ML3.7/38, Error ellipse: s-maj=2.1km s-min=1.8km az=56.0, Hypocentre not reviewed by the ISC*

NEIC ***13*** *00:58:08.9±2.0,63.˚60N±0.˚03×150.˚96W±0.˚09, h8km±2km, Error ellipse: s-maj=6.1km s-min=4.2km az=109.0*

AEIC ***13*** *00:58:08±2.6,63.˚56N±0.˚03×150.˚99W±0.˚07,h11km±5km, ML3.3,ML3.6/109(NEIC), Error ellipse: s-maj=5.4km s-min=4.0km az=141.0*

IDC ***13*** *00:58:08.5±1.1,63.˚72N×151.˚13W,h0km, mb3.4/3, mb1 3.5/7, mb1mx3.3/45, mbtmp3.3/7, ML2.8/4, Error ellipse: s-maj=17.6km s-min=12.2km az=132.0*

ISC 13 00:58:08.6±0.8, 63.˚59N±0.˚03×151.˚00W±0.˚02, h10km±5km, n137, σ1§15/131, mb3.5/3, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.05**	**138**		**Pg**		**00 58 10.9**	**+0.1**
KTH					**Sg**		**00 58 12.5**	**+0.2**
KTH				IAML			00 58 12.9	
	comp=E,33µm,0.8s							
TRF	**Thorofare Moun**	**0.35**	**114**		**Pg**		**00 58 15.8**	**+0.2**
TRF					**Sg**		**00 58 20.6**	**+0.4**
TRF	**Thorofare Moun**	**0.35**	**114**	IAML			00 58 21.0	
	comp=E,5µm,0.7s							
TRF				IAML			00 58 21.0	
	comp=N,7µm,0.3s							
TRF	**Thorofare Moun**	**0.35**	**114**	P			00 58 15.8	
	baz=290,SNR=1000							
TRF				S			00 58 20.7	
	baz=290							
BPAW	**Bear Paw Mtn.**	**0.51**	**1**		**Pb**		**00 58 19.5**	**-0.3**
BPAW					**Sb**		**00 58 26.9**	**-0.3**
BPAW				IAML			00 58 31.4	
	comp=E,2µm,0.4s							
BPAW	**Bear Paw Mtn.**	**0.51**	**1**	P			00 58 19.5	
	baz=180,SNR=638							
BPAW				S			00 58 26.5	
	baz=180							
CAST	**Castle Rocks**	**0.52**	**251**	Pg	**Pg**		**00 58 17.7**	**-1.0**
CAST					**Sg**		**00 58 24.4**	**-1.1**
CHUM	**Lake Minchumin**	**0.66**	**297**		**Pg**		**00 58 21.1**	**-0.2**
CHUM					**Sg**		**00 58 29.8**	**0.0**
CHUM	**Lake Minchumin**	**0.66**	**297**	P			00 58 21.4	
	baz=118,SNR=636							
CHUM				S			00 58 29.9	
	baz=118							
HUR	**Hurricane**	**0.87**	**134**		**Pg**		**00 58 24.6**	**-0.8**
PPLA	**Purkeypile**	**0.88**	**218**		**Pg**		**00 58 24.2**	**-1.4**
PPLA	**Purkeypile**	**0.88**	**218**	P			00 58 24.2	
	baz=38,SNR=287							
BWN	**Browne**	**0.90**	**49**		**Pn**		**00 58 27.4**	**+0.2**
BWN					**Sn**		**00 58 41.2**	**+1.0**
BWN	**Browne**	**0.90**	**49**	IAML			00 58 46.0	
	comp=E,1µm,0.6s							
BWN				IAML			00 58 46.5	
	comp=N,946nm,0.5s							
MCK	**McKinley**	**0.93**	**80**		**Pg**		**00 58 26.3**	**-0.2**
MCK	**McKinley**	**0.93**	**80**	P			00 58 26.3	
	baz=260,SNR=152							
RND	**Reindeer**	**0.98**	**100**		**Pg**		**00 58 26.9**	**-0.5**
RND					**Sg**		**00 58 39.8**	**-0.4**
RND	**Reindeer**	**0.98**	**100**	IAML			00 58 43.7	
	comp=N,1µm,0.4s							
CUT	**Chulitna**	**1.24**	**164**		**Pn**		**00 58 31.0**	**-1.0**
CUT	**Chulitna**	**1.24**	**164**	P			00 58 30.9	
	baz=344,SNR=55							
WAT7	**Susitna Watana**	**1.24**	**127**		**Pn**		**00 58 31.2**	**-0.9**
WAT2	**Susitna Watana**	**1.26**	**119**		**Pn**		**00 58 31.8**	**-0.6**
WAT2					**Sb**		**00 58 47.9**	**-0.9**
WAT2	**Susitna Watana**	**1.26**	**119**	P			00 58 31.9	
	baz=300							
NEA2	**Nenana**	**1.32**	**39**		**Pn**		**00 58 32.2**	**-0.8**
NEA2	**Nenana**	**1.32**	**39**	P			00 58 32.3	
	baz=220,SNR=182							
WAT1	**Susitna Watana**	**1.35**	**123**		**Pn**		**00 58 33.1**	**-0.4**
WAT1					**Sb**		**00 58 50.2**	**-1.0**
MLY	**Manley**	**1.45**	**4**		**Pn**		**00 58 35.0**	**+0.1**
MLY	**Manley**	**1.45**	**4**	IAML			00 58 57.2	
	comp=N,906nm,0.5s							
MLY				IAML			00 58 57.8	
	comp=E,833nm,0.4s							
MLY	**Manley**	**1.45**	**4**	P			00 58 35.1	
	baz=184,SNR=264							
WRH	**Wood River Hil**	**1.56**	**54**		**Pn**		**00 58 35.7**	**-0.6**
SKT	**Skwentna**	**1.64**	**189**		**Pn**		**00 58 37.1**	**-0.3**
SKT	**Skwentna**	**1.64**	**189**		**Sn**		**00 58 58.9**	**+0.3**
SKT				IAML			00 59 00.2	
	comp=N,958nm,0.6s							
SKT	**Skwentna**	**1.64**	**189**	P			00 58 36.8	
	baz=8.6,SNR=68							
I23K	**Minto, Yukon-K**	**1.72**	**24**		**Pn**		**00 58 38.6**	**+0.1**
I23K	**Minto, Yukon-K**	**1.72**	**24**	IAML			00 59 06.2	
	comp=E,829nm,0.4s							
I23K				IAML			00 59 07.5	
	comp=N,741nm,0.9s							
I23K	**Minto, Yukon-K**	**1.72**	**24**	P			00 58 38.6	
	baz=205,SNR=112							
CCB	**Clear Creek Bu**	**1.76**	**51**		**Pn**		**00 58 38.4**	**-0.7**
WAT6	**Susitna Watana**	**1.80**	**123**		**Pn**		**00 58 39.6**	**-0.2**
WAT6	**Susitna Watana**	**1.80**	**123**	P			00 58 39.7	
	baz=305,SNR=52							
MDM	**Murphy Dome**	**1.83**	**40**		**Pn**		**00 58 39.6**	**-0.6**
TCOL	**CIGO, UAF Yank**	**1.88**	**45**		**Pn**		**00 58 40.4**	**-0.4**
TCOL	**CIGO, UAF Yank**	**1.88**	**45**	P			00 58 40.4	
	baz=228,SNR=50							
COLA	**College**	**1.89**	**45**		**Pn**		**00 58 40.4**	**-0.4**
HDA	**Harding Lake**	**1.96**	**63**		**Pn**		**00 58 41.3**	**-0.6**
HDA	**Harding Lake**	**1.96**	**63**	P			00 58 41.3	
	baz=246,SNR=112							
HDA				P			00 58 41.3	
	baz=246,SNR=112							
GHO	**Glory Hole Cre**	**2.06**	**151**		**Pn**		**00 58 42.9**	**-0.5**
GHO					**Sn**		**00 59 08.9**	**-0.2**
GHO	**Glory Hole Cre**	**2.06**	**151**	IAML			00 59 16.5	
	comp=N,573nm,0.6s							
GHO				IAML			00 59 21.0	
	comp=E,508nm,0.5s							
PS08	**TAPS Pump Stn8**	**2.07**	**61**		**Pn**		**00 58 42.8**	**-0.6**
PS07	**TAPS Pump Stn7**	**2.09**	**33**		**Pn**		**00 58 43.7**	**0.0**
STLK	**Strandline Lak**	**2.13**	**191**		**Pn**		**00 58 44.0**	**-0.4**
SUA	**Susitna One**	**2.14**	**177**		**Pn**		**00 58 44.3**	**-0.1**
SUA					**Sn**		**00 59 11.6**	**+0.5**
SUA	**Susitna One**	**2.14**	**177**	IAML			00 59 18.3	
	comp=E,419nm,0.9s							
SUA				IAML			00 59 19.8	
	comp=N,384nm,0.9s							
SUA	**Susitna One**	**2.14**	**177**	P			00 58 44.2	
	baz=357,SNR=85							
IL31		**2.15**	**55**		**Pn**		**00 58 44.0**	**-0.6**
ILAR	**Eielson Array**	**2.15**	**55**	Pn	**Pn**		**00 58 43.8**	**-0.8**
	comp=N,2.1nm,0.3s,baz=239,slow=14,SNR=37							
ILAR				Lg	Lg		00 59 15.9	
	comp=N,23nm,0.3s,baz=241,slow=30,SNR=13							
ILAR	**Eielson Array**	**2.15**	**55**	Pn	**Pn**		**00 58 43.7**	**-0.9**
SML	**Sawmill**	**2.17**	**144**		**Pn**		**00 58 44.5**	**-0.4**
SML	**Sawmill**	**2.17**	**144**		**Sn**		**00 59 11.5**	**-0.3**
SML				IAML			00 59 18.3	
	comp=E,398nm,0.7s							
SML				IAML			00 59 20.9	
	comp=N,468nm,0.9s							
SML	**Sawmill**	**2.17**	**144**	P			00 58 44.4	
	baz=326,SNR=38							
SML				S			00 59 11.2	
	baz=326							
POKR	**Poker Plat Res**	**2.18**	**44**		**Pn**		**00 58 44.5**	**-0.5**
POKR	**Poker Plat Res**	**2.18**	**44**	P			00 58 44.6	
	baz=226							
POKR				Sb			00 59 16.1	
	baz=226							
PMR	**Palmer**	**2.18**	**156**		**Pn**		**00 58 45.1**	**+0.1**
PS06	**TAPS Pump Stn6**	**2.34**	**13**		**Pn**		**00 58 47.6**	**+0.6**
SPCP	**Crater Peak Br**	**2.39**	**193**		**Pn**		**00 58 47.4**	**-0.6**
SPCP					**Sn**		**00 59 18.6**	**+1.2**
SPCN	**Chakachatna No**	**2.44**	**194**		**Pn**		**00 58 48.5**	**+0.1**
SCM	**Sheep Creek Mo**	**2.44**	**135**		**Pn**		**00 58 48.6**	**0.0**
SCM	**Sheep Creek Mo**	**2.44**	**135**	IAML			00 59 26.8	
	comp=N,316nm,0.6s							
SCM				IAML			00 59 31.7	
	comp=E,311nm,0.9s							
SPCR	**Spurr Chakacha**	**2.46**	**194**	P			00 58 48.7	
	baz=13,SNR=15							
KNK	**Knik Glacier**	**2.48**	**151**		**Pn**		**00 58 50.1**	**+1.0**
KNK	**Knik Glacier**	**2.48**	**151**	IAML			00 59 25.9	
	comp=N,234nm,0.6s							
KNK	**Knik Glacier**	**2.48**	**151**	P			00 58 50.3	
	baz=333							
KNK				Sb			00 59 23.3	
	baz=333							
PAX	**Paxson**	**2.58**	**102**		**Pn**		**00 58 52.5**	**+2.1**
PAX	**Paxson**	**2.58**	**102**	P			00 58 50.8	
	baz=286							
PAX				Sb			00 59 27.5	
	baz=286							
RC01	**Rabbit Creek A**	**2.58**	**166**		**Pn**		**00 58 51.0**	**+0.6**
RC01					**Sn**		**00 59 24.6**	**+2.8**
RC01	**Rabbit Creek A**	**2.58**	**166**	IAML			00 59 26.6	
	comp=N,190nm,0.6s							
RC01				IAML			00 59 32.8	
	comp=E,168nm,0.6s							
RC01	**Rabbit Creek A**	**2.58**	**166**	P			00 58 50.6	
	baz=347,SNR=14							
RC01				Sb			00 59 25.4	
	baz=347							
M24K	**Tolsona, Glenn**	**2.67**	**122**		**Pn**		**00 58 52.4**	**+0.7**
M24K	**Tolsona, Glenn**	**2.67**	**122**	IAML			00 59 32.6	
	comp=E,292nm,0.8s							
M24K	**Tolsona, Glenn**	**2.67**	**122**	P			00 58 51.8	
	baz=306							
M24K				Sb			00 59 29.9	
	baz=306							
IM03		**2.68**	**335**		**Pn**		**00 58 52.1**	**+0.4**
IMAR	**Indian Mountai**	**2.68**	**335**		**Pn**		**00 58 52.0**	**+0.3**
CAPN	**Captain Cook N**	**2.83**	**182**	Pn	**Pn**		**00 58 55.9**	**+2.0**
CAPN	**Captain Cook N**	**2.83**	**182**	Sb			00 59 33.9	
	baz=1.5							
PWL	**Port Wells**	**3.01**	**154**		**Pn**		**00 58 57.3**	**+0.9**
PRP	**Porcupine Dome**	**3.05**	**48**	IAML			00 59 56.1	
	comp=N,96nm,0.7s							
PRP	**Porcupine Dome**	**3.05**	**48**	P			00 58 56.6	
	baz=233							
DOT	**Dot Lake**	**3.10**	**86**		**Pn**		**00 58 58.9**	**+1.3**
SLKM	**Skilak Lake**	**3.12**	**173**		**Pn**		**00 58 58.9**	**+1.1**
SCRK	**Sand Creek**	**3.14**	**80**	Pn	**Pn**		**00 58 58.3**	**+0.2**
SCRK	**Sand Creek**	**3.14**	**80**	P			00 58 57.7	
	baz=266							
KLU	**Klutina**	**3.16**	**130**		**Pn**		**00 58 59.5**	**+1.0**
KLU	**Klutina**	**3.16**	**130**	IAML			00 59 45.2	
	comp=N,146nm,0.9s							
KLU				IAML			00 59 46.0	
	comp=E,122nm,0.9s							
KLU	**Klutina**	**3.16**	**130**	P			00 59 00.1	
	baz=314							
NCT	**North Crescent**	**3.17**	**198**		**Pn**		**00 59 00.1**	**+1.4**
O22K	**Cooper Landing**	**3.18**	**169**		**Pn**		**00 59 00.1**	**+1.5**
O22K	**Cooper Landing**	**3.18**	**169**	P			00 59 00.1	
	baz=350							
PS05	**TAPS Pump Stn5**	**3.24**	**2**		**Pn**		**00 59 00.5**	**+1.1**
RSO	**Redoubt South**	**3.25**	**196**		**Pn**		**00 59 02.6**	**+2.8**
GLI	**Glacier Island**	**3.28**	**144**		**Pn**		**00 58 59.9**	**-0.1**
GLI				IAML			00 59 58.1	
	comp=E,196nm,0.9s							
GLI	**Glacier Island**	**3.28**	**144**	P			00 59 00.4	
	baz=328							
SVW2	**Sparrevohn**	**3.29**	**223**		**Pn**		**00 58 58.9**	**-1.3**
SVW2				IAML			00 59 52.2	
	comp=N,170nm,0.7s							
SVW2				IAML			00 59 54.3	
	comp=E,148nm,0.6s							
RED	**Redoubt Volcan**	**3.29**	**196**		**Pn**		**00 59 01.5**	**+1.2**
MENT	**Mentasta**	**3.35**	**98**		**Pn**		**00 59 04.2**	**+3.1**
MENT				IAML			01 00 00.2	
	comp=N,137nm,0.6s							
MENT				IAML			01 00 06.0	
	comp=E,188nm,0.7s							
DIV	**Divide**	**3.47**	**133**		**Pn**		**00 59 02.9**	**+0.2**
FID	**Port Fidalgo**	**3.55**	**141**		**Pn**		**00 59 05.0**	**+1.2**
FID	**Port Fidalgo**	**3.55**	**141**	IAML			00 59 55.9	
	comp=N,108nm,0.7s							
FID				IAML			01 00 05.6	
	comp=E,141nm,0.7s							
N25K	**Chitina, Valde**	**3.57**	**121**		**Pn**		**00 59 06.3**	**+2.2**
N25K	**Chitina, Valde**	**3.57**	**121**	P			00 59 05.7	
	baz=306							
COLD	**Coldfoot**	**3.67**	**5**		**Pn**		**00 59 06.2**	**+0.8**
COLD	**Coldfoot**	**3.67**	**5**	P			00 59 06.0	
	baz=186							
BRLK	**Bradley Lake**	**3.84**	**179**		**Pn**		**00 59 09.9**	**+2.1**
HIN	**Hinchinbrook I**	**3.84**	**144**	Pn	**Pn**		**00 59 08.6**	**+0.8**
FYU	**Fort Yukon**	**3.86**	**37**	Pn	**Pn**		**00 59 08.5**	**+0.6**
FYU				IAML			01 00 15.2	
	comp=N,76nm,1.1s							
FYU				IAML			01 00 41.5	
	comp=E,49nm,2.8s							
BRSE	**Bradley Lake S**	**3.87**	**178**	P			00 59 09.5	
	baz=358							
EYAK	**Cordova Ski Ar**	**3.92**	**139**		**Pn**		**00 59 10.0**	**+1.1**
EYAK	**Cordova Ski Ar**	**3.93**	**139**	P			00 59 10.7	
	baz=323							
HOM	**Homer**	**3.96**	**185**	Pn	**Pn**		**00 59 11.6**	**+2.3**
GLB	**Gilahina Butte**	**3.97**	**120**		**Pn**		**00 59 11.3**	**+1.8**
GLB	**Gilahina Butte**	**3.97**	**120**	IAML			01 00 18.4	
	comp=N,53nm,0.7s							
BMRM	**Bremner River**	**3.98**	**129**		**Pn**		**00 59 10.7**	**+1.0**
BMRM	**Bremner River**	**3.98**	**129**	IAML			01 00 14.7	
	comp=N,98nm,1.0s							
BMRM				IAML			01 00 15.8	
	comp=E,74nm,1.1s							
BMRM	**Bremner River**	**3.98**	**129**	P			00 59 10.3	
	baz=314							
K27K	**Chicken**	**3.98**	**80**		**Pn**		**00 59 09.4**	**-0.2**
K27K	**Chicken**	**3.98**	**80**	P			00 59 09.9	
	baz=267							
CNPM	**China Poot**	**4.08**	**182**		**Pn**		**00 59 11.9**	**+0.9**
CNPM	**China Poot**	**4.08**	**182**	IAML			01 00 13.6	
	comp=N,52nm,0.6s							
CNPM				IAML			01 00 21.8	
	comp=E,62nm,0.8s							
L27K	**Beaver Creek,**	**4.17**	**93**	P			00 59 12.8	
	baz=281							
BC03		**4.19**	**93**		**Pn**		**00 59 12.7**	**+0.3**
BCAR	**Beaver Creek A**	**4.19**	**93**		**Pb**		**00 59 21.0**	**-1.3**
VRDI	**Verde Repeater**	**4.24**	**121**		**Pn**		**00 59 15.0**	**+1.7**
VRDI	**Verde Repeater**	**4.24**	**121**	IAML			01 00 27.4	
	comp=N,56nm,1.0s							
MCARA	**McCarthy VSAT**	**4.31**	**117**		**Pn**		**00 59 16.8**	**+2.6**
MCARA				IAML			01 00 12.8	
	comp=E,78nm,0.9s							
MCARA				IAML			01 00 33.3	
	comp=N,62nm,1.4s							
EGAK	**Eagle**	**4.46**	**70**		**Pn**		**00 59 16.6**	**+0.4**
EGAK				IAML			01 00 34.4	
	comp=N,61nm,0.8s							
EGAK				IAML			01 00 39.5	
	comp=N,69nm,0.8s							
EGAK	**Eagle**	**4.46**	**70**	P			00 59 16.6	
	baz=259							
HMT	**Hamilton**	**4.56**	**133**	Pn	**Pn**		**00 59 18.3**	**+0.7**
PTPK	**Patty Peak**	**4.64**	**117**		**Pn**		**00 59 20.5**	**+1.5**
CRQM	**Cirque**	**4.65**	**124**		**Pn**		**00 59 20.7**	**+1.7**
CRQM				IAML			01 00 39.4	
	comp=N,62nm,0.8s							
CRQE	**Cirque**	**4.67**	**124**	P			00 59 20.4	
	baz=311							
BM03	**Burnt Mountain**	**4.67**	**32**		**Pn**		**00 59 18.9**	**-0.3**
BMAR	**Burnt Mountain**	**4.69**	**32**		**Pn**		**00 59 19.4**	**0.0**
BALM	**Baldy**	**4.78**	**119**		**Pn**		**00 59 22.3**	**+1.6**
KAIM	**Kayak Island**	**4.82**	**137**	Pn	**Pn**		**00 59 22.1**	**+0.8**
KIAG	**Kiagna River**	**4.84**	**120**		**Pn**		**00 59 22.8**	**+1.1**
SUCK	**Suckling Hills**	**4.92**	**133**	Pn	**Pn**		**00 59 23.3**	**+0.8**
BARN	**Barnard Glacie**	**5.04**	**116**		**Pn**		**00 59 25.4**	**+1.1**
BARN	**Barnard Glacie**	**5.04**	**116**	IAML			01 00 53.6	
	comp=E,20nm,1.5s							
TOLK	**Toolik Lake Re**	**5.11**	**6**		**Pn**		**00 59 27.5**	**+2.4**
TOLK	**Toolik Lake Re**	**5.11**	**6**	IAML			01 00 29.4	
	comp=N,38nm,0.9s							
TOLK				IAML			01 00 59.4	
	comp=E,26nm,1.6s							
TOLK	**Toolik Lake Re**	**5.11**	**6**	P			00 59 27.0	
	baz=187							
DAWY	**Dawson**	**5.16**	**80**		**Pn**		**00 59 25.8**	**-0.1**
DAWY	**Dawson**	**5.16**	**80**	IAML			01 01 03.3	
	comp=E,30nm,0.7s							
GRNC	**Granite Creek**	**5.20**	**119**	Pn	**Pn**		**00 59 27.9**	**+1.4**
CTGM	**Chitina Glacie**	**5.22**	**116**	Pn	**Pn**		**00 59 29.5**	**+2.6**
YAH	**Yahtse**	**5.43**	**122**	Pn	**Pn**		**00 59 31.6**	**+1.8**
LOGN	**Logan Glacier**	**5.44**	**116**	Pn	**Pn**		**00 59 31.8**	**+2.0**
MESA	**MESA**	**5.48**	**125**	Pn	**Pn**		**00 59 32.2**	**+1.8**
TABL	**Table Mountain**	**5.61**	**120**	Pn	**Pn**		**00 59 33.5**	**+1.3**
KDAK	**Kodiak Island**	**5.88**	**188**	Pn	**Pn**		**00 59 35.2**	**-0.4**
	comp=E,0.1nm,0.3s,baz=354,slow=9.2,SNR=2.2							
KDAK				Sn	**Sn**		**01 00 42.4**	**-0.7**
	comp=E,0.3nm,0.3s,baz=29,slow=19,SNR=1.1							
KDAK	**Kodiak Island**	**5.88**	**188**	Pn	**Pn**		**00 59 35.8**	**+0.1**
PCA	**Pinnacle**	**6.17**	**120**	Pn	**Pn**		**00 59 40.6**	**+0.8**
PINM	**Pinnacle**	**6.17**	**120**	P			00 59 40.2	
	baz=309							
ANM	**Nome**	**6.38**	**285**	Pn	**Pn**		**00 59 43.0**	**+0.5**
ANM	**Nome**	**6.38**	**285**	P			00 59 41.8	
	baz=92							
OHAK	**Old Harbor**	**6.49**	**191**	Pn	**Pn**		**00 59 44.7**	**+0.7**
RDOG	**Red Dog Mine**	**6.62**	**318**	Pn	**Pn**		**00 59 47.3**	**+1.3**
HYT	**Haines Junctio**	**6.89**	**108**	Pn	**Pn**		**00 59 53.0**	**+3.3**
TNA	**Tin City**	**7.54**	**293**	Pn	**Pn**		**00 59 59.1**	**+0.7**
TNA	**Tin City**	**7.54**	**293**	P			00 59 58.5	
	baz=98							
INK	**Inuvik**	**8.54**	**49**	Pn	**Pn**		**01 00 12.7**	**+0.5**
	comp=E,0.2nm,0.3s,baz=236,slow=15,SNR=3.9							
INK				Sn	**Sn**		**01 01 46.3**	**-2.0**
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=2.0							
INK	**Inuvik**	**8.54**	**49**	Pn	**Pn**		**01 00 12.2**	**+0.1**
BESE	**Bessie Mountai**	**9.28**	**115**	Pn	**Pn**		**01 00 22.9**	**+0.5**
JIS	**Juneau Island**	**9.66**	**116**	Pn	**Pn**		**01 00 27.8**	**+0.2**
SIT	**Sitka**	**10.14**	**123**	Pn	**Pn**		**01 00 34.4**	**+0.3**
C36M	**Paulatuk**	**12.12**	**50**	Pn	**Pn**		**01 01 00.6**	**-0.5**
YKA	**Yellowknife Ar**	**16.40**	**77**	Pn	**Pn**		**01 01 58.2**	**-0.4**
	comp=E,0.0nm,0.3s,baz=297,slow=13,SNR=2.7							
TXAR	**Lajitas Array**	**45.52**	**116**	P	**P**		**01 06 29.7**	**+1.5**
	comp=E,0.2nm,0.5s,baz=321,slow=7.0,SNR=4.7							
SONM	**Songino Array**	**53.47**	**305**	P	**P**		**01 07 29.8**	**+1.1**
	comp=E,0.5nm,0.8s,baz=37,slow=5.6,SNR=3.7							
MKAR	**Makanchi Array**	**62.21**	**321**	P	**P**		**01 08 29.2**	**-0.6**
	comp=E,0.3nm,0.7s,baz=37,slow=6.9,SNR=4.1							

IDC ***13*** *01:28:48.1±1.1,38.˚23N×91.˚43E,h0km, mb3.7/8, mb1 3.8/12,mb1mx3.6/57,mbtmp3.7/12, ML2.9/3, Error ellipse: s-maj=29.5km s-min=22.3km az=49.0*

NNC ***13*** *01:28:53.4±4.2,38.˚52N×91.˚61E,h99km±155km, mb3.9, Error ellipse: s-maj=43.8km s-min=29.6km az=38.0*

ISC 13 01:28:53.7±1.0, 38.˚5N±0.˚1×91.˚50E±0.˚09, h35km, n17, σ1§25/23, mb3.7/7, 4C-3D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**10.29**	**302**	⇑P		**Pn**	**01 31 18.1**	**-0.9**
	2.0nm,0.5s							
PDGK				⇑S		**Sn**	**01 33 11.2**	**-1.9**
	7.5nm,0.7s							
MK31	**Makanchi Array**	**10.71**	**324**	P		**Pn**	**01 31 25.6**	**+1.0**
	1.1nm,0.2s,baz=137,slow=14,SNR=170							
MK31				⇓S		**Sn**	**01 33 22.4**	**-0.7**
	2.7nm,0.5s,baz=137,slow=26,SNR=4.9							
MKAR	**Makanchi Array**	**10.71**	**324**	Pn		**Pn**	**01 31 24.2**	**-0.4**
	2.1nm,0.3s,baz=133,slow=14,SNR=128							
MKAR				Sn		**Sn**	**01 33 23.4**	**+0.2**
	1.2nm,0.3s,baz=139,slow=24,SNR=7.7

KNRA	Kununurra	8.76 176	Pn	Pn	01 31 20.2	+0.4
PLAI	Plampang	10.44 259	P	Pn	01 31 40.4	+0.1
	10nm,0.9s					
TWSI	Taliwang, Sumb	11.29 260	P	Pn	01 31 49.0	-1.8
	8.1nm,1.1s					
FITZ	Fitzroy Crossi	11.41 192	P	Pn	01 31 51.8	-0.2
	0.1nm,0.3s,baz=0.0,slow=10,SNR=4.0					
FITZ			S	S	01 33 57.6	-1.9
	0.3nm,0.3s,baz=323,slow=20,SNR=1.4					
WB0	Warramunga Arr	14.18 155	P	Pn	01 32 26.3	+0.9
WRA	Warramunga Arr	14.31 156	P	Pn	01 32 27.8	+0.8
	0.7nm,0.3s,baz=333,slow=12,SNR=31					
WRA			S	S	01 35 02.3	-0.8
	0.1nm,0.3s,baz=331,slow=21,SNR=5.5					
WRA	Warramunga Arr	14.31 156	P	P	01 32 26.9	+1.0
WB2	Warramunga Arr	14.31 156	P	Pn	01 32 27.5	+0.5
WR0	Warramunga Arr	14.41 155	P	Pn	01 32 29.3	+1.2
COEN	Coen	16.37 117	P	P	01 32 50.1	+1.6
COEN			IAmb	IAmb	01 32 51.5	
	comp=Z,5.7nm,0.6s					
PSA00	Pilbara Seismi	16.65 208	P	Pn	01 32 53.3	-1.0
PSA00			IAmb	IAmb	01 33 28.2	
	comp=Z,53nm,1.9s					
AS31	Alice Springs	17.58 162	P	Pn	01 33 04.5	-0.7
ASAR	Alice Springs	17.58 162	P	Pn	01 33 04.3	-0.8
	comp=Z,1.6nm,0.3s,baz=344,slow=12,SNR=101					
ASAR			S	S	01 36 10.3	+2.1
	baz=338,slow=17,SNR=5.3					
ASAR	Alice Springs	17.58 162	P	Pn	01 33 04.8	-0.4
MORW	Morawa	24.84 206	P	P	01 34 13.8	+1.9
MORW			IAmb	IAmb	01 34 37.8	
	comp=Z,51nm,1.8s					
BBOO	Buckleboo	26.83 165	P	P	01 34 32.0	+2.4
KSAR	Wonju Array Be	44.10 360	P	P	01 36 56.8	+1.6
PETK	Petropavlovsk-	64.81 19	P	P	01 39 24.1	+1.2
MKAR	Makanchi Array	67.13 328	P	P	01 39 37.6	-0.2
	comp=Z,0.3nm,0.4s,baz=119,slow=7.1,SNR=2.2					

IDC **13** *01:30:27.9±2.4, 25°.36N×122°.32E, h226km±23km, mb3.4/15, mb1 3.6/16, mb1mx3.3/51, mbtmp4.0/16, Error ellipse: s-maj=18.8km s-min=12.1km az=89.0*
TAP **13** *01:30:28.2, 25°.29N×122°.40E, h229km, ML4.4, C*
NEIC **13** *01:30:28.1±1.8, 25°.34N±0°.09×122°.36E±0°.09, h223km±6km, mb4.2/41, Error ellipse: s-maj=13.1km s-min=10.8km az=149.0*
JMA **13** *01:30:29.3±0.2, 25°.21N×122°.31E, h214km±2km, M4.2*
ISC 13 01:30:28.1±0.5, **25°.31N**±0°.04×**122°.35E**±0°.03, **h226**km±4km, **n213**, σ1**s17**/340, **mb4.0**/31, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PCYT	Pengchaiyu	0.40	322	P	Pn	01 30 58.7	+0.8
	baz=326						
TWB1	Santiao Chiao	0.45	227	P	Pn	01 30 58.2	+0.2
	baz=220						
TWB1				S	S	01 31 20.3	-1.1
	baz=220						
TNOU	National Taiwa	0.55	253	P	Pn	01 30 58.5	+0.2
	baz=263						
TNOU				eS	S	01 31 21.4	-0.4
	baz=263						
NWF	Wu-fen Shan	0.57	245	P	Pn	01 30 58.7	+0.1
	baz=246						
NWF				eS	S	01 31 21.7	-0.5
	baz=246						
WFSB	Wu-fen Shan	0.57	245	P	Pn	01 30 58.7	+0.3
	baz=246						
WFSB				S	S	01 31 21.9	-0.2
	baz=246						
TIPB	Shuangxi	0.58	234	P	Pn	01 30 58.2	-0.3
	baz=247						
TIPB				eS	S	01 31 20.7	-1.6
	baz=247						
EGS		0.60	219	eP	Pn	01 30 58.8	+0.2
	baz=219						
NTC	Toucheng	0.66	226	P	Pn	01 30 58.5	-0.3
	baz=216						
NTC				eS	S	01 31 22.9	+0.2
	baz=216						
TWY	Chenhua	0.68	267	P	Pn	01 30 59.4	+0.5
	baz=257						
YM08	YM08	0.70	260	eP	Pn	01 30 58.8	-0.2
	baz=261						
YM11	YM11	0.72	258	eP	Pn	01 30 59.5	+0.3
	baz=269						
YM11				eS	S	01 31 23.2	-0.1
	baz=269						
YM01	YM01	0.72	257	P	Pn	01 30 59.1	0.0
	baz=269						
YM01				eS	S	01 31 22.1	-1.2
	baz=269						
YM05	YM05	0.72	258	eP	Pn	01 30 59.4	+0.2
	baz=269						
YM05				eS	S	01 31 22.1	-1.3
	baz=269						
YM10	YM10	0.73	258	eP	Pn	01 30 58.6	-0.6
	baz=269						
YM10				eS	S	01 31 22.4	-1.0
	baz=269						
YM04	YM04	0.75	258	eP	Pn	01 30 59.0	-0.3
	baz=269						
YM04				eS	S	01 31 22.6	-0.8
	baz=269						
TWA	Mucha	0.77	245	P	Pn	01 30 59.3	0.0
	baz=241						
TWA				eS	S	01 31 23.1	-0.5
	baz=241						
ILA	Ilan	0.77	225	eP	Pn	01 30 59.2	-0.1
	baz=218						
ILA				eS	S	01 31 23.8	+0.1
	baz=218						
NHDH	Xindian Distri	0.82	245	P	Pn	01 30 59.9	+0.3
	baz=254						
NHDH				S	S	01 31 23.2	-0.8
	baz=254						
TWC	Suao	0.83	213	P	Pn	01 30 59.4	-0.2
	baz=208						
TWC				S	S	01 31 22.1	-2.1
	baz=208						
TATO	Taipei	0.85	247	eP	Pn	01 30 59.4	-0.3
	baz=253						
TATO				S	S	01 31 22.7	-1.6
	baz=253						
TATO	Taipei	0.85	247		Pn	01 30 59.4	-0.3
TATO				S	S	01 31 23.1	-1.1
TWE	Neicheng	0.85	227	P	Pn	01 31 00.0	+0.3
	baz=223						
TWE				eS	S	01 31 24.3	0.0
	baz=223						
TWS1	Kuangyinshan	0.87	256	P	Pn	01 30 59.8	0.0
	baz=265						
TWS1				eS	S	01 31 23.8	-0.7
	baz=265						
NDS	Dongshan	0.89	220	P	Pn	01 31 00.5	+0.5
	baz=216						
NDS				S	S	01 31 23.3	-1.4
	baz=216						
NWLT	Wulai	0.93	235	P	Pn	01 31 00.1	-0.1
	baz=234						
NWLT				S	S	01 31 24.1	-1.1
	baz=234						
ENTT	Nioudou	0.98	227	P	Pn	01 31 00.7	+0.3
	baz=223						
ENTT				S	S	01 31 25.1	-0.6
	baz=223						
NTY	Taoyuan	1.00	252	eP	Pn	01 31 00.8	+0.3
	baz=256						
NTY				eS	S	01 31 24.2	-1.5
	baz=256						
EWUT	Wuta	1.01	211	P	Pn	01 31 00.8	+0.2
	baz=208						
EWUT				S	S	01 31 24.4	-1.5
	baz=208						
JYNG	Yonagunijimaku	1.01	148	P	Pn	01 31 00.4	-0.3
JYNG				S	S	01 31 24.2	-1.8
NDT	Datong Townshi	1.04	227	P	Pn	01 31 00.9	+0.1
	baz=237						
NDT				S	S	01 31 25.2	-1.1
	baz=237						
YOJ	Yonaguni jima	1.04	144	P	Pn	01 31 00.4	-0.4
YOJ				S	S	01 31 24.5	-1.8
YOJ	Yonaguni jima	1.04	144	eP	Pn	01 31 00.4	-0.4
	baz=150						
YOJ				eS	S	01 31 24.7	-1.6
	baz=150						
YOJ	Yonaguni jima	1.04	144	Pn	Pn	01 31 00.2	-0.6
YOJ				S	S	01 31 24.4	-1.8
YHNB	Yeheng	1.09	234	eP	Pn	01 31 00.9	-0.3
	baz=243						
YHNB				eS	S	01 31 24.8	-2.2
	baz=243						
YHNB	Yeheng	1.09	234		Pn	01 31 00.8	-0.4
YHNB				S	S	01 31 25.0	-2.0
NSK	Sanguang	1.10	235	eP	Pn	01 31 01.0	-0.3
	baz=243						
NSK				S	S	01 31 24.8	-2.3
	baz=243						
NCUH	Zhongli	1.11	252	P	Pn	01 31 01.4	+0.2
	baz=258						
NCUH				S	S	01 31 25.8	-1.2
	baz=258						
NNS	Nan Shan	1.24	226	P	Pn	01 31 02.6	+0.2
	baz=224						
NNS				S	S	01 31 28.1	-0.8
	baz=224						
NNSB	Datong	1.24	225	P	Pn	01 31 02.6	+0.2
	baz=223						
NNSB				S	S	01 31 27.8	-1.1
	baz=223						
NJD	Zhudong	1.28	244	eP	Pn	01 31 02.9	+0.5
	baz=237						
NJD				eS	S	01 31 28.2	-0.9
	baz=237						
HSN1	Hsinchu	1.32	246	eP	Pn	01 31 02.8	0.0
	baz=255						
HSN1				eS	S	01 31 28.7	-0.9
	baz=255						
NACB	Ninganchiao	1.32	211	P	Pn	01 31 02.3	-0.6
	baz=209						
NACB				S	S	01 31 27.9	-1.9
	baz=209						
NACB	Ninganchiao	1.32	211		Pn	01 31 02.2	-0.6
NACB				S	S	01 31 27.9	-1.9
SBCB	Hsinchu	1.34	248	eP	Pn	01 31 03.2	+0.3
	baz=256						
SBCB				eS	S	01 31 29.1	-0.9
	baz=256						
HSN	Hsinchu	1.35	248	eS	S	01 31 28.5	-1.5
	baz=257						
ETLH	Xiulin Townshi	1.35	216	eP	Pn	01 31 03.0	-0.1
	baz=207						
ETLH				eS	S	01 31 29.1	-1.3
	baz=207						
LIOB	Emei	1.38	242	eP	Pn	01 31 03.4	+0.2
	baz=241						
LIOB				eS	S	01 31 29.4	-1.1
	baz=241						
NSTT	Nanjuang	1.40	241	eP	Pn	01 31 03.2	-0.1
	baz=240						
NSTT				eS	S	01 31 29.4	-1.3
	baz=240						
TWD	Chiawan	1.41	209	eP	Pn	01 31 02.9	-0.5
	baz=211						
TWD				eS	S	01 31 28.7	-2.2
	baz=211						
FUSS	Fushou	1.46	224	eP	Pn	01 31 04.8	+0.7
	baz=226						
FUSS				eS	S	01 31 32.0	-0.1
	baz=226						
HWA	Hwalien	1.49	207	eP	Pn	01 31 04.3	+0.2
	baz=203						
HWA				eS	S	01 31 31.2	-0.9
	baz=203						
TWT	Tachien	1.50	226	eP	Pn	01 31 05.1	+0.8
	baz=231						
TWT				eS	S	01 31 31.9	-0.6
	baz=231						
TDCB	Techi	1.51	226	eP	Pn	01 31 04.9	+0.5
	baz=231						
TDCB				eS	S	01 31 30.9	-1.8
	baz=231						
WHF	Hehuan Shan	1.52	220	eP	Pn	01 31 05.3	+0.5
	baz=212						
WHF				eS	S	01 31 32.5	-0.9
	baz=212						
IRIF	Iriomote-Funau	1.59	127	P	Pn	01 31 04.9	0.0
IRIF				S	S	01 31 32.7	-0.8
NMLH	Miaoli	1.61	242	eP	Pn	01 31 05.5	+0.4
	baz=241						
NMLH				eS	S	01 31 33.0	-0.8
	baz=241						
WHP	Taichung City	1.64	231	eP	Pn	01 31 05.6	+0.2
	baz=230						
WHP				eS	S	01 31 33.3	-1.1
	baz=230						
CHGB	Renai	1.64	221	eP	Pn	01 31 06.1	+0.5
	baz=214						
CHGB				eS	S	01 31 34.4	-0.3
	baz=214						
NSY	Sanyi	1.70	239	eP	Pn	01 31 06.3	+0.5
	baz=243						
NSY				eS	S	01 31 34.2	-1.0
	baz=243						
ESL	Shilin	1.71	209	eP	Pn	01 31 05.2	-0.7
	baz=206						
ESL				eS	S	01 31 32.7	-2.7
	baz=206						
WPL	Puli Township	1.81	225	eP	Pn	01 31 07.0	+0.2
	baz=228						
WPL				eS	S	01 31 35.5	-1.5
	baz=228						
DPDB	Guoxing	1.81	226	eP	Pn	01 31 07.3	+0.4
	baz=231						
DPDB				eS	S	01 31 36.6	-0.6
	baz=231						
HATJ	Hateruma jima	1.82	133	P	Pn	01 31 07.7	+0.8
HATJ				S	S	01 31 36.2	-0.9
WDJ	Dajia District	1.82	239	eP	Pn	01 31 07.5	+0.5
	baz=244						
WDJ				eS	S	01 31 35.0	-2.2
	baz=244						
EGFH	Guangfu	1.84	207	eP	Pn	01 31 06.4	-0.8
	baz=203						
EGFH				eS	S	01 31 34.3	-3.2
	baz=203						
JKRS	Kuro-shima	1.85	125	P	Pn	01 31 07.8	+0.6
JKRS				S	S	01 31 36.4	-1.2
JJ	Ishigaki jima	1.89	120	P	Pn	01 31 07.6	+0.1
JJ				S	S	01 31 36.0	-2.2
VWDT	VWDT	1.90	216	eP	Pn	01 31 08.2	+0.5
	baz=219						
VWDT				eS	S	01 31 37.6	-0.9
	baz=219						
TCU	Taichung	1.91	233	eP	Pn	01 31 08.3	+0.5
	baz=227						
TCU				eS	S	01 31 36.4	-2.2
	baz=227						
JISG	Ishigakijimahi	1.92	112	P	Pn	01 31 08.0	+0.2
JISG				*i* S	S	01 31 37.3	-1.5
SMLT	Sun Moon Lake	1.94	223	eP	Pn	01 31 08.4	+0.2
	baz=214						
SMLT				eS	S	01 31 38.3	-1.1
	baz=214						
TYC	Yuchr	1.95	224	P	Pn	01 31 08.4	+0.3
	baz=230						
TYC				S	S	01 31 37.8	-1.5
	baz=230						
WWF	Wufeng	1.96	230	eP	Pn	01 31 08.7	+0.4
	baz=229						
WWF				eS	S	01 31 39.1	-0.4
	baz=229						
SSLB	Suanglung	1.98	220	P	Pn	01 31 08.8	+0.3
	baz=219						
SSLB				S	S	01 31 38.5	-1.3
	baz=219						
SSLB	Suanglung	1.98	220		Pn	01 31 08.7	+0.2
SSLB				S	S	01 31 38.6	-1.3
HGSD	Ruisui	2.00	205	eP	Pn	01 31 08.4	-0.3
	baz=206						
HGSD				eS	S	01 31 38.2	-2.0
	baz=206						
EHY	Hungye	2.03	208	eP	Pn	01 31 08.1	-0.8
	baz=203						
EHY				eS	S	01 31 37.6	-3.1
	baz=203						
WCHH	Zhanghua	2.04	233	eP	Pn	01 31 09.1	+0.1
	baz=239						
WCHH				eS	S	01 31 39.8	-1.0
	baz=239						
WNT1	Nantou City	2.06	228	eP	Pn	01 31 09.8	+0.5
	baz=226						
WNT1				eS	S	01 31 40.1	-1.2
	baz=226						
WNT	Mingjian	2.08	227	eP	Pn	01 31 09.7	+0.3
	baz=225						
WNT				eS	S	01 31 40.7	-0.9
	baz=225						
WJS	Zhushan	2.09	225	eP	Pn	01 31 09.8	+0.3
	baz=230						
WJS				eS	S	01 31 41.6	-0.2
	baz=230						
WHYT	Xinyi Township	2.11	221	eP	Pn	01 31 09.9	+0.2
	baz=219						
WHYT				eS	S	01 31 39.7	-2.4
	baz=219						
YULB	Yu-li	2.14	207	eP	Pn	01 31 09.2	-0.8
	baz=204						
YULB				eS	S	01 31 39.0	-3.7
	baz=204						
YULB	Yu-li	2.14	207		Pn	01 31 09.0	-1.0
EYUL	Yuli	2.17	206	eP	Pn	01 31 09.8	-0.6
	baz=203						
EYUL				eS	S	01 31 40.2	-3.0
	baz=203						
TWF1	Yuli	2.17	206	eP	Pn	01 31 09.8	-0.6
	baz=202						
TWF1				eS	S	01 31 40.2	-3.1
	baz=202						
JTJ	Tarama	2.24	107	P	Pn	01 31 11.6	+0.7
JTJ				S	S	01 31 43.6	-0.7
WRL	Guolierlin Hig	2.28	232	eP	Pn	01 31 11.2	-0.2
	baz=226						
WRL				eS	S	01 31 43.3	-1.8
	baz=226						
ALS	Alishan	2.28	218	eP	Pn	01 31 12.1	+0.3
	baz=223						
ALS				eS	S	01 31 44.5	-1.2
	baz=223						
CHN5	Tsauling	2.29	222	eP	Pn	01 31 11.9	+0.3
	baz=220						
CHN5				eS	S	01 31 44.7	-0.8
	baz=220						
WGK	Gukeng	2.29	226	eP	Pn	01 31 11.3	-0.3
	baz=228						
WGK				eS	S	01 31 43.8	-1.6
	baz=228						
WDLH	Douliu	2.31	226	eP	Pn	01 31 11.9	+0.2
	baz=228						
WDLH				eS	S	01 31 44.7	-0.9
	baz=228						
FULB	Fuli	2.31	205	eP	Pn	01 31 11.8	0.0
	baz=203						
FULB				eS	S	01 31 44.2	-1.6
	baz=203						
MATB	Ma-tsu	2.32	292	eP	Pn	01 31 11.8	0.0
	baz=291						
MSUT	Lienchiang	2.35	292	eP	Pn	01 31 11.8	-0.3
	baz=292						
CHKT	Chengkung	2.38	202	eP	Pn	01 31 12.3	-0.2
	baz=202						
CHKT				eS	S	01 31 44.9	-2.1
	baz=202						
WTK	Tuku	2.41	228	eP	Pn	01 31 12.8	+0.1
	baz=226						
WTK				eS	S	01 31 46.2	-1.3
	baz=226						
ELDTW	Lidau	2.44	210	eP	Pn	01 31 13.2	0.0
	baz=203						
ELDTW				eS	S	01 31 47.0	-1.3
	baz=203						
EDH	Donghe	2.52	202	eP	Pn	01 31 13.7	-0.2
	baz=203						
EDH				eS	S	01 31 47.4	-2.2
	baz=203						
CHY	Chiayi	2.52	225	eP	Pn	01 31 13.4	-0.5
	baz=228						
CHY				eS	S	01 31 49.0	-0.5
	baz=228						
XPSS	Dashiqiu	2.52	310	eP	Pn	01 31 13.6	-0.2
	baz=310						
XPSS				eS	S	01 31 48.1	-1.5
	baz=310						
TPUB	Ta-pu	2.54	218	eP	Pn	01 31 14.4	+0.1
	baz=216						
TPUB				eS	S	01 31 48.5	-1.6
	baz=216						
TPUB	Ta-pu	2.54	218		Pn	01 31 14.3	+0.1
STYH	Taoyuan	2.57	214	eP	Pn	01 31 15.2	+0.7
	baz=217						
STYH				eS	S	01 31 49.8	-0.8
	baz=217						
STYT	Tauyuan	2.59	214	eP	Pn	01 31 15.2	+0.5
	baz=217						
STYT				eS	S	01 31 49.7	-1.3
	baz=217						
WTP	Ta-pu	2.59	218	eP	Pn	01 31 14.9	+0.2
	baz=216						
WTP				eS	S	01 31 49.8	-1.4
	baz=216						
JIRB	Irabujima	2.61	100	P	Pn	01 31 15.4	+0.6
JIRB				S	S	01 31 49.8	-1.4
LYJJ	Jianjiangzhen	2.64	298	eP	Pn	01 31 14.9	-0.1
	baz=298						
LONT	Longtian	2.64	205	eP	Pn	01 31 14.5	-0.7
	baz=196						
LONT				eS	S	01 31 49.6	-2.5
	baz=196						
VWUC	VWUC	2.65	264	eP	Pn	01 31 14.9	-0.3
	baz=264						
TWK	Hsinying	2.65	220	eP	Pn	01 31 15.6	+0.2
	baz=214						
TWK				eS	S	01 31 51.3	-1.0
	baz=214						
JIKM	Ikemajima	2.66	98	P	Pn	01 31 16.3	+1.0
JIKM				S	S	01 31 51.4	-0.8
SNST	Tainan City	2.68	219	eP	Pn	01 31 16.1	+0.4
	baz=213						
SNST				eS	S	01 31 52.3	-0.5
	baz=213						
CHN1	Nanshi	2.69	218	eP	Pn	01 31 16.1	+0.3
	baz=213						
CHN1				eS	S	01 31 52.2	-0.8
	baz=213						
JMJ	Miyako jima 2	2.72	100	eP	Pn	01 31 16.5	+0.5
	baz=102						
JMJ				eS	S	01 31 51.4	-2.0
	baz=102						
TWG	Pinlang	2.74	205	eP	Pn	01 31 15.5	-0.9
	baz=198						
TWG	Pinlang	2.74	205		Pn	01 31 15.4	-0.9
TWGBT	Beinan	2.74	205	eP	Pn	01 31 15.3	-1.0
	baz=197						
TWGBT				eS	S	01 31 52.0	-2.0
	baz=197						
SGST	Jiashian	2.74	216	eP	Pn	01 31 16.1	-0.3
	baz=217						
SGST				eS	S	01 31 52.6	-1.5
	baz=217						
LDUT	Ludao	2.75	197	eP	Pn	01 31 15.9	-0.5
	baz=191						
LDUT				eS	S	01 31 51.2	-2.9
	baz=191						
JMJ2	Miyako jima3	2.76	101	P	Pn	01 31 17.6	+1.1
JMJ2				S	S	01 31 53.2	-1.1
SLGT	Liugui	2.78	214	eP	Pn	01 31 18.0	+1.2
	baz=207						
SLGT				eS	S	01 31 54.2	-0.7
	baz=207						
JOGS	Gusukube	2.83	101	P	Pn	01 31 18.3	+1.1
JOGS				S	S	01 31 55.0	-0.6
PTMZ	Houxiangcun	2.94	265	eP	Pn	01 31 18.0	-0.4
	baz=265						
PTMZ				eS	S	01 31 55.9	-1.8
	baz=265						
SCST	Cishan	2.95	215	eP	Pn	01 31 19.8	+1.1
	baz=204						
SCST				eS	S	01 31 58.1	0.0
	baz=204						
ECL	Taimali	2.99	206	eP	Pn	01 31 18.8	-0.2
	baz=200						
ECL				eS	S	01 31 57.4	-1.5
	baz=200						
SSD	Sandimen	3.00	212	eP	Pn	01 31 19.7	+0.5
	baz=208						
SSD				eS	S	01 31 57.2	-1.9
	baz=208						
TSMG	Majia	3.03	211	eP	Pn	01 31 20.0	+0.5
	baz=208						
TSMG				eS	S	01 31 58.0	-1.8
	baz=208						

TWM1	**Shoushan**	3.04	216	*eP*		Pn	01 31 20.9	+1.2
	baz=206							
PNG	**Penghu**	3.08	236	*eP*		Pn	01 31 19.5	-0.5
	baz=236							
MHZQ	**Yeshan**	3.09	285	*eP*		Pn	01 31 20.1	-0.1
	baz=286							
MHZQ				*eS*		S	01 31 59.5	-1.4
	baz=286							
PHUB	**P'eng-hu**	3.10	235	*eP*		Pn	01 31 19.5	-0.8
	baz=234							
PHUB				*eS*		S	01 31 58.5	-2.7
	baz=234							
MASBT	**Mashibuluo**	3.11	211	*eP*		Pn	01 31 21.1	+0.6
	baz=207							
MASBT				*eS*		S	01 31 59.2	-2.3
	baz=207							
SNJT	**Kaohsiung City**	3.14	216	*eP*		Pn	01 31 21.9	+1.1
	baz=213							
SNJT				*eS*		S	01 32 01.9	-0.2
	baz=213							
EAST	**Anshuo**	3.22	206	*eP*		Pn	01 31 22.3	+0.5
	baz=208							
EAST				*eS*		S	01 32 01.9	-1.9
	baz=208							
SCZT	**Fangliau**	3.33	209	*eP*		Pn	01 31 23.2	+0.2
	baz=198							
LAY	**Lan-yu**	3.34	193	*eP*		Pn	01 31 23.0	-0.1
	baz=183							
LAY				*eS*		S	01 32 04.7	-1.6
	baz=183							
VCHM	**Qimei**	3.39	232	*eP*		Pn	01 31 23.3	-0.3
	baz=231							
VCHM				*eS*		S	01 32 04.8	-2.3
	baz=231							
SLIU	**Shizi**	3.39	205	*eP*		Pn	01 31 24.1	+0.4
	baz=200							
SLIU				*eS*		S	01 32 05.2	-2.1
	baz=200							
WLCH	**Liuqiu**	3.46	212	*eP*		Pn	01 31 26.2	+1.8
	baz=216							
TWK1	**Hengchun**	3.64	203	*eP*		Pn	01 31 26.9	+0.3
	baz=197							
TWK1				*eS*		S	01 32 09.9	-2.6
	baz=197							
TWKBT	**Hengchun**	3.64	203	*eP*		Pn	01 31 26.8	+0.2
	baz=197							
TWKBT				*eS*		S	01 32 09.4	-3.1
	baz=197							
TSEB	**Hengchuen, Pin**	3.65	202	*eP*		Pn	01 31 27.9	+1.2
	baz=197							
KNMB	**Chin-men Tao**	3.69	258	*eP*		Pn	01 31 26.7	-0.5
	baz=258							
KNMB	**Chin-men Tao**	3.69	258	Pn		Pn	01 31 26.8	-0.4
AXDP	**Jialang**	3.99	265	*eP*		Pn	01 31 30.4	-0.3
	baz=265							
JOW	**Kunigami**	5.54	73	P		Pn	01 31 48.7	-1.3
	31nm,0.3s,baz=132,slow=16,SNR=75							
JOW				S		S	01 32 47.9	-7.0
	21nm,0.8s,baz=118,slow=26,SNR=8.6							
JOW	**Kunigami**	5.54	73	*eP*		Pn	01 31 49.0	-0.9
	baz=77							
JMZ	**Minamidaito 2**	8.03	84	Pn		Pn	01 32 20.7	-1.0
KSRS	**Korea Array**	13.00	20	P		P	01 33 27.4	+0.3
	0.6nm,0.3s,baz=201,slow=11,SNR=10							
JHS	**Saijyo**	13.40	41	P		P	01 33 33.4	+1.7
JGF	**Kuroka**	16.49	48	P		Pn	01 34 08.1	+1.0
JGF				IAmb		IAmb	01 34 15.1	
	comp=Z,22nm,1.3s							
USRK	**Ussuriysk Ar.**	20.41	20	P		P	01 34 48.7	+0.7
	comp=Z,2.1nm,0.7s,baz=194,slow=5.6,SNR=6.5							
CMAR	**Chiang Mai Arr**	22.75	257	P		P	01 35 11.9	+0.8
	comp=Z,0.4nm,0.3s,baz=63,slow=8.4,SNR=5.0							
KLR	**Kul'dur**	24.98	15	P		P	01 35 30.6	-0.4
	comp=Z,2.8nm,0.9s,baz=224,slow=7.8,SNR=9.4							
SONM	**Songino Array**	25.77	335	P		P	01 35 37.8	-0.5
	comp=Z,0.8nm,0.5s,baz=150,slow=10,SNR=7.8							
SONM	**Songino Array**	25.77	335	P		P	01 35 39.3	+1.0
MTN	**Manton Dam**	38.88	166	P		P	01 37 31.7	-0.2
MTN				IAmb		IAmb	01 37 43.6	
	comp=Z,6.7nm,1.1s							
ZALV	**Zalesovo Beam**	39.89	326	P		P	01 37 37.6	-2.3
	comp=Z,0.8nm,0.5s,baz=114,slow=8.9,SNR=3.1							
ZALV	**Zalesovo Beam**	39.89	326	P		P	01 37 39.2	-0.7
FITZ	**Fitzroy Crossi**	43.27	175	P		P	01 38 07.2	-0.4
	comp=Z,1.4nm,0.7s,baz=2,9,slow=11,SNR=2.7							
FITZ	**Fitzroy Crossi**	43.27	175	P		P	01 38 07.9	+0.3
COEN	**Coen**	44.00	150	P		P	01 38 15.1	+1.6
COEN				IAmb		IAmb	01 38 16.5	
	comp=Z,7.3nm,1.4s							
WB0	**Warramunga Arr**	46.31	164	P		P	01 38 32.2	+0.5
WB0				IAmb		IAmb	01 38 39.1	
	comp=Z,8.4nm,1.4s							
WRA	**Warramunga Arr**	46.47	164	P		P	01 38 33.5	+0.6
	comp=Z,2.0nm,0.5s,baz=347,slow=8.5,SNR=5.7							
WRA	**Warramunga Arr**	46.47	164	P		P	01 38 33.7	+0.9
WB2	**Warramunga Arr**	46.47	164	P		P	01 38 33.5	+0.7
TIXI	**Tiksi**	46.52	3	P		P	01 38 32.3	-0.2
TIXI				IAmb		IAmb	01 38 32.7	
	comp=Z,5.8nm,0.6s							
WR0	**Warramunga Arr**	46.54	164	P		P	01 38 34.1	+0.8
ASAR	**Alice Springs**	49.96	166	P		P	01 38 59.3	-0.2
	comp=Z,0.6nm,0.4s,baz=349,slow=7.6,SNR=5.0							
KIWB	**Kanaga Island**	52.41	43	P		P	01 39 14.3	-3.0
ABKAR	**Akbulak array**	53.42	314	P		P	01 39 24.5	-0.2
NWAO	**Narrogin (SRO)**	58.12	185	P		P	01 39 59.1	+1.0
BBOO	**Buckleboo**	59.26	167	P		P	01 40 06.7	+0.7
PPLA	**Purkeypile**	65.75	30	P		P	01 40 49.6	+0.9
PPLA				IAmb		IAmb	01 41 06.4	
	comp=Z,13nm,1.4s							
TOLK	**Toolik Lake Re**	66.00	24	P		P	01 40 51.0	+1.0
MLY	**Manley**	66.06	28	P		P	01 40 51.8	+1.2
MLY				IAmb		IAmb	01 40 53.0	
	comp=Z,3.8nm,1.3s							
BPAW	**Bear Paw Mtn.**	66.10	29	P		P	01 40 51.9	+1.1
SKT	**Skwentna**	66.19	31	P		P	01 40 51.4	+0.1
SKT				IAmb		IAmb	01 41 00.1	
	comp=Z,4.3nm,1.2s							
KDAK	**Kodiak Island**	66.38	36	P		P	01 40 52.7	+0.2
KDAK				IAmb		IAmb	01 41 04.5	
	comp=Z,10nm,1.1s							
I23K	**Minto, Yukon-K**	66.62	27	P		P	01 40 55.2	+1.2
I23K				IAmb		IAmb	01 40 55.9	
	comp=Z,5.5nm,1.4s							
NEA2	**Nenana**	66.84	28	P		P	01 40 56.4	+1.0
NEA2				IAmb		IAmb	01 40 57.0	
	comp=Z,2.3nm,0.6s							
MDM	**Murphy Dome**	67.13	28	P		P	01 40 58.0	+0.8
MDM				IAmb		IAmb	01 40 59.1	
	comp=Z,2.9nm,1.0s							
WRH	**Wood River Hil**	67.28	28	P		P	01 40 58.9	+0.7
WRH				IAmb		IAmb	01 41 02.8	
	comp=Z,3.0nm,1.2s							
SML	**Sawmill**	67.71	31	P		P	01 41 01.5	+0.5
ILAR	**Eielson Array**	67.73	28	P		P	01 41 00.1	-0.9
	comp=Z,0.3nm,0.5s,baz=266,slow=5.4,SNR=7.8							
ILAR	**Eielson Array**	67.73	28	P		P	01 41 00.1	-0.9
ILAR				PcP		PcP	01 41 27.4	+1.3
BMAR	**Burnt Mountain**	68.07	25	P		P	01 41 04.6	+1.5
SCM	**Sheep Creek Mo**	68.17	31	P		P	01 41 04.6	+0.8
KEV	**Kevo**	68.33	338	P		P	01 41 04.7	+0.1
ARCES	**ARCESS Array B**	68.89	338	P		P	01 41 07.5	-0.6
	comp=Z,1.9nm,0.8s,baz=67,slow=5.0,SNR=5.7							
ARCES	**ARCESS Array B**	68.89	338	P		P	01 41 08.2	+0.1
ARCES				IAmb		IAmb	01 41 16.3	
	comp=Z,7.8nm,1.3s							
KLU	**Klutina**	68.90	31	P		P	01 41 08.9	+0.5
KLU				IAmb		IAmb	01 41 24.2	
	comp=Z,12nm,1.4s							
SCRK	**Sand Creek**	69.14	28	P		P	01 41 09.7	-0.2
DOT	**Dot Lake**	69.19	28	P		P	01 41 10.2	+0.2
GLB	**Gilahina Butte**	69.89	31	P		P	01 41 15.1	+0.7
K27K	**Chicken**	69.94	28	P		P	01 41 15.8	+1.2
K27K				IAmb		IAmb	01 41 22.5	
	comp=Z,9.4nm,1.4s							
EGAK	**Eagle**	70.10	27	P		P	01 41 16.4	+0.8
EGAK				IAmb		IAmb	01 41 16.6	
	comp=Z,3.8nm,0.9s							
BCAR	**Beaver Creek A**	70.34	29	P		P	01 41 18.5	+1.4
FIA1	**FINESS Array S**	71.01	330	P		P	01 41 21.2	+0.1
FINES	**FINESS Array B**	71.01	330	P		P	01 41 20.2	-0.8
	comp=Z,2.8nm,0.7s,baz=80,slow=5.7,SNR=13							
FINES	**FINESS Array B**	71.01	330	P		P	01 41 21.1	0.0
DAWY	**Dawson**	71.05	27	P		P	01 41 22.0	+0.6
DAWY				IAmb		IAmb	01 41 26.4	
	comp=Z,3.7nm,1.4s							
CTGM	**Chitina Glacie**	71.18	31	P		P	01 41 23.3	+1.0
INK	**Inuvik**	71.78	22	P		P	01 41 25.4	-0.2
	comp=Z,1.1nm,0.5s,baz=305,slow=6.9,SNR=7.5							
INK	**Inuvik**	71.78	22	P		P	01 41 25.5	0.0
INK				IAmb		IAmb	01 41 43.9	
	comp=Z,5.1nm,1.4s							
EUNU	**Eureka**	73.69	5	P		P	01 41 36.7	-0.1
C36M	**Paulatuk**	74.39	20	P		P	01 41 40.3	-0.5
C36M				IAmb		IAmb	01 41 41.0	
	comp=Z,2.5nm,0.5s							
NC405	**NORSAR Array S**	77.48	332	P		P	01 41 58.3	-0.1
NOA	**NORSAR Array B**	77.72	332	P		P	01 41 58.8	-1.0
	comp=Z,1.2nm,0.8s,baz=55,slow=5.6,SNR=3.8							
NC204	**NORSAR Array S**	77.79	333	P		P	01 41 60.0	-0.3
YKA	**Yellowknife Ar**	81.52	23	P		P	01 42 19.8	-0.3
	comp=Z,0.6nm,0.6s,baz=313,slow=4.9,SNR=18							
NVAR	**Mina Array Bea**	94.89	43	P		P	01 43 25.5	+0.5
	comp=Z,0.2nm,0.5s,baz=296,slow=2.9,SNR=3.9							

IDC ***13*** *01:31:12.4±2.4, 37.80N×91.24E, h0km, mb3.4/3, mb1 3.5/7, mb1mx3.3/55, mbtmp3.4/7, ML3.0/3, Error ellipse: s-maj=45.3km s-min=36.5km az=28.0*

ISC 13 01:31:19.4±1.8, 38.2N±0.2×91.0E±0.1, h35km, n7, σ1$07/8, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	10.78	326	Pn		Pn	01 33 52.0	+0.9
	0.8nm,0.3s,baz=134,slow=14,SNR=4.7							
MKAR				Sn		Sn	01 35 49.6	-0.9
	0.7nm,0.3s,baz=137,slow=25,SNR=3.9							
SONM	**Songino Array**	14.80	44	Pn		Pn	01 34 45.7	-0.4
	baz=235,slow=18,SNR=3.2							
KURBB	**Kurchatov Arra**	15.31	328	Pn		Pn	01 34 51.5	-1.3
	0.0nm,0.3s,baz=138,slow=14,SNR=2.4							
ZALV	**Zalesovo Beam**	16.36	347	Pn		Pn	01 35 07.5	+1.3
	0.1nm,0.3s,baz=168,slow=10.0,SNR=3.6							
BVAR	**Borovoye Array**	20.62	323	P		P	01 35 56.3	+0.8
	0.5nm,0.7s,baz=152,slow=6.5,SNR=2.5							
ILAR	**Eielson Array**	67.89	23	P		P	01 42 14.0	+0.2
	0.4nm,0.8s,baz=298,slow=5.8,SNR=4.4							
TORD	**Torodi Ar. Bea**	81.50	280	P		P	01 43 33.1	-0.4
	0.6nm,0.8s,baz=55,slow=5.5,SNR=2.8							

IDC ***13*** *02:24:24.4±0.6, 55.25N×27.99W, h0km, mb4.4/10, mb1 4.5/11, mb1mx4.2/29, mbtmp4.4/11, ML4.6/1, MS3.4/10, Ms1 3.4/10, ms1mx3.3/21, Error ellipse: s-maj=21.8km s-min=17.4km az=79.0*

NEIC ***13*** *02:24:28.0±1.7, 55.33S±0.09×28.1W±0.1, h19km±4km, mb4.6/26, Error ellipse: s-maj=15.9km s-min=8.3km az=142.0*

ISC 13 02:24:28.5±0.5, 55.30S±0.10×28.05W±0.09, h26km, n61, σ0$85/54, mb4.6/16, MS3.4/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HOPE	**Hope Point**	4.99	278			Pn	02 25 40.4	-1.2
VNA1	**Neumayer--Stat**	17.67	158	P		P	02 28 32.3	-0.8
VNA3	**Neumayer Olymp**	17.86	161	P		P	02 28 34.7	-0.6
VNA2	**Neumayer--Watz**	18.07	158	P		P	02 28 37.6	0.0
	baz=316,slow=14							
SNAA	**Sanae**	19.62	156	P		P	02 28 54.1	-0.6
SNAA	**Sanae**	19.62	156	P		P	02 28 54.1	-0.6
	1.9nm,0.3s,baz=303,slow=9.8,SNR=45							
SNAA				LR		LR	02 35 09.9	
	comp=Z,81nm,19.6s,baz=1.0,slow=33							
SNAA	**Sanae**	19.62	156	P		P	02 28 54.3	-0.3
SNAA				IAmb		IAmb	02 28 58.8	
	comp=Z,14nm,0.5s							
PMSA	**Palmer Station**	20.04	227	LR		LR	02 35 08.3	
	comp=Z,128nm,19.1s,baz=72,slow=32							
BELA	**Belgrano 2**	22.79	184	P		P	02 29 29.1	+0.5
MG02	**Cerro Sombrero**	24.06	259	P		P	02 29 42.6	+1.3
GO09	**Cerro Castillo**	26.44	260	P		P	02 30 02.1	-0.8
PLCA	**Paso Flores**	31.39	280	LR		LR	02 44 46.0	
	comp=Z,60nm,18.5s,baz=152,slow=39							
QSPA	**South Pole Qui**	34.95	180	P		P	02 31 17.9	-0.1
	comp=Z,6.8nm,0.7s,baz=196,slow=3.0,SNR=18							
QSPA	**South Pole Qui**	34.95	180	P		P	02 31 18.8	+0.8
QSPA				IAmb		IAmb	02 31 21.4	
	comp=Z,5.2nm,0.7s							
BO02	**Sierra Bellavi**	35.74	287	P		P	02 31 27.0	+2.0
CPUP	**Villa Florida**	35.95	312	P		P	02 31 25.9	-0.8
	comp=Z,5.7nm,1.0s,baz=152,slow=8.0,SNR=11							
CPUP				LR		LR	02 45 19.2	
	comp=Z,46nm,19.4s,baz=174,slow=35							
CPUP	**Villa Florida**	35.95	312	P		P	02 31 26.9	+0.1
MT09	**Talagante**	36.62	288	P		P	02 31 31.6	-1.0
MT02	**Curacav**	37.09	288	P		P	02 31 36.3	-0.2
MT02				IAmb		IAmb	02 31 55.1	
	comp=Z,14nm,1.3s							
VA03	**San Esteban**	37.15	289	P		P	02 31 38.0	+1.0
CO02	**Combarbal**	38.60	291	P		P	02 31 50.1	+0.8
CO02				IAmb		IAmb	02 31 56.8	
	comp=Z,17nm,1.3s							
CO03	**El Pedregal**	38.72	291	P		P	02 31 50.6	+0.3
SUR	**Sutherland**	40.92	77	P		P	02 32 09.0	+0.3
	comp=Z,3.3nm,0.8s,baz=200,slow=13,SNR=5.8							
SUR	**Sutherland**	40.92	77	P		P	02 32 10.6	+1.8
SUR				IAmb		IAmb	02 32 17.9	
	comp=Z,12nm,1.2s							
AC04	**Llanos de Chal**	41.01	293	P		P	02 32 10.5	+1.3
AC04				IAmb		IAmb	02 32 29.2	
	comp=Z,15nm,1.1s							
MAW	**Mawson**	41.04	144	LR		LR	02 49 10.8	
	comp=Z,26nm,18.4s,baz=238,slow=36							
BDFB	**Brasilia**	42.47	331	LR		LR	02 49 29.8	
	comp=Z,54nm,18.7s,baz=156,slow=36							
GO02	**Mina Guanaco**	42.72	298	P		P	02 32 24.0	+0.4
GO02				IAmb		IAmb	02 32 31.2	
	comp=Z,20nm,1.4s							
LVC	**Limon Verde**	44.50	300	P		P	02 32 40.0	+2.0
LVC				IAmb		IAmb	02 32 40.7	
	comp=Z,7.9nm,1.1s							
PB01	**IPOC Station P**	46.11	301	P		P	02 32 50.8	+0.4
BOSA	**Boshof**	46.27	77	P		P	02 32 51.1	-0.6
	comp=Z,3.2nm,0.7s,baz=190,slow=6.0,SNR=8.7							
BOSA				LR		LR	02 48 59.4	
	comp=Z,82nm,18.1s,baz=190,slow=32							
BOSA	**Boshof**	46.27	77	P		P	02 32 51.5	-0.2
BOSA				IAmb		IAmb	02 33 07.3	
	comp=Z,5.6nm,1.1s							
VNDA	**Vanda**	47.30	183	P		P	02 32 59.5	+0.4
	comp=Z,4.0nm,0.7s,baz=187,slow=5.3,SNR=16							
VNDA	**Vanda**	47.30	183	P		P	02 32 59.3	+0.2
VNDA				IAmb		IAmb	02 33 03.0	
	comp=Z,4.8nm,0.8s							
MNMC	**Minye Minye**	47.79	302	P		P	02 33 04.3	+0.5
LBTB	**Lobatse**	49.27	75	P		P	02 33 15.5	+0.6
LBTB				IAmb		IAmb	02 33 15.9	
	comp=Z,3.8nm,0.8s							
LPAZ	**La Paz**	49.55	306	P		P	02 33 18.1	+0.4
	comp=Z,4.2nm,0.9s,baz=144,slow=6.2,SNR=13							
LPAZ				LR		LR	02 53 27.7	
	comp=Z,23nm,22.0s,baz=184,slow=35							
LPAZ	**La Paz**	49.55	306	P		P	02 33 18.4	+0.6
LPAZ				IAmb		IAmb	02 33 19.3	
	comp=Z,7.7nm,1.1s							
SAML	**Samuel**	53.93	315	P		P	02 33 49.7	0.0
DBIC	**Dimbokro**	64.69	26	P		P	02 35 02.5	-1.6
	comp=Z,5.4nm,0.9s,baz=182,slow=8.5,SNR=3.9							
KOWA	**Kowa**	72.43	24	P		P	02 35 51.4	-0.9
	comp=Z,0.9nm,0.5s,baz=186,slow=9.2,SNR=1.9							
KOWA	**Kowa**	72.43	24	P		P	02 35 53.8	+1.5
KOWA				IAmb		IAmb	02 36 02.5	
	comp=Z,8.7nm,1.5s							
TOA0	**Torodi Ar. Sit**	72.65	30	P		P	02 35 54.1	+0.5
TOA0				IAmb		IAmb	02 35 54.8	
	comp=Z,3.9nm,0.7s							
TORD	**Torodi Ar. Bea**	72.65	30	P		P	02 35 53.4	-0.2
	comp=Z,3.3nm,0.6s,baz=201,slow=6.6,SNR=28							
TORD				LR		LR	03 03 01.9	
	comp=Z,30nm,18.2s,baz=205,slow=32							
TORD	**Torodi Ar. Bea**	72.65	30	P		P	02 35 54.1	+0.5
KMBO	**Kilima Mbogo**	75.23	70	LR		LR	03 08 07.2	
	comp=Z,54nm,19.1s,baz=240,slow=35							
MDT	**Midelt**	90.04	20	LR		LR	03 14 41.1	
	comp=Z,609nm,18.0s,baz=314,slow=34							
ASAR	**Alice Springs**	99.85	163	P		Pdif	02 38 09.9	-0.7
	comp=Z,0.4nm,0.7s,baz=178,slow=4.2,SNR=4.5							
FINES	**FINESS Array B**	123.95	28	PKP		PKiKP	02 43 22.2	-0.8
	comp=Z,1.6nm,0.6s,baz=222,slow=2.6,SNR=8.8							
FINES	**FINESS Array B**	123.95	28			PKiKP	02 43 23.8	+0.9
ARCES	**ARCESS Array B**	130.43	22	PKP		PKiKP	02 43 35.8	+0.1
	comp=Z,2.2nm,0.9s,baz=228,slow=2.3,SNR=6.7							
ARCES	**ARCESS Array B**	130.43	22			PKiKP	02 43 36.3	+0.6
YKA	**Yellowknife Ar**	135.29	319	PKP		PKPdf	02 43 43.9	-0.3
	comp=Z,0.8nm,0.8s,baz=120,slow=2.5,SNR=11							
MKAR	**Makanchi Array**	137.11	71	PKP		PKiKP	02 43 49.0	-1.0
	comp=Z,0.2nm,0.4s,baz=231,slow=3.4,SNR=3.7							
MKAR	**Makanchi Array**	137.11	71	PKPdf		PKiKP	02 43 49.4	-0.6
KURBB	**Kurchatov Arra**	137.42	64	PKhKP		PKPpre	02 43 44.7	
	comp=Z,0.3nm,0.6s,baz=248,slow=3.1,SNR=2.5							
KURBB				PKP		PKiKP	02 43 50.4	-0.1
	comp=Z,0.4nm,0.7s,baz=232,slow=2.0,SNR=4.8							
KURK	**Kurchatov**	137.52	64			PKPpre	02 43 44.7	
KURK						PKiKP	02 43 50.4	-0.3
ZALV	**Zalesovo Beam**	142.47	63	PKhKP		PKPpre	02 43 54.7	
	comp=Z,0.4nm,0.4s,baz=316,slow=4.0,SNR=1.9							
ILAR	**Eielson Array**	149.25	313	PKPbc		PKiKP	02 44 13.2	-1.1
	comp=Z,5.8nm,0.7s,baz=128,slow=2.1,SNR=40							
SONM	**Songino Array**	151.16	86	PKPbc		PKiKP	02 44 18.3	-0.7
	comp=Z,3.1nm,0.6s,baz=225,slow=3.1,SNR=25							
SONM	**Songino Array**	151.16	86			PKiKP	02 44 18.4	-0.6

KRSC 13 02:37:10.1±1.8, 48.46N×157.83E, h21km±31km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAU	**Pauzhetka**	3.08	348	*eP*		Pn	02 37 59.4	+1.9
PAU				*eS*		Sn	02 38 36.6	+2.9
MIPR	**Malaya Ipel'ka**	3.88	350	*eP*		Pn	02 38 12.0	+3.4
RUS	**Russkaya**	4.00	6	*eP*		Pn	02 38 13.8	+3.6
RUS				*eS*		Sn	02 39 01.7	+5.3
MTVR	**Mutnovka**	4.04	3	*eP*		Pn	02 38 14.4	+3.6
MTVR				*eS*		Sn	02 39 03.0	+5.5
GRL	**Gorelyy**	4.10	2	*eP*		Pn	02 38 15.8	+4.1
GRL				*eS*		Sn	02 39 04.6	+5.5
KRMR	**Karymshinskiy**	4.38	2	*eP*		Pn	02 38 18.4	+3.0
KRMR				*eS*		Sn	02 39 11.7	+6.0
DALK	**Dalny**	4.62	7	*eP*		Pn	02 38 22.5	+3.9
DALK				*eS*		Sn	02 39 17.1	+5.6
UGLR	**Uglovaya**	4.80	7	*eP*		Pn	02 38 26.7	+5.5
NLC	**Nalytchevo**	4.82	11	*eS*		Sn	02 39 20.9	+4.5
AVH	**Avacha**	4.85	6	*eP*		Pn	02 38 27.5	+5.6
SPN	**Mys Shipunski**	4.85	16	*eP*		Pn	02 38 27.1	+5.3
SPN				*eS*		Sn	02 39 23.2	+5.9
SMAR	**Somma**	4.85	7	*eP*		Pn	02 38 27.0	+5.0
KOK	**Koryaka**	4.87	6	*eP*		Pn	02 38 27.3	+5.2
KRER	**Koryakskii**	4.89	7	*eP*		Pn	02 38 27.7	+5.2
KRX	**Arik**	4.93	6	*eP*		Pn	02 38 28.3	+5.2
GNL	**Ganaly**	5.24	1	P		Pn	02 38 32.0	+4.7
MKZ	**Mys Kozlova**	6.57	20	*eP*		Pn	02 38 50.4	+5.0
MKZ				*eS*		Sn	02 40 04.3	+4.6
KZV	**Kizimen**	6.84	12	*eP*		Pn	02 38 55.3	+6.1
TUMD	**Tumrok D**	6.94	12	*eP*		Pn	02 38 55.7	+5.2
TUMD				*eS*		Sn	02 40 14.8	+6.0
TUMR	**Tumrok**	6.98	11	P		Pn	02 38 57.7	+6.5
KBTR	**Krutoberegovo**	8.34	20	*eP*		Pn	02 39 14.6	+4.9

VAO ***13*** *03:00:07.0±0.5, 40.19S×73.25W, h10km, mb4.6*

NEIC ***13*** *03:00:08.5, 40.12S×73.72W, h40km, Moment Tensor Solution. Moment tensor: Scale 10$15Nm; Mrr4.15; Mθθ0.60; Mφφ-4.75; Mrθ0.29; Mrφ2.34; Mθφ-4.64; Fault plane solution: Mo6.86000×10$15 NP1:φs320.44000°, δ26.17000°, λ59.84000°. NP2:φs173.35000°, δ67.58000°, λ103.87000°. Principal axes: T 6.2094, Plg65.0000°, Azm107.0000°; N 1.1618, Plg13.0000°, Azm348.0000°; P -7.3712, Plg21.0000°, Azm253.0000°;*

IDC ***13*** *03:00:08.1±0.7, 40.05S×73.46W, h29km±4km, mb4.2/16, mb1 4.2/19, mb1mx4.1/34, mbtmp4.3/19, ML4.4/3, MS3.7/8, Ms1 3.7/8, ms1mx3.4/30 Error ellipse: s-maj=21.3km s-min=12.7km az=88.0*

NEIC ***13*** *03:00:09.2±2.9, 40.10S±0.05×73.68W±0.07, h40km±1km, mb4.5/33, Mwr4.5/16, ML4.7(GUC), Error ellipse: s-maj=9.6km s-min=7.9km az=51.0*

GUC ***13*** *03:00:10.5±0.6, 40.26S×73.67W, h42km±3km, ML4.7*

ISC 13 03:00:08.1±0.7, 40.12S±0.04×73.54W±0.07, h28km±4km, n181, σ1$07/180, mb4.5/27, MS3.6/7, 6C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res

comp=Z,262nm,18.3s,baz=226,slow=39
CPUP Villa Florida 19.27 49 P **P** 03 04 29.9 -0.6
PB01 IPOC Station P 19.33 12 P **Pn** 03 04 32.7 +0.2
PB11 IPOC Station P 20.57 10 P Pn 03 04 46.3 -0.9
PB11 IAmb IAmb 03 04 47.3
comp=Z,12nm,0.7s
PSGCX Pisagua 20.67 9 P Pn 03 04 47.1 -1.2
MNMC Minye Minye 21.19 10 P **P** 03 04 52.6 +0.9
MNMC IAmb IAmb 03 05 11.2
comp=Z,22nm,0.8s
ITAB Concordia 21.90 61 *e*P **P** 03 04 58.6 -0.4
PB16 IPOC Station P 21.99 10 P **P** 03 05 03.1 +2.6
PB16 IAmb IAmb 03 05 08.5
comp=Z,30nm,1.3s
TER01 Tubaro-SC 23.16 68 *e*P **P** 03 05 10.9 -1.5
PTGB Pitanga 23.68 56 *e*P **P** 03 05 17.3 -0.2
LPAZ La Paz 24.21 13 P **P** 03 05 23.7 +0.6
comp=Z,1.7nm,0.8s,baz=174,slow=3.8,SNR=6.9
LPAZ La Paz 24.21 13 P **P** 03 05 23.7 +0.6
LPAZ La Paz 24.21 13 *e*P **P** 03 05 25.4 +2.3
AQDB Aquidauana 24.83 43 *e*P **P** 03 05 27.6 -0.4
PMSA Palmer Station 25.30 170 P **P** 03 05 33.5 +1.7
comp=Z,22nm,1.1s,baz=340,slow=4.5,SNR=1.4
PMSA LR LR 03 14 31.3
comp=Z,140nm,19.1s,baz=326,slow=34
FRTB Fartura 26.25 58 *e*P **P** 03 05 40.8 -0.1
SIV San Ignacio 26.38 28 P **P** 03 05 42.2 0.0
comp=Z,3.7nm,0.7s,baz=218,slow=8.7,SNR=17
PCMB Pacaembu 26.46 52 *e*P **P** 03 05 42.8 0.0
PET01 Itanhaem-SP 27.12 62 *e*P **P** 03 05 48.8 +0.1
SPB Sao Paulo 27.49 61 *e*P **P** 03 05 51.6 -0.4
PTLB Pontes e Lacer 27.61 31 *e*P **P** 03 05 54.1 +0.9
PP1B Ponte de Pedra 27.65 41 *e*P **P** 03 05 54.8 +1.3
VAO Valinhos 28.20 61 *e*P **P** 03 05 58.0 -0.5
RCLB Rio Claro- Sao 28.23 59 *e*P **P** 03 05 57.8 -1.0
ITRB Iturama 28.45 51 *e*P **P** 03 06 01.8 +1.1
HOPE Hope Point 28.50 132 P **P** 03 06 00.6 -0.2
BB19B Bebedouro 28.55 56 *e*P **P** 03 06 01.3 -0.4
VILB Vilhena 29.50 27 *e*P **P** 03 06 11.9 +1.8
MAN01 Angra dos Reis 30.34 64 *e*P **P** 03 06 17.0 -0.4
ARAG Araguaiana, MT 30.83 44 *e*P **P** 03 06 22.8 +1.1
ETMB Extrema 30.88 14 *e*P **P** 03 06 23.4 +1.3
BSCB Bom Sucesso 31.05 61 *e*P **P** 03 06 23.6 -0.2
IPMB Ipameri, GO 31.06 52 *e*P **P** 03 06 24.0 +0.1
CZSB Cruzeiro do Su 32.26 2 *e*P **P** 03 06 35.3 +0.9
SAML Samuel 32.39 19 *e*P **P** 03 06 36.3 +0.9
CAM01 Campos-RJ 32.62 66 *e*P **P** 03 06 37.9 +0.5
BDFB Brasilia 33.01 50 P **P** 03 06 39.9 -1.1
comp=Z,2.0nm,0.4s,baz=179,slow=6.7,SNR=9.3
BDFB LR LR 03 19 37.5
comp=Z,76nm,21.6s,baz=108,slow=36
BDFB Brasilia 33.01 50 P **P** 03 06 40.8 -0.2
BDFB IAmb IAmb 03 06 55.2
comp=Z,12nm,1.4s
CLDB Colider 33.10 33 *e*P **P** 03 06 42.9 +1.1
DIAM Diamantina, MG 33.69 59 *e*P **P** 03 06 47.2 +0.2
SNDB Serra Nova Dou 34.23 41 *e*P **P** 03 06 51.8 +0.3
SJMB Sao Joao De Ma 35.06 62 *e*P **P** 03 06 58.2 -0.5
RIB01 Linhares ES 35.18 64 *e*P **P** 03 07 00.2 +0.5
JANB Januaria 35.69 54 *e*P **P** 03 07 04.9 +0.7
PEXB Peixe 35.70 46 *e*P **P** 03 07 04.6 +0.4
NAN01 Guarapari, ES 36.38 62 *e*P **P** 03 07 09.9 -0.1
NPGB Novo Progresso 36.75 31 *e*P **P** 03 07 13.2 0.0
SDBA SAO DESIDERIO 37.39 50 *e*P **P** 03 07 18.4 -0.3
GUA01 Guaratinga, BA 37.48 61 *e*P **P** 03 07 19.5 +0.1
CMC01 Camacan , BA 38.55 60 *e*P **P** 03 07 29.1 +0.7
MACA Manacapuru-AM 38.59 21 *e*P **P** 03 07 29.2 +0.5
SMTB Santa Maria do 38.78 44 *e*P **P** 03 07 30.7 +0.4
ITTB Itaituba 39.06 29 *e*P **P** 03 07 32.6 -0.1
GDU01 Guandu, BA 39.71 58 *e*P **P** 03 07 39.1 +1.0
PRPB Parauapebas 39.96 39 *e*P **P** 03 07 42.2 +2.0
OTAV Otavalo 40.42 352 *e*P **P** 03 07 46.6 +2.1
BELA Belgrano 2 41.11 168 P **P** 03 07 49.8 +0.8
BELA IAmb IAmb 03 07 51.2
comp=Z,21nm,1.5s
PTGA Pitinga 41.11 21 LR LR 03 27 25.1
comp=Z,78nm,18.3s,baz=182,slow=40
NBLA Lagarto - SE 42.89 57 *e*P **P** 03 08 04.2 -0.1
NBTA Tacaratu-PE 44.13 55 *e*P **P** 03 08 14.5 +0.2
MCPB Macapa, AP 44.15 32 *e*P **P** 03 08 15.4 +1.1
VNA3 Neumayer Olymp 44.23 155 P **P** 03 08 14.8 +0.4
VNA1 Neumayer--Stat 44.60 154 P **P** 03 08 17.4 +0.1
NBAN Anadia - AL 44.87 58 *e*P **P** 03 08 21.0 +0.9
VNA2 Neumayer--Watz 44.92 155 P **P** 03 08 20.4 +0.5
baz=303,slow=7.1
NBMA Muriti-CE 45.05 53 *e*P **P** 03 08 23.0 +1.3
NBLI Livramento-PB 46.18 55 *e*P **P** 03 08 31.4 +0.8
SNAA Sanae 46.44 156 P **P** 03 08 32.4 +0.4
SNAA Sanae 46.44 156 P **P** 03 08 32.3 +0.4
comp=Z,7.6nm,0.7s,baz=282,slow=9.5,SNR=22
SNAA Sanae 46.44 156 P **P** 03 08 32.5 +0.5
NBPA Parau_RN 47.33 53 *e*P **P** 03 08 40.6 +1.1
RCBR Riachuelo 48.02 55 LR LR 03 30 15.7
comp=Z,298nm,18.1s,baz=206,slow=38
QSPA South Pole Qui 50.12 180 P **P** 03 09 01.3 +0.7
comp=Z,7.5nm,0.9s,baz=131,slow=3.0,SNR=18
QSPA South Pole Qui 50.12 180 P **P** 03 09 01.7 +1.1
VNDA Vanda 57.87 192 P **P** 03 09 58.1 +1.3
comp=Z,0.8nm,0.4s,baz=128,slow=9.7,SNR=3.8
MAW Mawson 67.66 163 P **P** 03 11 02.2 +0.1
comp=Z,4.4nm,0.9s,baz=229,slow=11,SNR=2.9
MAW LR LR 03 40 09.2
comp=Z,124nm,18.9s,baz=236,slow=36
MAW Mawson 67.66 163 P **P** 03 11 02.3 +0.3
SUR Sutherland 72.97 118 P **P** 03 11 35.9 +0.5
comp=Z,3.3nm,1.0s,baz=233,slow=10,SNR=1.8
SUR Sutherland 72.97 118 P **P** 03 11 37.0 +1.6
GOGA Godfrey 73.74 351 P **P** 03 11 39.6 +0.3
GOGA IAmb IAmb 03 11 42.6
comp=Z,4.0nm,1.0s
LRAL Lakeview Retre 73.85 348 P **P** 03 11 40.2 +0.3
LRAL IAmb IAmb 03 11 54.9
comp=Z,4.1nm,0.8s
TX31 Lajitas Ar. Si 74.56 333 P **P** 03 11 45.5 +1.2
TX31 IAmb IAmb 03 11 55.9
comp=Z,4.4nm,0.9s
TXAR Lajitas Array 74.56 333 P **P** 03 11 44.6 +0.3
comp=Z,0.4nm,0.7s,baz=156,slow=7.9,SNR=7.1
TXAR pP **pP** 03 11 53.0 -0.3
comp=Z,0.8nm,0.8s,baz=150,slow=8.4,SNR=7.4
TXAR Lajitas Array 74.56 333 P **P** 03 11 45.3 +1.0
DBIC Dimbokro 78.30 71 P **P** 03 12 05.8 -0.1
comp=Z,5.0nm,0.6s,baz=210,slow=6.7,SNR=15
DBIC LR LR 03 44 04.4
comp=Z,37nm,18.9s,baz=208,slow=34
DBIC Dimbokro 78.30 71 P **P** 03 12 05.7 -0.1
DBIC IAmb IAmb 03 12 06.8
comp=Z,5.3nm,0.6s
BOSA Boshof 78.31 117 P **P** 03 12 05.5 -0.4
comp=Z,2.7nm,0.5s,baz=235,slow=4.1,SNR=15
BOSA pP **PcP** 03 12 15.0 -0.2
comp=Z,5.7nm,0.7s,baz=218,slow=4.3,SNR=8.1
BOSA LR LR 03 41 23.4
comp=Z,19nm,19.4s,baz=176,slow=32
BOSA Boshof 78.31 117 P **P** 03 12 06.0 +0.1
BOSA IAmb IAmb 03 12 17.0
comp=Z,7.2nm,0.8s
LBTB Lobatse 80.83 115 P **P** 03 12 18.8 -0.9
comp=Z,2.8nm,0.7s,baz=243,slow=5.4,SNR=5.0
LBTB Lobatse 80.83 115 P **P** 03 12 19.7 +0.1
LBTB IAmb IAmb 03 12 35.0
comp=Z,6.0nm,0.8s
T25A Trinidad 81.95 336 P **P** 03 12 26.6 +1.4
T25A IAmb IAmb 03 12 27.9
comp=Z,9.4nm,1.4s
K58A Earlville 82.53 358 P **P** 03 12 28.1 +0.2
K58A IAmb IAmb 03 12 28.8
comp=Z,4.9nm,0.8s
PECO Prince Edward 83.73 357 P **P** 03 12 34.1 +0.2
PECO IAmb IAmb 03 12 45.1
comp=Z,4.2nm,0.8s
KOWA Kowa 84.25 66 P **P** 03 12 37.8 +0.5
KOWA IAmb IAmb 03 12 38.1
comp=Z,4.8nm,0.7s
K31A O'Neill 85.47 342 P **P** 03 12 43.2 +0.3
MATP Matopo 85.83 113 P **P** 03 12 45.1 -0.4
comp=Z,3.5nm,1.1s,baz=226,slow=6.3,SNR=4.5
ECSD EROS Data Cent 86.03 343 P **P** 03 12 45.1 -0.4
PHWY Pilot Hill 86.08 336 P **P** 03 12 44.1 -2.2
TORD Torodi Ar. Bea 87.41 71 P **P** 03 12 52.3 -0.7
comp=Z,1.2nm,0.8s,baz=233,slow=3.7,SNR=5.8
TORD pP **pP** 03 13 01.4 -0.9
comp=Z,1.6nm,0.8s,baz=212,slow=4.1,SNR=6.2
TORD Torodi Ar. Bea 87.41 71 P **P** 03 12 52.0 -1.0
TORD IAmb IAmb 03 13 03.8
comp=Z,1.4nm,0.8s
NVAR Mina Aray Bea 88.26 326 pP pP 03 13 07.4 +1.5
comp=Z,0.7nm,0.8s,baz=154,slow=5.9,SNR=5.5
PDAR Pinedale Array 88.71 334 P **P** 03 12 58.0 -0.8
comp=Z,0.7nm,0.9s,baz=142,slow=7.5,SNR=5.0
PDAR pP **pP** 03 13 08.3 +0.2
comp=Z,0.9nm,0.8s,baz=143,slow=5.2,SNR=6.4
WRA Warramunga Arr 114.83 209 PKP **PKiKP** 03 18 44.0 -2.5
comp=Z,0.4nm,0.8s,baz=158,slow=1.7,SNR=1.7
GERES GERESS Array B 117.23 48 PKP **PKPdf** 03 18 49.2 -1.0
comp=Z,0.4nm,0.6s,baz=260,slow=5.9,SNR=2.3
GERES GERESS Array B 117.23 48 **PKPdf** 03 18 49.7 -0.5
ILAR Eielson Array 119.06 332 PKP **PKPdf** 03 18 52.0 -1.1
comp=Z,0.6nm,1.0s,baz=147,slow=1.8,SNR=3.3
VYHS Vyhne 120.03 50 *e*PKP **PKiKP** 03 18 57.1 +1.6
TOLK Toolik Lake Re 121.97 335 PKPdf **PKPdf** 03 18 58.2 -0.4
BURAR Bucovina Array 123.48 53 PKPdf **PKiKP** 03 19 02.2 -0.3
H11S2 WAKE ISLAND Hyd 124.30 266 T T 05 35 23.8
baz=126,slow=75,SNR=111
H11S1 WAKE ISLAND Hyd 124.31 266 T T 05 35 23.4
baz=126,slow=75,SNR=162
H11S3 WAKE ISLAND Hyd 124.31 266 T T 05 35 22.7
baz=126,slow=75,SNR=92
H11N3 WAKE ISLAND Hyd 124.86 267 T T 05 36 05.2
baz=127,slow=75,SNR=28
H11N1 WAKE ISLAND Hyd 124.87 267 T T 05 36 05.8
baz=127,slow=75,SNR=50
H11N2 WAKE ISLAND Hyd 124.87 267 T T 05 36 06.1
baz=127,slow=75,SNR=29
BRTR Keskin Array B 125.68 65 PKP **PKPdf** 03 19 05.4 -1.4
comp=Z,0.7nm,0.8s,baz=191,slow=4.4,SNR=5.3
BRTR Keskin Array B 125.68 65 PKPdf **PKPdf** 03 19 06.4 -0.4
AKASG Malin Array Be 127.09 51 PKP **PKPdf** 03 19 07.8 -1.1
comp=Z,0.3nm,0.3s,baz=280,slow=2.9,SNR=5.9
ARCES ARCESS Array B 130.04 27 PKP **PKPdf** 03 19 13.4 -0.5
comp=Z,1.4nm,0.8s,baz=232,slow=2.9,SNR=5.0
SEY Seymchan 144.56 325 PKP **PKPab** 03 19 39.2 -0.2
comp=Z,1.3nm,0.5s,baz=169,slow=5.7,SNR=10
HRA Herat 144.63 85 PKPdf **PKPab** 03 19 40.0 -0.8
ARU Arti 145.02 46 **PKPdf** 03 19 41.4 -0.4
ABKAR Akbulak array 146.17 59 PKPbc **PKPbc** 03 19 44.7 -0.4
MA2 Magadan 146.28 320 PKPbc **PKPbc** 03 19 44.7 -0.4
TIXI Tiksi 146.45 347 PKPdf **PKPdf** 03 19 43.7 -0.1
BRVK Borovoye 152.30 50 **PKiKP** 03 20 00.7 -0.1
KKAR Karatay Array 153.09 72 PKPbc **PKPbc** 03 20 02.0 -0.6
KKAR PKPab **pPKPbc** 03 20 13.0 +0.9
CMAR Chiang Mai Arr 157.46 161 PKPab **PKPab** 03 20 30.9 -2.5
comp=Z,0.5nm,0.3s,baz=209,slow=4.1,SNR=5.8
CMAR Chiang Mai Arr 157.46 161 PKPab **PKPab** 03 20 32.3 -1.1
MKAR Makanchi Array 161.27 61 PKPab **PKPdf** 03 20 05.1 -0.4
comp=Z,0.2nm,0.7s,baz=316,slow=4.0,SNR=2.1
MKAR PKPab **PKPab** 03 20 48.3 -1.2
comp=Z,0.2nm,0.5s,baz=289,slow=3.7,SNR=3.6
MKAR Makanchi Array 161.27 61 **PKPdf** 03 20 05.1 -0.4
MKAR PKPab **PKPab** 03 20 49.1 -0.4
SONM Songino Array 172.29 0 PKPab **PKPab** 03 21 38.2 +0.2
comp=Z,0.7nm,0.7s,baz=0.0,slow=3.6,SNR=4.8
SONM Songino Array 172.29 0 **PKPab** 03 21 38.4 +0.4
LZH Lanzhou 175.48 152 *e*PKP **PKPdf** 03 20 17.8 +2.4
LZH pPKP pPKPdf 03 20 23.0 -2.0
LZH sPKP 03 20 28.3

IDC 13 03:06:37.6±4.1, 4°.67S×151°.98E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/40, mbtmp3.5/3, Error ellipse: s-maj=158.6km s-min=53.3km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.93**	**227**	P		P	03 11 44.1	+0.6
	1.2nm,1.0s,baz=50,slow=9.6,SNR=5.2							
ASAR	**Alice Springs**	**25.70**	**221**	P		P	03 12 09.2	-0.6
	0.4nm,0.7s,baz=56,slow=8.4,SNR=4.9							
FITZ	**Fitzroy Crossi**	**29.01**	**240**	P		P	03 12 39.4	-0.1
	1.4nm,1.0s,baz=50,slow=6.8,SNR=2.5							
TORD	**Torodi Ar. Bea**	**149.49**	**288**	PKPbc		PKPbc	03 26 29.6	-0.3
	0.6nm,0.8s,baz=74,slow=2.9,SNR=2.8							

IDC 13 03:08:08.6±44.0, 17°.93S×178°.70W, h605km±98km, mb2.9/3, mb1 3.1/4, mb1mx2.7/38, mbtmp3.9/4, Error ellipse: s-maj=872.8km s-min=125.6km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.10**	**273**	P		P	03 09 28.8	0.0
	2.0nm,0.3s,baz=203,slow=11,SNR=16							
STKA	**Stephens Creek**	**38.38**	**241**	P		P	03 14 39.8	0.0
	1.3nm,0.7s,baz=90,slow=20,SNR=2.8							
WRA	**Warramunga Arr**	**44.35**	**260**	P		P	03 15 26.8	-0.2
	0.5nm,0.5s,baz=96,slow=6.9,SNR=18							
ASAR	**Alice Springs**	**44.52**	**254**	P		P	03 15 28.2	0.0
	1.2nm,0.4s,baz=88,slow=8.7,SNR=34							

IDC 13 03:15:39.9±1.0, 16°.45N×46°.56W, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.5/52, mbtmp3.6/8, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/37, Error ellipse: s-maj=30.6km s-min=26.9km az=116.0

ISC 13 03:15:42.0±0.8, 16°.4N±0°.1×46°.6W±0°.2, h13km, n14, σ0°.79/8, mb3.7/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDP	**Montagnes des**	**12.75**	**209**	Pn		**Pn**	**03 18 43.5**	**+0.4**
	0.1nm,0.3s,baz=12,slow=14,SNR=9.0							
SJG	**San Juan**	**18.79**	**278**	LR		LR	03 25 48.3	
	comp=Z,50nm,19.9s,baz=94,slow=32							
H10N3	**ASCENSION HYDR**	**39.85**	**125**	T		T	04 05 24.8	
	baz=307,slow=75,SNR=51							
H10N2	**ASCENSION HYDR**	**39.85**	**125**	T		T	04 05 25.1	
	baz=307,slow=75,SNR=58							
H10N1	**ASCENSION HYDR**	**39.87**	**125**	T		T	04 05 26.3	
	baz=307,slow=75,SNR=57							
H10S3	**ASCENSION HYDR**	**40.40**	**126**	T		T	04 06 06.1	
	baz=306,slow=74,SNR=25							
H10S2	**ASCENSION HYDR**	**40.42**	**126**	T		T	04 06 07.5	
	baz=274,slow=74,SNR=12							
CPUP	**Villa Florida**	**43.79**	**194**	P		**P**	**03 23 46.7**	**-0.8**
	0.7nm,0.5s,baz=5.7,slow=10,SNR=1.9							
TORD	**Torodi Ar. Bea**	**46.68**	**87**	P		**P**	**03 24 11.0**	**+0.1**
	0.7nm,0.8s,baz=291,slow=6.0,SNR=3.1							
TXAR	**Lajitas Array**	**53.70**	**295**	P		**P**	**03 25 04.8**	**+0.8**
	0.1nm,0.6s,baz=95,slow=6.7,SNR=1.4							
YKA	**Yellowknife Ar**	**65.44**	**332**	P		**P**	**03 26 23.3**	**-1.0**
	0.1nm,0.6s,baz=57,slow=11,SNR=3.7							
ARCES	**ARCESS Array B**	**68.45**	**21**	P		**P**	**03 26 43.1**	**-0.3**
	1.1nm,0.8s,baz=258,slow=4.3,SNR=3.6							
BRTR	**Keskin Array B**	**72.23**	**53**	P		**P**	**03 27 08.0**	**+0.7**
	0.4nm,0.7s,baz=328,slow=5.1,SNR=2.8							
ILAR	**Eielson Array**	**79.61**	**335**	P		**P**	**03 27 49.0**	**+0.2**
	0.6nm,0.8s,baz=70,slow=4.7,SNR=7.5							

IDC 13 03:25:44.7±1.5, 7°.93S×118°.53E, h205km±13km, mb3.5/9, mb1 3.5/13, mb1mx3.3/50, mbtmp4.0/13, MS2.9/2, Ms1 2.9/2, ms1mx2.4/36, Error ellipse: s-maj=25.8km s-min=8.9km az=59.0

NEIC 13 03:25:44.3±1.9, 8°.03S±0°.08×118°.39E±0°.07, h202km±9km, mb4.0/16, Error ellipse: s-maj=11.9km s-min=10.0km az=207.0

DJA 13 03:25:45.1±0.4, 8°.S±4°×11°.8E±°, h180km±5km, M4.2/12, mb4.1/4, MLv4.2/12

ISC 13 03:25:44.0±0.5, 8°.09S±0°.05×118°.35E±0°.06, h200km, n58, σ1°.78/63, mb3.8/12, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLAI	**Plampang**	**0.93**	**218**	P		**Pn**	**03 26 12.7**	**-0.6**
PLAI				S		**Sn**	**03 26 33.0**	**-3.1**
TWSI	**Taliwang, Sumb**	**1.59**	**246**	P		**Pn**	**03 26 17.2**	**-1.3**
BASI	**Baing, Sumba**	**3.05**	**134**	P		**Pn**	**03 26 34.0**	**-0.2**
SRBI	**Singaraja**	**3.11**	**270**	P		**Pn**	**03 26 35.2**	**+0.3**
KAPI	**Kappang**	**3.36**	**25**	P		**Pn**	**03 26 36.7**	**-1.3**
	5.3nm,0.3s,baz=208,slow=6.3,SNR=21							
KAPI	**Kappang**	**3.36**	**25**	Pn		**Pn**	**03 26 38.4**	**+0.4**
MMRI	**Maumere**	**3.88**	**98**	Pn		**Pn**	**03 26 45.4**	**+1.0**
BNSI	**Bone**	**4.06**	**26**	P		**Pn**	**03 26 48.4**	**+1.8**
JAGI	**Jajag, Banyuwa**	**4.17**	**265**	Pn		**Pn**	**03 26 48.1**	**+0.1**
JAGI	**Jajag, Banyuwa**	**4.17**	**265**	P		**Pn**	**03 26 47.7**	**-0.3**
TTSI	**Tana Toraja**	**5.22**	**16**	P		**Pn**	**03 27 04.7**	**+3.4**
	0.2nm33nm,1.1s							
BATI	**Baumata 5.65 112**			P		**Pn**	**03 27 06.5**	**-0.3**
	4.9nm,0.3s,baz=289,slow=4.9,SNR=1.8							
BATI				S		**Sn**	**03 28 09.3**	**-2.9**
	37nm,0.3s,baz=357,slow=7.0,SNR=7.2							
BATI	**Baumata 5.65 112**			P		**Pn**	**03 27 07.9**	**+1.1**
	0.3nm19nm,0.5s							
SOEI	**Soe 6.07 106**			Pn		**Pn**	**03 27 11.5**	**-0.8**
SOEI	**Soe 6.07 106**			P		**Pn**	**03 27 11.6**	**-0.8**
	1.1nm37nm,0.7s							
UGM	**Wanagama 7.76 271**			Pn		**Pn**	**03 27 36.0**	**+1.8**
UGM	**Wanagama 7.76 271**			P		**Pn**	**03 27 34.7**	**+0.5**
LEM	**Lembang 10.72 276**			LR		LR	03 33 36.5	
	comp=Z,29nm,19.9s,baz=234,slow=43							
FITZ	**Fitzroy Crossi 12.21 145**			P		**Pn**	**03 28 31.6**	**0.0**
	0.5nm,0.3s,baz=341,slow=7.9,SNR=38							
FITZ				S		**Sn**	**03 30 42.7**	**-5.2**
	1.3nm,0.3s,baz=308,slow=19,SNR=8.8							
FITZ	**Fitzroy Crossi 12.21 145**			Pn		**Pn**	**03 28 31.8**	**+0.2**
KNRA	**Kununurra 12.67 127**			Pn		**Pn**	**03 28 36.5**	**-0.9**
MTN	**Manton Dam 13.42 112**			Pn		**Pn**	**03 28 47.2**	**+0.3**
PSA00	**Pilbara Seismi 13.48 174**			P		**P**	**03 28 51.5**	**+1.5**
KKM	**Kota Kinabalu 14.21 351**			P		**P**	**03 28 59.7**	**+1.4**
FAKI	**Fak Fak 14.75 70**			P		**Pn**	**03 29 02.5**	**-0.9**
WB0	**Warramunga Arr 19.39 128**			P		**P**	**03 29 55.3**	**+0.3**
WB0				IAmb		IAmb	03 29 59.9	
	comp=Z,3.1nm,0.8s							
WRA	**Warramunga Arr 19.45 129**			P		**P**	**03 29 55.7**	**0.0**
	comp=Z,0.7nm,0.3s,baz=301,slow=12,SNR=41							
WRA				S		**S**	**03 33 32.5**	**+7.7**
	comp=Z,0.3nm,0.3s,baz=225,slow=26,SNR=3.0							
WRA				ScP		**ScP**	**03 37 23.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=324,slow=2.0,SNR=9.8							
WRA	**Warramunga Arr 19.45 129**			P		**P**	**03 29 55.6**	**-0.1**
WRAB	**Tennant Creek 19.46 129**			P		**P**	**03 29 56.0**	**+0.3**
WRAB				IAmb		IAmb	03 30 05.3	
	comp=Z,5.5nm,1.2s							
WB2	**Warramunga Arr 19.46 129**			P		**P**	**03 29 56.0**	**+0.2**
WB2				IAmb		IAmb	03 29 56.3	
	comp=Z,9.7nm,1.4s							
WR0	**Warramunga Arr 19.62 129**			P		**P**	**03 29 58.0**	**+0.5**
WR0				IAmb		IAmb	03 29 58.9	
	comp=Z,9.1nm,1.3s							
MORW	**Morawa 20.98 186**			P		**P**	**03 30 12.5**	**+0.7**
MORW				IAmb		IAmb	03 30 30.3	
	comp=Z,9.4nm,1.1s							
AS31	**Alice Springs 21.49 138**			P		**P**	**03 30 17.9**	**+0.6**
ASAR	**Alice Springs 21.49 138**			P		**P**	**03 30 17.8**	**+0.5**
	comp=Z,2.0nm,0.3s,baz=309,slow=8.7,SNR=65							
ASAR				S		**S**	**03 34 03.7**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=319,slow=22,SNR=2.0							
ASAR				ScP		**ScP**	**03 37 29.2**	**-1.0**
	comp=Z,1.4nm,0.9s,baz=4.0,slow=2.4,SNR=5.8							
ASAR	**Alice Springs 21.49 138**			P		**P**	**03 30 18.2**	**+0.9**
FORT	**Forrest 24.33 159**			P		**P**	**03 30 44.2**	**+0.8**
NWAO	**Narrogin (SRO) 24.73 182**			P		**P**	**03 30 49.4**	**+2.3**
	comp=Z,4.4nm,0.4s,baz=12,slow=9.0,SNR=5.3							
NWAO	**Narrogin (SRO) 24.73 182**			P		**P**	**03 30 49.9**	**+2.8**
COEN	**Coen 25.04 106**			P		**P**	**03 30 50.1**	**0.0**
COEN				IAmb		IAmb	03 30 53.8	
	comp=Z,5.3nm,1.1s							
BBOO	**Buckleboo 29.57 149**			P		**P**	**03 31 31.5**	**+1.2**
STKA	**Stephens Creek 32.05 141**			P		**P**	**03 31 53.4**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=342,slow=13,SNR=2.9							
CMAR	**Chiang Mai Arr 32.60 324**			P		**P**	**03 31 58.1**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=157,slow=6.6,SNR=5.3							
JOW	**Kunigami 36.03 15**			LR		LR	03 48 42.7	
	comp=Z,48nm,19.9s,baz=264,slow=38							
KSRS	**Korea Array 46.19 11**			P		**P**	**03 33 48.5**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=186,slow=10.0,SNR=2.3							
KS19	**Wonju Array Si 46.22 10**			P		**P**	**03 33 45.9**	**-3.2**
KS19				IAmb		IAmb	03 33 50.0	
	comp=Z,4.5nm,1.1s							
USRK	**Ussuriysk Ar. 53.49 12**			P		**P**	**03 34 42.8**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=170,slow=4.8,SNR=6.1							
USRK	**Ussuriysk Ar. 53.49 12**			P		**P**	**03 34 43.5**	**-0.3**
SONM	**Songino Array 56.68 350**			P		**P**	**03 35 06.3**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=164,slow=7.6,SNR=4.7							
SONM	**Songino Array 56.68 350**			P		**P**	**03 35 06.7**	**+0.1**
MKAR	**Makanchi Array 63.36 333**			P		**P**	**03 35 50.9**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=150,slow=7.7,SNR=15							
MKAR	**Makanchi Array 63.36 333**			P		**P**	**03 35 51.1**	**-0.9**
MAKZ	**Makanchi 63.52 333**			P		**P**	**03 35 52.0**	**-1.0**
KKAR	**Karatay Array 66.95 324**			P		**P**	**03 36 13.3**	**-1.9**
ZALV	**Zalesovo Beam 67.97 339**			P		**P**	**03 36 19.2**	**-2.0**
	comp=Z,0.9nm,0.4s,baz=138,slow=6.9,SNR=3.5							
PEA0B	**Petropavlovsk- 69.51 24**			P		**P**	**03 36 29.8**	**-1.0**
VNDA	**Vanda 72.98 171**			P		**P**	**03 36 52.9**	**+1.7**
VNDA				IAmb		IAmb	03 36 59.0	
	comp=Z,3.4nm,1.3s							
ABKAR	**Akbulak array 76.46 325**			P		**P**	**03 37 11.1**	**-0.5**
TORD	**Torodi Ar. Bea 117.67 281**			PKP		**PKPdf**	**03 44 05.7**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=68,slow=1.5,SNR=1.7							

IDC 13 03:26:31.1±0.7, 5°.58S×153°.12E, h0km, mb4.2/17, mb1 4.4/19, mb1mx4.2/44, mbtmp4.3/19, ML2.1/1, MS3.4/11, Ms1 3.4/11, ms1mx3.2/52, Error ellipse: s-maj=21.0km s-min=14.2km az=115.0

NEIC 13 03:26:36.8±1.7, 5°.71S±0°.08×153°.0E±0°.1, h34km±5km, mb4.5/14, Error ellipse: s-maj=17.4km s-min=10.9km az=100.0

DJA 13 03:26:37.6±1.8, 5°.S±11°×15°.3E±2°.1, h90km±16km, M4.7/6, mB4.6/1, mb4.2/6, MLv4.9/2, Mw(mB)3.8/1

ISC 13 03:26:36.9±0.5, 5°.69S±0°.07×153°.09E±0°.09, h37km, n63, σ1°.20/61, mb4.4/23, MS3.3/10, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	**Rabaul 1.75 328**					**Pn**	**03 27 04.4**	**-0.3**
PMG	**Port Moresby 6.94 237**			Pn		**Pn**

comp=Z,100nm,20.6s,baz=110,slow=35
MJAR Matsushiro Arr 44.26 343 LR LR 03 52 50.5
comp=Z,32nm,18.5s,baz=210,slow=36
USRK Ussuriysk Ar. 53.17 341 P **P** **03 35 51.0 -0.3**
comp=Z,1.3nm,0.7s,baz=164,slow=5.7,SNR=4.2
USRK Ussuriysk Ar. 53.17 341 P **P** **03 35 51.2 0.0**
CMAR Chiang Mai Arr 58.51 296 P **P** **03 36 30.9 +0.9**
comp=Z,0.9nm,0.7s,baz=119,slow=5.4,SNR=8.5
CMAR Chiang Mai Arr 58.51 296 P **P** **03 36 30.2 +0.2**
PETK Petropavlovsk- 58.70 3 P **P** **03 36 30.0 -0.8**
PETK Petropavlovsk- 58.70 3 P **P** **03 36 29.9 -0.8**
comp=Z,2.9nm,0.7s,baz=158,slow=8.2,SNR=6.5
PETK LR LR 03 58 22.0
comp=Z,21nm,20.8s,baz=135,slow=33
MA2 Magadan 65.08 359 P **P** **03 37 12.5 -1.0**
comp=Z,4.4nm,0.4s,baz=152,slow=7.8,SNR=6.3
MA2 Magadan 65.08 359 P **P** **03 37 12.6 -0.8**
ULN Ulaanbaatar 66.89 328 **P** **03 37 25.9 +0.3**
ULN IAmb IAmb 03 37 27.0
comp=Z,8.7nm,1.4s
SONM Songino Array 67.22 328 P **P** **03 37 27.7 0.0**
comp=Z,1.3nm,0.7s,baz=139,slow=5.3,SNR=11
SONM Songino Array 67.22 328 P **P** **03 37 28.1 +0.5**
SONM IAmb IAmb 03 37 29.0
comp=Z,6.2nm,1.4s
SEY Seymchan 68.43 360 P **P** **03 37 33.9 -0.8**
comp=Z,1.8nm,0.7s,baz=188,slow=6.4,SNR=9.9
BILL Bilibino 74.14 5 P **P** **03 38 09.1 0.0**
BILL IAmb IAmb 03 38 19.0
comp=Z,4.3nm,0.8s
IMAR Indian Mountai 81.12 19 P **P** **03 38 47.3 -0.8**
MKAR Makanchi Array 81.18 319 P **P** **03 38 48.1 -0.8**
comp=Z,2.3nm,0.9s,baz=111,slow=5.8,SNR=17
MKAR Makanchi Array 81.18 319 P **P** **03 38 49.2 +0.4**
MLY Manley 81.60 21 P **P** **03 38 49.4 -1.3**
MLY IAmb IAmb 03 39 00.0
comp=Z,6.2nm,1.4s
ZAA0 Zalesovo Array 82.05 326 P **P** **03 38 53.1 -0.1**
ZAA0 IAmb IAmb 03 38 53.3
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 82.05 326 P **P** **03 38 52.1 -1.1**
comp=Z,3.8nm,0.7s,baz=112,slow=6.3,SNR=15
ZALV Zalesovo Beam 82.05 326 P **P** **03 38 53.5 +0.2**
ILAR Eielson Array 82.87 22 P **P** **03 38 54.8 -2.6**
comp=Z,1.2nm,1.0s,baz=255,slow=5.3,SNR=5.7
ILAR Eielson Array 82.87 22 P **P** **03 38 56.7 -0.6**
ULHL Ulahol 84.13 313 P **P** **03 39 05.8 +1.1**
SNR=5.4
QSPA South Pole Qui 84.28 180 P **P** **03 39 05.0 +0.2**
TKM2 Tokmak 2 84.75 314 P **P** **03 39 08.3 +0.6**
SNR=6.4
BMAR Burnt Mountain 84.98 20 P **P** **03 39 08.0 -0.1**
UCH Uchtor 85.38 313 P **P** **03 39 12.8 +1.6**
SNR=12
AAK Ala-Archa 85.48 313 P **P** **03 39 11.6 +0.3**
USP Ospenovka 85.61 314 P **P** **03 39 12.7 +1.0**
SNR=6.0
AML Almayashu 85.96 313 P **P** **03 39 14.8 +0.7**
SNR=17
NRIK Noril'sk 86.89 341 P **P** **03 39 17.6 +0.2**
comp=Z,2.3nm,0.6s,baz=108,slow=6.6,SNR=4.7
YKA Yellowknife Ar 96.07 28 P **P** **03 39 59.4 -0.9**
comp=Z,0.4nm,0.9s,baz=269,slow=4.7,SNR=4.1
YKA PP **PP** **03 43 56.7 +3.5**
comp=Z,0.1nm,0.7s,baz=285,slow=4.5,SNR=5.5
LPAZ La Paz 133.75 119 PKP **PKPdf** **03 45 50.4 -1.3**
comp=Z,3.4nm,1.1s,baz=316,slow=2.3,SNR=7.0
LPAZ La Paz 133.75 119 **PKiKP** **03 45 52.8 -0.2**
BDFB Brasilia 150.24 136 PKPbc **PKPbc** **03 46 25.9 +0.6**
comp=Z,12nm,0.9s,baz=228,slow=2.8,SNR=16
BDFB Brasilia 150.24 136 **PKiKP** **03 46 26.2 +0.1**
TORD Torodi Ar. Bea 150.84 287 PKPbc **PKPbc** **03 46 26.1 -0.5**
comp=Z,7.6nm,0.9s,baz=48,slow=1.9,SNR=24
TORD Torodi Ar. Bea 150.84 287 **PKPbc** **03 46 25.8 -0.8**

NEIC ***13*** *03:40:22.7±0.9,25.0°S±0.1°×175.01°W±0.05,h39km±13km, mb4.4/7,Error ellipse: s-maj=18.6km s-min=5.0km az=165.0*

IDC ***13*** *03:40:23.8±1.6,25.05°S×175.77°W,h0km,mb3.8/5, mb1 4.1/6,mb1mx3.8/46,mbtmp3.8/6,ML5.5/1,MS3.1/1, Ms1 3.1/1,ms1mx2.5/43,Error ellipse: s-maj=61.0km s-min=32.5km az=157.0*

ISC 13 03:40:28.8±1.2,25.2°S±0.1°×175.9°W±0.2,h35km,n19, σ1°34/17,mb4.1/8,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.21**	**44**	Pn	Pn	03 42 09.9	-16
MSVF	**Nonsavu**	**9.30**	**322**	Pn	**Pn**	**03 42 39.3**	**-1.2**
	1.6nm,0.3s,baz=148,slow=13,SNR=6.3						
MSVF	**Nonsavu**	**9.30**	**322**		**Pn**	**03 42 39.4**	**-1.1**
MXZ	**Matakaoa Point**	**13.30**	**200**	Pn	**Pn**	**03 43 35.1**	**+0.1**
RAR	**Rarotonga**	**15.34**	**78**	LR	LR	03 47 43.9	
	comp=Z,72nm,20.5s,baz=264,slow=29						
OXZ	**Oxford**	**20.63**	**206**	P	**P**	**03 45 02.6**	**-2.5**
OXZ				IAmb	IAmb	03 45 12.4	
	comp=Z,52nm,1.5s						
ARMA	**Armidale**	**29.14**	**252**	P	P	03 46 21.9	-4.9
ASAR	**Alice Springs**	**45.52**	**261**	P	**P**	**03 48 47.0**	**+1.8**
	comp=Z,0.6nm,0.7s,baz=101,slow=8.1,SNR=6.4						
ASAR				PcP	**PcP**	**03 50 25.9**	**+2.2**
	comp=Z,0.3nm,0.8s,baz=117,slow=5.4,SNR=2.7						
WR0	**Warramunga Arr**	**45.86**	**266**	P	**P**	**03 48 47.9**	**0.0**
WR0				IAmb	IAmb	03 48 52.5	
	comp=Z,5.2nm,1.2s						
WB2	**Warramunga Arr**	**46.03**	**266**	P	**P**	**03 48 49.5**	**+0.2**
WB2				IAmb	IAmb	03 49 02.4	
	comp=Z,9.6nm,1.4s						
WB0	**Warramunga Arr**	**46.05**	**266**	P	**P**	**03 48 49.8**	**+0.3**
WB0				IAmb	IAmb	03 48 51.1	
	comp=Z,9.4nm,1.5s						
WRA	**Warramunga Arr**	**46.05**	**266**	P	**P**	**03 48 49.4**	**0.0**
	comp=Z,1.0nm,0.5s,baz=104,slow=8.0,SNR=22						
WRA	**Warramunga Arr**	**46.05**	**266**	P	**P**	**03 48 49.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**54.45**	**265**	P	**P**	**03 49 54.1**	**+1.1**
	comp=Z,2.3nm,1.0s,baz=119,slow=8.2,SNR=3.8						
FITZ	**Fitzroy Crossi**	**54.45**	**265**	P	**P**	**03 49 54.9**	**+1.9**
FITZ				IAmb	IAmb	03 49 58.2	
	comp=Z,1.1nm,1.3s						
NVAR	**Mina Array Bea**	**83.14**	**42**	P	**P**	**03 52 50.9**	**-0.5**
	comp=Z,0.1nm,0.6s,baz=245,slow=7.5,SNR=1.8						
CMAR	**Chiang Mai Arr**	**93.47**	**289**	P	**P**	**03 53 42.7**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=129,slow=3.6,SNR=4.4						
AKASG	**Malin Array Be**	**148.01**	**329**	PKPbc	**PKPbc**	**04 00 10.5**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=44,slow=4.3,SNR=2.1						
BRTR	**Keskin Array B**	**151.32**	**308**	PKPbc	**PKPbc**	**04 00 18.2**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=67,slow=3.7,SNR=3.7						

ISK ***13*** *03:49:01.9,39.10N×24.50E,h9km,ML4.2/23*

IDC ***13*** *03:49:01.4±0.6,39.10N×24.43E,h0km,mb4.0/20, mb1 4.1/30,mb1mx3.9/64,mbtmp3.9/30,ML3.7/10, MS3.6/26,Ms1 3.6/26,ms1mx3.4/59,Error ellipse: s-maj=13.0km s-min=10.6km az=134.0*

ATH ***13*** *03:49:02.6,39.13N×24.46E,h17km±2km,ML4.1/35,Error ellipse: s-maj=2.1km s-min=0.7km az=112.0*

MOS ***13*** *03:49:02.7±0.9,39.20N×24.58E,h13km,mb4.2/16,Error ellipse: s-maj=5.0km s-min=3.0km az=97.1*

PDG ***13*** *03:49:02.6±0.4,39.10N×24.52E,h20km,ML4.3/14,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

BEO ***13*** *03:49:03.0±0.7,39.18N×24.60E,h0km,ML4.1/17*

MED_RC ***13*** *03:49:03.0±0.3,39.17N×24.57E,h13km±1km,MW4.4/25, Moment Tensor Solution.Mantle waves: s25,c34; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr-0.74±.22; Mθθ4.47±.25; Mϕϕ-3.73±.22; Mrθ0.33±.32; Mθϕ-1.41±.17; Mϕr1.71±.39; Best double couple: Mo4.72000×10^15 NP1:ϕs142.00000°,δ73.00000°, λ-17.00000°. NP2:ϕs237.00000°,δ74.00000°, λ-162.00000°. Principal axes: T 4.7100, Plg1.0000°, Azm9.0000°; N 0.0200, Plg66.0000°, Azm278.0000°; P -4.7300, Plg24.0000°, Azm100.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE ***13*** *03:49:03.0,39.10N×24.52E,h8km,ML4.1/13 Error ellipse: s-maj=0.7km s-min=0.3km az=215.0*

NEIC ***13*** *03:49:04.2,39.13N×24.51E,h7km,Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr0.03; Mθθ2.18; Mϕϕ-2.21; Mrθ-0.78; Mθϕ-1.02; Mϕr0.51; Fault plane solution: Mo2.60000×10^15 NP1:ϕs236.09000°, δ71.28000°,λ172.49000°. NP2:ϕs328.52000°,δ82.89000°, λ18.87000°. Principal axes: T 2.6989, Plg18.0000°, Azm194.0000°; N -0.2139, Plg70.0000°, Azm348.0000°; P -2.4850, Plg8.0000°, Azm101.0000°;*

NEIC ***13*** *03:49:04.1±2.7,39.13N±0.05×24.49E±0.06,h10km±1km, mb4.4/15,Mwr4.2/19,ML4.1(THE),ML4.1(ATH) Error ellipse: s-maj=8.9km s-min=8.1km az=216.0*

DDA ***13*** *03:49:04.9,39.12N×24.61E,h22km,MW4.2*

CFUSG ***13*** *03:49:06.2,39.45N×24.34E,h14km,MD3.6/2,Aegean Sea Magtype MSH 3.0 from 2 stations*

ISC 13 03:49:03.5±0.8,39.11N±0.02×24.52E±0.02,h11km±5km, n523,σ1°58/612,mb4.2/40,MS3.5/19,55C-18D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKY	**Skiros Island**	**0.23**	**174**	P	**Pg**	**03 49 07.8**	**-0.5**
SKY				S	**Sg**	**03 49 11.4**	**-0.2**
SKY				AML	AML	03 49 12.0	
SKY				AML	AML	03 49 12.7	
SKY	**Skiros Island**	**0.23**	**174**	P	**Pg**	**03 49 07.7**	**-0.6**
SKY				S	**Sg**	**03 49 10.4**	**-1.2**
	131μm,0.3s						
ALNA	**Alonissos**	**0.51**	**275**	P	**Pg**	**03 49 12.5**	**-1.0**
ALNA				AML	AML	03 49 21.2	
	comp=E,87438μm,0.3s						
ALNA				AML	AML	03 49 24.3	
	comp=N,85558μm,0.8s						
EFSA	**Agios Efstrati**	**0.56**	**40**	P	**Pg**	**03 49 14.4**	**0.0**
EFSA				S	**Sg**	**03 49 22.3**	**+0.4**
EFSA				AML	AML	03 49 24.1	
EFSA				AML	AML	03 49 24.2	
KYMI	**Kymi, Euboea I**	**0.58**	**215**	P	**Pg**	**03 49 13.7**	**-1.0**
KYMI				S	**Sg**	**03 49 22.1**	**-0.2**
KYMI				AML	AML	03 49 26.3	
	comp=E,38457μm,0.4s						
KYMI				AML	AML	03 49 26.5	
	comp=N,38324μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.58**	**215**	P	**Pg**	**03 49 13.8**	**-0.9**
KYMI				S	**Sg**	**03 49 22.4**	**+0.1**
	comp=N,19μm,0.4s						
EREA	**Eretria**	**0.83**	**214**	P	**Pg**	**03 49 17.9**	**-1.6**
EREA				S	**Sg**	**03 49 29.7**	**-0.5**
EREA				AML	AML	03 49 32.5	
	comp=E,65785μm,0.5s						
EREA				AML	AML	03 49 32.9	
	comp=N,43786μm,0.5s						
EREA	**Eretria**	**0.83**	**214**	P	**Pg**	**03 49 18.2**	**-1.3**
EREA				S	**Sg**	**03 49 30.7**	**+0.4**
	comp=N,27μm,0.5s						
LIA	**Limnos Island**	**0.94**	**33**	P	**Pg**	**03 49 20.7**	**-0.9**
LIA				S	**Sg**	**03 49 33.1**	**-0.8**
LIA				AML	AML	03 49 36.1	
	comp=N,52910μm,0.3s						
LIA				AML	AML	03 49 36.5	
	comp=E,34932μm,0.3s						
LIA	**Limnos Island**	**0.94**	**33**	P	**Pg**	**03 49 21.0**	**-0.6**
LIA				S	**Sb**	**03 49 34.3**	**0.0**
	comp=E,22μm,0.3s						
PSRA	**Psara**	**0.99**	**124**	P	**Pg**	**03 49 22.4**	**-0.2**
PSRA				AML	AML	03 49 38.2	
	comp=N,29041μm,0.7s						
PSRA				AML	AML	03 49 40.2	
	comp=E,27672μm,0.5s						
NEO	**Neokhori**	**1.03**	**282**	P	**Pg**	**03 49 21.6**	**-1.7**
NEO				AML	AML	03 49 39.5	
	comp=E,24158μm,0.3s						
NEO				AML	AML	03 49 40.7	
	comp=N,27514μm,0.4s						
NEO	**Neokhori**	**1.03**	**282**	P	**Pg**	**03 49 22.2**	**-1.0**
PAIG	**Paliouri**	**1.04**	**322**	P	**Pb**	**03 49 22.3**	**-1.3**
PAIG				S	**Sg**	**03 49 34.9**	**-2.3**
PAIG				AML	AML	03 49 41.6	
	comp=E,16937μm,1.0s						
PAIG				AML	AML	03 49 42.0	
	comp=N,14417μm,0.6s						
PAIG	**Paliouri**	**1.04**	**322**	P	**Pb**	**03 49 22.8**	**-0.8**
PAIG				S	**Sn**	**03 49 38.7**	**+0.1**
	comp=N,9μm,0.8s						
PAIG	**Paliouri**	**1.04**	**322**	P	**Pb**	**03 49 22.8**	**-0.8**
SIGR	**SIGRI**	**1.04**	**84**	P	**Pg**	**03 49 22.7**	**-0.9**
SIGR				S	**Sb**	**03 49 37.2**	**0.0**
SIGR				AML	AML	03 49 41.5	
	comp=E,8867μm,0.5s						
SIGR				AML	AML	03 49 44.5	
	comp=N,14758μm,0.9s						
SIGR	**SIGRI**	**1.04**	**84**	P	**Pg**	**03 49 22.9**	**-0.7**
SIGR				S	**Sb**	**03 49 37.4**	**+0.2**
	comp=N,6μm,0.7s						
SIGR	**SIGRI**	**1.04**	**84**	PG	**Pg**	**03 49 22.7**	**-0.9**
SIGR				SG	**Sb**	**03 49 37.6**	**+0.4**
SMIA	**Simia**	**1.05**	**258**	P	**Pg**	**03 49 21.5**	**-2.1**
SMIA				S	**Sg**	**03 49 35.2**	**-2.0**
SMIA				AML	AML	03 49 40.8	
SMIA				AML	AML	03 49 42.6	
SMIA	**Simia**	**1.05**	**258**	P	**Pg**	**03 49 22.8**	**-0.8**
SMIA				S	**Sg**	**03 49 37.0**	**-0.3**
	comp=N,80μm,0.5s						
XOR	**Xorichti**	**1.06**	**284**	P	**Pb**	**03 49 22.1**	**-1.8**
XOR				S	**Sg**	**03 49 35.2**	**-2.6**
XOR				AML	AML	03 49 41.0	
	comp=N,25674μm,0.5s						
XOR				AML	AML	03 49 41.4	
	comp=E,19388μm,0.7s						
XOR	**Xorichti**	**1.06**	**284**	P	**Pb**	**03 49 22.5**	**-1.4**
KARY	**Karystos**	**1.08**	**183**	P	**Pb**	**03 49 22.7**	**-1.5**
KARY				S	**Sb**	**03 49 36.7**	**-1.5**
KARY				AML	AML	03 49 40.9	
	comp=N,8629μm,0.3s						
KARY				AML	AML	03 49 42.9	
	comp=E,5901μm,0.4s						
KARY	**Karystos**	**1.08**	**183**	P	**Pb**	**03 49 22.8**	**-1.3**
DION	**Dionisos Attik**	**1.13**	**204**	P	**Pb**	**03 49 23.2**	**-1.8**
DION				S	**Sb**	**03 49 38.7**	**-1.0**
DION	**Dionisos Attik**	**1.13**	**204**	P	**Pb**	**03 49 23.7**	**-1.3**
DION				S	**Sg**	**03 49 39.9**	**+0.1**
	comp=E,27μm,0.4s						
PTL	**Penteli**	**1.18**	**206**	P	**Pb**	**03 49 24.4**	**-1.4**
PTL				AML	AML	03 49 42.9	
	comp=E,13606μm,0.7s						
PTL				AML	AML	03 49 43.3	
	comp=N,10398μm,0.3s						
PTL	**Penteli**	**1.18**	**206**	P	**Pb**	**03 49 24.4**	**-1.4**
PTL				S	**Sb**	**03 49 41.3**	**+0.2**
	comp=N,6μm,0.5s						
ATAL	**Atalanti**	**1.24**	**251**	P	**Pn**	**03 49 25.5**	**-1.3**
ATAL				S	**Sb**	**03 49 42.8**	**-0.1**
	comp=N,6μm,0.7s						
LKR	**Lokris**	**1.27**	**249**	P	**Pn**	**03 49 25.8**	**-1.4**
LKR				S	**Sb**	**03 49 41.5**	**-2.3**
LKR				AML	AML	03 49 45.5	
	comp=N,11995μm,0.5s						
LKR				AML	AML	03 49 48.8	
	comp=E,14501μm,0.5s						
LKR	**Lokris**	**1.27**	**249**	P	**Pn**	**03 49 25.8**	**-1.4**
ATHU	**Athens Univers**	**1.28**	**207**	P	**Pn**	**03 49 25.8**	**-1.4**
ATHU				S	**Sb**	**03 49 42.4**	**-1.6**
ATHU				AML	AML	03 49 44.6	
	comp=N,7778μm,0.9s						
ATHU				AML	AML	03 49 51.2	
	comp=E,2484μm,0.5s						
ATHU	**Athens Univers**	**1.28**	**207**	P	**Pn**	**03 49 25.9**	**-1.4**
OUR	**Ouranopolis**	**1.29**	**341**	P	**Pn**	**03 49 26.5**	**-1.0**
OUR				S	**Sb**	**03 49 41.9**	**-2.5**
OUR				AML	AML	03 49 48.9	
	comp=E,13693μm,0.9s						
OUR				AML	AML	03 49 50.1	
	comp=N,8816μm,0.8s						
OUR	**Ouranopolis**	**1.29**	**341**	P	**Pn**	**03 49 26.6**	**-0.9**
OUR	**Ouranopolis**	**1.29**	**341**	P	**Pn**	**03 49 26.6**	**-0.9**
OUR	**Ouranopolis**	**1.29**	**341**	PN	**Pn**	**03 49 26.6**	**-0.9**
OUR				SN	**Sb**	**03 49 43.9**	**-0.5**
ATH	**Athens Observa**	**1.30**	**209**	P	**Pn**	**03 49 25.9**	**-1.6**
ATH				S	**Sb**	**03 49 43.6**	**-0.9**
ATH				AML	AML	03 49 45.8	
	comp=E,14647μm,0.7s						
ATH				AML	AML	03 49 48.3	
	comp=N,18992μm,0.5s						
ATH	**Athens Observa**	**1.30**	**209**	P	**Pn**	**03 49 26.2**	**-1.3**
ATH	**Athens Observa**	**1.30**	**209**	P	**Pn**	**03 49 26.2**	**-1.3**
ATH				S	**Sb**	**03 49 43.6**	**-0.9**
KOCA	**Canakkale, Ayv**	**1.32**	**72**	*i* P	**Pn**	**03 49 26.7**	**-1.1**
KOCA				*i* S	**Sb**	**03 49 39.7**	**-5.4**
VIL2	**Platees**	**1.33**	**228**	P	**Pn**	**03 49 26.2**	**-1.8**
VIL2				AML	AML	03 49 49.6	
	comp=E,22181μm,0.7s						
VIL2				AML	AML	03 49 51.1	
	comp=N,22411μm,0.5s						
VILL	**Villia**	**1.34**	**225**	P	**Pn**	**03 49 27.2**	**-0.9**
PRK	**Paraskevi**	**1.37**	**84**	P	**Pn**	**03 49 28.0**	**-0.5**
PRK				S	**Sb**	**03 49 46.4**	**-0.3**
PRK				AML	AML	03 49 54.6	
	comp=N,19268μm,1.1s						
PRK				AML	AML	03 49 58.7	
	comp=E,17661μm,0.7s						
PRK	**Paraskevi**	**1.37**	**84**	P	**Pn**	**03 49 28.3**	**-0.2**
PRK				S	**Sb**	**03 49 46.3**	**-0.3**
	comp=E,10μm,0.9s						
VLY	**Voula,Athens**	**1.38**	**205**	P	**Pn**	**03 49 27.3**	**-1.4**
VLY				S	**Sb**	**03 49 45.7**	**-1.2**
VLY				AML	AML	03 49 51.0	
	comp=N,19164μm,0.5s						
VLY				AML	AML	03 49 54.2	
	comp=E,25224μm,0.5s						
VLY	**Voula,Athens**	**1.38**	**205**	P	**Pn**	**03 49 27.4**	**-1.3**
BOZC	**Bozcaada**	**1.39**	**58**	*i* P	**Pn**	**03 49 27.8**	**-1.1**
BOZC				*i* S	**Sn**	**03 49 39.9**	**-7.4**
BOZC	**Bozcaada**	**1.39**	**58**	PN	**Pn**	**03 49 27.5**	**-1.4**
CHOS	**Chios island**	**1.40**	**121**	P	**Pn**	**03 49 28.5**	**-0.6**
CHOS				AML	AML	03 49 51.6	
	comp=N,7531μm,1.0s						
CHOS				AML	AML	03 49 55.4	
	comp=E,11437μm,0.5s						
CHOS	**Chios island**	**1.40**	**121**	P	**Pn**	**03 49 28.4**	**-0.6**
CHOS				S	**Sn**	**03 49 47.5**	**0.0**
	comp=E,5μm,0.7s						
CHOS	**Chios island**	**1.40**	**121**	PN	**Pn**	**03 49 28.3**	**-0.7**
CHOS				SN	**Sn**	**03 49 47.5**	**0.0**
AXAR	**Agios Charalam**	**1.49**	**257**	P	**Pn**	**03 49 28.9**	**-1.4**
AXAR				S	**Sn**	**03 49 46.8**	**-2.9**
AXAR				AML	AML	03 49 57.1	
	comp=E,20146μm,0.6s						
AXAR				AML	AML	03 50 00.5	
	comp=N,14667μm,1.0s						
AXAR	**Agios Charalam**	**1.49**	**257**	P	**Pn**	**03 49 29.2**	**-1.0**
THAS	**Thassos island**	**1.50**	**6**	P	**Pn**	**03 49 28.8**	**-1.5**
THAS				AML	AML	03 49 50.1	
	comp=E,10035μm,0.3s						
THAS				AML	AML	03 49 51.7	
	comp=N,5773μm,0.3s						
THAS	**Thassos island**	**1.50**	**6**	P	**Pn**	**03 49 29.2**	**-1.2**
PLG	**Polygyros**	**1.51**	**327**	P	**Pn**	**03 49 29.2**	**-1.3**
PLG				S	**Sn**	**03 49 48.5**	**-1.7**
PLG				AML	AML	03 49 54.3	
	comp=E,6509μm,0.6s						
PLG				AML	AML	03 50 00.6	
	comp=N,4943μm,0.7s						
PLG	**Polygyros**	**1.51**	**327**	P	**Pn**	**03 49 29.6**	**-0.9**
PLG	**Polygyros**	**1.51**	**327**	P	**Pn**	**03 49 29.6**	**-0.9**
GADA	**Gvkgeada**	**1.52**	**44**	P	**Pn**	**03 49 30.0**	**-0.5**
GADA	**Gvkgeada**	**1.52**	**44**	PN	**Pn**	**03 49 30.1**	**-0.5**
GOKA	**anakkale-Gk**	**1.52**	**44**	*i* P	**Pn**	**03 49 30.0**	**-0.6**
GOKA				*i* S	**Sn**	**03 49 44.4**	**-6.0**
GOKC	**Gokceada-Canak**	**1.53**	**44**	PN	**Pn**	**03 49 30.8**	**0.0**
SMTH	**Samothraki Isl**	**1.57**	**29**	P	**Pn**	**03 49 29.4**	**-1.9**
SMTH				AML	AML	03 49 57.0	
	comp=N,5261μm,0.4s						
SMTH				AML	AML	03 49 59.9	
	comp=E,2356μm,0.4s						
SMTH	**Samothraki Isl**	**1.57**	**29**	P	**Pn**	**03 49 30.0**	**-1.3**
EZN	**Ezine**	**1.57**	**62**	P	**Pn**	**03 49 30.8**	**-0.5**
EZN				S	**Sn**	**03 49 51.7**	**+0.1**
	comp=E,3μm,0.7s						
EZN	**Ezine**	**1.57**	**62**	P	**Pn**	**03 49 30.8**	**-0.5**
EZN	**Ezine**	**1.57**	**62**	PN	**Pn**	**03 49 31.4**	**+0.1**
ECEA	**Canakkale, Ece**	**1.58**	**53**	*i* P	**Pn**	**03 49 30.9**	**-0.5**
ECEA				*i* S	**Sn**	**03 49 45.6**	**-6.3**
LTK	**Loutraki**	**1.63**	**229**	P	**Pn**	**03 49 31.1**	**-1.1**
LTK	**Loutraki**	**1.63**	**229**	P	**Pn**	**03 49 31.4**	**-0.7**
TNSA	**Tinos**	**1.65**	**162**	P	**Pn**	**03 49 31.3**	**-1.1**
LOUT	**Loutraki**	**1.65**	**228**	P	**Pn**	**03 49 31.1**	**-1.3**
LOUT				AML	AML	03 49 59.9	
	comp=N,2999μm,0.7s						
LOUT				AML	AML	03 50 01.8	
	comp=E,3921μm,0.6s						
LOUT	**Loutraki**	**1.65**	**228**	P	**Pn**	**03 49 31.5**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.69**	**67**	*i* P	**Pn**	**03 49 31.9**	**-1.1**
BAYC				*i* S	**Sn**	**03 49 48.0**	**-6.7**
AYVA	**Ayvalik**	**1.70**	**83**	*i* P	**Pn**	**03 49 32.4**	**-0.7**
AYVA				*i* S	**Sn**	**03 49 46.6**	**-8.2**
DLFA	**Delphi**	**1.70**	**249**	P	**Pn**	**03 49 32.2**	**-1.0**
AGG	**Agios Georgios**	**1.71**	**268**	P	**Pn**	**03 49 32.2**	**-1.1**
AGG				AML	AML	03 50 03.8	
	comp=N,6560μm,0.7s						
AGG				AML	AML	03 50 07.4	
	comp=E,9778μm,1.0s						
AGG	**Agios Georgios**	**1.71**	**268**	P	**Pn**	**03 49 32.4**	**-0.8**
AGG	**Agios Georgios**	**1.71**	**268**	P	**Pn**	**03 49 32.1**	**-1.1**
AGG	**Agios Georgios**	**1.71**	**268**	PN	**Pn**	**03 49 32.0**	**-1.2**
AGG	**Agios Georgios**	**1.71**	**268**	Pn	**Pn**	**03 49 32.1**	**-1.1**
DSF	**Desfina**	**1.71**	**247**	P	**Pn**	**03 49 31.9**	**-1.3**
DSF	**Desfina**	**1.71**	**247**	P	**Pn**	**03 49 31.9**	**-1.3**
LRSO	**Larissa Observ**	**1.74**	**289**	P	**Pn**	**03 49 33.2**	**-0.5**
LRSO	**Larissa Observ**	**1.74**	**289**	P	**Pn**	**03 49 32.8**	**-0.8**
ZEYE	**Izmir, Urla-Ze**	**1.78**	**119**	*i* P	**Pn**	**03 49 33.2**	**-0.9**
ZEYE				*i* S	**Sn**	**03 49 52.8**	**-3.9**
URLA	**Izmir**	**1.79**	**114**	*i* P	**Pn**	**03 49 32.6**	**-1.7**
URLA				*i* S	**Sn**	**03 49 49.9**	**-7.2**
URLA	**Izmir**	**1.79**	**114**	PN	**Pn**	**03 49 32.9**	**-1.4**
THAL	**Thalero**	**1.81**	**234**	P	**Pn**	**03 49 33.4**	**-1.1**
THAL				AML	AML	03 50 13.0	
	comp=E,17082μm,0.6s						
THAL				AML	AML	03 50 17.2	
	comp=N,14394μm,0.8s						
THAL	**Thalero**	**1.81**	**234**	P	**Pn**	**03 49 33.9**	**-0.6**
KVLA	**Kavala**	**1.83**	**357**	P	**Pn**	**03 49 33.6**	**-1.3**
HORT	**Hortiatis**	**1.84**	**324**	P	**Pn**	**03 49 34.5**	**-0.6**
HORT	**Hortiatis**	**1.84**	**324**	P	**Pn**	**03 49 34.7**	**-0.5**
HORT	**Hortiatis**	**1.84**	**324**	PN	**Pn**	**03 49 34.6**	**-0.6**
LIT	**Litokhoron**	**1.85**	**303**	P	**Pn**	**03 49 34.4**	**-0.8**
LIT				S	**Sn**	**03 49 57.2**	**-1.5**
LIT				AML	AML	03 49 58.0	
	comp=N,4473μm,0.6s						
LIT				AML	AML	03 49 58.3	
	comp=E,2693μm,1.0s						
LIT	**Litokhoron**	**1.85**	**303**

KRND	KRANIDI	2.03	212		P	Pn	03 49 36.2	-1.4
SERG	Sergoula	2.05	251		P	Pn	03 49 37.0	-0.9
SERG					AML	AML	03 50 04.5	
	comp=E,4710µm,0.5s							
SERG					AML	AML	03 50 14.8	
	comp=N,5962µm,0.8s							
TRIZ	Trizonia	2.05	250		P	Pn	03 49 37.1	-0.8
ENEZ	Enez	2.05	37	PN		Pn	03 49 37.2	-0.7
EVR	Evrytania	2.12	266		P	Pn	03 49 38.5	-0.4
EVR	Evrytania	2.12	266		P	Pn	03 49 38.4	-0.6
SRS	Serrai	2.13	341		P	Pn	03 49 38.1	-0.9
SRS	Serrai	2.13	341		*e*Pn	Pn	03 49 38.1	-0.9
SRS					*e*Sn	Sn	03 50 05.1	-0.3
SRS	Serrai	2.13	341		P	Pn	03 49 38.2	-0.9
DGB	zmir	2.13	119		*i* P	Pn	03 49 38.7	-0.3
DGB					*i* S	Sn	03 50 00.7	-4.8
ALN	Alexandroupoli	2.14	33		P	Pn	03 49 37.4	-1.7
ALN	Alexandroupoli	2.14	33	PN		Pn	03 49 38.3	-0.8
ALN	Alexandroupoli	2.14	33	Pn		Pn	03 49 37.4	-1.7
KLV	Kalavryta, Ach	2.14	241		P	Pn	03 49 38.6	-0.6
KLV	Kalavryta, Ach	2.14	241		P	Pn	03 49 38.7	-0.5
LPK	Lapseki	2.14	53	PN		Pn	03 49 37.8	-1.3
LAKA	Lakka	2.17	247		P	Pn	03 49 39.2	-0.4
RDO	Rodhopi	2.18	21	PN		Pn	03 49 38.5	-1.2
APE	Apeiranthos	2.19	158		P	Pn	03 49 39.1	-0.8
APE	Apeiranthos	2.19	158		P	Pn	03 49 38.7	-1.2
APE	Apeiranthos	2.19	158	⇑P		Pn	03 49 38.7	-1.2
APE					*i* S	Sn	03 50 04.2	-2.8
APE	Apeiranthos	2.19	158	*c* P		Pn	03 49 38.6	-1.2
APE	Apeiranthos	2.19	158	PN		Pn	03 49 38.9	-0.9
ERIK	Erikli-Kesan	2.19	44	PN		Pn	03 49 39.4	-0.4
SMG	Samos	2.30	127		P	Pn	03 49 40.8	-0.5
KESN	Edirne-Kesan	2.39	43	*i* P		Pn	03 49 42.4	-0.5
KESN					*i* S	Sn	03 50 08.4	-3.9
KNT	Kendrikon	2.40	329		P	Pn	03 49 42.7	0.0
KNT	Kendrikon	2.40	329		P	Pn	03 49 42.6	-0.1
KNT	Kendrikon	2.40	329		P	Pn	03 49 42.6	-0.1
KNT	Kendrikon	2.40	329	PN		Pn	03 49 42.6	-0.1
MHLO	Agia Marina, M	2.42	182		P	Pn	03 49 42.8	-0.1
GRG	Griva	2.46	319		P	Pn	03 49 44.0	+0.4
GRG	Griva	2.46	319		P	Pn	03 49 43.5	0.0
GRG	Griva	2.46	319		P	Pn	03 49 43.5	0.0
GRG	Griva	2.46	319	PN		Pn	03 49 43.6	0.0
BALY	Balya	2.48	74	*i* P		Pn	03 49 42.4	-1.5
BALY					*i* S	Sn	03 50 05.9	-8.4
KRG	Karabiga-Canak	2.50	58	PN		Pn	03 49 43.7	-0.3
STEP	BALIKESIR_Sava	2.50	83	*i* P		Pn	03 49 44.1	0.0
STEP					*i* S	Sn	03 50 09.4	-5.1
MMB	Musomiste	2.55	347		P	Pn	03 49 43.6	-1.2
AKHS	Akhisar	2.58	94	*i* P		Pn	03 49 44.7	-0.5
AKHS					*i* S	Sn	03 50 16.6	+0.1
RKY	Sarkoy-Tekirda	2.58	52	PN		Pn	03 49 45.4	+0.1
KNL	Balıkesir	2.59	62	*i* P		Pn	03 49 45.1	-0.2
KNL					*i* S	Sn	03 50 15.2	-1.7
KDZ	Kurdzhali	2.63	15		P	Pn	03 49 43.8	-2.1
KDZ					S	Sn	03 50 16.5	-1.3
MAR6	Marsite Statio	2.65	52	PN		Pn	03 49 46.8	+0.7
VAY	Valandovo	2.67	327	*e*Pn		Pn	03 49 46.5	+0.1
VAY	Valandovo	2.67	327	P		Pn	03 49 46.3	-0.1
VAY	Valandovo	2.67	327	*i* Pn		Pn	03 49 46.5	+0.1
VAY					*e*Sn	Sb	03 50 21.6	-2.4
MAR2	Marsite Statio	2.68	52	PN		Pn	03 49 47.0	+0.4
MAR3	Marsite Statio	2.69	52	PN		Pn	03 49 47.0	+0.3
DDIM	Aydin, Didim	2.70	127	*i* P		Pn	03 49 46.9	0.0
GZKV	Gazikoy-Tekird	2.71	52	PN		Pn	03 49 47.2	+0.3
MAR4	Marsite Statio	2.72	51	PN		Pn	03 49 47.2	0.0
MRMT	Marmara Adasi	2.80	57	PN		Pn	03 49 48.0	-0.3
ITM	Ithomi	2.81	228	PN		Pn	03 49 48.1	-0.2
ITM	Ithomi	2.81	228	Pn		Pn	03 49 48.6	+0.3
SANT	Santorini	2.83	164	⇑P		Pn	03 49 47.2	-1.5
SANT	Santorini	2.83	164	PN		Pn	03 49 48.5	-0.2
SANT	Santorini	2.83	164	Pn		Pn	03 49 48.6	-0.2
FNA	Florina	2.94	306	*e*Pn		Pn	03 49 50.6	+0.4
FNA	Florina	2.94	306	P		Pn	03 49 50.4	+0.2
FNA	Florina	2.94	306			Pn	03 49 50.4	+0.2
KKB	Krupnik	2.96	339		P	Pn	03 49 49.8	-0.7
KKB					S	Sn	03 50 24.5	-1.6
PLD	Plovdiv	3.00	3	*e*Pn		Pn	03 49 51.2	+0.3
PLD					*e*Sn	Sn	03 50 27.0	+0.2
PLD	Plovdiv	3.00	3	P		Pn	03 49 51.1	+0.2
PLD					S	Sn	03 50 27.3	+0.5
BODT	Bodrum	3.00	132	PN		Pn	03 49 50.0	+0.1
AYDN	Tasoluk	3.01	118	*i* P		Pn	03 49 51.3	+0.1
DIM	Dimitrovgrad	3.04	14	P		Pn	03 49 50.7	-0.8
DIM					S	Sn	03 50 26.7	-1.1
KTHA	Kythira Island	3.07	203	PN		Pn	03 49 50.8	-1.2
BDRM	Kayabasi	3.08	131	*i* P		Pn	03 49 51.5	-0.6
DURS	Dursunbey	3.10	80	*i* P		Pn	03 49 50.9	-1.6
DURS					*i* S	Sn	03 50 22.3	-7.3
STIP	Stip	3.14	326	*i* Pn		Pn	03 49 52.3	-0.5
MANT	Manisa	3.21	100	*i* P		Pn	03 49 53.8	-0.3
DEMI	Demirci	3.27	90	*i* P		Pn	03 49 55.2	+0.5
IGT	Igoumenitsa	3.27	279	*e*Pn		Pn	03 49 56.7	+2.0
IGT	Igoumenitsa	3.27	279	P		Pn	03 49 56.6	+1.9
KIRK	Kırklareli	3.32	36	*i* P		Pn	03 49 54.0	-1.3
OHR	Ohrid	3.48	306	*i* Pn		Pn	03 49 58.5	+0.9
OHR					*e*Sn	Sn	03 50 38.4	-0.6
MULA	Mugla, Merkez-	3.52	121	*i* P		Pn	03 49 58.8	+0.6
USAK	Uak-Merkez	3.53	95	*i* P		Pn	03 49 59.2	+0.8
ARMN	Kirklareli, Me	3.54	38	*i* P		Pn	03 49 57.6	+0.8
VIZE	Kirklareli, Vi	3.54	45	*i* P		Pn	03 49 57.1	-1.3
VTS	Vitosha	3.64	345	*e*Pn		Pn	03 50 00.0	+0.2
VTS					*e*Sn	Sn	03 50 41.7	-1.2
VTS	Vitosha	3.64	345	⇑P		Pn	03 50 00.2	+0.3
VTS	Vitosha	3.64	345	P		Pn	03 50 00.1	+0.2
VTS	Vitosha	3.64	345	Pn		Pn	03 50 00.1	+0.3
SKO	Skopje	3.70	322	*e*Pn		Pn	03 50 00.1	-0.5
SKO					*e*Sn	Sn	03 50 44.3	+0.1
SKO	Skopje	3.70	322	P		Pn	03 50 01.0	+0.4
SKO	Skopje	3.70	322	*i* Pn		Pn	03 50 01.1	+0.6
ULDT	Uludag	3.71	72	*i* P		Pn	03 50 01.4	+0.5
BOSS	Bosilegrad	3.72	336	*e*Pn		Pn	03 50 01.1	+0.2
BOSS					*e*Sn	Sn	03 50 46.0	+1.3
TURN	Turunc	3.75	127	*i* P		Pn	03 50 01.2	-0.1
IGD	Bursa	3.79	71	*i* P		Pn	03 50 01.4	-0.4
IDI	Anoyia	3.83	175	Pn		Pn	03 50 00.9	-1.4
	comp=N,8.2nm,0.3s,baz=344,slow=10,SNR=18							
IDI					Lg	Lg	03 50 56.8	
	comp=N,5.9nm,0.3s,baz=292,slow=19,SNR=1.7							
IDI					LR	LR	03 51 46.4	
	comp=N,902nm,19.4s,baz=328,slow=43							
IDI	Anoyia	3.83	175	⇓P		Pn	03 50 01.3	-1.1
IDI	Anoyia	3.83	175	Pn		Pn	03 50 01.8	-0.6
TAVA	DENIZLI_Tavas	3.83	114	*i* P		Pn	03 50 02.9	+0.4
GDZ	Gediz	3.86	89	*i* P		Pn	03 50 01.6	-1.3
BUY	Buyukada	3.94	62	*i* P		Pn	03 50 03.6	-0.2
KARP	Karpathos	4.13	149	Pn		Pn	03 50 05.7	-0.8
PVL	Pavlikeni	4.15	8	P		Pn	03 50 05.0	-1.7
PVL					S	Sn	03 50 52.8	-2.4
ANDZ	Kutahya, Merke	4.19	83	*i* P		Pn	03 50 08.1	+0.6
TIR	Tirane	4.21	304	⇑P		Pn	03 50 07.1	-0.5
TIR	Tirane	4.21	304	P		Pn	03 50 10.0	+2.5
TIR	Tirane	4.21	304	Pn		Pn	03 50 10.0	+2.5
BARS	Barje	4.23	332	*e*Pn		Pn	03 50 06.4	-1.5
BILE	Bilecik/Merkez	4.27	74	*i* P		Pn	03 50 09.4	+0.9
PLVB	Pleven	4.28	1	⇑P		Pn	03 50 08.4	-0.1
AUBOZ	BOZOYUK	4.34	78	*i* P		Pn	03 50 09.4	0.0
GOLH	Golhisar	4.39	114	*i* P		Pn	03 50 11.0	+0.8
ZAPS	Zavoj	4.40	342	*e*Pn		Pn	03 50 11.3	+1.1
ZAPS					*e*Sn	Sn	03 51 00.6	-0.8
KZIL	AFYON_Kizioren	4.48	99	*i* P		Pn	03 50 12.2	+0.7
BORA	Eskisehir	4.66	79	*i* P		Pn	03 50 14.3	+0.5
GEYV	SAKARYA_Geyve	4.66	71	*i* P		Pn	03 50 14.5	+0.8
BLKB	Belogradchik	4.72	343	*e*Pn		Pn	03 50 14.5	-0.1
SCTE	Santa Cesarea	4.77	284	Pn		Pn	03 50 15.9	+0.6
KAND	Kocaeli-Kandir	4.78	64	*i* P		Pn	03 50 15.7	+0.3
KAYN	Sakarya, Kayna	4.84	66	*i* P		Pn	03 50 15.5	-0.7
SELS	Selova	4.84	329	*e*Pn		Pn	03 50 15.9	-0.4
ELL	Elmali	4.87	117	P		Pn	03 50 19.7	+2.9
ELL	Elmali	4.87	117	Pn		Pn	03 50 19.7	+2.9
ISP	Isparta	4.88	103	P		Pn	03 50 17.8	+0.9
ISP	Isparta	4.88	103			Pn	03 50 17.8	+0.9
VLAD	Vladila	4.89	359	⇑P		Pn	03 50 16.7	-0.2
PVY	Plav	4.91	317	⇑*i* Pn		Pn	03 50 16.9	-0.4
PVY					*i* Sn	Sn	03 51 13.1	-1.0
SGAZ	Eskisehir, Sey	4.92	83	*i* P		Pn	03 50 18.2	+0.7
ULC	Ulcinj	4.93	307	*e*Pn		Pn	03 50 17.2	-0.3
ULC					*i* Sn	Sn	03 51 13.6	-0.9
BAIL	Bailesti	4.99	350	⇓P		Pn	03 50 18.4	+0.1
BOVS	Bovan	4.99	336	*e*Pn		Pn	03 50 18.0	-0.3
BOVS	Bovan	4.99	336	⇑P		Pn	03 50 18.1	-0.3
ZAGS	Zajecar	5.00	341	*e*Pn		Pn	03 50 17.7	-0.8
ZAGS					*e*Sn	Sn	03 51 14.5	-1.8
DRME	Dracevica, Mon	5.09	309	*e*Pn		Pn	03 50 21.6	+1.9
DRME	Dracevica, Mon	5.09	309	*e*Pn		Pn	03 50 19.5	-0.2
DRME					*i* Sn	Sn	03 51 17.6	-0.9
IVA	Berane	5.14	319	⇓*i* Pn		Pn	03 50 20.2	-0.2
IVA					*e*Sn	Sn	03 51 18.7	-1.0
SAHE	Sakarya_HENDEK	5.17	68	*i* P		Pn	03 50 21.0	+0.2
PDG	Podgorica	5.19	311	⇑P		Pn	03 50 21.6	+0.6
PDG	Podgorica	5.19	311	*e*Pn		Pn	03 50 22.5	+1.4
PDG	Podgorica	5.19	311	Pn		Pn	03 50 21.6	+0.6
TTG	Podgorica	5.19	311	⇓*i* Pn		Pn	03 50 20.9	-0.2
TTG					*i* Sn	Sn	03 51 20.1	-0.9
BTAS	Taskesti	5.20	72	*i* P		Pn	03 50 21.0	-0.3
PUNG	Punghina	5.30	348	⇑P		Pn	03 50 21.9	-0.6
KOME	Kolasin	5.32	316	*e*Pn		Pn	03 50 22.7	-0.2
KOME					*i* Sn	Sn	03 51 23.3	-0.9
MDUB	Mudurnu	5.32	73			Pn	03 50 23.0	0.0
BUM	Brajici-Budva	5.33	309	⇑*i* Pn		Pn	03 50 22.8	-0.3
BUM					*i* Sn	Sn	03 51 23.5	-1.0
HUMR	Humele	5.43	3	⇑P		Pn	03 50 23.7	-0.6
CEME	Cevo	5.46	311	⇓*i* Pn		Pn	03 50 24.7	-0.2
CEME					*i* Sn	Sn	03 51 26.6	-1.1
IVAS	Ivanjica	5.54	325	*e*Pn		Pn	03 50 25.9	-0.1
GRUS	Gruza	5.56	330	*e*Pn		Pn	03 50 26.0	-0.2
NKME	Niksic	5.58	313	⇓*i* Pn		Pn	03 50 26.3	-0.1
NKME					*i* Sn	Sn	03 51 29.5	-1.0
NKY	Niksic	5.58	313	*e*Pn		Pn	03 50 26.4	-0.2
NKY					*i* Sn	Sn	03 51 29.6	-1.2
SRE	Strehaia	5.63	350	⇑P		Pn	03 50 26.9	-0.3
SRE	Strehaia	5.63	350	P		Pn	03 50 26.8	-0.3
HCY	Herceg Novi	5.66	308	*e*Pn		Pn	03 50 28.4	+0.9
HCY	Herceg Novi	5.66	308	⇑*i* Pn		Pn	03 50 27.4	-0.1
HCY					*i* Sn	Sn	03 51 31.4	-1.1
DOGA	KONYA_Doganhis	5.69	98	*i* P		Pn	03 50 29.8	+1.8
KUBS	Kucevo	5.71	339	*e*Pn		Pn	03 50 26.9	-1.3
RMGR	Halanga-Turnu	5.71	347	⇑P		Pn	03 50 27.9	-0.4
SULR		5.71	13	⇑P		Pn	03 50 27.8	-0.4
SVIS	Svilajnac	5.71	335	*e*Pn		Pn	03 50 27.1	-1.1
PLE	Pljevlja	5.72	319	⇑*i* Pn		Pn	03 50 28.3	-0.2
PLE					*i* Sn	Sn	03 51 33.0	-1.2
STFAR	Stefanesti-Arg	5.76	3	⇑P		Pn	03 50 29.4	+0.5
KIBS	BOLU	5.80	75	*i* P		Pn	03 50 30.7	+1.1
MFTR	Murfatlar	5.85	29	⇑P		Pn	03 50 31.0	+0.9
UPM	Unac-Piva	5.89	316	*e*Pn		Pn	03 50 33.5	+2.7
UPM	Unac-Piva	5.89	316	⇑*i* Pn		Pn	03 50 30.6	-0.2
UPM					*i* Sn	Sn	03 51 37.0	-1.4
BRY	Bratogost	5.90	312	*e*Pn		Pn	03 50 32.3	+1.4
BRY	Bratogost	5.90	312	⇓*i* Pn		Pn	03 50 30.7	-0.2
BRY					*i* Sn	Sn	03 51 37.3	-1.3
TREB	Trebinje	5.90	310	*e*Pn		Pn	03 50 32.8	+2.0
TREB	Trebinje	5.90	310	*e*Pn		Pn	03 50 31.6	+0.8
TRUS	Trudelj	5.97	330	*e*Pn		Pn	03 50 31.4	-0.3
HERR	Herculane	5.98	345	⇓P		Pn	03 50 30.9	-0.9
DIVS	Divibare	6.03	327	*e*Pn		Pn	03 50 32.7	0.0
DIVS	Divibare	6.03	327	*e*Pn		Pn	03 50 32.6	0.0
DIVS	Divibare	6.03	327			Pn	03 50 32.6	0.0
SECR		6.03	11	⇓P		Pn	03 50 33.5	+0.8
TIP	Timpagrande	6.03	273	⇓P		Pn	03 50 32.0	-0.7
TIP	Timpagrande	6.03	273	Pn		Pn	03 50 32.4	-0.4
MDVR	Moldovita	6.04	341	⇑P		Pn	03 50 32.1	-0.7
TIRR	Tirgusor	6.08	27	P		Pn	03 50 32.5	-0.8
TIRR	Tirgusor	6.08	27	Pn		Pn	03 50 32.5	-0.8
BBLS	Lazići	6.11	323	*e*Pn		Pn	03 50 34.6	+0.9
BBLS	Lazići	6.11	323	*e*Pn		Pn	03 50 34.4	+0.7
ISR	Istrita	6.19	13	⇓P		Pn	03 50 35.8	+1.0
ISR	Istrita	6.19	13	P		Pn	03 50 36.0	+1.2
ISR					pmax	pmax		
	comp=E,54nm,1.1s							
MATE	Matera	6.21	287	⇑P		Pn	03 50 33.7	-1.2
VOIR		6.34	3	⇑P		Pn	03 50 36.6	-0.3
VOIR		6.34	3	P		Pn	03 50 36.6	-0.3
VOIR					pmax	pmax		
	comp=Z,52nm,0.8s							
LOT	Lotru	6.36	355	⇓P		Pn	03 50 37.0	-0.3
GZR	Gura Zlata	6.41	349	⇑P		Pn	03 50 37.0	-0.9
TPGR	Topolog	6.44	26	⇑P		Pn	03 50 38.9	+0.8
NEHR	Nehoiu	6.45	11	⇑P		Pn	03 50 38.6	+0.2
MLR	Muntele Rosu	6.46	9	Pn		Pn	03 50 38.6	-0.1
	comp=Z,3.0nm,0.3s,baz=227,slow=4.2,SNR=80							
MLR					Sn	Sn	03 51 51.7	-0.8
	comp=Z,0.5nm,0.3s,baz=143,slow=20,SNR=1.1							
MLR					Lg	Lg	03 52 23.7	
	baz=223,slow=19,SNR=1.6							
MLR					LR	LR	03 53 37.1	
	comp=Z,774nm,18.8s,baz=162,slow=42							
MLR	Muntele Rosu	6.46	9	⇑P		Pn	03 50 39.2	+0.6
MLR	Muntele Rosu	6.46	9	Pn		Pn	03 50 39.3	+0.6
HAPS	Han Pijesak,BI	6.49	322	*e*Pn		Pn	03 50 38.7	-0.3
TEKS	Tekeris	6.59	327	*e*Pn		Pn	03 50 40.3	0.0
TEKS	Tekeris	6.59	327	*e*Pn		Pn	03 50 40.0	-0.3
CFR	Carcaliu	6.63	23	⇓P		Pn	03 50 40.4	-0.4
CEL	Celeste	6.80	266	Pn		Pn	03 50 44.2	+1.0
BZS	Buzias	6.85	343	⇓P		Pn	03 50 43.1	-0.7
BZS	Buzias	6.85	343	P		Pn	03 50 42.6	-1.2
BZS					pmax	pmax		
	comp=Z,19nm,0.9s							
TLCR		6.86	26	⇑P		Pn	03 50 44.1	+0.2
TLCR		6.86	26	P		Pn	03 50 44.1	+0.2
DEV	Deva	6.87	351	⇑P		Pn	03 50 44.8	+0.6
DEV	Deva	6.87	351	P		Pn	03 50 44.7	+0.6
DEV					pmax	pmax		
	comp=Z,159nm,0.9s							
DOPR	Dopca	6.88	5	⇓P		Pn	03 50 44.4	+0.1
ODBI	Odobesti	6.91	15	⇓P		Pn	03 50 44.6	-0.1
PLOR	Plostina	6.92	12	⇑P		Pn	03 50 45.4	+0.6
PLOR	Plostina	6.92	12	P		Pn	03 50 45.4	+0.6
VRI	Vrincioaia	6.95	13	P		Pn	03 50 46.2	+1.0
VRI					pmax	pmax		
	comp=Z,44nm,1.2s							
FRGS	Fruska Gora	6.98	331	*e*Pn		Pn	03 50 45.5	-0.2
FRGS	Fruska Gora	6.98	331	⇑P		Pn	03 50 45.6	-0.1
FRGS	Fruska Gora	6.98	331	*e*Pn		Pn	03 50 45.4	-0.2
MDB	Medias	7.03	359	⇑P		Pn	03 50 47.2	+0.9
BR131	Keskin Array S	7.09	82	*c* P		Pn	03 50 48.2	+0.9
BR131	Keskin Array S	7.09	82			Pn	03 50 48.4	+1.1
BRTR	Keskin Array B	7.09	82	Pn		Pn	03 50 47.5	+0.3
	comp=Z,1.1nm,0.3s,baz=260,slow=12,SNR=65							
BRTR					Sn	Sn	03 52 05.5	-2.4
	comp=Z,0.2nm,0.3s,baz=194,slow=24,SNR=1.6							
BRTR					Lg	Lg	03 52 45.4	
	baz=24,slow=36,SNR=2.1							
BRTR					LR	LR	03 53 35.7	
	comp=Z,422nm,19.9s,baz=270,slow=38							
BRTR	Keskin Array B	7.09	82	Pn		Pn	03 50 48.4	+1.1
SGRT	San Giovanni R	7.20	294			Pn	03 50 48.6	0.0
SIRR	Siria	7.46	345	⇑P		Pn	03 50 51.3	-0.9
CJR	Cluj-Napoca	7.63	355	⇑P		Pn	03 50 55.4	+0.7
CJR	Cluj-Napoca	7.63	355	P		Pn	03 50 55.3	+0.7
MGRS	Mrkonjic Grad	7.68	316	*e*Pn		Pn	03 50 56.1	+0.8
DRGR		7.79	351	⇓P		Pn	03 50 56.2	+0.6
DRGR		7.79	351	P		Pn	03 50 56.5	-0.3
DRGR					pmax	pmax		
	comp=Z,26nm,1.1s							
BLY	Banja Luka	7.85	318	*e*Pn		Pn	03 50 59.1	+1.5
PAOL	Paolisi	7.87	287			Pn	03 50 59.9	+2.0
BIZ	Bicaz	7.91	8	⇑P		Pn	03 50 58.5	+0.1
ARCR	ARCALIA	7.97	359	⇑P		Pn	03 50 59.3	+0.1
VAE	Valguarnera	8.11	262	Pn		Pn	03 51 00.8	-0.5
	comp=Z,1.3nm,0.3s,baz=70,slow=6.7,SNR=2.1							
VAE					Sn	Sn	03 52 30.7	-2.3
	comp=Z,3.0nm,0.3s,baz=108,slow=16,SNR=4.2							
RAFF	Raffo Rosso	8.22	260			Pn	03 51 00.4	-2.3
MORH	Mrgy, Hungar	8.31	331	⇑P		Pn	03 51 03.8	-0.1
MORH	Mrgy, Hungar	8.31	331	*e*Pn		Pn	03 51 03.4	-0.5
PRAR	RASCA	8.34	8	⇑P		Pn	03 51 04.5	+0.1
MILM	Milestii Mici	8.41	21	⇑P		Pn	03 51 05.4	+0.2
BURAR	Bucovina Array	8.52	3	⇑P		Pn	03 51 07.1	+0.3
BURAR	Bucovina Array	8.52	3	P		Pn	03 51 07.1	+0.3
BURAR	Bucovina Array	8.52	3	Pn		Pn	03 51 06.0	-0.8
BUR08	Bucovina Ar. S	8.55	3	Pn		Pn	03 51 07.3	+0.1
INTR	Introdacqua	8.58	293	Pn		Pn	03 51 06.8	-0.9
BMR	Baia Mare	8.59	355	⇓P		Pn	03 51 08.1	+0.3
SEV	Sevastopol'	8.72	49	*e*P		Pn	03 51 09.1	-0.4
SEV					Pm		03 51 11.9	
	comp=Z,5.0nm,0.5s							
SEV					*e*S	Sn	03 52 43.1	-4.7
SEV					Sm		03 52 43.7	
	comp=N,5.0nm,0.5s							
SEV					Sm		03 52 45.9	
	comp=E,4.0nm,0.4s							
CORL	Corleone	8.88	266		Pn	Pn	03 51 12.0	+0.3
YAL	Yalta	8.98	50	*e*P		Pn	03 51 11.8	-1.2
YAL				*ex*		x	03 52 45.3	
YAL				*e*S		Sn	03 52 54.2	+0.1
CLTB	Caltabellotta	9.01	264			Pn	03 51 14.4	+0.8
AQU	L'Aquila	9.04	295	P		Pn	03 51 15.0	+1.0
AQU				pmax		pmax		
	comp=Z,32nm,1.1s							
TRPA	Tarpa	9.13	352	⇑P		Pn	03 51 14.4	-0.7
SIM	Simferopol'	9.22	48	*e*S		Sn	03 53 03.7	+3.7
ALU	Alushta	9.23	50	*e*P		Pn	03 51 18.8	+2.3
ALU				Pm			03 51 19.2	
	comp=Z,5.0nm,0.4s							
BEHE	Becsehely	9.30	325	*e*Pn		Pn	03 51 12.0	-5.4
NRCA	Norcia	9.39	297	Pn		Pn	03 51 18.0	-0.8
SORM	Soroca	9.44	16	⇑P		Pn	03 51 17.7	-1.6
SORM	Soroca	9.44	16	P		Pn	03 51 17.7	-1.6
CRES	Cresnjev	9.48	318	*e*Pn		Pn	03 51 20.7	+0.8
KMPD	K-Podol'skiy	9.55	8	P		Pn	03 51 20.0	-0.9
UZH	Uzhgorod	9.65	351	*e*P		Pn	03 51 21.8	-0.5
UZH				*i* S		Sn	03 53 11.4	+0.8
UZH				MLR		MLR		
	comp=N,100nm,12.0s							
UZH				MLR		MLR		
	comp=E,150nm,12.0s							
UZH				MLR		MLR		
	comp=Z,8.0nm,12.0s							
SUDU	Sudak	9.70	50	*e*P		Pn	03 51 25.5	+2.6
SUDU				Pm			03 51 31.5	
	comp=Z,6.0nm,0.5s							
SUDU				*e*S		Sn	03 53 12.3	+0.4
SUDU				Sm			03 53 13.1	
	comp=N,8.0nm,0.6s,comp=E,7.0nm,0.6s							
MURB	Monte Urbino	9.95	298	Pn		Pn	03 51 26.3	-0.1
CEY	Cerknica	9.97	315	*e*Pn		Pn	03 51 26.7	0.0
CRVS	Cervenica-Dubn	10.03	348	*e*P		Pn	03 51 29.4	+1.9
CRVS	Cervenica-Dubn	10.03	348	*e*PN		Pn	03 51 29.4	+1.9
SOKA	Soboth	10

comp=Z,10.0nm,1.0s
LOR Lormes 17.10 305 *e*P **P 03 53 05.0 +0.9**
LOR pmax pmax
comp=Z,22nm,1.5s
AVF Avril sur Loir 17.26 303 *e*P **Pn 03 53 03.9 -0.5**
AVF pmax pmax
comp=Z,8.0nm,0.9s
CAF Calviac 17.64 296 *e*P **P 03 53 11.5 +1.3**
CAF pmax pmax
comp=Z,9.0nm,1.2s
OBN Obninsk 17.95 23 LR LR 04 00 38.3
comp=Z,53nm,18.3s,baz=174,slow=39
OBN Obninsk 17.95 23⇑*i*P **Pn 03 53 11.9 -0.9**
OBN pmax pmax
comp=Z,2.0nm,0.7s
OBN MLR MLR
comp=N,187nm,16.0s
GRR Gorron 20.47 305 *e*P **P 03 53 41.4 +0.4**
GRR pmax pmax
comp=Z,21nm,1.3s
BELG Belogornoye 20.77 43 P Pn 03 53 46.1 -0.6
comp=Z,16nm,0.9s,baz=163,slow=19,SNR=4.7
BELG LR LR 04 03 05.1
comp=Z,140nm,21.0s,baz=312,slow=40
BELG Belogornoye 20.77 43⇑*i*P **P 03 53 44.4 +0.1**
ESBB Sonseca Array 21.98 281 P **P 03 54 00.2 +2.7**
ESBB IAmb IAmb 03 54 01.3
comp=Z,8.9nm,0.8s
ESDC Sonseca Array 21.99 281 P **P 03 53 56.6 -0.9**
comp=Z,7.5nm,0.9s,baz=74,slow=11,SNR=33
ESDC LR LR 04 02 20.0
comp=Z,78nm,18.9s,baz=50,slow=36
ESDC Sonseca Array 21.99 281 P **P 03 53 59.4 +1.9**
HFS Hagfors 22.12 346 P **P 03 53 58.3 -0.4**
comp=Z,3.4nm,0.7s,baz=140,slow=7.7,SNR=8.8
HFS LR LR 04 03 59.2
comp=Z,169nm,18.5s,baz=164,slow=41
PAB San Pablo 22.30 280 P **P 03 54 03.8 +2.9**
PAB pmax pmax
comp=Z,21nm,1.3s
PAB San Pablo 22.30 280 P **P 03 54 03.8 +2.9**
PAB IAmb IAmb 03 54 05.4
comp=Z,21nm,1.2s
FINES FINESS Array B 22.38 2 P **P 03 54 00.6 -0.9**
comp=Z,2.2nm,0.8s,baz=166,slow=13,SNR=1.9
FINES LR LR 04 03 31.3
comp=Z,468nm,18.3s,baz=208,slow=39
TAM Tamanrasset 22.95 230 P **P 03 54 10.9 +3.0**
TAM pmax pmax
comp=Z,8.0nm,1.2s
TAM Tamanrasset 22.95 230 P **P 03 54 10.9 +3.0**
NC602 NORSAR Array S 23.12 344 P **P 03 54 08.6 -0.6**
NOA NORSAR Array B 23.46 344 P **P 03 54 11.5 -1.3**
comp=Z,1.4nm,0.7s,baz=153,slow=10,SNR=9.0
NOA LR LR 04 03 25.3
comp=Z,80nm,18.4s,baz=170,slow=37
NOA NORSAR Array B 23.46 344 *e*P **P 03 54 12.3 -0.5**
NOA pmax pmax
comp=Z,1.0nm,0.7s
KLMR Klimovskoe 23.69 18 *e*P **P 03 54 13.6 -1.3**
KLMR pmax pmax
comp=Z,13nm,1.3s
KLMR Klimovskoe 23.69 18 *e*P **P 03 54 13.7 -1.2**
KLMR AMP 03 54 22.4
comp=Z,13nm,1.3s
NC204 NORSAR Array S 23.77 343 P **P 03 54 17.0 +1.2**
MDT Midelt 24.34 264 P **P 03 54 18.7 -2.7**
comp=Z,1.5nm,0.9s,baz=242,slow=4.7,SNR=2.3
EKA Eskdalemuir Ar 24.60 320 P **P 03 54 22.9 -0.5**
comp=Z,3.7nm,0.7s,baz=110,slow=9.8,SNR=11
KIRV Kirov 25.20 31 LR LR 04 05 04.8
comp=Z,136nm,18.1s,baz=232,slow=38
KIRV Kirov 25.20 31*c* *i*P **P 03 54 30.0 +1.2**
PRGR Permogore 26.03 23 *e*P **P 03 54 31.7 -4.6**
PRGR pmax pmax
comp=Z,5.0nm,0.6s
AKTO Aktyubinsk 26.12 53 P **P 03 54 37.8 +0.5**
comp=Z,1.4nm,0.8s,baz=272,slow=1.7,SNR=2.7
AKTO LR LR 04 07 20.4
comp=Z,76nm,20.2s,baz=269,slow=42
GEYT Alibeck 26.23 82 P **P 03 54 37.9 -0.6**
comp=Z,0.7nm,0.3s,baz=275,slow=7.1,SNR=1.3
ABKAR Akbulak array 27.13 56 P **P 03 54 48.0 +1.6**
ARU Arti 28.29 41 LR LR 04 07 55.6
comp=Z,42nm,19.8s,baz=223,slow=40
ARU Arti 28.29 41*c* *i*P **P 03 54 55.3 -1.4**
ARU S **S 03 59 41.2 -1.5**
ARU pmax pmax
comp=Z,14nm,2.8s
ARU MLR MLR
comp=Z,206nm,16.0s
ARCES ARCESS Array B 30.49 1 P **P 03 55 17.2 +1.1**
comp=Z,3.8nm,1.0s,baz=204,slow=11,SNR=4.0
ARCES LR LR 04 08 22.5
comp=Z,373nm,18.7s,baz=175,slow=38
TOA0 Torodi Ar. Sit 32.80 224 P **P 03 55 36.8 -0.1**
TOA0 IAmb IAmb 03 55 39.9
comp=Z,7.4nm,1.2s
TORD Torodi Ar. Bea 32.80 224 P **P 03 55 36.1 -0.8**
comp=Z,2.6nm,0.6s,baz=34,slow=8.7,SNR=12
TORD Torodi Ar. Bea 32.80 224 P **P 03 55 36.5 -0.4**
TORD IAmb IAmb 03 55 39.9
comp=Z,4.4nm,1.1s
BRVK Borovoye 34.05 51⇑*i*P **P 03 55 46.5 -1.0**
BRVK pmax pmax
comp=Z,1.0nm,0.8s
KK31 Karatay Array 34.55 68 P **P 03 55 53.2 +1.2**
KK31 pmax pmax
comp=Z,4.0nm,1.2s
KK31 Karatay Array 34.55 68 P **P 03 55 53.2 +1.2**
KK31 IAmb IAmb 03 56 01.0
comp=Z,3.8nm,1.2s
KKAR Karatay Array 34.55 68 P **P 03 55 52.9 +1.0**
KKAR Karatay Array 34.55 68 P **P 03 55 52.9 +1.0**
KOWA Kowa 35.09 234 P **P 03 55 56.1 -0.7**
comp=Z,1.5nm,0.7s,baz=104,slow=4.2,SNR=2.8
KOWA Kowa 35.09 234 P **P 03 55 59.1 +2.3**
KOWA IAmb IAmb 03 56 15.4
comp=Z,11nm,1.5s
DBIC Dimbokro 41.76 227 P **P 03 56 52.3 -0.6**
comp=Z,3.3nm,0.7s,baz=357,slow=7.6,SNR=5.7
DBIC Dimbokro 41.76 227 P **P 03 56 53.4 +0.5**
DBIC pmax pmax
comp=Z,19nm,1.4s
DBIC Dimbokro 41.76 227 P **P 03 56 53.4 +0.5**
MK31 Makanchi Array 42.14 60⇑*i*P **P 03 56 56.3 +0.6**
MK31 Makanchi Array 42.14 60 P **P 03 56 56.1 +0.4**
MKAR Makanchi Array 42.14 60 P **P 03 56 55.9 +0.2**
comp=Z,0.6nm,0.5s,baz=264,slow=9.4,SNR=10
MKAR LR LR 04 16 46.6
comp=Z,56nm,19.0s,baz=274,slow=40
MKAR Makanchi Array 42.14 60 *e*P **P 03 56 56.4 +0.7**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 42.14 60 P **P 03 56 56.2 +0.5**
ZALV Zalesovo Beam 42.73 49 P **P 03 57 00.5 +0.1**
comp=Z,1.5nm,0.6s,baz=286,slow=11,SNR=3.8
ZALV Zalesovo Beam 42.73 49 *e*P **P 03 57 00.9 +0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 42.73 49 P **P 03 57 00.8 +0.5**
NRIK Noril'sk 44.56 27 LR LR 04 17 33.4
comp=Z,113nm,19.8s,baz=282,slow=38
NRIK Noril'sk 44.56 27⇑*i*P **P 03 57 14.5 -0.4**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
DGZ Jazzator, Alta 44.94 55⇑*i*P **P 03 57 17.4 -1.1**
DGZ pmax pmax
comp=Z,2.0nm,1.3s
WMQ Urumqi 46.56 63 *e*P **P 03 57 31.8 +0.6**
WMQ pP sP 03 57 37.8 +1.9
WMQ sP pP 03 57 42.5 +7.9
WMQ PcP **PcP 03 59 09.9 +4.6**
WMQ ScP **ScP 04 02 51.5 -7.2**
WMQ S **S 04 04 17.8 -1.9**
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,58nm,4.3s
WMQ LR LR
comp=N,390nm,14.9s
WMQ LR LR
comp=E,650nm,13.5s
WMQ LR LR
comp=Z,250nm,29.2s
ULN Ulaanbaatar 57.82 52⇑*i*P **P 03 58 54.0 -1.0**
ULN pmax pmax
comp=Z,1.0nm,0.9s
PALK Pallekele 59.43 107 LR LR 04 26 15.6
comp=Z,30nm,19.0s,baz=66,slow=38
LZH Lanzhou 60.98 66 *e*P **P 03 59 14.8 -2.2**
LZH sP sP 03 59 23.0 +1.3
LZH pmax pmax
comp=Z,17nm,1.3s
YAK Yakutsk 62.73 31 LR LR 04 28 46.8
comp=Z,59nm,19.4s,baz=270,slow=38
HHC Hu-ho-hao-te 63.91 58 *e*P **P 03 59 38.6 +2.1**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,100nm,5.8s
CMAR Chiang Mai Arr 66.67 85 P **P 03 59 55.3 +0.8**
comp=Z,0.3nm,0.5s,baz=291,slow=7.7,SNR=1.9
CMAR LR LR 04 33 34.3
comp=Z,22nm,19.0s,baz=55,slow=40
BOSA Boshof 67.38 179 LR LR 04 30 41.2
KLR Kul'dur 71.13 41 *e*P **P 04 00 22.1 +0.2**
KLR pmax pmax
comp=Z,4.0nm,2.2s
MA2 Magadan 72.14 26 LR LR 04 36 10.7
comp=Z,84nm,18.1s,baz=350,slow=39
YKA Yellowknife Ar 73.54 342 P **P 04 00 35.4 -0.6**
comp=Z,0.8nm,1.0s,baz=34,slow=6.2,SNR=7.0
YKA Yellowknife Ar 73.54 342 *e*P **P 04 00 38.0 +2.0**
YKA pmax pmax
comp=Z,1.0nm,1.0s
NJ2 Nanjing 73.63 62 *e*P **P 04 00 36.4 -0.6**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
USA0B Ussuriysk Arra 74.43 45 P **P 04 00 44.5 +3.0**
USA0B pmax pmax
comp=Z,4.0nm,1.1s
USA0B Ussuriysk Arra 74.43 45 P **P 04 00 44.5 +3.0**
USA0B IAmb IAmb 04 00 51.4
comp=Z,3.5nm,1.1s
ILAR Eielson Array 76.24 356 P **P 04 00 51.1 -0.5**
comp=Z,0.6nm,0.7s,baz=348,slow=3.7,SNR=5.2
ILAR Eielson Array 76.24 356 *e*P **P 04 00 54.6 +3.1**
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ILAR Eielson Array 76.24 356 P **P 04 00 54.0 +2.4**
KSRS Korea Array 76.30 53 P **P 04 00 52.0 -0.3**
comp=Z,0.5nm,0.3s,baz=309,slow=4.8,SNR=2.7
KSRS Korea Array 76.30 53 P **P 04 00 52.0 -0.3**
DAWY Dawson 76.38 353 P **P 04 00 55.0 +2.6**
DAWY IAmb IAmb 04 00 58.6
comp=Z,4.7nm,1.2s
ULM Lac du Bonnet 76.76 325⇑*e*P **P 04 00 56.8 +2.0**
ULM pmax pmax
comp=Z,1.0nm,0.5s
ULM Lac du Bonnet 76.76 325 P **P 04 00 57.0 +2.2**
ULM IAmb IAmb 04 00 57.8
comp=Z,3.8nm,1.0s
TKL Tuckaleechee C 80.46 308 P **P 04 01 14.9 -0.5**
TKL pmax pmax
comp=Z,10.0nm,0.9s
DLBC Dease Lake 80.51 347 LR LR 04 36 53.7
comp=Z,38nm,19.5s,baz=349,slow=36
PDAR Pinedale Array 88.48 328 LR LR 04 47 03.2
comp=Z,32nm,19.5s,baz=294,slow=39
TXAR Lajitas Array 96.53 316 P **P 04 02 33.5 0.0**
comp=Z,0.3nm,0.8s,baz=29,slow=2.1,SNR=2.9

IDC 13 03:51:03.9±4.0, 22.04S×148.10E, h0km, mb3.4/1, mb1 3.6/5, mb1mx3.4/31, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=42.3km s-min=22.9km az=74.0, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.60**	**318**	Pn	Pn	03 51 48.1	+0.9
	4.0nm,0.3s,baz=138,slow=16,SNR=33						
CTA				Lg	Lg	03 52 27.3	
	9.9nm,0.3s,baz=198,slow=20,SNR=11						
STKA	**Stephens Creek**	**11.38**	**209**	Pn	Pn	03 53 46.5	-1.3
	0.2nm,0.3s,baz=26,slow=12,SNR=3.2						
STKA				Sn	Sn	03 55 46.9	-8.8
	0.1nm,0.3s,baz=130,slow=22,SNR=1.4						
WRA	**Warramunga Arr**	**13.02**	**277**	Pn	Pn	03 54 08.2	-2.1
	0.1nm,0.3s,baz=96,slow=13,SNR=2.6						
WRA				Lg	Lg	03 57 54.8	
	0.0nm,0.3s,baz=104,slow=26,SNR=3.7						
ASAR	**Alice Springs**	**13.19**	**260**	Pn	Pn	03 54 11.7	-0.9
	0.1nm,0.3s,baz=71,slow=14,SNR=2.1						
ASAR				Sn	Sn	03 56 33.4	-6.7
	baz=206,slow=22,SNR=4.1						
ASAR				Lg	Lg	03 58 03.9	
	baz=83,slow=29,SNR=3.7						
FITZ	**Fitzroy Crossi**	**21.45**	**277**	P	P	03 55 54.9	+0.9
	0.6nm,0.6s,baz=114,slow=20,SNR=2.0						

PRU 13 03:51:27.1±0.0, 49.81N×18.48E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.22**	**277**	*e*PG	Pg	03 51 30.6	-0.7
OKC				*e*SG	Sg	03 51 34.8	+0.7
	17nm,0.4s						
MORC	**Moravsky Berou**	**0.61**	**267**	*e*PG	Pg	03 51 39.5	+0.8
MORC				*e*SG	Sg	03 51 47.4	+0.8
LANS	**Liptovska Anna**	**0.92**	**135**	*e*PG	Pg	03 51 43.6	-1.2
LANS				*e*SG	Sb	03 51 57.9	-0.9
LANS				*e*LG	Lg	03 51 59.4	
JAVC	**Velka Javorina**	**1.09**	**209**	*e*PG	Pg	03 51 48.2	+0.3
KRLC	**Kraliky**	**1.13**	**284**	*e*SG	Sg	03 52 03.0	-0.3
	comp=Z,4.9nm,0.2s						
VRAC	**Vranov**	**1.33**	**248**	*e*PG	Pg	03 51 52.0	-0.5
VRAC				*e*SG	Sg	03 52 09.6	-0.1
VYHS	**Vyhne**	**1.34**	**170**	*e*PG	Pg	03 51 51.4	-1.3
DPC	**Dobruska-Polom**	**1.49**	**292**	*e*PG	Pn	03 51 54.4	-0.8
DPC				*e*SG	Sg	03 52 14.6	-0.4
KRUC	**Moravsky**	**1.55**	**242**	*e*PG	Pn	03 51 55.4	-0.6
KRUC				*e*SG	Sn	03 52 16.7	-0.1
OSTC	**Ostas**	**1.64**	**298**	*e*SG	Sg	03 52 19.5	-0.1
CHVC	**Chvalec**	**1.74**	**297**	*e*SG	Sb	03 52 22.1	-0.3
KHC	**Kasperske Hory**	**3.27**	**260**	*e*SG	Sg	03 53 12.0	-0.1

IDC ***13*** *03:53:49.4±0.6, 17.29N×121.83W, h0km, mb4.4/29, mb1 4.6/31, mb1mx4.4/54, mbtmp4.4/31, ML4.2/2, MS4.0/27, Ms1 4.0/27, ms1mx3.9/39, Error ellipse: s-maj=17.8km s-min=12.9km az=50.0*

NEIC ***13*** *03:53:51.2±1.5, 17.2N±0.1×121.9W±0.1, h10km±1km, mb4.7/235, Error ellipse: s-maj=21.8km s-min=17.1km az=233.0*

GCMT ***13*** *03:53:54.2±0.3, 17.39N±0.02×121.74W±0.02, h20km±1km, MW5.0/116, Moment Tensor Solution. s31,c36; s116,c159; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.56±.14; Mθθ3.21±.11; Mϕϕ-1.66±.09; Mrθ0.67±.18; Mθϕ1.04±.07; Mϕr-2.32±.24; Best double couple: M₀3.78200×10¹⁶ NP1:ϕs43.00000°, δ59.00000°, λ-148.00000°. NP2:ϕs295.00000°, δ63.00000°, λ-35.00000°. Principal axes: T 3.4320, Plg3.0000°, Azm350.0000°; N 0.6890, Plg47.0000°, Azm83.0000°; P -4.1310, Plg43.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 03:53:51.1±0.5, 17.24N±0.08×121.89W±0.09, h10km, n243, s0f80/153, mb4.7/126, MS4.0/28, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**12.81**	**56**	Pn	**Pn**	**03 56 51.7**	**-1.6**
	2.4nm,0.3s,baz=153,slow=6.8,SNR=1.7						
LPIG				Sn	Sn	03 59 05.2	-11
	1.8nm,0.3s,baz=207,slow=14,SNR=1.2						
LPIG				LR	LR	04 00 22.1	
	comp=Z,2μm,19.2s,baz=227,slow=31						
SLBS	**Sierra La Lagu**	**12.90**	**58**	Pn	**Pn**	**03 56 52.4**	**-2.2**
SRIG	**Santa Rosalia**	**13.43**	**40**		**Pn**	**03 57 02.4**	**+0.7**
SPX	**San Pedro Mart**	**14.93**	**22**		**Pn**	**03 57 23.6**	**+1.0**
SFX	**San Felipe**	**15.16**	**24**	P	**P**	**03 57 30.3**	**-0.1**
SFX				IAmb	IAmb	03 57 31.9	
	comp=Z,26nm,0.7s						

CCX Cicese 15.32 17 P **Pn 03 57 28.1 +0.6**
CCX IAmb IAmb 03 57 34.3
comp=Z,46nm,1.0s
HSIG 15.44 39 P **Pn 03 57 31.7 +2.7**
CBX Cerro Bola 15.74 17 P **Pn 03 57 33.5 +0.5**
SCI2 San Clemente I 15.96 10 P 03 57 35.9
baz=192
TKX Tecate 16.00 16 P **Pn 03 57 37.1 +0.8**
TKX IAmb IAmb 03 57 41.9
comp=Z,52nm,1.2s
BAR Barrett 16.08 16 P **Pn 03 57 38.1 +0.6**
SNCC San Nicolas Is 16.09 7 P 03 57 37.0
baz=188
109C Camp Elliot, M 16.17 15 **Pn 03 57 39.0 +0.5**
109C Camp Elliot, M 16.17 15 P 03 57 39.2
baz=196,SNR=11
RMX La Rumorosa 16.18 18 P **Pn 03 57 39.2 +0.5**
IKP In-Ko-Pah, Jac 16.21 18 P 03 57 39.3
baz=200,SNR=35
MONP2 Monument Peak 16.35 17 P 03 57 40.5
baz=199,SNR=24
CIS Catalina Islan 16.40 10 P 03 57 41.3
baz=192
SWSC Sam W. Stewart 16.58 18 P 03 57 43.8
baz=201,SNR=9.4
FMP Fort Macarthur 16.72 10 P 03 57 46.1
baz=192
214A Organ Pipe Nat 16.81 28 P **Pn 03 57 46.4 -0.2**
214A Organ Pipe Nat 16.81 28 P 03 57 46.9
baz=211,SNR=10
SCZ2 Santa Cruz Isl 16.81 6 P 03 57 47.3
baz=187
MURC Murrieta 16.83 14 P 03 57 47.4
baz=196,SNR=8.4
GLA Glamis 16.99 21 P **Pn 03 57 49.6 +0.7**
GLA IAmb IAmb 03 57 51.2
comp=Z,44nm,1.1s
GLA Glamis 16.99 21 P 03 57 49.4
baz=204
TPFO Pinon Flats 17.02 16 P 03 57 49.4
baz=198,SNR=9.0
PFO Pinyon Flats O 17.02 16 Pn **Pn 03 57 49.1 -0.3**
comp=Z,0.2nm,0.3s,baz=181,slow=7.2,SNR=12
PFO Pinyon Flats O 17.02 16 P **Pn 03 57 49.4 0.0**
PFO Pinyon Flats O 17.02 16 P 03 57 49.7
baz=198,SNR=11
PASC Pasadena Art C 17.19 10 P **Pn 03 57 51.7 +0.2**
DECC Green Verdugo 17.24 10 P 03 57 51.5
baz=191
SBC Santa Barbara 17.25 6 P 03 57 51.7
baz=187
MWC Mount Wilson 17.26 11 P **P 03 57 54.4 +0.4**
BC3 Big Chuckawall 17.34 18 P 03 57 53.7
baz=201,SNR=15
BFSC Mount Baldy Ra 17.35 12 P 03 57 53.7
baz=194,SNR=9.5
BELC Belle Mtn. Jos 17.51 16 P 03 57 56.0
baz=199,SNR=33
BBRC Big Bear Solar 17.53 14 P 03 57 55.4
baz=196
PKM Mcpherson Peak 17.68 6 P 03 57 58.4
baz=186
HPIG 17.85 54 P **Pn 03 58 00.0 +0.2**
IRM Iron Mountain 17.90 18 P 03 58 01.1
baz=201,SNR=23
EDW2 Edwards Air Fo 17.91 10 P 03 58 01.4
baz=192,SNR=8.2
ARVC Arvin 18.03 8 P 03 58 02.2
baz=189
TUC Tucson 18.06 32 P **Pn 03 58 02.8 +0.5**
TUC Tucson 18.06 32 P 03 58 02.4
baz=216
SMMC Simmler 18.08 5 P 03 58 03.5
baz=186,SNR=6.2
RRX Edison Barstow 18.10 13 P 03 58 03.1
baz=195
HEC Hector,Ludlow 18.21 15 P 03 58 04.9
baz=197,SNR=12
GMRC Granite Mounta 18.34 16 P 03 58 06.4
baz=199,SNR=9.1
PDMCI Parker Dam,Lak 18.36 21 P 03 58 05.8
baz=204
PAGB Antelope Grade 18.48 4 P **P 03 58 07.0 -0.2**
LRMC Laurel Mtn Rad 18.55 11 P 03 58 08.7
baz=193
ISA Isabella, Lake 18.60 9 P **Pn 03 58 09.1 +0.1**
ISA Isabella, Lake 18.60 9 P 03 58 09.8
baz=190,SNR=6.4
NEE2 Needles Airpor 18.63 19 P 03 58 10.0
baz=202
VES Vestal, Richgr 18.70 7 P 03 58 10.8
baz=188,SNR=11
TUQ Turquoise Moun 18.89 15 P 03 58 12.5
baz=198,SNR=18
PMPB Monarch Peak 18.93 3 P **Pn 03 58 13.7 +0.8**
PMPB IAmb IAmb 03 58 32.0
comp=Z,65nm,1.2s
ZAIG Zacatecas 18.97 70 P **P 03 58 12.5 -0.5**
ZAIG IAmb IAmb 03 58 21.1
comp=Z,50nm,1.5s
VOG Valley Oaks Go 19.14 6 P 03 58 15.1
baz=187
SHOC Shoshone, Teco 19.25 14 P 03 58 16.0
baz=196,SNR=15
CWC Cottonwood Cre 19.42 9 P 03 58 18.8
baz=191
SAO San Andreas Ge 19.46 1 P **P 03 58 18.4 +0.5**
FURC Furnace Creek, 19.67 12 P 03 58 20.6
baz=194,SNR=15
121A Cookes Peak, D 19.86 37 IAmb IAmb 03 58 34.0
comp=Z,40nm,0.9s
121A Cookes Peak, D 19.86 37 P 03 58 22.5
baz=223,SNR=23
TIN Tinemaha, Big 20.00 9 P 03 58 24.8
baz=190,SNR=8.3
GRAC Grapevine Rang 20.09 11 P 03 58 26.2
baz=193,SNR=15
SHPR Sheep Range 20.10 16 P **P 03 58 25.9 +0.7**
TPNV Topopah Spring 20.26 13 P **P 03 58 27.4 +0.6**
TPNV Topopah Spring 20.26 13 P 03 58 27.9
baz=196,SNR=82
WUAZ Wupatki 20.47 25 P **P 03 58 30.7 +1.4**
WUAZ Wupatki 20.47 25 P 03 58 30.1
baz=210
MLAC Mammoth, Mammc 20.49 7 P 03 58 29.9
baz=188
TX32 Lajitas Array 20.59 51 IAmb IAmb 03 58 33.5
comp=Z,55nm,1.4s
TXAR Lajitas Array 20.59 51 P **P 03 58 29.7 -0.8**
comp=Z,7.0nm,0.9s,baz=218,slow=7.9,SNR=52
TXAR LR LR 04 05 08.7
comp=Z,560nm,18.9s,baz=0.0,slow=33
TXAR Lajitas Array 20.59 51 P **P 03 58 30.5 +0.1**
CMB Columbia Colle 20.76 3 IAmb IAmb 03 58 37.6
comp=Z,54nm,1.4s
MNTX Cornudas Mount 20.77 43 P **P 03 58 33.2 +0.8**
MNTX Cornudas Mount 20.77 43 P 03 58 33.5
baz=230,SNR=19
W18A Petrified Fore 20.85 29 P **P 03 58 33.5 +0.2**
W18A Petrified Fore 20.85 29 P 03 58 33.2
baz=214
PRN Pahroc Range 20.98 15 IAmb IAmb 03 58 41.1
comp=Z,46nm,1.3s
LHV Little Huntoon 21.15 7 IAmb IAmb 03 58 39.0
comp=Z,31nm,1.2s
KNB Kanab 21.27 20 IAmb IAmb 03 58 39.9
comp=Z,31nm,1.0s
NVAR Mina Array Bea 21.35 8 P **P 03 58 38.8 +0.1**
comp=Z,8.9nm,0.9s,baz=196,slow=12,SNR=47
NVAR PcP **PcP 04 02 43.1 +0.2**
comp=Z,0.1nm,0.5s,baz=185,slow=4.5,SNR=1.5
NVAR LR LR 04 05 11.4
comp=Z,632nm,21.4s,baz=194,slow=32
NVAR Mina Array Bea 21.35 8 P **P 03 58 39.5 +0.8**
NV11 Mina Array Sit 21.37 8 P **P 03 58 39.5 +0.6**
NV11 IAmb IAmb 03 58 41.0
comp=Z,36nm,1.1s
GDXM Geysers 21.51 358 P **P 03 58 41.2 +0.9**
GDXM IAmb IAmb 03 58 45.2
comp=Z,38nm,1.3s
CCUT Cedar City 21.59 19 IAmb IAmb 03 58 43.3
comp=Z,31nm,1.2s
SZCU Shurtz Canyon 21.71 19 P **P 03 58 42.9 +0.3**
SZCU IAmb IAmb 03 58 47.2
comp=Z,21nm,1.0s
R11A Troy Canyon, C 21.75 13 P **P 03 58 43.1 +0.1**
R11A IAmb IAmb 03 58 44.7

comp=Z,20nm,0.9s
R11A Troy Canyon, C 21.75 13 P 03 58 43.2
baz=196,SNR=11
RUBR Rubicon Trail 21.79 4 IAmb IAmb 03 59 04.5
comp=Z,52nm,1.2s
PKCU Pink Cliffs 21.83 21 P **P** **03 58 44.5 +0.6**
PKCU IAmb IAmb 03 58 56.5
comp=Z,39nm,1.2s
PNTR Pine Nut 21.86 5 IAmb IAmb 03 58 46.6
comp=Z,26nm,1.2s
KVN Kaiserville 21.99 8 IAmb IAmb 03 58 47.5
comp=Z,25nm,1.1s
VCNR Virginia City 22.07 5 IAmb IAmb 03 58 53.5
comp=Z,32nm,1.3s
ORV Oroville 22.24 1 IAmb IAmb 03 58 53.5
comp=Z,20nm,1.0s
TLIG Tlapa 22.26 86 P **P** **03 58 49.0 +0.5**
TLIG IAmb IAmb 03 58 50.9
comp=Z,29nm,1.3s
PSUT Pine Spring 22.36 17 IAmb IAmb 03 58 54.6
comp=Z,43nm,1.2s
ANMO Albuquerque 22.38 35 P 03 58 49.7
baz=222
ANMO Albuquerque 22.38 35 P **P** **03 58 49.7 -0.1**
comp=Z,7.6nm,1.1s,baz=211,slow=9.6,SNR=14
ANMO LR LR 04 06 15.2
comp=Z,333nm,18.5s,baz=222,slow=33
ANMO Albuquerque 22.38 35 P **P** **03 58 50.2 +0.4**
MTPU Mount Pierson 22.41 20 IAmb IAmb 03 58 52.8
comp=Z,35nm,1.1s
PAHR Pah Rah Range 22.50 5 P **P** **03 58 51.1 +0.2**
PAHR IAmb IAmb 03 59 06.5
comp=Z,27nm,1.4s
BEKR Beckworth 22.59 3 IAmb IAmb 03 58 55.5
comp=Z,18nm,1.0s
TCRU Three Creeks R 22.84 19 P **P** **03 58 55.2 +0.5**
O02D Mt. Diablo Mer 22.87 358 P 03 58 55.4
baz=178
O03E Paynes Creek 22.98 0 P 03 58 56.8
baz=180
MVCO Mesa Verde 23.14 28 IAmb IAmb 03 59 00.9
comp=Z,35nm,1.4s
MVCO Mesa Verde 23.14 28 P 03 58 57.5
baz=214,SNR=7.5
WDC Whiskeytown Da 23.27 359 P **P** **03 58 59.9 +1.1**
WDC IAmb IAmb 03 59 05.8
comp=Z,45nm,1.5s
833A Chaparral WMA, 23.45 58 P 03 59 01.0
baz=247
N02D Trinity Center 23.67 358 P 03 59 03.6
baz=178
TMUT Trail Mountain 23.87 21 IAmb IAmb 03 59 09.8
comp=Z,16nm,0.8s
MSTX Muleshoe 23.91 42 P 03 59 05.6
baz=230,SNR=8.8
MSTX Muleshoe 23.91 42 IAmb IAmb 03 59 09.5
comp=Z,24nm,1.1s
SRU San Rafael Swe 23.95 22 IAmb IAmb 03 59 10.4
comp=Z,18nm,1.0s
JCT Junction City 24.06 53 P **P** **03 59 07.0 +0.3**
JCT IAmb IAmb 03 59 10.9
comp=Z,25nm,1.3s
JCT Junction City 24.06 53 P 03 59 06.9
baz=242,SNR=6.8
M02C Callahan 24.09 358 P 03 59 07.1
baz=178
ELK Elko 24.12 12 P **P** **03 59 07.6 +0.2**
comp=Z,4.0nm,0.9s,baz=206,slow=10,SNR=14
ELK LR LR 04 06 59.5
comp=Z,253nm,18.8s,baz=199,slow=33
NLU North Lily Min 24.19 19 IAmb IAmb 03 59 17.1
comp=Z,18nm,1.4s
P17A Butcher Ranch, 24.19 21 IAmb IAmb 03 59 10.4
comp=Z,17nm,1.2s
DUG Dugway, Tooele 24.19 17 P **P** **03 59 08.8 +0.8**
DUG Dugway, Tooele 24.19 17 P 03 59 08.5
baz=202
S22A 4UR Ranch, Cre 24.35 30 P 03 59 09.4
baz=217,SNR=14
MPU Maple Canyon 24.38 19 IAmb IAmb 03 59 15.5
comp=Z,19nm,1.5s
YBH Yreka Blue Hor 24.42 359 P **P** **03 59 09.7 -0.3**
comp=Z,5.6nm,1.0s,baz=169,slow=8.6,SNR=6.7
YBH LR LR 04 06 32.4
comp=Z,629nm,21.0s,baz=186,slow=31
YBH Yreka Blue Hor 24.42 359 P **P** **03 59 10.5 +0.5**
YBH IAmb IAmb 03 59 12.8
comp=Z,26nm,1.5s
M04C Macdoel 24.46 0 P 03 59 10.5
baz=180,SNR=5.7
MOD Modoc Plateau 24.62 3 IAmb IAmb 03 59 15.0
comp=Z,15nm,0.9s
L02E Cave Junction 24.88 357 P 03 59 14.3
baz=176
L04D Klamath Falls 24.90 359 P 03 59 14.3
baz=179,SNR=8.4
CTU Camp Tracy 24.96 18 IAmb IAmb 03 59 20.2
comp=Z,20nm,1.2s
JLU Jordanelle 24.97 19 P **P** **03 59 16.1 +1.0**
JLU IAmb IAmb 03 59 20.5
comp=Z,34nm,1.4s
T25A Trinidad 25.11 34 P 03 59 16.6
baz=222
AMTX Amarillo 25.18 42 IAmb IAmb 03 59 30.5
comp=Z,17nm,1.1s
AMTX Amarillo 25.18 42 P 03 59 16.9
baz=231
ABTX Abilene, Hawle 25.25 48 P 03 59 17.2
baz=238,SNR=16
HUMO Hull Mountain 25.30 358 P **P** **03 59 19.8 +1.9**
K04D Chiloquin, OR 25.31 0 P 03 59 18.0
baz=180,SNR=6.3
SPUT South Promonto 25.33 17 IAmb IAmb 03 59 21.7
comp=Z,23nm,1.1s
K02D Willamette Mer 25.42 357 P 03 59 19.3
baz=176
RDMU Red Mountain 25.58 22 P **P** **03 59 21.0 +0.4**
RDMU IAmb IAmb 03 59 26.6
comp=Z,23nm,1.3s
HVU Hansel Valley 25.68 16 IAmb IAmb 03 59 25.0
comp=Z,17nm,1.2s
O20A White River Ci 25.70 25 P 03 59 21.6
baz=211,SNR=6.2
CMIG Matias Romero 25.80 86 P **P** **03 59 21.6 -0.9**
comp=Z,7.4nm,0.9s,baz=259,slow=8.5,SNR=11
CMIG LR LR 04 07 08.1
comp=Z,435nm,21.3s,baz=264,slow=31
HWUT Hardware Ranch 25.86 18 P **P** **03 59 22.9 -0.2**
HWUT IAmb IAmb 03 59 39.1
comp=Z,16nm,0.9s
J01E Myrtle Point 25.90 357 P 03 59 23.3
baz=176
435B Jarrell 25.90 54 IAmb IAmb 03 59 26.6
comp=Z,21nm,0.9s
435B Jarrell 25.90 54 P 03 59 22.8
baz=244
J04D Umpqua Nationa 25.92 360 P 03 59 24.2
baz=180
J05D Fort Rock, OR 25.97 1 P 03 59 24.3
baz=181
Q24A Divide 26.12 31 P 03 59 25.7
baz=219,SNR=5.5
J08A Circle Bar Ran 26.20 6 IAmb IAmb 03 59 35.0
comp=Z,15nm,1.2s
I03D Drain, OR 26.41 358 P 03 59 28.3
baz=177
I04A Tendick Farm, 26.48 359 P 03 59 28.2
baz=179
PINE Pine Mountain 26.48 2 P **P** **03 59 29.6 +0.9**
PINE IAmb IAmb 03 59 37.2
comp=Z,27nm,1.4s
WHTX Lake Whitney, 26.54 52 IAmb IAmb 03 59 30.6
comp=Z,23nm,0.9s
WHTX Lake Whitney, 26.54 52 P 03 59 29.1
baz=242,SNR=7.0
ISCO Idaho Springs 26.56 29 P 03 59 29.3
baz=217
MFID Camas Ranch 26.60 10 IAmb IAmb 03 59 34.5
comp=Z,14nm,1.1s
I02D Swisshome 26.84 357 P 03 59 31.9
baz=176
HKT Hockley 26.95 57 P **P** **03 59 32.8 0.0**
HLID Hailey 27.00 12 IAmb IAmb 03 59 37.8
comp=Z,18nm,1.4s
HLID Hailey 27.00 12 P 03 59 33.3
baz=196,SNR=8.6
WMOK Wichita Mounta 27.01 45 P **P** **03 59 33.5 +0.1**
WMOK Wichita Mounta 27.01 45 P 03 59 33.2
baz=236
I05D Terrebonne, OR 27.02 1 P 03 59 32.9
baz=181
H04D Lebanon 27.21 359 P 03 59 34.3
baz=178
N23A Red Feather La 27.30 27 P 03 59 35.5
baz=215
Z35A Perchaven, San 27.34 49 P **P** **03 59 36.8 +0.5**
H04A Detroit Lake 27.36 360 IAmb IAmb 03 59 45.9
comp=Z,18nm,0.9s
KSCO Kaye Shedlock' 27.44 34 P 03 59 36.2
baz=223
BW06 Boulder Array 27.53 20 P 03 59 37.8
baz=206,SNR=6.8
PDAR Pinedale Array 27.53 20 P **P** **03 59 37.6 -0.6**
comp=Z,4.1nm,0.8s,baz=211,slow=5.8,SNR=31
PDAR PcP **PcP** **04 02 56.2 -0.1**
comp=Z,0.8nm,0.7s,baz=172,slow=2.8,SNR=5.1
PDAR LR LR 04 09 26.2
comp=Z,244nm,18.4s,baz=214,slow=34
PDAR Pinedale Array 27.53 20 P **P** **03 59 37.9 -0.3**
PHWY Pilot Hill 27.84 27 P **P** **03 59 41.1 0.0**
G03D McMinnville, O 27.92 358 P 03 59 40.6
baz=177
G05D Wamic, OR 27.93 1 P 03 59 41.0
baz=181
OKCFA Oklahoma City 28.29 45 P **P** **03 59 46.2 +1.3**
OK025 Westminster Rd 28.46 45 IAmb IAmb 03 59 48.1
comp=Z,20nm,1.1s
K22A Casper 28.52 24 IAmb IAmb 03 59 49.7
comp=Z,16nm,1.1s
K22A Casper 28.52 24 P 03 59 46.5
baz=212,SNR=5.8
NATX Nacogdoches 28.58 55 P 03 59 46.5
baz=246
F07A Phinny Hill Vi 28.62 3 P **P** **03 59 48.4 +0.8**
F07A IAmb IAmb 03 59 51.5
comp=Z,9.2nm,0.8s
H17A Grant Village 28.71 17 P 03 59 48.0
baz=203
F04D Rainier, OR 28.78 358 P 03 59 48.5
baz=178
CBKS Cedar Bluff 28.92 38 P **P** **03 59 51.8 +1.4**
CBKS IAmb IAmb 03 59 54.9
comp=Z,10nm,0.8s
CBKS Cedar Bluff 28.92 38 P 03 59 49.8
baz=228
YHL Hebgen Lake 28.96 16 IAmb IAmb 04 00 07.6
comp=Z,12nm,1.4s
DLMT Dillon 29.10 14 P **P** **03 59 54.4 +2.2**
OGNE Ogallala 29.18 32 P **P** **03 59 54.2 +1.5**
OGNE IAmb IAmb 04 00 01.0
comp=Z,17nm,1.1s
OGNE Ogallala 29.18 32 P 03 59 51.7
baz=222
E04D Cinebar 29.24 359 P 03 59 52.4
baz=179
R32A Long Quarter, 29.27 39 P **P** **03 59 53.9 +0.3**
R32A IAmb IAmb 03 59 55.1
comp=Z,11nm,1.1s
X37A Clayton 29.32 49 IAmb IAmb 03 59 58.0
comp=Z,14nm,1.4s
E09A Wood Farm, Sta 29.36 5 IAmb IAmb 03 59 57.5
comp=Z,8.9nm,0.9s
LON Longmire 29.43 0 P **P** **03 59 55.9 +1.0**
LON IAmb IAmb 04 00 02.3
comp=Z,11nm,1.2s
BOZ Bozeman (W) 29.55 15 P 03 59 55.9
baz=200
TUL1 Leonard 29.70 46 P 03 59 56.5
baz=238
RLMT Red Lodge 29.75 18 P 03 59 58.0
baz=205
T35A Sooner Cattle 29.76 44 IAmb IAmb 03 59 59.8
comp=Z,15nm,1.1s
D03D Eldon 30.23 358 P 04 00 01.3
baz=178
APG El Apazote 30.25 90 P **P** **04 00 01.9 -0.8**
comp=Z,5.3nm,1.0s,baz=200,slow=8.0,SNR=6.3
APG LR LR 04 09 45.0
comp=Z,362nm,19.3s,baz=272,slow=32
342A Flagon Creek P 30.28 57 P **P** **04 00 03.9 +1.3**
MIAR Mount Ida 30.60 50 P 04 00 04.3
baz=243
C06D Leavenworth 30.61 1 P 04 00 05.0
baz=182
Z41A Richland Creek 30.63 53 P 04 00 04.2
baz=246
RSSD Black Hills 30.75 26 P 04 00 06.7
baz=215
W39A Magazine 30.75 49 P **P** **04 00 07.5 +0.8**
W39A IAmb IAmb 04 00 22.6
comp=Z,9.1nm,1.2s
W39A Magazine 30.75 49 P 04 00 05.9
baz=242
U38A Gravette 30.94 46 IAmb IAmb 04 00 10.2
comp=Z,18nm,1.1s
B05A Bryant 30.95 360 P 04 00 08.2
baz=180
KSU1 Kansas State U 30.98 40 P 04 00 08.4
baz=232
B08A Colville Reser 31.11 3 IAmb IAmb 04 00 17.7
comp=Z,11nm,1.1s
X40A Basin Creek Fa 31.12 51 P 04 00 09.3
baz=244
HHAR Hobbs 31.17 47 IAmb IAmb 04 00 19.1
comp=Z,9.5nm,1.2s
NEW Newport 31.19 6 P **P** **04 00 09.1 -1.3**
comp=Z,2.6nm,0.9s,baz=170,slow=6.1,SNR=2.5
NEW Newport 31.19 6 P **P** **04 00 10.5 +0.1**
NEW Newport 31.19 6 P 04 00 10.3
baz=189
143A Socs Landing, 31.49 55 P **P** **04 00 14.4 +1.2**
TAOE Nuku Hiva Isla 31.59 216 *e*T T 04 33 30.0
comp=Z,71nm,0.3s
W41B Gary Mavity, V 31.86 50 P 04 00 15.9
baz=243
U40A Yellville 31.97 48 IAmb IAmb 04 00 26.7
comp=Z,10nm,1.4s
U40A Yellville 31.97 48 P 04 00 17.0
baz=241
LAO LASA Array 32.11 20 P 04 00 18.8
baz=209
S39A Bolivar 32.31 45 P **P** **04 00 21.0 +0.6**
LCAR Lake Charles 33.06 49 P **P** **04 00 28.0 +1.1**
OXF Oxford 33.71 53 P 04 00 32.4
baz=248
CCM Cathedral Cave 33.92 46 P **P** **04 00 34.4 0.0**
CCM IAmb IAmb 04 00 36.1
comp=Z,10nm,1.4s
CCM Cathedral Cave 33.92 46 P 04 00 34.1
baz=241
ECSD EROS Data Cent 33.97 34 IAmb IAmb 04 00 36.7
comp=Z,12nm,1.1s
ECSD EROS Data Cent 33.97 34 P 04 00 35.3
baz=227,SNR=8.4
DGMT Dagmar 34.34 21 P **P** **04 00 38.7 +0.8**
DGMT Dagmar 34.34 21 P 04 00 38.1
baz=211
PLAL Pickwick Lake 34.91 53 IAmb IAmb 04 00 43.5
comp=Z,16nm,1.2s
LRAL Lakeview Retre 35.09 57 P **P** **04 00 45.1 +0.5**
LRAL IAmb IAmb 04 00 45.6
comp=Z,7.7nm,1.1s
LRAL Lakeview Retre 35.09 57 P 04 00 44.4
baz=252
WVT Waverly 35.53 51 P **P** **04 00 48.1 -0.2**
WVT IAmb IAmb 04 00 50.0
comp=Z,11nm,1.1s
WVT Waverly 35.53 51 P 04 00 48.2
baz=247
F33A 5 Mile Ranch, 35.60 31 IAmb IAmb 04 00 50.2
comp=Z,16nm,1.1s
L40A Anamosa 36.03 40 IAmb IAmb 04 00 53.8
comp=Z,13nm,1.0s
T47A Sharon Grove 36.40 50 IAmb IAmb 04 00 57.5
comp=Z,11nm,1.0s
HDIL Hopedale 36.47 44 P **P** **04 00 56.0 -0.3**
HDIL IAmb IAmb 04 01 04.4
comp=Z,12nm,1.1s
HDIL Hopedale 36.47 44 P 04 00 56.1
baz=240
SWET Sewanee 36.63 54 IAmb IAmb 04 00 59.2
comp=Z,12nm,1.0s
CLTN Cedars of Leba 36.64 52 P **P** **04 00 57.9 +0.1**
FPAL Fort Paine 36.66 55 IAmb IAmb 04 00 59.4
comp=Z,20nm,1.1s
SPMN Marine on St. 37.01 35 IAmb IAmb 04 01 02.6
comp=Z,18nm,1.3s
SPMN Marine on St. 37.01 35 P 04 01 00.9
baz=230
F36A Milaca 37.03 33 IAmb IAmb 04 01 02.9
comp=Z,20nm,1.0s
JFWS Jewell Farm 37.11 40 P 04 01 01.8
baz=236
TIGA Tifton 37.45 61 P 04 01 04.4
baz=257
WCI Wyandotte Cave 37.49 49 P 04 01 04.9
baz=246
AGMN Agassiz Nation 37.57 29 P 04 01 05.2
baz=223
Y52A Lilburn 37.68 57 P **P** **04 01 06.7 -0.1**
SFIN Lafayette 37.85 45 P **P** **04 01 08.9 +0.8**
SFIN IAmb IAmb 04 01 20.2
comp=Z,26nm,1.4s
GOGA Godfrey 38.03 58 P 04 01 09.2
baz=254
TKL Tuckaleechee C 38.44 54 P **P** **04 01 11.7 -1.4**
comp=Z,5.1nm,0.8s,baz=234,slow=10,SNR=4.6
B35A Bob, Littlefor 38.62 30 IAmb IAmb 04 01 15.8
comp=Z,16nm,1.1s
TZTN Tazewell 38.90 53 P 04 01 16.3
baz=251
ULM Lac du Bonnet 39.00 27 P **P** **04 01 15.8 -1.8**
comp=Z,12nm,1.0s,baz=221,slow=9.7,SNR=14
ULM Lac du Bonnet 39.00 27 P **P** **04 01 17.6 0.0**
ULM IAmb IAmb 04 01 18.8
comp=Z,32nm,1.3s
P49A Miami Univ. Ec 39.14 48 IAmb IAmb 04 01 20.0
comp=Z,35nm,1.4s
P49A Miami Univ. Ec 39.14 48 P 04 01 19.0
baz=246
EYMN Ely 39.45 32 P 04 01 21.1
baz=229
Q51A Peebles 39.92 49 P **P** **04 01 25.9 +0.3**
KMSC Kings Mountain 40.20 56 IAmb IAmb 04 01 29.1
comp=Z,15nm,1.1s
KMSC Kings Mountain 40.20 56 P 04 01 28.1
baz=254
U54A Nelsons Funny 40.22 53 P 04 01 28.1
baz=252
P51A Williamsport 40.30 49 IAmb IAmb 04 01 29.9
comp=Z,15nm,1.0s
FFC Flin Flon 40.44 18 P **P** **04 01 28.4 -1.2**
ACSO Alum Creek Sta 40.64 48 P **P** **04 01 31.8 +0.4**
ACSO IAmb IAmb 04 01 32.8
comp=Z,35nm,1.4s
ACSO Alum Creek Sta 40.64 48 P 04 01 31.5
baz=247
J47A Sunmer 40.69 43 IAmb IAmb 04 01 33.2
comp=Z,20nm,1.1s
S54A Dingess, Beckl 41.00 52 P 04 01 34.0
baz=251
P52A Corning 41.02 49 P 04 01 34.4
baz=248
AAM Ann Arbor 41.03 44 P 04 01 34.7
baz=244
M50A Fremont 41.07 46 P **P** **04 01 35.6 +0.7**
M50A IAmb IAmb 04 01 36.3
comp=Z,16nm,0.8s
U56A King 41.27 54 P 04 01 36.6
baz=254
R54A Victor 41.36 51 P 04 01 36.7
baz=251
GLMI Grayling 41.58 40 P 04 01 37.1
baz=241
DLBC Dease Lake 41.58 354 P **P** **04 01 39.1 +0.1**
comp=Z,4.9nm,1.1s,baz=175,slow=12,SNR=1.8
M51A Elyria 41.63 46 P 04 01 38.8
baz=247
O53A New Philadelph 41.90 48 IAmb IAmb 04 01 42.6
comp=Z,14nm,1.0s
O53A New Philadelph 41.90 48 P 04 01 41.4
baz=249
R55A Marlinton 42.04 52 P 04 01 42.4
baz=252
RKT Rikitea 42.10 198 *e*LQ LQ 04 11 26.9
comp=Z,873nm,30.5s
RKT Rikitea 42.10 198 *e*T T 04 46 35.0
comp=Z,6.8nm,0.3s
R56A Bull Pasture M 42.62 52 P 04 01 48.4
baz=252
M53A WI Miller and 42.72 47 P 04 01 48.2
baz=248
T58A Grand View Acr 42.87 54 P 04 01 50.6
baz=255
N54A Moraine State 43.03 48 P 04 01 50.3
baz=249
L53A Girard 43.20 46 P 04 01 52.2
baz=248
R57A Stanardsville 43.25 52 P 04 01 51.5
baz=253
S58A Poland Farm, P 43.41 53 P 04 01 53.9
baz=254
ERPA Erie 43.45 46 P **P** **04 01 54.3 -0.1**
ERPA Erie 43.45 46 P 04 01 54.0
baz=248
M54A Oil Creek Stat 43.45 47 IAmb IAmb 04 01 55.4
comp=Z,13nm,1.1s
M54A Oil Creek Stat 43.45 47 P 04 01 54.1
baz=249
O56A Blue Knob Stat 43.81 49 P 04 01 56.1
baz=251
U60A Pendleton 43.82 55 P 04 01 56.6
baz=256
P57A Homestead Farm 43.98 51 P 04 01 58.4
baz=252
S59A Mechanicsville 44.03 53 P 04 01 59.4
baz=255
PPT Papeete 44.04 220 LR LR 04 15 05.0
comp=Z,117nm,20.4s,baz=29,slow=29
PPT2 Papeete2 44.05 220 *e*LQ LQ 04 11 58.0
comp=Z,699nm,34.8s
PPT2 *e*LR LR 04 14 10.8
comp=Z,243nm,26.8s
N56A West Decatur 44.22 49 P 04 02 00.6
baz=251
O57A Amberson 44.47 50 P 04 02 02.9
baz=252
M56A Emporium 44.49 48 P 04 02 02.9
baz=250
WVNY West Valley, N 44.51 46 P **P** **04 02 02.1 -0.8**
WVNY IAmb IAmb 04 02 04.1
comp=Z,18nm,1.1s
N57A Milroy 44.70 49 P 04 02 04.3
baz=252
L56A Greenwood 45.15 47 P 04 02 07.4
baz=250
P59A Jarrettsville 45.18 51 P 04 02 07.7
baz=254
M57A Sunshine Farm, 45.19 48 P **P** **04 02 08.4 +0.1**
M57A Sunshine Farm, 45.19 48 P 04 02 08.4
baz=251
H53A Bobcaygeon 45.33 44 P 04 02 08.4
baz=247
YKA Yellowknife Ar 45.50 5 P **P** **04 02 09.6 -0.8**
comp=Z,4.2nm,0.9s,baz=182,slow=8.7,SNR=32
YKA PcP **PcP** **04 03 48.6 -0.5**
comp=Z,0.9nm,0.8s,baz=185,slow=3.3,SNR=7.5
YKA LR LR 04 20 11.2
comp=Z,259nm,18.5s,baz=0.0,slow=35
K56A Middlesex 45.50 46 P 04 02 11.0
baz=250
O59A Robesonia 45.56 50 P 04 02 10.5
baz=253
L57A Andrews Acres 45.60 48 P 04 02 11.6
baz=251
M58A Price's Panora 45.68 49 P 04 02 11.3
baz=252
Q23K Middleton Isla 45.75 343 P 04 02 13.4
baz=146
P60A Greenville 45.83 51 P 04 02 14.3
baz=254
CTG Chitna Glacier 45.84 347 P 04 02 14.4
baz=154
G54A Lake Saint Pet 45.98 43 P 04 02 14.6
baz=247
J56A Wolcott 46.02 46 P **P** **04 02 14.5 -0.3**
J56A Wolcott 46.02 46 P 04 02 14.8
baz=250
K57A Scipio Center 46.07 47 P 04 02 15.4
baz=251
ALGO Algonquin Park 46.22 42 P 04 02 16.3
baz=246
BINY Binghamton 46.27 48 P 04 02 16.9

baz=252
OHAK Old Harbor 46.30 337 P 04 02 17.2
baz=136
L58A Harry Jones Me 46.32 48 P 04 02 17.4
baz=252
KDAK Kodiak Island 46.46 338 P **P** **04 02 18.5 +0.5**
comp=Z,13nm,1.0s,baz=146,slow=7.7,SNR=3.8
KDAK LR LR 04 16 46.6
comp=Z,275nm,20.4s,baz=148,slow=30
KDAK Kodiak Island 46.46 338 P **P** **04 02 18.8 +0.8**
M59A Waymart 46.47 49 P 04 02 16.9
baz=253
N60A Cedar Hill Far 46.51 50 P 04 02 18.1
baz=254
EYAK Cordova Ski Ar 46.53 344 P 04 02 18.4
baz=148
BMRM Bremner River 46.60 345 P 04 02 19.2
baz=150
K58A Earlville 46.69 47 P 04 02 20.6
baz=252
L59A Walton 46.94 48 P 04 02 21.5
baz=252
M60A Port Jervis 46.99 49 P 04 02 21.6
baz=254
I57A Carthage 47.06 45 P 04 02 22.7
baz=250
N25K Chitina, Valde 47.15 345 P 04 02 23.2
baz=150
K59A Cooperstown 47.25 47 P 04 02 24.9
baz=252
BRSE Bradley Lake S 47.33 341 P 04 02 24.7
baz=141
KLU Klutina 47.38 345 P 04 02 26.8
baz=148
H57A Richville 47.42 45 P 04 02 24.7
baz=250
PAL Palisades 47.42 50 P 04 02 24.7
baz=255
I58A Old Forge 47.45 46 P 04 02 25.0
baz=251,SNR=5.4
L60A Shokan 47.46 48 P 04 02 25.3
baz=253
BCAR Beaver Creek A 47.83 348 P **P** **04 02 29.2 +0.5**
L27K Beaver Creek, 47.83 348 P 04 02 29.5
baz=154
L61A Hillsdale 1, H 48.00 48 P 04 02 29.6
baz=254
LONY Lake Ozonia 48.02 45 P 04 02 29.5
baz=251
SDPT Sand Point 48.06 331 P 04 02 29.5
baz=127
MATQ Matagami 48.08 37 P 04 02 30.1
baz=244
RC01 Rabbit Creek A 48.09 342 P 04 02 30.0
baz=143
MENT Mentasta 48.12 347 P **P** **04 02 32.5 +1.5**
ROSC El Rosal 48.15 99 LR LR 04 20 30.8
comp=Z,50nm,18.5s,baz=112,slow=33
H58A Gabriels 48.22 45 P 04 02 31.6
baz=251
I59A Olmsteadville 48.24 46 P 04 02 31.6
baz=252
M62A Hamden 48.27 49 P 04 02 32.7
baz=255
D55A Sainte-Anne-du 48.27 42 P 04 02 32.2
baz=248
E56A St. Veronique 48.38 42 P 04 02 32.9
baz=249
J60A Lant Hill Farm 48.39 47 P 04 02 32.6
baz=253
TBI Tubuai 48.51 215 *e*LQ LQ 04 13 52.0
comp=Z,218nm,29.8s
TBI *e*LR LR 04 16 08.7
comp=Z,93nm,27.2s
H59A Cadyville 48.63 45 P 04 02 36.1
baz=252
I60A Shoreham 48.66 46 P 04 02 35.6
baz=253
SUA Susitna One 48.68 342 P 04 02 36.1
baz=142
L61B Northampton 48.69 48 P 04 02 36.0
baz=254
D56A ZEC Mazanza, M 48.74 42 P 04 02 35.8
baz=249
K27K Chicken 48.75 348 IAmb IAmb 04 02 41.7
comp=Z,12nm,1.4s
K27K Chicken 48.75 348 P 04 02 36.5
baz=154
WAT6 Susitna Watana 48.76 344 P 04 02 35.5
baz=146
SPCR Spurr Chakacha 48.92 341 P 04 02 36.8
baz=140
SCRK Sand Creek 49.09 347 P 04 02 39.1
baz=152
SCRK Sand Creek 49.09 347 P **P** **04 02 38.5 -0.1**
SCRK IAmb IAmb 04 02 47.4
comp=Z,7.3nm,1.0s
FALS False Pass 49.16 330 P 04 02 39.0
baz=123
EGAK Eagle 49.26 349 P **P** **04 02 41.7 +2.0**
EGAK IAmb IAmb 04 02 45.5
comp=Z,16nm,1.4s
EGAK Eagle 49.26 349 P 04 02 40.0
baz=155
WAT2 Susitna Watana 49.30 344 P 04 02 39.7
baz=146
SKT Skwentna 49.32 342 P 04 02 40.7
baz=142
ATAH Atahualpa 49.33 116 P **P** **04 02 41.8 +0.4**
comp=Z,5.8nm,0.8s,baz=289,slow=6.1,SNR=3.9
I61A Oroboro, Fairl 49.43 46 P 04 02 41.0
baz=254
F59A Saint Guilaume 49.62 44 P 04 02 42.3
baz=251
G60A Masonville 49.69 45 P 04 02 43.9
baz=252
H61A Lyndonville 49.80 46 P 04 02 44.5
baz=253
D58A Chemin du LacG 49.96 42 P 04 02 45.6
baz=250
MCK McKinley 50.02 345 P 04 02 45.7
baz=146,SNR=5.9
EPYK Eagle Plains 50.07 352 IAmb IAmb 04 02 49.1
comp=Z,8.3nm,1.0s
EPYK Eagle Plains 50.07 352 P 04 02 45.9
baz=161
HDA Harding Lake 50.12 346 P 04 02 45.9
baz=148
HDA P 04 02 45.9
baz=148
TRF Thorofare Moun 50.15 344 P 04 02 46.4
baz=144
F60A Warwick 50.20 44 P 04 02 46.9
baz=252
PPLA Purkeypile 50.23 343 P 04 02 47.1
baz=141
KTH Kantishna Hill 50.40 344 IAmb IAmb 04 02 56.7
comp=Z,10nm,0.9s
ILAR Eielson Array 50.41 346 P **P** **04 02 48.5 0.0**
comp=Z,1.7nm,0.6s,baz=168,slow=6.5,SNR=26
ILAR PcP **PcP** **04 04 05.9 -0.7**
comp=Z,1.9nm,1.1s,baz=184,slow=5.8,SNR=2.0
ILAR LR LR 04 18 55.5
comp=Z,77nm,21.2s,baz=140,slow=30
CAST Castle Rocks 50.61 343 P 04 02 51.1
baz=142
TCOL CIGO, UAF Yank 50.72 346 P 04 02 51.4
baz=147
PRP Porcupine Dome 50.76 348 P 04 02 51.5
baz=150
NEA2 Nenana 50.77 345 IAmb IAmb 04 02 59.1
comp=Z,11nm,1.1s
NEA2 Nenana 50.77 345 P 04 02 51.3
baz=146,SNR=6.9
F61A St Evariste 50.84 44 P 04 02 51.7
baz=253
BPAW Bear Paw Mtn. 50.85 344 P **P** **04 02 52.1 +0.2**
BPAW IAmb IAmb 04 02 59.9
comp=Z,5.7nm,0.9s
BPAW Bear Paw Mtn. 50.85 344 P 04 02 51.8
baz=143
MDM Murphy Dome 50.88 346 IAmb IAmb 04 03 00.5
comp=Z,7.8nm,1.0s
NIKH Nikolski High 51.03 325 P 04 02 53.4
baz=116
CHUM Lake Minchumin 51.04 343 P 04 02 53.5
baz=142
I23K Minto, Yukon-K 51.30 346 IAmb IAmb 04 03 03.8
comp=Z,9.6nm,0.8s
I23K Minto, Yukon-K 51.30 346 P 04 02 55.3
baz=146,SNR=8.3
MLY Manley 51.54 345 P **P** **04 02 57.0 0.0**
MLY Manley 51.54 345 P 04 02 57.5
baz=144
INK Inuvik 51.58 355 P **P** **04 02 56.5 -0.6**
comp=Z,3.5nm,0.6s,baz=165,slow=6.0,SNR=22
INK LR LR 04 22 06.2
comp=Z,212nm,18.3s,baz=144,slow=33
INK Inuvik 51.58 355 IAmb IAmb 04 03 01.1
comp=Z,9.7nm,1.0s
C36M Paulatuk 52.11 359 P 04 03 00.9
baz=177
G64A Maxfield 52.16 46 P 04 03 01.9
baz=255
BMAR Burnt Mountain 52.27 349 P **P** **04 03 02.4 +0.1**
E63A Oxbow 52.69 44 P 04 03 05.8
baz=255
IMAR Indian Mountai 53.07 344 P **P** **04 03 07.2 -1.0**
COLD Coldfoot 53.22 347 P 04 03 09.2
baz=146
TOLK Toolik Lake Re 54.27 348 IAmb IAmb 04 03 37.3
comp=Z,5.2nm,0.9s
TOLK Toolik Lake Re 54.27 348 P 04 03 17.2
baz=147
ANM Nome 55.59 339 P **P** **04 03 26.9 +0.2**
ANM IAmb IAmb 04 03 30.9
comp=Z,11nm,1.2s
ANM Nome 55.59 339 P 04 03 26.9
baz=127
RDOG Red Dog Mine 57.05 343 P 04 03 36.9
baz=132
TNA Tin City 57.06 339 P **P** **04 03 37.2 +0.1**
TNA Tin City 57.06 339 P 04 03 36.8
baz=125
GAMB Gambell 57.47 336 IAmb IAmb 04 03 50.1
comp=Z,7.0nm,1.2s
GAMB Gambell 57.47 336 P 04 03 39.8
baz=120
A21K Barrow 57.87 347 IAmb IAmb 04 03 50.9
comp=Z,9.3nm,0.8s
A21K Barrow 57.87 347 P 04 03 42.2
baz=140,SNR=5.2
RES Resolute Bay 59.32 8 P **P** **04 03 51.9 -0.9**
comp=Z,5.6nm,0.9s,baz=201,slow=9.5,SNR=8.9
RES Resolute Bay 59.32 8 P **P** **04 03 52.3 -0.5**
RES IAmb IAmb 04 03 54.9
comp=Z,6.4nm,0.9s
PB16 IPOC Station P 62.48 122 P **P** **04 04 15.8 0.0**
LPAZ La Paz 62.58 119 P **P** **04 04 16.1 -0.4**
comp=Z,4.4nm,0.8s,baz=338,slow=7.2,SNR=12
LPAZ LR LR 04 28 09.5
comp=Z,27nm,18.4s,baz=308,slow=33
LPAZ La Paz 62.58 119 P **P** **04 04 16.3 -0.2**
PTGA Pitinga 63.51 100 P **P** **04 04 23.0 +0.9**
SAML Samuel 63.58 109 P **P** **04 04 21.2 -1.4**
EUNU Eureka 64.83 6 P **P** **04 04 30.3 +0.5**
EUNU IAmb IAmb 04 04 38.3
comp=Z,3.8nm,0.8s
H03N2 Juan Fernandez 64.96 141 T T 05 14 59.7
baz=317,slow=77,SNR=42
H03N1 Juan Fernandez 64.97 141 T T 05 15 01.0
baz=317,slow=77,SNR=42
H03N3 Juan Fernandez 64.97 141 T T 05 15 00.3
baz=317,slow=77,SNR=63
H11N3 WAKE ISLAND Hy 67.12 285 T T 05 18 09.6
baz=78,slow=74,SNR=55
H11N2 WAKE ISLAND Hy 67.12 285 T T 05 18 09.9
baz=78,slow=74,SNR=43
H11N1 WAKE ISLAND Hy 67.13 285 T T 05 18 11.0
baz=78,slow=74,SNR=41
H11S2 WAKE ISLAND Hy 67.54 283 T T 05 18 41.7
baz=77,slow=75,SNR=12
H11S1 WAKE ISLAND Hy 67.54 283 T T 05 18 41.7
baz=77,slow=75,SNR=6.4
H11S3 WAKE ISLAND Hy 67.56 283 T T 05 18 43.0
baz=77,slow=75,SNR=6.6
MSVF Nonsavu 68.57 243 LR LR 04 29 42.0
comp=Z,141nm,18.1s,baz=336,slow=31
CO03 El Pedregal 68.60 134 P **P** **04 04 55.8 +1.2**
CO03 IAmb IAmb 04 04 56.8
comp=Z,4.9nm,1.0s
PETK Petropavlovsk- 70.68 321 P **P** **04 05 07.1 +0.1**
comp=Z,5.7nm,0.9s,baz=120,slow=8.8,SNR=5.3
PETK LR LR 04 30 23.4
comp=Z,92nm,21.0s,baz=70,slow=31
SUMG Summit 71.72 18 *i* P **P** **04 05 15.0 +1.6**
SUMG IAmb IAmb 04 05 16.3
comp=Z,7.1nm,1.2s
SEY Seymchan 72.88 331 P **P** **04 05 19.8 -0.2**
comp=Z,4.6nm,0.7s,baz=106,slow=5.5,SNR=25
MA2 Magadan 73.98 328 P **P** **04 05 26.5 -0.1**
comp=Z,6.7nm,0.9s,baz=88,slow=5.7,SNR=5.8
MA2 Magadan 73.98 328 P **P** **04 05 27.2 +0.5**
MA2 IAmb IAmb 04 05 28.2
comp=Z,11nm,1.1s
PLCA Paso Flores 74.80 142 P **P** **04 05 32.6 +0.9**
comp=Z,1.9nm,0.7s,baz=310,slow=5.1,SNR=3.9
PLCA LR LR 04 30 07.4
comp=Z,98nm,21.2s,baz=332,slow=29
PLCA Paso Flores 74.80 142 IAmb IAmb 04 05 43.3
comp=Z,7.0nm,1.1s
CPUP Villa Florida 76.20 123 P **P** **04 05 40.3 +0.4**
comp=Z,1.6nm,0.8s,baz=310,slow=4.7,SNR=4.1
TIXI Tiksi 79.66 342 P **P** **04 05 58.2 -0.2**
comp=Z,6.4nm,0.8s,baz=69,slow=2.8,SNR=16
TIXI Tiksi 79.66 342 P **P** **04 05 57.7 -0.7**
TIXI IAmb IAmb 04 05 59.1
comp=Z,13nm,1.1s
DZM Mont Dzumac 80.28 243 LR LR 04 36 49.9
comp=Z,92nm,18.1s,baz=129,slow=32
HNR Honiara 81.64 257 LR LR 04 34 10.9
comp=Z,59nm,20.5s,baz=45,slow=30
ASAJ Asahikawa 82.06 314 P **P** **04 06 11.9 +0.1**
comp=Z,10nm,0.9s,baz=23,slow=7.0,SNR=3.8
SPB Sao Paulo 83.24 117 P **P** **04 06 17.9 -0.3**
KLR Kul'dur 87.37 321 P **P** **04 06 38.2 -0.3**
comp=Z,1.0nm,0.8s,baz=98,slow=1.0,SNR=3.9
MJAR Matsushiro Arr 87.58 307 P **P** **04 06 39.0 -0.8**
comp=Z,5.9nm,0.9s,baz=88,slow=2.4,SNR=7.5
MJAR Matsushiro Arr 87.58 307 P **P** **04 06 40.1 +0.2**
MAT Matsushiro 87.58 307 P **P** **04 06 40.1 +0.2**
USRK Ussuriysk Ar. 89.21 316 LR LR 04 40 16.4
comp=Z,35nm,19.7s,baz=353,slow=31
ARCES ARCESS Array B 90.43 11 P **P** **04 06 51.2 -1.4**
comp=Z,2.0nm,0.9s,baz=324,slow=4.5,SNR=3.9
ARCES LR LR 04 46 24.0
comp=Z,69nm,21.1s,baz=265,slow=35
ARCES ARCESS Array B 90.43 11 P **P** **04 06 52.0 -0.5**
ARCES IAmb IAmb 04 06 54.0
comp=Z,6.1nm,1.2s
NRIK Noril'sk 91.15 350 LR LR 04 46 05.3
comp=Z,69nm,21.5s,baz=18,slow=34
NOA NORSAR Array B 93.47 21 LR LR 04 47 12.2
comp=Z,69nm,19.7s,baz=205,slow=34
KSRS Korea Array 94.83 311 LR LR 04 43 11.6
comp=Z,32nm,20.6s,baz=0.0,slow=31
FINES FINESS Array B 97.53 15 LR LR 04 49 57.6
comp=Z,109nm,18.5s,baz=306,slow=35
FITZ Fitzroy Crossi 116.00 258 **PKiKP** **04 12 35.4 +0.3**
BRTR Keskin Array B 118.90 21 PKP **PKPdf** **04 12 39.4 -1.1**
comp=Z,0.6nm,0.8s,baz=4.4,slow=2.7,SNR=4.2
BRTR Keskin Array B 118.90 21 **PKPdf** **04 12 39.6 -0.9**
CM31 Chiang Mai Arr 126.42 310 PKPdf **PKiKP** **04 12 56.0 +0.3**
CMAR Chiang Mai Arr 126.42 310 PKP **PKPdf** **04 12 55.4 +0.1**
comp=Z,2.4nm,0.8s,baz=7.1,slow=1.2,SNR=19
CMAR Chiang Mai Arr 126.42 310 **PKPdf** **04 12 55.0 -0.2**
PALK Pallekele 146.96 316 PKPbc **PKPbc** **04 13 34.7 -0.3**
comp=Z,9.2nm,1.0s,baz=79,slow=5.6,SNR=5.7
PALK Pallekele 146.96 316 PKPbc **PKPbc** **04 13 35.0 0.0**
BOSA Boshof 147.79 116 PKPbc **PKPbc** **04 13 35.8 -1.2**
comp=Z,3.8nm,1.0s,baz=264,slow=3.6,SNR=6.3
BOSA Boshof 147.79 116 PKPbc **PKPbc** **04 13 36.6 -0.4**

*ANF **13** 04:17:40.2±0.1,33.99N×118.34W,h13km±1km, ML3.3/28, Error ellipse: s-maj=1.1km s-min=1.0km az=62.0, Hypocentre not reviewed by the ISC*
*SCEDC **13** 04:17:41.1,33.99N×118.36W,h12km, Hypocentre not reviewed by the ISC*
*PAS **13** 04:17:41.0±1.7,33.998N±0.007×118.360W±0.009, h12km±1km, ML3.3/187, ML3.0/49(NEIC), Error ellipse: s-maj=1.1km s-min=0.9km az=216.0*
NEIC 13 04:17:40.4±1.2**,33.998N**±0.010×**118.36W**±0.01,

h18km, Error ellipse: s-maj=1.4km s-min=1.3km az=222.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHPC	**Baldwin Hills**	**0.01**	**207**		Pg	04 17 44.5	+0.9
LCGC	**La Cienega, Cu**	**0.02**	**278**		Pg	04 17 44.7	+1.1
USC	**University of**	**0.06**	**70**		Pg	04 17 43.6	-0.2
USC					Sg	04 17 45.9	-0.1
WTT2	**Watts, South G**	**0.10**	**120**		Pg	04 17 44.0	-0.1
WTT2					Sg	04 17 47.1	+0.6
GR2C	**Griffith Obs.**	**0.13**	**21**		Pg	04 17 44.0	-0.4
DJJ	**Donna J Jenkin**	**0.14**	**323**		Pg	04 17 44.1	-0.5
DJJ					Sg	04 17 46.5	-0.8
DJJ	**Donna J Jenkin**	**0.14**	**323**		Pg	04 17 44.0	-0.5
DJJ					Sg	04 17 46.5	-0.8
HLLC	**North Hollywoo**	**0.18**	**359**		Pb	04 17 44.8	+0.1
HLLC					Sg	04 17 48.0	-0.3
GVRC	**Garvey Reservo**	**0.20**	**75**		Pg	04 17 46.0	+0.5
PASC	**Pasadena Art C**	**0.22**	**39**	Pg	Pb	04 17 45.4	-0.4
PASC				Sg	Sb	04 17 48.9	-0.4
PASC				IAML		04 17 49.2	
	comp=N,3μm,0.6s						
PASC				IAML		04 17 49.3	
	comp=E,3μm,0.7s						
GSA	**Caltech--GSA**	**0.23**	**54**		Pg	04 17 45.9	0.0
GSA					Sg	04 17 49.7	0.0
CACC	**Caltech Cellar**	**0.24**	**55**		Pg	04 17 45.9	-0.1
CACC					Sb	04 17 49.6	-0.2
DECC	**Green Verdugo**	**0.26**	**4**		Pg	04 17 46.1	-0.2
DECC					Sg	04 17 49.9	-0.4
DECC	**Green Verdugo**	**0.26**	**4**	P		04 17 46.1	
	baz=185,SNR=151						
DECC				S		04 17 49.8	
	baz=185						
RPV	**Rancho Palos V**	**0.26**	**189**		Pg	04 17 46.1	-0.2
DLAC	**Del Amo**	**0.26**	**124**		Pb	04 17 47.1	+0.6
RHC	**Rose Hills Cem**	**0.29**	**89**		Pb	04 17 47.3	+0.4
RHC					Sb	04 17 52.4	+1.0
FMP	**Fort Macarthur**	**0.29**	**169**		Pg	04 17 46.7	-0.1
FMP					Sg	04 17 50.9	-0.2
FMP	**Fort Macarthur**	**0.29**	**169**	P		04 17 46.7	
	baz=349,SNR=76						
FMP				S		04 17 50.6	
	baz=349						
MWC	**Mount Wilson**	**0.34**	**48**		Pg	04 17 47.6	-0.1
MWC					Sg	04 17 52.6	-0.1
BLCC	**Black Canyon**	**0.36**	**313**		Pg	04 17 48.1	+0.1
BLCC					Sb	04 17 53.6	-0.1
BREC	**Barre Substati**	**0.37**	**121**		Pb	04 17 49.5	+1.1
BREC					Sg	04 17 52.8	-0.5
AGOC	**Agoura**	**0.37**	**294**		Pg	04 17 47.9	-0.3
PT2	**Point Dume**	**0.37**	**271**		Pg	04 17 48.3	+0.1
PT2					Sg	04 17 53.4	-0.1
OAT	**Oat Mountain**	**0.41**	**328**		Pb	04 17 49.5	+0.3
OAT					Sb	04 17 56.2	+1.0
CHFC	**Chilao Flat St**	**0.43**	**39**		Pg	04 17 49.2	-0.2
CHFC					Sg	04 17 55.4	-0.1
PEM	**Pine Mountain**	**0.44**	**67**		Pg	04 17 49.3	-0.1
PSRC	**Puddingstone R**	**0.47**	**78**		Pg	04 17 50.0	+0.1
PSRC					Sg	04 17 56.4	+0.1
PDE	**Pardee, Santa**	**0.48**	**337**		Pb	04 17 51.0	+0.6
PDE					Sb	04 17 58.5	+1.3
XTL	**Crystal Lake,**	**0.51**	**54**		Pg	04 17 50.5	-0.2
JNH	**Juniper Hills**	**0.56**	**37**		Pg	04 17 51.4	-0.3
JNH					Sg	04 17 58.9	-0.4
CJV	**Casa Juvan**	**0.56**	**18**		Pg	04 17 51.4	-0.3
CJV					Sb	04 17 59.5	+0.1
SSK	**Sunset Peak**	**0.59**	**69**		Pg	04 17 52.1	-0.1
LRRC	**Littlerock Res**	**0.59**	**27**		Pb	04 17 52.1	-0.1
LRRC					Sg	04 18 00.1	-0.1
CIAC	**Catalina I. Ai**	**0.60**	**185**		Pg	04 17 52.3	0.0
CIAC					Sg	04 17 59.9	-0.4
CIS	**Catalina Islan**	**0.60**	**185**	P		04 17 52.3	
	baz=4.3,SNR=61						
CIS				S		04 18 00.3	
	baz=4.3						
BFSC	**Mount Baldy Ra**	**0.63**	**67**		Pb	04 17 52.8	-0.1
BFSC					Sg	04 18 00.7	-0.6
BFSC	**Mount Baldy Ra**	**0.63**	**67**	P		04 17 52.5	
	baz=247,SNR=56						
BFSC				S		04 18 00.8	
	baz=247						
LEOC	**Leona Valley**	**0.63**	**4**		Pb	04 17 52.6	-0.3
LEOC					Sb	04 18 01.1	-0.4
PYR	**Pyramid**	**0.65**	**331**		Pg	04 17 53.8	+0.4
MLSC	**Mira Loma**	**0.66**	**89**		Pg	04 17 53.1	-0.3
MLSC					Sb	04 18 02.1	-0.1
CRNC	**Corona**	**0.67**	**100**		Pn	04 17 54.7	-0.3
OSI	**Osito Audit: C**	**0.69**	**334**	Pg	Pg	04 17 54.4	-0.4
OSI	**Osito Audit: C**	**0.69**	**334**		Sg	04 18 04.1	+0.9
OSI	**Osito Audit: C**	**0.69**	**334**	IAML		04 18 04.9	
	comp=N,969nm,0.7s						
OSI				IAML		04 18 08.0	
	comp=E,738nm,0.7s						
OSI	**Osito Audit: C**	**0.69**	**334**	P		04 17 54.1	
	baz=154						
OSI				S		04 18 03.9	
	baz=154						
ALPC	**Antelope**	**0.69**	**4**		Pb	04 17 53.7	-0.2
ALPC					Sb	04 18 03.1	0.0
BTPC	**Burnt Peak**	**0.71**	**345**		Pb	04 17 54.3	0.0
BTPC					Sb	04 18 03.6	-0.2
SS2	**San Sevaine**	**0.74**	**73**		Pg	04 17 54.9	-0.1
STCC	**Santa Clara**	**0.75**	**294**		Pg	04 17 55.3	+0.1
RVR	**Riverside**	**0.82**	**90**		Pb	04 17 55.6	-0.5
RVR					Sb	04 18 06.6	-0.1
SBB	**Saddle Back Bu**	**0.82**	**32**		Pb	04 17 55.8	-0.3
SBB					Sb	04 18 06.8	0.0
ELS	**Elsinore Mount**	**0.85**	**114**		Pb	04 17 55.7	-1.0
SME	**Santa Rosa Min**	**0.85**	**102**		Pb	04 17 56.1	-0.5
RSBC	**Riverside Bore**	**0.86**	**91**		Pb	04 17 56.4	-0.4
RSBC					Sb	04 18 07.9	0.0
RSBC	**Riverside Bore**	**0.86**	**91**		Pb	04 17 56.9	+0.1
RSBC					Sb	04 18 07.5	-0.4
CSP	**Cedar Springs**	**0.88**	**70**		Pb	04 17 57.3	+0.1
TPO	**Tropico Hills**	**0.89**	**7**		Pb	04 17 57.2	-0.1
EDW2	**Edwards Air Fo**	**0.93**	**19**		Pg	04 17 58.0	-0.1
EDW2					Sg	04 18 10.7	-0.2
EDW2	**Edwards Air Fo**	**0.93**	**19**	P		04 17 58.0	
	baz=199,SNR=109						
EDW2				S		04 18 10.7	
	baz=199						
ADO	**Adelanto Recei**	**0.94**	**54**		Pn	04 17 59.7	+0.9
ADO					Sn	04 18 12.1	+0.2
PEC	**Perris**	**1.00**	**96**		Pb	04 17 58.9	-0.4
PEC					Sg	04 18 12.6	-0.5
VTV	**Victorville**	**1.02**	**56**		Pg	04 18 01.1	+0.9
SCI2	**San Clemente I**	**1.03**	**189**		Pb	04 17 59.5	-0.2
SCI2	**San Clemente I**	**1.03**	**189**	P		04 17 59.4	
	baz=8.6,SNR=14						
SCI2				S		04 18 13.1	
	baz=8.6						
CFT	**Crafton Hills**	**1.04**	**88**		Pb	04 17 59.9	0.0
MPI	**Mount Pinos, F**	**1.04**	**321**		Pb	04 17 59.9	-0.3
RYS	**Reyes Peak**	**1.04**	**308**		Pn	04 18 00.4	0.0
MURC	**Murrieta**	**1.05**	**112**		Pb	04 17 59.7	-0.3
MURC					Sb	04 18 13.8	+0.5
MURC	**Murrieta**	**1.05**	**112**	P		04 17 59.6	
	baz=292,SNR=93						
MURC				S		04 18 14.3	
	baz=292						
SCZ2	**Santa Cruz Isl**	**1.06**	**270**		Pn	04 18 00.4	-0.1
SCZ2	**Santa Cruz Isl**	**1.06**	**270**	P		04 18 00.3	
	baz=90,SNR=35						
SCZ2				S		04 18 15.2	
	baz=90						
HYS	**Haystack Butte**	**1.08**	**37**		Pb	04 18 00.7	0.0
ABL	**Mount Abel**	**1.11**	**320**		Pb	04 18 00.9	-0.3
BTL	**Butler Peak**	**1.15**	**77**		Pb	04 18 02.2	+0.2
BACC	**Bachelor Mtn.**	**1.16**	**109**		Pn	04 18 01.3	-0.5
HMTC	**Hemet**	**1.16**	**104**		Pn	04 18 01.5	-0.4
DGR	**Domenigoni Val**	**1.17**	**107**		Pn	04 18 01.5	-0.5
CCAC	**Calif City Air**	**1.19**	**14**		Pb	04 18 02.7	+0.3
ARVC	**Arvin**	**1.19**	**341**		Pb	04 18 02.7	+0.2
ARVC	**Arvin**	**1.19**	**341**	P		04 18 02.7	
	baz=161,SNR=50						
ARVC				S		04 18 19.3	
	baz=161						
SBC	**Santa Barbara**	**1.21**	**292**		Pg	04 18 03.3	-0.5
SBC	**Santa Barbara**	**1.21**	**292**	P		04 18 02.9	
	baz=112,SNR=14						
SBC				S		04 18 19.9	

baz=112
BBRC Big Bear Solar 1.22 77 Pb 04 18 03.2 +0.1
BBRC Big Bear Solar 1.22 77 P 04 18 03.2
baz=258,SNR=62
BBRC S 04 18 19.7
baz=258
SNCC San Nicolas Is 1.23 233 Pb 04 18 03.3 +0.2
SNCC Sg Sg 04 18 19.7 -0.6
SNCC San Nicolas Is 1.23 233 P 04 18 03.2
baz=52
SNCC S 04 18 19.6
baz=52
POB Polly Butte 1.23 104 Pn 04 18 02.7 -0.2
GORC Green Oak Ranc 1.26 131 Pn 04 18 02.7 -0.5
BCW Bitter Crk WRg 1.28 317 Pb 04 18 04.1 0.0
DTP Desert Tortois 1.33 18 Pb 04 18 05.2 +0.2
PLM Palomar 1.40 117 Pn 04 18 05.3 0.0
CRY Cary Ranch 1.42 107 Pn 04 18 05.5 +0.1
RRX Edison Barstow 1.43 52 Pg 04 18 07.9 0.0
RRX Edison Barstow 1.43 52 P 04 18 05.9
baz=232
RRX S 04 18 26.1
baz=232
SYP Santa Ynez Pea 1.44 292 Pb 04 18 06.5 -0.3
PKM Mcpherson Peak 1.50 307 Pb 04 18 08.0 +0.2
PKM Mcpherson Peak 1.50 307 P 04 18 07.4
baz=126,SNR=38
PKM S 04 18 27.2
baz=126
HWB Hans Werner Br 1.52 129 Pn 04 18 06.6 -0.1
SNDA J Saunders Pla 1.52 107 Pg 04 18 09.1 -0.6
109C Camp Elliot, M 1.52 136 Pn Pn 04 18 06.3 -0.5
109C IAML 04 18 36.4
comp=N,206nm,0.4s
109C Camp Elliot, M 1.52 136 P 04 18 06.2
baz=317,SNR=32
FRD Ford Ranch, An 1.55 108 Pn 04 18 07.7 +0.5
DPP Dos Picos Cty 1.55 130 Pn 04 18 06.7 -0.4
LRMC Laurel Mtn Rad 1.58 20 Pb 04 18 09.0 -0.2
LRMC Laurel Mtn Rad 1.58 20 P 04 18 08.8
baz=201,SNR=52
LRMC S 04 18 29.7
baz=201
NJQ Nojoqui County 1.60 290 Pb 04 18 08.7 -0.8
EW2 E Wide Canyon 1.62 91 Pb 04 18 09.2 -0.6
PFO Pinyon Flats O 1.63 103 Pn Pn 04 18 08.7 +0.4
PFO IAML 04 18 39.0
comp=N,220nm,0.8s
PFO Pinyon Flats O 1.63 103 P 04 18 08.6
baz=284
PFO Sb 04 18 31.4
baz=284
TPFO Pinon Flats 1.63 103 Sb 04 18 31.5
baz=284
MATG Mataguay Scout 1.63 119 Pn 04 18 08.5 +0.1
BSM San Miguel Isl 1.66 272 Pb 04 18 09.6 -0.8
ISA Isabella, Lake 1.66 357 Pb 04 18 10.1 -0.5
ISA IAML 04 18 35.8
comp=E,157nm,0.7s
ISA Isabella, Lake 1.66 357 P 04 18 09.9
baz=177,SNR=64
ISA S 04 18 31.8
baz=177
EML El Monte Cty P 1.68 131 Pn 04 18 08.8 -0.1
SDRC San Diego Road 1.73 136 Pn 04 18 09.5 0.0
BORC Borrego Spring 1.77 114 Pn 04 18 10.2 0.0
TJX Tijuana 1.84 143 Pn Pb 04 18 13.0 -0.5
HEC Hector,Ludlow 1.87 63 P 04 18 12.6
baz=244,SNR=47
HEC S 04 18 36.6
baz=244
SMMC Simmler 1.88 315 P 04 18 13.1
baz=134
BAR Barrett 1.93 133 Pn 04 18 12.2 -0.1
BAR IAML 04 18 47.4
comp=N,128nm,0.3s
MONP2 Monument Peak 1.96 124 P 04 18 13.2
baz=305
BELC Belle Mtn. Jos 1.96 89 P 04 18 13.4
baz=270
BELC Sb 04 18 41.1
baz=270
TKX Tecate 2.04 134 Pn 04 18 13.9 0.0
TKX IAML 04 18 43.4
comp=E,121nm,0.4s
TKX IAML 04 18 44.1
comp=N,149nm,0.2s
CBX Cerro Bola 2.20 139 Pn 04 18 16.3 +0.1
CBX IAML 04 18 55.0
comp=N,79nm,0.6s
IKP In-Ko-Pah, Jac 2.31 125 P 04 18 18.0
baz=306
PAGB Antelope Grade 2.33 319 Pb 04 18 19.9 -1.9
PAGB IAML 04 19 00.1
comp=E,67nm,0.6s
RMX La Rumorosa 2.36 125 Pb 04 18 21.2 -1.3
RMX IAML 04 19 08.5
comp=N,82nm,1.1s
GMRC Granite Mounta 2.36 70 P 04 18 18.9
baz=251
IRM Iron Mountain 2.67 86 P 04 18 22.6
baz=267
PMPB Monarch Peak 2.98 319 Pn Pn 04 18 27.9 +1.0
PMPB IAML 04 19 24.1
comp=E,64nm,0.9s
PMPB IAML 04 19 32.9
comp=N,65nm,0.8s
TPNV Topopah Spring 3.41 30 Pn Pn 04 18 35.5 +2.6
TPNV IAML 04 19 35.7
comp=N,34nm,0.9s
TPNV IAML 04 19 38.8
comp=N,42nm,0.6s
TPNV Topopah Spring 3.41 30 P 04 18 35.1
baz=211
SHPR Sheep Range 3.62 45 Pn Pn 04 18 38.6 +2.9
SAO San Andreas Ge 3.74 318 Pn Pn 04 18 38.0 +0.7
SPX San Pedro Mart 3.83 140 Pn Pn 04 18 40.8 +2.0
LHV Little Huntoon 4.25 358 Pn Pn 04 18 48.8 +4.6
LHV IAML 04 19 57.4
comp=N,23nm,1.4s
PRN Pahroc Range 4.34 37 Pn Pn 04 18 48.5 +2.9
CMB Columbia Colle 4.35 338 Pn Pn 04 18 49.6 +3.9
NVAR Mina Array Bea 4.42 1 Pn Pn 04 18 50.9 +4.0
RYN Ryan 4.62 358 Pn Pn 04 18 52.4 +2.8
RYN IAML 04 20 12.1
comp=E,14nm,3.3s
KVN Kaiserville 5.05 2 Pn Pn 04 18 59.3 +4.0
KVN IAML 04 20 25.5
comp=E,8.1nm,4.7s
LCMT Little Creek M 5.14 53 Pn Pn 04 18 59.6 +3.0
LCMT IAML 04 20 43.2
comp=N,8.9nm,5.0s
CCUT Cedar City 5.39 47 Pn Pn 04 19 04.1 +4.0
CCUT IAML 04 19 55.1
comp=E,6.3nm,4.2s
CCUT IAML 04 20 46.7
comp=N,8.8nm,4.4s
KNB Kanab 5.43 55 Pn 04 19 03.6 +3.0
SZCU Shurtz Canyon 5.59 49 Pn Pn 04 19 06.6 +3.7
PSUT Pine Spring 5.81 37 Pn Pn 04 19 09.7 +3.9
ORV Oroville 6.09 336 Pn 04 19 12.3 +2.7
MTPU Mount Pierson 6.43 49 Pn Pn 04 19 18.7 +4.2
MSU Marysvale 6.72 46 Pn Pn 04 19 22.6 +4.1

*IDC **13** 04:27:19.6≈3.7,36˚39N×71˚48E,h45km≈34km,mb3.4/7, mb1 3.6/13,mb1mx3.3/49,mbtmp3.7/13,ML3.8/5,Error ellipse: s-maj=27.8km s-min=22.4km az=15.0*
*NEIC **13** 04:27:26.0≈2.2,36˚71N≈0˚05×71˚43E≈0˚10,h97km≈8km, mb4.1/9,Error ellipse: s-maj=12.5km s-min=5.2km az=112.0*
*NNC **13** 04:27:26.9≈6.3,36˚83N×71˚14E,h93km≈138km,mb3.8, mpv4.2,Error ellipse: s-maj=49.8km s-min=43.9km az=0.0*
ISC 13 04:27:24.9≈0.6,36˚61N≈0˚05×71˚51E≈0˚06,h100km,n59, σ1§83/61,mb3.9/10,5C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.57**	**339**	Pn	**Pn**	**04 28 05.3**	**+0.3**
KBL	**Kabul**	**2.88**	**225**	Pn	**Pn**	**04 28 11.5**	**+2.2**
NIL	**Nilore**	**3.28**	**154**	Pn	**Pn**	**04 28 17.8**	**+3.3**
THN	**Thein Dam**	**5.42**	**139**	*e*P	**Pn**	**04 28 46.0**	**+2.6**
AML	**Almayashu**	**5.77**	**16**	P	**Pn**	**04 28 49.2**	**+0.8**
SNR=256
DHRM DHARAMSHALA 5.88 136 *e*P **Pn** **04 28 50.0 +0.2**
DHRM *e*S **Sn** **04 29 53.1 -2.8**
DHRM IAML 04 29 57.0
comp=E,386nm,0.3s
DHRM IAML 04 29 57.5
comp=N,418nm,0.2s
UCH Uchtor 6.08 22 P **Pn** **04 28 53.8 +1.1**
SNR=20
EKS2 Erkin-Say 6.30 15 P **Pn** **04 28 57.0 +1.7**
SNR=11
AAK Ala-Archa 6.45 20 P **Pn** **04 28 58.8 +1.3**
SNR=24
AAK Ala-Archa 6.45 20 ⇑P **Pn** **04 28 58.8 +1.3**
comp=N,10nm,0.3s
AAK ⇓S **Sn** **04 30 09.1 -0.5**
comp=N,12nm,0.5s
AAK Ala-Archa 6.45 20 Pn **Pn** **04 28 58.7 +1.3**
KK31 Karatay Array 6.53 354 P **Pn** **04 28 58.6 +0.2**
comp=N,20nm,0.3s,baz=181,slow=14,SNR=245
KK31 ⇓S **Sn** **04 30 08.7 -2.7**
comp=N,5.4nm,0.4s,baz=180,slow=23
KK31 Karatay Array 6.53 354 **Pn** **04 28 58.4 0.0**
KKAR Karatay Array 6.53 354 **Pn** **04 28 58.4 -0.1**
KKAR Karatay Array 6.53 354 **Pn** **04 28 58.1 -0.3**
BOOM Boomskoye usch 6.80 29 Pn **Pn** **04 29 03.3 +1.1**
CHMS Chumysh 6.86 20 P **Pn** **04 29 03.9 +1.0**
SNR=7.2
USP Ospenovka 7.04 18 P **Pn** **04 29 05.7 +0.4**
SNR=22
TKM2 Tokmak 2 7.05 25 P **Pn** **04 29 07.7 +2.1**
SNR=5.5
TKM2 Tokmak 2 7.05 25 ⇑P **Pn** **04 29 06.6 +1.0**
comp=N,1.5nm,0.3s
TKM2 ⇑S **Sn** **04 30 23.9 -0.4**
comp=N,1.5nm,0.4s
SMLA Simla 7.21 138 *e*P **Pn** **04 29 08.2 +0.5**
SMLA *e*S **Sn** **04 30 24.6 -3.4**
SMLA IAML 04 30 26.8
comp=E,163nm,0.2s
SMLA IAML 04 30 28.0
comp=N,143nm,0.3s
DDI Dehra Dun 8.32 137 *e*S **Sn** **04 30 54.5 -0.6**
PDGK Podgornoye 9.09 40 ⇑P **Pn** **04 29 33.4 +0.1**
comp=N,2.1nm,0.6s
GEYT Alibeck 10.75 281 P **Pn** **04 29 51.7 -4.1**
comp=N,1.3nm,0.3s,baz=122,slow=9.8,SNR=6.1
GEYT S Sn 04 31 44.0 -10
comp=N,1.2nm,0.3s,baz=232,slow=41,SNR=2.5
GEYT Alibeck 10.75 281 **Pn** **04 29 51.9 -3.9**
MKAR Makanchi Array 12.97 35 P **Pn** **04 30 24.5 -0.8**
comp=N,0.0nm,0.3s,baz=228,slow=15,SNR=4.5
GKN Gorkha 14.02 124 *e*P **Pn** **04 30 36.4 -2.9**
comp=N,5.1nm,0.2s
DMN Daman 14.59 124 *e*P Pn 04 30 39.7 -7.0
comp=N,7.6nm,0.4s
PKI Pulchoki 14.82 123 *e*P Pn 04 30 42.3 -7.4
comp=N,3.6nm,0.2s
KURBB Kurchatov Arra 14.89 18 P **Pn** **04 30 47.8 -2.3**
comp=N,0.1nm,0.3s,baz=4.0,slow=27,SNR=4.1
KURK Kurchatov 15.00 18 P **Pn** **04 30 47.8 -3.6**
AB31 Akbulak array 15.19 330 P **Pn** **04 30 51.3 -2.6**
comp=N,2.7nm,0.4s,baz=136,slow=13,SNR=148
ABKAR Akbulak array 15.19 330 Pn **Pn** **04 30 50.4 -3.4**
JIRN Jiri 15.29 122 *e*P **Pn** **04 30 52.2 -3.5**
comp=N,4.8nm,0.2s
RAMN Ramite 16.03 123 *e*P Pn 04 30 54.7 -10
BVAR Borovoye Array 16.44 358 P **Pn** **04 31 08.6 -0.7**
comp=N,0.4nm,0.3s,baz=196,slow=15,SNR=5.6
BRVK Borovoye 16.47 357 P **Pn** **04 31 08.1 -1.8**
TAPN Taplejung 16.54 119 *e*P **Pn** **04 31 09.1 -2.1**
comp=N,6.4nm,0.4s
AKTO Aktyubinsk 16.89 329 P **Pn** **04 31 15.3 +0.3**
comp=N,1.5nm,0.3s,baz=145,slow=9.0,SNR=23
AKTO Aktyubinsk 16.89 329 ⇑P **Pn** **04 31 14.6 -0.4**
comp=N,4.4nm,0.6s
ZAA0 Zalesovo Array 19.65 24 P **P** **04 31 46.1 +0.5**
ZAA0 IAmb IAmb 04 31 46.7
comp=Z,2.4nm,0.6s
ZALV Zalesovo Beam 19.65 24 P **P** **04 31 46.2 +0.6**
comp=Z,0.4nm,0.3s,baz=233,slow=11,SNR=9.9
ZALV Zalesovo Beam 19.65 24 P **P** **04 31 46.5 +0.9**
MLR Muntele Rosu 35.08 299 P **P** **04 34 09.2 +0.7**
MLR IAmb IAmb 04 34 18.0
comp=Z,2.4nm,1.1s
FINES FINESS Array B 37.62 326 P **P** **04 34 31.4 +1.7**
comp=Z,2.7nm,0.9s,baz=111,slow=10,SNR=4.9
FINES FINESS Array B 37.62 326 P **P** **04 34 30.0 +0.3**
ARCES ARCESS Array B 41.20 337 P **P** **04 35 01.2 +1.9**
comp=Z,0.4nm,0.5s,baz=116,slow=8.5,SNR=9.0
ARCES ARCESS Array B 41.20 337 P **P** **04 35 01.5 +2.2**
ARCES IAmb IAmb 04 35 08.0
comp=Z,4.8nm,1.1s
NOA NORSAR Array B 44.54 323 P **P** **04 35 27.8 +1.4**
comp=Z,0.3nm,0.5s,baz=96,slow=7.6,SNR=2.0
TOA0 Torodi Ar. Sit 66.13 269 P **P** **04 38 01.8 0.0**
TOA0 IAmb IAmb 04 38 13.0
comp=Z,4.8nm,1.5s
TORD Torodi Ar. Bea 66.13 269 P **P** **04 38 01.8 0.0**
comp=Z,0.6nm,0.4s,baz=50,slow=6.0,SNR=9.0
TORD Torodi Ar. Bea 66.13 269 P **P** **04 38 01.9 0.0**
LBTB Lobatse 75.03 222 P **P** **04 38 57.8 +2.1**
LBTB IAmb IAmb 04 38 57.9
comp=Z,2.2nm,0.8s
YKA Yellowknife Ar 81.12 3 P **P** **04 39 31.0 +2.2**
comp=Z,0.2nm,0.8s,baz=359,slow=5.6,SNR=2.2
WRA Warramunga Arr 81.70 122 P **P** **04 39 33.2 +0.7**
comp=Z,0.5nm,0.7s,baz=325,slow=4.7,SNR=7.3
WRAB Tennant Creek 81.70 122 P **P** **04 39 33.2 +0.7**
WB2 Warramunga Arr 81.71 122 P **P** **04 39 32.7 +0.2**
ASAR Alice Springs 83.98 125 P **P** **04 39 44.8 +0.6**
comp=Z,0.4nm,0.7s,baz=311,slow=4.3,SNR=4.1
ASAR Alice Springs 83.98 125 P **P** **04 39 45.2 +1.0**

*IDC **13** 04:33:10.0≈1.4,60˚13N×153˚02W,h83km≈14km,mb3.3/5, mb1 3.7/9,mb1mx3.4/47,mbtmp3.7/9,Error ellipse: s-maj=21.3km s-min=10.0km az=99.0*
*ANF **13** 04:33:10.6≈0.3,59˚99N×152˚95W,h130km≈5km,ML4.0/33, ML4.0/34,Error ellipse: s-maj=4.8km s-min=2.4km az=111.0,Hypocentre not reviewed by the ISC*
*NEIC **13** 04:33:11.4≈1.7,60˚04N≈0˚03×152˚95W≈0˚08, h121km≈3km,Error ellipse: s-maj=5.9km s-min=3.7km az=118.0*
*AEIC **13** 04:33:12≈1.9,60˚04N≈0˚03×152˚96W≈0˚08,h120km≈3km, ML3.6,mb4.0/13(NEIC),ML3.8/102(NEIC),Error ellipse: s-maj=6.3km s-min=3.4km az=68.0*
ISC 13 04:33:12.7≈0.7,60˚07N≈0˚04×152˚88W≈0˚04, h121km≈5km,n154,σ1§40/179,mb3.9/10,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.09**	**231**		**Pn**	**04 33 28.1**	**-1.3**
IVE					**Sn**	**04 33 40.4**	**-1.5**
ILS	**Iliamna Low So**	**0.15**	**219**		**Pn**	**04 33 28.1**	**-1.3**
RED	**Redoubt Volcan**	**0.35**	**9**		**Pn**	**04 33 29.1**	**-1.0**
RED					**Sn**	**04 33 42.3**	**-0.9**
RSO	**Redoubt South**	**0.40**	**9**		**Pn**	**04 33 29.6**	**-0.8**
REF	**Redoubt East F**	**0.43**	**12**		**Pn**	**04 33 29.8**	**-0.8**
REF					**Sn**	**04 33 43.5**	**-0.6**
OPT	**Oil Point**	**0.46**	**203**		**Pn**	**04 33 29.5**	**-1.0**
AU22	**Augustine Moun**	**0.74**	**199**		**Pn**	**04 33 31.2**	**-1.2**
AU22					**Sn**	**04 33 45.7**	**-1.6**
AUL	**Augustine Lava**	**0.75**	**202**		**Pn**	**04 33 31.4**	**-1.1**
HOM	**Homer**	**0.75**	**123**		**Pn**	**04 33 32.2**	**-0.3**
HOM					**Sn**	**04 33 47.3**	**-0.1**
HOM	**Homer**	**0.75**	**123**	P		04 33 32.2	
baz=300,SNR=10							
HOM				S		04 33 47.1	
baz=300							
CNPM	**China Poot**	**1.00**	**123**		**Pn**	**04 33 34.0**	**-0.7**
CNPM					**Sn**	**04 33 50.5**	**-0.9**
BRLK	**Bradley Lake**	**1.05**	**106**		**Pn**	**04 33 35.0**	**-0.3**
CAPN	**Captain Cook N**	**1.11**	**50**		**Pn**	**04 33 37.2**	**+1.4**
CAPN	**Captain Cook N**	**1.11**	**50**	P		04 33 37.2	
baz=231							
BRSE	**Bradley Lake S**	**1.13**	**106**		**Pn**	**04 33 35.6**	**-0.5**
BRSE					**Sn**	**04 33 52.9**	**-0.9**
BRSE	**Bradley Lake S**	**1.13**	**106**	P		04 33 35.6	
baz=286							
BRSE				S		04 33 52.7	
baz=286							
SPCR	**Spurr Chakacha**	**1.18**	**16**		**Pn**	**04 33 36.3**	**-0.3**
SPCR	**Spurr Chakacha**	**1.18**	**16**	P		04 33 36.3	
baz=198,SNR=63
SPCR S 04 33 54.1
baz=198
SPCN Chakachatna No 1.21 16 **Pn** **04 33 36.8 -0.1**
SPCN **Sn** **04 33 56.2 +0.9**
SPCP Crater Peak Br 1.25 16 **Pn** **04 33 37.4 -0.1**
SPCP **Sn** **04 33 56.4 0.0**
SLKM Skilak Lake 1.40 71 **Pn** **04 33 38.1 -0.9**
STLK Strandline Lak 1.52 19 **Pn** **04 33 40.3 -0.2**
O22K Cooper Landing 1.63 74 **Pn** **04 33 41.2 -0.4**
O22K **Sn** **04 34 02.4 -1.2**
O22K Cooper Landing 1.63 74 P 04 33 41.2
baz=256,SNR=16
O22K S 04 34 02.4
baz=256
SVW2 Sparrevohn 1.68 309 **Pn** **04 33 40.8 -1.5**
SVW2 **Sn** **04 34 02.1 -2.8**
FIS Fire Island 1.70 50 **Pn** **04 33 42.4 -0.1**
FIS IAML 04 34 08.6
comp=N,851nm,0.7s
FIS IAML 04 34 12.9
comp=E,824nm,0.3s
SUA Susitna One 1.75 36 **Pn** **04 33 43.1 -0.1**
SUA **Sn** **04 34 06.4 0.0**
SUA IAML 04 34 07.7
comp=N,1μm,0.8s
SUA Susitna One 1.75 36 P 04 33 43.1
baz=218,SNR=228
SUA S 04 34 06.4
baz=218
RC01 Rabbit Creek A 1.86 55 **Pn** **04 33 43.7 -0.7**
RC01 **Sn** **04 34 07.8 -0.8**
RC01 Rabbit Creek A 1.86 55 P 04 33 43.8
baz=238,SNR=14
RC01 S 04 34 07.8
baz=238
SKT Skwentna 2.02 18 **Pn** **04 33 46.0 -0.5**
SKT **Sn** **04 34 12.7 +0.3**
SKT Skwentna 2.02 18 P 04 33 46.0
baz=200,SNR=39
KDAK Kodiak Island 2.30 176 P **Pn** **04 33 47.5 -2.4**
comp=N,53nm,0.3s,baz=342,slow=2.7,SNR=939
KDAK S **Sn** **04 34 15.4 -3.0**
comp=N,36nm,0.3s,baz=264,slow=22,SNR=16
KDAK Kodiak Island 2.30 176 IAML 04 34 16.6
comp=N,471nm,0.4s
KDAK Kodiak Island 2.30 176 P 04 33 47.5
baz=355
KDAK S 04 34 15.3
baz=355
CAHL Cahill 2.38 213 **Pn** **04 33 50.0 -1.0**
PWL Port Wells 2.39 69 **Pn** **04 33 49.6 -1.4**
PWL IAML 04 34 19.1
comp=N,578nm,0.5s
PWL IAML 04 34 19.3
comp=E,510nm,0.3s
PMR Palmer 2.39 49 **Pn** **04 33 49.3 -1.7**
PMR IAML 04 34 19.2
comp=E,291nm,0.6s
KNK Knik Glacier 2.56 56 **Pn** **04 33 51.8 -1.3**
KNK IAML 04 34 23.8
comp=E,505nm,0.4s
KNK IAML 04 34 25.3
comp=N,490nm,0.6s
KNK Knik Glacier 2.56 56 P 04 33 51.8
baz=240
KNK S 04 34 22.4
baz=240
GHO Glory Hole Cre 2.58 47 **Pn** **04 33 52.3 -1.2**
GHO **Sn** **04 34 23.0 -1.9**
GHO IAML 04 34 24.4
comp=E,444nm,0.7s
GHO IAML 04 34 25.2
comp=N,384nm,0.6s
CUT Chulitna 2.66 27 **Pn** **04 33 53.9 -0.6**
CUT **Sn** **04 34 26.1 -0.5**
CUT IAML 04 34 28.8
comp=N,459nm,0.5s
CUT Chulitna 2.66 27 P 04 33 54.1
baz=210,SNR=36
SML Sawmill 2.82 50 **Pn** **04 33 55.3 -1.3**
SML IAML 04 34 37.5
comp=E,302nm,1.0s
SML IAML 04 34 38.8
comp=N,226nm,0.9s
SML Sawmill 2.82 50 P 04 33 55.3
baz=234,SNR=10.0
SML S 04 34 28.4
baz=234
PPLA Purkeypile 2.85 6 **Pn** **04 33 57.4 +0.2**
PPLA Purkeypile 2.85 6 P 04 33 57.5
baz=188,SNR=50
PPLA S 04 34 31.7
baz=188
OHAK Old Harbor 2.87 184 **Pn** **04 33 54.2 -2.9**
OHAK Old Harbor 2.87 184 P 04 33 54.3
baz=3.3,SNR=20
OHAK S 04 34 26.7
baz=3.3
PLK3 Peulik 3 2.97 218 **Pn** **04 33 57.6 -0.9**
GLI Glacier Island 2.98 72 **Pn** **04 33 57.8 -0.8**
GLI IAML 04 34 32.9
comp=N,240nm,0.4s
GLI IAML 04 34 36.5
comp=E,304nm,0.4s
GLI Glacier Island 2.98 72 P 04 33 58.0
baz=256
GLI S 04 34 30.9
baz=256
PLK1 Peulik 1 2.98 222 **Pn** **04 33 56.9 -1.8**
HIN Hinchinbrook I 3.20 81 **Pn** **04 34 00.6 -1.0**
HIN IAML 04 34 39.2
comp=E,212nm,0.7s
HIN IAML 04 34 40.5
comp=N,187nm,0.4s
TT01 Tatalina 3.22 333 **Pn** **04 34 00.7 -1.1**
SCM Sheep Creek Mo 3.23 54 **Pn** **04 34 00.5 -1.6**
SCM **Sn** **04 34 38.1 -2.1**
FID Port Fidalgo 3.25 75 Pn **Pn** **04 34 00.6 -1.6**
FID IAML 04 34 40.4
comp=E,215nm,0.2s
FID IAML 04 34 41.4
comp=N,266nm,0.4s
HUR Hurricane 3.31 27 **Pn** **04 34 02.0 -0.9**
Q23K Middleton Isla 3.37 98 **Pn** **04 34 02.5 -1.2**
Q23K IAML 04 34 50.0
comp=N,256nm,2.5s
Q23K IAML 04 35 20.2
comp=E,196nm,2.8s
Q23K Middleton Isla 3.37 98 P 04 34 02.7
baz=283
MID Middleton Isla 3.37 98 Pn **Pn** **04 34 03.0 -0.8**
MID IAML 04 34 49.7
comp=E,199nm,1.9s
MID IAML 04 34 50.0
comp=N,200nm,2.5s
WAT7 Susitna Watana 3.38 33 **Pn** **04 34 03.0 -1.1**
WAT1 Susitna Watana 3.46 35 **Pn** **04 34 03.8 -1.2**
WAT6 Susitna Watana 3.53 42 **Pn** **04 34 05.0 -1.1**
WAT6 Susitna Watana 3.53 42 P 04 34 05.0
baz=227,SNR=58
WAT2 Susitna Watana 3.56 33 **Pn** **04 34 05.5 -0.9**
WAT2 Susitna Watana 3.56 33 P 04 34 05.6
baz=217
EYAK Cordova Ski Ar 3.58 79 **Pn** **04 34 05.5 -1.0**
EYAK Cordova Ski Ar 3.58 79 P 04 34 05.6
baz=265
SII Sitkinak Islan 3.59 192 **Pn** **04 34 03.4 -3.4**
SII IAML 04 34 48.0
comp=E,136nm,0.4s
SII Sitkinak Islan 3.59 192 P 04 34 03.7
baz=10.0
SII S 04 34 43.7
baz=10.0
TRF Thorofare Moun 3.61 19 **Pn** **04 34 06.2 -0.9**
TRF IAML 04 34 49.2
comp=N,198nm,0.7s
TRF IAML 04 34 50.8
comp=E,116nm,0.5s
TRF Thorofare Moun 3.61 19 P 04 34 06.4
baz=202,SNR=64
KTH Kantishna Hill 3.62 14 **Pn** **04 34 06.0 -1.1**
KTH IAML 04 34 50.9
comp=N,154nm,0.8s
KTH IAML 04 34 51.0
comp=E,113nm,0.7s

DIV	Divide	3.66	70			Pn	04 34 06.4	-1.3
KLU	Klutina	3.70	64			Pn	04 34 06.6	-1.6
KLU						Sn	04 34 47.8	-3.4
KLU	Klutina	3.70	64	P			04 34 06.8	
	baz=250							
CHUM	Lake Minchumin	3.83	4			Pn	04 34 09.5	-0.4
CHUM	Lake Minchumin	3.83	4	P			04 34 09.5	
	baz=185,SNR=34							
M24K	Tolsona, Glenn	3.84	55			Pn	04 34 09.1	-1.0
M24K	Tolsona, Glenn	3.84	55	P			04 34 09.4	
	baz=241,SNR=18							
RND	Reindeer	3.86	28			Pn	04 34 08.5	-1.8
GOAT	Goat Mountain	4.09	79			Pn	04 34 11.7	-1.7
RAGM	Ragged Mountai	4.11	82	Pn		Pn	04 34 12.9	-0.7
MCK	McKinley	4.12	25			Pn	04 34 13.0	-0.7
MCK	McKinley	4.12	25	P			04 34 13.4	
	baz=209,SNR=40							
BPAW	Bear Paw Mtn.	4.14	12			Pn	04 34 12.5	-1.5
BPAW						Sn	04 34 58.3	-3.3
BPAW	Bear Paw Mtn.	4.14	12	P			04 34 13.0	
	baz=194,SNR=34							
BMRM	Bremner River	4.19	74			Pn	04 34 13.2	-1.5
BMRM						Sn	04 34 59.6	-3.3
BMRM					IAML		04 35 01.3	
	comp=E,77nm,0.7s							
BMRM	Bremner River	4.19	74	P			04 34 12.9	
	baz=261							
KAIM	Kayak Island	4.25	88	Pn		Pn	04 34 15.5	0.0
KAIM					IAML		04 35 19.5	
	comp=N,155nm,2.3s							
HMT	Hamilton	4.31	83	Pn		Pn	04 34 15.6	-0.7
N25K	Chitina, Valde	4.34	66			Pn	04 34 15.7	-1.0
N25K						Sn	04 35 03.8	-2.6
N25K					IAML		04 35 06.3	
	comp=E,76nm,0.7s							
N25K					IAML		04 35 06.6	
	comp=N,62nm,0.4s							
N25K	Chitina, Valde	4.34	66	P			04 34 14.8	
	baz=253,SNR=5.7							
BWN	Browne	4.42	20			Pn	04 34 17.0	-0.7
BWN					IAML		04 35 35.3	
	comp=E,68nm,0.9s							
BWN					IAML		04 35 41.7	
	comp=N,69nm,0.9s							
CHIR	Chirikof Islan	4.50	200			Pn	04 34 15.2	-3.7
CHIR					IAML		04 35 05.8	
	comp=E,118nm,2.1s							
CHIR					IAML		04 35 38.6	
	comp=N,110nm,2.5s							
CHIR	Chirikof Islan	4.50	200	P			04 34 15.5	
	baz=17							
SUCK	Suckling Hills	4.56	86	Pn		Pn	04 34 19.1	-0.6
SUCK					IAML		04 35 52.3	
	comp=N,127nm,2.3s							
SUCK					IAML		04 35 54.5	
	comp=E,119nm,2.3s							
PAX	Paxson	4.59	47			Pn	04 34 19.2	-0.9
PAX	Paxson	4.59	47	P			04 34 19.4	
	baz=234,SNR=18							
GLB	Gilahina Butte	4.66	69	Pn		Pn	04 34 20.1	-0.9
GLB					IAML		04 35 14.4	
	comp=E,51nm,0.4s							
GLB					IAML		04 35 15.8	
	comp=N,57nm,0.7s							
VRDI	Verde Repeater	4.78	72	Pn		Pn	04 34 22.4	-0.4
VRDI						Sn	04 35 14.2	-3.2
VRDI					IAML		04 35 20.9	
	comp=N,50nm,0.7s							
NEA2	Nenana	4.87	20			Pn	04 34 23.0	-0.8
NEA2	Nenana	4.87	20	P			04 34 22.9	
	baz=203,SNR=200							
CRQM	Cirque	4.88	78			Pn	04 34 23.3	-0.7
CRQM					IAML		04 35 20.0	
	comp=E,76nm,0.7s							
CRQM					IAML		04 35 21.5	
	comp=N,86nm,0.8s							
CRQE	Cirque	4.90	78	P			04 34 23.6	
	baz=266							
WRH	Wood River Hil	4.95	25			Pn	04 34 24.0	-0.8
MCARA	McCarthy VSAT	5.01	71	Pn		Pn	04 34 26.1	+0.3
MCARA					Sn	Sn	04 35 21.4	-1.2
MCARA					IAML		04 35 25.1	
	comp=N,67nm,0.4s							
MCARA					IAML		04 35 31.0	
	comp=E,87nm,0.6s							
MCARA	McCarthy VSAT	5.02	71	P			04 34 25.4	
	baz=259							
MLY	Manley	5.08	10			Pn	04 34 25.2	-1.4
MLY	Manley	5.08	10	P			04 34 25.3	
	baz=193,SNR=96							
HDA	Harding Lake	5.16	30			Pn	04 34 26.6	-1.0
HDA	Harding Lake	5.16	30	P			04 34 26.6	
	baz=215,SNR=54							
HDA				P			04 34 26.6	
	baz=215,SNR=54							
CCB	Clear Creek Bu	5.16	25			Pn	04 34 26.6	-1.1
MENT	Mentasta	5.25	53	Pn		Pn	04 34 27.9	-0.9
PTPK	Patty Peak	5.25	73			Pn	04 34 28.6	-0.5
PTPK						Sn	04 35 25.9	-2.6
BALM	Baldy	5.29	75			Pn	04 34 28.9	-0.6
PS08	TAPS Pump Stn8	5.30	30			Pn	04 34 28.4	-1.2
I23K	Minto, Yukon-K	5.35	16	Pn		Pn	04 34 29.7	-0.5
I23K	Minto, Yukon-K	5.35	16	P			04 34 29.2	
	baz=200,SNR=165							
TCOL	CIGO, UAF Yank	5.35	24	Pn		Pn	04 34 29.6	-0.6
TCOL	CIGO, UAF Yank	5.35	24	P			04 34 29.2	
	baz=208,SNR=59							
COLA	College	5.35	24	Pn		Pn	04 34 29.4	-0.8
COLA	College	5.35	24	P			04 34 29.2	
	baz=208							
MDM	Murphy Dome	5.36	22	Pn		Pn	04 34 29.7	-0.7
MESA	MESA	5.47	84	Pn		Pn	04 34 32.2	+0.2
MESA	MESA	5.47	84	P			04 34 32.0	
	baz=273							
IL31		5.48	28	Pn		Pn	04 34 31.0	-0.9
ILAR	Eielson Array	5.48	28	P		Pn	04 34 30.6	-1.3
	comp=E,8.4nm,0.3s,baz=216,slow=14,SNR=632							
ILAR				S		Sn	04 35 28.7	-5.0
	comp=E,4.6nm,0.3s,baz=214,slow=24,SNR=8.6							
DOT	Dot Lake	5.50	46			Pn	04 34 31.4	-0.9
YAH	Yahtse	5.56	82	Pn		Pn	04 34 33.7	+0.4
BARN	Barnard Glacie	5.62	75	Pn		Pn	04 34 34.5	+0.4
POKR	Poker Plat Res	5.65	24	Pn		Pn	04 34 33.6	-0.7
POKR	Poker Plat Res	5.65	24	P			04 34 33.2	
	baz=209,SNR=16							
SCRK	Sand Creek	5.73	43			Pn	04 34 34.1	-1.4
SCRK	Sand Creek	5.73	43	P			04 34 34.1	
	baz=231,SNR=16							
CTG	Chitna Glacier	5.77	76	P			04 34 36.5	
	baz=266							
CTGM	Chitina Glacie	5.78	76	Pn		Pn	04 34 36.4	+0.3
TABL	Table Mountain	5.86	81	Pn		Pn	04 34 37.4	+0.1
CHX	Chaix Hills	5.89	85			Pn	04 34 36.2	-1.5
LOGN	Logan Glacier	5.93	78	Pn		Pn	04 34 37.7	-0.5
IM03		5.95	357			Pn	04 34 37.5	-0.7
IMAR	Indian Mountai	5.95	357	Pn		Pn	04 34 37.9	-0.3
PS06	TAPS Pump Stn6	5.98	13			Pn	04 34 38.3	-0.4
L27K	Beaver Creek,	6.07	56			Pn	04 34 39.4	-0.6
L27K	Beaver Creek,	6.07	56	P			04 34 39.0	
	baz=245							
BC03		6.09	56			Pn	04 34 39.4	-0.8
BCAR	Beaver Creek A	6.09	56	Pn		Pn	04 34 39.0	-1.3
BVCY	Beaver Creek	6.26	63			Pn	04 34 42.6	+0.1
YUK3	Moose Creek	6.29	69			Pn	04 34 42.4	-0.7
PCA	Pinnacle	6.32	84			Pn	04 34 43.3	0.0
PINM	Pinnacle	6.32	84	P			04 34 43.4	
	baz=275							
PRP	Porcupine Dome	6.42	29	Pn		Pn	04 34 43.9	-0.8
PRP	Porcupine Dome	6.42	29	P			04 34 43.6	
	baz=215							
K27K	Chicken	6.44	47			Pn	04 34 44.5	-0.4
K27K	Chicken	6.44	47	P			04 34 43.7	
	baz=237							
PS05	TAPS Pump Stn5	6.84	7			Pn	04 34 49.3	-1.0
EGAK	Eagle	7.20	44			Pn	04 34 53.7	-1.4
EGAK	Eagle	7.20	44	P			04 34 53.7	
	baz=234,SNR=5.3							
COLD	Coldfoot	7.28	8	Pn		Pn	04 34 55.9	-0.3
COLD	Coldfoot	7.28	8	P			04 34 55.6	
	baz=191,SNR=46							
ANM	Nome	7.35	313	Pn		Pn	04 34 57.3	+0.1
FYU	Fort Yukon	7.37	25	Pn		Pn	04 34 56.2	-1.1
DAWY	Dawson	7.49	52	Pn		Pn	04 34 58.7	-0.4
HYT	Haines Junctio	7.64	78	Pn		Pn	04 35 01.5	+0.2

BM03	Burnt Mountain	8.23	23			Pn	04 35 06.8	-2.2
BMAR	Burnt Mountain	8.24	23	Pn		Pn	04 35 08.1	-1.2
TOLK	Toolik Lake Re	8.72	8	Pn		Pn	04 35 16.1	+0.3
TOLK	Toolik Lake Re	8.72	8	P			04 35 15.5	
	baz=191,SNR=23							
SKAG	Skagway	8.88	86	Pn		Pn	04 35 18.9	+1.2
BESE	Bessie Mountai	9.33	91	Pn		Pn	04 35 25.7	+1.7
EPYK	Eagle Plains	9.62	42	Pn		Pn	04 35 29.6	+1.7
SIT	Sitka	9.65	101	Pn		Pn	04 35 27.2	-1.0
JIS	Juneau Island	9.66	93	Pn		Pn	04 35 29.4	+1.1
A21K	Barrow	11.40	354	Pn		Pn	04 35 49.1	-2.5
A21K	Barrow	11.40	354	P			04 35 49.3	
	baz=171							
CRAG	Craig	11.49	105	Pn		Pn	04 35 52.9	-0.1
INK	Inuvik	11.74	37	P		Pn	04 35 55.6	-0.5
	comp=E,0.4nm,0.3s,baz=213,slow=12,SNR=8.8							
INK	Inuvik	11.74	37	Pn		Pn	04 35 55.8	-0.3
DLBC	Dease Lake	11.80	88	P		Pn	04 35 59.5	+2.6
	comp=E,1.7nm,0.3s,baz=332,slow=6.2,SNR=33							
C36M	Paulatuk	15.25	41	Pn		Pn	04 36 38.9	-2.3
C36M				IAmb		IAmb	04 36 53.7	
	comp=Z,4.2nm,0.8s							
C36M	Paulatuk	15.25	41	P			04 36 38.4	
	baz=247							
YKA	Yellowknife Ar	18.37	66	P		Pn	04 37 18.4	-0.8
	comp=Z,0.3nm,0.3s,baz=277,slow=10.0,SNR=28							
NEW	Newport	23.71	104	P		P	04 38 15.0	+1.7
	comp=Z,1.0nm,0.4s,baz=288,slow=5.3,SNR=3.7							
NEW	Newport	23.71	104	P		P	04 38 15.1	+1.7
F10A	Beach Ranch, E	25.28	108	P		P	04 38 29.2	+1.6
HRY	Holter Researc	27.38	101	P		P	04 38 47.7	+1.3
NVAR	Mina Array Bea	30.70	119	P		P	04 39 18.1	+2.0
	comp=Z,0.3nm,0.7s,baz=312,slow=8.4,SNR=3.0							
NVAR	Mina Array Bea	30.70	119	P		P	04 39 16.1	0.0
PDAR	Pinedale Array	31.35	104	P		P	04 39 23.3	+1.5
	comp=Z,0.3nm,0.5s,baz=324,slow=5.9,SNR=2.8							
PDAR	Pinedale Array	31.35	104	P		P	04 39 23.6	+1.9
TPNV	Topopah Spring	32.84	118	P		P	04 39 36.8	+2.0
TPNV				IAmb		IAmb	04 39 52.5	
	comp=Z,2.1nm,1.1s							
SRU	San Rafael Swe	33.71	109	P		P	04 39 44.6	+2.3
SRU				IAmb		IAmb	04 39 45.2	
	comp=Z,2.9nm,1.0s							
SPA0	Spitsbergen Ar	41.84	3			P	04 40 50.0	+0.1
HHAR	Hobbs	44.05	95	P		P	04 41 08.0	-0.2
HHAR				IAmb		IAmb	04 41 16.2	
	comp=Z,4.6nm,1.2s							
X37A	Clayton	44.67	98	P		P	04 41 13.9	+0.8
X37A				IAmb		IAmb	04 41 28.6	
	comp=Z,5.9nm,1.5s							
TX31	Lajitas Ar. Si	44.95	111	P		P	04 41 17.7	+2.2
TX31				IAmb		IAmb	04 41 17.9	
	comp=Z,4.1nm,1.0s							
TX32	Lajitas Array	44.95	111	P		P	04 41 17.6	+2.1
TXAR	Lajitas Array	44.95	111	P		P	04 41 16.9	+1.4
	comp=Z,0.4nm,0.7s,baz=319,slow=7.0,SNR=6.6							
TXAR	Lajitas Array	44.95	111	P		P	04 41 17.1	+1.6
JCT	Junction City	45.84	106	P		P	04 41 24.4	+2.0
Y49A	Blount Mountai	49.73	91	P		P	04 41 52.6	+0.2
SONM	Songino Array	54.80	306	P		P	04 42 30.1	+0.4
	comp=Z,1.4nm,0.7s,baz=41,slow=6.8,SNR=9.7							
SONM	Songino Array	54.80	306	P		P	04 42 30.6	+0.9
SONM				IAmb		IAmb	04 42 30.9	
	comp=Z,1.1nm,0.7s							
ABKAR	Akbulak array	67.82	337	P		P	04 43 56.3	-0.8

*NOU **13** 04:37:39.9, 37.02S×177.45E, h276km, MLv4.2, Off E. Coast of N. Island, N.Z.*

WEL 13 04:37:48.9±0.8, 37.5S±5.1×177.7E±.1, h196km±7km, M3.2/30, MLv3.2/30, Error ellipse: s-maj=0.0km s-min=0.0km az=56.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.96	132	P	Pn	04 38 17.8	-0.1
HAZ				S	Sn	04 38 41.4	+1.0
KUZ	Kuaotunu	1.00	291	P	Pn	04 38 18.0	-0.1
RUGZ	Raukumara Rang	1.06	144	P	Pn	04 38 18.0	-0.7
RUGZ				S	Sn	04 38 41.0	-1.0
URZ	Urewera	1.16	171	P	Pn	04 38 19.1	-0.2
URZ				S	Sn	04 38 43.2	+0.1
PKGZ	Pakihiroa	1.23	130	P	Pn	04 38 20.2	+0.3
PKGZ				S	Sn	04 38 44.6	+0.6
TOZ	Tahuroa Road	1.26	240	P	Pn	04 38 20.7	+0.6
MWZ	Matawai	1.32	158	P	Pn	04 38 20.7	0.0
MWZ				S	Sn	04 38 45.0	-0.5
MUGZ	Murupara	1.37	184	P	Pn	04 38 21.0	0.0
MUGZ				S	Sn	04 38 46.3	+0.1
TWGZ	Tauwhareparae	1.38	141	P	Pn	04 38 21.7	+0.6
TWGZ				S	Sn	04 38 48.4	+2.2
WMGZ	Waiomatatini S	1.41	121	P	Pn	04 38 21.5	+0.2
WMGZ				S	Sn	04 38 47.7	+1.1
GRZ	Great Barrier	1.43	306	P	Pn	04 38 21.2	-0.4
PUZ	Puketiti	1.45	132	P	Pn	04 38 21.7	0.0
PUZ				S	Sn	04 38 46.3	-1.0
RTZ	Ruatahuna	1.50	177	P	Pn	04 38 22.1	-0.1
ETAZ	East Tamaki Re	1.57	275	P	Pn	04 38 23.3	+0.5
SNGZ	Shannon Statio	1.71	168	P	Pn	04 38 24.2	+0.1
SNGZ				S	Sn	04 38 50.6	-1.0
CNGZ	Carnagh Statio	1.73	143	P	Pn	04 38 24.8	+0.6
RIGZ	Rimuhau	1.74	157	P	Pn	04 38 24.7	+0.3
RIGZ				S	Sn	04 38 53.0	+0.8
MTHZ	Maungataniwha	1.74	181	P	Pn	04 38 24.3	-0.1
MTHZ				S	Sn	04 38 52.4	+0.1
MRHZ	Matea Rd	1.76	192	P	Pn	04 38 24.7	+0.1
AWAZ	Awhitu Peninsu	1.79	271	P	Pn	04 38 25.0	+0.1
RAHZ	Arahi	1.81	175	P	Pn	04 38 25.2	+0.1
RAHZ				S	Sn	04 38 54.5	+1.0
PRGZ	Paritu Road	1.98	157	P	Pn	04 38 26.6	-0.1
WHHZ	Waihua	1.98	172	P	Pn	04 38 26.8	0.0
WHHZ				S	Sn	04 38 56.5	-0.1
NMHZ	Naumai	1.98	182	P	Pn	04 38 27.1	+0.1
NMHZ				S	Sn	04 38 58.4	+1.7
KNZ	Kokohu	2.01	162	P	Pn	04 38 26.5	-0.5
RITZ	Rihia Road	2.03	203	P	Pn	04 38 27.6	+0.2
BKZ	Black Stump Fm	2.08	188	P	Pn	04 38 26.9	-0.9
BKZ				S	Sn	04 38 57.3	-1.1
HIZ	Hauiti	2.13	228	P	Pn	04 38 29.4	+1.0
ARHZ	Aropaoanui	2.15	178	P	Pn	04 38 28.3	-0.3
MHGZ	Mahia Peninsul	2.19	159	P	Pn	04 38 29.1	+0.1
TMVZ	Te Maari	2.21	205	P	Pn	04 38 29.5	+0.2
ETVZ	East Tongariro	2.23	204	P	Pn	04 38 29.2	-0.3
WTVZ	West Tongariro	2.25	207	P	Pn	04 38 30.0	+0.2
NNVZ	North Ngauruho	2.25	206	P	Pn	04 38 30.2	+0.3
OTVZ	Oturere	2.27	205	P	Pn	04 38 29.8	-0.2
TWVZ	Taurewa	2.27	210	P	Pn	04 38 30.1	+0.1
SNVZ	South Ngauruho	2.29	205	P	Pn	04 38 30.3	0.0
MCHZ	McNeill Hill	2.34	184	P	Pn	04 38 30.3	-0.3
KWHZ	Kaweka Forest	2.34	189	P	Pn	04 38 30.2	-0.5
WCZ	Waipu Caves	2.36	299	P	Pn	04 38 30.1	-0.7
MOVZ	Moawhango	2.46	201	P	Pn	04 38 31.1	-1.0
BHHZ	Black Hill Sta	2.46	195	P	Pn	04 38 30.8	-1.3
MTVZ	Mangateitei	2.53	206	P	Pn	04 38 32.4	-0.4
CKHZ	Cape Kidnapper	2.55	177	P	Pn	04 38 32.3	-0.6
KRHZ	Kereru	2.56	189	P	Pn	04 38 32.0	-1.2
VRZ	Vera Road	2.62	219	P	Pn	04 38 34.4	+0.7
KAHZ	Kahuranaki	2.68	180	P	Pn	04 38 33.5	-1.0
PNHZ	Pukenui	2.85	191	P	Pn	04 38 34.8	-1.7
PXZ	Pawanui	2.92	180	P	Pn	04 38 35.8	-1.4
WPHZ	Waipukurau	2.97	187	P	Pn	04 38 36.1	-1.7
TSZ	Takapari Road	3.03	194	P	Pn	04 38 36.8	-1.8
WAZ	Wanganui	3.03	209	P	Pn	04 38 37.6	-1.0
DVHZ	Dannevirke	3.23	190	P	Pn	04 38 38.5	-2.5
OUZ	Omahuta	3.26	304	P	Pn	04 38 41.1	-0.3
ANWZ	Angora Road	3.36	185	P	Pn	04 38 40.7	-1.8
POWZ	Post Office Ro	3.39	195	P	Pn	04 38 41.0	-1.9
PRWZ	Pori Road	3.51	191	P	Pn	04 38 42.2	-2.2
BFZ	Birch Farm	3.60	188	P	Pn	04 38 42.9	-2.6
MRZ	Mangatainoka R	3.69	196	P	Pn	04 38 43.5	-3.0
TIWZ	Tintock	3.74	192	P	Pn	04 38 45.0	-2.2
CPWZ	Castlepoint	3.83	188	P	Pn	04 38 46.6	-1.7
HOWZ	Holdsworth Sta	3.93	195	P	Pn	04 38 46.1	-3.4
OGWZ	Otaki Gorge	3.94	199	P	Pn	04 38 46.5	-3.1
KIW	Kapiti Island	4.05	202	P	Pn	04 38 47.8	-3.3
TMWZ	Te Maipa	4.07	191	P	Pn	04 38 48.5	-2.8
MTW	Mount Morrison	4.18	194	P	Pn	04 38 49.2	-3.5
CAW	Cannon Point	4.24	199	P	Pn	04 38 49.7	-3.6
DUWZ	D'Urville Isla	4.35	211	P	Pn	04 38 51.4	-3.4
TRWZ	Traveller	4.38	192	P	Pn	04 38 51.9	-3.3
PAWZ	Paruwai Farm	4.41	194	P	Pn	04 38 51.9	-3.7

WEL	Wellington	4.48	201	P		Pn	04 38 53.1	-3.3
MSWZ	Moikau Station	4.48	196	P		Pn	04 38 52.7	-3.8
BHW	Baring Head	4.57	199	P		Pn	04 38 53.7	-3.9
TCW	Tory Channel	4.57	206	P		Pn	04 38 54.2	-3.4
PLWZ	Palliser	4.63	195	P		Pn	04 38 54.4	-4.0
TUWZ	Tuamarina	4.88	207	P		Pn	04 38 57.8	-3.7
NNZ	Nelson	4.92	213	P		Pn	04 38 58.8	-3.3
QRZ	Quartz Range	5.03	221	P		Pn	04 38 59.9	-3.5
BSWZ	Blackbirch Sta	5.16	206	P		Pn	04 39 01.4	-3.7
KHZ	Kahutara	5.89	205	P		Pn	04 39 10.2	-4.3
DSZ	Denniston Nort	6.07	219	P		Pn	04 39 13.2	-3.7
GVZ	Greta Valley S	6.55	206	P		Pn	04 39 18.4	-4.8
LTZ	Lake Taylor	6.68	211	P		Pn	04 39 20.2	-4.7
INZ	Inchbonnie	6.99	215	P		Pn	04 39 24.2	-4.7
OXZ	Oxford	7.23	209	P		Pn	04 39 27.0	-4.9
MQZ	McQueen's Vall	7.34	205	P		Pn	04 39 27.6	-5.7
ARCZ	Arundel	8.09	211	P		Pn	04 39 37.9	-5.3
TMZ	Timaru	8.52	210	P		Pn	04 39 44.2	-4.6
ODZ	Otahua Downs	9.22	209	P		Pn	04 39 53.4	-4.4

*IDC **13** 04:42:10.5±0.8, 12.2N×86.1W, h0km, mb3.6/5, mb1 3.8/8, mb1mx3.6/42, mbtmp3.5/8, ML3.1/3, Error ellipse: s-maj=55.6km s-min=11.8km az=53.0*
*UCR **13** 04:42:11.7±1.4, 11.77N×86.73W, h0km±15km, MW4.2*
*INET **13** 04:42:12.2, 11.30N×87.02W, h11km, MW3.7*

ISC 13 04:42:11.9±0.7, 12.2N±0.1×86.1W±0.2, h10km, n17, σ0§96/23, mb3.4/5, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUAI	Buenos Aires	1.51	149	*i* P	Pb	04 42 41.5	+0.7
BUEV	Buena Vista	1.54	152	*i* P	Pb	04 42 40.6	+0.1
BUEV				*i* S	Sg	04 43 02.4	+1.0
CUI	Cuipilapa	1.78	148	*i* P	Pb	04 42 44.8	+0.2
PLVR	Palo Verde	1.97	157	*e*P	Pn	04 42 46.0	+0.5
PLVR				*e*S	Sb	04 43 12.6	0.0
GUAI	GUAI	1.98	162	*i* P	Pn	04 42 45.6	+0.1
JTS	Las Juntas de	2.20	148	Pn	Pn	04 42 49.1	+0.6
	10nm,0.3s,baz=14,slow=10,SNR=36						
JTS				Sn	Sn	04 43 15.4	-0.4
	12nm,0.3s,baz=180,slow=20,SNR=4.6						
JTS				Lg	Lg	04 43 22.8	
	22nm,0.3s,baz=339,slow=19,SNR=8.6						
JTS	Las Juntas de	2.20	148	eP	Pn	04 42 49.2	+0.6
APG	El Apazote	5.07	304	Pn	Pn	04 43 28.6	+0.4
	0.2nm,0.3s,baz=332,slow=21,SNR=3.1						
APG				Sn	Sn	04 44 28.5	+1.6
	0.4nm,0.3s,baz=117,slow=10,SNR=3.7						
CMIG	Matias Romero	9.78	301	Pn	Pn	04 44 31.2	-1.5
	0.4nm,0.3s,baz=159,slow=10.0,SNR=7.8						
TXAR	Lajitas Array	23.62	319	P	P	04 47 23.8	+0.4
	0.6nm,0.6s,baz=140,slow=10,SNR=14						
TXAR				PcP	PcP	04 51 08.2	-0.1
	0.4nm,0.6s,baz=144,slow=6.4,SNR=4.5						
PDAR	Pinedale Array	36.64	331	P	P	04 49 20.0	+1.2
	0.2nm,0.6s,baz=137,slow=9.1,SNR=3.6						
SIV	San Ignacio	37.38	138	P	P	04 49 24.7	-0.5
	1.9nm,0.6s,baz=318,slow=7.2,SNR=15						
NVAR	Mina Array Bea	38.77	318	PcP	PcP	04 51 48.8	+0.3
	0.5nm,0.6s,baz=134,slow=4.2,SNR=7.0						
BDFB	Brasilia	46.76	125	P	P	04 50 41.5	-0.5
	0.9nm,0.4s,baz=271,slow=9.4,SNR=3.6						
YKA	Yellowknife Ar	54.23	344	P	P	04 51 38.5	+0.9
	0.3nm,0.7s,baz=134,slow=7.7,SNR=6.6						
YKA				PcP	PcP	04 52 41.7	-0.1
	0.2nm,0.6s,baz=143,slow=4.5,SNR=8.0						
WRA	Warramunga Arr	140.43	253	PKP	PKPdf	05 01 39.9	-2.4
	0.2nm,0.6s,baz=86,slow=1.8,SNR=1.4						
CMAR	Chiang Mai Arr	149.16	351	PKPbc	PKPbc	05 02 00.1	-1.5
	0.2nm,0.3s,baz=344,slow=3.5,SNR=4.6						

*IDC **13** 04:43:29.6±0.7, 2.09S×12.74W, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.0/48, mbtmp4.2/15, ML3.6/2, MS3.9/27, Ms1 3.9/27, ms1mx3.8/31, Error ellipse: s-maj=22.0km s-min=16.7km az=136.0*
*GCMT **13** 04:43:30.9±0.3, 1.86S±0.03×12.86W±0.03, h12km, MW4.8/81, Moment Tensor Solution. s17,c18; s81,c103; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.48±.06; Mθθ0.95±.06; Mϕϕ0.52±.07; Mrθ0.60±.23; Mϕθ-0.73±.05; Mϕr-0.59±.24; Best double couple: M○1.71200×10^16 NP1:ϕs123.00000°, δ30.00000°, λ-97.00000°. NP2: ϕs311.00000°, δ60.00000°, λ-86.00000°. Principal axes: T 1.7190, Plg15.0000°, Azm38.0000°;

GERES				LR	LR	05 17 59.8		
	comp=Z,146nm,19.8s,baz=271,slow=37							
GERES	**GERESS Array B**	**55.79**	**21**	P	**P**	**04 53 08.5**	**+0.6**	
LPAZ	**La Paz**	**56.28**	**252**	P	**P**	**04 53 12.1**	**-0.4**	
	comp=Z,1.2nm,0.7s,baz=216,slow=13,SNR=4.6							
LPAZ				LR	LR	05 15 15.0		
	comp=Z,169nm,21.4s,baz=56,slow=34							
LPAZ	**La Paz**	**56.28**	**252**	P	**P**	**04 53 12.2**	**-0.4**	
PB09	**IPOC Station P**	**58.26**	**246**	P	**P**	**04 53 27.0**	**+1.0**	
PB07	**IPOC Station P**	**58.83**	**246**	P	**P**	**04 53 29.2**	**-0.8**	
GO02	**Mina Guanaco**	**59.28**	**242**	P	**P**	**04 53 34.2**	**+1.0**	
BR131	**Keskin Array S**	**59.50**	**40**	P	**P**	**04 53 35.5**	**+1.3**	
BR131				IAmb	IAmb	04 53 50.1		
	comp=Z,5.2nm,1.2s							
BRTR	**Keskin Array B**	**59.50**	**40**	P	**P**	**04 53 35.6**	**+1.3**	
BRTR				LR	LR	05 22 41.9		
	comp=Z,1.8nm,1.0s,baz=217,slow=7.1,SNR=8.2							
ROSC	**El Rosal**	**61.98**	**277**	LR	LR	05 18 03.7		
	comp=Z,125nm,20.6s,baz=336,slow=34							
AKASG	**Malin Array Be**	**63.71**	**28**	LR	LR	05 24 13.4		
	comp=Z,106nm,18.1s,baz=210,slow=38							
PLCA	**Paso Flores**	**64.59**	**225**	LR	LR	05 19 15.7		
	comp=Z,81nm,19.4s,baz=136,slow=33							
NOA	**NORSAR Array B**	**65.75**	**12**	LR	LR	05 25 29.9		
	comp=Z,48nm,18.1s,baz=205,slow=38							
KBZ	**Khabaz**	**67.50**	**40**	P	**P**	**04 54 28.2**	**+1.3**	
	comp=Z,2.2nm,1.0s,baz=205,slow=2.7,SNR=5.1							
FINES	**FINESS Array B**	**70.10**	**19**	LR	LR	05 26 48.8		
	comp=Z,108nm,18.1s,baz=222,slow=37							
KSPA	**Keystone Colle**	**71.71**	**315**	P	**P**	**04 54 54.4**	**+1.4**	
N58A	**Sunbury**	**72.14**	**314**	P	**P**	**04 54 55.8**	**+0.3**	
N58A				IAmb	IAmb	04 55 07.0		
	comp=Z,10nm,1.4s							
SSPA	**Standing Stone**	**72.92**	**314**	P	**P**	**04 55 01.2**	**+0.9**	
SSPA				IAmb	IAmb	04 55 07.3		
	comp=Z,8.5nm,1.1s							
Q56A	**Snyder Ridge,**	**73.39**	**312**	P	**P**	**04 55 04.2**	**+1.1**	
Q56A				IAmb	IAmb	04 55 12.3		
	comp=Z,7.3nm,1.1s							
ERPA	**Erie**	**74.88**	**315**	P	**P**	**04 55 11.7**	**0.0**	
ERPA				IAmb	IAmb	04 55 13.2		
	comp=Z,8.9nm,1.0s							
SADO	**Sadowa**	**75.11**	**317**	P	**P**	**04 55 12.9**	**-0.1**	
SADO				IAmb	IAmb	04 55 13.4		
	comp=Z,7.9nm,1.2s							
SYO	**Syowa Base**	**75.14**	**163**	*e*P	**P**	**04 55 10.0**	**-2.6**	
V53A	**Saluda**	**75.29**	**308**	P	**P**	**04 55 15.0**	**+0.8**	
V53A				IAmb	IAmb	04 55 27.9		
	comp=Z,7.1nm,1.1s							
ARCES	**ARCESS Array B**	**76.12**	**13**	LR	LR	05 29 36.2		
	comp=Z,34nm,18.5s,baz=180,slow=36							
GEYT	**Alibeck**	**76.34**	**50**	LR	LR	05 31 04.8		
	comp=Z,56nm,18.4s,baz=60,slow=37							
T50A	**Nancy**	**77.19**	**309**	P	**P**	**04 55 25.1**	**+0.2**	
T50A				IAmb	IAmb	04 55 25.9		
	comp=Z,7.2nm,0.7s							
LRAL	**Lakeview Retre**	**78.12**	**304**	P	**P**	**04 55 30.2**	**0.0**	
Z47A	**Carrollton**	**79.03**	**304**	P	**P**	**04 55 35.5**	**+0.2**	
WVT	**Waverly**	**79.36**	**307**	P	**P**	**04 55 36.5**	**-0.5**	
WVT				IAmb	IAmb	04 55 42.8		
	comp=Z,5.6nm,1.0s							
ABKAR	**Akbulak array**	**80.44**	**39**	P	**P**	**04 55 43.8**	**+1.3**	
FVM	**French Village**	**81.73**	**309**	P	**P**	**04 55 48.4**	**-1.3**	
FVM				IAmb	IAmb	04 55 49.2		
	comp=Z,4.8nm,0.7s							
CCM	**Cathedral Cave**	**82.38**	**309**	P	**P**	**04 55 52.3**	**-0.9**	
CCM				IAmb	IAmb	04 55 52.6		
	comp=Z,4.5nm,0.8s							
MAW	**Mawson**	**82.45**	**158**	P	**P**	**04 55 55.1**	**+2.3**	
	comp=Z,2.6nm,0.8s,baz=276,slow=12,SNR=2.9							
MAW				LR	LR	05 24 12.2		
	comp=Z,45nm,20.0s,baz=244,slow=30							
S39A	**Bolivar**	**83.96**	**308**	P	**P**	**04 56 00.9**	**-0.4**	
S39A				IAmb	IAmb	04 56 09.3		
	comp=Z,9.2nm,1.3s							
ULM	**Lac du Bonnet**	**87.35**	**320**	LR	LR	05 27 13.7		
	comp=Z,35nm,21.4s,baz=348,slow=30							
QSPA	**South Pole Qui**	**87.84**	**180**	P	**P**	**04 56 21.0**	**+0.9**	
AAK	**Ala-Archa**	**89.42**	**47**	P	**P**	**04 56 29.2**	**+1.1**	
AAK				IAmb	IAmb	04 56 30.6		
	comp=Z,6.8nm,1.4s							
TXAR	**Lajitas Array**	**91.94**	**299**	LR	LR	05 34 24.2		
	comp=Z,13nm,20.0s,baz=0.0,slow=33							
MKAR	**Makanchi Array**	**95.03**	**43**	P	**P**	**04 56 54.0**	**+0.2**	
	comp=Z,0.4nm,0.8s,baz=276,slow=3.5,SNR=4.1							
MKAR				LR	LR	05 45 40.5		
	comp=Z,49nm,19.5s,baz=285,slow=39							
NRIK	**Noril'sk**	**95.70**	**21**	LR	LR	05 45 51.7		
	comp=Z,66nm,18.0s,baz=261,slow=39							
ZALV	**Zalesovo Beam**	**96.23**	**36**	LR	LR	05 44 22.5		
	comp=Z,31nm,18.4s,baz=349,slow=38							
EGMT	**Eagleton**	**96.39**	**318**	P	**P**	**04 56 59.9**	**-0.1**	
PDAR	**Pinedale Array**	**96.57**	**313**	LR	LR	05 35 32.4		
	comp=Z,52nm,20.0s,baz=126,slow=32							
TAOE	**Nuku Hiva Isla**	**126.49**	**257**	*e*LR	LR	05 42 16.9		
	comp=Z,40nm,22.8s							
TBI	**Tubuai**	**130.84**	**236**	*e*LR	LR	05 44 15.2		
	comp=Z,91nm,24.5s							
PPT2	**Papeete2**	**133.17**	**243**	*e*LR	LR	05 45 20.7		
	comp=Z,71nm,24.8s							
ASAR	**Alice Springs**	**138.53**	**130**	PKhKP	PKPpre	05 02 49.3		
	comp=Z,0.3nm,0.3s,baz=212,slow=3.3,SNR=2.9							
ASAR	**Alice Springs**	**138.53**	**130**		**PKPdf**	**05 02 56.2**	**-1.3**	
WRA	**Warramunga Arr**	**140.84**	**126**	PKhKP	PKPpre	05 02 56.9		
	comp=Z,0.4nm,0.9s,baz=248,slow=2.5,SNR=4.9							
WRA	**Warramunga Arr**	**140.84**	**126**	PKPdf	**PKPdf**	**05 02 57.3**	**-4.6**	

IDC ***13*** *04:44:11.0±2.8, 31°.32S×68°.90W, h94km±41km, mb2.8/1, mb1 3.5/6, mb1mx3.3/36, mbtmp3.7/6, Error ellipse: s-maj=55.5km s-min=26.0km az=105.0*
GUC ***13*** *04:44:12.5±0.7, 31°.32S×69°.32W, h165km±12km, ML3.9*
ISC 13 04:44:11.9±0.9, 31°.27S±0°.05×68°.9W±0°.1, h118km±15km, n21, σ1°00/29, 3C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO03	**El Pedregal**	**1.62**	**285**	↑*e*P	**Pn**	**04 44 41.9**	**+1.2**
CO03				*e*S	**Sn**	**04 45 03.7**	**+1.0**
CO03				IAML		04 45 05.5	
	comp=E,1μm,0.4s						
CO02	**Combarbal**	**1.83**	**272**	*e*P	**Pn**	**04 44 43.7**	**+0.4**
CO02				*e*S	**Sn**	**04 45 06.9**	**-0.3**
CO02				IAML		04 45 09.7	
	comp=N,2μm,0.1s						
GO04	**Tololo Observa**	**1.99**	**303**	↑*e*P	**Pn**	**04 44 46.2**	**+0.7**
GO04				*e*S	**Sn**	**04 45 12.0**	**+1.0**
GO04				IAML		04 45 16.2	
	comp=E,1μm,0.4s						
VA03	**San Esteban**	**2.06**	**223**	↑*e*P	**Pn**	**04 44 47.1**	**+0.9**
VA03				*e*S	**Sn**	**04 45 13.2**	**+0.9**
VA03				IAML		04 45 13.9	
	comp=N,664nm,0.4s						
PEL	**Peldehue**	**2.42**	**219**	↓*e*P	**Pn**	**04 44 50.6**	**0.0**
PEL				*e*S	**Sn**	**04 45 19.9**	**-0.5**
PEL				IAML		04 45 21.9	
	comp=N,289nm,0.1s						
MT03	**Universidad Ad**	**2.62**	**212**	*e*P	**Pn**	**04 44 53.9**	**+0.7**
MT03				*e*S	**Sn**	**04 45 25.3**	**+0.3**
MT03				IAML		04 45 29.4	
	comp=E,347nm,0.3s						
MT05	**Renca**	**2.64**	**216**	*e*P	**Pn**	**04 44 53.7**	**+0.2**
MT05				*e*S	**Sn**	**04 45 25.2**	**-0.3**
MT05				IAML		04 45 29.4	
	comp=E,688nm,0.3s						
MT02	**Curacav**	**2.76**	**224**	↓*e*P	**Pn**	**04 44 54.1**	**-0.9**
MT02				*e*S	**Sn**	**04 45 26.7**	**-1.5**
LMEL	**Las Melosas**	**2.81**	**203**	*e*P	**Pn**	**04 44 56.5**	**+0.8**
LMEL				*e*S	**Sn**	**04 45 30.2**	**+0.8**
LMEL				IAML		04 45 36.8	
	comp=N,147nm,0.1s						
MT09	**Talagante**	**3.07**	**215**	*e*P	**Pn**	**04 44 58.4**	**-0.8**
MT09				*e*S	**Sn**	**04 45 34.7**	**-1.0**
MT09				IAML		04 45 39.8	
	comp=N,188nm,0.4s						
VA05	**Santo Domingo**	**3.33**	**224**	*e*P	**Pn**	**04 45 00.9**	**-1.5**
VA05				IAML		04 45 43.6	
	comp=E,228nm,0.2s						
AC04	**Llanos de Chal**	**3.61**	**327**	↓*i*P	**Pn**	**04 45 06.5**	**+0.2**
LVC	**Limon Verde**	**8.63**	**360**	P	**Pn**	**04 46 13.4**	**-0.9**
	comp=E,2.2nm,0.3s,baz=172,slow=7.1,SNR=1.5						
LVC				S	**Sn**	**04 47 48.2**	**-1.9**
	comp=E,0.1nm,0.3s,baz=168,slow=20,SNR=1.2						
H03N1	**Juan Fernandez**	**8.77**	**253**	T	T	04 53 40.3	
	baz=74,slow=72,SNR=28						
H03N3	**Juan Fernandez**	**8.78**	**253**	T	T	04 53 24.2	
	baz=74,slow=72,SNR=36						
H03N2	**Juan Fernandez**	**8.79**	**253**	T	T	04 53 28.3	
	baz=74,slow=72,SNR=25						
PLCA	**Paso Flores**	**9.54**	**188**	P	**Pn**	**04 46 24.9**	**-1.3**
	comp=E,0.2nm,0.3s,baz=359,slow=12,SNR=9.1						
CPUP	**Villa Florida**	**11.25**	**67**	P	**Pn**	**04 46 49.2**	**0.0**
	comp=E,0.1nm,0.3s,baz=241,slow=10,SNR=1.5						
LPAZ	**La Paz**	**14.93**	**3**	P	**P**	**04 47 39.8**	**-0.5**
	comp=E,0.2nm,0.3s,baz=177,slow=8.8,SNR=14						
SIV	**San Ignacio**	**16.79**	**27**	P	**P**	**04 48 01.0**	**+0.6**
	comp=E,0.2nm,0.3s,baz=230,slow=12,SNR=7.5						
TXAR	**Lajitas Array**	**68.77**	**328**	P	**P**	**04 55 05.1**	**+1.8**
	comp=E,0.1nm,0.6s,baz=163,slow=7.5,SNR=2.3						

IDC ***13*** *05:24:26.3±4.2, 16°.58S×175°.41W, h0km, mb4.1/3, mb1 4.5/3, mb1mx3.7/31, mbtmp4.1/3, Error ellipse: s-maj=310.8km s-min=31.2km az=152.0*
NEIC ***13*** *05:24:27.8±1.4, 16°.39S±0°.04×175°.48W±0°.09, h10km±1km, mb4.4/10, Error ellipse: s-maj=14.5km s-min=6.7km az=106.0*
ISC 13 05:24:31.0±0.8, 16°.5S±0°.1×175°.46W±0°.09, h35km, n19, σ1°08/18, mb4.4/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.37**	**55**	Sn	**Sn**	**05 26 25.3**	**+0.7**
	5.4nm,0.3s,baz=187,slow=2.9,SNR=10						
AFI	**Afiamalu**	**4.37**	**55**	Pn	**Pn**	**05 25 33.0**	**-1.9**
AFI				Sn	**Sn**	**05 26 25.1**	**+0.5**
NIUE	**Niue**	**5.88**	**117**	Pn	**Pn**	**05 25 56.0**	**+0.3**
FUNA	**Funafuti**	**9.45**	**326**	Pn	Pn	05 26 38.8	-5.9
RAO	**Raoul Island**	**12.93**	**190**	Pn	**Pn**	**05 27 30.6**	**-1.7**
SANVU	**Saraoutou**	**16.70**	**271**		**Pn**	**05 28 21.2**	**-1.2**
SANVU				IAmb	IAmb	05 28 36.6	
	comp=Z,27nm,0.8s						
WR0	**Warramunga Arr**	**47.49**	**258**	P	**P**	**05 33 03.0**	**0.0**
WR0				IAmb	IAmb	05 33 12.8	
	comp=Z,4.5nm,1.3s						
WB0	**Warramunga Arr**	**47.64**	**258**	P	**P**	**05 33 04.8**	**+0.6**
WB0				IAmb	IAmb	05 33 05.0	
	comp=Z,4.5nm,0.9s						
WB2	**Warramunga Arr**	**47.67**	**258**	P	**P**	**05 33 04.7**	**+0.4**
WB2				IAmb	IAmb	05 33 32.8	
	comp=Z,3.7nm,1.1s						
WRAB	**Tennant Creek**	**47.67**	**258**	P	**P**	**05 33 04.6**	**+0.3**
WRAB				IAmb	IAmb	05 33 05.0	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**47.68**	**258**	P	**P**	**05 33 04.5**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=94,slow=8.3,SNR=43						
WRA	**Warramunga Arr**	**47.68**	**258**	IAmb	IAmb	05 33 05.2	
	comp=Z,0.2nm,0.8s						
AS31	**Alice Springs**	**47.90**	**253**	P	**P**	**05 33 07.1**	**+1.0**
ASAR	**Alice Springs**	**47.90**	**253**	P	**P**	**05 33 07.2**	**+1.0**
	comp=Z,9.0nm,0.4s,baz=86,slow=8.1,SNR=126						
ASAR	**Alice Springs**	**47.90**	**253**	P	**P**	**05 33 06.8**	**+0.6**
FORT	**Forrest**	**53.17**	**244**	P	**P**	**05 33 46.8**	**+1.0**
FITZ	**Fitzroy Crossi**	**56.06**	**259**	P	**P**	**05 34 08.7**	**+1.8**
QSPA	**South Pole Qui**	**73.59**	**180**	P	**P**	**05 35 60.0**	**-0.5**
QSPA				IAmb	IAmb	05 36 11.3	
	comp=Z,6.5nm,1.5s						
NVAR	**Mina Array Bea**	**76.44**	**43**	P	**P**	**05 36 18.6**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=218,slow=11,SNR=4.2						

IDC ***13*** *05:32:19.3±1.5, 16°.82S×177°.71W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.0/25, mbtmp4.0/7, Error ellipse: s-maj=107.7km s-min=20.1km az=150.0*
NEIC ***13*** *05:33:20.8±1.0, 18°.1S±0°.2×178°.1W±0°.1, h638km±10km, mb4.3/18, Error ellipse: s-maj=23.7km s-min=17.6km az=164.0*
ISC 13 05:33:21.5±0.6, 18°.0S±0°.1×178°.10W±0°.10, h650km, n35, σ0°81/35, mb4.1/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.67**	**273**	P	**P**	**05 34 48.2**	**-0.5**
AFI	**Afiamalu**	**7.30**	**57**	P	**P**	**05 35 13.9**	**-2.6**
NIUE	**Niue**	**7.83**	**99**	P	**P**	**05 35 20.3**	**-0.8**
SANVU	**Saraoutou**	**14.30**	**278**	P	**P**	**05 36 21.7**	**+0.3**
EIDS	**Eidsvold**	**29.52**	**250**	P	**P**	**05 38 37.2**	**+0.5**
EIDS				IAmb	IAmb	05 39 29.2	
	comp=Z,19nm,1.4s						
ARMA	**Armidale**	**30.16**	**240**	P	**P**	**05 38 42.4**	**+0.2**
CTAO	**Charters Tower**	**33.72**	**261**	P	**P**	**05 39 12.7**	**+0.5**
CTAO				IAmb	IAmb	05 39 54.6	
	comp=Z,28nm,1.8s						
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**05 39 53.8**	**0.0**
	comp=Z,1.2nm,0.5s,baz=107,slow=14,SNR=3.8						
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**05 39 53.8**	**0.0**
BBOO	**Buckleboo**	**43.63**	**241**	P	**P**	**05 40 31.0**	**-0.3**
WR0	**Warramunga Arr**	**44.72**	**260**	P	**P**	**05 40 39.6**	**-0.1**
WR0				IAmb	IAmb	05 41 00.9	
	comp=Z,16nm,1.6s						
WB0	**Warramunga Arr**	**44.87**	**260**	P	**P**	**05 40 40.9**	**-0.1**
WB2	**Warramunga Arr**	**44.90**	**260**	P	**P**	**05 40 40.8**	**-0.3**
WB2				IAmb	IAmb	05 40 41.6	
	comp=Z,4.8nm,0.6s						
WRAB	**Tennant Creek**	**44.90**	**260**	P	**P**	**05 40 40.8**	**-0.4**
WRAB				IAmb	IAmb	05 40 41.5	
	comp=Z,9.8nm,1.2s						
WRA	**Warramunga Arr**	**44.91**	**260**	P	**P**	**05 40 41.1**	**-0.1**
	comp=Z,2.7nm,0.4s,baz=97,slow=7.1,SNR=128						
WRA	**Warramunga Arr**	**44.91**	**260**	P	**P**	**05 40 40.5**	**-0.7**
AS31	**Alice Springs**	**45.05**	**254**	P	**P**	**05 40 42.2**	**-0.1**
ASAR	**Alice Springs**	**45.05**	**254**	P	**P**	**05 40 42.3**	**0.0**
	comp=Z,6.1nm,0.7s,baz=91,slow=7.8,SNR=77						
ASAR	**Alice Springs**	**45.05**	**254**	P	**P**	**05 40 42.0**	**-0.3**
MTN	**Manton Dam**	**49.09**	**268**	P	**P**	**05 41 12.5**	**+0.1**
MTN				IAmb	IAmb	05 41 52.8	
	comp=Z,8.0nm,1.2s						
FORT	**Forrest**	**50.24**	**245**	P	**P**	**05 41 19.8**	**-0.8**
KNRA	**Kununurra**	**50.77**	**264**	P	**P**	**05 41 24.4**	**-0.2**
KNRA				IAmb	IAmb	05 41 27.2	
	comp=Z,19nm,1.5s						
FITZ	**Fitzroy Crossi**	**53.30**	**261**	P	**P**	**05 41 42.5**	**-0.1**
FITZ				IAmb	IAmb	05 43 27.2	
	comp=Z,15nm,1.8s						
SOEI	**Soe**	**56.36**	**270**	P	**P**	**05 42 03.0**	**-1.0**
PSA00	**Pilbara Seismi**	**58.17**	**255**	P	**P**	**05 42 15.8**	**-0.2**
PSA00				IAmb	IAmb	05 42 35.8	
	comp=Z,30nm,1.6s						
SBA	**Scott Base**	**60.37**	**184**	P	**P**	**05 42 30.1**	**+0.6**
QSPA	**South Pole Qui**	**72.08**	**180**	P	**P**	**05 43 40.9**	**-1.0**
QSPA				IAmb	IAmb	05 43 41.8	
	comp=Z,21nm,1.8s						
NVAR	**Mina Array Bea**	**79.27**	**44**	P	**P**	**05 44 23.1**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=225,slow=6.2,SNR=5.1						
NVAR	**Mina Array Bea**	**79.27**	**44**	P	**P**	**05 44 23.1**	**+1.1**
TXAR	**Lajitas Array**	**85.79**	**58**	P	**P**	**05 44 56.0**	**+1.5**
	comp=Z,0.7nm,0.7s,baz=219,slow=6.3,SNR=12						
TXAR	**Lajitas Array**	**85.79**	**58**	P	**P**	**05 44 56.3**	**+1.8**
ILAR	**Eielson Array**	**85.89**	**13**	P	**P**	**05 44 54.1**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=218,slow=4.7,SNR=6.3						
ILAR	**Eielson Array**	**85.89**	**13**	P	**P**	**05 44 54.6**	**+0.6**
PDAR	**Pinedale Array**	**87.20**	**43**	P	**P**	**05 45 01.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=219,slow=2.3,SNR=4.3						
PDAR	**Pinedale Array**	**87.20**	**43**	P	**P**	**05 45 01.4**	**+0.4**

NNC 13 05:36:01.1±4.1, 54°.33N×86°.75E, h0km, mb3.7, mpv3.4, 6C-2D, Error ellipse: s-maj=30.3km s-min=28.6km az=5.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**6.24**	**237**	↑Pn	Pn	05 37 34.7	+0.3
	4.6nm,0.7s						
KURBB				↓Sn	Sn	05 38 46.7	+0.3
	6.3nm,0.7s						
KURBB				↑Lg	Lg	05 39 22.6	
	19nm,0.8s						
MK31	**Makanchi Array**	**8.06**	**202**	Pn	Pn	05 38 00.9	+1.6
	0.6nm,0.5s,baz=26,slow=12,SNR=18						
MK31				↑Sn	Sn	05 39 31.4	+0.3
	1.2nm,0.6s,baz=27,slow=26,SNR=9.0						
MK31				↑Lg	Lg	05 40 22.3	
	6.0nm,0.9s,baz=26,slow=34,SNR=5.4						
MAKZ	**Makanchi**	**8.11**	**204**	↓Pn	Pn	05 37 59.2	-0.9
	0.6nm,0.4s						
MAKZ				↑Sn	Sn	05 39 32.9	+0.4
	2.5nm,0.8s						
MAKZ				↑Lg	Lg	05 40 23.4	
	3.1nm,0.8s						

IDC ***13*** *05:54:59.3±1.1, 13°.76N×93°.67E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.6/66, mbtmp3.9/9, ML4.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.4/57, Error ellipse: s-maj=43.0km s-min=19.8km az=53.0*
NEIC ***13*** *05:55:04.5±1.2, 13°.75N±0°.09×93°.8E±0°.1, h35km±2km, mb4.3/10, Error ellipse: s-maj=21.3km s-min=15.2km az=267.0*
NDI ***13*** *05:55:11.7±3.9, 14°.17N×93°.85E, h29km±50km, ML4.2, mb4.3(NEIC)*
ISC 13 05:55:11.6±0.7, 14°.09N±0°.07×93°.96E±0°.07, h100km, n50, σ1°88/44, mb4.0/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**1.36**	**228**	*e*P	**Pn**	**05 55 34.2**	**-1.9**
DGPR				*e*S	**Sn**	**05 55 51.8**	**-2.9**
DGPR				IAML		05 56 01.2	
	comp=E,674nm,0.4s						
DGPR				IAML		05 56 04.1	
	comp=N,750nm,0.5s						
PBA	**Port Blair**	**2.70**	**206**	*e*P	Pn	05 55 56.4	+3.0
PBA				*e*S	Sn	05 56 23.2	-2.3
PBA				IAML		05 56 24.0	
	comp=E,3μm,0.5s						
PBA				IAML		05 56 24.0	
	comp=N,2μm,0.4s						
UMPA	**Umpang Tak**	**5.17**	**65**	P	**Pn**	**05 56 24.0**	**-2.7**
UTHA	**Uthaitani**	**5.50**	**74**	P	**Pn**	**05 56 29.3**	**-1.8**
CM13	**Chiang Mai Arr**	**6.41**	**47**	P	**Pn**	**05 56 42.0**	**-1.5**
CM05	**Chiang Mai Arr**	**6.42**	**48**	P	**Pn**	**05 56 42.0**	**-1.7**
CM01	**Chiang Mai Arr**	**6.44**	**47**	P	Pn	05 56 47.5	+3.6
CM04	**Chiang Mai Arr**	**6.44**	**48**	P	**Pn**	**05 56 42.6**	**-1.3**
CM31	**Chiang Mai Arr**	**6.46**	**47**	Pn	**Pn**	**05 56 42.1**	**-2.0**
CMAR	**Chiang Mai Arr**	**6.46**	**47**	Pn	**Pn**	**05 56 42.2**	**-1.9**
	comp=N,0.7nm,0.3s,baz=235,slow=15,SNR=20						
CMAR				Sn	**Sn**	**05 57 52.7**	**-3.7**
	comp=N,0.7nm,0.3s,baz=238,slow=27,SNR=11						
CM09	**Chiang Mai Arr**	**6.48**	**47**	P	**Pn**	**05 56 43.0**	**-1.5**
CHTO	**Chiang Mai**	**6.70**	**45**		**Pn**	**05 56 45.6**	**-1.9**
CMMT	**Chiang Mai**	**6.70**	**45**	P	**Pn**	**05 56 48.1**	**+0.6**
PAYA	**Payao**	**7.71**	**46**	P	**Pn**	**05 57 03.5**	**+2.3**
SRAK	**Srakaew**	**7.84**	**90**	P	Pn	05 57 10.0	+7.0
SAIH	**SAIHA**	**8.40**	**354**	*e*P	**Pn**	**05 57 08.0**	**-2.8**
SAIH				*e*S	**Sn**	**05 58 38.3**	**-5.7**
SAIH				IAML		05 58 41.1	
	comp=E,785nm,0.3s						
SAIH				IAML		05 58 41.4	
	comp=N,368nm,0.2s						
KULM	**Kulim**	**10.95**	**142**	Pn	Pn	05 57 33.5	-12
SHL	**Shillong**	**11.58**	**351**	*e*S	Sn	05 59 49.9	-11
GSI	**Gununggsitoli**	**13.20**	**164**	Pn	Pn	05 58 05.7	-10
MDRS	**Chennai**	**13.38**	**267**	*e*S	Sn	06 00 32.6	-12
ODAN	**Odare**	**14.11**	**335**	*e*P	**Pn**	**05 58 24.5**	**-2.7**
	comp=N,7.4nm,0.2s						
TAPN	**Taplejung**	**14.42**	**337**	*e*P	**Pn**	**05 58 29.3**	**-2.0**
	comp=N,6.8nm,0.2s						
RAMN	**Ramite**	**14.52**	**333**	*e*P	**Pn**	**05 58 31.0**	**-1.6**
	comp=N,13nm,0.4s						
PALK	**Pallekele**	**14.68**	**244**	LR	LR	06 03 33.0	
	comp=N,22nm,20.7s,baz=133,slow=36						
JIRN	**Jiri**	**15.32**	**333**	*e*P	**Pn**	**05 58 42.2**	**-0.6**
	comp=N,6.4nm,0.3s						
PKI	**Pulchoki**	**15.60**	**331**	*e*P	**Pn**	**05 58 46.2**	**-0.1**
	comp=N,7.2nm,0.2s						
PKIN	**Phulchoki**	**15.61**	**331**	*e*P	**Pn**	**05 58 47.0**	**+0.6**
	comp=N,7.9nm,0.3s						
GUN	**Gumba**	**15.67**	**333**	*e*P	**Pn**	**05 58 47.8**	**+0.6**
	comp=N,4.0nm,0.2s						
GKN	**Gorkha**	**16.34**	**329**	*e*P	**P**	**05 58 56.3**	**-0.1**
	comp=N,5.2nm,0.2s						
KOLN	**Koldanda**	**16.68**	**326**	*e*P	**P**	**05 59 01.5**	**+1.2**
	comp=N,9.2nm,0.3s						
KBL	**Kabul**	**30.35**	**316**	P	**P**	**06 01 14.4**	**+0.2**
KBL				IAmb	IAmb	06 01 20.7	
	comp=Z,8.1nm,0.4s						
CHGR	**Chuyangaron**	**32.85**	**323**	P	**P**	**06 01 36.4**	**+0.4**
MK31	**Makanchi Array**	**34.04**	**346**	P	**P**	**06 01 47.8**	**+1.7**
MKAR	**Makanchi Array**	**34.04**	**346**	P	**P**	**06 01 47.7**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=158,slow=9.3,SNR=8.9						
MAKZ	**Makanchi**	**34.13**	**345**	P	**P**	**06 01 48.3**

YUK					pmax	pmax		
	comp=N,244nm,0.2s							
YUK					smax	smax		
	comp=N,2μm,0.2s							
YUK					smax	smax		
	comp=E,1μm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.43**	**288**	*i* P		**Pn**	**06 22 03.9**	**+0.2**
YUK					AMB	AMB	06 22 05.0	
	comp=E,20nm,0.1s							
YUK					AMB	AMB	06 22 05.0	
	comp=E,30nm,0.1s							
YUK					AMB	AMB	06 22 05.0	
	comp=E,60nm,0.1s							
YUK				*i* S		**Sn**	**06 22 21.2**	**-0.2**
YUK					A	A	06 22 22.0	
	comp=E,2μm,0.4s							
YUK					A	A	06 22 22.0	
	comp=E,1μm,0.4s							
NEM2	**Nemuro 2**	**1.47**	**261**	P		**Pn**	**06 22 04.8**	**+0.4**
NEM2				*e*S		**Sn**	**06 22 22.1**	**-0.4**
GRPR	**Tuman**	**1.48**	**286**	⇑*i*PN		**Pn**	**06 22 04.7**	**+0.3**
GRPR				*i* S		**Sn**	**06 22 22.8**	**+0.2**
GRPR					smax	smax		
	comp=N,2μm,0.2s							
GRPR					smax	smax		
	comp=E,2μm,0.2s							
GRPR	**Tuman**	**1.48**	**286**	*i* P		**Pn**	**06 22 05.0**	**+0.6**
GRPR				*i* S		**Sn**	**06 22 23.5**	**+0.9**
GRPR					A	A	06 22 24.0	
	comp=E,2μm,0.5s							
GRPR					A	A	06 22 24.0	
	comp=E,2μm,0.5s							
NMR	**Nemuro--Hokkai**	**1.48**	**262**	⇓*i*PN		**Pn**	**06 22 04.8**	**+0.3**
NMR				*i* S		**Sn**	**06 22 21.9**	**-0.9**
NMR	**Nemuro--Hokkai**	**1.48**	**262**	*i* P		**Pn**	**06 22 04.9**	**+0.4**
NMR				*i* S		**Sn**	**06 22 22.2**	**-0.6**
KUR	**Kuril'sk**	**1.63**	**3**	⇑*i*PN		**Pn**	**06 22 07.7**	**+1.2**
KUR				*i* S		**Sn**	**06 22 26.2**	**-0.2**
KUR					pmax	pmax		
	comp=N,60nm,0.1s							
KUR					pmax	pmax		
	comp=Z,121nm,0.1s							
KUR					pmax	pmax		
	comp=E,66nm,0.2s							
KUR					smax	smax		
	comp=N,2μm,0.2s							
KUR					smax	smax		
	comp=E,1μm,0.2s							
KUR	**Kuril'sk**	**1.63**	**3**	*i* P		**Pn**	**06 22 06.9**	**+0.4**
KUR					AMB	AMB	06 22 08.0	
	comp=E,60nm,0.2s							
KUR					AMB	AMB	06 22 08.0	
	comp=E,70nm,0.2s							
KUR					AMB	AMB	06 22 08.0	
	comp=E,120nm,0.2s							
KUR				*i* S		**Sn**	**06 22 26.5**	**+0.1**
KUR					A	A	06 22 27.0	
	comp=E,2μm,0.4s							
KUR					A	A	06 22 27.0	
	comp=E,1μm,0.4s							
RUSJ	**Misakicho**	**1.87**	**286**	⇓*i*PN		**Pn**	**06 22 11.6**	**+1.8**
RUSJ				*i* S		**Sn**	**06 22 34.1**	**+1.9**
JRA	**Rausu**	**1.93**	**281**	P		**Pn**	**06 22 11.6**	**+1.1**
JRA				*e*S		**Sn**	**06 22 34.3**	**+0.7**
JKHN	**Kushirohamanak**	**1.95**	**255**	*e*S		**Sn**	**06 22 33.9**	**-0.3**
JNSB	**Nemuroshibetsu**	**1.99**	**276**	P		**Pn**	**06 22 12.5**	**+1.0**
JNSB				*e*S		**Sn**	**06 22 35.8**	**+0.6**
JNK	**Nakash**	**2.19**	**271**	P		**Pn**	**06 22 14.9**	**+0.6**
JAK	**Akkeshi**	**2.30**	**256**	P		**Pn**	**06 22 16.3**	**+0.6**
JAK				*e*S		**Sn**	**06 22 42.0**	**-0.9**
JTKR	**Abashiri--Toko**	**2.80**	**279**	P		**Pn**	**06 22 24.1**	**+1.6**
JTKR				*e*S		**Sn**	**06 22 57.7**	**+2.7**
JAR	**Ashorobuto**	**2.91**	**265**	P		**Pn**	**06 22 25.8**	**+1.8**
JAR				*e*S		**Sn**	**06 22 58.1**	**+0.4**
JOB	**Onbets**	**2.94**	**258**	*e*S		**Sn**	**06 22 58.4**	**0.0**
JCH	**Churui**	**3.35**	**254**	P		**Pn**	**06 22 32.0**	**+1.9**
ERM	**Erimo**	**3.73**	**246**	*e*PN		**Pn**	**06 22 37.7**	**+2.5**
ASAJ	**Asahikawa**	**3.75**	**280**	P		Pn	06 22 42.9	+7.3
	comp=E,1.1nm,0.3s,baz=109,slow=34,SNR=1.9							
ASAJ					S	Sn	06 23 27.7	+9.1
	comp=E,2.6nm,0.3s,baz=7.5,slow=32,SNR=3.4							
YSS	**Yuzh-Sakhalins**	**4.86**	**315**	*e*P		**Pn**	**06 22 51.6**	**+0.9**
MJAR	**Matsushiro Arr**	**10.15**	**229**	LR		LR	06 28 57.4	
	comp=E,30nm,21.6s,baz=220,slow=39							
USA0B	**Ussuriysk Arra**	**11.38**	**278**	⇓*e*PN		**Pn**	**06 24 19.5**	**-0.6**
PETK	**Petropavlovsk-**	**11.58**	**31**	P		**Pn**	**06 24 22.2**	**-0.5**
	comp=E,0.1nm,0.3s,baz=208,slow=15,SNR=1.1							
EKMR	**Ekimchan**	**13.63**	**319**	*e*P		**Pn**	**06 24 49.0**	**-1.7**
MA2	**Magadan**	**16.10**	**6**	⇓*e*P		**Pn**	**06 25 24.2**	**+1.3**
MA2					pmax	pmax		
	comp=Z,10.0nm,2.0s							
BMKR	**Bomnak**	**16.56**	**319**	*e*P		**Pn**	**06 25 25.5**	**-3.3**
SEY	**Seymchan**	**19.55**	**6**	⇑*e*P		**P**	**06 26 03.8**	**+0.4**
SEY	**Seymchan**	**19.55**	**6**	*e*P		**P**	**06 26 03.8**	**+0.4**
ULN	**Ulaanbaatar**	**28.48**	**293**	⇑*e*P		**P**	**06 27 30.4**	**-0.1**
ULN	**Ulaanbaatar**	**28.48**	**293**	*e*P		**P**	**06 27 30.4**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**28.71**	**140**	T		T	06 58 24.3	
	baz=331,slow=75,SNR=84							
H11N1	**WAKE ISLAND Hy**	**28.73**	**140**	T		T	06 58 26.1	
	baz=331,slow=75,SNR=69							
H11N3	**WAKE ISLAND Hy**	**28.73**	**140**	T		T	06 58 28.5	
	baz=331,slow=75,SNR=82							
SONM	**Songino Array**	**28.92**	**293**	P		**P**	**06 27 34.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=87,slow=10,SNR=2.8							
H11S1	**WAKE ISLAND Hy**	**29.69**	**141**	T		T	06 59 36.4	
	baz=332,slow=76,SNR=140							
H11S3	**WAKE ISLAND Hy**	**29.69**	**142**	T		T	06 59 36.9	
	baz=332,slow=76,SNR=118							
H11S2	**WAKE ISLAND Hy**	**29.70**	**142**	T		T	06 59 37.7	
	baz=332,slow=76,SNR=97							
DGZ	**Jazzator, Alta**	**40.86**	**300**	⇓*e*P		**P**	**06 29 16.3**	**-0.8**
DGZ					pmax	pmax		
	comp=Z,1.0nm,0.4s							
ILAR	**Eielson Array**	**41.35**	**36**	P		**P**	**06 29 22.4**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=274,slow=7.6,SNR=4.8							
MK31	**Makanchi Array**	**45.03**	**298**	⇓*i*P		**P**	**06 29 50.4**	**-0.3**
MKAR	**Makanchi Array**	**45.03**	**298**	P		**P**	**06 29 50.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=78,slow=8.0,SNR=4.8							
MKAR	**Makanchi Array**	**45.03**	**298**	*i* P		**P**	**06 29 51.5**	**+0.8**
MKAR	**Makanchi Array**	**45.03**	**298**	*i* P		**P**	**06 29 51.5**	**+0.8**
KURK	**Kurchatov**	**45.97**	**304**	P		**P**	**06 29 57.6**	**-0.3**
KURK	**Kurchatov**	**45.97**	**304**	*e*P		**P**	**06 29 57.6**	**-0.3**
KURBB	**Kurchatov Arra**	**46.05**	**304**	P		**P**	**06 29 57.6**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=72,slow=8.1,SNR=4.0							
INK	**Inuvik**	**46.31**	**30**	P		**P**	**06 30 01.5**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=299,slow=8.4,SNR=15							
RES	**Resolute Bay**	**54.98**	**17**	P		**P**	**06 31 05.1**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=0.6,slow=9.8,SNR=3.6							
YKA	**Yellowknife Ar**	**55.68**	**34**	P		**P**	**06 31 11.4**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=303,slow=7.4,SNR=6.3							
ARCES	**ARCESS Array B**	**59.53**	**340**	P		**P**	**06 31 36.9**	**-0.9**
	comp=Z,2.0nm,1.0s,baz=15,slow=3.7,SNR=6.1							
FINES	**FINESS Array B**	**65.20**	**333**	P		**P**	**06 32 14.3**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=35,slow=7.0,SNR=5.5							
FINES	**FINESS Array B**	**65.20**	**333**	*i* P		**P**	**06 32 14.6**	**-1.1**
FINES					pmax	pmax		
	comp=Z,2.0nm,0.7s							
TXAR	**Lajitas Array**	**82.37**	**57**	P		P	06 34 05.1	+8.1
	comp=Z,0.4nm,0.9s,baz=293,slow=4.8,SNR=2.8							

IDC ***13*** *06:24:59.0±0.6, 18°.07S×17°.38W, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.1/45, mbtmp4.2/15, MS3.5/16, Ms1 3.5/16, ms1mx3.3/35, Error ellipse: s-maj=22.0km s-min=15.5km az=144.0*

NEIC ***13*** *06:25:00.5±1.6, 18°.0S±0°.1×17°.3W±0°.1, h10km±1km, mb4.7/34, Error ellipse: s-maj=20.1km s-min=15.7km az=121.0*

ISC 13 06:25:00.5±0.4**, 18°.05S**±0°.09×**17°.27W**±0°.08**, h10**km**, n105,** σ0**99**/94**, mb4.6**/28**, MS3.4**/16**, 1C-5D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ASCN	**Ascension**	**10.45**	**16**	Pn		**Pn**	**06 27 30.6**	**+0.1**
H10N1	**ASCENSION HYDR**	**10.50**	**15**	T		T	06 38 20.4	
	baz=194,slow=75							
H10N3	**ASCENSION HYDR**	**10.50**	**15**	T		T	06 38 18.8	
	baz=194,slow=75							
H10N2	**ASCENSION HYDR**	**10.52**	**15**	T		T	06 38 19.4	
	baz=194,slow=75							
NBAN	**Anadia - AL**	**20.23**	**292**	*e*P		**P**	**06 29 35.7**	**-0.3**
NBPV	**Pedro Velho**	**21.04**	**301**	*e*P		**P**	**06 29 44.2**	**-0.5**
NAN01	**Guarapari, ES**	**21.74**	**267**	*e*P		**P**	**06 29 52.2**	**-0.1**
RCBR	**Riachuelo**	**21.88**	**301**	P		**P**	**06 29 53.2**	**-0.6**
	20nm,1.0s,baz=102,slow=13,SNR=5.5							
RCBR					LR	LR	06 36 16.1	
	comp=Z,145nm,19.1s,baz=121,slow=31							
RCBR	**Riachuelo**	**21.88**	**301**	P		**P**	**06 29 51.6**	**-2.2**
RCBR					IAmb	IAmb	06 29 54.8	
	comp=Z,32nm,1.1s							
RCBR	**Riachuelo**	**21.88**	**301**	*e*P		**P**	**06 29 54.1**	**+0.4**
NBLI	**Livramento-PB**	**21.91**	**297**	*e*P		**P**	**06 29 52.9**	**-1.3**
NBTA	**Tacaratu-PE**	**22.05**	**291**	*e*P		**P**	**06 29 54.8**	**-0.9**
BSFB	**Barra de Sao F**	**22.38**	**264**	*e*P		**P**	**06 30 00.2**	**+1.1**
SJMB	**Sao Joao De Ma**	**22.70**	**265**	*e*P		**P**	**06 30 02.9**	**+0.3**
NBPA	**Parau_RN**	**22.91**	**300**	*e*P		**P**	**06 30 05.3**	**+0.5**
CAM01	**Campos-RJ**	**23.22**	**257**	*e*P		**P**	**06 30 08.6**	**+0.7**
NBMA	**Muriti-CE**	**23.47**	**294**	*e*P		**P**	**06 30 09.4**	**-1.1**
DUB01	**Friburgo-RJ**	**23.91**	**256**	*e*P		**P**	**06 30 14.5**	**-0.2**
NBCL	**Cascavel-CE**	**24.74**	**301**	*e*P		**P**	**06 30 22.8**	**+0.4**
VAS01	**Vassouras-RJ**	**24.91**	**256**	*e*P		**P**	**06 30 23.6**	**-0.3**
NBPB	**Pedra_Branca-C**	**25.09**	**297**	*e*P		**P**	**06 30 26.1**	**+0.6**
BSCB	**Bom Sucesso**	**26.07**	**259**	*e*P		**P**	**06 30 36.3**	**+1.8**
JANB	**Januaria**	**26.08**	**273**	*e*P		**P**	**06 30 34.1**	**-0.5**
SDBA	**SAO DESIDERIO**	**27.23**	**278**	*e*P		**P**	**06 30 44.3**	**-0.7**
DBIC	**Dimbokro**	**27.45**	**28**	P		**P**	**06 30 46.8**	**0.0**
	comp=Z,6.3nm,1.0s,baz=182,slow=7.3,SNR=4.9							
DBIC					LR	LR	06 39 04.5	
	comp=Z,83nm,19.8s,baz=174,slow=31							
DBIC	**Dimbokro**	**27.45**	**28**	P		**P**	**06 30 45.8**	**-1.1**
BDFB	**Brasilia**	**29.50**	**270**	P		**P**	**06 31 03.0**	**-2.3**
	comp=Z,0.9nm,0.5s,baz=230,slow=22,SNR=1.8							
BDFB					LR	LR	06 40 42.3	
	comp=Z,115nm,21.6s,baz=101,slow=32							
TIJ01	**Guaruva-PR**	**30.31**	**251**	*e*P		**P**	**06 31 14.2**	**+1.8**
PEXB	**Peixe**	**30.51**	**277**	*e*P		**P**	**06 31 14.5**	**+0.4**
SMTB	**Santa Maria do**	**30.82**	**283**	*e*P		**P**	**06 31 15.8**	**-1.1**
KOWA	**Kowa**	**34.88**	**23**	P		**P**	**06 31 53.3**	**+1.0**
	comp=Z,5.7nm,0.9s,baz=202,slow=8.7,SNR=9.1							
KOWA	**Kowa**	**34.88**	**23**	P		**P**	**06 31 52.2**	**-0.2**
KOWA					IAmb	IAmb	06 31 54.2	
	comp=Z,9.4nm,1.1s							
TOA0	**Torodi Ar. Sit**	**36.21**	**32**	P		**P**	**06 32 04.4**	**+0.6**
TOA0					IAmb	IAmb	06 32 05.5	
	comp=Z,10nm,1.1s							
TORD	**Torodi Ar. Bea**	**36.21**	**32**	P		**P**	**06 32 04.3**	**+0.5**
	comp=Z,5.4nm,1.0s,baz=216,slow=7.8,SNR=15							
TORD					LR	LR	06 44 16.9	
	comp=Z,61nm,18.9s,baz=215,slow=32							
TORD	**Torodi Ar. Bea**	**36.21**	**32**	P		**P**	**06 32 03.7**	**0.0**
AQDB	**Aquidauana**	**36.30**	**260**	*e*P		**P**	**06 32 04.8**	**+0.3**
CPUP	**Villa Florida**	**37.87**	**250**	P		**P**	**06 32 17.4**	**-0.5**
	comp=Z,2.9nm,1.1s,baz=139,slow=3.8,SNR=4.5							
CPUP					LR	LR	06 45 28.7	
	comp=Z,49nm,21.3s,baz=120,slow=33							
CPUP	**Villa Florida**	**37.87**	**250**	P		**P**	**06 32 17.4**	**-0.5**
NPGB	**Novo Progresso**	**38.67**	**282**	*e*P		**P**	**06 32 24.7**	**0.0**
PTLB	**Pontes e Lacer**	**40.11**	**267**	*e*P		**P**	**06 32 37.3**	**+0.6**
BOSA	**Boshof**	**40.25**	**113**	P		**P**	**06 32 38.5**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=280,slow=7.6,SNR=3.6							
BOSA					LR	LR	06 46 18.1	
	comp=Z,46nm,18.3s,baz=358,slow=32							
BOSA	**Boshof**	**40.25**	**113**	IAmb		IAmb	06 32 39.6	
	comp=Z,4.3nm,1.1s							
SIV	**San Ignacio**	**41.86**	**266**	P		**P**	**06 32 51.4**	**+0.2**
	comp=Z,2.1nm,1.1s,baz=91,slow=5.9,SNR=4.0							
PTGA	**Pitinga**	**45.33**	**288**	P		**P**	**06 33 19.8**	**+0.7**
PTGA					IAmb	IAmb	06 33 21.5	
	comp=Z,7.8nm,0.9s							
PTGA	**Pitinga**	**45.33**	**288**	*e*P		**P**	**06 33 20.4**	**+1.3**
SAML	**Samuel**	**45.45**	**275**	P		**P**	**06 33 20.7**	**+0.6**
SAML	**Samuel**	**45.45**	**275**	*e*P		**P**	**06 33 21.2**	**+1.2**
ETMB	**Extrema**	**48.08**	**273**	*e*P		**P**	**06 33 41.6**	**+0.9**
LPAZ	**La Paz**	**48.50**	**264**	P		**P**	**06 33 43.6**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=102,slow=13,SNR=4.0							
LPAZ					LR	LR	06 53 35.8	
	comp=Z,85nm,19.3s,baz=89,slow=36							
LPAZ	**La Paz**	**48.50**	**264**	P		**P**	**06 33 43.2**	**-1.5**
LPAZ					IAmb	IAmb	06 33 59.6	
	comp=Z,6.6nm,1.4s							
GO02	**Mina Guanaco**	**48.91**	**252**	P		**P**	**06 33 47.3**	**-0.1**
PB08	**IPOC Station P**	**48.91**	**259**	P		**P**	**06 33 46.6**	**-0.9**
PB08					IAmb	IAmb	06 33 47.3	
	comp=Z,7.5nm,1.0s							
PB14	**IPOC Station P**	**49.67**	**253**	P		**P**	**06 33 52.6**	**-0.6**
LCO	**Las Campanas**	**49.83**	**247**	P		**P**	**06 33 54.1**	**-0.2**
LCO					IAmb	IAmb	06 33 55.6	
	comp=Z,14nm,1.2s							
BO02	**Sierra Bellavi**	**50.16**	**240**	P		**P**	**06 33 56.0**	**-0.6**
BO02					IAmb	IAmb	06 33 57.3	
	comp=Z,9.5nm,1.1s							
MT09	**Talagante**	**50.25**	**241**	P		**P**	**06 33 56.2**	**-1.1**
MT09					IAmb	IAmb	06 33 57.5	
	comp=Z,14nm,1.2s							
BI02	**San Fabin de**	**50.75**	**237**	P		**P**	**06 33 60.0**	**-0.9**
BI02					IAmb	IAmb	06 34 01.5	
	comp=Z,11nm,1.2s							
PLCA	**Paso Flores**	**50.77**	**232**	LR		LR	06 53 17.4	
	comp=Z,46nm,19.4s,baz=128,slow=34							
VNA1	**Neumayer--Stat**	**52.87**	**176**	P		**P**	**06 34 15.4**	**-0.7**
VNA2	**Neumayer--Watz**	**53.20**	**176**	P		**P**	**06 34 17.2**	**-1.3**
VNA3	**Neumayer Olymp**	**53.38**	**177**	P		**P**	**06 34 20.3**	**+0.4**
SNAA	**Sanae**	**54.29**	**174**	LR		LR	06 52 19.6	
	comp=Z,33nm,18.2s,baz=15,slow=30							
CZSB	**Cruzeiro do Su**	**54.82**	**273**	*e*P		**P**	**06 34 30.8**	**-0.5**
ESDC	**Sonsca Array**	**58.76**	**12**	LR		LR	06 58 36.9	
	comp=Z,20nm,18.6s,baz=300,slow=34							
SDV	**Santo Domingo**	**59.09**	**292**	P		**P**	**06 35 03.3**	**+1.6**
KEST	**Kesra**	**59.14**	**25**	P		**P**	**06 35 03.2**	**+1.6**
	comp=Z,7.4nm,1.0s,baz=211,slow=3.8,SNR=6.3							
KEST					LR	LR	06 59 35.0	
	comp=Z,35nm,19.6s,baz=298,slow=35							
KEST	**Kesra**	**59.14**	**25**	P		**P**	**06 35 01.3**	**-0.3**
ROSC	**El Rosal**	**60.67**	**286**	LR		LR	07 00 50.8	
	comp=Z,118nm,18.6s,baz=262,slow=36							
FNA	**Florina**	**68.67**	**31**	P		**P**	**06 36 04.7**	**+0.6**
FNA					IAmb	IAmb	06 36 08.9	
	comp=Z,5.6nm,1.2s							
LIT	**Litokhoron**	**68.69**	**32**	P		**P**	**06 36 04.5**	**+0.2**
MAW	**Mawson**	**69.70**	**156**	P		**P**	**06 36 10.4**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=296,slow=5.9,SNR=5.0							
MAW	**Mawson**	**69.70**	**156**	P		**P**	**06 36 09.7**	**-0.4**
BFO	**Black Forest**	**69.93**	**18**	P		**P**	**06 36 11.2**	**-0.6**
BFO					IAmb	IAmb	06 36 13.0	
	comp=Z,6.7nm,1.0s							
MMAI	**Mount Meron Ar**	**71.48**	**45**	LR		LR	07 04 48.2	
	comp=Z,3.6nm,21.9s,baz=210,slow=33							
GERES	**GERESS Array B**	**72.08**	**21**	P		**P**	**06 36 24.4**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=192,slow=3.8,SNR=4.9							
GERES					LR	LR	07 06 59.7	
	comp=Z,20nm,18.2s,baz=284,slow=35							
QSPA	**South Pole Qui**	**72.13**	**180**	P		**P**	**06 36 25.7**	**+0.5**
QSPA					IAmb	IAmb	06 36 26.6	
	comp=Z,9.9nm,1.3s							
VRAC	**Vranov**	**73.49**	**22**	LR		LR	07 08 29.1	
	comp=Z,30nm,19.3s,baz=184,slow=36							
VOIR		**73.95**	**30**	⇓P		**P**	**06 36 36.6**	**+0.6**
MLR	**Muntele Rosu**	**74.41**	**30**	LR		LR	07 10 22.8	
	comp=Z,27nm,18.3s,baz=202,slow=37							
MLR	**Muntele Rosu**	**74.41**	**30**	⇓P		**P**	**06 36 39.5**	**+0.7**
MLR	**Muntele Rosu**	**74.41**	**30**	P		**P**	**06 36 39.7**	**+0.9**
DOPR	**Dopca**	**74.50**	**29**	⇓P		**P**	**06 36 40.0**	**+0.9**
BR131	**Keskin Array S**	**74.54**	**38**	P		**P**	**06 36 40.4**	**+0.7**
BR131					IAmb	IAmb	06 36 42.9	
	comp=Z,8.9nm,1.3s							
BRTR	**Keskin Array B**	**74.54**	**38**	P		**P**	**06 36 41.3**	**+1.6**
	comp=Z,1.6nm,0.9s,baz=198,slow=7.8,SNR=9.0							
BRTR	**Keskin Array B**	**74.54**	**38**	P		**P**	**06 36 41.0**	**+1.2**
VRI	**Vrincioaia**	**75.06**	**30**	⇑P		**P**	**06 36 41.1**	**-1.3**
BIZ	**Bicaz**	**75.55**	**29**	⇓P		**P**	**06 36 46.3**	**+1.1**
BURAR	**Bucovina Array**	**75.65**	**28**	⇓P		**P**	**06 36 49.6**	**+3.7**
AKASG	**Malin Array Be**	**79.70**	**28**	P		**P**	**06 37 08.3**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=222,slow=4.7,SNR=7.0							
AKASG	**Malin Array Be**	**79.70**	**28**	P		**P**	**06 37 08.3**	**+0.1**
SBA	**Scott Base**	**84.26**	**181**	P		**P**	**06 37 33.6**	**+1.7**
VNDA	**Vanda**	**84.62**	**180**	P		**P**	**06 37 34.3**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=192,slow=5.4,SNR=4.3							
VNDA	**Vanda**	**84.62**	**180**	IAmb		IAmb	06 37 35.1	
	comp=Z,4.7nm,1.4s							
WVT	**Waverly**	**85.67**	**310**	P		**P**	**06 37 39.4**	**-0.3**
WVT					IAmb	IAmb	06 37 40.6	
	comp=Z,9.9nm,1.4s							
W45A	**Hickory Valley**	**86.25**	**309**	P		**P**	**06 37 42.5**	**0.0**
CCM	**Cathedral Cave**	**88.95**	**311**	P		**P**	**06 37 55.4**	**-0.1**
R40A	**Maddies Statio**	**89.79**	**311**	P		**P**	**06 37 59.2**	**-0.2**
R40A					IAmb	IAmb	06 38 00.1	
	comp=Z,5.6nm,0.9s							
HHAR	**Hobbs**	**90.24**	**308**	P		**P**	**06 38 02.1**	**+0.5**
HHAR					IAmb	IAmb	06 38 02.6	
	comp=Z,6.4nm,1.2s							
CMAR	**Chiang Mai Arr**	**119.72**	**79**	PKP		**PKPdf**	**06 43 51.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=279,slow=1.7,SNR=4.3							
CMAR	**Chiang Mai Arr**	**119.72**	**79**			**PKPdf**	**06 43 50.5**	**-1.2**
ILAR	**Eielson Array**	**122.57**	**337**	PKP		**PKPdf**	**06 43 55.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=318,slow=1.2,SNR=3.4							
SONM	**Songino Array**	**125.66**	**44**	PKP		**PKiKP**	**06 44 02.9**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=249,slow=2.2,SNR=5.6							
SONM	**Songino Array**	**125.66**	**44**			**PKPdf**	**06 44 02.4**	**0.0**
MJAR	**Matsushiro Arr**	**151.60**	**45**	PKPbc		**PKPbc**	**06 44 55.5**	**0.0**
	comp=Z,4.9nm,1.0s,baz=297,slow=4.5,SNR=5.2							
MJAR	**Matsushiro Arr**	**151.60**	**45**			**PKPbc**	**06 44 53.1**	**-2.4**
MJAR				PKPab		**PKPab**	**06 45 02.0**	**-2.0**

ECX ***13*** *06:30:16.9±0.9, 27°.61N×111°.53W, h6km±11km, MD3.6, ML4.0*

MEX ***13*** *06:30:17.2±0.5, 27°.38N×111°.42W, h16km±653km, MD3.8*

ISC 13 06:30:14.6±1.2**, 27°.66N**±0°.10×**111°.57W**±0°.06**, h10**km**, n7,** σ0**70**/13**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUYB	**Guaymas**	**0.67**	**68**	*e*P		**Pb**	**06 30 28.7**	**+0.4**
GUYB				*e*S		**Sb**	**06 30 37.0**	**-0.6**
GUYB	**Guaymas**	**0.67**	**68**	*e*P		**Pb**	**06 30 28.4**	**+0.1**
GUYB				*e*S		**Sb**	**06 30 37.3**	**-0.3**
SRIG	**Santa Rosalia**	**0.68**	**241**	*e*P		**Pb**	**06 30 28.9**	**+0.3**
SRIG				*e*S		**Sb**	**06 30 37.9**	**-0.1**
SRIG	**Santa Rosalia**	**0.68**	**241**	*e*P		**Pb**	**06 30 28.9**	**+0.3**
SRIG				*i* S		**Sb**	**06 30 38.4**	**+0.4**
HSIG		**1.47**	**22**	*e*P		**Pg**	**06 30 43.0**	**+0.3**
HSIG				*e*S		**Sg**	**06 31 02.4**	**+0.6**
HSIG		**1.47**	**22**	*e*P		**Pg**	**06 30 43.6**	**+0.9**
HSIG				*e*S		**Sg**	**06 31 02.5**	**+0.6**
CPBX	**Cerro Prieto**	**5.75**	**327**	*e*		**Pn**	**06 31 38.4**	**-1.5**
CPBX					IAML		06 31 38.4	
	comp=E,178nm,0.1s							

IDC ***13*** *07:30:30.1±1.9, 5°.42S×152°.57E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/28, mbtmp3.8/8, Error ellipse: s-maj=64.2km s-min=23.0km az=119.0*

NEIC ***13*** *07:30:34.0±2.5, 5°.61S±0°.08×152°.8E±0°.1, h35km±2km, mb4.1/10, Error ellipse: s-maj=19.5km s-min=13.3km az=90.0*

ISC 13 07:30:34.5±1.0**, 5°.64S**±0°.08×**152°.7E**±0°.1**, h35**km**, n28,** σ1**37**/26**, mb3.9**/12**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.54**	**339**	Pn		**Pn**	**07 30 59.2**	**-0.4**
RABL				Sn		**Sn**	**07 31 20.9**	**+2.6**
MANU	**Manus Island**	**6.43**	**304**	Pn		**Pn**	**07 32 05.9**	**-0.9**
MANU				Sn		**Sn**	**07 33 19.0**	**+0.1**
PMG	**Port Moresby**	**6.67**	**236**	Pn		**Pn**	**07 32 09.7**	**-0.3**
	1.4nm,0.3s,ba

KNRA				IAmb	IAmb	07 45 13.1	
	comp=Z,31nm,1.0s						
DZM	**Mont Dzumac**	**22.97**	**136**	P	**P**	**07 45 15.6**	**+1.8**
	comp=Z,9.2nm,0.6s,baz=264,slow=9.8,SNR=11						
AS31	**Alice Springs**	**23.34**	**219**	P	**P**	**07 45 18.0**	**+0.9**
ASAR	**Alice Springs**	**23.34**	**219**	P	**P**	**07 45 18.1**	**+0.9**
	comp=Z,6.8nm,0.3s,baz=51,slow=8.7,SNR=176						
ASAR				pP	**pP**	**07 45 44.0**	**-0.8**
	comp=Z,4.9nm,0.7s,baz=45,slow=12,SNR=4.2						
ASAR				S	**S**	**07 49 17.9**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=48,slow=14,SNR=4.1						
ASAR				ScP	**ScP**	**07 52 25.8**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=71,slow=2.7,SNR=8.3						
ASAR	**Alice Springs**	**23.34**	**219**	P	**P**	**07 45 17.4**	**+0.3**
BATI	**Baumata**	**26.05**	**259**	LR	LR	07 57 59.2	
	comp=Z,78nm,18.9s,baz=45,slow=40						
FITZ	**Fitzroy Crossi**	**26.41**	**240**	P	**P**	**07 45 44.7**	**-0.2**
	comp=Z,6.4nm,0.5s,baz=60,slow=5.9,SNR=50						
FITZ				pP	**pP**	**07 46 12.6**	**-2.2**
	comp=Z,10nm,0.8s,baz=85,slow=9.0,SNR=6.0						
FITZ				ScP	**ScP**	**07 52 34.1**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=27,slow=4.5,SNR=2.7						
FITZ				LR	LR	07 57 02.6	
	comp=Z,36nm,19.3s,baz=52,slow=38						
FITZ	**Fitzroy Crossi**	**26.41**	**240**	P	**P**	**07 45 44.6**	**-0.3**
STKA	**Stephens Creek**	**27.03**	**195**	P	**P**	**07 45 50.2**	**0.0**
	comp=Z,1.9nm,0.4s,baz=16,slow=7.9,SNR=8.8						
STKA				LR	LR	07 55 40.7	
	comp=Z,22nm,21.8s,baz=25,slow=34						
STKA	**Stephens Creek**	**27.03**	**195**	P	**P**	**07 45 50.3**	**0.0**
LHI	**Lord Howe Isla**	**27.10**	**162**	P	**P**	**07 45 50.2**	**-0.7**
BBOO	**Buckleboo**	**29.71**	**203**	P	**P**	**07 46 14.2**	**+0.1**
BBOO				IAmb	IAmb	07 46 33.2	
	comp=Z,32nm,1.5s						
TOO	**Toolangi**	**31.87**	**186**	P	**P**	**07 46 33.1**	**0.0**
TOO				IAmb	IAmb	07 46 37.1	
	comp=Z,14nm,1.4s						
FORT	**Forrest**	**32.07**	**217**	P	**P**	**07 46 35.7**	**+0.9**
PSA00	**Pilbara Seismi**	**32.80**	**239**	P	**P**	**07 46 41.0**	**-0.3**
PSA00				IAmb	IAmb	07 46 42.5	
	comp=Z,18nm,1.4s						
TAU	**Tasmania Unive**	**37.04**	**183**	P	**P**	**07 47 19.5**	**+2.1**
GIRL	**Giralia**	**38.02**	**240**	P	**P**	**07 47 27.0**	**+1.1**
JOW	**Kunigami**	**38.44**	**328**	P	**P**	**07 47 30.3**	**+0.9**
MORW	**Morawa**	**39.27**	**230**	P	**P**	**07 47 35.8**	**-0.5**
MORW				IAmb	IAmb	07 47 48.4	
	comp=Z,24nm,1.5s						
NACB	**Ninganchiao**	**40.39**	**319**	P	**P**	**07 47 46.0**	**+0.4**
NACB				IAmb	IAmb	07 47 46.1	
	comp=Z,15nm,0.7s						
TUWZ	**Tuamarina**	**41.62**	**152**	P	**P**	**07 47 57.1**	**+1.7**
LTZ	**Lake Taylor**	**41.96**	**155**	P	**P**	**07 48 00.9**	**+2.7**
LTZ				IAmb	IAmb	07 48 21.2	
	comp=Z,61nm,1.3s						
PLWZ	**Palliser**	**42.34**	**151**	P	**P**	**07 48 01.8**	**+0.5**
JNU	**Nakatsue**	**42.57**	**337**	P	**P**	**07 48 03.0**	**-0.3**
JNU				IAmb	IAmb	07 48 08.2	
	comp=Z,53nm,1.2s						
MLZ	**Mavora Lakes**	**42.61**	**161**	P	**P**	**07 48 05.8**	**+2.4**
MLZ				IAmb	IAmb	07 48 32.6	
	comp=Z,38nm,1.3s						
JGF	**Kuroka**	**42.74**	**345**	P	**P**	**07 48 05.6**	**+1.0**
JGF				IAmb	IAmb	07 48 25.6	
	comp=Z,38nm,1.5s						
JWT	**Wachi**	**42.97**	**343**	P	**P**	**07 48 07.3**	**+0.9**
JWT				IAmb	IAmb	07 48 16.3	
	comp=Z,41nm,1.3s						
MJAR	**Matsushiro Arr**	**43.43**	**347**	P	**P**	**07 48 09.8**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=163,slow=9.5,SNR=1.8						
MAT	**Matsushiro**	**43.43**	**347**	P	**P**	**07 48 09.8**	**-0.3**
JHS	**Saijyo**	**43.43**	**340**	P	**P**	**07 48 10.6**	**+0.5**
JMM	**Marumori**	**44.19**	**350**	P	**P**	**07 48 17.1**	**+1.0**
JMM				IAmb	IAmb	07 48 33.8	
	comp=Z,21nm,1.1s						
JSD	**Sado**	**44.85**	**347**	P	**P**	**07 48 22.3**	**+0.9**
JSD				IAmb	IAmb	07 48 39.2	
	comp=Z,54nm,1.5s						
JTM	**Tenmabayashi**	**46.99**	**351**	P	**P**	**07 48 38.9**	**+0.8**
KSRS	**Korea Array**	**47.52**	**337**	P	**P**	**07 48 43.0**	**+0.8**
	comp=Z,4.3nm,0.7s,baz=156,slow=8.4,SNR=12						
NJ2	**Nanjing**	**47.68**	**324**	*eP*	**P**	**07 48 46.0**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JEW	**Eniwo**	**48.95**	**352**	P	**P**	**07 48 54.8**	**+1.7**
JKA	**Kamikawa-asahi**	**50.06**	**353**	P	**P**	**07 49 03.1**	**+1.6**
JKA				IAmb	IAmb	07 49 04.7	
	comp=Z,35nm,1.2s						
USA0B	**Ussuriysk Arra**	**52.22**	**344**	P	**P**	**07 49 17.0**	**-0.6**
USRK	**Ussuriysk Ar.**	**52.22**	**344**	P	**P**	**07 49 16.9**	**-0.7**
	comp=Z,4.7nm,0.7s,baz=189,slow=5.9,SNR=12						
USRK	**Ussuriysk Ar.**	**52.22**	**344**	P	**P**	**07 49 18.3**	**+0.8**
GSI	**Gunungsitoli**	**52.43**	**276**	P	**P**	**07 49 18.0**	**-1.7**
GSI				IAmb	IAmb	07 49 34.8	
	comp=Z,20nm,0.6s						
KMI	**Kunming**	**54.94**	**306**	⇑P	**P**	**07 49 35.4**	**-2.6**
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,75nm,4.6s						
BJI	**Beijing**	**55.01**	**329**	P	**P**	**07 49 40.1**	**+2.1**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**55.44**	**297**	P	**P**	**07 49 41.0**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=107,slow=5.8,SNR=2.1						
HHC	**Hu-ho-hao-te**	**58.04**	**327**	*eP*	**P**	**07 50 01.9**	**+2.3**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
PEA0B	**Petropavlovsk-**	**59.06**	**6**	P	**P**	**07 50 07.7**	**+1.4**
PETK	**Petropavlovsk-**	**59.06**	**6**	P	**P**	**07 50 07.2**	**+1.0**
	comp=Z,13nm,0.6s,baz=156,slow=6.1,SNR=27						
SONM	**Songino Array**	**65.50**	**330**	P	**P**	**07 50 49.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=145,slow=4.7,SNR=6.5						
SONM				pP	**pP**	**07 51 24.2**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=135,slow=4.6,SNR=3.1						
SONM	**Songino Array**	**65.50**	**330**	P	**P**	**07 50 48.5**	**-0.8**
WMQ	**Urumqi**	**74.33**	**318**	*eP*	**P**	**07 51 45.6**	**+2.3**
WMQ				PcP	**PcP**	**07 51 58.6**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,6.5s						
WMQ				LR	LR		
	comp=Z,610nm,28.9s						
WMQ				LR	LR		
	comp=Z,2μm,29.2s						
WMQ				LR	LR		
	comp=Z,250nm,29.1s						
MKAR	**Makanchi Array**	**78.99**	**320**	P	**P**	**07 52 09.5**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=98,slow=9.5,SNR=6.1						
ZALV	**Zalesovo Beam**	**80.22**	**327**	P	**P**	**07 52 13.9**	**-1.8**
	comp=Z,1.2nm,0.5s,baz=116,slow=6.6,SNR=4.4						
ILAR	**Eielson Array**	**84.27**	**23**	P	**P**	**07 52 34.7**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=251,slow=5.3,SNR=15						
SYO	**Syowa Base**	**91.69**	**200**	*eP*	**P**	**07 53 10.4**	**-1.6**
SYO	**Syowa Base**	**91.69**	**200**	*ePcP*	**PcP**	**07 53 13.0**	**+0.2**
NVAR	**Mina Array Bea**	**95.19**	**52**	P	**P**	**07 53 30.0**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=305,slow=3.2,SNR=2.0						
YKA	**Yellowknife Ar**	**97.77**	**28**	P	Pdif	07 53 40.3	+0.4
	comp=Z,0.3nm,1.0s,baz=258,slow=4.4,SNR=2.6						
TXAR	**Lajitas Array**	**107.39**	**61**	PP	**PP**	**07 58 50.8**	**-2.1**
	comp=Z,0.2nm,0.8s,baz=242,slow=6.9,SNR=3.6						
MODS	**Modra-Piesok**	**121.41**	**325**	*e*PKP	**PKiKP**	**07 59 00.6**	**+2.7**
TORD	**Torodi Ar. Bea**	**147.54**	**285**	PKPbc	**PKPbc**	**07 59 49.0**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=74,slow=2.5,SNR=9.7						
TORD				pPKPbc	**pPKPbc**	**08 00 27.7**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=63,slow=3.0,SNR=2.0						
TORD	**Torodi Ar. Bea**	**147.54**	**285**	PKPbc	**PKPbc**	**07 59 49.4**	**-0.3**
TORD				PKPab	**PKPab**	**07 59 51.9**	**-0.3**
BDFB	**Brasilia**	**152.48**	**141**	PKPbc	**PKiKP**	**08 00 01.8**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=0.6,slow=6.1,SNR=3.6						
BDFB				pPKPbc	**pPKPbc**	**08 00 37.8**	**-3.7**
	comp=Z,4.1nm,0.6s,baz=181,slow=2.7,SNR=6.1						
BDFB	**Brasilia**	**152.48**	**141**	PKPdf	**PKPdf**	**07 59 52.3**	**-2.5**
BDFB				PKPbc	**PKiKP**	**08 00 02.0**	**0.0**
BDFB				PKPab	**PKPab**	**08 00 11.8**	**-0.7**

FUNV **13** *07:46:38.7, 10°.83N×62°.10W, h79km, MW3.9*
TRN **13** *07:46:38.3, 10°.85N×62°.12W, h77km, MD3.5*
ISC 13 07:46:36.4±1.5, 10°.81N±0°.04×62°.15W±0°.04, h93km±14km, n13, σ1°25/25, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.75**	**102**	⇑*iP*	**Pn**	**07 46 54.6**	**+0.9**
TRN				*eS*	**Sn**	**07 47 05.6**	**-1.1**
TRN	**Trinidad (W)**	**0.75**	**102**	*eP*	**Pn**	**07 46 54.2**	**+0.5**
TRN				*i* S	**Sn**	**07 47 05.5**	**-1.1**
CRUV	**Carupano**	**1.07**	**263**	*eP*	**Pn**	**07 46 58.3**	**+1.2**
CRUV				*eS*	**Sn**	**07 47 12.9**	**+0.1**
GRGR	**Grenville**	**1.40**	**20**	*eP*	**Pn**	**07 47 01.7**	**+0.6**
GRGR				*eS*	**Sn**	**07 47 19.1**	**-0.6**
GRGR	**Grenville**	**1.40**	**20**	*eP*	**Pn**	**07 47 01.7**	**+0.6**
GRGR				*eS*	**Sn**	**07 47 18.8**	**-1.0**
TPR	**Prospect**	**1.40**	**74**	*e*	**Pn**	**07 47 01.1**	**0.0**
TPR				*eS*	**Sn**	**07 47 20.0**	**+0.2**
TOSP	**Speyside**	**1.66**	**73**	*eP*	**Pn**	**07 47 04.5**	**+0.1**
TOSP				*eS*	**Sn**	**07 47 24.6**	**-0.9**
TOSP	**Speyside**	**1.66**	**73**	*eP*	**Pn**	**07 47 04.9**	**+0.6**
GCMP	**Grenada, Carri**	**1.81**	**23**	*eP*	**Pn**	**07 47 06.8**	**+0.5**
GCMP				*eS*	**Sn**	**07 47 27.8**	**-1.2**
SVB	**Belmont**	**2.60**	**20**	*eP*	**Pn**	**07 47 18.6**	**+1.9**
SVB				*eS*	**Sn**	**07 47 47.1**	**-0.5**
RIOV	**Rio Grande**	**2.75**	**173**	*eP*	**Pn**	**07 47 20.6**	**+2.0**
RIOV				*eS*	**Sn**	**07 47 49.9**	**-1.2**
BIRV	**Birongo**	**4.06**	**266**	*eP*	**Pn**	**07 47 38.0**	**+1.6**
BIRV				*eS*	**Sn**	**07 48 21.5**	**-1.4**
BAUV	**El Baul**	**6.09**	**253**	*eP*	**Pn**	**07 48 04.1**	**+0.1**
BAUV				*eS*	**Sn**	**07 49 09.3**	**-3.1**

KRNET **13** *07:53:24.3±0.1, 41°.82N×72°.54E, h26km, mb2.2*
SOME **13** *07:53:25.0, 41°.77N×72°.62E, h15km*
NNC **13** *07:53:27.1±1.8, 42°.02N×72°.53E, h0km, mb2.9, mpv2.6, Error ellipse: s-maj=33.1km s-min=6.4km az=168.0*
ISC 13 07:53:23.6±1.2, 41°.78N±0°.03×72°.53E±0°.02, h0km±11km, n24, σ0°95/44, 17C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.57**	**143**	⇓*iP*	**Pb**	**07 53 36.0**	**-0.4**
ARSB	baz=47			⇓*iS*	**Sb**	**07 53 44.5**	**-0.6**
MNAS	**Manas**	**0.71**	**359**	⇑*iP*	**Pg**	**07 53 37.3**	**+0.1**
MNAS	baz=58			⇑*iS*	**Sg**	**07 53 46.3**	**-0.1**
AML	**Almayashu**	**0.94**	**67**	⇑*iP*	**Pg**	**07 53 41.7**	**+0.1**
AML	baz=70			⇑*iS*	**Sg**	**07 53 54.1**	**+0.3**
TRKS	**Terek-Say**	**1.07**	**257**	⇑*iP*	**Pb**	**07 53 44.8**	**-0.2**
TRKS	baz=51			⇑*iS*	**Sb**	**07 53 59.4**	**-0.2**
OHH	**Osh**	**1.27**	**171**	⇓*iP*	**Pb**	**07 53 48.2**	**-0.1**
OHH	baz=72			⇓*iS*	**Sn**	**07 54 05.5**	**-0.8**
EKS2	**Erkin-Say**	**1.28**	**46**	⇑*iP*	**Pg**	**07 53 46.9**	**-1.3**
EKS2	baz=47			⇑*iS*	**Sg**	**07 54 03.5**	**-1.3**
ARLS	**Aral**	**1.34**	**86**	⇑*iP*	**Pg**	**07 53 49.1**	**-0.2**
ARLS	baz=88			⇑*iS*	**Sg**	**07 54 06.6**	**-0.2**
UCH	**Uchtor**	**1.55**	**72**	⇓*iP*	**Pn**	**07 53 52.2**	**-0.6**
UCH	baz=74			⇓*iS*	**Sg**	**07 54 12.3**	**-1.0**
AAK	**Ala-Archa**	**1.70**	**59**	⇑*iP*	**Pn**	**07 53 54.1**	**-0.5**
AAK	baz=60			⇑*iS*	**Sn**	**07 54 16.0**	**-1.0**
AAK	**Ala-Archa**	**1.70**	**59**	⇓P	**Pn**	**07 53 53.8**	**-0.8**
AAK	0.7nm,0.4s			⇑S	**Sn**	**07 54 17.3**	**+0.2**
IUG	**Iuzhnay**	**1.90**	**282**	*eP*	**Pg**	**07 54 00.1**	**+0.1**
IUG	2.0nm,0.5s 8.2nm,0.2s			*eS*	**Sg**	**07 54 25.5**	**+0.9**
IUG	**Iuzhnay**	**1.90**	**282**	P	**Pg**	**07 54 00.0**	**+0.1**
IUG	13nm,0.3s 8.2nm,0.2s			S	**Sg**	**07 54 25.5**	**+0.9**
SFK	**Sufi-Kurgan**	**1.91**	**157**	⇓*iP*	**Pn**	**07 53 58.4**	**+0.8**
SFK	baz=58			⇓*iS*	**Sn**	**07 54 22.7**	**+0.3**
KK31	**Karatay Array**	**2.00**	**312**	Pn	**Pb**	**07 54 00.3**	**-0.5**
KK31	1.3nm,0.5s,baz=128,slow=16,SNR=8.5 0.5nm,0.2s,baz=132,slow=28,SNR=7.3			⇑Sn	**Sb**	**07 54 26.4**	**+0.2**
USP	**Ospenovka**	**2.08**	**44**	⇑*iP*	**Pn**	**07 53 59.2**	**-0.6**
USP	baz=44			⇑*iS*	**Sn**	**07 54 24.6**	**-1.9**
SGDS	**Sogindy**	**2.28**	**42**	Pg	**Pb**	**07 54 05.4**	**-0.2**
SGDS	1.3nm,0.3s 3.9nm,0.4s			Lg	Lg	07 54 34.8	
TKM2	**Tokmak 2**	**2.55**	**62**	⇑Pn	**Pb**	**07 54 11.5**	**+1.2**
TKM2	0.3nm,0.2s 1.5nm,0.4s			⇓Sn	**Sb**	**07 54 42.4**	**+0.3**
DGS	**Degeres**	**2.81**	**57**	*eP*	**Pb**	**07 54 14.8**	**+0.1**
DGS	2.4nm,0.5s 3.3nm,0.4s			*eS*	**Sb**	**07 54 50.8**	**+1.1**
DGS	**Degeres**	**2.81**	**57**	Pg	**Pb**	**07 54 14.8**	**+0.1**
DGS	2.4nm,0.5s 3.3nm,0.4s			Lg	Lg	07 54 50.8	
KST	**Kastek**	**2.84**	**62**	*eP*	**Pb**	**07 54 16.0**	**+0.7**
KST	1.2nm,0.3s 3.7nm,0.5s			*eS*	**Sb**	**07 54 52.6**	**+2.0**
KRBS	**Karabastau**	**3.01**	**49**	*eP*	**Pb**	**07 54 18.2**	**+0.1**
KRBS	0.8nm,0.3s 2.3nm,0.4s			*eS*	**Sb**	**07 54 56.6**	**+1.2**
KRBS	**Karabastau**	**3.01**	**49**	Pg	**Pb**	**07 54 18.2**	**+0.1**
KRBS	0.8nm,0.3s 2.3nm,0.4s			Lg	Lg	07 54 56.6	
KTBS	**Karatobe**	**3.62**	**56**	*eP*	**Pb**	**07 54 29.6**	**+1.1**
KTBS	0.7nm,0.4s 2.9nm,0.6s			*eS*	**Sb**	**07 55 16.1**	**+3.2**
KTBS	**Karatobe**	**3.62**	**56**	Pg	**Pb**	**07 54 29.6**	**+1.1**
KTBS	0.7nm,0.4s 2.9nm,0.6s			Lg	Lg	07 55 16.1	

NEIC **13** *08:06:58.5±1.6, 20°.1S±0°.1×178°.0W±0°.1, h544km±9km, mb4.2/21, Error ellipse: s-maj=20.0km s-min=17.3km az=102.0*
IDC **13** *08:07:00.6±2.2, 20°.06S×178°.06W, h561km±22km, mb3.2/10, mb1 3.4/11, mb1mx3.2/24, mbtmp4.1/11, Error ellipse: s-maj=28.0km s-min=19.1km az=122.0*
ISC 13 08:07:00.2±0.6, 20°.15S±0°.09×177°.9W±0°.1, h569km, n44, σ1°08/41, mb4.0/21, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.52**	**301**	P	**P**	**08 08 26.4**	**-1.1**
	20nm,0.3s,baz=117,slow=16,SNR=89						
MSVF	**Nonsavu**	**4.52**	**301**	P	**P**	**08 08 25.9**	**-1.6**
NIUE	**Niue**	**7.60**	**83**	P	**P**	**08 08 52.6**	**-2.1**
AFI	**Afiamalu**	**8.53**	**44**	P	P	08 09 00.2	-3.7
RAO	**Raoul Island**	**9.07**	**180**	P	**P**	**08 09 08.0**	**-0.9**
URZ	**Urewera**	**18.56**	**192**	P	**P**	**08 10 40.7**	**-1.4**
BFZ	**Birch Farm**	**21.07**	**192**	P	**P**	**08 11 04.1**	**-0.8**
QRZ	**Quartz Range**	**22.17**	**200**	P	**P**	**08 11 13.9**	**-0.8**
THZ	**Tophouse**	**22.91**	**198**	P	**P**	**08 11 21.2**	**-0.2**
WHZ	**Wether Hill Ro**	**28.20**	**201**	P	**P**	**08 12 08.3**	**+0.5**
CTAO	**Charters Tower**	**33.61**	**264**	P	**P**	**08 12 54.1**	**-0.4**
CTAO				IAmb	IAmb	08 12 56.5	
	comp=Z,19nm,1.4s						
COEN	**Coen**	**37.65**	**273**	P	**P**	**08 13 27.5**	**-0.4**
COEN				IAmb	IAmb	08 13 27.9	
	comp=Z,2.4nm,0.8s						
STKA	**Stephens Creek**	**38.02**	**244**	P	**P**	**08 13 31.6**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=80,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**38.02**	**244**	P	**P**	**08 13 31.5**	**+0.8**
BBOO	**Buckleboo**	**42.78**	**243**	P	**P**	**08 14 08.1**	**-0.6**
BBOO				IAmb	IAmb	08 14 18.4	
	comp=Z,20nm,1.4s						
WR0	**Warramunga Arr**	**44.55**	**262**	P	**P**	**08 14 21.2**	**-1.2**
WR0				IAmb	IAmb	08 14 41.4	
	comp=Z,8.6nm,1.4s						
AS31	**Alice Springs**	**44.68**	**256**	P	**P**	**08 14 22.8**	**-0.7**
ASAR	**Alice Springs**	**44.69**	**256**	P	**P**	**08 14 22.7**	**-0.8**
	comp=Z,3.0nm,0.6s,baz=98,slow=7.3,SNR=52						
ASAR	**Alice Springs**	**44.69**	**256**	P	**P**	**08 14 22.6**	**-1.0**
WB0	**Warramunga Arr**	**44.71**	**262**	P	**P**	**08 14 22.6**	**-1.2**
WB0				IAmb	IAmb	08 14 23.1	
	comp=Z,5.2nm,0.5s						
WB2	**Warramunga Arr**	**44.73**	**262**	P	**P**	**08 14 22.5**	**-1.3**
WB2				IAmb	IAmb	08 14 23.0	
	comp=Z,4.1nm,0.7s						
WRAB	**Tennant Creek**	**44.73**	**262**	P	**P**	**08 14 22.6**	**-1.3**
WRAB				IAmb	IAmb	08 14 37.9	
	comp=Z,7.0nm,1.4s						
WRA	**Warramunga Arr**	**44.74**	**262**	P	**P**	**08 14 22.7**	**-1.2**
	comp=Z,2.9nm,0.5s,baz=97,slow=7.8,SNR=82						
WRA	**Warramunga Arr**	**44.74**	**262**	P	**P**	**08 14 21.7**	**-2.3**
MTN	**Manton Dam**	**49.25**	**270**	P	**P**	**08 14 56.9**	**-0.9**
MTN				IAmb	IAmb	08 14 57.6	
	comp=Z,7.1nm,0.8s						
KNRA	**Kununurra**	**50.77**	**266**	P	**P**	**08 15 08.4**	**-0.5**
KNRA				IAmb	IAmb	08 15 08.9	
	comp=Z,4.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.16**	**262**	P	**P**	**08 15 25.7**	**-0.4**
VNDA	**Vanda**	**58.27**	**185**	P	**P**	**08 16 02.3**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=341,slow=8.1,SNR=4.8						
VNDA	**Vanda**	**58.27**	**185**	IAmb	IAmb	08 16 10.9	
	comp=Z,3.0nm,1.2s						
CASY	**Casey**	**64.32**	**205**	P	**P**	**08 16 40.4**	**+0.3**
CASY				IAmb	IAmb	08 16 54.5	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**69.92**	**180**	P	**P**	**08 17 15.6**	**+1.0**
QSPA				IAmb	IAmb	08 17 16.2	
	comp=Z,8.0nm,0.9s						
MJAR	**Matsushiro Arr**	**69.98**	**324**	P	**P**	**08 17 15.4**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=134,slow=8.6,SNR=1.3						
PETK	**Petropavlovsk-**	**75.95**	**345**	P	**P**	**08 17 49.4**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=119,slow=9.3,SNR=4.6						
USRK	**Ussuriysk Ar.**	**78.72**	**326**	P	**P**	**08 18 05.4**	**+1.2**
	comp=Z,2.9nm,0.8s,baz=129,slow=3.9,SNR=4.6						
USRK	**Ussuriysk Ar.**	**78.72**	**326**	P	**P**	**08 18 05.0**	**+0.8**
TXAR	**Lajitas Array**	**86.79**	**57**	P	**P**	**08 18 45.8**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=232,slow=4.1,SNR=3.4						
IMAR	**Indian Mountai**	**87.79**	**10**	P	**P**	**08 18 48.9**	**+0.1**
ILAR	**Eielson Array**	**87.95**	**13**	P	**P**	**08 18 48.9**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=211,slow=4.6,SNR=6.0						
ILAR	**Eielson Array**	**87.95**	**13**	P	**P**	**08 18 49.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**90.08**	**290**	P	**P**	**08 19 02.4**	**+1.9**
	comp=Z,1.1nm,0.8s,baz=130,slow=2.8,SNR=7.9						
CMAR	**Chiang Mai Arr**	**90.08**	**290**	P	**P**	**08 19 00.7**	**+0.2**
BMAR	**Burnt Mountain**	**90.73**	**12**	P	**P**	**08 19 03.4**	**+1.0**
GC02	**Grant County #**	**94.25**	**52**	P	**P**	**08 19 20.2**	**+0.9**
AKASG	**Malin Array Be**	**142.75**	**331**	PKhKP	PKPpre	08 25 26.3	
	comp=Z,3.4nm,0.8s,baz=40,slow=3.7,SNR=5.1						

NEIC **13** *08:09:04.4±2.1, 14°.92S±0°.10×167°.47E±0°.09, h127km±6km, mb4.3/11, Error ellipse: s-maj=17.6km s-min=7.5km az=138.0*
IDC **13** *08:09:05.9±7.9, 15°.10S×167°.12E, h107km±84km, mb3.6/4, mb1 3.7/5, mb1mx3.3/26, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=83.4km s-min=53.2km az=116.0*
ISC 13 08:09:05.0±1.5, 15°.05S±0°.1×167°.4E±0°.2, h129km, n19, σ1°73/20, mb4.1/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.47**	**198**		**Pn**	**08 09 23.1**	**-0.8**
SANVU					Sn	**08 09 39.7**	**+1.6**
DZM	**Mont Dzumac**	**7.09**	**187**	P	**Pn**	**08 10 46.4**	**+0.1**
	1.1nm,0.3s,baz=116,slow=21,SNR=23						
DZM				S	**Sn**	**08 12 02.1**	**-3.4**
	1.5nm,0.3s,baz=336,slow=17,SNR=5.2						
HNR	**Honiara**	**9.11**	**307**	Pn	**Pn**	**08 11 10.2**	**-3.2**
EIDS	**Eidsvold**	**18.41**	**233**	P	**P**	**08 13 08.9**	**-1.5**
EIDS				IAmb	IAmb	08 13 10.7	
	comp=Z,21nm,1.4s						
BKZ	**Black Stump Fm**	**25.38**	**163**	P	**P**	**08 14 19.1**	**-1.3**
BKZ				IAmb	IAmb	08 14 45.0	
	comp=Z,29nm,1.3s						
STKA	**Stephens Creek**	**28.88**	**230**	P	**P**	**08 14 53.3**	**+1.6**
	comp=Z,1.1nm,0.3s,baz=63,slow=9.0,SNR=8.6						
STKA	**Stephens Creek**	**28.88**	**230**	P	**P**	**08 14 53.5**	**+1.8**
WRA	**Warramunga Arr**	**31.84**	**256**	P	**P**	**08 15 18.5**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=84,slow=9.0,SNR=1.4						
AS31	**Alice Springs**	**32.65**	**249**	P	**P**	**08 15 25.8**	**+0.8**
ASAR	**Alice Springs**	**32.65**	**249**	P	**P**	**08 15 25.6**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=77,slow=9.2,SNR=12						
ASAR	**Alice Springs**	**32.65**	**249**	P	**P**	**08 15 25.9**	**+0.8**
BBOO	**Buckleboo**	**33.48**	**232**	P	**P**	**08 15 33.7**	**+1.6**
SAUI	**Saumlaki**	**35.97**	**277**	P	**P**	**08 15 53.8**	**+0.1**
FORT	**Forrest**	**39.23**	**240**

h51km:pP-P,n188,σ1$51/202,mb4.4/64,MS3.3/20,8C-10D,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.44**	**234**	P	**Pn**	**08 24 05.6**	**-1.5**
JTH				S	**Sn**	**08 24 12.6**	**-2.1**
JKEN	**Kujiedanarisaw**	**0.47**	**272**	P	**Pn**	**08 24 05.7**	**-1.8**
JKEN				S	**Sn**	**08 24 12.9**	**-2.4**
JANG	**Nango**	**0.65**	**286**	P	**Pn**	**08 24 08.2**	**-1.4**
JANG				S	**Sn**	**08 24 17.1**	**-2.0**
MIYJ	**Miyakonagasawa**	**0.73**	**213**	P	**Pn**	**08 24 09.5**	**-1.2**
MIYJ				S	**Sn**	**08 24 19.6**	**-1.4**
JKZ	**Kuzumaki**	**0.79**	**255**	P	**Pn**	**08 24 10.7**	**-0.8**
JKZ				S	**Sn**	**08 24 21.5**	**-1.0**
JOM	**Ohasama**	**1.07**	**228**	P	**Pn**	**08 24 14.9**	**-0.3**
JOM				S	**Sn**	**08 24 29.1**	**0.0**
JARK	**Aomorirokkasho**	**1.09**	**318**	P	**Pn**	**08 24 14.5**	**-1.0**
JARK				eS	**Sn**	**08 24 28.4**	**-1.1**
JTM	**Tenmabayashi**	**1.13**	**302**	P	**Pn**	**08 24 15.2**	**-0.7**
JTM				eS	**Sn**	**08 24 29.5**	**-0.9**
JTM	**Tenmabayashi**	**1.13**	**302**	Pn	**Pn**	**08 24 15.2**	**-0.7**
JTM				Sn	**Sn**	**08 24 29.2**	**-1.1**
JAH	**Hinai**	**1.30**	**270**	P	**Pn**	**08 24 17.9**	**-0.3**
ERM	**Erimo**	**1.92**	**19**	*de*P	**Pn**	**08 24 26.6**	**-0.1**
ERM	**Erimo**	**1.92**	**19**		**Pn**	**08 24 26.6**	**-0.1**
ERM				Sn	**Sn**	**08 24 51.7**	**+2.0**
JMM	**Marumori**	**2.62**	**208**		**Pn**	**08 24 36.0**	**-0.2**
JMM				Sn	**Sn**	**08 25 08.9**	**+2.1**
JEW	**Eniwo**	**2.72**	**346**		**Pn**	**08 24 38.2**	**+0.5**
JEW				Sn	**Sn**	**08 25 11.1**	**+1.7**
JSD	**Sado**	**3.83**	**237**		**Pn**	**08 24 50.7**	**-2.2**
ASAJ	**Asahikawa**	**3.92**	**3**	P	**Pn**	**08 24 54.3**	**+0.1**
	8.3nm,0.3s,baz=227,slow=9.0,SNR=32						
ASAJ				S	**Sn**	**08 25 43.5**	**+4.6**
	11nm,0.3s,baz=70,slow=6.3,SNR=6.1						
ASAJ				LR	LR	08 26 51.8	
	comp=Z,366nm,21.7s,baz=174,slow=45						
JKA	**Kamikawa-asahi**	**3.92**	**3**		**Pn**	**08 24 53.2**	**-0.9**
NMR	**Nemuro--Hokkai**	**4.07**	**38**	*e*P	**Pn**	**08 24 54.4**	**-1.7**
NMR				*e*S	**Sn**	**08 25 37.0**	**-5.4**
JYT	**Yasato**	**4.30**	**204**		**Pn**	**08 24 58.6**	**-0.8**
RUSJ	**Misakicho**	**4.47**	**28**	*e*P	**Pn**	**08 25 01.9**	**+0.3**
RUSJ				*e*S	**Sn**	**08 25 50.5**	**-1.8**
GRPR	**Tuman**	**4.58**	**33**	*e*P	**Pn**	**08 25 01.5**	**-1.6**
GRPR				*e*S	**Sn**	**08 25 50.2**	**-4.8**
GRPR				pmax	pmax		
	comp=E,89nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,92nm,0.2s						
GRPR				pmax	pmax		
	comp=N,56nm,0.3s						
GRPR				smax	smax		
	comp=E,465nm,0.5s						
GRPR				smax	smax		
	comp=N,453nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.65**	**33**	*e*P	**Pn**	**08 25 02.6**	**-1.5**
YUK				*e*S	**Sn**	**08 25 51.2**	**-5.6**
YUK				pmax	pmax		
	comp=Z,169nm,0.2s						
YUK				pmax	pmax		
	comp=N,34nm,0.1s						
YUK				pmax	pmax		
	comp=E,61nm,0.1s						
YUK				smax	smax		
	comp=N,692nm,0.4s						
YUK				smax	smax		
	comp=E,572nm,0.4s						
MJAR	**Matsushiro Arr**	**4.88**	**223**	P	**Pn**	**08 25 08.0**	**+0.7**
	comp=E,0.3nm,0.3s,baz=31,slow=13,SNR=18						
MJAR				S	**Sn**	**08 26 04.7**	**+2.2**
	baz=30,slow=17,SNR=0.9						
MJAR				LR	LR	08 27 24.0	
	comp=E,104nm,18.9s,baz=40,slow=42						
MJAR	**Matsushiro Arr**	**4.88**	**223**		**Pn**	**08 25 08.0**	**+0.7**
MJB9	**Matsu-Tunnel**	**4.88**	**223**	Pn	**Pn**	**08 25 08.6**	**+1.3**
MAJO	**Matsushiro**	**4.88**	**223**	*c*eP	**Pn**	**08 25 10.1**	**+2.8**
MAJO	**Matsushiro**	**4.88**	**223**		**Pn**	**08 25 08.1**	**+0.8**
MAT	**Matsushiro**	**4.88**	**223**	P	**Pn**	**08 25 09.7**	**+2.4**
MAT				eS	**Sn**	**08 26 05.6**	**+3.1**
JSG	**Sagara**	**6.42**	**212**	Pn	**Pn**	**08 25 29.0**	**+0.5**
TEY	**Ternei**	**6.42**	**321**	⇑*e*P	**Pn**	**08 25 28.2**	**-0.2**
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=N,30nm,0.7s						
TEY				pmax	pmax		
	comp=E,10.0nm,0.9s						
KUR	**Kuril'sk**	**6.48**	**37**	*e*P	**Pn**	**08 25 28.5**	**-0.7**
KUR				*e*S	**Sn**	**08 26 37.6**	**-4.1**
KUR				pmax	pmax		
	comp=Z,29nm,0.3s						
KUR				pmax	pmax		
	comp=N,16nm,0.2s						
KUR				pmax	pmax		
	comp=E,35nm,0.2s						
KUR				smax	smax		
	comp=N,156nm,0.6s						
KUR				smax	smax		
	comp=E,120nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.76**	**2**	*e*P	**Pn**	**08 25 34.0**	**+0.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
USA0B	**Ussuriysk Arra**	**8.65**	**301**	⇑*e*P	**Pn**	**08 26 01.7**	**+2.7**
USA0B	**Ussuriysk Arra**	**8.65**	**301**	Pn	**Pn**	**08 25 57.0**	**-2.0**
USRK	**Ussuriysk Ar.**	**8.65**	**301**	P	**Pn**	**08 25 58.0**	**-1.0**
	baz=105,slow=15,SNR=10						
USRK				LR	LR	08 29 13.7	
	comp=Z,122nm,18.2s,baz=103,slow=37						
USRK	**Ussuriysk Ar.**	**8.65**	**301**		**Pn**	**08 25 58.0**	**-1.0**
MDJ	**Mudanjiang**	**10.40**	**299**	Pn	**Pn**	**08 26 21.2**	**-1.7**
KSRS	**Korea Array**	**11.57**	**261**	P	**Pn**	**08 26 39.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=168,slow=41,SNR=1.7						
KSRS				LR	LR	08 30 40.9	
	comp=Z,97nm,18.4s,baz=88,slow=35						
KSRS	**Korea Array**	**11.57**	**261**		**Pn**	**08 26 39.5**	**+0.6**
KLR	**Kul'dur**	**11.75**	**324**	P	**Pn**	**08 26 40.0**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=319,slow=20,SNR=2.1						
KLR				LR	LR	08 31 15.0	
	comp=Z,132nm,19.2s,baz=140,slow=37						
KLR	**Kul'dur**	**11.75**	**324**	P	**Pn**	**08 26 40.0**	**-1.3**
PETK	**Petropavlovsk-**	**16.63**	**34**	LR	LR	08 34 14.3	
	comp=Z,30nm,18.8s,baz=212,slow=37						
MA2	**Magadan**	**20.12**	**13**	P	**P**	**08 28 26.3**	**+0.5**
	comp=Z,4.5nm,0.6s,baz=208,slow=10.0,SNR=9.6						
MA2				LR	LR	08 35 52.0	
	comp=Z,42nm,20.0s,baz=208,slow=36						
MA2	**Magadan**	**20.12**	**13**	⇓*e*P	**P**	**08 28 26.2**	**+0.3**
MA2				pmax	pmax		
	comp=Z,12nm,2.5s						
MA2	**Magadan**	**20.12**	**13**	P	**P**	**08 28 25.6**	**-0.2**
YAK	**Yakutsk**	**23.18**	**345**	LR	LR	08 38 52.5	
	comp=Z,49nm,18.6s,baz=271,slow=39						
YAK	**Yakutsk**	**23.18**	**345**	⇑*e*P	**P**	**08 28 55.2**	**-3.2**
YAK				pmax	pmax		
	comp=Z,11nm,0.4s						
SEY	**Seymchan**	**23.55**	**12**	P	**P**	**08 29 01.0**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=189,slow=8.1,SNR=12						
SEY	**Seymchan**	**23.55**	**12**	⇓*e*P	**P**	**08 29 02.5**	**+0.5**
BOD	**Bodaibo**	**25.32**	**324**	*e*P	**P**	**08 29 16.8**	**-1.4**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**26.76**	**299**	P	**P**	**08 29 31.0**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=93,slow=8.4,SNR=14						
SONM				LR	LR	08 39 55.3	
	comp=Z,52nm,20.9s,baz=75,slow=36						
SONM	**Songino Array**	**26.76**	**299**	*e*P	**P**	**08 29 31.3**	**-0.2**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**26.76**	**299**	P	**P**	**08 29 30.8**	**-0.7**
TLY	**Talaya**	**28.92**	**306**	LR	LR	08 42 08.1	
	comp=Z,34nm,19.1s,baz=116,slow=38						
H11N2	**WAKE ISLAND Hy 29.31**	**127**		T	T	09 00 39.9	
	baz=319,slow=75,SNR=255						
H11N1	**WAKE ISLAND Hy 29.32**	**127**		T	T	09 00 39.6	
	baz=319,slow=75,SNR=286						
H11N3	**WAKE ISLAND Hy 29.33**	**127**		T	T	09 00 41.4	
	baz=319,slow=75,SNR=275						
H11S1	**WAKE ISLAND Hy 30.13**	**129**		T	T	09 01 54.5	
	baz=321,slow=76,SNR=62						
H11S3	**WAKE ISLAND Hy 30.13**	**129**		T	T	09 01 56.1	
	baz=321,slow=76,SNR=40						
H11S2	**WAKE ISLAND Hy 30.14**	**129**		T	T	09 01 54.7	
	baz=321,slow=76,SNR=48						
BILL	**Bilibino**	**30.80**	**17**	⇑*e*P	**P**	**08 30 06.8**	**-0.2**
BILL				*e*		08 31 10.4	
BILL				*e*S	**S**	**08 35 09.3**	**+2.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,17nm,15.0s						
TIXI	**Tiksi**	**32.25**	**352**	P	**P**	**08 30 20.1**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=78,slow=7.3,SNR=3.2						
TIXI				LR	LR	08 44 48.2	
	comp=Z,28nm,19.7s,baz=208,slow=39						
TIXI	**Tiksi**	**32.25**	**352**	⇓*e*P	**P**	**08 30 19.4**	**-0.3**
TIXI	**Tiksi**	**32.25**	**352**	P	**P**	**08 30 20.1**	**+0.4**
TIXI	**Tiksi**	**32.25**	**352**	IAmb	IAmb	08 30 52.1	
	comp=Z,13nm,1.8s						
TNA	**Tin City**	**37.77**	**31**	P	**P**	**08 31 08.9**	**+1.8**
TNA				IAmb	IAmb	08 31 14.2	
	comp=Z,5.0nm,0.9s						
DGZ	**Jazzator, Alta**	**39.20**	**303**	⇓*i*P	**P**	**08 31 20.6**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,11nm,0.6s						
ZAA0	**Zalesovo Array**	**40.38**	**310**	P	**P**	**08 31 28.2**	**-1.0**
ZALV	**Zalesovo Beam**	**40.38**	**310**	P	**P**	**08 31 28.9**	**-0.3**
	comp=Z,2.9nm,0.5s,baz=90,slow=8.0,SNR=7.9						
ZALV				PcP	**PcP**	**08 33 31.7**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=92,slow=2.0,SNR=2.8						
ZALV				LR	LR	08 47 41.3	
	comp=Z,28nm,18.6s,baz=60,slow=35						
ZALV	**Zalesovo Beam**	**40.38**	**310**	P	**P**	**08 31 28.9**	**-0.3**
ZALV					**PcP**	**08 33 31.7**	**+0.3**
NRIK	**Noril'sk**	**40.73**	**334**	LR	LR	08 49 26.6	
	comp=Z,83nm,19.7s,baz=106,slow=38						
NRIK	**Noril'sk**	**40.73**	**334**	⇓*e*P	**P**	**08 31 31.2**	**-0.6**
NRIK				pmax	pmax		
	comp=Z,7.0nm,1.8s						
CM31	**Chiang Mai Arr**	**43.05**	**253**	P	**P**	**08 31 51.4**	**0.0**
CM31				IAmb	IAmb	08 33 13.6	
	comp=Z,16nm,1.9s						
CMAR	**Chiang Mai Arr**	**43.05**	**253**	P	**P**	**08 31 51.8**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=46,slow=6.9,SNR=2.2						
CMAR				LR	LR	08 48 57.1	
	comp=Z,7.8nm,21.1s,baz=200,slow=35						
CMAR	**Chiang Mai Arr**	**43.05**	**253**	P	**P**	**08 31 51.8**	**+0.3**
MK31	**Makanchi Array**	**43.12**	**299**	*c*iP	**P**	**08 31 50.8**	**-0.9**
MK31	**Makanchi Array**	**43.12**	**299**	P	**P**	**08 31 51.0**	**-0.7**
MKAR	**Makanchi Array**	**43.12**	**299**	P	**P**	**08 31 51.3**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=84,slow=10,SNR=15						
MKAR	**Makanchi Array**	**43.12**	**299**	P	**P**	**08 31 51.1**	**-0.6**
A21K	**Barrow**	**43.28**	**24**	P	**P**	**08 31 52.5**	**-0.1**
IMAR	**Indian Mountai**	**43.58**	**32**	P	**P**	**08 31 55.9**	**+0.8**
KDAK	**Kodiak Island**	**44.30**	**44**	P	**P**	**08 32 01.2**	**+0.2**
	comp=Z,5.4nm,0.9s,baz=311,slow=3.7,SNR=5.4						
KDAK	**Kodiak Island**	**44.30**	**44**	P	**P**	**08 32 01.2**	**+0.2**
KURK	**Kurchatov**	**44.61**	**306**	P	**P**	**08 32 03.7**	**+0.2**
KURK				*PP	**pP**	**08 32 19.1**	**+2.1**
KURBB	**Kurchatov Arra**	**44.68**	**306**	P	**P**	**08 32 03.6**	**-0.5**
	comp=Z,4.3nm,0.6s,baz=80,slow=8.7,SNR=13						
KURBB				pP	**pP**	**08 32 19.1**	**+1.5**
	comp=Z,4.8nm,0.7s,baz=80,slow=8.4,SNR=4.6						
BPAW	**Bear Paw Mtn.**	**44.71**	**35**	P	**P**	**08 32 06.0**	**+1.8**
BPAW				IAmb	IAmb	08 33 13.9	
	comp=Z,15nm,1.7s						
KTH	**Kantishna Hill**	**44.75**	**36**	P	**P**	**08 32 06.3**	**+1.8**
KTH				IAmb	IAmb	08 32 15.1	
	comp=Z,5.6nm,0.9s						
MLY	**Manley**	**44.81**	**34**	P	**P**	**08 32 06.8**	**+1.8**
MLY				IAmb	IAmb	08 32 40.5	
	comp=Z,20nm,2.0s						
TRF	**Thorofare Moun**	**45.03**	**36**	P	**P**	**08 32 08.4**	**+1.4**
TRF				IAmb	IAmb	08 32 44.9	
	comp=Z,15nm,1.5s						
COLD	**Coldfoot**	**45.06**	**31**	P	**P**	**08 32 08.4**	**+1.5**
TOLK	**Toolik Lake Re**	**45.34**	**29**	P	**P**	**08 32 10.4**	**+1.2**
TOLK				IAmb	IAmb	08 32 38.7	
	comp=Z,9.5nm,1.4s						
BWN	**Browne**	**45.37**	**35**	P	**P**	**08 32 11.1**	**+1.7**
I23K	**Minto, Yukon-K**	**45.39**	**33**	P	**P**	**08 32 11.3**	**+1.7**
RC01	**Rabbit Creek A**	**45.44**	**39**	P	**P**	**08 32 10.5**	**+0.5**
NEA2	**Nenana**	**45.53**	**34**	P	**P**	**08 32 11.6**	**+0.9**
NEA2				IAmb	IAmb	08 32 20.2	
	comp=Z,4.6nm,0.8s						
MCK	**McKinley**	**45.63**	**35**	P	**P**	**08 32 11.8**	**+0.3**
MCK				pmax	pmax		
	comp=Z,29nm,2.0s						
MCK	**McKinley**	**45.63**	**35**	P	**P**	**08 32 11.8**	**+0.3**
RND	**Reindeer**	**45.68**	**36**	P	**P**	**08 32 12.6**	**+0.6**
RND				pmax	pmax		
	comp=Z,25nm,1.8s						
RND	**Reindeer**	**45.68**	**36**	P	**P**	**08 32 12.6**	**+0.6**
RND				IAmb	IAmb	08 33 11.0	
	comp=Z,25nm,1.8s						
GHO	**Glory Hole Cre**	**45.77**	**38**	P	**P**	**08 32 13.3**	**+0.6**
MDM	**Murphy Dome**	**45.88**	**34**	P	**P**	**08 32 14.7**	**+1.3**
MDM				IAmb	IAmb	08 33 58.1	
	comp=Z,14nm,1.7s						
TCOL	**CIGO, UAF Yank**	**46.04**	**34**	P	**P**	**08 32 19.3**	**+4.7**
TCOL				IAmb	IAmb	08 32 24.3	
	comp=Z,4.6nm,0.7s						
COLA	**College**	**46.04**	**34**	P	**P**	**08 32 18.8**	**+4.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
COLA	**College**	**46.04**	**34**	P	**P**	**08 32 18.8**	**+4.1**
COLA				IAmb	IAmb	08 32 24.3	
	comp=Z,4.6nm,0.7s						
IL31		**46.46**	**34**	P	**P**	**08 32 18.1**	**+0.2**
IL31				IAmb	IAmb	08 32 27.2	
	comp=Z,4.0nm,0.9s						
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**08 32 18.6**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=262,slow=6.0,SNR=20						
PRP	**Porcupine Dome**	**46.98**	**33**	P	**P**	**08 32 22.1**	**-0.2**
PRP				IAmb	IAmb	08 32 31.9	
	comp=Z,4.3nm,0.8s						
SCRK	**Sand Creek**	**47.79**	**35**	P	**P**	**08 32 28.6**	**+0.1**
SCRK				IAmb	IAmb	08 32 37.9	
	comp=Z,4.3nm,0.7s						
K27K	**Chicken**	**48.62**	**35**	P	**P**	**08 32 35.8**	**+1.1**
K27K				IAmb	IAmb	08 33 26.1	
	comp=Z,14nm,1.7s						
L27K	**Beaver Creek,**	**48.88**	**36**	P	**P**	**08 32 38.5**	**+1.7**
L27K				IAmb	IAmb	08 33 07.5	
	comp=Z,12nm,1.6s						
BCAR	**Beaver Creek A**	**48.90**	**36**	P	**P**	**08 32 38.2**	**+1.3**
BVAR	**Borovoye Array**	**49.02**	**310**	P	**P**	**08 32 37.1**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=272,slow=40,SNR=8.2						
BRVK	**Borovoye**	**49.08**	**311**	⇓*e*P	**P**	**08 32 38.4**	**0.0**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRVK	**Borovoye**	**49.08**	**311**	P	**P**	**08 32 38.0**	**-0.3**
INK	**Inuvik**	**51.26**	**28**	P	**P**	**08 32 55.1**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=307,slow=6.9,SNR=9.1						
INK	**Inuvik**	**51.26**	**28**	P	**P**	**08 32 55.2**	**+0.6**
INK				pmax	pmax		
	comp=Z,17nm,1.9s						
INK	**Inuvik**	**51.26**	**28**	P	**P**	**08 32 55.2**	**+0.6**
INK				IAmb	IAmb	08 33 38.9	
	comp=Z,17nm,1.9s						
HYT	**Haines Junctio**	**51.35**	**38**	P	**P**	**08 32 57.8**	**+2.1**
KKAR	**Karatay Array**	**52.21**	**298**	P	**P**	**08 33 01.8**	**-0.4**
KKAR	**Karatay Array**	**52.21**	**298**	P	**P**	**08 33 01.8**	**-0.4**
KIP	**Kipapa**	**53.56**	**92**	⇓*e*P	**P**	**08 33 09.4**	**-3.0**
KIP				pmax	pmax		
	comp=Z,96nm,1.7s						
NIL	**Nilore**	**54.36**	**287**	P	**P**	**08 33 18.9**	**+0.8**
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NIL	**Nilore**	**54.36**	**287**	P	**P**	**08 33 18.9**	**+0.8**
ARU	**Arti**	**54.50**	**317**	P	**P**	**08 33 18.9**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=80,slow=6.3,SNR=9.4						
ARU				LR	LR	08 57 37.1	
	comp=Z,44nm,18.5s,baz=225,slow=37						
ARU	**Arti**	**54.50**	**317**	*c* iP	**P**	**08 33 18.6**	**-0.1**
ARU				*PP	**sP**	**08 33 36.5**	**-1.8**
ARU				S	**S**	**08 40 54.0**	**+0.2**
ARU				SS	**SS**	**08 44 31.4**	**-4.8**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU	**Arti**	**54.50**	**317**	P	**P**	**08 33 18.7**	**-0.1**
ABKAR	**Akbulak array**	**56.48**	**309**	P	**P**	**08 33 32.3**	**-0.8**
ABKAR				IAmb	IAmb	08 33 33.5	
	comp=Z,4.5nm,1.1s						
ABKAR	**Akbulak array**	**56.48**	**309**	P	**P**	**08 33 32.6**	**-0.5**
KBL	**Kabul**	**57.00**	**289**	P	**P**	**08 33 36.5**	**-0.7**
KBL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBL	**Kabul**	**57.00**	**289**	P	**P**	**08 33 36.5**	**-0.7**
KBL				IAmb	IAmb	08 33 37.2	
AKTO	**Aktyubinsk**	**57.13**	**311**	P	**P**	**08 33 37.8**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=70,slow=14,SNR=8.3						
AKTO				LR	LR	08 58 05.2	
	comp=Z,24nm,19.2s,baz=55,slow=36						
KIRV	**Kirov**	**58.18**	**322**	⇓*e*P	**P**	**08 33 44.7**	**-0.2**
RES	**Resolute Bay**	**59.37**	**15**	P	**P**	**08 33 52.5**	**-0.4**
RES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RES	**Resolute Bay**	**59.37**	**15**		**P**	**08 33 52.5**	**-0.4**
RES				IAmb	IAmb	08 33 53.1	
	comp=Z,2.7nm,0.8s						
WRA	**Warramunga Arr**	**60.29**	**189**	P	**P**	**08 33 59.3**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=5.7,slow=7.5,SNR=4.9						
YKA	**Yellowknife Ar**	**60.73**	**31**	P	**P**	**08 34 02.8**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=300,slow=6.2,SNR=11						
YKA	**Yellowknife Ar**	**60.73**	**31**	P	**P**	**08 34 02.8**	**+0.5**
ARCES	**ARCESS Array B**	**61.30**	**339**	P	**P**	**08 34 06.3**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=43,slow=9.1,SNR=2.2						
ARCES				LR	LR	09 02 55.1	
	comp=Z,32nm,18.2s,baz=35,slow=38						
ARCES	**ARCESS Array B**	**61.30**	**339**	P	**P**	**08 34 06.3**	**+0.1**
ARCES	**ARCESS Array B**	**61.30**	**339**	IAmb	IAmb	08 34 06.4	
	comp=Z,18nm,1.5s						
BELG	**Belogornoye**	**62.00**	**316**	P	**P**	**08 34 10.7**	**-0.4**
	comp=Z,9.1nm,0.7s,baz=34,slow=17,SNR=4.6						
GEYT	**Alibeck**	**62.96**	**298**	P	**P**	**08 34 17.4**	**-0.5**
	comp=Z,1.4nm,0.4s,baz=188,slow=28,SNR=2.1						
GEYT	**Alibeck**	**62.96**	**298**	P	**P**	**08 34 17.4**	**-0.5**
GEYT	**Alibeck**	**62.96**	**298**	IAmb	IAmb	08 34 18.4	
	comp=Z,2.5nm,1.0s						
ASAR	**Alice Springs**	**64.02**	**189**	P	**P**	**08 34 24.9**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=3.0,slow=7.1,SNR=4.7						
EIDS	**Eidsvold**	**65.73**	**171**	P	**P**	**08 34 35.8**	**0.0**
FINES	**FINESS Array B**	**66.36**	**332**	P	**P**	**08 34 39.2**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=74,slow=6.8,SNR=6.3						
FINES				pP	**pP**	**08 34 55.9**	**+2.3**
	comp=Z,3.7nm,0.9s,baz=55,slow=7.9,SNR=1.9						
FINES				LR	LR	09 04 22.9	
	comp=Z,24nm,21.4s,baz=98,slow=37						
MSVF	**Nonsavu**	**66.54**	**143**	LR	LR	08 58 47.8	
	comp=Z,32nm,20.4s,baz=22,slow=31						
SUMG	**Summit**	**67.53**	**0**	P	**P**	**08 34 48.4**	**+1.1**
SUMG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SUMG	**Summit**	**67.53**	**0**	P	**P**	**08 34 48.4**	**+1.1**
PINE	**Pine Mountain**	**67.77**	**51**	P	**P**	**08 34 51.6**	**+2.5**
PINE				IAmb	IAmb	08 35 06.9	
	comp=Z,14nm,1.4s						
K05A	**Summer Lake**	**68.41**	**52**	P	**P**	**08 34 54.7**	**+1.6**
AFI	**Afiamalu**	**68.65**	**132**	LR	LR	08 57 21.8	
	comp=Z,27nm,21.8s,baz=78,slow=29						
MOD	**Modoc Plateau**	**69.24**	**52**	P	**P**	**08 34 59.2**	**+0.9**
KIV	**Kislovodsk**	**69.39**	**310**	*e*P	**P**	**08 35 00.5**	**+1.5**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,77nm,17.0s						
KBZ	**Khabaz**	**69.40**	**310**	P	**P**	**08 34 59.7**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=49,slow=5.3,SNR=6.5						
KBZ	**Khabaz**	**69.40**	**310**	*e*P	**P**	**08 35 00.0**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GNI	**Garni**	**70.41**	**306**	P	**P**	**08 35 05.8**	**+0.3**
GNI				pmax	pmax		
	comp=Z,99nm,1.6s						
GNI	**Garni**	**70.41**	**306**	P	**P**	**08 35 05.8**	**+0.3**
FFC	**Flin Flon**	**70.67**	**34**	P	**P**	**08 35 07.3**	**+0.7**
FFC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
FFC	**Flin Flon**	**70.67**	**34**	P	**P**	**08 35 07.2**	**+0.7**
HRY	**Holter Researc**	**71.18**	**44**	P	**P**	**08 35 10.6**	**+0.7**
EGMT	**Eagleton**	**71.44**	**42**	P	**P**	**08 35 10.8**	**-0.7**
NOA	**NORSAR Array B**	**71.55**	**337**	P	**P**	**08 35 11.8**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=37,slow=6.0,SNR=3.9						
NOA				LR	LR	09 10 10.0	
	comp=Z,9.3nm,19.3s,baz=345,slow=39						
BOZ	**Bozeman (W)**	**71.99**	**45**	P	**P**	**08 35 15.9**	**+1.0**
BOZ						08 35 31.1	
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BOZ	**Bozeman (W)**	**71.99**	**45**	P	**P**	**08 35 15.9**	**+1.0**
BOZ					**pP**	**08 35 31.1**	**+2.1**
BOZ				IAmb	IAmb	08 35 32.3	
	comp=Z,9.9nm,1.5s						
AKASG	**Malin Array Be**	**72.24**	**322**	P	**P**	**08 35 15.7**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=45,slow=6.0,SNR=7.5						
AKASG				LR	LR	09 11 16.8	
	comp=Z,20nm,18.4s,baz=280,slow=39						
**AKBB

JHU eS S 08 29 44.3 -5.7
JRY Ryogami san 9.48 352 P P 08 28 07.2 +1.5
JYT Yasato 9.59 358 P P 08 28 07.2 +0.4
JHO Hitachi 9.96 0 P P 08 28 12.0 +1.2
MJAR Matsushiro Arr 10.10 349 P P 08 28 13.9 +1.7
0.2nm,0.3s,baz=331,slow=25,SNR=1.9
JNU Nakatsue 10.61 310 P P 08 28 20.6 +2.7
0.6nm,0.3s,baz=35,slow=2.4,SNR=4.2
JOW Kunigami 10.99 274 P P 08 28 24.1 +2.2
3.6nm,0.3s,baz=102,slow=11,SNR=6.1
JMM Marumori 11.22 1 P P 08 28 25.9 +1.8
ANA2 Anatahan 11.29 154 P P 08 28 24.7 -0.6
KSRS Korea Array 15.21 318 P P 08 29 10.0 +3.8
3.3nm,0.3s,baz=145,slow=8.9,SNR=46
KS19 Wonju Array Si 15.27 318 P P 08 29 05.2 -1.7
ASAJ Asahikawa 17.54 5 P P 08 29 31.1 +1.2
0.5nm,0.3s,baz=115,slow=19,SNR=2.0
SSLB Suanglung 17.97 265 P P 08 29 33.6 -0.7
USRK Ussuriysk Ar. 18.86 341 P P 08 29 43.1 +1.0
baz=159,slow=10,SNR=4.3
USA0B Ussuriysk Arra 18.86 341 P P 08 29 42.5 +0.4
USA0B IAmb IAmb 08 29 48.9
comp=Z,3.2nm,0.6s
KLR Kul'dur 23.59 345 P P 08 30 26.7 +1.9
comp=Z,0.7nm,0.4s,baz=295,slow=23,SNR=2.1
SONM Songino Array 34.07 318 P P 08 31 56.8 +0.7
comp=Z,2.0nm,0.5s,baz=124,slow=7.9,SNR=7.7
SONM Songino Array 34.07 318 IAmb IAmb 08 31 58.8
comp=Z,1.5nm,0.7s
SEY Seymchan 37.14 9 P P 08 32 22.6 +1.4
comp=Z,0.4nm,0.3s,baz=202,slow=8.8,SNR=6.0
CM31 Chiang Mai Arr 39.16 267 P P 08 32 37.9 -0.5
CM31 IAmb IAmb 08 33 07.9
comp=Z,8.0nm,1.5s
CMAR Chiang Mai Arr 39.16 267 P P 08 32 38.3 0.0
comp=Z,0.6nm,0.6s,baz=58,slow=7.8,SNR=4.7
SHL Shillong 43.52 280 P P 08 33 13.1 -0.1
WB0 Warramunga Arr 46.50 188 P P 08 33 35.0 -0.8
WB0 IAmb IAmb 08 33 43.4
comp=Z,9.0nm,1.4s
WRAB Tennant Creek 46.67 188 P P 08 33 36.2 -0.8
WRAB IAmb IAmb 08 34 18.9
comp=Z,4.6nm,1.2s
WR0 Warramunga Arr 46.67 188 P P 08 33 36.4 -0.8
WR0 IAmb IAmb 08 34 13.2
comp=Z,8.3nm,1.3s
WB2 Warramunga Arr 46.67 188 P P 08 33 36.0 -1.1
WB2 IAmb IAmb 08 34 13.9
comp=Z,4.1nm,1.1s
WRA Warramunga Arr 46.68 188 P P 08 33 36.2 -0.9
comp=Z,1.5nm,0.6s,baz=4.5,slow=7.5,SNR=18
WRA ScP ScP 08 38 04.0 -2.5
comp=Z,0.3nm,0.7s,baz=6.7,slow=5.2,SNR=2.1
ZAA0 Zalesovo Array 48.91 320 P P 08 33 53.3 -0.2
ZALV Zalesovo Beam 48.91 320 P P 08 33 53.3 -0.2
comp=Z,4.4nm,0.3s,baz=111,slow=7.1,SNR=14
ZALV Zalesovo Beam 48.91 320 P P 08 33 52.9 -0.6
MK31 Makanchi Array 49.67 310 P P 08 33 59.7 +0.4
MKAR Makanchi Array 49.67 310 P P 08 33 59.8 +0.5
comp=Z,2.8nm,0.6s,baz=91,slow=9.0,SNR=14
MKAR PcP PcP 08 35 10.9 -0.7
comp=Z,0.4nm,0.5s,baz=86,slow=5.9,SNR=4.0
MKAR ScP ScP 08 38 17.1 -2.0
comp=Z,0.1nm,0.4s,baz=93,slow=3.0,SNR=2.1
MKAR Makanchi Array 49.67 310 P P 08 33 59.5 +0.3
MAKZ Makanchi 49.88 310 P P 08 34 01.8 +0.9
MAKZ IAmb IAmb 08 34 02.2
comp=Z,3.6nm,0.8s
ASAR Alice Springs 50.40 188 P P 08 34 04.5 -0.4
comp=Z,0.3nm,0.4s,baz=359,slow=4.1,SNR=7.2
KURBB Kurchatov Arra 52.34 315 P P 08 34 18.5 -0.1
comp=Z,6.2nm,0.5s,baz=93,slow=7.7,SNR=19
KURBB PcP PcP 08 35 20.7 -0.8
comp=Z,0.3nm,0.6s,baz=92,slow=3.6,SNR=1.5
BOOM Boomskoye usch 54.29 305 P P 08 34 33.8 +0.8
BOOM IAmb IAmb 08 34 34.5
comp=Z,6.5nm,0.6s
SII Sitkinak Islan 54.65 38 P P 08 34 35.4 +0.5
AAK Ala-Archa 55.34 305 P P 08 34 40.9 +0.7
KDAK Kodiak Island 55.61 37 P P 08 34 41.7 +0.1
comp=Z,9.4nm,1.2s,baz=321,slow=6.5,SNR=16
A21K Barrow 56.38 20 P P 08 34 47.7 +1.0
CNPM China Poot 56.44 35 P P 08 34 47.2 -0.1
BRLK Bradley Lake 56.63 34 P P 08 34 48.2 -0.5
SUA Susitna One 56.83 32 P P 08 34 51.3 +1.1
KTH Kantishna Hill 56.95 30 P P 08 34 52.0 +1.0
KTH IAmb IAmb 08 35 08.0
comp=Z,11nm,1.4s
BPAW Bear Paw Mtn. 56.99 29 P P 08 34 52.1 +1.0
MLY Manley 57.21 28 P P 08 34 53.9 +1.3
TRF Thorofare Moun 57.23 30 P P 08 34 52.9 0.0
TRF IAmb IAmb 08 35 31.0
comp=Z,14nm,1.7s
PMR Palmer 57.61 32 P P 08 34 55.1 -0.2
PMR IAmb IAmb 08 34 57.0
comp=Z,11nm,1.2s
NIL Nilore 57.74 294 P P 08 34 57.7 +0.9
NIL IAmb IAmb 08 34 59.0
comp=Z,8.6nm,0.8s
I23K Minto, Yukon-K 57.80 28 P P 08 34 57.0 +0.4
I23K IAmb IAmb 08 35 11.8
comp=Z,11nm,1.6s
MCK McKinley 57.85 30 P P 08 34 57.0 0.0
MCK IAmb IAmb 08 34 58.2
comp=Z,4.6nm,0.9s
RND Reindeer 57.87 30 P P 08 34 57.5 +0.3
RND IAmb IAmb 08 34 58.7
comp=Z,14nm,1.6s
NEA2 Nenana 57.87 29 P P 08 34 58.1 +1.0
SML Sawmill 58.00 32 P P 08 34 58.5 +0.4
SML IAmb IAmb 08 35 16.1
comp=Z,15nm,1.4s
TOLK Toolik Lake Re 58.16 24 P P 08 35 00.7 +1.6
KK31 Karatay Array 58.19 306 P P 08 35 00.2 +0.5
KK31 IAmb IAmb 08 35 00.9
comp=Z,5.1nm,0.7s
KKAR Karatay Array 58.19 306 P P 08 34 59.5 -0.1
KKAR IAmb IAmb 08 35 00.9
comp=Z,5.1nm,0.7s
KKAR Karatay Array 58.19 306 P P 08 34 60.0 +0.3
IL31 58.82 29 P P 08 35 03.5 0.0
IL31 IAmb IAmb 08 35 37.8
comp=Z,8.4nm,1.6s
ILAR Eielson Array 58.82 29 P P 08 35 02.8 -0.7
comp=Z,0.5nm,0.5s,baz=250,slow=6.0,SNR=7.1
GAR Garm 59.00 301 P P 08 35 03.2 -2.2
KLU Klutina 59.14 32 P P 08 35 06.4 +0.6
KLU IAmb IAmb 08 35 18.2
comp=Z,18nm,1.6s
RAGM Ragged Mountai 59.76 34 P P 08 35 10.9 +1.0
BMRM Bremner River 59.78 33 P P 08 35 10.9 +0.8
DOT Dot Lake 60.02 30 P P 08 35 11.7 +0.1
SCRK Sand Creek 60.05 30 P P 08 35 12.2 +0.2
SCRK IAmb IAmb 08 35 12.6
comp=Z,2.8nm,0.6s
GLB Gilahina Butte 60.16 32 P P 08 35 12.6 0.0
GLB IAmb IAmb 08 35 28.2
comp=Z,8.8nm,1.2s
MENT Mentasta 60.18 31 P P 08 35 13.6 +1.0
MENT IAmb IAmb 08 35 20.5
comp=Z,10nm,1.6s
MCARA McCarthy VSAT 60.54 33 P P 08 35 16.0 +1.0
K27K Chicken 60.90 29 P P 08 35 18.2 +0.9
L27K Beaver Creek, 61.04 31 P P 08 35 19.1 +0.7
L27K IAmb IAmb 08 35 56.5
comp=Z,8.3nm,1.6s
EGAK Eagle 61.27 29 P P 08 35 21.4 +1.5
EGAK IAmb IAmb 08 35 36.0
comp=Z,12nm,1.6s
TABL Table Mountain 61.51 34 P P 08 35 20.2 -1.5
TABL IAmb IAmb 08 35 53.8
comp=Z,10nm,0.8s
DAWY Dawson 62.08 29 P P 08 35 25.9 +0.8
DAWY IAmb IAmb 08 36 01.0
comp=Z,7.1nm,1.6s
ARU Arti 63.91 322 P P 08 35 37.0 0.0
ARU IAmb IAmb 08 35 37.5
comp=Z,5.5nm,0.6s
INK Inuvik 64.06 24 P P 08 35 37.5 -0.3
comp=Z,0.5nm,0.4s,baz=252,slow=8.3,SNR=1.9
INK Inuvik 64.06 24 P P 08 35 38.0 +0.2
ABKAR Akbulak array 64.39 314 P P 08 35 40.0 -0.2
ABKAR IAmb IAmb 08 35 40.4
comp=Z,3.5nm,0.6s
JIS Juneau Island 65.22 35 P P 08 35 46.5 +1.3
AKTO Aktyubinsk 65.37 316 P P 08 35 46.0 -0.4
C36M Paulatuk 67.23 23 P P 08 35 57.6 0.0
YKA Yellowknife Ar 73.24 28 P P 08 36 33.2 -0.3
comp=Z,0.6nm,0.7s,baz=296,slow=5.2,SNR=7.7
ARCES ARCESS Array B 73.51 341 P P 08 36 35.0 +0.1
comp=Z,0.8nm,0.4s,baz=59,slow=7.6,SNR=9.1
KBZ Khabaz 77.27 313 P P 08 36 56.7 +0.3
comp=Z,2.0nm,0.3s,baz=70,slow=3.2,SNR=7.8
FINES FINESS Array B 77.73 333 P P 08 36 57.8 -0.7
comp=Z,1.6nm,0.3s,baz=76,slow=5.1,SNR=18
NVAR Mina Array Bea 81.94 51 P P 08 37 22.2 +0.8
comp=Z,0.1nm,0.6s,baz=281,slow=9.1,SNR=2.3
NVAR Mina Array Bea 81.94 51 P P 08 37 21.0 -0.5
AKASG Malin Array Be 82.14 323 P P 08 37 21.0 -0.9
comp=Z,2.2nm,0.4s,baz=51,slow=5.4,SNR=5.1
AKASG Malin Array Be 82.14 323 P P 08 37 21.2 -0.6
NOA NORSAR Array B 83.51 338 P P 08 37 27.5 -1.1
comp=Z,0.7nm,0.5s,baz=51,slow=5.8,SNR=2.1
BRTR Keskin Array B 85.26 312 P P 08 37 37.3 -0.5
comp=Z,0.4nm,0.4s,baz=305,slow=38,SNR=2.6
RWWY Rawlins 87.61 44 P P 08 37 48.5 -0.6
TORD Torodi Ar. Bea 123.79 310 PKP PKPdf 08 43 54.5 -1.0
comp=Z,0.4nm,0.5s,baz=29,slow=2.4,SNR=1.8

*IDC **13** 08:27:17.5±5.5, 5.°60S×152.°83E, h67km±47km, mb3.6/9, mb1 3.8/10, mb1mx3.5/46, mbtmp4.0/10, ML2.1/1, MS2.6/2, Ms1 2.7/2, ms1mx2.3/30, Error ellipse: s-maj=31.8km s-min=26.1km az=47.0*
ISC 13 08:27:14.1±1.0, 5.°5S±0.°1×152.°9E±0.°1, h37km, n13, σ0893/13, mb4.0/9, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.94**	**235**	P	P	Pn	**08 28 53.9**	**+0.6**
	2.0nm,0.3s,baz=13,slow=14,SNR=2.3							
PMG				S	S	Sn	08 30 11.5	+0.4
	0.9nm,0.3s,baz=229,slow=9.9,SNR=1.8							
PMG				LR	LR		08 31 21.8	
	comp=Z,40nm,19.7s,baz=107,slow=36							
DZM	**Mont Dzumac**	**21.05**	**143**	P	P		**08 31 56.1**	**+0.9**
	6.4nm,0.7s,baz=246,slow=23,SNR=2.5							
WRA	**Warramunga Arr**	**23.12**	**230**	P	P		**08 32 15.4**	**-1.7**
	1.2nm,0.5s,baz=56,slow=10,SNR=12							
ASAR	**Alice Springs**	**25.76**	**223**	P	P		**08 32 41.0**	**-0.6**
	0.5nm,0.6s,baz=61,slow=9.2,SNR=11							
FITZ	**Fitzroy Crossi**	**29.47**	**242**	P	P		**08 33 14.2**	**-0.6**
	3.8nm,0.8s,baz=65,slow=7.8,SNR=13							
CMAR	**Chiang Mai Arr**	**58.29**	**295**	LR	LR		09 01 27.7	
	comp=Z,5.6nm,21.8s,baz=155,slow=35							
SONM	**Songino Array**	**66.96**	**328**	P	P		**08 38 04.2**	**+1.0**
	0.3nm,0.5s,baz=143,slow=7.7,SNR=2.6							
MKAR	**Makanchi Array**	**80.92**	**319**	P	P		**08 39 24.8**	**+0.1**
	0.7nm,0.8s,baz=87,slow=5.1,SNR=5.6							
ZALV	**Zalesovo Beam**	**81.78**	**326**	P	P		**08 39 28.9**	**-0.1**
	1.1nm,0.7s,baz=115,slow=6.5,SNR=2.6							
KURBB	**Kurchatov Arra**	**84.41**	**322**	P	P		**08 39 43.2**	**+0.5**
	0.4nm,0.3s,baz=88,slow=4.7,SNR=7.3							
BVAR	**Borovoye Array**	**89.86**	**323**	P	P		**08 40 08.3**	**-0.8**
	1.1nm,0.9s,baz=115,slow=10,SNR=5.4							
BDFB	**Brasilia**	**150.56**	**136**	PKPbc	**PKPbc**		**08 47 02.3**	**-0.8**
	2.8nm,0.6s,baz=185,slow=7.6,SNR=6.6							
TORD	**Torodi Ar. Bea**	**150.64**	**287**	PKPbc	**PKPbc**		**08 47 02.2**	**-1.1**
	2.1nm,0.9s,baz=52,slow=2.0,SNR=7.3							

*JMA **13** 08:37:49.1±0.2, 35.°93N×141.°14E, h19km±3km, M3.7*
*NIED **13** 08:37:49.2, 35.°93N×141.°14E, h19km, MW3.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=0.94; Mθθ=0.01; Mφφ=0.93; Mrθ=0.10; Mφθ=0.59; Mφr=0.82; Fault plane solution: Mo 1.38000×10^14^ NP1:φs=5.00000°, δ=65.00000°, λ=-113.00000°. NP2:φs=230.00000°, δ=33.00000°, λ=-50.00000°.*
*IDC **13** 08:37:55.5±2.1, 34.°85N×138.°69E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/64, mbtmp3.3/4 Error ellipse: s-maj=84.6km s-min=19.6km az=78.0*
ISC 13 08:37:51.2±1.4, 35.°90N±0.°06×141.°0E±0.°1, h35km, n18, σ2907/17, mb3.4/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.24**	**215**	P	P	**Pn**	**08 37 55.9**	**-2.5**
CHOJ				S	S	**Sn**	**08 38 00.8**	**-2.6**
JIHU	**Itakohorinouch**	**0.41**	**279**	P	P	**Pn**	**08 37 59.7**	**-0.9**
JIHU				S	S	**Sn**	**08 38 07.0**	**-0.1**
JSMT	**Sammumatsuo**	**0.54**	**241**	P	P	**Pn**	**08 38 02.0**	**-0.4**
JSMT				S	S	**Sn**	**08 38 10.4**	**+0.2**
JHYU	**Hitachinakayam**	**0.56**	**321**	P	P	**Pn**	**08 38 01.2**	**-1.5**
JYT	**Yasato**	**0.75**	**296**	P	P	**Pn**	**08 38 04.1**	**-1.2**
JHO	**Hitachi**	**0.80**	**332**	P	P	**Pn**	**08 38 04.3**	**-1.7**
MJAR	**Matsushiro Arr**	**2.37**	**286**	Pn	P	**Pn**	**08 38 26.8**	**-0.8**
	0.4nm,0.3s,baz=101,slow=8.6,SNR=18							
MJAR				Sn	S	**Sn**	**08 38 50.1**	**-5.3**
	0.8nm,0.3s,baz=174,slow=15,SNR=3.0							
MAT	**Matsushiro**	**2.37**	**286**	P	P	**Pn**	**08 38 28.3**	**+0.7**
MAT				eS	S	**Sn**	**08 38 55.0**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**27.86**	**118**	T	T		09 12 38.5	
	baz=311,slow=75,SNR=76							
H11N1	**WAKE ISLAND Hy**	**27.87**	**118**	T	T		09 12 37.7	
	baz=311,slow=75,SNR=83							
H11N3	**WAKE ISLAND Hy**	**27.88**	**118**	T	T		09 12 40.3	
	baz=311,slow=75,SNR=72							
H11S1	**WAKE ISLAND Hy**	**28.53**	**121**	T	T		09 13 27.2	
	baz=313,slow=76,SNR=25							
H11S3	**WAKE ISLAND Hy**	**28.53**	**121**	T	T		09 13 28.1	
	baz=313,slow=76,SNR=24							
H11S2	**WAKE ISLAND Hy**	**28.54**	**121**	T	T		09 13 27.0	
	baz=313,slow=76,SNR=18							
MKAR	**Makanchi Array**	**44.47**	**303**	P	P		**08 46 01.1**	**+2.2**
	0.3nm,0.6s,baz=80,slow=8.7,SNR=4.0							
KURBB	**Kurchatov Arra**	**46.46**	**309**	P	P		**08 46 16.2**	**+1.7**
	0.3nm,0.4s,baz=85,slow=7.7,SNR=2.2							
WRA	**Warramunga Arr**	**55.90**	**188**	P	P		**08 47 25.6**	**+0.1**
	0.3nm,0.6s,baz=3.8,slow=7.3,SNR=4.9							
ASAR	**Alice Springs**	**59.63**	**188**	P	P		**08 47 53.1**	**+1.4**
	0.1nm,0.4s,baz=0.6,slow=8.7,SNR=2.2							

IDC 13 08:39:47.6±2.7, 53.°73N×86.°81E, h0km, mb1 2.9/2, mb1mx2.7/61, mbtmp2.9/2, ML2.4/2, Error ellipse: s-maj=24.4km s-min=14.5km az=65.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.20**	**281**	Pg	Pg		08 40 10.2	-0.4
	0.7nm,0.3s,baz=96,slow=15,SNR=8.4							
ZALV				Lg	Lg		08 40 25.5	
	0.5nm,0.3s,baz=100,slow=24,SNR=6.3							
I46RU	**ZALESOVO INFRA**	**1.20**	**281**	*i*			08 47 55.6	
	baz=104,slow=328,SNR=1.6							
KURBB	**Kurchatov Arra**	**5.97**	**242**	Pn	Pn		08 41 18.0	+0.9
	0.1nm,0.3s,baz=59,slow=44,SNR=4.3							
KURBB				Lg	Lg		08 43 00.9	
	0.0nm,0.3s,baz=61,slow=34,SNR=2.4							
MKAR	**Makanchi Array**	**7.52**	**204**	Pn	Pn		08 41 39.7	+1.1
	0.1nm,0.3s,baz=26,slow=14,SNR=6.5							
MKAR				Lg	Lg		08 43 49.3	
	0.1nm,0.3s,baz=28,slow=32,SNR=5.5							

WEL 13 08:48:05.3±0.5, 39.°3S×17.°9E±, h33km, M3.5/19, ML3.8/19, MLv3.5/19, Error ellipse: s-maj=0.0km s-min=0.0km az=60.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MHGZ	**Mahia Peninsul**	**1.08**	**288**	P	P	Pn	08 48 24.1	+0.1
PRGZ	**Paritu Road**	**1.19**	**298**	P	P	Pn	08 48 26.4	+0.8
CNGZ	**Carnagh Statio**	**1.28**	**321**	P	P	Pn	08 48 27.6	+0.8
KNZ	**Kokohu**	**1.29**	**291**	P	P	Pn	08 48 27.2	+0.2
RIGZ	**Rimuhau**	**1.38**	**304**	P	P	Pn	08 48 29.2	+0.9
RIGZ				S	S	Sb	08 48 47.2	-0.7
TKGZ	**Te Karaka**	**1.50**	**314**	P	P	Pn	08 48 30.5	+0.7
TKGZ				S	S	Sn	08 48 47.1	-1.2
WHHZ	**Waihua**	**1.60**	**284**	P	P	Pn	08 48 32.1	+0.9
WHHZ				S	S	Sn	08 48 51.9	+1.1
PUZ	**Puketiti**	**1.61**	**332**	P	P	Pn	08 48 31.7	+0.3
PUZ				S	S	Sn	08 48 49.8	-1.1
SNGZ	**Shannon Statio**	**1.63**	**295**	P	P	Pn	08 48 32.8	+1.1
SNGZ				S	S	Sn	08 48 51.6	+0.1
TWGZ	**Tauwhareparae**	**1.63**	**323**	P	P	Pn	08 48 32.6	+0.8
TWGZ				S	S	Sn	08 48 51.8	+0.2
CKHZ	**Cape Kidnapper**	**1.67**	**264**	P	P	Pn	08 48 33.0	+0.8
CKHZ				S	S	Sn	08 48 52.2	-0.3
RAGZ	**Rawiri**	**1.73**	**305**	P	P	Pn	08 48 34.2	+1.2
RAGZ				S	S	Sn	08 48 54.4	+0.5
ARHZ	**Aropaoanui**	**1.74**	**277**	P	P	Pn	08 48 34.3	+1.1
ARHZ				S	S	Sn	08 48 55.1	+0.8
MWZ	**Matawai**	**1.76**	**310**	P	P	Pn	08 48 34.0	+0.6
MWZ				S	S	Sn	08 48 54.3	-0.4
RAHZ	**Arahi**	**1.76**	**288**	P	P	Pn	08 48 34.3	+0.9
RAHZ				S	S	Sn	08 48 54.8	+0.1
WMGZ	**Waiomatatini S**	**1.79**	**339**	P	P	Pn	08 48 34.7	+1.0
WMGZ				S	S	Sn	08 48 56.1	+0.8
PKGZ	**Pakihiroa**	**1.83**	**330**	P	P	Pn	08 48 35.5	+1.0
PKGZ				S	S	Sn	08 48 56.0	-0.6
KAHZ	**Kahuranaki**	**1.84**	**260**	P	P	Pn	08 48 35.2	+0.6
KAHZ				S	S	Sn	08 48 57.2	+0.4
PXZ	**Pawanui**	**1.90**	**253**	P	P	Pn	08 48 34.9	-0.5
PXZ				S	S	Sn	08 48 56.4	-1.8
NMHZ	**Naumai**	**1.92**	**281**	P	P	Pn	08 48 36.9	+1.2
NMHZ				S	S	Sn	08 48 59.2	+0.5
RUGZ	**Raukumara Rang**	**1.95**	**321**	P	P	Pn	08 48 36.7	+0.6
RUGZ				S	S	Sn	08 48 59.2	-0.2
RTZ	**Ruatahuna**	**1.96**	**296**	P	P	Pn	08 48 37.3	+1.1
RTZ				S	S	Sn	08 48 59.4	-0.2
MCHZ	**McNeill Hill**	**1.96**	**271**	P	P	Pn	08 48 37.3	+1.2
MCHZ				S	S	Sn	08 49 01.0	+1.4
MTHZ	**Maungataniwha**	**1.96**	**288**	P	P	Pn	08 48 37.1	+0.9
MTHZ				S	S	Sn	08 48 59.9	+0.2
MXZ	**Matakaoa Point**	**2.06**	**339**	P	P	Pn	08 48 38.9	+1.4
URZ	**Urewera**	**2.06**	**306**	P	P	Pn	08 48 39.0	+1.5
URZ				S	S	Sn	08 49 02.3	+0.2
HAZ	**Te Kaha**	**2.07**	**326**	P	P	Pn	08 48 38.3	+0.7
HAZ				S	S	Sn	08 49 01.5	-0.7
PRHZ	**Porangahau**	**2.14**	**248**	P	P	Pn	08 48 37.8	+0.8
BKZ	**Black Stump Fm**	**2.15**	**278**	P	P	Pn	08 48 39.5	+0.7
BKZ				S	S	Sn	08 49 05.0	+0.7
MUGZ	**Murupara**	**2.17**	**297**	P	P	Pn	08 48 40.3	+1.3
KWHZ	**Kaweka Forest**	**2.17**	**271**	P	P	Pn	08 48 39.9	+0.8
KRHZ	**Kereru**	**2.21**	**265**	P	P	Pn	08 48 40.4	+0.7
WPHZ	**Waipukurau**	**2.22**	**254**	P	P	Pn	08 48 39.5	-0.3
MRHZ	**Matea Rd**	**2.28**	**286**	P	P	Pn	08 48 42.0	+1.4
ANWZ	**Angora Road**	**2.33**	**245**	P	P	Pn	08 48 40.2	-1.0
PNHZ	**Pukenui**	**2.37**	**259**	P	P	Pn	08 48 42.0	+0.1
PRRZ	**Plateau Road**	**2.42**	**293**	P	P	Pn	08 48 44.1	+1.6
ALRZ	**Allen Road**	**2.43**	**291**	P	P	Pn	08 48 44.0	+1.4
BHHZ	**Black Hill Sta**	**2.45**	**269**	P	P	Pn	08 48 43.4	+0.5
TARZ	**Mount Tarawera**	**2.47**	**300**	P	P	Pn	08 48 45.4	+2.1
DVHZ	**Dannevirke**	**2.49**	**250**	P	P	Pn	08 48 43.2	-0.3
HRRZ	**Handcock Road**	**2.54**	**295**	P	P	Pn	08 48 45.5	+1.2
WPRZ	**Whakapapatarin**	**2.58**	**291**	P	P	Pn	08 48 46.0	+1.4
BFZ	**Birch Farm**	**2.58**	**242**	P	P	Pn	08 48 43.1	-1.6
TSZ	**Takapari Road**	**2.58**	**256**	P	P	Pn	08 48 44.6	-0.1
HSRZ	**Hossack Road**	**2.61**	**296**	P	P	Pn	08 48 45.7	+0.6
OPRZ	**Ohinepanea**	**2.66**	**307**	P	P	Pn	08 48 47.0	+1.2
RITZ	**Rihia Road**	**2.67**	**280**	P	P	Pn	08 48 47.5	+1.6
MOVZ	**Moawhango**	**2.69**	**271**	P	P	Pn	08 48 47.5	+1.2
CPWZ	**Castlepoint**	**2.72**	**238**	P	P	Pn	08 48 45.8	-0.7
PRWZ	**Pori Road**	**2.72**	**246**	P	P	Pn	08 48 45.8	-0.7
ETVZ	**East Tongariro**	**2.75**	**276**	P	P	Pn	08 48 48.6	+1.4
RATZ	**Rangitukua**	**2.76**	**282**	P	P	Pn	08 48 48.4	+1.3
TMVZ	**Te Maari**	**2.76**	**277**	P	P	Pn	08 48 48.7	+1.4
TUVZ	**Tukino**	**2.78**	**273**	P	P	Pn	08 48 49.2	+1.6
OTVZ	**Oturere**	**2.78**	**276**	P	P	Pn	08 48 49.1	+1.4
NTVZ	**North Tongarir**	**2.78**	**277**	P	P	Pn	08 48 49.0	+1.4
SNVZ	**South Ngauruho**	**2.80**	**275**	P	P	Pn	08 48 49.3	+1.4
POWZ	**Post Office Ro**	**2.81**	**250**	P	P	Pn	08 48 47.6	-0.2
KRVZ	**Karewarewa**	**2.81**	**277**	P	P	Pn	08 48 49.3	+1.4
WNVZ	**Wahianoa**	**2.82**	**272**	P	P	Pn	08 48 50.0	+2.0
NNVZ	**North Ngauruho**	**2.83**	**276**	P	P	Pn	08 48 49.6	+1.4
NGZ	**Ngauruhoe**	**2.83**	**275**	P	P	Pn	08 48 49.6	+1.4
KUTZ	**Kaahu Road**	**2.83**	**290**	P	P	Pn	08 48 49.4	+1.2
WTVZ	**West Tongariro**	**2.85**	**276**	P	P	Pn	08 48 50.0	+1.5
FWVZ	**Far West T-bar**	**2.86**	**274**	P	P	Pn	08 48 50.0	+1.3
TIWZ	**Tintock**	**2.87**	**242**	P	P	Pn	08 48 48.9	+0.3
MTVZ	**Mangateitei**	**2.91**	**271**	P	P	Pn	08 48 48.5	-0.8
TWVZ	**Taurewa**	**2.97**	**277**	P	P	Pn	08 48 51.1	+1.0
PKVZ	**Pokaka**	**3.01**	**273**	P	P	Pn	08 48 51.9	+1.2
TMWZ	**Te Maipa**	**3.02**	**237**	P	P	Pn	08 48 49.0	-1.8
MRZ	**Mangatainoka R**	**3.03**	**246**	P	P	Pn	08 48 49.7	-1.3
HOWZ	**Holdsworth Sta**	**3.17**	**242**	P	P	Pn	08 48 51.2	-1.7
WAZ	**Wanganui**	**3.29**	**264**	P	P	Pn	08 48 56.4	+2.0
MTW	**Mount Morrison**	**3.30**	**238**	P	P	Pn	08 48 52.8	-1.8
OGWZ	**Otaki Gorge**	**3.38**	**246**	P	P	Pn	08 48 54.8	-0.8
PAWZ	**Paruwai Farm**	**3.46**	**236**	P	P	Pn	08 48 55.0	-1.8
VRZ	**Vera Road**	**3.49**	**275**	P	P	Pn	08 48 58.4	+1.2
HIZ	**Hauiti**	**3.54**	**285**	P	P	Pn	08 48 59.1	+1.2
CAW	**Cannon Point**	**3.57**	**242**	P	P	Pn	08 48 56.8	+1.5
KIW	**Kapiti Island**	**3.58**	**246**	P	P	Pn	08 48 57.8	-0.7
PLWZ	**Palliser**	**3.67**	**234**	P	P	Pn	08 48 57.8	-2.0
PREZ	**Palmer Road**	**3.93**	**271**	P	P	Pn	08 49 06.0	+2.7
NEZ	**North Egmont**	**3.98**	**272**	P	P	Pn	08 49 06.8	+2.8
KHEZ	**Kahui Hut**	**4.04**	**271**	P	P	Pn	08 49 07.4	+2.5
PKE	**Pukeiti**	**4.07**	**272**	P	P	Pn	08 49 07.6	+2.4
TCW	**Tory Channel**	**4.16**	**244**	P	P	Pn	08 49 04.5	-1.8
WIAZ	**Waiheke Island**	**4.20**	**309**	P	Pb	Pb	08 49 14.2	-4.2
DUWZ	**D'Urville Isla**	**4.27**	**250**	P	P	Pn	08 49 07.2	-0.7
NNZ	**Nelson**	**4.79**	**247**	P	P	Pn	08 49 13.9	-1.1
CTZ	**Chatham Island**	**5.26**	**145**	P	P	Pn	08 49 23.0	+1.5
CTZ				S	S	Sn	08 50 17.8	-3.2
QRZ	**Quartz Range**	**5.30**	**253**	P	P	Pn	08 49 20.8	-1.3
INZ	**Inchbonnie**	**6.71**	**239**	P	P	Pn	08 49 40.6	-0.8

*STR **13** 09:13:18.7±0.4, 45.°N±4.°×±.°, h13km±5km, MLv1.6/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*GEN **13** 09:13:18.8, 44.°49N×6.°66E,

ENR	**Entracque**	**0.58**	**125**	⇓P		**Pg**	**09 13 30.4**	**-0.5**
ENR				S		**Sb**	**09 13 38.5**	**-0.4**
ENR				AML	AML			
	comp=E,193μm,1.2s							
ENR				AML	AML			
	comp=N,158μm,0.6s							
OGMO	**Fort Saint-Gob**	**0.64**	**355**	Pg		**Pg**	**09 13 28.4**	**-3.6**
OGMO				Sg		**Sb**	**09 13 41.9**	**+1.2**
RSP	**Reno Superiore**	**0.68**	**32**	P		**Pn**	**09 13 33.6**	**-0.6**
RSP				S		**Sn**	**09 13 44.2**	**-0.3**
RSP	**Reno Superiore**	**0.68**	**32**	P		**Pn**	**09 13 33.6**	**-0.6**
RSP				S		**Sn**	**09 13 44.2**	**-0.3**
RSP				AML	AML			
	comp=E,78μm,0.3s							
RSP				AML	AML			
	comp=E,78μm,0.3s							
RSP				AML	AML			
	comp=N,59μm,0.2s							
ORIF	**Oris-en-Rattie**	**0.72**	**300**	*e*Pg		**Pg**	**09 13 32.2**	**-1.2**
ORIF	**Oris-en-Rattie**	**0.72**	**300**	*e*P		**Pn**	**09 13 34.8**	**+0.1**
ORIF				*e*Sg		**Sg**	**09 13 41.7**	**-1.3**
	comp=N,15nm,0.2s							
ORIF				*e*Sn		**Sn**	**09 13 46.4**	**+1.1**
ORIF	**Oris-en-Rattie**	**0.72**	**300**	Pg		**Pg**	**09 13 32.3**	**-1.1**
ORIF	**Oris-en-Rattie**	**0.72**	**300**	P		**Pg**	**09 13 32.3**	**-1.1**
ORIF				AML	AML			
	comp=E,34μm,0.4s							
ORIF				AML	AML			
	comp=N,37μm,1.4s							
TURF	**col de Turini**	**0.75**	**142**	Pg		**Pg**	**09 13 33.2**	**-0.7**
TURF				Sg		**Sg**	**09 13 43.2**	**-0.7**
GDM	**Grand'Maison**	**0.78**	**325**	Pg		**Pg**	**09 13 34.2**	**-0.4**
GDM				Sg		**Sg**	**09 13 44.5**	**-0.6**
SAOF	**Saorge**	**0.81**	**135**	Pg		**Pg**	**09 13 34.5**	**-0.7**
SAOF				Sg		**Sg**	**09 13 44.7**	**-1.2**
SAOF	**Saorge**	**0.81**	**135**	P		**Pg**	**09 13 34.5**	**-0.7**
SAOF				S		**Sg**	**09 13 44.7**	**-1.2**
SAOF	**Saorge**	**0.81**	**135**	AML	AML			
	comp=N,43μm,0.2s							
SAOF				AML	AML			
	comp=N,43μm,0.2s							
SAOF				AML	AML			
	comp=E,45μm,0.3s							
CALF	**Calern**	**0.82**	**172**	Pg		**Pg**	**09 13 34.4**	**-1.0**
GBOS	**Grotte di Boss**	**0.84**	**112**	P		**Pb**	**09 13 35.3**	**-0.1**
GBOS				S		**Sb**	**09 13 46.5**	**+0.2**
GBOS	**Grotte di Boss**	**0.84**	**112**	P		**Pb**	**09 13 35.3**	**-0.1**
GBOS				S		**Sb**	**09 13 46.5**	**+0.2**
GBOS				AML	AML			
	comp=N,50μm,1.5s							
GBOS				AML	AML			
	comp=E,56μm,0.9s							
SBF	**Sospel**	**0.85**	**145**	*e*Pg		**Pg**	**09 13 35.1**	**-0.9**
SBF				*e*Sg		**Sg**	**09 13 46.1**	**-1.2**
	comp=E,16nm,0.2s							
MLYF	**Mely**	**0.92**	**231**	Pg		**Pb**	**09 13 36.8**	**+0.1**
LPG	**La Plagne**	**0.93**	**360**	*e*Pg		**Pn**	**09 13 37.7**	**-0.1**
LPG				*e*Sg		**Sb**	**09 13 50.5**	**+1.3**
LSD	**Lago del Serru**	**0.93**	**16**	P		**Pn**	**09 13 38.0**	**+0.2**
LSD				S		**Sn**	**09 13 50.9**	**+0.1**
LSD	**Lago del Serru**	**0.93**	**16**	P		**Pn**	**09 13 37.9**	**+0.2**
LSD				S		**Sn**	**09 13 50.9**	**+0.1**
LSD				AML	AML			
	comp=E,37μm,1.5s							
LSD				AML	AML			
	comp=N,27μm,1.5s							
LPL	**La Plagne**	**0.95**	**359**	*e*Pg		**Pn**	**09 13 37.9**	**-0.1**
LPL	**La Plagne**	**0.95**	**359**	*e*P		**Pn**	**09 13 40.2**	**+2.2**
LPL				*e*Sg		**Sn**	**09 13 51.7**	**+0.5**
FRF	**La Foret Royal**	**1.01**	**185**	*e*Pg		**Pg**	**09 13 37.3**	**-1.6**
FRF	**La Foret Royal**	**1.01**	**185**	*e*P		**Pn**	**09 13 39.8**	**+1.2**
FRF				*e*Sg		**Sb**	**09 13 52.2**	**+1.0**
	comp=N,16nm,0.2s							
SMRF	**Simiane la Rot**	**1.04**	**236**	*e*Pg		**Pg**	**09 13 38.4**	**-1.0**
SMRF	**Simiane la Rot**	**1.04**	**236**	*e*P		**Pn**	**09 13 40.0**	**+1.0**
SMRF				*e*Sg		**Sg**	**09 13 51.3**	**-1.7**
	comp=N,8.4nm,0.3s							
RORO	**Rocca Rossa**	**1.04**	**115**	P		**Pb**	**09 13 38.8**	**0.0**
RORO				S		**Sb**	**09 13 52.3**	**+0.2**
IMI	**Imperia**	**1.05**	**128**	P		**Pg**	**09 13 38.7**	**-0.8**
IMI				S		**Sg**	**09 13 51.8**	**-1.5**
IMI	**Imperia**	**1.05**	**128**	P		**Pg**	**09 13 38.8**	**-0.8**
IMI				AML	AML			
	comp=E,20μm,0.4s							
IMI				AML	AML			
	comp=N,23μm,0.5s							
RUSF	**Rustrel**	**1.11**	**236**	Pn		**Pb**	**09 13 40.0**	**0.0**
LMR	**La Mourre**	**1.25**	**188**	*e*Pg		**Pn**	**09 13 41.5**	**-0.3**
LMR	**La Mourre**	**1.25**	**188**	*e*P		**Pg**	**09 13 43.5**	**+0.2**
LMR				*e*Sg		**Sb**	**09 13 56.6**	**-1.4**
	comp=N,10nm,0.2s							
VIVF	**Saint-Julien-l**	**1.52**	**282**	*e*Pn		**Pn**	**09 13 45.3**	**-0.3**
VIVF	**Saint-Julien-l**	**1.52**	**282**	*e*Pg		**Pb**	**09 13 47.4**	**+0.5**
VIVF				*e*Sn		**Sn**	**09 14 04.7**	**-0.2**
	comp=N,4.8nm,0.3s							
CABF	**La Chapelle**	**2.10**	**347**	*e*Pn		**Pn**	**09 13 54.3**	**+0.7**
LASF	**Ste Croix**	**2.14**	**258**	*e*Pn		**Pn**	**09 13 54.0**	**-0.1**
LASF				*e*Sn		**Sn**	**09 14 18.9**	**-1.4**
PGF	**Pioggiola**	**2.59**	**140**	*e*Pn		**Pn**	**09 14 00.6**	**+0.2**
PGF				*e*Sn		**Sn**	**09 14 31.1**	**-0.4**
	comp=N,3.3nm,0.3s							
TREG	**Tregnago**	**3.26**	**71**	⇑P		**Pg**	**09 14 19.7**	**-2.1**
APEC	**Apecchio**	**4.20**	**102**	S		**Sn**	**09 15 17.0**	**+5.9**
ARRO	**Arrone**	**4.79**	**112**	⇓P		**Pg**	**09 14 49.9**	**-1.2**
AQU	**L'Aquila**	**5.32**	**112**	P		**Pb**	**09 14 54.9**	**+3.2**

IDC ***13*** *09:18:47.4±4.7,53°.29N×165°.07W,h0km,mb3.2/3, mb1 3.6/5,mb1mx3.2/62,mbtmp3.2/5,ML3.0/2,Error ellipse: s-maj=83.2km s-min=35.2km az=98.0*

NEIC ***13*** *09:18:49.0±1.5,53°.38N±0°.04×165°.93W±0°.07,h38km±9km, Error ellipse: s-maj=7.1km s-min=4.2km az=121.0*

AEIC ***13*** *09:18:48±1.8,53°.39N±0°.05×165°.95W±0°.06,h39km±8km, ML3.2/30,Error ellipse: s-maj=7.1km s-min=4.6km az=154.0*

ISC 13 09:18:46.1±1.8,53°.28N±0°.07×165°.87W±0°.05, h16km±11km,n37,σ0=92/36,mb3.3/3,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
MNAT	**Makushin Natee**	**0.78**	**322**			**Pb**	**09**	**19**	**02.0**	**+0.8**
MNAT						**Sb**	**09**	**19**	**11.4**	**-0.2**
MGOD	**Makushin Gods**	**0.79**	**312**			**Pb**	**09**	**19**	**02.5**	**+1.0**
MGOD						**Sb**	**09**	**19**	**12.9**	**+0.9**
AKMO	**Akutan Morgan**	**0.82**	**354**			**Pb**	**09**	**19**	**02.6**	**+0.6**
AKMO						**Sb**	**09**	**19**	**12.1**	**-0.7**
AKBBA	**Akutan Broad B**	**0.83**	**358**			**Pg**	**09**	**19**	**02.4**	**+0.2**
AKBBA						**Sn**	**09**	**19**	**13.9**	**-1.0**
MAPS	**Pakushin South**	**0.83**	**310**			**Pb**	**09**	**19**	**03.1**	**+1.0**
MAPS						**Sb**	**09**	**19**	**13.5**	**+0.4**
MSW	**Makushin Switc**	**0.84**	**320**			**Pb**	**09**	**19**	**03.2**	**+0.9**
MSW						**Sn**	**09**	**19**	**14.7**	**-0.5**
AKUT	**Akutan**	**0.86**	**4**			**Pg**	**09**	**19**	**02.9**	**0.0**
AKSA	**Akutan Strait**	**0.87**	**7**			**Pg**	**09**	**19**	**02.5**	**-0.5**
AKSA						**Sb**	**09**	**19**	**13.5**	**-0.7**
AKLV	**Akutan Long Va**	**0.89**	**357**			**Pg**	**09**	**19**	**03.0**	**-0.4**
AKLV						**Sb**	**09**	**19**	**13.8**	**-1.1**
OKFG	**Magazine Ridge**	**1.23**	**277**			**Pb**	**09**	**19**	**09.1**	**+0.2**
OKSO	**Okmok South**	**1.37**	**274**			**Pn**	**09**	**19**	**11.0**	**+0.4**
WEBT	**Westdahl Beart**	**1.48**	**26**			**Pn**	**09**	**19**	**12.8**	**+0.8**
SSBA	**Shishaldin**	**1.82**	**34**			**Pn**	**09**	**19**	**17.8**	**+1.0**
SSBA						**Sn**	**09**	**19**	**40.8**	**+1.2**
NIKH	**Nikolski High**	**1.82**	**262**			**Pn**	**09**	**19**	**17.1**	**+0.4**
NIKH						**Sn**	**09**	**19**	**39.4**	**-0.1**
SSLW	**Shishaldin Wes**	**1.82**	**34**			**Pn**	**09**	**19**	**18.1**	**+1.4**
FALS	**False Pass**	**2.15**	**41**			**Pn**	**09**	**19**	**22.3**	**+1.2**
FALS						**Sn**	**09**	**19**	**48.4**	**+0.9**
DT1	**Dutton Round H**	**2.80**	**48**			**Pn**	**09**	**19**	**31.4**	**+1.3**
SDPT	**Sand Point**	**3.78**	**55**			**Pn**	**09**	**19**	**44.5**	**+0.9**
OHAK	**Old Harbor**	**8.20**	**56**	Pn		**Pn**	**09**	**20**	**44.1**	**-0.2**
KDAK	**Kodiak Island**	**8.78**	**54**	Pn		Pn	09	20	50.4	-1.8
	0.2nm,0.3s,baz=248,slow=5.1,SNR=10									
KDAK						Sn				
	0.1nm,0.3s,baz=57,slow=23,SNR=1.8									
HIN	**Hinchinbrook I**	**12.74**	**48**	Pn		**Pn**	**09**	**21**	**44.6**	**-1.8**
SCM	**Sheep Creek Mo**	**13.09**	**42**	Pn		**Pn**	**09**	**21**	**49.8**	**-1.5**
KLU	**Klutina**	**13.50**	**45**	Pn		Pn	09	21	54.5	-2.2
HMT	**Hamilton**	**13.74**	**50**	Pn		**Pn**	**09**	**21**	**58.3**	**-1.7**
ILAR	**Eielson Array**	**15.03**	**33**	Pn		**Pn**	**09**	**22**	**17.0**	**-0.5**
	0.0nm,0.3s,baz=228,slow=13,SNR=1.9									
YKA	**Yellowknife Ar**	**28.04**	**50**	P		**P**	**09**	**24**	**36.0**	**-0.1**
	0.2nm,0.6s,baz=275,slow=8.1,SNR=4.7									
NVAR	**Mina Array Bea**	**35.59**	**95**	P		P	09	25	42.7	-0.2
	0.3nm,0.8s,baz=297,slow=7.0,SNR=3.4									
H11N2	**WAKE ISLAND Hy**	**39.52**	**223**	T		T	10	08	26.2	
	baz=25,slow=76,SNR=34									
H11N3	**WAKE ISLAND Hy**	**39.53**	**223**	T		T	10	08	24.2	
	baz=25,slow=76,SNR=33									
H11N1	**WAKE ISLAND Hy**	**39.54**	**223**	T		T	10	08	28.3	
	baz=25,slow=76,SNR=31									
H11S1	**WAKE ISLAND Hy**	**40.70**	**222**	T		T	10	09	47.5	
	baz=24,slow=76,SNR=42									
H11S2	**WAKE ISLAND Hy**	**40.72**	**222**	T		T	10	09	55.8	
	baz=24,slow=76,SNR=37									
H11S3	**WAKE ISLAND Hy**	**40.72**	**222**	T		T	10	09	55.6	
	baz=24,slow=76,SNR=29									
TXAR	**Lajitas Array**	**50.64**	**92**	P		**P**	**09**	**27**	**44.6**	**+0.2**
	0.2nm,0.5s,baz=295,slow=5.7,SNR=5.9									
H03N2	**Juan Fernandez**	**114.31**	**114**	T		T	11	42	09.5	
	baz=319,slow=76									
H03N1	**Juan Fernandez**	**114.33**	**114**	T		T	11	41	57.3	
	baz=319,slow=76									
H03N3	**Juan Fernandez**	**114.33**	**114**	T		T	11	42	00.6	
	baz=319,slow=76									

BGR ***13*** *09:26:58.0±0.0,36°.39N×71°.67E,h33km,mb4.9*

MOS ***13*** *09:27:02.6±1.1,36°.55N×71°.43E,h97km,mb4.8/75,Error ellipse: s-maj=4.5km s-min=3.1km az=118.4*

BJI ***13*** *09:27:03.5±0.0,36°.61N×71°.37E,h94km,mB4.8/29, mb4.8/46*

IDC ***13*** *09:27:04.9±2.0,36°.39N×71°.31E,h114km±17km,mb4.3/35, mb1 4.3/37,mb1mx4.2/53,mbtmp4.6/37,MS3.4/20, Ms1 3.4/20,ms1mx3.1/49,Error ellipse: s-maj=12.2km s-min=8.9km az=1.0*

GCMT ***13*** *09:27:04.4±0.4,36°.45N±0°.04×71°.08E±0°.04,h110km±4km, MW4.8/65,Moment Tensor Solution. s25,c25; s65,c78; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.33±.07; Mθθ-1.55±.13; Mφφ0.21±.11; Mrθ-0.30±.08; Mrφ-1.33±.11; Mθφ-0.06±.06; Best double couple: M○1.83000×10^16 NP1:○s49.00000°,δ42.00000°,λ72.00000°. NP2: ○s253.00000°,δ51.00000°,λ106.00000°. Principal axes: T 1.3740, Plg77.0000°, Azm221.0000°; N 0.9110, Plg12.0000°, Azm63.0000°; P -2.2870, Plg5.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NNC ***13*** *09:27:05.6±3.0,36°.82N×70°.87E,h158km±44km,mb4.6, mpv5.5 Error ellipse: s-maj=28.3km s-min=17.2km az=164.0*

NEIC ***13*** *09:27:05.4±2.4,36°.57N±0°.06×71°.22E±0°.09,h113km±5km, mb4.7/104,Error ellipse: s-maj=9.9km s-min=8.7km az=74.0*

ISC 13 09:27:03.3±0.4,36°.48N±0°.03×71°.40E±0°.03,h96km±4km, h96km:pP-P,n562,σ1972/593,mb4.7/182,47C-95D,Fault plane solution: NP1:○s68.11240°,δ18.33167°, λ86.24984°. NP2:○s252.06244°,δ71.70898°,λ91.24146°. Principal axes: T Plg63.2709°, Azm164.0144°; N Plg1.1787°, Azm71.6728°; P Plg26.6989°, Azm341.0799°;

Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
GAR	**Garm**	**2.66**	**342**			**Pn**	**09**	**27**	**44.3**	**-0.3**
CEP	**Cherat**	**2.68**	**171**	P		**Pn**	**09**	**27**	**47.0**	**+2.1**
CEP				S		**Sn**	**09**	**28**	**21.0**	**+4.2**
KBL	**Kabul**	**2.72**	**226**	PN		**Pn**	**09**	**27**	**47.1**	**+1.6**
KBL	**Kabul**	**2.72**	**226**	Pn		**Pn**	**09**	**27**	**47.1**	**+1.6**
CHCP	**Chirah Chowk**	**3.20**	**151**	P		**Pn**	**09**	**27**	**54.4**	**+2.6**
NIL	**Nilore**	**3.21**	**151**	PN		**Pn**	**09**	**27**	**54.5**	**+2.7**
NIL	**Nilore**	**3.21**	**151**	Pn		**Pn**	**09**	**27**	**54.5**	**+2.7**
THW	**Thamme Wali**	**3.69**	**175**	P		**Pn**	**09**	**27**	**59.0**	**+0.7**
SARP	**Sargodha**	**4.67**	**167**	P		**Pn**	**09**	**28**	**11.3**	**-0.2**
KSH	**Kashi**	**4.72**	**49**	P		**Pn**	**09**	**28**	**09.6**	**-2.7**
KSH				S		**Sn**	**09**	**28**	**59.1**	**-6.8**
KSH				*s*max		*s*max				
	comp=N,4μm,0.4s									
KSH				*s*max		*s*max				
	comp=E,3μm,0.4s									
IUG	**luzhnay**	**5.76**	**350**	*e*P		**Pn**	**09**	**28**	**24.5**	**-1.9**
	baz=349									
IUG	**luzhnay**	**5.76**	**350**	*e*PN		**Pn**	**09**	**28**	**24.5**	**-1.9**
DHRM	**DHARAMSHALA**	**5.85**	**135**	*e*P		**Pn**	**09**	**28**	**27.9**	**+0.1**
DHRM				*e*S		**Sn**	**09**	**29**	**30.9**	**-2.7**
AML	**Almayashu**	**5.92**	**17**	P		**Pn**	**09**	**28**	**29.7**	**+0.9**
	SNR=2752									
CHM	**Chimkent**	**6.00**	**347**	*e*P		**Pn**	**09**	**28**	**29.3**	**-0.3**
	54nm,0.9s,baz=347									
CHM	**Chimkent**	**6.00**	**347**	*e*PN		**Pn**	**09**	**28**	**29.2**	**-0.3**
CHM				*p*max		*p*max				
	comp=Z,54nm,0.9s									
UCH	**Uchtor**	**6.23**	**22**	P		**Pn**	**09**	**28**	**34.1**	**+1.0**
	SNR=385									
DZA	**Taraz**	**6.41**	**360**	*e*P		**Pn**	**09**	**28**	**34.2**	**-0.9**
	baz=359									
DZA	**Taraz**	**6.41**	**360**	*e*PN		**Pn**	**09**	**28**	**34.2**	**-0.9**
EKS2	**Erkin-Say**	**6.44**	**16**	P		**Pn**	**09**	**28**	**36.8**	**+1.1**
	SNR=281									
BHK	**Bhakra**	**6.55**	**139**	*e*P		**Pn**	**09**	**28**	**37.2**	**+0.1**
BHK				*e*S		**Sn**	**09**	**29**	**49.0**	**-1.3**
AAK	**Ala-Archa**	**6.60**	**20**	P		**Pn**	**09**	**28**	**39.2**	**+1.4**
	SNR=292									
AAK	**Ala-Archa**	**6.60**	**20**	⇓P		**Pn**	**09**	**28**	**39.2**	**+1.4**
	comp=Z,300nm,0.5s									
AAK				⇓S		**Sn**	**09**	**29**	**51.5**	**-0.2**
	comp=Z,291nm,0.7s									
AAK	**Ala-Archa**	**6.60**	**20**	PN		**Pn**	**09**	**28**	**39.3**	**+1.4**
AAK	**Ala-Archa**	**6.60**	**20**	Pn		**Pn**	**09**	**28**	**39.3**	**+1.4**
KK31	**Karatay Array**	**6.65**	**354**	⇓P		**Pn**	**09**	**28**	**38.1**	**-0.3**
	comp=Z,301nm,0.3s,baz=178,slow=11,SNR=6498									
KK31				⇓S		**Sn**	**09**	**29**	**48.6**	**-4.1**
	comp=Z,76nm,0.4s,baz=180,slow=21,SNR=5.8									
KK31	**Karatay Array**	**6.65**	**354**	PN		**Pn**	**09**	**28**	**38.2**	**-0.3**
KK31	**Karatay Array**	**6.65**	**354**	Pn		**Pn**	**09**	**28**	**38.2**	**-0.2**
KKAR	**Karatay Array**	**6.65**	**354**	PN		**Pn**	**09**	**28**	**38.1**	**-0.3**
KKAR	**Karatay Array**	**6.65**	**354**			**Pn**	**09**	**28**	**37.6**	**-0.8**
KKAR	**Karatay Array**	**6.65**	**354**	Pn		**Pn**	**09**	**28**	**38.1**	**-0.3**
KBK	**Karagaybulak**	**6.75**	**23**	P		**Pn**	**09**	**28**	**41.5**	**+1.5**
	SNR=158									
ULHL	**Ulahol**	**6.87**	**32**	P		**Pn**	**09**	**28**	**42.8**	**+1.2**
	SNR=40									
CHMS	**Chumysh**	**7.01**	**21**	P		**Pn**	**09**	**28**	**44.1**	**+0.9**
	SNR=126									
SMLA	**Simla**	**7.18**	**136**	*e*P		**Pn**	**09**	**28**	**45.5**	**-0.1**
SMLA				*e*S		**Sn**	**09**	**30**	**03.2**	**-2.4**
SMLA				*l*AML			09	30	05.3	
	comp=N,1μm,0.4s									
SMLA				*l*AML			09	30	05.8	
	comp=E,1μm,0.2s									
USP	**Ospenovka**	**7.19**	**18**	P		**Pn**	**09**	**28**	**46.0**	**+0.3**
	SNR=266									
TKM2	**Tokmak 2**	**7.20**	**25**	P		**Pn**	**09**	**28**	**47.2**	**+1.1**
	SNR=298									
TKM2	**Tokmak 2**	**7.20**	**25**	⇓P		**Pn**	**09**	**28**	**47.0**	**+0.9**
	comp=E,156nm,0.5s									
TKM2				⇓S		**Sn**	**09**	**30**	**05.0**	**-1.5**
	comp=E,72nm,0.8s									
TKM2	**Tokmak 2**	**7.20**	**25**	PN		**Pn**	**09**	**28**	**47.0**	**+0.9**
HRA	**Herat**	**7.76**	**257**	Pn		**Pn**	**09**	**28**	**53.1**	**-0.6**
AAA	**Alma-Ata**	**7.95**	**31**	*e*P		**Pn**	**09**	**28**	**56.7**	**+0.6**
	baz=30									
AAA	**Alma-Ata**	**7.95**	**31**	*e*PN		**Pn**	**09**	**28**	**56.7**	**+0.6**
MDOK	**Medeo**	**7.97**	**31**	*e*P		**Pn**	**09**	**28**	**55.9**	**-0.6**
	baz=31									
MDOK	**Medeo**	**7.97**	**31**	⇓P		**Pn**	**09**	**28**	**57.7**	**+1.3**
	comp=E,40nm,0.6s									
MDOK	**Medeo**	**7.97**	**31**	*e*PN		**Pn**	**09**	**28**	**55.8**	**-0.6**
PRZ	**Przheval'sk**	**8.08**	**40**	PN		**Pn**	**09**	**28**	**59.5**	**+1.5**
PRZ	**Przheval'sk**	**8.08**	**40**	Pn		**Pn**	**09**	**28**	**59.5**	**+1.5**
DDI	**Dehra Dun**	**8.29**	**136**	*e*P		**Pn**	**09**	**29**	**01.2**	**+0.5**
DDI				*e*S		**Sn**	**09**	**30**	**27.0**	**-5.7**
DDI				*l*AML			09	30	31.9	
	comp=E,1μm,0.3s									
DDI				*l*AML			09	30	32.4	
	comp=N,1μm,0.3s									
SATY	**Saty**	**8.50**	**37**	*e*P		**Pn**	**09**	**29**	**02.9**	**-0.9**
	comp=N,19nm,0.8s,baz=37									
SATY	**Saty**	**8.50**	**37**	*e*PN		**Pn**	**09**	**29**	**02.8**	**-0.9**
SATY				*p*max		*p*max				
	comp=Z,19nm,0.8s									
UZB	**Uzynbulak**	**8.87**	**39**	*e*P		**Pn**	**09**	**29**	**08.1**	**-0.7**
	comp=Z,14nm,0.6s,baz=39									
UZB	**Uzynbulak**	**8.87**	**39**	*e*PN		**Pn**	**09**	**29**	**08.0**	**-0.7**
UZB				*p*max		*p*max				
	comp=Z,14nm,0.6s									
KPKS	**Kokpek**	**8.94**	**36**	*e*P		**Pn**	**09**	**29**	**08.8**	**-0.9**
	baz=36									
KPKS	**Kokpek**	**8.94**	**36**	*e*PN		**Pn**	**09**	**29**	**08.7**	**-0.9**
SHLS	**Shalkode**	**9.11**	**40**	*e*P		**Pn**	**09**	**29**	**14.4**	**+2.4**
	comp=Z,9.5nm,0.6s,baz=42									
SHLS	**Shalkode**	**9.11**	**40**	*e*P		**Pn**	**09**	**29**	**14.3**	**+2.4**
SHLS				*p*max		*p*max				
	comp=Z,9.0nm,0.6s									
NDI	**New Delhi**	**9.19**	**146**	*e*P		**Pn**	**09**	**29**	**12.0**	**-1.0**
NDI				*e*S		**Sn**	**09**	**30**	**48.0**	**-6.7**
PDGK	**Podgornoye**	**9.24**	**40**	⇓P		**Pn**	**09**	**29**	**13.6**	**-0.2**
	comp=Z,48nm,0.8s									
PDGK	**Podgornoye**	**9.24**	**40**	P		**Pn**	**09**	**29**	**13.5**	**-0.2**
TDK	**Taldyqorghan**	**10.04**	**30**	*e*P		**Pn**	**09**	**29**	**23.2**	**-1.2**
	baz=30									
TDK	**Taldyqorghan**	**10.04**	**30**	*e*P		**Pn**	**09**	**29**	**23.2**	**-1.2**
AJM	**Ajmer**	**10.35**	**164**	⇓*i*P		**Pn**	**09**	**29**	**26.0**	**-2.8**
AJM				*i*S		Sn	09	31	11.0	-12
GEYT	**Alibeck**	**10.69**	**282**	P		Pn	09	29	28.3	-5.2
	comp=Z,6.9nm,0.3s,baz=129,slow=12,SNR=22									
GEYT				S		Sn				
	comp=Z,36nm,0.3s,baz=207,slow=21,SNR=12									
GEYT				LR		LR	09	35	01.4	
	comp=Z,202nm,21.1s,baz=55,slow=45									
GEYT	**Alibeck**	**10.69**	**282**			Pn	09	29	28.2	-5.3
GYA0	**ALIBECK ARRAY**	**10.69**	**282**	P		Pn	09	29	27.3	-6.2
GYA0B	**ALIBECK ARRAY**	**10.69**	**282**	⇓P		Pn	09	29	27.4	-6.1
GYA0B				⇑S		Sn	09	31	19.3	-12
GYA0B	**ALIBECK ARRAY**	**10.69**	**282**	Pn		Pn	09	29	28.3	-5.2
PYUN	**Piuthan**	**12.87**	**127**	*e*P		**Pn**	**09**	**30**	**00.4**	**-2.5**
	comp=Z,559nm,0.4s									
MAKZ	**Makanchi**	**12.99**	**34**	P		**Pn**	**09**	**30**	**02.4**	**-1.7**
MAKZ	**Makanchi**	**12.99**	**34**	Pn		**Pn**	**09**	**30**	**02.4**	**-1.7**
MK31	**Makanchi Array**	**13.12**	**35**	⇑P		**Pn**	**09**	**30**	**04.3**	**-1.6**
	comp=Z,20nm,0.6s,baz=206,slow=7.9,SNR=85									
MK31	**Makanchi Array**	**13.12**	**35**	*c i*P		**Pn**	**09**	**30**	**05.1**	**-0.8**
MK31	**Makanchi Array**	**13.12**	**35**	Pn		**Pn**	**09**	**30**	**04.7**	**-1.1**
MKAR	**Makanchi Array**	**13.12**	**35**	P		**Pn**	**09**	**30**	**05.8**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=222,slow=13,SNR=92									
MKAR				LR		LR	09	35	43.0	
	comp=Z,118nm,20.2s,baz=224,slow=39									
MKAR				ScP		**ScP**	**09**	**38**	**51.7**	**-2.5**
	baz=216,slow=1.2,SNR=4.4									
MKAR	**Makanchi Array**	**13.12**	**35**	*i*P		**Pn**	**09**	**30**	**04.9**	**-1.0**
MKAR				*p*max		*p*max				
	comp=Z,15nm,0.8s									
MKAR	**Makanchi Array**	**13.12**	**35**	Pn		**Pn**	**09**	**30**	**04.3**	**-1.6**
KOLN	**Koldanda**	**13.49**	**127**	*e*P		**Pn**	**09**	**30**	**08.3**	**-2.7**
	comp=Z,115nm,0.4s									
GKN	**Gorkha**	**14.02**	**123**	*e*P		**Pn**	**09**	**30**	**15.1**	**-2.8**
	comp=Z,276nm,0.4s									
BHPL	**Bhopal**	**14.19**	**157**	*e*P		**Pn**	**09**	**30**	**15.6**	**-4.3**
BHPL				*e*S		Sn	09	32	43.6	-12
WMQ	**Urumqi**	**14.45**	**55**	*e*P		**Pn**	**09**	**30**	**24.1**	**+1.0**
WMQ				pP		P	09	30	35.6	+8.4
WMQ				sP			09	30	50.8	
WMQ

ALNE Al Ain 18.30 232 P **Pn** **09 31 10.3 -0.5**
SNR=7.5
ARQ Araqi 18.35 229 P **Pn** **09 31 12.0 +0.5**
SNR=6.2
SEKA Sheki 19.41 291 P **P** **09 31 22.5 +0.6**
MAK Makhachkala 19.45 297 *e*P **P** **09 31 22.1 -0.1**
MAK *e*S **S** **09 34 58.6 +1.8**
MAK pmax pmax
comp=Z,101nm,0.8s
MAK MLR MLR
comp=Z,150nm,16.0s
UMZA Um Al Zommool 19.64 230 P **P** **09 31 24.2 -0.2**
UMZA S **S** **09 34 56.0 -4.9**
ZAA0 Zalesovo Array 19.80 24 P **P** **09 31 25.3 -0.6**
ZAA0 IAmb IAmb 09 31 26.5
comp=Z,44nm,0.8s
ZALV Zalesovo Beam 19.80 24 P **P** **09 31 25.8 -0.1**
comp=Z,7.2nm,0.3s,baz=227,slow=10.0,SNR=237
ZALV Zalesovo Beam 19.80 24 *i* P **P** **09 31 25.5 -0.4**
ZALV pmax pmax
comp=Z,35nm,0.4s
ZALV Zalesovo Beam 19.80 24 P **P** **09 31 25.3 -0.6**
ZKTA Zakatala 19.89 293 P **P** **09 31 28.4 +1.4**
HYB Hyderabad 20.02 160 *i* P **P** **09 31 29.0 +0.5**
HYB *es*P sP 09 32 12.0 +12
HYB *e*S **Sn** **09 35 17.0 +0.5**
GANJ Ganja 20.02 290 P **P** **09 31 29.2 +0.8**
GUWA GUWAHATI 20.10 115 *e*P **P** **09 31 30.1 +0.8**
GUWA IAmb IAmb 09 31 32.1
comp=Z,95nm,0.7s
LGD Lagodekhi 20.20 293 P **P** **09 31 31.4 +1.1**
DDFL Dedoflistskaro 20.24 292 P **P** **09 31 32.3 +1.4**
SHL Shillong 20.61 116 P **P** **09 31 36.1 +1.0**
SHL pmax pmax
comp=Z,75nm,0.8s
SHL Shillong 20.61 116 *e*P **P** **09 31 36.3 +1.2**
SHL IAmb IAmb 09 31 37.1
comp=Z,54nm,0.8s
SHL Shillong 20.61 116 P **P** **09 31 36.1 +1.0**
NAX Nakhchivan 20.62 285 P **P** **09 31 36.5 +1.6**
GROC Groznyy 20.73 297 *e*P **P** **09 31 36.7 +0.7**
GROC *e**SP **pP** **09 31 58.5 +3.4**
GROC *e*S **S** **09 35 25.6 +3.7**
GROC *e**SS sS 09 35 47.0 -7.5
GROC pmax pmax
comp=Z,97nm,1.2s
GNI Garni 21.20 288 P **P** **09 31 40.3 -1.0**
comp=Z,7.4nm,0.6s,baz=337,slow=22,SNR=1.4
GNI Garni 21.20 288*ce*P **P** **09 31 43.9 +2.6**
GNI pmax pmax
comp=Z,160nm,1.3s
GNI Garni 21.20 288 P **P** **09 31 41.0 -0.4**
SEAG Tbilisi Sea 21.26 293 P **P** **09 31 45.6 +3.9**
KZRT Kazreti 21.53 291 P **P** **09 31 46.4 +1.8**
GUDG Gudauri 21.57 294 P **P** **09 31 48.9 +3.6**
SVE Sverdlovsk 21.60 344⇓*e*P **P** **09 31 45.0 -0.2**
SVE *e*S **S** **09 35 34.0 -4.8**
SVE pmax pmax
comp=Z,63nm,1.3s
ARU Arti 21.76 341 P **P** **09 31 46.4 -0.5**
comp=Z,8.6nm,0.5s,baz=155,slow=6.6,SNR=20
ARU LR LR 09 40 57.2
comp=Z,220nm,18.7s,baz=165,slow=38
ARU Arti 21.76 341*c* *i*P **P** **09 31 46.8 0.0**
ARU 09 32 16.6
ARU S **S** **09 35 43.6 +1.9**
ARU SS **SnSn** **09 36 18.2 +3.0**
ARU pmax pmax
comp=Z,92nm,1.5s
ARU Arti 21.76 341 P **P** **09 31 46.4 -0.5**
ARU IAmb IAmb 09 31 55.6
comp=Z,57nm,0.7s
ZEI Tsey 22.04 295 *e*P **P** **09 31 49.9 -0.3**
ZEI pmax pmax
comp=Z,17nm,0.7s
BGD Bogdanovka 22.12 291 P **P** **09 31 54.7 +3.6**
MOKO MOKOCHONG 22.13 111 *e*P **P** **09 31 53.0 +1.8**
KOHI KOHIMA 22.16 113 *e*P **P** **09 31 52.9 +1.4**
KOHI IAmb IAmb 09 31 59.2
comp=Z,151nm,1.1s
AKH Akhalkalaki 22.21 291 P **P** **09 31 54.5 +2.5**
ONI Oni 22.34 294 P **P** **09 31 56.0 +2.7**
NCK Nalchik 22.36 297⇑*e*P **P** **09 31 55.5 +2.1**
NCK pmax pmax
comp=Z,66nm,0.6s
IMP Imphal 22.55 115⇑*e*P **P** **09 31 56.5 +1.0**
GTA Gaotai 22.56 74 ⇓P **P** **09 31 58.3 +2.6**
GTA pP pP 09 32 21.8 +6.1
GTA sP sP 09 32 31.6 +3.3
GTA pmax pmax
comp=Z,23nm,1.1s
GTA pmax pmax
comp=Z,89nm,4.4s
GTA LR LR
comp=Z,98nm,14.9s
GTA LR LR
comp=Z,130nm,16.0s
GTA LR LR
comp=Z,91nm,14.5s
KBZ Khabaz 22.89 297 P **P** **09 31 58.6 -0.2**
comp=Z,18nm,1.0s,baz=140,slow=7.0,SNR=23
KBZ S **S** **09 36 05.6 +4.6**
comp=Z,4.8nm,0.9s,baz=75,slow=18,SNR=2.1
KBZ LR LR 09 43 12.1
comp=Z,102nm,19.9s,baz=120,slow=42
KBZ Khabaz 22.89 297*d* *i*P **P** **09 31 58.8 0.0**
KBZ pmax pmax
comp=Z,24nm,1.0s
NEY Neytrino 22.95 296⇑*e*P **P** **09 32 01.9 +2.3**
NEY pmax pmax
comp=Z,5.0nm,0.6s
GOF Gofitskoye 23.03 301⇑*e*P **P** **09 32 02.8 +2.7**
KVAR Kislovodsk Arr 23.07 298 S **S** **09 36 08.5 +4.4**
comp=Z,21nm,0.8s,baz=208,slow=14,SNR=3.7
KIV Kislovodsk 23.08 298 *e*P **P** **09 32 01.9 +1.2**
KIV *e*S **S** **09 36 06.9 +2.7**
KIV pmax pmax
comp=Z,61nm,1.0s
KIV MLR MLR
comp=Z,208nm,14.0s
KIV Kislovodsk 23.08 298 P **P** **09 32 00.9 +0.2**
KIV IAmb IAmb 09 32 32.5
comp=Z,33nm,0.7s
BELG Belogornoye 23.11 321 P **P** **09 32 00.5 -0.3**
comp=Z,108nm,1.0s,baz=289,slow=0.9,SNR=47
BELG S **S** **09 36 06.5 +2.3**
comp=Z,8.0nm,0.8s,baz=304,slow=19,SNR=1.3
BELG Belogornoye 23.11 321*ce*P **P** **09 32 00.2 -0.5**
BELG pmax pmax
comp=Z,16nm,1.0s
SOC Sochi 25.17 296 *e*P **P** **09 32 22.2 +2.6**
SOC *e* 09 32 56.8
SOC *e*S **S** **09 36 44.2 +6.7**
SOC pmax pmax
comp=Z,27nm,0.8s
VRH Novokhopyorsk 25.75 314 *e*P **P** **09 32 24.6 -0.1**
VRH pmax pmax
comp=Z,20nm,0.6s
RAYN Ar Rayn 25.78 247 *i* P **P** **09 32 24.4 -1.0**
SNR=10
RAYN Ar Rayn 25.78 247 P **P** **09 32 24.2 -1.2**
RAYN pmax pmax
comp=Z,13nm,1.0s
RAYN Ar Rayn 25.78 247 P **P** **09 32 24.2 -1.2**
MOY Mondy 25.90 45 *e*P **P** **09 32 30.9 +4.7**
LZH Lanzhou 26.10 81 *e*P **P** **09 32 34.0 +5.8**
LZH sP sP 09 33 07.9 +4.9
LZH pmax pmax
comp=Z,32nm,1.1s
MALT Malatya 26.18 284 P **P** **09 32 32.0 +3.1**
KIRV Kirov 26.40 334 P **P** **09 32 31.0 +0.5**
comp=Z,39nm,0.8s,baz=124,slow=2.4,SNR=10
KIRV LR LR 09 43 14.9
comp=Z,123nm,19.2s,baz=137,slow=37
KIRV Kirov 26.40 334*de*P **P** **09 32 30.8 +0.3**
ZAK Zakamensk 26.76 49 *e*P **P** **09 32 36.3 +2.3**
ZAK pmax pmax
comp=Z,5.0nm,1.0s
ANN Anapa 26.93 299 *e*P **P** **09 32 35.9 +0.5**
ANN *e**PP **pP** **09 32 56.1 -1.7**
ANN *e* 09 33 23.8
ANN *e*S **S** **09 37 06.8 +1.6**
ANN pmax pmax
comp=Z,18nm,0.5s

VSR Storozhevoye 27.25 313 *e*P **P** **09 32 37.3 -0.9**
VSR pmax pmax
comp=Z,30nm,1.0s
TLY Talaya 27.42 46⇑*e*P **P** **09 32 40.6 +0.8**
TLY pmax pmax
comp=Z,4.0nm,1.6s
LPSR Galich'ya Gora 27.89 316 *e*P **P** **09 32 43.7 -0.2**
LPSR pmax pmax
comp=Z,30nm,0.9s
SONM Songino Array 28.09 55 P **P** **09 32 46.7 +0.9**
comp=Z,2.4nm,0.9s,baz=249,slow=9.1,SNR=10
SONM LR LR 09 45 30.1
comp=Z,44nm,20.9s,baz=182,slow=39
SONM Songino Array 28.09 55 P **P** **09 32 47.2 +1.3**
ULN Ulaanbaatar 28.53 55⇑*e*P **P** **09 32 51.0 +1.2**
KMI Kunming 29.08 104 ⇓P P 09 33 00.0 +5.0
KMI pP pP 09 33 15.0 -2.5
KMI sP sP 09 33 27.1 -1.9
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI pmax pmax
comp=Z,130nm,4.5s
BR131 Keskin Array S 29.75 288*d* *i*P **P** **09 33 01.7 +1.0**
BRTR Keskin Array B 29.75 288 P **P** **09 33 00.3 -0.4**
comp=Z,2.8nm,0.7s,baz=95,slow=8.5,SNR=15
BRTR ScP **ScP** **09 39 32.0 -3.4**
comp=Z,1.1nm,0.8s,baz=104,slow=5.0,SNR=3.5
BRTR Keskin Array B 29.75 288 *i* P **P** **09 33 02.0 +1.3**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 29.75 288 P **P** **09 32 59.4 -1.4**
MOS Moscow 29.88 321 *e*P **P** **09 33 01.2 -0.3**
MOS *e* 09 33 39.4
MOS *e* 09 34 05.3
PRGR Permogore 29.92 335 *e*P **P** **09 33 01.6 -0.2**
PRGR pmax pmax
comp=Z,34nm,0.8s
OBN Obninsk 30.16 319 P **P** **09 33 03.8 -0.2**
comp=Z,7.7nm,0.4s,baz=129,slow=5.8,SNR=5.4
OBN LR LR 09 46 06.6
comp=Z,16nm,20.6s,baz=198,slow=38
OBN Obninsk 30.16 319⇓*e*P **P** **09 33 03.9 -0.1**
OBN *e* 09 34 00.9
OBN pmax pmax
comp=Z,25nm,0.6s
OBN MLR MLR
comp=Z,81nm,17.0s
OBN Obninsk 30.16 319 P **P** **09 33 04.0 +0.1**
CMAR Chiang Mai Arr 30.16 119 P **P** **09 33 04.7 +0.3**
comp=Z,4.2nm,0.9s,baz=297,slow=8.9,SNR=7.2
CMAR ScP **ScP** **09 39 33.8 -3.2**
comp=Z,1.1nm,0.8s,baz=286,slow=4.0,SNR=6.1
CMAR LR LR 09 48 05.1
comp=Z,30nm,19.4s,baz=300,slow=42
CMAR Chiang Mai Arr 30.16 119 *i* P **P** **09 33 06.3 +1.9**
CMAR pmax pmax
comp=Z,4.0nm,0.9s
CMAR Chiang Mai Arr 30.16 119 P **P** **09 33 06.1 +1.7**
XAN Xi'an 30.61 83 P P 09 33 13.3 +5.0
XAN pmax pmax
comp=Z,10.0nm,0.6s
XAN pmax pmax
comp=Z,12nm,3.8s
EIL Elat 31.15 268 P **P** **09 33 12.5 -0.5**
comp=Z,6.1nm,0.9s,baz=19,slow=4.7,SNR=4.3
HHC Hu-ho-hao-te 31.47 70 *e*P **P** **09 33 18.8 +2.9**
HHC pmax pmax
comp=Z,8.0nm,1.1s
HHC pmax pmax
comp=Z,68nm,5.5s
KLMR Klimovskoe 31.66 330 *e*P **P** **09 33 14.8 -2.3**
KLMR pmax pmax
comp=Z,23nm,1.2s
KLMR Klimovskoe 31.66 330 *e*P **P** **09 33 14.8 -2.3**
KLMR AMP 09 33 20.6
comp=Z,23nm,1.2s
ELL Elmali 33.12 283 P **P** **09 33 31.9 +1.6**
AKASG Malin Array Be 33.21 309 P **P** **09 33 31.0 +0.2**
comp=Z,23nm,0.5s,baz=82,slow=6.9,SNR=89
AKASG LR LR 09 50 23.2
comp=Z,48nm,18.9s,baz=90,slow=42
AKASG Malin Array Be 33.21 309 *i* P **P** **09 33 31.5 +0.7**
AKASG pmax pmax
comp=Z,23nm,0.5s
AKASG Malin Array Be 33.21 309 P **P** **09 33 30.8 0.0**
AKASG IAmb IAmb 09 33 32.7
comp=Z,12nm,0.8s
AKBB Malin Array Si 33.21 309*c* *i*P **P** **09 33 31.2 +0.4**
KIEV Kiev 33.22 309 P **P** **09 33 30.0 -0.8**
TPGR Topolog 33.33 298 ⇓P **P** **09 33 33.0 +1.0**
SORM Soroca 33.48 304 ⇓P **P** **09 33 33.4 +0.3**
SORM Soroca 33.48 304 P **P** **09 33 33.4 +0.3**
CFR Carcaliu 33.53 299 ⇑P **P** **09 33 34.4 +0.8**
CFR Carcaliu 33.53 299 P **P** **09 33 34.9 +1.3**
CFR pmax pmax
comp=Z,12nm,1.0s
NRIK Noril'sk 34.09 10 P **P** **09 33 39.1 +0.9**
comp=Z,13nm,0.8s,baz=207,slow=7.4,SNR=15
NRIK LR LR 09 47 50.4
comp=Z,29nm,18.2s,baz=186,slow=36
NRIK Noril'sk 34.09 10⇓*e*P **P** **09 33 40.0 +1.8**
NRIK pmax pmax
comp=Z,12nm,0.7s
NRIK Noril'sk 34.09 10 P **P** **09 33 39.4 +1.2**
NRIK IAmb IAmb 09 33 41.5
comp=Z,12nm,0.7s
VRI Vrincioaia 34.52 300 ⇑P **P** **09 33 43.6 +1.4**
VRI Vrincioaia 34.52 300 P **P** **09 33 44.7 +2.5**
VRI pmax pmax
comp=Z,16nm,1.3s
PLOR Plostina 34.57 300 ⇑P **P** **09 33 44.3 +1.6**
PLOR Plostina 34.57 300 P **P** **09 33 44.3 +1.6**
ISR Istrita 34.66 299 P **P** **09 33 46.3 +2.8**
ISR pmax pmax
comp=Z,30nm,1.1s
MNK Minsk 34.74 315 *e*P **P** **09 33 44.0 0.0**
MNK *e**PP **pP** **09 34 07.0 +0.5**
MNK *e* 09 35 04.0
MNK *e*S **S** **09 39 06.0 -0.9**
MNK Minsk 34.74 315 *i* P **P** **09 33 46.1 +2.1**
comp=E,1.0nm,0.5s
MNK *i* P **P** **09 33 46.1 +2.1**
comp=N,45nm,1.1s
MNK *i* P **P** **09 33 46.1 +2.1**
comp=Z,42nm,0.7s
MNK *i* pP **pP** **09 34 06.8 +0.3**
MNK *i* PP **PP** **09 35 05.1 +0.7**
MNK *i* PcP **PcP** **09 36 17.7 +2.2**
MNK *i* S **S** **09 39 10.6 +3.6**
MNK *i* sS **sS** **09 39 46.8 0.0**
MNK *i* ScS **ScS** **09 43 58.2 +3.0**
MNK *i* LQ LQ 09 45 28.4
MNK *i* LR LR 09 47 59.4
MNK *i* LRM MLR 09 49 49.3
comp=N,502nm,20.0s
MNK *i* LRM MLR 09 49 52.6
comp=Z,146nm,22.5s
MNK *i* LRM MLR 09 49 57.7
comp=E,49nm,17.4s
KMPD K-Podol'skiy 34.77 305 P **P** **09 33 45.0 +0.7**
HORU Horodok 34.83 306 P **P** **09 33 46.2 +1.3**
PRAR RASCA 34.88 303 ⇑P **P** **09 33 46.0 +0.7**
BIZ Bicaz 34.95 302 ⇓P **P** **09 33 47.2 +1.3**
MLR Muntele Rosu 35.07 299 P **P** **09 33 48.1 +1.0**
comp=E,23nm,0.9s,baz=24,slow=2.5,SNR=37
MLR Muntele Rosu 35.07 299 ⇓P **P** **09 33 49.6 +2.5**
BOD Bodaibo 35.16 39 *e*P **P** **09 33 47.1 -0.5**
BOD pmax pmax
comp=Z,8.0nm,1.9s
EZN Ezine 35.32 289 P **P** **09 33 50.8 +1.7**
ALN Alexandroupoli 35.37 291 P **P** **09 33 50.6 +1.0**
ALN pmax pmax
comp=Z,5.0nm,2.5s
ALN Alexandroupoli 35.37 291 P **P** **09 33 47.6 -1.9**
DOPR Dopca 35.45 300 ⇓P **P** **09 33 51.6 +1.3**
NACGM Naroch 35.45 316 *i* P **P** **09 33 51.0 +0.9**
NACGM *i* P **P** **09 33 51.0 +0.9**
NACGM *i* P **P** **09 33 51.0 +0.9**
NACGM *i* Pb pP 09 33 53.1 -20
comp=Z,79nm,1.1s
NACGM *i* pP sP 09 34 09.9 -14
NACGM *i* PP **PnPn** **09 35 10.5 -1.4**
NACGM *i* S **S** **09 39 16.0 -1.8**
NACGM *i* sS **ScP** **09 39 49.7 -4.9**

NACGM *i* SS SnSn 09 41 20.0 -27
NACGM *i* LQ LQ 09 45 14.0
NACGM *i* LR LR 09 47 33.6
BURAR Bucovina Array 35.56 303 ⇓P **P** **09 33 52.1 +0.7**
BURAR Bucovina Array 35.56 303 P **P** **09 33 52.0 +0.7**
BURAR Bucovina Array 35.56 303 P **P** **09 33 51.0 -0.3**
BURAR IAmb IAmb 09 33 53.6
comp=Z,9.2nm,0.9s
BUR08 Bucovina Ar. S 35.58 303 P **P** **09 33 51.9 +0.5**
BUR08 IAmb IAmb 09 33 53.3
comp=Z,8.4nm,0.9s
KSV Kosov 35.68 304 P **P** **09 33 53.2 +1.0**
VOIR 35.70 299 ⇓P **P** **09 33 53.7 +1.3**
VOIR 35.70 299 P **P** **09 33 53.5 +1.0**
VOIR pmax pmax
comp=Z,8.0nm,0.7s
IIGN Ignalina 35.87 316 *e*P **P** **09 33 55.5 +1.9**
JOF Joensuu 36.05 330 P **P** **09 33 55.7 +0.7**
JOF pmax pmax
comp=Z,35nm,0.8s
ARCR ARCALIA 36.15 302 ⇑P **P** **09 33 57.3 +1.2**
VSU Vasula 36.40 321 *e*P **P** **09 33 58.5 +0.4**
VSU Vasula 36.40 321*ce*P **P** **09 33 59.1 +1.0**
VSU pmax pmax
comp=Z,88nm,1.0s
LVV L'vov 36.43 307 *e*P **P** **09 33 59.5 +1.0**
MORS Morshin 36.49 305 P **P** **09 34 01.1 +2.1**
LOT Lotru 36.60 299 ⇑P **P** **09 34 01.8 +1.6**
BMR Baia Mare 36.73 303 P **P** **09 34 03.4 +2.3**
BMR pmax pmax
comp=Z,23nm,1.1s
UBPT Khong Chiam 36.93 116 P **P** **09 34 04.1 +1.0**
UBPT IAmb IAmb 09 34 04.8
comp=Z,12nm,0.8s
TRSU Trosnyk 37.09 304 P **P** **09 34 06.2 +2.1**
PABE Paberze 37.16 316 *e*P **P** **09 34 05.6 +1.1**
SRS Serrai 37.18 292 P **P** **09 34 05.7 +0.7**
SRS pmax pmax
comp=Z,5.0nm,1.0s
DEV Deva 37.19 300 P **P** **09 34 07.6 +2.6**
DEV pmax pmax
comp=Z,15nm,0.7s
VTS Vitosha 37.23 295 P **P** **09 34 04.0 -1.6**
VTS pmax pmax
comp=Z,3.0nm,0.9s
VTS Vitosha 37.23 295 P **P** **09 34 04.0 -1.6**
DRGR 37.28 302 ⇓P **P** **09 34 07.3 +1.4**
DRGR 37.28 302 P **P** **09 34 07.3 +1.4**
DRGR pmax pmax
comp=Z,11nm,1.0s
KWP Kalwaria Pacla 37.28 306 *e*P **P** **09 34 07.9 +2.1**
KWP Kalwaria Pacla 37.28 306 P **P** **09 34 07.5 +1.8**
KWP pmax pmax
comp=Z,60nm,1.1s
GZR Gura Zlata 37.30 299 ⇑P **P** **09 34 06.7 +0.6**
PAIG Paliouri 37.31 290 P **P** **09 34 06.9 +0.8**
PAIG pmax pmax
comp=Z,7.0nm,1.4s
SUW Suwalki 37.36 314 *e*P **P** **09 34 07.0 +0.7**
SUW Suwalki 37.36 314 P **P** **09 34 04.7 -1.6**
SUW pmax pmax
comp=Z,55nm,0.8s
SUW Suwalki 37.36 314 P **P** **09 34 04.7 -1.6**
SOH Sokhos 37.40 292 P **P** **09 34 07.7 +0.8**
SOH pmax pmax
comp=Z,2.0nm,1.7s
IDI Anoyia 37.42 282 P **P** **09 34 06.9 -0.3**
comp=Z,2.3nm,0.3s,baz=76,slow=5.6,SNR=8.1
IDI Anoyia 37.42 282 P **P** **09 34 06.6 -0.5**
IDI IAmb IAmb 09 34 51.2
comp=Z,26nm,1.1s
UZH Uzhgorod 37.53 305*c* *i*P **P** **09 34 07.5 -0.4**
UZH *i* 09 34 27.4
LVZ Lovozero 37.60 338⇑*e*P **P** **09 34 08.5 +0.3**
LVZ pmax pmax
comp=Z,20nm,1.2s
LVZ Lovozero 37.60 338 P **P** **09 34 08.7 +0.5**
FIA1 FINESS Array S 37.68 326 IAmb IAmb 09 34 11.0
comp=Z,18nm,0.8s
FINES FINESS Array B 37.68 326 P **P** **09 34 08.9 0.0**
comp=Z,13nm,0.6s,baz=113,slow=7.6,SNR=46
FINES LR LR 09 50 35.0
comp=Z,108nm,18.0s,baz=60,slow=37
FINES FINESS Array B 37.68 326 *i* P **P** **09 34 09.1 +0.2**
FINES pmax pmax
comp=Z,13nm,0.6s
FINES FINESS Array B 37.68 326 P **P** **09 34 08.6 -0.3**
APA Apatity 37.78 337⇓*i*P **P** **09 34 05.1 -4.6**
APA pmax pmax
comp=Z,6.0nm,0.9s
APA MLR MLR
comp=Z,400nm,15.0s
MTSE Matsula 37.94 321 *e*P **P** **09 34 11.9 +0.8**
CRVS Cervenica-Dubn 38.09 305 *e*P **P** **09 34 13.8 +1.3**
CRVS Cervenica-Dubn 38.09 305 *e*P **P** **09 34 13.8 +1.3**
MDVR Moldovita 38.10 298 ⇓P **P** **09 34 14.0 +1.2**
SUF Sumiainen 38.11 328 P **P** **09 34 13.1 +0.6**
SUF pmax pmax
comp=Z,43nm,0.8s
MSF Maaselka 38.35 334 P **P** **09 34 15.0 +0.5**
MSF pmax pmax
comp=Z,28nm,0.9s
PBUR Paburge 38.38 317 *e*P **P** **09 34 16.2 +1.3**
NIE Niedzica 38.85 306 *e*P **P** **09 34 21.5 +2.6**
NIE Niedzica 38.85 306 P **P** **09 34 21.5 +2.6**
NIE pmax pmax
comp=Z,18nm,1.0s
OUL Oulu 39.15 331 P **P** **09 34 21.7 +0.6**
OUL pmax pmax
comp=Z,29nm,2.5s
NJ2 Nanjing 39.16 82 *e*P **P** **09 34 22.0 +0.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
OJC Ojcow 39.17 307 *e*P **P** **09 34 22.9 +1.3**
OJC Ojcow 39.17 307 P **P** **09 34 20.7 -0.9**
OJC pmax pmax
comp=Z,32nm,1.0s
OJC Ojcow 39.17 307 P **P** **09 34 20.7 -0.9**
VYHS Vyhne 39.83 304 *e*P **P** **09 34 28.9 +1.8**
VYHS Vyhne 39.83 304 *e*P **P** **09 34 28.9 +1.8**
SGF Sodankyl 39.96 335 P **P** **09 34 28.8 +0.9**
MORH Mrgy, Hungar 40.12 301 ⇑P **P** **09 34 31.0 +1.5**
JAVC Velka Javorina 40.59 305 *e*P **P** **09 34 36.1 +2.7**
MORC Moravsky Berou 40.63 306 *e*P **P** **09 34 35.2 +1.5**
MORC Moravsky Berou 40.63 306 P **P** **09 34 33.6 -0.1**
MORC pmax pmax
comp=Z,13nm,0.8s
MORC Moravsky Berou 40.63 306 P **P** **09 34 33.6 -0.1**
MORC IAmb IAmb 09 34 36.0
comp=Z,12nm,0.8s
GKP Gorka Klasztor 40.83 312 *e*P **P** **09 34 36.7 +1.5**
MODS Modra-Piesok 40.88 304 *e*P **P** **09 34 37.5 +1.8**
MODS Modra-Piesok 40.88 304 *e*P **P** **09 34 37.5 +1.8**
KEV Kevo 40.94 338 P **P** **09 34 35.3 -0.6**
KEV pmax pmax
comp=Z,23nm,1.0s
KEV Kevo 40.94 338 P **P** **09 34 35.3 -0.6**
KEV IAmb IAmb 09 34 38.3
comp=Z,23nm,1.0s
VRAC Vranov 41.27 306 ⇑P **P** **09 34 40.1 +1.2**
VRAC Vranov 41.27 306 *e*P **P** **09 34 41.1 +2.2**
VRAC Vranov 41.27 306 P **P** **09 34 40.3 +1.4**
VRAC pmax pmax
comp=Z,26nm,1.1s
ARA0 ARCESS Array S 41.29 337 *e*P **P** **09 34 40.0 +1.3**
ARCES ARCESS Array B 41.29 337 P **P** **09 34 39.2 +0.4**
comp=Z,17nm,0.7s,baz=113,slow=7.7,SNR=70
ARCES LR LR 09 53 03.2
comp=Z,139nm,19.0s,baz=105,slow=38
ARCES ARCESS Array B 41.29 337 P **P** **09 34 39.1 +0.4**
ARCES IAmb IAmb 09 34 41.3
comp=Z,15nm,0.8s
DPC Dobruska-Polom 41.40 307 *e*P **P** **09 34 41.1 +1.1**
DPC *e* 09 35 04.3
DPC Dobruska-Polom 41.40 307 *e*P **P** **09 34 41.1 +1.1**
DPC *e*pP **pP** **09 35 04.3 +0.9**
KRUC Moravsky 41.42 305 *e*P **P** **09 34 42.1 +2.0**
KRUC Moravsky 41.42 305 P **P** **09 34 41.9 +1.8**
KRUC pmax pmax
comp=Z,10.0nm,1.3s
UPC Upice 41.59 308 *e*P **P** **09 34 43.2 +1.7**
UPC Upice 41.59 308 *e*P **P** **09 34 43.2 +1.7**
KTK1 Kautokeino 41.77 336 *e*P **P** **09 34 42.9 +0.2**

BLEU Blekinge 41.81 316 *i* P P 09 34 44.0 +0.9
CONA Conrad Observa 41.86 304 *i* P P 09 34 45.4 +1.6
comp=Z,14nm,1.0s,SNR=9.8
ARSA Arzberg 42.15 303 *e*P P 09 34 47.1 +0.9
comp=Z,3.0nm,0.7s
BSD Bornholm Skovb 42.25 315 *i* P P 09 34 46.6 -0.2
BSD Bornholm Skovb 42.25 315 *i* P P 09 34 46.6 -0.2
HAMF Hammerfest 42.36 339 *e*P P 09 34 48.4 +1.0
SOKA Soboth 42.55 302 *i* P P 09 34 50.0 +0.6
comp=Z,14nm,1.2s,SNR=6.2
PRU Pruhonice 42.56 307 P P 09 34 50.5 +1.1
PRU pmax pmax
comp=Z,4.0nm,1.1s
GSI Gunungsitoli 42.56 139 P P 09 34 51.6 +1.8
CKRC Cesky Krumlov 42.81 305 *e*P P 09 34 53.4 +2.0
BRG Berggiesshubel 42.89 308 P P 09 34 53.2 +1.2
BRG pmax pmax
comp=Z,26nm,1.0s
BRG Berggiesshubel 42.89 308 *e*P P 09 34 53.0 +0.9
BRG Amp 09 34 54.3
comp=Z,24nm,0.9s
BRG *ex* x 09 35 03.0
BRG Amp 09 35 03.8
comp=Z,6.1nm,1.0s
DEL Delary 42.90 317 *i* P P 09 34 52.0 0.0
DEL *i* P P 09 34 52.9 +0.9
OBKA Obir 42.91 302 *e*P P 09 34 53.9 +1.6
comp=Z,3.0nm,0.7s
JETT Jettan, Norway 42.91 336 *e*P P 09 34 52.8 +0.8
MOA Molln 42.93 304 *e*P P 09 34 53.8 +1.3
comp=Z,7.3nm,0.9s
LUNU Lund 43.11 315 *i* P P 09 34 54.8 +1.1
GERES GERESS Array B 43.20 305 P P 09 34 54.7 -0.1
comp=Z,1.6nm,0.6s,baz=63,slow=6.1,SNR=7.3
GERES ScP **ScP** 09 40 22.0 -2.8
comp=Z,0.3nm,0.4s,baz=52,slow=6.4,SNR=3.6
GERES GERESS Array B 43.20 305 P P 09 34 55.8 +1.0
KHC Kasperske Hory 43.26 306 *e*P P 09 34 57.1 +2.0
KHC Kasperske Hory 43.26 306 *e*P P 09 34 57.1 +2.0
HFS Hagfors 43.28 322 P P 09 34 55.0 0.0
comp=Z,29nm,0.6s,baz=102,slow=11,SNR=76
CLL Collm 43.45 309⇓ *i*P P 09 34 57.6 +1.0
comp=Z,13nm,0.8s
CLL *ep*P **pP** 09 35 21.0 +1.1
CLL Collm 43.45 309⇓ *i*P P 09 34 57.6 +1.0
CLL pmax pmax
comp=Z,13nm,0.8s
MYKA Terra Mystica 43.51 302 *e*P P 09 34 58.1 +1.0
comp=Z,5.7nm,0.8s
FABU Falkenberg 43.55 317 *i* P P 09 34 58.5 +1.2
BORU Boraas 43.56 318 *i* P P 09 34 58.3 +1.0
KBA Koelnbreinsper 43.65 303 *e*P P 09 34 59.2 +0.8
comp=Z,2.1nm,0.5s
KBA Koelnbreinsper 43.65 303 P P 09 34 59.6 +1.2
KBA pmax pmax
comp=Z,6.0nm,0.9s
YAK Yakutsk 43.80 35⇓ *i*P P 09 35 00.9 +1.8
YAK pmax pmax
comp=Z,13nm,0.5s
N2IH Innhavet 43.90 333 *e*P P 09 35 00.2 +0.4
FAUS Fauske 43.97 332 *e*P P 09 35 00.8 +0.4
MOR8 Moi Rana 43.99 331 *e*P P 09 35 00.8 +0.1
ONAU Onsala 44.01 318 *i* P P 09 35 01.9 +1.1
STEI Steigen 44.14 333 *e*P P 09 35 02.7 +0.9
STAL STALIGIAL 44.20 302 P P 09 35 02.3 -0.3
ABTA Abfaltersbach 44.26 302 *e*P P 09 35 02.0 -1.2
comp=Z,3.5nm,0.8s
NC405 NORSAR Array S 44.35 323 P P 09 35 03.7 0.0
MOX Moxa 44.38 308 P P 09 35 05.8 +1.8
MOX pmax pmax
comp=Z,12nm,2.5s
NC602 NORSAR Array S 44.40 323 P P 09 35 03.8 -0.2
NC602 NORSAR Array S 44.40 323 *e*P P 09 35 04.4 +0.4
NORES NORESS Array B 44.40 323 P P 09 35 03.6 -0.4
NBB30 Finnes 44.45 332 *e*P P 09 35 05.2 +0.9
STRU Stroemstad 44.47 320 *e* P 09 35 02.3 -2.2
baz=338,slow=7.4
STRU *i* P P 09 35 02.6 -1.9
STRU IAML 09 35 05.6
comp=Z,2.2nm,0.3s
STRU *i* S P 09 35 07.3 +2.8
NB201 NORSAR Array S 44.55 323 P P 09 35 05.2 -0.1
KSRS Korea Array 44.58 71 P P 09 35 07.4 +1.6
comp=Z,1.9nm,0.6s,baz=276,slow=6.1,SNR=6.3
KSRS LR LR 09 57 14.0
comp=Z,22nm,20.3s,baz=330,slow=40
KONS Konsvik 44.59 331 *e*P P 09 35 06.4 +1.0
NB2 NORSAR Subarra 44.59 323 P P 09 35 06.0 +0.4
baz=97,slow=7.9
NOA NORSAR Array B 44.59 323 P P 09 35 05.3 -0.3
comp=Z,27nm,0.7s,baz=96,slow=7.8,SNR=83
NOA LR LR 09 57 00.1
comp=Z,32nm,18.1s,baz=100,slow=40
NBB40 Tonnes 44.63 331 *e*P P 09 35 06.8 +1.1
NSS Namsos 44.69 328 *e*P P 09 35 07.1 +0.9
GRF Grafenberg Arr 44.73 307 *e*P P 09 35 09.1 +2.3
comp=Z,17nm,1.1s,baz=94,slow=7.1
NAO01 NORSAR Array S 44.73 323 P P 09 35 07.1 +0.5
OSL Oslo 44.75 321 *e*P P 09 35 07.5 +0.7
WTTA Wattenberg 44.78 303 *e*P P 09 35 07.4 0.0
comp=Z,2.7nm,0.5s
NBO00 NORSAR Array S 44.80 323 P P 09 35 06.9 -0.4
WATA Walderalm 44.80 303 *e*P P 09 35 08.7 +1.1
comp=Z,7.2nm,0.8s
LOF Lofoten 44.81 333 *e*P P 09 35 07.6 +0.5
NC204 NORSAR Array S 44.83 323 P P 09 35 07.3 -0.1
KLR Kul'dur 44.90 54 P P 09 35 08.5 +0.4
comp=Z,1.2nm,0.5s,baz=279,slow=8.1,SNR=7.0
KLR Kul'dur 44.90 54⇑ *e*P P 09 35 09.6 +1.5
KLR pmax pmax
comp=Z,2.0nm,0.6s
BSEG Bad Segeberg 44.94 313 P P 09 35 10.4 +2.0
BSEG pmax pmax
comp=Z,42nm,0.9s
CTI Castel Tesino 44.96 302 P P 09 35 09.6 +0.8
CTI pmax pmax
comp=Z,8.0nm,0.6s
CTI Castel Tesino 44.96 302 P P 09 35 09.6 +0.8
CTI IAmb IAmb 09 35 10.0
comp=Z,8.4nm,0.6s
SQTA Sankt Quirin 45.07 303 *e*P P 09 35 09.7 0.0
comp=Z,3.6nm,0.4s
MOTA Moosalm 45.12 304 *e*P P 09 35 09.9 -0.2
comp=Z,4.6nm,0.7s
KONO Kongsberg 45.30 321 P P 09 35 11.5 +0.3
KONO pmax pmax
comp=Z,24nm,0.8s
KONO Kongsberg 45.30 321 P P 09 35 11.5 +0.3
KONO IAmb IAmb 09 35 12.6
comp=Z,24nm,0.8s
KONO Kongsberg 45.30 321 *e*P P 09 35 12.0 +0.9
RETA Reutte 45.33 304 *e*P P 09 35 12.3 +0.7
comp=Z,1.3nm,0.4s
BJO1 Bjornoya 45.38 343 *e*P P 09 35 12.6 +1.0
FETA Feichten 45.42 303 *e*P P 09 35 11.1 -1.5
comp=Z,2.9nm,0.5s
TIXI Tiksi 45.67 22 P P 09 35 13.8 -0.2
comp=Z,5.1nm,0.3s,baz=253,slow=5.7,SNR=14
TIXI Tiksi 45.67 22⇑ *e*P P 09 35 13.7 -0.2
TIXI pmax pmax
comp=Z,14nm,0.5s
TIXI Tiksi 45.67 22 P P 09 35 13.5 -0.4
TIXI IAmb IAmb 09 35 51.6
comp=Z,8.2nm,0.8s
DOMB Dombas 45.70 324 *e*P P 09 35 15.9 +1.6
SALO Salr 45.81 301 P P 09 35 14.7 -0.7
HOMB Homborsund 45.84 319 *i* P P 09 35 16.7 +1.3
HOMB Homborsund 45.84 319 *e*P P 09 35 16.4 +1.0
USA0B Ussuriysk Arra 45.90 61⇑ *e*P P 09 35 13.9 -2.2
USRK Ussuriysk Ar. 45.90 61 P P 09 35 15.8 -0.3
comp=Z,1.3nm,0.8s,baz=289,slow=8.8,SNR=2.6
DAVA Damuels 45.95 304 *i* P P 09 35 16.7 0.0
comp=Z,13nm,0.5s,SNR=8.7
SKAR Skarslia 45.99 322 *e*P P 09 35 17.4 +0.7
DAVOX Davos/Dischmat 46.04 303 P P 09 35 16.6 -0.8
comp=Z,3.6nm,0.4s,baz=129,slow=16,SNR=8.0
MOL Molde 46.44 325 *e*P P 09 35 20.9 +0.9
SNART Snartemo 46.53 319 *i* P P 09 35 21.9 +1.1
SNART Snartemo 46.53 319 *e*P P 09 35 21.8 +1.0
AKN Aaknes 46.67 324 *e*P P 09 35 21.6 -0.3
MSSA Maissana 46.78 300 P P 09 35 22.3 -0.8
BFO Black Forest 46.81 305 P P 09 35 24.2 +1.0
BFO pmax pmax
comp=Z,7.0nm,1.3s
ODD1 Odda 46.81 321 *e*P P 09 35 23.5 +0.5
BLS5 Blasjo 46.90 321 *e*P P 09 35 24.9 +1.2
HYA Hoyanger 47.03 323 *e*P P 09 35 25.6 +0.9
HSPB Hornsund (broa 47.24 345 *e*P P 09 35 27.5 +1.4
BER Bergen 47.45 322 *e*P P 09 35 28.9 +1.0
CDF Champ du Feu 47.48 306 *e*P P 09 35 29.2 +0.7
CDF pmax pmax
comp=Z,3.0nm,0.6s
ASK Askoy 47.52 322 *e*P P 09 35 29.4 +0.9
PGF Pioggiola 47.56 297 *e*P P 09 35 28.2 -1.0
PGF pmax pmax
comp=Z,3.0nm,0.6s
SPA0 Spitsbergen Ar 47.59 347 P P 09 35 30.7 +1.9
SPA0 Spitsbergen Ar 47.59 347 *e*P P 09 35 29.5 +0.7
SENIN Lac Senin/Sane 47.87 303 IAmb IAmb 09 35 32.6
comp=Z,8.8nm,0.7s
HINF Hinteralfeld 47.87 305 *e*P P 09 35 31.6 +0.1
HINF pmax pmax
comp=Z,8.0nm,1.0s
MEM Membach 47.93 309 *d*P P 09 35 32.9 +1.1
WLF Walferdange 47.99 307 *d*P P 09 35 34.3 +2.0
WLF Walferdange 47.99 307 P P 09 35 34.6 +2.3
WLF pmax pmax
comp=Z,26nm,1.1s
HAU Haudompre 48.17 305 *e*P P 09 35 33.9 +0.2
HAU pmax pmax
comp=Z,5.0nm,0.6s
SAOF Saorge 48.23 300 P P 09 35 34.6 +0.3
SAOF pmax pmax
comp=Z,15nm,1.2s
JNU Nakatsue 48.29 76 P P 09 35 37.2 +2.4
SBF Sospel 48.34 300 *e*P P 09 35 35.4 +0.2
SBF pmax pmax
comp=Z,10.0nm,0.8s
LPG La Plagne 48.43 302 *e*P P 09 35 36.6 +0.5
LPG pmax pmax
comp=Z,8.0nm,0.7s
LPL La Plagne 48.44 302 *e*P P 09 35 36.6 +0.5
LPL pmax pmax
comp=Z,3.0nm,0.4s
BNI Bardonecchia 48.58 301 P P 09 35 38.1 +1.0
BNI pmax pmax
comp=Z,7.0nm,1.6s
MBDF Montbardon 48.60 301 *e*P P 09 35 37.0 -0.2
MBDF pmax pmax
comp=Z,4.0nm,0.4s
CABF La Chapelle 48.63 303 *e*P P 09 35 38.4 +1.0
CABF pmax pmax
comp=Z,10.0nm,0.7s
KBS Kingsbay 48.70 347 P P 09 35 39.6 +2.2
KBS pmax pmax
comp=Z,53nm,1.1s
KBS Kingsbay 48.70 347 P P 09 35 39.5 +2.2
KBS Kingsbay 48.70 347 *e*P P 09 35 38.8 +1.4
BMRD Maredsous 48.76 308 *d*P P 09 35 39.6 +1.4
GIVF Givet 48.76 308 *e*P P 09 35 38.5 +0.3
GIVF pmax pmax
comp=Z,17nm,1.2s
DOU Dourbes 48.91 308 *d*P P 09 35 40.3 +1.0
DOU Dourbes 48.91 308 P P 09 35 38.9 -0.4
DOU pmax pmax
comp=Z,19nm,2.4s
FRF La Foret Royal 48.97 299 *e*P P 09 35 40.7 +0.8
FRF pmax pmax
comp=Z,4.0nm,0.5s
SNF Seneffe 49.03 309 *d*P P 09 35 41.6 +1.4
BAIF Baives 49.16 308 *e*P P 09 35 42.5 +1.3
BAIF pmax pmax
comp=Z,20nm,1.0s
KEST Kesra 49.34 289 P P 09 35 43.0 +0.1
comp=Z,2.1nm,0.5s,baz=209,slow=23,SNR=2.5
LOR Lormes 49.97 305 *e*P P 09 35 48.9 +1.4
LOR pmax pmax
comp=Z,2.0nm,0.6s
SSB Saint Sauveur 49.99 302 P P 09 35 46.9 -0.8
SSB pmax pmax
comp=Z,5.0nm,0.8s
SSB Saint Sauveur 49.99 302 P P 09 35 46.9 -0.8
SSB IAmb IAmb 09 35 49.1
comp=Z,4.7nm,0.8s
VIVF Saint-Julien-l 50.01 301 *e*P P 09 35 48.0 +0.1
VIVF pmax pmax
comp=Z,3.0nm,0.4s
AVF Avril sur Loir 50.42 304 *e*P P 09 35 51.0 +0.2
AVF pmax pmax
comp=Z,11nm,0.8s
JWT Wachi 50.99 71 P P 09 35 57.4 +2.1
CAF Calviac 51.78 302 *e*P P 09 36 01.7 +0.6
CAF pmax pmax
comp=Z,4.0nm,0.8s
LDF La Druitiere 52.25 307 *e*P P 09 36 03.6 -0.8
LDF pmax pmax
comp=Z,6.0nm,0.7s
FLN La Foliniere 52.43 307 *e*P P 09 36 05.7 -0.1
FLN pmax pmax
comp=Z,7.0nm,0.7s
MBAR Mbarara 52.76 235 *ce*P P 09 36 09.2 +0.4
MBAR pmax pmax
comp=Z,10.0nm,1.7s
GRR Gorron 52.77 307 *e*P P 09 36 08.2 -0.1
GRR pmax pmax
comp=Z,11nm,0.9s
NOR Nord 53.88 350 *i* P P 09 36 16.6 +0.6
NOR Nord 53.88 350 *i* P P 09 36 16.6 +0.6
SGMF Saint Gilles 53.90 307 *e*P P 09 36 16.8 +0.2
SGMF pmax pmax
comp=Z,16nm,1.1s
JMM Marumori 54.11 66 P P 09 36 18.6 +0.4
ETSF Etsaut 54.20 301 *e*P P 09 36 18.3 -0.7
ETSF pmax pmax
comp=Z,5.0nm,0.5s
SEY Seymchan 54.26 34⇓ *e*P P 09 36 20.6 +1.7
ROSF Rostrenen 54.33 308 *e*P P 09 36 19.7 0.0
ROSF pmax pmax
comp=Z,12nm,0.9s
QUIF Quistinic 54.39 307 *e*P P 09 36 20.6 +0.5
QUIF pmax pmax
comp=Z,59nm,1.8s
DAG Danmarks Havn 54.84 344 *i* P P 09 36 23.4 +0.5
DAG Danmarks Havn 54.84 344 *i* P P 09 36 23.4 +0.5
DBG Daneborg 55.71 341 *i* P P 09 36 30.3 +1.1
DBG IAmb IAmb 09 36 32.0
comp=Z,4.4nm,0.5s
ESDC Sonseca Array 57.75 298 P P 09 36 43.7 -0.6
comp=Z,0.9nm,0.6s,baz=58,slow=7.7,SNR=8.2
BILL Bilibino 58.49 26⇑ *e*P P 09 36 50.6 +1.7
BILL *e*'PP **pP** 09 37 15.1 +1.3
BILL *e* 09 39 00.3
BILL pmax pmax
comp=Z,3.0nm,0.8s
BILL MLR MLR
comp=Z,29nm,17.0s
PETK Petropavlovsk- 59.76 44 LR LR 10 03 52.5
comp=Z,31nm,20.0s,baz=284,slow=37
NEEM North Greenlan 61.12 348 *i* P P 09 37 07.7 +0.5
NEEM IAmb IAmb 09 37 10.0
comp=Z,17nm,1.1s
SUMG Summit 61.19 341 *i* P P 09 37 08.8 +0.9
SUMG IAmb IAmb 09 37 12.1
comp=Z,22nm,0.7s
SUMG Summit 61.19 341 *i* P P 09 37 08.7 +0.9
SUMG pmax pmax
comp=Z,22nm,0.7s
SUMG Summit 61.19 341 P P 09 37 08.7 +0.9
RTC Rabat Centre 62.24 293 pP 09 37 44.4 +4.5
EUNU Eureka 63.05 356 P P 09 37 20.6 +0.8
TULEG Thule 64.51 350 *i* P P 09 37 29.4 +0.2
TULEG IAmb IAmb 09 37 31.1
comp=Z,4.5nm,0.6s
TULEG Thule 64.51 350 IAmb IAmb 09 37 31.7
comp=Z,20nm,1.3s
LSZ Lusaka 65.67 226 P P 09 37 36.9 -0.8
LSZ pmax pmax
comp=Z,5.0nm,0.9s
LSZ Lusaka 65.67 226 P P 09 37 36.9 -0.8
LSZ IAmb IAmb 09 37 38.1
comp=Z,5.4nm,0.8s
TOA0 Torodi Ar. Sit 66.04 269 P P 09 37 37.7 -2.4
TOA0 IAmb IAmb 09 37 39.7
comp=Z,8.2nm,0.7s
TORD Torodi Ar. Bea 66.04 269 P P 09 37 36.9 -2.4
comp=Z,6.9nm,0.5s,baz=50,slow=6.0,SNR=49
TORD LR LR 10 10 06.1
comp=Z,15nm,19.5s,baz=60,slow=39
TORD Torodi Ar. Bea 66.04 269 P P 09 37 37.3 -2.8
TORD IAmb IAmb 09 37 39.7
comp=Z,6.6nm,0.7s
DY2G Dye2 66.92 337 *i* P P 09 37 46.0 +0.8
DY2G IAmb IAmb 09 37 46.8
comp=Z,7.4nm,0.6s
A21K Barrow 67.25 15 IAmb IAmb 09 37 48.8
comp=Z,7.0nm,0.7s
RES Resolute Bay 68.74 356 LR LR 10 09 36.1
comp=Z,25nm,19.1s,baz=204,slow=37
KOWA Kowa 69.89 273 P P 09 38 02.4 -1.8
KOWA IAmb IAmb 09 38 09.2
comp=Z,5.9nm,0.6s
TOLK Toolik Lake Re 70.86 15 P P 09 38 08.8 -0.6
TOLK IAmb IAmb 09 38 11.2
comp=Z,9.0nm,0.8s
COLD Coldfoot 71.91 16 P P 09 38 15.6 0.0
BMAR Burnt Mountain 72.89 14 P P 09 38 22.4 +0.9
FYU Fort Yukon 73.51 14 P P 09 38 26.0 +1.0
FYU IAmb IAmb 09 38 27.6
comp=Z,8.3nm,1.0s
MLY Manley 73.61 17 P P 09 38 26.2 +0.5
C36M Paulatuk 73.87 6 IAmb IAmb 09 38 28.4
comp=Z,12nm,0.7s
INK Inuvik 73.87 9 P P 09 38 27.5 +0.4
comp=Z,4.7nm,0.5s,baz=343,slow=6.6,SNR=40
INK Inuvik 73.87 9 IAmb IAmb 09 38 29.8
comp=Z,13nm,1.2s
MDM Murphy Dome 74.25 16 IAmb IAmb 09 38 31.6
comp=Z,8.4nm,1.0s
BPAW Bear Paw Mtn. 74.32 18 P P 09 38 29.6 -0.3
NEA2 Nenana 74.37 17 IAmb IAmb 09 38 31.9
comp=Z,8.3nm,0.8s
TCOL CIGO, UAF Yank 74.41 16 P P 09 38 30.1 -0.3
TCOL IAmb IAmb 09 38 32.8
comp=Z,10nm,0.8s
COLA College 74.41 16 *de*P P 09 38 31.4 +1.1
COLA pmax pmax
comp=Z,10.0nm,0.8s
BWN Browne 74.63 17 IAmb IAmb 09 39 12.1
comp=Z,14nm,1.0s
WRH Wood River Hil 74.70 17 P P 09 38 32.3 +0.3
ILAR Eielson Array 74.71 16 P P 09 38 32.3 +0.2
comp=Z,3.7nm,0.9s,baz=316,slow=4.6,SNR=29
ILAR Eielson Array 74.71 16 P P 09 38 31.4 -0.7
ILAR Eielson Array 74.71 16 P P 09 38 31.4 -0.7
KTH Kantishna Hill 74.79 18 IAmb IAmb 09 38 34.4
comp=Z,10nm,0.9s
LBTB Lobatse 74.88 222 P P 09 38 33.4 -0.3
LBTB pmax pmax
comp=Z,8.0nm,0.9s
LBTB Lobatse 74.88 222 P P 09 38 33.4 -0.3
LBTB IAmb IAmb 09 39 25.1
comp=Z,8.4nm,0.8s
KNRA Kununurra 74.95 123 P P 09 38 34.3 +0.2
KNRA IAmb IAmb 09 39 06.0
comp=Z,9.6nm,0.8s
PPLA Purkeypile 75.00 19 IAmb IAmb 09 40 04.7
comp=Z,20nm,1.4s
DBIC Dimbokro 75.02 267 P P 09 38 32.6 -2.1
comp=Z,2.1nm,0.6s,baz=22,slow=5.1,SNR=7.9
DBIC Dimbokro 75.02 267 P P 09 38 32.6 -2.1
DBIC IAmb IAmb 09 39 18.7
comp=Z,18nm,1.4s
TRF Thorofare Moun 75.03 18 P P 09 38 34.5 +0.3
TRF IAmb IAmb 09 38 53.2
comp=Z,14nm,1.5s
MCK McKinley 75.12 17 P P 09 38 34.0 -0.6
MCK pmax pmax
comp=Z,9.0nm,1.2s
MCK McKinley 75.12 17 P P 09 38 34.0 -0.6
SCRK Sand Creek 76.03 15 P P 09 38 40.3 +0.4
DOT Dot Lake 76.31 15 P P 09 38 41.7 +0.4
K27K Chicken 76.38 14 P P 09 38 42.4 +0.8
SUA Susitna One 76.57 19 P P 09 38 42.9 0.0
SUA IAmb IAmb 09 39 26.4
comp=Z,14nm,1.2s
DAWY Dawson 76.87 13 P P 09 38 44.5 0.0
PMR Palmer 76.89 19 P P 09 38 44.8 +0.3
PMR pmax pmax
comp=Z,8.0nm,1.2s
PMR Palmer 76.89 19 P P 09 38 44.8 +0.3
SML Sawmill 76.91 18 P P 09 38 44.8 0.0
SML IAmb IAmb 09 39 33.9
comp=Z,16nm,1.0s
SCM Sheep Creek Mo 77.13 18 P P 09 38 45.9 -0.1
SCM pmax pmax
comp=Z,25nm,1.4s
SCM Sheep Creek Mo 77.13 18 P P 09 38 45.9 -0.1
SCM IAmb IAmb 09 39 50.1
comp=Z,25nm,1.4s
M24K Tolsona, Glenn 77.18 17 P P 09 38 46.8 +0.6
M24K IAmb IAmb 09 38 48.4
comp=Z,15nm,0.8s
BCAR Beaver Creek A 77.30 15 P P 09 38 47.5 +0.5
KLU Klutina 77.77 17 P P 09 38 50.8 +1.2
KLU IAmb IAmb 09 39 37.7
comp=Z,9.7nm,1.1s
BOSA Boshof 77.94 220 P P 09 38 50.1 -0.8
comp=Z,8.7nm,0.8s,baz=44,slow=3.9,SNR=16
BOSA Boshof 77.94 220 P P 09 38 50.5 -0.4
BOSA pmax pmax
comp=Z,13nm,1.0s
BOSA Boshof 77.94 220 P P 09 38 50.5 -0.4
BOSA IAmb IAmb 09 38 51.1
comp=Z,13nm,0.9s
N25K Chitina, Valde 77.98 17 P P 09 38 51.5 +0.8
N25K IAmb IAmb 09 39 29.6
comp=Z,19nm,1.4s
CRQM Cirque 79.07 16 P P 09 38 56.6 -0.2
CRQM IAmb IAmb 09 40 48.6
comp=Z,25nm,1.3s
KDAK Kodiak Island 79.10 22 P P 09 38 57.1 +0.3
KDAK pmax pmax
comp=Z,78nm,1.5s
KDAK Kodiak Island 79.10 22 P P 09 38 57.1 +0.3
CTGM Chitina Glacie 79.28 16 P P 09 38 57.4 -0.5
CTGM IAmb IAmb 09 40 39.6
comp=Z,23nm,1.4s
OHAK Old Harbor 79.34 23 P P 09 38 58.1 0.0
OHAK IAmb IAmb 09 41 14.0
comp=Z,33nm,1.4s
YKA Yellowknife Ar 81.25 3 P P 09 39 08.4 +0.1
comp=Z,3.9nm,0.5s,baz=354,slow=5.3,SNR=110
WRA Warramunga Arr 81.71 122 P P 09 39 10.4 -0.9
comp=Z,0.9nm,0.5s,baz=322,slow=5.0,SNR=18
WRA Warramunga Arr 81.71 122 *i* P P 09 39 11.3 0.0
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 81.71 122 P P 09 39 10.9 -0.4
WRAB Tennant Creek 81.71 122⇓ *e*P P 09 39 10.6 -0.7
AS31 Alice Springs 83.98 125 P P 09 39 23.6 +0.6
ASAR Alice Springs 83.98 125 P P 09 39 22.3 -0.7
comp=Z,1.3nm,0.6s,baz=311,slow=4.9,SNR=23
ASAR Alice Springs 83.98 125 P P 09 39 23.3 +0.2
FFC Flin Flon 88.98 356 P P 09 39 47.4 +0.4
FFC pmax pmax
comp=Z,12nm,1.2s
FFC Flin Flon 88.98 356 P P 09 39 47.4 +0.4
FFC IAmb IAmb 09 39 49.1
comp=Z,12nm,1.1s
ULM Lac du Bonnet 92.92 352 P P 09 40 05.2 -0.1
comp=Z,5.1nm,0.9s,baz=4.2,slow=5.0,SNR=9.8
ULM LR LR 10 24 06.3
comp=Z,25nm,21.5s,baz=40,slow=37
HNR Honiara 94.37 98 LR LR 10 26 57.7
comp=Z,28nm,19.6s,baz=212,slow=38
PDAR Pinedale Array 101.13 1 P Pdif 09 40 43.3 +0.4
comp=Z,0.2nm,0.6s,baz=39,slow=5.9,SNR=3.6
CPUP Villa Florida 135.53 268 PKP **PKPdf** 09 46 11.0 -1.4
comp=Z,1.9nm,0.9s,baz=154,slow=3.0,SNR=4.6
CPUP Villa Florida 135.53 268 PKIKP **PKPdf** 09 46 11.0 -1.4
PLCA Paso Flores 150.12 250 PKPbc **PKPbc** 09 46 41.8 -0.9
comp=Z,3.8nm,0.8s,baz=132,slow=5.2,SNR=7.5

IDC 13 09:50:43.9 ±2.8, 53.55N × 87.15E, h0 km, mb1 2.6/2, mb1mx2.6/51, mbtmp2.6/2, ML1.6/1 Error ellipse: s-maj=24.9km s-min=14.3km az=76.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.44**	**287**	*i*			10 00 00.0	

baz=102,slow=326,SNR=2.0

ZALV	**Zalesovo Beam**	**1.44**	**287**	Pg	Pn	09 51 09.6	-1.6		
	0.6nm,0.3s,baz=108,slow=15,SNR=3.5								
ZALV				Lg	Lg	09 51 30.8			
	0.7nm,0.3s,baz=110,slow=30,SNR=7.8								
KURBB	**Kurchatov Arra**	**6.07**	**245**	Pn	Pn	09 52 14.1	-0.7		
	0.0nm,0.3s,baz=60,slow=14,SNR=1.7								
KURBB				Lg	Lg	09 53 53.6			
	0.0nm,0.3s,baz=63,slow=33,SNR=2.0								
MKAR	**Makanchi Array**	**7.45**	**207**	Pn	Pn	09 52 36.1	+2.3		
	baz=28,slow=14,SNR=1.1								
MKAR				Sn	Sn	09 53 59.4	+0.5		
	0.1nm,0.3s,baz=28,slow=27,SNR=1.4								
MKAR				Lg	Lg	09 54 40.5			
	0.0nm,0.3s,baz=27,slow=30,SNR=2.2								

IDC 13 09:51:25.5±4.1, 4°33S×152°22E, h0km, mb3.0/2, mb1 3.3/2, mb1mx3.1/34, mbtmp3.1/2, Error ellipse: s-maj=172.9km s-min=54.5km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.34**	**227**	P	P	09 56 35.9	+0.2
	0.4nm,0.9s,baz=52,slow=9.8,SNR=2.6						
ASAR	**Alice Springs**	**26.12**	**221**	P	P	09 57 01.6	+0.1
	0.2nm,0.7s,baz=54,slow=9.3,SNR=2.4						
TORD	**Torodi Ar. Bea**	**149.61**	**289**	PKPbc	PKPbc	10 11 17.5	-0.7
	0.3nm,0.5s,baz=61,slow=2.1,SNR=1.1						

*ISK **13** 09:52:57.3, 38°.88N×26°.24E, h9km, ML2.9/34*
*DDA **13** 09:52:57.8, 38°.91N×26°.28E, h25km±1km, ML3.0*
*ATH **13** 09:52:58.5, 38°.90N×26°.21E, h16km±3km, ML2.6/5, Error ellipse: s-maj=3.2km s-min=1.2km az=291.0*
*THE **13** 09:52:58.7, 38°.91N×26°.22E, h10km, ML2.6/6, Error ellipse: s-maj=1.0km s-min=0.5km az=263.0*
ISC 13 09:52:58.2±0.9, 38°.90N±0°.02×26°.25E±0°.02, h14km±8km, n70, σ0°73/97, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.35**	**3**	P	**Pg**	**09 53 05.8**	**+0.5**
PRK				S	**Sb**	**09 53 10.8**	**-0.8**
PRK				AML	AML	09 53 16.0	
	comp=E,1829μm,0.2s						
PRK				AML	AML	09 53 16.6	
	comp=N,2257μm,0.4s						
PRK	**Paraskevi**	**0.35**	**3**	P	**Pg**	**09 53 05.8**	**+0.5**
PRK				S	**Sg**	**09 53 10.5**	**+0.4**
	comp=N,995nm,0.3s						
FOCM	**Foa**	**0.42**	**116**	PG	**Pg**	**09 53 06.4**	**-0.2**
FOCM				SG	**Sg**	**09 53 12.5**	**+0.3**
SIGR	**SIGRI**	**0.44**	**316**	P	**Pg**	**09 53 06.8**	**0.0**
SIGR				S	**Sg**	**09 53 12.8**	**+0.1**
SIGR				AML	AML	09 53 13.8	
	comp=E,2080μm,0.4s						
SIGR				AML	AML	09 53 14.3	
	comp=N,3103μm,0.3s						
SIGR	**SIGRI**	**0.44**	**316**	P	**Pg**	**09 53 06.9**	**0.0**
SIGR				S	**Sg**	**09 53 13.0**	**+0.2**
	comp=N,1μm,0.3s						
CHOS	**Chios island**	**0.53**	**196**	P	**Pg**	**09 53 08.5**	**-0.1**
CHOS				AML	AML	09 53 21.3	
	comp=E,1381μm,0.2s						
CHOS				AML	AML	09 53 23.8	
	comp=N,873μm,0.3s						
CHOS	**Chios island**	**0.53**	**196**	P	**Pg**	**09 53 08.8**	**+0.2**
CHOS	**Chios island**	**0.53**	**196**	PG	**Pg**	**09 53 08.5**	**-0.1**
AYVA	**Ayvalik**	**0.54**	**40**	*i* P	**Pg**	**09 53 08.4**	**-0.4**
AYVA				*i* S	**Sg**	**09 53 15.5**	**-0.4**
DKL	**Dikili**	**0.54**	**71**	PG	**Pg**	**09 53 08.8**	**0.0**
DKL				SG	**Sg**	**09 53 16.1**	**0.0**
URLA	**Izmir**	**0.60**	**153**	*i* P	**Pg**	**09 53 08.6**	**-1.3**
URLA				*i* S	**Sg**	**09 53 17.2**	**-0.7**
URLA	**Izmir**	**0.60**	**153**	PG	**Pg**	**09 53 08.7**	**-1.3**
URLA				SG	**Sg**	**09 53 17.9**	**0.0**
KOCA	**Canakkale, Ayv**	**0.61**	**352**	*i* P	**Pg**	**09 53 09.6**	**-0.5**
KOCA				*i* S	**Sb**	**09 53 19.7**	**+0.5**
KOCA				IAML		09 53 22.0	
	comp=E,530nm,0.2s						
PSRA	**Psara**	**0.64**	**237**	P	**Pg**	**09 53 10.6**	**0.0**
ZEDA	**zmir-Bergama**	**0.65**	**84**	*i* P	**Pg**	**09 53 10.5**	**-0.4**
ZEDA				*i* S	**Sg**	**09 53 19.4**	**-0.1**
ZEYE	**Izmir, Urla-Ze**	**0.69**	**163**	*i* P	**Pg**	**09 53 11.2**	**-0.3**
ZEYE				*i* S	**Sb**	**09 53 22.4**	**+1.1**
ZEYE				IAML		09 53 24.0	
	comp=E,2μm,0.4s						
ZEYE				IAML		09 53 24.0	
	comp=N,768nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**0.88**	**15**	*i* P	**Pb**	**09 53 13.9**	**-1.3**
BAYC				*i* S	**Sb**	**09 53 26.2**	**-0.6**
BUHA	**Balikesir, Bur**	**0.88**	**47**	*i* P	**Pb**	**09 53 14.4**	**-0.9**
BUHA				*i* S	**Sg**	**09 53 27.6**	**+0.7**
BUHA				IAML		09 53 30.0	
	comp=E,500nm,0.5s						
EZN	**Ezine**	**0.93**	**4**	P	**Pb**	**09 53 15.5**	**-0.6**
EZN				S	**Sg**	**09 53 28.9**	**+0.6**
	comp=E,715nm,0.5s						
EZN	**Ezine**	**0.93**	**4**	PG	**Pb**	**09 53 15.9**	**-0.2**
BOZC	**Bozcaada**	**0.96**	**351**	PG	**Pb**	**09 53 15.8**	**-0.7**
BOZC				SG	**Sn**	**09 53 30.4**	**-0.3**
ECEA	**Canakkale, Ece**	**1.15**	**357**	*i* P	**Pb**	**09 53 20.0**	**+0.2**
ECEA				*i* S	**Sn**	**09 53 35.0**	**-0.3**
ECEA				IAML		09 53 40.0	
	comp=N,342nm,0.3s						
ECEA				IAML		09 53 42.0	
	comp=E,319nm,0.7s						
STEP	**BALIKESIR_Sava**	**1.24**	**67**	*i* P	**Pb**	**09 53 21.5**	**+0.1**
STEP				*i* S	**Sb**	**09 53 37.0**	**-0.4**
SMG	**Samos**	**1.27**	**158**	P	**Pn**	**09 53 22.0**	**+0.4**
SMG				AML	AML	09 53 43.7	
	comp=N,851μm,0.3s						
SMG				AML	AML	09 53 43.9	
	comp=E,959μm,0.3s						
SMG	**Samos**	**1.27**	**158**	P	**Pb**	**09 53 22.2**	**+0.2**
SMG				S	**Sg**	**09 53 39.6**	**+0.3**
	comp=E,460nm,0.3s						
LIA	**Limnos Island**	**1.29**	**321**	P	**Pn**	**09 53 21.8**	**-0.1**
LIA				AML	AML	09 53 42.1	
	comp=N,232μm,0.3s						
LIA				AML	AML	09 53 43.9	
	comp=E,296μm,0.5s						
LIA	**Limnos Island**	**1.29**	**321**	P	**Pn**	**09 53 21.8**	**-0.1**
LIA				S	**Sn**	**09 53 38.8**	**-0.2**
	comp=E,135nm,0.4s						
GOKA	**anakkale-Gk**	**1.32**	**349**	*i* P	**Pn**	**09 53 22.2**	**0.0**
GOKA				*i* S	**Sn**	**09 53 39.2**	**-0.3**
GADA	**Gvkgeada**	**1.32**	**348**	P	**Pn**	**09 53 21.9**	**-0.3**
GADA	**Gvkgeada**	**1.32**	**348**	PN	**Pn**	**09 53 22.1**	**-0.1**
GOKC	**Gokceada-Canak**	**1.33**	**349**	PN	**Pn**	**09 53 22.5**	**+0.2**
BALY	**Balya**	**1.36**	**51**	*i* P	**Pn**	**09 53 21.2**	**-1.6**
BALY				*i* S	**Sb**	**09 53 41.2**	**+0.5**
BALB	**Balikesir**	**1.47**	**59**	PN	**Pn**	**09 53 24.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.51**	**7**	PN	**Pn**	**09 53 24.8**	**0.0**
LPK	**Lapseki**	**1.53**	**15**	PN	**Pn**	**09 53 25.1**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.60**	**126**	PN	**Pn**	**09 53 26.2**	**0.0**
SMTH	**Samothraki Isl**	**1.67**	**341**	P	**Pn**	**09 53 27.3**	**+0.3**
SMTH	**Samothraki Isl**	**1.67**	**341**	P	**Pn**	**09 53 26.7**	**-0.3**
KRBG	**Karabiga-Canak**	**1.70**	**28**	PN	**Pn**	**09 53 27.5**	**+0.1**
AYDN	**Tasoluk**	**1.78**	**133**	*i* P	**Pn**	**09 53 29.3**	**+0.7**
AYDN				*i* S	**Sb**	**09 53 54.1**	**+1.2**
ERIK	**Erikli-Kesan**	**1.78**	**7**	PN	**Pn**	**09 53 29.1**	**+0.5**
ENEZ	**Enez**	**1.84**	**358**	P	**Pn**	**09 53 29.4**	**+0.1**
ENEZ				S	**Sn**	**09 53 52.9**	**+0.5**
	comp=E,100nm,0.4s						
ENEZ	**Enez**	**1.84**	**358**	PN	**Pn**	**09 53 30.1**	**+0.8**
MANT	**Manisa**	**1.85**	**102**	*i* P	**Pn**	**09 53 29.4**	**-0.4**
MANT				*i* S	**Sg**	**09 53 57.0**	**-0.9**
DURS	**Dursunbey**	**1.87**	**67**	*i* P	**Pn**	**09 53 29.3**	**-0.5**
DURS				*i* S	**Sn**	**09 53 54.3**	**+1.0**
APE	**Apeiranthos**	**1.91**	**197**	PN	**Pn**	**09 53 30.4**	**0.0**
EDC	**Edincik**	**1.91**	**40**	PN	**Pn**	**09 53 30.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.93**	**22**	PN	**Pn**	**09 53 31.8**	**+1.2**
KULA	**Kula-Manisa**	**1.93**	**101**	PN	**Pn**	**09 53 31.5**	**+0.8**
SART	**Tekirdag**	**1.93**	**22**	*i* P	**Pn**	**09 53 30.3**	**-0.4**
SART				*i* S	**Sb**	**09 53 56.2**	**-1.0**
MAR6	**Marsite Statio**	**1.97**	**23**	PN	**Pn**	**09 53 32.3**	**+1.1**
MAR2	**Marsite Statio**	**2.00**	**24**	PN	**Pn**	**09 53 32.8**	**+1.3**
MRMT	**Marmara Adasi**	**2.00**	**31**	PN	**Pn**	**09 53 32.8**	**+1.2**
ALN	**Alexandroupoli**	**2.00**	**356**	P	**Pn**	**09 53 31.4**	**-0.2**
ALN	**Alexandroupoli**	**2.00**	**356**	PN	**Pn**	**09 53 32.4**	**+0.8**
MAR3	**Marsite Statio**	**2.01**	**23**	PN	**Pn**	**09 53 33.1**	**+1.3**
BODT	**Bodrum**	**2.02**	**155**	PN	**Pn**	**09 53 30.9**	**-0.9**
GZKV	**Gazikoy-Tekird**	**2.03**	**24**	PN	**Pb**	**09 53 33.5**	**-1.3**
MAR4	**Marsite Statio**	**2.06**	**23**	PN	**Pn**	**09 53 33.5**	**+1.1**
THAS	**Thassos island**	**2.07**	**326**	P	**Pn**	**09 53 32.4**	**-0.2**
SIMA	**Simav-Kutahya**	**2.14**	**84**	PN	**Pn**	**09 53 34.5**	**+0.9**
OUR	**Ouranopolis**	**2.26**	**310**	PN	**Pn**	**09 53 35.7**	**+0.5**
RDO	**Rodhopi**	**2.31**	**347**	PN	**Pn**	**09 53 36.6**	**+0.8**
YER	**Yerkesik**	**2.38**	**137**	PN	**Pn**	**09 53 37.8**	**+0.9**
TVSB	**Tavsanli**	**2.56**	**77**	PN	**Pn**	**09 53 40.7**	**+1.3**
SLVT	**Silivri**	**2.77**	**32**	PN	**Pn**	**09 53 43.4**	**+1.2**
CTKS	**Kestanelik-??a**	**2.91**	**36**	PN	**Pn**	**09 53 45.9**	**+1.8**
YLV	**Yalova**	**2.93**	**54**	PN	**Pn**	**09 53 45.7**	**+1.3**
CTYL	**Yalikoy Yolu**	**3.01**	**31**	PN	**Pn**	**09 53 46.8**	**+1.3**
ISK	**Istanbul-Kandi**	**3.06**	**44**	PN	**Pn**	**09 53 47.5**	**+1.4**

*IDC **13** 09:56:31.8±1.2, 41°.76S×82°.03E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/34, mbtmp3.8/6, MS3.5/12, Ms1 3.5/12, ms1mx3.3/34, Error ellipse: s-maj=37.1km s-min=30.7km az=92.0*
ISC 13 09:56:33.0±1.1, 41°.75±0°.2×82°.0E±0°.2, h10km, n26, σ0°43/11, mb4.0/6, MS3.6/12, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**26.03**	**85**	T	T	10 29 18.6	
	baz=244,slow=74,SNR=25						
H01W3	**Cape Leeuwin H**	**26.04**	**85**	T	T	10 29 18.7	
	baz=244,slow=74,SNR=30						
H01W1	**Cape Leeuwin H**	**26.05**	**85**	T	T	10 29 16.5	
	baz=244,slow=74,SNR=21						
MAW	**Mawson**	**27.92**	**196**	LR	LR	10 11 13.2	
	comp=Z,133nm,18.4s,baz=60,slow=32						
H08S2	**Diego Garcia H**	**34.98**	**343**	T	T	10 40 15.2	
	baz=170,slow=74						
H08S1	**Diego Carcia H**	**34.99**	**343**	T	T	10 40 15.6	
	baz=170						
H08S3	**Diego Garcia H**	**35.00**	**343**	T	T	10 40 15.7	
	baz=170,slow=74						
OPO	**Ambohidratompo**	**37.54**	**297**	LR	LR	10 13 47.8	
	comp=Z,67nm,20.7s,baz=116,slow=28						
ASAR	**Alice Springs**	**46.53**	**84**	P	**P**	**10 05 00.7**	**-0.2**
	0.4nm,0.8s,baz=234,slow=7.3,SNR=4.8						
ASAR				PcP	**PcP**	**10 06 35.5**	**+0.5**
	0.3nm,0.5s,baz=230,slow=2.4,SNR=5.8						
BOSA	**Boshof**	**47.39**	**267**	LR	LR	10 21 09.2	
	comp=Z,33nm,20.1s,baz=154,slow=31						
VNDA	**Vanda**	**47.47**	**163**	LR	LR	10 22 55.3	
	comp=Z,85nm,19.8s,baz=276,slow=33						
STKA	**Stephens Creek**	**47.88**	**98**	P	**P**	**10 05 11.1**	**-0.1**
	1.0nm,0.7s,baz=211,slow=9.1,SNR=2.9						
STKA				LR	LR	10 22 30.4	
	comp=Z,29nm,18.4s,baz=208,slow=33						
QSPA	**South Pole Qui**	**48.42**	**180**	P	**P**	**10 05 14.9**	**-0.1**
	4.2nm,1.1s,baz=306,slow=2.7,SNR=9.1						
PALK	**Pallekele**	**48.79**	**358**	LR	LR	10 22 46.5	
	comp=Z,76nm,18.1s,baz=272,slow=32						
WRA	**Warramunga Arr**	**49.09**	**80**	P	**P**	**10 05 21.0**	**+0.4**
	0.6nm,0.7s,baz=231,slow=8.1,SNR=6.0						
WRA				PcP	**PcP**	**10 06 44.3**	**+0.1**
	0.3nm,0.8s,baz=225,slow=2.2,SNR=1.6						
KMBO	**Kilima Mbogo**	**57.01**	**303**	LR	LR	10 25 31.0	
	comp=Z,19nm,21.5s,baz=92,slow=30						
CMAR	**Chiang Mai Arr**	**61.92**	**18**	P	**P**	**10 06 52.3**	**-0.5**
	0.5nm,0.4s,baz=206,slow=6.0,SNR=2.6						
JAY	**Jayapura**	**65.35**	**70**	LR	LR	10 36 23.3	
	comp=Z,27nm,18.1s,baz=76,slow=37						
URZ	**Urewera**	**69.12**	**123**	LR	LR	10 32 29.9	
	comp=Z,69nm,18.9s,baz=212,slow=31						
MKAR	**Makanchi Array**	**88.15**	**0**	LR	LR	10 46 52.0	
	comp=Z,37nm,18.4s,baz=152,slow=34						
TORD	**Torodi Ar. Bea**	**91.54**	**286**	LR	LR	10 48 34.5	
	comp=Z,32nm,19.5s,baz=240,slow=34						
KURBB	**Kurchatov Arra**	**92.03**	**358**	P	**P**	**10 09 41.5**	**+0.1**
	0.5nm,0.7s,baz=191,slow=4.3,SNR=2.9						
PLCA	**Paso Flores**	**94.21**	**201**	LR	LR	10 52 36.0	
	comp=Z,24nm,18.5s,baz=168,slow=36						
ILAR	**Eielson Array**	**144.12**	**33**	PKP	**PKPdf**	**10 16 07.2**	**-0.6**
	0.6nm,0.8s,baz=302,slow=2.8,SNR=5.1						
RES	**Resolute Bay**	**146.93**	**358**	PKPbc	**PKPbc**	**10 16 14.8**	**+0.6**
	1.5nm,0.9s,baz=353,slow=3.8,SNR=4.7						
INK	**Inuvik**	**147.38**	**24**	PKPbc	**PKPbc**	**10 16 16.0**	**+0.4**
	1.9nm,0.9s,baz=281,slow=1.1,SNR=4.3						

*KRNET **13** 09:58:43.0±0.1, 43°.97N×77°.07E, h15km, mb2.2*
*NNC **13** 09:58:43.9±1.3, 43°.93N×77°.00E, h0km, mb2.6, mpv2.7, Error ellipse: s-maj=12.6km s-min=6.2km az=155.0, Suspected Mining explosion.*
*SOME **13** 09:58:43.1, 44°.00N×77°.07E*
ISC 13 09:58:42.3±1.0, 44°.00N±0°.05×77°.01E±0°.02, h0km, n20, σ0°90/38, 15C-8D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTBS	**Karatobe**	**0.37**	**219**	*e*P	**Pb**	**09 58 51.1**	**-0.7**
	baz=28						
KTBS				*e*S	**Sb**	**09 58 56.6**	**-1.5**
	baz=28						
ARXS	**Arharly**	**0.63**	**70**	P	**Pb**	**09 58 54.9**	**-1.3**
	16nm,0.3s						
ARXS				S	**Sb**	**09 59 05.3**	**-0.2**
	14nm,0.4s						
KOTS	**Kotyrbulak**	**0.77**	**174**	*e*P	**Pg**	**09 58 56.8**	**-0.2**
	baz=78						
KOTS				*e*S	**Sg**	**09 59 07.0**	**0.0**
	baz=78						
KRBS	**Karabastau**	**1.01**	**253**	*e*P	**Pn**	**09 59 02.9**	**-0.9**
KRBS	baz=56			*e*S	**Sb**	**09 59 17.1**	**+0.6**
	baz=56						
ANVS	**Anan'yevo**	**1.31**	**158**	⇓*i*P	**Pg**	**09 59 06.5**	**-0.8**
	baz=60						
ANVS				⇓*i*S	**Sg**	**09 59 24.6**	**+0.3**
	baz=60						
TKM2	**Tokmak 2**	**1.49**	**224**	⇑*i*P	**Pb**	**09 59 11.4**	**+0.5**
	baz=26						
TKM2				⇑*i*S	**Sn**	**09 59 32.1**	**+1.4**
	baz=26						
TKM2	**Tokmak 2**	**1.49**	**224**	⇑P	**Pb**	**09 59 11.1**	**+0.1**
	0.6nm,0.5s						
TKM2				⇓S	**Sn**	**09 59 30.6**	**-0.2**
	1.4nm,0.3s						
UZB	**Uzynbulak**	**1.70**	**120**	*e*P	**Pb**	**09 59 13.9**	**-0.5**
	baz=19						
UZB				*e*S	**Sg**	**09 59 36.7**	**0.0**
	baz=19						
UZB	**Uzynbulak**	**1.70**	**120**	P	**Pb**	**09 59 14.0**	**-0.4**
	3.5nm,0.3s						
UZB				S	**Sg**	**09 59 37.8**	**+1.0**
	4.5nm,0.3s						
BOOM	**Boomskoye usch**	**1.70**	**208**	⇑*i*P	**Pb**	**09 59 14.3**	**-0.2**
	baz=10.0						
BOOM				⇑*i*S	**Sg**	**09 59 37.8**	**+1.0**
	baz=10.0						
PRZ	**Przheval'sk**	**1.83**	**146**	⇑*i*P	**Pn**	**09 59 15.3**	**+0.2**
	baz=46						
PRZ				⇑*i*S	**Sb**	**09 59 39.5**	**-0.7**
	baz=46						
ULHL	**Ulahol**	**1.84**	**198**	⇑*i*P	**Pb**	**09 59 16.2**	**-0.7**
	baz=0.0						
ULHL				⇑*i*S	**Sb**	**09 59 41.0**	**+0.4**
	baz=0.0						
KDJ	**Kajisay**	**1.87**	**176**	⇑*i*P	**Pb**	**09 59 16.7**	**-0.8**
	baz=77						
KDJ				⇑*i*S	**Sb**	**09 59 41.7**	**+0.2**
	baz=77						
CHMS	**Chumysh**	**1.92**	**239**	⇓*i*P	**Pg**	**09 59 18.9**	**-0.2**
	baz=41						
CHMS				⇓*i*S	**Sg**	**09 59 44.9**	**+0.9**
	baz=41						
PDGK	**Podgornoye**	**1.92**	**110**	Pg	**Pb**	**09 59 17.7**	**-0.6**
	1.1nm,0.3s						
PDGK				Lg	Lg	09 59 44.0	
	2.7nm,0.5s						
PDGK	**Podgornoye**	**1.92**	**110**	⇓Pn	**Pb**	**09 59 17.5**	**-0.8**
	0.7nm,0.5s						
PDGK				Sn	**Sb**	**09 59 42.0**	**-0.9**
	2.5nm,0.6s						
USP	**Ospenovka**	**1.96**	**249**	⇑*e*P	**Pg**	**09 59 19.4**	**-0.4**
	baz=50						
USP				⇑*i*S	**Sg**	**09 59 47.3**	**+2.0**
	baz=50						
SHLS	**Shalkode**	**1.97**	**114**	Pg	**Pg**	**09 59 22.5**	**+2.4**
	1.4nm,0.2s						
SHLS				Lg	Lg	09 59 52.5	
	8.3nm,0.6s						
AAK	**Ala-Archa**	**2.28**	**234**	⇓*i*P	**Pb**	**09 59 23.8**	**-0.6**
	baz=36						
AAK				⇓*i*S	**Sb**	**09 59 53.6**	**+0.3**
	baz=36						
UCH	**Uchtor**	**2.54**	**227**	⇑*i*P	**Pb**	**09 59 27.8**	**-1.2**
	baz=28						
UCH				⇑*i*S	**Sb**	**10 00 00.3**	**-0.7**
	baz=28						

*IDC **13** 10:22:31.1±7.6, 15°.91S×167°.77E, h186km±71km, mb3.6/4, mb1 3.8/5, mb1mx3.3/40, mbtmp4.2/5, Error ellipse: s-maj=70.5km s-min=44.4km az=172.0*
*NOU **13** 10:22:35.9, 16°.28S×167°.88E, h124km, MLv4.5, Vanuatu Islands*
ISC 13 10:22:28.2±1.7, 15°.8S±0°.1×168°.0E±0°.2, h177km, n14, σ0°92/15, mb4.0/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**1.93**	**176**	P	**Pn**	**10 23 03.5**	**-0.7**
LIFNC	**LIFOU**	**5.01**	**189**	P	**Pn**	**10 23 41.4**	**-0.9**
MARNC	**Mare, Loyalty**	**5.66**	**180**	P	**Pn**	**10 23 50.9**	**+0.3**
KOUNC	**Koumac, New Ca**	**5.93**	**216**	P	**Pn**	**10 23 54.6**	**+0.4**
YATNC	**Mamie plateau,**	**6.33**	**190**	P	**Pn**	**10 23 59.6**	**+0.2**
DZM	**Mont Dzumac**	**6.42**	**193**	P	**Pn**	**10 24 01.4**	**+0.6**
	5.2nm,0.3s,baz=30,slow=7.6,SNR=63						
DZM				S	**Sn**	**10 25 13.8**	**-0.1**
	1.9nm,0.3s,baz=344,slow=22,SNR=6.0						
NOUC	**Port Laguerre**	**6.49**	**194**	P	**Pn**	**10 24 02.3**	**+0.8**
ONTNC	**Ouen Toro**	**6.65**	**193**	P	**Pn**	**10 24 05.3**	**+1.6**
OUENC	**Ouen Island, N**	**6.69**	**190**	P	**Pn**	**10 24 05.0**	**+0.8**
STKA	**Stephens Creek**	**28.90**	**232**	P	**P**	**10 28 09.9**	**-0.6**
	1.2nm,0.4s,baz=96,slow=18,SNR=5.0						
WRA	**Warramunga Arr**	**32.31**	**258**	P	**P**	**10 28 39.5**	**-1.2**
	0.3nm,0.3s,baz=86,slow=10,SNR=11						
ASAR	**Alice Springs**	**33.01**	**251**	P	**P**	**10 28 46.6**	**-0.2**
	1.7nm,0.4s,baz=80,slow=8.8,SNR=62						
FITZ	**Fitzroy Crossi**	**40.56**	**261**	P	**P**	**10 29 50.8**	**+0.2**
	2.2nm,0.4s,baz=92,slow=9.5,SNR=7.4						
ARCES	**ARCESS Array B**	**121.46**	**345**	PKP	**PKiKP**	**10 41 01.6**	**+1.6**
	3.5nm,1.1s,baz=50,slow=1.4,SNR=1.7						

*IDC **13** 10:28:43.5±0.5, 24°.04N×102°.99E, h0km, mb4.2/25, mb1 4.3/26, mb1mx4.2/49, mbtmp4.2/26, ML4.3/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/41, Error ellipse: s-maj=17.6km s-min=11.2km az=67.0*
*BJI **13** 10:28:44.3±0.0, 23°.95N×102°.84E, h10km, mB4.6/16, mb4.3/35, ML4.3/13, Ms4.3/34, Ms7 4.2/30*
*NEIC **13** 10:28:45.3±1.8, 24°.01N±0°.02×102°.98E±0°.08, h10km±1km, mb4.7/61, Error ellipse: s-maj=12.2km s-min=2.8km az=73.0*
*MOS **13** 10:28:45.8±1.0, 23°.98N×102°.95E, h27km, mb4.8/47, Error ellipse: s-maj=7.7km s-min=4.8km az=106.5*
ISC 13 10:28:45.3±0.3, 23°.94N±0°.04×102°.92E±0°.04, h10km, n236, σ1°20/230, mb4.6/107, MS3.5/10, 29C-18D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**1.19**	**352**	⇓Pg	**Pn**	**10 29 07.9**	**-0.3**
KMI				Sg	**Sn**	**10 29 26.1**	**+1.6**
KMI				smax	smax		
	comp=N,4μm,0.9s						
KMI				smax	smax		
	comp=E,6μm,0.9s						
KMI	**Kunming**	**1.19**	**352**	P	**Pn**	**10 29 07.7**	**-0.5**
KMI	**Kunming**	**1.19**	**352**		**Pn**	**10 29 07.7**	**-0.5**
SLVN	**Son La**	**2.75**	**161**		**Pn**	**10 29 30.2**	**+0.7**
GYA	**Guiyang**	**4.21**	**53**	Pn	**Pn**	**10 29 50.3**	**+0.6**
GYA				Sn	**Sn**	**10 30 41.6**	**+2.5**
GYA				Sg	**Sg**	**10 31 04.0**	**+3.3**
GYA				smax	smax		
	comp=N,670nm,0.8s						
GYA				smax	smax		
	comp=E,430nm,0.8s						
GYA				LR	LR		
	comp=N,790nm,4.3s						
GYA				LR	LR		
	comp=E,2μm,4.5s						
GYA				LR	LR		
	comp=Z,1μm,5.5s						
CHTO	**Chiang Mai**	**6.31**	**217**	P	**Pn**	**10 30 20.1**	**+1.6**
CHTO	**Chiang Mai**	**6.31**	**217**	Pn	**Pn**	**10 30 20.1**	**+1.6**
CM09	**Chiang Mai Arr**	**6.59**	**215**	P	**Pn**	**10 30 23.9**	**+1.6**
LOEI	**Loei**	**6.59**	**194**	P	**Pn**	**10 30 23.2**	**+0.9**
CM31	**Chiang Mai Arr**	**6.60**	**215**	P	**Pn**	**10 30 23.8**	**+1.3**
CM31	**Chiang Mai Arr**	**6.60**	**215**		**Pn**	**10 30 24.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**6.60**	**215**	Pn	**Pn**	**10 30 23.6**	**+1.1**
	1.6nm,0.3s,baz=28,slow=12,SNR=22						
CMAR				Pg	**Pg**	**10 30 49.8**	**-2.0**
	1.6nm,0.3s,baz=34,slow=18,SNR=16						
CMAR				Lg	Lg	10 32 13.2	
	0.2nm,0.3s,baz=35,slow=27,SNR=5.0						
CMAR				LR	LR	10 33 21.6	
	comp=Z,281nm,18.6s,baz=142,slow=41						
CMAR	**Chiang Mai Arr**	**6.60**	**215**		LR	10 32 17.4	
CMAR	**Chiang Mai Arr**	**6

GTA LR LR
comp=E,280nm,11.3s
GTA LR LR
comp=Z,450nm,10.9s
NJ2 Nanjing 16.21 57 *e*P **Pn 10 32 32.3 -0.9**
NJ2 pmax pmax
comp=Z,12nm,0.6s
HHC Hu-ho-hao-te 18.35 21 *e*P **P 10 33 00.1 0.0**
HHC pmax pmax
comp=Z,13nm,1.1s
HHC pmax pmax
comp=Z,140nm,5.5s
HHC LR LR
comp=N,390nm,10.9s
HHC LR LR
comp=E,170nm,6.3s
HHC LR LR
comp=Z,280nm,7.0s
IPM Ipoh 19.44 186 P **Pn 10 33 13.9 +0.7**
TPTI 21.30 196 P **P 10 33 35.3 +3.1**
8.2nm,1.1s
PSI Prapat 21.37 191 P **P 10 33 34.9 +1.7**
15nm,0.9s,baz=359,slow=1.4,SNR=6.7
RPSI Rantau Prapat 21.48 191 P **P 10 33 33.0 -1.1**
RPSI Rantau Prapat 21.48 191 P **P 10 33 34.9 +0.7**
SBUM Sibu 23.18 156 P **P 10 33 52.0 -0.3**
WMQ Urumqi 23.44 331 *e*P **P 10 33 54.9 +0.1**
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ pmax pmax
comp=Z,180nm,4.7s
KSM Kuching 23.46 161 P **P 10 33 54.9 -0.2**
KSM IAmb IAmb 10 33 58.6
comp=Z,17nm,1.1s
SONM Songino Array 24.00 6 P **P 10 33 59.6 -0.7**
comp=Z,11nm,0.9s,baz=181,slow=9.9,SNR=48
SONM LR LR 10 44 28.3
comp=Z,130nm,18.4s,baz=267,slow=40
SONM Songino Array 24.00 6 P **P 10 34 00.9 +0.6**
ULN Ulaanbaatar 24.10 7⇓ *e*P **P 10 34 01.8 +0.6**
ULN pmax pmax
comp=Z,20nm,1.0s
ULN Ulaanbaatar 24.10 7 P **P 10 34 01.2 0.0**
ULN IAmb IAmb 10 34 06.0
comp=Z,32nm,1.3s
RGRI Rengat 24.16 181 P **P 10 34 04.3 +2.5**
comp=Z,44μmcomp=Z,78nm,0.5s
TJN Taejon 24.42 54⇑ *e*P **P 10 34 03.7 -0.4**
KSRS Korea Array 25.27 52 P **P 10 34 09.8 -2.0**
comp=Z,1.7nm,0.6s,baz=243,slow=9.9,SNR=5.8
ZAK Zakamensk 26.39 1 *e*P **P 10 34 22.5 +0.6**
ZAK pmax pmax
comp=Z,11nm,0.9s
PALK Pallekele 27.00 236 LR LR 10 45 25.8
comp=Z,34nm,19.3s,baz=172,slow=37
DAV Davao City (W) 27.46 124 LR LR 10 46 01.1
comp=Z,43nm,18.5s,baz=154,slow=38
NIL Nilore 27.66 297 P **P 10 34 32.3 -1.1**
NIL pmax pmax
comp=Z,53nm,1.3s
NIL Nilore 27.66 297 P **P 10 34 32.3 -1.1**
TLY Talaya 27.70 1 LR LR 10 46 44.6
comp=Z,131nm,20.0s,baz=166,slow=39
MK31 Makanchi Array 28.17 329 *ce*P **P 10 34 38.0 +0.2**
MK31 Makanchi Array 28.17 329 P **P 10 34 37.3 -0.5**
MKAR Makanchi Array 28.17 329 P **P 10 34 37.4 -0.4**
comp=Z,1.7nm,0.5s,baz=137,slow=9.8,SNR=11
MKAR PcP **PcP 10 37 50.6 -1.0**
comp=Z,0.7nm,0.8s,baz=116,slow=3.4,SNR=3.8
MKAR Makanchi Array 28.17 329 *ce*P **P 10 34 38.2 +0.4**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 28.17 329 P **P 10 34 37.2 -0.7**
DGZ Jazzator, Alta 28.43 339⇓ *i*P **P 10 34 41.6 +1.4**
DGZ pmax pmax
comp=Z,7.0nm,1.4s
HIA Hailar 28.52 23⇓ *e*P **P 10 34 41.6 +0.6**
HIA pmax pmax
comp=Z,13nm,1.5s
AAK Ala-Archa 29.99 315 P **P 10 34 55.8 +1.6**
AAK pmax pmax
comp=Z,5.0nm,0.9s
AAK Ala-Archa 29.99 315 P **P 10 34 55.8 +1.6**
USA0B Ussuriysk Arra 31.18 42⇑ *e*P **P 10 35 04.6 +0.1**
USRK Ussuriysk Ar. 31.18 42 P **P 10 35 03.5 -1.0**
comp=Z,1.3nm,0.5s,baz=260,slow=8.6,SNR=13
KBL Kabul 31.26 298 P **P 10 35 06.2 +0.6**
KBL pmax pmax
comp=Z,14nm,1.2s
KBL Kabul 31.26 298 P **P 10 35 08.7 +3.2**
GAR Garm 31.40 306 P **P 10 35 06.2 -0.5**
GAR IAmb IAmb 10 35 10.4
comp=Z,11nm,0.8s
KURBB Kurchatov Arra 32.66 331 P **P 10 35 17.4 0.0**
comp=Z,2.1nm,0.6s,baz=136,slow=9.4,SNR=17
KURK Kurchatov 32.69 331 P **P 10 35 17.4 -0.2**
KURK Kurchatov 32.69 331 P **P 10 35 17.4 -0.2**
KKAR Karatay Array 32.80 314 P **P 10 35 19.0 +0.2**
KKAR Karatay Array 32.80 314 P **P 10 35 19.0 +0.2**
ZALV Zalesovo Beam 32.90 340 P **P 10 35 19.0 -0.5**
comp=Z,1.3nm,0.4s,baz=146,slow=8.2,SNR=10
ZALV Zalesovo Beam 32.90 340 *i* P **P 10 35 19.6 +0.1**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 32.90 340 P **P 10 35 18.1 -1.4**
KLR Kul'dur 33.88 35⇓ *i*P **P 10 35 28.2 +0.1**
KLR pmax pmax
comp=Z,7.0nm,1.3s
ZEA Zeya 34.92 25 *e*P **P 10 35 37.9 +0.8**
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ERM Erimo 37.85 52⇓ *e*P **P 10 36 04.5 +2.3**
ERM pmax pmax
comp=Z,31nm,1.6s
BVAR Borovoye Array 38.04 328 P **P 10 36 03.6 -0.1**
comp=Z,1.2nm,0.4s,baz=189,slow=8.7,SNR=10.0
BRVK Borovoye 38.11 328 P **P 10 36 04.7 +0.4**
BRVK pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 38.11 328 P **P 10 36 04.7 +0.4**
YSS Yuzh-Sakhalins 39.17 44⇓ *e*P **P 10 36 10.3 -2.9**
YSS pmax pmax
comp=Z,34nm,1.3s
YSS Yuzh-Sakhalins 39.17 44 P **P 10 36 10.6 -2.6**
YSS IAmb IAmb 10 36 11.7
comp=Z,31nm,1.2s
GEYT Alibeck 40.50 301 P **P 10 36 24.8 +0.2**
comp=Z,14nm,0.7s,baz=154,slow=8.2,SNR=19
GEYT LR LR 10 55 38.4
comp=Z,45nm,19.7s,baz=160,slow=40
GEYT Alibeck 40.50 301 P **P 10 36 25.8 +1.3**
GEYT IAmb IAmb 10 36 29.7
comp=Z,14nm,0.8s
GYA0B ALIBECK ARRAY 40.50 301 P **P 10 36 25.0 +0.5**
ABKAR Akbulak array 41.97 318 P **P 10 36 36.9 +0.5**
ABKAR Akbulak array 41.97 318 P **P 10 36 36.1 -0.3**
ABKAR IAmb IAmb 10 36 41.8
comp=Z,4.1nm,1.0s
YAK Yakutsk 42.18 18⇓ *e*P **P 10 36 36.8 -1.1**
YAK pmax pmax
comp=Z,6.0nm,0.4s
AKTO Aktyubinsk 43.56 319 P **P 10 36 48.7 -0.6**
comp=Z,1.1nm,0.6s,baz=164,slow=1.7,SNR=3.8
AKTO PcP **PcP 10 38 35.8 -1.1**
comp=Z,1.3nm,0.7s,baz=117,slow=3.4,SNR=5.1
ARU Arti 45.65 327 *c i*P **P 10 37 07.4 +1.5**
ARU 10 38 42.7
ARU 10 38 58.0
ARU S **S 10 43 51.5 +2.9**
ARU pmax pmax
comp=Z,13nm,1.5s
NRIK Noril'sk 46.34 353 P **P 10 37 10.8 -0.3**
comp=Z,5.8nm,0.8s,baz=154,slow=6.5,SNR=7.2
NRIK Noril'sk 46.34 353 *de*P **P 10 37 11.3 +0.2**
NRIK pmax pmax
comp=Z,14nm,1.3s
NRIK Noril'sk 46.34 353 P **P 10 37 11.2 +0.1**
NRIK IAmb IAmb 10 37 15.6
comp=Z,14nm,1.3s
KNRA Kununurra 46.78 145 P **P 10 37 14.8 -0.3**
KNRA IAmb IAmb 10 37 16.8
comp=Z,11nm,1.1s
FITZ Fitzroy Crossi 47.30 150 P **P 10 37 18.7 -0.5**
comp=Z,1.8nm,0.7s,baz=346,slow=17,SNR=3.5
FITZ Fitzroy Crossi 47.30 150 IAmb IAmb 10 37 23.3
comp=Z,2.3nm,0.8s
SOCY Socotra 47.75 265 P **P 10 37 21.9 -1.1**
SOCY IAmb IAmb 10 37 25.2
comp=Z,8.6nm,1.1s
MA2 Magadan 48.71 30⇓ *i*P **P 10 37 28.6 -1.1**
MA2 pmax pmax
comp=Z,4.0nm,1.3s
TIXI Tiksi 49.95 10⇓ *e*P **P 10 37 38.6 -0.4**
TIXI pmax pmax
comp=Z,45nm,1.7s
PETK Petropavlovsk- 50.20 40 LR LR 11 01 28.8
comp=Z,46nm,18.4s,baz=238,slow=39
BELG Belogornoye 50.35 319⇑ *e*P **P 10 37 41.3 -1.0**
BELG pmax pmax
comp=Z,4.0nm,1.2s
KIRV Kirov 51.04 327⇓ *e*P **P 10 37 47.8 +0.4**
KBZ Khabaz 52.45 308⇓ *e*P **P 10 38 01.2 +3.0**
KBZ pmax pmax
comp=Z,4.0nm,1.5s
KIV Kislovodsk 52.61 308 *e*P **P 10 38 02.8 +3.3**
KIV pmax pmax
comp=Z,22nm,1.1s
WB0 Warramunga Arr 53.18 142 P **P 10 38 04.4 +0.6**
WB0 IAmb IAmb 10 38 05.2
comp=Z,9.8nm,1.0s
WRAB Tennant Creek 53.29 142 *c i*P **P 10 38 05.2 +0.6**
WRAB pmax pmax
comp=Z,13nm,1.3s
WRAB Tennant Creek 53.29 142 P **P 10 38 04.8 +0.2**
WRAB IAmb IAmb 10 38 06.2
comp=Z,8.7nm,0.8s
WRA Warramunga Arr 53.29 142 P **P 10 38 04.5 -0.1**
comp=Z,8.2nm,0.8s,baz=330,slow=8.4,SNR=34
WRA PcP **PcP 10 39 12.6 +0.3**
comp=Z,1.1nm,0.8s,baz=340,slow=4.1,SNR=3.0
WRA Warramunga Arr 53.29 142 P **P 10 38 04.9 +0.2**
WRA Warramunga Arr 53.29 142 P **P 10 38 04.8 +0.2**
WB2 Warramunga Arr 53.30 142 IAmb IAmb 10 38 06.2
comp=Z,9.8nm,0.8s
WR0 Warramunga Arr 53.42 142 P **P 10 38 05.6 0.0**
WR0 IAmb IAmb 10 38 07.0
comp=Z,11nm,0.9s
PRGR Permogore 53.80 330 *e*P **P 10 38 04.1 -3.7**
PRGR pmax pmax
comp=Z,16nm,0.7s
ASAR Alice Springs 56.08 145 P **P 10 38 25.1 +0.3**
comp=Z,2.2nm,0.7s,baz=325,slow=6.9,SNR=14
ASAR PcP **PcP 10 39 23.6 +0.6**
comp=Z,1.3nm,0.7s,baz=333,slow=3.5,SNR=7.3
ASAR Alice Springs 56.08 145 P **P 10 38 22.4 -2.5**
KLMR Klimovskoe 56.47 328 *e*P **P 10 38 26.7 -0.3**
KLMR pmax pmax
comp=Z,38nm,1.4s
KLMR Klimovskoe 56.47 328 *e*P **P 10 38 26.8 -0.3**
KLMR AMP 10 38 31.8
comp=Z,38nm,1.4s
MOS Moscow 56.70 322 *e*P **P 10 38 27.3 -1.5**
OBN Obninsk 57.24 321⇓ *i*P **P 10 38 32.5 -0.1**
OBN *e* 10 39 26.5
OBN *e* 10 40 39.6
OBN pmax pmax
comp=Z,9.0nm,0.5s
OBN MLR MLR
comp=Z,52nm,16.0s
BILL Bilibino 58.11 23⇓ *e*P **P 10 38 38.8 +0.2**
BILL *e* 10 40 43.1
BILL *e*S S 10 47 04.6 +25
BILL *e*SS **SS 10 50 31.9 +1.4**
BILL pmax pmax
comp=Z,8.0nm,2.5s
BILL MLR MLR
comp=Z,66nm,16.0s
NWAO Narrogin (SRO) 58.18 166 P **P 10 38 40.5 +1.0**
comp=Z,6.7nm,0.6s,baz=329,slow=8.6,SNR=5.9
NWAO Narrogin (SRO) 58.18 166 IAmb IAmb 10 38 41.6
comp=Z,24nm,1.2s
BRTR Keskin Array B 59.57 303 P **P 10 38 48.4 -1.0**
comp=Z,1.1nm,0.8s,baz=108,slow=4.7,SNR=3.2
LVZ Lovozero 59.88 336⇓ *e*P **P 10 38 50.4 -0.6**
LVZ pmax pmax
comp=Z,29nm,1.6s
JOF Joensuu 60.60 330 P **P 10 38 55.7 -0.2**
JOF pmax pmax
comp=Z,14nm,2.3s
AKASG Malin Array Be 61.65 316 P **P 10 39 02.7 -0.6**
comp=Z,6.6nm,0.8s,baz=75,slow=6.9,SNR=5.5
AKBB Malin Array Si 61.65 316⇑ *e*P **P 10 39 02.4 -0.9**
AKBB pmax pmax
comp=Z,10.0nm,0.9s
MSF Maaselka 61.82 333 P **P 10 39 04.1 0.0**
SORM Soroca 62.44 313⇑ P **P 10 39 09.0 +0.4**
SORM Soroca 62.44 313⇑ P **P 10 39 09.0 +0.4**
VSU Vasula 62.73 325⇓ *e*P **P 10 39 10.3 0.0**
VSU pmax pmax
comp=Z,52nm,1.1s
KEV Kevo 62.88 338 P **P 10 39 10.7 -0.4**
KEV pmax pmax
comp=Z,21nm,2.3s
SGF Sodankyl 62.91 335 P **P 10 39 09.5 -1.9**
SGF pmax pmax
comp=Z,221nm,0.9s
CFR Carcaliu 62.93 310⇑ P **P 10 39 10.4 -1.5**
CFR Carcaliu 62.93 310⇑ P **P 10 39 10.4 -1.5**
SUF Sumiainen 62.96 330 P **P 10 39 11.4 -0.4**
SUF pmax pmax
comp=Z,39nm,2.5s
FINES FINESS Array B 63.00 328 P **P 10 39 10.2 -1.9**
comp=Z,5.7nm,0.9s,baz=92,slow=9.7,SNR=5.3
FINES FINESS Array B 63.00 328 *i* P **P 10 39 15.1 +3.0**
FINES pmax pmax
comp=Z,4.0nm,0.7s
OUL Oulu 63.09 332 P **P 10 39 12.2 -0.4**
ARCES ARCESS Array B 63.39 337 P **P 10 39 14.4 -0.1**
comp=Z,2.4nm,0.9s,baz=88,slow=7.1,SNR=8.1
ARCES ARCESS Array B 63.39 337 IAmb IAmb 10 39 39.0
comp=Z,9.3nm,1.3s
VRI Vrincioaia 63.81 311⇑ P **P 10 39 18.9 +1.1**
VRI Vrincioaia 63.81 311⇑ P **P 10 39 18.9 +1.1**
PLOR Plostina 63.87 311⇑ P **P 10 39 19.4 +1.2**
PLOR Plostina 63.87 311⇑ P **P 10 39 19.4 +1.2**
BIZ Bicaz 64.09 312⇑ P **P 10 39 20.4 +0.7**
MLR Muntele Rosu 64.41 311⇑ P **P 10 39 23.0 +1.1**
MLR Muntele Rosu 64.41 311 P **P 10 39 22.8 +0.9**
MLR pmax pmax
comp=Z,16nm,1.2s
MLR Muntele Rosu 64.41 311 P **P 10 39 22.8 +0.9**
BURAR Bucovina Array 64.59 313⇑ P **P 10 39 25.5 +2.5**
BURAR Bucovina Array 64.59 313⇑ P **P 10 39 25.5 +2.5**
BURAR Bucovina Array 64.59 313 P **P 10 39 22.0 -1.0**
BURAR IAmb IAmb 10 39 27.0
comp=Z,4.1nm,1.1s
BUR08 Bucovina Ar. S 64.60 313 P **P 10 39 21.5 -1.6**
BUR08 IAmb IAmb 10 39 27.4
comp=Z,5.1nm,1.1s
ALN Alexandroupoli 65.12 306 P **P 10 39 26.4 0.0**
ALN pmax pmax
comp=Z,7.0nm,1.0s
ALN Alexandroupoli 65.12 306 IAmb IAmb 10 39 29.8
comp=Z,6.2nm,1.0s
KWP Kalwaria Pacla 65.94 315 P **P 10 39 32.4 +0.8**
KWP pmax pmax
comp=Z,52nm,0.5s
DRGR 66.41 312⇑ P **P 10 39 35.7 +0.9**
DRGR 66.41 312⇑ P **P 10 39 35.7 +0.9**
STKA Stephens Creek 66.70 145 LR LR 11 12 50.2
comp=Z,28nm,18.5s,baz=33,slow=40
STKA Stephens Creek 66.70 145⇓ *e*P **P 10 39 37.4 +0.9**
VTS Vitosha 66.85 308⇑ P **P 10 39 38.3 +0.6**
VTS Vitosha 66.85 308⇑ P **P 10 39 38.3 +0.6**
VTS Vitosha 66.85 308 IAmb IAmb 10 39 41.6
comp=Z,6.9nm,0.9s
CRVS Cervenica-Dubn 66.86 315 *e*P **P 10 39 38.4 +0.9**
CRVS Cervenica-Dubn 66.86 315 *e*P **P 10 39 38.4 +0.9**
CRVS *e* 11 11 21.8
HERR Herculane 66.97 310⇑ P **P 10 39 39.0 +0.7**
PAIG Paliouri 67.09 305 P **P 10 39 40.6 +1.5**
PAIG pmax pmax
comp=Z,8.0nm,1.1s
MDVR Moldovita 67.48 310⇑ P **P 10 39 42.2 +0.6**
GRG Griva 67.81 306 P **P 10 39 42.6 -1.1**
GRG pmax pmax
comp=Z,9.0nm,0.9s
LIT Litokhoron 67.94 305 P **P 10 39 42.2 -2.3**
LIT pmax pmax
comp=Z,4.0nm,0.7s
LIT Litokhoron 67.94 305 P **P 10 39 42.2 -2.3**
LIT IAmb IAmb 10 39 46.8
comp=Z,4.4nm,0.7s
KMBO Kilima Mbogo 68.34 259 P **P 10 39 48.0 +0.3**
comp=Z,1.7nm,0.4s,baz=54,slow=11,SNR=9.2
KMBO Kilima Mbogo 68.34 259 *i* P **P 10 39 48.9 +1.2**
KMBO pmax pmax
comp=Z,2.0nm,0.4s
FNA Florina 68.61 306 P **P 10 39 47.1 -1.6**
FNA pmax pmax
comp=Z,6.0nm,0.9s
FNA Florina 68.61 306 P **P 10 39 47.1 -1.6**
FNA IAmb IAmb 10 39 50.9
comp=Z,6.2nm,0.9s
MORC Moravsky Berou 69.20 316 *e*P **P 10 39 54.1 +1.9**
MORC Moravsky Berou 69.20 316 P **P 10 39 52.7 +0.5**
KSP Ksiaz 69.74 318 P **P 10 39 56.0 +0.5**
KSP pmax pmax
comp=Z,9.0nm,1.3s
VRAC Vranov 69.91 316 *e*P **P 10 39 57.0 +0.4**
VRAC Vranov 69.91 316 P **P 10 39 56.8 +0.2**
VRAC pmax pmax
comp=Z,9.0nm,1.0s
NORES NORESS Array B 70.08 329 P **P 10 39 56.8 -0.6**
KRUC Moravsky 70.09 316 *e*P **P 10 39 57.5 -0.2**
NOA NORSAR Array B 70.17 329 P **P 10 39 57.0 -0.9**
comp=Z,1.5nm,0.6s,baz=77,slow=6.1,SNR=5.6
NOR Nord 70.57 352 P **P 10 39 59.1 -0.9**
NOR pmax pmax
comp=Z,7.0nm,2.9s
CONA Conrad Observa 70.72 315 *e*P **P 10 39 59.4 -2.2**
comp=Z,4.4nm,1.1s
A21K Barrow 70.82 20 P **P 10 40 00.3 -1.4**
ARSA Arzberg 71.11 314 *e*P **P 10 40 04.3 +0.4**
comp=Z,4.7nm,0.9s
SOKA Soboth 71.58 314 *e*P **P 10 40 06.4 -0.5**
comp=Z,1.8nm,0.7s
GERES GERESS Array B 71.87 316 P **P 10 40 08.7 +0.1**
comp=Z,1.2nm,0.7s,baz=64,slow=6.1,SNR=4.3
GERES LR LR 11 18 20.2
comp=Z,30nm,18.1s,baz=293,slow=41
OBKA Obir 71.95 313 *e*P **P 10 40 09.7 +0.6**
comp=Z,1.6nm,0.6s
KBA Koelnbreinsper 72.59 314 *e*P **P 10 40 10.7 -2.4**
comp=Z,4.4nm,1.0s
KBA Koelnbreinsper 72.59 314 P **P 10 40 12.2 -0.8**
KBA pmax pmax
comp=Z,6.0nm,1.0s
TRI Trieste 72.70 313 P **P 10 40 13.5 0.0**
TRI pmax pmax
comp=Z,12nm,1.0s
ABTA Abfaltersbach 73.23 314 *e*P **P 10 40 15.8 -1.0**
comp=Z,3.3nm,0.7s
IMAR Indian Mountai 73.63 25 P **P 10 40 18.6 0.0**
WTTA Wattenberg 73.65 315 *e*P **P 10 40 18.8 -0.6**
comp=Z,4.0nm,0.6s
WATA Walderalm 73.67 315 *e*P **P 10 40 19.1 -0.3**
comp=Z,5.4nm,0.7s
SQTA Sankt Quirin 73.94 315 *e*P **P 10 40 20.8 -0.2**
comp=Z,4.2nm,0.7s
MOTA Moosalm 73.97 315 *e*P **P 10 40 20.7 -0.5**
comp=Z,5.2nm,0.8s
MBAR Mbarara 73.99 262 *ce*P **P 10 40 23.1 +1.2**
MBAR pmax pmax
comp=Z,4.0nm,1.0s
NRCA Norcia 74.00 310 P **P 10 40 20.4 -0.9**
NRCA IAmb IAmb 10 40 26.3
comp=Z,6.7nm,1.0s
TOLK Toolik Lake Re 74.06 21 IAmb IAmb 10 40 22.3
comp=Z,3.5nm,0.7s
RETA Reutte 74.14 315 *e*P **P 10 40 23.7 +1.6**
comp=Z,5.2nm,0.9s
FETA Feichten 74.31 315 *e*P **P 10 40 23.1 -0.1**
comp=Z,4.8nm,0.8s
COLD Coldfoot 74.44 23 IAmb IAmb 10 40 24.6
comp=Z,7.6nm,1.4s
ZCCA Zocca 75.00 312 P **P 10 40 26.6 -0.5**
ZCCA IAmb IAmb 10 40 30.1
comp=Z,9.3nm,0.9s
MLY Manley 75.16 25 IAmb IAmb 10 40 29.4
comp=Z,5.2nm,0.8s
NEA2 Nenana 75.99 25 P **P 10 40 31.1 -1.3**
NEA2 IAmb IAmb 10 40 33.4
comp=Z,5.8nm,1.1s
MDM Murphy Dome 76.15 25 P **P 10 40 32.8 -0.5**
MDM IAmb IAmb 10 40 37.3
comp=Z,6.4nm,0.9s
BMAR Burnt Mountain 76.28 22 P **P 10 40 34.7 +0.7**
COLA College 76.33 25⇑ *e*P **P 10 40 33.2 -1.0**
COLA pmax pmax
comp=Z,9.0nm,3.2s
MCK McKinley 76.43 26 IAmb IAmb 10 40 35.8
comp=Z,3.4nm,0.7s
ILAR Eielson Array 76.75 24 P **P 10 40 34.8 -1.9**
comp=Z,0.3nm,0.6s,baz=285,slow=4.8,SNR=6.9
PRP Porcupine Dome 76.89 23 P **P 10 40 37.0 -0.6**
PRP IAmb IAmb 10 40 38.7
comp=Z,5.6nm,1.0s
KDAK Kodiak Island 77.40 32 P **P 10 40 40.4 0.0**
KDAK pmax pmax
comp=Z,15nm,1.4s
SAOF Saorge 77.44 313 P **P 10 40 41.1 +0.2**
SAOF pmax pmax
comp=Z,7.0nm,1.0s
SML Sawmill 77.56 27 P **P 10 40 40.4 -0.8**
BNI Bardonecchia 77.63 314 P **P 10 40 40.6 -1.6**
BNI pmax pmax
comp=Z,6.0nm,2.0s
SCM Sheep Creek Mo 77.96 27 P **P 10 40 43.4 -0.2**
SCM pmax pmax
comp=Z,12nm,1.1s
SCM Sheep Creek Mo 77.96 27 P **P 10 40 43.4 -0.2**
M24K Tolsona, Glenn 78.31 27 P **P 10 40 46.7 +1.2**
KLU Klutina 78.72 27 P **P 10 40 48.0 +0.2**
INK Inuvik 79.24 18 P **P 10 40 50.9 +0.5**
INK pmax pmax
comp=Z,11nm,1.1s
INK Inuvik 79.24 18 IAmb IAmb 10 40 54.7
comp=Z,8.8nm,0.9s
BMRM Bremner River 79.53 27 P **P 10 40 52.2 0.0**
L27K Beaver Creek, 79.54 25 IAmb IAmb 10 40 56.9
comp=Z,6.6nm,1.0s
BCAR Beaver Creek A 79.56 25 P **P 10 40 52.8 +0.5**
GLB Gilahina Butte 79.62 27 P **P 10 40 52.9 +0.2**
GLB IAmb IAmb 10 40 53.9
comp=Z,5.2nm,0.7s
DAWY Dawson 79.89 23 P **P 10 40 54.3 +0.2**
RES Resolute Bay 80.93 5 P **P 10 40 59.1 -0.3**
RES pmax pmax
comp=Z,6.0nm,2.4s
ESDC Sonseca Array 87.05 312 P **P 10 41 31.0 -0.4**
comp=Z,0.5nm,0.5s,baz=54,slow=2.9,SNR=3.6
YKA Yellowknife Ar 88.82 16 P **P 10 41 38.9 -0.4**
comp=Z,1.4nm,0.8s,baz=325,slow=4.3,SNR=25
TXAR Lajitas Array 121.18 27 PKP **PKPdf 10 47 38.7 -0.5**
comp=Z,0.3nm,0.6s,baz=182,slow=1.5,SNR=4.6

NEIC ***13*** *10:29:38.5±2.7,5.°82S±0.°09×104.°27E±0.°10,h96km±8km, mb4.3/21,Error ellipse: s-maj=16.7km s-min=8.7km az=48.0*
IDC ***13*** *10:29:39.6±0.8,5.°33S×104.°66E,h92km±6km, mb4.0/17, mb1 4.1/18,mb1mx3.8/50,mbtmp4.3/18,Error ellipse: s-maj=23.0km s-min=10.4km az=55.0*
DJA ***13*** *10:29:40.0±0.2,6.°5S±4.°×10.°4E±.°,h78km±3km,M4.5/15, mb4.8/11,mB5.0/6,MLv4.5/15,Mw(mB)4.2/6*
ISC 13 10:29:39.3±0.5,5.°58S±0.°07×104.°50E±0.°06,h93km±4km, n84,σ1ᵎ54/91,mb4.2/26,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**0.05**	**354**	P	**Pn**	**10 29 52.8**	**+0.4**
KASI				S	**Sn**	**10 30 00.9**	**-1.1**
LWLI	**Liwa**	**0.71**	**321**	P	**Pn**	**10 29 58.3**	**+2.0**
LWLI				S	**Sn**	**10 30 10.0**	**+1.0**
BLSI	**Bandar Lampung**	**0.77**	**75**	P	**Pn**	**10 29 57.7**	**+0.9**
BLSI				S	**Sn**	**10 30 10.4**	**+0.6**
MNAI	**Manna**	**1.96**	**308**	Pn	**Pn**	**10 30 12.8**	**+1.7**
MNAI	**Manna**	**1.96**	**308**	P	**Pn**	**10 30 13.7**	**+2.6**
MNAI				S	**Sn**	**10 30 37.5**	**+2.2**
LHSI	**Lahat**	**1.99**	**331**	P	**Pn**	**10 30 14.8**	**+3.2**
TNG	**Tangerang**	**2.21**	**106**	P	**Pn**	**10 30 15.3**	**+0.9**

DBJI	**Dramaga**	**2.44 114**	P	**Pn**	**10 30 18.9 +1.5**	
CBJI	**Citeko**	**2.48 110**	P	**Pn**	**10 30 22.5 +4.5**	
LEM	**Lembang**	**3.34 112**	P	**Pn**	**10 30 32.1 +2.4**	
	34nm,0.3s,baz=232,slow=5.3,SNR=44					
LEM	**Lembang**	**3.34 112**	P	**Pn**	**10 30 31.2 +1.6**	
PPBI	**Pangkal Pinang**	**3.76 26**	P	**Pn**	**10 30 37.0 +1.8**	
CISI	**Cisompet, Garu**	**3.83 121**	Pn	**Pn**	**10 30 36.6 +0.3**	
CISI	**Cisompet, Garu**	**3.83 121**	P	**Pn**	**10 30 36.8 +0.5**	
TPI	**Tanjungpandan**	**4.21 48**	P	**Pn**	**10 30 42.9 +1.6**	
XMIS	**Christmas Isla**	**5.01 167**	Pn	Pn	10 30 46.9 -5.2	
UGM	**Wanagama**	**6.42 112**		**Pn**	**10 31 13.2 +1.9**	
UGM	**Wanagama**	**6.42 112**	P	**Pn**	**10 31 12.6 +1.3**	
	0.3nm44nm,0.5s					
BKNI	**Bangkinang**	**6.80 329**	Pn	**Pn**	**10 31 18.1 +1.4**	
MYKOM	**Kota Tinggi**	**7.34 355**	Pn	**Pn**	**10 31 27.2 +3.3**	
MNSI	**Mandailing Nat**	**8.01 322**	P	**Pn**	**10 31 35.1 +2.0**	
GSI	**Gunungsitoli**	**9.72 314**		**Pn**	**10 31 54.5 -1.9**	
GSI	**Gunungsitoli**	**9.72 314**	P	**Pn**	**10 31 54.5 -1.9**	
	45nm,0.5s					
ABJI	**Asem Bagus**	**9.91 103**	P	**Pn**	**10 32 03.4 +4.4**	
	90nm,0.8s					
ABJI			S	**Pn**	**10 32 03.4 +4.4**	
	90nm,0.8s					
SRBI	**Singaraja**	**10.92 104**	P	**Pn**	**10 32 13.8 +1.1**	
	811nm25nm,0.5s					
TPTI		**11.42 320**	P	**Pn**	**10 32 19.9 +0.4**	
TWSI	**Taliwang, Sumb**	**12.68 105**	P	**Pn**	**10 32 36.8 +0.5**	
	433nm11nm,0.7s					
PLAI	**Plampang**	**13.56 105**	P	**Pn**	**10 32 47.2 -0.7**	
	523nm27nm,0.5s					
BASI	**Baing, Sumba**	**16.57 107**	P	**Pn**	**10 33 26.0 -0.2**	
	47nm,0.6s					
BATI	**Baumata**	**19.52 105**	P	**P**	**10 33 59.0 -0.6**	
	16nm,0.3s,baz=330,slow=0.2,SNR=9.7					
BATI	**Baumata**	**19.52 105**	P	**P**	**10 34 00.6 +1.0**	
	624nm46nm,0.7s					
SOEI	**Soe**	**20.02 103**	P	**P**	**10 34 04.2 -0.9**	
SOEI	**Soe**	**20.02 103**	P	**P**	**10 34 05.4 +0.3**	
	26nm,0.7s					
PSA00	**Pilbara Seismi**	**21.77 138**	P	**P**	**10 34 23.0 -0.6**	
FITZ	**Fitzroy Crossi**	**24.11 123**	P	**P**	**10 34 46.6 0.0**	
	8.7nm,0.8s,baz=308,slow=5.6,SNR=29					
FITZ	**Fitzroy Crossi**	**24.11 123**	P	**P**	**10 34 46.6 0.0**	
FITZ			IAmb	IAmb	10 34 49.0	
	comp=Z,8.6nm,0.8s					
CMAR	**Chiang Mai Arr**	**24.50 347**	P	**P**	**10 34 48.1 -2.0**	
	comp=Z,1.8nm,0.7s,baz=183,slow=8.3,SNR=1.6					
KNRA	**Kununurra**	**25.84 115**	P	**P**	**10 35 01.8 -0.5**	
KNRA			IAmb	IAmb	10 35 26.5	
	comp=Z,8.8nm,0.8s					
MTN	**Manton Dam**	**27.24 107**	P	**P**	**10 35 14.4 -0.6**	
MTN			IAmb	IAmb	10 35 19.4	
	comp=Z,7.3nm,0.5s					
FAKI	**Fak Fak**	**27.79 86**	P	**P**	**10 35 19.3 -0.6**	
NWAO	**Narrogin (SRO)**	**29.69 158**	P	**P**	**10 35 38.2 +1.6**	
	comp=Z,3.2nm,0.6s,baz=234,slow=15,SNR=1.6					
H01W3	**Cape Leeuwin H**	**30.50 164**	T	T	11 07 47.7	
	baz=343,slow=76,SNR=36					
H01W2	**Cape Leeuwin H**	**30.51 164**	T	T	11 07 48.7	
	baz=343,slow=76,SNR=38					
H01W1	**Cape Leeuwin H**	**30.51 164**	T	T	11 07 49.1	
	baz=343,slow=76,SNR=8.2					
H08S2	**Diego Garcia H**	**31.86 265**	T	T	11 09 45.4	
	baz=89,slow=76,SNR=23					
H08S3	**Diego Garcia H**	**31.87 265**	T	T	11 09 49.7	
	baz=89,slow=76,SNR=22					
H08S1	**Diego Carcia H**	**31.88 265**	T	T	11 09 50.7	
	baz=89,slow=76,SNR=18					
WB0	**Warramunga Arr**	**32.31 119**	P	**P**	**10 35 59.6 -0.3**	
WB0			IAmb	IAmb	10 36 00.1	
	comp=Z,3.1nm,0.8s					
WRA	**Warramunga Arr**	**32.33 119**	P	**P**	**10 35 59.6 -0.4**	
	comp=Z,1.5nm,0.6s,baz=300,slow=9.9,SNR=35					
WRA			PcP	**PcP**	**10 38 46.6 +0.6**	
	comp=Z,0.6nm,0.4s,baz=301,slow=2.1,SNR=6.0					
WRA	**Warramunga Arr**	**32.33 119**	P	**P**	**10 35 59.3 -0.7**	
WRAB	**Tennant Creek**	**32.34 119**	P	**P**	**10 35 59.9 -0.1**	
WRAB			IAmb	IAmb	10 36 00.7	
	comp=Z,4.4nm,0.9s					
WB2	**Warramunga Arr**	**32.34 119**	P	**P**	**10 35 59.7 -0.4**	
WB2			IAmb	IAmb	10 36 00.7	
	comp=Z,3.8nm,0.9s					
WR0	**Warramunga Arr**	**32.51 119**	P	**P**	**10 36 01.6 0.0**	
WR0			IAmb	IAmb	10 36 02.2	
	comp=Z,3.5nm,0.8s					
ASAR	**Alice Springs**	**33.53 125**	P	**P**	**10 36 10.8 +0.4**	
	comp=Z,1.5nm,0.3s,baz=299,slow=8.1,SNR=82					
ASAR			PcP	**PcP**	**10 38 49.8 +0.5**	
	comp=Z,0.8nm,0.5s,baz=302,slow=2.6,SNR=6.9					
ASAR			S	**S**	**10 41 22.0 -4.0**	
	comp=Z,0.2nm,0.5s,baz=295,slow=16,SNR=3.6					
ASAR			ScP	**ScP**	**10 42 25.7 0.0**	
	comp=Z,0.3nm,0.7s,baz=300,slow=3.5,SNR=3.0					
ASAR	**Alice Springs**	**33.53 125**	P	**P**	**10 36 10.2 -0.3**	
AS31	**Alice Springs**	**33.53 125**	P	**P**	**10 36 10.6 +0.2**	
AS31			IAmb	IAmb	10 36 12.8	
	comp=Z,1.9nm,0.3s					
COEN	**Coen**	**38.96 105**	P	**P**	**10 36 55.8 -1.0**	
COEN			IAmb	IAmb	10 36 56.9	
	comp=Z,3.3nm,0.7s					
BBOO	**Buckleboo**	**39.98 137**	P	**P**	**10 37 05.0 0.0**	
STKA	**Stephens Creek**	**43.43 132**	P	**P**	**10 37 34.1 +0.9**	
	comp=Z,8.7nm,0.5s,baz=305,slow=8.4,SNR=16					
STKA			pP	**pP**	**10 37 55.1 +0.2**	
	comp=Z,2.3nm,0.4s,baz=286,slow=12,SNR=1.9					
STKA	**Stephens Creek**	**43.43 132**	P	**P**	**10 37 33.2 0.0**	
STKA			IAmb	IAmb	10 37 35.0	
	comp=Z,1.9nm,0.5s					
SONM	**Songino Array**	**53.21 2**	P	**P**	**10 38 48.1 -0.1**	
	comp=Z,1.0nm,0.6s,baz=178,slow=8.0,SNR=6.0					
SONM			pP	**pP**	**10 39 10.1 -1.1**	
	comp=Z,1.1nm,0.6s,baz=172,slow=6.9,SNR=5.0					
SONM			ScP	**ScP**	**10 43 43.2 -1.1**	
	comp=Z,0.6nm,0.6s,baz=193,slow=3.6,SNR=4.2					
SONM	**Songino Array**	**53.21 2**	P	**P**	**10 38 48.9 +0.8**	
MK31	**Makanchi Array**	**55.74 342**	P	**P**	**10 39 05.6 -0.8**	
MKAR	**Makanchi Array**	**55.74 342**	P	**P**	**10 39 05.0 -1.4**	
	comp=Z,1.1nm,0.5s,baz=153,slow=8.5,SNR=17					
MKAR			pP	**pP**	**10 39 27.9 -1.7**	
	comp=Z,0.8nm,0.6s,baz=148,slow=7.5,SNR=3.2					
MKAR	**Makanchi Array**	**55.74 342**	P	**P**	**10 39 05.1 -1.4**	
GEYT	**Alibeck**	**61.06 319**	P	**P**	**10 39 43.4 -0.3**	
	comp=Z,2.7nm,0.5s,baz=180,slow=8.1,SNR=2.9					
ZAA0	**Zalesovo Array**	**61.57 347**	P	**P**	**10 39 45.5 -1.1**	
ZAA0			IAmb	IAmb	10 40 07.5	
	comp=Z,2.6nm,1.1s					
ZALV	**Zalesovo Beam**	**61.57 347**	P	**P**	**10 39 44.6 -2.0**	
	comp=Z,1.1nm,0.3s,baz=155,slow=6.1,SNR=9.2					
ZALV	**Zalesovo Beam**	**61.57 347**	P	**P**	**10 39 45.0 -1.6**	
ABKAR	**Akbulak array**	**66.94 330**	P	**P**	**10 40 21.1 -0.7**	
ABKAR	**Akbulak array**	**66.94 330**	P	**P**	**10 40 20.8 -1.0**	
ABKAR			IAmb	IAmb	10 40 22.2	
	comp=Z,5.1nm,0.7s					
MAW	**Mawson**	**68.03 196**	P	**P**	**10 40 30.5 +2.1**	
	comp=Z,3.7nm,0.8s,baz=352,slow=6.3,SNR=4.5					
BKZ	**Black Stump Fm**	**72.55 129**	P	**P**	**10 40 57.1 +0.5**	
VNDA	**Vanda**	**77.82 169**	P	**P**	**10 41 27.8 +1.7**	
	comp=Z,1.5nm,0.5s,baz=322,slow=5.5,SNR=11					
VNDA	**Vanda**	**77.82 169**	P	**P**	**10 41 25.6 -0.5**	
BOSA	**Boshof**	**77.92 242**	P	**P**	**10 41 29.8 +2.0**	
	comp=Z,1.8nm,0.8s,baz=153,slow=4.0,SNR=3.8					
BRTR	**Keskin Array B**	**79.03 312**	P	**P**	**10 41 33.4 -0.2**	
	comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=2.8					
AKASG	**Malin Array Be**	**85.05 322**	P	**P**	**10 42 04.5 -0.1**	
	comp=Z,1.1nm,0.5s,baz=88,slow=5.2,SNR=2.7					
FINES	**FINESS Array B**	**89.35 332**	P	**P**	**10 42 24.8 -0.4**	
	comp=Z,1.6nm,0.5s,baz=116,slow=4.4,SNR=8.3					
FINES			pP	**pP**	**10 42 49.1 -1.0**	
	comp=Z,4.4nm,1.0s,baz=190,slow=19,SNR=2.4					
ARCES	**ARCESS Array B**	**91.35 340**	P	**P**	**10 42 34.1 -0.3**	
	comp=Z,2.4nm,1.0s,baz=91,slow=4.7,SNR=2.1					
YKA	**Yellowknife Ar**	**116.36 19**	PKP	**PKiKP**	**10 48 12.6 +0.8**	
	comp=Z,0.1nm,0.8s,baz=347,slow=1.9,SNR=1.6					
CPUP	**Villa Florida**	**143.72 208**	PKP	**PKPdf**	**10 49 03.8 -0.6**	
	comp=Z,0.8nm,0.3s,baz=251,slow=14,SNR=2.3					
TXAR	**Lajitas Array**	**144.41 45**	PKP	**PKPdf**	**10 49 05.3 -0.4**	
	comp=Z,0.4nm,0.4s,baz=267,slow=0.3,SNR=14					
BDFB	**Brasilia**	**145.57 232**	PKPbc	**PKPab**	**10 49 09.3 +0.7**	
	comp=Z,1.1nm,0.3s,baz=120,slow=3.1,SNR=5.8					

*IDC **13** 10:43:03.4±2.9, 17°.26N×121°.41E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.1/41, mbtmp3.2/3, ML4.8/1, Error ellipse: s-maj=59.2km s-min=33.5km az=47.0*
*MAN **13** 10:43:08.2, 16°.53N×120°.77E, h1km, mb4.3, ML3.1, MS2.8*

ISC 13 10:43:09.3±0.8, 16°.56N±0°.03×120°.71E±0°.09, h10km, n8, σ2s01/13, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BCP	**Baguio City**	**0.17**	**215**	⇑*iP*		**Pg**	**10 43 12.3**	**-0.8**
BCP				*i*	S	**Sg**	**10 43 15.1**	**-0.7**
SIPP	**Brgy, Tapao**	**1.38**	**350**	⇑*eP*		**Pg**	**10 43 37.2**	**+1.4**
SIPP				*eS*		**Sg**	**10 43 54.3**	**+0.6**
APYP	**Conner**	**1.39**	**21**	*eP*		**Pb**	**10 43 34.2**	**-1.2**
APYP				*eS*		**Sg**	**10 43 54.0**	**-0.1**
TGY	**Tagaytay City**	**2.45**	**175**	Pn		**Pg**	**10 43 55.7**	**-0.6**
	108nm,0.3s,baz=27,slow=2.3,SNR=6.1							
TGY				Sn		**Sg**	**10 44 33.4**	**+5.2**
	58nm,0.3s,baz=272,slow=19,SNR=1.9							
LQP	**Lukban**	**2.56**	**162**	⇑*eP*		**Pn**	**10 43 50.5**	**-0.6**
LQP				*eS*		**Sn**	**10 44 22.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**20.85**	**278**	P		**P**	**10 47 53.0**	**+1.6**
	0.2nm,0.3s,baz=96,slow=8.2,SNR=1.3							
WRA	**Warramunga Arr**	**38.67**	**159**	P		**P**	**10 50 31.2**	**-2.1**
	0.4nm,0.7s,baz=340,slow=9.1,SNR=4.9							
ASAR	**Alice Springs**	**42.01**	**162**	P		**P**	**10 51 01.5**	**+0.5**
	0.3nm,0.8s,baz=335,slow=6.4,SNR=3.5							

*NEIC **13** 11:15:54±1.2, 0°.03S±0°.05×123°.42E±0°.07, h150km±5km, mb4.5/52, Error ellipse: s-maj=10.4km s-min=6.9km az=92.0*
*DJA **13** 11:15:55.2±0.2, 0°.5±3°×12°.3E±°, h136km±3km, M4.5/14, mB4.8/4, mb4.6/9, MLv4.5/14, Mw(mB)4.1/4*
*IDC **13** 11:15:56.1±1.3, 0°.02S×123°.47E, h167km±12km, mb3.9/14, mb1 4.0/18, mb1mx3.8/45, mbtmp4.3/18, MS2.7/4, Ms1 2.7/4, ms1mx2.5/41, Error ellipse: s-maj=14.0km s-min=8.5km az=71.0*

ISC 13 11:15:54.9±0.3, 0°.03S±0°.04×123°.45E±0°.05, h157km, n129, σ1s29/137, mb4.5/62, 2C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**0.80**	**326**	P		**Pn**	**11 16 19.2**	**+0.4**
KMSI	**Cibinong**	**0.80**	**41**	P		**Pn**	**11 16 18.1**	**-0.7**
KMSI				S		**Sn**	**11 16 34.9**	**-2.2**
LUWI	**Luwuk**	**1.21**	**214**	Pn		**Pn**	**11 16 20.4**	**-1.8**
LUWI	**Luwuk**	**1.21**	**214**	P		**Pn**	**11 16 20.3**	**-1.8**
MRSI	**Marisa**	**1.59**	**289**	P		**Pn**	**11 16 24.4**	**-1.5**
APSI	**Ampana**	**2.00**	**244**	P		**Pn**	**11 16 29.5**	**-0.9**
TOLI2	**Tolitoli**	**2.90**	**293**	Pn		**Pn**	**11 16 39.9**	**-1.4**
SANI	**Sanana**	**3.23**	**128**	P		**Pn**	**11 16 43.2**	**-2.2**
TNTI	**Ternate**	**4.00**	**78**	Pn		**Pn**	**11 16 54.5**	**-0.8**
TNTI	**Ternate**	**4.00**	**78**	P		**Pn**	**11 16 54.9**	**-0.4**
TTSI	**Tana Toraja**	**4.71**	**230**	P		**Pn**	**11 17 05.4**	**+0.9**
NLAI	**Namlea**	**4.84**	**131**	P		**Pn**	**11 17 06.3**	**0.0**
SPSI	**Sidrap Palu**	**5.37**	**223**	P		**Pn**	**11 17 13.2**	**0.0**
	0.2nm76nm44nm,0.6s							
BNSI	**Bone**	**5.48**	**218**	P		**Pn**	**11 17 17.4**	**+2.7**
KAPI	**Kappang**	**6.17**	**217**	P		**Pn**	**11 17 26.1**	**+2.1**
	3.6nm,0.3s,baz=30,slow=9.6,SNR=9.6							
KAPI				S		**Sn**	**11 18 34.4**	**+0.5**
	3.1nm,0.3s,baz=217,slow=20,SNR=8.7							
KAPI				LR	LR		11 19 50.1	
	comp=Z,42nm,19.2s,baz=48,slow=38							
KAPI	**Kappang**	**6.17**	**217**			**Pn**	**11 17 22.2**	**-1.8**
BKB	**Balikpapan**	**6.67**	**259**	P		**Pn**	**11 17 30.2**	**-0.3**
	0.3nm76nm,0.8s							
MYLDM	**Lahad Datu**	**7.16**	**316**	Pn		**Pn**	**11 17 36.6**	**-0.5**
SIJI	**Sorong**	**7.86**	**96**	P		**Pn**	**11 17 47.1**	**+0.7**
	2.2nm,0.3s,baz=270,slow=16,SNR=4.4							
SIJI				S		**Sn**	**11 19 15.9**	**+1.7**
	0.5nm,0.3s,baz=72,slow=20,SNR=2.2							
FAKI	**Fak Fak**	**9.25**	**108**	Pn		**Pn**	**11 18 04.5**	**-0.4**
KKM	**Kota Kinabalu**	**9.41**	**310**			**Pn**	**11 18 05.9**	**-1.3**
BATI	**Baumata**	**10.11**	**179**	P		**Pn**	**11 18 19.4**	**+3.1**
	4.5nm,0.3s,baz=346,slow=14,SNR=1.7							
MTN	**Manton Dam**	**14.83**	**149**	Pn		**Pn**	**11 19 16.6**	**-0.3**
KNRA	**Kununurra**	**16.40**	**162**			**Pn**	**11 19 36.4**	**+0.2**
CISI	**Cisompet, Garu**	**17.29**	**244**	P		**P**	**11 19 44.4**	**-1.6**
CISI				IAmb	IAmb		11 19 53.5	
	comp=Z,14nm,0.6s							
CISI	**Cisompet, Garu**	**17.29**	**244**	P		**Pn**	**11 19 46.9**	**-0.1**
	comp=Z,2µmcomp=Z,14nm,1.2s							
FITZ	**Fitzroy Crossi**	**18.08**	**173**	P		**Pn**	**11 19 55.6**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=2.1,slow=7.8,SNR=89							
FITZ				LR	LR		11 27 37.2	
	comp=Z,18nm,19.3s,baz=302,slow=39							
FITZ	**Fitzroy Crossi**	**18.08**	**173**	P		**P**	**11 19 54.5**	**-0.1**
FITZ				IAmb	IAmb		11 19 57.3	
	comp=Z,24nm,1.2s							
DLV	**T Lat**	**19.04**	**309**	P		**P**	**11 20 05.0**	**-0.3**
DLV				IAmb	IAmb		11 20 09.8	
	comp=Z,22nm,0.7s							
PSA00	**Pilbara Seismi**	**21.70**	**189**	P		**P**	**11 20 33.0**	**-0.5**
WB0	**Warramunga Arr**	**22.35**	**152**	P		**P**	**11 20 40.1**	**0.0**
WRAB	**Tennant Creek**	**22.47**	**152**	P		**P**	**11 20 41.5**	**+0.2**
WRAB				IAmb	IAmb		11 20 43.1	
	comp=Z,15nm,0.6s							
WRA	**Warramunga Arr**	**22.48**	**152**	P		**P**	**11 20 41.7**	**+0.4**
	comp=Z,12nm,0.5s,baz=332,slow=10,SNR=320							
WRA				S		**S**	**11 24 34.9**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=333,slow=16,SNR=5.2							
WRA				ScP		**ScP**	**11 27 53.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=329,slow=2.7,SNR=5.2							
WRA	**Warramunga Arr**	**22.48**	**152**	P		**P**	**11 20 41.3**	**0.0**
WB2	**Warramunga Arr**	**22.48**	**152**	P		**P**	**11 20 41.8**	**+0.4**
WR0	**Warramunga Arr**	**22.59**	**152**	P		**P**	**11 20 42.6**	**+0.3**
WR0				IAmb	IAmb		11 20 51.6	
	comp=Z,14nm,0.6s							
IPM	**Ipoh**	**22.85**	**282**	P		**P**	**11 20 44.7**	**-0.2**
IPM				IAmb	IAmb		11 20 47.4	
	comp=Z,14nm,0.7s							
YULB	**Yu-li**	**23.38**	**355**	P		**P**	**11 20 49.8**	**+0.2**
UBPT	**Khong Chiam**	**23.39**	**311**	P		**P**	**11 20 50.4**	**+0.7**
UBPT				IAmb	IAmb		11 21 04.8	
	comp=Z,25nm,1.4s							
COEN	**Coen**	**23.93**	**126**	P		**P**	**11 20 54.9**	**+0.2**
YHNB	**Yeheng**	**24.64**	**355**	P		**P**	**11 21 00.4**	**-0.7**
AS31	**Alice Springs**	**25.59**	**157**	P		**P**	**11 21 10.4**	**+0.7**
ASAR	**Alice Springs**	**25.59**	**157**	P		**P**	**11 21 10.3**	**+0.7**
	comp=Z,1.9nm,0.6s,baz=343,slow=14,SNR=49							
ASAR				ScP		**ScP**	**11 28 01.6**	**0.0**
	comp=Z,0.6nm,0.8s,baz=332,slow=1.8,SNR=6.7							
ASAR	**Alice Springs**	**25.59**	**157**	P		**P**	**11 21 09.8**	**+0.1**
KHON	**Khomkaen**	**26.05**	**310**	P		**P**	**11 21 16.0**	**+2.2**
	comp=Z,8µmcomp=Z,54nm,0.8s							
JOW	**Kunigami**	**27.11**	**9**	LR	LR		11 33 51.8	
	comp=Z,19nm,18.3s,baz=301,slow=40							
UTHA	**Uthaitani**	**28.32**	**304**	P		**P**	**11 21 37.3**	**+3.2**
	comp=Z,229nmcomp=Z,22nm,0.7s							
SUKH	**Sukhothai**	**29.20**	**308**	P		**P**	**11 21 45.0**	**+3.2**
	comp=Z,21nm,0.7s							
MORW	**Morawa**	**29.73**	**193**	P		**P**	**11 21 45.9**	**-0.5**
LAMP	**Lampang**	**29.79**	**310**	P		**P**	**11 21 51.0**	**+3.9**
	comp=Z,582nmcomp=Z,12nm,0.8s							
CM04	**Chiang Mai Arr**	**30.23**	**309**	P		**P**	**11 21 54.2**	**+3.2**
	comp=Z,56nmcomp=Z,7.3nm,0.8s							
CM09	**Chiang Mai Arr**	**30.25**	**309**	P		**P**	**11 21 54.4**	**+3.3**
	comp=Z,46nmcomp=Z,6.7nm,0.8s							
CM01	**Chiang Mai Arr**	**30.26**	**309**	P		**P**	**11 21 54.0**	**+2.8**
	comp=Z,137nmcomp=Z,7.1nm,0.8s							
CM05	**Chiang Mai Arr**	**30.26**	**309**	P		**P**	**11 21 54.0**	**+2.8**
	comp=Z,44nmcomp=Z,5.9nm,0.8s							
CM02	**Chiang Mai Arr**	**30.27**	**309**	P		**P**	**11 21 54.6**	**+3.2**
	comp=Z,59nmcomp=Z,6.8nm,0.8s							
CM31	**Chiang Mai Arr**	**30.29**	**309**	P		**P**	**11 21 50.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**30.29**	**309**	P		**P**	**11 21 53.1**	**+1.6**
	comp=Z,3.6nm,0.7s,baz=134,slow=7.0,SNR=29							
CMAR				PcP		**PcP**	**11 24 48.7**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=160,slow=2.2,SNR=6.0							
CMAR	**Chiang Mai Arr**	**30.29**	**309**	P		**P**	**11 21 52.1**	**+0.6**
CM13	**Chiang Mai Arr**	**30.30**	**309**	P		**P**	**11 21 54.0**	**+2.4**
	comp=Z,8.0nm,0.8s							
CM15	**Chiang Mai Arr**	**30.30**	**309**	P		**P**	**11 21 54.0**	**+2.4**
	comp=Z,8.2nm,0.8s							
CHTO	**Chiang Mai**	**30.49**	**309**	P		**P**	**11 21 53.5**	**+0.1**
CHTO				IAmb	IAmb		11 21 56.6	
	comp=Z,8.3nm,0.8s							
FORT	**Forrest**	**30.89**	**172**	P		**P**	**11 21 57.0**	**+0.4**
NJ2	**Nanjing**	**32.21**	**353**	*eP*		**P**	**11 22 10.0**	**+1.9**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NWAO	**Narrogin (SRO)**	**33.24**	**190**	P		**P**	**11 22 16.5**	**-0.6**
NWAO				IAmb	IAmb		11 22 39.5	
	comp=Z,11nm,1.1s							
NWAO	**Narrogin (SRO)**	**33.24**	**190**	P		**P**	**11 22 17.1**	**0.0**
	comp=Z,8.0nm,1.1s							
BBOO	**Buckleboo**	**34.70**	**161**	P		**P**	**11 22 30.5**	**+0.7**
BBOO				IAmb	IAmb		11 22 35.5	
	comp=Z,20nm,1.4s							
JHS	**Saijyo**	**36.00**	**14**	P		**P**	**11 22 41.5**	**+0.6**
STKA	**Stephens Creek**	**36.02**	**153**	P		**P**	**11 22 42.0**	**+0.9**
	comp=Z,5.5nm,0.6s,baz=327,slow=9.8,SNR=16							
STKA	**Stephens Creek**	**36.02**	**153**	P		**P**	**11 22 41.3**	**+0.3**
JWT	**Wachi**	**36.86**	**16**	P		**P**	**11 22 47.7**	**-0.4**
KSRS	**Korea Array**	**37.53**	**6**	P		**P**	**11 22 56.6**	**+2.9**
	comp=Z,0.9nm,0.5s,baz=188,slow=10.0,SNR=2.7							
MJAR	**Matsushiro Arr**	**38.88**	**19**	P		**P**	**11 23 03.9**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=201,slow=8.6,SNR=4.2							
LZH	**Lanzhou**	**40.30**	**335**	⇑P		**P**	**11 23 14.8**	**-2.2**
LZH				pmax	pmax			
	comp=Z,17nm,1.1s							
ARMA	**Armidale**	**40.38**	**141**	P		**P**	**11 23 16.1**	**-1.6**
ARMA				IAmb	IAmb		11 23 21.1	
	comp=Z,8.7nm,0.6s							
HHC	**Hu-ho-hao-te**	**42.10**	**347**	*eP*		**P**	**11 23 33.8**	**+2.2**
HHC				pmax	pmax			
	comp=Z,13nm,1.0s							
HHC				pmax	pmax			
	comp=Z,120nm,5.2s							
CAN	**Canberra**	**42.43**	**148**	P		**P**	**11 23 34.8**	**+0.6**
CAN				IAmb	IAmb		11 23 38.4	
	comp=Z,13nm,0.8s							
TOO	**Toolangi**	**42.53**	**154**	P		**P**	**11 23 35.5**	**+0.4**
TOO				IAmb	IAmb		11 23 38.6	
	comp=Z,8.2nm,0.9s							
RAMN	**Ramite**	**44.44**	**310**	*eP*		**P**	**11 23 51.8**	**+1.1**
	comp=Z,42nm,0.6s							
USRK	**Ussuriysk Ar.**	**44.69**	**9**	P		**P**	**11 23 52.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=199,slow=6.1,SNR=6.5							
USRK	**Ussuriysk Ar.**	**44.69**	**9**	P		**P**	**11 23 51.6**	**-0.5**
GTA	**Gaotai**	**44.82**	**334**	⇑P		**P**	**11 23 55.4**	**+2.0**
GTA				pP	pP		11 24 29.3	+1.0
GTA				sP	sP		11 24 43.8	-2.2
GTA				pmax	pmax			
	comp=Z,9.0nm,0.7s							
JIRN	**Jiri**	**45.12**	**311**	*eP*		**P**	**11 23 56.9**	**+0.7**
	comp=Z,20nm,0.4s							
GUN	**Gumba**	**45.48**	**311**	*eP*		**P**	**11 23 59.8**	**+0.7**
	comp=Z,34nm,0.4s							
PKI	**Pulchoki**	**45.67**	**310**	*eP*		**P**	**11 24 00.8**	**+0.3**
	comp=Z,10nm,0.5s							
PKIN	**Phulchoki**	**45.68**	**310**	*eP*		**P**	**11 24 00.8**	**+0.3**
	comp=Z,18nm,0.5s							
KKN	**Kakani**	**45.88**	**310**	*eP*		**P**	**11 24 02.9**	**+0.9**
	comp=Z,20nm,0.6s							
DMN	**Daman**	**45.92**	**310**	*eP*		**P**	**11 24 02.7**	**+0.3**
	comp=Z,7.1nm,0.3s							
GKN	**Gorkha**	**46.47**	**310**	*eP*		**P**	**11 24 07.2**	**+0.6**
	comp=Z,29nm,0.6s							
KOLN	**Koldanda**	**47.16**	**309**	*eP*		**P**	**11 24 12.4**	**+0.4**
	comp=Z,61nm,0.7s							
PYUN	**Piuthan**	**47.79**	**309**	*eP*		**P**	**11 24 17.7**	**+0.8**
	comp=Z,88nm,0.6s							
ULN	**Ulaanbaatar**	**49.80**	**346**	P		**P**	**11 24 31.5**	**-0.3**
ULN				IAmb	IAmb		11

EMPR	**Esperanza - Ma**	**1.14 202**	⇑	*eP*	**Pn**	**11 41 59.9**	**0.0**
EMPR	**Esperanza - Ma**	**1.14 202**		*eS*	**Sn**	**11 42 14.4**	**0.0**
EMPR	**Esperanza - Ma**	**1.14 202**			**Pn**	**11 41 59.9**	**0.0**
EMPR					**Sn**	**11 42 14.4**	**0.0**
EMPR	**Esperanza - Ma**	**1.14 202**		IAML		11 42 25.1	
	comp=E,844nm,0.8s						
EMPR				IAML		11 42 26.8	
	comp=N,838nm,0.8s						
GCPR	**Guaynabo City**	**1.23 180**	⇓	*eP*	**Pn**	**11 42 00.2**	**-1.0**
GCPR	**Guaynabo City**	**1.23 180**		*eS*	**Sn**	**11 42 16.3**	**-0.3**
GCPR	**Guaynabo City**	**1.23 180**			**Pn**	**11 42 00.2**	**-1.0**
GCPR					**Sn**	**11 42 16.3**	**-0.3**
GCPR	**Guaynabo City**	**1.23 180**		IAML		11 42 25.6	
	comp=E,342nm,0.9s						
CBYP	**Canovanas**	**1.29 170**	⇓	*eP*	**Pn**	**11 42 01.0**	**-1.0**
CBYP	**Canovanas**	**1.29 170**			**Pn**	**11 42 01.0**	**-1.0**
CBYP	**Canovanas**	**1.29 170**		IAML		11 42 25.0	
	comp=E,798nm,0.2s						
CBYP				IAML		11 42 27.0	
	comp=N,715nm,0.2s						
AOPR	**Arecibo Observ**	**1.35 208**	⇑	*eP*	**Pn**	**11 42 02.4**	**-0.5**
AOPR	**Arecibo Observ**	**1.35 208**		*eS*	**Sn**	**11 42 19.8**	**+0.3**
AOPR	**Arecibo Observ**	**1.35 208**			**Pn**	**11 42 02.4**	**-0.5**
AOPR					**Sn**	**11 42 19.8**	**+0.3**
AOPR	**Arecibo Observ**	**1.35 208**		IAML		11 42 25.5	
	comp=N,1µm,0.6s						
HUMP	**Col San Antoni**	**1.41 171**	⇑	*eP*	**Pn**	**11 42 02.9**	**-0.8**
HUMP	**Col San Antoni**	**1.41 171**		*eS*	**Sn**	**11 42 21.0**	**-0.1**
HUMP	**Col San Antoni**	**1.41 171**			**Pn**	**11 42 02.9**	**-0.8**
HUMP					**Sn**	**11 42 21.0**	**-0.1**
HUMP	**Col San Antoni**	**1.41 171**		IAML		11 42 23.7	
	comp=N,230nm,0.5s						
HUMP				IAML		11 42 23.8	
	comp=E,226nm,0.2s						
SJG	**San Juan**	**1.43 182**			**Pn**	**11 42 04.1**	**+0.2**
SJG				IAML		11 42 23.3	
	comp=E,532nm,0.5s						
SJG				IAML		11 42 24.3	
	comp=E,419nm,0.7s						
AGPR	**Aguadilla, PR**	**1.45 222**		Pn	**Pn**	**11 42 04.7**	**+0.6**
AGPR				IAML		11 42 50.8	
	comp=N,228nm,1.8s						
CUPR	**Culebra, Puert**	**1.45 148**	⇑	*eP*	**Pn**	**11 42 03.6**	**-0.5**
CUPR	**Culebra, Puert**	**1.45 148**		*eS*	**Sn**	**11 42 22.6**	**+0.7**
CUPR	**Culebra, Puert**	**1.45 148**			**Pn**	**11 42 03.6**	**-0.5**
CUPR					**Sn**	**11 42 22.6**	**+0.7**
PDPR	**Patillas Dam,**	**1.52 178**			**Pn**	**11 42 05.1**	**-0.1**
PDPR				IAML		11 42 27.1	
	comp=E,398nm,0.5s						
MTP	**Monte Pirata**	**1.53 161**	⇓	*eP*	**Pn**	**11 42 05.1**	**-0.1**
MTP	**Monte Pirata**	**1.53 161**		*eS*	**Sn**	**11 42 24.7**	**+0.8**
MTP	**Monte Pirata**	**1.53 161**			**Pn**	**11 42 05.1**	**-0.1**
MTP					**Sn**	**11 42 24.7**	**+0.8**
CELP	**Cerrillos**	**1.54 198**	⇓	*eP*	**Pn**	**11 42 05.1**	**-0.3**
CELP	**Cerrillos**	**1.54 198**		*eS*	**Sn**	**11 42 24.2**	**0.0**
CELP	**Cerrillos**	**1.54 198**			**Pn**	**11 42 05.1**	**-0.3**
CELP					**Sn**	**11 42 24.2**	**0.0**
IGPR	**InterUniversit**	**1.57 181**	⇑	*eP*	**Pn**	**11 42 05.8**	**-0.1**
IGPR	**InterUniversit**	**1.57 181**		*eS*	**Sn**	**11 42 25.1**	**+0.1**
IGPR	**InterUniversit**	**1.57 181**		Pn	**Pn**	**11 42 06.0**	**+0.2**
IGPR				IAML		11 42 28.1	
	comp=E,348nm,0.3s						
OBIP	**Obispado Ponce**	**1.57 198**	⇑	*eP*	**Pn**	**11 42 05.7**	**-0.2**
OBIP	**Obispado Ponce**	**1.57 198**		*eS*	**Sn**	**11 42 24.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.57 198**			**Pn**	**11 42 05.7**	**-0.2**
OBIP					**Sn**	**11 42 24.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.57 198**		IAML		11 42 31.7	
	comp=N,304nm,1.1s						
OBIP				IAML		11 42 35.6	
	comp=E,246nm,0.8s						
MPR	**Mayaguez**	**1.66 217**			**Pn**	**11 42 07.7**	**+0.6**
ICMP	**Isla Caja de M**	**1.70 194**			**Pn**	**11 42 08.2**	**+0.5**
ICMP				IAML		11 42 32.6	
	comp=N,187nm,0.6s						
ICMP				IAML		11 42 36.6	
	comp=E,286nm,0.6s						
MLPR	**Magueyes Islan**	**1.81 210**	⇑	*eP*	**Pn**	**11 42 09.6**	**+0.5**
MLPR	**Magueyes Islan**	**1.81 210**			**Pn**	**11 42 09.6**	**+0.5**
CDVI	**St. Croix**	**2.18 145**		Pn	**Pn**	**11 42 14.7**	**+0.4**
DR12	**Loma Pena Alta**	**3.20 257**		Pn	**Pn**	**11 42 28.1**	**-0.3**
BANI	**BANI**	**4.20 255**		Pn	**Pn**	**11 42 42.0**	**-0.1**
SC01	**Santiago de lo**	**4.38 269**		Pn	**Pn**	**11 42 43.9**	**-0.7**
ANWB	**Willy Bob**	**4.49 114**		Pn	**Pn**	**11 42 46.3**	**+0.4**
SDDR	**Presa de Saban**	**4.95 264**			**Pn**	**11 42 52.5**	**+0.2**
SDDR				IAML		11 44 18.2	
	comp=E,41nm,1.9s						
SDDR				IAML		11 44 40.6	
	comp=E,35nm,2.2s						

DJA ***13*** *11:49:41.7±0.9,4˚N±9˚×12˚7E±˚, h48km±10km, M4.5/15, mB5.1/7, mb4.7/15, MLv4.5/12, Mw(mB)4.4/7*

NEIC ***13*** *11:49:42.9±1.1, 3˚.42N±0˚.06×127˚.18E±0˚.07, h76km±6km, mb4.4/44, Error ellipse: s-maj=11.7km s-min=8.0km az=56.0*

IDC ***13*** *11:49:44.3±1.5, 3˚.43N×127˚.35E, h77km±15km, mb3.8/19, mb1 4.0/23, mb1mx3.8/51, mbtmp4.2/23, MS3.2/23, Ms1 3.2/23, ms1mx3.0/62, Error ellipse: s-maj=20.6km s-min=8.3km az=71.0*

ISC 13 11:49:40.3±0.4, 3˚.45N±0˚.04×127˚.31E±0˚.06, h45km, n125, σ1§80/110, mb4.4/35, MS3.3/21, 2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SGSI	**Sangihe**	**1.79**	**278**	P		**Pn**	**11 50 09.8**	**+1.0**
SGSI				S		**Sn**	**11 50 33.3**	**+3.0**
TNTI	**Ternate**	**2.66**	**179**			**Pn**	**11 50 22.8**	**+2.0**
TNTI	**Ternate**	**2.66**	**179**	P		Pn	11 50 25.7	+4.9
DDMP	**Don Marcelino,**	**3.08**	**329**	*eP*		**Pn**	**11 50 28.2**	**+1.8**
DDMP				*eS*		**Sn**	**11 51 07.0**	**+5.0**
DAV	**Davao City (W)**	**3.98**	**334**	P		Pn	11 50 44.4	+5.4
	64nm,0.3s,baz=111,slow=8.6,SNR=3.7							
DAV				S		**Sn**	**11 51 30.1**	**+5.7**
	baz=48,slow=15,SNR=1.1							
DAV	**Davao City (W)**	**3.98**	**334**			**Pn**	**11 50 41.1**	**+2.2**
SKMP	**Bagumbayan, Su**	**4.11**	**318**	*eP*		**Pn**	**11 50 43.1**	**+2.4**
SKMP				*eS*		**Sn**	**11 51 30.3**	**+2.9**
KCP	**Kidapawan**	**4.17**	**328**	⇓ *iP*		Pn	11 50 47.5	+6.0
KMSI	**Cibinong**	**4.38**	**229**	P		Pn	11 50 49.5	+5.1
BUKP	**Musuan**	**4.93**	**333**	*eP*		**Pn**	**11 50 55.9**	**+3.9**
BUKP				*eS*		Sn	11 52 00.2	+12
GTOI	**Gorontalo**	**5.12**	**237**	P		**Pn**	**11 50 58.9**	**+4.3**
	0.1nm452nm24nm,0.8s							
CGP	**Cagayan de Oro**	**5.61**	**333**	⇓ *eP*		Pn	11 50 53.5	-7.8
SANI	**Sanana**	**5.62**	**194**	P		**Pn**	**11 51 03.4**	**+2.0**
	0.4nm3µm55nm,0.9s							
SWI	**Sorong**	**5.83**	**137**	P		**Pn**	**11 51 07.1**	**+2.8**
	0.2nm51nm,0.9s							
SIJI	**Sorong**	**5.84**	**137**	P		**Pn**	**11 51 08.0**	**+3.6**
	6.4nm,0.3s,baz=337,slow=9.5,SNR=14							
SIJI				S		**Sn**	**11 52 13.4**	**+3.3**
	0.1nm,0.3s,baz=72,slow=19,SNR=1.2							
SIJI				LR		LR	11 53 45.3	
	comp=Z,250nm,19.0s,baz=43,slow=42							
MRSI	**Marisa**	**6.12**	**241**	P		Pn	11 51 13.5	+5.2
	0.4nm1µm98nm,0.6s							
LUWI	**Luwuk**	**6.36**	**226**	Pn		**Pn**	**11 51 13.1**	**+1.5**
LUWI	**Luwuk**	**6.36**	**226**	P		Pn	11 51 18.8	+7.2
	0.6nm3µm150nm,0.8s							
NLAI	**Namlea**	**6.65**	**182**	P		**Pn**	**11 51 19.1**	**+3.5**
	0.2nm3µm35nm,0.9s							
TOLI2	**Tolitoli**	**6.92**	**251**	Pn		**Pn**	**11 51 18.6**	**-0.7**
APSI	**Ampana**	**7.12**	**233**	P		**Pn**	**11 51 24.7**	**+2.6**
FAKI	**Fak Fak**	**8.03**	**142**	Pn		**Pn**	**11 51 37.2**	**+2.8**
FAKI	**Fak Fak**	**8.03**	**142**	P		**Pn**	**11 51 38.9**	**+4.4**
	33nm,0.6s							
TTSI	**Tana Toraja**	**9.88**	**229**	P		**Pn**	**11 52 02.1**	**+2.2**
	2µm35nm,0.7s							
SPSI	**Sidrap Palu**	**10.54**	**226**	P		**Pn**	**11 52 12.9**	**+4.1**
	18nm,0.6s							
BNSI	**Bone**	**10.61**	**223**	P		**Pn**	**11 52 13.6**	**+3.7**
	24nm,0.7s							
KAPI	**Kappang**	**11.30**	**222**	P		**Pn**	**11 52 22.8**	**+3.5**
	0.9nm,0.3s,baz=15,slow=9.9,SNR=4.6							
KAPI				LR		LR	11 57 35.1	
	comp=Z,47nm,19.5s,baz=46,slow=42							
SOEI	**Soe**	**13.46**	**193**	Pn		**Pn**	**11 52 50.1**	**+1.1**
SOEI	**Soe**	**13.46**	**193**	P		**P**	**11 52 54.7**	**-2.5**
	34nm,0.8s							
BATI	**Baumata**	**14.04**	**195**	P		**P**	**11 53 00.3**	**-3.3**
	3.8nm,0.3s,baz=98,slow=7.1,SNR=6.6							
BATI	**Baumata**	**14.04**	**195**	P		**P**	**11 53 01.0**	**-2.6**
	23nm,0.7s							

GENI	**Genyem**	**14.19**	**115**		P		P	11 53 10.3 +5.1
SBUM	**Sibu**	**15.10**	**267**				**Pn**	**11 53 10.0 -0.8**
PLAI	**Plampang**	**15.46**	**218**		P		**P**	**11 53 19.9 +0.6**
	782nm86nm,1.0s							
SZP	**Santa**	**15.54**	**335**		Pn		**Pn**	**11 53 17.0 +0.5**
TWSI	**Taliwang, Sumb**	**15.96**	**221**		P		**P**	**11 53 26.2 +1.4**
	281nm29nm,0.9s							
MTN	**Manton Dam**	**16.63**	**167**				**P**	**11 53 31.2 -1.0**
KNRA	**Kununurra**	**19.06**	**176**		P		**P**	**11 53 58.6 -0.4**
KNRA					IAmb		IAmb	11 54 03.0
	comp=Z,19nm,0.8s							
YULB	**Yu-li**	**20.66**	**344**		P		**P**	**11 54 15.3 -1.2**
YULB					IAmb		IAmb	11 54 15.5
	comp=Z,20nm,0.9s							
TPUB	**Ta-pu**	**20.76**	**342**		P		**P**	**11 54 15.6 -2.0**
SSLB	**Suanglung**	**21.13**	**344**		P		**P**	**11 54 19.8 -1.7**
FITZ	**Fitzroy Crossi**	**21.48**	**184**		P		**P**	**11 54 26.0 +0.7**
	comp=Z,4.4nm,0.6s,baz=352,slow=4.7,SNR=19							
FITZ					LR		LR	12 04 14.6
	comp=Z,28nm,19.1s,baz=28,slow=41							
FITZ	**Fitzroy Crossi**	**21.48**	**184**		P		**P**	**11 54 25.5 +0.3**
YHNB	**Yeheng**	**21.86**	**345**		P		**P**	**11 54 28.7 -0.6**
LEM	**Lembang**	**22.15**	**243**		LR		LR	12 03 13.8
	comp=Z,20nm,20.8s,baz=50,slow=36							
JOW	**Kunigami**	**23.27**	**2**		LR		LR	12 02 43.8
	comp=Z,65nm,21.1s,baz=267,slow=34							
WB0	**Warramunga Arr**	**24.10**	**163**		P		**P**	**11 54 51.8 -0.1**
WB0					IAmb		IAmb	11 55 08.3
	comp=Z,9.5nm,0.8s							
WRAB	**Tennant Creek**	**24.25**	**164**		P		**P**	**11 54 52.3 -1.0**
WRAB					IAmb		IAmb	11 55 21.1
	comp=Z,12nm,0.9s							
WRA	**Warramunga Arr**	**24.25**	**164**		P		**P**	**11 54 53.5 +0.1**
	comp=Z,4.5nm,0.7s,baz=344,slow=10,SNR=7.0							
WRA	**Warramunga Arr**	**24.25**	**164**		P		**P**	**11 54 53.4 0.0**
WB2	**Warramunga Arr**	**24.26**	**164**		P		**P**	**11 54 53.4 0.0**
WR0	**Warramunga Arr**	**24.33**	**163**		P		**P**	**11 54 54.1 +0.1**
WR0					IAmb		IAmb	11 55 08.6
	comp=Z,14nm,1.1s							
PSA00	**Pilbara Seismi**	**25.92**	**196**		P		**P**	**11 55 07.5 -1.0**
PSA00	**Pilbara Seismi**	**25.92**	**196**		P		**P**	**11 55 07.5 -1.0**
PSA00					IAmb		IAmb	11 55 12.2
	comp=Z,13nm,0.8s							
JCJ	**Chichijima**	**27.48**	**30**		LR		LR	12 03 38.7
	comp=Z,92nm,21.6s,baz=110,slow=30							
AS31	**Alice Springs**	**27.71**	**167**		P		**P**	**11 55 23.7 -0.9**
ASAR	**Alice Springs**	**27.71**	**167**		P		**P**	**11 55 25.1 +0.5**
	comp=Z,0.6nm,0.5s,baz=347,slow=7.2,SNR=16							
ASAR					PcP		**PcP**	**11 58 40.9 0.0**
	comp=Z,0.4nm,0.7s,baz=358,slow=2.7,SNR=2.8							
ASAR					LR		LR	12 07 08.6
	comp=Z,36nm,21.5s,baz=7.0,slow=38							
ASAR	**Alice Springs**	**27.71**	**167**		P		**P**	**11 55 24.3 -0.3**
JNU	**Nakatsue**	**29.71**	**6**		LR		LR	12 10 54.5
	comp=Z,65nm,18.8s,baz=202,slow=43							
CMAR	**Chiang Mai Arr**	**31.51**	**300**		P		**P**	**11 55 59.4 +1.1**
	comp=Z,0.4nm,0.5s,baz=115,slow=6.6,SNR=4.8							
CMAR					LR		LR	12 09 39.6
	comp=Z,19nm,18.1s,baz=161,slow=38							
CMAR	**Chiang Mai Arr**	**31.51**	**300**		P		**P**	**11 55 57.3 -1.1**
KSRS	**Korea Array**	**33.84**	**1**		P		**P**	**11 56 18.8 +0.3**
	comp=Z,2.0nm,0.8s,baz=179,slow=9.2,SNR=5.6							
KSRS					LR		LR	12 14 42.7
	comp=Z,18nm,18.7s,baz=161,slow=44							
FORT	**Forrest**	**34.05**	**179**		P		**P**	**11 56 18.9 -1.5**
MORW	**Morawa**	**34.09**	**198**		P		**P**	**11 56 20.0 -0.8**
MJAR	**Matsushiro Arr**	**34.43**	**16**		LR		LR	12 08 43.9
	comp=Z,65nm,20.9s,baz=200,slow=33							
BBOO	**Buckleboo**	**37.01**	**168**		P		**P**	**11 56 45.3 -0.4**
NWAO	**Narrogin (SRO)**	**37.42**	**194**		P		**P**	**11 56 49.1 -0.1**
NWAO	**Narrogin (SRO)**	**37.42**	**194**		P		**P**	**11 56 48.1 -1.1**
NWAO					IAmb		IAmb	11 56 52.8
	comp=Z,34nm,1.5s							
STKA	**Stephens Creek**	**37.67**	**160**		P		**P**	**11 56 52.2 +0.9**
	comp=Z,5.8nm,0.6s,baz=335,slow=9.7,SNR=20							
STKA					LR		LR	12 13 53.1
	comp=Z,61nm,19.7s,baz=24,slow=38							
STKA	**Stephens Creek**	**37.67**	**160**		P		**P**	**11 56 50.8 -0.5**
BJT	**Baijiatuau**	**37.77**	**346**		P		**P**	**11 56 51.5 -0.6**
USRK	**Ussuriysk Ar.**	**40.79**	**5**		P		**P**	**11 57 18.5 +1.3**
	comp=Z,2.7nm,0.9s,baz=185,slow=8.7,SNR=4.8							
USRK					LR		LR	12 20 20.9
	comp=Z,23nm,18.0s,baz=180,slow=45							
USRK	**Ussuriysk Ar.**	**40.79**	**5**		P		**P**	**11 57 16.6 -0.7**
H11S3	**WAKE ISLAND Hy**	**41.32**	**66**		T		T	12 40 49.1
	baz=254,SNR=5.1							
H11S2	**WAKE ISLAND Hy**	**41.33**	**66**		T		T	12 40 48.5
	baz=254							
H11S1	**WAKE ISLAND Hy**	**41.33**	**66**		T		T	12 40 47.9
	baz=254							
ASAJ	**Asahikawa**	**42.69**	**16**		P		**P**	**11 57 33.8 +1.0**
	comp=Z,3.8nm,0.7s,baz=165,slow=8.7,SNR=5.0							
ASAJ					LR		LR	12 13 15.1
	comp=Z,50nm,21.3s,baz=198,slow=33							
KLR	**Kul'dur**	**45.77**	**4**		P		**P**	**11 57 58.0 +0.7**
	comp=Z,2.7nm,0.8s,baz=234,slow=6.2							
KLR					LR		LR	12 22 37.8
	comp=Z,34nm,18.0s,baz=217,slow=43							
ULN	**Ulaanbaatar**	**47.56**	**342**		P		**P**	**11 58 11.3 -0.3**
SONM	**Songino Array**	**47.74**	**341**		P		**P**	**11 58 13.5 +0.5**
	comp=Z,1.2nm,0.7s,baz=153,slow=7.8,SNR=7.2							
SONM	**Songino Array**	**47.74**	**341**		P		**P**	**11 58 12.0 -1.0**
TLY	**Talaya**	**51.97**	**342**		P		**P**	**11 58 43.9 -1.0**
TLY					IAmb		IAmb	11 59 00.1
	comp=Z,5.8nm,1.0s							
PEA0B	**Petropavlovsk-**	**55.47**	**22**		P		**P**	**11 59 09.5 -1.0**
PETK	**Petropavlovsk-**	**55.47**	**22**		P		**P**	**11 59 10.9 +0.5**
	comp=Z,6.5nm,0.8s,baz=197,slow=4.6,SNR=8.0							
PETK	**Petropavlovsk-**	**55.47**	**22**		P		**P**	**11 59 09.9 -0.6**
MK31	**Makanchi Array**	**58.11**	**325**		P		**P**	**11 59 28.8 -0.6**
MK31					IAmb		IAmb	11 59 42.2
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**58.11**	**325**		P		**P**	**11 59 30.6 +1.3**
	comp=Z,1.0nm,0.5s,baz=113,slow=7.3,SNR=10							
MKAR					LR		LR	12 25 42.6
	comp=Z,29nm,21.2s,baz=94,slow=37							
MKAR	**Makanchi Array**	**58.11**	**325**		P		**P**	**11 59 28.6 -0.8**
MAKZ	**Makanchi**	**58.30**	**325**		P		**P**	**11 59 29.7 -1.0**
MAKZ					IAmb		IAmb	11 59 43.1
	comp=Z,4.3nm,0.9s							
YAK	**Yakutsk**	**58.47**	**1**		LR		LR	12 23 05.7
	comp=Z,22nm,21.8s,baz=142,slow=34							
MA2	**Magadan**	**58.84**	**14**		LR		LR	12 21 42.7
MA2					P		**P**	**11 59 33.8 -0.4**
	comp=Z,24nm,21.7s,baz=200,slow=33							
MA2	**Magadan**	**58.84**	**14**		P		**P**	**11 59 33.8 -0.4**
MA2					IAmb		IAmb	11 59 36.3
	comp=Z,3.4nm,0.8s							
ZAA0	**Zalesovo Array**	**61.10**	**333**		P		**P**	**11 59 48.4 -1.4**
ZAA0					IAmb		IAmb	11 59 50.7
	comp=Z,3.7nm,0.9s							
ZALV	**Zalesovo Beam**	**61.10**	**333**		P		**P**	**11 59 49.8 0.0**
	comp=Z,1.4nm,0.6s,baz=114,slow=6.6,SNR=8.7							
ZALV					LR		LR	12 26 55.8
	comp=Z,24nm,20.4s,baz=64,slow=36							
ZALV	**Zalesovo Beam**	**61.10**	**333**		P		**P**	**11 59 48.9 -0.8**
PLWZ	**Palliser**	**62.47**	**141**		P		**P**	**11 59 59.3 0.0**
KK31	**Karatay Array**	**63.83**	**317**		P		**P**	**12 00 08.1 -0.2**
KK31					IAmb		IAmb	12 00 25.3
	comp=Z,5.6nm,1.2s							
KKAR	**Karatay Array**	**63.83**	**317**		P		**P**	**12 00 07.6 -0.6**
KKAR	**Karatay Array**	**63.83**	**317**		P		**P**	**12 00 07.4 -0.8**
KKAR					IAmb		IAmb	12 00 25.3
	comp=Z,5.6nm,1.2s							
BRVK	**Borovoye**	**67.94**	**327**		P		**P**	**12 00 34.0 -0.5**
TIXI	**Tiksi**	**68.11**	**1**		LR		LR	12 33 48.2
	comp=Z,14nm,19.4s,baz=187,slow=39							
TIXI	**Tiksi**	**68.11**	**1**		P		**P**	**12 00 34.7 -0.5**
TIXI					IAmb		IAmb	12 00 36.0
	comp=Z,5.4nm,0.8s							
NRIK	**Noril'sk**	**70.83**	**346**		P		**P**	**12 00 52.7 +0.6**
	comp=Z,3.1nm,0.7s,baz=163,slow=5.3,SNR=4.2							
NRIK	**Noril'sk**	**70.83**	**346**		P		**P**	**12 00 51.4 -0.6**
NRIK					IAmb		IAmb	12 00 53.2
	comp=Z,4.5nm,0.9s							
GEYT	**Alibeck**	**71.52**	**309**		LR		LR	12 36 26.5
	comp=Z,24nm,20.2s,baz=145,slow=39							
ABKAR	**Akbulak array**	**72.73**	**321**		P		**P**	**12 01 03.6 -0.2**
ABKAR	**Akbulak array**	**72.73**	**321**		P		**P**	**12 01 02.7 -1.1**
ABKAR					IAmb		IAmb	12 01 05.6
	comp=Z,2.9nm,0.8s							
AKTO	**Aktyubinsk**	**74.23**	**322**		P		**P**	**12 01 13.9 +1.2**
	comp=Z,3.0nm,0.7s,baz=102,slow=8.0,SNR=9.3							
AKTO					LR		LR	12 35 35.5
	comp=Z,33nm,19.4s,baz=47,slow=37							
IMAR	**Indian Mountai**	**82.36**	**24**		P		**P**	**12 01 57.3 +0.1**
SKT	**Skwentna**	**82.81**	**28**		P		**P**	**12 01 58.6 -1.1**
SKT					IAmb		IAmb	12 02 11.2
	comp=Z,5.3nm,1.2s							
VNDA	**Vanda**	**83.08**	**173**		P		**P**	**12 02 01.1 +0.4**
	comp=Z,0.7nm,0.6s,baz=338,slow=7.1,SNR=4.2							
VNDA	**Vanda**	**83.08**	**173**		P		**P**	**12 01 59.6 -1.1**
SUA	**Susitna One**	**83.13**	**29**		P		**P**	**12 02 00.9 -0.5**
SUA					IAmb		IAmb	12 02 03.9
	comp=Z,6.4nm,1.0s							
MLY	**Manley**	**83.48**	**25**		P		**P**	**12 02 02.9 -0.2**
MLY					IAmb		IAmb	12 02 05.8
	comp=Z,4.1nm,1.1s							
ILAR	**Eielson Array**	**85.11**	**25**		P		**P**	**12 02 11.6 +0.3**
	comp=Z,0.6nm,0.9s,baz=246,slow=5.6,SNR=4.5							
ILAR	**Eielson Array**	**85.11**	**25**		P		**P**	**12 02 10.8 -0.6**
KLU	**Klutina**	**85.44**	**29**		P		**P**	**12 02 12.4 -0.8**
KLU					IAmb		IAmb	12 02 37.0
	comp=Z,6.2nm,1.1s							
KLMR	**Klimovskoe**	**85.93**	**331**		P		**P**	**12 02 15.4 0.0**
KLMR					AMP			12 02 25.4
	comp=Z,12nm,1.4s							
BMAR	**Burnt Mountain**	**86.11**	**23**		P		**P**	**12 02 16.1 -0.2**
ARCES	**ARCESS Array B**	**90.91**	**340**		P		**P**	**12 02 39.1 +0.1**
	comp=Z,3.0nm,0.9s,baz=335,slow=1.7,SNR=3.6							
QSPA	**South Pole Qui**	**93.36**	**180**		P		**P**	**12 02 48.6 -1.9**
QSPA					IAmb		IAmb	12 03 13.8
	comp=Z,3.3nm,1.5s							
ELL	**Elmali**	**93.88**	**307**		P		**P**	**12 02 50.7 -2.9**
EUNU	**Eureka**	**94.90**	**6**		P		**P**	**12 02 55.8 -1.6**
NOA	**NORSAR Array B**	**99.29**	**334**		LR		LR	12 51 56.9
	comp=Z,24nm,18.2s,baz=15,slow=38							
YKA	**Yellowknife Ar**	**99.51**	**25**		P		**Pdif**	**12 03 18.3 0.0**
	comp=Z,0.2nm,0.8s,baz=302,slow=4.3,SNR=6.5							

INMG ***13*** *11:57:24.8±2.7, 37˚.46N×20˚.65W, h10km, ML3.6, Error ellipse: s-maj=24.1km s-min=7.2km az=98.0*

ISC 13 11:57:08.0±0.9, 37˚.02N±0˚.08×21˚.35W±0˚.04, h10km, n43, σ1§46/51, 2C, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PSMN	**Pico do Norte,**	**2.97**	**271**	*eP*		**Pb**	**11 58 00.7**	**-0.4**
PSMN				*eS*		**Sn**	**11 58 30.4**	**-0.6**
PSMN				A		A	11 58 31.0	
	145nm,0.2s							
PSMA	**Santa Maria**	**3.02**	**271**	*eP*		**Pb**	**11 58 01.9**	**0.0**
PSMA				*eS*		**Sn**	**11 58 31.7**	**-0.5**
PSMA				A		A	11 58 32.9	
	212nm,0.2s							
BART	**Pico Bartolome**	**3.13**	**285**	⇑ *iP*		**Pb**	**11 58 03.6**	**-0.2**
BART				*eS*		**Sn**	**11 58 35.1**	**+0.1**
BART				A		A	11 58 35.8	
	354nm,0.2s							
PCALD	**Caldeiras da R**	**3.38**	**284**	*eP*		**Pb**	**11 58 07.5**	**-0.6**
PCALD				*eS*		**Sn**	**11 58 41.0**	**-0.1**
PCALD				A		A	11 58 42.2	
	76nm,0.2s							
CMLA	**Cha da Macela**	**3.41**	**284**	*eP*		**Pb**	**11 58 07.5**	**-0.9**
CMLA				*eS*		**Sn**	**11 58 41.5**	**-0.1**
CMLA				A		A	11 58 46.0	
	300nm,0.2s							
PDA	**Ponta Delgada**	**3

0.5nm,0.4s,baz=74,slow=9.3,SNR=35
ARCES ARCESS Array B 118.77 346 PKP PKPdf 12 24 07.5 -0.4
1.9nm,1.0s,baz=42,slow=1.4,SNR=6.0

*IDC **13** 12:13:16.0±1.1, 37.02N×143.89E, h0km, mb3.6/6, mb1 3.8/11, mb1mx3.5/77, mbtmp3.8/11, ML3.7/4, Error ellipse: s-maj=25.9km s-min=17.4km az=96.0*
*JMA **13** 12:13:20.4±0.2, 37.22N×143.61E, h54km, M3.7*
*NIED **13** 12:13:20.4, 37.22N×143.61E, h54km, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr=2.78; Mθθ 0.04; Mφφ 2.73; Mrθ=0.18; Mθφ 0.93; Mφr=1.08; Fault plane solution: Mo 3.10000×10¹⁴ NP1:φ=14.00000°, δ 55.00000°, λ=-94.00000°. NP2:φ=201.00000°, δ 35.00000°, λ=-85.00000°.*

ISC 13 12:13:21.1±0.8, 37.06N±0.05×143.75E±0.08, h54km, n29, σ2.99/38, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**2.32**	**279**	P	**Pn**	**12 13 55.8**	**-1.0**
JFK				S	**Sn**	**12 14 21.4**	**-2.7**
ONAJ	**Iwakimizuishiy**	**2.36**	**272**	P	**Pn**	**12 13 56.3**	**-1.1**
ONAJ				S	**Sn**	**12 14 22.8**	**-2.4**
JMST	**Minamisoumatoc**	**2.38**	**287**	P	**Pn**	**12 13 55.6**	**-1.9**
JMST				S	**Sn**	**12 14 21.8**	**-3.7**
JMM	**Marumori**	**2.49**	**290**	P	**Pn**	**12 13 57.3**	**-1.8**
JMM				S	**Sn**	**12 14 25.0**	**-3.2**
JFFD	**Fukushimafurud**	**2.55**	**272**	P	**Pn**	**12 13 58.9**	**-1.1**
JFFD				S	**Sn**	**12 14 27.3**	**-2.5**
JHO	**Hitachi**	**2.59**	**261**	P	**Pn**	**12 13 59.7**	**-0.8**
JMK	**Ichinoseki**	**2.75**	**314**	P	**Pn**	**12 14 00.4**	**-2.3**
JMK				eS	**Sn**	**12 14 30.6**	**-4.1**
JFT	**Otama**	**2.76**	**281**	P	**Pn**	**12 14 02.4**	**-0.5**
JOM	**Ohasama**	**3.09**	**322**	P	**Pn**	**12 14 05.1**	**-2.3**
JOM				S	**Sn**	**12 14 38.2**	**-4.9**
JYK	**Kaneyama**	**3.26**	**306**	P	**Pn**	**12 14 08.3**	**-1.4**
JAG	**Ashikaga**	**3.51**	**261**	P	**Pn**	**12 14 12.8**	**-0.3**
JRY	**Ryogami san**	**4.04**	**257**	P	**Pn**	**12 14 20.0**	**-0.4**
MJAR	**Matsushiro Arr**	**4.47**	**265**	Pn	**Pn**	**12 14 27.1**	**+0.8**
	1.0nm,0.3s,baz=80,slow=17,SNR=32						
MJAR				Sn	**Sn**	**12 15 18.6**	**+1.5**
	0.3nm,0.3s,baz=60,slow=22,SNR=6.4						
MAT	**Matsushiro**	**4.48**	**265**	P	**Pn**	**12 14 27.3**	**+0.9**
MAT				eS	**Sn**	**12 15 16.3**	**-0.9**
JHJ	**Hachijo jima 2**	**5.10**	**221**	Pn	**Pn**	**12 14 34.4**	**-0.5**
	12nm,0.3s,baz=334,slow=23,SNR=5.1						
JHJ				Sn	**Sn**	**12 15 28.8**	**-3.7**
	26nm,0.3s,baz=267,slow=24,SNR=5.3						
ASAJ	**Asahikawa**	**7.11**	**353**	Pn	**Pn**	**12 14 60.0**	**-2.4**
	1.0nm,0.3s,baz=195,slow=10,SNR=12						
ASAJ				Sn	**Sn**	**12 16 15.0**	**-6.7**
	baz=266,slow=13,SNR=1.7						
JCJ	**Chichijima**	**10.02**	**188**	Pn	**Pn**	**12 15 38.8**	**-3.5**
	3.5nm,0.3s,baz=309,slow=13,SNR=1.6						
JCJ				Sn	**Sn**	**12 17 24.5**	**-8.7**
	3.0nm,0.3s,baz=261,slow=19,SNR=1.5						
USRK	**Usuriysk Ar.**	**11.43**	**312**	Pn	**Pn**	**12 16 02.2**	**+0.7**
	baz=130,slow=12,SNR=5.1						
KLR	**Kul'dur**	**14.97**	**328**	Pn	**P**	**12 16 54.3**	**+0.7**
	0.2nm,0.3s,baz=143,slow=9.8,SNR=10						
SEY	**Seymchan**	**26.45**	**9**	P	**P**	**12 18 54.7**	**+2.1**
	1.5nm,0.8s,baz=150,slow=6.2,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**26.58**	**124**	T	T	12 46 37.0	
	baz=317						
H11N1	**WAKE ISLAND Hy**	**26.59**	**124**	T	T	12 47 08.3	
	baz=317						
H11N3	**WAKE ISLAND Hy**	**26.60**	**124**	T	T	12 46 44.9	
	baz=317						
SONM	**Songino Array**	**29.33**	**303**	P	**P**	**12 19 22.1**	**+3.5**
	0.6nm,0.6s,baz=105,slow=8.0,SNR=5.0						
ZALV	**Zalesovo Beam**	**43.28**	**312**	PcP	**PcP**	**12 23 08.0**	**+2.8**
	0.3nm,0.3s,baz=108,slow=3.2,SNR=2.3						
KURBB	**Kurchatov Arra**	**47.46**	**308**	P	**P**	**12 21 52.5**	**+2.3**
	0.8nm,0.4s,baz=82,slow=8.1,SNR=8.0						
ILAR	**Eielson Array**	**48.48**	**32**	P	**P**	**12 21 59.7**	**+1.8**
	0.2nm,0.7s,baz=273,slow=6.2,SNR=1.8						
WRA	**Warramunga Arr**	**57.38**	**191**	P	**P**	**12 23 06.1**	**+2.1**
	0.5nm,0.8s,baz=10,slow=7.3,SNR=5.3						
ASAR	**Alice Springs**	**61.10**	**190**	P	**P**	**12 23 32.1**	**+2.5**
	0.3nm,0.7s,baz=16,slow=9.4,SNR=6.7						

*BUC **13** 12:15:13.8±0.3, 45.63N×26.50E, h146km±1km, ml3.6/32, Error ellipse: s-maj=1.9km s-min=1.5km az=148.0*

ISC 13 12:15:13.1±1.6, 45.64N±0.03×26.49E±0.03, h153km±8km, n81, σ0.46/128, 54C-73D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.18**	**119**	↓S	**Sn**	**12 15 49.2**	**-0.2**
BISRR	**Bisoca**	**0.18**	**119**	↓S	**Sn**	**12 15 49.2**	**-0.2**
PLOR	**Plostina**	**0.24**	**28**	↑P	**Pn**	**12 15 33.9**	**0.0**
PLOR				↑S	**Sn**	**12 15 49.5**	**-0.2**
PLOR	**Plostina**	**0.24**	**28**	↑P	**Pn**	**12 15 33.9**	**0.0**
PLOR				↑S	**Sn**	**12 15 49.5**	**-0.2**
NEHR	**Nehoiu**	**0.25**	**213**	↓P	**Pn**	**12 15 34.3**	**+0.4**
NEHR				↓S	**Sn**	**12 15 49.8**	**+0.1**
NEHR	**Nehoiu**	**0.25**	**213**	↓P	**Pn**	**12 15 34.3**	**+0.4**
NEHR				↓S	**Sn**	**12 15 49.8**	**+0.1**
VRI	**Vrincioaia**	**0.28**	**36**	↓P	**Pn**	**12 15 34.1**	**+0.1**
VRI				↓S	**Sn**	**12 15 49.6**	**-0.3**
VRI	**Vrincioaia**	**0.28**	**36**	↓P	**Pn**	**12 15 34.1**	**+0.1**
VRI				↑S	**Sn**	**12 15 49.6**	**-0.3**
MLR	**Muntele Rosu**	**0.41**	**249**	↓P	**Pn**	**12 15 34.7**	**+0.2**
MLR				↓S	**Sn**	**12 15 50.6**	**-0.1**
MLR	**Muntele Rosu**	**0.41**	**249**	↓P	**Pn**	**12 15 34.7**	**+0.2**
MLR				↓S	**Sn**	**12 15 50.6**	**-0.1**
ODBI	**Odobesti**	**0.42**	**72**	↓S	**Sn**	**12 15 50.7**	**+0.1**
ODBI	**Odobesti**	**0.42**	**72**	↓S	**Sn**	**12 15 50.7**	**+0.1**
GRER		**0.43**	**127**	↓S	**Sn**	**12 15 50.6**	**0.0**
GRER		**0.43**	**127**	↓S	**Sn**	**12 15 50.6**	**0.0**
ISR	**Istrita**	**0.52**	**176**	↓P	**Pn**	**12 15 35.0**	**0.0**
ISR				↑S	**Sn**	**12 15 51.6**	**+0.1**
ISR	**Istrita**	**0.52**	**176**	↓P	**Pn**	**12 15 35.0**	**0.0**
ISR				↑S	**Sn**	**12 15 51.6**	**+0.1**
PETR	**Petresti**	**0.53**	**80**	↑P	**Pn**	**12 15 35.7**	**+0.8**
PETR				↑S	**Sn**	**12 15 51.3**	**-0.1**
PETR	**Petresti**	**0.53**	**80**	↑P	**Pn**	**12 15 35.7**	**+0.8**
PETR				↑S	**Sn**	**12 15 51.3**	**-0.1**
SECR		**0.67**	**206**	↓P	**Pn**	**12 15 35.5**	**-0.2**
SECR				↓S	**Sn**	**12 15 53.0**	**0.0**
SECR		**0.67**	**206**	↓P	**Pn**	**12 15 35.5**	**-0.2**
SECR				↓S	**Sn**	**12 15 53.0**	**0.0**
GHRR		**0.77**	**56**	↑P	**Pn**	**12 15 36.8**	**+0.5**
GHRR				↑S	**Sn**	**12 15 54.1**	**0.0**
GHRR		**0.77**	**56**	↑P	**Pn**	**12 15 36.8**	**+0.5**
GHRR				↑S	**Sn**	**12 15 54.1**	**0.0**
PLAR	**PLOIESTI**	**0.79**	**204**	↑S	**Sn**	**12 15 54.4**	**+0.1**
PLAR	**PLOIESTI**	**0.79**	**204**	↑S	**Sn**	**12 15 54.4**	**+0.1**
PGOR	**Pogoanele**	**0.81**	**154**	↑P	**Pn**	**12 15 36.4**	**-0.2**
PGOR				↑S	**Sn**	**12 15 54.2**	**-0.3**
PGOR	**Pogoanele**	**0.81**	**154**	↑P	**Pn**	**12 15 36.4**	**-0.2**
PGOR				↑S	**Sn**	**12 15 54.2**	**-0.3**
TUDR		**0.83**	**93**	↑P	**Pn**	**12 15 37.4**	**+0.7**
TUDR				↑S	**Sn**	**12 15 54.7**	**-0.1**
TUDR		**0.83**	**93**	↑P	**Pn**	**12 15 37.4**	**+0.7**
TUDR				↑S	**Sn**	**12 15 54.7**	**-0.1**
DOPR	**Dopca**	**0.84**	**294**	↓P	**Pn**	**12 15 36.9**	**0.0**
DOPR				↑S	**Sn**	**12 15 54.5**	**-0.5**
DOPR	**Dopca**	**0.84**	**294**	↓P	**Pn**	**12 15 36.9**	**0.0**
DOPR				↑S	**Sn**	**12 15 54.5**	**-0.5**
SCHL	**Schela**	**0.95**	**98**	↓S	**Sn**	**12 15 56.1**	**-0.3**
SCHL	**Schela**	**0.95**	**98**	↓S	**Sn**	**12 15 56.1**	**-0.3**
SULR		**0.97**	**190**	↑P	**Pn**	**12 15 38.8**	**+0.9**
SULR				↑S	**Sn**	**12 15 56.6**	**-0.1**
SULR		**0.97**	**190**	↑P	**Pn**	**12 15 38.8**	**+0.9**
SULR				↑S	**Sn**	**12 15 56.6**	**-0.1**
VARL	**Varlezi**	**0.99**	**74**	↓S	**Sn**	**12 15 56.7**	**-0.3**
VARL	**Varlezi**	**0.99**	**74**	↓S	**Sn**	**12 15 56.7**	**-0.3**
BIR	**Birlad**	**1.01**	**51**	↓P	**Pn**	**12 15 38.6**	**+0.4**
BIR				↓S	**Sn**	**12 15 56.7**	**-0.7**
BIR	**Birlad**	**1.01**	**51**	↓P	**Pn**	**12 15 38.6**	**+0.4**
BIR				↓S	**Sn**	**12 15 56.7**	**-0.7**
VOIR		**1.03**	**259**	↓P	**Pn**	**12 15 38.3**	**-0.1**
VOIR				↓S	**Sn**	**12 15 57.4**	**-0.4**
VOIR		**1.03**	**259**	↓P	**Pn**	**12 15 38.3**	**-0.1**
VOIR				↓S	**Sn**	**12 15 57.4**	**-0.4**
MTUR	**Matau**	**1.08**	**248**	↓P	**Pn**	**12 15 38.5**	**-0.4**
MTUR	**Matau**	**1.08**	**248**	↓P	**Pn**	**12 15 38.5**	**-0.4**
GISR	**Galati**	**1.12**	**100**	↓S	**Sn**	**12 15 59.0**	**+0.1**
GISR	**Galati**	**1.12**	**100**	↓S	**Sn**	**12 15 59.0**	**+0.1**
LEHL	**Lehliu**	**1.19**	**168**	↑S	**Sn**	**12 16 00.1**	**0.0**
LEHL	**Lehliu**	**1.19**	**168**	↑S	**Sn**	**12 16 00.1**	**0.0**
AMRR	**Amara**	**1.19**	**149**	↓P	**Pn**	**12 15 39.4**	**-0.4**
AMRR				↓S	**Sn**	**12 16 00.2**	**+0.1**
AMRR	**Amara**	**1.19**	**149**	↓P	**Pn**	**12 15 39.4**	**-0.4**
AMRR				↓S	**Sn**	**12 16 00.2**	**+0.1**
GIUM	**Giurgiulesti**	**1.22**	**97**	↑P	**Pn**	**12 15 40.4**	**+0.4**
GIUM				↓S	**Sn**	**12 16 00.4**	**-0.2**
GIUM	**Giurgiulesti**	**1.22**	**97**	↑P	**Pn**	**12 15 40.4**	**+0.4**
GIUM				↓S	**Sn**	**12 16 00.4**	**-0.2**
CFR	**Carcaliu**	**1.25**	**111**	↓P	**Pn**	**12 15 40.6**	**+0.3**
CFR				↓S	**Sn**	**12 16 00.3**	**-0.9**
CFR	**Carcaliu**	**1.25**	**111**	↓P	**Pn**	**12 15 40.6**	**+0.3**
CFR				↓S	**Sn**	**12 16 00.3**	**-0.9**
GIRR	**Girov**	**1.32**	**0**	↓P	**Pn**	**12 15 41.0**	**0.0**
GIRR	**Girov**	**1.32**	**0**	↓P	**Pn**	**12 15 41.0**	**0.0**
BUC1	**Bucharest**	**1.33**	**194**	↑S	**Sn**	**12 16 02.3**	**-0.2**
BUC1	**Bucharest**	**1.33**	**194**	↑S	**Sn**	**12 16 02.3**	**-0.2**
VASR	**Vaslui**	**1.35**	**42**	↑P	**Pn**	**12 15 41.6**	**+0.2**
VASR				↑S	**Sn**	**12 16 02.0**	**-1.0**
VASR	**Vaslui**	**1.35**	**42**	↑P	**Pn**	**12 15 41.6**	**+0.2**
VASR				↑S	**Sn**	**12 16 02.0**	**-1.0**
HARR	**Harsova**	**1.39**	**132**	↓P	**Pn**	**12 15 42.2**	**+0.4**
HARR	**Harsova**	**1.39**	**132**	↓P	**Pn**	**12 15 42.2**	**+0.4**
SGRR	**Singureni**	**1.46**	**195**	↓S	**Sn**	**12 16 04.5**	**-0.4**
SGRR	**Singureni**	**1.46**	**195**	↓S	**Sn**	**12 16 04.5**	**-0.4**
HUMR	**Humele**	**1.54**	**224**	↑P	**Pn**	**12 15 43.3**	**+0.1**
HUMR				↓S	**Sn**	**12 16 05.7**	**-0.6**
HUMR	**Humele**	**1.54**	**224**	↑P	**Pn**	**12 15 43.3**	**+0.1**
HUMR				↓S	**Sn**	**12 16 05.7**	**-0.6**
TLBR	**Topalu**	**1.55**	**134**	↓P	**Pn**	**12 15 44.0**	**+0.6**
TLBR				↑S	**Sn**	**12 16 05.7**	**-0.9**
TLBR	**Topalu**	**1.55**	**134**	↓P	**Pn**	**12 15 44.0**	**+0.6**
TLBR				↑S	**Sn**	**12 16 05.7**	**-0.9**
TPGR	**Topolog**	**1.57**	**119**	↓P	**Pn**	**12 15 43.7**	**+0.1**
TPGR				↑S	**Sn**	**12 16 05.7**	**-1.3**
TPGR	**Topolog**	**1.57**	**119**	↓P	**Pn**	**12 15 43.7**	**+0.1**
TPGR				↑S	**Sn**	**12 16 05.7**	**-1.3**
TLCR		**1.70**	**105**	↑P	**Pn**	**12 15 45.1**	**+0.1**
TLCR				↑S	**Sn**	**12 16 09.2**	**-0.2**
TLCR		**1.70**	**105**	↑P	**Pn**	**12 15 45.1**	**+0.1**
TLCR				↑S	**Sn**	**12 16 09.2**	**-0.2**
JURR	**Jurilovca**	**1.90**	**116**	↓P	**Pn**	**12 15 47.9**	**+0.7**
JURR	**Jurilovca**	**1.90**	**116**	↓P	**Pn**	**12 15 47.9**	**+0.7**
MFTR	**Murfatlar**	**2.00**	**136**	↓P	**Pn**	**12 15 49.0**	**+0.5**
MFTR				↓S	**Sn**	**12 16 15.4**	**-0.1**
MFTR	**Murfatlar**	**2.00**	**136**	↓P	**Pn**	**12 15 49.0**	**+0.5**
MFTR				↓S	**Sn**	**12 16 15.4**	**-0.1**
MILM	**Milestii Mici**	**2.06**	**51**	↓P	**Pn**	**12 15 49.2**	**+0.2**
MILM	**Milestii Mici**	**2.06**	**51**	↓P	**Pn**	**12 15 49.2**	**+0.2**
KIS	**Kishinev**	**2.11**	**49**	eP	**Pn**	**12 15 50.3**	**+0.6**
KIS				*i* ↓S	**Sn**	**12 16 16.8**	**-1.0**
	90nm,0.3s						
BURAR	**Bucovina Array**	**2.16**	**337**	↑P	**Pn**	**12 15 51.5**	**+1.1**
BURAR	**Bucovina Array**	**2.16**	**337**	↑P	**Pn**	**12 15 51.5**	**+1.1**
VLAD	**Vladila**	**2.21**	**223**	↓S	**Sn**	**12 16 20.1**	**+0.2**
VLAD	**Vladila**	**2.21**	**223**	↓S	**Sn**	**12 16 20.1**	**+0.2**

*IDC **13** 12:29:21.6±6.7, 36.26N×70.38E, h184km±58km, mb3.2/8, mb1 3.2/12, mb1mx3.0/68, mbtmp3.7/12, MS3.1/1, Ms1 3.1/1, ms1mx2.3/35, Error ellipse: s-maj=37.3km s-min=22.7km az=11.0*
*NNC **13** 12:29:27.4±7.5, 36.87N×70.16E, h148km±123km, mb3.2, mpv4.0, Error ellipse: s-maj=68.7km s-min=46.1km az=176.0*

ISC 13 12:29:24.5±0.7, 36.54N±0.06×70.46E±0.09, h204km, n31, σ1.83/34, mb3.3/7, 2C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.96**	**156**	P	**Pn**	**12 30 13.7**	**-0.3**
CEP				S	**S**	**12 30 51.0**	**-1.1**
CHCP	**Chirah Chowk**	**3.68**	**140**	P	**Pn**	**12 30 22.8**	**+0.2**
THW	**Thamme Wali**	**3.88**	**164**	P	**Pn**	**12 30 24.2**	**-0.8**
KK31	**Karatay Array**	**6.56**	**0**	↓P	**Pn**	**12 30 58.0**	**-0.9**
	2.0nm,0.2s,baz=180,slow=13,SNR=46						
KK31				↓S	**S**	**12 32 09.0**	**-4.7**
	3.5nm,0.4s,baz=187,slow=26,SNR=6.7						
AAK	**Ala-Archa**	**6.84**	**26**	↑P	**Pn**	**12 31 02.8**	**+0.1**
	6.7nm,0.6s						
AAK				↓S	**S**	**12 32 18.2**	**-2.5**
	25nm,0.6s						
TKM2	**Tokmak 2**	**7.50**	**30**	↓P	**Pn**	**12 31 11.2**	**-0.2**
	11nm,0.5s						
TKM2				↓S	**S**	**12 32 33.8**	**-2.6**
	7.9nm,0.8s						
PYUN	**Piuthan**	**13.52**	**125**	eP	**Pn**	**12 32 26.6**	**-2.0**
MKAR	**Makanchi Array**	**13.52**	**37**	P	**Pn**	**12 32 29.1**	**+0.9**
	0.5nm,0.3s,baz=205,slow=8.0,SNR=20						
GKN	**Gorkha**	**14.69**	**121**	eP	**Pn**	**12 32 43.5**	**+0.5**
	12nm,0.3s						
AB31	**Akbulak array**	**14.84**	**332**	↓P	**Pn**	**12 32 45.7**	**+1.3**
	0.9nm,0.3s,baz=143,slow=12,SNR=67						
KURBB	**Kurchatov Arra**	**15.23**	**20**	P	**P**	**12 32 50.4**	**+0.9**
	0.0nm,0.3s,baz=208,slow=10,SNR=5.4						
KKN	**Kakani**	**15.27**	**121**	eP	**P**	**12 32 51.1**	**+0.7**
	11nm,0.4s						
PKIN	**Phulchoki**	**15.48**	**121**	eP	**P**	**12 32 53.1**	**+0.3**
	12nm,0.4s						
PKI	**Pulchoki**	**15.50**	**121**	eP	**P**	**12 32 53.3**	**+0.3**
	13nm,0.4s						
GUN	**Gumba**	**15.62**	**119**	eP	**Pn**	**12 32 56.2**	**+1.8**
	9.3nm,0.3s						
JIRN	**Jiri**	**15.99**	**119**	eP	**Pn**	**12 32 59.3**	**+0.4**
	17nm,0.5s						
BVAR	**Borovoye Array**	**16.49**	**360**	P	**Pn**	**12 33 04.9**	**+0.7**
	0.2nm,0.3s,baz=198,slow=13,SNR=2.7						
AKTO	**Aktyubinsk**	**16.53**	**331**	P	**P**	**12 33 04.7**	**+0.8**
	0.4nm,0.3s,baz=160,slow=8.6,SNR=6.7						
AKTO	**Aktyubinsk**	**16.53**	**331**	↑P	**P**	**12 33 04.8**	**+1.0**
	1.1nm,0.6s						
RAMN	**Ramite**	**16.71**	**120**	eP	**P**	**12 33 06.5**	**+0.2**
	16nm,0.5s						
TAPN	**Taplejung**	**17.25**	**117**	eP	**P**	**12 33 13.2**	**+1.0**
	4.3nm,0.4s						
ODAN	**Odare**	**17.32**	**119**	eP	**Pn**	**12 33 14.1**	**-0.5**
	16nm,0.7s						
ZALV	**Zalesovo Beam**	**20.07**	**25**	P	**P**	**12 33 42.7**	**+0.7**
	3.2nm,0.4s,baz=221,slow=11,SNR=15						
SONM	**Songino Array**	**28.67**	**55**	P	**P**	**12 35 04.3**	**+1.9**
	0.3nm,0.5s,baz=270,slow=7.2,SNR=2.5						
EIL	**Elat**	**30.40**	**267**	LR	LR	12 48 41.3	
	comp=Z,37nm,21.4s,baz=310,slow=38						
FINES	**FINESS Array B**	**37.21**	**326**	P	**P**	**12 36 16.3**	**+0.4**
	1.2nm,0.7s,baz=118,slow=12,SNR=4.0						
ARCES	**ARCESS Array B**	**40.38**		P	**P**	**12 36 47.5**	**+0.8**
	1.5nm,0.7s,baz=108,slow=6.9,SNR=9.3						
TIXI	**Tiksi**	**45.90**	**22**	P	**P**	**12 37 26.9**	**+0.8**
	0.9nm,0.3s,baz=257,slow=5.3,SNR=6.0						
TORD	**Torodi Ar. Bea**	**65.28**	**268**	P	**P**	**12 39 43.6**	**-1.2**
	0.2nm,0.5s,baz=28,slow=6.5,SNR=1.9						
YKA	**Yellowknife Ar**	**81.23**	**2**	P	**P**	**12 41 17.6**	**+0.5**
	0.1nm,0.4s,baz=349,slow=5.0,SNR=4.1						
WRA	**Warramunga Arr**	**82.38**	**122**	P	**P**	**12 41 22.2**	**-1.6**
	0.5nm,0.9s,baz=316,slow=4.8,SNR=1.1						

IDC 13 12:34:12.4±2.2, 3.55N×122.99E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.1/45, mbtmp3.2/3, MS2.7/1, Ms1 2.7/1, ms1mx1.9/19, Error ellipse: s-maj=346.3km s-min=26.2km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**13.69**	**177**	LR	LR	12 43 21.8	
	comp=Z,30nm,19.4s,baz=247,slow=40						
WRA	**Warramunga Arr**	**25.87**	**155**	P	P	12 39 46.1	0.0
	0.1nm,0.4s,baz=334,slow=9.8,SNR=5.4						
ASAR	**Alice Springs**	**29.07**	**159**	P	P	12 40 14.8	+0.1
	0.2nm,1.0s,baz=337,slow=9.1,SNR=4.2						
MKAR	**Makanchi Array**	**55.62**	**327**	P	P	12 43 50.1	-0.1
	0.3nm,0.3s,baz=126,slow=7.3,SNR=7.3						

MEX 13 12:34:18.2±1.5, 16.32N×98.95W, h20km±23km, MD4.2, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIG	**Cruz Grande**	**0.45**	**337**	eP	Pb	12 34 24.9	-2.6
CRIG				*i* S	Sb	12 34 30.3	-3.5
PNIG	**Pinotepa**	**0.79**	**85**	*i* P	Pb	12 34 30.6	-2.8
PNIG				*eS*	Sb	12 34 40.4	-3.3
ACP2	**Acapulco**	**1.05**	**302**	*i* P	Pn	12 34 40.9	+3.0
ACP2				*i* S	Sn	12 34 51.7	-0.2
TLIG	**Tlapa**	**1.29**	**17**	eP	Pn	12 34 37.9	-3.3
TLIG				*i* S	Sn	12 34 53.9	-4.2
YOIG	**Yosondua**	**1.45**	**68**	eP	Pn	12 34 40.5	-3.1
YOIG				eS	Sn	12 34 58.8	-3.4
CAIG	**El Cayaco**	**1.46**	**300**	eP	Pn	12 34 41.3	-2.1
CAIG				*i* S	Sn	12 34 57.7	-4.2
TXIG	**Tlaxiaco**	**1.47**	**50**	eP	Pn	12 34 40.5	-3.3
TXIG				*i* S	Sn	12 34 58.9	-3.7
HMTT	**Tlapaneco**	**1.52**	**14**	*i* P	Pb	12 34 47.5	+1.8
HMTT				*i* S	Sn	12 35 00.5	-3.1
MEIG	**Mezcala**	**1.72**	**338**	*i* S	Sb	12 35 10.5	0.0
PEIG	**Puerto Escondi**	**1.76**	**100**	eP	Pn	12 34 45.0	-2.6
PEIG				eS	Sb	12 35 13.4	+1.8
PEIG				*i* S	Sn	12 35 13.9	+4.4
FTIG	**Fresnillo de T**	**1.76**	**26**	eP	Pn	12 34 44.7	-3.0
FTIG				eS	Sn	12 35 06.0	-3.7
HLIG	**Huajuapan de L**	**1.86**	**36**	eP	Pn	12 34 46.0	-3.2
HLIG				*i* S	Sn	12 35 10.9	-1.3
PLIG	**Platanillo**	**2.13**	**346**	eP	Pn	12 34 51.2	-1.6
PLIG				*i* S	Sn	12 35 19.3	+0.6
VHO	**Vista Hermosa**	**2.25**	**70**	eP	Pn	12 34 51.4	-3.1
VHO				eS	Sn	12 35 23.2	+1.3
TOIG	**Toxpalan**	**2.52**	**45**	eP	Pn	12 34 55.5	-2.7
TOIG				*i* S	Sb	12 35 31.8	-1.8
TOIG				*i* S	Sn	12 35 32.1	+3.6
YAIG	**Yautepec**	**2.53**	**358**	eP	Pn	12 34 59.2	+0.8
YAIG				*i* S	Sb	12 35 33.2	-0.7
TPIG	**Tehuac#an**	**2.58**	**36**	eP	Pn	12 34 54.0	-5.1
TPIG				eS	Sn	12 35 32.0	+2.0
MAVM	**Malinalco, Edo**	**2.67**	**349**	eP	Pn	12 35 02.4	+0.7
PPM	**Popocatepetl**	**2.75**	**6**	eP	Pn	12 35 02.4	+0.7
PPM				eS	Sb	12 35 42.7	+2.2
VTVM	**Tizayuca**	**3.44**	**3**	eP	Pb	12 35 18.1	-0.5
CMIG	**Matias Romero**	**3.97**	**78**	*i* P	Pn	12 35 15.1	-2.9
CMIG				eS	Sb	12 36 18.8	+3.5
TGIG		**5.61**	**84**	*i* S	Sb	12 37 12.8	+10

*ANF **13** 12:38:59.5±0.3, 36.12N×97.57W, h5km, ML3.9/14, Error ellipse: s-maj=3.8km s-min=2.3km az=143.0*
*NEIC **13** 12:38:59.7±1.3, 36.09N±0.01×97.57W±0.02, h5km±7km, Error ellipse: s-maj=2.6km s-min=1.8km az=66.0*
*TUL **13** 12:38:59.7±1.4, 36.08N±0.01×97.56W±0.02, h5km±6km, ML3.3, mb_Lg3.3/87(NEIC), Error ellipse: s-maj=2.5km s-min=1.1km az=59.0*

ISC 13 12:38:59.5±1.1, 36.09N±0.02×97.57W±0.02, h3km±10km, n144, σ0.62/160, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.31**	**163**	Pg	**Pg**	**12 39 05.8**	**+0.3**
OK029				Sg	**Sg**	**12 39 10.3**	**+0.9**
BCOK	**Bluff Creek, N**	**0.43**	**185**		**Pg**	**12 39 08.1**	**+0.2**
BCOK				Sg	**Sg**	**12 39 14.0**	**+0.5**
OK009	**Oakdale Elemen**	**0.52**	**167**		**Pg**	**12 39 10.0**	**+0.5**
OK009				Sg	**Sg**	**12 39 15.0**	**-1.3**
OK025	**Westminster Rd**	**0.54**	**160**		**Pg**	**12 39 10.1**	**+0.3**
OK025				Sg	**Sg**	**12 39 17.6**	**+0.7**
OK001	**Jones High Sch**	**0.57**	**157**		**Pg**	**12 39 10.7**	**+0.2**
OK001				Sg	**Sg**	**12 39 17.1**	**-0.9**
OK031	**S. Brethren Rd**	**0

MIAR	**Mount Ida**	**3.61**	**114**	P		**Pn**	**12 39 57.4**	**+1.2**
	baz=296,SNR=13							
MIAR				S		**Sn**	**12 40 40.5**	**+1.1**
	baz=296							
MIAR	**Mount Ida**	**3.61**	**114**	P			12 39 57.4	
	baz=296,SNR=13							
MIAR				S			12 40 40.5	
	baz=296							
S39A	**Bolivar**	**3.76**	**64**			**Pn**	**12 39 58.6**	**+0.2**
S39A				IAmb_Lg			12 40 58.7	
	comp=Z,91nm,0.8s							
S39A	**Bolivar**	**3.76**	**64**	P		**Pn**	**12 39 58.9**	**+0.6**
	baz=246,SNR=20							
S39A	**Bolivar**	**3.76**	**64**	P			12 39 58.9	
	baz=246,SNR=20							
U40A	**Yellville**	**3.82**	**85**			**Pn**	**12 39 58.5**	**-0.7**
U40A				IAmb_Lg			12 41 02.6	
	comp=Z,56nm,0.8s							
U40A	**Yellville**	**3.82**	**85**	P		**Pn**	**12 39 58.5**	**-0.7**
	baz=267,SNR=14							
U40A	**Yellville**	**3.82**	**85**	P			12 39 58.5	
	baz=267,SNR=14							
U40A				P			12 39 58.5	
	baz=267,SNR=14							
ABTX	**Abilene, Hawle**	**3.86**	**207**	Pn		**Pn**	**12 39 59.8**	**0.0**
ABTX				IAmb_Lg			12 41 05.6	
	comp=Z,91nm,1.3s							
WHTX	**Lake Whitney,**	**4.09**	**179**	Pn		**Pn**	**12 40 03.9**	**+1.0**
WHTX	**Lake Whitney**	**4.09**	**179**	P		**Pn**	**12 40 03.2**	**+0.3**
	baz=359,SNR=9.9							
WHTX	**Lake Whitney,**	**4.09**	**179**	P			12 40 03.2	
	baz=359,SNR=9.9							
X40A	**Basin Creek Fa**	**4.19**	**111**			**Pn**	**12 40 04.4**	**+0.2**
X40A				IAmb_Lg			12 41 14.8	
	comp=Z,54nm,0.7s							
237A	**Washetta, Mont**	**4.33**	**160**	Pn		**Pn**	**12 40 06.4**	**+0.2**
WHAR	**Wooly Hollow**	**4.37**	**99**	Pn		**Pn**	**12 40 06.8**	**0.0**
WHAR				IAmb_Lg			12 41 20.3	
	comp=Z,51nm,1.0s							
WLAR	**White Oak Lake**	**4.38**	**122**	Pn		**Pn**	**12 40 07.5**	**+0.6**
WLAR				IAmb_Lg			12 41 26.3	
	comp=Z,44nm,0.8s							
MGMO	**Mountain Grove**	**4.39**	**74**			**Pn**	**12 40 06.3**	**-0.8**
FCAR	**Ozark Folk Cen**	**4.42**	**91**			**Pn**	**12 40 08.0**	**+0.6**
FCAR				IAmb_Lg			12 41 18.1	
	comp=Z,38nm,0.8s							
W41B	**Gary Mavity, V**	**4.43**	**100**	P		**Pn**	**12 40 07.5**	**0.0**
	baz=283,SNR=14							
W41B	**Gary Mavity, V**	**4.43**	**100**	P			12 40 07.5	
	baz=283,SNR=14							
N33A	**J Bar K, Exete**	**4.64**	**1**			**Pn**	**12 40 10.8**	**+0.3**
N33A				IAmb_Lg			12 41 34.1	
	comp=Z,57nm,1.0s							
P38A	**Dawn**	**4.76**	**41**			**Pn**	**12 40 12.1**	**+0.1**
P38A				IAmb_Lg			12 41 32.1	
	comp=Z,50nm,0.8s							
R40A	**Maddies Statio**	**4.77**	**61**			**Pn**	**12 40 12.6**	**+0.4**
R40A				IAmb_Lg			12 41 34.7	
	comp=Z,69nm,1.0s							
R40A	**Maddies Statio**	**4.77**	**61**	P		**Pn**	**12 40 12.3**	**+0.2**
	baz=244,SNR=9.8							
R40A	**Maddies Statio**	**4.77**	**61**	P			12 40 12.3	
	baz=244,SNR=9.8							
MSTX	**Muleshoe**	**4.77**	**245**			**Pn**	**12 40 11.1**	**-1.2**
NATX	**Nacogdoches**	**4.95**	**150**	Pn		**Pn**	**12 40 14.4**	**-0.3**
KSCO	**Kaye Shedlock'**	**4.97**	**307**			**Pn**	**12 40 16.1**	**+1.0**
N35A	**Tabor**	**5.00**	**17**	Pn		**Pn**	**12 40 16.1**	**+0.8**
LCAR	**Lake Charles**	**5.19**	**88**	Pn		**Pn**	**12 40 17.9**	**-0.1**
CCAR	**Cane Creek**	**5.23**	**113**	Pn		**Pn**	**12 40 18.5**	**0.0**
CCAR				IAmb_Lg			12 41 58.1	
	comp=Z,73nm,0.8s							
435B	**Jarrell**	**5.29**	**180**	Pn		**Pn**	**12 40 19.4**	**0.0**
435B				IAmb_Lg			12 41 57.4	
	comp=Z,30nm,1.1s							
BGNE	**Belgrade**	**5.33**	**355**			**Pn**	**12 40 18.9**	**-1.1**
BGNE				IAmb_Lg			12 42 02.9	
	comp=Z,51nm,0.8s							
CCM	**Cathedral Cave**	**5.42**	**67**	Pn		**Pn**	**12 40 20.7**	**-0.5**
CCM				IAmb_Lg			12 42 04.6	
	comp=Z,36nm,0.7s							
P40A	**Paris**	**5.56**	**50**			**Pn**	**12 40 23.3**	**+0.3**
P40A				IAmb_Lg			12 41 56.4	
	comp=Z,58nm,0.7s							
T25A	**Trinidad**	**5.60**	**283**			**Pn**	**12 40 24.6**	**+0.7**
T25A				IAmb_Lg			12 42 08.1	
	comp=Z,38nm,0.8s							
HBAR	**Harrisburg**	**5.64**	**93**	Pn		**Pn**	**12 40 23.2**	**-1.0**
PBMO	**Poplar Bluff**	**5.79**	**81**	Pn		**Pn**	**12 40 25.4**	**-0.9**
N38A	**Joes South For**	**5.80**	**35**	Pn		**Pn**	**12 40 26.6**	**+0.3**
JCT	**Junction City**	**5.90**	**199**			**Pn**	**12 40 27.6**	**-0.2**
JCT				IAmb_Lg			12 42 09.9	
	comp=Z,58nm,0.8s							
LPAR	**Lepanto**	**5.92**	**93**	IAmb_Lg			12 42 11.4	
	comp=Z,55nm,0.8s							
L34A	**Svendsen Farm,**	**5.94**	**9**			**Pn**	**12 40 29.7**	**+1.4**
OGNE	**Ogallala**	**5.98**	**326**			**Pn**	**12 40 28.4**	**-0.6**
OGNE				IAmb_Lg			12 42 15.8	
	comp=Z,47nm,0.7s							
FVM	**French Village**	**6.02**	**70**	Pn		**Pn**	**12 40 29.3**	**-0.1**
FVM				IAmb_Lg			12 42 10.7	
	comp=Z,58nm,1.0s							
143A	**Socs Landing,**	**6.11**	**122**	Pn		**Pn**	**12 40 30.5**	**-0.2**
143A				IAmb_Lg			12 42 28.5	
	comp=Z,42nm,0.9s							
GNAR	**Gosnell**	**6.12**	**89**	Pn		**Pn**	**12 40 31.5**	**+0.7**
PARMO	**Parma**	**6.33**	**83**	IAmb_Lg			12 42 38.5	
	comp=Z,58nm,0.8s							
441A	**DeRidder**	**6.46**	**144**	Pn		**Pn**	**12 40 35.0**	**-0.5**
LNXT	**Lenox**	**6.54**	**88**	Pn		**Pn**	**12 40 37.3**	**+0.7**
SDCO	**Great Sand Dun**	**6.57**	**287**	Pn		**Pn**	**12 40 37.7**	**+0.5**
K31A	**O'Neill**	**6.59**	**352**	Pn		**Pn**	**12 40 37.6**	**+0.4**
K31A				IAmb_Lg			12 42 36.2	
	comp=Z,37nm,0.7s							
GLAT	**Glass**	**6.70**	**86**	Pn		**Pn**	**12 40 39.9**	**+1.2**
SCIA	**State Center**	**6.72**	**29**			**Pn**	**12 40 39.5**	**+0.5**
SCIA				IAmb_Lg			12 42 34.5	
	comp=Z,54nm,0.8s							
GDL2	**Guadalupe Moun**	**6.84**	**237**	Pn		**Pn**	**12 40 40.6**	**-0.2**
S44A	**Carbondale**	**6.85**	**74**	Pn		**Pn**	**12 40 39.9**	**-0.9**
S44A				IAmb_Lg			12 42 56.3	
	comp=Z,26nm,0.7s							
OXF	**Oxford**	**6.85**	**101**	Pn		**Pn**	**12 40 39.8**	**-1.0**
OXF				IAmb_Lg			12 42 46.3	
	comp=Z,38nm,1.0s							
W45A	**Hickory Valley**	**6.89**	**95**	Pn		**Pn**	**12 40 39.9**	**-1.4**
W45A				IAmb_Lg			12 42 39.7	
	comp=Z,36nm,0.7s							
Y45A	**Yeager Farm, C**	**6.95**	**106**	Pn		**Pn**	**12 40 41.8**	**-0.4**
N41A	**Harden Midland**	**7.00**	**47**	Pn		**Pn**	**12 40 43.8**	**+0.9**
T45A	**Paducah**	**7.24**	**80**	IAmb_Lg			12 43 09.6	
	comp=Z,49nm,0.8s							
P43A	**Skaggs, Pawnee**	**7.28**	**58**	Pn		**Pn**	**12 40 47.4**	**+0.6**
ANMO	**Albuquerque**	**7.34**	**264**	Pn		**Pn**	**12 40 46.5**	**-1.2**
Q44A	**Meyer Farm, Va**	**7.35**	**65**	Pn		**Pn**	**12 40 47.9**	**+0.2**
ISCO	**Idaho Springs**	**7.36**	**303**			**Pn**	**12 40 47.5**	**-0.6**
K38A	**Parkersburg**	**7.53**	**28**	Pn		**Pn**	**12 40 49.5**	**-0.5**
ECSD	**EROS Data Cent**	**7.67**	**5**			**Pn**	**12 40 51.2**	**-0.8**
BNM	**Barren Site**	**7.67**	**258**			**Pn**	**12 40 52.8**	**+0.4**
L40A	**Anamosa**	**7.74**	**38**			**Pn**	**12 40 52.9**	**-0.1**
L40A				IAmb_Lg			12 43 09.4	
	comp=Z,31nm,0.8s							
PLAL	**Pickwick Lake**	**7.82**	**95**	Pn		**Pn**	**12 40 52.5**	**-1.5**
MNTX	**Cornudas Mount**	**7.83**	**238**			**Pn**	**12 40 53.6**	**-0.7**
WVT	**Waverly**	**7.88**	**87**	Pn		**Pn**	**12 40 55.7**	**+0.7**
HDIL	**Hopedale**	**7.88**	**53**	Pn		**Pn**	**12 40 55.2**	**+0.2**
Y22D	**IRIS PASSCAL I**	**7.93**	**258**	IAmb_Lg			12 43 32.9	
	comp=Z,32nm,1.0s							
PHWY	**Pilot Hill**	**8.07**	**313**	Pn		**Pn**	**12 40 57.5**	**-0.3**
PHWY				IAmb_Lg			12 43 26.0	
	comp=Z,17nm,0.9s							
SMCO	**Snowmass**	**8.07**	**295**			**Pn**	**12 40 57.8**	**-0.2**
USIN	**University of**	**8.14**	**74**	IAmb_Lg			12 43 22.6	
	comp=Z,40nm,1.0s							
O44A	**Mansfield**	**8.24**	**58**	Pn		**Pn**	**12 41 00.1**	**+0.2**
T47A	**Sharon Grove**	**8.47**	**81**	Pn		**Pn**	**12 41 02.5**	**-0.5**
TX31	**Lajitas Ar. Si**	**8.47**	**219**	Pn		**Pn**	**12 41 03.6**	**+0.4**
TX32	**Lajitas Array**	**8.47**	**219**	Pn		**Pn**	**12 41 02.1**	**-1.1**
TXAR	**Lajitas Array**	**8.47**	**219**	Pn		**Pn**	**12 41 03.0**	**-0.2**
L42A	**Oliver, Polo**	**8.52**	**44**	IAmb_Lg			12 43 32.0	
	comp=Z,28nm,0.8s							
I37A	**Lemond, Waseca**	**8.53**	**21**	IAmb_Lg			12 43 34.6	
	comp=Z,28nm,0.7s							
M44A	**Midewin, Midew**	**9.13**	**52**	IAmb_Lg			12 43 45.8	
	comp=Z,35nm,0.9s							
SFIN	**Lafayette**	**9.28**	**59**	Pn		**Pn**	**12 41 13.5**	**-0.6**
SFIN				IAmb_Lg			12 43 50.3	
	comp=Z,28nm,0.9s							
BLO	**Bloomington**	**9.29**	**67**	IAmb_Lg			12 43 56.7	
	comp=Z,31nm,0.8s							
O20A	**White River Ci**	**9.33**	**299**	Pn		**Pn**	**12 41 15.6**	**+0.6**
RSSD	**Black Hills**	**9.42**	**330**	Pn		**Pn**	**12 41 16.3**	**0.0**
I40A	**Norwalk**	**9.44**	**32**	Pn		**Pn**	**12 41 16.6**	**+0.3**
I40A				IAmb_Lg			12 44 04.8	
	comp=Z,16nm,0.7s							
SWET	**Sewanee**	**9.51**	**92**	Pn		**Pn**	**12 41 17.4**	**0.0**
K22A	**Casper**	**9.54**	**316**	Pn		**Pn**	**12 41 19.3**	**+1.5**
K22A				IAmb_Lg			12 44 15.0	
	comp=Z,22nm,1.0s							
F33A	**5 Mile Ranch,**	**9.79**	**5**	Pn		**Pn**	**12 41 20.2**	**-0.9**
F33A				IAmb_Lg			12 44 15.9	
	comp=Z,13nm,1.0s							
SPMN	**Marine on St.**	**9.81**	**20**	Pn		**Pn**	**12 41 20.5**	**-0.9**
SPMN				IAmb_Lg			12 44 18.4	
	comp=Z,14nm,0.9s							
R49A	**Shelbyville**	**10.13**	**74**	Pn		**Pn**	**12 41 26.8**	**+1.0**
P48A	**Milroy**	**10.18**	**67**	Pn		**Pn**	**12 41 25.6**	**-0.9**
I42A	**Draeger Farm,**	**10.23**	**38**	Pn		**Pn**	**12 41 26.4**	**-0.8**
T50A	**Nancy**	**10.28**	**81**	Pn		**Pn**	**12 41 28.9**	**+1.0**
N47A	**Urbana**	**10.46**	**59**	Pn		**Pn**	**12 41 31.2**	**+0.9**
X51A	**Calhoun**	**10.49**	**95**	Pn		**Pn**	**12 41 31.1**	**+0.3**
G40A	**Rib Lake**	**10.73**	**29**	Pn		**Pn**	**12 41 34.6**	**+0.5**
O49A	**Covington**	**11.19**	**65**	Pn		**Pn**	**12 41 39.9**	**-0.5**
BW06	**Boulder Array**	**11.41**	**309**	Pn		**Pn**	**12 41 44.6**	**+1.0**
PD31	**Pinedale Array**	**11.41**	**309**	Pn		**Pn**	**12 41 42.9**	**-0.7**
PDAR	**Pinedale Array**	**11.41**	**309**	Pn		**Pn**	**12 41 44.0**	**+0.4**
352A	**Blakely**	**11.48**	**110**	Pn		**Pn**	**12 41 44.2**	**0.0**
B35A	**Bob, Littlefor**	**12.58**	**12**	Pn		**Pn**	**12 41 58.9**	**-0.5**
E43A	**Lone Tree Farm**	**12.98**	**34**	Pn		**Pn**	**12 42 04.7**	**-0.1**

*TEH **13** 13:16:42.4,27.89N×53.49E,h5km,ML3.1*
*IDC **13** 13:16:47.1±3.6,28.06N×54.00E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.3/45,mbtmp3.5/5,Error ellipse: s-maj=74.7km s-min=45.0km az=49.0*
ISC 13 13:16:45.5±0.9,27.89N±0.06×53.51E±0.08,h10km,n11, σ1§64/11,mb3.5/5,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	**0.61**	**5**	*e*Pg	**Pg**	**13 16 55.3**	**-2.1**
LMD1	**Lamerd**	**0.63**	**209**	*e*Sg	**Sg**	**13 17 04.6**	**-1.4**
LAR1	**LAR**	**0.80**	**106**	*e*Pg	**Pg**	**13 16 59.3**	**-1.5**
GENO	**Geno**	**2.41**	**101**	*e*Pn	**Pn**	**13 17 26.5**	**+1.4**
KLNJ	**Kolanjah**	**3.53**	**332**	*e*Pn	**Pn**	**13 17 41.8**	**+1.1**
IGAR	**Gharneh**	**4.67**	**345**	*e*Pn	**Pn**	**13 17 57.0**	**+0.7**
BVAR	**Borovoye Array**	**28.05**	**22**	P	**P**	**13 22 36.6**	**-0.3**
	0.5nm,0.4s,baz=171,slow=9.8,SNR=5.3						
MKAR	**Makanchi Array**	**29.41**	**42**	P	**P**	**13 22 48.2**	**-0.8**
	0.2nm,0.7s,baz=232,slow=7.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**34.68**	**33**	P	**P**	**13 23 36.0**	**+0.9**
	0.2nm,0.3s,baz=248,slow=7.6,SNR=3.7						
CMAR	**Chiang Mai Arr**	**42.60**	**93**	P	**P**	**13 24 41.7**	**-0.4**
	0.6nm,0.8s,baz=281,slow=9.7,SNR=5.6						
YKA	**Yellowknife Ar**	**89.43**	**355**	P	**P**	**13 29 45.0**	**+2.8**
	0.2nm,0.7s,baz=6.5,slow=5.4,SNR=5.0						

IDC 13 13:21:28.4±2.6,15.23S×173.35W,h0km,mb3.4/4, mb1 3.8/5,mb1mx3.6/26,mbtmp3.4/5,ML3.6/1,MS3.2/1, Ms1 3.2/1,ms1mx2.5/21,Error ellipse: s-maj=214.6km s-min=22.0km az=150.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.01**	**50**	Pn	Pn	13 22 01.8	-1.8
	20nm,0.3s,baz=174,slow=10,SNR=47						
AFI				Sn	Sn	13 22 21.2	-8.3
	132nm,0.3s,baz=218,slow=20,SNR=28						
AFI				LR	LR	13 22 39.2	
	comp=Z,54nm,21.3s,baz=233,slow=35						
RAO	**Raoul Island**	**14.58**	**196**	LR	LR	13 29 35.4	
	comp=Z,90nm,20.0s,baz=73,slow=33						
WRA	**Warramunga Arr**	**49.93**	**257**	P	P	13 30 23.9	-0.5
	0.2nm,0.5s,baz=94,slow=7.1,SNR=1.7						
ASAR	**Alice Springs**	**50.21**	**252**	P	P	13 30 26.1	-0.3
	0.5nm,0.4s,baz=88,slow=8.0,SNR=16						
NVAR	**Mina Array Bea**	**74.17**	**42**	P	P	13 33 08.8	+1.6
	0.1nm,0.5s,baz=220,slow=5.4,SNR=2.2						
TXAR	**Lajitas Array**	**80.48**	**56**	P	P	13 33 42.8	+0.1
	0.3nm,0.9s,baz=224,slow=6.3,SNR=2.9						

*NEIC **13** 13:35:54.3±1.4, 15.92N±0.05×145.4E±0.2, h230km±7km, mb4.1/10, Error ellipse: s-maj=31.0km s-min=7.5km az=88.0*
*IDC **13** 13:36:06.1±23.0, 16.55N×145.64E, h325km±184km, mb3.3/11,mb1 3.5/11,mb1mx3.1/50,mbtmp4.0/11, Error ellipse: s-maj=144.9km s-min=25.6km az=174.0*
ISC 13 13:35:54.6±2.1,15.7N±0.4×145.5E±0.2,h250km,n28, σ1§19/28,mb3.9/16,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**0.70**	**20**		**Pn**	**13 36 25.0**	**-3.2**
KSRS	**Korea Array**	**26.68**	**328**	P	**P**	**13 41 09.9**	**-0.8**
	2.8nm,0.9s,baz=136,slow=8.8,SNR=7.3						
SONM	**Songino Array**	**45.39**	**323**	P	**P**	**13 43 48.4**	**-0.1**
	0.8nm,0.6s,baz=128,slow=6.5,SNR=4.6						
SDPT	**Sand Point**	**57.09**	**33**	P	**P**	**13 45 16.1**	**+1.2**
ANM	**Nome**	**59.05**	**22**	P	**P**	**13 45 28.3**	**0.0**
ZALV	**Zalesovo Beam**	**60.28**	**324**	P	**P**	**13 45 36.8**	**0.0**
	0.5nm,0.3s,baz=96,slow=9.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**60.28**	**324**	P	**P**	**13 45 36.4**	**-0.4**
MK31	**Makanchi Array**	**60.41**	**315**	P	**P**	**13 45 38.9**	**+1.0**
MKAR	**Makanchi Array**	**60.41**	**315**	P	**P**	**13 45 39.2**	**+1.3**
	1.0nm,0.4s,baz=92,slow=8.2,SNR=28						
MKAR				PcP	**PcP**	**13 46 21.4**	**+1.2**
	0.4nm,0.6s,baz=84,slow=4.5,SNR=3.8						
MKAR	**Makanchi Array**	**60.41**	**315**	P	**P**	**13 45 38.7**	**+0.8**
MAKZ	**Makanchi**	**60.62**	**315**	P	**P**	**13 45 40.4**	**+1.1**
MAKZ				IAmb	IAmb	13 45 41.0	
	comp=Z,1.8nm,0.5s						
KURK	**Kurchatov**	**63.38**	**319**	P	**P**	**13 45 58.5**	**+1.0**
KURBB	**Kurchatov Arra**	**63.42**	**319**	P	**P**	**13 45 58.5**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=96,slow=7.5,SNR=17						
RND	**Reindeer**	**65.27**	**27**	P	**P**	**13 46 09.1**	**-0.4**
RND				IAmb	IAmb	13 46 35.4	
	comp=Z,5.2nm,1.3s						
ILAR	**Eielson Array**	**66.44**	**26**	P	**P**	**13 46 15.1**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=249,slow=5.6,SNR=9.6						
ILAR	**Eielson Array**	**66.44**	**26**	P	**P**	**13 46 19.4**	**+2.5**
TOLK	**Toolik Lake Re**	**66.47**	**21**	P	**P**	**13 46 17.2**	**+0.1**
TOLK				IAmb	IAmb	13 46 40.0	
	comp=Z,3.2nm,1.1s						
BMAR	**Burnt Mountain**	**67.96**	**23**	P	**P**	**13 46 26.9**	**+0.4**
GRNC	**Granite Creek**	**68.04**	**30**	P	**P**	**13 46 28.2**	**+1.0**
BARN	**Barnard Glacie**	**68.12**	**30**	P	**P**	**13 46 28.7**	**+1.0**
BARN				IAmb	IAmb	13 46 54.1	
	comp=Z,7.0nm,1.0s						
BVAR	**Borovoye Array**	**68.66**	**321**	P	**P**	**13 46 31.7**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=152,slow=6.5,SNR=15						
ABKAR	**Akbulak array**	**75.39**	**318**	P	**P**	**13 47 11.3**	**+0.4**
ABKAR				IAmb	IAmb	13 47 11.7	
	comp=Z,1.2nm,0.6s						
YKA	**Yellowknife Ar**	**80.75**	**28**	P	**P**	**13 47 39.6**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=287,slow=4.9,SNR=9.1						
NVAR	**Mina Array Bea**	**85.17**	**52**	P	**P**	**13 48 04.7**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=260,slow=5.4,SNR=2.5						
ARCES	**ARCESS Array B**	**85.28**	**342**	P	**P**	**13 48 02.5**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=62,slow=6.4,SNR=2.3						
ARCES	**ARCESS Array B**	**85.28**	**342**	IAmb	IAmb	13 48 02.8	
	comp=Z,8.7nm,1.3s						
FINES	**FINESS Array B**	**89.52**	**335**	P	**P**	**13 48 22.6**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=112,slow=2.1,SNR=7.5						
DBIC	**Dimbokro**	**143.16**	**305**	PKP	**PKPdf**	**13 54 59.1**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=45,slow=5.7,SNR=2.0						

*IDC **13** 13:37:35.0±0.7,4.69S×153.01E, h42km±5km, mb5.0/36, mb1 5.1/37,mb1mx5.0/45,mbtmp5.3/37, ML4.3/1, MS4.3/22, Ms1 4.3/22,ms1mx4.2/29,Error ellipse: s-maj=13.5km s-min=8.9km az=93.0*
*BJI **13** 13:37:34.6±0.0,4.42S×153.18E,h53km,mB5.3/50, mb5.4/72,Ms4.8/47,Ms7 4.6/50*
*NEIC **13** 13:37:35.2±1.1,4.69S±0.06×152.99E±0.06,h50km±1km, mb5.4/212,Mwb5.3/39,Error ellipse: s-maj=11.5km s-min=8.8km az=55.0*

*NEIC **13** 13:37:36.6,4.69S×152.97E,h45km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; Mrr9.14; Mθθ-7.04; Mϕϕ-2.09; Mrθ4.20; Mrϕ-1.93; Mθϕ1.96; Fault plane solution: Mw9.70000×10^{16} NP1:ϕ252.91000°, δ30.67000°, λ93.91000°. NP2:ϕ68.37000°, δ59.41000°, λ87.68000°. Principal axes: T 10.3365, Plg75.0000°, Azm332.0000°; N -1.4445, Plg2.0000°, Azm70.0000°; P -8.8920, Plg14.0000°, Azm160.0000°;*
*DJA **13** 13:37:37.6±0.3,5.5S±2×15.3E±1,h75km±3km,M5.1/73, mb5.4/73,mB5.6/38,MLv5.5/3,Mw(mB)5.1/38, MwMwp4.8/5,Mwp5.1/5*
*MOS **13** 13:37:37.6±1.2,4.56S×152.90E,h72km,mb5.6/63,Error ellipse: s-maj=7.6km s-min=4.8km az=111.6*
*GCMT **13** 13:37:37.2±0.1,4.93S±0.01×153.00E±0.01,h51km, MW5.2/115,Moment Tensor Solution. s115,c188; s113,c196; Duration: 1§0 Moment tensor: Scale 10^{17} Nm; Mrr0.73±.02; Mθθ-0.80±.01; Mϕϕ0.07±.01; Mrθ0.35±.01; Mθϕ-0.08±.01; Mϕr0.03±.01; Best double couple: M0.84500×10^{17} NP1:ϕ265.00000°,δ33.00000°, λ90.00000°. NP2:ϕ85.00000°,δ57.00000°,λ90.00000°. Principal axes: T 0.8030, Plg78.0000°, Azm354.0000°; N 0.0830, Plg0.0000°, Azm85.0000°; P -0.8860, Plg12.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 13:37:36.2±0.4,4.72S±0.03×152.95E±0.04,h59km±3km, h59km:pP-P,n928,σ1§22/1006,mb5.4/260,MS4.4/42, 154C-72D,Fault plane solution: NP1:ϕ271.66245°, δ50.95330°,λ107.87248°. NP2:ϕ64.55543°,δ42.34060°, λ69.27544°. Principal axes: T Plg75.4903°, Azm241.6777°; N Plg13.7891°, Azm80.1799°; P Plg4.4286°, Azm349.0908°; New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.94**	**304**		**Pn**	**13 37 54.4**	**+0.9**
RABL	**Rabaul**	**0.94**	**304**	P	**Pn**	**13 37 54.7**	**+1.2**
MANU	**Manus Island**	**6.18**	**295**		**Pn**	**13 39 06.4**	**+1.5**
PMG	**Port Moresby**	**7.40**	**231**	P	**Pn**	**13 39 23.6**	**+2.0**
	12nm,0.3s,baz=44,slow=13,SNR=29						
PMG				S	**Sn**	**13 40 45.4**	**+1.2**
	35nm,0.3s,baz=342,slow=20,SNR=13						
PMG	**Port Moresby**	**7.40**	**231**	*ce*P	**Pn**	**13 39 24.2**	**+2.6**
PMG	**Port Moresby**	**7.40**	**231**	Pn	**Pn**	**13 39 23.0**	**+1.4**
PMG	**Port Moresby**	**7.40**	**231**	P	**Pn**	**13 39 24.3**	**+2.6**
HNR	**Honiara**	**8.37**	**124**	P	**Pn**	**13 39 36.1**	**+1.1**
	11nm,0.3s,baz=220,slow=6.2,SNR=17						
HNR				S	**Sn**	**13 41 10.5**	**+2.4**
	24nm,0.3s,baz=306,slow=23,SNR=1.6						
HNR	**Honiara**	**8.37**	**124**	P	**Pn**	**13 39 35.3**	**+0.3**
HNR				pmax	pmax		
	comp=Z,63nm,0.8s						
HNR	**Honiara**	**8.37**	**124**	Pn	**Pn**	**13 39 35.8**	**+0.8**
HNR	**Honiara**	**8.37**	**124**	P	**Pn**	**13 39 36.5**	**+1.5**
JAY	**Jayapura**	**12.42**	**280**	P	Pn	13 40 35.4	+5.0
	comp=Z,0.2nm,0.3s,baz=122,slow=13,SNR=3.9						
JAY	**Jayapura**	**12.42**	**280**	P	**Pn**	**13 40 32.8**	**+2.5**
	comp=Z,562nmcomp=Z,28nm,1.1s						
PATS	**Pohnpei**	**12.66**	**25**	P	**Pn**	**13 40 32.3**	**-1.3**
	baz=13,SNR=32						
PATS	**Pohnpei**	**12.66**	**25**	Pn	**Pn**	**13 40 32.4**	**-1.3**
GENI	**Genyem**	**12.93**	**279**	P	**Pn**	**13 40 39.8**	**+2.5**
	comp=Z,2μmcomp=Z,147nm,1.4s						
COEN	**Coen**	**13.31**	**226**	Pn	**Pn**	**13 40 43.4**	**+0.9**
MTSU	**Mount Surprise**	**15.79**	**212**	P	**P**	**13 41 16.7**	**-1.1**
	baz=16,SNR=23						
CTA	**Charters Tower**	**16.61**	**203**	P	**P**	**13 41 27.0**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=21,slow=13,SNR=16						
CTA				S	**S**	**13 44 34.5**	**-3.2**
	baz=327,slow=23,SNR=1.3						
CTA				LR	LR	13 47 04.6	
	comp=Z,2μm,21.7s,baz=24,slow=34						
CTAO	**Charters Tower**	**16.61**	**203**	P	**P**	**13

AS31	**Alice Springs**	**26.31 222**	P	**P**	**13 43 06.7**	**0.0**			
ASAR	**Alice Springs**	**26.31 222**	P	**P**	**13 43 06.8**	**+0.1**			
	comp=Z,5.5nm,0.7s,baz=55,slow=9.1,SNR=81								
ASAR			PcP	**PcP**	**13 46 32.9**	**+1.2**			
	comp=Z,6.8nm,0.8s,baz=63,slow=3.6,SNR=4.1								
ASAR			S	**S**	**13 47 34.3**	**-1.2**			
	comp=Z,1.0nm,0.7s,baz=49,slow=14,SNR=1.5								
ASAR			ScP	**ScP**	**13 50 10.1**	**+3.3**			
	comp=Z,2.6nm,0.8s,baz=53,slow=3.3,SNR=4.7								
ASAR			LR	LR	13 53 16.5				
	comp=Z,654nm,21.5s,baz=44,slow=36								
ASAR			PKiKP	**PKiKP**	**13 54 10.5**	**-0.5**			
	comp=Z,0.5nm,0.9s,baz=67,slow=1.1,SNR=2.1								
SANI	**Sanana**	**27.05 275**	P	**P**	**13 43 15.1**	**+1.8**			
	comp=Z,857nmcomp=Z,93nm,1.2s								
CMSA	**Cobar Meteorol**	**27.54 193**	P	**P**	**13 43 17.8**	**+0.3**			
	baz=28,SNR=17								
MSVF	**Nonsavu**	**27.76 120**	LR	LR	13 53 38.9				
	comp=Z,1μm,21.8s,baz=299,slow=35								
SOEI	**Soe**	**28.88 258**	P	**P**	**13 43 31.5**	**+1.6**			
	comp=Z,38nm,0.8s								
STKA	**Stephens Creek**	**29.04 200**	P	**P**	**13 43 30.3**	**-0.6**			
	comp=Z,11nm,0.8s,baz=355,slow=8.7,SNR=24								
STKA			ScP	**ScP**	**13 50 19.6**	**+4.7**			
	comp=Z,6.0nm,0.8s,baz=45,slow=1.4,SNR=6.0								
STKA			LR	LR	13 54 45.4				
	comp=Z,1μm,21.7s,baz=19,slow=35								
STKA	**Stephens Creek**	**29.04 200**	P	**P**	**13 43 30.9**	**-0.1**			
	baz=29,SNR=16								
STKA	**Stephens Creek**	**29.04 200**⇑	*eP*	**P**	**13 43 30.4**	**-0.5**			
STKA	**Stephens Creek**	**29.04 200**	P	**P**	**13 43 30.8**	**-0.1**			
KMSI	**Cibinong**	**29.42 280**	P	**P**	**13 43 35.2**	**+0.8**			
	comp=Z,220nm,0.9s								
BATI	**Baumata**	**29.54 258**	P	**P**	**13 43 36.2**	**+0.6**			
	comp=Z,46nm,0.8s,baz=6.3,slow=9.2,SNR=18								
BATI			LR	LR	13 57 57.9				
	comp=Z,801nm,21.9s,baz=118,slow=41								
BATI	**Baumata**	**29.54 258**	P	**P**	**13 43 36.1**	**+0.6**			
	comp=Z,477nmcomp=Z,39nm,0.8s								
FITZ	**Fitzroy Crossi**	**29.83 241**	P	**P**	**13 43 38.0**	**-0.1**			
	comp=Z,110nm,0.7s,baz=74,slow=7.5,SNR=402								
FITZ			S	**S**	**13 48 28.1**	**-2.8**			
	comp=Z,14nm,1.1s,baz=164,slow=15,SNR=2.2								
FITZ			LR	LR	13 57 18.9				
	comp=Z,641nm,20.1s,baz=75,slow=40								
FITZ	**Fitzroy Crossi**	**29.83 241**	P	**P**	**13 43 37.9**	**-0.1**			
	baz=30,SNR=214								
FITZ	**Fitzroy Crossi**	**29.83 241**	P	**P**	**13 43 38.0**	**-0.1**			
LUWI	**Luwuk**	**30.36 276**	P	**P**	**13 43 43.2**	**+0.4**			
LUWI	**Luwuk**	**30.36 276**	P	**P**	**13 43 43.5**	**+0.7**			
	comp=Z,2μmcomp=Z,160nm,1.1s								
GTOI	**Gorontalo**	**30.38 279**	P	**P**	**13 43 44.9**	**+1.9**			
	comp=Z,453nmcomp=Z,52nm,0.7s								
CAN	**Canberra**	**30.67 186**	P	**P**	**13 43 46.2**	**+0.8**			
CAN			pmax	pmax					
	comp=Z,34nm,1.3s								
CAN	**Canberra**	**30.67 186**	P	**P**	**13 43 46.2**	**+0.8**			
MMRI	**Maumere**	**30.75 261**	P	**P**	**13 43 46.7**	**+0.5**			
WRKA	**Warakurna**	**31.13 227**	P	**P**	**13 43 49.3**	**-0.2**			
	baz=31,SNR=64								
MRSI	**Marisa**	**31.41 279**	P	**P**	**13 43 52.1**	**+0.1**			
	comp=Z,697nmcomp=Z,50nm,1.2s								
HTT	**Hallett**	**31.42 203**	P	**P**	**13 43 52.4**	**+0.4**			
	baz=32,SNR=8.3								
APSI	**Ampana**	**31.49 276**	P	**P**	**13 43 53.8**	**+1.0**			
	comp=Z,882nmcomp=Z,107nm,1.1s								
BBOO	**Buckleboo**	**32.10 207**	P	**P**	**13 43 58.1**	**+0.2**			
BSSI	**Bau Bau, Buton**	**32.34 266**	P	**P**	**13 43 59.9**	**-0.4**			
	comp=Z,42nm,1.3s								
BASI	**Baing, Sumba**	**32.55 258**	P	**P**	**13 44 02.3**	**+0.3**			
	comp=Z,888nmcomp=Z,71nm,0.9s								
TOLI2	**Tolitoli**	**32.66 279**	P	**P**	**13 44 02.0**	**-1.1**			
TOLI2			IAmb	IAmb	13 44 04.7				
	comp=Z,37nm,1.0s								
BNSI	**Bone**	**32.74 269**	P	**P**	**13 44 03.9**	**+0.1**			
	comp=Z,65nm,1.2s								
SPSI	**Sidrap Palu**	**33.09 270**	P	**P**	**13 44 06.3**	**-0.5**			
	comp=Z,51nm,1.0s								
TTSI	**Tana Toraja**	**33.10 272**	P	**P**	**13 44 07.9**	**+1.0**			
	comp=Z,503nmcomp=Z,34nm,1.1s								
ARPS	**Mount Arapiles**	**33.49 196**	P	**P**	**13 44 11.0**	**+1.0**			
	baz=34,SNR=5.4								
FORT	**Forrest**	**34.95 219**	P	**P**	**13 44 23.0**	**+0.3**			
	baz=35,SNR=35								
FORT	**Forrest**	**34.95 219**	P	**P**	**13 44 22.7**	**0.0**			
PLAI	**Plampang**	**35.16 261**	P	**P**	**13 44 22.8**	**-1.9**			
	comp=Z,39nm,0.7s								
MYLDM	**Lahad Datu**	**35.79 286**	P	**P**	**13 44 32.0**	**+1.9**			
TWSI	**Taliwang, Sumb**	**36.03 262**	P	**P**	**13 44 30.8**	**-1.4**			
	comp=Z,19nm,1.0s								
PSA00	**Pilbara Seismi**	**36.20 239**	P	**P**	**13 44 33.1**	**-0.5**			
PSA00	**Pilbara Seismi**	**36.20 239**	P	**P**	**13 44 32.6**	**-1.0**			
PSA00			IAmb	IAmb	13 44 33.6				
	comp=Z,33nm,0.9s								
KBKI	**Kotabaru**	**36.72 271**	P	**P**	**13 44 37.7**	**-0.4**			
	comp=Z,827nmcomp=Z,28nm,1.0s								
JMZ	**Minamidaito 2**	**36.96 324**	P	**P**	**13 44 40.3**	**+0.4**			
SPMM	**Sapulut**	**37.63 284**	P	**P**	**13 44 47.0**	**+1.1**			
BBKI	**Banjar Baru**	**38.03 270**	P	**P**	**13 44 49.8**	**+0.6**			
	comp=Z,42nm,1.0s								
KKM	**Kota Kinabalu**	**38.21 286**	P	**P**	**13 44 50.7**	**-0.1**			
TAU	**Tasmania Unive**	**38.36 187**	P	**P**	**13 44 51.8**	**+0.3**			
TAU			pmax	pmax					
	comp=Z,36nm,0.9s								
TAU	**Tasmania Unive**	**38.36 187**	P	**P**	**13 44 51.8**	**+0.3**			
TAU			IAmb	IAmb	13 44 54.6				
	comp=Z,36nm,0.9s								
JAGI	**Jajag, Banyuwa**	**38.71 262**	P	**P**	**13 44 54.4**	**-0.5**			
JAGI			IAmb	IAmb	13 45 21.6				
	comp=Z,46nm,0.8s								
KMMI	**Kalianget**	**38.84 265**	P	**P**	**13 44 55.8**	**-0.2**			
	comp=Z,39nm,1.2s								
JOW	**Kunigami**	**39.42 324**	P	**P**	**13 45 02.3**	**+1.7**			
	comp=Z,140nm,0.8s,baz=155,slow=9.2,SNR=17								
JOW	**Kunigami**	**39.42 324**	P	**P**	**13 45 00.1**	**-0.5**			
KMBL	**Kambalda**	**39.42 224**	P	**P**	**13 45 00.8**	**+0.1**			
	baz=40,SNR=7.7								
URZ	**Urewera**	**39.98 150**	P	**P**	**13 45 05.7**	**+0.5**			
URZ			IAmb	IAmb	13 45 30.5				
	comp=Z,36nm,0.8s								
URZ	**Urewera**	**39.98 150**	P	**P**	**13 45 06.8**	**+1.6**			
RTZ	**Ruatahuna**	**40.19 150**	P	**P**	**13 45 09.0**	**+2.0**			
MWZ	**Matawai**	**40.25 150**	P	**P**	**13 45 09.6**	**+2.2**			
MTHZ	**Maungataniwha**	**40.31 151**	P	**P**	**13 45 09.8**	**+1.9**			
WMGZ	**Waiomatatini S**	**40.31 148**	P	**P**	**13 45 09.6**	**+1.6**			
BKZ	**Black Stump Fm**	**40.39 151**	P	**P**	**13 45 08.4**	**-0.1**			
BKZ			IAmb	IAmb	13 45 25.9				
	comp=Z,53nm,1.3s								
BKZ	**Black Stump Fm**	**40.39 151**	P	**P**	**13 45 09.9**	**+1.3**			
PUZ	**Puketiti**	**40.42 149**	P	**P**	**13 45 10.5**	**+1.7**			
SNGZ	**Shannon Statio**	**40.50 150**	P	**P**	**13 45 11.3**	**+1.8**			
RIGZ	**Rimuhau**	**40.65 150**	P	**P**	**13 45 12.4**	**+1.6**			
MCHZ	**McNeill Hill**	**40.70 151**	P	**P**	**13 45 13.1**	**+2.0**			
CNGZ	**Carnagh Statio**	**40.71 146**	P	**P**	**13 45 12.8**	**+1.7**			
PNHZ	**Pukenui**	**40.84 152**	P	**P**	**13 45 13.6**	**+1.3**			
THZ	**Tophouse**	**40.97 157**	P	**P**	**13 45 13.7**	**+0.3**			
THZ			IAmb	IAmb	13 45 36.1				
	comp=Z,151nm,1.4s								
WPHZ	**Waipukurau**	**41.07 152**	P	**P**	**13 45 15.6**	**+1.4**			
TUWZ	**Tuamarina**	**41.10 156**	P	**P**	**13 45 15.3**	**+0.9**			
YOJ	**Yonaguni jima**	**41.12 316**	P	**P**	**13 45 15.9**	**+1.2**			
YOJ			pmax	pmax					
	comp=Z,178nm,0.9s								
YOJ	**Yonaguni jima**	**41.12 316**	P	**P**	**13 45 15.9**	**+1.2**			
PBKI	**Pangkalan Bun**	**41.24 271**	P	**P**	**13 45 16.8**	**+0.9**			
	comp=Z,6μmcomp=Z,377nm,1.1s								
BSWZ	**Blackbirch Sta**	**41.31 156**	P	**P**	**13 45 17.3**	**+1.2**			
SBUM	**Sibu**	**41.32 279**	P	**P**	**13 45 16.9**	**+0.3**			
SBUM			IAmb	IAmb	13 45 19.1				
	comp=Z,64nm,1.3s								
SBUM	**Sibu**	**41.32 279**	P	**P**	**13 45 18.0**	**+1.5**			
ANWZ	**Angora Road**	**41.40 153**	P	**P**	**13 45 18.1**	**+1.3**			
GIRL	**Giralia**	**41.44 241**	P	**P**	**13 45 18.1**	**+0.7**			
	baz=42,SNR=6.0								
GIRL	**Giralia**	**41.44 241**	P	**P**	**13 45 18.4**	**+1.0**			
BHW	**Baring Head**	**41.47 155**	P	**P**	**13 45 17.8**	**+0.4**			
BFZ	**Birch Farm**	**41.48 153**	P	**P**	**13 45 18.3**	**+0.8**			
BFZ			IAmb	IAmb	13 45 31.0				
	comp=Z,108nm,1.3s								
BFZ	**Birch Farm**	**41.48 153**	P	**P**	**13 45 18.7**	**+1.2**			
LTZ	**Lake Taylor**	**41.61 158**	P	**P**	**13 45 19.9**	**+1.3**			
LTZ			IAmb	IAmb	13 45 42.3				
	comp=Z,74nm,1.2s								
YULB	**Yu-li**	**41.65 313**	P	**P**	**13 45 19.6**	**+0.5**			
YULB			IAmb	IAmb	13 45 22.2				
	comp=Z,56nm,0.8s								
TMWZ	**Te Maipa**	**41.66 154**	P	**P**	**13 45 20.1**	**+1.1**			
KHZ	**Kahutara**	**41.77 157**	P	**P**	**13 45 20.8**	**+1.0**			
NACB	**Ninganchiao**	**41.92 315**	P	**P**	**13 45 22.1**	**+0.8**			
NACB			IAmb	IAmb	13 45 23.5				
	comp=Z,99nm,1.0s								
JSU	**Suzuyama**	**41.92 331**	P	**P**	**13 45 22.0**	**+0.8**			
JSU			IAmb	IAmb	13 45 22.7				
	comp=Z,65nm,0.8s								
TPUB	**Ta-pu**	**42.08 313**	P	**P**	**13 45 22.8**	**+0.2**			
TPUB			IAmb	IAmb	13 45 23.7				
	comp=Z,39nm,0.7s								
SSLB	**Suanglung**	**42.14 314**	P	**P**	**13 45 23.8**	**+0.6**			
SSLB			IAmb	IAmb	13 45 24.8				
	comp=Z,57nm,1.1s								
JMN	**Monobe**	**42.28 336**	P	**P**	**13 45 25.1**	**+1.0**			
LBZ	**Lake Benmore**	**42.31 162**	P	**P**	**13 45 24.2**	**-0.1**			
YHNB	**Yeheng**	**42.39 315**	P	**P**	**13 45 25.5**	**+0.3**			
YHNB			IAmb	IAmb	13 45 27.7				
	comp=Z,93nm,0.9s								
DCZ	**Deep Cove**	**42.44 165**	P	**P**	**13 45 26.3**	**+1.1**			
DCZ			IAmb	IAmb	13 45 50.4				
	comp=Z,126nm,1.5s								
KLBR	**Kellerberrin**	**42.47 227**	P	**P**	**13 45 25.1**	**-0.6**			
	baz=43,SNR=14								
TATO	**Taipei**	**42.50 315**	P	**P**	**13 45 26.4**	**+0.4**			
TATO			IAmb	IAmb	13 45 28.6				
	comp=Z,120nm,1.1s								
MORW	**Morawa**	**42.52 231**	P	**P**	**13 45 26.1**	**-0.1**			
	baz=43,SNR=17								
MORW	**Morawa**	**42.52 231**	P	**P**	**13 45 25.8**	**-0.3**			
MORW			IAmb	IAmb	13 45 30.3				
	comp=Z,49nm,0.8s								
MQZ	**McQueen's Vall**	**42.55 159**	P	**P**	**13 45 26.5**	**+0.4**			
MLZ	**Mavora Lakes**	**42.60 164**	P	**P**	**13 45 27.1**	**+0.5**			
MLZ			IAmb	IAmb	13 45 43.3				
	comp=Z,66nm,1.0s								
JGF	**Kuroka**	**42.70 341**	P	**P**	**13 45 26.7**	**-0.8**			
BLDU	**Ballidu**	**42.75 229**	P	**P**	**13 45 27.6**	**-0.4**			
	baz=43,SNR=5.6								
WHZ	**Wether Hill Ro**	**43.04 165**	P	**P**	**13 45 30.6**	**+0.5**			
KSM	**Kuching**	**43.05 277**	P	**P**	**13 45 30.8**	**+0.1**			
KSM			IAmb	IAmb	13 45 33.0				
	comp=Z,85nm,1.1s								
KSM	**Kuching**	**43.05 277**	P	**P**	**13 45 31.0**	**+0.4**			
JNU	**Nakatsue**	**43.06 332**	P	**P**	**13 45 31.1**	**+0.7**			
	comp=Z,164nm,0.9s,baz=160,slow=10,SNR=46								
JNU			LR	LR	14 01 47.6				
	comp=Z,139nm,18.9s,baz=176,slow=34								
JNU	**Nakatsue**	**43.06 332**	P	**P**	**13 45 31.0**	**+0.5**			
JWT	**Wachi**	**43.07 339**	P	**P**	**13 45 30.1**	**-0.4**			
MJAR	**Matsushiro Arr**	**43.30 343**	P	**P**	**13 45 31.1**	**-1.2**			
	comp=Z,6.3nm,0.8s,baz=169,slow=8.9,SNR=13								
MJAR			PcP	**PcP**	**13 47 21.2**	**+0.8**			
	comp=Z,8.7nm,1.0s,baz=156,slow=3.0,SNR=4.6								
MJAR			ScP	**ScP**	**13 51 10.6**	**+3.7**			
	comp=Z,0.7nm,0.7s,baz=181,slow=4.7,SNR=3.2								
MJAR			LR	LR	14 03 20.4				
	comp=Z,188nm,18.5s,baz=150,slow=36								
MJAR	**Matsushiro Arr**	**43.30 343**	P	**P**	**13 45 30.6**	**-1.7**			
MAJO	**Matsushiro**	**43.30 343**⇓	*eP*	**P**	**13 45 31.2**	**-1.1**			
MAJO			pmax	pmax					
	comp=Z,23nm,1.0s								
MAJO	**Matsushiro**	**43.30 343**	P	**P**	**13 45 31.4**	**-0.9**			
MAT	**Matsushiro**	**43.30 343**	P	**P**	**13 45 31.6**	**-0.7**			
JHS	**Saijyo**	**43.69 336**	P	**P**	**13 45 35.9**	**+0.3**			
MUN	**Mundaring**	**43.80 227**	P	**P**	**13 45 35.8**	**-0.7**			
	baz=44,SNR=9.2								
QZH	**Quanzhou**	**44.55 313**⇓	*iP*	**P**	**13 45 40.6**	**-1.9**			
QZH			S	**S**	**13 52 11.9**	**-2.2**			
QZH			pmax	pmax					
	comp=Z,510nm,3.5s								
QZH			LR	LR					
	comp=Z,270nm,15.2s								
QZH			LR	LR					
	comp=Z,360nm,17.5s								
QZH			LR	LR					
	comp=Z,400nm,16.6s								
JSD	**Sado**	**44.67 343**	P	**P**	**13 45 42.8**	**-0.4**			
JSD			IAmb	IAmb	13 45 44.6				
	comp=Z,44nm,1.1s								
CISI	**Cisompet, Garu**	**44.95 264**	P	**P**	**13 45 44.4**	**-1.6**			
CISI	**Cisompet, Garu**	**44.95 264**	P	**P**	**13 45 44.6**	**-1.4**			
	comp=Z,3μmcomp=Z,302nm,1.2s								
TPI	**Tanjungpandan**	**45.24 271**	P	**P**	**13 45 48.6**	**+0.4**			
	comp=Z,82nm,1.1s								
CBJI	**Citeko**	**45.91 266**	P	**P**	**13 45 52.4**	**-1.1**			
	comp=Z,65nm,0.8s								
JTM	**Tenmabayashi**	**46.58 348**	P	**P**	**13 45 58.4**	**+0.2**			
SSE	**Sheshan**	**46.77 322**	P	**P**	**13 46 01.6**	**+1.7**			
SSE			S	**S**	**13 52 48.5**	**+2.6**			
SSE			pmax	pmax					
	comp=Z,17nm,0.7s								
SSE			pmax	pmax					
	comp=Z,140nm,4.5s								
SSE			LR	LR					
	comp=Z,190nm,26.1s								
SSE			LR	LR					
	comp=Z,340nm,33.0s								
PPBI	**Pangkal Pinang**	**46.79 271**	P	**P**	**13 46 00.2**	**-0.2**			
XMIS	**Christmas Isla**	**47.19 260**	P	**P**	**13 46 04.4**	**+0.8**			
XMIS			IAmb	IAmb	13 46 05.3				
	comp=Z,54nm,0.8s								
DLV	**T Lat**	**47.21 291**	P	**P**	**13 46 03.7**	**-0.2**			
ERM	**Erimo**	**47.36 350**⇓	*eP*	**P**	**13 46 05.9**	**+1.6**			
ERM			pmax	pmax					
	comp=Z,17nm,0.9s								
ERM	**Erimo**	**47.36 350**	P	**P**	**13 46 04.8**	**+0.5**			
ERM			IAmb	IAmb	13 46 27.2				
	comp=Z,25nm,0.9s								
TJN	**Taejon**	**47.37 332**	*c iP*	**P**	**13 46 05.3**	**+0.8**			
KSRS	**Korea Array**	**47.99 333**	P	**P**	**13 46 10.1**	**+0.7**			
	comp=Z,32nm,0.8s,baz=150,slow=8.3,SNR=80								
KSRS			sP	**pP**	**13 46 27.0**	**+2.1**			
	comp=Z,12nm,0.9s,baz=151,slow=9.9,SNR=4.7								
KSRS			PcP	**PcP**	**13 47 38.2**	**+1.5**			
	comp=Z,2.8nm,0.7s,baz=155,slow=3.7,SNR=1.0								
KSRS			LR	LR	14 05 54.5				
	comp=Z,149nm,18.7s,baz=188,slow=35								
KSAR	**Wonju Array Be**	**48.00 333**	P	**P**	**13 46 10.1**	**+0.7**			
KSAR	**Wonju Array Be**	**48.00 333**	P	**P**	**13 46 10.1**	**+0.7**			
KS19	**Wonju Array Si**	**48.06 333**	P	**P**	**13 46 09.8**	**-0.1**			
KS19			IAmb	IAmb	13 46 11.2				
	comp=Z,38nm,0.9s								
KASI	**Kota Agung**	**48.26 267**	P	**P**	**13 46 10.1**	**-1.7**			
	comp=Z,881nmcomp=Z,112nm,1.1s								
JEW	**Eniwo**	**48.47 349**	P	**P**	**13 46 12.9**	**0.0**			
QIZ	**Qiongzhong**	**48.56 300**	P	**P**	**13 46 13.8**	**-0.2**			
QIZ			S	**S**	**13 53 13.1**	**+1.4**			
QIZ			LR	LR					
	comp=Z,160nm,19.8s								
QIZ			LR	LR					
	comp=Z,400nm,18.7s								
QIZ			LR	LR					
	comp=Z,550nm,22.2s								
INCN	**Inchon**	**48.61 332**	P	**P**	**13 46 13.9**	**-0.3**			
INCN			pmax	pmax					
	comp=Z,238nm,0.9s								
INCN	**Inchon**	**48.61 332**	P	**P**	**13 46 13.9**	**-0.3**			
LWLI	**Liwa**	**48.71 267**	P	**P**	**13 46 13.1**	**-2.3**			
	comp=Z,8μmcomp=Z,49nm,1.0s								
NJ2	**Nanjing**	**48.88 321**	*eP*	**P**	**13 46 17.4**	**+1.2**			
NJ2			pmax	pmax					
	comp=Z,36nm,1.0s								
LHSI	**Lahat**	**49.29 269**	P	**P**	**13 46 18.4**	**-1.3**			
	comp=Z,43nm,1.2s								
MYKOM	**Kota Tinggi**	**49.48 276**	P	**P**	**13 46 21.7**	**+0.5**			
MYKOM			IAmb	IAmb	13 46 23.5				
	comp=Z,57nm,1.2s								
MYKOM	**Kota Tinggi**	**49.48 276**	P	**P**	**13 46 22.0**	**+0.8**			
JKA	**Kamikawa-asahi**	**49.49 350**	P	**P**	**13 46 21.4**	**+0.7**			
JKA			IAmb	IAmb	13 46 22.8				
	comp=Z,44nm,0.8s								
ASAJ	**Asahikawa**	**49.50 350**	P	**P**	**13 46 21.5**	**+0.7**			
	comp=Z,42nm,0.8s,baz=208,slow=9.7,SNR=25								
ASAJ			PcP	**PcP**	**13 47 44.1**	**+2.2**			
	comp=Z,22nm,1.0s,baz=90,slow=4.0,SNR=3.5								
ASAJ	**Asahikawa**	**49.50 350**	P	**P**	**13 46 21.4**	**+0.7**			
ASAJ			pmax	pmax					
	comp=Z,44nm,0.8s								
WHN	**Wuhan**	**50.90 316**	⇓P	**P**	**13 46 33.6**	**+2.0**			
WHN			pmax	pmax					
	comp=Z,48nm,0.7s								
JRMM	**Jerantut**	**51.15 279**	P	**P**	**13 46 34.0**	**+0.2**			
TEY	**Ternei**	**51.65 345**⇑	*eP*	**P**	**13 46 36.5**	**-0.4**			
TEY			pmax	pmax					
	comp=Z,30nm,0.8s								
TEY			pmax	pmax					
	comp=E,20nm,0.8s								
TEY			pmax	pmax					
	comp=N,20nm,0.8s								
USA0B	**Ussuriysk Arra**	**52.22 341**	*c iP*	**P**	**13 46 41.5**	**+0.3**			
USA0B	**Ussuriysk Arra**	**52.22 341**	P	**P**	**13 46 41.8**	**+0.6**			
USA0B			IAmb	IAmb	13 46 43.0				
	comp=Z,50nm,0.9s								
USRK	**Ussuriysk Ar.**	**52.22 341**	P	**P**	**13 46 41.8**	**+0.5**			
	comp=Z,36nm,0.8s,baz=170,slow=8.2,SNR=100								
USRK			PcP	**PcP**	**13 47 53.5**	**+1.4**			
	comp=Z,2.5nm,0.6s,baz=139,slow=2.8,SNR=1.0								
USRK			LR	LR	14 05 12.1				
	comp=Z,159nm,21.7s,baz=143,slow=32								
USRK	**Ussuriysk Ar.**	**52.22 341**	P	**P**	**13 46 41.5**	**+0.3**			
USRK					13 47 52.5				
USRK	**Ussuriysk Ar.**	**52.22 341**	P	**P**	**13 46 41.5**	**+0.3**			
USRK				**PcP**	**13 47 52.5**	**+0.4**			
YSS	**Yuzh-Sakhalins**	**52.23 351**	*eP*	**P**	**13 46 41.6**	**+0.4**			
YSS			*e*		13 47 52.4				
YSS			pmax	pmax					
	comp=Z,30nm,1.2s								
YSS	**Yuzh-Sakhalins**	**52.23 351**	P	**P**	**13 46 41.5**	**+0.2**			
YSS			IAmb	IAmb	13 46 42.9				
	comp=Z,52nm,1.2s								
YSS				**PcP**	**13 47 52.8**	**+0.7**			
IPM	**Ipoh**	**52.67 279**	P	**P**	**13 46 44.8**	**-0.4**			
IPM	**Ipoh**	**52.67 279**	P	**P**	**13 46 46.0**	**+0.8**			
KULM	**Kulim**	**53.17 280**	P	**P**	**13 46 48.6**	**-0.2**			
KULM			IAmb	IAmb	13 46 50.4				
	comp=Z,27nm,0.9s								
KULM	**Kulim**	**53.17 280**	P	**P**	**13 46 50.0**	**+1.2**			
MDJ	**Mudanjiang**	**53.40 339**	P	**P**	**13 46 50.5**	**+0.6**			
MDJ			pP	pP	13 47 04.6	-1.2			
MDJ			sP	sP	13 47 10.4	-2.2			
MDJ			PcP	**PcP**	**13 47 57.3**	**+0.8**			
MDJ			PP	**PP**	**13 48 52.3**	**+1.4**			
MDJ			S	**S**	**13 54 20.6**	**+2.8**			
MDJ			sS	sS	13 54 44.8	+1.7			
MDJ			pmax	pmax					
	comp=Z,57nm,1.0s								
MDJ			pmax	pmax					
	comp=Z,190nm,7.6s								
MDJ			LR	LR					
	comp=Z,280nm,24.9s								
MDJ			LR	LR					
	comp=Z,220nm,21.0s								
MDJ			LR	LR					
	comp=Z,530nm,31.3s								
MDJ	**Mudanjiang**	**53.40 339**	P	**P**	**13 46 50.3**	**+0.4**			
MDJ			IAmb	IAmb	13 46 51.6				
	comp=Z,43nm,0.9s								
MNSI	**Mandailing Nat**	**53.60 274**	P	**P**	**13 46 51.1**	**-0.9**			
	comp=Z,986nmcomp=Z,54nm,0.8s								
KHON	**Khomkaen**	**53.80 294**	P	**P**	**13 46 54.8**	**+1.4**			
	comp=Z,3μmcomp=Z,103nm,1.1s								
SRAK	**Srakaew**	**53.82 291**	P	**P**	**13 46 51.1**	**-2.4**			
	comp=Z,2μmcomp=Z,271nm,0.8s								
NONG	**Nongkai**	**54.08 296**	P	**P**	**13 46 56.5**	**+1.1**			
	comp=Z,11μmcomp=Z,101nm,1.0s								
ENH	**Enshi**	**54.21 313**	P	**P**	**13 46 56.0**	**-0.2**			
CN2	**Changchun**	**54.29 336**	*eP*	**P**	**13 46 55.3**	**-1.1**			
CN2			pP	pP	13 47 14.3	+2.0			
CN2			S	**S**	**13 54 26.1**	**-3.7**			
CN2			SS	**SS**	**13 58 08.8**	**-4.0**			
CN2			pmax	pmax					
	comp=Z,40nm,1.2s								
CN2			LR	LR					
	comp=Z,270nm,18.0s								
CN2			LR	LR					
	comp=Z,210nm,18.0s								
C

comp=Z,350nm,20.4s
KMI LR LR
comp=Z,500nm,19.5s
GRNR Gornyy 57.07 348⇑ *i*P **P 13 47 16.7 +0.4**
GRNR pmax pmax
comp=N,8.0nm,0.7s
GRNR pmax pmax
comp=Z,10.0nm,1.1s
LAMP Lampang 57.38 295 P **P 13 47 20.0 +1.0**
comp=Z,728nmcomp=Z,82nm,0.7s
UMPA Umpang Tak 57.39 293 P **P 13 47 21.2 +2.0**
comp=Z,1µmcomp=Z,106nm,1.1s
PPT Papeete 57.61 108 LR LR 14 09 42.1
comp=Z,150nm,19.2s,baz=296,slow=34
PPT2 Papeete2 57.61 108 *e*S S 13 55 36.2 +21
comp=Z,177nm,27.0s
PPT2 *e*LQ LQ 14 02 08.6
comp=Z,321nm,29.2s
PPT2 *e*LR LR 14 04 45.1
comp=Z,232nm,24.2s
PET Petropavlovsk 57.73 4 *e*P **P 13 47 21.1 +0.3**
PET *e* 13 48 13.6
PET *e*S **S 13 55 17.8 +2.7**
PET pmax pmax
comp=Z,61nm,0.9s
PET pmax pmax
comp=Z,100nm,12.7s
PET Petropavlovsk 57.73 4 P **P 13 47 21.3 +0.5**
PET IAmb IAmb 13 47 22.4
comp=Z,41nm,0.8s
PET **PcP PcP 13 48 14.2 +1.2**
PEA0B Petropavlovsk- 57.75 3*c i*P **P 13 47 21.9 +0.9**
PEA0B Petropavlovsk- 57.75 3 P **P 13 47 21.6 +0.6**
PETK Petropavlovsk- 57.75 3 P **P 13 47 21.9 +0.9**
comp=Z,55nm,0.9s,baz=162,slow=6.8,SNR=101
PETK PcP **PcP 13 48 14.1 +0.9**
comp=Z,32nm,0.9s,baz=180,slow=3.9,SNR=7.2
PETK LR LR 14 08 46.0
comp=Z,193nm,21.9s,baz=197,slow=32
PETK Petropavlovsk- 57.75 3 P **P 13 47 21.6 +0.6**
PETK Petropavlovsk- 57.75 3 P **P 13 47 21.6 +0.6**
CM35 Chiang Mai Arr 57.86 295 P **P 13 47 23.0 +0.6**
CM36 Chiang Mai Arr 57.86 295 P **P 13 47 23.0 +0.6**
CM34 Chiang Mai Arr 57.91 296 P **P 13 47 24.0 +1.2**
CM04 Chiang Mai Arr 57.93 295 P **P 13 47 24.6 +1.7**
comp=Z,435nmcomp=Z,54nm,0.9s
CM09 Chiang Mai Arr 57.93 295 P **P 13 47 24.7 +1.8**
comp=Z,458nmcomp=Z,57nm,1.0s
CM01 Chiang Mai Arr 57.95 295 P **P 13 47 24.9 +1.8**
comp=Z,439nmcomp=Z,52nm,1.1s
CM05 Chiang Mai Arr 57.96 295 P **P 13 47 24.8 +1.6**
comp=Z,317nmcomp=Z,38nm,1.1s
CM02 Chiang Mai Arr 57.97 295 P **P 13 47 24.0 +0.8**
comp=Z,409nmcomp=Z,51nm,1.0s
CM31 Chiang Mai Arr 57.98 295 P **P 13 47 24.9 +1.7**
comp=Z,12µmcomp=Z,1µm,1.1s
CM31 Chiang Mai Arr 57.98 295 P **P 13 47 24.3 +1.1**
CMAR Chiang Mai Arr 57.98 295 P **P 13 47 24.9 +1.6**
comp=Z,33nm,0.9s,baz=115,slow=5.4,SNR=197
CMAR PKPPKP **P'P'df 14 17 04.1 -2.8**
comp=Z,0.7nm,0.8s,baz=269,slow=5.2,SNR=5.9
CMAR Chiang Mai Arr 57.98 295 P **P 13 47 24.3 +1.1**
CM15 Chiang Mai Arr 57.99 295 P **P 13 47 25.0 +1.6**
comp=Z,417nmcomp=Z,52nm,1.0s
CM13 Chiang Mai Arr 58.00 295 P **P 13 47 25.0 +1.6**
comp=Z,366nmcomp=Z,44nm,1.1s
CMMT Chiang Mai 58.08 295 P **P 13 47 24.3 +0.2**
comp=Z,24nm,1.2s
CM33 Chiang Mai Arr 58.09 295 P **P 13 47 24.0 0.0**
CHTO Chiang Mai 58.09 295 P **P 13 47 24.9 +0.9**
CHTO pmax pmax
comp=Z,82nm,1.4s
CHTO Chiang Mai 58.09 295 P **P 13 47 24.9 +0.9**
CM32 Chiang Mai Arr 58.13 295 P **P 13 47 25.0 +0.7**
TBI Tubuai 58.45 114 *e*S S 13 55 48.7 +23
comp=Z,259nm,34.2s
TBI *e*LQ LQ 14 02 41.7
comp=Z,798nm,34.0s
TBI *e*LR LR 14 05 11.8
comp=Z,1µm,32.5s,baz=278
CD2 Chengdu 58.80 310 P **P 13 47 29.9 +1.1**
CD2 sP sP 13 47 52.8 +1.1
CD2 sS sS 13 55 53.5 -2.7
CD2 SS **SS 13 59 27.6 +3.2**
CD2 pmax pmax
comp=Z,150nm,0.8s
CD2 LR LR
comp=Z,410nm,19.4s
CD2 LR LR
comp=Z,590nm,22.3s
CD2 LR LR
comp=Z,800nm,21.6s
MHMT Maesarieng 58.81 294 P **P 13 47 29.6 +0.5**
HHC Hu-ho-hao-te 59.07 324 *e*P **P 13 47 33.3 +2.7**
HHC S **S 13 55 35.3 +1.9**
HHC sS sS 13 55 57.1 -2.3
HHC pmax pmax
comp=Z,13nm,1.1s
HHC pmax pmax
comp=Z,76nm,5.2s
HHC LR LR
comp=Z,260nm,19.2s
HHC LR LR
comp=Z,260nm,18.6s
HHC LR LR
comp=Z,430nm,18.0s
HIA Hailar 61.02 336 P **P 13 47 43.6 -0.1**
HIA pmax pmax
comp=Z,26nm,1.0s
HIA Hailar 61.02 336 P **P 13 47 43.6 -0.1**
HIA IAmb IAmb 13 47 45.4
comp=Z,26nm,1.0s
LZH Lanzhou 61.28 316 ⇑P **P 13 47 47.5 +1.6**
LZH pP pP 13 48 01.6 -0.4
LZH sP sP 13 48 07.1 -1.6
LZH S **S 13 56 01.5 -0.5**
LZH sS pS 13 56 23.3 +3.1
LZH pmax pmax
comp=Z,93nm,1.3s
LZH pmax pmax
comp=Z,320nm,7.3s
LZH LR LR
comp=Z,310nm,15.4s
LZH LR LR
comp=Z,380nm,16.0s
LZH LR LR
comp=Z,400nm,17.6s
ADK Adak 62.04 21 P **P 13 47 50.6 +0.2**
ADK pmax pmax
comp=Z,115nm,1.2s
ADK Adak 62.04 21 P **P 13 47 50.6 +0.2**
ZEA Zeya 62.11 343 *e*P **P 13 47 51.4 +0.5**
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,30nm,0.9s
MA2 Magadan 64.12 359 P **P 13 48 04.0 -0.1**
comp=Z,87nm,1.1s,baz=166,slow=6.3,SNR=147
MA2 Magadan 64.12 359*c i*P **P 13 48 04.3 +0.2**
MA2 pmax pmax
comp=Z,87nm,1.0s
MA2 Magadan 64.12 359 P **P 13 48 03.9 -0.1**
SAIH SAIHA 64.51 298 *e*P **P 13 48 08.1 +0.5**
SAIH IAmb IAmb 13 48 12.9
comp=Z,82nm,0.8s
KOHI KOHIMA 64.54 301 *e*P **P 13 48 07.4 -0.3**
KOHI IAmb IAmb 13 48 08.3
comp=Z,57nm,1.0s
ZIRO ZIRO 65.36 303 *e*P **P 13 48 14.1 +1.1**
ZIRO IAmb IAmb 13 48 14.9
comp=Z,53nm,1.0s
CIT Chita 65.69 335 *e*P **P 13 48 15.5 +1.0**
CIT *e* 13 48 36.5
CIT *e* 13 48 52.8
GTA Gaotai 65.70 317 ⇑P **P 13 48 16.5 +1.5**
GTA pP pP 13 48 30.9 -0.3
GTA sP sP 13 48 36.8 -1.1
GTA pmax pmax
comp=Z,42nm,1.1s
GTA pmax pmax
comp=Z,190nm,4.7s
GTA LR LR
comp=Z,140nm,18.5s
GTA LR LR
comp=Z,270nm,19.3s
GTA LR LR
comp=Z,370nm,18.9s
NIKH Nikolski High 65.88 24 P 13 48 15.2
baz=222
ULN Ulaanbaatar 66.01 328*c i*P **P 13 48 17.9 +1.1**
ULN pmax pmax
comp=Z,29nm,1.0s
ULN Ulaanbaatar 66.01 328 P **P 13 48 17.0 +0.2**
ULN IAmb IAmb 13 48 20.0
comp=Z,21nm,0.9s
SONM Songino Array 66.34 328 P **P 13 48 19.9 +1.1**
comp=Z,10nm,0.7s,baz=141,slow=6.8,SNR=53
SONM PKP2bc 14 16 53.8
comp=Z,3.6nm,1.1s,baz=309,slow=2.3,SNR=10
SONM LR LR 14 17 58.3
comp=Z,154nm,18.7s,baz=135,slow=36
SONM Songino Array 66.34 328 P **P 13 48 19.2 +0.4**
SONM pmax pmax
comp=Z,15nm,0.9s
SONM Songino Array 66.34 328 P **P 13 48 19.2 +0.4**
SHL Shillong 66.40 300 P **P 13 48 19.7 0.0**
SHL pmax pmax
comp=Z,59nm,0.9s
SHL Shillong 66.40 300 *e*P **P 13 48 20.7 +1.0**
SHL IAmb IAmb 13 48 22.9
comp=Z,34nm,0.7s
SHL Shillong 66.40 300 P **P 13 48 19.7 0.0**
TAOE Nuku Hiva Isla 66.49 98 *e*S S 13 57 26.4 +19
comp=Z,192nm,29.7s
TAOE Nuku Hiva Isla 66.49 98 *e*LR LR 14 08 37.4
comp=Z,341nm,31.9s
GUWA GUWAHATI 66.75 301 *e*P **P 13 48 22.2 +0.5**
SEY Seymchan 67.46 360 P **P 13 48 25.9 +0.5**
comp=Z,16nm,0.9s,baz=167,slow=6.0,SNR=68
SEY Seymchan 67.46 360⇑ *i*P **P 13 48 26.0 +0.5**
AKUT Akutan 67.99 25 P **P 13 48 29.0 0.0**
CASY Casey 68.14 197 P **P 13 48 30.2 +0.5**
LSA Lhasa 68.32 304 P **P 13 48 31.7 -0.5**
LSA pmax pmax
comp=Z,21nm,0.7s
LSA Lhasa 68.32 304 P **P 13 48 31.7 -0.5**
LSA IAmb IAmb 13 48 36.1
comp=Z,21nm,0.7s
SPIA Saint Paul Isl 68.52 21 P 13 48 32.5
baz=220
YAK Yakutsk 68.92 348 P **P 13 48 34.9 +0.2**
comp=Z,18nm,0.9s,baz=145,slow=2.0,SNR=19
YAK Yakutsk 68.92 348 *e*P **P 13 48 35.0 +0.3**
YAK pmax pmax
comp=Z,54nm,1.0s
YAK pmax pmax
comp=N,24nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK Yakutsk 68.92 348 P **P 13 48 34.3 -0.4**
YAK IAmb IAmb 13 48 36.5
comp=Z,58nm,1.0s
FALS False Pass 69.48 25 P 13 48 37.9
baz=227
ZAK Zakamensk 69.50 329 *e*P **P 13 48 38.9 +0.2**
ZAK pmax pmax
comp=Z,40nm,1.0s
BOD Bodaibo 69.77 339 *e*P **P 13 48 39.7 -0.3**
BOD pmax pmax
comp=Z,31nm,1.2s
TLY Talaya 70.08 330 P **P 13 48 43.5 +1.4**
comp=Z,13nm,0.9s,baz=158,slow=4.8,SNR=30
TLY Talaya 70.08 330 *e*P **P 13 48 42.7 +0.6**
TLY *e*S S 13 57 39.0 -10
TLY pmax pmax
comp=Z,34nm,0.9s
TLY Talaya 70.08 330 P **P 13 48 41.9 -0.2**
IRK Irkutsk 70.11 331 *e*P **P 13 48 41.3 -0.9**
IRK pmax pmax
comp=Z,42nm,1.2s
TAPN Taplejung 70.49 301 *e*P **P 13 48 46.3 +0.8**
comp=Z,111nm,1.1s
ODAN Odare 70.63 300 *e*P **P 13 48 46.9 +0.7**
comp=Z,110nm,0.7s
SDPT Sand Point 71.08 26 P 13 48 47.6
baz=230
RAMN Ramite 71.34 300 *e*P **P 13 48 50.5 0.0**
comp=Z,14nm,0.4s
MOY Mondy 71.42 329 *e*P **P 13 48 51.5 +1.1**
MOY pmax pmax
comp=Z,45nm,1.4s
RKT Rikitea 71.68 113 *e*LR LR 14 11 18.2
comp=Z,918nm,26.8s
JIRN Jiri 71.88 301 *e*P **P 13 48 54.1 +0.2**
comp=Z,42nm,0.7s
GUN Gumba 72.21 301 *e*P **P 13 48 56.7 +0.8**
comp=Z,140nm,0.9s
PKI Pulchoki 72.52 301 *e*P **P 13 48 58.1 +0.4**
comp=Z,94nm,1.1s
PKIN Phulchoki 72.53 301 *e*P **P 13 48 57.9 +0.2**
comp=Z,82nm,1.1s
KKN Kakani 72.69 301 *e*P **P 13 48 59.0 +0.4**
comp=Z,50nm,0.8s
DMN Daman 72.79 301 *e*P **P 13 49 00.0 +0.8**
comp=Z,124nm,1.0s
VNDA Vanda 72.91 178 P **P 13 49 00.1 +1.4**
comp=Z,14nm,0.8s,baz=323,slow=5.7,SNR=28
VNDA Vanda 72.91 178 P **P 13 48 59.4 +0.7**
VNDA pmax pmax
comp=Z,16nm,1.0s
VNDA Vanda 72.91 178 P **P 13 48 59.4 +0.7**
PALK Pallekele 73.07 279*ce*P **P 13 49 01.7 +0.8**
PALK pmax pmax
comp=Z,23nm,0.8s
PALK Pallekele 73.07 279 P **P 13 49 01.7 +0.8**
BILL Bilibino 73.19 5*d i*P **P 13 49 01.2 +0.8**
BILL *e* 13 49 17.5
BILL *e* 13 51 42.2
BILL pmax pmax
comp=Z,99nm,1.3s
BILL MLR MLR
comp=Z,153nm,21.0s
BILL Bilibino 73.19 5 P **P 13 49 01.0 +0.6**
BILL IAmb IAmb 13 49 02.5
comp=Z,59nm,0.8s
GAMB Gambell 73.26 16 P **P 13 49 00.3 -0.5**
GAMB IAmb IAmb 13 49 02.9
comp=Z,32nm,1.0s
GAMB Gambell 73.26 16 P 13 49 01.2
baz=217
GKN Gorkha 73.29 301 *e*P **P 13 49 02.3 +0.2**
comp=Z,160nm,1.2s
CHIR Chirikof Islan 73.54 27 P **P 13 49 03.0 +0.3**
CHIR Chirikof Islan 73.54 27 P 13 49 02.5
baz=234
KOLN Koldanda 74.12 300 *e*P **P 13 49 07.5 +0.5**
comp=Z,111nm,1.0s
SII Sitkinak Islan 74.63 27 P **P 13 49 09.5 +0.4**
SII Sitkinak Islan 74.63 27 P 13 49 09.3
baz=235,SNR=5.2
PYUN Piuthan 74.73 301 *e*P **P 13 49 10.6 +0.1**
comp=Z,147nm,0.9s
OHAK Old Harbor 75.41 27 P 13 49 13.7
baz=236,SNR=6.4
OHAK Old Harbor 75.41 27 P **P 13 49 13.5 0.0**
OHAK IAmb IAmb 13 49 14.7
comp=Z,41nm,0.8s
ANM Nome 75.65 17 P 13 49 15.6
baz=223,SNR=27
ANM Nome 75.65 17 P **P 13 49 15.1 +0.3**
ANM pmax pmax
comp=Z,29nm,0.9s
ANM Nome 75.65 17 P **P 13 49 15.1 +0.3**
ANM IAmb IAmb 13 49 16.9
comp=Z,29nm,0.9s
TNA Tin City 75.68 16 P **P 13 49 15.3 +0.5**
TNA Tin City 75.68 16 P 13 49 15.4
baz=220
WMQ Urumqi 75.78 317 P **P 13 49 17.4 +1.3**
WMQ pP PcP 13 49 28.9 +0.4
WMQ sP sP 13 49 37.8 -1.4
WMQ pmax pmax
comp=Z,64nm,1.3s
WMQ pmax pmax
comp=Z,440nm,4.1s
WMQ LR LR
comp=Z,320nm,28.7s
WMQ LR LR
comp=Z,600nm,25.7s
WMQ Urumqi 75.78 317 P **P 13 49 17.0 +0.9**
WMQ pmax pmax
comp=Z,91nm,1.3s
WMQ Urumqi 75.78 317 P **P 13 49 17.0 +0.9**
WMQ IAmb IAmb 13 49 18.8
comp=Z,91nm,1.3s
KDAK Kodiak Island 76.03 27 P **P 13 49 16.9 -0.2**
comp=Z,30nm,1.0s,baz=290,slow=8.9,SNR=7.1
KDAK Kodiak Island 76.03 27*de*P **P 13 49 17.7 +0.6**
KDAK pmax pmax
comp=Z,62nm,1.1s
KDAK Kodiak Island 76.03 27 P **P 13 49 17.2 +0.1**
KDAK IAmb IAmb 13 49 19.4
comp=Z,36nm,1.1s
KDAK Kodiak Island 76.03 27 P 13 49 17.4
baz=237
HYB Hyderabad 76.61 289 *i* P **P 13 49 20.0 -1.2**
HYB *es*P **sP 13 49 41.5 -3.0**
SVW2 Sparrevohn 76.69 23 P **P 13 49 21.5 +0.8**
SVW2 IAmb IAmb 13 49 23.0
comp=Z,24nm,0.8s
RSO Redoubt South 77.45 24 P **P 13 49 24.7 -0.6**
HOM Homer 77.47 25 P 13 49 25.4
baz=237
HOM Homer 77.47 25 P **P 13 49 24.9 -0.2**
CNPM China Poot 77.58 26 P **P 13 49 26.0 +0.2**
TIXI Tiksi 77.83 352*c i*P **P 13 49 26.5 -0.4**
TIXI pmax pmax
comp=Z,112nm,1.3s
TIXI Tiksi 77.83 352 P **P 13 49 26.6 -0.4**
TIXI IAmb IAmb 13 49 29.4
comp=Z,28nm,1.2s
BRLK Bradley Lake 77.85 25 P **P 13 49 27.0 -0.3**
BRLK IAmb IAmb 13 49 28.3
comp=Z,32nm,0.8s
BRSE Bradley Lake S 77.90 26 P 13 49 27.5
baz=238
DGZ Jazzator, Alta 78.11 323*c i*P **P 13 49 29.7 +0.6**
DGZ pmax pmax
comp=Z,75nm,1.0s
BHPL Bhopal 78.64 295 *e*P **P 13 49 31.4 -1.0**
BHPL IAmb IAmb 13 49 32.6
comp=Z,71nm,0.9s
O22K Cooper Landing 78.72 25 P 13 49 31.4
baz=239,SNR=8.7
O22K Cooper Landing 78.73 25 P **P 13 49 31.2 -0.8**
SKT Skwentna 78.78 23 P 13 49 31.1
baz=237,SNR=10
SKT Skwentna 78.79 23 P **P 13 49 31.3 -1.1**
SUA Susitna One 78.82 24 P **P 13 49 32.0 -0.8**
SUA IAmb IAmb 13 49 33.5
comp=Z,37nm,0.8s
SUA Susitna One 78.82 24 P 13 49 31.9
baz=238,SNR=17
RDOG Red Dog Mine 78.86 15 P **P 13 49 33.6 +0.9**
RDOG Red Dog Mine 78.86 15 P 13 49 33.8
baz=225
ZSN Zaisan 78.90 320⇑ *i*P **P 13 49 34.5 +1.0**
comp=Z,32nm,1.1s,baz=320
ZSN Zaisan 78.90 320*c i*P **P 13 49 34.4 +1.0**
ZSN pmax pmax
comp=Z,32nm,1.1s
RC01 Rabbit Creek A 79.04 25 P 13 49 33.7
baz=239,SNR=16
RC01 Rabbit Creek A 79.04 25 P **P 13 49 33.5 -0.2**
RC01 IAmb IAmb 13 49 34.8
comp=Z,73nm,1.1s
PPLA Purkeypile 79.04 22 P **P 13 49 33.6 -0.4**
PPLA Purkeypile 79.04 22 P 13 49 33.0
baz=236
PWL Port Wells 79.51 25 P **P 13 49 36.2 -0.2**
CUT Chulitna 79.51 23 P **P 13 49 35.4 -0.9**
CUT IAmb IAmb 13 49 37.2
comp=Z,47nm,1.0s
CUT Chulitna 79.51 23 P 13 49 35.5
baz=238,SNR=12
CHUM Lake Minchumin 79.55 22 P 13 49 37.0
baz=236,SNR=42
Q23K Middleton Isla 79.68 27 P 13 49 37.0
baz=242
GHO Glory Hole Cre 79.72 24 P **P 13 49 37.3 -0.3**
GHO IAmb IAmb 13 49 38.6
comp=Z,35nm,0.9s
KNK Knik Glacier 79.73 25 P 13 49 37.9
baz=240
KNK Knik Glacier 79.73 25 P **P 13 49 37.5 -0.1**
KNK IAmb IAmb 13 49 39.6
comp=Z,37nm,1.0s
KTH Kantishna Hill 79.88 22 P **P 13 49 37.4 -1.1**
KTH IAmb IAmb 13 49 38.8
comp=Z,34nm,0.9s
SML Sawmill 79.98 24 P 13 49 39.4
baz=240,SNR=29
SML Sawmill 79.98 24 P **P 13 49 38.5 -0.5**
DGAR Diego Garcia 80.00 263*de*P **P 13 49 41.4 +1.4**
DGAR pmax pmax
comp=Z,118nm,1.7s
GLI Glacier Island 80.05 25 P **P 13 49 39.1 -0.2**
GLI IAmb IAmb 13 49 40.4
comp=Z,48nm,0.8s
GLI Glacier Island 80.05 25 P 13 49 39.4
baz=241,SNR=7.5
TRF Thorofare Moun 80.06 22 P **P 13 49 38.4 -1.1**
TRF Thorofare Moun 80.06 22 P 13 49 38.5
baz=238,SNR=15
HIN Hinchinbrook I 80.07 26 P **P 13 49 39.3 -0.2**
BPAW Bear Paw Mtn. 80.15 22 P 13 49 39.2
baz=237,SNR=12
BPAW Bear Paw Mtn. 80.15 22 P **P 13 49 38.8 -1.1**
FID Port Fidalgo 80.25 26 P **P 13 49 40.1 -0.3**
FID IAmb IAmb 13 49 41.4
comp=Z,40nm,0.9s
SMLA Simla 80.34 303 *e*P **P 13 49 41.8 +0.3**
SMLA IAmb IAmb 13 49 45.4
comp=Z,42nm,0.8s
MK31 Makanchi Array 80.36 319*c i*P **P 13 49 42.0 +0.7**
MK31 Makanchi Array 80.36 319 P **P 13 49 41.7 +0.3**
MK31 IAmb IAmb 13 49 43.5
comp=Z,43nm,1.0s
MKAR Makanchi Array 80.36 319 P **P 13 49 42.2 +0.9**
comp=Z,29nm,0.8s,baz=100,slow=6.5,SNR=211
MKAR PKiKP **PKiKP 13 55 10.2 +0.4**
comp=Z,0.4nm,0.5s,baz=72,slow=1.1,SNR=1.9
MKAR PKKPbc **PKKPbc 14 08 24.4 -0.9**
comp=Z,2.1nm,0.8s,baz=318,slow=1.6,SNR=17
MKAR PKPPKP **P'P'df 14 16 30.7 +3.5**
comp=Z,1.6nm,1.0s,baz=337,slow=1.8,SNR=9.6
MKAR LR LR 14 25 43.0
comp=Z,130nm,19.3s,baz=100,slow=36
MKAR Makanchi Array 80.36 319 *i* P **P 13 49 42.2 +0.9**
MKAR pmax pmax
comp=Z,30nm,0.8s
MKAR Makanchi Array 80.36 319 P **P 13 49 41.8 +0.5**
SCM Sheep Creek Mo 80.41 25 P **P 13 49 41.2 -0.1**
SCM pmax pmax
comp=Z,53nm,1.0s
SCM Sheep Creek Mo 80.41 25 P **P 13 49 41.2 -0.1**
SCM IAmb IAmb 13 49 42.8
comp=Z,53nm,1.0s
WAT2 Susitna Watana 80.47 23 P 13 49 41.1
baz=239
EYAK Cordova Ski Ar 80.47 26 P 13 49 41.4
baz=242
MAKZ Makanchi 80.57 319 P **P 13 49 42.8 +0.4**
MAKZ pmax pmax
comp=Z,98nm,1.2s
MAKZ Makanchi 80.57 319 P **P 13 49 42.8 +0.4**
RND Reindeer 80.59 23 P **P 13 49 41.4 -0.8**
RND pmax pmax
comp=Z,46nm,0.8s
RND Reindeer 80.59 23 P **P 13 49 41.4 -0.8**
RND IAmb IAmb 13 49 42.7
comp=Z,46nm,0.8s
WAT6 Susitna Watana 80.61 24 P 13 49 42.4
baz=240,SNR=20
MNCI Minicoy 80.71 279 P **P 13 49 43.9 +0.1**
MCK McKinley 80.73 23 P **P 13 49 42.0 -0.9**
MCK pmax pmax
comp=Z,105nm,1.0s
MCK McKinley 80.73 23 P **P 13 49 42.0 -0.9**
MCK McKinley 80.73 23 P 13 49 42.3
baz=239,SNR=63
MNCY Minicoy 80.73 279 *e*P **P 13 49 44.6 +0.7**
MNCY IAmb IAmb 13 49 45.8
comp=Z,58nm,0.8s
MLY Manley 80.75 21 P 13 49 43.3
baz=237,SNR=53
MLY Manley 80.75 21 P **P 13 49 42.9 -0.2**
MLY IAmb IAmb 13 49 44.3

comp=Z,40nm,0.8s
BWN Browne 80.76 22 P P 13 49 42.8 -0.2
BWN IAmb IAmb 13 49 44.6
comp=Z,64nm,1.0s
KAIM Kayak Island 80.78 27 P 13 49 42.9
baz=244
KLU Klutina 80.84 25 P 13 49 44.1
baz=242,SNR=41
KLU Klutina 80.84 25 P P 13 49 43.7 +0.1
KLU IAmb IAmb 13 49 45.9
comp=Z,79nm,1.0s
RAGM Ragged Mountai 80.87 26 P P 13 49 43.5 -0.3
RAGM IAmb IAmb 13 49 45.4
comp=Z,57nm,1.2s
M24K Tolsona, Glenn 81.02 25 P 13 49 45.3
baz=242,SNR=17
M24K Tolsona, Glenn 81.02 25 P P 13 49 44.7 +0.1
M24K IAmb IAmb 13 49 46.4
comp=Z,64nm,0.8s
HMT Hamilton 81.03 27 P P 13 49 45.0 +0.3
NEA2 Nenana 81.12 22 P P 13 49 44.0 -0.9
NEA2 IAmb IAmb 13 49 45.3
comp=Z,40nm,0.9s
NEA2 Nenana 81.12 22 P 13 49 44.2
baz=239,SNR=49
BMRM Bremner River 81.16 26 P P 13 49 45.1 -0.2
BMRM IAmb IAmb 13 49 49.3
comp=Z,37nm,1.1s
BMRM Bremner River 81.16 26 P 13 49 45.5
baz=243,SNR=7.6
ZAA0 Zalesovo Array 81.17 326 P P 13 49 44.8 -0.6
ZAA0 IAmb IAmb 13 49 46.4
comp=Z,28nm,0.8s
ZALV Zalesovo Beam 81.17 326 P P 13 49 45.2 -0.2
comp=Z,27nm,0.8s,baz=110,slow=5.5,SNR=107
ZALV PKKPbc **PKKPbc 14 08 22.2 -1.6**
comp=Z,1.4nm,0.7s,baz=281,slow=2.4,SNR=7.4
ZALV PKPPKP **P'P'df 14 16 30.4 +5.3**
comp=Z,0.8nm,0.3s,baz=318,slow=2.0,SNR=9.6
ZALV LR LR 14 26 05.1
comp=Z,109nm,20.9s,baz=122,slow=36
POO Poona 81.20 289 *e*P **P 13 49 43.0 -3.4**
POO *e*P **PcP 13 49 46.4 -6.2**
POO IAmb IAmb 13 49 47.2
comp=Z,38nm,0.7s
DHRM DHARAMSHALA 81.28 303 *e*P **P 13 49 45.9 -0.9**
DHRM IAmb IAmb 13 49 47.0
comp=Z,89nm,0.8s
SHLS Shalkode 81.28 315 *e*P **P 13 49 46.1 -0.4**
comp=Z,31nm,1.2s,baz=315
SHLS Shalkode 81.28 315 *e*P **P 13 49 46.0 -0.4**
SHLS pmax pmax
comp=Z,31nm,1.2s
PDGK Podgornoye 81.31 315 P P 13 49 46.4 -0.2
I23K Minto, Yukon-K 81.31 21 P P 13 49 45.3 -0.6
I23K Minto, Yukon-K 81.31 21 P 13 49 45.5
baz=238,SNR=16
BGLC Bering Glacier 81.38 27 P 13 49 46.6
baz=245
WRH Wood River Hil 81.43 22 P P 13 49 45.1 -1.4
WRH IAmb IAmb 13 49 46.9
comp=Z,54nm,1.2s
N25K Chitina, Valde 81.45 25 P 13 49 47.4
baz=243,SNR=12
N25K Chitina, Valde 81.45 25 P P 13 49 47.0 +0.1
N25K IAmb IAmb 13 49 48.6
comp=Z,41nm,1.1s
UZB Uzynbulak 81.59 315⇑ *i*P **P 13 49 49.2 +1.0**
comp=Z,28nm,1.2s,baz=315
UZB Uzynbulak 81.59 315*c i*P **P 13 49 49.1 +1.0**
UZB pmax pmax
comp=Z,29nm,1.2s
MDM Murphy Dome 81.62 22 P P 13 49 46.4 -1.2
TCOL CIGO, UAF Yank 81.71 22 P 13 49 47.2
baz=240,SNR=18
TCOL CIGO, UAF Yank 81.71 22 P P 13 49 47.2 -0.9
TCOL IAmb IAmb 13 49 48.3
comp=Z,55nm,0.8s
CRQM Cirque 81.72 26 P P 13 49 48.4 0.0
CRQM IAmb IAmb 13 49 50.5
comp=Z,61nm,1.0s
PAX Paxson 81.72 24 P P 13 49 47.7 -0.6
PAX pmax pmax
comp=Z,15nm,1.0s
PAX Paxson 81.72 24 P P 13 49 47.7 -0.6
PAX Paxson 81.72 24 P 13 49 48.1
baz=242,SNR=10
COLA College 81.72 22 P 13 49 47.0
baz=240
COLA College 81.72 22*c i*P **P 13 49 46.8 -1.3**
COLA pmax pmax
comp=Z,58nm,0.9s
COLA College 81.72 22 P P 13 49 47.1 -0.9
GLB Gilahina Butte 81.72 26 P P 13 49 48.3 0.0
CRQE Cirque 81.73 26 P 13 49 48.8
baz=245
VRDI Verde Repeater 81.78 26 P P 13 49 48.7 -0.1
VRDI IAmb IAmb 13 49 50.1
comp=Z,43nm,1.0s
HDA Harding Lake 81.82 22 P 13 49 47.8
baz=241,SNR=15
HDA P 13 49 47.8
baz=241,SNR=15
KPKS Kokpek 81.91 315⇑ *i*P **P 13 49 50.8 +1.0**
comp=Z,36nm,1.4s,baz=315
KPKS Kokpek 81.91 315*c i*P **P 13 49 50.7 +1.0**
KPKS pmax pmax
comp=Z,36nm,1.4s
POKR Poker Plat Res 81.99 22 P P 13 49 48.6 -0.9
POKR Poker Plat Res 81.99 22 P 13 49 48.7
baz=240,SNR=6.2
SATY Saty 82.01 314⇑ *i*P **P 13 49 51.3 +1.0**
comp=Z,20nm,1.4s,baz=314
SATY Saty 82.01 314*c i*P **P 13 49 51.3 +1.0**
SATY pmax pmax
comp=Z,20nm,1.4s
IL31 82.03 22 P P 13 49 48.3 -1.3
IL31 IAmb IAmb 13 49 49.7
comp=Z,28nm,0.9s
ILAR Eielson Array 82.03 22 P P 13 49 48.4 -1.3
comp=Z,24nm,0.9s,baz=253,slow=5.0,SNR=152
ILAR PKiKP **PKiKP 13 55 11.4 -0.5**
comp=Z,0.5nm,0.7s,baz=299,slow=3.1,SNR=4.7
ILAR PKKPbc **PKKPbc 14 08 21.8 -0.5**
comp=Z,1.0nm,0.8s,baz=342,slow=2.1,SNR=9.4
ILAR LR LR 14 21 11.2
comp=Z,122nm,21.8s,baz=214,slow=32
MCARA McCarthy VSAT 82.03 26 P P 13 49 49.9 0.0
MCARA IAmb IAmb 13 49 52.0
comp=Z,52nm,1.0s
MCARA McCarthy VSAT 82.03 26 P 13 49 49.9
baz=245
COLD Coldfoot 82.13 19 P 13 49 50.9
baz=237,SNR=18
COLD Coldfoot 82.13 19 P P 13 49 50.8 +0.5
GRNC Granite Creek 82.32 27 P P 13 49 51.7 0.0
MENT Mentasta 82.42 24 P P 13 49 51.9 +0.1
MENT IAmb IAmb 13 49 53.3
comp=Z,23nm,1.0s
TDK Taldyqorghan 82.48 316 *i*P **P 13 49 53.6 +1.0**
comp=Z,48nm,1.3s,baz=316
TDK Taldyqorghan 82.48 316 *i*P **P 13 49 53.5 +1.0**
TDK pmax pmax
comp=Z,48nm,1.3s
BARN Barnard Glacie 82.50 26 P P 13 49 52.5 0.0
BARN IAmb IAmb 13 49 54.2
comp=Z,38nm,0.9s
DOT Dot Lake 82.59 24 P P 13 49 52.6 -0.2
DOT IAmb IAmb 13 49 53.9
comp=Z,50nm,0.9s
CTG Chitna Glacier 82.60 27 P 13 49 53.3
baz=246
CTGM Chitina Glacie 82.61 27 P P 13 49 53.3 +0.3
CTGM IAmb IAmb 13 49 55.2
comp=Z,52nm,1.0s
A21K Barrow 82.69 15 P 13 49 53.5
baz=231,SNR=40
A21K Barrow 82.69 15 P P 13 49 53.1 0.0
A21K IAmb IAmb 13 49 54.6
comp=Z,36nm,0.8s
LOGN Logan Glacier 82.70 27 P P 13 49 53.4 -0.1
LOGN IAmb IAmb 13 49 55.6
comp=Z,26nm,1.0s
SEM Semipalatinsk 82.71 322⇑ *i*P **P 13 49 53.4 -0.5**
baz=322
SEM Semipalatinsk 82.71 322*c i*P **P 13 49 53.4 -0.5**

PCA Pinnacle 82.75 28 P P 13 49 53.6 -0.2
PCA IAmb IAmb 13 49 55.8
comp=Z,25nm,0.9s
PINM Pinnacle 82.76 28 P 13 49 53.7
baz=247
SCRK Sand Creek 82.77 23 P P 13 49 53.4 -0.4
SCRK IAmb IAmb 13 49 55.0
comp=Z,28nm,1.0s
SCRK Sand Creek 82.77 23 P 13 49 53.8
baz=244,SNR=26
PRP Porcupine Dome 82.89 22 P P 13 49 52.5 -1.9
PRP Porcupine Dome 82.89 22 P 13 49 54.0
baz=242
KSH Kashi 83.00 311 P P 13 49 58.1 +2.6
KSH pP pP 13 50 15.4 +3.3
KSH S **S 14 00 11.4 +0.9**
KSH sS sS 14 00 42.4 +4.3
KSH pmax pmax
comp=Z,29nm,1.7s
KSH pmax pmax
comp=Z,250nm,7.1s
KSH LR LR
comp=Z,170nm,6.9s
KSH LR LR
comp=Z,240nm,5.7s
KSH LR LR
comp=Z,290nm,7.3s
MDOK Medeo 83.00 314 *i*P **P 13 49 56.7 +1.2**
baz=314
MDOK Medeo 83.00 314 *i*P **P 13 49 56.7 +1.2**
TNSS Tian-Shan 83.04 314⇑ *i*P **P 13 49 57.4 +1.3**
baz=314
TNSS Tian-Shan 83.04 314⇑ *i*P **P 13 49 57.3 +1.3**
TOLK Toolik Lake Re 83.09 18 P P 13 49 55.4 +0.1
TOLK Toolik Lake Re 83.09 18 P 13 49 55.9
baz=238,SNR=19
AAA Alma-Ata 83.10 314 *e*P **P 13 49 57.3 +1.4**
baz=314
AAA Alma-Ata 83.10 314 *e*P **P 13 49 57.3 +1.4**
L27K Beaver Creek, 83.25 25 P 13 49 56.9
baz=246,SNR=34
L27K Beaver Creek, 83.25 25 P P 13 49 56.3 +0.1
L27K IAmb IAmb 13 49 58.0
comp=Z,34nm,1.1s
ULHL Ulahol 83.37 313 P P 13 49 59.0 +1.5
SNR=12
FYU Fort Yukon 83.49 21 P P 13 49 57.3 +0.1
FYU IAmb IAmb 13 49 58.9
comp=Z,21nm,0.9s
KURK Kurchatov 83.80 322 P P 13 49 59.7 +0.5
KURK *i* 13 55 15.2
KURK Kurchatov 83.80 322 P P 13 49 59.6 +0.5
KURK **PKiKP 13 55 15.2 +0.1**
KURBB Kurchatov Arra 83.83 322 P P 13 49 59.6 +0.3
comp=Z,29nm,0.9s,baz=106,slow=4.3,SNR=168
KURBB PKiKP **PKiKP 13 55 15.2 +0.1**
comp=Z,0.2nm,0.3s,baz=106,slow=2.1,SNR=1.5
KURBB PKKPbc **PKKPbc 14 08 16.9 -0.6**
comp=Z,2.2nm,0.8s,baz=293,slow=2.9,SNR=19
KURBB Kurchatov Arra 83.83 322 P P 13 49 58.9 -0.4
TKM2 Tokmak 2 83.98 314 P P 13 50 01.8 +1.2
SNR=41
TKM2 Tokmak 2 83.98 314 P P 13 50 00.9 +0.3
NIL Nilore 84.05 304 P P 13 50 00.7 -0.2
NIL pmax pmax
comp=Z,60nm,1.0s
NIL Nilore 84.05 304 P P 13 50 00.7 -0.2
SIT Sitka 84.12 31 P 13 50 01.3
baz=252
EGAK Eagle 84.22 23 P 13 50 01.3
baz=246
EGAK Eagle 84.22 23 P P 13 50 01.2 +0.1
EGAK IAmb IAmb 13 50 02.7
comp=Z,25nm,0.9s
HYT Haines Junctio 84.29 27 P P 13 50 01.9 +0.3
CHMS Chumysh 84.61 314 P P 13 50 04.7 +1.2
SNR=35
UCH Uchtor 84.63 313 P P 13 50 06.1 +1.9
SNR=80
DAWY Dawson 84.65 24 P P 13 50 03.7 +0.4
DAWY IAmb IAmb 13 50 06.0
comp=Z,32nm,1.2s
AAK Ala-Archa 84.72 313 P P 13 50 05.7 +1.4
SNR=47
AAK Ala-Archa 84.72 313 P P 13 50 05.1 +0.8
SGDS Sogindy 84.78 314⇑ *i*P **P 13 50 05.3 +0.8**
comp=Z,43nm,1.3s,baz=314
SGDS Sogindy 84.78 314*c i*P **P 13 50 05.3 +0.8**
SGDS pmax pmax
comp=Z,43nm,1.3s
CRAG Craig 84.84 33 P 13 50 04.4
baz=254
SKAG Skagway 84.87 29 P P 13 50 04.4 0.0
SKAG Skagway 84.87 29 P 13 50 05.1
baz=252
AML Almayashu 85.20 313 P P 13 50 09.1 +2.1
SNR=8.7
EKS2 Erkin-Say 85.24 313 P P 13 50 08.5 +1.6
SNR=42
BTLS Baital 85.51 316⇑ *i*P **P 13 50 08.9 +1.0**
comp=Z,47nm,1.1s,baz=316
BTLS Baital 85.51 316*c i*P **P 13 50 08.9 +1.0**
BTLS pmax pmax
comp=Z,47nm,1.1s
WRAK Wrangell Islan 85.51 33 P 13 50 08.0
baz=255
MAW Mawson 85.70 203 P P 13 50 09.2 +0.8
comp=Z,16nm,0.6s,baz=95,slow=6.8,SNR=30
MAW pP **pP 13 50 22.9 -1.9**
comp=Z,9.2nm,0.8s,baz=104,slow=4.1,SNR=3.3
MAW Mawson 85.70 203 P P 13 50 09.2 +0.8
baz=86,SNR=21
MAW Mawson 85.70 203 P P 13 50 08.7 +0.2
MAW pmax pmax
comp=Z,13nm,1.4s
MAW Mawson 85.70 203 P P 13 50 08.7 +0.2
NRIK Noril'sk 85.93 341 P P 13 50 09.7 +0.1
comp=Z,14nm,0.8s,baz=117,slow=4.7,SNR=30
NRIK LR LR 14 27 15.9
comp=Z,161nm,21.7s,baz=110,slow=35
NRIK Noril'sk 85.93 341*c i*P **P 13 50 09.4 -0.2**
NRIK pmax pmax
comp=Z,57nm,1.4s
NRIK Noril'sk 85.93 341 P P 13 50 09.3 -0.2
EPYK Eagle Plains 86.53 22 P P 13 50 12.9 +0.3
EPYK Eagle Plains 86.53 22 P 13 50 13.0
baz=250,SNR=48
DZA Taraz 87.06 313 *e*P **P 13 50 16.3 +0.6**
baz=313
DZA Taraz 87.06 313 *e*P **P 13 50 16.3 +0.6**
DLBC Dease Lake 87.23 31 P P 13 50 16.4 +0.2
DLBC IAmb IAmb 13 50 18.9
comp=Z,36nm,1.1s
BRZS Berezniki 87.35 320⇑ *i*P **P 13 50 16.5 -0.4**
comp=Z,15nm,1.2s,baz=320
BRZS Berezniki 87.35 320*c i*P **P 13 50 16.5 -0.4**
BRZS pmax pmax
comp=Z,15nm,1.2s
KBL Kabul 87.64 305 P P 13 50 18.2 -0.7
KBL pmax pmax
comp=Z,8.0nm,0.7s
KBL Kabul 87.64 305 P P 13 50 18.2 -0.7
KK31 Karatay Array 87.68 313 *i*P **P 13 50 18.6 -0.1**
KK31 Karatay Array 87.68 313 P P 13 50 18.5 -0.2
KK31 IAmb IAmb 13 50 19.8
comp=Z,16nm,0.8s
KKAR Karatay Array 87.68 313 P P 13 50 18.4 -0.3
KKAR pmax pmax
comp=Z,16nm,0.9s
KKAR Karatay Array 87.68 313 P P 13 50 18.4 -0.3
KKAR Karatay Array 87.68 313 P P 13 50 18.5 -0.3
KKAR IAmb IAmb 13 50 19.8
comp=Z,16nm,0.8s
IUG luznay 87.89 312⇑ *i*P **P 13 50 20.6 +0.7**
baz=312
IUG luznay 87.89 312*c i*P **P 13 50 20.5 +0.7**
L02E Cave Junction 88.28 48 P 13 50 21.7
baz=262
INK Inuvik 88.32 21 P P 13 50 20.9 -0.1
comp=Z,14nm,0.9s,baz=251,slow=3.6,SNR=29
INK PKiKP **PKiKP 13 55 22.4 +0.4**
comp=Z,2.2nm,0.9s,baz=193,slow=1.5,SNR=4.1
INK Inuvik 88.32 21 P P 13 50 20.6 -0.5
INK pmax pmax
comp=Z,29nm,1.2s
INK Inuvik 88.32 21 P P 13 50 20.6 -0.5

INK IAmb IAmb 13 50 22.7
comp=Z,29nm,1.2s
I02D Swisshome 88.38 46 P 13 50 22.5
baz=262
H04D Lebanon 89.22 45 P 13 50 26.5
baz=263
BVAR Borovoye Array 89.27 323 P P 13 50 25.4 -0.5
comp=Z,72nm,0.7s,baz=160,slow=4.6,SNR=230
BVAR pP **pP 13 50 40.2 -2.5**
comp=Z,9.7nm,0.7s,baz=103,slow=8.7,SNR=3.0
BVAR PKKPbc **PKKPbc 14 08 03.1 -1.3**
comp=Z,0.9nm,0.8s,baz=152,slow=6.7,SNR=6.7
BRVK Borovoye 89.33 323*c i*P **P 13 50 25.8 -0.4**
BRVK pmax pmax
comp=Z,84nm,0.8s
BRVK Borovoye 89.33 323 P P 13 50 25.5 -0.7
D03D Eldon 89.37 42 P 13 50 26.4
baz=262
B05A Bryant 90.12 42 P 13 50 30.2
baz=263
J05D Fort Rock, OR 90.15 47 P 13 50 30.6
baz=264
I05D Terrebonne, OR 90.19 46 P 13 50 30.8
baz=264
PINE Pine Mountain 90.42 46 P P 13 50 30.9 -0.9
PINE IAmb IAmb 13 50 33.5
comp=Z,20nm,1.4s
SNCC San Nicolas Is 90.49 57 P 13 50 31.9
baz=265
MLAC Mammoth, Mammo 91.43 53 P 13 50 36.4
baz=265
I07A Izee 91.48 46 P P 13 50 36.1 -0.5
ISA Isabella, Lake 91.56 55 P 13 50 37.0
baz=265
LHV Little Huntoon 91.74 52 P P 13 50 37.7 0.0
MWC Mount Wilson 91.79 56 P P 13 50 38.1 -0.2
MWC pmax pmax
comp=Z,11nm,1.0s
MWC Mount Wilson 91.79 56 P P 13 50 38.1 -0.2
MWC IAmb IAmb 13 50 40.2
comp=Z,11nm,0.9s
EDW2 Edwards Air Fo 91.89 55 P 13 50 38.8
baz=266
C36M Paulatuk 91.90 21 P P 13 50 37.2 -0.5
C36M IAmb IAmb 13 50 37.9
comp=Z,8.1nm,0.9s
C36M Paulatuk 91.90 21 P 13 50 37.4
baz=262,SNR=10
NVAR Mina Array Bea 91.91 52 P P 13 50 39.1 +0.3
comp=Z,2.2nm,0.8s,baz=253,slow=6.4,SNR=12
NVAR LR LR 14 24 53.4
comp=Z,299nm,21.2s,baz=264,slow=31
NVAR Mina Array Bea 91.91 52 P P 13 50 36.7 -2.1
CWC Cottonwood Cre 91.94 54 P 13 50 38.4
baz=266
NV11 Mina Array Sit 92.03 52 P P 13 50 37.9 -1.4
BFSC Mount Baldy Ra 92.12 56 P 13 50 40.0
baz=266
J08A Circle Bar Ran 92.17 47 P P 13 50 39.0 -0.7
LRMC Laurel Mtn Rad 92.19 55 P 13 50 40.2
baz=266
BBRC Big Bear Solar 92.73 56 P 13 50 42.7
baz=266
FURC Furnace Creek, 92.92 54 P 13 50 43.8
baz=266
MONP2 Monument Peak 93.06 57 P 13 50 44.7
baz=266
PFO Pinyon Flats O 93.07 57 P 13 50 44.4
baz=266
BMO Blue Mountains 93.11 45 P P 13 50 43.0 -1.1
BMO pmax pmax
comp=Z,5.0nm,1.1s
BMO Blue Mountains 93.11 45 P P 13 50 43.0 -1.1
HRA Herat 93.22 304 P P 13 50 44.5 -0.4
HRA IAmb IAmb 13 50 45.9
comp=Z,14nm,0.9s
F10A Beach Ranch, E 93.23 44 P P 13 50 43.5 -1.1
HEC Hector,Ludlow 93.25 55 P 13 50 45.4
baz=266
IKP In-Ko-Pah, Jac 93.30 58 P 13 50 45.6
baz=266
SHOC Shoshone, Teco 93.36 54 P 13 50 45.4
baz=267
NEW Newport 93.43 42 P 13 50 45.1
baz=267
TPNV Topopah Spring 93.44 53 P 13 50 45.6
baz=267
BELC Belle Mtn. Jos 93.48 56 P 13 50 45.8
baz=267
SWSC Sam W. Stewart 93.58 57 P 13 50 47.0
baz=267
TUQ Turquoise Moun 93.62 55 P 13 50 47.1
baz=267
SYO Syowa Base 93.80 199‖ *e*P **P 13 50 46.6 +0.1**
GMRC Granite Mounta 93.80 56 P 13 50 47.6
baz=267
BC3 Big Chuckawall 93.91 57 P 13 50 47.8
baz=267
R11A Troy Canyon, C 94.04 52 P 13 50 49.1
baz=267
PLID Pearl Lake 94.05 45 P P 13 50 47.1 -1.5
IRM Iron Mountain 94.19 56 P 13 50 49.5
baz=267
GLA Glamis 94.40 57 P 13 50 50.8
baz=267
PDMCI Parker Dam,Lak 95.03 56 P 13 50 53.7
baz=268
SVE Sverdlovsk 95.19 327 *e*P **P 13 50 52.3 -0.8**
SVE pmax pmax
comp=Z,28nm,1.4s
YKA Yellowknife Ar 95.28 28 P P 13 50 53.7 +0.2
comp=Z,6.0nm,0.9s,baz=268,slow=4.4,SNR=62
YKA PKiKP **PKiKP 13 55 34.5 +0.5**
comp=Z,0.6nm,0.6s,baz=273,slow=1.2,SNR=8.8
YKA PKKPbc **PKKPdf 14 07 46.2 -2.9**
comp=Z,0.6nm,0.7s,baz=95,slow=3.1,SNR=6.0
YKA LR LR 14 28 20.1
comp=Z,272nm,21.6s,baz=0.0,slow=32
AB31 Akbulak array 95.51 319 P P 13 50 52.9 -1.9
ABKAR Akbulak array 95.51 319 P P 13 50 53.1 -1.7
CCUT Cedar City 95.77 53 P P 13 50 55.8 -0.8
214A Organ Pipe Nat 96.06 58 P 13 50 58.1
baz=268
KNB Kanab 96.19 53 P P 13 50 57.5 -0.9
KNB pmax pmax
comp=Z,5.0nm,1.0s
KNB Kanab 96.19 53 P P 13 50 57.5 -0.9
ARU Arti 96.33 326 PP PP 13 54 53.3 +0.9
comp=Z,1.7nm,0.2s,baz=78,slow=6.7,SNR=4.9
ARU Arti 96.33 326*c i*P **P 13 50 57.2 -1.2**
ARU 13 54 53.0
ARU S **SKSac 14 01 27.6 -2.3**
ARU SS **SS 14 08 47.0 -0.2**
ARU pmax pmax
comp=Z,43nm,1.0s
ARU Arti 96.33 326 P P 13 50 56.6 -1.8
GEYT Alibeck 96.69 308 P P 13 50 59.7 -0.8
comp=Z,2.2nm,0.5s,baz=115,slow=2.5,SNR=5.2
GEYT PP **PP 13 54 57.8 +2.0**
comp=Z,1.1nm,0.6s,baz=79,slow=7.5,SNR=1.6
GEYT Alibeck 96.69 308 P P 13 50 59.5 -1.1
AKTO Aktyubinsk 96.76 320 P P 13 50 59.5 -1.0
comp=Z,8.8nm,0.8s,baz=94,slow=6.0
BOZ Bozeman (W) 97.14 45 P P 13 51 01.4 -1.1
BOZ pmax pmax
comp=Z,2.0nm,1.0s
BOZ Bozeman (W) 97.14 45 P P 13 51 01.4 -1.1
BOZ Bozeman (W) 97.14 45 P 13 51 01.6
baz=270
WUAZ Wupatki 97.33 55 P 13 51 03.7
baz=269
BELA Belgrano 2 97.41 178 P P 13 51 02.6 -0.3
BELA IAmb IAmb 13 51 17.1
comp=Z,7.1nm,0.8s
EGMT Eagleton 98.36 42 P 13 51 08.6
baz=272
W18A Petrified Fore 98.67 55 P 13 51 10.2
baz=270
BW06 Boulder Array 98.68 48 P 13 51 09.4
baz=272
PDAR Pinedale Array 98.68 48 P P 13 51 08.1 -1.6
comp=Z,1.0nm,0.9s,baz=264,slow=2.7,SNR=6.9
PDAR PP **PP 13 55 14.7 +3.5**
comp=Z,1.4nm,0.8s,baz=270,slow=5.9,SNR=6.9
PDAR PKiKP **PKiKP 13 55 41.7 +0.7**
comp=Z,0.4nm,0.6s,baz=170,slow=4.4,SNR=1.9
PDAR Pinedale Array 98.68 48 P P 13 51 08.4 -1.2

SOCY	**Socotra**	**99.73**	**282**	Pdif	**Pdif**	**13 51 14.0**	**-0.7**		
SOCY				IAmb	IAmb	13 51 17.2			
	comp=Z,5.4nm,0.7s								
RES	**Resolute Bay**	**100.29**	**14**	PKiKP	**PKiKP**	**13 55 42.5**	**0.0**		
	comp=Z,1.0nm,0.8s,baz=358,slow=1.8,SNR=2.1								
RES	**Resolute Bay**	**100.29**	**14**	P	**Pdif**	**13 51 14.7**	**-1.0**		
PRGR	**Permogore**	**102.33**	**332**	*e*P	**Pdif**	**13 51 23.2**	**-1.9**		
PRGR				pmax	pmax				
	comp=Z,19nm,0.9s								
BELG	**Belogornoye**	**103.06**	**323**	Pdiff	**Pdif**	**13 51 27.4**	**-1.1**		
	comp=Z,25nm,0.8s,baz=107,slow=0.7,SNR=13								
VNA2	**Neumayer--Watz**	**103.38**	**187**	Pdiff	**Pdif**	**13 51 28.1**	**-1.6**		
TXAR	**Lajitas Array**	**103.96**	**61**	PKiKP	**PKiKP**	**13 55 51.8**	**+1.1**		
	comp=Z,1.5nm,1.0s,baz=318,slow=1.2,SNR=5.2								
TXAR				PKKPbc	**PKKPbc**	**14 07 20.6**	**-3.0**		
	comp=Z,0.8nm,0.8s,baz=120,slow=5.0,SNR=3.9								
TXAR	**Lajitas Array**	**103.96**	**61**		**PKiKP**	**13 55 48.8**	**-1.9**		
APA	**Apatity**	**105.31**	**340**	⇓*i*P	**Pdif**	**13 51 36.3**	**-1.9**		
APA				*i*		13 56 02.9			
APA				pmax	pmax				
	comp=Z,5.0nm,1.0s								
KLMR	**Klimovskoe**	**105.38**	**332**	*e*P	**Pdif**	**13 51 36.3**	**-2.4**		
KLMR				pmax	pmax				
	comp=Z,15nm,1.3s								
KLMR	**Klimovskoe**	**105.38**	**332**	*e*Pdif	**Pdif**	**13 51 36.3**	**-2.4**		
KLMR				AMP		13 51 38.3			
	comp=Z,15nm,1.3s								
KLMR				*e*PKKPbc	**PKKPbc**	**14 07 13.8**	**-6.4**		
ARCES	**ARCESS Array B**	**106.83**	**343**	PKiKP	**PKiKP**	**13 55 55.1**	**+0.4**		
	comp=Z,5.0nm,0.9s,baz=56,slow=3.4,SNR=6.4								
ARCES	**ARCESS Array B**	**106.83**	**343**		**PKiKP**	**13 55 55.7**	**+1.0**		
ULM	**Lac du Bonnet**	**107.08**	**39**	PKiKP	**PKiKP**	**13 55 55.6**	**-0.1**		
	comp=Z,2.8nm,0.7s,baz=318,slow=2.6,SNR=5.2								
ECSD	**EROS Data Cent**	**107.97**	**46**	P		13 55 58.0			
	baz=281								
EYMN	**Ely**	**110.46**	**40**	P		13 56 02.4			
	baz=286								
FINES	**FINESS Array B**	**111.04**	**336**	Pdiff	**Pdif**	**13 52 02.6**	**-1.2**		
	comp=Z,2.2nm,0.9s,baz=48,slow=2.8,SNR=3.7								
FINES				PKiKP	**PKiKP**	**13 56 02.5**	**-0.3**		
	comp=Z,3.1nm,0.8s,baz=104,slow=4.9,SNR=7.4								
FINES				PKKPbc	**PKKPbc**	**14 07 00.6**	**-1.7**		
	comp=Z,2.0nm,0.8s,baz=242,slow=4.1,SNR=3.5								
W39A	**Magazine**	**111.67**	**54**	P		13 56 05.0			
	baz=280								
U40A	**Yellville**	**112.21**	**53**	P		13 56 05.5			
	baz=281								
VSU	**Vasula**	**112.27**	**333**	⇑*i*PKiKP	**PKiKP**	**13 56 05.4**	**+0.3**		
JFWS	**Jewell Farm**	**112.68**	**45**	P		13 56 06.5			
	baz=285								
W41B	**Gary Mavity, V**	**112.91**	**54**	P		13 56 07.2			
	baz=281								
CCM	**Cathedral Cave**	**113.12**	**51**	P		13 56 07.1			
	baz=283								
MNK	**Minsk**	**113.60**	**329**	*i* PKP	PKiKP	13 56 21.5	+14		
	comp=E,3.0nm,1.4s								
MNK				*i* PKP	PKiKP	13 56 21.5	+14		
	comp=N,17nm,1.4s								
MNK				*i* PKP	PKiKP	13 56 21.5	+14		
	comp=Z,8.0nm,1.1s								
MNK				*i* PP	**PP**	**13 56 54.0**	**-6.2**		
MNK				*i* PPP	PPP	13 59 18.0			
MNK				*i* SKS	**SKSdf**	**14 03 06.7**	**-8.2**		
MNK				*i* PS	PKKPbc	14 06 31.4	-22		
MNK				*i* SS	**SS**	**14 12 37.5**	**-5.4**		
MNK				*i* SSS	SSS	14 16 51.7			
MNK				*i* LQ	LQ	14 37 41.3			
MNK				*i* LR	LR	14 42 23.1			
MNK				*i* LRM	MLR	14 44 39.2			
	comp=E,15nm,14.7s								
MNK				*i* LRM	MLR	14 44 46.8			
	comp=Z,96nm,12.8s								
MNK				*i* LRM	MLR	14 44 54.5			
	comp=N,140nm,19.2s								
NACGM	**Naroch**	**113.98**	**329**	*i* PKP	PKiKP	13 55 58.2	-10		
NACGM				*i* PKP	PKiKP	13 55 58.2	-10		
NACGM				*i* PKP	PKiKP	13 55 58.2	-10		
NACGM				*i* pPKP	PP	13 56 15.8	-47		
NACGM				*i* PP	PP	13 57 02.4	-0.4		
NACGM				*i* PPP	PPP	13 59 29.4			
NACGM				*i* SKS	**SKSdf**	**14 03 05.0**	**-11**		
NACGM				*i* pSKS		14 03 29.2			
NACGM				*i* sSKS		14 03 35.6			
NACGM				*i* SKKS	SKKSac	14 04 55.9	+56		
NACGM				*i* PS	**PS**	**14 06 44.3**	**+3.4**		
NACGM				*i* SS	SKKPbc	14 11 15.7	+42		
NACGM				*i* SSS	SSS	14 17 18.3			
NACGM				*i* LQ	LQ	14 28 42.5			
NACGM				*i* LR	LR	14 43 19.9			
AKASG	**Malin Array Be**	**114.52**	**324**	Pdiff	**Pdif**	**13 52 18.5**	**-1.0**		
	comp=N,1.7nm,0.7s,baz=53,slow=4.8,SNR=7.2								
AKASG				PKP	PKPdf	13 56 09.9	+0.2		
	comp=N,8.1nm,0.6s,baz=63,slow=2.0,SNR=27								
AKASG				PKKPbc	**PKKPbc**	**14 06 48.5**	**-1.8**		
	comp=N,1.4nm,0.7s,baz=252,slow=3.1,SNR=6.8								
AKBB	**Malin Array Si**	**114.52**	**324**	⇑*i*PKiKP	PKPdf	13 56 10.1	+0.4		
BRTR	**Keskin Array B**	**115.36**	**312**	PKP	**PKiKP**	**13 56 11.3**	**-0.6**		
	comp=N,1.5nm,0.7s,baz=148,slow=1.7,SNR=6.7								
BRTR				PP	**PP**	**13 57 16.4**	**+3.0**		
	comp=N,3.3nm,1.1s,baz=85,slow=6.1,SNR=5.3								
BRTR				PKKPbc	**PKKPbc**	**14 06 47.5**	**+0.2**		
	comp=N,1.2nm,0.7s,baz=222,slow=1.7,SNR=4.5								
BRTR	**Keskin Array B**	**115.36**	**312**	PKiKP	**PKiKP**	**13 56 11.4**	**-0.5**		
KMBO	**Kilima Mbogo**	**115.50**	**267**	PKP	**PKiKP**	**13 56 13.8**	**+0.8**		
	comp=N,1.3nm,0.4s,baz=117,slow=0.5,SNR=5.5								
MMAI	**Mount Meron Ar**	**115.57**	**304**	PKP	**PKiKP**	**13 56 13.3**	**+0.9**		
	comp=N,5.0nm,0.8s,baz=134,slow=6.2,SNR=3.0								
E46A	**Sault Ste Mari**	**115.61**	**40**		**PKiKP**	**13 56 11.8**	**-0.2**		
SFIN	**Lafayette**	**115.65**	**47**	P		13 56 12.3			
	baz=287								
SORM	**Soroca**	**116.09**	**322**	⇓P	**PKPdf**	**13 56 11.9**	**-0.9**		
SORM	**Soroca**	**116.09**	**322**	⇓PKiKP	**PKPdf**	**13 56 11.9**	**-0.9**		
WVT	**Waverly**	**116.22**	**52**	P		13 56 13.3			
	baz=284								
MILM	**Milestii Mici**	**116.29**	**321**	⇑P	**PKiKP**	**13 56 14.8**	**+1.6**		
N47A	**Urbana**	**116.52**	**46**	PKPdf	**PKPdf**	**13 56 13.6**	**-0.2**		
T47A	**Sharon Grove**	**116.57**	**51**		**PKPdf**	**13 56 13.8**	**-0.3**		
EIL	**Elat**	**116.58**	**301**	PKP	**PKiKP**	**13 56 14.9**	**+0.6**		
	comp=N,4.7nm,0.8s,baz=21,slow=8.6,SNR=4.2								
HFS	**Hagfors**	**116.66**	**339**	PKP	**PKiKP**	**13 56 13.6**	**+0.1**		
	comp=N,5.3nm,0.8s,baz=60,slow=3.5,SNR=5.2								
WCI	**Wyandotte Cave**	**116.85**	**49**	P		13 56 14.0			
	baz=286								
NB2	**NORSAR Subarra**	**116.89**	**340**	PKPdf	**PKPdf**	**13 56 13.9**	**-0.1**		
	baz=45,slow=1.9								
NOA	**NORSAR Array B**	**116.89**	**340**	PKP	**PKiKP**	**13 56 14.3**	**+0.2**		
	comp=N,5.0nm,0.9s,baz=45,slow=1.9,SNR=9.8								
MDUB	**Mudurnu**	**116.93**	**313**	PKPdf	**PKPdf**	**13 56 13.9**	**-0.9**		
TLCR		**116.95**	**319**	⇓P	**PKiKP**	**13 56 14.6**	**+0.1**		
TLCR		**116.95**	**319**	⇓PKiKP	**PKiKP**	**13 56 14.6**	**+0.1**		
L48A	**N Adams**	**117.07**	**45**		**PKiKP**	**13 56 15.3**	**+0.3**		
TPGR	**Topolog**	**117.34**	**319**	⇑P	**PKiKP**	**13 56 16.5**	**+1.1**		
CFR	**Carcaliu**	**117.40**	**319**	⇑P	**PKiKP**	**13 56 15.8**	**+0.4**		
CFR	**Carcaliu**	**117.40**	**319**	⇑PKiKP	**PKiKP**	**13 56 15.8**	**+0.4**		
N49A	**Columbus Grove**	**117.59**	**46**		**PKPdf**	**13 56 15.8**	**-0.1**		
MFTR	**Murfatlar**	**117.59**	**318**	⇓P	**PKiKP**	**13 56 16.2**	**+0.4**		
P49A	**Miami Univ. Ec**	**117.64**	**48**	P		13 56 15.8			
	baz=288								
TLBR	**Topalu**	**117.70**	**319**	⇑P	**PKiKP**	**13 56 16.1**	**0.0**		
O49A	**Covington**	**117.72**	**47**		**PKPdf**	**13 56 16.1**	**-0.1**		
HARR	**Harsova**	**117.72**	**319**	⇓P	**PKPdf**	**13 56 13.9**	**-2.1**		
HARR	**Harsova**	**117.72**	**319**	⇓PKiKP	**PKPdf**	**13 56 13.9**	**-2.1**		
BIZ	**Bicaz**	**117.97**	**322**	⇓P	**PKiKP**	**13 56 17.6**	**+1.1**		
VRI	**Vrincioaia**	**118.03**	**320**	⇑P	**PKPdf**	**13 56 16.2**	**-0.5**		
VRI	**Vrincioaia**	**118.03**	**320**	⇑PKiKP	**PKPdf**	**13 56 16.2**	**-0.5**		
MATQ	**Matagami**	**118.20**	**35**	P		13 56 17.1			
	baz=299								
BUR08	**Bucovina Ar. S**	**118.22**	**323**	PKPdf	**PKiKP**	**13 56 17.6**	**+0.5**		
BURAR	**Bucovina Array**	**118.22**	**323**	⇓P	**PKiKP**	**13 56 18.3**	**+1.2**		
BURAR	**Bucovina Array**	**118.22**	**323**	⇓PKiKP	**PKiKP**	**13 56 18.3**	**+1.2**		
BURAR	**Bucovina Array**	**118.22**	**323**	PKPdf	**PKiKP**	**13 56 17.4**	**+0.3**		
T50A	**Nancy**	**118.30**	**50**		**PKPdf**	**13 56 17.3**	**-0.1**		
ACSO	**Alum Creek Sta**	**118.68**	**46**		**PKPdf**	**13 56 18.0**	**0.0**		
ACSO	**Alum Creek Sta**	**118.68**	**46**	P		13 56 18.4			
	baz=290								
MLR	**Muntele Rosu**	**118.69**	**320**	PKP	**PKPdf**	**13 56 17.8**	**-0.3**		
	comp=N,3.4nm,0.6s,baz=135,slow=2.9,SNR=6.5								
MLR				PKKPbc	**PKKPbc**	**14 06 35.3**	**-0.3**		
	comp=N,3.0nm,0.6s,baz=234,slow=4.1,SNR=9.6								
MLR	**Muntele Rosu**	**118.69**	**320**	⇓P	**PKPdf**	**13 56 17.6**	**-0.5**		
MLR	**Muntele Rosu**	**118.69**	**320**	⇓PKiKP	**PKPdf**	**13 56 17.6**	**-0.5**		
I51A	**Listowel**	**118.73**	**42**	P		13 56 18.1			
	baz=293								
Q51A	**Peebles**	**118.81**	**48**		**PKPdf**	**13 56 17.6**	**-0.7**		
M51A	**Elyria**	**118.87**	**45**	P		13 56 17.9			
	baz=291								
N51A	**Ashland**	**118.88**	**45**		**PKiKP**	**13 56 18.6**	**+0.1**		
S51A	**Beattyville**	**119.07**	**49**		**PKPdf**	**13 56 18.3**	**-0.6**		
VLDQ	**Val d'Or**	**119.10**	**36**	PKPdf	**PKPdf**	**13 56 17.7**	**-0.9**		
P52A	**Corning**	**119.50**	**47**		**PKPdf**	**13 56 19.2**	**-0.4**		
P52A	**Corning**	**119.50**	**47**	P		13 56 19.7			
	baz=290								
W52A	**Murphy**	**119.56**	**52**		**PKiKP**	**13 56 20.1**	**+0.1**		
SADO	**Sadowa**	**119.57**	**40**	PKPdf	**PKPdf**	**13 56 19.6**	**0.0**		
HUMR	**Humele**	**119.72**	**320**	⇓P	**PKiKP**	**13 56 20.1**	**+0.1**		
ALGO	**Algonquin Park**	**119.74**	**39**	P		13 56 19.3			
	baz=297,SNR=12								
Y52A	**Lilburn**	**119.79**	**54**		**PKiKP**	**13 56 21.2**	**+0.7**		
BOSA	**Boshof**	**119.80**	**233**	PKP	**PKiKP**	**13 56 21.2**	**+0.4**		
	comp=N,5.6nm,0.7s,baz=164,slow=3.2,SNR=10								
BOSA	**Boshof**	**119.80**	**233**	PKiKP	**PKiKP**	**13 56 20.8**	**0.0**		
BOSA	**Boshof**	**119.80**	**233**	PKPdf	**PKiKP**	**13 56 20.8**	**0.0**		
CRVS	**Cervenica-Dubn**	**119.81**	**325**	*e*PKiKP	**PKiKP**	**13 56 21.3**	**+1.2**		
CRVS	**Cervenica-Dubn**	**119.81**	**325**	*e*PKP	**PKiKP**	**13 56 21.3**	**+1.2**		
M53A	**WI Miller and**	**119.88**	**44**		**PKiKP**	**13 56 20.4**	**0.0**		
M53A	**WI Miller and**	**119.88**	**44**	P		13 56 19.8			
	baz=292								
O53A	**New Philadelph**	**119.94**	**46**		**PKiKP**	**13 56 20.6**	**0.0**		
O53A	**New Philadelph**	**119.94**	**46**	P		13 56 20.4			
	baz=291								
G54A	**Lake Saint Pet**	**119.97**	**39**	P		13 56 20.3			
	baz=297,SNR=11								
L53A	**Girard**	**119.97**	**44**	P		13 56 20.4			
	baz=293								
N53A	**Lisbon**	**120.01**	**45**		**PKiKP**	**13 56 20.8**	**+0.1**		
H53A	**Bobcaygeon**	**120.01**	**40**	P		13 56 20.5			
	baz=296,SNR=5.9								
OJC	**Ojcow**	**120.03**	**327**	PKiKP	**PKiKP**	**13 56 21.2**	**+0.7**		
OJC	**Ojcow**	**120.03**	**327**	PKPdf	**PKiKP**	**13 56 21.2**	**+0.7**		
LOT	**Lotru**	**120.08**	**321**	⇓P	**PKPdf**	**13 56 20.1**	**-0.7**		
P53A	**Whipple**	**120.09**	**47**		**PKiKP**	**13 56 20.9**	**0.0**		
ERPA	**Erie**	**120.09**	**43**	P		13 56 20.4			
	baz=293								
DRGR		**120.11**	**323**	⇓P	**PKiKP**	**13 56 20.8**	**0.0**		
DRGR		**120.11**	**323**	⇓PKiKP	**PKiKP**	**13 56 20.8**	**0.0**		
Q53A	**Leroy**	**120.21**	**47**	P		13 56 20.9			
	baz=290								
BG3	**Lake Jocassee**	**120.37**	**52**		**PKPdf**	**13 56 21.3**	**-0.2**		
GOGA	**Godfrey**	**120.39**	**54**	P		13 56 21.5			
	baz=286								
PLVB	**Pleven**	**120.43**	**318**	⇓P	**PKiKP**	**13 56 21.9**	**+0.5**		
N54A	**Moraine State**	**120.54**	**45**		**PKPdf**	**13 56 21.6**	**0.0**		
N54A	**Moraine State**	**120.54**	**45**	P		13 56 21.6			
	baz=293								
M54A	**Oil Creek Stat**	**120.56**	**44**		**PKPdf**	**13 56 21.6**	**-0.1**		
M54A	**Oil Creek Stat**	**120.56**	**44**	P		13 56 21.8			
	baz=293,SNR=10.0								
O54A	**Avella**	**120.56**	**46**		**PKPdf**	**13 56 21.5**	**-0.2**		
DELO	**Deloro Mine**	**120.66**	**40**		**PKiKP**	**13 56 21.8**	**0.0**		
Q54A	**Coxs Mills**	**120.67**	**47**		**PKiKP**	**13 56 22.0**	**0.0**		
S54A	**Dingess, Beckl**	**120.73**	**48**	P		13 56 22.2			
	baz=290								
E55A	**Montcerf-Lytto**	**120.73**	**37**	P		13 56 21.8			
	baz=299								
GZR	**Gura Zlata**	**120.73**	**321**	⇓P	**PKiKP**	**13 56 22.4**	**+0.3**		
GZR	**Gura Zlata**	**120.73**	**321**	⇓PKiKP	**PKiKP**	**13 56 22.4**	**+0.3**		
U54A	**Nelsons Funny**	**120.76**	**50**	P		13 56 22.1			
	baz=289								
PLVO	**Plevna**	**120.77**	**39**		**PKPdf**	**13 56 21.9**	**0.0**		
TIGA	**Tifton**	**120.80**	**56**	P		13 56 22.1			
	baz=285								
D55A	**Sainte-Anne-du**	**120.80**	**37**	P		13 56 21.9			
	baz=300,SNR=9.7								
R54A	**Victor**	**120.84**	**48**	P		13 56 22.1			
	baz=290								
WVNY	**West Valley, N**	**120.92**	**43**	PKPdf	**PKPdf**	**13 56 22.4**	**0.0**		
LBTB	**Lobatse**	**120.95**	**237**	PKiKP	**PKPdf**	**13 56 22.7**	**-0.3**		
LBTB	**Lobatse**	**120.95**	**237**		**PKPdf**	**13 56 22.7**	**-0.3**		
J55A	**Hilton**	**121.08**	**41**	PKPdf	**PKPdf**	**13 56 22.4**	**-0.1**		
MCWV	**Mont Chateau**	**121.14**	**46**	P		13 56 22.8			
	baz=292								
PSZ	**Piszkesteto**	**121.21**	**325**	PKiKP	**PKiKP**	**13 56 23.2**	**+0.3**		
PSZ	**Piszkesteto**	**121.21**	**325**	PKPdf	**PKiKP**	**13 56 23.2**	**+0.3**		
D56A	**ZEC Mazanza, M**	**121.21**	**36**	P		13 56 22.6			
	baz=300,SNR=10								
E56A	**St. Veronique**	**121.30**	**37**	P		13 56 22.8			
	baz=300,SNR=5.5								
PECO	**Prince Edward**	**121.32**	**40**		**PKPdf**	**13 56 22.9**	**-0.1**		
BZS	**Buzias**	**121.34**	**322**	⇓P	**PKiKP**	**13 56 23.4**	**+0.3**		
BZS	**Buzias**	**121.34**	**322**	⇓PKiKP	**PKiKP**	**13 56 23.4**	**+0.3**		
R55A	**Marlinton**	**121.44**	**48**		**PKPdf**	**13 56 23.5**	**0.0**		
R55A	**Marlinton**	**121.44**	**48**	P		13 56 23.6			
	baz=291,SNR=7.2								
MORC	**Moravsky Berou**	**121.49**	**328**	*e*PKP	**PKiKP**	**13 56 24.6**	**+1.2**		
MORC	**Moravsky Berou**	**121.49**	**328**	PKiKP	**PKiKP**	**13 56 23.8**	**+0.4**		
MORC	**Moravsky Berou**	**121.49**	**328**	PKPdf	**PKiKP**	**13 56 23.8**	**+0.4**		
VYHS	**Vyhne**	**121.50**	**326**	*e*PKiKP	**PKiKP**	**13 56 24.4**	**+2.0**		
VYHS	**Vyhne**	**121.50**	**326**	*e*PKP	**PKiKP**	**13 56 25.3**	**+1.9**		
KMSC	**Kings Mountain**	**121.58**	**51**		**PKiKP**	**13 56 24.3**	**+0.4**		
KMSC	**Kings Mountain**	**121.58**	**51**	P		13 56 23.9			
	baz=288								
M56A	**Emporium**	**121.59**	**43**		**PKPdf**	**13 56 23.6**	**-0.1**		
M56A	**Emporium**	**121.59**	**43**	P		13 56 23.4			
	baz=294,SNR=8.3								
BLA	**Blacksburg**	**121.59**	**49**	PKiKP	**PKPdf**	**13 56 23.2**	**-0.6**		
BLA	**Blacksburg**	**121.59**	**49**	PKPdf	**PKPdf**	**13 56 23.2**	**-0.6**		
BLA	**Blacksburg**	**121.59**	**49**	P		13 56 23.7			
	baz=290								
K56A	**Middlesex**	**121.65**	**42**	P		13 56 23.7			
	baz=296								
VTS	**Vitosha**	**121.68**	**318**	⇓P	**PKiKP**	**13 56 24.3**	**+0.2**		
VTS	**Vitosha**	**121.68**	**318**	PKiKP	**PKPdf**	**13 56 23.5**	**-0.5**		
VTS	**Vitosha**	**121.68**	**318**	PKPdf	**PKPdf**	**13 56 23.5**	**-0.5**		
MDVR	**Moldovita**	**121.68**	**321**	⇓P	**PKPdf**	**13 56 23.8**	**0.0**		
J56A	**Wolcott**	**121.70**	**41**	PKPdf	**PKPdf**	**13 56 23.2**	**-0.5**		
J56A	**Wolcott**	**121.70**	**41**	P		13 56 23.8			
	baz=297,SNR=6.9								
BI02	**San Fabin de**	**121.72**	**139**	PKPdf	**PKiKP**	**13 56 24.4**	**+0.1**		
KRLC	**Kraliky**	**121.72**	**328**	*e*PKiKP	**PKiKP**	**13 56 25.1**	**+1.3**		
KRLC	**Kraliky**	**121.72**	**328**	*e*PKPDF	**PKiKP**	**13 56 25.1**	**+1.3**		
OSTC	**Ostas**	**121.73**	**329**	*e*PKPDF	**PKiKP**	**13 56 25.3**	**+1.5**		
L56A	**Greenwood**	**121.74**	**42**		**PKPdf**	**13 56 23.7**	**-0.2**		
L56A	**Greenwood**	**121.74**	**42**	P		13 56 23.8			
	baz=295,SNR=10								
N56A	**West Decatur**	**121.74**	**44**	P		13 56 24.0			
	baz=294								
DPC	**Dobruska-Polom**	**121.79**	**329**	*e*PKiKP	**PKiKP**	**13 56 25.2**	**+1.2**		
DPC	**Dobruska-Polom**	**121.79**	**329**	*e*PKPDF	**PKiKP**	**13 56 25.2**	**+1.2**		
O56A	**Blue Knob Stat**	**121.81**	**45**		**PKiKP**	**13 56 24.3**	**-0.1**		
O56A	**Blue Knob Stat**	**121.81**	**45**	P		13 56 24.5			
	baz=293,SNR=6.6								
Q56A	**Snyder Ridge,**	**121.84**	**46**		**PKiKP**	**13 56 24.3**	**-0.1**		
Q56A	**Snyder Ridge,**	**121.84**	**46**	P		13 56 24.2			
	baz=292								
UPC	**Upice**	**121.86**	**329**	*e*PKiKP	**PKiKP**	**13 56 26.3**	**+2.3**		
UPC	**Upice**	**121.86**	**329**	*e*PKPDF	**PKiKP**	**13 56 26.3**	**+2.3**		
P56A	**Dayton Farm, R**	**121.92**	**46**	P		13 56 24.5			
	baz=293								
R56A	**Bull Pasture M**	**121.92**	**47**	P		13 56 24.2			
	baz=292,SNR=5.0								
JAVC	**Velka Javorina**	**121.94**	**327**	*e*PKP	**PKiKP**	**13 56 26.1**	**+1.8**		
G57A	**Newington**	**122.04**	**38**	P		13 56 24.4			
	baz=299,SNR=7.7								
S56A	**Natural Bridge**	**122.07**	**48**	P		13 56 24.2			
	baz=291								
H57A	**Richville**	**122.10**	**39**	P		13 56 24.5			
	baz=298,SNR=6.2								
SSPA	**Standing Stone**	**122.14**	**44**		**PKPdf**	**13 56 24.2**	**-0.5**		
SSPA	**Standing Stone**	**122.14**	**44**	P		13 56 24.9			
	baz=294								
K57A	**Scipio Center**	**122.17**	**41**	P		13 56 24.5			
	baz=297								
I57A	**Carthage**	**122.18**	**40**	P		13 56 24.8			
	baz=298,SNR=5.8								
LATQ	**La Tuque**	**122.19**	**35**	P		13 56 24.7			
	baz=302								
J57A	**Williamstown**	**122.20**	**41**		**PKPdf**	**13 56 24.5**	**-0.3**		
J57A	**Williamstown**	**122.20**	**41**	P		13 56 24.6			
	baz=297,SNR=7.2								
VRAC	**Vranov**	**122.26**	**328**	PKP	**PKiKP**	**13 56 25.8**	**+0.9**		
	comp=N,9.1nm,0.8s,baz=69,slow=2.4,SNR=8.7								
VRAC	**Vranov**	**122.26**	**328**	⇑P	**PKiKP**	**13 56 25.4**	**+0.5**		
VRAC	**Vranov**	**122.26**	**328**	*e*PKP	**PKiKP**	**13 56 25.7**	**+0.9**		
VRAC	**Vranov**	**122.26**	**328**	⇑PKiKP	**PKiKP**	**13 56 25.4**	**+0.5**		
L57A	**Andrews Acres**	**122.27**	**42**	P		13 56 24.9			
	baz=296,SNR=8.9								
D58A	**Chemin du LacG**	**122.28**	**35**	P		13 56 24.6			
	baz=302								
N57A	**Milroy**	**122.32**	**44**	P		13 56 25.1			
	baz=294,SNR=5.4								
M57A	**Sunshine Farm,**	**122.37**	**43**		**PKPdf**	**13 56 25.1**	**-0.1**		
M57A	**Sunshine Farm,**	**122.37**	**43**	P		13 56 25.5			
	baz=295,SNR=10								
Q57A	**Strasburg**	**122.41**	**46**	P		13 56 25.1			
	baz=293,SNR=6.2								
MODS	**Modra-Piesok**	**122.43**	**326**	*e*PKiKP	**PKiKP**	**13 56 26.6**	**+1.4**		
MODS	**Modra-Piesok**	**122.43**	**326**	*e*PKP	**PKiKP**	**13 56 26.6**	**+1.4**		
E58A	**La Victoria**	**122.43**	**36**	P		13 56 25.3			
	baz=302,SNR=7.0								
O57A	**Amberson**	**122.49**	**45**	P		13 56 25.6			
	baz=294,SNR=6.6								
S57A	**Dark Hollow, R**	**122.49**	**48**	P		13 56 25.5			
	baz=292								
KRUC	**Moravsky**	**122.51**	**328**	*e*PKP	**PKiKP**	**13 56 25.9**	**+0.5**		
P57A	**Homestead Farm**	**122.51**	**45**		**PKPdf**	**13 56 25.3**	**-0.2**		
P57A	**Homestead Farm**	**122.51**	**45**	P		13 56 25.5			
	baz=293								
LONY	**Lake Ozonia**	**122.53**	**39**		**PKPdf**	**13 56 25.2**	**-0.1**		
LONY	**Lake Ozonia**	**122.53**	**39**	P		13 56 25.2			
	baz=299,SNR=8.5								
T57A	**Hurt**	**122.54**	**49**		**PKPdf**	**13 56 25.4**	**-0.1**		
PVCC	**Panska Ves**	**122.58**	**330**	*e*PKiKP	**PKiKP**	**13 56 26.3**	**+0.9**		
PVCC	**Panska Ves**	**122.58**	**330**	*e*PKPDF	**PKiKP**	**13 56 26.3**	**+0.9**		
G58A	**Ormstown**	**122.59**	**38**	P		13 56 25.2			
	baz=300,SNR=6.2								
R57A	**Stanardsville**	**122.61**	**47**	P		13 56 25.3			
	baz=292								
BRG	**Berggiesshubel**	**122.67**	**330**	*e*PKP	**PKiKP**	**13 56 26.1**	**+0.5**		
BRG				Amp		13 56 28.5			
	comp=Z,21nm,0.8s								
BRG				*ex*	x	13 56 42.1			
BRG				Amp		13 56 43.7			
	comp=Z,7.9nm,1.1s				

	comp=Z,16nm,0.8s,baz=79,slow=2.9,SNR=45								
GERES	**GERESS Array B**	**124.06**	**329**		PKIKP	**PKPdf**	**13 56 27.8**	**-0.5**
GERES	**GERESS Array B**	**124.06**	**329**			**PKPdf**	**13 56 27.8**	**-0.5**
M60A	**Port Jervis**	**124.06**	**42**	P			13 56 28.6	
	baz=297							
PEL	**Peldehue**	**124.11**	**136**		PKIKP	**PKPdf**	**13 56 28.9**	**+0.1**
PEL	**Peldehue**	**124.11**	**136**			**PKPdf**	**13 56 28.9**	**+0.1**
ODNJ	**Ogdensburg**	**124.19**	**42**			**PKiKP**	**13 56 28.8**	**-0.1**
S60A	**Water View**	**124.20**	**47**	P			13 56 29.1	
	baz=294							
H61A	**Lyndonville**	**124.21**	**38**	P			13 56 29.1	
	baz=302,SNR=7.2							
K61A	**Williamstown**	**124.32**	**40**	P			13 56 29.5	
	baz=299,SNR=11							
T60A	**Surry**	**124.36**	**48**			**PKiKP**	**13 56 29.2**	**-0.1**
T60A	**Surry**	**124.36**	**48**	P			13 56 29.6	
	baz=293							
LBNH	**Lisbon**	**124.36**	**38**		PKIKP	**PKiKP**	**13 56 29.3**	**+0.1**
LBNH	**Lisbon**	**124.36**	**38**			**PKiKP**	**13 56 29.3**	**+0.1**
LBNH	**Lisbon**	**124.36**	**38**	P			13 56 29.3	
	baz=302,SNR=8.5							
L61A	**Hillsdale 1, H**	**124.36**	**41**	P			13 56 29.1	
	baz=299							
MOA	**Molln**	**124.37**	**327**	*i* P		**PKiKP**	**13 56 29.4**	**+0.3**
	comp=Z,7.0nm,0.8s							
PDG	**Podgorica**	**124.38**	**320**	⇓P		**PKPdf**	**13 56 28.5**	**-0.4**
PDG	**Podgorica**	**124.38**	**320**		PKPdf	**PKPdf**	**13 56 29.0**	**0.0**
BRNJ	**Basking Ridge**	**124.40**	**43**		PKPdf	**PKPdf**	**13 56 29.0**	**0.0**
VA03	**San Esteban**	**124.41**	**135**			**PKiKP**	**13 56 29.8**	**0.0**
TRNY	**Table Rock, Ra**	**124.42**	**42**			**PKPdf**	**13 56 29.1**	**0.0**
HNH	**Hanover**	**124.42**	**39**			**PKiKP**	**13 56 29.4**	**+0.1**
J61A	**Chester**	**124.43**	**39**	P			13 56 29.7	
	baz=300,SNR=9.7							
D62A	**Allapoint, All**	**124.46**	**34**			**PKPdf**	**13 56 28.7**	**-0.2**
D62A	**Allapoint, All**	**124.46**	**34**	P			13 56 29.1	
	baz=306,SNR=7.8							
N61A	**South Mountain**	**124.55**	**43**	P			13 56 29.5	
	baz=297							
KSCT	**Kent School, K**	**124.63**	**41**			**PKPdf**	**13 56 29.3**	**-0.1**
M61A	**Granite Spring**	**124.64**	**42**	P			13 56 30.0	
	baz=298,SNR=10							
SOKA	**Soboth**	**124.65**	**326**	*i* P		**PKiKP**	**13 56 30.1**	**+0.3**
	comp=Z,13nm,1.3s,SNR=9							
H62A	**Milan**	**124.65**	**37**		PKPdf	**PKiKP**	**13 56 29.9**	**+0.2**
H62A	**Milan**	**124.65**	**37**	P			13 56 29.9	
	baz=303,SNR=5.4							
G62A	**West of Eustis**	**124.67**	**36**			**PKPdf**	**13 56 29.3**	**-0.2**
G62A	**West of Eustis**	**124.67**	**36**	P			13 56 29.7	
	baz=304,SNR=5.9							
PAL	**Palisades**	**124.69**	**42**		PKIKP	**PKiKP**	**13 56 29.7**	**-0.2**
PAL	**Palisades**	**124.69**	**42**			**PKiKP**	**13 56 29.7**	**-0.2**
PAL	**Palisades**	**124.69**	**42**	P			13 56 29.9	
	baz=298							
GRF	**Grefenberg Arr**	**124.77**	**331**	*e*PKP		**PKiKP**	**13 56 30.0**	**+0.2**
	baz=49,slow=1.2							
GRFO	**Grafenberg**	**124.77**	**331**		PKIKP	**PKiKP**	**13 56 29.9**	**+0.1**
GRFO	**Grafenberg**	**124.77**	**331**			**PKiKP**	**13 56 29.9**	**+0.1**
L61B	**Northampton**	**124.80**	**40**	P			13 56 30.0	
	baz=300,SNR=7.4							
ITM	**Ithomi**	**124.87**	**313**		PKPdf	**PKPdf**	**13 56 30.1**	**+0.1**
I62A	**Tamworth**	**124.92**	**38**		PKPdf	**PKiKP**	**13 56 30.6**	**+0.4**
I62A	**Tamworth**	**124.92**	**38**	P			13 56 30.4	
	baz=302,SNR=10							
J62A	**Henniker**	**124.96**	**39**	P			13 56 30.7	
	baz=301,SNR=6.1							
K62A	**Royalston**	**124.98**	**40**			**PKiKP**	**13 56 30.6**	**+0.2**
K62A	**Royalston**	**124.98**	**40**	P			13 56 30.7	
	baz=300,SNR=5.1							
WSPT	**Westport, CT**	**125.00**	**42**			**PKiKP**	**13 56 30.4**	**-0.1**
D63A	**Stockholm**	**125.00**	**33**	P			13 56 30.1	
	baz=307,SNR=5.5							
OBKA	**Obir**	**125.02**	**326**	*i* P		**PKiKP**	**13 56 30.7**	**+0.2**
	comp=Z,9.0nm,1.5s							
M62A	**Hamden**	**125.16**	**41**	P			13 56 30.7	
	baz=299							
E63A	**Oxbow**	**125.19**	**34**		PKPdf	**PKPdf**	**13 56 30.4**	**0.0**
E63A	**Oxbow**	**125.19**	**34**	P			13 56 30.5	
	baz=306							
BOJS	**Bojanci**	**125.20**	**325**	*i* PKPdf		**PKiKP**	**13 56 31.1**	**+0.3**
BOJS				*i* pPKPdf		**pPKPdf**	**13 56 47.0**	**-1.1**
F63A	**Nahmakanta, Br**	**125.23**	**35**		PKPdf	**PKPdf**	**13 56 30.6**	**+0.1**
F63A	**Nahmakanta, Br**	**125.23**	**35**	P			13 56 30.7	
	baz=305,SNR=7.0							
G63A	**Kingsbury**	**125.27**	**36**	P			13 56 31.0	
	baz=304,SNR=8.5							
PQI	**Presque Isle**	**125.27**	**34**		PKPdf	**PKPdf**	**13 56 30.4**	**-0.2**
H63A	**New Sharon**	**125.28**	**37**	P			13 56 31.2	
	baz=304							
I63A	**Otisfield**	**125.28**	**37**		PKPdf	**PKiKP**	**13 56 30.7**	**+0.1**
I63A	**Otisfield**	**125.28**	**37**	P			13 56 31.1	
	baz=303							
KBA	**Koelnbreinsper**	**125.34**	**327**	*i* P		**PKPdf**	**13 56 30.9**	**0.0**
	comp=Z,12nm,0.9s,SNR=8.0							
CO03	**El Pedregal**	**125.36**	**133**		PKPdf	**PKPdf**	**13 56 30.7**	**-0.6**
PKME	**Peaks-Kenny Pk**	**125.37**	**36**			**PKiKP**	**13 56 31.1**	**-0.1**
PKME	**Peaks-Kenny Pk**	**125.37**	**36**	P			13 56 31.4	
	baz=305,SNR=5.6							
J63A	**Strafford**	**125.39**	**39**	P			13 56 31.5	
	baz=302,SNR=6.0							
K63A	**Dunstable**	**125.41**	**39**			**PKPdf**	**13 56 31.0**	**+0.2**
K63A	**Dunstable**	**125.42**	**39**	P			13 56 31.4	
	baz=301							
UCCT	**U. Connecticut**	**125.42**	**41**		PKPdf	**PKiKP**	**13 56 31.3**	**0.0**
MYKA	**Terra Mystica**	**125.45**	**327**	*i* P		**PKiKP**	**13 56 31.2**	**-0.1**
	comp=Z,8.8nm,0.9s							
HRV	**Adam Dziewonsk**	**125.49**	**40**		PKIKP	**PKiKP**	**13 56 31.3**	**-0.1**
HRV	**Adam Dziewonsk**	**125.49**	**40**		PKPdf	**PKiKP**	**13 56 31.3**	**-0.1**
HRV	**Adam Dziewonsk**	**125.49**	**40**	P			13 56 31.4	
	baz=301							
E64A	**Bridgewater**	**125.53**	**34**	P			13 56 31.1	
	baz=307,SNR=5.8							
CEY	**Cerknica**	**125.54**	**325**	*i* PKPdf		**PKiKP**	**13 56 31.4**	**-0.1**
CEY				*i* pPKPdf		**pPKPdf**	**13 56 47.1**	**-1.7**
WVL	**Waterville**	**125.55**	**36**		PKPdf	**PKPdf**	**13 56 31.2**	**+0.1**
F64A	**Sherman**	**125.56**	**35**			**PKPdf**	**13 56 31.2**	**+0.1**
F64A	**Sherman**	**125.56**	**35**	P			13 56 31.2	
	baz=306,SNR=6.3							
GO04	**Tololo Observa**	**125.63**	**133**		PKPdf	**PKPdf**	**13 56 32.1**	**+0.1**
G64A	**Maxfield**	**125.69**	**35**	P			13 56 31.6	
	baz=305							
WES	**Weston**	**125.70**	**40**		PKIKP	**PKiKP**	**13 56 31.8**	**-0.1**
WES	**Weston**	**125.70**	**40**			**PKiKP**	**13 56 31.8**	**-0.1**
H64A	**Troy**	**125.77**	**36**	P			13 56 31.7	
	baz=304,SNR=7.0							
L63A	**North Scituate**	**125.78**	**40**			**PKiKP**	**13 56 32.1**	**+0.1**
L63A	**North Scituate**	**125.78**	**40**	P			13 56 31.9	
	baz=300,SNR=5.7							
BRYW	**Bryant College**	**125.80**	**40**			**PKiKP**	**13 56 32.0**	**-0.1**
ZOU	**Zoufplan**	**125.86**	**327**		PKPdf	**PKPdf**	**13 56 31.7**	**-0.3**
I64A	**Boothbay**	**125.92**	**37**	P			13 56 32.2	
	baz=304,SNR=6.3							
TRI	**Trieste**	**125.93**	**326**		PKIKP	**PKiKP**	**13 56 32.1**	**-0.1**
TRI	**Trieste**	**125.93**	**326**		PKPdf	**PKiKP**	**13 56 32.1**	**-0.1**
BATG	**Bathurst New B**	**125.95**	**32**		PKPdf	**PKiKP**	**13 56 32.2**	**0.0**
ABTA	**Abfaltersbach**	**125.99**	**327**	*i* P		**PKiKP**	**13 56 32.3**	**-0.2**
	comp=Z,25nm,0.9s,SNR=15							
EKA	**Eskdalemuir Ar**	**126.00**	**343**		PKP	**PKiKP**	**13 56 32.5**	**+0.5**
	comp=Z,15nm,0.9s,baz=29,slow=3.6,SNR=15							
WATA	**Walderalm**	**126.12**	**328**	*i* P		**PKiKP**	**13 56 32.9**	**+0.1**
	comp=Z,30nm,1.2s,SNR=7.2							
WTTA	**Wattenberg**	**126.14**	**328**	*i* P		**PKiKP**	**13 56 33.3**	**+0.4**
	comp=Z,41nm,0.9s,SNR=14							
STAL	**STALIGIAL**	**126.19**	**327**			**PKPdf**	**13 56 32.2**	**-0.1**
M64A	**Tiverton**	**126.20**	**40**			**PKiKP**	**13 56 32.7**	**-0.1**
M64A	**Tiverton**	**126.20**	**40**	P			13 56 32.8	
	baz=301							
L64A	**Middleborough**	**126.24**	**40**	P			13 56 32.8	
	baz=301							
H65A	**Eastbrook**	**126.31**	**36**	P			13 56 33.1	
	baz=306,SNR=5.2							
LCO	**Las Campanas**	**126.31**	**131**		PKIKP	**PKiKP**	**13 56 34.1**	**+0.2**
LCO	**Las Campanas**	**126.31**	**131**		PKPdf	**PKiKP**	**13 56 34.1**	**+0.2**
MOTA	**Moosalm**	**126.36**	**329**	*e*P		**PKiKP**	**13 56 33.5**	**+0.3**
	comp=Z,33nm,0.7s,SNR=17							
SQTA	**Sankt Quirin**	**126.39**	**328**	*e*P		**PKiKP**	**13 56 33.7**	**+0.4**
	comp=Z,29nm,0.8s,SNR=11							
G65A	**Princeton**	**126.40**	**35**			**PKPdf**	**13 56 32.8**	**+0.1**
G65A	**Princeton**	**126.40**	**35**	P			13 56 32.9	
	baz=306,SNR=6.3							
ZON	**Zonda**	**126.41**	**135**		PKIKP	**PKiKP**	**13 56 33.8**	**+0.1**
ZON	**Zonda**	**126.41**	**135**		PKPdf	**PKiKP**	**13 56 33.8**	**+0.1**
AC04	**Llanos de Chal**	**126.45**	**130**		PKPdf	**PKiKP**	**13 56 33.8**	**0.0**
RETA	**Reutte**	**126.45**	**329**	*i* P		**PKiKP**	**13 56 33.8**	**+0.5**
	comp=Z,12nm,0.8s							
BTNL	**Ternell**	**126.49**	**334**	*d*PKP		**PKiKP**	**13 56 33.6**	**+0.3**
MEM	**Membach**	**126.53**	**334**	*d*PKP		**PKiKP**	**13 56 33.8**	**+0.5**
BHOU	**Houvegnez**	**126.72**	**334**	*d*PKP		**PKiKP**	**13 56 34.6**	**+0.9**
BSTI	**Sart Tilman**	**126.73**	**335**	*d*PKP		**PKiKP**	**13 56 35.2**	**+1.5**
FETA	**Feichten**	**126.77**	**328**	*i* P		**PKiKP**	**13 56 34.6**	**+0.5**
	comp=Z,37nm,0.9s,SNR=23							
H66A	**Whiting**	**126.79**	**35**	P			13 56 33.4	
	baz=306,SNR=5.0							
GGN	**Saint George**	**126.86**	**34**		PKPdf	**PKPdf**	**13 56 33.5**	**-0.1**
CTI	**Castel Tesino**	**126.90**	**327**		PKiKP	**PKPdf**	**13 56 34.0**	**+0.2**
CTI	**Castel Tesino**	**126.90**	**327**		PKPdf	**PKPdf**	**13 56 34.0**	**+0.2**
BCLA	**Clavier**	**126.97**	**335**	*d*PKP		**PKiKP**	**13 56 34.7**	**+0.6**
SGRT	**San Giovanni R**	**126.97**	**320**		PKPdf	**PKiKP**	**13 56 34.4**	**-0.2**
DAVA	**Damuels**	**127.03**	**329**	*i* P		**PKiKP**	**13 56 35.0**	**+0.4**
	comp=Z,28nm,0.9s,SNR=11							
BGES	**Gesves**	**127.09**	**335**	*d*PKP		**PKiKP**	**13 56 34.8**	**+0.4**
BFO	**Black Forest**	**127.09**	**331**		PKIKP	**PKPdf**	**13 56 34.1**	**+0.1**
BFO	**Black Forest**	**127.09**	**331**		PKPdf	**PKPdf**	**13 56 34.1**	**+0.1**
WLF	**Walferdange**	**127.16**	**333**	*d*PKP		**PKiKP**	**13 56 36.1**	**+1.6**
BMRD	**Maredsous**	**127.28**	**335**	*d*PKP		**PKiKP**	**13 56 35.6**	**+0.8**
SNF	**Seneffe**	**127.33**	**335**	*d*PKP		**PKiKP**	**13 56 36.1**	**+1.3**
DAVOX	**Davos/Dischmat**	**127.36**	**329**	PKP		**PKiKP**	**13 56 35.9**	**+0.6**
	comp=Z,24nm,0.8s,baz=108,slow=6.1,SNR=29							
GIVF	**Givet**	**127.41**	**335**	*e*PKIKP		**PKiKP**	**13 56 36.3**	**+1.3**
GIVF				pmax	pmax			
	comp=Z,42nm,1.1s							
ATAH	**Atahualpa**	**127.42**	**103**	PKP		**PKPdf**	**13 56 35.6**	**-0.4**
	comp=Z,10.0nm,0.8s,baz=182,slow=4.4,SNR=3.9							
DOU	**Dourbes**	**127.51**	**335**	*d*PKP		**PKiKP**	**13 56 35.9**	**+0.6**
LMN	**Caledonia Moun**	**127.53**	**33**			**PKPdf**	**13 56 34.6**	**-0.3**
CDF	**Champ du Feu**	**127.54**	**332**	*e*PKIKP		**PKiKP**	**13 56 35.4**	**-0.1**
CDF				pmax	pmax			
	comp=Z,12nm,0.9s							
TIP	**Timpagrande**	**127.62**	**317**	⇓P		**PKiKP**	**13 56 36.3**	**+0.4**
TIP	**Timpagrande**	**127.62**	**317**		PKPdf	**PKPdf**	**13 56 34.9**	**-0.5**
BAIF	**Baives**	**127.70**	**335**	*e*PKIKP		**PKiKP**	**13 56 36.8**	**+1.2**
BAIF				pmax	pmax			
	comp=Z,28nm,1.1s							
ECH	**Echery**	**127.73**	**332**	PKIKP		**PKiKP**	**13 56 35.6**	**-0.2**
ECH	**Echery**	**127.73**	**332**	PKPdf		**PKiKP**	**13 56 35.6**	**-0.2**
TUE	**Stuetta**	**127.84**	**329**	PKPdf		**PKPdf**	**13 56 35.5**	**-0.2**
INTR	**Introdacqua**	**127.98**	**322**	PKPdf		**PKPdf**	**13 56 35.9**	**-0.1**
NRCA	**Norcia**	**128.00**	**323**			**PKPdf**	**13 56 35.9**	**-0.1**
MURB	**Monte Urbino**	**128.10**	**324**			**PKPdf**	**13 56 36.3**	**+0.2**
HINF	**Hinteralfeld**	**128.16**	**331**	*e*PKIKP		**PKPdf**	**13 56 36.2**	**+0.1**
HINF				pmax	pmax			
	comp=Z,19nm,0.9s							
HAU	**Haudompre**	**128.27**	**332**	*e*PKIKP		**PKiKP**	**13 56 36.7**	**-0.2**
HAU				pmax	pmax			
	comp=Z,23nm,0.8s							
ZCCA	**Zocca**	**128.33**	**326**			**PKiKP**	**13 56 37.3**	**+0.2**
AC02	**Maricunga**	**128.63**	**130**			**PKiKP**	**13 56 38.8**	**-0.1**
PB14	**IPOC Station P**	**128.73**	**127**	PKPdf		**PKiKP**	**13 56 38.8**	**-0.1**
LATE	**Laterza**	**128.91**	**323**			**PKPdf**	**13 56 37.7**	**+0.1**
SENIN	**Lac Senin/Sane**	**128.96**	**330**	PKPdf		**PKPdf**	**13 56 37.4**	**-0.5**
HAL	**Halifax**	**128.96**	**33**	PKIKP		**PKPdf**	**13 56 37.7**	**+0.1**
HAL	**Halifax**	**128.96**	**33**	PKPdf		**PKPdf**	**13 56 37.7**	**+0.1**
GO02	**Mina Guanaco**	**129.12**	**128**	PKPdf		**PKPdf**	**13 56 38.1**	**-0.8**
MSSA	**Maissana**	**129.16**	**327**	PKPdf		**PKPdf**	**13 56 37.7**	**-0.4**
CABF	**La Chapelle**	**129.38**	**331**	*e*PKIKP		**PKiKP**	**13 56 39.7**	**+0.5**
CABF				pmax	pmax			
	comp=Z,18nm,0.8s							
LPL	**La Plagne**	**129.83**	**329**	*e*PKIKP		**PKiKP**	**13 56 41.6**	**+1.3**
LPL				pmax	pmax			
	comp=Z,11nm,0.8s							
LPG	**La Plagne**	**129.84**	**329**	*e*PKIKP		**PKiKP**	**13 56 41.7**	**+1.3**
LPG				pmax	pmax			
	comp=Z,10.0nm,0.6s							
LOR	**Lormes**	**129.96**	**333**	*e*PKIKP		**PKiKP**	**13 56 40.4**	**+0.1**
LOR				pmax	pmax			
	comp=Z,14nm,0.8s							
PB04	**IPOC Station P**	**130.01**	**124**			**PKPdf**	**13 56 39.6**	**-0.9**
BNI	**Bardonecchia**	**130.18**	**329**	PKIKP		**PKPdf**	**13 56 40.1**	**0.0**
BNI	**Bardonecchia**	**130.18**	**329**	PKPdf		**PKPdf**	**13 56 40.1**	**0.0**
MBDF	**Montbardon**	**130.35**	**329**	*e*PKIKP		**PKiKP**	**13 56 42.6**	**+1.3**
MBDF				pmax	pmax			
	comp=Z,5.0nm,0.6s							
AVF	**Avril sur Loir**	**130.54**	**333**	*e*PKIKP		**PKiKP**	**13 56 42.9**	**+1.5**
AVF				pmax	pmax			
	comp=Z,5.0nm,0.7s							
FLN	**La Foliniere**	**130.62**	**337**	*e*PKIKP		**PKiKP**	**13 56 41.1**	**-0.4**
FLN				pmax	pmax			
	comp=Z,21nm,0.8s							
ORIF	**Oris-en-Rattie**	**130.68**	**329**	*e*PKIKP		**PKiKP**	**13 56 41.8**	**-0.1**
ORIF				pmax	pmax			
	comp=Z,12nm,0.8s							
LVC	**Limon Verde**	**130.89**	**125**	PKP		**PKiKP**	**13 56 44.1**	**+0.8**
	comp=Z,14nm,0.9s,baz=283,slow=3.2,SNR=9.4							
LVC				SKPbc		**SKPab**	**14 00 05.3**	**+3.2**
	comp=Z,9.6nm,0.9s,baz=211,slow=2.7,SNR=12							
GRR	**Gorron**	**131.07**	**337**	*e*PKIKP		**PKiKP**	**13 56 42.8**	**+0.4**
GRR				pmax	pmax			
	comp=Z,12nm,0.7s							
FRF	**La Foret Royal**	**131.22**	**328**	*e*PKIKP		**PKiKP**	**13 56 44.4**	**+1.5**
FRF				pmax	pmax			
	comp=Z,14nm,0.8s							
VIVF	**Saint-Julien-l**	**131.33**	**330**	*e*PKIKP		**PKiKP**	**13 56 44.4**	**+1.3**
VIVF				pmax	pmax			
	comp=Z,7.0nm,0.7s							
MNMC	**Minye Minye**	**131.88**	**121**			**PKPdf**	**13 56 42.3**	**-2.0**
VSL	**Villasalto**	**132.24**	**322**	PKPdf		**PKPdf**	**13 56 43.0**	**-1.0**
QUIF	**Quistinic**	**132.34**	**338**	*e*PKIKP		**PKPdf**	**13 56 42.0**	**-1.9**
QUIF				pmax	pmax			
	comp=Z,33nm,1.4s							
CAF	**Calviac**	**132.54**	**332**	*e*PKIKP		**PKiKP**	**13 56 47.3**	**+1.7**
CAF				pmax	pmax			
	comp=Z,5.0nm,0.9s							
ROSC	**El Rosal**	**132.90**	**88**	PKP		**PKiKP**	**13 56 47.8**	**+0.2**
	comp=Z,24nm,0.5s,baz=184,slow=11,SNR=5.5							
MTLF	**Montolieu**	**133.65**	**330**	*e*PKIKP		**PKiKP**	**13 56 47.6**	**-0.2**
MTLF				pmax	pmax			
	comp=Z,14nm,0.8s							
LPAZ	**La Paz**	**134.32**	**118**	PKhKP	PKPpre		13 56 37.3	
	comp=Z,1.6nm,0.6s,baz=222,slow=1.9,SNR=8.0							
LPAZ				PKP		**PKiKP**	**13 56 50.6**	**-0.1**
	comp=Z,9.7nm,0.8s,baz=246,slow=1.2,SNR=29							
LPAZ				SKPab		**SKPab**	**14 00 17.7**	**+0.4**
	comp=Z,12nm,1.2s,baz=293,slow=1.8,SNR=14							
LPAZ	**La Paz**	**134.32**	**118**			**SKPab**	**14 00 17.2**	**-0.1**
KEST	**Kesra**	**134.44**	**317**	PKP		**PKiKP**	**13 56 49.9**	**+0.1**
	comp=Z,8.9nm,0.9s,baz=108,slow=6.4,SNR=6.0							
KEST				SKPbc		**SKPbc**	**14 00 13.7**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=0.0,slow=7.1,SNR=2.4							
ETSF	**Etsaut**	**135.31**	**332**	*e*PKIKP		**PKiKP**	**13 56 52.0**	**+0.7**
ETSF				pmax	pmax			
	comp=Z,10.0nm,0.6s							
SJPF	**Ste Jean**	**135.45**	**333**	*e*PKIKP		**PKiKP**	**13 56 52.6**	**+1.1**
SJPF				pmax	pmax			
	comp=Z,10.0nm,0.9s							
CPUP	**Villa Florida**	**137.42**	**138**	PKhKP	PKPpre		13 56 44.6	
	comp=Z,1.5nm,0.9s,baz=180,slow=1.0,SNR=5.2							
CPUP				PKP		**PKiKP**	**13 56 55.5**	**-0.5**
	comp=Z,17nm,0.8s,baz=250,slow=1.8,SNR=33							
CPUP				SKP			14 00 26.6	
	comp=Z,1.2nm,0.3s,baz=303,slow=4.3,SNR=3.4							
PBRG	**Braganca**	**138.86**	**337**	*e*PKPdf		**PKPdf**	**13 56 52.3**	**-4.0**
AOPR	**Arecibo Observ**	**138.92**	**67**	PKPdf		**PKPdf**	**13 56 56.8**	**-0.2**
PGAV	**Gavieira, Arco**	**139.30**	**338**	*e*PKPdf		**PKiKP**	**13 57 00.3**	**+0.8**
ESDC	**Sonseca Array**	**139.43**	**332**	PKhKP	PKPpre		13 56 49.9	
	comp=Z,1.4nm,0.9s,baz=10,slow=3.8,SNR=4.6							
ESDC				PKP		**PKPdf**	**13 56 58.6**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=17,slow=2.5,SNR=10							
ESDC				PP		**PP**	**13 59 50.4**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=29,slow=7.6,SNR=4.1							
ESDC				SKPbc		**SKiKP**	**14 00 29.4**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=23,slow=3.3,SNR=2.8							
ESDC				SKKPbc		**SKKPbc**	**14 09 09.7**	**+4.3**
	comp=Z,1.1nm,0.8s,baz=237,slow=4.3,SNR=5.4							
MVO	**Moncovo**	**139.51**	**337**	*e*PKPdf		**PKPdf**	**13 56 55.0**	**-2.6**
POLO	**Lamas de Olo**	**139.63**	**337**	*e*PKPab		**PKPdf**	**13 56 52.5**	**-5.3**
PVRL	**Vila Real**	**139.69**	**337**	*e*PKPdf		**PKiKP**	**13 56 59.4**	**-0.9**
PVIS	**Viseu**	**140.24**	**337**	*e*PKPdf		**PKPdf**	**13 56 57.7**	**-1.2**
MTE	**Manteigas**	**140.37**	**336**	*e*PKPdf		**PKPdf**	**13 56 58.8**	**-0.4**
SIV	**San Ignacio**	**140.54**	**122**	PKhKP	PKPpre		13 56 52.3	
	comp=Z,3.2nm,0.6s,baz=256,slow=3.0,SNR=17							
SIV				PKP		**PKiKP**	**13 57 01.4**	**-1.3**
	comp=Z,13nm,0.9s,baz=248,slow=1.3,SNR=19							
SIV				SKPbc		**SKiKP**	**14 00 34.3**	**+0.2**
	comp=Z,10.0nm,0.9s,baz=241,slow=3.8,SNR=13							
PCBR	**Castelo Branco**	**140.82**	**336**	*e*PKPdf		**PKPdf**	**13 56 57.4**	**-2.5**
PCAS	**Casmilo, Conde**	**141.04**	**337**	*e*PKPdf		**PKPdf**	**13 56 59.4**	**-0.9**
PMRV	**Marv??o**	**141.13**	**335**	*e*PKPdf		**PKPdf**	**13 56 58.3**	**-2.2**
PMTG	**Montargil**	**141.78**	**336**	*e*PKPdf		**PKPdf**	**13 56 59.1**	**-2.5**
PBAR	**Barrancos**	**142.03**	**334**	*e*PKPdf		**PKPdf**	**13 56 58.5**	**-3.6**
EVO	**Evora**	**142.15**	**335**	*e*PKPdf		**PKPdf**	**13 56 59.0**	**-3.3**
PBEJ	**Beja**	**142.51**	**335**	*e*PKPdf		**PKPdf**	**13 57 00.9**	**-2.1**
PNCL	**Nicolau / Gran**	**142.72**	**336**	*e*PKPdf		**PKPdf**	**13 57 01.1**	**-2.2**
PCVE	**Castro Verde**	**142.92**	**335**	*e*PKPdf		**PKPdf**	**13 57 03.6**	**-0.1**
PVAQ	**Vaqueiros**	**142.97**	**334**	*e*PKPdf		**PKPdf**	**13 57 01.9**	**-1.9**
PBDV	**Barranco-do-Ve**	**143.20**	**334**	*e*PKPdf		**PKPdf**	**13 57 05.2**	**+0.9**
TAM	**Tamanrasset**	**143.76**	**303**		PKIKP	**PKPbc**	13 57 04.3	+0.8
TAM	**Tamanrasset**	**143.76**	**303**		PKPdf	**PKPbc**	13 57 04.3	+0.8
H07N1	**FLORES T-PHASE**	**44.99**	**5**	*e*PKP		**PKPab**	**13 57 05.3**	**-1.3**
SVB	**Belmont**	**145.20**	**74**			**PKPbc**	**13 57 07.3**	**-0.7**
H07S1	**FLORES T-PHASE**	**45.29**	**6**	*e*PKP		**PKPbc**	**13 57 07.5**	**-0.1**
SPB	**Sao Paulo**	**145.54**	**146**			**PKPab**	**13 57 09.1**	**-0.1**
PGRA	**Graciosa**	**145.83**	**1**	*e*PKP		**PKPdf**	**13 57 07.8**	**-0.9**
TOSP	**Speyside**	**146.22**	**77**	PKPbc		**PKPbc**	**13 57 10.7**	**-0.5**
PICO	**Pico**	**146.35**	**2**	*e*PKP		**PKPdf**	**13 57 08.5**	**-1.2**
PTGA	**Pitinga**	**146.67**	**98**	PKPbc		**PKPdf**	**13 57 11.2**	**+0.4**
	comp=Z,32nm,0.9s,baz=238,slow=3.0,SNR=34							
PTGA	**Pitinga**	**146.67**	**98**			**PKPbc**	**13 57 11.9**	**-0.7**
PSMN	**Pico do Norte,**	**147.81**	**357**	*e*PKP		**PKPdf**	**13 57 11.0**	**-1.1**
PMPST	**Porto Santo, M**	**150.06**	**342**	*e*PKPab		**PKiKP**	**13 57 23.3**	**+1.5**
PMPS	**Porto Santo**	**150.08**	**342**	*e*PKPab		**PKiKP**	**13 57 23.7**	**+1.9**
TOA0	**Torodi Ar. Sit**	**150.43**	**288**	PKPdf		**PKPdf**	**13 57 16.4**	**-0.5**
TOA0				PKPbc		**PKPbc**	**13 57 22.1**	**-0.1**
TORD	**Torodi

PBEJ				A	A	14 02 54.7	
	comp=N,7.8nm,0.2s						
PMTG	**Montargil**	**4.16**	**64**	P	**Pn**	**14 02 02.5**	**+1.7**
PMTG				S	**Sn**	**14 02 52.9**	**+3.4**
	comp=N,7.2nm,0.3s						
PMTG	**Montargil**	**4.16**	**64**	*e*Pn	**Pn**	**14 02 02.5**	**+1.7**
PMTG				*e*Sn	**Sn**	**14 02 52.9**	**+3.4**
PMTG				A	A	14 02 57.2	
	comp=N,7.2nm,0.3s						
PVAQ	**Vaqueiros**	**4.22**	**87**	P	**Pn**	**14 02 02.5**	**+0.8**
PVAQ				S	**Sn**	**14 02 51.7**	**+0.7**
	comp=N,17nm,0.1s						
PVAQ	**Vaqueiros**	**4.22**	**87**	*e*Pn	**Pn**	**14 02 02.5**	**+0.8**
PVAQ				*e*Sn	**Sn**	**14 02 51.7**	**+0.7**
PVAQ				A	A	14 02 55.4	
	comp=N,17nm,0.1s						
EGRO	**El Granado**	**4.41**	**86**	P	**Pn**	**14 02 05.4**	**+1.2**
EGRO	comp=N,0.6nm,0.1s,SNR=7.9			S	**Sn**	**14 02 55.5**	**-0.1**
	comp=N,5.7nm,0.1s,SNR=10						
PCAS	**Casmilo, Conde**	**4.46**	**51**	P	**Pn**	**14 02 07.0**	**+1.9**
PCAS				S	**Sn**	**14 02 59.8**	**+2.7**
	comp=N,3.9nm,0.4s						
PCAS	**Casmilo, Conde**	**4.46**	**51**	*e*Pn	**Pn**	**14 02 07.0**	**+1.9**
PCAS				*e*Sn	**Sn**	**14 02 59.8**	**+2.7**
PCAS				A	A	14 03 01.8	
	comp=N,3.9nm,0.4s						
PESTR	**Estremoz**	**4.55**	**68**	*e*Pn	**Pn**	**14 02 08.7**	**+2.5**
PESTR				*e*Sn	**Sn**	**14 03 00.7**	**+1.5**
PESTR				A	A	14 03 05.1	
	comp=N,5.9nm,0.4s						
PBAR	**Barrancos**	**4.81**	**78**	P	**Pn**	**14 02 11.9**	**+2.1**
PBAR				S	**Sn**	**14 03 05.6**	**0.0**
	comp=N,5.2nm,0.3s						
PBAR	**Barrancos**	**4.81**	**78**	*e*Pn	**Pn**	**14 02 11.9**	**+2.1**
PBAR				*e*Sn	**Sn**	**14 03 05.6**	**0.0**
PBAR				A	A	14 03 10.9	
	comp=N,5.2nm,0.3s						
PMRV	**Marv??o**	**4.89**	**63**	P	**Pn**	**14 02 12.4**	**+1.4**
PMRV				S	**Sn**	**14 03 08.2**	**+0.5**
	comp=N,6.1nm,0.2s						
PMRV	**Marv??o**	**4.89**	**63**	*e*Pn	**Pn**	**14 02 12.4**	**+1.4**
PMRV				*e*Sn	**Sn**	**14 03 08.2**	**+0.5**
PMRV				A	A	14 03 12.8	
	comp=N,6.1nm,0.2s						
PCBR	**Castelo Branco**	**5.01**	**58**	P	**Pn**	**14 02 15.2**	**+2.6**
PCBR				S	**Sn**	**14 03 12.5**	**+1.9**
	comp=N,1.8nm,0.2s						
PCBR	**Castelo Branco**	**5.01**	**58**	*e*Pn	**Pn**	**14 02 15.2**	**+2.6**
PCBR				*e*Sn	**Sn**	**14 03 12.5**	**+1.9**
PCBR				A	A	14 03 28.4	
	comp=N,3.6nm,0.2s						
PMPST	**Porto Santo, M**	**5.03**	**214**	*e*Sn	Sn	14 02 41.7	-29
PMPST				A	A	14 02 46.2	
	comp=N,31nm,0.7s						
PMPS	**Porto Santo**	**5.05**	**214**	S	Sn	14 02 41.7	-30
	comp=N,16nm,0.7s						
EMIN	**Mina Concepcio**	**5.06**	**83**	P	**Pn**	**14 02 13.6**	**+0.4**
EMIN	comp=N,0.5nm,0.1s,SNR=7.9			S	**Sn**	**14 03 11.1**	**-0.6**
	comp=N,2.4nm,0.1s,SNR=9.6						
PVIS	**Viseu**	**5.23**	**48**	P	**Pn**	**14 02 14.7**	**-1.0**
PVIS				S	**Sn**	**14 03 18.0**	**+1.9**
	comp=N,2.3nm,0.5s						
PVIS	**Viseu**	**5.23**	**48**	*e*Pn	**Pn**	**14 02 14.7**	**-1.0**
PVIS				*e*Sn	**Sn**	**14 03 18.0**	**+1.9**
PVIS				A	A	14 03 26.5	
	comp=N,4.6nm,0.5s						
MTE	**Manteigas**	**5.26**	**53**	S	**Sn**	**14 03 17.6**	**+0.8**
	comp=N,3.3nm,0.2s						
MTE	**Manteigas**	**5.26**	**53**	*e*Sn	**Sn**	**14 03 17.6**	**+0.8**
MTE				A	A	14 03 21.4	
	comp=N,6.6nm,0.2s						
POLO	**Lamas de Olo**	**5.72**	**43**	P	**Pn**	**14 02 24.3**	**+1.9**
POLO				S	**Sn**	**14 03 28.6**	**+0.4**
	comp=N,1.3nm,0.5s						
POLO	**Lamas de Olo**	**5.72**	**43**	*e*Pn	**Pn**	**14 02 24.3**	**+1.9**
POLO				*e*Sn	**Sn**	**14 03 28.6**	**+0.4**
POLO				A	A	14 03 31.1	
	comp=N,1.3nm,0.5s						
ESPR	**Espera**	**5.74**	**92**	S	**Sn**	**14 03 28.3**	**-0.2**
	comp=N,4.8nm,0.3s,SNR=7.9						
PCAB	**Cabril**	**5.84**	**40**	S	**Sn**	**14 03 31.7**	**+0.7**
	comp=N,5.7nm,0.3s						
PCAB	**Cabril**	**5.84**	**40**	*e*Sn	**Sn**	**14 03 31.7**	**+0.7**
PCAB				A	A	14 04 00.2	
	comp=N,11nm,0.3s						
EZAM	**Zamans**	**5.86**	**33**	S	**Sn**	**14 03 30.2**	**-1.3**
	comp=N,3.0nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.91**	**37**	P	**Pn**	**14 02 26.5**	**+1.5**
PGAV				S	**Sn**	**14 03 32.4**	**-0.4**
	comp=N,4.7nm,0.2s						
PGAV	**Gavieira, Arco**	**5.91**	**37**	*e*Pn	**Pn**	**14 02 26.5**	**+1.5**
PGAV				*e*Sn	**Sn**	**14 03 32.4**	**-0.4**
PGAV				A	A	14 03 38.4	
	comp=N,4.7nm,0.2s						
ELOB	**Lobios**	**5.94**	**39**	P	**Pn**	**14 02 27.2**	**+1.9**
ELOB	comp=N,0.9nm,0.1s,SNR=6.8			S	**Sn**	**14 03 33.0**	**-0.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.03**	**49**	P	**Pn**	**14 02 27.1**	**+0.5**
	comp=N,1.7nm,0.1s,SNR=5.9						
MVO				S	**Sn**	**14 03 34.3**	**-1.4**
	comp=N,0.8nm,0.1s,SNR=5.9						
MVO	**Moncorvo**	**6.03**	**49**	*e*Pn	**Pn**	**14 02 28.1**	**+1.5**
MVO				*e*Sn	**Sn**	**14 03 36.2**	**+0.6**
MVO				A	A	14 03 50.6	
	comp=N,3.3nm,0.5s						
ECAB	**El Cabril**	**6.07**	**81**	P	**Pn**	**14 02 28.7**	**+1.6**
	comp=N,0.7nm,0.1s,SNR=5.7						
ECAB				S	**Sn**	**14 03 34.9**	**-1.8**
	comp=N,1.8nm,0.2s,SNR=6.1						
EMAZ	**Mazaricos**	**6.42**	**28**	P	**Pn**	**14 02 33.1**	**+1.2**
	comp=N,2.8nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**14 03 41.2**	**-3.9**
	comp=N,1.9nm,0.1s,SNR=7.9						
PBRG	**Braganca**	**6.60**	**45**	S	**Sn**	**14 03 48.1**	**-1.6**
PBRG	**Braganca**	**6.60**	**45**	*e*Sn	**Sn**	**14 03 48.1**	**-1.6**
EAGO	**Agolada(Pontev**	**6.65**	**33**	P	**Pn**	**14 02 35.7**	**+0.6**
	comp=N,0.9nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**14 03 47.4**	**-3.6**
	comp=N,1.9nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.69**	**44**	P	**Pn**	**14 02 37.8**	**+2.1**
	comp=N,1.6nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**14 03 50.4**	**-1.6**
	comp=N,3.0nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.74**	**80**	P	**Pn**	**14 02 37.2**	**+0.9**
	comp=N,0.6nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**14 03 51.7**	**-1.4**
	comp=N,1.4nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**7.16**	**69**	P	**Pn**	**14 02 43.9**	**+1.8**
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**14 04 00.8**	**-2.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**7.48**	**69**	P	**Pn**	**14 02 47.5**	**+1.0**
	comp=N,0.4nm,0.3s,baz=255,slow=13,SNR=5.3						
ESDC				S	**Sn**	**14 04 08.3**	**-3.0**
	comp=N,0.4nm,0.3s,baz=125,slow=32,SNR=3.8						
EPON	**Pontenova**	**7.49**	**35**	P	**Pn**	**14 02 47.8**	**+1.3**
	comp=N,0.7nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**14 04 09.7**	**-1.9**
	comp=N,0.3nm,0.2s,SNR=7.9						
ETOR	**Torete**	**9.21**	**64**	P	**Pn**	**14 03 12.1**	**+1.9**
	comp=N,4.5nm,0.2s,SNR=7.9						
ETOR				S	**Sn**	**14 04 50.3**	**-3.7**
	comp=N,1.0nm,0.2s,SNR=7.9						

*ANF **13** 14:10:06.2±1.4,36°.54N×99°.00W,h2$^{km}_{\pm}$12^{km}, ML4.3/11, Error ellipse: s-maj=11.5km s-min=5.9km az=64.0*
*TUL **13** 14:10:06.1±1.0,36°.51N±0°.04×99°.05W±0°.05,h9$^{km}_{\pm}$7^{km}, ML3.5,mb_Lg3.4/85(NEIC),Error ellipse: s-maj=7.4km s-min=3.3km az=128.0*
*NEIC **13** 14:10:07.9±1.2,36°.57N±0°.05×99°.03W±0°.07, h26$^{km}_{\pm}$7^{km}, Error ellipse: s-maj=8.3km s-min=6.4km az=123.0*
ISC 13 14:10:06.0±1.1,36°.53N±0°.04×99°.05W±0°.05,h9$^{km}_{\pm}$9km, n90,σ0§54/71,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.16**	**167**		**Pg**	**14 10 09.4**	**+0.1**
U32A	**Winter Ranch,**	**0.16**	**167**	P	**Pg**	**14 10 09.2**	**-0.2**
	baz=342,SNR=1000						
U32A				S	**Sg**	**14 10 11.9**	**+0.2**
	baz=342						
OK032	**Salt Plains WL**	**0.72**	**68**	Pg	**Pg**	**14 10 19.9**	**0.0**
KAN10	**Anthony SW Sta**	**0.96**	**52**		**Pg**	**14 10 24.5**	**0.0**
KAN10					**Pb**	**14 10 24.7**	**-0.2**
KAN10					**Sb**	**14 10 37.5**	**-0.3**
KAN14	**Manchester OK**	**0.97**	**64**	Pg	**Pg**	**14 10 24.5**	**-0.1**
GC02	**Grant County #**	**1.01**	**71**		**Pg**	**14 10 25.0**	**-0.3**
KAN05	**Bluff City Nor**	**1.10**	**58**	Pn	**Pg**	**14 10 27.0**	**-0.1**
KAN08	**Anthony NE Sta**	**1.11**	**51**		**Pg**	**14 10 27.0**	**-0.2**
KAN12	**Harper NE Stat**	**1.14**	**47**	Pn	**Pg**	**14 10 27.6**	**-0.2**
KAN01	**Argonia South**	**1.20**	**59**		**Pb**	**14 10 28.4**	**-0.6**
KAN09	**Caldwell North**	**1.29**	**62**		**Pn**	**14 10 30.1**	**-0.2**
KAN13	**South Haven SW**	**1.35**	**69**		**Pn**	**14 10 30.9**	**-0.1**
BCOK	**Bluff Creek, N**	**1.46**	**126**		**Pn**	**14 10 32.3**	**-0.2**
OK029	**Liberty Lake**	**1.48**	**119**		**Pn**	**14 10 32.5**	**-0.4**
OK025	**Westminster Rd**	**1.68**	**124**		**Pn**	**14 10 36.1**	**+0.5**
OKCFA	**Oklahoma City**	**1.71**	**130**		**Pn**	**14 10 36.2**	**+0.2**
OKCFA	**Oklahoma City**	**1.71**	**130**	P	**Pn**	**14 10 36.9**	**+0.9**
	baz=311,SNR=5.7						
OKCFA				S	**Sb**	**14 10 59.6**	**+0.4**
	baz=311						
OKCFA	**Oklahoma City**	**1.71**	**130**	P		14 10 36.9	
	baz=311,SNR=5.7						
OKCFA				S		14 10 59.6	
	baz=311						
WMOK	**Wichita Mounta**	**1.81**	**173**		**Pn**	**14 10 37.5**	**+0.2**
WMOK	**Wichita Mounta**	**1.81**	**173**	P	**Pn**	**14 10 37.6**	**+0.3**
	baz=353,SNR=48						
WMOK	**Wichita Mounta**	**1.81**	**173**	P		14 10 37.6	
	baz=353,SNR=48						
OK031	**S. Brethren Rd**	**1.88**	**107**		**Pn**	**14 10 38.6**	**+0.3**
R32A	**Long Quarter,**	**1.91**	**8**	P	**Pn**	**14 10 38.0**	**-0.7**
	baz=188						
R32A	**Long Quarter,**	**1.91**	**8**	P		14 10 38.0	
	baz=188						
QUOK	**Quay**	**1.92**	**100**		**Pn**	**14 10 38.3**	**-0.6**
OK030	**Cody Creek RV**	**1.93**	**108**		**Pn**	**14 10 38.9**	**-0.1**
T35A	**Sooner Cattle**	**2.07**	**79**	Pn	**Pn**	**14 10 40.7**	**-0.3**
T35B	**Sooner Cattle**	**2.07**	**79**	P	**Pn**	**14 10 40.6**	**-0.4**
	baz=259,SNR=12						
T35B				S	**Sb**	**14 11 10.6**	**+1.0**
	baz=259						
T35B	**Sooner Cattle**	**2.07**	**79**	P		14 10 40.6	
	baz=259,SNR=12						
T35B				S		14 11 10.6	
	baz=259						
CBKS	**Cedar Bluff**	**2.34**	**347**	P	**Pb**	**14 10 47.8**	**-0.6**
	baz=167						
CBKS				S	**Sb**	**14 11 19.2**	**+1.8**
	baz=167						
CBKS	**Cedar Bluff**	**2.34**	**347**	P		14 10 47.8	
	baz=167						
CBKS				S		14 11 19.2	
	baz=167						
AMTX	**Amarillo**	**2.70**	**233**	IAmb_Lg		14 11 36.0	
	comp=Z,105nm,0.8s						
KSU1	**Kansas State U**	**3.21**	**36**	Pn	**Pn**	**14 10 57.8**	**+1.2**
X37A	**Clayton**	**3.57**	**122**		**Pn**	**14 11 01.9**	**+0.3**
X37A				IAmb_Lg		14 12 07.9	
	comp=Z,117nm,0.7s						
X37A	**Clayton**	**3.57**	**122**	P	**Pn**	**14 11 02.1**	**+0.5**
	baz=304,SNR=14						
X37A	**Clayton**	**3.57**	**122**	P		14 11 02.1	
	baz=304,SNR=14						
U38A	**Gravette**	**3.76**	**90**		**Pn**	**14 11 04.3**	**+0.1**
U38A				IAmb_Lg		14 12 08.1	
	comp=Z,58nm,0.7s						
KSCO	**Kaye Shedlock'**	**3.76**	**312**	IAmb_Lg		14 12 09.9	
	comp=Z,61nm,0.8s						
ABTX	**Abilene, Hawle**	**3.93**	**187**	Pn	**Pn**	**14 11 06.3**	**-0.3**
HHAR	**Hobbs**	**4.13**	**92**	Pn	**Pn**	**14 11 09.4**	**+0.2**
HHAR				IAmb_Lg		14 12 20.3	
	comp=Z,82nm,1.0s						
T25A	**Trinidad**	**4.34**	**280**	Pn	**Pn**	**14 11 11.8**	**-0.6**
T25A				IAmb_Lg		14 12 30.3	
	comp=Z,52nm,0.8s						
N33B	**J Bar K, Exete**	**4.38**	**16**	S	**Sn**	**14 12 03.8**	**-0.1**
	baz=197						
N33B	**J Bar K, Exete**	**4.38**	**16**	S		14 12 03.8	
	baz=197						
N33A	**J Bar K, Exete**	**4.38**	**16**	Pn	**Pn**	**14 11 12.7**	**0.0**
W39A	**Magazine**	**4.48**	**106**		**Pn**	**14 11 13.9**	**-0.1**
W39A				IAmb_Lg		14 12 36.9	
	comp=Z,83nm,0.8s						
Z38A	**Mt. Pleasant**	**4.67**	**133**	Pn	**Pn**	**14 11 16.8**	**+0.2**
Z38A				IAmb_Lg		14 12 36.1	
	comp=Z,48nm,0.8s						
WHTX	**Lake Whitney,**	**4.72**	**163**	Pn	**Pn**	**14 11 16.6**	**-0.8**
S39A	**Bolivar**	**4.72**	**74**	Pn	**Pn**	**14 11 17.7**	**+0.3**
S39A				IAmb_Lg		14 12 34.3	
	comp=Z,76nm,0.8s						
S39A	**Bolivar**	**4.72**	**74**	P	**Pn**	**14 11 17.9**	**+0.5**
	baz=257,SNR=12						
S39A	**Bolivar**	**4.72**	**74**	P		14 11 17.9	
	baz=257,SNR=12						
MIAR	**Mount Ida**	**4.88**	**112**		**Pn**	**14 11 19.9**	**+0.3**
MIAR				IAmb_Lg		14 12 51.6	
	comp=Z,38nm,0.8s						
MIAR	**Mount Ida**	**4.88**	**112**	P	**Pn**	**14 11 20.3**	**+0.7**
	baz=295,SNR=9.9						
MIAR	**Mount Ida**	**4.88**	**112**	P		14 11 20.3	
	baz=295,SNR=9.9						
BGNE	**Belgrade**	**4.92**	**8**	Pn	**Pn**	**14 11 21.1**	**+1.0**
BGNE				IAmb_Lg		14 12 54.9	
	comp=Z,77nm,0.8s						
BGNE	**Belgrade**	**4.92**	**8**	S	**Sn**	**14 12 16.6**	**-0.5**
	baz=188						
BGNE	**Belgrade**	**4.92**	**8**	S		14 12 16.6	
	baz=188						
OGNE	**Ogallala**	**4.99**	**333**	IAmb_Lg		14 12 52.9	
	comp=Z,108nm,0.8s						
U40A	**Yellville**	**5.00**	**90**	Pn	**Pn**	**14 11 21.7**	**+0.5**
U40A				IAmb_Lg		14 12 51.2	
	comp=Z,53nm,0.8s						
U40A	**Yellville**	**5.00**	**90**	P	**Pn**	**14 11 22.0**	**+0.8**
	baz=274,SNR=7.6						
U40A	**Yellville**	**5.00**	**90**	P		14 11 22.0	
	baz=274,SNR=7.6						
U40A				P		14 11 22.0	
	baz=274,SNR=7.6						
237A	**Washetta, Mont**	**5.26**	**148**	IAmb_Lg		14 13 05.4	
	comp=Z,49nm,0.8s						
P38A	**Dawn**	**5.33**	**53**	Pn	**Pn**	**14 11 27.0**	**+1.2**
P38A				IAmb_Lg		14 13 09.5	
	comp=Z,49nm,0.9s						
X40A	**Basin Creek Fa**	**5.46**	**110**	Pn	**Pn**	**14 11 27.6**	**0.0**
X40A				IAmb_Lg		14 13 06.2	
	comp=Z,35nm,0.8s						
X40A	**Basin Creek Fa**	**5.46**	**110**	P	**Pn**	**14 11 27.9**	**+0.4**
	baz=294,SNR=7.5						
X40A	**Basin Creek Fa**	**5.46**	**110**	P		14 11 27.9	
	baz=294,SNR=7.5						
X40A				P		14 11 27.9	
	baz=294,SNR=7.5						
MGMO	**Mountain Grove**	**5.47**	**81**		**Pn**	**14 11 27.9**	**+0.2**
MGMO				IAmb_Lg		14 13 00.4	
	comp=Z,69nm,0.8s						
WHAR	**Wooly Hollow**	**5.62**	**101**	Pn	**Pn**	**14 11 29.6**	**-0.2**
WHAR				IAmb_Lg		14 13 10.6	
	comp=Z,76nm,1.0s						
FCAR	**Ozark Folk Cen**	**5.63**	**94**	IAmb_Lg		14 13 09.0	
	comp=Z,41nm,0.8s						
R40A	**Maddies Statio**	**5.67**	**70**		**Pn**	**14 11 30.3**	**-0.1**
R40A				IAmb_Lg		14 13 08.0	
	comp=Z,86nm,1.0s						
R40A	**Maddies Statio**	**5.67**	**70**	P	**Pn**	**14 11 31.6**	**+1.2**
	baz=254,SNR=8.2						
R40A	**Maddies Statio**	**5.67**	**70**	P		14 11 31.6	
	baz=254,SNR=8.2						
W41B	**Gary Mavity, V**	**5.69**	**102**	P	**Pn**	**14 11 31.4**	**+0.8**
	baz=286,SNR=6.0						
W41B	**Gary Mavity, V**	**5.69**	**102**	P		14 11 31.4	
	baz=286,SNR=6.0						
L34A	**Svendsen Farm,**	**5.81**	**20**	Pn	**Pn**	**14 11 32.2**	**-0.1**
435B	**Jarrell**	**5.86**	**168**	Pn	**Pn**	**14 11 32.7**	**-0.4**
435B				IAmb_Lg		14 13 18.4	
	comp=Z,61nm,1.0s						
JCT	**Junction City**	**6.07**	**186**	IAmb_Lg		14 13 24.8	
	comp=Z,42nm,0.8s						
N38A	**Joes South For**	**6.23**	**45**	Pn	**Pn**	**14 11 38.4**	**+0.3**
P40A	**Paris**	**6.28**	**59**	Pn	**Pn**	**14 11 39.5**	**+0.7**
LCAR	**Lake Charles**	**6.39**	**92**	Pn	**Pn**	**14 11 40.1**	**-0.2**
LCAR				IAmb_Lg		14 13 29.0	
	comp=Z,29nm,0.7s						
CCM	**Cathedral Cave**	**6.40**	**74**	Pn	**Pn**	**14 11 40.7**	**+0.3**
CCM				IAmb_Lg		14 13 38.3	
	comp=Z,69nm,0.8s						
CCAR	**Cane Creek**	**6.50**	**112**	IAmb_Lg		14 13 48.4	
	comp=Z,31nm,0.9s						
PHWY	**Pilot Hill**	**6.90**	**316**	IAmb_Lg		14 13 49.8	
	comp=Z,28nm,0.8s						
PBMO	**Poplar Bluff**	**6.93**	**85**	IAmb_Lg		14 13 50.8	
	comp=Z,45nm,0.7s						
SCIA	**State Center**	**7.02**	**38**	IAmb_Lg		14 14 08.5	
	comp=Z,41nm,0.8s						
SLM	**Saint Louis**	**7.30**	**71**	IAmb_Lg		14 14 06.2	
	comp=Z,33nm,0.8s						
143A	**Socs Landing,**	**7.37**	**119**	IAmb_Lg		14 14 16.9	
	comp=Z,32nm,0.8s						
ECSD	**EROS Data Cent**	**7.43**	**14**	Pn	**Pn**	**14 11 54.3**	**-0.3**
K38A	**Parkersburg**	**7.79**	**37**	IAmb_Lg		14 14 21.8	
	comp=Z,48nm,0.9s						
SUSD	**Miller**	**7.90**	**0**	IAmb_Lg		14 14 29.2	
	comp=Z,28nm,0.7s						
S44A	**Carbondale**	**7.91**	**79**	IAmb_Lg		14 14 17.9	
	comp=Z,58nm,0.8s						
OXF	**Oxford**	**8.11**	**102**	IAmb_Lg		14 14 31.2	
	comp=Z,34nm,1.1s						
W45A	**Hickory Valley**	**8.12**	**97**	IAmb_Lg		14 14 32.2	
	comp=Z,54nm,1.0s						
P43A	**Skaggs, Pawnee**	**8.13**	**65**	Pn	**Pn**	**14 12 04.5**	**+0.4**
TX31	**Lajitas Ar. Si**	**8.16**	**210**	Pn	**Pn**	**14 12 04.3**	**-0.4**
TX32	**Lajitas Array**	**8.16**	**210**	Pn	**Pn**	**14 12 04.2**	**-0.5**
TXAR	**Lajitas Array**	**8.16**	**210**	Pn	**Pn**	**14 12 04.1**	**-0.6**
RWWY	**Rawlins**	**8.17**	**312**	IAmb_Lg		14 14 37.0	
	comp=Z,26nm,1.1s						
K22A	**Casper**	**8.40**	**319**	IAmb_Lg		14 14 56.0	
	comp=Z,46nm,1.1s						
RSSD	**Black Hills**	**8.48**	**335**	IAmb_Lg		14 14 39.5	
	comp=Z,42nm,1.2s						
I37A	**Lemond, Waseca**	**8.63**	**28**	IAmb_Lg		14 14 41.6	
	comp=Z,20nm,0.8s						
L42A	**Oliver, Polo**	**9.09**	**50**	IAmb_Lg		14 14 57.1	
	comp=Z,46nm,0.8s						
JFWS	**Jewell Farm**	**9.30**	**44**	IAmb_Lg		14 15 05.4	
	comp=Z,30nm,0.8s						
T47A	**Sharon Grove**	**9.59**	**84**	IAmb_Lg		14 15 17.6	
	comp=Z,21nm,0.8s						
P46A	**Rosedale**	**9.83**	**68**	IAmb_Lg		14 15 25.4	
	comp=Z,44nm,0.9s						

*NEIC **13** 14:32:28.0±1.7,8°.53S±0°.09×80°.3W±0°.1,h27$^{km}_{\pm}$4^{km}, mb4.9/21,ML5.0(ARE),Error ellipse: s-maj=18.5km s-min=12.9km az=78.0*
*ARE **13** 14:32:29±1.8,8°.49S±0°.09×80°.3W±0°.1,h30$^{km}_{\pm}$4^{km},Error ellipse: s-maj=18.4km s-min=11.8km az=73.0*
*VAO **13** 14:32:36.1±0.5,8°.14S×79°.76W,h10^{km},mb4.7*
*GCMT **13** 14:32:41.0±0.5,8°.28S±0°.02×79°.82W±0°.03,h39$^{km}_{\pm}$2^{km}, MW4.9/80,Moment Tensor Solution. s20,c20; s80,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.77±.18; $M_{\theta\theta}$-0.01±.11; $M_{\phi\phi}$-1.76±.12; $M_{r\theta}$-1.40±.10; $M_{\theta\phi}$0.15±.10; $M_{\phi r}$1.56±.12; Best double couple: M_o2.72500×10^{16} NP1:ϕ_s192.00000°,δ25.00000°,λ130.00000°. NP2: ϕ_s329.00000°,δ71.00000°,λ73.00000°. Principal axes: T 2.9150, Plg61.0000°, Azm215.0000°; N -0.3760, Plg16.0000°, Azm335.0000°; P -2.5340, Plg24.0000°, Azm72.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **13** 14:32:42.5±1.7,8°.21S×79°.88W,h80$^{km}_{\pm}$14^{km},mb4.0/18, mb1 4.2/22,mb1mx4.1/43,mbtmp4.3/22,MS4.2/19, Ms1 4.2/19,ms1mx4.0/28 Error ellipse: s-maj=13.9km s-min=9.4km az=38.0*
ISC 13 14:32:37.7±0.4,8°.26S±0°.05×79°.92W±0°.05,h35^{km},n289, σ1§43/263,mb4.7/30,MS4.4/18,Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.88**	**54**	P	**Pn**	**14 33 10.9**	**+3.1**
	481nm,0.3s,baz=267,slow=3.0,SNR=1530						
ATAH				S	**Sn**	**14 33 35.9**	**+5.4**
	543nm,0.3s,baz=92,slow=19,SNR=6.3						
ATAH				LR	LR	14 34 09.7	
	comp=Z,11μm,18.9s,baz=233,slow=48						
CZSB	**Cruzeiro do Su**	**7.17**	**86**	*e*P	**Pn**	**14 34 19.9**	**-0.2**
OTAV	**Otavalo**	**8.57**	**10**	Pn	**Pn**	**14 34 37.2**	**-2.6**
OTAV	**Otavalo**	**8.57**	**10**	*e*P	**Pn**	**14 34 43.2**	**+3.4**
OTAV	**Otavalo**	**8.57**	**10**	*e*P	**Pn**	**14 34 38.6**	**-1.2**
GCUF	**Volcan Galeras**	**9.77**	**15**	*e*P	**Pn**	**14 34 59.6**	**+3.3**
PTLC	**Puerto Leguiza**	**9.81**	**32**	*e*P	Pn	14 34 50.0	-6.4
SOTA	**Rioblanco**	**10.84**	**18**	*e*P	**Pn**	**14 35 12.2**	**+1.2**
PCON	**Cinco Dias**	**11.09**	**19**	*e*P	**Pn**	**14 35 16.7**	**+2.2**
POPC	**Popayan, Colom**	**11.21**	**17**	*e*P	**Pn**	**14 35 17.8**	**+2.1**
GARC	**Garzon, Huila**	**11.28**	**23**	*e*P	**Pn**	**14 35 15.8**	**-0.9**
MARP	**Paez Belalcaza**	**11.72**	**20**	*e*P	**Pn**	**14 35 23.4**	**+0.6**
BETC	**Betania**	**11.75**	**23**	*e*P	**Pn**	**14 35 25.0**	**+2.0**
MACC	**Macarena, Meta**	**11.98**	**31**	*e*P	**Pn**	**14 35 25.1**	**-1.1**
YOTC	**Y

PCRV	Puerto La Cruz	23.81	40	P		P	14 37 47.5	-0.2	
	comp=Z,21nm,0.9s,baz=302,slow=3.8,SNR=3.9								
CLDB	Colider	23.93	98	*e*P		P	14 37 47.5	-1.3	
ITTB	Itaituba	24.34	82	*e*P		P	14 37 52.1	-0.5	
NPGB	Novo Progresso	24.37	89	*e*P		P	14 37 51.6	-1.3	
H03N2	Juan Fernandez	25.07	178	T		T	15 04 07.8		
	baz=357,slow=76,SNR=1273								
H03N1	Juan Fernandez	25.08	178	T		T	15 04 08.6		
	baz=357,slow=76,SNR=1414								
H03N3	Juan Fernandez	25.09	178	T		T	15 04 07.4		
	baz=357,slow=76,SNR=1226								
APG	El Apazote	25.37	336	P		P	14 38 03.3	+1.2	
	comp=Z,5.4nm,0.6s,baz=172,slow=5.6,SNR=6.6								
PP1B	Ponte de Pedra	26.08	113	*e*P		P	14 38 09.7	+1.4	
MALB	Monte Alegre	26.32	77	*e*P		P	14 38 10.6	0.0	
AQDB	Aquidauana	26.37	120	*e*P		P	14 38 12.5	+1.6	
CPUP	Villa Florida	27.99	133	P		P	14 38 26.5	+1.1	
	comp=Z,2.8nm,0.9s,baz=321,slow=11,SNR=5.4								
CPUP	Villa Florida	27.99	133	*e*P		P	14 38 27.5	+2.1	
SNDB	Serra Nova Dou	28.41	100	*e*P		P	14 38 29.2	-0.2	
ARAG	Araguaiana, MT	28.45	108	*e*P		P	14 38 30.0	+0.4	
MCPB	Macapa, AP	28.85	76	*e*P		P	14 38 33.3	+0.1	
CMIG	Matias Romero	29.21	330	P		P	14 38 36.5	+0.2	
	comp=Z,1.3nm,0.6s,baz=227,slow=7.5,SNR=3.8								
MTP	Monte Pirata	29.79	28	P		P	14 38 36.1	-5.2	
MTP				IAmb		IAmb	14 38 43.4		
	comp=Z,16nm,0.8s								
PRPB	Parauapebas	29.93	88	*e*P		P	14 38 41.7	-1.1	
ITQB	Itaqui	30.52	137	*e*P		P	14 38 48.6	+0.8	
PCMB	Pacaembu	30.63	119	*e*P		P	14 38 50.8	+1.9	
ITRB	Iturama	30.80	115	*e*P		P	14 38 52.6	+2.1	
PTGB	Pitanga	31.22	125	*e*P		P	14 38 55.4	+1.2	
PEXB	Peixe	31.34	100	*e*P		P	14 38 55.3	0.0	
SMTB	Santa Maria do	31.97	93	*e*P		P	14 39 00.9	+0.1	
BDFB	Brasilia	32.03	106	P		P	14 38 59.8	-1.7	
	comp=Z,2.3nm,0.6s,baz=270,slow=14,SNR=2.7								
BDFB				LR		LR	14 52 41.1		
	comp=Z,1μm,19.6s,baz=284,slow=37								
TMAB	Tom-Au,PA,Br	32.21	81	*e*P		P	14 39 03.6	+0.7	
IPMB	Ipameri, GO	32.31	111	*e*P		P	14 39 03.2	-0.6	
ITAB	Concordia	32.37	129	*e*P		P	14 39 05.4	+1.3	
FRTB	Fartura	32.73	121	*e*P		P	14 39 09.5	+2.1	
BB19B	Bebedouro	32.85	116	*e*P		P	14 39 10.7	+2.2	
CPSB	Cacapava Do Su	33.15	135	*e*P		P	14 39 13.0	+2.1	
PLCA	Paso Flores	33.40	167	P		P	14 39 13.7	+0.6	
	comp=Z,8.0nm,0.8s,baz=332,slow=11,SNR=6.0								
PLCA	Paso Flores	33.40	167	*e*P		P	14 39 13.8	+0.8	
PLTB	Pedras Altas	33.85	137	*e*P		P	14 39 17.4	+0.3	
TIJ01	Guaruva-PR	33.98	124	*e*P		P	14 39 19.3	+0.9	
SPB	Sao Paulo	34.64	120	*e*P		P	14 39 25.7	+1.7	
SDBA	SAO DESIDERIO	34.68	100	*e*P		P	14 39 25.8	+1.3	
VAO	Valinhos	34.84	119	*e*P		P	14 39 27.2	+1.3	
PET01	Itanhaem-SP	35.03	121	*e*P		P	14 39 29.1	+1.8	
TER01	Tubaro-SC	35.32	129	*e*P		P	14 39 31.7	+1.9	
JANB	Januaria	35.49	104	*e*P		P	14 39 30.9	-0.5	
BSCB	Bom Sucesso	36.19	114	*e*P		P	14 39 39.1	+1.6	
DIAM	Diamantina, MG	36.59	110	*e*P		P	14 39 41.7	+0.7	
ESAR	Angra dos Reis	37.06	117	*e*P		P	14 39 45.8	+1.1	
MAN01	Angra dos Reis	37.43	117	*e*P		P	14 39 48.6	+0.7	
NBPS	Pedro II - PI	38.42	87	*e*P		P	14 39 55.9	-0.6	
SJMB	Sao Joao De Ma	38.99	109	*e*P		P	14 40 02.5	+1.5	
BSFB	Barra de Sao F	39.33	110	*e*P		P	14 40 03.2	-0.7	
RIB01	Linhares ES	39.83	110	*e*P		P	14 40 09.3	+1.2	
NAN01	Guarapari, ES	39.84	108	*e*P		P	14 40 10.2	+1.8	
GDU01	Guaridu, BA	39.94	101	*e*P		P	14 40 09.8	+0.8	
NBMO	Morrinhos-CE	39.96	85	*e*P		P	14 40 09.9	+0.6	
NBPB	Pedra_Branca-C	40.12	89	*e*P		P	14 40 10.8	+0.1	
NBIT	Itapeh - BA	40.16	103	*e*P		P	14 40 13.3	+2.4	
NBMA	Muriti-CE	40.77	92	*e*P		P	14 40 17.3	+1.3	
NBTA	Tacaratu-PE	41.37	94	*e*P		P	14 40 22.1	+1.1	
NBLA	Lagarto - SE	41.60	97	*e*P		P	14 40 23.8	+1.1	
NATX	Nacogdoches	42.22	341			P	14 40 28.7	+1.2	
JCT	Junction City	42.99	334	pP		P	14 40 34.3	+0.5	
NBAN	Anadia - AL	43.12	95	*e*P		P	14 40 34.7	-0.4	
WHTX	Lake Whitney,	43.39	338	pP		P	14 40 37.1	+0.2	
WLAR	White Oak Lake	43.56	344			P	14 40 39.7	+1.4	
Z38A	Mt. Pleasant	43.71	342	pP		P	14 40 39.7	+0.2	
TXAR	Lajitas Array	43.82	329	P		P	14 40 41.1	+0.5	
	comp=Z,0.9nm,0.9s,baz=148,slow=9.6,SNR=8.1								
TXAR				PcP		PcP	14 42 27.0	+0.2	
	comp=Z,0.6nm,0.7s,baz=159,slow=5.3,SNR=4.3								
TXAR	Lajitas Array	43.82	329			P	14 40 40.9	+0.3	
TX31	Lajitas Ar. Si	43.82	329			P	14 40 41.2	+0.6	
TX32	Lajitas Array	43.82	329			P	14 40 40.8	+0.2	
NBRF	Rio Formoso -	44.29	94	*e*P		P	14 40 45.2	+0.7	
MIAR	Mount Ida	44.49	344	pP		P	14 40 46.2	+0.4	
Z35A	Perchaven, San	44.52	339	P		P	14 40 37.7	-8.4	
Z35A				pP		P	14 40 46.7	+0.6	
Z35A				IAmb		IAmb	14 40 58.0		
	comp=Z,16nm,0.7s								
ABTX	Abilene, Hawle	44.79	336	pP		P	14 40 48.8	+0.6	
WHAR	Wooly Hollow	44.86	346	pP		P	14 40 49.5	+0.8	
X37A	Clayton	45.06	342	P		P	14 40 42.7	-7.6	
X37A				pP		P	14 40 51.0	+0.7	
X37A				IAmb		IAmb	14 40 52.5		
	comp=Z,22nm,0.8s								
W39A	Magazine	45.16	344	pP		P	14 40 52.1	+1.0	
FCAR	Ozark Folk Cen	45.39	346	pP		P	14 40 53.2	+0.3	
U40A	Yellville	46.01	345	pP		P	14 40 58.5	+0.6	
WMOK	Wichita Mounta	46.34	338	pP		P	14 41 01.9	+1.4	
S44A	Carbondale	46.54	350	P		P	14 40 53.8	-8.1	
S44A				IAmb		IAmb	14 41 16.0		
	comp=Z,10nm,0.8s								
OK025	Westminster Rd	46.60	340	pP		P	14 41 02.8	+0.3	
MNTX	Cornudas Mount	46.60	330	pP		P	14 41 02.4	-0.1	
MGMO	Mountain Grove	46.63	346	pP		P	14 41 03.5	+0.7	
OK029	Liberty Lake	46.83	340	pP		P	14 41 04.5	+0.2	
CCM	Cathedral Cave	47.27	348	pP		P	14 41 08.0	+0.3	
S39A	Bolivar	47.40	346	pP		P	14 41 08.6	-0.1	
T35A	Sooner Cattle	47.56	342	P		P	14 41 02.5	-7.5	
T35A				pP		P	14 41 10.0	+0.1	
R40A	Maddies Statio	47.72	347	pP		P	14 41 10.9	-0.3	
U32A	Winter Ranch,	47.89	339	P		P	14 41 04.1	-8.4	
U32A				IAmb		IAmb	14 41 13.9		
	comp=Z,17nm,0.9s								
KAN08	Anthony NE Sta	48.30	341	P		P	14 41 07.7	-8.0	
BNM	Barren Site	49.19	330	pP		P	14 41 22.9	+0.1	
P38A	Dawn	49.28	346	pP		P	14 41 22.8	-0.4	
R32A	Long Quarter,	49.63	341	pP		P	14 41 25.6	-0.3	
ANMO	Albuquerque	49.76	331	pP		P	14 41 26.8	-0.3	
TUC	Tucson	49.95	325			P	14 41 28.9	+0.4	
CBKS	Cedar Bluff	50.33	340	pP		P	14 41 31.4	+0.1	
T25A	Trinidad	50.66	335	pP		P	14 41 34.5	+0.6	
MEDO	Medina	51.20	1	P		P	14 41 31.6	-6.0	
MEDO				IAmb		IAmb	14 41 33.6		
	comp=Z,9.7nm,0.7s								
W18A	Petrified Fore	51.52	329			P	14 41 40.9	+0.5	
WUAZ	Wupatki	52.68	328	P		P	14 41 38.6	-10	
WUAZ						P	14 41 49.3	+0.3	
ISCO	Idaho Springs	53.41	335	P		P	14 41 45.9	-8.6	
ISCO						P	14 41 54.7	+0.2	
KNB	Kanab	54.58	328			P	14 42 03.6	+0.7	
RKT	Rikitea	54.71	248	*e*LR		LR	14 57 44.0		
	comp=Z,594nm,25.5s								
RKT	Rikitea	54.71	248	*e*T		T	15 40 28.2		
	comp=Z,15nm,0.3s								
LCMT	Little Creek M	54.80	327			P	14 42 04.3	-0.1	
SRU	San Rafael Swe	55.03	331	P		P	14 41 56.0	-10	
SRU				pP		P	14 42 05.7	-0.5	
CCUT	Cedar City	55.26	328			P	14 42 08.3	+0.4	
MSU	Marysvale	55.38	329			P	14 42 09.0	+0.2	
P17A	Butcher Ranch,	55.42	331			P	14 42 09.1	+0.2	
SHPR	Sheep Range	55.47	326			P	14 42 08.6	-0.8	
RDMU	Red Mountain	55.75	333	P		P	14 42 03.6	-7.7	
RDMU						P	14 42 11.4	+0.1	
RDMU				IAmb		IAmb	14 42 12.6		
	comp=Z,7.1nm,0.9s								
PSUT	Pine Spring	56.26	328			P	14 42 15.3	+0.3	
RSSD	Black Hills	56.52	339			P	14 42 17.3	+0.5	
ISA	Isabella, Lake	56.81	323			P	14 42 19.3	+0.4	
SPR3	Spring Creek 3	56.85	328			P	14 42 19.5	+0.1	
R11A	Troy Canyon, C	57.04	327			P	14 42 21.0	+0.5	
HWUT	Hardware Ranch	57.49	332	pP		P	14 42 23.5	-0.1	
BW06	Boulder Array	57.52	334	pP		P	14 42 23.3	-0.7	
PD31	Pinedale Array	57.52	334	pP		P	14 42 23.4	-0.6	
PDAR	Pinedale Array	57.52	334	P		P	14 42 23.6	-0.3	
	comp=Z,1.4nm,0.8s,baz=126,slow=7.5,SNR=9.3								
PDAR				LR		LR	15 07 05.5		
	comp=Z,97nm,19.0s,baz=152,slow=36								
PDAR	Pinedale Array	57.52	334	pP		P	14 42 23.3	-0.6	
BGU	Big Grassy Mou	57.65	331	pP		P	14 42 24.5	-0.3	
AGMN	Agassiz Nation	58.04	348	pP		P	14 42 26.6	-0.6	
HVU	Hansel Valley	58.19	331	pP		P	14 42 28.0	-0.5	
NV11	Mina Array Sit	58.52	325			P	14 42 31.0	+0.1	
REDW	Red Top Meadow	58.56	334			P	14 42 31.2	0.0	
LHV	Little Huntoon	58.59	325			P	14 42 32.0	+0.9	
NVAR	Mina Array Bea	58.60	325	P		P	14 42 32.3	+0.8	
	comp=Z,1.8nm,0.7s,baz=137,slow=6.9,SNR=17								
NVAR				LR		LR	15 06 16.7		
	comp=Z,54nm,19.1s,baz=176,slow=34								
NVAR	Mina Array Bea	58.60	325	P		P	14 42 22.4	-9.1	
NVAR						P	14 42 31.6	0.0	
ELK	Elko	58.61	329			P	14 42 31.6	-0.1	
LOHW	Long Hollow	58.66	334			P	14 42 32.1	+0.3	
KVN	Kaiserville	58.92	326			P	14 42 33.7	0.0	
FLWY	Flagg Ranch	59.08	335	pP		P	14 42 35.0	+0.2	
TAOE	Nuku Hiva Isla	59.50	265	*e*LR		LR	14 59 57.3		
	comp=Z,392nm,24.5s								
YERR	Yerington	59.51	325			P	14 42 38.3	+0.5	
YNE	Yellowstone No	59.54	336	pP		P	14 42 37.8	-0.2	
YHH	Holmes Hill	59.71	335			P	14 42 39.6	+0.4	
YHB	Horse Butte	59.83	335			P	14 42 40.4	+0.5	
ULM	Lac du Bonnet	59.90	348	P		P	14 42 37.7	-2.3	
	comp=Z,4.4nm,0.8s,baz=152,slow=4.7,SNR=8.0								
ULM	Lac du Bonnet	59.90	348	pP		P	14 42 38.9	-1.1	
YHL	Hebgen Lake	59.90	335			P	14 42 41.3	+0.8	
GCMT	Greycliff	60.05	336	pP		P	14 42 41.2	-0.1	
PAHR	Pah Rah Range	60.09	326			P	14 42 41.6	-0.2	
HLID	Hailey	60.33	332			P	14 42 43.5	+0.1	
BCYI	Bear Canyon	60.44	333			P	14 42 44.4	+0.3	
MCMT	McKenzie Canyo	60.60	334			P	14 42 45.7	+0.4	
BOZ	Bozeman (W)	60.69	335			P	14 42 45.8	0.0	
MFID	Camas Ranch	60.89	331			P	14 42 47.3	+0.2	
ORV	Oroville	61.19	324			P	14 42 49.7	+0.6	
EGMT	Eagleton	61.93	338	P		P	14 42 45.8	-8.1	
EGMT				pP		P	14 42 53.9	0.0	
EGMT				IAmb		IAmb	14 42 56.2		
	comp=Z,12nm,1.2s								
MSO	Missoula	62.64	334			P	14 42 59.1	+0.3	
I07A	Izee	63.20	329			P	14 43 03.0	+0.4	
G08A	Pilot Rock	63.80	330			P	14 43 07.0	+0.6	
WALA	Waterton Lakes	64.39	336	pP		P	14 43 12.2	-0.1	
TBI	Tubuai	68.02	248	*e*LR		LR	15 03 54.0		
	comp=Z,394nm,26.5s								
TBI	Tubuai	68.02	248	*e*T		T	15 57 11.5		
	comp=Z,18nm,0.3s								
PPT	Papeete	68.22	254	LR		LR	15 04 54.0		
	comp=Z,200nm,21.4s,baz=98,slow=28								
PPT2	Papeete2	68.22	254	*e*LR		LR	15 03 59.1		
	comp=Z,466nm,25.5s,baz=90								
BELA	Belgrano 2	73.34	171			P	14 44 05.3	-0.1	
YKA	Yellowknife Ar	75.44	344	P		P	14 44 16.2	-1.5	
	comp=Z,2.4nm,0.9s,baz=138,slow=6.8,SNR=24								
YKA				LR		LR	15 19 35.2		
	comp=Z,74nm,18.1s,baz=0.0,slow=37								
VNA3	Neumayer Olymp	75.92	162	P		P	14 44 09.3	-11	
VNA1	Neumayer--Stat	76.21	161	P		P	14 44 14.1	-8.0	
DBIC	Dimbokro	76.30	81	P		P	14 44 21.9	-1.7	
	comp=Z,2.5nm,0.8s,baz=239,slow=13,SNR=3.0								
DBIC				LR		LR	15 17 08.5		
	comp=Z,117nm,18.3s,baz=276,slow=35								
VNA2	Neumayer--Watz	76.56	161	P		P	14 44 14.6	-9.5	
DLBC	Dease Lake	77.73	336			P	14 44 31.6	+0.7	
SNAA	Sanae	78.15	162	P		P	14 44 32.2	-0.9	
SNAA	Sanae	78.15	162			P	14 44 32.8	-0.3	
DY2G	Dye2	78.46	13	*i* P		P	14 44 34.2	-0.8	
KOWA	Kowa	78.58	73	pP		P	14 44 36.7	+0.2	
BESE	Bessie Mountai	79.84	334			P	14 44 43.2	+0.7	
TORD	Torodi Ar. Bea	83.78	76	P		P	14 45 04.4	+0.3	
	comp=Z,1.1nm,0.7s,baz=281,slow=5.9,SNR=4.2								
TORD				LR		LR	15 22 42.8		
	comp=Z,151nm,18.3s,baz=225,slow=36								
ESDC	Sonseca Array	84.57	49	P		P	14 45 06.7	-1.0	
	comp=Z,0.7nm,0.4s,baz=259,slow=4.8,SNR=5.3								
ESDC				LR		LR	15 20 18.8		
	comp=Z,147nm,20.1s,baz=275,slow=34								
DAWY	Dawson	84.67	338			P	14 45 07.2	-0.5	
VRDI	Verde Repeater	84.92	334	pP		P	14 45 09.0	-0.1	
SUMG	Summit	84.99	12	*i* P		P	14 45 09.1	-0.5	
SUMG				IAmb		IAmb	14 45 10.7		
	comp=Z,5.9nm,0.8s								
INK	Inuvik	85.08	343	P		P	14 45 09.2	-0.3	
	comp=Z,8.0nm,1.1s,baz=117,slow=6.1,SNR=15								
L27K	Beaver Creek,	85.11	336	P		P	14 45 01.8	-8.1	
L27K				pP		PcP	14 45 10.2	-2.9	
GLB	Gilahina Butte	85.17	334	P		P	14 45 02.4	-7.9	
GLB				pP		PcP	14 45 10.1	-3.3	
GLB				IAmb		IAmb	14 45 11.3		
	comp=Z,11nm,1.0s								
K27K	Chicken	85.67	337			P	14 45 13.4	+0.8	
EGAK	Eagle	85.69	338	pP		P	14 45 12.5	-0.2	
KLU	Klutina	86.11	334	pP		P	14 45 14.5	-0.4	
DOT	Dot Lake	86.28	336	pP		P	14 45 15.3	-0.3	
SCRK	Sand Creek	86.40	337	pP		P	14 45 16.2	-0.1	
M24K	Tolsona, Glenn	86.47	334	P		P	14 45 09.1	-7.5	
M24K				pP		PcP	14 45 17.0	-2.1	
PAX	Paxson	86.55	335	pP		P	14 45 16.3	-0.8	
NEEM	North Greenlan	87.11	6	*i* P		P	14 45 19.5	-0.3	
NEEM				IAmb		IAmb	14 45 21.9		
	comp=Z,7.8nm,1.0s								
SML	Sawmill	87.29	334	pP		P	14 45 20.2	-0.4	
PRP	Porcupine Dome	87.67	338	pP		P	14 45 22.1	-0.4	
VNDA	Vanda	87.85	191	P		P	14 45 22.7	-0.4	
	comp=Z,1.4nm,0.7s,baz=127,slow=5.6,SNR=8.9								
VNDA				LR		LR	15 17 17.4		
	comp=Z,139nm,19.0s,baz=120,slow=30								
IL31		87.88	337	P		P	14 45 15.4	-7.8	
IL31				pP		PcP	14 45 22.8	-2.3	
IL31				IAmb		IAmb	14 45 24.2		
	comp=Z,6.0nm,1.1s								
ILAR	Eielson Array	87.88	337	P		P	14 45 22.8	-0.5	
	comp=Z,3.4nm,0.8s,baz=151,slow=3.6,SNR=32								
ILAR				LR		LR	15 25 01.5		
	comp=Z,57nm,21.6s,baz=130,slow=36								
ILAR	Eielson Array	87.88	337	pP		P	14 45 22.4	-1.0	
FYU	Fort Yukon	88.02	339	pP		P	14 45 24.1	+0.2	
RND	Reindeer	88.13	335	pP		P	14 45 24.4	-0.3	
CCB	Clear Creek Bu	88.19	336	pP		P	14 45 24.1	-0.7	
WRH	Wood River Hil	88.23	336	pP		P	14 45 24.6	-0.4	
CUT	Chulitna	88.36	334	pP		P	14 45 25.0	-0.6	
MDM	Murphy Dome	88.48	337	pP		P	14 45 25.5	-0.7	
BWN	Browne	88.67	336	P		P	14 45 18.4	-8.7	
BWN				pP		PcP	14 45 26.5	-2.2	
NEA2	Nenana	88.67	336	pP		P	14 45 26.5	-0.6	
SKT	Skwentna	88.76	333	pP		P	14 45 26.8	-0.8	
I23K	Minto, Yukon-K	88.99	337	pP		P	14 45 28.0	-0.6	
KTH	Kantishna Hill	89.05	335	pP		P	14 45 27.9	-1.0	
BPAW	Bear Paw Mtn.	89.27	335	pP		P	14 45 29.2	-0.8	
MLY	Manley	89.50	336	pP		P	14 45 29.9	-1.1	
KEST	Kesra	94.17	55	LR		LR	15 30 11.2		
	comp=Z,58nm,18.1s,baz=292,slow=37								
RDOG	Red Dog Mine	94.98	338	pP		P	14 45 56.0	-0.3	
GERES	GERESS Array B	98.54	42	LR		LR	15 28 20.9		
	comp=Z,69nm,20.7s,baz=276,slow=34								
MAW	Mawson	99.80	166	LR		LR	15 27 31.2		
	comp=Z,127nm,21.8s,baz=236,slow=33								
H11N3	WAKE ISLAND Hyl	114.50	288	T		T	16 55 34.5		
	baz=91,slow=75,SNR=56								
H11N2	WAKE ISLAND Hyl	114.52	288	T		T	16 55 23.7		
	baz=91,slow=75,SNR=66								
H11N1	WAKE ISLAND Hyl	114.52	288	T		T	16 55 36.1		
	baz=91,slow=75,SNR=62								
H11S2	WAKE ISLAND Hyl	114.69	287	T		T	16 55 44.4		
	baz=96,slow=74,SNR=33								
H11S1	WAKE ISLAND Hyl	114.69	287	T		T	16 55 45.5		
	baz=96,slow=74,SNR=21								
H11S3	WAKE ISLAND Hyl	114.70	287	T		T	16 55 47.8		
	baz=96,slow=74,SNR=22								
ABKAR	Akbulak array	127.13	32	pPKPdf		PKPdf	14 51 37.9	-0.5	
ABKAR	Akbulak array	127.13	32	pPKPdf		PKPdf	14 51 38.0	-0.5	
ZAA0	Zalesovo Array	132.81	12	pPKPdf		PKPdf	14 51 48.9	-0.1	
ZALV	Zalesovo Beam	132.81	12	PKP		PKPdf	14 51 47.4	-1.7	
	comp=Z,2.5nm,0.8s,baz=309,slow=3.1,SNR=12								
ZALV	Zalesovo Beam	132.81	12	PKPdf		PKPdf	14 51 41.5	-7.6	
ZALV				pPKPdf		PKiKP	14 51 48.7	-1.4	
AS31	Alice Springs	134.18	225	pPKPdf		PKPdf	14 51 51.6	-1.0	
ASAR	Alice Springs	134.18	225	PKP		PKPdf	14 51 50.8	-1.9	
	comp=Z,2.2nm,0.7s,baz=118,slow=2.3,SNR=21								
ASAR	Alice Springs	134.18	225	pPKPdf		PKPdf	14 51 51.4	-1.2	
WR0	Warramunga Arr	135.99	230	pPKPdf		PKPdf	14 51 54.6	-1.4	
WB2	Warramunga Arr	136.14	230	pPKPdf		PKPdf	14 51 55.5	-0.8	
WRAB	Tennant Creek	136.15	230	pPKPdf		PKPdf	14 51 55.5	-0.9	
WRA	Warramunga Arr	136.15	230	PKP		PKPdf	14 51 55.8	-0.6	
	comp=Z,5.3nm,0.8s,baz=134,slow=1.5,SNR=24								
WRA	Warramunga Arr	136.15	230	pPKPdf		PKPdf	14 51 55.2	-1.2	
WB0	Warramunga Arr	136.22	230	pPKPdf		PKPdf	14 51 55.5	-0.9	
MKAR	Makanchi Array	138.70	19	PKhKP		PKPpre	14 51 49.0		
	comp=Z,0.3nm,0.6s,baz=333,slow=1.4,SNR=2.8								
MKAR				PKP		PKPdf	14 51 59.5	-0.8	
	comp=Z,0.7nm,0.7s,baz=354,slow=2.4,SNR=5.2								
SONM	Songino Array	140.20	353	PKhKP		PKPpre	14 51 54.7		
	comp=Z,0.8nm,0.9s,baz=344,slow=2.1,SNR=3.2								
FITZ	Fitzroy Crossi	143.63	224	PKhKP		PKPpre	14 52 04.8		
	comp=Z,6.0nm,0.8s,baz=166,slow=4.5,SNR=14								
NIL	Nilore	144.63	41			PKPab	14 52 09.9	-0.1	
GTA	Gaotai	148.98	0	PKPbc		PKPdf	14 52 18.9	+0.3	
BATI	Baumata	150.20	232	PKPbc		PKPbc	14 52 26.8	+0.6	
	comp=Z,19nm,0.7s,baz=114,slow=4.9,SNR=7.9								
CMAR	Chiang Mai Arr	169.80	6	PKP		PKPdf	14 52 42.4	-0.3	
	comp=Z,1.2nm,0.9s,baz=289,slow=1.9,SNR=11								
CMAR				PKPab		PKPab	14 53 55.7	-0.9	
	comp=Z,2.4nm,0.9s,baz=332,slow=5.1,SNR=13								
CMAR				PP		PP	14 57 52.4	+7.4	
	comp=Z,0.2nm,0.4s,baz=359,slow=4.6,SNR=4.3								

BJI ***13*** *14:37:45.5±0.0,30.7′73N×141.′85E,h10km,mB4.8/37, mb4.5/52,Ms4.3/33,Ms7 4.1/32*

IDC ***13*** *14:37:47.6±0.5,30.′73N×141.′71E,h0km,mb4.3/27, mb1 4.5/32,mb1mx4.4/48,mbtmp4.3/32,ML4.1/4,MS3.7/18, Ms1 3.8/18,ms1mx3.5/43,Error ellipse: s-maj=16.0km s-min=11.1km az=82.0*

JMA ***13*** *14:37:49.1±0.2,30.′81N×142.′02E,h45km,M4.7*

NIED ***13*** *14:37:49.2,30.′81N×142.′02E,h45km,MW4.7,Moment Tensor Solution. s2 Moment tensor: Scale 10*^{16}*Nm; Mrr0.38; Mθθ0.01; Mϕϕ-0.39; Mrθ-0.28; Mθϕ0.08; Mϕr1.26; Fault plane solution: M*$_0$*1.35000×10*^{16} *NP1: ϕs348.00000°,δ82.00000°,λ90.00000°. NP2: ϕs170.00000°,δ8.00000°,λ93.00000°.*

NEIC ***13*** *14:37:50.2±1.2,30.′78N±0.′06×141.′65E±0.′09,h17km±4km, mb4.7/86 Error ellipse: s-maj=11.5km s-min=7.9km az=79.0*

MOS ***13*** *14:37:50.9±0.9,30.′72N×141.′62E,h33km,mb5.0/34,Error ellipse: s-maj=11.5km s-min=4.8km az=113.7*

ISC 13 14:37:52.7±0.3, **30.′75N**±0.′04×**141.′67E**±0.′05, **h35km**, **n274**, σ **1**9**45**/282, **mb4.7**/103, **MS3.9**/19, **16C-8D, Southeast of Honshu**

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

comp=Z,420nm,14.0s
CN2 LR LR

comp=Z,330nm,14.0s
YHNB Yeheng 18.95 256 P **P** **14 42 10.8 -0.2**
YHNB IAmb IAmb 14 42 13.3

comp=Z,54nm,1.2s
NACB Ninganchiao 18.97 255 P **P** **14 42 11.1 0.0**
NACB IAmb IAmb 14 42 13.3

comp=Z,29nm,1.1s
NJ2 Nanjing 19.52 280 *e*P **P** **14 42 16.8 -0.2**
NJ2 pmax pmax

comp=Z,8.0nm,0.6s
YULB Yu-li 19.55 253 P **P** **14 42 17.5 0.0**
YULB IAmb IAmb 14 42 25.5

comp=Z,27nm,0.7s
SSLB Suanglung 19.66 254 **Pn** **14 42 19.7 -0.7**
SSLB IAmb IAmb 14 42 22.4

comp=Z,62nm,1.0s
KLR Kul'dur 19.93 341 P **P** **14 42 20.6 -0.8**
comp=Z,1.6nm,0.3s,baz=150,slow=9.3,SNR=29
KLR LR LR 14 50 32.9

comp=Z,180nm,18.2s,baz=144,slow=38
KLR Kul'dur 19.93 341 *d i*P **P** **14 42 20.8 -0.6**
KLR pmax pmax

comp=Z,8.0nm,0.6s
TWG Pinlang 20.00 252 Pn **Pn** **14 42 23.9 -0.3**
TWG IAmb IAmb 14 42 26.5

comp=Z,29nm,1.0s
TYV Tymovskoe 20.11 2 *e*P Pn 14 42 27.9 +2.6
TYV pmax pmax

comp=Z,15nm,1.5s
TYV pmax pmax

comp=Z,200nm,3.2s
GRNR Gornyy 20.38 350⇑ *i*P **P** **14 42 27.0 +0.7**
GRNR pmax pmax

comp=N,4.0nm,0.9s
GRNR pmax pmax

comp=Z,3.0nm,0.7s
GRNR MLR MLR

comp=E,80nm,16.0s
GRNR MLR MLR

comp=Z,190nm,14.0s
BJI Beijing 22.69 301 P **P** **14 42 50.5 -0.7**
BJI S **S** **14 47 00.3 +3.1**
BJI pmax pmax

comp=Z,10.0nm,0.9s
BJI LR LR

comp=Z,95nm,5.7s
BJI LR LR

comp=Z,410nm,18.5s
BJI LR LR

comp=Z,440nm,22.0s
SZP Santa 23.34 241 P **P** **14 42 58.2 +0.2**
HIA Hailar 24.83 324 P **P** **14 43 10.9 -0.7**
HIA pmax pmax

comp=Z,26nm,0.8s
HIA Hailar 24.83 324 P **P** **14 43 10.9 -0.7**
HIA IAmb IAmb 14 43 13.4

comp=Z,26nm,0.8s
ZEA Zeya 25.23 340 *e*P **P** **14 43 15.9 +0.7**
ZEA pmax pmax

comp=E,10.0nm,1.0s
ZEA pmax pmax

comp=N,30nm,0.6s
ZEA pmax pmax

comp=Z,50nm,0.7s
ZEA MLR MLR

comp=Z,100nm,16.0s
H11N2 WAKE ISLAND Hy 25.26 110 T T 15 09 26.9
baz=309,slow=72
H11N1 WAKE ISLAND Hy 25.26 110 T T 15 09 31.7
baz=309,slow=72
H11N3 WAKE ISLAND Hy 25.28 110 T T 15 09 27.0
baz=309,slow=72
H11S3 WAKE ISLAND Hy 25.74 112 T T 15 09 59.1
baz=304,slow=74,SNR=10
H11S1 WAKE ISLAND Hy 25.74 112 T T 15 09 56.4
baz=304,slow=74,SNR=12
H11S2 WAKE ISLAND Hy 25.76 112 T T 15 10 00.2
baz=304,slow=74,SNR=8.2

comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 26.30 301 *e*P **P** **14 43 24.9 -0.3**
HHC pmax pmax

comp=Z,130nm,4.9s
HHC pmax pmax

comp=Z,250nm,16.4s
HHC LR LR

comp=Z,600nm,15.0s
HHC LR LR

comp=Z,710nm,16.3s
XAN Xi'an 27.78 285 P **P** **14 43 38.0 -0.5**
XAN pmax pmax

comp=Z,16nm,0.8s
XAN pmax pmax

comp=Z,120nm,5.1s
XAN Xi'an 27.78 285 P **P** **14 43 37.0 -1.5**
XAN pmax pmax

comp=Z,10.0nm,0.6s
XAN Xi'an 27.78 285 P **P** **14 43 37.0 -1.5**
XAN IAmb IAmb 14 43 38.7

comp=Z,10.0nm,0.6s
DAV Davao City (W) 27.97 216 LR LR 14 52 45.7
comp=Z,91nm,21.6s,baz=48,slow=32
MA2 Magadan 29.47 9 P **P** **14 43 52.8 -0.3**
comp=Z,1.8nm,0.6s,baz=174,slow=7.5,SNR=5.6
MA2 LR LR 14 55 34.3

comp=Z,75nm,21.6s,baz=198,slow=36
MA2 Magadan 29.47 9⇓ *e*P **P** **14 43 55.0 +1.9**
MA2 pmax pmax

comp=Z,7.0nm,1.8s
ULN Ulaanbaatar 31.44 313 *d i*P **P** **14 44 12.5 +1.7**
ULN pmax pmax

comp=Z,14nm,1.3s
ULN Ulaanbaatar 31.44 313 P **P** **14 44 10.6 -0.2**
ULN IAmb IAmb 14 44 13.2

comp=Z,7.4nm,0.7s
SONM Songino Array 31.84 312 P **P** **14 44 14.9 +0.5**
comp=Z,3.8nm,0.8s,baz=114,slow=8.2,SNR=14
SONM LR LR 14 57 45.9

comp=Z,191nm,18.1s,baz=112,slow=38
SONM Songino Array 31.84 312 *e*P **P** **14 44 15.9 +1.5**
SONM pmax pmax

comp=Z,4.0nm,0.8s
SONM Songino Array 31.84 312 P **P** **14 44 14.0 -0.4**
LZH Lanzhou 31.88 290⇑ P **P** **14 44 10.6 -4.3**
LZH pmax pmax

comp=Z,21nm,1.0s
LZH LR LR

comp=Z,220nm,13.0s
LZH LR LR

comp=Z,300nm,14.1s
LZH LR LR

comp=Z,210nm,14.6s
YAK Yakutsk 32.25 349 *ce*P **P** **14 44 16.8 -0.8**
YAK pmax pmax

comp=Z,13nm,0.8s
YAK Yakutsk 32.25 349 P **P** **14 44 16.9 -0.7**
SEY Seymchan 32.92 9 P **P** **14 44 23.9 +0.4**
comp=Z,1.7nm,0.7s,baz=203,slow=6.3,SNR=13
SEY Seymchan 32.92 9⇓ *i*P **P** **14 44 24.2 +0.7**
BOD Bodaibo 33.09 333 *e*P **P** **14 44 25.0 0.0**
BOD pmax pmax

comp=Z,15nm,0.9s
ZAK Zakamensk 34.63 316 *e*P **P** **14 44 37.6 -1.0**
ZAK pmax pmax

comp=Z,6.0nm,1.2s
IRK Irkutsk 34.74 319 *e*P **P** **14 44 38.4 -1.0**
IRK pmax pmax

comp=Z,21nm,1.3s
TLY Talaya 34.88 318 *c i*P **P** **14 44 42.0 +1.4**
TLY pmax pmax

comp=Z,13nm,0.9s
TLY Talaya 34.88 318 P **P** **14 44 39.8 -0.8**
TLY IAmb IAmb 14 44 43.2

comp=Z,12nm,0.9s
GTA Gaotai 35.07 296 P **P** **14 44 42.3 -0.3**
GTA pP pP 14 44 47.4 -4.3
GTA sP sP 14 44 50.4 -5.1
GTA ScP **ScP** **14 51 00.1 +3.3**
GTA pmax pmax

comp=Z,10.0nm,1.0s
GTA pmax pmax

comp=Z,69nm,5.5s
GTA LR LR

comp=Z,180nm,19.3s
GTA LR LR

comp=Z,300nm,19.3s
GTA LR LR

comp=Z,330nm,19.6s
MOY Mondy 36.42 317 *e*P **P** **14 44 54.9 +0.9**
MOY pmax pmax

comp=Z,10.0nm,1.5s
BILL Bilibino 40.02 14⇑ *e*P **P** **14 45 24.2 +0.3**
BILL *i* SS SS 14 54 27.2 +2.7
BILL pmax pmax

BILL comp=Z,7.0nm,1.4s MLR MLR

comp=Z,44nm,16.0s
BILL Bilibino 40.02 14 P **P** **14 45 24.0 +0.1**
CHTO Chiang Mai 40.35 263 P **P** **14 45 26.0 -1.2**
CHTO pmax pmax

comp=Z,3.0nm,0.7s
CHTO Chiang Mai 40.35 263 P **P** **14 45 26.0 -1.2**
CM31 Chiang Mai Arr 40.50 263 P **P** **14 45 27.4 -1.1**
CMAR Chiang Mai Arr 40.50 263 P **P** **14 45 27.6 -0.9**
comp=Z,1.4nm,0.7s,baz=57,slow=6.7,SNR=15
CMAR PcP **PcP** **14 47 31.9 +1.2**

comp=Z,0.9nm,0.8s,baz=27,slow=1.2,SNR=6.8
CMAR LR LR 15 02 47.0

comp=Z,154nm,19.7s,baz=129,slow=37
CMAR Chiang Mai Arr 40.50 263 *e*P **P** **14 45 28.6 +0.1**
CMAR pmax pmax

comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 40.50 263 P **P** **14 45 27.9 -0.6**
TIXI Tiksi 41.54 354 P **P** **14 45 36.0 -0.4**
comp=Z,2.1nm,0.4s,baz=80,slow=1.0,SNR=5.4
TIXI Tiksi 41.54 354⇓ *e*P **P** **14 45 36.2 -0.1**
TIXI pmax pmax

comp=Z,11nm,0.8s
TIXI Tiksi 41.54 354 P **P** **14 45 35.9 -0.4**
KSM Kuching 41.59 232 P **P** **14 45 37.8 +0.4**
SOEI Soe 43.60 205 P **P** **14 45 53.9 0.0**
SOEI IAmb IAmb 14 46 16.2

comp=Z,23nm,1.4s
WMQ Urumqi 44.15 303 *e*P **P** **14 45 59.4 +1.4**
DGZ Jazzator, Alta 44.47 311 *ce*P **P** **14 46 01.3 +0.7**
DGZ pmax pmax

comp=Z,13nm,1.0s
MTN Manton Dam 44.51 195 P **P** **14 46 00.2 -0.8**
MTN IAmb IAmb 14 46 00.9

comp=Z,6.9nm,0.7s
IPM Ipoh 46.31 244 P **P** **14 46 15.6 +0.2**
IPM IAmb IAmb 14 46 35.7

comp=Z,14nm,1.3s
ZAA0 Zalesovo Array 46.48 317 P **P** **14 46 15.4 -0.7**
ZALV Zalesovo Beam 46.48 317 P **P** **14 46 16.3 +0.1**
comp=Z,1.5nm,0.5s,baz=99,slow=7.5,SNR=9.6
ZALV PcP **PcP** **14 47 50.8 +0.5**

comp=Z,2.6nm,0.5s,baz=121,slow=3.3,SNR=8.3
ZALV LR LR 15 07 00.1

comp=Z,132nm,18.1s,baz=111,slow=38
ZALV Zalesovo Beam 46.48 317 *e*P **P** **14 46 16.5 +0.3**
ZALV pmax pmax

comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 46.48 317 P **P** **14 46 15.4 -0.7**
TAPN Taplejung 46.92 280 *e*P **P** **14 46 19.4 -1.0**
comp=Z,8.7nm,0.7s
ODAN Odare 47.34 280 *e*P **P** **14 46 22.8 -0.8**
comp=Z,15nm,0.7s
MK31 Makanchi Array 47.86 307 *c i*P **P** **14 46 27.5 +0.4**
MK31 Makanchi Array 47.86 307 P **P** **14 46 26.8 -0.3**
MK31 IAmb IAmb 14 46 28.4

comp=Z,4.8nm,0.7s
MKAR Makanchi Array 47.86 307 P **P** **14 46 27.7 +0.5**
comp=Z,5.0nm,0.6s,baz=90,slow=9.6,SNR=75
MKAR PcP **PcP** **14 47 55.6 +0.2**

comp=Z,0.8nm,0.6s,baz=75,slow=6.4,SNR=2.0
MKAR LR LR 15 07 24.4

comp=Z,113nm,19.1s,baz=88,slow=37
MKAR Makanchi Array 47.86 307 P **P** **14 46 26.8 -0.3**
RAMN Ramite 47.98 280 *e*P **P** **14 46 27.8 -0.8**
comp=Z,15nm,0.7s
MAKZ Makanchi 48.08 307 P **P** **14 46 28.7 -0.1**
MAKZ pmax pmax

comp=Z,6.0nm,0.6s
MAKZ Makanchi 48.08 307 P **P** **14 46 28.7 -0.1**
MAKZ IAmb IAmb 14 46 30.1

comp=Z,5.7nm,0.6s
JIRN Jiri 48.11 281 *e*P **P** **14 46 29.1 -0.7**
comp=Z,36nm,0.9s
GUN Gumba 48.30 281 *e*P **P** **14 46 30.6 -0.6**
comp=Z,42nm,1.1s
PKI Pulchoki 48.80 281 *e*P **P** **14 46 34.1 -0.9**
comp=Z,6.2nm,0.7s
KKN Kakani 48.84 281 *e*P **P** **14 46 34.6 -0.6**
comp=Z,21nm,0.8s
NRIK Noril'sk 49.10 338 P **P** **14 46 37.1 +0.9**
comp=Z,2.2nm,0.5s,baz=93,slow=14,SNR=6.9
NRIK LR LR 15 07 24.0

comp=Z,78nm,21.8s,baz=120,slow=36
NRIK Noril'sk 49.10 338 P **P** **14 46 36.1 -0.2**
NRIK IAmb IAmb 14 46 37.8

comp=Z,5.9nm,0.9s
GKN Gorkha 49.32 282 *e*P **P** **14 46 37.7 -1.1**
comp=Z,24nm,1.1s
PDGK Podgornoye 50.13 303 P **P** **14 46 44.2 -0.5**
KURBB Kurchatov Arra 50.21 312 P **P** **14 46 44.3 -0.7**
KOLN Koldanda 50.26 282 *e*P **P** **14 46 45.2 -0.8**
comp=Z,10nm,0.6s
PYUN Piuhan 50.67 283 *e*P **P** **14 46 49.1 0.0**
comp=Z,23nm,0.5s
WB0 Warramunga Arr 50.71 189 P **P** **14 46 48.2 -0.8**
CTA Charters Tower 50.74 174 P **P** **14 46 49.2 0.0**
comp=Z,4.0nm,1.0s,baz=24,slow=20,SNR=2.0
WRAB Tennant Creek 50.88 189 *c i*P **P** **14 46 49.8 -0.5**
WRAB pmax pmax

comp=Z,7.0nm,0.7s
WRAB Tennant Creek 50.88 189 P **P** **14 46 49.5 -0.9**
WRAB IAmb IAmb 14 46 50.6

comp=Z,7.5nm,0.7s
WR0 Warramunga Arr 50.88 189 P **P** **14 46 49.4 -0.9**
WR0 IAmb IAmb 14 46 50.7

comp=Z,10.0nm,0.6s
WB2 Warramunga Arr 50.89 189 P **P** **14 46 49.5 -0.9**
WB2 IAmb IAmb 14 46 50.7

comp=Z,8.8nm,0.7s
WRA Warramunga Arr 50.89 189 P **P** **14 46 49.9 -0.5**
comp=Z,8.4nm,0.6s,baz=3.4,slow=7.4,SNR=168
WRA PcP **PcP** **14 48 08.0 +1.3**

comp=Z,1.3nm,0.8s,baz=358,slow=3.8,SNR=1.4
WRA Warramunga Arr 50.89 189 P **P** **14 46 48.9 -1.5**
FITZ Fitzroy Crossi 50.96 200 P **P** **14 46 50.7 -0.2**
GSI Gunungsitoli 50.98 244 P **P** **14 46 49.5 -1.8**
GSI IAmb IAmb 14 46 53.4

comp=Z,12nm,0.9s
OHAK Old Harbor 51.35 39 P **P** **14 46 54.2 +0.7**
KDAK Kodiak Island 51.75 38 P **P** **14 46 56.2 -0.2**
comp=Z,4.7nm,0.9s,baz=305,slow=11,SNR=1.3
KDAK Kodiak Island 51.75 38 P **P** **14 46 56.1 -0.3**
SANVU Saraoutou 52.09 148 P **P** **14 47 01.2 +1.9**
A21K Barrow 52.19 21 P **P** **14 46 59.8 +0.3**
A21K IAmb IAmb 14 47 07.8

comp=Z,7.5nm,1.0s
SKT Skwentna 52.51 33 P **P** **14 47 02.5 +0.4**
SKT IAmb IAmb 14 47 11.3

comp=Z,11nm,1.3s
CNPM China Poot 52.52 36 P **P** **14 47 02.2 0.0**
CNPM IAmb IAmb 14 47 07.3

comp=Z,24nm,1.4s
MLY Manley 53.13 29 P **P** **14 47 07.2 +0.6**
KSH Kashi 53.38 299 P **P** **14 47 13.3 +4.3**
KSH S **S** **14 54 45.0 +6.2**
KSH pmax pmax

comp=Z,6.0nm,0.5s
KSH pmax pmax

comp=Z,150nm,5.9s
KSH LR LR

comp=Z,160nm,7.3s
KSH LR LR

comp=Z,210nm,7.6s
KSH LR LR

comp=Z,180nm,5.0s
TOLK Toolik Lake Re 54.01 25 P **P** **14 47 13.5 +0.4**
TOLK IAmb IAmb 14 47 19.4

comp=Z,9.0nm,1.2s
MDM Murphy Dome 54.19 30 P **P** **14 47 13.7 -0.7**
MDM IAmb IAmb 14 47 39.2

comp=Z,4.8nm,1.1s
WRH Wood River Hil 54.22 30 P **P** **14 47 14.5 -0.1**
CCB Clear Creek Bu 54.35 30 P **P** **14 47 16.4 +0.9**
CCB IAmb IAmb 14 47 18.8

comp=Z,4.7nm,1.3s
HON Honolulu 54.46 85 P **P** **14 47 17.6 +0.7**
HON pmax pmax

comp=Z,165nm,1.0s
HON Honolulu 54.46 85 P **P** **14 47 17.6 +0.7**
SCM Sheep Creek Mo 54.49 33 P **P** **14 47 17.2 +0.5**
SCM pmax pmax

comp=Z,21nm,1.2s
SCM Sheep Creek Mo 54.49 33 P **P** **14 47 17.2 +0.5**
AS31 Alice Springs 54.62 189 P **P** **14 47 17.5 -0.4**
AS31 IAmb IAmb 14 47 20.6

comp=Z,2.6nm,0.5s
ASAR Alice Springs 54.62 189 P **P** **14 47 17.5 -0.4**
comp=Z,3.1nm,0.5s,baz=2.3,slow=6.2,SNR=160
ASAR Alice Springs 54.62 189 P **P** **14 47 17.4 -0.6**
IL31 54.75 30 P **P** **14 47 18.8 +0.4**
ILAR Eielson Array 54.75 30 P **P** **14 47 18.1 -0.3**
comp=Z,1.1nm,0.6s,baz=261,slow=6.2,SNR=12
ILAR Eielson Array 54.75 30 *e*P **P** **14 47 20.4 +1.9**
ILAR pmax pmax

comp=Z,1.0nm,0.6s
BRVK Borovoye 55.15 316⇑ *i*P **P** **14 47 21.4 -0.1**
BRVK pmax pmax

comp=Z,4.0nm,0.8s
BRVK Borovoye 55.15 316 P **P** **14 47 21.9 +0.4**
BRVK IAmb IAmb 14 47 22.5

comp=Z,3.5nm,0.8s
PRP Porcupine Dome 55.35 29 P **P** **14 47 23.8 +0.9**
DOT Dot Lake 55.98 31 P **P** **14 47 27.4 0.0**
SCRK Sand Creek 56.01 31 P **P** **14 47 27.7 0.0**
PSA00 Pilbara Seismi 56.09 205 P **P** **14 47 27.9 -0.7**
PSA00 IAmb IAmb 14 47 28.9

comp=Z,3.2nm,0.8s
PSA00 Pilbara Seismi 56.09 205 P **P** **14 47 27.8 -0.7**
PSA00 IAmb IAmb 14 47 30.2

comp=Z,12nm,1.1s
KK31 Karatay Array 56.63 304 P **P** **14 47 32.5 +0.2**
KK31 pmax pmax

comp=Z,7.0nm,0.8s
KK31 Karatay Array 56.63 304 P **P** **14 47 32.5 +0.2**
KK31 IAmb IAmb 14 47 33.8

comp=Z,7.0nm,0.8s
KKAR Karatay Array 56.63 304 P **P** **14 47 32.6 +0.3**
KKAR pmax pmax

comp=Z,7.0nm,0.8s
KKAR Karatay Array 56.63 304 P **P** **14 47 32.4 0.0**
KKAR Karatay Array 56.63 304 P **P** **14 47 32.6 +0.3**
KKAR IAmb IAmb 14 47 33.8

comp=Z,7.0nm,0.8s
NIL Nilore 56.99 292 P **P** **14 47 35.3 +0.2**
NIL pmax pmax

comp=Z,40nm,0.8s
NIL Nilore 56.99 292 P **P** **14 47 35.2 +0.2**
L27K Beaver Creek, 57.01 32 P **P** **14 47 35.4 +0.7**
L27K IAmb IAmb 14 47 40.4

comp=Z,3.4nm,0.8s
EGAK Eagle 57.21 30 P **P** **14 47 34.8 -1.2**
EGAK IAmb IAmb 14 47 58.4

comp=Z,6.1nm,1.2s
GRNC Granite Creek 57.23 35 P **P** **14 47 36.8 +0.3**
GRNC IAmb IAmb 14 47 37.2

comp=Z,16nm,1.4s
TABL Table Mountain 57.55 35 P **P** **14 47 38.2 -0.6**
TABL IAmb IAmb 14 47 41.2

comp=Z,13nm,1.1s
DZM Mont Dzumac 57.66 153 P **P** **14 47 40.7 +0.9**
comp=Z,8.7nm,1.0s,baz=63,slow=11,SNR=2.1
INK Inuvik 59.91 25 P **P** **14 47 55.1 +0.4**
comp=Z,1.6nm,0.6s,baz=286,slow=5.8,SNR=5.1
INK Inuvik 59.91 25 P **P** **14 47 54.7 -0.1**
KBL Kabul 60.04 295 P **P** **14 47 56.5 0.0**
KBL pmax pmax

comp=Z,12nm,0.8s
KBL Kabul 60.04 295 P **P** **14 47 56.5 0.0**
SVE Sverdlovsk 60.08 321 *e*P **P** **14 47 57.1 +1.0**
SVE pmax pmax

comp=Z,24nm,0.9s
ARU Arti 61.29 321 *c i*P **P** **14 48 04.7 +0.4**
ARU 14 48 44.8
ARU S **S** **14 56 24.8 +2.9**
ARU SS **SS** **15 00 22.8 +0.7**
ARU pmax pmax

comp=Z,21nm,0.7s
ARU Arti 61.29 321 P **P** **14 48 04.5 +0.2**
AB31 Akbulak array 62.26 313 *i* P **P** **14 48 11.0 0.0**
ABKAR Akbulak array 62.26 313 P **P** **14 48 10.9 -0.1**
STKA Stephens Creek 62.29 180 P **P** **14 48 10.5 -0.7**
comp=Z,1.4nm,0.7s,baz=355,slow=13,SNR=2.9
STKA Stephens Creek 62.29 180 *e*P **P** **14 48 13.0 +1.8**
STKA pmax pmax

comp=Z,1.0nm,0.7s
FORT Forrest 62.55 193 P **P** **14 48 12.6 -0.3**
C36M Paulatuk 63.06 23 P **P** **14 48 16.0 +0.1**
C36M IAmb IAmb 14 48 29.7

comp=Z,9.1nm,1.4s
BBOO Buckleboo 63.44 185 P **P** **14 48 19.0 +0.1**
HRA Herat 65.38 297 P **P** **14 48 32.8 +0.7**
HRA IAmb IAmb 14 48 34.8

comp=Z,7.3nm,0.9s
KIRV Kirov 65.44 325⇑ *e*P **P** **14 48 32.3 +0.6**
PRGR Permogore 66.19 329 *e*P **P** **14 48 35.7 -0.8**
PRGR pmax pmax

comp=Z,16nm,0.9s
EUNU Eureka 66.36 8 P **P** **14 48 37.4 -0.1**
GEYT Alibeck 67.18 302 P **P** **14 48 44.5 +1.1**
comp=Z,6.5nm,0.9s,baz=45,slow=2.3,SNR=6.6
GEYT LR LR 15 19 41.9

comp=Z,67nm,20.4s,baz=350,slow=37
NWAO Narrogin (SRO) 67.42 202 P **P** **14 48 44.6 -0.1**
NWAO pmax pmax

comp=Z,17nm,1.2s
NWAO Narrogin (SRO) 67.42 202 P **P** **14 48 44.6 -0.1**
BELG Belogornoye 68.60 319⇓ *i*P **P** **14 48 52.7 +0.8**
BELG pmax pmax

comp=Z,4.0nm,0.9s
YKA Yellowknife Ar 69.16 29 P **P** **14 48 55.0 -0.2**
comp=Z,1.2nm,0.9s,baz=290,slow=5.7,SNR=8.4
YKA Yellowknife Ar 69.16 29 P **P** **14 48 55.0 -0.2**
KLMR Klimovskoe 69.21 329 *e*P **P** **14 48 55.4 -0.2**
KLMR pmax pmax

comp=Z,18nm,0.9s
KLMR Klimovskoe 69.21 329 *e*P **P** **14 48 55.4 -0.2**
KLMR AMP 14 48 56.9

comp=Z,18nm,0.9s
ARCES ARCESS Array B 69.95 340 P **P** **14 49 01.0 +1.0**
comp=Z,5.0nm,0.8s,baz=73,slow=10,SNR=7.0
SGF Sodankyl 70.84 338 P **P** **14 49 06.1 +0.6**
MSF Maaselka 70.85 336 P **P** **14 49 05.8 +0.2**
MSF pmax pmax

comp=Z,10.0nm,2.1s
JOF Joensuu 71.62 333 P **P** **14 49 10.4 +0.1**
JOF pmax pmax

comp=Z,19nm,1.0s
DAG Danmarks Havn 72.04 355 *i* P **P** **14 49 13.2 +0.6**
DAG *e*S S 14 49 34.2 -537
DAG Danmarks Havn 72.04 355 *i* P **P** **14 49 13.1 +0.6**
DAG *e*S S 14 49 34.2 -537
OUL Oulu 72.40 336 P **P** **14 49 15.7 +0.8**
SUF Sumiainen 73.70 334 P **P** **14 49 23.1 +0.5**
SUF pmax pmax

comp=Z,27nm,0.8s
FIA1 FINESS Array S 74.48 333 P **P** **14 49 27.8 +0.6**
FINES FINESS Array B 74.48 333 P **P** **14 49 27.9 +0.7**
comp=Z,4.5nm,0.4s,baz=59,slow=5.7,SNR=64
VAF Ylistaro 74.77 336 P **P** **14 49 29.6 +0.8**
ZEI Tsey 75.01 311 *e*P **P** **14 49 35.3 +4.4**
ZEI pmax pmax

comp=Z,4.0nm,0.9s
KBZ Khabaz 75.21 312 P **P** **14 49 32.9 +1.1**
comp=Z,6.0nm,0.8s,baz=96,slow=4.0,SNR=10.0
KBZ Khabaz 75.21 312 *e*P **P** **14 49 34.5 +2.8**
KBZ pmax pmax

comp=Z,6.0nm,0.8s
KIV Kislovodsk 75.24 312 *e*P **P** **14 49 33.8 +1.7**
KIV pmax pmax

comp=Z,33nm,1.0s
KIV MLR MLR

comp=Z,168nm,18.0s
GNI Garni 75.69 308⇓ *e*P **P** **14 49 36.9 +2.1**
GNI pmax pmax

comp=Z,8.0nm,1.1s
VSU Vasula 75.99 331⇑ *e*P **P** **14 49 36.8 +0.9**
VSU pmax pmax

comp=Z,65nm,0.9s
JTMT Jette 76.44 42 P **P** **14 49 37.7 -1.2**

JTMT					IAmb	IAmb	14 49 49.6		
	comp=Z,4.0nm,0.9s								
SUMG	**Summit**	**76.95**	**0**	P	**P**	**14 49 42.8**	**+1.1**		
SUMG				pmax	pmax				
	comp=Z,17nm,1.5s								
SUMG	**Summit**	**76.95**	**0**	P	**P**	**14 49 42.8**	**+1.1**		
SUMG				IAmb	IAmb	14 49 47.8			
	comp=Z,17nm,1.5s								
TUWZ	**Tuamarina**	**77.76**	**156**	P	**P**	**14 49 46.3**	**+0.4**		
MNK	**Minsk**	**77.83**	**327**	*i* P	**P**	**14 49 45.1**	**-1.3**		
	comp=E,4.0nm,1.2s								
MNK				*i* P	**P**	**14 49 45.1**	**-1.3**		
	comp=N,5.0nm,0.6s								
MNK				*i* P	**P**	**14 49 45.1**	**-1.3**		
	comp=Z,5.0nm,0.7s								
MNK				*i* PP	**PP**	**14 52 40.8**	**-1.0**		
MNK				*i* PPP	PPP	14 54 28.6			
MNK				*i* S	**S**	**14 59 36.0**	**-0.6**		
MNK				*i* SS	**SS**	**15 04 38.1**	**+1.7**		
MNK				*i* SSS	SSS	15 08 01.4			
MNK				*i* LQ	LQ	15 19 04.7			
MNK				*i* LR	LR	15 25 00.4			
MNK				*i* LRM	MLR	15 27 10.4			
	comp=N,124nm,19.1s								
MNK				*i* LRM	MLR	15 27 11.0			
	comp=Z,149nm,16.0s								
MNK				*i* LRM	MLR	15 27 25.7			
	comp=E,10.0nm,9.3s								
NVAR	**Mina Array Bea**	**78.62**	**52**	P	**P**	**14 49 51.7**	**+0.3**		
	comp=E,1.4nm,0.7s,baz=282,slow=5.9,SNR=8.2								
NVAR				LR	LR	15 21 22.2			
	comp=E,52nm,18.6s,baz=68,slow=33								
AKASG	**Malin Array Be**	**79.42**	**323**	P	**P**	**14 49 55.4**	**+0.2**		
	comp=E,1.6nm,0.4s,baz=48,slow=6.1,SNR=11								
AKASG	**Malin Array Be**	**79.42**	**323**	P	**P**	**14 49 54.8**	**-0.4**		
AKBB	**Malin Array Si**	**79.42**	**323**	⇑*eP*	**P**	**14 49 55.4**	**+0.2**		
AKBB	**Malin Array Si**	**79.42**	**323**	P	**P**	**14 49 54.8**	**-0.4**		
AKBB				IAmb	IAmb	14 49 56.3			
	comp=Z,9.6nm,1.1s								
NC405	**NORSAR Array S**	**79.84**	**338**	P	**P**	**14 49 57.0**	**-0.4**		
NC204	**NORSAR Array S**	**80.03**	**338**	P	**P**	**14 49 58.8**	**+0.4**		
NOA	**NORSAR Array B**	**80.06**	**338**	P	**P**	**14 49 59.0**	**+0.4**		
	comp=Z,3.6nm,0.7s,baz=42,slow=5.3,SNR=13								
NORES	**NORESS Array B**	**80.18**	**338**	P	**P**	**14 50 00.6**	**+1.4**		
PPT	**Papeete**	**81.66**	**116**	LR	LR	15 19 00.1			
	comp=Z,60nm,21.7s,baz=318,slow=30								
SOCY	**Socotra**	**81.91**	**279**	P	**P**	**14 50 07.5**	**-1.7**		
SOCY				IAmb	IAmb	14 50 11.4			
	comp=Z,6.8nm,0.8s								
PDAR	**Pinedale Array**	**81.94**	**45**	P	**P**	**14 50 09.1**	**-0.1**		
	comp=Z,0.4nm,0.5s,baz=318,slow=1.2,SNR=3.3								
BR131	**Keskin Array S**	**83.20**	**312**	*d* P	**P**	**14 50 16.8**	**+1.1**		
BR131	**Keskin Array S**	**83.20**	**312**	P	**P**	**14 50 16.2**	**+0.5**		
BR131				IAmb	IAmb	14 50 17.6			
	comp=Z,8.6nm,0.8s								
BRTR	**Keskin Array B**	**83.20**	**312**	P	**P**	**14 50 16.8**	**+1.1**		
	comp=Z,4.6nm,0.8s,baz=90,slow=4.9,SNR=18								
BRTR	**Keskin Array B**	**83.20**	**312**	P	**P**	**14 50 16.0**	**+0.3**		
RAYN	**Ar Rayn**	**83.28**	**293**	P	**P**	**14 50 17.1**	**+0.9**		
RAYN				pmax	pmax				
	comp=Z,15nm,0.8s								
RAYN	**Ar Rayn**	**83.28**	**293**	P	**P**	**14 50 17.1**	**+0.9**		
BUR08	**Bucovina Ar. S**	**83.38**	**322**	P	**P**	**14 50 16.2**	**-0.1**		
BUR08				IAmb	IAmb	14 50 23.5			
	comp=Z,5.2nm,1.3s								
BURAR	**Bucovina Array**	**83.39**	**322**	P	**P**	**14 50 16.7**	**+0.2**		
BURAR	**Bucovina Array**	**83.39**	**322**	P	**P**	**14 50 16.7**	**+0.2**		
MDUB	**Mudurnu**	**84.31**	**314**	P	**P**	**14 50 21.5**	**+0.2**		
CLL	**Collm**	**86.65**	**331**	*eP*	**P**	**14 50 33.0**	**+0.4**		
CLL	**Collm**	**86.65**	**331**	*eP*	**P**	**14 50 33.0**	**+0.4**		
TX31	**Lajitas Ar. Si**	**93.77**	**53**	P	**P**	**14 51 06.8**	**+0.3**		
TXAR	**Lajitas Array**	**93.77**	**53**	P	**P**	**14 51 07.9**	**+1.4**		
	comp=Z,1.8nm,0.8s,baz=307,slow=2.7,SNR=18								
TXAR	**Lajitas Array**	**93.77**	**53**	P	**P**	**14 51 07.0**	**+0.5**		
TXAR	**Lajitas Array**	**93.77**	**53**	P	**P**	**14 51 07.0**	**+0.5**		
TORD	**Torodi Ar. Bea**	**121.82**	**313**	PKP	**PKPdf**	**14 56 42.8**	**-1.0**		
	comp=Z,0.6nm,0.7s,baz=34,slow=1.6,SNR=2.7								
LPAZ	**La Paz**	**149.23**	**69**	PKPbc	**PKPbc**	**14 57 39.2**	**+0.2**		
	comp=Z,1.7nm,0.6s,baz=308,slow=2.4,SNR=5.1								

*BJI **13** 15:05:39.9±0.0, 1.°69N×126.°38E, h10km, mB4.9/28, mb4.5/41, Ms4.3/6, Ms7 4.0/6*
*IDC **13** 15:05:44.7±3.8, 1.°70N×126.°14E, h24km±25km, mb4.2/20, mb1 4.3/24, mb1mx4.2/37, mbtmp4.3/24, ML4.1/3, MS3.3/10, Ms1 3.4/10, ms1mx3.1/39, Error ellipse: s-maj=20.6km s-min=11.1km az=79.0*
*NEIC **13** 15:05:45.2±1.9, 1.°72N±0.°06×126.°29E±0.°07, h33km±4km, mb4.6/50, Error ellipse: s-maj=10.2km s-min=7.6km az=58.0*
*DJA **13** 15:05:46.9±0.3, 2.°N±3.°×12.°6E±.°, h58km±4km, M4.5/22, mB4.9/7, mb4.6/22, MLv4.6/13, Mw(mB)4.2/7*

ISC 13 15:05:47.0±0.3, 1.°72N±0.°04×126.°32E±0.°05, h47km, n146, σ1s55/142, mb4.6/56, MS3.4/9, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.41**	**132**	Pn	**Pn**	**15 06 08.6**	**-1.7**
TNTI	**Ternate**	**1.41**	**132**	P	**Pn**	**15 06 10.0**	**-0.2**
SGSI	**Sangihe**	**2.11**	**338**	P	**Pn**	**15 06 19.3**	**-0.6**
KMSI	**Cibinong**	**2.60**	**244**	P	**Pn**	**15 06 28.3**	**+1.7**
GTOI	**Gorontalo**	**3.48**	**252**	P	**Pn**	**15 06 40.4**	**+1.7**
SANI	**Sanana**	**3.76**	**185**	P	**Pn**	**15 06 42.8**	**+0.3**
DDMP	**Don Marcelino,**	**4.40**	**352**	*eP*	**Pn**	**15 06 51.2**	**-0.1**
LUWI	**Luwuk**	**4.48**	**232**	Pn	**Pn**	**15 06 54.9**	**+2.4**
LUWI	**Luwuk**	**4.48**	**232**	P	**Pn**	**15 06 53.9**	**+1.4**
MRSI	**Marisa**	**4.55**	**254**	P	**Pn**	**15 06 54.9**	**+1.5**
NLAI	**Namlea**	**4.98**	**171**	P	**Pn**	**15 07 01.6**	**+2.2**
	0.2nm40nm,0.7s						
SKMP	**Bagumbayan, Su**	**5.09**	**340**	*eP*	**Pn**	**15 07 00.9**	**+0.1**
MATI	**Mati**	**5.20**	**359**	*eP*	**Pn**	**15 07 04.9**	**+2.6**
APSI	**Ampana**	**5.35**	**241**	P	**Pn**	**15 07 06.7**	**+2.3**
	1.3nm4μm338nm,0.9s						
DAV	**Davao City (W)**	**5.37**	**352**	Pn	**Pn**	**15 07 05.2**	**+0.5**
	134nm,0.3s,baz=5.1,slow=3.6,SNR=3.0						
DAV				Sn	**Sn**	**15 08 09.7**	**+4.4**
	30nm,0.3s,baz=346,slow=9.9,SNR=1.2						
KCP	**Kidapawan**	**5.40**	**347**	⇑*eP*	**Pn**	**15 07 08.8**	**+3.7**
KCP				*i* S	**Sn**	**15 08 09.5**	**+3.5**
TOLI2	**Tolitoli**	**5.57**	**264**	Pn	**Pn**	**15 07 06.8**	**-0.6**
SIJI	**Sorong**	**5.57**	**117**	Pn	**Pn**	**15 07 08.1**	**+0.6**
	1.5nm,0.3s,baz=324,slow=7.2,SNR=8.9						
BUKP	**Musuan**	**6.25**	**348**	*eP*	**Pn**	**15 07 20.0**	**+3.2**
PAGZ	**Pagadian**	**6.76**	**334**	*eP*	**Pn**	**15 07 23.4**	**-0.3**
FAKI	**Fak Fak**	**7.51**	**128**	Pn	**Pn**	**15 07 35.3**	**+1.3**
GLSP	**General Luna,**	**8.02**	**359**	*eP*	**Pn**	**15 07 42.9**	**+1.9**
TTSI	**Tana Toraja**	**8.04**	**234**	P	**Pn**	**15 07 43.5**	**+2.2**
	608nm60nm,1.0s						
MYLDM	**Lahad Datu**	**8.53**	**294**	Pn	**Pn**	**15 07 50.3**	**+2.3**
SPSI	**Sidrap Palu**	**8.64**	**229**	P	**Pn**	**15 07 51.3**	**+1.7**
	46nm,0.7s						
BNSI	**Bone**	**8.69**	**226**	P	**Pn**	**15 07 52.0**	**+1.8**
	550nm26nm,0.7s						
KAPI	**Kappang**	**9.37**	**224**	Pn	**Pn**	**15 07 57.9**	**-1.6**
	4.4nm,0.3s,baz=183,slow=16,SNR=2.3						
KAPI				LR	LR	15 10 55.7	
	comp=Z,39nm,21.1s,baz=64,slow=34						
KKM	**Kota Kinabalu**	**10.96**	**293**	Pn	**Pn**	**15 08 18.0**	**-3.4**
SOEI	**Soe**	**11.58**	**190**	P	**Pn**	**15 08 31.1**	**+1.2**
	48nm,0.9s						
BATI	**Baumata**	**12.14**	**193**	LR	LR	15 14 15.1	
	comp=Z,177nm,22.0s,baz=34,slow=42						
BATI	**Baumata**	**12.14**	**193**	P	**Pn**	**15 08 39.0**	**+1.6**
	12nm,0.8s						
PLAI	**Plampang**	**13.50**	**219**	P	**Pn**	**15 08 57.9**	**+1.9**
	488nm20nm,0.8s						
TWSI	**Taliwang, Sumb**	**14.01**	**222**	P	**Pn**	**15 09 05.3**	**+2.3**
	15nm,0.9s						
SBUM	**Sibu**	**14.11**	**273**		**P**	**15 09 10.6**	**-0.3**
GENI	**Genyem**	**14.49**	**107**	P	**Pn**	**15 09 08.5**	**-0.9**
	46nm,0.9s						
JAY	**Jayapura**	**14.98**	**106**	Pn	**P**	**15 09 20.2**	**-0.4**
	0.6nm,0.3s,baz=244,slow=17,SNR=3.7						
JAY				LR	LR	15 14 49.8	
	comp=Z,103nm,20.6s,baz=289,slow=36						
JAY	**Jayapura**	**14.98**	**106**	P	**Pn**	**15 09 14.5**	**-1.5**
	10nm,0.9s						
MTN	**Manton Dam**	**15.23**	**162**		**Pn**	**15 09 18.2**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.80**	**230**	P	**P**	**15 09 31.1**	**+1.5**
KSM	**Kuching**	**16.01**	**269**	P	**P**	**15 09 32.1**	**+0.2**
KNRA	**Kununurra**	**17.45**	**172**		**Pn**	**15 09 47.1**	**0.0**
UGM	**Wanagama**	**18.43**	**239**	P	**Pn**	**15 09 59.3**	**0.0**
UGM				IAmb	IAmb	15 10 10.2	
	comp=Z,85nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.70**	**182**	P	**P**	**15 10 12.6**	**0.0**
	comp=Z,0.6nm,0.3s,baz=344,slow=6.1,SNR=15						
FITZ	**Fitzroy Crossi**	**19.70**	**182**		**P**	**15 10 12.3**	**-0.3**
LEM	**Lembang**	**20.50**	**245**	LR	LR	15 19 50.0	
	comp=Z,143nm,19.9s,baz=52,slow=42						
CISI	**Cisompet, Garu**	**20.63**	**243**	P	**P**	**15 10 21.8**	**-1.1**
CISI				IAmb	IAmb	15 10 49.5	
	comp=Z,20nm,1.0s						
YULB	**Yu-li**	**22.09**	**348**	P	**P**	**15 10 35.7**	**-2.7**
YULB				IAmb	IAmb	15 10 47.4	
	comp=Z,40nm,1.5s						
TPUB	**Ta-pu**	**22.15**	**346**	P	**P**	**15 10 35.6**	**-3.5**
TPUB				IAmb	IAmb	15 10 44.6	
	comp=Z,35nm,0.9s						
MYKOM	**Kota Tinggi**	**22.46**	**271**	P	**P**	**15 10 42.4**	**0.0**
SSLB	**Suanglung**	**22.55**	**347**	P	**P**	**15 10 40.6**	**-2.7**
SSLB				IAmb	IAmb	15 10 52.4	
	comp=Z,21nm,1.2s						
WB0	**Warramunga Arr**	**22.77**	**160**	P	**P**	**15 10 45.1**	**-0.6**
WB0				IAmb	IAmb	15 10 49.2	
	comp=Z,20nm,0.9s						
COEN	**Coen**	**22.84**	**134**	P	**P**	**15 10 45.9**	**-0.5**
WRAB	**Tennant Creek**	**22.91**	**160**	P	**P**	**15 10 46.5**	**-0.6**
WRAB				IAmb	IAmb	15 10 59.2	
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	**22.92**	**160**	P	**P**	**15 10 46.6**	**-0.6**
	comp=Z,7.8nm,0.3s,baz=336,slow=11,SNR=143						
WRA				PcP	**PcP**	**15 14 35.8**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=329,slow=2.0,SNR=3.2						
WRA	**Warramunga Arr**	**22.92**	**160**	P	**P**	**15 10 45.4**	**-1.8**
WB2	**Warramunga Arr**	**22.92**	**160**	P	**P**	**15 10 46.6**	**-0.6**
WB2				IAmb	IAmb	15 10 50.8	
	comp=Z,31nm,1.2s						
WR0	**Warramunga Arr**	**23.00**	**160**	P	**P**	**15 10 47.4**	**-0.6**
WR0				IAmb	IAmb	15 10 55.1	
	comp=Z,32nm,1.4s						
YHNB	**Yeheng**	**23.31**	**349**	P	**P**	**15 10 49.2**	**-2.0**
YHNB				IAmb	IAmb	15 11 09.7	
	comp=Z,41nm,1.4s						
PMG	**Port Moresby**	**23.52**	**118**	LR	LR	15 20 49.1	
	comp=Z,82nm,19.5s,baz=276,slow=38						
QIZ	**Qiongzhong**	**23.59**	**318**	P	**P**	**15 10 53.3**	**-0.5**
QIZ				S	**S**	**15 15 09.5**	**+4.6**
QIZ				LR	LR		
	comp=Z,72nm,9.1s						
QIZ				LR	LR		
	comp=Z,90nm,4.1s						
QIZ				LR	LR		
	comp=Z,180nm,20.5s						
PSA00	**Pilbara Seismi**	**24.00**	**195**	P	**P**	**15 10 57.5**	**0.0**
PSA00				IAmb	IAmb	15 10 58.8	
	comp=Z,17nm,0.9s						
AS31	**Alice Springs**	**26.29**	**164**	P	**P**	**15 11 18.4**	**+0.1**
ASAR	**Alice Springs**	**26.29**	**164**	P	**P**	**15 11 18.9**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=340,slow=7.6,SNR=122						
ASAR				PcP	**PcP**	**15 14 45.0**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=352,slow=2.2,SNR=6.8						
ASAR				ScP	**ScP**	**15 18 23.8**	**+3.7**
	comp=Z,0.6nm,1.0s,baz=347,slow=2.9,SNR=4.0						
ASAR	**Alice Springs**	**26.29**	**164**	P	**P**	**15 11 18.7**	**+0.3**
RPSI	**Ratau Prapat**	**27.39**	**273**	P	**P**	**15 11 26.2**	**-2.2**
PSI	**Prapat**	**27.39**	**273**	P	**P**	**15 11 26.2**	**-2.4**
	comp=Z,6.8nm,1.1s,baz=178,slow=3.1,SNR=3.6						
CTAO	**Charters Tower**	**29.19**	**139**	P	**P**	**15 11 44.3**	**0.0**
CTAO				IAmb	IAmb	15 11 49.7	
	comp=Z,14nm,1.1s						
JCJ	**Chichijima**	**29.47**	**30**	LR	LR	15 23 36.9	
	comp=Z,88nm,19.1s,baz=124,slow=36						
NJ2	**Nanjing**	**30.98**	**348**	*eP*	**P**	**15 11 59.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.58**	**304**	P	**P**	**15 12 05.6**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=130,slow=7.6,SNR=6.9						
CMAR				LR	LR	15 25 30.1	
	comp=Z,48nm,20.9s,baz=171,slow=38						
CMAR	**Chiang Mai Arr**	**31.58**	**304**	P	**P**	**15 12 03.7**	**-1.8**
MORW	**Morawa**	**32.16**	**197**	P	**P**	**15 12 10.6**	**+0.2**
FORT	**Forrest**	**32.36**	**177**	P	**P**	**15 12 12.5**	**+0.4**
KMI	**Kunming**	**32.54**	**318**	⇓P	**P**	**15 12 15.8**	**+1.7**
KMI				pP	pP	15 12 17.3	-8.8
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,140nm,4.4s						
ENH	**Enshi**	**32.58**	**332**	P	**P**	**15 12 13.0**	**-1.2**
ENH				IAmb	IAmb	15 12 18.2	
	comp=Z,16nm,1.2s						
JWT	**Wachi**	**34.45**	**13**	P	**P**	**15 12 29.8**	**-0.5**
JGF	**Kuroka**	**35.24**	**16**	P	**P**	**15 12 36.8**	**-0.3**
NWAO	**Narrogin (SRO)**	**35.51**	**193**	P	**P**	**15 12 36.2**	**-3.3**
BBOO	**Buckleboo**	**35.55**	**166**	P	**P**	**15 12 40.1**	**+0.2**
BBOO				IAmb	IAmb	15 13 01.4	
	comp=Z,13nm,1.1s						
KSRS	**Korea Array**	**35.59**	**2**	P	**P**	**15 12 42.1**	**+2.1**
	comp=Z,1.6nm,0.8s,baz=180,slow=9.4,SNR=5.1						
MJAR	**Matsushiro Arr**	**36.36**	**16**	P	**P**	**15 12 46.8**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=186,slow=9.3,SNR=4.0						
MAT	**Matsushiro**	**36.36**	**16**	P	**P**	**15 12 44.3**	**-2.4**
STKA	**Stephens Creek**	**36.42**	**158**	P	**P**	**15 12 48.1**	**+0.9**
	comp=Z,2.6nm,0.3s,baz=340,slow=19,SNR=3.0						
STKA	**Stephens Creek**	**36.42**	**158**	P	**P**	**15 12 47.6**	**+0.4**
JMM	**Marumori**	**38.36**	**19**	P	**P**	**15 13 01.8**	**-1.7**
BJI	**Beijing**	**39.24**	**348**	P	**P**	**15 13 10.4**	**-0.6**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LZH	**Lanzhou**	**40.04**	**331**	*eP*	**P**	**15 13 17.8**	**-0.1**
LZH				sP	pP	15 13 22.3	-7.8
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
HHC	**Hu-ho-hao-te**	**41.18**	**343**	*eP*	**P**	**15 13 26.1**	**-1.1**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,61nm,5.6s						
USRK	**Ussuriysk Ar.**	**42.60**	**6**	P	**P**	**15 13 40.6**	**+2.0**
	comp=Z,1.9nm,0.6s,baz=189,slow=8.5,SNR=5.8						
TOO	**Toolangi**	**42.94**	**157**	P	**P**	**15 13 41.4**	**0.0**
TOO				IAmb	IAmb	15 14 03.2	
	comp=Z,18nm,1.5s						
H11S3	**WAKE ISLAND Hy**	**42.94**	**64**	T	T	15 59 39.4	
	baz=257						
H11S1	**WAKE ISLAND Hy**	**42.95**	**64**	T	T	15 59 47.9	
	baz=257						
H11S2	**WAKE ISLAND Hy**	**42.95**	**64**	T	T	15 59 40.5	
	baz=257						
H11N1	**WAKE ISLAND Hy**	**43.51**	**63**	T	T	16 00 16.9	
	baz=258						
H11N2	**WAKE ISLAND Hy**	**43.52**	**63**	T	T	16 00 15.8	
	baz=258						
H11N3	**WAKE ISLAND Hy**	**43.53**	**63**	T	T	16 00 24.2	
	baz=258						
GTA	**Gaotai**	**44.62**	**331**	*eP*	**P**	**15 13 54.8**	**-0.3**
GTA				pP	pP	15 13 58.8	-8.6
GTA				sP	sP	15 14 02.5	-10
GTA				PcP	**PP**	**15 15 39.1**	**-0.8**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,55nm,5.8s						
GTA				LR	LR		
	comp=Z,71nm,15.6s						
GTA				LR	LR		
	comp=Z,74nm,18.2s						
GTA				LR	LR		
	comp=Z,120nm,18.9s						
TAPN	**Taplejung**	**44.90**	**308**	*eP*	**P**	**15 13 56.3**	**-1.4**
	comp=Z,16nm,1.1s						
ODAN	**Odare**	**44.93**	**307**	*eP*	**P**	**15 13 56.8**	**-1.1**
	comp=Z,7.6nm,0.6s						
RAMN	**Ramite**	**45.60**	**307**	*eP*	**P**	**15 14 02.7**	**-0.5**
	comp=Z,19nm,1.2s						
JIRN	**Jiri**	**46.24**	**308**	*eP*	**P**	**15 14 07.0**	**-1.4**
	comp=Z,4.0nm,0.3s						
GUN	**Gumba**	**46.60**	**308**	*eP*	**P**	**15 14 10.3**	**-0.9**
	comp=Z,6.8nm,0.4s						
PKIN	**Phulchoki**	**46.83**	**307**	*eP*	**P**	**15 14 12.1**	**-0.8**
	comp=Z,3.8nm,0.4s						
KOLN	**Koldanda**	**48.35**	**306**	*eP*	**P**	**15 14 24.0**	**-0.7**
	comp=Z,28nm,0.9s						
ULN	**Ulaanbaatar**	**48.90**	**343**		**P**	**15 14 27.3**	**-1.2**
PYUN	**Piuthan**	**48.98**	**307**	*eP*	**P**	**15 14 28.9**	**-0.6**
	comp=Z,29nm,0.9s						
SONM	**Songino Array**	**49.07**	**342**	P	**P**	**15 14 29.6**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=163,slow=7.2,SNR=11						
SONM				PcP	**PcP**	**15 15 53.6**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=152,slow=2.8,SNR=4.7						
SONM				LR	LR	15 38 53.6	
	comp=Z,46nm,18.1s,baz=118,slow=41						
SONM	**Songino Array**	**49.07**	**342**		**P**	**15 14 28.6**	**-1.2**
WMQ	**Urumqi**	**54.14**	**326**	*eP*	**P**	**15 15 08.6**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.7s						
PEA0B	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**15 15 33.0**	**+2.1**
PETK	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**15 15 32.8**	**+1.9**
	comp=Z,1.3nm,0.5s,baz=190,slow=3.5,SNR=18						
PETK	**Petropavlovsk-**	**57.44**	**22**	P	**P**	**15 15 33.2**	**+2.3**
MK31	**Makanchi Array**	**58.98**	**326**	P	**P**	**15 15 41.0**	**-0.8**
MK31				IAmb	IAmb	15 15 47.6	
	comp=Z,4.5nm,0.8s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**15 15 41.3**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=123,slow=8.8,SNR=23						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**15 15 41.1**	**-0.8**
MAKZ	**Makanchi**	**59.16**	**326**	P	**P**	**15 15 42.6**	**-0.6**
MAKZ				IAmb	IAmb	15 15 48.4	
	comp=Z,5.7nm,0.8s						
LBZ	**Lake Benmore**	**60.27**	**145**	P	**P**	**15 15 51.1**	**+0.3**
MA2	**Magadan**	**60.74**	**14**	P	**P**	**15 15 54.4**	**+0.7**
MA2				IAmb	IAmb	15 15 56.4	
	comp=Z,6.0nm,0.8s						
TUWZ	**Tuamarina**	**60.86**	**141**	P	**P**	**15 15 54.9**	**+0.1**
BKZ	**Black Stump Fm**	**61.38**	**137**	P	**P**	**15 15 59.0**	**+0.5**
ZALV	**Zalesovo Beam**	**62.19**	**334**	P	**P**	**15 16 01.9**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=137,slow=6.2,SNR=5.4						
ZALV	**Zalesovo Beam**	**62.19**	**334**	P	**P**	**15 16 01.6**	**-2.0**
AFI	**Afiamalu**	**63.26**	**106**	LR	LR	15 43 38.1	
	comp=Z,69nm,19.4s,baz=178,slow=36						
KKAR	**Karatay Array**	**64.43**	**318**	P	**P**	**15 16 17.2**	**-1.5**
CASY	**Casey**	**68.78**	**187**	P	**P**	**15 16 49.1**	**+3.2**
CASY				IAmb	IAmb	15 16 59.7	
	comp=Z,11nm,1.2s						
BRVK	**Borovoye**	**68.85**	**328**	P	**P**	**15 16 46.2**	**-0.4**
BRVK				IAmb	IAmb	15 16 50.1	
	comp=Z,7.2nm,0.9s						
TIXI	**Tiksi**	**69.85**	**1**	P	**P**	**15 16 52.1**	**-0.3**
TIXI				IAmb	IAmb	15 16 53.3	
	comp=Z,6.4nm,1.1s						
NRIK	**Noril'sk**	**72.28**	**347**	P	**P**	**15 17 07.0**	**-0.2**
	comp=Z,5.8nm,0.7s,baz=126,slow=5.9,SNR=13						
NRIK	**Noril'sk**	**72.28**	**347**	P	**P**	**15 17 07.0**	**-0.2**
NRIK				IAmb	IAmb	15 17 11.4	
	comp=Z,6.5nm,0.8s						
SOCY	**Socotra**	**72.37**	**282**	P	**P**	**15 17 06.6**	**-2.3**
SOCY				IAmb	IAmb	15 17 08.7	
	comp=Z,4.4nm,0.8s						
ABKAR	**Akbulak array**	**73.45**	**321**	P	**P**	**15 17 13.2**	**-1.3**
SDPT	**Sand Point**	**79.08**	**34**	P	**P**	**15 17 44.9**	**-1.4**
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**15 17 59.5**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=296,slow=5.8,SNR=11						
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**15 17 59.5**	**+0.6**
VNDA				IAmb	IAmb	15 18 01.0	
	comp=Z,5.0nm,1.1s						
MAW	**Mawson**	**81.74**	**200**	P	**P**	**15 18 01.6**	**+1.3**
	comp=Z,3.0nm,0.9s,baz=58,slow=5.7,SNR=3.6						
PPT	**Papeete**	**84.89**	**108**	LR	LR	15 54 19.4	
	comp=Z,14nm,18.5s,baz=322,slow=34						
KLMR	**Klimovskoe**	**86.95**	**331**	*eP*	**P**	**15 18 25.9**	**-1.0**
KLMR				AMP		15 18 28.6	
	comp=Z,13nm,1.0s						
ILAR	**Eielson Array**	**87.09**	**25**	P	**P**	**15 18 27.1**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=256,slow=4.4,SNR=4.9						
KMBO	**Kilima Mbogo**	**89.10**	**269**	P	**P**	**15 18 39.7**	**+1.2**
	comp=Z,1.7nm,0.5s,baz=96,slow=2.0,SNR=7.2						
BRTR	**Keskin Array B**	**90.98**	**310**	P	**P**	**15 18 46.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=67,slow=10,SNR=5.5						
ARCES	**ARCESS Array B**	**92.18**	**340**	P	**P**	**15 18 51.1**	**-0.3**

VAY				*e*Lg	Lg	15 47 14.0		
	comp=N,237nm,0.3s							
KTI	**Kastanea**	**0.50**	**202**	P	**Pg**	**15 47 06.6**	**+0.1**	
KNT	**Kendrikon**	**0.51**	**53**	P	**Pg**	**15 47 06.8**	**+0.2**	
KNT				S	**Sg**	**15 47 13.8**	**+0.5**	
KNT				AML	AML	15 47 15.2		
	comp=N,1700µm,0.2s							
KNT				AML	AML	15 47 15.2		
	comp=E,968µm,0.1s							
KNT	**Kendrikon**	**0.51**	**53**	P	**Pg**	**15 47 07.0**	**+0.3**	
KNT				S	**Sg**	**15 47 14.2**	**+0.9**	
	comp=E,675nm,0.2s							
KNT	**Kendrikon**	**0.51**	**53**	PG	**Pg**	**15 47 06.8**	**+0.2**	
KNT				SG	**Sg**	**15 47 14.2**	**+0.9**	
KNT	**Kendrikon**	**0.51**	**53**	*i*Pg	**Pg**	**15 47 07.0**	**+0.3**	
KNT				*i* Sg	**Sb**	**15 47 14.8**	**-0.9**	
THE	**Thessaloniki**	**0.51**	**116**	P	**Pg**	**15 47 06.6**	**-0.1**	
THE				S	**Sg**	**15 47 13.5**	**+0.1**	
THE				AML	AML	15 47 20.6		
	comp=N,495µm,0.4s							
THE				AML	AML	15 47 22.4		
	comp=E,451µm,0.3s							
THE	**Thessaloniki**	**0.51**	**116**	P	**Pg**	**15 47 06.5**	**-0.1**	
THE				S	**Sg**	**15 47 13.6**	**+0.2**	
THE	**Thessaloniki**	**0.51**	**116**	*i*Pg	**Pg**	**15 47 06.6**	**-0.1**	
THE				*i* Sg	**Sg**	**15 47 14.0**	**+0.6**	
HORT	**Hortiatis**	**0.62**	**115**	P	**Pg**	**15 47 08.9**	**+0.1**	
HORT				AML	AML	15 47 23.1		
	comp=E,744µm,0.6s							
HORT				AML	AML	15 47 23.4		
	comp=N,751µm,0.6s							
HORT	**Hortiatis**	**0.62**	**115**	P	**Pg**	**15 47 08.9**	**+0.1**	
HORT	**Hortiatis**	**0.62**	**115**	PG	**Pg**	**15 47 08.3**	**-0.5**	
KZN	**Kozani**	**0.71**	**219**	P	**Pg**	**15 47 10.1**	**-0.4**	
KZN				AML	AML	15 47 23.8		
	comp=N,469µm,0.5s							
KZN				AML	AML	15 47 25.1		
	comp=E,666µm,0.5s							
KZN	**Kozani**	**0.71**	**219**	P	**Pg**	**15 47 10.2**	**-0.3**	
KZN				S	**Sg**	**15 47 20.5**	**+0.8**	
	comp=E,288nm,0.5s							
FNA	**Florina**	**0.75**	**265**	P	**Pg**	**15 47 10.9**	**-0.4**	
FNA				AML	AML	15 47 28.3		
	comp=E,598µm,0.3s							
FNA				AML	AML	15 47 29.9		
	comp=N,658µm,0.4s							
FNA	**Florina**	**0.75**	**265**	P	**Pg**	**15 47 10.8**	**-0.4**	
FNA				S	**Sg**	**15 47 21.8**	**+0.8**	
	comp=N,290nm,0.4s							
FNA	**Florina**	**0.75**	**265**	*e*Pg	**Pg**	**15 47 10.9**	**-0.4**	
FNA				*e*Sg	**Sg**	**15 47 21.4**	**+0.4**	
FNA	**Florina**	**0.75**	**265**	PG	**Pg**	**15 47 10.9**	**-0.4**	
FNA	**Florina**	**0.75**	**265**	*i*Pg	**Pg**	**15 47 11.0**	**-0.2**	
FNA				*i* Sg	**Sg**	**15 47 21.6**	**+0.6**	
SOH	**Sokhos**	**0.75**	**92**	P	**Pg**	**15 47 11.3**	**0.0**	
SOH				S	**Sg**	**15 47 21.2**	**+0.1**	
SOH				AML	AML	15 47 27.4		
	comp=E,2360µm,0.4s							
SOH				AML	AML	15 47 27.7		
	comp=N,1233µm,0.6s							
SOH	**Sokhos**	**0.75**	**92**	P	**Pg**	**15 47 11.1**	**-0.2**	
SOH				S	**Sg**	**15 47 21.6**	**+0.5**	
	comp=N,715nm,0.5s							
SOH	**Sokhos**	**0.75**	**92**	*i*Pg	**Pg**	**15 47 11.3**	**0.0**	
SOH				*i* Sg	**Sb**	**15 47 22.9**	**+0.2**	
LIT	**Litokhoron**	**0.76**	**173**	P	**Pg**	**15 47 11.5**	**0.0**	
LIT				AML	AML	15 47 30.6		
	comp=E,287µm,0.3s							
LIT				AML	AML	15 47 32.1		
	comp=N,222µm,0.7s							
LIT	**Litokhoron**	**0.76**	**173**	P	**Pg**	**15 47 11.0**	**-0.5**	
LIT	**Litokhoron**	**0.76**	**173**	*i*Pg	**Pg**	**15 47 11.5**	**0.0**	
STIP	**Stip**	**0.85**	**351**	*i* Pg	**Pg**	**15 47 13.2**	**0.0**	
STIP				*i* Sg	**Sb**	**15 47 26.0**	**+0.5**	
STIP				*e*Lg	Lg	15 47 26.0		
	comp=E,25nm,0.4s							
PLG	**Polygyros**	**0.96**	**120**	P	**Pg**	**15 47 14.8**	**-0.4**	
PLG				AML	AML	15 47 32.2		
	comp=N,563µm,0.3s							
PLG				AML	AML	15 47 32.3		
	comp=E,586µm,0.4s							
PLG	**Polygyros**	**0.96**	**120**	P	**Pg**	**15 47 14.8**	**-0.4**	
PLG				S	**Sb**	**15 47 28.6**	**0.0**	
	comp=E,285nm,0.4s							
SRS	**Serrai**	**0.97**	**74**	P	**Pg**	**15 47 14.8**	**-0.6**	
SRS				AML	AML	15 47 34.2		
	comp=E,294µm,0.6s							
SRS				AML	AML	15 47 34.4		
	comp=N,298µm,0.5s							
SRS	**Serrai**	**0.97**	**74**	P	**Pg**	**15 47 14.8**	**-0.6**	
SRS				S	**Sb**	**15 47 28.8**	**-0.1**	
	comp=N,132nm,0.5s							
SRS	**Serrai**	**0.97**	**74**	*e*Pg	**Pg**	**15 47 14.8**	**-0.6**	
SRS				*e*Sg	**Sg**	**15 47 27.7**	**-0.3**	
SRS	**Serrai**	**0.97**	**74**	*i*Pg	**Pg**	**15 47 14.8**	**-0.6**	
SRS				*i* Sg	**Sb**	**15 47 28.8**	**-0.1**	
NEST	**Nestorio**	**1.09**	**247**	P	**Pg**	**15 47 17.4**	**-0.4**	
NEST				AML	AML	15 47 37.3		
	comp=N,318µm,0.6s							
NEST				AML	AML	15 47 38.8		
	comp=E,324µm,0.4s							
NEST	**Nestorio**	**1.09**	**247**	P	**Pg**	**15 47 17.8**	**0.0**	
PENT	**Pentalofos**	**1.14**	**235**	P	**Pg**	**15 47 18.7**	**0.0**	
PENT				AML	AML	15 47 45.0		
	comp=N,239µm,0.8s							
PENT				AML	AML	15 47 46.0		
	comp=E,168µm,0.6s							
KPRO	**Kipourio**	**1.18**	**221**	P	**Pg**	**15 47 19.1**	**-0.3**	
KPRO				AML	AML	15 47 41.0		
	comp=N,326µm,0.6s							
KPRO				AML	AML	15 47 47.4		
	comp=E,242µm,0.5s							
OHR	**Ohrid**	**1.21**	**283**	*i* Pg	**Pb**	**15 47 19.7**	**-0.4**	
OHR				*i* Sg	**Sb**	**15 47 36.4**	**+0.5**	
OHR				*e*Lg	Lg	15 47 36.6		
	comp=N,44nm,0.5s							
NVR	**Nevrokopi**	**1.24**	**66**	P	**Pb**	**15 47 19.5**	**-1.0**	
NVR				AML	AML	15 47 42.4		
	comp=E,179µm,0.5s							
NVR				AML	AML	15 47 42.7		
	comp=N,198µm,0.7s							
NVR	**Nevrokopi**	**1.24**	**66**	P	**Pb**	**15 47 19.9**	**-0.6**	
NVR				S	**Sn**	**15 47 37.8**	**+0.3**	
	comp=N,92nm,0.6s							
SKO	**Skopje**	**1.31**	**328**	*e*Pg	**Pn**	**15 47 20.3**	**-1.3**	
SKO				*e*Sg	**Sb**	**15 47 38.7**	**-0.1**	
SKO	**Skopje**	**1.31**	**328**	*i* Pn	**Pn**	**15 47 21.6**	**0.0**	
SKO				*i* Sn	**Sb**	**15 47 38.5**	**-0.3**	
SKO				*e*Lg	Lg	15 47 38.6		
	comp=E,3.3nm,0.5s							
OUR	**Ouranopolis**	**1.34**	**112**	P	**Pn**	**15 47 22.0**	**+0.1**	
OUR				AML	AML	15 47 46.9		
	comp=E,338µm,0.8s							
OUR				AML	AML	15 47 47.0		
	comp=N,411µm,0.4s							
OUR	**Ouranopolis**	**1.34**	**112**	P	**Pn**	**15 47 21.7**	**-0.2**	
OUR				S	**Sg**	**15 47 41.1**	**+1.2**	
	comp=N,175nm,0.4s							
OUR	**Ouranopolis**	**1.34**	**112**	PN	**Pb**	**15 47 22.4**	**+0.2**	
PAIG	**Paliouri**	**1.37**	**132**	P	**Pn**	**15 47 22.4**	**+0.1**	
PAIG				AML	AML	15 47 46.1		
	comp=N,580µm,0.6s							
PAIG				AML	AML	15 47 47.7		
	comp=E,281µm,0.5s							
PAIG	**Paliouri**	**1.37**	**132**	P	**Pn**	**15 47 22.3**	**0.0**	
PAIG				S	**Sg**	**15 47 41.2**	**+0.3**	
	comp=E,218nm,0.5s							
XOR	**Xorichti**	**1.62**	**157**	P	**Pn**	**15 47 25.6**	**-0.2**	
XOR				AML	AML	15 47 47.3		
	comp=E,90µm,0.6s							
XOR				AML	AML	15 47 50.1		
	comp=N,100µm,0.5s							
KAVA	**Kavala**	**1.64**	**84**	P	**Pn**	**15 47 26.3**	**+0.2**	
KAVA	**Kavala**	**1.64**	**84**	P	**Pn**	**15 47 26.2**	**+0.2**	
BOSS	**Bosilegrad**	**1.64**	**3**	*e*Pg	**Pn**	**15 47 26.6**	**+0.5**	
BOSS				*e*Sg	**Sb**	**15 47 48.2**	**-0.1**	
GJIK	**Gjilan**	**1.75**	**337**	*i* Pn	**Pn**	**15 47 28.4**	**+0.8**	
AGG	**Agios Georgios**	**1.83**	**181**	PN	**Pn**	**15 47 28.4**	**-0.3**	
VTS	**Vitosha**	**1.88**	**20**	*e*Pn	**Pn**	**15 47 30.0**	**+0.5**	
VTS				*e*Sg	**Sb**	**15 47 54.5**	**-0.7**	
VTS	**Vitosha**	**1.88**	**20**	*i* Pn	**Pn**	**15 47 30.2**	**+0.7**	
VTS				*i* Sn	**Sb**	**15 47 54.5**	**-0.7**	
BARS	**Barje**	**2.00**	**348**	*e*Pn	**Pn**	**15 47 29.9**	**-1.1**	
BARS	**Barje**	**2.00**	**348**	*i* Pn	**Pn**	**15 47 30.7**	**-0.3**	
IGT	**Igoumenitsa**	**2.04**	**230**	*e*Pn	**Pn**	**15 47 32.6**	**+1.0**	
PLD	**Plovdiv**	**2.16**	**54**	*e*Pn	**Pn**	**15 47 33.9**	**+0.8**	
PLD				*e*Sg	**Sg**	**15 48 06.5**	**+0.4**	
ZAPS	**Zavoj**	**2.42**	**5**	*e*Pn	**Pn**	**15 47 37.9**	**+1.0**	
SELS	**Selova**	**2.54**	**339**	*e*Pn	**Pn**	**15 47 38.6**	**+0.2**	
ZAGS	**Zajecar**	**2.96**	**358**	*e*Pn	**Pn**	**15 47 44.4**	**+0.3**	
IVAS	**Ivanjica**	**3.17**	**330**	*e*Pn	**Pn**	**15 47 46.6**	**-0.6**	

NEIC ***13*** *16:31:09.4±0.9, 19°.22N±0°.09×64°.71W±0°.07, h40km±50km, Error ellipse: s-maj=14.6km s-min=8.7km az=203.0*
RSPR ***13*** *16:31:10.2, 19°.24N×64°.70W, h30km±12km, MD3.2/6*

ISC 13 16:31:11.4±1.7, 19°.14N±0°.10×64°.79W±0°.04, h35km, n57, σ0.96/57, 6C-5D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.73**	**167**	*e*P	**Pn**	**16 31 24.2**	**-1.1**
TBVI	**Tortola**	**0.73**	**167**	*e*S	**Sn**	**16 31 34.9**	**-0.2**
TBVI	**Tortola**	**0.73**	**167**		**Pn**	**16 31 24.2**	**-1.1**
TBVI					**Sn**	**16 31 34.9**	**-0.2**
CUPR	**Culebra, Puert**	**0.95**	**210**	*e*P	**Pn**	**16 31 27.0**	**-1.2**
CUPR	**Culebra, Puert**	**0.95**	**210**	*e*S	**Sn**	**16 31 40.9**	**+0.4**
CUPR	**Culebra, Puert**	**0.95**	**210**		**Pn**	**16 31 27.0**	**-1.2**
CUPR					**Sn**	**16 31 40.9**	**+0.4**
CUPR	**Culebra, Puert**	**0.95**	**210**	IAML		16 31 45.1	
	comp=N,403nm,0.5s						
MTP	**Monte Pirata**	**1.26**	**215**	*e*P	**Pn**	**16 31 31.9**	**-0.6**
MTP	**Monte Pirata**	**1.26**	**215**	*e*S	**Sn**	**16 31 49.2**	**+0.9**
MTP	**Monte Pirata**	**1.26**	**215**		**Pn**	**16 31 31.9**	**-0.6**
MTP					**Sn**	**16 31 49.2**	**+0.9**
MTP	**Monte Pirata**	**1.26**	**215**	IAML		16 31 52.3	
	comp=N,266nm,0.3s						
MTP				IAML		16 31 54.2	
	comp=E,509nm,0.2s						
CBYP	**Canovanas**	**1.33**	**230**	*e*P	**Pn**	**16 31 32.6**	**-0.9**
CBYP	**Canovanas**	**1.33**	**230**	*e*S	**Sn**	**16 31 50.5**	**+0.5**
CBYP	**Canovanas**	**1.33**	**230**		**Sn**	**16 31 50.5**	**+0.5**
CBYP	**Canovanas**	**1.33**	**230**		**Pn**	**16 31 31.9**	**-1.6**
CBYP	**Canovanas**	**1.33**	**230**	IAML		16 31 54.9	
	comp=E,886nm,0.2s						
CBYP				IAML		16 31 56.0	
	comp=N,850nm,0.2s						
CDVI	**St. Croix**	**1.38**	**179**		**Pn**	**16 31 34.5**	**+0.4**
HUMP	**Col San Antoni**	**1.41**	**226**	*e*P	**Pn**	**16 31 34.0**	**-0.5**
HUMP	**Col San Antoni**	**1.41**	**226**	*e*S	**Sn**	**16 31 52.8**	**+0.9**
HUMP	**Col San Antoni**	**1.41**	**226**		**Sn**	**16 31 52.8**	**+0.9**
HUMP	**Col San Antoni**	**1.41**	**226**		**Pn**	**16 31 33.2**	**-1.3**
HUMP	**Col San Antoni**	**1.41**	**226**	IAML		16 31 55.6	
	comp=N,301nm,0.2s						
HUMP				IAML		16 31 56.7	
	comp=E,349nm,0.2s						
GCPR	**Guaynabo City**	**1.48**	**236**	*e*P	**Pn**	**16 31 34.6**	**-0.8**
GCPR	**Guaynabo City**	**1.48**	**236**	*e*S	**Sn**	**16 31 54.3**	**+0.7**
GCPR	**Guaynabo City**	**1.48**	**236**		**Sn**	**16 31 54.3**	**+0.7**
GCPR	**Guaynabo City**	**1.48**	**236**		**Pn**	**16 31 34.3**	**-1.2**
GCPR	**Guaynabo City**	**1.48**	**236**	IAML		16 31 56.8	
	comp=E,102nm,0.5s						
GCPR				IAML		16 32 31.3	
	comp=N,68nm,3.5s						
PDPR	**Patillas Dam,**	**1.61**	**227**		**Pn**	**16 31 36.4**	**-1.0**
PDPR				IAML		16 32 02.2	
	comp=E,134nm,0.5s						
SJG	**San Juan**	**1.65**	**232**		**Pn**	**16 31 37.1**	**-0.7**
SJG				IAML		16 32 01.1	
	comp=E,153nm,0.4s						
SJG				IAML		16 32 02.0	
	comp=E,112nm,0.4s						
IGPR	**InterUniversit**	**1.71**	**227**	*e*P	**Pn**	**16 31 38.5**	**-0.1**
IGPR	**InterUniversit**	**1.71**	**227**	*e*S	**Sn**	**16 32 00.0**	**+0.8**
EMPR	**Esperanza - Ma**	**1.78**	**249**	*e*P	**Pn**	**16 31 38.8**	**-0.8**
EMPR	**Esperanza - Ma**	**1.78**	**249**	*e*S	**Sn**	**16 32 01.6**	**+0.6**
EMPR	**Esperanza - Ma**	**1.78**	**249**		**Sn**	**16 32 01.6**	**+0.6**
EMPR	**Esperanza - Ma**	**1.78**	**249**		**Pn**	**16 31 38.4**	**-1.2**
EMPR						16 31 39.0	
EMPR	**Esperanza - Ma**	**1.78**	**249**	IAML		16 32 05.6	
	comp=N,189nm,0.6s						
EMPR				IAML		16 32 09.3	
	comp=E,268nm,0.5s						
CELP	**Cerrillos**	**2.00**	**238**	*e*P	**Pn**	**16 31 42.4**	**-0.2**
CELP	**Cerrillos**	**2.00**	**238**	*e*S	**Sn**	**16 32 07.5**	**+0.9**
CELP	**Cerrillos**	**2.00**	**238**		**Pn**	**16 31 42.4**	**-0.2**
CELP					**Sn**	**16 32 07.5**	**+0.9**
AOPR	**Arecibo Observ**	**2.02**	**248**	*e*P	**Pn**	**16 31 42.6**	**-0.4**
AOPR	**Arecibo Observ**	**2.02**	**248**	*e*S	**Sn**	**16 32 07.9**	**+0.8**
AOPR	**Arecibo Observ**	**2.02**	**248**		**Pn**	**16 31 42.6**	**-0.4**
AOPR					**Sn**	**16 32 07.9**	**+0.8**
AOPR	**Arecibo Observ**	**2.02**	**248**	IAML		16 32 14.5	
	comp=N,313nm,0.3s						
OBIP	**Obispado Ponce**	**2.04**	**238**	*e*P	**Pn**	**16 31 43.0**	**-0.2**
OBIP	**Obispado Ponce**	**2.04**	**238**	*e*S	**Sn**	**16 32 08.2**	**+0.8**
OBIP	**Obispado Ponce**	**2.04**	**238**		**Sn**	**16 32 08.2**	**+0.8**
OBIP	**Obispado Ponce**	**2.04**	**238**		**Pn**	**16 31 42.0**	**-1.2**
OBIP						16 31 42.5	
OBIP	**Obispado Ponce**	**2.04**	**238**	IAML		16 32 11.7	
	comp=E,96nm,0.5s						
OBIP				IAML		16 32 11.9	
	comp=N,62nm,0.5s						
ICMP	**Isla Caja de M**	**2.07**	**233**	Pn	**Pn**	**16 31 44.2**	**+0.7**
ICMP				IAML		16 32 17.7	
	comp=E,101nm,0.6s						
ICMP				IAML		16 32 54.0	
	comp=N,125nm,0.1s						
MPR	**Mayaguez**	**2.41**	**248**	Pn	**Pn**	**16 31 48.8**	**+0.4**
MLPR	**Magueyes Islan**	**2.44**	**242**	Pn	**Pn**	**16 31 47.7**	**-1.0**
ANWB	**Willy Bob**	**3.20**	**117**	*e*P	**Pn**	**16 31 59.5**	**+0.3**
ANWB				*e*S	**Sn**	**16 32 39.2**	**+3.1**
BPA	**Boggy Peak**	**3.48**	**126**	*e*P	**Pn**	**16 32 01.8**	**-1.2**
BPA				*e*S	**Sn**	**16 32 42.4**	**-0.6**
ANBD	**Bethesda, Anti**	**3.54**	**125**	*e*P	**Pn**	**16 32 02.8**	**-1.1**
ANBD				*e*S	**Sn**	**16 32 44.1**	**-0.5**
DR12	**Loma Pena Alta**	**4.36**	**266**	Pn	**Pn**	**16 32 13.6**	**-1.7**
SDDR	**Presa de Saban**	**6.15**	**270**	Pn	**Pn**	**16 32 38.8**	**-1.0**
MCLT	**Moule a Chique**	**6.54**	**145**	Pn	**Pn**	**16 32 46.4**	**+1.4**

DJA 13 16:33:32.8±0.6, 8°S±2°×11°4E±°, h10km, M2.2/6, MLv2.2/6, Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.33**	**159**	P	Pg	16 33 39.2	-0.2
JAGI				S	Sb	16 33 46.7	+0.5
ABJI	**Asem Bagus**	**0.41**	**29**	P	Pg	16 33 40.4	-0.6
ABJI				S	Sb	16 33 47.9	-0.7
KMMI	**Kalianget**	**1.10**	**357**	P	Pn	16 33 54.4	+0.1
KMMI				S	Sn	16 34 09.9	+0.2
SRBI	**Singaraja**	**1.17**	**86**	P	Pb	16 33 54.9	-0.3

JMA ***13*** *16:56:19.8±0.3, 36°.82N×142°.12E, h36km, M4.3*
NIED ***13*** *16:56:19.9, 36°.82N×142°.13E, h36km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.54; Mθθ-0.11; Mφφ-0.42; Mrθ-0.26; Mθφ-1.22; Mφr1.53; Fault plane solution: Mo2.03000×10^15 NP1:φs1.00000°, δ80.00000°, λ52.00000°. NP2:φs259.00000°, δ39.00000°, λ164.00000°.*
IDC ***13*** *16:56:21.3±0.7, 36°.84N×141°.99E, h0km, mb3.8/18, mb1 3.9/24, mb1mx3.8/59, mbtmp3.9/24, ML2.5/4, MS3.3/15, Ms1 3.3/15, ms1mx3.0/54 Error ellipse: s-maj=15.7km s-min=12.8km az=131.0*
NEIC ***13*** *16:56:29.5±1.9, 37°.10N±0°.06×141°.49E±0°.09, h37km±7km, mb4.2/12, Error ellipse: s-maj=12.7km s-min=5.9km az=125.0*

ISC 13 16:56:28.8±0.6, 37°.06N±0°.06×141°.62E±0°.06, h33km, n98, σ1.52/72, mb4.0/28, MS3.4/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.66**	**274**	P	**Pb**	**16 56 38.9**	**-3.1**
ONAJ				*e*S	**Sn**	**16 56 53.4**	**+2.2**
JFK	**Kawauchi**	**0.67**	**297**	P	**Pb**	**16 56 39.8**	**-2.4**
JFFD	**Fukushimafurud**	**0.85**	**272**	P	**Pn**	**16 56 41.9**	**-2.6**
JMST	**Minamisoumatoc**	**0.88**	**319**	P	**Pn**	**16 56 42.5**	**-2.4**
JHO	**Hitachi**	**0.96**	**242**	P	Pn	16 56 41.7	-4.3
JHO				S	**Sn**	**16 56 57.5**	**-0.9**
JMM	**Marumori**	**1.04**	**321**	P	**Pn**	**16 56 44.9**	**-2.2**
JMM	**Marumori**	**1.04**	**321**		**Pn**	**16 56 44.8**	**-2.3**
JFT	**Otama**	**1.12**	**294**	P	**Pn**	**16 56 47.0**	**-1.2**
JFT				*e*S	**Sb**	**16 57 06.4**	**+2.4**
JIO	**Ouri**	**1.41**	**351**	P	Pn	16 56 49.2	-2.9
JYT	**Yasato**	**1.42**	**234**	Pn	Pn	16 56 49.4	-2.9
JOU	**Okura**	**1.50**	**330**	P	**Pn**	**16 56 52.0**	**-1.5**
JFY	**Yanaizu**	**1.57**	**283**	P	**Pn**	**16 56 53.6**	**-0.8**
JAG	**Ashikaga**	**1.85**	**251**	P	Pn	16 56 55.2	-3.1
MJAR	**Matsushiro Arr**	**2.79**	**260**	Pn	**Pn**	**16 57 09.9**	**-1.2**
	0.7nm,0.3s,baz=94,slow=11,SNR=45						
MJAR				Sn	**Sn**	**16 57 47.6**	**+4.0**
	2.6nm,0.3s,baz=201,slow=23,SNR=8.2						
MJAR				Lg	Lg	16 57 59.6	
	3.4nm,0.3s,baz=87,slow=28,SNR=6.1						
MJAR				LR	LR	16 58 21.7	
	comp=Z,87nm,20.0s,baz=70,slow=40						
MAJO	**Matsushiro**	**2.79**	**260**		**Pn**	**16 57 10.2**	**-0.9**
MAT	**Matsushiro**	**2.79**	**260**	P	**Pn**	**16 57 10.2**	**-1.0**
MAT				*e*S	**Sn**	**16 57 44.7**	**+1.0**
MJB9	**Matsu-Tunnel**	**2.79**	**260**		**Pn**	**16 57 10.8**	**-0.4**
JSD	**Sado**	**2.84**	**291**	Pn	**Pn**	**16 57 10.2**	**-1.7**
JGF	**Kuroka**	**3.74**	**248**		**Pn**	**16 57 24.1**	**-0.2**
JTM	**Tenmabayashi**	**3.74**	**354**	Pn	**Pn**	**16 57 24.9**	**+0.6**
INU	**Inuyama**	**4.10**	**247**		**Pn**	**16 57 28.9**	**-0.2**
JHJ2	**Mitsune**	**4.21**	**201**	Pn	Pn	16 57 25.6	-5.1
JHJ	**Hachijo jima 2**	**4.21**	**201**	Pn	Pn	16 57 24.6	-6.2
	38nm,0.3s,baz=274,slow=23,SNR=7.0						
JHJ				Sn	Sn	16 58 11.5	-7.3
	20nm,0.3s,baz=336,slow=20,SNR=1.5						
ERM	**Erimo**	**5.09**	**13**	Pn	Pn	16 57 39.7	-3.0
JWT	**Wachi**	**5.34**	**252**	Pn	**Pn**	**16 57 46.7**	**+0.5**
JKA	**Kamikawa-asahi**	**7.08**	**6**	Pn	**Pn**	**16 58 10.2**	**0.0**
ASAJ	**Asahikawa**	**7.08**	**6**	Pn	Pn	16 58 05.1	-5.0
	0.2nm,0.3s,baz=292,slow=14,SNR=2.3						
ASAJ				Sn	**Sn**	**16 59 30.2**	**+0.7**
	0.2nm,0.3s,baz=239,slow=14,SNR=2.3						
ASAJ				LR	LR	17 01 31.4	
	comp=Z,271nm,19.0s,baz=172,slow=43						
JMN	**Monobe**	**7.14**	**245**	Pn	**Pn**	**16 58 11.8**	**+0.8**
JNU	**Nakatsue**	**9.64**	**249**	LR	LR	17 02 58.7	
	comp=Z,113nm,18.1s,baz=61,slow=40						
JCJ	**Chichijima**	**9.95**	**177**	Pn	Pn	16 58 42.3	-7.2
	3.5nm,0.3s,baz=264,slow=22,SNR=1.6						
JCJ				Sn	Sn	17 00 23.2	-17
	4.2nm,0.3s,baz=293,slow=23,SNR=1.5						
USRK	**Ussuriysk Ar.**	**10.21**	**317**	Pn	**Pn**	**16 58 55.7**	**+2.7**
	baz=130,slow=14,SNR=4.9						
USRK				LR	LR	17 02 42.6	
	comp=Z,182nm,18.6s,baz=110,slow=36						
JSU	**Suzuyama**	**10.77**	**242**	Pn	**Pn**	**16 59 00.1**	**-0.6**
KSRS	**Korea Array**	**10.93**	**276**	Pn	**Pn**	**16 59 05.7**	**+2.9**
	0.1nm,0.3s,baz=89,slow=14,SNR=2.7						
KSRS				LR	LR	17 03 06.6	
	comp=Z,114nm,20.7s,baz=84,slow=36						
KSAR	**Wonju Array Be**	**10.96**	**276**		**Pn**	**16 59 01.5**	**-1.7**
KLR	**Kul'dur**	**14.12**	**333**	Pn	**Pn**	**16 59 49.0**	**+2.6**
	0.0nm,0.3s,baz=136,slow=21,SNR=1.5						
KLR				LR	LR	17 05 06.7	
	comp=Z,117nm,18.5s,baz=141,slow=36						
PETK	**Petropavlovsk-**	**19.58**	**30**	LR	LR	17 08 27.7	
	comp=Z,38nm,21.6s,baz=221,slow=37						
MA2	**Magadan**	**23.29**	**12**	P	**P**	**17 01 31.2**	**-2.3**
	1.1nm,0.3s,baz=190,slow=9.3,SNR=6.6						
MA2				LR	LR	17 10 04.8	
	comp=Z,28nm,21.0s,baz=242,slow=35						
MA2	**Magadan**	**23.29**	**12**	P	**P**	**17 01 34.1**	**+0.7**
MA2				IAmb	IAmb	17 01 39.7	
	comp=Z,5.6nm,0.9s						
HHC	**Hu-ho-hao-te**	**23.62**	**289**	*e*P	**P**	**17 01 36.8**	**-0.2**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,86nm,5.5s						
YAK	**Yakutsk**	**26.08**	**347**	P	**P**	**17 01 58.5**	**-0.5**
	comp=Z,2.0nm,0.4s,baz=89,slow=1.5,SNR=2.8						
YAK				LR	LR	17 12 26.4	
	comp=Z,70nm,18.4s,baz=185,slow=37						
SEY	**Seymchan**	**26.73**	**11**	P	**P**	**17 02 03.3**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=54,slow=22,SNR=3.6						
SONM	**Songino Array**	**27.91**	**304**	P	**P**	**17 02 15.4**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=93,slow=7.5,SNR=12						
SONM				LR	LR	17 13 52.7	
	comp=Z,42nm,18.8s,baz=65,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.02**	**121**	T	T	17 31 31.6	
	baz=314,slow=75,SNR=92						
H11N1	**WAKE ISLAND Hy**	**28.03**	**121**	T	T	17 31 31.9	
	baz=314,

FINES	**FINESS Array B**	**68.86**	**332**	P	**P**	**17 07 29.0**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=65,slow=7.8,SNR=2.1						
KBZ	**Khabaz**	**71.01**	**311**	LR	LR	17 43 27.6	
	comp=Z,29nm,18.5s,baz=49,slow=40						
NWAO	**Narrogin (SRO)**	**73.26**	**201**	P	**P**	**17 07 57.8**	**+1.2**
NOA	**NORSAR Array B**	**74.22**	**337**	P	**P**	**17 08 03.6**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=40,slow=5.7,SNR=2.4						
AKASG	**Malin Array Be**	**74.38**	**322**	P	**P**	**17 08 03.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=46,slow=6.3,SNR=7.1						
AKASG	**Malin Array Be**	**74.38**	**322**	IAmb	IAmb	17 08 11.4	
	comp=Z,0.7nm,0.8s						
TXAR	**Lajitas Array**	**89.97**	**52**	P	P	17 09 22.2	-3.0
	comp=Z,0.1nm,0.2s,baz=348,slow=3.9,SNR=1.7						
ESDC	**Sonseca Array**	**97.34**	**334**	LR	LR	17 57 43.3	
	comp=Z,20nm,18.6s,baz=355,slow=38						
H03N2	**Juan Fernandez**	**146.86**	**96**	T	T	19 59 52.3	
	baz=291,slow=76,SNR=9.9						
H03N3	**Juan Fernandez**	**146.87**	**96**	T	T	19 59 52.9	
	baz=291,slow=76,SNR=8.7						
H03N1	**Juan Fernandez**	**146.88**	**96**	T	T	19 59 54.0	
	baz=291,slow=76,SNR=9.2						
SIV	**San Ignacio**	**150.94**	**50**	PKPbc	**PKPdf**	**17 16 15.4**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=259,slow=20,SNR=1.3						

IDC 13 17:00:35.1±8.1, 4.13S×151.62E, h114km±57km, mb2.8/2, mb1 3.1/3, mb1mx2.8/45, mbtmp3.3/3, Error ellipse: s-maj=140.7km s-min=54.5km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.86**	**220**	P		Pn	17 02 13.4	+0.3
	0.3nm,0.3s,baz=102,slow=2.3,SNR=2.5							
PMG				S		Sn	17 03 31.2	+1.3
	0.2nm,0.3s,baz=237,slow=17,SNR=1.1							
WRA	**Warramunga Arr**	**23.04**	**226**	P		P	17 05 30.2	-0.4
	0.4nm,0.3s,baz=51,slow=9.7,SNR=2.1							
ASAR	**Alice Springs**	**25.88**	**220**	P		P	17 05 56.8	+0.3
	0.3nm,0.9s,baz=54,slow=8.7,SNR=5.3							
TORD	**Torodi Ar. Bea**	**148.98**	**289**	PKPbc		PKPbc	17 20 10.0	-0.8
	0.8nm,0.8s,baz=90,slow=1.4,SNR=2.3							

*IDC **13** 17:13:53.8±0.5, 23.81N×121.22E, h0km, mb4.2/27, mb1 4.4/28, mb1mx4.2/47, mbtmp4.2/28, ML4.0/1, MS3.6/12, Ms1 3.6/12, ms1mx3.2/51, Error ellipse: s-maj=15.9km s-min=11.8km az=74.0*

*NIED **13** 17:13:56.1, 23.94N×121.04E, h0km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M_{rr}2.86; $M_{\theta\theta}$-0.64; $M_{\phi\phi}$-2.22; $M_{r\theta}$-0.17; $M_{\theta\phi}$0.13; $M_{\phi r}$1.09; Fault plane solution: $M_0$2.77000×10^{15} NP1: ϕ_s354.00000°, δ57.00000°, λ89.00000°. NP2: ϕ_s176.00000°, δ33.00000°, λ92.00000°.*

*BJI **13** 17:13:56.0±0.0, 23.94N×121.17E, h13km, mB4.5/28, mb4.2/35, ML4.3/11, Ms4.1/27, Ms7 4.0/28*

*JMA **13** 17:13:56.0±0.3, 23.94N×121.04E, h0km, M4.2*

*NEIC **13** 17:13:57.8±2.2, 23.92N±0.03×121.09E±0.04, h24km±4km, Error ellipse: s-maj=6.1km s-min=3.9km az=114.0*

*TAP **13** 17:13:57.7, 23.93N×121.08E, h19km, ML4.8, B*

*ASIES **13** 17:13:57.3, 23.92N×121.10E, h25km, MW4.2*

ISC 13 17:13:57.3±0.6, 23.923N±0.010×121.10E±0.01, h19km±2km, n335, σ1s33/488, mb4.4/57, MS3.6/9, 29C-61D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CHGB	**Renai**	**0.15**	**26**	⇑*i*P		**Pg**	**17 14 02.7**	**+0.8**
	baz=34							
CHGB				*i* S		**Sg**	**17 14 05.9**	**+0.9**
	baz=34							
WPL	**Puli Township**	**0.16**	**304**	⇑*i*P		**Pg**	**17 14 02.2**	**+0.5**
	baz=305							
WPL				*i* S		**Sg**	**17 14 05.2**	**+0.4**
	baz=305							
VWDT	**VWDT**	**0.17**	**167**	⇑*i*P		**Pg**	**17 14 03.1**	**+1.2**
	baz=163							
VWDT				S		**Sg**	**17 14 06.8**	**+1.8**
	baz=163							
SMLT	**Sun Moon Lake**	**0.19**	**258**	⇑*i*P		**Pg**	**17 14 02.7**	**+0.5**
	baz=252							
SMLT				*i* S		**Sg**	**17 14 06.3**	**+0.8**
	baz=252							
SSLB	**Suanglung**	**0.19**	**225**	⇑*i*P		**Pg**	**17 14 02.5**	**+0.3**
	baz=218							
SSLB				*i* S		**Sg**	**17 14 05.7**	**+0.2**
	baz=218							
SSLB	**Suanglung**	**0.19**	**225**	Pg		**Pb**	**17 14 01.4**	**-0.2**
DPDB	**Guoxing**	**0.19**	**305**	⇑*i*P		**Pg**	**17 14 02.7**	**+0.4**
	baz=305							
DPDB				S		**Sg**	**17 14 06.2**	**+0.6**
	baz=305							
WCS	**Beigang Elemen**	**0.22**	**308**	⇑*e*P		**Pg**	**17 14 03.3**	**+0.8**
	baz=308							
WCS				*e*S		**Sg**	**17 14 07.5**	**+1.3**
	baz=308							
TYC	**Yuchr**	**0.22**	**265**	⇑*i*P		**Pg**	**17 14 03.0**	**+0.4**
	baz=262							
TYC				*i* S		**Sg**	**17 14 06.7**	**+0.4**
	baz=262							
WHF	**Hehuan Shan**	**0.27**	**34**	⇓*i*P		**Pg**	**17 14 04.4**	**+0.8**
	baz=40							
WHF				S		**Sg**	**17 14 09.0**	**+1.0**
	baz=40							
WHYT	**Xinyi Township**	**0.32**	**225**	⇑*i*P		**Pb**	**17 14 04.9**	**+0.4**
	baz=221							
WHYT				*i* S		**Sb**	**17 14 10.2**	**+0.9**
	baz=221							
ESL	**Shilin**	**0.32**	**109**	⇓*i*P		**Pb**	**17 14 05.3**	**+0.8**
	baz=110							
ESL				*i* S		**Sb**	**17 14 10.2**	**+0.8**
	baz=110							
TDCB	**Techi**	**0.33**	**9**	⇑*i*P		**Pb**	**17 14 04.9**	**+0.1**
	baz=13							
TDCB				*i* S		**Sg**	**17 14 09.3**	**-0.2**
	baz=13							
TWT	**Tachien**	**0.34**	**12**	⇑*i*P		**Pb**	**17 14 04.9**	**0.0**
	baz=13							
TWT				*i* S		**Sg**	**17 14 09.4**	**-0.2**
	baz=13							
FUSS	**Fushou**	**0.35**	**22**	⇓*i*P		**Pb**	**17 14 05.3**	**+0.1**
	baz=26							
FUSS				*i* S		**Sg**	**17 14 10.1**	**+0.1**
	baz=26							
WJS	**Zhushan**	**0.35**	**254**	⇓*i*P		**Pb**	**17 14 06.0**	**+0.9**
	baz=251							
WJS				*i* S		**Sb**	**17 14 12.2**	**+1.8**
	baz=251							
WHP	**Taichung City**	**0.38**	**338**	⇑*i*P		**Pb**	**17 14 05.8**	**+0.1**
	baz=324							
WHP				*i* S		**Sb**	**17 14 12.4**	**+1.1**
	baz=324							
WNT	**Mingjian**	**0.38**	**263**	⇓*i*P		**Pb**	**17 14 06.4**	**+0.8**
	baz=261							
WNT				*i* S		**Sb**	**17 14 12.9**	**+1.6**
	baz=261							
WNT1	**Nantou City**	**0.39**	**268**	⇓*i*P		**Pb**	**17 14 06.6**	**+1.0**
	baz=266							
WNT1				*i* S		**Sn**	**17 14 13.3**	**-1.5**
	baz=266							
WWF	**Wufeng**	**0.39**	**288**	⇓*i*P		**Pb**	**17 14 06.8**	**+1.2**
	baz=287							
WWF				*i* S		**Sn**	**17 14 13.6**	**-1.2**
	baz=287							
EGFH	**Guangfu**	**0.39**	**130**	⇓*i*P		**Pb**	**17 14 06.4**	**+0.7**
	baz=130							
EGFH				*i* S		**Sb**	**17 14 12.3**	**+0.8**
	baz=130							
TCU	**Taichung**	**0.45**	**300**	⇓*i*P		**Pb**	**17 14 07.7**	**+1.0**
	baz=300							
TCU				S		**Sn**	**17 14 14.9**	**-1.5**
	baz=300							
ETLH	**Xiulin Townshi**	**0.45**	**51**	⇓*i*P		**Pb**	**17 14 07.0**	**+0.3**
	baz=53							
ETLH				*e*S		**Sb**	**17 14 13.5**	**+0.3**
	baz=53							
YUS	**Yu-Shan**	**0.45**	**197**	⇑*i*P		**Pb**	**17 14 07.3**	**+0.3**
	baz=194							
YUS				*i* S		**Sb**	**17 14 15.1**	**+1.5**
	baz=194							
EHY	**Hungye**	**0.46**	**154**	⇓*i*P		**Pb**	**17 14 07.6**	**+0.7**
	baz=152							
EHY				*e*S		**Sb**	**17 14 13.9**	**+0.5**
	baz=152							
HWA	**Hwalien**	**0.47**	**83**	⇓*i*P		**Pn**	**17 14 08.0**	**-1.0**
	baz=85							
HWA				*e*S		**Sn**	**17 14 15.9**	**-0.9**
	baz=85							
TWD	**Chiawan**	**0.48**	**71**	⇓*i*P		**Pb**	**17 14 07.5**	**+0.3**
	baz=73							
TWD				S		**Sb**	**17 14 15.4**	**+1.5**
	baz=73							
ALS	**Alishan**	**0.49**	**213**	⇓*i*P		**Pb**	**17 14 08.2**	**+0.6**
	baz=210							
ALS				*i* S		**Sb**	**17 14 15.7**	**+1.2**
	baz=210							
CHN5	**Tsauling**	**0.50**	**230**	⇓*i*P		**Pb**	**17 14 08.2**	**+0.6**
	baz=228							
CHN5				*i* S		**Sb**	**17 14 16.2**	**+1.5**
	baz=228							
NACB	**Ninganchiao**	**0.52**	**61**	⇓*i*P		**Pb**	**17 14 07.9**	**+0.1**
	baz=63							
NACB				S		**Sn**	**17 14 16.7**	**-1.4**
	baz=63							
NACB	**Ninganchiao**	**0.52**	**61**			**Pg**	**17 14 07.2**	**-0.6**
TWQ1	**Liyutan**	**0.52**	**325**	⇓*i*P		**Pn**	**17 14 09.0**	**-0.8**
	baz=326							
TWQ1				*i* S		**Sn**	**17 14 17.0**	**-1.1**
	baz=326							
WCHH	**Zhanghua**	**0.52**	**288**	⇓*i*P		**Pn**	**17 14 08.8**	**-0.9**
	baz=287							
WCHH				*i* S		**Sn**	**17 14 17.2**	**-0.9**
	baz=287							
HGSD	**Ruisui**	**0.52**	**145**	⇓*i*P		**Pn**	**17 14 09.0**	**-0.8**
	baz=144							
HGSD				S		**Sb**	**17 14 16.3**	**+1.3**
	baz=144							
WGK	**Gukeng**	**0.55**	**245**	⇓*i*P		**Pn**	**17 14 09.2**	**-0.9**
	baz=242							
WGK				*i* S		**Sn**	**17 14 17.8**	**-0.9**
	baz=242							
YULB	**Yu-li**	**0.56**	**161**	⇓*i*P		**Pg**	**17 14 09.1**	**+0.6**
	baz=160							
YULB				*e*S		**Sg**	**17 14 16.2**	**+0.2**
	baz=160							
YULB	**Yu-li**	**0.56**	**161**	Pg		**Pb**	**17 14 08.2**	**-0.2**
WDLH	**Douliu**	**0.56**	**246**	⇓*i*P		**Pn**	**17 14 09.7**	**-0.7**
	baz=244							
WDLH				S		**Sn**	**17 14 18.7**	**-0.5**
	baz=244							
NNSB	**Datong**	**0.57**	**27**	⇓*i*P		**Pb**	**17 14 08.7**	**0.0**
	baz=29							
NNSB				*e*S		**Sb**	**17 14 16.3**	**-0.1**
	baz=29							
NNS	**Nan Shan**	**0.57**	**26**	⇓*i*P		**Pn**	**17 14 08.9**	**+0.1**
	baz=29							
NNS				S		**Sb**	**17 14 16.6**	**0.0**
	baz=29							
NSY	**Sanyi**	**0.58**	**328**	⇓*i*P		**Pn**	**17 14 10.5**	**-0.2**
	baz=329							
NSY				S		**Sn**	**17 14 19.5**	**-0.2**
	baz=329							
TWF1	**Yuli**	**0.60**	**162**	⇓*i*P		**Pg**	**17 14 09.9**	**+0.7**
	baz=160							
TWF1				S		**Sg**	**17 14 17.9**	**+0.7**
	baz=160							
WDJ	**Dajia District**	**0.60**	**315**	⇓*i*P		**Pn**	**17 14 10.6**	**-0.2**
	baz=316							
WDJ				S		**Sn**	**17 14 20.0**	**0.0**
	baz=316							
EYUL	**Yuli**	**0.61**	**161**	⇓*i*P		**Pn**	**17 14 10.2**	**-0.8**
	baz=159							
EYUL				S		**Sg**	**17 14 18.6**	**+1.1**
	baz=159							
WRL	**Guolierlin Hig**	**0.66**	**268**	⇓*i*P		**Pg**	**17 14 11.0**	**+0.6**
	baz=267							
WRL				*e*S		**Sn**	**17 14 21.1**	**-0.5**
	baz=267							
NMLH	**Miaoli**	**0.67**	**335**	⇓*i*P		**Pn**	**17 14 12.2**	**+0.3**
	baz=336							
NMLH				*e*S		**Sn**	**17 14 22.5**	**+0.6**
	baz=336							
CHN2	**Minshiung**	**0.69**	**236**	⇓*i*P		**Pn**	**17 14 11.7**	**-0.4**
	baz=234							
CHN2				*i* S		**Sn**	**17 14 22.1**	**-0.3**
	baz=234							
WTK	**Tuku**	**0.69**	**250**	⇓*i*P		**Pg**	**17 14 11.5**	**+0.5**
	baz=249							
WTK				*i* S		**Sn**	**17 14 22.1**	**-0.2**
	baz=249							
NSTT	**Nanjuang**	**0.71**	**353**	⇑*i*P		**Pn**	**17 14 12.2**	**-0.3**
	baz=355							
NSTT				S		**Sg**	**17 14 21.6**	**+0.8**
	baz=355							
LIOB	**Emei**	**0.72**	**354**	⇑*i*P		**Pn**	**17 14 12.5**	**-0.1**
	baz=355							
LIOB				*e*S		**Sg**	**17 14 21.9**	**+0.7**
	baz=355							
ELDTW	**Lidau**	**0.73**	**186**	⇑*i*P		**Pg**	**17 14 11.7**	**-0.1**
	baz=184							
ELDTW				*e*S		**Sg**	**17 14 22.3**	**+0.7**
	baz=184							
CHN4	**Tsaushan**	**0.73**	**219**	⇓*e*P		**Pg**	**17 14 12.2**	**+0.5**
	baz=218							
CHN4				*e*S		**Sn**	**17 14 23.3**	**-0.2**
	baz=218							
FULB	**Fuli**	**0.74**	**166**	⇓*i*P		**Pn**	**17 14 13.2**	**+0.4**
	baz=165							
FULB				*e*S		**Sn**	**17 14 23.9**	**+0.3**
	baz=165							
CHY	**Chiayi**	**0.75**	**236**	⇓*i*P		**Pn**	**17 14 12.5**	**-0.4**
	baz=234							
CHY				S		**Sn**	**17 14 23.7**	**-0.1**
	baz=234							
WTCT	**Ta-ch'eng**	**0.75**	**266**	⇓*i*P		**Pg**	**17 14 12.2**	**+0.1**
	baz=264							
WTCT				S		**Sn**	**17 14 23.3**	**-0.6**
	baz=264							
TPUB	**Ta-pu**	**0.76**	**215**	⇓*i*P		**Pg**	**17 14 12.3**	**+0.2**
	baz=213							
TPUB				*e*S		**Sn**	**17 14 23.1**	**-0.9**
	baz=213							
TPUB	**Ta-pu**	**0.76**	**215**			**Pb**	**17 14 11.5**	**-0.4**
ENA	**Nanau**	**0.77**	**49**	⇓*e*P		**Pg**	**17 14 12.6**	**+0.2**
	baz=51							
ENA				*e*S		**Sg**	**17 14 23.1**	**+0.4**
	baz=51							
NDT	**Datong Townshi**	**0.78**	**29**	⇓*i*P		**Pb**	**17 14 12.3**	**+0.1**
	baz=31							
NDT				*e*S		**Sg**	**17 14 22.9**	**0.0**
	baz=31							
YHNB	**Yeheng**	**0.79**	**19**	⇓*i*P		**Pb**	**17 14 12.6**	**+0.2**
	baz=20							
YHNB				S		**Sn**	**17 14 24.5**	**-0.3**
	baz=20							
YHNB	**Yeheng**	**0.79**	**19**	Pg		**Pb**	**17 14 12.3**	**-0.1**
NJN	**Zhunan**	**0.79**	**345**	*e*P		**Pn**	**17 14 13.6**	**+0.1**
	baz=346							
NJN				*e*S		**Sn**	**17 14 25.6**	**+0.9**
	baz=346							
NSK	**Sanguang**	**0.79**	**17**	⇓*i*P		**Pb**	**17 14 12.7**	**+0.2**
	baz=20							
NSK				*e*S		**Sn**	**17 14 24.9**	**0.0**
	baz=20							
STYH	**Taoyuan**	**0.81**	**202**	⇓*i*P		**Pn**	**17 14 13.5**	**-0.2**
	baz=200							
STYH				*e*S		**Sn**	**17 14 24.5**	**-0.7**
	baz=200							
WTP	**Ta-pu**	**0.81**	**214**	⇓*i*P		**Pg**	**17 14 13.1**	**0.0**
	baz=211							
WTP				*e*S		**Sn**	**17 14 24.7**	**-0.6**
	baz=211							
EWUT	**Wuta**	**0.81**	**50**	⇓P		**Pg**	**17 14 13.2**	**0.0**
	baz=51							
EWUT				*e*S		**Sn**	**17 14 25.5**	**+0.2**
	baz=51							
NJD	**Zhudong**	**0.81**	**359**	*e*P		**Pn**	**17 14 14.4**	**+0.7**
NJD				*e*S		**Sn**	**17 14 25.5**	**+0.1**
WMLT	**Mailiao**	**0.81**	**262**	⇓P		**Pg**	**17 14 13.2**	**+0.1**
	baz=261							
WMLT				*e*S		**Sn**	**17 14 25.1**	**-0.2**
	baz=261							
STYT	**Tauyuan**	**0.82**	**203**	⇓*i*P		**Pn**	**17 14 13.8**	**-0.1**
	baz=201							
STYT				*e*S		**Sn**	**17 14 25.1**	**-0.5**
	baz=201							
ENTT	**Nioudou**	**0.83**	**31**	⇓*i*P		**Pb**	**17 14 13.4**	**+0.2**
	baz=33							
ENTT				*e*S		**Sn**	**17 14 25.3**	**-0.5**
	baz=33							
WSF	**Szhu**	**0.85**	**251**	⇓*i*P		**Pb**	**17 14 13.6**	**+0.1**
	baz=249							
WSF				S		**Sn**	**17 14 25.9**	**-0.5**
	baz=249							
CHKT	**Chengkung**	**0.85**	**163**	P		**Pn**	**17 14 14.8**	**+0.4**
	baz=162							
CHKT				*e*S		**Sn**	**17 14 27.4**	**+1.0**
	baz=162							
HSN1	**Hsinchu**	**0.85**	**355**	*e*P		**Pn**	**17 14 15.0**	**+0.6**
	baz=356							
HSN1				*e*S		**Sn**	**17 14 27.6**	**+1.2**
	baz=356							
TWK	**Hsinying**	**0.86**	**221**	⇓*i*P		**Pg**	**17 14 14.1**	**-0.1**
	baz=218							
TWK				*e*S		**Sn**	**17 14 26.4**	**-0.2**
	baz=218							
SBCB	**Hsinchu**	**0.87**	**353**	⇑P		**Pn**	**17 14 15.2**	**+0.5**
	baz=354							
SBCB				*e*S		**Sn**	**17 14 28.4**	**+1.5**
	baz=354							
HSN	**Hsinchu**	**0.88**	**352**	*e*P		**Pn**	**17 14 15.5**	**+0.7**
	baz=356							
HSN				*e*S		**Sn**	**17 14 29.0**	**+1.9**
	baz=356							
SNST	**Tainan City**	**0.89**	**218**	*e*P		**Pg**	**17 14 14.5**	**-0.2**
	baz=217							
SNST				*e*S		**Sn**	**17 14 27.9**	**+0.5**
	baz=217							
CHN1	**Nanshi**	**0.90**	**216**	P		**Pg**	**17 14 14.7**	**-0.2**
	baz=214							
CHN1				*e*S		**Sn**	**17 14 27.8**	**+0.2**
	baz=214							
NDS	**Dongshan**	**0.90**	**38**	⇓P		**Pg**	**17 14 14.8**	**-0.1**
	baz=40							
NDS				*e*S		**Sn**	**17 14 28.1**	**+0.4**
	baz=40							
NWLT	**Wulai**	**0.93**	**23**	⇓P		**Pb**	**17 14 15.1**	**+0.3**
	baz=25							
NWLT				*e*S		**Sn**	**17 14 28.2**	**-0.1**
	baz=25							
ICHU	**Yijhu**	**0.94**	**234**	⇓P		**Pn**	**17 14 15.3**	**-0.2**
	baz=232							
ICHU				*e*S		**Sn**	**17 14 29.3**	**+0.9**
	baz=232							
TWE	**Neicheng**	**0.95**	**33**	⇓P		**Pn**	**17 14 15.8**	**+0.1**
	baz=35							
TWE				*e*S		**Sg**	**17 14 28.5**	**+0.2**
	baz=35							
SGST	**Jiashian**	**0.96**	**210**	P		**Pb**	**17 14 14.9**	**-0.5**
	baz=208							
SGST				*e*S		**Sn**	**17 14 29.1**	**+0.1**
	baz=208							
EDH	**Donghe**	**0.96**	**169**	*e*P		**Pg**	**17 14 16.6**	**+0.5**
	baz=168							
TWC	**Suao**	**0.97**	**45**	⇓P		**Pn**	**17 14 15.9**	**0.0**
	baz=47							
TWC				*e*S		**Sb**	**17 14 28.4**	**+0.5**
	baz=47							
CHN8	**Yiju**	**1.00**	**235**	P		**Pn**	**17 14 16.2**	**-0.1**
	baz=233							
CHN8				*e*S		**Sg**	**17 14 30.9**	**+1.0**
	baz=233							
LONT	**Longtian**	**1.01**	**178**	*e*P		**Pg**	**17 14 17.2**	**+0.3**
	baz=177							
LONT				*e*S		**Sg**	**17 14 32.5**	**+2.2**
	baz=177							
SLGT	**Liugui**	**1.01**	**204**	*e*P		**Pg**	**17 14 17.2**	**+0.2**
	baz=203							
SLGT				*e*S		**Sg**	**17 14 31.4**	**+1.1**
	baz=203							
ILA	**Ilan**	**1.03**	**35**	*e*P		**Pg**	**17 14 17.6**	**+0.3**
	baz=37							
ILA				*e*S		**Sg**	**17 14 31.2**	**+0.4**
	baz=37							
NCUH	**Zhongli**	**1.04**	**4**	*e*P		**Pg**	**17 14 17.5**	**-0.1**
	baz=5.0							
NCU	**National Centr**	**1.05**	**4**	*e*P		**Pg**	**17 14 17.8**	**+0.2**
	baz=6.0							
NCU				*e*S		**Sg**	**17 14 33.9**	**+2.5**
	baz=6.0							
CHN3	**Shinhua**	**1.08**	**219**	*e*P		**Pg**	**17 14 18.9**	**+0.7**
	baz=218							
CHN3				*e*S		**Sg**	**17 14 34.6**	**+2.1**
	baz=218							
NHW	**Xinwu Township**	**1.08**	**357**	*e*P		**Pg**	**17 14 18.2**	**-0.1**
	baz=358							
NHW				*e*S		**Sg**	**17 14 34.4**	**+1.9**
	baz=358							
NTY	**Taoyuan**	**1.09**	**10**	*e*P		**Pg**	**17 14 18.6**	**+0.2**
	baz=11							
NTY				*e*S		**Sg**	**17 14 36.0**	**+3.3**
	baz=11							
TWG	**Pinlang**	**1.10**	**181**	*e*P		**Pg**	**17 14 18.4**	**-0.2**
	baz=180							
TWG				*e*S		**Sg**	**17 14 34.0**	**+1.0**
	baz=180							
TWG	**Pinlang**	**1.10**	**181**			**Pg**	**17 14 18.4**	**-0.2**
TWGBT	**Beinan**	**1.10**	**181**	⇑P		**Pg**	**17 14 18.5**	**-0.1**
	baz=180							
TWGBT				*e*S		**Sg**	**17 14 34.0**	**+0.9**
	baz=180							
NHDH	**Xindian Distri**	**1.11**	**20**	*e*P		**Pg**	**17 14 18.7**	**0.0**
	baz=22							
NHDH				*e*S		**Sg**	**17 14 34.8**	**+1.5**
	baz=22							
TATO	**Taipei**	**1.11**	**19**	*e*P		**Pg**	**17 14 18.9**	**+0.1**
	baz=20							
TATO				*e*S		**Sg**	**17 14 34.6**	**+1.3**
	baz=20							
TATO	**Taipei**	**1.11**	**19**			**Pg**	**17 14 18.9**	**+0.1**
BACT	**New Taipei Cit**	**1.11**	**16**	*e*P		**Pg**	**17 14 19.4**	**+0.5**
	baz=17							
BACT				*e*S		**Sg**	**17 14 35.7**	**+2.1**
	baz=17							
SCLT	**Jiali**	**1.12**	**228**	*e*P		**Pg**	**17 14 18.5**	**-0.4**
	baz=227							
SCLT				*e*S		**Sg**	**17 14 34.9**	**+1.3**
	baz=227							
NTC	**Toucheng**	**1.14**	**36**	*e*P		**Pg**	**17 14 19.1**	**-0.4**
	baz=37							
NTC				*e*S		**Sg**	**17 14 35.1**	**+0.7**
	baz=37							
TWA	**Mucha**	**1.14**	**23**	*e*P		**Pg**	**17 14 19.5**	**+0.1**
	baz=24							
TWA				*e*S		**Sg**	**17 14 36.7**	**+2.2**
	baz=24							
TTN	**Taitung**	**1.16**	**178**	*e*P		**Pg**	**17 14 19.8**	**-0.1**
	baz=177							
TTN				*e*S		**Sg**	**17 14 36.3**	**+1.2**
	baz=177							
TAP	**Taipei**	**1.17**	**18**	*e*P		**Pb**	**17 14 19.1**	**+0.1**
	baz=20							
TAP				*e*S		**Sg**	**17 14 36.8**	**+1.4**
	baz=20							
SCST	**Cishan**	**1.17**	**208**	*e*P		**Pg**	**17 14 20.4**	**+0.3**
	baz=207							
SCST				*e*S		**Sg**	**17 14 37.0**	**+1.6**
	baz=207							
TAP1	**Taipei**	**1.18**	**19**	*e*P		**Pg**	**17 14 20.0**	**-0.1**
	baz=20							
TAP1				*e*S		**Sg**	**17 14 36.5**	**+0.9**
	baz=20							
TAI1	**Yung-k'ang**	**1.19**	**223**	*e*P		**Pg**	**17 14 20.3**	**0.0**
	baz=221							
TAI1				*e*S		**Sg**	**17 14 37.6**	**+1.7**
	baz=221							
TWS1	**Kuangyinshan**	**1.21**	**14**	*e*P		**Pg**	**17 14 20.4**	**-0.3**
	baz=15							
TWS1				*e*S		**Sg**	**17 14 37.6**	**+1.1**
	baz=15							
TIPB	**Shuangxi**	**1.

	baz=164									
YM04	**YM04**	**1.29**	**18⇑**	*eP*	**Pb**	**17 14 21.3**	**+0.3**			
	baz=19									
YM04				*eS*	**Sg**	**17 14 38.5**	**-0.6**			
	baz=19									
YM01	**YM01**	**1.29**	**19⇑**	*eP*	**Pb**	**17 14 21.5**	**+0.4**			
	baz=20									
YM01				*eS*	**Sg**	**17 14 39.6**	**+0.4**			
	baz=20									
YM10	**YM10**	**1.30**	**19⇑**	*eP*	**Pb**	**17 14 21.6**	**+0.4**			
	baz=20									
YM10				*eS*	**Sg**	**17 14 39.1**	**-0.3**			
	baz=20									
NWF	**Wu-fen Shan**	**1.30**	**28**	*eP*	**Pg**	**17 14 22.3**	**-0.1**			
	baz=29									
NWF				*eS*	**Sg**	**17 14 41.4**	**+1.9**			
	baz=29									
WFSB	**Wu-fen Shan**	**1.30**	**28**	*eP*	**Pg**	**17 14 22.4**	**-0.1**			
	baz=29									
WFSB				*eS*	**Sg**	**17 14 41.4**	**+1.9**			
	baz=29									
YM05	**YM05**	**1.31**	**19⇑**	*eP*	**Pb**	**17 14 21.6**	**+0.3**			
	baz=20									
YM05				*eS*	**Sg**	**17 14 39.3**	**-0.4**			
	baz=20									
YM11	**YM11**	**1.31**	**19**	*eP*	**Pb**	**17 14 21.9**	**+0.4**			
	baz=20									
YM11				*eS*	**Sg**	**17 14 39.4**	**-0.4**			
	baz=20									
ANP	**Anpu**	**1.31**	**17**	*eP*	**Pb**	**17 14 21.6**	**+0.1**			
	baz=18									
ANP				*eS*	**Sg**	**17 14 41.2**	**+1.3**			
	baz=18									
SGLT	**Jiouru**	**1.32**	**205**	*eP*	**Pg**	**17 14 23.1**	**+0.3**			
	baz=204									
ECL	**Taimali**	**1.33**	**186**	*eP*	**Pb**	**17 14 21.9**	**+0.3**			
	baz=185									
ECL				*eS*	**Sg**	**17 14 40.0**	**-0.2**			
	baz=185									
YM08	**YM08**	**1.34**	**19**	*eP*	**Pb**	**17 14 22.0**	**+0.2**			
	baz=20									
YM08				*eS*	**Sg**	**17 14 40.8**	**+0.2**			
	baz=20									
TWB1	**Santiao Chiao**	**1.35**	**37**	*eP*	**Pb**	**17 14 22.4**	**+0.3**			
	baz=38									
TWB1				*eS*	**Sg**	**17 14 41.0**	**0.0**			
	baz=38									
TSPT	**Pingtung City**	**1.36**	**204**	*eP*	**Pg**	**17 14 23.8**	**+0.3**			
	baz=203									
SNJT	**Kaohsiung City**	**1.36**	**211**	*eP*	**Pg**	**17 14 22.9**	**-0.6**			
	baz=210									
SNJT				*eS*	**Sg**	**17 14 42.4**	**+1.1**			
	baz=210									
TNOU	**National Taiwa**	**1.37**	**27**	*eP*	**Pb**	**17 14 22.6**	**+0.3**			
	baz=28									
TNOU				*eS*	**Sg**	**17 14 42.3**	**+0.7**			
	baz=28									
MASBT	**Mashibuluo**	**1.37**	**198⇑**	*eP*	**Pb**	**17 14 22.7**	**+0.2**			
	baz=197									
MASBT				*eS*	**Sg**	**17 14 41.2**	**-0.6**			
	baz=197									
TWY	**Chenhua**	**1.42**	**19**	*eP*	**Pb**	**17 14 23.6**	**+0.3**			
	baz=20									
TWY				*eS*	**Sg**	**17 14 42.5**	**-0.9**			
	baz=20									
PHUB	**P'eng-hu**	**1.46**	**254⇓**	*eP*	**Pn**	**17 14 22.6**	**-0.1**			
	baz=253									
PHUB				*eS*	**Sn**	**17 14 41.1**	**-0.1**			
	baz=253									
PNG	**Penghu**	**1.46**	**256⇓**	*eP*	**Pn**	**17 14 22.6**	**-0.1**			
	baz=255									
PNG				*eS*	**Sb**	**17 14 41.7**	**-0.3**			
	baz=255									
WDGT	**Dungji**	**1.48**	**244**	*eP*	**Pn**	**17 14 23.0**	**+0.1**			
	baz=243									
WDGT				*eS*	**Sb**	**17 14 42.5**	**-0.1**			
	baz=243									
KAU	**Kaohsiung**	**1.53**	**209**	*eP*	**Pb**	**17 14 25.8**	**+0.7**			
	baz=207									
EAST	**Anshuo**	**1.55**	**189**	*eP*	**Pb**	**17 14 25.6**	**+0.1**			
	baz=188									
EAST				*eS*	**Sg**	**17 14 47.3**	**-0.1**			
	baz=188									
TAW	**Tawu**	**1.57**	**187**	*eP*	**Pb**	**17 14 25.7**	**-0.1**			
	baz=186									
SCZT	**Fangliau**	**1.60**	**196**	*eP*	**Pb**	**17 14 26.0**	**-0.4**			
	baz=195									
SCZT				*eS*	**Sg**	**17 14 47.8**	**-1.4**			
	baz=195									
VCHM	**Qimei**	**1.69**	**245**	*eP*	**Pn**	**17 14 25.9**	**+0.1**			
	baz=245									
VCHM				*eS*	**Sn**	**17 14 47.7**	**+0.7**			
	baz=245									
WLCH	**Liuqiu**	**1.70**	**203**	*eP*	**Pb**	**17 14 27.8**	**-0.2**			
	baz=202									
TWP	**Hsiaoliuchiu**	**1.71**	**204**	*eP*	**Pb**	**17 14 27.4**	**-0.8**			
	baz=203									
SLIU	**Shizi**	**1.72**	**189**	*eP*	**Pb**	**17 14 27.6**	**-0.7**			
	baz=189									
SLIU				*eS*	**Sb**	**17 14 51.2**	**+1.6**			
	baz=189									
JYNG	**Yonaguni jima**	**1.77**	**72**	P	**Pn**	**17 14 27.9**	**+1.0**			
JYNG				S	**Sb**	**17 14 50.4**	**-0.5**			
YOJ	**Yonaguni jima**	**1.83**	**73**	P	**Pn**	**17 14 28.7**	**+1.0**			
YOJ				*eS*	**Sb**	**17 14 52.2**	**-0.4**			
YOJ	**Yonaguni jima**	**1.83**	**73**	*eP*	**Pn**	**17 14 28.8**	**+1.0**			
	baz=73									
YOJ				*eS*	**Sb**	**17 14 51.8**	**-0.8**			
	baz=73									
YOJ	**Yonaguni jima**	**1.83**	**73**		**Pn**	**17 14 28.5**	**+0.8**			
VWUC	**VWUC**	**1.84**	**306**	*eP*	**Pn**	**17 14 26.9**	**-1.1**			
	baz=305									
VWUC				*eS*	**Sn**	**17 14 48.9**	**-1.9**			
	baz=305									
PCYT	**Pengchaiyu**	**1.92**	**27**	*eP*	**Pb**	**17 14 30.4**	**-1.2**			
	baz=28									
PCYT				*eS*	**Sb**	**17 14 55.1**	**-0.1**			
	baz=28									
LAY	**Lan-yu**	**1.92**	**167**	*eP*	**Pn**	**17 14 29.2**	**+0.2**			
	baz=167									
LAY				*eS*	**Sn**	**17 14 53.5**	**+0.7**			
	baz=167									
HEN	**Hengchun**	**1.94**	**190**	*eP*	**Pb**	**17 14 31.0**	**-1.0**			
	baz=189									
HEN				*eS*	**Sg**	**17 14 58.0**	**-1.7**			
	baz=189									
TWK1	**Hengchun**	**1.99**	**188**	*eP*	**Pb**	**17 14 31.5**	**-1.5**			
	baz=187									
TWK1				*eS*	**Sg**	**17 15 02.9**	**+1.5**			
	baz=187									
TWKBT	**Hengchun**	**1.99**	**188**	*eP*	**Pn**	**17 14 31.4**	**+1.4**			
	baz=187									
TWKBT				*eS*	**Sb**	**17 14 57.2**	**-0.2**			
	baz=187									
TSEB	**Hengchuen, Pin**	**2.02**	**185**	*eP*	**Pb**	**17 14 33.7**	**+0.2**			
	baz=186									
PTMZ	**Houxiangcun**	**2.12**	**302**	*eP*	**Pn**	**17 14 30.8**	**-1.0**			
	baz=302									
PTMZ				*eS*	**Sn**	**17 14 55.4**	**-2.2**			
	baz=302									
IRIF	**Iriomote-Funau**	**2.44**	**80**	P	**Pn**	**17 14 37.1**	**+1.0**			
IRIF				S	**Sn**	**17 15 06.8**	**+1.3**			
MATB	**Ma-tsu**	**2.45**	**335⇑**	*eP*	**Pn**	**17 14 35.4**	**-0.9**			
	baz=335									
MATB				*eS*	**Sn**	**17 15 03.5**	**-2.3**			
	baz=335									
HATJ	**Hateruma jima**	**2.48**	**86**	P	**Pn**	**17 14 37.8**	**+1.1**			
HATJ				*eS*	**Sn**	**17 15 08.6**	**+2.1**			
MSUT	**Lienchiang**	**2.48**	**335**	*eP*	**Pn**	**17 14 36.0**	**-0.7**			
	baz=335									
MSUT				*eS*	**Sn**	**17 15 05.2**	**-1.2**			
	baz=335									
KNM	**Kinmen**	**2.48**	**282**	*eP*	**Pn**	**17 14 38.1**	**+1.3**			
	baz=280									
KNM				*eS*	**Sn**	**17 15 09.1**	**+2.4**			
	baz=280									
QZH	**Quanzhou**	**2.50**	**294**	Pn	**Pn**	**17 14 36.3**	**-0.7**			
QZH				Sn	**Sn**	**17 15 05.4**	**-1.6**			
QZH				smax	smax					
	comp=N,1μm,0.2s									
QZH				smax	smax					
	comp=E,990nm,0.3s									
KNMB	**Chin-men Tao**	**2.53**	**283**	*eP*	**Pn**	**17 14 37.0**	**-0.5**			
	baz=282									
KNMB				*eS*	**Sn**	**17 15 05.7**	**-2.2**			
	baz=282									
KNMB	**Chin-men Tao**	**2.53**	**283**	Pn	**Pn**	**17 14 36.7**	**-0.7**			
JKRS	**Kuro-shima**	**2.68**	**83**	P	**Pn**	**17 14 40.9**	**+1.5**			
JKRS				S	**Sn**	**17 15 14.1**	**+2.7**			
JIJ	**Ishigaki jima**	**2.81**	**80**	P	**Pn**	**17 14 42.2**	**+0.9**			
JIJ				*eS*	**Sn**	**17 15 15.1**	**+0.3**			
MHZQ	**Yeshan**	**2.87**	**320**	*eP*	**Pn**	**17 14 41.3**	**-0.8**			
	baz=319									
MHZQ				*eS*	**Sn**	**17 15 14.2**	**-1.8**			
	baz=319									
LYJJ	**Jianjiangzhen**	**2.88**	**335**	*eP*	**Pn**	**17 14 41.4**	**-0.9**			
	baz=335									
LYJJ				*eS*	**Sn**	**17 15 14.8**	**-1.7**			
	baz=335									
JISG	**Ishigakijimahi**	**3.00**	**77**	P	**Pn**	**17 14 44.9**	**+1.0**			
JISG				*eS*	**Sn**	**17 15 20.5**	**+1.0**			
AXDP	**Jialang**	**3.01**	**289**	*eP*	**Pn**	**17 14 43.6**	**-0.5**			
	baz=289									
AXDP				*eS*	**Sn**	**17 15 17.7**	**-2.1**			
	baz=289									
ZPLA	**Ao Xicun**	**3.06**	**271⇓**	*eP*	**Pn**	**17 14 44.5**	**-0.2**			
	baz=270									
ZPLA				*eS*	**Sn**	**17 15 19.9**	**-1.1**			
	baz=270									
XPSS	**Dashiqiu**	**3.11**	**345**	*eP*	**Pn**	**17 14 44.5**	**-0.9**			
	baz=345									
XPSS				*eS*	**Sn**	**17 15 19.9**	**-2.1**			
	baz=345									
JTJ	**Tarama**	**3.36**	**77**	P	**Pn**	**17 14 50.0**	**+1.1**			
JTJ				*eS*	**Sn**	**17 15 30.5**	**+2.2**			
BBP	**Basco**	**3.56**	**167**	*eP*	**Pn**	**17 14 52.6**	**+1.0**			
JIRB	**Irabujima**	**3.82**	**76**	P	**Pn**	**17 14 56.5**	**+1.3**			
JIKM	**Ikemajima**	**3.91**	**74**	P	**Pn**	**17 14 58.4**	**+2.0**			
JMJ	**Miyako jima 2**	**3.93**	**76**	*eP*	**Pn**	**17 14 57.6**	**+1.0**			
	baz=77									
JMJ2	**Miyako jima3**	**3.94**	**77**	P	**Pn**	**17 14 58.4**	**+1.6**			
JMJ2				*eS*	**Sn**	**17 15 45.1**	**+2.5**			
VDOS	**Pratas Island**	**5.16**	**232**	*eP*	**Pn**	**17 15 15.6**	**+2.0**			
	baz=231									
VDOS				*eS*	**Sn**	**17 16 12.7**	**0.0**			
	baz=231									
APYP	**Conner**	**6.03**	**179**	*eP*	**Pn**	**17 15 27.3**	**+1.7**			
HKPS	**Hong Kong Po S**	**6.61**	**257**	*eP*	**Pn**	**17 15 34.9**	**+1.3**			
	baz=256									
JOW	**Kunigami**	**7.11**	**64**	Pn	**Pn**	**17 15 40.0**	**-0.4**			
	6.7nm,0.3s,baz=146,slow=16,SNR=18									
JOW				Sn	**Sn**	**17 16 56.9**	**-3.8**			
	0.9nm,0.3s,baz=136,slow=28,SNR=1.6									
JOW	**Kunigami**	**7.11**	**64**	*eP*	**Pn**	**17 15 40.3**	**-0.1**			
	baz=66									
JOW	**Kunigami**	**7.11**	**64**	Pn	**Pn**	**17 15 40.2**	**-0.1**			
GZH	**Guangzhou**	**7.17**	**265**	Pn	**Pn**	**17 15 37.1**	**-4.1**			
GZH				Sn	Sn	17 16 48.8	-13			
GZH				smax	smax					
	comp=N,360nm,0.8s									
GZH				smax	smax					
	comp=E,180nm,0.9s									
NJ2	**Nanjing**	**8.34**	**347**	*eP*	Pn	17 16 02.8	+5.6			
NJ2				S	**Sn**	**17 17 39.4**	**+8.5**			
NJ2				pmax	pmax					
	comp=Z,14nm,0.6s									
NJ2				smax	smax					
	comp=N,100nm,1.0s									
NJ2				smax	smax					
	comp=E,96nm,1.2s									
WHN	**Wuhan**	**8.92**	**319**	⇓P	Pn	17 16 12.9	+7.7			
WHN				S	**Sn**	**17 17 42.5**	**-2.7**			
WHN				LR	LR					
	comp=N,2μm,5.4s									
WHN				LR	LR					
	comp=E,2μm,4.5s									
WHN				LR	LR					
	comp=Z,1μm,12.1s									
JMZ	**Minamidaito 2**	**9.38**	**76**	Pn	**Pn**	**17 16 12.3**	**+0.7**			
QIZ	**Qiongzhong**	**11.55**	**247**	P	**Pn**	**17 16 44.1**	**+2.7**			
QIZ				S	**Sn**	**17 18 55.8**	**+5.8**			
QIZ				LR	LR					
	comp=N,290nm,17.2s									
QIZ				LR	LR					
	comp=E,270nm,16.2s									
QIZ				LR	LR					
	comp=Z,290nm,18.1s									
QIZ	**Qiongzhong**	**11.55**	**247**	Pn	**Pn**	**17 16 41.8**	**+0.4**			
GYA	**Guiyang**	**13.31**	**284**	*eP*	**P**	**17 17 12.8**	**-2.3**			
GYA				S	Sn	17 19 42.5	+9.4			
GYA				LR	LR					
	comp=Z,670nm,11.8s									
KSAR	**Wonju Array Be**	**14.68**	**22**	Pn	**Pn**	**17 17 24.0**	**0.0**			
KSRS	**Korea Array**	**14.70**	**22**	Pn	**P**	**17 17 28.4**	**-1.9**			
	0.5nm,0.3s,baz=199,slow=11,SNR=21									
KSRS				LR	LR	17 23 28.7				
	comp=Z,128nm,19.0s,baz=198,slow=39									
KS19	**Wonju Array Si**	**14.73**	**22**	P	**P**	**17 17 30.2**	**-0.4**			
SLVN	**Son La**	**16.08**	**264**	P	**P**	**17 17 45.1**	**-0.8**			
KMI	**Kunming**	**16.75**	**278**	⇓P	**Pn**	**17 17 51.8**	**+0.5**			
KMI				pmax	pmax					
	comp=Z,6.0nm,0.7s									
KMI				pmax	pmax					
	comp=Z,85nm,3.9s									
KMI				LR	LR					
	comp=N,290nm,8.9s									
KMI				LR	LR					
	comp=E,710nm,9.9s									
KMI				LR	LR					
	comp=Z,750nm,10.4s									
DAV	**Davao City (W)**	**17.30**	**165**	LR	LR	17 24 26.9				
	comp=Z,102nm,20.3s,baz=346,slow=37									
HHC	**Hu-ho-hao-te**	**18.68**	**337**	*eP*	**Pn**	**17 18 15.8**	**+0.9**			
HHC				pmax	pmax					
	comp=Z,8.0nm,1.1s									
HHC				pmax	pmax					
	comp=Z,100nm,5.6s									
JCJ	**Chichijima**	**19.29**	**76**	LR	LR	17 24 46.2				
	comp=Z,155nm,18.8s,baz=120,slow=34									
MJAR	**Matsushiro Arr**	**19.37**	**46**	LR	LR	17 26 14.1				
	comp=Z,100nm,21.9s,baz=240,slow=38									
CM34	**Chiang Mai Arr**	**21.04**	**260**	P	**P**	**17 18 45.0**	**+4.7**			
CM35	**Chiang Mai Arr**	**21.09**	**260**	P	**P**	**17 18 44.0**	**+3.1**			
CM36	**Chiang Mai Arr**	**21.20**	**260**	P	**P**	**17 18 46.0**	**+4.0**			
CM33	**Chiang Mai Arr**	**21.24**	**260**	P	**P**	**17 18 46.0**	**+3.6**			
CMMT	**Chiang Mai**	**21.24**	**260**	P	**P**	**17 18 45.8**	**+3.3**			
CHTO	**Chiang Mai**	**21.24**	**260**	P	**P**	**17 18 43.6**	**+1.1**			
CM09	**Chiang Mai Arr**	**21.31**	**259**	P	**P**	**17 18 47.0**	**+3.7**			
CM04	**Chiang Mai Arr**	**21.34**	**259**	P	**P**	**17 18 48.0**	**+4.5**			
CM01	**Chiang Mai Arr**	**21.35**	**259**	P	**P**	**17 18 48.5**	**+4.8**			
CM31	**Chiang Mai Arr**	**21.35**	**259**	P	**P**	**17 18 48.1**	**+4.4**			
CM31	**Chiang Mai Arr**	**21.35**	**259**	P	**P**	**17 18 43.5**	**-0.1**			
CMAR	**Chiang Mai Arr**	**21.35**	**259**	P	**P**	**17 18 45.0**	**+1.3**			
	3.3nm,0.8s,baz=62,slow=8.0,SNR=36									
CMAR				PcP	**PcP**	**17 22 47.7**	**+0.1**			
	0.8nm,0.5s,baz=34,slow=0.7,SNR=15									
CMAR				LR	LR	17 27 30.6				
	comp=Z,120nm,19.0s,baz=133,slow=38									
CMAR	**Chiang Mai Arr**	**21.35**	**259**	P	**P**	**17 18 41.9**	**-1.8**			
CM02	**Chiang Mai Arr**	**21.36**	**259**	P	**P**	**17 18 48.1**	**+4.4**			
CM05	**Chiang Mai Arr**	**21.37**	**259**	P	**P**	**17 18 48.0**	**+4.2**			
CM15	**Chiang Mai Arr**	**21.37**	**259**	P	**P**	**17 18 48.2**	**+4.3**			
CM32	**Chiang Mai Arr**	**21.38**	**260**	P	**P**	**17 18 48.0**	**+4.1**			
CM13	**Chiang Mai Arr**	**21.40**	**259**	P	**P**	**17 18 48.5**	**+4.3**			
USRK	**Ussuriysk Ar.**	**22.11**	**21**	P	**P**	**17 18 52.1**	**+0.6**			
	1.3nm,0.6s,baz=226,slow=11,SNR=4.4									
USRK				LR	LR	17 28 01.9				
	comp=Z,104nm,20.2s,baz=168,slow=38									
TOLI2	**Tolitoli**	**22.68**	**181**	P	**P**	**17 18 56.8**	**-1.1**			
TOLI2				IAmb	IAmb	17 19 06.0				
	comp=Z,10nm,0.8s									
SBUM	**Sibu**	**23.01**	**203**	P	**P**	**17 19 00.8**	**-0.5**			
SBUM				IAmb	IAmb	17 19 03.4				
	comp=Z,9.0nm,0.8s									
GTA	**Gaotai**	**23.72**	**316**	P	**P**	**17 19 09.4**	**+1.0**			
GTA				pP	pP	17 19 14.8	+0.5			
GTA				sP	sP	17 19 17.8	+0.6			
GTA				pmax	pmax					
	comp=Z,2.0nm,1.5s									
GTA				pmax	pmax					
	comp=Z,81nm,4.4s									
GTA				LR	LR					
	comp=Z,110nm,13.8s									
GTA				LR	LR					
	comp=Z,200nm,12.4s									
GTA				LR	LR					
	comp=Z,230nm,14.2s									
KSM	**Kuching**	**24.64**	**207**	P	**P**	**17 19 15.6**	**-1.4**			
KSM				IAmb	IAmb	17 19 18.3				
	comp=Z,18nm,1.2s									
MTKI	**Muara Teweh, K**	**25.44**	**195**	P	**P**	**17 19 24.0**	**-0.1**			
	comp=Z,8.0nm,0.7s									
STKI	**Sintang**	**25.49**	**203**	P	**P**	**17 19 25.2**	**+0.6**			
ULN	**Ulaanbaatar**	**26.38**	**338**	P	**P**	**17 19 32.1**	**-0.5**			
ULN				IAmb	IAmb	17 19 40.0				
	comp=Z,11nm,1.4s									
SONM	**Songino Array**	**26.58**	**338**	P	**P**	**17 19 35.4**	**+1.0**			
	comp=Z,3.5nm,0.7s,baz=162,slow=11,SNR=32									
SONM				LR	LR	17 31 21.1				
	comp=Z,146nm,18.7s,baz=128,slow=39									
SONM	**Songino Array**	**26.58**	**338**	P	**P**	**17 19 34.5**	**+0.1**			
KLR	**Kul'dur**	**26.61**	**16**	P	**P**	**17 19 35.9**	**+1.3**			
	comp=Z,1.6nm,0.7s,baz=190,slow=8.0,SNR=7.5									
ASAJ	**Asahikawa**	**26.75**	**36**	P	**P**	**17 19 36.3**	**+0.5**			
	comp=Z,3.1nm,0.6s,baz=231,slow=13,SNR=4.8									
JKA	**Kamikawa-asahi**	**26.75**	**36**	P	**P**	**17 19 36.3**	**+0.5**			
LSA	**Lhasa**	**27.30**	**289**	P	**P**	17 19 52.0	+11			
LSA	**Lhasa**	**27.30**	**289**	P	**P**	**17 19 41.6**	**+0.2**			
TWSI	**Taliwang, Sumb**	**32.72**	**188**	P	**P**	**17 20 28.6**	**-0.3**			
	comp=Z,8.5nm,0.7s									
WMQ	**Urumqi**	**33.78**	**314**	*eP*	**P**	**17 20 39.6**	**+1.5**			
WMQ				pmax	pmax					
	comp=Z,12nm,0.7s									
WMQ				pmax	pmax					
	comp=Z,110nm,3.9s									
ZSN	**Zaisan**	**37.15**	**318**	*eP*	**P**	**17 21 07.5**	**+0.5**			
	baz=318									
MTN	**Manton Dam**	**37.84**	**164**	P	**P**	**17 21 10.5**	**-2.4**			
MTN				IAmb	IAmb	17 21 17.3				
	comp=Z,6.1nm,0.8s									
MK31	**Makanchi Array**	**38.47**	**316**	P	**P**	**17 21 18.9**	**+0.7**			
MK31				IAmb	IAmb	17 21 20.2				
	comp=Z,6.2nm,0.7s									
MKAR	**Makanchi Array**	**38.47**	**316**	P	**P**	**17 21 19.3**	**+1.2**			
	comp=Z,8.5nm,0.6s,baz=109,slow=10,SNR=142									
MKAR				PcP	**PcP**	**17 23 29.6**	**-1.4**			
	comp=Z,0.3nm,0.6s,baz=93,slow=6.1,SNR=1.8									
MKAR	**Makanchi Array**	**38.47**	**316**	P	**P**	**17 21 18.7**	**+0.6**			
MAKZ	**Makanchi**	**38.68**	**316**	P	**P**	**17 21 20.7**	**+0.9**			
MAKZ				IAmb	IAmb	17 21 21.9				
	comp=Z,8.6nm,0.6s									
SHLS	**Shalkode**	**39.17**	**310**	*eP*	**P**	**17 21 22.6**	**-1.5**			
	baz=310									
UZB	**Uzynbulak**	**39.48**	**310**	*eP*	**P**	**17 21 27.7**	**+0.9**			
	baz=310									
KPKS	**Kokpek**	**39.80**	**310**	*eP*	**P**	**17 21 30.2**	**+0.8**			
	baz=310									
SATY	**Saty**	**39.89**	**309**	*eP*	**P**	**17 21 31.4**	**+1.2**			
	baz=309									
KNRA	**Kununurra**	**40.06**	**168**	P	**P**	**17 21 30.2**	**-1.4**			
TDK	**Taldyqorghan**	**40.42**	**312**	*eP*	**P**	**17 21 36.0**	**+1.6**			
	comp=Z,4.0nm,0.6s,baz=312									
ZAA0	**Zalesovo Array**	**40.42**	**327**	P	**P**	**17 21 34.0**	**-0.2**			
ZALV	**Zalesovo Beam**	**40.42**	**327**	P	**P**	**17 21 34.0**	**-0.3**			
	comp=Z,3.5nm,0.6s,baz=113,slow=7.9,SNR=21									
ZALV				LR	LR	17 39 21.2				
	comp=Z,48nm,19.1s,baz=98,slow=38									
MDOK	**Medeo**	**40.88**	**309**	*eP*	**P**	**17 21 39.7**	**+1.3**			
	baz=309									
TNSS	**Tian-Shan**	**40.92**	**309**	*eP*	**P**	**17 21 40.5**	**+1.4**			
	baz=309									
AAA	**Alma-Ata**	**40.98**	**309**	*eP*	**P**	**17 21 41.0**	**+1.9**			
	comp=Z,9.0nm,0.4s,baz=309									
SEM	**Semipalatinsk**	**41.17**	**321**	*eP*	**P**	**17 21 40.6**	**-0.2**			
	baz=320									
MA2	**Magadan**	**41.26**	**22**	P	**P**	**17 21 40.6**	**-0.5**			
	comp=Z,0.5nm,0.3s,baz=203,slow=13,SNR=3.8									
ULHL	**Ulahol**	**41.26**	**307**	P	**P**	**17 21 43.3**	**+1.6**			
	SNR=7.7									
TKM2	**Tokmak 2**	**41.86**	**308**	P	**P**	**17 21 48.7**	**+2.1**			
	SNR=6.5									
KBK	**Karagabulak**	**42.28**	**308**	P	**P**	**17 21 52.1**	**+2.1**			
	SNR=5.0									
UCH	**Uchtor**	**42.51**	**307**	P	**P**	**17 21 54.6**	**+2.4**			
	SNR=6.9									
SGDS	**Sogindy**	**42.66**	**309**	*eP*	**P**	**17 21 51.9**	**-1.1**			
	baz=309									
H11S3	**WAKE ISLAND Hy**	**42.70**	**88**	T	T	18 07 05.8				
	baz=284,slow=74,SNR=8.3									
H11S1	**WAKE ISLAND Hy**	**42.71**	**88**	T	T	18 07 06.5				
	baz=284,slow=74,SNR=4.9									
H11S2	**WAKE ISLAND Hy**	**42.72**	**88**	T	T	18 07 08.7				
	baz=284,slow=74,SNR=4.3									
AML	**Almayashu**	**43.10**	**307**	P	**P**	**17 21 59.0**	**+2.2**			
	SNR=6.8									
BTLS	**Baital**	**43.41**	**311**	*eP*	**P**	**17 21 58.7**	**-0.2**			
	baz=311									
SEY	**Seymchan**	**44.25**	**20**	P	**P**	**17 22 06.5**	**+1.2**			
	comp=Z,0.4nm,0.4s,baz=251,slow=22,SNR=5.5									
PSA00	**Pilbara Seismi**	**45.24**	**182**	P	**P**	**17 22 11.6**	**-2.0**			
WB0

ILAR	**Eielson Array**	**69.48**	**27**	P		**P**	**17 25 03.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=272,slow=4.7,SNR=5.5							
ARCES	**ARCESS Array B**	**69.75**	**338**	P		**P**	**17 25 05.5**	**-0.3**
	comp=Z,3.8nm,0.7s,baz=48,slow=5.4,SNR=9.2							
FINES	**FINESS Array B**	**71.63**	**330**	P		**P**	**17 25 17.7**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=34,slow=5.8,SNR=17							
FINES				LR		LR	17 59 28.7	
	comp=Z,70nm,18.8s,baz=358,slow=38							
AKASG	**Malin Array Be**	**73.01**	**318**	P		**P**	**17 25 25.6**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=57,slow=6.4,SNR=6.9							
AKASG	**Malin Array Be**	**73.01**	**318**	P		**P**	**17 25 25.7**	**-0.2**
AKBB	**Malin Array Si**	**73.01**	**318**	P		**P**	**17 25 25.1**	**-0.8**
AKBB				IAmb		IAmb	17 25 26.6	
	comp=Z,4.8nm,1.1s							
BR131	**Keskin Array S**	**73.27**	**306**	P		**P**	**17 25 28.6**	**+0.8**
BR131				IAmb		IAmb	17 25 40.8	
	comp=Z,3.6nm,0.9s							
BRTR	**Keskin Array B**	**73.27**	**306**	P		**P**	**17 25 28.4**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=151,slow=2.2,SNR=8.0							
BRTR	**Keskin Array B**	**73.27**	**306**	P		**P**	**17 25 27.2**	**-0.5**
VRI	**Vrincioaia**	**76.13**	**314**	⇑P		**P**	**17 25 46.0**	**+1.9**
BIZ	**Bicaz**	**76.17**	**315**	⇑P		**P**	**17 25 45.0**	**+0.7**
BUR08	**Bucovina Ar. S**	**76.50**	**316**	P		**P**	**17 25 47.2**	**+0.9**
BURAR	**Bucovina Array**	**76.50**	**316**	⇓P		**P**	**17 25 47.8**	**+1.5**
BURAR	**Bucovina Array**	**76.50**	**316**	P		**P**	**17 25 46.8**	**+0.5**
MLR	**Muntele Rosu**	**76.78**	**314**	⇑P		**P**	**17 25 49.4**	**+1.4**
MLR	**Muntele Rosu**	**76.78**	**314**	P		**P**	**17 25 48.8**	**+0.9**
MLR				IAmb		IAmb	17 25 50.2	
	comp=Z,4.4nm,0.8s							
KWP	**Kalwaria Pacla**	**77.32**	**319**	P		**P**	**17 25 51.6**	**+0.8**
NC405	**NORSAR Array S**	**78.17**	**332**	P		**P**	**17 25 55.5**	**+0.3**
CRVS	**Cervenica-Dubn**	**78.35**	**318**	*eP*		**P**	**17 25 57.0**	**+0.5**
NOA	**NORSAR Array B**	**78.42**	**332**	P		**P**	**17 25 56.3**	**-0.4**
	comp=Z,4.5nm,0.7s,baz=59,slow=5.6,SNR=18							
NOA				LR		LR	18 03 58.6	
	comp=Z,76nm,18.1s,baz=55,slow=38							
NC204	**NORSAR Array S**	**78.50**	**332**	P		**P**	**17 25 57.2**	**+0.1**
OJC	**Ojcow**	**78.82**	**320**	P		**P**	**17 25 59.7**	**+0.7**
VTS	**Vitosha**	**79.65**	**312**	⇑P		**P**	**17 26 05.8**	**+1.8**
VTS	**Vitosha**	**79.65**	**312**	P		**P**	**17 26 05.0**	**+1.0**
MDVR	**Moldovita**	**79.82**	**314**	⇓P		**P**	**17 26 05.8**	**+1.1**
LIT	**Litokhoron**	**81.16**	**310**	P		**P**	**17 26 11.6**	**-0.3**
LIT				IAmb		IAmb	17 26 13.2	
	comp=Z,3.5nm,0.8s							
FNA	**Florina**	**81.66**	**311**	P		**P**	**17 26 14.0**	**-0.6**
FNA				IAmb		IAmb	17 26 14.8	
	comp=Z,4.2nm,0.8s							
GERES	**GERESS Array B**	**83.00**	**321**	P		**P**	**17 26 21.8**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=57,slow=4.9,SNR=9.4							
GERES	**GERESS Array B**	**83.00**	**321**	P		**P**	**17 26 21.7**	**+0.2**
YKA	**Yellowknife Ar**	**83.24**	**23**	P		**P**	**17 26 21.4**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=318,slow=4.6,SNR=17							
KMBO	**Kilima Mbogo**	**84.83**	**266**	P		**P**	**17 26 32.1**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=40,slow=9.9,SNR=4.8							
YBH	**Yreka Blue Hor**	**92.00**	**4**	LR		LR	18 04 49.5	
	comp=Z,35nm,20.4s,baz=86,slow=33							
PDAR	**Pinedale Array**	**98.88**	**35**	P		**P**	**17 27 36.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=252,slow=25,SNR=4.3							

NEIC ***13*** *17:26:42.3±1.6, 5.2S±0.1°×152.0E±0.2, h67km±10km, mb4.1/10, Error ellipse: s-maj=32.0km s-min=8.0km az=113.0*

IDC ***13*** *17:26:43.1±2.4, 5.16S×151.79E, h56km±16km, mb3.9/10, mb1 4.1/11, mb1mx3.8/31, mbtmp4.2/11, ML2.1/1, MS3.5/20, Ms1 3.5/20, ms1mx3.4/34, Error ellipse: s-maj=36.3km s-min=11.4km az=124.0*

DJA ***13*** *17:26:43.4±0.6, 5.5S×15.2E±°, h68km±7km, M4.5/8, mb4.2/8, MLv4.7/3*

ISC 13 17:26:44.0±1.0, 5.2S±0.1°×151.9E±0.2, h70km, n47, σ1§49/39, mb4.1/16, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.99**	**14**		**Pn**	**17 27 01.4**	**-1.0**
PMG	**Port Moresby**	**6.34**	**228**	P	**Pn**	**17 28 14.4**	**-0.4**
	3.1nm,0.3s,baz=47,slow=7.5,SNR=10						
PMG				S	**Sn**	**17 29 24.6**	**-1.3**
	4.5nm,0.3s,baz=86,slow=22,SNR=4.5						
PMG	**Port Moresby**	**6.34**	**228**	Pn	**Pn**	**17 28 15.1**	**+0.2**
JAY	**Jayapura**	**11.50**	**283**	LR	LR	17 33 13.7	
	comp=Z,247nm,21.1s,baz=84,slow=34						
SIJI	**Sorong**	**21.06**	**281**	P	**P**	**17 31 25.6**	**+2.9**
	7.1nm,0.8s,baz=39,slow=16,SNR=5.6						
MTN	**Manton Dam**	**21.90**	**248**	P	**P**	**17 31 29.2**	**-2.3**
MTN				IAmb	IAmb	17 31 43.5	
	comp=Z,6.7nm,0.9s						
DZM	**Mont Dzumac**	**21.91**	**141**	LR	LR	17 38 52.6	
	comp=Z,243nm,21.3s,baz=251,slow=33						
WB0	**Warramunga Arr**	**22.41**	**228**	P	**P**	**17 31 36.0**	**-1.1**
WB0				IAmb	IAmb	17 31 50.9	
	comp=Z,6.6nm,0.8s						
WR0	**Warramunga Arr**	**22.42**	**227**	P	**P**	**17 31 36.1**	**-1.1**
WR0				IAmb	IAmb	17 31 51.0	
	comp=Z,8.7nm,1.1s						
WRAB	**Tennant Creek**	**22.55**	**228**	P	**P**	**17 31 37.1**	**-1.4**
WB2	**Warramunga Arr**	**22.55**	**228**	P	**P**	**17 31 37.0**	**-1.6**
WB2				IAmb	IAmb	17 31 51.0	
	comp=Z,8.0nm,0.8s						
WRA	**Warramunga Arr**	**22.56**	**228**	P	**P**	**17 31 37.4**	**-1.3**
	comp=Z,2.6nm,0.7s,baz=55,slow=10.0,SNR=41						
WRA				S	**S**	**17 35 39.0**	**-2.2**
	comp=Z,1.9nm,1.1s,baz=58,slow=18,SNR=5.6						
WRA				ScP	**ScP**	**17 39 04.6**	**+2.9**
	comp=Z,1.7nm,1.1s,baz=50,slow=3.0,SNR=2.2						
WRA	**Warramunga Arr**	**22.56**	**228**	P	**P**	**17 31 37.0**	**-1.6**
KNRA	**Kununurra**	**25.04**	**244**	P	**P**	**17 32 00.4**	**-1.5**
AS31	**Alice Springs**	**25.30**	**222**	P	**P**	**17 32 03.7**	**-0.6**
ASAR	**Alice Springs**	**25.30**	**222**	P	**P**	**17 32 03.6**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=56,slow=8.9,SNR=42						
ASAR				S	**S**	**17 36 28.9**	**+3.4**
	comp=Z,0.4nm,1.0s,baz=35,slow=16,SNR=2.4						
ASAR				ScP	**ScP**	**17 39 11.3**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=48,slow=4.2,SNR=7.1						
STKA	**Stephens Creek**	**28.29**	**199**	LR	LR	17 43 59.5	
	comp=Z,90nm,19.7s,baz=26,slow=37						
BATI	**Baumata**	**28.45**	**258**	P	**P**	**17 32 31.9**	**-0.7**
	comp=Z,13nm,0.9s,baz=136,slow=4.4,SNR=5.8						
BATI				LR	LR	17 46 24.5	
	comp=Z,136nm,18.8s,baz=118,slow=42						
BATI	**Baumata**	**28.45**	**258**	P	**P**	**17 32 32.7**	**+0.1**
	comp=Z,7.5nm,0.9s						
FITZ	**Fitzroy Crossi**	**28.73**	**241**	P	**P**	**17 32 34.0**	**-1.0**
	comp=Z,3.1nm,0.7s,baz=90,slow=7.0,SNR=15						
FITZ				LR	LR	17 45 28.1	
	comp=Z,116nm,18.8s,baz=64,slow=39						
FITZ	**Fitzroy Crossi**	**28.73**	**241**	P	**P**	**17 32 33.7**	**-1.2**
FITZ				IAmb	IAmb	17 32 34.9	
	comp=Z,5.1nm,0.9s						
DAV	**Davao City (W)**	**28.96**	**295**	LR	LR	17 44 02.7	
	comp=Z,69nm,18.9s,baz=120,slow=36						
MTKI	**Muara Teweh, K**	**37.20**	**275**	P	**P**	**17 33 49.7**	**+0.8**
JNU	**Nakatsue**	**42.99**	**334**	LR	LR	17 50 59.4	
	comp=Z,50nm,20.7s,baz=160,slow=34						
MJAR	**Matsushiro Arr**	**43.42**	**344**	LR	LR	17 51 44.7	
	comp=Z,45nm,20.1s,baz=160,slow=35						
KSRS	**Korea Array**	**47.93**	**334**	LR	LR	17 54 06.6	
	comp=Z,23nm,20.3s,baz=186,slow=34						
USRK	**Ussuriysk Ar.**	**52.31**	**342**	LR	LR	17 54 32.8	
	comp=Z,34nm,21.7s,baz=169,slow=32						
CMAR	**Chiang Mai Arr**	**57.24**	**296**	P	**P**	**17 36 24.8**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=115,slow=4.8,SNR=12						
CMAR				LR	LR	18 01 08.0	
	comp=Z,16nm,18.8s,baz=190,slow=36						
CMAR	**Chiang Mai Arr**	**57.24**	**296**	P	**P**	**17 36 22.6**	**-2.1**
PETK	**Petropavlovsk-**	**58.25**	**4**	LR	LR	17 58 02.1	
	comp=Z,44nm,20.3s,baz=171,slow=32						
PPT	**Papeete**	**58.45**	**107**	LR	LR	17 58 56.7	
	comp=Z,24nm,18.6s,baz=8.5,slow=33						
HHC	**Hu-ho-hao-te**	**58.83**	**325**	*eP*	**P**	**17 36 35.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,5.5s						
SONM	**Songino Array**	**66.16**	**328**	P	**P**	**17 37 25.2**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=144,slow=5.6,SNR=9.6						
SONM				LR	LR	18 05 01.9	
	comp=Z,32nm,20.9s,baz=117,slow=35						
SONM	**Songino Array**	**66.16**	**328**	P	**P**	**17 37 24.7**	**+0.4**
SONM				IAmb	IAmb	17 37 29.3	
	comp=Z,1.5nm,0.7s						
WMQ	**Urumqi**	**75.42**	**318**	*eP*	**P**	**17 38 21.1**	**+0.6**
MKAR	**Makanchi Array**	**80.02**	**319**	P	**P**	**17 38 46.0**	**0.0**
	comp=Z,0.8nm,0.9s,baz=98,slow=6.4,SNR=6.9						
MKAR	**Makanchi Array**	**80.02**	**319**	P	**P**	**17 38 45.5**	**-0.5**
ZALV	**Zalesovo Beam**	**80.97**	**327**	P	**P**	**17 38 50.9**	**0.0**
	comp=Z,1.7nm,0.7s,baz=108,slow=6.2,SNR=8.2						
ZALV				LR	LR	18 15 02.1	
	comp=Z,25nm,20.1s,baz=115,slow=36						
ZALV	**Zalesovo Beam**	**80.97**	**327**	P	**P**	**17 38 50.0**	**-0.8**
ILAR	**Eielson Array**	**82.81**	**22**	P	**P**	**17 39 01.6**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=248,slow=5.1,SNR=14						
ILAR				LR	LR	18 11 38.4	
	comp=Z,20nm,19.1s,baz=252,slow=32						
MAW	**Mawson**	**84.91**	**203**	LR	LR	18 13 10.7	
	comp=Z,43nm,21.4s,baz=54,slow=33						
NVAR	**Mina Array Bea**	**92.99**	**52**	P	**P**	**17 39 51.3**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=252,slow=6.2,SNR=7.2						
NVAR				LR	LR	18 14 52.8	
	comp=Z,33nm,20.1s,baz=284,slow=31						
NVAR	**Mina Array Bea**	**92.99**	**52**	P	**P**	**17 39 48.0**	**-2.3**
YKA	**Yellowknife Ar**	**96.14**	**28**	LR	LR	18 19 57.0	
	comp=Z,20nm,20.6s,baz=0.0,slow=33						
PDAR	**Pinedale Array**	**99.73**	**48**	LR	LR	18 17 34.3	
	comp=Z,38nm,21.5s,baz=300,slow=31						
TORD	**Torodi Ar. Bea**	**149.59**	**287**	PKPbc	**PKPbc**	**17 46 26.0**	**-0.6**
	comp=Z,6.6nm,0.9s,baz=51,slow=2.4,SNR=19						
TORD	**Torodi Ar. Bea**	**149.59**	**287**		**PKPbc**	**17 46 25.9**	**-0.7**

KRSC ***13*** *17:42:00.6±0.5, 54.56N×160.55E, h115km±8km, ML3.7*
MOS ***13*** *17:42:01.7±0.9, 54.65N×160.25E, h128km, mb3.9/2, Error ellipse: s-maj=21.3km s-min=10.8km az=67.2*
IDC ***13*** *17:42:02.8±1.5, 54.84N×159.88E, h123km±15km, mb3.2/9, mb1 3.6/11, mb1mx3.2/44, mbtmp3.7/11, MS3.4/1, Ms1 3.4/1, ms1mx2.6/13, Error ellipse: s-maj=28.7km s-min=14.3km az=143.0*

ISC 13 17:42:01.9±0.7, 54.57N±0.03×160.49E±0.04, h113km±6km, n68, σ1§03/94, mb3.6/10, 5C-3D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZV	**Kizimen**	**0.56**	**348**	*i* P	**Pn**	**17 42 19.9**	**+0.2**
KZV				*e*S	**Sn**	**17 42 33.3**	**+0.2**
TUMD	**Tumrok D**	**0.64**	**355**	*i* P	**Pn**	**17 42 19.9**	**-0.2**
TUMD				*e*S	**Sn**	**17 42 33.4**	**-0.5**
MKZ	**Mys Kozlova**	**0.72**	**90**	*i* P	**Pn**	**17 42 21.1**	**+0.4**
MKZ				*e*S	**Sn**	**17 42 35.2**	**+0.4**
TUMR	**Tumrok**	**0.74**	**345**	*i* P	**Pn**	**17 42 21.5**	**+0.4**
TUMR				*e*S	**Sn**	**17 42 36.1**	**+0.6**
KII	**Karymskiy**	**0.81**	**229**	*e*P	**Pn**	**17 42 21.7**	**+0.1**
KII				*e*S	**Sn**	**17 42 36.8**	**+0.3**
KMNR	**Kamenistaya**	**1.20**	**353**	*e*P	**Pn**	**17 42 26.2**	**+0.6**
KMNR				*e*S	**Sn**	**17 42 44.3**	**+0.8**
BZMR	**Bezymyannaya**	**1.37**	**360**	*e*P	**Pn**	**17 42 28.3**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**1.38**	**5**	*e*P	**Pn**	**17 42 27.9**	**+0.3**
KIRR	**Kirishev**	**1.39**	**357**	*e*P	**Pn**	**17 42 28.1**	**+0.4**
KIRR				*e*S	**Sn**	**17 42 47.9**	**+0.5**
BZWR	**Bezymyannyi-We**	**1.40**	**0**	*e*P	**Pn**	**17 42 28.8**	**+0.9**
KPT	**Kopyto**	**1.41**	**354**	*e*P	**Pn**	**17 42 28.6**	**+0.7**
KPT				*e*S	**Sn**	**17 42 48.4**	**+0.7**
ZLN	**Zelenaya**	**1.46**	**7**	*e*P	**Pn**	**17 42 29.2**	**+0.7**
SPN	**Mys Shipunski**	**1.50**	**191**	*e*P	**Pn**	**17 42 28.5**	**-0.3**
SPN				*e*S	**Sn**	**17 42 48.4**	**-0.9**
NLC	**Nalytchevo**	**1.56**	**206**	*e*P	**Pn**	**17 42 29.8**	**+0.3**
NLC				*e*S	**Sn**	**17 42 50.9**	**+0.4**
SDLR	**Sedlovina**	**1.60**	**217**	*e*P	**Pn**	**17 42 30.9**	**+0.7**
SDLR				*e*S	**Sn**	**17 42 52.6**	**+0.8**
KRX	**Arik**	**1.63**	**223**	*e*P	**Pn**	**17 42 31.6**	**+1.1**
KRX				*e*S	**Sn**	**17 42 53.4**	**+1.1**
KRER	**Koryakskii**	**1.63**	**220**	*e*P	**Pn**	**17 42 31.4**	**+0.7**
SMAR	**Somma**	**1.65**	**218**	*e*P	**Pn**	**17 42 31.5**	**+0.7**
AVH	**Avacha**	**1.67**	**219**	*e*P	**Pn**	**17 42 32.0**	**+1.0**
AVH				*e*S	**Sn**	**17 42 55.3**	**+2.2**
UGLR	**Uglovaya**	**1.68**	**217**	*e*P	**Pn**	**17 42 31.8**	**+0.6**
KOK	**Koryaka**	**1.68**	**221**	*e*P	**Pn**	**17 42 32.1**	**+0.9**
ESO	**Esso**	**1.71**	**324**	*i* P	**Pn**	**17 42 31.8**	**+0.5**
ESO				*e*S	**Sn**	**17 42 53.4**	**-0.4**
GNL	**Ganaly**	**1.74**	**241**	*i* P	**Pn**	**17 42 32.2**	**+0.4**
GNL				*e*S	**Sn**	**17 42 54.7**	**+0.1**
KLY	**Klyuchi**	**1.75**	**3**	*e*P	**Pn**	**17 42 32.7**	**+0.8**
KLY				*e*S	**Sn**	**17 42 55.6**	**+0.8**
SRDR	**Sredinnyy**	**1.81**	**346**	*e*P	**Pn**	**17 42 32.6**	**-0.1**
DALK	**Dalny**	**1.85**	**215**	*e*P	**Pn**	**17 42 33.7**	**+0.6**
DALK				*e*S	**Sn**	**17 42 57.6**	**+0.7**
PET	**Petropavlovsk**	**1.89**	**216**	*e*PN	**Pn**	**17 42 34.8**	**+1.2**
PET				*e*S	**Sn**	**17 42 59.5**	**+1.7**
PET				pmax	pmax		
	comp=Z,84nm,0.6s						
PET				smax	smax		
	comp=N,192nm,0.5s						
PET				smax	smax		
	comp=E,141nm,0.5s						
PET	**Petropavlovsk**	**1.89**	**216**	*e*P	**Pn**	**17 42 34.3**	**+0.7**
PET				*e*S	**Sn**	**17 42 58.6**	**+0.8**
BDR	**Baidarnaya**	**2.05**	**11**	*e*P	**Pn**	**17 42 36.8**	**+1.2**
SMKR	**Semkarok**	**2.10**	**15**	*e*P	**Pn**	**17 42 37.0**	**+0.8**
KBG	**Krutoberegovo**	**2.11**	**36**	*e*P	**Pn**	**17 42 36.8**	**+0.5**
KBG				*e*S	**Sn**	**17 43 02.7**	**0.0**
KBTR	**Krutoberegovo**	**2.11**	**38**	*e*P	**Pn**	**17 42 37.0**	**+0.6**
KBTR				*e*S	**Sn**	**17 43 03.1**	**+0.3**
SRKR	**Sorokina**	**2.13**	**10**	*e*P	**Pn**	**17 42 37.4**	**+0.8**
PEA0B	**Petropavlovsk-**	**2.21**	**230**	⇑ePN	**Pn**	**17 42 38.0**	**+0.4**
PETK	**Petropavlovsk-**	**2.21**	**230**	P	**Pn**	**17 42 38.1**	**+0.5**
	comp=E,3.0nm,0.3s,baz=72,slow=15,SNR=110						
PETK				S	**Sn**	**17 43 06.2**	**+1.1**
	comp=E,2.1nm,0.3s,baz=94,slow=17,SNR=5.5						
KRMR	**Karymshinskiy**	**2.24**	**220**	*e*P	**Pn**	**17 42 38.7**	**+0.7**
KRMR				*e*S	**Sn**	**17 43 06.1**	**+0.5**
RUS	**Russkaya**	**2.44**	**210**	*e*P	**Pn**	**17 42 40.5**	**-0.1**
GRL	**Gorelyy**	**2.48**	**217**	*e*P	**Pn**	**17 42 42.3**	**+1.0**
MTVR	**Mutnovka**	**2.50**	**214**	*e*P	**Pn**	**17 42 42.4**	**+0.8**
MTVR				*e*S	**Sn**	**17 43 12.6**	**+0.6**
APC	**Apacha**	**2.57**	**232**	*e*P	**Pn**	**17 42 43.0**	**+0.7**
ASAK	**Asacha**	**2.68**	**216**	*e*P	**Pn**	**17 42 44.9**	**+1.1**
KDTR	**Khodutka, Kamc**	**3.12**	**209**	*e*P	**Pn**	**17 42 50.4**	**+0.9**
KDTR				*e*S	**Sn**	**17 43 25.1**	**-1.1**
MIPR	**Malaya Ipel'ka**	**3.20**	**226**	*e*P	**Pn**	**17 42 51.7**	**+1.1**
BKI	**Bering**	**3.23**	**76**	*i* P	**Pn**	**17 42 51.4**	**+0.5**
BKI				*e*S	**Sn**	**17 43 27.0**	**-1.7**
PAU	**Pauzhetka**	**3.82**	**217**	*e*P	**Pn**	**17 43 00.5**	**+1.7**
PALN	**Palana**	**4.54**	**357**	*e*P	**Pn**	**17 43 10.6**	**+2.2**
SKR	**Severo-Kuril's**	**4.71**	**216**	⇑ePN	**Pn**	**17 43 11.2**	**+0.4**
OSSR	**Ossora**	**4.90**	**16**	*e*P	**Pn**	**17 43 13.4**	**+0.2**
MA2	**Magadan**	**7.30**	**317**	P	**Pn**	**17 43 45.5**	**-0.1**
	comp=E,0.5nm,0.3s,baz=123,slow=10.0,SNR=44						
MA2	**Magadan**	**7.30**	**317**	*ce*PN	**Pn**	**17 43 46.3**	**+0.7**
ASAJ	**Asahikawa**	**15.62**	**235**	P	**Pn**	**17 45 36.3**	**+0.8**
	comp=E,0.6nm,0.3s,baz=25,slow=8.5,SNR=6.8						
ERM	**Erimo**	**16.99**	**229**	⇓*e*P	**Pn**	**17 45 50.8**	**-1.6**
ERM				pmax	pmax		
	comp=Z,23nm,1.5s						
YAK	**Yakutsk**	**17.69**	**307**	⇓*e*P	**P**	**17 45 58.5**	**-1.5**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KLR	**Kul'dur**	**18.45**	**265**	P	**P**	**17 46 08.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=133,slow=7.0,SNR=2.4						
KLR	**Kul'dur**	**18.45**	**265**	⇓*e*P	**P**	**17 46 08.1**	**-0.3**
KLR				pmax	pmax		
	comp=Z,7.0nm,2.0s						
TIXI	**Tiksi**	**21.85**	**333**	⇑*e*P	**P**	**17 46 47.0**	**+2.2**
MAJO	**Matsushiro**	**23.67**	**230**	⇑*e*P	**P**	**17 47 02.8**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,14nm,1.6s						
ILAR	**Eielson Array**	**27.62**	**47**	P	**P**	**17 47 38.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=263,slow=7.1,SNR=12						
SONM	**Songino Array**	**33.82**	**281**	P	**P**	**17 48 30.2**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=55,slow=7.6,SNR=1.8						
YKA	**Yellowknife Ar**	**41.92**	**44**	P	**P**	**17 49 40.9**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=301,slow=8.0,SNR=9.3						
YKA	**Yellowknife Ar**	**41.92**	**44**	*eP*	**P**	**17 49 40.3**	**-0.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**47.74**	**295**	P	**P**	**17 50 23.0**	**-4.0**
	comp=Z,0.1nm,0.5s,baz=63,slow=7.9,SNR=4.0						
MKAR				LR	LR	18 11 33.0	
	comp=Z,44nm,18.8s,baz=66,slow=37						
MKAR	**Makanchi Array**	**47.74**	**295**	*i* P	**P**	**17 50 26.2**	**-0.8**
NVAR	**Mina Array Bea**	**55.03**	**71**	P	**P**	**17 51 23.8**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=286,slow=8.6,SNR=4.9						
PDAR	**Pinedale Array**	**56.61**	**62**	P	**P**	**17 51 34.1**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=316,slow=2.5,SNR=2.5						
TXAR	**Lajitas Array**	**69.85**	**68**	P	**P**	**17 53 01.8**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=310,slow=4.4,SNR=11						
WRA	**Warramunga Arr**	**77.52**	**205**	P	**P**	**17 53 44.9**	**0.0**
	comp=Z,0.4nm,0.4s,baz=19,slow=6.1,SNR=9.8						
ASAR	**Alice Springs**	**81.20**	**205**	P	**P**	**17 54 05.2**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=16,slow=5.1,SNR=7.3						

IDC 13 17:46:37.8±5.3, 25.51S×176.54W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.6/21, mbtmp3.9/2, Error ellipse: s-maj=278.3km s-min=51.3km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.89**	**261**	P	P	17 54 55.5	+1.0
	0.6nm,0.5s,baz=102,slow=7.5,SNR=16						
WRA	**Warramunga Arr**	**45.45**	**267**	P	P	17 54 57.8	-1.1
	0.7nm,0.4s,baz=105,slow=8.6,SNR=43						
AKASG	**Malin Array Be**	**148.01**	**329**	PKPbc	PKPbc	18 06 24.1	-0.8
	0.3nm,0.4s,baz=42,slow=4.2,SNR=4.1						
BRTR	**Keskin Array B**	**151.06**	**307**	PKPbc	PKPbc	18 06 32.7	-0.4
	0.4nm,0.6s,baz=38,slow=7.3,SNR=2.8						

DJA 13 18:38:56.3±0.5, 8°S±4°×117°4E±°, h54km±5km, M2.5/6, MLv2.5/6, Bali region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.23**	**210**	P	Pn	18 39 06.3	+1.0
JAGI				S	Sn	18 39 14.9	+3.1
ABJI	**Asem Bagus**	**0.47**	**356**	P	Pn	18 39 09.4	+1.9
ABJI				S	Sn	18 39 18.7	+3.1
SRBI	**Singaraja**	**0.95**	**79**	P	Pn	18 39 14.2	+0.7
SRBI				S	Sn	18 39 27.1	+1.0
KMMI	**Kalianget**	**1.25**	**346**	P	Pn	18 39 11.1	-6.4
TWSI	**Taliwang, Sumb**	**2.62**	**100**	P	Pn	18 39 36.3	0.0
TWSI				S	Sn	18 39 56.9	-10

ISK ***13*** *18:44:42.8, 34.81N×31.69E, h15km, ML2.9/11*
NIC ***13*** *18:44:43.2±0.0, 34.79N×31.61E, h26km, MI3.3/3*
DDA ***13*** *18:44:44.4, 34.98N×31.86E, h23km±2km, ML2.3*

ISC 13 18:44:40.3±1.7, 34.92N±0.06×31.66E±0.04, h0km±11km, n33, σ1§65/51, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKMS	**Akamas**	**0.56**	**80**	P	**Pn**	**18 44 55.9**	**+0.4**
AKMS				S	**Sb**	**18 45 05.6**	**+4.1**
AKMS				AML	AML	18 45 06.1	
	7.8nm,0.2s						
AKMS				AML	AML	18 45 06.1	
	7.8nm,0.2s						
AKMS				AML	AML	18 45 06.1	
	10nm,0.3s						
AKMS				AML	AML	18 45 06.1	
	10nm,0.3s						
NATA	**Nata**	**0.76**	**100**	P	**Pn**	**18 44 58.3**	**+0.1**
NATA				AML	AML	18 45 17.7	
	4.3nm,0.6s						
NATA				AML	AML	18 45 19.1	
	2.9nm,0.4s						
ALFC	**Alefka**	**0.80**	**73**	P	**Pn**	**18 44 59.8**	**+0.9**
ALFC				S	**Sn**	**18 45 12.1**	**+0.6**
ALFC				AML	AML	18 45 15.6	
	3.4nm,0.2s						

Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}2.17; $M_{\theta\theta}$0.65; $M_{\phi\phi}$-2.83; $M_{r\theta}$0.90; $M_{r\phi}$-0.99; $M_{\theta\phi}$0.73; Fault plane solution: $M_0$2.93000×10^{16} NP1:ϕ_s34.00000°, δ58.00000°, λ115.00000°. NP2:ϕ_s172.00000°, δ40.00000°, λ55.00000°.

*MOS **13** 18:51:04.9± 1.0, 39.°82N× 143.°58E, h25km, mb5.1/71, MS4.8/15 Error ellipse: s-maj=5.4km s-min=3.4km az=110.0*

*GCMT **13** 18:51:08.7± 0.2, 39.°75N± 0.°02× 143.°83E± 0.°02, h18km, MW5.0/123, Moment Tensor Solution. s58, c70; s123, c202; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.08± .13; $M_{\theta\theta}$-0.08± .07; $M_{\phi\phi}$-3.00± .09; $M_{r\theta}$1.50± .19; $M_{\theta\phi}$-0.84± .05; $M_{r\phi}$2.95± .21; Best double couple: M_o4.57200×10^{16} NP1:ϕ_s186.00000°, δ23.00000°, λ73.00000°. NP2:ϕ_s24.00000°, δ68.00000°, λ97.00000°. Principal axes: T 4.5380, Plg66.0000°, Azm306.0000°; N 0.0640, Plg6.0000°, Azm201.0000°; P -4.6060, Plg23.0000°, Azm108.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **13** 18:51:10.1± 0.0, 40.°29N× 144.°21E, h31km, mb5.0*

ISC 13 18:51:04.3± 0.6, **39.°73N**± 0.°03× **143.°71E**± 0.°04, **h16**km± 3km, **h15**km: **pP-P, n712**, σ1§ **50**/756, **mb4.9**/291, **MS4.7**/69, **103C-31D, Fault plane solution: NP1**:ϕ_s160.81342°, δ19.16440°, λ55.85825°. **NP2:**ϕ_s16.48797°, δ74.23447°, λ101.03721°. **Principal axes:** T Plg59.3212°, Azm301.8740°; N Plg10.6171°, Azm193.4543°; P Plg28.4113°, Azm97.6343°; **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s ISC
JTH	**Tanohata**	**1.44**	**279**	P		**Pn**	**18 51 28.6 -1.1**
JTH				*e*S		**Sn**	**18 51 47.3 -0.9**
MIYJ	**Miyakonagasawa**	**1.47**	**264**	P		**Pn**	**18 51 29.5 -0.6**
MIYJ				*e*S		**Sn**	**18 51 46.8 -2.2**
JKEN	**Kujiedanarisaw**	**1.61**	**288**	P		**Pn**	**18 51 30.6 -1.4**
JANG	**Nango**	**1.80**	**291**	P		**Pn**	**18 51 33.6 -1.1**
JANG				*e*S		**Sn**	**18 51 55.6 -1.6**
JOM	**Ohasama**	**1.89**	**263**	P		**Pn**	**18 51 36.0 +0.1**
JOM				*e*S		**Sn**	**18 51 58.6 -0.7**
JMK	**Ichinoseki**	**2.08**	**249**	P		**Pn**	**18 51 38.3 -0.3**
JTM	**Tenmabayashi**	**2.28**	**298**	Pn		**Pn**	**18 51 41.0 -0.2**
ERM	**Erimo**	**2.32**	**350**	*c i*P		**Pn**	**18 51 41.0 -0.8**
ERM	**Erimo**	**2.32**	**350**	Pn		**Pn**	**18 51 40.3 -1.5**
JOT	**Ohata**	**2.61**	**310**	P		**Pn**	**18 51 45.2 -0.6**
JNBK	**Urakawa-nobuka**	**2.64**	**344**	P		**Pn**	**18 51 45.9 -0.4**
JYK	**Kaneyama**	**2.72**	**254**	P		**Pn**	**18 51 47.7 +0.3**
JCH	**Churui**	**2.89**	**355**	P		**Pn**	**18 51 49.0 -0.7**
JCH				S		**Sn**	**18 52 21.3 -2.8**
JMM	**Marumori**	**2.94**	**232**	P		**Pn**	**18 51 49.0 -1.4**
JKB	**Kayabe**	**2.96**	**318**	P		**Pn**	**18 51 51.0 +0.4**
JKB				S		**Sn**	**18 52 24.8 -0.9**
JOMM	**Oshimamatsumae**	**3.34**	**304**	P		**Pn**	**18 51 56.7 +0.9**
JAK	**Akkeshi**	**3.34**	**13**	P		**Pn**	**18 51 54.6 -1.3**
JAK				*e*S		**Sn**	**18 52 31.2 -4.0**
JFT	**Otama**	**3.44**	**231**	P		**Pn**	**18 51 56.9 -0.4**
JFT				*e*S		**Sn**	**18 52 36.6 -1.2**
JEW	**Eniwo**	**3.54**	**332**	P		**Pn**	**18 51 59.5 +0.9**
JEW				*e*S		**Sn**	**18 52 40.0 -0.1**
JEW	**Eniwo**	**3.54**	**332**	Pn		**Pn**	**18 51 58.0 -0.6**
JAR	**Ashorobuto**	**3.56**	**1**	P		**Pn**	**18 51 57.5 -1.4**
JAR				*e*S		**Sn**	**18 52 37.5 -3.1**
NMR	**Nemuro--Hokkai**	**3.94**	**22**	*i*P		**Pn**	**18 52 02.2 -1.8**
NMR				*i* S		**Sn**	**18 52 45.1 -4.7**
JKA	**Kamikawa-asahi**	**4.46**	**350**			**Pn**	**18 52 10.8 -0.4**
JKA	**Kamikawa-asahi**	**4.46**	**350**			**Sn**	**18 53 01.8 -0.9**
ASAJ	**Asahikawa**	**4.46**	**350**	Pn		**Pn**	**18 52 11.8 +0.6**
	5.7nm,0.3s,baz=204,slow=16,SNR=50						
ASAJ				Sn		**Sn**	**18 53 01.8 -1.0**
	6.5nm,0.3s,baz=225,slow=13,SNR=6.5						
JYT	**Yasato**	**4.47**	**220**	Pn		**Pn**	**18 52 09.5 -1.8**
RUSJ	**Misakicho**	**4.51**	**14**	*e*P		**Pn**	**18 52 11.1 -0.9**
RUSJ				*e*S		**Sn**	**18 53 02.7 -1.4**
GRPR	**Tuman**	**4.53**	**19**	*c i*P		**Pn**	**18 52 10.3 -1.8**
GRPR				*i* S		**Sn**	**18 52 58.1 -6.3**
GRPR				pmax	pmax		
	comp=Z,319nm,0.3s						
GRPR				pmax	pmax		
	comp=N,182nm,0.2s						
GRPR				pmax	pmax		
	comp=E,94nm,0.2s						
GRPR				smax	smax		
	comp=N,288nm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
JSD	**Sado**	**4.58**	**250**	Pn		**Pn**	**18 52 13.1 +0.2**
YUK	**Yuzh-Kuril'sk**	**4.59**	**20**	*c i*P		**Pn**	**18 52 11.5 -1.5**
YUK				*i* S		**Sn**	**18 52 59.2 -6.7**
YUK				pmax	pmax		
	comp=Z,529nm,0.5s						
YUK				pmax	pmax		
	comp=E,49nm,0.2s						
YUK				pmax	pmax		
	comp=N,84nm,0.5s						
YUK				smax	smax		
	comp=N,296nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
YUK				MLR	MLR		
	comp=E,4μm,13.0s						
YUK				MLR	MLR		
	comp=Z,2μm,13.0s						
YUK				MLR	MLR		
	comp=N,1μm,10.0s						
MJAR	**Matsushiro Arr**	**5.38**	**235**	Pn		**Pn**	**18 52 24.5 +0.5**
	comp=N,1.1nm,0.3s,baz=43,slow=12,SNR=178						
MJAR				LR		LR	18 54 49.6
	comp=N,3μm,19.0s,baz=55,slow=43						
MJAR	**Matsushiro Arr**	**5.38**	**235**	P		**Pn**	**18 52 24.0 +0.1**
MJAR	**Matsushiro Arr**	**5.38**	**235**			**Pn**	**18 52 24.0 +0.1**
MAJO	**Matsushiro**	**5.38**	**235**	*c i*P		**Pn**	**18 52 24.9 +0.9**
MAJO	**Matsushiro**	**5.38**	**235**	Pn		**Pn**	**18 52 24.8 +0.8**
MAT	**Matsushiro**	**5.38**	**235**	P		**Pn**	**18 52 24.9 +0.9**
MAT				*e*S		**Sn**	**18 53 26.5 +0.9**
MJB9	**Matsu-Tunnel**	**5.38**	**235**			**Pn**	**18 52 23.8 -0.1**
KUR	**Kuril'sk**	**6.30**	**28**	*i*P		**Pn**	**18 52 36.5 +0.1**
KUR				*i* S		**Sn**	**18 53 40.8 -7.2**
KUR				pmax	pmax		
	comp=Z,101nm,0.6s						
KUR				pmax	pmax		
	comp=N,21nm,0.5s						
KUR				pmax	pmax		
	comp=E,20nm,0.6s						
KUR				pmax	pmax		
	comp=Z,213nm,1.1s						
KUR				smax	smax		
	comp=E,230nm,0.4s						
KUR				smax	smax		
	comp=N,366nm,0.6s						
KUR				MLR	MLR		
	comp=Z,2μm,13.0s						
KUR				MLR	MLR		
	comp=N,901nm,9.0s						
KUR				MLR	MLR		
	comp=E,3μm,13.0s						
JGF	**Kuroka**	**6.51**	**233**			**Pn**	**18 52 39.3 -0.2**
INU	**Inuyama**	**6.88**	**233**	Pn		**Pn**	**18 52 45.3 +0.7**
YSS	**Yuzh-Sakhalins**	**7.25**	**355**	*e*P		**Pn**	**18 52 50.2 +0.7**
YSS				*e*S		**Sn**	**18 54 08.4 -3.1**
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				MLR	MLR		
	comp=Z,4μm,13.0s						
YSS	**Yuzh-Sakhalins**	**7.25**	**355**	Pn		**Pn**	**18 52 50.1 +0.5**
JHJ	**Hachijo jima 2**	**7.32**	**207**	Pn		**Pn**	**18 52 50.5 -0.1**
	comp=Z,23nm,0.3s,baz=288,slow=22,SNR=5.2						
JHJ				Sn		**Sn**	**18 54 06.5 -6.8**
	comp=Z,71nm,0.3s,baz=58,slow=23,SNR=9.9						
TEY	**Ternei**	**7.46**	**318**	*e*P		**Pn**	**18 52 55.5 +3.0**
TEY				pmax	pmax		
	comp=E,30nm,1.3s						
TEY				pmax	pmax		
	comp=N,30nm,1.0s						
TEY				pmax	pmax		
	comp=Z,20nm,1.7s						
TEY				MLR	MLR		
	comp=E,100nm,16.0s						
TEY				MLR	MLR		
	comp=N,400nm,14.0s						
TEY				MLR	MLR		
	comp=Z,400nm,13.0s						
JWT	**Wachi**	**7.96**	**239**			**Pn**	**18 53 01.4 +2.1**
JHS	**Saijyo**	**9.66**	**244**			**Pn**	**18 53 21.3 -1.4**
USRK	**Ussuriysk Ar.**	**9.80**	**301**	Pn		**Pn**	**18 53 25.9 +1.4**
	baz=103,slow=14,SNR=66						
USRK	**Ussuriysk Ar.**	**9.80**	**301**	P		**Pn**	**18 53 25.6 +1.1**
USRK	**Ussuriysk Ar.**	**9.80**	**301**			**Pn**	**18 53 25.6 +1.1**
USA0B	**Ussuriysk Arra**	**9.80**	**301**	*c i*P		**Pn**	**18 53 26.4 +1.9**
USA0B	**Ussuriysk Arra**	**9.80**	**301**			**Pn**	**18 53 25.9 +1.4**
MSHR	**Mys Shultsa**	**9.88**	**291**	*e*P		**Pn**	**18 53 27.9 +2.2**
MSHR				pmax	pmax		
	comp=Z,78nm,1.3s						
JMN	**Monobe**	**9.90**	**236**	Pn		**Pn**	**18 53 25.8 -0.2**
TYV	**Tymovskoe**	**11.15**	**357**	*e*P		**Pn**	**18 53 43.2 +0.2**
TYV				*e*S		**Sn**	**18 55 50.5 +3.2**
TYV				pmax	pmax		
	comp=Z,12nm,1.4s						
TYV				pmax	pmax		
	comp=Z,200nm,4.4s						
TYV				smax	smax		
	comp=E,800nm,7.4s						
MDJ	**Mudanjiang**	**11.55**	**300**	P		**Pn**	**18 53 47.8 -0.6**
MDJ				PcP		**PcP**	**18 59 38.6 -0.8**
MDJ				pmax	pmax		
	comp=E,28nm,0.9s						
MDJ				pmax	pmax		
	comp=E,890nm,5.2s						
MDJ				LR	LR		
	comp=E,3μm,12.8s						
MDJ				LR	LR		
	comp=E,4μm,13.5s						
MDJ				LR	LR		
	comp=E,5μm,12.1s						
MDJ	**Mudanjiang**	**11.55**	**300**	Pn		**Pn**	**18 53 47.9 -0.6**
GRNR	**Gornyy**	**12.16**	**338**	*i*P		**Pn**	**18 53 57.6 +0.8**
GRNR				*e*S		**Sn**	**18 56 16.3 +4.3**
GRNR				pmax	pmax		
	comp=E,9.0nm,0.9s						
GRNR				pmax	pmax		
	comp=N,10.0nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.8s						
GRNR				MLR	MLR		
	comp=E,1μm,16.0s						
GRNR				MLR	MLR		
	comp=Z,1μm,16.0s						
JNU	**Nakatsue**	**12.25**	**241**	LR	LR	18 59 07.9	
	comp=Z,4μm,18.3s,baz=50,slow=40						
JNU	**Nakatsue**	**12.25**	**241**	Pn		**Pn**	**18 53 57.0 -1.2**
KSRS	**Korea Array**	**12.56**	**265**	Pn		**Pn**	**18 54 02.8 +0.5**
	comp=Z,0.4nm,0.3s,baz=87,slow=14,SNR=15						
KSRS				LR	LR	18 58 24.9	
	comp=Z,2μm,18.5s,baz=68,slow=35						
KSAR	**Wonju Array Be**	**12.59**	**265**	P		**Pn**	**18 54 02.7 0.0**
KSAR	**Wonju Array Be**	**12.59**	**265**	Pn		**Pn**	**18 54 02.7 0.0**
JCJ	**Chichijima**	**12.67**	**186**	Pn		Pn	18 53 58.6 -5.2
	comp=Z,6.1nm,0.3s,baz=277,slow=22,SNR=5.8						
JCJ				Sn		Sn	18 56 12.5 -12
	comp=Z,6.9nm,0.3s,baz=95,slow=24,SNR=2.5						
KLR	**Kul'dur**	**12.75**	**322**	Pn		**Pn**	**18 54 05.2 +0.3**
	comp=Z,0.3nm,0.3s,baz=130,slow=13,SNR=30						
KLR				LR	LR	18 59 28.5	
	comp=Z,3μm,18.1s,baz=134,slow=40						
KLR	**Kul'dur**	**12.75**	**322**	*c*eP		**Pn**	**18 54 04.3 -0.6**
KLR				pmax	pmax		
	comp=Z,56nm,1.5s						
TJN	**Taejon**	**13.31**	**261**	*e*P		**Pn**	**18 54 13.5 +1.0**
NKL	**Nikolayevsk**	**13.58**	**352**	*e*P		**Pn**	**18 54 15.0 -1.1**
NKL				*e*S		**Sn**	**18 56 51.1 +4.6**
NKL				pmax	pmax		
	comp=E,96nm,0.5s						
NKL				pmax	pmax		
	comp=N,342nm,1.1s						
NKL				pmax	pmax		
	comp=Z,18nm,1.3s						
NKL				smax	smax		
	comp=E,133nm,2.5s						
NKL				smax	smax		
	comp=N,1.0nm,3.4s						
NKL				MLR	MLR		
	comp=N,14nm,20.0s						
NKL				MLR	MLR		
	comp=Z,2μm,15.0s						
CN2	**Changchun**	**14.22**	**293**	*e*P		**Pn**	**18 54 24.3 -0.6**
SNY	**Shenyang**	**15.39**	**284**	P		**Pn**	**18 54 41.8 +1.1**
SNY				pmax	pmax		
	comp=Z,11nm,0.8s						
SNY				pmax	pmax		
	comp=Z,580nm,10.0s						
SNY				LR	LR		
	comp=Z,2μm,13.7s						
SNY				LR	LR		
	comp=Z,1μm,12.7s						
SNY				LR	LR		
	comp=Z,2μm,15.7s						
PEA0B	**Petropavlovsk-**	**16.45**	**31**	*e*P		**P**	**18 54 58.4 +1.4**
PEA0B	**Petropavlovsk-**	**16.45**	**31**	P		**Pn**	**18 54 53.2 -1.0**
PETK	**Petropavlovsk-**	**16.45**	**31**	Pn		**P**	**18 54 55.6 -1.3**
	comp=Z,0.4nm,0.3s,baz=195,slow=6.7,SNR=14						
PETK				LR	LR	19 00 52.7	
	comp=Z,584nm,19.4s,baz=219,slow=36						
PETK	**Petropavlovsk-**	**16.45**	**31**	P		**Pn**	**18 54 52.1 -2.2**
PET	**Petropavlovsk**	**16.77**	**33**	*e*P		**P**	**18 55 02.1 +1.6**
PET				*e*S		**Sn**	**18 58 05.7 +1.5**
PET				pmax	pmax		
	comp=Z,68nm,1.6s						
PET	**Petropavlovsk**	**16.77**	**33**	P		**Pn**	**18 54 57.1 -1.3**
DL2	**Dalian**	**17.11**	**274**	P		**Pn**	**18 55 02.0 -0.6**
DL2				S		**Sn**	**18 58 15.1 +2.6**
DL2				pmax	pmax		
	comp=Z,94nm,1.2s						
DL2				pmax	pmax		
	comp=Z,440nm,5.3s						
DL2				LR	LR		
	comp=Z,860nm,14.2s						
DL2				LR	LR		
	comp=Z,1μm,15.2s						
DL2				LR	LR		
	comp=Z,1μm,17.6s						
ZEA	**Zeya**	**17.92**	**327**	*e*P		**Pn**	**18 55 10.0 -2.7**
ZEA				pmax	pmax		
	comp=E,10.0nm,1.1s						
ZEA				pmax	pmax		
	comp=N,20nm,1.3s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				MLR	MLR		
	comp=E,2μm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2μm,15.0s						
HIA	**Hailar**	**19.50**	**307**	P		**P**	**18 55 28.3 -2.4**
HIA				pmax	pmax		
	comp=Z,66nm,1.5s						
HIA	**Hailar**	**19.50**	**307**	P		**P**	**18 55 28.3 -2.4**
SSE	**Sheshan**	**20.24**	**252**	P		**P**	**18 55 38.8 0.0**
SSE				S		**S**	**18 59 25.6 +0.3**
SSE				pmax	pmax		
	comp=Z,21nm,0.8s						
SSE				pmax	pmax		
	comp=Z,130nm,3.2s						
SSE				LR	LR		
	comp=Z,920nm,13.1s						
SSE				LR	LR		
	comp=Z,840nm,13.1s						
MA2	**Magadan**	**20.36**	**10**	P		**P**	**18 55 40.5 +0.7**
	comp=Z,45nm,0.7s,baz=197,slow=9.0,SNR=119						
MA2				LR	LR	19 04 20.9	
	comp=Z,1μm,19.6s,baz=201,slow=39						
MA2	**Magadan**	**20.36**	**10**	*c i*P		Pn	18 55 41.0 -0.9
MA2				pmax	pmax		
	comp=Z,39nm,0.7s						
MA2	**Magadan**	**20.36**	**10**	P		**P**	**18 55 40.1 +0.2**
MA2				IAmb	IAmb	IAmb	18 55 42.6
	comp=Z,49nm,0.8s						
BJI	**Beijing**	**21.10**	**280**	P		**P**	**18 55 45.8 -2.3**
BJI				S		**S**	**18 59 42.3 0.0**
BJI				pmax	pmax		
	comp=Z,20nm,1.2s						
BJI				pmax	pmax		
	comp=Z,220nm,6.0s						
BJI				LR	LR		
	comp=Z,1μm,14.7s						
BJI				LR	LR		
	comp=Z,1μm,15.6s						
BJI				LR	LR		
	comp=Z,730nm,17.9s						
BJT	**Baijiatuau**	**21.11**	**280**	P		**P**	**18 55 45.0 -3.2**
BJT				pmax	pmax		
	comp=Z,36nm,1.3s						
BJT	**Baijiatuau**	**21.11**	**280**	P		**P**	**18 55 45.0 -3.2**
TIA	**Tai'an**	**21.22**	**269**	P		**P**	**18 55 47.1 -2.3**
TIA				pmax	pmax		
	comp=Z,34nm,1.3s						
TIA				pmax	pmax		
	comp=Z,250nm,4.8s						
TIA				LR	LR		
	comp=Z,1μm,11.6s						
TIA				LR	LR		
	comp=Z,2μm,15.5s						
TIA				LR	LR		
	comp=Z,3μm,15.9s						
NJ2	**Nanjing**	**21.50**	**257**	*e*P		**P**	**18 55 50.8 -1.6**
NJ2				sP		**pP**	**18 55 56.0 -0.3**
NJ2				pmax	pmax		
	comp=Z,210nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,140nm,4.4s						
NJ2				LR	LR		
	comp=Z,2μm,17.8s						
NJ2				LR	LR		
	comp=Z,2μm,15.1s						
NJ2				LR	LR		
	comp=Z,2μm,13.7s						
SEY	**Seymchan**	**23.81**	**10**	P		**P**	**18 56 16.6 +0.5**
	comp=Z,43nm,0.8s,baz=174,slow=16,SNR=67						
SEY				LR	LR	19 07 08.5	
	comp=Z,955nm,18.3s,baz=160,slow=40						
YAK	**Yakutsk**	**23.91**	**344**	P		**P**	**18 56 15.8 -1.2**
	comp=Z,28nm,0.8s,baz=23,slow=1.7,SNR=24						
YAK				LR	LR	19 06 00.9	
	comp=Z,766nm,19.2s,baz=132,slow=38						
YAK	**Yakutsk**	**23.91**	**344**	*c i*P		**P**	**18 56 15.3 -1.8**
YAK				*e*PP		**sP**	**18 56 22.6 -0.1**
YAK				*e*PPP		PPP	18 56 50.4
YAK				*e*S		**S**	**19 00 29.6 -2.9**
YAK				*e*SS		**pS**	**19 00 37.5 +1.1**
YAK				*e*SS		**SnSn**	**19 01 10.9 -1.2**
YAK				*e*SSS		SSS	19 01 26.7
YAK				pmax	pmax		
	comp=Z,29nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,70nm,1.5s						
YAK				pmax	pmax		
	comp=N,79nm,1.6s						
YAK				smax	smax		
	comp=E,64nm,2.0s						
YAK				smax	smax		
	comp=N,183nm,2.3s						
YAK				MLR	MLR		
	comp=Z,683nm,17.0s						
YAK	**Yakutsk**	**23.91**	**344**	P		**P**	**18 56 15.2 -1.9**
YHNB	**Yeheng**	**24.05**	**238**	IAmb		IAmb	18 56 26.4
	comp=Z,34nm,1.1s						
CIT	**Chita**	**24.13**	**311**	*e*P		**P**	**18 56 17.0 -2.4**
CIT				*e*			18 56 25.4
CIT				*e*			18 56 53.9
CIT				*e*S		S	19 00 24.8 -12
CIT				pmax	pmax		
	comp=Z,204nm,1.9s						
NACB	**Ninganchiao**	**24.25**	**237**	IAmb		IAmb	18 56 21.7
	comp=Z,28nm,0.9s						
HHC	**Hu-ho-hao-te**	**24.48**	**283**	*e*P		**P**	**18 56 21.9 -0.8**
HHC				PP		**PnPn**	**18 56 57.5 +4.1**
HHC				S		**S**	**19 00 38.3 -4.0**
HHC				sS		pS	19 00 45.3 -1.6
HHC				SS		**SnSn**	**19 01 32.1 +5.5**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,380nm,5.8s						
HHC				LR	LR		
	comp=Z,1μm,12.1s						
HHC				LR	LR		
	comp=Z,2μm,15.8s						
HHC				LR	LR		
	comp=Z,2μm,15.9s						
SSLB	**Suanglung**	**24.94**	**237**	P		**P**	**18 56 26.2 -0.7**
SSLB				IAmb	IAmb	IAmb	18 56 40.4
	comp=Z,24nm,0.8s						
YULB	**Yu-li**	**25.00**	**236**	P		**P**	**18 56 26.7 -0.7**
TPUB	**Ta-pu**	**25.49**	**237**	P		**P**	**18 56 32.6 +0.7**
WHN	**Wuhan**	**25.61**	**258**	P		**P**	**18 56 33.0 +0.1**
WHN				S		**S**	**19 00 59.8 -0.5**
WHN				LR	LR		
	comp=Z,5μm,13.8s						
WHN				LR	LR		
	comp=Z,4μm,16.0s						
WHN				LR	LR		
	comp=Z,4μm,13.9s						
BTO	**Baotou**	**25.67**	**283**	*e*P		**P**	**18 56 34.0 +0.5**
BTO				LR	LR		
	comp=Z,5μm,15.6s						
BTO				LR	LR		
	comp=Z,5μm,15.6s						
BTO				LR	LR		
	comp=Z,6μm,15.9s						
QZH	**Quanzhou**	**25.73**	**243**	*i*P		**P**	**18 56 34.1 +0.1**
QZH				S		**S**	**19 01 02.0 -0.3**
QZH				LR	LR		
	comp=Z,1μm,17.5s						
QZH				LR	LR		
	comp=Z,920nm,16.6s						
QZH				LR	LR		
	comp=Z,1μm,12.9s						
BOD	**Bodaibo**	**26.33**	**323**	*e*P		**P**	**18 56 35.8 -3.3**
BOD				pmax	pmax		
	comp=Z,46nm,1.3s						
ULN	**Ulaanbaatar**	**27.47**	**299**	*c i*P		**P**	**18 56 50.1 +0.4**
ULN				pmax	pmax		
	comp=Z,46nm,1.3s						
ULN	**Ulaanbaatar**	**27.47**	**299**	P		**P**	**18 56 50.2 +0.4**
SONM	**Songino Array**	**27.91**	**299**	P		**P**	**18 56 53.6 0.0**
	comp=Z,9.6nm,0.9s,baz=99,slow=7.0,SNR=62						
SONM				LR	LR		19 07 56.5
	comp=Z,279nm,19.6s,baz=99,slow=36						
SONM	**Songino Array**	**27.91**	**299**	P		**P**	**18 56 54.0 +0.3**
SONM				IAmb	IAmb	IAmb	18 56 56.0
	comp=Z,40nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**28.19**	**128**	T		T	19 26 24.1
	baz=318,slow=75,SNR=73						
H11N1	**WAKE ISLAND Hy**	**28.20**	**128**	T		T	19 26 24.1
	baz=318,slow=75,SNR=61						
H11N3	**WAKE ISLAND Hy**	**28.21**	**128**	T		T	19 26 24.1
	baz=318,slow=75,SNR=70						
XAN	**Xi'an**	**28.28**	**269**	P		**P**	**18 56 57.4 +0.4**
XAN				pmax	pmax		
	comp=Z,38nm,0.5s						
XAN				pmax	pmax		
	comp=Z,36nm,5.7s						
XAN	**Xi'an**	**28.28**	**269**	P		**P**	**18 56 56.4 -0.6**
XAN				pmax	pmax		
	comp=Z,53nm,1.3s						
XAN	**Xi'an**	**28.28**	**269**	P		**P**	**18 56 56.4 -0.6**
H11S1	**WAKE ISLAND Hy**	**29.02**	**130**	T		T	19 27 24.1
	baz=2.6,slow=74,SNR=10						
H11S3	**WAKE ISLAND Hy**	**29.02**	**130**	T		T	19 27 25.3
H11S2	**WAKE ISLAND Hy**	**29.03**	**130**	T		T	19 27 24.1
	baz=327,slow=74,SNR=13						
ENH	**Enshi**	**29.43**	**262**	P		**P**	**18 57 06.8 -0.4**
IRK	**Irkutsk**	**29.74**	**308**	*e*P		**P**	**18 57 10.2 +0.5**
IRK				pmax	pmax		
	comp=Z,48nm,2.2s						
TLY	**Talaya**	**30.04**	**307**	P		**P**	**18 57 12.6 +0.2**
	comp=Z,3.2nm,0.8s,baz=115,slow=8.7,SNR=16						
TLY				LR	LR		19 08 45.2
	comp=Z,188nm,21.8s,baz=100,slow=35						
TLY	**Talaya**	**30.04**	**307**	*e*P		**P**	**18 57 13.1 +0.7**
TLY				*e*			18 58 06.7
TLY				*e*SS		SS	19 04 04.9 -13
TLY				pmax	pmax		
	comp=Z,42nm,1.4s						
TLY				MLR	MLR		
	comp=Z,3μm,15.0s						
TLY	**Talaya**	**30.04**	**307**	P		**P**	**18 57 12.9 +0.5**
ZAK	**Zakamensk**	**30.13**	**304**	*e*P		**P**	**18 57 13.0 -0.3**
ZAK				pmax	pmax		
	comp=Z,18nm,1.3s						

BILL	**Bilibino**	**30.93**	**16**	⇓*i*P	**P**	**18 57 20.1 +0.1**
BILL				*e*		18 58 25.3
BILL				*e*S	**S**	**19 02 21.4 -2.0**
BILL				pmax	pmax	
	comp=Z,10.0nm,1.0s					
BILL	**Bilibino**	**30.93**	**16**	P	**P**	**18 57 20.2 +0.2**
LZH	**Lanzhou**	**31.48**	**276**	⇑P	**P**	**18 57 26.5 +1.0**
LZH				sP	sP	18 57 30.8 -0.5
LZH				S	**S**	**19 02 37.1 +4.1**
LZH				sS	sS	19 02 44.3 +4.2
LZH				SS	**SnSn**	**19 04 16.4 -1.3**
LZH				pmax	pmax	
	comp=Z,47nm,1.3s					
LZH				pmax	pmax	
	comp=Z,190nm,4.6s					
LZH				LR	LR	
	comp=Z,1μm,13.6s					
LZH				LR	LR	
	comp=Z,2μm,14.0s					
LZH				LR	LR	
	comp=Z,2μm,16.3s					
MOY	**Mondy**	**31.68**	**306**	*e*P	**P**	**18 57 27.5 +0.5**
MOY				pmax	pmax	
	comp=Z,40nm,2.2s					
TIXI	**Tiksi**	**32.86**	**351**	P	**P**	**18 57 36.8 -0.1**
	comp=Z,3.5nm,0.6s,baz=110,slow=3.0,SNR=16					
TIXI				LR	LR	19 12 18.0
	comp=Z,627nm,18.1s,baz=174,slow=39					
TIXI	**Tiksi**	**32.86**	**351**	⇑*e*P	**P**	**18 57 36.5 -0.4**
TIXI				pmax	pmax	
	comp=Z,23nm,1.3s					
TIXI	**Tiksi**	**32.86**	**351**	P	**P**	**18 57 36.5 -0.4**
GYA	**Guiyang**	**33.50**	**258**	⇓P	**P**	**18 57 43.3 +0.1**
GYA				S	**S**	**19 03 01.8 -2.7**
GYA				pmax	pmax	
	comp=Z,39nm,1.0s					
GYA				LR	LR	
	comp=Z,690nm,14.3s					
GYA				LR	LR	
	comp=Z,470nm,15.1s					
GYA				LR	LR	
	comp=Z,870nm,15.5s					
CD2	**Chengdu**	**33.54**	**267**	P	**P**	**18 57 43.0 -0.4**
CD2				S	**S**	**19 03 07.3 +2.4**
CD2				pmax	pmax	
	comp=Z,60nm,1.2s					
CD2				LR	LR	
	comp=Z,3μm,15.8s					
CD2				LR	LR	
	comp=Z,2μm,12.9s					
CD2				LR	LR	
	comp=Z,3μm,14.4s					
GTA	**Gaotai**	**33.58**	**284**	⇑P	**P**	**18 57 44.3 +0.5**
GTA				pP	pP	18 57 48.5 +0.6
GTA				sP	pwP	18 57 51.6 +0.3
GTA				PcP	**PcP**	**19 00 25.6 +1.6**
GTA				S	**S**	**19 03 08.1 +2.5**
GTA				pmax	pmax	
	comp=Z,44nm,1.2s					
GTA				pmax	pmax	
	comp=Z,240nm,5.1s					
GTA				LR	LR	
	comp=Z,460nm,16.0s					
GTA				LR	LR	
	comp=Z,2μm,16.0s					
GTA				LR	LR	
	comp=Z,2μm,16.7s					
QIZ	**Qiongzhong**	**35.70**	**245**	P	**P**	**18 58 01.0 -1.1**
QIZ				S	**S**	**19 03 38.3 +0.1**
QIZ				LR	LR	
	comp=Z,600nm,14.6s					
QIZ				LR	LR	
	comp=Z,870nm,16.4s					
QIZ				LR	LR	
	comp=Z,830nm,21.6s					
KMI	**Kunming**	**37.19**	**259**	⇑P	**P**	**18 58 15.0 -0.1**
KMI				sP	pwP	18 58 23.8 +1.1
KMI				S	**S**	**19 03 58.9 -2.5**
KMI				SS	**SnSn**	**19 06 27.8 -8.6**
KMI				pmax	pmax	
	comp=Z,24nm,0.8s					
KMI				pmax	pmax	
	comp=Z,250nm,6.0s					
KMI				LR	LR	
	comp=Z,1μm,14.3s					
KMI				LR	LR	
	comp=Z,960nm,12.9s					
KMI				LR	LR	
	comp=Z,1μm,13.2s					
KMI	**Kunming**	**37.19**	**259**	P	**P**	**18 58 13.6 -1.5**
KMI				pmax	pmax	
	comp=Z,32nm,1.1s					
KMI	**Kunming**	**37.19**	**259**	P	**P**	**18 58 13.6 -1.5**
KMI				IAmb	IAmb	18 58 16.6
	comp=Z,32nm,1.1s					
TNA	**Tin City**	**37.62**	**31**		**P**	**18 58 18.7 +0.8**
SLVN	**Son La**	**38.50**	**253**	P	**P**	**18 58 23.6 -2.3**
RDOG	**Red Dog Mine**	**40.28**	**28**	P	**P**	**18 58 38.7 -1.5**
DGZ	**Jazzator, Alta**	**40.34**	**303**	*c i*P	**P**	**18 58 42.4 +1.2**
DGZ				pmax	pmax	
	comp=Z,59nm,1.6s					
NONG	**Nongkai**	**41.10**	**250**	P	**P**	**18 58 48.8 +1.2**
	comp=Z,24μmcomp=Z,34nm,1.2s					
MYLDM	**Lahad Datu**	**41.24**	**220**	P	**P**	**18 58 49.0 +0.4**
WMQ	**Urumqi**	**41.30**	**295**	P	**P**	**18 58 50.1 +1.0**
WMQ				pP	pP	18 58 53.8 +0.6
WMQ				sP	pwP	18 58 57.4 +0.9
WMQ				pmax	pmax	
	comp=Z,55nm,1.1s					
WMQ				pmax	pmax	
	comp=Z,500nm,4.3s					
WMQ				LR	LR	
	comp=Z,1μm,15.3s					
WMQ				LR	LR	
	comp=Z,1μm,14.3s					
WMQ				LR	LR	
	comp=Z,600nm,18.7s					
WMQ	**Urumqi**	**41.30**	**295**	P	**P**	**18 58 50.0 +1.0**
WMQ				pmax	pmax	
	comp=Z,45nm,1.2s					
WMQ	**Urumqi**	**41.30**	**295**	P	**P**	**18 58 50.0 +1.0**
UBPT	**Khong Chiam**	**41.30**	**245**	P	**P**	**18 58 49.2 +0.1**
UBPT				IAmb	IAmb	18 58 50.6
	comp=Z,24nm,1.2s					
ZAA0	**Zalesovo Array**	**41.49**	**310**	P	**P**	**18 58 50.4 0.0**
ZAA0				IAmb	IAmb	18 58 52.0
	comp=Z,24nm,1.4s					
ZALV	**Zalesovo Beam**	**41.49**	**310**	P	**P**	**18 58 50.5 +0.2**
	comp=Z,6.2nm,0.5s,baz=94,slow=7.9,SNR=35					
ZALV				PcP	**PcP**	**19 00 48.1 +0.4**
	comp=Z,3.9nm,0.8s,baz=80,slow=4.2,SNR=3.9					
ZALV				LR	LR	19 16 53.3
	comp=Z,444nm,19.8s,baz=80,slow=37					
ZALV	**Zalesovo Beam**	**41.49**	**310**	*i* P	**P**	**18 58 51.0 +0.7**
ZALV				pmax	pmax	
	comp=Z,6.0nm,0.5s					
NRIK	**Noril'sk**	**41.61**	**334**	P	**P**	**18 58 51.5 +0.3**
	comp=Z,5.2nm,0.9s,baz=105,slow=9.8,SNR=11					
NRIK				LR	LR	19 17 04.3
	comp=Z,544nm,18.4s,baz=100,slow=38					
NRIK	**Noril'sk**	**41.61**	**334**	*c i*P	**P**	**18 58 51.2 +0.1**
NRIK				pmax	pmax	
	comp=Z,13nm,1.1s					
NRIK	**Noril'sk**	**41.61**	**334**	P	**P**	**18 58 49.9 -1.2**
ZSN	**Zaisan**	**42.41**	**301**	*e*P	**P**	**18 58 57.6 -0.4**
	comp=Z,45nm,2.1s,baz=300					
ZSN				*e*S	**S**	**19 05 19.7 +0.9**
	baz=300					
ZSN	**Zaisan**	**42.41**	**301**	*e*P	**P**	**18 58 57.6 -0.4**
ZSN				*e*S	**S**	**19 05 19.6 +0.9**
ZSN				pmax	pmax	
	comp=Z,45nm,2.1s					
KHON	**Khomkaen**	**42.46**	**249**	P	**P**	**18 58 59.0 +0.3**
	comp=Z,48nm,0.9s					
SPMM	**Sapulut**	**42.67**	**222**	P	**P**	**18 58 59.0 -1.4**
UTTA	**Uttaradit**	**43.20**	**252**	P	**P**	**18 59 05.5 +0.8**
	comp=Z,250nmcomp=Z,27nm,0.9s					
A21K	**Barrow**	**43.27**	**24**	P	**P**	**18 59 05.1 +0.6**
A21K				IAmb	IAmb	18 59 19.9
	comp=Z,39nm,1.4s					
CHAI	**Chaiyaphum**	**43.35**	**249**	P	**P**	**18 59 06.4 +0.5**
	comp=Z,333nmcomp=Z,39nm,0.9s					
LAMP	**Lampang**	**43.39**	**254**	P	**P**	**18 59 07.0 +0.8**
	comp=Z,26nm,1.0s					
CM35	**Chiang Mai Arr**	**43.65**	**254**	P	**P**	**18 59 08.0 -0.3**
CM33	**Chiang Mai Arr**	**43.72**	**255**	P	**P**	**18 59 09.0 +0.1**
CMMT	**Chiang Mai**	**43.72**	**255**	P	**P**	**18 59 08.0 -0.9**
	comp=Z,239nmcomp=Z,7.6nm,1.6s					
CHTO	**Chiang Mai**	**43.72**	**255**	P	**P**	**18 59 09.1 +0.2**
CHTO				pmax	pmax	
	comp=Z,14nm,1.0s					
CHTO	**Chiang Mai**	**43.72**	**255**	P	**P**	**18 59 09.1 +0.2**
CHTO				IAmb	IAmb	18 59 10.6
	comp=Z,14nm,1.0s					
CM36	**Chiang Mai Arr**	**43.79**	**254**	P	**P**	**18 59 10.0 +0.5**
LSA	**Lhasa**	**43.80**	**274**	P	**P**	**18 59 10.8 +0.8**
LSA				pmax	pmax	
	comp=Z,52nm,1.6s					
LSA	**Lhasa**	**43.80**	**274**	P	**P**	**18 59 09.9 -0.1**
LSA				pmax	pmax	
	comp=Z,17nm,1.2s					
LSA	**Lhasa**	**43.80**	**274**	P	**P**	**18 59 09.9 -0.1**
LSA				IAmb	IAmb	18 59 26.4
	comp=Z,17nm,1.2s					
MRSI	**Marisa**	**43.83**	**212**	P	**P**	**18 59 11.0 +1.3**
	comp=Z,441nmcomp=Z,29nm,1.2s					
CM32	**Chiang Mai Arr**	**43.89**	**255**	P	**P**	**18 59 11.0 +0.7**
KDAK	**Kodiak Island**	**43.90**	**44**	P	**P**	**18 59 10.5 +0.7**
	comp=Z,6.6nm,0.8s,baz=297,slow=6.9,SNR=4.8					
KDAK	**Kodiak Island**	**43.90**	**44**	IAmb	IAmb	18 59 16.8
	comp=Z,23nm,1.3s					
CM09	**Chiang Mai Arr**	**43.91**	**254**	P	**P**	**18 59 11.0 +0.5**
	comp=Z,61nmcomp=Z,5.9nm,0.9s					
CM31	**Chiang Mai Arr**	**43.94**	**254**	P	**P**	**18 59 12.1 +1.4**
	comp=Z,168nm,0.8s					
CM31	**Chiang Mai Arr**	**43.94**	**254**	P	**P**	**18 59 10.1 -0.6**
CMAR	**Chiang Mai Arr**	**43.94**	**254**	P	**P**	**18 59 10.9 +0.2**
	comp=Z,3.8nm,0.8s,baz=48,slow=6.4,SNR=36					
CMAR				LR	LR	19 17 11.5
	comp=Z,272nm,18.6s,baz=91,slow=36					
CMAR	**Chiang Mai Arr**	**43.94**	**254**	P	**P**	**18 59 10.6 -0.1**
CMAR	**Chiang Mai Arr**	**43.94**	**254**	P	**P**	**18 59 10.6 -0.1**
CM04	**Chiang Mai Arr**	**43.95**	**254**	P	**P**	**18 59 11.0 +0.3**
	comp=Z,84nmcomp=Z,11nm,0.9s					
CM01	**Chiang Mai Arr**	**43.95**	**254**	P	**P**	**18 59 12.0 +1.2**
	comp=Z,71nmcomp=Z,8.9nm,1.0s					
CM02	**Chiang Mai Arr**	**43.95**	**254**	P	**P**	**18 59 12.1 +1.3**
	comp=Z,66nmcomp=Z,9.7nm,0.9s					
CM15	**Chiang Mai Arr**	**43.96**	**254**	P	**P**	**18 59 12.1 +1.2**
	comp=Z,53nmcomp=Z,6.1nm,1.0s					
CM05	**Chiang Mai Arr**	**43.98**	**254**	P	**P**	**18 59 12.2 +1.3**
	comp=Z,73nmcomp=Z,7.2nm,1.0s					
CM13	**Chiang Mai Arr**	**43.99**	**254**	P	**P**	**18 59 12.0 +0.9**
	comp=Z,57nmcomp=Z,6.7nm,1.1s					
SUKH	**Sukhothai**	**44.04**	**253**	P	**P**	**18 59 12.6 +1.1**
	comp=Z,208nmcomp=Z,26nm,1.0s					
MK31	**Makanchi Array**	**44.27**	**300**	*c i*P	**P**	**18 59 13.2 +0.2**
MK31	**Makanchi Array**	**44.27**	**300**	P	**P**	**18 59 12.9 -0.1**
MK31				IAmb	IAmb	18 59 14.6
	comp=Z,19nm,1.1s					
MKAR	**Makanchi Array**	**44.27**	**300**	P	**P**	**18 59 13.1 +0.1**
	comp=Z,14nm,1.0s,baz=82,slow=9.9,SNR=73					
MKAR				LR	LR	19 17 02.5
	comp=Z,241nm,21.4s,baz=73,slow=35					
MKAR	**Makanchi Array**	**44.27**	**300**	*i* P	**P**	**18 59 13.3 +0.3**
MKAR				pmax	pmax	
	comp=Z,14nm,1.0s					
MKAR	**Makanchi Array**	**44.27**	**300**	P	**P**	**18 59 12.6 -0.4**
RABL	**Rabaul**	**44.40**	**168**	P	**P**	**18 59 12.2 -2.0**
MAKZ	**Makanchi**	**44.47**	**300**	P	**P**	**18 59 14.8 +0.1**
MAKZ				pmax	pmax	
	comp=Z,43nm,1.4s					
MAKZ	**Makanchi**	**44.47**	**300**	P	**P**	**18 59 14.8 +0.1**
SRAK	**Srakaew**	**44.58**	**247**	P	**P**	**18 59 14.0 -1.7**
MLY	**Manley**	**44.61**	**33**	P	**P**	**18 59 16.8 +1.3**
SEM	**Semipalatinsk**	**44.78**	**306**	*e*P	**P**	**18 59 15.7 -1.7**
	comp=Z,21nm,1.4s,baz=306					
SEM				LR	LR	19 18 56.8
	comp=Z,122nm,11.5s,baz=306					
SEM	**Semipalatinsk**	**44.78**	**306**	*e*P	**P**	**18 59 15.6 -1.7**
SEM				pmax	pmax	
	comp=Z,21nm,1.4s					
SEM				MLR	MLR	
	comp=Z,122nm,11.0s					
MHMT	**Maesarieng**	**44.87**	**255**	P	**P**	**18 59 18.0 -0.1**
	comp=Z,24nm,0.8s					
COLD	**Coldfoot**	**44.92**	**30**	P	**P**	**18 59 18.8 +1.0**
BWN	**Browne**	**45.15**	**35**	P	**P**	**18 59 20.9 +1.1**
I23K	**Minto, Yukon-K**	**45.19**	**33**	P	**P**	**18 59 20.2 +0.2**
I23K				IAmb	IAmb	18 59 31.2
	comp=Z,20nm,1.5s					
TOLK	**Toolik Lake Re**	**45.24**	**28**	P	**P**	**18 59 21.5 +1.0**
TOLK				IAmb	IAmb	18 59 36.4
	comp=Z,19nm,1.4s					
SHL	**Shillong**	**45.27**	**268**	P	**P**	**18 59 20.9 -0.6**
SHL				pmax	pmax	
	comp=Z,23nm,1.1s					
SHL	**Shillong**	**45.27**	**268**	P	**P**	**18 59 20.9 -0.6**
NEA2	**Nenana**	**45.32**	**34**	P	**P**	**18 59 20.7 -0.4**
NEA2				IAmb	IAmb	18 59 35.0
	comp=Z,6.8nm,0.7s					
UTHA	**Uthaitani**	**45.41**	**251**	P	**P**	**18 59 24.7 +2.3**
	comp=Z,12nm,0.9s					
UMPA	**Umpang Tak**	**45.42**	**252**	P	**P**	**18 59 25.8 +3.3**
	comp=Z,24nm,1.0s					
RND	**Reindeer**	**45.44**	**36**	P	**P**	**18 59 23.3 +1.2**
RND				pmax	pmax	
	comp=Z,19nm,1.4s					
RND	**Reindeer**	**45.44**	**36**	P	**P**	**18 59 23.3 +1.2**
RND				IAmb	IAmb	18 59 47.9
	comp=Z,19nm,1.4s					
MDM	**Murphy Dome**	**45.67**	**33**	P	**P**	**18 59 25.8 +1.9**
MDM				IAmb	IAmb	18 59 44.2
	comp=Z,19nm,1.4s					
KURK	**Kurchatov**	**45.74**	**306**	P	**P**	**18 59 25.4 +0.8**
KURK	**Kurchatov**	**45.74**	**306**	P	**P**	**18 59 25.4 +0.8**
WRH	**Wood River Hil**	**45.74**	**34**	P	**P**	**18 59 25.7 +1.2**
KURBB	**Kurchatov Arra**	**45.81**	**306**	P	**P**	**18 59 25.4 +0.2**
	comp=Z,23nm,0.9s,baz=81,slow=8.3,SNR=120					
KURBB	**Kurchatov Arra**	**45.81**	**306**	P	**P**	**18 59 24.7 -0.5**
TCOL	**CIGO, UAF Yank**	**45.83**	**34**	P	**P**	**18 59 24.4 -0.7**
TCOL				IAmb	IAmb	18 59 38.3
	comp=Z,18nm,1.1s					
COLA	**College**	**45.84**	**34**	P	**P**	**18 59 24.6 -0.5**
COLA				pmax	pmax	
	comp=Z,17nm,1.0s					
COLA	**College**	**45.84**	**34**	P	**P**	**18 59 24.6 -0.5**
COLA				IAmb	IAmb	18 59 38.3
	comp=Z,17nm,1.0s					
CCB	**Clear Creek Bu**	**45.86**	**34**	P	**P**	**18 59 26.5 +1.1**
POKR	**Poker Plat Res**	**46.01**	**33**	P	**P**	**18 59 25.5 -1.1**
POKR				IAmb	IAmb	18 59 47.1
	comp=Z,16nm,1.0s					
IL31		**46.25**	**34**	P	**P**	**18 59 29.2 +0.9**
IL31				IAmb	IAmb	18 59 42.6
	comp=Z,10.0nm,1.2s					
ILAR	**Eielson Array**	**46.25**	**34**	P	**P**	**18 59 29.6 +1.1**
	comp=Z,1.7nm,0.6s,baz=260,slow=6.9,SNR=25					
ILAR				LR	LR	19 18 51.5
	comp=Z,189nm,21.4s,baz=281,slow=36					
ILAR	**Eielson Array**	**46.25**	**34**	P	**P**	**18 59 29.4 +0.9**
SBUM	**Sibu**	**46.84**	**226**	P	**P**	**18 59 33.5 -0.1**
SBUM				IAmb	IAmb	18 59 35.5
	comp=Z,12nm,1.2s					
SBUM	**Sibu**	**46.84**	**226**	P	**P**	**18 59 35.0 +1.4**
FYU	**Fort Yukon**	**46.87**	**31**	P	**P**	**18 59 35.9 +2.6**
PHET	**Kaeng Krachan**	**47.04**	**248**	P	**P**	**18 59 37.0 +1.8**
PDGK	**Podgornoye**	**47.15**	**296**	P	**P**	**18 59 34.6 -1.4**
SHLS	**Shalkode**	**47.23**	**296**	*e*P	**P**	**18 59 33.4 -3.1**
	comp=Z,14nm,1.2s,baz=296					
SHLS	**Shalkode**	**47.23**	**296**	*e*P	**P**	**18 59 33.4 -3.1**
SHLS				pmax	pmax	
	comp=Z,15nm,1.2s					
TDK	**Taldyqorghan**	**47.37**	**299**	*e*P	**P**	**18 59 37.0 -0.5**
	comp=Z,41nm,1.1s,baz=299					
TDK				*e*S	**S**	**19 06 31.3 +0.6**
	baz=299					
TDK				LR	LR	19 20 25.0
	comp=Z,483nm,12.8s,baz=299					
TDK	**Taldyqorghan**	**47.37**	**299**	*e*P	**P**	**18 59 37.0 -0.5**
TDK				*e*S	**S**	**19 06 31.3 +0.6**
TDK				pmax	pmax	
	comp=Z,41nm,1.1s					
TDK				MLR	MLR	
	comp=Z,483nm,13.0s					
UZB	**Uzynbulak**	**47.53**	**296**	*e*P	**P**	**18 59 38.0 -1.0**
	comp=Z,21nm,1.7s,baz=296					
UZB	**Uzynbulak**	**47.53**	**296**	*e*P	**P**	**18 59 37.9 -1.0**
UZB				pmax	pmax	
	comp=Z,21nm,1.7s					
DOT	**Dot Lake**	**47.56**	**35**	P	**P**	**18 59 39.1 +0.4**
DOT				IAmb	IAmb	18 59 57.0
	comp=Z,11nm,1.5s					
SCRK	**Sand Creek**	**47.56**	**35**	P	**P**	**18 59 39.4 +0.5**
SCRK				IAmb	IAmb	18 59 57.6
	comp=Z,17nm,1.5s					
TAPN	**Taplejung**	**47.58**	**273**	*e*P	**P**	**18 59 40.5 +0.8**
	comp=Z,97nm,1.3s					
KPKS	**Kokpek**	**47.66**	**297**	*e*P	**P**	**18 59 39.0 -0.9**
	comp=Z,24nm,1.3s,baz=297					
KPKS	**Kokpek**	**47.66**	**297**	*e*P	**P**	**18 59 39.0 -0.9**
KPKS				pmax	pmax	
	comp=Z,24nm,1.3s					
MENT	**Mentasta**	**47.79**	**36**	P	**P**	**18 59 40.5 -0.1**
SATY	**Saty**	**47.99**	**296**	*e*P	**P**	**18 59 41.8 -0.7**
	comp=Z,17nm,1.8s,baz=296					
SATY	**Saty**	**47.99**	**296**	*e*P	**P**	**18 59 41.8 -0.7**
SATY				pmax	pmax	
	comp=Z,17nm,1.8s					
ODAN	**Odare**	**48.08**	**272**	*e*P	**P**	**18 59 44.2 +0.7**
	comp=Z,59nm,0.9s					
MTKI	**Muara Teweh, K**	**48.30**	**220**	P	**P**	**18 59 46.2 +1.2**
	comp=Z,17nm,1.4s					
K27K	**Chicken**	**48.39**	**35**	P	**P**	**18 59 46.9 +1.8**
K27K				IAmb	IAmb	19 00 08.2
	comp=Z,12nm,1.2s					
JIRN	**Jiri**	**48.60**	**274**	*e*P	**P**	**18 59 48.5 +0.8**
RAMN	**Ramite**	**48.64**	**273**	*e*P	**P**	**18 59 48.4 +0.6**
	comp=Z,100nm,1.1s					
EGAK	**Eagle**	**48.70**	**33**	P	**P**	**18 59 48.3 +0.8**
GUN	**Gumma**	**48.71**	**275**	*e*P	**P**	**18 59 49.2 +0.7**
	comp=Z,68nm,0.7s					
KSM	**Kuching**	**48.71**	**227**	P	**P**	**18 59 48.7 +0.6**
KSM	**Kuching**	**48.71**	**227**	P	**P**	**18 59 50.0 +1.8**
MDOK	**Medeo**	**48.89**	**297**	*e*P	**P**	**18 59 48.7 -0.7**
	baz=297					
MDOK				*e*S	**S**	**19 06 52.9 +0.4**
	baz=297					
MDOK				LR	LR	19 21 05.7
	comp=Z,387nm,13.8s,baz=297					
MDOK	**Medeo**	**48.89**	**297**	*e*P	**P**	**18 59 48.7 -0.7**
MDOK				*e*S	**S**	**19 06 52.9 +0.4**
MDOK				MLR	MLR	
	comp=Z,387nm,14.0s					
AAA	**Alma-Ata**	**48.97**	**297**	*e*P	**P**	**18 59 49.9 0.0**
	comp=Z,17nm,1.3s,baz=297					
AAA				LR	LR	19 21 08.6
	comp=Z,312nm,13.8s,baz=297					
AAA	**Alma-Ata**	**48.97**	**297**	*e*P	**P**	**18 59 49.9 0.0**
AAA				pmax	pmax	
	comp=Z,17nm,1.3s					
AAA				MLR	MLR	
	comp=Z,312nm,14.0s					
BNSI	**Bone**	**49.00**	**212**	P	**P**	**18 59 51.6 +1.3**
	comp=Z,18nm,1.2s					
TNSS	**Tian-Shan**	**49.00**	**297**	*e*P	**P**	**18 59 50.5 -0.2**
	baz=297					
TNSS	**Tian-Shan**	**49.00**	**297**	*e*P	**P**	**18 59 50.4 -0.2**
KKN	**Kakani**	**49.23**	**275**	*e*P	**P**	**18 59 52.7 +0.3**
PKI	**Pulchoki**	**49.24**	**274**	*e*P	**P**	**18 59 52.7 +0.1**
PKIN	**Phulchoki**	**49.25**	**274**	*e*P	**P**	**18 59 52.6 +0.1**
DMN	**Daman**	**49.46**	**275**	*e*P	**P**	**18 59 54.6 +0.5**
	comp=Z,78nm,1.2s					
BRZS	**Berezniki**	**49.60**	**307**	*e*P	**P**	**18 59 53.6 -1.0**
	comp=Z,14nm,1.3s,baz=307					
BRZS	**Berezniki**	**49.60**	**307**	*e*P	**P**	**18 59 53.6 -1.0**
BRZS				pmax	pmax	
	comp=Z,14nm,1.3s					
GKN	**Gorkha**	**49.62**	**275**	*e*P	**P**	**18 59 55.6 +0.3**
KAPI	**Kappang**	**49.70**	**212**	P	**P**	**18 59 56.8 +1.1**
KAPI				pmax	pmax	
	comp=Z,42nm,1.5s					
KAPI	**Kappang**	**49.70**	**212**	P	**P**	**18 59 56.8 +1.1**
ULHL	**Ulaihol**	**49.77**	**296**	P	**P**	**18 59 56.9 +0.6**
	SNR=10					
TKM2	**Tokmak 2**	**49.97**	**297**	P	**P**	**18 59 58.6 +0.8**
	SNR=32					
TKM2	**Tokmak 2**	**49.97**	**297**	P	**P**	**18 59 57.4 -0.4**
BVAR	**Borovoye Array**	**50.13**	**311**	P	**P**	**18 59 58.6 +0.1**
	comp=Z,5.9nm,0.8s,baz=92,slow=13,SNR=35					
BRVK	**Borovoye**	**50.18**	**311**	*c i*P	**P**	**18 59 59.4 +0.5**
BRVK				pmax	pmax	
	comp=Z,26nm,1.7s					
BRVK	**Borovoye**	**50.18**	**311**	P	**P**	**18 59 59.0 0.0**
BRVK				IAmb	IAmb	19 00 00.3
	comp=Z,14nm,1.1s					
BTLS	**Baital**	**50.28**	**300**	*e*P	**P**	**18 59 59.0 -0.8**
	comp=Z,11nm,1.3s,baz=300					
BTLS	**Baital**	**50.28**	**300**	*e*P	**P**	**18 59 59.0 -0.8**
BTLS				pmax	pmax	
	comp=Z,11nm,1.3s					
EPYK	**Eagle Plains**	**50.29**	**31**	P	**P**	**19 00 00.3 +0.6**
EPYK				IAmb	IAmb	19 00 13.0
	comp=Z,16nm,1.1s					
SGDS	**Sogindy**	**50.44**	**298**	*e*P	**P**	**19 00 00.3 -0.9**
	comp=Z,14nm,1.4s,baz=298					
SGDS	**Sogindy**	**50.44**	**298**	*e*P	**P**	**19 00 00.3 -0.9**
SGDS				pmax	pmax	
	comp=Z,14nm,1.4s					
KBK	**Karagaybulak**	**50.51**	**297**	P	**P**	**19 00 02.6 +0.8**
	SNR=28					
BBKI	**Banjar Baru**	**50.51**	**219**	P	**P**	**19 00 02.6 +0.7**
	comp=Z,14nm,1.5s					
CHMS	**Chumysh**	**50.52**	**297**	P	**P**	**19 00 02.1 +0.4**
	SNR=5.0					
KOLN	**Koldanda**	**50.53**	**276**	*e*P	**P**	**19 00 02.9 +0.7**
USP	**Ospenovka**	**50.60**	**298**	P	**P**	**19 00 02.8 +0.4**
	SNR=10					
AAK	**Ala-Archa**	**50.83**	**297**	P	**P**	**19 00 04.5 +0.3**
	comp=Z,4.9nm,0.9s,baz=100,slow=9.8,SNR=15					
AAK	**Ala-Archa**	**50.83**	**297**	P	**P**	**19 00 04.6 +0.3**
	SNR=7.7					
AAK	**Ala-Archa**	**50.83**	**297**	P	**P**	**19 00 04.5 +0.3**
AAK				IAmb	IAmb	19 00 05.9
	comp=Z,23nm,1.4s					
PYUN	**Piuthan**	**50.84**	**276**	*e*P	**P**	**19 00 05.3 +0.8**
KSH	**Kashi**	**50.99**	**293**	P	**P**	**19 00 09.8 +4.4**
KSH				pP	pwP	19 00 13.3 +0.3
KSH				S	**S**	**19 07 23.0 +1.2**
KSH				SS	**SS**	**19 10 59.3 +2.8**
KSH				pmax	pmax	
	comp=Z,15nm,1.5s					
KSH				pmax	pmax	
	comp=Z,150nm,5.0s					
KSH				LR	LR	
	comp=Z,620nm,11.8s					
KSH				LR	LR	
	comp=Z,520nm,9.0s					
KSH				LR	LR	
	comp=Z,1μm,8.0s					
HYT	**Haines Junctio**	**51.06**	**38**	P	**P**	**19 00 07.8 +2.2**
HYT				IAmb	IAmb	19 00 17.2
	comp=Z,19nm,1.1s					
INK	**Inuvik**	**51.16**	**28**	P	**P**	**19 00 07.4 +1.3**
	comp=Z,5.5nm,0.6s,baz=302,slow=6.8,SNR=28					
INK	**Inuvik**	**51.16**	**28**	P	**P**	**19 00 07.6 +1.5**
EKS2	**Erkin-Say**	**51.31**	**297**	P	**P**	**19 00 08.3 +0.5**
	SNR=9.8					
AML	**Almayashu**	**51.57**	**297**	P	**P**	**19 00 11.1 +1.1**
	SNR=22					
JRMM	**Jerantut**	**51.58**	**237**	P	**P**	**19

KKAR pmax pmax
comp=Z,15nm,1.1s
KKAR Karatay Array 53.36 299 P **P** **19 00 22.1 -0.8**
KKAR Karatay Array 53.36 299 P **P** **19 00 22.5 -0.4**
KKAR IAmb IAmb 19 00 24.2
comp=Z,15nm,1.1s
MTN Manton Dam 53.60 195 P **P** **19 00 22.6 -2.2**
MTN IAmb IAmb 19 00 47.5
comp=Z,12nm,1.0s
TPI Tanjungpandan 53.68 227 P **P** **19 00 26.7 +1.3**
IUG luzhnay 54.07 298 *e*P **P** **19 00 27.5 -0.7**
comp=Z,11nm,1.4s,baz=298
IUG luzhnay 54.07 298 *e*P **P** **19 00 27.4 -0.7**
IUG pmax pmax
comp=Z,11nm,1.4s
C36M Paulatuk 54.22 26 P **P** **19 00 28.9 +0.2**
C36M IAmb IAmb 19 00 31.1
comp=Z,6.3nm,0.7s
SVE Sverdlovsk 54.34 318 *e*P **P** **19 00 30.6 +0.8**
SVE pmax pmax
comp=Z,35nm,1.4s
SVE MLR MLR
comp=Z,2μm,14.0s
SRBI Singaraja 54.40 216 P **P** **19 00 31.4 +0.8**
comp=Z,542nmcomp=Z,34nm,1.4s
PSI Prapat 54.72 240 P **P** **19 00 33.8 +0.5**
comp=Z,4.4nm,0.4s,baz=0.2,slow=8.1,SNR=7.5
RPSI Rantau Prapat 54.80 239 P **P** **19 00 33.1 -0.6**
RPSI IAmb IAmb 19 00 34.6
comp=Z,16nm,1.2s
RPSI Rantau Prapat 54.80 239 P **P** **19 00 33.8 +0.1**
BKNI Bangkinang 55.21 236 P **P** **19 00 37.2 +0.7**
PMBI Palembang 55.48 230 P **P** **19 00 40.2 +1.7**
NIL Nilore 55.51 287 P **P** **19 00 39.3 +0.7**
NIL pmax pmax
comp=Z,62nm,1.2s
NIL Nilore 55.51 287 P **P** **19 00 39.3 +0.7**
ARU Arti 55.55 318 P **P** **19 00 38.7 +0.1**
UGM Wanagama 56.48 221 P **P** **19 00 42.9 -2.7**
KNRA Kununurra 56.86 197 P **P** **19 00 46.6 -1.6**
KNRA IAmb IAmb 19 01 10.4
comp=Z,10nm,0.9s
LHSI Lahat 56.93 230 P **P** **19 00 50.3 +1.4**
comp=Z,44nm,1.1s
AB31 Akbulak array 57.60 310 P **P** **19 00 52.6 -0.6**
ABKAR Akbulak array 57.60 310 P **P** **19 00 52.8 -0.4**
ABKAR Akbulak array 57.60 310 P **P** **19 00 52.8 -0.4**
ABKAR IAmb IAmb 19 00 54.9
comp=Z,18nm,1.1s
KBL Kabul 58.15 290 P **P** **19 00 57.0 -0.6**
KBL pmax pmax
comp=Z,17nm,1.1s
KBL Kabul 58.15 290 P **P** **19 00 57.0 -0.6**
AKTO Aktyubinsk 58.23 311 P **P** **19 00 58.1 +0.5**
comp=Z,7.7nm,0.9s,baz=66,slow=13,SNR=17
SANVU Saraoutou 59.11 153 P **P** **19 01 03.5 -0.5**
KIRV Kirov 59.19 323*c i*P **P** **19 01 04.6 +0.4**
PRGR Permogore 59.49 327 *e*P **P** **19 01 06.3 +0.1**
PRGR *e* 19 03 18.3
PRGR pmax pmax
comp=Z,16nm,1.0s
RES Resolute Bay 59.53 15 P **P** **19 01 06.8 +0.5**
comp=Z,5.3nm,0.9s,baz=314,slow=6.2,SNR=24
RES Resolute Bay 59.53 15 P **P** **19 01 06.1 -0.2**
RES IAmb IAmb 19 01 18.2
comp=Z,10nm,0.8s
WB0 Warramunga Arr 59.83 190 P **P** **19 01 08.1 -0.9**
WR0 Warramunga Arr 60.00 190 P **P** **19 01 09.2 -0.9**
WR0 IAmb IAmb 19 01 11.5
comp=Z,6.6nm,0.6s
WRAB Tennant Creek 60.00 190⇑ *i*P **P** **19 01 09.9 -0.2**
WRAB pmax pmax
comp=Z,28nm,2.9s
WRAB Tennant Creek 60.00 190 P **P** **19 01 08.1 -2.0**
WRAB IAmb IAmb 19 01 36.3
comp=Z,12nm,1.1s
WB2 Warramunga Arr 60.01 190 P **P** **19 01 08.4 -1.8**
WB2 IAmb IAmb 19 01 37.7
comp=Z,11nm,1.1s
WRA Warramunga Arr 60.01 190 P **P** **19 01 09.5 -0.7**
comp=Z,4.9nm,0.6s,baz=7.9,slow=6.8,SNR=52
YKA Yellowknife Ar 60.57 31 P **P** **19 01 14.3 +0.7**
comp=Z,1.7nm,0.7s,baz=300,slow=6.3,SNR=26
YKA Yellowknife Ar 60.57 31 *i*P **P** **19 01 14.6 +1.0**
YKA pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 62.11 339 P **P** **19 01 24.4 +0.5**
comp=Z,2.6nm,0.8s,baz=54,slow=6.2,SNR=5.0
ARCES LR LR 19 31 33.7
comp=Z,394nm,20.3s,baz=55,slow=39
ARCES ARCESS Array B 62.11 339 IAmb IAmb 19 01 35.4
comp=Z,15nm,1.4s
TULEG Thule 62.18 8 P **P** **19 01 22.7 -1.6**
KLMR Klimovskoe 62.44 328 *e*P **P** **19 01 22.9 -3.3**
KLMR *e* 19 03 39.5
KLMR *e*SS SS 19 13 51.6 -3.7
KLMR pmax pmax
comp=Z,27nm,1.3s
KLMR Klimovskoe 62.44 328 *e*P **P** **19 01 23.0 -3.3**
KLMR AMP 19 01 27.9
comp=Z,27nm,1.3s
KLMR *e*PP **PP** **19 03 39.6 -3.6**
KLMR *e*SS **SS** **19 13 51.7 -3.6**
KLMR *e*SS **SS** **19 13 51.7 -3.6**
KLMR LQ LQ 19 24 30.5
KLMR LQ LQ 19 24 30.5
KLMR ⇓LR LR 19 29 52.8
NEEM North Greenlan 62.73 4 *i*P **P** **19 01 29.4 +1.0**
NEEM IAmb IAmb 19 01 39.6
comp=Z,6.3nm,0.8s
BELG Belogornoye 63.06 317*c i*P **P** **19 01 31.2 +0.7**
BELG pmax pmax
comp=Z,11nm,1.1s
HRA Herat 63.09 293 P **P** **19 01 29.7 -1.6**
HRA IAmb IAmb 19 01 32.5
comp=Z,9.3nm,1.2s
DAG Danmarks Havn 63.23 356 *i*P **P** **19 01 31.3 0.0**
DAG IAmb IAmb 19 01 32.9
comp=Z,6.6nm,0.9s
DAG Danmarks Havn 63.23 356 *i*P **P** **19 01 31.3 0.0**
DAG pmax pmax
comp=Z,7.0nm,0.9s
AS31 Alice Springs 63.73 190 P **P** **19 01 34.8 -0.4**
ASAR Alice Springs 63.73 190 P **P** **19 01 35.0 -0.2**
comp=Z,2.1nm,0.7s,baz=6.7,slow=5.7,SNR=54
ASAR Alice Springs 63.73 190 P **P** **19 01 34.3 -0.9**
GEYT Alibeck 64.11 299 P **P** **19 01 37.8 0.0**
comp=Z,6.3nm,1.0s,baz=41,slow=4.7,SNR=12
GEYT LR LR 19 31 55.1
comp=Z,200nm,19.8s,baz=15,slow=38
GEYT Alibeck 64.11 299 P **P** **19 01 36.4 -1.4**
GEYT IAmb IAmb 19 01 39.3
comp=Z,6.0nm,1.0s
GYA0B ALIBECK ARRAY 64.11 299 P **P** **19 01 36.4 -1.4**
MSVF Nonsavu 65.54 144 LR LR 19 23 52.9
comp=Z,121nm,20.0s,baz=312,slow=30
DBG Daneborg 65.73 355 *i*P **P** **19 01 47.8 +0.1**
DBG IAmb IAmb 19 01 49.0
comp=Z,2.2nm,1.1s
MOS Moscow 66.16 324 *e*P **P** **19 01 49.3 -1.3**
MOS pmax pmax
comp=Z,34nm,1.1s
MOS MLR MLR
comp=Z,1μm,16.0s
E07A Sunnyside 66.35 48 P **P** **19 01 53.0 +0.8**
E07A IAmb IAmb 19 02 09.3
comp=Z,12nm,1.3s
C09A Chrisman Ranch 66.56 47 P **P** **19 01 54.9 +1.4**
C09A IAmb IAmb 19 02 19.3
comp=Z,16nm,1.4s
D08A Wollman Farm, 66.61 48 P **P** **19 01 55.4 +1.6**
D08A IAmb IAmb 19 02 08.9
comp=Z,7.5nm,1.1s
F07A Phinny Hill Vi 66.67 49 P **P** **19 01 54.0 -0.2**
F07A IAmb IAmb 19 02 05.9
comp=Z,13nm,1.2s
VRH Novokhopyorsk 66.79 318 *e*P **P** **19 01 53.4 -1.4**
VRH pmax pmax
comp=Z,30nm,1.4s
VRH MLR MLR
comp=Z,2μm,15.0s
NEW Newport 66.95 46 P **P** **19 01 57.7 +1.8**
comp=Z,2.6nm,0.7s,baz=279,slow=8.8,SNR=3.0
NEW Newport 66.95 46 P **P** **19 01 57.6 +1.6**
NEW pmax pmax
comp=Z,7.0nm,1.2s
NEW Newport 66.95 46 P **P** **19 01 57.6 +1.6**
NEW IAmb IAmb 19 02 16.9
comp=Z,7.4nm,1.1s
OBN Obninsk 67.01 323⇑ *e*P **P** **19 01 56.3 +0.2**
OBN *e* 19 02 27.6
OBN *e* 19 04 28.3
OBN *e*SS SS 19 15 08.2 +1.6
OBN pmax pmax
comp=Z,35nm,1.7s
OBN MLR MLR
comp=Z,1μm,16.0s
OBN Obninsk 67.01 323 P **P** **19 01 56.4 +0.2**
PINE Pine Mountain 67.23 51 P **P** **19 01 59.2 +1.1**
FIA1 FINESS Array S 67.26 333 P **P** **19 01 57.7 +0.1**
FINES FINESS Array B 67.26 333 P **P** **19 01 57.7 +0.1**
comp=Z,9.7nm,0.9s,baz=47,slow=8.4,SNR=18
FINES LR LR 19 34 32.0
comp=Z,973nm,18.2s,baz=34,slow=39
FINES FINESS Array B 67.26 333 P **P** **19 01 57.4 -0.2**
YBH Yreka Blue Hor 67.28 54 P **P** **19 02 01.0 +2.8**
YBH pmax pmax
comp=Z,10.0nm,1.2s
YBH Yreka Blue Hor 67.28 54 P **P** **19 02 01.0 +2.8**
YBH IAmb IAmb 19 02 08.3
comp=Z,9.7nm,1.2s
E09A Wood Farm, Sta 67.36 48 P **P** **19 01 57.7 -0.8**
E09A IAmb IAmb 19 02 24.7
comp=Z,11nm,1.1s
LPSR Galich'ya Gora 67.38 320 *e*P **P** **19 01 57.6 -0.9**
LPSR pmax pmax
comp=Z,20nm,1.4s
LPSR MLR MLR
comp=Z,1μm,14.0s
G08A Pilot Rock 67.57 49 P **P** **19 02 02.0 +1.9**
K05A Summer Lake 67.85 52 P **P** **19 02 04.0 +2.0**
SUMG Summit 67.98 1 *i*P **P** **19 02 03.8 +1.3**
SUMG IAmb IAmb 19 02 05.0
comp=Z,7.3nm,0.8s
SUMG Summit 67.98 1 *i*P **P** **19 02 03.8 +1.3**
SUMG pmax pmax
comp=Z,7.0nm,0.8s
SUMG Summit 67.98 1 P **P** **19 02 02.3 -0.2**
WDC Whiskeytown Da 68.03 55 P **P** **19 02 04.8 +1.9**
WDC pmax pmax
comp=Z,6.0nm,1.0s
WDC Whiskeytown Da 68.03 55 P **P** **19 02 04.8 +1.9**
WDC IAmb IAmb 19 02 09.2
comp=Z,6.3nm,1.0s
VSR Storozhevoye 68.09 319 *e*P **P** **19 02 02.6 -0.4**
VSR pmax pmax
comp=Z,20nm,1.2s
VSR MLR MLR
comp=Z,990nm,14.0s
F10A Beach Ranch, E 68.19 48 **P** **19 02 05.7 +1.8**
F10A IAmb IAmb 19 02 09.8
comp=Z,8.4nm,1.4s
MAK Makhachkala 68.21 308 *e*P P 19 01 58.4 -5.5
MAK *e*PPP PPP 19 06 06.7
MAK *e*S **S** **19 10 55.0 -8.6**
MAK *e*SS **SS** **19 15 24.8 -1.0**
MAK pmax pmax
comp=Z,158nm,1.4s
MAK MLR MLR
comp=Z,772nm,13.0s
MOD Modoc Plateau 68.68 53 P **P** **19 02 08.5 +1.3**
MOD IAmb IAmb 19 02 18.1
comp=Z,8.1nm,1.1s
BMO Blue Mountains 68.78 49 P **P** **19 02 07.8 +0.1**
BMO pmax pmax
comp=Z,5.0nm,0.9s
BMO Blue Mountains 68.78 49 P **P** **19 02 07.8 +0.1**
BMO IAmb IAmb 19 02 37.4
comp=Z,4.8nm,0.8s
J08A Circle Bar Ran 68.96 51 P **P** **19 02 10.9 +2.1**
J08A IAmb IAmb 19 02 15.8
comp=Z,9.1nm,1.0s
VSU Vasula 69.03 330 *e*P **P** **19 02 09.6 +0.8**
VSU Vasula 69.03 330⇓ *i*P **P** **19 02 09.4 +0.6**
VSU pmax pmax
comp=Z,158nm,2.6s
ORV Oroville 69.27 55 P **P** **19 02 10.0 -0.6**
ORV pmax pmax
comp=Z,11nm,1.5s
ORV Oroville 69.27 55 P **P** **19 02 10.0 -0.6**
ORV IAmb IAmb 19 02 26.9
comp=Z,11nm,1.4s
WVOR Wild Horse Val 69.39 52 P **P** **19 02 11.5 0.0**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
WVOR Wild Horse Val 69.39 52 P **P** **19 02 11.5 0.0**
WVOR IAmb IAmb 19 02 18.3
comp=Z,9.3nm,1.1s
SEKA Sheki 69.40 307 P **P** **19 02 11.7 +0.2**
PLID Pearl Lake 69.40 48 P **P** **19 02 13.2 +1.5**
ZKTA Zakatala 69.50 307 P **P** **19 02 12.0 -0.1**
MSO Missoula 69.53 46 **P** **19 02 13.7 +1.4**
MSO IAmb IAmb 19 02 22.8
comp=Z,5.0nm,0.8s
GOF Gofitskoye 69.64 312 *e*P **P** **19 02 15.9 +3.1**
MNGR Mingechevir, A 69.72 306 P **P** **19 02 14.1 +0.8**
BEKR Beckworth 69.81 55 P **P** **19 02 14.8 +0.6**
BEKR IAmb IAmb 19 02 20.5
comp=Z,8.6nm,1.0s
LKRN Lenkeran, Azer 69.84 304 P **P** **19 02 14.7 +0.6**
DDFL Dedoflistskaro 69.92 307 P **P** **19 02 15.4 +0.7**
MTSE Matsula 69.97 331 *e*P **P** **19 02 12.0 -2.5**
NCK Nalchik 70.24 310⇓ *i*P **P** **19 02 17.9 +1.4**
NCK pmax pmax
comp=Z,29nm,1.2s
GANJ Ganja 70.26 307 P **P** **19 02 18.0 +1.2**
ZEI Tsey 70.47 310 *e*P **P** **19 02 17.1 -1.1**
ZEI pmax pmax
comp=Z,11nm,0.9s
MFID Camas Ranch 70.49 49 P **P** **19 02 17.1 -1.1**
KIV Kislovodsk 70.49 311 *e*P **P** **19 02 19.2 +1.0**
KIV *e* 19 02 41.1
KIV *e*S **S** **19 11 32.8 +2.1**
KIV *e*SS **SS** **19 16 04.7 +3.6**
KIV pmax pmax
comp=Z,161nm,1.1s
KIV pmax pmax
comp=Z,140nm,4.1s
KIV Kislovodsk 70.49 311 P **P** **19 02 18.5 +0.3**
KBZ Khabaz 70.51 311 P **P** **19 02 18.7 +0.6**
comp=Z,18nm,0.9s,baz=49,slow=2.7,SNR=33
KBZ LR LR 19 35 54.4
comp=Z,110nm,18.4s,baz=17,slow=38
KBZ Khabaz 70.51 311*c i*P **P** **19 02 19.0 +0.9**
KBZ pmax pmax
comp=Z,32nm,1.0s
PAHR Pah Rah Range 70.51 54 P **P** **19 02 17.2 -1.2**
PAHR IAmb IAmb 19 02 24.5
comp=Z,12nm,1.2s
BTNK Botanikuri 70.59 308 P **P** **19 02 19.5 +0.8**
PNTR Pine Nut 70.74 55 P **P** **19 02 19.3 -0.6**
PNTR IAmb IAmb 19 02 41.1
comp=Z,7.0nm,0.9s
HRY Holter Researc 70.76 45 P **P** **19 02 21.7 +1.9**
FCC Fort Churchill 70.78 28 P **P** **19 02 19.9 +0.4**
FCC pmax pmax
comp=Z,18nm,1.4s
FCC Fort Churchill 70.78 28 P **P** **19 02 19.9 +0.4**
CMB Columbia Colle 70.85 56 P **P** **19 02 21.3 +0.9**
CMB pmax pmax
comp=Z,8.0nm,1.2s
CMB Columbia Colle 70.85 56 P **P** **19 02 21.3 +0.9**
CMB IAmb IAmb 19 02 26.5
comp=Z,7.9nm,1.2s
NEY Neytrino 70.89 311⇓ *e*P **P** **19 02 22.9 +2.1**
NEY pmax pmax
comp=Z,6.0nm,1.2s
LRM Limekiln Ridge 70.97 46 P **P** **19 02 21.6 +0.4**
YERR Yerington 71.03 55 P **P** **19 02 22.6 +1.0**
YERR IAmb IAmb 19 02 28.4
comp=Z,11nm,1.0s
EGMT Eagleton 71.06 43 P **P** **19 02 21.9 +0.3**
EGMT IAmb IAmb 19 02 45.0
comp=Z,7.3nm,0.8s
DLMT Dillon 71.17 46 P **P** **19 02 23.7 +1.3**
WAKR Walker 71.18 55 P **P** **19 02 23.4 +0.8**
IDID Didziasalis 71.19 327 *e*P **P** **19 02 23.0 +0.9**
HLID Hailey 71.22 49 P **P** **19 02 24.3 +1.6**
MNK Minsk 71.26 326 *e*P **P** **19 02 24.0 +1.5**
MNK Minsk 71.26 326 *i*P **P** **19 02 23.8 +1.3**
comp=E,3.0nm,0.9s
MNK *i*P **P** **19 02 23.8 +1.3**
comp=N,20nm,0.9s
MNK *i*P **P** **19 02 23.8 +1.3**
comp=Z,27nm,0.8s
MNK *i*PP **PP** **19 05 01.5 +1.5**
MNK *i*PPP PPP 19 06 44.6
MNK *i*S **S** **19 11 42.0 +3.0**
MNK *i*SS **SS** **19 16 16.7 +4.6**
MNK *i*SSS SSS 19 19 35.8
MNK *i*LQ LQ 19 28 47.7
MNK *i*LR LR 19 34 13.1
MNK *i*LRM MLR 19 36 46.8
comp=Z,592nm,18.1s
MNK *i*LRM MLR 19 37 00.9
comp=N,646nm,16.8s
MNK *i*LRM MLR 19 37 12.5
comp=E,86nm,18.0s
ISAL Salakas 71.26 328 *e*P **P** **19 02 23.5 +1.0**
STKA Stephens Creek 71.28 182 P **P** **19 02 22.9 +0.2**
comp=E,2.4nm,0.5s,baz=333,slow=7.4,SNR=13
STKA Stephens Creek 71.28 182⇑ *e*P **P** **19 02 22.6 -0.1**
IIGN Ignalina 71.38 328 *e*P **P** **19 02 24.1 +0.9**
NACGM Naroch 71.45 327 *i*P P 19 02 09.7 -14
NACGM *i*P P 19 02 09.7 -14
NACGM *i*P P 19 02 09.7 -14
NACGM *i*Pb pP 19 02 24.7 -3.2
comp=N,41nm,0.8s
NACGM *i*Pb sP 19 02 26.3 -3.2
comp=Z,24nm,0.6s
NACGM *i*PcP pwP 19 02 35.7 +3.7
NACGM *i*PP PP 19 04 39.5 -22
NACGM *i*PPP PPP 19 06 17.8
NACGM *i*S S 19 11 06.8 -34
NACGM *i*SS SS 19 15 00.9 -74
NACGM *i*SSS SSS 19 18 27.4
NACGM *i*LQ LQ 19 28 11.0
NACGM *i*LR LR 19 33 10.9
ICESG Greenland Ices 71.47 1 *i*P **P** **19 02 25.4 +1.4**
ICESG IAmb IAmb 19 02 27.1
comp=Z,10nm,1.1s
GNI Garni 71.53 307*ce*P **P** **19 02 26.1 +1.5**
GNI pmax pmax
comp=Z,28nm,1.7s
GNI Garni 71.53 307 P **P** **19 02 24.1 -0.6**
BOZ Bozeman (W) 71.56 46 P **P** **19 02 26.3 +1.6**
BOZ pmax pmax
comp=Z,7.0nm,0.8s
BOZ Bozeman (W) 71.56 46 P **P** **19 02 26.3 +1.6**
BOZ IAmb IAmb 19 02 30.2
comp=Z,6.6nm,0.8s
NAX Nakhchivan 71.64 306 P **P** **19 02 25.8 +0.6**
FORT Forrest 71.65 194 P **P** **19 02 25.9 +0.9**
RYN Ryan 71.69 55 P **P** **19 02 25.8 +0.2**
KVN Kaiserville 71.70 54 P **P** **19 02 27.4 +1.7**
KVN pmax pmax
comp=Z,7.0nm,0.9s
KVN Kaiserville 71.70 54 P **P** **19 02 27.4 +1.7**
KVN IAmb IAmb 19 02 28.6
comp=Z,7.0nm,0.9s
LHV Little Huntoon 71.92 55 P **P** **19 02 28.2 +1.4**
LHV IAmb IAmb 19 02 34.2
comp=Z,13nm,1.0s
NVAR Mina Array Bea 71.94 55 P **P** **19 02 28.3 +1.1**
comp=Z,5.5nm,0.9s,baz=291,slow=6.6,SNR=15
NVAR LR LR 19 34 55.4
comp=Z,60nm,18.2s,baz=289,slow=36
NVAR Mina Array Bea 71.94 55 P **P** **19 02 27.9 +0.7**
NV11 Mina Array Sit 72.04 55 P **P** **19 02 27.7 0.0**
NV11 IAmb IAmb 19 02 43.3
comp=Z,12nm,1.4s
NC405 NORSAR Array S 72.18 338 P **P** **19 02 27.5 -0.5**
PABE Paberze 72.18 329 *e*P **P** **19 02 29.0 +1.0**
NC303 NORSAR Array S 72.19 338 P **P** **19 02 28.2 +0.3**
YHL Hebgen Lake 72.27 46 P **P** **19 02 31.1 +2.0**
NC204 NORSAR Array S 72.32 338 P **P** **19 02 28.9 0.0**
YHB Horse Butte 72.32 46 P **P** **19 02 30.4 +1.0**
YHB IAmb IAmb 19 02 36.1
comp=Z,8.7nm,0.9s
NOA NORSAR Array B 72.38 338 P **P** **19 02 29.4 +0.2**
comp=Z,6.7nm,0.9s,baz=37,slow=6.0,SNR=14
NOA LR LR 19 38 30.2
comp=Z,413nm,18.2s,baz=25,slow=39
SOC Sochi 72.43 312 *e*P **P** **19 02 29.9 +0.2**
SOC *e* 19 05 08.9
SOC *e*PPP PPP 19 06 54.7
SOC *e*S **S** **19 11 53.1 +0.3**
SOC *e*SS **SS** **19 16 30.4 -0.1**
UOSS Minazif 72.69 288 P **P** **19 02 32.5 +0.9**
YNE Yellowstone No 72.82 45 P **P** **19 02 32.9 +0.5**
TPH Tonopah 72.84 55 P **P** **19 02 33.5 +0.9**
TPH pmax pmax
comp=Z,36nm,1.0s
TPH Tonopah 72.84 55 P **P** **19 02 33.5 +0.9**
H17A Grant Village 72.89 46 P **P** **19 02 35.0 +2.1**
H17A IAmb IAmb 19 02 41.2
comp=Z,11nm,1.0s
ANN Anapa 72.95 314 *e*P P 19 02 27.5 -5.3
ANN *e**PP pP 19 02 32.5 -4.5
ANN *e* 19 02 46.0
ANN *e*S **S** **19 11 52.8 -5.9**
ANN pmax pmax
comp=Z,118nm,1.5s
SFJD Kangerlussuaq 73.03 6 P **P** **19 02 33.3 +0.4**
SFJD pmax pmax
comp=Z,26nm,1.4s
SFJD Kangerlussuaq 73.03 6 P **P** **19 02 33.3 +0.4**
AKASG Malin Array Be 73.25 323 P **P** **19 02 34.6 +0.1**
comp=Z,3.8nm,0.6s,baz=42,slow=6.4,SNR=29
AKASG LR LR 19 36 48.2
comp=Z,305nm,18.4s,baz=25,slow=38
AKASG Malin Array Be 73.25 323 *i*P **P** **19 02 34.5 0.0**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 73.25 323 P **P** **19 02 34.7 +0.3**
AKBB Malin Array Si 73.25 323⇑ *i*P **P** **19 02 34.4 -0.1**
AKBB pmax pmax
comp=Z,14nm,1.0s
AKBB Malin Array Si 73.25 323 P **P** **19 02 34.1 -0.4**
AKBB IAmb IAmb 19 02 35.3
comp=Z,12nm,1.0s
HVU Hansel Valley 73.27 49 P **P** **19 02 36.3 +1.3**
HVU pmax pmax
comp=Z,7.0nm,1.0s
HVU Hansel Valley 73.27 49 P **P** **19 02 36.3 +1.3**
LOHW Long Hollow 73.37 47 P **P** **19 02 36.2 +0.5**
R11A Troy Canyon, C 73.69 54 P **P** **19 02 38.7 +1.1**
FRB Frobisher Bay 73.73 14 P **P** **19 02 37.7 +0.7**
comp=Z,7.2nm,0.8s,baz=1.5,slow=5.1,SNR=21
DY2G Dye2 73.84 4 *i*P **P** **19 02 38.7 +0.7**
DY2G IAmb IAmb 19 02 39.9
comp=Z,8.7nm,0.9s
SPR3 Spring Creek 3 74.07 52 P **P** **19 02 39.7 -0.2**
HWUT Hardware Ranch 74.09 49 P **P** **19 02 40.0 +0.1**
HWUT IAmb IAmb 19 02 59.6
comp=Z,11nm,1.4s
TPNV Topopah Spring 74.14 55 P **P** **19 02 41.1 +0.9**
TPNV pmax pmax
comp=Z,7.0nm,0.9s
TPNV Topopah Spring 74.14 55 P **P** **19 02 41.1 +0.9**
KOPT Kop Dagi 74.19 309 P **P** **19 02 40.1 -0.4**
KOPT IAmb IAmb 19 02 43.8
comp=Z,11nm,0.9s
DUG Dugway, Tooele 74.24 51 P **P** **19 02 42.1 +1.4**
DUG pmax pmax
comp=Z,8.0nm,1.2s
DUG Dugway, Tooele 74.24 51 P **P** **19 02 42.1 +1.4**
BW06 Boulder Array 74.50 47 P **P** **19 02 43.6 +1.3**
PD31 Pinedale Array 74.50 47 P **P** **19 02 42.8 +0.5**
PDAR Pinedale Array 74.50 47 P **P** **19 02 43.5 +1.3**
comp=Z,2.1nm,0.7s,baz=273,slow=2.2,SNR=14
PDAR LR LR 19 37 32.6
comp=Z,41nm,19.1s,baz=342,slow=37
PDAR Pinedale Array 74.50 47 P **P** **19 02 43.2 +1.0**
CTU Camp Tracy 74.56 50 P **P** **19 02 43.4 +0.8**
PRN Pahroc Range 74.61 54 P **P** **19 02 42.8 -0.1**
PRN IAmb IAmb 19 02 58.2
comp=Z,11nm,1.3s
PSUT Pine Spring 74.65 53 P **P** **19 02 45.3 +2.1**
PSUT IAmb IAmb 19 02 58.6
comp=Z,13nm,1.5s
JLU Jordanelle 74.79 50 P **P** **19 02 43.1 -0.9**
NLU North Lily Min 74.83 51 P **P** **19 02 44.2 0.0**

MPU **Maple Canyon** 75.05 50 P P 19 02 45.5 0.0
SHPR **Sheep Range** 75.10 55 P P 19 02 47.5 +1.8
TCRU **Three Creeks R** 75.46 52 P P 19 02 47.7 -0.2
CCUT **Cedar City** 75.57 53 P P 19 02 50.6 +2.1
MSU **Marysvale** 75.68 52 P P 19 02 49.4 +0.2
MSU **Marysvale** 75.68 52 P P 19 02 49.4 +0.2
SZCU **Shurtz Canyon** 75.71 53 P P 19 02 48.0 -1.3
MARD **Mardin** 75.72 307 P P 19 02 50.1 +0.9
TMUT **Trail Mountain** 75.77 51 P P 19 02 48.7 -1.0
RDMU **Red Mountain** 75.91 49 P P 19 02 51.6 +1.2
RDMU IAmb IAmb 19 02 57.6
comp=Z,11nm,0.9s
P17A **Butcher Ranch,** 75.93 50 P P 19 02 50.8 +0.3
P17A IAmb IAmb 19 03 15.0
comp=Z,11nm,1.2s
MTPU **Mount Pierson** 75.98 52 P P 19 02 53.2 +2.2
LCMT **Little Creek M** 75.98 53 P P 19 02 52.0 +1.2
LCMT IAmb IAmb 19 02 57.8
comp=Z,7.5nm,1.0s
PFO **Pinyon Flats O** 76.06 58⇑ *e*P P 19 02 56.1 +4.8
KVT **Kavak** 76.12 312 P P 19 02 53.8 +2.4
KNB **Kanab** 76.24 53 P P 19 02 54.2 +1.9
KNB pmax pmax
comp=Z,5.0nm,0.9s
KNB **Kanab** 76.24 53 P P 19 02 54.2 +1.9
LVV **L'vov** 76.25 325 *e*P P 19 02 52.9 +1.0
LVV MLR MLR
comp=Z,400nm,17.0s
LVV MLR MLR
comp=N,400nm,16.0s
LVV MLR MLR
comp=E,500nm,18.0s
ULM **Lac du Bonnet** 76.26 35 P P 19 02 52.1 +0.2
comp=E,1.4nm,0.4s,baz=341,slow=8.9,SNR=3.4
ULM **Lac du Bonnet** 76.26 35 P P 19 02 53.2 +1.3
ULM pmax pmax
comp=Z,5.0nm,1.1s
ULM **Lac du Bonnet** 76.26 35 P P 19 02 53.2 +1.3
SRU **San Rafael Swe** 76.29 50 P P 19 02 54.2 +1.6
SRU pmax pmax
comp=Z,6.0nm,0.9s
SRU **San Rafael Swe** 76.29 50 P P 19 02 54.2 +1.6
RSSD **Black Hills** 76.62 43 P P 19 02 54.8 +0.4
RSSD pmax pmax
comp=Z,4.0nm,0.9s
RSSD **Black Hills** 76.62 43 P P 19 02 54.8 +0.4
O20A **White River Ci** 76.96 48 P P 19 02 56.1 -0.3
KWP **Kalwaria Pacla** 76.97 325 P P 19 02 56.6 +0.6
KWP pmax pmax
comp=Z,48nm,1.2s
KWP **Kalwaria Pacla** 76.97 325 P P 19 02 56.6 +0.6
BUR08 **Bucovina Ar. S** 77.28 322 P P 19 02 58.4 +0.5
BUR08 IAmb IAmb 19 02 59.4
comp=Z,7.6nm,0.9s
BURAR **Bucovina Array** 77.29 322 ⇓P P 19 02 59.1 +1.2
BURAR **Bucovina Array** 77.29 322 P P 19 02 59.1 +1.2
BURAR **Bucovina Array** 77.29 322 P P 19 02 58.4 +0.5
BURAR IAmb IAmb 19 03 00.3
comp=Z,7.5nm,0.9s
BIZ **Bicaz** 77.36 322 ⇑P P 19 02 58.7 +0.5
ILGA **Ilgaz** 77.46 313 P P 19 03 00.4 +1.3
CFR **Carcaliu** 77.60 319 ⇓P P 19 03 00.9 +1.3
CFR **Carcaliu** 77.60 319 P P 19 03 00.9 +1.3
PV10 **Paradox Valley** 77.65 50 P P 19 03 03.0 +2.7
PV14 **Lion Creek, Pa** 77.66 50 P P 19 03 00.6 +0.3
PV14 IAmb IAmb 19 03 11.4
comp=Z,13nm,1.0s
TPGR **Topolog** 77.69 319 ⇓P P 19 03 01.1 +1.0
PV22 **Blue Mesa, Par** 77.69 50 P P 19 03 00.5 0.0
PV22 IAmb IAmb 19 03 29.1
comp=Z,10nm,1.3s
PV20 **West Nyswonger** 77.72 50 P P 19 03 00.1 -0.5
PV20 IAmb IAmb 19 03 11.7
comp=Z,11nm,1.2s
PV04 **Paradox Valley** 77.72 50 P P 19 03 02.1 +1.5
PV04 IAmb IAmb 19 03 20.1
comp=Z,14nm,1.4s
PV19 **Morning Glory** 77.73 50 P P 19 03 01.8 +1.1
PV19 IAmb IAmb 19 03 04.9
comp=Z,8.8nm,0.7s
PV17 **East Wray Mesa** 77.76 50 P P 19 03 02.6 +1.7
PV16 **Nyswonger Mesa** 77.77 50 P P 19 03 02.8 +1.8
PV16 IAmb IAmb 19 03 12.0
comp=Z,6.5nm,0.9s
OJC **Ojcow** 77.78 327 P P 19 03 01.2 +0.7
OJC pmax pmax
comp=Z,30nm,1.1s
OJC **Ojcow** 77.78 327 P P 19 03 01.2 +0.7
PV11 **David Mesa, Pa** 77.80 50 P P 19 03 03.0 +1.9
PV11 IAmb IAmb 19 03 06.4
comp=Z,8.3nm,0.7s
PV05 **Paradox Valley** 77.81 50 P P 19 03 03.0 +1.9
PV05 IAmb IAmb 19 03 07.9
comp=Z,9.9nm,1.0s
PV18 **Skein Mesa, Pa** 77.81 50 P P 19 03 03.3 +2.1
PV18 IAmb IAmb 19 03 18.3
comp=Z,18nm,1.4s
VRI **Vrincioaia** 77.82 320 ⇑P P 19 03 03.1 +2.3
VRI **Vrincioaia** 77.82 320 ⇑P P 19 03 03.1 +2.3
PV12 **Saucer Basin,** 77.83 50 P P 19 03 02.7 +1.4
PV12 IAmb IAmb 19 03 12.6
comp=Z,19nm,1.4s
PV07 **Paradox Valley** 77.84 50 P P 19 03 00.7 -0.6
PV03 **Paradox Valley** 77.84 50 P P 19 03 03.5 +2.1
PV03 IAmb IAmb 19 03 20.7
comp=Z,9.0nm,1.2s
PLOR **Plostina** 77.87 320 ⇑P P 19 03 04.9 +3.8
PLOR **Plostina** 77.87 320 ⇑P P 19 03 04.9 +3.8
UZH **Uzhgorod** 77.89 325 *e*P P 19 02 59.1 -2.0
PV13 **Radium Mtn., P** 77.92 50 P P 19 03 03.5 +1.7
PV13 IAmb IAmb 19 03 06.1
comp=Z,8.3nm,0.9s
PV02 **Paradox Valley** 77.94 50 P P 19 03 03.6 +1.7
PV02 IAmb IAmb 19 03 21.4
comp=Z,8.5nm,1.1s
GAZ **Gaziantep** 77.99 308 P P 19 03 03.4 +1.4
GAZ IAmb IAmb 19 03 04.6
comp=Z,14nm,1.1s
CRVS **Cervenica-Dubn** 78.06 325 *e*P P 19 03 03.0 +0.9
CRVS **Cervenica-Dubn** 78.06 325 *e*P P 19 03 03.0 +0.9
PV01 **Paradox Valley** 78.09 50 P P 19 03 04.8 +2.1
PV01 IAmb IAmb 19 03 27.9
comp=Z,11nm,1.2s
WUAZ **Wupatki** 78.09 54 P P 19 03 04.5 +1.7
WUAZ IAmb IAmb 19 03 23.0
comp=Z,13nm,1.4s
SMCO **Snowmass** 78.33 49 P P 19 03 05.2 +0.9
BR131 **Keskin Array S** 78.39 312⇓ *e*P P 19 03 05.4 +1.1
BR131 **Keskin Array S** 78.39 312 P P 19 03 04.8 +0.5
BR131 IAmb IAmb 19 03 06.3
comp=Z,11nm,1.1s
BRTR **Keskin Array B** 78.39 312 P P 19 03 05.0 +0.7
comp=Z,3.2nm,1.0s,baz=66,slow=6.9,SNR=15
BRTR LR LR 19 44 30.3
comp=Z,200nm,18.3s,baz=21,slow=41
BRTR **Keskin Array B** 78.39 312 P P 19 03 04.2 -0.1
BRTR **Keskin Array B** 78.39 312 P P 19 03 04.2 -0.1
DOPR **Dopca** 78.40 321 ⇑P P 19 03 05.4 +1.4
MLR **Muntele Rosu** 78.47 321 ⇑P P 19 03 07.4 +2.8
MLR **Muntele Rosu** 78.47 321 P P 19 03 04.3 -0.3
MLR pmax pmax
comp=Z,9.0nm,1.2s
MLR **Muntele Rosu** 78.47 321 P P 19 03 04.3 -0.3
MLR IAmb IAmb 19 03 29.1
comp=Z,9.1nm,1.2s
LANS **Liptovska Anna** 78.74 326 *e*P P 19 03 07.8 +1.9
LANS pmax pmax
comp=Z,7.0nm,1.2s
LANS **Liptovska Anna** 78.74 326 *e*P P 19 03 07.8 +1.9
MVCO **Mesa Verde** 78.74 51 P P 19 03 05.4 -0.9
MVCO IAmb IAmb 19 03 25.9
comp=Z,20nm,1.5s
ANTO **Ankara** 78.78 313 P P 19 03 06.2 -0.1
ANTO pmax pmax
comp=Z,14nm,1.0s
ANTO **Ankara** 78.78 313 P P 19 03 06.2 -0.1
ANTO IAmb IAmb 19 03 17.0
comp=Z,14nm,0.9s
BR231 **Keskin MP Arra** 78.80 313 P P 19 03 06.6 +0.1
BR231 IAmb IAmb 19 03 08.7
comp=Z,12nm,0.9s
VOIR 78.95 321 ⇑P P 19 03 08.9 +1.8
VOIR 78.95 321 ⇑P P 19 03 08.9 +1.8
OSTC **Ostas** 78.99 329 AMS AMS 19 43 10.0
comp=Z,1μm,15.8s
MORC **Moravsky Berou** 79.06 328 *e*P P 19 03 08.6 +0.9
MORC **Moravsky Berou** 79.06 328 P P 19 03 08.5 +0.9
MORC pmax pmax
comp=Z,14nm,1.1s
MORC **Moravsky Berou** 79.06 328 P P 19 03 08.5 +0.9
MORC IAmb IAmb 19 03 10.0
comp=Z,14nm,1.1s
DPC **Dobruska-Polom** 79.11 329 *e*P P 19 03 08.9 +1.0
DPC *e* 19 03 18.0
DPC MLR MLR
comp=Z,700nm,16.6s
DPC **Dobruska-Polom** 79.11 329 *e*P P 19 03 08.9 +1.0
DPC *ex* x 19 03 18.0
DPC AMS AMS 19 43 30.0
comp=Z,700nm,16.6s
UPC **Upice** 79.11 329 AMS AMS 19 43 10.0
comp=Z,1μm,15.5s
KRLC **Kraliky** 79.14 328 *e*P P 19 03 09.1 +1.0
KRLC MLR MLR
comp=Z,600nm,15.4s
KRLC **Kraliky** 79.14 328 *e*P P 19 03 09.1 +1.0
KRLC AMS AMS 19 43 10.0
comp=Z,600nm,15.4s
MDUB **Mudurnu** 79.26 314 P P 19 03 08.6 -0.4
PSZ **Piszkesteto** 79.49 325 ⇑P P 19 03 12.0 +1.9
PSZ **Piszkesteto** 79.49 325 P P 19 03 10.8 +0.8
PSZ pmax pmax
comp=Z,28nm,1.3s
PSZ **Piszkesteto** 79.49 325 P P 19 03 10.8 +0.8
VYHS **Vyhne** 79.51 326 *e*P P 19 03 11.1 +1.0
VYHS pmax pmax
comp=Z,18nm,1.3s
VYHS **Vyhne** 79.51 326 *e*P P 19 03 11.1 +1.0
BRG **Berggiesshubel** 79.63 330 *e*P P 19 03 11.4 +0.8
BRG Amp 19 03 12.8
comp=Z,6.5nm,0.9s
BRG *ex* x 19 03 19.8
BRG Amp 19 03 22.3
comp=Z,7.0nm,1.3s
CLL **Collm** 79.63 331 *e*P P 19 03 11.0 +0.4
comp=Z,12nm,1.0s
CLL *e* 19 03 27.0
CLL *e*PP PP 19 06 07.0 -3.7
CLL *e*S S 19 13 12.0 +0.1
CLL LmH 19 37 00.0
comp=N,700nm,18.0s
CLL LmH 19 37 00.0
comp=E,900nm,21.5s
CLL LmV 19 44 00.0
comp=Z,500nm,18.4s
CLL **Collm** 79.63 331 P P 19 03 10.7 +0.1
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL **Collm** 79.63 331 P P 19 03 10.7 +0.1
CLL IAmb IAmb 19 03 12.2
comp=Z,9.6nm,0.9s
PVCC **Panska Ves** 79.66 330 AMS AMS 19 41 50.0
comp=Z,800nm,17.0s
JAVC **Velka Javorina** 79.72 327 *e*P P 19 03 13.5 +2.2
VRAC **Vranov** 79.81 328 *e*P P 19 03 12.8 +1.1
GZR **Gura Zlata** 80.07 322 ⇓P P 19 03 13.9 +0.7
GZR **Gura Zlata** 80.07 322 P P 19 03 13.9 +0.7
PRA **Prague** 80.08 330 AMS AMS 19 42 00.0
comp=Z,900nm,17.8s
SMOL **Smolenice** 80.09 327 *e*P P 19 03 14.7 +1.5
SMOL pmax pmax
comp=Z,5.0nm,1.1s
SMOL **Smolenice** 80.09 327 *e*P P 19 03 14.7 +1.5
KRUC **Moravsky** 80.09 328 *e*P P 19 03 14.0 +0.8
PRU **Pruhonice** 80.10 329 *e*P P 19 03 14.4 +1.2
PRU *e* 19 03 23.0
PRU MLR MLR
comp=Z,800nm,16.8s
PRU **Pruhonice** 80.10 329 *e*P P 19 03 14.4 +1.2
PRU *ex* x 19 03 23.0
PRU AMS AMS 19 42 00.0
comp=Z,800nm,16.8s
SRO **Srobarova** 80.25 326 *e*P P 19 03 16.2 +2.1
SRO **Srobarova** 80.25 326 *e*P P 19 03 16.2 +2.1
MODS **Modra-Piesok** 80.26 327 *e*P P 19 03 16.0 +1.9
MODS pmax pmax
comp=Z,14nm,1.2s
MODS **Modra-Piesok** 80.26 327 *e*P P 19 03 16.0 +1.9
TREC **Trest** 80.27 329 AMS AMS 19 44 10.0
comp=Z,900nm,16.6s
NKC **Novy Kostel** 80.71 331 AMS AMS 19 45 00.0
comp=Z,700nm,14.6s
MDVR **Moldovita** 81.03 322 ⇓P P 19 03 18.9 +0.5
SOP **Sopron** 81.10 327 P P 19 03 20.7 +2.1
SOP pmax pmax
comp=Z,23nm,1.4s
CKRC **Cesky Krumlov** 81.12 329 *e*P P 19 03 19.8 +1.0
CKRC AMS AMS 19 44 40.0
comp=Z,500nm,16.5s
KHC **Kasperske Hory** 81.16 329⇑ *i*P P 19 03 19.6 +0.6
KHC pmax pmax
comp=Z,21nm,1.0s
KHC **Kasperske Hory** 81.16 329 *e*P P 19 03 19.9 +0.9
KHC *ex* x 19 03 28.5
KHC AMS AMS 19 42 40.0
comp=Z,700nm,17.9s
KHC **Kasperske Hory** 81.16 329 P P 19 03 19.7 +0.8
KHC IAmb IAmb 19 03 20.7
comp=Z,8.5nm,1.0s
CONA **Conrad Observa** 81.20 327 *e*P P 19 03 20.6 +1.3
comp=Z,9.2nm,1.0s,SNR=7.3
RAYN **Ar Rayn** 81.28 293 P P 19 03 20.3 +0.3
RAYN pmax pmax
comp=Z,12nm,1.1s
RAYN **Ar Rayn** 81.28 293 P P 19 03 20.3 +0.3
RAYN IAmb IAmb 19 03 21.6
comp=Z,12nm,1.1s
GERES **GERESS Array B** 81.34 329 P P 19 03 20.5 +0.5
comp=Z,1.8nm,0.8s,baz=32,slow=5.2,SNR=12
GERES LR LR 19 43 17.6
comp=Z,509nm,18.4s,baz=17,slow=38
ANMO **Albuquerque** 81.48 51 P P 19 03 22.4 +1.3
comp=Z,2.1nm,0.7s,baz=292,slow=8.1,SNR=5.1
ANMO **Albuquerque** 81.48 51⇓ *e*P P 19 03 23.1 +2.0
ANMO pmax pmax
comp=Z,5.0nm,1.3s
ANMO **Albuquerque** 81.48 51 P P 19 03 20.1 -1.1
PLD **Plovdiv** 81.54 319 P P 19 03 24.1 +3.0
PLD pmax pmax
comp=Z,30nm,1.4s
GRF **Grafenberg Arr** 81.61 331 *e*P P 19 03 22.0 +0.7
comp=Z,16nm,1.1s,baz=37,slow=4.5
GRF *ep*P pwP 19 03 31.0 +1.4
GRFO **Grafenberg** 81.61 331 P P 19 03 22.3 +1.0
GRFO pmax pmax
comp=Z,21nm,1.2s
GRFO **Grafenberg** 81.61 331 P P 19 03 22.3 +1.0
ARSA **Arzberg** 81.88 327 *e*P P 19 03 23.3 +0.6
comp=Z,5.7nm,0.8s
VTS **Vitosha** 81.90 320 P P 19 03 23.2 0.0
VTS pmax pmax
comp=Z,9.0nm,0.9s
VTS **Vitosha** 81.90 320 P P 19 03 23.2 0.0
VTS IAmb IAmb 19 03 25.6
comp=Z,9.4nm,0.9s
MOA **Molln** 81.92 328 *e*P P 19 03 23.9 +0.9
comp=Z,11nm,1.4s
SOCY **Socotra** 82.11 279 P P 19 03 21.7 -2.9
DIVS **Divibare** 82.35 323 P P 19 03 25.1 -0.2
DIVS IAmb IAmb 19 03 26.5
comp=Z,7.5nm,1.1s
GROS **Grobnik** 82.51 327 *i* P P 19 03 26.6 +0.4
GROS *i* pP pwP 19 03 35.2 +0.7
SOKA **Soboth** 82.53 327 *e*P P 19 03 27.0 +0.7
comp=Z,15nm,1.1s,SNR=16
SRS **Serrai** 82.83 319 P P 19 03 29.4 +1.5
SRS pmax pmax
comp=Z,9.0nm,1.2s
OBKA **Obir** 82.87 327 *i* P P 19 03 28.4 +0.3
comp=Z,5.7nm,0.9s
KBA **Koelnbreinsper** 82.91 328 *e*P P 19 03 29.3 +0.9
comp=Z,8.3nm,1.2s
GCIS **Gornji Cirnik** 82.93 326 *i* P P 19 03 28.6 +0.3
MYKA **Terra Mystica** 83.15 328 *i* P P 19 03 29.7 +0.2
comp=Z,13nm,1.8s
WATA **Walderalm** 83.40 329 *i* P P 19 03 31.4 +0.5
comp=Z,14nm,1.6s
WTTA **Wattenberg** 83.44 329 *e*P P 19 03 32.0 +0.8
comp=Z,12nm,1.9s
ZOU **Zoufplan** 83.48 328 P P 19 03 31.3 -0.1
ABTA **Abfaltersbach** 83.51 329 *e*P P 19 03 31.1 -0.2
comp=Z,5.8nm,1.2s
MOTA **Moosalm** 83.58 330 *e*P P 19 03 32.3 +0.5
comp=Z,10nm,1.0s,SNR=7.2
RETA **Reutte** 83.59 330 *e*P P 19 03 32.7 +0.9
comp=Z,13nm,1.1s,SNR=5.3
SQTA **Sankt Quirin** 83.64 330 *i* P P 19 03 33.0 +0.9
comp=Z,13nm,1.5s
BFO **Black Forest** 83.81 332 P P 19 03 33.1 +0.3
BFO pmax pmax
comp=Z,11nm,1.2s
BFO **Black Forest** 83.81 332 P P 19 03 33.1 +0.3
BFO IAmb IAmb 19 03 34.1
comp=Z,11nm,1.2s
STAL **STALIGIAL** 83.83 328 P P 19 03 31.9 -1.1
STAL IAmb IAmb 19 03 33.4
comp=Z,7.9nm,1.0s
PDG **Podgorica** 83.97 322 P P 19 03 33.8 +0.1
FETA **Feichten** 83.99 330 *i* P P 19 03 34.7 +0.8
comp=Z,7.3nm,1.0s,SNR=5.3
DAVA **Damuels** 84.10 330 *e*P P 19 03 35.1 +0.7
comp=Z,12nm,1.1s,SNR=5.2
CDF **Champ du Feu** 84.11 333 *e*P P 19 03 34.6 +0.2
CDF pmax pmax
comp=Z,12nm,1.2s
LIT **Litokhoron** 84.15 319 P P 19 03 34.0 -0.7
LIT **Litokhoron** 84.15 319 P P 19 03 34.0 -0.7
FNA **Florina** 84.20 320 P P 19 03 35.1 +0.1
FNA pmax pmax
comp=Z,9.0nm,1.0s
FNA **Florina** 84.20 320 P P 19 03 35.1 +0.1
FNA IAmb IAmb 19 03 36.1
comp=Z,9.0nm,1.0s
PPT **Papeete** 84.27 118 LR LR 19 33 41.3
comp=Z,169nm,20.0s,baz=348,slow=30
PPT2 **Papeete2** 84.29 118 *e*S S 19 14 05.8 +5.1
comp=Z,450nm,32.5s
PPT2 **Papeete2** 84.29 118 *e*LR LR 19 30 00.8
comp=Z,357nm,23.0s,baz=307
ECH **Echery** 84.32 332 P P 19 03 35.8 +0.4
ECH pmax pmax
comp=Z,12nm,1.3s
ECH **Echery** 84.32 332 P P 19 03 35.8 +0.4
ECH IAmb IAmb 19 03 45.6
comp=Z,12nm,1.3s
CTI **Castel Tesino** 84.43 329 P P 19 03 35.2 -0.9
CTI pmax pmax
comp=Z,9.0nm,1.2s
CTI **Castel Tesino** 84.43 329 P P 19 03 35.2 -0.9
CTI IAmb IAmb 19 03 45.2
comp=Z,8.9nm,1.2s
HAU **Haudompre** 84.79 333 *e*P P 19 03 37.7 -0.1
HAU pmax pmax
comp=Z,6.0nm,1.0s
TUE **Stuetta** 84.98 330 P P 19 03 39.2 +0.2
TAOE **Nuku Hiva Isla** 85.12 106 *e*LR LR 19 30 34.5
comp=Z,330nm,21.0s
SENIN **Lac Senin/Sane** 85.84 331 P P 19 03 43.6 +0.3
LOR **Lormes** 86.28 334 *e*P P 19 03 45.3 +0.1
LOR pmax pmax
comp=Z,12nm,1.0s
LDF **La Druitiere** 86.40 337 *e*P P 19 03 45.7 0.0
LDF pmax pmax
comp=Z,26nm,1.6s
NRCA **Norcia** 86.43 326 P P 19 03 46.0 -0.1
SSF **Saint Saulge** 86.58 334 *e*P P 19 03 46.8 +0.1
SSF pmax pmax
comp=Z,12nm,1.1s
LPL **La Plagne** 86.77 331 *e*P P 19 03 49.1 +1.2
LPL pmax pmax
comp=Z,6.0nm,1.0s
LPG **La Plagne** 86.78 331 *e*P P 19 03 48.4 +0.4
LPG pmax pmax
comp=Z,12nm,1.2s
GRR **Gorron** 86.80 337 *e*P P 19 03 48.0 +0.3
GRR pmax pmax
comp=Z,28nm,1.3s
SMF **Signal de Mont** 86.83 334 *e*P P 19 03 48.2 +0.3
SMF pmax pmax
comp=Z,19nm,1.3s
S39A **Bolivar** 86.86 42 P P 19 03 47.7 -0.5
S39A IAmb IAmb 19 03 53.6
comp=Z,7.3nm,1.1s
AVF **Avril sur Loir** 86.87 334 *e*P P 19 03 48.4 +0.3
AVF pmax pmax
comp=Z,13nm,0.9s
R40A **Maddies Statio** 86.94 41 P P 19 03 49.0 +0.5
R40A IAmb IAmb 19 03 50.2
comp=Z,5.8nm,0.7s
TX31 **Lajitas Ar. Si** 87.06 54 P P 19 03 51.5 +2.1
TX32 **Lajitas Array** 87.06 54 P P 19 03 51.0 +1.5
TXAR **Lajitas Array** 87.06 54 P P 19 03 50.7 +1.2
comp=Z,1.2nm,0.8s,baz=311,slow=4.1,SNR=8.7
TXAR LR LR 19 44 08.7
comp=Z,46nm,18.1s,baz=0.0,slow=37
TXAR **Lajitas Array** 87.06 54 P P 19 03 50.5 +1.0
TXAR **Lajitas Array** 87.06 54 P P 19 03 50.5 +1.0
ROSF **Rostrenen** 87.55 339 *e*P P 19 03 52.2 +0.9
ROSF pmax pmax
comp=Z,12nm,1.0s
CCM **Cathedral Cave** 87.64 40 P P 19 03 52.7 +0.8
CCM pmax pmax
comp=Z,10.0nm,0.9s
CCM **Cathedral Cave** 87.64 40 P P 19 03 52.7 +0.8
TCF **Toulx Ste Croi** 87.69 334 *e*P P 19 03 52.6 +0.5
TCF pmax pmax
comp=Z,10.0nm,1.2s
U40A **Yellville** 88.12 42 P P 19 03 54.0 -0.3
U40A IAmb IAmb 19 04 00.7
comp=Z,6.3nm,0.9s
TBI **Tubuai** 88.40 122 *e*S S 19 14 43.0 +2.6
comp=Z,95nm,29.5s
TBI **Tubuai** 88.40 122 *e*LR LR 19 31 55.2
comp=Z,182nm,23.8s
RJF **Les Rejaudoux** 88.79 334 *e*P P 19 03 58.0 +0.7
RJF pmax pmax
comp=Z,17nm,1.5s
FCAR **Ozark Folk Cen** 88.86 42 P P 19 03 57.6 -0.1
FCAR IAmb IAmb 19 04 04.0
comp=Z,5.8nm,1.0s
S44A **Carbondale** 88.90 39 P P 19 03 59.1 +1.2
CAF **Calviac** 88.94 334 *e*P P 19 03 59.1 +1.1
CAF pmax pmax
comp=Z,12nm,1.4s
PBMO **Poplar Bluff** 89.03 41 P P 19 03 58.1 -0.5
MTLF **Montolieu** 90.28 333 *e*P P 19 04 04.9 +0.6
MTLF pmax pmax
comp=Z,31nm,2.1s
KEST **Kesra** 93.93 324 LR LR 19 51 58.9
comp=Z,556nm,18.0s,baz=318,slow=39
ESDC **Sonseca Array** 95.63 335 LR LR 19 53 26.5
comp=Z,242nm,18.1s,baz=45,slow=39
LPAZ **La Paz** 143.76 59 PKP PKPbc 19 10 37.7 +0.3
comp=Z,0.9nm,0.8s,baz=31,slow=12,SNR=2.2

TAP 13 18:55:58.4, 24.82N×122.45E, h61km±1km, ML2.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=294	**0.46**	**295**	*e*P		Pn	18 56 10.2	+0.2
TWB1				S		Sn	18 56 19.2	+0.7
NTC	**Toucheng** baz=273	**0.57**	**274**	*e*P		Pn	18 56 11.9	+0.7
NTC				*e*S		Sn	18 56 21.1	+0.7
TWC	**Suao** baz=249	**0.58**	**250**	*e*P		Pn	18 56 11.7	+0.4
TWC				*e*S		Sn	18 56 21.4	+0.7
TIPB	**Shuangxi** baz=285	**0.59**	**285**	*e*S		Sn	18 56 22.1	+1.1
TNOU	**National Taiwa** baz=298	**0.70**	**299**	*e*S		Sn	18 56 24.5	+1.3
EWUT	**Wuta** baz=238	**0.71**	**239**	*e*S		Sn	18 56 24.1	+0.6
TWE	**Neicheng** baz=262	**0.72**	**263**	*e*P		Pn	18 56 13.1	+0.2
TWE				S		Sn	18 56 24.5	+1.0
TWA	**Mucha** baz=281	**0.81**	**282**	P		Pn	18 56 15.0	+1.0

TWA					S		Sn	18 56 26.3	+0.9
	baz=281								
NWRT	**Kuosheng**	**0.82**	**298**	*e*S			Sn	18 56 26.1	+0.5
	baz=298								
ENTT	**Nioudou**	**0.82**	**258**	*e*P			Pn	18 56 15.0	+0.7
	baz=257								
ENTT				*i* S			Sn	18 56 26.7	+0.8
	baz=257								
NWLT	**Wulai**	**0.86**	**268**	*e*P			Pn	18 56 15.6	+0.8
	baz=267								
NWLT					eS		Sn	18 56 28.2	+1.4
	baz=267								
YM08	**YM08**	**0.87**	**296**	*e*P			Pn	18 56 15.2	+0.4
	baz=295								
YM08					eS		Sn	18 56 28.0	+1.1
	baz=295								
YM10	**YM10**	**0.88**	**293**	*e*S			Sn	18 56 27.8	+0.6
	baz=292								
NDT	**Datong Townshi**	**0.88**	**256**	*e*S			Sn	18 56 28.6	+1.4
	baz=256								
PCYT	**Pengchaiyu**	**0.88**	**337**	*e*S			Sn	18 56 28.2	+1.0
	baz=337								
YM04	**YM04**	**0.90**	**292**	P			Pn	18 56 15.0	-0.2
	baz=292								
YM04					eS		Sn	18 56 27.8	+0.2
	baz=292								
TWS1	**Kuangyinshan**	**0.98**	**287**	*e*P			Pn	18 56 16.8	+0.6
	baz=286								
TWS1					eS		Sn	18 56 31.4	+2.0
	baz=286								
YHNB	**Yeheng**	**0.99**	**262**	*e*P			Pn	18 56 17.0	+0.6
	baz=261								
YHNB					eS		Sn	18 56 31.0	+1.3
	baz=261								
YHNB	**Yeheng**	**0.99**	**262**	P			Pn	18 56 16.5	+0.1
NACB	**Ninganchiao**	**1.01**	**231**	P			Pn	18 56 18.0	+1.4
	baz=230								
NACB					eS		Sn	18 56 31.4	+1.4
	baz=230								
NACB	**Ninganchiao**	**1.01**	**231**	P			Pn	18 56 17.8	+1.2
NNSB	**Datong**	**1.05**	**249**	P			Pn	18 56 17.8	+0.6
	baz=248								
NNSB					eS		Sn	18 56 32.2	+1.1
	baz=248								
NNS	**Nan Shan**	**1.05**	**249**	P			Pn	18 56 18.4	+1.2
	baz=248								
NNS					S		Sn	18 56 31.8	+0.6
	baz=248								
NTY	**Taoyuan**	**1.06**	**280**	*e*P			Pn	18 56 18.4	+1.1
	baz=279								
NTY					S		Sn	18 56 32.8	+1.5
	baz=279								
TWD	**Chiawan**	**1.07**	**227**	*e*S			Sn	18 56 32.8	+1.4
	baz=226								
ETLH	**Xiulin Townshi**	**1.07**	**236**	*e*P			Pn	18 56 18.2	+0.7
	baz=235								
ETLH					eS		Sn	18 56 32.4	+0.8
	baz=235								
NCU	**National Centr**	**1.16**	**278**	*e*S			Sn	18 56 33.0	-0.5
	baz=277								
FUSS	**Fushou**	**1.24**	**243**	*e*P			Pn	18 56 20.4	+0.6
	baz=242								
FUSS					eS		Sn	18 56 35.5	-0.3
	baz=242								
NJD	**Zhudong**	**1.24**	**267**	*e*P			Pn	18 56 20.5	+0.9
	baz=266								
NJD					eS		Sn	18 56 35.3	-0.3
	baz=266								
WHF	**Hehuan Shan**	**1.27**	**239**	P			Pn	18 56 20.9	+0.4
	baz=238								
NHW	**Xinwu Township**	**1.29**	**279**	*e*P			Pn	18 56 21.2	+1.0
	baz=278								
NHW					eS		Sn	18 56 37.7	+1.0
	baz=278								
HSN1	**Hsinchu**	**1.30**	**269**	*e*P			Pn	18 56 20.4	0.0
	baz=268								
TDCB	**Techi**	**1.30**	**245**	*e*P			Pn	18 56 20.9	+0.2
	baz=244								
TDCB					eS		Sn	18 56 37.3	+0.1
	baz=244								
ESL	**Shilin**	**1.36**	**223**	S			Sn	18 56 39.1	+0.7
	baz=222								
HGSD	**Ruisui**	**1.62**	**216**	P			Pn	18 56 25.1	+0.4
	baz=215								
HGSD					eS		Sn	18 56 45.8	+1.3
	baz=215								

IDC 13 18:59:43.2±1.6, 28°.68N×105°.68E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.2/64, mbtmp3.5/4, Error ellipse: s-maj=418.1km s-min=21.6km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**25.71**	**321**	P	P	19 05 15.3	+0.2
	0.5nm,0.7s,baz=121,slow=11,SNR=4.6						
KURBB	**Kurchatov Arra**	**30.00**	**324**	P	P	19 05 53.1	-0.2
	0.6nm,0.7s,baz=131,slow=9.4,SNR=5.7						
WRA	**Warramunga Arr**	**55.70**	**147**	P	P	19 09 21.8	+0.3
	0.4nm,0.8s,baz=334,slow=8.5,SNR=9.0						
ASAR	**Alice Springs**	**58.71**	**150**	P	P	19 09 42.5	-0.4
	0.2nm,0.5s,baz=329,slow=7.1,SNR=9.7						

*DDA **13** 19:00:28.9, 35°.77N×27°.48E, h10km±1km, ML2.0*
*ATH **13** 19:00:28.4, 35°.80N×27°.31E, h14km±6km, ML2.5/3, Error ellipse: s-maj=9.5km s-min=1.2km az=137.0*
*THE **13** 19:00:28.1, 35°.64N×27°.51E, h3km±4km, ML2.5/2, Error ellipse: s-maj=4.8km s-min=0.6km az=148.0*
ISC 13 19:00:27.8±1.0, 35°.70N±0°.05×27°.49E±0°.05, h16km±9km, n20, σ0°81/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.31**	**240**	P	**Pg**	**19 00 34.1**	**-0.2**
KARP				S	**Sg**	**19 00 38.6**	**-0.2**
KARP				AML	AML	19 00 39.3	
	comp=N,3031μm,0.1s						
KARP				AML	AML	19 00 40.1	
	comp=E,3143μm,0.1s						
KARP	**Karpathos**	**0.31**	**240**	P	**Pg**	**19 00 34.2**	**-0.2**
KARP				S	**Sg**	**19 00 38.9**	**+0.1**
	comp=E,2μm,0.1s						
ARG	**Arkhangelos**	**0.73**	**45**	P	**Pb**	**19 00 43.2**	**+1.1**
ARG				S	**Sn**	**19 00 53.6**	**-0.6**
ARG				AML	AML	19 00 55.9	
	comp=N,823μm,0.4s						
ARG				AML	AML	19 00 56.6	
	comp=E,920μm,0.2s						
ARG	**Arkhangelos**	**0.73**	**45**	P	**Pb**	**19 00 43.1**	**+1.0**
ARG				S	**Sn**	**19 00 54.2**	**-0.1**
	comp=E,440nm,0.3s						
NIS1	**Nisyros Isl.**	**0.93**	**345**	P	**Pn**	**19 00 47.3**	**+1.0**
ZKR	**Zakros**	**1.19**	**241**	P	**Pn**	**19 00 49.2**	**-0.7**
ZKR				AML	AML	19 01 09.1	
	comp=N,174μm,0.3s						
ZKR				AML	AML	19 01 13.6	
	comp=E,279μm,0.6s						
ZKR	**Zakros**	**1.19**	**241**	P	**Pn**	**19 00 49.6**	**-0.2**
STIA	**Sitia Lasithi**	**1.24**	**247**	P	**Pn**	**19 00 51.0**	**+0.5**
BDRM	**Kayabasi**	**1.36**	**359**	*i* P	**Pg**	**19 00 53.7**	**-0.3**
BDRM				*i* S	**Sg**	**19 01 11.0**	**-0.8**
BDRM				IAML		19 01 17.0	
	comp=N,23nm,0.4s						
BDRM				IAML		19 01 20.0	
	comp=E,16nm,0.2s						
DALY	**Dalyan (Mula)**	**1.46**	**40**	*i* P	**Pg**	**19 00 55.2**	**-0.7**
DALY				*i* S	**Sg**	**19 01 15.2**	**+0.3**
DALY				IAML		19 01 22.0	
	comp=E,25nm,0.4s						
DALY				IAML		19 01 22.0	
	comp=N,27nm,0.4s						
NPS	**Neapolis**	**1.59**	**254**	P	**Pn**	**19 00 55.6**	**+0.3**
NPS	**Neapolis**	**1.59**	**254**	P	**Pn**	**19 00 56.2**	**+0.9**
MULA	**Mugla, Merkez-**	**1.69**	**23**	*i* P	**Pg**	**19 00 59.4**	**-0.9**
MULA				IAML		19 01 29.0	
	comp=E,22nm,0.4s						
AKAS	**Kas**	**1.80**	**72**	*i* P	**Pn**	**19 00 58.6**	**+0.3**
AYDN	**Tasoluk**	**1.98**	**9**	*i* P	**Pn**	**19 01 01.9**	**+1.2**
AYDN				*i* S	**Sn**	**19 01 24.0**	**-1.3**
CAEL	**Denizli, Camel**	**2.05**	**46**	*i* P	**Pg**	**19 01 06.1**	**-1.1**
CAEL				*i* S	**Sg**	**19 01 34.8**	**+1.1**
CAEL				IAML		19 01 41.0	
	comp=E,33nm,1.1s						
CAEL				IAML		19 01 45.0	
	comp=N,40nm,0.9s						
APE	**Apeiranthos**	**2.08**	**311**	P	**Pn**	**19 01 02.7**	**+0.5**
TAVA	**DENIZLI_Tavas**	**2.10**	**33**	*i* P	**Pb**	**19 01 05.8**	**+0.2**
TAVA				*i* S	**Sg**	**19 01 34.1**	**-1.3**
TAVA				IAML		19 01 40.0	
	comp=E,10nm,0.3s						
TAVA				IAML		19 01 40.0	
	comp=N,14nm,0.5s						
IDI	**Anoyia**	**2.16**	**260**	P	**Pn**	**19 01 03.8**	**+0.6**
GOLH	**Golhisar**	**2.27**	**47**	*i* P	**Pb**	**19 01 08.0**	**-0.4**
GOLH				*i* S	**Sg**	**19 01 42.0**	**+1.3**
GOLH				IAML		19 01 49.0	
	comp=N,19nm,0.6s						

*IDC **13** 19:06:45.1±1.0, 55°.21S×28°.24W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.9/20, mbtmp4.0/4, MS3.2/1, Ms1 3.1/1, ms1mx2.6/21, Error ellipse: s-maj=42.2km s-min=28.5km az=69.0*
*NEIC **13** 19:06:46.5±1.8, 55°.25S±0°.10×28°.4W±0°.2, h10km±2km, mb4.1/6, Error ellipse: s-maj=20.9km s-min=15.2km az=115.0*
ISC 13 19:06:46.6±0.9, 55°.3S±0°.2×28°.4W±0°.2, h10km, n15, σ0°76/10, mb4.1/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.80**	**278**	Pn	**Pn**	**19 07 58.7**	**-0.1**
SNAA	**Sanae**	**19.75**	**156**	P	**P**	**19 11 15.5**	**-0.6**
CPUP	**Villa Florida**	**35.78**	**312**	P	**P**	**19 13 45.4**	**-0.3**
	1.0nm,0.4s,baz=149,slow=9.2,SNR=4.2						
CPUP	**Villa Florida**	**35.78**	**312**	IAmb	IAmb	19 13 59.0	
	comp=Z,8.4nm,1.5s						
BOSA	**Boshof**	**46.44**	**78**	LR	LR	19 31 20.7	
	comp=Z,28nm,21.4s,baz=208,slow=32						
VNDA	**Vanda**	**47.34**	**183**	P	**P**	**19 15 20.2**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=198,slow=5.5,SNR=11						
VNDA	**Vanda**	**47.34**	**183**	IAmb	IAmb	19 15 26.6	
	comp=Z,2.8nm,1.3s						
MNMC	**Minye Minye**	**47.60**	**302**	P	**P**	**19 15 22.1**	**-0.7**
LPAZ	**La Paz**	**49.36**	**306**	P	**P**	**19 15 37.4**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=114,slow=5.3,SNR=4.0						
LPAZ	**La Paz**	**49.36**	**306**	IAmb	IAmb	19 15 38.1	
	comp=Z,1.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**72.70**	**31**	P	**P**	**19 18 14.4**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=199,slow=7.0,SNR=4.8						
TORD	**Torodi Ar. Bea**	**72.70**	**31**	IAmb	IAmb	19 18 19.3	
	comp=Z,1.7nm,1.3s						
ILAR	**Eielson Array**	**149.08**	**313**	PKPbc	**PKPbc**	**19 26 33.5**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=112,slow=2.1,SNR=17						
ILAR	**Eielson Array**	**149.08**	**313**		**PKPdf**	**19 26 30.7**	**+1.4**
SONM	**Songino Array**	**151.35**	**86**	PKPbc	**PKPbc**	**19 26 39.0**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=228,slow=2.5,SNR=4.7						

IDC 13 19:10:26.4±5.4, 12°.92S×167°.09E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/29, mbtmp3.7/5, Error ellipse: s-maj=138.1km s-min=44.4km az=113.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.07**	**227**	P	P	19 16 38.5	+1.0
	1.2nm,0.7s,baz=59,slow=12,SNR=2.1						
WRA	**Warramunga Arr**	**32.14**	**253**	P	P	19 16 55.4	-0.6
	0.4nm,0.8s,baz=88,slow=8.9,SNR=5.9						
ASAR	**Alice Springs**	**33.20**	**246**	P	P	19 17 04.8	-0.4
	0.8nm,0.6s,baz=74,slow=9.6,SNR=19						
CMAR	**Chiang Mai Arr**	**74.07**	**294**	P	P	19 22 05.5	+0.7
	0.2nm,0.8s,baz=136,slow=6.1,SNR=4.7						
MKAR	**Makanchi Array**	**95.78**	**317**	P	P	19 23 53.6	-1.0
	0.2nm,0.6s,baz=114,slow=3.6,SNR=2.4						

*DJA **13** 19:28:08.4±0.2, 7°.S±3°×12°.0E±°, h544km±3km, M4.2/19, mB4.7/7, mb4.3/19, MLv4.4/16, Mw(mB)3.9/7*
*NEIC **13** 19:28:08.1±1.1, 7°.27S±0°.09×120°.5E±0°.1, h546km±7km, mb4.3/36, Error ellipse: s-maj=17.5km s-min=12.3km az=68.0*
*IDC **13** 19:28:08.8±0.9, 7°.27S×120°.53E, h552km±10km, mb3.6/20, mb1 3.7/25, mb1mx3.5/54, mbtmp4.6/25, Error ellipse: s-maj=16.8km s-min=6.8km az=67.0*
ISC 13 19:28:08.5±0.4, 7°.31S±0°.06×120°.50E±0°.08, h556km, n114, σ1°16/122, mb4.2/36, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.17**	**127**	P	**P**	**19 29 17.7**	**-1.9**
MMRI	**Maumere**	**2.17**	**127**	P	**P**	**19 29 17.7**	**-1.9**
KAPI	**Kappang**	**2.40**	**323**	P	**P**	**19 29 21.1**	**+0.4**
KAPI	**Kappang**	**2.40**	**342**	P	**P**	**19 29 21.0**	**+0.2**
BASI	**Baing, Sumba**	**2.89**	**178**	P	**P**	**19 29 22.4**	**-1.0**
BNSI	**Bone**	**2.92**	**352**	P	**P**	**19 29 23.7**	**+0.1**
PLAI	**Plampang**	**3.09**	**241**	P	**P**	**19 29 22.8**	**-1.8**
SPSI	**Sidrap Palu**	**3.40**	**348**	P	**P**	**19 29 26.7**	**0.0**
TWSI	**Taliwang, Sumb**	**3.85**	**248**	P	**P**	**19 29 27.8**	**-1.9**
BATI	**Baumata**	**4.25**	**133**	P	**P**	**19 29 32.3**	**-0.5**
	39nm,0.3s,baz=299,slow=2.1,SNR=85						
BATI				S	**S**	**19 30 35.4**	**-6.1**
	34nm,0.3s,baz=319,slow=1.5,SNR=16						
BATI	**Baumata**	**4.25**	**133**	P	**P**	**19 29 32.0**	**-0.8**
TTSI	**Tana Toraja**	**4.29**	**351**	P	**P**	**19 29 32.7**	**-0.4**
SOEI	**Soe**	**4.45**	**123**	P	**P**	**19 29 33.7**	**-0.7**
SOEI	**Soe**	**4.45**	**123**	P	**P**	**19 29 33.8**	**-0.7**
DNP	**Denpasar**	**5.41**	**255**	P	**P**	**19 29 41.4**	**-0.8**
	2.8nm7μm165nm,0.6s						
KBKI	**Kotabaru**	**5.87**	**313**	P	**P**	**19 29 45.7**	**-0.6**
	0.1nm435nm40nm,0.7s						
JAGI	**Jajag, Banyuwa**	**6.39**	**259**	P	**P**	**19 29 48.2**	**-2.8**
BBKI	**Banjar Baru**	**6.80**	**304**	P	**P**	**19 29 55.2**	**+0.2**
	0.1nm44nm,0.9s						
NLAI	**Namlea**	**7.72**	**59**	P	**P**	**19 30 05.0**	**+1.2**
	0.5nm2μm35nm,0.6s						
MRSI	**Marisa**	**7.87**	**11**	P	**P**	**19 30 05.2**	**0.0**
	0.2nm57nm,0.8s						
GTOI	**Gorontalo**	**8.28**	**18**	P	**P**	**19 30 09.7**	**+0.4**
	419nm41nm,0.9s						
TOLI2	**Tolitoli**	**8.37**	**2**	P	**P**	**19 30 09.4**	**-0.8**
KMSI	**Cibinong**	**8.57**	**24**	P	**P**	**19 30 11.8**	**-0.4**
	94nm,0.7s						
UGM	**Wanagama**	**9.90**	**266**	P	**P**	**19 30 24.1**	**-1.6**
SMRI	**Semarang**	**9.98**	**271**	P	**P**	**19 30 25.1**	**-1.4**
KNRA	**Kununurra**	**11.60**	**136**	P	**P**	**19 30 42.7**	**-0.3**
MTN	**Manton Dam**	**11.82**	**119**	P	**P**	**19 30 43.5**	**-1.9**
FITZ	**Fitzroy Crossi**	**11.84**	**155**	P	**P**	**19 30 45.5**	**+0.1**
	1.2nm,0.3s,baz=344,slow=6.4,SNR=67						
FITZ				S	**S**	**19 32 51.6**	**-2.8**
	0.2nm,0.3s,baz=355,slow=22,SNR=7.3						
FITZ	**Fitzroy Crossi**	**11.84**	**155**	P	**P**	**19 30 45.3**	**0.0**
FAKI	**Fak Fak**	**12.49**	**70**	P	**P**	**19 30 50.8**	**-1.5**
SWI	**Sorong**	**12.50**	**60**	P	**P**	**19 30 51.6**	**-0.7**
	24nm,1.1s						
SIJI	**Sorong**	**12.50**	**60**	P	**P**	**19 30 51.3**	**-1.1**
	0.8nm,0.3s,baz=242,slow=22,SNR=19						
MYLDM	**Lahad Datu**	**12.57**	**351**	P	**P**	**19 30 54.8**	**+1.8**
CISI	**Cisompet, Garu**	**12.58**	**268**	P	**P**	**19 30 50.0**	**-3.2**
SBUM	**Sibu**	**12.74**	**319**	P	**P**	**19 30 55.2**	**+0.4**
KSM	**Kuching**	**13.40**	**310**	P	**P**	**19 30 59.8**	**-1.9**
KKM	**Kota Kinabalu**	**13.94**	**342**	P	**P**	**19 31 06.1**	**-1.1**
PSA00	**Pilbara Seismi**	**14.19**	**182**	P	**P**	**19 31 09.1**	**-0.6**
GIRL	**Giralia**	**16.39**	**201**	P	**P**	**19 31 31.8**	**+0.3**
WB0	**Warramunga Arr**	**18.30**	**134**	P	**P**	**19 31 49.6**	**+0.6**
WB0				IAmb	IAmb	19 31 51.3	
	comp=Z,9.1nm,0.8s						
WRA	**Warramunga Arr**	**18.38**	**134**	P	**P**	**19 31 50.5**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=315,slow=10,SNR=105						
WRA				S	**S**	**19 34 49.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=308,slow=17,SNR=4.8						
WRA	**Warramunga Arr**	**18.38**	**134**	P	**P**	**19 31 49.6**	**-0.1**
WRAB	**Tennant Creek**	**18.38**	**134**	P	**P**	**19 31 50.5**	**+0.8**
WB2	**Warramunga Arr**	**18.39**	**134**	P	**P**	**19 31 50.4**	**+0.6**
WR0	**Warramunga Arr**	**18.54**	**134**	P	**P**	**19 31 51.7**	**+0.6**
AS31	**Alice Springs**	**20.74**	**143**	P	**P**	**19 32 11.8**	**+0.7**
ASAR	**Alice Springs**	**20.74**	**143**	P	**P**	**19 32 11.8**	**+0.8**
	comp=Z,4.7nm,0.4s,baz=320,slow=8.3,SNR=181						
ASAR				S	**S**	**19 35 27.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=314,slow=13,SNR=1.5						
ASAR				PcP	**PcP**	**19 35 56.2**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=323,slow=1.7,SNR=10						
ASAR				ScP	**ScP**	**19 38 41.4**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=326,slow=2.4,SNR=6.4						
ASAR	**Alice Springs**	**20.74**	**143**	P	**P**	**19 32 11.6**	**+0.5**
MORW	**Morawa**	**22.05**	**190**	P	**P**	**19 32 23.1**	**+0.4**
MORW				IAmb	IAmb	19 32 26.9	
	comp=Z,12nm,1.4s						
COEN	**Coen**	**23.23**	**108**	P	**P**	**19 32 34.2**	**+0.7**
COEN				IAmb	IAmb	19 33 02.5	
	comp=Z,9.0nm,1.1s						
FORT	**Forrest**	**24.40**	**164**	P	**P**	**19 32 44.6**	**+1.0**
NWAO	**Narrogin (SRO)**	**25.67**	**186**	P	**P**	**19 32 56.7**	**+1.9**
UBPT	**Khong Chiam**	**26.94**	**326**	P	**P**	**19 33 05.8**	**-0.3**
UBPT				IAmb	IAmb	19 33 11.9	
	comp=Z,11nm,1.2s						
BBOO	**Buckleboo**	**29.20**	**152**	P	**P**	**19 33 26.1**	**+0.4**
BBOO				IAmb	IAmb	19 33 27.1	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**31.37**	**144**	P	**P**	**19 33 45.7**	**+1.3**
	comp=Z,5.1nm,0.3s,baz=321,slow=9.0,SNR=28						
STKA				PcP	**PcP**	**19 36 21.4**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=336,slow=5.6,SNR=3.9						
STKA	**Stephens Creek**	**31.37**	**144**	P	**P**	**19 33 45.4**	**+1.0**
SLVN	**Son La**	**32.80**	**331**	P	**P**	**19 33 57.4**	**+0.7**
SLVN				IAmb	IAmb	19 33 58.5	
	comp=Z,3.7nm,0.8s						
CM31	**Chiang Mai Arr**	**33.28**	**321**	P	**P**	**19 34 01.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**33.28**	**321**	P	**P**	**19 34 01.1**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=143,slow=6.6,SNR=20						
CMAR				PcP	**PcP**	**19 36 27.4**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=178,slow=2.8,SNR=4.4						
CMAR				ScP	**ScP**	**19 39 20.6**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=176,slow=2.9,SNR=5.0						
CMAR	**Chiang Mai Arr**	**33.28**	**321**	P	**P**	**19 34 00.5**	**-0.3**
CHTO	**Chiang Mai**	**33.55**	**321**	P	**P**	**19 34 03.4**	**+0.3**
CHTO				IAmb	IAmb	19 34 04.1	
	comp=Z,3.0nm,0.6s						
TOO	**Toolangi**	**37.71**	**147**	P	**P**	**19 34 39.6**	**+2.4**
TOO				IAmb	IAmb	19 34 40.3	
	comp=Z,17nm,1.4s						
ENH	**Enshi**	**38.83**	**345**	P	**P**	**19 34 45.1**	**-1.3**
XAN	**Xi'an**	**42.56**	**346**	P	**P**	**19 35 15.5**	**-0.6**
XAN				IAmb	IAmb	19 35 15.9	
	comp=Z,7.9nm,0.6s						
KSAR	**Wonju Array Be**	**45.05**	**8**	P	**P**	**19 35 36.2**	**+1.0**
KSRS	**Korea Array**	**45.07**	**8**	P	**P**	**19 35 38.5**	**+0.5**
	comp=Z,4.1nm,0.8s,baz=189,slow=8.0,SNR=14						
LSA	**Lhasa**	**46.37**	**324**	P	**P**	**19 35 45.0**	**-0.9**
LSA				IAmb	IAmb	19 35 47.4	
	comp=Z,6.8nm,0.7s						
MAJO	**Matsushiro**	**46.68**	**20**	P	**P**	**19 35 46.6**	**-1.0**
MAJO				IAmb	IAmb	19 35 47.1	
	comp=Z,6.1nm,0.8s						
MAT	**Matsushiro**	**46.68**	**20**	P	**P**	**19 35 46.5**	**-1.1**
MJAR	**Matsushiro Arr**	**46.68**	**20**	P	**P**	**19 35 46.8**	**-0.8**
	comp=Z,6.7nm,0.8s,baz=190,slow=8.2,SNR=12						
JSD	**Sado**	**48.06**	**19**	P	**P**	**19 35 57.7**	**-0.2**
HHC	**Hu-ho-hao-te**	**48.62**	**351**	*e*P	**P**	**19 36 04.0**	**+1.8**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.8s						
GTA	**Gaotai**	**50.28**	**339**	P	**P**	**19 36 15.8**	**+1.4**
GTA				pP	pP	19 37 59.6	+1.2
GTA				sP	sP	19 39 01.4	+2.0
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,140nm,5.5s						
GTA				LR	LR		
	comp=N,150nm,13.8s						
GTA				LR	LR		
	comp=E,120nm,15.3s						
GTA				LR	LR		
	comp=Z,120nm,14.9s						
USA0B	**Ussuriysk Arra**	**52.31**	**10**	P	**P**	**19 36 28.7**	**-0.1**
USA0B				IAmb	IAmb	19 36 29.5	
	comp=Z,6.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**52.31**	**10**	P	**P**	**19 36 28.6**	**-0.2**
	comp=Z,5.9nm,0.5s,baz=189,slow=7.0,SNR=28						
USRK	**Ussuriysk Ar.**	**52.31**	**10**	P	**P**	**19 36 28.4**	**-0.4**
MDJ	**Mudanjiang**	**52.34**	**8**	P	**P**	**19 36 28.8**	**-0.1**
MDJ				IAmb	IAmb	19 36 29.8	
	comp=Z,6.1nm,0.8s						
ASAJ	**Asahikawa**	**54.95**	**19**	P	**P**	**19 36 47.9**	**+0.4**
	comp=Z,5.7nm,0.7s,baz=249,slow=10,SNR=6.3						
JKA	**Kamikawa-asahi**	**54.95**	**19**	P	**P**	**19 36 47.9**	**+0.4**
JKA	**Kamikawa-asahi**	**54.95**	**19**	IAmb	IAmb	19 37 14.0	
	comp=Z,20nm,1.3s						
ULN	**Ulaanbaatar**	**56.21**	**349**	P	**P**	**19 36 56.6**	**+0.3**
SONM	**Songino Array**	**56.30**	**349**	P	**P**	**19 36 57.0**	**+0.1**
	comp=Z,4.6nm,0.6s,baz=165,slow=8.6,SNR=42						
SONM	**Songino Array**	**56.30**	**349**	P	**P**	**19 36 57.3**	**+0.3**
RPZ	**Rata Peaks**	**57.04**	**138**	P	**P**	**19 37 02.7**	**+0.7**
	comp=Z,16nm,0.6s,baz=261,slow=4.0,SNR=7.8						
RPZ	**Rata Peaks**	**57.04**	**138**	P	**P**	**19 37 03.3**	**+1.3**
KLR	**Kul'dur**	**57.16**	**9**	P	**P**	**19 37 01.9**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=218,slow=4.7,SNR=4.4						
WMQ	**Urumqi**	**58.92**	**333**	*e*P	**P**	**19 37 16.5**	**+1.8**
MK31	**Makanchi Array**	**63.66**	**332**	P	**P**	**19 37 45.4**	**-0.3**
MK31				IAmb	IAmb	19 37 47.0	
	comp=Z,3.7nm,0.8s						
MKAR	**Makanchi Array**	**63.66**	**332**	P	**P**	**19 37 46.1**	**+0.5**
	comp=Z,4.3nm,0.5s,baz=140,slow=7.6,SNR=44						
MKAR	**Makanchi Array**	**63.66**	**332**	P	**P**	**19 37 45.5**	**-0.1**
MAKZ	**Makanchi**	**63.82**	**332**	P	**P**	**19 37 46.9**	**+0.2**
PETK	**Petropavlovsk-

JHU	**Hanno**	**5.77 338**	P	**Pn**	**19 36 10.6**	**+0.1**
JHU			S	**Sn**	**19 37 15.7**	**-0.3**
JYT	**Yasato**	**5.88 346**	P	**Pn**	**19 36 11.3**	**-0.6**
JYT			S	**Sn**	**19 37 17.5**	**-1.1**
JRY	**Ryogami san**	**6.05 336**	P	**Pn**	**19 36 15.2**	**+0.8**
JRY			S	**Sn**	**19 37 24.6**	**+1.7**
JHO	**Hitachi**	**6.18 349**	P	**Pn**	**19 36 14.4**	**-1.7**
JAG	**Ashikaga**	**6.25 341**	P	**Pn**	**19 36 16.6**	**-0.5**
JAG			S	**Sn**	**19 37 26.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**40.73 263**	P		**19 42 25.9**	**+0.3**
	0.2nm,0.7s,baz=72,slow=5.8,SNR=2.9					
MKAR	**Makanchi Array**	**48.20 307**	P	**P**	**19 43 25.8**	**+0.8**
	0.5nm,0.5s,baz=91,slow=7.1,SNR=7.6					
KURBB	**Kurchatov Arra**	**50.56 312**	P	**P**	**19 43 43.6**	**+0.8**
	0.5nm,0.6s,baz=90,slow=7.8,SNR=6.5					
WRA	**Warramunga Arr**	**50.71 189**	P	**P**	**19 43 44.2**	**0.0**
	0.9nm,0.3s,baz=6.6,slow=7.5,SNR=40					
FITZ	**Fitzroy Crossi**	**50.83 200**	P	**P**	**19 43 45.7**	**+0.6**
	0.5nm,0.6s,baz=0.0,slow=11,SNR=1.4					
ASAR	**Alice Springs**	**54.44 189**	P	**P**	**19 44 12.4**	**+0.7**
	0.3nm,0.5s,baz=10,slow=6.1,SNR=11					

NEIC ***13*** *19:46:55.0±1.2, 13°.2S±0°.1×166°.9E±0°.3, h187km±13km, mb4.2/19, Error ellipse: s-maj=42.3km s-min=14.8km az=99.0*

IDC ***13*** *19:46:57.5±6.1, 13°.43S×167°.26E, h225km±66km, mb3.5/10, mb1 3.7/11, mb1mx3.4/35, mbtmp4.1/11, MS3.6/1, Ms1 3.6/1, ms1mx2.7/26, Error ellipse: s-maj=49.8km s-min=26.1km az=155.0*

ISC 13 19:46:55.1±1.2, 13°.27S±0°.09×167°.2E±0°.2, h200km, n32, σ1ş04/30, mb4.2/20, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.17 180**			**Pn**	**19 47 34.8**	**-0.6**
DZM	**Mont Dzumac**	**8.79 185**		P	**Pn**	**19 48 58.2**	**-0.5**
	0.3nm,0.3s,baz=312,slow=20,SNR=2.1						
DZM				S	**Sn**	**19 50 38.5**	**+1.1**
	baz=296,slow=19,SNR=1.7						
RABL	**Rabaul**	**17.37 300**		P	**P**	**19 50 43.3**	**-0.9**
CTA	**Charters Tower**	**21.16 249**		P	**P**	**19 51 26.7**	**+1.7**
	3.0nm,0.5s,baz=76,slow=13,SNR=5.1						
CTAO	**Charters Tower**	**21.16 249**		P	**P**	**19 51 23.6**	**-1.4**
CTAO				IAmb	IAmb	19 51 37.7	
	comp=Z,23nm,1.3s						
ARMA	**Armidale**	**22.32 218**		P	**P**	**19 51 37.2**	**+0.8**
COEN	**Coen**	**23.36 265**		P	**P**	**19 51 47.9**	**+2.0**
COEN				IAmb	IAmb	19 52 09.3	
	comp=Z,14nm,1.4s						
URZ	**Urewera**	**26.41 162**		LR	LR	20 01 39.2	
	comp=Z,130nm,19.4s,baz=31,slow=34						
STKA	**Stephens Creek**	**29.90 228**		P	**P**	**19 52 44.6**	**+0.3**
	comp=Z,2.7nm,0.4s,baz=57,slow=10.0,SNR=14						
STKA	**Stephens Creek**	**29.90 228**		IAmb	IAmb	19 52 44.6	
	comp=Z,1.9nm,1.4s						
WR0	**Warramunga Arr**	**31.95 254**		P	**P**	**19 53 01.1**	**-1.3**
WR0				IAmb	IAmb	19 53 07.4	
	comp=Z,3.2nm,1.1s						
WB0	**Warramunga Arr**	**32.07 254**		P	**P**	**19 53 02.1**	**-1.4**
WB2	**Warramunga Arr**	**32.13 254**		P	**P**	**19 53 02.7**	**-1.3**
WB2				IAmb	IAmb	19 53 08.5	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**32.13 254**		P	**P**	**19 53 02.6**	**-1.4**
WRAB				IAmb	IAmb	19 53 03.4	
	comp=Z,2.6nm,0.8s						
WRA	**Warramunga Arr**	**32.14 254**		P	**P**	**19 53 03.0**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=86,slow=9.1,SNR=12						
AS31	**Alice Springs**	**33.15 247**		P	**P**	**19 53 11.9**	**-0.9**
AS31				IAmb	IAmb	19 53 12.4	
	comp=Z,2.0nm,0.3s						
ASAR	**Alice Springs**	**33.15 247**		P	**P**	**19 53 11.8**	**-1.0**
	comp=Z,2.5nm,0.3s,baz=75,slow=9.3,SNR=38						
BBOO	**Buckleboo**	**34.44 230**		P	**P**	**19 53 23.6**	**-0.2**
BBOO				IAmb	IAmb	19 53 45.1	
	comp=Z,15nm,1.3s						
MTN	**Manton Dam**	**35.12 266**		P	**P**	**19 53 30.4**	**+0.6**
MTN				IAmb	IAmb	19 53 51.5	
	comp=Z,8.6nm,1.1s						
KNRA	**Kununurra**	**37.26 262**		P	**P**	**19 53 47.7**	**-0.2**
KNRA				IAmb	IAmb	19 53 49.0	
	comp=Z,5.3nm,0.8s						
FORT	**Forrest**	**40.00 238**		P	**P**	**19 54 09.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**40.23 258**		P	**P**	**19 54 12.7**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=95,slow=5.3,SNR=7.1						
FITZ	**Fitzroy Crossi**	**40.23 258**		P	**P**	**19 54 11.9**	**-0.8**
BATI	**Baumata**	**42.69 269**		P	**P**	**19 54 33.5**	**+0.8**
	comp=Z,10nm,0.5s,baz=178,slow=3.6,SNR=5.7						
PSA00	**Pilbara Seismi**	**45.78 253**		P	**P**	**19 54 57.5**	**+0.3**
PSA00				IAmb	IAmb	19 55 22.5	
	comp=Z,16nm,1.4s						
TOLI2	**Tolitoli**	**48.18 284**		P	**P**	**19 55 15.1**	**-0.7**
TOLI2				IAmb	IAmb	19 55 24.3	
	comp=Z,3.2nm,0.8s						
NWAO	**Narrogin (SRO)**	**49.45 238**		P	**P**	**19 55 24.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**74.30 294**		P	**P**	**19 58 12.6**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=132,slow=4.5,SNR=13						
SONM	**Songino Array**	**81.28 323**		P	**P**	**19 58 49.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=112,slow=9.7,SNR=4.2						
SONM	**Songino Array**	**81.28 323**		IAmb	IAmb	19 58 51.0	
	comp=Z,0.6nm,1.2s						
ILAR	**Eielson Array**	**85.16 18**		P	**P**	**19 59 07.7**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=258,slow=4.9,SNR=4.6						
MKAR	**Makanchi Array**	**96.10 317**		P	**P**	**20 00 00.6**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=128,slow=33,SNR=6.0						

IDC ***13*** *19:50:23.6±5.3, 5°.50S×152°.45E, h59km±47km, mb3.6/10, mb1 3.8/11, mb1mx3.6/33, mbtmp3.9/11, ML1.9/1, Error ellipse: s-maj=44.9km s-min=24.7km az=125.0*

ISC 13 19:50:21.6±1.4, 5°.4S±0°.2×152°.5E±0°.3, h40km, n12, σ0ş76/13, mb3.9/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.62 233**		P	**Pn**	**19 51 57.9**	**+1.5**
	1.5nm,0.3s,baz=207,slow=15,SNR=1.5						
PMG				S	**Sn**	**19 53 10.5**	**-0.1**
	12nm,0.3s,baz=121,slow=17,SNR=8.1						
WRA	**Warramunga Arr**	**22.82 229**		P	**P**	**19 55 20.7**	**-0.7**
	2.3nm,0.6s,baz=53,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**25.49 223**		P	**P**	**19 55 45.8**	**-0.7**
	1.1nm,0.8s,baz=52,slow=8.9,SNR=10						
FITZ	**Fitzroy Crossi**	**29.11 242**		P	**P**	**19 56 17.9**	**-1.0**
	2.5nm,0.7s,baz=87,slow=7.8,SNR=8.0						
CMAR	**Chiang Mai Arr**	**57.88 296**		P	**P**	**20 00 10.1**	**0.0**
	0.5nm,0.7s,baz=122,slow=5.7,SNR=6.8						
PETK	**Petropavlovsk-**	**58.48 4**		P	**P**	**20 00 13.7**	**+0.1**
	0.8nm,0.5s,baz=162,slow=7.5,SNR=4.5						
SONM	**Songino Array**	**66.70 328**		P	**P**	**20 01 08.9**	**+0.2**
	0.5nm,0.6s,baz=146,slow=5.0,SNR=4.7						
MKAR	**Makanchi Array**	**80.60 319**		P	**P**	**20 02 30.2**	**0.0**
	0.4nm,0.5s,baz=95,slow=7.2,SNR=7.7						
ZALV	**Zalesovo Beam**	**81.51 326**		P	**P**	**20 02 34.3**	**-0.5**
	0.8nm,0.6s,baz=122,slow=6.1,SNR=4.1						
ILAR	**Eielson Array**	**82.84 22**		P	**P**	**20 02 41.2**	**-0.4**
	1.7nm,0.8s,baz=245,slow=5.6,SNR=19						
YKA	**Yellowknife Ar**	**96.11 28**		P	**P**	**20 03 45.9**	**+1.0**
	0.4nm,0.7s,baz=268,slow=4.1,SNR=7.1						
TORD	**Torodi Ar. Bea**	**150.22 287**		PKPbc	**PKPbc**	**20 10 09.0**	**-0.5**
	0.3nm,0.5s,baz=210,slow=23,SNR=2.7						

IDC ***13*** *20:07:19.1±0.6, 40°.90S×43°.53E, h0km, mb4.1/11, mb1 4.2/12, mb1mx4.0/28, mbtmp4.1/12, ML3.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/38, Error ellipse: s-maj=33.4km s-min=15.8km az=30.0*

NEIC ***13*** *20:07:20.5±0.9, 41°.0S±0°.1×43°.5E±0°.1, h10km±4km, mb4.4/10, Error ellipse: s-maj=17.2km s-min=11.1km az=163.0*

ISC 13 20:07:20.3±0.6, 40°.9S±0°.2×43°.5E±0°.1, h9km, n33, σ0ş52/30, mb4.2/12, MS3.4/5, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRZF	**Crozet Islands**	**8.18 135**		Pn	**Pn**	**20 09 19.1**	**-0.1**
BOSA	**Boshof**	**19.32 304**		P	**P**	**20 11 45.7**	**-0.2**
	0.1nm,0.3s,baz=148,slow=13,SNR=3.6						
BOSA				LR	LR	20 17 52.1	
	comp=Z,105nm,21.8s,baz=160,slow=33						
BOSA	**Boshof**	**19.32 304**		P	**P**	**20 11 46.0**	**0.0**
SUR	**Sutherland**	**20.05 288**		P	**P**	**20 11 54.3**	**+0.4**
	7.1nm,1.0s,baz=301,slow=5.7,SNR=3.0						
SUR				LR	LR	20 18 03.1	
	comp=Z,98nm,19.4s,baz=75,slow=32						
SUR	**Sutherland**	**20.05 288**		P	**P**	**20 11 53.9**	**-0.1**
SUR				IAmb	IAmb	20 11 57.3	
	comp=Z,22nm,1.2s						
LBTB	**Lobatse**	**21.78 311**		P	**P**	**20 12 12.3**	**-0.2**
	comp=Z,12nm,1.2s,baz=208,slow=7.0,SNR=5.4						
LBTB				LR	LR	20 19 20.5	
	comp=Z,138nm,19.5s,baz=138,slow=33						
LBTB	**Lobatse**	**21.78 311**		P	**P**	**20 12 12.5**	**0.0**
LBTB				IAmb	IAmb	20 12 14.8	
	comp=Z,18nm,1.2s						
MATP	**Matopo**	**24.10 324**		P	**P**	**20 12 36.3**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=163,slow=8.6,SNR=9.7						
MATP				LR	LR	20 20 38.5	
	comp=Z,111nm,21.6s,baz=146,slow=33						
LSZ	**Lusaka**	**28.81 328**		P	**P**	**20 13 19.3**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=149,slow=9.7,SNR=2.6						
LSZ				LR	LR	20 23 23.8	
	comp=Z,128nm,21.8s,baz=162,slow=34						
H01W2	**Cape Leeuwin H**	**54.69 108**		T	T	21 16 09.3	
	baz=242,slow=75,SNR=79						
H01W3	**Cape Leeuwin H**	**54.70 108**		T	T	21 16 03.3	
	baz=242,slow=75,SNR=72						
H01W1	**Cape Leeuwin H**	**54.70 108**		T	T	21 16 09.6	
	baz=242,slow=75,SNR=82						
TOA0	**Torodi Ar. Sit**	**66.25 315**		P	**P**	**20 18 09.2**	**+0.3**
TOA0				IAmb	IAmb	20 18 15.5	
	comp=Z,4.4nm,1.2s						
TORD	**Torodi Ar. Bea**	**66.25 315**		P	**P**	**20 18 09.0**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=140,slow=5.0,SNR=6.6						
TORD	**Torodi Ar. Bea**	**66.25 315**		P	**P**	**20 18 09.7**	**+0.8**
TORD				IAmb	IAmb	20 18 10.9	
	comp=Z,1.7nm,0.9s						
ASAR	**Alice Springs**	**75.20 109**		P	**P**	**20 19 03.2**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=227,slow=5.0,SNR=12						
STKA	**Stephens Creek**	**75.40 120**		P	**P**	**20 19 05.0**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=253,slow=3.6,SNR=10						
STKA	**Stephens Creek**	**75.40 120**		IAmb	IAmb	20 19 06.0	
	comp=Z,1.0nm,0.8s						
WRA	**Warramunga Arr**	**77.84 106**		P	**P**	**20 19 18.6**	**+0.1**
	comp=Z,3.1nm,0.9s,baz=226,slow=4.6,SNR=16						
WB2	**Warramunga Arr**	**77.85 106**		P	**P**	**20 19 18.2**	**-0.3**
WB2				IAmb	IAmb	20 19 21.1	
	comp=Z,5.7nm,1.2s						
WRAB	**Tennant Creek**	**77.85 106**		P	**P**	**20 19 19.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**78.33 53**		P	**P**	**20 19 21.5**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=222,slow=4.7,SNR=4.5						
CPUP	**Villa Florida**	**80.77 243**		P	**P**	**20 19 35.0**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=116,slow=6.1,SNR=12						
CPUP	**Villa Florida**	**80.77 243**		P	**P**	**20 19 35.1**	**+0.7**
CPUP				IAmb	IAmb	20 19 35.8	
	comp=Z,3.8nm,0.7s						
BO02	**Sierra Bellavi**	**83.42 229**		P	**P**	**20 19 48.0**	**-0.3**
RPZ	**Rata Peaks**	**83.42 145**		LR	LR	20 48 27.5	
	comp=Z,123nm,19.0s,baz=168,slow=30						
MKAR	**Makanchi Array**	**93.94 26**		P	**P**	**20 20 37.9**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=227,slow=5.7,SNR=2.8						
ULM	**Lac du Bonnet**	**150.40 302**		PKPbc	**PKPbc**	**20 27 11.1**	**-0.5**
	comp=Z,4.8nm,0.8s,baz=119,slow=3.6,SNR=6.4						
ULM	**Lac du Bonnet**	**150.40 302**			**PKPbc**	**20 27 10.9**	**-0.6**
TXAR	**Lajitas Array**	**150.91 257**		PKP	**PKPdf**	**20 27 07.6**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=136,slow=41,SNR=2.9						
TXAR				PKPbc	**PKiKP**	**20 27 13.9**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=123,slow=4.6,SNR=18						
TXAR	**Lajitas Array**	**150.91 257**			**PKiKP**	**20 27 13.8**	**-0.4**
INK	**Inuvik**	**152.52 358**		PKPbc	**PKPbc**	**20 27 15.1**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=7.6,slow=5.0,SNR=4.5						
YKA	**Yellowknife Ar**	**154.75 336**		PKP	**PKPdf**	**20 27 11.1**	**-1.1**
	comp=Z,0.4nm,1.0s,baz=120,slow=39,SNR=2.4						
YKA				PKPab	**pPKPab**	**20 27 36.8**	**-0.9**
	comp=Z,0.7nm,1.1s,baz=90,slow=4.2,SNR=4.2						

IDC ***13*** *20:21:23.5±0.5, 40°.96S×43°.53E, h0km, mb4.3/21, mb1 4.4/22, mb1mx4.3/39, mbtmp4.3/22, ML4.0/1, MS3.7/20, Ms1 3.7/20, ms1mx3.6/35, Error ellipse: s-maj=18.0km s-min=12.8km az=44.0*

NEIC ***13*** *20:21:25.1±1.3, 41°.0S±0°.1×43°.4E±0°.2, h10km±1km, mb4.7/31, Error ellipse: s-maj=21.7km s-min=18.7km az=83.0*

ISC 13 20:21:25.0±0.4, 41°.01S±0°.09×43°.5E±0°.1, h9km, n84, σ0ş91/77, mb4.6/41, MS3.7/20, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**19.35 304**		P	**P**	**20 25 50.8**	**-0.2**
	0.3nm,0.3s,baz=137,slow=10,SNR=13						
BOSA				LR	LR	20 31 57.3	
	comp=Z,195nm,21.2s,baz=144,slow=33						
BOSA	**Boshof**	**19.35 304**		P	**P**	**20 25 50.9**	**0.0**
SUR	**Sutherland**	**20.06 288**		P	**P**	**20 25 58.3**	**-0.3**
	17nm,0.9s,baz=108,slow=9.3,SNR=9.9						
SUR				LR	LR	20 32 16.8	
	comp=Z,101nm,19.3s,baz=66,slow=32						
SUR	**Sutherland**	**20.06 288**		P	**P**	**20 25 58.8**	**+0.1**
LBTB	**Lobatse**	**21.81 312**		P	**P**	**20 26 17.5**	**-0.1**
	12nm,1.0s,baz=141,slow=12,SNR=7.4						
LBTB				LR	LR	20 33 23.6	
	comp=Z,181nm,21.9s,baz=124,slow=33						
LBTB	**Lobatse**	**21.81 312**		P	**P**	**20 26 16.2**	**-1.3**
LBTB				IAmb	IAmb	20 26 19.0	
	comp=Z,21nm,1.1s						
ABPO	**Ambohimpanom**	**22.16 9**		P	**P**	**20 26 21.0**	**-0.3**
ABPO				IAmb	IAmb	20 26 28.2	
	comp=Z,39nm,1.2s						
OPO	**Ambohidratompo**	**22.59 9**		P	**P**	**20 26 26.3**	**+0.3**
	comp=Z,5.8nm,1.0s,baz=174,slow=6.9,SNR=3.7						
MATP	**Matopo**	**24.14 324**		P	**P**	**20 26 40.1**	**-1.4**
	comp=Z,12nm,0.9s,baz=156,slow=8.5,SNR=22						
MATP				LR	LR	20 35 02.7	
	comp=Z,146nm,19.6s,baz=138,slow=34						
MAW	**Mawson**	**28.68 165**		LR	LR	20 35 51.7	
	comp=Z,146nm,21.3s,baz=31,slow=30						
LSZ	**Lusaka**	**28.87 328**		P	**P**	**20 27 24.0**	**-0.1**
	comp=Z,4.2nm,0.7s,baz=167,slow=10,SNR=11						
LSZ				LR	LR	20 37 38.8	
	comp=Z,266nm,20.8s,baz=146,slow=34						
LSZ	**Lusaka**	**28.87 328**		P	**P**	**20 27 23.2**	**-0.9**
LSZ				IAmb	IAmb	20 27 30.0	
	comp=Z,11nm,1.2s						
SNAA	**Sanae**	**38.23 202**		P	**P**	**20 28 45.9**	**+1.0**
	comp=Z,2.3nm,0.9s,baz=47,slow=13,SNR=3.6						
SNAA	**Sanae**	**38.23 202**		P	**P**	**20 28 44.0**	**-0.8**
KMBO	**Kilima Mbogo**	**40.09 350**		P	**P**	**20 29 01.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=189,slow=5.7,SNR=3.6						
KMBO				LR	LR	20 43 25.1	
	comp=Z,117nm,21.4s,baz=94,slow=33						
H01W2	**Cape Leeuwin H**	**54.68 108**		T	T	21 30 07.8	
	baz=242,slow=75,SNR=89						
H01W3	**Cape Leeuwin H**	**54.69 108**		T	T	21 30 08.4	
	baz=242,slow=75,SNR=84						
H01W1	**Cape Leeuwin H**	**54.70 108**		T	T	21 30 09.0	
	baz=242,slow=75,SNR=89						
VNDA	**Vanda**	**55.96 167**		P	**P**	**20 31 03.2**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=277,slow=5.1,SNR=4.9						
VNDA				LR	LR	20 52 40.7	
	comp=Z,67nm,21.8s,baz=210,slow=34						
VNDA	**Vanda**	**55.96 167**		IAmb	IAmb	20 31 10.7	
	comp=Z,5.7nm,1.4s						
SBA	**Scott Base**	**56.58 168**		P	**P**	**20 31 07.6**	**+0.3**
SBA				IAmb	IAmb	20 31 13.4	
	comp=Z,8.4nm,1.1s						
DBIC	**Dimbokro**	**64.88 305**		P	**P**	**20 32 04.7**	**0.0**
	comp=Z,4.6nm,0.9s,baz=121,slow=7.1,SNR=5.4						
DBIC				LR	LR	20 55 56.9	
	comp=Z,57nm,21.9s,baz=142,slow=32						
DBIC	**Dimbokro**	**64.88 305**		IAmb	IAmb	20 32 07.1	
	comp=Z,8.9nm,1.1s						
TOA0	**Torodi Ar. Sit**	**66.29 315**		P	**P**	**20 32 13.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**66.29 315**		P	**P**	**20 32 13.8**	**+0.1**
	comp=Z,6.1nm,1.0s,baz=143,slow=3.9,SNR=18						
TORD				LR	LR	21 01 11.1	
	comp=Z,80nm,18.8s,baz=180,slow=36						
TORD	**Torodi Ar. Bea**	**66.29 315**		P	**P**	**20 32 13.3**	**-0.5**
TORD				IAmb	IAmb	20 32 16.2	
	comp=Z,6.4nm,1.0s						
KOWA	**Kowa**	**70.56 311**		P	**P**	**20 32 40.8**	**+0.3**
KOWA				IAmb	IAmb	20 32 43.8	
	comp=Z,7.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**72.56 99**		P	**P**	**20 32 53.5**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=187,slow=18,SNR=3.7						
ASAR	**Alice Springs**	**75.20 108**		P	**P**	**20 33 08.0**	**-0.2**
	comp=Z,2.3nm,0.9s,baz=220,slow=4.9,SNR=20						
ASAR				LR	LR	21 00 00.3	
	comp=Z,45nm,21.3s,baz=180,slow=31						

AS31	**Alice Springs**	**75.20 108**		P	**P**	**20 33 07.4**	**-0.8**
STKA	**Stephens Creek**	**75.38 119**		P	**P**	**20 33 09.1**	**+0.1**
	comp=Z,7.9nm,0.8s,baz=246,slow=4.1,SNR=16						
STKA				LR	LR	21 01 04.9	
	comp=Z,50nm,20.4s,baz=207,slow=32						
STKA	**Stephens Creek**	**75.38 119**		P	**P**	**20 33 09.1**	**+0.1**
WRA	**Warramunga Arr**	**77.84 106**		P	**P**	**20 33 22.4**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=226,slow=4.6,SNR=24						
WRA	**Warramunga Arr**	**77.84 106**		P	**P**	**20 33 23.1**	**-0.1**
WB2	**Warramunga Arr**	**77.85 106**		P	**P**	**20 33 23.5**	**+0.3**
WB2				IAmb	IAmb	20 33 25.0	
	comp=Z,5.5nm,0.9s						
WRAB	**Tennant Creek**	**77.85 106**		P	**P**	**20 33 23.4**	**+0.2**
WRAB				IAmb	IAmb	20 33 24.1	
	comp=Z,6.5nm,0.9s						
KOLN	**Koldanda**	**77.90 36**		*e*P	**P**	**20 33 21.2**	**-2.1**
	comp=Z,28nm,1.1s						
PYUN	**Piuthan**	**77.91 35**		*e*P	**P**	**20 33 23.0**	**-0.4**
	comp=Z,31nm,1.2s						
WR0	**Warramunga Arr**	**77.97 106**		P	**P**	**20 33 23.3**	**-0.6**
WR0				IAmb	IAmb	20 33 25.0	
	comp=Z,6.0nm,1.1s						
WB0	**Warramunga Arr**	**77.99 106**		P	**P**	**20 33 24.0**	**+0.1**
CMAR	**Chiang Mai Arr**	**78.39 53**		P	**P**	**20 33 25.3**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=223,slow=7.2,SNR=6.5						
CMAR				LR	LR	21 04 17.5	
	comp=Z,17nm,19.2s,baz=177,slow=33						
CMAR	**Chiang Mai Arr**	**78.39 53**		P	**P**	**20 33 25.5**	**-0.5**
DMN	**Daman**	**78.43 37**		*e*P	**P**	**20 33 26.3**	**-0.1**
PKIN	**Phulchoki**	**78.54 37**		*e*P	**P**	**20 33 25.8**	**-1.2**
	comp=Z,12nm,1.2s						
PKI	**Pulchoki**	**78.54 37**		*e*P	**P**	**20 33 26.0**	**-1.0**
	comp=Z,17nm,1.2s						
GKN	**Gorkha**	**78.56 36**		*e*P	**P**	**20 33 26.0**	**-0.9**
	comp=Z,21nm,1.2s						
RAMN	**Ramite**	**78.57 39**		*e*P	**P**	**20 33 27.0**	**-0.1**
	comp=Z,9.9nm,0.7s						
ODAN	**Odare**	**78.86 39**		*e*P	**P**	**20 33 28.5**	**-0.2**
	comp=Z,27nm,1.0s						
JIRN	**Jiri**	**78.98 38**		*e*P	**P**	**20 33 29.4**	**-0.1**
	comp=Z,13nm,1.0s						
PLCA	**Paso Flores**	**79.00 225**		P	**P**	**20 33 29.5**	**+0.2**
GUN	**Gumba**	**79.05 37**		*e*P	**P**	**20 33 29.6**	**-0.2**
	comp=Z,16nm,1.0s						
NIL	**Nilore**	**79.20 25**		P	**P**	**20 33 30.0**	**-0.2**
TAPN	**Taplejung**	**79.43 39**		*e*P	**P**	**20 33 32.5**	**+0.6**
	comp=Z,13nm,1.0s						
GEYT	**Alibeck**	**79.70 12**		LR	LR	21 06 31.3	
	comp=Z,57nm,21.1s,baz=285,slow=34						
SHL	**Shillong**	**80.04 43**		P	**P**	**20 33 35.0**	**-0.1**
SHL				IAmb	IAmb	20 33 40.9	
	comp=Z,6.1nm,1.0s						
CPUP	**Villa Florida**	**80.72 243**		P	**P**	**20 33 39.6**	**+0.9**
	comp=Z,6.9nm,0.8s,baz=124,slow=5.3,SNR=20						
CPUP	**Villa Florida**	**80.72 243**		P	**P**	**20 33 39.1**	**+0.3**
CPUP				IAmb	IAmb	20 33 40.3	
	comp=Z,8.0nm,0.8s						
BRTR	**Keskin Array B**	**80.85 352**		P	**P**	**20 33 39.0**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=188,slow=8.2,SNR=5.7						
BRTR				LR	LR	21 10 52.9	
	comp=Z,40nm,18.2s,baz=172,slow=37						
BDFB	**Brasilia**	**81.00 257**		P	**P**	**20 33 41.0**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=153,slow=6.7,SNR=4.6						
BDFB	**Brasilia**	**81.00 257**		IAmb	IAmb	20 33 42.7	
	comp=Z,8.2nm,1.2s						
AGG	**Agios Georgios**	**81.95 344**		P	**P**	**20 33 45.3**	**+0.5**
AGG				IAmb	IAmb	20 33 48.1	
	comp=Z,4.3nm,0.9s						
KEST	**Kesra**	**82.55 333**		P	**P**	**20 33 49.5**	**+1.5**
	comp=Z,4.6nm,0.9s,baz=322,slow=6.0,SNR=5.3						
KEST				LR	LR	21 11 12.0	
	comp=Z,109nm,20.4s,baz=270,slow=36						
KEST	**Kesra**	**82.55 333**		P	**P**	**20 33 48.4**	**+0.3**
KEST				IAmb	IAmb	20 33 53.0	
	comp=Z,6.0nm,1.0s						
BO02	**Sierra Bellavi**	**83.36 229**		P

METS				*i*	S		**Sg**	**20 41 41.3**	**+0.4**
QZX	**Qazax, Azerbai**	**0.84**	**16**		P		**Pg**	**20 41 31.6**	**-0.6**
QZX					S		**Sb**	**20 41 43.3**	**-0.3**
IGDI	**IGDIR**	**0.85**	**244**	*i*	P		**Pg**	**20 41 31.9**	**-0.5**
IGDI				*i*	S		**Sg**	**20 41 40.7**	**-2.9**
IGDI					IAML			20 41 46.0	
	comp=N,328nm,0.5s								
IGDI					IAML			20 41 47.0	
	comp=E,421nm,0.5s								
STE	**Stepanavan**	**0.92**	**325**	⇓*i*	P		**Pb**	**20 41 34.3**	**+0.4**
STE				⇓*i*	S		**Sn**	**20 41 48.1**	**+0.2**
SBZ	**Shahbuz**	**0.93**	**156**		P		**Pn**	**20 41 34.2**	**-0.5**
SBZ					S		**Sn**	**20 41 47.0**	**-0.8**
VNNZ	**Vanand**	**0.97**	**262**	*i*	P		**Pg**	**20 41 34.4**	**-0.3**
VNNZ				*i*	S		**Sn**	**20 41 49.1**	**+0.1**
GANJ	**Ganja**	**1.03**	**67**		P		**Pg**	**20 41 34.5**	**-1.3**
GANJ					S		**Sb**	**20 41 48.9**	**-0.2**
NAX	**Nakhchivan**	**1.12**	**163**		P		**Pg**	**20 41 37.0**	**-0.5**
NAX					S		**Sn**	**20 41 53.1**	**+0.5**
EAK	**Akyaka**	**1.20**	**292**	*i*	P		**Pb**	**20 41 37.5**	**-1.1**
EAK				*i*	S		**Sb**	**20 41 54.2**	**+0.1**
KZRT	**Kazreti**	**1.25**	**336**		P		**Pn**	**20 41 38.8**	**-0.3**
KZRT					S		**Sn**	**20 41 56.6**	**+0.8**
KZRT	**Kazreti**	**1.25**	**336**	*i*	P		**Pn**	**20 41 38.2**	**-0.8**
KZRT				*i*	S		**Sb**	**20 41 54.9**	**-0.5**
DMNI	**Dmanisi**	**1.27**	**328**		P		**Pn**	**20 41 39.5**	**0.0**
DMNI					S		**Sn**	**20 41 57.5**	**+1.0**
DYDN	**Diyadin**	**1.28**	**237**	*i*	P		**Pn**	**20 41 39.4**	**-0.2**
DYDN				*i*	S		**Sg**	**20 41 56.9**	**-0.2**
DYDN					IAML			20 42 07.0	
	comp=E,176nm,0.7s								
DYDN					IAML			20 42 11.0	
	comp=N,233nm,0.8s								
CLDR	**Caldiran**	**1.42**	**219**	*i*	P		**Pn**	**20 41 40.8**	**-0.8**
CLDR					IAML			20 42 09.0	
	comp=E,139nm,0.7s								
CLDR					IAML			20 42 13.0	
	comp=N,109nm,0.6s								
CLDR	**Caldiran**	**1.42**	**219**		PN		**Pn**	**20 41 41.2**	**-0.4**
CLDR	**Caldiran**	**1.42**	**219**	*e*	Pg		**Pb**	**20 41 42.5**	**+0.2**
DDFL	**Dedoflistskaro**	**1.44**	**33**		P		**Pg**	**20 41 44.0**	**+0.5**
DDFL	**Dedoflistskaro**	**1.44**	**33**	*i*	P		**Pg**	**20 41 44.1**	**+0.6**
DDFL	**Dedoflistskaro**	**1.44**	**33**		P		**Pg**	**20 41 44.1**	**+0.6**
DDFL					S		**Sg**	**20 42 05.8**	**+3.6**
BTNK	**Botanikuri**	**1.45**	**352**		P		**Pb**	**20 41 42.4**	**-0.3**
BTNK					S		**Sg**	**20 42 03.0**	**+0.4**
BTNK	**Botanikuri**	**1.45**	**352**	*i*	P		**Pn**	**20 41 42.1**	**+0.3**
BTNK				*i*	S		**Sb**	**20 42 01.4**	**+0.3**
BTNK	**Botanikuri**	**1.45**	**352**		P		**Pn**	**20 41 42.1**	**+0.3**
BTNK					S		**Sg**	**20 42 03.0**	**+0.4**
TRLG	**Trialeti**	**1.49**	**331**		P		**Pb**	**20 41 43.2**	**-0.3**
TRLG					S		**Sg**	**20 42 03.8**	**0.0**
ORD	**Ordubad**	**1.50**	**151**		P		**Pb**	**20 41 43.0**	**-0.6**
ORD					S		**Sg**	**20 42 04.1**	**+0.1**
KOTA	**Agri, Merkez-K**	**1.50**	**253**	*i*	P		**Pb**	**20 41 44.0**	**+0.3**
SEAG	**Tbilisi Sea**	**1.53**	**352**		P		**Pg**	**20 41 44.8**	**-0.5**
SEAG					S		**Sg**	**20 42 06.7**	**+1.5**
AGDM	**Agdam**	**1.56**	**94**		P		**Pb**	**20 41 44.7**	**0.0**
AGDM					S		**Sg**	**20 42 08.6**	**+2.3**
KARS	**Kars**	**1.57**	**285**		PN		**Pb**	**20 41 45.4**	**+0.5**
IMRD	**Marand**	**1.61**	**162**	*e*	Pg		**Pb**	**20 41 45.6**	**+0.1**
BRDA	**Brd**	**1.61**	**89**		P		**Pg**	**20 41 46.3**	**-0.5**
BRDA					S		**Sg**	**20 42 09.9**	**+2.2**
MNGR	**Mingechevir, A**	**1.62**	**70**		P		**Pg**	**20 41 46.3**	**-0.7**
MNGR					S		**Sg**	**20 42 10.6**	**+2.5**
BRNG	**Burnasheti**	**1.67**	**326**		P		**Pb**	**20 41 47.0**	**+0.5**
BRNG					S		**Sg**	**20 42 11.3**	**+1.6**
AKH	**Akhalkalaki**	**1.67**	**315**		P		**Pg**	**20 41 47.5**	**-0.5**
AKH					S		**Sg**	**20 42 10.3**	**+0.6**
AKH	**Akhalkalaki**	**1.67**	**315**		PN		**Pb**	**20 41 46.7**	**+0.1**
AKH	**Akhalkalaki**	**1.67**	**315**	*e*	Pn		**Pg**	**20 41 48.4**	**+0.4**
VMUR	**Van-Muradiye**	**1.71**	**223**	*i*	P		**Pb**	**20 41 47.4**	**+0.2**
VMUR				*i*	S		**Sg**	**20 42 12.8**	**+1.8**
VMUR					IAML			20 42 23.0	
	comp=E,122nm,1.8s								
VMUR					IAML			20 42 24.0	
	comp=N,128nm,0.9s								
AGRB	**Hanur-Agry**	**1.74**	**248**		PN		**Pb**	**20 41 47.7**	**0.0**
OZAP	**Van, Ozalp-Mer**	**1.79**	**208**	*i*	P		**Pg**	**20 41 50.1**	**-0.1**
OZAP					IAML			20 42 28.0	
	comp=E,135nm,1.1s								
OZAP					IAML			20 42 34.0	
	comp=N,138nm,1.7s								
ZKTA	**Zakatala**	**1.82**	**40**		P		**Pb**	**20 41 48.8**	**-0.3**
ZKTA					S		**Sg**	**20 42 14.9**	**+0.5**
SEKA	**Sheki**	**1.88**	**59**		P		**Pb**	**20 41 50.0**	**-0.1**
SEKA					S		**Sg**	**20 42 16.2**	**-0.2**
QRD	**Qoradiz**	**1.90**	**114**		P		**Pb**	**20 41 50.5**	**+0.1**
QRD					S		**Sg**	**20 42 17.5**	**+0.6**
BKRG	**Bakuriani**	**1.91**	**323**		P		**Pb**	**20 41 51.2**	**+0.5**
BKRG					S		**Sg**	**20 42 18.1**	**+0.6**
BLQ	**Beylaqan**	**1.98**	**105**		P		**Pb**	**20 41 51.5**	**-0.3**
BLQ					S		**Sg**	**20 42 20.0**	**+0.4**
ZRD	**Zardab**	**2.00**	**88**		P		**Pb**	**20 41 52.3**	**+0.3**
ZRD					S		**Sg**	**20 42 20.1**	**0.0**
EATA	**Eleskirt**	**2.02**	**260**	*i*	P		**Pb**	**20 41 53.6**	**+1.0**
EATA					IAML			20 42 36.0	
	comp=N,73nm,0.7s								
SENK	**Senkaya-Erzuru**	**2.10**	**279**		PN		**Pb**	**20 41 53.4**	**-0.6**
ITBZ	**Tabriz**	**2.18**	**157**	*e*	Pn		**Pb**	**20 41 54.5**	**-0.7**
ITBZ				*e*				20 41 59.2	
	comp=Z,881nm,0.4s								
EPOS	**Posof**	**2.18**	**306**	*i*	P		**Pb**	**20 41 54.9**	**-0.3**
EPOS				*i*	S		**Sg**	**20 42 24.7**	**-1.2**
EPOS					IAML			20 42 37.0	
	comp=N,59nm,0.7s								
QBL	**Gabala**	**2.22**	**71**		P		**Pb**	**20 41 55.4**	**-0.4**
QBL					S		**Sg**	**20 42 25.7**	**-1.5**
MLAZ	**Malazgirt-MUS**	**2.24**	**241**		PN		**Pn**	**20 41 53.9**	**+1.1**
GUDG	**Gudauri**	**2.26**	**349**		P		**Pb**	**20 41 57.2**	**+0.5**
GUDG					S		**Sg**	**20 42 29.2**	**+0.6**
ABS	**Abastumani**	**2.28**	**312**		P		**Pg**	**20 41 58.5**	**-1.1**
ABS					S		**Sg**	**20 42 29.7**	**+0.5**
KDMR	**Kurdemir**	**2.38**	**86**		P		**Pb**	**20 41 57.0**	**-1.5**
KDMR					S		**Sb**	**20 42 29.0**	**+1.2**
PNSH	**Pansheti**	**2.41**	**352**		P		**Pb**	**20 41 59.5**	**+0.2**
PNSH					S		**Sg**	**20 42 33.2**	**-0.2**
IML	**Ismayilli**	**2.43**	**76**		P		**Pb**	**20 41 57.5**	**-2.0**
IML					S		**Sb**	**20 42 29.8**	**+0.4**
HOMI	**Horasan**	**2.44**	**266**	*i*	P		**Pb**	**20 42 00.2**	**+0.5**
HOMI					IAML			20 42 44.0	
	comp=E,70nm,0.9s								
HOMI					IAML			20 42 50.0	
	comp=N,67nm,1.8s								
IHRS	**Heris**	**2.46**	**141**	*e*	Pn		**Pb**	**20 41 59.4**	**-0.6**
IHRS				*e*				20 42 03.8	
	comp=Z,3µm,0.4s								
KOPR	**Koprukoy-ERZUR**	**2.48**	**265**		PN		**Pn**	**20 41 57.7**	**+1.5**
XNQ	**Khinaliq**	**2.51**	**67**		P		**Pb**	**20 41 59.4**	**-1.5**
XNQ					S		**Sb**	**20 42 32.3**	**+0.5**
AKDM	**Akdamar-Van**	**2.51**	**221**		PN		**Pn**	**20 41 56.9**	**+0.3**
SAAT	**Saatly**	**2.60**	**97**		P		**Pn**	**20 41 59.1**	**+1.5**
SAAT					S		**Sb**	**20 42 33.7**	**-0.4**
TKB	**Tkibuli**	**2.62**	**324**		P		**Pg**	**20 42 04.9**	**-1.3**
TKB					S		**Sg**	**20 42 38.6**	**-1.5**
ONI	**Oni**	**2.64**	**333**		P		**Pb**	**20 42 03.3**	**+0.2**
ONI					S		**Sg**	**20 42 39.3**	**-1.4**
DBAD	**Bademkaya**	**2.69**	**288**	*i*	P		**Pg**	**20 42 06.7**	**-0.7**
QSAR	**Qusar**	**2.73**	**61**		P		**Pb**	**20 42 03.4**	**-1.2**
QSAR					S		**Sb**	**20 42 38.1**	**+0.2**
PQL	**Pirkuli**	**2.74**	**77**		P		**Pb**	**20 42 02.3**	**-2.4**
PQL					S		**Sb**	**20 42 38.6**	**+0.3**
GLBA	**Clilabad**	**2.75**	**110**		P		**Pb**	**20 42 03.6**	**-1.3**
GLBA					S		**Sb**	**20 42 39.7**	**+1.3**
YRD	**Yardimli**	**2.78**	**117**		P		**Pb**	**20 42 03.9**	**-1.6**
YRD					S		**Sb**	**20 42 40.7**	**+1.0**
DBOC	**Borcka**	**2.81**	**294**	*i*	P		**Pg**	**20 42 08.8**	**-0.9**
QUBA	**Quba, Azerbaij**	**2.82**	**66**		P		**Pb**	**20 42 04.0**	**-2.1**
QUBA					S		**Sb**	**20 42 38.9**	**-1.7**
GBS	**Qobustan**	**2.97**	**83**		P		**Pb**	**20 42 06.4**	**-2.2**
LRK	**Lerik**	**2.99**	**121**		P		**Pb**	**20 42 06.8**	**-2.3**
LRK					S		**Sb**	**20 42 45.9**	**+0.3**
ATGJ	**Altiaghaj**	**3.01**	**77**		P		**Pb**	**20 42 06.4**	**-2.9**
ISRB	**Sarab**	**3.15**	**139**	*e*			**Pg**	**20 42 19.6**	**+3.4**
	comp=Z,946nm,0.3s								
ASTR	**Astara**	**3.34**	**119**		P		**Pb**	**20 42 11.1**	**-3.8**
ASTR					S		**Sb**	**20 42 53.1**	**-2.2**

NEIC ***13*** *20:43:37.7±1.1,5.°34S±0.°06×152.°4E±0.°1,h55km±8km, mb4.1/13,Error ellipse: s-maj=19.2km s-min=8.1km az=90.0*

IDC ***13*** *20:43:39.2±4.9,5.°45S×152.°35E,h69km±42km,mb3.5/11, mb1 3.7/12,mb1mx3.6/31,mbtmp3.9/12,ML2.1/1,Error ellipse: s-maj=39.0km s-min=22.5km az=115.0*

ISC 13 20:43:35.9±0.9,5.°4S±0.°1×152.°5E±0.°2,h40km,n30, σ0.°94/31,mb3.9/16,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.21**	**345**			**Pn**	**20 43 57.6**	**+1.2**
PMG	**Port Moresby**	**6.62**	**232**	P		**Pn**	**20 45 12.6**	**+1.8**
	2.4nm,0.3s,baz=20,slow=9.9,SNR=5.7							
PMG				S		**Sn**	**20 46 24.2**	**-0.8**
	8.4nm,0.3s,baz=325,slow=21,SNR=8.3							
PMG	**Port Moresby**	**6.62**	**232**			**Pn**	**20 45 12.5**	**+1.7**
MTN	**Manton Dam**	**22.32**	**249**	P		**P**	**20 48 30.6**	**+0.2**
WB0	**Warramunga Arr**	**22.68**	**229**	P		**P**	**20 48 34.8**	**+0.7**
WB0				IAmb		IAmb	20 48 41.2	
	comp=Z,12nm,1.2s							
WR0	**Warramunga Arr**	**22.68**	**229**	P		**P**	**20 48 34.3**	**+0.1**
WR0				IAmb		IAmb	20 48 53.4	
	comp=Z,4.0nm,0.9s							
WRAB	**Tennant Creek**	**22.81**	**229**	P		**P**	**20 48 35.4**	**-0.2**
WRAB				IAmb		IAmb	20 48 40.8	
	comp=Z,4.8nm,0.7s							
WB2	**Warramunga Arr**	**22.81**	**229**	P		**P**	**20 48 36.1**	**+0.5**
WB2				IAmb		IAmb	20 48 48.8	
	comp=Z,17nm,1.4s							
WRA	**Warramunga Arr**	**22.82**	**229**	P		**P**	**20 48 35.3**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=55,slow=10.0,SNR=16							
WRA	**Warramunga Arr**	**22.82**	**229**	P		**P**	**20 48 35.6**	**-0.1**
KNRA	**Kununurra**	**25.43**	**244**	P		**P**	**20 49 00.6**	**+0.5**
KNRA				IAmb		IAmb	20 49 13.4	
	comp=Z,10nm,0.9s							
AS31	**Alice Springs**	**25.51**	**223**	P		**P**	**20 49 01.6**	**+0.8**
ASAR	**Alice Springs**	**25.51**	**223**	P		**P**	**20 49 00.3**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=57,slow=8.9,SNR=12							
STKA	**Stephens Creek**	**28.27**	**200**	P		**P**	**20 49 25.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=21,slow=18,SNR=1.8							
STKA	**Stephens Creek**	**28.27**	**200**	P		**P**	**20 49 25.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**29.10**	**242**	P		**P**	**20 49 31.4**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=205,slow=4.3,SNR=3.4							
FITZ	**Fitzroy Crossi**	**29.10**	**242**	P		**P**	**20 49 32.1**	**-1.0**
FITZ				IAmb		IAmb	20 49 37.3	
	comp=Z,2.7nm,0.7s							
CMAR	**Chiang Mai Arr**	**57.82**	**296**	P		**P**	**20 53 23.7**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=112,slow=4.4,SNR=5.0							
PETK	**Petropavlovsk-**	**58.42**	**4**	P		**P**	**20 53 28.5**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=180,slow=40,SNR=2.8							
SONM	**Songino Array**	**66.63**	**328**	P		**P**	**20 54 22.3**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=145,slow=5.4,SNR=4.4							
SONM	**Songino Array**	**66.63**	**328**	IAmb		IAmb	20 54 24.8	
	comp=Z,0.8nm,0.9s							
CNPM	**China Poot**	**78.37**	**26**	P		**P**	**20 55 33.4**	**+1.4**
SUA	**Susitna One**	**79.61**	**24**	P		**P**	**20 55 37.6**	**-1.3**
MKAR	**Makanchi Array**	**80.53**	**319**	P		**P**	**20 55 44.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=104,slow=5.6,SNR=3.9							
MKAR	**Makanchi Array**	**80.53**	**319**	P		**P**	**20 55 43.1**	**-1.0**
ZALV	**Zalesovo Beam**	**81.44**	**326**	P		**P**	**20 55 49.1**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=119,slow=12,SNR=1.7							
ILAR	**Eielson Array**	**82.81**	**22**	P		**P**	**20 55 55.6**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=244,slow=5.4,SNR=15							
ILAR	**Eielson Array**	**82.81**	**22**	P		**P**	**20 55 55.7**	**0.0**
YKA	**Yellowknife Ar**	**96.08**	**28**	P		**P**	**20 56 59.1**	**+0.1**
	comp=Z,0.8nm,1.1s,baz=271,slow=4.2,SNR=4.6							
TORD	**Torodi Ar. Bea**	**150.16**	**287**	PKPbc		**PKPbc**	**21 03 21.6**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=180,slow=0.7,SNR=4.2							
TORD				PKPab		**PKPab**	**21 03 29.4**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=73,slow=4.1,SNR=6.4							

IDC 13 20:49:21.9±3.0,34.°69S×178.°05E,h0km,mb3.5/2, mb1 3.7/3,mb1mx3.5/22,mbtmp3.4/3,ML3.2/1,Error ellipse: s-maj=64.5km s-min=41.4km az=77.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.65**	**192**	Pn		Pn	20 50 18.6	-1.0
	1.8nm,0.3s,baz=301,slow=23,SNR=11							
URZ				Sn		Sn	20 50 58.2	-5.0
	1.9nm,0.3s,baz=302,slow=23,SNR=1.7							
ASAR	**Alice Springs**	**39.80**	**274**	P		P	20 56 56.8	-0.1
	0.5nm,0.5s,baz=116,slow=7.4,SNR=9.1							
WRA	**Warramunga Arr**	**41.20**	**279**	P		P	20 57 08.3	-0.2
	0.3nm,0.5s,baz=116,slow=7.9,SNR=7.9							
FINES	**FINESS Array B**	**147.82**	**335**	PKPbc		PKPbc	21 09 07.8	-0.2
	2.9nm,1.0s,baz=295,slow=7.3,SNR=1.8							

IDC ***13*** *21:02:14.8±0.6,43.°59N×87.°67E,h0km,mb3.9/16, mb1 3.9/23,mb1mx3.7/68,mbtmp3.8/23,ML3.4/6,MS2.7/4, Ms1 2.8/4,ms1mx2.4/58,Error ellipse: s-maj=14.8km s-min=9.4km az=44.0*

MOS ***13*** *21:02:17.7±0.9,43.°67N×87.°63E,h30km,mb4.5/6,Error ellipse: s-maj=7.2km s-min=5.6km az=134.4*

BJI ***13*** *21:02:18.2±0.0,43.°59N×87.°66E,h14km,mB4.5/8, mb4.0/12,ML3.9/12,Ms3.6/4,Ms7 3.4/2*

NEIC ***13*** *21:02:19.5±1.7,43.°65N±0.°06×87.°66E±0.°09,h28km±5km, mb4.3/20,Error ellipse: s-maj=11.5km s-min=4.7km az=49.0*

NNC ***13*** *21:02:20.2±2.1,43.°80N×87.°40E,h0km,mb4.4,mpv4.2, Error ellipse: s-maj=16.2km s-min=10.8km az=124.0*

ISC 13 21:02:19.5±0.7,43.°66N±0.°05×87.°75E±0.°04,h30km±5km, n146,σ1§38/153,mb4.0/23,9C-12D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.16**	**346**	Pg		**Pb**	**21 02 25.6**	**+0.1**
WMQ				Sg		**Sb**	**21 02 30.3**	**+0.7**
WMQ				smax		smax		
	comp=N,18µm,0.3s							
WMQ				smax		smax		
	comp=E,8µm,0.7s							
WMQ	**Urumqi**	**0.16**	**346**	P		**Pb**	**21 02 25.6**	**+0.1**
WMQ				S		**Sb**	**21 02 30.3**	**+0.7**
WMQ	**Urumqi**	**0.16**	**346**			**Pb**	**21 02 25.6**	**+0.1**
WMQ				Sg		**Sb**	**21 02 30.3**	**+0.7**
ZSN	**Zaisan**	**4.29**	**333**	*e*	P	**Pn**	**21 03 24.0**	**+1.2**
	baz=334							
ZSN	**Zaisan**	**4.29**	**333**	Pg		Pb	21 03 40.0	+5.7
	27nm,0.3s							
ZSN				Lg		Lg	21 04 38.7	
	159nm,0.5s							
ZSN	**Zaisan**	**4.29**	**333**	*e*	P	**Pn**	**21 03 24.0**	**+1.2**
MK31	**Makanchi Array**	**4.97**	**311**	⇓	Pn	**Pn**	**21 03 32.6**	**+0.6**
	0.7nm,0.1s,baz=129,slow=14,SNR=13							
MK31				⇑	Sn	**Sn**	**21 04 28.1**	**-0.3**
	22nm,0.3s,baz=126,slow=28,SNR=7.4							
MK31	**Makanchi Array**	**4.97**	**311**	*d*	iP	**Pn**	**21 03 32.9**	**+0.9**
MK31	**Makanchi Array**	**4.97**	**311**			**Pn**	**21 03 32.9**	**+0.9**
MK31					Sn	**Sn**	**21 04 28.5**	**+0.1**
MKAR	**Makanchi Array**	**4.97**	**311**		Pn	**Pn**	**21 03 32.9**	**+0.9**
	4.0nm,0.3s,baz=130,slow=14,SNR=330							
MKAR					Sn	**Sn**	**21 04 27.9**	**-0.5**
	21nm,0.3s,baz=122,slow=27,SNR=13							
MKAR					Lg	Lg	21 04 52.4	
	18nm,0.3s,baz=144,slow=28,SNR=4.1							
MKAR					LR	LR	21 05 19.2	
	comp=Z,74nm,21.0s,baz=80,slow=37							
MKAR	**Makanchi Array**	**4.97**	**311**			**Pn**	**21 03 32.2**	**+0.2**
MAKZ	**Makanchi**	**5.15**	**310**	⇑	Pn	**Pn**	**21 03 35.3**	**+0.7**
	2.4nm,0.2s							
MAKZ				⇓	Pg		21 03 43.0	
	7.8nm,0.3s							
MAKZ				⇓	Sn	**Sn**	**21 04 32.6**	**-0.3**
	21nm,0.3s							
MAKZ	**Makanchi**	**5.15**	**310**	P		**Pn**	**21 03 35.4**	**+0.9**
MAKZ	**Makanchi**	**5.15**	**310**			**Pn**	**21 03 35.4**	**+0.9**
KTMS	**Ketmen**	**5.38**	**270**	Pg		**Pb**	**21 03 55.1**	**+2.3**
	6.9nm,0.1s							
KTMS				Lg		Lg	21 05 03.6	
	101nm,0.5s							
PDGK	**Podgornoye**	**6.02**	**270**	Pg		**Pb**	**21 04 06.3**	**+2.7**
	9.1nm,0.3s							
PDGK				Lg		Lg	21 05 23.7	
	42nm,0.5s							
PDGK	**Podgornoye**	**6.02**	**270**	⇓	Pn	**Pn**	**21 03 46.4**	**-0.2**
	4.3nm,0.3s							
PDGK				⇓	Sn	**Sn**	**21 04 55.2**	**+0.7**
	30nm,0.5s							
PDGK	**Podgornoye**	**6.02**	**270**	P		**Pn**	**21 03 46.4**	**-0.2**
PDGK				S		**Sn**	**21 04 55.2**	**+0.7**
DGZ	**Jazzator, Alta**	**6.04**	**358**	*d*	iP	**Pn**	**21 03 50.0**	**+3.0**

SHLS	**Shalkode**	**6.06**	**268**	*e*	P		**Pn**	**21 03 43.2**	**-3.9**
	baz=268								
SHLS	**Shalkode**	**6.06**	**268**		Pg		**Pb**	**21 04 03.4**	**-0.9**
	30nm,0.4s								
SHLS					Lg		Lg	21 05 18.2	
	176nm,0.4s								
SHLS	**Shalkode**	**6.06**	**268**	*e*	P		**Pn**	**21 03 43.2**	**-3.9**
UZB	**Uzynbulak**	**6.38**	**268**	*e*	P		**Pn**	**21 03 50.6**	**-1.0**
	baz=269								
UZB	**Uzynbulak**	**6.38**	**268**		Pg		Pb	21 04 15.6	+5.7
	9.2nm,0.4s								
UZB					Lg		Lg	21 05 38.9	
	45nm,0.5s								
UZB	**Uzynbulak**	**6.38**	**268**	*e*	P		**Pn**	**21 03 50.5**	**-1.0**
KPKS	**Kokpek**	**6.59**	**271**	*e*	P		**Pn**	**21 03 53.4**	**-1.0**
	baz=272								
KPKS	**Kokpek**	**6.59**	**271**	*e*	P		**Pn**	**21 03 53.4**	**-1.0**
TDK	**Taldyqorghan**	**6.83**	**285**	*e*	P		**Pn**	**21 03 57.6**	**-0.1**
	baz=285								
TDK	**Taldyqorghan**	**6.83**	**285**		Pg		**Pb**	**21 04 22.0**	**+4.5**
	41nm,0.4s								
TDK					Lg		Lg	21 05 49.6	
	164nm,0.6s								
TDK	**Taldyqorghan**	**6.83**	**285**	*e*	P		**Pn**	**21 03 57.5**	**-0.1**
SATY	**Saty**	**6.84**	**268**	*e*	P		**Pn**	**21 03 57.5**	**-0.4**
	baz=269								
SATY	**Saty**	**6.84**	**268**		Pg		**Pb**	**21 04 18.4**	**+0.7**
	6.1nm,0.2s								
SATY					Lg		Lg	21 05 44.1	
	50nm,0.4s								
SATY	**Saty**	**6.84**	**268**	*e*	P		**Pn**	**21 03 57.4**	**-0.4**
ARXS	**Arharly**	**7.18**	**278**		Pg		**Pb**	**21 04 26.4**	**+2.9**
	12nm,0.3s								
ARXS					Lg		Lg	21 05 57.5	
	63nm,0.5s								
KOTS	**Kotyrbulak**	**7.75**	**270**		Pg		**Pb**	**21 04 35.2**	**+2.0**
	12nm,0.2s								
KOTS					Lg		Lg	21 06 12.0	
	50nm,0.6s								
MDOK	**Medeo**	**7.81**	**270**	*e*	P		**Pn**	**21 04 10.1**	**-1.1**
	baz=270								
MDOK	**Medeo**	**7.81**	**270**		Pg		Pb	21 04 39.1	+4.9
	5.4nm,0.3s								
MDOK					Lg		Lg	21 06 19.4	
	21nm,0.9s								
MDOK	**Medeo**	**7.81**	**270**	*e*	P		**Pn**	**21 04 10.0**	**-1.1**
AAA	**Alma-Ata**	**7.90**	**270**	*e*	P		**Pn**	**21 04 11.0**	**-1.4**
	baz=271								
AAA	**Alma-Ata**	**7.90**	**270**	*e*	P		**Pn**	**21 04 10.9**	**-1.4**
TNSS	**Tian-Shan**	**7.90**	**269**	*e*	P		**Pn**	**21 04 11.8**	**-0.9**
	baz=270								
TNSS	**Tian-Shan**	**7.90**	**269**		Pg		**Pb**	**21 04 39.5**	**+3.7**
	5.1nm,0.4s								
TNSS					Lg		Lg	21 06 19.7	
	11nm,0.6s								
TNSS	**Tian-Shan**	**7.90**	**269**	*e*	P		**Pn**	**21 04 11.7**	**-0.9**
SEM	**Semipalatinsk**	**8.47**	**325**	*e*	P		**Pn**	**21 04 20.2**	**0.0**
	baz=326								
SEM	**Semipalatinsk**	**8.47**	**325**		Pg		Pb	21 04 51.8	+6.5
	3.4nm,0.2s								
SEM					Lg		Lg	21 06 40.6	
	42nm,0.8s								
SEM	**Semipalatinsk**	**8.47**	**325**	*e*	P		**Pn**	**21 04 20.2**	**0.0**
KST	**Kastek**	**8.61**	**270**		Pg		Pn	21 04 53.9	+32
	5.0nm,0.3s								
KST					Lg		Lg	21 06 44.6	
	24nm,0.9s								
BOOM	**Boomskoye usch**	**8.72**	**266**	P

HHC				pmax	pmax	
	comp=Z,98nm,5.7s					
SHL	**Shillong**	**18.37 168**		P	**P**	**21 06 32.3 +0.4**
SHL				pmax	pmax	
	comp=Z,12nm,0.4s					
SHL	**Shillong**	**18.37 168**		P	**P**	**21 06 32.3 +0.4**
SHL				IAmb	IAmb	21 06 32.4
	comp=Z,12nm,0.4s					
AB31	**Akbulak array**	**19.89 296**		P	**P**	**21 06 47.5 -0.8**
	comp=Z,0.2nm,0.3s,baz=97,slow=10,SNR=20					
ABKAR	**Akbulak array**	**19.89 296**		P	**P**	**21 06 47.9 -0.5**
ABKAR	**Akbulak array**	**19.89 296**		P	**P**	**21 06 47.8 -0.5**
ABKAR				IAmb	IAmb	21 07 07.1
	comp=Z,1.4nm,0.7s					
AKTO	**Aktyubinsk**	**21.26 299**		P	**P**	**21 07 02.3 -0.8**
	comp=Z,1.1nm,0.4s,baz=102,slow=12,SNR=4.6					
AKTO	**Aktyubinsk**	**21.26 299**	⇑	P	**P**	**21 07 04.9 +1.7**
	comp=Z,1.4nm,0.6s					
SVE	**Sverdlovsk**	**21.59 317**	*eP*		**P**	**21 07 09.2 +2.6**
SVE			*eS*		**S**	**21 11 05.1 +1.1**
SVE				pmax	pmax	
	comp=Z,13nm,0.9s					
ARU	**Arti**	**22.48 315**		P	**P**	**21 07 15.7 -0.3**
	comp=Z,0.4nm,0.3s,baz=123,slow=17,SNR=3.5					
ARU	**Arti**	**22.48 315**	*c iP*		**P**	**21 07 17.5 +1.4**
ARU						21 07 36.4
ARU				SS	Sn	21 11 53.1 +19
ARU				pmax	pmax	
	comp=Z,7.0nm,1.9s					
ARU	**Arti**	**22.48 315**		P	**P**	**21 07 17.3 +1.2**
GEYT	**Alibeck**	**23.08 266**		P	**P**	**21 07 22.1 -0.5**
	comp=Z,0.9nm,0.5s,baz=134,slow=6.2,SNR=1.9					
GEYT	**Alibeck**	**23.08 266**		P	**P**	**21 07 21.6 -1.0**
NRIK	**Noril'sk**	**25.74 360**		P	**P**	**21 07 47.6 +0.6**
	comp=Z,3.5nm,0.5s,baz=186,slow=3.3,SNR=5.9					
NRIK	**Noril'sk**	**25.74 360**		P	**P**	**21 07 47.5 +0.6**
NRIK				IAmb	IAmb	21 07 49.6
	comp=Z,4.4nm,0.6s					
CMAR	**Chiang Mai Arr**	**26.84 156**		P	**P**	**21 07 57.8 +0.4**
	comp=Z,1.7nm,0.9s,baz=334,slow=8.9,SNR=19					
CMAR				PcP	**PcP**	**21 11 18.9 -0.6**
	comp=Z,0.2nm,0.7s,baz=332,slow=4.1,SNR=2.6					
CMAR	**Chiang Mai Arr**	**26.84 156**		P	**P**	**21 07 58.0 +0.6**
CMAR	**Chiang Mai Arr**	**26.84 156**		P	**P**	**21 07 58.0 +0.6**
YAK	**Yakutsk**	**30.54 38**		P	**P**	**21 08 30.4 +0.5**
	comp=Z,3.1nm,0.3s,baz=264,slow=0.6,SNR=2.8					
YAK	**Yakutsk**	**30.54 38**	*deP*		**P**	**21 08 30.6 +0.7**
YAK				pmax	pmax	
	comp=Z,4.0nm,0.5s					
YAK	**Yakutsk**	**30.54 38**		P	**P**	**21 08 30.1 +0.2**
TIXI	**Tiksi**	**34.34 22**		P	**P**	**21 09 04.1 +1.1**
	comp=Z,1.3nm,0.3s,baz=4.1,slow=0.8,SNR=7.2					
TIXI	**Tiksi**	**34.34 22**	*‖eP*		**P**	**21 09 04.3 +1.3**
TIXI	**Tiksi**	**34.34 22**		P	**P**	**21 09 04.7 +1.7**
TIXI				IAmb	IAmb	21 09 13.1
	comp=Z,3.2nm,1.2s					
FINES	**FINESS Array B**	**39.75 319**		P	**P**	**21 09 48.2 -0.8**
	comp=Z,3.7nm,1.1s,baz=93,slow=9.7,SNR=3.4					
FINES	**FINESS Array B**	**39.75 319**	*i*	P	**P**	**21 09 51.9 +2.9**
FINES				pmax	pmax	
	comp=Z,1.0nm,0.5s					
FINES	**FINESS Array B**	**39.75 319**		P	**P**	**21 09 49.5 +0.5**
KULM	**Kulim**	**39.88 160**		P	**P**	**21 09 51.2 +0.7**
KULM				IAmb	IAmb	21 10 10.5
	comp=Z,6.7nm,1.1s					
RAYN	**Ar Rayn**	**39.99 254**		P	**P**	**21 09 50.7 -0.8**
RAYN				pmax	pmax	
	comp=Z,2.0nm,1.0s					
RAYN	**Ar Rayn**	**39.99 254**		P	**P**	**21 09 50.7 -0.8**
ARCES	**ARCESS Array B**	**40.28 331**		P	**P**	**21 09 53.3 -0.1**
	comp=Z,1.9nm,0.9s,baz=95,slow=11,SNR=1.9					
ARCES	**ARCESS Array B**	**40.28 331**		P	**P**	**21 09 54.6 +1.2**
SOCY	**Socotra**	**42.76 233**		P	**P**	**21 10 11.9 -2.4**
SOCY				IAmb	IAmb	21 10 30.2
	comp=Z,3.1nm,1.0s					
MLR	**Muntele Rosu**	**43.10 295**		LR	LR	21 27 56.7
	comp=Z,30nm,21.7s,baz=27,slow=36					
NOA	**NORSAR Array B**	**46.90 320**		P	**P**	**21 10 46.3 -0.5**
	comp=Z,0.4nm,0.7s,baz=74,slow=7.8,SNR=1.5					
HOMB	**Homborsund**	**49.03 317**	*eP*		P	21 11 11.3 +8.1
HOMB				IAML		21 11 15.2
	comp=Z,53nm,0.3s					
BFO	**Black Forest**	**53.04 305**	*i*	P	**P**	**21 11 32.2 -1.3**
ILAR	**Eielson Array**	**63.80 23**		P	**P**	**21 12 47.4 -0.8**
	comp=Z,0.3nm,0.8s,baz=318,slow=7.5,SNR=2.0					
ESDC	**Sonseca Array**	**65.12 302**		LR	LR	21 43 12.2
	comp=Z,13nm,21.4s,baz=300,slow=38					
GRNC	**Granite Creek**	**68.43 24**		P	**P**	**21 13 17.8 -0.5**
FITZ	**Fitzroy Crossi**	**70.59 142**		P	**P**	**21 13 31.6 -0.2**
	comp=Z,1.0nm,0.6s,baz=343,slow=7.8					
FITZ	**Fitzroy Crossi**	**70.59 142**		P	**P**	**21 13 31.3 -0.5**
FITZ				IAmb	IAmb	21 13 41.8
	comp=Z,4.3nm,1.4s					
PSA00	**Pilbara Seismi**	**71.29 149**		P	**P**	**21 13 36.9 +0.9**
YKA	**Yellowknife Ar**	**72.68 11**		P	**P**	**21 13 43.0 -0.9**
	comp=Z,0.1nm,0.3s,baz=355,slow=6.2,SNR=1.7					
WB0	**Warramunga Arr**	**76.23 135**		P	**P**	**21 14 04.9 -0.2**
WB0				IAmb	IAmb	21 14 20.5
	comp=Z,7.2nm,1.4s					
WRAB	**Tennant Creek**	**76.35 135**	*‖eP*		**P**	**21 14 05.9 +0.2**
WRAB				pmax	pmax	
	comp=Z,12nm,1.5s					
WRAB	**Tennant Creek**	**76.35 135**		P	**P**	**21 14 05.6 -0.1**
WRAB				IAmb	IAmb	21 14 06.8
	comp=Z,3.3nm,0.8s					
WRA	**Warramunga Arr**	**76.35 135**		P	**P**	**21 14 06.0 +0.2**
	comp=Z,1.9nm,0.7s,baz=336,slow=5.1,SNR=18					
WRA	**Warramunga Arr**	**76.35 135**	*i*	P	**P**	**21 14 06.0 +0.2**
WRA				pmax	pmax	
	comp=Z,2.0nm,0.6s					
WRA	**Warramunga Arr**	**76.35 135**		P	**P**	**21 14 06.1 +0.4**
WB2	**Warramunga Arr**	**76.36 135**		P	**P**	**21 14 05.8 0.0**
WR0	**Warramunga Arr**	**76.47 135**		P	**P**	**21 14 06.6 +0.2**
WR0				IAmb	IAmb	21 14 20.0
	comp=Z,3.5nm,1.2s					
TORD	**Torodi Ar. Bea**	**78.22 277**		P	**P**	**21 14 15.1 -1.3**
	comp=Z,0.5nm,0.8s,baz=44,slow=2.9,SNR=2.4					
ASAR	**Alice Springs**	**79.26 138**		P	**P**	**21 14 21.6 -0.3**
	comp=Z,1.3nm,0.7s,baz=337,slow=5.9,SNR=18					
ASAR	**Alice Springs**	**79.26 138**		P	**P**	**21 14 22.1 +0.2**
ASAR	**Alice Springs**	**79.26 138**		P	**P**	**21 14 22.1 +0.2**

*JMA **13** 21:23:30.9±0.3,30°.56N×142°.85E,h51km,M4.3*
*IDC **13** 21:23:32.6±2.8,30°.18N×142°.81E,h0km,mb3.5/7, mb1 3.6/8,mb1mx3.4/58,mbtmp3.5/8,ML3.8/1,Error ellipse: s-maj=82.6km s-min=19.3km az=74.0*
ISC 13 21:23:32.6±1.1,30°.59N±0°.06×143°.1E±0°.2,h45km,n21, σ3ᵗ02/18,mb3.7/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.58 193**		*eS*	**Sn**	**21 25 03.1**	**-3.5**
JCJ	**Chichijima**	**3.58 193**		Pn	**Pn**	**21 24 24.8**	**-0.8**
	12nm,0.3s,baz=49,slow=20,SNR=2.0						
JCJ				Sn	**Sn**	**21 25 02.5**	**-4.2**
	7.7nm,0.3s,baz=287,slow=19,SNR=1.8						
JHJ2	**Mitsune**	**3.77 313**		*eS*	**Sn**	**21 25 08.7**	**-2.6**
JHJ	**Hachijo jima 2**	**3.79 312**		Pn	**Pn**	**21 24 28.2**	**-0.3**
	7.2nm,0.3s,baz=87,slow=19,SNR=2.1						
JHJ				Sn	**Sn**	**21 25 09.3**	**-2.6**
	28nm,0.3s,baz=124,slow=22,SNR=7.7						
BSO1	**Boso 1**	**4.43 337**		P	**Pn**	**21 24 36.5**	**-0.3**
BSO1				*eS*	**Sn**	**21 25 25.9**	**-1.0**
JMKN	**Mikurajimanish**	**4.44 319**		*eS*	**Sn**	**21 25 25.8**	**-2.1**
JHU	**Hanno**	**6.15 330**		*eS*	**Sn**	**21 26 06.9**	**-3.0**
JHO	**Hitachi**	**6.37 341**		*eS*	**Sn**	**21 26 09.3**	**-6.0**
MJAR	**Matsushiro Arr**	**7.21 327**		Pn	**Pn**	**21 25 16.0**	**+0.6**
	0.2nm,0.3s,baz=158,slow=12,SNR=7.9						
MJAR				Sn	**Sn**	**21 26 33.0**	**-3.0**
	0.2nm,0.3s,baz=158,slow=10,SNR=4.9						
ASAJ	**Asahikawa**	**13.51 358**		Pn	**Pn**	**21 26 39.5**	**-2.0**
	0.4nm,0.3s,baz=236,slow=3.6,SNR=1.9						
JOW	**Kunigami**	**13.55 258**		Pn	Pn	21 26 30.8	-11
	3.3nm,0.3s,baz=215,slow=20,SNR=1.9						
H11S3	**WAKE ISLAND Hy**	**24.53 114**		T	T	21 54 12.2	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**24.54 114**		T	T	21 54 11.3	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**24.55 114**		T	T	21 54 13.6	
	baz=304						
SONM	**Songino Array**	**32.87 312**		P	P	21 30 09.4	+7.1
	0.9nm,0.7s,baz=118,slow=8.1,SNR=7.9						
CMAR	**Chiang Mai Arr**	**41.72 264**		P	**P**	**21 31 20.7**	**+3.3**
	0.2nm,0.7s,baz=61,slow=5.6,SNR=2.0						
MKAR	**Makanchi Array**	**48.95 307**		P	P	21 32 21.3	+6.9
	0.3nm,0.7s,baz=102,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**50.95 191**		P	**P**	**21 32 32.1**	**+2.4**
	0.5nm,0.6s,baz=7.9,slow=8.0,SNR=5.6						
KURBB	**Kurchatov Arra**	**51.24 312**		P	P	21 32 37.8	+6.2
	0.5nm,0.6s,baz=88,slow=7.1,SNR=5.3						
FITZ	**Fitzroy Crossi**	**51.25 201**		P	**P**	**21 32 34.2**	**+2.2**
	1.0nm,0.9s,baz=45,slow=8.6,SNR=1.8						
ASAR	**Alice Springs**	**54.67 190**		P	**P**	**21 32 59.7**	**+2.5**
	0.1nm,0.4s,baz=1.0,slow=5.6,SNR=4.2						

*ATH **13** 21:26:23.6,35°.40N×23°.44E,h65km±3km,ML3.2/6,Error ellipse: s-maj=3.6km s-min=1.4km az=225.0*
*ISK **13** 21:26:24.5,35°.28N×23°.29E,h40km±2km,ML3.2/7*
*THE **13** 21:26:25.1,35°.26N×23°.24E,h24km±1km,ML3.3/4,Error ellipse: s-maj=1.9km s-min=0.7km az=63.0*
*HLW **13** 21:26:29.8,34°.92N×24°.11E,h25km±34km,Md4.2,Ml3.8*
ISC 13 21:26:24.2±1.3,35°.23N±0°.05×23°.29E±0°.05,h32km±9km, n51,σ1ᵗ17/61,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.33**	**89**	P	**Pn**	**21 26 32.3**	**-0.4**
KNDR				S	**Sb**	**21 26 38.2**	**+0.5**
	4μm,0.5s						
KNDR	**Palaiochora Ch**	**0.33**	**89**	PG	**Pn**	**21 26 32.4**	**-0.3**
KNDR				SG	**Sb**	**21 26 39.3**	**+1.6**
IMMV	**Iera Moni Meta**	**0.61**	**68**	P	**Pn**	**21 26 36.5**	**-0.2**
IMMV				S	**Sn**	**21 26 45.8**	**+0.4**
IMMV				AML	AML	21 26 47.1	
	comp=N,4320μm,0.3s						
IMMV				AML	AML	21 26 48.5	
	comp=E,7536μm,0.9s						
IMMV	**Iera Moni Meta**	**0.61**	**68**	P	**Pn**	**21 26 36.6**	**-0.1**
IMMV				S	**Sn**	**21 26 46.5**	**+1.1**
	comp=E,3μm,0.7s						
IMMV	**Iera Moni Meta**	**0.61**	**68**	PG	**Pn**	**21 26 36.5**	**-0.2**
IMMV				SG	**Sn**	**21 26 46.2**	**+0.8**
ANKY	**Antikythira Is**	**0.64**	**1**	P	**Pb**	**21 26 36.3**	**-0.7**
ANKY				S	**Sn**	**21 26 46.4**	**+0.5**
ANKY				AML	AML	21 26 47.9	
	comp=E,3178μm,0.4s						
ANKY				AML	AML	21 26 48.3	
	comp=N,3970μm,0.4s						
ANKY	**Antikythira Is**	**0.64**	**1**	P	**Pb**	**21 26 36.2**	**-0.7**
GVDS	**Gavdos**	**0.77**	**120**	P	**Pn**	**21 26 39.5**	**+0.7**
GVDS	**Gavdos**	**0.77**	**120**	PG	**Pn**	**21 26 39.4**	**+0.7**
GVD	**Gavdhos**	**0.77**	**120**	P	**Pn**	**21 26 39.5**	**+0.8**
GVD				S	**Sn**	**21 26 52.5**	**+3.3**
GVD				AML	AML	21 26 54.5	
	comp=E,4487μm,0.4s						
GVD				AML	AML	21 26 58.2	
	comp=N,6350μm,0.4s						
GVD	**Gavdhos**	**0.77**	**120**	P	**Pn**	**21 26 39.6**	**+0.8**
GVD				S	**Sn**	**21 26 51.7**	**+2.5**
	comp=N,3μm,0.3s						
GVD	**Gavdhos**	**0.77**	**120**	PG	**Pn**	**21 26 39.7**	**+1.0**
VAM	**Vamos**	**0.77**	**77**	P	**Pn**	**21 26 38.9**	**+0.1**
VAM				S	**Sn**	**21 26 49.3**	**0.0**
VAM				AML	AML	21 26 52.4	
	comp=N,4673μm,0.6s						
VAM				AML	AML	21 26 54.2	
	comp=E,4581μm,0.4s						
VAM	**Vamos**	**0.77**	**77**	P	**Pn**	**21 26 39.4**	**+0.6**
VAM				S	**Sn**	**21 26 51.1**	**+1.9**
	comp=E,2μm,0.5s						
PRNS	**Prines Rethymn**	**1.00**	**82**	P	**Pb**	**21 26 42.4**	**-0.7**
KTHA	**Kythira Island**	**1.04**	**350**	P	**Pn**	**21 26 42.9**	**+0.4**
KTHA	**Kythira Island**	**1.04**	**350**	P	**Pn**	**21 26 43.0**	**+0.4**
KTHA	**Kythira Island**	**1.04**	**350**	PG	**Pn**	**21 26 42.9**	**+0.4**
KTHR	**Kythira**	**1.05**	**348**	P	**Pn**	**21 26 43.0**	**+0.3**
SIVA	**Sivas**	**1.27**	**99**	P	**Pb**	**21 26 46.9**	**-0.6**
SIVA				AML	AML	21 27 18.1	
	comp=E,1657μm,0.7s						
SIVA				AML	AML	21 27 20.7	
	comp=N,1505μm,0.5s						
SIVA	**Sivas**	**1.27**	**99**	P	**Pb**	**21 26 47.2**	**-0.3**
IDI	**Anoyia**	**1.31**	**87**	P	**Pb**	**21 26 47.2**	**-1.1**
IDI				AML	AML	21 27 07.7	
	comp=N,483μm,0.6s						
IDI				AML	AML	21 27 13.8	
	comp=E,430μm,0.6s						
IDI	**Anoyia**	**1.31**	**87**	P	**Pb**	**21 26 47.3**	**-1.1**
IDI	**Anoyia**	**1.31**	**87**	PN	**Pb**	**21 26 47.0**	**-1.3**
MNVA	**Monemvasia**	**1.47**	**352**	P	**Pn**	**21 26 48.5**	**+0.1**
HRKL	**Herakleio**	**1.49**	**86**	PN	**Pb**	**21 26 49.7**	**-1.5**
VLI	**Veliai**	**1.51**	**349**	P	**Pn**	**21 26 49.4**	**+0.4**
VLI	**Veliai**	**1.51**	**349**	P	**Pn**	**21 26 49.5**	**+0.5**
MHLA	**Plaka, Milos I**	**1.77**	**31**	P	**Pn**	**21 26 52.4**	**-0.1**
NPS	**Neapolis**	**1.91**	**88**	P	**Pb**	**21 26 55.7**	**-2.6**
NPS	**Neapolis**	**1.91**	**88**	P	**Pb**	**21 26 56.0**	**-2.3**
THR5	**Thira Island,**	**2.05**	**54**	P	**Pn**	**21 26 57.3**	**+0.8**
THR3	**Thira Island,**	**2.08**	**55**	P	**Pn**	**21 26 56.8**	**0.0**
SANT	**Santorini**	**2.10**	**57**	P	**Pn**	**21 26 56.8**	**-0.3**
SANT	**Santorini**	**2.10**	**57**	PN	**Pn**	**21 26 57.2**	**0.0**
THT2	**Imerovigli**	**2.11**	**55**	PN	**Pn**	**21 26 58.1**	**+0.8**
THR8	**Santorini-Mono**	**2.13**	**56**	P	**Pn**	**21 26 57.5**	**-0.1**
KRND	**KRANIDI**	**2.15**	**357**	P	**Pn**	**21 26 57.4**	**-0.3**
KRND	**KRANIDI**	**2.15**	**357**	P	**Pn**	**21 26 58.0**	**+0.2**
ITM	**Ithomi**	**2.23**	**331**	PN	**Pn**	**21 26 59.7**	**+0.7**
ZKR	**Zakros**	**2.41**	**92**	P	**Pn**	**21 27 03.1**	**+1.8**
ZKR	**Zakros**	**2.41**	**92**	PN	**Pn**	**21 27 02.8**	**+1.5**
APE	**Apeiranthos**	**2.58**	**44**	P	**Pn**	**21 27 03.5**	**-0.3**
APE	**Apeiranthos**	**2.58**	**44**	PN	**Pn**	**21 27 04.7**	**+0.9**
AMT	**Artemida-Makis**	**2.62**	**331**	P	**Pn**	**21 27 04.9**	**+0.5**
KARP	**Karpathos**	**3.18**	**83**	PN	**Pn**	**21 27 12.1**	**+0.1**
ARG	**Arkhangelos**	**4.06**	**75**	PN	**Pn**	**21 27 24.2**	**+0.2**
SLUM	**Salum**	**4.06**	**156**	P	**Pn**	**21 27 23.5**	**-0.6**
	baz=164						
SWA2		**6.25**	**162**	P	**Pn**	**21 27 53.1**	**-1.0**
	baz=168						
SWA2				AMP		21 29 00.0	
	baz=168						
RYAN	**Fayoum**	**8.53**	**134**	P	**Pn**	**21 28 23.1**	**-2.3**
	baz=136						
RYAN				S	Sn	21 29 45.0	-15
	baz=136						
SUZ	**Suez**	**9.68**	**121**	P	**Pn**	**21 28 38.0**	**-3.2**
	baz=122						

*IDC **13** 21:28:58.3±3.2,43°.00N×45°.60E,h0km,mb3.3/2, mb1 3.0/4,mb1mx2.9/52,mbtmp3.0/4,ML2.1/2,Error ellipse: s-maj=90.7km s-min=13.4km az=8.0*
*NORS **13** 21:29:04.4±0.0,43°.56N×45°.61E,h7km,MPVA3.1*
*MOS **13** 21:29:04.2±0.0,43°.57N×45°.63E,h7km,MPVA3.0*
*DRS **13** 21:29:05.3±0.0,42°.94N×45°.42E,h10km*
ISC 13 21:29:05.4±1.4,43°.60N±0°.06×45°.64E±0°.03,h8km±11km, n21,σ1ᵗ45/37,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.41**	**164**	*ePg*	**Pb**	**21 29 13.8**	**-1.1**
GROC				*eSg*	**Sb**	**21 29 21.2**	**0.0**
TRKR	**Terskaya**	**0.67**	**281**	*ePg*	**Pb**	**21 29 19.6**	**+0.2**
TRKR				*eSg*	**Sb**	**21 29 28.8**	**+1.0**
DVE	**Vedeno**	**0.73**	**151**	*ePg*	**Pg**	**21 29 18.8**	**-0.7**
KMGR	**Komgaron**	**0.78**	**227**	*ePg*	**Pb**	**21 29 21.2**	**0.0**
KMGR				*eSg*	**Sb**	**21 29 32.2**	**+0.2**
PRTR	**Priterechnaya**	**1.00**	**279**	*ePg*	**Pg**	**21 29 24.9**	**+0.2**
PRTR				*eSg*	**Sb**	**21 29 39.7**	**+1.4**
DBC	**Dubki**	**1.04**	**123**	*ePg*	**Pb**	**21 29 25.8**	**+0.1**
DBC				*eSg*	**Sn**	**21 29 42.9**	**+1.8**
STDR	**Stavd-Durt**	**1.17**	**259**	*ePg*	**Pg**	**21 29 26.7**	**-0.4**
STDR				*eSg*	**Sn**	**21 29 46.7**	**+2.5**
KRNR	**Karanay**	**1.20**	**129**	*ePg*	**Pg**	**21 29 28.1**	**-0.4**
KRNR				*eSg*	**Sn**	**21 29 45.9**	**+0.7**
LACR	**Lac**	**1.25**	**232**	*ePg*	**Pg**	**21 29 28.2**	**-1.2**
KORR	**Kora**	**1.26**	**247**	*eSg*	**Sn**	**21 29 47.9**	**+1.6**
BUJR	**Buynaksk**	**1.32**	**125**	*ePg*	**Pg**	**21 29 32.2**	**+1.4**
BUJR				*eSg*	**Sn**	**21 29 50.8**	**+2.9**
ARKR	**Arakani**	**1.40**	**135**	*ePg*	**Pn**	**21 29 31.1**	**-0.2**
ARKR				*eSg*	**Sn**	**21 29 51.9**	**+1.9**
GNBR	**Gunib**	**1.55**	**141**	*ePg*	**Pb**	**21 29 34.6**	**+0.2**
GNBR				*eSg*	**Sg**	**21 29 56.6**	**+1.4**
KBTC	**Kuba-Taba**	**1.64**	**279**	*ePg*	**Pn**	**21 29 35.6**	**+1.1**
KBTC				*eSg*	**Sb**	**21 29 57.7**	**+1.1**
DIGR	**Digorskoe uzhe**	**1.66**	**246**	*ePg*	**Pn**	**21 29 35.3**	**+0.3**
DIGR				*eSg*	**Sb**	**21 29 57.6**	**+0.2**
KBZ	**Khabaz**	**2.00**	**275**	Pn	**Pn**	**21 29 37.4**	**-2.0**
	0.4nm,0.3s,baz=280,slow=13,SNR=10						
KBZ				Sn	**Sn**	**21 30 04.9**	**+0.4**
	0.9nm,0.3s,baz=336,slow=23,SNR=12						
NEY	**Neytrino**	**2.15**	**262**	*ePg*	**Pn**	**21 29 42.6**	**+0.8**
NEY				*eSg*	**Sb**	**21 30 11.7**	**0.0**
KVAR	**Kislovodsk Arr**	**2.16**	**281**	Pn	**Pn**	**21 29 40.7**	**-1.1**
	baz=117,slow=16,SNR=3.3						
KVAR				Sn	**Sn**	**21 30 10.2**	**+1.3**
	baz=158,slow=16,SNR=9.0						
SHA1	**Shidzhatmaz**	**2.17**	**275**	*ePg*	**Pn**	**21 29 42.9**	**+0.9**
SHA1				*eSg*	**Sn**	**21 30 10.3**	**+1.1**
MKAR	**Makanchi Array**	**25.87**	**70**	P	**P**	**21 34 33.4**	**-4.1**
	0.1nm,0.3s,baz=260,slow=8.1,SNR=2.1						
ZALV	**Zalesovo Beam**	**27.48**	**54**	P	**P**	**21 34 49.6**	**-2.3**
	0.4nm,0.3s,baz=259,slow=9.6,SNR=2.5						

*IDC **13** 21:40:45.7±1.2,17°.48S×178°.58W,h520km±14km, mb3.6/16,mb1 3.8/19,mb1mx3.6/36,mbtmp4.5/19,Error ellipse: s-maj=15.1km s-min=10.3km az=144.0*
*NOU **13** 21:40:47.6,17°.30S×178°.41W,h562km,mb4.9,Fiji Islands Region*
*NEIC **13** 21:40:48.5±1.9,17°.5S±0°.1×178°.6W±0°.1,h552km±6km, mb4.7/67,Error ellipse: s-maj=15.7km s-min=14.4km az=157.0*
ISC 13 21:40:47.9±0.3,17°.48S±0°.07×178°.48W±0°.06,h547km, n217,σ1ᵗ11/220,mb4.6/67,1C-1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.32 265**		P	**P**	**21 42 06.6**	**+1.7**
MSVF	**Nonsavu**	**3.32 265**		P	**P**	**21 42 06.6**	**+1.7**
AFI	**Afiamalu**	**7.37 62**		P	**P**	**21 42 37.8**	**-1.6**
	21nm,0.3s,baz=56,slow=2.5,SNR=15						
AFI				S	**S**	**21 44 07.8**	**-3.0**
	2.3nm,0.3s,baz=53,slow=20,SNR=1.2						
AFI	**Afiamalu**	**7.37 62**		P	**P**	**21 42 36.8**	**-2.6**
AFI	**Afiamalu**	**7.37 62**		P	**P**	**21 42 37.9**	**-1.6**
AFI	**Afiamalu**	**7.37 62**		P	**P**	**21 42 36.6**	**-2.9**
NIUE	**Niue**	**8.28 102**		P	**P**	**21 42 49.0**	**+0.7**
	baz=8.2,SNR=14						
NIUE	**Niue**	**8.28 102**		P	**P**	**21 42 50.6**	**+2.3**
FUNA	**Funafuti**	**9.19 345**		P	**P**	**21 42 59.5**	**+1.9**
SANVU	**Saraoutou**	**13.88 276**		P	**P**	**21 43 47.0**	**+1.1**
SANVU	**Saraoutou**	**13.88 276**		P	**P**	**21 43 47.3**	**+1.3**
PINNC	**Pines Island,**	**14.18 247**		P	**P**	**21 43 48.6**	**-0.3**
YATNC	**Mamie plateau,**	**14.50 249**		P	**P**	**21 43 51.9**	**-0.4**
OUENC	**Ouen Island, N**	**14.65 248**		P	**P**	**21 43 53.9**	**+0.1**
DZM	**Mont Dzumac**	**14.91 250**		P	**P**	**21 43 54.4**	**-2.2**
	3.8nm,0.3s,baz=80,slow=19,SNR=25						
NOUC	**Port Laguerre**	**15.04 250**		P	**P**	**21 43 58.0**	**+0.1**
KOUNC	**Koumac, New Ca**	**16.58 257**		P	**P**	**21 44 13.0**	**0.0**
RAR	**Rarotonga**	**18.03 105**		P	**P**	**21 44 26.5**	**+0.2**
	0.9nm,0.3s,baz=248,slow=11,SNR=3.9						
OUZ	**Omahuta**	**19.03 200**		P	**P**	**21 44 37.9**	**+2.8**
OUZ				IAmb	IAmb	21 44 39.5	
	comp=Z,41nm,1.0s						
URZ	**Urewera**	**21.06 190**		P	**P**	**21 44 51.2**	**-2.3**
	comp=Z,8.8nm,0.6s,baz=305,slow=19,SNR=2.6						
URZ				S	**S**	**21 48 07.7**	**-4.4**
	comp=Z,13nm,0.6s,baz=125,slow=23,SNR=3.1						
URZ	**Urewera**	**21.06 190**		P	**P**	**21 44 51.4**	**-2.1**
URZ				IAmb	IAmb	21 45 01.6	
	comp=Z,50nm,1.2s						
BKZ	**Black Stump Fm**	**22.05 190**		P	**P**	**21 45 01.8**	**-0.6**
BKZ				IAmb	IAmb	21 45 14.1	
	comp=Z,45nm,1.4s						
BFZ	**Birch Farm**	**23.56 190**		P	**P**	**21 45 15.3**	**-0.6**
BFZ				IAmb	IAmb	21 45 27.2	
	comp=Z,44nm,1.0s						
QRZ	**Quartz Range**	**24.52 197**		P	**P**	**21 45 24.9**	**+0.5**
TUWZ	**Tuamarina**	**24.74 194**		P	**P**	**21 45 26.8**	**+0.5**
BSWZ	**Blackbirch Sta**	**25.03 194**		P	**P**	**21 45 30.0**	**+1.1**
LTZ	**Lake Taylor**	**26.42 195**		P	**P**	**21 45 39.8**	**-1.4**
LTZ				IAmb	IAmb	21 45 42.1	
	comp=Z,19nm,0.6s						
OXZ	**Oxford**	**26.99 195**		P	**P**	**21 45 45.0**	**-1.2**
**P

ASAR				PcP	PcP	21 49 43.9	-0.1	
	comp=Z,3.5nm,0.6s,baz=97,slow=4.9,SNR=5.2							
ASAR				ScP	ScP	21 52 46.0	+1.5	
	comp=Z,1.4nm,0.8s,baz=99,slow=4.3,SNR=4.6							
ASAR	**Alice Springs**	**44.84**	**254**	P	**P**	**21 48 12.9**	**-1.0**	
ASAR				PcP	PcP	21 49 44.1	+0.1	
KDU	**Kakadu**	**47.50**	**269**	P	**P**	**21 48 33.4**	**-0.7**	
	baz=48,SNR=5.4							
MTN	**Manton Dam**	**48.75**	**268**	P	**P**	**21 48 42.3**	**-1.1**	
	baz=49,SNR=7.6							
MTN	**Manton Dam**	**48.75**	**268**	P	P	**21 48 42.4**	**-1.0**	
MTN				IAmb	IAmb	21 48 42.8		
	comp=Z,20nm,0.7s							
WRKA	**Warakurna**	**49.91**	**252**	P	**P**	**21 48 51.3**	**-0.6**	
	baz=50,SNR=161							
FORT	**Forrest**	**50.13**	**244**	P	**P**	**21 48 52.3**	**-1.0**	
	baz=50,SNR=23							
FORT	**Forrest**	**50.13**	**244**	P	**P**	**21 48 52.5**	**-0.9**	
FAKI	**Fak Fak**	**50.43**	**281**	P	**P**	**21 48 55.2**	**-0.6**	
FAKI				IAmb	IAmb	21 48 58.4		
	comp=Z,35nm,1.1s							
KNRA	**Kununurra**	**50.47**	**264**	P	**P**	**21 48 55.0**	**-1.1**	
SWI	**Sorong**	**52.08**	**283**	P	**P**	**21 49 07.3**	**-0.5**	
	comp=Z,1μmcomp=Z,100nm,0.8s							
FITZ	**Fitzroy Crossi**	**53.03**	**260**	P	**P**	**21 49 14.0**	**-0.5**	
	baz=53,SNR=21							
FITZ	**Fitzroy Crossi**	**53.03**	**260**	P	**P**	**21 49 13.7**	**-0.8**	
SOEI	**Soe**	**56.01**	**270**	P	**P**	**21 49 35.9**	**+0.3**	
SOEI				IAmb	IAmb	21 49 37.3		
	comp=Z,63nm,0.8s							
PSA00	**Pilbara Seismi**	**57.95**	**255**	P	**P**	**21 49 47.9**	**-0.8**	
PSA00				IAmb	IAmb	21 49 48.5		
	comp=Z,38nm,0.8s							
PSA00	**Pilbara Seismi**	**57.95**	**255**	P	**P**	**21 49 47.0**	**-1.6**	
PSA00				IAmb	IAmb	21 49 47.6		
	comp=Z,19nm,0.7s							
KLBR	**Kellerberrin**	**58.96**	**243**	P	**P**	**21 49 54.2**	**-1.0**	
	baz=59,SNR=38							
NWAO	**Narrogin (SRO)**	**59.35**	**242**	P	**P**	**21 49 57.2**	**-0.6**	
	baz=59,SNR=8.6							
NWAO	**Narrogin (SRO)**	**59.35**	**242**	P	P	**21 49 57.4**	**-0.5**	
NWAO				IAmb	IAmb	21 50 04.3		
	comp=Z,25nm,1.2s							
BLDU	**Ballidu**	**59.91**	**244**	P	**P**	**21 50 00.3**	**-1.2**	
	baz=60,SNR=12							
MUN	**Mundaring**	**60.26**	**243**	P	**P**	**21 50 03.6**	**-0.3**	
	baz=60,SNR=5.8							
MORW	**Morawa**	**60.59**	**246**	P	**P**	**21 50 05.1**	**-1.0**	
	baz=61,SNR=19							
MORW	**Morawa**	**60.59**	**246**	P	**P**	**21 50 05.3**	**-0.8**	
MORW				IAmb	IAmb	21 50 05.9		
	comp=Z,17nm,0.6s							
VNDA	**Vanda**	**60.86**	**185**	P	**P**	**21 50 07.8**	**+0.7**	
	comp=Z,1.1nm,0.6s,baz=18,slow=6.4,SNR=5.8							
VNDA	**Vanda**	**60.86**	**185**	P	**P**	**21 50 08.8**	**+1.8**	
BNSI	**Bone**	**61.44**	**275**	P	**P**	**21 50 10.5**	**-1.4**	
	comp=Z,23nm,1.2s							
SPSI	**Sidrap Palu**	**61.89**	**275**	P	**P**	**21 50 14.0**	**-0.9**	
	comp=Z,15nm,0.8s							
PLAI	**Plampang**	**62.44**	**269**	P	**P**	**21 50 17.5**	**-0.9**	
	comp=Z,52nm,0.7s							
TOLI2	**Tolitoli**	**62.57**	**281**	P	**P**	**21 50 20.6**	**+1.3**	
TOLI2				IAmb	IAmb	21 50 27.2		
	comp=Z,16nm,1.5s							
GIRL	**Giralia**	**62.95**	**253**	P	**P**	**21 50 22.2**	**+0.6**	
	baz=63,SNR=7.6							
GIRL	**Giralia**	**62.95**	**253**	P	**P**	**21 50 21.8**	**+0.2**	
TWSI	**Taliwang, Sumb**	**63.31**	**269**	P	**P**	**21 50 23.0**	**-1.0**	
	comp=Z,380nmcomp=Z,47nm,0.8s							
JAGI	**Jajag, Banyuwa**	**65.99**	**268**	P	**P**	**21 50 39.3**	**-1.7**	
JAGI				IAmb	IAmb	21 50 39.9		
	comp=Z,32nm,0.8s							
CASY	**Casey**	**66.50**	**205**	P	**P**	**21 50 43.6**	**+0.5**	
CASY				IAmb	IAmb	21 50 44.5		
	comp=Z,22nm,1.1s							
BBKI	**Banjar Baru**	**66.73**	**274**	P	**P**	**21 50 45.2**	**-0.4**	
	comp=Z,14nm,0.9s							
MJAR	**Matsushiro Arr**	**67.53**	**323**	P	**P**	**21 50 49.1**	**-0.9**	
	comp=Z,2.1nm,0.8s,baz=153,slow=6.3,SNR=6.5							
MJAR	**Matsushiro Arr**	**67.53**	**323**	P	**P**	**21 50 49.7**	**-0.3**	
MAJO	**Matsushiro**	**67.53**	**323**	P	**P**	**21 50 49.5**	**-0.5**	
MAJO				IAmb	IAmb	21 51 05.0		
	comp=Z,12nm,1.4s							
MAT	**Matsushiro**	**67.53**	**323**	P	**P**	**21 50 49.2**	**-0.8**	
JSD	**Sado**	**68.56**	**324**	P	**P**	**21 50 56.7**	**+0.5**	
JSD				IAmb	IAmb	21 51 13.8		
	comp=Z,13nm,1.1s							
KKM	**Kota Kinabalu**	**68.58**	**284**	P	**P**	**21 50 56.6**	**-0.3**	
KKM				IAmb	IAmb	21 50 57.0		
	comp=Z,12nm,0.6s							
JHS	**Saijyo**	**69.53**	**319**	P	**P**	**21 51 02.5**	**+0.3**	
UGM	**Wanagama**	**69.60**	**268**	P	**P**	**21 51 02.5**	**-0.5**	
SSLB	**Suanglung**	**71.95**	**303**	P	**P**	**21 51 15.4**	**-1.3**	
SSLB				IAmb	IAmb	21 51 15.6		
	comp=Z,28nm,1.3s							
KSM	**Kuching**	**72.57**	**277**	P	**P**	**21 51 20.9**	**+0.5**	
KSM				IAmb	IAmb	21 51 21.5		
	comp=Z,22nm,0.8s							
QSPA	**South Pole Qui**	**72.57**	**180**	P	**P**	**21 51 20.9**	**+1.3**	
PETK	**Petropavlovsk-**	**73.25**	**345**	P	**P**	**21 51 23.0**	**-0.4**	
	comp=Z,4.1nm,0.9s,baz=133,slow=8.3,SNR=4.9							
PETK	**Petropavlovsk-**	**73.25**	**345**	P	**P**	**21 51 23.3**	**-0.2**	
KSRS	**Korea Array**	**74.34**	**318**	P	**P**	**21 51 30.1**	**+0.1**	
	comp=Z,1.1nm,0.5s,baz=135,slow=6.2,SNR=4.8							
KASI	**Kota Agung**	**76.01**	**269**	P	**P**	**21 51 38.4**	**-1.4**	
	comp=Z,56nm,0.8s							
NJ2	**Nanjing**	**77.62**	**309**	*e*P	**P**	**21 51 48.6**	**+0.4**	
NJ2				pmax	pmax			
	comp=Z,11nm,0.6s							
NVAR	**Mina Array Bea**	**79.16**	**44**	P	**P**	**21 51 57.8**	**+1.3**	
	comp=Z,0.8nm,0.7s,baz=217,slow=6.8,SNR=4.8							
UBPT	**Khong Chiam**	**81.73**	**289**	P	**P**	**21 52 10.3**	**+0.2**	
UBPT				IAmb	IAmb	21 52 18.5		
	comp=Z,22nm,1.4s							
SUA	**Susitna One**	**81.73**	**13**	P	**P**	**21 52 09.4**	**+0.2**	
IPM	**Ipoh**	**82.30**	**277**	P	**P**	**21 52 13.8**	**+0.6**	
IPM				IAmb	IAmb	21 52 14.2		
	comp=Z,16nm,0.7s							
KULM	**Kulim**	**82.91**	**278**	P	**P**	**21 52 16.5**	**+0.4**	
TNA	**Tin City**	**83.17**	**4**	P	**P**	**21 52 16.7**	**+0.5**	
MSU	**Marysvale**	**83.35**	**46**	P	**P**	**21 52 15.4**	**-2.7**	
GLB	**Gilahina Butte**	**83.38**	**16**	P	**P**	**21 52 17.7**	**+0.2**	
BJI	**Beijing**	**83.44**	**315**	P	**P**	**21 52 18.6**	**+0.4**	
BJI				pmax	pmax			
	comp=Z,6.0nm,1.0s							
TRF	**Thorofare Moun**	**83.61**	**12**	P	**P**	**21 52 18.1**	**-0.6**	
RND	**Reindeer**	**83.87**	**13**	P	**P**	**21 52 20.1**	**+0.2**	
MAW	**Mawson**	**84.24**	**200**	P	**P**	**21 52 21.5**	**-0.1**	
	comp=Z,3.7nm,0.6s,baz=154,slow=6.2,SNR=9.3							
MAW	**Mawson**	**84.24**	**200**	P	**P**	**21 52 22.6**	**+0.9**	
	baz=84,SNR=7.5							
MAW	**Mawson**	**84.24**	**200**	P	**P**	**21 52 22.5**	**+0.8**	
GSI	**Gunungsitoli**	**84.61**	**273**	P	**P**	**21 52 25.2**	**+0.6**	
GSI				IAmb	IAmb	21 52 25.8		
	comp=Z,22nm,0.7s							
WRH	**Wood River Hil**	**84.97**	**13**	P	**P**	**21 52 25.1**	**-0.1**	
ILAR	**Eielson Array**	**85.49**	**13**	P	**P**	**21 52 27.0**	**-0.7**	
	comp=Z,0.4nm,0.4s,baz=226,slow=5.1,SNR=6.9							
TX31	**Lajitas Ar. Si**	**85.82**	**58**	P	**P**	**21 52 31.4**	**+1.2**	
TX31				IAmb	IAmb	21 52 33.4		
	comp=Z,14nm,1.2s							
TX32	**Lajitas Array**	**85.82**	**58**	P	**P**	**21 52 31.8**	**+1.6**	
TXAR	**Lajitas Array**	**85.82**	**58**	P	**P**	**21 52 31.8**	**+1.6**	
	comp=Z,1.3nm,0.8s,baz=215,slow=6.6,SNR=12							
TXAR	**Lajitas Array**	**85.82**	**58**	P	**P**	**21 52 32.3**	**+2.1**	
HHC	**Hu-ho-hao-te**	**86.93**	**314**	*e*P	**P**	**21 52 36.3**	**+1.1**	
HHC				pmax	pmax			
	comp=Z,8.0nm,1.1s							
HHC				pmax	pmax			
	comp=Z,150nm,5.8s							
PDAR	**Pinedale Array**	**87.09**	**43**	P	**P**	**21 52 36.6**	**+0.5**	
	comp=Z,0.1nm,0.3s,baz=202,slow=4.6,SNR=2.5							
KMI	**Kunming**	**87.58**	**297**	⇑P	**P**	**21 52 41.0**	**+2.3**	
KMI				pmax	pmax			
	comp=Z,10.0nm,0.9s							
KMI				pmax	pmax			
	comp=Z,100nm,4.2s							
CM35	**Chiang Mai Arr**	**88.56**	**290**	P	**P**	**21 52 44.0**	**+0.8**	
CM04	**Chiang Mai Arr**	**88.63**	**290**	P	**P**	**21 52 46.0**	**+2.5**	
	comp=Z,60nmcomp=Z,3.7nm,1.0s							
CM01	**Chiang Mai Arr**	**88.65**	**290**	P	**P**	**21 52 47.1**	**+3.5**	
	comp=Z,4.9nm,1.3s							
CM05	**Chiang Mai Arr**	**88.66**	**290**	P	**P**	**21 52 45.0**	**+1.4**	
	comp=Z,2.7nm,1.0s							
CM02	**Chiang Mai Arr**	**88.67**	**290**	P	**P**	**21 52 45.4**	**+1.7**	
	comp=Z,4.2nm,1.1s							
CMAR	**Chiang Mai Arr**	**88.68**	**290**	P	**P**	**21 52 44.5**	**+0.7**	
	comp=Z,3.2nm,1.0s,baz=111,slow=3.3,SNR=15							
CM15	**Chiang Mai Arr**	**88.69**	**290**	P	**P**	**21 52 45.8**	**+2.0**	
CM13	**Chiang Mai Arr**	**88.70**	**290**	P	**P**	**21 52 45.9**	**+2.1**	
	comp=Z,2.8nm,1.0s							
CM33	**Chiang Mai Arr**	**88.79**	**290**	P	**P**	**21 52 45.0**	**+0.7**	
LZH	**Lanzhou**	**90.58**	**308**	*e*P	**P**	**21 52 50.4**	**-2.0**	
LZH				pmax	pmax			
	comp=Z,17nm,1.4s							
VNA3	**Neumayer Olymp**	**91.17**	**176**	P	**P**	**21 52 54.8**	**+0.5**	
SONM	**Songino Array**	**93.19**	**319**	P	**P**	**21 53 03.2**	**-0.9**	
	comp=Z,0.3nm,0.5s,baz=142,slow=6.2,SNR=4.2							
SONM	**Songino Array**	**93.19**	**319**	P	**P**	**21 53 04.8**	**+0.8**	
MKAR	**Makanchi Array**	**108.79**	**314**	PKiKP	**PKiKP**	**21 58 14.0**	**-1.1**	
	comp=Z,0.3nm,0.5s,baz=217,slow=1.0,SNR=6.1							
ARCES	**ARCESS Array B**	**125.89**	**350**	PKP	**PKPdf**	**21 58 46.5**	**-0.7**	
	comp=Z,3.3nm,1.0s,baz=329,slow=3.2,SNR=4.9							
FINES	**FINESS Array B**	**132.76**	**344**	PKP	**PKPdf**	**21 58 59.6**	**-0.8**	
	comp=Z,5.2nm,1.2s,baz=304,slow=3.2,SNR=4.3							
AKASG	**Malin Array Be**	**140.15**	**333**	PKP	**PKiKP**	**21 59 16.0**	**-1.0**	
	comp=Z,0.5nm,0.4s,baz=53,slow=2.5,SNR=1.8							
KWP	**Kalwaria Pacla**	**143.66**	**337**		PKPbc	21 59 19.9	+0.3	
ILGA	**Ilgaz**	**143.72**	**317**		PKPbc	21 59 20.4	0.0	
BUR08	**Bucovina Ar. S**	**144.19**	**332**		**PKPdf**	**21 59 22.3**	**+0.5**	
BR131	**Keskin Array S**	**144.44**	**315**	PKPbc	**PKPdf**	**21 59 22.6**	**+0.1**	
BRTR	**Keskin Array B**	**144.44**	**315**	PKP	PKPbc	21 59 22.3	-0.2	
	comp=Z,2.5nm,0.5s,baz=91,slow=1.9,SNR=17							
BRTR	**Keskin Array B**	**144.44**	**315**		PKPbc	21 59 22.4	-0.1	
CRVS	**Cervenica-Dubn**	**144.72**	**337**	*e*PKP	**PKPab**	**21 59 23.8**	**+0.2**	
OSTC	**Ostas**	**144.97**	**344**	*e*PKP	**PKPdf**	**21 59 23.1**	**+0.2**	
CLL	**Collm**	**145.03**	**347**	⇓*i*PKPbc	**PKPbc**	**21 59 23.5**	**-0.2**	
	comp=Z,19nm,1.3s							
CLL	**Collm**	**145.03**	**347**	PKPbc	**PKPbc**	**21 59 23.9**	**+0.1**	
UPC	**Upice**	**145.06**	**344**	*e*PKP	**PKPbc**	**21 59 24.3**	**+0.4**	
DPC	**Dobruska-Polom**	**145.12**	**343**	*e*PKP	**PKPbc**	**21 59 24.6**	**+0.5**	
LANS	**Liptovska Anna**	**145.22**	**339**	*e*PKP	**PKPab**	**21 59 25.6**	**+0.1**	
BRG	**Berggiesshubel**	**145.24**	**346**	*e*PKP	**PKPbc**	**21 59 24.4**	**0.0**	
BRG				Amp		21 59 26.3		
	comp=Z,3.5nm,0.7s							
BRG				*ex*	x	21 59 29.3		
BRG				Amp		21 59 31.1		
	comp=Z,1.4nm,0.6s							
KRLC	**Kraliky**	**145.24**	**343**	*e*PKP	**PKPbc**	**21 59 24.6**	**+0.1**	
MORC	**Moravsky Berou**	**145.29**	**342**	*e*PKP	**PKPbc**	**21 59 24.9**	**+0.3**	
PVCC	**Panska Ves**	**145.41**	**345**	*e*PKP	**PKPbc**	**21 59 25.1**	**+0.2**	
MLR	**Muntele Rosu**	**145.44**	**329**		**PKPbc**	**21 59 25.2**	**-0.1**	
PRU	**Pruhonice**	**145.92**	**345**	*e*PKP	**PKPbc**	**21 59 26.5**	**+0.1**	
VRAC	**Vranov**	**145.99**	**342**	*e*PKP	**PKPbc**	**21 59 26.9**	**+0.3**	
VYHS	**Vyhne**	**146.00**	**339**	*e*PKP	**PKPdf**	**21 59 25.1**	**+0.4**	
JAVC	**Velka Javorina**	**146.06**	**341**	*e*PKP	**PKPbc**	**21 59 27.8**	**+0.9**	
KOLL	**Kolacno**	**146.07**	**340**	*e*PKP	**PKPbc**	**21 59 26.8**	**0.0**	
KRUC	**Moravsky**	**146.26**	**342**	*e*PKP	**PKPbc**	**21 59 27.4**	**0.0**	
MODS	**Modra-Piesok**	**146.61**	**341**	*e*PKP	**PKPbc**	**21 59 28.0**	**-0.4**	
GRF	**Grafenberg Arr**	**146.93**	**348**	*e*PKP	**PKPbc**	**21 59 29.4**	**+0.2**	
	baz=17,slow=2.1							
KHC	**Kasperske Hory**	**146.95**	**345**	*e*PKP	**PKPbc**	**21 59 29.4**	**+0.1**	
KHC	**Kasperske Hory**	**146.95**	**345**		**PKPbc**	**21 59 29.6**	**+0.3**	
CKRC	**Cesky Krumlov**	**147.06**	**344**	*e*PKP	**PKPbc**	**21 59 29.4**	**-0.1**	
GEC2	**GERESS Array S**	**147.19**	**345**		**PKPbc**	**21 59 30.3**	**+0.4**	
GERES	**GERESS Array B**	**147.19**	**345**	PKPbc	**PKPbc**	**21 59 30.2**	**+0.2**	
	comp=Z,6.2nm,0.7s,baz=30,slow=2.8,SNR=21							
CONA	**Conrad Observa**	**147.44**	**342**	*i* P	**PKPbc**	**21 59 31.2**	**+0.5**	
	comp=Z,5.7nm,0.7s							
WLF	**Walferdange**	**147.68**	**354**	PKPbc	**PKiKP**	**21 59 32.4**	**-0.2**	
MOA	**Molln**	**147.96**	**344**	*e*P	**PKPbc**	**21 59 31.9**	**0.0**	
	comp=Z,5.8nm,1.4s							
ARSA	**Arzberg**	**148.15**	**342**	*i* P	**PKPbc**	**21 59 32.2**	**-0.2**	
	comp=Z,2.5nm,0.8s							
SOKA	**Soboth**	**148.81**	**342**	*e*P	**PKPbc**	**21 59 33.7**	**-0.4**	
	comp=Z,3.2nm,0.8s,SNR=5.1							
VTS	**Vitosha**	**148.86**	**328**		**PKPbc**	**21 59 34.5**	**0.0**	
KBA	**Koelnbreinsper**	**148.91**	**344**	*i* P	**PKPbc**	**21 59 34.0**	**-0.5**	
	comp=Z,2.7nm,0.5s							
WATA	**Walderalm**	**149.10**	**347**	*i* P	**PKPbc**	**21 59 34.6**	**-0.3**	
	comp=Z,3.5nm,0.6s							
RETA	**Reutte**	**149.13**	**348**	*i* P	**PKPbc**	**21 59 34.8**	**0.0**	
	comp=Z,1.4nm,0.4s							
WTTA	**Wattenberg**	**149.15**	**347**	*e*P	**PKPbc**	**21 59 35.0**	**-0.1**	
	comp=Z,6.3nm,0.6s,SNR=4.9							
MOTA	**Moosalm**	**149.19**	**347**	*i* P	**PKPbc**	**21 59 34.8**	**-0.3**	
	comp=Z,7.3nm,1.1s							
DIVS	**Divibare**	**149.23**	**334**		**PKPbc**	**21 59 35.4**	**+0.2**	
MYKA	**Terra Mystica**	**149.25**	**344**	*e*P	**PKPbc**	**21 59 34.3**	**-0.9**	
	comp=Z,3.9nm,0.5s							
SQTA	**Sankt Quirin**	**149.29**	**347**	*i* P	**PKPbc**	**21 59 35.3**	**0.0**	
	comp=Z,4.5nm,0.5s							
VNDS	**Vrh nad Dolski**	**149.43**	**342**	*i* PKPbc	**PKPbc**	**21 59 35.2**	**-0.4**	
ABTA	**Abfaltersbach**	**149.43**	**345**	*i* P	**PKPbc**	**21 59 35.1**	**-0.5**	
	comp=Z,5.7nm,0.6s,SNR=8.2							
DAVA	**Damuels**	**149.49**	**349**	*e*P	**PKPbc**	**21 59 36.2**	**+0.3**	
	comp=Z,6.8nm,1.2s							
FETA	**Feichten**	**149.58**	**348**	*i* P	**PKPbc**	**21 59 36.2**	**+0.1**	
	comp=Z,5.3nm,1.0s							
GBAS	**Gorenja Brezov**	**149.66**	**342**	*i* PKPbc	**PKPbc**	**21 59 35.7**	**-0.4**	
STAL	**STALIGIAL**	**149.84**	**344**	PKPbc	**PKPbc**	**21 59 35.7**	**-0.8**	
GBRS	**Gornja Briga**	**149.91**	**341**	*i* PKPbc	**PKPbc**	**21 59 36.7**	**-0.1**	
CTI	**Castel Tesino**	**150.30**	**346**	PKPbc	**PKPbc**	**21 59 38.0**	**+0.3**	
FNA	**Florina**	**151.15**	**328**		**PKPbc**	**21 59 39.2**	**-0.6**	
AGG	**Agios Georgios**	**151.91**	**324**		**PKPbc**	**21 59 40.3**	**-1.2**	
OSSC	**Osservatorio P**	**152.76**	**344**	PKPbc	**PKiKP**	**21 59 46.8**	**+3.5**	

*IDC **13** 21:42:16.9±1.0, 41°.33N×117°.23W, h0km, mb2.8/1, mb1 3.1/4, mb1mx3.0/37, mbtmp2.8/4, ML3.0/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/16, Error ellipse: s-maj=10.0km s-min=6.5km az=157.0*

*NEIC **13** 21:42:18.7±1.9, 41°.20N±0°.05×117°.28W±0°.06, h0km±2km, ML2.6/47, Error ellipse: s-maj=8.4km s-min=7.5km az=39.0*

ISC 13 21:42:18.3±1.1, 41°.22N±0°.04×117°.26W±0°.04, h0km, n36, σ1§32/35, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WVOR	**Wild Horse Val**	**1.59**	**320**			**Pn**	**21 42 47.3**	**-0.5**
ELK	**Elko**	**1.60**	**107**	Pn	Pn	**Pn**	**21 42 46.0**	**-2.1**
	2μm,0.3s,baz=16,slow=0.0,SNR=1.4							
ELK				Lg	Lg	Lg	21 43 07.3	
	633nm,0.3s,baz=159,slow=0.2,SNR=8.3							
PAHR	**Pah Rah Range**	**2.21**	**228**			**Pn**	**21 42 56.0**	**-0.4**
KVN	**Kaiserville**	**2.26**	**197**	Pn	Pn	**Pn**	**21 42 56.7**	**-0.3**
KVN				IAML			21 43 39.6	
	comp=E,28nm,0.9s							
J08A	**Circle Bar Ran**	**2.32**	**338**	Pn	Pn	**Pn**	**21 42 58.3**	**+0.5**
MOD	**Modoc Plateau**	**2.38**	**288**	Pn	Pn	**Pn**	**21 42 58.5**	**-0.2**
MOD				IAML			21 43 39.0	
	comp=E,28nm,0.8s							
MOD				IAML			21 43 44.8	
	comp=N,25nm,0.9s							
MFID	**Camas Ranch**	**2.44**	**25**			**Pn**	**21 42 59.0**	**-0.5**
MFID				IAML			21 43 39.9	
	comp=N,35nm,1.0s							
MFID				IAML			21 43 40.4	
	comp=N,43nm,0.6s							
YERR	**Yerington**	**2.70**	**215**	Pn	Pn	**Pn**	**21 43 02.3**	**-0.8**
YERR				IAML			21 43 52.6	
	comp=N,34nm,1.0s							
YERR				IAML			21 43 53.8	
	comp=E,25nm,1.2s							
BEKR	**Beckworth**	**2.72**	**241**			**Pn**	**21 43 03.4**	**+0.1**
BEKR				IAML			21 43 57.1	
	comp=E,17nm,0.8s							
RYN	**Ryan**	**2.76**	**201**	Pn	Pn	**Pn**	**21 43 03.6**	**-0.3**
RYN				IAML			21 43 55.0	
	comp=E,23nm,0.6s							
RYN				IAML			21 43 55.4	
	comp=N,31nm,0.7s							
PNTR	**Pine Nut**	**2.78**	**221**			**Pn**	**21 43 04.1**	**-0.2**
PNTR				IAML			21 43 59.5	
	comp=N,32nm,0.9s							
NV11	**Mina Array Sit**	**2.87**	**194**	Pn	Pn	**Pn**	**21 43 05.9**	**+0.5**
NV11				IAML			21 43 54.3	
	comp=E,14nm,0.8s							
NV11				IAML			21 44 03.5	
	comp=N,13nm,1.7s							
NVAR	**Mina Array Bea**	**2.90**	**196**	Pn	Pn	**Pn**	**21 43 05.4**	**-0.5**
	comp=N,0.5nm,0.3s,baz=15,slow=13,SNR=15							
NVAR				Pg	Pg	**Pb**	**21 43 11.6**	**+0.6**
	comp=N,2.2nm,0.3s,baz=14,slow=15,SNR=13							
NVAR				Lg	Lg		21 43 52.7	
	comp=N,3.4nm,0.3s,baz=46,slow=21,SNR=10.0							
NVAR	**Mina Array Bea**	**2.90**	**196**			**Pn**	**21 43 05.7**	**-0.2**
R11A	**Troy Canyon, C**	**3.14**	**155**	Pn	Pn	**Pn**	**21 43 09.2**	**-0.1**
HLID	**Hailey**	**3.15**	**41**			**Pn**	**21 43 08.5**	**-0.8**
HLID				IAML			21 44 03.0	
	comp=N,14nm,0.7s							
HLID				IAML			21 44 04.4	
	comp=N,9.9nm,1.1s							
SPR3	**Spring Creek 3**	**3.16**	**134**			**Pn**	**21 43 11.1**	**+1.5**
SPR3				IAML			21 44 03.7	
	comp=E,11nm,1.0s							
WAKR	**Walker**	**3.19**	**212**	Pn	Pn	**Pn**	**21 43 09.5**	**-0.3**
WAKR				IAML			21 44 08.8	
	comp=E,15nm,2.6s							
WAKR				IAML			21 44 16.5	
	comp=N,10nm,2.7s							
BGU	**Big Grassy Mou**	**3.21**	**94**	Pn	Pn	**Pn**	**21 43 08.5**	**-1.7**
BGU				IAML			21 44 09.0	
	comp=E,14nm,0.7s							
I07A	**Izee**	**3.31**	**331**	Pn	Pn	**Pn**	**21 43 12.5**	**+1.1**
I07A				IAML			21 44 19.7	
	comp=N,15nm,2.6s							
I07A				IAML			21 44 55.9	
	comp=E,16nm,5.0s							
HVU	**Hansel Valley**	**3.42**	**79**			**Pn**	**21 43 12.1**	**-0.9**
AFDM	**Forest Hills D**	**3.64**	**233**	Pn	Pn	**Pn**	**21 43 16.4**	**+0.5**
AFDM				IAML			21 44 52.1	
	comp=N,6.6nm,4.8s							
PSUT	**Pine Spring**	**3.75**	**135**	Pn	Pn	**Pn**	**21 43 19.5**	**+1.9**
PLID	**Pearl Lake**	**3.98**	**13**	Pn	Pn	**Pn**	**21 43 23.1**	**+2.4**
PLID				IAML			21 44 13.0	
	comp=N,6.0nm,4.1s							
PLID				IAML			21 44 48.6	
	comp=N,7.7nm,3.5s							
YBH	**Yreka Blue Hor**	**4.12**	**279**	Pn	Pn	**Pn**	**21 43 22.3**	**-0.4**
	comp=N,0.2nm,0.3s,baz=95,slow=12,SNR=2.3							
YBH				Lg	Lg	Lg	21 44 33.6	
	comp=N,0.2nm,0.3s,baz=306,slow=8.7,SNR=2.7							
YBH	**Yreka Blue Hor**	**4.12**	**279**	Pn	Pn	**Pn**	**21 43 22.9**	**+0.3**
YBH				IAML			21 45 18.1	
	comp=N,12nm,4.6s							
PRN	**Pahroc Range**	**4.17**	**155**	Pn	Pn	**Pn**	**21 43 25.8**	**+2.4**
ECR	**Eagle Creek**	**4.75**	**65**	Pn	Pn	**Pn**	**21 43 34.2**	**+2.9**
SRU	**San Rafael Swe**	**5.58**	**110**			**Pn**	**21 43 45.8**	**+3.1**
QLMT	**Earthquake Lak**	**5.59**	**48**	Pn	Pn	**Pn**	**21 43 43.8**	**+0.8**
PDAR	**Pinedale Array**	**5.95**	**72**	Pn	Pn	**Pn**	**21 43 48.4**	**+0.6**
	comp=N,0.2nm,0.3s,baz=280,slow=12,SNR=2.2							
PDAR				Pg	**Pb**		**21 44 01.3**	**-1.6**
	comp=N,0.3nm,0.3s,baz=264,slow=15,SNR=4.6							
PDAR				Lg	Lg	Lg	21 45 22.4	
	comp=N,0.1nm,0.3s,baz=75,slow=35,SNR=1.3							
MSO	**Missoula**	**6.10**	**22**	Pn	Pn	**Pn**	**21 43 51.2**	**+1.5**
I56US	**NEWPORT INFRAS**	**7.04**	**1**	*i*			22 25 30.0	
	baz=180,slow=313,SNR=3.3							
ANMO	**Albuquerque**	**10.57**	**123**	LR	LR		21

NEIC ***13*** *22:16:19.8,21.10°S×68.59°W,h120km,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=4.20; $M_{\theta\theta}$1.62; $M_{\phi\phi}$2.58; $M_{r\theta}$4.83; $M_{r\phi}$-3.54; $M_{\theta\phi}$-1.40; Fault plane solution: $M_0$7.16000×10^{16} NP1:ϕ_s294.94000°, δ69.61000°, λ-112.61000°. NP2:ϕ_s165.03000°, δ30.08000°, λ-44.03000°. Principal axes: T 7.3447, Plg21.0000°, Azm42.0000°; N -0.3787, Plg21.0000°, Azm303.0000°; P -6.9660, Plg59.0000°, Azm173.0000°;*

NEIC ***13*** *22:16:20.2±2.5,21.08±0.04°×68.63W±0.05,h122km±1km, mb5.4/339, Mwb5.3/10, Mwr5.2/46, Mww5.2, ML5.1(GUC) Error ellipse: s-maj=8.3km s-min=6.5km az=253.0*

IDC ***13*** *22:16:20.3±0.3,21.09S×68.51W,h118km±2km, mb4.8/28, mb1 4.9/32, mb1mx4.8/40, mbtmp5.2/32, MS4.0/16, Ms1 4.0/16, ms1mx3.8/29, Error ellipse: s-maj=10.8km s-min=5.1km az=90.0*

NEIC ***13*** *22:16:23,21.11S×68.53W,h110km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=4.77; $M_{\theta\theta}$2.20; $M_{\phi\phi}$2.56; $M_{r\theta}$3.42; $M_{r\phi}$-5.24; $M_{\theta r}$-0.97; Fault plane solution: $M_0$7.56000×10^{16} NP1:ϕ_s164.00000°, δ38.00000°, λ-46.00000°. NP2:ϕ_s293.00000°, δ63.00000°, λ-118.00000°. Principal axes: T 8.3571, Plg13.0000°, Azm44.0000°; N -2.0084, Plg25.0000°, Azm307.0000°; P -6.3488, Plg61.0000°, Azm159.0000°;*

GCMT ***13*** *22:16:24.2±0.2,21.14S±0.01°×68.51W±0.01,h139km±1km, MW5.2/139, Moment Tensor Solution. s105,c133; s139,c211; Duration: 150 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.60±.01; $M_{\theta\theta}$0.26±.02; $M_{\phi\phi}$0.35±.02; $M_{r\theta}$0.43±.01; $M_{r\phi}$-0.62±.01; $M_{\theta r}$-0.08±.01; Best double couple: $M_0$0.91200×10^{17} NP1:ϕ_s165.00000°, δ40.00000°, λ-46.00000°. NP2:ϕ_s293.00000°, δ63.00000°, λ-120.00000°. Principal axes: T 1.0080, Plg13.0000°, Azm45.0000°; N -0.1920, Plg26.0000°, Azm308.0000°; P -0.8160, Plg60.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 22:16:19.5±0.3,21.06S±0.02×68.53W±0.03,h116km±2km, h116km:pP-P,n685,σ1§64/733,mb5.3/202,63C-103D, Fault plane solution: NP1:ϕ_s114.77859°,δ34.80379°, λ-76.60957°. **NP2:**ϕ_s278.61063°,δ56.27198°, λ-99.14495°. **Principal axes:** T Plg10.8356°, Azm15.1809°; N Plg7.5957°, Azm283.7184°; P Plg76.7141°, Azm159.3343°; **Fault plane solution: NP1:**ϕ_s323.92706°,δ52.37882°,λ-108.13472°. **NP2:** ϕ_s172.14217°,δ41.17345°,λ-68.00816°. **Principal axes:** T Plg5.7742°, Azm66.7072°; N Plg14.2724°, Azm335.2332°; P Plg74.5575°, Azm178.1801°;

Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.90**	**271**	*eP*		**Pn**	**22 16 39.2**	**-1.0**
PB01				*i* S		**Sn**	**22 16 55.1**	**-0.8**
PB01				IAML			22 16 56.9	
	comp=N,53μm,0.2s							
PB01	**IPOC Station P**	**0.90**	**271**			**Pn**	**22 16 39.3**	**-1.0**
PB01				Sn		**Sn**	**22 16 54.7**	**-1.2**
PB01	**IPOC Station P**	**0.90**	**271**	*eP*		**Pn**	**22 16 39.4**	**-0.8**
PB01				*eS*		**Sn**	**22 16 55.5**	**-0.5**
PB01				IAML			22 16 58.9	
	comp=Z,31μm,0.2s							
PB09	**IPOC Station P**	**0.99**	**222**	*eP*		**Pn**	**22 16 40.8**	**-0.5**
PB09				*i* S		**Sn**	**22 16 57.5**	**-0.2**
PB09				IAML			22 16 59.1	
	comp=N,34μm,0.3s							
PB09	**IPOC Station P**	**0.99**	**222**			**Pn**	**22 16 40.9**	**-0.5**
PB09				Sn		**Sn**	**22 16 57.0**	**-0.8**
PB09	**IPOC Station P**	**0.99**	**222**	*eP*		**Pn**	**22 16 40.8**	**-0.5**
PB09				*eS*		**Sn**	**22 16 57.9**	**+0.2**
PB09				IAML			22 16 58.9	
	comp=Z,43μm,1.2s							
PB08	**IPOC Station P**	**1.08**	**327**	*eP*		**Pn**	**22 16 43.0**	**+0.5**
PB08				*i* S		**Sn**	**22 17 01.1**	**+1.3**
PB08				IAML			22 17 04.0	
	comp=N,40μm,0.6s							
PB08	**IPOC Station P**	**1.08**	**327**			**Pn**	**22 16 43.0**	**+0.5**
PB08				Sn		**Sn**	**22 17 00.5**	**+0.6**
PB08	**IPOC Station P**	**1.08**	**327**	*eP*		**Pn**	**22 16 43.0**	**+0.5**
PB08				*eS*		**Sn**	**22 17 01.9**	**+2.1**
PB08				IAML			22 17 04.4	
	comp=Z,21μm,1.0s							
PB07	**IPOC Station P**	**1.43**	**242**	*eP*		**Pn**	**22 16 44.7**	**-1.4**
PB07				*i* S		**Sn**	**22 17 04.5**	**-1.7**
PB07				IAML			22 17 06.4	
	comp=N,37μm,0.6s							
PB07	**IPOC Station P**	**1.43**	**242**			**Pn**	**22 16 44.6**	**-1.4**
PB07				Sn		**Sn**	**22 17 04.0**	**-2.2**
PB07	**IPOC Station P**	**1.43**	**242**	*eP*		**Pn**	**22 16 44.6**	**-1.4**
PB07				*eS*		**Sn**	**22 17 04.6**	**-1.7**
PB07				IAML			22 17 09.2	
	comp=Z,20μm,0.5s							
HMBC	**Humberstone**	**1.49**	**301**	*eP*		**Pn**	**22 16 45.8**	**-0.9**
HMBC				*i* S		**Sn**	**22 17 06.5**	**-0.9**
HMBC				IAML			22 17 08.2	
	comp=N,78μm,0.7s							
PB03	**IPOC Station P**	**1.51**	**229**	*eP*		**Pn**	**22 16 45.6**	**-1.4**
PB03				*i* S		**Sn**	**22 17 05.8**	**-2.0**
PB03				IAML			22 17 07.1	
	comp=N,27μm,0.3s							
PB03	**IPOC Station P**	**1.51**	**229**	*eP*		**Pn**	**22 16 45.5**	**-1.4**
PB03				*eS*		**Sn**	**22 17 06.0**	**-1.8**
PB03				IAML			22 17 10.3	
	comp=Z,18μm,0.5s							
PATCX	**Punta Patache**	**1.54**	**279**	⇑*iP*		**Pn**	**22 16 46.2**	**-1.0**
PATCX				*i* S		**Sn**	**22 17 06.5**	**-1.7**
PATCX				IAML			22 17 08.6	
	comp=N,75μm,0.2s							
PATCX	**Punta Patache**	**1.54**	**279**			**Pn**	**22 16 46.2**	**-1.0**
PATCX				Sn		**Sn**	**22 17 06.0**	**-2.3**
PATCX	**Punta Patache**	**1.54**	**279**	*eP*		**Pn**	**22 16 46.2**	**-1.0**
PATCX				*eP*		**Pn**	**22 16 46.4**	**-0.8**
LVC	**Limon Verde**	**1.58**	**193**	P		**Pn**	**22 16 47.7**	**-0.4**
	comp=N,4μm,0.3s,baz=14,slow=9.0							
LVC				S		**Sn**	**22 17 09.3**	**-0.5**
	comp=N,2μm,0.3s,baz=270,slow=23,SNR=54							
LVC	**Limon Verde**	**1.58**	**193**	⇓*iP*		**Pn**	**22 16 47.9**	**-0.2**
LVC				*i* S		**Sn**	**22 17 09.1**	**-0.7**
LVC	**Limon Verde**	**1.58**	**193**			**Pn**	**22 16 47.9**	**-0.2**
LVC				Sn		**Sn**	**22 17 08.9**	**-0.9**
LVC	**Limon Verde**	**1.58**	**193**	*eP*		**Pn**	**22 16 47.9**	**-0.2**
LVC				*eS*		**Sn**	**22 17 10.0**	**+0.2**
LVC	**Limon Verde**	**1.58**	**193**	*eP*		**Pn**	**22 16 47.7**	**-0.4**
LVC				*eS*		**Sn**	**22 17 09.9**	**+0.2**
TA01	**Diego Aracena**	**1.62**	**287**	*eP*		**Pn**	**22 16 46.9**	**-1.3**
TA01				*i* S		**Sn**	**22 17 08.1**	**-1.8**
TA01				IAML			22 17 10.6	
	comp=N,42μm,0.5s							
TA01	**Diego Aracena**	**1.62**	**287**	Pn		**Pn**	**22 16 47.2**	**-0.9**
PB11	**IPOC Station P**	**1.67**	**321**			**Pn**	**22 16 48.4**	**-0.5**
TA02	**Huaiquique**	**1.69**	**297**	*eP*		**Pn**	**22 16 47.8**	**-1.1**
TA02				*i* S		**Sn**	**22 17 09.7**	**-1.7**
TA02				IAML			22 17 15.4	
	comp=N,44μm,0.1s							
TA02	**Huaiquique**	**1.69**	**297**	Pn		**Pn**	**22 16 47.9**	**-1.1**
PB06	**IPOC Station P**	**1.90**	**210**	*eP*		**Pn**	**22 16 50.7**	**-1.1**
PB06				*i* S		**Sn**	**22 17 14.4**	**-2.0**
PB06				IAML			22 17 16.0	
	comp=E,30μm,0.5s							
PB06	**IPOC Station P**	**1.90**	**210**			**Pn**	**22 16 50.7**	**-1.1**
PB06	**IPOC Station P**	**1.90**	**210**	*eP*		**Pn**	**22 16 50.7**	**-1.1**
PB06				*eS*		**Sn**	**22 17 14.8**	**-1.6**
PB06				IAML			22 17 17.8	
	comp=Z,10μm,0.8s							
PB04	**IPOC Station P**	**1.97**	**230**	*eP*		**Pn**	**22 16 50.8**	**-1.8**
PB04				*i* S		**Sn**	**22 17 15.2**	**-2.6**
PB04				IAML			22 17 19.4	
	comp=E,25μm,0.8s							
PB04	**IPOC Station P**	**1.97**	**230**			**Pn**	**22 16 50.8**	**-1.8**
PB04	**IPOC Station P**	**1.97**	**230**	*eP*		**Pn**	**22 16 50.8**	**-1.8**
PB04				*eS*		**Sn**	**22 17 17.5**	**-0.3**
PB04				IAML			22 17 23.1	
	comp=Z,10μm,0.3s							
PSGC	**Pisagua**	**2.09**	**314**	*eP*		**Pn**	**22 16 52.7**	**-1.3**
PSGC				*i* S		**Sn**	**22 17 19.2**	**-1.1**
PSGC				IAML			22 17 26.1	
	comp=E,11μm,0.4s							
PSGCX	**Pisagua**	**2.09**	**314**	Pn		**Pn**	**22 16 52.8**	**-1.2**
PSGCX	**Pisagua**	**2.09**	**314**	*eP*		**Pn**	**22 16 52.6**	**-1.3**
MNMC	**Mine Minye**	**2.16**	**332**	*eP*		**Pn**	**22 16 55.4**	**+0.3**
MNMC				*i* S		**Sn**	**22 17 23.0**	**+0.6**
MNMC				IAML			22 17 25.7	
	comp=N,43μm,0.6s							
MNMC	**Mine Minye**	**2.16**	**332**	Pn		**Pn**	**22 16 55.4**	**+0.3**
MNMCX	**Mine Minye**	**2.16**	**332**	*eP*		**Pn**	**22 16 55.4**	**+0.2**
PB15	**IPOC Station P**	**2.31**	**202**	*eP*		**Pn**	**22 16 55.9**	**-1.1**
PB15				*i* S		**Sn**	**22 17 24.5**	**-1.1**
PB15	**IPOC Station P**	**2.31**	**202**			**Pn**	**22 16 56.3**	**-0.7**
PB15	**IPOC Station P**	**2.31**	**202**	*eP*		**Pn**	**22 16 55.9**	**-1.1**
PB15				*eS*		**Sn**	**22 17 24.8**	**-0.8**
PB15				IAML			22 17 29.4	
	comp=Z,36μm,0.4s							
PB05	**IPOC Station P**	**2.37**	**221**	*eP*		**Pn**	**22 16 55.5**	**-2.0**
PB05				*eS*		**Sn**	**22 17 31.0**	**+4.3**
PB05				IAML			22 17 32.3	
	comp=Z,4μm,0.8s							
PB16	**IPOC Station P**	**2.86**	**341**	*eP*		**Pn**	**22 17 05.1**	**+0.7**
PB16				*i* S		**Sn**	**22 17 41.1**	**+2.2**
PB16				IAML			22 17 53.0	
	comp=N,4μm,0.6s							
PB16	**IPOC Station P**	**2.86**	**341**			**Pn**	**22 17 05.2**	**+0.8**
PB16	**IPOC Station P**	**2.86**	**341**	*eP*		**Pn**	**22 17 05.1**	**+0.7**
PB16				*eS*		**Sn**	**22 17 41.4**	**+2.5**
PB16				IAML			22 17 48.1	
	comp=Z,4μm,0.6s							
YJA	**Yavi**	**3.02**	**112**	*eP*		**Pn**	**22 17 09.1**	**+2.8**
YJA				*eS*		**Sn**	**22 17 47.9**	**+5.6**
PB10	**IPOC Station P**	**3.08**	**217**	⇑*iP*		**Pn**	**22 17 03.8**	**-2.9**
PB10				*i* S		**Sn**	**22 17 39.8**	**-3.4**
PB10				IAML			22 17 56.6	
	comp=N,4μm,0.4s							
PB10	**IPOC Station P**	**3.08**	**217**	Pn		**Pn**	**22 17 04.8**	**-2.0**
AP01	**Chacalluta**	**3.17**	**327**	⇑*iP*		**Pn**	**22 17 06.6**	**-1.4**
AP01				*i* S		**Sn**	**22 17 44.5**	**-0.9**
AP01				IAML			22 17 56.0	
	comp=N,14μm,0.5s							
AP01	**Chacalluta**	**3.17**	**327**			**Pn**	**22 17 06.6**	**-1.4**
PB14	**IPOC Station P**	**3.95**	**206**	⇑*iP*		**Pn**	**22 17 15.3**	**-3.3**
PB14				*i* S		**Sn**	**22 17 58.2**	**-6.1**
PB14	**IPOC Station P**	**3.95**	**206**	Pn		**Pn**	**22 17 16.2**	**-2.4**
GO02	**Mina Guanaco**	**4.20**	**193**	*eP*		**Pn**	**22 17 19.5**	**-2.5**
GO02				*i* S		**Sn**	**22 18 06.9**	**-3.4**
GO02	**Mina Guanaco**	**4.20**	**193**	Pn		**Pn**	**22 17 19.7**	**-2.3**
LPAZ	**La Paz**	**4.76**	**5**	P		**Pn**	**22 17 32.1**	**+2.3**
	comp=N,98nm,0.3s,baz=200,slow=7.0,SNR=815							
LPAZ	**La Paz**	**4.76**	**5**	P		**Pn**	**22 17 31.8**	**+2.0**
AC01	**Pan de Azucar**	**5.41**	**200**	Pn		**Pn**	**22 17 34.4**	**-3.6**
FSA	**Cafayete**	**5.55**	**156**	*eP*		**Pn**	**22 17 40.2**	**+0.2**
AC02	**Maricunga**	**5.78**	**185**	Pn		**Pn**	**22 17 41.8**	**-1.6**
AC04	**Llanos de Chal**	**7.48**	**198**	Pn		**Pn**	22 18 00.1	-5.9
LCO	**Las Campanas**	**8.16**	**194**	P		**Pn**	22 18 09.7	-5.7
LCO	**Las Campanas**	**8.16**	**194**			**Pn**	22 18 09.7	-5.7
SIV	**San Ignacio**	**8.68**	**56**	P		**Pn**	**22 18 21.1**	**-1.2**
	comp=N,344nm,0.3s,baz=263,slow=9.5,SNR=1930							
SIV				S		**Sn**	**22 19 55.2**	**-3.4**
	baz=302,slow=18,SNR=3.3							
PTLB	**Pontes e Lacer**	**10.52**	**60**	*eP*		**Pn**	**22 18 44.7**	**-2.5**
VILB	**Vilhena**	**11.33**	**46**	*eP*		**Pn**	**22 18 56.5**	**-1.6**
ETMB	**Extrema**	**11.40**	**12**	*eP*		**Pn**	**22 18 56.4**	**-2.6**
ETMB				*eS*		**Sn**	**22 21 01.6**	**-2.8**
CPUP	**Villa Florida**	**11.52**	**119**	P		**Pn**	**22 18 59.1**	**-1.4**
	comp=N,0.7nm,0.3s,baz=286,slow=12,SNR=20							
CPUP				LR		LR	22 24 35.8	
	comp=N,459nm,19.6s,baz=297,slow=43							
CPUP	**Villa Florida**	**11.52**	**119**			**Pn**	**22 18 58.6**	**-2.0**
CPUP	**Villa Florida**	**11.52**	**119**	*eP*		**Pn**	**22 18 58.7**	**-1.8**
AQDB	**Aquidauana**	**12.02**	**90**	*eP*		**Pn**	**22 19 04.8**	**-2.3**
AQDB				*eS*		**Sn**	**22 21 16.6**	**-2.8**
MT05	**Renca**	**12.44**	**189**	Pn		**Pn**	**22 19 09.8**	**-2.8**
MT03	**Universidad Ad**	**12.51**	**188**			**Pn**	**22 19 10.8**	**-2.8**
VA05	**Santo Domingo**	**12.84**	**192**	Pn		**Pn**	**22 19 15.0**	**-2.8**
MT09	**Talagante**	**12.86**	**189**	Pn		**Pn**	**22 19 14.8**	**-3.3**
SAML	**Samuel**	**13.10**	**24**	*eP*		**Pn**	**22 19 19.0**	**-2.2**
PP1B	**Ponte de Pedra**	**13.34**	**77**	*eP*		**Pn**	**22 19 21.8**	**-2.6**
ITQB	**Itaqui**	**13.75**	**131**	*eP*		**Pn**	**22 19 27.9**	**-1.7**
BO02	**Sierra Bellavi**	**13.83**	**188**	Pn		**Pn**	**22 19 28.6**	**-2.0**
CZSB	**Cruzeiro do Su**	**13.85**	**342**	*eP*		**Pn**	**22 19 26.5**	**-4.5**
CZSB				*eS*		**S**	**22 22 17.4**	**-0.3**
PTGB	**Pitanga**	**15.60**	**107**	*eP*		**Pn**	**22 19 55.6**	**-0.1**
PTGB				*eS*		**S**	**22 22 53.0**	**+0.2**
CLDB	**Colider**	**15.88**	**52**	*eP*		**Pn**	**22 19 55.6**	**-0.9**
PCMB	**Pacaembu**	**16.10**	**95**	*eP*		**Pn**	**22 19 58.7**	**-0.6**
PCMB				*eS*		**S**	**22 23 02.7**	**+0.1**
ITAB	**Concordia**	**16.17**	**116**	*eP*		**Pn**	**22 19 59.8**	**-0.4**
ITAB				*eS*		**S**	**22 23 03.3**	**-0.8**
CPSB	**Cacapava Do Su**	**16.46**	**127**	*eP*		**Pn**	**22 20 02.4**	**-1.3**
ARAG	**Araguaiana, MT**	**16.73**	**74**	*eP*		**Pn**	**22 20 06.2**	**-0.9**
ATAH	**Atahualpa**	**16.81**	**324**	P		**P**	**22 20 09.2**	**+0.4**
	comp=N,0.4nm,0.3s,baz=142,slow=12,SNR=6.6							
PLTB	**Pedras Altas**	**17.08**	**132**	*eP*		**P**	**22 20 09.6**	**-1.6**
ITRB	**Iturama**	**17.09**	**89**	*eP*		**P**	**22 20 11.4**	**0.0**
FRTB	**Fartura**	**17.71**	**101**	*eP*		**Pn**	**22 20 18.6**	**-0.3**
FRTB				*eS*		**S**	**22 23 34.5**	**-1.9**
CNLB	**Canela**	**17.97**	**121**	*eP*		**P**	**22 20 20.4**	**-0.6**
CNLB				*eS*		**S**	**22 23 40.3**	**-1.2**
TIJ01	**Guaruva-PR**	**18.44**	**107**	*eP*		**Pn**	**22 20 27.0**	**-0.7**
BB19B	**Bebedouro**	**18.67**	**94**	*eP*		**P**	**22 20 28.4**	**-0.3**
SNDB	**Serra Nova Dou**	**18.82**	**64**	*eP*		**P**	**22 20 29.9**	**-0.4**
SNDB				*eS*		**S**	**22 23 54.7**	**-3.7**
NPGB	**Novo Progresso**	**18.88**	**44**	*eP*		**P**	**22 20 29.2**	**-1.8**
TER01	**Tubaro-SC**	**19.11**	**117**	*eP*		**P**	**22 20 32.2**	**-1.2**
MACA	**Manacapuru-AM**	**19.36**	**24**	*eP*		**P**	**22 20 34.6**	**-1.6**
IPMB	**Ipameri, GO**	**19.39**	**84**	*eP*		**P**	**22 20 35.9**	**-0.7**
IPMB				*eS*		**S**	**22 24 08.5**	**-1.3**
RCLB	**Rio Claro- Sao**	**19.55**	**98**	*eP*		**P**	**22 20 37.3**	**-1.0**
SPB	**Sao Paulo**	**19.68**	**101**	P		**P**	**22 20 38.8**	**-0.8**
SPB	**Sao Paulo**	**19.68**	**101**	*eP*		**P**	**22 20 38.9**	**-0.7**
PLCA	**Paso Flores**	**19.69**	**185**	P		**P**	**22 20 39.6**	**0.0**
	comp=N,3.9nm,0.3s,baz=1.9,slow=12,SNR=10.0							
PLCA				S		**S**	**22 24 15.5**	**+0.1**
	comp=N,0.1nm,0.3s,baz=60,slow=22,SNR=1.6							
PLCA	**Paso Flores**	**19.69**	**185**	P		**P**	**22 20 38.9**	**-0.7**
PLCA				IAmb		IAmb	22 20 44.9	
	comp=Z,145nm,0.8s							
PLCA	**Paso Flores**	**19.69**	**185**	*eP*		**P**	**22 20 40.5**	**+0.8**
PLCA				*eS*		**S**	**22 24 18.5**	**+3.1**
PET01	**Itanhaem-SP**	**19.87**	**103**	*eP*		**P**	**22 20 40.7**	**-1.0**
LL04	**Puerto Octay**	**20.06**	**189**	IAmb		IAmb	22 20 44.5	
	comp=Z,105nm,0.8s							
VAO	**Valinhos**	**20.08**	**100**	*eP*		**P**	**22 20 42.9**	**-1.2**
BDFB	**Brasilia**	**20.20**	**78**	P		**P**	**22 20 45.1**	**-0.3**
	comp=Z,86nm,0.5s,baz=254,slow=10,SNR=198							
BDFB				S		**S**	**22 24 22.4**	**-3.5**
	comp=Z,5.9nm,0.6s,baz=152,slow=17,SNR=1.3							
BDFB				LR		LR	22 29 54.1	
	comp=Z,842nm,20.7s,baz=273,slow=40							
BDFB	**Brasilia**	**20.20**	**78**	P		**P**	**22 20 45.0**	**-0.3**
BDFB				IAmb		IAmb	22 20 46.3	
	comp=Z,107nm,0.5s							
LL03	**Petrohue**	**20.29**	**188**	P		**P**	**22 20 45.9**	**-0.1**
LL05	**Los Muermos**	**20.71**	**191**	P		**P**	**22 20 51.5**	**+0.9**
ITTB	**Itaituba**	**20.73**	**39**	*eP*		**P**	**22 20 49.3**	**-1.7**
PEXB	**Peixe**	**21.31**	**69**	*eP*		**P**	**22 20 56.1**	**-1.2**
PEXB				*eS*		**S**	**22 24 46.8**	**-0.8**
PARB	**Paraibuna**	**21.33**	**100**	*eP*		**P**	**22 20 55.7**	**-1.7**
PTGA	**Pitinga**	**21.87**	**24**	P		**P**	**22 21 01.7**	**-1.4**
	comp=Z,152nm,0.6s,baz=323,slow=23,SNR=197							
PTGA				S		**S**	**22 24 51.3**	**-6.3**
	comp=Z,14nm,0.7s,baz=126,slow=23,SNR=2.7							
PTGA				LR		LR	22 31 03.2	
	comp=Z,487nm,18.1s,baz=204,slow=40							
PTGA	**Pitinga**	**21.87**	**24**	P		**P**	**22 21 00.9**	**-2.2**
PTGA				IAmb		IAmb	22 21 07.6	
	comp=Z,139nm,0.7s							
PTGA	**Pitinga**	**21.87**	**24**	*eP*		**P**	**22 21 01.9**	**-1.2**
LL07	**Hotel Espejo d**	**22.10**	**190**	P		**P**	**22 21 05.2**	**-0.2**
BSCB	**Bom Sucesso**	**22.17**	**94**	*eP*		**P**	**22 21 05.3**	**-1.1**
LL02	**Futaleuf**	**22.24**	**186**	IAmb		IAmb	22 21 08.6	
	comp=Z,146nm,1.1s							
ESAR	**Angra dos Reis**	**22.41**	**99**	*eP*		**P**	**22 21 07.8**	**-0.9**
MAN01	**Angra dos Reis**	**22.85**	**99**	*eP*		**P**	**22 21 11.7**	**-1.4**
OTAV	**Otavalo**	**23.28**	**334**	P		**P**	**22 21 19.5**	**+1.8**
OTAV				pmax		pmax		
	comp=Z,215nm,1.3s							
OTAV	**Otavalo**	**23.28**	**334**	P		**P**	**22 21 19.5**	**+1.8**
OTAV				IAmb		IAmb	22 21 35.7	
	comp=Z,215nm,1.2s							
OTAV	**Otavalo**	**23.28**	**334**	*eP*		**P**	**22 21 19.2**	**+1.5**
VAS01	**Vassouras-RJ**	**23.34**	**98**	*eP*		**P**	**22 21 16.5**	**-1.2**
PRPB	**Parauapebas**	**23.40**	**53**	*eP*		**P**	**22 21 16.7**	**-1.6**
SMTB	**Santa Maria do**	**23.55**	**62**	*eP*		**P**	**22 21 19.1**	**-0.5**
MALB	**Monte Alegre**	**23.62**	**38**	*eP*		**P**	**22 21 18.6**	**-1.6**
GCUF	**Volcan Galeras**	**23.77**	**338**	*eP*		**P**	**22 21 23.0**	**+0.9**
JANB	**Januaria**	**23.77**	**79**	*eP*		**P**	**22 21 20.7**	**-1.0**
GARC	**Garzon, Huila**	**24.09**	**343**	*eP*		**P**	**22 21 25.3**	**+0.6**
SDBA	**SAO DESIDERIO**	**24.18**	**73**	*eP*		**P**	**22 21 24.3**	**-1.0**
DUB01	**Friburgo-RJ**	**24.34**	**97**	*eP*		**P**	**22 21 25.9**	**-0.8**
BBAC	**Balboa, Cauca**	**24.47**	**339**	*eP*		**P**	**22 21 29.3**	**+1.2**
BETC	**Betania**	**24.55**	**343**	*eP*		**P**	**22 21 29.1**	**+0.4**
BOAV	**Boa Vista**	**24.59**	**20**	*eP*		**P**	**22 21 28.7**	**-0.3**
CAM01	**Campos-RJ**	**25.02**	**97**	*eP*		**P**	**22 21 32.0**	**-0.8**
SJMB	**Sao Joao De Ma**	**25.81**	**90**	*eP*		**P**	**22 21 39.1**	**-1.0**
ALF01	**Guarapari-ES**	**25.98**	**94**	*eP*		**P**	**22 21 40.7**	**-0.9**
BSFB	**Barra de Sao F**	**26.11**	**90**	*eP*		**P**	**22 21 42.6**	**-0.1**
MCPB	**Macapa, AP**	**26.12**	**40**	*eP*		**P**	**22 21 42.6**	**-0.3**
ROSC	**El Rosal**	**26.36**	**347**	P		**P**	**22 21 44.7**	**-0.7**
	comp=Z,19nm,0.5s,baz=154,slow=3.7,SNR=6.9							
ROSC				LR		LR	22 33 28.1	
	comp=Z,233nm,19.1s,baz=216,slow=39							
ROSC	**El Rosal**	**26.36**	**347**	P		**P**	**22 21 45.9**	**+0.5**
ROSC				pmax		pmax		
	comp=Z,46nm,1.0s							
ROSC	**El Rosal**	**26.36**	**347**	P		**P**	**22 21 45.9**	**+0.5**
RIB01	**Linhares ES**	**26.45**	**91**	*eP*		**P**	**22 21 45.5**	**-0.4**
GUY2C	**Guyana, Caldas**	**26.97**	**345**	*eP*		**P**	**22 21 51.0**	**0.0**
TMAB	**Tom-Au,PA,Br**	**27.23**	**50**	*eP*		**P**	**22 21 52.9**	**+0.1**
GUA01	**Guaratinga, BA**	**27.53**	**86**	*eP*		**P**	**22 21 54.7**	**-0.8**
CBOC	**Ciudad Bolivar**	**27.75**	**344**	*eP*		**P**	**22 21 57.0**	**-0.6**
BARC	**Barichara**	**27.86**	**350**	*eP*		**P**	**22 21 58.9**	**+0.3**
HELC	**Santa Helena**	**27.94**	**345**	*eP*		**P**	**22 21 58.3**	**-1.2**
CMC01	**Camacan, BA**	**28.11**	**83**	*eP*		**P**	**22 21 59.5**	**-1.2**
NBIT	**Itapeh - BA**	**28.31**	**82**	*eP*		**P**	**22 22 01.9**	**-0.6**
GDU01	**Guandu, BA**	**28.55**	**80**	*eP*		**P**	**22 22 03.1**	**-1.5**
DBBC	**Dabeiba**	**28.90**	**344**	*eP*		**P**	**22 22 07.3**	**-0.5**
GO09	**Cerro Castillo**	**30.30**	**185**	IAmb		IAmb	22 22 56.6	
	comp=Z,141nm,1.7s							
MDP	**Montagnes des**	**30.31**	**33**	P		**P**	**22 22 19.5**	**-0.7**
	comp=Z,25nm,0.7s,baz=211,slow=9.3,SNR=17							
MDP				LR		LR	22 34 42.1	
	comp=Z,621nm,18.6s,baz=193,slow=36							
MG05	**Puerto Natales**	**30.72**	**185**	IAmb		IAmb	22 22 25.1	
	comp=Z,68nm,0.8s							
NBPS	**Pedro II - PI**	**31.09**	**62**	*eP*		**P**	**22 22 25.0**	**-2.1**
NBLA	**Lagarto - SE**	**31.14**	**76**	*eP*		**P**	**22 22 25.1**	**-2.4**
PCRV	**Puerto La Cruz**	**31.27**	**7**	P		**P**	**22 22 28.6**	**-0.1**
	comp=Z,24nm,0.5s,baz=9.7,slow=0.9,SNR=15							
EFI	**East Falkland**	**31.63**	**168**	‖*eP*		**P**	**22 22 31.2**	**-0.1**
EFI				pmax		pmax		
	comp=Z,250nm,2.5s							
NBTA	**Tacaratu-PE**	**31.65**	**73**	*eP*		**P**	**22 22 31.3**	**-0.7**
MG02	**Cerro Sombrero**	**31.67**	**181**	P	

BG3 **Lake Jocassee** 57.40 346 P **P** **22 25 56.2 +0.3**
V58A **Windy Hill, Pi** 57.42 350 IAmb IAmb 22 26 27.7
comp=Z,43nm,1.1s
833A **Chaparral WMA,** 57.44 328 pP 22 26 26.1
baz=146
X51A **Calhoun** 57.45 344 IAmb IAmb 22 26 27.3
comp=Z,71nm,1.1s
U61A **Possum Corner** 57.57 352 pP 22 26 27.4
baz=171
FPAL **Fort Paine** 57.63 343 IAmb IAmb 22 26 27.6
comp=Z,36nm,1.2s
U59A **Littleton** 57.77 351 P **P** **22 25 58.5 +0.1**
U59A IAmb IAmb 22 26 30.2
comp=Z,29nm,1.1s
U60A **Pendleton** 57.80 352 pP 22 26 29.1
baz=171
W50A **Signal Mountai** 58.17 344 IAmb IAmb 22 26 32.5
comp=Z,58nm,1.1s
NATX **Nacogdoches** 58.18 334 pP 22 26 32.2
baz=151
NATX **Nacogdoches** 58.18 334 P **P** **22 26 02.1 +0.7**
CPCT **Cooper Cave** 58.21 345 P **P** **22 26 01.6 0.0**
CPCT pP **pP** **22 26 31.7 +0.9**
CPCT IAmb IAmb 22 26 32.8
comp=Z,37nm,1.1s
TKL **Tuckaleechee C** 58.23 345 P **P** **22 26 01.1 -0.5**
comp=Z,13nm,0.8s,baz=167,slow=8.4,SNR=16
TKL pP **pP** **22 26 30.9 0.0**
comp=Z,26nm,0.9s,baz=159,slow=7.0,SNR=7.5
TKL **Tuckaleechee C** 58.23 345 IAmb IAmb 22 26 32.8
comp=Z,43nm,1.0s
T59A **Double "B" Far** 58.34 352 IAmb IAmb 22 26 34.2
comp=Z,46nm,1.1s
SWET **Sewanee** 58.35 343 IAmb IAmb 22 26 33.4
comp=Z,57nm,0.9s
T60A **Surry** 58.40 352 pP 22 26 33.0
baz=171
T60A **Surry** 58.40 352 P **P** **22 26 04.1 +1.3**
V51A **Loudon** 58.50 345 IAmb IAmb 22 26 34.6
comp=Z,26nm,0.8s
435B **Jarrell** 58.62 331 pP 22 26 34.3
baz=148
435B **Jarrell** 58.62 331 P **P** **22 26 05.0 +0.6**
435B IAmb IAmb 22 26 55.7
comp=Z,18nm,0.8s
T57A **Hurt** 58.62 350 IAmb IAmb 22 26 36.5
comp=Z,43nm,1.1s
PLAL **Pickwick Lake** 58.74 341 IAmb IAmb 22 26 35.5
comp=Z,50nm,1.1s
Z41A **Richland Creek** 58.77 336 pP 22 26 35.9
baz=154
237A **Washetta, Mont** 58.87 333 P **P** **22 26 06.0 -0.2**
S60A **Water View** 58.95 352 pP 22 26 36.8
baz=171
BLA **Blacksburg** 59.03 349 pP 22 26 38.1
baz=167
BLA **Blacksburg** 59.03 349 IAmb IAmb 22 26 39.8
comp=Z,89nm,1.6s
S58A **Poland Farm, P** 59.04 351 pP 22 26 38.0
baz=170
S59A **Mechanicsville** 59.08 352 pP 22 26 38.1
baz=171
V48A **Smith Brothers** 59.09 343 P **P** **22 26 07.1 -0.6**
X43A **Marvell** 59.22 339 pP 22 26 38.7
baz=156
S57A **Dark Hollow, R** 59.32 350 pP 22 26 40.1
baz=169
S57A **Dark Hollow, R** 59.32 350 IAmb IAmb 22 26 41.5
comp=Z,31nm,1.0s
S56A **Natural Bridge** 59.34 350 pP 22 26 40.2
baz=168
R58B **Mineral** 59.36 351 pP 22 26 40.2
baz=170
R58B **Mineral** 59.36 351 IAmb IAmb 22 26 41.1
comp=Z,27nm,1.0s
JCT **Junction City** 59.41 329 pP 22 26 39.9
baz=146
JCT **Junction City** 59.41 329 P **P** **22 26 10.5 +0.5**
JCT pmax pmax
comp=Z,17nm,0.9s
JCT **Junction City** 59.41 329 P **P** **22 26 10.5 +0.5**
SHEL **Horse Pasture** 59.43 97 P **P** **22 26 11.3 +0.8**
SHEL pmax pmax
comp=Z,148nm,0.8s
SHEL **Horse Pasture** 59.43 97 P **P** **22 26 11.3 +0.8**
R59A **King George, V** 59.49 352 pP 22 26 41.1
baz=171
R60A **Leonardtown, M** 59.49 353 pP 22 26 40.9
baz=171
CBN **Corbin Frederi** 59.53 352 pP 22 26 41.0
baz=171
U49A **Red Boiling Sp** 59.54 344 IAmb IAmb 22 26 41.5
comp=Z,23nm,0.8s
WHTX **Lake Whitney,** 59.58 332 pP 22 26 41.3
baz=149
WHTX **Lake Whitney,** 59.58 332 P **P** **22 26 11.2 0.0**
WHTX IAmb IAmb 22 26 42.0
comp=Z,33nm,0.9s
Z38A **Mt. Pleasant** 59.63 334 IAmb IAmb 22 26 42.8
comp=Z,46nm,0.8s
R58A **Rapidan** 59.71 351 pP 22 26 42.7
baz=170
WVT **Waverly** 59.74 342 pP 22 26 41.2
baz=159
WVT **Waverly** 59.74 342 P **P** **22 26 11.2 -0.9**
WVT pmax pmax
comp=Z,52nm,0.9s
WVT **Waverly** 59.74 342 P **P** **22 26 11.2 -0.9**
WVT IAmb IAmb 22 26 42.5
comp=Z,52nm,0.9s
S54A **Dingess, Beckl** 59.77 348 pP 22 26 42.3
baz=166
R57A **Stanardsville** 59.78 351 pP 22 26 43.3
baz=169
T50A **Nancy** 59.78 345 IAmb IAmb 22 26 43.4
comp=Z,34nm,1.1s
X40A **Basin Creek Fa** 59.88 337 pP 22 26 43.0
baz=154
X40A **Basin Creek Fa** 59.88 337 P **P** **22 26 12.6 -0.5**
Q61A **Milford** 59.96 354 pP 22 26 45.3
baz=173
R55A **Marlinton** 60.02 349 pP 22 26 45.7
baz=168
R56A **Bull Pasture M** 60.02 350 pP 22 26 45.3
baz=168
R54A **Victor** 60.08 349 pP 22 26 45.2
baz=167
MIAR **Mount Ida** 60.21 336 pP 22 26 45.3
baz=153
MIAR **Mount Ida** 60.21 336 P **P** **22 26 15.2 -0.1**
MIAR pmax pmax
comp=Z,105nm,1.5s
MIAR **Mount Ida** 60.21 336 P **P** **22 26 15.2 -0.1**
W41B **Gary Mavity, V** 60.28 338 pP 22 26 45.7
baz=155
Q58A **Fox Den Farm,** 60.30 352 pP 22 26 46.6
baz=170
VNA3 **Neumayer Olymp** 60.38 161 P **P** **22 26 17.0 +0.9**
R53A **Hurricane** 60.40 348 IAmb IAmb 22 26 49.0
comp=Z,44nm,1.1s
WHAR **Wooly Hollow** 60.40 338 IAmb IAmb 22 26 47.0
comp=Z,34nm,1.1s
TXAR **Lajitas Array** 60.47 325 P **P** **22 26 17.0 -0.4**
comp=Z,1.8nm,0.6s,baz=152,slow=8.2,SNR=16
TXAR pP **pP** **22 26 46.0 -0.8**
comp=Z,1.8nm,0.6s,baz=148,slow=8.7,SNR=5.8
TXAR PKP2bc 22 55 45.6
comp=Z,0.6nm,0.8s,baz=305,slow=3.2,SNR=4.9
TXAR **Lajitas Array** 60.47 325 P **P** **22 26 17.5 +0.1**
Q57A **Strasburg** 60.49 351 pP 22 26 48.5
baz=170
VNA1 **Neumayer--Stat** 60.58 161 P **P** **22 26 18.8 +1.4**
Q56A **Snyder Ridge,** 60.61 350 pP 22 26 49.4
baz=169
Q56A **Snyder Ridge,** 60.61 350 IAmb IAmb 22 26 50.9
comp=Z,53nm,0.9s
Z35A **Perchaven, San** 60.63 333 P **P** **22 26 18.9 +0.6**
LCAR **Lake Charles** 60.72 339 IAmb IAmb 22 26 48.9
comp=Z,34nm,1.1s
P59A **Jarrettsville** 60.80 353 pP 22 26 50.2
baz=172
Q54A **Coxs Mills** 60.83 349 P **P** **22 26 19.3 -0.2**
Q54A IAmb IAmb 22 26 51.4
comp=Z,65nm,1.1s
Q53A **Leroy** 60.83 348 pP 22 26 50.0
baz=166
R50A **Paris** 60.86 346 IAmb IAmb 22 26 51.0
comp=Z,54nm,1.2s
W39A **Magazine** 60.86 336 pP 22 26 50.4
baz=153
W39A **Magazine** 60.86 336 IAmb IAmb 22 26 21.9
comp=Z,38nm,0.8s
P57A **Homestead Farm** 60.87 352 pP 22 26 51.2
baz=170
P57A **Homestead Farm** 60.87 352 IAmb IAmb 22 26 52.7
comp=Z,35nm,1.1s
FCAR **Ozark Folk Cen** 60.89 338 IAmb IAmb 22 26 50.0
comp=Z,27nm,1.0s
P60A **Greenville** 60.91 354 pP 22 26 50.8
baz=172
X37A **Clayton** 60.94 335 IAmb IAmb 22 26 51.7
comp=Z,53nm,0.9s
VNA2 **Neumayer--Watz** 60.95 161 P **P** **22 26 20.8 +0.8**
baz=291,slow=7.9
P56A **Dayton Farm, R** 61.01 351 pP 22 26 52.2
baz=169
Q52A **Bidwell** 61.08 348 IAmb IAmb 22 26 52.9
comp=Z,42nm,1.0s
O61A **Allentown** 61.09 355 pP 22 26 52.2
baz=174
ABTX **Abilene, Hawle** 61.11 330 pP 22 26 51.7
baz=147
ABTX **Abilene, Hawle** 61.11 330 IAmb IAmb 22 26 53.0
comp=Z,54nm,1.2s
PBMO **Poplar Bluff** 61.13 340 IAmb IAmb 22 26 51.8
comp=Z,59nm,1.1s
WCI **Wyandotte Cave** 61.29 344 pP 22 26 52.0
baz=161
WCI **Wyandotte Cave** 61.29 344 P **P** **22 26 22.1 -0.4**
WCI pP **pP** **22 26 52.2 +0.1**
WCI IAmb IAmb 22 26 53.4
comp=Z,59nm,0.9s
MCWV **Mont Chateau** 61.32 350 pP 22 26 53.8
baz=168
Q51A **Peebles** 61.36 347 IAmb IAmb 22 26 54.5
comp=Z,42nm,1.1s
O58A **Lewisberry** 61.36 353 pP 22 26 54.3
baz=171
O60A **Telford** 61.39 354 pP 22 26 54.4
baz=173
O59A **Robesonia** 61.47 353 pP 22 26 54.1
baz=172
O57A **Amberson** 61.54 352 pP 22 26 55.8
baz=170
U40A **Yellville** 61.56 338 pP 22 26 54.4
baz=154
U40A **Yellville** 61.56 338 IAmb IAmb 22 26 55.0
comp=Z,33nm,0.9s
P52A **Corning** 61.70 348 pP 22 26 55.5
baz=166
P52A **Corning** 61.70 348 IAmb IAmb 22 26 56.9
comp=Z,60nm,1.1s
O56A **Blue Knob Stat** 61.72 351 pP 22 26 57.0
baz=170
O56A **Blue Knob Stat** 61.72 351 P **P** **22 26 26.5 +1.0**
O56A IAmb IAmb 22 26 58.4
comp=Z,44nm,1.0s
N61A **South Mountain** 61.72 355 pP 22 26 56.9
baz=174
P51A **Williamsport** 61.74 347 IAmb IAmb 22 26 56.9
comp=Z,56nm,1.2s
N62A **Caunsett State** 61.84 356 pP 22 26 56.9
baz=175
HHAR **Hobbs** 61.89 337 P **P** **22 26 26.8 +0.1**
HHAR IAmb IAmb 22 26 57.9
comp=Z,63nm,1.2s
N60A **Cedar Hill Far** 61.91 354 pP 22 26 57.8
baz=173
O54A **Avella** 61.92 350 IAmb IAmb 22 26 58.9
comp=Z,28nm,0.8s
PAL **Palisades** 61.95 355 pP 22 26 57.9
baz=174
X34A **Smith Ranch, M** 61.97 333 IAmb IAmb 22 26 59.0
comp=Z,77nm,1.4s
SSPA **Standing Stone** 61.99 352 pP 22 26 58.6
baz=170
N59A **State Game Lan** 62.02 354 pP 22 26 58.9
baz=172
N58A **Sunbury** 62.05 353 pP 22 26 58.8
baz=172
N58A **Sunbury** 62.05 353 IAmb IAmb 22 27 00.3
comp=Z,36nm,1.1s
N57A **Milroy** 62.06 352 pP 22 26 58.6
baz=171
O52A **Adamsville** 62.11 348 IAmb IAmb 22 26 59.8
comp=Z,60nm,1.1s
O53A **New Philadelph** 62.12 349 pP 22 26 58.7
baz=167
O53A **New Philadelph** 62.13 349 IAmb IAmb 22 27 00.2
comp=Z,76nm,1.1s
P49A **Miami Univ. Ec** 62.15 346 pP 22 26 57.8
baz=163
P49A **Miami Univ. Ec** 62.15 346 IAmb IAmb 22 26 59.1
comp=Z,72nm,1.1s
U38A **Gravette** 62.19 337 P **P** **22 26 28.6 -0.2**
M63A **Gales Ferry** 62.23 357 pP 22 27 00.0
baz=176
BLO **Bloomington** 62.24 344 IAmb IAmb 22 26 59.8
comp=Z,54nm,0.9s
M61A **Granite Spring** 62.24 356 pP 22 26 59.9
baz=175
P48A **Milroy** 62.24 345 P **P** **22 26 28.6 -0.4**
P48A pP **pP** **22 26 58.7 +0.2**
P48A IAmb IAmb 22 26 59.0
comp=Z,26nm,0.8s
TUL1 **Leonard** 62.26 335 pP 22 26 59.2
baz=151
M62A **Hamden** 62.31 356 pP 22 27 00.6
baz=176
N56A **West Decatur** 62.32 352 pP 22 27 00.3
baz=170
M60A **Port Jervis** 62.32 355 pP 22 27 00.3
baz=174
M64A **Tiverton** 62.34 358 pP 22 27 02.4
baz=177
ACSO **Alum Creek Sta** 62.44 348 pP 22 26 59.9
baz=165
WMOK **Wilita Mounta** 62.49 332 pP 22 27 00.2
baz=148
CCM **Cathedral Cave** 62.56 340 pP 22 27 00.9
baz=156
CCM **Cathedral Cave** 62.56 340 P **P** **22 26 30.9 -0.2**
CCM pmax pmax
comp=Z,65nm,1.1s
CCM **Cathedral Cave** 62.56 340 P **P** **22 26 30.9 -0.2**
CCM IAmb IAmb 22 27 02.2
comp=Z,65nm,1.1s
SNAA **Sanae** 62.58 161 P **P** **22 26 31.7 +0.7**
SNAA **Sanae** 62.58 161 *d* P **P** **22 26 31.7 +0.7**
SNAA pmax pmax
comp=Z,185nm,1.3s
SNAA **Sanae** 62.58 161 P **P** **22 26 31.6 +0.7**
M57A **Sunshine Farm,** 62.59 353 pP 22 27 02.7
baz=171
M57A **Sunshine Farm,** 62.59 353 IAmb IAmb 22 27 04.2
comp=Z,38nm,1.1s
OK025 **Westminster Rd** 62.60 334 IAmb IAmb 22 27 01.7
comp=Z,31nm,0.8s
N53A **Lisbon** 62.60 349 IAmb IAmb 22 27 03.6
comp=Z,69nm,1.1s
M59A **Waymart** 62.61 354 pP 22 27 02.7
baz=173
N54A **Moraine State** 62.61 350 pP 22 27 02.2
baz=168
KSPA **Keystone Colle** 62.66 354 P **P** **22 26 32.0 +0.3**
KSPA IAmb IAmb 22 27 04.6
comp=Z,55nm,1.6s
L63A **North Scituate** 62.66 357 pP 22 27 02.9
baz=177
OK030 **Cody Creek RV** 62.67 334 IAmb IAmb 22 27 02.5
comp=Z,40nm,0.9s
O49A **Covington** 62.69 346 IAmb IAmb 22 27 03.1
comp=Z,60nm,1.1s
L64A **Middleborough** 62.71 358 pP 22 27 03.2
baz=178
OK031 **S. Brethren Rd** 62.72 334 IAmb IAmb 22 26 33.1
comp=Z,41nm,0.6s
P46A **Rosedale** 62.83 344 P **P** **22 26 31.8 -1.1**
P46A pP **22 27 03.5 +0.9**
M56A **Emporium** 62.86 352 pP 22 27 04.2
baz=170
M56A **Emporium** 62.86 352 IAmb IAmb 22 27 05.6
comp=Z,42nm,0.9s
S39A **Bolivar** 62.92 338 P **P** **22 26 33.0 -0.5**
M55A **Ridgway** 62.93 351 IAmb IAmb 22 27 06.1
comp=Z,40nm,0.9s
L60A **Shokan** 62.95 355 pP 22 27 05.0
baz=174
N51A **Ashland** 62.99 348 IAmb IAmb 22 27 05.4
comp=Z,51nm,1.1s
M54A **Oil Creek Stat** 63.10 351 pP 22 27 05.5
baz=168
M54A **Oil Creek Stat** 63.10 351 P **P** **22 26 35.1 +0.5**
M54A **pP** **22 27 05.6 +1.3**
L61A **Hillsdale 1, H** 63.10 356 pP 22 27 05.5
baz=175
L58A **Harry Jones Me** 63.15 354 pP 22 27 06.4
baz=172
M53A **WI Miller and** 63.19 350 pP 22 27 06.3
baz=167
L57A **Andrews Acres** 63.21 353 pP 22 27 06.7
baz=171
L59A **Walton** 63.22 355 pP 22 27 06.6
baz=173
L59A **Walton** 63.22 355 IAmb IAmb 22 27 08.4
comp=Z,37nm,1.1s
MNTX **Cornudas Mount** 63.24 325 pP 22 27 05.6
baz=141
MNTX **Cornudas Mount** 63.24 325 P **P** **22 26 35.7 -0.1**
L61B **Northampton** 63.30 357 pP 22 27 07.0
baz=176
HRV **Adam Dziewonsk** 63.30 357 pP 22 27 07.4
baz=177
HRV **Adam Dziewonsk** 63.31 357 P **P** **22 26 36.9 +1.0**
HRV pmax pmax
comp=Z,34nm,1.1s
HRV **Adam Dziewonsk** 63.31 357 P **P** **22 26 36.9 +1.0**
HRV IAmb IAmb 22 27 08.8
comp=Z,34nm,1.1s
BINY **Binghamton** 63.31 354 pP 22 27 07.6
baz=172
BINY **Binghamton** 63.31 354 IAmb IAmb 22 27 09.0
comp=Z,73nm,1.1s
M51A **Elyria** 63.35 349 pP 22 27 06.4
baz=166
N49A **Columbus Grove** 63.36 347 P **P** **22 26 35.9 -0.4**
N49A **pP** **22 27 07.1 +1.2**
T35A **Sooner Cattle** 63.42 335 IAmb IAmb 22 27 08.6
comp=Z,64nm,1.2s
L56A **Greenwood** 63.43 352 pP 22 27 08.1
baz=171
L56A **Greenwood** 63.43 352 IAmb IAmb 22 27 08.8
comp=Z,48nm,1.1s
K63A **Dunstable** 63.49 358 pP 22 27 08.6
baz=177
K62A **Royalston** 63.49 357 pP 22 27 08.6
baz=176
SFIN **Lafayette** 63.52 344 pP 22 27 06.4
baz=161
SFIN **Lafayette** 63.52 344 P **P** **22 26 36.4 -1.0**
SFIN pP **pP** **22 27 06.9 -0.2**
K60A **Five Rivers En** 63.55 356 pP 22 27 09.2
baz=174
L53A **Girard** 63.62 350 pP 22 27 08.7
baz=168
TRY **Troy** 63.65 356 P **P** **22 26 39.5 +1.4**
TRY pP **pP** **22 27 08.6 +0.7**
TRY IAmb IAmb 22 27 11.3
comp=Z,62nm,1.0s
ERPA **Erie** 63.74 351 pP 22 27 09.8
baz=168
ERPA **Erie** 63.74 351 P **P** **22 26 38.6 -0.2**
ERPA pP **pP** **22 27 09.0 +0.4**
K59A **Cooperstown** 63.78 355 pP 22 27 10.7
baz=174
K58A **Earlville** 63.84 354 pP 22 27 10.8
baz=173
K58A **Earlville** 63.84 354 P **P** **22 26 39.9 +0.4**
K58A pP **pP** **22 27 10.3 +1.1**
K58A IAmb IAmb 22 27 12.4
comp=Z,72nm,1.1s
K57A **Scipio Center** 63.90 353 pP 22 27 10.5
baz=172
AMTX **Amarillo** 63.93 330 pP 22 27 10.1
baz=146
AMTX **Amarillo** 63.93 330 P **P** **22 26 39.4 -0.9**
K56A **Middlesex** 63.95 353 pP 22 27 11.0
baz=171
OK032 **Salt Plains WL** 64.01 334 IAmb IAmb 22 27 08.0
comp=Z,37nm,1.0s
J62A **Henniker** 64.03 357 pP 22 27 12.5
baz=177
KAN09 **Caldwell North** 64.05 334 IAmb IAmb 22 27 12.1
comp=Z,52nm,0.9s
KS20 **Mayfield South** 64.11 335 IAmb IAmb 22 27 12.4
comp=Z,54nm,1.1s
J60A **Lant Hill Farm** 64.14 356 pP 22 27 13.2
baz=175
P40A **Paris** 64.16 340 IAmb IAmb 22 27 12.8
comp=Z,69nm,1.0s
J61A **Chester** 64.19 357 pP 22 27 13.5
baz=176
HDIL **Hopedale** 64.27 343 pP 22 27 11.5
baz=159
HDIL **Hopedale** 64.27 343 P **P** **22 26 40.7 -1.7**
HDIL pP **pP** **22 27 11.6 -0.6**
KAN12 **Harper NE Stat** 64.35 334 P **P** **22 26 42.9 0.0**
KAN12 pP **pP** **22 27 13.3 +0.6**
J59A **Piesco** 64.44 355 pP 22 27 15.0
baz=174
HSIG 64.44 319 P **P** **22 26 43.9 +0.2**
HSIG pP **pP** **22 27 13.4 0.0**
J56A **Wolcott** 64.47 353 pP 22 27 14.4
baz=172
J57A **Williamstown** 64.51 354 pP 22 27 14.9
baz=172
J57A **Williamstown** 64.51 354 P **P** **22 26 43.8 0.0**
J57A pP **pP** **22 27 14.3 +0.7**
J57A IAmb IAmb 22 27 16.5
comp=Z,54nm,1.1s
AAM **Ann Arbor** 64.57 348 pP 22 27 14.0
baz=164
I62A **Tamworth** 64.66 358 pP 22 27 16.5
baz=177
I58A **Old Forge** 64.70 355 pP 22 27 16.4
baz=174
I59A **Olmsteadville** 64.72 356 pP 22 27 16.5
baz=175
I60A **Shoreham** 64.73 356 pP 22 27 16.8
baz=175
P38A **Dawn** 64.73 339 P **P** **22 26 44.6 -0.7**
P38A IAmb IAmb 22 27 16.1
comp=Z,38nm,0.8s
N41A **Harden Midland** 64.87 341 P **P** **22 26 44.6 -1.5**
N41A pP **pP** **22 27 15.5 -0.5**
I57A **Carthage** 65.00 354 pP 22 27 18.4
baz=173
LBNH **Lisbon** 65.05 357 pP 22 27 18.8
baz=177
121A **Cookes Peak, D** 65.18 324 pP 22 27 19.7
baz=140
121A **Cookes Peak, D** 65.18 324 P **P** **22 26 49.3 +0.7**
121A pP **PcP** **22 27 19.9 -0.4**
H61A **Lyndonville** 65.34 357 pP 22 27 20.2
baz=177
H62A **Milan** 65.35 358 pP 22 27 21.2
baz=177
H58A **Gabriels** 65.36 356 pP 22 27 20.8
baz=174
KSU1 **Kansas State U** 65.36 336 pP 22 27 19.4
baz=151
H64A **Troy** 65.38 359 pP 22 27 21.4
baz=179
H60A **Morristown** 65.41 357 pP 22 27 21.5
baz=176
H63A **New Sharon** 65.41 359 pP 22 27 21.7
baz=179
H57A **Richville** 65.50 355 pP 22 27 21.5
baz=173
H66A **Whiting** 65.53 1 pP 22 27 22.0
baz=181
H59A **Cadyville** 65.55 356 pP 22 27 22.0
baz=175
I51A **Listowel** 65.55 350 pP 22 27 21.3
baz=167
LONY **Lake Ozonia** 65.59 355 pP 22 27 22.3
baz=174
LONY **Lake Ozonia** 65.59 355 P **P** **22 26 51.1 +0.3**
LONY pP **PcP** **22 27 21.4 0.0**
LONY IAmb IAmb 22 27 23.9
comp=Z,40nm,1.1s
R32A **Long Quarter,** 65.60 334 IAmb IAmb 22 27 22.9

comp=Z,78nm,1.1s
FRNY **Flat Rock** 65.73 356 P **P** 22 26 51.9 +0.2
FRNY pP **PcP** 22 27 22.6 +0.6
FRNY IAmb IAmb 22 27 24.9
comp=Z,38nm,1.2s
DELO **Deloro Mine** 65.78 353 P **P** 22 26 51.9 -0.1
DELO pP **pP** 22 27 21.5 -0.4
DELO IAmb IAmb 22 27 23.9
comp=Z,51nm,1.4s
BNM **Barren Site** 65.80 326 P **P** 22 26 53.4 +0.8
BNM pP **PcP** 22 27 23.8 +0.9
G63A **Kingsbury** 65.86 359 pP 22 27 24.3
baz=179
G60A **Masonville** 65.92 357 pP 22 27 24.9
baz=176
G65A **Princeton** 65.94 1 pP 22 27 24.0
baz=181
H53A **Bobcaygeon** 65.95 352 pP 22 27 24.2
baz=170
G62A **West of Eustis** 65.98 358 pP 22 27 25.2
baz=178
G62A **West of Eustis** 65.98 358 IAmb IAmb 22 27 07.5
comp=Z,47nm,0.7s
G64A **Maxfield** 65.99 360 pP 22 27 25.0
baz=180
PKME **Peaks-Kenny Pk** 66.00 359 pP 22 27 25.1
baz=179
PKME **Peaks-Kenny Pk** 66.00 359 IAmb IAmb 22 27 06.6
comp=Z,33nm,0.7s
G61A **St-Isidore-de-** 66.08 358 pP 22 27 25.4
baz=177
G58A **Ormstown** 66.08 356 pP 22 27 25.6
baz=174
G57A **Newington** 66.10 355 pP 22 27 25.5
baz=174
L40A **Anamosa** 66.22 342 P **P** **22 26 54.3 -0.5**
L40A pP **PcP** **22 27 24.4 +0.3**
L40A IAmb IAmb 22 27 26.2
comp=Z,94nm,1.2s
SADO **Sadowa** 66.22 352 P **P** **22 26 50.8 -4.1**
comp=Z,3.6nm,0.6s,baz=110,slow=19,SNR=5.3
SADO pP **PcP** **22 27 23.4 -0.7**
comp=Z,15nm,0.8s,baz=210,slow=4.3,SNR=4.4
SADO LR LR 22 57 54.1
comp=Z,71nm,19.8s,baz=211,slow=38
ANMO **Albuquerque** 66.33 327 pP 22 27 27.0
baz=141
ANMO **Albuquerque** 66.33 327 *de*P **P** **22 26 57.0 +1.0**
ANMO pmax pmax
comp=Z,14nm,1.7s
ANMO **Albuquerque** 66.33 327 P **P** **22 26 56.8 +0.8**
CBKS **Cedar Bluff** 66.35 334 pP 22 27 26.6
baz=148
CBKS **Cedar Bluff** 66.35 334 P **P** **22 26 56.1 +0.2**
CBKS *PP **pP** **22 27 26.3 +0.5**
CBKS pmax pmax
comp=Z,97nm,1.1s
CBKS **Cedar Bluff** 66.35 334 P **P** **22 26 56.1 +0.2**
CBKS pP **pP** **22 27 26.3 +0.5**
F63A **Nahmakanta, Br** 66.44 360 pP 22 27 28.3
baz=180
F64A **Sherman** 66.60 0 pP 22 27 28.9
baz=180
F64A **Sherman** 66.60 0 **P** **22 26 57.6 +0.4**
F64A IAmb IAmb 22 27 10.4
comp=Z,28nm,0.6s
LMN **Caledonia Moun** 66.67 3 IAmb IAmb 22 27 09.7
comp=Z,28nm,0.6s
SCIA **State Center** 66.68 340 pP 22 27 28.0
baz=155
F59A **Saint Guilaume** 66.70 357 pP 22 27 29.4
baz=176
G54A **Lake Saint Pet** 66.70 353 pP 22 27 28.9
baz=170
TUC **Tucson** 66.71 322 pP 22 27 29.1
baz=137
TUC **Tucson** 66.71 322 P **P** **22 27 00.1 +1.7**
TUC pmax pmax
comp=Z,10.0nm,1.2s
TUC **Tucson** 66.71 322 **P** **22 27 00.1 +1.7**
JFWS **Jewell Farm** 66.73 343 pP 22 27 28.3
baz=158
JFWS **Jewell Farm** 66.73 343 P **P** **22 26 57.6 -0.5**
JFWS *PP **pP** **22 27 28.1 0.0**
JFWS pmax pmax
comp=Z,62nm,1.0s
JFWS **Jewell Farm** 66.73 343 P **P** **22 26 57.6 -0.5**
JFWS pP **pP** **22 27 28.1 0.0**
JFWS IAmb IAmb 22 27 29.7
comp=Z,62nm,0.9s
GAC **Glen Almond** 66.74 355 P **P** **22 26 58.5 +0.4**
F61A **St Evariste** 66.75 358 pP 22 27 29.7
baz=178
F58A **St-Lin Laurent** 66.78 356 pP 22 27 29.8
baz=175
F60A **Warwick** 66.78 357 pP 22 27 29.9
baz=177
F57A **Harrington** 66.78 355 pP 22 27 29.8
baz=174
T25A **Trinidad** 67.04 329 pP 22 27 31.8
baz=144
T25A **Trinidad** 67.05 329 P **P** **22 27 01.3 +0.8**
T25A **PcP** **22 27 28.7 +0.7**
E63A **Oxbow** 67.16 0 pP 22 27 32.9
baz=180
E64A **Bridgewater** 67.16 1 pP 22 27 32.8
baz=181
GLMI **Grayling** 67.19 348 pP 22 27 31.7
baz=164
E61A **Lac Etchemin** 67.19 359 pP 22 27 33.1
baz=178
E58A **La Victoria** 67.25 356 pP 22 27 33.1
baz=175
ALGO **Algonquin Park** 67.25 353 pP 22 27 32.6
baz=170
E59A **St. Maurice** 67.31 357 pP 22 27 33.3
baz=176
PQI **Presque Isle** 67.41 0 P **P** **22 27 04.4 +2.1**
E55A **Montcerf-Lytto** 67.53 354 pP 22 27 34.1
baz=172
E56A **St. Veronique** 67.54 355 pP 22 27 34.8
baz=174
214A **Organ Pipe Nat** 67.65 320 pP 22 27 35.9
baz=135
D60A **Saint Jean D'O** 67.69 358 pP 22 27 35.7
baz=178
KSCO **Kaye Shedlock'** 67.75 332 pP 22 27 36.1
baz=146
D63A **Stockholm** 67.77 0 pP 22 27 36.5
baz=180
L34A **Svendsen Farm,** 67.80 338 **P** **22 27 04.0 -0.9**
D59A **Saint-Raymond** 67.81 358 pP 22 27 36.5
baz=177
D58A **Chemin du LacG** 67.95 357 pP 22 27 37.1
baz=176
BGNE **Belgrade** 67.95 336 pP 22 27 36.4
baz=150
D61A **St Aubert, Com** 67.95 359 pP 22 27 36.4
baz=178
D56A **ZEC Mazanza, M** 68.02 355 pP 22 27 37.4
baz=174
D55A **Sainte-Anne-du** 68.05 355 pP 22 27 37.6
baz=173
SDCO **Great Sand Dun** 68.05 329 pP 22 27 36.8
baz=143
BATG **Bathurst New B** 68.05 2 IAmb IAmb 22 27 19.3
comp=Z,23nm,0.6s
W18A **Petrified Fore** 68.19 324 pP 22 27 37.4
baz=139
DBIC **Dimbokro** 68.27 73 P **P** **22 27 08.0 -0.4**
comp=Z,32nm,0.8s,baz=217,slow=6.3,SNR=55
DBIC LR LR 22 56 52.7
comp=Z,112nm,19.8s,baz=212,slow=36
DBIC **Dimbokro** 68.27 73 P **P** **22 27 08.0 -0.4**
DBIC IAmb IAmb 22 27 09.0
comp=Z,45nm,0.9s
SPX **San Pedro Mart** 68.64 318 P **P** **22 27 11.8 +1.0**
I37A **Lemond, Waseca** 68.65 341 IAmb IAmb 22 27 41.4
comp=Z,68nm,0.9s
S22A **4UR Ranch, Cre** 68.70 328 pP 22 27 41.1
baz=142
Q24A **Divide** 68.86 330 pP 22 27 43.1
baz=144
OGNE **Ogallala** 69.10 333 pP 22 27 44.3
baz=147
MVCO **Mesa Verde** 69.12 327 pP 22 27 44.6
baz=140
MVCO **Mesa Verde** 69.12 327 P **P** **22 27 14.2 +0.7**
K31A **O'Neill** 69.23 337 P **P** **22 27 14.1 +0.3**
VLDQ **Val d'Or** 69.31 354 P **P** **22 27 14.2 +0.1**
VLDQ pP **pP** **22 27 44.9 +0.6**
VLDQ IAmb IAmb 22 27 47.3
comp=Z,41nm,1.1s
ECSD **EROS Data Cent** 69.44 339 pP 22 27 45.5
baz=152
ECSD **EROS Data Cent** 69.44 339 IAmb IAmb 22 27 46.3
comp=Z,54nm,1.2s
SPMN **Marine on St.** 69.57 342 pP 22 27 46.0
baz=156
SPMN **Marine on St.** 69.58 342 IAmb IAmb 22 27 47.4
comp=Z,57nm,1.2s
ISCO **Idaho Springs** 69.74 330 pP 22 27 48.8
baz=143
PDMCI **Parker Dam,Lak** 70.09 321 pP 22 27 50.7
baz=135
IKP **In-Ko-Pah, Jac** 70.14 319 pP 22 27 51.1
baz=133
F36A **Milaca** 70.36 342 P **P** **22 27 19.3 -1.3**
F36A pP **pP** **22 27 50.8 -0.1**
F36A IAmb IAmb 22 27 52.3
comp=Z,41nm,0.9s
BC3 **Big Chuckawall** 70.42 320 pP 22 27 53.5
baz=134
MONP2 **Monument Peak** 70.50 319 pP 22 27 54.1
baz=133
IRM **Iron Mountain** 70.59 320 pP 22 27 54.8
baz=134
N23A **Red Feather La** 70.77 331 pP 22 27 55.0
baz=143
SUSD **Miller** 70.87 337 pP 22 27 54.5
baz=150
MATQ **Matagami** 70.96 354 pP 22 27 55.5
baz=171
BELC **Belle Mtn. Jos** 70.99 320 pP 22 27 56.5
baz=134
PFO **Pinyon Flats O** 71.01 319 pP 22 27 56.2
baz=133
PFO **Pinyon Flats O** 71.01 319 *e*P **P** **22 27 26.6 +1.6**
PFO pmax pmax
comp=Z,26nm,1.3s
PFO **Pinyon Flats O** 71.01 319 P **P** **22 27 25.5 +0.5**
F33A **5 Mile Ranch,** 71.19 340 IAmb IAmb 22 28 02.6
comp=Z,36nm,0.8s
O20A **White River Ci** 71.25 329 pP 22 27 58.2
baz=141
O20A **White River Ci** 71.25 329 IAmb IAmb 22 27 59.0
comp=Z,34nm,0.9s
KNB **Kanab** 71.28 324 IAmb IAmb 22 28 00.8
comp=Z,124nm,1.3s
GMRC **Granite Mounta** 71.33 320 pP 22 27 59.1
baz=134
MURC **Murrieta** 71.45 319 pP 22 27 59.1
baz=132
LCMT **Little Creek M** 71.51 324 P **P** **22 27 29.3 +1.3**
LCMT pP **pP** **22 28 00.1 +1.9**
SRU **San Rafael Swe** 71.60 327 IAmb IAmb 22 28 01.5
comp=Z,43nm,0.8s
EYMN **Ely** 71.71 344 pP 22 27 59.7
baz=158
EYMN **Ely** 71.72 344 P **P** **22 27 28.4 -0.3**
EYMN pP **pP** **22 27 58.8 -0.3**
EYMN IAmb IAmb 22 28 00.6
comp=Z,39nm,0.9s
TUQ **Turquoise Moun** 71.93 321 pP 22 28 02.4
baz=134
CCUT **Cedar City** 71.96 324 IAmb IAmb 22 28 04.5
comp=Z,41nm,0.9s
CIS **Catalina Islan** 72.08 318 pP 22 28 03.0
baz=132
BFSC **Mount Baldy Ra** 72.17 319 pP 22 28 04.0
baz=132
RDMU **Red Mountain** 72.23 328 IAmb IAmb 22 28 04.7
comp=Z,30nm,0.8s
K22A **Casper** 72.43 332 pP 22 28 05.1
baz=143
K22A **Casper** 72.43 332 P **P** **22 27 34.1 +0.8**
K22A pP **pP** **22 28 04.5 +0.7**
KOWA **Kowa** 72.52 66 P **P** **22 27 33.2 -1.0**
KOWA IAmb IAmb 22 27 35.2
comp=Z,34nm,0.7s
RSSD **Black Hills** 72.56 334 pP 22 28 06.0
baz=146
RSSD **Black Hills** 72.56 334 P **P** **22 27 34.7 +0.6**
RSSD pmax pmax
comp=Z,29nm,1.0s
RSSD **Black Hills** 72.56 334 P **P** **22 27 34.7 +0.6**
DECC **Green Verdugo** 72.59 318 pP 22 28 06.6
baz=132
B35A **Bob, Littlefor** 72.69 343 IAmb IAmb 22 28 06.5
comp=Z,64nm,0.9s
EDW2 **Edwards Air Fo** 72.80 319 pP 22 28 07.8
baz=132
NLU **North Lily Min** 73.03 326 P **P** **22 27 37.9 +0.9**
NLU pP **pP** **22 28 07.8 +0.4**
TPNV **Topopah Spring** 73.17 322 pP 22 28 10.7
baz=134
JLU **Jordanelle** 73.19 327 P **P** **22 27 39.4 +1.4**
JLU pP **pP** **22 28 09.6 +1.2**
JLU IAmb IAmb 22 28 10.9
comp=Z,34nm,0.8s
FURC **Furnace Creek,** 73.19 321 pP 22 28 10.5
baz=133
SCZ2 **Santa Cruz Isl** 73.23 318 pP 22 28 10.5
baz=131
AGMN **Agassiz Nation** 73.25 341 pP 22 28 08.9
baz=154
AGMN **Agassiz Nation** 73.25 341 IAmb IAmb 22 28 10.0
comp=Z,40nm,0.8s
E28A **Huff** 73.33 337 P **P** **22 27 39.0 +0.5**
E28A pP **pP** **22 28 10.0 +1.2**
DUG **Dugway, Tooele** 73.59 326 pP 22 28 12.6
baz=137
ISA **Isabella, Lake** 73.61 319 pP 22 28 12.9
baz=132
ISA **Isabella, Lake** 73.61 319 P **P** **22 27 41.0 +0.6**
ISA pmax pmax
comp=Z,21nm,0.9s
ISA **Isabella, Lake** 73.61 319 P **P** **22 27 41.0 +0.6**
ISA pP **pP** **22 28 12.5 +1.7**
R11A **Troy Canyon, C** 73.76 323 pP 22 28 14.1
baz=135
GRAC **Grapevine Rang** 73.85 321 pP 22 28 14.2
baz=133
CWC **Cottonwood Cre** 73.89 320 pP 22 28 14.7
baz=132
BW06 **Boulder Array** 73.91 330 pP 22 28 13.7
baz=140
PD31 **Pinedale Array** 73.91 330 P **P** **22 27 42.4 +0.3**
PD31 pP **pP** **22 28 13.4 +0.9**
PDAR **Pinedale Array** 73.91 330 P **P** **22 27 42.1 0.0**
comp=Z,3.5nm,0.8s,baz=120,slow=8.7,SNR=15
PDAR pP **pP** **22 28 13.5 +0.9**
comp=Z,5.8nm,0.8s,baz=142,slow=7.5,SNR=6.2
PDAR LR LR 23 04 23.0
comp=Z,24nm,18.6s,baz=131,slow=39
PDAR **Pinedale Array** 73.91 330 P **P** **22 27 42.0 -0.1**
PKM **Mcpherson Peak** 73.93 318 pP 22 28 14.7
baz=131
HWUT **Hardware Ranch** 74.00 328 IAmb IAmb 22 28 16.9
comp=Z,35nm,0.8s
MDND **Maddock** 74.05 339 pP 22 28 14.1
baz=150
VES **Vestal, Richgr** 74.10 319 pP 22 28 15.3
baz=132
SPUT **South Promonto** 74.22 327 IAmb IAmb 22 28 16.7
comp=Z,40nm,0.9s
SMMC **Simmler** 74.32 318 pP 22 28 17.1
baz=131
TPH **Tonopah** 74.50 322 IAmb IAmb 22 28 18.8
comp=Z,121nm,1.3s
AHID **Auburn Hatcher** 74.64 329 P **P** **22 27 46.9 +0.6**
AHID pP **pP** **22 28 17.4 +0.5**
AHID IAmb IAmb 22 28 18.9
comp=Z,44nm,0.9s
VAH **Vaihoa** 74.70 259 *e*P **P** **22 27 49.4 +2.3**
comp=Z,56nm,1.2s
REDW **Red Top Meadow** 74.97 329 IAmb IAmb 22 28 21.1
comp=Z,34nm,0.9s
ULM **Lac du Bonnet** 75.01 342 P **P** **22 27 47.8 -0.2**
comp=Z,14nm,0.5s,baz=152,slow=6.5,SNR=40
ULM pP **pP** **22 28 18.9 +0.4**
comp=Z,34nm,0.8s,baz=155,slow=5.6,SNR=12
ULM LR LR 23 03 57.0
comp=Z,54nm,18.3s,baz=96,slow=38
ULM **Lac du Bonnet** 75.01 342 *d i*P **P** **22 27 47.9 -0.1**
ULM **Lac du Bonnet** 75.01 342 IAmb IAmb 22 28 19.6
comp=Z,45nm,0.8s
LOHW **Long Hollow** 75.05 330 P **P** **22 27 49.4 +0.7**
LOHW pP **pP** **22 28 20.1 +0.9**
NVAR **Mina Array Bea** 75.37 322 P **P** **22 27 51.7 +1.1**
comp=Z,8.1nm,0.9s,baz=155,slow=6.6,SNR=38
NVAR pP **pP** **22 28 22.4 +1.1**
comp=Z,6.9nm,0.9s,baz=144,slow=6.9,SNR=6.1
NVAR LR LR 22 59 10.4
comp=Z,52nm,18.7s,baz=230,slow=34
NVAR **Mina Array Bea** 75.37 322 P **P** **22 27 51.9 +1.2**
FLWY **Flagg Ranch** 75.45 330 IAmb IAmb 22 28 24.4
comp=Z,70nm,0.9s
LAO **LASA Array** 75.54 334 pP 22 28 23.1
baz=144
LAO **LASA Array** 75.54 334 IAmb IAmb 22 28 24.6
comp=Z,82nm,1.2s
RLMT **Red Lodge** 75.59 332 pP 22 28 24.0
baz=141
RLMT **Red Lodge** 75.60 332 IAmb IAmb 22 28 24.8
comp=Z,52nm,1.0s
H17A **Grant Village** 75.63 330 pP 22 28 25.2
baz=140
PAE **Paea** 75.74 256 *e*P **P** **22 27 55.2 +2.2**
comp=Z,7.9nm,1.0s
PPT2 **Papeete2** 75.76 256 *e*P **P** **22 27 55.6 +2.4**
comp=Z,58nm,1.3s
YHH **Holmes Hill** 76.06 330 P **P** **22 27 56.5 +2.0**
YHH pP **pP** **22 28 27.4 +2.2**
YHH IAmb IAmb 22 28 28.9
comp=Z,73nm,1.0s
YHB **Horse Butte** 76.19 330 IAmb IAmb 22 28 29.3
comp=Z,47nm,0.9s
DGMT **Dagmar** 76.21 336 pP 22 28 27.4
baz=146
DGMT **Dagmar** 76.21 336 IAmb IAmb 22 28 28.1
comp=Z,90nm,0.9s
YHL **Hebgen Lake** 76.26 330 IAmb IAmb 22 28 29.5
comp=Z,39nm,0.9s
SBA **Scott Base** 76.32 190 P **P** **22 27 57.1 +1.9**
SBA pmax pmax
comp=Z,62nm,1.4s
SBA **Scott Base** 76.32 190 P **P** **22 27 57.1 +1.9**
SBA IAmb IAmb 22 27 59.0
comp=Z,62nm,1.4s
SYO **Syowa Base** 76.79 159 *i*P **P** **22 27 59.0 +1.0**
SYO **Syowa Base** 76.79 159 *e*pP pP 22 28 24.8 -3.7
PAHR **Pah Rah Range** 76.85 322 P **P** **22 28 00.6 +1.6**
PAHR IAmb IAmb 22 28 02.0
comp=Z,39nm,0.8s
PAHR pP **pP** **22 28 31.1 +1.6**
HLID **Hailey** 76.86 328 pP 22 28 31.8
baz=137
HLID **Hailey** 76.86 328 IAmb IAmb 22 28 33.1
comp=Z,43nm,1.0s
TORD **Torodi Ar. Bea** 76.87 70 P **P** **22 27 58.8 -0.6**
comp=Z,7.7nm,0.7s,baz=253,slow=5.4,SNR=358
TORD LR LR 23 00 28.8
comp=Z,134nm,21.8s,baz=260,slow=34
TORD **Torodi Ar. Bea** 76.87 70 P **P** **22 27 58.4 -1.0**
TORD IAmb IAmb 22 28 00.2
comp=Z,66nm,0.7s
BOZ **Bozeman (W)** 77.03 331 pP 22 28 32.1
baz=139
VNDA **Vanda** 77.34 190 P **P** **22 28 01.1 +0.2**
comp=Z,10nm,0.9s,baz=123,slow=3.2,SNR=42
VNDA LR LR 23 01 26.5
comp=Z,40nm,21.0s,baz=134,slow=35
VNDA **Vanda** 77.34 190 P **P** **22 28 02.1 +1.1**
VNDA pmax pmax
comp=Z,14nm,1.0s
VNDA **Vanda** 77.34 190 P **P** **22 28 02.1 +1.1**
MFID **Camas Ranch** 77.47 327 IAmb IAmb 22 28 35.9
comp=Z,50nm,1.2s
EGMT **Eagleton** 78.06 333 pP 22 28 37.3
baz=141
EGMT **Eagleton** 78.06 333 IAmb IAmb 22 28 38.6
comp=Z,68nm,1.1s
SUR **Sutherland** 78.49 120 P **P** **22 28 09.8 +1.4**
comp=Z,31nm,0.7s,baz=243,slow=6.1,SNR=38
SUR **Sutherland** 78.49 120 P **P** **22 28 09.7 +1.2**
SUR IAmb IAmb 22 28 10.6
comp=Z,38nm,0.8s
O03E **Paynes Creek** 78.63 321 pP 22 28 40.2
baz=130
PLID **Pearl Lake** 78.75 328 P **P** **22 28 10.3 +0.8**
PLID pP **pP** **22 28 41.8 +1.6**
PLID IAmb IAmb 22 28 42.5
comp=Z,40nm,0.9s
MSO **Missoula** 79.02 330 pP 22 28 43.3
baz=138
MSO **Missoula** 79.02 330 P **P** **22 28 11.3 +0.6**
MSO pP **pP** **22 28 42.6 +1.1**
O02D **Mt. Diablo Mer** 79.14 321 pP 22 28 43.6
baz=130
N02D **Trinity Center** 79.59 321 pP 22 28 45.6
baz=130
M04C **Macdoel** 79.61 322 pP 22 28 46.5
baz=131
K05A **Summer Lake** 79.70 324 IAmb IAmb 22 28 17.3
comp=Z,44nm,1.0s
JTMT **Jette** 79.85 331 P **P** **22 28 16.4 +1.2**
JTMT pP **pP** **22 28 47.4 +1.4**
JTMT IAmb IAmb 22 28 48.6
comp=Z,42nm,1.2s
M02C **Callahan** 79.95 322 pP 22 28 48.1
baz=130
F10A **Beach Ranch, E** 79.98 328 IAmb IAmb 22 28 50.6
comp=Z,81nm,1.6s
K04D **Chiloquin, OR** 80.11 323 pP 22 28 49.0
baz=131
L04D **Klamath Falls** 80.16 323 pP 22 28 49.4
baz=130
J05D **Fort Rock, OR** 80.26 324 pP 22 28 50.5
baz=131
PINE **Pine Mountain** 80.43 324 IAmb IAmb 22 28 52.4
comp=Z,60nm,1.2s
WALA **Waterton Lakes** 80.65 332 P **P** **22 28 19.3 -0.2**
WALA pP **pP** **22 28 51.2 +0.9**
WALA IAmb IAmb 22 28 52.6
comp=Z,44nm,0.9s
J04D **Umpqua Nationa** 80.71 323 pP 22 28 52.8
baz=131
L02E **Cave Junction** 80.87 322 pP 22 28 53.7
baz=129
I05D **Terrebonne, OR** 81.01 325 pP 22 28 54.4
baz=131
MDT **Midelt** 81.19 50 P **P** **22 28 23.7 +1.0**
comp=Z,6.1nm,0.9s,baz=218,slow=2.2,SNR=8.3
I04A **Tendick Farm,** 81.24 324 pP 22 28 55.2
baz=130
K02D **Willamette Mer** 81.24 322 pP 22 28 55.5
baz=129
PBDV **Barranco-do-Ve** 81.33 45 *e*P **P** **22 28 24.9 +1.6**
HAWA **Hanford** 81.43 327 IAmb IAmb 22 28 57.1
comp=Z,42nm,0.9s
PNCL **Nicolau / Gran** 81.44 44 *e*P **P** **22 28 25.0 +1.3**
PCVE **Castro Verde** 81.48 44 *e*P **P** **22 28 25.5 +1.5**
MESJ **Messejana** 81.49 44 *e*P **P** **22 28 24.8 +0.8**
MESJ IAmb IAmb 22 28 26.1
comp=Z,21nm,1.1s
MESJ **Messejana** 81.49 44 *e*P **P** **22 28 24.8 +0.8**
NEW **Newport** 81.55 330 pP 22 28 56.8
baz=135
D08A **Wollman Farm,** 81.58 328 P **P** **22 28 24.7 +0.4**
D08A pP **pP** **22 28 56.7 +1.4**
D08A IAmb IAmb 22 28 57.8
comp=Z,79nm,1.5s
G05D **Wamic, OR** 81.59 325 pP 22 28 57.4
baz=131
J01E **Myrtle Point** 81.69 323 pP 22 28 57.6
baz=129
C09A **Chrisman Ranch** 81.77 329 IAmb IAmb 22 28 58.7
comp=Z,66nm,0.9s
EVO **Evora** 82.01 44 *e*P **P** **22 28 27.9 +1.1**
F05D **White Salmon** 82.09 326 pP 22 29 00.0
baz=131
PMTG **Montargil** 82.19 43 *e*P **P** **22 28 28.8 +1.2**
FCC **Fort Churchill** 82.28 347 IAmb IAmb 22 29 01.2
comp=Z,40nm,0.8s
PBAR **Barrancos** 82.44 44 *e*P **P** **22 28 29.4 +0.4**
LTY **Liberty** 82.59 327 IAmb IAmb 22 29 02.9
comp=Z,44nm,1.1s
B08A **Colville Reser** 82.67 329 P **P** **22 28 29.6 -0.4**
B08A pP **pP** **22 29 01.2 +0.1**

B08A IAmb IAmb 22 29 02.8
comp=Z,44nm,1.2s
PMRV Marv??o 82.92 43 *e*P **P 22 28 31.9 +0.4**
PCBR Castelo Branco 83.10 43 *e*P **P 22 28 32.7 +0.3**
PCBR *e*pP **pP 22 29 03.3 -0.1**
D05A Enumclaw 83.22 327 IAmb IAmb 22 29 05.8
comp=Z,49nm,1.0s
PVIS Viseu 83.34 42 *e*P **P 22 28 35.1 +1.5**
PVIS *e*pP **pP 22 29 07.0 +2.3**
BOSA Boshof 83.34 118 P **P 22 28 34.5 +0.3**
comp=Z,49nm,0.8s,baz=257,slow=4.4,SNR=65
BOSA LR LR 23 04 05.3
comp=Z,92nm,18.4s,baz=251,slow=34
BOSA Boshof 83.34 118 P **P 22 28 34.0 -0.2**
BOSA IAmb IAmb 22 28 35.4
comp=Z,53nm,0.8s
MTE Manteigas 83.38 42 *e*P **P 22 28 34.7 +0.8**
PVRL Vila Real 83.77 41 *e*P **P 22 28 37.3 +1.5**
POLO Lamas de Olo 83.78 41 *e*P **P 22 28 36.6 +0.7**
PCAB Cabril 83.83 41 *e*P **P 22 28 36.8 +0.7**
B06A Marblemount 83.84 328 P **P 22 28 35.7 -0.2**
B06A pP **pP 22 29 06.9 -0.1**
B06A IAmb IAmb 22 29 08.4
comp=Z,43nm,0.8s
B05A Bryant 83.98 327 pP 22 29 08.3
baz=131
D03D Eldon 84.01 326 pP 22 29 08.4
baz=130
MVO Moncorvo 84.13 42 *e*P **P 22 28 38.6 +0.9**
MVO *e*pP **pP 22 29 08.4 -0.4**
TAM Tamanrasset 84.31 63 P **P 22 28 39.8 +0.7**
A05A Maple Falls 84.46 328 P **P 22 28 38.9 -0.2**
A05A pP **pP 22 29 10.8 +0.6**
A05A IAmb IAmb 22 29 11.8
comp=Z,57nm,0.9s
FRB Frobisher Bay 84.52 360 P **P 22 28 38.8 -0.2**
A04D Lummi Island 84.58 327 pP 22 29 11.5
baz=131
MAW Mawson 84.65 163 P **P 22 28 41.0 +1.2**
comp=Z,51nm,0.6s,baz=213,slow=6.0,SNR=126
PBRG Braganca 84.67 41 *e*P **P 22 28 41.2 +0.8**
PBRG *e*pP **pP 22 29 12.2 +0.7**
LBTB Lobatse 84.88 115 P **P 22 28 42.6 +0.6**
comp=Z,55nm,0.7s,baz=245,slow=5.8,SNR=82
LBTB Lobatse 84.88 115 P **P 22 28 42.3 +0.3**
LBTB IAmb IAmb 22 28 43.6
comp=Z,63nm,0.8s
PAB San Pablo 84.95 44 P **P 22 28 42.5 +0.6**
PAB pmax pmax
comp=Z,14nm,0.9s
PAB San Pablo 84.95 44 P **P 22 28 42.5 +0.6**
ESDC Sonseca Array 85.27 44 P **P 22 28 43.4 -0.1**
comp=Z,5.5nm,0.9s,baz=249,slow=4.9,SNR=30
ESDC LR LR 23 05 15.4
comp=Z,56nm,19.4s,baz=280,slow=34
MATP Matopo 89.04 111 P **P 22 29 03.0 +0.8**
comp=Z,42nm,0.8s,baz=248,slow=4.5,SNR=85
LSZ Lusaka 90.68 107 P **P 22 29 11.7 +1.7**
comp=Z,14nm,0.7s,baz=235,slow=3.7,SNR=42
LSZ Lusaka 90.68 107 P **P 22 29 12.0 +2.0**
LSZ pmax pmax
comp=Z,19nm,0.9s
LSZ Lusaka 90.68 107 P **P 22 29 12.0 +2.0**
LSZ IAmb IAmb 22 29 13.1
comp=Z,19nm,0.8s
YKA Yellowknife Ar 90.89 340 P **P 22 29 10.0 +0.4**
comp=Z,15nm,0.7s,baz=133,slow=4.9,SNR=255
YKA pP **pP 22 29 41.7 +0.7**
comp=Z,41nm,1.0s,baz=131,slow=5.0,SNR=14
YKA PKKP **PKKPdf 22 46 34.5 +1.0**
comp=Z,0.3nm,0.7s,baz=322,slow=2.7,SNR=4.0
YKA LR LR 23 12 24.3
comp=Z,56nm,21.7s,baz=0.0,slow=37
KEST Kesra 92.76 53 P **P 22 29 19.1 +0.1**
comp=Z,5.8nm,1.0s,baz=325,slow=3.2,SNR=7.1
CASY Casey 92.93 180 P **P 22 29 20.9 +1.7**
CRAG Craig 93.75 329 pP 22 29 55.3
baz=122
WRAK Wrangell Islan 93.90 330 pP 22 29 56.8
baz=123
DLBC Dease Lake 93.98 332 IAmb IAmb 22 29 57.7
comp=Z,26nm,1.2s
EKA Eskdalemuir Ar 94.06 31 P **P 22 29 24.7 +0.3**
comp=Z,1.4nm,0.8s,baz=217,slow=4.5,SNR=1.7
SUMG Summit 95.57 9 *i* P 22 29 41.1 +10
SUMG Summit 95.57 9 IAmb IAmb 22 29 47.9
comp=Z,12nm,0.7s
AFI Afiamalu 97.04 252 LR LR 23 05 30.0
comp=Z,464nm,20.9s,baz=277,slow=30
ZCCA Zocca 97.28 45 IAmb IAmb 22 29 42.3
comp=Z,6.5nm,0.7s
TEOL Teolo 98.12 45 IAmb IAmb 22 29 44.9
comp=Z,11nm,0.8s
MOTA Moosalm 98.49 43 *i* P Pdif 22 29 45.2 +0.3
comp=Z,15nm,1.2s
SQTA Sankt Quirin 98.51 43 *i* P Pdif 22 29 45.5 +0.5
comp=Z,6.6nm,0.9s
WATA Walderalm 98.78 43 *i* P Pdif 22 29 46.7 +0.5
comp=Z,5.7nm,0.9s
WTTA Wattenberg 98.80 43 *i* P Pdif 22 29 47.0 +0.6
comp=Z,5.8nm,0.9s
KBA Koelnbreinsper 99.82 43 *i* P **Pdif 22 29 51.1 +0.2**
comp=Z,2.0nm,0.8s
MYKA Terra Mystica 99.86 44 *i* P **Pdif 22 29 51.6 +0.7**
comp=Z,3.2nm,0.8s
OBKA Obir 100.40 44 *e*P **Pdif 22 29 54.2 +0.8**
comp=Z,2.2nm,0.8s
GERES GERESS Array B 100.65 42 P **Pdif 22 29 54.2 -0.2**
comp=Z,0.6nm,0.8s,baz=225,slow=4.0,SNR=4.4
GERES PKKPbc **PKKPbc 22 46 06.4 -3.5**
comp=Z,0.4nm,0.6s,baz=57,slow=3.6,SNR=3.6
GERES GERESS Array B 100.65 42 **Pdif 22 29 53.8 -0.6**
CRQE Cirque 100.90 331 pP 22 30 27.3
baz=114
MCARA McCarthy VSAT 101.12 332 pP 22 30 28.5
baz=114
KLU Klutina 102.45 331 pP 22 30 33.8
baz=111
MODS Modra-Piesok 102.75 43 *e*P **Pdif 22 30 10.0 +6.3**
MODS Modra-Piesok 102.75 43 *e*PDIFF **Pdif 22 30 10.0 +6.3**
WAT6 Susitna Watana 103.63 332 pP 22 30 38.9
baz=109
SML Sawmill 103.64 331 pP 22 30 38.9
baz=109
ILAR Eielson Array 104.00 334 PKKPbc PKKPbc 22 45 58.0 -2.5
comp=Z,0.4nm,0.7s,baz=318,slow=4.4,SNR=5.1
CRVS Cervenica-Dubn 105.56 43 *e*P **Pdif 22 30 21.8 +5.6**
CRVS Cervenica-Dubn 105.56 43 *e*PDIFF **Pdif 22 30 21.8 +5.6**
NACGM Naroch 109.97 38 *i* P **Pdif 22 30 22.7 -13**
NACGM *i* P **Pdif 22 30 22.7 -13**
NACGM *i* P **Pdif 22 30 22.7 -13**
NACGM *i* PP **PKiKP 22 34 30.4 -6.5**
NACGM *i* PPP PPP 22 36 48.1
NACGM *i* SKS SKSdf 22 40 49.0 -49
NACGM *i* SKKS SKKSac 22 41 48.7 -14
NACGM *i* S **Sdif 22 42 39.2 +0.3**
NACGM *i* PS PS 22 45 06.1 +24
NACGM *i* SS SKKPbc 22 48 55.5 -21
NACGM *i* SSS SSS 22 54 26.8
FINES FINESS Array B 110.45 31 PKKPbc PKKPbc 22 45 38.5 -1.5
comp=Z,1.6nm,0.8s,baz=38,slow=7.0,SNR=4.1
AKASG Malin Array Be 110.84 42 PKiKP **PKiKP 22 34 38.2 -0.5**
comp=Z,1.0nm,0.5s,baz=271,slow=2.3,SNR=8.5
AKASG PKKPbc **PKKPbc 22 45 37.1 -1.3**
comp=Z,0.7nm,0.5s,baz=58,slow=4.3,SNR=6.6
BRTR Keskin Array B 112.29 55 PKiKP **PKiKP 22 34 42.1 +0.1**
comp=Z,1.8nm,0.7s,baz=212,slow=3.6,SNR=9.0
OBN Obninsk 115.60 38 *i*PKiKP **PKiKP 22 34 47.8 +0.2**
OBN *e* 22 35 50.5
OBN *e*SS SS 22 52 02.2 +20
OBN pmax pmax
comp=Z,18nm,1.7s
KLMR Klimovskoe 116.95 31 *e*PKiKP **PKPdf 22 34 49.9 -0.1**
KLMR pmax pmax
comp=Z,7.0nm,0.8s
KLMR Klimovskoe 116.95 31 *e*PKPdf **PKPdf 22 34 49.9 -0.1**
KLMR AMP 22 34 51.4
comp=Z,7.0nm,0.8s
LPSR Galich'ya Gora 117.00 41 *e*PKiKP **PKPdf 22 34 50.3 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 117.15 42 *e*PKiKP **PKPdf 22 34 49.8 -0.9**
VSR pmax pmax
comp=Z,10.0nm,1.0s
SOC Sochi 117.25 51 *i* PKiKP **PKiKP 22 34 51.3 +0.1**

SOC *e* 22 36 03.3
SOC *e*PPP PPP 22 38 37.1
SOC *e*SS SS 22 52 12.5 +7.8
SOC *e*SSS SSS 22 56 33.3
SOC pmax pmax
comp=Z,17nm,0.7s
MARD Mardin 117.51 58 **PKiKP 22 34 53.3 +1.2**
VRH Novokhopyorsk 118.75 42 *e*PKiKP **PKPdf 22 34 53.4 -0.4**
VRH pmax pmax
comp=Z,8.0nm,0.6s
KIV Kislovodsk 119.42 51 *i* PKiKP **PKiKP 22 34 55.6 0.0**
KIV pmax pmax
comp=Z,26nm,1.0s
KIV Kislovodsk 119.42 51 PKPdf **PKiKP 22 34 55.7 +0.2**
KBZ Khabaz 119.56 51 PKP **PKiKP 22 34 56.4 +0.7**
comp=Z,9.4nm,0.8s,baz=240,slow=2.2,SNR=19
PRGR Permogore 119.76 30 *e*PKiKP **PKiKP 22 34 55.5 0.0**
PRGR pmax pmax
comp=Z,17nm,0.9s
STKA Stephens Creek 119.97 210 PKP **PKiKP 22 34 57.5 +0.4**
comp=Z,4.7nm,0.8s,baz=262,slow=1.7,SNR=10
STKA Stephens Creek 119.97 210 *i*PKiKP **PKPdf 22 34 56.7 -0.2**
STKA Stephens Creek 119.97 210 PKPdf **PKPdf 22 34 56.8 -0.2**
NCK Nalchik 120.07 51 *i*PKiKP **PKiKP 22 34 58.2 +1.4**
ZEI Tsey 120.27 52 *i* PKiKP **PKPdf 22 34 57.3 0.0**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 120.81 55 *i*PKiKP **PKPdf 22 34 58.3 -0.1**
BILL Bilibino 122.24 339 *i*PKiKP **PKiKP 22 35 00.7 +0.4**
BILL *e* 22 41 55.7
BILL pmax pmax
comp=Z,7.0nm,1.5s
KIRV Kirov 122.25 33 PKP **PKiKP 22 35 00.9 +0.4**
comp=Z,6.7nm,0.6s,baz=323,slow=4.8,SNR=4.3
KIRV Kirov 122.25 33 *d*PKiKP **PKiKP 22 35 00.6 +0.1**
BELG Belogornoye 122.31 41 PKP **PKiKP 22 35 01.1 +0.3**
comp=Z,17nm,0.8s,baz=143,slow=1.8,SNR=8.1
BELG Belogornoye 122.31 41 *d*PKiKP **PKPdf 22 35 00.6 0.0**
FORT Forrest 126.05 198 PKPdf **PKPdf 22 35 08.6 0.0**
CTA Charters Tower 126.80 222 PKP **PKiKP 22 35 11.2 +0.4**
comp=Z,1.7nm,0.4s,baz=137,slow=16,SNR=5.8
ARU Arti 127.59 34 PKP **PKiKP 22 35 11.3 +0.1**
comp=Z,5.4nm,0.6s,baz=263,slow=1.9,SNR=34
ARU Arti 127.59 34 *i* PKiKP **PKiKP 22 35 11.9 +0.7**
ARU 22 37 12.0
ARU 22 42 11.6
ARU Arti 127.59 34 PKPdf **PKPdf 22 35 10.7 +0.1**
TIXI Tiksi 128.40 353 *i*PKiKP **PKPdf 22 35 10.8 -0.9**
TIXI Tiksi 128.40 353 PKPdf **PKPdf 22 35 11.0 -0.8**
AKTO Aktyubinsk 129.07 41 PKP **PKiKP 22 35 14.9 +0.5**
comp=Z,6.8nm,0.9s,baz=322,slow=2.0,SNR=24
NRIK Noril'sk 129.57 11 PKP **PKiKP 22 35 15.3 +0.5**
comp=Z,1.4nm,0.5s,baz=66,slow=2.8,SNR=5.7
NRIK Noril'sk 129.57 11 *i*PKiKP **PKiKP 22 35 15.2 +0.4**
SEY Seymchan 129.83 337 *i*PKiKP **PKiKP 22 35 15.7 +0.2**
ASAR Alice Springs 130.47 207 PKP **PKPdf 22 35 17.5 +0.2**
comp=Z,14nm,0.8s,baz=149,slow=2.4,SNR=73
ASAR pPKP **pPKPdf 22 35 49.6 -0.5**
comp=Z,5.5nm,1.0s,baz=142,slow=2.2,SNR=3.1
ASAR Alice Springs 130.47 207 PKPdf **PKPdf 22 35 17.1 -0.1**
ABKAR Akbulak array 130.59 42 PKPdf **PKiKP 22 35 17.5 +0.1**
GEYT Alibeck 131.26 58 PKP **PKiKP 22 35 18.9 -0.4**
comp=Z,3.7nm,0.7s,baz=266,slow=5.9,SNR=7.7
GEYT Alibeck 131.26 58 PKPdf **PKPdf 22 35 18.5 +0.2**
PEA0B Petropavlovsk- 132.42 324 *i*PKiKP **PKPdf 22 35 20.1 +0.2**
PETK Petropavlovsk- 132.42 324 PKP **PKiKP 22 35 20.6 -0.4**
comp=Z,12nm,1.0s,baz=114,slow=3.5,SNR=11
PETK pPKP **pPKPdf 22 35 52.5 -0.4**
comp=Z,8.6nm,0.9s,baz=90,slow=5.9,SNR=6.7
PETK Petropavlovsk- 132.42 324 PKPdf **PKiKP 22 35 20.8 -0.2**
MA2 Magadan 132.48 334 *i*PKiKP **PKPdf 22 35 19.8 0.0**
WRA Warramunga Arr 133.51 210 PKP **PKPdf 22 35 23.6 +0.5**
comp=Z,16nm,0.6s,baz=157,slow=1.7,SNR=92
WRA Warramunga Arr 133.51 210 PKPdf **PKPdf 22 35 22.6 -0.5**
WRAB Tennant Creek 133.51 210 *d*PKiKP **PKPdf 22 35 23.3 +0.2**
BRVK Borovoye 135.16 34 *d*PKiKP **PKiKP 22 35 26.4 -0.2**
BRVK Borovoye 135.16 34 PKPdf **PKiKP 22 35 26.0 -0.6**
BVAR Borovoye Array 135.23 34 PKP **PKPdf 22 35 25.2 0.0**
comp=Z,5.7nm,0.8s,baz=160,slow=9.0,SNR=40
YAK Yakutsk 137.17 347 *i*PKiKP **PKPdf 22 35 29.3 +0.8**
BRZS Berezniki 137.97 37 *e*PKP **PKPdf 22 35 30.4 0.0**
baz=37
BRZS Berezniki 137.97 37 *e*PKiKP **PKPdf 22 35 30.4 0.0**
FITZ Fitzroy Crossi 138.68 201 PKhKP PKPpre 22 35 23.6
comp=Z,2.2nm,0.6s,baz=182,slow=4.6,SNR=14
FITZ PKP **PKPdf 22 35 32.9 +0.2**
comp=Z,21nm,0.7s,baz=192,slow=5.2,SNR=34
IUG luzhnay 139.42 49 *e*PKP **PKPdf 22 35 34.0 +0.5**
baz=49
IUG luzhnay 139.42 49 *e*PKiKP **PKPdf 22 35 33.9 +0.5**
DZA Taraz 140.09 48 *e*PKP **PKPdf 22 35 35.0 +0.4**
baz=48
DZA Taraz 140.09 48 *e*PKiKP **PKPdf 22 35 34.9 +0.4**
KURK Kurchatov 140.77 33 PKiKP **PKPdf 22 35 36.5 +1.1**
KURK Kurchatov 140.77 33 **PKPdf 22 35 36.5 +1.1**
KURBB Kurchatov Arra 140.78 33 PKhKP PKPpre 22 35 27.8
comp=Z,2.2nm,0.7s,baz=297,slow=2.9,SNR=16
KURBB PKP **PKPdf 22 35 36.5 +1.1**
comp=Z,7.4nm,0.9s,baz=297,slow=2.4,SNR=18
KURBB pPKPbc pPKPdf 22 36 08.7 +0.3
comp=Z,2.6nm,0.7s,baz=307,slow=2.7,SNR=2.8
BTLS Baital 141.06 43 *e*PKP **PKPdf 22 35 37.1 +0.9**
baz=43
BTLS Baital 141.06 43 *e*PKiKP **PKPdf 22 35 37.0 +0.9**
ZALV Zalesovo Beam 141.41 25 PKhKP PKPpre 22 35 30.3
comp=Z,7.0nm,0.8s,baz=314,slow=4.7,SNR=30
ZALV PKP **PKPdf 22 35 37.4 +0.9**
comp=Z,20nm,0.6s,baz=292,slow=2.5,SNR=44
ZALV pPKPbc pPKPdf 22 36 09.7 +0.3
comp=Z,8.2nm,0.8s,baz=288,slow=3.6,SNR=3.0
ZALV SKPbc **SKPbc 22 39 03.8 +0.8**
comp=Z,7.8nm,0.9s,baz=305,slow=1.5,SNR=9.4
SEM Semipalatinsk 141.78 32 *e*PKP **PKPdf 22 35 38.2 +0.6**
baz=32
SEM Semipalatinsk 141.78 32 *e*PKiKP **PKPdf 22 35 38.2 +0.6**
AAK Ala-Archa 142.34 47 PKP **PKPdf 22 35 38.8 0.0**
comp=Z,11nm,0.8s,baz=198,slow=6.4,SNR=23
AAK Ala-Archa 142.34 47 **PKPdf 22 35 37.8 -1.0**
BOD Bodaibo 143.24 358 *e*PKHKP PKPpre 22 35 36.5
BOD pmax pmax
comp=Z,17nm,1.4s
GENI Genyem 143.36 233 PKP **PKPdf 22 35 40.0 -1.2**
AAA Alma-Ata 143.72 44 *e*PKP **PKPdf 22 35 41.5 +0.4**
baz=44
AAA Alma-Ata 143.72 44 *e*PKiKP **PKPdf 22 35 41.5 +0.4**
TNSS Tian-Shan 143.82 45 *e*PKP **PKPdf 22 35 41.3 -0.4**
baz=45
TNSS Tian-Shan 143.82 45 *e*PKiKP **PKPdf 22 35 41.2 -0.4**
MDOK Medeo 143.83 44 *e*PKP **PKPdf 22 35 40.4 -1.0**
baz=44
MDOK Medeo 143.83 44 *e*PKiKP **PKPdf 22 35 40.4 -1.0**
NIL Nilore 144.01 61 PKiKP PKPbc 22 35 40.0 0.0
NIL Nilore 144.01 61 PKPdf PKPbc 22 35 40.0 -0.1
GRNR Gornyy 144.46 335 *i*PKiKP **PKPdf 22 35 42.3 +0.3**
GRNR pmax pmax
comp=Z,40nm,0.9s
KSH Kashi 144.55 51 PKP PKPbc 22 35 42.1 +0.5
KSH sPKP 22 36 15.4
KSH PP **PP 22 39 02.9 +2.8**
KSH SKS **SKSdf 22 42 39.9 -1.7**
KSH AMB AMB
comp=Z,140nm,3.8s
KSH LR LR
comp=Z,170nm,7.6s
KSH LR LR
comp=Z,130nm,8.1s
KSH LR LR
comp=Z,150nm,5.0s
KPKS Kokpek 144.74 43 *e*PKP PKPbc 22 35 42.4 +0.3
baz=43
KPKS Kokpek 144.74 43 *e*PKiKP PKPbc 22 35 42.4 +0.3
SATY Saty 144.76 44 *e*PKP PKPbc 22 35 42.2 0.0
baz=44
SATY Saty 144.76 44 *e*PKiKP PKPbc 22 35 42.2 0.0
MAKZ Makanchi 144.89 36 PKiKP **PKPdf 22 35 43.1 +0.2**
MAKZ Makanchi 144.89 36 **PKPdf 22 35 43.1 +0.2**
MK31 Makanchi Array 145.07 36 *d*PKiKP **PKPdf 22 35 43.9 +0.7**
MKAR Makanchi Array 145.07 36 PKPbc **PKPdf 22 35 43.6 +0.4**
comp=Z,63nm,0.8s,baz=320,slow=3.2,SNR=514
MKAR pPKPbc **pPKPdf 22 36 16.2 0.0**
comp=Z,18nm,0.8s,baz=291,slow=5.1,SNR=4.8
UZB Uzunbulak 145.11 43 *e*PKP **PKPab 22 35 43.5 0.0**
baz=43
UZB Uzunbulak 145.11 43 *e*PKiKP **PKPab 22 35 43.5 0.0**
SAUI Saumlaki 145.18 216 PKP **PKiKP 22 35 46.5 -1.8**

ZEA Zeya 145.22 344 *e*PKiKP **PKPab 22 35 43.9 +0.6**
ZEA *e* 22 36 16.7
ZEA pmax pmax
comp=N,20nm,0.5s
ZEA pmax pmax
comp=Z,60nm,1.5s
SHLS Shalkode 145.39 43 *e*PKP **PKPab 22 35 44.6 +0.1**
baz=43
SHLS Shalkode 145.39 43 *e*PKiKP **PKPab 22 35 44.5 +0.1**
DGZ Jazzator, Alta 145.64 28 *d*PKP2 **PKPab 22 35 45.3 +0.1**
ZSN Zaisan 146.01 33 *e*PKP **PKPdf 22 35 45.2 +0.4**
baz=33
ZSN Zaisan 146.01 33 *e*PKiKP **PKPdf 22 35 45.2 +0.4**
ERM Erimo 146.15 315 *c i*PKP2 **PKPab 22 35 47.4 +0.2**
ERM Erimo 146.15 315 PKPbc **PKPab 22 35 47.1 -0.1**
BATI Baumata 146.70 202 PKPbc **PKPbc 22 35 49.2 +0.5**
comp=Z,63nm,0.7s,baz=177,slow=1.9,SNR=14
BATI Baumata 146.70 202 PKP **PKPbc 22 35 49.3 +0.5**
SOEI Soe 146.90 204 PKP **PKPab 22 35 50.4 -0.5**
SOEI PKP **PKiKP 22 35 51.0 -1.0**
PALK Pallekele 147.26 110 PKPbc **PKPbc 22 35 49.3 -1.0**
comp=Z,18nm,0.9s,baz=78,slow=4.5,SNR=8.0
KLR Kul'dur 147.57 335 *e*PKiKP **PKPdf 22 35 48.5 +1.2**
BASI Baing, Sumba 147.66 197 PKP **PKPbc 22 35 51.3 -0.1**
BASI PKP **PKiKP 22 35 53.1 -0.3**
TEY Ternei 148.37 325 *e*PKP2 **PKPbc 22 35 52.0 -0.3**
MOY Mondy 148.37 12 *e*PKP2 **PKiKP 22 35 53.7 -0.2**
MOY pmax pmax
comp=Z,59nm,1.6s
MMRI Maumere 148.65 201 **PKPdf 22 35 50.5 +0.3**
MMRI **PKPbc 22 35 54.3 +0.3**
MMRI Maumere 148.65 201 PKP **PKPdf 22 35 51.7 +1.5**
MMRI PKP **PKPbc 22 35 54.7 +0.7**
FAKI Fak Fak 148.66 223 PKP **PKPbc 22 35 52.7 -1.4**
FAKI PKP **PKiKP 22 35 55.5 0.0**
HYB Hyderabad 148.74 91 *i* PKP **PKPdf 22 35 51.0 +0.8**
HYB *e*pPKP **pPKPbc 22 36 26.0 -0.7**
BNDI Bandanaira 148.80 217 PKP **PKPbc 22 35 52.7 -1.7**
TLY Talaya 148.83 9 PKPbc **PKiKP 22 35 54.3 -0.4**
comp=Z,15nm,0.7s,baz=204,slow=2.8,SNR=9.8
TLY Talaya 148.83 9 *e*PKiKP **PKPbc 22 35 51.5 -1.9**
TLY Talaya 148.83 9 **PKPdf 22 35 50.7 +1.3**
TLY PKPbc **PKiKP 22 35 54.8 +0.1**
CIT Chita 149.05 357 *e*PKP2 **PKiKP 22 35 55.2 0.0**
PLAI Plampang 149.66 192 PKP **PKPdf 22 35 53.5 +1.7**
PLAI PKP **PKPbc 22 35 57.0 +0.5**
WMQ Urumqi 149.90 36 *e*PKPbc **PKPdf 22 35 51.6 +0.2**
WMQ LR LR
comp=Z,380nm,25.9s
WMQ LR LR
comp=Z,260nm,26.5s
TWSI Taliwang, Sumb 149.92 191 PKP **PKPdf 22 35 52.9 +0.7**
TWSI PKP **PKPbc 22 35 53.1 -4.0**
ZAK Zakamensk 150.03 11 *e*PKHKP PKPpre 22 35 51.8
ZAK pmax pmax
comp=Z,18nm,1.1s
DNP Denpasar 150.22 187 PKP **PKPdf 22 35 55.0 +2.3**
DNP PKP **PKPab 22 36 03.2 -0.9**
SRBI Singaraja 150.81 188 PKP **PKPdf 22 35 55.6 +2.0**
SRBI PKP **PKiKP 22 36 00.1 +0.2**
UGM Wanagama 151.19 178 PKP **PKPdf 22 35 56.1 +1.9**
UGM PKP **PKiKP 22 36 01.2 +0.5**
USA0B Ussuriysk Arra 151.32 328 *e*PKiKP **PKPdf 22 35 54.1 +0.6**
USA0B Ussuriysk Arra 151.32 328 PKPdf **PKPdf 22 35 53.1 -0.3**
USA0B PKPbc **PKiKP 22 36 00.4 +0.4**
USRK Ussuriysk Ar. 151.32 328 PKP **PKPdf 22 35 53.2 -0.2**
comp=Z,3.0nm,0.9s,baz=65,slow=1.2,SNR=7.8
USRK PKPbc **PKiKP 22 36 00.3 +0.3**
comp=Z,28nm,0.8s,baz=0.4,slow=0.8,SNR=82
USRK pPKPbc **pPKPbc 22 36 32.0 -0.3**
comp=Z,27nm,0.8s,baz=354,slow=0.6,SNR=13
USRK Ussuriysk Ar. 151.32 328 PKIKP **PKPdf 22 35 53.9 +0.4**
USRK Ussuriysk Ar. 151.32 328 **PKPdf 22 35 53.9 +0.4**
NLAI Namlea 151.40 214 PKP **PKPdf 22 35 57.5 +3.0**
NLAI PKP **PKiKP 22 36 01.1 0.0**
KMMI Kalianget 151.96 185 PKP **PKPdf 22 35 57.5 +2.2**
KMMI PKP **PKiKP 22 36 03.4 +1.2**
LEM Lembang 152.03 172 PKP **PKPdf 22 35 57.4 +1.7**
comp=Z,43nm,0.8s,baz=66,slow=2.1,SNR=8.4
LEM PKPbc **PKiKP 22 36 03.9 +1.3**
comp=Z,262nm,0.7s,baz=330,slow=1.9,SNR=50
SMRI Semarang 152.05 178 PKP **PKPdf 22 35 57.3 +1.8**
SMRI PKP **PKiKP 22 36 03.6 +1.1**
MJAR Matsushiro Arr 152.07 309 PKPbc **PKiKP 22 36 01.9 +0.1**
comp=Z,18nm,0.8s,baz=85,slow=1.4,SNR=38
MJAR pPKPbc **pPKPbc 22 36 33.8 -0.6**
comp=Z,13nm,1.0s,baz=79,slow=2.2,SNR=4.2
MJAR Matsushiro Arr 152.07 309 PKIKP **PKiKP 22 36 02.0 +0.1**
MJAR Matsushiro Arr 152.07 309 **PKiKP 22 36 02.0 +0.1**
MAJO Matsushiro 152.07 309 PKIKP **PKPbc 22 36 01.2 -0.3**
MAJO Matsushiro 152.07 309 PKPbc **PKPbc 22 36 01.2 -0.3**
MAJO PKPab **PKPab 22 36 11.8 +0.4**
MAT Matsushiro 152.07 309 PKP **PKiKP 22 36 01.8 -0.1**
MDJ Mudanjiang 152.13 332 PKPbc **PKPdf 22 35 55.3 +0.6**
MDJ pPKP pPKPdf 22 36 23.1 -4.6
MDJ PP **PP 22 39 44.3 +1.1**
MDJ AMB AMB
comp=Z,170nm,4.3s
DBJI Dramaga 152.17 170 PKP **PKPdf 22 35 57.4 +1.7**
DBJI PKP **PKiKP 22 36 03.4 +0.7**
KASI Kota Agung 152.71 165 PKP **PKPdf 22 35 57.6 +1.1**
KASI PKP **PKPbc 22 35 57.7 -5.9**
KAPI Kappang 152.84 198 PKIKP **PKPdf 22 35 57.8 +1.1**
KAPI 22 36 15.8
KAPI Kappang 152.84 198 PKPdf **PKPdf 22 35 57.8 +1.1**
KAPI PKPbc **PKiKP 22 36 04.7 +0.6**
KAPI PKPab **PKPab 22 36 15.8 +0.7**
MSHR Mys Shultsa 152.92 327 *i*PKiKP **PKPdf 22 35 56.2 +0.3**
SONM Songino Array 152.97 8 PKP **PKPdf 22 35 57.2 +1.2**
comp=Z,7.3nm,0.9s,baz=301,slow=1.1,SNR=53
SONM PKPbc **PKiKP 22 36 04.1 +0.6**
comp=Z,13nm,0.8s,baz=310,slow=1.0,SNR=33
SONM Songino Array 152.97 8 PKIKP **PKPdf 22 35 56.4 +0.4**
SONM 22 36 15.3
SONM Songino Array 152.97 8 PKPdf **PKPdf 22 35 56.4 +0.4**
SONM PKPbc **PKPbc 22 36 03.1 -0.3**
SONM PKPab **PKPab 22 36 15.3 +0.4**
SANI Sanana 152.99 213 PKP **PKiKP 22 36 04.7 +0.3**
ULN Ulaanbaatar 153.02 7 *de*PKiKP **PKPdf 22 35 57.1 +1.0**
ULN Ulaanbaatar 153.02 7 PKPdf **PKPdf 22 35 57.1 +1.0**
ULN PKPbc **PKiKP 22 36 03.8 +0.2**
ULN PKPab **PKPab 22 36 16.0 +0.8**
LWLI Liwa 153.09 164 PKP **PKPdf 22 35 58.7 +1.5**
LWLI PKP **PKiKP 22 36 05.8 +1.1**
PYUN Piuthan 153.21 69 *e*P **PKPdf 22 35 57.2 +0.1**
comp=Z,29nm,1.2s
BNSI Bone 153.32 199 PKP **PKPdf 22 35 59.1 +1.8**
BNSI PKP **PKPbc 22 35 59.4 -5.5**
KOLN Koldanda 153.79 70 *e*P **PKPdf 22 35 58.0 +0.1**
comp=Z,11nm,1.0s
SPSI Sidrap Palu 153.83 199 PKP **PKPdf 22 35 59.7 +1.6**
SPSI PKP **PKiKP 22 36 07.1 +1.0**
GKN Gorkha 154.66 69 *e*P **PKPdf 22 35 59.1 +0.1**
comp=Z,29nm,1.3s
TTSI Tana Toraja 154.69 200 PKP **PKPdf 22 36 01.1 +1.8**
TTSI PKP **PKPbc 22 36 02.4 -5.5**
TTSI PKP **PKiKP 22 36 14.9 +7.0**
DMN Daman 155.14 70 *e*P **PKPdf 22 35 59.7 -0.1**
KKN Kakani 155.26 69 *e*P **PKPdf 22 36 00.3 +0.4**
comp=Z,4.3nm,0.6s
PKIN Phulchoki 155.40 70 *e*P **PKPdf 22 35 59.9 -0.3**
PKI Pulchoki 155.41 70 *e*P **PKPdf 22 36 00.1 -0.2**
comp=Z,32nm,1.6s
GUN Gumba 155.76 69 *e*P **PKPdf 22 36 00.9 +0.1**
JIRN Jiri 156.08 69 *e*P **PKPdf 22 36 00.8 -0.4**
RAMN Ramite 156.56 71 *e*P **PKPdf 22 36 02.2 +0.5**
comp=Z,29nm,1.1s
ODAN Odare 157.27 71 *e*P **PKPdf 22 36 02.8 +0.2**
comp=Z,29nm,1.1s
TAPN Taplejung 157.46 69 *e*P **PKPdf 22 36 02.7 -0.2**
PSI Prapat 158.12 144 PKP **PKPdf 22 36 04.3 +0.4**
comp=Z,4.3nm,0.6s,baz=180,slow=6.0,SNR=7.9
PSI PKPab **PKPab 22 36 37.8 -0.1**
comp=Z,18nm,0.8s,baz=180,slow=4.0,SNR=13
KSRS Korea Array 158.31 322 PKP **PKPdf 22 36 03.8 +0.6**
comp=Z,7.4nm,0.8s,baz=68,slow=1.4,SNR=23
KSRS PKPab **PKPab 22 36 38.0 0.0**
comp=Z,5.8nm,0.7s,baz=60,slow=3.7,SNR=12
KSRS pPKPab **pPKPab 22 37 10.6 +1.0**
comp=Z,11nm,1.1s,baz=64,slow=3.9,SNR=4.4
KSAR Wonju Array Be 158.34 322 PKP2 **PKPab 22 36 37.5 -0.6**
KSAR 23 36 04.2
KSAR Wonju Array Be 158.34 322 PKPdf **PKPdf 22 36 04.2 +0.9**

KSAR					PKPab	22 36 37.5	-0.6
GTA	Gaotai	159.16	26	⇓PKP	PKPdf	22 36 05.3	+0.9
GTA				PKPab	PKPab	22 36 42.3	+0.6
GTA				LR	LR		
	comp=Z,92nm,14.5s						
GTA				LR	LR		
	comp=Z,79nm,14.9s						
GTA				LR	LR		
	comp=Z,80nm,17.5s						
HHC	Hu-ho-hao-te	160.27	360	*e*P	PKPdf	22 35 58.8	-6.8
BTO	Baotou	160.47	3	*e*PKP	PKPdf	22 36 06.8	+1.0
IPM	Ipoh	160.65	147	PKPdf	PKPdf	22 36 06.0	-0.6
BJI	Beijing	160.66	349	PKP	PKPdf	22 36 06.5	+0.7
SBUM	Sibu	161.49	182		PKPdf	22 36 08.6	+1.0
SBUM				PKPab	sPKPdf	22 36 52.9	-0.1
LZH	Lanzhou	163.61	22	PKP	PKPdf	22 36 11.3	+2.1
XAN	Xi'an	166.87	9	PKP	PKPdf	22 36 12.9	+1.0
NJ2	Nanjing	167.22	330	*e*PKP	PKPdf	22 36 11.8	-0.3
CMAR	Chiang Mai Arr	167.92	100	PKP	PKPdf	22 36 13.7	+0.7
	comp=Z,6.3nm,1.0s,baz=273,slow=1.9,SNR=38						
CMAR				pPKP	pPKPdf	22 36 46.3	+0.2
	comp=Z,2.1nm,0.9s,baz=301,slow=1.9,SNR=4.5						
CMAR				PKPab	PKPab	22 37 20.6	-0.3
	comp=Z,4.4nm,0.7s,baz=256,slow=6.2,SNR=26						
CMAR				PP	PP	22 41 11.8	+1.6
	comp=Z,2.2nm,1.0s,baz=255,slow=6.4,SNR=9.0						
CMAR	Chiang Mai Arr	167.92	100	PKPdf	PKPdf	22 36 13.2	+0.3
CMAR				PKPab	PKPab	22 37 20.5	-0.3
CD2	Chengdu	167.99	34	PKP	PKPdf	22 36 11.1	-1.6
CHTO	Chiang Mai	168.01	99	PKIKP	PKPdf	22 36 12.9	-0.1
CHTO						22 37 20.6	
CHTO	Chiang Mai	168.01	99	PKPdf	PKPdf	22 36 12.9	-0.1
CHTO				PKPab	PKPab	22 37 20.6	-0.7
WHN	Wuhan	170.21	345	PKP	PKPdf	22 36 09.8	-4.2
WHN				PP	PP	22 41 23.3	+3.8
WHN				AMB	AMB		
	comp=Z,420nm,10.8s						
KMI	Kunming	171.00	62	⇓PKP	PKPdf	22 36 15.6	+0.6
SLVN	Son La	172.94	86		PKPdf	22 36 16.8	+1.1
GYA	Guiyang	173.05	38	⇑PKP	PKPdf	22 36 16.6	+0.9

DJA 13 22:25:36.7±0.6, 4°S±5°×12°7E±°, h10km, M3.8/8, mb4.2/3, mB5.2/1, MLv3.6/8, Mw(mB)4.5/1, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	0.39	329	P	Pb	22 25 45.2	-0.4
NLAI				S	Sb	22 25 51.0	-0.6
SANI	Sanana	2.00	319	P	Pn	22 26 11.0	+0.4
SANI				S	Sn	22 26 36.3	+0.6
SWI	Sorong	4.78	56	P	Pn	22 26 48.9	0.0
FAKI	Fak Fak	4.98	83	P	Pn	22 26 52.2	+0.6
	0.1nm26nm,1.3s						
LUWI	Luwuk	5.17	299	P	Pn	22 26 54.1	-0.2
	0.2nm2µm46nm,0.7s						

IDC 13 22:46:35.5±4.8, 15°41S×178°45W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/38, mbtmp3.8/3, Error ellipse: s-maj=195.3km s-min=79.5km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.84	239	P	P	22 54 10.6	-0.3
	0.7nm,0.4s,baz=131,slow=17,SNR=1.3						
WRA	Warramunga Arr	45.09	257	P	P	22 54 53.5	-0.3
	0.4nm,0.8s,baz=89,slow=7.5,SNR=10						
ASAR	Alice Springs	45.47	252	P	P	22 54 57.0	+0.1
	1.3nm,0.4s,baz=83,slow=8.4,SNR=14						
MMAI	Mount Meron Ar	144.71	306	PKP	PKPdf	23 06 14.3	-0.6
	1.0nm,0.5s,baz=82,slow=3.1,SNR=2.1						

IDC 13 22:54:58.5±2.3, 20°46N×123°25E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/63, mbtmp3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/23, Error ellipse: s-maj=77.1km s-min=27.8km az=51.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	13.50	170	LR	LR	23 03 31.7	
	comp=Z,50nm,19.2s,baz=284,slow=38						
CMAR	Chiang Mai Arr	23.00	269	P	P	23 00 05.4	+0.3
	0.2nm,0.6s,baz=78,slow=10,SNR=2.4						
H11N1	WAKE ISLAND Hy	40.91	83	T	T	23 47 43.5	
	baz=278						
H11N2	WAKE ISLAND Hy	40.91	83	T	T	23 47 38.0	
	baz=278						
H11S3	WAKE ISLAND Hy	40.91	85	T	T	23 47 56.0	
	baz=281						
H11N3	WAKE ISLAND Hy	40.92	83	T	T	23 47 40.1	
	baz=278						
H11S1	WAKE ISLAND Hy	40.92	85	T	T	23 47 58.8	
	baz=281						
H11S2	WAKE ISLAND Hy	40.93	85	T	T	23 47 56.8	
	baz=281						
WRA	Warramunga Arr	41.59	164	P	P	23 02 46.9	-1.4
	0.4nm,0.6s,baz=343,slow=8.9,SNR=2.7						
MKAR	Makanchi Array	42.36	318	P	P	23 02 54.1	-0.3
	0.2nm,0.7s,baz=111,slow=7.9,SNR=1.7						
ASAR	Alice Springs	45.07	166	P	P	23 03 17.4	+1.0
	0.3nm,0.9s,baz=344,slow=7.1,SNR=3.7						

*WEL **13** 23:05:00,37°.93S×178°.36E, h17km, ML4.2, Mw4.4, Moment Tensor Solution. s5 Moment tensor: Scale 10^15 Nm; Mrr1.20; Mθθ-2.55; Mφφ1.35; Mrθ-4.07; Mθφ0.79; Mφr-1.25; Fault plane solution: M0 4.83000×10^15 NP1: φs140.00000°, δ23.00000°, λ156.00000°. NP2: φs252.00000°, δ81.00000°, λ69.00000°. Principal axes: T -515.9300, Plg50.0000°, Azm139.0000°; N 450.2200, Plg21.0000°, Azm255.0000°; P 65.7100, Plg33.0000°, Azm360.0000°;*

*IDC **13** 23:05:44.0±1.3, 38°.43S×178°.63E, h0km, mb4.3/6, mb1 4.5/7, mb1mx4.1/37, mbtmp4.3/7, ML3.3/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/29 Error ellipse: s-maj=37.8km s-min=23.3km az=0.0*

*NEIC **13** 23:05:46.0±1.9, 38°.06S±0°.05×178°.66E±0°.06, h13km±6km, mb4.4/10, Error ellipse: s-maj=8.4km s-min=4.5km az=219.0*

*NOU **13** 23:05:46.2, 38°.07S×178°.82E, h20km, MLv4.5, Off E. Coast of N. Island, N.Z.*

*WEL **13** 23:05:48.6, 37°.9S±0°.8×177°8E±°, h11km±1km, M4.2/7, ML4.7/7, MLv4.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=70.7*

ISC 13 23:05:46.7±1.3, 37°.97S±0°.03×178°58E±0°.05, h12km±7km, n152, σ1°35/154, mb4.4/11, MS3.5/4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	0.20	319	P	Pg	23 05 52.2	+1.1
WMGZ				S	Sb	23 05 55.6	+1.4
PUZ	Puketiti	0.28	249	P	Pg	23 05 53.2	+0.8
PUZ				S	Sg	23 05 56.7	+0.4
PKGZ	Pakihiroa	0.41	282	P	Pg	23 05 54.3	-0.5
PKGZ				S	Sg	23 05 58.8	-1.5
MXZ	Matakaoa Point	0.47	332		Pb	23 05 57.1	+0.4
MXZ					Sb	23 06 03.9	+0.4
MXZ	Matakaoa Point	0.47	332	P	Pg	23 05 56.9	+1.1
MXZ				S	Sb	23 06 03.5	-0.1
TWGZ	Tauwhareparae	0.52	247	P	Pb	23 05 58.1	+0.4
TWGZ				S	Sb	23 06 05.5	+0.4
CNGZ	Carnagh Statio	0.59	210	P	Pn	23 06 02.5	+1.6
CNGZ				S	Sn	23 06 15.5	+5.1
HAZ	Te Kaha	0.67	289	P	Pg	23 05 59.0	-0.6
HAZ				S	Sg	23 06 06.7	-1.8
RUGZ	Raukumara Rang	0.72	270	P	Pg	23 06 00.2	-0.4
RUGZ				S	Sg	23 06 08.4	-1.6
TKGZ	Te Karaka	0.74	231	P	Pn	23 06 03.1	+0.2
MWZ	Matawai	0.91	246	P	Pg	23 06 04.7	+0.6
RIGZ	Rimuhau	0.98	221	P	Pn	23 06 07.4	+1.2
RAGZ	Rawiri	1.06	240	P	Pn	23 06 08.2	+0.9
PRGZ	Paritu Road	1.10	210	P	Pg	23 06 09.0	+1.2
WIZ	White Island	1.19	292	P	Pn	23 06 09.4	+0.3
URZ	Urewera	1.20	256	Pn	Pn	23 06 09.2	+0.1
	263nm,0.3s,baz=120,slow=24,SNR=602						
URZ				Sn	Sn	23 06 25.2	-0.1
	364nm,0.3s,baz=221,slow=22,SNR=5.4						
URZ	Urewera	1.20	256		Pn	23 06 09.4	+0.2
URZ	Urewera	1.20	256	P	Pn	23 06 09.4	+0.2
WSRZ	White Island S	1.20	292	P	Pg	23 06 10.4	+0.6
KNZ	Kokohu	1.27	214	P	Pn	23 06 10.7	+0.6
SNGZ	Shannon Statio	1.27	230	P	Pb	23 06 11.1	+0.6
WHRZ	Whale Island	1.28	275	P	Pb	23 06 11.0	+0.4
MHGZ	Mahia Peninsul	1.29	204	P	Pb	23 06 11.7	+0.8
RTZ	Ruatahuna	1.42	243	P	Pb	23 06 13.4	+0.4
EDRZ	Edgecumbe	1.46	264	P	Pb	23 06 13.8	0.0
RAHZ	Arahi	1.51	231	P	Pb	23 06 14.6	0.0
MARZ	Manawahe	1.51	269	P	Pn	23 06 14.0	+0.6
MUGZ	Murupara	1.51	250	P	Pb	23 06 15.3	+0.6
WHHZ	Waihua	1.53	223	P	Pn	23 06 14.7	+0.9
OPRZ	Ohinepanea	1.61	274	P	Pn	23 06 14.5	-0.3
TARZ	Mount Tarawera	1.66	260	P	Pb	23 06 17.2	0.0
RRRZ	Republican Roa	1.67	257	P	Pb	23 06 17.1	-0.2
MKRZ	Makatiti	1.68	264	P	Pb	23 06 18.4	+0.9
LIRZ	Lichensteins R	1.74	268	P	Pn	23 06 17.7	+1.0
OMRZ	Omania	1.75	265	P	Pn	23 06 17.9	+1.1
HLRZ	Highlands Stat	1.78	260	P	Pb	23 06 18.8	-0.5
NMHZ	Naumai	1.79	231	P	Pb	23 06 19.2	-0.2
ARHZ	Aropaoanui	1.79	223	P	Pn	23 06 18.8	+1.4
PRRZ	Plateau Road	1.80	252	P	Pn	23 06 18.8	+1.3
KARZ	Kaharoa	1.85	268	P	Pn	23 06 18.7	+0.5
TGRZ	Tauranga	1.85	277	P	Pn	23 06 18.3	+0.1
ALRZ	Allen Road	1.86	251	P	Pb	23 06 20.3	-0.3
HRRZ	Handcock Road	1.86	256	P	Pn	23 06 19.9	+1.5
HSRZ	Hossack Road	1.87	259	P	Pb	23 06 20.2	-0.6
NGRZ	Ngongotaha	1.90	265	P	Pn	23 06 20.4	+1.5
UTU	Utuhina	1.90	263	P	Pg	23 06 23.9	+0.8
WPRZ	Whakapapatarin	1.98	253	P	Pg	23 06 24.9	+0.3
MYRZ	Mayor Island	1.98	290	P	Pn	23 06 20.6	+0.6
GRRZ	Paleaton Road	1.98	258	P	Pg	23 06 26.9	+2.1
BKZ	Black Stump Fm	2.03	233		Pn	23 06 21.2	+0.6
BKZ	Black Stump Fm	2.03	233	P	Pn	23 06 21.5	+0.9
CKHZ	Cape Kidnapper	2.05	214	P	Pn	23 06 21.0	+0.1
MCHZ	McNeill Hill	2.08	225	P	Pn	23 06 22.2	+0.8
KMRZ	Kaimai	2.09	273	P	Pn	23 06 21.9	+0.3
KWHZ	Kaweka Forest	2.23	229	P	Pn	23 06 23.8	+0.4
KUTZ	Kaahu Road	2.23	256	P	Pn	23 06 25.0	+1.5
KAHZ	Kahuranaki	2.25	216	P	Pn	23 06 23.7	-0.1
RITZ	Rihia Road	2.36	244	P	Pn	23 06 27.6	+2.3
RATZ	Rangitukua	2.38	247	P	Pb	23 06 29.4	-0.1
KRHZ	Kereru	2.40	225	P	Pn	23 06 26.1	+0.3
TLZ	Tolley Road	2.43	261	P	Pn	23 06 26.9	+0.8
TOZ	Tahuroa Road	2.45	275	P	Pn	23 06 26.7	+0.3
PXZ	Pawanui	2.45	213	P	Pn	23 06 26.1	-0.3
KATZ	Kakaramea	2.48	245	P	Pn	23 06 30.7	-0.4
BHHZ	Black Hill Sta	2.48	232	P	Pn	23 06 27.4	+0.4
TMVZ	Te Maari	2.53	242	P	Pn	23 06 28.6	+1.0
ETVZ	East Tongariro	2.53	242	P	Pn	23 06 28.5	+0.8
NTVZ	North Tongarir	2.54	243	P	Pn	23 06 28.8	+1.0
KRVZ	Karewarewa	2.56	243	P	Pn	23 06 29.0	+0.9
OTVZ	Oturere	2.58	242	P	Pn	23 06 29.0	+0.6
KUZ	Kuaotunu	2.59	297	P	Pn	23 06 28.1	-0.2
NNVZ	North Ngauruho	2.60	243	P	Pn	23 06 29.6	+1.0
SNVZ	South Ngauruho	2.60	241	P	Pn	23 06 29.6	+0.9
WTVZ	West Tongariro	2.61	243	P	Pn	23 06 31.0	+2.2
NGZ	Ngauruhoe	2.63	242	P	Pn	23 06 30.1	+1.1
TUVZ	Tukino	2.63	240	P	Pn	23 06 30.4	+1.4
MOVZ	Moawhango	2.64	236	P	Pn	23 06 29.7	+0.7
WPHZ	Waipukurau	2.67	218	P	Pn	23 06 29.3	-0.2
PNHZ	Pukenui	2.69	223	P	Pn	23 06 29.0	-0.6
WNVZ	Wahianoa	2.70	239	P	Pn	23 06 31.0	+1.0
PRHZ	Porangahau	2.75	213	P	Pn	23 06 30.4	0.0
MTVZ	Mangateitei	2.81	239	P	Pn	23 06 32.9	+1.4
PKVZ	Pokaka	2.84	242	P	Pn	23 06 32.6	+1.5
TSZ	Takapari Road	2.92	224	P	Pn	23 06 32.3	-0.6
HIZ	Hauiti	2.98	258		Pn	23 06 35.1	+1.3
HIZ	Hauiti	2.98	258	P	Pn	23 06 35.6	+1.8
WIAZ	Waiheke Island	2.99	292	P	Pn	23 06 34.3	+0.5
GRZ	Great Barrier	3.03	304	P	Pn	23 06 34.0	-0.4
ETAZ	East Tamaki Re	3.08	288	P	Pn	23 06 35.9	+0.8
MBAZ	Motutapu North	3.17	291	P	Pn	23 06 36.8	+0.5
VRZ	Vera Road	3.21	248	P	Pn	23 06 38.5	+1.6
EPAZ	Eden Park BICE	3.25	289	P	Pn	23 06 38.3	+1.0
BFZ	Birch Farm	3.26	213	Pn	Pn	23 06 36.2	-1.3
POWZ	Post Office Ro	3.26	221	P	Pn	23 06 36.7	-0.8
AWAZ	Awhitu Peninsu	3.26	285	P	Pn	23 06 38.7	+1.2
PRWZ	Pori Road	3.28	217	P	Pn	23 06 37.6	-0.3
ABAZ	Army Bay	3.29	293	P	Pn	23 06 39.2	+1.3
WAZ	Wanganui	3.32	237	P	Pn	23 06 39.6	+1.2
RVAZ	Riverhead Bore	3.41	289	P	Pn	23 06 40.9	+1.4
LREZ	Lake Rotokare	3.59	244	P	Pn	23 06 43.6	+1.5
NEZ	North Egmont	3.75	248	P	Pn	23 06 46.5	+2.2
PKE	Pukeiti	3.80	250	P	Pn	23 06 49.0	+4.0
KHEZ	Kahui Hut	3.81	248	P	Pn	23 06 47.7	+2.5
WCZ	Waipu Caves	3.96	300	P	Pn	23 06 48.0	+0.9
MSWZ	Moikau Station	4.29	216	Pn	Pn	23 06 50.6	-1.1
PLWZ	Palliser	4.41	214	Pn	Pn	23 06 50.6	-2.8
SNZO	South Karori	4.48	221	Pn	Pn	23 06 53.2	-1.0
OUZ	Omahuta	4.86	303		Pn	23 07 01.0	+1.4
OUZ	Omahuta	4.86	303	P	Pn	23 07 01.1	+1.6
TUWZ	Tuamarina	4.97	225		Pn	23 06 59.1	-1.9
NNZ	Nelson	5.16	230	Pn	Pn	23 07 01.1	-2.6
BSWZ	Blackbirch Sta	5.20	223	Pn	Pn	23 07 01.4	-2.9
QRZ	Quartz Range	5.49	237	Pn	Pn	23 07 06.3	-1.8
THZ	Tophouse	5.78	227	Pn	Pn	23 07 10.4	-1.8
KHZ	Kahutara	5.88	219	Pn	Pn	23 07 13.0	-0.5
LTZ	Lake Taylor	6.80	223	Pn	Pn	23 07 24.0	-2.2
CTZ	Chatham Island	6.81	149	P	Pn	23 07 29.2	+3.0
OXZ	Oxford	7.30	221	Pn	Pn	23 07 32.9	-0.2
RPZ	Rata Peaks	8.09	222	Pn	Pn	23 07 39.7	-4.1
	0.5nm,0.3s,baz=44,slow=5.7,SNR=3.0						
RPZ				Sn	Sn	23 09 06.1	-9.1
	2.6nm,0.3s,baz=126,slow=21,SNR=7.5						
RPZ	Rata Peaks	8.09	222		Pn	23 07 43.5	-0.4
FOZ	Fox Glacier	8.66	227	Pn	Pn	23 07 50.9	-0.8
LBZ	Lake Benmore	9.00	222	Pn	Pn	23 07 52.8	-3.6
ODZ	Otahua Downs	9.23	218	Pn	Pn	23 07 55.9	-3.7
DZM	Mont Dzumac	18.99	323	LR	LR	23 15 46.6	
	comp=Z,101nm,19.8s,baz=7.5,slow=31						
MSVF	Nonsavu	20.17	359	LR	LR	23 16 46.7	
	comp=Z,150nm,20.4s,baz=234,slow=32						
MSVF	Nonsavu	20.17	359	P	P	23 10 20.7	-0.3
MSVF				IAmb	IAmb	23 10 33.0	
	comp=Z,8.7nm,0.8s						
RAR	Rarotonga	25.07	54	LR	LR	23 19 16.8	
	comp=Z,48nm,20.2s,baz=224,slow=32						
STKA	Stephens Creek	30.79	270	P	P	23 12 01.9	-0.2
	comp=Z,4.2nm,0.9s,baz=97,slow=12,SNR=6.8						
CTA	Charters Tower	33.19	293	P	P	23 12 25.9	+2.7
	comp=Z,4.6nm,0.7s,baz=135,slow=8.0,SNR=3.6						
BBOO	Buckleboo	34.82	265	P	P	23 12 37.0	-0.3
BBOO				IAmb	IAmb	23 12 42.2	
	comp=Z,3.7nm,0.9s						
COEN	Coen	39.45	298	P	P	23 13 17.2	+0.4
COEN				IAmb	IAmb	23 13 23.4	
	comp=Z,10.0nm,1.0s						
AS31	Alice Springs	40.55	277	P	P	23 13 25.9	0.0
ASAR	Alice Springs	40.55	277	P	P	23 13 25.5	-0.5
	comp=Z,4.0nm,0.9s,baz=119,slow=7.3,SNR=20						
FORT	Forrest	41.89	264	P	P	23 13 36.5	-0.3
WR0	Warramunga Arr	42.07	283	P	P	23 13 38.4	0.0
WR0				IAmb	IAmb	23 13 43.9	
	comp=Z,9.0nm,0.9s						
WB2	Warramunga Arr	42.23	282	P	P	23 13 39.1	-0.6
WB2				IAmb	IAmb	23 13 44.6	
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	42.24	282	P	P	23 13 39.1	-0.7
	comp=Z,6.8nm,1.0s,baz=125,slow=7.4,SNR=15						
WRA	Warramunga Arr	42.24	282	P	P	23 13 39.7	-0.1
WB0	Warramunga Arr	42.30	283	P	P	23 13 39.6	-0.7
WB0				IAmb	IAmb	23 13 45.6	
	comp=Z,7.6nm,0.8s						
NWAO	Narrogin (SRO)	49.45	256	P	P	23 14 34.8	-1.8
FITZ	Fitzroy Crossi	50.05	278	P	P	23 14 40.1	-1.2
	comp=Z,4.7nm,1.1s,baz=149,slow=10,SNR=4.2						
FITZ	Fitzroy Crossi	50.05	278	P	P	23 14 40.7	-0.6
BATI	Baumata	56.29	284	LR	LR	23 40 44.0	
	comp=Z,106nm,18.4s,baz=156,slow=37						
H03N3	Juan Fernandez	78.86	124	T	T	00 44 21.9	
	baz=234,slow=72,SNR=12						
H03N2	Juan Fernandez	78.86	124	T	T	00 44 20.7	
	baz=234,slow=72,SNR=11						
H03N1	Juan Fernandez	78.87	124	T	T	00 44 02.1	
	baz=234,slow=72,SNR=13						
PSI	Prapat	83.57	279	LR	LR	23 57 56.3	
	comp=Z,31nm,18.2s,baz=90,slow=38						
CMAR	Chiang Mai Arr	93.32	291	P	P	23 19 03.6	+2.0
	comp=Z,0.5nm,0.6s,baz=110,slow=3.5,SNR=3.3						
ARCES	ARCESS Array B	145.22	344	PKPbc	PKPbc	23 25 22.6	-0.1
	comp=Z,5.8nm,1.2s,baz=20,slow=2.9,SNR=1.4						
FINES	FINESS Array B	150.95	333	PKPbc	PKPbc	23 25 38.4	+0.2
	comp=Z,2.5nm,0.9s,baz=80,slow=2.1,SNR=4.5						
BRTR	Keskin Array B	152.74	285	PKPbc	PKPbc	23 25 42.0	-1.3
	comp=Z,1.7nm,0.9s,baz=101,slow=4.4,SNR=5.7						
TORD	Torodi Ar. Bea	155.12	187	PKPab	PKPab	23 26 02.4	-2.1
	comp=Z,0.7nm,0.8s,baz=183,slow=2.1,SNR=2.6						

*JMA **13** 23:25:18.2±0.4, 32°.58N×137°.90E, h387km±4km, M3.4*

*IDC **13** 23:25:19.7±1.3, 32°.72N×137°.98E, h410km±18km, mb2.8/4, mb1 2.8/6, mb1mx2.6/50, mbtmp3.5/6, Error ellipse: s-maj=35.2km s-min=20.1km az=77.0*

ISC 13 23:25:19.3±1.1, 32°.76N±0°.10×137°.9E±0°.1, h400km, n16, σ1°00/23, mb3.0/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	1.60	77	P	Pn	23 26 14.7	+1.8
	5.2nm,0.3s,baz=52,slow=12,SNR=1.2						
JHJ				S	S	23 26 55.0	-1.2
	8.9nm,0.3s,baz=79,slow=21,SNR=1.3						
BSO3	Boso 3	2.96	46	*e*S	S	23 27 12.6	+0.2
BSO4	Boso 4	2.99	41	*e*S	S	23 27 13.0	-0.2
BSO1	Boso 1	3.16	53	P	Pn	23 26 23.0	-0.1
BSO1				*e*S	S	23 27 14.9	-0.1
JWT	Wachi	3.27	321	P	Pn	23 26 24.4	-0.3
JHU	Hanno	3.28	20	P	Pn	23 26 25.4	+0.7
JHU				*e*S	S	23 27 17.5	-0.3
JRY	Ryogami san	3.34	14	P	Pn	23 26 26.6	+1.3
JRY				*e*S	S	23 27 20.4	+1.5
MJAR	Matsushiro Arr	3.77	3	P	Pn	23 26 29.9	+0.7
	0.2nm,0.3s,baz=176,slow=10,SNR=9.9						
JAG	Ashikaga	3.86	19	P	Pn	23 26 30.1	+0.2
JAG				*e*S	S	23 27 25.9	-1.4
JHO	Hitachi	4.41	29	P	Pn	23 26 35.4	+0.2
JHO				*e*S	S	23 27 35.1	-1.8
JFK	Kawauchi	5.19	27	P	Pn	23 26 43.7	+0.5
JFK				*e*S	S	23 27 50.0	-1.4
KLR	Kul'dur	17.09	346	P	P	23 28 55.0	+1.1
	0.2nm,0.3s,baz=157,slow=13,SNR=4.5						
PETK	Petropavlovsk-	24.80	29	P	P	23 30 06.7	-0.2
	2.9nm,0.9s,baz=219,slow=16,SNR=3.6						
ZALV	Zalesovo Beam	42.83	316	P	P	23 32 40.1	+0.5
	0.4nm,0.3s,baz=79,slow=7.5,SNR=2.3						
MKAR	Makanchi Array	44.10	305	P	P	23 32 49.5	-0.4
	0.2nm,0.4s,baz=86,slow=11,SNR=5.7						
WRA	Warramunga Arr	52.52	184	P	P	23 33 52.6	-0.8
	0.1nm,0.3s,baz=360,slow=7.6,SNR=4.8						

*NEIC **13** 23:36:34.2±2.2, 30°.97S±0°.05×72°.04W±0°.07, h38km±14km, Error ellipse: s-maj=8.2km s-min=7.0km az=87.0*

*GUC **13** 23:36:36.1±0.4, 31°.13S×71°.75W, h35km, ML3.7*

ISC 13 23:36:33.0±1.4, 30°.96S±0°.03×72°.08W±0°.07, h35km±6km, n46, σ1°45/61, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CO02	Combarbal	0.96	105		Pn	23 36 50.3	+0.3
CO02				Sn	Sn	23 36 59.9	-2.7
CO03	El Pedregal	1.20	85	⇓*e*P	Pn	23 36 53.3	-0.1
CO03				*i* S	Sn	23 37 06.5	-2.1
CO03				IAML		23 37 07.2	
	comp=N,9µm,0.1s						
CO03	El Pedregal	1.20	85		Pn	23 36 53.5	+0.1
CO03				Sn	Sn	23 37 06.4	-2.1
GO04	Tololo Observa	1.35	55	*e*P	Pn	23 36 56.4	+0.8
GO04				*i* S	Sn	23 37 12.4	-0.1
GO04				IAML		23 37 18.8	
	comp=N,6µm,0.5s						
GO04	Tololo Observa	1.35	55	Pn	Pn	23 36 56.5	+0.9
GO04				Sn	Sn	23 37 11.9	-0.5
VA01	Torpederas	2.09	170	*e*P	Pn	23 37 06.8	+1.3
VA01				IAML		23 37 31.0	
	comp=E,305nm,0.1s						
VA01	Torpederas	2.09	170	Pn	Pn	23 37 06.9	+1.3
ROCH	El Roble	2.21	156	*e*P	Pn	23 37 08.7	+1.4
ROCH				*i* S	Sn	23 37 32.2	-1.3
VA03	San Esteban	2.22	145	*e*P	Pn	23 37 08.6	+1.2
VA03				*i* S	Sn	23 37 33.2	-0.6
VA03				IAML		23 37 36.2	
	comp=E,844nm,0.3s						
VA03	San Esteban	2.22	145		Pn	23 37 08.8	+1.4
LCO	Las Campanas	2.28	32	Pn	Pn	23 37 10.1	+1.

	5.6nm,0.3s,baz=254,slow=4.1,SNR=4.0						
BATI				S	**Sn**	**23 39 17.8**	**+0.7**
	15nm,0.3s,baz=103,slow=23,SNR=10.0						
FAKI	**Fak Fak**	**5.73**	**37**	Pn	**Pn**	**23 38 15.1**	**+2.4**
MTN	**Manton Dam**	**5.79**	**156**	Pn	**Pn**	**23 38 16.2**	**+2.8**
SIJI	**Sorong**	**7.05**	**21**	P	**Pn**	**23 38 30.5**	**+0.1**
	1.8nm,0.3s,baz=186,slow=22,SNR=12						
SIJI				S	**Sn**	**23 39 45.8**	**-3.6**
	1.7nm,0.3s,baz=237,slow=23,SNR=2.3						
KNRA	**Kununurra**	**8.12**	**180**	Pn	**Pn**	**23 38 45.6**	**+1.2**
FITZ	**Fitzroy Crossi**	**10.95**	**196**	P	**Pn**	**23 39 20.9**	**-1.2**
	1.3nm,0.3s,baz=26,slow=11,SNR=36						
FITZ				S	**Sn**	**23 41 17.4**	**-5.9**
	1.2nm,0.3s,baz=130,slow=22,SNR=7.4						
FITZ	**Fitzroy Crossi**	**10.95**	**196**	Pn	**Pn**	**23 39 21.4**	**-0.7**
WB0	**Warramunga Arr**	**13.35**	**156**	Pn	**Pn**	**23 39 52.7**	**-0.6**
WRAB	**Tennant Creek**	**13.49**	**157**		**Pn**	**23 39 54.7**	**-0.3**
WRA	**Warramunga Arr**	**13.49**	**157**	P	**Pn**	**23 39 54.3**	**-0.7**
	1.7nm,0.3s,baz=338,slow=14,SNR=61						
WRA				S	**Sn**	**23 42 21.2**	**-3.3**
	1.0nm,0.3s,baz=337,slow=23,SNR=7.8						
WRA	**Warramunga Arr**	**13.49**	**157**		**Pn**	**23 39 54.8**	**-0.3**
WB2	**Warramunga Arr**	**13.50**	**157**		**Pn**	**23 39 54.9**	**-0.2**
WR0	**Warramunga Arr**	**13.59**	**156**	Pn	**Pn**	**23 39 55.7**	**-0.5**
COEN	**Coen**	**15.54**	**116**		**Pn**	**23 40 22.1**	**+1.4**
PSA00	**Pilbara Seismi**	**16.42**	**211**	P	**P**	**23 40 32.1**	**+0.7**
PSA00				IAmb	IAmb	23 40 44.3	
	comp=Z,6.8nm,1.0s						
AS31	**Alice Springs**	**16.80**	**163**	P	**Pn**	**23 40 37.5**	**+1.4**
ASAR	**Alice Springs**	**16.81**	**163**	P	**Pn**	**23 40 38.2**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=336,slow=10,SNR=51						
ASAR				S	**S**	**23 43 42.5**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=346,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**16.81**	**163**	P	**Pn**	**23 40 37.7**	**+1.6**
MORW	**Morawa**	**24.57**	**208**	P	**P**	**23 41 57.7**	**+2.1**
MORW				IAmb	IAmb	23 42 10.0	
	comp=Z,8.8nm,1.1s						
BBOO	**Buckleboo**	**26.07**	**166**	P	**P**	**23 42 08.3**	**-0.8**
BBOO				IAmb	IAmb	23 42 12.8	
	comp=Z,3.0nm,1.1s						
NWAO	**Narrogin (SRO)**	**27.46**	**201**	P	**P**	**23 42 22.1**	**+0.5**
	comp=Z,6.3nm,0.8s,baz=56,slow=7.3,SNR=2.3						
NWAO	**Narrogin (SRO)**	**27.46**	**201**	P	**P**	**23 42 22.3**	**+0.7**
EIDS	**Eidsvold**	**27.73**	**132**	P	**P**	**23 42 24.3**	**+0.2**
EIDS				IAmb	IAmb	23 42 27.9	
	comp=Z,6.8nm,1.1s						
NACB	**Ninganchiao**	**32.26**	**348**	P	**P**	**23 43 03.5**	**-0.4**
MKAR	**Makanchi Array**	**67.98**	**327**	P	**P**	**23 47 31.5**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=114,slow=7.5,SNR=4.9						

ECX ***13*** *23:51:09.4±0.6,31°.12N×116°.62W,h14km±3km, MD3.1, ML3.4*

MEX ***13*** *23:51:10.1±0.3,32°.06N×115°.07W,h20km±999km, MD3.8*

ISC 13 23:51:05.9±2.5, 31°.09N±0°.10×116°.6W±0°.1, h11km±11km, n17, σ0s68/27, 8C-3D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVX	**San Vicente**	**0.41**	**54**	*e*P	**Pn**	**23 51 16.5**	**-1.3**
SVX				*i* S	**Sb**	**23 51 21.8**	**+0.4**
CCX	**Cicese**	**0.78**	**358**	*e*P	**Pn**	**23 51 22.8**	**-0.1**
CCX				*e*S	**Sb**	**23 51 32.9**	**+0.8**
SPIG	**San Pedro Mart**	**1.00**	**92**	*e*P	**Pn**	**23 51 27.0**	**+0.7**
SPIG				*e*S	**Sn**	**23 51 40.0**	**-0.6**
SPIG	**San Pedro Mart**	**1.00**	**92**	*e*P	**Pn**	**23 51 26.9**	**+0.6**
SPIG				*e*S	**Sn**	**23 51 40.0**	**-0.6**
SPX	**San Pedro Mart**	**1.00**	**93**	⇑*e*P	**Pn**	**23 51 27.1**	**+0.7**
SPX				*e*S	**Sn**	**23 51 40.1**	**-0.6**
SPX				⇓*e*		23 51 42.1	
SPX				IAML		23 51 42.1	
	comp=N,1μm,0.3s						
SPX				⇑*e*		23 51 43.7	
SPX				IAML		23 51 43.7	
	comp=E,567nm,0.3s						
CBX	**Cerro Bola**	**1.22**	**359**	⇑*i*P	**Pg**	**23 51 30.2**	**+0.8**
CBX				*e*S	**Sg**	**23 51 45.9**	**+0.5**
CBX				IAML		23 51 48.4	
	comp=N,1μm,0.6s						
CBX				⇓*e*		23 51 48.4	
CBX				⇑*e*		23 51 48.6	
CBX				IAML		23 51 48.6	
	comp=E,1μm,0.4s						
TJIG	**Tijuana**	**1.34**	**359**	*e*P	**Pg**	**23 51 31.6**	**-0.1**
TJIG				*e*S	**Sn**	**23 51 48.5**	**0.0**
TJIG	**Tijuana**	**1.34**	**359**	*e*P	**Pg**	**23 51 31.7**	**-0.1**
TKX	**Tecate**	**1.48**	**1**	*e*P	**Pg**	**23 51 33.7**	**-0.6**
TKX				*e*S	**Sb**	**23 51 53.2**	**+0.9**
SFX	**San Felipe**	**1.53**	**91**	*e*P	**Pg**	**23 51 35.3**	**-0.1**
SFX				*e*S	**Sg**	**23 51 55.4**	**+0.2**
SFX				IAML		23 52 00.7	
	comp=N,435nm,0.5s						
SFX				⇓*e*		23 52 00.7	
RMX	**La Rumorosa**	**1.58**	**17**	*e*P	**Pb**	**23 51 35.3**	**-0.1**
RMX				*e*S	**Sn**	**23 51 55.6**	**+0.9**
BAR	**Barrett**	**1.59**	**359**	⇑*e*P	**Pg**	**23 51 35.4**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**1.62**	**16**	⇑*e*P	**Pg**	**23 51 36.8**	**-0.2**
MONP2	**Monument Peak**	**1.81**	**6**	⇑*e*P	**Pb**	**23 51 39.3**	**+0.1**
MATG	**Mataguay Scout**	**2.11**	**360**	⇑*e*P	**Pb**	**23 51 43.3**	**-0.9**
SLH	**Sleepy Hollow**	**2.12**	**9**	*e*P	**Pb**	**23 51 43.5**	**-1.0**
214A	**Organ Pipe Nat**	**3.38**	**74**	*e*P	**Pn**	**23 51 59.0**	**+0.3**

MAN ***13*** *23:55:28.9, 16°.54N×120°.51E, h24km, mb5.0, ML4.0, MS4.0*

IDC ***13*** *23:55:40.5±2.1, 14°.18N×119°.32E, h0km, mb3.2/3, mb1 3.6/3, mb1mx3.2/41, mbtmp3.3/3, Error ellipse: s-maj=49.7km s-min=24.3km az=6.0*

ISC 13 23:55:30.1±1.2, 16°.58N±0°.05×120°.50E±0°.09, h35km, n9, σ2s43/13, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.60**	**251**	*e*P	**Pn**	**23 55 42.4**	**+0.4**
APYP	**Conner**	**1.46**	**29**	*e*P	**Pn**	**23 55 52.7**	**-1.2**
APYP				*e*S	**Sn**	**23 56 12.6**	**+0.7**
CVP	**Callao Caves**	**1.69**	**48**	⇓*e*P	**Pn**	**23 55 55.7**	**-1.4**
CVP				*i* S	**Sn**	**23 56 19.2**	**+1.8**
MACP	**Maragondon, Ca**	**2.31**	**175**	*e*P	**Pn**	**23 56 04.0**	**-1.6**
MACP				*e*S	**Sn**	**23 56 33.9**	**+1.0**
TGY	**Tagaytay City**	**2.50**	**170**	Pn	**Pn**	**23 56 10.2**	**+1.9**
	68nm,0.3s,baz=84,slow=4.9,SNR=1.9						
TGY				Sn	**Sn**	**23 56 31.4**	**-6.2**
	41nm,0.3s,baz=114,slow=4.9,SNR=4.4						
LQP	**Lukban**	**2.65**	**158**	⇑*e*P	**Pn**	**23 56 12.9**	**+2.4**
LQP				*e*S	**Sn**	**23 56 41.6**	**0.0**
CMAR	**Chiang Mai Arr**	**20.64**	**278**	P	Pn	00 00 14.9	+5.6
	0.3nm,0.3s,baz=102,slow=7.5,SNR=4.2						
WRA	**Warramunga Arr**	**38.76**	**159**	P	**P**	**00 02 51.5**	**+0.2**
	0.4nm,0.7s,baz=338,slow=9.4,SNR=4.8						
ASAR	**Alice Springs**	**42.09**	**162**	P	**P**	**00 03 19.5**	**+0.6**
	0.4nm,0.9s,baz=335,slow=6.3,SNR=2.5						

IDC ***14*** *00:11:58.9±1.9, 43°.65N×105°.41W, h0km, mb1 3.4/3, mb1mx3.2/44, mbtmp3.2/3, ML3.3/3, Error ellipse: s-maj=44.9km s-min=8.8km az=151.0*

NEIC ***14*** *00:11:59.9±0.9, 43°.75N±0°.01×105°.28W±0°.06, h0km±2km, ML3.2/64, Error ellipse: s-maj=7.3km s-min=3.1km az=79.0*

ISC 14 00:11:59.5±1.0, 43°.74N±0°.06×105°.33W±0°.06, h0km, n60, σ0s93/60, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.00**	**67**		**Pg**	**00 12 18.6**	**-0.1**
K22A	**Casper**	**1.40**	**219**	Pn	**Pg**	**00 12 25.5**	**-0.8**
K22A				IAML		00 12 50.2	
	comp=N,510nm,0.3s						
K22A				IAML		00 12 54.1	
	comp=E,268nm,0.3s						
PHWY	**Pilot Hill**	**2.44**	**182**		**Pn**	**00 12 41.8**	**+0.9**
RWWY	**Rawlins**	**2.48**	**215**		**Pn**	**00 12 42.0**	**+0.7**
RWWY				IAML		00 13 17.9	
	comp=E,134nm,0.7s						
RWWY				IAML		00 13 21.2	
	comp=E,145nm,0.7s						
LAO	**LASA Array**	**3.01**	**348**		**Pn**	**00 12 48.8**	**+0.3**
LAO				IAML		00 13 33.5	
	comp=E,112nm,0.3s						
RLMT	**Red Lodge**	**3.14**	**297**		**Pn**	**00 12 51.1**	**+0.7**
RLMT				IAML		00 13 42.1	
	comp=E,52nm,0.3s						
RLMT				IAML		00 13 48.7	
	comp=E,56nm,0.3s						
BW06	**Boulder Array**	**3.24**	**254**		**Pn**	**00 12 52.8**	**+1.0**
BW06				IAML		00 13 46.0	
	comp=E,37nm,0.3s						
PD31	**Pinedale Array**	**3.24**	**254**		**Pn**	**00 12 52.6**	**+0.8**
PDAR	**Pinedale Array**	**3.24**	**254**	Pn	**Pn**	**00 12 52.5**	**+0.6**
	comp=E,2.7nm,0.3s,baz=79,slow=16,SNR=59						
PDAR				Lg		00 13 38.7	
	comp=E,18nm,0.3s,baz=73,slow=34,SNR=13						
YNE	**Yellowstone No**	**3.59**	**292**	Pn	**Pn**	**00 12 57.0**	**+0.4**
YNE				IAML		00 14 21.6	
	comp=E,48nm,4.2s						
YNE				IAML		00 14 21.6	
	comp=N,45nm,2.3s						
YMP	**Mirror Lake Pl**	**3.61**	**288**	Pn	**Pn**	**00 12 58.1**	**+1.1**
GCMT	**Greycliff**	**3.71**	**305**		**Pn**	**00 12 59.0**	**+0.8**
OGNE	**Ogallala**	**3.71**	**138**	Pn	**Pn**	**00 12 59.3**	**+1.2**
LKWY	**Lake**	**3.74**	**284**		**Pn**	**00 12 57.7**	**-1.1**
LKWY				IAML		00 14 29.2	
	comp=N,40nm,0.8s						
LKWY				IAML		00 14 30.2	
	comp=N,23nm,0.8s						
LOHW	**Long Hollow**	**3.83**	**270**		**Pn**	**00 13 00.9**	**+1.0**
H17A	**Grant Village**	**3.84**	**282**		**Pn**	**00 13 00.9**	**+0.8**
H17A				IAML		00 14 02.8	
	comp=N,21nm,0.6s						
FLWY	**Flagg Ranch**	**3.90**	**277**		**Pn**	**00 13 02.3**	**+1.4**
FLWY				IAML		00 14 12.6	
	comp=N,25nm,2.3s						
MOOW	**Moose Ponds**	**3.93**	**272**		**Pn**	**00 13 03.1**	**+1.8**
ISCO	**Idaho Springs**	**3.95**	**183**	Pn	**Pn**	**00 13 02.5**	**+0.9**
YPP	**Pitchstone Pla**	**3.99**	**280**		**Pn**	**00 13 03.3**	**+1.2**
REDW	**Red Top Meadow**	**4.04**	**266**		**Pn**	**00 13 03.5**	**+0.8**
REDW				IAML		00 14 08.5	
	comp=N,18nm,1.2s						
REDW				IAML		00 14 18.9	
	comp=N,23nm,1.1s						
YHH	**Holmes Hill**	**4.10**	**287**		**Pn**	**00 13 05.0**	**+1.3**
YMR	**Madison River**	**4.16**	**285**		**Pn**	**00 13 03.9**	**-0.6**
YMR				IAML		00 14 30.3	
	comp=N,40nm,1.2s						
YMR				IAML		00 14 35.0	
	comp=E,32nm,0.9s						
O20A	**White River Ci**	**4.21**	**212**	Pn	**Pn**	**00 13 05.8**	**+0.7**
O20A				IAML		00 14 13.4	
	comp=E,29nm,0.3s						
O20A				IAML		00 14 29.9	
	comp=N,30nm,1.2s						
AHID	**Auburn Hatcher**	**4.33**	**259**		**Pn**	**00 13 07.2**	**+0.4**
AHID				IAML		00 14 23.7	
	comp=E,21nm,0.8s						
E28A	**Huff**	**4.33**	**48**		**Pn**	**00 13 06.4**	**-0.1**
E28A				IAML		00 14 33.9	
	comp=E,39nm,0.6s						
YHL	**Hebgen Lake**	**4.35**	**287**		**Pn**	**00 13 07.7**	**+0.6**
YHL				IAML		00 14 25.9	
	comp=E,17nm,1.1s						
YHL				IAML		00 14 40.9	
	comp=N,16nm,1.2s						
ECR	**Eagle Creek**	**4.46**	**263**		**Pn**	**00 13 09.6**	**+1.1**
RDMU	**Red Mountain**	**4.47**	**226**		**Pn**	**00 13 09.3**	**+0.6**
RDMU				IAML		00 14 27.4	
	comp=N,18nm,0.9s						
RDMU				IAML		00 14 36.2	
	comp=E,16nm,0.9s						
SUSD	**Miller**	**4.64**	**79**	Pn	**Pn**	**00 13 12.7**	**+1.8**
SMCO	**Snowmass**	**4.73**	**196**	Pn	**Pn**	**00 13 13.5**	**+1.2**
SMCO				IAML		00 14 29.7	
	comp=E,14nm,0.3s						
SMCO				IAML		00 14 31.4	
	comp=E,23nm,0.3s						
DGMT	**Dagmar**	**4.79**	**9**		**Pn**	**00 13 13.0**	**0.0**
BOZ	**Bozeman (W)**	**4.86**	**295**	Pn	**Pn**	**00 13 15.0**	**+0.9**
BOZ				IAML		00 14 36.3	
	comp=E,9.5nm,1.2s						
BOZ				IAML		00 14 36.6	
	comp=E,12nm,0.8s						
HWUT	**Hardware Ranch**	**5.07**	**247**		**Pn**	**00 13 17.2**	**+0.2**
HWUT				IAML		00 14 53.2	
	comp=E,16nm,1.1s						
HWUT				IAML		00 14 56.0	
	comp=E,20nm,0.9s						
KSCO	**Kaye Shedlock'**	**5.14**	**156**		**Pn**	**00 13 16.2**	**-1.6**
TCUT	**Toone Canyon**	**5.21**	**242**		**Pn**	**00 13 19.2**	**+0.3**
EGMT	**Eagleton**	**5.28**	**326**		**Pn**	**00 13 19.5**	**-0.2**
DLMT	**Dillon**	**5.44**	**290**	Pn	**Pn**	**00 13 21.6**	**-0.4**
HRY	**Holter Researc**	**5.47**	**305**	Pn	**Pn**	**00 13 23.1**	**+0.8**
LRM	**Limekiln Ridge**	**5.48**	**295**	Pn	**Pn**	**00 13 22.4**	**-0.2**
MCMT	**McKenzie Canyo**	**5.51**	**284**		**Pn**	**00 13 25.6**	**+2.6**
JLU	**Jordanelle**	**5.53**	**237**		**Pn**	**00 13 23.4**	**+0.2**
MDND	**Maddock**	**5.73**	**42**	Pn	**Pn**	**00 13 25.4**	**-0.4**
SPUT	**South Promonto**	**5.80**	**248**		**Pn**	**00 13 27.9**	**+1.0**
HVU	**Hansel Valley**	**5.82**	**253**		**Pn**	**00 13 28.2**	**+0.9**
P17A	**Butcher Ranch,**	**5.89**	**225**	Pn	**Pn**	**00 13 29.3**	**+1.2**
SRU	**San Rafael Swe**	**6.05**	**222**		**Pn**	**00 13 31.0**	**+0.5**
TMUT	**Trail Mountain**	**6.26**	**227**		**Pn**	**00 13 34.0**	**+0.6**
NLU	**North Lily Min**	**6.30**	**235**	Pn	**Pn**	**00 13 34.5**	**+0.7**
ECSD	**EROS Data Cent**	**6.31**	**87**	Pn	**Pn**	**00 13 33.6**	**-0.1**
BGU	**Big Grassy Mou**	**6.37**	**246**	Pn	**Pn**	**00 13 36.1**	**+1.4**
CBKS	**Cedar Bluff**	**6.48**	**138**	Pn	**Pn**	**00 13 35.7**	**-0.4**
Q16A	**Castle Valley**	**6.53**	**224**		**Pn**	**00 13 37.8**	**+0.8**
DUG	**Dugway, Tooele**	**6.61**	**240**	Pn	**Pn**	**00 13 38.4**	**+0.4**
T25A	**Trinidad**	**6.63**	**174**	Pn	**Pn**	**00 13 38.7**	**+0.3**
MSU	**Marysvale**	**7.35**	**227**	Pn	**Pn**	**00 13 49.2**	**+0.9**
JTMT	**Jette**	**7.43**	**306**	Pn	**Pn**	**00 13 49.8**	**+0.5**
MTPU	**Mount Pierson**	**7.71**	**225**	Pn	**Pn**	**00 13 53.6**	**+0.4**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**00 14 12.0**	**-0.9**
	comp=E,1.0nm,0.3s,baz=235,slow=11,SNR=12						
ULM				Pg		00 14 46.0	
	comp=E,0.7nm,0.3s,baz=227,slow=14,SNR=5.5						
ULM				Lg	Lg	00 16 43.5	
	comp=E,0.5nm,0.3s,baz=124,slow=22,SNR=2.3						
YKA	**Yellowknife Ar**	**19.55**	**347**	P	**P**	**00 16 28.5**	**0.0**
	comp=E,0.1nm,0.3s,baz=166,slow=12,SNR=5.9						

WEL ***14*** *00:24:00, 37°.92S×178°.35E, h15km, ML4.6, Mw4.6, Moment Tensor Solution. s4 Moment tensor: Scale 10^15 Nm; Mrr1.84; Mθθ-5.41; Mφφ3.58; Mrθ-5.70; Mθφ2.01; Mφr-3.61; Fault plane solution: Mo8.50000×10^15 NP1: φs142.00000°, δ36.00000°, λ167.00000°. NP2: φs243.00000°, δ82.00000°, λ55.00000°. Principal axes: T -854.4800, Plg42.0000°, Azm120.0000°; N 846.0900, Plg35.0000°, Azm248.0000°; P 8.3900, Plg28.0000°, Azm1.0000°;*

IDC ***14*** *00:24:05.9±1.2, 37°.59S×178°.48E, h0km, mb4.3/6, mb1 4.5/6, mb1mx4.1/30, mbtmp4.3/6, MS3.6/12, Ms1 3.6/12, ms1mx3.5/26 Error ellipse: s-maj=32.0km s-min=16.3km az=144.0*

NEIC ***14*** *00:24:05.8±1.4, 38°.07S±0°.07×178°.76E±0°.09, h10km±2km, mb4.5/10, Error ellipse: s-maj=14.5km s-min=7.7km az=48.0*

WEL ***14*** *00:24:09.7, 37°.9S±0°.8×178°.8E±°, h10km±1km, M4.6/11, ML4.9/11, MLv4.6/11, Error ellipse: s-maj=0.0km s-min=0.0km az=70.2*

NOU ***14*** *00:24:12.4, 38°.10S×178°.33E, h128km, MLv4.5, Off E. Coast of N. Island, N.Z.*

ISC 14 00:24:08.8±0.8, 37°.95S±0°.02×178°.49E±0°.04, h19km±2km, n165, σ1s68/174, mb4.5/11, MS3.6/14, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.14**	**335**	P	**Pg**	**00 24 13.1**	**0.0**
WMGZ				S	**Sg**	**00 24 16.3**	**+0.3**
PUZ	**Puketiti**	**0.22**	**237**	P	**Pb**	**00 24 14.1**	**+0.3**
PUZ				S	**Sb**	**00 24 17.8**	**+0.7**
PKGZ	**Pakihiroa**	**0.33**	**281**	P	**Pg**	**00 24 15.2**	**-0.8**
PKGZ				S	**Sg**	**00 24 19.5**	**-1.4**
MXZ	**Matakaoa Point**	**0.41**	**339**		**Pb**	**00 24 18.0**	**+0.4**
MXZ					**Sn**	**00 24 25.7**	**-1.2**
MXZ	**Matakaoa Point**	**0.41**	**339**	P	**Pb**	**00 24 17.8**	**+0.2**
MXZ				S	**Sb**	**00 24 25.1**	**+1.6**
TWGZ	**Tauwhareparae**	**0.46**	**241**	P	**Pb**	**00 24 19.0**	**+0.6**
TWGZ				S	**Sb**	**00 24 26.7**	**+1.8**
CNGZ	**Carnagh Statio**	**0.58**	**203**	P	**Pn**	**00 24 23.3**	**+1.4**
CNGZ				S	**Sn**	**00 24 36.9**	**+5.9**
HAZ	**Te Kaha**	**0.59**	**289**	P	**Pb**	**00 24 20.0**	**-0.5**
HAZ				S	**Sb**	**00 24 27.7**	**-0.7**
RUGZ	**Raukumara Rang**	**0.64**	**268**	P	**Pb**	**00 24 21.1**	**-0.3**
RUGZ				S	**Sb**	**00 24 29.7**	**-0.3**
TKGZ	**Te Karaka**	**0.70**	**226**	P	**Pn**	**00 24 24.1**	**+0.4**
TKGZ				S	**Sn**	**00 24 35.1**	**+1.1**
MWZ	**Matawai**	**0.85**	**243**	P	**Pg**	**00 24 25.7**	**+0.2**
MWZ				S	**Sg**	**00 24 37.1**	**+0.4**
RIGZ	**Rimuhau**	**0.95**	**217**	P	**Pg**	**00 24 28.6**	**+1.3**
RIGZ				S	**Sn**	**00 24 44.2**	**+4.1**
RAGZ	**Rawiri**	**1.01**	**237**	P	**Pg**	**00 24 29.1**	**+0.7**
RAGZ				S	**Sg**	**00 24 43.4**	**+1.7**
PRGZ	**Paritu Road**	**1.08**	**206**	P	**Pg**	**00 24 30.3**	**+0.5**
WIZ	**White Island**	**1.12**	**292**	P	**Pg**	**00 24 30.8**	**+0.4**
WSRZ	**White Island S**	**1.13**	**292**	P	**Pg**	**00 24 31.6**	**+1.0**
URZ	**Urewera**	**1.13**	**254**	Pg	**Pb**	**00 24 30.1**	**+0.4**
	524nm,0.3s,baz=302,slow=24,SNR=802						
URZ				Lg	Lg	00 24 47.5	
	1μm,0.3s,baz=200,slow=21,SNR=13						
URZ	**Urewera**	**1.13**	**254**		**Pb**	**00 24 30.2**	**+0.5**
URZ					**Sg**	**00 24 49.0**	**+3.4**
URZ	**Urewera**	**1.13**	**254**	P	**Pb**	**00 24 30.2**	**+0.5**
WHRZ	**Whale Island**	**1.20**	**274**	P	**Pg**	**00 24 32.5**	**+0.4**
SNGZ	**Shannon Statio**	**1.23**	**227**	P	**Pg**	**00 24 32.3**	**-0.3**
KNZ	**Kokohu**	**1.25**	**211**	P	**Pb**	**00 24 32.1**	**+0.4**
MHGZ	**Mahia Peninsul**	**1.28**	**201**	P	**Pb**	**00 24 32.9**	**+0.5**
RTZ	**Ruatahuna**	**1.36**	**240**	P	**Pg**	**00 24 34.6**	**-0.5**
EDRZ	**Edgecumbe**	**1.39**	**263**	P	**Pb**	**00 24 34.9**	**+0.6**
MARZ	**Manawahe**	**1.44**	**268**	P	**Pb**	**00 24 35.1**	**+0.2**
MUGZ	**Murupara**	**1.45**	**248**	P	**Pb**	**00 24 35.9**	**+0.7**
RAHZ	**Arahi**	**1.47**	**228**	P	**Pb**	**00 24 36.1**	**+0.7**
WHHZ	**Waihua**	**1.50**	**221**	P	**Pb**	**00 24 36.1**	**+0.2**
OPRZ	**Ohinepanea**	**1.54**	**273**	P	**Pn**	**00 24 35.9**	**+0.8**
MTHZ	**Maungataniwha**	**1.58**	**235**	P	**Pb**	**00 24 37.4**	**0.0**
TARZ	**Mount Tarawera**	**1.59**	**259**	P	**Pb**	**00 24 38.2**	**+0.5**
RRRZ	**Republican Roa**	**1.61**	**255**	P	**Pg**	**00 24 39.1**	**-0.6**
MKRZ	**Makatiti**	**1.61**	**263**	P	**Pg**	**00 24 39.4**	**-0.4**
OMRZ	**Omania**	**1.68**	**264**	P	**Pb**	**00 24 39.0**	**-0.2**
HLRZ	**Highlands Stat**	**1.71**	**259**	P	**Pb**	**00 24 39.9**	**+0.2**
PRRZ	**Plateau Road**	**1.74**	**251**	P	**Pb**	**00 24 40.3**	**+0.1**
NMHZ	**Naumai**	**1.75**	**229**	P	**Pb**	**00 24 41.2**	**+0.9**
ARHZ	**Aropaoanui**	**1.76**	**221**	P	**Pb**	**00 24 40.2**	**-0.3**
KARZ	**Kaharoa**	**1.78**	**267**	P	**Pb**	**00 24 39.9**	**-0.9**
TGRZ	**Tauranga**	**1.78**	**276**	P	**Pn**	**00 24 39.6**	**+1.1**
HRRZ	**Handcock Road**	**1.79**	**255**	P	**Pb**	**00 24 40.9**	**-0.2**
ALRZ	**Allen Road**	**1.80**	**249**	P	**Pb**	**00 24 41.7**	**+0.6**
HSRZ	**Hossack Road**	**1.81**	**258**	P	**Pb**	**00 24 41.4**	**+0.1**
NGRZ	**Ngongotaha**	**1.83**	**265**	P	**Pb**	**00 24 41.2**	**-0.4**
UTUZ	**Utuhina**	**1.83**	**262**	P	**Pg**	**00 24 44.2**	**+0.3**
MYRZ	**Mayor Island**	**1.91**	**290**	P	**Pn**	**00 24 41.6**	**+1.3**
GRRZ	**Galatos Road**	**1.92**	**257**	P	**Pg**	**00 24 46.5**	**+0.8**
WPRZ	**Whakapapatarin**	**1.92**	**252**	P	**Pb**	**00 24 44.6**	**+1.4**
BKZ	**Black Stump Fm**	**1.98**	**232**		**Pn**	**00 24 42.6**	**+1.3**
BKZ	**Black Stump Fm**	**1.98**	**232**	P	**Pn**	**00 24 42.7**	**+1.3**
KMRZ	**Kaimai**	**2.02**	**272**	P	**Pn**	**00 24 43.2**	**+1.3**
CKHZ	**Cape Kidnapper**	**2.03**	**213**	P	**Pn**	**00 24 42.7**	**+0.7**
MCHZ	**McNeill Hill**	**2.05**	**223**	P	**Pn**	**00 24 43.4**	**+1.2**
HATZ	**Hinemaiaia**	**2.11**	**243**	P	**Pb**	**00 24 46.9**	**+0.6**
KUTZ	**Kaahu Road**	**2.17**	**255**	P	**Pb**	**00 24 46.7**	**-0.8**
KWHZ	**Kaweka Forest**	**2.19**	**227**	P	**Pn**	**00 24 45.0**	**+0.8**
KAHZ	**Kahuranaki**	**2.23**	**214**	P	**Pn**	**00 24 45.3**	**+0.6**
RITZ	**Rihia Road**	**2.31**	**243**	P	**Pb**	**00 24 50.4**	**+0.6**
RATZ	**Rangitukua**	**2.32**	**246**	P	**Pb**	**00 24 48.8**	**-1.3**
TLZ	**Tolley Road**	**2.36**	**260**	P	**Pn**	**00 24 48.0**	**+1.5**
KRHZ	**Kereru**	**2.37**	**224**	P	**Pn**	**00 24 47.5**	**+0.8**
TOZ	**Tahuroa Road**	**2.38**	**274**	P	**Pn**	**00 24 47.8**	**+1.1**
KATZ	**Kakaramea**	**2.42**	**244**	P	**Pn**	**00 24 50.4**	**-1.0**
PXZ	**Pawanui**	**2.44**	**211**	P	**Pn**	**00 24 47.9**	**+0.4**
BHHZ	**Black Hill Sta**	**2.44**	**230**	P	**Pn**	**00 24 48.5**	**+0.8**
TMVZ	**Te Maari**	**2.48**	**241**	P	**Pn**	**00 24 50.0**	**+1.8**
ETVZ	**East Tongariro**	**2.48**	**241**	P	**Pn**	**00 24 50.4**	**+2.1**
NTVZ	**North Tongarir**	**2.49**	**242**	P	**Pn**	**00 24 50.2**	**+1.8**
KRVZ	**Karewarewa**	**2.51**	**242**	P	**Pn**	**00 24 50.3**

COEN				IAmb	IAmb	00 31 39.1		
	comp=Z,13nm,1.1s							
VNDA	**Vanda**	**40.31**	**186**	LR	LR	00 46 06.2		
	comp=Z,84nm,19.6s,baz=16,slow=32							
AS31	**Alice Springs**	**40.48**	**277**	P	**P**	**00 31 47.0**	**+0.6**	
ASAR	**Alice Springs**	**40.48**	**277**	P	**P**	**00 31 46.5**	**+0.1**	
	comp=Z,5.6nm,0.8s,baz=116,slow=7.3,SNR=47							
ASAR				S	**S**	**00 37 48.4**	**-6.0**	
	comp=Z,0.9nm,0.9s,baz=132,slow=14,SNR=5.6							
ASAR				LR	LR	00 48 18.0		
	comp=Z,104nm,18.7s,baz=124,slow=36							
ASAR	**Alice Springs**	**40.48**	**277**	P	**P**	**00 31 46.3**	**-0.1**	
FORT	**Forrest**	**41.82**	**264**	P	**P**	**00 31 57.7**	**+0.4**	
WR0	**Warramunga Arr**	**42.00**	**283**	P	**P**	**00 31 58.8**	**-0.1**	
WR0				IAmb	IAmb	00 32 05.1		
	comp=Z,9.0nm,1.0s							
WB2	**Warramunga Arr**	**42.15**	**283**	P	**P**	**00 32 00.2**	**0.0**	
WB2				IAmb	IAmb	00 32 01.0		
	comp=Z,13nm,1.1s							
WRA	**Warramunga Arr**	**42.16**	**283**	P	**P**	**00 31 59.5**	**-0.7**	
	comp=Z,6.6nm,0.9s,baz=124,slow=7.5,SNR=27							
WRA	**Warramunga Arr**	**42.16**	**283**	P	**P**	**00 31 59.9**	**-0.4**	
WB0	**Warramunga Arr**	**42.22**	**283**	P	**P**	**00 32 00.8**	**+0.1**	
WB0				IAmb	IAmb	00 32 01.4		
	comp=Z,11nm,1.1s							
TAOE	**Nuku Hiva Isla**	**47.15**	**63**	*e*LR	LR	00 46 09.6		
	comp=Z,98nm,21.6s							
KNRA	**Kununurra**	**48.95**	**283**	P	**P**	**00 32 54.3**	**+0.3**	
FITZ	**Fitzroy Crossi**	**49.97**	**278**	P	**P**	**00 33 01.1**	**-0.7**	
	comp=Z,3.2nm,0.7s,baz=136,slow=4.2,SNR=8.8							
FITZ	**Fitzroy Crossi**	**49.97**	**278**	IAmb	IAmb	00 33 02.8		
	comp=Z,6.1nm,1.1s							
QSPA	**South Pole Qui**	**52.18**	**180**	P	**P**	**00 33 20.4**	**+2.5**	
	comp=Z,4.8nm,1.1s,baz=3.0,slow=1.5,SNR=5.4							
MAW	**Mawson**	**64.24**	**203**	LR	LR	01 04 18.8		
	comp=Z,75nm,18.5s,baz=59,slow=37							
LEM	**Lembang**	**70.76**	**276**	LR	LR	01 08 30.6		
	comp=Z,48nm,19.8s,baz=148,slow=38							
H03N3	**Juan Fernandez**	**78.93**	**124**	T	T	02 02 25.8		
	baz=234,slow=72,SNR=16							
H03N2	**Juan Fernandez**	**78.93**	**124**	T	T	02 02 34.5		
	baz=234,slow=72,SNR=12							
H03N1	**Juan Fernandez**	**78.94**	**124**	T	T	02 02 37.7		
	baz=234,slow=72,SNR=19							
KSRS	**Korea Array**	**88.35**	**322**	LR	LR	01 13 23.2		
	comp=Z,18nm,18.1s,baz=131,slow=34							
PETK	**Petropavlovsk-**	**92.47**	**348**	LR	LR	01 14 34.8		
	comp=Z,23nm,18.8s,baz=39,slow=33							
CMAR	**Chiang Mai Arr**	**93.25**	**291**	P	**P**	**00 37 22.1**	**-0.2**	
	comp=Z,0.9nm,1.1s,baz=145,slow=4.9,SNR=2.0							
CMAR				LR	LR	01 24 55.3		
	comp=Z,20nm,18.1s,baz=177,slow=39							
KLR	**Kul'dur**	**96.16**	**331**	LR	LR	01 15 49.1		
	comp=Z,15nm,19.4s,baz=332,slow=32							
MA2	**Magadan**	**99.85**	**346**	LR	LR	01 16 50.3		
	comp=Z,27nm,20.3s,baz=206,slow=32							
ARCES	**ARCESS Array B**	**145.18**	**344**	PKP	**PKPab**	**00 43 43.6**	**0.0**	
	comp=Z,4.3nm,0.9s,baz=74,slow=1.8,SNR=7.5							
FINES	**FINESS Array B**	**150.90**	**333**	PKPbc	**PKPbc**	**00 43 59.1**	**0.0**	
	comp=Z,1.5nm,0.8s,baz=90,slow=1.0,SNR=5.9							
BRTR	**Keskin Array B**	**152.67**	**285**	PKPbc	**PKiKP**	**00 44 04.2**	**-0.1**	
	comp=Z,1.6nm,0.9s,baz=176,slow=5.7,SNR=6.8							

*NORS **14** 00:34:06.9±0.0, 43.°61N×45.°69E, h9km, MPVA3.7*
*MOS **14** 00:34:07.8±0.0, 43.°59N×45.°63E, h15km, MPVA3.8*
*TIF **14** 00:34:07.3, 43.°64N×45.°49E, h8km±2km*
ISC 14 00:34:08.1±1.1, **43.°69N**±0.°03×**45.°66E**±0.°02, **h14**km±8km, **n44,** σ1°**17**/84, **3C-1D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.49**	**169**	*i* Pg	**Pg**	**00 34 17.2**	**-0.6**
GROC				*e*Sg	**Sg**	**00 34 24.8**	**+0.4**
TRKR	**Terskaya**	**0.68**	**273**	*i* Pg	**Pn**	**00 34 22.6**	**-0.7**
TRKR				*e*Sg	**Sn**	**00 34 33.1**	**-0.5**
DVE	**Vedeno**	**0.80**	**155**	*i* Pg	**Pg**	**00 34 22.2**	**-1.5**
DVE				*e*Sg	**Sg**	**00 34 32.9**	**-1.3**
KMGR	**Komgaron**	**0.86**	**223**	*e*Pg	**Pg**	**00 34 24.5**	**-0.2**
KMGR				*e*Sg	**Sg**	**00 34 36.0**	**+0.1**
BTKR	**Batakoyurt**	**0.87**	**249**	*e*Pg	**Pb**	**00 34 25.5**	**+0.4**
BTKR				*e*Sg	**Sb**	**00 34 38.4**	**+1.8**
VLKR	**Vladikavkaz**	**0.96**	**229**	*e*Pg	**Pg**	**00 34 26.5**	**-0.2**
VLKR				*e*Sg	**Sb**	**00 34 41.0**	**+1.9**
PRTR	**Priterechnaya**	**1.00**	**274**	*i* Pg	**Pn**	**00 34 28.4**	**+0.7**
PRTR				*i* Sg	**Sn**	**00 34 43.7**	**+2.1**
DBC	**Dubki**	**1.08**	**128**	*i* Pg	**Pb**	**00 34 28.2**	**-0.4**
DBC				*e*Sg	**Sn**	**00 34 45.0**	**+1.3**
ARNR	**Ardon**	**1.12**	**244**	*e*Pg	**Pn**	**00 34 29.6**	**+0.2**
ARNR				*e*Sg	**Sn**	**00 34 46.7**	**+2.0**
STDR	**Stavd-Durt**	**1.21**	**255**	*e*Pg	**Pg**	**00 34 31.5**	**+0.2**
STDR				*e*Sg	**Sn**	**00 34 48.7**	**+2.0**
KRNR	**Karanay**	**1.25**	**133**	*e*Pg	**Pg**	**00 34 31.4**	**-0.8**
KRNR				*e*Sg	**Sn**	**00 34 49.3**	**+1.4**
PNSH	**Pansheti**	**1.30**	**216**	P	**Pn**	**00 34 30.6**	**-1.4**
PNSH				S	**Sb**	**00 34 47.1**	**-1.9**
KORR	**Kora**	**1.31**	**243**	*i* Pg	**Pn**	**00 34 32.3**	**+0.4**
KORR				*e*Sg	**Sg**	**00 34 51.2**	**+0.9**
LACR	**Lac**	**1.32**	**230**	*e*Pg	**Pn**	**00 34 31.2**	**-1.0**
LACR				*e*Sg	**Sb**	**00 34 49.2**	**-0.3**
BUJR	**Buynaksk**	**1.36**	**129**	*e*Pg	**Pg**	**00 34 34.1**	**-0.2**
BUJR				*e*Sg	**Sg**	**00 34 52.6**	**+0.6**
LSNR	**Lesken**	**1.40**	**254**	*e*Pg	**Pg**	**00 34 33.7**	**-0.3**
LSNR				*e*Sg	**Sn**	**00 34 52.0**	**+0.5**
GUDG	**Gudauri**	**1.50**	**216**	P	**Pn**	**00 34 34.4**	**-0.4**
GUDG				S	**Sn**	**00 34 53.3**	**-0.9**
NCK	**Nalchik**	**1.51**	**263**	*e*Pg	**Pg**	**00 34 36.5**	**-0.6**
NCK				*e*Sg	**Sb**	**00 34 55.6**	**+0.6**
MAK	**Makhachkala**	**1.53**	**118**	*e*Pg	**Pg**	**00 34 38.8**	**+1.4**
MAK				*e*Sg	**Sg**	**00 34 57.2**	**0.0**
ZEI	**Tsey**	**1.57**	**236**	*i* Pg	**Pn**	**00 34 34.9**	**-0.8**
ZEI				*e*Sg	**Sn**	**00 34 55.0**	**-0.9**
GNBR	**Gunib**	**1.61**	**143**	*i* Pg	**Pb**	**00 34 37.5**	**-0.1**
GNBR				*e*Sg	**Sb**	**00 34 58.3**	**+0.5**
KBTC	**Kuba-Taba**	**1.64**	**275**	*e*Pg	**Pb**	**00 34 37.9**	**-0.2**
KBTC				*e*Sg	**Sg**	**00 35 01.2**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.71**	**243**	*e*Pg	**Pn**	**00 34 37.5**	**-0.2**
DIGR				*e*Sg	**Sn**	**00 34 58.9**	**-0.5**
PYA1	**Pyatigorsk**	**1.89**	**282**	*e*Pg	**Pb**	**00 34 41.8**	**-0.6**
PYA1				*e*Sg	**Sb**	**00 35 06.9**	**+0.9**
ONI	**Oni**	**1.95**	**237**	P	**Pn**	**00 34 41.5**	**+0.6**
ONI				S	**Sn**	**00 35 05.9**	**+0.7**
ONI	**Oni**	**1.95**	**237**	*e*Pg	**Pn**	**00 34 41.4**	**+0.6**
ONI				*e*Sg	**Sn**	**00 35 05.4**	**+0.2**
KBZ	**Khabaz**	**2.00**	**272**	*e*Pg	**Pb**	**00 34 43.2**	**-1.1**
KBZ				*e*Sg	**Sn**	**00 35 07.2**	**+0.8**
BEYR	**Belyy Ugol+**	**2.08**	**280**	*e*Pg	**Pn**	**00 34 43.7**	**+1.1**
BEYR				*e*Sg	**Sn**	**00 35 08.5**	**0.0**
URKR	**Urkarakh**	**2.10**	**136**	*e*Pg	**Pb**	**00 34 45.1**	**-0.9**
URKR				*e*Sg	**Sn**	**00 35 09.4**	**+0.5**
BTNK	**Botanikuri**	**2.10**	**198**	P	**Pn**	**00 34 43.6**	**+0.7**
KIV0	**Kislovodsk Arr**	**2.17**	**278**	*e*Pg	**Pn**	**00 34 44.2**	**+0.3**
KIV0				*e*Sg	**Sn**	**00 35 10.5**	**0.0**
KIV	**Kislovodsk**	**2.17**	**278**	*e*Pg	**Pn**	**00 34 44.2**	**+0.3**
KIV				*e*Sg	**Sn**	**00 35 11.1**	**+0.4**
SHA1	**Shidzhatmaz**	**2.18**	**272**	*e*Pg	**Pn**	**00 34 44.2**	**0.0**
SHA1				*e*Sg	**Sb**	**00 35 13.2**	**-1.2**
NEY	**Neytrino**	**2.19**	**259**	*e*Pg	**Pb**	**00 34 46.5**	**-1.0**
NEY				*e*Sg	**Sn**	**00 35 11.1**	**0.0**
ALER	**Alexandrovskoy**	**2.25**	**300**	*e*Pn	**Pb**	**00 34 47.8**	**-0.7**
ALER				*e*Sn	**Sb**	**00 35 16.1**	**-0.1**
DDFL	**Dedoflistskaro**	**2.26**	**171**	P	**Pb**	**00 34 48.3**	**-0.4**
GOF	**Gofitskoye**	**2.33**	**307**	*e*Pn	**Pg**	**00 34 50.5**	**-2.1**
GOF				*e*Sn	**Sb**	**00 35 18.7**	**+0.3**
BRNG	**Burnasheti**	**2.47**	**214**	P	**Pn**	**00 34 48.7**	**+0.7**
BKRG	**Bakuriani**	**2.49**	**220**	P	**Pn**	**00 34 48.1**	**-0.2**
BKRG				S	**Sb**	**00 35 23.2**	**0.0**
DMNI	**Dmanisi**	**2.59**	**205**	P	**Pn**	**00 34 49.3**	**-0.5**
DMNI				S	**Sb**	**00 35 25.7**	**-0.5**
AKT	**Akhty**	**2.68**	**145**	*e*Pn	**Pb**	**00 34 54.0**	**-2.0**
AKT				*e*Sn	**Sn**	**00 35 24.9**	**+1.6**
GNI	**Garni**	**3.60**	**191**	*e*Pn	**Pn**	**00 35 03.7**	**+0.1**
GNI				*e*Sn	**Sn**	**00 35 46.0**	**0.0**
AKTO	**Aktyubinsk**	**10.79**	**47**	⇑Pn	Pn	00 36 48.7	+6.6
	1.7nm,0.9s						
AKTO				⇑Sn	**Sn**	**00 38 38.2**	**-4.3**
	1.9nm,1.1s						
AB31	**Akbulak array**	**11.31**	**56**	⇓Pn	**Pn**	**00 36 52.8**	**+3.7**
	0.5nm,0.6s,baz=246,slow=16,SNR=5.0						
AB31				⇑Sn	**Sn**	**00 38 52.0**	**-3.2**
	0.2nm,0.4s,baz=243,slow=23,SNR=6.3						

IDC 14 01:15:41.7±1.5, **27.°96N**×**102.°28E, h0**km, **mb3.3**/4, **mb1 3.6**/4, **mb1mx3.3**/52, **mbtmp3.4**/4, **Error ellipse: s-maj=86.7km s-min=24.5km az=65.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**20.10**	**8**	P	P	01 20 15.7	-1.4
	0.3nm,0.7s,baz=188,slow=12,SNR=4.1						
MKAR	**Makanchi Array**	**24.49**	**325**	P	P	01 21 03.6	+1.0
	0.4nm,0.7s,baz=129,slow=9.6,SNR=4.1						
WRA	**Warramunga Arr**	**56.83**	**143**	P	P	01 25 28.4	+0.2
	0.5nm,0.5s,baz=321,slow=6.1,SNR=12						
ASAR	**Alice Springs**	**59.70**	**146**	P	P	01 25 47.9	-0.4
	0.3nm,0.5s,baz=328,slow=7.1,SNR=5.1						

*IDC **14** 01:23:23.5±1.9, 7.°48S×129.°47E, h88km±27km, mb2.9/1, mb1 3.6/6, mb1mx3.2/42, mbtmp3.8/6, Error ellipse: s-maj=27.3km s-min=15.2km az=117.0*
ISC 14 01:23:22.8±0.9, **7.°57S**±0.°06×**129.°59E**±0.°10, **h79**km, **n6,** σ1°**73**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.42**	**245**	P	**Pn**	**01 24 56.1**	**+1.3**
	6.5nm,0.3s,baz=114,slow=1.7,SNR=1.8						
BATI				S	**Sn**	**01 26 05.5**	**-1.2**
	8.8nm,0.3s,baz=145,slow=22,SNR=5.6						
SIJI	**Sorong**	**6.86**	**14**	P	**Pn**	**01 25 01.4**	**+0.5**
	1.6nm,0.3s,baz=225,slow=22,SNR=1.8						
SIJI				S	**Sn**	**01 26 16.5**	**-1.1**
	1.2nm,0.3s,baz=190,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**11.15**	**200**	P	**Pn**	**01 25 59.9**	**+0.5**
	0.9nm,0.3s,baz=30,slow=9.7,SNR=38						
WRA	**Warramunga Arr**	**13.13**	**160**	P	**Pn**	**01 26 28.4**	**+2.1**
	0.6nm,0.3s,baz=334,slow=14,SNR=32						
WRA				S	**Sn**	**01 28 48.5**	**-2.1**
	0.8nm,0.3s,baz=337,slow=22,SNR=8.0						
ASAR	**Alice Springs**	**16.53**	**166**	P	**Pn**	**01 27 11.6**	**+1.7**
	0.3nm,0.3s,baz=333,slow=9.5,SNR=13						
ASAR				S	**Sn**	**01 30 11.2**	**-1.7**
	0.2nm,0.3s,baz=327,slow=18,SNR=3.4						
MKAR	**Makanchi Array**	**68.48**	**327**	P	**P**	**01 34 15.4**	**-1.2**
	0.1nm,0.5s,baz=115,slow=6.5,SNR=1.9						

*IDC **14** 01:26:59.0±3.1, 6.°91S×148.°36E, h211km±30km, mb3.5/3, mb1 3.6/5, mb1mx3.1/34, mbtmp3.9/5, MS3.1/2, Ms1 3.2/2, ms1mx2.5/20, Error ellipse: s-maj=75.1km s-min=27.9km az=131.0*
ISC 14 01:26:57.9±1.6, **6.°7S**±0.°3×**148.°2E**±0.°5, **h200**km, **n8,** σ1°**01**/6, **mb4.1**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.91**	**201**	P	**Pn**	**01 27 46.8**	**+0.4**
	4.9nm,0.3s,baz=27,slow=9.0,SNR=3.8						
PMG				S	Sn	01 28 14.4	-10
	20nm,0.3s,baz=41,slow=22,SNR=10						
WRA	**Warramunga Arr**	**18.84**	**224**	P	**P**	**01 31 01.5**	**-1.5**
	0.6nm,0.3s,baz=52,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**21.78**	**218**	P	**P**	**01 31 33.8**	**-0.3**
	2.7nm,0.4s,baz=48,slow=9.1,SNR=29						
BATI	**Baumata**	**24.51**	**260**	LR	LR	01 41 56.6	
	comp=Z,137nm,21.5s,baz=194,slow=36						
FITZ	**Fitzroy Crossi**	**24.75**	**241**	P	**P**	**01 32 01.8**	**+0.5**
	4.8nm,0.5s,baz=50,slow=8.1,SNR=22						
CMAR	**Chiang Mai Arr**	**54.61**	**298**	LR	LR	02 00 42.5	
	comp=Z,6.0nm,20.6s,baz=120,slow=37						
ILAR	**Eielson Array**	**85.63**	**23**	P	**P**	**01 39 13.3**	**-0.3**
	0.3nm,0.9s,baz=263,slow=6.0,SNR=1.4						
TORD	**Torodi Ar. Bea**	**146.40**	**284**	PKPbc	**PKPbc**	**01 46 16.8**	**+0.5**
	0.3nm,0.5s,baz=64,slow=3.7,SNR=2.6						

*BJI **14** 01:37:45.8±0.0, 9.°77S×119.°04E, h84km, mB4.9/15, mb4.7/18, Ms4.5/3, Ms7 4.1/1*
*NEIC **14** 01:37:50.3±1.3, 9.°44S±0.°05×118.°68E±0.°06, h87km±7km, mb4.3/16, Error ellipse: s-maj=8.8km s-min=7.7km az=81.0*
*DJA **14** 01:37:51.7±0.2, 10.°5±2.°×11.°9E±.°, h89km±3km, M4.9/24, mB5.4/12, mb4.9/24, MLv5.0/20, Mw(mB)4.8/12*
*IDC **14** 01:37:52.7±2.1, 9.°29S×118.°83E, h100km±19km, mb4.0/12, mb1 4.1/15, mb1mx3.8/33, mbtmp4.4/15, MS2.8/2, Ms1 2.8/2, ms1mx2.3/34, Error ellipse: s-maj=21.5km s-min=9.8km az=66.0*
ISC 14 01:37:51.8±0.4, **9.°45S**±0.°05×**118.°75E**±0.°04, **h100**km, **n97,** σ1°**44**/105, **mb4.5**/25, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.14**	**303**	P	**Pn**	**01 38 13.3**	**-0.5**
PLAI				S	**Sn**	**01 38 28.8**	**-1.6**
WSI	**Waingapu**	**1.54**	**98**	P	**Pn**	**01 38 18.6**	**0.0**
BASI	**Baing, Sumba**	**1.96**	**113**	P	**Pn**	**01 38 24.0**	**+0.1**
BASI				S	**Sn**	**01 38 48.8**	**+0.4**
TWSI	**Taliwang, Sumb**	**1.97**	**291**	P	**Pn**	**01 38 24.4**	**+0.3**
TWSI				S	**Sn**	**01 38 48.7**	**0.0**
MMRI	**Maumere**	**3.54**	**77**	Pn	**Pn**	**01 38 44.2**	**-0.7**
MMRI				Sn	**Sn**	**01 39 24.6**	**-1.3**
MMRI	**Maumere**	**3.54**	**77**	P	**Pn**	**01 38 45.7**	**+0.9**
DNP	**Denpasar**	**3.58**	**282**	P	**Pn**	**01 38 46.0**	**+0.7**
BSSI	**Bau Bau, Buton**	**3.71**	**28**	P	**Pn**	**01 38 47.1**	**-0.1**
SRBI	**Singaraja**	**3.75**	**291**	P	**Pn**	**01 38 47.4**	**-0.2**
KAPI	**Kappang**	**4.52**	**13**	P	**Pn**	**01 38 58.2**	**+0.2**
	106nm,0.3s,baz=204,slow=2.9,SNR=710						
KAPI				S	**Sn**	**01 39 46.7**	**-2.8**
	112nm,0.3s,baz=342,slow=24,SNR=12						
KAPI				LR	LR	01 41 05.7	
	comp=Z,110nm,18.5s,baz=171,slow=44						
KAPI	**Kappang**	**4.52**	**13**	Pn	**Pn**	**01 38 58.5**	**+0.5**
KAPI				Sn	**Sn**	**01 39 46.6**	**-2.8**
JAGI	**Jajag, Banyuwa**	**4.64**	**282**	Pn	**Pn**	**01 38 57.5**	**-2.3**
JAGI	**Jajag, Banyuwa**	**4.64**	**282**	P	**Pn**	**01 38 58.5**	**-1.3**
ABJI	**Asem Bagus**	**4.76**	**290**	P	**Pn**	**01 39 01.3**	**0.0**
BATI	**Baumata**	**4.90**	**99**	P	**Pn**	**01 39 04.2**	**+0.9**
	245nm,0.3s,baz=332,slow=1.4,SNR=69						
BATI				S	**Sn**	**01 39 58.0**	**-0.8**
	106nm,0.3s,baz=38,slow=21,SNR=8.1						
BATI	**Baumata**	**4.90**	**99**	P	**Pn**	**01 39 03.9**	**+0.6**
BNSI	**Bone**	**5.19**	**15**	P	**Pn**	**01 39 07.0**	**-0.2**
	1.4nm5μm345nm,0.6s						
KMMI	**Kalianget**	**5.30**	**296**	P	**Pn**	**01 39 08.8**	**+0.2**
	0.2nm56nm,0.6s						
SOEI	**Soe**	**5.45**	**94**	Pn	**Pn**	**01 39 10.3**	**-0.5**
SOEI	**Soe**	**5.45**	**94**	P	**Pn**	**01 39 11.5**	**+0.7**
	1.8nm5μm454nm,0.6s						
SPSI	**Sidrap Palu**	**5.54**	**11**	P	**Pn**	**01 39 12.3**	**+0.3**
	0.7nm3μm149nm,0.6s						
TTSI	**Tana Toraja**	**6.45**	**10**	P	**Pn**	**01 39 26.5**	**+2.2**
	0.9nm4μm193nm,0.5s						
KBKI	**Kotabaru**	**6.62**	**337**	P	**Pn**	**01 39 27.8**	**+1.1**
BBKI	**Banjar Baru**	**7.10**	**327**	P	**Pn**	**01 39 33.9**	**+0.7**
	0.3nm5μm58nm,0.9s						
UGM	**Wanagama**	**8.27**	**280**		**Pn**	**01 39 47.1**	**-2.0**
UGM	**Wanagama**	**8.27**	**280**	P	**Pn**	**01 39 49.6**	**+0.5**
	3μm91nm,0.9s						
BKB	**Balikpapan**	**8.34**	**347**	Pn	**Pn**	**01 39 49.7**	**-0.3**
BKB	**Balikpapan**	**8.34**	**347**	P	**Pn**	**01 39 52.8**	**+2.8**
	3μm239nm,0.7s						
APSI	**Ampana**	**8.96**	**19**	P	**Pn**	**01 39 59.8**	**+1.4**
	32nm,0.9s						
MTKI	**Muara Teweh, K**	**9.28**	**335**	P	**Pn**	**01 40 04.5**	**+1.7**
SANI	**Sanana**	**10.29**	**45**	P	**Pn**	**01 40 16.6**	**+0.1**
	25nm,0.9s						
MRSI	**Marisa**	**10.36**	**18**	P	**Pn**	**01 40 19.0**	**+1.5**
	81nm,1.0s						
TOLI2	**Tolitoli**	**10.68**	**11**	Pn	**Pn**	**01 40 20.1**	**-1.8**
FITZ	**Fitzroy Crossi**	**10.89**	**143**	P	**Pn**	**01 40 24.8**	**+0.1**
	3.0nm,0.3s,baz=336,slow=7.6,SNR=83						
FITZ				S	Sn	01 42 16.3	-8.4
	5.0nm,0.3s,baz=186,slow=19,SNR=14						
FITZ	**Fitzroy Crossi**	**10.89**	**143**	Pn	**Pn**	**01 40 23.7**	**-1.1**
CISI	**Cisompet, Garu**	**10.98**	**279**		Pn	01 40 22.1	-3.8
CISI					**Sn**	**01 42 23.9**	**-2.9**
LEM	**Lembang**	**11.32**	**282**	LR	LR	01 44 36.4	
	comp=Z,41nm,20.4s,baz=202,slow=36						
KNRA	**Kununurra**	**11.57**	**123**	Pn	**Pn**	**01 40 33.0**	**-0.9**
PSA00	**Pilbara Seismi**	**12.10**	**175**	Pn	**Pn**	**01 40 39.3**	**-1.6**
MTN	**Manton Dam**	**12.61**	**107**	Pn	**Pn**	**01 40 45.8**	**-1.9**
GIRL	**Giralia**	**13.82**	**198**	Pn	**Pn**	**01 41 02.8**	**-0.6**
KASI	**Kota Agung**	**14.66**	**284**	P	**Pn**	**01 41 14.4**	**+0.1**
	1μm98nm,0.5s						
FAKI	**Fak Fak**	**14.90**	**65**	Pn	**Pn**	**01 41 15.4**	**-2.1**

LWLI	**Liwa**	**15.22**	**286**	P	**Pn**	**01 41 21.7**	**+0.1**	
MNAI	**Manna**	**16.47**	**287**		**Pn**	**01 41 35.8**	**-1.3**	
DSRI	**Dabo**	**16.68**	**301**	P	**Pn**	**01 41 40.0**	**+0.3**	
KSI	**Kapahiang**	**17.05**	**289**	P	**Pn**	**01 41 44.1**	**-0.1**	
	96nm,0.8s							
WB0	**Warramunga Arr**	**18.27**	**126**		**P**	**01 41 58.9**	**+1.1**	
WB0				IAmb	IAmb	01 42 11.7		
	comp=Z,14nm,1.0s							
WRA	**Warramunga Arr**	**18.32**	**126**	P	**P**	**01 42 00.0**	**+1.6**	
	comp=Z,1.7nm,0.3s,baz=308,slow=14,SNR=58							
WRA				S	S	01 45 13.3	-9.5	
	comp=Z,0.9nm,0.3s,baz=291,slow=25,SNR=8.8							
WRA	**Warramunga Arr**	**18.32**	**126**	P	**P**	**01 41 58.6**	**+0.2**	
WRAB	**Tennant Creek**	**18.32**	**126**		**P**	**01 41 57.0**	**-1.5**	
WRAB				IAmb	IAmb	01 41 58.8		
	comp=Z,17nm,0.9s							
WB2	**Warramunga Arr**	**18.33**	**126**	P	**P**	**01 41 58.9**	**+0.4**	
WB2				IAmb	IAmb	01 42 02.3		
	comp=Z,9.3nm,0.6s							
WR0	**Warramunga Arr**	**18.49**	**126**	P	**P**	**01 42 00.6**	**+0.4**	
WR0				IAmb	IAmb	01 42 05.9		
	comp=Z,10nm,0.6s							
KRJI	**Kerinci**	**18.68**	**292**	P	**P**	**01 42 02.6**	**+0.2**	
MORW	**Morawa**	**19.68**	**187**	P	**P**	**01 42 13.1**	**0.0**	
MORW				IAmb	IAmb	01 42 24.2		
	comp=Z,24nm,1.1s							
AS31	**Alice Springs**	**20.24**	**136**	P	**P**	**01 42 20.4**	**+1.1**	
AS31					**S**	**01 46 01.0**	**-0.1**	
ASAR	**Alice Springs**	**20.24**	**136**	P	**P**	**01 42 22.0**	**+2.7**	
	comp=Z,9.4nm,0.7s,baz=321,slow=12,SNR=64							
ASAR				S	**S**	**01 45 57.7**	**-3.3**	
	comp=Z,8.2nm,0.8s,baz=311,slow=24,SNR=17							
ASAR	**Alice Springs**	**20.24**	**136**	P	**P**	**01 42 20.5**	**+1.2**	
ASAR					**S**	**01 46 04.0**	**+3.0**	
RPSI	**Rantau Prapat**	**23.14**	**300**	P	**P**	**01 42 49.2**	**-0.6**	
PSI	**Prapat**	**23.20**	**301**	P	**P**	**01 42 49.4**	**-1.0**	
	comp=Z,13nm,0.4s,baz=180,slow=5.6,SNR=12							
NWAO	**Narrogin (SRO)**	**23.41**	**183**	P	**P**	**01 42 54.6**	**+2.6**	
	comp=Z,6.4nm,0.8s,baz=3.8,slow=15,SNR=1.7							
NWAO	**Narrogin (SRO)**	**23.41**	**183**	P	**P**	**01 42 51.3**	**-0.7**	
TGY	**Tagaytay City**	**23.50**	**5**	P	**P**	**01 42 52.5**	**-0.4**	
	comp=Z,230nm,0.5s,baz=177,slow=4.9,SNR=5.6							
TSI	**Tuntungan**	**23.88**	**302**	P	**P**	**01 42 57.2**	**+0.8**	
TPTI		**24.93**	**299**	P	**P**	**01 43 06.4**	**+0.5**	
	comp=Z,18nm,0.7s							
STKA	**Stephens Creek**	**30.77**	**140**	P	**P**	**01 43 59.6**	**+1.7**	
	comp=Z,1.6nm,0.5s,baz=304,slow=10,SNR=6.3							
STKA	**Stephens Creek**	**30.77**	**140**	P	**P**	**01 43 57.8**	**-0.2**	
CMAR	**Chiang Mai Arr**	**33.92**	**325**	P	**P**	**01 44 25.6**	**0.0**	
	comp=Z,0.4nm,0.5s,baz=151,slow=6.5,SNR=4.9							
TAPN	**Taplejung**	**47.36**	**321**	*e*P	**P**	**01 46 16.9**	**+0.5**	
	comp=Z,7.0nm,0.4s							
**L

IDC ***14*** *02:08:40.0±0.9, 4.°96S×153.°15E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/27, mbtmp3.9/9, ML2.0/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/33, Error ellipse: s-maj=27.8km s-min=22.5km az=113.0*

ISC 14 02:08:46.4±0.9, **5.°0S**±0.°1×**153.°1E**±0.°1, **h43**km, **n16,** σ1§**31**/13, **mb3.7**/8, **MS3.2**/5, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.31**	**233**	Pn	**Pn**	**02 10 31.3**	**+0.6**
	1.3nm,0.3s,baz=61,slow=10,SNR=2.0						
PMG				Sn	**Sn**	**02 11 51.3**	**-1.1**
	1.5nm,0.3s,baz=217,slow=22,SNR=2.1						
HNR	**Honiara**	**8.08**	**123**	LR	LR	02 13 48.1	
	comp=Z,121nm,18.2s,baz=346,slow=38						
DZM	**Mont Dzumac**	**21.31**	**144**	P	**P**	**02 13 30.8**	**+1.1**
	8.7nm,0.8s,baz=244,slow=10,SNR=9.5						
WRA	**Warramunga Arr**	**23.51**	**229**	P	**P**	**02 13 51.2**	**-1.5**
	1.6nm,0.8s,baz=56,slow=10,SNR=8.9						
ASAR	**Alice Springs**	**26.17**	**223**	P	**P**	**02 14 17.4**	**+0.3**
	0.4nm,0.6s,baz=55,slow=8.7,SNR=5.3						
ASAR				LR	LR	02 24 55.2	
	comp=Z,44nm,20.2s,baz=59,slow=37						
STKA	**Stephens Creek**	**28.79**	**201**	LR	LR	02 24 52.4	
	comp=Z,55nm,21.8s,baz=22,slow=34						
BATI	**Baumata**	**29.60**	**258**	LR	LR	02 28 46.2	
	comp=Z,218nm,19.4s,baz=108,slow=41						
FITZ	**Fitzroy Crossi**	**29.80**	**242**	P	**P**	**02 14 48.4**	**-1.1**
	1.6nm,0.7s,baz=66,slow=9.2,SNR=3.5						
FITZ				LR	LR	02 27 15.5	
	comp=Z,60nm,18.2s,baz=72,slow=37						
PETK	**Petropavlovsk-**	**58.06**	**3**	LR	LR	02 39 11.2	
	comp=Z,19nm,21.8s,baz=88,slow=32						
CMAR	**Chiang Mai Arr**	**58.24**	**295**	P	**P**	**02 18 38.8**	**+1.9**
	0.5nm,0.7s,baz=117,slow=4.4,SNR=4.7						
MKAR	**Makanchi Array**	**80.69**	**319**	P	**P**	**02 20 56.1**	**+1.1**
	0.6nm,0.7s,baz=104,slow=5.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**81.51**	**326**	P	**P**	**02 20 58.7**	**-0.5**
	1.6nm,0.6s,baz=104,slow=6.6,SNR=8.7						
ILAR	**Eielson Array**	**82.27**	**22**	P	**P**	**02 21 00.8**	**-2.1**
	0.5nm,0.8s,baz=246,slow=5.9,SNR=4.2						
GERES	**GERESS Array B**	**124.41**	**329**	PKP	**PKiKP**	**02 27 42.5**	**+1.1**
	0.4nm,0.8s,baz=72,slow=1.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**150.65**	**288**	PKPbc	**PKPbc**	**02 28 34.4**	**-0.5**
	2.5nm,0.9s,baz=46,slow=2.4,SNR=9.7						
BDFB	**Brasilia**	**150.69**	**135**	PKPbc	**PKPbc**	**02 28 34.7**	**-0.4**
	1.7nm,0.6s,baz=90,slow=1.0,SNR=4.4						

ATH ***14*** *02:44:11.3, 36.°62N×20.°41E, h41km±16km, ML2.6/10, Error ellipse: s-maj=16.9km s-min=1.5km az=36.0*
THE ***14*** *02:44:15.5, 36.°85N×20.°56E, h4km±1km, ML2.5/8, Error ellipse: s-maj=2.7km s-min=1.5km az=40.0*

ISC 14 02:44:14.4±1.3, **36.°81N**±0.°05×**20.°53E**±0.°03, **h17**km±10km, **n65,** σ1§**22**/86, **9C-7D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTHK	**Lithakia**	**0.93**	**15**	P	**Pn**	**02 44 32.5**	**-0.3**
LTHK				S	**Sn**	**02 44 47.2**	**+1.5**
LTHK				AML	AML	02 44 53.7	
	comp=E,559μm,0.5s						
LTHK				AML	AML	02 44 54.5	
	comp=N,658μm,0.5s						
LTHK	**Lithakia**	**0.93**	**15**	P	**Pn**	**02 44 32.5**	**-0.3**
LTHK				S	**Sn**	**02 44 45.1**	**-0.6**
	comp=N,298nm,0.5s						
VLMS	**Volimes, Zakyn**	**1.07**	**6**	P	**Pg**	**02 44 34.6**	**-0.6**
VLMS				S	**Sn**	**02 44 51.2**	**+2.0**
VLMS				AML	AML	02 44 58.0	
	comp=E,846μm,0.5s						
VLMS				AML	AML	02 45 00.6	
	comp=N,913μm,0.7s						
VLMS	**Volimes, Zakyn**	**1.07**	**6**	P	**Pg**	**02 44 34.7**	**-0.4**
VLMS				S	**Sn**	**02 44 49.5**	**+0.3**
	comp=N,468nm,0.6s						
ITM	**Ithomi**	**1.18**	**71**	P	**Pn**	**02 44 35.3**	**-0.8**
ITM				S	**Sg**	**02 44 53.2**	**+0.7**
ITM				AML	AML	02 44 55.2	
	comp=N,260μm,0.3s						
ITM				AML	AML	02 44 57.0	
	comp=E,362μm,0.6s						
ITM	**Ithomi**	**1.18**	**71**	P	**Pn**	**02 44 35.8**	**-0.3**
ITM				S	**Sg**	**02 44 53.0**	**+0.5**
	comp=E,155nm,0.5s						
AMT	**Artemida-Makis**	**1.19**	**52**	P	**Pg**	**02 44 36.6**	**-0.7**
AMT				S	**Sg**	**02 44 54.9**	**+2.1**
AMT				AML	AML	02 45 03.5	
	comp=E,640μm,0.7s						
AMT				AML	AML	02 45 12.5	
	comp=N,783μm,0.6s						
AMT	**Artemida-Makis**	**1.19**	**52**	P	**Pg**	**02 44 37.0**	**-0.3**
AMT				S	**Sg**	**02 44 54.1**	**+1.3**
	comp=N,372nm,0.6s						
VTN	**Vitineika**	**1.22**	**25**	P	**Pg**	**02 44 37.8**	**-0.2**
PSDA	**Pessada-Kefalo**	**1.30**	**2**	P	**Pb**	**02 44 38.3**	**-0.2**
PSDA	**Pessada-Kefalo**	**1.30**	**2**	P	**Pb**	**02 44 38.4**	**-0.1**
VLS	**Valsamata**	**1.37**	**2**	P	**Pb**	**02 44 39.1**	**-0.4**
VLS				S	**Sg**	**02 44 59.7**	**+1.1**
VLS				AML	AML	02 45 10.5	
	comp=E,287μm,0.6s						
VLS				AML	AML	02 45 10.6	
	comp=N,250μm,0.4s						
VLS	**Valsamata**	**1.37**	**2**	P	**Pb**	**02 44 39.2**	**-0.4**
VLS				S	**Sg**	**02 44 57.8**	**-0.8**
	comp=N,135nm,0.5s						
DMLN	**Damoulianata-K**	**1.43**	**355**	P	**Pb**	**02 44 40.1**	**-0.5**
DMLN	**Damoulianata-K**	**1.43**	**355**	P	**Pb**	**02 44 40.2**	**-0.5**
DMLN				S	**Sg**	**02 44 59.3**	**-1.4**
	comp=N,240nm,0.4s						
RLS	**Riolos of Patr**	**1.45**	**31**	P	**Pb**	**02 44 40.6**	**-0.4**
RLS	**Riolos of Patr**	**1.45**	**31**	P	**Pb**	**02 44 40.6**	**-0.4**
RLS				S	**Sg**	**02 45 00.5**	**-0.8**
DRO	**Drossia**	**1.48**	**39**	P	**Pb**	**02 44 41.6**	**+0.2**
DRO				S	**Sg**	**02 45 03.1**	**+1.0**
DRO				AML	AML	02 45 19.0	
	comp=N,379μm,0.5s						
DRO				AML	AML	02 45 25.5	
	comp=E,323μm,0.6s						
DRO	**Drossia**	**1.48**	**39**	P	**Pb**	**02 44 41.5**	**0.0**
DRO				S	**Sg**	**02 45 01.9**	**-0.2**
	comp=E,182nm,0.6s						
AXS	**Araxos**	**1.54**	**26**	P	**Pb**	**02 44 42.5**	**0.0**
AXS				AML	AML	02 45 07.9	
	comp=E,93μm,0.5s						
AXS				AML	AML	02 45 09.5	
	comp=N,103μm,0.6s						
AXS	**Araxos**	**1.54**	**26**	P	**Pb**	**02 44 42.5**	**0.0**
VLX	**Vlachokerasia**	**1.58**	**69**	P	**Pn**	**02 44 42.5**	**+0.7**
VLX				AML	AML	02 45 17.6	
	comp=E,425μm,0.5s						
VLX				AML	AML	02 45 18.2	
	comp=N,336μm,0.7s						
VLX	**Vlachokerasia**	**1.58**	**69**	P	**Pb**	**02 44 42.6**	**-0.6**
KLV	**Kalavryta, Ach**	**1.78**	**46**	P	**Pb**	**02 44 45.9**	**-0.8**
KLV				AML	AML	02 45 35.6	
	comp=E,70μm,0.8s						
KLV				AML	AML	02 45 48.4	
	comp=N,65μm,0.8s						
KLV	**Kalavryta, Ach**	**1.78**	**46**	P	**Pb**	**02 44 45.8**	**-0.9**
EVGI	**Lefkada island**	**1.81**	**3**	P	**Pb**	**02 44 46.5**	**-0.6**
LAKA	**Lakka**	**1.83**	**38**	P	**Pb**	**02 44 47.3**	**-0.2**
VLI	**Veliai**	**1.93**	**92**	P	**Pn**	**02 44 47.6**	**+1.1**
VLI				AML	AML	02 45 28.9	
	comp=E,88μm,0.5s						
VLI				AML	AML	02 45 41.7	
	comp=N,86μm,1.1s						
VLI	**Veliai**	**1.93**	**92**	P	**Pn**	**02 44 48.0**	**+1.5**
VLI				S	**Sb**	**02 45 12.9**	**-0.1**
	comp=N,45nm,0.7s						
PVO	**Paravola**	**1.97**	**23**	P	**Pb**	**02 44 49.8**	**0.0**
PVO	**Paravola**	**1.97**	**23**	P	**Pb**	**02 44 49.8**	**0.0**
LKD2	**Lefkada island**	**1.98**	**3**	P	**Pb**	**02 44 49.4**	**-0.6**
SERG	**Sergoula**	**2.01**	**37**	P	**Pb**	**02 44 50.2**	**-0.3**
SERG	**Sergoula**	**2.01**	**37**	P	**Pb**	**02 44 50.0**	**-0.5**
KALE	**Kalithea**	**2.03**	**38**	P	**Pb**	**02 44 50.3**	**-0.6**
ANX	**Ano Chora**	**2.10**	**31**	P	**Pb**	**02 44 51.3**	**-0.7**
KTHA	**Kythira Island**	**2.11**	**104**	P	**Pn**	**02 44 49.4**	**+0.4**
ANKY	**Antikythira Is**	**2.42**	**112**	P	**Pn**	**02 44 53.9**	**+0.6**
AGG	**Agios Georgios**	**2.63**	**32**	P	**Pb**	**02 44 58.4**	**-2.7**
NEO	**Neokhori**	**3.28**	**40**	P	**Pn**	**02 45 06.1**	**+1.1**
MPAZ	**Palizzi**	**3.78**	**289**	⇑P	**Pn**	**02 45 13.9**	**+2.0**
MPAZ	**Palizzi**	**3.78**	**289**	⇑P	**Pn**	**02 45 13.9**	**+2.0**
MPAZ				S	**Sn**	**02 45 56.4**	**+0.3**
MPAZ				AML	AML		
	comp=E,33μm,1.6s						
MPAZ				AML	AML		
	comp=N,40μm,0.3s						
MPAZ	**Palizzi**	**3.78**	**289**	⇑P	**Pn**	**02 45 13.9**	**+2.0**
HAVL	**Avola**	**4.34**	**274**	P	**Pn**	**02 45 20.5**	**+0.9**
HAVL	**Avola**	**4.34**	**274**	P	**Pn**	**02 45 20.5**	**+0.9**
HAVL				S	**Sn**	**02 46 08.5**	**-1.3**
HAVL				AML	AML		
	comp=E,87μm,1.1s						
HAVL				AML	AML		
	comp=N,99μm,1.5s						
HAVL	**Avola**	**4.34**	**274**	S	**Sn**	**02 46 08.5**	**-1.3**
HPAC	**Pachino**	**4.36**	**270**	⇓P	**Pn**	**02 45 22.1**	**+2.3**
HPAC				S	**Sn**	**02 46 09.5**	**-0.6**
HPAC	**Pachino**	**4.36**	**270**	⇓P	**Pn**	**02 45 22.1**	**+2.3**
HPAC	**Pachino**	**4.36**	**270**	⇓P	**Pn**	**02 45 22.1**	**+2.3**
HPAC	**Pachino**	**4.36**	**270**	S	**Sn**	**02 46 09.5**	**-0.6**
MCSR	**Castroreale**	**4.39**	**288**	P	**Pn**	**02 45 22.5**	**+2.2**
MCSR	**Castroreale**	**4.39**	**288**	P	**Pn**	**02 45 22.5**	**+2.2**
MCSR				AML	AML		
	comp=N,75μm,1.3s						
MCSR				AML	AML		
	comp=E,65μm,0.8s						
MCSR	**Castroreale**	**4.39**	**288**	P	**Pn**	**02 45 22.5**	**+2.2**
MILZ	**Milazzo**	**4.46**	**291**	⇓P	**Pn**	**02 45 23.8**	**+2.6**
MEU	**Monte Lauro**	**4.50**	**275**	⇑P	**Pn**	**02 45 23.7**	**+1.8**
MEU	**Monte Lauro**	**4.50**	**275**	⇑P	**Pn**	**02 45 23.7**	**+1.8**
MEU	**Monte Lauro**	**4.50**	**275**	⇑P	**Pn**	**02 45 23.7**	**+1.8**
MEU				S	**Sn**	**02 46 13.9**	**+0.1**
MEU				AML	AML		
	comp=N,103μm,1.0s						
MEU				AML	AML		
	comp=E,91μm,1.6s						
HLNI	**Lentini**	**4.56**	**278**	⇓P	**Pn**	**02 45 23.2**	**+0.6**
HLNI				S	**Sn**	**02 46 13.0**	**-2.1**
HLNI				AML	AML		
	comp=E,32μm,1.3s						
HLNI				AML	AML		
	comp=N,34μm,1.6s						
HLNI	**Lentini**	**4.56**	**278**	⇓P	**Pn**	**02 45 23.2**	**+0.6**
HLNI	**Lentini**	**4.56**	**278**	⇓P	**Pn**	**02 45 23.2**	**+0.6**
HLNI	**Lentini**	**4.56**	**278**	S	**Sn**	**02 46 13.0**	**-2.1**
HMDC	**Modica**	**4.61**	**274**	⇑P	**Pn**	**02 45 24.2**	**+0.8**
HMDC				S	**Sn**	**02 46 14.7**	**-1.9**
HMDC	**Modica**	**4.61**	**274**	⇑P	**Pn**	**02 45 24.2**	**+0.8**
HMDC	**Modica**	**4.61**	**274**	⇑P	**Pn**	**02 45 24.2**	**+0.8**
HMDC	**Modica**	**4.61**	**274**	S	**Sn**	**02 46 14.7**	**-1.9**

IDC ***14*** *03:01:24.0±1.2, 30.°45N×142.°97E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.7/39, mbtmp3.8/9, ML3.3/2, MS3.1/1, Ms1 3.1/1, ms1mx2.1/49, Error ellipse: s-maj=41.8km s-min=18.3km az=79.0*

ISC 14 03:01:30.2±1.1, **30.°32N**±0.°08×**142.°9E**±0.°2, **h45**km, **n10,** σ0§**73**/9, **mb3.8**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.27**	**190**	Pn	**Pn**	**03 02 18.3**	**-0.6**
	6.1nm,0.3s,baz=347,slow=20,SNR=6.7						
JCJ				Sn	**Sn**	**03 02 56.3**	**-0.3**
	23nm,0.3s,baz=84,slow=23,SNR=6.8						
MJAR	**Matsushiro Arr**	**7.31**	**329**	Pn	Pn	03 03 09.5	-5.0
	0.2nm,0.3s,baz=159,slow=11,SNR=12						
KSRS	**Korea Array**	**14.28**	**304**	Pn	**Pn**	**03 04 49.6**	**-0.1**
	baz=115,slow=14,SNR=2.2						
SONM	**Songino Array**	**32.88**	**312**	P	**P**	**03 08 00.5**	**+0.4**
	1.1nm,1.0s,baz=113,slow=8.5,SNR=4.7						
MKAR	**Makanchi Array**	**48.93**	**307**	P	**P**	**03 10 11.6**	**-0.2**
	0.4nm,0.5s,baz=91,slow=11,SNR=5.9						
LEM	**Lembang**	**50.05**	**228**	LR	LR	03 32 58.5	
	comp=Z,19nm,19.5s,baz=44,slow=38						
WRA	**Warramunga Arr**	**50.64**	**190**	P	**P**	**03 10 26.3**	**+1.3**
	1.6nm,0.5s,baz=8.9,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**54.36**	**190**	P	**P**	**03 10 53.2**	**+0.7**
	0.7nm,0.5s,baz=4.0,slow=6.0,SNR=19						
YKA	**Yellowknife Ar**	**69.04**	**29**	P	**P**	**03 12 30.5**	**-0.4**
	0.2nm,0.8s,baz=294,slow=5.9,SNR=3.8						
FINES	**FINESS Array B**	**75.32**	**334**	P	**P**	**03 13 08.2**	**-0.2**
	3.3nm,1.0s,baz=55,slow=12,SNR=2.3						

IDC ***14*** *03:30:52.6±1.5, 35.°14N×69.°94E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/51, mbtmp3.7/7, ML3.4/2, Error ellipse: s-maj=34.6km s-min=27.5km az=158.0*
NNC ***14*** *03:31:05.2±14.0, 36.°07N×69.13E, h15km±300km, mb4.2, mpv4.1, Error ellipse: s-maj=292.6km s-min=53.2km az=3.0*

ISC 14 03:31:05.2±1.1, **35.°74N**±0.°09×**69.°63E**±0.°09, **h90**km, **n19,** σ1§**86**/24, **mb3.7**/5, **6C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**7.12**	**25**	P	**Pn**	**03 32 46.5**	**-0.5**
	SNR=63						
KK31	**Karatay Array**	**7.39**	**5**	⇑P	**Pn**	**03 32 50.6**	**+0.4**
	3.0nm,0.4s,baz=189,slow=14,SNR=58						
KK31				⇑S	**Sn**	**03 34 11.2**	**-1.3**
	3.9nm,0.5s,baz=199,slow=28,SNR=6.0						
UCH	**Uchtor**	**7.51**	**29**	P	**Pn**	**03 32 52.3**	**-0.1**
	SNR=11						
EKS2	**Erkin-Say**	**7.63**	**24**	P	**Pn**	**03 32 53.9**	**+0.3**
	SNR=8.8						
AAK	**Ala-Archa**	**7.86**	**27**	P	**Pn**	**03 32 57.0**	**+0.2**
	SNR=11						
AAK	**Ala-Archa**	**7.86**	**27**	⇑P	**Pn**	**03 32 56.2**	**-0.6**
	7.6nm,0.7s						
AAK				S	**Sn**	**03 34 25.1**	**+1.0**
	11nm,0.7s						
CHMS	**Chumysh**	**8.26**	**27**	P	**Pn**	**03 33 02.1**	**-0.1**
	SNR=5.6						
USP	**Ospenovka**	**8.41**	**25**	P	**Pn**	**03 33 03.4**	**-0.8**
	SNR=8.5						
TKM2	**Tokmak 2**	**8.53**	**31**	P	**Pn**	**03 33 05.5**	**-0.5**
	SNR=14						
TKM2	**Tokmak 2**	**8.53**	**31**	⇓P	**Pn**	**03 33 05.1**	**-1.0**
	6.0nm,0.5s						
TKM2				⇑S	**Sn**	**03 34 41.8**	**+1.2**
	3.4nm,0.7s						
GEYT	**Alibeck**	**9.48**	**287**	Pn	**Pn**	**03 33 17.9**	**-0.9**
	1.0nm,0.3s,baz=132,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**14.56**	**37**	Pn	**Pn**	**03 34 25.1**	**-1.5**
	0.1nm,0.3s,baz=230,slow=16,SNR=3.5						
AB31	**Akbulak array**	**15.26**	**335**	⇓P	**Pn**	**03 34 35.6**	**+0.1**
	1.5nm,0.3s,baz=156,slow=12,SNR=92						
AB31				⇑S	**Sn**	**03 37 18.9**	**-4.8**
	0.6nm,0.6s,baz=155,slow=22,SNR=5.2						
AKTO	**Aktyubinsk**	**16.93**	**334**	⇓P	**P**	**03 34 57.0**	**+0.2**
	2.6nm,0.6s						
AKTO				⇑S	**Sn**	**03 38 01.7**	**-2.3**
	1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**21.07**	**26**	P	**P**	**03 35 43.0**	**+1.1**
	2.1nm,0.3s,baz=214,slow=11,SNR=9.6						
ARCES	**ARCESS Array B**	**41.43**	**338**	P	**P**	**03 38 43.8**	**+1.4**
	1.4nm,0.7s,baz=114,slow=9.0,SNR=3.5						
NOA	**NORSAR Array B**	**44.33**	**324**	P	**P**	**03 39 10.6**	**+4.6**
	0.5nm,0.7s,baz=90,slow=8.0,SNR=1.7						
TORD	**Torodi Ar. Bea**	**64.59**	**268**	P	**P**	**03 41 33.3**	**0.0**
	0.4nm,0.4s,baz=51,slow=6.5,SNR=5.2						
WRA	**Warramunga Arr**	**82.54**	**121**	P	**P**	**03 43 15.0**	**-3.2**
	0.4nm,0.8s,baz=328,slow=4.9,SNR=2.5						

FUNV ***14*** *03:40:03.3, 9.°02N×71.°19W, h10km, MW3.2*

ISC 14 03:40:03.8±1.3, **9.°00N**±0.°04×**71.°09W**±0.°03, **h12**km±11km, **n12,** σ0§**90**/21, **1C, Lake Maracaibo**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.75**	**162**	⇑*i*P	**Pg**	**03 40 18.7**	**+0.4**
SOCV				*e*S	**Sg**	**03 40 28.2**	**0.0**
CURV	**Curarigua**	**1.49**	**48**	*e*P	**Pb**	**03 40 31.7**	**+0.2**
CURV				*e*S	**Sg**	**03 40 51.1**	**-0.8**
SANV	**Sanarito**	**1.61**	**72**	*e*P	**Pb**	**03 40 33.6**	**+0.1**
SANV				*e*S	**Sb**	**03 40 54.8**	**+1.0**
CAPV	**Capacho**	**1.66**	**227**	*e*P	**Pn**	**03 40 32.0**	**-0.9**
CAPV				*e*S	**Sn**	**03 40 52.8**	**-1.6**
SIQV	**Siquisique**	**2.06**	**37**	*e*P	**Pn**	**03 40 37.1**	**-1.2**
SIQV				*e*S	**Sn**	**03 41 04.1**	**+0.1**
OCAC	**Ocana**	**2.34**	**251**	*e*S	**Sg**	**03 41 17.4**	**-1.6**
OCAC				*i*		03 41 19.6	
	comp=Z,135nm,0.3s						
ELOV	**Elorza**	**2.54**	**141**	*e*P	**Pn**	**03 40 44.8**	**-0.2**
ELOV				*e*S	**Sn**	**03 41 16.1**	**+0.2**
CRJC	**Cerrejon, Guaj**	**2.67**	**319**	*e*P	**Pn**	**03 40 47.0**	**+0.2**
CRJC				*e*S	**Sn**	**03 41 18.7**	**-0.5**
SMLC	**San Martn de**	**2.96**	**266**	*e*P	**Pn**	**03 40 51.3**	**+0.7**
SMLC				*e*S	**Sb**	**03 41 33.9**	**+1.3**
SMLC				*i*		03 41 41.6	
	comp=Z,18nm,0.3s						
BAUV	**El Baul**	**3.01**	**91**	*e*P	**Pn**	**03 40 51.4**	**+0.2**
BAUV				*e*S	**Sn**	**03 41 26.4**	**-0.9**
PTBC	**PUERTO BERRIO,**	**4.14**	**234**	*e*P	**Pn**	**03 41 06.8**	**-0.1**
PTBC				*i*		03 42 13.8	
	comp=Z,4.2nm,0.4s						
MOTC	**Monteria, Cord**	**4.53**	**268**	*e*P	**Pn**	**03 41 13.4**	**+1.1**

IDC ***14*** *03:43:37.1±1.7, 5.°64S×152.°90E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/44, mbtmp3.8/7, MS3.1/4, Ms1 3.0/4, ms1mx2.7/32, Error ellipse: s-maj=85.7km s-min=21.6km az=130.0*

ISC 14 03:43:41.9±1.6, **5.°8S**±0.°4×**152.°9E**±0.°4, **h35**km, **n11,** σ1§**22**/9, **mb3.7**/6, **MS3.3**/3, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.78**	**237**	Pn	**Pn**	**03 45 17.2**	**-1.9**
	baz=39,slow=6.5,SNR=1.6						
PMG				Sn	**Sn**	**03 46 36.5**	**+1.4**
	6.5nm,0.3s,baz=89,slow=15,SNR=10						
PMG				LR	LR	03 47 24.6	
	comp=Z,21nm,19.0s,baz=350,slow=33						
DZM	**Mont Dzumac**	**20.83**	**142**	LR	LR	03 55 03.0	
	comp=Z,118nm,18.5s,baz=52,slow=33						
WRA	**Warramunga Arr**	**22.94**	**230**	P	**P**	**03 48 43.4**	**+0.1**
	1.1nm,0.7s,baz=55,slow=10.0,SNR=5.6						
ASAR	**Alice Springs**	**25.56**	**224**	P	**P**	**03 49 08.3**	**+0.6**
	1.3nm,0.8s,baz=55,slow=9.3,SNR=13						
STKA	**Stephens Creek**	**28.08**	**201**	LR	LR	04 00 53.3	
	comp=Z,34nm,18.1s,baz=25,slow=37						
FITZ	**Fitzroy Crossi**	**29.34**	**243**	P	**P**	**03 49 41.9**	**+0.2**
	0.8nm,0.5s,baz=54,slow=3.3,SNR=6.4						
MKAR	**Makanchi Array**	**81.12**	**319**	P	**P**	**03 55 53.9**	**0.0**
	0.8nm,0.9s,baz=119,slow=5.6,SNR=5.0						
ILAR	**Eielson Array**	**82.98**	**22**	P	**P**	**03 56 03.1**	**-0.1**
	0.5nm,0.7s,baz=246,slow=5.2,SNR=6.4						
YKA	**Yellowknife Ar**	**96.19**	**28**	P	**P**	**03 57 05.7**	**-0.4**
	0.3nm,0.8s,baz=264,slow=4.2,SNR=5.5						
ARU	**Arti**	**97.17**	**326**	LR	LR	04 41 38.9	
	comp=Z,17nm,19.4s,baz=185,slow=36						
TORD	**Torodi Ar. Bea**	**150.72**	**287**	PKPbc	**PKiKP**	**04 03 34.0**	**+1.8**
	0.6nm,0.8s,baz=60,slow=3.5,SNR=2.3						

IDC ***14*** *04:09:38.7±1.1, 5.°51S×153.°39E, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.0/36, mbtmp4.2/12, ML2.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/28, Error ellipse: s-maj=29.5km s-min=18.2km az=88.0*
NEIC ***14*** *04:09:44.8±1.1, 5.°57S±0.°07×153.°4E±0.°1, h49km±9km, mb4.3/9, Error ellipse: s-maj=14.7km s-min=10.7km az=90.0*

ISC 14 04:09:44.2±0.7, **5.°48S**±0.°06×**153.°44E**±0.°09, **h43**km, **n31,** σ1§**21**/33, **mb4.1**/13, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.80**	**315**	Pn	**Pn**	**04 10 13.5**	**+0.7**
RABL				Sn	**Sn**	**04 10 32.6**	**-1.9**
PMG	**Port Moresby**	**7.35**	**238**	Pn	**Pn**	**04 11 28.2**	**-0.8**
	3.7nm,0.3s,baz=34,slow=17,SNR=2.5						
PMG				Sn	**Sn**	**04 12 55.5**	**+4.3**
	3.1nm,0.3s,baz=15,slow=23,SNR=4.0						
PMG	**Port Moresby**	**7.35**	**238**		**Pn**	**04 11 27.4**	**-1.7**
PMG					**Sn**	**04 12 50.2**	**-1.0**
SANVU	**Saraoutou**	**16.76**	**127**		**P**	**04 13 37.8**	**+0.1**
DZM	**Mont Dzumac**	**20.75**	**144**	P	**P**	**04 14 21.7**	**+0.2**
	3.3nm,0.4s,baz=185,slow=17,SNR=8.8						
MTN	**Manton Dam**	**23.19**	**250**	P	**P**	**04 14 46.9**	**-0.6**
MTN				IAmb	IAmb	04 15 06.7	
	comp=Z,16nm,1.1s						
WR0	**Warramunga Arr**	**23.35**	**230**	P	**P**	**04 14 49.6**	**+0.6**
WB0	**Warramunga Arr**	**23.35**	**231**	P	**P**	**04 14 48.0**	**-1.0**
WB2	**Warramunga Arr**	**23.48**	**231**	P	**P**	**04 14 50.2**	**-0.1**
WB2				IAmb	IAmb	04 14 52.2	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**23.49**	**231**	P	**P**	**04 14 48.8**	**-1.6**
	comp=Z,2.4nm,0.9s,baz=57,slow=10,SNR=11						
ASAR	**Alice Springs**	**26.10**	**224**	P	**P**	**04 15 14.2**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=57,slow=9.1,SNR=18						
STKA	**Stephens Creek**	**28.51**	**201**	P	**P**	**04 15 36.5**	**+0.8**
	comp=Z,0.5nm,0.2s,baz=287,slow=20,SNR=1.3						
FITZ	**Fitzroy Crossi**	**29.91**	**243**	P	**P**	**04 15 47.2**	**-1.0**

MTN	**Manton Dam**	**23.07**	**249**	P	**P**	**04 17 17.1**	**-0.4**
WB0	**Warramunga Arr**	**23.43**	**230**	P	**P**	**04 17 19.8**	**-1.3**
WB0				IAmb	IAmb	04 17 39.3	
	comp=Z,6.0nm,0.9s						
WR0	**Warramunga Arr**	**23.43**	**229**	P	**P**	**04 17 21.2**	**+0.1**
WR0				IAmb	IAmb	04 17 37.7	
	comp=Z,5.2nm,1.0s						
WB2	**Warramunga Arr**	**23.56**	**229**	P	**P**	**04 17 20.5**	**-1.8**
WB2				IAmb	IAmb	04 17 36.3	
	comp=Z,5.0nm,0.8s						
WRA	**Warramunga Arr**	**23.57**	**229**	P	**P**	**04 17 20.7**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=54,slow=9.8,SNR=4.3						
WRA	**Warramunga Arr**	**23.57**	**229**	P	**P**	**04 17 20.9**	**-1.6**
ASAR	**Alice Springs**	**26.24**	**223**	P	**P**	**04 17 48.5**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=53,slow=9.2,SNR=2.7						
BATI	**Baumata**	**29.64**	**258**	LR	LR	04 32 36.8	
	comp=Z,110nm,18.9s,baz=98,slow=41						
FITZ	**Fitzroy Crossi**	**29.86**	**242**	P	**P**	**04 18 20.8**	**+1.7**
	comp=Z,2.1nm,0.9s,baz=96,slow=9.2,SNR=1.5						
CMAR	**Chiang Mai Arr**	**58.24**	**295**	P	**P**	**04 22 05.8**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=112,slow=5.0,SNR=5.1						
CMAR	**Chiang Mai Arr**	**58.24**	**295**	P	**P**	**04 22 04.2**	**-1.9**
SCM	**Sheep Creek Mo**	**80.58**	**24**	P	**P**	**04 24 23.3**	**0.0**
SCM				IAmb	IAmb	04 24 29.6	
	comp=Z,1.2nm,1.0s						
MKAR	**Makanchi Array**	**80.67**	**319**	P	**P**	**04 24 24.2**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=115,slow=5.5,SNR=4.9						
MKAR	**Makanchi Array**	**80.67**	**319**	P	**P**	**04 24 22.9**	**-1.2**
ZALV	**Zalesovo Beam**	**81.47**	**326**	P	**P**	**04 24 27.7**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=118,slow=7.4,SNR=7.6						
ILAR	**Eielson Array**	**82.20**	**22**	P	**P**	**04 24 32.5**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=258,slow=4.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**150.66**	**288**	PKPbc	**PKPbc**	**04 32 03.1**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=67,slow=2.6,SNR=15						
BDFB	**Brasilia**	**150.72**	**135**	PKPbc	**PKPbc**	**04 32 04.9**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=45,slow=4.3,SNR=3.1						

MDD **14** *04:25:36.2±0.2,43°.13N×0°.65W,h3km±2km,mbLg3.4/26, Error ellipse: s-maj=2.6km s-min=1.8km az=155.0, PRXIMO*
STR **14** *04:25:36.4±0.2,43°N±2°×±°,h5km, MLv3.6/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary*
LDG **14** *04:25:36.5±0.1,43°.12N×0°.62W,h2km,Md3.6/3,Ml3.8/52, Error ellipse: s-maj=1.1km s-min=0.9km az=119.0*
INMG **14** *04:25:36.1±1.9,43°.14N×0°.66W,h5km±4km,ML3.2, Error ellipse: s-maj=3.6km s-min=2.2km az=179.0*
SFS **14** *04:25:36.0,43°.06N×0°.66W,ML3.4,OLORON STE MARIE (FRANCIA)*
IDC **14** *04:25:37.8±2.4,42°.90N×0°.86W,h0km,mb1 3.5/5, mb1mx3.2/54,mbtmp3.4/5,ML3.4/5,Error ellipse: s-maj=38.1km s-min=17.9km az=137.0*

ISC 14 04:25:34.2±0.8,43°.15N±0°.02×0°.67W±0°.02,h15km±5km, n206,σ1§89/362,5C-6D,Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ATE	**Arette**	**0.07**	**200**	⇓Pg		**Pg**	**04 25 37.4**	**+0.2**
	55μm,0.0s,SNR=18							
ATE				Lg		Lg	04 25 38.5	
	123μm,0.0s,SNR=7.9							
ATE	**Arette**	**0.07**	**200**	Pg		**Pg**	**04 25 37.4**	**+0.2**
ATE				Sg		**Sg**	**04 25 38.5**	**-0.6**
ETSF	**Etsaut**	**0.26**	**162**	Pg		**Pb**	**04 25 40.5**	**-0.2**
ETSF				Lg		Lg	04 25 43.7	
	3μm,0.2s							
ETSF	**Etsaut**	**0.26**	**162**	*e*Pg		**Pb**	**04 25 40.5**	**-0.2**
ETSF				*e*Sg		**Sb**	**04 25 43.7**	**-1.4**
	7μm,0.2s							
URDF	**Urds**	**0.29**	**11**	Pg		**Pg**	**04 25 43.0**	**+2.6**
URDF				Sg		**Sn**	**04 25 48.7**	**-1.5**
SJPF	**Ste Jean**	**0.41**	**265**	Pg		**Pg**	**04 25 43.6**	**+1.2**
SJPF				Lg		Lg	04 25 50.3	
	1μm,0.3s							
SJPF	**Ste Jean**	**0.41**	**265**	*e*Pg		**Pg**	**04 25 43.6**	**+1.2**
SJPF				*e*Sg		**Sg**	**04 25 50.3**	**+2.3**
	2μm,0.3s							
PYLO	**Lourdes**	**0.46**	**96**	Pg		**Pg**	**04 25 44.3**	**+1.0**
PYLO				Sg		**Sb**	**04 25 51.4**	**+0.7**
EORO	**Oroz-Betelu**	**0.54**	**242**	⇑Pg		**Pb**	**04 25 44.8**	**-0.6**
	381nm,0.3s,SNR=18							
EORO				Lg		Lg	04 25 52.3	
	2μm,0.2s,SNR=5.0							
TERF	**Tercis-les-Bai**	**0.62**	**329**	Pg		**Pn**	**04 25 49.1**	**+0.6**
TERF				Sg		**Sn**	**04 25 59.0**	**+0.8**
EPF	**Esparros**	**0.75**	**99**	Pg		**Pb**	**04 25 50.0**	**+1.0**
EPF				Lg		Lg	04 26 00.1	
	254nm,0.3s							
EPF	**Esparros**	**0.75**	**99**	*e*Pg		**Pb**	**04 25 50.0**	**+1.0**
EPF				*e*Sg		**Sg**	**04 26 00.1**	**+1.4**
	508nm,0.3s							
EARA	**Aranguren**	**0.77**	**241**	⇑Pg		**Pb**	**04 25 50.4**	**+1.1**
	107nm,0.3s,SNR=18							
EARA				Lg		Lg	04 26 00.4	
	467nm,0.2s,SNR=14							
EARA	**Aranguren**	**0.77**	**241**	Pg		**Pb**	**04 25 50.4**	**+1.1**
EARA	**Aranguren**	**0.77**	**241**	Sg		**Sg**	**04 26 01.6**	**+2.3**
ECHI	**Chisagues Biel**	**0.80**	**127**	⇓Pg		**Pb**	**04 25 50.2**	**+0.3**
	249nm,0.2s,SNR=18							
ECHI				Lg		Lg	04 26 00.1	
	1μm,0.2s,SNR=7.9							
ECHI	**Chisagues Biel**	**0.80**	**127**	Sg		**Sb**	**04 25 59.9**	**-0.7**
ECHI	**Chisagues Biel**	**0.80**	**127**	Pg		**Pb**	**04 25 50.2**	**+0.3**
ECHI	**Chisagues Biel**	**0.80**	**127**	Sg		**Sb**	**04 25 59.9**	**-0.7**
MLS	**Moulis**	**1.31**	**98**	Pg		**Pb**	**04 25 59.2**	**+0.8**
MLS				Sg		**Sb**	**04 26 16.8**	**+1.7**
CSOR	**Sort**	**1.54**	**120**	Pg		**Pb**	**04 26 03.6**	**+1.1**
	55nm,0.2s,SNR=622							
CSOR				Lg		Lg	04 26 24.1	
	279nm,0.1s,SNR=5.0							
LRVF	**chteau la Riv**	**1.82**	**8**	Pn		**Pn**	**04 26 06.9**	**+2.0**
LRVF				Pg		**Pg**	**04 26 10.4**	**+1.3**
MONQ	**Montcuq**	**1.82**	**47**	P		**Pn**	**04 26 05.6**	**+0.6**
MONQ				Pn		**Pb**	**04 26 08.0**	**+0.8**
MONQ				Pg		**Pg**	**04 26 10.3**	**+1.2**
MONQ				Sn		**Sg**	**04 26 32.7**	**0.0**
ELAN	**Lanestosa**	**2.02**	**273**	Pn		**Pb**	**04 26 11.5**	**+0.8**
	2.1nm,0.1s,SNR=54							
ELAN				Lg		Lg	04 26 38.3	
	131nm,0.4s,SNR=5.0							
CLLI	**Llivia**	**2.06**	**108**	⇓Pg		**Pb**	**04 26 13.6**	**+2.3**
	75nm,0.4s,SNR=18							
CLLI				Lg		Lg	04 26 41.7	
	232nm,0.4s,SNR=10.0							
LFF	**La Frestale**	**2.06**	**29**	Pn		**Pn**	**04 26 10.4**	**+2.1**
LFF				Pg		**Pg**	**04 26 14.8**	**+1.1**
LFF				Lg		Lg	04 26 43.0	
	278nm,0.4s							
LFF	**La Frestale**	**2.06**	**29**	*e*Pn		**Pn**	**04 26 10.4**	**+2.1**
LFF	**La Frestale**	**2.06**	**29**	*e*Pg		**Pg**	**04 26 14.8**	**+1.1**
LFF				*e*Sg		**Sg**	**04 26 43.0**	**+2.6**
	556nm,0.4s							
MTLF	**Montolieu**	**2.12**	**84**	Pn		**Pn**	**04 26 09.6**	**+0.5**
MTLF				Pg		**Pg**	**04 26 15.3**	**+0.5**
MTLF				Lg		Lg	04 26 42.3	
	99nm,0.4s							
MTLF	**Montolieu**	**2.12**	**84**	*e*Pn		**Pn**	**04 26 09.6**	**+0.5**
MTLF	**Montolieu**	**2.12**	**84**	*e*Pg		**Pg**	**04 26 15.3**	**+0.5**
MTLF				*e*Sg		**Sg**	**04 26 42.3**	**0.0**
	199nm,0.4s							
MTLF	**Montolieu**	**2.12**	**84**	P		**Pn**	**04 26 10.3**	**+1.2**
MTLF				Pg		**Pb**	**04 26 14.5**	**+2.2**
EPOB	**Poblet**	**2.22**	**144**	Pn		**Pn**	**04 26 12.6**	**+2.1**
	3.7nm,0.2s,SNR=55							
EPOB				Pg		**Pb**	**04 26 16.0**	**+2.0**
	16nm,0.1s,SNR=5.5							
EPOB				Lg		Lg	04 26 44.7	
	122nm,0.3s,SNR=5.0							
ERTA	**Horta de San J**	**2.31**	**161**	⇓Pn		**Pn**	**04 26 13.9**	**+2.0**
	4.8nm,0.2s,SNR=18							
ERTA				Pg		**Pg**	**04 26 18.9**	**+0.3**
	25nm,0.2s,SNR=7.4							
ERTA				Lg		Lg	04 26 47.2	
	64nm,0.1s,SNR=9.7							
ETOR	**Torete**	**2.55**	**204**	⇓Pn		**Pn**	**04 26 17.9**	**+2.8**
	180nm,0.2s,SNR=18							
ETOR				Sn		**Sn**	**04 26 48.1**	**+2.2**
	29nm,0.4s,SNR=6.7							
ETOR				Lg		Lg	04 26 55.4	
	510nm,0.4s,SNR=8.0							
CAF	**Calviac**	**2.65**	**47**	Pn		**Pn**	**04 26 16.4**	**-0.1**
CAF				Pg		**Pg**	**04 26 25.6**	**+0.5**
CAF				Lg		Lg	04 27 00.6	
	101nm,0.3s							
CAF	**Calviac**	**2.65**	**47**	*e*Pn		**Pn**	**04 26 16.4**	**-0.1**
CAF	**Calviac**	**2.65**	**47**	*e*Pg		**Pg**	**04 26 25.6**	**+0.5**
CAF				*e*Sg		**Sg**	**04 27 00.6**	**+1.2**
	201nm,0.3s							
RJF	**Les Rejaudoux**	**2.67**	**35**	Pn		**Pn**	**04 26 17.2**	**+0.5**
RJF				Pg		**Pg**	**04 26 25.8**	**+0.5**
RJF				Sn		**Sn**	**04 26 49.9**	**+1.2**
RJF				Lg		Lg	04 26 59.9	
	186nm,0.3s							
RJF	**Les Rejaudoux**	**2.67**	**35**	*e*Pn		**Pn**	**04 26 17.2**	**+0.5**
RJF	**Les Rejaudoux**	**2.67**	**35**	*e*Pg		**Pg**	**04 26 25.8**	**+0.5**
RJF				*e*Sn		**Sn**	**04 26 49.9**	**+1.2**
RJF				*e*Sg		**Sg**	**04 26 59.9**	**0.0**
	372nm,0.3s							
CFON	**Fontmartina**	**2.68**	**120**	⇓Pn		**Pn**	**04 26 20.3**	**+3.3**
	29nm,0.2s,SNR=18							
CFON				Pg		**Pb**	**04 26 25.1**	**+3.1**
	63nm,0.2s,SNR=14							
CFON				Lg		Lg	04 26 59.0	
	400nm,0.2s,SNR=5.0							
SJAF	**Saint Jean de**	**2.70**	**103**	Pn		**Pb**	**04 26 21.1**	**-1.1**
	1.5nm,0.2s,SNR=7.9							
SJAF				Pg		**Pg**	**04 26 25.6**	**-0.3**
	17nm,0.3s,SNR=7.9							
SJAF				Lg		Lg	04 27 00.9	
	88nm,0.3s,SNR=7.9							
SJAF	**Saint Jean de**	**2.70**	**103**	Pn		**Pn**	**04 26 19.8**	**+2.7**
SJAF				Pg		**Pb**	**04 26 22.9**	**+0.7**
EJON	**La Jonquera**	**2.71**	**104**	Pn		**Pb**	**04 26 21.7**	**-0.7**
	0.2nm,0.1s,SNR=31							
EJON				Pg		**Pg**	**04 26 27.4**	**+1.3**
	7.7nm,0.2s,SNR=10.0							
EJON				Lg		Lg	04 27 01.6	
	84nm,0.4s,SNR=14							
EMOS	**Mosqueruela**	**2.79**	**177**	Pn		**Pn**	**04 26 20.4**	**+1.9**
	1.2nm,0.1s,SNR=31							
EMOS				Pg		**Pg**	**04 26 28.9**	**+1.2**
	6.1nm,0.1s,SNR=31							
EMOS				Lg		Lg	04 27 03.0	
	39nm,0.2s,SNR=7.2							
EARI	**Arriondas**	**3.32**	**274**	Pn		**Pn**	**04 26 28.8**	**+3.1**
	3.2nm,0.1s,SNR=7.9							
EARI				Sn		**Sn**	**04 27 07.3**	**+2.3**
	6.9nm,0.2s,SNR=7.9							
LASF	**Ste Croix**	**3.42**	**73**	Pn		**Pn**	**04 26 27.9**	**+0.9**
LASF				Pg		**Pg**	**04 26 39.6**	**0.0**
LASF				Lg		Lg	04 27 22.8	
	36nm,0.4s							
LASF	**Ste Croix**	**3.42**	**73**	*e*Pn		**Pn**	**04 26 27.9**	**+0.9**
LASF	**Ste Croix**	**3.42**	**73**	*e*Pg		**Pg**	**04 26 39.6**	**0.0**
LASF				*e*Sg		**Sg**	**04 27 22.8**	**-1.1**
	72nm,0.4s							
UCM	**Universidad Co**	**3.43**	**215**	*e*P		**Pn**	**04 26 29.4**	**+2.2**
UCM				*e*S		**Sn**	**04 27 07.8**	**+0.2**
MFF	**Saint Martin d**	**3.47**	**6**	Pn		**Pn**	**04 26 29.4**	**+1.7**
MFF				Pg		**Pg**	**04 26 40.7**	**0.0**
MFF				Lg		Lg	04 27 24.2	
	47nm,0.3s							
MFF	**Saint Martin d**	**3.47**	**6**	*e*Pn		**Pn**	**04 26 29.4**	**+1.7**
MFF	**Saint Martin d**	**3.47**	**6**	*e*Pg		**Pg**	**04 26 40.7**	**0.0**
MFF				*e*Sg		**Sg**	**04 27 24.2**	**-1.5**
	94nm,0.3s							
LBL	**Lubilhac**	**3.50**	**52**	Pn		**Pn**	**04 26 29.3**	**+1.1**
LBL	**Lubilhac**	**3.50**	**52**	Sn		**Sn**	**04 27 08.4**	**-1.0**
ECHE	**Chera**	**3.56**	**184**	Pn		**Pn**	**04 26 31.1**	**+2.1**
	1.8nm,0.2s,SNR=7.9							
ECHE				Pg		**Pg**	**04 26 41.7**	**-0.7**
	0.7nm,0.1s,SNR=7.9							
ECHE				Sn		**Sn**	**04 27 11.8**	**+0.9**
	6.3nm,0.2s,SNR=7.9							
ECHE				Lg		Lg	04 27 27.4	
	53nm,0.5s,SNR=7.9							
GUD	**Guadarrama**	**3.61**	**227**	⇑Pn		**Pn**	**04 26 32.6**	**+2.8**
	18nm,0.3s,SNR=18							
GUD				Sn		**Sn**	**04 27 13.8**	**+1.6**
	45nm,0.4s,SNR=7.9							
GUD				Lg		Lg	04 27 28.7	
	30nm,0.4s,SNR=5.0							
PYM	**Petit Puy Mans**	**3.70**	**44**	Pn		**Pn**	**04 26 32.8**	**+1.8**
TCF	**Toulx Ste Croi**	**3.75**	**32**	Pn		**Pn**	**04 26 32.3**	**+0.7**
TCF				Pg		**Pg**	**04 26 46.1**	**+0.1**
TCF				Lg		Lg	04 27 35.3	
	56nm,0.3s							
TCF	**Toulx Ste Croi**	**3.75**	**32**	*e*Pn		**Pn**	**04 26 32.3**	**+0.7**
TCF	**Toulx Ste Croi**	**3.75**	**32**	*e*Pg		**Pg**	**04 26 46.1**	**+0.1**
TCF				*e*Sg		**Sg**	**04 27 35.3**	**+0.7**
	112nm,0.3s							
AGO	**Saint Agoulin**	**3.97**	**42**	Pn		**Pn**	**04 26 36.0**	**+1.4**
AGO	**Saint Agoulin**	**3.97**	**42**	Sn		**Sn**	**04 27 22.0**	**+1.0**
VIVF	**Saint-Julien-l**	**4.21**	**64**	Pn		**Pn**	**04 26 39.0**	**+1.0**
VIVF				Pg		**Pg**	**04 26 54.5**	**-0.4**
VIVF				Lg		Lg	04 27 47.7	
	20nm,0.4s							
VIVF	**Saint-Julien-l**	**4.21**	**64**	*e*Pn		**Pn**	**04 26 39.0**	**+1.0**
VIVF	**Saint-Julien-l**	**4.21**	**64**	*e*Pg		**Pg**	**04 26 54.5**	**-0.4**
VIVF				*e*Sg		**Sg**	**04 27 47.7**	**-1.8**
	39nm,0.4s							
BGF	**Bois d'Agland**	**4.23**	**35**	Pn		**Pn**	**04 26 39.8**	**+1.7**
BGF				Pg		**Pg**	**04 26 54.7**	**-0.4**
BGF				Lg		Lg	04 27 48.2	
	189nm,0.3s							
BGF	**Bois d'Agland**	**4.23**	**35**	*e*Pn		**Pn**	**04 26 39.8**	**+1.7**
BGF	**Bois d'Agland**	**4.23**	**35**	*e*Pg		**Pg**	**04 26 54.7**	**-0.4**
BGF				*e*Sg		**Sg**	**04 27 48.2**	**-1.6**
	378nm,0.3s							
ESDC	**Sonseca Array**	**4.26**	**217**	Pn		**Pn**	**04 26 40.4**	**+1.7**
	1.7nm,0.3s,baz=38,slow=13,SNR=28							
ESDC				Sn		**Sn**	**04 27 27.1**	**-1.2**
	5.3nm,0.3s,baz=37,slow=24,SNR=15							
ESDC				Lg		Lg	04 27 43.5	
	5.0nm,0.3s,baz=34,slow=28,SNR=7.3							
ESDC	**Sonseca Array**	**4.26**	**217**	Pn		**Pn**	**04 26 40.4**	**+1.7**
	2.8nm,0.3s,baz=39,slow=13,SNR=86							
ESDC				Sn		**Sn**	**04 27 27.7**	**-0.5**
	8.2nm,0.3s,baz=38,slow=24,SNR=16							
ESDC				Lg		Lg	04 27 47.0	
	8.6nm,0.3s,baz=36,slow=28,SNR=4.9							
ETOS	**Mallorca**	**4.27**	**141**	Pn		**Pn**	**04 26 41.0**	**+2.2**
	4.5nm,0.2s,SNR=25							
ETOS				Sn		**Sn**	**04 27 28.4**	**+0.1**
	6.5nm,0.3s,SNR=5.0							
EIBI	**Ibiza**	**4.39**	**159**	Pn		**Pn**	**04 26 42.0**	**+1.7**
	6.8nm,0.2s,SNR=64							
EIBI				Sn		**Sn**	**04 27 28.7**	**-2.5**
	6.1nm,0.2s,SNR=5.0							
AFON	**Font Roja**	**4.48**	**179**	Pn		**Pn**	**04 26 44.8**	**+3.1**
	15nm,0.2s,SNR=21							
AFON				Sn		**Sn**	**04 27 34.3**	**+0.7**
	5.4nm,0.3s,SNR=5.0							
EBEN2	**Beniarda presa**	**4.48**	**175**	Pn		**Pn**	**04 26 44.0**	**+2.3**
	6.7nm,0.1s,SNR=7.9							
EBEN2				Sn		**Sn**	**04 27 33.2**	**-0.3**
	16nm,0.3s,SNR=7.9							
PAB	**San Pablo**	**4.54**	**219**	Pn		**Pn**	**04 26 44.3**	**+1.8**
	8.4nm,0.2s,SNR=7.9							
PAB				Sn		**Sn**	**04 27 35.6**	**+0.5**
	19nm,0.3s,SNR=7.9							
PAB				Lg		Lg	04 27 56.8	
	22nm,0.4s,SNR=7.9							
RUSF	**Rustrel**	**4.54**	**78**	Pn		**Pn**	**04 26 44.2**	**+1.8**
ETOB	**Tobarra**	**4.55**	**189**	Pn		**Pn**	**04 26 44.8**	**+2.2**
	3.1nm,0.2s,SNR=58							
ETOB				Sn		**Sn**	**04 27 35.7**	**+0.5**
	2.7nm,0.2s,SNR=5.0							
ETOB				Lg		Lg	04 28 00.6	
	27nm,0.8s,SNR=7.9							
SMRF	**Simiane la Rot**	**4.61**	**78**	Pn		**Pn**	**04 26 44.9**	**+1.5**
SMRF				Pg		**Pg**	**04 27 01.8**	**-0.7**
SMRF				Lg		Lg	04 28 00.3	
	22nm,0.4s							
SMRF	**Simiane la Rot**	**4.61**	**78**	*e*Pn		**Pn**	**04 26 44.9**	**+1.5**
SMRF	**Simiane la Rot**	**4.61**	**78**	*e*Pg		**Pg**	**04 27 01.8**	**-0.7**
SMRF				*e*Sg		**Sg**	**04 28 00.3**	**-1.9**
	22nm,0.4s							
AVF	**Avril sur Loir**	**4.62**	**37**	Pn		**Pn**	**04 26 44.8**	**+1.3**
AVF				Pg		**Pg**	**04 27 02.2**	**-0.6**
AVF				Lg		Lg	04 28 01.2	
	52nm,0.5s							
AVF	**Avril sur Loir**	**4.62**	**37**	*e*Pn		**Pn**	**04 26 44.8**	**+1.3**
AVF	**Avril sur Loir**	**4.62**	**37**	*e*Pg		**Pg**	**04 27 02.2**	**-0.6**
AVF				*e*Sg		**Sg**	**04 28 01.2**	**-1.4**
	103nm,0.5s							
ECAL	**Calabor**	**4.64**	**257**	Pn		**Pn**	**04 26 46.4**	**+2.5**
	7.7nm,0.2s,SNR=32							
ECAL				Sn		**Sn**	**04 27 36.5**	**-1.1**
	21nm,0.2s,SNR=5.0							
ECAL				Lg		Lg	04 28 00.6	
	42nm,0.3s,SNR=5.0							
PBRG	**Braganca**	**4.69**	**255**	*e*Pn		**Pn**	**04 26 46.8**	**+2.3**
PBRG				*e*Sn		**Sn**	**04 27 36.9**	**-1.7**
PBRG				A		A	04 28 08.8	
	31nm,0.4s							
HYF	**Humbligny**	**4.74**	**28**	Pn		**Pn**	**04 26 47.0**	**+1.9**
HYF				Pg		**Pg**	**04 27 04.4**	**-0.5**
HYF				Lg		Lg	04 28 06.4	
HYF	**Humbligny**	**4.74**	**28**	*e*Pn		**Pn**	**04 26 47.0**	**+1.9**
HYF	**Humbligny**	**4.74**	**28**	*e*Pg		**Pg**	**04 27 04.4**	**-0.5**
HYF				*e*Sg		**Sg**	**04 28 06.4**	**+0.2**
EPON	**Pontenova**	**4.74**	**274**	Pn		**Pn**	**04 26 48.7**	**+3.6**
	1.7nm,0.1s,SNR=19							
EPON				Sn		**Sn**	**04 27 42.3**	**+2.5**
	14nm,0.3s,SNR=4.6							
SMF	**Signal de Mont**	**4.74**	**41**	Pn		**Pn**	**04 26 46.1**	**+0.9**
SMF				Pg		**Pg**	**04 27 04.3**	**-0.7**
SMF				Sn		**Sn**	**04 27 39.3**	**-0.6**
SMF				Lg		Lg	04 28 05.8	
	30nm,0.3s							
SMF	**Signal de Mont**	**4.74**	**41**	*e*Pn		**Pn**	**04 26 46.1**	**+0.9**
SMF	**Signal de Mont**	**4.74**	**41**	*e*Pg		**Pg**	**04 27 04.3**	**-0.7**
SMF				*e*Sn		**Sn**	**04 27 39.3**	**-0.6**
SMF				*e*Sg		**Sg**	**04 28 05.8**	**-0.6**
	60nm,0.3s							
SSF	**Saint Saulge**	**4.90**	**36**	Pn		**Pn**	**04 26 47.0**	**-0.4**
SSF				Pg		**Pg**	**04 27 07.2**	**-0.8**
SSF				Sn		**Sn**	**04 27 43.2**	**-0.6**
SSF				Lg		Lg	04 28 11.0	
	37nm,0.5s							
SSF	**Saint Saulge**	**4.90**	**36**	*e*Pn		**Pn**	**04 26 47.0**	**-0.4**
SSF	**Saint Saulge**	**4.90**	**36**	*e*Pg		**Pg**	**04 27 07.2**	**-0.8**
SSF				*e*Sn		**Sn**	**04 27 43.2**	**-0.6**
SSF				*e*Sg		**Sg**	**04 28 11.0**	**-0.5**
	74nm,0.5s							
MAHO	**Mahon**	**4.93**	**130**	*e*P		**Pn**	**04 26 49.8**	**+2.0**
MAHO				*e*S		**Sn**	**04 27 44.6**	**+0.2**
ORIF	**Oris-en-Rattie**	**5.04**	**67**	Pn		**Pn**	**04 26 51.1**	**+1.7**
ORIF				Lg		Lg	04 28 13.7	
	12nm,0.6s							
ORIF	**Oris-en-Rattie**	**5.04**	**67**	*e*Pn		**Pn**	**04 26 51.1**	**+1.7**
ORIF				*e*Sg		**Sg**	**04 28 13.7**	**-2.3**
	24nm,0.6s							
QUIF	**Quistinic**	**5.08**	**341**	Pn		**Pn**	**04 26 51.1**	**+1.3**
QUIF				Pg		**Pg**	**04 27 11.7**	**+0.3**
QUIF				Sn		**Sn**	**04 27 48.7**	**+0.6**
	12nm,0.3s							
QUIF				Lg		Lg	04 28 17.4	
	12nm,0.3s							
QUIF	**Quistinic**	**5.08**	**341**	*e*Pn		**Pn**	**04 26 51.1**	**+1.3**
QUIF	**Quistinic**	**5.08**	**341**	*e*Pg		**Pg**	**04 27 11.7**	**+0.3**
QUIF				*e*Sn		**Sn**	**04 27 48.7**	**+0.6**
	25nm,0.3s							
QUIF				*e*Sg		**Sg**	**04 28 17.4**	**+0.2**
	24nm,0.3s							
EPLA	**Plasencia**	**5.09**	**235**	Pn		**Pn**	**04 26 52.2**	**+2.2**
	3.4nm,0.1s,SNR=7.9							
EPLA				Sn		**Sn**	**04 27 48.5**	**-0.1**
	18nm,0.2s,SNR=5.9							
ETRV	**Los Montesinos**	**5.12**	**181**	Pn		**Pn**	**04 26 53.0**	**+2.6**
	42nm,0.2s,SNR=7.9							
MVO	**Moncorvo**	**5.13**	**249**	⇑Pn		**Pn**	**04 26 52.8**	**+2.3**
	11nm,0.1s,SNR=18							
MVO				Sn		**Sn**	**04 27 48.7**	**-0.8**
	48nm,0.3s,SNR=8.2							
MVO				Lg		Lg	04 28 15.3	
	46nm,0.3s,SNR=7.9							
MVO	**Moncorvo**	**5.13**	**249**	⇑*i*Pn		**Pn**	**04 26 52.8**	**+2.3**
MVO				*e*Sn		**Sn**	**04 27 48.8**	**-0.7**
MVO				*e*Sg		**Sg**	**04 28 14.2**	**-4.5**
MVO				A		A	04 28 17.5	
	41nm,0.3s							
LOR	**Lormes**	**5.21**	**36**	Pn		**Pn**	**04 26 53.4**	**+1.7**
LOR				Pg		**Pg**	**04 27 12.6**	**-1.4**
LOR				Sn		**Sn**	**04 27 50.3**	**-1.2**

28nm,0.5s
FLN La Foliniere 5.62 1 *e*Pn **Pn 04 26 59.1 +2.0**
baz=181
FLN La Foliniere 5.62 1 *e*Pg **Pg 04 27 20.9 -0.8**
baz=181
FLN *e*Sn **Sn**
FLN *e*Sg **Sg 04 28 32.9 -1.4**
57nm,0.5s
PCAB Cabril 5.63 258 *e*Pn **Pn 04 26 59.9 +2.5**
PCAB *e*Sn **Sn 04 28 01.1 -0.8**
PCAB *e*Sg **Sg 04 28 30.5 -4.4**
PCAB A A 04 28 37.0
20nm,0.5s
EQES Quesada 5.65 200 Pn **Pn 04 27 00.5 +2.8**
8.5nm,0.3s,SNR=16
EQES Sn **Sn 04 28 01.4 -0.9**
7.1nm,0.4s,SNR=5.0
EQES Lg Lg 04 28 35.5
21nm,0.5s,SNR=7.9
PGAV Gavieira, Arco 5.74 261 *e*Pn **Pn 04 27 01.4 +2.5**
PGAV *e*Sn **Sn 04 28 05.7 +1.2**
PGAV A A 04 28 42.5
12nm,0.5s
EADA Adamuz 5.80 212 Pn **Pn 04 27 01.2 +1.5**
7.6nm,0.2s,SNR=75
EADA Sn **Sn 04 28 03.6 -2.3**
4.6nm,0.1s,SNR=5.0
EADA Lg Lg 04 28 35.6
15nm,0.5s,SNR=7.9
LPL La Plagne 5.81 63 Pn **Pn 04 27 02.4 +2.3**
LPL Pg **Pg 04 27 24.0 -1.5**
LPL Lg Lg 04 28 38.4
5.6nm,0.5s
LPL La Plagne 5.81 63 *e*Pn **Pn 04 27 02.4 +2.3**
LPL La Plagne 5.81 63 *e*Pg **Pg 04 27 24.0 -1.5**
LPL *e*Sg **Sg 04 28 38.4 -2.3**
11nm,0.5s
LPG La Plagne 5.82 64 Pn **Pn 04 27 02.4 +2.2**
LPG Lg Lg 04 28 39.8
5.4nm,0.5s
LPG La Plagne 5.82 64 *e*Pn **Pn 04 27 02.4 +2.2**
LPG *e*Sg **Sg 04 28 39.8 -1.1**
11nm,0.5s
MTE Manteigas 5.83 244 *e*Pn **Pn 04 27 01.5 +1.3**
MTE *e*Sn **Sn 04 28 05.6 -1.1**
MTE *e*Sg **Sg 04 28 36.6 -4.6**
MTE A A 04 28 43.3
26nm,0.7s
PVIS Viseu 5.91 248 *e*Pn **Pn 04 27 03.3 +2.0**
PVIS *e*Sn **Sn 04 28 07.7 -1.1**
PVIS *e*Sg **Sg 04 28 38.9 -5.0**
PVIS A A 04 28 44.0
17nm,0.6s
CABF La Chapelle 5.92 52 Pn **Pn 04 27 02.9 +1.5**
CABF Pg **Pg 04 27 25.9 -1.6**
CABF Lg Lg 04 28 42.2
32nm,0.7s
CABF La Chapelle 5.92 52 *e*Pn **Pn 04 27 02.9 +1.5**
CABF La Chapelle 5.92 52 *e*Pg **Pg 04 27 25.9 -1.6**
CABF *e*Sg **Sg 04 28 42.2 -1.8**
63nm,0.7s
SBF Sospel 5.94 80 Pn **Pn 04 27 02.9 +1.3**
SBF Lg Lg 04 28 41.6
4.2nm,0.5s
SBF Sospel 5.94 80 *e*Pn **Pn 04 27 02.9 +1.3**
SBF *e*Sg **Sg 04 28 41.6 -3.1**
8.4nm,0.5s
GORA Gorafe 5.95 199 Pn **Pn 04 27 05.3 +3.5**
72nm,0.2s,SNR=7.9
GORA Sn **Sn 04 28 10.1 +0.4**
57nm,0.4s,SNR=7.9
GORA Lg Lg 04 28 44.0
35nm,0.4s,SNR=7.9
EZAM Zamans 6.00 263 Pn **Pn 04 27 04.7 +2.2**
2.0nm,0.1s,SNR=7.9
EZAM Sn **Sn 04 28 09.9 -1.0**
8.6nm,0.3s,SNR=7.9
EZAM Lg Lg 04 28 47.8
17nm,0.6s,SNR=7.9
PCBR Castelo Branco 6.09 239 *e*Pn **Pn 04 27 05.1 +1.5**
PCBR *e*Sn **Sn 04 28 11.1 -1.9**
PCBR A A 04 28 50.1
14nm,0.3s
EMAZ Mazaricos 6.09 271 Pn **Pn 04 27 07.2 +3.5**
2.0nm,0.1s,SNR=7.9
EMAZ Sn **Sn 04 28 12.3 -0.9**
12nm,0.3s,SNR=7.9
ECAB El Cabril 6.22 217 Pn **Pn 04 27 07.3 +1.7**
2.7nm,0.2s,SNR=44
ECAB Sn **Sn 04 28 13.8 -2.6**
10nm,0.3s,SNR=6.1
ECAB Lg Lg 04 28 53.5
12nm,0.4s,SNR=7.9
PMRV Marv??o 6.28 236 *e*Pn **Pn 04 27 08.0 +1.7**
PMRV *e*Sn **Sn 04 28 15.7 -2.1**
PMRV A A 04 28 18.4
24nm,0.7s
ENIJ Nijar 6.28 191 Pn **Pn 04 27 09.4 +3.1**
8.0nm,0.4s,SNR=7.9
EQUE Quentar 6.30 201 Pn **Pn 04 27 10.1 +3.3**
7.2nm,0.2s,SNR=30
EQUE Sn **Sn 04 28 19.2 +0.7**
7.2nm,0.5s,SNR=5.0
EQUE Lg Lg 04 28 55.8
14nm,0.6s,SNR=7.9
HORN Hornachuelos 6.35 215 P 04 27 09.5
HORN S 04 28 17.4
SFTF Sexfontaines 6.44 36 Pn **Pn 04 27 10.9 +2.4**
SFTF Pg **Pg 04 27 36.4 -1.1**
SFTF Lg Lg 04 28 58.5
61nm,0.7s
SFTF Sexfontaines 6.44 36 *e*Pn **Pn 04 27 10.9 +2.4**
SFTF Sexfontaines 6.44 36 *e*Pg **Pg 04 27 36.4 -1.1**
SFTF *e*Sg **Sg 04 28 58.5 -2.4**
61nm,0.7s
EBER Berja 6.47 196 Pn **Pn 04 27 13.5 +4.4**
2.8nm,0.2s,SNR=19
EBER Sn **Sn 04 28 23.4 +0.6**
4.0nm,0.3s,SNR=7.9
COI Coimbra 6.50 246 *e*Sn **Sn 04 28 21.2 -1.9**
COI *e*Sg **Sg 04 28 56.2 -6.5**
COI A A 04 29 00.8
35nm,0.6s
EGOR Sierra Gorda, 6.58 205 Pn **Pn 04 27 14.0 +3.4**
1.9nm,0.2s,SNR=7.9
EGOR Sn **Sn 04 28 25.5 +0.1**
7.8nm,0.3s,SNR=7.9
PCAS Casmilo, Conde 6.63 245 *e*Pn **Pn 04 27 13.5 +2.3**
PCAS *e*Sn **Sn 04 28 25.5 -1.0**
PCAS *e*Sg **Sg 04 29 03.1 -3.9**
PCAS A A 04 29 20.8
15nm,0.6s
ELGU Los Guajares, 6.67 201 Pn **Pn 04 27 15.5 +3.8**
7.7nm,0.2s,SNR=7.9
ELGU Sn **Sn 04 28 30.0 +2.5**
12nm,0.4s,SNR=7.9
MEZF Maizieres J'vi 6.68 35 Pg **Pg 04 27 40.5 -1.5**
MEZF Lg Lg 04 29 09.1
99nm,0.6s
MEZF Maizieres J'vi 6.68 35 *e*Pg **Pg 04 27 40.5 -1.5**
baz=214
MEZF *e*Sg **Sg 04 29 09.1 +0.7**
99nm,0.6s
PESTR Estremoz 6.76 233 *e*Pn **Pn 04 27 14.4 +1.5**
PESTR *e*Sn **Sn 04 28 26.8 -2.8**
PESTR A A 04 29 18.7
8.6nm,0.5s
PESTR Estremoz 6.76 233 P 04 27 14.3
PESTR S 04 28 26.6
SAVF Savonnieres en 6.80 34 *e*Pg **Pg 04 27 42.9 -1.4**
SAVF *e*Sg **Sg 04 29 09.3 -2.9**
72nm,0.7s
HAU Haudompre 6.91 43 Pg **Pg 04 27 44.3 -2.2**
HAU Lg Lg 04 29 12.5
20nm,0.5s
HAU Haudompre 6.91 43 *e*Pg **Pg 04 27 44.3 -2.2**
HAU *e*Sg **Sg 04 29 12.5 -3.4**
39nm,0.5s
PBAR Barrancos 6.94 226 *e*Pn **Pn 04 27 17.1 +1.8**
PBAR *e*Sn **Sn 04 28 31.8 -2.1**
PBAR A A 04 28 33.4
11nm,0.6s
PAGF Fort de Pagny 7.01 37 *e*Pn **Pn 04 27 17.4 +1.1**
baz=217
PAGF Fort de Pagny 7.01 37 *e*Pg **Pg 04 27 47.0 -1.3**
PAGF *e*Sg **Sg 04 29 15.5 -3.5**
95nm,0.8s,baz=218
PMTG Montargil 7.01 237 *e*Pn **Pn 04 27 17.9 +1.6**
PMTG *e*Sn **Sn 04 28 33.9 -1.9**
PMTG A A 04 29 30.6
9.1nm,0.7s
HINF Hinteralfeld 7.05 46 Pg **Pg 04 27 47.8 -1.3**
HINF Lg Lg 04 29 17.2
6.7nm,0.5s
HINF Hinteralfeld 7.05 46 *e*Pg **Pg 04 27 47.8 -1.3**
HINF *e*Sg **Sg 04 29 17.2 -3.1**
13nm,0.5s
EMIN Mina Concepcio 7.06 222 Pn **Pn 04 27 18.6 +1.6**
0.8nm,0.2s,SNR=8.0
EMIN Sn **Sn 04 28 33.1 -3.8**
6.2nm,0.3s,SNR=5.0
PSBE So Bento 7.11 242 *e*Pn **Pn 04 27 20.1 +2.4**
PSBE *e*Sn **Sn 04 28 38.4 +0.1**
PSBE A A 04 29 30.4
13nm,0.5s
PGF Pioggiola 7.13 92 Pn **Pn 04 27 19.6 +1.5**
PGF Sn **Sn 04 28 36.0 -2.9**
2.0nm,0.3s
PGF Pioggiola 7.13 92 *e*Pn **Pn 04 27 19.6 +1.5**
PGF *e*Sn **Sn 04 28 36.0 -2.9**
4.0nm,0.3s
EVO Evora 7.23 233 *i* P **Pn 04 27 20.8 +1.5**
EVO *e*S **Sn 04 28 35.5 -5.7**
EVO Evora 7.23 233 *e*Pn **Pn 04 27 20.9 +1.6**
EVO *e*Sn **Sn 04 28 39.8 -1.3**
EMIJ Mijas 7.29 207 Pn **Pn 04 27 23.8 +3.5**
4.7nm,0.3s,SNR=7.9
EMIJ Sn **Sn 04 28 40.9 -1.8**
4.6nm,0.3s,SNR=7.9
ESPR Espera 7.43 214 Pn **Pn 04 27 25.1 +3.1**
1.6nm,0.1s,SNR=5.8
ESPR Sn **Sn 04 28 44.6 -1.4**
1.4nm,0.2s,SNR=5.0
PBEJ Beja 7.49 229 *e*Sn **Sn 04 28 44.0 -3.7**
CDF Champ du Feu 7.65 44 Pg Pb 04 27 58.8 +12
CDF Lg Lg 04 29 36.2
7.4nm,0.5s
CDF Champ du Feu 7.65 44 *e*Pg Pb 04 27 58.8 +12
CDF *e*Sg Sb 04 29 36.2 +19
15nm,0.5s
EGRO El Granado 7.65 225 Pn **Pn 04 27 26.4 +1.4**
0.3nm,0.1s,SNR=9.4
EGRO Sn **Sn 04 28 47.6 -3.9**
5.3nm,0.2s,SNR=5.0
BAIF Baives 7.68 24 Pn **Pn 04 27 27.2 +1.7**
BAIF Pg Pb 04 27 58.1 +11
BAIF Sn **Sn 04 28 49.8 -2.4**
BAIF Lg Lg 04 29 37.5
22nm,0.8s
BAIF Baives 7.68 24 *e*Pn **Pn 04 27 27.2 +1.7**
BAIF Baives 7.68 24 *e*Pg Pb 04 27 58.1 +11
BAIF *e*Sn **Sn 04 28 49.8 -2.4**
BAIF *e*Sg Sb 04 29 37.5 +19
44nm,0.8s
PMAFR Mafra 7.74 240 Pn **Pn 04 27 28.7 +2.4**
7.5nm,0.3s,SNR=6.2
PMAFR Mafra 7.74 240 *e*Pn **Pn 04 27 28.7 +2.4**
PMST Lisbon--Monsan 7.81 238 *e*Pn **Pn 04 27 29.8 +2.6**
PNCL Nicolau / Gran 7.81 233 *e*Pn **Pn 04 27 29.0 +1.7**
PNCL *e*Sn **Sn 04 28 52.3 -3.1**
PNCL A A 04 29 54.1
4.7nm,0.7s
PVAQ Vaqueiros 7.87 226 *e*Pn **Pn 04 27 29.2 +1.1**
PVAQ *e*Sn **Sn 04 28 52.9 -4.0**
PVAQ A A 04 28 55.1
5.7nm,1.0s
PVAQ Vaqueiros 7.87 226 P 04 27 29.4
PVAQ S 04 28 52.8
PCVE Castro Verde 7.87 228 *e*Pn **Pn 04 27 29.4 +1.3**
PCVE *e*Sn **Sn 04 28 54.0 -3.0**
GIVF Givet 7.91 27 *e*Pg Pb 04 28 02.8 +12
GIVF *e*Sn **Sn 04 28 55.7 -2.2**
5.5nm,0.3s
GIVF *e*Sg Sb 04 29 45.2 +20
39nm,0.9s
PBDV Barranco-do-Ve 8.10 226 *e*Sn **Sn 04 28 59.8 -2.9**
PBDV A A 04 29 04.4
6.4nm,0.6s
SMIR Smir Dam 8.30 208 P 04 27 39.0
DAVOX Davos/Dischmat 8.31 60 Pn Pn 04 27 43.3 +9.0
0.3nm,0.3s,baz=294,slow=10.0,SNR=2.4
DAVOX Lg Lg 04 30 04.1
0.2nm,0.3s,baz=286,slow=4.0,SNR=3.9
PTEO Sao Teotonio 8.31 230 *e*Pn **Pn 04 27 35.4 +1.2**
PTEO *e*Sn **Sn 04 29 04.5 -3.3**
PTEO -ML 04 30 12.0
CHEFC Chefchaouen 8.81 206 P 04 27 44.5
AKLM AKL 8.98 197 P 04 27 47.5
KEST Kesra 10.71 130 Pn Pn 04 28 12.3 +5.2
0.2nm,0.3s,baz=356,slow=19,SNR=1.7
MD31 MD31 10.76 199 P 04 28 10.7
ZHG ZHG 10.76 208 P 04 28 10.0
MDT Midelt 10.77 198 Pn **Pn 04 28 10.8 +2.8**
0.2nm,0.3s,baz=29,slow=10,SNR=1.5
GERES GERESS Array B 11.50 55 Pn Pn 04 28 25.0 +7.2
0.2nm,0.3s,baz=250,slow=14,SNR=2.5
EKA Eskdalemuir Ar 12.30 353 Pn **Pn 04 28 30.5 +1.8**
baz=160,slow=15,SNR=7.1
TTIG Tnine Tigouga, 14.02 209 P 04 28 51.1

*IDC **14** 04:31:24.1±0.7, 4.°54S×138.°72E, h0km, mb4.1/12, mb1 4.2/17, mb1mx4.1/39, mbtmp4.2/17, ML4.6/6, MS3.2/11, Ms1 3.2/11, ms1mx3.0/36, Error ellipse: s-maj=21.8km s-min=14.4km az=87.0*
*DJA **14** 04:31:26.4±0.3, 5.°S±3.°×13.°9E±.°, h10km, M4.8/7, mB5.2/4, mb4.9/7, MLv4.8/4, Mw(mB)4.6/4*
*NEIC **14** 04:31:28.8±1.4, 4.°65S±0.°08×138.°63E±0.°07, h39km±7km, mb4.4/20, Error ellipse: s-maj=12.0km s-min=9.1km az=220.0*
ISC 14 04:31:28.7±0.4, **4.°71S**±0.°05×**138.°66E**±0.°05, **h35**km, **n68,**
σ1**§81/71, mb4.2**/21, **MS3.3**/7, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WAMI	**Wamena**	**0.82**	**4**	P	Pn		Pn	04 31 38.0	-5.8
WAMI				S	Sn		Sn	04 31 44.7	-10
GENI	**Genyem**	**2.59**	**36**	P	Pn		**Pn**	**04 32 08.0**	**-0.1**
GENI				S	Sn		**Sn**	**04 32 39.2**	**+0.8**
JAY	**Jayapura**	**2.99**	**43**	Pn	Pn		**Pn**	**04 32 11.7**	**-2.0**
JAY	14nm,0.3s,baz=214,slow=11,SNR=30				Sn		**Sn**	**04 32 45.4**	**-3.0**
JAY	**Jayapura**	**2.99**	**43**	P	Pn		**Pn**	**04 32 13.3**	**-0.4**
FAKI	**Fak Fak**	**6.64**	**285**	Pn	Pn		**Pn**	**04 33 03.5**	**-0.3**
FAKI	37nm,0.3s,baz=252,slow=12,SNR=5.2				Sn		**Sn**	**04 34 17.3**	**-1.0**
FAKI	**Fak Fak**	**6.64**	**285**	P	Pn		**Pn**	**04 33 05.0**	**+1.2**
SIJI	0.2nm49nm,1.0s **Sorong**	**8.31**	**297**	Pn	Pn		**Pn**	**04 33 25.5**	**-1.3**
SIJI	6.4nm,0.3s,baz=65,slow=11,SNR=9.1				LR		LR	04 37 25.3	
SWI	comp=Z,278nm,18.9s,baz=178,slow=44 **Sorong**	**8.32**	**297**	P	Pn		**Pn**	**04 33 27.4**	**+0.5**
MANU	45nm,0.6s **Manus Island**	**9.09**	**73**	Pn	Pn		**Pn**	**04 33 37.5**	**+0.1**
PMG	**Port Moresby**	**9.64**	**119**	LR	LR			04 39 17.5	
COEN	comp=Z,179nm,18.1s,baz=334,slow=49 **Coen**	**10.21**	**154**	Pn	Pn		**Pn**	**04 33 54.0**	**+1.1**
MTN	**Manton Dam**	**10.98**	**222**	Pn	Pn		**Pn**	**04 34 04.0**	**+0.7**
KNRA	**Kununurra**	**14.60**	**221**	Pn	Pn		**Pn**	**04 34 53.5**	**+0.6**
SOEI	**Soe**	**15.12**	**250**	Pn	Pn		**Pn**	**04 34 59.7**	**-0.3**
SOEI				Sn	Sn		**Sn**	**04 37 48.9**	**+2.3**
WB0	**Warramunga Arr**	**15.53**	**195**	Pn	Pn		**Pn**	**04 35 04.9**	**-0.3**
WB0	comp=Z,50nm,0.8s			IAmb	IAmb			04 35 13.4	
WR0	**Warramunga Arr**	**15.68**	**194**	Pn	Pn		**Pn**	**04 35 06.5**	**-0.6**
WR0	comp=Z,29nm,0.8s			IAmb	IAmb			04 35 14.6	
WRAB	**Tennant Creek**	**15.70**	**195**	Pn	Pn		**Pn**	**04 35 07.2**	**-0.2**
WB2	**Warramunga Arr**	**15.71**	**195**	Pn	Pn		**Pn**	**04 35 07.3**	**-0.1**
WRA	**Warramunga Arr**	**15.71**	**195**	Pn	Pn		**Pn**	**04 35 06.5**	**-1.0**
WRA	comp=Z,1.3nm,0.3s,baz=16,slow=13,SNR=56				Sn		**Sn**	**04 37 53.6**	**-7.0**
WRA	comp=Z,2.0nm,0.3s,baz=11,slow=22,SNR=5.0				LR		LR	04 41 59.4	
WRA	comp=Z,140nm,21.1s,baz=60,slow=40 **Warramunga Arr**	**15.71**	**195**	Pn	Pn		**Pn**	**04 35 07.4**	**-0.1**
WRA					Sn		**Sn**	**04 38 00.5**	**-0.1**
BATI	**Baumata**	**15.83**	**249**	Pn	Pn		**Pn**	**04 35 09.7**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=209,slow=1.3,SNR=2.0								

CTA Charters Tower 16.98 155 P **P 04 35 25.7 +0.5**
comp=Z,1.5nm,0.3s,baz=317,slow=15,SNR=6.5
CTAO Charters Tower 16.98 155 Pn **Pn 04 35 24.4 +0.8**
DAV Davao City (W) 17.53 312 LR LR 04 42 32.5
comp=Z,33nm,20.5s,baz=152,slow=38
FITZ Fitzroy Crossi 18.41 223 P **Pn 04 35 42.1 +0.8**
comp=Z,0.9nm,0.3s,baz=38,slow=12,SNR=19
FITZ S **Sn 04 38 57.1 -9.0**
comp=Z,1.1nm,0.3s,baz=137,slow=2.8,SNR=8.3
FITZ LR LR 04 43 33.0
comp=Z,78nm,18.2s,baz=46,slow=39
FITZ Fitzroy Crossi 18.41 223 P **P 04 35 41.1 +0.1**
TOLI2 Tolitoli 18.77 288 P **P 04 35 43.9 -1.1**
TOLI2 IAmb IAmb 04 35 49.0
comp=Z,13nm,0.7s
AS31 Alice Springs 19.39 193 P **Pn 04 35 53.1 -0.1**
AS31 IAmb IAmb 04 35 56.9
comp=Z,20nm,0.6s
ASAR Alice Springs 19.39 193 P **Pn 04 35 55.4 +2.2**
comp=Z,7.2nm,0.3s,baz=23,slow=9.5,SNR=444
ASAR S **Sn 04 39 31.2 +1.4**
comp=Z,0.6nm,0.3s,baz=18,slow=21,SNR=4.8
ASAR Alice Springs 19.39 193 P **Pn 04 35 54.2 +1.1**
EIDS Eidsvold 23.75 151 P **P 04 36 37.8 -0.1**
EIDS IAmb IAmb 04 36 57.1
comp=Z,6.6nm,0.8s
PSA00 Pilbara Seismi 24.77 226 P **P 04 36 48.7 +1.4**
PSA00 IAmb IAmb 04 36 51.7
comp=Z,7.8nm,0.7s
STKA Stephens Creek 27.16 175 P **P 04 37 09.8 +0.9**
comp=Z,1.0nm,0.3s,baz=346,slow=8.9,SNR=4.2
STKA LR LR 04 48 39.2
comp=Z,76nm,19.5s,baz=20,slow=38
STKA Stephens Creek 27.16 175 P **P 04 37 09.4 +0.5**
FORT Forrest 27.78 200 P **P 04 37 14.3 -0.2**
BBOO Buckleboo 28.06 185 P **P 04 37 16.4 -0.5**
BBOO IAmb IAmb 04 37 23.6
comp=Z,4.0nm,0.9s
MORW Morawa 32.34 219 P **P 04 37 56.5 +1.6**
JWT Wachi 39.90 356 P **P 04 38 58.8 -0.5**
JWT IAmb IAmb 04 39 03.0
comp=Z,9.1nm,0.8s
NJ2 Nanjing 41.13 334 *e*P **P 04 39 10.0 +0.4**
NJ2 pmax pmax
comp=Z,13nm,0.5s
KSRS Korea Array 43.13 347 P **P 04 39 25.2 -0.5**
comp=Z,1.2nm,0.6s,baz=151,slow=8.8,SNR=4.9
KSRS LR LR 04 55 51.5
comp=Z,6.4nm,21.4s,baz=149,slow=34
CMAR Chiang Mai Arr 45.41 302 P **P 04 39 45.2 +0.8**
comp=Z,3.6nm,0.7s,baz=122,slow=6.1,SNR=28
CMAR LR LR 04 59 39.7
comp=Z,8.8nm,21.8s,baz=45,slow=37
CMAR Chiang Mai Arr 45.41 302 P **P 04 39 43.1 -1.2**
CHTO Chiang Mai 45.57 302 P **P 04 39 44.7 -0.9**
CHTO IAmb IAmb 04 39 47.0
comp=Z,5.0nm,0.8s
ASAJ Asahikawa 48.74 4 LR LR 04 58 28.1
comp=Z,30nm,19.8s,baz=286,slow=33
USRK Ussuriysk Ar. 49.06 354 P **P 04 40 11.1 -1.2**
comp=Z,1.7nm,0.7s,baz=189,slow=8.0,SNR=4.3
USRK Ussuriysk Ar. 49.06 354 P **P 04 40 11.6 -0.8**
BJI Beijing 49.10 337 P **P 04 40 13.3 +0.6**
HHC Hu-ho-hao-te 51.69 334 *e*P **P 04 40 32.9 +0.4**
HHC pmax pmax
comp=Z,16nm,1.1s
HHC pmax pmax
comp=Z,67nm,5.5s
BTO Baotou 52.19 332 *e*P **P 04 40 40.5 +4.3**
BTO pmax pmax
comp=Z,21nm,0.9s
BTO AMB AMB
comp=Z,440nm,4.0s
KLR Kul'dur 54.06 354 P **P 04 40 49.4 -0.3**
comp=Z,1.7nm,0.6s,baz=159,slow=7.1,SNR=7.9
SONM Songino Array 59.50 335 P **P 04 41 28.5 0.0**
comp=Z,1.0nm,0.5s,baz=154,slow=7.2,SNR=5.2
SONM Songino Array 59.50 335 P **P 04 41 27.3 -1.2**
SONM IAmb IAmb 04 41 29.6
comp=Z,1.1nm,0.6s
PETK Petropavlovsk- 59.81 13 LR LR 05 03 13.9
comp=Z,23nm,21.3s,baz=159,slow=32
WMQ Urumqi 66.54 322 *e*P **P 04 42 18.5 +3.2**
WMQ pmax pmax
comp=Z,27nm,0.7s
WMQ pmax pmax
comp=Z,150nm,5.5s
WMQ LR LR
comp=N,4μm,29.3s
WMQ LR LR
comp=E,4μm,29.0s
WMQ LR LR
comp=Z,3μm,28.8s
MKAR Makanchi Array 71.34 323 P **P 04 42 45.5 +0.5**
comp=Z,1.0nm,0.5s,baz=116,slow=7.5,SNR=13
MKAR Makanchi Array 71.34 323 P **P 04 42 45.2 +0.2**
ZALV Zalesovo Beam 73.63 330 P **P 04 42 58.0 -0.4**
comp=Z,1.7nm,0.5s,baz=123,slow=5.5,SNR=7.2
VNDA Vanda 73.80 175 P **P 04 43 00.1 +1.1**
comp=Z,0.8nm,0.7s,baz=315,slow=5.0,SNR=4.1
VNDA LR LR 05 15 20.5
comp=Z,72nm,18.9s,baz=342,slow=36
VNDA Vanda 73.80 175 P **P 04 42 59.8 +0.7**
KURBB Kurchatov Arra 75.33 325 P **P 04 43 08.6 +0.2**
comp=Z,0.6nm,0.5s,baz=116,slow=5.0,SNR=6.0
BVAR Borovoye Array 80.92 325 P **P 04 43 39.2 -0.1**
comp=Z,1.2nm,0.6s,baz=228,slow=3.8,SNR=8.0
ILAR Eielson Array 87.67 24 P **P 04 44 12.1 -1.2**
comp=Z,0.3nm,0.5s,baz=255,slow=4.7,SNR=5.5
GERES GERESS Array B 116.01 323 PKP **PKPdf 04 50 08.8 +0.6**
comp=Z,0.3nm,0.6s,baz=342,slow=8.4,SNR=3.7
GERES GERESS Array B 116.01 323 **PKiKP 04 50 06.8 -1.4**
TORD Torodi Ar. Bea 136.72 284 PKP **PKiKP 04 50 50.0 -0.3**
comp=Z,0.8nm,1.0s,baz=62,slow=2.1,SNR=2.5
CPUP Villa Florida 145.47 154 PKPbc **PKPab 04 51 05.5 +1.4**
comp=Z,1.2nm,0.6s,baz=238,slow=2.6,SNR=5.3
CPUP Villa Florida 145.47 154 PKPdf **PKPbc 04 51 02.2 -1.7**
LPAZ La Paz 146.27 129 PKPbc **PKPab 04 51 08.7 +0.5**
comp=Z,1.7nm,0.8s,baz=6.8,slow=2.7,SNR=4.5

*NNC **14** 04:51:33.5±5.1, 39.°88N×68.°19E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=46.7km s-min=37.1km az=162.0*
ISC 14 04:51:22, 39.°40N×67.°30E, h5km, **1C-6D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NUT	**Nurota**	**1.70**	**313**	*e*P	Pn		Pn	04 51 53.0	+0.7
NUT				*e*S	Sg		Sn	04 52 16.0	-0.5
CHMG	**Chimgan**	**2.98**	**43**	*e*S	Sn		Sn	04 52 47.0	+0.7
CHRV	**Charvak**	**3.02**	**41**	*e*S	Sn		Sn	04 52 47.0	0.0
KK31	**Karatay Array**	**4.42**	**32**	⇓Pn	Pn		Pn	04 52 32.2	+2.4
KK31	0.8nm,0.4s,baz=57,slow=9.7,SNR=4.2			⇓Pg	Pb			04 52 39.9	-0.3
KK31	3.8nm,0.6s,baz=217,slow=19,SNR=12			⇓Lg	Lg			04 53 29.2	
AAK	6.3nm,0.5s,baz=214,slow=30,SNR=7.5 **Ala-Archa**	**6.33**	**57**	⇑Pg	Pb			04 53 13.9	+1.2
AAK	1.6nm,0.7s			⇓Lg	Lg			04 54 30.8	
TKM2	1.0nm,0.5s **Tokmak 2**	**7.18**	**58**	⇓Pg	Pb			04 53 25.6	-1.6
TKM2	2.8nm,1.1s			⇓Lg	Lg			04 54 57.7	
	2.0nm,0.8s								

*IDC **14** 04:51:23.9±1.0, 5.°02S×152.°95E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/34, mbtmp4.0/8, ML2.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/31, Error ellipse: s-maj=27.0km s-min=24.7km az=100.0*
*NEIC **14** 04:51:30.1±0.6, 5.°05S±0.°08×152.°9E±0.°1, h57km±4km, mb4.0/6, Error ellipse: s-maj=15.3km s-min=11.6km az=68.0*
ISC 14 04:51:29.5±0.7, **5.°05S**±0.°07×**152.°99E**±0.°09, **h43**km, **n23,**
σ1**§14/25, mb3.9**/10, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.18**	**316**	Pn	Pn		**Pn**	**04 51 50.0**	**+0.4**
RABL				Sn	Sn		**Sn**	**04 52 04.6**	**+0.1**
PMG	**Port Moresby**	**7.22**	**233**	Pn	Pn		**Pn**	**04 53 12.3**	**-0.3**
	2.7nm,0.3s,baz=94,slow=1.8,SNR=4.6								
PMG				Sn	Sn		**Sn**	**04 54 34.2**	**+0.9**

	4.2nm,0.3s,baz=279,slow=3.2,SNR=2.1							
JAY	**Jayapura**	**12.51**	**281**	LR	LR	04 58 55.0		
	comp=Z,37nm,20.3s,baz=30,slow=36							
PATS	**Pohnpei**	**12.95**	**24**	Pn	**Pn**	**04 54 30.4**	**-0.5**	
KWAJ	**Kwajalein Atol**	**20.05**	**47**	P	**P**	**04 55 59.5**	**+0.3**	
DZM	**Mont Dzumac**	**21.36**	**144**	P	**P**	**04 56 13.6**	**+0.2**	
	11nm,0.8s,baz=274,slow=8.2,SNR=17							
WB0	**Warramunga Arr**	**23.28**	**229**	P	**P**	**04 56 32.0**	**-1.5**	
WB0				IAmb	IAmb	04 56 37.7		
	comp=Z,5.8nm,1.0s							
WR0	**Warramunga Arr**	**23.28**	**229**	P	**P**	**04 56 33.1**	**-0.5**	
WR0				IAmb	IAmb	04 56 36.6		
	comp=Z,4.3nm,1.1s							
WB2	**Warramunga Arr**	**23.41**	**229**	P	**P**	**04 56 34.4**	**-0.5**	
WB2				IAmb	IAmb	04 56 53.0		
	comp=Z,4.2nm,0.8s							
WRA	**Warramunga Arr**	**23.42**	**229**	P	**P**	**04 56 33.9**	**-1.1**	
	comp=Z,1.1nm,0.5s,baz=54,slow=9.7,SNR=17							
WRA				PcP	**PcP**	**05 00 23.8**	**+3.2**	
	comp=Z,0.6nm,0.8s,baz=53,slow=2.5,SNR=5.2							
WRA	**Warramunga Arr**	**23.42**	**229**	P	**P**	**04 56 34.0**	**-0.9**	
ASAR	**Alice Springs**	**26.09**	**223**	P	**P**	**04 57 00.1**	**+0.7**	
	comp=Z,0.9nm,0.6s,baz=52,slow=9.1,SNR=11							
FITZ	**Fitzroy Crossi**	**29.70**	**242**	P	**P**	**04 57 30.3**	**-1.4**	
	comp=Z,1.4nm,0.6s,baz=74,slow=7.7,SNR=7.2							
FITZ				LR	LR	05 09 40.2		
	comp=Z,26nm,19.0s,baz=118,slow=37							
FITZ	**Fitzroy Crossi**	**29.70**	**242**	P	**P**	**04 57 30.3**	**-1.4**	
FITZ				IAmb	IAmb	04 57 33.4		
	comp=Z,3.5nm,1.0s							
CMAR	**Chiang Mai Arr**	**58.15**	**295**	P	**P**	**05 01 21.4**	**+2.0**	
	comp=Z,0.2nm,0.4s,baz=102,slow=5.7,SNR=4.1							
CMAR				LR	LR	05 27 10.8		
	comp=Z,4.5nm,18.1s,baz=55,slow=37							
CMAR	**Chiang Mai Arr**	**58.15**	**295**	P	**P**	**05 01 18.3**	**-1.1**	
MKAR	**Makanchi Array**	**80.63**	**319**	P	**P**	**05 03 38.1**	**+0.3**	
	comp=Z,0.2nm,0.5s,baz=87,slow=7.1,SNR=2.5							
MKAR	**Makanchi Array**	**80.63**	**319**	P	**P**	**05 03 36.9**	**-1.0**	
ZALV	**Zalesovo Beam**	**81.46**	**326**	P	**P**	**05 03 41.9**	**-0.1**	
	comp=Z,1.4nm,0.6s,baz=111,slow=6.3,SNR=7.4							
LPAZ	**La Paz**	**134.14**	**118**	PKP	**PKiKP**	**05 10 45.6**	**+0.1**	
	comp=Z,0.7nm,0.6s,baz=238,slow=6.0,SNR=4.5							
TORD	**Torodi Ar. Bea**	**150.56**	**288**	PKPbc	**PKiKP**	**05 11 17.7**	**-0.8**	
	comp=Z,1.4nm,0.7s,baz=32,slow=3.2,SNR=8.1							
TORD	**Torodi Ar. Bea**	**150.56**	**288**		**PKPbc**	**PKiKP**	**05 11 16.8**	**-1.0**
BDFB	**Brasilia**	**150.76**	**135**	PKPbc	**PKiKP**	**05 11 18.7**	**-0.3**	
	comp=Z,2.8nm,0.7s,baz=139,slow=4.6,SNR=5.0							

IDC ***14*** *05:44:43.3±1.4, 7°.64S×122°.37E, h551km±12km, mb2.6/1, mb1 2.7/5, mb1mx2.6/37, mbtmp3.6/5, Error ellipse: s-maj=47.0km s-min=23.5km az=69.0*

ISC 14 05:44:43.9±1.4, 7°.7S±0°.1×122°.5E±0°.2, h573km, n6, σ1s72, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.74**	**155**	P	**P**	**05 45 59.3**	**-0.1**
	33nm,0.3s,baz=20,slow=1.1,SNR=15						
BATI				S	**S**	**05 46 58.1**	**-2.8**
	17nm,0.3s,baz=228,slow=22,SNR=12						
FITZ	**Fitzroy Crossi**	**10.78**	**164**	P	**P**	**05 47 10.6**	**+0.6**
	0.1nm,0.3s,baz=0.0,slow=10,SNR=1.2						
SIJI	**Sorong**	**11.07**	**53**	P	**P**	**05 47 13.0**	**-0.1**
	1.5nm,0.3s,baz=306,slow=16,SNR=3.9						
WRA	**Warramunga Arr**	**16.73**	**138**	P	**P**	**05 48 10.4**	**+1.2**
	0.4nm,0.3s,baz=316,slow=11,SNR=34						
ASAR	**Alice Springs**	**19.28**	**147**	P	**P**	**05 48 34.0**	**+1.5**
	0.1nm,0.3s,baz=322,slow=8.8,SNR=5.2						
MKAR	**Makanchi Array**	**64.95**	**331**	P	**P**	**05 54 27.9**	**+0.1**
	0.3nm,0.6s,baz=133,slow=8.5,SNR=2.8						

NOU ***14*** *05:47:26.3, 42°.26S×173°.00E, h25km, MLv4.0, South Island, New Zealand*

WEL 14 05:47:24.5, 42°.5S±2°×173°.3E±°, h21km±5km, M3.7/19, ML3.9/19, MLv3.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.39**	**5**	P	Pb	05 47 33.0	+0.4
THZ				S	Sb	05 47 37.6	-0.4
KHZ	**Kahutara**	**0.57**	**118**	P	Pb	05 47 36.5	+0.6
KHZ				S	Sb	05 47 43.1	-0.5
LTZ	**Lake Taylor**	**0.77**	**215**	P	Pb	05 47 39.3	0.0
LTZ				S	Sb	05 47 47.7	-1.6
GVZ	**Greta Valley S**	**0.83**	**171**	P	Pn	05 47 41.6	+0.6
GVZ				S	Sn	05 47 52.2	-0.4
BSWZ	**Blackbirch Sta**	**0.87**	**61**	P	Pn	05 47 41.3	-0.2
DSZ	**Denniston Nort**	**0.89**	**297**	P	Pn	05 47 42.4	+0.7
DSZ				S	Sn	05 47 56.9	+2.9
NNZ	**Nelson**	**1.01**	**23**	P	Pn	05 47 43.4	+0.1
NNZ				S	Sn	05 47 58.4	+1.5
AMCZ	**Amberley**	**1.04**	**189**	P	Pn	05 47 45.4	+1.5
AMCZ				S	Sn	05 47 59.8	+2.1
TUWZ	**Tuamarina**	**1.08**	**49**	P	Pb	05 47 44.9	+0.4
TUWZ				S	Sn	05 48 00.6	+1.9
CMWZ	**Cape Campbell**	**1.08**	**69**	P	Pb	05 47 47.0	+2.4
CMWZ				S	Sn	05 48 05.7	+6.9
INZ	**Inchbonnie**	**1.20**	**241**	P	Pb	05 47 46.6	+0.1
OXZ	**Oxford**	**1.32**	**207**	P	Pn	05 47 48.2	+0.4
QRZ	**Quartz Range**	**1.34**	**349**	P	Pb	05 47 50.0	+1.0
TCW	**Tory Channel**	**1.41**	**49**	P	Pb	05 47 50.3	+0.2
DUWZ	**D'Urville Isla**	**1.56**	**31**	P	Pb	05 47 52.9	+0.2
MQZ	**McQueen's Vall**	**1.56**	**186**	P	Pn	05 47 51.2	+0.2
OKCZ	**Okains Bay**	**1.58**	**175**	P	Pn	05 47 51.9	+0.6
WEL	**Wellington**	**1.67**	**59**	P	Pb	05 47 54.6	+0.1
BHW	**Baring Head**	**1.67**	**64**	P	Pb	05 47 54.3	-0.3
AKCZ	**Akaroa Harbour**	**1.72**	**179**	P	Pn	05 47 54.0	+0.8
WVZ	**Waitaha Valley**	**1.82**	**239**	P	Pb	05 47 57.1	-0.1
PLWZ	**Palliser**	**1.88**	**73**	P	Pn	05 47 56.4	+1.0
MSWZ	**Moikau Station**	**1.93**	**69**	P	Pn	05 47 57.2	+1.1
WACZ	**Wakanui South**	**1.94**	**202**	P	Pn	05 47 56.5	+0.2
CAW	**Cannon Point**	**1.95**	**59**	P	Pb	05 47 58.1	-1.2
KIW	**Kapiti Island**	**2.00**	**51**	P	Pb	05 47 59.5	-0.7
RPZ	**Rata Peaks**	**2.05**	**220**	P	Pn	05 47 59.2	+1.4
PAWZ	**Paruwai Farm**	**2.06**	**69**	P	Pn	05 47 59.1	+1.1
ARCZ	**Arundel**	**2.18**	**214**	P	Pn	05 48 00.4	+0.8
OGWZ	**Otaki Gorge**	**2.18**	**53**	P	Pb	05 48 01.5	-1.8
GCSZ	**Gaunt Creek Bo**	**2.20**	**237**	P	Pb	05 48 02.5	-1.1
MTW	**Mount Morrison**	**2.21**	**64**	P	Pn	05 48 00.7	+0.7
TRWZ	**Traveller**	**2.24**	**71**	P	Pn	05 48 01.6	+1.2
HOWZ	**Holdsworth Sta**	**2.35**	**59**	P	Pn	05 48 02.9	+1.0
TMWZ	**Te Maipa**	**2.50**	**66**	P	Pn	05 48 04.3	+0.4
MRZ	**Mangatainoka R**	**2.52**	**55**	P	Pn	05 48 05.5	+1.3
TMZ	**Timaru**	**2.61**	**211**	P	Pn	05 48 05.7	+0.1
FOZ	**Fox Glacier**	**2.63**	**237**	P	Pn	05 48 08.3	+2.5
TIWZ	**Tintock**	**2.65**	**60**	P	Pn	05 48 06.8	+0.7
OHWZ	**Ohakea**	**2.68**	**44**	P	Pb	05 48 09.5	-2.2
POWZ	**Post Office Ro**	**2.81**	**52**	P	Pn	05 48 09.6	+1.5
PRWZ	**Pori Road**	**2.83**	**57**	P	Pn	05 48 09.5	+1.0
NMEZ	**Namu Road**	**2.84**	**16**	P	Pb	05 48 13.5	-1.0
WAZ	**Wanganui**	**2.88**	**35**	P	Pb	05 48 13.5	-1.6
LREZ	**Lake Rotokare**	**2.91**	**24**	P	Pb	05 48 15.8	-0.2
BFZ	**Birch Farm**	**2.94**	**61**	P	Pn	05 48 10.0	+0.1
PREZ	**Palmer Road**	**2.97**	**20**	P	Pb	05 48 15.0	-1.7
LBZ	**Lake Benmore**	**2.97**	**220**	P	Pb	05 48 11.3	+0.9
NBEZ	**Newall Road No**	**2.98**	**15**	P	Pb	05 48 14.7	-2.1
KHEZ	**Kahui Hut**	**2.98**	**17**	P	Pb	05 48 14.5	-2.5
NEZ	**North Egmont**	**3.02**	**18**	P	Pb	05 48 16.0	-1.6
PKE	**Pukeiti**	**3.07**	**17**	P	Pb	05 48 15.7	-2.8
DVHZ	**Dannevirke**	**3.10**	**55**	P	Pn	05 48 12.6	+0.4
DREZ	**Durham Road**	**3.13**	**19**	P	Pb	05 48 16.7	-2.6
TSZ	**Takapari Road**	**3.14**	**49**	P	Pn	05 48 13.9	+1.2
MHEZ	**Mangahewa**	**3.26**	**20**	P	Pb	05 48 19.8	-1.9
ODZ	**Otahua Downs**	**3.31**	**208**	P	Pn	05 48 15.0	-0.1
VRZ	**Vera Road**	**3.35**	**26**	P	Pb	05 48 20.0	-3.1
PNHZ	**Pukenui**	**3.37**	**50**	P	Pn	05 48 17.0	+1.1
MTVZ	**Mangateitei**	**3.40**	**37**	P	Pb	05 48 22.0	-2.0
WPHZ	**Waipukurau**	**3.41**	**54**	P	Pn	05 48 17.6	+1.2
PKVZ	**Pokaka**	**3.42**	**34**	P	Pb	05 48 20.6	-3.8
WNVZ	**Wahianoa**	**3.50**	**37**	P	Pn	05 48 21.1	+3.3
TRVZ	**Turoa**	**3.50**	**37**	P	Pn	05 48 21.2	+3.3
MOVZ	**Moawhango**	**3.51**	**40**	P	Pn	05 48 20.6	+2.8
WHVZ	**Whangaehu Hut**	**3.53**	**37**	P	Pn	05 48 21.6	+3.2
FWVZ	**Far West T-bar**	**3.54**	**36**	P	Pn	05 48 21.7	+3.3
JCZ	**Jackson Bay**	**3.55**	**236**	P	Pn	05 48 20.0	+1.5
TUVZ	**Tukino**	**3.57**	**37**	P	Pn	05 48 22.4	+3.6
BHHZ	**Black Hill Sta**	**3.60**	**43**	P	Pn	05 48 21.1	+2.0
NGZ	**Ngauruhoe**	**3.63**	**36**	P	Pn	05 48 22.8	+3.2
SNVZ	**South Ngauruho**	**3.63**	**36**	P	Pn	05 48 22.6	+2.9
KRHZ	**Kereru**	**3.65**	**48**	P	Pn	05 48 20.5	+0.7
OTVZ	**Oturere**	**3.66**	**36**	P	Pn	05 48 23.3	+3.2
NNVZ	**North Ngauruho**	**3.67**	**36**	P	Pn	05 48 23.4	+3.3
WTVZ	**West Tongariro**	**3.67**	**35**	P	Pn	05 48 23.4	+3.3
KRVZ	**Karewarewa**	**3.71**	**36**	P	Pn	05 48 24.0	+3.3
TMVZ	**Te Maari**	**3.72**	**36**	P	Pn	05 48 23.8	+3.0
NTVZ	**North Tongarir**	**3.72**	**36**	P	Pn	05 48 24.1	+3.3
KATZ	**Kakaramea**	**3.83**	**35**	P	Pb	05 48 28.9	-2.5
KWHZ	**Kaweka Forest**	**3.83**	**46**	P	Pb	05 48 30.2	-1.3
KAHZ	**Kahuranaki**	**3.84**	**54**	P	Pn	05 48 22.5	+0.1
WKZ	**Wanaka**	**3.87**	**225**	P	Pn	05 48 24.6	+1.8
HIZ	**Hauiti**	**3.94**	**23**	P	Pn	05 48 26.7	+3.1
RATZ	**Rangitukua**	**3.96**	**35**	P	Pb	05 48 29.0	-4.5
MCHZ	**McNeill Hill**	**3.97**	**48**	P	Pb	05 48 29.7	-4.0
BKZ	**Black Stump Fm**	**4.06**	**44**	P	Pn	05 48 26.3	+0.9
NMHZ	**Naumai**	**4.28**	**46**	P	Pn	05 48 31.8	+3.4
MRHZ	**Matea Rd**	**4.28**	**40**	P	Pn	05 48 29.2	+0.8
KUTZ	**Kaahu Road**	**4.30**	**33**	P	Pb	05 48 36.8	-2.5
TLZ	**Tolley Road**	**4.33**	**29**	P	Pn	05 48 32.1	+3.0
MTHZ	**Maungataniwha**	**4.47**	**44**	P	Pn	05 48 31.7	+0.6
TOZ	**Tahuroa Road**	**4.86**	**26**	P	Pn	05 48 39.3	+3.0
MWZ	**Matawai**	**5.22**	**45**	P	Pn	05 48 43.4	+2.0
AWAZ	**Awhitu Peninsu**	**5.26**	**16**	P	Pn	05 48 45.8	+3.9
WTAZ	**Waiatarua**	**5.37**	**15**	P	Pn	05 48 48.6	+5.1
ETAZ	**East Tamaki Re**	**5.43**	**18**	P	Pn	05 48 47.6	+3.5
MBAZ	**Motutapu North**	**5.60**	**17**	P	Pn	05 48 50.4	+3.9
WIAZ	**Waiheke Island**	**5.63**	**19**	P	Pn	05 48 50.1	+3.1
ABAZ	**Army Bay**	**5.75**	**16**	P	Pn	05 48 53.0	+4.4
KUZ	**Kuaotunu**	**5.83**	**23**	P	Pn	05 48 52.2	+2.6
WCZ	**Waipu Caves**	**6.31**	**11**	P	Pn	05 48 59.7	+3.5

KRNET ***14*** *05:53:55.9±0.1, 39°.69N×73°.20E, h15km, mb3.1*
NNC ***14*** *05:53:55.8±3.4, 39°.81N×73°.02E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=26.9km s-min=14.6km az=167.0*
SOME ***14*** *05:53:56.6, 39°.88N×73°.17E, h0km*

ISC 14 05:53:55.6±1.4, 39°.85N±0°.04×73°.20E±0°.03, h0km±12km, n34, σ1s85/60, 28C-14D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.29**	**56**	⇑*iP*	**Pb**	**05 54 03.6**	**-0.1**
	baz=35						
SFK				⇑*iS*	**Sb**	**05 54 09.7**	**+0.5**
	baz=35						
OHH	**Osh**	**0.74**	**335**	⇑*iP*	**Pn**	**05 54 12.8**	**-0.6**
	baz=39						
OHH				⇑*eS*	**Sn**	**05 54 25.8**	**+0.4**
	baz=39						
DRK	**Karamyk**	**1.14**	**251**	⇑*iP*	**Pg**	**05 54 17.0**	**-0.4**
	baz=60						
DRK				⇑*iS*	**Sg**	**05 54 32.1**	**-0.1**
	baz=60						
ARSB	**Arslanbob**	**1.48**	**354**	⇑*iP*	**Pg**	**05 54 26.5**	**+2.6**
	baz=54						
ARSB				⇑*iS*	**Sg**	**05 54 48.7**	**+5.6**
	baz=54						
BTK	**Batken**	**1.84**	**277**	⇑*iP*	**Pb**	**05 54 30.5**	**+0.4**
	baz=82						
BTK				⇑*iS*	**Sg**	**05 54 55.7**	**+1.0**
	baz=82						
ARLS	**Aral**	**2.18**	**23**	⇓*iP*	**Pg**	**05 54 37.3**	**-0.1**
	baz=21						
ARLS				⇓*iS*	**Sg**	**05 55 07.5**	**+1.8**
	baz=21						
TRKS	**Terek-Say**	**2.29**	**318**	⇑*eP*	**Pb**	**05 54 37.8**	**-0.1**
	baz=20						
TRKS				⇑*iS*	**Sg**	**05 55 08.3**	**-0.9**
	baz=20						
AML	**Almayashu**	**2.31**	**9**	⇓*iP*	**Pg**	**05 54 39.4**	**-0.4**
	baz=9.0						
AML				⇓*iS*	**Sg**	**05 55 10.8**	**+1.1**
	baz=9.0						
GAR	**Garm**	**2.39**	**250**	⇑*iP*	**Pn**	**05 54 37.4**	**+1.4**
	baz=54						
GAR				⇑*iS*	**Sb**	**05 55 07.9**	**-1.6**
	baz=54						
UCH	**Uchtor**	**2.57**	**22**	⇓*iP*	**Pb**	**05 54 42.9**	**0.0**
	baz=21						
UCH				⇓*iS*	**Sg**	**05 55 17.0**	**-1.3**
	baz=21						
MNAS	**Manas**	**2.68**	**349**	⇑*iP*	**Pb**	**05 54 44.9**	**+0.3**
	baz=50						
MNAS				⇑*iS*	**Sg**	**05 55 20.2**	**-1.6**
	baz=50						
EKS2	**Erkin-Say**	**2.84**	**9**	⇓*eP*	**Pb**	**05 54 46.6**	**-0.6**
	baz=8.0						
EKS2				⇓*iS*	**Sb**	**05 55 23.4**	**+0.8**
	baz=8.0						
AAK	**Ala-Archa**	**2.95**	**19**	⇑*eP*	**Pb**	**05 54 48.5**	**-0.6**
	baz=18						
AAK				⇑*iS*	**Sb**	**05 55 26.5**	**+0.7**
	baz=18						
AAK	**Ala-Archa**	**2.95**	**19**	⇓*Pg*	**Pg**	**05 54 51.5**	**-0.7**
	5.5nm,0.5s						
AAK				⇑*Lg*	Lg	05 55 30.8	
	28nm,0.8s						
KBK	**Karagaybulak**	**3.10**	**25**	⇑*iP*	**Pb**	**05 54 50.5**	**-1.1**
	baz=23						
KBK				⇑*iS*	**Sb**	**05 55 30.2**	**+0.2**
	baz=23						
ULHL	**Ulahol**	**3.32**	**43**	⇓*eP*	**Pb**	**05 54 52.6**	**-2.9**
	baz=41						
ULHL				⇓*iS*	**Sb**	**05 55 33.9**	**-2.6**
	baz=41						
BOOM	**Boomskoye usch**	**3.35**	**37**	⇓*eP*	**Pb**	**05 54 53.7**	**-2.3**
	baz=36						
BOOM				⇓*iS*	**Sb**	**05 55 35.8**	**-1.5**
	baz=36						
USP	**Ospenovka**	**3.55**	**16**	⇑*iP*	**Pb**	**05 54 56.3**	**-3.0**
	baz=15						
USP				⇑*iS*	**Sb**	**05 55 40.8**	**-2.1**
	baz=15						
TKM2	**Tokmak 2**	**3.56**	**30**	⇑*Pg*	**Pb**	**05 54 59.8**	**+0.2**
	2.5nm,0.7s						
TKM2				⇓*Lg*	Lg	05 55 51.5	
	8.1nm,0.5s						
KDJ	**Kajisay**	**3.78**	**52**	⇑*eP*	**Pn**	**05 54 58.8**	**+3.6**
	baz=50						
KDJ				⇑*iS*	**Sb**	**05 55 45.1**	**-4.5**
	baz=50						
KST	**Kastek**	**3.81**	**32**	*eP*	**Pg**	**05 55 08.4**	**-0.1**
	1.7nm,0.2s						
KST				*eS*	**Sg**	**05 55 59.7**	**+1.8**
	9.3nm,0.5s						
KK31	**Karatay Array**	**3.82**	**329**	⇑*Pg*	**Pb**	**05 55 05.7**	**+1.8**
	1.7nm,0.4s,baz=150,slow=16,SNR=22						
KK31				⇑*Lg*	Lg	05 55 57.9	
	2.6nm,0.3s,baz=154,slow=24,SNR=4.2						
BRLS	**Borolday**	**4.06**	**323**	*eP*	**Pb**	**05 55 09.7**	**+1.8**
	3.0nm,0.2s						
BRLS				*eS*	**Sg**	**05 56 01.8**	**-4.1**
	7.3nm,0.7s						
IZV	**Izvestkoviy**	**4.09**	**38**	*eP*	**Pg**	**05 55 13.9**	**-0.1**
	2.2nm,0.2s						
IZV				*eS*	**Sg**	**05 56 09.3**	**+2.4**
	19nm,0.5s						
IZV	**Izvestkoviy**	**4.09**	**38**	Pg	**Pg**	**05 55 13.9**	**-0.1**
	2.2nm,0.2s						
IZV				Lg	Lg	05 56 09.3	
	19nm,0.5s						
TNSS	**Tian-Shan**	**4.25**	**40**	*eP*	**Pg**	**05 55 16.2**	**-0.8**
	2.9nm,0.4s						
TNSS				*eS*	**Sg**	**05 56 13.9**	**+1.7**
	7.3nm,0.7s						
TNSS	**Tian-Shan**	**4.25**	**40**	Pg	**Pg**	**05 55 16.2**	**-0.8**
	2.9nm,0.4s						
TNSS				Lg	Lg	05 56 13.9	
	7.3nm,0.7s						
KRBS	**Karabastau**	**4.26**	**25**	*eP*	**Pg**	**05 55 15.8**	**-1.5**
	1.5nm,0.5s						
KRBS				*eS*	**Sg**	**05 56 12.8**	**+0.2**
	3.1nm,0.3s						
KRBS	**Karabastau**	**4.26**	**25**	Pg	**Pg**	**05 55 15.8**	**-1.5**
	1.5nm,0.5s						
KRBS				Lg	Lg	05 56 12.8	
	3.1nm,0.3s						
MDOK	**Medeo**	**4.39**	**40**	*eP*	**Pg**	**05 55 19.1**	**-0.7**
	2.4nm,0.5s						
MDOK				*eS*	**Sg**	**05 56 18.3**	**+1.6**
	9.3nm,0.8s						
MDOK	**Medeo**	**4.39**	**40**	Pg	**Pg**	**05 55 19.1**	**-0.7**
	2.4nm,0.5s						
MDOK				Lg	Lg	05 56 18.3	
	9.3nm,0.8s						
KOTS	**Kotyrbulak**	**4.48**	**40**	*eP*	**Pg**	**05 55 21.2**	**-0.2**
	9.2nm,0.4s						
KOTS				*eS*	**Sg**	**05 56 21.7**	**+2.2**
	13nm,0.5s						
KOTS	**Kotyrbulak**	**4.48**	**40**	Pg	**Pg**	**05 55 21.2**	**-0.2**
	9.2nm,0.4s						
KOTS				Lg	Lg	05 56 21.7	
	13nm,0.5s						
BTLS	**Baital**	**5.22**	**7**	*eP*	**Pg**	**05 55 32.5**	**-3.2**
	0.6nm,0.4s						
BTLS				*eS*	**Sg**	**05 56 40.9**	**-2.4**
	5.8nm,0.6s						

IDC ***14*** *06:01:17.9±1.0, 29°.96N×139°.25E, h379km±10km, mb3.5/24, mb1 3.6/30, mb1mx3.4/63, mbtmp4.2/30, Error ellipse: s-maj=13.5km s-min=8.7km az=77.0*
NEIC ***14*** *06:01:17.7±1.3, 29°.96N±0°.08×139°.4E±0°.1, h377km±7km, mb4.0/42, Error ellipse: s-maj=15.3km s-min=11.7km az=81.0*
JMA ***14*** *06:01:17.3±0.3, 29°.97N×139°.59E, h395km±5km, M3.9*

ISC 14 06:01:18.5±0.5, 30°.04N±0°.05×139°.44E±0°.07, h388km, n107, σ1s36/116, mb3.9/41, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**3.04**	**6**	P	**Pn**	**06 02 21.5**	**+0.5**
JHJ2	**Mitsune**	**3.08**	**6**	P	**Pn**	**06 02 21.7**	**+0.3**
JHJ2				*eS*	**S**	**06 03 10.8**	**-1.4**
JHJ2	**Mitsune**	**3.08**	**6**	Pn	**Pn**	**06 02 20.0**	**-1.3**
JHJ	**Hachijo jima 2**	**3.08**	**5**	P	**Pn**	**06 02 20.9**	**-0.5**
	79nm,0.3s,baz=255,slow=21,SNR=28						
JHJ				S	**S**	**06 03 10.7**	**-1.7**
	62nm,0.3s,baz=212,slow=23,SNR=6.4						
CBIJ	**Chichi jima**	**3.80**	**140**	P	**Pn**	**06 02 26.2**	**-1.8**
CBIJ				*eS*	**S**	**06 03 19.6**	**-4.6**
JCJ	**Chichijima**	**3.80**	**140**	P	**Pn**	**06 02 26.4**	**-1.7**
	106nm,0.3s,baz=321,slow=21,SNR=53						
JCJ				S	**S**	**06 03 21.6**	**-2.6**
	438nm,0.3s,baz=273,slow=21,SNR=24						
JCJ	**Chichijima**	**3.80**	**140**	Pn	**Pn**	**06 02 26.2**	**-1.8**
JMKN	**Mikurajimanish**	**3.84**	**2**	P	**Pn**	**06 02 28.2**	**0.0**
TTO1	**TONANKAI O.B.S**	**4.23**	**328**	P	**Pn**	**06 02 33.5**	**+1.9**
BSO1	**Boso 1**	**4.78**	**15**	P	**Pn**	**06 02 37.4**	**+0.4**
BSO1				*eS*	**S**	**06 03 40.4**	**-0.4**
JIE	**Ise**	**4.92**	**333**	P	**Pn**	**06 02 40.6**	**+1.6**
JOD2	**Odawara 2**	**5.22**	**357**	P	**Pn**	**06 02 41.9**	**-0.2**
JOD2				*eS*	**S**	**06 03 46.1**	**-4.1**
INU	**Inuyama**	**5.67**	**340**	Pn	**Pn**	**06 02 47.7**	**+0.7**
JGF	**Kuroka**	**5.82**	**343**	Pn	**Pn**	**06 02 48.6**	**0.0**
JRY	**Ryogami san**	**5.98**	**356**	P	**Pn**	**06 02 50.2**	**-0.2**
JRY				*eS*	**S**	**06 04 00.1**	**-5.1**
JMN	**Monobe**	**5.99**	**309**	Pn	**Pn**	**06 02 50.1**	**-0.5**
JWT	**Wachi**	**6.24**	**328**	Pn	**Pn**	**06 02 54.7**	**+1.5**
JTO	**Tosashimizu**	**6.33**	**298**	P	**Pn**	**06 02 54.7**	**+0.4**
MJAR	**Matsushiro Arr**	**6.57**	**351**	P	**Pn**	**06 02 55.9**	**-1.0**
	0.4nm,0.3s,baz=167,slow=11,SNR=7.8						
MJAR				S	**S**	**06 04 14.8**	**-2.3**
	0.4nm,0.3s,baz=152,slow=18,SNR=6.3						
MAJO	**Matsushiro**	**6.57**	**351**		**Pn**	**06 02 56.6**	**-0.3**
MAT	**Matsushiro**	**6.57**	**351**	P	**Pn**	**06 02 56.7**	**-0.2**
MAT				*eS*	**S**	**06 04 13.3**	**-3.9**
JHS	**Saijyo**	**7.28**	**314**	P	**P**	**06 03 06.3**	**+0.6**
JHS	**Saijyo**	**7.28**	**314**	Pn	**P**	**06 03 06.1**	**+0.4**
JMM	**Marumori**	**7.89**	**8**		**Pn**	**06 03 12.3**	**+0.5**
JNU	**Nakatsue**	**7.92**	**295**	P	**Pn**	**06 03 11.4**	**-0.9**
	1.6nm,0.3s,baz=114,slow=7.6,SNR=7.7						
JNU	**Nakatsue**	**7.92**	**295**	Pn	**Pn**	**06 03 12.0**	**-0.4**
JSD	**Sado**	**8.04**	**353**	Pn	**

comp=Z,3.7nm,1.1s
DAWY Dawson 59.61 30 P P 06 10 42.8 0.0
EPYK Eagle Plains 60.44 27 P P 06 10 50.5 +2.2
EPYK IAmb IAmb 06 10 52.1
comp=Z,7.7nm,1.2s
ARU Arti 60.63 321 P P 06 10 49.2 -0.4
comp=Z,1.7nm,0.2s,baz=108,slow=7.9,SNR=4.2
ARU Arti 60.63 321 IAmb IAmb 06 10 50.0
comp=Z,5.3nm,1.0s
ABKAR Akbulak array 61.33 313 P P 06 10 54.3 -0.1
ABKAR IAmb IAmb 06 10 54.7
comp=Z,4.1nm,1.1s
ABKAR Akbulak array 61.33 313 P P 06 10 53.8 -0.6
INK Inuvik 61.38 25 P P 06 10 56.0 +1.6
comp=Z,1.0nm,0.3s,baz=280,slow=5.3,SNR=18
INK Inuvik 61.38 25 IAmb IAmb 06 10 56.6
comp=Z,1.4nm,0.8s
FORT Forrest 61.44 191 P P 06 10 55.2 -0.1
STKA Stephens Creek 61.61 178 P P 06 10 56.0 -0.4
comp=Z,1.7nm,0.4s,baz=12,slow=8.1,SNR=6.9
AKTO Aktyubinsk 62.25 314 P P 06 11 00.3 -0.2
comp=Z,1.2nm,0.5s,baz=80,slow=14,SNR=5.5
BBOO Buckleboo 62.59 183 P P 06 11 02.6 -0.2
MORW Morawa 62.87 203 P P 06 11 04.1 -0.6
NWAO Narrogin (SRO) 66.06 200 P P 06 11 25.1 0.0
EUNU Eureka 67.33 8 P P 06 11 33.9 +1.4
EUNU IAmb IAmb 06 11 34.8
comp=Z,1.7nm,0.8s
ARCES ARCESS Array B 69.97 340 P P 06 11 49.4 +0.7
comp=Z,1.4nm,0.5s,baz=72,slow=9.1,SNR=6.2
YKA Yellowknife Ar 70.70 28 P P 06 11 54.0 +0.8
comp=Z,0.5nm,0.7s,baz=295,slow=5.4,SNR=11
FINES FINESS Array B 74.24 333 P P 06 12 13.6 -0.2
comp=Z,1.8nm,0.5s,baz=58,slow=4.0,SNR=6.8
KBZ Khabaz 74.25 312 P P 06 12 14.1 -0.1
comp=Z,3.9nm,0.8s,baz=117,slow=4.4,SNR=5.9
AKASG Malin Array Be 78.82 323 P P 06 12 38.9 -0.5
comp=Z,0.8nm,0.4s,baz=51,slow=5.6,SNR=7.7
NC405 NORSAR Array S 79.76 337 P P 06 12 43.4 -0.8
HFS Hagfors 79.77 336 P P 06 12 44.5 +0.2
comp=Z,2.4nm,0.4s,baz=91,slow=5.9,SNR=10
NOA NORSAR Array B 79.98 337 P P 06 12 45.6 +0.2
comp=Z,1.5nm,0.7s,baz=49,slow=4.8,SNR=3.9
BRTR Keskin Array B 82.24 312 P P 06 12 58.2 +0.4
comp=Z,2.9nm,0.8s,baz=114,slow=4.4,SNR=10
BRTR Keskin Array B 82.24 312 P P 06 12 58.1 +0.3
BUR08 Bucovina Ar. S 82.75 322 P P 06 13 00.8 +0.6
BUR08 IAmb IAmb 06 13 19.0
comp=Z,4.9nm,1.4s
BURAR Bucovina Array 82.76 322 P P 06 13 00.2 -0.1
BURAR IAmb IAmb 06 13 01.7
comp=Z,2.5nm,0.7s
VYHS Vyhne 85.51 325 eP P 06 13 11.1 -2.7
GERES GERESS Array B 87.75 328 P P 06 13 24.6 +0.1
comp=Z,0.4nm,0.6s,baz=18,slow=4.8,SNR=3.4
TXAR Lajitas Array 95.72 52 P P 06 14 04.1 +2.4
comp=Z,0.3nm,0.7s,baz=292,slow=3.4,SNR=6.0
TXAR pP pP 06 15 31.9 +0.8
comp=Z,0.3nm,0.8s,baz=299,slow=5.2,SNR=3.9
TORD Torodi Ar. Bea 170.84 310 PKP PKPdf 06 19 25.1 -0.9
comp=Z,0.4nm,0.5s,baz=8,slow=3.3,SNR=2.8
LPAZ La Paz 151.29 68 PKPbc PKiKP 06 20 29.2 +0.7
comp=Z,1.2nm,0.5s,baz=279,slow=2.1,SNR=11

IDC ***14*** *06:07:08.4±1.8, 66.67N×13.40E, h0km, mb1 3.0/3, mb1mx2.8/49, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=20.8km s-min=9.9km az=114.0*
NAO ***14*** *06:07:08.7±0.6, 66.66N×13.48E, ML2.6*
BER ***14*** *06:07:09.5±0.8, 66.64N×13.43E, h5km±4km, ML2.1, ML2.6(HEL), Confirmed Earthquake*
UPP ***14*** *06:07:09.9±1.3, 66.66N×13.47E, h4km, ML2.4, Suspected explosion*
HEL ***14*** *06:07:10.0±0.3, 66.65N×13.36E, h10km, ML2.6, ML2.4(UPP), Confirmed Earthquake*

ISC 14 06:07:08.9±0.8, 66.68N±0.01×13.50E±0.02, h12km±5km, n108, σ2s11/178, 3C-2D, Northern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NBB15	**Halsa Church**	**0.07**	**25**	*i* P	**Pg**	**06 07 11.4**	**+0.1**
NBB15				*e*S	**Sg**	**06 07 13.1**	**-0.1**
NBB15				IAML		06 07 13.2	
	comp=Z,716nm,0.1s						
NBB17	**Glomfjord BVr**	**0.23**	**52**	*e*P	**Pg**	**06 07 14.3**	**+0.6**
NBB17	**Glomfjord BVr**	**0.23**	**52**	*e*S	**Sg**	**06 07 18.1**	**+1.1**
NBB17	**Glomfjord BVr**	**0.23**	**52**	IAML		06 07 21.0	
	comp=Z,594nm,0.2s						
KONS	**Konsvik**	**0.23**	**220**	Pg	**Pg**	**06 07 13.0**	**-0.8**
KONS				Lg	Lg	06 07 15.8	
KONS	**Konsvik**	**0.23**	**220**	*i* P	**Pg**	**06 07 13.1**	**-0.8**
KONS				*e*S	**Sg**	**06 07 15.8**	**-1.2**
KONS				IAML		06 07 18.1	
	comp=Z,205nm,0.5s						
NBB40	**Tonnes**	**0.26**	**230**	*i* P	**Pg**	**06 07 13.4**	**-0.8**
NBB40				*e*S	**Sg**	**06 07 16.3**	**-1.4**
NBB40				IAML		06 07 17.5	
	comp=Z,389nm,0.2s						
NBB30	**Finnes**	**0.31**	**17**	*i* P	**Pb**	**06 07 15.7**	**-0.7**
NBB30				*e*S	**Sb**	**06 07 20.7**	**-0.8**
NBB30				IAML		06 07 22.7	
	comp=Z,100nm,0.2s						
NBB14	**Nordeng Farm**	**0.38**	**190**	*e*P	**Pg**	**06 07 15.9**	**-0.6**
NBB14	**Nordeng Farm**	**0.38**	**190**	*e*S	**Sg**	**06 07 20.6**	**-0.9**
NBB14	**Nordeng Farm**	**0.38**	**190**	IAML		06 07 21.3	
	comp=Z,303nm,0.2s						
STOK	**Stokkvaagen**	**0.40**	**209**	Pg	**Pg**	**06 07 16.2**	**-0.6**
STOK				Lg	Lg	06 07 29.1	
STOK	**Stokkvaagen**	**0.40**	**209**	*e*P	**Pg**	**06 07 16.0**	**-0.7**
STOK				*e*S	**Sg**	**06 07 20.7**	**-1.3**
NBB05	**Inndyr**	**0.42**	**30**	*e*P	**Pb**	**06 07 18.1**	**-0.2**
NBB05	**Inndyr**	**0.42**	**30**	*e*S	**Sb**	**06 07 24.6**	**0.0**
NBB05	**Inndyr**	**0.42**	**30**	IAML		06 07 25.8	
	comp=Z,511nm,0.1s						
MOR8	**Moi Rana**	**0.63**	**143**	Pg	**Pg**	**06 07 20.6**	**-0.6**
MOR8				Lg	Lg	06 07 29.1	
MOR8	**Moi Rana**	**0.63**	**143**	*e*P	**Pg**	**06 07 20.6**	**-0.6**
MOR8				*e*S	**Sg**	**06 07 28.7**	**-0.8**
MOR8				IAML		06 07 30.7	
	comp=Z,110nm,0.2s						
NBB28	**Valnes**	**0.64**	**36**	*e*P	**Pb**	**06 07 21.8**	**-0.2**
NBB28				*e*S	**Sb**	**06 07 30.9**	**0.0**
NBB28				IAML		06 07 34.9	
	comp=Z,97nm,0.3s						
NBB03	**Karbol**	**0.72**	**53**	*e*P	**Pb**	**06 07 23.0**	**-0.4**
NBB03	**Karbol**	**0.72**	**53**	*e*S	**Sb**	**06 07 32.8**	**-0.4**
NBB03				IAML		06 07 35.5	
	comp=Z,86nm,0.1s						
NBB29	**Rokland skole**	**0.79**	**66**	*e*S	**Sb**	**06 07 36.4**	**+1.1**
NBB29				IAML		06 07 47.7	
	comp=Z,382nm,0.2s						
NBB08	**Skaug oppvekst**	**0.84**	**32**	*e*P	**Pb**	**06 07 25.6**	**+0.2**
NBB08	**Skaug oppvekst**	**0.84**	**32**	*e*S	**Sb**	**06 07 36.8**	**+0.1**
NBB08				IAML		06 07 45.0	
	comp=Z,163nm,0.4s						
FAUS	**Fauske**	**1.00**	**44**	*e*P	**Pb**	**06 07 27.7**	**-0.4**
FAUS				*e*S	**Sb**	**06 07 42.5**	**+1.3**
FAUS				*e*		06 07 43.8	
FAUS				IAML		06 07 46.1	
	comp=Z,43nm,0.3s						
N2RO	**R_st**	**1.00**	**328**	*e*P	**Pg**	**06 07 27.5**	**-0.7**
N2RO				*e*S	**Sg**	**06 07 40.8**	**-0.5**
N2RO				IAML		06 07 43.1	
	comp=Z,42nm,0.9s						
N2VA	**Vr_y**	**1.04**	**343**	*e*P	**Pg**	**06 07 28.4**	**-0.5**
N2VA				*e*S	**Sb**	**06 07 42.3**	**-0.1**
N2VA				IAML		06 07 45.1	
	comp=Z,15nm,0.3s						
N2ST	**Straumen**	**1.06**	**50**	*e*P	**Pg**	**06 07 28.3**	**-1.1**
N2ST				IAML		06 07 43.1	
	comp=Z,105nm,0.6s						
N2ST				*e*S	**Sb**	**06 07 43.7**	**+0.6**
N2ST				*e*		06 07 48.0	
N2TV	**TVrnvik**	**1.10**	**35**	*e*P	**Pn**	**06 07 30.4**	**+0.3**
N2TV				*e*S	**Sb**	**06 07 45.0**	**+1.0**
N2TV				IAML		06 07 56.1	
	comp=Z,58nm,0.5s						
N2SV	**S_rv¥gen**	**1.23**	**351**	*e*P	**Pg**	**06 07 31.2**	**-1.4**
N2SV				*e*S	**Sg**	**06 07 46.7**	**-1.9**
N2SV				*e*Sg	**Sn**	**06 07 49.7**	**+1.2**
N2SV				IAML		06 07 51.8	
	comp=Z,35nm,0.2s						
N2NF	**Nordfold**	**1.28**	**31**	*e*P	**Pn**	**06 07 33.3**	**+0.7**
N2NF				*e*S	**Sn**	**06 07 52.2**	**+2.6**
N2NF				IAML		06 07 55.2	
	comp=Z,40nm,0.2s						
STEI	**Steigen**	**1.43**	**27**	Pg	**Pb**	**06 07 35.6**	**+0.2**
STEI				Lg	Lg	06 07 55.7	
STEI	**Steigen**	**1.43**	**27**	*e*Pg	**Pb**	**06 07 35.7**	**+0.2**
STEI				*e*S	**Sg**	**06 07 52.8**	**-2.1**
STEI				*e*Sg	**Sn**	**06 07 55.9**	**+2.5**
STEI				IAML		06 08 01.0	
	comp=Z,31nm,0.6s						
STEI	**Steigen**	**1.43**	**27**	*e*P	**Pb**	**06 07 35.7**	**+0.2**
STEI				*e*S	**Sn**	**06 07 56.0**	**+2.7**
LOF	**Lofoten**	**1.46**	**1**	Pg	**Pn**	**06 07 34.5**	**-0.6**
LOF				Lg	Lg	06 07 53.1	
LOF	**Lofoten**	**1.46**	**1**	*e*P	**Pn**	**06 07 34.5**	**-0.6**
LOF				*e*S	**Sg**	**06 07 52.4**	**-3.5**
LOF				IAML		06 07 57.6	
	comp=Z,27nm,0.3s						
N2IH	**Innhavet**	**1.60**	**35**	*e*P	**Pn**	**06 07 37.2**	**+0.1**
N2IH				*e*Sg	**Sg**	**06 08 01.8**	**+1.3**
N2IH				IAML		06 08 05.7	
	comp=Z,74nm,0.4s						
N2HS	**Hamsund**	**1.63**	**28**	*e*P	**Pb**	**06 07 39.0**	**+0.1**
N2HS				*e*S	**Sg**	**06 08 02.8**	**+1.5**
N2HS				IAML		06 08 04.4	
	comp=Z,47nm,0.3s						
N2DI	**Digermulen**	**1.74**	**19**	*e*P	**Pb**	**06 07 40.9**	**+0.1**
N2DI				*e*S	**Sn**	**06 08 02.3**	**+1.3**
N2SO	**Sortland**	**2.18**	**19**	*e*P	**Pb**	**06 07 47.9**	**-0.3**
N2SO				*e*S	**Sn**	**06 08 13.0**	**+1.2**
N2SO				IAML		06 08 20.2	
	comp=Z,12nm,0.2s						
NSS	**Namsos**	**2.25**	**197**	*e*Pg	**Pb**	**06 07 48.4**	**-1.0**
NSS				*e*Sg	**Sb**	**06 08 17.2**	**0.0**
NSS				IAML		06 08 22.8	
	comp=Z,27nm,0.3s						
NSS	**Namsos**	**2.25**	**197**	*e*P	**Pn**	**06 07 48.0**	**+2.2**
NSS				*e*S	**Sb**	**06 08 17.1**	**0.0**
N2HA	**Harstad**	**2.42**	**27**	*e*P	**Pb**	**06 07 52.8**	**+0.5**
N2HA				*e*S	**Sb**	**06 08 22.7**	**+0.7**
N2HA				IAML		06 08 27.3	
	comp=Z,25nm,0.4s						
NIKU	**Nikkaluokta**	**2.46**	**58**	P	**Pn**	**06 07 50.8**	**+2.0**
NIKU				S	**Sb**	**06 08 22.9**	**-0.3**
NIKU	**Nikkaluokta**	**2.46**	**58**	*e*P	**Pn**	**06 07 50.8**	**+2.0**
NIKU				*e*S	**Sb**	**06 08 22.9**	**-0.3**
RATU	**Laukkuluspa**	**2.63**	**61**	P	**Pn**	**06 07 53.9**	**+2.7**
RATU	**Laukkuluspa**	**2.63**	**61**	*e*P	**Pn**	**06 07 53.9**	**+2.7**
DUNU	**Dundret**	**2.82**	**78**	P	**Pn**	**06 07 56.6**	**+2.8**
DUNU				S	**Sn**	**06 08 30.5**	**+2.7**
DUNU	**Dundret**	**2.82**	**78**	*e*P	**Pn**	**06 07 56.6**	**+2.8**
DUNU				*e*S	**Sn**	**06 08 30.5**	**+2.7**
KUA	**Kurravaara**	**2.94**	**61**	P	**Pn**	**06 07 57.3**	**+1.8**
KUA	**Kurravaara**	**2.94**	**61**	*e*P	**Pn**	**06 07 57.3**	**+1.8**
LILU	**Lilltraesk**	**2.95**	**115**	P	**Pn**	**06 07 57.9**	**+2.4**
LILU				S	**Sn**	**06 08 33.7**	**+2.9**
LILU	**Lilltraesk**	**2.95**	**115**	*e*P	**Pn**	**06 07 57.9**	**+2.4**
LILU				*e*S	**Sn**	**06 08 33.7**	**+2.9**
HARU	**Harads**	**3.05**	**96**	P	**Pn**	**06 07 58.7**	**+1.8**
HARU	**Harads**	**3.05**	**96**	*e*P	**Pn**	**06 07 58.7**	**+1.8**
NOD	**Norderasen**	**3.30**	**169**	*e*	**Pn**	**06 08 02.7**	**+2.3**
NOD				*e*Sg	**Sb**	**06 08 50.9**	**+3.5**
SVAU	**Svanoeiden**	**3.34**	**128**	P	**Pn**	**06 08 01.8**	**+0.9**
SVAU	**Svanoeiden**	**3.34**	**128**	*e*P	**Pn**	**06 08 01.8**	**+0.9**
SJUU	**Sjulsmark**	**3.50**	**106**	P	**Pn**	**06 08 04.8**	**+1.7**
SJUU				S	**Sn**	**06 08 46.7**	**+2.3**
SJUU	**Sjulsmark**	**3.50**	**106**	*e*P	**Pn**	**06 08 04.8**	**+1.7**
SJUU				*e*S	**Sn**	**06 08 46.7**	**+2.3**
LANU	**Lannavaara**	**3.56**	**63**	*e*P	**Pn**	**06 08 07.2**	**+3.2**
LANU	**Lannavaara**	**3.56**	**63**	*e*P	**Pn**	**06 08 08.1**	**+3.2**
LANU				*e*S	**Sn**	**06 08 50.7**	**+4.8**
KIF	**Kilpisjarvi**	**3.62**	**46**	Pn	**Pn**	**06 08 07.3**	**+2.6**
KIF				Pg	**Pg**	**06 08 16.5**	**-1.7**
KIF				Sn	**Sn**	**06 08 52.1**	**+4.7**
KIF				Lg	Lg	06 09 04.9	
KIF	**Kilpisjarvi**	**3.62**	**46**	*e*P	**Pn**	**06 08 07.4**	**+2.6**
KIF				MSN		06 09 08.3	
	comp=Z,4.6nm,0.2s						
KIF	**Kilpisjarvi**	**3.62**	**46**	*e*P	**Pn**	**06 08 07.4**	**+2.6**
KIF				*e*S	**Sn**	**06 08 51.8**	**+4.4**
KIF				MSN		06 09 08.3	
	comp=Z,4.6nm,0.2s						
ODEU	**Stanfors**	**3.77**	**124**	P	**Pn**	**06 08 08.1**	**+1.3**
ODEU				S	**Sn**	**06 08 52.3**	**+1.3**
ODEU	**Stanfors**	**3.77**	**124**	*e*P	**Pn**	**06 08 08.1**	**+1.3**
ODEU				*e*S	**Sn**	**06 08 52.3**	**+1.3**
SOLU	**Sollefteaa**	**3.80**	**153**	P	**Pn**	**06 08 09.2**	**+2.1**
SOLU	**Sollefteaa**	**3.80**	**153**	*e*P	**Pn**	**06 08 09.2**	**+2.1**
PAJU	**Pajala**	**3.81**	**80**	P	**Pn**	**06 08 09.5**	**+2.0**
PAJU	**Pajala**	**3.81**	**80**	*e*P	**Pn**	**06 08 09.5**	**+2.0**
JETT	**Jettan, Norway**	**3.88**	**39**	*e*P	**Pn**	**06 08 09.7**	**+1.4**
JETT				*e*S	**Sn**	**06 08 52.2**	**-1.6**
BURU	**Burvik**	**3.88**	**119**	P	**Pn**	**06 08 10.6**	**+2.2**
BURU	**Burvik**	**3.88**	**119**	*e*P	**Pn**	**06 08 10.8**	**+2.5**
BURU				*e*S	**Sn**	**06 08 55.3**	**+1.5**
BURU	**Burvik**	**3.88**	**119**	*e*P	**Pn**	**06 08 10.8**	**+2.5**
BURU				*e*S	**Sn**	**06 08 55.3**	**+1.5**
KALU	**Kalix**	**4.07**	**97**	P	**Pn**	**06 08 12.3**	**+1.4**
KALU	**Kalix**	**4.07**	**97**	*e*P	**Pn**	**06 08 12.2**	**+1.3**
KALU				*e*S	**Sn**	**06 08 59.6**	**+1.3**
KALU	**Kalix**	**4.07**	**97**	*e*P	**Pn**	**06 08 12.2**	**+1.3**
KALU				*e*S	**Sn**	**06 08 59.6**	**+1.3**
UMAU	**Umeaa**	**4.12**	**130**	P	**Pn**	**06 08 12.9**	**+1.3**
UMAU				S	**Sn**	**06 09 00.3**	**+0.7**
UMAU	**Umeaa**	**4.12**	**130**	*e*P	**Pn**	**06 08 12.7**	**+1.2**
UMAU				*e*S	**Sn**	**06 08 60.0**	**+0.4**
UMAU	**Umeaa**	**4.12**	**130**	*e*P	**Pn**	**06 08 12.7**	**+1.2**
UMAU				*e*S	**Sn**	**06 08 60.0**	**+0.4**
HUSU	**Husum**	**4.13**	**141**	*e*S	**Sn**	**06 09 01.4**	**+1.4**
HUSU	**Husum**	**4.13**	**141**	*e*S	**Sn**	**06 09 01.4**	**+1.4**
HEF	**Hetta**	**4.27**	**61**	*e*P	**Pn**	**06 08 16.2**	**+2.6**
HEF				MPN		06 08 17.7	
	comp=Z,0.8nm,0.1s						
HEF				*e*S	**Sn**	**06 09 04.5**	**+1.2**
HEF				MSN		06 09 27.3	
	comp=Z,2.3nm,0.2s						
HEF	**Hetta**	**4.27**	**61**	*e*P	**Pn**	**06 08 16.2**	**+2.6**
HEF				MPN		06 08 17.7	
	comp=Z,0.8nm,0.1s						
HEF				*e*S	**Sn**	**06 09 04.5**	**+1.2**
HEF				MSN		06 09 27.3	
	comp=Z,2.3nm,0.2s						
KTK1	**Kautokeino**	**4.37**	**53**	*e*P	**Pn**	**06 08 16.2**	**+1.2**
KTK1				IAML		06 09 27.6	
	comp=Z,2.8nm,0.3s						
TOF	**Tornio**	**4.40**	**93**	*e*P	**Pn**	**06 08 17.1**	**+1.7**
TOF				MPN		06 08 17.8	
	comp=Z,1.8nm,0.1s						
TOF				*e*S	**Sn**	**06 09 07.8**	**+1.3**
TOF	**Tornio**	**4.40**	**93**	*e*P	**Pn**	**06 08 17.1**	**+1.7**
TOF				MPN		06 08 17.8	
	comp=Z,1.8nm,0.1s						
TOF				*e*S	**Sn**	**06 09 07.8**	**+1.3**
RNF	**Rovaniemi**	**4.98**	**85**	*e*P	**Pn**	**06 08 24.5**	**+1.1**
RNF				MPN		06 08 24.8	
	comp=Z,0.9nm,0.1s						
RNF				*e*S	**Sn**	**06 09 21.5**	**+0.6**
RNF	**Rovaniemi**	**4.98**	**85**	*e*P	**Pn**	**06 08 24.5**	**+1.1**
RNF				MPN		06 08 24.8	
	comp=Z,0.9nm,0.1s						
RNF				*e*S	**Sn**	**06 09 21.5**	**+0.6**
DOMB	**Dombas**	**5.04**	**205**	*e*P	**Pn**	**06 08 22.2**	**-2.1**
DOMB				*e*Sg	**Sb**	**06 09 42.4**	**+5.1**
SGF	**Sodankyl**	**5.16**	**75**	*e*P	**Pn**	**06 08 27.3**	**+1.5**
SGF				MPN		06 08 29.3	
	comp=Z,0.9nm,0.1s						
SGF				*e*S	**Sn**	**06 09 25.3**	**+0.2**
SGF	**Sodankyl**	**5.16**	**75**	*e*P	**Pn**	**06 08 27.3**	**+1.5**
SGF				MPN		06 08 29.3	
	comp=Z,0.9nm,0.1s						
SGF				*e*S	**Sn**	**06 09 25.3**	**+0.2**
ARA0	**ARCESS Array S**	**5.33**	**52**	Pn	**Pn**	**06 08 28.8**	**+0.6**
	baz=234,slow=14						
ARA0				Sn	**Sn**	**06 09 28.8**	**-0.6**
	baz=236,slow=22						
ARA0				Lg	Lg	06 09 54.5	
	baz=235,slow=28						
ARA0	**ARCESS Array S**	**5.33**	**52**	Pn	**Pn**	**06 08 28.8**	**+0.6**
	baz=234,slow=14						
ARA0				Sn	**Sn**	**06 09 28.8**	**-0.6**
	baz=236,slow=22						
ARA0				Sg	**Sg**	**06 09 54.5**	**-5.2**
	baz=235,slow=28						
ARCES	**ARCESS Array B**	**5.33**	**52**	Pn	**Pn**	**06 08 28.7**	**+0.5**
	baz=238,slow=12,SNR=12						
ARCES				Sn	**Sn**	**06 09 28.3**	**-1.1**
	baz=241,slow=18,SNR=7.0						
ARCES				Lg	Lg	06 09 55.7	
	baz=232,slow=27,SNR=5.2						
NB2	**NORSAR Subarra**	**5.75**	**191**	Lg	Lg	06 10 06.6	
	baz=16,slow=37						
NB2	**NORSAR Subarra**	**5.75**	**191**	Sg	**Sg**	**06 10 06.6**	**-6.7**
	baz=16,slow=37						
NOA	**NORSAR Array B**	**5.75**	**191**	Pn	**Pn**	**06 08 33.1**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=6.3,slow=13,SNR=1.4						
NOA				Lg	Lg	06 10 07.0	
	comp=Z,0.1nm,0.3s,baz=330,slow=22,SNR=4.6						
NRA0	**NORESS Array S**	**6.03**	**189**	Pn	**Pn**	**06 08 38.8**	**+0.9**
	baz=7.6,slow=14						
NRA0				Sn	**Sn**	**06 09 47.2**	**+0.5**
	baz=9.8,slow=28						
NRA0				Lg	Lg	06 10 14.2	
	slow=37						
NRA0	**NORESS Array S**	**6.03**	**189**	Pn	**Pn**	**06 08 38.8**	**+0.9**
	baz=7.6,slow=14						
NRA0				Sn	**Sn**	**06 09 47.2**	**+0.5**
	baz=9.8,slow=28						
NRA0				Sg	**Sb**	**06 10 14.2**	**+8.4**
	slow=37						
HFS	**Hagfors**	**6.57**	**179**	Pn	**Pn**	**06 08 46.9**	**+1.7**
	baz=5.4,slow=11						
HFS				Sn	**Sn**	**06 09 59.5**	**-0.6**
	baz=15,slow=22						
HFS				Lg	Lg	06 10 32.1	
	slow=28						
HFS	**Hagfors**	**6.57**	**179**	Pn	**Pn**	**06 08 46.9**	**+1.7**
	baz=5.4,slow=11						
HFS				Sn	**Sn**	**06 09 59.5**	**-0.6**
	baz=15,slow=22						
HFS				Sg	**Sg**	**06 10 32.1**	**-7.5**
	slow=28						
FIA0	**FINESS Array S**	**7.61**	**128**	Pn	**Pn**	**06 08 60.0**	**+0.6**
	baz=319,slow=14						
FIA0				Sn	**Sn**	**06 10 23.3**	**-2.1**
	baz=327,slow=28						
FIA0				Lg	Lg	06 11 04.1	
	baz=317,slow=28						
FIA0	**FINESS Array S**	**7.61**	**128**	Pn	**Pn**	**06 08 60.0**	**+0.6**
	baz=319,slow=14						
FIA0				Sn	**Sn**	**06 10 23.3**	**-2.1**
	baz=327,slow=28						
FIA0				Sg	**Sg**	**06 11 04.1**	**-8.5**
	baz=317,slow=28						
FINES	**FINESS Array B**	**7.61**	**128**	Pn	**Pn**	**06 09 00.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=322,slow=12,SNR=5.0						
FINES				Sn	**Sn**	**06 10 23.9**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=328,slow=23,SNR=5.0						
FINES				Lg	Lg	06 11 04.0	
	comp=Z,0.4nm,0.3s,baz=323,slow=25,SNR=4.2						
APA0	**Apatity Array**	**7.64**	**74**	Pn	**Pn**	**06 08 58.9**	**-1.0**
	baz=247,slow=14						
APA0				Sn	**Sn**	**06 10 22.7**	**-3.6**
	baz=294,slow=22						
APA0	**Apatity Array**	**7.64**	**74**	Pn	**Pn**	**06 08 58.9**	**-1.0**
	baz=247,slow=14						
APA0				Sn	**Sn**	**06 10 22.7**	**-3.6**
	baz=294,slow=22						

TAP 14 06:14:44.5, 24.27N×121.67E, h7km, ML1.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.12**	**216**	P	Pg	06 14 47.5	+0.5
	baz=216						
NACB				S	Sg	06 14 50.2	+1.4
	baz=216						
ETLH	**Xiulin Townshi**	**0.18**	**250**	*i* P	Pg	06 14 49.1	+0.9
	baz=249						
ETLH				S	Sg	06 14 52.8	+2.0
	baz=249						
TWD	**Chiawan**	**0.20**	**200**	P	Pg	06 14 49.5	+1.0
	baz=197						
TWD				S	Sg	06 14 53.1	+1.9
	baz=197						
NNSB	**Datong**	**0.31**	**301**	P	Pb	06 14 51.6	-0.8
	baz=300						
NNSB				*e*S	Sb	06 14 56.7	-1.0
	baz=300						
NDT	**Datong Townshi**	**0.36**	**336**	*i* P	Pb	06 14 52.5	-0.8
	baz=336						
NDT				*i* S	Sb	06 14 58.6	-0.6
	baz=336						
FUSS	**Fushou**	**0.39**	**267**	P	Pg	06 14 52.8	+0.6
	baz=266						
FUSS				S	Sb	06 14 59.7	-0.6
	baz=266						
WHF	**Hehuan Shan**	**0.39**	**252**	*i* P	Pb	06 14 53.3	-0.8
	baz=250						
WHF				*i* S	Sb	06 14 59.6	-0.8
	baz=250						
YHNB	**Yeheng**	**0.48**	**326**	P	Pb	06 14 55.4	0.0
	baz=325						
YHNB				*e*S	Sb	06 15 02.8	+0.1
	baz=325						
NSK	**Sanguang**	**0.49**	**325**	P	Pb	06 14 56.0	+0.4
	baz=325						
CHGB	**Renai**	**0.50**	**245**	P	Pb	06 14 55.5	-0.3
	baz=245						
CHGB				S	Sb	06 15 03.3	-0.1
	baz=245						
NWLT	**Wulai**	**0.53**	**343**	P	Pb	06 14 56.0	-0.2
	baz=343						
NWLT				S	Sb	06 15 04.3	+0.3
	baz=343						
WHP	**Taichung City**	**0.66**	**271**	*e*P	Pb	06 14 58.4	-0.1
	baz=270						
WHP				*e*S	Sb	06 15 08.7	+0.7
	baz=270						
VWDT	**VWDT**	**0.71**	**223**	*e*S	Sb	06 15 09.3	+0.3
	baz=223						
YULB	**Yu-li**	**0.94**	**202**	*e*P	Pg	06 15 02.6	+0.1
	baz=201						
YULB				*e*S	Sn	06 15 17.8	-0.1

LEM	Lembang	2.54	355	P		Pn	06 43 07.5	+1.8
UGM	Wanagama	3.03	62			Pn	06 43 11.1	-1.2
UGM	Wanagama	3.03	62	P		Pn	06 43 10.5	-1.8
SMRI	Semarang	3.46	48			Pn	06 43 18.4	+0.2
SMRI	Semarang	3.46	48	P		Pn	06 43 17.6	-0.6
KASI	Kota Agung	5.06	319	P		Pn	06 43 42.1	+1.9
	0.3nm898nm24nm,0.5s							
JAGI	Jajag, Banyuwa	6.31	82			Pn	06 43 57.6	+0.2
JAGI	Jajag, Banyuwa	6.31	82	P		Pn	06 43 57.8	+0.4
	0.4nm1µm74nm,0.5s							
TWSI	Taliwang, Sumb	8.96	87	P		Pn	06 44 34.2	+0.4
	637nm41nm,0.7s							
PLAI	Plampang	9.84	88	P		Pn	06 44 45.6	-0.2
	834nm83nm,0.8s							
KAPI	Kappang	12.59	71	LR		LR	06 50 54.9	
	comp=Z,116nm,20.1s,baz=241,slow=42							
GIRL	Giralia	14.55	156	Pn		Pn	06 45 47.6	-2.7
RPSI	Rantau Prapat	14.92	323	Pn		Pn	06 45 52.5	-2.8
TOLI2	Tolitoli	16.58	52	Pn		Pn	06 46 16.3	-0.5
TOLI2				IAmb	IAmb	IAmb	06 46 21.0	
	comp=Z,10nm,0.7s							
PSA00	Pilbara Seismi	16.75	138	Pn		Pn	06 46 15.7	-3.2
PSA00				IAmb	IAmb	IAmb	06 46 32.8	
	comp=Z,13nm,1.1s							
FITZ	Fitzroy Crossi	19.34	119	P		Pn	06 46 50.5	-0.2
	comp=Z,0.2nm,0.3s,baz=272,slow=3.2,SNR=5.3							
FITZ	Fitzroy Crossi	19.34	119	P		Pn	06 46 50.4	-0.3
FITZ				IAmb	IAmb	IAmb	06 47 06.2	
	comp=Z,6.7nm,1.2s							
WB0	Warramunga Arr	27.66	115	P		P	06 48 12.3	+0.4
WB0				IAmb	IAmb	IAmb	06 48 30.2	
	comp=Z,8.1nm,1.1s							
WRA	Warramunga Arr	27.67	115	P		P	06 48 12.6	+0.6
	comp=Z,1.9nm,0.8s,baz=290,slow=11,SNR=8.6							
WRAB	Tennant Creek	27.68	115	P		P	06 48 12.4	+0.3
WRAB				IAmb	IAmb	IAmb	06 48 27.5	
	comp=Z,10nm,1.3s							
WB2	Warramunga Arr	27.68	115	P		P	06 48 13.0	+0.9
WR0	Warramunga Arr	27.85	115	P		P	06 48 14.2	+0.5
WR0				IAmb	IAmb	IAmb	06 48 16.1	
	comp=Z,12nm,1.5s							
ASAR	Alice Springs	28.68	123	P		P	06 48 22.5	+1.5
	comp=Z,0.7nm,0.7s,baz=286,slow=7.9,SNR=6.5							
ASAR				PcP		PcP	06 51 34.0	+2.7
	comp=Z,0.4nm,1.0s,baz=298,slow=2.7,SNR=4.2							
ASAR				LR		LR	06 59 42.5	
	comp=Z,65nm,21.2s,baz=305,slow=36							
CMAR	Chiang Mai Arr	29.01	342	P		P	06 48 23.8	-0.1
	comp=Z,0.6nm,0.6s,baz=182,slow=7.6,SNR=6.3							
H08S2	Diego Garcia H	34.98	270	T		T	07 26 18.2	
	baz=95,slow=75,SNR=13							
H08S3	Diego Garcia H	34.99	270	T		T	07 26 27.6	
	baz=95,slow=75,SNR=29							
H08S1	Diego Garcia H	35.00	270	T		T	07 26 27.3	
	baz=95,slow=75,SNR=4.9							
STKA	Stephens Creek	38.46	131	P		P	06 49 47.5	+1.7
	comp=Z,4.2nm,0.9s,baz=324,slow=7.3,SNR=7.3							
STKA	Stephens Creek	38.46	131	IAmb		IAmb	06 49 49.6	
	comp=Z,1.1nm,0.8s							
GTA	Gaotai	49.10	352	*e*P		P	06 51 12.8	+1.5
GTA				pP		pP	06 51 16.8	-2.0
GTA				sP		sP	06 51 19.8	-2.1
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
SMLA	Simla	49.86	325↑	*e*P		P	06 51 17.4	+0.3
SONM	Songino Array	56.97	359	P		P	06 52 09.9	+0.7
	comp=Z,2.1nm,0.6s,baz=174,slow=8.8,SNR=7.3							
SONM	Songino Array	56.97	359	P		P	06 52 09.8	+0.7
SONM				IAmb		IAmb	06 52 10.7	
	comp=Z,2.3nm,0.8s							
USRK	Ussuriysk Ar.	57.64	20	P		P	06 52 13.2	-0.6
	comp=Z,1.1nm,0.6s,baz=188,slow=8.2,SNR=4.7							
WSAR	Wadi Sarin	58.05	305	LR		LR	07 16 33.0	
	comp=Z,56nm,19.3s,baz=161,slow=35							
AAK	Ala-Archa	60.05	332	LR		LR	07 21 38.1	
	comp=Z,36nm,20.9s,baz=177,slow=39							
MK31	Makanchi Array	60.38	340	P		P	06 52 33.6	+0.8
MKAR	Makanchi Array	60.38	340	P		P	06 52 33.8	+0.9
	comp=Z,7.1nm,0.6s,baz=144,slow=7.8,SNR=83							
MKAR				LR		LR	07 21 02.9	
	comp=Z,39nm,18.2s,baz=154,slow=38							
MKAR	Makanchi Array	60.38	340	P		P	06 52 33.3	+0.4
KLR	Kul'dur	62.02	18	P		P	06 52 42.6	-1.2
	comp=Z,1.8nm,0.6s,baz=187,slow=4.4,SNR=8.0							
ZALV	Zalesovo Beam	66.02	345	P		P	06 53 10.2	+0.1
	comp=Z,1.7nm,0.6s,baz=149,slow=5.1,SNR=7.8							
ZALV				LR		LR	07 25 22.6	
	comp=Z,42nm,20.0s,baz=74,slow=39							
ZALV	Zalesovo Beam	66.02	345	P		P	06 53 09.8	-0.2
GEYT	Alibeck	66.08	319	LR		LR	07 25 47.8	
	comp=Z,23nm,18.5s,baz=130,slow=39							
PETK	Petropavlovsk-	75.26	28	P		P	06 54 06.3	-0.1
	comp=Z,1.2nm,0.8s,baz=180,slow=0.9,SNR=6.2							
GNI	Garni	76.21	315	LR		LR	07 30 53.0	
	comp=Z,8.7nm,20.6s,baz=25,slow=38							
ARCES	ARCESS Array B	96.03	339	LR		LR	07 47 00.4	
	comp=Z,28nm,18.2s,baz=130,slow=40							
YKA	Yellowknife Ar	118.78	21	PKP		PKiKP	07 01 11.9	+0.5
	comp=Z,0.3nm,0.8s,baz=333,slow=1.5,SNR=4.5							
TXAR	Lajitas Array	144.44	52	PKP		PKPdf	07 02 00.9	+0.2
	comp=Z,0.2nm,0.7s,baz=268,slow=2.6,SNR=2.6							
BDFB	Brasilia	145.50	224	PKPbc		PKiKP	07 02 07.1	+0.3
	comp=Z,0.5nm,0.3s,baz=184,slow=5.3,SNR=3.2							

IDC 14 06:55:16.1±3.0, 15°22S×177°64W, h404km±56km, mb2.9/3, mb1 3.3/5, mb1mx3.0/39, mbtmp3.8/5, Error ellipse: s-maj=364.3km s-min=20.4km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.83	238	P	P	06 56 38.6	+2.1
	4.4nm,0.3s,baz=119,slow=23,SNR=25						
AFI	Afiamalu	5.83	78	P	P	06 56 45.4	-1.5
	2.9nm,0.3s,baz=82,slow=2.4,SNR=8.7						
WRA	Warramunga Arr	45.90	257	P	P	07 03 00.1	-0.7
	0.4nm,0.6s,baz=89,slow=7.1,SNR=6.2						
ASAR	Alice Springs	46.28	252	P	P	07 03 03.3	-0.4
	2.2nm,0.6s,baz=85,slow=8.3,SNR=33						
TXAR	Lajitas Array	83.94	58	P	P	07 07 04.5	+1.8
	0.3nm,0.7s,baz=205,slow=4.0,SNR=3.0						

*NEIC **14** 06:58:38.0±1.7, 22°.1S×179°.1W±0°.2, h526km±11km, mb4.4/27, Error ellipse: s-maj=21.7km s-min=14.6km az=72.0*

*IDC **14** 06:58:38.7±2.3, 21°.93S×179°.17W, h527km±20km, mb3.8/7, mb1 3.9/9, mb1mx3.4/33, mbtmp4.7/9, Error ellipse: s-maj=33.8km s-min=20.2km az=91.0*

ISC 14 06:58:36.7±1.3, 22°.1S±0°.1×178°.9W±0°.2, h526km, n63, σ1s50/61, mb4.4/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.17	326	P	P	07 00 06.7	-0.2
	16nm,0.3s,baz=157,slow=5.6,SNR=118						
MSVF	Nonsavu	5.17	326	P	P	07 00 06.5	-0.3
NIUE	Niue	8.90	72	P	P	07 00 47.5	+4.5
DZM	Mont Dzumac	13.61	267	P	P	07 01 31.9	-0.2
	0.5nm,0.3s,baz=74,slow=18,SNR=4.7						
OUZ	Omahuta	14.68	205	P	P	07 01 43.3	+0.3
SANVU	Saraoutou	14.72	294	P	P	07 01 42.9	-0.9
MXZ	Matakaoa Point	15.65	188	P	P	07 01 52.6	-0.5
TGRZ	Tauranga	16.18	194	P	P	07 01 59.5	+1.1
URZ	Urewera	16.52	191	P	P	07 01 59.5	-2.2
URZ				IAmb	IAmb	07 02 00.8	
	comp=Z,18nm,0.8s						
URZ	Urewera	16.52	191	P	P	07 01 59.0	-2.7
MWZ	Matawai	16.52	190	P	P	07 02 00.6	-1.2
RAGZ	Rawiri	16.70	190	P	P	07 02 06.3	+2.7
MUGZ	Murupara	16.79	192	P	P	07 02 01.9	-2.5
HRRZ	Handcock Road	16.80	193	P	P	07 02 04.0	-0.6
RIGZ	Rimuhau	16.85	189	P	P	07 02 04.0	-1.0
RTZ	Ruatahuna	16.89	191	P	P	07 02 02.7	-2.7
MTHZ	Maungataniwha	17.14	191	P	P	07 02 05.8	-2.0
RAHZ	Arahi	17.16	191	P	P	07 02 06.2	-1.7
BKZ	Black Stump Fm	17.51	192	P	P	07 02 08.6	-2.6
BKZ	Black Stump Fm	17.51	192	P	P	07 02 08.2	-3.0
TMVZ	Te Maari	17.63	194	P	P	07 02 11.2	-1.1
OTVZ	Oturere	17.68	194	P	P	07 02 10.7	-2.2
SNVZ	South Ngauruho	17.71	194	P	P	07 02 11.4	-1.7
KWHZ	Kaweka Forest	17.77	192	P	P	07 02 11.5	-2.1
BHHZ	Black Hill Sta	17.91	193	P	P	07 02 12.0	-2.8
KRHZ	Kereru	18.00	192	P	P	07 02 13.2	-2.4
KAHZ	Kahuranaki	18.05	191	P	P	07 02 16.1	0.0
NEZ	North Egmont	18.18	198	P	P	07 02 19.8	+2.5
DVHZ	Dannevirke	18.67	192	P	P	07 02 20.2	-1.5
BFZ	Birch Farm	19.02	191	P	P	07 02 23.2	-1.7
BFZ	Birch Farm	19.02	191	P	P	07 02 23.2	-1.7
SNZO	South Karori	19.95	194	P	P	07 02 33.3	0.0
QRZ	Quartz Range	20.08	199	P	P	07 02 34.9	+0.4
NNZ	Nelson	20.19	197	P	P	07 02 35.4	-0.1
TUWZ	Tuamarina	20.24	196	P	P	07 02 35.0	-1.0
BSWZ	Blackbirch Sta	20.53	196	P	P	07 02 38.9	+0.4
THZ	Tophouse	20.83	197	P	P	07 02 41.0	-0.3
THZ				IAmb	IAmb	07 02 44.6	
	comp=Z,28nm,1.1s						
LTZ	Lake Taylor	21.95	198	P	P	07 02 54.0	+2.5
OXZ	Oxford	22.52	197	P	P	07 02 57.3	+0.8
RPZ	Rata Peaks	23.16	199	P	P	07 03 04.5	+2.2
	comp=Z,25nm,0.5s,baz=257,slow=1.0,SNR=16						
STKA	Stephens Creek	36.39	246	P	P	07 04 57.1	+0.5
	comp=Z,4.9nm,0.6s,baz=87,slow=11,SNR=14						
STKA	Stephens Creek	36.39	246	IAmb	IAmb	07 04 58.0	
	comp=Z,1.2nm,0.8s						
AS31	Alice Springs	43.38	258	P	P	07 05 52.4	-0.4
ASAR	Alice Springs	43.38	258	P	P	07 05 52.7	-0.1
	comp=Z,12nm,0.8s,baz=90,slow=8.2,SNR=92						
WR0	Warramunga Arr	43.40	264	P	P	07 05 51.9	-1.1
WR0				IAmb	IAmb	07 05 55.0	
	comp=Z,5.8nm,0.9s						
WB0	Warramunga Arr	43.58	264	P	P	07 05 53.5	-0.8
WB0				IAmb	IAmb	07 05 54.3	
	comp=Z,11nm,0.6s						
WB2	Warramunga Arr	43.58	264	P	P	07 05 53.7	-0.7
WB2				IAmb	IAmb	07 05 54.4	
	comp=Z,8.7nm,0.8s						
WRAB	Tennant Creek	43.58	264	P	P	07 05 53.2	-1.2
WRAB				IAmb	IAmb	07 05 54.4	
	comp=Z,10nm,1.0s						
WRA	Warramunga Arr	43.59	264	P	P	07 05 53.8	-0.7
	comp=Z,7.1nm,0.6s,baz=94,slow=7.8,SNR=115						
WRA	Warramunga Arr	43.59	264	P	P	07 05 53.4	-1.1
JAY	Jayapura	43.78	291	P	P	07 05 55.2	-0.9
	comp=Z,12nm,0.6s,baz=46,slow=3.5,SNR=5.5						
FORT	Forrest	47.94	248	P	P	07 06 27.1	-0.3
MTN	Manton Dam	48.38	272	P	P	07 06 29.6	-1.3
MTN				IAmb	IAmb	07 06 45.1	
	comp=Z,30nm,1.3s						
KNRA	Kununurra	49.75	268	P	P	07 06 40.9	-0.2
KNRA				IAmb	IAmb	07 06 41.6	
	comp=Z,12nm,0.7s						
FITZ	Fitzroy Crossi	52.02	264	P	P	07 06 57.9	+0.3
PSA00	Pilbara Seismi	56.53	258	P	P	07 07 29.0	-0.3
PSA00				IAmb	IAmb	07 07 29.7	
	comp=Z,8.7nm,1.0s						
MORW	Morawa	58.49	249	P	P	07 07 43.1	+0.6
MORW				IAmb	IAmb	07 07 46.1	
	comp=Z,18nm,1.2s						
GIRL	Giralia	61.35	256	P	P	07 08 02.5	+0.8
TOLI2	Tolitoli	63.13	283	P	P	07 08 12.9	-0.5
TOLI2				IAmb	IAmb	07 08 14.9	
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	68.02	180	P	P	07 08 44.0	+0.8
USRK	Ussuriysk Ar.	79.79	326	P	P	07 09 51.1	+1.1
	comp=Z,0.6nm,0.7s,baz=92,slow=8.7,SNR=4.8						
CMAR	Chiang Mai Arr	89.86	290	P	P	07 10 41.5	+1.6
	comp=Z,2.4nm,0.8s,baz=128,slow=3.3,SNR=17						
AKASG	Malin Array Be	143.95	329	PKP	PKPdf	07 17 11.2	-0.7
	comp=Z,3.0nm,0.6s,baz=40,slow=4.2,SNR=12						

*IDC **14** 07:00:50.8±0.9, 37°.18N×141°.11E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/61, mbtmp3.6/11, ML2.0/2, Error ellipse: s-maj=23.5km s-min=23.0km az=117.0*

*JMA **14** 07:00:53.5±0.1, 37°.14N×141°.20E, h25km±1km, M3.8*

JMA Felt I J1.

*NIED **14** 07:00:53.5, 37°.14N×141°.20E, h25km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; M_{rr}-2.19; $M_{\theta\theta}$1.63; $M_{\phi\phi}$0.57; $M_{r\theta}$-0.26; $M_{\theta\phi}$1.80; $M_{\phi r}$0.07; Fault plane solution: $M_0$2.61000×10¹⁴ NP1:ϕ_s61.00000°, δ47.00000°, λ-78.00000°. NP2:ϕ_s225.00000°, δ44.00000°, λ-102.00000°.*

ISC 14 07:00:53.1±1.5, 37°.15N±0°.05×141°.23E±0°.07, h17km±8km, n31, σ0s83/30, mb3.6/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.35	262	P	Pg	07 01 00.8	+0.4
ONAJ				S	Sg	07 01 05.7	+0.4
JFK	Kawauchi	0.35	307	P	Pg	07 01 01.0	+0.5
JFK				*e*S	Sg	07 01 06.1	+0.5
JFFD	Fukushimafurud	0.54	264	P	Pg	07 01 03.9	+0.1
JFFD				S	Sg	07 01 10.8	-0.2
JMST	Minamisoumatoc	0.63	335	P	Pg	07 01 05.6	0.0
JMST				S	Sg	07 01 14.2	+0.1
JHO	Hitachi	0.76	225	P	Pb	07 01 06.7	-1.1
JMM	Marumori	0.79	334	P	Pb	07 01 08.1	-0.4
JMM				S	Sb	07 01 18.8	-0.1
JFT	Otama	0.80	298	P	Pb	07 01 08.8	+0.2
JFT				S	Sb	07 01 19.5	+0.4
JSB	Shiboa	1.06	260	*e*S	Sb	07 01 26.9	+0.2
JFY	Yanaizu	1.24	282	P	Pn	07 01 16.0	+0.3
JFY				*e*S	Sb	07 01 32.3	+0.4
MJAR	Matsushiro Arr	2.50	257	Pn	Pn	07 01 32.9	-0.1
	0.6nm,0.3s,baz=80,slow=16,SNR=7.8						
MJAR				Lg	Lg	07 02 09.4	
	1.7nm,0.3s,baz=122,slow=14,SNR=7.0						
MAT	Matsushiro	2.50	257	P	Pn	07 01 33.9	+0.9
MAT				*e*S	Sn	07 02 04.5	+1.4
USRK	Ussuriysk Ar.	9.94	318	Pn	Pn	07 03 12.2	-2.9
	baz=114,slow=13,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.34	121	T	T	07 36 22.9	
	baz=314,slow=75,SNR=175						
H11N1	WAKE ISLAND Hy	28.34	121	T	T	07 36 22.8	
	baz=314,slow=75,SNR=166						
H11N3	WAKE ISLAND Hy	28.35	121	T	T	07 36 24.7	
	baz=314,slow=75,SNR=149						
H11S1	WAKE ISLAND Hy	29.05	123	T	T	07 37 14.3	
	baz=314,slow=76,SNR=83						
H11S3	WAKE ISLAND Hy	29.05	123	T	T	07 37 34.3	
	baz=314,slow=76,SNR=69						
H11S2	WAKE ISLAND Hy	29.06	123	T	T	07 37 24.2	
	baz=314,slow=76,SNR=49						
ZALV	Zalesovo Beam	41.73	312	P	P	07 08 41.0	0.0
	0.8nm,0.5s,baz=79,slow=8.0,SNR=4.7						
MKAR	Makanchi Array	43.93	302	P	P	07 08 58.6	-0.4
	0.6nm,0.7s,baz=91,slow=7.6,SNR=6.8						
ILAR	Eielson Array	49.48	32	P	P	07 09 42.9	+0.8
	0.6nm,0.7s,baz=265,slow=5.6,SNR=8.4						
WRA	Warramunga Arr	57.16	188	P	P	07 10 38.6	-0.4
	0.5nm,0.8s,baz=3.5,slow=7.3,SNR=2.0						
ASAR	Alice Springs	60.88	188	P	P	07 11 05.2	+0.3
	0.2nm,0.7s,baz=0.0,slow=7.4,SNR=1.7						
ARCES	ARCESS Array B	63.84	339	P	P	07 11 23.7	-0.4
	4.8nm,1.1s,baz=51,slow=9.6,SNR=3.5						
AKASG	Malin Array Be	74.11	322	P	P	07 12 27.5	-0.7
	1.2nm,0.4s,baz=47,slow=5.8,SNR=5.8						
PDAR	Pinedale Array	77.69	45	P	P	07 12 50.2	+1.0
	0.1nm,0.4s,baz=327,slow=6.5,SNR=1.7						
TXAR	Lajitas Array	90.17	52	P	P	07 13 53.8	+0.9
	0.2nm,0.6s,baz=298,slow=1.9,SNR=2.5						
LPAZ	La Paz	146.76	59	PKPbc	PKPbc	07 20 35.8	+0.4
	0.9nm,0.7s,baz=66,slow=3.2,SNR=5.9						
H03N2	Juan Fernandez	147.18	96	T	T	10 05 03.7	
	baz=291,slow=76,SNR=5.1						
H03N3	Juan Fernandez	147.19	96	T	T	10 05 04.8	
	baz=291,slow=76,SNR=1.4						
H03N1	Juan Fernandez	147.20	96	T	T	10 05 04.9	
	baz=291,slow=76,SNR=5.6						

*IDC **14** 07:12:15.8±1.3, 27°.04N×52°.69E, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.7/49, mbtmp3.9/16, ML3.6/2, MS3.2/4, Ms1 3.2/4, ms1mx2.6/40, Error ellipse: s-maj=27.8km s-min=21.4km az=24.0*

*TEH **14** 07:12:17.4, 27°.27N×52°.96E, h6km, ML3.9*

*THR **14** 07:12:19.8±0.3, 27°.27N×53°.00E, h18km±10km, ML3.5*

*OMAN **14** 07:12:24.1, 26°.96N×53°.10E, h7km, mb5.2/2, ml3.4/6*

ISC 14 07:12:17.5±1.9, 27°.19N±0°.06×52°.88E±0°.06, h3km±12km, n66, σ1s48/72, mb3.7/13, MS3.1/3, 1C-1D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.29	59	*e*Pg	Pg	07 12 21.9	-1.3
QIR1	Qir	1.29	6	*e*Pg	Pg	07 12 42.3	0.0
LAR1	LAR	1.41	70	*e*Pg	Pg	07 12 44.4	-0.2
LAR1				*e*Sg	Sn	07 13 06.2	+3.0
JHRM	Jahrom	1.45	25	*e*Pg	Pn	07 12 45.1	+0.4
AHBU	AHRAM	2.18	320	*e*Pn	Pn	07 12 57.4	+2.8
SHI	Shiraz	2.47	353	*e*Pn	Pn	07 12 59.3	+0.5
GENO	Geno	2.94	85	*e*Pn	Pn	07 13 05.9	+0.7
SHME	Shamm	3.13	110	*e*Pn	Pn	07 13 08.8	+1.1
SHME	Shamm	3.13	110	P	Pn	07 13 10.2	+2.5
SHME				S	Sn	07 13 47.3	+1.8
BANOM	Banah	3.31	112	*e*Pn	Pn	07 13 11.4	+1.2
BANOM	Banah	3.31	112	P	Pn	07 13 12.2	+2.0
	SNR=7.8						
BANOM				S	Sn	07 13 49.1	-0.9
NAZ	Nazwa, Dubai	3.32	131	*e*Pn	Pn	07 13 12.4	+2.1
ASUD	Al Ashush, Dub	3.37	139	*e*Pn	Pn	07 13 14.1	+3.1
ASUD	Al Ashush, Dub	3.37	139	P	Pn	07 13 13.5	+2.5
	SNR=14						
MASF	Masafi	3.45	121	P	Pn	07 13 14.0	+1.8
	SNR=6.9						
MASF				S	Sn	07 13 54.6	+1.0
MSFE	Esma-Masafi	3.46	121	*e*Pn	Pn	07 13 13.7	+1.4
MDH	Madha	3.60	121	*e*Pn	Pn	07 13 16.0	+1.9
UOSS	Minazif	3.73	126	*e*Pn	Pn	07 13 17.5	+1.6
UOSS	Minazif	3.73	126	P	Pn	07 13 17.4	+1.5
UOSS				S	Sn	07 14 00.5	+0.2
HATD	Hatta, Dubai	3.75	128	*e*Pn	Pn	07 13 18.5	+2.2
KRBR	Kerman	4.40	50	*e*Pn	Pn	07 13 26.5	+1.0
KRBR				IAML		07 14 22.2	
	comp=E,38nm,0.4s						
KRBR	Kerman	4.40	50	*e*Pn	Pn	07 13 26.5	+1.0
TVBK	TV Kerman	4.41	50	*e*Pn	Pn	07 13 26.8	+1.2
IMEH	Mehriz	4.45	19	*e*Pn	Pn	07 13 27.0	+0.9
KHGB	Koh Gabri	4.48	44	*e*Pn	Pn	07 13 26.8	+0.4
SOHO	SOHO	4.48	132	*e*Pn	Pn	07 13 27.9	+1.6
IRAM	Ramesheh	4.63	355	*e*Pn	Pn	07 13 28.5	0.0
CHMN	Cheshme madani	4.89	56	*e*Pn	Pn	07 13 33.2	+1.0
UMZA	Um Al Zommool	4.91	155	*e*Pn	Pn	07 13 34.3	+2.1
IBAF	Bafgh	4.97	27	*e*Pn	Pn	07 13 33.9	+0.7
ARQ	Araqi	5.05	139	P	Pn	07 13 36.2	+2.0
	SNR=13						
ARQ				S	Sn	07 14 32.5	-0.6
ICHK	Chekchek	5.21	14	*e*Pn	Pn	07 13 37.7	+1.2
KBAM	BAM	5.29	67	*e*Pn	Pn	07 13 38.5	+1.1
HOQ	Hoqain	5.38	131	P	Pn	07 13 40.7	+2.1
HOQ				S	Sn	07 14 40.5	-0.6
YZKH	Yazd	5.39	16	*e*Pn	Pn	07 13 40.4	+1.5
YZKH	Yazd	5.39	16	*e*Pn	Pn	07 13 40.4	+1.5
BSY	Bisya	5.91	138	P	Pn	07 13 48.1	+2.2
	SNR=12						
BSY				S	Sn	07 14 53.4	-0.7
ANAR	Anarak	6.03	7	*e*Pn	Pn	07 13 47.6	-0.1
WSAR	Wadi Sarin	6.52	126	Pn	Pn	07 13 55.6	+1.2
	comp=E,1.2nm,0.3s,baz=326,slow=8.5,SNR=14						
WSAR				Sn	Sn	07 15 06.8	-2.5
	comp=E,1.5nm,0.3s,baz=95,slow=12,SNR=5.3						
TPRV	Parvadeh(Tabas	6.69	29	*e*Pn	Pn	07 13 56.8	+0.1
KRSH	Karshahi	6.79	355	*e*Pn	Pn	07 13 59.2	+1.0
ISFB	Sefidab	7.16	356	*e*Pn	Pn	07 14 03.0	-0.2
ZHSF	Zahedan	7.36	69	*e*Pn	Pn	07 14 07.2	+1.2
ZHSF	Zahedan	7.36	69	*e*Pn	Pn	07 14 07.2	+1.2
TKDS	Koohdasht(Taba	7.38	29	*e*Pn	Pn	07 14 05.7	-0.5
TNSJ	Nastanj	7.48	25	*e*Pn	Pn	07 14 07.2	-0.4
MHTO	MHTO	7.72	142	P	Pn	07 14 12.7	+1.9
	SNR=9.2						
MHTO				S	Sn	07 15 37.5	-1.3
	SNR=7.4						
IGHG	Ghaleghazi	8.95	324	*e*Pn	Pn	07 14 27.7	-0.2
MMAI	Mount Meron Ar	16.20	295	Pn	Pn	07 16 05.7	-0.4
	baz=96,slow=13,SNR=1.5						
KBZ	Khabaz	18.38	337	P	Pn	07 16 34.4	+1.2
	comp=E,0.2nm,0.3s,baz=129,slow=7.9,SNR=5.0						
KBZ				LR	LR	07 24 36.7	
	comp=E,72nm,18.6s,baz=312,slow=40						
BRTR	Keskin Array B	20.30	313	P	P	07 16 54.0	-0.5
	comp=E,1.1nm,0.6s,baz=141,slow=12,SNR=5.6						
AB31	Akbulak array	22.70	12	P↑nn	P	07 17 11.0	-9.2
	comp=E,0.5nm,0.5s,baz=209,slow=12,SNR=6.0						
AB31				↓Lg	Lg	07 18 49.3	
	comp=E,1.7nm,0.6s,baz=359,slow=27

MG05 Puerto Natales 21.98 279 P P 07 43 47.8 -0.5
MG05 IAmb IAmb 07 44 00.9
comp=Z,83nm,1.3s
GO09 Cerro Castillo 22.17 280 P P 07 43 50.4 0.0
GO09 IAmb IAmb 07 44 07.7
comp=Z,94nm,1.4s
QSPA South Pole Qui 29.04 180 P P 07 44 57.7 +3.1
comp=Z,12nm,0.9s,baz=168,slow=3.6,SNR=35
QSPA PcP PcP 07 48 03.3 +1.1
comp=Z,4.8nm,1.1s,baz=158,slow=4.2,SNR=3.8
QSPA LR LR 07 55 48.9
comp=Z,193nm,20.0s,baz=184,slow=35
QSPA South Pole Qui 29.04 180 P P 07 44 55.5 +0.9
PLCA Paso Flores 29.29 298 P P 07 44 56.5 -0.4
comp=Z,1.1nm,0.8s,baz=134,slow=7.4,SNR=3.6
PLCA PcP PcP 07 48 03.4 +0.1
comp=Z,0.9nm,0.7s,baz=295,slow=4.8,SNR=4.1
PLCA LR LR 07 56 00.1
comp=Z,298nm,20.0s,baz=148,slow=35
PLCA Paso Flores 29.29 298 P P 07 44 55.6 -1.2
SYO Syowa Base 30.77 137 eP P 07 45 05.4 -4.1
SYO Syowa Base 30.77 137 esP sP 07 45 13.4 +0.7
PLTB Pedras Altas 31.60 331 eP P 07 45 17.1 -0.1
CPSB Cacapava Do Su 32.86 332 eP P 07 45 28.1 -0.1
ITQB Itaqui 34.35 327 eP P 07 45 40.8 -0.4
MT09 Talagante 35.41 305 P P 07 45 49.4 -1.1
MT09 IAmb IAmb 07 46 00.6
comp=Z,32nm,1.2s
ITAB Concordia 35.64 335 eP P 07 45 51.7 -0.6
VA05 Santo Domingo 35.77 304 P P 07 45 51.8 -1.7
PEL Peldehue 35.85 306 P P 07 45 53.6 -0.6
PEL IAmb IAmb 07 46 05.6
comp=Z,53nm,1.3s
MT02 Curacav 35.92 305 P P 07 45 54.4 -0.4
MT02 IAmb IAmb 07 46 05.8
comp=Z,27nm,0.9s
VA03 San Esteban 36.13 306 P P 07 45 56.3 -0.4
ZON Zonda 36.49 309 P P 07 45 59.4 -0.3
ZON IAmb IAmb 07 46 11.3
comp=Z,32nm,1.3s
TIJ01 Guaruva-PR 36.93 340 eP P 07 46 02.4 -1.1
CPUP Villa Florida 37.71 328 P P 07 46 09.2 -0.9
comp=Z,8.9nm,0.9s,baz=167,slow=8.8,SNR=20
CPUP LR LR 08 03 28.7
comp=Z,186nm,18.2s,baz=160,slow=39
CPUP Villa Florida 37.71 328 P P 07 46 09.4 -0.7
CPUP IAmb IAmb 07 46 21.2
comp=Z,34nm,1.1s
CPUP Villa Florida 37.71 328 eP P 07 46 10.0 0.0
CO03 El Pedregal 37.89 307 P P 07 46 11.5 -0.1
CO03 IAmb IAmb 07 46 22.9
comp=Z,36nm,1.2s
PTGB Pitanga 38.07 336 eP P 07 46 11.6 -1.6
PARB Paraibuna 38.40 346 eP P 07 46 16.1 +0.1
GO04 Tololo Observa 38.53 308 P P 07 46 16.1 -1.1
GO04 IAmb IAmb 07 46 28.1
comp=Z,34nm,1.1s
MAN01 Angra dos Reis 38.69 348 eP P 07 46 18.7 +0.3
MAW Mawson 38.81 143 P P 07 46 20.9 +2.0
comp=Z,5.6nm,0.9s,baz=240,slow=9.1,SNR=6.1
MAW PcP PcP 07 48 31.3 +1.6
comp=Z,5.8nm,1.0s,baz=241,slow=4.0,SNR=5.0
MAW Mawson 38.81 143 P P 07 46 20.0 +1.1
VAO Valinhos 38.91 344 eP P 07 46 20.7 +0.5
VAS01 Vassouras-RJ 39.22 349 eP P 07 46 23.7 +0.9
DUB01 Friburgo-RJ 39.33 351 eP P 07 46 24.7 +1.0
CAM01 Campos-RJ 39.53 352 eP P 07 46 26.1 +0.8
LCO Las Campanas 39.53 309 P P 07 46 24.7 -1.0
AC04 Llanos de Chal 40.40 309 P P 07 46 32.3 -0.2
SBA Scott Base 40.49 187 P P 07 46 34.2 +1.5
BSCB Bom Sucesso 40.62 347 eP P 07 46 34.4 -0.1
AC02 Maricunga 40.92 312 P P 07 46 37.3 -0.1
AC02 IAmb IAmb 07 46 49.4
comp=Z,48nm,1.1s
BB19B Bebedouro 41.03 342 eP P 07 46 36.7 -1.2
VNDA Vanda 41.09 186 P P 07 46 41.3 +3.6
comp=Z,5.4nm,1.0s,baz=195,slow=8.0,SNR=6.6
VNDA LR LR 08 02 27.0
comp=Z,53nm,22.0s,baz=178,slow=34
VNDA Vanda 41.09 186 P P 07 46 38.8 +1.1
RIB01 Linhares ES 41.95 354 eP P 07 46 45.5 +0.2
BSFB Barra de Sao F 42.45 353 eP P 07 46 48.7 -0.7
SJMB Sao Joao De Ma 42.60 353 eP P 07 46 51.1 +0.5
GO02 Mina Guanaco 42.61 312 P P 07 46 50.5 -0.5
GO02 IAmb IAmb 07 47 02.3
comp=Z,35nm,0.8s
ITRB Iturama 42.65 340 eP P 07 46 50.3 -0.8
AQDB Aquidauana 42.95 332 eP P 07 46 52.8 -0.7
NAN01 Guarapari, ES 43.40 354 eP P 07 46 56.8 -0.3
IPMB Ipameri, GO 44.02 343 eP P 07 47 01.2 -0.9
GUA01 Guaratinga, BA 44.63 355 eP P 07 47 07.2 +0.2
LVC Limon Verde 44.72 315 P P 07 47 08.6 +0.5
comp=Z,2.5nm,0.8s,baz=179,slow=11,SNR=3.6
LVC PcP PcP 07 48 50.8 +0.4
comp=Z,3.2nm,0.6s,baz=261,slow=3.1,SNR=2.6
LVC Limon Verde 44.72 315 P P 07 47 07.3 -0.8
LVC Limon Verde 44.72 315 eP P 07 47 06.7 -1.4
PP1B Ponte de Pedra 45.55 335 eP P 07 47 13.7 -0.7
BDFB Brasilia 46.29 344 P P 07 47 19.5 -0.8
comp=Z,1.9nm,0.4s,baz=156,slow=12,SNR=5.8
BDFB LR LR 08 04 56.1
comp=Z,91nm,19.8s,baz=129,slow=34
BDFB Brasilia 46.29 344 P P 07 47 19.3 -1.0
SUR Sutherland 46.37 78 P P 07 47 21.1 +0.3
comp=Z,14nm,0.8s,baz=206,slow=8.1,SNR=8.6
SUR Sutherland 46.37 78 P P 07 47 20.7 -0.2
SUR IAmb IAmb 07 47 23.5
comp=Z,21nm,0.9s
PB01 IPOC Station P 46.37 315 P P 07 47 20.5 -0.3
JANB Januaria 46.45 349 eP P 07 47 21.1 -0.4
ARAG Araguaiana, MT 46.81 339 eP P 07 47 23.1 -1.1
PB08 IPOC Station P 47.09 316 P P 07 47 26.7 -0.1
PB08 IAmb IAmb 07 47 38.9
comp=Z,23nm,1.2s
PSGCX Pisagua 47.92 315 P P 07 47 31.6 -1.4
PSGCX IAmb IAmb 07 47 44.1
comp=Z,21nm,1.3s
MNMC Minye Minye 48.18 316 P P 07 47 34.8 -0.4
PTLB Pontes e Lacer 48.59 330 eP P 07 47 36.8 -1.3
SDBA SAO DESIDERIO 49.13 349 eP P 07 47 41.6 -0.6
PEXB Peixe 49.81 344 eP P 07 47 46.3 -1.1
NBLA Lagarto - SE 50.13 358 eP P 07 47 49.3 -0.5
LPAZ La Paz 50.35 319 P P 07 47 51.8 -0.4
comp=Z,1.6nm,0.6s,baz=315,slow=7.8,SNR=7.4
LPAZ PcP PcP 07 49 11.0 +0.3
comp=Z,1.7nm,0.7s,baz=127,slow=5.1,SNR=2.1
LPAZ LR LR 08 10 08.5
comp=Z,82nm,19.6s,baz=154,slow=37
LPAZ La Paz 50.35 319 P P 07 47 51.8 -0.4
LPAZ La Paz 50.35 319 eP P 07 47 49.9 -2.3
SNDB Serra Nova Dou 50.38 341 eP P 07 47 50.9 -0.9
CASY Casey 50.47 163 P P 07 47 51.7 -0.1
CASY IAmb IAmb 07 47 56.9
comp=Z,47nm,1.3s
VILB Vilhena 51.26 329 eP P 07 47 57.3 -1.1
NBAN Anadia - AL 51.43 360 eP P 07 47 58.8 -0.8
BOSA Boshof 51.61 80 P P 07 48 01.3 +0.3
comp=Z,26nm,1.0s,baz=210,slow=8.4,SNR=17
BOSA LR LR 08 05 41.0
comp=Z,89nm,18.4s,baz=212,slow=31
BOSA Boshof 51.61 80 P P 07 48 01.6 +0.6
NBTA Tacaratu-PE 51.99 358 eP P 07 48 03.6 -0.2
SMTB Santa Maria do 52.92 346 eP P 07 48 09.9 -0.9
H10S2 ASCENSION HYDR 54.50 26 T T 08 47 08.0
baz=192,slow=74,SNR=110
H10S3 ASCENSION HYDR 54.50 26 T T 08 47 08.1
baz=28,slow=74,SNR=134
LBTB Lobatse 54.81 78 P P 07 48 24.5 -0.1
NBPB Pedra_Branca-C 55.59 356 eP P 07 48 30.2 0.0
H10N1 ASCENSION HYDR 55.62 26 T T 08 48 22.4
baz=192,slow=75,SNR=177
H10N3 ASCENSION HYDR 55.62 26 T T 08 48 28.7
baz=192,slow=75,SNR=265
H10N2 ASCENSION HYDR 55.63 26 T T 08 48 29.8
baz=192,slow=75,SNR=204
PRPB Parauapebas 55.86 343 eP P 07 48 31.0 -1.1
ETMB Extrema 55.87 323 eP P 07 48 32.0 -0.2
NPGB Novo Progresso 55.92 337 eP P 07 48 30.8 -1.7
NBPS Pedro II - PI 56.81 354 eP P 07 48 38.4 -0.5
ITTB Itaituba 58.60 337 eP P 07 48 50.1 -1.4
CZSB Cruzeiro do Su 59.86 317 eP P 07 48 59.2 -1.0
MALB Monte Alegre 60.79 339 eP P 07 49 05.3 -1.2
MACA Manacapuru-AM 60.81 332 eP P 07 49 05.1 -1.6
LSZ Lusaka 64.41 75 P P 07 49 31.5 +0.6
LSZ IAmb IAmb 07 49 32.7
comp=Z,24nm,1.1s
BOAV Boa Vista 66.16 333 eP P 07 49 40.4 -1.6
OTAV Otavalo 69.25 314 P P 07 50 01.1 -1.0
OTAV IAmb IAmb 07 50 15.5
comp=Z,29nm,1.4s
OTAV Otavalo 69.25 314 eP P 07 50 01.3 -0.8
DBIC Dimbokro 71.92 33 P P 07 50 17.8 0.0
comp=Z,11nm,1.0s,baz=164,slow=7.4,SNR=14
DBIC Dimbokro 71.92 33 P P 07 50 17.1 -0.7
DBIC IAmb IAmb 07 50 18.8
comp=Z,18nm,1.1s
KOWA Kowa 79.64 32 P P 07 51 01.6 -0.3
KOWA IAmb IAmb 07 51 03.7
comp=Z,28nm,1.4s
TOA0 Torodi Ar. Sit 79.92 37 P P 07 51 03.3 -0.1
TORD Torodi Ar. Bea 79.92 37 P P 07 51 03.8 +0.4
comp=Z,25nm,0.9s,baz=200,slow=6.1,SNR=77
TORD Torodi Ar. Bea 79.92 37 P P 07 51 02.7 -0.7
TORD IAmb IAmb 07 51 05.0
comp=Z,36nm,1.1s
KMBO Kilima Mbogo 81.03 76 P P 07 51 11.3 +1.5
comp=Z,1.3nm,0.5s,baz=207,slow=5.3,SNR=9.9
MORW Morawa 87.25 156 P P 07 51 39.3 -1.7
FORT Forrest 87.45 166 P P 07 51 43.7 +1.7
TAM Tamanrasset 90.16 38 P P 07 51 54.5 -0.3
TAM IAmb IAmb 07 51 58.2
comp=Z,22nm,1.4s
H08S1 Diego Carcia H 92.13 110 T T 09 35 11.4
baz=205,slow=76,SNR=3.8
H08S2 Diego Garcia H 92.14 110 T T 09 35 27.5
baz=205,slow=76,SNR=2.5
H08S3 Diego Garcia H 92.15 110 T T 09 35 12.7
baz=205,slow=76,SNR=4.9
ASAR Alice Springs 95.05 171 P P 07 52 18.1 +0.6
comp=Z,2.3nm,1.0s,baz=178,slow=4.3,SNR=12
ASAR Alice Springs 95.05 171 P P 07 52 16.9 -0.6
N60A Cedar Hill Far 106.55 330 P 07 57 20.8
baz=162
N59A State Game Lan 106.76 330 P 07 57 21.1
baz=161
WCI Wyandotte Cave 107.16 321 P 07 57 21.6
baz=157
P52A Corning 107.23 324 P 07 57 21.2
baz=159
K61A Williamstown 107.83 332 P 07 57 22.9
baz=162
L57A Andrews Acres 108.05 329 P 07 57 22.5
baz=161
AKASG Malin Array Be 123.13 44 PKPdf 07 57 49.3 -0.7
MNK Minsk 125.92 40 i PKP PKPdf 07 57 54.5 -0.7
comp=E,5.0nm,1.1s
MNK i PKP PKPdf 07 57 54.5 -0.7
comp=N,22nm,0.7s
MNK i PKP PKPdf 07 57 54.5 -0.7
comp=Z,9.0nm,0.8s
MNK i PP PP 07 59 48.9 -0.6
MNK i PKS PKSdf 08 01 36.7 +5.3
MNK i PPP PPP 08 02 28.7
MNK i SKS SKSdf 08 05 22.5 +16
MNK i PS PS 08 09 30.0 -20
MNK i SS SS 08 16 50.4 0.0
MNK i SSS SSS 08 21 29.2
MNK i LQ LQ 08 45 32.8
MNK i LR LR 08 48 21.0
MNK i LRM MLR 08 51 55.2
comp=N,780nm,23.1s
MNK i LRM MLR 08 52 00.9
comp=Z,340nm,26.1s
MNK i LRM MLR 08 52 12.5
comp=E,32nm,17.4s
CMAR Chiang Mai Arr 126.91 123 PKP PKiKP 07 57 58.9 +0.1
comp=E,3.5nm,0.9s,baz=236,slow=3.6,SNR=20
NOA NORSAR Array B 127.19 27 PKP PKPdf 07 57 57.5 0.0
comp=E,1.3nm,0.8s,baz=204,slow=1.9,SNR=3.0
CHTO Chiang Mai 127.23 123 PKPdf 07 57 58.8 -0.1
FCC Fort Churchill 127.80 326 PKPdf 07 57 57.5 -1.1
CHGR Chuyangaron 130.09 81 PKPdf 07 58 04.3 +0.4
FINES FINESS Array B 131.20 34 PKP PKPdf 07 58 05.4 +0.4
comp=E,3.7nm,0.9s,baz=220,slow=1.5,SNR=6.5
ABKAR Akbulak array 133.97 65 PKPdf 07 58 10.1 -0.5
KSH Kashi 134.04 86 PKP PKiKP 07 58 12.8 +0.1
KSH PP PP 08 00 47.8 +5.2
KSH AMB AMB
comp=E,170nm,6.9s
KKAR Karatay Array 134.19 78 PKPdf 07 58 10.7 -0.6
KMI Kunming 134.42 123 ePKP PKPdf 07 58 11.0 -1.6
KMI LR LR
comp=E,310nm,19.7s
KMI LR LR
comp=E,450nm,28.1s
KMI LR LR
comp=E,540nm,27.3s
AAK Ala-Archa 135.74 82 PKPdf 07 58 14.1 -0.4
YKA Yellowknife Ar 136.89 318 PKP PKPdf 07 58 15.3 -0.4
comp=E,2.5nm,0.8s,baz=132,slow=2.6,SNR=22
YKA PP PP 08 00 59.2 -0.9
comp=E,0.3nm,0.9s,baz=129,slow=6.4,SNR=4.5
ARCES ARCESS Array B 137.56 27 PKP PKPdf 07 58 16.6 -0.1
comp=E,1.5nm,0.7s,baz=298,slow=2.6,SNR=5.3
ARCES ARCESS Array B 137.56 27 PKPdf 07 58 17.4 +0.7
CD2 Chengdu 139.94 121 PKP PKPdf 07 58 22.3 -0.1
SIT Sitka 140.82 301 P 07 58 24.0
baz=131
MK31 Makanchi Array 142.55 84 PKPdf 07 58 27.3 +0.7
MKAR Makanchi Array 142.55 84 PKhKP PKPpre 07 58 22.4
comp=E,3.1nm,0.7s,baz=240,slow=2.1,SNR=31
WMQ Urumqi 143.00 92 ePKP PKPdf 07 58 29.3 +1.8
WMQ pPKP sPKPdf 07 58 33.0 +2.3
WMQ LR LR
comp=E,790nm,29.0s
LZH Lanzhou 144.42 116 ePKP PKPdf 07 58 30.8 +0.4
LZH pPKP PKiKP 07 58 34.6 +0.6
LZH sPKP 07 58 38.8
LZH LR LR
comp=E,450nm,17.9s
LZH LR LR
comp=E,570nm,20.7s
PINM Pinnacle 144.74 303 P 07 58 29.5
baz=126
PCA Pinnacle 144.74 303 PKPab 07 58 28.8 -0.2
XAN Xi'an 144.78 124 PKP PKPdf 07 58 30.9 0.0
XAN Xi'an 144.78 124 PKPdf 07 58 31.2 +0.2
GTA Gaotai 145.35 109 PKPbc PKPab 07 58 33.3 +1.4
GTA LR LR
comp=E,440nm,20.7s
GTA LR LR
comp=E,2μm,20.4s
LOGN Logan Glacier 145.46 303 PKPab 07 58 31.6 -0.1
YAH Yahtse 145.50 302 PKPab 07 58 32.1 +0.2
CTGM Chitina Glacie 145.67 303 PKPdf 07 58 31.3 -0.4
CTG Chitna Glacier 145.68 303 P 07 58 32.2
baz=124
GRNC Granite Creek 145.71 303 PKPdf 07 58 31.5 -0.3
BARN Barnard Glacie 145.86 303 PKPdf 07 58 32.2 +0.1
CRQE Cirque 146.27 302 P 07 58 33.8
baz=123
NJ2 Nanjing 146.58 139 ePKPbc PKPdf 07 58 34.8 +0.8
MCARA McCarthy VSAT 146.59 303 P 07 58 34.4
baz=123
MCARA McCarthy VSAT 146.59 303 PKPdf 07 58 32.6 -0.5
DAWY Dawson 146.59 309 PKPdf 07 58 33.2 +0.2
INK Inuvik 146.66 318 PKPdf PKPdf 07 58 33.3 +0.4
VRDI Verde Repeater 146.68 303 PKPdf PKPbc 07 58 34.5 -0.7
EPYK Eagle Plains 146.79 314 P 07 58 34.3
baz=120
EPYK Eagle Plains 146.79 314 PKPdf PKPdf 07 58 34.0 +0.7
GLB Gilahina Butte 146.94 303 PKPdf PKPbc 07 58 34.9 -0.8
BCAR Beaver Creek A 146.99 306 PKPdf 07 58 33.0 -0.7
BMRM Bremner River 147.01 302 P 07 58 36.0
baz=122
BMRM Bremner River 147.01 302 PKPdf PKPdf 07 58 34.4 +0.5
EYAK Cordova Ski Ar 147.26 301 P 07 58 36.6
baz=122
EYAK Cordova Ski Ar 147.26 301 PKPdf 07 58 33.1 -1.1
N25K Chitina, Valde 147.34 303 P 07 58 37.0
baz=122
N25K Chitina, Valde 147.35 303 PKPdf 07 58 34.0 -0.4
HIN Hinchinbrook I 147.49 300 PKPbc 07 58 37.1 -0.1
K27K Chicken 147.59 308 P 07 58 37.5
baz=120
K27K Chicken 147.59 308 PKPbc 07 58 37.3 -0.1
EGAK Eagle 147.61 309 P 07 58 36.9
baz=119
EGAK Eagle 147.61 309 PKPdf 07 58 34.7 +0.1
FID Port Fidalgo 147.67 301 PKPbc 07 58 37.5 -0.2
MENT Mentasta 147.68 305 PKPbc 07 58 37.6 -0.1
KLU Klutina 147.83 302 P 07 58 38.2
baz=121,SNR=12
KLU Klutina 147.83 302 PKPbc 07 58 38.5 +0.3
GLI Glacier Island 147.99 301 P 07 58 38.6
baz=121
DOT Dot Lake 148.17 306 PKPbc 07 58 38.6 -0.3
M24K Tolsona, Glenn 148.25 303 P 07 58 40.1
baz=120,SNR=11
M24K Tolsona, Glenn 148.25 303 PKPbc 07 58 39.4 +0.2
SCRK Sand Creek 148.30 307 P 07 58 39.4
baz=119
SCRK Sand Creek 148.30 307 PKPbc 07 58 38.4 -1.0
PAX Paxson 148.39 305 P 07 58 39.4
baz=119,SNR=10
PAX Paxson 148.39 305 PKPbc 07 58 38.8 -0.9
PWL Port Wells 148.50 300 PKPbc 07 58 39.4 -0.5
ZAA0 Zalesovo Array 148.51 76 PKPdf PKPdf 07 58 36.2 -0.2
ZALV Zalesovo Beam 148.51 76 PKPbc PKPbc 07 58 39.8 -0.3
comp=E,9.5nm,0.7s,baz=246,slow=3.6,SNR=36
ZALV Zalesovo Beam 148.51 76 PKPbc 07 58 39.4 -0.7
SCM Sheep Creek Mo 148.58 302 PKPdf 07 58 36.5 +0.1
OHAK Old Harbor 148.71 291 P 07 58 40.7
baz=124
KNK Knik Glacier 148.84 301 P 07 58 40.7
baz=120
BRSE Bradley Lake S 148.95 297 P 07 58 41.2
baz=121
SML Sawmill 148.98 301 P 07 58 40.9
baz=120,SNR=5.6
SML Sawmill 148.98 301 PKPbc 07 58 40.6 -0.5
WAT6 Susitna Watana 149.12 303 P 07 58 41.5
baz=119
PMR Palmer 149.20 301 P 07 58 41.3
baz=119
PMR Palmer 149.21 301 PKPbc 07 58 41.0 -0.6
GHO Glory Hole Cre 149.21 301 PKPbc 07 58 40.6 -1.2
RC01 Rabbit Creek A 149.21 300 P 07 58 41.5
baz=120
PRP Porcupine Dome 149.59 309 P 07 58 42.6
baz=116
PRP Porcupine Dome 149.59 309 PKPbc 07 58 42.0 -0.6
WAT2 Susitna Watana 149.64 303 P 07 58 42.1
baz=118
HDA Harding Lake 149.65 307 P 07 58 42.4
baz=116
HDA P 07 58 42.4
baz=116
IL31 149.79 307 PKPbc 07 58 41.9 -1.0
ILAR Eielson Array 149.79 307 PKPbc PKPbc 07 58 42.6 -0.3
comp=E,9.7nm,0.8s,baz=154,slow=1.9,SNR=67
ILAR Eielson Array 149.79 307 PKPbc 07 58 41.7 -1.3
TIA Tai'an 149.80 134 PKPbc PKiKP 07 58 45.0 +0.1
SUA Susitna One 149.82 300 P 07 58 43.5
baz=119
FYU Fort Yukon 149.93 311 PKPbc 07 58 42.8 -0.5
FYU PKPab PKPab 07 58 49.6 +0.6
RND Reindeer 149.95 304 PKPbc 07 58 42.6 -0.9
CCB Clear Creek Bu 150.09 307 PKPbc 07 58 42.8 -0.9
WRH Wood River Hil 150.12 306 PKPbc 07 58 43.1 -0.7
MCK McKinley 150.13 305 P 07 58 43.8
baz=116,SNR=6.3
MCK McKinley 150.13 305 PKPbc 07 58 43.1 -0.8
POKR Poker Plat Res 150.15 308 P 07 58 43.4
baz=115
POKR Poker Plat Res 150.15 308 PKPbc 07 58 43.1 -0.7
POKR PKPab PKPab 07 58 49.7 -0.3
COLA College 150.20 307 P 07 58 43.5
baz=115
COLA College 150.20 307 PKPbc 07 58 43.5 -0.4
COLA PKPab PKPab 07 58 50.0 -0.2
TCOL CIGO, UAF Yank 150.21 307 P 07 58 43.5
baz=115,SNR=6.9
TCOL CIGO, UAF Yank 150.21 307 PKPbc 07 58 43.2 -0.7
TCOL PKPab PKPab 07 58 50.0 -0.2
SPCR Spurr Chakacha 150.31 299 P 07 58 44.2
baz=118
MDM Murphy Dome 150.39 307 PKPbc 07 58 43.3 -1.2
SKT Skwentna 150.39 300 P 07 58 44.1
baz=118,SNR=15
SKT Skwentna 150.39 300 PKPbc 07 58 43.9 -0.6
BWN Browne 150.53 305 PKPbc 07 58 44.5 -0.2
TRF Thorofare Moun 150.55 304 PKPbc 07 58 44.6 -0.5
TRF Thorofare Moun 150.55 304 P 07 58 44.7
baz=116,SNR=6.7
NEA2 Nenana 150.56 306 P 07 58 44.2
baz=115,SNR=12
NEA2 Nenana 150.56 306 PKPbc 07 58 43.5 -1.3
BTO Baotou 150.85 119 ePKPbc PKPbc 07 58 46.8 +0.4
BTO SS SS 08 21 48.4 +3.4
KTH Kantishna Hill 150.85 303 PKPbc 07 58 45.5 -0.1
I23K Minto, Yukon-K 150.90 307 P 07 58 45.1
baz=114
I23K Minto, Yukon-K 150.90 307 PKPbc 07 58 44.3 -1.3
SDPT Sand Point 150.97 284 P 07 58 45.4
baz=124
PPLA Purkeypile 151.08 302 P 07 58 45.6
baz=116,SNR=6.8
PPLA Purkeypile 151.08 302 PKPbc 07 58 46.1 -0.2
BPAW Bear Paw Mtn. 151.11 304 P 07 58 45.8
baz=114,SNR=11
BPAW Bear Paw Mtn. 151.11 304 PKPbc 07 58 45.7 -0.5
MLY Manley 151.39 306 PKPbc 07 58 46.3 -0.5
MLY Manley 151.39 306 P 07 58 47.2
baz=113
CHUM Lake Minchumin 151.55 304 P 07 58 47.2
baz=114
HHC Hu-ho-hao-te 151.70 121 ePKPbc PKPdf 07 58 44.1 +2.0
COLD Coldfoot 151.99 311 P 07 58 48.5
baz=110
COLD Coldfoot 151.99 311 PKPbc 07 58 48.1 0.0
TOLK Toolik Lake Re 152.22 314 P 07 58 48.6
baz=108
TOLK Toolik Lake Re 152.22 314 PKPbc 07 58 48.4 -0.2
IMAR Indian Mountai 152.91 307 PKPbc 07 58 50.1 -0.1
IMAR PKPab PKPab 07 58 59.7 -1.8
KSRS Korea Array 154.20 150 PKPab PKPab 07 59 09.8 +2.2
comp=E,1.0nm,0.4s,baz=196,slow=3.6,SNR=4.5
SONM Songino Array 154.87 105 PKPbc PKPbc 07 58 54.6 -0.6
comp=E,2.1nm,0.9s,baz=208,slow=2.3,SNR=5.5
SONM PKPab PKPab 07 59 11.4 +0.8
comp=E,4.5nm,0.9s,baz=243,slow=4.5,SNR=7.3
SONM Songino Array 154.87 105 PKiKP 07 58 55.6 +0.4
SONM PKPab PKPab 07 59 10.9 +0.4
MJAR Matsushiro Arr 155.06 169 PKPab PKPab 07 59 12.5 +1.0
comp=E,0.8nm,0.3s,baz=206,slow=5.1,SNR=4.8
ULN Ulaanbaatar 155.20 106 PKPab PKPab 07 59 12.2 +0.2
NRIK Noril'sk 155.95 46 PKPab PKPab 07 59 15.2 +0.8
comp=E,2.5nm,0.7s,baz=232,slow=2.6,SNR=5.8
NRIK Noril'sk 155.95 46 PKPab 07 59 15.4 +1.0
USRK Ussuriysk Ar. 161.56 152 PKPab PKPab 07 59 42.1 +2.8
comp=E,0.7nm,0.4s,baz=204,slow=4.2,SNR=6.2
USRK Ussuriysk Ar. 161.56 152 PKPab PKPab 07 59 40.6 +1.3

NEIC ***14*** *08:00:00.7±1.6, 34°.37N±0°.06, 26°.56E±0°.07, h12km±4km, Error ellipse: s-maj=9.0km s-min=7.8km az=152.0*
MOS ***14*** *08:00:00.1±1.2, 34°.40N, 26°.51E, h15km, mb5.0/66, Error ellipse: s-maj=4.3km s-min=2.4km az=96.4*
NIC ***14*** *08:00:01.4±0.0, 34°.31N, 26°.45E, h52km±11km, Ml4.6/5*
DDA ***14*** *08:00:02.7, 34°.63N, 26°.65E, h14km±4km, MW4.3*
ATH ***14*** *08:00:02.7, 34°.43N, 26°.67E, h9km±3km, ML4.1/9, Error ellipse: s-maj=3.2km s-min=1.3km az=13.0*
BJI ***14*** *08:00:02.1±0.0, 34°.58N, 26°.54E, h25km, mB5.1/27, mb4.9/45, Ms4.9/9, Ms7 4.5/6*
HLW ***14*** *08:00:03.8, 34°.55N, 26°.77E, h26km±13km, Md4.3, Ml4.6*
ISK ***14*** *08:00:03.7, 34°.67N, 26°.74E, h8km, ML4.3/41*
IDC ***14*** *08:00:05.8±0.7, 34°.68N, 26°.46E, h34km±4km, mb4.4/27, mb1 4.5/37, mb1mx4.4/44, mbtmp4.6/37, ML4.1/10, MS3.7/9, Ms1 3.7/9, ms1mx3.4/45, Error ellipse: s-maj=13.0km s-min=9.4km az=170.0*
THE ***14*** *08:00:06.1, 34°.68N, 26°.60E, h0km, ML4.1/6, Error ellipse: s-maj=2.1km s-min=0.8km az=163.0*
MED_RC ***14*** *08:00:07.0±0.3, 34°.54N, 26°.58E, h24km±2km, MW4.5/19, Moment Tensor Solution. Mantle waves: s19,c27; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr0.17±.11; Mθθ-0.81±.07; Mφφ0.64±.06; Mrθ0.25±.08; Mθφ-0.16±.06; Mrφ0.02±.07; Best double couple: M0 0.77000×10^16 NP1:φs218.00000°, δ80.00000°, λ-9.00000°. NP2:φs310.00000°, δ81.00000°,*

λ-170.00000°. Principal axes: T 0.6500, Plg1.0000°, Azm84.0000°; N 0.2300, Plg77.0000°, Azm350.0000°; P -0.8900, Plg13.0000°, Azm174.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.

ISC 14 08:00:04.1±0.5,**34°49N**±0.03,**26°51E**±0.02,**h28**km±3km, **h27**km:**pP-P**, **n715**,σ1=**39**/773, **mb4.8**/169, **MS3.9**/11, **114C-70D**, **Fault plane solution: NP1**:Φ±122.66137°, δ85.10322°, λ161.01387°. **NP2**:Φ±214.34361°, δ71.08581°, λ5.17702°. **Principal axes:** T Plg16.8322°, Azm76.9735°; N Plg70.4151°, Azm288.7276°; P Plg9.7210°, Azm169.9443°; **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
ZKR	**Zakros**	**0.70**	**333**	P	**Pb**	**08 00 16.9**	**-1.0**
ZKR				S	**Sn**	**08 00 28.5**	**+0.3**
ZKR				AML	AML	08 00 37.4	
	comp=E,68767μm,0.8s						
ZKR				AML	AML	08 00 37.4	
	comp=N,20693μm,0.6s						
ZKR	**Zakros**	**0.70**	**333**	P	**Pb**	**08 00 16.8**	**-1.0**
ZKR				S	**Sb**	**08 00 26.4**	**-0.8**
	comp=N,23μm,0.7s						
ZKR	**Zakros**	**0.70**	**333**	PG	**Pb**	**08 00 16.2**	**-1.7**
ZKR				SG	**Sb**	**08 00 25.0**	**-2.2**
ZKR	**Zakros**	**0.70**	**333**	P	**Pb**	**08 00 16.8**	**-1.1**
ZKR				S	**Sn**	**08 00 29.1**	**+0.9**
ZKR				AML	AML	08 00 35.8	
	comp=N,66nm,0.8s						
ZKR				AML	AML	08 00 35.8	
	comp=N,66nm,0.8s						
ZKR				AML	AML	08 00 36.0	
	comp=N,20nm,0.6s						
ZKR				AML	AML	08 00 36.0	
	comp=N,20nm,0.6s						
STIA	**Sitia Lasithi**	**0.83**	**329**	P	**Pb**	**08 00 19.1**	**-0.9**
FRMA	**Ierapetra Chan**	**0.89**	**306**	P	**Pn**	**08 00 19.2**	**-1.7**
FRMA				S	**Sb**	**08 00 32.0**	**-0.6**
NPS	**Neapolis**	**1.13**	**313**	P	**Pb**	**08 00 25.1**	**0.0**
NPS				S	**Sb**	**08 00 40.9**	**+1.6**
NPS				AML	AML	08 00 52.0	
	comp=N,13486μm,0.7s						
NPS				AML	AML	08 01 01.0	
	comp=E,18484μm,0.8s						
NPS	**Neapolis**	**1.13**	**313**	P	**Pb**	**08 00 24.8**	**-0.2**
NPS				S	**Sb**	**08 00 40.0**	**+0.7**
	comp=E,9μm,0.8s						
NPS	**Neapolis**	**1.13**	**313**	P	**Pb**	**08 00 25.0**	**0.0**
NPS				S	**Sb**	**08 00 40.9**	**+1.6**
KARP	**Karpathos**	**1.15**	**23**	P	**Pb**	**08 00 25.1**	**-0.3**
KARP				S	**Sb**	**08 00 40.4**	**+0.5**
KARP				AML	AML	08 00 53.2	
	comp=N,28287μm,0.9s						
KARP				AML	AML	08 00 53.5	
	comp=E,25794μm,0.7s						
KARP	**Karpathos**	**1.15**	**23**	P	**Pb**	**08 00 24.9**	**-0.5**
KARP				S	**Sn**	**08 00 39.3**	**+0.1**
	comp=E,13μm,0.8s						
KARP	**Karpathos**	**1.15**	**23**		**Pb**	**08 00 25.6**	**+0.3**
KARP	**Karpathos**	**1.15**	**23**	⇑P	**Pb**	**08 00 25.0**	**-0.3**
KARP				S	**Sb**	**08 00 42.7**	**+2.8**
KARP				AML	AML	08 00 52.8	
	comp=E,26nm,0.7s						
KARP				AML	AML	08 00 52.8	
	comp=E,26nm,0.7s						
KARP				AML	AML	08 00 52.9	
	comp=E,29nm,0.9s						
KARP				AML	AML	08 00 52.9	
	comp=E,29nm,0.9s						
HRKL	**Herakleio**	**1.49**	**304**	PN	**Pb**	**08 00 31.7**	**+0.6**
IACM	**Heraklion**	**1.51**	**303**	P	**Pb**	**08 00 32.6**	**+1.2**
SIVA	**Sivas**	**1.57**	**290**	P	**Pb**	**08 00 32.8**	**+0.2**
SIVA				S	**Sb**	**08 00 54.2**	**+2.1**
SIVA				AML	AML	08 01 02.2	
	comp=E,10644μm,0.7s						
SIVA				AML	AML	08 01 10.9	
	comp=N,11709μm,0.6s						
SIVA	**Sivas**	**1.57**	**290**	P	**Pb**	**08 00 32.8**	**+0.2**
SIVA				S	**Sb**	**08 00 54.4**	**+2.3**
	comp=N,6μm,0.6s						
IDI	**Anoyia**	**1.62**	**300**	Pg	**Pb**	**08 00 32.6**	**-0.9**
	comp=N,60nm,0.3s,baz=127,slow=15,SNR=178						
IDI				Lg	Lg	08 00 55.9	
	comp=N,132nm,0.3s,baz=28,slow=17,SNR=5.1						
IDI	**Anoyia**	**1.62**	**300**	P	**Pb**	**08 00 33.4**	**-0.1**
IDI				S	**Sb**	**08 00 55.2**	**+1.6**
IDI				AML	AML	08 01 13.0	
	comp=E,2931μm,0.8s						
IDI				AML	AML	08 01 16.0	
	comp=N,4868μm,1.0s						
IDI	**Anoyia**	**1.62**	**300**	P	**Pb**	**08 00 33.0**	**-0.5**
IDI				S	**Sb**	**08 00 55.0**	**+1.4**
IDI	**Anoyia**	**1.62**	**300**	⇑P	**Pb**	**08 00 34.5**	**+1.1**
IDI	**Anoyia**	**1.62**	**300**	PN	**Pb**	**08 00 33.6**	**+0.1**
IDI	**Anoyia**	**1.62**	**300**		**Pn**	**08 00 30.6**	**-0.4**
TMBK	**Timbaki Herakl**	**1.63**	**291**	P	**Pb**	**08 00 34.3**	**+0.8**
TMBK				S	**Sb**	**08 00 55.6**	**+2.0**
PRNS	**Prines Rethymn**	**1.94**	**297**	P	**Pb**	**08 00 39.2**	**+0.4**
PRNS				S	**Sb**	**08 01 03.5**	**+0.9**
SANT	**Santorini**	**2.10**	**334**	P	**Pb**	**08 00 39.8**	**-1.8**
SANT	**Santorini**	**2.10**	**334**	P	**Pn**	**08 00 38.9**	**+1.4**
SANT	**Santorini**	**2.10**	**334**	⇑*i*P	**Pn**	**08 00 38.8**	**+1.4**
SANT				*i*S	Sb	08 01 19.0	+12
SANT	**Santorini**	**2.10**	**334**	PN	**Pn**	**08 00 38.6**	**+1.1**
SANT	**Santorini**	**2.10**	**334**		**Pn**	**08 00 37.7**	**+0.2**
GVDS	**Gavdos**	**2.11**	**280**	P	**Pb**	**08 00 40.9**	**-0.8**
GVDS	**Gavdos**	**2.11**	**280**	PN	**Pb**	**08 00 41.1**	**-0.6**
GVD	**Gavdhos**	**2.11**	**280**	P	**Pb**	**08 00 41.2**	**-0.5**
GVD				S	**Sb**	**08 01 09.6**	**+2.2**
GVD				AML	AML	08 01 24.4	
	comp=E,4236μm,0.8s						
GVD				AML	AML	08 01 26.0	
	comp=N,3932μm,0.5s						
GVD	**Gavdhos**	**2.11**	**280**	P	**Pb**	**08 00 40.8**	**-0.9**
GVD	**Gavdhos**	**2.11**	**280**	PN	**Pb**	**08 00 40.9**	**-0.8**
THR6	**Thira Island,**	**2.11**	**332**	P	**Pn**	**08 00 39.5**	**+1.9**
ARG	**Arkhangelos**	**2.12**	**35**	P	**Pb**	**08 00 40.6**	**-1.3**
ARG				S	**Sb**	**08 01 08.8**	**+1.0**
ARG				AML	AML	08 01 28.4	
	comp=N,4190μm,1.0s						
ARG				AML	AML	08 01 31.5	
	comp=E,3482μm,0.6s						
ARG	**Arkhangelos**	**2.12**	**35**	P	**Pb**	**08 00 40.6**	**-1.3**
ARG				S	**Sb**	**08 01 05.9**	**-1.9**
	comp=E,2μm,1.2s						
ARG	**Arkhangelos**	**2.12**	**35**	P	**Pb**	**08 00 40.5**	**-1.4**
ARG				S	**Sb**	**08 01 06.5**	**-1.3**
ARG	**Arkhangelos**	**2.12**	**35**	PN	**Pn**	**08 00 38.0**	**+0.2**
THR9	**Santorini-Faro**	**2.13**	**332**	P	**Pn**	**08 00 39.3**	**+1.5**
SNT5	**Nea Kammeni, S**	**2.15**	**333**	P	**Pn**	**08 00 39.3**	**+1.1**
THR3	**Thira Island,**	**2.15**	**333**	P	**Pn**	**08 00 40.0**	**+1.8**
NIS1	**Nisyros Isl.**	**2.16**	**12**	P	**Pn**	**08 00 40.0**	**+1.7**
NIS1	**Nisyros Isl.**	**2.16**	**12**	PN	**Pn**	**08 00 37.7**	**-0.6**
THT2	**Imerovigli**	**2.17**	**334**	PN	**Pn**	**08 00 39.8**	**+1.3**
THR5	**Thira Island,**	**2.18**	**332**	P	**Pn**	**08 00 40.3**	**+1.7**
VAM	**Vamos**	**2.18**	**295**	P	**Pb**	**08 00 42.2**	**-0.7**
VAM				S	**Sb**	**08 01 12.0**	**+2.4**
VAM				AML	AML	08 01 33.7	
	comp=E,2489μm,0.7s						
VAM				AML	AML	08 01 35.4	
	comp=N,4924μm,0.9s						
VAM	**Vamos**	**2.18**	**295**	P	**Pb**	**08 00 42.2**	**-0.7**
KOSK	**Kos Island**	**2.28**	**7**	P	**Pn**	**08 00 41.4**	**+1.5**
KOSK	**Kos Island**	**2.28**	**7**	PN	**Pn**	**08 00 39.6**	**-0.3**
IMMV	**Iera Moni Meta**	**2.37**	**295**	P	**Pb**	**08 00 44.9**	**-1.1**
IMMV				S	**Sb**	**08 01 17.3**	**+2.4**
IMMV				AML	AML	08 01 34.4	
	comp=N,2980μm,1.0s						
IMMV				AML	AML	08 01 41.8	
	comp=E,4224μm,0.9s						
IMMV	**Iera Moni Meta**	**2.37**	**295**	P	**Pb**	**08 00 44.7**	**-1.4**
IMMV	**Iera Moni Meta**	**2.37**	**295**	PN	**Pb**	**08 00 45.0**	**-1.1**
KNDR	**Palaiochora Ch**	**2.52**	**288**	PN	**Pb**	**08 00 46.9**	**-1.7**
BODT	**Bodrum**	**2.63**	**12**	P	**Pn**	**08 00 45.2**	**+0.4**
BODT	**Bodrum**	**2.63**	**12**	PN	**Pn**	**08 00 44.7**	**-0.1**
TURN	**Turunc**	**2.64**	**30**	⇑*i*P	**Pn**	**08 00 46.5**	**+1.6**
TURN				*i*S	Sb	08 01 33.4	+11
TURN	**Turunc**	**2.64**	**30**	PN	**Pn**	**08 00 44.7**	**-0.2**
BDRM	**Kayabasi**	**2.66**	**15**	*i*P	**Pn**	**08 00 46.4**	**+1.2**
BDRM				*i*S	Sb	08 01 35.7	+12
APE	**Apeiranthos**	**2.72**	**341**	P	**Pn**	**08 00 47.4**	**+1.4**
APE				S	**Sn**	**08 01 19.3**	**+1.2**
APE	**Apeiranthos**	**2.72**	**341**	⇑P	**Pn**	**08 00 47.3**	**+1.2**
APE				⇓S	**Sn**	**08 01 20.3**	**+2.2**
APE	**Apeiranthos**	**2.72**	**341**	⇑*i*P	**Pn**	**08 00 47.2**	**+1.2**
APE				*i*S	**Sn**	**08 01 20.9**	**+2.8**
APE	**Apeiranthos**	**2.72**	**341**	*i*P	**Pn**	**08 00 47.7**	**+1.7**
APE	**Apeiranthos**	**2.72**	**341**	PN	**Pn**	**08 00 47.0**	**+1.0**
MHLO	**Agia Marina, M**	**2.84**	**321**	P	**Pn**	**08 00 49.9**	**+2.3**
DALY	**Dalyan (Mula)**	**2.86**	**35**	*i*P	**Pn**	**08 00 49.0**	**+1.1**
DALY				*i*S	Sb	08 01 44.1	+15
DALY	**Dalyan (Mula)**	**2.86**	**35**	PN	**Pn**	**08 00 47.9**	**+0.1**
FETY	**Fethiye**	**2.94**	**43**	P	**Pn**	**08 00 49.6**	**+0.5**
FETY	**Fethiye**	**2.94**	**43**	PN	**Pn**	**08 00 49.5**	**+0.5**
KSL	**Kastellorizon**	**2.94**	**55**	P	**Pn**	**08 00 50.5**	**+1.5**
KSL	**Kastellorizon**	**2.94**	**55**	P	**Pn**	**08 00 50.0**	**+1.0**
KSL				S	**Sn**	**08 01 26.3**	**+2.9**
YER	**Yerkesik**	**2.97**	**27**	P	**Pn**	**08 00 51.3**	**+1.8**
YER	**Yerkesik**	**2.97**	**27**	P	**Pn**	**08 00 51.3**	**+1.8**
YER	**Yerkesik**	**2.97**	**27**	PN	**Pn**	**08 00 50.4**	**+0.9**
AKAS	**Kas**	**3.00**	**54**	⇑*i*P	**Pn**	**08 00 50.2**	**+0.2**
AKAS				*i*S	**Sn**	**08 01 26.4**	**+1.3**
AKAS	**Kas**	**3.00**	**54**	PN	**Pn**	**08 00 50.4**	**+0.4**
AKAS				SN	**Sn**	**08 01 24.3**	**-0.8**
AKAS	**Kas**	**3.00**	**54**	Pn	**Pn**	**08 00 49.9**	**-0.1**
DDIM	**Aydin, Didim**	**3.00**	**10**	*i*P	**Pn**	**08 00 50.9**	**+1.0**
DDIM				*i*S	Sb	08 01 46.1	+13
ANKY	**Antikythira Is**	**3.04**	**298**	P	**Pn**	**08 00 52.6**	**+2.2**
ANKY				S	**Sb**	**08 01 30.0**	**-4.2**
	comp=E,1μm,0.7s						
MULA	**Mugla, Merkez-**	**3.09**	**26**	*i*P	**Pn**	**08 00 52.8**	**+1.6**
MULA				*i*S	Sb	08 01 45.4	+10
MATC	**Matruh**	**3.18**	**170**	P	**Pn**	**08 00 53.1**	**+0.8**
	baz=172						
MATC				AMP		08 01 00.0	
	baz=172						
SLUM	**Salum**	**3.21**	**202**	P	**Pn**	**08 00 54.0**	**+1.2**
	baz=204						
SLUM				S	**Sn**	**08 01 30.1**	**-0.1**
	baz=204						
AYDN	**Tasoluk**	**3.33**	**18**	⇑*i*P	**Pn**	**08 00 56.1**	**+1.7**
AYDN				*i*S	Sb	08 01 56.4	+14
KTHA	**Kythira Island**	**3.39**	**302**	P	**Pn**	**08 00 56.8**	**+1.5**
CAEL	**Denizli, Camel**	**3.43**	**39**	⇑*i*P	**Pn**	**08 00 57.8**	**+1.9**
CAEL				*i*S	Sb	08 02 08.2	+23
KTHR	**Kythira**	**3.44**	**302**	P	**Pn**	**08 00 57.7**	**+1.8**
ELL	**Elmali**	**3.50**	**49**	P	**Pn**	**08 00 57.4**	**+0.5**
ELL	**Elmali**	**3.50**	**49**		**Pn**	**08 00 57.4**	**+0.5**
AKUM	**Antalya-Kumluc**	**3.55**	**58**	⇑*i*P	**Pn**	**08 00 58.5**	**+1.1**
AKUM				*i*S	Sb	08 02 27.2	+38
AYDB	**Zeytinkoy-Aydi**	**3.60**	**16**	PN	**Pn**	**08 00 59.2**	**+1.0**
GOLH	**Golhisar**	**3.64**	**40**	⇑*i*P	**Pn**	**08 01 01.1**	**+2.3**
GOLH				*i*S	Sb	08 02 14.2	+23
URLA	**Izmir**	**3.86**	**360**	*i*P	**Pn**	**08 01 01.7**	**-0.1**
URLA				*i*S	Sb	08 02 16.0	+18
URLA	**Izmir**	**3.86**	**360**	PN	**Pn**	**08 01 02.7**	**+1.0**
CHOS	**Chios island**	**3.92**	**354**	P	**Pn**	**08 01 03.5**	**+0.9**
CHOS	**Chios island**	**3.92**	**354**	PN	**Pn**	**08 01 03.4**	**+0.9**
KORT	**Korkueli**	**3.94**	**49**	⇑*i*P	**Pn**	**08 01 05.5**	**+2.6**
KORT				*i*S	**Sn**	**08 01 51.5**	**+3.3**
KORT	**Korkueli**	**3.94**	**49**	PN	**Pn**	**08 01 04.3**	**+1.4**
OSC1	**CSNet OBS 1**	**4.00**	**103**	P	**Pn**	**08 01 02.8**	**-0.8**
OSC1				S	**Sn**	**08 01 50.2**	**+0.7**
ANTB	**Antalya**	**4.07**	**53**	PN	**Pn**	**08 01 05.6**	**+1.0**
ATHU	**Athens Univers**	**4.16**	**327**	P	**Pn**	**08 01 08.0**	**+2.3**
BRDR	**BURDUR-Merkez**	**4.25**	**40**	*i*P	**Pn**	**08 01 08.7**	**+1.7**
BRDR				*i*S	Sb	08 02 37.9	+29
BUCA	**Burdur, Bucak-**	**4.28**	**47**	*i*P	**Pn**	**08 01 09.1**	**+1.6**
BUCA				*i*S	Sb	08 02 37.6	+28
MANT	**Manisa**	**4.29**	**21**	Pn	**Pn**	**08 01 08.5**	**+0.8**
KULA	**Kula-Manisa**	**4.34**	**22**	PN	**Pn**	**08 01 09.4**	**+1.0**
ISP	**Isparta**	**4.59**	**42**	P	**Pn**	**08 01 12.9**	**+1.1**
ISP	**Isparta**	**4.59**	**42**	PN	**Pn**	**08 01 12.5**	**+0.7**
ISP	**Isparta**	**4.59**	**42**	Pn	**Pn**	**08 01 12.9**	**+1.1**
KYMI	**Kymi, Euboea I**	**4.60**	**335**	P	**Pn**	**08 01 14.0**	**+2.1**
ITM	**Ithomi**	**4.66**	**307**	Pn	**Pn**	**08 01 12.1**	**-0.6**
KEPZ	**Antalya-Kepez**	**4.72**	**58**	⇑*i*P	**Pn**	**08 01 15.0**	**+1.4**
KEPZ				*i*S	**Sn**	**08 02 07.7**	**+0.2**
AKMS	**Akamas**	**4.74**	**82**	P	**Pn**	**08 01 13.2**	**-0.6**
AKMS				AML	AML	08 02 06.0	
	comp=E,1.6nm,0.4s						
AKMS				AML	AML	08 02 08.0	
	comp=E,1.2nm,0.4s						
SIGR	**SIGRI**	**4.75**	**353**	PN	**Pn**	**08 01 15.6**	**+1.7**
OSC2	**CSNet OBS 4**	**4.92**	**105**	P	**Pn**	**08 01 14.6**	**-1.5**
OSC2				S	**Sn**	**08 02 12.7**	**+0.5**
NATA	**Nata**	**4.92**	**85**	P	**Pn**	**08 01 16.9**	**+0.6**
SIMA	**Simav-Kutahya**	**4.96**	**22**	PN	**Pn**	**08 01 17.6**	**+0.7**
ALFC	**Alefka**	**4.97**	**81**	⇑P	**Pn**	**08 01 16.5**	**-0.4**
ALFC				AML	AML	08 02 11.6	
	comp=E,1.8nm,0.5s						
ALFC				AML	AML	08 02 12.5	
	comp=E,1.9nm,0.3s						
GAZI	**Gazipasa**	**4.97**	**68**	*i*P	**Pn**	**08 01 16.5**	**-0.6**
GAZI				*i*S	**Sn**	**08 02 08.7**	**-4.9**
GAZI	**Gazipasa**	**4.97**	**68**	PN	**Pn**	**08 01 18.6**	**+1.6**
BUHA	**Balikesir, Bur**	**5.02**	**4**	*i*P	**Pn**	**08 01 19.4**	**+1.9**
BUHA				*i*S	Sb	08 02 45.8	+15
KOCA	**Canakkale, Ayv**	**5.02**	**356**	*i*P	**Pn**	**08 01 18.6**	**+1.1**
KOCA				*i*S	Sb	08 02 57.3	+26
SEDI	**Konya, Seydise**	**5.11**	**53**	⇑*i*P	**Pn**	**08 01 21.4**	**+2.4**
SEDI				*i*S	**Sn**	**08 02 21.1**	**+3.9**
SHUT	**Suhut-Afyon**	**5.15**	**37**	PN	**Pn**	**08 01 20.7**	**+1.2**
SZAC	**Souni**	**5.18**	**85**	⇑P	**Pn**	**08 01 19.1**	**-0.8**
LEF	**Lefka**	**5.20**	**81**	PN	**Pn**	**08 01 22.3**	**+2.2**
LEF				SN	**Sn**	**08 02 19.1**	**-0.1**
SWA2		**5.32**	**191**	P	**Pn**	**08 01 22.4**	**+0.6**
	baz=193						
EZN	**Ezine**	**5.33**	**358**	P	**Pn**	**08 01 23.6**	**+1.7**
BOZC	**Bozcaada**	**5.36**	**355**	PN	**Pn**	**08 01 23.7**	**+1.4**
DOGA	**KONYA_Doganhis**	**5.45**	**47**	*i*P	**Pn**	**08 01 24.9**	**+1.3**
DOGA				*i*S	**Sn**	**08 02 26.7**	**+1.2**
TVSB	**Tavsanli**	**5.45**	**24**	PN	**Pn**	**08 01 24.6**	**+1.0**
ASGA	**Asgata**	**5.48**	**85**	P	**Pn**	**08 01 24.3**	**+0.3**
CSS	**Mathiatis**	**5.55**	**83**	*i*P	**Pn**	**08 01 24.2**	**-0.8**
CSS				*i*S	**Sn**	**08 02 26.6**	**-1.3**
CSS	**Mathiatis**	**5.55**	**83**	PN	**Pn**	**08 01 27.2**	**+2.2**
CSS	**Mathiatis**	**5.55**	**83**	Pn	**Pn**	**08 01 24.5**	**-0.5**
CSS	**Mathiatis**	**5.55**	**83**	⇑P	**Pn**	**08 01 24.6**	**-0.4**
CSS				AML	AML	08 02 28.1	
	comp=E,0.6nm,0.6s						
CSS				AML	AML	08 02 29.8	
	comp=E,0.7nm,0.5s						
AGG	**Agios Georgios**	**5.68**	**324**	P	**Pn**	**08 01 26.1**	**-0.6**
AGG	**Agios Georgios**	**5.68**	**324**		**Pn**	**08 01 26.1**	**-0.6**
BERE	**Bereket-Mersin**	**5.71**	**69**	PN	**Pn**	**08 01 29.3**	**+2.1**
GADA	**Gvkgeada**	**5.72**	**355**	PN	**Pn**	**08 01 28.4**	**+1.2**
LFK	**Lefkose**	**5.74**	**80**	PN	**Pn**	**08 01 30.9**	**+3.3**
KONT	**Konya--Tatoy**	**5.79**	**52**	PN	**Pn**	**08 01 29.7**	**+1.5**
MVOU	**Mavrovouni**	**5.80**	**83**	⇑P	**Pn**	**08 01 29.2**	**+0.8**
KKBE	**Karaman, Kazim**	**5.82**	**60**	⇑*i*P	**Pn**	**08 01 30.1**	**+1.4**
KKBE				*i*S	**Sn**	**08 02 33.0**	**-1.5**
HMYD	**Mayadein**	**5.88**	**142**	P	**Pn**	**08 01 29.3**	**-0.1**
	baz=143						
GELI	**Tayfur-Gelibol**	**5.90**	**359**	PN	**Pn**	**08 01 32.2**	**+2.5**
TEVE	**Tevekalti-Mers**	**5.90**	**69**	PN	**Pn**	**08 01 31.8**	**+2.0**
PAIG	**Paliouri**	**5.91**	**338**	P	**Pn**	**08 01 31.9**	**+2.1**
PAIG				pmax	pmax		
	comp=Z,29nm,0.9s						
AKKU	**Akkuyu-Mersin**	**5.91**	**72**	PN	**Pn**	**08 01 32.1**	**+2.2**
HNAT	**Natroun**	**5.92**	**144**	P	**Pn**	**08 01 29.3**	**-0.7**
	baz=145						
HNAT				AMP		08 02 00.0	
	baz=145						
EDC	**Edincik**	**5.93**	**9**	P	**Pn**	**08 01 32.8**	**+2.7**
LADK	**Ladik-KONYA**	**5.94**	**50**	PN	**Pn**	**08 01 32.2**	**+1.9**
IKL	**Isikli**	**6.04**	**71**	PN	**Pn**	**08 01 33.6**	**+2.0**
VLS	**Vlasiamata**	**6.10**	**309**	P	**Pn**	**08 01 37.0**	**+4.6**
KEBE	**Keben-Mersin**	**6.12**	**69**	PN	**Pn**	**08 01 34.7**	**+2.0**
ERIK	**Erikli-Kesan**	**6.17**	**359**	PN	**Pn**	**08 01 34.7**	**+1.3**
OUR	**Ouranopolis**	**6.20**	**341**	P	Pn	08 01 38.7	+4.9
MAR6	**Marsite Statio**	**6.22**	**5**	PN	**Pn**	**08 01 36.3**	**+2.1**
ENEZ	**Enez**	**6.25**	**357**	PN	**Pn**	**08 01 36.6**	**+2.2**
SILI	**Silifke-Mersin**	**6.26**	**70**	PN	**Pn**	**08 01 36.6**	**+2.0**
GZKV	**Gazikoy-Tekird**	**6.27**	**5**	PN	**Pn**	**08 01 36.6**	**+1.8**
KOT	**Kottamia**	**6.34**	**134**	P	**Pn**	**08 01 35.7**	**-0.2**
	baz=135						
KOT				AMP		08 02 00.0	
	baz=135						
PLG	**Polygyros**	**6.39**	**338**	P	Pn	08 01 41.6	+5.1
ALN	**Alexandroupoli**	**6.41**	**356**	P	**Pn**	**08 01 36.7**	**0.0**
ALN	**Alexandroupoli**	**6.41**	**356**		**Pn**	**08 01 36.7**	**0.0**
HSAF	**As Saff**	**6.42**	**138**	P	**Pn**	**08 01 36.5**	**-0.4**
	baz=139						
KIZK	**Mersin**	**6.46**	**70**	PN	**Pn**	**08 01 40.1**	**+2.7**
GLL	**Jalalah**	**6.53**	**137**	P	**Pn**	**08 01 37.5**	**-1.0**
	baz=138						
YESY	**Yesilyurt**	**6.64**	**58**	PN	**Pn**	**08 01 42.0**	**+2.0**
SOH	**Sokhos**	**6.83**	**339**	P	**Pn**	**08 01 45.3**	**+2.8**
SOH				pmax	pmax		
	comp=Z,13nm,0.6s						
MDUB	**Mudurnu**	**6.99**	**30**	PN	**Pn**	**08 01 46.1**	**+1.3**
MDUB	**Mudurnu**	**6.99**	**30**		**Pn**	**08 01 45.5**	**+0.7**
SUZ	**Suez**	**7.02**	**130**	P	**Pn**	**08 01 45.0**	**-0.1**
	baz=130						
SRS	**Serrai**	**7.03**	**341**	P	**Pn**	**08 01 48.2**	**+2.9**
SRS				pmax	pmax		
	comp=Z,24nm,1.4s						
NBNS	**Bani Suef**	**7.08**	**144**	P	**Pn**	**08 01 45.7**	**-0.3**
	baz=145						
NBNS				AMP		08 03 00.0	
	baz=145						
IGT	**Igoumenitsa**	**7.11**	**317**	P	**Pn**	**08 01 48.3**	**+2.0**
IGT				pmax	pmax		
	comp=Z,16nm,1.3s						
YUVA	**Yuva-Kibriscik**	**7.14**	**33**	PN	**Pn**	**08 01 48.4**	**+1.6**
ZAF	**Zafarana**	**7.24**	**134**	P	**Pn**	**08 01 47.5**	**-0.6**
	baz=135						
BR231	**Keskin MP Arra**	**7.26**	**41**	Pn	**Pn**	**08 01 48.9**	**+0.3**
GRG	**Griva**	**7.27**	**334**	P	**Pn**	**08 01 51.1**	**+2.6**
GRG				pmax	pmax		
	comp=Z,72nm,1.3s						
KNT	**Kendrikon**	**7.28**	**337**	P	**Pn**	**08 01 52.7**	**+4.1**
KNT				pmax	pmax		
	comp=Z,32nm,1.1s						
ANTO	**Ankara**	**7.29**	**41**	P	**Pn**	**08 01 48.0**	**-0.9**
ANTO	**Ankara**	**7.29**	**41**	Pn	**Pn**	**08 01 48.0**	**-0.9**
MMAI	**Mount Meron Ar**	**7.47**	**99**	Pn	**Pn**	**08 01 51.0**	**-0.3**
	comp=Z,8.1nm,0.3s,baz=276,slow=8.2,SNR=7.2						
MMAI				Sn	**Sn**	**08 03 11.5**	**-3.6**
	comp=Z,14nm,0.3s,baz=313,slow=8.7,SNR=2.7						
FNA	**Florina**	**7.53**	**328**	P	**Pn**	**08 01 52.1**	**-0.1**
FNA	**Florina**	**7.53**	**328**		**Pn**	**08 01 52.0**	**-0.1**
VAY	**Valandovo**	**7.53**	**336**	*i*P	**Pn**	**08 01 55.5**	**+3.5**
BRTR	**Keskin Array B**	**7.67**	**45**	Pn	**Pn**	**08 01 55.2**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=221,slow=13,SNR=24						
BRTR				Sn	**Sn**	**08 03 20.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=214,slow=23,SNR=2.3						
BRTR				LR	LR	08 05 58.4	
	comp=Z,2μm,18.8s,baz=236,slow=46						
BRTR	**Keskin Array B**	**7.67**	**45**		**Pn**	**08 01 54.5**	**+0.4**
BR131	**Keskin Array S**	**7.67**	**45**	*i*P	**Pn**	**08 01 55.5**	**+1.4**
BR131	**Keskin Array S**	**7.67**	**45**		**Pn**	**08 01 54.7**	**+0.6**
HWQ	**Hawqa**	**7.72**	**89**	*e*P	**Pn**	**08 01 55.8**	**+1.0**
RCY	**Rachaya**	**7.72**	**95**	*e*P	**Pn**	**08 01 54.2**	**-0.7**
TAMRE	**El Minia**	**7.72**	**150**	P	**Pn**	**08 01 55.2**	**+0.4**
	baz=151						
PLD	**Plovdiv**	**7.75**	**349**	P	**Pn**	**08 01 58.1**	**+3.0**
PLD				pmax	pmax		
	comp=Z,2.0nm,1.3s						
STIP	**Stip**	**7.99**	**335**	*i*P	**Pn**	**08 02 00.8**	**+2.4**
OHR	**Ohrid**	**8.05**	**327**	*i*P	**Pn**	**08 02 01.6**	**+2.4**
GRB	**Gharib**	**8.14**	**138**	P	**Pn**	**08 02 00.1**	**-0.5**
	baz=139						
VTS	**Vitosha**	**8.54**	**343**	⇓P	**Pn**	**08 02 07.2**	**+1.2**
VTS	**Vitosha**	**8.54**	**343**	⇓P	**Pn**	**08 02 07.2**	**+1.2**
VTS	**Vitosha**	**8.54**	**343**		**Pn**	**08 02 05

KBZ Khabaz 15.63 49 Pn **P** **08 03 44.8 -1.4**
comp=Z,0.2nm,0.3s,baz=251,slow=8.3,SNR=27
KBZ Khabaz 15.63 49 *ce*P **P** **08 03 45.2 -1.1**
KBZ pmax pmax
comp=Z,42nm,1.2s
CONA Conrad Observa 15.65 332 *e*P **Pn** **08 03 42.4 -0.3**
comp=Z,8.6nm,1.0s
STAL STALIGIAL 15.80 322 **Pn** **08 03 43.6 -1.0**
JAVC Velka Javorina 15.82 338 *e*PN **Pn** **08 03 44.5 -0.4**
NAX Nakhchivan 15.82 67 P **P** **08 03 49.2 +0.6**
ZEI Tsey 15.83 53 *e*P **P** **08 03 47.6 -1.2**
ZEI pmax pmax
comp=Z,48nm,1.1s
ZOU Zoufplan 15.87 323 **Pn** **08 03 44.1 -1.6**
KBA Koelnbreinsper 16.07 325 *e*P **Pn** **08 03 48.5 +0.3**
comp=Z,14nm,1.1s,SNR=5.2
KBA Koelnbreinsper 16.07 325 P **Pn** **08 03 49.4 +1.2**
KBA pmax pmax
comp=Z,16nm,1.2s
GUDG Gudauri 16.08 55 P **P** **08 03 53.6 +2.0**
CTI Castel Tesino 16.21 320 P **Pn** **08 03 49.2 -0.7**
CTI pmax pmax
comp=Z,11nm,0.8s
CTI Castel Tesino 16.21 320 **Pn** **08 03 49.2 -0.7**
ABTA Abfaltersbach 16.23 323 *e*P **Pn** **08 03 49.1 -1.1**
comp=Z,7.9nm,0.6s
MOA Molln 16.23 329 *e*P **Pn** **08 03 50.5 +0.3**
comp=Z,6.9nm,0.5s
AKASG Malin Array Be 16.31 6 Pn **Pn** **08 03 50.3 -0.8**
comp=Z,4.4nm,0.3s,baz=190,slow=11,SNR=13
AKASG LR LR 08 11 05.4
comp=Z,372nm,18.2s,baz=180,slow=41
AKASG Malin Array Be 16.31 6 P **Pn** **08 03 50.7 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,1.0s
AKASG Malin Array Be 16.31 6 **Pn** **08 03 50.7 -0.4**
AKBB Malin Array Si 16.31 6 *i* P **Pn** **08 03 51.0 -0.1**
AKBB Malin Array Si 16.31 6 **Pn** **08 03 50.1 -1.0**
KRUC Moravsky 16.41 336 *e*PN **Pn** **08 03 51.3 -1.1**
KRUC Moravsky 16.41 336 P **Pn** **08 03 52.3 -0.1**
KRUC pmax pmax
comp=Z,6.0nm,0.7s
OJC Ojcow 16.49 344 P **Pn** **08 03 52.6 -0.8**
OJC pmax pmax
comp=Z,14nm,1.2s
OJC Ojcow 16.49 344 **Pn** **08 03 52.6 -0.8**
VRAC Vranov 16.55 336 Pn **Pn** **08 03 52.9 -1.3**
comp=Z,0.6nm,0.3s,baz=160,slow=11,SNR=5.1
VRAC Vranov 16.55 336 *e*PN **Pn** **08 03 52.7 -1.5**
SALO Salr 16.56 317 **Pn** **08 03 53.2 -1.1**
SALO IAmb IAmb 08 03 58.3
comp=Z,127nm,1.0s
MORC Moravsky Berou 16.67 339 *e*PN **Pn** **08 03 54.8 -0.9**
MORC Moravsky Berou 16.67 339 P **Pn** **08 03 55.3 -0.4**
MORC pmax pmax
comp=Z,13nm,0.9s
MORC Moravsky Berou 16.67 339 **Pn** **08 03 55.3 -0.4**
GANJ Ganja 16.78 63 P **P** **08 04 01.4 +2.3**
DDFL Dedoflistskaro 16.86 60 P **P** **08 04 02.1 +2.0**
CKRC Cesky Krumlov 16.98 331 *e*P **Pn** **08 03 59.0 -0.6**
WTTA Wattenberg 17.02 323 *e*P **Pn** **08 04 00.5 +0.2**
comp=Z,8.1nm,0.6s
WTTA Wattenberg 17.02 323 P **P** **08 04 01.7 -0.2**
WTTA pmax pmax
comp=Z,16nm,0.9s
LGD Lagodekhi 17.07 59 P **P** **08 04 05.1 +2.8**
WATA Walderalm 17.10 323 *e*P **Pn** **08 04 01.2 0.0**
comp=Z,35nm,1.5s,SNR=7.0
SQTA Sankt Quirin 17.21 322 *e*P **Pn** **08 04 02.5 -0.1**
comp=Z,8.2nm,0.6s
GEC2 GERESS Array S 17.25 330 **Pn** **08 04 02.0 -1.0**
GERES GERESS Array B 17.25 330 P **Pn** **08 04 01.6 -1.4**
comp=Z,0.4nm,0.3s,baz=142,slow=12,SNR=25
GERES LR LR 08 12 25.0
comp=Z,245nm,20.3s,baz=130,slow=43
FETA Feichten 17.32 321 *e*P **P** **08 04 04.9 -0.4**
comp=Z,20nm,0.9s,SNR=8.8
MOTA Moosalm 17.34 322 *i* P **Pn** **08 04 04.2 -0.1**
comp=Z,16nm,1.2s
MNGR Mingechevir, A 17.37 63 P **P** **08 04 09.9 +4.3**
SAOF Saorge 17.51 308 P **Pn** **08 04 06.6 +0.3**
SAOF pmax pmax
comp=Z,19nm,1.2s
KHC Kasperske Hory 17.52 331 *i* P **Pn** **08 04 06.2 -0.2**
KHC pmax pmax
comp=Z,32nm,1.4s
KHC Kasperske Hory 17.52 331 *e*P **Pn** **08 04 04.7 -1.7**
KHC Kasperske Hory 17.52 331 P **Pn** **08 04 05.5 -0.9**
SBF Sospel 17.54 308 *e*P **Pn** **08 04 06.6 0.0**
SBF pmax pmax
comp=Z,32nm,1.0s
DPC Dobruska-Polom 17.55 338 *e*P **Pn** **08 04 06.6 -0.1**
DPC Dobruska-Polom 17.55 338 *e*P **Pn** **08 04 06.6 -0.1**
SEKA Sheki 17.57 62 P **P** **08 04 11.7 +3.8**
RETA Reutte 17.61 322 *e*P **Pn** **08 04 07.4 -0.1**
comp=Z,3.3nm,0.4s
DAVOX Davos/Dischmat 17.62 319 P **Pn** **08 04 07.3 -0.4**
comp=Z,0.8nm,0.3s,baz=141,slow=11,SNR=8.7
TUE Stuetta 17.72 318 P **Pn** **08 04 08.2 -0.8**
UPC Upice 17.78 337 *e*P **Pn** **08 04 09.2 -0.3**
UPC Upice 17.78 337 *e*P **Pn** **08 04 09.2 -0.3**
WET Wettzell 17.82 329 P **Pn** **08 04 09.6 -0.5**
WET pmax pmax
comp=Z,9.0nm,1.0s
PRU Pruhonice 17.84 334 *e*P **Pn** **08 04 09.2 -1.1**
PRU Pruhonice 17.84 334 *e*P **Pn** **08 04 09.2 -1.1**
FRF La Foret Royal 17.93 306 *e*P **P** **08 04 13.4 +1.6**
FRF pmax pmax
comp=Z,25nm,1.4s
DAVA Damuels 17.94 320 *e*P **Pn** **08 04 10.7 -0.9**
comp=Z,23nm,1.3s
KSP Ksiaz 17.99 338 P **P** **08 04 12.3 -0.1**
KSP pmax pmax
comp=Z,16nm,1.0s
PVCC Panska Ves 18.28 335 P **P** **08 04 15.3 -0.3**
PVCC pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 18.55 311 P **P** **08 04 17.9 -0.9**
BNI pmax pmax
comp=Z,10.0nm,1.1s
BNI Bardonecchia 18.55 311 P **P** **08 04 17.9 -0.9**
LPG La Plagne 18.72 312 *e*P **Pn** **08 04 22.0 +0.7**
LPG pmax pmax
comp=Z,7.0nm,0.6s
LPL La Plagne 18.74 312 *e*P **Pn** **08 04 21.4 -0.1**
LPL pmax pmax
comp=Z,9.0nm,0.7s
BRG Berggiesshubel 18.79 334 P **P** **08 04 20.1 -1.1**
BRG pmax pmax
comp=Z,18nm,0.9s
BRG Berggiesshubel 18.79 334 *e*P **P** **08 04 20.2 -1.0**
BRG Amp 08 04 22.9
comp=Z,16nm,1.0s
SENIN Lac Senin/Sane 18.83 315 P **P** **08 04 21.1 -0.9**
NKC Novy Kostel 18.84 331 *e*P **P** **08 04 20.8 -1.0**
NKC Novy Kostel 18.84 331 *e*P **P** **08 04 20.8 -1.0**
VORD Divnogorie 18.87 25 *e*P **Pn** **08 04 22.5 -0.3**
VORD pmax pmax
comp=Z,40nm,0.8s
GRA1 Grafenberg Arr 18.95 328 P **P** **08 04 22.1 -0.9**
GRF Grafenberg Arr 18.95 328 P **P** **08 04 22.1 -0.9**
GRF pmax pmax
comp=Z,17nm,0.7s
GRFO Grafenberg 18.95 328 P **P** **08 04 22.3 -0.6**
GRFO pmax pmax
comp=Z,20nm,1.0s
GRFO Grafenberg 18.95 328 P **P** **08 04 22.3 -0.6**
SLE Schleitheim 18.97 320 P **P** **08 04 22.9 -0.3**
SLE pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 19.04 25 *e*P **P** **08 04 24.3 +0.4**
VSR pmax pmax
comp=Z,50nm,1.1s
BFO Black Forest 19.41 321 P **P** **08 04 26.8 -1.2**
BFO pmax pmax
comp=Z,19nm,1.2s
BFO Black Forest 19.41 321 P **P** **08 04 26.8 -1.2**
CLL Collm 19.49 334 *i* P **P** **08 04 29.0 +0.2**
comp=Z,11nm,0.8s
CLL *e* 08 04 34.0
CLL *e*(S) S 08 07 54.0 -13
CLL Lm MLR 08 14 00.0
comp=Z,200nm,18.1s
CLL Collm 19.49 334 P **P** **08 04 27.2 -1.6**
CLL pmax pmax
comp=Z,11nm,0.8s
CLL Collm 19.49 334 P **P** **08 04 27.2 -1.6**
MOX Moxa 19.50 330 P **Pn** **08 04 29.7 -0.6**
MOX pmax pmax
comp=Z,10.0nm,0.9s
SUW Suwalki 19.67 354 P **P** **08 04 30.7 -0.1**
SUW pmax pmax
comp=Z,91nm,0.8s
SUW Suwalki 19.67 354 P **P** **08 04 30.7 -0.1**
CABF La Chapelle 19.68 314 *e*P **P** **08 04 30.6 -0.4**
CABF pmax pmax
comp=Z,13nm,0.8s
VIVF Saint-Julien-l 19.75 308 *e*P **P** **08 04 31.5 -0.3**
VIVF pmax pmax
comp=Z,9.0nm,1.0s
RAYN Ar Rayn 19.77 119 P **P** **08 04 31.3 -1.0**
RAYN pmax pmax
comp=Z,14nm,1.2s
RAYN Ar Rayn 19.77 119 P **P** **08 04 31.3 -1.0**
HINF Hinteralfeld 19.89 318 *e*P **P** **08 04 32.3 -1.0**
HINF pmax pmax
comp=Z,11nm,0.9s
ECH Echery 19.96 319 P **P** **08 04 33.0 -1.0**
ECH pmax pmax
comp=Z,24nm,1.1s
ECH Echery 19.96 319 P **P** **08 04 33.0 -1.0**
VRH Novokhopyorsk 19.98 29 *e*P **P** **08 04 34.7 +0.6**
VRH pmax pmax
comp=Z,70nm,0.6s
SSB Saint Sauveur 20.01 309 P **P** **08 04 32.8 -1.9**
SSB pmax pmax
comp=Z,10.0nm,1.0s
SSB Saint Sauveur 20.01 309 P **P** **08 04 32.8 -1.9**
CDF Champ du Feu 20.01 320 *e*P **P** **08 04 34.7 0.0**
CDF pmax pmax
comp=Z,34nm,1.1s
MNK Minsk 20.03 2 *i* P **P** **08 04 32.9 -1.8**
comp=E,3.0nm,0.9s
MNK *i* P **P** **08 04 32.9 -1.8**
comp=N,51nm,1.0s
MNK *i* P **P** **08 04 32.9 -1.8**
comp=Z,66nm,1.0s
MNK *i* PP **PnPn** **08 04 49.2 -1.9**
MNK *i* S **S** **08 08 15.9 -2.4**
MNK *i* SS **SnSn** **08 08 34.6 -0.9**
MNK *i* LQ LQ 08 10 37.3
MNK *i* LR LR 08 11 22.4
MNK *i* LRM MLR 08 13 13.9
comp=Z,160nm,12.4s
MNK *i* LRM MLR 08 13 31.6
comp=E,58nm,21.0s
MNK *i* LRM MLR 08 13 31.6
comp=N,576nm,16.4s
MNK *i* ScS ScS 08 15 27.0 -39
LPSR Galich'ya Gora 20.13 22 *e*P **P** **08 04 35.8 0.0**
LPSR pmax pmax
comp=Z,110nm,1.0s
HAU Haudompre 20.28 318 *e*P **P** **08 04 36.9 -0.6**
HAU pmax pmax
comp=Z,17nm,0.8s
NACGM Naroch 20.41 0 *i* P **P** **08 04 38.3 -0.6**
NACGM *i* P **P** **08 04 38.3 -0.6**
NACGM *i* P **P** **08 04 38.3 -0.6**
NACGM *i* Pb Pn 08 04 40.3 -0.7
comp=Z,43nm,0.9s
NACGM *i* PP **pwP** **08 04 50.3 +0.9**
NACGM *i* PPP PPP 08 05 01.1
NACGM *i* S S 08 08 07.5 -18
NACGM *i* SSS SSS 08 08 38.1
NACGM *i* LQ LQ 08 10 12.8
NACGM *i* LR LR 08 11 35.3
MTLF Montolieu 20.88 302 *e*P **P** **08 04 43.3 -0.8**
MTLF pmax pmax
comp=Z,9.0nm,1.0s
LOR Lormes 21.33 314 P **P** **08 04 48.3 -0.6**
LOR pmax pmax
comp=Z,10.0nm,0.9s
WLF Walferdange 21.36 321 *d*P **P** **08 04 49.2 +0.1**
comp=Z,16nm,1.0s
WLF Walferdange 21.36 321 P **P** **08 04 47.6 -1.5**
WLF pmax pmax
comp=Z,17nm,0.8s
WLF Walferdange 21.36 321 P **P** **08 04 47.5 -1.5**
AVF Avril sur Loir 21.41 312 *e*P **P** **08 04 50.7 +1.0**
AVF pmax pmax
comp=Z,8.0nm,0.8s
CAF Calviac 21.49 306 *e*P **P** **08 04 49.9 -0.8**
CAF pmax pmax
comp=Z,10.0nm,1.1s
BGF Bois d'Agland 21.62 311 *e*P **P** **08 04 52.8 +0.8**
BGF pmax pmax
comp=Z,15nm,1.0s
OBN Obninsk 21.76 16 P **P** **08 04 52.4 -0.9**
comp=Z,7.9nm,0.4s,baz=355,slow=13,SNR=9.7
OBN Obninsk 21.76 16 *i* P **P** **08 04 51.2 -2.1**
OBN *i* 08 08 55.6
OBN pmax pmax
comp=Z,61nm,0.9s
OBN MLR MLR
comp=Z,296nm,18.0s
OBN Obninsk 21.76 16 P **P** **08 04 52.3 -0.9**
TAM Tamanrasset 21.82 243 P **P** **08 04 52.2 -2.3**
TAM pmax pmax
comp=Z,9.0nm,0.9s
TAM Tamanrasset 21.82 243 P **P** **08 04 52.2 -2.3**
BHOU Houvegnez 21.86 323 *dx* x 08 04 57.5
BTNL Terneli 21.94 323 *d*P **P** **08 04 55.7 +0.3**
comp=Z,27nm,1.4s
RJF Les Rejaudoux 21.99 307 *e*P **P** **08 04 55.5 -0.4**
RJF pmax pmax
comp=Z,9.0nm,0.9s
MEM Membach 22.02 323 *d*P **P** **08 04 56.8 +0.6**
comp=Z,29nm,1.0s
MEM Membach 22.02 323 P **P** **08 04 57.0 +0.8**
MEM pmax pmax
comp=Z,42nm,1.1s
BSTI Sart Tilman 22.22 323 *d*P **P** **08 04 59.4 +1.1**
BSTI *ds*P **pwP** **08 05 09.5 -0.1**
BCLA Clavier 22.25 322 *b*P **P** **08 04 58.4 -0.3**
comp=Z,17nm,1.1s
BGES Gesves 22.34 322 *d*P **P** **08 04 59.4 -0.3**
BGES *dp*P **sP** **08 05 07.6 -1.8**
DOU Dourbes 22.42 321 *d*P **P** **08 04 59.7 -0.8**
comp=Z,14nm,1.5s
DOU *ds*P **sP** **08 05 10.3 +0.1**
BMRD Maredsous 22.46 321 *d*P **P** **08 05 00.6 -0.3**
BMRD *dx* x 08 05 15.8
MOS Moscow 22.57 16 *e*P **P** **08 04 59.3 -2.7**
MOS *e*S **S** **08 09 00.1 -7.5**
MOS pmax pmax
comp=Z,95nm,1.1s
SNF Seneffe 22.83 321 *d*P **P** **08 05 05.4 +0.6**
UCC Uccle 22.96 322 P **P** **08 05 04.6 -1.6**
UCC pmax pmax
comp=Z,26nm,0.8s
UCC Uccle 22.96 322 P **P** **08 05 04.6 -1.6**
UCC IAmb IAmb 08 05 17.9
comp=Z,26nm,0.8s
BELG Belogornoye 23.37 34 P **P** **08 05 10.1 -0.2**
comp=Z,102nm,1.0s,baz=249,slow=1.2,SNR=25
BELG Belogornoye 23.37 34 *c i*P **P** **08 05 09.6 -0.7**
BELG pmax pmax
comp=Z,20nm,1.0s
DEL Delary 23.65 342 *i* P **P** **08 05 09.0 -3.9**
VSU Vasula 23.98 0 *i* P **P** **08 05 16.2 +0.2**
VSU pmax pmax
comp=Z,49nm,1.1s
FLN La Foliniere 24.60 314 *e*P **P** **08 05 21.1 -0.8**
FLN pmax pmax
comp=Z,41nm,1.4s
ESDC Sonseca Array 24.87 291 P **P** **08 05 24.0 -0.4**
comp=Z,3.1nm,0.9s,baz=85,slow=9.9,SNR=13
ESDC LR LR 08 15 57.5
comp=Z,70nm,20.8s,baz=115,slow=39
ESDC Sonseca Array 24.87 291 P **P** **08 05 22.9 -1.5**
PUL Pulkovo 25.41 4 *ce*P **P** **08 05 30.2 +1.2**
PUL pmax pmax
comp=Z,127nm,0.8s
GEYT Alibeck 25.59 73 P **P** **08 05 32.8 +1.8**
comp=Z,8.7nm,0.7s,baz=285,slow=5.7,SNR=15
GEYT Alibeck 25.59 73 P **P** **08 05 29.8 -1.1**
GEYT IAmb IAmb 08 05 35.8
comp=Z,16nm,1.1s
GYA0B ALIBECK ARRAY 25.59 73 P **P** **08 05 29.8 -1.2**
GYA0B IAmb IAmb 08 05 47.3
comp=Z,24nm,0.9s
QUIF Quistinic 25.93 310 *e*P **P** **08 05 35.9 +2.0**
QUIF pmax pmax
comp=Z,5.0nm,0.6s
MDT Midelt 25.99 275 P **P** **08 05 33.6 -1.2**
comp=Z,3.3nm,0.9s,baz=100,slow=8.0,SNR=5.3
FIA1 FINESS Array S 26.97 359 P **P** **08 05 42.3 -0.9**
FIA1 IAmb IAmb 08 05 42.9
comp=Z,17nm,0.9s
FINES FINESS Array B 26.97 359 P **P** **08 05 41.5 -1.7**
comp=Z,14nm,0.9s,baz=148,slow=11,SNR=18
FINES LR LR 08 16 40.3
comp=Z,209nm,19.1s,baz=172,slow=37
FINES FINESS Array B 26.97 359 *i* P **P** **08 05 42.2 -1.0**
FINES pmax pmax
comp=Z,14nm,0.9s
FINES FINESS Array B 26.97 359 P **P** **08 05 42.1 -1.0**
HFS Hagfors 27.01 346 P **P** **08 05 42.0 -1.5**
comp=Z,14nm,0.8s,baz=134,slow=6.4,SNR=18
VALR Valaam 27.03 5 *i* P **P** **08 05 43.0 -0.6**
VALR pmax pmax
comp=Z,64nm,1.0s
KONO Kongsberg 27.54 341 *e*P **P** **08 05 45.9 -2.4**
KLMR Klimovskoe 27.67 14 *e*P **P** **08 05 47.9 -1.4**
KLMR pmax pmax
comp=Z,54nm,0.9s
KLMR Klimovskoe 27.67 14 *e*P **P** **08 05 48.0 -1.4**
KLMR AMP 08 05 50.1
comp=Z,54nm,0.9s
AKTO Aktyubinsk 27.85 46 P **P** **08 05 51.8 +0.6**
comp=Z,8.9nm,1.0s,baz=252,slow=11,SNR=22
AKTO Aktyubinsk 27.85 46 *i* P **P** **08 05 51.2 0.0**
AKTO pmax pmax
comp=Z,18nm,1.1s
NC602 NORSAR Array S 28.01 344 P **P** **08 05 51.5 -1.0**
NC602 NORSAR Array S 28.01 344 *e*P **P** **08 05 51.0 -1.6**
NORES NORESS Array B 28.01 344 P **P** **08 05 53.8 +1.3**
NAO01 NORSAR Array S 28.26 344 P **P** **08 05 53.7 -1.1**
NC405 NORSAR Array S 28.31 345 P **P** **08 05 53.7 -1.5**
NC405 IAmb IAmb 08 06 06.3
comp=Z,46nm,1.5s
NB2 NORSAR Subarra 28.36 344 P **P** **08 05 53.9 -1.7**
baz=156,slow=9.3
NOA NORSAR Array B 28.36 344 P **P** **08 05 53.3 -2.4**
comp=Z,1.8nm,0.6s,baz=154,slow=10,SNR=12
NOA LR LR 08 17 46.0
comp=Z,129nm,21.7s,baz=150,slow=38
NBO00 NORSAR Array S 28.45 344 P **P** **08 05 55.0 -1.5**
KIRV Kirov 28.48 25 P **P** **08 05 55.3 -1.3**
comp=Z,9.4nm,0.5s,baz=326,slow=1.1,SNR=3.6
KIRV Kirov 28.48 25 *ce*P **P** **08 05 56.6 0.0**
AB31 Akbulak array 28.60 49 *i* P **P** **08 05 59.0 +1.2**
ABKAR Akbulak array 28.60 49 P **P** **08 05 56.9 -0.9**
ABKAR Akbulak array 28.60 49 P **P** **08 05 57.1 -0.7**
ABKAR IAmb IAmb 08 06 00.3
comp=Z,7.2nm,1.0s
EKA Eskdalemuir Ar 29.28 325 P **P** **08 06 01.9 -1.9**
comp=Z,9.7nm,0.9s,baz=122,slow=11,SNR=12
ESK Eskdalemuir 29.29 324 P **P** **08 06 03.5 -0.4**
ESK pmax pmax
comp=Z,32nm,1.2s
ESK Eskdalemuir 29.29 324 P **P** **08 06 03.5 -0.4**
ESK IAmb IAmb 08 06 13.1
comp=Z,32nm,1.2s
HRA Herat 29.30 80 P **P** **08 06 03.8 -0.6**
DOMB Dombas 29.74 343 *e*P **P** **08 06 06.1 -1.8**
PRGR Permogore 29.75 18 *e*P **P** **08 06 06.7 -1.2**
PRGR *e* 08 07 08.6
PRGR *e*S **S** **08 10 58.1 -4.1**
PRGR pmax pmax
comp=Z,35nm,1.0s
ARU Arti 30.90 35 *c i*P **P** **08 06 18.0 -0.1**
ARU 08 07 14.9
ARU S **S** **08 11 20.1 -0.3**
ARU pmax pmax
comp=Z,18nm,2.1s
ARU Arti 30.90 35 P **P** **08 06 17.5 -0.7**
TOA0 Torodi Ar. Sit 31.00 233 P **P** **08 06 17.3 -2.2**
TOA0 IAmb IAmb 08 06 21.8
comp=Z,16nm,1.5s
TORD Torodi Ar. Bea 31.00 233 P **P** **08 06 19.9 +0.4**
comp=Z,2.7nm,0.5s,baz=36,slow=8.4,SNR=15
TORD Torodi Ar. Bea 31.00 233 P **P** **08 06 17.9 -1.6**
NSS Namsos 31.37 348 *e*P **P** **08 06 20.9 -1.3**
KONS Konsvik 33.02 350 *e*P **P** **08 06 35.2 -1.4**
APA Apatity 33.35 5 ||*i*P **P** **08 06 38.3 -1.2**
APA pmax pmax
comp=Z,23nm,0.9s
APA MLR MLR
comp=Z,700nm,11.0s
FAUS Fauske 33.58 352 *e*P **P** **08 06 39.7 -1.8**
LVZ Lovozero 33.77 5 *ce*P **P** **08 06 42.6 -0.6**
LVZ pmax pmax
comp=Z,28nm,1.0s
LVZ Lovozero 33.77 5 P **P** **08 06 42.2 -1.0**
KOWA Kowa 34.04 242 P **P** **08 06 43.3 -2.8**
STEI Steigen 34.12 352 *e*P **P** **08 06 45.3 -0.8**
KTK1 Kautokeino 34.62 358 *e*P **P** **08 06 49.8 -0.8**
KK31 Karatay Array 34.95 62 *i* P **P** **08 06 54.7 +1.0**
KK31 Karatay Array 34.95 62 P **P** **08 06 53.7 0.0**
KK31 IAmb IAmb 08 07 06.4
comp=Z,15nm,1.2s
KKAR Karatay Array 34.95 62 P **P** **08 06 53.9 +0.2**
KKAR Karatay Array 34.95 62 P **P** **08 06 53.9 +0.2**
KKAR Karatay Array 34.95 62 P **P** **08 06 53.9 +0.2**
KKAR IAmb IAmb 08 07 06.5
comp=Z,15nm,1.2s
GAR Garm 35.06 70 P **P** **08 06 55.5 +0.7**
GAR IAmb IAmb 08 06 57.9
comp=Z,14nm,1.1s
ARA0 ARCESS Array S 35.10 359 *e*P **P** **08 06 52.1 -2.6**
ARCES ARCESS Array B 35.10 359 P **P** **08 06 53.3 -1.3**
comp=Z,3.3nm,0.4s,baz=177,slow=9.2,SNR=57
ARCES LR LR 08 21 10.1
comp=Z,96nm,20.2s,baz=225,slow=36
ARCES ARCESS Array B 35.10 359 P **P** **08 06 53.4 -1.3**
ARCES pmax pmax
comp=Z,22nm,1.2s
ARCES ARCESS Array B 35.10 359 P **P** **08 06 53.4 -1.3**
ARCES IAmb IAmb 08 06 55.1
comp=Z,22nm,1.2s
JETT Jettan, Norway 35.29 356 *e*P **P** **08 06 54.8 -1.5**
DZA Taraz 35.55 63 *e*P **P** **08 06 60.0 +1.0**
baz=63
DZA *i* S **S** **08 12 32.9 0.0**
baz=63
DZA Taraz 35.55 63 *e*P **P** **08 06 59.9 +1.0**
BRVK Borovoye 35.90 45 *ce*P **P** **08 07 03.3 +1.6**
BRVK pmax pmax
comp=Z,15nm,1.2s
BRVK Borovoye 35.90 45 P **P** **08 07 00.7 -1.0**
BRVK IAmb IAmb 08 07 04.1
comp=Z,19nm,1.3s
HAMF Hanmerfest 36.25 358 *e*P **P** **08 07 01.9 -2.5**
BRZS Berezniki 36.83 51 *e*P **P** **08 07 10.2 +0.5**
comp=Z,11nm,1.8s,baz=51
BRZS *i* S **S** **08 12 52.0 -0.2**
baz=51
BRZS Berezniki 36.83 51 *e*P **P** **08 07 10.2 +0.5**
BRZS pmax pmax
comp=Z,11nm,1.8s
BTLS Baital 37.47 59 *e*P **P** **08 07 15.9 +0.6**
baz=59
BTLS Baital 37.47 59 *e*P **P** **08 07 15.8 +0.6**
AAK Ala-Archa 37.89 63 *ce*P **P** **08 07 21.2 +2.2**
AAK pmax pmax
comp=Z,20nm,0.8s
AAK Ala-Archa 37.89 63 P **P** **08 07 18.0 -1.0**
NIL Nilore 38.38 78 P **P** **08 07 21.7 -1.3**
NIL pmax pmax
comp=Z,12nm,0.9s
NIL Nilore 38.38 78 P **P** **08 07 21.7 -1.3**
NIL IAmb IAmb 08 07 26.6
comp=Z,12nm,0.9s
BOOM Boomskoye usch 38.97 63 P **P** **08 07 26.8 -1.2**
BOOM pmax pmax
comp=Z,5.0nm,0.9s
BOOM Boomskoye usch 38.97 63 P **P** **08 07 26.8 -1.2**
TNSS Tian-Shan 39.66 62 *e*P **P** **08 07 34.6 +0.4**
baz=62
TNSS Tian-Shan 39.66 62 *e*P **P** **08 07 34.5 +0.4**
MDOK Medeo 39.72 62 *e*P **P** **08 07 35.3 +1.0**
baz=62
MDOK Medeo 39.72 62 *e*P **P** **08 07 35.3 +1.0**

DBIC Dimbokro 40.11 234 P **P** **08 07 38.5 +0.9**
comp=Z,5.6nm,0.6s,baz=24,slow=8.2,SNR=11
DBIC Dimbokro 40.11 234 P **P** **08 07 35.7 -1.9**
TDK Taldyqorghan 40.56 59 *eP* **P** **08 07 42.2 +1.1**
comp=Z,10nm,0.6s,baz=59
TDK Taldyqorghan 40.56 59 *eP* **P** **08 07 42.2 +1.1**
TDK pmax pmax
comp=Z,10.0nm,0.6s
KURBB Kurchatov Arra 40.62 50 P **P** **08 07 41.8 +0.4**
SATY Saty 40.72 62 *eP* **P** **08 07 43.6 +1.0**
comp=Z,7.9nm,1.3s,baz=62
SATY Saty 40.72 62 *eP* **P** **08 07 43.5 +1.0**
SATY pmax pmax
comp=Z,8.0nm,1.3s
KPKS Kokpek 40.88 61 *eP* **P** **08 07 45.2 +1.4**
baz=62
KPKS Kokpek 40.88 61 *eP* **P** **08 07 45.2 +1.4**
UZB Uzynbulak 41.16 62 *eP* **P** **08 07 47.2 +1.0**
baz=62
UZB Uzynbulak 41.16 62 *eP* **P** **08 07 47.2 +1.0**
SHLS Shalkode 41.48 62 *eP* **P** **08 07 51.3 +2.5**
baz=62
SHLS Shalkode 41.48 62 *eP* **P** **08 07 51.3 +2.5**
SEM Semipalatinsk 41.71 51 *eP* **P** **08 07 50.6 -0.2**
comp=Z,6.6nm,1.3s,baz=51
SEM Semipalatinsk 41.71 51 *eP* **P** **08 07 50.5 -0.2**
SEM pmax pmax
comp=Z,7.0nm,1.3s
MAKZ Makanchi 42.94 56 P **P** **08 08 00.2 -0.3**
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
MAKZ Makanchi 42.94 56 P **P** **08 08 00.2 -0.3**
MK31 Makanchi Array 43.15 56 P **P** **08 08 02.7 +0.5**
MK31 Makanchi Array 43.15 56 P **P** **08 08 01.7 -0.5**
MKAR Makanchi Array 43.15 56 P **P** **08 08 03.4 +1.2**
comp=Z,7.5nm,0.7s,baz=275,slow=6.2,SNR=69
MKAR Makanchi Array 43.15 56*eP* **P** **08 08 03.4 +1.2**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MKAR Makanchi Array 43.15 56 P **P** **08 08 01.3 -0.9**
SPA0 Spitsbergen Ar 44.01 357 P **P** **08 08 08.7 -0.1**
SCO Scoresbysund 44.39 339 P **P** **08 08 12.2 +0.4**
SCO pmax pmax
comp=Z,20nm,1.4s
SCO Scoresbysund 44.39 339 P **P** **08 08 12.2 +0.4**
SCO IAmb IAmb 08 08 29.6
comp=Z,20nm,1.4s
ZAA0 Zalesovo Array 44.61 46 P **P** **08 08 12.9 -0.9**
ZAA0 IAmb IAmb 08 08 15.6
comp=Z,34nm,1.5s
ZALV Zalesovo Beam 44.61 46 P **P** **08 08 14.4 +0.7**
comp=Z,9.1nm,0.5s,baz=270,slow=8.8,SNR=29
ZALV pP **sP** **08 08 24.6 0.0**
comp=Z,12nm,0.6s,baz=265,slow=9.4,SNR=13
ZALV Zalesovo Beam 44.61 46 P **P** **08 08 13.7 -0.1**
ZSN Zaisan 44.85 55 *eP* **P** **08 08 16.4 +0.5**
baz=55
ZSN Zaisan 44.85 55 *eP* **P** **08 08 16.3 +0.5**
KBS Kingsbay 44.97 356 P **P** **08 08 16.0 -0.3**
KBS pmax pmax
comp=Z,86nm,1.4s
KBS Kingsbay 44.97 356 P **P** **08 08 16.0 -0.3**
DAG Danmarks Havn 46.97 347 *i* P **P** **08 08 31.4 -0.7**
DAG IAmb IAmb 08 08 32.5
comp=Z,2.6nm,0.8s
DAG Danmarks Havn 46.97 347 *i* P **P** **08 08 31.3 -0.7**
DAG pmax pmax
comp=Z,3.0nm,0.8s
WMQ Urumqi 47.31 60 *eP* **P** **08 08 35.9 +0.6**
WMQ pP pP 08 08 39.8 -3.2
WMQ PcP **PcP** **08 10 08.1 +2.1**
WMQ pmax pmax
comp=Z,27nm,0.8s
WMQ pmax pmax
comp=Z,140nm,4.3s
WMQ LR LR
comp=Z,860nm,20.9s
WMQ LR LR
comp=Z,750nm,17.7s
NRIK Noril'sk 47.98 25 P **P** **08 08 40.5 +0.5**
comp=Z,2.9nm,0.6s,baz=237,slow=8.4,SNR=4.5
NRIK Noril'sk 47.98 25*ceP* **P** **08 08 41.4 +1.3**
NRIK pmax pmax
comp=Z,7.0nm,1.1s
NRIK Noril'sk 47.98 25 P **P** **08 08 39.8 -0.3**
NRIK IAmb IAmb 08 08 42.1
comp=Z,7.7nm,1.2s
PYUN Piuthan 48.07 81 *eP* **P** **08 08 43.1 +1.5**
comp=Z,9.2nm,0.3s
GKN Gorkha 49.46 81 *eP* **P** **08 08 53.2 +1.0**
comp=Z,13nm,0.4s
LSZ Lusaka 49.51 178 LR LR 08 30 33.9
comp=Z,113nm,19.4s,baz=340,slow=37
NOR Nord 49.76 352 *i* P **P** **08 08 53.1 -0.6**
NOR IAmb IAmb 08 08 54.3
comp=Z,6.2nm,0.7s
NOR Nord 49.76 352 *i* P **P** **08 08 53.0 -0.6**
NOR pmax pmax
comp=Z,6.0nm,0.7s
ICESG Greenland Ices 49.80 335 *i* P **P** **08 08 54.7 +0.2**
ICESG IAmb IAmb 08 08 55.9
comp=Z,7.8nm,0.9s
DMN Daman 49.99 81 *eP* **P** **08 08 57.4 +1.0**
comp=Z,18nm,0.8s
SUMG Summit 50.03 339 *i* P **P** **08 08 56.5 +0.2**
SUMG IAmb IAmb 08 08 58.2
comp=Z,14nm,1.0s
SUMG Summit 50.03 339 *i* P **P** **08 08 56.4 +0.2**
SUMG pmax pmax
comp=Z,14nm,1.0s
SUMG Summit 50.03 339 P **P** **08 08 54.8 -1.4**
KKN Kakani 50.06 81 *eP* **P** **08 08 58.5 +1.6**
PKI Pulchoki 50.25 81 *eP* **P** **08 08 59.1 +0.6**
GUN Gumba 50.50 80 *eP* **P** **08 09 01.6 +1.2**
JIRN Jiri 50.85 80 *eP* **P** **08 09 04.0 +0.9**
comp=Z,14nm,0.5s
RAMN Ramite 51.47 81 *eP* **P** **08 09 07.4 -0.2**
comp=Z,8.2nm,0.5s
DY2G Dye2 52.13 331 *i* P **P** **08 09 12.4 +0.6**
DY2G IAmb IAmb 08 09 13.4
comp=Z,8.5nm,1.0s
NEEM North Greenlan 53.94 345 *i* P **P** **08 09 25.2 0.0**
NEEM IAmb IAmb 08 09 27.6
comp=Z,14nm,0.8s
LSA Lhasa 54.07 76 P **P** **08 09 26.2 -0.8**
LSA Lhasa 54.07 76 P **P** **08 09 26.2 -0.8**
LSA IAmb IAmb 08 09 30.1
comp=Z,5.4nm,0.7s
TLY Talaya 56.19 47 *i* P **P** **08 09 42.5 +1.1**
TLY pmax pmax
comp=Z,10.0nm,1.1s
TLY Talaya 56.19 47 P **P** **08 09 41.2 -0.2**
TLY IAmb IAmb 08 09 45.5
comp=Z,12nm,1.0s
ZAK Zakamensk 56.29 48 *eP* **P** **08 09 43.2 +0.9**
ZAK pmax pmax
comp=Z,17nm,1.2s
SHL Shillong 56.36 80 P **P** **08 09 41.6 -1.6**
SHL pmax pmax
comp=Z,8.0nm,0.8s
SHL Shillong 56.36 80 P **P** **08 09 41.6 -1.6**
SHL IAmb IAmb 08 09 44.7
comp=Z,7.6nm,0.8s
GTA Gaotai 57.22 62 P **P** **08 09 51.1 +2.0**
GTA pP pwP 08 10 01.3 +1.2
GTA sP sP 08 10 04.9 +5.0
GTA PcP **PcP** **08 10 45.3 +1.9**
GTA pmax pmax
comp=Z,8.0nm,1.2s
TULEG Thule 58.02 344 *i* P **P** **08 09 53.2 -0.7**
TULEG IAmb IAmb 08 09 54.9
comp=Z,22nm,0.8s
TULEG Thule 58.02 344 P **P** **08 09 52.7 -1.2**
SONM Songino Array 58.99 51 P **P** **08 10 02.4 +1.1**
comp=Z,7.5nm,0.7s,baz=283,slow=8.8,SNR=19
SONM pP **pwP** **08 10 12.7 +0.5**
comp=Z,2.4nm,0.6s,baz=290,slow=9.1,SNR=3.8
SONM Songino Array 58.99 51 P **P** **08 10 00.3 -1.0**
SONM IAmb IAmb 08 10 04.0
comp=Z,19nm,1.4s
ULN Ulaanbaatar 59.40 50*ceP* **P** **08 10 05.9 +1.7**
ULN pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 59.40 50 P **P** **08 10 03.2 -0.9**
ULN IAmb IAmb 08 10 07.4
comp=Z,12nm,0.8s
EUNU Eureka 60.07 349 P **P** **08 10 07.8 -0.4**
TIXI Tiksi 61.37 21*ceP* **P** **08 10 17.3 +0.3**
TIXI pmax pmax
comp=Z,21nm,1.0s
TIXI Tiksi 61.37 21 P **P** **08 10 16.2 -0.9**
TIXI IAmb IAmb 08 10 18.1
comp=Z,6.1nm,1.1s
LZH Lanzhou 61.42 64 *eP* **P** **08 10 20.8 +2.6**
LZH pP sP 08 10 28.9 -0.1
LZH sP pwP 08 10 33.4 +4.2
LZH pmax pmax
comp=Z,27nm,1.3s
BOSA Boshof 62.78 181 P **P** **08 10 29.1 +2.0**
comp=Z,5.7nm,1.1s,baz=331,slow=8.5,SNR=3.1
BTO Baotou 64.05 57 *eP* **P** **08 10 36.3 +0.7**
BTO S **S** **08 19 15.8 +5.4**
BTO pmax pmax
comp=Z,54nm,1.4s
BTO pmax pmax
comp=Z,360nm,6.5s
BTO LR LR
comp=Z,1μm,9.3s
RES Resolute Bay 64.62 345 P **P** **08 10 38.4 -0.2**
RES pmax pmax
comp=Z,6.0nm,1.1s
RES Resolute Bay 64.62 345 P **P** **08 10 38.4 -0.2**
RES IAmb IAmb 08 10 45.3
comp=Z,5.6nm,1.1s
MHMT Maesarieng 64.77 85 P **P** **08 10 42.2 +1.7**
comp=Z,10.0nm,0.7s
HHC Hu-ho-hao-te 65.01 56 *eP* **P** **08 10 43.8 +1.9**
HHC pmax pmax
comp=Z,35nm,1.2s
HHC pmax pmax
comp=Z,100nm,5.6s
CHTO Chiang Mai 65.28 84 P **P** **08 10 45.8 +2.0**
CM32 Chiang Mai Arr 65.28 84 P **P** **08 10 46.0 +2.2**
CM33 Chiang Mai Arr 65.28 84 P **P** **08 10 45.0 +1.2**
CMMT Chiang Mai 65.29 84 P **P** **08 10 44.6 +0.8**
comp=Z,279nmcomp=Z,2.4nm,1.5s
KMI Kunming 65.32 76 P **P** **08 10 48.4 +4.1**
KMI sP pwP 08 11 00.9 +5.4
KMI pmax pmax
comp=Z,12nm,0.6s
KMI LR LR
comp=Z,360nm,14.8s
KMI LR LR
comp=Z,240nm,14.8s
CM34 Chiang Mai Arr 65.43 83 P **P** **08 10 46.0 +1.2**
CM15 Chiang Mai Arr 65.45 84 P **P** **08 10 47.0 +2.1**
comp=Z,4.6nm,0.9s
CM13 Chiang Mai Arr 65.45 84 P **P** **08 10 46.0 +1.1**
comp=Z,3.1nm,0.8s
CM31 Chiang Mai Arr 65.46 84 P **P** **08 10 43.8 -1.2**
CM31 IAmb IAmb 08 11 00.0
comp=Z,5.7nm,0.8s
CMAR Chiang Mai Arr 65.46 84 P **P** **08 10 45.7 +0.8**
comp=Z,2.2nm,0.7s,baz=301,slow=8.2,SNR=18
CMAR pP **pwP** **08 10 56.4 +0.5**
comp=Z,3.0nm,0.8s,baz=301,slow=8.2,SNR=7.4
CMAR Chiang Mai Arr 65.46 84 P **P** **08 10 44.4 -0.6**
CM02 Chiang Mai Arr 65.47 84 P **P** **08 10 47.6 +2.6**
comp=Z,5.8nm,0.9s
CM05 Chiang Mai Arr 65.49 84 P **P** **08 10 47.0 +1.9**
comp=Z,3.5nm,1.0s
CM01 Chiang Mai Arr 65.49 84 P P 08 10 55.0 +10
CM09 Chiang Mai Arr 65.50 84 P **P** **08 10 47.5 +2.2**
comp=Z,6.0nm,0.8s
CM04 Chiang Mai Arr 65.52 84 P **P** **08 10 47.9 +2.5**
comp=Z,5.7nm,0.9s
CM35 Chiang Mai Arr 65.52 84 P **P** **08 10 48.0 +2.6**
CM36 Chiang Mai Arr 65.55 84 P **P** **08 10 47.0 +1.4**
LAMP Lampang 65.99 83 P **P** **08 10 50.9 +2.5**
comp=Z,624nmcomp=Z,22nm,0.8s
XAN Xi'an 66.06 64 P **P** **08 10 49.3 +0.7**
XAN pP pP 08 10 55.1 -1.4
XAN sP sP 08 10 59.0 -0.5
XAN pmax pmax
comp=Z,12nm,1.6s
SUKH Sukhothai 66.51 84 P **P** **08 10 54.1 +2.4**
comp=Z,17nm,0.9s
HIA Hailar 66.65 45*c i* P **P** **08 10 53.8 +1.6**
HIA pmax pmax
comp=Z,33nm,1.1s
HIA Hailar 66.65 45 P **P** **08 10 51.8 -0.4**
UTTA Uttaradit 67.14 84 P P 08 11 08.8 +13
BJI Beijing 68.53 56 P **P** **08 11 05.9 +1.8**
BJI SS SS 08 24 31.5 +3.3
BJI pmax pmax
comp=Z,11nm,1.0s
BJT Baijiatuan 68.53 56 P **P** **08 11 04.3 +0.1**
BJT pmax pmax
comp=Z,19nm,1.3s
BJT Baijiatuan 68.53 56 P **P** **08 11 04.3 +0.1**
D63A Stockholm 68.61 313 P 08 11 05.5
baz=62
H66A Whiting 69.18 311 P 08 11 08.9
baz=62
CHAI Chaiyaphum 69.26 85 P P 08 11 22.0 +13
F64A Sherman 69.31 312 P 08 11 09.3
baz=62
F63A Nahmakanta, Br 69.85 312 P 08 11 12.4
baz=61
TIA Tai'an 71.00 59 P **P** **08 11 21.3 +1.9**
TIA pmax pmax
comp=Z,11nm,1.1s
D58A Chemin du LacG 71.43 315 P 08 11 22.7
baz=59
F60A Warwick 71.45 313 P 08 11 22.7
baz=60
E58A La Victoria 72.03 314 P 08 11 25.8
baz=59
LBNH Lisbon 72.32 312 P 08 11 28.1
baz=59
D56A ZEC Mazanza, M 72.55 315 P 08 11 29.5
baz=58
H60A Morristown 72.63 312 P 08 11 30.2
baz=59
MATQ Matagami 72.71 319 P 08 11 30.5
baz=57
CN2 Changchun 72.73 49 *eP* **P** **08 11 30.5 +0.8**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
E56A St. Veronique 72.98 315 P 08 11 32.1
baz=58
D55A Sainte-Anne-du 72.98 316 P 08 11 32.5
baz=58
H59A Cadyville 73.19 313 P 08 11 33.4
baz=58
BILL Bilibino 73.41 15 *i* P **P** **08 11 33.2 -0.1**
BILL *i* 08 11 41.9
BILL *i* 08 11 53.1
BILL *i* 08 14 15.6
BILL pmax pmax
comp=Z,8.0nm,1.3s
BILL Bilibino 73.41 15 P **P** **08 11 33.3 -0.1**
KLR Kul'dur 73.48 41*ceP* **P** **08 11 35.5 +1.5**
KLR pmax pmax
comp=Z,12nm,1.2s
H58A Gabriels 73.60 313 P 08 11 35.7
baz=58
LONY Lake Ozonia 73.74 313 P 08 11 36.9
baz=58
J60A Lant Hill Farm 73.76 311 P 08 11 36.9
baz=58
C36M Paulatuk 74.25 350 P **P** **08 11 37.6 -0.5**
C36M IAmb IAmb 08 11 49.4
comp=Z,9.0nm,0.7s
H57A Richville 74.31 313 P 08 11 39.6
baz=57
J59A Piesco 74.31 312 P 08 11 40.2
baz=57
NJ2 Nanjing 74.32 62 *eP* **P** **08 11 38.5 -0.7**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
A21K Barrow 74.46 1 P **P** **08 11 39.5 +0.2**
A21K IAmb IAmb 08 11 41.4
comp=Z,20nm,1.2s
A21K Barrow 74.46 1 P 08 11 40.7
baz=357
I58A Old Forge 74.48 312 P 08 11 41.2
baz=57
FCC Fort Churchill 74.85 332 P **P** **08 11 41.5 -0.3**
FCC pmax pmax
comp=Z,12nm,1.5s
FCC Fort Churchill 74.85 332 P **P** **08 11 41.5 -0.3**
FCC IAmb IAmb 08 11 54.1
comp=Z,12nm,1.4s
K59A Cooperstown 74.90 312 P 08 11 43.8
baz=57
G54A Lake Saint Pet 75.39 315 P 08 11 46.4
baz=56
K58A Earlville 75.39 312 P 08 11 46.6
baz=56
M60A Port Jervis 75.55 310 P 08 11 47.2
baz=57
MA2 Magadan 75.57 26*ceP* **P** **08 11 46.1 +0.1**
MA2 pmax pmax
comp=Z,7.0nm,1.1s
MA2 Magadan 75.57 26 P **P** **08 11 46.3 +0.3**
MA2 IAmb IAmb 08 11 48.2
comp=Z,12nm,1.2s
BINY Binghamton 75.92 312 P 08 11 49.6
baz=56
L58A Harry Jones Me 75.92 311 P 08 11 49.8
baz=56
N60A Cedar Hill Far 76.10 310 P 08 11 50.3
baz=56
H53A Bobcaygeon 76.14 315 P 08 11 50.4
baz=55
INK Inuvik 76.44 353 P **P** **08 11 50.4 -0.3**
INK pmax pmax
comp=Z,11nm,1.3s
INK Inuvik 76.44 353 P **P** **08 11 50.4 -0.3**
INK IAmb IAmb 08 11 51.7
comp=Z,11nm,1.2s
USA0B Ussuriysk Arra 76.46 46 P **P** **08 11 51.5 +0.2**
USA0B pmax pmax
comp=Z,19nm,0.9s
USA0B Ussuriysk Arra 76.46 46 P **P** **08 11 51.5 +0.2**
USRK Ussuriysk Ar. 76.46 46 P **P** **08 11 52.0 +0.7**
comp=Z,19nm,0.8s,baz=296,slow=4.6,SNR=28
USRK Ussuriysk Ar. 76.46 46 P **P** **08 11 52.0 +0.7**
USRK Ussuriysk Ar. 76.46 46 P **P** **08 11 51.3 0.0**
N59A State Game Lan 76.50 310 P 08 11 52.9
baz=56
L57A Andrews Acres 76.56 312 P 08 11 53.0
baz=56
M58A Price's Panora 76.67 311 P 08 11 54.0
baz=56
L56A Greenwood 76.92 312 P 08 11 55.1
baz=55
N58A Sunbury 77.13 311 P 08 11 56.3
baz=56
TOLK Toolik Lake Re 77.14 359 P **P** **08 11 54.0 -0.8**
TOLK IAmb IAmb 08 11 57.1
comp=Z,11nm,1.4s
RDOG Red Dog Mine 77.52 4 P **P** **08 11 55.9 -0.9**
RDOG IAmb IAmb 08 11 58.7
comp=Z,11nm,1.1s
RDOG Red Dog Mine 77.52 4 P 08 11 57.6
baz=352
O58A Lewisberry 77.67 310 P 08 11 58.8
baz=55
M56A Emporium 77.67 312 P 08 11 59.7
baz=55
N57A Milroy 77.70 311 P 08 11 59.4
baz=55
KSAR Wonju Array Be 77.72 53 P **P** **08 11 58.8 +0.3**
KSAR Wonju Array Be 77.72 53 P **P** **08 11 58.8 +0.3**
KSRS Korea Array 77.74 53 P **P** **08 11 59.9 +1.3**
comp=Z,9.1nm,0.9s,baz=302,slow=4.8,SNR=21
SSPA Standing Stone 77.98 311 P 08 12 00.2
baz=55
N56A West Decatur 78.07 312 P 08 12 00.9
baz=55
BMAR Burnt Mountain 78.18 357 P **P** **08 12 01.1 +0.6**
YKA Yellowknife Ar 78.45 343 P **P** **08 12 02.0 0.0**
comp=Z,2.8nm,1.0s,baz=39,slow=5.4,SNR=28
M54A Oil Creek Stat 78.56 313 P 08 12 03.3
baz=54
COLD Coldfoot 78.57 359 P **P** **08 12 03.1 +0.4**
COLD IAmb IAmb 08 12 05.2
comp=Z,6.8nm,0.9s
COLD Coldfoot 78.57 359 P 08 12 03.5
baz=2.7
EPYK Eagle Plains 78.64 353 P **P** **08 12 02.8 -0.3**
EPYK IAmb IAmb 08 12 04.3
comp=Z,13nm,1.1s
EPYK Eagle Plains 78.65 353 P 08 12 03.0
baz=14
N54A Moraine State 79.08 312 P 08 12 05.8
baz=54
TNA Tin City 79.63 6 P **P** **08 12 08.5 0.0**
TNA IAmb IAmb 08 12 10.4
comp=Z,9.6nm,1.0s
TNA Tin City 79.64 6 P 08 12 08.7
baz=348,SNR=8.7
Q56A Snyder Ridge, 79.72 310 P 08 12 09.4
baz=54
S58A Poland Farm, P 79.83 309 P 08 12 10.6
baz=54
IMAR Indian Mountai 79.85 0 P **P** **08 12 10.3 +0.6**
PRP Porcupine Dome 80.13 357 P **P** **08 12 10.0 -1.4**
PRP Porcupine Dome 80.13 357 P 08 12 12.1
baz=6.6
R56A Bull Pasture M 80.23 310 P 08 12 12.7
baz=54
O53A New Philadelph 80.26 312 P 08 12 12.9
baz=53
S57A Dark Hollow, R 80.33 309 P 08 12 12.9
baz=54
EGAK Eagle 80.59 355 P **P** **08 12 12.1 -1.6**
EGAK IAmb IAmb 08 12 25.6
comp=Z,14nm,1.4s
POKR Poker Plat Res 80.61 357 P **P** **08 12 12.9 -1.0**
POKR IAmb IAmb 08 12 15.9
comp=Z,15nm,1.1s
POKR Poker Plat Res 80.61 357 P 08 12 14.2
baz=5.0
I23K Minto, Yukon-K 80.64 358 P **P** **08 12 13.9 -0.1**
I23K Minto, Yukon-K 80.64 358 P 08 12 14.2
baz=3.4
R55A Marlinton 80.76 310 P 08 12 15.5
baz=53
FFC Flin Flon 80.78 333 P **P** **08 12 13.9 -1.0**
FFC pmax pmax
comp=Z,15nm,1.5s
FFC Flin Flon 80.78 333 P **P** **08 12 13.9 -1.0**
FFC IAmb IAmb 08 12 27.4
comp=Z,15nm,1.4s
MLY Manley 80.78 359 P **P** **08 12 15.1 +0.3**
MLY IAmb IAmb 08 12 28.6
comp=Z,11nm,1.2s
MLY Manley 80.79 359 P 08 12 15.8
baz=2.2,SNR=7.0
MDM Murphy Dome 80.80 358 P **P** **08 12 15.1 +0.2**
MDM IAmb IAmb 08 12 17.3
comp=Z,13nm,1.0s
ANM Nome 80.82 5 P **P** **08 12 15.4 +0.4**
ANM pmax pmax
comp=Z,13nm,1.0s
ANM Nome 80.82 5 P **P** **08 12 15.3 +0.4**
ANM IAmb IAmb 08 12 17.0
comp=Z,13nm,1.0s
ANM Nome 80.83 5 P 08 12 15.1
baz=350,SNR=13
COLA College 80.87 358 P 08 12 15.9
baz=4.7
TCOL CIGO, UAF Yank 80.87 358 P 08 12 16.0
baz=4.7
IL31 80.94 357 P **P** **08 12 15.0 -0.5**
ILAR Eielson Array 80.94 357 P **P** **08 12 15.9 +0.3**
comp=Z,3.4nm,1.0s,baz=350,slow=3.7,SNR=17
ILAR Eielson Array 80.94 357 P **P** **08 12 15.7 +0.1**
GAMB Gambell 80.99 8 P 08 12 16.3
baz=345
COWI Conover 81.07 321 P **P** **08 12 16.1 -0.6**
COWI IAmb IAmb 08 12 18.4
comp=Z,8.4nm,1.1s
CCB Clear Creek Bu 81.09 358 P **P** **08 12 16.6 +0.2**
CCB IAmb IAmb 08 12 18.3
comp=Z,8.5nm,1.0s
DAWY Dawson 81.15 354 P **P** **08 12 17.1 +0.3**
DAWY IAmb IAmb 08 12 19.2
comp=Z,8.4nm,0.9s
NEA2 Nenana 81.19 358 P **P** **08 12 17.3 +0.3**
NEA2 IAmb IAmb 08 12 18.5
comp=Z,6.8nm,1.0s
NEA2 Nenana 81.19 358 P 08 12 17.2
baz=3.6

WRH	**Wood River Hil**	**81.28**	**358**	P		**P**	**08 12 16.6**	**-0.8**
WRH				IAmb		IAmb	08 12 19.3	
	comp=Z,17nm,1.0s							
HDA	**Harding Lake**	**81.30**	**357**	P			08 12 17.7	
	baz=5.4,SNR=11							
HDA				P			08 12 17.7	
	baz=5.4,SNR=11							
ACSO	**Alum Creek Sta**	**81.34**	**313**	P			08 12 18.4	
	baz=52							
K27K	**Chicken**	**81.40**	**355**	P		**P**	**08 12 17.9**	**-0.1**
K27K				IAmb		IAmb	08 12 20.9	
	comp=Z,16nm,1.1s							
K27K	**Chicken**	**81.40**	**355**	P			08 12 18.9	
	baz=9.5							
ULM	**Lac du Bonnet**	**81.53**	**327**	P		**P**	**08 12 18.8**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=51,slow=8.2,SNR=6.8							
ULM	**Lac du Bonnet**	**81.53**	**327**	P		**P**	**08 12 17.8**	**-1.2**
ULM				IAmb		IAmb	08 12 20.0	
	comp=Z,17nm,1.4s							
SCRK	**Sand Creek**	**81.58**	**356**	P		**P**	**08 12 19.8**	**+0.6**
SCRK				IAmb		IAmb	08 12 32.1	
	comp=Z,11nm,1.2s							
SCRK	**Sand Creek**	**81.58**	**356**	P			08 12 19.6	
	baz=7.9,SNR=9.2							
BPAW	**Bear Paw Mtn.**	**81.72**	**359**	P		**P**	**08 12 19.2**	**-0.6**
BPAW				IAmb		IAmb	08 12 21.9	
	comp=Z,8.8nm,1.0s							
BPAW	**Bear Paw Mtn.**	**81.72**	**359**	P			08 12 19.9	
	baz=2.0,SNR=9.0							
DOT	**Dot Lake**	**81.91**	**356**	P		**P**	**08 12 21.3**	**+0.5**
DOT				IAmb		IAmb	08 12 23.5	
	comp=Z,11nm,1.0s							
CHUM	**Lake Minchumin**	**81.96**	**360**	P			08 12 21.2	
	baz=0.9,SNR=7.2							
MCK	**McKinley**	**82.05**	**358**	P		**P**	**08 12 20.9**	**-0.6**
MCK				pmax		pmax		
	comp=Z,18nm,1.1s							
MCK	**McKinley**	**82.05**	**358**	P		**P**	**08 12 20.9**	**-0.6**
MCK	**McKinley**	**82.05**	**358**	P			08 12 21.6	
	baz=3.8,SNR=10							
KTH	**Kantishna Hill**	**82.27**	**359**	P		**P**	**08 12 23.0**	**+0.3**
KTH				IAmb		IAmb	08 12 25.1	
	comp=Z,14nm,1.1s							
BCAR	**Beaver Creek A**	**82.34**	**355**	P		**P**	**08 12 23.7**	**+0.7**
TRF	**Thorofare Moun**	**82.36**	**359**	P		**P**	**08 12 23.2**	**-0.1**
TRF				IAmb		IAmb	08 12 25.2	
	comp=Z,9.9nm,1.0s							
TRF	**Thorofare Moun**	**82.36**	**359**	P			08 12 22.9	
	baz=2.6							
RND	**Reindeer**	**82.37**	**358**	P		**P**	**08 12 22.6**	**-0.6**
RND				pmax		pmax		
	comp=Z,8.0nm,1.1s							
RND	**Reindeer**	**82.37**	**358**	P		**P**	**08 12 22.6**	**-0.6**
RND				IAmb		IAmb	08 12 23.9	
	comp=Z,7.9nm,1.1s							
P49A	**Miami Univ. Ec**	**82.82**	**313**	P			08 12 25.5	
	baz=51							
PPLA	**Purkeypile**	**82.94**	**359**	P		**P**	**08 12 26.3**	**-0.1**
PPLA	**Purkeypile**	**82.95**	**359**	P			08 12 26.0	
	baz=1.0							
WAT6	**Susitna Watana**	**83.16**	**357**	P			08 12 27.2	
	baz=4.7							
KMSC	**Kings Mountain**	**83.43**	**308**	P			08 12 28.8	
	baz=52							
SPMN	**Marine on St.**	**83.56**	**322**	P		**P**	**08 12 30.1**	**+0.4**
SPMN				IAmb		IAmb	08 12 31.4	
	comp=Z,11nm,1.3s							
SPMN	**Marine on St.**	**83.56**	**322**	P			08 12 29.6	
	baz=46							
JFWS	**Jewell Farm**	**83.79**	**319**	P			08 12 30.6	
	baz=48							
SKT	**Skwentna**	**83.86**	**359**	P		**P**	**08 12 30.3**	**-0.6**
SKT	**Skwentna**	**83.86**	**359**	P			08 12 30.8	
	baz=1.6							
SCM	**Sheep Creek Mo**	**83.89**	**357**	P		**P**	**08 12 30.5**	**-0.6**
SCM				pmax		pmax		
	comp=Z,20nm,1.1s							
SCM	**Sheep Creek Mo**	**83.89**	**357**	P		**P**	**08 12 30.5**	**-0.6**
N25K	**Chitina, Valde**	**83.98**	**356**	P			08 12 31.8	
	baz=7.3							
GHO	**Glory Hole Cre**	**84.01**	**358**	P		**P**	**08 12 31.7**	**-0.1**
L42A	**Oliver, Polo**	**84.08**	**318**	P		**P**	**08 12 31.4**	**-1.0**
L42A				IAmb		IAmb	08 12 34.8	
	comp=Z,8.9nm,0.9s							
HYT	**Haines Junctio**	**84.14**	**352**	P		**P**	**08 12 32.8**	**+0.3**
HYT				IAmb		IAmb	08 12 35.4	
	comp=Z,8.9nm,1.1s							
KLU	**Klutina**	**84.17**	**356**	P			08 12 32.6	
	baz=6.2							
PMR	**Palmer**	**84.20**	**358**	P		**P**	**08 12 33.1**	**+0.6**
PMR				pmax		pmax		
	comp=Z,25nm,1.4s							
PMR	**Palmer**	**84.20**	**358**	P		**P**	**08 12 33.1**	**+0.6**
PMR	**Palmer**	**84.20**	**358**	P			08 12 33.6	
	baz=3.6							
ERM	**Erimo**	**84.22**	**42**	*ce*P		**P**	**08 12 34.1**	**+1.1**
ERM				pmax		pmax		
	comp=Z,39nm,1.7s							
KNK	**Knik Glacier**	**84.36**	**358**	P			08 12 34.1	
	baz=4.1							
SUA	**Susitna One**	**84.36**	**359**	P		**P**	**08 12 32.5**	**-1.1**
SUA	**Susitna One**	**84.36**	**359**	P			08 12 34.0	
	baz=2.2							
CTG	**Chitna Glacier**	**84.38**	**354**	P			08 12 34.4	
	baz=10.0							
T50A	**Nancy**	**84.48**	**312**	P		**P**	**08 12 34.8**	**+0.3**
T50A				IAmb		IAmb	08 12 37.0	
	comp=Z,17nm,1.4s							
WCI	**Wyandotte Cave**	**84.60**	**313**	P		**P**	**08 12 35.2**	**+0.1**
WCI				pmax		pmax		
	comp=Z,17nm,1.3s							
WCI	**Wyandotte Cave**	**84.60**	**313**	P		**P**	**08 12 35.1**	**+0.1**
WCI	**Wyandotte Cave**	**84.60**	**313**	P			08 12 35.7	
	baz=50							
BMRM	**Bremner River**	**84.61**	**356**	P			08 12 35.6	
	baz=7.3							
SPCR	**Spurr Chakacha**	**84.65**	**359**	P			08 12 35.7	
	baz=1.0							
I37A	**Lemond, Waseca**	**84.71**	**321**	P		**P**	**08 12 35.1**	**-0.5**
RC01	**Rabbit Creek A**	**84.72**	**358**	P			08 12 36.1	
	baz=3.1							
CRQE	**Cirque**	**84.73**	**355**	P			08 12 36.1	
	baz=8.6							
SVW2	**Sparrevohn**	**84.74**	**1**	P		**P**	**08 12 35.2**	**-0.2**
SVW2				IAmb		IAmb	08 12 38.1	
	comp=Z,9.0nm,1.0s							
GLI	**Glacier Island**	**84.84**	**357**	P			08 12 36.3	
	baz=5.2							
F33A	**5 Mile Ranch,**	**84.87**	**324**	P		**P**	**08 12 36.7**	**+0.4**
F33A				IAmb		IAmb	08 12 37.8	
	comp=Z,9.1nm,1.3s							
MAJO	**Matsushiro**	**84.87**	**49**	P		**P**	**08 12 36.5**	**0.0**
MAJO				pmax		pmax		
	comp=Z,15nm,1.1s							
MAJO	**Matsushiro**	**84.87**	**49**	P		**P**	**08 12 36.5**	**0.0**
MAT	**Matsushiro**	**84.87**	**49**	P		**P**	**08 12 37.2**	**+0.7**
MJAR	**Matsushiro Arr**	**84.88**	**49**	P		**P**	**08 12 37.9**	**+1.4**
	comp=Z,13nm,1.0s,baz=306,slow=5.0,SNR=21							
MJAR				pP		**pwP**	**08 12 48.5**	**+0.8**
	comp=Z,9.1nm,1.0s,baz=297,slow=6.1,SNR=5.9							
MJAR	**Matsushiro Arr**	**84.88**	**49**	P		**P**	**08 12 36.7**	**+0.2**
MJAR				IAmb		IAmb	08 12 39.3	
	comp=Z,8.9nm,1.0s							
L40A	**Anamosa**	**84.89**	**319**	P		**P**	**08 12 36.0**	**-0.5**
EYAK	**Cordova Ski Ar**	**85.10**	**356**	P			08 12 37.7	
	baz=6.4							
PINM	**Pinnacle**	**85.14**	**353**	P			08 12 37.6	
	baz=11							
OLIL	**Olney**	**85.34**	**315**	P		**P**	**08 12 38.0**	**-0.9**
U49A	**Red Boiling Sp**	**85.39**	**312**	P		**P**	**08 12 38.5**	**-0.5**
GOGA	**Godfrey**	**85.89**	**308**	P			08 12 42.0	
	baz=51							
T47A	**Sharon Grove**	**85.89**	**313**	P		**P**	**08 12 40.8**	**-0.8**
T47A				IAmb		IAmb	08 12 44.1	
	comp=Z,10nm,1.0s							
W50A	**Signal Mountai**	**85.94**	**310**	P		**P**	**08 12 41.2**	**-0.7**
CLTN	**Cedars of Leba**	**86.00**	**312**	P		**P**	**08 12 42.4**	**+0.2**
CLTN				IAmb		IAmb	08 12 44.9	
	comp=Z,12nm,1.2s							
E28A	**Huff**	**86.40**	**327**	P		**P**	**08 12 44.3**	**+0.3**
E28A				IAmb		IAmb	08 12 47.1	
	comp=Z,11nm,1.0s							
V48A	**Smith Brothers**	**86.53**	**312**	P		**P**	**08 12 43.9**	**-0.9**
V48A				IAmb		IAmb	08 12 47.0	
	comp=Z,11nm,1.2s							
ECSD	**EROS Data Cent**	**86.55**	**323**	P		**P**	**08 12 43.3**	**-1.4**
ECSD				IAmb		IAmb	08 12 46.5	
	comp=Z,6.7nm,1.2s							
ECSD	**EROS Data Cent**	**86.55**	**323**	P			08 12 45.0	
	baz=44							
SIUC	**Southern Illin**	**86.68**	**314**	P		**P**	**08 12 44.4**	**-1.0**
N38A	**Joes South For**	**86.86**	**319**	P		**P**	**08 12 45.6**	**-0.7**
WVT	**Waverly**	**86.89**	**312**	P		**P**	**08 12 46.1**	**-0.4**
WVT				pmax		pmax		
	comp=Z,8.0nm,1.1s							
WVT	**Waverly**	**86.89**	**312**	P		**P**	**08 12 46.1**	**-0.4**
WVT				IAmb		IAmb	08 12 47.6	
	comp=Z,7.8nm,1.1s							
WVT	**Waverly**	**86.89**	**312**	P			08 12 46.9	
	baz=49							
Z51A	**Franklin**	**87.05**	**309**	P		**P**	**08 12 45.6**	**-1.8**
FVM	**French Village**	**87.20**	**315**	P		**P**	**08 12 46.4**	**-1.6**
FVM				pmax		pmax		
	comp=Z,15nm,1.2s							
FVM	**French Village**	**87.20**	**315**	P		**P**	**08 12 46.4**	**-1.6**
CCM	**Cathedral Cave**	**87.63**	**316**	P		**P**	**08 12 49.8**	**-0.2**
CCM				pmax		pmax		
	comp=Z,13nm,1.3s							
CCM	**Cathedral Cave**	**87.63**	**316**	P		**P**	**08 12 49.8**	**-0.2**
CCM				IAmb		IAmb	08 12 52.6	
	comp=Z,13nm,1.3s							
CCM	**Cathedral Cave**	**87.63**	**316**	P			08 12 50.5	
	baz=47							
R40A	**Maddies Statio**	**88.06**	**316**	P		**P**	**08 12 52.1**	**0.0**
KDAK	**Kodiak Island**	**88.08**	**360**	LR		LR	08 53 26.3	
	comp=Z,1μm,20.4s,baz=237,slow=36							
LRAL	**Lakeview Retre**	**88.40**	**310**	P		**P**	**08 12 53.3**	**-0.5**
LRAL	**Lakeview Retre**	**88.40**	**310**	P			08 12 54.3	
	baz=49							
K31A	**O'Neill**	**88.43**	**323**	P		**P**	**08 12 52.4**	**-1.4**
OHAK	**Old Harbor**	**88.64**	**360**	P			08 12 54.9	
	baz=0.1							
LAO	**LASA Array**	**88.72**	**330**	P		**P**	**08 12 55.5**	**+0.3**
LAO	**LASA Array**	**88.73**	**330**	P			08 12 56.0	
	baz=37							
EGMT	**Eagleton**	**89.06**	**332**	P		**P**	**08 12 56.5**	**-0.3**
EGMT	**Eagleton**	**89.06**	**332**	P			08 12 57.2	
	baz=35							
S39A	**Bolivar**	**89.07**	**317**	P		**P**	**08 12 55.7**	**-1.2**
S39A				IAmb		IAmb	08 13 00.4	
	comp=Z,5.9nm,0.8s							
SII	**Sitkinak Islan**	**89.31**	**0**	P			08 12 58.5	
	baz=359							
BRAL	**Brewton**	**89.65**	**308**	P			08 13 00.3	
	baz=49							
WALA	**Waterton Lakes**	**89.70**	**335**	P		**P**	**08 12 57.9**	**-1.9**
WALA				IAmb		IAmb	08 13 01.2	
	comp=Z,9.8nm,1.3s							
RSSD	**Black Hills**	**89.80**	**327**	P		**P**	**08 12 59.1**	**-1.3**
RSSD				pmax		pmax		
	comp=Z,8.0nm,1.3s							
RSSD	**Black Hills**	**89.80**	**327**	P		**P**	**08 12 59.1**	**-1.3**
RSSD				IAmb		IAmb	08 13 03.1	
	comp=Z,8.3nm,1.2s							
RSSD	**Black Hills**	**89.80**	**327**	P			08 13 01.0	
	baz=39							
JTMT	**Jette**	**90.95**	**335**	P		**P**	**08 13 05.4**	**-0.2**
RLMT	**Red Lodge**	**91.25**	**330**	P			08 13 07.8	
	baz=35							
MIAR	**Mount Ida**	**91.41**	**314**	P		**P**	**08 13 06.7**	**-1.1**
MIAR				pmax		pmax		
	comp=Z,5.0nm,1.1s							
MIAR	**Mount Ida**	**91.41**	**314**	P		**P**	**08 13 06.7**	**-1.1**
MIAR				IAmb		IAmb	08 13 10.2	
	comp=Z,4.7nm,1.1s							
MIAR	**Mount Ida**	**91.42**	**314**	P			08 13 08.6	
	baz=46							
NEW	**Newport**	**91.47**	**337**	P		**P**	**08 13 06.5**	**-1.4**
NEW				pmax		pmax		
	comp=Z,7.0nm,1.2s							
NEW	**Newport**	**91.47**	**337**	P		**P**	**08 13 06.5**	**-1.4**
NEW				IAmb		IAmb	08 13 09.9	
	comp=Z,6.9nm,1.1s							
NEW	**Newport**	**91.47**	**337**	P			08 13 08.5	
	baz=29							
MSO	**Missoula**	**91.61**	**334**	P			08 13 09.2	
	baz=32							
YNE	**Yellowstone No**	**91.64**	**331**	P		**P**	**08 13 08.0**	**-1.0**
YNE				IAmb		IAmb	08 13 11.8	
	comp=Z,5.5nm,1.0s							
TUL1	**Leonard**	**91.73**	**317**	P			08 13 09.7	
	baz=44							
K22A	**Casper**	**92.07**	**327**	P			08 13 11.2	
	baz=37							
PHWY	**Pilot Hill**	**92.66**	**326**	P		**P**	**08 13 13.6**	**-0.2**
PHWY				IAmb		IAmb	08 13 15.5	
	comp=Z,7.4nm,1.0s							
N23A	**Red Feather La**	**93.20**	**326**	P			08 13 16.1	
	baz=38							
PDAR	**Pinedale Array**	**93.29**	**329**	P		**P**	**08 13 16.1**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=76,slow=6.3,SNR=5.5							
ASAR	**Alice Springs**	**116.75**	**101**	PKP		**PKPdf**	**08 18 46.0**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=307,slow=1.0,SNR=2.6							

BJI ***14*** *08:13:53.0±0.0, 15.07S×173.03W, h5km, mB5.7/49, mb5.2/46, Ms5.5/51, Ms7 5.2/51*

MOS ***14*** *08:13:53.7±0.9, 15.03S×173.34W, h10km, mb5.4/64, MS5.3/11, Error ellipse: s-maj=9.0km s-min=6.8km az=72.2*

NEIC ***14*** *08:13:54.1, 15.21S×173.34W, h9km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.20; Mθθ 1.07; Mφφ-1.27; Mrθ0.51; Mrφ0.99; Mθφ2.54; Fault plane solution: M₀3.01000×10¹⁷ NP1:φ₁112.20000°, δ29.41000°, λ6.11000°. NP2:φ₂16.87000°, δ87.00000°, λ119.27000°. Principal axes: T 2.7267, Plg41.0000°, Azm314.0000°; N 0.5033, Plg29.0000°, Azm195.0000°; P -3.2300, Plg35.0000°, Azm82.0000°;*

IDC ***14*** *08:13:54.4±0.3, 15.16S×173.38W, h0km, mb4.8/35, mb1 4.9/35, mb1mx4.9/44, mbtmp4.8/35, MS5.2/35, Ms1 5.2/35, ms1mx5.2/38 Error ellipse: s-maj=14.6km s-min=11.2km az=140.0*

NEIC ***14*** *08:13:55.3±1.5, 15.20S±0.08×173.35W±0.07, h8km±1km, mb5.4/322, Ms_20 5.4/736, Mwb5.6/67, Mwc5.7(GCMT), Error ellipse: s-maj=13.3km s-min=11.6km az=210.0*

NOU ***14*** *08:13:56.8, 15.05S×172.82W, h22km, mb5.2, Samoa Islands Region*

GCMT ***14*** *08:14:03.3±0.1, 14.99S±0.01×173.06W±0.01, h15km, MW5.7/167, Moment Tensor Solution. s136,c247; s167,c340; Duration: 1ŧ7 Moment tensor: Scale 10¹⁷ Nm; Mrr0.60±.03; Mθθ1.42±.03; Mφφ-2.02±.03; Mrθ1.16±.10; Mθφ2.06±.02; Mrφ3.04±.15; Best double couple: M₀4.25000×10¹⁷ NP1:φ₁113.00000°, δ39.00000°, λ8.00000°. NP2:φ₂17.00000°, δ85.00000°, λ129.00000°. Principal axes: T 4.2450, Plg38.0000°, Azm321.0000°; N 0.0080, Plg39.0000°, Azm192.0000°; P -4.2540, Plg29.0000°, Azm76.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***14*** *08:14:03, 14.95S×173.04W, h15km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.53; Mθθ1.61; Mφφ-2.14; Mrθ1.01; Mθφ2.16; Mrφ3.69; Fault plane solution: M₀4.80000×10¹⁷ NP1:φ₁111.00000°, δ36.00000°, λ7.00000°. NP2:φ₂16.00000°, δ86.00000°, λ126.00000°. Principal axes: T 4.6163, Plg38.0000°, Azm318.0000°; N 0.3465, Plg36.0000°, Azm193.0000°; P -4.9629, Plg31.0000°, Azm77.0000°;*

ISC 14 08:13:57.9±0.5, 15.27S±0.05×173.21W±0.04, h25km±3km, h25km:pP-P, n1142, σ1936/911, mb5.3/231, MS5.4/418, 65C-39D, Fault plane solution: NP1:φ₁352.28571°, δ75.00001°, λ112.49999°. NP2:φ₂114.28468°, δ26.82370°, λ34.99913°. Principal axes: T Plg54.4920°, Azm290.0537°; N Plg21.6936°, Azm166.1666°; P Plg26.6160°, Azm64.6675°; **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.93**	**46**	Pn	Pn	08 14 22.1	-7.1
	534nm,0.3s,baz=43,slow=1.1,SNR=354						
AFI				Sn	Sn	08 14 41.6	-11
	1μm,0.3s,baz=118,slow=23,SNR=8.8						
AFI	**Afiamalu**	**1.93**	**46**		Pn	08 14 22.2	-7.0
AFI	**Afiamalu**	**1.93**	**46**	P	Pn	08 14 22.4	-6.8
NIUE	**Niue**	**4.92**	**141**	P	**Pn**	**08 15 08.2**	**-2.1**
	baz=5.0,SNR=143						
NIUE				S	**Sn**	**08 16 00.7**	**-5.7**
	baz=5.0						
NIUE	**Niue**	**4.92**	**141**	Pn	**Pn**	**08 15 09.2**	**-1.1**
NIUE	**Niue**	**4.92**	**141**	P	**Pn**	**08 15 08.8**	**-1.4**
MSVF	**Nonsavu**	**8.74**	**252**	Pn	Pn	08 16 08.1	+5.4
	2.2nm,0.3s,baz=94,slow=12,SNR=94						
MSVF				LR	LR	08 18 56.4	
	comp=Z,44μm,18.9s,baz=68,slow=35						
MSVF	**Nonsavu**	**8.74**	**252**	*c* P	Pn	08 16 09.3	+6.5
MSVF	**Nonsavu**	**8.74**	**252**	P	Pn	08 16 09.8	+7.0
FUNA	**Funafuti**	**10.00**	**311**	Pn	**Pn**	**08 16 16.2**	**-3.8**
KNTN	**Kanton**	**12.50**	**7**	Pn	Pn	08 16 48.3	-5.9
KNTN	**Kanton**	**12.50**	**7**	P	Pn	08 16 48.5	-5.7
RAR	**Rarotonga**	**14.06**	**117**	Pn	**Pn**	**08 17 11.1**	**-4.5**
	2.8nm,0.3s,baz=248,slow=6.0,SNR=14						
RAR				Sn	Sn	08 19 40.6	-10
	0.9nm,0.3s,baz=300,slow=23,SNR=1.3						
RAR	**Rarotonga**	**14.06**	**117**	Pn	**Pn**	**08 17 11.3**	**-4.3**
RAR	**Rarotonga**	**14.06**	**117**	P	**Pn**	**08 17 12.5**	**-3.1**
RAO	**Raoul Island**	**14.58**	**197**	Sn	Sn	08 19 47.1	-16
	131nm,0.3s,baz=117,slow=23,SNR=2.3						
MARNC	**Mare, Loyalty**	**18.84**	**248**	P	**Pn**	**08 18 21.2**	**+4.5**
SANVU	**Saraoutou**	**18.89**	**267**	P	**P**	**08 18 14.5**	**-2.1**
SANVU				IAmb	IAmb	08 18 29.0	
	comp=Z,243nm,1.2s						
SANVU	**Saraoutou**	**18.89**	**267**	P	**Pn**	**08 18 21.0**	**+3.6**
PINNC	**Pines Island,**	**19.69**	**245**	P	**Pn**	**08 18 28.2**	**+1.3**
YATNC	**Mamie plateau,**	**20.02**	**247**	P	Pn	08 18 33.4	+2.6
OUENC	**Ouen Island, N**	**20.16**	**246**	P	Pn	08 18 34.9	+2.4
	comp=Z,200nm,1.3s						
DZM	**Mont Dzumac**	**20.42**	**248**	P	**P**	**08 18 32.8**	**-0.7**
	comp=Z,8.4nm,0.6s,baz=85,slow=19,SNR=8.9						
DZM				LR	LR	08 25 19.7	
	comp=Z,11μm,18.2s,baz=85,slow=34						
ONTNC	**Ouen Toro**	**20.48**	**247**	P	Pn	08 18 40.0	+3.8
NOUC	**Port Laguerre**	**20.55**	**248**	P	Pn	08 18 39.5	+2.4
PAE	**Paea**	**22.78**	**99**	*e*P	**P**	**08 18 59.6**	**+0.9**
PAE	**Paea**	**22.78**	**99**	*e*T	T	08 42 21.4	
	comp=Z,10nm,0.3s						
PPT	**Papeete**	**22.78**	**99**	P	**P**	**08 19 00.6**	**+1.9**
	comp=Z,74nm,1.1s,baz=318,slow=3.9,SNR=11						
PPT				LR	LR	08 25 18.9	
	comp=Z,7μm,21.5s,baz=268,slow=30						
PPT2	**Papeete2**	**22.78**	**99**	*e*P	**P**	**08 18 59.9**	**+1.1**
	comp=Z,180nm,1.4s						
PPT2				*e*LQ	LQ	08 23 24.0	
	comp=Z,28μm,28.2s						
PPT2				*e*LR	LR	08 24 26.9	
	comp=Z,21μm,25.0s,baz=263						
PPT2	**Papeete2**	**22.78**	**99**	*e*T	T	08 42 15.7	
	comp=Z,9.5nm,0.3s						
PPTF	**Pamatai, Papee**	**22.79**	**99**	P	**P**	**08 18 59.9**	**+0.9**
XMAS	**Kiritimati**	**23.22**	**44**	P	**P**	**08 19 03.6**	**+0.4**
XMAS				IAmb	IAmb	08 19 29.0	
	comp=Z,111nm,1.1s						
MXZ	**Matakaoa Point**	**23.45**	**197**	IAMs_20	IAMs_20	08 27 00.1	
	comp=Z,12μm,22.0s						
TBI	**Tubuai**	**23.79**	**113**	*e*P	**P**	**08 19 10.0**	**+1.3**
	comp=Z,153nm,1.1s						
TBI				*e*LQ	LQ	08 23 52.6	
	comp=Z,21μm,29.0s						
TBI				*e*LR	LR	08 24 48.5	
	comp=Z,22μm,26.0s,baz=287						
TBI	**Tubuai**	**23.79**	**113**	*e*T	T	08 43 30.9	
	comp=Z,24nm,0.3s						
MEH	**Mehetia**	**24.23**	**100**	*e*P	**P**	**08 19 13.4**	**+0.4**
	comp=Z,35nm,1.3s						
URZ	**Urewera**	**24.45**	**199**	P	**P**	**08 19 16.5**	**+1.8**
	comp=Z,17nm,0.8s,baz=120,slow=24,SNR=8.9						
URZ	**Urewera**	**24.45**	**199**	P	**P**	**08 19 15.3**	**+0.6**
VAH	**Vaihoa**	**24.68**	**93**	*e*P	**P**	**08 19 17.2**	**+0.2**
	comp=Z,406nm,1.2s						
VAH	**Vaihoa**	**24.68**	**93**	*e*T	T	08 44 41.3	
	comp=Z,9.4nm,0.2s						
HNR	**Honiara**	**26.84**	**279**	LR	LR	08 28 32.4	
	comp=Z,9μm,18.8s,baz=123,slow=33						
KWAJ	**Kwajalein Atol**	**30.55**	**320**	IAMs_20	IAMs_20	08 29 26.5	
	comp=Z,8μm,20.0s						
OXZ	**Oxford**	**30.68**	**201**	P	**P**	**08 20 10.6**	**+0.1**
OXZ				IAmb	IAmb	08 20 19.3	
	comp=Z,69nm,1.2s						
RPZ	**Rata Peaks**	**31.37**	**202**	P	**P**	**08 20 17.3**	**+0.7**
	comp=Z,15nm,0.8s,baz=45,slow=5.7,SNR=2.2						
FOZ	**Fox Glacier**	**31.69**	**204**	IAMs_20	IAMs_20	08 32 41.7	
	comp=Z,9μm,18.0s						
LBZ	**Lake Benmore**	**32.27**	**203**	IAMs_20	IAMs_20	08 33 23.3	
	comp=Z,10μm,19.0s						
TAOE	**Nuku Hiva Isla**	**32.92**	**83**	*e*S	**S**	**08 25 46.3**	**-1.2**
	comp=Z,902nm,25.0s						
TAOE				*e*LR	LR	08 29 13.1	
	comp=Z,13μm,23.6s,baz=257						
TAOE	**Nuku Hiva Isla**	**32.92**	**83**	*e*T	T	08 54 55.4	
	comp=Z,54nm,0.2s						
TAOE	**Nuku Hiva Isla**	**32.92**	**83**	IAMs_20	IAMs_20	08 30 25.3	
	comp=Z,8μm,20.0s						
WKZ	**Wanaka**	**33.09**	**203**	IAMs_20	IAMs_20	08 33 37.8	
	comp=Z,8μm,20.0s						
MLZ	**Mavora Lakes**	**33.89**	**204**	IAMs_20	IAMs_20	08 34 00.9	
	comp=Z,6μm,20.0s						
WHZ	**Wether Hill Ro**	**34.39**	**204**	IAMs_20	IAMs_20	08 34 25.3	
	comp=Z,7μm,19.0s						
PYZ	**Puysegur Point**	**35.12**	**205**	IAMs_20	IAMs_20	08 34 23.4	
	comp=Z,7μm,20.0s						
ARMA	**Armidale**	**35.57**	**239**	P	**P**	**08 20 53.7**	**+0.3**
	baz=36,SNR=5.4						
ARMA	**Armidale**	**35.57**	**239**	P	**P**	**08 20 52.4**	**-1.0**
PATS	**Pohnpei**	**35.76**	**306**	IAMs_20	IAMs_20	08 31 34.3	
	comp=Z,7μm,20.0s						
RKT	**Rikitea**	**36.86**	**108**	*e*S	**S**	**08 26 51.1**	**+3.3**
	comp=Z,799nm,30.0s						
RKT				*e*LQ	LQ	08 29 31.2	
	comp=Z,4μm,27.5s						
RKT				*e*LR	LR	08 30 55.5	
	comp=Z,13μm,25.2s						

QIS **Mount Isa** **45.09 256** P **P** **08 22 10.7 -1.6**
baz=45,SNR=4.0
HTT **Hallett** **46.77 238** P **P** **08 22 25.3 -0.1**
baz=47,SNR=8.6
JAY **Jayapura** **47.14 281** LR LR 08 40 44.1
comp=Z,4μm,20.1s,baz=96,slow=34
BBOO **Buckleboo** **49.04 240** P **P** **08 22 42.9 -0.1**
baz=49,SNR=7.3
BBOO **Buckleboo** **49.04 240** P **P** **08 22 42.0 -1.0**
BBOO IAmb IAmb 08 22 54.1
comp=Z,50nm,1.4s
BBOO IAMs_20 IAMs_20 08 40 55.2
comp=Z,3μm,19.0s
WR0 **Warramunga Arr** **49.86 257** P **P** **08 22 48.3 -1.2**
WR0 IAMs_20 IAMs_20 08 41 34.6
comp=Z,4μm,22.0s
WR8 **Warramunga Arr** **49.90 257** IAMs_20 IAMs_20 08 41 24.6
comp=Z,3μm,21.0s
WR7 **Warramunga Arr** **49.92 257** IAMs_20 IAMs_20 08 41 36.2
comp=Z,4μm,21.0s
WR6 **Warramunga Arr** **49.95 257** IAMs_20 IAMs_20 08 41 36.8
comp=Z,4μm,21.0s
WR4 **Warramunga Arr** **49.99 257** IAMs_20 IAMs_20 08 41 38.9
comp=Z,3μm,21.0s
WR3 **Warramunga Arr** **50.01 257** IAMs_20 IAMs_20 08 41 38.4
comp=Z,3μm,20.0s
WB0 **Warramunga Arr** **50.01 257** P **P** **08 22 48.6 -2.1**
WB0 IAmb IAmb 08 22 56.9
comp=Z,56nm,1.4s
WB0 IAMs_20 IAMs_20 08 41 28.6
comp=Z,4μm,21.0s
WB7 **Warramunga Arr** **50.02 257** IAMs_20 IAMs_20 08 41 39.2
comp=Z,3μm,20.0s
WC3 **Warramunga Arr** **50.02 257** IAMs_20 IAMs_20 08 41 39.8
comp=Z,4μm,21.0s
WB8 **Warramunga Arr** **50.02 257** IAMs_20 IAMs_20 08 41 29.8
comp=Z,4μm,21.0s
WC2 **Warramunga Arr** **50.03 257** IAMs_20 IAMs_20 08 41 40.0
comp=Z,4μm,21.0s
WB6 **Warramunga Arr** **50.03 257** IAMs_20 IAMs_20 08 41 30.1
comp=Z,4μm,21.0s
WB3 **Warramunga Arr** **50.04 257** IAMs_20 IAMs_20 08 41 39.3
comp=Z,4μm,21.0s
WB2 **Warramunga Arr** **50.04 257** P **P** **08 22 49.1 -1.7**
baz=50
WB2 **Warramunga Arr** **50.04 257** P **P** **08 22 48.8 -2.1**
WB2 IAmb IAmb 08 22 59.8
comp=Z,44nm,1.4s
WB2 IAMs_20 IAMs_20 08 41 39.3
comp=Z,4μm,21.0s
WRAB **Tennant Creek** **50.04 257** *ce* P **P** **08 22 48.7 -2.2**
WRAB pmax pmax
comp=Z,51nm,2.5s
WRAB **Tennant Creek** **50.04 257** P **P** **08 22 49.5 -1.4**
WRAB IAmb IAmb 08 22 57.2
comp=Z,68nm,1.4s
WRAB **Tennant Creek** **50.04 257** IAMs_20 IAMs_20 08 41 39.1
comp=Z,3μm,21.0s
WB1 **Warramunga Ar.** **50.05 257** IAMs_20 IAMs_20 08 41 29.4
comp=Z,3μm,20.0s
WC4 **Warramunga Arr** **50.05 257** IAMs_20 IAMs_20 08 41 40.6
comp=Z,4μm,21.0s
WRA **Warramunga Arr** **50.05 257** P **P** **08 22 48.7 -2.2**
comp=Z,10nm,0.7s,baz=90,slow=7.0,SNR=56
WRA LR LR 08 41 51.8
comp=Z,3μm,21.1s,baz=90,slow=34
WRA **Warramunga Arr** **50.05 257** P **P** **08 22 48.5 -2.4**
WC1 **Warramunga Arr** **50.05 257** IAMs_20 IAMs_20 08 41 40.7
comp=Z,3μm,20.0s
AS31 **Alice Springs** **50.33 252** P **P** **08 22 51.4 -1.6**
ASAR **Alice Springs** **50.33 252** P **P** **08 22 50.6 -2.4**
comp=Z,41nm,0.7s,baz=87,slow=7.8,SNR=160
ASAR LR LR 08 42 13.3
comp=Z,8μm,21.6s,baz=91,slow=34
ASAR **Alice Springs** **50.33 252** P **P** **08 22 51.0 -2.0**
ASAR **Alice Springs** **50.33 252** P **P** **08 22 51.0 -2.0**
KDU **Kakadu** **52.66 266** P **P** **08 23 09.4 -1.1**
baz=53,SNR=6.3
SAUI **Saumlaki** **54.71 271** IAMs_20 IAMs_20 08 44 05.9
comp=Z,3μm,21.0s
WRKA **Warakurna** **55.41 250** P **P** **08 23 29.5 -1.1**
baz=56,SNR=12
FORT **Forrest** **55.64 243** P **P** **08 23 31.2 -0.8**
FORT IAmb IAmb 08 23 43.4
comp=Z,50nm,1.1s
KNRA **Kununurra** **55.77 261** IAMs_20 IAMs_20 08 45 00.9
comp=Z,4μm,20.0s
SIJI **Sorong** **56.62 279** LR LR 08 46 46.6
comp=Z,2μm,21.9s,baz=340,slow=35
FITZ **Fitzroy Crossi** **58.42 258** LR LR 08 46 57.6
comp=Z,4μm,20.6s,baz=98,slow=34
FITZ **Fitzroy Crossi** **58.42 258** P **P** **08 23 53.3 +1.4**
baz=59,SNR=4.7
FITZ **Fitzroy Crossi** **58.42 258** P **P** **08 23 50.0 -1.9**
JCJ **Chichijima** **60.39 314** LR LR 08 45 19.1
comp=Z,2μm,21.2s,baz=112,slow=31
JCJ **Chichijima** **60.39 314** IAMs_20 IAMs_20 08 44 57.2
comp=Z,3μm,22.0s
SOEI **Soe** **61.12 267** P **P** **08 24 09.5 -1.2**
BATI **Baumata** **61.61 267** LR LR 08 49 07.2
comp=Z,2μm,20.9s,baz=128,slow=34
PSAA3 **Pilbara Seismi** **63.41 253** IAMs_20 IAMs_20 08 51 38.6
comp=Z,3μm,20.0s
PSA00 **Pilbara Seismi** **63.42 253** P **P** **08 24 24.4 -1.5**
PSA00 IAmb IAmb 08 24 48.8
comp=Z,14nm,0.9s
PSA00 **Pilbara Seismi** **63.42 253** P **P** **08 24 25.1 -0.8**
PSA00 IAmb IAmb 08 24 42.6
comp=Z,7.2nm,0.9s
PSAB1 **Pilbara Seismi** **63.44 253** IAMs_20 IAMs_20 08 51 39.4
comp=Z,3μm,20.0s
PSAD1 **Pilbara Seismi** **63.45 253** IAMs_20 IAMs_20 08 52 12.6
comp=Z,3μm,19.0s
PSAC1 **Pilbara Seismi** **63.46 253** IAMs_20 IAMs_20 08 50 48.8
comp=Z,3μm,21.0s
PSAD3 **Pilbara Seismi** **63.47 253** IAMs_20 IAMs_20 08 50 58.2
comp=Z,3μm,21.0s
VNDA **Vanda** **63.53 186** P **P** **08 24 27.4 +1.8**
comp=Z,9.3nm,0.9s,baz=1.5,slow=6.5,SNR=18
VNDA LR LR 08 51 15.8
comp=Z,762nm,18.0s,baz=20,slow=35
VNDA **Vanda** **63.53 186** P **P** **08 24 25.7 +0.1**
VNDA IAmb IAmb 08 24 41.2
comp=Z,27nm,1.4s
KLBR **Kellerberrin** **64.46 242** P **P** **08 24 33.7 +1.1**
baz=65,SNR=5.7
DAV **Davao City (W)** **64.58 286** LR LR 08 51 11.4
comp=Z,2μm,18.4s,baz=141,slow=35
DAV **Davao City (W)** **64.58 286** IAMs_20 IAMs_20 08 51 54.1
comp=Z,2μm,18.0s
NWAO **Narrogin (SRO)** **64.85 241** IAMs_20 IAMs_20 08 50 27.6
comp=Z,2μm,21.0s
MORW **Morawa** **66.11 245** IAMs_20 IAMs_20 08 51 13.1
comp=Z,3μm,21.0s
KAPI **Kappang** **66.56 271** LR LR 08 52 13.9
comp=Z,988nm,21.3s,baz=110,slow=35
JYT **Yasato** **67.53 321** P **P** **08 24 51.0 -1.1**
JYT IAMs_20 IAMs_20 08 49 58.2
comp=Z,3μm,20.0s
JMM **Marumori** **68.24 322** P **P** **08 24 55.8 -0.7**
SMY **Shemya** **68.60 352** IAMs_20 IAMs_20 08 48 25.3
comp=Z,3μm,20.0s
JGF **Kuroka** **68.91 318** P **P** **08 24 59.6 -1.2**
MJAR **Matsushiro Arr** **68.95 320** P **P** **08 24 59.6 -1.4**
comp=Z,20nm,1.1s,baz=154,slow=5.9,SNR=28
MJAR LR LR 08 49 38.8
comp=Z,3μm,21.8s,baz=130,slow=31
MJAR **Matsushiro Arr** **68.95 320** P **P** **08 25 00.2 -0.8**
MJAR pmax pmax
comp=Z,32nm,1.4s
MJAR **Matsushiro Arr** **68.95 320** P **P** **08 25 00.2 -0.8**
MJAR IAmb IAmb 08 25 02.1
comp=Z,32nm,1.4s
MAJO **Matsushiro** **68.96 320** *ci* P **P** **08 25 00.7 -0.4**
MAJO pmax pmax
comp=Z,40nm,1.5s
MAJO **Matsushiro** **68.96 320** P **P** **08 25 00.2 -0.8**
MAJO **Matsushiro** **68.96 320** IAMs_20 IAMs_20 08 49 17.1
comp=Z,3μm,21.0s
MAT **Matsushiro** **68.96 320** P **P** **08 25 00.7 -0.4**
MAT S **S** **08 34 04.6 +0.3**
MJB9 **Matsu-Tunnel** **68.96 320** P **P** **08 25 00.7 -0.4**
MJB9 IAmb IAmb 08 25 16.0
comp=Z,23nm,0.6s
INU **Inuyama** **68.97 318** P **P** **08 24 59.9 -1.2**
INU IAmb IAmb 08 25 03.4
comp=Z,41nm,1.3s

ERM **Erimo** **69.75 327** IAMs_20 IAMs_20 08 51 00.1
comp=Z,3μm,20.0s
JEM **Erimo** **69.75 327** IAMs_20 IAMs_20 08 51 02.1
comp=Z,3μm,21.0s
YUK **Yuzh-Kuril'sk** **69.84 330** *e* P P 08 24 59.2 -7.1
YUK *e* 08 25 27.2
YUK *e*S **S** **08 34 08.3 -5.9**
YUK *e* 08 34 56.4
YUK *e*SS **SS** **08 38 38.9 -4.8**
YUK pmax pmax
comp=Z,247nm,1.6s
JSD **Sado** **69.87 321** P **P** **08 25 06.0 -0.6**
JSD IAMs_20 IAMs_20 08 51 22.3
comp=Z,2μm,20.0s
JOW **Kunigami** **70.55 306** IAMs_20 IAMs_20 08 49 43.4
comp=Z,3μm,22.0s
SKR **Severo-Kuril's** **70.96 340** *e* P **P** **08 25 12.5 -0.5**
SKR *e*S **S** **08 34 29.1 +2.0**
SKR pmax pmax
comp=Z,400nm,6.6s
SKR pmax pmax
comp=Z,200nm,6.5s
SKR MLR MLR
comp=Z,500nm,17.0s
MCCM **Marconi Confer** **71.04 40** IAMs_20 IAMs_20 08 48 15.7
comp=Z,2μm,20.0s
SDPT **Sand Point** **71.16 8** P 08 25 15.2
baz=193
JEW **Eniwo** **71.23 326** P **P** **08 25 14.1 -0.7**
JEW IAMs_20 IAMs_20 08 51 52.4
comp=Z,2μm,20.0s
HOPS **Hopland Field** **71.45 39** IAMs_20 IAMs_20 08 52 51.5
comp=Z,2μm,19.0s
JKA **Kamikawa-asahi** **71.52 328** P **P** **08 25 17.1 +0.6**
ASAJ **Asahikawa** **71.52 328** P **P** **08 25 17.2 +0.6**
ASAJ pmax pmax
comp=Z,98nm,1.5s
KCPM **Cahto Peak** **71.58 38** IAMs_20 IAMs_20 08 48 44.7
comp=Z,3μm,19.0s
CCX **Cicese** **71.62 48** IAMs_20 IAMs_20 08 49 30.9
comp=Z,2μm,20.0s
OSI **Osito Audit: C** **71.67 45** IAMs_20 IAMs_20 08 49 15.8
comp=Z,3μm,21.0s
TJX **Tijuana** **71.69 48** IAMs_20 IAMs_20 08 49 41.4
comp=Z,3μm,21.0s
PASC **Pasadena Art C** **71.79 46** IAMs_20 IAMs_20 08 49 40.0
comp=Z,3μm,20.0s
109C **Camp Elliot, M** **71.85 47** IAMs_20 IAMs_20 08 48 47.8
comp=Z,3μm,22.0s
ARVC **Arvin** **71.89 45** P 08 25 19.5
baz=236
MWC **Mount Wilson** **71.91 46** IAMs_20 IAMs_20 08 49 34.2
comp=Z,3μm,20.0s
TKX **Tecate** **72.03 48** IAMs_20 IAMs_20 08 50 34.7
comp=Z,3μm,19.0s
BAR **Barrett** **72.05 48** IAMs_20 IAMs_20 08 48 11.1
comp=Z,3μm,21.0s
SPX **San Pedro Mart** **72.07 50** IAMs_20 IAMs_20 08 48 34.8
comp=Z,2μm,22.0s
VES **Vestal, Richgr** **72.12 44** P 08 25 21.0
baz=235
MURC **Murrieta** **72.17 47** P 08 25 21.8
baz=237
BFSC **Mount Baldy Ra** **72.19 46** P 08 25 21.4
baz=237
PET **Petropavlovsk** **72.20 343** *e* P **P** **08 25 21.6 +1.2**
PET *e*S **S** **08 34 43.0 +1.7**
PET *e*PPS PPS 08 35 29.8
PET *e*SS **SS** **08 39 14.7 -5.0**
PET pmax pmax
comp=Z,400nm,14.4s
PET MLR MLR
comp=Z,1μm,18.0s
KHMM **Horse Mountain** **72.24 37** IAMs_20 IAMs_20 08 49 25.2
comp=Z,2μm,20.0s
EDW2 **Edwards Air Fo** **72.32 45** P 08 25 22.2
baz=236
MONP2 **Monument Peak** **72.34 48** P 08 25 22.5
baz=238
O02D **Mt. Diablo Mer** **72.36 38** P 08 25 23.0
baz=231
ISA **Isabella, Lake** **72.43 44** P **P** **08 25 22.8 +0.5**
ISA pmax pmax
comp=Z,16nm,1.4s
ISA **Isabella, Lake** **72.43 44** P **P** **08 25 22.8 +0.5**
ISA **Isabella, Lake** **72.43 44** P 08 25 23.2
baz=236
IKP **In-Ko-Pah, Jac** **72.43 48** P 08 25 23.2
baz=238
SFX **San Felipe** **72.52 50** IAMs_20 IAMs_20 08 49 08.7
comp=Z,2μm,21.0s
CMB **Columbia Colle** **72.54 41** P **P** **08 25 23.7 +0.8**
CMB pmax pmax
comp=Z,7.0nm,1.0s
CMB **Columbia Colle** **72.54 41** P **P** **08 25 23.6 +0.8**
PEA0B **Petropavlovsk-** **72.56 342** *ce* P **P** **08 25 22.9 +0.3**
PEA0B **Petropavlovsk-** **72.56 342** P **P** **08 25 22.5 -0.1**
PETK **Petropavlovsk-** **72.56 342** P **P** **08 25 22.4 -0.2**
comp=Z,26nm,0.9s,baz=125,slow=9.3,SNR=12
PETK LR LR 08 54 38.5
comp=Z,662nm,19.2s,baz=161,slow=34
PETK **Petropavlovsk-** **72.56 342** P **P** **08 25 21.9 -0.7**
PFO **Pinyon Flats O** **72.69 47** P **P** **08 25 23.8 -0.2**
comp=Z,3.3nm,0.9s,baz=236,slow=6.9,SNR=5.4
PFO LR LR 08 51 25.4
comp=Z,2μm,19.4s,baz=266,slow=31
PFO **Pinyon Flats O** **72.69 47** P **P** **08 25 24.0 0.0**
PFO pmax pmax
comp=Z,11nm,1.2s
PFO **Pinyon Flats O** **72.69 47** P **P** **08 25 24.0 0.0**
PFO **Pinyon Flats O** **72.69 47** P 08 25 24.5
baz=238
TPFO **Pinon Flats** **72.69 47** P 08 25 25.1
baz=238
SRIG **Santa Rosalia** **72.70 55** IAMs_20 IAMs_20 08 49 24.0
comp=Z,3μm,20.0s
AFDM **Forest Hills D** **72.72 40** P **P** **08 25 24.9 +1.0**
ORV **Oroville** **72.76 39** P **P** **08 25 24.4 +0.3**
ORV pmax pmax
comp=Z,10.0nm,1.1s
ORV **Oroville** **72.76 39** P **P** **08 25 24.4 +0.3**
WDC **Whiskeytown Da** **72.76 38** P **P** **08 25 25.3 +1.3**
WDC pmax pmax
comp=Z,29nm,1.4s
WDC **Whiskeytown Da** **72.76 38** P **P** **08 25 25.3 +1.3**
WDC IAmb IAmb 08 25 34.1
comp=Z,29nm,1.4s
WDC IAMs_20 IAMs_20 08 49 43.0
comp=Z,2μm,20.0s
LPIG **La Paz** **72.81 58** LR LR 08 48 54.7
comp=Z,2μm,21.8s,baz=238,slow=29
SWSC **Sam W. Stewart** **72.81 48** P 08 25 25.3
baz=236
CPBX **Cerro Prieto** **72.89 49** IAMs_20 IAMs_20 08 49 06.5
comp=Z,2μm,22.0s
UABX **UABC, Campus M** **72.91 48** IAMs_20 IAMs_20 08 49 50.7
comp=Z,2μm,20.0s
N02D **Trinity Center** **72.91 38** P 08 25 26.1
baz=231
SLBS **Sierra La Lagu** **72.93 59** P **P** **08 25 26.3 +0.7**
SLBS IAmb IAmb 08 25 28.0
comp=Z,33nm,1.4s
SLBS **Sierra La Lagu** **72.93 59** IAMs_20 IAMs_20 08 48 56.3
comp=Z,2μm,21.0s
O03E **Paynes Creek** **73.02 39** P 08 25 26.6
baz=232
SZP **Santa** **73.07 294** IAMs_20 IAMs_20 08 50 49.2
comp=Z,2μm,22.0s
M02C **Callahan** **73.08 37** P 08 25 26.9
baz=231
BELC **Belle Mtn. Jos** **73.22 47** P 08 25 28.3
baz=238
RUBR **Rubicon Trail** **73.29 41** IAMs_20 IAMs_20 08 50 15.3
comp=Z,2μm,19.0s
SII **Sitkinak Islan** **73.30 11** IAMs_20 IAMs_20 08 52 20.0
comp=Z,2μm,18.0s
YBH **Yreka Blue Hor** **73.38 37** P **P** **08 25 29.2 +1.4**
comp=Z,3.6nm,0.6s,baz=65,slow=2.5,SNR=10.0
YBH **Yreka Blue Hor** **73.38 37** P **P** **08 25 29.1 +1.2**
YBH IAmb IAmb 08 25 37.3
comp=Z,21nm,1.1s
WAKR **Walker** **73.42 41** IAMs_20 IAMs_20 08 49 18.8
comp=Z,3μm,22.0s
BC3 **Big Chuckawall** **73.43 47** P 08 25 29.3
baz=238
HEC **Hector,Ludlow** **73.43 46** P 08 25 28.8
baz=238

K02D **Willamette Mer** **73.44 36** P 08 25 28.9
baz=230
YSS **Yuzh-Sakhalins** **73.46 330** ↑ *e* P **P** **08 25 27.1 -0.9**
YSS *e* 08 25 43.3
YSS *e* 08 28 10.4
YSS *e*S **S** **08 34 55.4 -0.5**
YSS *e* 08 35 35.1
YSS *e*SS **SS** **08 39 37.0 -2.2**
YSS pmax pmax
comp=Z,600nm,3.2s
YSS pmax pmax
comp=E,300nm,2.3s
YSS smax smax
comp=N,700nm,9.5s
YSS **Yuzh-Sakhalins** **73.46 330** P **P** **08 25 28.1 +0.1**
YSS IAmb IAmb 08 25 36.5
comp=Z,44nm,0.9s
YSS IAMs_20 IAMs_20 08 52 16.2
comp=Z,2μm,20.0s
GLA **Glamis** **73.56 48** P **P** **08 25 29.9 +0.9**
GLA pmax pmax
comp=Z,34nm,1.3s
GLA **Glamis** **73.56 48** P **P** **08 25 29.9 +0.9**
GLA IAmb IAmb 08 25 39.1
comp=Z,34nm,1.3s
GLA IAMs_20 IAMs_20 08 50 11.3
comp=Z,2μm,20.0s
GLA **Glamis** **73.56 48** P 08 25 30.4
baz=239
J01E **Myrtle Point** **73.59 35** P 08 25 30.1
baz=230
BEKR **Beckworth** **73.65 40** P **P** **08 25 28.8 -0.8**
PNTR **Pine Nut** **73.66 41** IAMs_20 IAMs_20 08 49 47.1
comp=Z,2μm,20.0s
HUMO **Hull Mountain** **73.79 36** P **P** **08 25 31.2 +1.1**
HUMO IAmb IAmb 08 25 49.6
comp=Z,33nm,1.2s
YERR **Yerington** **73.83 41** IAMs_20 IAMs_20 08 49 53.5
comp=Z,2μm,21.0s
LHV **Little Huntoon** **73.87 42** IAMs_20 IAMs_20 08 49 46.9
comp=Z,2μm,22.0s
GMRC **Granite Mounta** **73.88 46** P 08 25 31.7
baz=238
IRM **Iron Mountain** **73.91 47** P 08 25 31.7
baz=238
L04D **Klamath Falls** **73.92 37** P 08 25 31.9
baz=231
M04C **Macdoel** **73.92 37** P 08 25 31.9
baz=232
FURC **Furnace Creek,** **73.96 44** P 08 25 32.2
baz=237
TUQ **Turquoise Moun** **74.04 46** P 08 25 32.5
baz=238
SHOC **Shoshone, Teco** **74.05 45** P 08 25 32.5
baz=237
RYN **Ryan** **74.08 42** P **P** **08 25 32.8 +0.7**
RYN IAMs_20 IAMs_20 08 50 04.3
comp=Z,2μm,21.0s
OHAK **Old Harbor** **74.09 11** P 08 25 33.3
baz=200
NVAR **Mina Array Bea** **74.11 42** P **P** **08 25 33.4 +1.1**
comp=Z,1.5nm,0.7s,baz=228,slow=9.7,SNR=8.2
NVAR LR LR 08 50 30.5
comp=Z,2μm,21.4s,baz=235,slow=30
NVAR **Mina Array Bea** **74.11 42** P **P** **08 25 32.8 +0.5**
NV11 **Mina Array Sit** **74.20 42** P **P** **08 25 32.8 0.0**
NV11 IAmb IAmb 08 25 45.2
comp=Z,28nm,1.2s
NV11 IAMs_20 IAMs_20 08 50 29.6
comp=Z,2μm,21.0s
I02D **Swisshome** **74.25 35** P 08 25 34.0
baz=230
I03D **Drain, OR** **74.27 35** P 08 25 33.8
baz=230
214A **Organ Pipe Nat** **74.48 50** P 08 25 34.9
baz=241,SNR=8.0
214A **Organ Pipe Nat** **74.49 50** P **P** **08 25 35.3 +0.9**
214A IAMs_20 IAMs_20 08 50 19.8
comp=Z,2μm,21.0s
HSIG **Kaiserville** **74.50 54** IAMs_20 IAMs_20 08 50 17.6
comp=Z,3μm,21.0s
KVN **Kaiserville** **74.59 41** P **P** **08 25 35.7 +0.6**
KVN pmax pmax
comp=Z,19nm,1.1s
KVN **Kaiserville** **74.59 41** P **P** **08 25 35.7 +0.6**
KVN IAMs_20 IAMs_20 08 50 18.7
comp=Z,2μm,19.0s
TPH **Tonopah** **74.61 43** P **P** **08 25 35.4 +0.2**
TPH pmax pmax
comp=Z,119nm,1.1s
TPH **Tonopah** **74.61 43** P **P** **08 25 35.4 +0.2**
TPNV **Topopah Spring** **74.63 44** P 08 25 36.3
baz=237
TPNV **Topopah Spring** **74.63 44** P **P** **08 25 36.5 +1.1**
TPNV pmax pmax
comp=Z,11nm,1.1s
TPNV **Topopah Spring** **74.63 44** P **P** **08 25 36.5 +1.1**
J04D **Umpqua Nationa** **74.67 36** P 08 25 36.2
baz=231
PDMCI **Parker Dam,Lak** **74.70 47** P 08 25 36.0
baz=239
KDAK **Kodiak Island** **74.75 11** P 08 25 36.8
baz=201
KDAK **Kodiak Island** **74.75 11** P **P** **08 25 36.2 +0.9**
comp=Z,14nm,1.0s,baz=140,slow=15,SNR=3.9
KDAK **Kodiak Island** **74.75 11** P **P** **08 25 36.2 +0.9**
KDAK IAmb IAmb 08 25 41.5
comp=Z,36nm,1.2s
QSPA **South Pole Qui** **74.78 180** P **P** **08 25 37.2 +1.4**
QSPA IAmb IAmb 08 25 43.4
comp=Z,25nm,0.8s
QSPA **South Pole Qui** **74.78 180** IAMs_20 IAMs_20 09 01 35.2
comp=Z,2μm,18.0s
I04A **Tendick Farm,** **74.85 36** P 08 25 36.9
baz=231
MOD **Modoc Plateau** **74.90 38** P **P** **08 25 37.8 +1.0**
MOD IAmb IAmb 08 25 45.9
comp=Z,29nm,1.1s
MOD IAMs_20 IAMs_20 08 50 51.7
comp=Z,2μm,20.0s
K05A **Summer Lake** **75.06 37** P **P** **08 25 39.0 +1.3**
K05A IAmb IAmb 08 25 47.2
comp=Z,47nm,1.1s
YHNB **Yeheng** **75.12 301** IAMs_20 IAMs_20 08 54 46.4
comp=Z,2μm,20.0s
H04D **Lebanon** **75.13 35** P 08 25 39.2
baz=230
SHPR **Sheep Range** **75.13 45** P **P** **08 25 39.4 +1.1**
SHPR IAMs_20 IAMs_20 08 51 16.6
comp=Z,2μm,20.0s
J05D **Fort Rock, OR** **75.20 37** P 08 25 39.4
baz=232
PINE **Pine Mountain** **75.68 36** P **P** **08 25 41.9 +0.6**
PINE IAmb IAmb 08 25 50.8
comp=Z,51nm,1.1s
PRN **Pahroc Range** **75.69 44** P **P** **08 25 41.9 +0.4**
I05D **Terrebonne, OR** **75.79 36** P 08 25 42.8
baz=232
R11A **Troy Canyon, C** **75.84 43** IAMs_20 IAMs_20 08 51 43.9
comp=Z,2μm,21.0s
TUC **Tucson** **76.16 51** P 08 25 45.0
baz=242
TUC **Tucson** **76.16 51** P **P** **08 25 44.7 +0.5**
TUC pmax pmax
comp=Z,21nm,1.1s
TUC **Tucson** **76.16 51** P **P** **08 25 44.6 +0.5**
TUC IAmb IAmb 08 25 53.3
comp=Z,21nm,1.1s
TUC **Tucson** **76.16 51** IAMs_20 IAMs_20 08 51 30.3
comp=Z,3μm,21.0s
KSRS **Korea Array** **76.19 315** P **P** **08 25 44.6 +0.5**
comp=Z,22nm,1.3s,baz=122,slow=6.0,SNR=22
KSRS LR LR 08 53 25.3
comp=Z,904nm,21.8s,baz=106,slow=31
KSAR **Wonju Array Be** **76.21 315** P **P** **08 25 44.4 +0.2**
KSAR **Wonju Array Be** **76.21 315** P **P** **08 25 44.4 +0.2**
WVOR **Wild Horse Val** **76.21 38** IAMs_20 IAMs_20 08 52 27.4
comp=Z,2μm,20.0s
TYV **Tymovskoe** **76.31 333** *e* P **P** **08 25 44.6 +0.2**
TYV *e*S **S** **08 35 31.0 +3.4**
TYV pmax pmax
comp=Z,36nm,1.7s
TYV smax smax
comp=E,10.0nm,1.9s
G05D **Wamic, OR** **76.37 35** P 08 25 45.9
baz=231

E04D Cinebar 76.52 33 P 08 25 47.1
baz=230
I07A Izee 76.68 37 P P 08 25 47.4 +0.6
I07A IAmb IAmb 08 25 55.5
comp=Z,27nm,1.2s
F05D White Salmon 76.69 34 P 08 25 48.3
baz=231
LCMT Little Creek M 76.71 45 P P 08 25 47.5 +0.2
J08A Circle Bar Ran 76.85 38 P P 08 25 48.2 +0.3
J08A IAmb IAmb 08 25 56.4
comp=Z,33nm,1.2s
CCUT Cedar City 76.91 45 P P 08 25 49.7 +1.3
BRSE Bradley Lake S 76.93 11 P 08 25 48.5
baz=202
MSHR Mys Shultsa 76.94 321 *i* P P 08 25 48.0 -0.2
MSHR pmax pmax
comp=Z,23nm,1.1s
KNB Kanab 77.00 46 P P 08 25 50.0 +1.0
KNB pmax pmax
comp=Z,60nm,1.4s
KNB Kanab 77.00 46 P P 08 25 50.0 +1.0
KNB IAmb IAmb 08 26 06.3
comp=Z,60nm,1.4s
PSUT Pine Spring 77.08 44 P P 08 25 50.8 +1.4
D05A Enumclaw 77.23 33 P P 08 25 50.2 +0.5
RSO Redoubt South 77.24 10 P P 08 25 49.7 0.0
WUAZ Wupatki 77.27 48 P 08 25 51.7
baz=241
WUAZ Wupatki 77.27 48 P P 08 25 51.3 +0.8
WUAZ IAMs_20 IAMs_20 08 51 26.2
comp=Z,2µm,22.0s
ELK Elko 77.36 41 P P 08 25 50.8 -0.1
comp=Z,3.7nm,1.1s,baz=266,slow=5.3,SNR=8.4
ELK LR LR 08 52 20.1
comp=Z,1µm,21.7s,baz=216,slow=30
ELK Elko 77.36 41 P P 08 25 51.5 +0.6
ELK pmax pmax
comp=Z,14nm,1.1s
ELK Elko 77.36 41 P P 08 25 51.5 +0.6
ELK IAMs_20 IAMs_20 08 52 08.0
comp=Z,2µm,21.0s
USA0B Ussuriysk Arra 77.39 323 *c i* P P 08 25 51.2 +0.5
USA0B Ussuriysk Arra 77.39 323 P P 08 25 51.2 +0.5
USA0B IAmb IAmb 08 25 53.0
comp=Z,78nm,1.5s
USRK Ussuriysk Ar. 77.39 323 P P 08 25 50.6 -0.1
comp=Z,24nm,1.2s,baz=108,slow=4.4,SNR=27
USRK LR LR 08 54 02.1
comp=Z,2µm,21.2s,baz=130,slow=31
USRK Ussuriysk Ar. 77.39 323 P P 08 25 50.5 -0.2
SVW2 Sparrevohn 77.40 9 P P 08 25 50.6 +0.2
QZH Quanzhou 77.55 300 P P 08 25 50.9 -1.1
QZH S S 08 35 43.9 +1.8
QZH pmax pmax
comp=Z,340nm,8.2s
QZH LR LR
comp=Z,740nm,24.6s
QZH LR LR
comp=Z,1µm,25.1s
PKCU Pink Cliffs 77.57 45 P P 08 25 53.0 +0.7
PKCU IAmb IAmb 08 26 02.8
comp=Z,44nm,1.1s
G08A Pilot Rock 77.72 36 P P 08 25 52.8 +0.1
G08A IAmb IAmb 08 26 01.6
comp=Z,24nm,1.1s
HPIG 77.80 58 P P 08 25 53.9 +0.3
HPIG IAmb IAmb 08 25 57.5
comp=Z,27nm,1.3s
HPIG IAMs_20 IAMs_20 08 51 27.4
comp=Z,2µm,22.0s
O22K Cooper Landing 77.81 12 P 08 25 53.7
baz=203
O22K Cooper Landing 77.81 12 P P 08 25 52.7 +0.1
O22K IAmb IAmb 08 26 06.3
comp=Z,35nm,0.9s
A04D Lummi Island 77.85 32 P 08 25 54.5
baz=230
B05A Bryant 77.86 32 P 08 25 53.8
baz=230
MTPU Mount Pierson 77.96 45 P P 08 25 56.2 +1.7
MTPU IAmb IAmb 08 26 11.0
comp=Z,22nm,1.1s
LTY Liberty 77.98 34 P P 08 25 54.4 +0.4
E07A Sunnyside 77.99 34 P P 08 25 55.4 +1.4
SPCR Spurr Chakacha 78.03 10 P 08 25 54.6
baz=201
HAWA Hanford 78.06 35 P P 08 25 54.9 +0.5
MSU Marysvale 78.20 45 P P 08 25 56.9 +1.2
MSU Marysvale 78.20 45 P P 08 25 56.9 +1.2
W18A Petrified Fore 78.26 49 P P 08 25 57.0 +1.0
W18A IAmb IAmb 08 26 11.6
comp=Z,30nm,1.4s
W18A IAMs_20 IAMs_20 08 53 18.5
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 78.37 11 P 08 25 55.8
baz=203,SNR=6.8
RC01 Rabbit Creek A 78.37 11 P P 08 25 55.5 -0.2
RC01 IAmb IAmb 08 25 57.6
comp=Z,51nm,1.3s
E08A Dider Farm, El 78.38 35 P P 08 25 57.4 +1.2
E08A IAmb IAmb 08 26 01.3
comp=Z,44nm,1.4s
HIN Hinchinbrook I 78.41 13 P P 08 25 55.5 -0.5
HIN IAmb IAmb 08 26 00.2
comp=Z,55nm,1.4s
BMO Blue Mountains 78.41 37 P P 08 25 57.0 +0.5
BMO pmax pmax
comp=Z,18nm,1.1s
BMO Blue Mountains 78.41 37 P P 08 25 57.0 +0.5
BMO IAMs_20 IAMs_20 08 53 49.3
comp=Z,1µm,20.0s
MFID Camas Ranch 78.47 39 P P 08 25 57.7 +0.8
121A Cookes Peak, D 78.52 52 P P 08 25 58.7 +1.3
121A IAmb IAmb 08 26 06.8
comp=Z,22nm,0.9s
121A IAMs_20 IAMs_20 08 52 24.7
comp=Z,3µm,21.0s
121A Cookes Peak, D 78.52 52 P 08 25 57.9
baz=244,SNR=8.6
SUA Susitna One 78.53 11 P 08 25 57.4
baz=202
SUA Susitna One 78.53 11 P P 08 25 57.5 +0.7
SUA IAmb IAmb 08 26 04.5
comp=Z,24nm,0.8s
DUG Dugway, Tooele 78.64 43 P 08 25 58.2
baz=239
DUG Dugway, Tooele 78.64 43 P P 08 25 58.4 +0.5
DUG pmax pmax
comp=Z,18nm,1.1s
DUG Dugway, Tooele 78.64 43 P P 08 25 58.4 +0.5
DUG IAMs_20 IAMs_20 08 53 01.9
comp=Z,2µm,22.0s
EYAK Cordova Ski Ar 78.71 13 P 08 25 58.4
baz=207
GLI Glacier Island 78.71 13 P 08 25 57.8
baz=206,SNR=8.9
GLI Glacier Island 78.71 13 P P 08 25 57.7 0.0
GLI IAmb IAmb 08 25 59.7
comp=Z,35nm,1.0s
FID Port Fidalgo 78.73 13 P P 08 25 58.1 +0.4
SUCK Suckling Hills 78.75 15 IAMs_20 IAMs_20 08 55 39.2
comp=Z,2µm,20.0s
ZAIG Zacatecas 78.78 63 P P 08 26 00.6 +1.4
D08A Wollman Farm, 78.80 34 P P 08 25 58.1 -0.3
GAMB Gambell 78.80 1 P 08 25 58.0
baz=182,SNR=29
GAMB Gambell 78.80 1 P P 08 25 58.0 -0.1
GAMB IAmb IAmb 08 26 08.0
comp=Z,62nm,1.4s
NKL Nikolayevsk 78.81 334 *e* P P 08 25 56.9 -1.4
NKL *e* S S 08 35 58.1 +3.7
NKL pmax pmax
comp=N,2.0nm,1.2s
NKL pmax pmax
comp=E,87nm,1.2s
NKL pmax pmax
comp=Z,27nm,1.6s
RAGM Ragged Mountai 78.81 14 IAMs_20 IAMs_20 09 02 58.7
comp=Z,2µm,18.0s
HMT Hamilton 78.86 14 P P 08 25 58.8 +0.3
HMT IAmb IAmb 08 26 03.0
comp=Z,31nm,1.2s
HMT IAMs_20 IAMs_20 08 56 50.2
comp=Z,2µm,19.0s
BGU Big Grassy Mou 78.88 42 P P 08 25 58.8 -0.4
SKT Skwentna 78.88 10 P 08 25 58.2
baz=201,SNR=10
SKT Skwentna 78.88 10 P P 08 25 57.9 -0.6
SKT IAmb IAmb 08 26 11.9
comp=Z,33nm,1.2s
SKT IAMs_20 IAMs_20 08 55 20.3
comp=Z,1µm,20.0s
E09A Wood Farm, Sta 78.90 35 P P 08 25 59.1 +0.1
KNK Knik Glacier 78.92 12 P 08 25 59.2
baz=204
KNK Knik Glacier 78.92 12 P P 08 25 58.8 0.0
KNK IAmb IAmb 08 26 11.5
comp=Z,46nm,1.3s
PMR Palmer 78.95 11 P 08 25 58.8
baz=204,SNR=13
PMR Palmer 78.95 11 P P 08 25 58.8 -0.1
PMR pmax pmax
comp=Z,58nm,1.4s
PMR Palmer 78.95 11 P P 08 25 58.8 -0.1
PMR IAmb IAmb 08 26 03.3
comp=Z,58nm,1.4s
MDJ Mudanjiang 79.03 322 P P 08 26 00.5 +0.7
MDJ pP pP 08 26 03.9 -3.2
MDJ sP PcP 08 26 04.9 -3.3
MDJ PP **PP** **08 28 56.9 -2.4**
MDJ S **S** **08 36 02.3 +5.0**
MDJ SS **SS** **08 41 10.4 +6.7**
MDJ pmax pmax
comp=Z,29nm,1.2s
MDJ pmax pmax
comp=Z,700nm,5.1s
MDJ LR LR
comp=Z,1µm,22.6s
MDJ LR LR
comp=Z,2µm,19.6s
MDJ LR LR
comp=Z,3µm,21.8s
MDJ Mudanjiang 79.03 322 P P 08 26 00.2 +0.4
MDJ IAmb IAmb 08 26 03.1
comp=Z,47nm,1.4s
MDJ IAMs_20 IAMs_20 08 54 19.6
comp=Z,3µm,21.0s
Q16A Castle Valley 79.08 45 P P 08 26 02.1 +1.7
F10A Beach Ranch, E 79.10 36 P P 08 26 00.7 +0.4
GRNR Gornyy 79.12 330 ⇑ *i* P P 08 26 00.6 +0.5
GRNR pmax pmax
comp=Z,20nm,1.2s
EPT El Paso 79.16 53 IAMs_20 IAMs_20 08 53 25.8
comp=Z,2µm,20.0s
TMUT Trail Mountain 79.25 44 P P 08 26 03.0 +1.4
TMUT IAmb IAmb 08 26 11.3
comp=Z,33nm,0.9s
PLID Pearl Lake 79.30 37 P P 08 26 01.6 +0.1
SML Sawmill 79.30 12 P 08 26 00.9
baz=204
MPU Maple Canyon 79.32 43 P P 08 26 03.1 +1.3
BMRM Bremner River 79.34 14 P 08 26 01.1
baz=208,SNR=26
BMRM Bremner River 79.34 14 P P 08 26 00.7 -0.5
B08A Colville Reser 79.36 33 P P 08 26 01.8 +0.2
HLID Hailey 79.41 39 P 08 26 02.3
baz=237,SNR=19
HLID Hailey 79.41 39 P P 08 26 02.8 +0.7
HLID IAmb IAmb 08 26 11.4
comp=Z,27nm,0.9s
HVU Hansel Valley 79.48 41 P P 08 26 03.5 +1.0
HVU pmax pmax
comp=Z,20nm,0.9s
HVU Hansel Valley 79.48 41 P P 08 26 03.5 +1.0
CUT Chulitna 79.49 11 P 08 26 01.5
baz=203
CUT Chulitna 79.49 11 P P 08 26 01.5 -0.3
CUT IAMs_20 IAMs_20 08 56 09.6
comp=Z,2µm,20.0s
CRQM Cirque 79.50 14 P P 08 26 02.1 -0.2
CRQM IAmb IAmb 08 26 06.7
comp=Z,57nm,1.2s
CRQM IAMs_20 IAMs_20 08 57 11.3
comp=Z,1µm,18.0s
YAH Yahtse 79.51 15 P P 08 26 02.5 +0.2
YAH IAmb IAmb 08 26 11.3
comp=Z,26nm,0.9s
YAH IAMs_20 IAMs_20 09 02 33.2
comp=Z,1µm,18.0s
CRQE Cirque 79.51 15 P 08 26 02.3
baz=210
KLU Klutina 79.52 13 P 08 26 02.2
baz=207,SNR=7.7
KLU Klutina 79.52 13 P P 08 26 02.1 -0.1
SCM Sheep Creek Mo 79.53 12 P P 08 26 01.7 -0.5
SCM pmax pmax
comp=Z,44nm,1.0s
SCM Sheep Creek Mo 79.53 12 P P 08 26 01.7 -0.5
SCM IAmb IAmb 08 26 11.1
comp=Z,44nm,1.0s
CTU Camp Tracy 79.59 43 P P 08 26 04.2 +1.1
C09A Chrisman Ranch 79.59 34 P P 08 26 03.5 +0.7
C09A IAmb IAmb 08 26 07.5
comp=Z,39nm,1.5s
SRU San Rafael Swe 79.62 45 P P 08 26 04.8 +1.4
SRU pmax pmax
comp=Z,23nm,1.1s
SRU San Rafael Swe 79.62 45 P P 08 26 04.8 +1.4
PPLA Purkeypile 79.62 10 P 08 26 03.0
baz=201
PPLA Purkeypile 79.62 10 IAMs_20 IAMs_20 08 55 24.0
comp=Z,1µm,21.0s
P17A Butcher Ranch, 79.65 44 P P 08 26 04.6 +1.1
PCA Pinnacle 79.67 16 P P 08 26 04.0 +1.0
PCA IAmb IAmb 08 26 05.1
comp=Z,50nm,1.4s
PINM Pinnacle 79.67 16 P 08 26 03.3
baz=212
BCPM Bancas Point 79.71 16 IAMs_20 IAMs_20 09 01 43.9
comp=Z,1µm,18.0s
TABL Table Mountain 79.73 16 P P 08 26 04.0 +0.5
TABL IAmb IAmb 08 26 12.7
comp=Z,56nm,1.4s
TABL IAMs_20 IAMs_20 09 02 31.2
comp=Z,1µm,18.0s
JLU Jordanelle 79.74 43 P P 08 26 04.4 +0.3
ANM Nome 79.81 3 P 08 26 03.7
baz=188,SNR=10
ANM Nome 79.81 3 P P 08 26 03.9 +0.4
ANM pmax pmax
comp=Z,32nm,1.4s
ANM Nome 79.81 3 P P 08 26 03.9 +0.4
GRNC Granite Creek 79.82 15 P P 08 26 05.0 +1.0
GRNC IAmb IAmb 08 26 13.3
comp=Z,71nm,1.3s
VRDI Verde Repeater 79.84 14 P P 08 26 03.6 -0.4
VRDI IAmb IAmb 08 26 13.3
comp=Z,71nm,1.4s
Y22D IRIS PASSCAL I 79.85 51 IAMs_20 IAMs_20 08 53 40.8
comp=Z,2µm,21.0s
LENM Lemitar 79.85 50 P P 08 26 04.9 +0.2
N25K Chitina, Valde 79.91 13 P 08 26 04.6
baz=208,SNR=14
N25K Chitina, Valde 79.91 13 P P 08 26 04.2 -0.1
N25K IAmb IAmb 08 26 10.4
comp=Z,26nm,1.0s
GLB Gilahina Butte 79.94 14 P P 08 26 05.0 +0.5
GLB IAmb IAmb 08 26 08.9
comp=Z,58nm,1.4s
MNTX Cornudas Mount 80.00 53 P 08 26 05.4
baz=245,SNR=32
MNTX Cornudas Mount 80.00 53 P P 08 26 06.2 +0.8
MNTX IAMs_20 IAMs_20 08 53 42.0
comp=Z,2µm,21.0s
BESE Bessie Mountai 80.00 19 P P 08 26 04.6 -0.2
BESE IAmb IAmb 08 26 14.6
comp=Z,45nm,1.4s
M24K Tolsona, Glenn 80.01 13 P 08 26 05.0
baz=207,SNR=21
M24K Tolsona, Glenn 80.01 13 P P 08 26 05.0 +0.2
TCUT Toone Canyon 80.03 43 P P 08 26 07.2 +1.6
TCUT IAmb IAmb 08 26 14.8
comp=Z,57nm,0.8s
MCARA McCarthy VSAT 80.08 14 P 08 26 05.0
baz=210
MCARA McCarthy VSAT 80.08 14 P P 08 26 05.7 +0.6
MCARA IAmb IAmb 08 26 14.4
comp=Z,30nm,1.2s
LOGN Logan Glacier 80.09 15 P P 08 26 06.0 +0.7
LOGN IAmb IAmb 08 26 12.2
comp=Z,47nm,1.3s
MA2 Magadan 80.09 342 P P 08 26 04.7 -0.5
comp=Z,12nm,0.8s,baz=145,slow=6.5,SNR=15
MA2 Magadan 80.09 342 *ce* P P 08 26 04.5 -0.7
MA2 pmax pmax
comp=Z,36nm,1.3s
MA2 Magadan 80.09 342 P P 08 26 03.6 -1.6
MA2 IAmb IAmb 08 26 09.6
comp=Z,33nm,1.1s
BNM Barren Site 80.10 51 P P 08 26 06.9 +0.7
MVCO Mesa Verde 80.12 47 P P 08 26 07.5 +1.4
MVCO Mesa Verde 80.12 47 P 08 26 05.5
baz=242
CTG Chitna Glacier 80.12 15 P 08 26 05.4
baz=211
WAT6 Susitna Watana 80.12 12 P 08 26 04.9
baz=205,SNR=25
BARN Barnard Glacie 80.13 15 P P 08 26 05.4 -0.2
BARN IAmb IAmb 08 26 12.6
comp=Z,50nm,1.2s
CTGM Chitina Glacie 80.13 15 P P 08 26 05.9 +0.3
HWUT Hardware Ranch 80.17 42 P P 08 26 05.7 -0.7
HWUT IAMs_20 IAMs_20 08 53 59.5
comp=Z,2µm,21.0s
NJ2 Nanjing 80.23 307 *e* P P 08 26 05.5 -1.1
NJ2 S S 08 36 18.6 +8.1
NJ2 sS **sS** **08 36 24.1 +1.5**
NJ2 pmax pmax
comp=Z,13nm,0.5s
NJ2 LR LR
comp=Z,590nm,17.2s
NJ2 LR LR
comp=Z,710nm,16.7s
NJ2 LR LR
comp=Z,1µm,19.1s
WAT2 Susitna Watana 80.31 11 P 08 26 06.6
baz=204
TX31 Lajitas Ar. Si 80.38 56 P P 08 26 09.1 +1.5
TX32 Lajitas Array 80.38 56 P P 08 26 08.7 +1.1
TX32 IAmb IAmb 08 26 16.9
comp=Z,44nm,1.4s
TXAR Lajitas Array 80.38 56 P P 08 26 08.6 +1.0
comp=Z,4.1nm,1.0s,baz=224,slow=5.2,SNR=41
TXAR LR LR 08 53 55.7
comp=Z,2µm,21.2s,baz=0.0,slow=30
TXAR Lajitas Array 80.38 56 P P 08 26 08.0 +0.3
BCYI Bear Canyon 80.42 39 P P 08 26 09.0 +1.3
KTH Kantishna Hill 80.45 10 P P 08 26 06.1 -1.1
KTH IAmb IAmb 08 26 11.6
comp=Z,53nm,1.2s
KTH IAMs_20 IAMs_20 08 55 18.8
comp=Z,2µm,20.0s
TRF Thorofare Moun 80.46 10 P 08 26 06.8
baz=202,SNR=13
TRF Thorofare Moun 80.46 10 P P 08 26 06.5 -0.8
TRF IAmb IAmb 08 26 17.1
comp=Z,62nm,1.0s
TRF IAMs_20 IAMs_20 08 56 50.1
comp=Z,2µm,20.0s
TLIG Tlapa 80.48 69 P P 08 26 09.7 +1.3
NEW Newport 80.49 34 P 08 26 07.6
baz=234
NEW Newport 80.49 34 P P 08 26 08.8 +1.1
comp=Z,4.3nm,1.1s,baz=222,slow=14,SNR=3.3
NEW Newport 80.49 34 P P 08 26 09.2 +1.5
NEW pmax pmax
comp=Z,13nm,1.5s
NEW Newport 80.49 34 P P 08 26 09.2 +1.5
KLR Kul'dur 80.50 327 *ce* P P 08 26 08.0 +0.3
KLR pmax pmax
comp=Z,28nm,1.5s
CHUM Lake Minchumin 80.53 9 P 08 26 07.8
baz=200,SNR=14
SKAG Skagway 80.56 19 P 08 26 08.1
baz=217
SKAG Skagway 80.56 19 P P 08 26 08.5 +0.8
ANMO Albuquerque 80.57 50 P 08 26 08.8
baz=244
ANMO Albuquerque 80.57 50 P P 08 26 09.7 +1.1
comp=Z,5.7nm,1.1s,baz=225,slow=5.6,SNR=17
ANMO Albuquerque 80.57 50 *ce* P P 08 26 10.1 +1.5
ANMO pmax pmax
comp=Z,20nm,1.7s
ANMO Albuquerque 80.57 50 P P 08 26 08.9 +0.3
ANMO Albuquerque 80.57 50 IAMs_20 IAMs_20 08 53 32.0
comp=Z,2µm,21.0s
RND Reindeer 80.67 11 P P 08 26 07.9 -0.5
RND pmax pmax
comp=Z,98nm,1.2s
RND Reindeer 80.67 11 P P 08 26 07.9 -0.5
RND IAMs_20 IAMs_20 08 56 55.7
comp=Z,1µm,20.0s
TNA Tin City 80.68 2 P 08 26 08.4
baz=185,SNR=43
TNA Tin City 80.68 2 P P 08 26 08.4 +0.2
PAX Paxson 80.93 12 P 08 26 09.6
baz=207,SNR=16
PAX Paxson 80.94 12 P P 08 26 09.1 -0.7
PAX pmax pmax
comp=Z,54nm,1.4s
PAX Paxson 80.94 12 P P 08 26 09.1 -0.7
PAX IAmb IAmb 08 26 14.7
comp=Z,54nm,1.4s
BPAW Bear Paw Mtn. 80.95 10 P 08 26 09.3
baz=202,SNR=14
BPAW Bear Paw Mtn. 80.95 10 P P 08 26 09.1 -0.6
BPAW IAmb IAmb 08 26 13.0
comp=Z,32nm,1.3s
MCK McKinley 80.96 11 P 08 26 09.5
baz=204,SNR=41
MCK McKinley 80.96 11 P P 08 26 09.0 -0.8
MCK pmax pmax
comp=Z,66nm,1.0s
MCK McKinley 80.96 11 P P 08 26 09.0 -0.8
MCK IAMs_20 IAMs_20 08 56 54.3
comp=Z,1µm,20.0s
RDMU Red Mountain 80.97 44 P P 08 26 11.1 +0.4
GDL2 Guadalupe Moun 80.99 53 P P 08 26 11.9 +1.1
HYT Haines Junctio 81.03 17 P P 08 26 10.8 +0.4
HYT IAmb IAmb 08 26 15.5
comp=Z,54nm,1.3s
MCMT McKenzie Canyo 81.03 39 P P 08 26 12.0 +1.0
AHID Auburn Hatcher 81.06 41 P P 08 26 11.1 0.0
CN2 Changchun 81.10 320 *e* P P 08 26 11.1 +0.1
CN2 S S 08 36 23.3 +4.2
CN2 pmax pmax
comp=Z,30nm,1.2s
CN2 pmax pmax
comp=Z,480nm,5.0s
CN2 LR LR
comp=Z,560nm,24.4s
CN2 LR LR
comp=Z,860nm,25.4s
CN2 LR LR
comp=Z,1µm,25.4s
DL2 Dalian 81.22 314 P P 08 26 12.4 +0.7
DL2 S S 08 36 26.1 +5.6
DL2 pmax pmax
comp=Z,22nm,1.0s
DL2 pmax pmax
comp=Z,560nm,7.3s
DL2 LR LR
comp=Z,800nm,21.6s
DL2 LR LR
comp=Z,500nm,24.2s
DL2 LR LR
comp=Z,1µm,22.8s
BWN Browne 81.27 10 P P 08 26 11.4 0.0
BWN IAMs_20 IAMs_20 08 57 16.3
comp=Z,2µm,20.0s
MENT Mentasta 81.28 13 P P 08 26 11.2 -0.3
MENT IAmb IAmb 08 26 24.3
comp=Z,20nm,0.9s
SNY Shenyang 81.30 318 ⇑ P P 08 26 12.8 +0.7
SNY S S 08 36 28.4 +7.2
SNY pmax pmax
comp=Z,36nm,1.6s
SNY pmax pmax
comp=Z,440nm,4.8s
SNY LR LR
comp=Z,550nm,16.3s
SNY LR LR
comp=Z,680nm,13.5s
SNY LR LR
comp=Z,1µm,19.1s
MSO Missoula 81.46 37 P 08 26 13.2
baz=237,SNR=17
MSO Missoula 81.46 37 P P 08 26 12.9 -0.1

MSO IAmb IAmb 08 26 17.4
comp=Z,43nm,1.4s
MSO IAMs_20 IAMs_20 08 54 17.1
comp=Z,2µm,22.0s
DLMT Dillon 81.47 38 P **P 08 26 14.0 +0.9**
DLMT IAmb IAmb 08 26 21.6
comp=Z,22nm,1.1s
DLBC Dease Lake 81.51 21 LR LR 08 59 33.4
comp=Z,437nm,18.2s,baz=171,slow=34
DLBC Dease Lake 81.51 21 P **P 08 26 13.6 +0.7**
REDW Red Top Meadow 81.51 41 P **P 08 26 13.7 +0.2**
REDW IAmb IAmb 08 26 22.0
comp=Z,24nm,1.1s
S22A 4UR Ranch, Cre 81.54 47 P 08 26 14.1
baz=243,SNR=35
SNOW Snow King Moun 81.62 41 P **P 08 26 15.0 +0.8**
SNOW IAmb IAmb 08 26 25.1
comp=Z,25nm,0.9s
O20A White River Ci 81.66 45 P 08 26 14.3
baz=242
O20A White River Ci 81.66 45 P **P 08 26 15.3 +1.1**
O20A IAmb IAmb 08 26 23.1
comp=Z,40nm,1.4s
NEA2 Nenana 81.72 10 P 08 26 14.1
baz=204,SNR=7.8
NEA2 Nenana 81.72 10 P **P 08 26 12.8 -1.0**
NEA2 IAMs_20 IAMs_20 08 57 18.6
comp=Z,2µm,20.0s
JTMT Jette 81.77 36 P **P 08 26 14.6 0.0**
MOOW Mose Ponds 81.77 40 P **P 08 26 15.9 +1.0**
WRH Wood River Hil 81.78 11 P **P 08 26 13.6 -0.5**
WRH IAMs_20 IAMs_20 08 57 31.2
comp=Z,1µm,20.0s
LOHW Long Hollow 81.79 41 P **P 08 26 15.1 +0.1**
BCAR Beaver Creek A 81.83 14 P **P 08 26 14.1 -0.4**
DOT Dot Lake 81.83 13 P **P 08 26 13.6 -0.9**
DOT IAmb IAmb 08 26 18.9
comp=Z,68nm,1.4s
MLY Manley 81.85 9 P 08 26 13.9
baz=202,SNR=29
MLY Manley 81.86 9 P **P 08 26 13.7 -0.9**
MLY IAmb IAmb 08 26 18.4
comp=Z,50nm,1.3s
QLMT Earthquake Lak 81.90 39 P **P 08 26 16.8 +1.3**
HDA Harding Lake 81.94 11 P 08 26 14.7
baz=206,SNR=11
HDA P 08 26 14.7
baz=206,SNR=11
FLWY Flagg Ranch 81.97 40 P **P 08 26 16.5 +0.6**
FLWY IAmb IAmb 08 26 25.4
comp=Z,39nm,1.0s
CCB Clear Creek Bu 82.00 11 P **P 08 26 14.3 -0.9**
YPP Pitchstone Pla 82.00 40 P **P 08 26 17.1 +1.0**
YHB Horse Butte 82.00 39 P **P 08 26 17.5 +1.5**
YHB IAmb IAmb 08 26 25.6
comp=Z,34nm,0.9s
BW06 Boulder Array 82.04 42 P 08 26 15.5
baz=241,SNR=13
BW06 Boulder Array 82.04 42 P **P 08 26 16.5 +0.2**
PD31 Pinedale Array 82.04 42 P **P 08 26 16.4 +0.1**
PDAR Pinedale Array 82.04 42 P **P 08 26 16.4 +0.1**
comp=Z,4.8nm,1.0s,baz=207,slow=3.6,SNR=16
PDAR Pinedale Array 82.04 42 P **P 08 26 16.9 +0.6**
YHL Hebgen Lake 82.06 39 P **P 08 26 17.5 +1.1**
YHL IAmb IAmb 08 26 26.1
comp=Z,45nm,1.0s
SMCO Snowmass 82.08 46 P **P 08 26 17.1 +0.3**
SMCO IAmb IAmb 08 26 25.6
comp=Z,32nm,1.1s
SMCO IAMs_20 IAMs_20 08 56 08.5
comp=Z,2µm,20.0s
YMR Madison River 82.10 40 P **P 08 26 17.4 +0.9**
YMR IAmb IAmb 08 26 25.8
comp=Z,29nm,1.1s
SCRK Sand Creek 82.14 13 P 08 26 15.8
baz=208,SNR=15
SCRK Sand Creek 82.14 13 P **P 08 26 16.4 +0.3**
SCRK IAmb IAmb 08 26 20.8
comp=Z,38nm,1.3s
BOZ Bozeman (W) 82.17 39 P **P 08 26 17.7 +0.9**
BOZ pmax pmax
comp=Z,41nm,1.4s
BOZ Bozeman (W) 82.17 39 P **P 08 26 17.7 +0.9**
BOZ IAmb IAmb 08 26 22.2
comp=Z,41nm,1.4s
BOZ IAMs_20 IAMs_20 08 55 48.0
comp=Z,1µm,21.0s
BOZ Bozeman (W) 82.17 39 P 08 26 16.3
baz=239,SNR=21
I23K Minto, Yukon-K 82.19 10 P 08 26 15.9
baz=203,SNR=28
I23K Minto, Yukon-K 82.19 10 P **P 08 26 15.7 -0.5**
I23K IAmb IAmb 08 26 21.2
comp=Z,61nm,1.3s
I23K IAMs_20 IAMs_20 08 56 01.8
comp=Z,2µm,21.0s
TCOL CIGO, UAF Yank 82.19 11 P 08 26 15.6
baz=205,SNR=12
TCOL CIGO, UAF Yank 82.19 11 P **P 08 26 15.8 -0.5**
TCOL IAMs_20 IAMs_20 08 58 03.0
comp=Z,2µm,20.0s
COLA College 82.19 11 P 08 26 16.0
baz=205
COLA College 82.20 11 *c* iP **P 08 26 15.6 -0.7**
COLA pmax pmax
comp=Z,50nm,0.9s
COLA College 82.20 11 P **P 08 26 15.5 -0.7**
COLA College 82.20 11 IAMs_20 IAMs_20 08 58 04.0
comp=Z,1µm,20.0s
H17A Grant Village 82.20 40 P **P 08 26 18.2 +1.0**
MDM Murphy Dome 82.21 10 P **P 08 26 15.4 -1.0**
MDM IAMs_20 IAMs_20 08 58 04.3
comp=Z,2µm,19.0s
YHH Holmes Hill 82.23 40 P **P 08 26 18.4 +1.1**
YHH IAmb IAmb 08 26 23.4
comp=Z,46nm,1.5s
IL31 82.28 11 P **P 08 26 16.0 -0.7**
IL31 IAmb IAmb 08 26 20.9
comp=Z,52nm,1.3s
ILAR Eielson Array 82.28 11 P **P 08 26 15.9 -0.8**
comp=Z,23nm,1.2s,baz=216,slow=5.0,SNR=43
ILAR Eielson Array 82.28 11 P **P 08 26 16.0 -0.8**
ILAR Eielson Array 82.28 11 P **P 08 26 15.8 -1.0**
YNR Norris Junctio 82.30 40 P **P 08 26 19.1 +1.4**
YNR IAmb IAmb 08 26 34.2
comp=Z,34nm,1.3s
IMAR Indian Mountai 82.31 8 P **P 08 26 16.6 -0.3**
LKWY Lake 82.40 40 P **P 08 26 19.2 +1.0**
LKWY pmax pmax
comp=Z,21nm,1.0s
LKWY Lake 82.40 40 P **P 08 26 19.2 +1.0**
LKWY IAmb IAmb 08 26 28.5
comp=Z,21nm,0.9s
SEY Seymchan 82.44 345 *i* P **P 08 26 17.8 +0.2**
POKR Poker Plat Res 82.49 11 P 08 26 17.6
baz=205,SNR=20
POKR Poker Plat Res 82.49 11 P **P 08 26 17.5 -0.3**
POKR IAMs_20 IAMs_20 08 57 52.9
comp=Z,1µm,20.0s
K27K Chicken 82.60 13 P 08 26 18.8
baz=210
K27K Chicken 82.60 13 P **P 08 26 18.1 -0.3**
K27K IAmb IAmb 08 26 24.5
comp=Z,61nm,1.4s
HRY Holter Researc 82.63 38 P **P 08 26 19.9 +0.8**
WALA Waterton Lakes 82.70 35 P **P 08 26 19.6 +0.2**
WALA IAmb IAmb 08 26 34.0
comp=Z,26nm,1.5s
YNE Yellowstone No 82.86 40 P **P 08 26 22.0 +1.5**
YNE IAmb IAmb 08 26 26.3
comp=Z,37nm,1.3s
MSTX Muleshoe 82.93 52 P **P 08 26 21.0 0.0**
MSTX IAMs_20 IAMs_20 08 55 06.6
comp=Z,2µm,21.0s
MSTX Muleshoe 82.93 52 P 08 26 21.4
baz=246,SNR=29
T25A Trinidad 83.01 49 P 08 26 21.5
baz=245,SNR=8.5
T25A Trinidad 83.01 49 P **P 08 26 22.3 +0.8**
T25A IAmb IAmb 08 26 29.5
comp=Z,22nm,1.1s
T25A IAMs_20 IAMs_20 08 55 36.4
comp=Z,1µm,20.0s
QIZ Qiongzhong 83.03 292 P **P 08 26 20.1 -1.5**
QIZ sP **PcP 08 26 24.8 -1.5**
QIZ PP **PP 08 29 29.9 -3.0**
QIZ S **S 08 36 40.1 +0.2**
QIZ SS **SS 08 42 02.6 -1.7**
QIZ pmax pmax
comp=Z,320nm,3.5s
QIZ LR LR
comp=Z,360nm,13.7s
QIZ LR LR
comp=Z,720nm,18.0s
QIZ LR LR
comp=Z,1µm,22.0s
RWWY Rawlins 83.07 44 P **P 08 26 21.2 -0.5**
PRP Porcupine Dome 83.20 11 P 08 26 22.1
baz=207
PRP Porcupine Dome 83.20 11 P **P 08 26 21.1 -0.6**
DAWY Dawson 83.25 14 P **P 08 26 21.5 -0.3**
TIA Tai'an 83.26 310 P **P 08 26 24.0 +1.5**
TIA PP **PP 08 29 30.0 -4.5**
TIA SKS **SKSac 08 36 42.8 -0.5**
TIA S **SKKSac 08 36 49.3 +1.7**
TIA pmax pmax
comp=Z,7.0nm,0.6s
TIA pmax pmax
comp=Z,410nm,3.9s
TIA LR LR
comp=Z,460nm,13.2s
TIA LR LR
comp=Z,820nm,19.2s
TIA LR LR
comp=Z,1µm,19.2s
Q24A Divide 83.26 47 P 08 26 22.6
baz=244
ISCO Idaho Springs 83.30 46 P **P 08 26 24.0 +0.9**
ISCO pmax pmax
comp=Z,21nm,1.2s
ISCO Idaho Springs 83.30 46 P **P 08 26 24.0 +0.9**
ISCO IAmb IAmb 08 26 39.1
comp=Z,20nm,1.2s
ISCO Idaho Springs 83.30 46 P 08 26 23.1
baz=244,SNR=16
RLMT Red Lodge 83.37 40 P 08 26 23.2
baz=241,SNR=23
RLMT Red Lodge 83.37 40 P **P 08 26 23.8 +0.7**
RLMT IAmb IAmb 08 26 28.7
comp=Z,48nm,1.4s
RDOG Red Dog Mine 83.42 4 P 08 26 23.2
baz=190
RDOG Red Dog Mine 83.42 4 P **P 08 26 22.9 +0.3**
RDOG IAmb IAmb 08 26 32.0
comp=Z,34nm,1.2s
EGAK Eagle 83.45 13 P 08 26 23.7
baz=211,SNR=17
EGAK Eagle 83.45 13 P **P 08 26 22.6 -0.2**
EGAK IAmb IAmb 08 26 27.7
comp=Z,47nm,1.3s
GCMT Greycliff 83.46 39 P **P 08 26 24.9 +1.4**
N23A Red Feather La 83.56 45 P 08 26 24.6
baz=244,SNR=14
CMIG Matias Romero 83.66 70 P **P 08 26 25.9 +1.0**
comp=Z,1.6nm,0.7s,baz=320,slow=9.7,SNR=4.3
JCT Junction City 83.92 56 P 08 26 25.9
baz=248
JCT Junction City 83.92 56 P **P 08 26 25.8 -0.3**
JCT pmax pmax
comp=Z,20nm,1.1s
JCT Junction City 83.92 56 P **P 08 26 25.8 -0.3**
JCT IAmb IAmb 08 26 34.1
comp=Z,20nm,1.1s
JCT IAMs_20 IAMs_20 08 56 47.1
comp=Z,2µm,20.0s
K22A Casper 83.96 43 P 08 26 26.5
baz=243,SNR=16
K22A Casper 83.96 43 P **P 08 26 26.4 +0.3**
K22A IAMs_20 IAMs_20 09 02 25.0
comp=Z,1µm,18.0s
COLD Coldfoot 83.98 9 P 08 26 25.8
baz=202,SNR=36
COLD Coldfoot 83.98 9 P **P 08 26 26.1 +0.6**
PHWY Pilot Hill 84.07 45 P **P 08 26 27.2 +0.3**
PHWY IAmb IAmb 08 26 36.4
comp=Z,24nm,1.2s
BELA Belgrano 2 84.10 172 P **P 08 26 27.4 +1.2**
BELA IAmb IAmb 08 26 36.4
comp=Z,29nm,1.2s
AMTX Amarillo 84.12 52 P 08 26 27.1
baz=247
AMTX Amarillo 84.12 52 P **P 08 26 27.1 +0.1**
AMTX IAMs_20 IAMs_20 08 56 26.0
comp=Z,2µm,20.0s
FYU Fort Yukon 84.20 11 P **P 08 26 27.3 +0.8**
FYU IAmb IAmb 08 26 43.4
comp=Z,16nm,1.1s
BILL Bilibino 84.40 352 *d* iP **P 08 26 27.3 -0.3**
BILL *i* S **S 08 36 43.2 -8.6**
BILL pmax pmax
comp=Z,29nm,1.3s
BILL MLR MLR
comp=Z,491nm,17.0s
BILL Bilibino 84.40 352 P **P 08 26 26.7 -0.9**
BILL IAmb IAmb 08 26 37.5
comp=Z,28nm,1.1s
BILL IAMs_20 IAMs_20 08 57 03.2
comp=Z,2µm,22.0s
KVTX Kingsville 84.44 60 IAMs_20 IAMs_20 09 03 22.2
comp=Z,1µm,18.0s
EGMT Eagleton 84.51 37 P 08 26 29.3
baz=240,SNR=11
EGMT Eagleton 84.51 37 P **P 08 26 29.5 +0.8**
EGMT IAmb IAmb 08 26 33.7
comp=Z,40nm,1.4s
EGMT IAMs_20 IAMs_20 08 57 51.8
comp=Z,1µm,20.0s
ABTX Abilene, Hawle 84.83 54 P 08 26 31.1
baz=248
ABTX Abilene, Hawle 84.83 54 P **P 08 26 30.8 +0.1**
735A Kenedy 84.96 58 IAMs_20 IAMs_20 08 56 25.0
comp=Z,2µm,22.0s
KSCO Kaye Shedlock' 85.07 48 P **P 08 26 31.6 -0.2**
KSCO IAMs_20 IAMs_20 08 56 31.7
comp=Z,2µm,21.0s
KSCO Kaye Shedlock' 85.07 48 P 08 26 32.0
baz=246
BMAR Burnt Mountain 85.08 11 P **P 08 26 31.5 +0.4**
TOLK Toolik Lake Re 85.38 8 P 08 26 32.7
baz=203,SNR=17
TOLK Toolik Lake Re 85.38 8 P **P 08 26 32.9 +0.3**
TOLK IAmb IAmb 08 26 41.7
comp=Z,52nm,1.3s
ZEA Zeya 85.40 329 *e* P **P 08 26 33.3 +0.4**
ZEA *e* S **S 08 37 06.2 +3.9**
ZEA pmax pmax
comp=Z,20nm,2.1s
ZEA pmax pmax
comp=Z,200nm,6.0s
ZEA smax smax
comp=N,600nm,11.4s
BJT Baijiatuau 85.51 313 P **P 08 26 33.1 -0.7**
BJT pmax pmax
comp=Z,26nm,1.3s
BJT Baijiatuau 85.51 313 P **P 08 26 33.1 -0.7**
BJT IAmb IAmb 08 26 35.4
comp=Z,26nm,1.3s
BJI Beijing 85.51 313 P **P 08 26 35.1 +1.3**
BJI S **S 08 37 07.8 +3.9**
BJI pmax pmax
comp=Z,22nm,1.6s
BJI pmax pmax
comp=Z,550nm,6.6s
BJI LR LR
comp=Z,450nm,19.6s
BJI LR LR
comp=Z,540nm,24.5s
BJI LR LR
comp=Z,980nm,24.6s
EPYK Eagle Plains 85.79 14 P 08 26 34.6
baz=215,SNR=20
EPYK Eagle Plains 85.79 14 P **P 08 26 34.8 +0.1**
435B Jarrell 85.81 57 P 08 26 35.8
baz=250
435B Jarrell 85.81 57 P **P 08 26 36.8 +1.2**
435B IAMs_20 IAMs_20 08 57 25.4
comp=Z,2µm,20.0s
CCIG Comitan 85.93 72 P **P 08 26 37.5 +0.9**
CCIG IAmb IAmb 08 26 40.0
comp=Z,43nm,1.5s
LAO LASA Array 85.99 39 P 08 26 37.1
baz=243,SNR=22
LAO LASA Array 85.99 39 P **P 08 26 37.2 +1.1**
HUEH Huehuetenango 86.24 73 IAMs_20 IAMs_20 08 55 15.8
comp=Z,2µm,20.0s
RSSD Black Hills 86.24 42 P 08 26 37.6
baz=245
RSSD Black Hills 86.24 42 P **P 08 26 37.6 0.0**
RSSD pmax pmax
comp=Z,25nm,1.1s
RSSD Black Hills 86.24 42 P **P 08 26 37.6 0.0**
RSSD IAmb IAmb 08 26 45.4
comp=Z,25nm,1.1s
OGNE Ogallala 86.27 46 IAMs_20 IAMs_20 08 57 24.2
comp=Z,2µm,21.0s
WMOK Wichita Mounta 86.27 53 P 08 26 37.6
baz=249
WMOK Wichita Mounta 86.28 53 P **P 08 26 37.7 -0.1**
WMOK pmax pmax
comp=Z,20nm,1.4s
WMOK Wichita Mounta 86.28 53 P **P 08 26 37.7 -0.1**
WMOK IAmb IAmb 08 26 42.2
comp=Z,20nm,1.4s
WMOK Wichita Mounta 86.28 53 IAMs_20 IAMs_20 08 57 23.1
comp=Z,2µm,21.0s
WHTX Lake Whitney, 86.34 56 P 08 26 38.2
baz=250
WHTX Lake Whitney, 86.34 56 P **P 08 26 38.7 +0.6**
U32A Winter Ranch, 86.70 51 P **P 08 26 40.6 +0.8**
U32A IAMs_20 IAMs_20 08 57 29.4
comp=Z,3µm,22.0s
HKT Hockley 86.95 58 *d* iP **P 08 26 42.1 +1.1**
HKT pmax pmax
comp=Z,46nm,1.4s
HKT Hockley 86.95 58 P **P 08 26 42.2 +1.1**
HKT IAmb IAmb 08 26 46.3
comp=Z,46nm,1.4s
HKT Hockley 86.95 58 IAMs_20 IAMs_20 08 58 32.7
comp=Z,2µm,20.0s
X34A Smith Ranch, M 86.95 53 P **P 08 26 41.8 +0.7**
X34A IAMs_20 IAMs_20 08 57 12.7
comp=Z,2µm,22.0s
Z35A Perchaven, San 86.96 54 P **P 08 26 42.2 +1.1**
CBKS Cedar Bluff 87.06 49 P 08 26 42.0
baz=248
CBKS Cedar Bluff 87.07 49 P **P 08 26 42.1 +0.5**
CBKS pmax pmax
comp=Z,14nm,1.0s
CBKS Cedar Bluff 87.07 49 P **P 08 26 42.1 +0.5**
CBKS IAmb IAmb 08 26 50.9
comp=Z,14nm,0.9s
APG El Apazote 87.11 74 P **P 08 26 44.2 +1.8**
comp=Z,18nm,0.9s,baz=274,slow=5.5,SNR=16
A21K Barrow 87.11 5 P 08 26 42.0
baz=196
A21K Barrow 87.11 5 P **P 08 26 41.4 +0.4**
A21K IAmb IAmb 08 26 51.0
comp=Z,19nm,1.2s
HIA Hailar 87.20 323 *c* iP **P 08 26 41.7 -0.2**
HIA pmax pmax
comp=Z,42nm,1.7s
HIA Hailar 87.20 323 P **P 08 26 42.0 +0.1**
HIA IAmb IAmb 08 26 43.0
comp=Z,21nm,1.1s
HIA Hailar 87.20 323 IAMs_20 IAMs_20 08 59 46.8
comp=Z,2µm,21.0s
OK032 Salt Plains WL 87.45 51 P **P 08 26 43.5 0.0**
OK032 IAmb IAmb 08 26 49.1
comp=Z,34nm,1.4s
FNO Franklin 87.52 53 P **P 08 26 45.2 +1.5**
FNO IAmb IAmb 08 26 51.5
comp=Z,32nm,1.1s
LL01 San Ignacio de 87.61 133 IAMs_20 IAMs_20 08 58 31.4
comp=Z,2µm,20.0s
237A Washetta, Mont 87.66 56 P **P 08 26 45.1 +0.6**
237A IAMs_20 IAMs_20 08 58 25.1
comp=Z,1µm,20.0s
OK029 Liberty Lake 87.67 52 IAMs_20 IAMs_20 08 58 29.0
comp=Z,2µm,21.0s
R32A Long Quarter, 87.67 49 P **P 08 26 44.0 -0.5**
R32A IAmb IAmb 08 26 53.5
comp=Z,21nm,1.0s
R32A IAMs_20 IAMs_20 08 59 02.7
comp=Z,2µm,20.0s
OK025 Westminster Rd 87.68 52 IAMs_20 IAMs_20 08 58 17.4
comp=Z,2µm,21.0s
MTO3 Montecristo 87.96 75 P **P 08 26 47.8 +1.2**
MTO3 IAmb IAmb 08 26 49.3
comp=Z,24nm,1.2s
MTO3 IAMs_20 IAMs_20 08 57 33.7
comp=Z,2µm,20.0s
MAW Mawson 87.98 199 P **P 08 26 46.0 +0.6**
comp=Z,12nm,0.7s,baz=140,slow=8.2,SNR=13
MAW LR LR 09 06 03.3
comp=Z,1µm,18.6s,baz=114,slow=36
MAW Mawson 87.98 199 P **P 08 26 46.3 +0.8**
baz=88,SNR=14
MAW Mawson 87.98 199 P **P 08 26 46.2 +0.8**
MAW pmax pmax
comp=Z,7.0nm,1.2s
MAW MLR MLR
comp=Z,400nm,19.0s
MAW Mawson 87.98 199 P **P 08 26 46.2 +0.8**
DGMT Dagmar 88.01 38 P 08 26 46.6
baz=244,SNR=14
DGMT Dagmar 88.01 38 P **P 08 26 46.4 +0.5**
DGMT Dagmar 88.01 38 IAMs_20 IAMs_20 08 59 44.4
comp=Z,2µm,22.0s
KAN13 South Haven SW 88.08 51 P **P 08 26 46.6 +0.2**
KAN13 IAmb IAmb 08 26 55.6
comp=Z,21nm,1.2s
LL04 Puerto Octay 88.08 132 IAMs_20 IAMs_20 08 55 27.9
comp=Z,2µm,21.0s
INK Inuvik 88.09 14 P **P 08 26 45.9 +0.2**
comp=Z,11nm,1.1s,baz=202,slow=6.0,SNR=16
INK Inuvik 88.09 14 P **P 08 26 45.1 -0.6**
INK IAmb IAmb 08 26 50.1
comp=Z,34nm,1.3s
KS20 Mayfield South 88.09 51 IAMs_20 IAMs_20 08 59 16.2
comp=Z,2µm,21.0s
GYA Guiyang 88.14 298 ⇑P **P 08 26 48.8 +1.7**
GYA SKS **SKSac 08 37 16.0 +1.4**
GYA S **ScS 08 37 34.9 -1.5**
GYA pmax pmax
comp=Z,330nm,4.4s
GYA LR LR
comp=Z,300nm,16.6s
GYA LR LR
comp=Z,370nm,17.8s
GYA LR LR
comp=Z,500nm,19.5s
OK031 S. Brethren Rd 88.19 52 IAMs_20 IAMs_20 08 59 05.8
comp=Z,2µm,21.0s
OK030 Cody Creek RV 88.22 52 IAMs_20 IAMs_20 08 59 06.7
comp=Z,2µm,21.0s
NATX Nacogdoches 88.50 57 P **P 08 26 49.6 +1.1**
NATX IAMs_20 IAMs_20 08 58 41.4
comp=Z,1µm,21.0s
NATX Nacogdoches 88.50 57 P 08 26 49.2
baz=251
XAN Xi'an 88.70 306 P **P 08 26 49.6 +0.1**
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,120nm,7.2s
Z38A Mt. Pleasant 88.73 55 P **P 08 26 49.1 -0.5**
T35A Sooner Cattle 88.77 51 P **P 08 26 49.5 -0.2**
T35A IAmb IAmb 08 26 53.3
comp=Z,25nm,1.4s
X37A Clayton 88.86 54 IAMs_20 IAMs_20 08 59 06.7
comp=Z,2µm,20.0s
TUL1 Leonard 88.97 52 P 08 26 50.8
baz=250
YAK Yakutsk 89.06 337 *e* P **P 08 26 48.9 -1.5**
YAK *e* 08 30 14.8
YAK *e* PPP PPP 08 32 16.8
YAK *e* S **SKSac 08 37 15.5 -2.7**
YAK *e** SS **SKKSac 08 37 31.8 +1.8**
YAK *e* SS **SS 08 43 30.0 -1.1**
YAK *e* SSS SSS 08 47 08.2
YAK pmax pmax
comp=Z,26nm,1.5s
YAK pmax pmax
comp=E,13nm,1.4s
YAK pmax pmax
comp=Z,73nm,2.0s
YAK pmax pmax

comp=N,16nm,2.0s
YAK pmax pmax
comp=E,21nm,1.9s
YAK smax smax
comp=N,56nm,3.2s
YAK smax smax
comp=E,38nm,2.8s
YAK MLR MLR
comp=Z,277nm,17.0s
YAK MLR MLR
comp=N,163nm,17.0s
YAK MLR MLR
comp=E,232nm,19.0s
HHC Hu-ho-hao-te 89.07 313 *e*P **P 08 26 52.4 +1.3**
HHC sP pP 08 26 59.4 +0.8
HHC SKS **SKSac 08 37 19.3 -0.2**
HHC S **S 08 37 37.8 -0.6**
HHC sS ScS 08 37 45.8 +2.3
HHC pmax pmax
comp=E,34nm,1.1s
HHC pmax pmax
comp=E,420nm,5.6s
HHC LR LR
comp=E,640nm,19.2s
HHC LR LR
comp=E,670nm,20.2s
HHC LR LR
comp=E,1μm,19.6s
BGNE Belgrade 89.15 47 IAMs_20 IAMs_20 08 59 01.7
comp=Z,2μm,21.0s
K31A O'Neill 89.17 45 P **P 08 26 51.5 0.0**
K31A IAMs_20 IAMs_20 08 59 08.2
comp=Z,2μm,21.0s
441A DeRidder 89.38 58 IAMs_20 IAMs_20 08 59 39.8
comp=Z,1μm,21.0s
E28A Huff 89.39 41 IAMs_20 IAMs_20 09 06 05.4
comp=Z,1μm,18.0s
N33A J Bar K, Exete 89.41 47 IAMs_20 IAMs_20 09 00 03.6
comp=Z,2μm,21.0s
KSU1 Kansas State U 89.44 49 P 08 26 53.3
baz=250
KSU1 Kansas State U 89.44 49 P **P 08 26 53.3 +0.5**
KSU1 IAmb IAmb 08 26 57.4
comp=Z,14nm,1.0s
KSU1 Kansas State U 89.44 49 IAMs_20 IAMs_20 09 00 08.6
comp=Z,2μm,20.0s
PLCA Paso Flores 89.47 132 P **P 08 26 54.4 +1.3**
comp=Z,3.0nm,1.1s,baz=256,slow=7.1,SNR=2.9
PLCA LR LR 08 59 33.2
comp=Z,1μm,19.6s,baz=246,slow=30
PLCA Paso Flores 89.47 132 P **P 08 26 54.3 +1.1**
CRIN San Cristobal 89.66 77 IAMs_20 IAMs_20 08 56 41.8
comp=Z,2μm,20.0s
TGUH Tegucigalpa,Un 89.81 75 P **P 08 26 54.8 -0.4**
TGUH IAmb IAmb 08 26 59.6
comp=Z,29nm,1.1s
TGUH IAMs_20 IAMs_20 08 57 37.8
comp=Z,2μm,20.0s
YKA Yellowknife Ar 89.90 23 P **P 08 26 54.5 +0.1**
comp=Z,5.4nm,1.0s,baz=234,slow=4.3,SNR=45
YKA PP **PP 08 30 33.3 +5.8**
comp=Z,0.1nm,0.5s,baz=229,slow=4.6,SNR=3.6
YKA LR LR 08 59 28.5
comp=Z,502nm,21.5s,baz=0.0,slow=30
BTO Baotou 90.08 312 *e*P **P 08 26 56.9 +1.0**
BTO pmax pmax
comp=Z,69nm,1.9s
BTO pmax pmax
comp=Z,2μm,5.0s
BTO LR LR
comp=Z,5μm,16.7s
BTO LR LR
comp=Z,3μm,15.4s
U38A Gravette 90.22 52 P **P 08 26 56.4 -0.1**
MIAR Mount Ida 90.25 54 P **P 08 26 56.6 0.0**
MIAR pmax pmax
comp=Z,10.0nm,1.4s
MIAR Mount Ida 90.25 54 P **P 08 26 56.6 0.0**
MIAR IAMs_20 IAMs_20 08 59 58.5
comp=Z,2μm,21.0s
MIAR Mount Ida 90.25 54 P 08 26 56.5
baz=252
342A Flagon Creek P 90.27 58 P **P 08 26 58.3 +1.4**
342A IAMs_20 IAMs_20 09 00 15.6
comp=Z,1μm,21.0s
BI02 San Fabin de 90.28 128 P **P 08 26 58.8 +1.7**
BI02 IAmb IAmb 08 27 24.8
comp=Z,30nm,1.5s
W39A Magazine 90.29 54 P 08 26 57.7
baz=252
W39A Magazine 90.29 54 P **P 08 26 57.9 +1.1**
W39A IAmb IAmb 08 27 03.8
comp=Z,19nm,1.3s
WLAR White Oak Lake 90.35 55 P **P 08 26 58.4 +1.3**
Z41A Richland Creek 90.46 56 P 08 26 58.1
baz=252
ML02 Panimavida 90.47 127 P **P 08 26 58.4 +0.6**
ML02 IAmb IAmb 08 27 07.3
comp=Z,29nm,1.1s
ML02 IAMs_20 IAMs_20 09 03 47.7
comp=Z,2μm,19.0s
HHAR Hobbs 90.51 53 P **P 08 26 57.8 -0.1**
HHAR IAMs_20 IAMs_20 09 00 58.4
comp=Z,1μm,21.0s
MDND Maddock 90.57 40 P 08 26 58.2
baz=248
MDND Maddock 90.57 40 P **P 08 26 59.0 +1.2**
L34A Svendsen Farm, 90.59 47 IAMs_20 IAMs_20 08 59 56.8
comp=Z,2μm,22.0s
N35A Tabor 90.74 48 IAMs_20 IAMs_20 08 59 49.9
comp=Z,2μm,22.0s
X40A Basin Creek Fa 90.81 55 IAMs_20 IAMs_20 09 00 24.5
comp=Z,1μm,20.0s
JTS Las Juntas de 91.00 80 P **P 08 27 01.4 +0.8**
comp=Z,38nm,1.2s,baz=196,slow=0.1,SNR=14
JTS Las Juntas de 91.00 80*d*/P **P 08 27 02.8 +2.1**
JTS pmax pmax
comp=Z,38nm,1.2s
JTS Las Juntas de 91.00 80 P **P 08 27 02.0 +1.3**
ECSD EROS Data Cent 91.03 45 P **P 08 26 59.9 -0.2**
ECSD IAmb IAmb 08 27 04.6
comp=Z,15nm,1.2s
ECSD EROS Data Cent 91.03 45 P 08 27 00.1
baz=250
KMI Kunming 91.13 296 *e*P **P 08 27 02.3 +1.0**
KMI SKS **SKSac 08 37 31.3 -1.1**
KMI S **ScS 08 37 59.9 -1.6**
KMI pmax pmax
comp=Z,10.0nm,0.8s
KMI pmax pmax
comp=Z,250nm,6.1s
KMI LR LR
comp=Z,470nm,17.0s
KMI LR LR
comp=Z,730nm,18.9s
KMI LR LR
comp=Z,840nm,18.9s
C36M Paulatuk 91.18 16 P 08 27 01.1
baz=227
C36M Paulatuk 91.18 16 P **P 08 26 59.4 -0.7**
C36M IAmb IAmb 08 27 08.4
comp=Z,22nm,1.3s
U40A Yellville 91.37 53 P **P 08 27 01.4 -0.4**
U40A IAmb IAmb 08 27 07.9
comp=Z,15nm,1.2s
U40A IAMs_20 IAMs_20 09 01 04.1
comp=Z,1μm,20.0s
U40A Yellville 91.37 53 P 08 27 01.8
baz=252
143A Socs Landing, 91.42 57 P **P 08 27 03.5 +1.4**
143A IAMs_20 IAMs_20 09 01 32.7
comp=Z,1μm,21.0s
S39A Bolivar 91.42 51 P **P 08 27 02.0 -0.1**
W41B Gary Mavity, V 91.48 54 P 08 27 02.8
baz=252
WHAR Wooly Hollow 91.48 54 P **P 08 27 03.7 +1.3**
344A Westbrook Farm 91.60 58 P **P 08 27 04.1 +1.1**
344A IAMs_20 IAMs_20 09 02 02.6
comp=Z,1μm,22.0s
COVE Coope Vega, Sa 91.64 79 IAMs_20 IAMs_20 08 58 47.4
comp=Z,2μm,20.0s
HDC Heredia 91.73 80 IAMs_20 IAMs_20 08 59 42.8
comp=Z,2μm,19.0s
FCAR Ozark Folk Cen 91.79 53 P **P 08 27 04.7 +0.9**
FCAR IAmb IAmb 08 27 07.8
comp=Z,36nm,1.5s
P38A Dawn 91.87 49 IAMs_20 IAMs_20 09 01 33.0
comp=Z,2μm,21.0s
FFC Flin Flon 91.89 33 P **P 08 27 03.7 -0.1**
FFC pmax pmax
comp=Z,22nm,1.4s
FFC Flin Flon 91.89 33 P **P 08 27 03.7 -0.1**
FFC IAmb IAmb 08 27 08.0
comp=Z,22nm,1.4s
CD2 Chengdu 91.90 301 P **P 08 27 03.5 -1.0**
CD2 pmax pmax
comp=Z,30nm,0.4s
PEL Peldehue 91.90 125 P **P 08 27 07.4 +2.8**
PEL pmax pmax
comp=Z,26nm,1.1s
MT03 Universidad Ad 91.92 125 IAMs_20 IAMs_20 08 58 04.5
comp=Z,2μm,22.0s
D32A Dogwood Acres, 91.94 42 IAMs_20 IAMs_20 09 02 17.0
comp=Z,1μm,20.0s
F33A 5 Mile Ranch, 91.97 43 P **P 08 27 04.5 +0.1**
PEZE Perez Zeledon, 91.98 81 P **P 08 27 06.2 +0.9**
PEZE IAmb IAmb 08 27 12.3
comp=Z,37nm,1.5s
PEZE IAMs_20 IAMs_20 08 57 51.5
comp=Z,1μm,21.0s
VBMS Vicksburg 91.99 57 P **P 08 27 06.4 +1.6**
VBMS Vicksburg 91.99 57 P 08 27 04.9
baz=253
MGMO Mountain Grove 92.06 52 P **P 08 27 05.4 +0.3**
X43A Marvell 92.36 55 P 08 27 06.7
baz=253
R40A Maddies Statio 92.40 51 P **P 08 27 06.5 -0.1**
R40A IAMs_20 IAMs_20 09 01 05.2
comp=Z,2μm,21.0s
N38A Joes South For 92.45 48 IAMs_20 IAMs_20 09 02 49.1
comp=Z,1μm,20.0s
LCAR Lake Charles 92.59 53 P **P 08 27 08.1 +0.6**
LCAR IAmb IAmb 08 27 12.1
comp=Z,30nm,1.3s
346A Big Creek Wild 92.62 58 P **P 08 27 07.1 -0.6**
CMAR Chiang Mai Arr 92.75 288 P **P 08 27 08.6 0.0**
comp=Z,0.7nm,0.5s,baz=106,slow=2.9,SNR=6.0
CMAR LR LR 09 03 53.0
comp=Z,738nm,21.9s,baz=144,slow=32
CMAR Chiang Mai Arr 92.75 288 P **P 08 27 08.1 -0.5**
ATAH Atahualpa 92.76 98 LR LR 08 59 27.7
comp=Z,4μm,20.2s,baz=250,slow=29
SYO Syowa Base 92.77 191‖ *e*pP **P 08 27 10.0 +2.3**
SYO Syowa Base 92.77 191‖ *e*PP PP 08 30 48.0 -1.2
GO04 Tololo Observa 92.80 122 P **P 08 27 09.2 +0.2**
GO04 IAmb IAmb 08 27 23.6
comp=Z,25nm,1.1s
SCIA State Center 92.80 47 P 08 27 08.7
baz=252
SCIA State Center 92.80 47 P **P 08 27 09.4 +1.1**
SCIA IAMs_20 IAMs_20 09 01 49.4
comp=Z,2μm,21.0s
HBAR Harrisburg 92.83 54 P **P 08 27 09.0 +0.4**
NNA Nana 92.91 103 IAMs_20 IAMs_20 08 59 02.0
comp=Z,1μm,21.0s
P40A Paris 92.93 50 P **P 08 27 08.6 -0.3**
P40A IAmb IAmb 08 27 13.0
comp=Z,22nm,1.3s
P40A IAMs_20 IAMs_20 09 01 56.2
comp=Z,2μm,21.0s
VNA3 Neumayer Olymp 92.97 175 P **P 08 27 10.5 +1.8**
SNAA Sanae 93.03 177 P **P 08 27 09.2 +0.2**
SNAA Sanae 93.03 177*ce*P **P 08 27 10.9 +1.9**
SNAA pmax pmax
comp=Z,13nm,2.5s
SNAA Sanae 93.03 177 P **P 08 27 09.5 +0.5**
SNAA IAmb IAmb 08 27 18.7
comp=Z,13nm,1.1s
SNAA IAMs_20 IAMs_20 09 15 16.6
comp=Z,2μm,19.0s
AGMN Agassiz Nation 93.07 41 P 08 27 09.8
baz=251
AGMN Agassiz Nation 93.07 41 P **P 08 27 09.3 -0.1**
AGMN IAmb IAmb 08 27 13.0
comp=Z,29nm,1.4s
AGMN IAMs_20 IAMs_20 09 03 05.7
comp=Z,1μm,20.0s
CCM Cathedral Cave 93.10 52 P **P 08 27 09.5 -0.3**
CCM pmax pmax
comp=Z,21nm,1.3s
CCM Cathedral Cave 93.10 52 P **P 08 27 09.5 -0.3**
CCM IAmb IAmb 08 27 13.6
comp=Z,21nm,1.3s
CCM Cathedral Cave 93.10 52 IAMs_20 IAMs_20 09 01 26.8
comp=Z,2μm,21.0s
CCM Cathedral Cave 93.10 52 P 08 27 09.4
baz=253
Y45A Yeager Farm, C 93.24 56 P **P 08 27 12.2 +1.7**
MET Memphis--Engin 93.28 55 IAMs_20 IAMs_20 09 02 44.9
comp=Z,1μm,20.0s
LZH Lanzhou 93.29 306 *e*P **P 08 27 11.0 0.0**
LZH pP PcP 08 27 14.4 +2.9
LZH sP pP 08 27 16.3 -2.1
LZH SKS **SKSac 08 37 46.0 +2.0**
LZH S **S 08 38 10.8 -6.4**
LZH sS pS 08 38 24.3 -2.6
LZH pmax pmax
comp=Z,25nm,1.4s
LZH pmax pmax
comp=Z,200nm,9.2s
LZH LR LR
comp=Z,450nm,16.8s
LZH LR LR
comp=Z,670nm,17.2s
LZH LR LR
comp=Z,570nm,19.0s
I37A Lemond, Waseca 93.32 45 P **P 08 27 11.1 +0.4**
I37A IAMs_20 IAMs_20 09 01 13.9
comp=Z,2μm,22.0s
K38A Parkersburg 93.34 47 P **P 08 27 11.4 +0.6**
K38A IAmb IAmb 08 27 15.7
comp=Z,34nm,1.3s
K38A IAMs_20 IAMs_20 09 01 42.7
comp=Z,2μm,22.0s
PBMO Poplar Bluff 93.36 53 P **P 08 27 11.8 +0.8**
PBMO IAmb IAmb 08 27 15.4
comp=Z,27nm,1.4s
PBMO IAMs_20 IAMs_20 09 01 26.8
comp=Z,2μm,22.0s
VNA2 Neumayer--Watz 93.47 175 P **P 08 27 11.8 +0.9**
OXF Oxford 93.52 55 P 08 27 11.8
baz=254
OXF Oxford 93.53 55 P **P 08 27 12.2 +0.4**
OXF pmax pmax
comp=Z,68nm,1.2s
OXF Oxford 93.53 55 P **P 08 27 12.2 +0.4**
OXF IAMs_20 IAMs_20 09 03 47.3
comp=Z,2μm,20.0s
VNA1 Neumayer--Stat 93.67 175 P **P 08 27 12.2 +0.4**
FVM French Village 93.70 52 P **P 08 27 12.7 +0.1**
FVM pmax pmax
comp=Z,32nm,1.3s
FVM French Village 93.70 52 P **P 08 27 12.7 +0.1**
FVM IAmb IAmb 08 27 17.1
comp=Z,32nm,1.2s
FVM IAMs_20 IAMs_20 09 02 16.6
comp=Z,2μm,21.0s
ULM Lac du Bonnet 93.71 39 P **P 08 27 12.1 -0.2**
comp=Z,17nm,1.2s,baz=246,slow=5.5,SNR=14
ULM LR LR 09 04 09.4
comp=Z,1μm,19.7s,baz=256,slow=32
ULM Lac du Bonnet 93.71 39 P **P 08 27 11.8 -0.5**
ULM IAmb IAmb 08 27 16.0
comp=Z,31nm,1.4s
ULM IAMs_20 IAMs_20 09 03 37.5
comp=Z,2μm,20.0s
F36A Milaca 93.81 44 P **P 08 27 13.6 +0.7**
F36A IAmb IAmb 08 27 16.5
comp=Z,17nm,1.3s
F36A IAMs_20 IAMs_20 09 02 12.5
comp=Z,2μm,22.0s
PARMO Parma 93.85 53 IAMs_20 IAMs_20 09 03 11.8
comp=Z,2μm,20.0s
W45A Hickory Valley 93.88 55 P **P 08 27 14.4 +0.9**
W45A IAMs_20 IAMs_20 09 03 42.7
comp=Z,1μm,20.0s
BOD Bodaibo 93.91 329 *e*P **P 08 27 11.7 -1.3**
BOD pmax pmax
comp=Z,13nm,1.9s
SLM Saint Louis 94.03 51 IAMs_20 IAMs_20 09 01 45.2
comp=Z,2μm,21.0s
HENM Henderson Moun 94.08 53 IAMs_20 IAMs_20 09 01 34.9
comp=Z,2μm,22.0s
SPMN Marine on St. 94.09 44 P **P 08 27 14.8 +0.6**
SPMN IAmb IAmb 08 27 19.3
comp=Z,26nm,1.2s
SPMN Marine on St. 94.09 44 P 08 27 14.5
baz=253
N41A Harden Midland 94.15 49 P **P 08 27 14.1 -0.5**
N41A IAMs_20 IAMs_20 09 04 03.3
comp=Z,2μm,20.0s
L40A Anamosa 94.27 48 P **P 08 27 15.3 +0.2**
L40A IAMs_20 IAMs_20 09 01 59.3
comp=Z,2μm,22.0s
B35A Bob, Littlefor 94.44 41 P **P 08 27 14.9 -0.8**
B35A IAmb IAmb 08 27 19.3
comp=Z,24nm,1.2s
B35A IAMs_20 IAMs_20 09 04 35.1
comp=Z,1μm,20.0s
ULN Ulaanbaatar 94.45 318*ce*P **P 08 27 16.1 +0.1**
ULN pmax pmax
comp=Z,19nm,1.4s
ULN Ulaanbaatar 94.45 318 P **P 08 27 16.5 +0.5**
ULN IAmb IAmb 08 27 22.0
comp=Z,13nm,1.2s
ULN Ulaanbaatar 94.45 318 IAMs_20 IAMs_20 09 03 11.7
comp=Z,1μm,22.0s
S44A Carbondale 94.51 52 IAMs_20 IAMs_20 09 09 23.2
comp=Z,1μm,18.0s
SIUC Southern Illin 94.55 52 IAMs_20 IAMs_20 09 09 32.6
comp=Z,1μm,19.0s
BRAL Brewton 94.55 59 P 08 27 16.7
baz=255
PLAL Pickwick Lake 94.71 55 P **P 08 27 17.2 -0.1**
PLAL IAmb IAmb 08 27 21.9
comp=Z,32nm,1.4s
PLAL IAMs_20 IAMs_20 09 03 25.7
comp=Z,1μm,20.0s
T45A Paducah 94.80 53 IAMs_20 IAMs_20 09 02 30.9
comp=Z,2μm,22.0s
P43A Skaggs, Pawnee 94.84 50 P **P 08 27 17.7 -0.1**
SONM Songino Array 94.87 318 P **P 08 27 17.7 -0.2**
comp=Z,1.1nm,0.8s,baz=168,slow=7.6,SNR=5.9
SONM PP **PP 08 31 09.8 +2.7**
comp=Z,2.3nm,1.0s,baz=129,slow=4.0,SNR=6.9
SONM LR LR 09 04 56.2
comp=Z,1μm,21.9s,baz=107,slow=32
SONM Songino Array 94.87 318 P **P 08 27 17.5 -0.4**
TIXI Tiksi 94.92 344 P **P 08 27 17.2 -0.2**
comp=Z,3.7nm,0.8s,baz=114,slow=5.9,SNR=8.8
TIXI Tiksi 94.92 344 *e*P **P 08 27 16.8 -0.6**
TIXI Tiksi 94.92 344 P **P 08 27 16.9 -0.4**
TIXI IAMs_20 IAMs_20 09 05 19.7
comp=Z,1μm,21.0s
JFWS Jewell Farm 95.20 47 P 08 27 19.2
baz=254
JFWS Jewell Farm 95.20 47 P **P 08 27 19.0 -0.3**
JFWS pmax pmax
comp=Z,31nm,1.3s
JFWS Jewell Farm 95.20 47 P **P 08 27 19.0 -0.3**
WVT Waverly 95.20 54 P **P 08 27 19.4 -0.1**
WVT pmax pmax
comp=Z,17nm,1.2s
WVT Waverly 95.20 54 P **P 08 27 19.4 -0.1**
WVT IAmb IAmb 08 27 24.0
comp=Z,17nm,1.2s
WVT Waverly 95.20 54 P 08 27 19.6
baz=255
I40A Norwalk 95.21 46 P **P 08 27 19.3 0.0**
I40A IAMs_20 IAMs_20 09 04 52.9
comp=Z,2μm,20.0s
HDIL Hopedale 95.25 50 P 08 27 19.7
baz=255
HDIL Hopedale 95.25 50 P **P 08 27 19.8 +0.2**
E38A The Farm, Brul 95.33 43 P **P 08 27 20.7 +0.8**
E38A IAmb IAmb 08 27 23.8
comp=Z,17nm,1.2s
E38A IAMs_20 IAMs_20 09 03 51.9
comp=Z,1μm,20.0s
L42A Oliver, Polo 95.37 48 P **P 08 27 19.9 -0.2**
L42A IAMs_20 IAMs_20 09 03 36.4
comp=Z,1μm,21.0s
X48A Hartselle 95.39 56 IAMs_20 IAMs_20 09 02 53.9
comp=Z,2μm,22.0s
250A Grady 95.40 58 P **P 08 27 20.4 -0.2**
OLIL Olney 95.66 52 IAMs_20 IAMs_20 09 02 23.6
comp=Z,2μm,22.0s
EYMN Ely 95.75 42 P 08 27 21.4
baz=254
EYMN Ely 95.75 42 P **P 08 27 21.2 -0.5**
EYMN IAmb IAmb 08 27 25.9
comp=Z,21nm,1.2s
EYMN Ely 95.75 42 IAMs_20 IAMs_20 09 04 06.6
comp=Z,2μm,21.0s
USIN University of 95.80 52 IAMs_20 IAMs_20 09 04 47.3
comp=Z,2μm,22.0s
G40A Rib Lake 95.87 45 P **P 08 27 22.2 -0.2**
G40A IAmb IAmb 08 27 26.5
comp=Z,23nm,1.3s
V48A Smith Brothers 95.89 55 IAMs_20 IAMs_20 09 03 33.1
comp=Z,2μm,20.0s
SOR Soroa 95.96 68 IAMs_20 IAMs_20 09 03 04.2
comp=Z,1μm,20.0s
T47A Sharon Grove 95.98 53 IAMs_20 IAMs_20 09 03 16.3
comp=Z,2μm,21.0s
CLTN Cedars of Leba 96.36 54 IAMs_20 IAMs_20 09 03 57.5
comp=Z,2μm,21.0s
M44A Midewin, Midew 96.38 49 P **P 08 27 24.1 -0.6**
M44A IAmb IAmb 08 27 28.3
comp=Z,19nm,1.1s
I42A Draeger Farm, 96.40 46 P **P 08 27 24.3 -0.4**
I42A IAMs_20 IAMs_20 09 05 30.4
comp=Z,2μm,19.0s
PATCX Punta Patache 96.40 114 IAMs_20 IAMs_20 09 00 52.1
comp=Z,2μm,20.0s
SWET Sewanee 96.47 55 IAMs_20 IAMs_20 09 04 49.4
comp=Z,1μm,21.0s
K43A Burlington 96.50 48 P **P 08 27 25.1 -0.2**
K43A IAMs_20 IAMs_20 09 04 01.4
comp=Z,2μm,21.0s
FPAL Fort Paine 96.56 56 IAMs_20 IAMs_20 09 04 01.9
comp=Z,2μm,21.0s
Z51A Franklin 96.62 57 IAMs_20 IAMs_20 09 10 36.7
comp=Z,1μm,18.0s
L44A Lake County Fo 96.67 48 IAMs_20 IAMs_20 09 10 03.0
comp=Z,1μm,18.0s
L44A Lake County Fo 96.67 48 P 08 27 26.2
baz=256
COWI Conover 96.81 44 P **P 08 27 26.4 -0.2**
SFIN Lafayette 96.83 50 P 08 27 27.1
baz=256
152A Waverly Hall 96.84 58 IAMs_20 IAMs_20 09 05 34.5
comp=Z,1μm,21.0s
LVC Limon Verde 96.91 116 IAMs_20 IAMs_20 09 01 06.2
comp=Z,2μm,21.0s
PB01 IPOC Station P 96.92 114 IAMs_20 IAMs_20 09 01 12.7
comp=Z,2μm,21.0s
W50A Signal Mountai 96.96 56 IAMs_20 IAMs_20 09 05 35.3
comp=Z,1μm,20.0s
BLO Bloomington 96.96 51 IAMs_20 IAMs_20 09 03 26.0
comp=Z,2μm,22.0s
AP01 Chacalluta 97.02 111 IAMs_20 IAMs_20 09 00 06.5
comp=Z,1μm,21.0s
X51A Calhoun 97.17 56 IAMs_20 IAMs_20 09 04 22.1
comp=Z,2μm,20.0s
GTA Gaotai 97.24 309 *e*P Pdif 08 27 30.9 +1.9
GTA pP pP 08 27 34.3 -2.0
GTA sP sP 08 27 37.8 -1.4
GTA SKS **SKSac 08 38 06.4 +1.6**
GTA S **ScS 08 38 55.8 +4.2**
GTA SS **SS 08 45 32.0 +2.4**
GTA pmax pmax
comp=Z,2.0nm,0.7s
GTA pmax pmax
comp=Z,72nm,5.1s
GTA LR LR
comp=Z,420nm,19.6s
GTA LR LR
comp=Z,860nm,19.6s
GTA LR LR
comp=Z,2μm,19.6s
H43A Windswept, Lux 97.34 46 P Pdif 08 27 29.7 +0.6
H43A IAMs_20 IAMs_20 09 05 18.3
comp=Z,1μm,20.0s
FCC Fort Churchill 97.38 31 IAMs_20 IAMs_20 09 06 45.4
comp=Z,1μm,21.0s
ZAK Zakamensk 97.54 320 *e*P **P 08 27 29.1 -0.8**
ZAK pmax pmax
comp=Z,5.0nm,1.5s

CPCT	**Cooper Cave**	**97.64**	**55**	IAMs_20	IAMs_20	09 04 06.5				
	comp=Z,1μm,21.0s									
TLY	**Talaya**	**97.64**	**321**	*i* P	**P**	**08 27 29.1**	**-1.2**			
TLY				pmax	pmax					
	comp=Z,3.0nm,1.0s									
TLY	**Talaya**	**97.64**	**321**	P	**P**	**08 27 29.5**	**-0.8**			
TLY				IAMs_20	IAMs_20	09 08 12.1				
	comp=Z,1μm,20.0s									
Y52A	**Lilburn**	**97.65**	**57**	IAMs_20	IAMs_20	09 05 41.9				
	comp=Z,2μm,20.0s									
T50A	**Nancy**	**97.75**	**54**	IAMs_20	IAMs_20	09 05 13.2				
	comp=Z,2μm,20.0s									
R49A	**Shelbyville**	**97.78**	**53**	IAMs_20	IAMs_20	09 06 23.9				
	comp=Z,2μm,20.0s									
P48A	**Milroy**	**97.86**	**51**	IAMs_20	IAMs_20	09 03 52.7				
	comp=Z,2μm,22.0s									
V51A	**Loudon**	**97.86**	**55**	IAMs_20	IAMs_20	09 04 55.2				
	comp=Z,2μm,21.0s									
N47A	**Urbana**	**97.98**	**50**	P	**P**	**08 27 31.5**	**-0.5**			
N47A				IAmb	IAmb	08 27 33.4				
	comp=Z,13nm,1.2s									
GOGA	**Godfrey**	**98.03**	**58**	P		08 27 32.4				
	baz=257									
W52A	**Murphy**	**98.04**	**56**	IAMs_20	IAMs_20	09 05 10.0				
	comp=Z,1μm,20.0s									
154A	**Montrose**	**98.15**	**58**	IAMs_20	IAMs_20	09 04 52.3				
	comp=Z,1μm,22.0s									
TKL	**Tuckaleechee C**	**98.28**	**55**	IAMs_20	IAMs_20	09 04 47.5				
	comp=Z,2μm,22.0s									
E43A	**Lone Tree Farm**	**98.32**	**44**	P	**P**	**08 27 33.0**	**-0.4**			
P49A	**Miami Univ. Ec**	**98.41**	**51**	IAMs_20	IAMs_20	09 04 32.3				
	comp=Z,2μm,22.0s									
R50A	**Paris**	**98.43**	**53**	P	Pdif	08 27 35.1	+1.0			
R50A				IAmb	IAmb	08 27 38.2				
	comp=Z,16nm,1.4s									
061Z	**Ochoppi**	**98.54**	**66**	IAMs_20	IAMs_20	09 04 31.2				
	comp=Z,1μm,22.0s									
BG3	**Lake Jocassee**	**98.81**	**56**	IAMs_20	IAMs_20	09 05 44.5				
	comp=Z,1μm,21.0s									
G45A	**Suttons Bay**	**98.93**	**46**	IAMs_20	IAMs_20	09 11 50.5				
	comp=Z,1μm,18.0s									
V53A	**Saluda**	**99.05**	**56**	IAMs_20	IAMs_20	09 05 21.8				
	comp=Z,2μm,21.0s									
N49A	**Columbus Grove**	**99.11**	**50**	P	**Pdif**	**08 27 37.6**	**+0.5**			
N49A				IAmb	IAmb	08 27 40.7				
	comp=Z,19nm,1.3s									
J47A	**Sunmer**	**99.13**	**48**	P	**Pdif**	**08 27 37.3**	**+0.2**			
L48A	**N Adams**	**99.14**	**49**	IAMs_20	IAMs_20	09 06 37.4				
	comp=Z,1μm,20.0s									
HODGE	**Hodges**	**99.19**	**57**	IAMs_20	IAMs_20	09 05 27.7				
	comp=Z,2μm,21.0s									
060A	**Indiantown**	**99.27**	**65**	IAMs_20	IAMs_20	09 07 07.5				
	comp=Z,1μm,20.0s									
Q51A	**Peebles**	**99.34**	**52**	P	**Pdif**	**08 27 39.3**	**+1.1**			
Q51A				IAmb	IAmb	08 27 42.4				
	comp=Z,22nm,1.4s									
Q51A				IAMs_20	IAMs_20	09 05 14.0				
	comp=Z,2μm,21.0s									
GLMI	**Grayling**	**99.61**	**46**	IAMs_20	IAMs_20	09 08 24.3				
	comp=Z,909nm,19.0s									
PAULI	**Pauline**	**99.67**	**57**	IAMs_20	IAMs_20	09 06 31.4				
	comp=Z,2μm,21.0s									
LPAZ	**La Paz**	**99.68**	**110**	P	**Pdif**	**08 27 43.0**	**+2.0**			
	comp=Z,1.0nm,0.9s,baz=43,slow=3.9,SNR=4.2									
LPAZ				LR	LR	09 05 16.4				
	comp=Z,675nm,19.4s,baz=265,slow=31									
LPAZ	**La Paz**	**99.68**	**110**	P	**Pdif**	**08 27 43.0**	**+2.0**			
257A	**Skidaway Islan**	**99.74**	**60**	IAMs_20	IAMs_20	09 05 58.4				
	comp=Z,1μm,22.0s									
AAM	**Ann Arbor**	**99.78**	**49**	IAMs_20	IAMs_20	09 06 49.1				
	comp=Z,997nm,19.0s									
ROSC	**El Rosal**	**99.82**	**88**	LR	LR	09 03 17.9				
	comp=Z,2μm,21.8s,baz=264,slow=30									
ROSC	**El Rosal**	**99.82**	**88**	IAMs_20	IAMs_20	09 02 33.4				
	comp=Z,2μm,22.0s									
ACSO	**Alum Creek Sta**	**99.86**	**51**	IAMs_20	IAMs_20	09 05 57.6				
	comp=Z,2μm,22.0s									
MTDJ	**Mount Denham**	**99.91**	**74**	IAMs_20	IAMs_20	09 03 23.1				
	comp=Z,1μm,21.0s									
KMSC	**Kings Mountain**	**100.13**	**56**	IAMs_20	IAMs_20	09 06 46.3				
	comp=Z,2μm,21.0s									
V55A	**Taylorsville**	**100.36**	**56**	IAMs_20	IAMs_20	09 06 24.5				
	comp=Z,2μm,21.0s									
P52A	**Corning**	**100.38**	**52**	P		08 27 42.4				
	baz=259									
K50A	**Casco**	**100.62**	**49**	IAMs_20	IAMs_20	09 05 32.5				
	comp=Z,1μm,22.0s									
S54A	**Dingess, Beckl**	**100.66**	**54**	P		08 27 43.8				
	baz=259									
Y57A	**Sumter**	**100.67**	**58**	IAMs_20	IAMs_20	09 06 22.8				
	comp=Z,2μm,22.0s									
M51A	**Elyria**	**100.67**	**50**	P		08 27 44.0				
	baz=259									
Q53A	**Leroy**	**100.70**	**53**	P		08 27 44.2				
	baz=259									
O52A	**Adamsville**	**100.70**	**51**	IAMs_20	IAMs_20	09 05 42.9				
	comp=Z,1μm,21.0s									
BIRD	**Birdtown, Kers**	**100.73**	**57**	IAMs_20	IAMs_20	09 07 34.4				
	comp=Z,2μm,20.0s									
R54A	**Victor**	**100.98**	**53**	P		08 27 45.3				
	baz=259									
O53A	**New Philadelph**	**101.19**	**51**	IAMs_20	IAMs_20	09 07 13.0				
	comp=Z,1μm,22.0s									
W57A	**Gilead**	**101.21**	**57**	IAMs_20	IAMs_20	09 07 37.9				
	comp=Z,2μm,21.0s									
Y58A	**Scranton**	**101.24**	**58**	IAMs_20	IAMs_20	09 07 01.9				
	comp=Z,2μm,22.0s									
BLA	**Blacksburg**	**101.25**	**54**	IAMs_20	IAMs_20	09 07 29.7				
	comp=Z,1μm,20.0s									
N53A	**Lisbon**	**101.57**	**51**	IAMs_20	IAMs_20	09 07 32.0				
	comp=Z,1μm,20.0s									
X58A	**Rowland**	**101.62**	**57**	IAMs_20	IAMs_20	09 06 51.1				
	comp=Z,1μm,22.0s									
O54A	**Avella**	**101.81**	**51**	IAMs_20	IAMs_20	09 07 53.3				
	comp=Z,2μm,21.0s									
Y59A	**Loris**	**101.90**	**58**	IAMs_20	IAMs_20	09 07 20.5				
	comp=Z,2μm,21.0s									
V58A	**Windy Hill, Pi**	**102.03**	**56**	IAMs_20	IAMs_20	09 06 52.6				
	comp=Z,1μm,22.0s									
T57A	**Hurt**	**102.13**	**55**	IAMs_20	IAMs_20	09 07 40.1				
	comp=Z,2μm,21.0s									
N54A	**Moraine State**	**102.23**	**51**	IAMs_20	IAMs_20	09 08 43.5				
	comp=Z,2μm,20.0s									
N54A	**Moraine State**	**102.23**	**51**	P		08 27 51.0				
	baz=260									
ERPA	**Erie**	**102.42**	**50**	IAMs_20	IAMs_20	09 07 59.2				
	comp=Z,2μm,20.0s									
Y60A	**Bolivia**	**102.44**	**58**	IAMs_20	IAMs_20	09 10 42.8				
	comp=Z,1μm,20.0s									
S57A	**Dark Hollow, R**	**102.49**	**54**	IAMs_20	IAMs_20	09 07 31.7				
	comp=Z,2μm,21.0s									
CNNC	**Cliffs of the**	**102.92**	**57**	IAMs_20	IAMs_20	09 09 00.1				
	comp=Z,1μm,20.0s									
O56A	**Blue Knob Stat**	**103.19**	**52**	IAMs_20	IAMs_20	09 07 11.9				
	comp=Z,2μm,22.0s									
SADO	**Sadowa**	**103.44**	**47**	IAMs_20	IAMs_20	09 08 33.8				
	comp=Z,1μm,20.0s									
T59A	**Double "B" Far**	**103.46**	**55**	IAMs_20	IAMs_20	09 08 39.6				
	comp=Z,2μm,21.0s									
WVNY	**West Valley, N**	**103.48**	**49**	IAMs_20	IAMs_20	09 07 51.4				
	comp=Z,2μm,21.0s									
J54A	**Appleton**	**103.58**	**49**	IAMs_20	IAMs_20	09 07 47.9				
	comp=Z,1μm,22.0s									
M56A	**Emporium**	**103.66**	**50**	IAMs_20	IAMs_20	09 08 47.2				
	comp=Z,2μm,20.0s									
MEDO	**Medina**	**103.70**	**49**	IAMs_20	IAMs_20	09 08 04.0				
	comp=Z,1μm,21.0s									
SSPA	**Standing Stone**	**103.76**	**51**	IAMs_20	IAMs_20	09 08 00.9				
	comp=Z,2μm,21.0s									
V61A	**Roper**	**104.06**	**56**	IAMs_20	IAMs_20	09 08 16.5				
	comp=Z,1μm,22.0s									
T60A	**Surry**	**104.14**	**55**	IAMs_20	IAMs_20	09 07 58.4				
	comp=Z,1μm,21.0s									
J55A	**Hilton**	**104.18**	**49**	IAMs_20	IAMs_20	09 08 16.6				
	comp=Z,2μm,22.0s									
U61A	**Possum Corner**	**104.25**	**56**	IAMs_20	IAMs_20	09 09 22.4				
	comp=Z,2μm,21.0s									
SDV	**Santo Domingo**	**104.35**	**85**	IAMs_20	IAMs_20	09 06 27.3				
	comp=Z,1μm,21.0s									
SDMD	**Soldier's Deli**	**104.38**	**53**	IAMs_20	IAMs_20	09 08 40.5				
	comp=Z,1μm,21.0s									
PECO	**Prince Edward**	**104.86**	**48**	IAMs_20	IAMs_20	09 09 19.5				
	comp=Z,2μm,21.0s									
J56A	**Wolcott**	**104.87**	**49**	IAMs_20	IAMs_20	09 08 49.0				
	comp=Z,2μm,22.0s									
PLVO	**Plevna**	**104.93**	**47**	IAMs_20	IAMs_20	09 09 39.3				
	comp=Z,1μm,21.0s									
S61A	**Accomac**	**105.05**	**55**	IAMs_20	IAMs_20	09 09 08.5				
	comp=Z,2μm,22.0s									
BINY	**Binghamton**	**105.38**	**50**	IAMs_20	IAMs_20	09 10 01.6				
	comp=Z,2μm,20.0s									
WUPA	**West Chester U**	**105.39**	**52**	IAMs_20	IAMs_20	09 09 54.3				
	comp=Z,1μm,21.0s									
KSPA	**Keystone Colle**	**105.47**	**51**	IAMs_20	IAMs_20	09 10 04.0				
	comp=Z,1μm,21.0s									
H57A	**Richville**	**106.06**	**48**	P		08 32 19.5				
	baz=264									
L59A	**Walton**	**106.08**	**50**	IAMs_20	IAMs_20	09 10 11.1				
	comp=Z,1μm,20.0s									
ODNJ	**Ogdensburg**	**106.28**	**51**	IAMs_20	IAMs_20	09 11 00.7				
	comp=Z,2μm,21.0s									
G57A	**Newington**	**106.41**	**47**	P		08 32 20.6				
	baz=265									
LONY	**Lake Ozonia**	**106.65**	**47**	IAMs_20	IAMs_20	09 10 20.8				
	comp=Z,1μm,21.0s									
TRY	**Troy**	**107.14**	**50**	IAMs_20	IAMs_20	09 11 34.2				
	comp=Z,2μm,21.0s									
ACCN	**Adirondack Com**	**107.20**	**49**	IAMs_20	IAMs_20	09 08 57.6				
	comp=Z,1μm,22.0s									
WSPT	**Westport, CT**	**107.25**	**51**	IAMs_20	IAMs_20	09 10 19.4				
	comp=Z,1μm,20.0s									
FRNY	**Flat Rock**	**107.37**	**47**	IAMs_20	IAMs_20	09 11 44.0				
	comp=Z,2μm,20.0s									
UCCT	**U. Connecticut**	**108.13**	**51**	IAMs_20	IAMs_20	09 12 06.5				
	comp=Z,1μm,20.0s									
M63A	**Gales Ferry**	**108.24**	**51**	IAMs_20	IAMs_20	09 10 48.3				
	comp=Z,2μm,22.0s									
L63A	**North Scituate**	**108.60**	**51**	IAMs_20	IAMs_20	09 12 29.8				
	comp=Z,1μm,20.0s									
BRYW	**Bryant College**	**108.65**	**50**	IAMs_20	IAMs_20	09 12 21.3				
	comp=Z,1μm,20.0s									
L64A	**Middleborough**	**109.18**	**50**	IAMs_20	IAMs_20	09 12 47.1				
	comp=Z,1μm,21.0s									
ZAA0	**Zalesovo Array**	**109.23**	**322**	IAMs_20	IAMs_20	09 15 12.5				
	comp=Z,1μm,21.0s									
G62A	**West of Eustis**	**109.56**	**47**	IAMs_20	IAMs_20	09 11 47.8				
	comp=Z,994nm,22.0s									
M66A	**Nantucket**	**109.66**	**51**	P		08 32 26.5				
	baz=267									
PKME	**Peaks-Kenny Pk**	**110.44**	**47**	IAMs_20	IAMs_20	09 13 07.9				
	comp=Z,969nm,20.0s									
SJG	**San Juan**	**110.50**	**76**	IAMs_20	IAMs_20	09 12 17.8				
	comp=Z,980nm,20.0s									
F63A	**Nahmakanta, Br**	**110.58**	**47**	IAMs_20	IAMs_20	09 19 41.7				
	comp=Z,1μm,18.0s									
MKAR	**Makanchi Array**	**110.86**	**315**	Pdiff	**Pdif**	**08 28 30.5**	**+1.3**			
	comp=Z,0.3nm,0.8s,baz=48,slow=4.5,SNR=2.1									
MKAR				PKiKP	**PKiKP**	**08 32 30.1**	**+1.2**			
	comp=Z,1.0nm,0.9s,baz=70,slow=1.4,SNR=8.1									
E63A	**Oxbow**	**111.06**	**46**	IAMs_20	IAMs_20	09 11 56.3				
	comp=Z,2μm,22.0s									
MAKZ	**Makanchi**	**111.08**	**315**	IAMs_20	IAMs_20	09 13 50.7				
	comp=Z,911nm,22.0s									
F64A	**Sherman**	**111.11**	**46**	IAMs_20	IAMs_20	09 19 57.7				
	comp=Z,1μm,18.0s									
G65A	**Princeton**	**111.66**	**47**	IAMs_20	IAMs_20	09 14 06.3				
	comp=Z,1μm,20.0s									
PTGA	**Pitinga**	**112.18**	**97**	IAMs_20	IAMs_20	09 11 36.0				
	comp=Z,1μm,20.0s									
SEUS	**St. Eustatius**	**113.37**	**77**	IAMs_20	IAMs_20	09 11 24.0				
	comp=Z,1μm,19.0s									
TOSP	**Speyside**	**114.57**	**84**	IAMs_20	IAMs_20	09 16 44.4				
	comp=Z,1μm,21.0s									
BOOM	**Boomskoye usch**	**115.48**	**310**	IAMs_20	IAMs_20	09 23 42.4				
	comp=Z,822nm,20.0s									
AAK	**Ala-Archa**	**116.54**	**310**	*i* PKiKP	**PKiKP**	**08 32 40.6**	**+0.6**			
AAK	**Ala-Archa**	**116.54**	**310**	IAMs_20	IAMs_20	09 23 15.5				
	comp=Z,751nm,20.0s									
BDFB	**Brasilia**	**117.77**	**117**	IAMs_20	IAMs_20	09 13 57.7				
	comp=Z,1μm,22.0s									
BRVK	**Borovoye**	**117.94**	**322**	*i* PKiKP	**PKiKP**	**08 32 42.4**	**+0.2**			
BRVK	**Borovoye**	**117.94**	**322**		**PKiKP**	**08 32 42.2**	**0.0**			
BRVK	**Borovoye**	**117.94**	**322**	IAMs_20	IAMs_20	09 19 18.9				
	comp=Z,1μm,22.0s									
DRLN	**Deer Lake**	**118.16**	**42**	IAMs_20	IAMs_20	09 18 41.6				
	comp=Z,1μm,21.0s									
KKAR	**Karatay Array**	**119.41**	**311**	PKiKP	**PKPdf**	**08 32 44.6**	**-0.8**			
KKAR	**Karatay Array**	**119.41**	**311**		**PKPdf**	**08 32 44.6**	**-0.8**			
GAR	**Garm**	**119.95**	**306**		**PKiKP**	**08 32 47.5**	**+0.8**			
ARU	**Arti**	**123.32**	**329**	*i* PKiKP	**PKiKP**	**08 32 53.9**	**+1.3**			
ARU						08 34 34.0				
ARU						08 40 05.4				
ARU				SP	SP	08 44 31.3	+5.3			
ARU				MLR	MLR					
	comp=Z,1μm,21.0s									
ARU	**Arti**	**123.32**	**329**		**PKPdf**	**08 32 52.1**	**-0.3**			
ARU				IAMs_20	IAMs_20	09 23 02.8				
	comp=Z,1μm,21.0s									
ARCES	**ARCESS Array B**	**124.50**	**352**	PKP	**PKiKP**	**08 32 54.7**	**+0.1**			
	comp=Z,5.5nm,0.9s,baz=256,slow=2.5,SNR=4.6									
ARCES	**ARCESS Array B**	**124.50**	**352**		**PKiKP**	**08 32 55.2**	**+0.6**			
APA	**Apatity**	**124.94**	**348**	⇓ *i* PKiKP	**PKiKP**	**08 32 58.0**	**+2.5**			
APA				pmax	pmax					
	comp=Z,6.0nm,0.9s									
ABKAR	**Akbulak array**	**125.23**	**320**		**PKPdf**	**08 32 56.2**	**-0.1**			
ABKAR	**Akbulak array**	**125.23**	**320**		**PKiKP**	**08 32 56.6**	**0.0**			
PRGR	**Permogore**	**126.08**	**338**	*e*PKiKP	**PKPdf**	**08 32 54.8**	**-2.7**			
PRGR				*e*		08 34 52.3				
PRGR				pmax	pmax					
	comp=Z,10.0nm,0.9s									
KLMR	**Klimovskoe**	**128.73**	**340**	*e*PKiKP	**PKPdf**	**08 33 01.4**	**-1.2**			
KLMR				*e*		08 35 04.6				
KLMR				*e*SS	SS	08 52 20.0	-4.2			
KLMR				pmax	pmax					
	comp=Z,34nm,1.4s									
KLMR	**Klimovskoe**	**128.73**	**340**	*e*PKPdf	**PKPdf**	**08 33 01.4**	**-1.2**			
KLMR				AMP		08 33 12.8				
	comp=Z,34nm,1.4s									
KLMR				*e*PP	**PP**	**08 35 04.7**	**-3.9**			
KLMR				*e*SS	**SS**	**08 52 20.1**	**-4.1**			
KLMR				*e*SS	**SS**	**08 52 20.1**	**-4.1**			
KLMR				LQ	LQ	09 17 41.9				
KLMR				LQ	LQ	09 17 41.9				
KLMR				LR	LR	09 27 51.9				
GEYT	**Alibeck**	**129.57**	**307**	PKP	**PKiKP**	**08 33 06.5**	**+0.8**			
	comp=Z,2.0nm,0.5s,baz=256,slow=1.2,SNR=6.1									
GEYT	**Alibeck**	**129.57**	**307**	PKPdf	**PKiKP**	**08 33 06.0**	**+0.2**			
FINES	**FINESS Array B**	**131.85**	**348**	PKP	**PKiKP**	**08 33 09.1**	**-0.5**			
	comp=Z,3.6nm,0.9s,baz=103,slow=4.4,SNR=2.8									
OBN	**Obninsk**	**134.06**	**337**	*i* PKiKP	**PKPdf**	**08 33 12.9**	**+0.1**			
OBN				*i*		08 35 42.7				
OBN				pmax	pmax					
	comp=Z,15nm,1.3s									
NOA	**NORSAR Array B**	**134.18**	**357**	PKP	**PKiKP**	**08 33 14.1**	**-0.3**			
	comp=Z,1.0nm,0.8s,baz=14,slow=4.1,SNR=2.3									
MAK	**Makhachkala**	**135.62**	**317**	*e*P	**Pdif**	**08 30 12.8**	**-6.5**			
MAK				*e*PPP	PPP	08 38 49.7				
MAK				*e*		08 40 25.1				
MAK				pmax	pmax					
	comp=Z,237nm,1.3s									
NACGM	**Naroch**	**137.51**	**343**	*i* PKP	**PKiKP**	**08 33 22.4**	**+1.1**			
NACGM				*i* PKP	**PKiKP**	**08 33 22.4**	**+1.1**			
NACGM				*i* PKP	**PKiKP**	**08 33 22.4**	**+1.1**			
NACGM				*i* PP	**PP**	**08 36 09.7**	**+5.0**			
NACGM				*i* PPP	PPP	08 38 45.9				
NACGM				*i* SKS	SKSdf	08 40 01.8	-27			
NACGM				*i* SKKS	SKKSac	08 43 33.5	+35			
NACGM				*i* PS	PS	08 47 18.2	+46			
NACGM				*i* SS	**SS**	**08 54 05.5**	**-5.0**			
NACGM				*i* SSS	SSS	08 59 28.9				
NACGM				*i* LQ	LQ	09 24 41.2				
NACGM				*i* LR	LR	09 34 30.9				
MNK	**Minsk**	**137.54**	**342**	*i* PKP	**PKiKP**	**08 33 22.8**	**+1.5**			
	comp=E,3.0nm,0.8s									
MNK				*i* PKP	**PKiKP**	**08 33 22.8**	**+1.5**			
	comp=N,33nm,0.8s									
MNK				*i* PKP	**PKiKP**	**08 33 22.8**	**+1.5**			
	comp=Z,9.0nm,0.7s									
MNK				*i* PP	**PP**	**08 36 08.6**	**+3.7**			
MNK				*i* PPP	PPP	08 39 09.3				
MNK				*i* SKS	**SKSdf**	**08 40 33.5**	**+5.1**			
MNK				*i* PS	PS	08 46 36.5	+3.6			
MNK				*i* SS	**SS**	**08 54 19.8**	**+8.9**			
MNK				*i* SSS	SSS	08 59 17.1				
MNK				*i* LR	LR	09 30 18.4				
MNK				*i* LRM	MLR	09 33 27.6				
	comp=Z,486nm,20.2s									
MNK				*i* LRM	MLR	09 33 52.6				
	comp=E,97nm,24.6s									
MNK				*i* LRM	MLR	09 34 43.3				
	comp=N,1μm,21.7s									
KIV	**Kislovodsk**	**138.21**	**321**	*i* PKiKP	**PKPdf**	**08 33 21.5**	**+0.4**			
KIV				*e*		08 36 07.7				
KIV				*e*PS	PS	08 46 34.4	-5.1			
KIV				*e*SS	SS	08 54 19.6	-0.8			
KIV				*e*SSS	SSS	08 59 27.5				
KIV				pmax	pmax					
	comp=Z,18nm,1.0s									
KIV				MLR	MLR					
	comp=Z,2μm,24.0s									
KIV	**Kislovodsk**	**138.21**	**321**	IAMs_20	IAMs_20	09 39 45.3				
	comp=Z,639nm,20.0s									
SOC	**Sochi**	**140.22**	**322**	*i* PKiKP	**PKiKP**	**08 33 27.5**	**+0.4**			
SOC				*e*		08 36 22.5				
SOC				MLR	MLR					
	comp=Z,654nm,18.0s									
AKASG	**Malin Array Be**	**140.28**	**338**	PKhKP	PKPpre	08 33 19.5				
	comp=Z,1.8nm,0.7s,baz=35,slow=3.3,SNR=2.3									
AKASG				PKP	**PKPdf**	**08 33 23.7**	**-0.8**			
	comp=Z,0.5nm,0.4s,baz=25,slow=2.5,SNR=13									
AKASG	**Malin Array Be**	**140.28**	**338**		**PKPdf**	**08 33 23.5**	**-1.0**			
KOPT	**Kop Dagi**	**141.65**	**317**	IAMs_20	IAMs_20	09 37 39.4				
	comp=Z,698nm,21.0s									
RAYN	**Ar Rayn**	**142.66**	**289**	PKiKP	**PKPdf**	**08 33 30.0**	**+0.3**			
RAYN				MLR	MLR					
	comp=Z,500nm,20.0s									
RAYN	**Ar Rayn**	**142.66**	**289**		**PKPdf**	**08 33 30.0**	**+0.3**			
LVV	**L'vov**	**142.79**	**341**	*e*PKiKP	**PKPdf**	**08 33 28.9**	**-0.2**			
LSZ	**Lusaka**	**143.01**	**216**	PKP	**PKPdf**	**08 33 29.5**	**-1.1**			
	comp=Z,0.9nm,0.3s,baz=9.8,slow=2.6,SNR=3.7									
LSZ	**Lusaka**	**143.01**	**216**		PKPbc	08 33 28.0	+0.7			
LSZ	**Lusaka**	**143.01**	**216**	IAMs_20	IAMs_20	09 34 26.9				
	comp=Z,808nm,20.0s									
RSDY	**Resadiye-TOKAT**	**143.49**	**319**	P	PKPbc	08 33 28.8	+0.9			
OJC	**Ojcow**	**143.57**	**346**	PKiKP	**PKPdf**	**08 33 29.5**	**-1.0**			
OJC	**Ojcow**	**143.57**	**346**		**PKPdf**	**08 33 29.4**	**-1.0**			
KSP	**Ksiaz**	**143.69**	**350**	*e*P	**PKPdf**	**08 33 29.7**	**-0.9**			
CLL	**Collm**	**143.70**	**353**	*e*PKPpre	PKPpre	08 33 27.0				
CLL				*e*PKPdf	**PKPdf**	**08 33 30.0**	**-0.6**			
CLL				*i* sPKiKP	pPKPdf	08 33 37.6	-0.8			
	comp=Z,16nm,0.9s									
CLL				*e*SS	SS	08 55 12.0	-11			
CLL				*e*(SSS)		09 00 42.0				
CLL				LmV		09 48 00.0				
	comp=Z,600nm,19.0s									
CLL	**Collm**	**143.70**	**353**	*e*PKiKP	PKPab	08 33 27.0	-0.3			
CLL				*e*		08 33 30.0				
CLL				MLR	MLR					
	comp=Z,600nm,19.0s									
CLL	**Collm**	**143.70**	**353**	IAMs_20	IAMs_20	09 48 16.3				
	comp=Z,684nm,19.0s									
SNOP	**Sinop**	**143.81**	**323**	P	PKPbc	08 33 28.8	+0.1			
KVT	**Kavak**	**143.88**	**321**	P	**PKPdf**	**08 33 31.3**	**0.0**			
MALT	**Malatya**	**143.90**	**316**	P	**PKPdf**	**08 33 31.5**	**0.0**			
SVSK	**Karacayir**	**143.97**	**319**	P	**PKPdf**	**08 33 30.9**	**-0.5**			
OSTC	**Ostas**	**143.98**	**350**	*e*PKP	**PKPdf**	**08 33

KHC IAMs_20 IAMs_20 09 36 51.0
comp=Z,877nm,21.0s
MLR Muntele Rosu 145.82 336 ⇑P **PKPab 08 33 36.5 +0.9**
MLR Muntele Rosu 145.82 336 PKIKP **PKPbc 08 33 35.0 -0.2**
MLR MLR MLR
comp=Z,2μm,21.0s
MLR Muntele Rosu 145.82 336 PKPbc 08 33 35.0 -0.2
DRGR 145.88 340 ⇓P **PKPbc 08 33 35.0 -0.2**
DRGR 145.88 340 ⇓PKIKP **PKPbc 08 33 35.0 -0.2**
CKRC Cesky Krumlov 145.97 351 *e*PKP **PKPab 08 33 36.5 +0.6**
GEC2 GERESS Array S 146.03 352 PKPab 08 33 36.0 -0.2
GEC2 IAMs_20 IAMs_20 09 36 58.0
comp=Z,928nm,21.0s
GERES GERESS Array B 146.03 352 PKPbc **PKPab 08 33 35.9 -0.3**
comp=Z,18nm,1.0s,baz=29,slow=3.0,SNR=40
GERES GERESS Array B 146.03 352 PKP2 **PKPbc 08 33 35.5 -0.2**
GERES GERESS Array B 146.03 352 PKPbc 08 33 35.5 -0.2
KOZT Kozan 146.08 316 P **PKPab 08 33 37.1 +0.4**
BR131 Keskin Array S 146.17 321 PKP2 **PKPbc 08 33 36.1 -0.3**
BR131 Keskin Array S 146.17 321 PKPbc 08 33 36.1 -0.3
BRTR Keskin Array B 146.17 321 PKPbc **PKPbc 08 33 36.4 0.0**
comp=Z,18nm,0.8s,baz=112,slow=2.2,SNR=69
BRTR Keskin Array B 146.17 321 P **PKPbc 08 33 35.9 -0.5**
BRTR Keskin Array B 146.17 321 PKP2 **PKPdf 08 33 35.7 +0.3**
BRTR Keskin Array B 146.17 321 PKPdf 08 33 35.7 +0.3
VOIR 146.22 337 ⇑P **PKPab 08 33 37.0 0.0**
VOIR 146.22 337 ⇑PKP2 **PKPab 08 33 37.0 0.0**
KAMT Kaman 146.34 321 P **PKPab 08 33 37.5 -0.2**
CEYT Ceyhan 146.39 316 P **PKPab 08 33 38.3 +0.5**
TAHT Tahtakopru-Hat 146.42 314 P **PKPab 08 33 37.5 -0.5**
ARR Arges 146.43 337 ⇓P **PKPab 08 33 37.8 0.0**
CMRD Camardi-Nigde 146.54 317 P **PKPbc 08 33 37.5 -0.1**
CONA Conrad Observa 146.58 349 *e*P **PKPbc 08 33 37.3 0.0**
comp=Z,58nm,1.2s,SNR=27
ANTO Ankara 146.58 322 P **PKPab 08 33 38.5 -0.1**
ANTO Ankara 146.58 322 PKP2 **PKPbc 08 33 37.1 -0.5**
ANTO Ankara 146.58 322 PKPbc 08 33 37.1 -0.5
LOD Lodumlu 146.59 322 P **PKPbc 08 33 37.5 -0.1**
DEV Deva 146.61 339 ⇑P **PKPab 08 33 38.7 +0.3**
DEV Deva 146.61 339 ⇑PKP2 **PKPab 08 33 38.7 +0.3**
GULA Gulagac 146.63 319 P **PKPab 08 33 38.3 -0.6**
SIRR Siria 146.68 341 ⇑P **PKPab 08 33 39.1 +0.5**
LOT Lotru 146.68 338 ⇑P **PKPdf 08 33 36.1 0.0**
SERE Sereflikochisa 146.69 320 P **PKPbc 08 33 37.9 -0.1**
MOA Molln 146.93 351 *e*P **PKPab 08 33 38.7 -0.8**
comp=Z,49nm,1.1s,SNR=20
KULU Kulu 146.98 321 P **PKPab 08 33 39.8 -0.4**
BFO Black Forest 147.00 358 PKP2 **PKPbc 08 33 38.5 +0.1**
BFO Black Forest 147.00 358 PKPbc 08 33 38.5 +0.1
MDUB Mudurnu 147.10 325 PKPbc 08 33 38.1 -0.9
CLF Chambon-Foret 147.12 6 PKPab 08 33 39.4 -0.9
ECH Echery 147.14 360 PKP2 **PKPbc 08 33 39.2 +0.4**
ECH Echery 147.14 360 PKPbc 08 33 39.2 +0.4
ECH IAMs_20 IAMs_20 09 46 26.5
comp=Z,644nm,20.0s
BZS Buzias 147.27 341 ⇓P **PKPbc 08 33 39.9 +0.7**
BZS Buzias 147.27 341 ⇓PKP2 **PKPbc 08 33 39.9 +0.7**
YESY Yesilyurt 147.28 318 P **PKPbc 08 33 39.5 -0.2**
MERS Mersin 147.29 316 P **PKPab 08 33 40.6 -0.9**
ARSA Arzberg 147.29 349 *e*P **PKPbc 08 33 39.6 +0.4**
comp=Z,64nm,1.4s,SNR=18
CHBY Cihanbeyli 147.33 320 P **PKPab 08 33 40.6 -1.0**
MORH Mrgy, Hungar 147.58 345 ⇑P **PKPbc 08 33 39.9 -0.1**
MORH Mrgy, Hungar 147.58 345 *e*P **PKPdf 08 33 38.3 +0.9**
HERR Herculane 147.65 339 ⇓P **PKPbc 08 33 40.9 +0.6**
RETA Reutte 147.70 355 *e*P **PKPbc 08 33 40.7 +0.2**
comp=Z,78nm,1.2s,SNR=19
KIZK Mersin 147.76 316 P **PKPbc 08 33 40.6 -0.2**
WATA Walderalm 147.78 354 *e*P **PKPbc 08 33 40.8 0.0**
comp=Z,25nm,1.1s,SNR=7.6
KBA Koelnbreinsper 147.81 352 *i* P **PKPbc 08 33 40.3 -0.6**
comp=Z,40nm,1.2s
MOTA Moosalm 147.81 354 *e*P **PKPbc 08 33 40.6 -0.2**
comp=Z,81nm,1.1s,SNR=21
WTTA Wattenberg 147.84 354 *e*P **PKPbc 08 33 41.3 +0.3**
comp=Z,49nm,0.9s,SNR=14
WTTA Wattenberg 147.84 354 PKP2 **PKPbc 08 33 41.2 +0.3**
ISK Istanbul-Kandi 147.84 327 P **PKPbc 08 33 40.4 -0.5**
LADK Ladik-KONYA 147.89 320 P **PKPbc 08 33 40.5 -0.8**
SQTA Sankt Quirin 147.93 354 *e*P **PKPbc 08 33 40.8 -0.3**
SNR=12
SOKA Soboth 147.93 349 *e*P **PKPbc 08 33 40.5 -0.6**
comp=Z,47nm,1.3s,SNR=15
PERS Pernice 147.96 349 *e*PKPbc **PKPbc 08 33 40.8 -0.4**
SILI Silifke-Mersin 147.97 316 P **PKPbc 08 33 41.6 +0.2**
DAVA Damuels 147.97 356 *e*P **PKPbc 08 33 41.5 +0.2**
comp=Z,42nm,0.9s,SNR=12
MDVR Moldovita 147.98 340 ⇑P **PKiKP 08 33 42.7 -0.4**
KONT Konya--Tatoy 148.05 320 P **PKPbc 08 33 41.9 +0.2**
GROS Grobnik 148.06 349 *e*PKPbc **PKPdf 08 33 39.7 +1.4**
PLVB Pleven 148.09 335 ⇑P **PKiKP 08 33 42.5 -0.9**
FETA Feichten 148.17 355 *e*P **PKiKP 08 33 43.4 -0.2**
comp=Z,22nm,1.1s,SNR=8.4
OBKA Obir 148.18 350 *i* P **PKiKP 08 33 42.6 -0.9**
comp=Z,25nm,0.9s
IKL Isikli 148.20 316 P **PKPbc 08 33 42.7 +0.7**
MYKA Terra Mystica 148.21 351 *e*P **PKiKP 08 33 42.7 -0.8**
comp=Z,30nm,1.2s,SNR=9.2
FURI Furi 148.21 262 IAMs_20 IAMs_20 09 34 13.9
comp=Z,796nm,21.0s
FRGS Fruska Gora 148.24 342 ⇑P **PKiKP 08 33 43.5 -0.1**
FRGS Fruska Gora 148.24 342 *e*P **PKPbc 08 33 41.6 -0.3**
TEVE Tevekalti-Mers 148.25 317 P **PKiKP 08 33 44.2 +0.2**
EREN Erenkoy 148.26 315 P **PKiKP 08 33 42.9 -1.0**
AKKU Akkuyu-Mersin 148.33 316 P **PKPbc 08 33 42.4 0.0**
ZOU Zoufplan 148.38 352 PKPbc 08 33 42.1 -0.4
BERE Bereket-Mersin 148.45 317 P **PKiKP 08 33 43.6 -0.9**
DAVOX Davos/Dischmat 148.47 356 PKPbc **PKiKP 08 33 43.5 -0.7**
comp=Z,37nm,0.9s,baz=320,slow=6.4,SNR=14
LJU Ljubljana 148.63 350 *e*PKPbc **PKiKP 08 33 44.3 -0.1**
CRES Cresnjev 148.67 348 *e*P **PKPbc 08 33 42.8 -0.2**
STAL STALIGIAL 148.70 352 PKPdf 08 33 40.2 +0.9
TUE Stuetta 148.81 357 PKPdf 08 33 40.0 +0.3
TUE PKiKP 08 33 44.7 -0.3
TUE IAMs_20 IAMs_20 09 36 54.6
comp=Z,916nm,21.0s
TEKS Tekeris 148.87 342 *e*P **PKPbc 08 33 43.3 -0.2**
CEY Cerknica 148.95 350 *e*P **PKPbc 08 33 42.9 -0.8**
SENIN Lac Senin/Sane 148.99 359 PKiKP 08 33 44.8 -0.6
CTI Castel Tesino 149.04 353 PKP2 **PKPbc 08 33 43.8 -0.2**
CTI Castel Tesino 149.04 353 PKPbc 08 33 43.8 -0.2
TRI Trieste 149.09 350 PKP2 **PKPbc 08 33 44.3 +0.3**
TRI Trieste 149.09 350 PKPbc 08 33 44.3 +0.3
TRI IAMs_20 IAMs_20 09 44 52.7
comp=Z,919nm,21.0s
MRAK Mrakovica 149.14 346 *e*P **PKPab 08 33 47.6 -0.9**
CSS Mathiatis 149.14 314 PKPbc 08 33 44.9 +0.4
CSS IAMs_20 IAMs_20 09 39 20.1
comp=Z,724nm,22.0s
DIVS Divibare 149.14 341 *e*P **PKPdf 08 33 40.8 +0.6**
DIVS Divibare 149.14 341 PKPdf 08 33 40.5 +0.3
DIVS IAMs_20 IAMs_20 09 36 47.2
comp=Z,1μm,22.0s
ISP Isparta 149.26 321 IAMs_20 IAMs_20 09 55 15.3
comp=Z,729nm,21.0s
VTS Vitosha 149.29 336 ⇑P **PKiKP 08 33 46.4 +0.3**
VTS Vitosha 149.29 336 PKP2 **PKiKP 08 33 45.4 -0.6**
VTS MLR MLR
comp=Z,800nm,20.0s
VTS Vitosha 149.29 336 PKiKP 08 33 45.4 -0.6
VTS IAMs_20 IAMs_20 09 39 59.4
comp=Z,780nm,20.0s
BLY Banja Luka 149.32 345 *e*P **PKPbc 08 33 44.4 -0.2**
LEF Lefka 149.36 315 ⇓P **PKPbc 08 33 44.1 -0.9**
HAPS Han Pijesak,BI 149.47 343 *e*P **PKPdf 08 33 39.7 -1.0**
ALN Alexandroupoli 149.47 331 P **PKPbc 08 33 44.7 -0.4**
ALN Alexandroupoli 149.47 331 PKP2 **PKiKP 08 33 45.5 -0.7**
ALN Alexandroupoli 149.47 331 PKiKP 08 33 45.5 -0.7
RDO Rodhopi 149.51 331 P **PKPbc 08 33 44.6 -0.6**
BBLS Lazići 149.53 342 *e*P **PKPdf 08 33 41.4 +0.6**
ENEZ Enez 149.54 330 P **PKiKP 08 33 45.7 -0.7**
SALO Salr 149.58 355 PKiKP 08 33 45.9 -0.4
KULA Kula-Manisa 149.87 324 P **PKPbc 08 33 46.2 -0.1**
MANT Manisa 149.95 324 PKPdf **PKPdf 08 33 42.8 +1.0**
MANT **PKiKP 08 33 47.1 -0.5**
SSB Saint Sauveur 150.02 3 PKP2 **PKPab 08 33 52.0 -0.1**
SSB Saint Sauveur 150.02 3 PKPdf **PKPdf 08 33 42.8 +1.4**
SSB **PKiKP 08 33 47.3 0.0**
SSB PKPab **PKPab 08 33 52.0 -0.1**
SMTH Samothraki Isl 150.05 331 P **PKPbc 08 33 46.2 -0.4**
GADA Gvkgeada 150.09 330 P **PKPbc 08 33 46.2 -0.4**
NVR Nevrokopi 150.09 334 P **PKPbc 08 33 46.5 -0.2**

KAVA Kavala 150.10 332 P **PKPbc 08 33 46.6 0.0**
EZN Ezine 150.16 329 P **PKPbc 08 33 46.7 -0.1**
UPM Unac-Piva 150.29 342 *e*P **PKPdf 08 33 43.5 +1.4**
BNI Bardonecchia 150.31 0 PKiKP 08 33 48.4 +0.4
THAS Thassos island 150.32 332 P **PKPbc 08 33 46.6 -0.6**
ELL Elmali 150.32 320 PKIKP **PKPbc 08 33 47.4 -0.1**
ELL Elmali 150.32 320 PKPbc 08 33 47.4 -0.1
PGAV Gavieira, Arco 150.39 23 *e*SS SS 08 56 53.1 +14
PGAV Gavieira, Arco 150.39 23 *e*LR LR 09 31 36.0
comp=Z,987nm,20.0s
SRS Serrai 150.40 334 P **PKPbc 08 33 46.4 -1.0**
STIP Stip 150.49 336 *i* P **PKPbc 08 33 47.6 +0.1**
SKO Skopje 150.53 337 *i* P **PKiKP 08 33 48.9 +0.4**
PRK Paraskevi 150.62 328 P **PKiKP 08 33 48.7 +0.1**
VAY Valandovo 150.66 335 *i* P **PKiKP 08 33 48.3 -0.4**
LIA Limnos Island 150.66 330 P **PKPbc 08 33 47.5 -0.5**
BRY Bratogost 150.67 342 *e*P **PKPbc 08 33 45.9 -2.3**
AKAS Kas 150.84 320 PKPbc 08 33 47.6 -1.2
SIGR SIGRI 150.86 329 P **PKPbc 08 33 47.7 -0.8**
OUR Ouranopolis 150.87 332 P **PKPbc 08 33 47.5 -1.0**
PDG Podgorica 150.88 341 ⇑P **PKPbc 08 33 46.5 -1.9**
PDG Podgorica 150.88 341 *e*P **PKPdf 08 33 45.1 +2.3**
PDG Podgorica 150.88 341 PKPdf 08 33 43.2 +0.4
PDG PKPbc **PKiKP 08 33 49.6 +0.6**
PDG IAMs_20 IAMs_20 09 38 29.2
comp=Z,706nm,21.0s
FETY Fethiye 150.90 321 P **PKPbc 08 33 47.6 -1.1**
KSL Kastellorizon 150.91 320 P **PKPbc 08 33 48.5 -0.2**
MSSA Maissana 150.95 356 PKPdf **PKPdf 08 33 42.7 -0.2**
MSSA **PKPbc 08 33 48.7 0.0**
YER Yerkesik 151.04 323 P **PKiKP 08 33 49.3 -0.4**
POLO Lamas de Olo 151.08 23 *e*PKPbc **PKPbc 08 33 48.3 -0.8**
PBRG Braganca 151.08 21 *e*PKPdf **PKPdf 08 33 41.2 -2.0**
HCY Herceg Novi 151.10 342 *e*P **PKPbc 08 33 47.4 -1.6**
DRME Dracevica, Mon 151.12 341 *e*P **PKPbc 08 33 48.1 -1.0**
PHP Peshkopia 151.15 339 P **PKPbc 08 33 48.7 -0.5**
PAIG Paliouri 151.34 332 P **PKPbc 08 33 48.0 -1.6**
CHOS Chios island 151.38 327 P **PKPbc 08 33 49.3 -0.6**
SMG Samos 151.46 325 P **PKPbc 08 33 49.6 -0.4**
OHR Ohrid 151.52 337 *i* P **PKiKP 08 33 50.9 +0.3**
MVO Moncorvo 151.54 22 *e*PKPbc **PKiKP 08 33 51.0 +0.4**
MVO Moncorvo 151.54 22 *e*SS SS 08 57 12.9 +21
MVO Moncorvo 151.54 22 *e*LR LR 09 32 17.3
comp=Z,682nm,20.0s
FNA Florina 151.58 336 P **PKPbc 08 33 49.6 -0.7**
FNA Florina 151.58 336 PKPdf 08 33 44.7 +0.7
FNA PKPbc **PKiKP 08 33 50.7 0.0**
PVIS Viseu 151.60 24 *e*PKPab **PKPab 08 33 59.5 +0.7**
BODT Bodrum 151.65 324 P **PKPbc 08 33 49.4 -1.1**
MURB Monte Urbino 151.67 351 PKPdf **PKPdf 08 33 45.1 +1.0**
MURB **PKiKP 08 33 50.9 +0.1**
LIT Litokhoron 151.71 334 P **PKPbc 08 33 49.5 -1.0**
SKY Skiros Island 151.76 330 P **PKPbc 08 33 49.4 -1.2**
KZN Kozani 151.84 335 P **PKPbc 08 33 50.3 -0.6**
NRCA Norcia 151.99 350 PKiKP 08 33 51.4 -0.1
XOR Xorichti 152.01 332 P **PKPbc 08 33 49.6 -1.6**
MTE Manteigas 152.01 24 *e*PKPab **PKPab 08 33 57.9 -2.6**
MTE Manteigas 152.01 24 *e*SS SS 08 57 17.5 +21
MTE Manteigas 152.01 24 *e*LR LR 09 30 32.5
comp=Z,627nm,22.0s
MTE Manteigas 152.01 24 PKPdf **PKPdf 08 33 45.7 +1.0**
MTE **pPKPbc 08 33 59.6 +0.6**
PMOZ Porto Moniz, M 152.08 47 *e*LR LR 09 25 39.5
comp=Z,489nm,20.0s
KYMI Kymi, Euboea I 152.17 330 P **PKPbc 08 33 50.7 -0.9**
CASP Castiglione de 152.35 354 PKPbc 08 33 51.3 -0.6
THL Klokotos Trika 152.36 334 P **PKPbc 08 33 49.1 -2.8**
LATE Laterza 152.41 352 PKPbc 08 33 51.6 -0.5
SGRT San Giovanni R 152.49 345 PKPdf **PKPdf 08 33 46.3 +0.9**
SGRT **PKPbc 08 33 51.7 -0.6**
PCBR Castelo Branco 152.52 24 *e*PKPab **PKPab 08 34 02.1 -0.5**
ATAL Atalanti 152.63 332 P **PKPbc 08 33 51.9 -0.7**
INTR Introdacqua 152.65 348 PKPbc 08 33 51.9 -0.7
AGG Agios Georgios 152.67 333 P **PKPbc 08 33 51.9 -0.8**
AGG Agios Georgios 152.67 333 PKPdf **PKPdf 08 33 46.3 +0.6**
AGG **PKPbc 08 33 51.9 -0.8**
LKR Lokris 152.68 332 P **PKPbc 08 33 52.4 -0.3**
AXAR Agios Charalam 152.74 332 P **PKiKP 08 33 53.0 -0.1**
ATHU Athens Univers 152.85 330 P **PKPbc 08 33 52.1 -1.0**
PMTG Montargil 152.86 26 *e*PKPab **PKPab 08 34 03.0 -1.1**
PMRV Marv??o 152.90 25 *e*PKPab **PKPab 08 34 03.3 -1.0**
PMRV Marv??o 152.90 25 *e*LR LR 09 27 11.4
comp=Z,834nm,20.0s
VLY Voula,Athens 152.94 329 P **PKPbc 08 33 51.9 -1.4**
EVR Evrytania 152.99 334 P **PKPbc 08 33 53.2 -0.3**
SANT Santorini 153.19 325 PKiKP 08 33 53.9 -0.2
LTK Loutraki 153.20 331 P **PKPbc 08 33 52.7 -1.2**
SCTE Santa Cesarea 153.26 340 PKiKP 08 33 54.4 +0.3
KALE Kalithea 153.28 332 P **PKPbc 08 33 53.9 -0.2**
SERG Sergoula 153.30 333 P **PKiKP 08 33 54.5 +0.2**
PESTR Estremoz 153.30 26 *e*SS SS 08 57 21.6 +11
PAOL Paolisi 153.45 347 IAMs_20 IAMs_20 09 48 01.2
comp=Z,592nm,20.0s
KLV Kalavryta, Ach 153.56 332 P **PKPbc 08 33 54.3 -0.4**
LKD2 Lefkada island 153.58 335 P **PKiKP 08 33 54.9 +0.1**
PAB San Pablo 153.91 20 PKIKP **PKPdf 08 33 47.3 -0.3**
PAB **PKPdf 08 34 07.8**
PAB San Pablo 153.91 20 PKPdf **PKPdf 08 33 47.2 -0.3**
PAB PKPbc **PKiKP 08 33 55.8 +0.2**
PAB **sPKPbc 08 34 07.8 +1.8**
PAB San Pablo 153.91 20 IAMs_20 IAMs_20 09 46 30.9
comp=Z,742nm,20.0s
ES15 SONSECA Array 153.92 19 IAMs_20 IAMs_20 09 39 36.9
comp=Z,837nm,20.0s
ESBB Sonseca Array 153.92 19 PKPdf **PKPdf 08 33 47.5 0.0**
ESBB PKPbc **PKPbc 08 34 54.7 -0.7**
ESBB PKPab **PKPab 08 34 09.3 +0.7**
ESBB IAMs_20 IAMs_20 09 39 38.0
comp=Z,829nm,20.0s
ESDC Sonseca Array 153.92 19 PKPbc **PKPbc 08 33 51.5 -4.0**
comp=Z,0.3nm,0.4s,baz=236,slow=1.4,SNR=2.4
ESDC PKPab **PKPab 08 34 09.0 +0.4**
comp=Z,22nm,1.3s,baz=325,slow=2.4,SNR=10
ES04 SONSECA Array 153.94 19 IAMs_20 IAMs_20 09 39 42.6
comp=Z,887nm,21.0s
ES12 SONSECA Array 153.96 19 IAMs_20 IAMs_20 09 39 38.0
comp=Z,730nm,20.0s
PBAR Barrancos 154.11 26 *e*SS SS 08 57 29.6 +10
IDI Anoyia 154.29 324 PKPdf **PKPdf 08 33 48.2 +0.1**
IDI **PKPbc 08 33 55.9 -0.5**
IDI PKPab **sPKPbc 08 34 09.0 +2.1**
ITM Ithomi 154.37 331 IAMs_20 IAMs_20 09 45 15.0
comp=Z,594nm,21.0s
PVAQ Vaqueiros 154.47 28 *e*LR LR 09 26 47.0
comp=Z,1μm,22.0s
TIP Timpagrande 154.62 342 PKPdf 08 33 48.7 +0.2
TIP PKPbc **pPKPdf 08 33 57.1 +0.7**
TIP PKPab **PKPab 08 34 11.4 -0.1**
CEL Celeste 155.72 342 IAMs_20 IAMs_20 09 46 00.4
comp=Z,783nm,22.0s
VSL Villasalto 155.75 355 IAMs_20 IAMs_20 09 46 32.2
comp=Z,706nm,19.0s
KEST Kesra 159.49 354 PKPab **PKPab 08 34 33.4 +0.8**
comp=Z,7.9nm,1.1s,baz=243,slow=3.7,SNR=3.8
KEST Kesra 159.49 354 PKPab 08 34 32.6 0.0
MDT Midelt 159.69 29 PKPab **PKPab 08 34 34.7 +1.0**
comp=Z,12nm,1.2s,baz=307,slow=5.8,SNR=5.0
DBIC Dimbokro 165.74 126 PKP **PKPdf 08 34 02.6 +1.1**
comp=Z,3.9nm,0.9s,baz=345,slow=5.1,SNR=3.4
DBIC PKPab **PKPab 08 35 01.4 +0.8**
comp=Z,2.8nm,0.9s,baz=179,slow=12,SNR=1.8
DBIC Dimbokro 165.74 126 PKIKP **PKPdf 08 34 01.8 +0.3**
DBIC Dimbokro 165.74 126 PKPdf **PKPdf 08 34 01.8 +0.3**
KOWA Kowa 169.52 93 PKP **PKPdf 08 34 04.5 +0.4**
comp=Z,1.5nm,0.3s,baz=221,slow=2.4,SNR=5.3
KOWA PKPab **PKPab 08 35 17.3 -0.1**
comp=Z,2.9nm,0.7s,baz=259,slow=9.4,SNR=5.0
TOA0 Torodi Ar. Sit 174.63 112 PKPdf 08 34 06.2 -0.2
TORD Torodi Ar. Bea 174.63 112 PKP **PKPdf 08 34 05.1 -1.3**
comp=Z,8.1nm,1.2s,baz=312,slow=1.1,SNR=10
TORD PKPab **PKPab 08 35 40.3 +0.2**
comp=Z,2.5nm,1.1s,baz=257,slow=3.2,SNR=4.2
TORD PP **PP 08 39 31.6 -0.8**
comp=Z,4.4nm,1.3s,baz=254,slow=4.7,SNR=5.3
TORD Torodi Ar. Bea 174.63 112 PKPdf 08 34 05.7 -0.8
TORD **PKPab 08 35 39.7 -0.4**

ISC 14 08:36:14.7±1.5,**49°62N**±0°.08×**18°04E**±0°.04,**h12**km±14km,
n5,σ0°48/10,Czech and Slovak Republics

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

MORC Moravsky Berou 0.36 296 *e*PG **Pg 08 36 22.3 +0.4**
MORC *e*SG **Sb 08 36 27.9 -0.7**
VRAC Vranov 0.99 252 *e*PG **Pg 08 36 33.6 -0.2**
VRAC *e*SG **Sb 08 36 47.4 +0.6**
LANS Liptovska Anna 1.04 116 *e*PG **Pg 08 36 34.5 -0.3**
LANS *e*SG **Sb 08 36 48.8 +0.5**
LANS *e*LG Lg 08 36 51.9
KRUC Moravsky 1.21 243 *e*PG **Pn 08 36 37.4 0.0**
KRUC *e*SG **Sg 08 36 53.6 -0.2**
VYHS Vyhne 1.24 155 *e*PG **Pb 08 36 38.1 +0.1**
VYHS *e*SG **Sb 08 36 54.1 +0.1**

IDC ***14*** *08:37:46.6±1.7, 13°.29N×91°.29W, h0km, mb3.6/4, mb1 3.9/8, mb1mx3.7/36, mbtmp3.7/8, ML3.8/4, Error ellipse: s-maj=31.0km s-min=22.2km az=27.0*
UCR ***14*** *08:37:47.7±1.3, 13°.31N×91°.54W, h34km±266km, ML3.5*
SNET ***14*** *08:37:47.6±1.3, 13°.32N×91°.54W, h35km±263km, ML3.7*
INET ***14*** *08:37:49.0, 13°.23N×91°.33W, h4km, MW3.2*
GCG ***14*** *08:37:55.7±0.3, 13°.68N×91°.17W, h17km±8km, MD4.1*
ISC 14 08:37:47.6±2.3,13°.22N±0°.08×91°.38W±0°.05,h10km±13km,
n55,σ0°72/71,mb3.7/4,1C,Near coast of Guatemala

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

ERG Entre ros, C 1.22 351 ⇑*e*P **Pg 08 38 11.1 -0.1**
FUG Fuego 3 1.32 23 *e*P **Pn 08 38 11.3 -1.0**
PCG Pacaya 1.38 33 *e*P **Pn 08 38 12.7 -0.5**
NBG Las Nubes 1.69 36 *e*P **Pn 08 38 17.9 +0.5**
CEVE Cerro Verde 1.81 70 *e*P **Pn 08 38 18.3 -0.7**
CEVE *e*S **Sb 08 38 44.1 +0.3**
CEVE IAML 08 38 49.9
comp=Z,1μm,0.3s
CEVE Cerro Verde 1.81 70 *e*P **Pn 08 38 18.3 -0.7**
CEVE *e*S **Sb 08 38 44.1 +0.3**
CEVE IAML 08 38 49.9
comp=Z,1μm,0.3s
RTR El Retiro 1.81 68 *e*P **Pn 08 38 18.3 -0.7**
RTR *e*S **Sn 08 38 42.6 +0.5**
RTR El Retiro 1.81 68 *e*P **Pn 08 38 18.3 -0.7**
RTR *e*S **Sn 08 38 42.6 +0.5**
SBLS San Blas 1.81 70 *e*P **Pn 08 38 18.3 -0.8**
SBLS San Blas 1.81 70 *e*P **Pn 08 38 18.3 -0.8**
SNJE San Jose 1.84 69 *e*P **Pn 08 38 18.6 -0.9**
SNJE San Jose 1.84 69 *e*P **Pn 08 38 18.6 -0.9**
JAYA Jayaque - finc 1.92 77 *e*P **Pn 08 38 19.8 -0.8**
JAYA *e*S **Sn 08 38 44.9 0.0**
JAYA IAML 08 38 50.6
comp=Z,745nm,0.2s
JAYA Jayaque - finc 1.92 77 *e*P **Pn 08 38 19.8 -0.8**
JAYA *e*S **Sn 08 38 44.9 0.0**
JAYA IAML 08 38 50.6
comp=Z,745nm,0.2s
APG El Apazote 1.98 26 Pn Pn 08 38 21.2 -0.1
comp=Z,153nm,0.3s,baz=187,slow=4.6,SNR=1151
APG Sn **Sn 08 38 46.0 -0.4**
comp=Z,13nm,0.3s,baz=236,slow=12,SNR=4.6
LALI Alcalda de L 2.02 82 *e*P **Pn 08 38 20.8 -0.9**
LALI IAML 08 38 57.0
comp=Z,142nm,0.4s
LALI Alcalda de L 2.02 82 *e*P **Pn 08 38 20.8 -0.9**
LALI IAML 08 38 57.0
comp=Z,142nm,0.4s
TACO Tacachico 2.10 69 *e*P **Pn 08 38 22.5 -0.4**
TACO *e*S **Sn 08 38 49.0 -0.1**
TACO IAML 08 38 56.3
comp=Z,150nm,0.5s
TACO Tacachico 2.10 69 *e*P **Pn 08 38 22.5 -0.4**
TACO *e*S **Sn 08 38 49.0 -0.1**
TACO IAML 08 38 56.3
comp=Z,150nm,0.5s
UEES Universidad Ev 2.14 76 *e*P **Pn 08 38 22.7 -0.7**
UEES IAML 08 38 58.5
comp=Z,492nm,0.4s
UEES Universidad Ev 2.14 76 *e*P **Pn 08 38 22.7 -0.7**
UEES IAML 08 38 58.5
comp=Z,492nm,0.4s
SNET Serv Nac Est T 2.14 77 *e*P **Pn 08 38 23.6 +0.2**
SNET IAML 08 38 55.7
comp=Z,425nm,0.4s
SNET Serv Nac Est T 2.14 77 *e*P **Pn 08 38 23.6 +0.2**
SNET IAML 08 38 55.7
comp=Z,425nm,0.4s
OPAM Oficina de Pla 2.17 77 *e*P **Pn 08 38 23.8 -0.1**
OPAM Oficina de Pla 2.17 77 *e*P **Pn 08 38 23.8 -0.1**
MTO3 Montecristo 2.28 59 *e*P **Pn 08 38 25.3 -0.2**
MTO3 *e*S **Sn 08 38 54.3 +0.5**
MTO3 IAML 08 39 01.7
comp=Z,85nm,0.5s
MTO3 Montecristo 2.28 59 *e*P **Pn 08 38 25.3 -0.2**
MTO3 *e*S **Sn 08 38 54.3 +0.5**
MTO3 IAML 08 39 01.7
comp=Z,85nm,0.5s
LFRS El Faro 2.29 80 *e*P **Pn 08 38 26.2 +0.7**
LFRS IAML 08 39 00.6
comp=Z,2μm,0.5s
LFRS El Faro 2.29 80 *e*P **Pn 08 38 26.2 +0.7**
LFRS IAML 08 39 00.6
comp=Z,2μm,0.5s
LBRS Las Brisas 2.33 77 *e*P **Pn 08 38 26.4 +0.3**
LBRS Las Brisas 2.33 77 *e*P **Pn 08 38 26.4 +0.3**
PAVA Las Pavas 2.42 78 *e*P **Pn 08 38 27.9 +0.6**
PAVA *e*S **Sn 08 38 59.1 +1.9**
PAVA IAML 08 39 04.5
comp=Z,339nm,0.4s
PAVA Las Pavas 2.42 78 *e*P **Pn 08 38 27.9 +0.6**
PAVA *e*S **Sn 08 38 59.1 +1.9**
PAVA IAML 08 39 04.5
comp=Z,339nm,0.4s
COEG Centro de Oper 2.46 80 *e*P **Pn 08 38 28.2 +0.4**
COEG IAML 08 39 03.5
comp=Z,406nm,0.4s
COEG Centro de Oper 2.46 80 *e*P **Pn 08 38 28.2 +0.4**
COEG IAML 08 39 03.5
comp=Z,406nm,0.4s
MRL Marmol 2.47 41 *e*P **Pn 08 38 29.3 +1.2**
PQSS Presa 15 de Se 2.77 81 *e*P **Pn 08 38 31.6 -0.4**
COEB Comit de Eme 2.78 84 *e*P **Pn 08 38 32.1 -0.2**
COEB IAML 08 39 16.6
comp=Z,253nm,0.4s
COEB Comit de Eme 2.78 84 *e*P **Pn 08 38 32.1 -0.2**
COEB IAML 08 39 16.6
comp=Z,253nm,0.4s
TECA Tecapa 2.81 84 *e*P **Pn 08 38 33.0 +0.2**
TECA Tecapa 2.81 84 *e*P **Pn 08 38 33.0 +0.2**
PACA Pacayal 2.98 85 *e*P **Pn 08 38 35.6 +0.6**
PACA Pacayal 2.98 85 *e*P **Pn 08 38 35.6 +0.6**
LCND La Caada 3.40 88 *e*P **Pn 08 38 41.1 +0.5**
LCND *e*S **Sn 08 39 21.2 +0.2**
LCND IAML 08 39 33.1
comp=Z,146nm,0.4s
LCND La Caada 3.40 88 *e*P **Pn 08 38 41.1 +0.5**
LCND *e*S **Sn 08 39 21.2 +0.2**
LCND IAML 08 39 33.1
comp=Z,146nm,0.4s
CMIG Matias Romero 5.12 319 Pn **Pn 08 39 04.7 +0.3**
comp=Z,2.0nm,0.3s,baz=133,slow=9.8,SNR=21
CMIG Sn **Sn 08 40 04.7 +1.0**
comp=Z,2.7nm,0.3s,baz=24,slow=20,SNR=5.6
JTS Las Juntas de 6.93 114 Pn **Pn 08 39 29.7 +0.4**
comp=Z,0.2nm,0.3s,baz=330,slow=20,SNR=2.2
JTS Sn **Sn 08 40 47.3 -1.0**
comp=Z,0.3nm,0.3s,baz=232,slow=16,SNR=1.1
TEIG Tepich 7.57 23 Pn **Pn 08 39 38.1 +0.1**
comp=Z,9.5nm,0.3s,baz=170,slow=1.0,SNR=25
H06E1 SOCORRO T-PHASE 9.58 289 T T 09 02 27.5
SNR=38
TXAR Lajitas Array 19.68 326 P **Pn 08 42 18.4 0.0**
comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=15
ANMO Albuquerque 25.57 330 P **P 08 43 16.6 -0.5**
comp=Z,0.5nm,0.7s,baz=152,slow=15,SNR=3.9
NVAR Mina Array Bea 34.65 321 P **P 08 44 39.7 +2.2**
comp=Z,1.2nm,0.7s,baz=132,slow=8.1,SNR=7.5
YKA Yellowknife Ar 51.92 347 P **P 08 46 54.9 -1.3**
comp=Z,0.4nm,0.5s,baz=149,slow=8.0,SNR=10.0
INK Inuvik 61.35 343 P **P 08 48 02.5 -0.8**
comp=Z,0.5nm,0.6s,baz=69,slow=4.7,SNR=2.0
CMAR Chiang Mai Arr 146.92 342 P

mb1 3.9/6,mb1mx3.5/44,mbtmp3.6/6,ML3.5/4,Error ellipse: s-maj=33.0km s-min=27.4km az=3.0

INET ***14*** *08:44:15.7, 13°.20N×91°.44W, h26km, MW3.1*

GCG ***14*** *08:44:17.9±0.4, 13°.53N×91°.18W, h0km±6km, MD3.9*

ISC 14 08:44:13.8±2.1, 13°.37N±0°.07×91°.33W±0°.05, h8km±12km, n39, σ0°81/48, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**1.09**	**348**	*eP*	**Pn**	**08 44 36.9**	**+1.5**
FUG	**Fuego 3**	**1.17**	**24**	*eP*	**Pn**	**08 44 37.1**	**+0.4**
FUG				*eS*	**Sn**	**08 44 53.8**	**+0.8**
RTAL	**Retalhuleu**	**1.21**	**343**	*eP*	**Pb**	**08 44 35.9**	**-1.1**
RTAL				*eS*	**Sg**	**08 44 52.4**	**-0.3**
PCG	**Pacaya**	**1.24**	**34**	*eP*	**Pg**	**08 44 38.5**	**+0.9**
PCG				*eS*	**Sn**	**08 44 54.5**	**-0.1**
NBG	**Las Nubes**	**1.54**	**38**	*eP*	**Pg**	**08 44 43.6**	**+0.1**
RTR	**El Retiro**	**1.72**	**72**	*eP*	**Pn**	**08 44 44.9**	**+0.8**
CEVE	**Cerro Verde**	**1.72**	**74**	*eP*	**Pn**	**08 44 44.2**	**0.0**
CEVE				*eS*	**Sb**	**08 45 08.4**	**+0.8**
CEVE				IAML		08 45 14.0	
	comp=Z,634nm,0.2s						
SNJE	**San Jose**	**1.75**	**73**	*eP*	**Pn**	**08 44 44.5**	**0.0**
APG	**El Apazote**	**1.83**	**27**	Pn	**Pb**	**08 44 47.0**	**-0.7**
	comp=Z,27nm,0.3s,baz=244,slow=8.7,SNR=280						
APG				Sn	**Sg**	**08 45 12.4**	**-0.3**
	comp=Z,13nm,0.3s,baz=112,slow=16,SNR=5.4						
UNIC	**Universidad Ca**	**1.83**	**70**	*eP*	**Pn**	**08 44 45.8**	**+0.2**
JAYA	**Jayaque - finc**	**1.85**	**81**	*eP*	**Pn**	**08 44 45.6**	**-0.4**
JAYA				*eS*	**Sb**	**08 45 11.1**	**-0.2**
JAYA				IAML		08 45 16.7	
	comp=Z,370nm,0.2s						
HUEH	**Huehuetenango**	**1.95**	**355**	*eP*	**Pn**	**08 44 47.6**	**+0.2**
HUEH				*eS*	**Sb**	**08 45 13.9**	**-0.4**
PMON	**Piamonte**	**1.99**	**80**	*eP*	**Pn**	**08 44 47.9**	**+0.1**
PMON				*eS*	**Sb**	**08 45 15.1**	**-0.2**
TACO	**Tacachico**	**2.01**	**72**	*eP*	**Pn**	**08 44 48.3**	**+0.3**
BOQS	**Boqueron**	**2.02**	**79**	*eP*	**Pn**	**08 44 48.9**	**+0.5**
UEES	**Universidad Ev**	**2.06**	**80**	*eP*	**Pn**	**08 44 49.0**	**+0.2**
UEES				IAML		08 45 24.9	
	comp=Z,257nm,0.5s						
UESS	**Universidad de**	**2.10**	**80**	*eP*	**Pn**	**08 44 50.1**	**+0.8**
OPAM	**Oficina de Pla**	**2.10**	**80**	*eP*	**Pn**	**08 44 49.7**	**+0.4**
OPAM				IAML		08 45 24.2	
	comp=Z,172nm,0.3s						
MTO3	**Montecristo**	**2.17**	**61**	*eP*	**Pn**	**08 44 51.0**	**+0.6**
LFRS	**El Faro**	**2.22**	**83**	*eP*	**Pn**	**08 44 51.9**	**+0.9**
LFRS				*eS*	**Sb**	**08 45 21.8**	**-0.1**
LBRS	**Las Brisas**	**2.25**	**80**	*eP*	**Pn**	**08 44 52.5**	**+1.0**
ESQI	**Esquipulas**	**2.26**	**58**	*eP*	**Pn**	**08 44 52.4**	**+0.8**
ESQI				*eS*	**Sb**	**08 45 22.5**	**-0.7**
MRL	**Marmol**	**2.33**	**43**	*eP*	**Pb**	**08 44 55.2**	**-1.1**
PAVA	**Las Pavas**	**2.35**	**81**	*eP*	**Pn**	**08 44 53.5**	**+0.7**
COEG	**Centro de Oper**	**2.39**	**84**	*eP*	**Pn**	**08 44 54.0**	**+0.6**
COEG				IAML		08 45 38.1	
	comp=Z,168nm,0.3s						
LLGN	**La Laguna**	**2.45**	**71**	*eP*	**Pn**	**08 44 54.4**	**+0.3**
PQSS	**Presa 15 de Se**	**2.70**	**84**	*eP*	**Pn**	**08 44 58.1**	**+0.6**
COEB	**Comit de Eme**	**2.72**	**87**	*eP*	**Pn**	**08 44 58.4**	**+0.4**
TECA	**Tecapa**	**2.75**	**87**	*eP*	**Pn**	**08 44 59.3**	**+0.9**
PACA	**Pacayal**	**2.92**	**88**	*eP*	**Pn**	**08 45 01.7**	**+1.0**
LCND	**La Caada**	**3.34**	**91**	*eP*	**Pn**	**08 45 06.9**	**+0.5**
CMIG	**Matias Romero**	**5.05**	**318**	Pn	**Pn**	**08 45 30.8**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=148,slow=8.7,SNR=13						
JTS	**Las Juntas de**	**6.95**	**115**	Pn	**Pn**	**08 45 58.1**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=185,slow=19,SNR=1.3						
TEIG	**Tepich**	**7.42**	**23**	Pn	**Pn**	**08 46 04.4**	**+2.0**
	comp=Z,2.2nm,0.3s,baz=22,slow=16,SNR=9.4						
H06E1	**SOCORRO T-PHASI**	**9.58**	**289**	T	T	09 08 54.0	
	SNR=20						
TXAR	**Lajitas Array**	**19.58**	**326**	P	**P**	**08 48 42.9**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=9.3						
NVAR	**Mina Array Bea**	**34.57**	**321**	P	**P**	**08 51 04.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=138,slow=6.0,SNR=5.7						
YKA	**Yellowknife Ar**	**51.79**	**346**	P	**P**	**08 53 20.3**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=146,slow=8.1,SNR=6.3						
CMAR	**Chiang Mai Arr**	**146.80**	**342**	PKPbc	**PKPbc**	**09 03 57.6**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=332,slow=3.2,SNR=5.1						

IDC ***14*** *09:13:40.7±0.8, 4°.38N×32°.63W, h0km, mb4.0/16, mb1 4.3/16,mb1mx4.0/55,mbtmp4.0/16,MS4.3/5, Ms1 4.3/5,ms1mx3.7/29,Error ellipse: s-maj=29.8km s-min=16.4km az=158.0*

NEIC ***14*** *09:13:42.7±1.6, 4°.40N±0°.10×32°.6W±0°.1, h10km±1km, mb4.7/83,Error ellipse: s-maj=20.8km s-min=13.8km az=126.0*

ISC 14 09:13:42.9±0.4, 4°39N±0°.07×32°55W±0°.08, h11km, n145, σ0898/131, mb4.6/57, MS4.2/5, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NBCL	**Cascavel-CE**	**10.30**	**214**	*eP*	**Pn**	**09 16 10.1**	**-0.7**
RCBR	**Riachuelo**	**10.69**	**198**	Pn	**Pn**	**09 16 15.2**	**-0.9**
RCBR	**Riachuelo**	**10.69**	**198**	*eP*	**Pn**	**09 16 16.7**	**+0.6**
NBMO	**Morrinhos-CE**	**10.70**	**224**	*eP*	**Pn**	**09 16 16.6**	**+0.3**
NBPB	**Pedra_Branca-C**	**12.11**	**215**	*eP*	**Pn**	**09 16 34.6**	**-1.0**
NBMA	**Muriti-CE**	**13.22**	**208**	*eP*	**Pn**	**09 16 49.1**	**-1.7**
SACV	**Santiago Islan**	**13.71**	**39**	Pn	**Pn**	**09 16 54.9**	**-2.5**
NBTA	**Tacaratu-PE**	**14.51**	**202**	*eP*	**Pn**	**09 17 08.7**	**+0.4**
MBO	**M'Bour**	**18.30**	**56**	P	**P**	**09 17 58.2**	**+1.2**
MBO				IAmb	IAmb	09 18 19.7	
	comp=Z,37nm,0.8s						
SMTB	**Santa Maria do**	**19.95**	**229**	*eP*	**Pn**	**09 18 15.5**	**-1.4**
PRPB	**Parauapebas**	**20.18**	**239**	*eP*	Pn	09 18 17.9	-1.7
NBIT	**Itapeh - BA**	**20.38**	**199**	*eP*	**P**	**09 18 19.2**	**-0.5**
SDBA	**SAO DESIDERIO**	**20.72**	**216**	*eP*	**P**	**09 18 23.5**	**-0.1**
H10N3	**ASCENSION HYDR**	**21.73**	**124**	T	T	09 41 02.9	
	baz=304,slow=75,SNR=30						
H10N2	**ASCENSION HYDR**	**21.73**	**124**	T	T	09 41 03.2	
	baz=304,slow=75,SNR=23						
H10N1	**ASCENSION HYDR**	**21.75**	**124**	T	T	09 41 04.4	
	baz=304,slow=75,SNR=20						
H10S3	**ASCENSION HYDR**	**22.22**	**127**	T	T	09 41 41.9	
	baz=304,slow=74,SNR=30						
H10S2	**ASCENSION HYDR**	**22.24**	**127**	T	T	09 41 41.9	
	baz=276,slow=74,SNR=20						
JANB	**Januaria**	**22.57**	**211**	*eP*	**P**	**09 18 39.8**	**-3.6**
PEXB	**Peixe**	**22.67**	**224**	*eP*	**P**	**09 18 43.0**	**-1.5**
NAN01	**Guarapari, ES**	**23.33**	**198**	*eP*	**P**	**09 18 47.1**	**-4.1**
SJMB	**Sao Joao De Ma**	**24.48**	**200**	*eP*	**P**	**09 19 01.8**	**-0.4**
BSFB	**Barra de Sao F**	**24.48**	**199**	*eP*	**P**	**09 19 01.8**	**-0.5**
SNDB	**Serra Nova Dou**	**24.73**	**229**	*eP*	**P**	**09 19 05.4**	**+0.8**
ITTB	**Itaituba**	**24.74**	**250**	*eP*	**P**	**09 19 03.3**	**-1.4**
RIB01	**Linhares ES**	**24.79**	**198**	*eP*	**P**	**09 19 04.4**	**-0.6**
BDFB	**Brasilia**	**25.11**	**217**	P	**P**	**09 19 07.2**	**-0.9**
NPGB	**Novo Progresso**	**25.44**	**244**	*eP*	**P**	**09 19 10.5**	**-0.5**
ARAG	**Araguaiana, MT**	**27.61**	**223**	*eP*	**P**	**09 19 31.2**	**+0.6**
DBIC	**Dimbokro**	**27.66**	**84**	P	**P**	**09 19 30.7**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=273,slow=9.0,SNR=4.4						
DBIC	**Dimbokro**	**27.66**	**84**	IAmb	IAmb	09 19 31.5	
	comp=Z,7.4nm,1.1s						
PTGA	**Pitinga**	**27.86**	**260**	LR	LR	09 30 06.9	
	comp=Z,564nm,18.6s,baz=58,slow=36						
PTGA	**Pitinga**	**27.86**	**260**	*eP*	**P**	**09 19 33.3**	**+0.4**
H05S1	**Guadeloupe/Mar**	**29.59**	**292**	T	T	09 50 49.3	
	SNR=8.0						
GRGR	**Grenville**	**29.78**	**287**	P	**P**	**09 19 51.0**	**+1.0**
KOWA	**Kowa**	**29.85**	**68**	P	**P**	**09 19 51.2**	**+0.7**
KOWA				IAmb	IAmb	09 19 52.2	
	comp=Z,12nm,1.4s						
H05N1	**Guadeloupe/Mar**	**30.39**	**295**	T	T	09 51 41.9	
	SNR=3.7						
PTLB	**Pontes e Lacer**	**32.89**	**233**	*eP*	**P**	**09 20 18.7**	**+1.4**
CDVI	**St. Croix**	**34.21**	**295**	P	**P**	**09 20 29.1**	**+0.3**
TOA0	**Torodi Ar. Sit**	**34.91**	**73**	P	**P**	**09 20 34.3**	**-0.6**
TOA0				IAmb	IAmb	09 20 37.0	
	comp=Z,8.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**34.91**	**73**	P	**P**	**09 20 33.4**	**-1.5**
	comp=Z,3.8nm,1.0s,baz=265,slow=9.5,SNR=11						
TORD	**Torodi Ar. Bea**	**34.91**	**73**	P	**P**	**09 20 34.5**	**-0.4**
ETMB	**Extrema**	**36.39**	**247**	*eP*	**P**	**09 20 48.1**	**+0.5**
ITAB	**Concordia**	**36.70**	**210**	*eP*	**P**	**09 20 51.3**	**+1.3**
CPUP	**Villa Florida**	**38.84**	**217**	P	**P**	**09 21 07.4**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=32,slow=12,SNR=3.2						
CPUP				LR	LR	09 36 39.8	
	comp=Z,364nm,18.3s,baz=56,slow=36						
CPUP	**Villa Florida**	**38.84**	**217**	*eP*	**P**	**09 21 08.6**	**+0.4**
LPAZ	**La Paz**	**40.75**	**239**	P	**P**	**09 21 24.3**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=68,slow=5.6,SNR=8.4						
LPAZ				LR	LR	09 37 12.2	
	comp=Z,258nm,20.1s,baz=56,slow=35						
LPAZ	**La Paz**	**40.75**	**239**	*eP*	**P**	**09 21 25.2**	**+0.3**
LPAZ	**La Paz**	**40.75**	**239**	*eP*	**P**	**09 21 25.0**	**+0.1**
ITQB	**Itaqui**	**40.99**	**213**	*eP*	**P**	**09 21 26.0**	**0.0**
PLTB	**Pedras Altas**	**41.17**	**208**	*eP*	**P**	**09 21 28.2**	**+0.7**
ROSC	**El Rosal**	**41.63**	**272**	LR	LR	09 39 25.3	
	comp=Z,327nm,18.1s,baz=64,slow=37						
ROSC	**El Rosal**	**41.63**	**272**	P	**P**	**09 21 32.7**	**+0.7**
ROSC				IAmb	IAmb	09 21 35.2	
	comp=Z,23nm,1.2s						
CZSB	**Cruzeiro do Su**	**41.83**	**253**	*eP*	**P**	**09 21 33.0**	**-0.2**
ESDC	**Sonseca Array**	**43.60**	**32**	P	**P**	**09 21 48.4**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=242,slow=9.3,SNR=6.9						
ESDC	**Sonseca Array**	**43.60**	**32**	P	**P**	**09 21 48.0**	**+0.7**
LVC	**Limon Verde**	**44.53**	**231**	*eP*	**P**	**09 21 55.4**	**+0.1**
VSL	**Villasalto**	**51.52**	**41**	P	**P**	**09 22 48.5**	**-0.4**
BATG	**Bathurst New B**	**51.55**	**331**	P	**P**	**09 22 49.6**	**+0.7**
BATG				IAmb	IAmb	09 22 49.9	
	comp=Z,7.9nm,0.8s						
KSPA	**Keystone Colle**	**53.44**	**320**	P	**P**	**09 23 02.5**	**-0.5**
KSPA				IAmb	IAmb	09 23 06.3	
	comp=Z,14nm,1.2s						
ECH	**Echery**	**55.28**	**31**	P	**P**	**09 23 16.8**	**+0.4**
TRQ	**Mont Tremblant**	**55.30**	**326**	P	**P**	**09 23 16.8**	**+0.2**
PECO	**Prince Edward**	**55.46**	**322**	P	**P**	**09 23 18.6**	**+0.9**
PECO				IAmb	IAmb	09 23 19.2	
	comp=Z,8.8nm,0.8s						
WVNY	**West Valley, N**	**55.69**	**320**	P	**P**	**09 23 20.4**	**+0.9**
O54A	**Avella**	**55.82**	**317**	P	**P**	**09 23 20.4**	**+0.1**
N54A	**Moraine State**	**55.91**	**318**	P	**P**	**09 23 21.6**	**+0.6**
N54A				IAmb	IAmb	09 23 22.3	
	comp=Z,8.8nm,1.1s						
PLCA	**Paso Flores**	**56.80**	**214**	LR	LR	09 46 20.8	
	comp=Z,274nm,18.1s,baz=30,slow=34						
PLCA	**Paso Flores**	**56.80**	**214**	P	**P**	**09 23 27.5**	**+0.1**
PLCA				IAmb	IAmb	09 23 41.8	
	comp=Z,7.7nm,1.4s						
ACSO	**Alum Creek Sta**	**57.64**	**316**	P	**P**	**09 23 34.2**	**+0.9**
ACSO				IAmb	IAmb	09 23 34.7	
	comp=Z,12nm,1.0s						
T47A	**Sharon Grove**	**59.43**	**311**	P	**P**	**09 23 45.6**	**-0.3**
CLL	**Collm**	**60.16**	**31**	*eP*	**P**	**09 23 52.0**	**+1.4**
PSZ	**Piszkesteto**	**62.28**	**37**	P	**P**	**09 24 06.3**	**+1.1**
E43A	**Lone Tree Farm**	**62.85**	**321**	P	**P**	**09 24 09.0**	**+0.1**
CCM	**Cathedral Cave**	**62.89**	**311**	P	**P**	**09 24 07.9**	**-1.4**
CCM				IAmb	IAmb	09 24 10.1	
	comp=Z,5.3nm,1.3s						
I42A	**Draeger Farm,**	**63.13**	**318**	P	**P**	**09 24 10.9**	**+0.1**
WLAR	**White Oak Lake**	**63.22**	**306**	P	**P**	**09 24 12.7**	**+1.2**
N41A	**Harden Midland**	**63.40**	**314**	P	**P**	**09 24 11.2**	**-1.5**
N41A				IAmb	IAmb	09 24 20.7	
	comp=Z,5.0nm,0.7s						
MGMO	**Mountain Grove**	**63.42**	**310**	P	**P**	**09 24 12.4**	**-0.5**
MGMO				IAmb	IAmb	09 24 13.1	
	comp=Z,6.1nm,1.2s						
MLR	**Muntele Rosu**	**65.13**	**41**	P	**P**	**09 24 24.7**	**+0.6**
	comp=Z,11nm,1.1s,baz=282,slow=5.7,SNR=8.7						
MLR	**Muntele Rosu**	**65.13**	**41**	P	**P**	**09 24 23.1**	**-0.9**
NOA	**NORSAR Array B**	**65.36**	**22**	P	**P**	**09 24 24.4**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=229,slow=6.7,SNR=2.3						
SPMN	**Marine on St.**	**66.20**	**318**	P	**P**	**09 24 30.2**	**-0.6**
SPMN				IAmb	IAmb	09 24 30.8	
	comp=Z,5.3nm,0.9s						
KAN13	**South Haven SW**	**67.43**	**308**	P	**P**	**09 24 38.2**	**-0.6**
KAN13				IAmb	IAmb	09 24 40.1	
	comp=Z,5.7nm,1.0s						
KS20	**Mayfield South**	**67.53**	**308**	P	**P**	**09 24 39.0**	**-0.5**
KAN09	**Caldwell North**	**67.56**	**308**	P	**P**	**09 24 39.4**	**-0.2**
KAN09				IAmb	IAmb	09 24 40.3	
	comp=Z,8.1nm,1.1s						
KAN01	**Argonia South**	**67.68**	**308**	P	**P**	**09 24 40.3**	**-0.1**
KAN01				IAmb	IAmb	09 24 41.8	
	comp=Z,8.6nm,1.1s						
KAN05	**Bluff City Nor**	**67.76**	**308**	P	**P**	**09 24 40.8**	**-0.1**
KAN05				IAmb	IAmb	09 24 40.9	
	comp=Z,8.6nm,1.0s						
KAN08	**Anthony NE Sta**	**67.86**	**308**	P	**P**	**09 24 41.2**	**-0.3**
KAN12	**Harper NE Stat**	**67.89**	**308**	P	**P**	**09 24 41.4**	**-0.3**
KAN10	**Anthony SW Sta**	**67.93**	**308**	P	**P**	**09 24 41.8**	**-0.2**
KAN10				IAmb	IAmb	09 24 53.9	
	comp=Z,7.4nm,1.0s						
JCT	**Junction City**	**68.20**	**301**	P	**P**	**09 24 42.7**	**-1.2**
JCT				IAmb	IAmb	09 24 44.5	
	comp=Z,3.2nm,0.9s						
ECSD	**EROS Data Cent**	**68.37**	**315**	P	**P**	**09 24 43.7**	**-1.0**
ECSD				IAmb	IAmb	09 24 55.4	
	comp=Z,4.2nm,1.2s						
ABTX	**Abilene, Hawle**	**68.39**	**303**	P	**P**	**09 24 44.5**	**-0.5**
ABTX				IAmb	IAmb	09 24 46.0	
	comp=Z,3.4nm,0.9s						
BGNE	**Belgrade**	**68.90**	**313**	P	**P**	**09 24 47.5**	**-0.5**
BRTR	**Keskin Array B**	**68.97**	**49**	P	**P**	**09 24 50.6**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=243,slow=5.4,SNR=4.9						
BRTR	**Keskin Array B**	**68.97**	**49**	P	**P**	**09 24 50.3**	**+1.6**
AKASG	**Malin Array Be**	**68.99**	**37**	P	**P**	**09 24 48.1**	**-0.2**
	comp=Z,2.7nm,0.9s,baz=247,slow=6.9,SNR=8.9						
AKASG	**Malin Array Be**	**68.99**	**37**	IAmb	IAmb	09 24 50.8	
	comp=Z,3.6nm,1.2s						
AGMN	**Agassiz Nation**	**69.16**	**320**	P	**P**	**09 24 47.8**	**-1.7**
AGMN				IAmb	IAmb	09 24 49.2	
	comp=Z,4.0nm,0.9s						
ILGA	**Ilgaz**	**69.31**	**48**	P	**P**	**09 24 51.3**	**+0.5**
CBKS	**Cedar Bluff**	**69.54**	**310**	P	**P**	**09 24 52.5**	**+0.4**
CBKS				IAmb	IAmb	09 24 52.6	
	comp=Z,7.7nm,1.1s						
ULM	**Lac du Bonnet**	**69.77**	**322**	P	**P**	**09 24 51.2**	**-2.0**
	comp=Z,1.7nm,0.8s,baz=103,slow=5.4,SNR=3.3						
ULM	**Lac du Bonnet**	**69.77**	**322**	IAmb	IAmb	09 24 52.7	
	comp=Z,3.2nm,1.1s						
ZAIG	**Zacatecas**	**69.89**	**293**	P	**P**	**09 24 55.6**	**+0.8**
TX31	**Lajitas Ar. Si**	**71.40**	**299**	P	**P**	**09 25 02.9**	**-0.8**
TX31				IAmb	IAmb	09 25 04.2	
	comp=Z,12nm,1.4s						
TX32	**Lajitas Array**	**71.40**	**299**	P	**P**	**09 25 02.8**	**-1.0**
TXAR	**Lajitas Array**	**71.40**	**299**	P	**P**	**09 25 03.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=101,slow=6.5,SNR=7.4						
MDND	**Maddock**	**71.45**	**319**	P	**P**	**09 25 03.3**	**-0.2**
FINES	**FINESS Array B**	**71.57**	**26**	P	**P**	**09 25 04.4**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=239,slow=9.6,SNR=2.5						
OGNE	**Ogallala**	**71.67**	**312**	P	**P**	**09 25 04.6**	**-0.4**
FCC	**Fort Churchill**	**71.78**	**331**	P	**P**	**09 25 04.3**	**-0.9**
FCC				IAmb	IAmb	09 25 04.9	
	comp=Z,5.5nm,0.6s						
PMSA	**Palmer Station**	**72.81**	**194**	P	**P**	**09 25 14.0**	**+2.8**
MNTX	**Cornudas Mount**	**73.10**	**302**	P	**P**	**09 25 13.2**	**-0.5**
ISCO	**Idaho Springs**	**74.20**	**310**	P	**P**	**09 25 19.0**	**-1.3**
ISCO				IAmb	IAmb	09 25 23.1	
	comp=Z,9.4nm,1.4s						
ANMO	**Albuquerque**	**74.31**	**305**	P	**P**	**09 25 21.5**	**+0.5**
DGMT	**Dagmar**	**74.59**	**319**	P	**P**	**09 25 22.9**	**+0.8**
FFC	**Flin Flon**	**74.62**	**326**	P	**P**	**09 25 21.8**	**-0.3**
FFC				IAmb	IAmb	09 25 22.6	
	comp=Z,7.8nm,1.1s						
SMCO	**Snowmass**	**75.17**	**309**	P	**P**	**09 25 26.7**	**+0.6**
SMCO				IAmb	IAmb	09 25 29.3	
	comp=Z,7.0nm,1.2s						
LAO	**LASA Array**	**75.63**	**317**	P	**P**	**09 25 28.0**	**-0.2**
LAO				IAmb	IAmb	09 25 29.9	
	comp=Z,8.2nm,1.0s						
O20A	**White River Ci**	**76.24**	**310**	P	**P**	**09 25 32.5**	**+0.4**
O20A				IAmb	IAmb	09 25 33.6	
	comp=Z,5.8nm,1.0s						
PDAR	**Pinedale Array**	**77.49**	**313**	P	**P**	**09 25 38.5**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=102,slow=6.5,SNR=5.5						
PDAR	**Pinedale Array**	**77.49**	**313**	P	**P**	**09 25 37.6**	**-1.5**
TUC	**Tucson**	**77.72**	**302**	P	**P**	**09 25 40.2**	**-0.1**
YNE	**Yellowstone No**	**78.04**	**315**	P	**P**	**09 25 41.3**	**-0.8**
P17A	**Butcher Ranch,**	**78.10**	**309**	P	**P**	**09 25 42.5**	**0.0**
LOHW	**Long Hollow**	**78.33**	**313**	P	**P**	**09 25 43.9**	**+0.2**
LOHW				IAmb	IAmb	09 25 44.9	
	comp=Z,8.0nm,1.3s						
SNOW	**Snow King Moun**	**78.43**	**313**	P	**P**	**09 25 44.7**	**+0.4**
SNOW				IAmb	IAmb	09 25 46.3	
	comp=Z,8.4nm,1.4s						
MOOW	**Moose Ponds**	**78.45**	**314**	P	**P**	**09 25 44.4**	**+0.1**
MOOW				IAmb	IAmb	09 25 45.3	
	comp=Z,7.4nm,1.4s						
TMUT	**Trail Mountain**	**78.45**	**309**	P	**P**	**09 25 44.5**	**0.0**
REDW	**Red Top Meadow**	**78.49**	**313**	P	**P**	**09 25 44.8**	**+0.3**
REDW				IAmb	IAmb	09 26 01.7	
	comp=Z,7.0nm,1.4s						
YHH	**Holmes Hill**	**78.61**	**315**	P	**P**	**09 25 45.7**	**+0.4**
YHH				IAmb	IAmb	09 25 47.0	
	comp=Z,6.2nm,1.3s						
RES	**Resolute Bay**	**78.68**	**346**	P	**P**	**09 25 44.8**	**+0.2**
YHL	**Hebgen Lake**	**78.85**	**315**	P	**P**	**09 25 47.4**	**+0.8**
YHL				IAmb	IAmb	09 25 48.9	
	comp=Z,9.6nm,1.4s						
MTPU	**Mount Pierson**	**79.14**	**308**	P	**P**	**09 25 48.8**	**+0.3**
MTPU				IAmb	IAmb	09 25 50.4	
	comp=Z,6.9nm,1.1s						
NLU	**North Lily Min**	**79.16**	**310**	P	**P**	**09 25 48.4**	**+0.1**
DUG	**Dugway, Tooele**	**79.74**	**310**	P	**P**	**09 25 52.1**	**+0.8**
EUNU	**Eureka**	**79.80**	**352**	P	**P**	**09 25 51.4**	**+0.6**
EUNU				IAmb	IAmb	09 25 59.7	
	comp=Z,10nm,1.3s						
BGU	**Big Grassy Mou**	**79.94**	**311**	P	**P**	**09 25 53.5**	**+1.0**
BGU				IAmb	IAmb	09 25 54.7	
	comp=Z,6.3nm,1.2s						
WALA	**Waterton Lakes**	**81.03**	**319**	P	**P**	**09 25 57.7**	**-0.4**
WALA				IAmb	IAmb	09 25 58.9	
	comp=Z,6.9nm,1.2s						
PRN	**Pahroc Range**	**81.39**	**307**	P	**P**	**09 26 01.3**	**+1.0**
PRN				IAmb	IAmb	09 26 02.8	
	comp=Z,5.8nm,1.1s						
YKA	**Yellowknife Ar**	**82.45**	**332**	P	**P**	**09 26 03.9**	**-1.2**
	comp=Z,1.3nm,1.0s,baz=97,slow=5.4,SNR=12						
TPH	**Tonopah**	**83.12**	**308**	P	**P**	**09 26 09.8**	**+0.3**
NVAR	**Mina Array Bea**	**83.97**	**308**	P	**P**	**09 26 13.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=108,slow=2.9,SNR=2.4						
BMAR	**Burnt Mountain**	**94.25**	**339**	P	**P**	**09 27 01.8**	**-0.1**
ILAR	**Eielson Array**	**96.16**	**337**	P	**P**	**09 27 10.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=55,slow=3.8,SNR=5.9						

LDG ***14*** *09:16:17.8±0.1, 43°.02N×0°.17W, h2km, Md2.1/2, Ml2.7/8, Error ellipse: s-maj=1.8km s-min=1.5km az=168.0*

MRB ***14*** *09:16:18.0±0.2, 43°.02N×0°.17W, h5km±2km, ML2.0/23, Error ellipse: s-maj=1.0km s-min=0.8km az=237.0*

STR ***14*** *09:16:18.2±0.4, 43°N±3°×±°, h1km, MLv1.9/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary*

ISC 14 09:16:16.1±0.9, 43°.02N±0°.02×0°.19W±0°.02, h16km±6km, n43, σ1916/83, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYLO	**Lourdes**	**0.13**	**52**	Pg	**Pb**	**09 16 20.3**	**0.0**
PYLO				Sg	**Sg**	**09 16 22.1**	**-0.2**
PYLO	**Lourdes**	**0.13**	**52**	P	**Pb**	**09 16 20.3**	**0.0**
PYLO				S	**Sg**	**09 16 22.2**	**-0.2**
	321nm,0.2s						
VIEF	**Viey**	**0.21**	**130**	Pg	**Pb**	**09 16 21.6**	**0.0**
VIEF				Sg	**Sb**	**09 16 24.5**	**-0.8**
ETSF	**Etsaut**	**0.29**	**246**	*e*Pg	**Pb**	**09 16 23.7**	**+0.6**
ETSF				*e*Sg	**Sb**	**09 16 28.1**	**+0.4**
	118nm,0.3s						
ATE	**Arette**	**0.38**	**281**	Pg	Pn	**09 16 25.4**	**-1.5**
ATE				Sg	**Sb**	**09 16 31.7**	**+1.5**
ATE	**Arette**	**0.38**	**281**	P	Pn	**09 16 25.5**	**-1.5**
ATE				S	**Sb**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**230**	P	P	09 36 59.3	-0.3
	1.8nm,0.8s,baz=54,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**25.78**	**224**	P	P	09 37 24.6	+0.3
	0.6nm,0.7s,baz=60,slow=8.6,SNR=6.9						
FITZ	**Fitzroy Crossi**	**29.51**	**243**	P	P	09 37 57.4	-0.4
	0.8nm,0.6s,baz=73,slow=10,SNR=2.3						
MKAR	**Makanchi Array**	**80.39**	**319**	P	P	09 44 08.5	+0.3
	0.3nm,0.6s,baz=101,slow=2.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**150.72**	**287**	PKPbc	PKPbc	09 51 46.5	-0.4
	0.5nm,0.7s,baz=53,slow=2.8,SNR=3.1						

NNC ***14*** *09:36:24.4±3.8, 43°.79N×69°.96E, h0km, mb3.2, mpv2.5, Error ellipse: s-maj=20.3km s-min=12.5km az=143.0, Suspected Mining explosion.*
KRNET ***14*** *09:36:24.6±0.1, 43°.80N×69°.34E, mb2.3*
ISC 14 09:36:18.5±3.2, 43°.8N±0°.1×69°.6E±0°.1, h0km, n6, σ1§14/10, 4C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.97**	**138**	⇑P	**Pn**	**09 36 39.6**	**+0.1**
	1.0nm,0.3s,baz=323,slow=18,SNR=9.4						
KK31				⇑S	**Sg**	**09 36 51.1**	**+1.4**
	4.7nm,0.3s,baz=333,slow=34,SNR=89						
MNAS	**Manas**	**2.50**	**122**	⇓*i*P	**Pg**	**09 37 08.0**	**+1.6**
	baz=18						
MNAS				⇓*i*S	**Sg**	**09 37 39.1**	**+0.4**
	baz=18						
TRKS	**Terek-Say**	**2.56**	**154**	⇓*i*P	**Pg**	**09 37 08.0**	**+0.5**
	baz=49						
TRKS				⇓*i*S	**Sg**	**09 37 40.3**	**-0.3**
	baz=49						
ARSB	**Arslanbob**	**3.52**	**134**	⇑*i*P	**Pb**	**09 37 21.4**	**-0.4**
	baz=31						
ARSB				⇑*i*S	**Sb**	**09 38 03.4**	**-1.8**
	baz=31						
AAK	**Ala-Archa**	**3.75**	**107**	Pg	**Pg**	**09 37 29.9**	**-0.5**
	1.6nm,0.5s						
AAK				Lg	Lg	09 38 19.1	
	6.1nm,1.1s						
TKM2	**Tokmak 2**	**4.44**	**100**	⇓Pg	**Pg**	**09 37 44.2**	**+0.5**
	1.5nm,0.8s						
TKM2				⇓Lg	Lg	09 38 38.7	
	1.7nm,0.6s						

MDD ***14*** *09:38:40.3±1.9, 36°.70N×12°.56W, h24km±104km, mb3.9/10, Error ellipse: s-maj=112.0km s-min=13.7km az=56.0, PRXIMO*
INMG ***14*** *09:38:42.1±0.9, 36°.60N×12°.70W, h10km, ML2.6, Error ellipse: s-maj=4.5km s-min=3.2km az=78.0*
ISC 14 09:38:40.6±3.6, 36°.9N±0°.1×12°.3W±0°.2, h10km, n50, σ1§21/87, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.80**	**84**	P	**Pn**	**09 39 25.5**	**+0.1**
	2.2nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**09 39 59.2**	**0.0**
	46nm,0.2s,SNR=7.8						
PFVI	**Vila Bisbo**	**2.80**	**84**	*e*Pn	**Pn**	**09 39 26.2**	**+0.8**
PFVI				*e*Sn	**Sn**	**09 39 58.9**	**-0.3**
PFVI				A	A	09 40 01.1	
	19nm,0.4s						
PTEO	**Sao Teotonio**	**2.94**	**76**	P	**Pn**	**09 39 28.1**	**+0.8**
PTEO				S	**Sn**	**09 40 02.1**	**-0.5**
	8.2nm,0.5s						
PTEO	**Sao Teotonio**	**2.94**	**76**	*e*Pn	**Pn**	**09 39 28.1**	**+0.8**
PTEO				*e*Sn	**Sn**	**09 40 02.1**	**-0.5**
PTEO				A	A	09 40 05.3	
	16nm,0.5s						
PMAFR	**Mafra**	**3.16**	**48**	P	**Pn**	**09 39 31.4**	**+1.0**
	5.4nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**09 40 10.4**	**+2.2**
	106nm,0.5s,SNR=10						
PMAFR	**Mafra**	**3.16**	**48**	*e*Pn	**Pn**	**09 39 31.6**	**+1.2**
PMAFR				*e*Sn	**Sn**	**09 40 10.2**	**+2.0**
PMAFR				A	A	09 40 12.3	
	22nm,0.2s						
PNCL	**Nicolau / Gran**	**3.25**	**67**	P	**Pn**	**09 39 32.7**	**+1.2**
PNCL				S	**Sn**	**09 40 10.6**	**+0.4**
	7.5nm,0.2s						
PNCL	**Nicolau / Gran**	**3.25**	**67**	*e*Pn	**Pn**	**09 39 32.7**	**+1.2**
PNCL				*e*Sn	**Sn**	**09 40 10.6**	**+0.4**
PNCL				A	A	09 40 16.5	
	7.5nm,0.2s						
PCVE	**Castro Verde**	**3.49**	**76**	P	**Pn**	**09 39 36.1**	**+1.2**
PCVE				S	**Sn**	**09 40 15.8**	**-0.4**
	7.1nm,0.5s						
PCVE	**Castro Verde**	**3.49**	**76**	*e*Pn	**Pn**	**09 39 36.1**	**+1.2**
PCVE				*e*Sn	**Sn**	**09 40 15.8**	**-0.4**
PCVE				A	A	09 40 17.7	
	7.1nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.52**	**83**	P	**Pn**	**09 39 36.2**	**+0.9**
PBDV				S	**Sn**	**09 40 17.4**	**+0.4**
	7.8nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.52**	**83**	*e*Pn	**Pn**	**09 39 36.2**	**+0.9**
PBDV				*e*Sn	**Sn**	**09 40 17.4**	**+0.4**
PBDV				A	A	09 40 26.1	
	7.8nm,0.5s						
PVAQ	**Vaqueiros**	**3.71**	**81**	P	**Pn**	**09 39 38.9**	**+1.0**
PVAQ				S	**Sn**	**09 40 21.2**	**-0.4**
	8.8nm,0.5s						
PVAQ	**Vaqueiros**	**3.71**	**81**	*e*Pn	**Pn**	**09 39 38.9**	**+1.0**
PVAQ				*e*Sn	**Sn**	**09 40 21.2**	**-0.4**
PVAQ				A	A	09 40 23.3	
	8.8nm,0.5s						
PBEJ	**Beja**	**3.71**	**71**	S	**Sn**	**09 40 21.5**	**-0.3**
	3.6nm,0.4s						
PBEJ	**Beja**	**3.71**	**71**	*e*Sn	**Sn**	**09 40 21.5**	**-0.3**
PBEJ				A	A	09 40 23.7	
	7.1nm,0.4s						
EVO	**Evora**	**3.78**	**63**	P	**Pn**	**09 39 39.7**	**+0.8**
EVO				S	**Sn**	**09 40 23.2**	**-0.3**
EVO	**Evora**	**3.78**	**63**	*e*P	**Pn**	**09 39 39.7**	**+0.8**
EVO				*e*S	**Sn**	**09 40 23.2**	**-0.3**
EVO	**Evora**	**3.78**	**63**	*e*Sn	**Sn**	**09 40 23.7**	**+0.2**
EVO				A	A	09 40 25.4	
	12nm,0.3s						
PSBE	**So Bento**	**3.82**	**45**	*e*Pn	**Pn**	**09 39 41.2**	**+1.8**
PSBE				*e*Sn	**Sn**	**09 40 26.9**	**+2.5**
PMTG	**Montargil**	**3.90**	**55**	P	**Pn**	**09 39 41.5**	**+1.0**
PMTG				S	**Sn**	**09 40 26.3**	**0.0**
	3.5nm,0.5s						
PMTG	**Montargil**	**3.90**	**55**	*e*Pn	**Pn**	**09 39 41.5**	**+1.0**
PMTG				*e*Sn	**Sn**	**09 40 26.3**	**0.0**
PMTG				A	A	09 40 31.7	
	3.5nm,0.5s						
EGRO	**El Granado**	**3.91**	**79**	P	**Pn**	**09 39 41.0**	**+0.4**
	0.2nm,0.1s,SNR=4.6						
EGRO				S	**Sn**	**09 40 26.0**	**-0.5**
	8.2nm,0.1s,SNR=6.2						
PESTR	**Estremoz**	**4.23**	**61**	*e*Sn	**Sn**	**09 40 34.0**	**-0.5**
PESTR				A	A	09 40 36.2	
	3.7nm,0.3s						
PCAS	**Casmilo, Conde**	**4.35**	**42**	P	**Pn**	**09 39 48.1**	**+1.3**
PCAS				S	**Sn**	**09 40 37.6**	**0.0**
PCAS	**Casmilo, Conde**	**4.35**	**42**	*e*Pn	**Pn**	**09 39 48.1**	**+1.3**
PCAS				*e*Sn	**Sn**	**09 40 37.6**	**0.0**
PBAR	**Barrancos**	**4.38**	**71**	P	**Pn**	**09 39 48.3**	**+1.1**
PBAR				S	**Sn**	**09 40 37.3**	**-1.0**
	4.2nm,0.2s						
PBAR	**Barrancos**	**4.38**	**71**	*e*Pn	**Pn**	**09 39 48.3**	**+1.1**
PBAR				*e*Sn	**Sn**	**09 40 37.3**	**-1.0**
PBAR				A	A	09 40 39.9	
	4.2nm,0.2s						
EMIN	**Mina Concepcio**	**4.58**	**77**	P	**Pn**	**09 39 49.7**	**-0.1**
	0.4nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**09 40 41.6**	**-1.5**
	2.6nm,0.1s,SNR=8.2						
PMRV	**Marv??o**	**4.63**	**55**	P	**Pn**	**09 39 51.5**	**+0.9**
PMRV				S	**Sn**	**09 40 43.9**	**-0.6**
	3.0nm,0.2s						
PMRV	**Marv??o**	**4.63**	**55**	*e*Pn	**Pn**	**09 39 51.5**	**+0.9**
PMRV				*e*Sn	**Sn**	**09 40 43.9**	**-0.6**
PMRV				A	A	09 40 46.2	
	3.0nm,0.2s						
PCBR	**Castelo Branco**	**4.81**	**51**	P	**Pn**	**09 39 54.4**	**+1.4**
PCBR	**Castelo Branco**	**4.81**	**51**	*e*Pn	**Pn**	**09 39 54.4**	**+1.4**
PVIS	**Viseu**	**5.15**	**41**	S	**Sn**	**09 40 56.9**	**-0.4**
	1.7nm,0.5s						
PVIS	**Viseu**	**5.15**	**41**	*e*Sn	**Sn**	**09 40 56.9**	**-0.4**
PVIS				A	A	09 41 09.3	
	3.3nm,0.5s						
ECAB	**El Cabril**	**5.61**	**76**	P	**Pn**	**09 40 04.4**	**+0.4**
	0.6nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**09 41 06.5**	**-2.1**
	4.8nm,0.3s,SNR=7.8						
POLO	**Lamas de Olo**	**5.69**	**37**	P	**Pn**	**09 40 06.3**	**+1.0**
POLO				S	**Sn**	**09 41 09.4**	**-1.3**
POLO	**Lamas de Olo**	**5.69**	**37**	*e*Pn	**Pn**	**09 40 06.3**	**+1.0**
POLO				*e*Sn	**Sn**	**09 41 09.4**	**-1.3**
MVO	**Moncorvo**	**5.93**	**42**	P	**Pn**	**09 40 09.0**	**+0.5**
	1.5nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**09 41 15.5**	**-1.0**
	3.0nm,0.8s,SNR=7.9						
MVO	**Moncorvo**	**5.93**	**42**	*e*Pn	**Pn**	**09 40 09.2**	**+0.7**
MVO				*e*Sn	**Sn**	**09 41 15.7**	**-0.8**
MVO				A	A	09 41 21.4	
	1.8nm,0.3s						
PGAV	**Gavieira, Arco**	**5.96**	**30**	P	**Pn**	**09 40 10.1**	**+1.2**
PGAV				S	**Sn**	**09 41 15.3**	**-2.0**
	2.8nm,0.9s						
PGAV	**Gavieira, Arco**	**5.96**	**30**	*e*Pn	**Pn**	**09 40 10.1**	**+1.2**
PGAV				*e*Sn	**Sn**	**09 41 15.3**	**-2.0**
PGAV				A	A	09 41 19.6	
	2.8nm,0.9s						
ELOB	**Lobios**	**5.97**	**32**	P	**Pn**	**09 40 10.2**	**+1.1**
	1.7nm,0.3s,SNR=4.8						
ELOB				S	**Sn**	**09 41 15.9**	**-1.5**
	2.1nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.28**	**76**	P	**Pn**	**09 40 13.5**	**+0.3**
	0.4nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**09 41 22.6**	**-2.4**
	2.0nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.58**	**22**	S	**Sn**	**09 41 29.3**	**-3.1**
	6.5nm,0.5s,SNR=7.9						
ECAL	**Calabor**	**6.64**	**39**	P	**Pn**	**09 40 18.9**	**+0.7**
	2.7nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.74**	**27**	P	**Pn**	**09 40 20.3**	**+0.7**
	0.9nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**09 41 33.3**	**-3.2**
	3.5nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**6.81**	**65**	S	**Sn**	**09 41 35.2**	**-3.0**
	2.0nm,0.5s,SNR=7.9						
GUD	**Guadarrama**	**7.39**	**57**	S	**Sn**	**09 41 50.4**	**-2.3**
	2.3nm,0.5s,SNR=7.9						
ETOR	**Torete**	**8.91**	**61**	P	**Pn**	**09 40 50.1**	**+0.7**
	4.3nm,0.3s,SNR=7.9						

TRN ***14*** *09:56:27.2, 10°.96N×62°.11W, h95km, MD3.3*
FUNV ***14*** *09:56:29.1, 11°.02N×62°.21W, h19km, MW3.0*
ISC 14 09:56:27.3±2.2, 10°.97N±0°.07×62°.15W±0°.05, h89km±22km, n9, σ0§90/16, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.80**	**113**	⇑*i*P	**Pn**	**09 56 45.1**	**+0.3**
TRN				*e*S	**Sn**	**09 56 57.2**	**-0.6**
TRN	**Trinidad (W)**	**0.80**	**113**	*e*P	**Pn**	**09 56 45.1**	**+0.3**
TRN				*e*S	**Sn**	**09 56 57.7**	**-0.1**
CRUV	**Carupano**	**1.10**	**255**	*e*P	**Pn**	**09 56 48.3**	**+0.1**
CRUV				*e*S	**Sn**	**09 57 02.6**	**-1.2**
GRGR	**Grenville**	**1.25**	**23**	*e*P	**Pn**	**09 56 50.0**	**0.0**
GRGR				*e*S	**Sn**	**09 57 08.0**	**+0.9**
GRGR	**Grenville**	**1.25**	**23**	*e*P	**Pn**	**09 56 50.3**	**+0.3**
GRGR				*e*S	**Sn**	**09 57 08.3**	**+1.3**
TOSP	**Speyside**	**1.62**	**78**	*e*P	**Pn**	**09 56 55.2**	**+0.7**
TOSP				*e*S	**Sn**	**09 57 14.1**	**-1.1**
GCMP	**Grenada, Carri**	**1.67**	**25**	*e*P	**Pn**	**09 56 54.7**	**-0.4**
GCMP				*e*S	**Sn**	**09 57 16.0**	**-0.3**
SVB	**Belmont**	**2.45**	**21**	*e*S	**Sn**	**09 57 33.2**	**-1.6**
BIRV	**Birongo**	**4.08**	**263**	*e*P	**Pn**	**09 57 28.2**	**+0.8**

UPP ***14*** *10:01:05.9±2.6, 64°.58N×31°.13E, h0km, ML1.7, Suspected explosion*
HEL ***14*** *10:01:08.2±0.1, 64°.74N×30°.69E, h0km, ML2.1, Explosion*
KOLA ***14*** *10:01:08.2, 64°.74N×30°.27E, h0km, ML2.5, Karelia,Finland, Oulu area*
BER ***14*** *10:01:09.7±2.3, 64°.75N×30°.67E, h0km, ML2.6(NAO), Suspected explosion*
NAO ***14*** *10:01:09.1±1.9, 64°.72N×30°.94E, ML2.6*
IDC ***14*** *10:01:10.7±1.6, 64°.78N×30°.39E, h0km, mb1 3.1/3, mb1mx2.9/38, mbtmp2.9/3, ML2.2/3, Error ellipse: s-maj=23.1km s-min=7.6km az=103.0*
ISC 14 10:01:09.3±1.0, 64°.81N±0°.03×30°.69E±0°.05, h0km, n50, σ1§54/71, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.27**	**345**	PG	**Pg**	**10 01 31.8**	**-1.7**
	baz=163						
KU6				MSG		10 01 48.4	
	comp=Z,9.8nm,0.2s						
KU6				SG	**Sg**	**10 01 49.6**	**-0.3**
MSF	**Maaselka**	**1.31**	**329**	PG	**Pg**	**10 01 32.5**	**-1.8**
	baz=152						
MSF				SG	**Sg**	**10 01 51.0**	**-0.2**
JOF	**Joensuu**	**1.92**	**171**	PG	**Pn**	**10 01 41.4**	**-1.7**
OUL	**Oulu**	**2.06**	**280**	PG	**Pn**	**10 01 45.2**	**+0.1**
OUL				SG	**Sn**	**10 02 11.2**	**-0.1**
OUF	**Merijarvi**	**2.61**	**263**	PG	**Pn**	**10 01 53.5**	**+1.0**
	baz=84						
OUF				MSG		10 02 24.9	
	comp=Z,16nm,0.2s						
OUF				SG	**Sb**	**10 02 27.5**	**-1.8**
RNF	**Rovaniemi**	**2.65**	**315**	PG	**Pn**	**10 01 54.8**	**+1.7**
RNF				SG	**Sb**	**10 02 29.2**	**-1.3**
OBF0	**Syolatti, Pyha**	**2.79**	**267**	PG	**Pn**	**10 01 56.4**	**+1.3**
OBF0				SG	**Sb**	**10 02 33.8**	**-0.9**
SUF	**Sumiainen**	**2.91**	**226**	PB	**Pn**	**10 01 57.7**	**+1.0**
SUF				MSG		10 02 32.4	
	comp=Z,7.0nm,0.2s						
SUF				SG	**Sb**	**10 02 36.4**	**-1.6**
TOF	**Tornio**	**2.95**	**299**	PB	**Pn**	**10 01 58.5**	**+1.3**
TOF				MSG		10 02 35.8	
	comp=Z,5.0nm,0.2s						
TOF				SB	**Sn**	**10 02 36.1**	**+2.8**
APA0	**Apatity Array**	**2.96**	**17**	Pn	**Pn**	**10 01 57.1**	**-0.3**
APA0				Sn	**Sn**	**10 02 36.3**	**+2.7**
	baz=184,slow=37						
APA0				Lg	Lg	10 02 43.2	
	baz=196,slow=37						
APA0	**Apatity Array**	**2.96**	**17**	Pn	**Pn**	**10 01 57.1**	**-0.3**
APA0				Sg	**Sg**	**10 02 43.2**	**-1.0**
	baz=196,slow=37						
APA0	**Apatity Array**	**2.96**	**17**	P	**Pn**	**10 01 57.5**	**+0.1**
APA0				S	**Sn**	**10 02 34.5**	**+0.9**
APA	**Apatity**	**2.98**	**20**	P	**Pn**	**10 01 58.0**	**+0.2**
APA				S	**Sn**	**10 02 35.2**	**+1.0**
VRF	**Varrio**	**2.98**	**352**	PN	**Pn**	**10 01 57.7**	**-0.1**
	baz=172						
VRF				MSG		10 02 37.9	
	comp=Z,3.4nm,0.2s						
SGF	**Sodankyl**	**3.14**	**329**	PG	**Pb**	**10 02 07.4**	**+1.5**
	baz=149						
SGF				SB	**Sb**	**10 02 42.4**	**-2.3**
KALU	**Kalix**	**3.25**	**292**	P	**Pn**	**10 02 01.4**	**-0.1**
KALU				S	**Sn**	**10 02 43.1**	**+2.3**
KALU	**Kalix**	**3.25**	**292**	SG	**Sb**	**10 02 49.1**	**+1.2**
KAF	**Kangasniemi**	**3.35**	**218**	PB	**Pn**	**10 02 04.6**	**+1.9**
KEF	**Keuruu**	**3.72**	**227**	PB	**Pn**	**10 02 09.4**	**+1.5**
PAJU	**Pajala**	**3.82**	**309**	P	**Pn**	**10 02 09.1**	**-0.2**
PAJU	**Pajala**	**3.82**	**309**	PN	**Pn**	**10 02 09.3**	**+0.1**
SJUU	**Sjulsmark**	**3.90**	**284**	P	**Pn**	**10 02 10.2**	**-0.1**
VAF	**Ylistaro**	**3.96**	**247**	PB	**Pn**	**10 02 13.2**	**+2.1**
	baz=56						
FIA0	**FINESS Array S**	**3.97**	**214**	Pn	**Pn**	**10 02 11.0**	**-0.4**
	baz=41,slow=12						
FIA0				Pg	**Pb**	**10 02 19.4**	**-0.6**
	baz=32,slow=16						
FIA0				Lg	Lg	10 03 10.3	
	baz=29,slow=28						
FIA0	**FINESS Array S**	**3.97**	**214**	Pn	**Pn**	**10 02 11.0**	**-0.4**
	baz=41,slow=12						
FIA0				Pg	**Pb**	**10 02 19.4**	**-0.6**
	baz=32,slow=16						
FIA0				Sg	**Sb**	**10 03 10.3**	**+1.8**
	baz=29,slow=28						
FINES	**FINESS Array B**	**3.97**	**214**	Pn	**Pn**	**10 02 09.9**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=6.1						
FINES				Pg	**Pb**	**10 02 19.6**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=32,slow=16,SNR=6.1						
FINES				Lg	Lg	10 03 12.3	
	comp=Z,1.2nm,0.3s,baz=29,slow=28,SNR=12						
BURU	**Burvik**	**4.01**	**271**	P	**Pn**	**10 02 10.6**	**-1.2**
BURU				S	**Sn**	**10 02 59.0**	**-0.3**
BURU	**Burvik**	**4.01**	**271**	PN	**Pn**	**10 02 11.0**	**-0.8**
BURU				SG	**Sb**	**10 03 13.0**	**+3.5**
HARU	**Harads**	**4.27**	**293**	P	**Pn**	**10 02 15.5**	**+0.1**
ODEU	**Stanfors**	**4.32**	**269**	P	**Pn**	**10 02 14.3**	**-1.7**
UMAU	**Umeaa**	**4.45**	**263**	P	**Pn**	**10 02 16.1**	**-1.8**
UMAU	**Umeaa**	**4.45**	**263**	SG	**Sb**	**10 03 26.4**	**+4.1**
HEF	**Hetta**	**4.57**	**325**	PG	**Pb**	**10 02 31.5**	**+1.2**
HEF				SG	**Sb**	**10 03 28.6**	**+2.7**
DUNU	**Dundret**	**4.75**	**304**	P	**Pn**	**10 02 22.4**	**+0.4**
LANU	**Lannavaara**	**4.77**	**317**	P	**Pn**	**10 02 21.3**	**-1.1**
SVAU	**Svanoeiden**	**4.79**	**271**	P	**Pn**	**10 02 21.4**	**-1.1**
PVF	**Pernaja**	**4.82**	**210**	SG	**Sb**	**10 03 35.9**	**+2.9**
ARA0	**ARCESS Array S**	**5.16**	**339**	Pn	**Pn**	**10 02 26.7**	**-0.9**
	baz=155,slow=14						
ARA0	**ARCESS Array S**	**5.16**	**339**	Pn	**Pn**	**10 02 26.7**	**-0.9**
	baz=155,slow=14						
ARCES	**ARCESS Array B**	**5.16**	**339**	Pn	**Pn**	**10 02 26.8**	**-0.9**
	baz=157,slow=15,SNR=60						
ARCES				Sn	**Sn**	**10 03 25.6**	**-2.1**
	baz=158,slow=25,SNR=5.3						
ARCES				Lg	Lg	10 03 50.1	
	baz=154,slow=34,SNR=5.1						
RATU	**Laukkuluspa**	**5.40**	**309**	P	**Pn**	**10 02 30.8**	**-0.2**
KOVU	**Salmi**	**5.43**	**314**	P	**Pn**	**10 02 31.3**	**0.0**
I37NO	**I37NO**	**6.38**	**317**	*i*		10 38 52.0	
	baz=128,slow=322,SNR=5.7						
HFS	**Hagfors**	**9.14**	**247**	Pn	**Pn**	**10 03 20.9**	**-1.3**
	baz=59,slow=12						
HFS	**Hagfors**	**9.14**	**247**	Pn	**Pn**	**10 03 20.9**	**-1.3**
	baz=59,slow=12						
NB2	**NORSAR Subarra**	**9.63**	**256**	Pn	**Pn**	**10 03 28.1**	**-0.8**
NB2	**NORSAR Subarra**	**9.63**	**256**	Pn	**Pn**	**10 03 28.1**	**-0.8**
NOA	**NORSAR Array B**	**9.63**	**256**	Pn	**Pn**	**10 03 24.9**	**-4.1**
	comp=Z,0.0nm,0.3s,baz=56,slow=12,SNR=1.6						
NRA0	**NORESS Array S**	**9.66**	**254**	Pn	**Pn**	**10 03 28.5**	**-0.8**
	baz=50,slow=16						
NRA0	**NORESS Array S**	**9.66**	**254**	Pn	**Pn**	**10 03 28.5**	**-0.8**
	baz=50,slow=16						

SOME ***14*** *10:12:53.8, 43°.33N×71°.90E, h25km*
NNC ***14*** *10:12:54.8±1.4, 42°.79N×71°.71E, h0km, mb2.7, mpv2.1, Error ellipse: s-maj=44.4km s-min=4.4km az=11.0*
KRNET ***14*** *10:12:55.2±0.1, 43°.21N×71°.92E, h23km, mb2.5*
ISC 14 10:12:54.3±1.3, 43°.24N±0°.05×71°.95E±0°.03, h3km±14km, n16, σ1§17/32, 11C-9D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAS	**Manas**	**0.86**	**151**	⇑*i*P	**Pg**	**10 13 10.6**	**-0.2**
	baz=49						
MNAS				⇑*i*S	**Sg**	**10 13 22.5**	**+0.6**
	baz=49						
KK31	**Karatay Array**	**1.06**	**263**	⇓P	**Pg**	**10 13 13.2**	**-1.4**
	0.2nm,0.2s,baz=106,slow=9.1,SNR=20						
KK31				⇑S	**Sg**	**10 13 25.6**	**-2.7**
	1.7nm,0.3s,baz=116,slow=18,SNR=18						
EKS2	**Erkin-Say**	**1.46**	**113**	⇓*i*P	**Pg**	**10 13 22.4**	**+0.1**
	baz=11						
EKS2				⇓*i*S	**Sg**	**10 13 42.3**	**+1.0**
	baz=11						
BRLS	**Borolday**	**1.56**	**263**	*e*P	**Pg**	**10 13 24.6**	**+0.4**
	baz=56						
BRLS				*e*S	**Sg**	**10 13 47.1**	**+2.6**
	baz=56						
BRLS	**Borolday**	**1.56**	**263**	*e*P	**Pg**	**10 13 24.6**	**+0.4**
	5.2nm,0.3s						
BRLS				*e*S	**Sg**	**10 13 47.0**	**+2.6**
	10nm,0.3s						
AML	**Almayashu**	**1.70**	**130**	⇑*i*P	**Pb**	**10 13 25.9**	**-0.5**
	baz=29						
AML				⇑*i*S	**Sb**	**10 13 48.6**	**+0.2**
	baz=29						
TRKS	**Terek-Say**	**1.81**	**200**	⇑*i*P	**Pb**	**10 13 27.9**	**-0.3**
	baz=98						
TRKS				⇑*i*S	**Sg**	**10 13 52.4**	**-0.2**
	baz=98						
USP	**Ospenovka**	**1.86**	**88**	⇑*i*P	**Pb**	**10 13 28.6**	**-0.4**
	baz=87						
USP				⇑*i*S	**Sg**	**10 13 53.4**	**-0.7**
	baz=87						
AAK	**Ala-Archa**	**1.96**	**107**	⇑*i*P	**Pb**	**10 13 30.0**	**-0.8**
	baz=6.0						
AAK				⇑*i*S	**Sb**	**10 13 56.3**	**+0.6**
	baz=6.0						
AAK	**Ala-Archa**	**1.96**	**107**	⇓Pn	**Pb**	**10 13 30.2**	**-0.6**
	1.0nm,0.5s						
AAK				⇓Sn	**Sg**	**10 13 58.4**	**+1.0**
	2.0nm,0.5s						
UCH	**Uchtor**	**2.15**	**117**	⇓*i*P	**Pb**	**10 13 32.3**	**-1.7**
	baz=16						
UCH				⇓*i*S	**Sb**	**10 14 00.7**	**-0.5**
	baz=16						
BTLS	**Baital**	**2.35**	**39**	*e*P	**Pn**	**10 13 33.8**	**+0.1**
	1.5nm,0.5s						
BTLS				*e*S	**Sn**	**10 14 02.9**	**-0.2**
	1.9nm,0.3s						
TKM2	**Tokmak 2**	**2.69**	**96**	⇓Pn	**Pb**	**10 13 43.7**	**+0.4**
	0.8nm,0.4s						
TKM2				⇓Sn	**Sb**	**10 14 17.3**	**+0.6**
	2.2nm,0.5s						
KRBS	**Karabastau**	**2.75**	**79**	*e*P	**Pb**	**10 13 42.9**	**-1.2**
	0.8nm,0.6s						
KRBS				*e*S	**Sb**	**10 14 18.6**	**+0.4**
	5.8nm,0.4s						
DGS	**Degeres**	**2.79**	**89**	*e*P	**Pb**	**10 13 44.1**	**-0.8**
	1.9nm,0.4s						
DG

WRAB	**Tennant Creek**	**24.34**	**152**	P	**P**	**10 37 29.4**	**-0.6**
WRAB				IAmb	IAmb	10 37 48.1	
	comp=Z,5.8nm,1.2s						
WRA	**Warramunga Arr**	**24.35**	**152**	P	**P**	**10 37 27.8**	**-2.2**
	comp=Z,1.5nm,0.6s,baz=328,slow=11,SNR=9.1						
WRA	**Warramunga Arr**	**24.35**	**152**	IAmb	IAmb	10 37 30.9	
	comp=Z,0.4nm,1.4s						
WB2	**Warramunga Arr**	**24.35**	**152**	P	**P**	**10 37 29.1**	**-0.9**
WB2				IAmb	IAmb	10 37 51.3	
	comp=Z,5.5nm,1.2s						
WR0	**Warramunga Arr**	**24.46**	**151**	P	**P**	**10 37 29.3**	**-1.7**
WR0				IAmb	IAmb	10 37 34.6	
	comp=Z,5.5nm,0.9s						
COEN	**Coen**	**25.74**	**127**	P	**P**	**10 37 42.7**	**-0.1**
COEN				IAmb	IAmb	10 37 47.6	
	comp=Z,13nm,1.2s						
ASAR	**Alice Springs**	**27.43**	**156**	P	**P**	**10 37 57.5**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=344,slow=14,SNR=11						
CM31	**Chiang Mai Arr**	**28.46**	**308**	P	**P**	**10 38 08.0**	**+0.8**
CM31				IAmb	IAmb	10 38 18.4	
	comp=Z,2.4nm,0.8s						
JNU	**Nakatsue**	**32.47**	**13**	P	**P**	**10 38 42.0**	**-0.4**
STKA	**Stephens Creek**	**37.89**	**153**	P	**P**	**10 39 29.7**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=343,slow=14,SNR=1.8						
HNR	**Honiara**	**39.01**	**107**	P	**P**	**10 39 38.6**	**-0.2**
CAN	**Canberra**	**44.31**	**148**	P	**P**	**10 40 22.4**	**+0.5**
MK31	**Makanchi Array**	**56.99**	**328**	P	**P**	**10 41 57.9**	**+0.5**
MK31				IAmb	IAmb	10 41 59.0	
	comp=Z,0.7nm,0.7s						
MKAR	**Makanchi Array**	**56.99**	**328**	P	**P**	**10 41 58.8**	**+1.4**
	comp=Z,0.8nm,0.5s,baz=118,slow=8.2,SNR=7.4						
MKAR	**Makanchi Array**	**56.99**	**328**	P	**P**	**10 41 57.7**	**+0.3**
MAKZ	**Makanchi**	**57.17**	**328**	P	**P**	**10 41 59.8**	**+1.2**
MAKZ				IAmb	IAmb	10 42 00.5	
	comp=Z,2.3nm,1.4s						
KURBB	**Kurchatov Arra**	**61.34**	**330**	P	**P**	**10 42 28.6**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=123,slow=6.0,SNR=4.7						
KURK	**Kurchatov**	**61.35**	**330**	P	**P**	**10 42 28.6**	**+1.3**

IDC ***14*** *10:34:02.0±2.1, 62.°91N×28.°63E, h0km, mb1 3.3/3, mb1mx2.9/52, mbtmp3.2/3, ML1.9/3, Error ellipse: s-maj=32.2km s-min=9.9km az=107.0*
HEL ***14*** *10:34:04.8, 63.°13N×27.°73E, h0km, ML2.0, Explosion*
UPP ***14*** *10:34:09.3±3.0, 63.°17N×26.°82E, h0km, ML2.0, Suspected explosion*
ISC 14 10:34:04.4±0.9**, 63.°09N**±0.°03×**27.°60E**±0.°05**, h0**km**, n38,** σ1°**14/48, Finland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SUF	**Sumiainen**	**0.76**	**241**	*e*P		**Pg**	**10 34 19.6**	**+0.6**
SUF				*e*S		**Sb**	**10 34 30.9**	**-0.5**
KAF	**Kangasniemi**	**1.15**	**212**	*e*P		**Pg**	**10 34 26.4**	**0.0**
	baz=29							
KEF	**Keuruu**	**1.56**	**235**	*e*P		**Pb**	**10 34 34.2**	**0.0**
KEF				MSG			10 34 53.8	
	comp=Z,7.2nm,0.2s							
JOF	**Joensuu**	**1.70**	**94**	*e*P		**Pn**	**10 34 34.1**	**-1.2**
FIA0	**FINESS Array S**	**1.80**	**204**	*e*PN		**Pb**	**10 34 38.1**	**-0.1**
FIA0				*e*SN		**Sg**	**10 35 02.1**	**-0.1**
FINES	**FINESS Array B**	**1.80**	**204**	Pn		**Pb**	**10 34 38.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=34,slow=16,SNR=11							
FINES				Sn		**Sg**	**10 35 02.6**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=36,slow=24,SNR=13							
OUF	**Merijarvi**	**1.81**	**316**	*e*P		**Pn**	**10 34 37.3**	**+0.5**
	baz=132							
OUF				MSG			10 34 59.0	
	comp=Z,10nm,0.2s							
OBF0	**Syolatti, Pyha**	**2.05**	**315**	*e*PG		**Pb**	**10 34 42.1**	**-0.5**
	baz=127							
OUL	**Oulu**	**2.14**	**340**	*e*PB		**Pn**	**10 34 42.3**	**+1.0**
	baz=152							
OUL				*e*SG		**Sb**	**10 35 11.9**	**+0.9**
VAF	**Ylistaro**	**2.24**	**271**	*e*PB		**Pb**	**10 34 45.3**	**-0.5**
VAF				MSG			10 35 12.9	
	comp=Z,9.6nm,0.2s							
VAF				*e*SG		**Sg**	**10 35 15.9**	**-0.5**
VJF	**Virojoki**	**2.56**	**180**	MSG			10 35 21.5	
	comp=Z,5.9nm,0.2s							
VJF				*e*SB		**Sb**	**10 35 23.6**	**+0.5**
PVF	**Pernaja**	**2.69**	**199**	*e*PB		**Pb**	**10 34 52.8**	**-0.5**
PVF				MSG			10 35 25.6	
	comp=Z,3.3nm,0.2s							
MSF	**Maaselka**	**2.90**	**12**	*e*P		**Pn**	**10 34 52.4**	**+0.6**
KU6	**Riekki**	**3.11**	**18**	*e*P		**Pn**	**10 34 55.6**	**+0.9**
KU6				MSG			10 35 34.5	
	comp=Z,4.1nm,0.2s							
KU6				*e*SG		**Sb**	**10 35 38.4**	**-0.6**
BURU	**Burvik**	**3.14**	**301**	*e*P		**Pn**	**10 34 57.8**	**+2.8**
UMAU	**Umeaa**	**3.20**	**287**	*e*P		**Pn**	**10 34 56.8**	**+0.8**
TOF	**Tornio**	**3.32**	**336**	*e*PG		**Pb**	**10 35 05.6**	**+1.5**
KALU	**Kalix**	**3.33**	**328**	P		**Pn**	**10 34 59.3**	**+1.6**
KALU				S		**Sn**	**10 35 36.7**	**-1.2**
KALU	**Kalix**	**3.33**	**328**	*e*P		**Pn**	**10 34 59.3**	**+1.6**
KALU				*e*S		**Sn**	**10 35 36.7**	**-1.2**
OLKF	**Oulanka, Finla**	**3.33**	**13**	*e*P		**Pn**	**10 34 59.6**	**+1.8**
OLKF				*e*SG		**Sb**	**10 35 46.7**	**+1.3**
RAF	**Rauma**	**3.44**	**236**	*e*PG		**Pg**	**10 35 08.8**	**-1.5**
SJUU	**Sjulsmark**	**3.56**	**316**	P		**Pn**	**10 35 01.4**	**+0.5**
SJUU	**Sjulsmark**	**3.56**	**316**	*e*P		**Pn**	**10 35 01.4**	**+0.5**
RNF	**Rovaniemi**	**3.60**	**350**	*e*PB		**Pb**	**10 35 06.5**	**-2.3**
LILU	**Lilltraesk**	**4.04**	**306**	P		**Pn**	**10 35 07.5**	**+0.1**
LILU	**Lilltraesk**	**4.04**	**306**	*e*P		**Pn**	**10 35 07.5**	**+0.1**
HARU	**Harads**	**4.20**	**320**	P		**Pn**	**10 35 10.5**	**+0.9**
HARU	**Harads**	**4.20**	**320**	*e*P		**Pn**	**10 35 10.5**	**+0.9**
PAJU	**Pajala**	**4.38**	**336**	P		**Pn**	**10 35 13.2**	**+1.1**
PAJU	**Pajala**	**4.38**	**336**	*e*P		**Pn**	**10 35 13.8**	**+1.6**
SGF	**Sodankyl**	**4.39**	**355**	*e*P		**Pn**	**10 35 13.7**	**+1.4**
LANU	**Lannavaara**	**5.49**	**337**	P		**Pn**	**10 35 28.9**	**+1.4**
LANU	**Lannavaara**	**5.49**	**337**	*e*P		**Pn**	**10 35 28.9**	**+1.4**
NIKU	**Nikkaluoka**	**5.97**	**327**	P		**Pn**	**10 35 34.6**	**+0.7**
NIKU	**Nikkaluokta**	**5.97**	**327**	*e*P		**Pn**	**10 35 34.6**	**+0.7**
ARCES	**ARCESS Array B**	**6.53**	**354**	Pn		**Pn**	**10 35 40.5**	**-1.1**
	baz=168,slow=15,SNR=12							
ARCES				Sn		**Sn**	**10 36 56.0**	**-0.7**
	baz=178,slow=22,SNR=2.3							
HFS	**Hagfors**	**7.26**	**252**	Pn		**Pn**	**10 35 53.5**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=68,slow=16,SNR=2.0							
NOA	**NORSAR Array B**	**7.96**	**262**	Pn		**Pn**	**10 36 02.6**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=72,slow=14,SNR=1.4							

ATH ***14*** *10:52:53.0, 36.°22N×29.°27E, h33km±12km, ML2.8/3, Error ellipse: s-maj=13.4km s-min=1.5km az=118.0*
DDA ***14*** *10:52:52.4, 35.°96N×29.°28E, h21km±1km, ML2.9*
ISK ***14*** *10:52:53.3, 36.°02N×29.°29E, h7km, ML3.0/16*
NIC ***14*** *10:52:54.5±0.0, 35.°93N×29.°41E, h20km±1km, MI3.4/3*
ISC 14 10:52:53.9±1.1**, 36.°03N**±0.°03×**29.°33E**±0.°02**, h34**km±2**km, n43,** σ1°**60/60, 3C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSL	**Kastellorizon**	**0.24**	**59**	P		**Pb**	**10 53 00.4**	**-0.6**
KSL				S		**Sb**	**10 53 05.0**	**-0.8**
KSL				AML		AML	10 53 06.2	
	comp=E,14764μm,0.3s							
KSL				AML		AML	10 53 07.6	
	comp=N,7547μm,0.4s							
KSL	**Kastellorizon**	**0.24**	**59**	⇓P		**Pb**	**10 53 00.4**	**-0.6**
KSL				S		**Sb**	**10 53 05.7**	**-0.1**
AKAS	**Kas**	**0.31**	**47**	*i* P		**Pb**	**10 53 00.2**	**-1.7**
AKAS				*i* S		**Sn**	**10 53 06.2**	**-0.5**
AKAS				IAML			10 53 08.0	
	comp=N,2μm,0.5s							
AKAS				IAML			10 53 09.0	
	comp=E,2μm,0.3s							
AKAS	**Kas**	**0.31**	**47**	PG		**Pb**	**10 53 00.4**	**-1.5**
AKAS				SG		**Sn**	**10 53 05.6**	**-1.2**
FETY	**Fethiye**	**0.64**	**342**	PG		**Pb**	**10 53 05.6**	**-1.0**
FETY				SG		**Sb**	**10 53 15.2**	**-0.5**
ELL	**Elmali**	**0.86**	**33**	PG		**Pb**	**10 53 10.7**	**+0.2**
ELL	**Elmali**	**0.86**	**33**	S		**Sb**	**10 53 25.7**	**+3.8**
AKUM	**Antalya-Kumluc**	**0.87**	**70**	*i* P		**Pb**	**10 53 11.0**	**+0.3**
AKUM				*i* S		**Sb**	**10 53 23.7**	**+1.6**
AKUM				IAML			10 53 26.0	
	comp=N,321nm,0.4s							
AKUM				IAML			10 53 28.0	
	comp=E,429nm,0.3s							
DALY	**Dalyan (Mula)**	**0.96**	**326**	*i* P		**Pb**	**10 53 11.2**	**-0.9**
DALY				*i* S		**Sb**	**10 53 25.2**	**+0.7**
DALY				IAML			10 53 29.0	
	comp=N,324nm,0.4s							
DALY				IAML			10 53 31.0	
	comp=E,226nm,0.5s							
DALY	**Dalyan (Mula)**	**0.96**	**326**	PG		**Pb**	**10 53 11.8**	**-0.3**
DALY				SG		**Sb**	**10 53 25.4**	**+0.9**
ARG	**Arkhangelos**	**0.99**	**281**	P		**Pn**	**10 53 10.3**	**-1.1**
ARG				AML		AML	10 53 38.1	
	comp=N,671μm,0.6s							
ARG				AML		AML	10 53 42.1	
	comp=E,1034μm,1.1s							
ARG	**Arkhangelos**	**0.99**	**281**	PG		**Pb**	**10 53 12.5**	**-0.1**
ARG	**Arkhangelos**	**0.99**	**281**	P		**Pb**	**10 53 14.5**	**+1.9**
CAEL	**Denizli, Camel**	**1.10**	**360**	*i* P		**Pb**	**10 53 15.1**	**+0.6**
CAEL				*i* S		**Sb**	**10 53 30.7**	**+2.1**
CAEL				IAML			10 53 35.0	
	comp=E,521nm,0.5s							
CAEL				IAML			10 53 45.0	
	comp=N,530nm,0.7s							
TURN	**Turunc**	**1.15**	**311**	PN		**Pb**	**10 53 15.5**	**+0.2**
KORT	**Korkueli**	**1.28**	**40**	PN		**Pb**	**10 53 18.5**	**+1.0**
KORT				SN		**Sb**	**10 53 36.6**	**+2.9**
YER	**Yerkesik**	**1.39**	**323**	PN		**Pb**	**10 53 19.5**	**+0.1**
YER				SN		**Sb**	**10 53 38.7**	**+1.8**
MULA	**Mugla, Merkez-**	**1.47**	**327**	*i* P		**Pb**	**10 53 20.3**	**-0.4**
MULA				IAML			10 53 44.0	
	comp=E,471nm,0.8s							
MULA				IAML			10 53 45.0	
	comp=N,296nm,0.4s							
MLSB	**Milas**	**1.78**	**316**	PN		**Pb**	**10 53 25.1**	**-0.8**
KARP	**Karpathos**	**1.82**	**255**	P		**Pb**	**10 53 25.0**	**-1.7**
KARP				S		**Sb**	**10 53 49.6**	**+0.4**
KARP				AML		AML	10 54 07.2	
	comp=N,208μm,0.7s							
KARP				AML		AML	10 54 14.2	
	comp=E,202μm,1.0s							
KARP	**Karpathos**	**1.82**	**255**	PN		**Pb**	**10 53 25.0**	**-1.7**
KARP	**Karpathos**	**1.82**	**255**	P		**Pb**	**10 53 25.2**	**-1.5**
KARP				S		**Sb**	**10 53 48.4**	**-0.8**
KARP				AML		AML	10 53 49.1	
	comp=E,0.1nm,0.4s							
KARP				AML		AML	10 53 49.1	
	comp=E,0.1nm,0.4s							
KARP				AML		AML	10 53 50.7	
	comp=E,0.2nm,0.6s							
KARP				AML		AML	10 53 50.7	
	comp=E,0.2nm,0.6s							
BDRM	**Kayabasi**	**1.84**	**305**	*i* P		**Pb**	**10 53 26.4**	**-0.5**
BDRM				*i* S		**Sb**	**10 53 49.9**	**+0.4**
BDRM				IAML			10 54 02.0	
	comp=N,124nm,0.9s							
BASM	**Basmaki-Afyon**	**1.98**	**17**	PN		**Pb**	**10 53 28.6**	**-0.7**
ISP	**Isparta**	**2.03**	**28**	PN		**Pb**	**10 53 29.4**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**2.24**	**329**	PN		**Pb**	**10 53 31.7**	**-2.0**
SEDI	**Konya, Seydise**	**2.41**	**53**	*i* P		**Pb**	**10 53 34.5**	**-2.2**
SEDI				IAML			10 54 12.0	
	comp=N,51nm,0.5s							
SEDI				IAML			10 54 15.0	
	comp=E,51nm,0.9s							
GAZI	**Gazipasa**	**2.43**	**84**	PN		**Pb**	**10 53 34.7**	**-2.2**
MANT	**Manisa**	**2.54**	**346**	*i* P		**Pb**	**10 53 36.7**	**-2.2**
MANT				IAML			10 54 23.0	
	comp=N,25nm,0.8s							
KULA	**Kula-Manisa**	**2.54**	**348**	PN		**Pb**	**10 53 35.8**	**-3.1**
SMG	**Samos**	**2.61**	**311**	P		**Pn**	**10 53 35.6**	**+1.9**
AKMS	**Akamas**	**2.65**	**111**	⇓P		**Pn**	**10 53 35.0**	**+0.7**
AKMS				AML		AML	10 54 06.4	
	comp=N,0.5nm,0.3s							
AKMS				AML		AML	10 54 06.4	
	comp=N,0.5nm,0.3s							
AKMS				S		**Sn**	**10 54 06.5**	**+1.3**
AKMS				AML		AML	10 54 07.0	
	comp=N,0.8nm,0.2s							
AKMS				AML		AML	10 54 07.0	
	comp=N,0.8nm,0.2s							
USAK	**Uak-Merkez**	**2.70**	**355**	*i* P		**Pb**	**10 53 39.2**	**-2.3**
SHUT	**Suhut-Afyon**	**2.71**	**21**	PN		**Pb**	**10 53 38.7**	**-3.0**
DOGA	**KONYA_Doganhis**	**2.80**	**41**	*i* P		**Pb**	**10 53 40.6**	**-2.7**
DOGA				IAML			10 54 16.0	
	comp=E,66nm,0.4s							
DOGA				IAML			10 54 16.0	
	comp=N,64nm,0.4s							
ALFC	**Alefka**	**2.80**	**107**	P		**Pn**	**10 53 36.5**	**+0.1**
ALFC				AML		AML	10 54 10.2	
	comp=N,0.4nm,0.3s							
ALFC				AML		AML	10 54 10.2	
	comp=N,0.4nm,0.3s							
ALFC				S		**Sn**	**10 54 10.3**	**+1.2**
ALFC				AML		AML	10 54 10.3	
	comp=N,0.4nm,0.2s							
ALFC				AML		AML	10 54 10.3	
	comp=N,0.4nm,0.2s							
NATA	**Nata**	**2.92**	**114**	⇑P		**Pn**	**10 53 39.0**	**+1.0**
OSC1	**CSNet OBS 1**	**2.99**	**147**	P		**Pn**	**10 53 39.4**	**+0.5**
OSC1				S		**Sn**	**10 54 13.6**	**+0.1**
KKBE	**Karaman, Kazim**	**3.14**	**67**	*i* P		**Pb**	**10 53 44.9**	**-4.2**
KKBE				IAML			10 54 22.0	
	comp=E,24nm,0.6s							
KKBE				IAML			10 54 22.0	
	comp=N,29nm,0.8s							
SZAC	**Souni**	**3.17**	**113**	⇑P		**Pn**	**10 53 42.1**	**+0.7**
ASGA	**Asgata**	**3.43**	**110**	⇑P		**Pn**	**10 53 46.0**	**+1.0**
CSS	**Mathiatis**	**3.43**	**107**	P		**Pn**	**10 53 46.4**	**+1.4**
OSC2	**CSNet OBS 4**	**3.81**	**140**	P		**Pn**	**10 53 51.1**	**+0.9**

IDC ***14*** *10:55:37.5±0.5, 5.°53S×153.°08E, h0km, mb4.6/30, mb1 4.7/32, mb1mx4.6/53, mbtmp4.6/32, ML3.4/2, MS3.7/12, Ms1 3.7/12, ms1mx3.5/29, Error ellipse: s-maj=17.0km s-min=11.2km az=99.0*
NEIC ***14*** *10:55:38.4±1.4, 5.°59S±0.°07×153.°12E±0.°07, h10km±1km, mb4.9/46, Error ellipse: s-maj=13.7km s-min=9.7km az=52.0*
BJI ***14*** *10:55:40.5±0.0, 5.°33S×153.°43E, h35km, mB5.1/30, mb4.8/45, Ms4.9/8, Ms7 4.5/5*
DJA ***14*** *10:55:43.9±0.6, 6°S±4°×15°3E±°, h43km±5km, M4.8/26, mB5.2/6, mb4.9/26, MLv4.8/3, Mw(mB)4.6/6*
ISC 14 10:55:40.0±1.5**, 5.°48S**±0.°05×**153.°13E**±0.°06**, h18**km±8**km, n177,** σ1°**30/184, mb4.9/71, MS3.6/12, 2C-1D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RABL	**Rabaul**	**1.60**	**323**	Pn		**Pb**	**10 56 09.5**	**+0.3**
RABL	**Rabaul**	**1.60**	**323**	P		**Pg**	**10 56 10.7**	**-0.3**
MANU	**Manus Island**	**6.69**	**300**	Pn		**Pn**	**10 57 14.9**	**-2.7**
PMG	**Port Moresby**	**7.09**	**236**	Pn		**Pn**	**10 57 23.3**	**+0.2**
	9.9nm,0.3s,baz=59,slow=7.2,SNR=15							
PMG				Sn		**Sn**	**10 58 44.5**	**+1.2**
	5.6nm,0.3s,baz=229,slow=23,SNR=6.5							
PMG				LR		LR	10 59 41.0	
	comp=Z,482nm,20.2s,baz=89,slow=35							
PMG	**Port Moresby**	**7.09**	**236**	Pn		**Pn**	**10 57 21.5**	**-1.6**
PMG	**Port Moresby**	**7.09**	**236**	P		**Pn**	**10 57 25.5**	**+2.4**
HNR	**Honiara**	**7.81**	**121**	Pn		**Pn**	**10 57 36.6**	**+3.6**
	7.8nm,0.3s,baz=180,slow=20,SNR=4.8							
HNR				LR		LR	11 00 25.2	
	comp=Z,456nm,18.6s,baz=258,slow=37							
HNR	**Honiara**	**7.81**	**121**	Pn		**Pn**	**10 57 31.8**	**-1.1**
JAY	**Jayapura**	**12.74**	**283**	Pn		**Pn**	**10 58 44.0**	**+3.4**
	0.4nm,0.3s,baz=11,slow=2.2,SNR=4.6							
GENI	**Genyem**	**13.25**	**282**	P		**Pn**	**10 58 49.7**	**+2.3**
	79nm,1.4s							
MTSU	**Mount Surprise**	**15.24**	**214**	P		**P**	**10 59 21.3**	**+1.8**
	baz=15,SNR=7.8							
CTA	**Charters Tower**	**15.99**	**204**	Pn		**Pn**	**10 59 25.1**	**+0.8**
	0.5nm,0.3s,baz=28,slow=13,SNR=9.9							
CTAO	**Charters Tower**	**15.99**	**204**			**Pn**	**10 59 22.3**	**-2.0**
SANVU	**Saraoutou**	**17.00**	**127**	Pn		**Pn**	**10 59 35.3**	**-1.9**
SANVU				IAmb		IAmb	10 59 47.2	
	comp=Z,105nm,1.1s							
EIDS	**Eidsvold**	**19.87**	**185**	P		**P**	**11 00 11.2**	**+0.7**
	baz=20,SNR=9.5							
EIDS	**Eidsvold**	**19.87**	**185**	P		**P**	**11 00 07.8**	**-2.7**
EIDS				IAmb		IAmb	11 00 12.0	
	comp=Z,38nm,1.0s							
QIS	**Mount Isa**	**19.93**	**220**	P		**P**	**11 00 11.6**	**+0.4**
	baz=20,SNR=17							
DZM	**Mont Dzumac**	**20.93**	**143**	P		**P**	**11 00 22.3**	**+0.3**
	comp=Z,36nm,1.0s,baz=296,slow=11,SNR=7.9							
RMQ	**Roma**	**21.30**	**191**	P		**P**	**11 00 26.3**	**+0.4**
	baz=21,SNR=19							
KDU	**Kakadu**	**21.61**	**249**	P		**P**	**11 00 29.2**	**-0.1**
	baz=22,SNR=53							
SIJI	**Sorong**	**22.30**	**281**	P		**P**	**11 00 37.1**	**+0.2**
	comp=Z,8.2nm,0.4s,baz=62,slow=11,SNR=8.5							
SIJI				LR		LR	11 09 04.5	
	comp=Z,105nm,19.9s,baz=92,slow=36							
SWI	**Sorong**	**22.31**	**281**	P		**P**	**11 00 37.6**	**+0.7**
	comp=Z,1μmcomp=Z,54nm,1.2s							
QLP	**Quilpie**	**22.64**	**201**	P		**P**	**11 00 40.0**	**-0.3**
	baz=23,SNR=13							
MTN	**Manton Dam**	**22.91**	**250**	P		**P**	**11 00 42.7**	**-0.5**
	baz=23,SNR=11							
MTN	**Manton Dam**	**22.91**	**250**	P		**P**	**11 00 42.3**	**-0.9**
MTN				IAmb		IAmb	11 00 49.5	
	comp=Z,94nm,1.4s							
WR0	**Warramunga Arr**	**23.11**	**230**	P		**P**	**11 00 43.1**	**-2.2**
WR0				IAmb		IAmb	11 00 47.4	
	comp=Z,42nm,1.1s							
WB0	**Warramunga Arr**	**23.11**	**230**	P		**P**	**11 00 44.0**	**-1.3**
WB0				IAmb		IAmb	11 00 47.4	
	comp=Z,47nm,1.1s							
WRAB	**Tennant Creek**	**23.24**	**230**	P		**P**	**11 00 45.0**	**-1.7**
WRAB				IAmb		IAmb	11 00 48.6	
	comp=Z,26nm,0.9s							
WB2	**Warramunga Arr**	**23.25**	**230**	P		**P**	**11 00 45.9**	**-0.8**
	baz=23							
WB2	**Warramunga Arr**	**23.25**	**230**	P		**P**	**11 00 45.3**	**-1.4**
WB2				IAmb		IAmb	11 00 48.7	
	comp=Z,26nm,0.9s							
WRA	**Warramunga Arr**	**23.26**	**230**	P		**P**	**11 00 45.7**	**-1.1**
	comp=Z,22nm,1.0s,baz=56,slow=10,SNR=52							
WRA				PcP		**PcP**	**11 04 35.1**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=48,slow=1.8,SNR=5.1							
WRA				LR		LR	11 10 03.5	
	comp=Z,219nm,18.3s,baz=65,slow=37							
WRA	**Warramunga Arr**	**23.26**	**230**	P		**P**	**11 00 43.8**	**-3.1**
WRA				PcP		**PcP**	**11 04 35.3**	**+0.8**
ARMA	**Armidale**	**24.85**	**183**	P		**P**	**11 01 02.1**	**+0.3**
	baz=25,SNR=5.1							
ARMA	**Armidale**	**24.85**	**183**	P		**P**	**11 00 60.0**	**-1.8**
AS31	**Alice Springs**	**25.88**	**224**	P		**P**	**11 01 10.7**	**-0.5**
ASAR	**Alice Springs**	**25.88**	**224**	P		**P**	**11 01 10.1**	**-1.1**
	comp=Z,5.0nm,0.8s,baz=60,slow=9.1,SNR=43							
ASAR				PcP		**PcP**	**11 04 41.1**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=72,slow=2.9,SNR=6.7							
ASAR				ScP		**ScP**	**11 08 23.6**	**+4.4**
	comp=Z,0.8nm,0.9s,baz=47,slow=4.1,SNR=4.1							
ASAR				LR		LR	11 10 45.4	
	comp=Z,160nm,20.1s,baz=82,slow=35							
ASAR	**Alice Springs**	**25.88**	**224**	P		**P**	**11 01 09.3**	**-1.9**
ASAR						**PcP**	**11 04 40.9**	**+0.7**
KNRA	**Kununurra**	**25.98**	**245**	P		**P**	**11 01 11.8**	**-0.3**
	baz=26							
KNRA	**Kununurra**	**25.98**	**245**	P		**P**	**11 01 12.0**	**-0.1**
CMSA	**Cobar Meteorol**	**26.84**	**194**	P		**P**	**11 01 18.8**	**-0.9**
	baz=27,SNR=8.0							
MSVF	**Nonsavu**	**27.23**	**119**	P		**P**	**11 01 25.4**	**+2.0**
STKA	**Stephens Creek**	**28.40**	**201**	P		**P**	**11 01 31.7**	**-1.9**
	comp=Z,11nm,0.9s,baz=8.2,slow=9.4,SNR=21							
STKA				LR		LR	11 13 20.3	
	comp=Z,232nm,18.5s,baz=8.2,slow=38							
STKA	**Stephens Creek**	**28.40**	**201**	P		**P**	**11 01 32.6**	**-1.0**
	baz=28,SNR=11							
STKA	**Stephens Creek**	**28.40**	**201**	P		**P**	**11 01 32.2**	**-1.4**
SOEI	**Soe**	**28.92**	**260**	P		**P**	11 01 49.6	+11
BATI	**Baumata**	**29.56**	**259**	P		**P**	**11 01 43.8**	**-0.4**
	comp=Z,29nm,0.7s,baz=118,slow=5.9,SNR=4.3							
FITZ	**Fitzroy Crossi**	**29.63**	**243**	P		**P**	**11 01 44.1**	**-0.7**
	comp=Z,37nm,0.9s,baz=77,slow=9.4,SNR=78							
FITZ				LR		LR	11 14 18.8	
	comp=Z,116nm,18.4s,baz=57,slow=38							
FITZ	**Fitzroy Crossi**	**29.63**	**243**	P		**P**	**11 01 44.1**	**-0.7**
	baz=30,SNR=52							
FITZ	**Fitzroy Crossi**	**29.63**	**243**	P		**P**	**11 01 43.8**	**-1.0**
CNB	**Canberra Magne**	**29.89**	**186**	P		**P**	**11 01 46.8**	**-0.1**
	baz=30							
WRKA	**Warakurna**	**30.75**	**228**	P		**P**	**11 01 53.6**	**-1.0**
	baz=31,SNR=17							
HTT	**Hallett**	**30.79**	**204**	P		**P**	**11 01 54.1**	**-0.9**
	baz=31,SNR=5.6							
MMRI	**Maumere**	**30.82**	**262**	P		**P**	**11 01 55.1**	**-0.2**
MMRI	**Maumere**	**30.82**	**262**	P		**P**	**11 01 56.1**	**+0.8**
	comp=Z,60nm,1.0s							
BBOO	**Buckleboo**	**31.51**	**208**	P		**P**	**11 01 60.0**	**-1.2**
	baz=32,SNR=6.1	

LZH	**Lanzhou**	**61.95**	**316**	*eP*	**P**	**11 05 59.8**	**+0.5**
LZH				pP	pwP	11 06 12.4	+4.1
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
MA2	**Magadan**	**64.88**	**359**	P	**P**	**11 06 17.9**	**-0.1**
GTA	**Gaotai**	**66.38**	**317**	P	**P**	**11 06 30.0**	**+1.7**
GTA				pP	pwP	11 06 39.3	+2.0
GTA				sP	sP	11 06 43.5	+8.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,46nm,4.0s						
GTA				LR	LR		
	comp=Z,77nm,15.6s						
GTA				LR	LR		
	comp=Z,69nm,17.5s						
ULN	**Ulaanbaatar**	**66.75**	**328**	P	**P**	**11 06 29.8**	**-0.8**
ULN				IAmb	IAmb	11 06 33.2	
	comp=Z,9.6nm,1.1s						
SHL	**Shillong**	**66.94**	**301**	P	**P**	**11 06 32.3**	**+0.1**
SONM	**Songino Array**	**67.07**	**328**	P	**P**	**11 06 34.4**	**+1.8**
	comp=Z,2.2nm,0.5s,baz=147,slow=6.9,SNR=7.3						
SONM	**Songino Array**	**67.07**	**328**	P	**P**	**11 06 32.1**	**-0.5**
SONM				IAmb	IAmb	11 06 35.1	
	comp=Z,10nm,1.4s						
TLY	**Talaya**	**70.83**	**330**	P	**P**	**11 06 55.6**	**-0.1**
TAPN	**Taplejung**	**71.04**	**301**	*eP*	**P**	**11 06 58.2**	**+0.3**
	comp=Z,44nm,1.1s						
ODAN	**Odare**	**71.17**	**301**	*eP*	**P**	**11 06 59.7**	**+1.1**
	comp=Z,49nm,1.0s						
RAMN	**Ramite**	**71.88**	**301**	*eP*	**P**	**11 07 03.4**	**+0.6**
	comp=Z,16nm,1.0s						
VNDA	**Vanda**	**72.14**	**178**	P	**P**	**11 07 03.5**	**+0.3**
	comp=Z,4.3nm,1.0s,baz=326,slow=7.8,SNR=12						
VNDA	**Vanda**	**72.14**	**178**	P	**P**	**11 07 02.5**	**-0.7**
VNDA				IAmb	IAmb	11 07 04.7	
	comp=Z,14nm,1.2s						
JIRN	**Jiri**	**72.42**	**301**	*eP*	**P**	**11 07 06.7**	**+0.4**
	comp=Z,28nm,1.0s						
GUN	**Gumba**	**72.76**	**301**	*eP*	**P**	**11 07 08.8**	**+0.6**
	comp=Z,57nm,0.9s						
PKI	**Pulchoki**	**73.06**	**301**	*eP*	**P**	**11 07 10.2**	**+0.2**
	comp=Z,48nm,1.2s						
KKN	**Kakani**	**73.23**	**301**	*eP*	**P**	**11 07 11.6**	**+0.7**
DMN	**Daman**	**73.33**	**301**	*eP*	**P**	**11 07 12.5**	**+1.0**
	comp=Z,55nm,0.9s						
PALK	**Pallekele**	**73.37**	**279**	P	**P**	**11 07 11.4**	**-0.4**
	comp=Z,12nm,1.0s,baz=212,slow=7.0,SNR=6.2						
PALK	**Pallekele**	**73.37**	**279**	P	**P**	**11 07 11.9**	**+0.1**
PALK				IAmb	IAmb	11 07 13.5	
	comp=Z,15nm,1.0s						
GKN	**Gorkha**	**73.84**	**301**	*eP*	**P**	**11 07 14.9**	**+0.5**
	comp=Z,95nm,1.2s						
BILL	**Bilibino**	**73.93**	**5**	P	**P**	**11 07 14.1**	**+0.2**
KOLN	**Koldanda**	**74.67**	**301**	*eP*	**P**	**11 07 19.8**	**+0.5**
	comp=Z,52nm,0.9s						
PYUN	**Piuthan**	**75.27**	**301**	*eP*	**P**	**11 07 23.2**	**+0.4**
WMQ	**Urumqi**	**76.47**	**317**	*eP*	**P**	**11 07 26.6**	**-2.5**
WMQ				pP	PcP	11 07 41.0	+0.3
WMQ				sP	pwP	11 07 47.0	+8.9
WMQ				PP	**PP**	**11 10 17.8**	**-3.3**
WMQ				S	**S**	**11 17 09.3**	**-4.8**
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.8s						
WMQ				LR	LR		
	comp=Z,2μm,29.0s						
WMQ				LR	LR		
	comp=Z,3μm,29.2s						
WMQ				LR	LR		
	comp=Z,200nm,25.1s						
TIXI	**Tiksi**	**78.61**	**352**	P	**P**	**11 07 40.9**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=126,slow=9.1,SNR=7.4						
TIXI	**Tiksi**	**78.61**	**352**	P	**P**	**11 07 40.7**	**+0.3**
ZSN	**Zaisan**	**79.60**	**320**	*eP*	**P**	**11 07 46.4**	**0.0**
	baz=320						
ZSN				*i* S	**S**	**11 17 47.0**	**-0.6**
	baz=320						
IMAR	**Indian Mountai**	**80.91**	**19**	P	**P**	**11 07 53.2**	**+0.3**
MK31	**Makanchi Array**	**81.05**	**319**	P	**P**	**11 07 53.8**	**-0.4**
MK31				IAmb	IAmb	11 07 56.4	
	comp=Z,7.7nm,1.1s						
MKAR	**Makanchi Array**	**81.05**	**319**	P	**P**	**11 07 54.4**	**+0.2**
	comp=Z,4.5nm,0.9s,baz=101,slow=6.3,SNR=33						
MAKZ	**Makanchi**	**81.26**	**319**	P	**P**	**11 07 55.2**	**-0.1**
MAKZ				IAmb	IAmb	11 07 57.4	
	comp=Z,11nm,0.9s						
MCK	**McKinley**	**81.36**	**22**	P	**P**	**11 07 55.3**	**-0.2**
MCK				IAmb	IAmb	11 08 04.7	
	comp=Z,10nm,1.2s						
MLY	**Manley**	**81.40**	**21**	P	**P**	**11 07 55.4**	**-0.2**
ZAA0	**Zalesovo Array**	**81.90**	**326**	P	**P**	**11 07 58.2**	**-0.2**
ZAA0				IAmb	IAmb	11 07 59.6	
	comp=Z,7.8nm,0.8s						
ZALV	**Zalesovo Beam**	**81.90**	**326**	P	**P**	**11 07 57.9**	**-0.5**
	comp=Z,8.0nm,0.7s,baz=103,slow=5.3,SNR=34						
SHLS	**Shalkode**	**81.94**	**315**	*eP*	**P**	**11 07 57.1**	**-2.1**
	baz=315						
UZB	**Uzynbulak**	**82.25**	**315**	*eP*	**P**	**11 08 00.2**	**-0.5**
	baz=315						
UZB				*eS*	**S**	**11 18 14.4**	**-1.4**
	baz=315						
KPKS	**Kokpek**	**82.57**	**315**	*eP*	**P**	**11 08 01.9**	**-0.4**
	comp=Z,5.4nm,1.6s,baz=315						
ILAR	**Eielson Array**	**82.66**	**22**	P	**P**	**11 08 01.2**	**-1.0**
	comp=Z,2.0nm,1.1s,baz=261,slow=4.4,SNR=8.6						
ILAR				LR	LR	11 45 07.3	
	comp=Z,67nm,18.4s,baz=276,slow=36						
SATY	**Saty**	**82.67**	**315**	*eP*	**P**	**11 08 01.8**	**-1.1**
	baz=314						
TDK	**Taldyqorghan**	**83.16**	**316**	*eP*	**P**	**11 08 05.7**	**+0.4**
	baz=316						
DOT	**Dot Lake**	**83.22**	**24**	P	**P**	**11 08 04.9**	**-0.3**
DOT				IAmb	IAmb	11 08 08.4	
	comp=Z,5.3nm,1.1s						
SEM	**Semipalatinsk**	**83.42**	**322**	*eP*	**P**	**11 08 05.8**	**-1.0**
	baz=322						
MDOK	**Medeo**	**83.66**	**314**	*eP*	**P**	**11 08 07.8**	**-0.3**
	baz=314						
TNSS	**Tian-Shan**	**83.70**	**314**	*eP*	**P**	**11 08 09.5**	**+0.9**
	baz=314						
AAA	**Alma-Ata**	**83.76**	**314**	*eP*	**P**	**11 08 08.3**	**-0.2**
	baz=314						
BCAR	**Beaver Creek A**	**83.88**	**25**	P	**P**	**11 08 09.4**	**+0.7**
ULHL	**Ulahol**	**84.03**	**313**	P	**P**	**11 08 11.6**	**+1.6**
	SNR=8.3						
QSPA	**South Pole Qui**	**84.48**	**180**	P	**P**	**11 08 11.3**	**-0.4**
KURK	**Kurchatov**	**84.51**	**322**	P	**P**	**11 08 11.8**	**-0.2**
KURBB	**Kurchatov Arra**	**84.54**	**322**	P	**P**	**11 08 11.8**	**-0.4**
	comp=Z,7.3nm,0.9s,baz=110,slow=4.0,SNR=39						
NIL	**Nilore**	**84.63**	**304**	P	**P**	**11 08 13.6**	**+0.5**
BMAR	**Burnt Mountain**	**84.77**	**20**	P	**P**	**11 08 13.8**	**+0.8**
MAW	**Mawson**	**85.07**	**203**	P	**P**	**11 08 14.3**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=116,slow=6.7,SNR=11						
MAW	**Mawson**	**85.07**	**203**	P	**P**	**11 08 14.8**	**+0.2**
	baz=85,SNR=5.6						
MAW	**Mawson**	**85.07**	**203**	P	**P**	**11 08 13.4**	**-1.1**
CHMS	**Chumysh**	**85.26**	**314**	P	**P**	**11 08 17.4**	**+1.3**
	SNR=6.7						
UCH	**Uchtor**	**85.28**	**313**	P	**P**	**11 08 19.0**	**+2.3**
	SNR=21						
AAK	**Ala-Archa**	**85.37**	**313**	P	**P**	**11 08 17.7**	**+0.9**
	comp=Z,7.7nm,0.9s,baz=130,slow=3.1,SNR=17						
AAK	**Ala-Archa**	**85.37**	**313**	P	**P**	**11 08 16.1**	**-0.6**
AAK				IAmb	IAmb	11 08 19.3	
	comp=Z,13nm,1.0s						
SGDS	**Sogindy**	**85.44**	**314**	*eP*	**P**	**11 08 17.3**	**+0.4**
	comp=Z,10nm,1.4s,baz=314						
USP	**Ospenovka**	**85.50**	**314**	P	**P**	**11 08 18.9**	**+1.7**
	SNR=14						
AML	**Almayashu**	**85.85**	**313**	P	**P**	**11 08 21.3**	**+1.8**
	SNR=32						
BTLS	**Baital**	**86.18**	**316**	*eP*	**P**	**11 08 20.8**	**+0.3**
	comp=Z,12nm,1.4s,baz=316						
NRIK	**Noril'sk**	**86.71**	**341**	P	**P**	**11 08 22.9**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=114,slow=5.4,SNR=8.1						
NRIK	**Noril'sk**	**86.71**	**341**	P	**P**	**11 08 22.3**	**-0.3**
NRIK				IAmb	IAmb	11 08 25.7	
	comp=Z,5.9nm,0.9s						
EPYK	**Eagle Plains**	**87.17**	**22**	P	**P**	**11 08 25.3**	**+0.4**
EPYK				IAmb	IAmb	11 08 30.1	
	comp=Z,12nm,1.3s						
DZA	**Taraz**	**87.71**	**313**	*eP*	**P**	**11 08 28.2**	**+0.2**
	baz=313						
BRZS	**Berezniki**	**88.05**	**320**	*eP*	**P**	**11 08 28.4**	**-1.0**
	baz=320						
KKAR	**Karatay Array**	**88.34**	**313**	P	**P**	**11 08 30.5**	**-0.5**
INK	**Inuvik**	**88.97**	**21**	P	**P**	**11 08 33.1**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=181,slow=12,SNR=3.3						
BVAR	**Borovoye Array**	**89.98**	**323**	P	**P**	**11 08 38.1**	**-0.4**
	comp=Z,6.4nm,0.8s,baz=124,slow=13,SNR=40						
BRVK	**Borovoye**	**90.05**	**323**	P	**P**	**11 08 38.3**	**-0.4**
BRVK				IAmb	IAmb	11 08 39.6	
	comp=Z,8.9nm,0.9s						
SYO	**Syowa Base**	**93.14**	**199**	*eP*	**P**	**11 08 51.6**	**-1.2**
SYO	**Syowa Base**	**93.14**	**199**	*eS*	sP	11 08 57.8	-1.6
YKA	**Yellowknife Ar**	**95.87**	**28**	P	**P**	**11 09 05.2**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=270,slow=4.8,SNR=8.3						
PDAR	**Pinedale Array**	**99.06**	**48**	LR	LR	11 51 01.9	
	comp=Z,127nm,18.5s,baz=314,slow=34						
CRVS	**Cervenica-Dubn**	**120.53**	**325**	*ePKP*	**PKiKP**	**11 14 32.1**	**+1.1**
VYHS	**Vyhne**	**122.23**	**326**	*ePKP*	**PKiKP**	**11 14 35.2**	**+0.9**
GERES	**GERESS Array B**	**124.81**	**328**	PKP	**PKiKP**	**11 14 39.5**	**0.0**
	comp=Z,1.1nm,0.6s,baz=70,slow=4.4,SNR=3.8						
LVC	**Limon Verde**	**130.31**	**126**	PKP	**PKiKP**	**11 14 52.1**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=150,slow=1.7,SNR=4.3						
LPAZ	**La Paz**	**133.80**	**119**	PKP	**PKiKP**	**11 14 59.5**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=321,slow=2.3,SNR=9.9						
LPAZ	**La Paz**	**133.80**	**119**	PKPdf	**PKPdf**	**11 14 57.9**	**+0.1**
CPUP	**Villa Florida**	**136.74**	**138**	PKP	**PKiKP**	**11 15 03.5**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=261,slow=2.9,SNR=4.9						
SIV	**San Ignacio**	**139.98**	**123**	PKP	**PKPdf**	**11 15 09.5**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=194,slow=1.7,SNR=8.0						
BDFB	**Brasilia**	**150.35**	**135**	PKPbc	**PKPbc**	**11 15 31.6**	**0.0**
	comp=Z,22nm,0.8s,baz=262,slow=1.5,SNR=26						
BDFB	**Brasilia**	**150.35**	**135**		**PKiKP**	**11 15 32.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**150.83**	**287**	PKPbc	**PKPbc**	**11 15 32.4**	**-0.2**
	comp=Z,16nm,0.9s,baz=57,slow=2.1,SNR=51						
TORD	**Torodi Ar. Bea**	**150.83**	**287**		**PKPbc**	**11 15 31.9**	**-0.8**

IDC ***14*** *11:04:27.7±0.9, 11°.79N×44°.16E, h0km, mb4.1/15, mb1 4.2/19, mb1mx4.0/56, mbtmp4.1/19, ML3.8/4, MS3.7/27, Ms1 3.7/27, ms1mx3.6/37, Error ellipse: s-maj=21.5km s-min=14.5km az=163.0*

NEIC ***14*** *11:04:29.4±2.4, 11°.8N±0°.1×44°.06E±0°.03, h10km±1km, mb4.6/45, Error ellipse: s-maj=18.4km s-min=4.2km az=167.0*

GCMT ***14*** *11:04:29.4±0.4, 12°.15N±0°.04×43°.99E±0°.05, h17km±1km, MW4.7/76, Moment Tensor Solution. s14,c15; s76,c91; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.60±.14; Mθθ=0.92±.09; Mϕϕ=0.67±.09; Mrθ=0.27±.24; Mϕθ=-0.32±.05; Mϕr=0.69±.28; Best double couple: M₀=1.49700×10¹⁶ NP1:ϕs=292.00000°, δ43.00000°, λ=-115.00000°. NP2: ϕs=145.00000°, δ52.00000°, λ=-68.00000°. Principal axes: T 1.1590, Plg5.0000°, Azm220.0000°; N 0.6730, Plg17.0000°, Azm311.0000°; P -1.8350, Plg72.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 11:04:28.3±0.5, 11°.78N±0°.08×44°.08E±0°.06, h4km, n99, σ1°17/85, mb4.5/32, MS3.7/23, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**1.23**	**259**	Pn	**Pg**	**11 04 51.3**	**-0.5**
	242nm,0.3s,baz=37,slow=12,SNR=13						
ATD				Sn	**Sn**	**11 05 09.8**	**+0.4**
	520nm,0.3s,baz=218,slow=22,SNR=21						
ATD	**Arta Tunnel**	**1.23**	**259**		**Pg**	**11 04 50.7**	**-1.2**
ATD				Sn	**Sn**	**11 05 09.6**	**+0.3**
FURI	**Furi**	**6.03**	**242**	Pn	**Pn**	**11 05 56.3**	**-2.3**
SOCY	**Socotra**	**9.71**	**87**	Pn	**Pn**	**11 06 49.1**	**+0.2**
SOCY	**Socotra**	**9.71**	**87**	P	**Pn**	**11 06 45.4**	**-3.5**
	SNR=8.6						
WHFO	**Wadi Hawf**	**11.19**	**56**	P	Pn	11 07 20.4	+11
RAYN	**Ar Rayn**	**11.76**	**6**	Pn	**Pn**	**11 07 14.6**	**-2.4**
DMTO	**DMTO**	**12.06**	**59**	P	Pn	11 07 28.1	+7.0
DMTO				S		11 10 51.0	
KMBO	**Kilima Mbogo**	**14.50**	**208**	Pn	**Pn**	**11 07 55.1**	**+0.4**
	0.3nm,0.3s,baz=32,slow=13,SNR=5.3						
KMBO				LR	LR	11 13 28.2	
	comp=Z,959nm,20.0s,baz=90,slow=37						
DQM	**DQM**	**15.27**	**56**	P	**Pn**	**11 08 05.8**	**+0.9**
MHTO	**MHTO**	**16.16**	**54**	P	**Pn**	**11 08 15.5**	**-0.9**
	SNR=6.8						
BSY	**Bisya**	**16.60**	**47**	P	**Pn**	**11 08 23.0**	**+0.9**
	SNR=5.7						
JMDO	**Jabal Madar**	**17.04**	**50**	P	**Pn**	**11 08 26.2**	**-1.4**
SMDO	**Samad**	**17.41**	**48**	P	**Pn**	**11 08 31.3**	**-1.0**
	SNR=9.0						
UOSS	**Minazif**	**17.42**	**40**	Pn	**Pn**	**11 08 32.8**	**+0.4**
UOSS				IAmb	IAmb	11 08 42.7	
	comp=Z,90nm,1.6s						
WBK	**Wadi Bani Khal**	**17.83**	**51**	P	**Pn**	**11 08 34.6**	**-2.9**
WSAR	**Wadi Sarin**	**17.94**	**49**	P	**Pn**	**11 08 37.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=243,slow=9.2,SNR=12						
WSAR				LR	LR	11 16 04.1	
	comp=Z,510nm,19.5s,baz=253,slow=39						
MBAR	**Mbarara**	**18.07**	**228**	P	**P**	**11 08 42.9**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=60,slow=15,SNR=4.5						
MBAR				LR	LR	11 15 33.3	
	comp=Z,455nm,20.9s,baz=24,slow=37						
MBAR	**Mbarara**	**18.07**	**228**	Pn	**Pn**	**11 08 39.1**	**-1.6**
BANOM	**Banah**	**18.20**	**38**	P	**Pn**	**11 08 40.5**	**-1.5**
EIL	**Elat**	**19.73**	**336**	P	**Pn**	**11 09 00.3**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=117,slow=4.3,SNR=5.4						
EIL				LR	LR	11 15 09.0	
	comp=Z,204nm,21.0s,baz=114,slow=32						
MMAI	**Mount Meron Ar**	**22.59**	**341**	P	**P**	**11 09 32.1**	**+2.1**
	comp=Z,0.8nm,0.4s,baz=179,slow=14,SNR=6.1						
MMAI				LR	LR	11 17 05.6	
	comp=Z,167nm,20.0s,baz=190,slow=34						
MARD	**Mardin**	**25.60**	**354**	P	**P**	**11 09 59.1**	**+0.3**
HRA	**Herat**	**27.94**	**33**	P	**P**	**11 10 20.1**	**+0.1**
HRA				IAmb	IAmb	11 10 35.9	
	comp=Z,6.6nm,0.8s						
ELL	**Elmali**	**27.95**	**335**	P	**P**	**11 10 18.3**	**-1.7**
GNI	**Garni**	**28.27**	**1**	P	**P**	**11 10 20.8**	**-2.1**
GNI				IAmb	IAmb	11 10 49.6	
	comp=Z,11nm,0.8s						
KOPT	**Kop Dagi**	**28.31**	**354**	P	**P**	**11 10 21.2**	**-2.1**
KOPT				IAmb	IAmb	11 10 45.2	
	comp=Z,25nm,1.7s						
GEYT	**Alibeck**	**28.92**	**23**	LR	LR	11 23 43.7	
	comp=Z,287nm,20.0s,baz=200,slow=40						
GYA0B	**ALIBECK ARRAY**	**28.92**	**23**	P	**P**	**11 10 30.1**	**+1.5**
BRTR	**Keskin Array B**	**29.33**	**343**	P	**P**	**11 10 32.4**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=159,slow=14,SNR=9.7						
BRTR				LR	LR	11 21 28.3	
	comp=Z,193nm,18.3s,baz=156,slow=35						
BRTR	**Keskin Array B**	**29.33**	**343**	P	**P**	**11 10 34.0**	**+1.7**
BR131	**Keskin Array S**	**29.33**	**343**	P	**P**	**11 10 33.2**	**+0.8**
BR131				IAmb	IAmb	11 10 35.7	
	comp=Z,12nm,1.1s						
ANTO	**Antara**	**29.71**	**342**	P	**P**	**11 10 36.6**	**+1.0**
KBZ	**Khabaz**	**31.85**	**358**	LR	LR	11 25 07.9	
	comp=Z,138nm,18.6s,baz=173,slow=39						
ITM	**Ithomi**	**32.18**	**326**	P	**P**	**11 10 58.8**	**+1.5**
ALN	**Alexandroupoli**	**33.06**	**335**	P	**P**	**11 11 06.0**	**+1.0**
ALN				IAmb	IAmb	11 11 08.4	
	comp=Z,11nm,1.4s						
AGG	**Agios Georgios**	**33.32**	**328**	P	**P**	**11 11 08.4**	**+1.1**
AGG				IAmb	IAmb	11 11 09.3	
	comp=Z,7.4nm,1.1s						
VTS	**Vitosha**	**35.68**	**333**	P	**P**	**11 11 27.4**	**-0.4**
DIVS	**Divibare**	**38.31**	**332**	P	**P**	**11 11 51.0**	**+0.9**
KK31	**Karatay Array**	**38.72**	**31**	P	**P**	**11 11 54.2**	**+0.7**
KKAR	**Karatay Array**	**38.72**	**31**	P	**P**	**11 11 53.2**	**-0.4**
SGRT	**San Giovanni R**	**38.79**	**325**	P	**P**	**11 11 52.9**	**-1.3**
SGRT				IAmb	IAmb	11 12 24.3	
	comp=Z,7.2nm,0.7s						
BURAR	**Bucovina Array**	**39.08**	**340**	P	**P**	**11 11 57.7**	**+1.1**
BUR08	**Bucovina Ar. S**	**39.11**	**340**	P	**P**	**11 11 57.8**	**+1.0**
BUR08				IAmb	IAmb	11 12 37.7	
	comp=Z,24nm,1.9s						
KEST	**Kesra**	**39.41**	**313**	P	**P**	**11 12 00.4**	**+0.9**
	comp=Z,4.7nm,1.1s,baz=308,slow=15,SNR=2.4						
KEST				LR	LR	11 27 56.8	
	comp=Z,73nm,18.2s,baz=276,slow=36						
KEST	**Kesra**	**39.41**	**313**	P	**P**	**11 11 59.4**	**-0.1**
KEST				IAmb	IAmb	11 12 09.3	
	comp=Z,14nm,1.4s						
ABKAR	**Akbulak array**	**39.62**	**16**	P	**P**	**11 12 01.3**	**+0.4**
INTR	**Introdacqua**	**39.99**	**324**	P	**P**	**11 12 05.4**	**+1.1**
INTR				IAmb	IAmb	11 12 05.8	
	comp=Z,41nm,2.0s						
AKTO	**Aktyubinsk**	**40.21**	**14**	LR	LR	11 31 46.9	
	comp=Z,244nm,19.2s,baz=195,slow=41						
AAK	**Ala-Archa**	**40.54**	**35**	P	**P**	**11 12 10.2**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=243,slow=8.5,SNR=3.6						
AAK	**Ala-Archa**	**40.54**	**35**	P	**P**	**11 12 09.0**	**+0.1**
BELG	**Belogornoye**	**40.61**	**3**	LR	LR	11 31 01.0	
	comp=Z,164nm,21.0s,baz=158,slow=39						
AKASG	**Malin Array Be**	**40.68**	**346**	P	**P**	**11 12 09.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=162,slow=6.9,SNR=7.0						
AKASG				LR	LR	11 30 01.2	
	comp=Z,67nm,18.1s,baz=115,slow=38						
AKBB	**Malin Array Si**	**40.68**	**346**	P	**P**	**11 12 10.1**	**+0.4**
AKBB				IAmb	IAmb	11 12 11.4	
	comp=Z,30nm,1.9s						
BOOM	**Boomskoye usch**	**41.27**	**36**	P	**P**	**11 12 16.7**	**+1.8**
PSZ	**Piszkesteto**	**41.33**	**335**	P	**P**	**11 12 14.2**	**-1.0**
PSZ				IAmb	IAmb	11 12 17.7	
	comp=Z,18nm,1.6s						
TOA0	**Torodi Ar. Sit**	**41.37**	**277**	P	**P**	**11 12 15.9**	**0.0**
TOA0				IAmb	IAmb	11 12 20.6	
	comp=Z,15nm,1.6s						
TORD	**Torodi Ar. Bea**	**41.37**	**277**	P	**P**	**11 12 16.9**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=88,slow=6.6,SNR=9.3						
TORD				LR	LR	11 29 02.1	
	comp=Z,78nm,19.7s,baz=340,slow=36						
TORD	**Torodi Ar. Bea**	**41.37**	**277**	P	**P**	**11 12 15.8**	**-0.1**
TORD				IAmb	IAmb	11 12 19.5	
	comp=Z,16nm,2.0s						
MURB	**Monte Urbino**	**41.58**	**325**	P	**P**	**11 12 18.2**	**+0.9**
OBN	**Obninsk**	**43.64**	**354**	LR	LR	11 34 15.0	
	comp=Z,26nm,18.4s,baz=167,slow=41						
VRAC	**Vranov**	**43.79**	**334**	LR	LR	11 32 55.6	
	comp=Z,80nm,18.0s,baz=116,slow=39						
BOSA	**Boshof**	**44.08**	**204**	LR	LR	11 31 33.9	
	comp=Z,294nm,19.1s,baz=12,slow=37						
GEC2	**GERESS Array S**	**44.74**	**332**	P	**P**	**11 12 43.8**	**+1.0**
GERES	**GERESS Array B**	**44.74**	**332**	P	**P**	**11 12 41.9**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=150,slow=5.6,SNR=6.6						
GERES	**GERESS Array B**	**44.74**	**332**	P	**P**	**11 12 43.0**	**+0.2**
KHC	**Kasperske Hory**	**45.00**	**332**	P	**P**	**11 12 44.8**	**0.0**
KHC				IAmb	IAmb	11 12 48.2	
	comp=Z,19nm,1.7s						
ARU	**Arti**	**45.95**	**11**	LR	LR	11 36 10.1	
	comp=Z,97nm,18.1s,baz=196,slow=41						
BRVK	**Borovoye**	**46.22**	**22**	P	**P**	**11 12 55.0**	**+0.6**
BRVK				IAmb	IAmb	11 12 56.6	
	comp=Z,9.4nm,1.5s						
KIRV	**Kirov**	**46.89**	**4**	LR	LR	11 36 08.2	
	comp=Z,113nm,21.0s,baz=191,slow=41						
SHL	**Shillong**	**47.08**	**66**	P	**P**	**11 13 01.7**	**-0.1**
MAKZ	**Makanchi**	**47.30**	**35**	P	**P**	**11 13 02.8**	**-0.3**
MK31	**Makanchi Array**	**47.47**	**35**	P	**P**	**11 13 03.9**	**-0.4**
MK31				IAmb	IAmb	11 13 05.8	
	comp=Z,7.6nm,1.1s						
MKAR	**Makanchi Array**	**47.47**	**35**	P	**P**	**11 13 02.8**	**-1.6**
	comp=Z,3.5nm,0.9s,baz=224,slow=6.8,SNR=20						
MKAR				LR	LR	11 35 49.1	
	comp=Z,78nm,18.4s,baz=232,slow=40						
MKAR	**Makanchi Array**	**47.47**	**35**	P	**P**	**11 13 03.6**	**-0.7**
DBIC	**Dimbokro**	**48.52**	**269**	LR	LR	11 32 19.3	
	comp=Z,53nm,19.5s,baz=62,slow=34						
ESDC	**Sonseca Array**	**50.63**	**312**	P	**P**	**11 13 29.6**	**+0.9**
	comp=Z,2.4nm,1.0s,baz=101,slow=6.9,SNR=10						
ESDC				LR	LR	11 34 31.4	
	comp=Z,44nm,18.8s,baz=90,slow=36						
ESDC	**Sonseca Array**	**50.63**	**312**	P	**P**	**11 13 30.2**	**+1.4**
FINES	**FINESS Array B**	**51.29**	**349**	LR	LR	11 38 15.9	
	comp=Z,68nm,18.5s,baz=112,slow=40						
ZAA0	**Zalesovo Array**	**52.98**	**29**	P	**P**	**11 13 44.8**	**-1.2**
ZAA0				IAmb	IAmb	11 13 51.5	
	comp=Z,9.2nm,1.4s						
ZALV	**Zalesovo Beam**	**52.98**	**29**	P	**P**	**11 13 44.5**	**-1.5**
	comp=Z,1.8nm,0.7s,baz=238,slow=8.5,SNR=8.6						
ZALV				LR	LR	11 39 38.3	
	comp=Z,354nm,18.5s,baz=221,slow=40						
CM31	**Chiang Mai Arr**	**53.22**	**76**	P	**P**	**11 13 48.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**53.22**	**76**	P	**P**	**11 13 47.2**	**-1.1**
	comp=Z,6.9nm,1.0s,baz=272,slow=8.6,SNR=34						
CMAR				LR	LR	11 36

PB04					IAML			11 17 24.6		
	comp=E,41µm,0.1s									
PB04	**IPOC Station P**	**0.41**	**29**			**Pn**		**11 17 14.8**	**+0.3**	
PB04				Sn		**Sn**		**11 17 23.6**	**+1.2**	
PB04	**IPOC Station P**	**0.41**	**29**	*eP*		**Pn**		**11 17 15.3**	**+0.8**	
PB04				*eS*		**Sn**		**11 17 24.0**	**+1.5**	
PB04				IAML				11 17 29.2		
	comp=E,23µm,0.4s									
PB06	**IPOC Station P**	**0.73**	**91**	*iP*		**Pn**		**11 17 18.4**	**+0.3**	
PB06				*i S*		**Sn**		**11 17 28.8**	**0.0**	
PB06				IAML				11 17 29.4		
	comp=E,29µm,0.4s									
PB06	**IPOC Station P**	**0.73**	**91**			**Pn**		**11 17 17.7**	**-0.4**	
PB06				Sn		**Sn**		**11 17 28.8**	**0.0**	
PB06	**IPOC Station P**	**0.73**	**91**	*eP*		**Pn**		**11 17 18.3**	**+0.2**	
PB06				*eS*		**Sn**		**11 17 29.1**	**+0.3**	
PB06				IAML				11 17 30.3		
	comp=E,27µm,0.3s									
PB10	**IPOC Station P**	**0.84**	**192**	*iP*		**Pn**		**11 17 20.3**	**+1.0**	
PB10				*i S*		**Sn**		**11 17 32.3**	**+1.3**	
PB10	**IPOC Station P**	**0.84**	**192**			**Pn**		**11 17 19.7**	**+0.4**	
PB10				Sn		**Sn**		**11 17 32.5**	**+1.5**	
PB10	**IPOC Station P**	**0.84**	**192**	*eP*		**Pn**		**11 17 20.1**	**+0.8**	
PB10				*eS*		**Sn**		**11 17 32.6**	**+1.6**	
PB10				IAML				11 17 33.1		
	comp=E,9µm,0.3s									
PB03	**IPOC Station P**	**0.85**	**41**	*iP*		**Pn**		**11 17 20.1**	**+0.5**	
PB03				*i S*		**Sn**		**11 17 32.0**	**+0.4**	
PB03				IAML				11 17 32.9		
	comp=E,22µm,0.4s									
PB03	**IPOC Station P**	**0.85**	**41**	*eP*		**Pn**		**11 17 20.1**	**+0.4**	
PB03				*eS*		**Sn**		**11 17 32.1**	**+0.6**	
PB03				IAML				11 17 32.7		
	comp=E,11µm,0.2s									
PB15	**IPOC Station P**	**0.97**	**122**	*iP*		**Pn**		**11 17 21.5**	**+0.3**	
PB15				*i S*		**Sn**		**11 17 34.5**	**+0.2**	
PB15	**IPOC Station P**	**0.97**	**122**			**Pn**		**11 17 20.9**	**-0.3**	
PB15				Sn		**Sn**		**11 17 34.8**	**+0.5**	
PB15	**IPOC Station P**	**0.97**	**122**	*eP*		**Pn**		**11 17 21.5**	**+0.3**	
PB15				*eS*		**Sn**		**11 17 35.1**	**+0.8**	
PB15				IAML				11 17 37.4		
	comp=E,17µm,0.4s									
PB07	**IPOC Station P**	**1.06**	**25**	*iP*		**Pn**		**11 17 22.5**	**+0.2**	
PB07				*i S*		**Sn**		**11 17 36.2**	**0.0**	
PB07				IAML				11 17 38.0		
	comp=N,14µm,0.3s									
PB07	**IPOC Station P**	**1.06**	**25**			**Pn**		**11 17 22.0**	**-0.3**	
PB07				Sn		**Sn**		**11 17 36.0**	**-0.2**	
PB07	**IPOC Station P**	**1.06**	**25**	*eP*		**Pn**		**11 17 22.4**	**0.0**	
PB07				*eS*		**Sn**		**11 17 36.3**	**0.0**	
PB07				IAML				11 17 38.3		
	comp=E,11µm,0.5s									
LVC	**Limon Verde**	**1.34**	**87**	P		**Pn**		**11 17 27.3**	**+1.0**	
	comp=E,1µm,0.3s,baz=285,slow=6.4,SNR=8023									
LVC				S		**Sn**		**11 17 43.7**	**+0.3**	
	comp=E,272nm,0.3s,baz=262,slow=11,SNR=13									
LVC	**Limon Verde**	**1.34**	**87**	*iP*		**Pn**		**11 17 27.3**	**+1.0**	
LVC				*i S*		**Sn**		**11 17 43.9**	**+0.5**	
LVC	**Limon Verde**	**1.34**	**87**			**Pn**		**11 17 27.4**	**+1.0**	
LVC				Sn		**Sn**		**11 17 44.1**	**+0.8**	
LVC	**Limon Verde**	**1.34**	**87**	*eP*		**Pn**		**11 17 27.2**	**+0.9**	
LVC				*eS*		**Sn**		**11 17 44.6**	**+1.2**	
LVC				IAML				11 17 45.2		
	comp=E,2µm,0.2s									
PB09	**IPOC Station P**	**1.37**	**50**			**Pn**		**11 17 27.0**	**+0.6**	
PB09				Sn		**Sn**		**11 17 44.3**	**+0.6**	
PB01	**IPOC Station P**	**1.83**	**26**	*iP*		**Pn**		**11 17 33.1**	**+0.4**	
PB01				*i S*		**Sn**		**11 17 54.7**	**-0.1**	
PB01	**IPOC Station P**	**1.83**	**26**			**Pn**		**11 17 32.6**	**0.0**	
PB01				Sn		**Sn**		**11 17 54.6**	**-0.1**	
PB01	**IPOC Station P**	**1.83**	**26**	*eS*		**Sn**		**11 17 55.0**	**+0.2**	
PB01				IAML				11 17 55.1		
	comp=E,3µm,0.3s									
PATCX	**Punta Patache**	**1.87**	**6**	*iP*		**Pn**		**11 17 32.8**	**-0.4**	
PATCX	**Punta Patache**	**1.87**	**6**			**Pn**		**11 17 32.8**	**-0.4**	
PATCX				Sn		**Sn**		**11 17 54.7**	**-1.1**	
PATCX	**Punta Patache**	**1.87**	**6**	*eP*		**Pn**		**11 17 32.8**	**-0.4**	
PB14	**IPOC Station P**	**1.93**	**181**			**Pn**		**11 17 33.9**	**-0.3**	
PB14				Sn		**Sn**		**11 17 57.0**	**-0.4**	
PB14	**IPOC Station P**	**1.93**	**181**	*eP*		**Pn**		**11 17 34.3**	**+0.1**	
PB14				*eS*		**Sn**		**11 17 57.2**	**-0.3**	
PB14				IAML				11 17 58.3		
	comp=E,1µm,0.3s									
TA01	**Diego Aracena**	**2.12**	**5**			**Pn**		**11 17 35.7**	**-0.8**	
TA01				Sn		**Sn**		**11 18 00.1**	**-1.6**	
TA02	**Huaiquique**	**2.42**	**5**			**Pn**		**11 17 39.9**	**-0.7**	
GO02	**Mina Guanaco**	**2.56**	**164**	*iP*		**Pn**		**11 17 43.6**	**+0.9**	
GO02	**Mina Guanaco**	**2.56**	**164**			**Pn**		**11 17 43.9**	**+1.1**	
GO02				Sn		**Sn**		**11 18 14.7**	**+1.8**	
PB08	**IPOC Station P**	**2.78**	**24**	*iP*		**Pn**		**11 17 46.4**	**+0.6**	
PB08	**IPOC Station P**	**2.78**	**24**			**Pn**		**11 17 46.4**	**+0.6**	
PB11	**IPOC Station P**	**2.99**	**13**	*iP*		**Pn**		**11 17 47.9**	**-0.6**	
PB11	**IPOC Station P**	**2.99**	**13**			**Pn**		**11 17 47.9**	**-0.6**	
PSGC	**Pisagua**	**3.09**	**4**	*iP*		**Pn**		**11 17 49.0**	**-0.9**	
PSGCX	**Pisagua**	**3.09**	**4**	Pn		**Pn**		**11 17 49.0**	**-0.8**	
AC01	**Pan de Azucar**	**3.45**	**184**	*iP*		**Pn**		**11 17 53.8**	**-0.9**	
AC01	**Pan de Azucar**	**3.45**	**184**	Pn		**Pn**		**11 17 53.7**	**-0.9**	
MNMC	**Minye Minye**	**3.61**	**12**			**Pn**		**11 17 56.9**	**-0.3**	
AC02	**Maricunga**	**4.28**	**165**	*iP*		**Pn**		**11 18 07.4**	**+1.0**	
AC02	**Maricunga**	**4.28**	**165**			**Pn**		**11 18 07.8**	**+1.3**	
AP01	**Chacalluta**	**4.30**	**0**	Pn		**Pn**		**11 18 06.1**	**-0.3**	
YJA	**Yavi**	**4.51**	**84**	*eP*		**Pn**		**11 18 13.8**	**+4.1**	
GO03	**Copiap**	**4.88**	**179**			**Pn**		**11 18 14.0**	**-0.4**	
GO03	**Copiap**	**4.88**	**179**	*eP*		**Pn**		**11 18 14.8**	**+0.4**	
GO03				*eS*		**Sn**		**11 19 08.9**	**-0.7**	
AC04	**Llanos de Chal**	**5.53**	**187**	Pn		**Pn**		**11 18 20.2**	**-3.0**	
LCO	**Las Campanas**	**6.30**	**183**	Pn		**Pn**		**11 18 31.8**	**-2.2**	
LPAZ	**La Paz**	**6.71**	**19**	P		**Pn**		**11 18 41.8**	**+1.8**	
	comp=Z,3.8nm,0.3s,baz=205,slow=2.9,SNR=91									
LPAZ	**La Paz**	**6.71**	**19**	Pn		**Pn**		**11 18 42.2**	**+2.3**	
LPAZ	**La Paz**	**6.71**	**19**	*eP*		**Pn**		**11 18 42.2**	**+2.3**	
LPAZ				*eS*		Sn		11 19 32.7	-23	
GO04	**Tololo Observa**	**7.46**	**183**	Pn		**Pn**		**11 18 47.3**	**-2.6**	
CO03	**El Pedregal**	**8.12**	**182**			**Pn**		**11 18 55.8**	**-2.9**	
ZON	**Zonda**	**8.95**	**171**	Pn		**Pn**		**11 19 06.8**	**-3.2**	
VA03	**San Esteban**	**10.04**	**181**	Pn		**Pn**		**11 19 27.7**	**+2.8**	
SIV	**San Ignacio**	**11.01**	**54**	P		**Pn**		**11 19 35.8**	**-2.5**	
	comp=Z,3.7nm,0.3s,baz=248,slow=12,SNR=49									
CPUP	**Villa Florida**	**12.40**	**110**	P		**Pn**		**11 19 54.2**	**-3.0**	
	comp=Z,0.2nm,0.3s,baz=275,slow=11,SNR=6.3									
PTLB	**Pontes e Lacer**	**12.82**	**58**	*eP*		**Pn**		**11 20 00.8**	**-2.1**	
H03N1	**Juan Fernandez**	**13.09**	**213**	T		T		11 33 27.0		
	baz=38,slow=72,SNR=74									
H03N2	**Juan Fernandez**	**13.10**	**213**	T		T		11 33 28.6		
	baz=38,slow=72,SNR=46									
H03N3	**Juan Fernandez**	**13.11**	**213**	T		T		11 33 19.5		
	baz=38,slow=72,SNR=61									
VILB	**Vilhena**	**13.68**	**47**	*eP*		**Pn**		**11 20 14.4**	**-0.3**	
AQDB	**Aquidauana**	**13.82**	**84**	*eP*		**Pn**		**11 20 16.1**	**-0.4**	
BI02	**San Fabin de**	**13.95**	**183**	Pn		**Pn**		**11 20 18.5**	**+0.3**	
CZSB	**Cruzeiro do Su**	**15.05**	**351**	*eP*		**Pn**		**11 20 33.7**	**+1.1**	
PP1B	**Ponte de Pedra**	**15.39**	**74**	*eP*		**Pn**		**11 20 35.0**	**-2.1**	
CPSB	**Cacapava Do Su**	**16.97**	**120**	*eP*		**Pn**		**11 20 54.5**	**-2.4**	
ITAB	**Concordia**	**17.14**	**109**	*eP*		**Pn**		**11 20 59.0**	**0.0**	
PLTB	**Pedras Altas**	**17.41**	**125**	*eP*		**Pn**		**11 21 03.3**	**-1.1**	
PCMB	**Pacaembu**	**17.73**	**90**	*eP*		**Pn**		**11 21 04.8**	**-1.6**	
PLCA	**Paso Flores**	**17.99**	**180**	P		**P**		**11 21 06.3**	**-3.0**	
	comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=3.3									
PLCA	**Paso Flores**	**17.99**	**180**	*eP*		**P**		**11 21 06.0**	**-3.3**	
LL04	**Puerto Octay**	**18.25**	**185**	P		**P**		**11 21 11.1**	**-1.0**	
ARAG	**Araguaiana, MT**	**18.84**	**72**	*eP*		**P**		**11 21 18.3**	**-0.4**	
ITRB	**Iturama**	**18.89**	**85**	*eP*		**P**		**11 21 19.1**	**-0.2**	
FRTB	**Fartura**	**19.16**	**96**	*eP*		**P**		**11 21 22.4**	**+0.1**	
TIJ01	**Guaruva-PR**	**19.68**	**102**	*eP*		**P**		**11 21 28.4**	**+0.3**	
PET01	**Itanhaem-SP**	**21.23**	**99**	*eP*		**P**		**11 21 45.7**	**+1.0**	
NPGB	**Novo Progresso**	**21.23**	**45**	*eP*		**P**		**11 21 44.2**	**-0.5**	
IPMB	**Ipameri, GO**	**21.28**	**81**	*eP*		**P**		**11 21 45.1**	**-0.2**	
VAO	**Valinhos**	**21.56**	**95**	*eP*		**P**		**11 21 47.9**	**-0.4**	
MACA	**Manacapuru-AM**	**21.56**	**27**	*eP*		**P**		**11 21 50.1**	**+1.9**	
BDFB	**Brasilia**	**22.23**	**76**	P		**P**		**11 21 54.5**	**-1.1**	
	comp=Z,5.0nm,0.4s,baz=255,slow=13,SNR=6.3									
BDFB	**Brasilia**	**22.23**	**76**	P		**P**		**11 21 55.3**	**-0.3**	
BDFB				IAmb		IAmb		11 21 57.3		
	comp=Z,20nm,1.4s									
PARB	**Paraibuna**	**22.78**	**96**	*eP*		**P**		**11 22 01.5**	**+0.2**	
PTGA	**Pitinga**	**24.06**	**26**	P		**P**		**11 22 14.2**	**+0.8**	
	comp=Z,5.7nm,0.3s,baz=206,slow=17,SNR=13									
PTGA	**Pitinga**	**24.06**	**26**	P		**P**		**11 22 15.2**	**+1.8**	
PTGA	**Pitinga**	**24.06**	**26**	*eP*		**P**		**11 22 15.4**	**+2.0**	
VAS01	**Vassouras-RJ**	**24.87**	**94**	*eP*		**P**		**11 22 22.3**	**+1.5**	
PRPB	**Paraupebas**	**25.74**	**53**	*eP*		**P**		**11 22 31.2**	**+2.4**	
SMTB	**Santa Maria do**	**25.82**	**61**	*eP*		**P**		**11 22 29.7**	**+0.2**	
DUB01	**Friburgo-RJ**	**25.87**	**94**	*eP*		**P**		**11 22 30.9**	**+0.9**	
MALB	**Monte Alegre**	**25.95**	**39**	*eP*		**P**		**11 22 32.2**	**+1.6**	
SDBA	**SAO DESIDERIO**	**26.30**	**71**	*eP*		**P**		**11 22 35.4**	**+1.5**	
CAM01	**Campos-RJ**	**26.56**	**94**	*eP*		**P**		**11 22 36.8**	**+0.7**	
SJMB	**Sao Joao De Ma**	**27.56**	**87**	*eP*		**P**		**11 22 46.8**	**+1.6**	
RIB01	**Linhares ES**	**28.15**	**89**	*eP*		**P**		**11 22 51.8**	**+1.4**	
MCPB	**Macapa, AP**	**28.46**	**41**	*eP*		**P**		**11 22 55.4**	**+2.3**	
NAN01	**Guarapari, ES**	**28.74**	**86**	*eP*		**P**		**11 22 57.6**	**+1.9**	
NBIT	**Itapeh - BA**	**30.23**	**81**	*eP*		**P**		**11 23 10.6**	**+1.8**	
GDU01	**Guandu, BA**	**30.52**	**78**	*eP*		**P**		**11 23 13.5**	**+2.1**	
NBLA	**Lagarto - SE**	**33.19**	**75**	*eP*		**P**		**11 23 36.3**	**+1.4**	
NBTA	**Tacaratu-PE**	**33.77**	**72**	*eP*		**P**		**11 23 42.2**	**+2.2**	
NBPB	**Pedra_Branca-C**	**34.25**	**65**	*eP*		**P**		**11 23 47.1**	**+3.0**	
NBAN	**Arnadia - AL**	**35.10**	**74**	*eP*		**P**		**11 23 53.6**	**+2.1**	
NBMO	**Morrinhos-CE**	**35.13**	**61**	*eP*		**P**		**11 23 54.6**	**+2.9**	
NBRF	**Rio Formoso -**	**36.55**	**73**	*eP*		**P**		**11 24 04.8**	**+0.9**	
TEIG	**Tepich**	**46.10**	**336**	P		**P**		**11 25 22.8**	**+0.8**	
H06E1	**SOCORRO T-PHAS**	**57.18**	**313**	T		T		12 28 36.8		
	SNR=8.5									
SWET	**Sewanee**	**59.45**	**345**		P		**P**	**11 26 59.9**	**-0.4**	
JCT	**Junction City**	**59.95**	**331**		P		**P**	**11 27 04.6**	**+0.7**	
TXAR	**Lajitas Array**	**60.86**	**327**		P		**P**	**11 27 10.9**	**+0.8**	
	comp=Z,0.9nm,0.7s,baz=150,slow=8.1,SNR=12									
TXAR	**Lajitas Array**	**60.86**	**327**		P		**P**	**11 27 10.6**	**+0.5**	
TX31	**Lajitas Ar. Si**	**60.86**	**327**		P		**P**	**11 27 10.6**	**+0.5**	
TX32	**Lajitas Array**	**60.86**	**327**		P		**P**	**11 27 10.7**	**+0.6**	
TX32					IAmb		IAmb	11 28 08.3		
	comp=Z,7.0nm,1.8s									
T47A	**Sharon Grove**	**61.42**	**345**		P		**P**	**11 27 12.9**	**-0.8**	
SNAA	**Sanae**	**61.60**	**161**		P		**P**	**11 27 15.1**	**+0.5**	
SNAA					IAmb		IAmb	11 28 52.2		
	comp=Z,13nm,1.7s									
LCAR	**Lake Charles**	**61.66**	**341**		P		**P**	**11 27 14.9**	**-0.4**	
LCAR					IAmb		IAmb	11 27 15.3		
	comp=Z,3.6nm,0.7s									
ABTX	**Abilene, Hawle**	**61.71**	**332**		P		**P**	**11 27 16.4**	**+0.6**	
PBMO	**Poplar Bluff**	**62.11**	**342**		P		**P**	**11 27 17.9**	**-0.3**	
PBMO					IAmb		IAmb	11 27 18.3		
	comp=Z,4.5nm,0.7s									
WCI	**Wyandotte Cave**	**62.42**	**346**		P		**P**	**11 27 19.3**	**-1.0**	
WCI					IAmb		IAmb	11 27 19.9		
	comp=Z,7.8nm,0.9s									
U40A	**Yellville**	**62.46**	**340**		P		**P**	**11 27 20.2**	**-0.4**	
U40A					IAmb		IAmb	11 27 21.1		
	comp=Z,5.9nm,0.9s									
FVM	**French Village**	**63.23**	**342**		P		**P**	**11 27 25.4**	**-0.3**	
OK031	**S. Brethren Rd**	**63.48**	**336**		P		**P**	**11 27 27.4**	**-0.1**	
OK031					IAmb		IAmb	11 28 32.4		
	comp=Z,6.0nm,1.0s									
MNTX	**Cornudas Mount**	**63.63**	**327**		P		**P**	**11 27 28.9**	**+0.3**	
S39A	**Bolivar**	**63.83**	**340**		P		**P**	**11 27 29.4**	**-0.3**	
S39A					IAmb		IAmb	11 27 30.3		
	comp=Z,7.3nm,1.0s									
R40A	**Maddies Statio**	**64.05**	**341**		P		**P**	**11 27 30.9**	**-0.3**	
MSTX	**Muleshoe**	**64.24**	**330**		P		**P**	**11 27 32.6**	**0.0**	
MSTX					IAmb		IAmb	11 27 34.0		
	comp=Z,5.6nm,1.0s									
ANMO	**Albuquerque**	**66.78**	**328**		P		**P**	**11 27 50.6**	**+1.5**	
TUC	**Tucson**	**66.97**	**323**		P		**P**	**11 27 51.5**	**+1.3**	
L40A	**Anamosa**	**67.26**	**343**		P		**P**	**11 27 51.3**	**-0.4**	
L40A					IAmb		IAmb	11 27 51.8		
	comp=Z,5.7nm,0.8s									
QSPA	**South Pole Qui**	**67.50**	**180**		P		**P**	**11 27 54.3**	**+1.1**	
QSPA					IAmb		IAmb	11 29 31.5		
	comp=Z,14nm,1.6s									
GGN	**Saint George**	**67.56**	**3**		P		**P**	**11 27 55.0**	**+1.5**	
G62A	**West of Eustis**	**67.58**	**360**		P		**P**	**11 27 54.2**	**+0.5**	
F64A	**Sherman**	**68.25**	**2**		P		**P**	**11 27 58.9**	**+1.0**	
I42A	**Draeger Farm,**	**68.41**	**346**		P		**P**	**11 27 58.5**	**-0.4**	
I42A					IAmb		IAmb	11 27 59.0		
	comp=Z,4.8nm,0.8s									
E63A	**Oxbow**	**68.81**	**1**		P		**P**	**11 28 02.6**	**+1.3**	
PQI	**Presque Isle**	**69.07**	**2**		P		**P**	**11 28 03.8**	**+0.9**	
ISCO	**Idaho Springs**	**70.34**	**332**		P		**P**	**11 28 11.5**	**+0.2**	
DBIC	**Dimbokro**	**70.36**	**74**		P		**P**	**11 28 10.3**	**-1.3**	
	comp=Z,1.1nm,0.4s,baz=237,slow=9.6,SNR=1.9									
E43A	**Lone Tree Farm**	**70.37**	**348**		P		**P**	**11 28 10.3**	**-0.7**	
E43A					IAmb		IAmb	11 30 44.5		
	comp=Z,15nm,1.4s									
SMCO	**Snowmass**	**70.44**	**331**		P		**P**	**11 28 11.8**	**-0.2**	
KNB	**Kanab**	**71.62**	**325**		P		**P**	**11 28 21.5**	**+2.5**	
KNB					IAmb		IAmb	11 28 22.2		
	comp=Z,6.2nm,1.1s									
O20A	**White River Ci**	**71.79**	**330**		P		**P**	**11 28 20.9**	**+1.0**	
O20A					IAmb		IAmb	11 28 22.2		
	comp=Z,6.5nm,0.8s									
LCMT	**Little Creek M**	**71.83**	**325**		P		**P**	**11 28 20.5**	**+0.3**	
SRU	**San Rafael Swe**	**72.06**	**328**		P		**P**	**11 28 22.9**	**+1.4**	
SRU					IAmb		IAmb	11 28 23.6		
	comp=Z,5.6nm,0.7s									
F33A	**5 Mile Ranch,**	**72.16**	**341**		P		**P**	**11 28 21.3**	**-0.5**	
F33A					IAmb		IAmb	11 29 15.9		
	comp=Z,12nm,1.6s									
Q16A	**Castle Valley**	**72.22**	**328**		P		**P**	**11 28 24.5**	**+1.9**	
Q16A					IAmb		IAmb	11 28 25.8		
	comp=Z,4.2nm,0.9s									
CCUT	**Cedar City**	**72.30**	**325**		P		**P**	**11 28 25.9**	**+2.7**	
CCUT					IAmb		IAmb	11 28 26.4		
	comp=Z,5.6nm,0.8s									
MSU	**Marysvale**	**72.42**	**327**		P		**P**	**11 28 25.0**	**+1.2**	
P17A	**Butcher Ranch,**	**72.44**	**328**		P		**P**	**11 28 25.3**	**+1.4**	
P17A					IAmb		IAmb	11 28 26.0		
	comp=Z,5.0nm,0.7s									
SHPR	**Sheep Range**	**72.50**	**323**		P		**P**	**11 28 25.8**	**+1.6**	
SHPR					IAmb		IAmb	11 29 11.7		
	comp=Z,12nm,1.9s									
RDMU	**Red Mountain**	**72.75**	**330**		P		**P**	**11 28 26.7**	**+1.0**	
RDMU					IAmb		IAmb	11 28 27.5		
	comp=Z,4.4nm,0.8s									
MPU	**Maple Canyon**	**73.30**	**328**		P		**P**	**11 28 30.4**	**+1.4**	
PDAR	**Pinedale Array**	**74.48**	**331**		P		**P**	**11 28 36.4**	**+0.5**	
	comp=Z,0.3nm,0.5s,baz=142,slow=9.7,SNR=3.9									
AHID	**Auburn Hatcher**	**75.18**	**330**		P		**P**	**11 28 40.3**	**+0.5**	
AHID					IAmb		IAmb	11 28 41.5		
	comp=Z,4.8nm,0.8s									
NVAR	**Mina Array Bea**	**75.61**	**323**		P		**P**	**11 28 42.4**	**0.0**	
	comp=Z,0.7nm,0.5s,baz=128,slow=5.8,SNR=2.8									
ULM	**Lac du Bonnet**	**76.06**	**343**		P		**P**	**11 28 43.5**	**-0.9**	
	comp=Z,1.5nm,0.6s,baz=155,slow=7.9,SNR=4.2									
ULM	**Lac du Bonnet**	**76.06**	**343**		IAmb		IAmb	11 29 08.5		
	comp=Z,13nm,1.8s									
TORD	**Torodi Ar. Bea**	**79.02**	**71**		P		**P**	**11 29 00.5**	**-1.3**	
	comp=Z,3.6nm,0.5s,baz=255,slow=5.1,SNR=26									
TORD					pP		**pP**	**11 29 15.3**	**-3.1**	
	comp=Z,2.1nm,0.3s,baz=258,slow=5.7,SNR=10									
TORD	**Torodi Ar. Bea**	**79.02**	**71**		P		**P**	**11 29 00.4**	**-1.3**	
PLID	**Pearl Lake**	**79.24**	**329**		P		**P**	**11 29 03.1**	**+0.5**	
PLID					IAmb		IAmb	11 29 04.4		
	comp=Z,4.9nm,1.0s									
YKA	**Yellowknife Ar**	**91.86**	**341**		P		**P**	**11 30 04.5**	**-0.2**	
	comp=Z,1.7nm,0.7s,baz=136,slow=4.7,SNR=41									
YKA					pP		**pP**	**11 30 21.2**	**+0.3**	
	comp=Z,0.5nm,0.7s,baz=134,slow=4.7,SNR=4.7									
H11S2	**WAKE ISLAND Hyl**	**26.68**	**277**		T		T	13 55 35.7		
	baz=105,slow=75,SNR=180									
H11S1	**WAKE ISLAND Hyl**	**26.69**	**277**		T		T	13 55 44.2		
	baz=105,slow=75,SNR=161									
H11S3	**WAKE ISLAND Hyl**	**26.70**	**277**		T		T	13 55 49.9		
	baz=105,slow=75,SNR=188									
H11N3	**WAKE ISLAND Hyl**	**26.80**	**278**		T		T	13 55 54.5		
	baz=104,slow=74,SNR=139									
H11N2	**WAKE ISLAND Hyl**	**26.82**	**278**		T		T	13 55 55.7		
	baz=104,slow=74,SNR=131									
H11N1	**WAKE ISLAND Hyl**	**26.82**	**278**		T		T	13 55 57.3		
	baz=104,slow=74,SNR=71									
ASAR	**Alice Springs**	**128.23**	**209**		PKP		**PKPdf**	**11 36 03.3**	**-0.7**	
	comp=Z,0.9nm,0.7s,baz=132,slow=2.0,SNR=16									
ASAR					pPKP		**pPKPdf**	**11 36 20.0**	**-1.1**	
	comp=Z,0.3nm,0.6s,baz=114,slow=2.2,SNR=2.0									
WRA	**Warramunga Arr**	**131.24**	**212**		PKP		**PKPdf**	**11 36 09.8**	**0.0**	
	comp=Z,0.7nm,0.6s,baz=151,slow=1.7,SNR=17									
ZALV	**Zalesovo Beam**	**143.60**	**25**		PKP		**PKPdf**	**11 36 31.1**	**-0.3**	
	comp=Z,1.8nm,0.6s,baz=254,slow=1.1,SNR=9.4									
MKAR	**Makanchi Array**	**147.38**	**36**		PKPbc		**PKPdf**	**11 36 38.4**	**+0.2**	
	comp=Z,3.3nm,0.7s,baz=327,slow=3.1,SNR=32									
MKAR	**Makanchi Array**	**147.38**	**36**				**PKPdf**	**11 36 37.7**	**-0.5**	
MKAR					PKPbc		**PKPbc**	**11 36 40.6**	**-0.1**	
MJAR	**Matsushiro Arr**	**151.71**	**306**		PKPbc		**PKPbc**	**11 36 51.4**	**-0.3**	
	comp=Z,1.9nm,0.6s,baz=137,slow=1.2,SNR=4.6									
MJAR	**Matsushiro Arr**	**151.71**	**306**		PKPab		**PKPab**	**11 36 59.3**	**-1.4**	
USRK	**Ussuriysk Ar.**	**151.74**	**325**		PKPbc		**PKPbc**	**11 36 51.2**	**-0.3**	
	comp=Z,1.7nm,0.6s,baz=50,slow=4.5,SNR=4.6									

*SJA **14** 11:21:49.1±0.7,20.02S×71.01W,h27km±3km, ML4.1, MW4.2*
*NEIC **14** 11:21:52.2±2.4,20.05S±0.03×70.86W±0.07,h28km±6km, mb4.3/3, ML4.1(GUC), Error ellipse: s-maj=9.8km s-min=4.0km az=92.0*
*GUC **14** 11:21:52.6±0.7,20.01S×70.93W, h35km±2km, ML4.1*
*IDC **14** 11:21:55.9±2.8, 19.99S×70.73W, h45km±25km, mb3.6/6, mb1 3.8/10, mb1mx3.6/34, mbtmp3.8/10, ML3.5/4, Error ellipse: s-maj=34.2km s-min=21.7km az=94.0*
ISC 14 11:21:53.0±0.9, 20.01S±0.03×70.87W±0.05, h29km±6km, n69, σ1s70/92, mb4.1/5, 8C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.74**	**111**	*iP*		**Pb**	**11 22 06.0**	**-1.4**
TA02				*i S*		**Sb**	**11 22 16.7**	**-0.5**
TA02				IAML			11 22 18.7	
	comp=N,16µm,0.2s							
TA02	**Huaiquique**	**0.74**	**111**	Pn		**Pb**	**11 22 05.9**	**-1.4**
TA02				Sn		**Sn**	**11 22 17.4**	**-0.5**
PSGC	**Pisagua**	**0.81**	**60**	*iP*		**Pb**	**11 22 07.2**	**-1.5**
P

TORD				IAmb	IAmb	11 33 52.2
	comp=Z,2.1nm,0.8s					
YKA	**Yellowknife Ar**	**89.19**	**341**	**P**	**P**	**11 34 45.6 +0.1**
	comp=Z,0.3nm,0.7s,baz=137,slow=5.0,SNR=6.7					
YKA				pP	**sP**	**11 34 58.9 +1.7**
	comp=Z,0.6nm,0.8s,baz=135,slow=5.5,SNR=5.9					
ASAR	**Alice Springs**	**130.32**	**210**	PKP	**PKiKP**	**11 41 02.6 +0.3**
	comp=Z,0.2nm,0.9s,baz=124,slow=1.3,SNR=1.8					
MKAR	**Makanchi Array**	**145.45**	**33**	PKPbc	**PKPab**	**11 41 28.6 0.0**
	comp=Z,1.9nm,0.7s,baz=325,slow=4.0,SNR=15					
MKAR	**Makanchi Array**	**145.45**	**33**	PKPbc	**PKPab**	**11 41 29.3 +0.8**

JMA 14 12:08:56.0±0.2, 37.22N×143.66E, h51km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.05**	**303**	P		Pn	12 09 29.1	+1.1
JIKH				S		Sn	12 09 53.4	+1.0
JIO	**Ouri**	**2.21**	**305**	P		Pn	12 09 31.4	+1.3
JIO				S		Sn	12 09 57.3	+1.1
JFK	**Kawauchi**	**2.23**	**275**	P		Pn	12 09 31.4	+0.9
JMST	**Minamisoumatoc**	**2.26**	**284**	P		Pn	12 09 31.8	+0.9
JMST				*e*S		Sn	12 09 58.4	+0.8
ONAJ	**Iwakimizuishiy**	**2.29**	**268**	P		Pn	12 09 32.1	+0.8
JKMT	**Kesennumamotoy**	**2.35**	**313**	P		Pn	12 09 33.0	+0.9
JKMT				*e*S		Sn	12 10 00.5	+0.8
JMK	**Ichinoseki**	**2.59**	**313**	P		Pn	12 09 36.5	+1.1
JFT	**Otama**	**2.66**	**277**	P		Pn	12 09 38.4	+1.9
JFT				*e*S		Sn	12 10 09.8	+2.3
JOM	**Ohasama**	**2.92**	**321**	P		Pn	12 09 41.3	+1.4
JOM				S		Sn	12 10 14.5	+0.7
JYK	**Kaneyama**	**3.11**	**304**	P		Pn	12 09 44.4	+1.9
BSO1	**Boso 1**	**3.36**	**221**	*e*S		Sn	12 10 25.2	+1.3
JAG	**Ashikaga**	**3.47**	**258**	P		Pn	12 09 48.8	+1.3
JANG	**Nango**	**3.57**	**333**	P		Pn	12 09 49.9	+1.1
JANG				*e*S		Sn	12 10 30.2	+0.5
JRY	**Ryogami san**	**4.01**	**254**	P		Pn	12 09 55.9	+0.9
JRY				*e*S		Sn	12 10 40.5	-0.2
MAT	**Matsushiro**	**4.42**	**263**	P		Pn	12 10 03.6	+3.0
MAT				*e*S		Sn	12 10 50.7	-0.1
JOT	**Ohata**	**4.62**	**335**	*e*S		Sn	12 10 55.9	+0.3
JKB	**Kayabe**	**5.08**	**337**	*e*S		Sn	12 11 05.1	-1.8
JCH	**Churui**	**5.39**	**358**	P		Pn	12 10 13.4	-0.4
JCH				*e*S		Sn	12 11 10.5	-4.0
NEM2	**Nemuro 2**	**6.34**	**14**	P		Pn	12 10 24.9	-1.9
NEM2				*e*S		Sn	12 11 32.1	-5.7

IDC ***14*** *12:08:59.4±0.7, 27.87S×178.97W, h366km±9km, mb3.5/7, mb1 3.8/11, mb1mx3.5/36, mbtmp4.5/11, Error ellipse: s-maj=20.4km s-min=16.1km az=145.0*
NEIC ***14*** *12:08:59.2±1.5, 28.15S±0.1×178.8W±0.2, h389km±8km, mb4.2/21, Error ellipse: s-maj=24.7km s-min=14.4km az=104.0*

ISC 14 12:08:58.3±0.6, 28.21S±0.05×178.3W±0.1, h400km, n117, σ2.39/143, mb4.0/15, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.08**	**163**	P		**Pn**	**12 09 52.5**	**+2.9**
RIZ				S		**S**	**12 10 32.0**	**+1.0**
RAO	**Raoul Island**	**1.09**	**162**	P		**Pn**	**12 09 51.5**	**+1.9**
	196nm,0.3s,baz=66,slow=20,SNR=2.8							
RAO				S		**S**	**12 10 30.6**	**-0.5**
	281nm,0.3s,baz=116,slow=23,SNR=4.6							
RAO	**Raoul Island**	**1.09**	**162**			**Pn**	**12 09 52.5**	**+2.9**
GLKZ	**Green Lake**	**1.10**	**163**	P		**Pn**	**12 09 51.2**	**+1.5**
GLKZ				S		**S**	**12 10 29.0**	**-2.2**
GRZ	**Great Barrier**	**9.60**	**212**	P		**Pn**	**12 11 14.2**	**+2.7**
MXZ	**Matakaoa Point**	**9.75**	**196**			**Pn**	**12 11 14.1**	**+0.9**
MXZ				S		**S**	**12 13 03.3**	**-0.6**
MXZ	**Matakaoa Point**	**9.75**	**196**	P		**Pn**	**12 11 14.3**	**+1.0**
MXZ				S		**S**	**12 12 59.3**	**-4.5**
KUZ	**Kuaotunu**	**9.89**	**209**	P		**Pn**	**12 11 18.2**	**+3.3**
WCZ	**Waipu Caves**	**9.91**	**217**	P		**Pn**	**12 11 18.2**	**+3.0**
WMGZ	**Waiomatatini S**	**9.97**	**195**	P		**Pn**	**12 11 16.4**	**+0.6**
WMGZ				S		**S**	**12 13 04.9**	**-3.4**
HAZ	**Te Kaha**	**10.07**	**198**	P		**Pn**	**12 11 17.1**	**+0.1**
HAZ				S		**S**	**12 13 08.7**	**-1.7**
PKGZ	**Pakihiroa**	**10.12**	**197**	P		**P**	**12 11 17.3**	**+0.2**
PKGZ				S		**S**	**12 13 08.0**	**-3.5**
WIAZ	**Waiheke Island**	**10.19**	**211**	P		**Pn**	**12 11 21.3**	**+2.9**
PUZ	**Puketiti**	**10.25**	**195**	P		**P**	**12 11 17.3**	**-1.2**
PUZ				S		**S**	**12 13 09.8**	**-4.3**
RUGZ	**Raukumara Rang**	**10.29**	**198**	P		**Pn**	**12 11 20.0**	**+0.3**
RUGZ				S		**S**	**12 13 12.5**	**-2.7**
WHRZ	**Whale Island**	**10.40**	**201**	P		Pn	12 11 25.7	+4.8
WHRZ				S		**S**	**12 13 16.9**	**-0.4**
TWGZ	**Tauwhareparae**	**10.41**	**196**	P		**P**	**12 11 20.5**	**+0.1**
TWGZ				S		**S**	**12 13 14.4**	**-3.2**
OPRZ	**Ohinepanea**	**10.53**	**203**	P		**Pn**	**12 11 23.5**	**+1.2**
TGRZ	**Tauranga**	**10.53**	**204**	P		**Pn**	**12 11 25.6**	**+3.3**
CNGZ	**Carnagh Statio**	**10.65**	**195**	P		**Pn**	**12 11 23.5**	**-0.2**
CNGZ				S		**S**	**12 13 13.8**	**-8.5**
MWZ	**Matawai**	**10.68**	**198**	P		**P**	**12 11 22.3**	**-1.0**
MWZ				S		**S**	**12 13 20.1**	**-2.9**
TKGZ	**Te Karaka**	**10.70**	**197**	P		**P**	**12 11 22.3**	**-1.1**
TKGZ				S		**S**	**12 13 17.5**	**-5.7**
URZ	**Urewera**	**10.73**	**200**	P		**Pn**	**12 11 25.5**	**+0.9**
	16nm,0.3s,baz=270,slow=4.2,SNR=70							
URZ				S		**S**	**12 13 21.0**	**-2.9**
	17nm,0.3s,baz=56,slow=23,SNR=11							
URZ	**Urewera**	**10.73**	**200**	P		**Pn**	**12 11 25.3**	**+0.7**
URZ				S		**S**	**12 13 21.3**	**-2.6**
URZ	**Urewera**	**10.73**	**200**	P		**P**	**12 11 23.6**	**-0.2**
URZ				S		**S**	**12 13 20.5**	**-3.4**
KARZ	**Kaharoa**	**10.80**	**204**	P		**Pn**	**12 11 28.7**	**+3.3**
TOZ	**Tahuroa Road**	**10.82**	**207**	P		**Pn**	**12 11 27.8**	**+2.1**
OMRZ	**Omania**	**10.83**	**203**	P		**Pn**	**12 11 30.0**	**+4.2**
TARZ	**Mount Tarawera**	**10.90**	**202**	P		**Pn**	**12 11 29.2**	**+2.5**
TARZ				S		**S**	**12 13 27.5**	**-0.1**
MSVF	**Nonsavu**	**10.96**	**341**	P		**P**	**12 11 23.7**	**-3.0**
	5.0nm,0.3s,baz=94,slow=23,SNR=38							
MSVF	**Nonsavu**	**10.96**	**341**	P		**P**	**12 11 24.0**	**-2.7**
RRRZ	**Republican Roa**	**10.99**	**202**	P		**Pn**	**12 11 31.4**	**+3.7**
RRRZ				S		**S**	**12 13 34.0**	**+4.8**
MUGZ	**Murupara**	**11.04**	**201**	P		**Pn**	**12 11 27.8**	**-0.3**
MUGZ				S		**S**	**12 13 26.5**	**-3.6**
SNGZ	**Shannon Statio**	**11.15**	**198**	P		**P**	**12 11 28.7**	**+0.2**
SNGZ				S		**S**	**12 13 30.1**	**-2.4**
RAHZ	**Arahi**	**11.35**	**199**	P		**S**	**12 13 35.3**	**-1.2**
NMHZ	**Naumai**	**11.60**	**199**	P		**S**	**12 13 42.5**	**+0.9**
ARHZ	**Aropaoanui**	**11.70**	**198**	P		**S**	**12 13 42.8**	**-0.7**
BKZ	**Black Stump Fm**	**11.75**	**200**	P		**Pn**	**12 11 37.1**	**+0.5**
BKZ				S		**S**	**12 13 44.1**	**-0.6**
BKZ	**Black Stump Fm**	**11.75**	**200**	P		**P**	**12 11 33.9**	**-1.2**
BKZ				S		**S**	**12 13 42.3**	**-2.4**
BKZ	**Black Stump Fm**	**11.75**	**200**	P		**S**	**12 13 36.5**	**-8.3**
HIZ	**Hauiti**	**11.76**	**207**	P		**Pn**	**12 11 36.2**	**-0.3**
HIZ	**Hauiti**	**11.76**	**207**	P		**Pn**	**12 11 39.6**	**+3.1**
MCHZ	**McNeill Hill**	**11.95**	**199**	P		**S**	**12 13 49.3**	**+0.6**
KWHZ	**Kaweka Forest**	**12.01**	**200**	P		**S**	**12 13 50.2**	**+0.2**
NGZ	**Ngauruhoe**	**12.05**	**203**	P		**S**	**12 13 54.5**	**+3.5**
TUVZ	**Tukino**	**12.12**	**203**	P		**Pn**	**12 11 40.6**	**-0.2**
TUVZ				S		**S**	**12 13 50.3**	**-2.0**
TUVZ	**Tukino**	**12.12**	**203**	P		**S**	**12 13 54.5**	**+2.1**
BHHZ	**Black Hill Sta**	**12.18**	**201**	P		**P**	**12 11 38.7**	**-1.2**
BHHZ				S		**S**	**12 13 50.2**	**-3.3**
BHHZ	**Black Hill Sta**	**12.18**	**201**	P		**S**	**12 13 52.6**	**-0.8**
WNVZ	**Wahianoa**	**12.19**	**203**	P		**P**	**12 11 40.9**	**+0.8**
WNVZ				S		**S**	**12 13 54.9**	**+1.1**
WNVZ	**Wahianoa**	**12.19**	**203**	P		**S**	**12 13 54.4**	**+0.6**
MOVZ	**Moawhango**	**12.21**	**202**	P		**P**	**12 11 40.9**	**+0.7**
MOVZ				S		**S**	**12 13 49.3**	**-4.7**
MOVZ	**Moawhango**	**12.21**	**202**	P		**S**	**12 13 51.9**	**-2.1**
KAHZ	**Kahuranaki**	**12.22**	**198**	P		**S**	**12 13 49.8**	**-4.5**
KRHZ	**Kereru**	**12.23**	**200**	P		**S**	**12 13 53.6**	**-0.8**
VRZ	**Vera Road**	**12.32**	**206**	P		**Pn**	**12 11 44.9**	**+1.9**
PXZ	**Pawanui**	**12.45**	**197**	P		**P**	**12 11 43.0**	**+0.3**
PXZ				S		**S**	**12 13 54.0**	**-4.7**
PXZ	**Pawanui**	**12.45**	**197**	P		**S**	**12 13 55.8**	**-3.0**
PNHZ	**Pukenui**	**12.53**	**200**	P		**P**	**12 11 43.0**	**-0.6**
PNHZ	**Pukenui**	**12.53**	**200**	P		**S**	**12 13 59.7**	**-0.7**
WPHZ	**Waipukurau**	**12.60**	**199**	P		**Pn**	**12 11 45.7**	**-0.5**
WPHZ	**Waipukurau**	**12.60**	**199**	P		**S**	**12 13 59.1**	**-2.6**
NEZ	**North Egmont**	**12.71**	**208**	P		**Pn**	**12 11 51.7**	**+4.1**
PRHZ	**Porangahau**	**12.73**	**198**	P		**Pn**	**12 11 47.7**	**-0.1**
TSZ	**Takapari Road**	**12.73**	**200**	P		**P**	**12 11 46.1**	**+0.2**
TSZ	**Takapari Road**	**12.73**	**200**	P		**S**	**12 14 00.3**	**-4.3**
WAZ	**Wanganui**	**12.79**	**204**	P		**Pn**	**12 11 48.7**	**+0.2**
DVHZ	**Dannevirke**	**12.89**	**199**	P		**P**	**12 11 48.6**	**+0.9**
DVHZ	**Dannevirke**	**12.89**	**199**	P		**S**	**12 14 05.6**	**-2.2**
POWZ	**Post Office Ro**	**13.10**	**200**	P		**Pn**	**12 11 51.1**	**-0.9**
BFZ	**Birch Farm**	**13.22**	**198**	P		**Pn**	**12 11 53.1**	**-0.4**
BFZ	**Birch Farm**	**13.22**	**198**	P		**P**	**12 11 52.3**	**+1.0**
HOWZ	**Holdsworth Sta**	**13.64**	**200**	P		**P**	**12 11 56.1**	**+0.2**
OGWZ	**Otaki Gorge**	**13.67**	**201**	P		**P**	**12 11 56.3**	**+0.1**
MARNC	**Mare, Loyalty**	**14.10**	**295**	P		**P**	**12 12 03.5**	**+2.4**
TUWZ	**Tuamarina**	**14.64**	**204**	P		**P**	**12 12 06.1**	**-0.5**
NNZ	**Nelson**	**14.66**	**206**	P		**P**	**12 12 07.0**	**+0.2**
QRZ	**Quartz Range**	**14.67**	**209**	P		**P**	**12 12 08.4**	**+1.4**
BSWZ	**Blackbirch Sta**	**14.91**	**203**	P		**P**	**12 12 09.0**	**-0.7**
DZM	**Mont Dzumac**	**15.11**	**290**	P		**P**	**12 12 08.0**	**-4.1**
	0.6nm,0.3s,baz=124,slow=16,SNR=4.2							
THZ	**Tophouse**	**15.31**	**206**	P		**P**	**12 12 15.4**	**+1.4**
AFI	**Afiamalu**	**15.47**	**24**	P		**P**	**12 12 17.8**	**+1.8**
	5.0nm,0.3s,baz=240,slow=22,SNR=8.0							
AFI				S		**S**	**12 14 55.9**	**-3.9**
	0.9nm,0.3s,baz=202,slow=23,SNR=1.9							
AFI	**Afiamalu**	**15.47**	**24**	P		**P**	**12 12 18.2**	**+2.1**
KHZ	**Kahutara**	**15.65**	**203**	P		**P**	**12 12 19.0**	**+1.4**
LTZ	**Lake Taylor**	**16.42**	**205**	P		**P**	**12 12 26.5**	**+0.6**
LTZ					IAmb	IAmb	12 12 40.9	
	comp=Z,67nm,1.5s							
LHI	**Lord Howe Isla**	**19.91**	**255**	P		P	12 13 15.5	+14
KNTN	**Kanton**	**26.06**	**15**	P		**P**	**12 13 57.0**	**-0.6**
KNTN					IAmb	IAmb	12 14 03.1	
	comp=Z,42nm,1.1s							
ARMA	**Armidale**	**26.28**	**258**	P		**P**	**12 13 57.4**	**-2.1**
ARMA					IAmb	IAmb	12 14 13.1	
	comp=Z,21nm,1.5s							
EIDS	**Eidsvold**	**27.45**	**269**	P		**P**	**12 14 08.1**	**-1.6**
EIDS					IAmb	IAmb	12 14 14.4	
	comp=Z,9.5nm,1.1s							
MCQ	**Macquarie Isla**	**31.05**	**206**	P		**P**	**12 14 42.2**	**+1.4**
CTA	**Charters Tower**	**33.25**	**276**	P		**P**	**12 14 59.1**	**-1.1**
	comp=Z,6.5nm,0.6s,baz=98,slow=11,SNR=9.0							
CTAO	**Charters Tower**	**33.25**	**276**	P		**P**	**12 14 58.3**	**-2.0**
CTAO					IAmb	IAmb	12 15 00.4	
	comp=Z,7.9nm,0.8s							
STKA	**Stephens Creek**	**34.78**	**254**	P		**P**	**12 15 13.2**	**+0.2**
	comp=Z,1.9nm,0.5s,baz=107,slow=11,SNR=6.8							
STKA	**Stephens Creek**	**34.78**	**254**	P		**P**	**12 15 11.5**	**-1.6**
BBOO	**Buckleboo**	**39.36**	**252**	P		**P**	**12 15 50.4**	**-0.7**
BBOO					IAmb	IAmb	12 15 51.8	
	comp=Z,6.3nm,0.9s							
PATS	**Pohnpei**	**41.52**	**324**	P		**P**	**12 16 06.0**	**-2.7**
AS31	**Alice Springs**	**43.01**	**265**	P		**P**	**12 16 19.6**	**-1.0**
ASAR	**Alice Springs**	**43.01**	**265**	P		**P**	**12 16 20.1**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=93,slow=7.1,SNR=23							
WR0	**Warramunga Arr**	**43.61**	**270**	P		**P**	**12 16 23.7**	**-1.7**
WB2	**Warramunga Arr**	**43.79**	**270**	P		**P**	**12 16 24.9**	**-1.8**
WB2					IAmb	IAmb	12 16 26.3	
	comp=Z,4.8nm,0.7s							
WRAB	**Tennant Creek**	**43.79**	**270**	P		**P**	**12 16 25.4**	**-1.3**
WRAB					IAmb	IAmb	12 16 26.7	
	comp=Z,7.5nm,1.0s							
WRA	**Warramunga Arr**	**43.80**	**270**	P		**P**	**12 16 24.9**	**-1.9**
	comp=Z,5.7nm,0.8s,baz=110,slow=6.6,SNR=41							
WRA	**Warramunga Arr**	**43.80**	**270**	P		**P**	**12 16 25.0**	**-1.9**
WB0	**Warramunga Arr**	**43.81**	**270**	P		**P**	**12 16 25.2**	**-1.7**
WB0					IAmb	IAmb	12 16 26.8	
	comp=Z,6.2nm,0.8s							
FORT	**Forrest**	**46.39**	**253**	P		**P**	**12 16 45.7**	**-1.1**
FORT					IAmb	IAmb	12 16 47.2	
	comp=Z,12nm,0.8s							
FITZ	**Fitzroy Crossi**	**52.13**	**268**	P		**P**	**12 17 29.6**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=119,slow=5.3,SNR=5.5							
FITZ	**Fitzroy Crossi**	**52.13**	**268**		IAmb	IAmb	12 17 30.1	
	comp=Z,3.1nm,1.1s							
QSPA	**South Pole Qui**	**61.89**	**180**	P		P	12 18 45.2	+8.5
	comp=Z,0.8nm,0.8s,baz=224,slow=1.2,SNR=1.7							
QSPA	**South Pole Qui**	**61.89**	**180**	P		**P**	**12 18 39.7**	**+2.9**
QSPA					IAmb	IAmb	12 19 06.2	
	comp=Z,4.8nm,1.4s							
PETK	**Petropavlovsk-**	**83.64**	**346**	P		**P**	**12 20 45.4**	**+2.6**
	comp=Z,3.2nm,0.7s,baz=106,slow=8.4,SNR=17							
FINES	**FINESS Array B**	**143.00**	**341**	PKhKP	PKPpre		12 27 44.0	
NOA	**NORSAR Array B**	**146.56**	**352**	PKPbc	**PKiKP**		**12 27 56.0**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=346,slow=0.6,SNR=6.9							
FINES	**FINESS Array B**	**143.00**	**341**	PKPdf	**PKPdf**		**12 27 44.5**	**0.0**
	comp=Z,1.3nm,0.5s,baz=15,slow=4.6,SNR=4.6							
HFS	**Hagfors**	**147.06**	**349**	PKPbc	**PKiKP**		**12 27 56.3**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=48,slow=2.2,SNR=13							
AKASG	**Malin Array Be**	**149.39**	**325**	PKPbc	**PKiKP**		**12 28 02.7**	**+1.4**
	comp=Z,2.7nm,0.4s,baz=44,slow=3.3,SNR=13							
AKASG	**Malin Array Be**	**149.39**	**325**	PKPdf	**PKPdf**		**12 27 56.9**	**+1.3**
AKASG				PKPab	**PKPab**		**12 28 08.5**	**+1.8**
BRTR	**Keskin Array B**	**151.28**	**302**	PKPbc	**PKiKP**		**12 28 07.9**	**+2.1**
	comp=Z,0.9nm,0.6s,baz=258,slow=2.8,SNR=2.6							

BER 14 12:58:09.4±0.9, 61.58N×4.44E, h10km±2km, ML1.4, 1C, Confirmed Earthquake, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FOO	**Floro**	**0.29**	**85**		*e*P	Pg	12 58 14.8	-0.5
FOO					*e*S	Sg	12 58 19.0	-0.2
FOO					IAML		12 58 19.1	
	comp=Z,42nm,0.1s							
SUE	**Sulen**	**0.54**	**163**		*e*P	Pg	12 58 19.3	-0.6
SUE					*e*S	Sg	12 58 26.6	-0.4
SUE					IAML		12 58 28.6	
	comp=Z,14nm,0.3s							
HYA	**Hoyanger**	**0.94**	**115**	↑	*i*P	Pg	12 58 25.6	-1.8
HYA					*e*S	Sg	12 58 38.3	-1.3
HYA					IAML		12 58 39.8	
	comp=Z,17nm,0.1s							
ASK	**Askoy**	**1.16**	**161**		*e*P	Pb	12 58 29.3	-2.1
ASK					*e*S	Sb	12 58 44.2	-2.2
ASK					IAML		12 58 46.4	
	comp=Z,20nm,0.6s							
AKN	**Aaknes**	**1.36**	**62**		*e*P	Pn	12 58 32.3	-2.0
AKN					*e*S	Sb	12 58 49.7	-2.5
AKN					IAML		12 58 51.0	
	comp=Z,13nm,0.5s							
MOL	**Molde**	**1.77**	**54**		*e*S	Sn	12 58 59.5	-3.1
MOL					IAML		12 59 06.9	
	comp=Z,4.1nm,0.3s							
ODD1	**Odda**	**1.99**	**146**		*e*P	Pn	12 58 42.3	-0.7
ODD1					*e*S	Sn	12 59 04.8	-3.2
ODD1					IAML		12 59 11.0	
	comp=Z,3.9nm,0.1s							
SKAR	**Skarslia**	**2.08**	**114**		*e*P	Pn	12 58 42.5	-1.8
SKAR					*e*S	Sn	12 59 07.1	-3.2
SKAR					IAML		12 59 12.8	
	comp=Z,3.2nm,0.2s							

DNK 14 12:58:11.1±1.6, 55.70N×13.39E, h0km±22km, ML1.0, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LUNU	**Lund**	**0.08**	**156**		*i*P	Pg	12 58 11.9	-0.6
DEL	**Delary**	**0.82**	**19**		*e*	Pg	12 58 24.5	-2.2
	baz=193,slow=14							
DEL					*i*P	Pb	12 58 25.6	-2.6
DEL					IAML		12 58 39.1	
	comp=Z,0.4nm,0.4s							
BSD	**Bornholm Skovb**	**1.05**	**123**		*i*P	Pg	12 58 30.7	-0.5
BSD					*i*S	Sg	12 58 44.6	-0.1
BSD					IAML		12 58 47.6	
	comp=Z,4.5nm,0.3s							
BLEU	**Blekinge**	**1.49**	**65**		*i*P	Pn	12 58 37.6	-1.4
BLEU					*i*S	Sg	12 58 58.1	-0.8

IDC ***14*** *13:04:22.6±0.6, 19.14N×121.50E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/45, mbtmp3.9/13, ML3.8/1, MS3.6/9, Ms1 3.6/9, ms1mx3.2/40, Error ellipse: s-maj=28.9km s-min=14.0km az=76.0*
BJI ***14*** *13:04:27.4±0.0, 19.23N×121.05E, h25km, mB4.7/22, mb4.2/24, ML4.1/1, Ms3.8/8, Ms7 3.6/9*
NEIC ***14*** *13:04:27.9±1.6, 19.22N±0.05×121.14E±0.10, h33km±4km, mb4.5/71, Error ellipse: s-maj=13.4km s-min=7.4km az=102.0*
MAN ***14*** *13:04:29.5, 19.18N×121.26E, h27km, MS4.2*

ISC 14 13:04:28.8±0.4, 19.21N±0.03×121.15E±0.05, h39km, n118, σ1.18/112, mb4.4/44, MS3.6/8, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**1.28**	**138**		*e*P	**Pn**	**13 04 50.4**	**+0.2**
SGCP					*e*S	**Sn**	**13 05 06.4**	**+0.3**
APYP	**Conner**	**1.34**	**176**		*e*P	**Pn**	**13 04 51.3**	**+0.3**
APYP					*e*S	**Sn**	**13 05 08.2**	**+0.6**
SIPP	**Brgy, Tapao**	**1.44**	**207**	↑	*e*P	**Pn**	**13 04 54.3**	**+2.0**
SIPP					*e*S	Sn	13 05 21.6	+12
BBP	**Basco**	**1.45**	**32**		*e*P	**Pn**	**13 04 53.6**	**+1.1**
BBP					*e*S	**Sn**	**13 05 11.8**	**+1.6**
CVP	**Callao Caves**	**1.62**	**157**	↓	*i*P	**Pn**	**13 04 56.0**	**+1.1**
CVP					*i* S	**Sn**	**13 05 15.9**	**+1.2**
SZP	**Santa**	**1.78**	**202**			**Pn**	**13 04 57.4**	**+0.4**
TWG	**Pinlang**	**3.60**	**359**			**Pn**	**13 05 21.4**	**-0.7**
TPUB	**Ta-pu**	**4.10**	**353**			**Pn**	**13 05 28.5**	**-0.5**
YULB	**Yu-li**	**4.17**	**2**	Pn		**Pn**	**13 05 29.5**	**-0.4**
SSLB	**Suanglung**	**4.56**	**358**	Pn		**Pn**	**13 05 35.1**	**-0.3**
NACB	**Ninganchiao**	**4.96**	**5**			**Pn**	**13 05 40.6**	**-0.2**
LQP	**Lukban**	**5.08**	**176**	↓	*e*P	**Pn**	**13 05 45.4**	**+2.8**
YHNB	**Yeheng**	**5.44**	**2**	Pn		**Pn**	**13 05 48.5**	**+1.0**
YOJ	**Yonaguni jima**	**5.51**	**18**	Pn		**Pn**	**13 05 48.8**	**+0.5**
KNMB	**Chin-men Tao**	**5.83**	**334**	Pn		**Pn**	**13 05 50.9**	**-1.8**
QIZ	**Qiongzhong**	**10.69**	**271**	P		**Pn**	**13 06 58.3**	**-1.2**
QIZ				S		**Sn**	**13 08 58.1**	**+0.1**
QIZ				pmax	pmax			
	comp=Z,210nm,3.6s							
QIZ				LR	LR			
	comp=E,180nm,9.8s							
QIZ				LR	LR			
	comp=Z,190nm,14.3s							
QIZ	**Qiongzhong**	**10.69**	**271**	Pn		**Pn**	**13 06 57.8**	**-1.7**
DAV	**Davao City (W)**	**12.81**	**160**	LR	LR		13 13 18.6	
	comp=Z,279nm,18.3s,baz=338,slow=42							
NJ2	**Nanjing**	**12.96**	**351**	*e*P		**Pn**	**13 07 31.0**	**+0.6**
NJ2				pmax	pmax			
	comp=Z,4.0nm,0.5s							
TOLI2	**Tolitoli**	**17.99**	**181**			**P**	**13 08 37.3**	**+1.2**
KMI	**Kunming**	**18.04**	**292**	↓	P	**Pn**	**13 08 35.4**	**-1.4**
KMI					pP	pP	13 08 45.3	-0.5
KMI					pmax	pmax		
	comp=Z,13nm,1.4s							
KMI					pmax	pmax		
	comp=Z,89nm,3.8s							
KMI					LR	LR		
	comp=N,160nm,11.5s							
KMI					LR	LR		
	comp=E,190nm,13.5s							
KMI					LR	LR		
	comp=Z,200nm,15.4s							
JHS	**Saijyo**	**18.97**	**32**	P		**P**	**13 08 47.3**	**+0.4**
JHS					IAmb	IAmb	13 08 51.6	
	comp=Z,44nm,1.4s							
KSRS	**Korea Array**	**19.12**	**17**	P		**P**	**13 08 46.1**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=198,slow=12,SNR=7.7							
KSRS					LR	LR	13 17 04.9	
	comp=Z,68nm,18.4s,baz=194,slow=40							
JWT	**Wachi**	**20.38**	**35**	Pn		Pn	13 09 04.9	+0.5
JWT					IAmb	IAmb	13 09 05.6	
	comp=Z,62nm,1.5s							
CMAR	**Chiang Mai Ar**	**21.04**	**272**	P		**P**	**13 09 10.7**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=73,slow=9.4,SNR=5.9							
CMAR					LR	LR	13 18 25.4	
	comp=Z,66nm,18.3s,baz=136,slow=40							
JGF	**Kuroka**	**21.71**	**38**	P		**P**	**13 09 17.1**	**+0.5**
JGF					IAmb	IAmb	13 09 20.9	
	comp=Z,11nm,0.9s							
HHC	**Hu-ho-hao-te**	**23.08**

COLD				IAmb	IAmb	13 15 58.9	
	comp=Z,5.1nm,1.4s						
MLY	**Manley**	**71.98**	**26**	P	**P**	**13 15 47.7**	**-0.5**
MLY				IAmb	IAmb	13 16 00.4	
	comp=Z,3.4nm,1.0s						
BPAW	**Bear Paw Mtn.**	**71.98**	**27**	P	**P**	**13 15 48.1**	**-0.2**
SKT	**Skwentna**	**71.99**	**30**	P	**P**	**13 15 47.8**	**-0.6**
SKT				IAmb	IAmb	13 16 08.4	
	comp=Z,5.5nm,1.1s						
KDAK	**Kodiak Island**	**71.99**	**34**	P	**P**	**13 15 48.0**	**-0.3**
TRF	**Thorofare Moun**	**72.37**	**28**	P	**P**	**13 15 50.9**	**+0.2**
TRF				IAmb	IAmb	13 16 03.5	
	comp=Z,7.8nm,1.3s						
SUA	**Susitna One**	**72.43**	**30**	P	**P**	**13 15 50.7**	**-0.3**
CNPM	**China Poot**	**72.46**	**32**	P	**P**	**13 15 50.7**	**-0.4**
BRLK	**Bradley Lake**	**72.60**	**32**	P	**P**	**13 15 52.2**	**+0.2**
MCK	**McKinley**	**72.93**	**28**	P	**P**	**13 15 54.4**	**+0.5**
MCK				IAmb	IAmb	13 15 54.6	
	comp=Z,4.5nm,0.9s						
RND	**Reindeer**	**73.02**	**28**	P	**P**	**13 15 54.1**	**-0.3**
RND				IAmb	IAmb	13 15 54.7	
	comp=Z,3.8nm,0.7s						
MDM	**Murphy Dome**	**73.05**	**26**	P	**P**	**13 15 54.2**	**-0.3**
MDM				IAmb	IAmb	13 16 02.1	
	comp=Z,5.5nm,1.3s						
PMR	**Palmer**	**73.17**	**30**	P	**P**	**13 15 54.8**	**-0.5**
PMR				IAmb	IAmb	13 15 55.5	
	comp=Z,3.3nm,0.6s						
WRH	**Wood River Hil**	**73.18**	**27**	P	**P**	**13 15 55.7**	**+0.4**
GHO	**Glory Hole Cre**	**73.24**	**30**	P	**P**	**13 15 55.6**	**-0.2**
GHO				IAmb	IAmb	13 15 59.7	
	comp=Z,8.3nm,1.2s						
POKR	**Poker Plat Res**	**73.36**	**26**	P	**P**	**13 15 56.2**	**-0.2**
POKR				IAmb	IAmb	13 16 12.1	
	comp=Z,3.8nm,0.8s						
SML	**Sawmill**	**73.52**	**30**	P	**P**	**13 15 57.0**	**-0.4**
KNK	**Knik Glacier**	**73.52**	**30**	P	**P**	**13 15 57.1**	**-0.3**
KNK				IAmb	IAmb	13 15 57.6	
	comp=Z,5.2nm,0.6s						
KEV	**Kevo**	**73.57**	**339**	P	**P**	**13 15 57.9**	**+0.4**
ILAR	**Eielson Array**	**73.64**	**27**	P	**P**	**13 15 56.9**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=273,slow=4.6,SNR=6.3						
PWL	**Port Wells**	**73.68**	**31**	P	**P**	**13 15 57.7**	**-0.6**
PWL				IAmb	IAmb	13 16 01.7	
	comp=Z,8.1nm,0.9s						
SCM	**Sheep Creek Mo**	**73.98**	**30**	P	**P**	**13 15 59.8**	**-0.3**
FYU	**Fort Yukon**	**73.98**	**25**	P	**P**	**13 16 00.7**	**+0.7**
FYU				IAmb	IAmb	13 16 20.9	
	comp=Z,9.8nm,1.4s						
PRP	**Porcupine Dome**	**74.07**	**26**	P	**P**	**13 16 00.7**	**0.0**
PRP				IAmb	IAmb	13 16 01.0	
	comp=Z,4.7nm,1.5s						
ARCES	**ARCESS Array B**	**74.13**	**339**	P	**P**	**13 16 00.7**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=60,slow=7.2,SNR=14						
GLI	**Glacier Island**	**74.27**	**31**	P	**P**	**13 16 01.2**	**-0.6**
SPA0	**Spitsbergen Ar**	**74.32**	**348**	P	**P**	**13 16 01.1**	**-0.6**
M24K	**Tolsona, Glenn**	**74.46**	**29**	P	**P**	**13 16 02.3**	**-0.6**
KLU	**Klutina**	**74.70**	**30**	P	**P**	**13 16 04.7**	**+0.3**
KLU				IAmb	IAmb	13 16 07.0	
	comp=Z,3.0nm,0.9s						
SCRK	**Sand Creek**	**75.04**	**27**	P	**P**	**13 16 06.1**	**-0.2**
SCRK				IAmb	IAmb	13 16 09.7	
	comp=Z,7.5nm,1.5s						
MENT	**Mentasta**	**75.39**	**28**	P	**P**	**13 16 08.7**	**+0.4**
FINES	**FINESS Array B**	**75.72**	**330**	LR	LR	13 55 24.5	
	comp=Z,63nm,19.8s,baz=331,slow=40						
BARN	**Barnard Glacie**	**76.81**	**30**	P	**P**	**13 16 17.3**	**+0.7**
DAWY	**Dawson**	**76.97**	**26**	P	**P**	**13 16 17.8**	**+0.6**
CTGM	**Chitina Glacie**	**76.99**	**30**	P	**P**	**13 16 17.9**	**+0.4**
LOGN	**Logan Glacier**	**77.18**	**30**	P	**P**	**13 16 19.6**	**+1.0**
LOGN				IAmb	IAmb	13 16 31.8	
	comp=Z,8.1nm,1.3s						
EPYK	**Eagle Plains**	**77.33**	**24**	P	**P**	**13 16 19.2**	**0.0**
INK	**Inuvik**	**77.83**	**22**	P	**P**	**13 16 22.1**	**+0.3**
HYT	**Haines Junctio**	**78.81**	**29**	P	**P**	**13 16 28.4**	**+0.8**
HYT				IAmb	IAmb	13 16 35.4	
	comp=Z,11nm,1.4s						
BURAR	**Bucovina Array**	**79.94**	**317**	P	**P**	**13 16 34.5**	**+0.5**
C36M	**Paulatuk**	**80.49**	**19**	P	**P**	**13 16 35.1**	**-1.2**
C36M				IAmb	IAmb	13 16 36.2	
	comp=Z,2.6nm,0.8s						
NOA	**NORSAR Array B**	**82.60**	**333**	LR	LR	13 55 57.0	
	comp=Z,63nm,18.3s,baz=295,slow=37						
YKA	**Yellowknife Ar**	**87.55**	**23**	P	**P**	**13 17 12.7**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=311,slow=4.3,SNR=44						
PPT	**Papeete**	**94.97**	**107**	LR	LR	13 55 37.8	
	comp=Z,20nm,18.1s,baz=292,slow=32						
TXAR	**Lajitas Array**	**115.21**	**43**	PKP	**PKPdf**	**13 23 07.2**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=234,slow=1.1,SNR=5.0						

KRSC 14 13:16:46.6±1.6, 54°.97N×165°.48E, h30km±11km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.37**	**50**	*eP*	Pb	13 16 54.5	-0.5
BKI				*eS*	Sb	13 16 58.9	-1.8
KBTR	**Krutoberegovo**	**1.96**	**311**	*eP*	Pn	13 17 19.3	+1.7
KBTR				*eS*	Sb	13 17 43.4	-2.0
MKZ	**Mys Kozlova**	**2.21**	**261**	P	Pb	13 17 25.1	-0.7
MKZ				*eS*	Sb	13 17 51.8	-0.9
KZV	**Kizimen**	**2.99**	**275**	*eP*	Pb	13 17 36.5	-2.6
KZV				*eS*	Sb	13 18 11.7	-3.5
SPN	**Mys Shipunski**	**3.72**	**242**	S	Sn	13 18 27.0	+2.3
NLC	**Nalytchevo**	**4.04**	**246**	S	Sn	13 18 36.3	+3.9
SDLR	**Sedlovina**	**4.23**	**249**	*eP*	Pn	13 17 54.3	+5.3
SDLR				*eS*	Sn	13 18 41.7	+4.3
SMAR	**Somma**	**4.29**	**249**	*eP*	Pb	13 17 55.6	-5.6
SMAR				*eS*	Sn	13 18 42.9	+4.1
KRER	**Koryakskii**	**4.29**	**250**	*eP*	Pb	13 17 55.7	-5.7
KRER				*eS*	Sn	13 18 43.6	+4.5
UGLR	**Uglovaya**	**4.30**	**249**	*eP*	Pn	13 17 55.5	+5.6
AVH	**Avacha**	**4.32**	**249**	P	Pb	13 17 56.1	-5.6
AVH				*eS*	Sn	13 18 44.0	+4.5
KRX	**Arik**	**4.33**	**251**	*eP*	Pn	13 17 55.9	+5.6
KRX				*eS*	Sn	13 18 43.6	+3.9
KOK	**Koryaka**	**4.36**	**250**	P	Pn	13 17 56.6	+5.8
DALK	**Dalny**	**4.42**	**247**	P	Pn	13 17 57.1	+5.7
DALK				S	Sn	13 18 44.8	+3.1
KRMR	**Karymshinskiy**	**4.85**	**247**	P	Pn	13 18 03.4	+6.1
KRMR				S	Sn	13 18 57.1	+4.8
RUS	**Russkaya**	**4.86**	**241**	P	Pn	13 18 02.5	+5.1
RUS				*eS*	Sn	13 18 55.6	+3.0
MTVR	**Mutnovka**	**5.00**	**243**	P	Pn	13 18 04.4	+4.9
MTVR				S	Sn	13 19 00.0	+3.7
GRL	**Gorelyy**	**5.02**	**244**	*eP*	Pn	13 18 05.5	+5.7
GRL				S	Sn	13 19 01.9	+5.2

*NEIC **14** 13:25:35.6±1.7, 25°.05S×0°.09×179°.7E±0°.1, h496km±7km, mb4.5/43, Error ellipse: s-maj=18.1km s-min=13.6km az=93.0*
*IDC **14** 13:25:35.9±1.4, 24°.99S×179°.72E, h494km±14km, mb3.6/16, mb1 3.7/21, mb1mx3.6/30, mbtmp4.5/21, Error ellipse: s-maj=15.2km s-min=11.2km az=77.0*
ISC 14 13:25:36.4±0.4, 24°.99S±0°.05×179°.73E±0°.07, h507km, n120, σ1§45/136, mb4.4/38, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**4.72**	**154**	P	**P**	**13 27 01.5**	**+0.4**
GLKZ	**Green Lake**	**4.74**	**154**	P	**P**	**13 27 02.1**	**+0.8**
GLKZ				S	**S**	**13 28 11.2**	**+0.4**
MSVF	**Nonsavu**	**7.39**	**347**	P	**P**	**13 27 27.6**	**+0.6**
	1.9nm,0.3s,baz=185,slow=12,SNR=11						
MSVF	**Nonsavu**	**7.39**	**347**	P	**P**	**13 27 27.5**	**+0.5**
OUZ	**Omahuta**	**11.49**	**206**	P	**P**	**13 28 11.4**	**+2.0**
WCZ	**Waipu Caves**	**11.86**	**202**	P	**P**	**13 28 14.7**	**+1.4**
KUZ	**Kuaotunu**	**12.21**	**195**	P	**P**	**13 28 17.3**	**+0.4**
WIAZ	**Waiheke Island**	**12.41**	**197**	P	**P**	**13 28 20.5**	**+1.4**
DZM	**Mont Dzumac**	**12.53**	**281**	P	**P**	**13 28 21.3**	**+0.6**
	0.9nm,0.3s,baz=96,slow=17,SNR=7.3						
MXZ	**Matakaoa Point**	**12.59**	**185**	P	**P**	**13 28 20.9**	**-0.1**
MXZ	**Matakaoa Point**	**12.59**	**185**	P	**P**	**13 28 22.3**	**+1.4**
WMGZ	**Waiomatatini S**	**12.84**	**185**	P	**P**	**13 28 24.7**	**+1.1**
WMGZ				S	**S**	**13 30 41.1**	**-0.4**
RUGZ	**Raukumara Rang**	**13.05**	**187**	P	**P**	**13 28 26.8**	**+0.8**
RUGZ				S	**S**	**13 30 43.1**	**-2.6**
PUZ	**Puketiti**	**13.10**	**185**	P	**P**	**13 28 27.3**	**+0.9**
PUZ				S	**S**	**13 30 46.3**	**-0.2**
TOZ	**Tahuroa Road**	**13.20**	**195**	P	**P**	**13 28 32.0**	**+4.5**
TWGZ	**Tauwhareparae**	**13.23**	**186**	P	**P**	**13 28 27.6**	**-0.2**
TWGZ				S	**S**	**13 30 47.5**	**-1.6**
URZ	**Urewera**	**13.41**	**189**	P	**P**	**13 28 28.8**	**-0.8**
	3.6nm,0.3s,baz=300,slow=22,SNR=21						
URZ				S	**S**	**13 30 49.8**	**-2.7**
	0.9nm,0.3s,baz=305,slow=23,SNR=1.6						
URZ	**Urewera**	**13.41**	**189**	P	**P**	**13 28 27.2**	**-2.4**
URZ	**Urewera**	**13.41**	**189**	P	**P**	**13 28 27.5**	**-2.1**
URZ				S	**S**	**13 30 50.9**	**-1.6**
MWZ	**Matawai**	**13.44**	**187**	P	**P**	**13 28 30.6**	**+0.7**
MWZ				S	**S**	**13 30 53.1**	**+0.1**
TKGZ	**Te Karaka**	**13.50**	**186**	P	**P**	**13 28 30.8**	**+0.2**
TKGZ				S	**S**	**13 30 56.0**	**+1.8**
AFI	**Afiamalu**	**13.62**	**38**	P	**P**	**13 28 30.1**	**-2.1**
	1.1nm,0.3s,baz=316,slow=16,SNR=2.8						
AFI				S	**S**	**13 30 54.3**	**-2.8**
	2.6nm,0.3s,baz=55,slow=16,SNR=4.5						
MUGZ	**Murupara**	**13.68**	**190**	P	**P**	**13 28 31.5**	**-1.0**
MUGZ				S	**S**	**13 30 57.1**	**-0.5**
TLZ	**Tolley Road**	**13.77**	**194**	P	**P**	**13 28 36.0**	**+2.5**
RIGZ	**Rimuhau**	**13.78**	**186**	P	**P**	**13 28 34.2**	**+0.7**
RIGZ				S	**S**	**13 30 58.0**	**-1.5**
RTZ	**Ruatahuna**	**13.78**	**189**	P	**P**	**13 28 36.3**	**+2.7**
RTZ				S	**S**	**13 31 00.6**	**+0.9**
MTHZ	**Maungataniwha**	**14.04**	**189**	P	**P**	**13 28 36.2**	**-1.0**
MTHZ				S	**S**	**13 31 03.5**	**-1.0**
RATZ	**Rangitukua**	**14.23**	**193**	P	**P**	**13 28 38.7**	**+0.3**
BKZ	**Black Stump Fm**	**14.40**	**190**	P	**P**	**13 28 37.4**	**-2.6**
BKZ	**Black Stump Fm**	**14.40**	**190**	P	**P**	**13 28 38.6**	**-1.4**
BKZ				S	**S**	**13 31 08.7**	**-2.8**
ETVZ	**East Tongariro**	**14.51**	**193**	P	**P**	**13 28 41.5**	**+0.2**
VRZ	**Vera Road**	**14.71**	**195**	P	**P**	**13 28 46.3**	**+3.1**
BHHZ	**Black Hill Sta**	**14.78**	**191**	P	**P**	**13 28 40.6**	**-3.5**
KRHZ	**Kereru**	**14.88**	**190**	P	**P**	**13 28 43.4**	**-1.7**
KAHZ	**Kahuranaki**	**14.96**	**189**	P	**P**	**13 28 45.0**	**-0.9**
SANVU	**Saraoutou**	**15.10**	**307**	P	**P**	**13 28 47.0**	**-0.7**
TSZ	**Takapari Road**	**15.36**	**191**	P	**P**	**13 28 48.3**	**-1.8**
BFZ	**Birch Farm**	**15.92**	**190**	P	**P**	**13 28 53.9**	**-2.0**
BFZ	**Birch Farm**	**15.92**	**190**	P	**P**	**13 28 54.0**	**-1.8**
MRZ	**Mangatainoka R**	**16.01**	**192**	P	**P**	**13 28 53.2**	**-3.5**
OGWZ	**Otaki Gorge**	**16.24**	**192**	P	**P**	**13 28 57.5**	**-1.6**
HOWZ	**Holdsworth Sta**	**16.25**	**191**	P	**P**	**13 28 58.1**	**-1.2**
SNZO	**South Karori**	**16.81**	**193**	P	**P**	**13 29 03.0**	**-2.0**
QRZ	**Quartz Range**	**16.90**	**199**	P	**P**	**13 29 04.2**	**-1.7**
NNZ	**Nelson**	**17.03**	**197**	P	**P**	**13 29 04.2**	**-2.9**
TUWZ	**Tuamarina**	**17.09**	**195**	P	**P**	**13 29 04.6**	**-3.1**
BSWZ	**Blackbirch Sta**	**17.38**	**195**	P	**P**	**13 29 08.8**	**-1.6**
THZ	**Tophouse**	**17.66**	**197**	P	**P**	**13 29 10.7**	**-2.5**
KHZ	**Kahutara**	**18.12**	**195**	P	**P**	**13 29 15.5**	**-1.7**
LTZ	**Lake Taylor**	**18.78**	**197**	P	**P**	**13 29 21.7**	**-1.7**
OXZ	**Oxford**	**19.35**	**197**	P	**P**	**13 29 26.9**	**-1.6**
OXZ				IAmb	IAmb	13 29 51.0	
	comp=Z,60nm,1.3s						
RPZ	**Rata Peaks**	**19.98**	**199**	P	**P**	**13 29 33.5**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=222,slow=2.0,SNR=5.2						
RPZ	**Rata Peaks**	**19.98**	**199**	P	**P**	**13 29 33.1**	**-1.2**
RPZ				IAmb	IAmb	13 29 49.1	
	comp=Z,50nm,1.2s						
MLZ	**Mavora Lakes**	**22.39**	**202**	P	**P**	**13 29 55.3**	**-0.8**
MLZ				IAmb	IAmb	13 30 00.6	
	comp=Z,64nm,1.5s						
HNR	**Honiara**	**24.37**	**306**	P	**P**	**13 30 12.4**	**-1.7**
	comp=Z,39nm,0.7s,baz=303,slow=2.1,SNR=5.2						
HNR	**Honiara**	**24.37**	**306**	P	**P**	**13 30 13.5**	**-0.6**
HNR				IAmb	IAmb	13 30 14.7	
	comp=Z,41nm,0.8s						
CTA	**Charters Tower**	**31.26**	**272**	P	**P**	**13 31 14.6**	**+0.3**
	comp=Z,13nm,0.4s,baz=102,slow=13						
CTAO	**Charters Tower**	**31.26**	**272**	P	**P**	**13 31 15.4**	**+1.1**
CTAO				IAmb	IAmb	13 31 16.3	
	comp=Z,14nm,0.8s						
STKA	**Stephens Creek**	**34.10**	**250**	P	**P**	**13 31 38.5**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=109,slow=12,SNR=6.8						
STKA	**Stephens Creek**	**34.10**	**250**	P	**P**	**13 31 38.1**	**-0.3**
COEN	**Coen**	**36.06**	**281**	P	**P**	**13 31 54.0**	**-0.9**
COEN				IAmb	IAmb	13 32 01.6	
	comp=Z,11nm,1.1s						
BBOO	**Buckleboo**	**38.80**	**248**	P	**P**	**13 32 16.6**	**-0.7**
AS31	**Alice Springs**	**41.63**	**262**	P	**P**	**13 32 40.1**	**+0.1**
ASAR	**Alice Springs**	**41.63**	**262**	P	**P**	**13 32 40.3**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=96,slow=7.2,SNR=39						
ASAR				S	**S**	**13 38 18.1**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=99,slow=14,SNR=6.7						
ASAR	**Alice Springs**	**41.63**	**262**	P	**P**	**13 32 40.0**	**0.0**
WR0	**Warramunga Arr**	**41.92**	**267**	P	**P**	**13 32 42.0**	**-0.3**
WR0				IAmb	IAmb	13 32 42.5	
	comp=Z,5.3nm,0.6s						
WB2	**Warramunga Arr**	**42.09**	**267**	P	**P**	**13 32 43.4**	**-0.3**
WB2				IAmb	IAmb	13 32 44.3	
	comp=Z,9.0nm,0.8s						
WRAB	**Tennant Creek**	**42.10**	**267**	P	**P**	**13 32 43.2**	**-0.5**
WRAB				IAmb	IAmb	13 32 43.9	
	comp=Z,7.3nm,0.5s						
WB0	**Warramunga Arr**	**42.10**	**268**	P	**P**	**13 32 43.4**	**-0.4**
WB0				IAmb	IAmb	13 32 44.3	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**42.10**	**267**	P	**P**	**13 32 43.6**	**-0.2**
	comp=Z,9.1nm,0.6s,baz=103,slow=7.8,SNR=124						
WRA				ScP	**ScP**	**13 37 30.6**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=102,slow=3.6,SNR=8.5						
WRA				S	**S**	**13 38 23.0**	**-3.4**
	comp=Z,1.8nm,1.0s,baz=100,slow=14,SNR=8.2						
WRA	**Warramunga Arr**	**42.10**	**267**	P	**P**	**13 32 42.6**	**-1.1**
FORT	**Forrest**	**45.71**	**251**	P	**P**	**13 33 11.0**	**-0.7**
FORT				IAmb	IAmb	13 33 31.2	
	comp=Z,17nm,0.9s						
WAKE	**Wake Island**	**45.81**	**343**	P	**P**	**13 33 12.8**	**+0.4**
MTN	**Manton Dam**	**47.31**	**276**	P	**P**	**13 33 22.1**	**-1.8**
MTN				IAmb	IAmb	13 33 41.2	
	comp=Z,20nm,1.2s						
KNRA	**Kununurra**	**48.45**	**271**	P	**P**	**13 33 32.5**	**0.0**
KNRA				IAmb	IAmb	13 33 33.3	
	comp=Z,18nm,0.5s						
FITZ	**Fitzroy Crossi**	**50.51**	**267**	P	**P**	**13 33 48.6**	**+0.9**
	comp=Z,7.4nm,0.8s,baz=117,slow=7.6,SNR=24						
FITZ	**Fitzroy Crossi**	**50.51**	**267**	P	**P**	**13 33 48.0**	**+0.3**
FITZ				IAmb	IAmb	13 33 49.5	
	comp=Z,7.4nm,0.9s						
FAKI	**Fak Fak**	**50.67**	**288**	P	**P**	**13 33 49.3**	**+0.4**
FAKI				IAmb	IAmb	13 34 08.0	
	comp=Z,40nm,1.4s						
VNDA	**Vanda**	**53.28**	**185**	P	**P**	**13 34 07.8**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=7.0,slow=5.4,SNR=6.7						
VNDA	**Vanda**	**53.28**	**185**	P	**P**	**13 34 06.2**	**-0.6**
SBA	**Scott Base**	**53.28**	**183**	P	**P**	**13 34 08.5**	**+1.8**
MORW	**Morawa**	**56.28**	**251**	P	**P**	**13 34 28.4**	**-0.2**
MORW				IAmb	IAmb	13 34 54.0	
	comp=Z,28nm,1.4s						
CASY	**Casey**	**59.03**	**206**	P	**P**	**13 34 46.3**	**-0.3**
CASY				IAmb	IAmb	13 34 46.7	
	comp=Z,17nm,0.8s						
QSPA	**South Pole Qui**	**65.10**	**180**	P	**P**	**13 35 27.0**	**+0.6**
	comp=Z,7.1nm,0.7s,baz=344,slow=0.9,SNR=42						
MJAR	**Matsushiro Arr**	**72.66**	**326**	P	**P**	**13 36 11.9**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=156,slow=4.6,SNR=7.9						
MJAR	**Matsushiro Arr**	**72.66**	**326**	IAmb	IAmb	13 36 13.7	
	comp=Z,2.5nm,0.9s						
MAT	**Matsushiro**	**72.66**	**326**	P	**P**	**13 36 12.4**	**+0.2**
JWT	**Wachi**	**73.17**	**323**	P	**P**	**13 36 15.9**	**+0.8**
JWT				IAmb	IAmb	13 36 21.5	
	comp=Z,52nm,1.5s						
JSU	**Suzuyama**	**73.31**	**317**	P	**P**	**13 36 16.5**	**+0.4**
JSD	**Sado**	**73.80**	**327**	P	**P**	**13 36 19.3**	**+0.7**
JSD				IAmb	IAmb	13 36 35.8	
	comp=Z,8.0nm,0.8s						
MAW	**Mawson**	**76.65**	**201**	P	**P**	**13 36 34.7**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=139,slow=5.6,SNR=12						
MAW	**Mawson**	**76.65**	**201**	P	**P**	**13 36 34.4**	**+0.2**
KSRS	**Korea Array**	**78.93**	**320**	P	**P**	**13 36 48.0**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=139,slow=5.2,SNR=6.0						
PETK	**Petropavlovsk-**	**80.10**	**347**	P	**P**	**13 36 53.4**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=133,slow=7.0,SNR=9.7						
NJ2	**Nanjing**	**81.19**	**311**	*eP*	**P**	**13 37 01.6**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	**Ussuriysk Ar.**	**81.55**	**327**	P	**P**	**13 37 00.6**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=157,slow=4.2,SNR=5.5						
SNAA	**Sanae**	**83.58**	**179**	P	**P**	**13 37 09.7**	**-0.8**
VNA3	**Neumayer Olymp**	**83.80**	**177**	P	**P**	**13 37 11.0**	**-0.6**
VNA2	**Neumayer--Watz**	**84.22**	**178**	P	**P**	**13 37 12.9**	**-0.7**
VNA1	**Neumayer--Stat**	**84.46**	**177**	P	**P**	**13 37 14.0**	**-0.8**
TUC	**Tucson**	**87.37**	**53**	P	**P**	**13 37 30.6**	**+1.1**
TUC				IAmb	IAmb	13 37 32.3	
	comp=Z,3.2nm,0.9s						
PLCA	**Paso Flores**	**87.68**	**134**	P	**P**	**13 37 31.7**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=288,slow=5.4,SNR=3.8						
PLCA	**Paso Flores**	**87.68**	**134**	IAmb	IAmb	13 37 31.8	
	comp=Z,2.4nm,1.1s						
BI02	**San Fabin de**	**89.29**	**131**	P	**P**	**13 37 39.1**	**+0.6**
BI02				IAmb	IAmb	13 37 40.1	
	comp=Z,5.4nm,1.0s						
KMI	**Kunming**	**89.56**	**298**	⇓P	**P**	**13 37 39.8**	**-0.2**
KMI				pP	PcP	13 37 53.6	+13
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
KMI				pmax	pmax		
	comp=Z,89nm,3.8s						
CMAR	**Chiang Mai Arr**	**89.68**	**290**	P	**P**	**13 37 41.5**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=140,slow=2.9,SNR=9.5						
TMUT	**Trail Mountain**	**90.76**	**46**	P	**P**	**13 37 46.9**	**+1.5**
TMUT				IAmb	IAmb	13 37 47.5	
	comp=Z,4.5nm,0.8s						
HHC	**Hu-ho-hao-te**	**91.02**	**315**	*eP*	**P**	**13 37 45.3**	**-0.9**
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,63nm,5.9s						
TX31	**Lajitas Ar. Si**	**91.21**	**58**	P	**P**	**13 37 48.7**	**+1.3**
TX31				IAmb	IAmb	13 37 49.5	
	comp=Z,6.3nm,0.9s						
TX32	**Lajitas Array**	**91.21**	**58**	P	**P**	**13 37 48.5**	**+1.1**
TXAR	**Lajitas Array**	**91.21**	**58**	P	**P**	**13 37 48.7**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=215,slow=6.4,SNR=14						
TXAR	**Lajitas Array**	**91.21**	**58**	P	**P**	**13 37 48.2**	**+0.8**
LZH	**Lanzhou**	**93.85**	**308**	*eP*	**P**	**13 37 58.0**	**-1.5**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
MKAR	**Makanchi Array**	**112.71**	**312**	PKKPbc	PKKPbc	13 54 04.5	-0.9
	comp=Z,0.4nm,0.6s,baz=294,slow=3.9,SNR=5.0						
ARCES	**ARCESS Array B**	**132.90**	**348**	PKP	**PKPdf**	**13 43 52.3**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=96,slow=1.8,SNR=5.5						
ARCES				SKPbc	**SKPbc**	**13 46 33.4**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=27,slow=1.4,SNR=6.3						
FINES	**FINESS Array B**	**139.40**	**341**	SKPbc	**SKPbc**	**13 46 52.2**	**-0.3**
	comp=Z,6.2nm,0.9s,baz=304,slow=3.7,SNR=8.8						
AKASG	**Malin Array Be**	**145.75**	**326**	PKPbc	**PKPbc**	**13 44 18.8**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=39,slow=4.3,SNR=4.2						
CRVS	**Cervenica-Dubn**	**150.69**	**330**	*e*PKP	**PKPbc**	**13 44 30.5**	**-0.2**
CRVS				*e*		13 44 41.0	
TORD	**Torodi Ar. Bea**	**168.07**	**189**	PKPab	**PKPab**	**13 45 55.5**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=179,slow=3.7,SNR=7.3						
TORD	**Torodi Ar. Bea**	**168.07**	**189**		**PKPab**	**13 45 55.3**	**-0.9**

*JMA **14** 13:50:19.1±0.1, 40°.61N×142°.69E, h28km±3km, M3.7*
JMA Felt I J1.
*IDC **14** 13:50:21.5±3.1, 40°.70N×143°.05E, h75km±25km, mb3.2/4, mb1 3.3/7, mb1mx3.1/39, mbtmp3.5/7, MS2.1/1, Ms1 2.1/1, ms1mx1.9/22, Error ellipse: s-maj=46.5km s-min=22.0km az=79.0*
ISC 14 13:50:18.9±2.3, 40°.62N±0°.05×142°.70E±0°.07, h32km±16km, n24, σ1§14/29, mb3.5/4, 1C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.86**	**242**	⇓P	**Pn**	**13 50 34.6**	**-0.1**
JKEN				S	**Sb**	**13 50 45.8**	**-0.7**
JTH	**Tanohata**	**0.93**	**224**	P	**Pn**	**13 50 35.9**	**+0.2**
JANG	**Nango**	**0.93**	**255**	⇓P	**Pn**	**13 50 36.1**	**+0.3**
JANG				S	**Sb**	**13 50 48.2**	**-0.5**

EKS2	**Erkin-Say**	**1.42**	**22**	P		**Pn**	**14 19 51.2**	**+0.1**
	SNR=34							
TRKS	**Terek-Say**	**1.45**	**278**	⇓*iP*		**Pn**	**14 19 51.6**	**+0.1**
	baz=76							
TRKS				⇓*iS*		**Sn**	**14 20 11.4**	**+0.8**
	baz=76							
AAK	**Ala-Archa**	**1.68**	**39**	Pg		**Pb**	**14 19 55.8**	**-0.5**
	50nm,0.3s,baz=208,slow=5.4,SNR=354							
AAK				Lg		Lg	14 20 17.9	
	36nm,0.3s,baz=46,slow=15,SNR=31							
AAK	**Ala-Archa**	**1.68**	**39**	⇓*iP*		**Pb**	**14 19 55.9**	**-0.3**
	baz=38							
AAK				⇓*iS*		**Sb**	**14 20 17.6**	**+0.2**
	baz=38							
AAK	**Ala-Archa**	**1.68**	**39**	P		**Pb**	**14 19 55.7**	**-0.5**
	SNR=200							
AAK	**Ala-Archa**	**1.68**	**39**	Pn		**Pn**	**14 19 55.5**	**+0.9**
	64nm,0.3s							
AAK				Sn		**Sb**	**14 20 17.6**	**+0.2**
	143nm,0.4s							
FRU1	**Bishkek**	**1.87**	**38**	⇑*iP*		**Pb**	**14 19 59.0**	**-0.5**
	baz=37							
FRU1				⇑*iS*		**Sb**	**14 20 23.5**	**+0.6**
	baz=37							
KBK	**Karagaybulak**	**1.92**	**47**	⇑*iP*		**Pb**	**14 20 00.2**	**-0.2**
	baz=46							
KBK				⇑*iS*		**Sb**	**14 20 23.9**	**-0.6**
	baz=46							
KBK	**Karagaybulak**	**1.92**	**47**	P		**Pb**	**14 20 00.3**	**-0.2**
	SNR=149							
DZA	**Taraz**	**2.00**	**321**	Pg		**Pg**	**14 20 03.2**	**-0.6**
	97nm,0.1s							
DZA				Lg		Lg	14 20 30.7	
	656nm,0.4s							
CHMS	**Chumysh**	**2.08**	**37**	⇑*iP*		**Pb**	**14 20 02.5**	**-0.5**
	baz=36							
CHMS				⇑*iS*		**Sb**	**14 20 28.4**	**-0.3**
	baz=36							
CHMS	**Chumysh**	**2.08**	**37**	P		**Pb**	**14 20 02.4**	**-0.5**
	SNR=67							
DRK	**Karamyk**	**2.10**	**208**	⇑*iP*		**Pn**	**14 20 02.3**	**+1.7**
	baz=8.0							
DRK				⇑*iS*		**Sb**	**14 20 29.3**	**-0.3**
	baz=8.0							
BTK	**Batken**	**2.13**	**234**	⇑*iP*		**Pb**	**14 20 03.2**	**-0.8**
	baz=34							
BTK				⇑*iS*		**Sb**	**14 20 30.7**	**+0.3**
	baz=34							
USP	**Ospenovka**	**2.20**	**29**	⇑*iP*		**Pb**	**14 20 03.9**	**-1.1**
	baz=28							
USP				⇑*iS*		**Sb**	**14 20 31.6**	**-0.6**
	baz=28							
USP	**Ospenovka**	**2.20**	**29**	P		**Pb**	**14 20 03.7**	**-1.3**
	SNR=136							
CHMG	**Chimgan**	**2.30**	**276**	*eP*		**Pb**	**14 20 08.0**	**+1.2**
CHMG				*eS*		**Sb**	**14 20 36.0**	**+0.8**
CHRV	**Charvak**	**2.35**	**278**	*eP*		**Pb**	**14 20 08.0**	**+0.4**
CHRV				*eS*		**Sg**	**14 20 40.0**	**-0.8**
BOOM	**Boomskoye usch**	**2.44**	**61**	⇑*iP*		**Pn**	**14 20 06.3**	**+1.2**
	baz=61							
BOOM				⇑*iS*		**Sn**	**14 20 36.8**	**+1.8**
	baz=61							
TKM2	**Tokmak 2**	**2.46**	**49**	⇑*iP*		**Pb**	**14 20 07.9**	**-1.7**
	baz=49							
TKM2				⇑*iS*		**Sn**	**14 20 37.8**	**+2.3**
	baz=49							
TKM2	**Tokmak 2**	**2.46**	**49**	P		**Pb**	**14 20 07.7**	**-1.9**
	SNR=124							
TKM2	**Tokmak 2**	**2.46**	**49**	⇓Pg		**Pb**	**14 20 08.2**	**-1.4**
	38nm,0.3s							
TKM2				⇓Lg		Lg	14 20 41.1	
	241nm,0.6s							
ULHL	**Ulahol**	**2.55**	**68**	⇑*iP*		**Pb**	**14 20 09.0**	**-2.1**
	baz=68							
ULHL				⇑*iS*		**Sn**	**14 20 39.6**	**+1.9**
	baz=68							
ULHL	**Ulahol**	**2.55**	**68**	P		**Pn**	**14 20 08.6**	**+1.9**
	SNR=257							
KK31	**Karatay Array**	**2.58**	**314**	⇓Pn		**Pn**	**14 20 09.9**	**+3.0**
	12nm,0.4s,baz=128,slow=13,SNR=135							
KK31				⇓Lg		Lg	14 20 46.8	
	33nm,0.3s,baz=132,slow=28,SNR=13							
TAS	**Tashkent**	**2.83**	**271**	*eP*		**Pg**	**14 20 19.0**	**-0.6**
TAS				*eS*		**Sg**	**14 20 55.0**	**-1.2**
BRLS	**Boroldaу**	**2.92**	**306**	Pg		**Pb**	**14 20 19.6**	**+2.2**
	108nm,0.6s							
BRLS				Lg		Lg	14 20 58.7	
	125nm,0.4s							
KRBS	**Karabastau**	**3.04**	**39**	*eP*		**Pb**	**14 20 20.2**	**+0.7**
	50nm,0.6s							
KRBS				*eS*		**Sb**	**14 20 59.1**	**+2.5**
	88nm,0.6s							
KRBS	**Karabastau**	**3.04**	**39**	Pg		**Pb**	**14 20 20.2**	**+0.7**
	50nm,0.6s							
KRBS				Lg		Lg	14 20 59.9	
	88nm,0.6s							
IZV	**Izvestkoviy**	**3.14**	**56**	*eP*		**Pb**	**14 20 21.5**	**+0.3**
	22nm,0.4s							
IZV				*eS*		**Sb**	**14 21 01.3**	**+1.9**
	117nm,0.7s							
IZV	**Izvestkoviy**	**3.14**	**56**	Pg		**Pb**	**14 20 21.5**	**+0.3**
	22nm,0.4s							
IZV				Lg		Lg	14 21 01.3	
	117nm,0.7s							
KDJ	**Kajisay**	**3.19**	**74**	⇑*iP*		**Pn**	**14 20 16.9**	**+1.5**
	baz=74							
KDJ				⇑*iS*		**Sn**	**14 20 55.1**	**+1.7**
	baz=74							
TNSS	**Tian-Shan**	**3.35**	**58**	*eP*		**Pb**	**14 20 25.6**	**+0.8**
	12nm,0.6s							
TNSS				*eS*		**Sb**	**14 21 07.9**	**+2.2**
	59nm,0.6s							
TNSS	**Tian-Shan**	**3.35**	**58**	Pg		**Pb**	**14 20 25.6**	**+0.8**
	12nm,0.6s							
TNSS				Lg		Lg	14 21 09.5	
	59nm,0.6s							
KNDC	**Almaty**	**3.45**	**56**	⇑Pn		**Pn**	**14 20 21.7**	**+2.8**
	44nm,0.5s							
KNDC				⇑Lg		Lg	14 21 11.4	
	215nm,0.8s							
MDOK	**Medeo**	**3.48**	**57**	*eP*		**Pb**	**14 20 27.8**	**+0.9**
	15nm,0.6s							
MDOK				*eS*		**Sb**	**14 21 12.0**	**+2.9**
	51nm,0.6s							
MDOK	**Medeo**	**3.48**	**57**	⇑Pn		**Pn**	**14 20 21.7**	**+2.3**
	22nm,0.6s							
MDOK				⇑Lg		Lg	14 21 11.7	
	73nm,0.7s							
MDOK	**Medeo**	**3.48**	**57**	Pg		**Pb**	**14 20 27.6**	**+0.7**
	20nm,0.7s							
MDOK				Lg		Lg	14 21 12.8	
	51nm,0.6s							
KOTS	**Kotyrbulak**	**3.55**	**57**	*eP*		**Pg**	**14 20 30.4**	**-3.0**
	53nm,0.5s							
KOTS				*eS*		**Sg**	**14 21 16.0**	**-3.4**
	96nm,0.5s							
KOTS	**Kotyrbulak**	**3.55**	**57**	Pg		**Pg**	**14 20 30.4**	**-3.0**
	53nm,0.5s							
KOTS				Lg		Lg	14 21 16.0	
	96nm,0.5s							
ANVS	**Anan'yevo**	**3.72**	**66**	⇓*iP*		**Pn**	**14 20 24.2**	**+1.4**
	baz=65							
ANVS				⇓*iS*		**Sn**	**14 21 08.0**	**+1.3**
	baz=65							
SATY	**Saty**	**4.33**	**65**	*eP*		**Pb**	**14 20 43.0**	**+1.6**
	15nm,0.8s							
SATY				*eS*		**Sg**	**14 21 38.6**	**-5.7**
	39nm,0.4s							
SATY	**Saty**	**4.33**	**65**	Pg		**Pb**	**14 20 43.0**	**+1.6**
	15nm,0.8s							
SATY				Lg		Lg	14 21 38.6	
	39nm,0.4s							
KPKS	**Kokpek**	**4.67**	**61**	*eP*		**Pb**	**14 20 49.6**	**+2.3**
	32nm,0.5s							
KPKS				*eS*		**Sg**	**14 21 50.0**	**-5.4**
	83nm,0.5s							
SHLS	**Shalkode**	**5.09**	**67**	*eP*		**Pg**	**14 21 04.0**	**+1.3**
	12nm,0.3s							
SHLS				*eS*		**Sg**	**14 22 14.5**	**+5.9**
	45nm,0.6s							
SHLS	**Shalkode**	**5.09**	**67**	Pg		**Pg**	**14 21 04.0**	**+1.3**
	12nm,0.3s							
SHLS				Lg		Lg	14 22 14.5	
	45nm,0.6s							
PDGK	**Podgornoye**	**5.17**	**65**	Pg		**Pb**	**14 20 57.9**	**+2.3**
	3.2nm,0.5s							
PDGK				Lg		Lg	14 22 04.1	
	12nm,0.9s							
KTMS	**Ketmen**	**5.80**	**66**	*eP*		**Pb**	**14 21 09.1**	**+2.7**
	1.6nm,0.1s							
KTMS				*eS*		**Sb**	**14 22 22.7**	**+6.8**
	4.8nm,0.2s							
KTMS	**Ketmen**	**5.80**	**66**	Pg		**Pb**	**14 21 09.1**	**+2.7**
	1.6nm,0.1s							
KTMS				Lg		Lg	14 22 22.7	
	4.8nm,0.2s							
MAKZ	**Makanchi**	**8.43**	**47**	⇓Pn		**Pn**	**14 21 27.9**	**+0.7**
	0.6nm,0.6s							
MAKZ				⇑Lg		Lg	14 23 45.8	
	8.4nm,1.1s							
MK31	**Makanchi Array**	**8.59**	**48**	⇑Pn		**Pn**	**14 21 30.2**	**+0.7**
	1.0nm,0.5s,baz=227,slow=13,SNR=15							
MK31				⇑Lg		Lg	14 23 56.2	
	1.7nm,0.5s,baz=236,slow=26,SNR=2.6							
MKAR	**Makanchi Array**	**8.59**	**48**	Pn		**Pn**	**14 21 31.0**	**+1.5**
	0.2nm,0.3s,baz=228,slow=14,SNR=17							
MKAR				Lg		Lg	14 23 54.5	
	0.4nm,0.3s,baz=239,slow=24,SNR=5.0							
MKAR				LR		LR	14 25 08.2	
	comp=Z,37nm,18.3s,baz=203,slow=40							
KURBB	**Kurchatov Arra**	**10.02**	**20**	Pn		**Pn**	**14 21 47.7**	**-1.3**
	0.1nm,0.3s,baz=215,slow=12,SNR=8.1							
KURBB				Lg		Lg	14 24 39.4	
	0.1nm,0.3s,baz=212,slow=35,SNR=8.5							
KURBB	**Kurchatov Arra**	**10.02**	**20**	⇑Lg		Lg	14 24 41.6	
	37nm,0.8s							
BVAR	**Borovoye Array**	**11.82**	**352**	Pn		**Pn**	**14 22 12.3**	**-1.3**
	0.1nm,0.3s,baz=223,slow=12,SNR=3.7							
BVAR				Lg		Lg	14 25 37.1	
	0.3nm,0.3s,baz=162,slow=25,SNR=4.9							
AKTO	**Aktyubinsk**	**13.84**	**316**	Pn		**Pn**	**14 22 40.2**	**-1.1**
	0.1nm,0.3s,baz=113,slow=7.7,SNR=1.6							
ZALV	**Zalesovo Beam**	**14.86**	**28**	Pn		**Pn**	**14 22 56.0**	**+0.9**
	0.2nm,0.3s,baz=210,slow=13,SNR=10							
ZALV				Lg		Lg	14 27 18.1	
	0.2nm,0.3s,baz=213,slow=21,SNR=2.4							
ARCES	**ARCESS Array B**	**37.36**	**335**	P		**P**	**14 26 36.7**	**-0.6**
	2.1nm,1.0s,baz=106,slow=9.5,SNR=1.5							
ILAR	**Eielson Array**	**69.68**	**17**	P		**P**	**14 30 32.5**	**-1.9**
	0.4nm,0.8s,baz=324,slow=6.2,SNR=4.6							
YKA	**Yellowknife Ar**	**76.32**	**4**	P		**P**	**14 31 11.9**	**-1.8**
	0.1nm,0.4s,baz=351,slow=5.8,SNR=4.2							

*IDC **14** 15:14:33.9±0.5,50°.29S×124°.50E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/14, mbtmp3.9/4, MS3.3/3, Ms1 3.3/3, ms1mx2.9/33, Error ellipse: s-maj=41.1km s-min=5.5km az=118.0*

*NEIC **14** 15:14:35.8±1.2,50°.3S±0°.1×124°.5E±0°.4, h15km±4km, mb4.2/11, Error ellipse: s-maj=36.8km s-min=12.8km az=115.0*

ISC 14 15:14:35.0±1.0,**50°.3S**±0°.2×**124°.8E**±0°.2,**h10**km,**n16, σ0s97/13, mb4.1/10, MS3.2/3, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**22.26**	**40**	P		**P**	**15 19 33.5**	**+1.4**
	1.1nm,0.7s,baz=202,slow=13,SNR=6.5							
STKA				LR		LR	15 27 12.3	
	comp=Z,68nm,18.5s,baz=203,slow=34							
STKA	**Stephens Creek**	**22.26**	**40**	IAmb		IAmb	15 19 34.1	
	comp=Z,1.3nm,1.1s							
CAN	**Canberra**	**23.09**	**59**	P		**P**	**15 19 42.1**	**+1.2**
CAN				IAmb		IAmb	15 20 08.2	
	comp=Z,23nm,1.5s							
ASAR	**Alice Springs**	**27.54**	**18**	P		**P**	**15 20 22.6**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=190,slow=8.9,SNR=25							
ASAR				LR		LR	15 30 03.1	
	comp=Z,85nm,20.3s,baz=155,slow=34							
ASAR	**Alice Springs**	**27.54**	**18**	P		**P**	**15 20 21.5**	**-0.5**
AS31	**Alice Springs**	**27.54**	**18**	P		**P**	**15 20 22.3**	**+0.3**
AS31				IAmb		IAmb	15 20 48.8	
	comp=Z,1.5nm,1.5s							
WHZ	**Wether Hill Ro**	**28.84**	**98**	P		**P**	**15 20 32.2**	**-1.1**
VNDA	**Vanda**	**30.63**	**165**	LR		LR	15 31 52.4	
	comp=Z,52nm,18.4s,baz=307,slow=34							
WRA	**Warramunga Arr**	**31.25**	**17**	P		**P**	**15 20 54.8**	**0.0**
	comp=Z,0.9nm,1.2s,baz=192,slow=11,SNR=1.9							
WR0	**Warramunga Arr**	**31.27**	**18**	P		**P**	**15 20 55.1**	**+0.1**
WR0				IAmb		IAmb	15 21 20.9	
	comp=Z,4.4nm,1.1s							
WB0	**Warramunga Arr**	**31.43**	**18**	P		**P**	**15 20 55.7**	**-0.7**
WB0				IAmb		IAmb	15 20 58.8	
	comp=Z,7.5nm,1.3s							
MAW	**Mawson**	**34.46**	**217**	P		**P**	**15 21 21.9**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=94,slow=13,SNR=11							
MAW	**Mawson**	**34.46**	**217**	IAmb		IAmb	15 21 27.7	
	comp=Z,1.3nm,1.4s							
CTAO	**Charters Tower**	**34.63**	**37**	P		**P**	**15 21 24.9**	**+0.5**
PMG	**Port Moresby**	**44.80**	**32**	P		**P**	**15 22 47.7**	**-1.3**
PMG				IAmb		IAmb	15 22 48.9	
	comp=Z,17nm,1.1s							
BELA	**Belgrano 2**	**51.44**	**185**	P		**P**	**15 23 40.7**	**+1.1**
BELA				IAmb		IAmb	15 23 54.3	
	comp=Z,3.5nm,0.7s							

MAN 14 15:35:38.5,**11°.52N**×**124°.85E**,**h1**km,**MS3.6**,**1C**,**Leyte**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OCLP	**Ormoc**	**0.52**	**206**	*eP*		Pg	15 35 48.5	0.0
OCLP				*eS*		Sg	15 35 50.5	-4.8
MSLP	**Maasin**	**1.38**	**179**	*eP*		Pb	15 36 05.1	0.0
MSLP				*eS*		Sg	15 36 21.9	-1.0
LLP	**Lapu-Lapu**	**1.48**	**216**	⇑*eP*		Pg	15 36 07.1	+0.3
LLP				*i* S		Sg	15 36 22.3	-3.7
GLSP	**General Luna,**	**2.14**	**144**	*eP*		Pn	15 36 15.9	+0.5
CNOP	**Candoni, Negro**	**2.74**	**232**	*eP*		Pn	15 36 24.4	+0.7
CNOP				*eS*		Sn	15 36 51.6	-5.9
MACP	**Maragondon, Ca**	**4.86**	**305**	*eP*		Pb	15 37 03.7	-0.8
ENPP	**El Nido**	**5.32**	**267**	*eP*		Pg	15 37 23.6	+3.0
ENPP				*eS*		Sn	15 37 56.2	-5.0

*MAN **14** 15:36:36.9, 14°.26N×118°.99E, h41km, MS3.0*

*IDC **14** 15:36:38.1±2.2, 14°.24N×119°.16E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/37, mbtmp3.2/3, ML3.2/1, MS2.5/2, Ms1 2.5/2, ms1mx2.3/29, Error ellipse: s-maj=51.5km s-min=24.8km az=8.0*

ISC 14 15:36:36.7±2.2,**14°.24N**±0°.06×**119°.17E**±0°.07,**h6**km±13km, **n13,σ1s90/18,1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LUBP	**Lubang**	**1.16**	**116**	*eP*		**Pn**	**15 36 58.4**	**-1.0**
LUBP				*eS*		**Sb**	**15 37 13.3**	**-1.1**
MACP	**Maragondon, Ca**	**1.50**	**89**	*eS*		**Sb**	**15 37 25.0**	**+0.8**
TGY	**Tagaytay City**	**1.72**	**94**	Pn		**Pg**	**15 37 09.5**	**-0.1**
	120nm,0.3s,baz=134,slow=1.2,SNR=2.6							
TGY				Sn		**Sg**	**15 37 32.9**	**+1.0**
	135nm,0.3s,baz=288,slow=21,SNR=7.5							
PGP	**Puerto Galera**	**1.88**	**113**	⇑*eP*		**Pb**	**15 37 10.2**	**-1.3**
PGP				*i* S		**Sn**	**15 37 34.2**	**+0.8**
LQP	**Lukban**	**2.30**	**93**	⇓*eP*		**Pb**	**15 37 17.4**	**-1.3**
LQP				*eS*		**Sn**	**15 37 45.5**	**+1.4**
BUSP	**Coron**	**2.44**	**156**	*eP*		**Pn**	**15 37 16.7**	**-0.4**
BUSP				*eS*		**Sn**	**15 37 43.6**	**-3.7**
SJMP	**San Jose**	**2.59**	**133**	*eP*		**Pn**	**15 37 19.9**	**+0.8**
SJMP				*eS*		**Sn**	**15 37 49.0**	**-2.0**
APYP	**Conner**	**4.11**	**29**	*eP*		**Pn**	**15 37 40.0**	**-0.1**
APYP				*eS*		**Sn**	**15 38 25.2**	**-3.4**
CMAR	**Chiang Mai Arr**	**19.86**	**285**	P		**Pn**	**15 41 10.8**	**+0.5**
	0.0nm,0.3s,baz=100,slow=9.3,SNR=4.2							
KSRS	**Korea Array**	**24.39**	**17**	LR		LR	15 50 44.0	
	comp=Z,4.5nm,21.6s,baz=150,slow=35							
ASAJ	**Asahikawa**	**35.86**	**29**	LR		LR	15 59 53.4	
	comp=Z,20nm,18.3s,baz=144,slow=39							
WRA	**Warramunga Arr**	**37.10**	**156**	P		**P**	**15 43 50.7**	**+2.5**
	0.3nm,0.6s,baz=334,slow=9.8,SNR=1.5							
ASAR	**Alice Springs**	**40.34**	**159**	P		**P**	**15 44 17.4**	**+2.0**
	0.4nm,0.8s,baz=334,slow=7.5,SNR=6.0							

*JMA **14** 15:57:32.9±0.3, 26°.25N×125°.32E, h25km±5km, M3.2*

*IDC **14** 15:57:33.3±1.0, 25°.86N×124°.73E, h0km, mb3.4/7, mb1 3.5/8, mb1mx3.4/46, mbtmp3.4/8, ML3.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/31, Error ellipse: s-maj=35.0km s-min=19.9km az=61.0*

ISC 14 15:57:36.0±1.9,**26°.16N**±0°.09×**125°.40E**±0°.08,**h37**km±3km,

n22,σ0s75/22, mb3.4/7, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKM	**Ikemajima**	**1.24**	**186**	P		**Pn**	**15 57 56.1**	**-0.7**
JIKM				S		**Sn**	**15 58 12.4**	**+0.2**
JKE	**Kume jima 2**	**1.26**	**82**	P		**Pn**	**15 57 55.8**	**-1.2**
JKE				*eS*		**Sn**	**15 58 12.9**	**+0.2**
JIRB	**Irabujima**	**1.34**	**189**	P		**Pn**	**15 57 57.5**	**-0.7**
JIRB				S		**Sn**	**15 58 15.3**	**+0.5**
JOGS	**Gusukube**	**1.40**	**180**	P		**Pn**	**15 57 58.8**	**-0.1**
JOGS				S		**Sn**	**15 58 17.3**	**+1.2**
JMJ2	**Miyako jima3**	**1.42**	**183**	P		**Pn**	**15 57 59.1**	**-0.1**
JMJ2				S		**Sn**	**15 58 17.5**	**+0.9**
JTJ	**Tarama**	**1.64**	**203**	*eS*		**Sn**	**15 58 22.3**	**+0.2**
JAGN	**Aguni-jima**	**1.71**	**75**	*eS*		**Sn**	**15 58 24.3**	**+0.5**
JISG	**Ishigakijimahi**	**1.85**	**212**	P		**Pn**	**15 58 04.0**	**-1.2**
JIJ	**Ishigaki jima**	**2.12**	**213**	P		**Pn**	**15 58 08.1**	**-0.8**
JIJ				*eS*		**Sn**	**15 58 34.5**	**+0.5**
JKRS	**Kuro-shima**	**2.29**	**214**	P		**Pn**	**15 58 11.2**	**0.0**
IRIF	**Iriomote-Funau**	**2.36**	**220**	P		**Pn**	**15 58 11.9**	**-0.3**
JNTH	**Nagotoyohara**	**2.38**	**81**	P		**Pn**	**15 58 12.8**	**+0.3**
JOW	**Kunigami**	**2.66**	**75**	Pn		Pn	15 58 26.1	+10
	3.3nm,0.3s,baz=232,slow=12,SNR=3.4							
KSRS	**Korea Array**	**11.46**	**10**	LR		LR	16 05 14.7	
	comp=Z,72nm,18.4s,baz=217,slow=39							
SONM	**Songino Array**	**26.29**	**330**	P		P	16 03 12.1	+4.0
	0.7nm,0.7s,baz=148,slow=8.5,SNR=1.9							
MKAR	**Makanchi Array**	**39.70**	**313**	P		**P**	**16 05 04.4**	**-0.3**
	0.3nm,0.6s,baz=100,slow=10,SNR=4.5							
ZALV	**Zalesovo Beam**	**40.78**	**324**	P		**P**	**16 05 14.6**	**+1.1**
	0.5nm,0.4s,baz=105,slow=9.1,SNR=2.2							
KURBB	**Kurchatov Arra**	**43.16**	**317**	P		**P**	**16 05 33.8**	**+0.8**
	0.3nm,0.6s,baz=104,slow=8.9,SNR=2.7							
WRA	**Warramunga Arr**	**46.64**	**168**	P		**P**	**16 06 00.5**	**-0.5**
	0.7nm,1.0s,baz=349,slow=8.1,SNR=5.2							
ASAR	**Alice Springs**	**50.21**	**170**	P		P	16 06 31.3	+2.9
	0.3nm,0.6s,baz=357,slow=15,SNR=7.6							
ARCES	**ARCESS Array B**	**69.13**	**338**	LR		LR	16 46 56.4	
	comp=Z,38nm,19.8s,baz=255,slow=43							
YKA	**Yellowknife Ar**	**79.64**	**24**	P		P	16 09 45.3	+5.9
	0.3nm,0.6s,baz=301,slow=5.7,SNR=4.0							

*IDC **14** 16:15:31.5±0.6, 12°.59N×125°.56E, h0km, mb4.0/17, mb1 4.2/17, mb1mx4.0/39, mbtmp4.0/17, MS3.4/7, Ms1 3.4/7, ms1mx2.9/42, Error ellipse: s-maj=30.5km s-min=12.2km az=76.0*

*MAN **14** 16:15:34.5, 12°.70N×125°.64E, h96km, MS4.0*

*NEIC **14** 16:15:36.9±1.4, 12°.5N±0°.1×125°.5E±0°.1, h38km±7km, mb4.5/26, Error ellipse: s-maj=20.8km s-min=13.9km az=73.0*

ISC 14 16:15:38.7±1.5,**12°.58N**±0°.05×**125°.60E**±0°.08,**h56**km±14km, **n88,σ1s63/85, mb4.3/35, MS3.2/7, 3C-5D, Samar**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OCLP	**Ormoc**	**1.80**	**213**	*eP*		**Pn**	**16 16 06.3**	**-1.2**
OCLP				*eS*		**Sn**	**16 16 31.5**	**+2.2**
MMPH	**Masbate**	**1.94**	**264**	⇓*eP*		**Pn**	**16 16 08.1**	**-1.2**
MMPH				*i* S		**Sn**	**16 16 30.4**	**-2.2**
SCSP	**San Jose Seism**	**2.29**	**298**	*eP*		**Pn**	**16 16 10.4**	**-3.7**
SCSP				*eS*		**Sn**	**16 16 47.5**	**+6.5**
MSLP	**Maasin**	**2.54**	**197**	*eP*		**Pn**	**16 16 16.7**	**-0.9**
MSLP				*eS*		**Sn**	**16 16 47.8**	**+0.6**
LLP	**Lapu-Lapu**	**2.76**	**216**	⇓*eP*		**Pn**	**16 16 19.3**	**-1.3**
LLP				*eS*		Sn	16 17 04.3	+12
GLSP	**General Luna,**	**2.83**	**169**	*eP*		**Pn**	**16 16 17.9**	**-3.7**
RCP	**Roxas**	**2.97**	**250**	⇓*eP*		**Pn**	**16 16 22.3**	**-1.1**
RCP				*i* S		Sn	16 17 05.8	+7.9
JCNP	**Jose Panganiba**	**3.29**	**301**	*eP*		**Pn**	**16 16 27.0**	**-0.8**
JCNP				*eS*		Sn	16 17 13.7	+7.9
GQP	**Guinayangan**	**3.34**	**294**	⇓*eP*		**Pn**	**16 16 26.3**	**-2.1**
GQP				*eS*		Sn	16 16 56.6	-10
QUIM	**Jordan**	**3.53**	**237**	*eP*		**Pn**	**16 16 28.5**	**-2.6**
BUTP	**Butuan**	**3.59**	**180**	*eP*		**Pn**	**16 16 31.2**	**-0.7**
BUTP				*eS*		**Sn**	**16 17 13.8**	**+0.7**
CNOP	**Candoni, Negro**	**3.99**	**227**	*eP*		**Pn**	**16 16 35.7**	**-1.7**
CNOP				*eS*		**Sn**	**16 17 21.0**	**-1.9**
JAP	**San Jose, Anti**	**4.01**	**243**	⇑*eP*		**Pn**	**16 16 39.3**	**+1.6**
CGP	**Cagayan de Oro**	**4.20**	**192**	⇓*eP*		Pn	16 16 50.9	+11
CGP				*eS*		**Sn**	**16 17 33.8**	**+5.7**
LQP	**Lukban**	**4.23**	**292**	⇑*iP*		**Pn**	**16 16 41.9**	**+0.9**
LQP				*i* S		**Sn**	**16 17 32.6**	**+3.4**
SJMP	**San Jose**	**4.37**	**269**	*eP*		**Pn**	**16 16 42.0**	**-0.7**
BUKP	**Musuan**	**4.70**	**186**	*eP*		**Pn**	**16 16 48.0**	**+0.8**
BUKP				*eS*		Sn	16 17 19.9	-21
CUYO	**Cuyo Island**	**4.80**	**249**	*eP*		**Pn**	**16 16 46.6**	**-2.0**
DAV	**Davao City (W)**	**5.48**	**180**	LR		LR	16 19 30.

H11N1	**WAKE ISLAND Hy**	**40.22**	**74**	T	T	17 06 26.5			
	baz=266,slow=75,SNR=18								
H11N2	**WAKE ISLAND Hy**	**40.22**	**74**	T	T	17 06 27.0			
	baz=266,slow=75,SNR=18								
H11N3	**WAKE ISLAND Hy**	**40.23**	**74**	T	T	17 06 29.9			
	baz=266,slow=75,SNR=23								
PKI	**Pulchoki**	**40.38**	**298**	*eP*	**P**	**16 23 11.1**	**-0.8**		
PKIN	**Phulchoki**	**40.40**	**298**	*eP*	**P**	**16 23 10.9**	**-1.1**		
	comp=Z,2.8nm,0.5s								
MORW	**Morawa**	**42.42**	**192**	P	**P**	**16 23 27.9**	**-0.2**		
FORT	**Forrest**	**43.18**	**177**	P	**P**	**16 23 34.8**	**+0.7**		
EIDS	**Eidsvold**	**45.17**	**147**	P	**P**	**16 23 50.2**	**0.0**		
EIDS				IAmb	IAmb	16 24 14.6			
	comp=Z,8.3nm,1.1s								
NWAO	**Narrogin (SRO)**	**45.95**	**190**	P	**P**	**16 23 55.1**	**-1.2**		
BBOO	**Buckleboo**	**46.23**	**168**	P	**P**	**16 23 59.3**	**+0.8**		
BBOO				IAmb	IAmb	16 24 10.8			
	comp=Z,7.0nm,0.8s								
STKA	**Stephens Creek**	**46.79**	**161**	P	**P**	**16 24 03.8**	**+0.9**		
	comp=Z,0.7nm,0.5s,baz=283,slow=20,SNR=3.0								
PETK	**Petropavlovsk-**	**47.83**	**26**	P	**P**	**16 24 11.6**	**+0.8**		
	comp=Z,2.3nm,0.9s,baz=239,slow=10.0,SNR=1.7								
PETK				LR	LR	16 42 06.9			
	comp=Z,27nm,21.6s,baz=140,slow=33								
MK31	**Makanchi Array**	**49.80**	**322**	P	**P**	**16 24 26.9**	**+0.8**		
MKAR	**Makanchi Array**	**49.80**	**322**	P	**P**	**16 24 27.1**	**+1.0**		
	comp=Z,2.6nm,1.0s,baz=126,slow=8.5,SNR=16								
MKAR				PcP	**PcP**	**16 25 47.1**	**+1.0**		
	comp=Z,1.0nm,0.8s,baz=94,slow=5.7,SNR=3.7								
MKAR	**Makanchi Array**	**49.80**	**322**	P	**P**	**16 24 26.5**	**+0.4**		
NIL	**Nilore**	**51.91**	**303**	P	**P**	**16 24 42.1**	**0.0**		
NIL				IAmb	IAmb	16 24 42.9			
	comp=Z,5.1nm,0.8s								
ZALV	**Zalesovo Beam**	**52.30**	**331**	P	**P**	**16 24 44.2**	**-0.4**		
	comp=Z,0.7nm,0.3s,baz=111,slow=8.0,SNR=2.9								
KKAR	**Karatay Array**	**56.18**	**314**	P	**P**	**16 25 13.1**	**0.0**		
TIXI	**Tiksi**	**59.07**	**1**	P	**P**	**16 25 33.3**	**+0.5**		
TIXI				IAmb	IAmb	16 25 38.6			
	comp=Z,3.0nm,1.1s								
BRVK	**Borovoye**	**59.47**	**325**	P	**P**	**16 25 35.5**	**-0.4**		
BRVK				IAmb	IAmb	16 25 37.7			
	comp=Z,3.6nm,0.8s								
NRIK	**Noril'sk**	**61.62**	**346**	P	**P**	**16 25 50.3**	**0.0**		
	comp=Z,2.1nm,0.6s,baz=124,slow=7.4,SNR=6.4								
NRIK	**Noril'sk**	**61.62**	**346**	P	**P**	**16 25 50.0**	**-0.2**		
NRIK				IAmb	IAmb	16 25 52.2			
	comp=Z,4.6nm,1.1s								
ABKAR	**Akbulak array**	**64.71**	**319**	P	**P**	**16 26 11.1**	**0.0**		
ARU	**Arti**	**66.95**	**326**	P	**P**	**16 26 25.4**	**0.0**		
ARU				IAmb	IAmb	16 26 25.9			
	comp=Z,3.3nm,0.5s								
RAO	**Raoul Island**	**68.54**	**128**	LR	LR	16 53 38.0			
	comp=Z,954nm,18.5s,baz=223,slow=33								
SOCY	**Socotra**	**69.72**	**278**	P	**P**	**16 26 42.5**	**-1.0**		
SOCY				IAmb	IAmb	16 26 43.3			
	comp=Z,4.7nm,0.8s								
ODZ	**Otahua Downs**	**70.35**	**148**	P	**P**	**16 26 46.5**	**-0.1**		
KBZ	**Khabaz**	**76.17**	**312**	P	**P**	**16 27 21.1**	**0.0**		
	comp=Z,2.0nm,0.9s,baz=243,slow=4.8,SNR=4.3								
RAR	**Rarotonga**	**80.59**	**114**	LR	LR	16 57 11.6			
	comp=Z,82nm,19.9s,baz=210,slow=31								
ARCES	**ARCESS Array B**	**81.81**	**340**	P	**P**	**16 27 53.0**	**+1.5**		
	comp=Z,2.3nm,1.0s,baz=75,slow=6.4,SNR=4.7								
FINES	**FINESS Array B**	**83.56**	**332**	P	**P**	**16 28 01.2**	**+0.6**		
	comp=Z,1.9nm,0.8s,baz=134,slow=5.5,SNR=4.8								
AKASG	**Malin Array Be**	**84.37**	**321**	P	**P**	**16 28 04.3**	**-0.7**		
	comp=Z,0.2nm,0.3s,baz=60,slow=5.6,SNR=9.0								
PLCA	**Paso Flores**	**148.58**	**156**	PKPbc	**PKiKP**	**16 35 21.4**	**-0.1**		
	comp=Z,2.3nm,0.9s,baz=296,slow=2.3,SNR=3.9								

NNC 14 16:36:50.3±3.2, 37°.12N×71°.25E, h0km, mb3.9, mpv3.5, 3C-1D, Error ellipse: s-maj=25.2km s-min=23.7km az=144.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.00**	**355**	⇑P	Pn	16 38 20.9	+0.5
	4.7nm,0.6s,baz=175,slow=12,SNR=38						
KK31				⇑S	Sn	16 39 30.7	+0.8
	1.6nm,0.5s,baz=184,slow=20,SNR=5.3						
AAK	**Ala-Archa**	**6.05**	**23**	P	Pn	16 38 21.6	+0.5
	1.6nm,0.4s						
AAK				S	Sn	16 39 33.1	+1.9
	2.0nm,0.5s						
TKM2	**Tokmak 2**	**6.69**	**29**	⇑P	Pn	16 38 28.9	-1.1
	1.8nm,0.7s						
TKM2				⇓S	Sn	16 39 47.6	+0.7
	2.6nm,0.8s						

BUC 14 17:33:32.5±0.3, 45°.54N×26°.34E, h141km±2km, ml3.7/32, 88C-56D, Error ellipse: s-maj=2.4km s-min=1.8km az=148.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.12**	**196**	⇑P	Pn	17 33 52.1	+0.5
NEHR				⇑S	Sn	17 34 06.5	+0.5
NEHR	**Nehoiu**	**0.12**	**196**	⇑P	Pn	17 33 52.1	+0.5
NEHR				⇑S	Sn	17 34 06.5	+0.5
BISRR	**Bisoca**	**0.26**	**89**	⇓P	Pn	17 33 52.6	+0.8
BISRR				⇑S	Sn	17 34 07.1	+0.6
BISRR	**Bisoca**	**0.26**	**89**	⇓P	Pn	17 33 52.6	+0.8
BISRR				⇑S	Sn	17 34 07.1	+0.6
MLR	**Muntele Rosu**	**0.28**	**260**	⇑P	Pn	17 33 52.3	+0.3
MLR				⇓S	Sn	17 34 07.1	+0.3
MLR	**Muntele Rosu**	**0.28**	**260**	⇑P	Pn	17 33 52.3	+0.3
MLR				⇓S	Sn	17 34 07.1	+0.3
PLOR	**Plostina**	**0.38**	**35**	⇑P	Pn	17 33 52.3	+0.1
PLOR				⇑S	Sn	17 34 08.0	+0.8
PLOR	**Plostina**	**0.38**	**35**	⇑P	Pn	17 33 52.3	+0.1
PLOR				⇑S	Sn	17 34 08.0	+0.8
VRI	**Vrincioaia**	**0.42**	**40**	⇓P	Pn	17 33 52.7	+0.3
VRI				⇓S	Sn	17 34 07.7	+0.2
VRI	**Vrincioaia**	**0.42**	**40**	⇓P	Pn	17 33 52.7	+0.3
VRI				⇓S	Sn	17 34 07.7	+0.2
ISR	**Istrita**	**0.45**	**161**	⇓P	Pn	17 33 53.3	+0.7
ISR				⇓S	Sn	17 34 08.2	+0.4
ISR	**Istrita**	**0.45**	**161**	⇓P	Pn	17 33 53.3	+0.7
ISR				⇓S	Sn	17 34 08.2	+0.4
GRER		**0.47**	**110**	⇓P	Pn	17 33 52.5	-0.1
GRER				⇑S	Sn	17 34 08.8	+0.9
GRER		**0.47**	**110**	⇓P	Pn	17 33 52.5	-0.1
GRER				⇑S	Sn	17 34 08.8	+0.9
SECR		**0.54**	**201**	⇑P	Pn	17 33 53.6	+0.6
SECR				⇑S	Sn	17 34 09.6	+1.0
SECR		**0.54**	**201**	⇑P	Pn	17 33 53.6	+0.6
SECR				⇑S	Sn	17 34 09.6	+1.0
ODBI	**Odobesti**	**0.55**	**66**	⇑P	Pn	17 33 53.9	+0.9
ODBI				⇓S	Sn	17 34 09.9	+1.3
ODBI	**Odobesti**	**0.55**	**66**	⇑P	Pn	17 33 53.9	+0.9
ODBI				⇓S	Sn	17 34 09.9	+1.3
PETR	**Petresti**	**0.65**	**74**	⇑P	Pn	17 33 54.0	+0.4
PETR				⇓S	Sn	17 34 11.1	+1.4
PETR	**Petresti**	**0.65**	**74**	⇑P	Pn	17 33 54.0	+0.4
PETR				⇓S	Sn	17 34 11.1	+1.4
PLAR	**PLOIESTI**	**0.67**	**200**	⇑P	Pn	17 33 54.4	+0.6
PLAR				⇓S	Sn	17 34 11.0	+1.2
PLAR	**PLOIESTI**	**0.67**	**200**	⇑P	Pn	17 33 54.4	+0.6
PLAR				⇓S	Sn	17 34 11.0	+1.2
PGOR	**Pogoanele**	**0.78**	**144**	⇓P	Pn	17 33 54.7	+0.2
PGOR				⇓S	Sn	17 34 12.4	+1.1
PGOR	**Pogoanele**	**0.78**	**144**	⇓P	Pn	17 33 54.7	+0.2
PGOR				⇓S	Sn	17 34 12.4	+1.1
DOPR	**Dopca**	**0.79**	**303**	⇓P	Pn	17 33 54.6	-0.1
DOPR	**Dopca**	**0.79**	**303**	⇓P	Pn	17 33 54.6	-0.1
SULR		**0.87**	**184**	⇑P	Pn	17 33 55.8	+0.6
SULR				⇑S	Sn	17 34 13.5	+1.0
SULR		**0.87**	**184**	⇑P	Pn	17 33 55.8	+0.6
SULR				⇑S	Sn	17 34 13.5	+1.0
GHRR		**0.91**	**55**	⇑P	Pn	17 33 56.1	+0.6
GHRR				⇑S	Sn	17 34 14.0	+0.8
GHRR		**0.91**	**55**	⇑P	Pn	17 33 56.1	+0.6
GHRR				⇑S	Sn	17 34 14.0	+0.8
VOIR		**0.92**	**264**	⇑P	Pn	17 33 55.6	-0.1
VOIR				⇓S	Sn	17 34 12.4	-1.0
VOIR		**0.92**	**264**	⇑P	Pn	17 33 55.6	-0.1
VOIR				⇓S	Sn	17 34 12.4	-1.0
TUDR		**0.93**	**86**	⇓P	Pn	17 33 55.8	0.0
TUDR				⇓S	Sn	17 34 13.4	0.0
TUDR		**0.93**	**86**	⇓P	Pn	17 33 55.8	0.0
TUDR				⇓S	Sn	17 34 13.4	0.0
MTUR	**Matau**	**0.95**	**251**	⇑P	Pn	17 33 56.1	0.0
MTUR	**Matau**	**0.95**	**251**	⇑P	Pn	17 33 56.1	0.0
TESR	**Tescani**	**0.99**	**12**	⇑P	Pn	17 33 56.4	+0.1
TESR				⇑S	Sn	17 34 13.6	-0.9
TESR	**Tescani**	**0.99**	**12**	⇑P	Pn	17 33 56.4	+0.1
TESR				⇑S	Sn	17 34 13.6	-0.9
SCHL	**Schela**	**1.05**	**92**	⇑P	Pn	17 33 57.2	+0.4
SCHL				⇑S	Sn	17 34 14.5	-0.7
SCHL	**Schela**	**1.05**	**92**	⇑P	Pn	17 33 57.2	+0.4
SCHL				⇑S	Sn	17 34 14.5	-0.7
VARL	**Varlezi**	**1.11**	**71**	⇑P	Pn	17 33 57.9	+0.5
VARL				⇑S	Sn	17 34 17.0	+0.7
VARL	**Varlezi**	**1.11**	**71**	⇑P	Pn	17 33 57.9	+0.5
VARL				⇑S	Sn	17 34 17.0	+0.7
LEHL	**Lehliu**	**1.12**	**162**	⇑S	Sn	17 34 16.6	+0.1
LEHL	**Lehliu**	**1.12**	**162**	⇑S	Sn	17 34 16.6	+0.1
BIR	**Birlad**	**1.15**	**51**	⇑P	Pn	17 33 58.3	+0.6
BIR				⇑S	Sn	17 34 17.1	+0.1
BIR	**Birlad**	**1.15**	**51**	⇑P	Pn	17 33 58.3	+0.6
BIR				⇑S	Sn	17 34 17.1	+0.1
AMRR	**Amara**	**1.17**	**143**	⇑P	Pn	17 33 58.2	+0.3
AMRR				⇑S	Sn	17 34 17.1	-0.1
AMRR	**Amara**	**1.17**	**143**	⇑P	Pn	17 33 58.2	+0.3
AMRR				⇑S	Sn	17 34 17.1	-0.1
BUC1	**Bucharest**	**1.22**	**191**	⇑S	Sn	17 34 18.0	0.0
BUC1	**Bucharest**	**1.22**	**191**	⇑S	Sn	17 34 18.0	0.0
GIUM	**Giurgiulesti**	**1.31**	**92**	⇓P	Pn	17 33 59.8	+0.5
GIUM				⇑S	Sn	17 34 20.4	+0.6
GIUM	**Giurgiulesti**	**1.31**	**92**	⇓P	Pn	17 33 59.8	+0.5
GIUM				⇑S	Sn	17 34 20.4	+0.6
CFR	**Carcaliu**	**1.32**	**105**	⇑P	Pn	17 33 59.2	-0.1
CFR				⇓S	Sn	17 34 18.8	-1.1
CFR	**Carcaliu**	**1.32**	**105**	⇑P	Pn	17 33 59.2	-0.1
CFR				⇓S	Sn	17 34 18.8	-1.1
SGRR	**Singureni**	**1.35**	**191**	⇑P	Pn	17 34 00.4	+0.7
SGRR				⇓S	Sn	17 34 19.6	-0.8
SGRR	**Singureni**	**1.35**	**191**	⇑P	Pn	17 34 00.4	+0.7
SGRR				⇓S	Sn	17 34 19.6	-0.8
HUMR	**Humele**	**1.40**	**224**	⇓P	Pn	17 33 60.0	-0.3
HUMR				⇑S	Sn	17 34 20.7	-0.7
HUMR	**Humele**	**1.40**	**224**	⇓P	Pn	17 33 60.0	-0.3
HUMR				⇑S	Sn	17 34 20.7	-0.7
HARR	**Harsova**	**1.41**	**127**	⇓P	Pn	17 34 00.3	-0.1
HARR	**Harsova**	**1.41**	**127**	⇓P	Pn	17 34 00.3	-0.1
VASR	**Vaslui**	**1.49**	**42**	⇓P	Pn	17 34 01.7	+0.4
VASR				⇑S	Sn	17 34 22.9	-0.3
VASR	**Vaslui**	**1.49**	**42**	⇓P	Pn	17 34 01.7	+0.4
VASR				⇑S	Sn	17 34 22.9	-0.3
TLBR	**Topalu**	**1.57**	**129**	⇓P	Pn	17 34 02.1	+0.1
TLBR				⇑S	Sn	17 34 24.0	-0.6
TLBR	**Topalu**	**1.57**	**129**	⇓P	Pn	17 34 02.1	+0.1
TLBR				⇑S	Sn	17 34 24.0	-0.6
TPGR	**Topolog**	**1.62**	**114**	⇑P	Pn	17 34 02.5	-0.2
TPGR				⇓S	Sn	17 34 25.3	-0.4
TPGR	**Topolog**	**1.62**	**114**	⇑P	Pn	17 34 02.5	-0.2
TPGR				⇓S	Sn	17 34 25.3	-0.4
TLCR		**1.78**	**101**	⇑P	Pn	17 34 04.5	+0.1
TLCR				⇑S	Sn	17 34 29.0	+0.1
TLCR		**1.78**	**101**	⇑P	Pn	17 34 04.5	+0.1
TLCR				⇑S	Sn	17 34 29.0	+0.1
JURR	**Jurilovca**	**1.96**	**113**	⇓P	Pn	17 34 06.5	+0.1
JURR	**Jurilovca**	**1.96**	**113**	⇓P	Pn	17 34 06.5	+0.1
MILM	**Milestii Mici**	**2.20**	**50**	⇑P	Pn	17 34 09.7	+0.4
MILM				⇑S	Sn	17 34 36.9	-0.9
MILM	**Milestii Mici**	**2.20**	**50**	⇑P	Pn	17 34 09.7	+0.4
MILM				⇑S	Sn	17 34 36.9	-0.9
KIS	**Kishinev**	**2.25**	**49**	*eP*	Pn	17 34 10.0	0.0
KIS				*eS*	Sn	17 34 37.4	-1.5
	100nm,0.6s						
KIS	**Kishinev**	**2.25**	**49**	⇓S	Sn	17 34 38.3	-0.6
KIS	**Kishinev**	**2.25**	**49**	⇓S	Sn	17 34 38.3	-0.6
GZR	**Gura Zlata**	**2.51**	**268**	⇑P	Pn	17 34 13.1	-0.3
GZR				⇑S	Sn	17 34 44.5	-0.3
GZR	**Gura Zlata**	**2.51**	**268**	⇑P	Pn	17 34 13.1	-0.3
GZR				⇑S	Sn	17 34 44.5	-0.3
KALB	**Balgarevo**	**2.60**	**144**	⇑P	Pn	17 34 15.0	+0.6
KALB				⇓S	Sn	17 34 47.0	+0.3
KALB	**Balgarevo**	**2.60**	**144**	⇑P	Pn	17 34 15.0	+0.6
KALB				⇓S	Sn	17 34 47.0	+0.3
MDVR	**Moldovita**	**3.36**	**259**	⇓P	Pn	17 34 23.7	-0.4
MDVR	**Moldovita**	**3.36**	**259**	⇓P	Pn	17 34 23.7	-0.4

*SJA **14** 17:38:37.0±0.8, 32°.67S×72°.11W, h8km±7km, ML4.1, MW3.7*

*IDC **14** 17:38:38.9±1.5, 32°.62S×71°.53W, h0km, mb4.3/3, mb1 4.1/6, mb1mx3.9/22, mbtmp4.0/6, ML3.9/3, MS2.9/3, Ms1 2.9/3, ms1mx2.8/24, Error ellipse: s-maj=57.6km s-min=33.1km az=95.0*

*NEIC **14** 17:38:40.3±1.9, 32°.61S±0°.03×71°.86W±0°.05, h18km±5km, Error ellipse: s-maj=7.6km s-min=3.1km az=122.0*

*NEIC **14** 17:38:40.9, 32°.62S×71°.85W, h27km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr4.76; Mθθ0.43; Mϕϕ-5.19; Mrθ0.68; Mϕϕ-1.25; Mϕr-3.79; Fault plane solution: Mo6.43000×10¹⁴ NP1:ϕ=178.09000°, δ63.94000°, λ76.16000°. NP2:ϕ=27.37000°, δ29.27000°, λ116.06000°. Principal axes: T 6.2313, Plg68.0000°, Azm61.0000°; N 0.3732, Plg12.0000°, Azm184.0000°; P -6.6046, Plg18.0000°, Azm278.0000°;*

*GUC **14** 17:38:42.2±0.6, 32°.71S×71°.72W, h26km±4km, ML4.0*

ISC 14 17:38:38.4±1.3, 32°.57S±0°.02×71°.84W±0°.04, h7km, 8km, n85, σ1=47/97, mb4.3/5, 8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.48**	**160**	⇓*iP*	**Pb**	**17 38 50.1**	**+0.8**
VA01				*i* S	**Sb**	**17 38 55.7**	**-0.8**
VA01	**Torpederas**	**0.48**	**160**		**Pb**	**17 38 50.1**	**+0.8**
VA01				Sg	**Sb**	**17 38 55.5**	**-1.1**
ROC1	**El Roble**	**0.81**	**121**	*eP*	**Pn**	**17 38 56.0**	**-0.4**
ROC1				*eS*	**Sb**	**17 39 06.1**	**0.0**
ROCH	**El Roble**	**0.81**	**120**	⇓*iP*	**Pn**	**17 38 56.0**	**-0.4**
ROCH				*i* S	**Sb**	**17 39 06.3**	**+0.2**
MT02	**Curacav**	**0.91**	**140**	⇓*iP*	**Pb**	**17 38 56.8**	**+0.3**
MT02				*i* S	**Sg**	**17 39 07.5**	**-0.2**
MT02	**Curacav**	**0.91**	**140**		**Pb**	**17 38 56.7**	**+0.1**
VA05	**Santo Domingo**	**1.10**	**170**	⇓*iP*	**Pg**	**17 38 60.0**	**+0.3**
VA05				*i* S	**Sg**	**17 39 13.9**	**-0.1**
VA05				IAML		17 39 14.9	
	comp=E,5μm,0.3s						
VA05	**Santo Domingo**	**1.10**	**170**		**Pg**	**17 38 59.9**	**+0.3**
VA05				Sg	**Sg**	**17 39 13.7**	**-0.3**
VA03	**San Esteban**	**1.11**	**101**	⇓*iP*	**Pn**	**17 39 00.9**	**+0.5**
VA03				*i* S	**Sn**	**17 39 15.3**	**-0.6**
VA03				IAML		17 39 16.7	
	comp=E,5μm,0.2s						
VA03	**San Esteban**	**1.11**	**101**		**Pn**	**17 39 00.9**	**+0.5**
VA03				Sg	**Sn**	**17 39 15.2**	**-0.7**
PEL	**Peldehue**	**1.13**	**121**	*eP*	**Pn**	**17 39 00.5**	**-0.2**
PEL				*i* S	**Sn**	**17 39 15.3**	**-1.3**
PEL				IAML		17 39 17.7	
	comp=E,6μm,0.3s						
PEL	**Peldehue**	**1.13**	**121**	Pn	**Pn**	**17 39 00.5**	**-0.2**
PEL				Sg	**Sn**	**17 39 15.2**	**-1.3**
PEL	**Peldehue**	**1.13**	**121**	*eP*	**Pn**	**17 39 01.3**	**+0.6**
PEL				*eS*	**Sn**	**17 39 16.8**	**+0.3**
MT05	**Renca**	**1.24**	**132**	⇓*iP*	**Pg**	**17 39 02.6**	**+0.4**
MT05				*i* S	**Sb**	**17 39 17.8**	**-0.7**
MT05				IAML		17 39 21.3	
	comp=E,9μm,0.3s						
MT05	**Renca**	**1.24**	**132**		**Pg**	**17 39 02.6**	**+0.4**
MT09	**Talagante**	**1.40**	**150**	⇓*iP*	**Pb**	**17 39 04.7**	**-0.3**
MT09				*eS*	**Sb**	**17 39 21.2**	**-2.0**
MT09	**Talagante**	**1.40**	**150**		**Pb**	**17 39 04.7**	**-0.3**
FSR	**Penalolen**	**1.43**	**130**	⇓*iP*	**Pg**	**17 39 06.9**	**+1.0**
FSR				*i* S	**Sg**	**17 39 24.9**	**+0.4**
MT03	**Universidad Ad**	**1.45**	**130**	*i* P	**Pg**	**17 39 06.0**	**-0.2**
MT03				*i* S	**Sb**	**17 39 24.3**	**-0.3**
MT03				IAML		17 39 29.4	
	comp=E,6μm,0.5s						
MT03	**Universidad Ad**	**1.45**	**130**	Pn	**Pb**	**17 39 05.9**	**+0.1**
LMEL	**Las Melosas**	**1.88**	**133**	*eP*	**Pb**	**17 39 12.7**	**-0.4**
LMEL				*i* S	**Sb**	**17 39 36.2**	**-0.6**
LMEL				IAML		17 39 39.8	
	comp=N,3μm,0.2s						
BO03	**Pichilemu**	**1.93**	**183**	*eP*	**Pn**	**17 39 11.0**	**-0.6**
AUSP	**Uspallata**	**2.10**	**81**	*eP*	**Pg**	**17 39 18.9**	**+0.1**
BO02	**Sierra Bellavi**	**2.39**	**159**	Pn	**Pn**	**17 39 18.8**	**+0.7**
ASAL	**Salagasta**	**2.54**	**91**	*eP*	**Pg**	**17 39 25.8**	**-1.3**
ASAL				*eP*	**Pb**	**17 39 26.0**	**+1.6**
ASAL				*eS*	**Sg**	**17 39 59.1**	**-0.9**
GO04	**Tololo Observa**	**2.55**	**21**	Pn	**Pb**	**17 39 23.5**	**-1.1**
GO04	**Tololo Observa**	**2.55**	**21**	*eP*	**Pb**	**17 39 23.6**	**-1.0**
GO04				*eS*	**Sb**	**17 39 57.7**	**+1.5**
AAGR	**Agrelo**	**2.59**	**102**	*eP*	**Pb**	**17 39 26.0**	**+0.8**
AAGR				IAML		17 40 11.2	
	comp=Z,329nm,0.7s						
ZON	**Zonda**	**2.87**	**70**	Pn	**Pb**	**17 39 29.4**	**-0.6**
ZON	**Zonda**	**2.87**	**70**	*eP*	**Pb**	**17 39 29.4**	**-0.6**
ZON				IAML		17 40 19.7	
	comp=Z,303nm,0.7s						
RTCV	**Cerro Valdivia**	**2.88**	**77**	*eP*	**Pb**	**17 39 29.7**	**-0.5**
RTCV				*eS*	**Sg**	**17 40 13.3**	**+2.2**
RTCV				IAML		17 40 18.6	
	comp=Z,261nm,1.7s						
ACCO	**Cerro Coronel**	**3.08**	**51**	*eP*	**Pb**	**17 39 33.4**	**-0.3**
ACCO				*eP*	**Pb**	**17 39 33.5**	**-0.3**
ACCO				IAML		17 40 27.0	
	comp=Z,492nm,0.3s						
RTLL	**Cerro Villicun**	**3.12**	**68**	*eP*	**Pb**	**17 39 33.4**	**-0.8**
RTLL				*eS*	**Sg**	**17 40 17.7**	**-0.8**
RTLL				IAML		17 40 22.3	
	comp=Z,394nm,0.4s						
AROD	**Rodeo**	**3.13**	**41**	*eP*	**Pb**	**17 39 33.9**	**-0.8**
AROD				*eS*	**Sg**	**17 40 22.2**	**+3.1**
COIS	**El Sosneado**	**3.15**	**144**	*eP*	**Pn**	**17 39 30.6**	**+2.1**
ML02	**Panimavida**	**3.21**	**174**	Pn	**Pn**	**17 39 32.3**	**+3.0**
LAMA	**Las Malvinas**	**3.22**	**138**	*eP*	**Pb**	**17 39 33.3**	**-2.7**
RFA	**San Rafael**	**3.57**	**129**	*eP*	**Pn**	**17 39 37.3**	**+3.0**
LCO	**Las Campanas**	**3.68**	**16**	Pn	**Pn**	**17 39 38.7**	**+2.7**
BI02	**San Fabin de**	**4.11**	**174**	Pn	**Pn**	**17 39 42.1**	**+0.4**
AC04	**Llanos de Chal**	**4.40**	**9**	Pn	**Pn**	**17 39 47.5**	**+1.9**
VCA	**Vinchina**	**4.94**	**40**	*eP*	Pn	17 39 58.8	+5.6
VCA				*eS*	**Sg**	**17 41 13.2**	**-3.8**
VCA				IAML		17 41 15.3	
	comp=Z,574nm,0.7s						
APLL	**PUNTA DE LOS L**	**5.03**	**66**	*eP*	Pn	17 39 59.6	+5.3
GO03	**Copiap**	**5.15**	**16**		**Pn**	**17 39 58.4**	**+2.4**
GO03	**Copiap**	**5.15**	**16**	*eP*	**Pn**	**17 39 59.0**	**+3.0**
MRA	**San Martin**	**5.18**	**90**	*eP*	**Pn**	**17 39 59.5**	**+3.1**
MRA				*eS*	**Sb**	**17 41 05.7**	**-6.1**
MRA				IAML		17 41 06.8	
	comp=Z,130nm,0.9s						
ACLC	**CERRO LA CRUZ**	**5.24**	**55**	*eP*	**Pn**	**17 40 01.3**	**+4.0**
ACLC				*eP*	Pb	17 40 01.5	-8.9
ACLC				*eS*	**Sb**	**17 41 15.9**	**+2.3**
ACLC				IAML		17 41 16.5	
	comp=Z,182nm,0.5s						
H03N1	**Juan Fernandez**	**6.00**	**260**	T	T	17 46 37.9	
	baz=89,slow=74,SNR=751						
H03N3	**Juan Fernandez**	**6.02**	**260**	T	T	17 46 37.5	
	baz=89,slow=74,SNR=836						
H03N2	**Juan Fernandez**	**6.02**	**260**	T	T	17 46 37.8	
	baz=89,slow=74,SNR=826						
H03S1	**Juan Fernandez**	**6.06**	**256**	T	T	17 46 25.7	
	baz=82,slow=75,SNR=39						
H03S3	**Juan Fernandez**	**6.06**	**256**	T	T	17 46 28.1	
	baz=82,slow=75,SNR=36						
H03S2	**Juan Fernandez**	**6.07**	**256**	T	T	17 46 27.8	
	baz=82,slow=75,SNR=58						
AC02	**Maricunga**	**6.18**	**23**		**Pn**	**17 40 11.4**	**+0.9**
AC01	**Pan de Azucar**	**6.49**	**10**	Pn	**Pn**	**17 40 14.6**	**+0.2**
GO02	**Mina Guanaco**	**7.64**	**16**	Pn	**P

		2.0nm,0.4s							
TKM2					⇑S		Sn	17 53 44.1	-2.4
		4.2nm,1.2s							
MKAR	Makanchi Array		12.82	35	P		Pn	17 53 45.0	+0.6
		0.0nm,0.3s,baz=213,slow=13,SNR=5.2							
PYUN	Piuthan		13.01	129	*e*P		Pn	17 53 45.6	-1.5
		7.3nm,0.2s							
KOLN	Koldanda		13.62	128	*e*P		Pn	17 53 53.2	-1.6
		2.2nm,0.3s							
GKN	Gorkha		14.14	125	*e*P		Pn	17 54 00.8	-0.3
		6.2nm,0.4s							
DMN	Daman		14.71	125	*e*P		P	17 54 08.7	-0.5
		4.6nm,0.4s							
KURBB	Kurchatov Arra		14.72	18	P		P	17 54 11.2	+2.4
		0.1nm,0.3s,baz=208,slow=10,SNR=1.7							
PKIN	Phulchoki		14.92	124	*e*P		P	17 54 11.2	-0.4
		5.4nm,0.4s							
PKI	Pulchoki		14.93	124	*e*P		P	17 54 11.3	-0.5
		5.7nm,0.4s							
AB31	Akbulak array		15.02	330	⇑P		P	17 54 11.0	-1.2
		0.5nm,0.5s,baz=147,slow=12,SNR=16							
AB31					⇓S		S	17 56 53.9	-4.3
		0.7nm,0.5s,baz=154,slow=23,SNR=7.3							
GUN	Gumba		15.03	122	*e*P		P	17 54 12.7	-0.2
		4.9nm,0.4s							
JIRN	Jiri		15.40	122	*e*P		P	17 54 17.6	+0.6
		13nm,0.4s							
RAMN	Ramite		16.14	123	*e*P		Pn	17 54 26.2	+0.7
		7.5nm,0.6s							
BVAR	Borovoye Array		16.25	358	P		Pn	17 54 27.4	+1.1
		0.3nm,0.3s,baz=181,slow=13,SNR=5.3							
TAPN	Taplejung		16.64	120	*e*P		Pn	17 54 32.1	+0.5
		3.1nm,0.3s							
AKTO	Aktyubinsk		16.73	329	P		Pn	17 54 33.5	+1.4
		0.6nm,0.3s,baz=146,slow=11,SNR=9.7							
AKTO	Aktyubinsk		16.73	329	⇓P		Pn	17 54 32.3	+0.2
		6.0nm,0.9s							
AKTO					⇑S		S	17 57 33.9	-1.4
		2.1nm,1.0s							
ZALV	Zalesovo Beam		19.48	24	P		Pn	17 55 02.6	-1.9
		0.3nm,0.3s,baz=213,slow=10,SNR=5.1							
CMAR	Chiang Mai Arr		30.25	120	P		P	17 56 43.5	+2.0
		0.2nm,0.5s,baz=299,slow=8.2,SNR=3.4							
ARCES	ARCESS Array B		41.02	337	P		P	17 58 15.5	+3.0
		1.4nm,0.9s,baz=116,slow=10,SNR=1.4							
WRA	Warramunga Arr		81.81	122	P		P	18 02 45.6	-0.5
		0.3nm,0.8s,baz=323,slow=5.2,SNR=4.7							
ASAR	Alice Springs		84.10	125	P		P	18 02 58.6	+0.9
		0.8nm,1.1s,baz=312,slow=5.9,SNR=3.3							

IDC 14 18:13:06.3±8.0, 27.98S×178.62W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/36, mbtmp3.6/2, Error ellipse: s-maj=407.1km s-min=66.9km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.75	265	P	P	18 21 05.5	-0.2
	0.3nm,0.6s,baz=102,slow=7.1,SNR=6.0						
WRA	Warramunga Arr	43.51	270	P	P	18 21 11.8	-0.1
	0.6nm,0.3s,baz=107,slow=8.1,SNR=5.4						
AKASG	Malin Array Be	149.03	325	PKPbc	PKPbc	18 32 55.5	-0.5
	0.7nm,0.3s,baz=49,slow=2.0,SNR=2.1						

IDC 14 18:18:29.9±1.6, 1.90S×128.52E, h0km, mb3.9/2, mb1 4.2/5, mb1mx3.7/35, mbtmp4.0/5, ML4.1/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/32, Error ellipse: s-maj=38.0km s-min=26.0km az=84.0

DJA 14 18:18:35.4±1.0, 2.5S×12.9E±°, h27km±9km, M3.9/13, mb4.2/3, mB4.8/1, MLv3.8/13, Mw(mB)4.1/1

ISC 14 18:18:34.3±0.8, 2.05S±0.06×128.57E±0.05, h34km, n15, σ2°64/21, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	1.34	165	P	Pb	18 19 00.1	+1.2
MSAI				S	Sb	18 19 21.4	+5.7
NLAI	Namlea	1.89	231	P	Pb	18 19 07.6	-0.6
SANI	Sanana	2.58	270	P	Pn	18 19 13.2	-0.5
BNDI	Bandanaira	2.80	152	P	Pb	18 19 21.4	-2.2
SWI	Sorong	2.93	66	P	Pn	18 19 19.5	+1.0
SWI				S	Sn	18 19 53.3	+0.8
SIJI	Sorong	2.93	67	Pn	Pn	18 19 19.4	+0.8
	10nm,0.3s,baz=258,slow=18,SNR=54						
SIJI				Sn	Sn	18 19 52.3	-0.3
	8.5nm,0.3s,baz=4.3,slow=20,SNR=19						
TNTI	Ternate	3.05	337	P	Pn	18 19 19.5	-0.6
TNTI				S	Sn	18 19 53.5	-1.9
FAKI	Fak Fak	3.77	103	P	Pn	18 19 32.0	+1.9
KMSI	Cibinong	5.28	299	P	Pn	18 19 50.8	0.0
	0.3nm36nm,0.5s						
GTOI	Gorontalo	6.17	296	P	Pn	18 20 06.7	+3.7
	0.0nm7.1nm,0.9s						
APSI	Ampana	7.01	279	P	Pn	18 20 16.4	+1.8
FITZ	Fitzroy Crossi	16.21	190	Pn	P	18 22 21.7	-0.6
	0.4nm,0.3s,baz=12,slow=9.3,SNR=14						
FITZ				LR	LR	18 29 00.1	
	comp=Z,28nm,19.9s,baz=116,slow=38						
WRA	Warramunga Arr	18.66	163	P	Pn	18 22 49.8	-0.2
	1.0nm,0.3s,baz=346,slow=11,SNR=46						
WRA				S	Sn	18 26 10.8	-7.0
	0.1nm,0.3s,baz=337,slow=22,SNR=2.8						
ASAR	Alice Springs	22.11	167	P	P	18 23 28.5	+1.7
	3.8nm,0.4s,baz=348,slow=12,SNR=109						
ASAR				S	S	18 27 26.1	-2.7
	0.9nm,0.9s,baz=349,slow=21,SNR=6.7						
MKAR	Makanchi Array	63.34	326	P	P	18 29 00.1	+0.1
	0.7nm,1.0s,baz=136,slow=6.4,SNR=2.7						

IDC 14 18:43:10.1±4.1, 11.24N×86.45W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.7/23, mbtmp3.6/5, Error ellipse: s-maj=161.3km s-min=64.4km az=40.0

INET 14 18:43:11.2, 10.55N×87.22W, h15km, MW3.6

UCR 14 18:43:11.4±1.7, 10.40N×87.08W, h14km±9km, MW3.7

ISC 14 18:43:11.5±1.1, 10.6N±0.1×87.06W±0.08, h23km, n18, σ1°44/22, mb3.7/5, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAJU	San Juanillo,	1.42	110	*e*P	Pn	18 43 35.6	-0.2
SAJU				*e*S	Sn	18 43 54.2	+0.3
HZTE	Horizontes, Gu	1.45	84	*e*P	Pn	18 43 37.4	+1.1
BUEV	Buena Vista	1.64	82	*i* P	Pn	18 43 39.3	+0.3
INDI	Punta indio, G	1.69	114	*e*P	Pn	18 43 39.5	0.0
INDI				*e*S	Sn	18 44 00.1	-0.3
PLVR	Palo Verde	1.70	97	*e*P	Pn	18 43 39.2	-0.7
LIM1	Limonal	1.78	86	*i* P	Pn	18 43 42.2	+1.2
LIM1				*i* S	Sb	18 44 06.2	+0.7
CUI	Cuipilapa	1.87	87	*e*P	Pn	18 43 43.4	+1.3
CUI				*i* S	Sb	18 44 08.4	+0.5
JTS	Las Juntas de	2.09	97	*e*P	Pn	18 43 46.2	+1.1
LCR2	La Lucha 2	3.12	105	*e*P	Pn	18 44 02.1	+2.7
RIMA	Rio Macho	3.25	104	*e*P	Pn	18 44 04.2	+3.0
CVTR	Volcan Turrial	3.29	99	*e*P	Pb	18 44 07.2	-2.3
CDM	Cerro de Muert	3.40	107	*e*P	Pn	18 44 06.0	+2.4
TXAR	Lajitas Array	24.28	323	P	P	18 48 27.5	+0.2
	0.9nm,0.7s,baz=135,slow=9.0,SNR=7.3						
PDAR	Pinedale Array	37.60	332	P	P	18 50 24.2	-0.5
	1.3nm,1.1s,baz=129,slow=7.1,SNR=4.1						
NVAR	Mina Array Bea	39.37	320	P	P	18 50 40.9	+1.3
	0.6nm,0.3s,baz=116,slow=6.1,SNR=1.8						
YKA	Yellowknife Ar	55.52	345	P	P	18 52 43.0	-1.5
	0.1nm,0.3s,baz=144,slow=7.2,SNR=2.9						
ILAR	Eielson Array	67.89	336	P	P	18 54 08.0	+0.1
	0.6nm,0.7s,baz=126,slow=4.6,SNR=4.9						
CMAR	Chiang Mai Arr	150.56	348	PKPbc	PKPbc	19 03 03.1	+0.7
	0.2nm,0.6s,baz=348,slow=3.8,SNR=4.3						

IDC 14 18:58:38.6±1.8, 20.07S×70.84W, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.6/31, mbtmp3.8/4, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/27, Error ellipse: s-maj=54.4km s-min=17.9km az=61.0

GUC 14 18:58:40.3±0.5, 20.16S×71.05W, h31km±2km, ML3.6

ISC 14 18:58:37.1±1.9, 20.12S±0.03×71.04W±0.07, h4km±11km, n32, σ1°32/38, 7C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	Huaiquique	0.86	100	⇑*e*P	Pb	18 58 54.8	+0.1
TA02				*i* S	Sb	18 59 06.3	-0.4
TA01	Diego Aracena	0.92	119	*e*P	Pb	18 58 55.6	0.0
TA01				*i* S	Sb	18 59 07.7	-0.6
TA01				IAML		18 59 09.1	
	comp=N,2μm,0.3s						
PSGC	Pisagua	1.00	59	*e*P	Pb	18 58 57.6	+0.4
PSGC				*i* S	Sb	18 59 10.7	-0.1
PSGC				IAML		18 59 12.9	
	comp=N,3μm,0.5s						
PATCX	Punta Patache	1.08	130	⇓*e*P	Pg	18 58 58.5	+0.5
PATCX				*i* S	Sg	18 59 12.2	+0.2
PATCX				IAML		18 59 16.8	
	comp=N,2μm,0.3s						
HMBC	Humberstone	1.09	99	⇑*e*P	Pb	18 58 58.5	-0.1
HMBC				*i* S	Sb	18 59 12.9	-0.5
MNMC	Minye Minye	1.67	54	*e*P	Pb	18 59 08.6	-0.1
MNMC				*i* S	Sg	18 59 30.8	-0.2
PB01	IPOC Station P	1.72	123	*e*P	Pn	18 59 08.3	+0.2
PB01				*i* S	Sn	18 59 29.6	-0.9
PB01				IAML		18 59 37.8	
	comp=N,1μm,0.7s						
PB08	IPOC Station P	1.77	91	*e*P	Pn	18 59 09.4	+0.4
PB08				*i* S	Sb	18 59 32.8	-0.3
PB08				IAML		18 59 35.5	
	comp=N,2μm,0.9s						
AP01	Chacalluta	1.86	21	*e*P	Pn	18 59 10.6	+0.8
AP01				*i* S	Sb	18 59 34.4	-0.8
AP01				IAML		18 59 43.3	
	comp=E,1μm,1.1s						
PB07	IPOC Station P	1.93	146	⇑*e*P	Pn	18 59 10.9	-0.1
PB07				*i* S	Sn	18 59 33.6	-2.3
PB07				IAML		18 59 46.1	
	comp=E,585nm,0.6s						
PB03	IPOC Station P	2.27	148	⇑*e*P	Pn	18 59 15.5	-0.1
PB03				*i* S	Sg	18 59 48.8	-1.2
PB03				IAML		18 59 58.3	
	comp=E,347nm,0.3s						
PB16	IPOC Station P	2.29	39	⇑*i*P	Pn	18 59 17.8	+1.5
PB16				*i* S	Sb	18 59 47.3	-0.9
PB16				IAML		18 59 59.7	
	comp=N,413nm,0.6s						
PB04	IPOC Station P	2.36	160	*i* S	Sn	18 59 42.4	-4.0
PB04				IAML		19 00 00.7	
	comp=E,582nm,0.4s						
PB09	IPOC Station P	2.37	135	⇑*e*P	Pn	18 59 17.5	+0.5
PB09				*i* S	Sn	18 59 46.3	-0.4
PB09				IAML		18 59 57.9	
	comp=E,758nm,0.4s						
PB05	IPOC Station P	2.83	164	⇑*e*P	Pn	18 59 22.8	-0.6
PB05				IAML		19 00 16.6	
	comp=E,190nm,0.3s						
PB06	IPOC Station P	2.92	152	*e*P	Pn	18 59 24.3	-0.3
PB06				IAML		19 00 14.7	
	comp=E,237nm,0.5s						
LVC	Limon Verde	3.17	142	Pn	Pn	18 59 29.9	+1.6
	comp=E,3.2nm,0.3s,baz=324,slow=12,SNR=54						
LVC				Pg	Pb	18 59 35.5	+1.1
	comp=E,19nm,0.3s,baz=344,slow=11,SNR=26						
LVC				Sn	Sn	19 00 05.6	-1.2
	comp=E,12nm,0.3s,baz=21,slow=20,SNR=6.7						
LVC				Lg	Lg	19 00 16.7	
	comp=E,29nm,0.3s,baz=57,slow=20,SNR=16						
LVC				LR	LR	19 00 53.3	
	comp=E,175nm,18.4s,baz=309,slow=44						
PB15	IPOC Station P	3.40	155	*e*P	Pn	18 59 31.0	-0.3
LPAZ	La Paz	4.70	36	Pn	Pb	18 59 56.6	-4.0
	comp=E,1.2nm,0.3s,baz=202,slow=5.2,SNR=13						
SIV	San Ignacio	10.32	68	Pn	Pn	19 01 07.3	+1.1
	comp=E,0.6nm,0.3s,baz=270,slow=12,SNR=8.1						
H03N1	Juan Fernandez	15.01	206	T	T	19 17 35.4	
	baz=33,slow=72,SNR=35						
H03N2	Juan Fernandez	15.02	206	T	T	19 17 36.2	
	baz=33,slow=72,SNR=34						
H03N3	Juan Fernandez	15.03	206	T	T	19 17 42.2	
	baz=33,slow=72,SNR=28						
TORD	Torodi Ar. Bea	78.78	71	P	P	19 10 41.3	-0.5
	comp=E,1.0nm,0.7s,baz=256,slow=5.5,SNR=4.6						
YKA	Yellowknife Ar	89.24	341	P	P	19 11 36.2	+2.3
	comp=E,0.4nm,0.8s,baz=134,slow=5.2,SNR=5.3						
H11S2	WAKE ISLAND Hyd	25.72	279	T	T	21 37 05.5	
	baz=101,slow=74,SNR=17						
H11S1	WAKE ISLAND Hyd	25.73	279	T	T	21 37 14.3	
	baz=101,slow=74,SNR=8.5						
H11S3	WAKE ISLAND Hyd	25.73	279	T	T	21 37 10.5	
	baz=101,slow=74,SNR=6.6						
H11N3	WAKE ISLAND Hyd	25.77	280	T	T	21 37 10.3	
	baz=102						
H11N2	WAKE ISLAND Hyd	25.78	280	T	T	21 37 09.4	
	baz=102						
H11N1	WAKE ISLAND Hyd	25.79	280	T	T	21 37 07.8	
	baz=102						
MKAR	Makanchi Array	145.63	33	PKPbc	PKPab	19 18 18.6	+1.1
	comp=E,0.9nm,0.8s,baz=324,slow=4.0,SNR=6.9						

IDC 14 19:17:15.4±166.0, 46.19N×151.41E, h0km, Error ellipse: s-maj=370.8km s-min=17.2km az=120.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	WAKE ISLAND Hy	29.31	149	H	H	19 54 01.0	
	baz=338,slow=76,SNR=20						
H11N1	WAKE ISLAND Hy	29.32	149	H	H	19 53 58.7	
	baz=338,slow=76,SNR=21						
H11N3	WAKE ISLAND Hy	29.32	149	H	H	19 53 58.9	
	baz=338,slow=76,SNR=23						
H11S1	WAKE ISLAND Hy	30.37	150	H	H	19 55 21.0	
	baz=339,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	30.38	150	H	H	19 55 20.9	
	baz=339,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	30.39	150	H	H	19 55 18.8	
	baz=339,slow=76,SNR=14						
H03N2	Juan Fernandez	139.93	90	H	H	22 12 24.0	
	baz=307,slow=77,SNR=18						
H03N1	Juan Fernandez	139.95	90	H	H	22 12 27.3	
	baz=307,slow=77,SNR=19						
H03N3	Juan Fernandez	139.95	90	H	H	22 12 23.7	
	baz=307,slow=77,SNR=20						

IDC 14 19:18:58.2±177.0, 46.49N×150.52E, h0km, Error ellipse: s-maj=395.0km s-min=16.7km az=119.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H11N2	WAKE ISLAND Hy	29.88	148	H	H	19 56 25.7	
	baz=338,slow=76,SNR=180						
H11N1	WAKE ISLAND Hy	29.89	148	H	H	19 56 27.2	
	baz=338,slow=76,SNR=156						
H11N3	WAKE ISLAND Hy	29.90	148	H	H	19 56 27.4	
	baz=338,slow=76,SNR=169						
H11S1	WAKE ISLAND Hy	30.93	149	H	H	19 57 45.6	
	baz=339,slow=76,SNR=122						
H11S3	WAKE ISLAND Hy	30.94	149	H	H	19 57 46.2	
	baz=339,slow=76,SNR=124						
H11S2	WAKE ISLAND Hy	30.95	149	H	H	19 57 47.0	
	baz=339,slow=76,SNR=142						
H03N2	Juan Fernandez	140.54	89	H	H	22 14 53.9	
	baz=307,slow=77,SNR=23						
H03N1	Juan Fernandez	140.56	89	H	H	22 14 55.6	
	baz=307,slow=77,SNR=23						
H03N3	Juan Fernandez	140.56	89	H	H	22 14 53.5	
	baz=307,slow=77,SNR=24						

IDC 14 19:28:55.3±2.9, 31.54S×71.75W, h0km, mb4.1/1, mb1 3.8/2, mb1mx3.5/24, mbtmp3.7/2, ML3.5/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/20, Error ellipse: s-maj=128.4km s-min=47.6km az=96.0

SJA 14 19:28:56.7±1.0, 31.64S×71.95W, h15km, ML3.8, MW4.2

GUC 14 19:28:57.9±0.7, 31.58S×71.94W, h36km±3km, ML3.8

ISC 14 19:28:55.2±1.6, 31.61S±0.03×71.99W±0.05, h2km±10km, n44, σ1°68/68, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA01	Torpederas	1.44	169	*e*P	Pg	19 29 23.3	+0.5
VA01				*e*S	Sg	19 29 42.1	+0.6
ROCH	El Roble	1.59	149	*e*P	Pg	19 29 25.6	0.0
ROCH				*i* S	Sg	19 29 46.1	-0.1
ROCH				IAML		19 29 50.7	
	comp=N,3μm,0.6s						
ROC1	El Roble	1.59	149	*e*P	Pg	19 29 26.0	+0.3
ROC1				*e*S	Sg	19 29 47.4	+1.0
VA03	San Esteban	1.68	134	⇑*e*P	Pg	19 29 26.9	-0.4
VA03				*i* S	Sg	19 29 48.2	-0.8
VA03				IAML		19 29 49.6	
	comp=N,3μm,0.4s						
VA03	San Esteban	1.68	134	*e*P	Pg	19 29 27.0	-0.4
VA03				*e*S	Sg	19 29 49.1	0.0
VA03				IAML		19 29 51.9	
	comp=Z,1μm,0.6s						
GO04	Tololo Observa	1.76	36	*e*P	Pn	19 29 27.5	+0.6
GO04				*i* S	Sn	19 29 49.6	-0.5
GO04				IAML		19 29 57.5	
	comp=N,3μm,0.5s						
GO04	Tololo Observa	1.76	36	*e*P	Pb	19 29 28.1	-0.2
GO04				*e*S	Sb	19 29 51.1	+0.1
MT02	Curacav	1.79	157	*e*P	Pb	19 29 28.6	-0.2
MT02				*i* S	Sg	19 29 51.6	-1.2
PEL	Peldehue	1.88	145	*e*P	Pb	19 29 29.8	-0.6
PEL				*e*S	Sb	19 29 53.4	-1.0
PEL				IAML		19 29 56.8	
	comp=N,967nm,0.5s						
PEL	Peldehue	1.88	145	*e*P	Pb	19 29 30.4	0.0
PEL				*e*S	Sg	19 29 54.1	-1.6
MT05	Renca	2.07	150	*e*P	Pb	19 29 32.2	-1.3
MT05				*i* S	Sb	19 29 58.5	-1.2
MT05				IAML		19 30 07.7	
	comp=E,1μm,0.3s						
VA05	Santo Domingo	2.07	171	*e*P	Pn	19 29 31.9	+1.0
VA05				*e*S	Sn	19 29 56.5	-0.7
VA05				IAML		19 30 08.4	
	comp=E,798nm,0.4s						
MT03	Universidad Ad	2.25	147	*e*P	Pn	19 29 34.8	+1.1
MT03	Universidad Ad	2.25	147	*e*P	Pb	19 29 35.7	-1.0
MT03				*e*S	Sb	19 30 03.5	-1.6
MT03				IAML		19 30 13.5	
	comp=Z,602nm,0.7s						
AUSP	Uspallata	2.29	106	*e*P	Pb	19 29 37.2	-0.2
AUSP				*e*S	Sb	19 30 06.0	-0.4
RTLS	Leoncito	2.30	95	*e*P	Pb	19 29 37.3	-0.3
RTLS				*e*S	Sb	19 30 05.8	-0.8
RTLS				IAML		19 30 07.1	
	comp=Z,424nm,0.8s						
MT09	Talagante	2.32	159	*e*P	Pb	19 29 36.7	-1.1
MT09				*i* S	Sb	19 30 05.2	-1.8
MT09				IAML		19 30 14.8	
	comp=N,476nm,0.2s						
AROD	Rodeo	2.59	57	*e*P	Pb	19 29 41.6	-1.0
AROD				*e*S	Sg	19 30 16.2	-2.4
LMEL	Las Melosas	2.69	147	⇑*e*P	Pn	19 29 40.7	+1.0
ACCO	Cerro Coronel	2.70	69	*e*P	Pb	19 29 43.9	-0.7
ACCO				*e*S	Sb	19 30 18.4	+0.1
ACCO				IAML		19 30 23.5	
	comp=Z,248nm,0.8s						
ZON	Zonda	2.82	90	*e*P	Pb	19 29 45.6	-0.8
ASAL	Salagasta	2.85	111	*e*P	Pb	19 29 46.4	-0.4
ASAL				*e*S	Sg	19 30 30.9	+4.2
ASAL				IAML		19 30 32.7	
	comp=Z,208nm,1.4s						
ARCO	CERRO ARCO	2.86	116	*e*P	Pb	19 29 46.7	-0.5
ARCO				IAML		19 30 33.3	
	comp=Z,232nm,2.0s						
BO03	Pichilemu	2.88	180	*e*P	Pn	19 29 43.2	+1.0
BO03				IAML		19 30 40.0	
	comp=E,142nm,0.5s						
RTCV	Cerro Valdivia	2.95	96	*e*P	Pb	19 29 47.1	-1.4
RTCV				*e*S	Sg	19 30 30.7	+0.8
RTCV				IAML		19 30 33.3	
	comp=Z,155nm,0.7s						
RTLL	Cerro Villicun	3.01	86	*e*P	Pb	19 29 48.5	-1.2
RTLL				*e*S	Sg	19 30 34.4	-1.6
AAGR	Agrelo	3.05	120	*e*P	Pb	19 29 51.2	+0.9
AAGR				*e*S	Sg	19 30 36.4	+3.2
AAGR				IAML		19 30 38.7	
	comp=Z,257nm,2.1s						
BO02	Sierra Bellavi	3.33	163	*e*P	Pn	19 29 49.7	+1.3
BO02				*i* S	Sn	19 30 28.4	-0.3
BO02				IAML		19 30 42.8	
	comp=N,298nm,0.4s						
BO02	Sierra Bellavi	3.33	163	*e*P	Pn	19 29 50.2	+1.8
BO02				*e*S	Sn	19 30 28.7	0.0
BO02				IAML		19 30 45.4	
	comp=Z,303nm,0.7s						
AC04	Llanos de Chal	3.48	13	*i* S	Sn	19 30 34.0	+1.6
AC04				IAML		19 30 56.3	
	comp=E,141nm,0.6s						
AGUA	GUANDACOL	3.68	56	*e*P	Pn	19 29 56.8	+3.5
AGUA				IAML		19 30 59.0	
	comp=Z,198nm,0.7s						
GO03	Copiap	4.28	21	*e*P	Pn	19 30 04.2	+2.7
GO03				*e*S	Sb	19 31 05.2	+1.7
RFA	San Rafael	4.32	138	*e*P	Pn	19 30 05.1	+3.1
RFA				*e*P	Pb	19 30 05.2	-6.7
VCA	Vinchina	4.35	50	*e*P	Pb	19 30 08.3	-4.1
VCA				*e*S	Sb	19 31 06.8	+1.4
VCA				IAML		19 31 12.8	
	comp=Z,180nm,0.7s						
ACHE	Chepes	4.57	86	*e*P	Pn	19 30 08.2	+2.6
ACHE				*e*S	Sb	19 31 09.7	-2.2
ACLC	CERRO LA CRUZ	4.86	65	*e*P	Pn	19 30 12.3	+2.8
ACLC				*e*S	Sb	19 31 14.8	-5.4
ACLC				IAML		19 31 16.1	
	comp=Z,256nm,0.9s						
BI02	San Fabin de	5.08	174	*e*P	Pn	19 30 14.3	+1.9
H03N1	Juan Fernandez	6.13	251	T	T	19 37 04.5	
	baz=80,slow=72,SNR=1164						
H03N3	Juan Fernandez	6.14	251	T	T	19 37 07.4	
	baz=80,slow=72,SNR=1181						
H03N2	Juan Fernandez	6.14	251	T	T	19 37 06.4	
	baz=80,slow=72,SNR=978						
PLCA	Paso Flores	9.18	173	Pn	Pn	19 31 09.7	+0.9
	comp=Z,0.1nm,0.3s,baz=342,slow=11,SNR=2.0						
PLCA				LR	LR	19 34 44.7	
	comp=Z,44nm,20.1s,baz=43,slow=38						
CPUP	Villa Florida	13.86	71	LR	LR	19 37 48.2	
	comp=Z,51nm,19.0s,baz=232,slow=39						
TORD	Torodi Ar. Bea	83.36	70	P	P	19 41 23.6	-0.7
	comp=E,1.3nm,0.8s,baz=241,slow=4.8,SNR=5.2						
ZALV	Zalesovo Beam	152.16	30	PKPbc	PKPbc	19 48 51.8	-0.1
	comp=E,1.5nm,0.8s,baz=302,slow=3.2,SNR=6.5						

*IDC 14 19:34:13.9±1.8, 2.09S×34.77E, h0km, mb3.5/2, mb1 3.8/5, mb1

BAKO IAML 19 37 37.1
comp=Z,176nm,0.5s
CHML Chimala 7.13 185 *i* P **Pn** **19 36 03.2 +2.6**
CHML IAML 19 38 24.5
comp=Z,173nm,0.5s
PDHT Panda Hill 7.40 191 *i* P **Pn** **19 36 07.8 +3.4**
PDHT IAML 19 38 20.1
comp=Z,192nm,0.5s
KIDE Kidegembe 7.56 177 *i* P **Pn** **19 36 09.1 +2.5**
KIDE IAML 19 37 33.5
comp=Z,170nm,0.5s
KIPE Kipengere 7.57 182 *i* P **Pn** **19 36 09.6 +2.8**
KIPE IAML 19 37 34.0
comp=Z,186nm,0.4s
MFRI Mfriga 7.59 175 *i* P **Pn** **19 36 10.9 +3.9**
MFRI IAML 19 37 48.2
comp=Z,128nm,0.6s
ILOM Ilombo 7.67 190 *i* P **Pn** **19 36 11.6 +3.4**
ILOM IAML 19 38 37.3
comp=Z,117nm,1.0s
ITUM Tunduma 7.81 191 *i* P **Pn** **19 36 13.3 +3.2**
ITUM IAML 19 38 40.0
comp=Z,129nm,0.9s
TOLA Matola 7.87 181 *i* P **Pn** **19 36 13.8 +2.9**
TOLA IAML 19 38 40.8
comp=Z,194nm,0.5s
WINO Wino 8.05 176 *i* P **Pn** **19 36 16.4 +3.0**
WINO IAML 19 37 46.1
comp=Z,113nm,0.6s
CPMW Chitipa 8.10 190 *i* P **Pn** **19 36 17.6 +3.6**
CPMW IAML 19 38 49.6
comp=Z,78nm,1.1s
KAPK Kapoka 8.14 189 *i* P **Pn** **19 36 18.7 +4.1**
KAPK IAML 19 38 49.9
comp=Z,84nm,0.5s
BANG Mbangamawe 8.44 173 *i* P **Pn** **19 36 21.3 +2.8**
BANG IAML 19 38 01.3
comp=Z,125nm,0.5s
WENY Wenya 8.50 187 *i* P **Pn** **19 36 22.5 +3.0**
WENY IAML 19 38 52.7
comp=Z,74nm,0.9s
NTHA Nthalire 8.68 187 *i* P **Pn** **19 36 25.1 +3.1**
NTHA IAML 19 39 17.6
comp=Z,48nm,0.6s
ZINI Mgazini 8.76 176 *i* P **Pn** **19 36 23.3 +0.3**
ZINI IAML 19 39 05.1
comp=Z,74nm,0.6s
LIGA Liganga 8.97 176 *i* P **Pn** **19 36 28.3 +2.5**
LIGA IAML 19 39 19.8
comp=Z,98nm,1.1s
TIRI Matiri 9.03 179 *i* P **Pn** **19 36 29.6 +2.8**
TIRI IAML 19 39 20.3
comp=Z,119nm,0.8s
THAZ Thazima 9.16 187 *i* P **Pn** **19 36 32.2 +3.6**
THAZ IAML 19 39 22.9
comp=Z,61nm,0.7s
NGON Ngonga 9.23 184 *i* P **Pn** **19 36 32.6 +3.1**
NGON IAML 19 39 17.9
comp=Z,50nm,0.7s
BOLE Bolero 9.29 186 *i* P **Pn** **19 36 33.9 +3.6**
BOLE IAML 19 39 26.1
comp=Z,56nm,0.7s
ENUK Enukweni 9.47 185 *i* P **Pn** **19 36 36.3 +3.2**
KURU Muhukuru 9.49 175 *i* P **Pn** **19 36 34.8 +1.8**
KURU IAML 19 39 32.1
comp=Z,81nm,1.4s
VWZMW Thunduwike 9.50 187 *i* P **Pn** **19 36 36.9 +3.7**
VWZMW IAML 19 39 32.2
comp=Z,39nm,0.6s
LSZ Lusaka 14.95 205 Pn **Pn** **19 37 43.1 -4.7**
comp=Z,0.1nm,0.3s,baz=12,slow=12,SNR=1.4
LSZ Sn Sn 19 40 21.8 -12
comp=Z,0.3nm,0.3s,baz=316,slow=18,SNR=1.8
LSZ Lg Lg 19 41 55.4
comp=Z,0.2nm,0.3s,baz=114,slow=20,SNR=1.8
TORD Torodi Ar. Bea 35.88 295 LR LR 19 55 05.8
comp=Z,27nm,18.1s,baz=95,slow=35
MKAR Makanchi Array 63.78 34 P **P** **19 44 48.6 +0.2**
comp=Z,0.2nm,0.7s,baz=242,slow=6.2,SNR=2.6
CMAR Chiang Mai Arr 66.25 69 P **P** **19 45 05.3 +0.3**
comp=Z,0.7nm,1.0s,baz=251,slow=8.4,SNR=6.5

BJI ***14*** *19:41:24.2±0.0,48˚.09N×152˚.94E,h154km,mB4.8/37, mb4.6/56*
MOS ***14*** *19:41:25.5±1.1,48˚.01N×152˚.64E,h143km,mb4.5/49, Error ellipse: s-maj=6.0km s-min=3.3km az=70.2*
SKHL ***14*** *19:41:26.6±0.7,47˚.90N×152˚.90E,h138km±5km,mb5.1/13, mbv5.2/7,msh5.1/5,msha5.7/6*
IDC ***14*** *19:41:27.6±0.7,48˚.08N×152˚.54E,h147km±5km,mb3.9/27, mb1 4.0/34,mb1mx3.9/54,mbtmp4.4/34,MS3.2/2, Ms1 3.2/2,ms1mx2.6/39,Error ellipse: s-maj=11.7km s-min=7.9km az=140.0*
NEIC ***14*** *19:41:28.9±1.6,48˚.07N±0˚.09×152˚.6E±0˚.1,h158km±5km, mb4.6/147,Error ellipse: s-maj=14.9km s-min=9.3km az=142.0*
JMA ***14*** *19:41:30.3±0.6,46˚.47N×153˚.18E,h183km,M4.2*
ISC 14 19:41:27.2±0.4,47˚.98N±0˚.04×152˚.74E±0˚.04,h147km±3km, h147km:pP-P,n500,σ1s51/545,mb4.5/196,**17C-9D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.49**	**38**	*e*P	N	**Pn**	**19 42 20.6**	**0.0**
SKR				*e*S	N	**Sn**	**19 43 01.4**	**-0.7**
SKR				pmax	pmax			
	comp=Z,700nm,3.3s							
SKR				pmax	pmax			
	comp=Z,190nm,0.6s							
SKR				smax	smax			
	comp=E,478nm,0.5s							
SKR				smax	smax			
	comp=N,377nm,0.5s							
SKR				MLR	MLR			
	comp=Z,100nm,10.0s							
SKR	**Severo-Kuril's**	**3.49**	**38**	*e*P		**Pn**	**19 42 20.4**	**-0.2**
SKR				AMB	AMB		19 42 21.0	
	comp=Z,700nm,3.3s							
SKR				AMB	AMB		19 42 23.0	
	comp=Z,190nm,0.6s							
SKR				*e*S		**Sn**	**19 43 00.2**	**-1.9**
SKR				A	A		19 43 08.0	
	comp=Z,380nm,0.5s							
SKR				A	A		19 43 08.0	
	comp=Z,480nm,0.5s							
KUR	**Kuril'sk**	**4.34**	**232**	*i* P		**Pn**	**19 42 31.6**	**-0.2**
KUR				*e*S		**Sn**	**19 43 23.0**	**+1.1**
KUR				pmax	pmax			
	comp=E,12nm,0.6s							
KUR				pmax	pmax			
	comp=Z,107nm,0.6s							
KUR				pmax	pmax			
	comp=N,11nm,0.4s							
KUR				pmax	pmax			
	comp=Z,146nm,1.5s							
KUR				smax	smax			
	comp=N,244nm,0.3s							
KUR				smax	smax			
	comp=E,42nm,0.2s							
KUR				smax	smax			
	comp=N,1μm,2.0s							
KUR				smax	smax			
	comp=E,231nm,2.0s							
KUR	**Kuril'sk**	**4.34**	**232**	*i* P		**Pn**	**19 42 31.5**	**-0.2**
KUR				AMB	AMB		19 42 32.9	
	comp=E,10.0nm,0.5s							
KUR				AMB	AMB		19 42 32.9	
	comp=E,180nm,0.5s							
KUR				AMB	AMB		19 42 33.0	
	comp=E,300nm,2.0s							
KUR				*e*S		**Sn**	**19 43 20.7**	**-1.2**
KUR				A	A		19 43 26.0	
	comp=E,1μm,3.0s							
KUR				A	A		19 43 26.0	
	comp=E,2μm,3.0s							
KUR				A	A		19 43 29.6	
	comp=E,210nm,0.3s							
KUR				A	A		19 43 29.6	
	comp=E,70nm,0.3s							
PAU	**Pauzhetka**	**4.38**	**36**	PN		**Pn**	**19 42 31.8**	**-0.3**
PAU				S		**Sn**	**19 43 21.9**	**-0.8**
PAU	**Pauzhetka**	**4.38**	**36**	*e*P		**Pn**	**19 42 31.9**	**-0.2**
PAU				AMB	AMB		19 42 33.1	
	comp=E,270nm,0.6s							
PAU				*e*S		**Sn**	**19 43 21.9**	**-0.8**
PAU				A	A		19 43 22.9	
	comp=E,920nm,0.6s							
PAU				A	A		19 43 22.9	
	comp=E,550nm,0.6s							
KDTR	**Khodutka, Kamc**	**5.15**	**40**	PN		**Pn**	**19 42 40.0**	**-2.4**
KDTR				S		**Sn**	**19 43 35.5**	**-5.7**
APC	**Apacha**	**5.70**	**28**	PN		**Pn**	**19 42 49.1**	**-0.5**
MTVR	**Mutnovka**	**5.70**	**36**	PN		**Pn**	**19 42 49.0**	**-0.8**
MTVR				S		**Sn**	**19 43 51.9**	**-2.5**
GRL	**Gorelyy**	**5.71**	**35**	PN		**Pn**	**19 42 50.0**	**0.0**
GRL				S		**Sn**	**19 43 53.9**	**-0.8**
RUS	**Russkaya**	**5.79**	**38**	PN		**Pn**	**19 42 48.8**	**-2.1**
RUS				S		**Sn**	**19 43 51.8**	**-4.7**
RUS	**Russkaya**	**5.79**	**38**	*i* P		**Pn**	**19 42 48.8**	**-2.1**
KRMR	**Karymshinskiy**	**5.95**	**33**	PN		**Pn**	**19 42 52.5**	**-0.5**
PEA0B	**Petropavlovsk-**	**6.03**	**30**	*ce*PN		**Pn**	**19 42 54.4**	**+0.3**
PEA0B	**Petropavlovsk-**	**6.03**	**30**			**Pn**	**19 42 54.8**	**+0.7**
PETK	**Petropavlovsk-**	**6.03**	**30**	P		**Pn**	**19 42 54.1**	**0.0**
	comp=E,5.4nm,0.3s,baz=198,slow=9.0,SNR=117							
PETK				S		**Sn**	**19 44 01.3**	**-0.7**
	comp=E,0.2nm,0.3s,baz=208,slow=21,SNR=1.4							
PETK	**Petropavlovsk-**	**6.03**	**30**			**Pn**	**19 42 54.3**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**6.21**	**233**	*d* iPN		**Pn**	**19 42 54.7**	**-1.8**
YUK				*e*S		**Sn**	**19 44 01.8**	**-4.6**
YUK				pmax	pmax			
	comp=N,36nm,0.4s							
YUK				pmax	pmax			
	comp=E,61nm,0.4s							
YUK				pmax	pmax			
	comp=Z,343nm,0.4s							
YUK				smax	smax			
	comp=E,166nm,0.3s							
YUK				smax	smax			
	comp=N,80nm,0.2s							
YUK				smax	smax			
	comp=N,287nm,1.2s							
YUK				smax	smax			
	comp=E,100nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**6.21**	**233**	*i* P		**Pn**	**19 42 55.3**	**-1.2**
YUK				AMB	AMB		19 42 55.5	
	comp=E,40nm,0.4s							
YUK				AMB	AMB		19 42 55.5	
	comp=E,60nm,0.4s							
YUK				AMB	AMB		19 42 55.5	
	comp=E,340nm,0.4s							
YUK				*e*S		**Sn**	**19 44 03.7**	**-2.7**
YUK				A	A		19 44 07.0	
	comp=E,80nm,0.3s							
YUK				A	A		19 44 07.0	
	comp=E,170nm,0.3s							
YUK				A	A		19 44 09.8	
	comp=E,300nm,1.0s							
YUK				A	A		19 44 09.8	
	comp=E,100nm,1.0s							
GRPR	**Tuman**	**6.28**	**233**	‖ *i* PN		**Pn**	**19 42 56.0**	**-1.5**
GRPR				*e*S		**Sn**	**19 44 05.7**	**-2.5**
GRPR				pmax	pmax			
	comp=E,151nm,0.4s							
GRPR				pmax	pmax			
	comp=Z,262nm,0.4s							
GRPR				pmax	pmax			
	comp=N,134nm,0.2s							
GRPR	**Tuman**	**6.28**	**233**	*i* P		**Pn**	**19 42 56.0**	**-1.5**
GRPR				AMB	AMB		19 42 59.0	
	comp=N,130nm,0.4s							
GRPR				AMB	AMB		19 42 59.0	
	comp=N,150nm,0.4s							
GRPR				AMB	AMB		19 42 59.0	
	comp=N,260nm,0.4s							
GRPR				*e*S		**Sn**	**19 44 05.0**	**-3.2**
PET	**Petropavlovsk**	**6.30**	**35**	*e*PN		**Pn**	**19 42 54.3**	**-3.4**
PET				*e*S		**Sn**	**19 44 04.8**	**-3.7**
PET				smax	smax			
	comp=E,145nm,0.6s							
PET				smax	smax			
	comp=N,117nm,0.7s							
PET				MLR	MLR			
	comp=Z,300nm,15.0s							
PET	**Petropavlovsk**	**6.30**	**35**	Pn		**Pn**	**19 42 57.7**	**+0.1**
PET	**Petropavlovsk**	**6.30**	**35**	*e*P		**Pn**	**19 42 57.4**	**-0.3**
PET				*e*S		**Sn**	**19 44 05.6**	**-2.9**
PET				A	A		19 44 14.9	
	comp=Z,120nm,0.7s							
PET				A	A		19 44 14.9	
	comp=Z,150nm,0.7s							
DALK	**Dalny**	**6.34**	**35**	PN		**Pn**	**19 42 57.4**	**-0.9**
DALK				S		**Sn**	**19 44 05.1**	**-4.5**
RUSJ	**Misakicho**	**6.50**	**236**	‖ *i* PN		**Pn**	**19 42 59.7**	**-0.7**
RUSJ				S		**Sn**	**19 44 12.7**	**-0.6**
KOK	**Koryaka**	**6.50**	**33**	PN		**Pn**	**19 43 00.6**	**+0.1**
KOK	**Koryaka**	**6.50**	**33**	*e*P		**Pn**	**19 43 00.6**	**+0.1**
UGLR	**Uglovaya**	**6.51**	**34**	PN		**Pn**	**19 43 00.5**	**-0.1**
AVH	**Avacha**	**6.52**	**34**	PN		**Pn**	**19 43 00.4**	**-0.3**
SMAR	**Somma**	**6.54**	**34**	PN		**Pn**	**19 43 00.9**	**-0.2**
KRER	**Koryakskii**	**6.55**	**33**	PN		**Pn**	**19 43 01.0**	**-0.3**
KRX	**Arik**	**6.56**	**33**	PN		**Pn**	**19 43 01.0**	**-0.3**
GLVR	**Golovnino**	**6.59**	**233**	*e*PN		**Pn**	**19 42 59.5**	**-2.0**
GLVR				*e*S		**Sn**	**19 44 12.7**	**-2.8**
GLVR				pmax	pmax			
	comp=Z,301nm,1.4s							
GLVR				pmax	pmax			
	comp=Z,154nm,0.4s							
GLVR				pmax	pmax			
	comp=N,96nm,0.5s							
GLVR	**Golovnino**	**6.59**	**233**	*e*P		**Pn**	**19 42 59.6**	**-2.0**
GLVR				AMB	AMB		19 43 03.0	
	comp=N,300nm,1.4s							
GLVR				AMB	AMB		19 43 06.0	
	comp=N,100nm,0.4s							
GLVR				AMB	AMB		19 43 06.0	
	comp=N,150nm,0.4s							
GLVR				*e*S		**Sn**	**19 44 12.2**	**-3.3**
GNL	**Ganaly**	**6.60**	**28**	PN		**Pn**	**19 43 02.7**	**+0.9**
JRA	**Rausu**	**6.67**	**235**	P		**Pn**	**19 43 01.4**	**-1.3**
NLC	**Nalytchevo**	**6.68**	**37**	PN		**Pn**	**19 43 00.3**	**-2.5**
NLC	**Nalytchevo**	**6.68**	**37**	*e*P		**Pn**	**19 43 00.3**	**-2.5**
NEM2	**Nemuro 2**	**6.73**	**229**	P		Pn	19 42 59.1	-4.4
NEM2				*e*S		Sn	19 44 08.4	-11
NMR	**Nemuro--Hokkai**	**6.74**	**229**	*e*PN		**Pn**	**19 42 59.3**	**-4.3**
NMR	**Nemuro--Hokkai**	**6.74**	**229**	*e*P		Pn	19 42 59.0	-4.6
YSS	**Yuzh-Sakhalins**	**6.84**	**265**	‖ *e*PN		**Pn**	**19 43 07.0**	**+2.0**
YSS				pmax	pmax			
	comp=Z,20nm,0.6s							
YSS	**Yuzh-Sakhalins**	**6.84**	**265**	Pn		**Pn**	**19 43 06.9**	**+1.9**
YSS	**Yuzh-Sakhalins**	**6.84**	**265**	*e*P		**Pn**	**19 43 06.7**	**+1.7**
YSS				AMB	AMB		19 43 08.7	
	comp=Z,20nm,0.6s							
YSS				*e*S		**Sn**	**19 44 21.7**	**0.0**
YSS				A	A		19 44 33.2	
	comp=Z,20nm,0.8s							
YSS				A	A		19 44 33.2	
	comp=Z,30nm,0.8s							
YSS				A	A		19 44 33.4	
	comp=Z,200nm,3.5s							
SPN	**Mys Shipunski**	**6.91**	**39**	PN		**Pn**	**19 43 03.8**	**-2.0**
SPN	**Mys Shipunski**	**6.91**	**39**	*e*P		**Pn**	**19 43 03.8**	**-2.0**
JNK	**Nakash**	**7.12**	**235**	P		**Pn**	**19 43 06.8**	**-2.0**
UGL	**Uglegorsk**	**7.17**	**283**	*e*PN		**Pn**	**19 43 06.0**	**-3.3**
UGL				pmax	pmax			
	comp=Z,57nm,0.8s							
UGL	**Uglegorsk**	**7.17**	**283**	*e*P		**Pn**	**19 43 11.5**	**+2.2**
UGL				AMB	AMB		19 43 12.5	
	comp=E,60nm,0.8s							
UGL				*e*S		**Sn**	**19 44 28.9**	**-0.5**
UGL				A	A		19 44 35.5	
	comp=Z,500nm,3.0s							
UGL				A	A		19 44 35.5	
	comp=Z,460nm,3.0s							
TYV	**Tymovskoe**	**7.18**	**297**	*e*PN		**Pn**	**19 43 11.3**	**+1.9**
TYV				pmax	pmax			
	comp=Z,200nm,2.6s							
TYV				pmax	pmax			
	comp=Z,44nm,1.2s							
TYV	**Tymovskoe**	**7.18**	**297**	*e*P		**Pn**	**19 43 10.6**	**+1.2**
TYV				AMB	AMB		19 43 12.0	
	comp=Z,200nm,2.6s							
TYV				AMB	AMB		19 43 12.4	
	comp=Z,50nm,1.0s							
TYV				*e*S		**Sn**	**19 44 28.4**	**-1.2**
TYV				A	A		19 44 35.0	
	comp=Z,20nm,0.8s							
TYV				A	A		19 44 35.0	
	comp=Z,10.0nm,0.8s							
JTKR	**Abashiri--Toko**	**7.34**	**240**	P		**Pn**	**19 43 11.0**	**-0.7**
KII	**Karymskiy**	**7.39**	**32**	PN		**Pn**	**19 43 09.5**	**-2.8**
JAK	**Akkeshi**	**7.53**	**231**	P		**Pn**	**19 43 10.2**	**-4.0**
JAK				*e*S		Sn	19 44 28.8	-9.5
JSE	**Soyaes**	**7.63**	**250**	P		**Pn**	**19 43 18.9**	**+3.4**
JMP	**Maruseppu**	**7.64**	**242**	P		**Pn**	**19 43 15.8**	**0.0**
JAR	**Ashorobuto**	**7.84**	**237**	P		**Pn**	**19 43 16.7**	**-1.6**
JWK2	**Keihoku**	**7.92**	**254**	P		**Pn**	**19 43 22.5**	**+3.1**
JKA	**Kamikawa-asahi**	**8.04**	**245**	Pn		**Pn**	**19 43 21.9**	**+0.9**
JKA	**Kamikawa-asahi**	**8.04**	**245**	*e*P		**Pn**	**19 43 21.9**	**+0.9**
ASAJ	**Asahikawa**	**8.04**	**245**	P		**Pn**	**19 43 21.9**	**+0.9**
	comp=Z,24nm,0.3s,baz=70,slow=9.8,SNR=277							
ASAJ				S		**Sn**	**19 44 50.7**	**+0.2**
	baz=114,slow=20,SNR=0.9							
ASAJ	**Asahikawa**	**8.04**	**245**	P		**Pn**	**19 43 21.9**	**+0.9**
JOB	**Onbets**	**8.06**	**234**	P		**Pn**	**19 43 18.3**	**-3.0**
JOB				*e*S		**Sn**	**19 44 43.6**	**-7.3**
JKK2	**Kamakawa 2**	**8.08**	**243**	P		**Pn**	**19 43 21.8**	**+0.2**
OKH	**Okha**	**8.34**	**316**	*e*P		**Pn**	**19 43 27.1**	**+2.2**
OKH				AMB	AMB		19 43 29.2	
	comp=Z,400nm,4.0s							
OKH				*e*S		**Sn**	**19 44 59.2**	**+1.6**
OKH				A	A		19 45 03.5	
	comp=Z,280nm,5.0s							
OKH				A	A		19 45 03.5	
	comp=Z,330nm,5.0s							
JSS	**Shosan**	**8.36**	**249**	P		**Pn**	**19 43 29.1**	**+3.9**
JRBN	**Rebuntou**	**8.42**	**257**	P		**Pn**	**19 43 28.9**	**+2.8**
JCH	**Churui**	**8.51**	**234**	P		**Pn**	**19 43 23.9**	**-3.4**
JCH				*e*S		Sn	19 44 52.8	-9.0
KZV	**Kizimen**	**8.55**	**31**	PN		**Pn**	**19 43 28.5**	**+0.7**
JFR	**Furan**	**8.59**	**240**	P		**Pn**	**19 43 27.4**	**-1.0**
JAB	**Ashibetsu**	**8.61**	**243**	P		**Pn**	**19 43 28.9**	**+0.3**
TUMR	**Tumrok**	**8.64**	**29**	PN		**Pn**	**19 43 29.3**	**+0.3**
TUMR				S		**Sn**	**19 45 02.2**	**-2.7**
MKZ	**Mys Kozlova**	**8.66**	**37**	PN		**Pn**	**19 43 25.7**	**-3.5**
ESO	**Esso**	**8.76**	**23**	PN		**Pn**	**19 43 31.5**	**+1.0**
ESO	**Esso**	**8.76**	**23**	*e*P		**Pn**	**19 43 31.5**	**+1.0**
ERM	**Erimo**	**9.03**	**232**	*ce*PN		**Pn**	**19 43 31.1**	**-3.2**
ERM				pmax	pmax			
	comp=Z,49nm,0.5s							
ERM	**Erimo**	**9.03**	**232**			**Pn**	**19 43 31.4**	**-2.9**
JNBK	**Urakawa-nobuka**	**9.07**	**235**	P		Pn	19 43 29.9	-4.8
JNBK				*e*S		Sn	19 45 03.1	-12
NKL	**Nikolayevsk**	**9.25**	**308**	*i* P		**Pn**	**19 43 38.8**	**+1.8**
NKL				AMB	AMB		19 43 39.5	
	comp=Z,10.0nm,1.0s							
NKL				AMB	AMB		19 43 39.6	
	comp=Z,100nm,1.3s							
JEW	**Eniwo**	**9.45**	**241**	P		**Pn**	**19 43 39.1**	**-0.8**
JEW	**Eniwo**	**9.45**	**241**			**Pn**	**19 43 39.0**	**-0.8**
JNB	**Noboribetsu**	**9.92**	**241**	P		**Pn**	**19 43 43.0**	**-3.1**
JKB	**Kayabe**	**10.29**	**238**	P		**Pn**	**19 43 46.7**	**-4.2**
JKB				*e*S		Sn	19 45 32.9	-12
KBG	**Krutoberegovo**	**10.29**	**33**	PN		**Pn**	**19 43 49.2**	**-1.7**
KBG	**Krutoberegovo**	**10.29**	**33**	*e*P		**Pn**	**19 43 49.4**	**-1.5**
KBG				AMB	AMB		19 43 49.7	
	comp=Z,40nm,0.2s							
KBG				AMB	AMB		19 43 53.2	
	comp=Z,200nm,5.0s							
KBG				*e*S		**Sn**	**19 45 39.8**	**-4.7**
KBG				A	A		19 45 44.1	
	comp=Z,50nm,0.6s							
KBG				A	A		19 45 44.1	
	comp=Z,30nm,0.6s							
KBTR	**Krutoberegovo**	**10.30**	**33**	PN		**Pn**	**19 43 49.4**	**-1.6**
JSH	**Shimam**	**10.41**	**244**	P		**Pn**	**19 43 51.7**	**-0.8**
JYM2	**Yakumo 2**	**10.53**	**241**	P		**Pn**	**19 43 50.8**	**-3.3**
BKI	**Bering**	**10.94**	**44**	PN		**Pn**	**19 43 55.8**	**-3.6**
JTM	**Tenmabayashi**	**11.01**	**233**			Pn	19 43 54.2	-6.3
JANG	**Nango**	**11.07**	**231**	P		Pn	19 43 54.6	-6.7
JOSM	**Okushiri--Mats**	**11.08**	**243**	P		**Pn**	**19 43 58.5**	**-2.8**
JTH	**Tanohata**	**11.22**	**228**	P		Pn	19 43 56.4	-6.8
MA2	**Magadan**	**11.67**	**355**	P		**Pn**	**19 44 08.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=174,slow=6.9,SNR=11							
MA2	**Magadan**	**11.67**	**355**	*ce*PN		**Pn**	**19 44 09.4**	**+0.4**
MA2				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MA2	**Magadan**	**11.67**	**355**	*e*P		**Pn**	**19 44 09.4**	**+0.4**
JRG	**Rokugo**	**12.25**	**230**	P		Pn	19 44 11.3	-5.4
JMM	**Marumori**	**13.36**	**225**	Pn		Pn	19 44 25.8	-5.1
EKMR	**Ekimchan**	**13.56**	**299**	*i* P		**Pn**	**19 44 35.0**	**+1.6**
EKMR				AMB	AMB		19 44 40.9	
	comp=Z,40nm,0.8s							
KLR	**Kul'dur**	**13.94**	**283**	P		**Pn**	**19 44 39.5**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=88,slow=13,SNR=26							
KLR	**Kul'dur**	**13.94**	**283**	*ce*P		**Pn**	**19 44 40.0**	**+1.8**
KLR				pmax	pmax			
	comp=Z,43nm,1.0s							
KLR	**Kul'dur**	**13.94**	**283**	*e*P		**Pn**	**19 44 37.1**	**-1.1**
SMY	**Shemya**	**14.42**	**63**	P		**P**	**19 44 46.0**	**-0.9**
SMY	**Shemya**	**14.42**	**63**	Pn		**P**	**19 44 46.0**	**-0.9**
JSD	**Sado**	**14.50**	**232**			**Pn**	**19 44 44.3**	**-1.0**
USA0B	**Ussuriysk Arra**	**14.88**	**263**	*i* P		**Pn**	**19 44 50.2**	**+0.2**
USA0B	**Ussuriysk Arra**	**14.88**	**263**			**Pn**	**19 44 50.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**14.88**	**263**	P		**Pn**	**19 44 50.6**	**+0.6**
	baz=63,slow=12,SNR=117							
USRK	**Ussuriysk Ar.**	**14.88**	**263**	Pn		**Pn**	**19 44 49.7**	**-0.3**
SEY	**Seymchan**	**14.98**	**359**	P		**Pn**	**19 44 51.1**	**0.0**
	comp=Z,0.5nm,0.3s,baz=171,slow=8.5,SNR=26							
MAJO	**Matsushiro**	**15.66**	**228**	*i* P		**Pn**	**19 44 58.9**	**-1.0**
MAJO	**Matsushiro**	**15.66**	**228**	Pn		**Pn**	**19 44 59.0**	**-0.8**
MAJO				IAmb	IAmb		19 45 02.1	
	comp=Z,32nm,1.1s							
MAT	**Matsushiro**	**15.66**	**228**	P		**Pn**	**19 44 58.0**	**-1.9**
MJAR	**Matsushiro Arr**	**15.66**	**228**	P		**Pn**	**19 44 57.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=26,slow=14,SNR=6.0							
MSHR	**Mys Shultsa**	**16.10**	**258**	*ce*P		**Pn**	**19 45 03.3**	**-1.8**
MSHR				pmax	pmax			
	comp=Z,30nm,1.3s							
BMKR	**Bomnak**	**16.32**	**303**	*i* P		**P**	**19 45 08.2**	**+0.3**
BMKR				AMB	AMB		19 45 10.8	
	comp=Z,20nm,0.8s							
MDJ	**Mudanjiang**	**16.33**	**267**	P		**Pn**	**19 45 06.8**	**-1.0**
MDJ				pmax	pmax			
	comp=Z,6.0nm,0.6s							
MDJ				pmax	pmax			
	comp=Z,160nm,3.5s							
MDJ	**Mudanjiang**	**16.33**	**267**	P		**Pn**	**19 45 06.9**	**-1.0**
MDJ				IAmb	IAmb		19 45 10.8	
	comp=Z,35nm,1.3s							
JGF	**Kuroka**	**16.83**	**228**	P		**P**	**19 45 13.5**	**-0.2**
ZEA	**Zeya**	**17.04**	**299**	*e*P		**Pn**	**19 45 16.9**	**+0.5**
ZEA				pmax	pmax			
	comp=E,10.0nm,1.3s							
ZEA				pmax	pmax			
	comp=N,10.0nm,0.9s							
ZEA				pmax	pmax			
	comp=Z,20nm,1.1s							
ZEA				pmax	pmax			
	comp=E,100nm,5.2s							
ZEA				pmax	pmax			
	comp=Z,100nm,9.8s							
ZEA	**Zeya**	**17.04**	**299**	*e*P		**P**	**19 45 16.1**	**+0.3**
ZEA				AMB	AMB		19 45 17.7	
	comp=Z,10.0nm,0.8s							
ZEA				AMB	AMB		19 45 17.7	
	comp=Z,10.0nm,0.8s							
ZEA				AMB	AMB		19 45 17.7	
	comp=Z,20nm,0.8s							
ZEA			

YAK smax smax
comp=N,24nm,2.0s
YAK smax smax
comp=E,37nm,2.1s
YAK Yakutsk 19.15 326 P **P** **19 45 39.3 +0.6**
CN2 Changchun 19.40 268 *eP* **P** **19 45 39.5 -2.2**
CN2 PP **pP** **19 46 08.4 +2.0**
CN2 pmax pmax
comp=E,20nm,1.0s
JHS Saijyo 19.53 236 P **P** **19 45 43.5 +0.3**
ADK Adak 19.99 67 P **P** **19 45 47.8 -0.1**
ADK pmax pmax
comp=Z,48nm,1.0s
ADK Adak 19.99 67 P **P** **19 45 47.8 -0.1**
JMN Monobe 20.08 232 P **P** **19 45 49.5 +0.4**
KSRS Korea Array 20.96 249 P **P** **19 45 58.6 +0.2**
comp=Z,27nm,1.1s,baz=49,slow=10,SNR=58
KS19 Wonju Array Si 20.97 249 P **P** **19 45 58.9 +0.3**
KS19 IAmb IAmb 19 45 59.9
comp=Z,32nm,1.1s
KSAR Wonju Array Be 20.99 249 P **P** **19 45 58.9 +0.1**
KSAR Wonju Array Be 20.99 249 P **P** **19 45 58.9 +0.1**
BILL Bilibino 21.25 14 *i* P **P** **19 46 00.4 -0.9**
BILL *i* *PP **pwP** **19 46 31.4 +1.8**
BILL *i* 19 49 59.0
BILL pmax pmax
comp=Z,7.0nm,1.6s
TJN Taejon 21.98 247 *ce*P **P** **19 46 04.5 -4.8**
JTU Tsushima 22.00 241 P **P** **19 46 08.8 -0.6**
JNU Nakatsue 22.17 236 P **P** **19 46 10.7 -0.5**
comp=Z,11nm,0.8s,baz=24,slow=20,SNR=7.6
JNU Nakatsue 22.17 236 P **P** **19 46 11.1 -0.1**
JNU IAmb IAmb 19 46 16.3
comp=Z,33nm,1.3s
JSU Suzuyama 23.62 234 P **P** **19 46 25.4 +0.6**
GAMB Gambell 24.99 38 P **P** **19 46 39.1 +2.4**
BOD Bodaibo 25.02 308 *eP* **P** **19 46 35.1 -2.0**
BOD pmax pmax
comp=Z,6.0nm,1.4s
TIXI Tiksi 26.21 343 P **P** **19 46 45.9 -1.8**
comp=Z,0.6nm,0.3s,baz=139,slow=8.3,SNR=5.6
TIXI LR LR 19 56 36.1
comp=Z,27nm,21.1s,baz=230,slow=35
TIXI Tiksi 26.21 343 ⇑*iP* **P** **19 46 45.5 -2.2**
TNA Tin City 27.16 35 P **P** **19 46 57.6 +1.3**
ANM Nome 27.86 38 P **P** **19 47 03.8 +1.2**
ANM pmax pmax
comp=Z,4.0nm,0.9s
ANM Nome 27.86 38 P **P** **19 47 03.8 +1.2**
JOW Kunigami 28.48 231 P **P** **19 47 08.3 -0.1**
comp=Z,26nm,0.5s,baz=9.6,slow=13,SNR=4.7
HHC Hu-ho-hao-te 29.97 272 *eP* **P** **19 47 21.9 +0.3**
HHC pmax pmax
comp=Z,10.0nm,1.2s
HHC pmax pmax
comp=Z,56nm,5.4s
NJ2 Nanjing 30.14 251 *eP* **P** **19 47 23.0 0.0**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
ULN Ulaanbaatar 30.27 287 *ce*P **P** **19 47 22.5 -1.7**
ULN pmax pmax
comp=Z,3.0nm,1.0s
H11N2 WAKE ISLAND Hy 30.43 153 T T 20 19 25.9
baz=342,slow=76,SNR=94
H11N1 WAKE ISLAND Hy 30.45 153 T T 20 19 46.1
baz=342,slow=76,SNR=127
H11N3 WAKE ISLAND Hy 30.45 153 T T 20 19 24.9
baz=342,slow=76,SNR=70
H11S1 WAKE ISLAND Hy 31.53 154 T T 20 21 00.5
baz=342,slow=76,SNR=116
H11S3 WAKE ISLAND Hy 31.54 154 T T 20 20 54.0
baz=342,slow=76,SNR=69
H11S2 WAKE ISLAND Hy 31.55 154 T T 20 20 49.6
baz=342,slow=76,SNR=89
A21K Barrow 33.02 27 P **P** **19 47 48.0 +0.2**
PPLA Purkeypile 33.42 43 P **P** **19 47 53.4 +1.8**
KDAK Kodiak Island 33.54 52 P **P** **19 47 52.3 -0.1**
comp=Z,22nm,1.0s,baz=295,slow=4.8,SNR=9.2
KDAK Kodiak Island 33.54 52 P **P** **19 47 52.5 +0.1**
SKT Skwentna 33.74 45 P **P** **19 47 55.7 +1.5**
YHNB Yeheng 33.97 238 P **P** **19 47 55.4 -1.2**
YHNB IAmb IAmb 19 48 03.6
comp=Z,21nm,1.3s
BPAW Bear Paw Mtn. 33.98 41 P **P** **19 47 57.5 +1.3**
BPAW IAmb IAmb 19 47 58.6
comp=Z,7.7nm,0.8s
KTH Kantishna Hill 34.00 42 P **P** **19 47 58.0 +1.5**
CNPM China Poot 34.04 49 P **P** **19 47 57.2 +0.4**
MLY Manley 34.11 39 P **P** **19 47 58.2 +0.8**
SUA Susitna One 34.14 46 P **P** **19 47 58.3 +0.6**
SUA IAmb IAmb 19 47 59.9
comp=Z,25nm,1.2s
NACB Ninganchiao 34.23 237 P **P** **19 47 56.6 -2.2**
TRF Thorofare Moun 34.28 42 P **P** **19 47 59.9 +0.8**
TRF IAmb IAmb 19 48 01.0
comp=Z,7.4nm,0.5s
CUT Chulitna 34.32 44 P **P** **19 48 00.4 +1.3**
CUT IAmb IAmb 19 48 14.5
comp=Z,25nm,1.2s
COLD Coldfoot 34.46 35 P **P** **19 48 00.7 +0.4**
BWN Browne 34.65 41 P **P** **19 48 04.1 +2.1**
I23K Minto, Yukon-K 34.70 39 P **P** **19 48 03.4 +1.0**
NEA2 Nenana 34.82 40 P **P** **19 48 04.1 +0.7**
NEA2 IAmb IAmb 19 48 05.9
comp=Z,15nm,0.9s
TOLK Toolik Lake Re 34.84 33 P **P** **19 48 04.1 +0.5**
MCK McKinley 34.88 41 P **P** **19 48 04.3 +0.2**
MCK pmax pmax
comp=Z,16nm,1.0s
MCK McKinley 34.88 41 P **P** **19 48 04.2 +0.2**
MCK IAmb IAmb 19 48 06.4
comp=Z,16nm,1.0s
SSLB Suanglung 34.89 238 P **P** **19 48 02.8 -1.7**
SSLB IAmb IAmb 19 48 08.8
comp=Z,11nm,1.2s
RND Reindeer 34.93 42 P **P** **19 48 04.1 -0.4**
RND pmax pmax
comp=Z,17nm,1.0s
RND Reindeer 34.93 42 P **P** **19 48 04.1 -0.4**
RND IAmb IAmb 19 48 06.0
comp=Z,17nm,1.0s
GHO Glory Hole Cre 34.99 45 P **P** **19 48 05.9 +0.9**
GHO IAmb IAmb 19 48 07.8
comp=Z,28nm,1.5s
YULB Yu-li 35.01 237 P **P** **19 48 05.7 +0.2**
YULB IAmb IAmb 19 48 15.3
comp=Z,29nm,1.5s
MDM Murphy Dome 35.17 39 P **P** **19 48 07.8 +1.2**
MDM IAmb IAmb 19 48 09.3
comp=Z,14nm,0.8s
KNK Knik Glacier 35.24 45 P **P** **19 48 07.7 +0.6**
WRH Wood River Hil 35.24 40 P **P** **19 48 08.3 +1.3**
WRH IAmb IAmb 19 48 09.2
comp=Z,22nm,1.3s
SML Sawmill 35.26 45 P **P** **19 48 08.2 +0.8**
SML pmax pmax
comp=Z,21nm,0.8s
SML Sawmill 35.26 45 P **P** **19 48 08.2 +0.8**
TCOL CIGO, UAF Yank 35.33 39 P **P** **19 48 09.1 +1.3**
COLA College 35.34 39 *i* P **P** **19 48 09.0 +1.2**
COLA pmax pmax
comp=Z,26nm,0.8s
COLA College 35.34 39 P **P** **19 48 09.1 +1.3**
PWL Port Wells 35.35 46 P **P** **19 48 08.8 +0.8**
CCB Clear Creek Bu 35.36 40 P **P** **19 48 08.5 +0.5**
XAN Xi'an 35.39 263 P **P** **19 48 08.1 -0.6**
XAN pmax pmax
comp=Z,11nm,1.5s
TPUB Ta-pu 35.46 237 P **P** **19 48 08.7 -0.7**
POKR Poker Plat Res 35.51 39 P **P** **19 48 11.1 +1.7**
POKR IAmb IAmb 19 48 12.0
comp=Z,18nm,0.9s
SCM Sheep Creek Mo 35.74 45 P **P** **19 48 12.2 +0.8**
SCM pmax pmax
comp=Z,37nm,1.4s
SCM Sheep Creek Mo 35.74 45 P **P** **19 48 12.2 +0.8**
IL31 35.75 40 P **P** **19 48 11.9 +0.6**
IL31 IAmb IAmb 19 48 13.6
comp=Z,21nm,1.2s
ILAR Eielson Array 35.75 40 P **P** **19 48 11.4 +0.1**
comp=Z,7.2nm,0.9s,baz=258,slow=8.5,SNR=37
M24K Tolsona, Glenn 36.25 44 P **P** **19 48 17.2 +1.4**
FID Port Fidalgo 36.27 46 P **P** **19 48 16.0 +0.2**
PRP Porcupine Dome 36.30 38 P **P** **19 48 17.6 +1.4**

PRP IAmb IAmb 19 48 19.1
comp=Z,13nm,0.9s
FYU Fort Yukon 36.40 37 P **P** **19 48 18.8 +1.9**
FYU IAmb IAmb 19 48 19.8
comp=Z,14nm,0.9s
KLU Klutina 36.44 45 P **P** **19 48 18.5 +1.2**
KLU IAmb IAmb 19 48 24.7
comp=Z,14nm,1.1s
N25K Chitina, Valde 37.05 45 P **P** **19 48 24.3 +1.7**
N25K IAmb IAmb 19 48 57.5
comp=Z,16nm,1.3s
DOT Dot Lake 37.06 41 P **P** **19 48 22.7 +0.2**
SCRK Sand Creek 37.06 41 P **P** **19 48 23.0 +0.4**
SCRK IAmb IAmb 19 48 25.0
comp=Z,15nm,1.4s
BMRM Bremner River 37.14 46 P **P** **19 48 24.6 +1.3**
BMRM IAmb IAmb 19 48 32.7
comp=Z,20nm,1.2s
MENT Mentasta 37.29 43 P **P** **19 48 26.1 +1.6**
ENH Enshi 37.36 258 P **P** **19 48 24.5 -0.9**
ENH IAmb IAmb 19 48 25.8
comp=Z,16nm,1.0s
GLB Gilahina Butte 37.45 45 P **P** **19 48 27.1 +1.2**
GLB IAmb IAmb 19 49 02.0
comp=Z,13nm,1.2s
LZH Lanzhou 37.61 270 *eP* **P** **19 48 28.8 +1.1**
LZH pP pP 19 48 57.5 -1.0
LZH sP sP 19 49 16.6 +1.8
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,80nm,5.2s
VRDI Verde Repeater 37.66 45 P **P** **19 48 29.2 +1.5**
VRDI IAmb IAmb 19 48 58.0
comp=Z,24nm,1.5s
MCARA McCarthy VSAT 37.83 45 P **P** **19 48 31.0 +1.9**
MCARA IAmb IAmb 19 48 58.8
comp=Z,11nm,1.0s
CRQM Cirque 37.89 46 P **P** **19 48 31.7 +2.0**
CRQM IAmb IAmb 19 48 32.5
comp=Z,16nm,0.9s
EGAK Eagle 38.20 39 P **P** **19 48 32.5 +0.5**
EGAK IAmb IAmb 19 48 34.1
comp=Z,17nm,1.1s
GTA Gaotai 38.54 277 ⇑P **P** **19 48 35.4 0.0**
GTA pP pwP 19 49 10.3 -0.6
GTA sP sP 19 49 30.1 +7.4
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,79nm,5.5s
GTA LR LR
comp=Z,74nm,14.2s
GTA LR LR
comp=Z,91nm,14.5s
GTA LR LR
comp=Z,90nm,15.3s
BARN Barnard Glacie 38.54 45 P **P** **19 48 37.1 +1.9**
BARN IAmb IAmb 19 48 40.0
comp=Z,13nm,1.0s
YAH Yahtse 38.64 46 P **P** **19 48 37.9 +1.9**
CTGM Chitina Glacie 38.72 45 P **P** **19 48 38.2 +1.7**
CTGM IAmb IAmb 19 48 39.3
comp=Z,16nm,1.0s
LOGN Logan Glacier 38.90 46 P **P** **19 48 39.4 +1.3**
TABL Table Mountain 38.91 46 P **P** **19 48 39.6 +1.3**
DAWY Dawson 39.06 40 P **P** **19 48 40.0 +0.7**
PCA Pinnacle 39.42 47 P **P** **19 48 43.4 +1.1**
EPYK Eagle Plains 39.82 36 P **P** **19 48 46.9 +1.3**
EPYK IAmb IAmb 19 48 48.2
comp=Z,11nm,1.1s
HYT Haines Junctio 40.57 45 P **P** **19 48 53.9 +1.9**
INK Inuvik 40.75 33 P **P** **19 48 54.3 +1.2**
comp=Z,1.6nm,0.3s,baz=282,slow=8.1,SNR=13
INK Inuvik 40.75 33 P **P** **19 48 54.6 +1.5**
ZAA0 Zalesovo Array 41.69 305 P **P** **19 48 59.2 -1.7**
ZALV Zalesovo Beam 41.69 305 P **P** **19 48 59.6 -1.3**
comp=Z,3.5nm,0.4s,baz=60,slow=6.7,SNR=32
ZALV pP **pP** **19 49 32.3 0.0**
comp=Z,0.8nm,0.5s,baz=54,slow=6.5,SNR=1.6
ZALV PcP **PcP** **19 50 55.0 +0.4**
comp=Z,3.4nm,0.9s,baz=40,slow=2.5,SNR=7.9
ZALV pScP 19 51 30.0
comp=Z,1.7nm,0.7s,baz=88,slow=3.3,SNR=2.0
ZALV Zalesovo Beam 41.69 305 P **P** **19 48 59.8 -1.1**
GYA Guiyang 41.75 256 ⇑P **P** **19 49 01.9 0.0**
GYA pmax pmax
comp=Z,17nm,1.3s
DGZ Jazzator, Alta 41.79 298 *i* P **P** **19 49 02.2 +0.2**
DGZ pmax pmax
comp=Z,4.0nm,1.1s
C36M Paulatuk 43.88 31 P **P** **19 49 19.2 +0.9**
WMQ Urumqi 44.25 290 *eP* **P** **19 49 22.5 +0.7**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,99nm,3.8s
WMQ LR LR
comp=Z,240nm,8.9s
WMQ LR LR
comp=Z,350nm,7.3s
WMQ LR LR
comp=Z,130nm,17.5s
ZSN Zaisan 44.29 296 *eP* **P** **19 49 20.9 -1.1**
baz=296
ZSN Zaisan 44.29 296 *eP* **P** **19 49 20.9 -1.1**
DLBC Dease Lake 44.92 47 P **P** **19 49 29.8 +2.9**
comp=Z,5.1nm,0.8s,baz=359,slow=17,SNR=5.6
DLBC Dease Lake 44.92 47 P **P** **19 49 29.3 +2.4**
DLBC IAmb IAmb 19 49 30.1
comp=Z,34nm,1.6s
KMI Kunming 45.23 258 ⇓P **P** **19 49 29.8 -0.1**
KMI pmax pmax
comp=Z,19nm,1.2s
KMI pmax pmax
comp=Z,89nm,3.8s
SEM Semipalatinsk 45.68 301 *i* P **P** **19 49 30.9 -2.3**
baz=302
SEM Semipalatinsk 45.68 301 *i* P **P** **19 49 30.9 -2.3**
MK31 Makanchi Array 46.16 296 *d* *iP* **P** **19 49 35.3 -1.4**
MK31 Makanchi Array 46.16 296 P **P** **19 49 35.7 -1.0**
MK31 pP **pP** **19 50 11.2 +2.5**
MK31 IAmb IAmb 19 50 13.4
comp=Z,15nm,1.1s
MKAR Makanchi Array 46.16 296 P **P** **19 49 35.4 -1.3**
comp=Z,2.5nm,0.4s,baz=68,slow=7.2,SNR=49
MKAR pP **pP** **19 50 08.2 -0.5**
comp=Z,10nm,0.9s,baz=76,slow=7.4,SNR=8.3
MKAR PcP **PcP** **19 51 10.1 0.0**
comp=Z,0.9nm,0.8s,baz=72,slow=3.4,SNR=1.7
MKAR ScP **ScP** **19 54 47.7 -1.5**
comp=Z,0.6nm,0.8s,baz=42,slow=1.6,SNR=4.0
MKAR LR LR 20 10 41.1
comp=Z,48nm,19.0s,baz=16,slow=38
MKAR Makanchi Array 46.16 296 *i* P **P** **19 49 35.7 -1.0**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 46.16 296 P **P** **19 49 35.6 -1.0**
MKAR pP **pwP** **19 50 12.2 -0.9**
MAKZ Makanchi 46.34 296 P **P** **19 49 37.1 -1.0**
MAKZ pP **pP** **19 50 12.6 +2.5**
MAKZ IAmb IAmb 19 50 15.0
comp=Z,13nm,1.1s
SLVN Son La 47.14 253 P **P** **19 49 45.2 +0.5**
EUNU Eureka 47.97 12 P **P** **19 49 50.6 +0.3**
TDK Taldyqorghan 49.40 296 *eP* **P** **19 50 00.6 -1.1**
comp=Z,15nm,0.9s,baz=296
TDK Taldyqorghan 49.40 296 *eP* **P** **19 50 00.6 -1.1**
TDK pmax pmax
comp=Z,15nm,0.9s
SHLS Shalkode 49.73 293 *eP* **P** **19 50 01.2 -3.2**
baz=293
SHLS Shalkode 49.73 293 *eP* **P** **19 50 01.1 -3.2**
RES Resolute Bay 49.75 19 P **P** **19 50 04.1 +0.3**
comp=Z,1.1nm,0.3s,baz=312,slow=7.6,SNR=7.2
RES Resolute Bay 49.75 19 P **P** **19 50 04.7 +0.9**
BRVK Borovoye 49.92 309 *ce*P **P** **19 50 04.7 -0.8**
BRVK pmax pmax
comp=Z,6.0nm,0.8s
BRVK Borovoye 49.92 309 P **P** **19 50 04.7 -0.8**
BRVK pP **pP** **19 50 40.4 +2.6**
BRVK IAmb IAmb 19 50 42.9
comp=Z,8.6nm,0.9s
SGSI Sangihe 49.94 217 P **P** **19 50 07.5 +1.5**
comp=Z,3μmcomp=Z,167nm,0.4s

LSA Lhasa 49.96 272 P **P** **19 50 08.3 +1.6**
LSA pmax pmax
comp=Z,47nm,0.4s
LSA Lhasa 49.96 272 P **P** **19 50 08.0 +1.4**
LSA pmax pmax
comp=Z,20nm,1.3s
LSA Lhasa 49.96 272 P **P** **19 50 08.0 +1.4**
LSA IAmb IAmb 19 50 09.1
comp=Z,20nm,1.3s
UZB Uzynbulak 50.01 294 *eP* **P** **19 50 05.6 -0.9**
baz=294
UZB Uzynbulak 50.01 294 *eP* **P** **19 50 05.5 -0.9**
KPKS Kokpek 50.05 294 *eP* **P** **19 50 05.2 -1.5**
baz=294
KPKS Kokpek 50.05 294 *eP* **P** **19 50 05.2 -1.5**
YKA Yellowknife Ar 50.09 37 P **P** **19 50 07.8 +1.2**
comp=Z,3.6nm,0.7s,baz=298,slow=7.0,SNR=34
YKA pP **pP** **19 50 39.7 +0.1**
comp=Z,1.8nm,0.9s,baz=298,slow=7.3,SNR=4.0
BRZS Berezniki 50.16 304 *eP* **P** **19 50 05.8 -1.6**
comp=Z,12nm,1.1s,baz=304
BRZS Berezniki 50.16 304 *eP* **P** **19 50 05.7 -1.6**
BRZS pmax pmax
comp=Z,12nm,1.1s
SATY Saty 50.44 294 *eP* **P** **19 50 08.6 -1.0**
baz=294
SATY Saty 50.44 294 *eP* **P** **19 50 08.6 -1.0**
MDOK Medeo 51.21 295 *eP* **P** **19 50 14.1 -1.5**
baz=295
MDOK Medeo 51.21 295 *eP* **P** **19 50 14.0 -1.5**
AAA Alma-Ata 51.27 295 *eP* **P** **19 50 15.4 -0.5**
baz=295
AAA Alma-Ata 51.27 295 *eP* **P** **19 50 15.3 -0.5**
AAA Alma-Ata 51.27 295 *eP* **P** **19 50 15.3 -0.5**
JAY Jayapura 51.38 195 P **P** **19 50 19.9 +3.1**
comp=Z,5.6nm,1.2s
GENI Genyem 51.55 196 P **P** **19 50 21.8 +3.8**
comp=Z,24nm,1.5s
MYLDM Lahad Datu 51.71 226 P **P** **19 50 20.2 +0.9**
MYLDM IAmb IAmb 19 50 56.9
comp=Z,11nm,1.2s
TNTI Ternate 51.91 213 P **P** **19 50 23.6 +2.9**
comp=Z,13nm,2.0s
LAMP Lampang 51.93 255 P **P** **19 50 23.0 +2.1**
comp=Z,17nm,1.1s
BTLS Baital 51.99 298 *eP* **P** **19 50 19.5 -1.6**
baz=298
BTLS Baital 51.99 298 *eP* **P** **19 50 19.4 -1.6**
CM34 Chiang Mai Arr 52.01 255 P **P** **19 50 22.0 +0.5**
SWI Sorong 52.12 208 P **P** **19 50 23.0 +0.8**
comp=Z,5.7nm,0.7s
CM35 Chiang Mai Arr 52.13 255 P **P** **19 50 23.0 +0.6**
SHL Shillong 52.16 267 P **P** **19 50 22.4 -0.4**
SHL pmax pmax
comp=Z,17nm,0.8s
SHL Shillong 52.16 267 P **P** **19 50 22.4 -0.4**
CM33 Chiang Mai Arr 52.16 255 P **P** **19 50 23.0 +0.4**
CMMT Chiang Mai 52.16 255 P **P** **19 50 22.0 -0.6**
comp=Z,7.8nm,1.5s
CHTO Chiang Mai 52.17 255 P **P** **19 50 23.5 +0.8**
CHTO pmax pmax
comp=Z,17nm,1.1s
CHTO Chiang Mai 52.17 255 P **P** **19 50 23.5 +0.8**
CHTO IAmb IAmb 19 50 24.5
comp=Z,17nm,1.1s
CM36 Chiang Mai Arr 52.28 255 P **P** **19 50 24.0 +0.5**
CM32 Chiang Mai Arr 52.35 255 P **P** **19 50 25.0 +1.0**
CHAI Chaiyaphum 52.36 250 P **P** **19 50 24.9 +0.9**
comp=Z,686nmcomp=Z,41nm,0.6s
CM09 Chiang Mai Arr 52.40 255 P **P** **19 50 26.0 +1.6**
comp=Z,81ncomp=Z,8.1nm,1.1s
CM31 Chiang Mai Arr 52.43 255 P **P** **19 50 25.9 +1.4**
comp=Z,3μmcomp=Z,146nm,0.4s
CM31 Chiang Mai Arr 52.43 255 P **P** **19 50 25.5 +1.0**
CM31 IAmb IAmb 19 50 26.7
comp=Z,12nm,1.1s
CMAR Chiang Mai Arr 52.43 255 P **P** **19 50 25.4 +0.8**
comp=Z,4.3nm,0.8s,baz=32,slow=7.3,SNR=47
CMAR ScP **ScP** **19 55 17.6 +1.3**
comp=Z,1.0nm,1.0s,baz=20,slow=2.9,SNR=7.0
CMAR Chiang Mai Arr 52.43 255 *i* P **P** **19 50 25.3 +0.7**
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CM02 Chiang Mai Arr 52.44 255 P **P** **19 50 26.4 +1.7**
comp=Z,70ncomp=Z,8.4nm,1.2s
CM15 Chiang Mai Arr 52.44 255 P **P** **19 50 26.0 +1.3**
comp=Z,64ncomp=Z,6.9nm,1.3s
CM01 Chiang Mai Arr 52.44 255 P **P** **19 50 26.4 +1.8**
comp=Z,61ncomp=Z,7.1nm,1.1s
CM04 Chiang Mai Arr 52.44 255 P **P** **19 50 26.4 +1.8**
comp=Z,77ncomp=Z,7.4nm,1.3s
CM05 Chiang Mai Arr 52.47 255 P **P** **19 50 26.0 +1.1**
comp=Z,90ncomp=Z,6.9nm,1.1s
CM13 Chiang Mai Arr 52.48 255 P **P** **19 50 26.6 +1.7**
comp=Z,53ncomp=Z,6.3nm,1.1s
SGDS Sogindy 52.52 296 *eP* **P** **19 50 24.2 -0.9**
comp=Z,5.4nm,1.1s,baz=296
SGDS Sogindy 52.52 296 *eP* **P** **19 50 24.2 -0.9**
SGDS pmax pmax
comp=Z,5.0nm,1.1s
SVE Sverdlovsk 52.76 316 *eP* **P** **19 50 26.3 -0.2**
SVE pmax pmax
comp=Z,15nm,1.1s
SVE Sverdlovsk 52.76 316 *eP* **P** **19 50 26.3 -0.2**
AAK Ala-Archa 53.06 295 *ce*P **P** **19 50 29.2 0.0**
AAK pmax pmax
comp=Z,14nm,0.8s
AAK Ala-Archa 53.06 295 P **P** **19 50 28.4 -0.8**
AAK Ala-Archa 53.06 295 *eP* **P** **19 50 29.2 0.0**
MHMT Maesarieng 53.29 256 P **P** **19 50 32.1 +1.3**
comp=Z,22nm,1.4s
KMSI Cibinong 53.39 217 P **P** **19 50 34.1 +2.5**
comp=Z,39nm,1.2s
GTOI Gorontalo 53.73 218 P **P** **19 50 34.7 +0.6**
comp=Z,8.1nm,1.2s
SRAK Srakaew 53.75 249 P **P** **19 50 33.8 -0.4**
comp=Z,150nm,1.1s
TAPN Taplejung 53.78 272 *eP* **P** **19 50 35.5 +0.7**
comp=Z,19nm,0.3s
ARU Arti 53.93 317 *d* *iP* **P** **19 50 33.8 -1.3**
ARU *PP **pwP** **19 51 10.8 -1.4**
ARU 19 51 38.3
ARU S **S** **19 57 59.0 +0.3**
ARU pmax pmax
comp=Z,25nm,1.2s
ARU Arti 53.93 317 P **P** **19 50 33.9 -1.1**
ARU **pwP** **19 51 10.8 -1.4**
ODAN Odare 54.32 272 *eP* **P** **19 50 39.2 +0.6**
comp=Z,16nm,0.4s
JIRN Jiri 54.60 273 *eP* **P** **19 50 41.6 +0.8**
comp=Z,40nm,0.4s
GUN Gumba 54.65 274 *eP* **P** **19 50 41.5 +0.4**
comp=Z,35nm,0.4s
RAMN Ramite 54.79 272 *eP* **P** **19 50 42.2 +0.2**
comp=Z,59nm,0.3s
DZA Taraz 54.82 297 *eP* **P** **19 50 41.0 -0.8**
baz=297
DZA Taraz 54.82 297 *eP* **P** **19 50 40.9 -0.8**
LON Longmire 54.94 57 P **P** **19 50 43.7 +1.1**
LON pmax pmax
comp=Z,12nm,1.4s
LON Longmire 54.94 57 P **P** **19 50 43.7 +1.1**
LON IAmb IAmb 19 50 52.6
comp=Z,12nm,1.4s
KKN Kakani 55.13 274 *eP* **P** **19 50 45.1 +0.7**
PKI Pulchoki 55.19 274 *eP* **P** **19 50 45.4 +0.5**
comp=Z,18nm,0.4s
KK31 Karatay Array 55.19 298 P **P** **19 50 43.2 -1.1**
KK31 pmax pmax
comp=Z,6.0nm,1.1s
KK31 Karatay Array 55.19 298 P **P** **19 50 43.2 -1.1**
KKAR Karatay Array 55.19 298 P **P** **19 50 43.5 -0.9**
KKAR pmax pmax
comp=Z,6.0nm,1.1s
KKAR Karatay Array 55.19 298 P **P** **19 50 43.5 -0.9**
KKAR Karatay Array 55.19 298 P **P** **19 50 43.2 -1.1**
PKIN Phulchoki 55.19 274 *eP* **P** **19 50 45.3 +0.4**
comp=Z,18nm,0.4s
DMN Daman 55.36 274 *eP* **P** **19 50 46.9 +0.8**
comp=Z,39nm,0.3s
GKN Gorkha 55.42 275 *eP* **P** **19 50 46.9 +0.5**
comp=Z,38nm,0.4s
PHET Kaeng Krachan 56.10 250 P **P** **19 50 53.3 +2.2**
PRGR Permogore 56.19 327 *eP* **P** **19 50 51.0 -0.1**
PRGR *e*PP **pwP** **19 51 27.7 -0.9**
PRGR pmax pmax

comp=Z,6.0nm,0.6s
KOLN Koldanda 56.27 275 *e*P **P** **19 50 53.1 +0.6**
comp=Z,8.2nm,0.3s
PYUN Piuthan 56.46 276 *e*P **P** **19 50 54.4 +0.6**
comp=Z,18nm,0.3s
ARCES ARCESS Array B 56.60 340 P **P** **19 50 52.8 -1.2**
comp=Z,0.9nm,0.4s,baz=23,slow=7.4,SNR=15
ARCES ARCESS Array B 56.60 340 lAmb lAmb 19 51 27.3
comp=Z,18nm,1.4s
ABKAR Akbulak array 57.44 309 P **P** **19 50 58.7 -1.5**
ABKAR lAmb lAmb 19 51 00.5
comp=Z,5.5nm,0.9s
ABKAR pP **pwP** **19 51 36.6 -1.2**
ABKAR Akbulak array 57.44 309 P **P** **19 50 58.4 -1.8**
ABKAR pP **pwP** **19 51 36.5 -1.4**
GAR Garm 57.77 294 P **P** **19 51 01.8 -1.0**
BKB Balikpapan 58.11 224 P **P** **19 51 06.4 +1.2**
comp=Z,44nm,0.8s
TTSI Tana Toraja 58.39 220 P **P** **19 51 09.2 +2.0**
comp=Z,7.7nm,0.6s
CHGR Chuyangaron 58.69 294 P **P** **19 51 10.9 +1.8**
CHGR **sP** **19 51 59.8 +1.5**
PLID Pearl Lake 59.18 56 P **P** **19 51 13.8 +1.2**
PLID lAmb lAmb 19 51 15.0
comp=Z,8.7nm,0.9s
MSO Missoula 59.22 53 P **P** **19 51 13.8 +1.1**
MSO lAmb lAmb 19 51 15.9
comp=Z,17nm,1.6s
NIL Nilore 59.28 287 P **P** **19 51 12.7 -0.6**
NIL pP **pwP** **19 51 49.6 -1.6**
SUMG Summit 59.49 4 P **P** **19 51 13.9 -0.6**
SUMG pmax pmax
comp=Z,18nm,1.6s
SUMG Summit 59.49 4 P **P** **19 51 13.9 -0.6**
SUMG lAmb lAmb 19 51 17.1
comp=Z,18nm,1.6s
FFC Flin Flon 59.96 40 P **P** **19 51 18.5 +1.0**
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 59.96 40 P **P** **19 51 18.5 +1.0**
FFC lAmb lAmb 19 51 19.8
comp=Z,4.4nm,0.8s
FCC Fort Churchill 60.37 33 P **P** **19 51 20.9 +0.7**
FCC pmax pmax
comp=Z,3.0nm,0.8s
FCC Fort Churchill 60.37 33 P **P** **19 51 20.9 +0.7**
LRM Limekiln Ridge 60.66 53 P **P** **19 51 23.9 +1.2**
PNTR Pine Nut 60.89 63 P **P** **19 51 25.8 +1.4**
PNTR lAmb lAmb 19 51 26.9
comp=Z,5.6nm,0.9s
MCMT McKenzie Canyo 61.08 54 P **P** **19 51 26.9 +1.3**
BOZ Bozeman (W) 61.24 53 P **P** **19 51 27.5 +1.0**
BOZ pmax pmax
comp=Z,5.0nm,0.6s
BOZ Bozeman (W) 61.24 53 P **P** **19 51 27.4 +1.0**
BOZ lAmb lAmb 19 51 29.1
comp=Z,5.0nm,0.6s
KBL Kabul 61.38 291 P **P** **19 51 26.5 -1.2**
KBL pmax pmax
comp=Z,10.0nm,0.9s
KBL Kabul 61.38 291 P **P** **19 51 26.5 -1.2**
KBL lAmb lAmb 19 51 27.7
comp=Z,9.6nm,0.9s
BELG Belogornoye 61.44 318 *i* P **P** **19 51 27.7 +0.2**
BELG pmax pmax
comp=Z,5.0nm,0.9s
KVN Kaiserville 61.81 62 P **P** **19 51 31.9 +1.4**
KVN pmax pmax
comp=Z,8.0nm,1.1s
KVN Kaiserville 61.81 62 P **P** **19 51 31.9 +1.4**
KVN lAmb lAmb 19 51 33.0
comp=Z,8.3nm,1.1s
PBKI Pangkalan Bun 61.88 228 P **P** **19 51 32.8 +1.8**
comp=Z,7µmcomp=Z,81nm,0.9s
YHL Hebgen Lake 61.97 53 P **P** **19 51 33.8 +2.3**
YHL **pP** **19 52 06.3 +0.2**
LHV Little Huntoon 62.09 63 P **P** **19 51 33.4 +1.3**
NVAR Mina Array Bea 62.09 63 P **P** **19 51 33.7 +1.3**
comp=Z,0.4nm,0.3s,baz=294,slow=6.8,SNR=3.9
NVAR Mina Array Bea 62.09 63 P **P** **19 51 33.3 +0.9**
GCMT Greycliff 62.16 52 P **P** **19 51 34.5 +1.8**
YHH Holmes Hill 62.19 53 P **P** **19 51 34.1 +1.1**
H17A Grant Village 62.59 53 P **P** **19 51 38.4 +2.7**
H17A lAmb lAmb 19 51 39.9
comp=Z,6.5nm,1.1s
RLMT Red Lodge 62.81 52 P **P** **19 51 38.7 +1.6**
RLMT lAmb lAmb 19 51 40.3
comp=Z,10nm,1.4s
FINES FINESS Array B 62.81 334 P **P** **19 51 35.3 -1.2**
comp=Z,2.8nm,0.5s,baz=36,slow=7.5,SNR=36
FINES pP **pP** **19 52 12.1 +1.6**
comp=Z,1.6nm,0.5s,baz=25,slow=6.9,SNR=2.5
FINES FINESS Array B 62.81 334 *i* P **P** **19 51 35.7 -0.8**
FINES pmax pmax
comp=Z,3.0nm,0.4s
MOOW Moose Ponds 62.93 54 P **P** **19 51 39.5 +1.6**
MOOW lAmb lAmb 19 51 41.1
comp=Z,9.8nm,1.6s
TPH Tonopah 62.97 62 P **P** **19 51 39.0 +0.8**
TPH pmax pmax
comp=Z,36nm,1.1s
TPH Tonopah 62.97 62 P **P** **19 51 39.0 +0.8**
LOHW Long Hollow 63.09 54 P **P** **19 51 40.8 +1.8**
LOHW lAmb lAmb 19 51 42.2
comp=Z,6.7nm,1.2s
REDW Red Top Meadow 63.12 54 P **P** **19 51 41.2 +2.0**
REDW lAmb lAmb 19 51 42.4
comp=Z,7.6nm,0.9s
DUG Dugway, Tooele 64.14 58 P **P** **19 51 46.8 +1.0**
DUG pmax pmax
comp=Z,5.0nm,0.7s
DUG Dugway, Tooele 64.14 58 P **P** **19 51 46.8 +1.0**
DUG lAmb lAmb 19 52 16.8
comp=Z,5.2nm,0.7s
OBN Obninsk 64.15 325 *i* P **P** **19 51 45.4 +0.1**
OBN *i* *PP **PcP** **19 52 19.4 +0.3**
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN Obninsk 64.15 325 *i* P **P** **19 51 45.4 +0.1**
PD31 Pinedale Array 64.23 54 P **P** **19 51 47.4 +0.9**
PDAR Pinedale Array 64.23 54 P **P** **19 51 47.9 +1.5**
comp=Z,3.5nm,0.8s,baz=267,slow=0.8,SNR=26
PDAR Pinedale Array 64.23 54 P **P** **19 51 47.4 +0.9**
GEYT Alibeck 65.75 300 P **P** **19 51 56.1 0.0**
comp=Z,1.4nm,0.3s,baz=41,slow=4.7,SNR=4.9
ULM Lac du Bonnet 65.76 41 P **P** **19 51 55.9 +0.1**
comp=Z,1.6nm,0.7s,baz=298,slow=7.7,SNR=5.0
ULM Lac du Bonnet 65.76 41 lAmb lAmb 19 51 56.7
comp=Z,3.9nm,1.2s
VSR Storozhevoye 65.99 321 *e*P **P** **19 51 54.8 -2.5**
VSR pmax pmax
comp=Z,10.0nm,1.4s
VORD Divnogorie 66.12 321 *e*P **P** **19 51 55.3 -2.8**
VORD pmax pmax
comp=Z,5.0nm,0.8s
NOA NORSAR Array B 66.98 341 P **P** **19 52 02.8 -0.8**
comp=Z,1.5nm,0.8s,baz=29,slow=6.5,SNR=6.1
NORES NORESS Array B 67.17 340 P **P** **19 52 06.6 +1.9**
MNK Minsk 67.81 329 *i* P **P** **19 52 05.1 -3.7**
comp=E,2.0nm,0.8s
MNK *i* P **P** **19 52 05.1 -3.7**
comp=N,7.0nm,0.6s
MNK *i* P **P** **19 52 05.1 -3.7**
comp=Z,6.0nm,0.8s
MNK *i* pP **pP** **19 52 41.2 -1.9**
MNK *i* PP **PP** **19 54 37.8 -1.7**
MNK *i* PPP PPP 19 56 16.7
MNK *i* S **S** **20 00 49.9 -4.6**
MNK *i* sS **sS** **20 01 55.3 +0.1**
MNK *i* SS SS 20 05 01.5 -16
MNK *i* SSS SSS 20 08 34.9
MNK *i* LRM MLR 20 24 34.8
comp=Z,68nm,19.0s
MNK *i* LRM MLR 20 24 40.6
comp=E,13nm,15.4s
MNK *i* LRM MLR 20 24 40.6
comp=N,88nm,19.0s
ISCO Idaho Springs 68.42 54 P **P** **19 52 15.4 +2.1**
ISCO pmax pmax
comp=Z,5.0nm,0.8s
WRA Warramunga Arr 69.60 198 P **P** **19 52 19.7 -0.5**
comp=Z,1.2nm,0.5s,baz=9.9,slow=6.9,SNR=15
WRA Warramunga Arr 69.60 198 *i* P **P** **19 52 20.7 +0.5**
WRA pmax pmax
comp=Z,1.0nm,0.5s

KIV Kislovodsk 69.76 314 *e*P **P** **19 52 22.6 +1.5**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV Kislovodsk 69.76 314 *e*P **P** **19 52 22.6 +1.5**
KBZ Khabaz 69.82 313 P **P** **19 52 21.4 0.0**
comp=Z,1.1nm,0.5s,baz=13,slow=2.2,SNR=4.1
ECSD EROS Data Cent 70.21 46 P **P** **19 52 24.7 +0.9**
AKASG Malin Array Be 70.38 326 P **P** **19 52 22.8 -1.9**
comp=Z,0.7nm,0.3s,baz=34,slow=6.3,SNR=7.8
AKASG Malin Array Be 70.38 326 *i* P **P** **19 52 23.3 -1.4**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKBB Malin Array Si 70.38 326 *ce*P **P** **19 52 23.7 -1.0**
ANMO Albuquerque 71.41 58 *ce*P **P** **19 52 31.4 0.0**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
AS31 Alice Springs 73.30 198 P **P** **19 52 43.4 +1.0**
ASAR Alice Springs 73.30 198 P **P** **19 52 43.6 +1.3**
comp=Z,3.1nm,0.6s,baz=12,slow=5.5,SNR=82
BUR08 Bucovina Ar. S 74.40 326 P **P** **19 52 48.0 -0.7**
BURAR Bucovina Array 74.42 326 P **P** **19 52 48.4 -0.4**
BURAR Bucovina Array 74.42 326 P **P** **19 52 48.4 -0.4**
LANS Liptovska Anna 75.15 330 *e*P **P** **19 52 52.2 -0.7**
LANS Liptovska Anna 75.15 330 *e*P **P** **19 52 52.2 -0.7**
MORC Moravsky Berou 75.23 332 *e*P **P** **19 52 52.9 -0.5**
MORC Moravsky Berou 75.23 332 P **P** **19 52 52.8 -0.5**
MORC Moravsky Berou 75.23 332 P **P** **19 52 52.8 -0.5**
CLL Collm 75.23 335 *i* P **P** **19 52 53.4 +0.1**
CLL *i* pP **pwP** **19 53 32.1 -0.3**
CLL Collm 75.23 335 *i* P **P** **19 52 53.4 +0.1**
CLL *i* *PP **pwP** **19 53 32.1 -0.3**
VRAC Vranov 75.94 332 *e*P **P** **19 52 57.4 0.0**
KRUC Moravsky 76.22 332 *e*P **P** **19 52 58.7 -0.2**
VOIR 76.30 325 P **P** **19 53 00.3 +0.7**
VOIR pmax pmax
comp=Z,4.0nm,1.0s
TX31 Lajitas Ar. Si 77.11 61 P **P** **19 53 05.2 +0.8**
TX32 Lajitas Array 77.11 61 P **P** **19 53 05.2 +0.8**
TX32 lAmb lAmb 19 53 06.3
comp=Z,6.8nm,0.7s
TXAR Lajitas Array 77.11 61 P **P** **19 53 05.3 +0.9**
comp=Z,4.4nm,0.5s,baz=295,slow=4.4,SNR=65
TXAR pP **pP** **19 53 41.3 +1.2**
comp=Z,1.5nm,0.7s,baz=306,slow=3.9,SNR=3.1
GERES GERESS Array B 77.23 334 P **P** **19 53 05.0 +0.3**
comp=Z,0.4nm,0.3s,baz=39,slow=4.8,SNR=5.9
BRTR Keskin Array B 77.32 316 P **P** **19 53 05.5 +0.1**
comp=Z,1.9nm,1.0s,baz=354,slow=1.2,SNR=4.1
BTNL Ternell 77.69 339 *d*P **P** **19 53 07.8 +0.6**
comp=Z,3.7nm,0.9s
U40A Yellville 77.70 49 P **P** **19 53 07.4 0.0**
MEM Membach 77.70 339 *d*P **P** **19 53 07.9 +0.7**
BSTI Sart Tilman 77.83 339 *d*P **P** **19 53 09.6 +1.7**
BMRD Maredsous 78.28 340 *d*P **P** **19 53 10.8 +0.4**
comp=Z,5.3nm,1.0s
GIVF Givet 78.45 340 *e*P **P** **19 53 11.1 -0.2**
GIVF pmax pmax
comp=Z,10.0nm,1.1s
BAIF Baives 78.64 340 *e*P **P** **19 53 12.3 0.0**
BAIF pmax pmax
comp=Z,6.0nm,0.8s
SOKA Soboth 78.75 332 *e*P **P** **19 53 13.5 +0.3**
comp=Z,9.7nm,1.4s
KBA Koelnbreinsper 78.92 333 *e*P **P** **19 53 14.9 +0.7**
comp=Z,9.0nm,1.1s
KBA Koelnbreinsper 78.92 333 P **P** **19 53 15.2 +1.0**
KBA pmax pmax
comp=Z,10.0nm,0.9s
BFO Black Forest 79.22 337 P **P** **19 53 15.5 -0.1**
BFO pmax pmax
comp=Z,10.0nm,1.2s
BFO Black Forest 79.22 337 P **P** **19 53 15.5 -0.1**
WATA Walderalm 79.22 334 *i* P **P** **19 53 16.4 +0.6**
comp=Z,9.1nm,1.1s
WTTA Wattenberg 79.26 334 *i* P **P** **19 53 17.1 +1.0**
comp=Z,5.9nm,0.7s
WTTA Wattenberg 79.26 334 P **P** **19 53 16.8 +0.7**
WTTA pmax pmax
comp=Z,11nm,1.1s
MOTA Moosalm 79.35 335 *e*P **P** **19 53 17.1 +0.6**
comp=Z,6.1nm,0.8s
VTS Vitosha 79.38 325 P **P** **19 53 17.0 +0.3**
VTS pmax pmax
comp=Z,8.0nm,0.9s
VTS Vitosha 79.38 325 P **P** **19 53 17.0 +0.3**
VTS lAmb lAmb 19 53 18.0
comp=Z,7.6nm,0.9s
CDF Champ du Feu 79.42 337 *e*P **P** **19 53 16.6 -0.1**
CDF pmax pmax
comp=Z,14nm,1.3s
SQTA Sankt Quirin 79.43 334 *e*P **P** **19 53 18.0 +1.1**
comp=Z,13nm,1.5s
ABTA Abfaltersbach 79.47 333 *e*P **P** **19 53 16.8 -0.3**
comp=Z,3.3nm,1.0s
ECH Echery 79.63 337 P **P** **19 53 18.0 +0.2**
ECH pmax pmax
comp=Z,7.0nm,1.0s
ECH Echery 79.63 337 P **P** **19 53 18.0 +0.2**
DAVA Damuels 79.75 335 *e*P **P** **19 53 19.0 +0.4**
comp=Z,5.1nm,1.1s
HAU Haudompre 80.03 338 *e*P **P** **19 53 19.8 -0.2**
HAU pmax pmax
comp=Z,13nm,1.2s
STKA Stephens Creek 80.12 190 P **P** **19 53 20.8 +0.3**
comp=Z,1.4nm,0.7s,baz=360,slow=8.3,SNR=4.0
SRS Serrai 80.51 324 P **P** **19 53 22.6 -0.1**
SRS pmax pmax
comp=Z,9.0nm,1.1s
TUE Stuetta 80.64 335 P **P** **19 53 22.6 -0.9**
TUE lAmb lAmb 19 53 28.6
comp=Z,11nm,1.2s
FLN La Foliniere 80.88 342 *e*P **P** **19 53 24.3 -0.1**
FLN pmax pmax
comp=Z,4.0nm,0.8s
LDF La Druitiere 80.97 342 *e*P **P** **19 53 24.6 -0.3**
LDF pmax pmax
comp=Z,19nm,1.6s
SENIN Lac Senin/Sane 81.30 337 P **P** **19 53 27.6 +0.6**
SENIN lAmb lAmb 19 53 28.4
comp=Z,16nm,1.6s
GRR Gorron 81.31 343 *e*P **P** **19 53 26.9 +0.2**
GRR pmax pmax
comp=Z,19nm,1.1s
LOR Lormes 81.33 339 *e*P **P** **19 53 26.8 -0.1**
LOR pmax pmax
comp=Z,20nm,1.1s
SSF Saint Saulge 81.61 339 *e*P **P** **19 53 28.3 0.0**
SSF pmax pmax
comp=Z,7.0nm,0.8s
SGMF Saint Gilles 81.77 344 P **P** **19 53 29.3 +0.2**
SGMF pmax pmax
comp=Z,3.0nm,0.4s
ROSF Rostrenen 81.83 344 *e*P **P** **19 53 29.7 +0.3**
ROSF pmax pmax
comp=Z,40nm,1.4s
AVF Avril sur Loir 81.90 339 *e*P **P** **19 53 29.9 +0.1**
AVF pmax pmax
comp=Z,6.0nm,0.6s
QUIF Quistinic 82.21 344 *e*P **P** **19 53 32.2 +0.8**
QUIF pmax pmax
comp=Z,46nm,2.0s
LPL La Plagne 82.23 337 *e*P **P** **19 53 32.5 +0.6**
LPL pmax pmax
comp=Z,9.0nm,1.0s
LPG La Plagne 82.25 337 *e*P **P** **19 53 32.7 +0.6**
LPG pmax pmax
comp=Z,12nm,1.0s
BNI Bardonecchia 82.68 336 P **P** **19 53 34.1 0.0**
BNI pmax pmax
comp=Z,7.0nm,1.1s
BNI Bardonecchia 82.68 336 P **P** **19 53 34.1 0.0**
NRCA Norcia 82.80 331 P **P** **19 53 35.0 +0.2**
NRCA lAmb lAmb 19 53 36.2
comp=Z,15nm,1.0s
MBDF Montbardon 82.95 336 *e*P **P** **19 53 36.3 +0.7**
MBDF pmax pmax
comp=Z,5.0nm,1.0s
ORIF Oris-en-Rattie 83.02 337 *e*P **P** **19 53 36.4 +0.6**
ORIF pmax pmax
comp=Z,6.0nm,0.8s
SSB Saint Sauveur 83.02 338 P **P** **19 53 35.9 +0.1**
SSB pmax pmax
comp=Z,14nm,1.2s
SSB Saint Sauveur 83.02 338 P **P** **19 53 35.9 +0.1**
SSB lAmb lAmb 19 53 37.7
comp=Z,14nm,1.2s
INTR Introdacqua 83.28 330 P **P** **19 53 36.6 -0.6**
INTR lAmb lAmb 19 53 38.6
comp=Z,9.6nm,1.0s
VIVF Saint-Julien-l 83.39 338 *e*P **P** **19 53 38.3 +0.7**
VIVF pmax pmax
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 83.61 298 P **P** **19 53 39.4 +0.2**
RAYN pmax pmax
comp=Z,11nm,1.0s
RAYN Ar Rayn 83.61 298 P **P** **19 53 39.4 +0.2**
RAYN lAmb lAmb 19 53 40.7
comp=Z,11nm,0.9s
RJF Les Rejaudoux 83.73 340 *e*P **P** **19 53 39.8 +0.5**
RJF pmax pmax
comp=Z,11nm,1.2s
CAF Calviac 83.96 340 *e*P **P** **19 53 41.4 +0.9**
CAF pmax pmax
comp=Z,11nm,1.1s
FRF La Foret Royal 84.07 336 *e*P **P** **19 53 41.6 +0.5**
FRF pmax pmax
comp=Z,11nm,1.3s
TIP Timpagrande 84.80 327 P **P** **19 53 44.0 -0.9**
TIP lAmb lAmb 19 53 46.0
comp=Z,5.3nm,0.7s
MTLF Montolieu 85.42 339 *e*P **P** **19 53 49.7 +1.9**
MTLF pmax pmax
comp=Z,11nm,1.2s
EPF Esparros 86.15 340 *e*P **P** **19 53 51.8 +0.3**
EPF pmax pmax
comp=Z,4.0nm,1.0s
KEST Kesra 90.46 331 P **P** **19 54 12.0 -0.1**
comp=Z,5.2nm,0.8s,baz=342,slow=3.0,SNR=6.6
KEST Kesra 90.46 331 P **P** **19 54 12.2 +0.1**
KEST lAmb lAmb 19 54 14.1
comp=Z,8.2nm,1.1s
QSPA South Pole Qui 137.72 180 PKP **PKiKP** **20 00 33.7 -0.8**
comp=Z,1.4nm,0.6s,baz=318,slow=3.6,SNR=1.8
QSPA SKPbc **SKPbc** **20 03 50.8 -1.4**
comp=Z,1.8nm,0.9s,baz=280,slow=2.6,SNR=3.5
H03N2 Juan Fernandez 139.00 89 T T 22 35 35.5
baz=309,slow=77,SNR=5.6
H03N1 Juan Fernandez 139.01 89 T T 22 35 36.8
baz=309,slow=77,SNR=4.1
H03N3 Juan Fernandez 139.01 89 T T 22 35 36.1
baz=309,slow=77,SNR=2.9
CPUP Villa Florida 148.06 58 PKPbc **PKPbc** **20 00 55.3 +0.1**
comp=Z,1.7nm,0.5s,baz=321,slow=5.5,SNR=6.3
PLCA Paso Flores 148.55 93 PKPbc **PKiKP** **20 00 57.0 -0.5**
comp=Z,1.4nm,0.8s,baz=349,slow=5.1,SNR=3.7

MDD **14** *19:46:31.5±1.0, 34°.84N×14°.30W, h30km, mb3.7/5, Error ellipse: s-maj=57.1km s-min=6.0km az=142.0, PRXIMO*
INMG **14** *19:46:34.4±1.2, 35°.04N×14°.49W, h10km, ML2.3, Error ellipse: s-maj=14.6km s-min=2.4km az=135.0*
IGIL **14** *19:46:35.0, 35°.27N×14°.18W, h0km, ML1.7*
ISC 14 19:46:27.1±1.3, 34°.8N±0°.2×14°.2W±0°.1, h10km, n34, σ2.9s 66/41, Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMPST	**Porto Santo, M**	**2.46**	**227**	*e*Pn		**Pn**	**19 47 08.2**	**+0.9**
PMPST				*e*Sn		**Sn**	**19 47 35.8**	**-1.6**
PMPST				A		A	19 47 37.2	
	24nm,0.5s							
PMPS	**Porto Santo**	**2.48**	**226**	P		**Pn**	**19 47 08.2**	**+0.8**
PMPS				S		**Sn**	**19 47 34.8**	**-2.9**
	7.7nm,0.9s							
PMPS	**Porto Santo**	**2.48**	**226**	*e*Sn		**Sn**	**19 47 34.8**	**-2.9**
PMPS				A		A	19 47 37.6	
	15nm,0.9s							
PMAR	**Madeira**	**3.06**	**228**	P		**Pn**	**19 47 17.6**	**+2.0**
PMAR				S		**Sn**	**19 47 49.5**	**-2.9**
PMAR	**Madeira**	**3.06**	**228**	*e*Pn		**Pn**	**19 47 17.6**	**+2.0**
PMAR				*e*Sn		**Sn**	**19 47 49.5**	**-2.9**
PFVI	**Vila Bisbo**	**4.95**	**60**	P		**Pn**	**19 47 43.6**	**+2.2**
	1.1nm,0.1s,SNR=5.9							
PFVI				S		**Sn**	**19 48 35.4**	**-3.3**
	27nm,1.0s,SNR=8.6							
PFVI	**Vila Bisbo**	**4.95**	**60**	*e*Pn		**Pn**	**19 47 43.8**	**+2.4**
PFVI				*e*Sn		**Sn**	**19 48 35.8**	**-2.9**
PFVI				A		A	19 48 38.5	
	6.8nm,0.9s							
MORF	**Marmelete**	**5.15**	**59**	P		**Pn**	**19 47 46.6**	**+2.3**
MORF				S		**Sn**	**19 48 41.3**	**-2.5**
	3.4nm,0.3s							
MORF	**Marmelete**	**5.15**	**59**	*e*Pn		**Pn**	**19 47 46.6**	**+2.3**
MORF				*e*Sn		**Sn**	**19 48 41.3**	**-2.5**
MORF				A		A	19 48 43.4	
	3.4nm,0.3s							
PTEO	**Sao Teotonio**	**5.21**	**57**	S		**Sn**	**19 48 41.8**	**-3.5**
PTEO	**Sao Teotonio**	**5.21**	**57**	*e*Sn		**Sn**	**19 48 41.8**	**-3.5**
PBDV	**Barranco-do-Ve**	**5.64**	**62**	P		**Pn**	**19 47 53.8**	**+2.8**
PBDV				S		**Sn**	**19 48 53.8**	**-2.0**
	3.4nm,0.7s							
PBDV	**Barranco-do-Ve**	**5.64**	**62**	*e*Pn		**Pn**	**19 47 53.8**	**+2.8**
PBDV				*e*Sn		**Sn**	**19 48 53.8**	**-2.0**
PBDV				A		A	19 48 54.3	
	3.4nm,0.7s							
PNCL	**Nicolau / Gran**	**5.65**	**52**	S		Sn	19 48 51.1	-4.8
	1.6nm,1.0s							
PNCL	**Nicolau / Gran**	**5.65**	**52**	*e*Sn		Sn	19 48 51.1	-4.8
PNCL				A		A	19 48 57.8	
	1.6nm,1.0s							
MESJ	**Messejana**	**5.71**	**56**	*e*P		**Pn**	**19 47 55.0**	**+3.1**
MESJ				*e*S		Sn	19 48 53.6	-3.8
MESJ				IAML			19 48 55.8	
	comp=N,1.0nm,0.1s							
MESJ	**Messejana**	**5.71**	**56**	P		**Pn**	**19 47 55.0**	**+3.1**
MESJ				S		Sn	19 48 53.6	-3.8
MESJ	**Messejana**	**5.71**	**56**	*e*Sn		Sn	19 48 53.8	-3.7
MESJ				A		A	19 48 58.1	
	comp=N,1.9nm,0.7s							
PCVE	**Castro Verde**	**5.73**	**59**	P		**Pn**	**19 47 54.9**	**+2.7**
PCVE				S		**Sn**	**19 48 54.7**	**-3.4**
	comp=N,1.7nm,0.9s							
PCVE	**Castro Verde**	**5.73**	**59**	*e*Pn		**Pn**	**19 47 54.9**	**+2.7**
PCVE				*e*Sn		**Sn**	**19 48 54.7**	**-3.4**
PCVE				A		A	19 49 25.9	
	comp=N,1.7nm,0.9s							
PVAQ	**Vaqueiros**	**5.86**	**62**	P		**Pn**	**19 47 57.3**	**+3.3**
PVAQ				S		Sn	19 48 57.9	-3.3
	comp=N,3.1nm,0.9s							
PVAQ	**Vaqueiros**	**5.86**	**62**	*e*Pn		**Pn**	**19 47 57.3**	**+3.3**
PVAQ				*e*Sn		Sn	19 48 57.9	-3.3
PVAQ				A		A	19 49 16.2	
	comp=N,3.1nm,0.9s							
EGRO	**El Granado**	**6.08**	**61**	P		**Pn**	**19 47 58.9**	**+1.9**
	comp=N,0.4nm,0.2s,SNR=7.9							
EGRO				S		Sn	19 49 02.8	-4.0
	comp=N,1.2nm,0.1s,SNR=7.9							
PMTG	**Montargil**	**6.41**	**46**	S		Sn	19 49 10.1	-4.8
	comp=N,1.0nm,0.9s							
PMTG	**Montargil**	**6.41**	**46**	*e*Sn		Sn	19 49 10.1	-4.8
PMTG				A		A	19 49 18.6	
	comp=N,1.0nm,0.9s							
PBAR	**Barrancos**	**6.69**	**58**	P		**Pn**	**19 48 08.0**	**+2.7**
PBAR				S		Sn	19 49 17.5	-4.0
	comp=N,1.0nm,0.6s							
PBAR	**Barrancos**	**6.69**	**58**	*e*Pn		**Pn**	**19 48 08.0**	**+2.7**
PBAR				*e*Sn		Sn	19 49 17.5	-4.0
PBAR				A		A	19 49 20.6	
	comp=N,1.0nm,0.6s							
EMIN	**Mina Concepcio**	**6.77**	**62**	P		**Pn**	**19 48 08.8**	**+2.4**
	comp=N,0.4nm,0.2s,SNR=7.9							
EMIN				S		Sn	19 49 19.5	-4.0
	comp=N,0.9nm,0.4s,SNR=7.9							
PCAS	**Casmilo, Conde**	**6.94**	**39**	P		**Pn**	**19 48 11.1**	**+2.3**
PCAS	**Casmilo, Conde**	**6.94**	**39**	*e*Pn		**Pn**	**19 48 11.1**	**+2.3**
PMRV	**Marv??o**	**7.14**	**48**	P		**Pn**	**19 48 12.5**	**+0.9**
PMRV				S		Sn	19 49 26.8	-6.0
	comp=N,1.0nm,0.7s							
PMRV	**Marv??o**	**7.14**	**48**	*e*Pn		**Pn**	**19 48 12.5**	**+0.9**
PMRV				*e*Sn		Sn	19 49 26.8	-6.0
PMRV				A		A	19 49 35.5	
	comp=N,1.0nm,0.7s							
ECAB	**El Cabril**	**7.80**	**63**	P		**Pn**	**19 48 22.6**	**+1.9**
	comp=N,0.1nm,0.1s,SNR=7.9							
ECAB				S		Sn	19 49 44.2	-4.9
	comp=N,0.6nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**8.45**	**64**	P		**Pn**	**19 48 31.8**	**+2.2**
	comp=N,0.2nm,0.1s,SNR=7.9							
EADA				S		Sn	19 50 01.6	-3.5
	comp=N,0.2nm,0.1s,SNR=7.9							

IDC 14 19:46:41.3±47.0, 16°67S×177°19W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/29, mbtmp4.1/3, Error ellipse: s-maj=881.5km s-min=170.7km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.25**	**240**	P	P	19 54 20.0	-0.1
	1.2nm,0.7s,baz=101,slow=10,SNR=3.7						
WRA	**Warramunga Arr**	**46.01**	**258**	P	P	19 55 06.5	-0.4
	0.3nm,0.4s,baz=93,slow=7.6,SNR=8.9						
ASAR	**Alice Springs**	**46.25**	**253**	P	P	19 55 08.9	+0.1
	4.1nm,0.5s,baz=89,slow=8.2,SNR=84						

*IDC **14** 19:49:06.6±1.1,34°19S×179°16W,h0km,mb4.4/4, mb1 4.6/5,mb1mx4.0/24,mbtmp4.5/5,ML4.5/1,MS3.8/17, Ms1 3.8/17,ms1mx3.6/37,Error ellipse: s-maj=34.3km s-min=28.9km az=89.0*

*NEIC **14** 19:49:08.0±1.6,34°43S±0°10×179°1W±0°1,h10km±1km, mb4.5/16,Error ellipse: s-maj=20.2km s-min=14.8km az=123.0*

*WEL **14** 19:49:10.1±0.9,34°S±12°×17°9W±2°3,h33km,M4.5/21, mB5.1/10,ML5.0/21,MLv4.7/21,Mw(mB)4.4/10,Error ellipse: s-maj=0.0km s-min=0.0km az=116.9*

ISC 14 19:49:11.4±0.8, 34°36S±0°07×179°1W±0°1, h35km, n89, σ1s53/86, mb4.4/13, MS3.8/17, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.83**	**213**	Pn	**Pn**	19 50 05.6	-2.2
MXZ	**Matakaoa Point**	**3.83**	**213**	P	**Pn**	19 50 05.1	-2.7
MXZ				S	**Sn**	19 50 51.3	-0.3
WMGZ	**Waiomatatini S**	**4.00**	**210**	P	**Pn**	19 50 10.0	-0.1
WMGZ				S	**Sn**	19 50 57.2	+1.4
PKGZ	**Pakihiroa**	**4.20**	**212**	P	**Pn**	19 50 12.6	-0.4
PKGZ				S	**Sn**	19 51 01.6	+0.7
HAZ	**Te Kaha**	**4.23**	**216**	P	**Pn**	19 50 13.1	-0.2
PUZ	**Puketiti**	**4.28**	**209**	P	**Pn**	19 50 14.2	+0.1
PUZ				S	**Sn**	19 51 03.8	+1.1
RUGZ	**Raukumara Rang**	**4.45**	**215**	P	**Pn**	19 50 16.3	-0.1
RUGZ				S	**Sn**	19 51 08.8	+1.7
TWGZ	**Tauwhareparae**	**4.49**	**211**	P	**Pn**	19 50 17.2	+0.4
TWGZ				S	**Sn**	19 51 08.3	+0.5
CNGZ	**Carnagh Statio**	**4.66**	**207**	P	**Pn**	19 50 18.7	-0.5
WHRZ	**Whale Island**	**4.73**	**221**	P	**Pn**	19 50 21.6	+1.5
TKGZ	**Te Karaka**	**4.76**	**210**	P	**Pn**	19 50 21.3	+0.7
TKGZ				S	**Sn**	19 51 14.6	+0.1
MWZ	**Matawai**	**4.81**	**214**	P	**Pn**	19 50 20.7	-0.7
MWZ				S	**Sn**	19 51 16.1	+0.1
OPRZ	**Ohinepanea**	**4.95**	**224**	P	**Pn**	19 50 24.8	+1.5
URZ	**Urewera**	**4.96**	**217**	Pn	**Pn**	19 50 23.2	-0.1
	18nm,0.3s,baz=107,slow=20,SNR=51						
URZ				Sn	**Sn**	19 51 18.4	-0.9
	14nm,0.3s,baz=120,slow=20,SNR=3.2						
URZ	**Urewera**	**4.96**	**217**		**Pn**	19 50 21.9	-1.4
URZ	**Urewera**	**4.96**	**217**	P	**Pn**	19 50 23.2	-0.1
URZ				S	**Sn**	19 51 19.7	+0.4
MARZ	**Manawahe**	**4.98**	**222**	P	**Pn**	19 50 24.7	+1.0
RAGZ	**Rawiri**	**5.00**	**213**	P	**Pn**	19 50 23.1	-0.8
RIGZ	**Rimuhau**	**5.02**	**209**	P	**Pn**	19 50 24.0	-0.2
PRGZ	**Paritu Road**	**5.16**	**207**	P	**Pn**	19 50 24.5	-1.7
GLKZ	**Green Lake**	**5.18**	**11**	P	**Pn**	19 50 23.3	-3.1
OMRZ	**Omania**	**5.24**	**223**	P	**Pn**	19 50 28.3	+1.1
SNGZ	**Shannon Statio**	**5.27**	**212**	P	**Pn**	19 50 27.6	0.0
MUGZ	**Murupara**	**5.29**	**218**	P	**Pn**	19 50 27.9	0.0
RTZ	**Ruatahuna**	**5.30**	**216**	P	**Pn**	19 50 27.5	-0.5
HLRZ	**Highlands Stat**	**5.35**	**222**	P	**Pn**	19 50 30.1	+1.3
MHGZ	**Mahia Peninsul**	**5.36**	**206**	P	**Pn**	19 50 29.4	+0.7
RAHZ	**Arahi**	**5.49**	**213**	P	**Pn**	19 50 30.6	-0.1
TOZ	**Tahuroa Road**	**5.53**	**231**	P	**Pn**	19 50 33.7	+2.5
MTHZ	**Maungataniwha**	**5.55**	**215**	P	**Pn**	19 50 31.4	-0.1
MRHZ	**Matea Rd**	**5.75**	**218**	P	**Pn**	19 50 33.6	-0.6
BKZ	**Black Stump Fm**	**5.96**	**215**		**Pn**	19 50 35.0	-2.2
OUZ	**Omahuta**	**6.09**	**260**		**Pn**	19 50 38.1	-0.7
RITZ	**Rihia Road**	**6.14**	**220**	P	**Pn**	19 50 39.9	+0.3
HIZ	**Hauiti**	**6.41**	**228**	Pn	**Pn**	19 50 41.8	-1.4
BFZ	**Birch Farm**	**7.32**	**209**	Pn	**Pn**	19 50 52.9	-2.8
MSWZ	**Moikau Station**	**8.34**	**211**	Pn	**Pn**	19 51 08.1	-1.7
SNZO	**South Karori**	**8.50**	**213**	Pn	**Pn**	19 51 10.6	-1.3
TUWZ	**Tuamarina**	**8.95**	**216**	Pn	**Pn**	19 51 14.9	-3.2
NNZ	**Nelson**	**9.07**	**219**	Pn	**Pn**	19 51 17.4	-2.4
BSWZ	**Blackbirch Sta**	**9.20**	**215**	Pn	**Pn**	19 51 20.0	-1.5
QRZ	**Quartz Range**	**9.27**	**223**	Pn	**Pn**	19 51 19.9	-2.6
THZ	**Tophouse**	**9.72**	**218**	Pn	**Pn**	19 51 28.6	0.0
THZ					**Sn**	19 53 10.7	-5.8
KHZ	**Kahutara**	**9.90**	**214**	Pn	**Pn**	19 51 30.2	-0.9
LTZ	**Lake Taylor**	**10.79**	**216**	Pn	**Pn**	19 51 41.3	-2.0
OXZ	**Oxford**	**11.31**	**215**		**Pn**	19 51 48.2	-2.1
RPZ	**Rata Peaks**	**12.07**	**216**	Pn	**Pn**	19 51 58.2	-2.7
	1.0nm,0.3s,baz=92,slow=11,SNR=1.8						
RPZ				Sn	Sn	19 54 01.3	-13
	1.0nm,0.3s,baz=215,slow=19,SNR=1.3						
RPZ	**Rata Peaks**	**12.07**	**216**		**Pn**	19 51 57.7	-3.1
PPT	**Papeete**	**31.20**	**65**	LR	LR	20 05 26.4	
	comp=Z,52nm,21.9s,baz=193,slow=31						
STKA	**Stephens Creek**	**32.89**	**263**	LR	LR	20 08 31.0	
	comp=Z,321nm,18.4s,baz=42,slow=35						
STKA	**Stephens Creek**	**32.89**	**263**	P	**P**	19 55 43.0	+0.8
CTAO	**Charters Tower**	**33.76**	**286**	P	**P**	19 55 52.3	+2.4
BBOO	**Buckleboo**	**37.17**	**259**	P	**P**	19 56 19.1	0.0
BBOO				IAmb	IAmb	19 56 42.9	
	comp=Z,34nm,1.6s						
COEN	**Coen**	**39.67**	**291**	P	**P**	19 56 41.3	+1.1
COEN				IAmb	IAmb	19 57 04.2	
	comp=Z,15nm,1.2s						
XMAS	**Kiritimati**	**41.53**	**34**	P	**P**	19 56 57.0	+1.5
AS31	**Alice Springs**	**42.15**	**272**	P	**P**	19 57 00.1	-0.6
ASAR	**Alice Springs**	**42.15**	**272**	P	**P**	19 57 00.7	+0.1
	comp=Z,4.6nm,0.7s,baz=112,slow=7.4,SNR=43						
ASAR				PcP	**PcP**	19 58 54.0	-0.6
	comp=Z,1.4nm,0.7s,baz=124,slow=3.8,SNR=6.3						
ASAR				LR	LR	20 14 12.6	
	comp=Z,175nm,19.8s,baz=127,slow=36						
ASAR	**Alice Springs**	**42.15**	**272**	P	**P**	19 57 00.1	-0.6
WR0	**Warramunga Arr**	**43.32**	**277**	P	**P**	19 57 10.1	0.0
WR0				IAmb	IAmb	19 57 14.1	
	comp=Z,6.9nm,1.2s						
WB2	**Warramunga Arr**	**43.49**	**277**	P	**P**	19 57 11.4	0.0
WB2				IAmb	IAmb	19 57 13.5	
	comp=Z,9.4nm,1.2s						
WRAB	**Tennant Creek**	**43.49**	**277**	P	**P**	19 57 11.4	-0.1
WRAB				IAmb	IAmb	19 57 34.6	
	comp=Z,7.4nm,1.1s						
WRA	**Warramunga Arr**	**43.50**	**277**	P	**P**	19 57 11.4	-0.2
	comp=Z,2.1nm,0.8s,baz=119,slow=7.5,SNR=23						
WRA				PcP	**PcP**	19 58 58.8	-0.4
	comp=Z,0.7nm,0.7s,baz=127,slow=3.3,SNR=3.3						
WRA	**Warramunga Arr**	**43.50**	**277**	P	**P**	19 57 11.4	-0.2
WB0	**Warramunga Arr**	**43.54**	**277**	P	**P**	19 57 11.6	-0.2
WB0				IAmb	IAmb	19 57 25.9	
	comp=Z,7.4nm,1.1s						
FORT	**Forrest**	**44.28**	**259**	P	**P**	19 57 17.8	+0.1
FORT				IAmb	IAmb	19 57 17.9	
	comp=Z,11nm,0.8s						
MTN	**Manton Dam**	**49.83**	**283**	P	**P**	19 57 59.2	-2.0
KNRA	**Kununurra**	**50.23**	**278**	P	**P**	19 58 02.7	-1.5
KNRA				IAmb	IAmb	19 58 11.0	
	comp=Z,17nm,1.4s						
FITZ	**Fitzroy Crossi**	**51.56**	**274**	LR	LR	20 20 18.2	
	comp=Z,216nm,18.5s,baz=106,slow=36						
FITZ	**Fitzroy Crossi**	**51.56**	**274**	P	**P**	19 58 13.4	-0.8
FITZ				IAmb	IAmb	19 58 22.4	
	comp=Z,3.9nm,0.9s						
QSPA	**South Pole Qui**	**55.76**	**180**	P	**P**	19 58 47.2	+2.8
	comp=Z,5.3nm,1.0s,baz=61,slow=2.0,SNR=5.9						
QSPA				LR	LR	20 18 37.6	
	comp=Z,41nm,19.0s,baz=27,slow=32						
QSPA	**South Pole Qui**	**55.76**	**180**	P	**P**	19 58 47.1	+2.6
SIJI	**Sorong**	**57.05**	**295**	LR	LR	20 22 44.4	
	comp=Z,111nm,19.3s,baz=86,slow=36						
BATI	**Baumata**	**57.36**	**281**	LR	LR	20 24 19.1	
	comp=Z,158nm,18.4s,baz=118,slow=37						
RPN	**Rapa Nui**	**59.33**	**104**	LR	LR	20 18 41.8	
	comp=Z,62nm,20.1s,baz=265,slow=30						
KAPI	**Kappang**	**63.50**	**283**	LR	LR	20 26 26.0	
	comp=Z,36nm,19.4s,baz=161,slow=35						
LEM	**Lembang**	**72.40**	**274**	LR	LR	20 31 38.9	
	comp=Z,54nm,19.5s,baz=135,slow=35						
PLCA	**Paso Flores**	**80.48**	**133**	LR	LR	20 31 03.2	
	comp=Z,36nm,18.9s,baz=190,slow=31						
PSI	**Prapat**	**84.96**	**277**	LR	LR	20 43 04.0	
	comp=Z,91nm,18.4s,baz=96,slow=38						
PETK	**Petropavlovsk-**	**89.42**	**346**	P	**P**	20 02 04.7	+0.8
	comp=Z,4.8nm,0.7s,baz=108,slow=8.2,SNR=9.3						
NVAR	**Mina Array Bea**	**91.75**	**43**	LR	LR	20 38 57.9	
	comp=Z,46nm,18.0s,baz=267,slow=33						
CMAR	**Chiang Mai Arr**	**93.85**	**290**	LR	LR	20 47 57.5	
	comp=Z,20nm,18.2s,baz=183,slow=38						
TXAR	**Lajitas Array**	**95.28**	**58**	LR	LR	20 36 10.3	
	comp=Z,24nm,21.4s,baz=0.0,slow=30						
LPAZ	**La Paz**	**97.32**	**115**	LR	LR	20 36 25.3	
	comp=Z,15nm,20.5s,baz=165,slow=29						
CPUP	**Villa Florida**	**98.21**	**130**	LR	LR	20 39 54.7	
	comp=Z,46nm,19.4s,baz=224,slow=31						
MKAR	**Makanchi Array**	**119.57**	**309**	PKP	**PKiKP**	**20 07 56.2**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=61,slow=3.5,SNR=3.8						
ARCES	**ARCESS Array B**	**142.23**	**346**	PKhKP	PKPpre	20 08 35.5	
	comp=Z,1.6nm,0.8s,baz=25,slow=2.4,SNR=1.8						
FINES	**FINESS Array B**	**148.49**	**337**	PKPbc	**PKiKP**	**20 08 53.3**	**-1.7**
	comp=Z,4.7nm,0.8s,baz=48,slow=4.1,SNR=9.1						
NOA	**NORSAR Array B**	**152.49**	**349**	PKPbc	**PKiKP**	**20 09 03.7**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=12,slow=4.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**158.87**	**182**	PKPab	**PKPab**	**20 09 42.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=175,slow=3.6,SNR=2.6						

*ATH **14** 19:56:46.9,36°88N×23°00E,h12km±3km,ML2.8/6,Error ellipse: s-maj=3.2km s-min=1.3km az=169.0*

*THE **14** 19:56:47.3,36°85N×22°97E,h10km,ML2.7/9,Error ellipse: s-maj=1.0km s-min=0.3km az=238.0*

ISC 14 19:56:47.0±0.8, 36°87N±0°02×22°96E±0°03, h11km±7km, n42, σ0s41/58, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.15**	**188**	P	**Pg**	19 56 50.6	+0.2
VLI				S	**Sg**	19 56 52.5	-0.4
VLI				AML	AML	19 56 53.2	
	comp=N,19080μm,0.3s						
VLI				AML	AML	19 56 54.7	
	comp=E,12052μm,0.3s						
VLI	**Veliai**	**0.15**	**188**	P	**Pg**	19 56 50.6	+0.2
VLI				S	**Sg**	19 56 53.1	+0.2
	comp=E,8μm,0.2s						
MNVA	**Monemvasia**	**0.19**	**162**	P	**Pg**	19 56 51.4	+0.4
MNVA				S	**Sg**	19 56 53.7	-0.1
MNVA				AML	AML	19 56 54.6	
	comp=N,5243μm,0.4s						
MNVA				AML	AML	19 56 54.9	
	comp=E,7976μm,0.4s						
KRND	**KRANIDI**	**0.54**	**16**	P	**Pg**	19 56 57.9	+0.5
KRND				S	**Sg**	19 57 04.7	+0.1
KRND	**KRANIDI**	**0.54**	**16**	P	**Pg**	19 56 57.9	+0.5
KRND				S	**Sb**	19 57 05.8	-0.3
	comp=E,968nm,0.2s						
KTHA	**Kythira Island**	**0.61**	**173**	P	**Pg**	19 56 58.8	-0.1
KTHA				S	**Sg**	19 57 07.2	+0.2
	comp=E,1μm,0.2s						
VLX	**Vlachokerasia**	**0.69**	**317**	P	**Pg**	19 57 00.3	0.0
VLX				S	**Sg**	19 57 09.0	-0.4
VLX				AML	AML	19 57 14.0	
	comp=E,2167μm,0.3s						
VLX				AML	AML	19 57 15.1	
	comp=N,1296μm,0.4s						
ITM	**Ithomi**	**0.89**	**291**	P	**Pg**	19 57 04.1	-0.1
ITM				S	**Sg**	19 57 15.0	-0.7
ITM				AML	AML	19 57 15.2	
	comp=N,712μm,0.3s						
ITM				AML	AML	19 57 16.8	
	comp=E,624μm,0.6s						
ITM	**Ithomi**	**0.89**	**291**	P	**Pg**	19 57 04.0	-0.1
ITM				S	**Sb**	19 57 16.9	+0.7
	comp=E,392nm,0.3s						
PYL	**PYLOS**	**0.98**	**272**	P	**Pg**	19 57 05.6	-0.3
ANKY	**Antikythira Is**	**1.03**	**165**	P	**Pb**	19 57 06.4	-0.4
ANKY	**Antikythira Is**	**1.03**	**165**	P	**Pb**	19 57 06.5	-0.4
ANKY				S	**Sb**	19 57 20.9	+0.5
	comp=E,200nm,0.3s						
LOUT	**Loutraki**	**1.12**	**0**	P	**Pb**	19 57 07.0	-1.4
LTK	**Loutraki**	**1.16**	**0**	P	**Pb**	19 57 08.5	-0.5
MHLO	**Agia Marina, M**	**1.17**	**98**	P	**Pn**	19 57 09.1	-0.1
VLY	**Voula,Athens**	**1.19**	**34**	P	**Pb**	19 57 09.3	-0.2
VLY				S	**Sn**	19 57 25.8	+0.2
	comp=E,465nm,0.5s						
THAL	**Thalero**	**1.19**	**349**	P	**Pn**	19 57 09.2	-0.3
AMT	**Artemida-Makis**	**1.20**	**304**	P	**Pn**	19 57 09.7	0.0
AMT				S	**Sn**	19 57 26.8	+0.8
AMT				AML	AML	19 57 34.5	
	comp=E,819μm,0.9s						
AMT				AML	AML	19 57 36.2	
	comp=N,935μm,0.9s						
ATHU	**Athens Univers**	**1.28**	**30**	P	**Pn**	19 57 10.2	-0.5
KLV	**Kalavryta, Ach**	**1.34**	**331**	P	**Pn**	19 57 11.6	-0.1
KLV	**Kalavryta, Ach**	**1.34**	**331**	P	**Pn**	19 57 11.9	+0.2
KLV				S	**Sg**	19 57 30.3	+0.1
	comp=N,220nm,0.3s						
VIL2	**Platees**	**1.36**	**10**	P	**Pn**	19 57 11.1	-0.8
PTL	**Penteli**	**1.38**	**31**	P	**Pn**	19 57 12.2	0.0
PTL				S	**Sn**	19 57 30.8	+0.3
	comp=N,180nm,0.4s						
DION	**Dionisos Attik**	**1.43**	**32**	P	**Pn**	19 57 12.9	0.0
DION				S	**Sb**	19 57 32.0	0.0
	comp=N,372nm,0.4s						
DRO	**Drossia**	**1.47**	**318**	P	**Pb**	19 57 14.4	0.0
LAKA	**Lakka**	**1.58**	**331**	P	**Pn**	19 57 15.1	+0.2
IMMV	**Iera Moni Meta**	**1.63**	**149**	P	**Pn**	19 57 14.6	-0.9
TRIZ	**Trizonia**	**1.66**	**335**	P	**Pn**	19 57 16.1	+0.2
KALE	**Kalithea**	**1.66**	**337**	P	**Pn**	19 57 15.6	-0.4
EREA	**Eretria**	**1.73**	**26**	P	**Pn**	19 57 16.9	-0.1
VAM	**Vamos**	**1.77**	**145**	P	**Pn**	19 57 17.1	-0.3
LKR	**Lokris**	**1.78**	**1**	P	**Pn**	19 57 17.5	-0.2
ATAL	**Atalanti**	**1.82**	**1**	P	**Pn**	19 57 18.2	0.0
AXS	**Araxos**	**1.83**	**317**	P	**Pb**	19 57 20.2	-0.2
ANX	**Ano Chora**	**1.91**	**335**	P	**Pn**	19 57 20.0	+0.4
ANX				S	**Sn**	19 57 44.3	+0.6
ANX				AML	AML	19 57 53.9	
	comp=E,374μm,0.5s						
ANX				AML	AML	19 57 56.4	
	comp=N,503μm,0.6s						
AXAR	**Agios Charalam**	**1.91**	**353**	P	**Pn**	19 57 19.7	+0.2
THR5	**Thira Island,**	**1.97**	**102**	P	**Pn**	19 57 20.3	+0.1
KYMI	**Kymi, Euboea I**	**1.98**	**27**	P	**Pn**	19 57 19.8	-0.6
AGG	**Agios Georgios**	**2.21**	**347**	P	**Pn**	19 57 23.9	+0.3
IDI	**Anoyia**	**2.22**	**135**	P	**Pn**	19 57 23.6	-0.1
EVR	**Evrytania**	**2.24**	**336**	P	**Pn**	19 57 24.3	+0.2
NPS	**Neapolis**	**2.68**	**126**	P	**Pn**	19 57 30.1	+0.1

*IDC **14** 20:04:01.7±1.1,34°28S×179°07W,h0km,mb4.3/4, mb1 4.5/5,mb1mx4.0/32,mbtmp4.3/5,ML4.3/1,MS3.5/3, Ms1 3.5/3,ms1mx3.0/22,Error ellipse: s-maj=35.7km s-min=29.0km az=85.0*

*NEIC **14** 20:04:02.9±1.5,34°41S±0°09×179°1W±0°2,h10km±1km, mb4.2/7,Error ellipse: s-maj=21.2km s-min=15.7km az=94.0*

*WEL **14** 20:04:06.5±0.8,35°S±6°×17°9W±°,h33km,M4.5/28, mB5.1/3,ML4.7/25,MLv4.5/28,Mw(mB)4.4/3,Error ellipse: s-maj=0.0km s-min=0.0km az=124.9*

ISC 14 20:04:05.5±0.8, 34°55S±0°08×178°65W±0°10, h35km, n81, σ1s47/93, mb4.2/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.89**	**218**	P	**Pn**	20 05 02.6	-0.3
MXZ				S	**Sn**	20 05 46.7	-0.6
WMGZ	**Waiomatatini S**	**4.04**	**215**	P	**Pn**	20 05 06.7	+1.9
WMGZ				S	**Sn**	20 05 54.0	+3.1
PKGZ	**Pakihiroa**	**4.26**	**218**	P	**Pn**	20 05 08.8	+0.9
PKGZ				S	**Sn**	20 05 57.4	+1.0
HAZ	**Te Kaha**	**4.32**	**221**	P	**Pn**	20 05 10.5	+1.9
PUZ	**Puketiti**	**4.32**	**215**	P	**Pn**	20 05 06.1	-2.5
PUZ				S	**Sn**	20 05 58.7	+0.9
RUGZ	**Raukumara Rang**	**4.53**	**220**	P	**Pn**	20 05 12.0	+0.4
RUGZ				S	**Sn**	20 06 04.6	+1.6
TWGZ	**Tauwhareparae**	**4.53**	**216**	P	**Pn**	20 05 12.8	+1.2
TWGZ				S	**Sn**	20 06 05.2	+2.1
CNGZ	**Carnagh Statio**	**4.68**	**212**	P	**Pn**	20 05 14.4	+0.9
MWZ	**Matawai**	**4.88**	**218**	P	**Pn**	20 05 16.6	+0.2
MWZ				S	**Sn**	20 06 12.6	+1.0
URZ	**Urewera**	**5.04**	**221**	Pn	**Pn**	20 05 18.2	-0.4
	11nm,0.3s,baz=269,slow=3.3,SNR=43						
URZ				Sn	**Sn**	20 06 14.4	-1.3
	5.8nm,0.3s,baz=121,slow=21,SNR=1.8						
URZ	**Urewera**	**5.04**	**221**		**Pn**	20 05 18.7	0.0
URZ	**Urewera**	**5.04**	**221**	P	**Pn**	20 05 18.7	0.0
URZ				S	**Sn**	20 06 14.7	-1.0
RIGZ	**Rimuhau**	**5.06**	**214**	P	**Pn**	20 05 19.1	+0.2
RIGZ				S	**Sn**	20 06 16.9	+0.8
RAGZ	**Rawiri**	**5.06**	**218**	P	**Pn**	20 05 18.9	0.0
RAGZ				S	**Sn**	20 06 15.6	-0.5
OPRZ	**Ohinepanea**	**5.09**	**228**	P	**Pn**	20 05 20.8	+1.5
GRZ	**Great Barrier**	**5.11**	**249**	P	**Pn**	20 05 20.3	+0.8
PRGZ	**Paritu Road**	**5.18**	**212**	P	**Pn**	20 05 20.8	+0.2
PRGZ				S	**Sn**	20 06 16.6	-2.5
SNGZ	**Shannon Statio**	**5.32**	**216**	P	**Pn**	20 05 23.4	+1.0
SNGZ				S	**Sn**	20 06 23.2	+0.7
MHGZ	**Mahia Peninsul**	**5.37**	**210**	P	**Pn**	20 05 26.3	+3.3
RTZ	**Ruatahuna**	**5.37**	**220**	P	**Pn**	20 05 23.5	+0.3
MUGZ	**Murupara**	**5.39**	**222**	P	**Pn**	20 05 23.2	-0.2
RRRZ	**Republican Roa**	**5.44**	**224**	P	**Pn**	20 05 28.7	+4.6
RAHZ	**Arahi**	**5.55**	**217**	P	**Pn**	20 05 27.0	+1.5
MTHZ	**Maungataniwha**	**5.62**	**219**	P	**Pn**	20 05 27.3	+0.7
BKZ	**Black Stump Fm**	**6.04**	**219**	Pn	**Pn**	20 05 30.8	-1.6
BKZ	**Black Stump Fm**	**6.04**	**219**	P	**Pn**	20 05 32.0	-0.3
CKHZ	**Cape Kidnapper**	**6.14**	**213**	P	Pn	20 05 41.2	+7.5
RATZ	**Rangitukua**	**6.22**	**225**	P	**Pn**	20 05 34.8	0.0
RITZ	**Rihia Road**	**6.25**	**223**	P	**Pn**	20 05 36.1	+1.0
KAHZ	**Kaharanaki**	**6.34**	**213**	P	**Pn**	20 05 35.9	-0.6
OUZ	**Omahuta**	**6.41**	**262**	Pn	**Pn**	20 05 38.0	+0.6
TMVZ	**Te Maari**	**6.43**	**223**	P	**Pn**	20 05 37.6	-0.1
NTVZ	**North Tongarir**	**6.43**	**223**	P	**Pn**	20 05 37.7	-0.1
ETVZ	**East Tongariro**	**6.44**	**223**	P	**Pn**	20 05 37.8	-0.1
KRHZ	**Kereru**	**6.46**	**217**	P	**Pn**	20 05 37.8	-0.3
OTVZ	**Oturere**	**6.48**	**223**	P	**Pn**	20 05 38.8	+0.3
NNVZ	**North Ngauruho**	**6.49**	**223**	P	**Pn**	20 05 38.7	0.0
BHHZ	**Black Hill Sta**	**6.50**	**219**	P	**Pn**	20 05 38.3	-0.4
SNVZ	**South Ngauruho**	**6.51**	**223**	P	**Pn**	20 05 38.8	-0.2
NGZ	**Ngauruhoe**	**6.53**	**223**	P	**Pn**	20 05 39.7	+0.6
HIZ	**Hauiti**	**6.56**	**231**	Pn	**Pn**	20 05 37.7	-1.8
MOVZ	**Moawhango**	**6.61**	**221**	P	**Pn**	20 05 39.3	-0.8
PNHZ	**Pukenui**	**6.75**	**216**	P	**Pn**	20 05 41.3	-0.9
BFZ	**Birch Farm**	**7.34**	**212**	Pn	**Pn**	20 05 50.0	-0.2
BFZ	**Birch Farm**	**7.34**	**212**	P	**Pn**	20 05 50.5	+0.3
MRZ	**Mangatainoka R**	**7.63**	**215**	P	**Pn**	20 05 51.6	-2.5
HOWZ	**Holdsworth Sta**	**7.85**	**214**	P	**Pn**	20 05 55.9	-1.3
MSWZ	**Moikau Station**	**8.38**	**213**	Pn	**Pn**	20 06 03.6	-0.8
PLWZ	**Palliser**	**8.50**	**213**	Pn	**Pn**	20 06 04.3	-1.8
SNZO	**South Karori**	**8.55**	**216**	Pn	**Pn**	20 06 05.1	-1.7
TUWZ	**Tuamarina**	**9.02**	**218**	Pn	**Pn**	20 06 11.8	-1.4
NNZ	**Nelson**	**9.17**	**221**	Pn	**Pn**	20 06 12.2	-3.0
BSWZ	**Blackbirch Sta**	**9.27**	**217**		**Pn**	20 06 15.4	-1.2
CTZ	**Chatham Island**	**9.31**	**171**	P	Pn	20 06 22.2	+5.1
CTZ				S	**Sn**	20 07 58.0	-2.6
QRZ	**Quartz Range**	**9.39**	**226**	Pn	**Pn**	20 06 14.1	-4.2
THZ	**Tophouse**	**9.80**	**220**	Pn	**Pn**	20 06 22.8	-1.2
THZ	**Tophouse**	**9.80**	**220**	P	**Pn**	20 06 23.6	-0.4
KHZ	**Kahutara**	**9.96**	**216**	Pn	**Pn**	20 06 24.2	-1.9
LTZ	**Lake Taylor**	**10.86**	**218**	Pn	**Pn**	20 06 37.4	-1.0
OXZ	**Oxford**	**11.37**	**217**	Pn	**Pn**	20 06 45.5	+0.2
RPZ	**Rata Peaks**	**12.15**	**218**	Pn	**Pn**	20 06 54.5	-1.5
LBZ	**Lake Benmore**	**13.06**	**218**	Pn	**Pn**	20 07 06.0	-2.6
WKZ	**Wanaka**	**13.97**	**219**	Pn	**Pn**	20 07 21.3	+0.4
WHZ	**Wether Hill Ro**	**15.25**	**218**	P	**P**	20

TOLI2	**Tolitoli**	**6.61**	**258**		**Pn**	**20 17 24.4**	**-0.3**
FAKI	**Fak Fak**	**7.39**	**137**	Pn	**Pn**	**20 17 37.9**	**+2.5**
BNDI	**Bandanaira**	**7.51**	**159**	P	**Pn**	**20 17 38.5**	**+1.4**
	0.6nm129nm,1.5s						
MYLDM	**Lahad Datu**	**9.10**	**287**	Pn	**Pn**	**20 18 02.4**	**+3.6**
SBUM	**Sibu**	**15.01**	**270**	P	**P**	**20 19 25.3**	**+1.9**
MTN	**Manton Dam**	**15.78**	**166**	P	**Pn**	**20 19 29.2**	**+0.3**
MTN				IAmb	IAmb	20 19 46.5	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**18.17**	**175**		**P**	**20 19 56.2**	**-2.2**
KNRA				IAmb	IAmb	20 20 17.7	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.58**	**184**	P	**P**	**20 20 22.5**	**-2.2**
	comp=Z,1.2nm,0.5s,baz=22,slow=12,SNR=11						
FITZ	**Fitzroy Crossi**	**20.58**	**184**	IAmb	IAmb	20 20 29.4	
	comp=Z,1.7nm,0.8s						
YULB	**Yu-li**	**21.50**	**345**	P	**P**	**20 20 34.7**	**+0.1**
YULB				IAmb	IAmb	20 20 49.1	
	comp=Z,13nm,1.1s						
TPUB	**Ta-pu**	**21.60**	**343**	P	**P**	**20 20 35.2**	**-0.5**
TPUB				IAmb	IAmb	20 21 05.8	
	comp=Z,20nm,1.2s						
WB0	**Warramunga Arr**	**23.27**	**163**	P	**P**	**20 20 50.6**	**-2.6**
WB0				IAmb	IAmb	20 20 51.1	
	comp=Z,7.2nm,0.5s						
WRAB	**Tennant Creek**	**23.41**	**163**	P	**P**	**20 20 52.2**	**-2.3**
WRAB				IAmb	IAmb	20 20 53.0	
	comp=Z,9.8nm,0.6s						
WRA	**Warramunga Arr**	**23.42**	**163**	P	**P**	**20 20 52.3**	**-2.3**
	comp=Z,7.2nm,0.5s,baz=345,slow=11,SNR=128						
WRA	**Warramunga Arr**	**23.42**	**163**	P	**P**	**20 20 50.8**	**-3.8**
WB2	**Warramunga Arr**	**23.42**	**163**	P	**P**	**20 20 52.2**	**-2.5**
WB2				IAmb	IAmb	20 20 53.1	
	comp=Z,10nm,0.6s						
WR0	**Warramunga Arr**	**23.49**	**163**	P	**P**	**20 20 52.9**	**-2.4**
WR0				IAmb	IAmb	20 20 53.8	
	comp=Z,8.2nm,0.7s						
PSA00	**Pilbara Seismi**	**25.04**	**196**	P	**P**	**20 21 07.5**	**-1.9**
PSA00				IAmb	IAmb	20 21 35.6	
	comp=Z,10nm,1.2s						
AS31	**Alice Springs**	**26.86**	**166**	P	**P**	**20 21 23.8**	**-2.1**
ASAR	**Alice Springs**	**26.86**	**166**	P	**P**	**20 21 23.8**	**-2.1**
	comp=Z,2.4nm,0.5s,baz=348,slow=7.3,SNR=51						
ASAR				PcP	**PcP**	**20 24 47.5**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=355,slow=2.8,SNR=5.0						
ASAR	**Alice Springs**	**26.86**	**166**	P	**P**	**20 21 23.3**	**-2.6**
FORT	**Forrest**	**33.15**	**179**	P	**P**	**20 22 19.1**	**-2.5**
BBOO	**Buckleboo**	**36.15**	**167**	P	**P**	**20 22 45.8**	**-1.6**
NWAO	**Narrogin (SRO)**	**36.53**	**194**	P	**P**	**20 22 49.3**	**-1.4**
	comp=Z,6.6nm,1.0s,baz=5.7,slow=10,SNR=1.4						
NWAO	**Narrogin (SRO)**	**36.53**	**194**	P	**P**	**20 22 49.4**	**-1.3**
NWAO				IAmb	IAmb	20 23 19.5	
	comp=Z,53nm,1.4s						
STKA	**Stephens Creek**	**36.85**	**159**	P	**P**	**20 22 52.0**	**-1.4**
	comp=Z,2.8nm,0.6s,baz=341,slow=9.0,SNR=8.4						
STKA				LR	LR	20 41 45.1	
	comp=Z,31nm,19.8s,baz=209,slow=42						
STKA	**Stephens Creek**	**36.85**	**159**	IAmb	IAmb	20 22 53.1	
	comp=Z,1.2nm,1.1s						
MKAR	**Makanchi Array**	**58.81**	**325**	P	**P**	**20 25 44.9**	**+1.8**
	comp=Z,0.1nm,0.6s,baz=128,slow=6.5,SNR=1.8						
MKAR				pP	**sP**	**20 26 07.6**	**+5.0**
	comp=Z,0.4nm,0.5s,baz=118,slow=8.3,SNR=4.6						

IDC 14 20:19:00.7±674.0**, 29°.34N**×**78°.26W, h0**km**, Error ellipse: s-maj=339.1km s-min=201.3km az=40.0, Off east coast of United States**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I51GB	**BERMUDA INFRAS**	**2.04**	**72**	*i*		21 36 10.0	
	baz=258,slow=328,SNR=2.0						
I10CA	**LAC DU BONNET**	**24.79**	**332**	*i*		22 50 10.0	
	baz=138,slow=320,SNR=2.4						

IDC 14 20:20:39.8±1.5**, 48°.58S**×**123°.07E, h0**km**, mb3.6/4, mb1 3.9/4, mb1mx3.6/26, mbtmp3.6/4, MS3.4/2, Ms1 3.4/2, ms1mx3.0/12, Error ellipse: s-maj=70.8km s-min=27.9km az=89.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**15.19**	**331**	T	T	20 39 35.8	
	baz=159,slow=73,SNR=6.9						
H01W2	**Cape Leeuwin H**	**15.19**	**331**	T	T	20 39 40.6	
	baz=159,slow=73,SNR=5.7						
H01W3	**Cape Leeuwin H**	**15.20**	**331**	T	T	20 39 37.6	
	baz=159,slow=73,SNR=6.2						
ASAR	**Alice Springs**	**26.30**	**23**	P	P	20 26 16.1	-1.0
	0.9nm,0.9s,baz=195,slow=9.6,SNR=5.6						
WRA	**Warramunga Arr**	**29.98**	**22**	P	P	20 26 49.6	-0.3
	0.7nm,1.0s,baz=195,slow=9.0,SNR=2.4						
VNDA	**Vanda**	**32.61**	**165**	P	P	20 27 11.8	-0.7
VNDA	0.7nm,0.7s,baz=314,slow=10.0,SNR=4.6			LR	LR	20 39 29.5	
	comp=Z,62nm,18.1s,baz=299,slow=35						
CMAR	**Chiang Mai Arr**	**70.12**	**336**	P	P	20 31 53.8	-0.1
	0.4nm,0.8s,baz=179,slow=4.9,SNR=4.3						
PLCA	**Paso Flores**	**90.26**	**170**	LR	LR	21 08 35.3	
	comp=Z,19nm,20.4s,baz=178,slow=32						
YKA	**Yellowknife Ar**	**145.80**	**44**	PKPbc	PKPab	20 40 20.8	+0.8
	0.1nm,0.3s,baz=275,slow=1.9,SNR=5.2						

*MEX **14** 20:35:20.6*±*0.3, 27°.94N*×*111°.80W, h20**km**±*999**km**, MD3.9*
*ECX **14** 20:35:21.1*±*0.5, 27°.77N*×*111°.73W, h10**km**±*382**km**, MD3.2*
ISC 14 20:35:16.6±1.3**, 27°.86N**±0°.09**×111°.80W**±0°.07**, h10**km**, n5, σ1**8**97/10, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.67**	**216**	*eP*	**Pn**	**20 35 32.4**	**+0.3**
SRIG				*eS*	**Sn**	**20 35 41.5**	**-1.2**
SRIG	**Santa Rosalia**	**0.67**	**216**	*eP*	**Pn**	**20 35 32.4**	**+0.3**
SRIG				*i* S	**Sn**	**20 35 41.2**	**-1.4**
GUYB	**Guaymas**	**0.82**	**87**	*eP*	**Pn**	**20 35 33.6**	**-0.6**
GUYB				*eS*	**Sb**	**20 35 43.9**	**-0.1**
GUYB	**Guaymas**	**0.82**	**87**	*eP*	**Pn**	**20 35 34.2**	**+0.1**
GUYB				*eS*	**Sn**	**20 35 45.2**	**-1.1**
HSIG		**1.37**	**33**	*eP*	**Pn**	**20 35 39.4**	**-2.4**
HSIG				*eS*	**Sg**	**20 36 04.8**	**+4.0**

*KRNET **14** 20:36:51.8*±*0.1, 39°.89N*×*78°.01E, mb4.0*
*SOME **14** 20:36:54.6, 40°.30N*×*77°.63E, h0**km***
*IDC **14** 20:36:54.6*±*1.1, 40°.04N*×*77°.80E, h0**km**, mb3.6/7, mb1 3.7/12, mb1mx3.4/51, mbtmp3.6/12, ML2.8/5, Error ellipse: s-maj=22.8km s-min=17.9km az=94.0*
*NNC **14** 20:36:57.4*±*1.1, 40°.25N*×*77°.72E, h0**km**, mb4.4, mpv4.1, Error ellipse: s-maj=7.7km s-min=6.2km az=172.0*
ISC 14 20:36:57.6±1.2**, 40°.17N**±0°.04**×77°.96E**±0°.03**, h13**km**±8**km**, n93, σ2**8**38/135, mb3.5/7, 42C-16D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.66**	**248**	Pn	**Pg**	**20 37 31.4**	**+1.9**
KSH				Sn	**Sg**	**20 37 58.8**	**+7.8**
KSH				smax	smax		
	comp=N,500nm,0.6s						
KSH				smax	smax		
	comp=E,390nm,0.6s						
KDJ	**Kajisay**	**2.05**	**344**	⇑*iP*	**Pn**	**20 37 32.4**	**+0.4**
	baz=45						
KDJ				⇑*iS*	**Sb**	**20 38 02.9**	**+2.6**
	baz=45						
PRZ	**Przheval'sk**	**2.34**	**8**	⇑*iP*	**Pn**	**20 37 37.2**	**+1.2**
	baz=6.0						
PRZ				⇑*iS*	**Sb**	**20 38 10.0**	**+1.3**
	baz=6.0						
ULHL	**Ulahol**	**2.45**	**329**	⇑*iP*	**Pn**	**20 37 38.4**	**+0.9**
	baz=31						
ULHL				⇑*iS*	**Sb**	**20 38 12.4**	**+0.6**
	baz=31						
ULHL	**Ulahol**	**2.45**	**329**	P	**Pn**	**20 37 38.6**	**+1.1**
	SNR=80						
ANVS	**Anan'yevo**	**2.62**	**355**	⇓*iP*	**Pn**	**20 37 41.2**	**+1.3**
	baz=55						
ANVS				⇓*iS*	**Sb**	**20 38 16.3**	**-0.5**
	baz=55						
BOOM	**Boomskoye usch**	**2.77**	**327**	⇑*iP*	**Pn**	**20 37 42.8**	**+0.8**
	baz=30						
BOOM				⇑*iS*	**Sn**	**20 38 20.4**	**+5.0**
	baz=30						
SATY	**Saty**	**2.91**	**6**	*eP*	**Pb**	**20 37 49.4**	**-0.1**
	comp=E,131nm,1.0s						
SATY				*eS*	**Sb**	**20 38 29.1**	**+4.1**
	comp=E,151nm,0.7s						
SATY	**Saty**	**2.91**	**6**	Pg	**Pb**	**20 37 49.4**	**-0.1**
	comp=E,131nm,1.0s						
SATY				Lg	Lg	20 38 29.1	
	comp=E,151nm,0.7s						
TNSS	**Tian-Shan**	**2.97**	**346**	*eP*	**Pb**	**20 37 49.4**	**-1.2**
	comp=E,147nm,0.6s						
TNSS				*eS*	**Sb**	**20 38 29.0**	**+2.0**
	comp=E,131nm,1.0s						
TNSS	**Tian-Shan**	**2.97**	**346**	Pg	**Pb**	**20 37 49.4**	**-1.2**
	comp=E,147nm,0.6s						
TNSS				Lg	Lg	20 38 29.0	
	comp=E,131nm,1.0s						
IZV	**Izvestkoviy**	**3.04**	**341**	*eP*	**Pb**	**20 37 49.8**	**-1.9**
	comp=E,106nm,0.6s						
IZV				*eS*	**Sb**	**20 38 29.8**	**+1.0**
	comp=E,146nm,0.8s						
IZV	**Izvestkoviy**	**3.04**	**341**	Pg	**Pb**	**20 37 49.8**	**-1.9**
	comp=E,106nm,0.6s						
IZV				Lg	Lg	20 38 29.8	
	comp=E,146nm,0.8s						
MDOK	**Medeo**	**3.07**	**347**	*eP*	**Pb**	**20 37 50.8**	**-1.4**
	comp=E,116nm,0.6s						
MDOK				*eS*	**Sb**	**20 38 31.5**	**+1.8**
	comp=E,204nm,0.5s						
MDOK	**Medeo**	**3.07**	**347**	⇓Pn	**Pn**	**20 37 49.7**	**+1.9**
	comp=E,112nm,0.6s						
MDOK				⇓Lg	Lg	20 38 31.8	
	comp=E,223nm,0.7s						
MDOK	**Medeo**	**3.07**	**347**	Pg	**Pb**	**20 37 50.8**	**-1.4**
	comp=E,116nm,0.6s						
MDOK				Lg	Lg	20 38 31.5	
	comp=E,204nm,0.5s						
UZB	**Uzynbulak**	**3.08**	**15**	*eP*	**Pb**	**20 37 52.8**	**+0.4**
	comp=E,46nm,0.5s						
UZB				*eS*	**Sg**	**20 38 34.4**	**-2.3**
	comp=E,104nm,0.6s						
UZB	**Uzynbulak**	**3.08**	**15**	Pg	**Pb**	**20 37 52.8**	**+0.4**
	comp=E,46nm,0.5s						
UZB				Lg	Lg	20 38 34.4	
	comp=E,104nm,0.6s						
KOTS	**Kotyrbulak**	**3.13**	**349**	*eP*	**Pb**	**20 37 52.6**	**-0.6**
	comp=E,150nm,0.6s						
KOTS				*eS*	**Sb**	**20 38 34.8**	**+3.4**
	comp=E,139nm,0.6s						
KOTS	**Kotyrbulak**	**3.13**	**349**	Pg	**Pb**	**20 37 52.6**	**-0.6**
	comp=E,150nm,0.6s						
KOTS				Lg	Lg	20 38 34.8	
	comp=E,139nm,0.6s						
KNDC	**Almaty**	**3.14**	**347**	⇓Pg	**Pb**	**20 37 52.9**	**-0.4**
	comp=E,164nm,0.8s						
KNDC				⇑Lg	Lg	20 38 35.4	
	comp=E,632nm,0.7s						
SHLS	**Shalkode**	**3.19**	**20**	*eP*	**Pg**	**20 37 57.3**	**-1.5**
	comp=E,61nm,0.6s						
SHLS				*eS*	**Sg**	**20 38 42.1**	**+1.9**
	comp=E,122nm,0.8s						
SHLS	**Shalkode**	**3.19**	**20**	Pg	**Pg**	**20 37 57.3**	**-1.5**
	comp=E,61nm,0.6s						
SHLS				Lg	Lg	20 38 42.1	
	comp=E,122nm,0.8s						
ARLS	**Aral**	**3.23**	**303**	⇑*iP*	**Pn**	**20 37 48.3**	**+0.1**
	baz=6.0						
ARLS				⇑*iS*	**Sn**	**20 38 29.3**	**+2.7**
	baz=6.0						
KST	**Kastek**	**3.24**	**333**	*eP*	**Pb**	**20 37 53.1**	**-2.0**
	comp=E,61nm,0.7s						
KST				*eS*	**Sb**	**20 38 34.8**	**+0.3**
	comp=E,120nm,0.8s						
KST	**Kastek**	**3.24**	**333**	Pg	**Pb**	**20 37 53.1**	**-2.0**
	comp=E,61nm,0.7s						
KST				Lg	Lg	20 38 34.8	
	comp=E,120nm,0.8s						
TKM2	**Tokmak 2**	**3.27**	**328**	⇓*iP*	**Pn**	**20 37 49.9**	**+1.0**
	baz=30						
TKM2				⇓*iS*	**Sn**	**20 38 32.3**	**+4.5**
	baz=30						
TKM2	**Tokmak 2**	**3.27**	**328**	P	**Pn**	**20 37 50.2**	**+1.3**
	SNR=40						
TKM2	**Tokmak 2**	**3.27**	**328**	⇓Pn	**Pn**	**20 37 49.7**	**+0.9**
	comp=E,40nm,0.7s						
TKM2				⇓Lg	Lg	20 38 37.0	
	comp=E,100nm,0.7s						
UCH	**Uchtor**	**3.32**	**310**	⇑*eP*	**Pn**	**20 37 49.5**	**-0.2**
	baz=13						
UCH				⇑*iS*	**Sn**	**20 38 31.6**	**+2.4**
	baz=13						
UCH	**Uchtor**	**3.32**	**310**	P	**Pn**	**20 37 50.9**	**+1.2**
	SNR=5.7						
KPKS	**Kokpek**	**3.34**	**9**	*eP*	**Pb**	**20 37 56.2**	**-0.6**
	comp=E,57nm,0.3s						
KPKS				*eS*	**Sb**	**20 38 40.1**	**+2.7**
	comp=E,312nm,0.5s						
PDGK	**Podgornoye**	**3.36**	**19**	Pg	**Pb**	**20 37 57.7**	**+0.6**
	comp=E,28nm,0.5s						
PDGK				Lg	Lg	20 38 43.0	
	comp=E,76nm,0.7s						
KBK	**Karagaybulak**	**3.36**	**319**	⇑*iP*	**Pn**	**20 37 50.8**	**+0.7**
	baz=21						
KBK				⇑*iS*	**Sn**	**20 38 33.7**	**+3.7**
	baz=21						
KBK	**Karagaybulak**	**3.36**	**319**	P	**Pn**	**20 37 51.7**	**+1.7**
	SNR=88						
SFK	**Sufi-Kurgan**	**3.42**	**269**	⇑*iP*	**Pn**	**20 37 49.1**	**-1.8**
	baz=73						
SFK				⇑*iS*	**Sn**	**20 38 30.7**	**-0.8**
	baz=73						
DGS	**Degeres**	**3.48**	**333**	*eP*	**Pb**	**20 37 57.5**	**-1.7**
	comp=E,46nm,0.6s						
DGS				*eS*	**Sb**	**20 38 42.6**	**+1.1**
	comp=E,176nm,0.6s						
DGS	**Degeres**	**3.48**	**333**	Pg	**Pb**	**20 37 57.5**	**-1.7**
	comp=E,46nm,0.6s						
DGS				Lg	Lg	20 38 42.6	
	comp=E,176nm,0.6s						
AAK	**Ala-Archa**	**3.59**	**315**	Pn	**Pn**	**20 37 53.7**	**+0.6**
	comp=E,1.6nm,0.3s,baz=126,slow=7.9,SNR=40						
AAK				Lg	Lg	20 38 43.1	
	comp=E,3.1nm,0.3s,baz=53,slow=20,SNR=11						
AAK	**Ala-Archa**	**3.59**	**315**	⇑*iP*	**Pn**	**20 37 53.5**	**+0.4**
	baz=17						
AAK				⇑*iS*	**Sn**	**20 38 38.5**	**+3.0**
	baz=17						
AAK	**Ala-Archa**	**3.59**	**315**	P	**Pn**	**20 37 54.0**	**+0.9**
	SNR=18						
AAK	**Ala-Archa**	**3.59**	**315**	⇑Pg	Pn	20 37 58.0	+4.8
	comp=E,55nm,0.8s						
AAK				⇑Lg	Lg	20 38 44.5	
	comp=E,107nm,0.8s						
FRU1	**Bishkek**	**3.64**	**318**	⇑*iP*	**Pn**	**20 37 54.1**	**+0.4**
	baz=20						
FRU1				⇑*iS*	**Sn**	**20 38 39.9**	**+3.4**
	baz=20						
KTBS	**Karatobe**	**3.67**	**345**	*eP*	**Pb**	**20 38 01.0**	**-1.3**
	comp=E,43nm,0.7s						
KTBS				*eS*	**Sb**	**20 38 48.8**	**+2.0**
	comp=E,160nm,0.5s						
KTBS	**Karatobe**	**3.67**	**345**	Pg	**Pb**	**20 38 01.0**	**-1.3**
	comp=E,43nm,0.7s						
KTBS				Lg	Lg	20 38 48.8	
	comp=E,160nm,0.5s						
CHMS	**Chumysh**	**3.71**	**321**	⇑*iP*	**Pn**	**20 37 55.4**	**+0.7**
	baz=23						
CHMS				⇑*iS*	**Sn**	**20 38 42.0**	**+3.6**
	baz=23						
CHMS	**Chumysh**	**3.71**	**321**	P	**Pn**	**20 37 55.7**	**+1.0**
	SNR=11						
KTMS	**Ketmen**	**3.73**	**28**	*eP*	**Pb**	**20 38 04.6**	**+1.1**
	comp=E,5.8nm,0.5s						
KTMS				*eS*	**Sg**	**20 38 54.3**	**-3.2**
	comp=E,62nm,0.6s						
AML	**Almayashu**	**3.77**	**303**	⇑*eP*	**Pn**	**20 37 55.7**	**-0.1**
	baz=6.0						
AML				⇑*iS*	**Sn**	**20 38 42.9**	**+2.6**
	baz=6.0						
AML	**Almayashu**	**3.77**	**303**	P	**Pn**	**20 37 56.5**	**+0.7**
	SNR=32						
KRBS	**Karabastau**	**3.92**	**335**	*eP*	**Pb**	**20 38 05.0**	**-1.6**
	comp=E,20nm,0.8s						
KRBS				*eS*	**Sb**	**20 38 55.1**	**+1.2**
	comp=E,82nm,0.6s						
ARSB	**Arslanbob**	**3.95**	**289**	⇑*iP*	**Pn**	**20 37 57.0**	**-1.1**
	baz=92						
ARSB				⇑*iS*	**Sn**	**20 38 45.5**	**+1.0**
	baz=92						
OHH	**Osh**	**3.97**	**277**	⇑*iP*	**Pn**	**20 37 56.6**	**-1.7**
	baz=81						
OHH				⇑*iS*	**Sn**	**20 38 44.6**	**-0.2**
	baz=81						
EKS2	**Erkin-Say**	**4.01**	**310**	⇑*eP*	**Pn**	**20 37 59.3**	**+0.4**
	baz=12						
EKS2				⇑*iS*	**Sn**	**20 38 48.0**	**+2.1**
	baz=12						
EKS2	**Erkin-Say**	**4.01**	**310**	P	**Pn**	**20 38 00.1**	**+1.2**
	SNR=17						
USP	**Ospenovka**	**4.04**	**321**	⇓*iP*	**Pn**	**20 38 00.0**	**+0.8**
	baz=23						
USP				⇓*iS*	**Sn**	**20 38 49.8**	**+3.4**
	baz=23						
USP	**Ospenovka**	**4.04**	**321**	P	**Pb**	**20 38 06.7**	**-2.0**
	SNR=41						
ARXS	**Arharly**	**4.04**	**359**	*eP*	**Pb**	**20 38 09.3**	**+0.6**
	comp=E,45nm,0.7s						
ARXS				*eS*	**Sb**	**20 39 03.0**	**+5.4**
	comp=E,112nm,0.5s						
ARXS	**Arharly**	**4.04**	**359**	Pg	**Pb**	**20 38 09.3**	**+0.6**
	comp=E,45nm,0.7s						
ARXS				Lg	Lg	20 39 03.0	
	comp=E,112nm,0.5s						
MNAS	**Manas**	**4.72**	**301**	⇓*iP*	**Pn**	**20 38 09.0**	**+0.4**
	baz=4.0						
MNAS				⇓*iS*	**Sn**	**20 39 04.7**	**+1.4**
	baz=4.0						
TDK	**Taldyqorghan**	**4.84**	**4**	*eP*	**Pb**	**20 38 22.1**	**-0.2**
	comp=E,26nm,0.8s						
TDK				*eS*	**Sb**	**20 39 25.3**	**+4.8**
	comp=E,71nm,0.9s						
TRKS	**Terek-Say**	**5.35**	**287**	⇑*iP*	**Pn**	**20 38 15.5**	**-1.8**
	baz=89						
TRKS				⇑*iS*	**Sn**	**20 39 16.7**	**-2.1**
	baz=89						
BTLS	**Baital**	**5.66**	**331**	*eP*	**Pb**	**20 38 35.8**	**-0.5**
	comp=E,4.1nm,0.8s						
BTLS				*eS*	**Sb**	**20 39 47.9**	**+3.9**
	comp=E,6.8nm,0.9s						
KK31	**Karatay Array**	**6.30**	**300**	⇑Pg	**Pb**	**20 38 47.2**	**0.0**
	comp=E,3.3nm,0.6s,baz=121,slow=14,SNR=23						
KK31				⇑Lg	Lg	20 40 10.0	
	comp=E,11nm,0.8s,baz=129,slow=25,SNR=5.2						
MAKZ	**Makanchi**	**7.25**	**22**	⇑Pn	**Pn**	**20 38 44.9**	**+1.5**
	comp=E,1.2nm,0.7s						
MAKZ				⇑Sn	**Sn**	**20 40 11.3**	**+5.8**
	comp=E,1.7nm,0.7s						
MAKZ				⇓Lg	Lg	20 40 46.0	
	comp=E,3.0nm,0.6s						
MK31	**Makanchi Array**	**7.33**	**24**	Pn	**Pn**	**20 38 46.5**	**+2.0**
	comp=E,0.9nm,0.5s,baz=194,slow=12,SNR=19						
MK31				⇓Pg	**Pb**	**20 39 08.7**	**+4.0**
	comp=E,3.4nm,1.0s,baz=203,slow=14,SNR=4.2						
MK31				⇑Sn	**Sn**	**20 40 11.1**	**+3.5**
	comp=E,2.7nm,0.7s,baz=198,slow=16,SNR=4.4						
MK31				⇑Lg	Lg	20 40 46.7	
	comp=E,4.0nm,0.6s						
MKAR	**Makanchi Array**	**7.33**	**24**	Pn	**Pn**	**20 38 46.3**	**+1.8**
	comp=E,0.4nm,0.3s,baz=188,slow=14,SNR=8.0						
MKAR				Sn	**Sn**	**20 40 11.2**	**+3.7**
	comp=E,0.5nm,0.3s,baz=206,slow=22,SNR=5.8						
MKAR				Lg	Lg	20 40 47.8	
	comp=E,0.3nm,0.3s,baz=217,slow=29,SNR=2.5						
CEP	**Cherat**	**7.97**	**219**	P	**Pn**	**20 38 52.1**	**-1.2**
WMQ	**Urumqi**	**8.12**	**60**	*ePn*	**Pn**	**20 38 57.0**	**+1.8**
WMQ				Sn	**Sn**	**20 40 31.8**	**+4.9**
WMQ				smax	smax		
	comp=N,9.0nm,0.7s						
WMQ				smax	smax		
	comp=E,16nm,0.7s						
THW	**Thamme Wali**	**8.89**	**216**	P	**Pn**	**20 39 05.5**	**-0.4**
KURBB	**Kurchatov Arra**	**10.46**	**2**	Pn	**Pn**	**20 39 27.2**	**-0.1**
	comp=E,0.1nm,0.3s,baz=194,slow=12,SNR=14						
KURBB				Sn	**Sn**	**20 41 17.0**	**-7.3**
	comp=E,0.0nm,0.3s,baz=187,slow=24,SNR=2.1						
KURBB				Lg	Lg	20 42 24.7	
	comp=E,0.0nm,0.3s,baz=182,slow=29,SNR=4.2						
KURBB	**Kurchatov Arra**	**10.46**	**2**	⇑Pn	**Pn**	**20 39 27.2**	**-0.1**
	comp=E,3.5nm,0.8s						
KURBB				⇓Lg	Lg	20 42 26.4	
	comp=E,17nm,0.8s						
PYUN	**Piuthan**	**12.73**	**159**	*eP*	**Pn**	**20 39 56.3**	**-2.3**
	comp=E,12nm,0.4s						
KOLN	**Koldanda**	**13.22**	**158**	*eP*	**Pn**	**20 40 01.9**	**-3.3**
	comp=E,3.0nm,0.4s						
GKN	**Gorkha**	**13.33**	**154**	*eP*	**Pn**	**20 40 04.1**	**-2.6**
	comp=E,4.0nm,0.4s						
KKN	**Kakani**	**13.75**	**152**	*eP*	**Pn**	**20 40 09.5**	**-3.0**
	comp=E,4.4nm,0.5s						
BVAR	**Borovoye Array**	**13.86**	**341**	Pn	**Pn**	**20 40 10.7**	**-3.0**
	comp=E,0.0nm,0.3s,baz=102,slow=14,SNR=3.8						
BVAR				Lg	Lg	20 44 06.5	
	comp=E,0.1nm,0.3s,baz=156,slow=33,SNR=3.7						
GUN	**Gumba**	**13.87**	**149**	*eP*	**Pn**	**20 40 10.3**	**-3.9**
	comp=E,8.1nm,0.5s						
PKIN	**Phulchoki**	**13.99**	**152**	*eP*	**Pn**	**20 40 12.1**	**-3.7**
	comp=E,3.3nm,0.3s						
PKI	**Pulchoki**	**14.00**	**152**	*eP*	**Pn**	**20 40 12.7**	**-3.3**
	comp=E,7.3nm,0.6s						
JIRN	**Jiri**	**14.21**	**149**	*eP*	**Pn**	**20 40 16.1**	**-2.9**
	comp=E,8.2nm,0.5s						
ZALV	**Zalesovo Beam**	**14.55**	**16**	Pn	**Pn**	**20 40 22.6**	**-0.4**
	comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=6.1						
RAMN	**Ramite**	**15.01**	**149**	*eP*	**Pn**	**20 40 25.6**	**-4.1**
	comp=E,9.9nm,0.5s						
TAPN	**Taplejung**	**15.12**	**145**	*eP*	**Pn**	**20 40 27.8**	**-3.5**
	comp=E,3.7nm,0.8s						
ODAN	**Odare**	**15.41**	**147**	*eP*	**Pn**	**20 40 31.3**	**-3.7**
	comp=E,5.9nm,0.5s						
GTA	**Gaotai**	**16.82**	**86**	*eP*	**P**	**20 40 57.6**	**+2.6**
GTA				pP	sP	20 41 03.4	+2.4
GTA				sP	sP	20 41 06.3	+5.3
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s	

PATS	**Pohnpei**	**13.09 19**	Pn	**Pn**	**21 13 41.2**	**+0.2**
CTA	**Charters Tower**	**16.27 207**	P	**P**	**21 14 23.2**	**-0.7**
	0.2nm,0.3s,baz=34,slow=20,SNR=1.6					
CTAO	**Charters Tower**	**16.27 207**		**P**	**21 14 24.2**	**+0.3**
CTAO			IAmb	IAmb	21 14 30.8	
	comp=Z,36nm,1.4s					
BAKI	**Biak**	**18.54 283**	P	**P**	**21 14 47.2**	**-1.8**
	comp=Z,60nm,1.1s					
EIDS	**Eidsvold**	**19.82 188**		**P**	**21 15 02.5**	**-0.3**
EIDS			IAmb	IAmb	21 15 14.6	
	comp=Z,12nm,1.1s					
DZM	**Mont Dzumac**	**20.20 145**	P	**P**	**21 15 08.2**	**+1.1**
	comp=Z,12nm,0.5s,baz=322,slow=20,SNR=15					
FAKI	**Fak Fak**	**22.00 276**	P	**P**	**21 15 25.8**	**-0.7**
	comp=Z,22nm,1.3s					
SAUI	**Saumlaki**	**22.80 263**	P	**P**	**21 15 33.0**	**-2.0**
	comp=Z,275nm,1.4s					
SIJI	**Sorong**	**23.32 281**	P	**P**	**21 15 40.0**	**-0.1**
	comp=Z,4.7nm,0.6s,baz=1.8,slow=8.6,SNR=4.2					
SWI	**Sorong**	**23.33 281**	P	**P**	**21 15 38.5**	**-1.7**
	comp=Z,12nm,0.8s					
WR0	**Warramunga Arr**	**23.78 232**	P	**P**	**21 15 44.1**	**-0.1**
WB0	**Warramunga Arr**	**23.79 232**	P	**P**	**21 15 44.0**	**-0.3**
WB0			IAmb	IAmb	21 15 45.0	
	comp=Z,16nm,1.1s					
MTN	**Manton Dam**	**23.80 251**	P	**P**	**21 15 43.7**	**-0.6**
WB2	**Warramunga Arr**	**23.92 232**	P	**P**	**21 15 45.2**	**-0.2**
WRA	**Warramunga Arr**	**23.93 232**	P	**P**	**21 15 45.6**	**+0.1**
	comp=Z,14nm,0.8s,baz=53,slow=10.0,SNR=121					
WRA	**Warramunga Arr**	**23.93 232**	P	**P**	**21 15 44.5**	**-0.9**
BNDI	**Bandanaira**	**24.17 272**	P	**P**	**21 15 44.9**	**-2.8**
	comp=Z,3μmcomp=Z,25μmcomp=Z,111nm,0.7s					
ARMA	**Armidale**	**24.75 185**	P	**P**	**21 15 53.6**	**+0.7**
ARMA			IAmb	IAmb	21 15 54.5	
	comp=Z,8.6nm,0.9s					
AS31	**Alice Springs**	**26.46 225**	P	**P**	**21 16 08.1**	**-0.3**
ASAR	**Alice Springs**	**26.46 225**	P	**P**	**21 16 08.1**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=54,slow=8.4,SNR=29					
ASAR			pP	**pP**	**21 16 24.7**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=52,slow=12,SNR=3.2					
ASAR			PcP	**PcP**	**21 19 32.2**	**+0.1**
	comp=Z,6.5nm,1.4s,baz=69,slow=2.6,SNR=5.6					
ASAR	**Alice Springs**	**26.46 225**	P	**P**	**21 16 07.3**	**-1.2**
KNRA	**Kununurra**	**26.82 246**	P	**P**	**21 16 11.1**	**-0.7**
KNRA			IAmb	IAmb	21 16 15.5	
	comp=Z,5.9nm,0.8s					
STKA	**Stephens Creek**	**28.61 203**	P	**P**	**21 16 27.1**	**-0.4**
	comp=Z,5.6nm,0.7s,baz=353,slow=11,SNR=9.4					
STKA	**Stephens Creek**	**28.61 203**	P	**P**	**21 16 26.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**30.45 244**	P	**P**	**21 16 43.0**	**-1.0**
	comp=Z,3.6nm,0.6s,baz=55,slow=7.4,SNR=20					
FITZ			pP	**pP**	**21 17 00.3**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=50,slow=8.1,SNR=2.7					
FITZ	**Fitzroy Crossi**	**30.45 244**	P	**P**	**21 16 43.0**	**-1.0**
FITZ			IAmb	IAmb	21 16 43.9	
	comp=Z,3.0nm,0.7s					
BATI	**Baumata**	**30.52 260**	P	**P**	**21 16 44.8**	**+0.1**
	comp=Z,15nm,0.8s,baz=315,slow=2.4,SNR=4.5					
BBOO	**Buckleboo**	**31.85 210**	P	**P**	**21 16 55.0**	**-1.1**
BBOO			IAmb	IAmb	21 17 08.7	
	comp=Z,5.9nm,1.1s					
CMAR	**Chiang Mai Arr**	**59.45 295**	P	**P**	**21 20 34.5**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=126,slow=6.0,SNR=6.7					
CMAR			pP	**pP**	**21 20 49.3**	**-3.2**
	comp=Z,0.7nm,0.5s,baz=124,slow=5.7,SNR=6.6					
CMAR	**Chiang Mai Arr**	**59.45 295**	P	**P**	**21 20 33.7**	**0.0**
VNDA	**Vanda**	**71.94 178**	P	**P**	**21 21 53.1**	**0.0**
	comp=Z,0.5nm,0.6s,baz=357,slow=5.9,SNR=5.5					
VNDA	**Vanda**	**71.94 178**	P	**P**	**21 21 53.3**	**+0.3**
WMQ	**Urumqi**	**77.28 317**	P	**P**	**21 22 25.3**	**+0.7**
MKAR	**Makanchi Array**	**81.85 319**	P	**P**	**21 22 50.6**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=104,slow=5.1,SNR=4.7					
MKAR			pP	**pP**	**21 23 07.2**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=90,slow=3.9,SNR=4.7					
ILAR	**Eielson Array**	**82.45 22**	P	**P**	**21 22 54.0**	**+2.0**
	comp=Z,0.1nm,0.6s,baz=209,slow=7.2,SNR=1.5					
ILAR			pP	**pP**	**21 23 10.3**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=219,slow=7.0,SNR=2.6					
QSPA	**South Pole Qui**	**84.31 180**	P	**P**	**21 23 01.8**	**0.0**
QSPA			IAmb	IAmb	21 23 15.1	
	comp=Z,3.9nm,1.4s					
TORD	**Torodi Ar. Bea**	**151.84 287**	PKPbc	**PKPbc**	**21 30 24.2**	**-1.3**
	comp=Z,0.6nm,0.4s,baz=57,slow=2.5,SNR=6.5					
TORD	**Torodi Ar. Bea**	**151.84 287**		**PKPbc**	**21 30 25.1**	**-0.5**

KRNET 14 21:31:45.1±0.1, 42°61N×76°12E, h29km, mb1.0, 6C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOOM	**Boomskoye usch**	**0.18**	**227**	⇑*iP*	Pb	21 31 50.9	-0.3
	baz=27						
BOOM				⇑*iS*	Sb	21 31 55.2	-0.2
	baz=27						
ULHL	**Ulahol**	**0.38**	**166**	⇓*iP*	Pb	21 31 53.6	-0.2
	baz=66						
ULHL				⇓*iS*	Sb	21 32 00.0	+0.3
	baz=66						
TKM2	**Tokmak 2**	**0.49**	**309**	⇑*iP*	Pb	21 31 55.4	-0.2
	baz=9.0						
TKM2				⇑*iS*	Sb	21 32 02.9	+0.2
	baz=9.0						
KBK	**Karagaybulak**	**0.86**	**273**	⇑*iP*	Pn	21 32 01.2	-0.3
	baz=73						
KBK				⇑*iS*	Sn	21 32 13.7	+0.4
	baz=73						

IDC 14 21:32:00.9±5.8, 6°61S×156°25E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, Error ellipse: s-maj=150.1km s-min=38.1km az=106.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.06**	**236**	P	P	21 37 27.4	+0.1
	0.8nm,0.4s,baz=59,slow=8.9,SNR=19						
H11S3	**WAKE ISLAND Hy**	**26.99**	**22**	T	T	22 06 17.1	
	baz=202,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**26.99**	**22**	T	T	22 06 17.3	
	baz=202,slow=76,SNR=40						
H11S1	**WAKE ISLAND Hy**	**27.01**	**22**	T	T	22 06 18.4	
	baz=202,slow=76,SNR=23						
ASAR	**Alice Springs**	**27.36**	**229**	P	P	21 37 47.5	-0.6
	0.2nm,0.3s,baz=61,slow=9.3,SNR=2.9						
CMAR	**Chiang Mai Arr**	**61.75**	**295**	P	P	21 42 22.6	+0.8
	0.3nm,0.7s,baz=135,slow=4.9,SNR=5.1						
MKAR	**Makanchi Array**	**83.94**	**318**	P	P	21 44 32.5	-0.5
	0.3nm,0.5s,baz=101,slow=7.7,SNR=6.4						

NNC 14 21:32:05.4±0.2, 43°02N×78°42E, h12km±1km, mpv1.7, Error ellipse: s-maj=2.5km s-min=1.0km az=14.0
SOME 14 21:32:05.5, 43°18N×78°35E, h0km
ISC 14 21:32:04.0±3.8, 43°21N±0°06×78°3E±0°2, h10km±14km, n6, σ0s55/12, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.18**	**149**	*eP*	**Pg**	**21 32 08.3**	**+0.3**
	13nm,0.1s						
SATY				*eS*	**Sg**	**21 32 10.3**	**-0.3**
	96nm,0.1s						
SATY	**Saty**	**0.18**	**149**	P	**Pg**	**21 32 08.3**	**+0.3**
	13nm,0.1s						
SATY				S	**Sg**	**21 32 10.3**	**-0.3**
	96nm,0.1s						
KPKS	**Kokpek**	**0.39**	**49**	*eP*	**Pg**	**21 32 11.9**	**+0.1**
	1.0nm,0.0s						
KPKS				*eS*	**Sg**	**21 32 16.5**	**-0.5**
	0.9nm,0.1s						
UZB	**Uzynbulak**	**0.54**	**96**	*eP*	**Pb**	**21 32 15.7**	**-0.1**
	2.2nm,0.2s						
UZB				*eS*	**Sb**	**21 32 23.0**	**-0.6**
	2.6nm,0.1s						
UZB	**Uzynbulak**	**0.54**	**96**	P	**Pb**	**21 32 15.7**	**-0.1**
	2.2nm,0.2s						
UZB				S	**Sb**	**21 32 23.0**	**-0.6**
	2.6nm,0.1s						
PDGK	**Podgornoye**	**0.89**	**82**	P	**Pg**	**21 32 22.0**	**+0.8**
	0.2nm,0.4s						
PDGK				S	**Sb**	**21 32 34.1**	**+0.5**
	0.4nm,0.4s						

IDC 14 21:47:10.0±1.1, 29°26N×102°79E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.4/44, mbtmp3.5/8, ML3.3/2, Error ellipse: s-maj=30.0km s-min=17.6km az=83.0
BJI 14 21:47:13.7±0.0, 29°05N×102°35E, h16km, mb3.7/4, ML3.7/18
ISC 14 21:47:12.1±0.8, 29°25N±0°05×102°53E±0°07, h10km, n12, σ1s73/16, mb3.5/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**4.60**	**126**	Pn	**Pn**	**21 48 23.3**	**+1.5**
GYA				Pg	**Pg**	**21 48 39.6**	**-0.6**
GYA				Sn	**Sn**	**21 49 15.9**	**+0.5**
GYA				Sg	**Sg**	**21 49 40.9**	**+1.1**
GYA				smax	smax		
	comp=N,87nm,1.0s						
GYA				smax	smax		
	comp=E,100nm,1.0s						
XAN	**Xi'an**	**7.25**	**47**	Pn	**Pn**	**21 49 01.3**	**+3.1**
XAN				Sn	**Sn**	**21 50 20.8**	**+0.2**
XAN				Sg	**Sg**	**21 51 05.0**	**+0.2**
XAN				smax	smax		
	comp=N,120nm,1.0s						
XAN				smax	smax		
	comp=E,81nm,1.1s						
WHN	**Wuhan**	**10.34**	**80**	P	Pn	21 49 49.3	+8.7
CMAR	**Chiang Mai Arr**	**11.23**	**198**	Pn	**Pn**	**21 49 54.0**	**+1.2**
	0.0nm,0.3s,baz=22,slow=12,SNR=3.4						
CMAR				Pg		21 50 37.6	
	0.0nm,0.3s,baz=8.8,slow=19,SNR=4.3						
CMAR				Lg	Lg	21 53 07.0	
	0.0nm,0.3s,baz=22,slow=29,SNR=4.9						
WMQ	**Urumqi**	**18.76**	**325**	*eP*	**Pn**	**21 51 32.9**	**+1.1**
SONM	**Songino Array**	**18.80**	**8**	P	**Pn**	**21 51 32.3**	**0.0**
	0.5nm,0.3s,baz=204,slow=3.2,SNR=3.0						
TLY	**Talaya**	**22.43**	**2**	P	**P**	**21 52 08.3**	**-2.6**
	2.0nm,0.6s,baz=96,slow=16,SNR=3.3						
KSRS	**Korea Array**	**22.69**	**62**	P	**P**	**21 52 10.9**	**-2.9**
	1.1nm,0.6s,baz=239,slow=10,SNR=6.2						
MKAR	**Makanchi Array**	**23.57**	**324**	P	**P**	**21 52 24.3**	**+1.5**
	0.4nm,0.7s,baz=132,slow=9.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**27.96**	**326**	P	**P**	**21 53 02.5**	**-0.2**
	0.6nm,0.7s,baz=133,slow=10.0,SNR=2.7						
WRA	**Warramunga Arr**	**57.74**	**144**	P	**P**	**21 57 01.6**	**-1.7**
	0.5nm,0.6s,baz=319,slow=6.1,SNR=10.0						
ASAR	**Alice Springs**	**60.66**	**147**	P	**P**	**21 57 22.2**	**-1.4**
	0.1nm,0.3s,baz=321,slow=6.7,SNR=1.8						

NEIC 14 22:01:59.1±1.0, 10°85N±0°09×93°81E±0°05, h139km±10km, mb4.1/13, Error ellipse: s-maj=14.0km s-min=3.1km az=150.0
IDC 14 22:02:02.5±3.4, 10°99N×93°98E, h164km±32km, mb3.6/11, mb1 3.6/13, mb1mx3.2/66, mbtmp4.0/13, Error ellipse: s-maj=29.3km s-min=13.2km az=53.0
ISC 14 22:02:00.1±0.6, 10°83N±0°08×93°85E±0°10, h150km, n45, σ0s69/45, mb3.9/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CM31	**Chiang Mai Arr**	**9.04**	**32**	Pn	**Pn**	**22 04 06.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**9.04**	**32**	P	**Pn**	**22 04 07.0**	**-0.5**
	0.1nm,0.3s,baz=221,slow=15,SNR=15						
IPM	**Ipoh**	**9.51**	**131**	Pn	**Pn**	**22 04 13.1**	**-0.6**
GSI	**Gunungsitoli**	**10.16**	**158**	Pn	**Pn**	**22 04 20.8**	**-1.6**
PALK	**Pallekele**	**13.45**	**256**	P	**P**	**22 05 08.9**	**-0.4**
	0.3nm,0.3s,baz=268,slow=7.4,SNR=1.9						
PALK				S	Sn	22 07 23.9	-10
	1.3nm,0.3s,baz=76,slow=22,SNR=11						
SLVN	**Son La**	**14.22**	**42**	P	**P**	**22 05 18.1**	**+0.2**
SHL	**Shillong**	**14.78**	**353**	Pn	**Pn**	**22 05 21.3**	**-0.7**
TAPN	**Taplejung**	**17.42**	**341**	*eP*	**P**	**22 05 53.9**	**+0.5**
	23nm,0.8s						
RAMN	**Ramite**	**17.43**	**338**	*eP*	**Pn**	**22 05 54.5**	**0.0**
	22nm,0.6s						
JIRN	**Jiri**	**18.23**	**338**	*eP*	**P**	**22 06 03.0**	**+0.7**
	7.8nm,0.3s						
PKI	**Pulchoki**	**18.45**	**336**	*eP*	**P**	**22 06 05.0**	**+0.3**
	11nm,0.5s						
PKIN	**Phulchoki**	**18.46**	**336**	*eP*	**P**	**22 06 04.9**	**+0.1**
	16nm,0.6s						
GUN	**Gumba**	**18.57**	**337**	*eP*	**P**	**22 06 06.5**	**+0.5**
	24nm,0.5s						
KKN	**Kakani**	**18.70**	**336**	*eP*	**P**	**22 06 07.6**	**+0.3**
	17nm,0.4s						
LSA	**Lhasa**	**18.95**	**353**	P	**P**	**22 06 09.9**	**-0.3**
LSA					IAmb	IAmb	22 06 12.7
	comp=Z,5.6nm,0.7s						
GKN	**Gorkha**	**19.15**	**334**	*eP*	**P**	**22 06 12.6**	**+0.5**
	comp=Z,61nm,0.4s						
KOLN	**Koldanda**	**19.41**	**332**	*eP*	**P**	**22 06 15.6**	**+0.6**
	comp=Z,42nm,0.6s						
GAR	**Garm**	**35.03**	**327**	P	**P**	**22 08 38.1**	**-0.5**
AAK	**Ala-Archa**	**35.91**	**335**	P	**P**	**22 08 45.8**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=146,slow=5.6,SNR=8.1						
AAK	**Ala-Archa**	**35.91**	**335**	P	**P**	**22 08 45.6**	**-0.5**
AAK					IAmb	IAmb	22 08 47.6
	comp=Z,1.6nm,0.8s						
MK31	**Makanchi Array**	**37.16**	**347**	P	**P**	**22 08 57.0**	**+0.5**
MKAR	**Makanchi Array**	**37.16**	**347**	P	**P**	**22 08 56.3**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=162,slow=8.9,SNR=17						
KKAR	**Karatay Array**	**38.02**	**332**	P	**P**	**22 09 03.8**	**0.0**
KURBB	**Kurchatov Arra**	**41.63**	**345**	P	**P**	**22 09 33.1**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=169,slow=7.5,SNR=6.9						
KURK	**Kurchatov**	**41.69**	**345**	P	**P**	**22 09 33.1**	**-0.9**
GEYT	**Alibeck**	**41.85**	**316**	P	**P**	**22 09 37.0**	**+1.5**
	comp=Z,4.0nm,0.4s,baz=136,slow=9.0,SNR=9.6						
GEYT	**Alibeck**	**41.85**	**316**	P	**P**	**22 09 36.8**	**+1.3**
GEYT					IAmb	IAmb	22 09 37.6
	comp=Z,3.5nm,0.6s						
GYA0B	**ALIBECK ARRAY**	**41.85**	**316**	P	**P**	**22 09 36.5**	**+1.0**
GYA0B					IAmb	IAmb	22 09 37.6
	comp=Z,6.2nm,0.5s						
ZAA0	**Zalesovo Array**	**43.61**	**352**	P	**P**	**22 09 49.3**	**0.0**
ZAA0					IAmb	IAmb	22 09 50.1
	comp=Z,2.3nm,0.7s						
ZALV	**Zalesovo Beam**	**43.61**	**352**	P	**P**	**22 09 49.4**	**+0.1**
	comp=Z,2.4nm,0.3s,baz=180,slow=8.4,SNR=17						
ZALV	**Zalesovo Beam**	**43.61**	**352**	P	**P**	**22 09 49.2**	**-0.1**
ABKAR	**Akbulak array**	**47.53**	**330**	P	**P**	**22 10 19.5**	**-0.7**
ABKAR	**Akbulak array**	**47.53**	**330**	P	**P**	**22 10 19.7**	**-0.5**
AKTO	**Aktyubinsk**	**49.24**	**330**	P	**P**	**22 10 32.9**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=112,slow=8.2,SNR=5.2						
WB0	**Warramunga Arr**	**50.18**	**127**	P	**P**	**22 10 41.8**	**+0.9**
WB0					IAmb	IAmb	22 10 51.0
	comp=Z,8.0nm,1.4s						
WRA	**Warramunga Arr**	**50.24**	**127**	P	**P**	**22 10 41.9**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=302,slow=10,SNR=42						
WRA	**Warramunga Arr**	**50.24**	**127**	P	**P**	**22 10 42.1**	**+0.8**
ASAR	**Alice Springs**	**52.05**	**132**	P	**P**	**22 10 55.8**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=302,slow=6.9,SNR=6.9						
BBOO	**Buckleboo**	**59.20**	**139**	P	**P**	**22 11 46.7**	**+1.1**
FIA1	**FINESS Array S**	**69.98**	**332**	P	**P**	**22 12 54.2**	**-0.9**
FINES	**FINESS Array B**	**69.98**	**332**	P	**P**	**22 12 54.5**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=130,slow=18,SNR=5.7						
FINES	**FINESS Array B**	**69.98**	**332**	P	**P**	**22 12 54.3**	**-0.8**
ARCES	**ARCESS Array B**	**72.41**	**340**	P	**P**	**22 13 09.6**	**0.0**
	comp=Z,1.3nm,0.8s,baz=79,slow=6.3,SNR=5.3						
ARCES	**ARCESS Array B**	**72.41**	**340**	P	**P**	**22 13 09.4**	**-0.1**
SPITS	**Spitsbergen Ar**	**76.91**	**348**	P	**P**	**22 13 35.9**	**+0.5**
	comp=Z,12nm,1.0s,baz=137,slow=14,SNR=7.3						

IDC 14 22:08:44.7±1.9, 3°03N×128°47E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.4/40, mbtmp3.6/5, Error ellipse: s-maj=105.1km s-min=23.6km az=69.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.18**	**187**	P	P	22 13 33.8	+1.9
	0.8nm,0.5s,baz=20,slow=14,SNR=2.4						
WRA	**Warramunga Arr**	**23.55**	**166**	P	P	22 13 57.1	+0.2
	0.5nm,0.3s,baz=342,slow=10,SNR=17						
ASAR	**Alice Springs**	**27.06**	**169**	P	P	22 14 28.6	-0.5
	0.4nm,0.3s,baz=349,slow=7.3,SNR=6.0						
STKA	**Stephens Creek**	**36.89**	**161**	P	P	22 15 53.9	-1.3
	0.7nm,0.5s,baz=323,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**59.12**	**325**	P	P	22 18 47.4	+0.2
	0.3nm,0.4s,baz=125,slow=8.1,SNR=6.3						

IPEC 14 22:15:39.8±0.2, 49°87N×18°49E, h0km±3km, ML1.3/3, Error ellipse: s-maj=1.7km s-min=1.1km az=164.0

PRU 14 22:15:39.9±0.0, 49°81N×18°54E, h0km, Mining Induced Event Darkov, E=2.0e+04, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.26**	**276**	*e*PG	Pg	22 15 44.2	-0.6
OKC				*e*SG	Sg	22 15 49.0	+0.9
	comp=Z,31nm,0.4s						
OKC	**Ostrava-Krasne**	**0.26**	**276**	*e*PG	Pb	22 15 46.8	-0.6
MORC	**Moravsky Berou**	**0.65**	**267**	*e*PG	Pg	22 15 51.6	-0.7
MORC				*e*SG	Sg	22 15 59.1	-1.6
MORC	**Moravsky Berou**	**0.65**	**267**	*e*Pg	Pg	22 15 51.6	-0.7
	baz=81						
MORC				*e*Sg	Sg	22 15 59.1	-1.6
	8.8nm,0.3s,baz=81						
LANS	**Liptovska Anna**	**0.90**	**137**	*e*PG	Pb	22 15 57.7	-0.6
LANS				*e*SG	Sn	22 16 12.8	-0.7
LANS				*e*LG	Lg	22 16 17.8	
OJC	**Ojcow**	**0.91**	**63**	*e*Pg	Pg	22 15 57.2	-0.2
OJC				*e*Sg	Sg	22 16 10.1	+1.0
JAVC	**Velka Javorina**	**1.11**	**211**	*e*PG	Pb	22 16 02.0	0.0
JAVC	**Velka Javorina**	**1.11**	**211**	*e*Pg	Pb	22 16 02.0	0.0
	baz=28						
KRLC	**Kraliky**	**1.17**	**284**	*e*PG	Pg	22 16 00.2	-2.0
KRLC				*e*SG	Sg	22 16 16.8	-0.6
	comp=Z,15nm,0.5s						
KRLC	**Kraliky**	**1.17**	**284**	*e*PG	Pb	22 16 03.1	+0.1
NIE	**Niedzica**	**1.21**	**108**	*e*Pg	Pn	22 16 04.4	+0.3
NIE				*e*Sg	Sn	22 16 22.8	+1.6
VYHS	**Vyhne**	**1.33**	**171**	*e*PG	Pg	22 16 05.2	-0.2
VYHS				*e*SG	Sn	22 16 24.6	+0.4
VRAC	**Vranov**	**1.36**	**249**	*e*PG	Pg	22 16 05.0	-1.0
VRAC				*e*SG	Sg	22 16 22.2	-1.5
VRAC	**Vranov**	**1.36**	**249**	*e*Pg	Pg	22 16 05.0	-1.0
	baz=65						
VRAC				*e*Sg	Sg	22 16 22.1	-1.6
	4.4nm,0.2s,baz=65						
SMOL	**Smolenice**	**1.49**	**210**	*e*PN	Pn	22 16 07.3	-0.6
SMOL				*e*SN	Sg	22 16 27.0	-0.7
SMOL				*e*LG	Lg	22 16 31.5	
DPC	**Dobruska-Polom**	**1.53**	**292**	*e*PG	Pn	22 16 06.8	-1.7
DPC				*e*SG	Sg	22 16 28.1	-0.9
	comp=Z,5.7nm,0.3s						
KRUC	**Moravsky**	**1.59**	**243**	*e*PG	Pn	22 16 08.5	-0.8
KRUC				*e*SG	Sn	22 16 29.6	-0.9
KRUC	**Moravsky**	**1.59**	**243**	*e*Pg	Pn	22 16 08.4	-0.9
	baz=59						
KRUC				*e*Sg	Sn	22 16 29.6	-0.9
	2.8nm,0.2s,baz=59						
MODS	**Modra-Piesok**	**1.66**	**210**	*e*PN	Pn	22 16 06.6	-3.7
MODS				*e*SN	Sn	22 16 31.4	-0.9
OSTC	**Ostas**	**1.67**	**297**	*e*PG	Pn	22 16 09.3	-1.1
OSTC				*e*SG	Sn	22 16 32.4	-0.2
	comp=Z,15nm,1.2s						
OSTC	**Ostas**	**1.67**	**297**	*e*PG	Pg	22 16 11.9	0.0
KSP	**Ksiaz**	**1.77**	**307**	*e*Pg	Pg	22 16 15.4	+1.5
KSP				*e*Sg	Sg	22 16 37.3	+0.5
TREC	**Trest**	**2.05**	**257**	*e*PG	Pb	22 16 17.0	-1.1
TREC				*e*SG	Sb	22 16 44.1	0.0
	comp=Z,3.2nm,0.4s						
PRU	**Pruhonice**	**2.59**	**275**	*e*SG	Sg	22 17 02.1	-1.0
	comp=Z,1.9nm,0.6s						
PVCC	**Panska Ves**	**2.65**	**287**	*e*SG	Sg	22 17 04.6	-0.5
	comp=Z,5.3nm,0.4s						
CKRC	**Cesky Krumlov**	**2.94**	**252**	*e*SG	Sg	22 17 12.9	-1.4
KHC	**Kasperske Hory**	**3.31**	**260**	*e*PG	Pb	22 16 39.5	+0.1
KHC				*e*SG	Sg	22 17 25.2	-0.9
	comp=Z,5.1nm,1.2s						

IDC 14 22:36:25.9±64.0, 25°64S×178°49E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/39, mbtmp4.2/3, Error ellipse: s-maj=1138.0km s-min=150.4km az=89.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**32.82**	**250**	P	P	22 42 59.9	-1.4
	1.1nm,0.4s,baz=100,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**40.43**	**263**	P	P	22 44 06.2	-0.1
	1.4nm,0.5s,baz=98,slow=7.5,SNR=22						
WRA	**Warramunga Arr**	**40.96**	**269**	P	P	22 44 11.4	+0.7
	2.6nm,0.3s,baz=103,slow=8.6,SNR=94						

IDC 14 22:36:59.5±0.9, 39°89N×143°50E, h0km, mb3.7/9, mb1 3.8/12, mb1mx3.6/52, mbtmp3.7/12, ML3.0/3, Error ellipse: s-maj=25.7km s-min=18.1km az=91.0
JMA 14 22:37:01.2±0.3, 40°06N×143°36E, h3km±3km, M3.9
NIED 14 22:37:01.2, 40°06N×143°36E, h3km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.96; Mθθ2.24; Mϕϕ-0.28; Mrθ2.48; Mrϕ1.58; Mθϕ2.26; Fault plane solution: Mw4.21000×10¹⁴ NP1: ϕs228.00000°, δ73.00000°, λ-104.00000°. NP2: ϕs89.00000°, δ22.00000°, λ-51.00000°.
ISC 14 22:36:59.8±2.2, 39°99N±0°06×143°43E±0°07, h1km±12km, n28, σ0s97/27, mb3.7/9, Off east coast of Honshu

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

GRGR	**Grenville**	**1.42**	**27**	*e*P		**Pn**	**22 39 09.2**	**+0.4**
GRGR				*e*S		**Sn**	**22 39 26.4**	**-1.5**
GRGR	**Grenville**	**1.42**	**27**	*e*P		**Pn**	**22 39 08.8**	**0.0**
GRGR				*e*S		**Sn**	**22 39 26.1**	**-1.8**
TPR	**Prospect**	**1.54**	**77**	*e*P		**Pn**	**22 39 12.1**	**+2.0**
TOSP	**Speyside**	**1.79**	**76**	*e*P		**Pn**	**22 39 14.2**	**+0.9**
TOSP				*e*S		**Sn**	**22 39 35.9**	**-0.2**
GCMP	**Grenada, Carri**	**1.84**	**28**	*e*P		**Pn**	**22 39 14.8**	**+0.9**
GCMP				*e*S		**Sn**	**22 39 36.7**	**-0.5**
PCRV	**Puerto La Cruz**	**2.39**	**254**	*e*P		**Pn**	**22 39 23.5**	**+2.4**
PCRV				*e*S		**Sn**	**22 39 50.8**	**+0.8**
RIOV	**Rio Grande**	**2.81**	**170**	*e*P		**Pn**	**22 39 28.1**	**+1.4**
RIOV				*e*S		**Sn**	**22 39 58.8**	**-1.1**
LUEV	**Luepa**	**5.05**	**170**	*e*P		**Pn**	**22 39 57.4**	**+0.5**
LUEV				*e*S		**Sn**	**22 40 51.1**	**-3.1**
BAUV	**El Baul**	**5.96**	**252**	*e*S		**Sn**	**22 41 13.1**	**-3.0**
BAUV	**El Baul**	**5.96**	**252**	*e*P		**Pn**	**22 40 10.8**	**+1.7**
BAUV				*e*S		**Sn**	**22 41 14.4**	**-1.7**

IDC 14 23:23:29.5±2.8, 4°29S×144°71E, h0km, mb3.6/3, mb1 4.1/5, mb1mx3.7/32, mbtmp3.9/5, ML4.2/2, Error ellipse: s-maj=48.9km s-min=27.9km az=82.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**4.37**	**294**	Pn	Pn	23 24 39.0	+1.8
	4.2nm,0.3s,baz=119,slow=5.5,SNR=11						
JAY				Sn	Sn	23 25 30.2	+1.2
	5.6nm,0.3s,baz=168,slow=13,SNR=4.8						
WRA	**Warramunga Arr**	**18.55**	**212**	P	Pn	23 27 49.2	+1.1
	1.1nm,0.3s,baz=35,slow=12,SNR=66						
ASAR	**Alice Springs**	**21.91**	**207**	P	P	23 28 25.9	+1.3
	2.4nm,0.6s,baz=35,slow=8.3,SNR=23						
FITZ	**Fitzroy Crossi**	**23.16**	**232**	P	P	23 28 36.1	-1.8
	1.3nm,0.3s,baz=36,slow=8.8,SNR=15						
MKAR	**Makanchi Array**	**74.74**	**321**	P	P	23 35 10.8	-0.6
	0.1nm,0.4s,baz=103,slow=6.4,SNR=2.3						

IDC 14 23:26:50.9±2.4, 42°22N×46°78E, h0km, mb3.6/5, mb1 3.6/8, mb1mx3.4/47, mbtmp3.5/8, ML2.7/2, Error ellipse: s-maj=54.6km s-min=16.1km az=14.0
DDA 14 23:26:53.0, 42°45N×46°72E, h14km±7km, ML3.1
NSSP 14 23:26:55.2, 42°00N×46°53E, h10km, Ms3.2
MOS 14 23:26:55.1±0.0, 41°96N×46°64E, h28km, MPVA4.3
NORS 14 23:26:55.6±0.0, 42°01N×46°74E, h18km, MPVA4.5
TIF 14 23:26:56.1, 42°00N×46°70E, h62km±1km
AZER 14 23:26:57.1±0.2, 41°91N×46°66E, h45km, ml3.4/32, Error ellipse: s-maj=3.6km s-min=1.6km az=17.0

ISC 14 23:26:58.0±0.7, 42°00N±0°02×46°71E±0°02, h56km±5km, n144, σ1°75/245, mb3.3/5, 5C-6D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKTA	**Zakatala**	**0.36**	**190**	P	**Pn**	**23 27 07.7**	**-0.6**
ZKTA	**Zakatala**	**0.36**	**190**	P	**Pn**	**23 27 07.7**	**-0.6**
	SNR=1788						
ZKTA				S	**Sn**	**23 27 15.6**	**-0.2**
LGD	**Lagodekhi**	**0.38**	**245**	P	**Pn**	**23 27 07.7**	**-0.7**
LGD				S	**Sn**	**23 27 16.1**	**0.0**
LGD	**Lagodekhi**	**0.38**	**245**	*e*P	**Pn**	**23 27 07.7**	**-0.7**
LGD				*e*S	**Sn**	**23 27 16.0**	**0.0**
LGD	**Lagodekhi**	**0.38**	**245**	P	**Pn**	**23 27 07.9**	**-0.6**
LGD				S	**Sn**	**23 27 16.3**	**+0.3**
XNZR	**Khunzakh**	**0.55**	**360**	*e*P	**Pn**	**23 27 09.9**	**-0.5**
XNZR				*e*S	**Sn**	**23 27 19.6**	**+0.2**
XNZR	**Khunzakh**	**0.55**	**360**	*e*Pg	**Pn**	**23 27 10.0**	**-0.5**
XNZR				*e*Sg	**Sn**	**23 27 19.4**	**+0.1**
ARKR	**Arakani**	**0.64**	**19**	*i* P	**Pn**	**23 27 10.8**	**-0.6**
ARKR				*e*		23 27 20.9	
ARKR				pmax	pmax		
	comp=Z,486nm,0.4s						
ARKR				smax	smax		
	comp=N,3μm,0.4s						
ARKR	**Arakani**	**0.64**	**19**	*e*Pg	**Pn**	**23 27 10.9**	**-0.6**
ARKR				*e*Sg	**Sn**	**23 27 20.1**	**-1.1**
DDFL	**Dedoflistskaro**	**0.70**	**219**	P	**Pn**	**23 27 13.8**	**+1.6**
DDFL				S	**Sn**	**23 27 28.8**	**+6.3**
DDFL	**Dedoflistskaro**	**0.70**	**219**	*i* P	**Pn**	**23 27 13.7**	**+1.6**
DDFL				*i* S	**Sn**	**23 27 29.0**	**+6.6**
DDFL	**Dedoflistskaro**	**0.70**	**219**	*e*P	**Pn**	**23 27 13.8**	**+1.6**
DDFL				*e*S	**Sn**	**23 27 28.7**	**+6.3**
DDFL	**Dedoflistskaro**	**0.70**	**219**	P	**Pn**	**23 27 13.7**	**+1.6**
DDFL				S	**Sn**	**23 27 25.1**	**+2.7**
URKR	**Urkarakh**	**0.71**	**76**	*e*P	**Pn**	**23 27 11.9**	**-0.4**
URKR				*e*S	**Sn**	**23 27 23.8**	**+1.1**
URKR				pmax	pmax		
	comp=Z,681nm,0.5s						
URKR	**Urkarakh**	**0.71**	**76**	*e*Pg	**Pn**	**23 27 11.9**	**-0.4**
URKR				*e*Sg	**Sn**	**23 27 23.5**	**+0.8**
KRNR	**Karanay**	**0.84**	**10**	*e*Pg	**Pn**	**23 27 13.2**	**-0.8**
KRNR				*e*Sg	**Sn**	**23 27 25.3**	**-0.4**
SEKA	**Sheki**	**0.87**	**155**	P	**Pn**	**23 27 14.0**	**-0.2**
SEKA	**Sheki**	**0.87**	**155**	P	**Pn**	**23 27 14.1**	**-0.2**
	SNR=751						
SEKA				S	**Sn**	**23 27 27.3**	**+1.2**
BUJR	**Buynaksk**	**0.88**	**20**	*e*P	**Pn**	**23 27 14.5**	**+0.1**
BUJR				*e*S	**Sn**	**23 27 27.8**	**+1.4**
BUJR				pmax	pmax		
	comp=Z,481nm,0.4s						
BUJR	**Buynaksk**	**0.88**	**20**	*e*Pg	**Pn**	**23 27 14.4**	**+0.1**
BUJR				*e*Sg	**Sn**	**23 27 28.0**	**+1.6**
AKT	**Akhty**	**0.92**	**124**	*e*P	**Pn**	**23 27 15.0**	**0.0**
AKT				*e*S	**Sn**	**23 27 28.2**	**+0.7**
AKT				pmax	pmax		
	comp=Z,414nm,0.3s						
AKT	**Akhty**	**0.92**	**124**	*i* Pg	**Pn**	**23 27 14.9**	**-0.1**
AKT				*e*Sg	**Sn**	**23 27 27.9**	**+0.5**
DBC	**Dubki**	**1.03**	**5**	⇑*i* P	**Pn**	**23 27 16.2**	**-0.2**
DBC				*e*S	**Sn**	**23 27 30.8**	**+0.9**
DBC	**Dubki**	**1.03**	**5**	*i* Pg	**Pn**	**23 27 16.1**	**-0.2**
DBC				*e*Sg	**Sn**	**23 27 30.6**	**+0.7**
DVE	**Vedeno**	**1.05**	**336**	*e* P	**Pn**	**23 27 16.6**	**0.0**
DVE				pmax	pmax		
	comp=Z,382nm,0.4s						
DVE	**Vedeno**	**1.05**	**336**	*i* Pg	**Pn**	**23 27 16.7**	**+0.1**
DVE				*e*Sg	**Sn**	**23 27 31.9**	**+1.5**
DLMR	**Dylym**	**1.08**	**357**	*e*P	**Pn**	**23 27 17.0**	**0.0**
DLMR				*e*S	**Sn**	**23 27 32.5**	**+1.6**
DLMR				pmax	pmax		
	comp=Z,416nm,0.3s						
DLMR	**Dylym**	**1.08**	**357**	*e*Pg	**Pn**	**23 27 16.9**	**0.0**
DLMR				*e*Sg	**Sn**	**23 27 32.5**	**+1.6**
MAK	**Makhachkala**	**1.13**	**31**	⇓*i* P	**Pn**	**23 27 18.6**	**+1.0**
MAK				*e*		23 27 35.9	
MAK				pmax	pmax		
	comp=Z,245nm,0.3s						
MAK				smax	smax		
	comp=N,2μm,0.4s						
MAK				smax	smax		
	comp=N,1μm,0.4s						
MAK	**Makhachkala**	**1.13**	**31**	*e*Pg	**Pn**	**23 27 18.7**	**+1.1**
MAK				*e*Sg	**Sn**	**23 27 34.8**	**+2.6**
MNGR	**Mingechevir, A**	**1.25**	**167**	P	**Pn**	**23 27 19.7**	**+0.5**
MNGR	**Mingechevir, A**	**1.25**	**167**	P	**Pn**	**23 27 19.7**	**+0.5**
	SNR=12						
MNGR				S	**Sn**	**23 27 36.9**	**+1.8**
QSAR	**Qusar**	**1.26**	**112**	P	**Pn**	**23 27 20.9**	**+1.5**
	SNR=72						
QSAR				S	**Sn**	**23 27 38.6**	**+3.3**
KANR	**Karaman**	**1.33**	**25**	*e*Pg	**Pn**	**23 27 21.7**	**+1.5**
KANR				*e*Sg	**Sn**	**23 27 40.9**	**+3.9**
QBL	**Gabala**	**1.35**	**141**	P	**Pn**	**23 27 21.2**	**+0.6**
	SNR=92						
QBL				S	**Sn**	**23 27 39.6**	**+2.1**
XNQ	**Khinaliq**	**1.35**	**127**	P	**Pn**	**23 27 21.8**	**+1.0**
	SNR=46						
XNQ				S	**Sn**	**23 27 40.6**	**+2.8**
QZX	**Qazax, Azerbai**	**1.37**	**227**	P	**Pn**	**23 27 20.3**	**-0.5**
	SNR=15						
QZX				S	**Sn**	**23 27 38.7**	**+0.6**
GANJ	**Ganja**	**1.38**	**192**	P	**Pn**	**23 27 20.5**	**-0.5**
GANJ	**Ganja**	**1.38**	**192**	P	**Pn**	**23 27 20.5**	**-0.5**
	SNR=99						
GANJ				S	**Sn**	**23 27 38.4**	**+0.2**
GROC	**Groznyy**	**1.38**	**331**	*i* P	**Pn**	**23 27 21.8**	**+0.8**
GROC				pmax	pmax		
	comp=Z,87nm,0.1s						
GROC	**Groznyy**	**1.38**	**331**	*i* Pg	**Pn**	**23 27 22.1**	**+1.1**
GROC				*e*Sg	**Sn**	**23 27 41.4**	**+3.2**
SEAG	**Tbilisi Sea**	**1.44**	**261**	P	**Pn**	**23 27 23.8**	**+2.0**
SEAG				S	**Sn**	**23 27 41.4**	**+1.6**
SEAG	**Tbilisi Sea**	**1.44**	**261**	*e*P	**Pn**	**23 27 23.8**	**+2.0**
SEAG				*e*S	**Sn**	**23 27 41.3**	**+1.6**
BTNK	**Botanikuri**	**1.46**	**258**	P	**Pn**	**23 27 21.7**	**-0.3**
BTNK				S	**Sn**	**23 27 40.8**	**+0.6**
BTNK	**Botanikuri**	**1.46**	**258**	*i* P	**Pn**	**23 27 21.8**	**-0.3**
BTNK				IAML		23 27 45.0	
	comp=E,220nm,1.0s						
BTNK	**Botanikuri**	**1.46**	**258**	*e*P	**Pn**	**23 27 21.7**	**-0.3**
BTNK				*e*S	**Sn**	**23 27 40.7**	**+0.6**
BTNK	**Botanikuri**	**1.46**	**258**	P	**Pn**	**23 27 21.8**	**-0.3**
BTNK				S	**Sn**	**23 27 42.8**	**+2.7**
GDB	**GEDABAY**	**1.46**	**210**	P	**Pn**	**23 27 21.3**	**-0.9**
	SNR=61						
GDB				S	**Sn**	**23 27 40.1**	**-0.3**
QUBA	**Quba, Azerbaij**	**1.48**	**115**	P	**Pn**	**23 27 23.5**	**+1.1**
	SNR=27						
QUBA				S	**Sn**	**23 27 44.3**	**+3.6**
IML	**Ismayilli**	**1.64**	**137**	P	**Pn**	**23 27 24.6**	**+0.1**
	SNR=13						
IML				S	**Sn**	**23 27 46.2**	**+1.7**
PNSH	**Pansheti**	**1.68**	**293**	P	**Pn**	**23 27 25.6**	**+0.5**
PNSH				S	**Sn**	**23 27 45.9**	**+0.2**
PNSH	**Pansheti**	**1.68**	**293**	*e*P	**Pn**	**23 27 25.6**	**+0.5**
PNSH				*e*S	**Sn**	**23 27 45.9**	**+0.2**
GUDG	**Gudauri**	**1.72**	**287**	P	**Pn**	**23 27 27.0**	**+1.2**
GUDG	**Gudauri**	**1.72**	**287**	*e*P	**Pn**	**23 27 27.0**	**+1.2**
KMGR	**Komgaron**	**1.73**	**309**	*e*P	**Pn**	**23 27 27.0**	**+1.3**
KMGR				*e*S	**Sn**	**23 27 50.6**	**+3.9**
KMGR	**Komgaron**	**1.73**	**309**	*i* Pg	**Pn**	**23 27 27.0**	**+1.3**
KMGR				*e*Sg	**Sn**	**23 27 51.0**	**+4.3**
BRDA	**Brd**	**1.77**	**168**	P	**Pn**	**23 27 26.9**	**+0.8**
	SNR=40						
BRDA				S	**Sn**	**23 27 49.1**	**+1.6**
KZRT	**Kazreti**	**1.83**	**251**	P	**Pn**	**23 27 26.6**	**-0.5**
KZRT				S	**Sn**	**23 27 48.8**	**-0.4**
KZRT	**Kazreti**	**1.83**	**251**	*e*P	**Pn**	**23 27 26.6**	**-0.5**
KZRT				*e*S	**Sn**	**23 27 48.8**	**-0.4**
VLKR	**Vladikavkaz**	**1.83**	**306**	*e*Pg	**Pn**	**23 27 28.7**	**+1.6**
VLKR				*e*Sg	**Sn**	**23 27 52.1**	**+2.9**
PQL	**Pirkuli**	**1.86**	**130**	P	**Pn**	**23 27 28.4**	**+0.8**
	SNR=16						
PQL				S	**Sn**	**23 27 52.9**	**+2.8**
ZRD	**Zardab**	**1.87**	**156**	P	**Pn**	**23 27 27.9**	**+0.4**
	SNR=17						
ZRD				S	**Sn**	**23 27 50.6**	**+0.6**
SIZA	**Siyzn**	**1.88**	**118**	P	**Pn**	**23 27 28.9**	**+1.0**
	SNR=15						
SIZA				S	**Sn**	**23 27 54.2**	**+3.6**
AGDM	**Agdam**	**1.91**	**171**	P	**Pn**	**23 27 28.3**	**+0.2**
	SNR=35						
AGDM				S	**Sn**	**23 27 52.9**	**+1.9**
KDMR	**Kurdemir**	**1.96**	**145**	P	**Pn**	**23 27 28.6**	**-0.2**
	SNR=5.0						
KDMR				S	**Sn**	**23 27 54.2**	**+1.8**
LACR	**Lac**	**1.97**	**296**	*e*P	**Pn**	**23 27 29.8**	**+0.8**
LACR				*e*S	**Sn**	**23 27 54.0**	**+1.3**
LACR	**Lac**	**1.97**	**296**	*e*Pg	**Pn**	**23 27 29.9**	**+0.8**
LACR				*e*Sg	**Sn**	**23 27 54.1**	**+1.5**
DMNI	**Dmanisi**	**2.00**	**251**	P	**Pn**	**23 27 28.6**	**-0.9**
DMNI				S	**Sn**	**23 27 52.8**	**-0.6**
DMNI	**Dmanisi**	**2.00**	**251**	*e*P	**Pn**	**23 27 28.5**	**-0.9**
DMNI				*e*S	**Sn**	**23 27 52.8**	**-0.6**
TRLG	**Trialeti**	**2.00**	**258**	P	**Pn**	**23 27 29.1**	**-0.4**
TRLG				S	**Sn**	**23 27 53.4**	**-0.2**
TRLG	**Trialeti**	**2.00**	**258**	*e*P	**Pn**	**23 27 29.1**	**-0.4**
TRLG				*e*S	**Sn**	**23 27 53.3**	**-0.2**
STE	**Stepanavan**	**2.02**	**241**	⇓*i* P	**Pn**	**23 27 29.6**	**-0.1**
STE				⇓*i* S	**Sn**	**23 27 55.9**	**+2.0**
ATGJ	**Altiaghaj**	**2.02**	**123**	P	**Pn**	**23 27 30.0**	**+0.2**
	SNR=8.8						
ATGJ				S	**Sn**	**23 27 56.8**	**+2.8**
BTKR	**Batakoyurt**	**2.11**	**311**	*e*P	**Pn**	**23 27 32.3**	**+1.4**
BTKR				*e*S	**Sn**	**23 27 59.5**	**+3.6**
BTKR	**Batakoyurt**	**2.11**	**311**	*e*Pg	**Pn**	**23 27 31.8**	**+0.9**
BTKR				*e*Sg	**Sn**	**23 27 56.5**	**+0.6**
ARNR	**Ardon**	**2.15**	**304**	*i* P	**Pn**	**23 27 32.3**	**+1.0**
ARNR				pmax	pmax		
	comp=Z,13nm,0.1s						
ARNR	**Ardon**	**2.15**	**304**	*i* Pg	**Pn**	**23 27 32.4**	**+1.0**
ARNR				*e*Sg	**Sn**	**23 27 58.9**	**+2.0**
BRNG	**Burnasheti**	**2.18**	**261**	P	**Pn**	**23 27 32.0**	**0.0**
BRNG				S	**Sn**	**23 27 58.4**	**+0.3**
ZEI	**Tsey**	**2.22**	**292**	*e*P	**Pn**	**23 27 33.1**	**+0.5**
ZEI	**Tsey**	**2.22**	**292**	*e*Pg	**Pn**	**23 27 33.0**	**+0.3**
ZEI				*e*Sg	**Sn**	**23 28 00.7**	**+1.6**
GBS	**Qobustan**	**2.23**	**130**	P	**Pn**	**23 27 33.9**	**+1.3**
	SNR=7.7						
GBS				S	**Sn**	**23 28 00.1**	**+1.2**
KORR	**Kora**	**2.23**	**300**	*e*Pg	**Pn**	**23 27 33.0**	**+0.4**
KORR				*e*Sg	**Sn**	**23 28 02.1**	**+3.0**
KAPZ	**Kaputan**	**2.26**	**223**	*i* P	**Pn**	**23 27 33.2**	**+0.2**
KAPZ				*i* S	**Sn**	**23 28 00.8**	**+1.0**
TRKR	**Terskaya**	**2.26**	**321**	*i* P	**Pn**	**23 27 33.4**	**+0.6**
TRKR				pmax	pmax		
	comp=Z,120nm,0.4s						
TRKR	**Terskaya**	**2.26**	**321**	*i* Pn	**Pn**	**23 27 33.2**	**+0.4**
TRKR				*e*Sn	**Sn**	**23 28 00.6**	**+1.1**
BLQ	**Beylaqan**	**2.36**	**164**	P	**Pn**	**23 27 33.9**	**-0.4**
	SNR=6.5						
BLQ				S	**Sn**	**23 28 02.8**	**+0.7**
GNI	**Garni**	**2.37**	**220**	*i* P	**Pn**	**23 27 35.3**	**+0.8**
GNI				*i* S	**Sn**	**23 28 05.4**	**+2.9**
GNI	**Garni**	**2.37**	**220**	*i* P	**Pn**	**23 27 34.9**	**+0.3**
GNI	**Garni**	**2.37**	**220**	*e*Pn	**Pn**	**23 27 35.5**	**+0.9**
GNI				*e*Sn	**Sn**	**23 28 05.2**	**+2.7**
STDR	**Stavd-Durt**	**2.38**	**306**	*e*Pn	**Pn**	**23 27 35.5**	**+0.9**
STDR				*e*Sn	**Sn**	**23 28 03.5**	**+0.8**
BKRG	**Bakuriani**	**2.39**	**265**	P	**Pn**	**23 27 35.0**	**+0.2**
BKRG				S	**Sn**	**23 28 04.6**	**+1.5**
BKRG	**Bakuriani**	**2.39**	**265**	*e*P	**Pn**	**23 27 35.0**	**+0.2**
BKRG				*e*S	**Sn**	**23 28 04.5**	**+1.5**
BGD	**Bogdanovka**	**2.44**	**254**	P	**Pn**	**23 27 35.7**	**+0.1**
BGD	**Bogdanovka**	**2.44**	**254**	*e*P	**Pn**	**23 27 35.7**	**+0.1**
AKH	**Akhalkalaki**	**2.48**	**257**	P	**Pn**	**23 27 38.1**	**+2.0**
AKH	**Akhalkalaki**	**2.48**	**257**	*e*P	**Pn**	**23 27 38.0**	**+2.0**
LSNR	**Lesken**	**2.48**	**302**	*e*Pn	**Pn**	**23 27 35.6**	**-0.4**
LSNR				*e*Sn	**Sn**	**23 28 06.0**	**+0.8**
DIGR	**Digorskoe uzhe**	**2.48**	**292**	*e*Pn	**Pn**	**23 27 36.9**	**+0.7**
DIGR				*e*Sn	**Sn**	**23 28 05.9**	**+0.5**
ONI	**Oni**	**2.49**	**285**	P	**Pn**	**23 27 37.0**	**+1.0**
ONI	**Oni**	**2.49**	**285**	*e*P	**Pn**	**23 27 37.0**	**+1.0**
ONI	**Oni**	**2.49**	**285**	*e*Pn	**Pn**	**23 27 37.1**	**+1.0**
ONI				*e*Sn	**Sn**	**23 28 06.1**	**+0.9**
SAAT	**Saatly**	**2.50**	**148**	P	**Pn**	**23 27 35.1**	**-1.0**
SAAT				S	**Sn**	**23 28 05.5**	**+0.1**
PRTR	**Priterechnaya**	**2.50**	**315**	P	**Pn**	**23 27 36.7**	**+0.5**
PRTR				*e*S	**Sn**	**23 28 06.9**	**+1.4**
PRTR	**Priterechnaya**	**2.50**	**315**	*e*Pn	**Pn**	**23 27 36.5**	**+0.3**
PRTR				*e*Sn	**Sn**	**23 28 06.0**	**+0.5**
NRKZ	**NAREK**	**2.52**	**219**	*i* P	**Pn**	**23 27 38.3**	**+1.7**
NRKZ				*i* S	**Sn**	**23 28 09.8**	**+3.5**
QRD	**Qoradiz**	**2.57**	**169**	P	**Pn**	**23 27 36.7**	**-0.5**
QRD				S	**Sn**	**23 28 07.9**	**+0.6**
HYR	**Heyderabad**	**2.67**	**212**	P	**Pn**	**23 27 38.4**	**-0.2**
	SNR=3.6						
HYR				S	**Sn**	**23 28 10.3**	**+0.4**
ALIB	**Äli-Bayra**	**2.68**	**139**	P	**Pn**	**23 27 38.4**	**-0.2**
ALIB				S	**Sn**	**23 28 12.3**	**+2.5**
NCK	**Nalchik**	**2.74**	**304**	*e*Pn	**Pn**	**23 27 39.8**	**+0.3**
NCK				*e*Sn	**Sn**	**23 28 11.7**	**+0.3**
SBZ	**Shahbuz**	**2.74**	**199**	P	**Pn**	**23 27 38.7**	**-0.9**
SBZ				S	**Sn**	**23 28 13.0**	**+1.5**
TKB	**Tkibuli**	**2.78**	**279**	P	**Pn**	**23 27 44.0**	**+3.9**
TKB				S	**Sn**	**23 28 20.5**	**+8.0**
TKB	**Tkibuli**	**2.78**	**279**	*e*P	**Pn**	**23 27 43.9**	**+3.9**
TKB				*e*S	**Sn**	**23 28 20.5**	**+8.0**
GOBA	**Gobu**	**2.78**	**124**	P	**Pn**	**23 27 41.5**	**+1.4**
GOBA				S	**Sn**	**23 28 14.6**	**+2.1**
ABS	**Abastumani**	**2.92**	**267**	P	**Pn**	**23 27 42.0**	**0.0**
ABS	**Abastumani**	**2.92**	**267**	*e*P	**Pn**	**23 27 42.0**	**0.0**
KBTC	**Kuba-Taba**	**3.03**	**308**	*e*Pn	**Pn**	**23 27 43.0**	**-0.5**
KBTC				*e*Sn	**Sn**	**23 28 17.3**	**-1.3**
GLBA	**Clilabad**	**3.04**	**154**	P	**Pn**	**23 27 43.5**	**0.0**
	SNR=45						
GLBA				S	**Sn**	**23 28 18.8**	**+0.2**
ORD	**Ordubad**	**3.11**	**190**	P	**Pn**	**23 27 45.3**	**+0.7**
ORD				S	**Sn**	**23 28 19.9**	**-0.7**
NEY	**Neytrino**	**3.20**	**294**	*e*Pn	**Pn**	**23 27 46.5**	**+0.7**
NEY				*e*Sn	**Sn**	**23 28 22.6**	**-0.2**
YRD	**Yardimli**	**3.29**	**159**	P	**Pn**	**23 27 46.7**	**-0.5**
	SNR=65						
YRD				S	**Sn**	**23 28 23.6**	**-1.6**
KBZ	**Khabaz**	**3.29**	**303**	Pn	**Pn**	**23 27 45.7**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=106,slow=5.3,SNR=18						
KBZ				Sn	**Sn**	**23 28 23.0**	**-1.9**
	comp=Z,1.2nm,0.3s,baz=122,slow=8.9,SNR=4.8						
KBZ	**Khabaz**	**3.29**	**303**	*i* P	**Pn**	**23 27 46.0**	**-1.0**
KBZ	**Khabaz**	**3.29**	**303**	*e*Pn	**Pn**	**23 27 46.2**	**-0.8**
KBZ				*e*Sn	**Sn**	**23 28 26.0**	**+1.1**
PYA1	**Pyatigorsk**	**3.36**	**309**	*e*Pn	**Pn**	**23 27 47.1**	**-0.8**
SHA1	**Shidzhatmaz**	**3.45**	**302**	*i* P	**Pn**	**23 27 48.9**	**-0.5**
SHA1	**Shidzhatmaz**	**3.45**	**302**	*e*Pn	**Pn**	**23 27 49.0**	**-0.5**
KIV	**Kislovodsk**	**3.54**	**305**	*i* P	**Pn**	**23 27 49.4**	**-1.1**
KIV				*i* S	**Sn**	**23 28 29.6**	**-1.6**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.9s						
KIV				smax	smax		
	comp=N,18nm,1.2s						
LRK	**Lerik**	**3.57**	**159**	P	**Pn**	**23 27 50.7**	**-0.3**
	SNR=84						
LRK				S	**Sn**	**23 28 31.6**	**-0.5**
LKRN	**Lenkeran, Azer**	**3.64**	**154**	P	**Pn**	**23 27 51.3**	**-0.5**
LKRN	**Lenkeran, Azer**	**3.64**	**154**	P	**Pn**	**23 27 51.3**	**-0.5**
	SNR=8.0						
LKRN				S	**Sn**	**23 28 32.3**	**-1.3**
ASTR	**Astara**	**3.78**	**154**	P	**Pn**	**23 27 53.2**	**-0.6**
	SNR=15						
ASTR				S	**Sn**	**23 28 36.6**	**-0.4**
GEYT	**Alibeck**	**9.65**	**111**	Pn	**Pn**	**23 29 10.5**	**-3.7**
	comp=N,0.1nm,0.3s,baz=306,slow=12,SNR=1.7						
BELG	**Belogornoye**	**10.42**	**3**	*i* P	**Pn**	**23 29 22.1**	**-2.4**
AKTO	**Aktyubinsk**	**11.51**	**39**	⇓Pn	**Pn**	**23 29 43.9**	**+4.5**
	comp=N,1.9nm,0.7s						
AKTO				⇓Sn	Sn	23 31 35.2	-11
	comp=N,1.4nm,0.7s						
AB31	**Akbulak array**	**11.76**	**47**	⇑Pn	**Pn**	**23 29 46.1**	**+3.3**
	comp=N,0.3nm,0.3s,baz=242,slow=15,SNR=12						
AB31				⇓Sn	Sn	23 31 44.0	-8.5
	comp=N,0.3nm,0.3s,baz=240,slow=24,SNR=8.1						
OBN	**Obninsk**	**14.72**	**337**	*i* P	**Pn**	**23 30 22.1**	**-0.6**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**14.86**	**312**	Pn	Pn	23 30 17.6	-6.9
	comp=Z,1.3nm,0.3s,baz=119,slow=11,SNR=3.1						
ARU	**Arti**	**16.35**	**24**	*c* P	**Pn**	**23 30 43.4**	**-0.2**
ARU				S	**Sn**	**23 33 48.6**	**+4.6**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.6s						
FINES	**FINESS Array B**	**23.10**	**334**	P	**P**	**23 31 55.8**	**-2.9**
	comp=Z,1.0nm,0.4s,baz=146,slow=9.4,SNR=10						
GERES	**GERESS Array B**	**24.02**	**298**	P	**P**	**23 32 07.3**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=91,slow=8.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**27.83**	**51**	P	**P**	**23 32 39.4**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=273,slow=11,SNR=1.7						
NOA	**NORSAR Array B**	**28.63**	**324**	P	P	23 32 46.4	-2.5
	comp=Z,0.7nm,0.9s,baz=108,slow=8.9,SNR=1.6						
SPITS	**Spitsbergen Ar**	**38.29**	**350**	P	**P**	**23 34 11.5**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=151,slow=18,SNR=13						
YKA	**Yellowknife Ar**	**74.78**	**351**	*i* P	**P**	**23 38 30.7**	**-0.9**

HEL 14 23:36:27.8, 67°78N×20°29E, h0km, ML1.8, Explosion
UPP 14 23:36:28.4±0.1, 67°83N×20°20E, h1km, ML1.9, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	23 36 31.1	+0.1
KUA				S	Sg	23 36 33.2	+0.4
KUA	**Kur

moment-rate function

ISC 14 23:41:28.5s−0.5,**7°52S**±0°04×**128°73E**±0°04,**h129**km,4km, **h129**km:**pP-P,n331,**σ1s**60/354,mb5.0**/92,**4C-3D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.59**	**100**	Op	**Pn**	**23 42 11.2**	**+1.3**
SAUI				Sn	**Sn**	**23 42 43.7**	**+2.1**
SAUI	**Saumlaki**	**2.59**	**100**	P	**Pn**	**23 42 10.2**	**+0.4**
SAUI				S	**Sn**	**23 42 40.8**	**-0.8**
BNDI	**Bandanaira**	**3.20**	**22**	P	**Pn**	**23 42 19.8**	**+2.1**
BNDI				S	**Sn**	**23 42 57.5**	**+1.8**
MSAI	**Masohi**	**4.15**	**3**	P	**Pn**	**23 42 31.2**	**+0.9**
NLAI	**Namlea**	**4.55**	**339**	P	**Pn**	**23 42 37.6**	**+2.0**
SOEI	**Soe**	**4.94**	**243**	Pn	**Pn**	**23 42 42.3**	**+1.4**
SOEI	**Soe**	**4.94**	**243**	P	**Pn**	**23 42 41.9**	**+1.0**
SOEI				S	**Sn**	**23 43 38.1**	**+0.9**
BATI	**Baumata**	**5.67**	**242**	P	**Pn**	**23 42 52.1**	**+1.5**
	214nm,0.3s,baz=123,slow=2.3,SNR=252						
BATI				S	**Sn**	**23 43 52.2**	**-2.6**
	604nm,0.3s,baz=89,slow=3.9,SNR=14						
BATI	**Baumata**	**5.67**	**242**	P	**Pn**	**23 42 51.8**	**+1.1**
	9.1nm2µm9µm615nm,0.6s						
BATI				S	**Sn**	**23 43 55.1**	**+0.3**
	9.1nm2µm9µm615nm,0.6s						
FAKI	**Fak Fak**	**5.76**	**38**	Pn	**Pn**	**23 42 50.6**	**-1.2**
FAKI	**Fak Fak**	**5.76**	**38**	P	**Pn**	**23 42 50.8**	**-1.0**
	1.4nm3µm212nm,0.6s						
MTN	**Manton Dam**	**5.80**	**156**	P	**Pn**	**23 42 52.5**	**+0.2**
	baz=5.9,SNR=702						
MTN				S	**Sn**	**23 43 55.9**	**-1.9**
	baz=5.9,SNR=15						
MTN	**Manton Dam**	**5.80**	**156**	Pn	**Pn**	**23 42 53.1**	**+0.8**
SANI	**Sanana**	**6.08**	**333**	P	**Pn**	**23 42 58.8**	**+2.7**
	0.8nm2µm169nm,0.8s						
KDU	**Kakadu**	**6.32**	**145**	P	**Pn**	**23 42 59.5**	**+0.1**
	baz=6.4,SNR=1000						
MMRI	**Maumere**	**6.52**	**260**	Pn	**Pn**	**23 43 03.0**	**+0.9**
MMRI	**Maumere**	**6.52**	**260**	P	**Pn**	**23 43 02.5**	**+0.4**
	1.7nm4µm370nm,0.8s						
SIJI	**Sorong**	**7.07**	**21**	P	**Pn**	**23 43 09.0**	**-0.6**
	8.6nm,0.3s,baz=143,slow=23,SNR=22						
SIJI				S	**Sn**	**23 44 22.1**	**-6.5**
	10nm,0.3s,baz=190,slow=21,SNR=9.2						
SIJI				LR	LR	23 46 31.2	
	comp=Z,258nm,21.8s,baz=126,slow=44						
SWI	**Sorong**	**7.08**	**21**	P	**Pn**	**23 43 09.5**	**-0.1**
	0.8nm2µm66nm,0.5s						
KNRA	**Kununurra**	**8.11**	**180**	Pn	**Pn**	**23 43 23.1**	**-0.4**
TNTI	**Ternate**	**8.34**	**351**	P	**Pn**	**23 43 28.6**	**+1.9**
BASI	**Baing, Sumba**	**8.49**	**251**	P	**Pn**	**23 43 27.3**	**-1.3**
	5µm380nm,0.7s						
LUWI	**Luwuk**	**8.75**	**317**	Pn	**Pn**	**23 43 35.4**	**+3.2**
LUWI	**Luwuk**	**8.75**	**317**	P	**Pn**	**23 43 34.5**	**+2.3**
	5µm409nm,1.4s						
BNSI	**Bone**	**9.12**	**289**	P	**Pn**	**23 43 38.4**	**+1.4**
	2µm171nm,1.1s						
KAPI	**Kappang**	**9.26**	**285**	P	**Pn**	**23 43 40.7**	**+1.7**
	4.8nm,0.3s,baz=122,slow=7.8,SNR=53						
KMSI	**Cibinong**	**9.33**	**329**	P	**Pn**	**23 43 42.1**	**+2.2**
	115nm,1.2s						
SRPI	**Serui, Papua**	**9.35**	**54**	P	**Pn**	**23 43 40.3**	**0.0**
SPSI	**Sidrap Palu**	**9.59**	**291**	P	**Pn**	**23 43 44.7**	**+1.3**
	2µm199nm,1.0s						
APSI	**Ampana**	**9.63**	**313**	P	**Pn**	**23 43 46.9**	**+2.9**
	1µm93nm,1.2s						
BAKI	**Biak**	**9.67**	**50**	P	**Pn**	**23 43 44.3**	**-0.3**
	5µm457nm,0.7s						
TTSI	**Tana Toraja**	**9.92**	**296**	P	**Pn**	**23 43 50.5**	**+2.6**
	2µm103nm,1.1s						
MRSI	**Marisa**	**10.43**	**319**	P	**Pn**	**23 43 57.1**	**+2.3**
	986nm42nm,0.7s						
WAMI	**Wamena**	**10.57**	**71**	P	**Pn**	**23 43 57.7**	**+1.1**
PLAI	**Plampang**	**10.92**	**262**	P	**Pn**	**23 44 00.5**	**-0.8**
	2µm212nm,0.8s						
FITZ	**Fitzroy Crossi**	**10.94**	**196**	P	**Pn**	**23 43 59.1**	**-2.4**
	13nm,0.3s,baz=16,slow=8.4,SNR=140						
FITZ				S	**Sn**	**23 45 55.2**	**-6.9**
	30nm,0.3s,baz=82,slow=13,SNR=9.0						
FITZ				LR	LR	23 48 51.9	
	comp=Z,166nm,19.7s,baz=26,slow=40						
FITZ	**Fitzroy Crossi**	**10.94**	**196**	P	**Pn**	**23 43 59.2**	**-2.4**
	baz=11,SNR=123						
FITZ				S	**Sn**	**23 45 55.4**	**-6.7**
	baz=11,SNR=8.0						
FITZ	**Fitzroy Crossi**	**10.94**	**196**		**Pn**	**23 43 59.3**	**-2.2**
TOLI2	**Tolitoli**	**11.67**	**317**	Pn	**Pn**	**23 44 14.1**	**+2.8**
TWSI	**Taliwang, Sumb**	**11.79**	**263**	P	**Pn**	**23 44 12.5**	**-0.3**
	563nm35nm,0.7s						
GENI	**Genyem**	**12.40**	**67**	P	**Pn**	**23 44 21.0**	**+0.2**
	2µm124nm,0.6s						
JAY	**Jayapura**	**12.92**	**68**	P	**Pn**	**23 44 26.9**	**-0.7**
	6.5nm,0.3s,baz=210,slow=6.3,SNR=18						
JAY	**Jayapura**	**12.92**	**68**	P	**Pn**	**23 44 27.8**	**+0.2**
	332nm31nm,0.7s						
KBKI	**Kotabaru**	**13.19**	**288**	P	**Pn**	**23 44 32.8**	**+1.8**
	53nm,0.8s						
WB0	**Warramunga Arr**	**13.36**	**156**		**Pn**	**23 44 29.9**	**-3.3**
SRBI	**Singaraja**	**13.40**	**267**	P	**Pn**	**23 44 35.4**	**+1.7**
	34nm,1.0s						
SMKI	**Samarinda**	**13.46**	**301**	P	**P**	**23 44 37.0**	**-2.2**
	64nm,0.5s						
WRAB	**Tennant Creek**	**13.49**	**157**		**Pn**	**23 44 32.0**	**-2.9**
WRA	**Warramunga Arr**	**13.50**	**157**	P	**Pn**	**23 44 32.4**	**-2.6**
	19nm,0.3s,baz=343,slow=13,SNR=268						
WRA				S	**Sn**	**23 46 57.8**	**-6.3**
	52nm,0.3s,baz=318,slow=23,SNR=12						
WRA	**Warramunga Arr**	**13.50**	**157**	Pn	**Pn**	**23 44 30.7**	**-4.3**
WB2	**Warramunga Arr**	**13.50**	**157**	P	**Pn**	**23 44 32.1**	**-2.9**
	baz=14						
WB2				S	Sn	23 46 53.3	-11
	baz=14						
WB2	**Warramunga Arr**	**13.50**	**157**		**Pn**	**23 44 31.8**	**-3.3**
WR0	**Warramunga Arr**	**13.59**	**156**		**Pn**	**23 44 32.6**	**-3.6**
BBKI	**Banjar Baru**	**14.39**	**286**	P	**P**	**23 44 49.7**	**+0.1**
	2µm208nm,1.0s						
JAGI	**Jajag, Banyuwa**	**14.46**	**265**	P	**P**	**23 44 49.9**	**-0.5**
JAGI	**Jajag, Banyuwa**	**14.46**	**265**	P	**Pn**	**23 44 48.8**	**+1.5**
KMMI	**Kalianget**	**14.65**	**271**	P	**P**	**23 44 52.6**	**+0.2**
	38nm,0.7s						
MTKI	**Muara Teweh, K**	**15.26**	**295**	P	**P**	**23 45 00.1**	**+0.9**
COEN	**Coen**	**15.57**	**115**	P	**Pn**	**23 44 60.0**	**-1.2**
	baz=16						
COEN				S	Sn	23 47 40.7	-13
	baz=16						
COEN	**Coen**	**15.57**	**115**	P	**Pn**	**23 44 59.7**	**-1.4**
COEN				IAmb	IAmb	23 45 05.6	
	comp=Z,100nm,1.2s						
MYLDM	**Lahad Datu**	**16.22**	**321**	P	**P**	**23 45 13.1**	**+3.3**
MYLDM				IAmb	IAmb	23 45 35.9	
	comp=Z,45nm,0.8s						
PSA00	**Pilbara Seismi**	**16.39**	**211**		**P**	**23 45 11.9**	**+0.2**
PSA00				IAmb	IAmb	23 45 17.7	
	comp=Z,64nm,0.7s						
QIS	**Mount Isa**	**16.70**	**142**	P	**Pn**	**23 45 14.8**	**-0.2**
	baz=17,SNR=148						
QIS				S	Sn	23 48 08.3	-13
	baz=17						
AS31	**Alice Springs**	**16.81**	**163**	P	**P**	**23 45 15.1**	**-1.2**
ASAR	**Alice Springs**	**16.81**	**163**	P	**P**	**23 45 15.6**	**-0.8**
	comp=Z,8.0nm,0.3s,baz=335,slow=8.6,SNR=178						
ASAR				S	Sn	23 48 11.5	-12
	comp=Z,4.7nm,0.3s,baz=334,slow=16,SNR=4.2						
SPMM	**Sapulut**	**17.24**	**314**	P	**Pn**	**23 45 28.0**	**+6.4**
WRKA	**Warakurna**	**17.43**	**181**	P	**P**	**23 45 23.0**	**-0.1**
	baz=18,SNR=70						
WRKA				S	S	23 48 25.7	-12
	baz=18,SNR=7.3						
PBKI	**Pangkalan Bun**	**17.64**	**285**	P	**Pn**	**23 45 29.6**	**+3.1**
	comp=Z,9µmcomp=Z,453nm,1.0s						
PMG	**Port Moresby**	**18.33**	**97**	P	**Pn**	**23 45 34.4**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=290,slow=12,SNR=13						
PMG				S	**S**	**23 48 48.7**	**-7.5**
	baz=143,slow=20,SNR=0.9						
PMG				LR	LR	23 53 35.6	
	comp=Z,360nm,19.9s,baz=254,slow=40						
PMG	**Port Moresby**	**18.33**	**97**		**Pn**	**23 45 36.3**	**+1.7**
PMG				IAmb	IAmb	23 45 38.2	
	comp=Z,132nm,1.1s						
KKM	**Kota Kinabalu**	**18.36**	**317**		**Pn**	**23 45 35.7**	**+0.6**
MTSU	**Mount Surprise**	**18.49**	**126**	P	**Pn**	**23 45 37.3**	**+0.8**
	baz=19,SNR=90						
STKI	**Sintang**	**18.78**	**293**	P	**Pn**	**23 45 40.5**	**+0.6**
SBUM	**Sibu**	**19.22**	**300**	P	**Pn**	**23 45 45.7**	**+0.7**
SBUM				IAmb	IAmb	23 45 47.6	
	comp=Z,117nm,1.5s						
SBUM	**Sibu**	**19.22**	**300**	P	**Pn**	**23 45 45.0**	**-0.1**
MANU	**Manus Island**	**19.35**	**75**	P	**Pn**	**23 45 46.8**	**+0.2**
MANU				IAmb	IAmb	23 45 51.7	
	comp=Z,36nm,0.7s						
KSM	**Kuching**	**20.43**	**295**	P	**P**	**23 45 56.9**	**+1.1**
KSM				IAmb	IAmb	23 46 02.0	
	comp=Z,36nm,0.9s						
KSM	**Kuching**	**20.43**	**295**	P	Pn	23 45 59.0	-0.2
GIRL	**Giralia**	**20.51**	**221**	P	Pn	23 45 59.2	-0.9
	baz=21,SNR=7.4						
CTA	**Charters Tower**	**21.09**	**128**	P	**P**	**23 46 04.3**	**+1.4**
	comp=Z,15nm,0.6s,baz=304,slow=14,SNR=13						
CTAO	**Charters Tower**	**21.09**	**128**	P	**P**	**23 46 04.5**	**+1.6**
CTAO				IAmb	IAmb	23 46 53.0	
	comp=Z,49nm,1.0s						
TPI	**Tanjungpandan**	**21.51**	**282**	P	**P**	**23 46 09.0**	**+1.6**
	comp=Z,338nmcomp=Z,21nm,1.0s						
PPBI	**Pangkal Pinang**	**23.12**	**282**	P	**P**	**23 46 27.1**	**+3.5**
	comp=Z,46nm,1.1s						
FORT	**Forrest**	**23.15**	**181**	P	**P**	**23 46 25.1**	**+1.5**
	baz=23,SNR=280						
FORT				S	Sn	23 50 40.6	-15
	baz=23						
FORT	**Forrest**	**23.15**	**181**	P	**P**	**23 46 24.6**	**+1.0**
QLP	**Quilpie**	**24.02**	**144**	P	**P**	**23 46 33.0**	**+1.4**
	baz=24,SNR=42						
PMBI	**Palembang**	**24.28**	**280**	P	**P**	**23 46 36.9**	**+2.8**
	comp=Z,17µmcomp=Z,93nm,0.6s						
MORW	**Morawa**	**24.55**	**208**	P	**P**	**23 46 37.5**	**+1.1**
	baz=25,SNR=26						
MORW	**Morawa**	**24.55**	**208**	P	**P**	**23 46 38.2**	**+1.8**
KMBL	**Kambalda**	**24.58**	**194**	P	**P**	**23 46 38.0**	**+1.4**
	baz=25,SNR=59						
BLDU	**Ballidu**	**25.59**	**205**	P	**P**	**23 46 46.8**	**+1.0**
	baz=26,SNR=22						
KLBR	**Kellerberrin**	**26.05**	**202**	P	**P**	**23 46 51.3**	**+1.4**
	baz=26,SNR=30						
BBOO	**Buckleboo**	**26.07**	**166**	P	**P**	**23 46 51.3**	**+1.1**
	baz=26,SNR=204						
BBOO	**Buckleboo**	**26.07**	**166**	P	**P**	**23 46 51.2**	**+1.1**
RMQ	**Roma**	**26.81**	**137**	P	**P**	**23 46 58.8**	**+2.0**
	baz=27,SNR=4.5						
MUN	**Mundaring**	**26.99**	**204**	P	**P**	**23 46 59.3**	**+0.9**
	baz=27,SNR=4.6						
STKA	**Stephens Creek**	**27.04**	**155**	P	**P**	**23 47 00.2**	**+1.3**
	comp=Z,37nm,0.5s,baz=326,slow=9.5,SNR=107						
STKA				LR	LR	23 59 05.6	
	comp=Z,256nm,18.6s,baz=322,slow=39						
STKA	**Stephens Creek**	**27.04**	**155**	P	**P**	**23 47 00.2**	**+1.3**
	baz=27,SNR=89						
STKA	**Stephens Creek**	**27.04**	**155**	P	**P**	**23 47 00.2**	**+1.3**
NWAO	**Narrogin (SRO)**	**27.44**	**201**	P	**P**	**23 47 03.7**	**+1.3**
	comp=Z,31nm,0.4s,baz=43,slow=7.9,SNR=37						
NWAO	**Narrogin (SRO)**	**27.44**	**201**	P	**P**	**23 47 03.7**	**+1.3**
	baz=28,SNR=35						
NWAO	**Narrogin (SRO)**	**27.44**	**201**	P	**P**	**23 47 03.4**	**+1.0**
HTT	**Hallett**	**27.46**	**161**	P	**P**	**23 47 03.9**	**+1.3**
	baz=28,SNR=53						
CMSA	**Cobar Meteorol**	**28.67**	**149**	P	**P**	**23 47 15.0**	**+1.7**
	baz=29,SNR=82						
IPM	**Ipoh**	**30.10**	**292**	P	**P**	**23 47 28.0**	**+1.8**
IPM				IAmb	IAmb	23 47 28.1	
	comp=Z,15nm,0.6s						
MNSI	**Mandailing Nat**	**30.22**	**285**	P	**P**	**23 47 28.1**	**+0.8**
	comp=Z,27nm,0.7s						
KULM	**Kulim**	**30.77**	**294**	P	**P**	**23 47 32.7**	**+0.6**
KULM				IAmb	IAmb	23 47 48.4	
	comp=Z,98nm,2.0s						
HNR	**Honiara**	**30.93**	**96**	P	**P**	**23 47 34.6**	**+1.1**
ARMA	**Armidale**	**31.30**	**140**	P	**P**	**23 47 38.4**	**+1.6**
	baz=31,SNR=5.5						
ARMA	**Armidale**	**31.30**	**140**	P	**P**	**23 47 39.1**	**+2.3**
RPSI	**Rantau Prapat**	**31.42**	**288**	P	**P**	**23 47 39.3**	**+1.5**
RPSI				IAmb	IAmb	23 47 41.3	
	comp=Z,14nm,0.6s						
ARPS	**Mount Arapiles**	**31.48**	**160**	P	**P**	**23 47 40.3**	**+2.3**
	baz=32,SNR=57						
YNG	**Young**	**32.24**	**149**	P	**P**	**23 47 47.0**	**+2.2**
	baz=32,SNR=19						
GSI	**Gunungsitoli**	**32.29**	**284**	P	**P**	**23 47 45.5**	**0.0**
GSI				PcP	**PcP**	**23 50 32.0**	**+1.2**
UBPT	**Khong Chiam**	**32.31**	**315**	P	**P**	**23 47 46.1**	**+0.5**
UBPT				IAmb	IAmb	23 47 46.5	
	comp=Z,19nm,0.6s						
CAN	**Canberra**	**33.34**	**149**	P	**P**	**23 47 57.2**	**+2.8**
CAN				IAmb	IAmb	23 47 58.0	
	comp=Z,33nm,0.8s						
CAN				PcP	**PcP**	**23 50 35.0**	**+1.5**
TOO	**Toolangi**	**33.57**	**156**	P	**P**	**23 47 59.3**	**+3.0**
	baz=34,SNR=38						
TOO	**Toolangi**	**33.57**	**156**	P	**P**	**23 47 59.6**	**+3.3**
LHMI	**Lhok Sumawe**	**34.14**	**291**	P	**P**	**23 48 01.9**	**+0.3**
JOW	**Kunigami**	**34.15**	**359**	P	**P**	**23 48 01.2**	**-0.2**
PHIT	**Phitsanulok**	**37.23**	**311**	P	**P**	**23 48 28.7**	**+0.9**
UTTA	**Uttaradit**	**37.47**	**312**	P	**P**	**23 48 30.2**	**+0.4**
SLVN	**Son La**	**37.63**	**320**	P	**P**	**23 48 32.1**	**+0.9**
UMPA	**Umpang Tak**	**37.81**	**309**	P	**P**	**23 48 33.0**	**+0.2**
SANVU	**Saraoutou**	**38.47**	**105**	P	**P**	**23 48 40.0**	**+1.7**
JSU	**Suzuyama**	**38.84**	**2**	P	**P**	**23 48 40.5**	**-0.7**
CM36	**Chiang Mai Arr**	**39.03**	**312**	P	**P**	**23 48 43.0**	**0.0**
CM04	**Chiang Mai Arr**	**39.05**	**312**	P	**P**	**23 48 43.0**	**-0.1**
CM09	**Chiang Mai Arr**	**39.07**	**312**	P	**P**	**23 48 43.7**	**+0.4**
CM05	**Chiang Mai Arr**	**39.07**	**312**	P	**P**	**23 48 43.0**	**-0.3**
CM01	**Chiang Mai Arr**	**39.08**	**312**	P	**P**	**23 48 43.0**	**-0.3**
CM35	**Chiang Mai Arr**	**39.09**	**312**	P	**P**	**23 48 43.0**	**-0.5**
CM02	**Chiang Mai Arr**	**39.09**	**312**	P	**P**	**23 48 43.9**	**+0.4**
CM31	**Chiang Mai Arr**	**39.11**	**312**	P	**P**	**23 48 44.0**	**+0.4**
CM31	**Chiang Mai Arr**	**39.11**	**312**	P	**P**	**23 48 44.6**	**+1.0**
CM31				IAmb	IAmb	23 48 44.9	
	comp=Z,21nm,1.1s						
CM31				PcP	**PcP**	**23 50 52.1**	**+1.2**
CMAR	**Chiang Mai Arr**	**39.11**	**312**	P	**P**	**23 48 43.8**	**+0.1**
	comp=Z,9.9nm,0.8s,baz=144,slow=7.3,SNR=96						
CMAR				PcP	**PcP**	**23 50 51.8**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=163,slow=2.4,SNR=16						
CMAR				ScP	**ScP**	**23 54 26.7**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=156,slow=3.1,SNR=8.1						
CMAR	**Chiang Mai Arr**	**39.11**	**312**	P	**P**	**23 48 43.2**	**-0.4**
CMAR					**PcP**	**23 50 51.2**	**+0.3**
CM13	**Chiang Mai Arr**	**39.12**	**312**	P	**P**	**23 48 43.0**	**-0.7**
CM15	**Chiang Mai Arr**	**39.12**	**312**	P	**P**	**23 48 44.0**	**+0.3**
CM34	**Chiang Mai Arr**	**39.20**	**312**	P	**P**	**23 48 44.0**	**-0.4**
CM32	**Chiang Mai Arr**	**39.30**	**312**	P	**P**	**23 48 45.0**	**-0.2**
CMMT	**Chiang Mai**	**39.33**	**312**	P	**P**	**23 48 44.4**	**-1.0**
	comp=Z,0.0nmcomp=Z,151nmcomp=Z,13nm,1.0s						
CHTO	**Chiang Mai**	**39.33**	**312**	P	**P**	**23 48 45.5**	**+0.1**
CHTO				IAmb	IAmb	23 48 46.6	
	comp=Z,22nm,0.9s						
CHTO				PcP	**PcP**	**23 50 52.5**	**+0.9**
CM33	**Chiang Mai Arr**	**39.33**	**312**	P	**P**	**23 48 45.0**	**-0.5**
MHMT	**Maesariang**	**39.70**	**310**	P	**P**	**23 48 51.5**	**+3.0**
GYA	**Guiyang**	**39.99**	**328**	⇓P	**P**	**23 48 50.9**	**0.0**
GYA				pP	pwP	23 49 21.1	-2.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,170nm,4.9s						
WHN	**Wuhan**	**40.28**	**341**	⇓P	**P**	**23 48 53.3**	**+0.2**
WHN				pmax	pmax		
	comp=Z,38nm,0.7s						
NJ2	**Nanjing**	**40.46**	**347**	*e*P	**P**	**23 48 56.0**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	**Kunming**	**41.14**	**323**	⇑P	**P**	**23 49 01.6**	**+1.0**
KMI				pP	pwP	23 49 32.3	-0.2
KMI				pmax	pmax		
	comp=Z,26nm,0.8s						
KMI				pmax	pmax		
	comp=Z,130nm,3.7s						
KMI				LR	LR		
	comp=Z,140nm,7.9s						
KMI				LR	LR		
	comp=Z,97nm,11.2s						
KMI				LR	LR		
	comp=Z,110nm,10.2s						
ENH	**Enshi**	**41.87**	**335**	P	**P**	**23 49 04.6**	**-1.5**
JHS	**Saijyo**	**42.49**	**5**	P	**P**	**23 49 10.4**	**-0.7**
JHS				IAmb	IAmb	23 50 37.0	
	comp=Z,32nm,1.2s						
JWT	**Wachi**	**43.03**	**8**	P	**P**	**23 49 14.7**	**-0.7**
JWT				IAmb	IAmb	23 49 16.4	
	comp=Z,18nm,0.6s						
MAT	**Matsushiro**	**44.72**	**11**	P	**P**	**23 49 26.8**	**-2.1**
MJAR	**Matsushiro Arr**	**44.72**	**11**	P	**P**	**23 49 26.3**	**-2.6**
	comp=Z,12nm,0.9s,baz=189,slow=9.6,SNR=14						
MJAR	**Matsushiro Arr**	**44.72**	**11**	P	**P**	**23 49 27.5**	**-1.5**
KSAR	**Wonju Array Be**	**44.73**	**359**	P	**P**	**23 49 28.5**	**-0.5**
KSRS	**Korea Array**	**44.74**	**359**	P	**P**	**23 49 27.8**	**-1.2**
	comp=Z,4.0nm,0.7s,baz=176,slow=10,SNR=18						
KSRS				pP	**pP**	**23 49 58.5**	**+1.1**
	comp=Z,4.3nm,0.9s,baz=175,slow=12,SNR=4.0						
KSRS				LR	LR	00 05 36.9	
	comp=Z,29nm,20.5s,baz=170,slow=32						
KS19	**Wonju Array Si**	**44.79**	**359**	P	**P**	**23 49 29.1**	**-0.3**
KS19				IAmb	IAmb	23 50 00.1	
	comp=Z,92nm,1.9s						
CD2	**Chengdu**	**45.08**	**329**	P	**P**	**23 49 30.9**	**-1.0**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
XAN	**Xi'an**	**45.39**	**337**	IAmb	IAmb	23 49 33.6	
	comp=Z,23nm,0.9s						
JSD	**Sado**	**46.18**	**10**	P	**P**	**23 49 40.3**	**-0.1**
JSD				IAmb	IAmb	23 49 40.9	
	comp=Z,34nm,0.9s						
BJT	**Baijiatuau**	**48.70**	**347**	IAmb	IAmb	23 49 59.7	
	comp=Z,15nm,0.9s						
BJI	**Beijing**	**48.72**	**347**	P	**P**	**23 49 59.1**	**-0.9**
BJI				pmax	pmax		
	comp=Z,16nm,0.7s						
MSVF	**Nonsavu**	**49.06**	**107**	P	**P**	**23 50 05.8**	**+2.7**
MSVF				IAmb	IAmb	23 50 06.0	
	comp=Z,13nm,0.8s						
LZH	**Lanzhou**	**49.28**	**333**	⇑P	**P**	**23 50 04.6**	**+0.1**
LZH				sP	sP	23 50 46.8	-0.4
LZH				pmax	pmax		
	comp=Z,77nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.8s						
PALK	**Pallekele**	**50.09**	**286**	P	**P**	**23 50 10.6**	**-0.3**
PALK				PcP	**PcP**	**23 51 29.7**	**+0.9**
HHC	**Hu-ho-hao-te**	**50.65**	**343**	*e*P	**P**	**23 50 17.0**	**+2.2**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,35nm,5.5s						
WHZ	**Wether Hill Ro**	**50.99**	**145**	P	**P**	**23 50 18.4**	**+1.3**
QRZ	**Quartz Range**	**51.12**	**138**	P	**P**	**23 50 21.5**	**+3.3**
USA0B	**Ussuriysk Arra**	**51.56**	**3**	P	**P**	**23 50 20.8**	**-0.5**
USA0B				IAmb	IAmb	23 50 21.4	
	comp=Z,29nm,1.6s						
USRK	**Ussuriysk Ar.**	**51.56**	**3**	P	**P**	**23 50 20.5**	**-0.8**
	comp=Z,5.1nm,0.6s,baz=187,slow=7.3,SNR=14						
USRK				pP	**pP**	**23 50 50.1**	**-0.1**
	comp=Z,4.0nm,0.8s,baz=196,slow=7.7,SNR=4.5						
USRK	**Ussuriysk Ar.**	**51.56**	**3**	P	**P**	**23 50 19.9**	**-1.4**
RPZ	**Rata Peaks**	**51.61**	**141**	P	**P**	**23 50 23.9**	**+2.1**
LSA	**Lhasa**	**51.71**	**317**	P	**P**	**23 50 23.1**	**-0.2**
LSA				IAmb	IAmb	23 50 24.6	
	comp=Z,15nm,0.6s						
MDJ	**Mudanjiang**	**51.90**	**1**	P	**P**	**23 50 25.1**	**+1.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,69nm,4.4s						
LTZ	**Lake Taylor**	**51.90**	**140**	P	**P**	**23 50 26.3**	**+2.3**
TUWZ	**Tuamarina**	**52.35**	**138**	P	**P**	**23 50 28.5**	**+1.2**
ODAN	**Odare**	**52.65**	**312**	*e*P	**P**	**23 50 29.3**	**-0.7**
	comp=Z,44nm,0.5s						
TAPN	**Taplejung**	**52.70**	**313**	*e*P	**P**	**23 50 29.7**	**-0.7**
	comp=Z,37nm,0.5s						
BKZ	**Black Stump Fm**	**53.14**	**134**	P	**P**	**23 50 35.1**	**+1.8**
RAMN	**Ramite**	**53.28**	**312**	*e*P	**P**	**23 50 34.3**	**-0.4**
	comp=Z,102nm,0.5s						
BFZ	**Birch Farm**	**53.59**	**136**	P	**P**	**23 50 38.1**	**+1.7**
GTA	**Gaotai**	**53.83**	**332**	⇑P	**P**	**23 50 38.1**	**-0.2**
GTA				pP	pP	23 51 08.6	+1.3
GTA				sP	sP	23 51 23.3	+2.2
GTA				pmax	pmax		
	comp=Z,42nm,0.7s						
GTA				pmax	pmax		
	comp=Z,120nm,4.0s						
GTA				LR	LR		
	comp=Z,70nm,14.2s						
GTA				LR	LR		
	comp=Z,78nm,15.3s						
GTA				LR	LR		
	comp=Z,89nm,14.5s						
MXZ	**Matakaoa Point**	**53.86**	**131**	P	**P**	**23 50 40.4**	**+2.0**
JIRN	**Jiri**	**53.98**	**312**	*e*P	**P**	**23 50 39.2**	**-0.7**
	comp=Z,33nm,0.6s						
GUN	**Gumba**	**54.35**	**312**	*e*P	**P**	**23 50 41.8**	**-0.8**

comp=Z,26nm,1.0s,baz=323
MAKZ Makanchi 68.15 327 P **P** **23 52 14.6 -0.2**
MAKZ IAmb IAmb 23 52 15.6
comp=Z,27nm,1.2s
TNSS Tian-Shan 68.81 322 *e*P **P** **23 52 18.6 -0.9**
baz=322
MDOK Medeo 68.82 322 *e*P **P** **23 52 18.4 -0.8**
baz=322
AAA Alma-Ata 68.93 322 *e*P **P** **23 52 19.4 -0.4**
baz=322
TDK Taldyqorghan 69.05 324 *e*P **P** **23 52 20.0 -0.4**
comp=Z,23nm,1.4s,baz=324
MA2 Magadan 69.15 12 P **P** **23 52 20.2 -0.5**
MA2 IAmb IAmb 23 52 21.6
comp=Z,14nm,0.9s
YAK Yakutsk 69.34 0 P **P** **23 52 20.9 -0.8**
TKM2 Tokmak 2 69.58 321 P **P** **23 52 24.1 +0.1**
SNR=16
KBK Karagaybulak 69.85 321 P **P** **23 52 26.1 +0.5**
SNR=5.2
UCH Uchtor 69.90 320 P **P** **23 52 26.6 +0.3**
SNR=17
RAR Rarotonga 70.11 110 P **P** **23 52 28.8 +1.4**
RAR IAmb IAmb 23 52 29.9
comp=Z,19nm,0.8s
AAK Ala-Archa 70.13 320 P **P** **23 52 27.7 +0.5**
SNR=26
AAK Ala-Archa 70.13 320 P **P** **23 52 27.5 +0.2**
AAK IAmb IAmb 23 52 28.8
comp=Z,26nm,1.1s
KBL Kabul 70.14 311 P **P** **23 52 25.8 -1.8**
CHMS Chumysh 70.15 321 P **P** **23 52 27.2 -0.1**
SNR=7.3
AML Almayashu 70.38 320 P **P** **23 52 29.4 +0.3**
SNR=30
USP Ospenovka 70.45 321 P **P** **23 52 29.1 +0.1**
SNR=31
SGDS Sogindy 70.47 321 *e*P **P** **23 52 28.6 -0.7**
comp=Z,6.4nm,0.7s,baz=321
EKS2 Erkin-Say 70.59 320 P **P** **23 52 30.7 +0.6**
SNR=38
GAR Garm 71.14 315 P **P** **23 52 32.4 -1.1**
GAR IAmb IAmb 23 52 35.6
comp=Z,27nm,1.0s
SEM Semipalatinsk 71.29 330 *e*P **P** **23 52 32.6 -1.7**
comp=Z,11nm,0.7s,baz=330
ZAA0 Zalesovo Array 71.49 334 P **P** **23 52 33.8 -1.3**
ZAA0 IAmb IAmb 23 52 35.4
comp=Z,14nm,0.7s
ZALV Zalesovo Beam 71.49 334 P **P** **23 52 33.7 -1.4**
comp=Z,13nm,0.6s,baz=121,slow=4.6,SNR=63
ZALV pP **pP** **23 53 05.4 -0.7**
comp=Z,5.6nm,0.8s,baz=115,slow=5.9,SNR=3.3
ZALV Zalesovo Beam 71.49 334 P **P** **23 52 33.4 -1.7**
BTLS Baital 71.65 322 *e*P **P** **23 52 35.8 -0.5**
comp=Z,15nm,1.2s,baz=322
VNDA Vanda 72.09 173 P **P** **23 52 39.5 +1.1**
comp=Z,5.8nm,0.6s,baz=320,slow=6.7,SNR=73
VNDA Vanda 72.09 173 P **P** **23 52 39.3 +1.0**
DZA Taraz 72.27 319 *e*P **P** **23 52 39.3 -0.7**
baz=320
IUG Iuzhnay 72.77 318 *e*P **P** **23 52 42.5 -0.6**
baz=318
KK31 Karatay Array 72.90 319 P **P** **23 52 43.2 -0.6**
KK31 IAmb IAmb 23 52 45.2
comp=Z,25nm,1.2s
KKAR Karatay Array 72.90 319 P **P** **23 52 43.3 -0.4**
SBA Scott Base 73.00 172 P **P** **23 52 45.3 +1.7**
CHM Chimkent 73.13 318 *e*P **P** **23 52 45.0 -0.1**
baz=316
MAW Mawson 74.01 201 P **P** **23 52 51.5 +1.8**
comp=Z,20nm,0.9s,baz=79,slow=5.2,SNR=21
MAW LR LR 00 25 33.5
comp=Z,50nm,18.1s,baz=44,slow=36
MAW Mawson 74.01 201 P **P** **23 52 51.5 +1.8**
baz=74,SNR=11
MAW Mawson 74.01 201 P **P** **23 52 51.1 +1.4**
MHTO MHTO 74.98 294 P **P** **23 52 54.8 -1.4**
SNR=8.6
BRZS Berezniki 75.03 326 *e*P **P** **23 52 55.3 -0.7**
baz=326
HRA Herat 75.28 308 P **P** **23 52 57.6 -0.4**
SOCY Socotra 76.83 284 P **P** **23 53 04.9 -2.1**
SNR=10
BRVK Borovoye 77.90 328 P **P** **23 53 10.7 -1.3**
DOK Doka 77.97 291 P **P** **23 53 11.4 -1.7**
SNR=14
WHFO Wadi Hawf 78.15 290 P **P** **23 53 12.4 -1.8**
SNR=12
ABTO Aybut 78.48 289 P **P** **23 53 15.8 -0.2**
SNR=6.2
TIXI Tiksi 79.00 0 P **P** **23 53 15.7 -2.0**
GEYT Alibeck 79.59 311 P **P** **23 53 21.5 -0.2**
comp=Z,1.9nm,0.8s,baz=126,slow=3.8,SNR=5.6
GEYT Alibeck 79.59 311 P **P** **23 53 21.1 -0.6**
NRIK Noril'sk 81.75 346 P **P** **23 53 31.8 -0.6**
comp=Z,3.2nm,0.6s,baz=122,slow=6.7,SNR=6.5
NRIK Noril'sk 81.75 346 P **P** **23 53 31.3 -1.1**
ABKAR Akbulak array 82.13 322 P **P** **23 53 33.5 -1.4**
QSPA South Pole Qui 82.46 180 P **P** **23 53 36.9 +0.4**
QSPA IAmb IAmb 23 53 37.6
comp=Z,17nm,0.7s
SYO Syowa Base 82.73 201‖ *e*P **P** **23 53 38.8 +1.2**
SYO Syowa Base 82.73 201‖ *e*pP pP 23 54 13.2 +3.6
AKTO Aktyubinsk 83.71 323 P **P** **23 53 42.4 -0.6**
comp=Z,7.9nm,0.8s,baz=119,slow=6.1
ARU Arti 85.48 328 P **P** **23 53 50.0 -1.8**
ARU IAmb IAmb 23 53 53.1
comp=Z,12nm,0.9s
RAYN Ar Rayn 86.80 294 P **P** **23 53 57.9 -1.1**
KMBO Kilima Mbogo 91.32 269 P **P** **23 54 20.8 0.0**
comp=Z,1.2nm,0.8s,baz=28,slow=7.6,SNR=4.9
IMAR Indian Mountai 91.77 24 **P** **23 54 20.4 -1.0**
KBZ Khabaz 92.13 314 P **P** **23 54 22.6 -0.9**
comp=Z,2.0nm,0.8s,baz=122,slow=4.0,SNR=5.6
CUT Chulitna 92.45 27 P 23 54 24.0
baz=259
MLY Manley 92.78 25 P 23 54 25.2
baz=258
MARD Mardin 92.87 307 P **P** **23 54 26.1 -1.2**
MARD IAmb IAmb 23 54 27.3
comp=Z,10nm,0.5s
MCK McKinley 93.30 26 P 23 54 27.2
baz=260
MCK McKinley 93.30 26 IAmb IAmb 23 54 27.6
comp=Z,11nm,0.9s
I23K Minto, Yukon-K 93.37 25 P **P** **23 54 27.4 -1.4**
I23K IAmb IAmb 23 54 28.8
comp=Z,8.5nm,0.7s
I23K Minto, Yukon-K 93.37 25 P 23 54 28.1
baz=260
NEA2 Nenana 93.39 25 P 23 54 28.5
baz=260
COLD Coldfoot 93.43 23 P 23 54 28.5
baz=259
BELA Belgrano 2 94.23 183 **P** **23 54 32.5 -0.1**
ILAR Eielson Array 94.35 25 P **P** **23 54 31.1 -2.1**
comp=Z,1.7nm,0.7s,baz=248,slow=4.8,SNR=20
ILAR Eielson Array 94.35 25 P **P** **23 54 30.9 -2.4**
SNAA Sanae 94.87 194 P **P** **23 54 36.7 +1.0**
SNAA Sanae 94.87 194 P **P** **23 54 35.9 +0.2**
SNAA IAmb IAmb 23 54 37.5
comp=Z,8.3nm,0.9s
N25K Chitina, Valde 94.97 29 P 23 54 36.1
baz=264
BMAR Burnt Mountain 95.61 23 P **P** **23 54 38.5 -0.6**
KLMR Klimovskoe 96.12 331 *e*P P 23 54 36.3 -5.1
KLMR AMP 23 54 43.2
comp=Z,8.0nm,1.4s
K27K Chicken 96.35 26 P 23 54 42.6
baz=266
K27K Chicken 96.35 26 IAmb IAmb 23 54 43.8
comp=Z,11nm,1.2s
BCAR Beaver Creek A 96.41 27 P **P** **23 54 42.2 -0.6**
VNA3 Neumayer Olymp 96.71 192 P **P** **23 54 45.1 +1.0**
MATP Matopo 96.89 248 P **P** **23 54 45.9 -0.1**
comp=Z,1.4nm,0.8s,baz=98,slow=3.2,SNR=4.3
LSZ Lusaka 98.11 253 P **P** **23 54 51.3 -0.3**
comp=Z,1.7nm,0.5s,baz=86,slow=6.0,SNR=6.7
LSZ Lusaka 98.11 253 P **P** **23 54 51.0 -0.6**
LSZ IAmb IAmb 23 56 30.4
comp=Z,19nm,1.8s
INK Inuvik 99.81 22 PKKPbc PKKPbc 00 11 18.0 -2.8
comp=Z,0.5nm,0.4s,baz=348,slow=2.9,SNR=4.3
ARCES ARCESS Array B 101.62 340 P **Pdif** **23 55 05.4 -0.5**
comp=Z,2.0nm,0.8s,baz=76,slow=5.1,SNR=6.9
ARCES PKKPbc **PKKPbc** **00 11 12.6 -3.0**
comp=Z,1.1nm,0.5s,baz=257,slow=2.5,SNR=16
ARCES ARCESS Array B 101.62 340 **Pdif** **23 55 05.6 -0.3**
FINES FINESS Array B 102.61 331 P **Pdif** **23 55 09.8 -0.6**
comp=Z,2.8nm,1.0s,baz=2.9,slow=5.6,SNR=4.2
FINES PKiKP **PKiKP** **23 59 30.2 -0.5**
comp=Z,1.4nm,0.7s,baz=76,slow=2.4,SNR=8.5
MLR Muntele Rosu 104.28 315 Pdiff **Pdif** **23 55 18.2 -0.2**
comp=Z,1.1nm,0.7s,baz=169,slow=9.5,SNR=3.2
YKA Yellowknife Ar 108.77 26 Pdiff **Pdif** **23 55 36.9 -0.9**
comp=Z,0.2nm,0.6s,baz=295,slow=4.7,SNR=4.8
YKA PKiKP **PKiKP** **23 59 41.3 -0.8**
comp=Z,0.6nm,0.7s,baz=293,slow=1.4,SNR=12
YKA PKKPbc **PKKPbc** **00 10 51.2 -2.4**
comp=Z,0.3nm,0.4s,baz=41,slow=2.0,SNR=9.6
GERES GERESS Array B 112.00 320 PKiKP **PKiKP** **23 59 48.3 -0.5**
comp=Z,1.9nm,0.6s,baz=71,slow=2.5,SNR=23
WTTA Wattenberg 113.75 319 *i* P **PKiKP** **23 59 51.8 -0.5**
comp=Z,8.9nm,0.6s
WATA Walderalm 113.77 319 *i* P **PKiKP** **23 59 51.3 -1.0**
comp=Z,1.8nm,0.5s
MOTA Moosalm 114.07 319 *e*P PKPdf 23 59 52.0 -0.8
comp=Z,2.8nm,0.5s
FETA Feichten 114.41 318 *e*P PKPdf 23 59 52.8 -0.7
comp=Z,1.4nm,0.6s
DAVA Damuels 114.89 319 *i* P **PKiKP** **23 59 53.6 -0.8**
comp=Z,3.2nm,0.5s
DAVOX Davos/Dischmat 115.03 318 PKP **PKiKP** **23 59 54.4 -0.4**
comp=Z,2.7nm,0.5s,baz=221,slow=7.6,SNR=11
KEST Kesra 118.12 306 PKP **PKiKP** **00 00 01.2 +0.2**
comp=Z,3.0nm,0.7s,baz=289,slow=3.4,SNR=9.0
PDAR Pinedale Array 118.15 45 PKP **PKPdf** **00 00 00.8 -0.1**
comp=Z,1.0nm,0.7s,baz=219,slow=0.6,SNR=9.0
EKA Eskdalemuir Ar 119.01 331 PKP **PKPdf** **00 00 01.2 -0.7**
comp=Z,0.8nm,0.4s,baz=48,slow=3.7,SNR=7.9
RSSD Black Hills 121.48 42 PKPdf **PKPdf** **00 00 06.6 -0.7**
LENM Lemitar 122.41 54 PKPdf **PKiKP** **00 00 10.3 +0.8**
ANMO Albuquerque 122.63 53 PKPdf **PKiKP** **00 00 10.3 +0.4**
ULM Lac du Bonnet 123.56 33 PKP **PKPdf** **00 00 10.1 -0.7**
comp=Z,2.7nm,0.7s,baz=231,slow=2.7,SNR=7.5
ULM Lac du Bonnet 123.56 33 PKPdf **PKPdf** **00 00 08.8 -2.1**
MNTX Cornudas Mount 124.29 57 PKPdf **PKPdf** **00 00 12.7 -0.1**
TXAR Lajitas Array 126.28 59 PKP **PKiKP** **00 00 17.4 +0.2**
comp=Z,1.7nm,0.9s,baz=208,slow=1.3,SNR=10
ESDC Sonseca Array 126.98 315 PKP **PKPdf** **00 00 17.0 -0.8**
comp=Z,1.1nm,0.9s,baz=15,slow=3.5,SNR=6.1
ESDC Sonseca Array 126.98 315 PKPdf **PKPdf** **00 00 17.1 -0.6**
F36A Milaca 127.29 36 PKPdf **PKPdf** **00 00 18.0 -0.1**
TOA0 Torodi Ar. Sit 127.67 281 PKPdf **PKPdf** **00 00 19.3 -0.4**
TORD Torodi Ar. Bea 127.67 281 PKP **PKPdf** **00 00 18.9 -0.8**
comp=Z,3.8nm,0.6s,baz=66,slow=2.2,SNR=22
TORD Torodi Ar. Bea 127.67 281 PKPdf **PKPdf** **00 00 18.3 -1.4**
PLCA Paso Flores 128.81 161 PKP **PKiKP** **00 00 22.4 +0.4**
comp=Z,6.5nm,0.9s,baz=239,slow=1.2,SNR=14
MDT Midelt 130.02 307 PKP **PKiKP** **00 00 24.6 0.0**
comp=Z,1.5nm,0.6s,baz=281,slow=1.7,SNR=5.1
BI02 San Fabin de 132.22 158 **PKiKP** **00 00 29.3 +0.3**
DBIC Dimbokro 133.95 272 PKP **PKPdf** **00 00 32.2 +0.6**
comp=Z,5.3nm,0.9s,baz=142,slow=8.9,SNR=5.1
DBIC SKPbc **SKPbc** **00 03 47.2 -1.9**
comp=Z,8.9nm,1.0s,baz=77,slow=5.2,SNR=5.5
DBIC Dimbokro 133.95 272 PKPdf **PKPdf** **00 00 31.2 -0.4**
L48A N Adams 134.89 35 PKPdf **PKiKP** **00 00 33.4 -0.7**
PB15 IPOC Station P 144.66 150 **PKPdf** **00 00 51.0 -0.1**
DWPF Disney Wildern 144.91 51 **PKPab** **00 00 50.7 +0.2**
LVC Limon Verde 145.44 150 **PKPab** **00 00 54.5 +1.3**
CPUP Villa Florida 145.84 170 PKPbc **PKPab** **00 00 54.3 +0.2**
comp=Z,20nm,0.8s,baz=194,slow=2.1,SNR=50
CPUP Villa Florida 145.84 170 **PKPab** **00 00 53.9 -0.2**
JTS Las Juntas de 146.62 83 PKPbc **PKPbc** **00 00 56.6 +0.4**
NNA Nana 148.03 127 PKPbc **PKPbc** **00 01 00.5 +0.4**
LPAZ La Paz 151.06 145 PKPbc **PKiKP** **00 01 09.4 +0.6**
comp=Z,8.6nm,0.4s,baz=32,slow=2.8,SNR=63
LPAZ La Paz 151.06 145 PKPdf **PKPdf** **00 01 03.0 +0.7**
LPAZ PKPbc **PKiKP** **00 01 09.3 +0.6**
LPAZ PKPab **PKPab** **00 01 17.9 +1.8**

TIR ***15*** *00:27:03.5, 40.79N ± 21.81E, h2km ± 1km, Md3.2, Ml3.2*
SKO ***15*** *00:27:03.1, 40.74N ± 21.84E, h15km*
THE ***15*** *00:27:04.4, 40.73N ± 21.86E, h4km, ML2.8/22, Error ellipse: s-maj=0.9km s-min=0.3km az=320.0*
ATH ***15*** *00:27:04.5, 40.72N ± 21.86E, h11km ± 1km, ML2.9/13, Error ellipse: s-maj=2.0km s-min=0.6km az=312.0*
BEO ***15*** *00:27:06.2 ± 0.5, 40.87N ± 21.91E, h7km ± 3km, ML2.6/10*
ISC 15 00:27:04.2 ± 0.9, **40.74N** ± 0.01 × **21.86E** ± 0.01, **h11** km ± 8km,
n114, σ 0 92/176, 18C-8D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FNA	**Florina**	**0.37**	**277**	P		**Pg**	**00 27 11.4**	**-0.2**
FNA				S		**Sg**	**00 27 16.9**	**+0.3**
FNA				AML		AML	00 27 17.2	
	comp=E,13862μm,0.5s							
FNA				AML		AML	00 27 20.1	
	comp=N,7532μm,0.3s							
FNA	**Florina**	**0.37**	**277**	P		**Pg**	**00 27 11.4**	**-0.2**
FNA				S		**Sg**	**00 27 16.7**	**+0.2**
	comp=N,5μm,0.5s							
FNA	**Florina**	**0.37**	**277**	P		**Pg**	**00 27 11.4**	**-0.2**
	baz=270							
FNA				S		**Sg**	**00 27 16.5**	**0.0**
	baz=270							
FNA	**Florina**	**0.37**	**277**	⇑*i* Pg		**Pg**	**00 27 11.5**	**-0.2**
FNA				*i* Sg		**Sg**	**00 27 16.9**	**+0.3**
KZN	**Kozani**	**0.43**	**189**	P		**Pg**	**00 27 12.3**	**-0.5**
KZN				S		**Sg**	**00 27 18.7**	**+0.1**
KZN				AML		AML	00 27 20.2	
	comp=N,6400μm,0.4s							
KZN				AML		AML	00 27 22.6	
	comp=E,5776μm,0.4s							
KZN	**Kozani**	**0.43**	**189**	P		**Pg**	**00 27 12.3**	**-0.5**
KZN				S		**Sg**	**00 27 18.9**	**+0.3**
	comp=E,3μm,0.4s							
GRG	**Griva**	**0.47**	**62**	P		**Pg**	**00 27 13.7**	**+0.3**
GRG				S		**Sg**	**00 27 20.6**	**+1.0**
GRG				AML		AML	00 27 22.6	
	comp=E,3400μm,0.2s							
GRG				AML		AML	00 27 23.5	
	comp=N,4872μm,0.1s							
GRG	**Griva**	**0.47**	**62**	P		**Pg**	**00 27 13.8**	**+0.4**
GRG				S		**Sb**	**00 27 20.9**	**-0.6**
	comp=N,2μm,0.1s							
GRG	**Griva**	**0.47**	**62**	*e*Pg		**Pg**	**00 27 13.7**	**+0.3**
NEST	**Nestorio**	**0.70**	**243**	P		**Pg**	**00 27 17.5**	**-0.2**
NEST				S		**Sg**	**00 27 26.5**	**-0.4**
NEST				AML		AML	00 27 31.8	
	comp=N,1460μm,0.5s							
NEST				AML		AML	00 27 31.8	
	comp=E,1629μm,0.4s							
NEST	**Nestorio**	**0.70**	**243**	P		**Pg**	**00 27 17.3**	**-0.4**
NEST				S		**Sg**	**00 27 27.5**	**+0.7**
	comp=E,648nm,0.4s							
PENT	**Pentalofos**	**0.77**	**226**	P		**Pg**	**00 27 18.7**	**-0.4**
PENT				S		**Sg**	**00 27 29.4**	**+0.2**
PENT				AML		AML	00 27 36.1	
	comp=N,1542μm,0.6s							
PENT				AML		AML	00 27 37.1	
	comp=E,959μm,0.4s							
PENT	**Pentalofos**	**0.77**	**226**	P		**Pg**	**00 27 18.7**	**-0.4**
PENT				S		**Sb**	**00 27 30.5**	**+0.2**
	comp=E,638nm,0.6s							
VAY	**Valandovo**	**0.79**	**42**	*e*Pg		**Pg**	**00 27 19.4**	**-0.2**
VAY				*e*Sg		**Sg**	**00 27 29.3**	**-0.6**
VAY	**Valandovo**	**0.79**	**42**	*i* Pg		**Pg**	**00 27 19.1**	**-0.4**
VAY				*i* Sg		**Sb**	**00 27 30.8**	**0.0**
VAY				*e*Lg		Lg	00 27 31.4	
	comp=N,325nm,0.6s							
VAY				*e*Lg		Lg	00 27 32.1	
	comp=E,402nm,0.5s							
LIT	**Litokhoron**	**0.80**	**143**	P		**Pg**	**00 27 18.9**	**-0.7**
LIT				S		**Sg**	**00 27 29.6**	**-0.5**
LIT				AML		AML	00 27 34.5	
	comp=N,2894μm,0.2s							
LIT				AML		AML	00 27 36.0	
	comp=E,3267μm,0.2s							
LIT	**Litokhoron**	**0.80**	**143**	P		**Pg**	**00 27 18.6**	**-1.0**
LIT				S		**Sg**	**00 27 30.5**	**+0.5**
	comp=E,2μm,0.2s							
LIT	**Litokhoron**	**0.80**	**143**	*i* Pg		**Pg**	**00 27 18.8**	**-0.8**
LIT				*i* Sg		**Sb**	**00 27 31.1**	**+0.1**
KBN	**Korca**	**0.82**	**262**	P		**Pg**	**00 27 19.7**	**-0.4**
KBN				S		**Sg**	**00 27 31.2**	**+0.3**
	comp=E,695nm,0.4s							
KBN	**Korca**	**0.82**	**262**	P		**Pg**	**00 27 19.4**	**-0.7**
	baz=259							
KBN				S		**Sg**	**00 27 30.9**	**0.0**
	baz=259							
KBN				AMP				
	comp=N,2.8nm,0.3s,baz=259							
THE	**Thessaloniki**	**0.85**	**97**	P		**Pg**	**00 27 20.3**	**-0.3**
THE				S		**Sg**	**00 27 32.0**	**+0.3**
THE				AML		AML	00 27 36.3	
	comp=E,838μm,0.2s							
THE				AML		AML	00 27 36.5	
	comp=N,1727μm,0.4s							
THE	**Thessaloniki**	**0.85**	**97**	P		**Pg**	**00 27 20.4**	**-0.2**
THE				S		**Sb**	**00 27 33.2**	**+0.8**
THE	**Thessaloniki**	**0.85**	**97**	*i* Pg		**Pg**	**00 27 20.3**	**-0.3**
KPRO	**Kipourio**	**0.87**	**206**	P		**Pg**	**00 27 20.6**	**-0.3**
KPRO				S		**Sg**	**00 27 32.1**	**-0.2**
KPRO				AML		AML	00 27 40.1	
	comp=N,2113μm,0.4s							
KPRO				AML		AML	00 27 41.0	
	comp=E,2332μm,0.7s							
KPRO	**Kipourio**	**0.87**	**206**	P		**Pg**	**00 27 20.5**	**-0.5**
KPRO				S		**Sb**	**00 27 33.2**	**+0.2**
	comp=E,1μm,0.4s							
OHR	**Ohrid**	**0.89**	**295**	*i* Pg		**Pg**	**00 27 20.7**	**-0.7**
OHR				*i* Sg		**Sb**	**00 27 34.1**	**+0.6**
OHR				*e*Lg		Lg	00 27 34.4	
	comp=N,412nm,0.6s							
OHR				*e*Lg		Lg	00 27 35.4	
	comp=E,304nm,0.6s							
KNT	**Kendrikon**	**0.89**	**61**	P		**Pg**	**00 27 21.5**	**+0.1**
KNT				S		**Sb**	**00 27 33.8**	**0.0**
KNT				AML		AML	00 27 34.1	
	comp=N,1130μm,0.4s							
KNT				AML		AML	00 27 37.9	
	comp=E,1071μm,0.2s							
KNT	**Kendrikon**	**0.89**	**61**	P		**Pg**	**00 27 21.3**	**-0.1**
KNT				S		**Sb**	**00 27 34.1**	**+0.3**
	comp=E,558nm,0.3s							
KNT	**Kendrikon**	**0.89**	**61**	*i* Pg		**Pg**	**00 27 21.4**	**-0.1**
KNT				*i* Sg		**Sb**	**00 27 34.0**	**+0.3**
HORT	**Hortiatis**	**0.95**	**98**	P		**Pg**	**00 27 22.3**	**-0.3**
HORT				S		**Sb**	**00 27 35.4**	**-0.1**
HORT				AML		AML	00 27 38.0	
	comp=N,1310μm,0.5s							
HORT				AML		AML	00 27 38.6	
	comp=E,692μm,0.3s							
HORT	**Hortiatis**	**0.95**	**98**	P		**Pg**	**00 27 22.1**	**-0.5**
HORT				S		**Sb**	**00 27 35.5**	**-0.1**
	comp=E,515nm,0.4s							
STIP	**Stip**	**0.99**	**14**⇑	*i* Pg		**Pn**	**00 27 24.7**	**+0.6**
STIP				*i* Sg		**Sn**	**00 27 39.4**	**+1.3**
LSK	**Leskovik**	**1.12**	**239**	P		**Pb**	**00 27 25.4**	**-0.4**
LSK				S		**Sn**	**00 27 42.4**	**+0.8**
	comp=E,595nm,0.7s							
LSK	**Leskovik**	**1.12**	**239**	P		**Pb**	**00 27 24.7**	**-1.1**
	baz=236							
LSK				S		**Sg**	**00 27 41.1**	**+0.6**
	baz=236							
LSK				AMP				
	comp=N,2.2nm,0.7s,baz=236							
SOH	**Sokhos**	**1.14**	**85**	P		**Pb**	**00 27 25.7**	**-0.3**
SOH				S		**Sg**	**00 27 41.3**	**+0.4**
SOH				AML		AML	00 27 44.3	
	comp=N,1571μm,0.5s							
SOH				AML		AML	00 27 44.6	
	comp=E,1701μm,0.4s							
SOH	**Sokhos**	**1.14**	**85**	P		**Pb**	**00 27 25.4**	**-0.6**
SOH				S		**Sn**	**00 27 42.1**	**+0.3**
	comp=E,665nm,0.5s							
SOH	**Sokhos**	**1.14**	**85**	*i* Pg		**Pb**	**00 27 25.4**	**-0.6**
SOH				*i* Sg		**Sn**	**00 27 42.8**	**+0.9**
THL	**Klokotos Trika**	**1.18**	**174**	P		**Pb**	**00 27 26.2**	**-0.3**
THL	**Klokotos Trika**	**1.18**	**174**	P		**Pb**	**00 27 25.3**	**-1.3**
THL				S		**Sn**	**00 27 42.9**	**+0.2**
	comp=E,472nm,0.5s							
PLG	**Polygyros**	**1.26**	**106**	P		**Pn**	**00 27 27.8**	**-0.1**
PLG				S		**Sn**	**00 27 44.8**	**-0.1**
PLG				AML		AML	00 27 46.4	
	comp=N,1718μm,0.5s							
PLG				AML		AML	00 27 47.7	
	comp=E,676μm,0.4s							
PLG	**Polygyros**	**1.26**	**106**	P		**Pn**	**00 27 27.6**	**-0.3**
PLG				S		**Sg**	**00 27 45.4**	**+0.5**
	comp=E,628nm,0.6s							
SKO	**Skopje**	**1.27**	**346**	*e*Pg		**Pn**	**00 27 27.5**	**-0.5**
SKO				*e*Sg		**Sb**	**00 27 43.4**	**-1.3**
SKO	**Skopje**	**1.27**	**346**	*i* Pg		**Pn**	**00 27 28.5**	**+0.2**
JAN	**Janina**	**1.33**	**216**	P		**Pn**	**00 27 28.8**	**0.0**
JAN	**Janina**	**1.33**	**216**	P		**Pb**	**00 27 29.2**	**0.0**
JAN				S		**Sg**	**00 27 48.4**	**+1.5**
	comp=E,268nm,0.5s							
SRS	**Serrai**	**1.37**	**73**	P		**Pn**	**00 27 29.1**	**-0.2**
SRS	**Serrai**	**1.37**	**73**	P		**Pn**	**00 27 29.1**	**-0.2**
SRS	**Serrai**	**1.37**	**73**	*e*Pg		**Pn**	**00 27 28.8**	**-0.5**
SRS				*e*Sg		**Sg**	**00 27 48.0**	**-0.2**
SRS	**Serrai**	**1.37**	**73**	*i* Pn		**Pn**	**00 27 29.0**	**-0.3**
PHP	**Peshkopia**	**1.43**	**312**	P		**Pn**	**00 27 29.7**	**-0.5**
PHP	**Peshkopia**	**1.43**	**312**	P		**Pn**	**00 27 29.5**	**-0.7**
	baz=312							
PHP				S		**Sn**	**00 27 48.5**	**-0.5**
	baz=312							
PAIG	**Paliouri**	**1.61**	**120**	P		**Pn**	**00 27 32.8**	**+0.2**
PAIG				S		**Sn**	**00 27 53.4**	**+0.1**
PAIG				AML		AML	00 27 56.6	
	comp=N,406μm,0.5s							
PAIG				AML		AML	00 28 00.8	
	comp=E,252μm,0.3s							
PAIG	**Paliouri**	**1.61**	**120**	P		**Pn**	**00 27 32.6**	**0.0**
PAIG				S		**Sb**	**00 27 54.6**	**+0.3**
	comp=E,180nm,0.4s							
TIR	**Tirane**	**1.63**	**293**	⇑S		**Sg**	**00 27 59.9**	**+3.3**
TIR	**Tirane**	**1.63**	**293**	P		**Pn**	**00 27 32.9**	**+0.1**
	baz=292							
TIR				S		**Sb**	**00 27 54.8**	**0.0**
	baz=292							
TIR	**Tirane**	**1.63**	**293**	*i* Pn		**Pg**	**00 27 35.1**	**-0.3**
NVR	**Nevrokopi**	**1.63**	**67**	P		**Pn**	**00 27 33.0**	**0.0**
NVR	**Nevrokopi**	**1.63**	**67**	P		**Pn**	**00 27 33.0**	**0.0**
NVR				S		**Sb**	**00 27 55.8**	**+0.7**
	comp=E,70nm,0.7s							
SRN	**Sarande**	**1.66**	**240**	P		**Pg**	**00 27 36.1**	**+0.1**
SRN	**Sarande**	**1.66**	**240**	P		**Pb**	**00 27 34.5**	**-0.3**
	baz=238							
SRN				S		**Sg**	**00 27 57.3**	**-0.3**
	baz=238							
OUR	**Ouranopolis**	**1.67**	**103**	P		**Pn**	**00 27 34.0**	**+0.5**
OUR	**Ouranopolis**	**1.67**	**103**	P		**Pn**	**00 27 33.9**	**+0.5**
OUR				S		**Sb**	**00 27 56.0**	**0.0**
	comp=E,345nm,0.8s							
IGT	**Igoumenitsa**	**1.68**	**225**	P		**Pg**	**00 27 36.5**	**+0.1**
IGT	**Igoumenitsa**	**1.68**	**225**	*e*Pn		**Pg**	**00 27 37.2**	**+0.8**
PRZK	**Prizren**	**1.69**	**331**	*i* Pn		**Pb**	**00 27 35.5**	**+0.1**
XOR	**Xorichti**	**1.71**	**143**	P		**Pn**	**00 27 33.7**	**-0.3**
XOR				S		**Sb**	**00 27 57.6**	**+0.4**
	comp=E,185nm,0.6s							
MAKR	**Makrakomi, Fth**	**1.73**	**173**	P		**Pn**	**00 27 35.3**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.73**	**173**	P		**Pn**	**00 27 35.2**	**+0.9**
AGG	**Agios Georgios**	**1.75**	**168**	P		**Pn**	**00 27 34.8**	**+0.2**
AGG				S		**Sb**	**00 27 58.0**	**-0.4**
	comp=E,155nm,0.7s							
BOSS	**Bosilegrad**	**1.82**	**15**	*e*Pg		**Pn**	**00 27 36.3**	**+0.8**
BOSS				*e*Sg		**Sb**	**00 27 59.5**	**-0.8**
EVR	**Evrytania**	**1.82**	**181**	P		**Pn**	**00 27 36.4**	**+0.8**
EVR	**Evrytania**	**1.82**	**181**	P		**Pn**	**00 27 36.0**	**+0.4**
EVR				S		**Sb**	**00 28 00.0**	**-0.4**
	comp=E,215nm,0.7s							
PUK	**Puka**	**1.97**	**312**	P		**Pn**	**00 27 38.9**	**+1.2**

VTS				*e*Sg		**Sn**	**00 28 07.7**	**+0.9**
VTS	**Vitosha**	**2.14**	**28**	⇑P		**Pn**	**00 27 41.0**	**+0.9**
VTS				⇓S		**Sn**	**00 28 05.9**	**-0.9**
VTS	**Vitosha**	**2.14**	**28**	*i* Pn		**Pn**	**00 27 40.8**	**+0.7**
NYDR	**Nydri-Lefkada**	**2.21**	**204**	P		**Pb**	**00 27 43.3**	**-0.9**
EVGI	**Lefkada island**	**2.31**	**204**	P		**Pn**	**00 27 44.2**	**+2.0**
KALE	**Kalithea**	**2.35**	**175**	P		**Pn**	**00 27 43.6**	**+0.7**
TRIZ	**Trizonia**	**2.38**	**176**	P		**Pn**	**00 27 43.8**	**+0.7**
LAKA	**Lakka**	**2.50**	**178**	P		**Pn**	**00 27 46.0**	**+1.2**
SELS	**Selova**	**2.54**	**348**	*e*Pn		**Pn**	**00 27 45.7**	**+0.2**
PDG	**Podgorica**	**2.58**	**312**	⇓P		**Pb**	**00 27 49.1**	**-1.5**
PDG				⇑S		**Sn**	**00 28 18.9**	**+1.5**
ZAPS	**Zavoj**	**2.60**	**13**	*e*Pn		**Pn**	**00 27 48.0**	**+1.7**
BOVS	**Bovan**	**2.90**	**358**	*e*Pn		**Pn**	**00 27 50.2**	**-0.1**
BLKB	**Belogradchik**	**2.95**	**12**	*e*Pn		**Pn**	**00 27 52.1**	**+1.1**
BLKB	**Belogradchik**	**2.95**	**12**	⇑S		**Sn**	**00 28 24.5**	**-1.9**
ZAGS	**Zajecar**	**3.09**	**5**	*e*Pn		**Pn**	**00 27 53.0**	**+0.1**
IVAS	**Ivanjica**	**3.11**	**336**	*e*Pn		**Pn**	**00 27 55.3**	**+2.0**
GRUS	**Gruza**	**3.26**	**345**	*e*Pn		**Pn**	**00 27 55.9**	**+0.6**
PLVB	**Pleven**	**3.35**	**37**	⇑P		**Pn**	**00 27 58.5**	**+2.0**
BBLS	**Lazići**	**3.62**	**331**	*e*Pn		**Pn**	**00 28 02.5**	**+2.2**
DIVS	**Divibare**	**3.63**	**338**	*e*Pn		**Pn**	**00 28 01.4**	**+0.9**
TRUS	**Trudelj**	**3.65**	**343**	*e*Pn		**Pn**	**00 28 01.2**	**+0.6**
MDVR	**Moldovita**	**4.04**	**359**	⇑P		**Pn**	**00 28 07.4**	**+1.3**
HERR	**Herculane**	**4.16**	**5**	⇑P		**Pn**	**00 28 08.3**	**+0.6**
HERR				⇑S		**Sn**	**00 28 54.6**	**-1.7**
HUMR	**Humele**	**4.43**	**30**	⇑S		**Sn**	**00 29 02.3**	**-0.7**
FRGS	**Fruska Gora**	**4.67**	**342**	⇓P		**Pn**	**00 28 15.5**	**+0.9**
GZR	**Gura Zlata**	**4.70**	**8**	⇑P		**Pn**	**00 28 15.2**	**+0.1**
GZR				⇑S		**Sn**	**00 29 07.4**	**-2.3**
BZS	**Buzias**	**4.88**	**358**	⇓P		**Pn**	**00 28 18.3**	**+0.8**
BZS				⇑S		**Sn**	**00 29 11.1**	**-2.9**
ARR	**Arges**	**5.05**	**23**	⇓P		**Pn**	**00 28 20.8**	**+0.8**
VOIR		**5.25**	**25**	⇑P		**Pn**	**00 28 23.1**	**+0.4**
MLR	**Muntele Rosu**	**5.61**	**31**	⇑P		**Pn**	**00 28 29.7**	**+1.9**
MORH	**Mrgy, Hungar**	**5.95**	**338**	⇓P		**Pn**	**00 28 33.7**	**+1.5**
MORH				⇓S		**Sn**	**00 29 37.2**	**-3.3**
BISRR	**Bisoca**	**5.97**	**35**	⇑P		**Pn**	**00 28 35.1**	**+2.5**
PLOR	**Plostina**	**6.19**	**33**	⇓P		**Pn**	**00 28 38.3**	**+2.7**
VRI	**Vrincioaia**	**6.24**	**33**	⇑P		**Pn**	**00 28 38.6**	**+2.4**

IDC ***15*** *01:21:48.8±0.9, 0.°70N×67.°26E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.6/40, mbtmp3.8/9, ML4.1/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/36, Error ellipse: s-maj=27.6km s-min=24.4km az=174.0*
NEIC ***15*** *01:21:49.8±1.3, 0.°6N±0.°1×67.°22E±0.°0, h10km±1km, mb4.3/6, Error ellipse: s-maj=24.5km s-min=15.9km az=180.0*

ISC 15 01:21:50.3±0.9, 0.°6N±0.°2×67.°3E±0.°1, h10km, n23, σ0ᵉ73/21, mb4.0/10, MS2.9/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNCI	**Minicoy**	**9.55**	**37**	Pn	**Pn**	**01 24 09.1**	**+1.1**
PALK	**Pallekele**	**14.95**	**63**	Pn	**Pn**	**01 25 22.4**	**+0.5**
	0.9nm,0.3s,baz=350,slow=13,SNR=7.5						
PALK				LR	LR	01 29 54.1	
	comp=Z,88nm,19.0s,baz=333,slow=33						
PALK	**Pallekele**	**14.95**	**63**	Pn	**Pn**	**01 25 21.8**	**-0.1**
PALK				IAmb	IAmb	01 25 27.6	
	comp=Z,17nm,1.3s						
ATD	**Arta Tunnel**	**26.54**	**295**	LR	LR	01 36 12.7	
	comp=Z,31nm,21.1s,baz=56,slow=33						
CMAR	**Chiang Mai Arr**	**35.80**	**58**	P	**P**	**01 28 50.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=237,slow=9.5,SNR=1.5						
CMAR				LR	LR	01 41 57.4	
	comp=Z,20nm,20.9s,baz=346,slow=34						
LSZ	**Lusaka**	**41.71**	**246**	P	**P**	**01 29 40.8**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=100,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**47.82**	**14**	P	**P**	**01 30 27.7**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=206,slow=8.1,SNR=6.9						
MKAR	**Makanchi Array**	**47.82**	**14**	P	**P**	**01 30 28.1**	**0.0**
ABKAR	**Akbulak array**	**48.85**	**354**	P	**P**	**01 30 36.1**	**+0.2**
ABKAR				IAmb	IAmb	01 30 37.2	
	comp=Z,2.5nm,1.2s						
ABKAR	**Akbulak array**	**48.85**	**354**	P	**P**	**01 30 36.0**	**+0.1**
BOSA	**Boshof**	**49.59**	**231**	LR	LR	01 49 28.7	
	comp=Z,30nm,18.4s,baz=171,slow=33						
ZAA0	**Zalesovo Array**	**55.09**	**13**	P	**P**	**01 31 22.2**	**-0.1**
ZALV	**Zalesovo Beam**	**55.09**	**13**	P	**P**	**01 31 21.1**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=210,slow=8.0,SNR=7.0						
ZALV	**Zalesovo Beam**	**55.09**	**13**	P	**P**	**01 31 21.0**	**-1.4**
SONM	**Songino Array**	**57.96**	**30**	P	**P**	**01 31 42.8**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=222,slow=1.9,SNR=2.2						
SONM	**Songino Array**	**57.96**	**30**	P	**P**	**01 31 42.3**	**-0.8**
SONM				IAmb	IAmb	01 31 43.1	
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**68.74**	**112**	P	**P**	**01 32 55.6**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=291,slow=5.7,SNR=7.3						
WB2	**Warramunga Arr**	**68.76**	**112**	P	**P**	**01 32 56.2**	**+1.2**
WR0	**Warramunga Arr**	**68.93**	**112**	P	**P**	**01 32 55.3**	**-0.9**
WR0				IAmb	IAmb	01 33 12.7	
	comp=Z,4.3nm,1.1s						
ASAR	**Alice Springs**	**68.96**	**116**	P	**P**	**01 32 55.8**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=287,slow=4.7,SNR=5.7						
ESDC	**Sonseca Array**	**75.20**	**311**	P	**P**	**01 33 33.0**	**-0.4**
	comp=Z,0.2nm,0.8s,baz=104,slow=9.4,SNR=4.3						
TXAR	**Lajitas Array**	**148.97**	**344**	PKPbc	**PKPbc**	**01 41 39.4**	**0.0**
	comp=Z,1.0nm,0.8s,baz=48,slow=2.7,SNR=13						
TXAR	**Lajitas Array**	**148.97**	**344**		**PKiKP**	**01 41 40.3**	**-0.5**

IDC 15 01:56:13.6±2.0, 1.°34N×126.°45E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/38, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=120.4km s-min=25.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.33**	**182**	P	P	02 00 40.2	-0.4
	0.1nm,0.3s,baz=5.1,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**22.52**	**160**	P	P	02 01 15.0	-0.2
	1.3nm,0.4s,baz=339,slow=10,SNR=34						
ASAR	**Alice Springs**	**25.89**	**164**	P	P	02 01 47.6	+0.2
	1.5nm,0.4s,baz=350,slow=14,SNR=20						
MKAR	**Makanchi Array**	**59.36**	**326**	P	P	02 06 17.8	+0.1
	0.1nm,0.3s,baz=122,slow=6.8,SNR=4.1						

CRAAG ***15*** *02:14:50.4, 36.°58N×8.°08E, Ml2.7*
LDG ***15*** *02:14:50.3, 36.°38N×7.°71E, h30km*

ISC 15 02:14:49.7±2.2, 36.°73N±0.°09×8.°0E±0.°2, h10km, n17, σ1ᵉ91/17, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAH	**Djebel Manchou**	**0.47**	**257**	P	**Pn**	**02 15 02.3**	**-0.4**
ABSA	**Djebel Ababsia**	**0.62**	**222**	P	**Pn**	**02 15 02.6**	**-2.1**
CAEH	**'Ain El Ouahch**	**0.92**	**273**	P	**Pn**	**02 15 09.9**	**+1.1**
CTEI	**Djebel Teioual**	**1.45**	**243**	P	**Pg**	**02 15 19.5**	**+2.0**
PGF	**Pioggiola**	**5.86**	**7**	*e*P	Pb	02 16 22.4	-10
PGF				*e*Sn	**Sn**	**02 17 24.7**	**+0.7**
	1.8nm,0.3s						
LMR	**La Mourre**	**6.69**	**351**	*e*Pn	**Pn**	**02 16 29.6**	**+1.6**
LMR	**La Mourre**	**6.69**	**351**	*e*P	Pn	02 16 32.8	+4.8
LMR				*e*Sn	**Sn**	**02 17 40.9**	**-3.4**
	4.6nm,0.3s						
FRF	**La Foret Royal**	**6.90**	**352**	*e*Pn	**Pn**	**02 16 32.9**	**+2.0**
FRF	**La Foret Royal**	**6.90**	**352**	*e*P	Pn	02 16 36.2	+5.3
FRF				*e*Sn	**Sn**	**02 17 47.3**	**-2.1**
	1.7nm,0.2s						
SBF	**Sospel**	**7.13**	**357**	*e*Pn	**Pn**	**02 16 35.7**	**+1.5**
SBF	**Sospel**	**7.13**	**357**	*e*P	Pn	02 16 39.9	+5.7
SBF				*e*Sn	**Sn**	**02 17 53.2**	**-2.1**
	3.1nm,0.3s						
SMRF	**Simiane la Rot**	**7.47**	**346**	*e*Pn	**Pn**	**02 16 39.1**	**+0.4**
SMRF				*e*Sn	**Sn**	**02 18 00.3**	**-3.2**
	0.8nm,0.3s						
MTLF	**Montolieu**	**7.95**	**328**	*e*Pn	**Pn**	**02 16 45.0**	**-0.3**
MTLF	**Montolieu**	**7.95**	**328**	*e*P	Pn	02 16 49.0	+3.7
LASF	**Ste Croix**	**7.98**	**338**	*e*Pn	**Pn**	**02 16 45.2**	**-0.6**
VIVF	**Saint-Julien-l**	**8.49**	**344**	*e*Pn	**Pn**	**02 16 52.2**	**-0.6**
RJF	**Les Rejaudoux**	**9.86**	**332**	*e*Pn	**Pn**	**02 17 12.1**	**+0.6**

JMA 15 02:19:30.5, 36.°92N×139.°40E, h5km, M2.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKT	**Katashina**	**0.20**	**218**	P	Pg	02 19 34.6	+0.2
JKT				*i* S	Sg	02 19 37.4	+0.5
JAG	**Ashikaga**	**0.50**	**175**	P	Pg	02 19 40.3	+0.3
JFY	**Yanaizu**	**0.54**	**27**	P	Pg	02 19 41.0	0.0
JFY				S	Sg	02 19 48.2	+0.1
MAT	**Matsushiro**	**1.03**	**249**	P	Pg	02 19 50.2	0.0
MAT				S	Sg	02 20 03.3	-0.3

TEH ***15*** *02:22:12.7, 27.°25N×52.°93E, h6km, ML3.6*
IDC ***15*** *02:22:12.5±1.9, 27.°16N×52.°89E, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.6/49, mbtmp3.8/12, ML3.3/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/40, Error ellipse: s-maj=38.1km s-min=24.0km az=19.0*
DSN ***15*** *02:22:18.8±0.8, 27.°17N×52.°91E, h88km±72km, ML3.9/10, Error ellipse: s-maj=13.2km s-min=6.1km az=168.0*
OMAN ***15*** *02:22:19.7, 27.°13N×53.°02E, h142km, mb4.6/10, ml3.5/12*

ISC 15 02:22:14.8±0.6, 27.°24N±0.°04×52.°90E±0.°05, h10km, n72, σ1ᵉ41/91, mb3.7/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.26**	**68**	*e*Pg	**Pg**	**02 22 18.2**	**-1.9**
QIR1	**Qir**	**1.23**	**6**	*e*Pg	**Pb**	**02 22 37.9**	**-0.4**
LAR1	**LAR**	**1.38**	**72**	*e*Pg	**Pn**	**02 22 40.3**	**+0.1**
LAR1				*e*Sg	**Sg**	**02 23 01.8**	**+2.5**
JHRM	**Jahrom**	**1.39**	**25**	*e*Pg	**Pb**	**02 22 41.0**	**0.0**
JRN	**Qarnain Island**	**2.29**	**181**	P	**Pb**	**02 22 56.4**	**+0.2**
JRN				S	**Sb**	**02 23 25.3**	**+0.7**
SHI	**Shiraz**	**2.41**	**352**	*e*Pn	**Pn**	**02 22 55.0**	**+0.5**
GENO	**Geno**	**2.92**	**86**	*e*Pn	**Pn**	**02 23 01.4**	**-0.1**
SHME	**Shamm**	**3.14**	**112**	P	**Pn**	**02 23 05.9**	**+1.6**
SHME	**Shamm**	**3.14**	**112**	P	**Pn**	**02 23 06.3**	**+2.0**
BANOM	**Banah**	**3.32**	**113**	P	**Pn**	**02 23 08.1**	**+1.3**
BANOM	**Banah**	**3.32**	**113**	P	**Pn**	**02 23 08.3**	**+1.5**
	SNR=12						
SLWR	**Sila**	**3.34**	**199**	P	**Pn**	**02 23 09.1**	**+2.0**
NAZ	**Nazwa, Dubai**	**3.35**	**131**	P	**Pn**	**02 23 09.3**	**+2.1**
NAZ	**Nazwa, Dubai**	**3.35**	**131**	P	**Pn**	**02 23 09.3**	**+2.1**
NAZ				S	**Sn**	**02 23 49.1**	**+2.0**
ASUD	**Al Ashush, Dub**	**3.41**	**139**	P	**Pn**	**02 23 10.0**	**+2.0**
ASUD	**Al Ashush, Dub**	**3.41**	**139**	P	**Pn**	**02 23 10.6**	**+2.6**
	SNR=12						
ASUD				S	**Sn**	**02 23 50.9**	**+2.5**
MASF	**Masafi**	**3.47**	**122**	P	**Pn**	**02 23 10.3**	**+1.4**
MASF				S	**Sn**	**02 23 50.5**	**+0.3**
FAQ	**Al Faqa, Dubai**	**3.48**	**135**	P	**Pn**	**02 23 10.0**	**+1.1**
FAQ	**Al Faqa, Dubai**	**3.48**	**135**	P	**Pn**	**02 23 11.7**	**+2.8**
FAQ				S	**Sn**	**02 23 51.4**	**+1.3**
MSFE	**Esma-Masafi**	**3.48**	**122**	P	**Pn**	**02 23 09.6**	**+0.5**
MSFE				S	**Sn**	**02 23 50.3**	**0.0**
MDH	**Madha**	**3.62**	**122**	P	**Pn**	**02 23 11.4**	**+0.5**
MDH	**Madha**	**3.62**	**122**	P	**Pn**	**02 23 11.9**	**+1.0**
MDH				S	**Sn**	**02 23 54.5**	**+0.8**
UOSS	**Minazif**	**3.75**	**127**	P	**Pn**	**02 23 13.4**	**+0.6**
UOSS	**Minazif**	**3.75**	**127**	P	**Pn**	**02 23 13.6**	**+0.9**
UOSS				S	**Sn**	**02 23 56.4**	**-0.7**
HATD	**Hatta, Dubai**	**3.78**	**129**	P	**Pn**	**02 23 14.2**	**+1.1**
HATD				S	**Sn**	**02 23 57.4**	**-0.3**
HATD	**Hatta, Dubai**	**3.78**	**129**	P	**Pn**	**02 23 14.6**	**+1.4**
HATD				S	**Sn**	**02 23 57.7**	**0.0**
NGRK	**Negar Kerman**	**4.14**	**54**	*e*Pn	**Pn**	**02 23 18.8**	**+0.4**
IMEH	**Mehriz**	**4.40**	**20**	*e*Pn	**Pn**	**02 23 23.1**	**+1.3**
KHGB	**Koh Gabri**	**4.43**	**44**	*e*Pn	**Pn**	**02 23 23.3**	**+1.0**
SOHO	**SOHO**	**4.51**	**133**	P	**Pn**	**02 23 24.1**	**+0.9**
SOHO	**SOHO**	**4.51**	**133**	P	**Pn**	**02 23 25.2**	**+2.0**
SOHO				S	**Sn**	**02 24 16.0**	**+0.2**
IRAM	**Ramesheh**	**4.57**	**354**	*e*Pn	**Pn**	**02 23 23.7**	**-0.5**
CHMN	**Cheshme madani**	**4.85**	**56**	*e*Pn	**Pn**	**02 23 30.3**	**+2.2**
ARQ	**Araqi**	**5.09**	**139**	P	**Pn**	**02 23 33.0**	**+1.8**
	SNR=16						
ARQ				S	**Sn**	**02 24 29.7**	**-0.4**
ICHK	**Chekchek**	**5.15**	**14**	*e*Pn	**Pn**	**02 23 33.6**	**+1.3**
KBAM	**BAM**	**5.25**	**68**	*e*Pn	**Pn**	**02 23 34.7**	**+1.2**
HOQ	**Hoqain**	**5.41**	**131**	P	**Pn**	**02 23 37.0**	**+1.4**
	SNR=9.7						
HOQ				S	**Sn**	**02 24 36.0**	**-1.9**
BSY	**Bisya**	**5.94**	**138**	P	**Pn**	**02 23 44.0**	**+1.1**
BSY				S	**Sn**	**02 24 50.2**	**-0.9**
SMDO	**Samad**	**6.26**	**131**	P	**Pn**	**02 23 48.8**	**+1.5**
SMDO				S	**Sn**	**02 24 57.6**	**-1.3**
WSAR	**Wadi Sarin**	**6.55**	**126**	Pn	**Pn**	**02 23 50.5**	**-0.7**
	0.9nm,0.3s,baz=304,slow=10,SNR=11						
WSAR				Sn	**Sn**	**02 25 03.4**	**-2.5**
	1.6nm,0.3s,baz=98,slow=20,SNR=5.5						
TPRV	**Parvadeh(Tabas**	**6.63**	**29**	*e*Pn	**Pn**	**02 23 53.1**	**+0.6**
KRSH	**Karshahi**	**6.74**	**355**	*e*Pn	**Pn**	**02 23 55.3**	**+1.4**
JMDO	**Jabal Madar**	**6.78**	**135**	P	**Pn**	**02 23 55.4**	**+1.0**
JMDO				S	**Sn**	**02 25 08.4**	**-3.2**
ISFB	**Sefidab**	**7.11**	**356**	*e*Pn	**Pn**	**02 23 59.8**	**+0.8**
WBK	**Wadi Bani Khal**	**7.19**	**129**	P	**Pn**	**02 24 00.6**	**+0.6**
WBK				S	**Sn**	**02 25 19.4**	**-2.4**
TKDS	**Koohdasht(Taba**	**7.32**	**29**	*e*Pn	**Pn**	**02 24 02.4**	**+0.5**
TNSJ	**Nastanj**	**7.42**	**25**	*e*Pn	**Pn**	**02 24 03.5**	**+0.2**
IKFM	**Kafar-mosalman**	**7.63**	**326**	*e*Pn	**Pn**	**02 24 07.8**	**+1.8**
RAYN	**Ar Rayn**	**7.64**	**243**	P	**Pn**	**02 24 07.1**	**+0.8**
IDOB	**Doab**	**7.69**	**329**	*e*Pn	**Pn**	**02 24 09.6**	**+2.6**
MHTO	**MHTO**	**7.76**	**142**	P	**Pn**	**02 24 09.0**	**+1.1**
	SNR=19						
MHTO				S	**Sn**	**02 25 33.3**	**-2.6**
JLN	**Jalan Bani Buh**	**7.80**	**129**	P	**Pn**	**02 24 08.2**	**-0.2**
DQM	**DQM**	**8.43**	**149**	P	**Pn**	**02 24 17.2**	**+0.1**
	SNR=5.7						
DQM				S	**Sn**	**02 25 48.9**	**-3.5**
DOK	**Doka**	**8.66**	**172**	P	**Pn**	**02 24 20.0**	**-0.2**
IGHG	**Ghaleghazi**	**8.91**	**324**	*e*Pn	**Pn**	**02 24 24.5**	**+0.6**
WHFO	**Wadi Hawf**	**9.31**	**175**	P	**Pn**	**02 24 28.1**	**-1.1**
DMTO	**DMTO**	**9.67**	**168**	P	**Pn**	**02 24 32.9**	**-1.2**
ABTO	**Aybut**	**9.85**	**178**	P	**Pn**	**02 24 35.5**	**-1.1**
GEYT	**Alibeck**	**11.53**	**21**	LR	LR	02 29 30.5	
	comp=Z,38nm,18.3s,baz=315,slow=38						
KBZ	**Khabaz**	**18.33**	**336**	P	**P**	**02 26 30.2**	**+1.0**
	0.1nm,0.3s,baz=157,slow=7.5,SNR=5.5						
BRTR	**Keskin Array B**	**20.27**	**313**	P	**P**	**02 26 50.8**	**+0.1**
	0.5nm,0.5s,baz=143,slow=12,SNR=2.3						
BRTR				LR	LR	02 37 57.5	
	comp=Z,12nm,18.4s,baz=358,slow=46						
AAK	**Ala-Archa**	**23.34**	**43**	LR	LR	02 38 04.2	
	comp=Z,44nm,20.9s,baz=306,slow=41						
AKTO	**Aktyubinsk**	**23.49**	**8**	P	**P**	**02 27 25.4**	**+0.8**
	1.0nm,0.7s,baz=216,slow=12,SNR=4.6						
BELG	**Belogornoye**	**25.43**	**352**	P	**P**	**02 27 43.6**	**+1.1**
	18nm,0.7s,baz=138,slow=2.0,SNR=7.4						
BVAR	**Borovoye Array**	**28.86**	**22**	P	**P**	**02 28 12.5**	**-0.9**
	0.8nm,0.5s,baz=174,slow=15,SNR=5.2						
MKAR	**Makanchi Array**	**30.25**	**42**	P	**P**	**02 28 25.9**	**+0.1**
	0.6nm,0.5s,baz=231,slow=9.6,SNR=7.7						
ZALV	**Zalesovo Beam**	**35.52**	**33**	P	**P**	**02 29 11.2**	**-0.5**
	1.5nm,0.4s,baz=243,slow=8.2,SNR=8.3						
FINES	**FINESS Array B**	**38.64**	**340**	P	**P**	**02 29 38.5**	**+0.4**
	1.4nm,0.8s,baz=134,slow=11,SNR=3.4						
NOA	**NORSAR Array B**	**43.83**	**332**	P	**P**	**02 30 20.0**	**-0.9**
	0.8nm,0.8s,baz=108,slow=9.1,SNR=1.7						
ARCES	**ARCESS Array B**	**45.23**	**347**	P	**P**	**02 30 30.8**	**-1.1**
	2.5nm,1.0s,baz=140,slow=12,SNR=4.9						
ESDC	**Sonseca Array**	**48.30**	**300**	P	**P**	**02 30 55.8**	**-0.7**
	0.5nm,0.9s,baz=82,slow=6.5,SNR=4.2						
YKA	**Yellowknife Ar**	**90.02**	**354**	P	**P**	**02 35 13.9**	**-0.4**
	0.4nm,0.7s,baz=6.7,slow=4.5,SNR=8.3						

IDC ***15*** *03:56:37.5±2.2, 3.°48N×125.°67E, h163km±21km, mb3.9/8, mb1 4.1/12, mb1mx3.6/59, mbtmp4.5/12, MS3.1/2, Ms1 3.1/2, ms1mx2.5/40, Error ellipse: s-maj=28.7km s-min=12.2km az=63.0*
NEIC ***15*** *03:56:37.3±1.2, 3.°41N±0.°07×125.°7E±0.°1, h163km±9km, mb4.6/15, Error ellipse: s-maj=15.6km s-min=10.0km az=70.0*
DJA ***15*** *03:56:38.6±0.2, 3.°N±2.°×12.°6E±.°, h147km±2km, M4.7/25, mb4.6/25, mB5.2/8, MLv4.8/15, Mw(mB)4.6/8, MwMwp6.4/2, Mwp6.4/2*

ISC 15 03:56:37.1±0.5, 3.°39N±0.°05×125.°72E±0.°07, h150km, n66, σ1ᵉ79/72, mb4.4/15, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**0.35**	**327**	P	**Pn**	**03 56 59.0**	**+1.2**
SGSI				S	**Sn**	**03 57 15.5**	**+1.9**
DDMP	**Don Marcelino,**	**2.70**	**360**	*e*P	**Pn**	**03 57 19.9**	**-0.8**
TNTI	**Ternate**	**3.08**	**148**		**Pn**	**03 57 26.2**	**+0.7**
TNTI				Sn	**Sn**	**03 58 03.2**	**+0.4**
TNTI	**Ternate**	**3.08**	**148**	P	**Pn**	**03 57 26.0**	**+0.5**
KMSI	**Cibinong**	**3.29**	**212**	P	**Pn**	**03 57 30.9**	**+2.7**

SKMP	**Bagumbayan, Su**	**3.32**	**339**	*e*P		**Pn**	**03 57 28.3**	**-0.3**
MATI	**Mati**	**3.57**	**9**	*e*P		**Pn**	**03 57 31.5**	**-0.3**
KCP	**Kidapawan**	**3.65**	**350**	⇑*i*P		**Pn**	**03 57 33.7**	**+0.8**
KCP				*i* S		**Sn**	**03 58 18.6**	**+2.4**
DAV	**Davao City (W)**	**3.66**	**358**	S		**Sn**	**03 58 19.9**	**+3.6**
	116nm,0.3s,baz=126,slow=20,SNR=6.5							
DAV	**Davao City (W)**	**3.66**	**358**	Pn		**Pn**	**03 57 33.9**	**+0.9**
GTOI	**Gorontalo**	**3.85**	**225**	P		**Pn**	**03 57 36.9**	**+1.5**
BUKP	**Musuan**	**4.51**	**352**	*e*P		**Pn**	**03 57 44.9**	**+0.8**
MRSI	**Marisa**	**4.76**	**233**	P		**Pn**	**03 57 49.7**	**+2.3**
PAGZ	**Pagadian**	**5.00**	**332**	*e*P		**Pn**	**03 57 49.4**	**-1.2**
LUWI	**Luwuk**	**5.30**	**214**	P		**Pn**	**03 57 57.3**	**+2.8**
	1.0nm374nm,1.1s							
SANI	**Sanana**	**5.41**	**177**	P		**Pn**	**03 57 55.3**	**-0.7**
	1.7nm13μm212nm,0.8s							
TOLI2	**Tolitoli**	**5.43**	**245**	Pn		**Pn**	**03 57 57.0**	**+0.7**
APSI	**Ampana**	**5.90**	**224**	P		**Pn**	**03 58 05.1**	**+2.6**
	0.4nm1μm82nm,0.5s							
GLSP	**General Luna,**	**6.37**	**4**	*e*P		**Pn**	**03 58 08.4**	**-0.3**
NLAI	**Namlea**	**6.73**	**168**	P		**Pn**	**03 58 13.6**	**0.0**
	2.3nm41μm82nm,1.1s							
SWI	**Sorong**	**6.96**	**127**	P		**Pn**	**03 58 18.0**	**+1.3**
	0.1nm21nm,0.7s							
SIJI	**Sorong**	**6.97**	**127**	P		**Pn**	**03 58 17.9**	**+1.1**
	5.3nm,0.3s,baz=337,slow=14,SNR=8.5							
TTSI	**Tana Toraja**	**8.70**	**223**	P		**Pn**	**03 58 42.8**	**+2.9**
FAKI	**Fak Fak**	**9.05**	**134**			**Pn**	**03 58 44.8**	**+0.3**
FAKI	**Fak Fak**	**9.05**	**134**	P		**Pn**	**03 58 45.4**	**+0.9**
	40nm,1.2s							
SMKI	**Samarinda**	**9.32**	**246**	P		**Pn**	**03 58 52.2**	**+4.0**
	297nm,0.8s							
SPSI	**Sidrap Palu**	**9.42**	**219**	P		**Pn**	**03 58 50.1**	**+0.6**
	38nm,0.8s							
BNSI	**Bone**	**9.56**	**216**	P		**Pn**	**03 58 53.4**	**+2.1**
	15nm,0.7s							
KAPI	**Kappang**	**10.26**	**216**	P		**Pn**	**03 59 01.7**	**+1.1**
	3.9nm,0.3s,baz=13,slow=10,SNR=19							
BBKI	**Banjar Baru**	**12.83**	**238**	P		**Pn**	**03 59 37.3**	**+3.1**
	78nm,1.0s							
BATI	**Baumata**	**13.66**	**189**	P		**Pn**	**03 59 47.1**	**+2.2**
	4.1nm,0.3s,baz=301,slow=5.9,SNR=2.3							
BATI	**Baumata**	**13.66**	**189**	P		**Pn**	**03 59 47.4**	**+2.5**
	31nm,0.7s							
PLAI	**Plampang**	**14.49**	**213**	P		**Pn**	**03 59 55.7**	**+0.4**
	28nm,0.8s							
TWSI	**Taliwang, Sumb**	**14.93**	**216**	P		**P**	**04 00 04.6**	**+2.0**
	600nm25nm,0.8s							
SRBI	**Singaraja**	**15.49**	**223**	P		**Pn**	**04 00 08.6**	**+0.9**

BKZ	**Black Stump Fm**	**8.93**	**198**	P	**P**	**04 03**	**26.6**	**+0.9**
BKZ				S	**S**	**04 05**	**06.2**	**-2.5**
MCHZ	**McNeill Hill**	**9.14**	**197**	P	**Pn**	**04 03**	**29.5**	**+1.6**
MCHZ				S	**S**	**04 05**	**11.7**	**-1.3**
KWHZ	**Kaweka Forest**	**9.19**	**198**	P	**P**	**04 03**	**28.6**	**+0.1**
KWHZ				S	**S**	**04 05**	**14.2**	**0.0**
NGZ	**Ngauruhoe**	**9.21**	**203**	P	**Pn**	**04 03**	**32.3**	**+3.4**
BHHZ	**Black Hill Sta**	**9.35**	**200**	P	**P**	**04 03**	**30.5**	**+0.2**
BHHZ				S	**S**	**04 05**	**14.6**	**-3.0**
MOVZ	**Moawhango**	**9.37**	**201**	P	**P**	**04 03**	**30.2**	**-0.3**
MOVZ				S	**S**	**04 05**	**14.3**	**-3.7**
KRHZ	**Kereru**	**9.41**	**198**	P	**Pn**	**04 03**	**32.1**	**+1.0**
KAHZ	**Kahuranaki**	**9.43**	**195**	P	**Pn**	**04 03**	**34.1**	**+2.8**
PNHZ	**Pukenui**	**9.71**	**199**	P	**P**	**04 03**	**34.4**	**+0.1**
TSZ	**Takapari Road**	**9.91**	**199**	P	**P**	**04 03**	**37.1**	**+0.6**
MRZ	**Mangatainoka R**	**10.58**	**199**	P	**P**	**04 03**	**43.1**	**-0.7**
MSWZ	**Moikau Station**	**11.37**	**199**	P	**P**	**04 03**	**53.6**	**+1.0**
MSVF	**Nonsavu**	**13.07**	**351**	P	P	04 04	05.9	-5.8
	7.1nm,0.3s,baz=99,slow=22,SNR=7.7							
CTA	**Charters Tower**	**32.26**	**281**	P	**P**	**04 07**	**14.1**	**+0.6**
	2.3nm,0.4s,baz=96,slow=10,SNR=1.9							
STKA	**Stephens Creek**	**32.83**	**258**	P	**P**	**04 07**	**18.2**	**0.0**
	0.9nm,0.4s,baz=85,slow=12,SNR=2.8							
ASAR	**Alice Springs**	**41.48**	**268**	P	**P**	**04 08**	**30.1**	**+0.1**
	1.1nm,0.5s,baz=106,slow=7.4,SNR=17							
WRA	**Warramunga Arr**	**42.49**	**274**	P	**P**	**04 08**	**37.5**	**-0.7**
	5.1nm,0.3s,baz=111,slow=8.0,SNR=77							
FITZ	**Fitzroy Crossi**	**50.74**	**271**	P	**P**	**04 09**	**41.6**	**+0.3**
	1.2nm,0.3s,baz=100,slow=6.1,SNR=4.9							
PETK	**Petropavlovsk-**	**85.74**	**347**	P	**P**	**04 13**	**14.3**	**-0.4**
	3.6nm,0.9s,baz=112,slow=4.8,SNR=5.6							
ARCES	**ARCESS Array B**	**138.55**	**347**	PKhKP	PKPpre	04 19	49.5	
	3.6nm,1.1s,baz=301,slow=1.4,SNR=5.8							
FINES	**FINESS Array B**	**144.87**	**339**	PKP	**PKPdf**	**04 20**	**08.7**	**-0.6**
	3.9nm,0.5s,baz=56,slow=3.7,SNR=24							
NOA	**NORSAR Array B**	**148.80**	**350**	PKPbc	**PKPbc**	**04 20**	**19.8**	**-0.6**
	0.7nm,0.6s,baz=14,slow=4.1,SNR=3.4							
AKASG	**Malin Array Be**	**150.55**	**321**	PKPbc	**PKPbc**	**04 20**	**23.4**	**-1.5**
	0.9nm,0.4s,baz=46,slow=2.8,SNR=7.0							

*IDC **15** 04:09:36.6±1.9, 7°.53S×127°.59E, h161km±18km, mb3.8/5, mb1 4.0/10, mb1mx3.7/32, mbtmp4.4/10, MS2.9/1, Ms1 2.9/1, ms1mx2.3/44, Error ellipse: s-maj=24.8km s-min=14.5km az=70.0*

*NEIC **15** 04:09:37.1±1.9, 7°.53S±0°.07×127°.59E±0°.08, h168km±8km, mb4.5/11, Error ellipse: s-maj=12.1km s-min=9.7km az=129.0*

*DJA **15** 04:09:37.5±1.3, 8°S±5°×127°8E±°, h12km±10km, M4.6/8, mb4.5/4, mB5.3/3, MLv4.6/8, Mw(mB)4.7/3*

ISC 15 04:09:36.7±0.6,**7°.68S**±0°.05×**127°.64E**±0°.05,**h162**km,**n43,** σ1§**96**/51,**mb4.4**/8,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.64**	**95**	P	**Pn**	**04 10 34.4**	**+1.7**
SAUI				S	**Sn**	**04 11 18.8**	**+2.5**
SOEI	**Soe**	**3.92**	**238**	Pn	**Pn**	**04 10 38.0**	**+1.6**
SOEI				Sn	**Sn**	**04 11 24.0**	**+1.1**
SOEI	**Soe**	**3.92**	**238**	P	**Pn**	**04 10 38.0**	**+1.6**
SOEI				S	**Sn**	**04 11 23.9**	**+1.1**
NLAI	**Namlea**	**4.44**	**353**	P	**Pn**	**04 10 46.6**	**+3.6**
BATI	**Baumata**	**4.66**	**237**	P	**Pn**	**04 10 48.0**	**+2.0**
	25nm,0.3s,baz=93,slow=2.1,SNR=7.9						
BATI				S	**Sn**	**04 11 39.8**	**-0.3**
	72nm,0.3s,baz=114,slow=23,SNR=23						
BATI	**Baumata**	**4.66**	**237**	P	**Pn**	**04 10 47.7**	**+1.8**
BATI				S	**Sn**	**04 11 42.3**	**+2.3**
MMRI	**Maumere**	**5.43**	**260**	P	**Pn**	**04 10 57.3**	**+1.3**
	0.5nm4µm52nm,0.6s						
MTN	**Manton Dam**	**6.18**	**146**	Pn	**Pn**	**04 11 09.2**	**+3.2**
FAKI	**Fak Fak**	**6.59**	**44**	Pn	**Pn**	**04 11 12.4**	**+1.0**
FAKI				Sn	**Sn**	**04 12 24.6**	**-1.2**
BSSI	**Bau Bau, Buton**	**7.25**	**282**	P	**Pn**	**04 11 23.0**	**+2.8**
	0.1nm16nm,0.8s						
BASI	**Baing, Sumba**	**7.42**	**250**	P	**Pn**	**04 11 24.0**	**+1.6**
	0.3nm50nm,0.7s						
SIJI	**Sorong**	**7.67**	**28**	P	**Pn**	**04 11 24.6**	**-1.1**
	4.5nm,0.3s,baz=206,slow=22,SNR=11						
KNRA	**Kununurra**	**8.03**	**175**		**Pn**	**04 11 31.7**	**+1.2**
LUWI	**Luwuk**	**8.18**	**323**	Pn	**Pn**	**04 11 28.9**	**-3.7**
FITZ	**Fitzroy Crossi**	**10.54**	**190**	P	**Pn**	**04 12 03.4**	**-0.3**
	3.2nm,0.3s,baz=26,slow=13,SNR=23						
FITZ				S	**Sn**	**04 13 55.3**	**-5.2**
	5.2nm,0.3s,baz=76,slow=21,SNR=9.3						
WB0	**Warramunga Arr**	**13.69**	**152**	Pn	**Pn**	**04 12 44.8**	**+0.5**
WRAB	**Tennant Creek**	**13.81**	**153**	Pn	**Pn**	**04 12 46.8**	**+0.9**
WRA	**Warramunga Arr**	**13.82**	**153**	P	**Pn**	**04 12 45.8**	**-0.1**
	1.5nm,0.3s,baz=326,slow=13,SNR=37						
WRA				S	**Sn**	**04 15 13.8**	**-5.6**
	6.9nm,0.3s,baz=325,slow=24,SNR=10.0						
WB2	**Warramunga Arr**	**13.82**	**153**	Pn	**Pn**	**04 12 45.7**	**-0.3**
WR0	**Warramunga Arr**	**13.93**	**152**	Pn	**Pn**	**04 12 46.8**	**-0.5**
DAV	**Davao City (W)**	**14.79**	**352**	LR	LR	04 18 15.4	
	comp=Z,55nm,20.9s,baz=310,slow=35						
PSA00	**Pilbara Seismi**	**15.73**	**208**		**P**	**04 13 10.8**	**+0.5**
PSA00				IAmb	IAmb	04 13 12.8	
	comp=Z,13nm,0.9s						
COEN	**Coen**	**16.48**	**114**		**Pn**	**04 13 20.0**	**+1.1**
COEN				IAmb	IAmb	04 13 28.1	
	comp=Z,9.0nm,0.9s						
AS31	**Alice Springs**	**17.00**	**160**		**Pn**	**04 13 26.5**	**+1.5**
AS31				IAmb	IAmb	04 13 30.5	
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**17.00**	**160**	P	**Pn**	**04 13 27.8**	**+2.7**
	comp=Z,5.6nm,0.3s,baz=336,slow=11,SNR=203						
ASAR				S	**S**	**04 16 30.8**	**-2.5**
	comp=Z,2.0nm,0.3s,baz=329,slow=17,SNR=12						
ASAR	**Alice Springs**	**17.00**	**160**		**Pn**	**04 13 26.1**	**+1.0**
FORT	**Forrest**	**22.99**	**179**	P	**P**	**04 14 28.4**	**+1.1**
MORW	**Morawa**	**23.92**	**206**	P	**P**	**04 14 37.4**	**+1.5**
MORW				IAmb	IAmb	04 14 38.8	
	comp=Z,9.3nm,0.6s						
BBOO	**Buckleboo**	**26.20**	**164**	P	**P**	**04 14 58.3**	**+1.8**
NWAO	**Narrogin (SRO)**	**26.92**	**200**	P	**P**	**04 15 03.4**	**+0.6**
NWAO				IAmb	IAmb	04 15 13.9	
	comp=Z,19nm,1.1s						
NWAO	**Narrogin (SRO)**	**26.92**	**200**	P	**P**	**04 15 03.8**	**+0.9**
NWAO				IAmb	IAmb	04 15 13.9	
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**27.37**	**153**	P	**P**	**04 15 08.2**	**+1.3**
	comp=Z,3.1nm,0.4s,baz=328,slow=8.3,SNR=12						
STKA	**Stephens Creek**	**27.37**	**153**	P	**P**	**04 15 08.4**	**+1.5**
RPSI	**Rantau Prapat**	**30.44**	**289**	P	**P**	**04 15 33.4**	**-0.9**
PSI	**Prapat**	**30.48**	**289**	P	**P**	**04 15 33.4**	**-1.3**
	comp=Z,6.0nm,0.7s,baz=179,slow=5.3,SNR=4.3						
BJT	**Baijiatuan**	**48.62**	**348**	P	**P**	**04 18 02.2**	**-1.9**
BJT				IAmb	IAmb	04 18 02.9	
	comp=Z,5.3nm,0.4s						
MKAR	**Makanchi Array**	**67.53**	**328**	P	**P**	**04 20 14.3**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=137,slow=8.0,SNR=8.7						
MKAR	**Makanchi Array**	**67.53**	**328**	P	**P**	**04 20 14.1**	**-1.3**
ZALV	**Zalesovo Beam**	**71.17**	**335**	P	**P**	**04 20 36.6**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=126,slow=5.6,SNR=3.0						
VNDA	**Vanda**	**72.07**	**173**	P	**P**	**04 20 43.5**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=320,slow=8.8,SNR=9.4						
VNDA	**Vanda**	**72.07**	**173**	P	**P**	**04 20 43.3**	**+0.6**
CPUP	**Villa Florida**	**145.85**	**172**	PKPbc	**PKPbc**	**04 28 58.0**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=243,slow=6.9,SNR=3.4						
LPAZ	**La Paz**	**151.53**	**147**	PKPbc	**PKiKP**	**04 29 14.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=32,slow=3.7,SNR=4.9						

*SOME **15** 04:10:56.4, 40°.80N×77°.15E, h0km*

*KRNET **15** 04:10:56.6±0.1, 40°.77N×77°.34E, h17km, mb3.4*

*NNC **15** 04:10:58.3±1.3, 40°.77N×77°.21E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=9.1km s-min=6.5km az=163.0*

ISC 15 04:11:01.5±1.4,**40°.92N**±0°.07×**77°.17E**±0°.03,**h10**km,**n63,** σ1§**38**/94,**23C-17D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.21**	**0**	⇓*iP*	**Pb**	**04 11 22.7**	**-2.0**
	baz=55						
KDJ				⇓*iS*	**Sn**	**04 11 41.7**	**+0.4**
	baz=55						
ULHL	**Ulahol**	**1.50**	**333**	⇑*iP*	**Pn**	**04 11 28.2**	**-0.5**
	baz=31						
ULHL				⇑*iS*	**Sg**	**04 11 51.3**	**+1.5**
	baz=31						
ULHL	**Ulahol**	**1.50**	**333**	P	**Pn**	**04 11 27.9**	**-0.7**
	SNR=113						
PRZ	**Przheval'sk**	**1.81**	**30**	⇑*iP*	**Pn**	**04 11 32.4**	**-0.6**
	baz=24						
PRZ				⇑*iS*	**Sb**	**04 11 58.5**	**+0.7**
	baz=24						
BOOM	**Boomskoye usch**	**1.82**	**330**	⇓*iP*	**Pn**	**04 11 33.7**	**+0.6**
	baz=29						
BOOM				⇓*iS*	**Sg**	**04 12 01.1**	**+1.0**
	baz=29						
ANVS	**Anan'yevo**	**1.90**	**11**	⇓*iP*	**Pn**	**04 11 33.9**	**-0.3**
	baz=7.0						
ANVS				⇓*iS*	**Sg**	**04 12 01.7**	**-0.9**
	baz=7.0						
TNSS	**Tian-Shan**	**2.12**	**356**	*e*P	**Pb**	**04 11 40.1**	**-0.2**
	32nm,0.2s						
TNSS				*e*S	**Sg**	**04 12 11.5**	**+1.6**
	94nm,0.5s						
TNSS	**Tian-Shan**	**2.12**	**356**	Pg	**Pb**	**04 11 40.1**	**-0.2**
	32nm,0.2s						
TNSS				Lg	Lg	04 12 11.5	
	94nm,0.5s						
IZV	**Izvestkoviy**	**2.16**	**349**	*e*P	**Pb**	**04 11 40.3**	**-0.5**
	30nm,0.6s						
IZV				*e*S	**Sg**	**04 12 11.8**	**+1.0**
	180nm,0.3s						
IZV	**Izvestkoviy**	**2.16**	**349**	Pg	**Pb**	**04 11 40.3**	**-0.5**
	30nm,0.6s						
IZV				Lg	Lg	04 12 11.9	
	180nm,0.3s						
MDOK	**Medeo**	**2.25**	**358**	⇑*e*P	**Pb**	**04 11 42.2**	**-0.1**
	30nm,0.5s						
MDOK				*e*S	**Sg**	**04 12 14.9**	**+1.2**
	170nm,0.7s						
MDOK	**Medeo**	**2.25**	**358**	⇓Pg	**Pb**	**04 11 42.2**	**-0.1**
	20nm,0.5s						
MDOK				⇑Lg	Lg	04 12 15.6	
	141nm,0.6s						
MDOK	**Medeo**	**2.25**	**358**	Pg	**Pb**	**04 11 42.2**	**-0.1**
	30nm,0.5s						
MDOK				Lg	Lg	04 12 14.7	
	170nm,0.7s						
AAA	**Alma-Ata**	**2.30**	**355**	*e*P	**Pb**	**04 11 44.3**	**+1.2**
	41nm,0.1s						
AAA				*e*S	**Sg**	**04 12 18.2**	**+2.8**
	160nm,0.2s						
KST	**Kastek**	**2.31**	**337**	*e*P	**Pb**	**04 11 42.9**	**-0.4**
	23nm,0.4s						
KST				*e*S	**Sg**	**04 12 15.8**	**+0.2**
	118nm,0.3s						
KST	**Kastek**	**2.31**	**337**	Pg	**Pb**	**04 11 42.9**	**-0.4**
	23nm,0.4s						
KST				Lg	Lg	04 12 15.8	
	118nm,0.3s						
KOTS	**Kotyrbulak**	**2.31**	**359**	*e*P	**Pb**	**04 11 44.0**	**+0.6**
	103nm,0.2s						
KOTS				*e*S	**Sg**	**04 12 17.9**	**+2.0**
	167nm,0.4s						
KOTS	**Kotyrbulak**	**2.31**	**359**	Pg	**Pb**	**04 11 44.0**	**+0.6**
	103nm,0.2s						
KOTS				Lg	Lg	04 12 17.9	
	167nm,0.4s						
TKM2	**Tokmak 2**	**2.32**	**330**	⇑*iP*	**Pn**	**04 11 41.0**	**+1.0**
	baz=29						
TKM2				⇑*iS*	**Sb**	**04 12 13.8**	**+1.4**
	baz=29						
TKM2	**Tokmak 2**	**2.32**	**330**	P	**Pb**	**04 11 43.2**	**-0.4**
	SNR=16						
TKM2	**Tokmak 2**	**2.32**	**330**	⇓Pg	**Pb**	**04 11 43.0**	**-0.6**
	19nm,0.8s						
TKM2				⇑Lg	Lg	04 12 17.0	
	36nm,0.5s						
SATY	**Saty**	**2.33**	**23**	*e*P	**Pb**	**04 11 43.4**	**-0.3**
	26nm,0.2s						
SATY				*e*S	**Sg**	**04 12 16.8**	**+0.4**
	87nm,0.1s						
SATY	**Saty**	**2.33**	**23**	Pg	**Pb**	**04 11 43.1**	**-0.6**
	33nm,0.2s						
SATY				Lg	Lg	04 12 16.1	
	87nm,0.1s						
ARLS	**Aral**	**2.34**	**295**	⇓*iP*	**Pn**	**04 11 40.9**	**+0.7**
	baz=97						
ARLS				⇓*iS*	**Sb**	**04 12 13.4**	**+0.5**
	baz=97						
UCH	**Uchtor**	**2.38**	**304**	⇑*iP*	**Pn**	**04 11 41.2**	**+0.1**
	baz=5.0						
UCH				⇑*iS*	**Sb**	**04 12 15.7**	**+1.2**
	baz=5.0						
UCH	**Uchtor**	**2.38**	**304**	P	**Pn**	**04 11 43.1**	**+2.1**
	SNR=30						
KBK	**Karagaybulak**	**2.40**	**317**	⇓*iP*	**Pn**	**04 11 42.8**	**+1.7**
	baz=17						
KBK				⇓*iS*	**Sb**	**04 12 15.6**	**+0.8**
	baz=17						
KBK	**Karagaybulak**	**2.40**	**317**	P	**Pb**	**04 11 44.1**	**-0.9**
	SNR=30						
DGS	**Degeres**	**2.54**	**336**	*e*P	**Pb**	**04 11 47.2**	**-0.2**
	14nm,0.2s						
DGS				*e*S	**Sg**	**04 12 23.9**	**+0.6**
	67nm,0.4s						
DGS	**Degeres**	**2.54**	**336**	Pg	**Pb**	**04 11 47.2**	**-0.2**
	14nm,0.2s						
DGS				Lg	Lg	04 12 23.8	
	67nm,0.4s						
UZB	**Uzunbulak**	**2.62**	**31**	*e*P	**Pb**	**04 11 47.9**	**-0.8**
	16nm,0.2s						
UZB				*e*S	**Sg**	**04 12 25.0**	**-0.7**
	37nm,0.2s						
UZB	**Uzunbulak**	**2.62**	**31**	Pg	**Pb**	**04 11 47.9**	**-0.8**
	16nm,0.2s						
UZB				Lg	Lg	04 12 25.0	
	37nm,0.2s						
AAK	**Ala-Archa**	**2.64**	**312**	⇑*iP*	**Pn**	**04 11 46.2**	**+1.9**
	baz=12						
AAK				⇑*iS*	**Sb**	**04 12 21.0**	**-0.5**
	baz=12						
AAK	**Ala-Archa**	**2.64**	**312**	P	**Pb**	**04 11 47.5**	**-1.4**
	SNR=31						
AAK	**Ala-Archa**	**2.64**	**312**	⇓Pn	**Pn**	**04 11 46.3**	**+2.0**
	28nm,0.7s						
AAK				⇑Lg	Lg	04 12 25.6	
	55nm,0.6s						
CHMS	**Chumysh**	**2.75**	**320**	⇓*iP*	**Pn**	**04 11 47.5**	**+1.7**
	baz=20						
CHMS				⇓*iS*	**Sb**	**04 12 23.8**	**-0.8**
	baz=20						
CHMS	**Chumysh**	**2.75**	**320**	P	**Pb**	**04 11 50.4**	**-0.4**
	SNR=9.6						
KPKS	**Kokpek**	**2.78**	**23**	*e*P	**Pb**	**04 11 51.0**	**-0.5**
	43nm,0.2s						
KPKS				*e*S	**Sg**	**04 12 29.8**	**-1.2**
	102nm,0.4s						
SHLS	**Shalkode**	**2.81**	**37**	*e*P	**Pg**	**04 11 54.9**	**-0.6**
	44nm,0.6s						
SHLS				*e*S	**Sg**	**04 12 36.4**	**+4.5**
	63nm,0.6s						
SHLS	**Shalkode**	**2.81**	**37**	Pg	**Pg**	**04 11 54.9**	**-0.6**
	44nm,0.6s						
SHLS				Lg	Lg	04 12 36.4	
	63nm,0.6s						
KTBS	**Karatobe**	**2.82**	**353**	*e*P	**Pb**	**04 11 51.9**	**0.0**
	23nm,0.3s						
KTBS				*e*S	**Sg**	**04 12 31.4**	**-0.6**
	152nm,0.4s						
KTBS	**Karatobe**	**2.82**	**353**	Pg	**Pb**	**04 11 51.9**	**0.0**
	23nm,0.3s						
KTBS				Lg	Lg	04 12 31.4	
	152nm,0.4s						
AML	**Almayashu**	**2.88**	**296**	⇑*iP*	**Pn**	**04 11 48.5**	**+0.7**
	baz=98						
AML				⇑*iS*	**Sb**	**04 12 26.8**	**-1.8**
	baz=98						
AML	**Almayashu**	**2.88**	**296**	P	**Pb**	**04 11 51.6**	**-1.6**
	SNR=52						
KRBS	**Karabastau**	**2.99**	**339**	*e*P	**Pb**	**04 11 55.0**	**+0.1**
	16nm,0.4s						
KRBS				*e*S	**Sg**	**04 12 37.0**	**-0.5**
	47nm,0.6s						
KRBS	**Karabastau**	**2.99**	**339**	Pg	**Pb**	**04 11 55.0**	**+0.1**
	16nm,0.4s						
KRBS				Lg	Lg	04 12 37.0	
	47nm,0.6s						
USP	**Ospenovka**	**3.08**	**321**	⇑*iP*	**Pn**	**04 11 51.7**	**+1.5**
	baz=21						
USP				⇑*iS*	**Sb**	**04 12 32.2**	**-1.7**
	baz=21						
USP	**Ospenovka**	**3.08**	**321**	P	**Pb**	**04 11 55.6**	**-0.7**
	SNR=48						
EKS2	**Erkin-Say**	**3.08**	**306**	⇑*iP*	**Pn**	**04 11 51.4**	**+1.1**
	baz=7.0						
EKS2				⇑*iS*	**Sb**	**04 12 31.5**	**-2.6**
	baz=7.0						
EKS2	**Erkin-Say**	**3.08**	**306**	P	**Pb**	**04 11 55.8**	**-0.6**
	SNR=10						
SGDS	**Sogindy**	**3.16**	**324**	Pg	**Pb**	**04 11 57.2**	**-0.6**
	22nm,0.5s						
SGDS				Lg	Lg	04 12 40.3	
	23nm,0.5s						
ARXS	**Arharly**	**3.33**	**8**	*e*P	**Pb**	**04 12 01.6**	**+0.9**
	14nm,0.5s						
ARXS				*e*S	**Sg**	**04 12 48.1**	**-0.3**
	62nm,0.5s						
ARXS	**Arharly**	**3.33**	**8**	Pg	**Pb**	**04 12 01.6**	**+0.9**
	14nm,0.5s						
ARXS				Lg	Lg	04 12 48.1	
	62nm,0.5s						
DJR	**Jarkent**	**3.92**	**29**	*e*P	**Pb**	**04 12 11.2**	**+0.4**
	3.9nm,0.3s						
DJR				*e*S	**Sg**	**04 13 04.6**	**-2.8**
	15nm,0.5s						
DJR	**Jarkent**	**3.92**	**29**	Pg	**Pb**	**04 12 11.2**	**+0.4**
	3.9nm,0.3s						
DJR				Lg	Lg	04 13 04.6	
	15nm,0.5s						
TDK	**Taldyqorghan**	**4.18**	**12**	*e*P	**Pb**	**04 12 16.7**	**+1.5**
	82nm,0.3s						
TDK				*e*S	**Sg**	**04 13 13.6**	**-2.1**
	87nm,0.5s						
TDK	**Taldyqorghan**	**4.18**	**12**	Pg	**Pb**	**04 12 16.7**	**+1.5**
	82nm,0.3s						
TDK				Lg	Lg	04 13 13.6	
	87nm,0.5s						
BTLS	**Baital**	**4.71**	**332**	*e*P	**Pb**	**04 12 25.2**	**+1.0**
	3.2nm,0.4s						
BTLS				*e*S	**Sg**	**04 13 28.3**	**-4.6**
	9.1nm,0.3s						
KK31	**Karatay Array**	**5.42**	**296**	⇓Pg	**Pb**	**04 12 37.2**	**+0.9**
	1.9nm,0.6s,baz=120,slow=17,SNR=16						
KK31				⇓Lg	Lg	04 13 53.1	
	1.0nm,0.3s,baz=118,slow=30,SNR=5.0						
IUG	**luzhnay**	**5.50**	**285**	*e*P	**Pb**	**04 12 40.2**	**+2.6**
	5.6nm,0.3s						
IUG				*e*S	**Sg**	**04 13 54.3**	**-3.7**
	6.9nm,0.5s						
IUG	**luzhnay**	**5.50**	**285**	Pg	**Pb**	**04 12 40.2**	**+2.6**
	7.4nm,0.5s						
IUG				Lg	Lg	04 13 54.2	
	7.1nm,0.4s						
MK31	**Makanchi Array**	**6.94**	**30**	⇑Pn	**Pn**	**04 12 42.8**	**-0.4**
	0.2nm,0.3s,baz=209,slow=12,SNR=5.5						
MK31				⇑Lg	Lg	04 14 47.4	
	1.4nm,0.6s						
KURBB	**Kurchatov Arra**	**9.75**	**5**	⇑Lg	Lg	04 16 15.6	
	8.5nm,0.9s						

*IDC **15** 04:17:41.9±1.9, 1°.65N×126°.89E, h0km, mb4.0/4, mb1 4.3/5, mb1mx3.8/34, mbtmp4.1/5, ML4.4/1, Error ellipse: s-maj=101.3km s-min=26.0km az=68.0*

*NEIC **15** 04:17:45.2±1.4, 2°.34N±0°.07×127°.01E±0°.03, h95km±9km, mb4.4/17, Error ellipse: s-maj=10.8km s-min=2.5km az=158.0*

*DJA **15** 04:17:46.7±1.2, 2°N±2°×12°7E±°, h24km±11km, M4.7/11, mb5.0/4, mB5.3/4, MLv4.5/11, Mw(mB)4.7/4*

ISC 15 04:17:45.8±0.7,**2°.30N**±0°.06×**126°.99E**±0°.08,**h100**km,**n40,** σ0§**94**/43,**mb4.3**/13,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.56**	**166**	Pn	**Pn**	**04 18 13.3**	**+0.5**
TNTI				Sn	**Sn**	**04 18 33.1**	**-0.2**
TNTI	**Ternate**	**1.56**	**166**	P	**Pn**	**04 18 12.4**	**-0.4**
TNTI				S	**Sn**	**04 18 32.7**	**-0.6**
SGSI	**Sangihe**	**2.00**	**313**	P	**Pn**	**04 18 19.2**	**+0.8**
SGSI				S	**Sn**	**04 18 43.4**	**0.0**
KMSI	**Cibinong**	**3.46**	**240**	P	**Pn**	**04 18 38.3**	**+0.6**
GTOI	**Gorontalo**	**4.30**	**248**	P	**Pn**	**04 18 49.5**	**+0.4**
SANI	**Sanana**	**4.43**	**193**	P	**Pn**	**04 18 48.6**	**-2.2**
SWI	**Sorong**	**5.30**	**126**	P	Pn	04 18 48.3	-14
MRSI	**Marisa**	**5.36**	**250**	P	**Pn**	**04 19 04.4**	**+1.0**
	0.6nm2µm207nm,0.7s						
LUWI	**Luwuk**	**5.36**	**232**	Pn	**Pn**	**04 19 04.8**	**+1.4**
LUWI				Sn	**Sn**	**04 20 03.6**	**-0.3**
LUWI	**Luwuk**	**5.36**	**232**	P	**Pn**	**04 19 05.2**	**+1.8**
	0.8nm8µm105nm,0.7s						
NLAI	**Namlea**	**5.50**	**179**	P	**Pn**	**04 19 05.6**	**+0.3**
TOLI2	**Tolitoli**	**6.31**	**259**	Pn	**Pn**	**04 19 16.0**	**-0.3**
MYLDM	**Lahad Datu**	**8.94**	**289**	Pn	**Pn**	**04 19 51.8**	**-0.3**
SBUM	**Sibu**	**14.75**	**271**	P	**Pn**	**04 21 10.8**	**+1.3**
MTN	**Manton Dam**	**15.60**	**165**	Pn	**Pn**	**04 21 18.9**	**-1.3**
KSM	**Kuching**	**16.69**	**267**	Pn	**Pn**	**04 21 32.8**	**-0.9**
KNRA	**Kununurra**	**17.95**	**174**	P	**P**	**04 21 48.7**	**+0.6**
KNRA				IAmb	IAmb	04 21 49.9	
	comp=Z,16nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.31**	**184**	P	**P**	**04 22 13.8**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=6.5,slow=11,SNR=14						
FITZ	**Fitzroy Crossi**	**20.31**	**184**	P	**P**	**04 22 14.5**	**+0.6**
WB0	**Warramunga Arr**	**23.10**	**162**	P	**P**	**04 22 43.2**	**0.0**
PMG	**Port Moresby**	**23.22**	**120**	P	**P**	**04 22 42.9**	**-1.4**
PMG				IAmb	IAmb	04 22 55.0	
	comp=Z,18nm,0.8s						
WRAB	**Tennant Creek**

	450nm,0.2s						
JNK	**Nakash**	**0.82**	**319**	P	**Pn**	**04 40 13.0**	**-0.2**
JNK				*e*S	**Sn**	**04 40 23.4**	**-0.8**
JRA	**Rausu**	**1.00**	**346**	P	**Pn**	**04 40 15.9**	**+0.3**
JRA				*e*S	**Sn**	**04 40 29.1**	**+0.5**
GRPR	**Tuman**	**1.05**	**13**	*e*P	**Pn**	**04 40 16.1**	**-0.3**
GRPR				AMB	AMB	04 40 16.7	
	60nm,0.2s						
GRPR				*e*S	**Sn**	**04 40 29.4**	**-0.4**
GRPR				A	A	04 40 30.0	
	660nm,0.4s						
GRPR				A	A	04 40 30.0	
	1µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.10**	**15**	*i* P	**Pn**	**04 40 17.3**	**+0.2**
YUK				AMB	AMB	04 40 18.1	
	30nm,0.2s						
YUK				AMB	AMB	04 40 18.1	
	30nm,0.2s						
YUK				AMB	AMB	04 40 18.1	
	50nm,0.2s						
YUK				*i* S	**Sn**	**04 40 30.8**	**-0.4**
YUK				A	A	04 40 32.0	
	480nm,0.2s						
YUK				A	A	04 40 32.0	
	510nm,0.2s						
JOB	**Onbets**	**1.19**	**267**	*e*S	**Sn**	**04 40 33.0**	**-0.3**
JAR	**Ashorobuto**	**1.28**	**285**	P	**Pn**	**04 40 33.6**	**0.0**
JAR				*e*S	**Sn**	**04 40 35.9**	**+0.5**
JTKR	**Abashiri--Toko**	**1.51**	**312**	P	**Pn**	**04 40 23.3**	**+0.7**
KUR	**Kuril'sk**	**2.85**	**37**	*e*S	**Sn**	**04 41 14.1**	**0.0**
KUR				A	A	04 41 19.2	
	50nm,0.8s						
KUR				A	A	04 41 19.2	
	30nm,0.8s						

BJI ***15*** *04:44:57.6±0.0,6˚.20S×148˚.75E, h44km, mB4.9/18, mb4.7/21, Ms4.5/4, Ms7 4.1/4*

IDC ***15*** *04:45:00.8±2.1,6˚.32S×148˚.45E, h63km±19km, mb4.2/18, mb1 4.4/23, mb1mx4.1/48, mbtmp4.5/23, MS3.7/13, Ms1 3.7/13, ms1mx3.6/25, Error ellipse: s-maj=16.6km s-min=11.1km az=97.0*

NEIC ***15*** *04:45:01.4±0.7,6˚.37S±0˚.06×148˚.39E±0˚.06, h71km±6km, mb4.8/30, Error ellipse: s-maj=9.6km s-min=8.6km az=133.0*

DJA ***15*** *04:45:01.6±0.4,6˚S±3˚×14˚8E±˚, h66km±5km, M5.0/34, mB5.3/12, mb5.0/34, MLv5.3/3, Mw(mB)4.8/12*

GCMT ***15*** *04:45:02.4±0.4,6˚.43S±0˚.02×148˚.45E±0˚.03, h51km±3km, MW4.8/67, Moment Tensor Solution. s15,c16; s67,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.96±.23; $M_{\theta\theta}$1.12±.15; $M_{\phi\phi}$-2.07±.13; $M_{r\theta}$1.15±.10; $M_{\theta\phi}$0.11±.12; $M_{\phi r}$-1.07±.11; Best double couple: M_o2.38400×10^{16} NP1:ϕ_s35.00000˚,δ42.00000˚,λ157.00000˚. NP2: ϕ_s143.00000˚,δ75.00000˚,λ50.00000˚. Principal axes: T 2.2960, Plg45.0000˚, Azm13.0000˚; N 0.1850, Plg38.0000˚, Azm156.0000˚; P -2.4720, Plg20.0000˚, Azm262.0000˚; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 04:44:59.5±0.4,6˚.34S±0˚.05×148˚.39E±0˚.06,h46km,n127, σ1ᵍ35/125,mb4.8/44,MS3.8/13,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.28**	**202**	P	**Pn**	**04 45 50.3**	**+1.9**
	70nm,0.3s,baz=17,slow=6.0,SNR=47						
PMG				S	**Sn**	**04 46 28.3**	**+2.0**
	518nm,0.3s,baz=173,slow=20,SNR=38						
PMG				LR	LR	04 47 26.2	
	comp=Z,3µm,19.6s,baz=23,slow=44						
PMG	**Port Moresby**	**3.28**	**202**		**Pn**	**04 45 49.3**	**+0.9**
PMG					**Sn**	**04 46 27.8**	**+1.5**
PMG	**Port Moresby**	**3.28**	**202**	P	**Pn**	**04 45 52.2**	**+3.7**
RABL	**Rabaul**	**4.32**	**61**	Pn	**Pn**	**04 46 04.1**	**+1.3**
RABL	**Rabaul**	**4.32**	**61**	P	**Pn**	**04 46 05.0**	**+2.2**
MANU	**Manus Island**	**4.39**	**347**	Pn	**Pn**	**04 46 06.9**	**+3.2**
COEN	**Coen**	**9.14**	**214**	Pn	**Pn**	**04 47 10.0**	**+1.1**
HNR	**Honiara**	**11.85**	**106**	P	**Pn**	**04 47 47.9**	**+1.8**
	9.7nm,0.3s,baz=235,slow=2.2,SNR=9.5						
MTSU	**Mount Surprise**	**12.38**	**198**	P	**Pn**	**04 47 53.8**	**+0.5**
	baz=12,SNR=9.3						
MTSU				S	Sn	04 50 00.5	-9.3
	baz=12						
CTA	**Charters Tower**	**13.82**	**188**	P	**Pn**	**04 48 15.7**	**+2.8**
	0.3nm,0.3s,baz=24,slow=16,SNR=2.1						
FAKI	**Fak Fak**	**16.44**	**281**	Pn	**Pn**	**04 48 48.1**	**+0.9**
FAKI				IAmb	IAmb	04 48 57.3	
	comp=Z,52nm,1.0s						
FAKI	**Fak Fak**	**16.44**	**281**	P	**P**	**04 48 49.5**	**+0.1**
	comp=Z,66nm,1.1s						
QIS	**Mount Isa**	**16.50**	**210**	P	**Pn**	**04 48 48.3**	**+0.4**
	baz=16,SNR=38						
KDU	**Kakadu**	**16.91**	**247**	P	**Pn**	**04 48 52.8**	**-0.2**
	baz=17,SNR=21						
SIJI	**Sorong**	**17.93**	**287**	P	**P**	**04 49 07.2**	**+1.4**
	comp=Z,1.1nm,0.3s,baz=135,slow=20,SNR=1.9						
SWI	**Sorong**	**17.94**	**287**	P	**P**	**04 49 07.7**	**+1.8**
	comp=Z,44nm,0.8s						
MTN	**Manton Dam**	**18.19**	**248**	P	**P**	**04 49 08.0**	**-0.4**
	baz=18,SNR=11						
MTN	**Manton Dam**	**18.19**	**248**	P	**P**	**04 49 08.5**	**-0.2**
MTN				IAmb	IAmb	04 49 17.9	
	comp=Z,25nm,0.8s						
WB0	**Warramunga Arr**	**19.05**	**224**	P	**P**	**04 49 17.9**	**-0.3**
WB0				IAmb	IAmb	04 49 24.0	
	comp=Z,44nm,0.8s						
WR0	**Warramunga Arr**	**19.08**	**224**	P	**P**	**04 49 18.3**	**-0.2**
WR0				IAmb	IAmb	04 49 20.5	
	comp=Z,54nm,0.9s						
EIDS	**Eidsvold**	**19.09**	**173**	P	**P**	**04 49 18.8**	**+0.2**
	baz=19,SNR=7.5						
EIDS	**Eidsvold**	**19.09**	**173**		**P**	**04 49 18.7**	**+0.2**
WRAB	**Tennant Creek**	**19.20**	**224**	P	**P**	**04 49 19.6**	**-0.1**
WRAB				IAmb	IAmb	04 49 21.6	
	comp=Z,52nm,0.7s						
WB2	**Warramunga Arr**	**19.20**	**224**	P	**P**	**04 49 19.7**	**-0.1**
WB2				IAmb	IAmb	04 49 21.7	
	comp=Z,52nm,0.7s						
WRA	**Warramunga Arr**	**19.21**	**224**	P	**P**	**04 49 20.4**	**+0.5**
	comp=Z,8.2nm,0.3s,baz=50,slow=11,SNR=192						
WRA				S	**S**	**04 52 49.5**	**-5.8**
	comp=Z,0.4nm,0.3s,baz=42,slow=24,SNR=8.0						
WRA				LR	LR	04 58 02.7	
	comp=Z,486nm,18.4s,baz=55,slow=41						
RMQ	**Roma**	**20.04**	**179**	P	Pn	04 49 30.4	-0.5
	baz=20,SNR=10						
QLP	**Quilpie**	**20.51**	**191**	P	**P**	**04 49 34.7**	**+0.7**
	baz=20,SNR=7.8						
KNRA	**Kununurra**	**21.36**	**243**	P	**P**	**04 49 43.1**	**-0.1**
NLAI	**Namlea**	**21.44**	**277**	P	**P**	**04 49 45.8**	**+1.8**
	comp=Z,37nm,0.8s						
AS31	**Alice Springs**	**22.15**	**217**	P	**P**	**04 49 51.4**	**-0.3**
AS31				IAmb	IAmb	04 49 53.1	
	comp=Z,28nm,0.8s						
ASAR	**Alice Springs**	**22.15**	**217**	P	**P**	**04 49 52.2**	**+0.6**
	comp=Z,64nm,0.7s,baz=52,slow=9.6,SNR=380						
ASAR				S	**S**	**04 53 50.3**	**-3.0**
	comp=Z,10nm,0.7s,baz=33,slow=22,SNR=9.7						
ASAR	**Alice Springs**	**22.15**	**217**	P	**P**	**04 49 51.5**	**-0.1**
SANI	**Sanana**	**22.74**	**280**	P	**P**	**04 49 57.2**	**-0.8**
	comp=Z,698nmcomp=Z,79nm,1.0s						
DZM	**Mont Dzumac**	**23.42**	**134**	LR	LR	04 57 56.4	
	comp=Z,379nm,21.1s,baz=294,slow=33						
SOEI	**Soe**	**24.12**	**260**	P	**P**	**04 50 10.8**	**-0.6**
SOEI				IAmb	IAmb	04 50 26.6	
	comp=Z,73nm,0.9s						
SOEI	**Soe**	**24.12**	**260**	P	**P**	**04 50 12.7**	**+1.2**
	comp=Z,2µmcomp=Z,96nm,0.8s						
ARMA	**Armidale**	**24.14**	**173**	P	**P**	**04 50 10.9**	**-0.6**
BATI	**Baumata**	**24.76**	**259**	P	**P**	**04 50 18.2**	**+0.9**
	comp=Z,140nm,0.7s,baz=140,slow=1.9,SNR=20						
BATI				LR	LR	05 01 49.4	
	comp=Z,336nm,20.8s,baz=110,slow=41						
BATI	**Baumata**	**24.76**	**259**	P	**P**	**04 50 19.0**	**+1.8**
	comp=Z,1µmcomp=Z,98nm,0.9s						
FITZ	**Fitzroy Crossi**	**25.08**	**240**	P	**P**	**04 50 21.1**	**+1.1**
	comp=Z,111nm,0.5s,baz=69,slow=8.5,SNR=403						
FITZ				LR	LR	05 01 18.1	
	comp=Z,450nm,19.8s,baz=76,slow=39						
FITZ	**Fitzroy Crossi**	**25.08**	**240**	P	**P**	**04 50 21.0**	**+1.0**
	baz=25,SNR=377						
FITZ	**Fitzroy Crossi**	**25.08**	**240**	P	**P**	**04 50 19.7**	**-0.3**
CMSA	**Cobar Meteorol**	**25.19**	**185**	P	**P**	**04 50 21.9**	**+1.0**
	baz=25,SNR=8.1						
MMRI	**Maumere**	**26.03**	**263**	P	**P**	**04 50 28.2**	**-0.4**
MMRI	**Maumere**	**26.03**	**263**	P	**P**	**04 50 29.6**	**+0.9**
	comp=Z,283nm,1.1s						
LUWI	**Luwuk**	**26.09**	**281**	P	**P**	**04 50 30.6**	**+1.3**
	comp=Z,116nm,0.9s						
STKA	**Stephens Creek**	**26.19**	**193**	P	**P**	**04 50 31.4**	**+1.5**
	comp=Z,9.4nm,0.4s,baz=358,slow=8.9,SNR=22						
STKA	**Stephens Creek**	**26.19**	**193**	P	**P**	**04 50 30.7**	**+0.8**
	baz=26,SNR=9.1						
STKA	**Stephens Creek**	**26.19**	**193**	P	**P**	**04 50 29.4**	**-0.5**
GTOI	**Gorontalo**	**26.26**	**284**	P	**P**	**04 50 33.8**	**+3.0**
	comp=Z,35nm,1.0s						
WRKA	**Warakurna**	**26.75**	**224**	P	**P**	**04 50 35.3**	**+0.1**
	baz=27,SNR=90						
BSSI	**Bau Bau, Buton**	**27.73**	**269**	P	**P**	**04 50 44.3**	**+0.3**
	comp=Z,48nm,1.1s						
BASI	**Baing, Sumba**	**27.78**	**260**	P	**P**	**04 50 43.7**	**-0.8**
	comp=Z,3µmcomp=Z,220nm,0.9s						
BNSI	**Bone**	**28.22**	**272**	P	**P**	**04 50 50.2**	**+1.8**
	comp=Z,22nm,1.0s						
HTT	**Hallett**	**28.35**	**197**	P	**P**	**04 50 49.5**	**+0.2**
	baz=28,SNR=11						
KAPI	**Kappang**	**28.53**	**271**	P	**P**	**04 50 51.8**	**+0.7**
	comp=Z,17nm,0.9s,baz=82,slow=4.2,SNR=11						
TOLI2	**Tolitoli**	**28.54**	**284**	P	**P**	**04 50 50.7**	**-0.5**
TOLI2				IAmb	IAmb	04 50 58.4	
	comp=Z,17nm,1.0s						
SPSI	**Sidrap Palu**	**28.60**	**273**	P	**P**	**04 50 49.1**	**-2.6**
	comp=Z,13nm,1.1s						
TTSI	**Tana Toraja**	**28.66**	**275**	P	**P**	**04 50 51.7**	**-0.6**
	comp=Z,3µmcomp=Z,20nm,1.2s						
BBOO	**Buckleboo**	**28.73**	**202**	P	**P**	**04 50 52.8**	**+0.1**
	baz=29,SNR=4.9						
BBOO	**Buckleboo**	**28.73**	**202**	P	**P**	**04 50 52.3**	**-0.4**
PLAI	**Plampang**	**30.44**	**263**	P	**P**	**04 51 06.6**	**-1.5**
	comp=Z,51nm,0.7s						
FORT	**Forrest**	**30.90**	**216**	P	**P**	**04 51 12.3**	**+0.4**
	baz=31,SNR=16						
FORT	**Forrest**	**30.90**	**216**	P	**P**		
FORT				IAmb	IAmb	04 51 16.4	
	comp=Z,39nm,0.8s						
PSA00	**Pilbara Seismi**	**31.48**	**238**	P	**P**	**04 51 16.5**	**-0.6**
PSA00				IAmb	IAmb	04 51 21.1	
	comp=Z,38nm,1.1s						
BBKI	**Banjar Baru**	**33.54**	**273**	P	**P**	**04 51 35.8**	**+0.5**
JAGI	**Jajag, Banyuwa**	**34.01**	**264**	P	**P**	**04 51 38.9**	**-0.6**
JAGI	**Jajag, Banyuwa**	**34.01**	**264**	P	**P**	**04 51 36.6**	**-2.8**
	comp=Z,58nm,0.9s						
KMBL	**Kambalda**	**35.15**	**222**	P	**P**	**04 51 49.7**	**+0.7**
	baz=35,SNR=25						
GIRL	**Giralia**	**36.69**	**240**	P	**P**	**04 52 02.8**	**+0.4**
	baz=37,SNR=3.9						
UGM	**Wanagama**	**37.60**	**265**	P	**P**	**04 52 09.5**	**-0.7**
UGM	**Wanagama**	**37.60**	**265**	P	**P**	**04 52 09.8**	**-0.4**
	comp=Z,98nm,1.4s						
MORW	**Morawa**	**37.99**	**230**	P	**P**	**04 52 13.9**	**+0.7**
	baz=38,SNR=4.6						
MORW	**Morawa**	**37.99**	**230**	P	**P**	**04 52 12.8**	**-0.4**
KLBR	**Kellerberrin**	**38.09**	**225**	P	**P**	**04 52 14.1**	**0.0**
	baz=38,SNR=21						
BLDU	**Ballidu**	**38.30**	**227**	P	**P**	**04 52 17.2**	**+1.4**
	baz=38,SNR=8.7						
JOW	**Kunigami**	**38.31**	**330**	LR	LR	05 05 03.9	
	comp=Z,181nm,20.7s,baz=170,slow=31						
NWAO	**Narrogin (SRO)**	**39.22**	**223**	P	**P**	**04 52 24.1**	**+0.6**
	comp=Z,5.8nm,0.4s,baz=75,slow=9.5,SNR=11						
NWAO	**Narrogin (SRO)**	**39.22**	**223**	P	**P**	**04 52 23.4**	**-0.1**
	baz=39,SNR=6.9						
NWAO	**Narrogin (SRO)**	**39.22**	**223**	P	**P**	**04 52 23.1**	**-0.4**
NWAO				IAmb	IAmb	04 52 30.5	
	comp=Z,23nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.22**	**223**	P	**P**	**04 52 22.9**	**-0.7**
NWAO				IAmb	IAmb	04 52 30.5	
	comp=Z,18nm,1.1s						
MUN	**Mundaring**	**39.40**	**225**	P	**P**	**04 52 25.8**	**+0.8**
	baz=39,SNR=3.6						
LEM	**Lembang**	**40.50**	**267**	P	**P**	**04 52 33.6**	**-1.0**
	comp=Z,30nm,0.3s,baz=27,slow=7.5,SNR=5.0						
JNU	**Nakatsue**	**42.63**	**338**	P	**P**	**04 52 51.6**	**0.0**
	comp=Z,1.1nm,0.8s,baz=128,slow=6.2,SNR=2.9						
JHS	**Saijyo**	**43.57**	**342**	P	**P**	**04 52 59.2**	**0.0**
JHS				IAmb	IAmb	04 53 05.5	
	comp=Z,13nm,1.0s						
MJAR	**Matsushiro Arr**	**43.71**	**348**	P	**P**	**04 53 00.1**	**-0.2**
	comp=Z,8.2nm,0.9s,baz=172,slow=8.4,SNR=10						
MJAR				LR	LR	05 11 16.3	
	comp=Z,46nm,18.3s,baz=165,slow=36						
MJAR	**Matsushiro Arr**	**43.71**	**348**	P	**P**	**04 52 59.6**	**-0.7**
MAJO	**Matsushiro**	**43.72**	**348**	P	**P**	**04 52 59.6**	**-0.6**
MAJO				IAmb	IAmb	04 53 00.9	
	comp=Z,11nm,0.8s						
MAT	**Matsushiro**	**43.72**	**348**	P	**P**	**04 52 59.9**	**-0.4**
QIZ	**Qiongzhong**	**45.59**	**304**	P	**P**	**04 53 17.3**	**+1.8**
QIZ				S	**S**	**04 59 54.6**	**-0.3**
QIZ				LR	LR		
	comp=Z,110nm,16.2s						
QIZ				LR	LR		
	comp=Z,130nm,16.7s						
QIZ				LR	LR		
	comp=Z,140nm,28.4s						
NJ2	**Nanjing**	**47.44**	**325**	*e*P	**P**	**04 53 31.8**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**47.58**	**338**	P	**P**	**04 53 30.8**	**+0.1**
	comp=Z,4.9nm,0.8s,baz=155,slow=8.7,SNR=16						
KSAR	**Wonju Array Be**	**47.58**	**338**	P	**P**	**04 53 29.7**	**-1.1**
USRK	**Ussuriysk Ar.**	**52.44**	**345**	P	**P**	**04 54 07.6**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=180,slow=7.4,SNR=7.2						
USRK				LR	LR	05 14 17.2	
	comp=Z,43nm,21.1s,baz=154,slow=34						
USRK	**Ussuriysk Ar.**	**52.44**	**345**	P	**P**	**04 54 05.8**	**-1.7**
CMAR	**Chiang Mai Arr**	**54.63**	**298**	P	**P**	**04 54 24.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=140,slow=7.1,SNR=1.6						
CMAR				LR	LR	05 15 16.5	
	comp=Z,26nm,21.7s,baz=175,slow=33						
KLR	**Kul'dur**	**57.22**	**347**	P	**P**	**04 54 41.4**	**-0.6**
	comp=Z,3.8nm,1.1s,baz=162,slow=7.0,SNR=6.4						
HHC	**Hu-ho-hao-te**	**57.85**	**328**	*e*P	**P**	**04 54 48.3**	**+1.5**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,91nm,5.7s						
PETK	**Petropavlovsk-**	**59.75**	**6**	P	**P**	**04 54 58.6**	**-1.0**
	comp=Z,4.2nm,0.8s,baz=146,slow=4.9,SNR=9.9						
PETK				LR	LR	05 17 11.9	
	comp=Z,79nm,21.7s,baz=187,slow=32						
GTA	**Gaotai**	**63.89**	**320**	*e*P	**P**	**04 55 28.3**	**+0.4**
GTA				pP	pP	04 55 39.9	-0.7
GTA				sP	sP	04 55 46.4	+0.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,92nm,5.8s						
GTA				LR	LR		
	comp=Z,64nm,14.9s						
GTA				LR	LR		
	comp=Z,130nm,15.3s						
GTA				LR	LR		
	comp=Z,86nm,16.0s						
SONM	**Songino Array**	**65.38**	**330**	P	**P**	**04 55 35.9**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=132,slow=4.2,SNR=4.2						
SONM	**Songino Array**	**65.38**	**330**	P	**P**	**04 55 36.3**	**-1.1**
MA2	**Magadan**	**65.73**	**1**	LR	LR	05 22 35.5	
	comp=Z,38nm,19.6s,baz=187,slow=34						
YAK	**Yakutsk**	**69.69**	**351**	LR	LR	05 23 59.8	
	comp=Z,31nm,20.7s,baz=91,slow=34						
VNDA	**Vanda**	**71.50**	**177**	P	**P**	**04 56 14.7**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=322,slow=6.7,SNR=8.8						
VNDA	**Vanda**	**71.50**	**177**	P	**P**	**04 56 13.8**	**-1.2**
WMQ	**Urumqi**	**73.95**	**319**	*e*P	**P**	**04 56 31.8**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,40nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,5.9s						
MKAR	**Makanchi Array**	**78.64**	**320**	P	**P**	**04 56 54.7**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=96,slow=8.6,SNR=4.7						
MKAR	**Makanchi Array**	**78.64**	**320**	P	**P**	**04 56 55.2**	**-1.5**
ZALV	**Zalesojn Beam**	**80.04**	**327**	P	**P**	**04 57 01.9**	**-2.3**
	comp=Z,0.8nm,0.4s,baz=68,slow=4.0,SNR=5.4						
QSPA	**South Pole Qui**	**83.63**	**180**	P	**P**	**04 57 21.6**	**-1.4**
	comp=Z,5.0nm,0.6s,baz=299,slow=0.9,SNR=38						
QSPA	**South Pole Qui**	**83.63**	**180**	P	**P**	**04 57 22.6**	**-0.4**
QSPA				IAmb	IAmb	04 57 25.3	
	comp=Z,8.0nm,0.9s						
ILAR	**Eielson Array**	**85.25**	**23**	P	**P**	**04 57 28.6**	**-2.4**
	comp=Z,2.8nm,0.8s,baz=262,slow=5.0,SNR=18						
ILAR	**Eielson Array**	**85.25**	**23**	P	**P**	**04 57 30.7**	**-0.3**
NRIK	**Noril'sk**	**86.03**	**342**	LR	LR	05 32 41.8	
	comp=Z,23nm,20.3s,baz=76,slow=33						
BCAR	**Beaver Creek A**	**86.65**	**25**	P	**P**	**04 57 36.9**	**-1.1**
BMAR	**Burnt Mountain**	**87.22**	**21**	P	**P**	**04 57 40.0**	**-0.8**
YKA	**Yellowknife Ar**	**98.83**	**28**	P	Pdif	04 58 34.5	+0.2
	comp=Z,0.7nm,1.0s,baz=274,slow=4.8,SNR=5.2						
PLCA	**Paso Flores**	**121.08**	**146**	PKP	**PKPdf**	**05 03 47.9**	**+0.2**
	comp=Z,2.8nm,1.1s,baz=199,slow=6.5,SNR=2.8						
GERES	**GERESS Array B**	**122.97**	**326**	PKP	**PKPdf**	**05 03 49.9**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=50,slow=2.1,SNR=8.5						
LPAZ	**La Paz**	**137.44**	**122**	PKP	**PKPdf**	**05 04 19.9**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=30,slow=1.7,SNR=7.7						
ROSC	**El Rosal**	**137.47**	**90**	PKP	**PKPdf**	**05 04 19.9**	**0.0**
	comp=Z,5.4nm,0.5s,baz=21,slow=16,SNR=5.3						
ROSC	**El Rosal**	**137.47**	**90**		**PKPdf**	**05 04 17.5**	**-2.4**
TORD	**Torodi Ar. Bea**	**146.51**	**284**	PKPbc	**PKPdf**	**05 04 35.9**	**+0.4**
	comp=Z,24nm,0.9s,baz=63,slow=2.9,SNR=62						
TORD	**Torodi Ar. Bea**	**146.51**	**284**	PKPdf	**PKPdf**	**05 04 33.9**	**-1.5**
BDFB	**Brasilia**	**152.78**	**144**	PKPbc	**PKPbc**	**05 04 51.8**	**-0.9**
	comp=Z,1.3nm,0.3s,baz=180,slow=8.8,SNR=4.1						
DBIC	**Dimbokro**	**153.42**	**272**	PKPbc	**PKPbc**	**05 04 52.6**	**-1.4**
	comp=Z,9.3nm,0.8s,baz=63,slow=2.9,SNR=10						

IDC ***15*** *04:49:45.0±1.1,28˚.11N×95˚.89E, h0km, mb3.6/9, mb1 3.8/9, mb1mx3.6/66, mbtmp3.6/9, MS3.5/1, Ms1 3.5/1, ms1mx2.6/36, Error ellipse: s-maj=46.1km s-min=19.4km az=55.0*

NDI ***15*** *04:49:48.9±2.4,28˚.15N×95˚.71E, h27km±10km, ML4.5*

ISC 15 04:49:47.7±2.0,28˚.13N±0˚.06×95˚.72E±0˚.07,h17km±12km, n18,σ1ᵍ70/24,mb3.7/9,3C,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKP	**Lekhapani**	**0.80**	**172**	*e*P	**Pn**	**04 50 04.3**	**+0.1**
LKP				*e*S	**Sn**	**04 50 16.1**	**+0.5**
DIBR	**DIBRUGARH**	**0.97**	**228**	*e*P	**Pg**	**04 50 06.1**	**-0.5**
DIBR				*e*S	**Sb**	**04 50 21.2**	**+2.5**
DIBR				IAML		04 50 22.2	
	comp=N,12µm,0.1s						
DIBR				IAML		04 50 22.4	
	comp=E,13µm,0.1s						
JORH	**JORHAT**	**1.90**	**224**	*e*P	**Pb**	**04 50 21.6**	**-0.3**
JORH				*e*S	**Sn**	**04 50 43.9**	**+1.0**
JORH				IAML		04 50 47.9	
	comp=Z,11µm,0.5s						
ITAN	**ITANAGAR**	**2.03**	**242**	*e*P	**Pn**	**04 50 22.3**	**+1.2**
ITAN				*e*S	**Sn**	**04 50 46.7**	**+0.7**
ITAN				IAML		04 50 47.6	
	comp=N,2µm,0.2s						
MOKO	**MOKOCHONG**	**2.10**	**211**	*e*P	**Pn**	**04 50 23.2**	**+1.0**
MOKO				*e*S	**Sn**	**04 50 48.3**	**+0.4**
IMP	**Imphal**	**3.65**	**206**	*e*S	**Sn**	**04 51 23.0**	**-3.1**
GUWA	**GUWAHATI**	**4.08**	**243**	*e*P	**Pn**	**04 50 48.6**	**-0.7**
GUWA				*e*S	**Sn**	**04 51 33.5**	**-3.1**
GUWA				IAML		04 51 35.6	
	comp=E,2µm,0.3s						
GUWA				IAML		04 51 35.8	
	comp=N,2µm,0.3s						
SHL	**Shillong**	**4.27**	**234**	*e*P	**Pn**	**04 50 53.0**	**+0.8**
SHL				*e*S	**Sn**	**04 51 37.6**	**-4.2**
SHL				IAML		04 51 40.2	
	comp=N,3µm,0.3s						
SHL				IAML		04 51 40.3	
	comp=E,3µm,0.3s						
SONM	**Songino Array**	**21.36**	**20**	P	**P**	**04 54 32.6**	**-1.6**
	comp=E,0.6nm,0.5s,baz=199,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	**21.41**	**334**	P	**P**	**04 54 35.5**	**+0.8**
	comp=E,1.4nm,0.4s,baz=150,slow=9.2,SNR=19						
AAK	**Ala-Archa**	**22.48**	**316**	P	**P**	**04 54 47.9**	**+1.5**
	comp=E,1.9nm,0.6s,baz=102,slow=6.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**27.01**	**346**	P	**P**	**04 55 29.7**	**+1.0**
	comp=E,0.5nm,0.4s,baz=163,slow=10,SNR=3.9						
LEM	**Lembang**	**36.60**	**160**	LR	LR	05 13 04.8	
	comp=E,74nm,20.8s,baz=113,slow=38						
AKASG	**Malin Array Be**	**54.13**	**314**	P	**P**	**04 59 11.2**	**-0.5**
	comp=E,0.3nm,0.4s,baz=76,slow=6.0,SNR=2.7						
MLR	**Muntele Rosu**	**56.77**	**309**	P	**P**	**04 59 31.8**	**+0.8**
	comp=E,1.7nm,0.9s,baz=277,slow=2.3,SNR=4.0						
WRA	**Warramunga Arr**	**60.64**	**138**	P	**P**	**04 59 57.2**	**-0.8**
	comp=E,0.6nm,0.6s,baz=326,slow=7.4,SNR=6.4						
ASAR	**Alice Springs**	**63.30**	**141**	P	**P**	**05 00 15.3**	**-0.5**
	comp=E,0.3nm,0.5s,baz=329,slow=6.7,SNR=2.0						
YKA	**Yellowknife Ar**	**86.48**	**14**	P	**P**	**05 02 29.6**	**+0.3**
	comp=E,0.2nm,0.8s,

WB0				IAmb	IAmb	05 16 00.4
	comp=Z,4.8nm,0.7s					
WB2	**Warramunga Arr**	**32.07**	**251**	P	**P**	**05 15 58.2 -2.3**
WB2				IAmb	IAmb	05 16 00.2
	comp=Z,8.5nm,1.2s					
WRA	**Warramunga Arr**	**32.08**	**251**	P	**P**	**05 15 59.2 -1.4**
	comp=Z,4.2nm,0.8s,baz=84,slow=8.7,SNR=10.0					
WRA				pP	**pP**	**05 16 29.5 -1.1**
	comp=Z,1.2nm,0.7s,baz=81,slow=9.3,SNR=2.9					
WRA				PcP	**PcP**	**05 18 45.6 -0.9**
	comp=Z,1.7nm,1.0s,baz=75,slow=3.3,SNR=5.2					
WRA				ScP	**ScP**	**05 22 16.0 -0.2**
	comp=Z,1.1nm,0.9s,baz=86,slow=3.7,SNR=4.8					
ASAR	**Alice Springs**	**33.27**	**245**	P	**P**	**05 16 09.6 -1.3**
	comp=Z,7.6nm,0.8s,baz=73,slow=9.7,SNR=66					
ASAR				pP	**pP**	**05 16 39.2 -1.7**
	comp=Z,1.8nm,0.8s,baz=71,slow=9.8,SNR=3.5					
ASAR				PcP	**PcP**	**05 18 49.5 -0.3**
	comp=Z,1.1nm,0.6s,baz=86,slow=2.5,SNR=8.0					
ASAR				ScP	**ScP**	**05 22 20.8 +0.5**
	comp=Z,2.6nm,0.9s,baz=79,slow=3.6,SNR=12					
ASAR	**Alice Springs**	**33.27**	**245**	P	**P**	**05 16 08.6 -2.3**
BBOO	**Buckleboo**	**34.98**	**228**	P	**P**	**05 16 25.2 -0.3**
KNRA	**Kununurra**	**36.99**	**260**	P	**P**	**05 16 42.3 -0.4**
KNRA				IAmb	IAmb	05 16 43.4
	comp=Z,23nm,1.0s					
FITZ	**Fitzroy Crossi**	**40.07**	**256**	P	**P**	**05 17 07.7 -0.8**
	comp=Z,4.3nm,0.7s,baz=53,slow=8.2,SNR=8.8					
FITZ				pP	**pP**	**05 17 37.7 -1.2**
	comp=Z,3.2nm,0.6s,baz=92,slow=6.6,SNR=4.0					
FITZ	**Fitzroy Crossi**	**40.07**	**256**	P	**P**	**05 17 08.3 -0.1**
FORT	**Forrest**	**40.35**	**236**	P	**P**	**05 17 09.7 -0.9**
FORT				IAmb	IAmb	05 17 11.1
	comp=Z,20nm,0.7s					
PSA00	**Pilbara Seismi**	**45.74**	**251**	P	**P**	**05 17 53.5 -0.6**
MJAR	**Matsushiro Arr**	**55.07**	**332**	P	**P**	**05 19 03.5 -0.4**
	comp=Z,2.2nm,0.5s,baz=162,slow=8.5,SNR=5.4					
JKA	**Kamikawa-asahi**	**59.82**	**340**	P	**P**	**05 19 37.6 +0.7**
JKA	**Kamikawa-asahi**	**59.82**	**340**	IAmb	IAmb	05 19 39.2
	comp=Z,13nm,0.7s					
ASAJ	**Asahikawa**	**59.82**	**340**	P	**P**	**05 19 37.6 +0.7**
	comp=Z,9.9nm,0.6s,baz=273,slow=1.6,SNR=4.3					
KSRS	**Korea Array**	**61.02**	**325**	P	**P**	**05 19 46.4 +1.2**
	comp=Z,1.4nm,0.6s,baz=137,slow=6.9,SNR=6.1					
USRK	**Ussuriysk Ar.**	**64.04**	**333**	P	**P**	**05 20 06.4 +1.2**
	comp=Z,4.1nm,0.9s,baz=134,slow=6.2,SNR=4.4					
VNDA	**Vanda**	**65.74**	**181**	P	**P**	**05 20 14.8 -0.8**
	comp=Z,1.2nm,0.6s,baz=339,slow=7.7,SNR=12					
SBA	**Scott Base**	**66.03**	**180**	P	**P**	**05 20 17.8 +0.3**
CN2	**Changchun**	**66.87**	**329**	*e*P	**P**	**05 20 24.1 +0.8**
CN2				pmax	pmax	
	comp=Z,10.0nm,0.7s					
CMAR	**Chiang Mai Arr**	**73.25**	**293**	P	**P**	**05 21 04.3 +1.5**
	comp=Z,1.3nm,0.8s,baz=119,slow=4.1,SNR=8.5					
CMAR				pP	**pP**	**05 21 39.2 +0.4**
	comp=Z,1.0nm,0.7s,baz=115,slow=4.5,SNR=2.3					
CMAR	**Chiang Mai Arr**	**73.25**	**293**	P	**P**	**05 21 02.4 -0.4**
QSPA	**South Pole Qui**	**78.19**	**180**	P	**P**	**05 21 29.1 -1.1**
QSPA				IAmb	IAmb	05 21 32.1
	comp=Z,18nm,1.2s					
ULN	**Ulaanbaatar**	**79.46**	**324**	P	**P**	**05 21 37.5 +0.1**
ULN				IAmb	IAmb	05 21 39.2
	comp=Z,7.9nm,0.8s					
BILL	**Bilibino**	**79.65**	**360**	P	**P**	**05 21 36.8 -1.0**
BILL				IAmb	IAmb	05 21 39.3
	comp=Z,14nm,1.4s					
SONM	**Songino Array**	**79.82**	**324**	P	**P**	**05 21 40.0 +0.7**
	comp=Z,1.3nm,0.4s,baz=139,slow=5.9,SNR=10					
SONM	**Songino Array**	**79.82**	**324**	P	**P**	**05 21 38.9 -0.4**
GTA	**Gaotai**	**80.25**	**314**	*e*P	**P**	**05 21 43.5 +1.7**
GTA				pP	PcP	05 21 48.8 +0.3
GTA				pmax	pmax	
	comp=Z,5.0nm,0.8s					
IL31		**83.96**	**18**	P	**P**	**05 22 00.6 +0.3**
ILAR	**Eielson Array**	**83.96**	**18**	P	**P**	**05 22 00.6 +0.2**
	comp=Z,3.4nm,0.9s,baz=234,slow=5.2,SNR=28					
ILAR	**Eielson Array**	**83.96**	**18**	P	**P**	**05 21 60.0 -0.4**
NVAR	**Mina Array Bea**	**85.83**	**50**	P	**P**	**05 22 11.5 +0.8**
	comp=Z,0.4nm,0.5s,baz=240,slow=7.2,SNR=2.4					
MK31	**Makanchi Array**	**94.70**	**317**	P	**P**	**05 22 51.7 0.0**
MK31				IAmb	IAmb	05 22 52.8
	comp=Z,4.6nm,0.8s					
MKAR	**Makanchi Array**	**94.70**	**317**	P	**P**	**05 22 52.0 +0.2**
	comp=Z,4.8nm,0.6s,baz=91,slow=6.4,SNR=49					
MKAR	**Makanchi Array**	**94.70**	**317**	P	**P**	**05 22 51.9 +0.1**
ZALV	**Zalesovo Beam**	**94.71**	**324**	P	**P**	**05 22 50.5 -1.1**
	comp=Z,1.0nm,0.5s,baz=118,slow=5.9,SNR=6.3					
MAKZ	**Makanchi**	**94.92**	**317**	P	**P**	**05 22 53.4 +0.6**
YKA	**Yellowknife Ar**	**95.24**	**27**	P	**P**	**05 22 52.8 -0.9**
	comp=Z,0.5nm,0.6s,baz=255,slow=4.2,SNR=17					
ARCES	**ARCESS Array B**	**117.31**	**346**	PKP	**PKPdf**	**05 28 14.3 -0.2**
	comp=Z,1.5nm,0.4s,baz=86,slow=2.2,SNR=29					
FINES	**FINESS Array B**	**122.82**	**339**	PKP	**PKPdf**	**05 28 25.0 -0.3**
	comp=Z,1.3nm,0.5s,baz=344,slow=0.3,SNR=12					
NOA	**NORSAR Array B**	**127.68**	**345**	PKP	**PKPdf**	**05 28 34.9 +0.2**
	comp=Z,1.5nm,0.9s,baz=39,slow=2.2,SNR=3.6					
GERES	**GERESS Array B**	**136.79**	**334**	PKP	**PKPdf**	**05 28 53.1 +0.7**
	comp=Z,0.7nm,0.6s,baz=120,slow=1.9,SNR=6.0					
KEST	**Kesra**	**148.58**	**323**	PKPbc	**PKPbc**	**05 29 18.1 +0.8**
	comp=Z,7.9nm,0.8s,baz=296,slow=3.5,SNR=9.0					
ESDC	**Sonseca Array**	**151.04**	**345**	PKPbc	**PKPbc**	**05 29 22.8 -0.3**
	comp=Z,2.5nm,0.8s,baz=18,slow=2.1,SNR=12					
TORD	**Torodi Ar. Bea**	**165.27**	**277**	PKP	**PKPdf**	**05 29 34.2 -0.7**
	comp=Z,0.8nm,0.7s,baz=352,slow=3.0,SNR=4.6					

*NOU **15** 05:17:57.5,42.°18S×173.°51E,h13km,MLv3.7,South Island, New Zealand*
WEL 15 05:17:55.3±0.5,42.°3S×17.°4E±.°,h11km±5km,M3.2/8, ML3.4/8,MLv3.2/8,Error ellipse: s-maj=0.0km s-min=0.0km az=114.9,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.36**	**217**	P	Pb	05 18 03.4	-0.4
KHZ				S	Sb	05 18 09.1	-0.4
BSWZ	**Blackbirch Sta**	**0.41**	**5**	P	Pb	05 18 04.1	-0.6
BSWZ				S	Sb	05 18 10.7	-0.2
TUWZ	**Tuamarina**	**0.70**	**7**	P	Pb	05 18 09.4	-0.1
TUWZ				S	Sn	05 18 20.9	-1.1
THZ	**Tophouse**	**0.78**	**297**	P	Pg	05 18 10.7	+0.3
THZ				S	Sg	05 18 20.9	+0.3
NNZ	**Nelson**	**0.97**	**339**	P	Pg	05 18 13.9	-0.1
NNZ				S	Sb	05 18 27.2	+0.3
TCW	**Tory Channel**	**0.97**	**20**	P	Pb	05 18 14.1	-0.1
TCW				S	Sn	05 18 27.9	-0.8
GVZ	**Greta Valley S**	**1.03**	**215**	P	Pb	05 18 15.3	+0.2
GVZ				S	Sn	05 18 30.0	-0.1
WEL	**Wellington**	**1.09**	**40**	P	Pb	05 18 15.9	-0.3
WEL				S	Sg	05 18 30.7	+0.1
PLWZ	**Palliser**	**1.20**	**63**	P	Pn	05 18 16.7	-1.4
MSWZ	**Moikau Station**	**1.28**	**57**	P	Pn	05 18 17.8	-1.3
DUWZ	**D'Urville Isla**	**1.32**	**3**	P	Pn	05 18 19.4	-0.4
LTZ	**Lake Taylor**	**1.33**	**240**	P	Pn	05 18 19.7	-0.1
CAW	**Cannon Point**	**1.38**	**43**	P	Pn	05 18 19.5	-0.9
PAWZ	**Paruwai Farm**	**1.41**	**59**	P	Pn	05 18 19.3	-1.7
KIW	**Kapiti Island**	**1.50**	**33**	P	Pn	05 18 21.8	-0.3
DSZ	**Denniston Nort**	**1.56**	**283**	P	Pb	05 18 24.2	0.0
MTW	**Mount Morrison**	**1.58**	**53**	P	Pn	05 18 21.7	-1.6
QRZ	**Quartz Range**	**1.62**	**323**	P	Pb	05 18 24.8	-0.5
OGWZ	**Otaki Gorge**	**1.65**	**38**	P	Pn	05 18 23.3	-0.9
OKCZ	**Okains Bay**	**1.69**	**199**	P	Pn	05 18 23.5	-1.4
HOWZ	**Holdsworth Sta**	**1.76**	**46**	P	Pn	05 18 24.1	-1.7
OXZ	**Oxford**	**1.79**	**227**	P	Pn	05 18 25.1	-1.0
MQZ	**McQueen's Vall**	**1.80**	**208**	P	Pn	05 18 24.1	-2.2
INZ	**Inchbonnie**	**1.87**	**250**	P	Pn	05 18 27.4	+0.2
MRZ	**Mangatainoka R**	**1.97**	**43**	P	Pn	05 18 27.2	-1.4
PRWZ	**Pori Road**	**2.25**	**46**	P	Pn	05 18 38.1	-0.3
POWZ	**Post Office Ro**	**2.27**	**41**	P	Pn	05 18 31.3	-1.4
WACZ	**Wakanui South**	**2.33**	**218**	P	Pn	05 18 32.6	-1.0
WVZ	**Waitaha Valley**	**2.47**	**246**	P	Pn	05 18 35.6	0.0
WAZ	**Wanganui**	**2.52**	**21**	P	Pn	05 18 37.6	+1.3
DVHZ	**Dannevirke**	**2.54**	**45**	P	Pb	05 18 42.1	+1.2
RPZ	**Rata Peaks**	**2.59**	**231**	P	Pn	05 18 36.3	-0.9
TSZ	**Takapari Road**	**2.62**	**39**	P	Pn	05 18 35.9	-1.7
ARCZ	**Arundel**	**2.67**	**226**	P	Pn	05 18 37.1	-1.1
LREZ	**Lake Rotokare**	**2.70**	**9**	P	Pb	05 18 41.9	-1.7
PREZ	**Palmer Road**	**2.79**	**5**	P	Pb	05 18 43.6	-1.6
KHEZ	**Kahui Hut**	**2.83**	**3**	P	Pb	05 18 43.5	-2.5
GCSZ	**Gaunt Creek Bo**	**2.84**	**244**	P	Pn	05 18 41.4	+0.8
PNHZ	**Pukenui**	**2.84**	**40**	P	Pn	05 18 38.7	-2.0
NBEZ	**Newall Road No**	**2.85**	**1**	P	Pb	05 18 47.1	+0.8
NEZ	**North Egmont**	**2.86**	**4**	P	Pb	05 18 46.2	-0.2
PKE	**Pukeiti**	**2.93**	**2**	P	Pn	05 18 44.6	+2.7
PKVZ	**Pokaka**	**3.06**	**23**	P	Pn	05 18 44.4	+0.8
TMZ	**Timaru**	**3.06**	**221**	P	Pn	05 18 43.4	-0.2
VRZ	**Vera Road**	**3.08**	**14**	P	Pn	05 18 45.4	+1.5
MOVZ	**Moawhango**	**3.08**	**29**	P	Pn	05 18 43.6	-0.4
WNVZ	**Wahianoa**	**3.10**	**26**	P	Pn	05 18 46.1	+1.8
BHHZ	**Black Hill Sta**	**3.13**	**33**	P	Pn	05 18 43.8	-0.9
KRHZ	**Kereru**	**3.14**	**39**	P	Pn	05 18 42.6	-2.2
NGZ	**Ngauruhoe**	**3.24**	**25**	P	Pb	05 18 50.7	-2.3
SNVZ	**South Ngauruho**	**3.24**	**26**	P	Pn	05 18 47.2	+0.9
OTVZ	**Oturere**	**3.27**	**26**	P	Pn	05 18 46.8	+0.1
NNVZ	**North Ngauruho**	**3.28**	**25**	P	Pn	05 18 47.3	+0.4
WTVZ	**West Tongariro**	**3.29**	**25**	P	Pn	05 18 47.4	+0.5
ETVZ	**East Tongariro**	**3.31**	**26**	P	Pb	05 18 51.6	-2.6
KRVZ	**Karewarewa**	**3.33**	**25**	P	Pb	05 18 53.9	-0.5
TMVZ	**Te Maari**	**3.33**	**26**	P	Pn	05 18 47.6	+0.2
NTVZ	**North Tongarir**	**3.33**	**26**	P	Pn	05 18 47.6	+0.1
BKZ	**Black Stump Fm**	**3.58**	**35**	P	Pb	05 18 56.5	-2.2
HIZ	**Hauiti**	**3.69**	**13**	P	Pn	05 18 53.7	+1.3
ODZ	**Otahua Downs**	**3.73**	**217**	P	Pn	05 18 51.6	-1.1
TLZ	**Tolley Road**	**4.01**	**20**	P	Pn	05 18 57.0	+0.3
JCZ	**Jackson Bay**	**4.18**	**241**	P	Pn	05 19 00.2	+1.1

IDC 15 05:41:17.4±2.4,21.°45N×93.°06E,h0km,mb3.5/3, mb1 3.5/4,mb1mx3.2/52,mbtmp3.3/4,ML3.2/1,Error ellipse: s-maj=90.6km s-min=22.8km az=54.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.29**	**117**	Pn	Pn	05 42 53.3	+1.9
	0.1nm,0.3s,baz=313,slow=12,SNR=2.4						
CMAR				Pg	Pb	05 43 12.4	+4.6
	0.1nm,0.3s,baz=302,slow=17,SNR=4.7						
MKAR	**Makanchi Array**	**26.75**	**343**	P	P	05 46 59.5	+0.8
	0.2nm,0.4s,baz=149,slow=9.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**33.04**	**351**	P	P	05 47 53.8	-0.6
	0.4nm,0.3s,baz=158,slow=5.9,SNR=2.0						
WRA	**Warramunga Arr**	**57.64**	**133**	P	P	05 51 09.0	-0.7
	0.3nm,0.6s,baz=319,slow=7.4,SNR=7.7						

MEX 15 05:47:28.0±1.2,18.°09N×103.°30W,h10km,MD4.0,Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.20**	**348**	*e*P	Pg	05 47 31.6	-0.6
MMIG				*i* S	Sg	05 47 34.6	-0.5
COIG	**Colima**	**1.15**	**341**	*e*P	Pb	05 47 46.1	-3.9
COIG				*e*S	Sb	05 48 00.5	-4.5
R15V		**1.25**	**329**	*e*P	Pn	05 47 47.6	-4.0
R15V				*e*S	Sb	05 48 03.7	-4.4
EZ5V		**1.41**	**348**	*e*P	Pn	05 47 50.9	-3.2
EZ5V				*e*S	Sb	05 48 08.1	-4.7
ZIIG	**Zihuatanejo**	**1.81**	**105**	*i* P	Pn	05 47 55.6	-3.7
ZIIG				*e*S	Sn	05 48 17.3	-5.0
MOIG	**Morelia**	**2.55**	**51**	*e*P	Pn	05 48 06.1	-3.5
MOIG				*e*S	Sn	05 48 35.4	-5.5
ARIG	**Puente Sto Nin**	**2.81**	**86**	*i* P	Pn	05 48 10.4	-2.7
ARIG				*e*S	Sn	05 48 43.3	-3.8
CAIG	**El Cayaco**	**3.07**	**109**	*e*P	Pn	05 48 12.4	-4.2
CAIG				*e*S	Sn	05 48 51.0	-2.4
ANIG	**Ahuacatlan**	**3.17**	**339**	*e*P	Pn	05 48 15.1	-2.9
ANIG				*e*S	Sn	05 48 52.5	-3.4
IGIG	**Irapuato, Guan**	**3.24**	**35**	*e*S	Sn	05 48 55.1	-2.8
MEIG	**Mezcala**	**3.51**	**92**	*e*P	Pn	05 48 20.1	-2.5
MEIG				*e*S	Sn	05 49 00.6	-3.7
PLIG	**Platanillo**	**3.62**	**85**	*e*P	Pn	05 48 21.8	-2.5
PLIG				*e*S	Sb	05 49 11.8	-4.5
PLIG				*e*S	Sn	05 49 12.3	+5.1
JRQG	**Juriquilla Cam**	**3.74**	**46**	*e*P	Pn	05 48 23.1	-3.0
JRQG				*e*S	Sn	05 49 07.6	-2.8
YAIG	**Yautepec**	**4.09**	**79**	*e*P	Pn	05 48 27.9	-2.9
YAIG				*e*S	Sn	05 49 15.2	-3.7
CRIG	**Cruz Grande**	**4.20**	**108**	*e*P	Pn	05 48 28.2	-4.0
CRIG				*e*S	Sn	05 49 18.2	-3.1
TLIG	**Tlapa**	**4.54**	**96**	*e*P	Pn	05 48 34.9	-2.0
TLIG				*e*S	Sn	05 49 26.8	-3.0
ZAIG	**Zacatecas**	**4.71**	**8**	*e*P	Pn	05 48 36.3	-3.1
ZAIG				*e*S	Sn	05 49 30.5	-3.7
TPIG	**Tehuac#an**	**5.65**	**86**	*e*P	Pn	05 48 50.6	-1.7
TPIG				*e*S	Sn	05 49 55.1	-2.2
TOIG	**Toxpalan**	**5.93**	**89**	*e*P	Pn	05 48 53.6	-2.5
TOIG				*e*S	Sn	05 50 01.2	-3.0

*IDC **15** 05:48:42.7±1.4,29.°31N×52.°54E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.5/53,mbtmp3.7/8,ML3.2/1,MS3.5/2, Ms1 3.5/2,ms1mx2.5/58,Error ellipse: s-maj=35.3km s-min=25.6km az=150.0*
*TEH **15** 05:48:43.5,29.°38N×52.°59E,h11km,ML3.4*
*THR **15** 05:48:45.1±0.3,29.°41N±0.°04×52.°56E±0.°05,h15km±10km,ML3.2*
ISC 15 05:48:44.5±0.7,29.°36N±0.°04×52.°56E±0.°05,h10km,n37, σ1§40/36,mb3.7/7,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**0.29**	**353**	*e*Pg	**Pg**	**05 48 48.6**	**-1.8**
SHI				*e*Sg	**Sg**	**05 48 53.6**	**-0.7**
KAZ1	**Kazerun**	**0.84**	**289**	*e*Pg	**Pg**	**05 49 00.7**	**-0.1**
QIR1	**Qir**	**0.98**	**154**	*e*Pg	**Pg**	**05 49 02.8**	**-0.5**
AHBU	**AHRAM**	**1.21**	**246**	*e*Pg	**Pg**	**05 49 07.5**	**-0.2**
JHRM	**Jahrom**	**1.23**	**133**	*e*Pg	**Pb**	**05 49 07.2**	**-0.8**
KLNJ	**Kolanjah**	**1.84**	**333**	*e*Pn	**Pn**	**05 49 17.5**	**+0.9**
LMD1	**Lamerd**	**2.08**	**165**	*e*Pn	**Pn**	**05 49 19.8**	**+0.3**
LAR1	**LAR**	**2.32**	**136**	*e*Pn	**Pn**	**05 49 24.6**	**+1.7**
IRAM	**Ramesheh**	**2.45**	**357**	*e*Pn	**Pn**	**05 49 26.8**	**+2.0**
IMEH	**Mehriz**	**2.70**	**41**	*e*Pn	**Pn**	**05 49 28.9**	**+0.7**
IGAR	**Gharneh**	**3.07**	**352**	*e*Pn	**Pn**	**05 49 34.9**	**+1.6**
NASN	**Na'in**	**3.44**	**4**	*e*Pn	**Pn**	**05 49 39.8**	**+1.3**
NASN	**Na'in**	**3.44**	**4**	*e*Pn	**Pn**	**05 49 39.8**	**+1.3**
YZKH	**Yazd**	**3.49**	**30**	*e*Pn	**Pn**	**05 49 40.8**	**+1.7**
YZKH	**Yazd**	**3.49**	**30**	*e*Pn	**Pn**	**05 49 40.8**	**+1.7**
IZEF	**Zefreh**	**3.53**	**357**	*e*Pn	**Pn**	**05 49 42.1**	**+2.7**
IPIR	**Pirpir**	**3.61**	**337**	*e*Pn	**Pn**	**05 49 41.7**	**+0.9**
KRBR	**Kerman**	**3.71**	**79**	*e*Pn	**Pn**	**05 49 44.4**	**+2.1**
KRBR				IAML		05 50 54.4	
	comp=E,29nm,0.8s						
KRBR	**Kerman**	**3.71**	**79**	*e*Pn	**Pn**	**05 49 44.4**	**+2.1**
TVBK	**TV Kerman**	**3.71**	**79**	*e*Pn	**Pn**	**05 49 42.9**	**+0.6**
IKLH	**Kolahrood**	**4.04**	**348**	*e*Pn	**Pn**	**05 49 49.4**	**+2.7**
KRSH	**Karshahi**	**4.61**	**356**	*e*Pn	**Pn**	**05 49 55.7**	**+1.2**
KHMZ	**Khomeyn**	**4.90**	**334**	*e*Pn	**Pn**	**05 49 59.8**	**+1.3**
KHMZ	**Khomeyn**	**4.90**	**334**	*e*Pn	**Pn**	**05 49 59.8**	**+1.3**
ISFB	**Sefidab**	**4.99**	**357**	*e*Pn	**Pn**	**05 50 01.3**	**+1.7**
ASAO	**Ashtian**	**5.60**	**338**	*e*Pn	**Pn**	**05 50 09.7**	**+1.5**
ASAO	**Ashtian**	**5.60**	**338**	*e*Pn	**Pn**	**05 50 09.7**	**+1.5**
WSAR	**Wadi Sarin**	**8.17**	**137**	Pn	**Pn**	**05 50 42.7**	**-0.6**
	comp=E,0.3nm,0.3s,baz=269,slow=5.4,SNR=1.9						
BELG	**Belogornoye**	**23.30**	**352**	LR	LR	06 05 48.9	
	comp=E,47nm,20.4s,baz=171,slow=44						
BVAR	**Borovoye Array**	**27.04**	**24**	P	**P**	**05 54 26.9**	**0.0**
	comp=E,0.7nm,0.6s,baz=160,slow=11,SNR=5.3						
KURBB	**Kurchatov Arra**	**28.85**	**35**	P	**P**	**05 54 42.8**	**-0.2**
	comp=E,0.4nm,0.6s,baz=234,slow=8.8,SNR=4.4						
MKAR	**Makanchi Array**	**28.93**	**45**	P	**P**	**05 54 44.4**	**+0.6**
	comp=E,0.4nm,0.8s,baz=235,slow=5.1,SNR=2.8						
ZALV	**Zalesovo Beam**	**33.93**	**34**	P	**P**	**05 55 27.1**	**-0.5**
	comp=E,0.7nm,0.4s,baz=234,slow=12,SNR=3.8						
FINES	**FINESS Array B**	**36.56**	**339**	P	**P**	**05 55 50.7**	**+0.5**
	comp=E,1.9nm,0.7s,baz=152,slow=8.6,SNR=4.7						
TORD	**Torodi Ar. Bea**	**49.68**	**262**	P	**P**	**05 57 36.2**	**-0.7**
	comp=E,1.1nm,0.7s,baz=58,slow=7.7,SNR=7.3						
KLR	**Kul'dur**	**61.60**	**47**	LR	LR	06 26 54.2	
	comp=E,88nm,19.3s,baz=72,slow=37						
YKA	**Yellowknife Ar**	**87.89**	**354**	P	**P**	**06 01 34.0**	**0.0**
	comp=E,0.4nm,0.9s,baz=13,slow=5.0,SNR=6.0						

*RSNC **15** 05:56:55.0±1.5,7.°13N×72.°11W,h0km±6km,ML3.9,Mw4.1, Fault plane solution: NP1:φs20.00000°,δ42.00000°, λ118.00000°.*
*IDC **15** 05:56:56.6±2.5,7.°16N×72.°11W,h40km±23km,mb3.7/10, mb1 4.1/15,mb1mx3.8/34,mbtmp4.0/15,ML3.7/5,MS3.2/8, Ms1 3.2/8,ms1mx2.9/40,Error ellipse: s-maj=21.9km s-min=14.0km az=66.0*
*NEIC **15** 05:56:58.5±1.5,7.°11N±0.°07×72.°03W±0.°06,h57km±7km, mb4.4/41,Error ellipse: s-maj=12.1km s-min=4.6km az=140.0*
ISC 15 05:56:53.6±1.1,7.°15N±0.°03×72.°05W±0.°03,h12km±7km,

n101,σ1§63/119,mb4.4/27,MS3.2/3,2C-5D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAMC	**Pamplona, Colo**	**0.67**	**287**	⇓*i*P	**Pg**	**05 57 06.1**	**-0.7**
PAMC				*e*S	**Sg**	**05 57 14.6**	**-1.0**
PAMC				*i*		05 57 15.3	
	comp=Z,5μm,0.4s						
BARC	**Barichara**	**1.25**	**244**	⇓*i*P	**Pn**	**05 57 16.2**	**-0.9**
BARC				*e*S	**Sg**	**05 57 36.0**	**+2.1**
BARC				*i*		05 57 41.1	
	comp=Z,2μm,0.4s						
RUSC	**La Rusia**	**1.61**	**219**	⇓*i*P	**Pn**	**05 57 22.8**	**+0.5**
RUSC				*e*S	**Sn**	**05 57 43.2**	**0.0**
RUSC				*i*		05 57 48.7	
	comp=Z,666nm,0.5s						
SOCV	**Socops**	**1.64**	**46**	*e*P	**Pg**	**05 57 24.9**	**-0.3**
SOCV				*e*S	**Sg**	**05 57 47.5**	**+1.0**
BRRC	**Barranca, Sant**	**1.65**	**269**	⇓*i*P	**Pn**	**05 57 24.0**	**+1.6**
BRRC				*e*S	**Sn**	**05 57 44.7**	**+1.3**
BRRC				*i*		05 57 48.1	
	comp=Z,1μm,0.4s						
OCAC	**Ocana**	**1.66**	**311**	⇓*i*P	**Pb**	**05 57 24.4**	**+0.1**
OCAC				*e*S	**Sb**	**05 57 45.5**	**+0.4**
SDV	**Santo Domingo**	**2.23**	**39**		**Pb**	**05 57 33.8**	**-0.2**
PTBC	**PUERTO BERRIO,**	**2.46**	**256**	*e*P	**Pn**	**05 57 33.9**	**+0.3**
PTBC				*e*S	**Sb**	**05 58 07.1**	**-1.0**
PTBC				*i*		05 58 09.6	
	comp=Z,1μm,0.5s						
SPBC	**San Pablo de B**	**2.49**	**234**	*e*P	**Pn**	**05 57 35.9**	**+1.8**
SPBC				*e*S	**Sn**	**05 58 06.0**	**+1.4**
SPBC				*i*		05 58 14.0	
	comp=Z,723nm,0.6s						
SMLC	**San Martn de**	**2.59**	**310**	*e*P	**Pn**	**05 57 36.3**	**+1.0**
SMLC				*e*S	**Sb**	**05 58 12.8**	**+1.0**
SMLC				*i*		05 58 14.4	
	comp=Z,1μm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.80**	**277**	*e*P	**Pn**	**05 57 39.5**	**+1.2**
ZARC				*e*S	**Sn**	**05 58 13.4**	**+1.4**
ZARC				*i*		05 58 15.4	
	comp=Z,478nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.93**	**182**	*e*P	**Pn**	**05 57 40.6**	**+0.6**
PTGC				*e*S	**Sn**	**05 58 16.7**	**+1.6**
PTGC				*i*		05 58 30.0	
	comp=Z,620nm,0.4s						
NORC	**Norcasia**	**3.21**	**241**	*e*P	**Pn**	**05 57 44.6**	**+0.6**
NORC				*e*S	**Sn**	**05 58 23.6**	**+1.5**
NORC				*i*		05 58 35.7	
	comp=Z,195nm,0.7s						
ROSC	**El Rosal**	**3.21**	**225**	Pn	**Pn**	**05 57 46.1**	**+1.8**
	comp=Z,18nm,0.3s,baz=8.6,slow=1.6,SNR=54						
ROSC				Sn	**Sb**	**05 58 31.4**	**+1.2**
	comp=Z,41nm,0.3s,baz=243,slow=23,SNR=6.7						
ROSC	**El Rosal**	**3.21**	**225**	Pn	**Pn**	**05 57 47.1**	**+2.8**
ROSC	**El Rosal**	**3.21**	**225**	*

CCM	**Cathedral Cave**	**35.34**	**333**	P	**P**	**06 03 49.0**	**+0.1**
CCM				IAmb	IAmb	06 03 49.5	
	comp=Z,5.8nm,0.8s						
SFIN	**Lafayette**	**35.73**	**340**	P	**P**	**06 03 52.9**	**+0.7**
OK030	**Cody Creek RV**	**36.51**	**325**	P	**P**	**06 03 58.9**	**-0.1**
OK031	**S. Brethren Rd**	**36.56**	**325**	P	**P**	**06 03 59.0**	**-0.4**
QUOK	**Quay**	**36.64**	**326**	P	**P**	**06 03 59.2**	**-0.9**
TX31	**Lajitas Ar. Si**	**37.05**	**311**	P	**P**	**06 04 03.2**	**-0.6**
TX31				IAmb	IAmb	06 04 04.1	
	comp=Z,5.6nm,0.8s						
TX32	**Lajitas Array**	**37.05**	**311**	P	**P**	**06 04 03.4**	**-0.4**
TXAR	**Lajitas Array**	**37.05**	**311**	P	**P**	**06 04 02.9**	**-0.9**
	comp=Z,1.7nm,0.7s,baz=126,slow=9.1,SNR=28						
TXAR				PcP	**PcP**	**06 06 24.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=137,slow=6.3,SNR=8.3						
TXAR	**Lajitas Array**	**37.05**	**311**	P	**P**	**06 04 03.1**	**-0.7**
I42A	**Draeger Farm,**	**39.47**	**341**	IAmb	IAmb	06 04 24.3	
	comp=Z,4.5nm,0.6s						
MNTX	**Cornudas Mount**	**39.52**	**313**	P	**P**	**06 04 24.3**	**-0.2**
MNTX				IAmb	IAmb	06 04 25.7	
	comp=Z,5.1nm,0.8s						
TUC	**Tucson**	**43.84**	**310**	P	**P**	**06 05 00.1**	**+0.1**
EYMN	**Ely**	**43.90**	**341**	P	**P**	**06 04 59.9**	**-0.2**
EYMN				IAmb	IAmb	06 05 00.2	
	comp=Z,4.4nm,0.9s						
ISCO	**Idaho Springs**	**44.29**	**322**	P	**P**	**06 05 04.3**	**+0.6**
PV13	**Radium Mtn., P**	**45.36**	**318**	IAmb	IAmb	06 05 13.4	
	comp=Z,5.1nm,0.7s						
K22A	**Casper**	**46.61**	**325**	P	**P**	**06 05 18.5**	**-3.4**
ULM	**Lac du Bonnet**	**47.35**	**339**	P	**P**	**06 05 25.9**	**-1.4**
	comp=Z,2.7nm,0.9s,baz=143,slow=11,SNR=5.3						
KNB	**Kanab**	**47.50**	**315**	P	**P**		
KNB				IAmb	IAmb	06 05 30.4	
	comp=Z,4.9nm,0.8s						
PLCA	**Paso Flores**	**47.66**	**178**	P	**P**	**06 05 28.3**	**-1.6**
	comp=Z,2.3nm,0.8s,baz=0.8,slow=9.8,SNR=5.0						
PLCA	**Paso Flores**	**47.66**	**178**	P	**P**	**06 05 28.1**	**-1.8**
PLCA				IAmb	IAmb	06 05 29.1	
	comp=Z,6.7nm,1.1s						
LCMT	**Little Creek M**	**47.79**	**315**	IAmb	IAmb	06 05 32.5	
	comp=Z,3.3nm,0.9s						
PD31	**Pinedale Array**	**48.45**	**323**	P	**P**	**06 05 35.7**	**-0.6**
PD31				IAmb	IAmb	06 05 47.3	
	comp=Z,6.0nm,1.5s						
PDAR	**Pinedale Array**	**48.45**	**323**	P	**P**	**06 05 35.6**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=114,slow=8.0,SNR=7.8						
PDAR				PcP	**PcP**	**06 07 01.0**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=99,slow=5.8,SNR=3.7						
PDAR	**Pinedale Array**	**48.45**	**323**	P	**P**	**06 05 34.0**	**-2.3**
LOHW	**Long Hollow**	**49.56**	**324**	IAmb	IAmb	06 05 45.8	
	comp=Z,1.7nm,0.7s						
REDW	**Red Top Meadow**	**49.56**	**323**	P	**P**	**06 05 44.6**	**-0.2**
REDW				IAmb	IAmb	06 05 45.6	
	comp=Z,4.3nm,1.0s						
MOOW	**Moose Ponds**	**49.73**	**324**	P	**P**	**06 05 45.4**	**-0.7**
HVU	**Hansel Valley**	**49.87**	**320**	P	**P**	**06 05 47.1**	**0.0**
NVAR	**Mina Array Bea**	**52.02**	**314**	P	**P**	**06 06 01.7**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=117,slow=7.2,SNR=3.6						
NVAR				PcP	**PcP**	**06 07 14.3**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=138,slow=5.3,SNR=3.9						
MFID	**Camas Ranch**	**52.64**	**321**	IAmb	IAmb	06 06 17.2	
	comp=Z,5.9nm,1.5s						
YKA	**Yellowknife Ar**	**63.33**	**339**	P	**P**	**06 07 21.3**	**-1.0**
	comp=Z,2.9nm,0.8s,baz=127,slow=7.2,SNR=56						
SUMG	**Summit**	**68.48**	**10** *i* P		**P**	**06 07 55.6**	**-0.2**
SUMG				IAmb	IAmb	06 07 57.0	
	comp=Z,4.2nm,1.1s						
SUMG	**Summit**	**68.48**	**10** *i* P		**P**	**06 07 55.0**	**-0.8**
SUMG	**Summit**	**68.48**	**10** P		**P**	**06 07 55.0**	**-0.8**
NEEM	**North Greenlan**	**71.14**	**5** *i* P		**P**	**06 08 11.3**	**-0.7**
NEEM				IAmb	IAmb	06 08 12.4	
	comp=Z,4.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.64**	**78** P		**P**	**06 08 21.7**	**0.0**
	comp=Z,0.7nm,0.5s,baz=289,slow=6.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**72.64**	**78**	IAmb	IAmb	06 08 22.1	
	comp=Z,2.2nm,1.4s						
ILAR	**Eielson Array**	**77.12**	**335**	P	**P**	**06 08 45.3**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=94,slow=5.3,SNR=6.3						
ASAR	**Alice Springs**	**150.16**	**234**	PKPbc	**PKPbc**	**06 16 43.1**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=118,slow=3.3,SNR=13						
ASAR	**Alice Springs**	**150.16**	**234**		**PKPdf**	**06 16 42.8**	**+2.5**
WRA	**Warramunga Arr**	**151.42**	**241**	PKPbc	**PKPbc**	**06 16 46.5**	**-1.9**
	comp=Z,1.8nm,0.8s,baz=108,slow=2.7,SNR=12						

DJA ***15*** *06:48:39.5±1.4,4˚S±12˚×13˚4E±˚, h98km±22km, M4.3/6, mb4.2/1, MLv4.4/6*

IDC ***15*** *06:48:42.6±1.4, 3˚.55S×133˚.34E, h0km, mb3.8/3, mb1 4.0/7, mb1mx3.7/36, mbtmp3.8/7, ML3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/46, Error ellipse: s-maj=37.4km s-min=17.0km az=61.0*

ISC 15 06:48:43.1±0.9, 3°.62S±0°.06×133°.43E±0°.07, h10km, n11, σ2s09/15, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.37**	**301**	P	**Pn**	**06 49 08.9**	**+0.6**
FAKI				S	**Sg**	**06 49 31.2**	**+3.9**
RKPI	**Ransiki, Papua**	**2.23**	**20**	P	**Pn**	**06 49 19.2**	**-0.9**
RKPI				S	**Sb**	**06 49 51.5**	**+0.4**
SIJI	**Sorong**	**3.49**	**322**	Pn	**Pn**	**06 49 37.3**	**-0.1**
	2.8nm,0.3s,baz=214,slow=23,SNR=9.9						
SIJI				Pg	**Pg**	**06 49 48.1**	**-1.8**
	14nm,0.3s,baz=150,slow=6.9,SNR=23						
SIJI				Sn	**Sn**	**06 50 16.5**	**-2.4**
	1.5nm,0.3s,baz=132,slow=24,SNR=1.2						
SIJI				Lg	Lg	06 50 31.3	
	8.4nm,0.3s,baz=68,slow=15,SNR=4.0						
SWI	**Sorong**	**3.50**	**322**	P	**Pn**	**06 49 37.6**	**0.0**
JAY	**Jayapura**	**7.35**	**82**	Pn	**Pn**	**06 50 33.1**	**+2.6**
	0.8nm,0.3s,baz=297,slow=22,SNR=2.3						
DAV	**Davao City (W)**	**13.20**	**324**	LR	LR	06 57 56.0	
	comp=Z,41nm,16.5s,baz=158,slow=42						
WRA	**Warramunga Arr**	**16.25**	**177**	Pn	**Pn**	**06 52 31.8**	**+0.2**
	0.1nm,0.3s,baz=359,slow=12,SNR=7.0						
WRA				Sn	Sn	06 55 22.6	-9.4
	0.1nm,0.3s,baz=356,slow=23,SNR=2.5						
FITZ	**Fitzroy Crossi**	**16.29**	**207**	Pn	**Pn**	**06 52 32.3**	**+0.2**
	0.2nm,0.3s,baz=27,slow=11,SNR=6.0						
FITZ				Sn	**Sn**	**06 55 28.9**	**-4.0**
	0.2nm,0.3s,baz=150,slow=13,SNR=4.3						
ASAR	**Alice Springs**	**19.93**	**179**	P	**Pn**	**06 53 18.6**	**+1.7**
	5.0nm,0.9s,baz=2.0,slow=9.8,SNR=30						
CMAR	**Chiang Mai Arr**	**40.44**	**304**	P	**P**	**06 56 22.9**	**+0.8**
	0.5nm,0.6s,baz=111,slow=6.4,SNR=5.8						
MKAR	**Makanchi Array**	**67.38**	**325**	P	**P**	**06 59 38.2**	**-0.5**
	2.0nm,0.9s,baz=120,slow=7.2,SNR=14						

ARE ***15*** *06:59:16±4.0, 14˚.67S±0˚.07×76˚.6W±0˚.1, h21km±4km, Error ellipse: s-maj=0.0km s-min=0.0km az=157.0*

IDC ***15*** *06:59:16.2±0.5, 14˚.42S×76˚.04W, h0km, mb4.2/19, mb1 4.4/24, mb1mx4.3/44, mbtmp4.2/24, ML4.1/4, MS4.6/30, Ms1 4.6/30, ms1mx4.6/36, Error ellipse: s-maj=21.0km s-min=10.5km az=60.0*

NEIC ***15*** *06:59:17.4±2.6, 14˚.52S±0˚.06×76˚.17W±0˚.09, h10km±1km, mb4.9/95, ML5.2(ARE), Error ellipse: s-maj=16.1km s-min=9.0km az=250.0*

VAO ***15*** *06:59:18.9±0.6, 14˚.45S×75˚.97W, h10km, mb4.9*

GCMT ***15*** *06:59:23.4±0.2, 14˚.51S±0˚.01×76˚.31W±0˚.01, h24km, MW5.2/113, Moment Tensor Solution. s79,c113; s113,c181; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.61±.02; Mθθ-0.05±.01; Mϕϕ-0.56±.02; Mrθ0.15±.02; Mrϕ0.30±.01; Mθϕ-0.62±.03; Best double couple: M0.91500×10^17 NP1:ϕs325.00000°, δ24.00000°, λ73.00000°. NP2:ϕs164.00000°, δ67.00000°, λ97.00000°. Principal axes: T 0.8780, Plg67.0000°, Azm87.0000°; N 0.0740, Plg7.0000°, Azm341.0000°; P -0.9520, Plg22.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 06:59:17.2±0.3, 14°.60S±0°.04×76°.20W±0°.06, h10km, n263, σ1s43/202, mb4.9/63, MS4.6/31, 3C-1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.67**	**346**	Pn	**Pn**	**06 59 58.1**	**-2.2**
	17nm,0.3s,baz=155,slow=12,SNR=33						
NNA				Pg	**Pb**	**07 00 03.7**	**-1.4**
	169nm,0.3s,baz=174,slow=11,SNR=59						
NNA				Lg	Lg	07 00 34.8	
	329nm,0.3s,baz=200,slow=13,SNR=9.5						
NNA	**Nana**	**2.67**	**346**		**Pn**	**06 59 57.9**	**-2.4**
NNA	**Nana**	**2.67**	**346**		**Pn**	**06 59 59.9**	**-0.4**
AP01	**Chacalluta**	**6.76**	**125**	Pn	**Pn**	**07 00 54.2**	**-2.3**
PB16	**IPOC Station P**	**7.42**	**121**		**Pn**	**07 01 07.0**	**+0.9**
CZSB	**Cruzeiro do Su**	**7.64**	**27** *eP*		**Pn**	**07 01 07.3**	**-1.3**
PSGCX	**Pisagua**	**7.65**	**131**	Pn	**Pn**	**07 01 09.2**	**+0.3**
ATAH	**Atahualpa**	**7.72**	**344**	Pn	**Pn**	**07 01 09.6**	**-0.6**
	1.9nm,0.3s,baz=169,slow=4.0,SNR=14						
ATAH				Sn	**Sn**	**07 02 40.6**	**+2.7**
	2.0nm,0.3s,baz=157,slow=4.1,SNR=3.6						
MNMC	**Minye Minye**	**7.77**	**126**	Pn	**Pn**	**07 01 10.6**	**0.0**
LPAZ	**La Paz**	**7.96**	**103**	Pn	Pn	07 01 18.1	+4.5
	20nm,0.3s,baz=303,slow=12,SNR=572						
LPAZ				LR	LR	07 05 01.2	
	comp=Z,5μm,18.4s,baz=289,slow=44						
LPAZ	**La Paz**	**7.96**	**103** *i* P		**Pn**	**07 01 17.0**	**+3.3**
LPAZ	**La Paz**	**7.96**	**103**	Pn	Pn	07 01 18.4	+4.8
PB11	**IPOC Station P**	**8.09**	**130**		**Pn**	**07 01 14.7**	**-0.3**
TA01	**Diego Aracena**	**8.26**	**137**		**Pn**	**07 01 17.3**	**+0.2**
PATCX	**Punta Patache**	**8.46**	**138**		**Pn**	**07 01 20.1**	**+0.2**
PB08	**IPOC Station P**	**8.70**	**130**		**Pn**	**07 01 23.5**	**0.0**
PB01	**IPOC Station P**	**9.05**	**136**		**Pn**	**07 01 28.6**	**+0.4**
PB07	**IPOC Station P**	**9.29**	**141**		**Pn**	**07 01 31.2**	**-0.2**
PB04	**IPOC Station P**	**9.60**	**144**		**Pn**	**07 01 35.7**	**0.0**
PB09	**IPOC Station P**	**9.75**	**138**		**Pn**	**07 01 39.3**	**+1.6**
PB06	**IPOC Station P**	**10.22**	**143**		**Pn**	**07 01 44.3**	**+0.1**
PB10	**IPOC Station P**	**10.35**	**150**	Pn	**Pn**	**07 01 45.5**	**-0.3**
LVC	**Limon Verde**	**10.55**	**140**	Pn	**Pn**	**07 01 50.5**	**+1.7**
	6.1nm,0.3s,baz=311,slow=11,SNR=62						
LVC				Sn	**Sn**	**07 03 45.6**	**-1.7**
	2.5nm,0.3s,baz=280,slow=17,SNR=1.2						
LVC				Lg	Lg	07 04 46.7	
	baz=112,slow=19,SNR=9.2						
LVC				LR	LR	07 05 32.7	
	comp=Z,2μm,21.4s,baz=314,slow=36						
LVC	**Limon Verde**	**10.55**	**140**	Pn	**Pn**	**07 01 50.2**	**+1.3**
LVC	**Limon Verde**	**10.55**	**140** *eP*		**Pn**	**07 01 50.5**	**+1.7**
PB15	**IPOC Station P**	**10.67**	**144**		**Pn**	**07 01 50.9**	**+0.5**
ETMB	**Extrema**	**10.86**	**65** *eP*		**Pn**	**07 01 51.6**	**-1.2**
GO02	**Mina Guanaco**	**12.21**	**150**	Pn	**Pn**	**07 02 12.2**	**+0.7**
AC01	**Pan de Azucar**	**12.63**	**156**	Pn	**Pn**	**07 02 16.6**	**-0.4**
AC02	**Maricunga**	**13.85**	**153**	Pn	**Pn**	**07 02 35.5**	**+1.4**
SAML	**Samuel**	**13.92**	**68**		**Pn**	**07 02 32.4**	**-2.3**
SIV	**San Ignacio**	**14.66**	**97**	Pn	**Pn**	**07 02 42.8**	**-2.1**
	0.9nm,0.3s,baz=280,slow=11,SNR=20						
SIV				LR	LR	07 09 10.4	
	comp=Z,12μm,19.0s,baz=288,slow=41						
PTLC	**Puerto Leguiza**	**14.74**	**6** *eP*		Pn	07 02 38.8	-7.1
OTAV	**Otavalo**	**14.91**	**351**		**Pn**	**07 02 49.8**	**+1.2**
OTAV	**Otavalo**	**14.91**	**351** *eP*		**P**	**07 02 53.1**	**-1.2**
LCO	**Las Campanas**	**15.22**	**161**	P	**Pn**	**07 02 52.6**	**0.0**
LCO				IAmb	IAmb	07 03 07.8	
	comp=Z,68nm,1.4s						
VILB	**Vilhena**	**15.63**	**86** *eP*		**Pn**	**07 02 56.1**	**-1.7**
GCUF	**Volcan Galeras**	**15.76**	**356** *eP*		**P**	**07 03 02.7**	**-1.2**
GO04	**Tololo Observa**	**16.28**	**163**	P	**Pn**	**07 03 07.6**	**+1.3**
GO04				IAmb	IAmb	07 03 15.2	
	comp=Z,156nm,1.3s						
PTLB	**Pontes e Lacer**	**16.51**	**95** *eP*		**Pn**	**07 03 08.9**	**-0.1**
BBAC	**Balboa, Cauca**	**16.54**	**356** *eP*		**P**	**07 03 10.2**	**+0.9**
SOTA	**Risalnco**	**16.63**	**359** *eP*		**P**	**07 03 12.9**	**-0.6**
MACC	**Macarena, Meta**	**16.80**	**8** *eP*		**Pn**	**07 03 12.2**	**-0.5**
PCON	**Cinco Dias**	**16.82**	**359** *eP*		**P**	**07 03 18.1**	**+2.5**
CO03	**El Pedregal**	**16.94**	**164**	P	**Pn**	**07 03 15.2**	**+0.7**
POPC	**Popayan, Colom**	**17.03**	**358** *eP*		**P**	**07 03 18.1**	**+0.4**
MARP	**Paez Belalcaza**	**17.33**	**1** *eP*		**Pn**	**07 03 19.2**	**-0.4**
GUVC	**San Jose del G**	**17.39**	**12** *eP*		**P**	**07 03 23.4**	**+1.9**
ORTC	**Ortega, Tolima**	**18.41**	**3** *eP*		**P**	**07 03 33.3**	**+0.6**
ORTC				*eP*	**pP**	**07 03 35.2**	**-0.3**
YOTC	**Yotoco, Valle**	**18.46**	**360** *eP*		**Pn**	**07 03 33.5**	**+0.1**
VILC	**Villavicencio,**	**18.75**	**8** *eP*		**Pn**	**07 03 40.9**	**+3.8**
VA03	**San Esteban**	**18.80**	**165**	P	**Pn**	**07 03 39.1**	**+1.6**
H03N1	**Juan Fernandez**	**18.92**	**187**	T	T	07 23 04.4	
	baz=8.4,slow=74						
H03N2	**Juan Fernandez**	**18.92**	**187**	T	T	07 23 03.7	
	baz=8.4,slow=74,SNR=3220						
H03N3	**Juan Fernandez**	**18.94**	**187**	T	T	07 23 03.1	
	baz=8.4,slow=74,SNR=3220						
MACA	**Manacapuru-AM**	**19.06**	**55** *eP*		**P**	**07 03 39.1**	**-0.8**
ROSC	**El Rosal**	**19.40**	**6** P		**P**	**07 03 43.7**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=245,slow=11,SNR=1.4						
ROSC				LR	LR	07 12 00.1	
	comp=Z,3μm,20.1s,baz=213,slow=40						
ROSC	**El Rosal**	**19.40**	**6**		sP	07 03 51.6	+3.6
ROSC	**El Rosal**	**19.40**	**6** *eP*		**Pn**	**07 03 51.0**	**+5.8**
MT09	**Talagante**	**19.67**	**167**	P	**P**	**07 03 46.4**	**-0.2**
MT09				IAmb	IAmb	07 04 08.7	
	comp=Z,89nm,1.5s						
GUY2C	**Guyana, Caldas**	**19.71**	**2** *eP*		**Pn**	**07 03 49.0**	**+0.1**
NORC	**Norcasia**	**20.07**	**4** *eP*		**P**	**07 03 44.8**	**-6.2**
CLDB	**Colider**	**20.24**	**82** *eP*		**P**	**07 03 52.4**	**-0.4**
CBOC	**Ciudad Bolivar**	**20.33**	**1** *eP*		Pn	07 03 56.0	+0.1
AQDB	**Aquidauana**	**20.40**	**110** *eP*		Pn	07 03 55.3	-1.3
RUSC	**La Rusia**	**20.59**	**9** *eP*		Pn	07 03 58.7	-0.5
BO02	**Sierra Bellavi**	**20.70**	**167**	P	**P**	**07 03 57.8**	**+0.1**
BO02				IAmb	IAmb	07 04 12.8	
	comp=Z,81nm,1.5s						
PP1B	**Ponte de Pedra**	**20.70**	**101** *eP*		**P**	**07 03 58.1**	**+0.3**
PTBC	**PUERTO BERRIO,**	**21.07**	**5** *eP*		**P**	**07 04 00.8**	**-1.0**
PTGA	**Pitinga**	**21.15**	**51** P		**P**	**07 04 02.1**	**-0.6**
	comp=Z,14nm,0.7s,baz=235,slow=13,SNR=11						
PTGA	**Pitinga**	**21.15**	**51**	P	**P**	**07 04 01.6**	**-1.0**
PTGA				IAmb	IAmb	07 04 12.8	
	comp=Z,108nm,1.3s						
PTGA	**Pitinga**	**21.15**	**51** *eP*		**P**	**07 04 01.3**	**-1.4**
CPUP	**Villa Florida**	**21.16**	**126** P		**P**	**07 04 03.5**	**+0.9**
	comp=Z,40nm,1.1s,baz=304,slow=10,SNR=34						
CPUP				LR	LR	07 13 53.8	
	comp=Z,2μm,18.6s,baz=300,slow=42						
CPUP	**Villa Florida**	**21.16**	**126** P		**P**	**07 04 03.0**	**+0.4**
CPUP					**P**	**07 04 03.6**	**+1.0**
CPUP				IAmb	IAmb	07 04 05.1	
	comp=Z,110nm,1.4s						
ML02	**Panimavida**	**21.51**	**169**	P	**P**	**07 04 06.3**	**0.0**
ML02				IAmb	IAmb	07 04 19.5	
	comp=Z,106nm,1.4s						
BRRC	**Barranca, Sant**	**21.70**	**7** *eP*		**P**	**07 04 11.3**	**+2.8**
NPGB	**Novo Progresso**	**21.79**	**72** *eP*		**P**	**07 04 07.3**	**-2.2**
ZARC	**Zaragoza, Cauc**	**21.99**	**4** *eP*		**P**	**07 04 10.1**	**-1.5**
PAMC	**Pamplona, Colo**	**22.07**	**9** *eP*		**P**	**07 04 15.6**	**+2.6**
BI02	**San Fabin de**	**22.41**	**170** P		**P**	**07 04 15.8**	**-0.3**
BI02					**pP**	**07 04 19.1**	**+0.1**
BI02				IAmb	IAmb	07 04 40.0	
	comp=Z,52nm,1.2s						
ITTB	**Itaituba**	**22.58**	**65** *eP*		**P**	**07 04 16.5**	**-1.5**
OCAC	**Ocana**	**22.87**	**7** *i* P		**P**	**07 04 19.2**	**-1.9**
OCAC				*eP*	**P**	**07 04 19.2**	**-1.9**
BOAV	**Boa Vista**	**22.94**	**44** *eP*		**P**	**07 04 20.1**	**-1.7**
MOTC	**Monteria, Cord**	**23.23**	**1** *eP*		**P**	**07 04 25.0**	**+0.2**
SMLC	**San Martn de**	**23.34**	**5** *eP*		**P**	**07 04 25.2**	**-0.7**
ITQB	**Itaqui**	**23.48**	**133** *eP*		**P**	**07 04 27.6**	**+0.4**
ARAG	**Araguaiana, MT**	**23.57**	**96** *eP*		**P**	**07 04 26.9**	**-1.2**
TRCB	**Terra Rica**	**23.74**	**114** *eP*		**P**	**07 04 30.6**	**+0.7**
SDV	**Santo Domingo**	**23.98**	**14** P		**P**	**07 04 32.0**	**-0.3**
SJCC	**San Jacinto, C**	**24.36**	**2** *eP*		**P**	**07 04 36.5**	**+0.8**
SNDB	**Serra Nova Dou**	**24.38**	**87** *eP*		**P**	**07 04 34.4**	**-1.4**
PCMB	**Pacaembu**	**24.69**	**110** *eP*		**P**	**07 04 39.4**	**+0.7**
PTGB	**Pitanga**	**24.82**	**118** *eP*		**P**	**07 04 40.1**	**+0.3**
MALB	**Monte Alegre**	**25.09**	**62** *eP*		**P**	**07 04 42.4**	**+0.1**
ITRB	**Iturama**	**25.20**	**105** *eP*		**P**	**07 04 43.5**	**+0.2**
ITAB	**Concordia**	**25.70**	**123** *eP*		**P**	**07 04 48.8**	**+1.1**
CPSB	**Cacapava Do Su**	**26.18**	**131** *eP*		**P**	**07 04 52.4**	**+0.3**
JTS	**Las Juntas de**	**26.20**	**340**	LR	LR	07 14 55.4	
	comp=Z,2μm,18.6s,baz=236,slow=36						
PLCA	**Paso Flores**	**26.50**	**170** P		**P**	**07 04 56.6**	**+1.6**
	comp=Z,4.0nm,0.7s,baz=348,slow=11,SNR=10						
PLCA				LR	LR	07 13 05.6	
	comp=Z,638nm,21.5s,baz=336,slow=31						
PLCA	**Paso Flores**	**26.50**	**170**	P	**P**	**07 04 51.3**	**-3.7**
PLCA	**Paso Flores**	**26.50**	**170** *eP*		**P**	**07 04 57.5**	**+2.5**
FRTB	**Fartura**	**26.61**	**113** *eP*		**P**	**07 04 57.4**	**+1.3**
PLTB	**Pedras Altas**	**26.81**	**133** *eP*		**P**	**07 04 57.9**	**+0.2**
IPMB	**Ipameri, GO**	**27.07**	**101** *eP*		**P**	**07 04 59.7**	**-0.5**
BB19B	**Bebedouro**	**27.09**	**108** *eP*		**P**	**07 05 00.7**	**+0.2**
PCRV	**Puerto La Cruz**	**27.15**	**26**	LR	LR	07 16 42.9	
	comp=Z,3μm,21.7s,slow=39						
BDFB	**Brasilia**	**27.23**	**96** P		**P**	**07 05 01.4**	**-0.3**
	comp=Z,6.4nm,0.5s,baz=284,slow=9.6,SNR=11						
BDFB				LR	LR	07 16 34.5	
	comp=Z,5μm,18.1s,baz=270,slow=38						
BDFB	**Brasilia**	**27.23**	**96** P		**P**	**07 05 01.5**	**-0.3**
PRPB	**Parauapebas**	**27.25**	**75** *eP*		**P**	**07 05 00.9**	**-1.0**
PEXB	**Peixe**	**27.25**	**88** *eP*		**P**	**07 05 01.1**	**-0.7**
MCPB	**Macapa, AP**	**27.75**	**61** *eP*		**P**	**07 05 04.9**	**-1.4**
SMTB	**Santa Maria do**	**28.57**	**82** *eP*		**P**	**07 05 13.4**	**-0.3**
SPB	**Sao Paulo**	**28.57**	**113** P		**P**	**07 05 13.8**	**+0.1**
VAO	**Valinhos**	**28.87**	**111** *eP*		**P**	**07 05 17.5**	**+1.1**
MDP	**Montagnes des**	**30.48**	**52**	LR	LR	07 18 24.5	
	comp=Z,4μm,20.1s,baz=232,slow=38						
JANB	**Januaria**	**30.82**	**95** *eP*		**P**	**07 05 32.6**	**-1.1**
SJMB	**Sao Joao De Ma**	**33.76**	**102** *eP*		**P**	**07 05 59.2**	**-0.2**
BSFB	**Barra de Sao F**	**34.09**	**102** *eP*		**P**	**07 06 02.1**	**-0.1**
RIB01	**Linhares ES**	**34.53**	**103** *eP*		**P**	**07 06 05.5**	**-0.6**
NAN01	**Guarapari, ES**	**34.76**	**100** *eP*		**P**	**07 06 08.0**	**-0.1**
CMC01	**Camacan, BA**	**35.42**	**96** *eP*		**P**	**07 06 13.3**	**-0.5**
GDU01	**Guandu, BA**	**35.50**	**93** *eP*		**P**	**07 06 13.6**	**-0.9**
NBIT	**Itapeh - BA**	**35.53**	**95** *eP*		**P**	**07 06 14.0**	**-0.7**
CMIG	**Matias Romero**	**36.49**	**329**	LR	LR	07 19 19.3	
	comp=Z,862nm,18.8s,baz=138,slow=33						
NBPB	**Pedra_Branca-C**	**37.11**	**80** *eP*		**P**	**07 06 27.4**	**-0.8**
NBLA	**Lagarto - SE**	**37.60**	**89** *eP*		**P**	**07 06 31.1**	**-1.3**
NBAN	**Anadia - AL**	**39.30**	**87** *eP*		**P**	**07 06 46.1**	**-0.7**
NBRF	**Rio Formoso -**	**40.61**	**86** *eP*		**P**	**07 06 56.4**	**-1.2**
FPAL	**Fort Paine**	**49.68**	**350** P		**P**	**07 08 11.8**	**+2.5**
FPAL				IAmb	IAmb	07 08 18.7	
	comp=Z,26nm,1.3s						
V52A	**Sevierville**	**50.65**	**352**	IAmb	IAmb	07 08 17.1	
	comp=Z,29nm,1.4s						
LPIG	**La Paz**	**50.89**	**319**	LR	LR	07 25 18.8	
	comp=Z,235nm,20.6s,baz=113,slow=31						
V48A	**Smith Brothers**	**51.06**	**349**	IAmb	IAmb	07 08 29.3	
	comp=Z,21nm,1.2s						
TXAR	**Lajitas Array**	**51.10**	**329** P		**P**	**07 08 20.7**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=246,slow=36,SNR=1.0						
TXAR				LR	LR	07 28 43.1	
	comp=Z,695nm,18.3s,baz=0.0,slow=35						
ABTX	**Abilene, Hawle**	**52.03**	**335** P		**P**	**07 08 28.5**	**+1.3**
ABTX				IAmb	IAmb	07 08 46.7	
	comp=Z,25nm,1.3s						
X37A	**Clayton**	**52.20**	**340**	IAmb	IAmb	07 08 37.4	
	comp=Z,21nm,1.1s						
U40A	**Yellville**	**53.06**	**343** P		**P**	**07 08 34.7**	**0.0**
U40A				IAmb	IAmb	07 08 44.2	
	comp=Z,12nm,1.0s						
R50A	**Paris**	**53.15**	**352**	IAmb	IAmb	07 08 44.2	
	comp=Z,28nm,1.4s						
MGMO	**Mountain Grove**	**53.65**	**344**	IAmb	IAmb	07 08 46.5	
	comp=Z,20nm,1.2s						
MNTX	**Cornudas Mount**	**53.87

NEW	**Newport**	**72.39**	**333**		P		**P**	**07 10 43.8**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=112,slow=8.6,SNR=3.2								
NEW	**Newport**	**72.39**	**333**		P		**P**	**07 10 44.4**	**+0.9**
NEW					IAmb		IAmb	07 10 51.8	
	comp=Z,11nm,1.2s								
PMOZ	**Porto Moniz, M**	**73.46**	**49**	*e*	LR		LR	07 37 03.5	
	comp=Z,260nm,20.0s								
DBIC	**Dimbokro**	**73.82**	**79**		P		**P**	**07 10 50.4**	**-2.2**
	comp=Z,2.3nm,0.5s,baz=215,slow=4.6,SNR=6.4								
DBIC					LR		LR	07 41 29.7	
	comp=Z,1μm,20.5s,baz=223,slow=34								
FCC	**Fort Churchill**	**74.55**	**350**		IAmb		IAmb	07 11 02.5	
	comp=Z,16nm,1.4s								
QSPA	**South Pole Qui**	**75.55**	**180**		P		**P**	**07 11 04.1**	**+2.1**
QSPA					IAmb		IAmb	07 11 04.8	
	comp=Z,17nm,1.2s								
KOWA	**Kowa**	**77.02**	**71**		P		**P**	**07 11 11.1**	**+0.1**
KOWA					IAmb		IAmb	07 11 11.4	
	comp=Z,14nm,1.2s								
RAR	**Rarotonga**	**78.97**	**251**		LR		LR	07 37 30.1	
	comp=Z,338nm,18.2s,baz=95,slow=29								
PFVI	**Vila Bisbo**	**81.54**	**48**	*e*	S		**SKKSac**	**07 21 57.4**	**-0.6**
TOA0	**Torodi Ar. Sit**	**81.89**	**74**		P		**P**	**07 11 37.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**81.89**	**74**		P		**P**	**07 11 37.2**	**-0.4**
	comp=Z,13nm,0.5s,baz=266,slow=5.2,SNR=53								
TORD					LR		LR	07 47 10.8	
	comp=Z,554nm,19.8s,baz=230,slow=35								
TORD	**Torodi Ar. Bea**	**81.89**	**74**		P		**P**	**07 11 37.1**	**-0.4**
PBDV	**Barranco-do-Ve**	**82.23**	**48**	*e*	S		**SKKSac**	**07 22 08.6**	**+5.3**
PCVE	**Castro Verde**	**82.32**	**48**	*e*	P		**P**	**07 11 41.1**	**+1.8**
	comp=Z,49nm,1.7s								
VNDA	**Vanda**	**82.36**	**191**		P		**P**	**07 11 41.0**	**+2.1**
	comp=Z,1.2nm,0.8s,baz=125,slow=4.7,SNR=7.0								
VNDA					LR		LR	07 41 39.1	
	comp=Z,221nm,18.4s,baz=124,slow=31								
PVAQ	**Vaqueiros**	**82.46**	**48**	*e*	S		**SKKSac**	**07 22 04.2**	**-0.7**
PVAQ	**Vaqueiros**	**82.46**	**48**	*e*	LR		LR	07 41 54.5	
	comp=Z,379nm,20.0s								
YKA	**Yellowknife Ar**	**82.50**	**343**		P		**P**	**07 11 38.7**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=143,slow=6.1,SNR=67								
PMTG	**Montargil**	**82.80**	**47**	*e*	P		**P**	**07 11 43.1**	**+1.3**
	comp=Z,49nm,1.6s								
PBAR	**Barrancos**	**83.27**	**48**	*e*	P		**P**	**07 11 45.6**	**+1.4**
SFJD	**Kangerlussuaq**	**83.52**	**10**		LR		LR	07 51 02.5	
	comp=Z,140nm,19.1s,baz=198,slow=37								
PMRV	**Marv??o**	**83.53**	**47**	*e*	S		**SKKSac**	**07 22 16.2**	**+3.2**
PMRV	**Marv??o**	**83.53**	**47**	*e*	LR		LR	07 40 46.5	
	comp=Z,756nm,22.0s								
PVIS	**Viseu**	**83.73**	**45**	*e*	P		**P**	**07 11 47.2**	**+0.6**
	comp=Z,41nm,1.6s								
PGAV	**Gavieira, Arco**	**84.01**	**44**	*e*	LR		LR	07 40 55.4	
	comp=Z,548nm,20.0s								
MVO	**Moncorvo**	**84.51**	**45**	*e*	P		**P**	**07 11 50.8**	**+0.2**
	comp=Z,26nm,2.0s								
MVO	**Moncorvo**	**84.51**	**45**	*e*	S		**S**	**07 22 17.3**	**-0.2**
MVO	**Moncorvo**	**84.51**	**45**	*e*	LR		LR	07 39 57.3	
	comp=Z,552nm,20.0s								
PBRG	**Braganca**	**84.97**	**45**	*e*	P		**P**	**07 11 53.5**	**+0.6**
SYO	**Syowa Base**	**85.31**	**161⇑**	*e*	P		**P**	**07 11 53.1**	**-1.0**
SYO	**Syowa Base**	**85.31**	**161⇓**	*e*	PcP		**P**	**07 11 55.0**	**+0.9**
ESDC	**Sonseca Array**	**86.06**	**47**		P		**P**	**07 11 58.3**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=253,slow=6.0,SNR=7.0								
ESDC					LR		LR	07 47 37.1	
	comp=Z,556nm,19.6s,baz=255,slow=34								
ESDC	**Sonseca Array**	**86.06**	**47**		P		**P**	**07 11 58.8**	**+0.4**
ESDC					IAmb		IAmb	07 12 08.9	
	comp=Z,20nm,1.4s								
BORG	**Borgarnes**	**89.27**	**21**		LR		LR	07 50 56.6	
	comp=Z,156nm,18.7s,baz=242,slow=35								
RES	**Resolute Bay**	**89.87**	**355**		IAmb		IAmb	07 12 26.0	
	comp=Z,12nm,1.4s								
SUMG	**Summit**	**90.47**	**11**	*i*	P		**P**	**07 12 18.4**	**-0.7**
SUMG					IAmb		IAmb	07 12 20.9	
	comp=Z,4.0nm,1.2s								
SUMG	**Summit**	**90.47**	**11**		P		**P**	**07 12 19.4**	**+0.3**
AFI	**Afiamalu**	**91.81**	**255**		LR		LR	07 47 01.5	
	comp=Z,210nm,18.6s,baz=108,slow=31								
INK	**Inuvik**	**92.19**	**342**		P		**P**	**07 12 25.7**	**-0.9**
	comp=Z,1.8nm,1.0s,baz=70,slow=6.3,SNR=4.4								
BCAR	**Beaver Creek A**	**92.33**	**335**		P		**P**	**07 12 27.8**	**+0.3**
MAW	**Mawson**	**92.81**	**165**		P		**P**	**07 12 30.1**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=212,slow=10,SNR=2.8								
MAW					LR		LR	07 51 02.9	
	comp=Z,345nm,21.8s,baz=236,slow=33								
BOSA	**Boshof**	**92.85**	**120**		LR		LR	07 52 01.3	
	comp=Z,328nm,18.7s,baz=232,slow=34								
RAO	**Raoul Island**	**92.87**	**239**		LR		LR	07 45 46.9	
	comp=Z,173nm,20.8s,baz=296,slow=30								
URZ	**Urewera**	**93.69**	**229**		LR		LR	07 45 49.2	
	comp=Z,332nm,20.5s,baz=212,slow=30								
ILAR	**Eielson Array**	**95.11**	**336**		P		**P**	**07 12 39.1**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=181,slow=5.9,SNR=4.2								
GERES	**GERESS Array B**	**100.77**	**42**		P		**Pdif**	**07 13 06.2**	**0.0**
	comp=Z,0.3nm,0.2s,baz=186,slow=4.0,SNR=3.8								
H11N3	**WAKE ISLAND Hyl**	**19.77**	**285**		T		T	09 29 02.3	
	baz=96,slow=75								
H11N2	**WAKE ISLAND Hyl**	**19.78**	**285**		T		T	09 29 05.2	
	baz=96,slow=75								
H11N1	**WAKE ISLAND Hyl**	**19.78**	**285**		T		T	09 29 01.9	
	baz=96,slow=75								
H11S2	**WAKE ISLAND Hyl**	**19.83**	**283**		T		T	09 29 04.2	
	baz=98,slow=74								
H11S1	**WAKE ISLAND Hyl**	**19.83**	**283**		T		T	09 29 04.8	
	baz=98,slow=74								
H11S3	**WAKE ISLAND Hyl**	**19.84**	**283**		T		T	09 29 05.6	
	baz=98,slow=74								
ASAR	**Alice Springs**	**131.91**	**218**		PKP		**PKPdf**	**07 18 32.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=125,slow=1.8,SNR=7.7								
WRA	**Warramunga Arr**	**134.39**	**222**		PKP		**PKPdf**	**07 18 36.5**	**0.0**
	comp=Z,1.9nm,0.8s,baz=138,slow=1.8,SNR=16								
WRA	**Warramunga Arr**	**134.39**	**222**		PKPdf		**PKPdf**	**07 18 37.0**	**+0.5**
ZALV	**Zalesovo Beam**	**138.00**	**17**		PKP		**PKPdf**	**07 18 42.3**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=325,slow=1.8,SNR=6.3								
KURK	**Kurchatov**	**138.62**	**24**				**PKPdf**	**07 18 43.7**	**+0.4**
KURBB	**Kurchatov Arra**	**138.65**	**24**		PKP		**PKPdf**	**07 18 43.7**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=316,slow=2.6,SNR=4.4								
MKAR	**Makanchi Array**	**143.21**	**25**		PKhKP		PKPab	07 18 47.8	+0.4
	comp=Z,0.6nm,0.7s,baz=340,slow=3.0,SNR=1.8								
KSH	**Kashi**	**145.19**	**39**		PKPbc		**PKPab**	**07 18 55.6**	**+0.3**
KSH					PP		**PP**	**07 22 16.1**	**+2.1**
SONM	**Songino Array**	**146.79**	**357**		PKPbc		**PKPbc**	**07 18 59.9**	**+0.1**
	comp=Z,4.0nm,0.5s,baz=329,slow=2.1,SNR=12								
WMQ	**Urumqi**	**147.78**	**22**	*e*	P		**PKPdf**	**07 18 59.3**	**-0.5**
WMQ					pmax		pmax		
	comp=Z,190nm,4.3s								
KSRS	**Korea Array**	**148.74**	**321**		PKPbc		**PKiKP**	**07 19 06.7**	**0.0**
	comp=Z,0.8nm,0.5s,baz=38,slow=2.2,SNR=8.0								
HHC	**Hu-ho-hao-te**	**152.98**	**347**	*e*	P		**PKPdf**	**07 19 07.8**	**-0.2**
GTA	**Gaotai**	**155.03**	**7**	⇑	PKPbc		PKPbc	07 19 18.9	
GTA					LR		LR		
	comp=N,420nm,18.5s								
GTA					LR		LR		
	comp=E,340nm,18.5s								
GTA					LR		LR		
	comp=Z,370nm,19.6s								
NJ2	**Nanjing**	**157.84**	**324**	*e*	P		**PKPdf**	**07 19 12.5**	**-2.2**
NJ2					pmax		pmax		
	comp=Z,8.0nm,0.5s								
CD2	**Chengdu**	**163.76**	**0**		PKP		**PKPdf**	**07 19 18.5**	**-2.7**
CMAR	**Chiang Mai Arr**	**173.97**	**50**		PKP		**PKPdf**	**07 19 28.0**	**0.0**
	comp=Z,0.4nm,0.6s,baz=304,slow=0.4,SNR=2.1								

IDC ***15*** *07:08:35.3±0.5, 35.39°N 104.05°E, h0km, mb4.3/27, mb1 4.3/32, mb1mx4.2/65, mbtmp4.2/32, ML3.7/5, MS3.9/25, Ms1 3.9/25, ms1mx3.7/65, Error ellipse: s-maj=14.7km s-min=10.0km az=65.0*

BJI ***15*** *07:08:36.0±0.0, 35.36°N×104.03°E, h9km, mB4.7/30, mb4.6/47, ML5.0/27, Ms4.6/55, Ms7 4.3/55*

GCMT ***15*** *07:08:37.6±0.4, 35.41°N 0.02×104.15°E 0.03, h21km±2km, MW4.7/79, Moment Tensor Solution. s11,c12; s79,c100; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.13±.11; Mθθ0.80±.08; Mϕϕ-0.66±.07; Mrθ0.13±.14; Mϕθ1.16±.07; Mϕr0.29±.14; Best double couple: M0 1.40700×10^16 NP1:ϕs196.00000°,δ77.00000°,λ0.00000°. NP2: ϕs196.00000°,δ90.00000°,λ-167.00000°. Principal axes: T 1.4760, Plg9.0000°, Azm331.0000°; N -0.1400, Plg77.0000°, Azm197.0000°; P -1.3370, Plg9.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *07:08:37.6±1.2, 35.39°N 0.08×104.00°E 0.09, h13km±5km, mb4.5/34 Error ellipse: s-maj=11.7km s-min=10.9km az=223.0*

MOS ***15*** *07:08:37.5±0.9, 35.38°N×104.02°E, h27km, mb4.9/37, Error ellipse: s-maj=7.2km s-min=4.4km az=118.0*

ISC 15 07:08:37.7±0.3, 35.37°N±0.03°×103.92°E±0.03, h10km, n263, σ1s82/261, mb4.6/77, MS4.0/25, 18C-8D, Gansu

Code	Station Name	Δ°	AZ°		Phase	ID	Time	Res
					Op	ISC	h m s	ISC
LZH	**Lanzhou**	**0.71**	**355**	*i*	Pg	**Pg**	**07 08 50.4**	**-1.1**
LZH					Sg	**Sg**	**07 09 00.6**	**-0.3**
LZH					smax	smax		
	comp=N,33μm,0.8s							
LZH					smax	smax		
	comp=E,49μm,0.9s							
XAN	**Xi'an**	**4.33**	**106**		P	**Pn**	**07 09 41.5**	**-2.1**
XAN	**Xi'an**	**4.33**	**106**		Pn	**Pn**	**07 09 41.5**	**-2.1**
CD2	**Chengdu**	**4.45**	**182**		Pn	**Pn**	**07 09 46.0**	**+0.7**
CD2					Pg	**Pb**	**07 09 58.4**	**+2.4**
CD2					Sg	**Sg**	**07 10 58.8**	**-1.9**
CD2					smax	smax		
	comp=N,3μm,1.1s							
CD2					smax	smax		
	comp=E,2μm,1.4s							
GTA	**Gaotai**	**5.19**	**322**	⇑	Pn	**Pn**	**07 09 56.3**	**+0.8**
GTA					Pg	**Pb**	**07 10 12.0**	**+3.4**
GTA					Sn	**Sn**	**07 10 56.6**	**+1.1**
GTA					Sg	**Sg**	**07 11 23.1**	**-1.2**
GTA					smax	smax		
	comp=N,530nm,1.0s							
GTA					smax	smax		
	comp=E,440nm,0.9s							
GTA					LR	LR		
	comp=N,2μm,7.3s							
GTA					LR	LR		
	comp=E,3μm,10.2s							
GTA					LR	LR		
	comp=Z,2μm,12.0s							
ENH	**Enshi**	**6.91**	**136**			**Pn**	**07 10 17.8**	**-1.3**
BTO	**Baotou**	**7.10**	**41**	*e*	Pn	**Pn**	**07 10 21.8**	**+0.1**
BTO					Pg	**Pb**	**07 10 44.8**	**+3.7**
BTO					Sg	Sb	07 12 14.5	+8.5
BTO					smax	smax		
	comp=N,1μm,1.0s							
BTO					smax	smax		
	comp=E,2μm,0.9s							
BTO	**Baotou**	**7.10**	**41**		Pn	**Pn**	**07 10 21.3**	**-0.4**
BTO					Pg	**Pb**	**07 10 44.3**	**+3.2**
BTO					Sn	**Sn**	**07 11 38.3**	**-4.2**
BTO					Sg	**Sb**	**07 12 14.0**	**+8.0**
BTO					smax	smax		
	comp=E,2μm,0.9s							
BTO					smax	smax		
	comp=E,2μm,0.8s							
TIY	**Taiyuan**	**7.24**	**69**	*e*	Pn	**Pn**	**07 10 21.9**	**-1.7**
TIY					Pg	**Pb**	**07 10 45.8**	**+2.4**
TIY					Sg	**Sb**	**07 12 16.5**	**+6.7**
TIY					smax	smax		
	comp=E,860nm,0.8s							
TIY					smax	smax		
	comp=E,1μm,1.0s							
HHC	**Hu-ho-hao-te**	**8.13**	**45**	*e*	P	**Pn**	**07 10 35.8**	**-0.1**
HHC					S	**Sn**	**07 12 07.3**	**-0.6**
HHC					pmax	pmax		
	comp=E,30nm,1.1s							
HHC					pmax	pmax		
	comp=E,130nm,5.1s							
HHC					LR	LR		
	comp=E,3μm,4.0s							
HHC					LR	LR		
	comp=E,740nm,3.9s							
GYA	**Guiyang**	**9.19**	**164**		P	**Pn**	**07 10 52.3**	**+1.8**
GYA					S	**Sn**	**07 12 33.3**	**-0.8**
GYA					pmax	pmax		
	comp=E,40nm,0.7s							
GYA					LR	LR		
	comp=E,550nm,5.9s							
WHN	**Wuhan**	**9.99**	**116**	⇑	P	**Pn**	**07 11 03.5**	**+2.2**
WHN					S	**Sn**	**07 12 46.8**	**-6.7**
WHN					LR	LR		
	comp=E,4μm,6.8s							
KMI	**Kunming**	**10.27**	**186**	⇑	P	Pn	07 11 10.3	+5.0
KMI					pP		07 11 13.3	
KMI					S	**Sn**	**07 13 00.9**	**+0.3**
KMI					SS	**SnSn**	**07 13 16.0**	**+3.4**
KMI					pmax	pmax		
	comp=E,13nm,1.0s							
KMI					pmax	pmax		
	comp=E,48nm,3.5s							
KMI					LR	LR		
	comp=E,2μm,12.2s							
KMI					LR	LR		
	comp=E,1μm,10.3s							
TIA	**Tai'an**	**10.76**	**82**		P	**Pn**	**07 11 09.8**	**-2.0**
TIA					pmax	pmax		
	comp=E,9.0nm,0.8s							
TIA					LR	LR		
	comp=E,1μm,10.4s							
TIA					LR	LR		
	comp=E,770nm,9.8s							
BJI	**Beijing**	**10.76**	**61**		P	**Pn**	**07 11 14.5**	**+2.7**
BJI					pmax	pmax		
	comp=E,8.0nm,0.6s							
LSA	**Lhasa**	**12.17**	**246**		P	**Pn**	**07 11 32.4**	**+0.8**
LSA	**Lhasa**	**12.17**	**246**			**Pn**	**07 11 32.4**	**+0.8**
SONM	**Songino Array**	**12.59**	**8**		Pn	**Pn**	**07 11 35.4**	**-1.4**
	comp=E,0.7nm,0.3s,baz=187,slow=13,SNR=8.4							
SONM					Lg	Lg	07 15 14.5	
	comp=E,0.8nm,0.3s,baz=200,slow=34,SNR=8.6							
SONM					LR	LR	07 17 23.0	
	comp=E,223nm,20.3s,baz=196,slow=42							
SONM	**Songino Array**	**12.59**	**8**			**Pn**	**07 11 35.3**	**-1.6**
ULN	**Ulaanbaatar**	**12.70**	**10**	*ce*	P	**Pn**	**07 11 36.3**	**-2.1**
ULN					pmax	pmax		
	comp=Z,9.0nm,1.0s							
ULN	**Ulaanbaatar**	**12.70**	**10**		Pn	**Pn**	**07 11 36.5**	**-1.9**
NJ2	**Nanjing**	**12.86**	**101**	*e*	P	**Pn**	**07 11 39.3**	**-1.3**
NJ2					pmax	pmax		
	comp=Z,8.0nm,0.5s							
NJ2					LR	LR		
	comp=Z,3μm,11.4s							
NJ2					LR	LR		
	comp=Z,2μm,7.6s							
NJ2					LR	LR		
	comp=Z,2μm,8.5s							
SHL	**Shillong**	**14.25**	**230**		P	**Pn**	**07 11 58.1**	**-1.6**
SHL	**Shillong**	**14.25**	**230**		Pn	**Pn**	**07 11 58.1**	**-1.6**
DL2	**Dalian**	**14.55**	**71**		P	**Pn**	**07 12 03.9**	**+0.3**
DL2					pmax	pmax		
	comp=Z,24nm,0.8s							
DL2					LR	LR		
	comp=Z,1μm,16.3s							
DL2					LR	LR		
	comp=Z,430nm,17.9s							
DL2					LR	LR		
	comp=Z,460nm,12.0s							
GZH	**Guangzhou**	**14.74**	**144**		P	Pn	07 11 58.4	-7.8
GZH					S	Sn	07 14 38.8	-11
ZAK	**Zakamensk**	**15.01**	**358**	*e*	P	**Pn**	**07 12 08.6**	**-1.3**
ZAK					pmax	pmax		
	comp=Z,12nm,1.1s							
WMQ	**Urumqi**	**15.07**	**309**	*e*	P	**Pn**	**07 12 12.0**	**+1.3**
WMQ					pP	P	07 12 14.8	-1.2
WMQ					sP	pP	07 12 17.4	-2.0
WMQ					S	**Sn**	**07 14 59.6**	**+1.9**
WMQ					pmax	pmax		
	comp=Z,39nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,300nm,3.9s							
WMQ					LR	LR		
	comp=Z,4μm,10.7s							
WMQ					LR	LR		
	comp=Z,3μm,12.3s							
WMQ					LR	LR		
	comp=Z,2μm,15.7s							
WMQ	**Urumqi**	**15.07**	**309**		P	**P**	**07 12 18.0**	**+1.9**
WMQ					pmax	pmax		
	comp=Z,20nm,0.7s							
WMQ	**Urumqi**	**15.07**	**309**		P	**P**	**07 12 18.0**	**+1.9**
WMQ					IAmb	IAmb	07 12 19.8	
	comp=Z,20nm,0.7s							
TAPN	**Taplejung**	**15.98**	**244**	*e*	P	**Pn**	**07 12 19.9**	**-3.0**
	comp=Z,42nm,0.8s							
TLY	**Talaya**	**16.30**	**359**		Pn	**Pn**	**07 12 24.6**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=169,slow=16,SNR=1.1							
TLY					Lg	Lg	07 17 10.3	
	comp=Z,0.0nm,0.3s,baz=59,slow=24,SNR=3.7							
TLY					LR	LR	07 19 25.5	
	comp=Z,300nm,20.8s,baz=168,slow=40							
TLY	**Talaya**	**16.30**	**359**	*de*	P	**Pn**	**07 12 27.0**	**+0.4**
TLY					pmax	pmax		
	comp=Z,12nm,1.5s							
MOY	**Mondy**	**16.42**	**354**	*e*	P	**Pn**	**07 12 28.3**	**+0.1**
MOY					pmax	pmax		
	comp=Z,37nm,2.1s							
ODAN	**Odare**	**16.49**	**244**	*e*	P	**Pn**	**07 12 26.4**	**-3.0**
	comp=Z,133nm,1.1s							
IRK	**Irkutsk**	**16.87**	**1**	*e*	P	**P**	**07 12 35.4**	**-0.4**
IRK					pmax	pmax		
	comp=Z,62nm,0.9s							
JIRN	**Jiri**	**16.95**	**248**	*e*	P	**Pn**	**07 12 33.0**	**-2.3**
	comp=Z,116nm,0.9s							
CM34	**Chiang Mai Arr**	**16.99**	**196**		P	**P**	**07 12 38.0**	**+0.6**
RAMN	**Ramite**	**17.02**	**245**	*e*	P	**Pn**	**07 12 32.9**	**-3.2**
	comp=Z,40nm,0.7s							
GUN	**Gumba**	**17.06**	**249**	*e*	P	**Pn**	**07 12 34.6**	**-2.1**
	comp=Z,302nm,0.9s							
CM33	**Chiang Mai Arr**	**17.07**	**196**		P	**P**	**07 12 38.0**	**-0.3**
CHTO	**Chiang Mai**	**17.07**	**196**		P	**P**	**07 12 37.9**	**-0.4**
CHTO					pmax	pmax		
	comp=Z,12nm,1.2s							
CHTO	**Chiang Mai**	**17.07**	**196**		P	**P**	**07 12 37.9**	**-0.4**
CMMT	**Chiang Mai**	**17.07**	**196**		P	**P**	**07 12 38.2**	**-0.1**
	comp=Z,248nmcomp=Z,5.4nm,1.0s							
QIZ	**Qiongzhong**	**17.10**	**161**		P	**P**	**07 12 39.4**	**+0.8**
QIZ					S	**Sn**	**07 15 50.9**	**+3.7**
QIZ					pmax	pmax		
	comp=Z,21nm,0.7s							
QIZ					pmax	pmax		
	comp=Z,59nm,4.7s							
QIZ					LR	LR		
	comp=Z,600nm,8.5s							
QIZ					LR	LR		
	comp=Z,740nm,7.9s							
QIZ					LR	LR		
	comp=Z,770nm,10.4s							
QIZ	**Qiongzhong**	**17.10**	**161**		P	**P**	**07 12 40.4**	**+1.7**
QIZ					IAmb	IAmb	07 12 45.1	
	comp=Z,28nm,1.1s							
CM35	**Chiang Mai Arr**	**17.16**	**195**		P	**P**	**07 12 39.0**	**-0.3**
LAMP	**Lampang**	**17.21**	**194**		P	**P**	**07 12 44.0**	**+4.2**
	comp=Z,520nmcomp=Z,18nm,0.9s							
CM32	**Chiang Mai Arr**	**17.25**	**196**		P	**P**	**07 12 41.0**	**+0.7**
NONG	**Nongkai**	**17.26**	**182**		P	**P**	**07 12 45.3**	**+5.0**
	comp=Z,17nm,1.1s							
CM36	**Chiang Mai Arr**	**17.33**	**196**		P	**P**	**07 12 41.0**	**-0.1**
CM31	**Chiang Mai Arr**	**17.42**	**196**		P	P	07 12 49.7	+7.5
CMAR	**Chiang Mai Arr**	**17.42**	**196**		P	**P**	**07 12 41.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=7.0,slow=11,SNR=19							
CMAR					LR	LR	07 19 31.6	
	comp=Z,298nm,18.9s,baz=51,slow=38							
CMAR	**Chiang Mai Arr**	**17.42**	**196**	*ce*	P	**P**	**07 12 41.7**	**-0.4**
CMAR					pmax	pmax		
	comp=Z,3.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**17.42**	**196**			**P**	**07 12 41.5**	**-0.7**
CM09	**Chiang Mai Arr**	**17.42**	**196**		P	**P**	**07 12 43.5**	**+1.3**
	comp=Z,70nmcomp=Z,7.9nm,0.9s							
CM15	**Chiang Mai Arr**	**17.43**	**196**		P	**P**	**07 12 43.5**	**+1.2**
	comp=Z,7.2nm,0.8s							
CM02	**Chiang Mai Arr**	**17.44**	**196**		P	**P**	**07 12 43.0**	**+0.6**
	comp=Z,70nmcomp=Z,8.1nm,0.9s							
CM01	**Chiang Mai Arr**	**17.45**	**196**		P	**P**	**07 12 44.8**	**+2.3**
	comp=Z,230nmcomp=Z,8.3nm,0.9s							
CM13	**Chiang Mai Arr**	**17.46**	**196**		P	**P**	**07 12 43.0**	**+0.4**
	comp=Z,6.0nm,0.9s							
CM04	**Chiang Mai Arr**	**17.47**	**196**		P	**P**	**07 12 44.0**	**+1.4**
	comp=Z,80nmcomp=Z,7.1nm,0.9s							
CM05	**Chiang Mai Arr**	**17.47**	**196**		P	**P**	**07 12 43.0**	**+0.3**
	comp=Z,55nmcomp=Z,6.2nm,1.0s							
KKN	**Kakani**	**17.58**	**250**	*e*	P	**Pn**	**07 12 41.6**	**-1.4**
	comp=Z,28nm,1.2s							
PKI	**Pulchoki**	**17.59**	**249**	*e*	P	**Pn**	**07 12 40.9**	**-2.4**
	comp=Z,216nm,1.3s							
PKIN	**Phulchoki**	**17.60**	**249**	*e*	P	**Pn**	**07 12 41.1**	**-2.2**
	comp=Z,60nm,0.9s							
DMN	**Daman**	**17.80**	**249**	*e*	P	**Pn**	**07 12 44.3**	**-1.5**
	comp=Z,85nm,0.9s							
UTTA	**Uttaradit**	**17.81**	**191**		P	P	07 12 56.0	+10
MHMT	**Maesariang**	**17.94**	**199**		P	P	07 13 02.5	+15
GKN	**Gorkha**	**17.97**	**251**	*e*	P	**Pn**	**07 12 46.6**	**-1.2**
	comp=Z,107nm,1.0s							
HIA	**Hailar**	**18.10**	**35**		P	**P**	**07 12 52.0**	**+2.5**
HIA					pmax	pmax		
	comp=Z,50nm,1.2s							
HIA	**Hailar**	**18.10**	**35**			**P**	**07 12 52.0**	**+2.5**
HIA					IAmb	IAmb	07 12 54.4	
	comp=Z,50nm,1.2s							
SUKH	**Sukhothai**	**18.23**	**193**		P	P	07 12 59.0	+8.0
PHIT	**Phitsanulok**	**18.38**	**191**		P	**P**	**07 12 59.2**	**+6.5**
	comp=Z,75nm,1.0s							
CN2	**Changchun**	**18.56**	**57**	*e*	P	**P**	**07 12 53.5**	**-1.1**
CN2				*ep*	P	pP	07 12 57.3	-0.7
CN2				*eS*		**Sn**	**07 16 18.3**	**-4.0**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					LR	LR		
	comp=Z,820nm,10.0s							
CN2					LR	LR		
	comp=Z,770nm,10.0s							
CN2					LR	LR		
	comp=Z,770nm,10.0s							
ZSN	**Zaisan**	**18.65**	**316**	*e*	P	**Pn**	**07 12 55.3**	**-0.5**
	baz=316							
ZSN	**Zaisan**	**18.65**	**316**	*e*	P	**Pn**	**07 12 55.3**	**-0.5**
KOLN	**Koldanda**	**18.88**	**252**	*e*	P	**P**	**07 12 56.2**	**-2.3**
	comp=Z,76nm,1.0s							
KHON	**Khomkaen**	**18.98**	**183**		P	Pn

baz=299
MDOK Medeo 22.15 299 *e*P **P** **07 13 33.4 -0.3**
AAA Alma-Ata 22.25 299 *e*P **P** **07 13 34.9 +0.1**
baz=299
AAA Alma-Ata 22.25 299 *e*P **P** **07 13 34.8 +0.1**
JNU Nakatsue 22.37 88 LR LR 07 23 38.7
comp=Z,131nm,20.3s,baz=297,slow=41
PHET Kaeng Krachan 22.70 191 P **P** **07 13 44.8 +5.2**
SEM Semipalatinsk 22.81 318 *e*P **P** **07 13 40.8 0.0**
baz=318
SEM Semipalatinsk 22.81 318 *e*P **P** **07 13 40.8 0.0**
ZAA0 Zalesovo Array 22.88 330 P **P** **07 13 41.1 -0.2**
ZAA0 IAmb IAmb 07 13 42.2
comp=Z,23nm,1.3s
ZALV Zalesovo Beam 22.88 330 P **P** **07 13 41.4 +0.2**
comp=Z,4.8nm,0.5s,baz=134,slow=11,SNR=5.5
ZALV LR LR 07 23 12.1
comp=Z,177nm,18.4s,baz=158,slow=38
ZALV Zalesovo Beam 22.88 330 P **P** **07 13 41.0 -0.2**
USA0B Ussuriysk Arra 23.21 59⇑ *e*P **P** **07 13 46.4 +1.7**
USRK Ussuriysk Ar. 23.21 59 LR LR 07 22 42.2
comp=Z,158nm,20.6s,baz=243,slow=37
BOD Bodaibo 23.45 14 *e*P **P** **07 13 45.6 -1.3**
BOD pmax pmax
comp=Z,13nm,1.8s
KURK Kurchatov 23.86 318 P **P** **07 13 50.6 -0.4**
KURBB Kurchatov Arra 23.86 318 P **P** **07 13 50.6 -0.5**
comp=Z,16nm,0.8s,baz=123,slow=10,SNR=50
AAK Ala-Archa 23.91 297 P **P** **07 13 51.9 +0.1**
comp=Z,3.8nm,0.7s,baz=154,slow=4.9,SNR=14
AAK LR LR 07 25 13.2
comp=Z,482nm,18.3s,baz=98,slow=42
AAK Ala-Archa 23.91 297 *ce*P **P** **07 13 52.1 +0.3**
AAK pmax pmax
comp=Z,10.0nm,0.6s
AAK Ala-Archa 23.91 297 P **P** **07 13 51.7 -0.1**
AAK IAmb IAmb 07 14 04.7
comp=Z,7.5nm,0.9s
SGDS Sogindy 23.94 299 *e*P **P** **07 13 51.7 -0.3**
baz=298
SGDS Sogindy 23.94 299 *e*P **P** **07 13 51.6 -0.4**
ZEA Zeya 24.58 34 *e*P **P** **07 14 02.0 +4.4**
ZEA pmax pmax
comp=Z,20nm,0.7s
ZEA MLR MLR
comp=Z,300nm,8.0s
KLR Kul'dur 24.63 47 P **P** **07 13 57.2 -1.0**
comp=Z,6.8nm,0.9s,baz=270,slow=9.7,SNR=11
KLR LR LR 07 23 40.4
comp=Z,175nm,18.0s,baz=196,slow=37
KLR Kul'dur 24.63 47⇑ *e*P **P** **07 13 57.5 -0.7**
KLR pmax pmax
comp=Z,17nm,1.3s
BTLS Baital 24.66 302 *e*P **P** **07 13 58.7 +0.2**
baz=302
BTLS Baital 24.66 302 *e*P **P** **07 13 58.6 +0.2**
DZA Taraz 26.25 296 *e*P **P** **07 14 12.8 -0.3**
baz=296
DZA Taraz 26.25 296 *e*P **P** **07 14 12.7 -0.3**
KK31 Karatay Array 26.87 297 P **P** **07 14 18.5 -0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 26.87 297 P **P** **07 14 18.5 -0.1**
KKAR Karatay Array 26.87 297 P **P** **07 14 18.3 -0.3**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 26.87 297 P **P** **07 14 18.6 0.0**
KKAR Karatay Array 26.87 297 P **P** **07 14 18.3 -0.3**
GAR Garm 26.93 288 P **P** **07 14 18.8 -0.5**
BRZS Berezniki 26.98 312 *e*P **P** **07 14 19.2 -0.2**
baz=312
BRZS Berezniki 26.98 312 *e*P **P** **07 14 19.2 -0.2**
IUG luzhnay 27.16 295 *e*P **P** **07 14 20.8 -0.4**
baz=295
IUG luzhnay 27.16 295 *e*P **P** **07 14 20.8 -0.4**
CHM Chimkent 27.48 295 *e*P **P** **07 14 23.9 -0.2**
baz=295
CHM Chimkent 27.48 295 *e*P **P** **07 14 23.9 -0.2**
MJAR Matsushiro Arr 27.69 77 LR LR 07 25 43.2
comp=Z,80nm,18.0s,baz=280,slow=37
BVAR Borovoye Array 29.45 317 P **P** **07 14 41.1 -0.4**
comp=Z,1.8nm,0.8s,baz=105,slow=5.1,SNR=7.4
BRVK Borovoye 29.52 317⇑ *e*P **P** **07 14 41.0 -1.1**
BRVK pmax pmax
comp=Z,14nm,2.5s
BRVK Borovoye 29.52 317 P **P** **07 14 41.2 -0.8**
BRVK IAmb IAmb 07 14 48.0
comp=Z,5.4nm,0.9s
YSS Yuzh-Sakhalins 31.13 56⇑ *e*P **P** **07 14 58.5 +2.1**
YSS *e*S **S** **07 20 01.5 -0.4**
YSS pmax pmax
comp=Z,30nm,1.1s
YSS MLR MLR
comp=Z,400nm,13.0s
YAK Yakutsk 31.21 23 LR LR 07 26 53.8
comp=Z,134nm,18.2s,baz=274,slow=35
PSI Prapat 32.74 189 P **P** **07 15 11.4 +0.5**
comp=Z,5.4nm,0.6s,baz=360,slow=16,SNR=2.1
RPSI Rantau Prapat 32.84 189 P **P** **07 15 11.4 -0.2**
SBUM Sibu 33.65 165 P **P** **07 15 22.1 +3.4**
ABKAR Akbulak array 34.85 307 P **P** **07 15 28.6 -0.2**
ABKAR Akbulak array 34.85 307 IAmb IAmb 07 15 29.6
comp=Z,3.8nm,0.8s
PALK Pallekele 35.16 223 P **P** **07 15 31.8 -0.1**
comp=Z,5.9nm,1.0s,baz=155,slow=9.2,SNR=4.2
PALK Pallekele 35.16 223 IAmb IAmb 07 15 33.0
comp=Z,11nm,1.1s
NRIK Noril'sk 35.21 350 P **P** **07 15 30.9 -0.8**
comp=Z,6.8nm,0.7s,baz=151,slow=6.2,SNR=9.9
NRIK LR LR 07 30 53.3
comp=Z,203nm,19.3s,baz=166,slow=38
NRIK Noril'sk 35.21 350⇑ *e*P **P** **07 15 30.9 -0.8**
NRIK pmax pmax
comp=Z,8.0nm,0.7s
NRIK Noril'sk 35.21 350 P **P** **07 15 30.8 -0.8**
NRIK IAmb IAmb 07 15 39.1
comp=Z,8.0nm,0.7s
SVE Sverdlovsk 36.05 320 *e*P **P** **07 15 39.6 +0.5**
SVE pmax pmax
comp=Z,17nm,0.9s
AKTO Aktyubinsk 36.22 309 LR LR 07 31 15.8
comp=Z,406nm,20.2s,baz=106,slow=38
GEYT Alibeck 36.56 288 P **P** **07 15 44.7 +1.0**
comp=Z,3.3nm,0.7s,baz=60,slow=8.8,SNR=7.0
GEYT LR LR 07 32 07.0
comp=Z,318nm,18.5s,baz=30,slow=38
GEYT Alibeck 36.56 288 P **P** **07 15 45.3 +1.6**
ARU Arti 37.04 319 P **P** **07 15 47.0 -0.5**
comp=Z,2.8nm,0.2s,baz=107,slow=5.9,SNR=14
ARU LR LR 07 31 30.5
comp=Z,186nm,20.5s,baz=101,slow=37
ARU Arti 37.04 319 *d i*P **P** **07 15 47.0 -0.5**
ARU S **S** **07 21 34.0 +1.0**
ARU SS **SnSn** **07 24 07.6 +1.3**
ARU pmax pmax
comp=Z,14nm,0.9s
ARU Arti 37.04 319 P **P** **07 15 47.1 -0.5**
ARU IAmb IAmb 07 15 48.1
comp=Z,13nm,0.9s
TIXI Tiksi 38.62 12 P **P** **07 15 59.2 -1.4**
comp=Z,3.7nm,0.5s,baz=196,slow=2.6,SNR=6.6
TIXI Tiksi 38.62 12⇑ *e*P **P** **07 15 58.8 -1.8**
TIXI pmax pmax
comp=Z,22nm,1.0s
TIXI Tiksi 38.62 12 P **P** **07 15 58.8 -1.8**
TIXI IAmb IAmb 07 16 05.2
comp=Z,5.1nm,0.7s
MA2 Magadan 38.69 36⇑ *e*P **P** **07 16 01.3 -0.1**
MA2 pmax pmax
comp=Z,3.0nm,1.1s
SEY Seymchan 40.50 32 P **P** **07 16 16.0 -0.4**
comp=Z,0.9nm,0.6s,baz=232,slow=7.8,SNR=4.7
PETK Petropavlovsk- 41.33 47 LR LR 07 34 05.6
comp=Z,130nm,18.8s,baz=259,slow=37
KIRV Kirov 42.31 321 LR LR 07 34 47.3
comp=Z,186nm,18.4s,baz=127,slow=37
KIRV Kirov 42.31 321⇑ *e*P **P** **07 16 30.8 -0.5**
BELG Belogornoye 42.84 311 LR LR 07 35 08.9
comp=Z,220nm,19.0s,baz=124,slow=37
BELG Belogornoye 42.84 311⇓ *i*P **P** **07 16 35.2 -0.5**
BELG pmax pmax
comp=Z,3.0nm,0.9s
KAPI Kappang 42.84 156 P **P** **07 16 35.8 -0.3**
comp=Z,5.8nm,0.3s,baz=328,slow=12,SNR=6.7
PRGR Permogore 44.65 325 *e*P **P** **07 16 48.6 -1.5**
PRGR pmax pmax
comp=Z,8.0nm,0.7s
ZEI Tsey 46.32 298 *e*P **P** **07 17 03.6 -0.3**
ZEI pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 46.85 300 P **P** **07 17 07.8 0.0**
comp=Z,2.6nm,0.7s,baz=82,slow=9.2,SNR=4.4
KBZ LR LR 07 40 01.1
comp=Z,153nm,18.8s,baz=70,slow=40
KBZ Khabaz 46.85 300⇓ *i*P **P** **07 17 07.7 0.0**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KIV Kislovodsk 46.95 300 *e*P **P** **07 17 08.5 -0.2**
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,224nm,16.0s
BILL Bilibino 47.42 27⇑ *e*P **P** **07 17 10.2 -1.7**
BILL *e* 07 19 03.6
BILL *e*S **S** **07 24 04.4 -1.3**
BILL pmax pmax
comp=Z,2.0nm,1.5s
BILL MLR MLR
comp=Z,167nm,15.0s
KLMR Klimovskoe 47.52 323 *e*P **P** **07 17 10.7 -2.0**
KLMR *e* 07 19 01.6
KLMR pmax pmax
comp=Z,25nm,1.0s
KLMR Klimovskoe 47.52 323 *e*P **P** **07 17 10.8 -2.0**
KLMR AMP 07 17 12.9
comp=Z,25nm,1.0s
KLMR *e*PP **PP** **07 19 01.7 -2.2**
OBN Obninsk 49.27 316⇓ *e*P **P** **07 17 25.7 -0.6**
OBN *i* 07 17 30.2
OBN *e* 07 19 21.6
OBN pmax pmax
comp=Z,8.0nm,0.4s
OBN MLR MLR
comp=Z,220nm,14.0s
JOF Joensuu 51.38 326 P **P** **07 17 41.7 -0.5**
JOF pmax pmax
comp=Z,13nm,1.9s
ARCES ARCESS Array B 53.33 335 P **P** **07 17 56.2 -0.4**
comp=Z,3.1nm,0.6s,baz=66,slow=5.9,SNR=10
ARCES ARCESS Array B 53.33 335 IAmb IAmb 07 17 57.3
comp=Z,6.3nm,1.0s
FINES FINESS Array B 53.98 324 P **P** **07 18 00.6 -0.9**
comp=Z,4.7nm,0.8s,baz=92,slow=7.5,SNR=14
VSU Vasula 54.16 321⇑ *e*P **P** **07 18 02.7 -0.1**
VSU pmax pmax
comp=Z,34nm,0.9s
AKASG Malin Array Be 54.41 311 P **P** **07 18 03.7 -1.1**
comp=Z,1.0nm,0.3s,baz=66,slow=6.6,SNR=6.0
AKASG Malin Array Be 54.41 311 P **P** **07 18 04.0 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 54.41 311 P **P** **07 18 04.0 -0.8**
AKBB Malin Array Si 54.41 311⇓ *e*P **P** **07 18 04.0 -0.8**
BRTR Keskin Array B 54.59 297 P **P** **07 18 06.0 -0.4**
comp=Z,1.2nm,0.7s,baz=78,slow=10,SNR=4.4
BRTR Keskin Array B 54.59 297 P **P** **07 18 06.0 -0.4**
FITZ Fitzroy Crossi 57.03 155 P **P** **07 18 22.8 -1.1**
comp=Z,1.7nm,0.8s,baz=343,slow=9.3,SNR=4.5
MLR Muntele Rosu 58.04 306 LR LR 07 45 07.7
comp=Z,264nm,20.2s,baz=80,slow=38
KWP Kalwaria Pacla 58.73 311 P **P** **07 18 36.3 +0.7**
KWP pmax pmax
comp=Z,21nm,0.8s
KWP Kalwaria Pacla 58.73 311 P **P** **07 18 36.3 +0.7**
CRVS Cervenica-Dubn 59.75 311 *e*P **P** **07 18 43.6 +0.9**
CRVS Cervenica-Dubn 59.75 311 *e*P **P** **07 18 43.5 +0.9**
A21K Barrow 59.85 22 P **P** **07 18 42.0 -0.8**
A21K IAmb IAmb 07 18 52.2
comp=Z,8.3nm,1.1s
NIE Niedzica 60.28 312 P **P** **07 18 47.1 +0.8**
NIE pmax pmax
comp=Z,3.0nm,1.2s
OJC Ojcow 60.30 313 P **P** **07 18 45.7 -0.7**
OJC pmax pmax
comp=Z,7.0nm,0.8s
OJC Ojcow 60.30 313 P **P** **07 18 45.7 -0.7**
OJC IAmb IAmb 07 18 51.7
comp=Z,6.8nm,0.8s
PMG Port Moresby 60.40 129 LR LR 07 45 47.7
comp=Z,50nm,19.3s,baz=145,slow=37
NOA NORSAR Array B 61.01 326 P **P** **07 18 50.6 -0.5**
comp=Z,0.5nm,0.6s,baz=180,slow=6.4,SNR=6.1
VYHS Vyhne 61.52 311 *e*P **P** **07 18 55.1 +0.4**
VYHS Vyhne 61.52 311 *e*P **P** **07 18 55.1 +0.4**
WRAB Tennant Creek 62.12 147 *ce*P **P** **07 18 57.8 -1.1**
WRAB pmax pmax
comp=Z,11nm,1.0s
WRAB Tennant Creek 62.12 147 P **P** **07 18 57.8 -1.1**
WRA Warramunga Arr 62.12 147 P **P** **07 18 57.4 -1.5**
comp=Z,5.7nm,0.8s,baz=343,slow=7.1,SNR=26
WRA Warramunga Arr 62.12 147 IAmb IAmb 07 19 01.8
comp=Z,0.3nm,0.8s
WR0 Warramunga Ar 62.23 147 P **P** **07 18 59.4 -0.3**
DPC Dobruska-Polom 62.33 314 P **P** **07 19 00.6 +0.5**
DPC pmax pmax
comp=Z,53nm,1.1s
MODS Modra-Piesok 62.52 311 *e*P **P** **07 18 58.0 -3.5**
MODS Modra-Piesok 62.52 311 *e*P **P** **07 18 58.0 -3.5**
VRAC Vranov 62.57 313 LR LR 07 47 45.6
comp=Z,182nm,18.3s,baz=78,slow=38
COLD Coldfoot 63.65 25 P **P** **07 19 07.8 -0.8**
COLD IAmb IAmb 07 19 15.5
comp=Z,7.0nm,0.9s
JMIC Jan Mayen 63.75 340 LR LR 07 50 35.4
comp=Z,167nm,19.3s,baz=250,slow=40
CLL Collm 63.87 316 *e*P **P** **07 19 10.0 -0.3**
comp=Z,6.0nm,0.7s
CLL LmV 07 54 00.0
comp=Z,300nm,20.3s
CLL Collm 63.87 316 *e*P **P** **07 19 10.0 -0.3**
CLL pmax pmax
comp=Z,6.0nm,0.7s
CLL MLR MLR
comp=Z,300nm,20.3s
GERES GERESS Array B 64.50 313 P **P** **07 19 13.9 -0.6**
comp=Z,1.3nm,0.7s,baz=69,slow=7.3,SNR=8.8
GERES GERESS Array B 64.50 313 P **P** **07 19 14.4 -0.2**
GERES GERESS Array B 64.50 313 P **P** **07 19 14.4 -0.2**
AS31 Alice Springs 65.23 150 P **P** **07 19 19.5 +0.1**
ASAR Alice Springs 65.23 150 P **P** **07 19 18.1 -1.3**
comp=Z,2.6nm,0.6s,baz=341,slow=7.1,SNR=21
ASAR Alice Springs 65.23 150 P **P** **07 19 17.4 -2.1**
BMAR Burnt Mountain 65.41 23 P **P** **07 19 20.1 -0.1**
KBA Koelnbreinsper 65.48 311 *e*P **P** **07 19 21.3 +0.2**
comp=Z,1.9nm,0.7s
ILAR Eielson Array 66.07 26 P **P** **07 19 22.6 -1.8**
comp=Z,0.5nm,0.6s,baz=285,slow=7.3,SNR=6.3
WTTA Wattenberg 66.44 312 *e*P **P** **07 19 26.5 -0.7**
comp=Z,3.9nm,0.6s
MOTA Moosalm 66.72 312 *e*P **P** **07 19 27.8 -1.3**
comp=Z,5.7nm,1.2s
FETA Feichten 67.10 312 *e*P **P** **07 19 30.6 -0.9**
comp=Z,2.4nm,0.7s
DAVOX Davos/Dischmat 67.72 312 LR LR 07 50 43.1
comp=Z,292nm,20.0s,baz=270,slow=37
INK Inuvik 68.19 20 P **P** **07 19 36.7 -1.0**
INK pmax pmax
comp=Z,7.0nm,2.8s
INK Inuvik 68.19 20 P **P** **07 19 40.8 +3.1**
TUE Stuetta 68.19 312 P **P** **07 19 41.7 +3.2**
GIVF Givet 69.04 317 *e*P **P** **07 19 42.5 -0.9**
GIVF pmax pmax
comp=Z,7.0nm,0.8s
C36M Paulatuk 69.83 16 P **P** **07 19 46.5 -1.4**
C36M IAmb IAmb 07 20 15.4
comp=Z,4.2nm,0.9s
LPG La Plagne 70.25 312 *e*P **P** **07 19 50.7 -0.6**
LPG pmax pmax
comp=Z,8.0nm,0.8s
LPL La Plagne 70.25 312 *e*P **P** **07 19 50.6 -0.7**
LPL pmax pmax
comp=Z,4.0nm,0.5s
PGF Pioggiola 70.34 309 *e*P **P** **07 19 55.4 +3.7**
PGF pmax pmax
comp=Z,7.0nm,0.8s
SAOF Saorge 70.52 310 P **P** **07 19 52.5 -0.2**
SAOF pmax pmax
comp=Z,14nm,1.0s
MBDF Montbardon 70.63 311 *e*P **P** **07 19 54.5 +1.0**
MBDF pmax pmax
comp=Z,4.0nm,0.6s
ORIF Oris-en-Rattie 71.08 312 *e*P **P** **07 19 55.9 -0.2**
ORIF pmax pmax
comp=Z,5.0nm,0.7s
SMF Signal de Mont 71.39 314 *e*P **P** **07 19 56.5 -1.4**
SMF pmax pmax
comp=Z,4.0nm,0.7s
LMR La Mourre 71.51 310 *e*P **P** **07 19 58.3 -0.3**
LMR pmax pmax
comp=Z,5.0nm,0.8s
LDF La Druitiere 72.58 318 *e*P **P** **07 20 08.3 +3.3**
LDF pmax pmax
comp=Z,6.0nm,0.8s
FLN La Foliniere 72.69 318 *e*P **P** **07 20 09.0 +3.4**
FLN pmax pmax
comp=Z,6.0nm,0.9s
MFF Saint Martin d 73.71 316 *e*P **P** **07 20 10.9 -0.8**
MFF pmax pmax
comp=Z,15nm,0.9s
SGMF Saint Gilles 74.11 318 *e*P **P** **07 20 14.6 +0.6**
SGMF pmax pmax
comp=Z,6.0nm,0.7s
ROSF Rostrenen 74.45 319 *e*P **P** **07 20 19.7 +3.7**
ROSF pmax pmax
comp=Z,41nm,1.7s
STKA Stephens Creek 75.67 148 P **P** **07 20 21.6 -1.4**
comp=Z,1.6nm,0.5s,baz=339,slow=6.3,SNR=4.9
STKA Stephens Creek 75.67 148⇓ *e*P **P** **07 20 22.7 -0.4**
YKA Yellowknife Ar 77.67 17 P **P** **07 20 33.0 -1.0**
comp=Z,2.1nm,1.0s,baz=326,slow=4.6,SNR=18
RTC Rabat Centre 85.42 309 P **P** **07 21 16.3 +0.7**
TORD Torodi Ar. Bea 92.20 288 P **P** **07 21 47.1 -1.0**
comp=Z,0.9nm,0.8s,baz=66,slow=3.2,SNR=3.9
TORD Torodi Ar. Bea 92.20 288 IAmb IAmb 07 21 49.2
comp=Z,0.8nm,0.8s
BDFB Brasilia 148.12 301 PKPbc **PKPbc** **07 28 22.2 -2.2**
comp=Z,2.4nm,0.8s,baz=117,slow=4.5,SNR=4.0

KRNET ***15*** *07:17:36.1±0.1, 41.11N×71.99E, h14km, mb2.4*
SOME ***15*** *07:17:37.3, 41.27N×72.00E, h5km*
NNC ***15*** *07:17:41.3±3.4, 41.44N×72.07E, h0km, mb3.3, mpv3.0,*
Error ellipse: s-maj=30.5km s-min=10.3km az=179.0
ISC 15 07:17:35.3±1.1, 41.20N±0.03×72.04E±0.02, h5km±11km,
n31,σ1s36/53, 28C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.72**	**79**	⇓*i*P		**Pn**	**07 17 50.9**	**-1.4**
ARSB	baz=74			⇓*i*S		**Sn**	**07 18 01.7**	**-2.1**
TRKS	**Terek-Say**	**0.76**	**296**	⇓*i*P		**Pg**	**07 17 49.5**	**-0.3**
TRKS	baz=0.0			⇓*i*S		**Sg**	**07 17 59.6**	**0.0**
OHH	**Osh**	**0.88**	**140**	⇑*i*P		**Pg**	**07 17 52.3**	**+0.2**
OHH	baz=34			⇑*i*S		**Sg**	**07 18 03.8**	**+0.3**
MNAS	**Manas**	**1.34**	**15**	⇑*i*P		**Pg**	**07 18 02.4**	**+1.5**
MNAS	baz=16			⇑*i*S		**Sn**	**07 18 22.7**	**+3.7**
BTK	**Batken**	**1.47**	**220**	⇑*i*P		**Pn**	**07 18 02.4**	**-0.1**
BTK	baz=21			⇑*i*S		**Sn**	**07 18 20.7**	**-1.5**
AML	**Almayashu**	**1.55**	**52**	⇑*i*P		**Pg**	**07 18 06.6**	**+1.6**
AML	baz=51			⇑*i*S		**Sg**	**07 18 28.5**	**+3.3**
SFK	**Sufi-Kurgan**	**1.62**	**136**	⇑*i*P		**Pb**	**07 18 05.6**	**-0.3**
SFK	baz=33			⇑*i*S		**Sg**	**07 18 27.5**	**+0.1**
DRK	**Karamyk**	**1.72**	**186**	⇑*i*P		**Pn**	**07 18 06.3**	**+0.1**
DRK	baz=85			⇑*i*S		**Sn**	**07 18 28.6**	**-0.2**
IUG	**luzhnay** 26nm,0.2s	**1.78**	**303**	*e*P		**Pg**	**07 18 09.5**	**+0.1**
IUG	63nm,0.4s			*e*S		**Sg**	**07 18 33.0**	**+0.5**
IUG	**luzhnay** 26nm,0.2s	**1.78**	**303**	P		**Pg**	**07 18 09.5**	**+0.1**
IUG	63nm,0.4s			S		**Sg**	**07 18 31.7**	**-0.8**
ARLS	**Aral**	**1.84**	**68**	⇑*i*P		**Pg**	**07 18 11.1**	**+0.6**
ARLS	baz=66			⇑*i*S		**Sg**	**07 18 37.0**	**+2.7**
EKS2	**Erkin-Say**	**1.96**	**41**	⇑*i*P		**Pg**	**07 18 13.2**	**+0.4**
EKS2	baz=40			⇑*i*S		**Sg**	**07 18 40.3**	**+2.2**
UCH	**Uchtor**	**2.12**	**60**	⇑*i*P		**Pg**	**07 18 15.5**	**-0.4**
UCH	baz=59			⇑*i*S		**Sg**	**07 18 44.0**	**+0.6**
KK31	**Karatay Array** 1.0nm,0.3s,baz=134,slow=14,SNR=14	**2.22**	**330**	⇓Pn		**Pg**	**07 18 17.0**	**-0.8**
KK31	4.7nm,0.3s,baz=132,slow=27,SNR=15			⇑Sn		**Sg**	**07 18 45.2**	**-1.4**
AAK	**Ala-Archa**	**2.33**	**51**	⇑*i*P		**Pg**	**07 18 18.3**	**-1.6**
AAK	baz=50			⇑*i*S		**Sg**	**07 18 49.2**	**-0.9**
AAK	**Ala-Archa** 2.3nm,0.6s	**2.33**	**51**	⇑Pg		**Pg**	**07 18 22.2**	**+2.3**
AAK	9.4nm,0.5s			⇑Lg		Lg	07 18 50.7	
BRLS	**Borolday** 9.7nm,0.2s	**2.46**	**319**	*e*P		**Pb**	**07 18 19.9**	**-0.1**
BRLS	31nm,0.4s			*e*S		**Sb**	**07 18 50.7**	**0.0**
BRLS	**Borolday** 19nm,0.2s	**2.46**	**319**	Pg		**Pb**	**07 18 20.6**	**+0.6**
BRLS	31nm,0.4s			Lg		Lg	07 18 51.0	
GAR	**Garm**	**2.56**	**212**	⇑*i*P		**Pn**	**07 18 19.2**	**+1.6**
GAR	baz=12			⇑*i*S		**Sn**	**07 18 50.6**	**+1.4**
KBK	**Karagaybulak**	**2.61**	**55**	⇑*e*P		**Pb**	**07 18 22.1**	**-0.6**
KBK	baz=54			⇑*i*S		**Sb**	**07 18 55.7**	**+0.5**
SGDS	**Sogindy** 1.4nm,0.4s	**2.96**	**40**	Pg		**Pg**	**07 18 31.3**	**-0.7**
SGDS	4.6nm,0.4s			Lg		Lg	07 19 09.4	
TKM2	**Tokmak 2** 5.7nm,0.7s	**3.16**	**56**	⇑Lg		Lg	07 19 15.8	
DGS	**Degeres** 1.7nm,0.4s	**3.44**	**52**	*e*P		**Pg**	**07 18 40.1**	**-1.1**
DGS	4.7nm,0.6s			*e*S		**Sg**	**07 19 25.4**	**-0.5**
DGS	**Degeres** 1.5nm,0.3s	**3.44**	**52**	Pg		**Pg**	**07 18 41.1**	**-0.2**
DGS	4.7nm,0.6s			Lg		Lg	07 19 25.8	
KST	**Kastek** 4.1nm,0.4s	**3.45**	**56**	*e*P		**Pg**	**07 18 40.8**	**-0.6**
KST	7.2nm,0.5s			*e*S		**Sg**	**07 19 26.3**	**+0.2**
KRBS	**Karabastau** 1.1nm,0.6s	**3.67**	**46**	*e*P		**Pg**	**07 18 44.2**	**-1.4**
KRBS	3.7nm,0.4s			*e*S		**Sg**	**07 19 32.3**	**-0.9**
KRBS	**Karabastau** 2.0nm,0.5s	**3.67**	**46**	Pg		**Pg**	**07 18 43.6**	**-2.0**
KRBS	3.7nm,0.4s			Lg		Lg	07 19 30.3	
BTLS	**Baital** 1.6nm,0.4s	**4.11**	**20**	*e*P		**Pg**	**07 18 52.5**	**-1.6**
BTLS	5.0nm,0.4s			*e*S		**Sg**	**07 19 47.2**	**-0.2**
BTLS	**Baital** 2.0nm,0.5s	**4.11**	**20**	Pg		**Pg**	**07 18 53.8**	**-0.3**
BTLS	5.7nm,0.4s			Lg		Lg	07 19 47.8	
KTBS	**Karatobe** 1.9nm,0.7s	**4.25**	**52**	*e*P		**Pg**	**07 18 54.7**	**-2.1**
KTBS	5.9nm,0.5s			*e*S		**Sg**	**07 19 50.2**	**-1.8**
KTBS	**Karatobe** 1.9nm,0.7s	**4.25**	**52**	Pg		**Pg**	**07 18 55.5**	**-1.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTBS				Lg	Lg	07 19 50.7	
	5.9nm,0.5s						

IDC ***15*** *07:30:31.2±12.0, 12.40S×167.03E, h170km±113km, mb3.6/10, mb1 3.9/10, mb1mx3.5/51, mbtmp4.0/10, Error ellipse: s-maj=57.1km s-min=33.5km az=159.0*

NEIC ***15*** *07:30:56±1.1, 12.7S±0.3×166.5E±0.2, h424km±11km, mb4.1/13, Error ellipse: s-maj=44.6km s-min=20.7km az=149.0*

ISC 15 07:30:36.3±0.8, 12.4S±0.2×166.9E±0.2, h220km, n25, σ1§89/25, mb4.1/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**19.76**	**227**	P	**P**	**07 34 51.6**	**+1.8**
CTA	**Charters Tower**	**21.26**	**246**	P	**P**	**07 35 06.2**	**+0.4**
	6.0nm,0.7s,baz=82,slow=12,SNR=6.7						
ARMA	**Armidale**	**22.87**	**216**	P	**P**	**07 35 21.0**	**+0.1**
ARMA				IAmb	IAmb	07 35 23.5	
	comp=Z,11nm,1.1s						
COEN	**Coen**	**23.18**	**263**	P	**P**	**07 35 23.3**	**-0.5**
COEN				IAmb	IAmb	07 35 44.2	
	comp=Z,9.7nm,1.2s						
STKA	**Stephens Creek**	**30.32**	**226**	P	**P**	**07 36 28.0**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=40,slow=9.0,SNR=5.6						
STKA	**Stephens Creek**	**30.32**	**226**	IAmb	IAmb	07 36 30.4	
	comp=Z,0.5nm,0.7s						
WR0	**Warramunga Arr**	**31.96**	**252**	P	**P**	**07 36 41.5**	**-0.4**
WB0	**Warramunga Arr**	**32.07**	**253**	P	**P**	**07 36 41.4**	**-1.5**
WB0				IAmb	IAmb	07 36 43.3	
	comp=Z,3.7nm,0.8s						
WB2	**Warramunga Arr**	**32.13**	**252**	P	**P**	**07 36 43.0**	**-0.5**
WB2				IAmb	IAmb	07 36 58.0	
	comp=Z,8.0nm,1.4s						
WRAB	**Tennant Creek**	**32.13**	**252**	P	**P**	**07 36 42.8**	**-0.7**
WRAB				IAmb	IAmb	07 36 48.7	
	comp=Z,6.5nm,1.4s						
WRA	**Warramunga Arr**	**32.15**	**252**	P	**P**	**07 36 43.1**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=85,slow=9.1,SNR=20						
ASAR	**Alice Springs**	**33.27**	**246**	P	**P**	**07 36 52.7**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=71,slow=9.5,SNR=28						
FITZ	**Fitzroy Crossi**	**40.18**	**257**	P	**P**	**07 37 51.6**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=60,slow=8.6,SNR=13						
CMAR	**Chiang Mai Arr**	**73.70**	**294**	P	**P**	**07 41 48.7**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=120,slow=5.4,SNR=2.1						
BILL	**Bilibino**	**80.21**	**360**	P	**P**	**07 42 21.9**	**+0.1**
BILL				IAmb	IAmb	07 42 23.8	
	comp=Z,4.6nm,0.9s						
IL31		**84.41**	**18**	P	**P**	**07 42 43.5**	**0.0**
IL31				IAmb	IAmb	07 43 02.7	
	comp=Z,7.0nm,1.4s						
ILAR	**Eielson Array**	**84.41**	**18**	P	**P**	**07 42 43.9**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=249,slow=5.0,SNR=34						
NVAR	**Mina Array Bea**	**86.00**	**49**	P	**P**	**07 42 52.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=224,slow=7.6,SNR=2.4						
SMCO	**Snowmass**	**94.72**	**51**	P	**P**	**07 43 32.7**	**-0.7**
TXAR	**Lajitas Array**	**95.45**	**61**	P	**P**	**07 43 37.3**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=222,slow=4.7,SNR=2.3						
YKA	**Yellowknife Ar**	**95.62**	**27**	P	**P**	**07 43 35.7**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=260,slow=4.3,SNR=7.6						
K22A	**Casper**	**95.76**	**48**	P	**P**	**07 43 40.8**	**+3.1**
CSS	**Mathiatis**	**132.44**	**306**		**PKPdf**	**07 49 19.3**	**-5.6**
ELL	**Elmali**	**134.51**	**310**		**PKPdf**	**07 49 24.3**	**-4.6**
ESDC	**Sonseca Array**	**151.64**	**345**	PKPbc	**PKiKP**	**07 50 05.3**	**0.0**
	comp=Z,0.7nm,0.4s,baz=349,slow=2.8,SNR=8.3						
ESDC				PKPab	**PKPab**	**07 50 15.9**	**+1.6**
	comp=Z,0.8nm,0.6s,baz=358,slow=4.2,SNR=4.6						

NNC ***15*** *07:33:25.8±2.4, 54.15N×86.57E, h0km, mb3.1, mpv3.0, Error ellipse: s-maj=26.2km s-min=11.7km az=4.0, Suspected Mining explosion.*

IDC 15 07:33:28.2±2.5, 54.10N×86.46E, h0km, mb1 3.2/2, mb1mx3.0/72, mbtmp3.2/2, ML3.1/2, 7C-1D, Error ellipse: s-maj=19.7km s-min=11.8km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**262**	*i*		07 40 40.0	
	baz=80,slow=315,SNR=2.8						
ZAA0	**Zalesovo Array**	**0.98**	**262**	⇑P	Pg	07 33 45.5	-1.5
	0.3nm,0.3s						
ZAA0				⇑S	Sg	07 34 00.5	+0.8
	8.8nm,1.0s						
ZALV	**Zalesovo Beam**	**0.98**	**262**	Pg	Pg	07 33 45.6	-1.3
	1.7nm,0.3s,baz=81,slow=17,SNR=17						
ZALV				Lg	Lg	07 34 00.8	
	3.1nm,0.3s,baz=81,slow=28,SNR=20						
ZALV				Rg	Rg	07 34 05.9	
	12nm,0.7s,baz=69,slow=28,SNR=6.4						
KURBB	**Kurchatov Arra**	**5.98**	**238**	Pn	Pn	07 34 58.8	+1.0
	0.2nm,0.3s,baz=54,slow=13,SNR=7.9						
KURBB				Lg	Lg	07 36 40.6	
	0.1nm,0.3s,baz=56,slow=30,SNR=5.2						
KURBB	**Kurchatov Arra**	**5.98**	**238**	⇑Pn	Pn	07 34 58.9	+1.0
	2.6nm,0.7s						
KURBB				⇑Sn	Sn	07 36 06.7	-0.2
	3.5nm,0.6s						
KURBB				⇓Lg	Lg	07 36 38.1	
	4.7nm,0.6s						
MK31	**Makanchi Array**	**7.78**	**202**	⇑Pn	Pn	07 35 24.1	+1.4
	8.5nm,1.4s,baz=29,slow=12,SNR=18						
MK31				⇑Sn	Sn	07 36 50.0	-1.4
	3.8nm,1.2s,baz=22,slow=28,SNR=3.7						
MK31				⇑Lg	Lg	07 37 34.4	
	1.5nm,0.8s						
MKAR	**Makanchi Array**	**7.78**	**202**	Pn	Pn	07 35 23.9	+1.3
	0.5nm,0.3s,baz=20,slow=14,SNR=12						
MKAR				Sn	Sn	07 36 50.4	-1.0
	0.1nm,0.3s,baz=24,slow=28,SNR=5.0						
MKAR				Lg	Lg	07 37 34.7	
	0.1nm,0.3s,baz=24,slow=21,SNR=2.0						

IDC 15 07:38:24.6±8.1, 22.34N×143.08E, h355km±83km, mb3.3/5, mb1 3.4/6, mb1mx3.0/71, mbtmp4.0/6, Error ellipse: s-maj=56.0km s-min=22.5km az=87.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**19.95**	**322**	P	P	07 42 31.2	-0.3
	0.3nm,0.3s,baz=146,slow=9.0,SNR=11						
KLR	**Kul'dur**	**28.30**	**344**	P	P	07 43 46.4	-0.1
	1.6nm,0.6s,baz=172,slow=7.0,SNR=7.7						
WRA	**Warramunga Arr**	**42.88**	**192**	P	P	07 45 49.5	0.0
	0.2nm,0.3s,baz=15,slow=9.5,SNR=2.9						
BVAR	**Borovoye Array**	**62.12**	**319**	P	P	07 48 09.9	+1.1
	7.5nm,0.9s,baz=110,slow=8.1,SNR=1.4						
YKA	**Yellowknife Ar**	**75.93**	**28**	P	P	07 49 33.3	+0.6
	0.2nm,0.5s,baz=294,slow=5.4,SNR=5.2						
ARCES	**ARCESS Array B**	**78.28**	**341**	P	P	07 49 44.2	-1.4
	5.3nm,0.8s,baz=78,slow=5.9,SNR=1.8						
PLCA	**Paso Flores**	**146.25**	**131**	PKPbc	PKPdf	07 57 22.8	+0.6
	0.8nm,0.8s,baz=270,slow=5.1,SNR=1.5						

DNK ***15*** *07:39:01.9±1.9, 58.73N×18.58E, h0km, ML2.3, Explosion*
UPP ***15*** *07:39:01.7±0.2, 58.75N×18.55E, h0km, ML2.7, Explosion*
HEL ***15*** *07:39:02.6±0.0, 58.74N×18.53E, h0km, ML2.2, ML2.7(UPP), Explosion*
NAO ***15*** *07:39:06.1±2.0, 59.07N×18.39E, ML2.2*
BER ***15*** *07:39:06.8±3.0, 59.11N×18.51E, h0km, ML2.2(NAO), Suspected explosion*

IDC ***15*** *07:39:06.8±1.8, 59.09N×18.37E, h0km, mb1 3.2/4, mb1mx3.0/58, mbtmp3.1/4, ML2.6/4, Error ellipse: s-maj=24.1km s-min=6.7km az=177.0*

ISC 15 07:39:01.5±0.7, 58.74N±0.02×18.44E±0.03, h0km, n71, σ1§25/87, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.35**	**320**	P	**Pg**	**07 39 09.2**	**+1.0**
NYNU				S	**Sg**	**07 39 14.2**	**+1.4**
NYNU	**Nynaeshamn**	**0.35**	**320**	P	**Pg**	**07 39 09.2**	**+1.0**
NYNU				S	**Sg**	**07 39 14.2**	**+1.4**
NYNU	**Nynaeshamn**	**0.35**	**320**	*i* P	**Pg**	**07 39 09.2**	**+1.0**
NYNU				*i* S	**Sg**	**07 39 14.2**	**+1.4**
VIKU	**Vikbolandet**	**0.94**	**256**	P	**Pb**	**07 39 20.3**	**-0.4**
VIKU	**Vikbolandet**	**0.94**	**256**	P	**Pb**	**07 39 20.3**	**-0.4**
VIKU	**Vikbolandet**	**0.94**	**256**	*e*P	**Pb**	**07 39 20.3**	**-0.4**
NRTU	**Norrtaelje**	**0.94**	**6**	P	**Pg**	**07 39 19.3**	**-0.4**
NRTU	**Norrtaelje**	**0.94**	**6**	*e*P	**Pg**	**07 39 19.2**	**-0.4**
NRTU				*e*S	**Sg**	**07 39 31.9**	**0.0**
GOTU	**Gotland**	**1.06**	**176**	P	**Pg**	**07 39 21.5**	**-0.3**
GOTU	**Gotland**	**1.06**	**176**	P	**Pg**	**07 39 21.5**	**-0.3**
GOTU	**Gotland**	**1.06**	**176**	*e*P	**Pg**	**07 39 21.6**	**-0.3**
GOTU				*e*S	**Sg**	**07 39 35.6**	**0.0**
ESKU	**Eskilstuna**	**1.17**	**296**	P	**Pb**	**07 39 24.4**	**-0.2**
ESKU	**Eskilstuna**	**1.17**	**296**	P	**Pb**	**07 39 24.4**	**-0.2**
ESKU	**Eskilstuna**	**1.17**	**296**	*e*P	**Pb**	**07 39 24.4**	**-0.2**
UPP	**Uppsala**	**1.20**	**340**	*e*P	**Pg**	**07 39 24.3**	**-0.1**
UPP	**Uppsala**	**1.20**	**340**	P	**Pg**	**07 39 24.5**	**0.0**
UPP	**Uppsala**	**1.20**	**340**	*e*P	**Pg**	**07 39 24.5**	**0.0**
FIBU	**Brunna**	**1.29**	**335**	P	**Pg**	**07 39 26.2**	**0.0**
FIBU	**Brunna**	**1.29**	**335**	P	**Pg**	**07 39 26.2**	**0.0**
FIBU	**Brunna**	**1.29**	**335**	*e*P	**Pg**	**07 39 26.2**	**0.0**
BACU	**Backbrunna**	**1.31**	**329**	P	**Pg**	**07 39 26.6**	**0.0**
BACU	**Backbrunna**	**1.31**	**329**	P	**Pg**	**07 39 26.6**	**0.0**
BACU	**Backbrunna**	**1.31**	**329**	*e*P	**Pg**	**07 39 26.6**	**0.0**
FLYU	**Flymyra**	**1.42**	**349**	P	**Pn**	**07 39 28.2**	**-0.3**
FLYU	**Flymyra**	**1.42**	**349**	P	**Pn**	**07 39 28.2**	**-0.3**
FLYU	**Flymyra**	**1.42**	**349**	*e*P	**Pn**	**07 39 28.2**	**-0.3**
VSTU	**Vaestervik**	**1.48**	**224**	P	**Pn**	**07 39 29.5**	**+0.1**
VSTU	**Vaestervik**	**1.48**	**224**	P	**Pn**	**07 39 29.5**	**+0.1**
VSTU	**Vaestervik**	**1.48**	**224**	*e*P	**Pn**	**07 39 29.5**	**+0.1**
OSTU	**Oestervaala**	**1.64**	**337**	P	**Pb**	**07 39 32.2**	**-0.3**
OSTU	**Oestervaala**	**1.64**	**337**	P	**Pb**	**07 39 32.2**	**-0.3**
OSTU	**Oestervaala**	**1.64**	**337**	*e*P	**Pb**	**07 39 32.2**	**-0.3**
AAL	**Aland**	**1.65**	**28**	*e*P	**Pn**	**07 39 31.4**	**-0.3**
AAL				*i* Sg	**Sn**	**07 39 52.1**	**-1.4**
AAL	**Aland**	**1.65**	**28**	P	**Pn**	**07 39 31.2**	**-0.4**
AAL	**Aland**	**1.65**	**28**	*e*P	**Pn**	**07 39 31.3**	**-0.4**
AAL				*e*S	**Sn**	**07 39 52.4**	**-1.1**
SLIT	**Slitere, Latvi**	**2.32**	**117**	*e*P	**Pn**	**07 39 41.7**	**+0.7**
SLIT	**Slitere, Latvi**	**2.32**	**117**	*e*P	**Pn**	**07 39 40.1**	**-0.9**
HFC2	**Hagfors New Ar**	**2.80**	**302**	*e*P	**Pn**	**07 39 49.2**	**+1.7**
HFC2				*e*S	**Sb**	**07 40 25.3**	**-1.8**
HFS	**Hagfors**	**2.80**	**302**	Pn	**Pn**	**07 39 49.2**	**+1.7**
	2.2nm,0.3s,baz=108,slow=14,SNR=45						
HFS				Lg	Lg	07 40 26.6	
	4.2nm,0.3s,baz=108,slow=26,SNR=7.9						
HFS	**Hagfors**	**2.80**	**302**	Pn	**Pn**	**07 39 49.4**	**+1.8**
	baz=117,slow=16						
HFS				Lg	Lg	07 40 27.0	
	baz=113,slow=37						
HFS	**Hagfors**	**2.80**	**302**	Pn	**Pn**	**07 39 49.4**	**+1.8**
	baz=117,slow=16						
HFS				Sg	**Sb**	**07 40 27.0**	**-0.1**
	baz=113,slow=37						
MTSE	**Matsula**	**2.80**	**88**	*e*P	**Pn**	**07 39 47.1**	**-0.4**
BLEU	**Blekinge**	**2.82**	**211**	*i* P	**Pn**	**07 39 48.6**	**+0.8**
BLEU				*e*S	**Sn**	**07 40 24.3**	**+1.8**
RAF	**Rauma**	**2.84**	**35**	*e*P	**Pn**	**07 39 48.6**	**+0.6**
RAF				*e*S	**Sn**	**07 40 23.1**	**+0.3**
RAF				MSG		07 40 31.6	
	comp=Z,5.5nm,0.1s						
BORU	**Boraas**	**3.20**	**252**	*e*P	**Pn**	**07 39 49.8**	**-3.3**
PBUR	**Paburge**	**3.31**	**144**	*e*P	**Pn**	**07 39 56.6**	**+2.0**
PBUR				IAML		07 40 20.7	
	comp=Z,12nm,0.3s						
DEL	**Delary**	**3.35**	**229**	*e*	**Pn**	**07 39 55.3**	**+0.2**
	baz=57,slow=12						
DEL				*i* P	**Pn**	**07 39 56.0**	**+0.9**
DEL				IAML		07 40 53.2	
	comp=Z,3.9nm,0.3s						
MEF	**Metsahovi**	**3.38**	**61**	MSG		07 40 52.6	
	comp=Z,7.9nm,0.2s						
FABU	**Falkenberg**	**3.52**	**243**	*e*P	**Pn**	**07 39 58.9**	**+1.5**
TJOU	**Tjoern**	**3.66**	**262**	*i* P	**Pn**	**07 40 01.4**	**+2.1**
STRU	**Stroemstad**	**3.78**	**278**	*i* P	**Pn**	**07 40 04.0**	**+3.1**
HEMU	**Hemsoen**	**3.95**	**357**	*e*P	**Pn**	**07 40 03.9**	**+0.5**
HEMU				*e*S	**Sn**	**07 40 51.2**	**+0.9**
NRA0	**NORESS Array S**	**4.02**	**303**	Pn	**Pn**	**07 40 05.0**	**+0.7**
	baz=107,slow=10						
NRA0				Lg	Lg	07 41 08.8	
	baz=101,slow=37						
NRA0	**NORESS Array S**	**4.02**	**303**	Pn	**Pn**	**07 40 05.0**	**+0.7**
	baz=107,slow=10						
NRA0				Sg	**Sg**	**07 41 08.8**	**-1.9**
	baz=101,slow=37						
BSD	**Bornholm Skovb**	**4.12**	**209**	*e*P	**Pn**	**07 40 05.5**	**-0.1**
BSD	**Bornholm Skovb**	**4.12**	**209**	*i* P	**Pn**	**07 40 04.6**	**-1.0**
BSD	**Bornholm Skovb**	**4.12**	**209**	*e*S	**Sn**	**07 40 54.5**	**+0.1**
PVF	**Pernaja**	**4.18**	**61**	MSG		07 41 15.3	
	comp=Z,4.7nm,0.2s						
NB2	**NORSAR Subarra**	**4.31**	**305**	Pn	**Pn**	**07 40 09.2**	**+1.0**
	baz=125,slow=14						
NB2				Lg	Lg	07 41 17.5	
	baz=115,slow=37						
NB2	**NORSAR Subarra**	**4.31**	**305**	Pn	**Pn**	**07 40 09.2**	**+1.0**
	baz=125,slow=14						
NB2				Sg	**Sg**	**07 41 17.5**	**-2.3**
	baz=115,slow=37						
NOA	**NORSAR Array B**	**4.31**	**305**	Pn	**Pn**	**07 40 09.3**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=119,slow=21,SNR=20						
NOA				Lg	Lg	07 41 15.7	
	comp=Z,0.2nm,0.3s,baz=99,slow=8.6,SNR=4.0						
PABE	**Paberze**	**4.43**	**135**	IAML		07 40 22.2	
	comp=Z,5.4nm,0.1s						
FIA0	**FINESS Array S**	**4.69**	**51**	Pn	**Pn**	**07 40 15.5**	**+2.1**
	baz=242,slow=12						
FIA0				Sn	**Sn**	**07 41 07.9**	**-0.5**
	baz=235,slow=22						
FIA0				Lg	Lg	07 41 24.6	
	baz=242,slow=28						
FIA0	**FINESS Array S**	**4.69**	**51**	Pn	**Pn**	**07 40 15.5**	**+2.1**
	baz=242,slow=12						
FIA0				Sg	**Sb**	**07 41 24.6**	**+3.2**
	baz=242,slow=28						
FINES	**FINESS Array B**	**4.69**	**51**	Pn	**Pn**	**07 40 15.5**	**+2.1**
	comp=Z,1.2nm,0.3s,baz=240,slow=11,SNR=26						
FINES				Pg	**Pb**	**07 40 25.1**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=247,slow=15,SNR=7.6						
FINES				Sn	**Sn**	**07 41 08.0**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=243,slow=21,SNR=3.9						
FINES				Lg	Lg	07 41 25.4	
	comp=Z,3.2nm,0.3s,baz=239,slow=24,SNR=22						
APA0	**Apatity Array**	**11.02**	**30**	Pn	**Pn**	**07 41 39.2**	**-1.0**
	baz=226,slow=12						
APA0	**Apatity Array**	**11.02**	**30**	Pn	**Pn**	**07 41 39.2**	**-1.0**
	baz=226,slow=12						
ARA0	**ARCESS Array S**	**11.26**	**13**	Pn	**Pn**	**07 41 40.5**	**-2.9**
	baz=196,slow=14						
ARA0	**ARCESS Array S**	**11.26**	**13**	Pn	**Pn**	**07 41 40.5**	**-2.9**
	baz=196,slow=14						
ARCES	**ARCESS Array B**	**11.26**	**13**	Pn	**Pn**	**07 41 41.0**	**-2.4**
	baz=198,slow=14,SNR=46						

IDC ***15*** *07:39:25.5±0.3, 39.74N×106.41E, h0km, mb4.7/55, mb1 4.8/60, mb1mx4.7/73, mbtmp4.7/60, ML4.5/4, MS4.9/27, Ms1 4.9/27, ms1mx4.8/40, Error ellipse: s-maj=10.0km s-min=7.6km az=49.0*

MOS ***15*** *07:39:25.6±0.9, 39.79N×106.37E, h11km, mb5.3/54, MS5.1/28, Error ellipse: s-maj=5.2km s-min=3.7km az=122.7*

BJI ***15*** *07:39:27.8±0.0, 39.76N×106.37E, h10km, mB5.4/41, mb5.1/48, ML5.9/26, Ms5.8/73, Ms7 5.5/71*

NEIC ***15*** *07:39:27.6, 39.75N×106.41E, h22km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.19; Mθθ-0.20; Mφφ 0.39; Mrθ-0.09; Mφφ 1.37; Mφr 0.26; Fault plane solution: M₀ 1.44000×10¹⁷ NP1:φs174.44000°, δ85.34000°, λ-168.54000°. NP2:φs83.49000°, δ78.57000°, λ-4.76000°. Principal axes: T 1.5098, Plg5.0000°, Azm308.0000°; N -0.1543, Plg78.0000°, Azm196.0000°; P -1.3555, Plg11.0000°, Azm39.0000°;*

NEIC ***15*** *07:39:27.2±1.9, 39.75N±0.06×106.40E±0.09, h10km±1km, mb5.2/192, Ms_20 5.2/249, Mwb5.4/10, Mww5.4, Mwc5.5(GCMT) Error ellipse: s-maj=11.7km s-min=9.8km az=261.0*

GCMT ***15*** *07:39:29.2±0.1, 39.74N±0.01×106.39E±0.01, h26km, MW5.5/148, Moment Tensor Solution. s128,c220; s148,c287; Duration: 1§3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.09±.02; Mθθ-0.22±.02; Mφφ 0.31±.02; Mrθ 0.31±.04; Mθφ2.00±.02; Mφr-0.07±.04; Best double couple: M₀2.04300×10¹⁷ NP1:φs356.00000°, δ81.00000°, λ-177.00000°. NP2:φs266.00000°, δ87.00000°, λ-9.00000°. Principal axes: T 2.0730, Plg4.0000°, Azm311.0000°; N -0.0600, Plg81.0000°, Azm68.0000°; P -2.0130, Plg8.0000°, Azm221.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *07:39:30.39.79N×106.46E, h25km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.04; Mθθ-0.29; Mφφ 0.25; Mrθ-0.11; Mθφ 1.91; Mφr-0.41; Fault plane solution: M₀ 1.98000×10¹⁷ NP1:φs266.00000°, δ78.00000°, λ4.00000°. NP2:φs176.00000°, δ86.00000°, λ168.00000°. Principal axes: T 1.9846, Plg11.0000°, Azm130.0000°; N -0.0184, Plg78.0000°, Azm337.0000°; P -1.9662, Plg5.0000°, Azm221.0000°;*

NEIC ***15*** *07:39:37.39.64N×106.42E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.24; Mθθ-0.23; Mφφ 0.48; Mrθ-0.00; Mθφ 1.28; Mφr-0.06; Fault plane solution: M₀ 1.34000×10¹⁷ NP1:φs262.00000°, δ88.00000°, λ0.00000°. NP2:φs352.00000°, δ90.00000°, λ-177.00000°. Principal axes: T 1.4504, Plg2.0000°, Azm127.0000°; N -0.2446, Plg88.0000°, Azm356.0000°; P -1.2057, Plg2.0000°, Azm217.0000°;*

BGR ***15*** *07:39:42.9±0.0, 40.46N×104.41E, h33km, mb5.3*

ISC 15 07:39:27.2±0.6, 39.73N±0.03×106.39E±0.02, h8km±3km, n732, σ1§81/638, mb5.2/229, MS5.2/178, 93C-95D, Fault plane solution: NP1:φs340.47028°, δ81.91781°, λ-156.62500°. NP2:φs246.99283°, δ66.87075°, λ-8.79398°. Principal axes: T Plg10.2732°, Azm111.7433°; N Plg65.3415°, Azm358.4890°; P Plg22.1586°, Azm205.9763°; Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.92**	**71**	*e*Pn	**Pn**	**07 40 12.8**	**-1.1**
BTO				Pg	**Pb**	**07 40 18.4**	**-1.1**
BTO				Sg	**Sb**	**07 40 54.1**	**-1.2**
BTO				smax	smax		
	comp=N,159μm,1.3s						
BTO				smax	smax		
	comp=E,55μm,0.7s						
BTO	**Baotou**	**2.92**	**71**	*e*Pn	**Pn**	**07 40 13.3**	**-0.6**
BTO				Pg	**Pb**	**07 40 18.0**	**-1.5**
BTO				Sn	**Sn**	**07 40 45.5**	**-3.7**
BTO				Sg	**Sb**	**07 40 53.4**	**-1.9**
BTO				smax	smax		
	comp=E,159μm,0.7s						
BTO				smax	smax		
	comp=E,60μm,0.4s						
HHC	**Hu-ho-hao-te**	**4.11**	**73**	*e*Pn	**Pn**	**07 40 30.1**	**-0.3**
HHC				Pg	**Pb**	**07 40 40.5**	**+0.6**
HHC				Sn	**Sn**	**07 41 18.3**	**-0.4**
HHC				Sg	**Sb**	**07 41 31.8**	**+2.1**
HHC				smax	smax		
	comp=E,31μm,0.6s						
HHC				smax	smax		
	comp=E,36μm,0.5s						
LZH	**Lanzhou**	**4.16**	**210**	Pn	**Pn**	**07 40 33.6**	**+2.5**
LZH				Pg	**Pg**	**07 40 47.0**	**+0.1**
LZH				Sg	**Sg**	**07 41 39.1**	**-1.7**
LZH				smax	smax		
	comp=E,37μm,0.9s						
LZH				smax	smax		
	comp=E,33μm,0.7s						
LZH				LR	LR		
	comp=E,61μm,7.6s						
LZH				LR	LR		
	comp=E,67μm,7.0s						
LZH				LR	LR		
	comp=E,68μm,7.7s						
GTA	**Gaotai**	**5.09**	**268**	Pn	**Pn**	**07 40 44.3**	**+0.4**
GTA				Pg	**Pb**	**07 40 58.8**	**+2.2**
GTA				Sn	**Sn**	**07 41 43.4**	**+0.5**
GTA				Sg	**Sg**	**07 42 06.8**	**-3.8**
GTA				smax	smax		
	comp=E,18μm,1.1s						
GTA				smax	smax		
	comp=E,16μm,0.9s						
GTA				LR	LR		
	comp=E,78μm,7.6s						
GTA				LR	LR		
	comp=E,39μm,5.5s						
GTA				LR	LR		
	comp=E,26μm,6.2s						
TIY	**Taiyuan**	**5.14**	**111**	*e*Pn	**Pn**	**07 40 44.0**	**-0.5**
TIY				Pg	**Pb**	**07 41 01.3**	**+3.9**
TIY				Sn	**Sn**	**07 41 44.1**	**+0.1**
TIY				Sg	**Sb**	**07 42 05.3**	**+6.0**
TIY				smax	smax		
	comp=E,24μm,0.8s						
TIY				smax	smax		
	comp=E,17μm,0.8s						
XAN	**Xi'an**	**6.04**	**160**	Pn	**Pn**	**07 40 57.8**	**+1.0**
XAN				Sn	**Sn**	**07 42 04.5**	**-1.6**
XAN				Sg	**Sg**	**07 42 36.8**	**-4.1**
XAN				smax	smax		
	comp=E,9μm,1.0s						
XAN				smax	smax		
	comp=E,8μm,1.6s						
XAN				LR	LR		
	comp=E,52μm,5.0s						
XAN				LR	LR		
	comp=E,148μm,5.4s						
XAN				LR	LR		
	comp=E,51μm,4.5s						
XAN	**Xi'an**	**6.04**	**160**	P	**Pn**	**07 40 58.0**	**+1.2**
XAN	**Xi'an**	**6.04**	**160**	Pn	**Pn**	**07 40 58.0**	**+1.2**
BJT	**Baijiatuan**	**7.53**	**85**	P	**Pn**	**07 41 18.1**	**+0.9**
BJT	**Baijiatuan**	**7.53**	**85**	Pn	**Pn**	**07 41 18.1**	**+0.9**
BJI	**Beijing**	**7.53**	**85**	Pn	**Pn**	**07 41 17.4**	**+0.2**
BJI				smax	smax		
	comp=E,5μm,0.9s						
BJI				smax	smax		
	comp=E,3μm,1.3s						
SONM	**Songino Array**	**8.10**	**0**	Pn	**Pn**	**07 41 25.1**	**0.0**
	comp=E,16nm,0.3s,baz=180,slow=15,SNR=313						
SONM				Sn	**Sn**	**07 42 57.4**	**+0.6**
	comp=E,58nm,0.3s,baz=178,slow=21,SNR=10						
SONM				Lg	Lg	07 43 41.6	
	comp=E,130nm,0.3s,baz=188,slow=31,SNR=7.9						
SONM				LR	LR	07 44 32.1	
	comp=E,5μm,20.0s,baz=180,slow=38						
ULN	**Ulaanbaatar**	**8.14

comp=Z,17µm,15.4s
DL2 LR LR
comp=Z,14µm,10.7s
DL2 LR LR
comp=Z,18µm,10.8s
TLY Talaya 12.10 352 Pn **Pn 07 42 20.4 +0.6**
comp=Z,0.1nm,0.3s,baz=190,slow=8.0,SNR=25
TLY Lg Lg 07 45 48.7
comp=Z,0.1nm,0.3s,baz=276,slow=9.9,SNR=6.6
TLY LR LR 07 46 49.1
comp=Z,3µm,18.1s,baz=159,slow=37
TLY Talaya 12.10 352 *eP* **Pn 07 42 20.0 +0.2**
TLY *eS* **Sn 07 44 37.1 +2.3**
TLY pmax pmax
comp=Z,42nm,0.6s
TLY MLR MLR
comp=Z,12µm,7.0s
TLY Talaya 12.10 352 Pn **Pn 07 42 20.1 +0.4**
TLY Talaya 12.10 352 P **Pn 07 42 20.5 +0.6**
TLY S 07 45 46.0
MOY Mondy 12.51 344 *eP* **Pn 07 42 26.4 +0.9**
MOY *eS* **Sn 07 44 52.6 +7.6**
IRK Irkutsk 12.60 354 *eP* **Pn 07 42 27.4 +0.8**
IRK pmax pmax
comp=Z,133nm,0.6s
NJ2 Nanjing 12.68 123⇓ *i*P **Pn 07 42 27.9 +0.2**
NJ2 sP 07 42 34.6
NJ2 S **Sn 07 44 49.9 +0.9**
NJ2 pmax pmax
comp=Z,99nm,1.1s
NJ2 LR LR
comp=Z,10µm,11.4s
NJ2 LR LR
comp=Z,8µm,10.4s
NJ2 LR LR
comp=Z,16µm,13.7s
SNY Shenyang 13.20 75⇓ P **Pn 07 42 36.1 +1.3**
SNY S **Sn 07 45 04.5 +2.8**
SNY SS **SnSn 07 45 17.3 +3.6**
SNY pmax pmax
comp=Z,160nm,2.3s
SNY LR LR
comp=Z,10µm,6.7s
SNY LR LR
comp=Z,11µm,8.4s
SNY LR LR
comp=Z,15µm,8.3s
GYA Guiyang 13.24 179⇓ P **Pn 07 42 35.3 -0.3**
GYA S **Sn 07 45 03.6 +0.5**
GYA pmax pmax
comp=Z,33nm,0.8s
GYA LR LR
comp=Z,5µm,5.9s
GYA LR LR
comp=Z,10µm,5.7s
GYA LR LR
comp=Z,4µm,9.3s
HIA Hailar 13.46 41 P **Pn 07 42 36.3 -2.1**
HIA Hailar 13.46 41 Pn **Pn 07 42 36.3 -2.1**
WMQ Urumqi 14.53 292 *eP* **Pn 07 42 53.5 +0.4**
WMQ pP P 07 42 58.8 -1.0
WMQ sP 07 43 00.9
WMQ PP **PnPn 07 43 07.1 +6.2**
WMQ S **Sn 07 45 36.8 +2.5**
WMQ SS **S 07 45 50.8 -3.2**
WMQ pmax pmax
comp=Z,2µm,3.7s
WMQ LR LR
comp=Z,36µm,11.3s
WMQ LR LR
comp=Z,30µm,10.1s
WMQ LR LR
comp=Z,18µm,16.9s
WMQ Urumqi 14.53 292 P **Pn 07 42 53.5 +0.4**
WMQ Urumqi 14.53 292 Pn **Pn 07 42 53.5 +0.4**
CN2 Changchun 14.79 68 *eP* **Pn 07 42 56.6 +0.1**
CN2 *es*P P 07 43 03.5 +1.0
CN2 *eS* **Sn 07 45 40.3 -0.2**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 LR LR
comp=Z,55µm,12.0s
CN2 LR LR
comp=Z,16µm,12.0s
CN2 LR LR
comp=Z,12µm,13.0s
SSE Sheshan 14.81 121 P **Pn 07 42 58.5 +1.6**
SSE S **Sn 07 45 45.8 +4.6**
SSE pmax pmax
comp=Z,34nm,0.8s
SSE pmax pmax
comp=Z,520nm,6.4s
KMI Kunming 14.89 193⇓ P **Pn 07 42 57.0 -1.2**
KMI pP P 07 43 03.5 -0.5
KMI sP 07 43 05.5
KMI PP **PnPn 07 43 10.8 +4.6**
KMI pmax pmax
comp=Z,34nm,1.6s
KMI pmax pmax
comp=Z,390nm,3.5s
KMI LR LR
comp=Z,8µm,22.8s
KMI LR LR
comp=Z,29µm,16.4s
KMI LR LR
comp=Z,8µm,15.6s
KMI Kunming 14.89 193 P **P 07 43 02.1 -1.9**
KMI Kunming 14.89 193 **P 07 43 02.1 -1.9**
INCN Inchon 15.98 92 P **P 07 43 16.0 +0.1**
INCN IAmb IAmb 07 43 18.9
comp=Z,253nm,1.1s
INCN **PcP 07 48 07.2 -2.3**
LSA Lhasa 16.02 236 P **Pn 07 43 13.5 +0.3**
LSA pmax pmax
comp=Z,440nm,1.6s
LSA LR LR
comp=Z,14µm,8.5s
LSA LR LR
comp=Z,20µm,10.7s
LSA LR LR
comp=Z,35µm,13.5s
LSA Lhasa 16.02 236 P **Pn 07 43 13.8 +0.6**
LSA pmax pmax
comp=Z,123nm,1.0s
LSA Lhasa 16.02 236 Pn **Pn 07 43 13.8 +0.6**
TJN Taejon 16.85 95⇓ *eP* **Pn 07 43 23.1 -0.3**
KS19 Wonju Array Si 16.93 91 **P 07 43 26.1 -0.3**
KSAR Wonju Array Be 16.96 91 P **Pn 07 43 23.6 -1.1**
KSAR Wonju Array Be 16.96 91 **Pn 07 43 23.6 -1.1**
KSRS Korea Array 16.99 91 Pn **Pn 07 43 25.4 +0.3**
comp=Z,1.2nm,0.3s,baz=285,slow=11,SNR=61
KSRS Lg Lg 07 48 19.0
comp=Z,0.2nm,0.3s,baz=297,slow=30,SNR=4.5
ZSN Zaisan 17.36 303 *eP* **Pn 07 43 29.4 -0.3**
baz=304
ZSN *eS* **Sn 07 46 43.6 +0.7**
baz=304
ZSN Zaisan 17.36 303 *eP* **Pn 07 43 29.4 -0.3**
ZSN *eS* **Sn 07 46 43.6 +0.7**
GZH Guangzhou 17.61 158⇓ *i*P **Pn 07 43 30.5 -2.5**
GZH S **Sn 07 46 43.3 -6.0**
GZH LR LR
comp=Z,11µm,6.2s
GZH LR LR
comp=Z,6µm,5.5s
MDJ Mudanjiang 17.86 67 P **Pn 07 43 35.9 0.0**
MDJ S **Sn 07 46 53.5 -1.5**
MDJ pmax pmax
comp=Z,400nm,5.7s
MDJ LR LR
comp=Z,40µm,15.7s
MDJ LR LR
comp=Z,13µm,15.4s
MDJ LR LR
comp=Z,4µm,7.3s
MDJ Mudanjiang 17.86 67 **Pn 07 43 35.3 -0.6**
QZH Quanzhou 17.97 142⇑ *i*P **Pn 07 43 36.3 -1.0**
QZH S **Sn 07 46 57.0 -0.8**
QZH pmax pmax
comp=Z,65nm,1.5s
QZH pmax pmax
comp=Z,1µm,3.8s
QZH LR LR
comp=Z,6µm,8.3s
QZH LR LR
comp=Z,6µm,7.6s
QZH LR LR
comp=Z,7µm,10.4s
KNMB Chin-men Tao 18.28 143 P **Pn 07 43 40.6 -0.5**
BOD Bodaibo 18.76 13 *eP* **P 07 43 46.5 +0.1**
BOD pmax pmax
comp=Z,69nm,1.3s
MSHR Mys Shultsa 18.85 73⇑ *i*P **Pn 07 43 49.6 +1.6**
MSHR pmax pmax
comp=Z,20nm,0.8s
MK31 Makanchi Array 18.87 300*c i*P **P 07 43 46.6 -1.2**
MK31 pmax pmax
comp=Z,29nm,0.6s
MK31 Makanchi Array 18.87 300 P **P 07 43 47.1 -0.7**
MKAR Makanchi Array 18.87 300 P **P 07 43 47.1 -0.7**
comp=Z,2.4nm,0.3s,baz=103,slow=13,SNR=37
MKAR S **Sn 07 47 09.2 -10**
comp=Z,0.3nm,0.3s,baz=100,slow=21,SNR=2.9
MKAR Lg Lg 07 49 20.6
comp=Z,0.9nm,0.3s,baz=106,slow=26,SNR=2.9
MKAR LR LR 07 50 51.4
comp=Z,3µm,18.3s,baz=104,slow=36
MKAR Makanchi Array 18.87 300 *i* P **P 07 43 47.0 -0.7**
MKAR pmax pmax
comp=Z,16nm,0.7s
MKAR Makanchi Array 18.87 300 P **P 07 43 46.7 -1.1**
MAKZ Makanchi 19.08 300 P **P 07 43 49.2 -0.9**
MAKZ Makanchi 19.08 300 P **P 07 43 49.5 -0.5**
MAKZ IAmb IAmb 07 44 08.2
comp=Z,189nm,1.4s
TATO Taipei 19.43 135 P **Pn 07 43 54.9 -0.2**
TATO IAmb IAmb 07 44 05.7
comp=Z,123nm,1.0s
USA0B Ussuriysk Arra 19.52 68⇑ *eP* **P 07 43 55.3 +0.5**
USA0B Ussuriysk Arra 19.52 68 **Pn 07 43 56.5 +0.4**
USRK Ussuriysk Ar. 19.52 68 P **Pn 07 43 55.8 -0.3**
baz=268,slow=6.7,SNR=54
USRK Lg Lg 07 49 41.3
baz=264,slow=28,SNR=8.0
USRK LR LR 07 51 58.1
comp=Z,4µm,18.3s,baz=258,slow=39
USRK Ussuriysk Ar. 19.52 68 **Pn 07 43 55.9 -0.2**
YHNB Yeheng 19.62 136 P **P 07 43 56.6 +0.5**
YHNB IAmb IAmb 07 43 59.9
comp=Z,139nm,0.8s
TAPN Taplejung 19.83 237 *eP* **P 07 43 58.9 +0.3**
comp=Z,279nm,0.9s
ZEA Zeya 19.91 38 *eP* **Pn 07 44 00.3 -0.3**
ZEA *eS* **S 07 47 33.9 -9.2**
ZEA pmax pmax
comp=E,40nm,1.2s
ZEA pmax pmax
comp=Z,60nm,1.1s
ZEA pmax pmax
comp=E,800nm,6.7s
ZEA pmax pmax
comp=N,800nm,7.2s
ZEA pmax pmax
comp=Z,1µm,5.3s
ZEA smax smax
comp=E,600nm,8.4s
ZEA smax smax
comp=N,1µm,11.7s
ZEA MLR MLR
comp=N,5µm,14.0s
ZEA MLR MLR
comp=E,5µm,14.0s
ZEA MLR MLR
comp=Z,6µm,10.0s
SSLB Suanglung 20.11 138 P **P 07 44 02.3 +0.8**
SSLB IAmb IAmb 07 44 04.4
comp=Z,171nm,1.1s
NACB Ninganchiao 20.13 136 IAmb IAmb 07 44 12.6
comp=Z,279nm,1.3s
TPUB Ta-pu 20.35 139 IAmb IAmb 07 44 20.7
comp=Z,141nm,0.9s
KLR Kul'dur 20.35 54 P **P 07 44 04.4 +0.6**
comp=Z,35nm,1.0s,baz=258,slow=11,SNR=58
KLR LR LR 07 53 10.7
comp=Z,2µm,19.9s,baz=253,slow=41
KLR Kul'dur 20.35 54*d i*P **P 07 44 04.1 +0.3**
KLR pmax pmax
comp=Z,82nm,1.2s
ODAN Odare 20.37 237 *eP* Pn 07 44 05.5 -1.0
comp=Z,264nm,0.8s
ZAA0 Zalesovo Array 20.37 321 P **P 07 44 03.2 -0.9**
ZALV Zalesovo Beam 20.37 321 P **P 07 44 03.1 -1.0**
comp=Z,24nm,0.4s,baz=121,slow=9.8,SNR=81
ZALV Lg Lg 07 50 08.6
comp=Z,17nm,1.0s,baz=120,slow=23,SNR=5.1
ZALV LR LR 07 52 18.9
comp=Z,1µm,19.0s,baz=129,slow=38
ZALV Zalesovo Beam 20.37 321 P **P 07 44 02.0 -2.0**
PDGK Podgornoye 20.42 289 P **P 07 44 03.6 -1.2**
SHLS Shalkode 20.44 288 *eP* **P 07 44 00.4 -4.7**
comp=Z,36nm,0.8s,baz=289
SHLS *eS* **S 07 47 47.1 -6.9**
baz=289
SHLS Shalkode 20.44 288 *eP* **P 07 44 00.3 -4.7**
SHLS *eS* **S 07 47 47.1 -6.9**
SHLS pmax pmax
comp=Z,36nm,0.8s
YULB Yu-li 20.61 138 P **P 07 44 08.0 +1.1**
JIRN Jiri 20.62 240 *eP* **P 07 44 07.7 +0.3**
comp=Z,337nm,0.7s
GUN Gumba 20.67 241 *eP* **P 07 44 07.9 +0.1**
comp=Z,559nm,0.8s
YOJ Yonaguni jima 20.69 132 P **P 07 44 08.0 +0.4**
YOJ pmax pmax
comp=Z,266nm,1.1s
JNU Nakatsue 20.75 101 P **P 07 44 08.4 +0.1**
comp=Z,80nm,1.1s,baz=336,slow=3.6,SNR=7.7
JNU LR LR 07 53 01.0
comp=Z,5µm,18.7s,baz=293,slow=39
JNU Nakatsue 20.75 101 **P 07 44 08.8 +0.5**
JNU IAmb IAmb 07 44 21.5
comp=Z,202nm,1.5s
UZB Uzynbulak 20.76 288 *eP* **P 07 44 07.0 -1.6**
comp=Z,76nm,1.4s,baz=289
UZB *eS* **S 07 47 59.6 -0.9**
baz=289
UZB Uzynbulak 20.76 288 *eP* **P 07 44 06.9 -1.6**
UZB *eS* **S 07 47 59.5 -0.9**
UZB pmax pmax
comp=Z,76nm,1.4s
RAMN Ramite 20.82 238 *eP* **P 07 44 09.5 +0.1**
comp=Z,65nm,0.4s
QIZ Qiongzhong 20.85 171 P **P 07 44 08.8 -0.6**
QIZ S **S 07 48 01.1 -1.0**
QIZ sS Sn 07 48 09.6 +2.2
QIZ LR LR
comp=Z,6µm,4.3s
QIZ LR LR
comp=Z,22µm,12.2s
QIZ LR LR
comp=Z,5µm,9.0s
QIZ Qiongzhong 20.85 171 P **P 07 44 09.2 -0.2**
KPKS Kokpek 21.01 289 *eP* **P 07 44 09.8 -1.3**
comp=Z,96nm,1.8s,baz=290
KPKS *eS* **S 07 48 04.8 -0.6**
baz=290
KPKS Kokpek 21.01 289 *eP* **P 07 44 09.8 -1.3**
KPKS *eS* **S 07 48 04.7 -0.6**
KPKS pmax pmax
comp=Z,96nm,1.8s
KKN Kakani 21.15 242 *eP* **P 07 44 13.0 +0.1**
comp=Z,117nm,0.6s
JSU Suzuyama 21.17 105 IAmb IAmb 07 44 20.9
comp=Z,109nm,1.1s
PKI Pulchoki 21.21 241 *eP* **P 07 44 13.5 -0.1**
comp=Z,188nm,0.6s
PKIN Phulchoki 21.21 242 *eP* **P 07 44 13.4 -0.2**
comp=Z,155nm,0.6s
SATY Saty 21.21 288 *eP* **P 07 44 12.0 -1.5**
comp=Z,50nm,0.8s,baz=288
SATY *eS* **S 07 48 08.6 -0.8**
baz=288
SATY Saty 21.21 288 *eP* **P 07 44 11.9 -1.5**
SATY *eS* **S 07 48 08.5 -0.8**
SATY pmax pmax
comp=Z,50nm,0.8s
TDK Taldyqorghan 21.28 293 *eP* **P 07 44 13.4 -0.5**
comp=Z,133nm,1.3s,baz=294
TDK *eS* **S 07 48 10.7 +0.2**
baz=294
TDK Taldyqorghan 21.28 293 *eP* **P 07 44 13.4 -0.5**
TDK *eS* **S 07 48 10.7 +0.2**
TDK pmax pmax
comp=Z,133nm,1.3s
DMN Daman 21.39 242 *eP* **P 07 44 15.6 +0.1**
comp=Z,220nm,0.7s
GKN Gorkha 21.46 244 *eP* **P 07 44 15.6 -0.6**
comp=Z,137nm,0.6s
JHS Saijyo 21.73 94 P **P 07 44 19.6 +0.7**
JHS IAmb IAmb 07 44 41.6
comp=Z,85nm,1.0s
CM34 Chiang Mai Arr 21.73 199 P **P 07 44 21.0 +2.1**
NONG Nongkai 21.78 188 P **P 07 44 20.0 +0.6**
comp=Z,5µmcomp=Z,280nm,0.9s
CM33 Chiang Mai Arr 21.81 199 P **P 07 44 21.7 +1.9**
CHTO Chiang Mai 21.82 199 P **P 07 44 20.7 +0.8**
CHTO pmax pmax
comp=Z,73nm,0.9s
CHTO Chiang Mai 21.82 199 P **P 07 44 20.7 +0.8**
CHTO IAmb IAmb 07 44 44.9
comp=Z,73nm,0.8s
CHTO Chiang Mai 21.82 199 P **P 07 44 20.9 +1.0**
CMMT Chiang Mai 21.82 199 P **P 07 44 20.3 +0.4**
comp=Z,669nmcomp=Z,56nm,1.2s
DANN Dangsing 21.86 246 *eP* **P 07 44 20.8 +0.2**
CM35 Chiang Mai Arr 21.90 199 P **P 07 44 22.7 +2.0**
LAMP Lampang 21.93 197 P **P 07 44 24.0 +2.9**
comp=Z,1µmcomp=Z,146nm,1.0s
CM32 Chiang Mai Arr 22.00 199 P **P 07 44 24.0 +2.2**
CM36 Chiang Mai Arr 22.06 199 P **P 07 44 23.0 +0.5**
CM31 Chiang Mai Arr 22.16 199 P **P 07 44 25.5 +1.9**
comp=Z,2µm,1.0s
CM31 Chiang Mai Arr 22.16 199 IAmb IAmb 07 44 46.9
comp=Z,104nm,0.9s
CMAR Chiang Mai Arr 22.16 199 P **P 07 44 24.1 +0.6**
comp=Z,4.8nm,0.6s,baz=3.8,slow=8.6,SNR=32
CMAR LR LR 07 53 54.1
comp=Z,3µm,18.1s,baz=58,slow=39
CMAR Chiang Mai Arr 22.16 199 P **P 07 44 23.5 0.0**
CM09 Chiang Mai Arr 22.16 199 P **P 07 44 25.0 +1.4**
comp=Z,117nm,1.0s
CM15 Chiang Mai Arr 22.17 199 P **P 07 44 26.1 +2.4**
comp=Z,54nm,1.0s
CM02 Chiang Mai Arr 22.18 199 P **P 07 44 25.0 +1.2**
comp=Z,93nm,0.9s
CM01 Chiang Mai Arr 22.19 199 P **P 07 44 25.9 +2.0**
comp=Z,82nm,0.9s
CM13 Chiang Mai Arr 22.20 199 P **P 07 44 26.2 +2.2**
comp=Z,61nm,1.0s
MDOK Medeo 22.21 288 *eP* **P 07 44 23.3 -0.9**
baz=289
MDOK *eS* **S 07 48 28.7 -0.1**
baz=289
MDOK Medeo 22.21 288 *eP* **P 07 44 23.2 -0.9**
MDOK *eS* **S 07 48 28.6 -0.1**
CM04 Chiang Mai Arr 22.21 199 P **P 07 44 25.9 +1.9**
comp=Z,97nm,1.0s
CM05 Chiang Mai Arr 22.21 199 P **P 07 44 26.0 +1.9**
comp=Z,70nm,1.0s
TNSS Tian-Shan 22.28 288 *eP* **P 07 44 24.6 -0.6**
baz=288
TNSS Tian-Shan 22.28 288 *eP* **P 07 44 24.5 -0.6**
KURK Kurchatov 22.30 309 P **P 07 44 23.9 -0.9**
KURK Kurchatov 22.30 309 P **P 07 44 23.9 -0.9**
JOW Kunigami 22.30 119 P **P 07 44 23.8 -1.2**
comp=Z,57nm,0.7s,baz=337,slow=7.8,SNR=13
JOW LR LR 07 54 17.4
comp=Z,3µm,18.7s,baz=345,slow=40
JOW Kunigami 22.30 119 P **P 07 44 22.2 -2.8**
JOW IAmb IAmb 07 44 36.9
comp=Z,84nm,0.8s
AAA Alma-Ata 22.30 289 *eP* **P 07 44 24.4 -0.6**
baz=289
AAA *eS* **S 07 48 30.6 +0.2**
baz=289
AAA Alma-Ata 22.30 289 *eP* **P 07 44 24.4 -0.6**
AAA *eS* **S 07 48 30.6 +0.2**
KURBB Kurchatov Arra 22.32 308 P **P 07 44 23.9 -1.2**
comp=Z,12nm,0.6s,baz=112,slow=11,SNR=53
KURBB Lg Lg 07 51 10.5
comp=Z,30nm,1.3s,baz=109,slow=33,SNR=6.5
KURBB Kurchatov Arra 22.32 308 P **P 07 44 24.1 -0.9**
KOLN Koldanda 22.32 245 *eP* **P 07 44 25.6 +0.1**
comp=Z,276nm,0.8s
UTTA Uttaradit 22.49 195 P **P 07 44 28.5 +1.5**
comp=Z,1µmcomp=Z,145nm,0.8s
PYUN Piuthan 22.55 246 *eP* **P 07 44 27.5 -0.4**
comp=Z,1µm,1.3s
LOEI Loei 22.59 193 P **P 07 44 33.8 +5.7**
comp=Z,207nm,0.8s
MHMT Maesarieng 22.70 201 P **P 07 44 30.4 +1.1**
comp=Z,2µmcomp=Z,209nm,0.9s
ULHL Ulaho 22.84 286 P **P 07 44 30.9 0.0**
SNR=12
SUKH Sukhothai 22.94 197 P **P 07 44 33.0 +1.2**
comp=Z,2µmcomp=Z,205nm,0.8s
PHIT Phitsanulok 23.06 195 P **P 07 44 34.8 +1.8**
comp=Z,7µmcomp=Z,982nm,0.8s
TKM2 Tokmak 2 23.28 288 P **P 07 44 35.5 +0.1**
SNR=12
TKM2 Tokmak 2 23.28 288 P **P 07 44 35.4 0.0**
KSH Kashi 23.38 279 P **P 07 44 41.3 +4.9**
KSH sP sP 07 44 47.9 +7.6
KSH S **S 07 48 44.3 -5.3**
KSH PcS **PcS 07 52 05.3 +3.0**
KSH LR LR
comp=Z,6µm,8.1s
KSH LR LR
comp=Z,5µm,6.2s
KSH LR LR
comp=Z,7µm,5.3s
JWT Wachi 23.39 92 P **P 07 44 35.2 -1.1**
JWT IAmb IAmb 07 44 37.8
comp=Z,106nm,1.3s
KHON Khomkaen 23.52 189 P **P 07 44 39.0 +1.3**
comp=Z,2µmcomp=Z,265nm,0.7s
GRNR Gornyy 23.68 52⇑ *i*P **P 07 44 39.7 +0.6**
GRNR *eS* **S 07 48 58.4 +4.3**
GRNR MLR MLR
comp=E,4µm,10.0s
KBK Karagaybulak 23.77 287 P **P 07 44 40.8 +0.5**
SNR=7.9
CHMS Chumysh 23.89 288 P **P 07 44 43.3 +2.1**
SNR=7.5
SGDS Sogindy 23.96 289 *eP* **P 07 44 41.0 -1.0**
baz=290
SGDS *eS* **S 07 48 58.7 -0.1**
baz=290
SGDS Sogindy 23.96 289 *eP* **P 07 44 40.9 -1.0**
SGDS *eS* **S 07 48 58.6 -0.1**
CHAI Chaiyaphum 24.05 190 P **P 07 44 42.8 0.0**
comp=E,2µmcomp=E,269nm,0.7s
USP Ospenovka 24.06 289 P **P 07 44 43.3 +0.4**
SNR=27
AAK Ala-Archa 24.10 287 P **P 07 44 43.1 -0.3**
comp=E,11nm,0.8s,baz=96,slow=11,SNR=18
AAK Lg Lg 07 52 05.7
comp=E,8.6nm,1.0s,baz=318,slow=1.3,SNR=7.8
AAK LR LR 07 53 40.9
comp=E,6µm,19.1s,baz=82,slow=36
AAK Ala-Archa 24.10 287 P **P 07 44 44.2 +0.7**
SNR=13
AAK Ala-Archa 24.10 287 *i* P **P 07 44 43.2 -0.3**
SNR=13
AAK Ala-Archa 24.10 287*c i*P **P 07 44 43.4 0.0**
AAK pmax pmax
comp=Z,45nm,0.8s
AAK Ala-Archa 24.10 287 P **P 07 44 44.1 +0.7**
AAK IAmb IAmb 07 44 58.6
comp=Z,98nm,1.2s
AAK Ala-Archa 24.10 287 P **P 07 44 42.9 -0.5**
UCH Uchtor 24.12 286 P **P 07 44 45.1 +1.2**
SNR=56
UMPA Umpang Tak 24.35 198 P **P 07 44 50.2 +4.6**
comp=Z,6µmcomp=Z,103nm,0.9s
UBPT Khong Chiam 24.38 182 P **P 07 44 46.0 +0.2**
comp=Z,38nm,1.0s
UBPT Khong Chiam 24.38 182 IAmb IAmb 07 44 53.9
comp=Z,83nm,1.0s
EKS2 Erkin-Say 24.63 287 P **P 07 44 50.0 +1.8**
SNR=12
AML Almayashu 24.74 286 P **P 07 44 52.3 +2.8**
SNR=6.6
UTHA Uthaitani 24.84 196 P **P 07 44 51.5 +1.4**
comp=Z,811nmcomp=Z,104nm,0.7s
MAJO Matsushiro 25.16 87⇑ *eP* **P 07 44 52.2 -0.7**
MAJO pmax pmax

comp=Z,10.0nm,1.0s
MAT Matsushiro 25.16 87 P **P** **07 44 50.8 -2.0**
MAT S **S** **07 49 11.0 -7.0**
MJAR Matsushiro Arr 25.16 87 P **P** **07 44 52.2 -0.7**
comp=Z,5.3nm,0.8s,baz=290,slow=11,SNR=9.0
MJAR LR LR 07 53 46.5
MJAR Matsushiro Arr 25.16 87 P **P** **07 44 52.6 -0.2**
comp=Z,2µm,20.6s,baz=270,slow=34
BRZS Berezniki 25.80 305 *e*P **P** **07 44 57.6 -1.0**
comp=Z,15nm,0.8s,baz=305
BRZS Berezniki 25.80 305 *e*P **P** **07 44 57.5 -1.0**
BRZS pmax pmax
comp=Z,15nm,0.8s
SRAK Srakaew 25.91 190 P **P** **07 45 02.0 +2.3**
SRDT SRDT 26.08 196 P P 07 45 15.2 +14
DZA Taraz 26.41 288 *e*P **P** **07 45 03.3 -0.8**
baz=288
DZA Taraz 26.41 288 *e*P **P** **07 45 03.3 -0.8**
NDI New Delhi 26.41 254 *e*P P 07 45 12.0 +7.7
YAK Yakutsk 26.44 25 P **P** **07 45 03.8 -0.4**
comp=Z,28nm,0.6s,baz=223,slow=2.7,SNR=12
YAK Lg Lg 07 53 11.1
comp=Z,9.3nm,0.3s,baz=306,slow=23,SNR=6.4
YAK Yakutsk 26.44 25 *e*P **P** **07 45 03.5 -0.6**
YAK *e* 07 45 49.7
YAK *e*S **S** **07 49 35.8 -1.9**
YAK *e*SS **SnSn** **07 50 46.5 +8.2**
YAK pmax pmax
comp=Z,141nm,1.7s
YAK pmax pmax
comp=N,41nm,1.3s
YAK pmax pmax
comp=E,46nm,1.2s
YAK pmax pmax
comp=Z,89nm,1.3s
YAK pmax pmax
comp=N,68nm,1.4s
YAK pmax pmax
comp=E,62nm,1.6s
YAK smax smax
comp=N,792nm,5.0s
YAK smax smax
comp=E,434nm,4.8s
YAK MLR MLR
comp=Z,2µm,17.0s
YAK MLR MLR
comp=N,2µm,16.0s
YAK MLR MLR
comp=E,590nm,19.0s
YAK Yakutsk 26.44 25 P **P** **07 45 04.2 0.0**
NKL Nikolayevsk 26.88 49 *e*P **P** **07 45 05.8 -2.4**
NKL *e*S **S** **07 49 45.0 +0.2**
NKL pmax pmax
comp=E,41nm,0.6s
NKL pmax pmax
comp=N,1.0nm,1.1s
NKL pmax pmax
comp=Z,67nm,1.1s
NKL smax smax
comp=E,67nm,0.8s
NKL smax smax
comp=N,1.0nm,0.9s
NKL MLR MLR
comp=E,4µm,16.0s
KK31 Karatay Array 26.98 289 P **P** **07 45 09.4 +0.1**
KK31 Karatay Array 26.98 289 IAmb IAmb 07 45 30.9
comp=Z,78nm,0.9s
KKAR Karatay Array 26.98 289 P **P** **07 45 09.1 -0.2**
KKAR pmax pmax
comp=Z,77nm,0.9s
KKAR Karatay Array 26.98 289 P **P** **07 45 09.1 -0.2**
KKAR IAmb IAmb 07 45 30.9
comp=Z,78nm,0.9s
PATY Pattaya 27.15 192 P P 07 45 20.0 +9.1
ASAJ Asahikawa 27.15 69 P **P** **07 45 10.2 -0.5**
comp=Z,15nm,0.6s,baz=209,slow=8.8,SNR=9.4
JKA Kamikawa-asahi 27.15 69 P **P** **07 45 09.9 -0.9**
JKA IAmb IAmb 07 45 20.7
comp=Z,60nm,0.9s
NIL Nilore 27.16 268 P **P** **07 45 12.3 +1.3**
NIL pmax pmax
comp=Z,137nm,0.9s
NIL MLR MLR
comp=Z,1µm,18.0s
NIL Nilore 27.16 268 P **P** **07 45 12.3 +1.3**
NIL Nilore 27.16 268 P **P** **07 45 12.6 +1.6**
NIL P **P** **07 45 12.6 +1.6**
YSS Yuzh-Sakhalins 27.23 63‖ *e*P **P** **07 45 10.7 -0.7**
YSS *e**SP **pP** **07 45 13.7 -0.5**
YSS *e* 07 45 18.2
YSS *e* 07 45 53.4
YSS *e*PPP PPP 07 46 08.3
YSS *e* 07 48 25.2
YSS *e*S **S** **07 49 47.5 -2.9**
YSS pmax pmax
comp=Z,30nm,1.4s
YSS smax smax
comp=N,500nm,4.1s
YSS MLR MLR
comp=Z,5µm,13.0s
YSS MLR MLR
comp=N,3µm,12.0s
YSS Yuzh-Sakhalins 27.23 63 P **P** **07 45 11.1 -0.3**
YSS IAmb IAmb 07 45 23.7
comp=Z,44nm,1.0s
PHET Kaeng Krachan 27.38 194 P P 07 45 20.5 +7.5
IUG Iuzhnay 27.44 287 *e*P **P** **07 45 12.8 -0.7**
baz=287
IUG Iuzhnay 27.44 287 *e*P **P** **07 45 12.8 -0.7**
TYV Tymovskoe 27.56 54 *e*P **P** **07 45 15.3 +0.9**
TYV pmax pmax
comp=Z,25nm,1.4s
TYV pmax pmax
comp=Z,100nm,4.3s
DLV T Lat 27.74 176 IAMs_20 IAMs_20 07 56 35.2
comp=Z,5µm,18.0s
GAR Garm 27.78 280 P **P** **07 45 16.2 -0.5**
BVAR Borovoye Array 27.84 311 P **P** **07 45 15.9 -1.0**
comp=Z,11nm,0.6s,baz=148,slow=8.7,SNR=56
BRVK Borovoye 27.91 311 P **P** **07 45 16.9 -0.6**
BRVK Borovoye 27.91 311 P **P** **07 45 16.9 -0.6**
BRVK IAmb IAmb 07 45 38.8
comp=Z,36nm,0.7s
BRVK Borovoye 27.91 311 P **P** **07 45 17.3 -0.2**
TGY Tagaytay City 28.56 149 LR LR 07 56 50.8
comp=Z,2µm,18.9s,baz=304,slow=37
KBL Kabul 30.07 272 P **P** **07 45 38.0 +0.9**
KBL pmax pmax
comp=Z,26nm,0.8s
KBL Kabul 30.07 272 P **P** **07 45 38.0 +0.9**
KBL IAmb IAmb 07 46 00.7
comp=Z,26nm,0.8s
NRIK Noril'sk 31.32 347 P **P** **07 45 46.8 -0.7**
comp=Z,4.8nm,0.7s,baz=155,slow=10,SNR=13
NRIK Lg Lg 07 55 53.6
comp=Z,1.4nm,0.3s,baz=262,slow=13,SNR=5.5
NRIK Noril'sk 31.32 347‖ *e*P **P** **07 45 47.2 -0.3**
NRIK pmax pmax
comp=Z,18nm,1.4s
NRIK Noril'sk 31.32 347 P **P** **07 45 47.3 -0.2**
HYB Hyderabad 32.81 235 *i* P P 07 45 55.0 -6.2
HYB *e*S **S** **07 51 19.0 +0.4**
TIXI Tiksi 33.94 13 P **P** **07 46 09.5 -0.9**
comp=Z,20nm,0.8s,baz=205,slow=5.0,SNR=37
TIXI Tiksi 33.94 13 *de*P **P** **07 46 09.3 -1.1**
TIXI pmax pmax
comp=Z,216nm,1.3s
TIXI Tiksi 33.94 13 P **P** **07 46 09.5 -0.9**
TIXI IAmb IAmb 07 46 11.4
comp=Z,36nm,1.0s
ABKAR Akbulak array 33.99 302 P **P** **07 46 10.0 -1.1**
ABKAR Akbulak array 33.99 302 IAmb IAmb 07 46 30.9
comp=Z,23nm,0.8s
MA2 Magadan 34.05 39 *de*P **P** **07 46 10.7 -0.8**
MA2 pmax pmax
comp=Z,7.0nm,1.0s
MA2 Magadan 34.05 39 P **P** **07 46 10.5 -1.0**
SVE Sverdlovsk 34.14 315 *e*P **P** **07 46 12.5 +0.2**
SVE *e*S **S** **07 51 41.0 +2.6**
SVE pmax pmax
comp=Z,38nm,0.9s
SVE MLR MLR
comp=Z,3µm,15.0s
KULM Kulim 34.68 190 P **P** **07 46 17.0 -0.3**
KKM Kota Kinabalu 34.69 163 IAMs_20 IAMs_20 08 00 25.5
comp=Z,4µm,18.0s
POO Poona 35.12 242 *e*P **P** **07 46 18.0 -3.3**
AKTO Aktyubinsk 35.21 304 P **P** **07 46 21.1 -0.5**
comp=Z,4.7nm,0.6s,baz=90,slow=11,SNR=16
ARU Arti 35.21 314 P **P** **07 46 21.1 -0.6**
comp=Z,6.7nm,0.4s,baz=105,slow=4.7,SNR=40
ARU Arti 35.21 314 *c i*P **P** **07 46 21.0 -0.6**
ARU 07 47 35.3
ARU S **S** **07 51 57.5 +2.5**
ARU SS **SnSn** **07 54 16.7 +4.9**
ARU pmax pmax
comp=Z,27nm,0.8s
ARU MLR MLR
comp=Z,2µm,16.0s
ARU Arti 35.21 314 P **P** **07 46 20.6 -1.0**
ARU IAmb IAmb 07 46 32.5
comp=Z,32nm,0.6s
HRA Herat 35.36 276 P **P** **07 46 24.5 +1.1**
HRA IAmb IAmb 07 46 47.9
comp=Z,81nm,1.4s
SKR Severo-Kuril's 36.06 56‖ *e*P **P** **07 46 30.2 +1.2**
MYLDM Lahad Datu 36.10 159 P **P** **07 46 30.8 +1.2**
MYLDM IAMs_20 IAMs_20 08 03 38.8
comp=Z,4µm,18.0s
PEA0B Petropavlovsk- 37.01 51⇑ *e*P **P** **07 46 38.1 +1.1**
PETK Petropavlovsk- 37.01 51 P **P** **07 46 37.3 +0.3**
comp=Z,7.3nm,0.7s,baz=252,slow=8.6,SNR=5.4
PETK LR LR 08 03 57.8
comp=Z,3µm,18.6s,baz=250,slow=40
PETK Petropavlovsk- 37.01 51 P **P** **07 46 38.0 +1.0**
TPTI 37.26 195 P **P** **07 46 37.7 -1.7**
comp=Z,18nm,0.9s
GEYT Alibeck 37.29 283 P **P** **07 46 40.7 +1.1**
comp=Z,13nm,0.8s,baz=72,slow=4.8,SNR=18
GEYT LR LR 08 02 40.5
comp=Z,4µm,21.3s,baz=70,slow=37
PSI Prapat 37.38 192 P **P** **07 46 41.8 +1.2**
comp=Z,15nm,0.6s,baz=360,slow=7.8,SNR=8.4
PSI Prapat 37.38 192 P **P** **07 46 41.2 +0.6**
PSI pmax pmax
comp=Z,80nm,0.8s
PSI MLR MLR
comp=Z,3µm,21.0s
RPSI Rantau Prapat 37.49 192 P **P** **07 46 41.2 -0.2**
SBUM Sibu 37.49 170 P **P** **07 46 42.5 +1.1**
SBUM IAmb IAmb 07 46 44.5
comp=Z,54nm,1.0s
SBUM Sibu 37.49 170 P **P** **07 46 43.0 +1.6**
PET Petropavlovsk 37.58 52 *e*P **P** **07 46 43.0 +1.2**
PET *e* 07 48 11.4
PET *e*S **S** **07 52 30.7 -0.5**
PET pmax pmax
comp=Z,200nm,8.8s
PET pmax pmax
comp=Z,200nm,9.9s
PET MLR MLR
comp=Z,7µm,14.0s
PET MLR MLR
comp=Z,7µm,14.0s
KSM Kuching 38.25 174 P **P** **07 46 48.7 +0.8**
KSM IAmb IAmb 07 46 50.1
comp=Z,55nm,1.0s
KSM Kuching 38.25 174 P **P** **07 46 49.0 +1.2**
GSI Gunungsitoli 39.09 194 IAmb IAmb 07 47 08.9
comp=Z,49nm,0.8s
GSI IAMs_20 IAMs_20 08 03 28.2
comp=Z,4µm,21.0s
MNSI Mandailing Nat 39.25 191 P **P** **07 46 55.0 -1.2**
comp=Z,27nm,0.9s
PALK Pallekele 39.69 222 P **P** **07 47 00.5 +0.5**
comp=Z,3.8nm,0.6s,baz=110,slow=11,SNR=3.3
PALK Pallekele 39.69 222‖ *e*P **P** **07 47 00.2 +0.2**
PALK pmax pmax
comp=Z,10.0nm,1.1s
PALK Pallekele 39.69 222 P **P** **07 46 59.4 -0.6**
DSRI Dabo 40.06 183 P **P** **07 47 02.3 -0.6**
comp=Z,3µmcomp=Z,25nm,0.8s
KIRV Kirov 40.31 317 P **P** **07 47 04.2 -0.5**
comp=Z,18nm,0.6s,baz=86,slow=5.0,SNR=6.5
KIRV Kirov 40.31 317‖ *e*P **P** **07 47 03.1 -1.5**
TOLI2 Tolitoli 40.62 158 P **P** **07 47 06.5 -1.1**
MTKI Muara Teweh, K 41.22 167 P **P** **07 47 13.1 +0.5**
BELG Belogornoye 41.57 308 P **P** **07 47 14.4 -0.6**
comp=Z,13nm,0.8s,baz=304,slow=5.0,SNR=7.1
BELG Belogornoye 41.57 308 *ce*P **P** **07 47 14.3 -0.7**
BELG pmax pmax
comp=Z,5.0nm,1.1s
MRSI Marisa 41.57 156 P **P** **07 47 16.2 +0.8**
comp=Z,1µmcomp=Z,49nm,1.3s
GTOI Gorontalo 41.77 155 P **P** **07 47 16.1 -0.9**
comp=Z,667nmcomp=Z,30nm,0.9s
TPI Tanjungpandan 42.30 178 P **P** **07 47 21.3 -0.1**
comp=Z,389nmcomp=Z,34nm,1.0s
PRGR Permogore 42.33 322 *e*P **P** **07 47 21.0 -0.2**
PRGR pmax pmax
comp=Z,35nm,0.6s
PMBI Palembang 42.48 182 IAMs_20 IAMs_20 08 06 32.5
comp=Z,3µm,18.0s
BILL Bilibino 42.65 29 *ce*P **P** **07 47 23.9 +0.2**
BILL *e* 07 49 03.6
BILL *e*S **S** **07 53 49.3 +2.6**
BILL pmax pmax
comp=Z,39nm,1.3s
BILL MLR MLR
comp=Z,2µm,15.0s
BILL Bilibino 42.65 29 P **P** **07 47 24.2 +0.4**
BILL IAMs_20 IAMs_20 08 06 13.5
comp=Z,2µm,18.0s
APSI Ampana 42.80 157 P **P** **07 47 24.3 -1.1**
comp=Z,694nmcomp=Z,52nm,1.2s
LUWI Luwuk 43.27 156 P **P** **07 47 26.5 -2.7**
comp=Z,3µmcomp=Z,61nm,0.6s
JLN Jalan Bani Buh 43.41 260 P **P** **07 47 32.1 +1.7**
JLN P **P** **07 47 32.1 +1.7**
JLN S **S** **07 54 02.5 +3.6**
JLN S **S** **07 54 02.5 +3.6**
LHSI Lahat 43.43 184 P **P** **07 47 29.5 -1.0**
comp=Z,2µmcomp=Z,68nm,0.8s
WBK Wadi Bani Khal 43.49 261 P **P** **07 47 32.8 +1.7**
WBK P **P** **07 47 32.8 +1.7**
WBK S **S** **07 54 02.1 +2.1**
WBK S **S** **07 54 02.1 +2.1**
MAK Makhachkala 43.54 294 *e*P P 07 47 24.7 -6.5
MAK *e*S **S** **07 53 51.7 -8.6**
MAK pmax pmax
comp=Z,55nm,0.4s
BBKI Banjar Baru 43.68 168 P **P** **07 47 32.3 -0.3**
comp=Z,36nm,0.8s
BANOM Banah 43.75 267 *i* P **P** **07 47 34.8 +1.6**
SNR=5.8
BANOM Banah 43.75 267 P P 07 47 41.8 +8.6
BANOM P P 07 47 41.8 +8.6
SHME Shamm 43.81 268 P **P** **07 47 36.2 +2.6**
SHME Shamm 43.81 268 P **P** **07 47 36.5 +2.9**
SHME P **P** **07 47 36.5 +2.9**
SMDO Samad 43.94 263 P **P** **07 47 36.8 +1.9**
SNR=6.8
SMDO P **P** **07 47 36.8 +1.9**
SNR=6.8
SMDO S S 07 54 19.3 +13
SMDO S S 07 54 19.3 +13
MASF Masafi 44.15 267 P P 07 47 44.9 +8.5
MASF P P 07 47 44.9 +8.5
MSFE Esma-Masafi 44.15 267 P **P** **07 47 39.1 +2.7**
HOQ Hoqain 44.22 264 P P 07 47 47.0 +10
SNR=11
HOQ P P 07 47 47.0 +10
SNR=11
TTSI Tana Toraja 44.33 161 P **P** **07 47 38.4 +0.7**
comp=Z,51nm,1.1s
UOSS Minazif 44.33 266 P **P** **07 47 38.2 +0.3**
HATD Hatta, Dubai 44.45 266 *i* P **P** **07 47 40.9 +2.0**
SNR=6.5
SOHO SOHO 44.51 265 *i* P **P** **07 47 38.1 -1.2**
SNR=6.4
LWLI Liwa 44.58 183 P **P** **07 47 38.3 -1.6**
GROC Groznyy 44.67 295 *e*P **P** **07 47 39.8 -0.5**
GROC *e* 07 49 25.3
GROC *e*S **S** **07 54 11.4 -5.4**
GROC pmax pmax
comp=Z,54nm,1.1s
GROC MLR MLR
comp=Z,1µm,11.0s
NAZ Nazwa, Dubai 44.73 267 P **P** **07 47 43.4 +2.4**
NAZ Nazwa, Dubai 44.73 267 P P 07 47 49.3 +8.3
NAZ P P 07 47 49.3 +8.3
BSY Bisya 44.77 263 P **P** **07 47 43.4 +2.1**
SNR=7.6
BSY P **P** **07 47 43.4 +2.1**
SNR=7.6
FAQ Al Faqa, Dubai 44.91 266 P **P** **07 47 46.0 +3.6**
FAQ Al Faqa, Dubai 44.91 266 P P 07 47 50.7 +8.2
FAQ P P 07 47 50.7 +8.2
ARQ Araqi 44.96 264 P **P** **07 47 45.4 +2.5**
SNR=6.4
ARQ P **P** **07 47 45.4 +2.5**
SNR=6.4
ASUD Al Ashush, Dub 45.18 266 P **P** **07 47 46.4 +1.8**
MHTO MHTO 45.18 260 P **P** **07 47 45.5 +0.9**
SNR=26
MHTO P **P** **07 47 45.5 +0.9**
SNR=26
MHTO S **S** **07 54 24.5 -0.1**
MHTO S **S** **07 54 24.5 -0.1**
KLMR Klimovskoe 45.29 321 *e*P **P** **07 47 43.9 -1.1**
KLMR *e* 07 49 29.7
KLMR pmax pmax
comp=Z,110nm,1.4s
KLMR MLR MLR
comp=Z,3µm,10.0s
KLMR Klimovskoe 45.29 321 *e*P **P** **07 47 44.0 -1.1**
KLMR AMP 07 47 56.1
comp=Z,110nm,1.4s
KLMR *e*PP **PP** **07 49 29.8 -0.9**
KLMR *e*SS **SS** **07 57 49.2 +1.5**
KLMR *e*SS **SS** **07 57 49.2 +1.5**
KLMR LQ LQ 08 03 24.3
KLMR LQ LQ 08 03 24.3
KLMR LR LR 08 06 51.5
KLMR AMP 08 07 50.5
comp=Z,3µm,10.4s
SANI Sanana 45.30 152 P **P** **07 47 44.6 -1.0**
comp=Z,947nmcomp=Z,42nm,0.8s
VRH Novokhopyorsk 45.37 307 *e*P **P** **07 47 45.1 -0.7**
VRH pmax pmax
comp=Z,40nm,0.6s
VRH MLR MLR
comp=Z,1µm,10.0s
ZEI Tsey 46.12 295 *e*P **P** **07 47 51.4 -0.7**
ZEI pmax pmax
comp=Z,17nm,0.8s
KAPI Kappang 46.20 161 P **P** **07 47 51.9 -0.8**
comp=Z,30nm,1.1s,baz=302,slow=3.6,SNR=15
KBZ Khabaz 46.52 297 P **P** **07 47 55.1 +0.1**
comp=Z,3.4nm,0.8s,baz=121,slow=6.5,SNR=6.0
KBZ LR LR 08 09 04.7
comp=Z,3µm,18.9s,baz=76,slow=38
KBZ Khabaz 46.52 297‖ *e*P **P** **07 47 55.2 +0.3**
KBZ pmax pmax
comp=Z,12nm,1.4s
KIV Kislovodsk 46.60 297 *i* P P 07 48 04.6 +8.9
SNR=5.3
KIV Kislovodsk 46.60 297 *e*P **P** **07 47 55.9 +0.2**
KIV *e*S **S** **07 54 45.6 +0.8**
KIV pmax pmax
comp=Z,51nm,1.0s
KIV pmax pmax
comp=Z,137nm,3.5s
KIV MLR MLR
comp=Z,4µm,16.0s
KIV Kislovodsk 46.60 297 IAMs_20 IAMs_20 08 09 18.3
comp=Z,2µm,18.0s
LPSR Galich'ya Gora 46.78 309 *e*P **P** **07 47 55.5 -1.3**
LPSR pmax pmax
comp=Z,20nm,0.9s
LPSR MLR MLR
comp=Z,1µm,9.0s
AKH Akhalkalaki 46.86 293⇑ P P 07 48 06.5 +8.7
MOS Moscow 46.92 314 *e*P **P** **07 47 55.7 -2.2**
MOS *e* 07 49 43.4
MOS pmax pmax
comp=Z,51nm,0.8s
MOS MLR MLR
comp=Z,1µm,18.0s
VORD Divnogorie 46.92 307 *e*P **P** **07 47 56.3 -1.7**
VORD pmax pmax
comp=Z,8.0nm,0.8s
VSR Storozhevoye 46.94 307 *e*P **P** **07 47 57.0 -1.1**
VSR pmax pmax
comp=Z,30nm,0.5s
VSR MLR MLR
comp=Z,1µm,12.0s
UGM Wanagama 47.56 174 P **P** **07 48 03.2 -0.1**
APA Apatity 47.58 330⇓ *i* P P 07 48 08.1 +5.2
APA pmax pmax
comp=Z,9.0nm,1.0s
OBN Obninsk 47.63 313 P **P** **07 48 03.3 -0.1**
comp=Z,7.1nm,0.4s,baz=60,slow=12,SNR=3.0
OBN LR LR 08 09 29.0
comp=Z,504nm,18.2s,baz=78,slow=38
OBN Obninsk 47.63 313⇑ *e*P **P** **07 48 03.4 0.0**
OBN *e* 07 48 10.2
OBN *i* 07 49 54.0
OBN *e*S S 07 55 12.4 +14
OBN pmax pmax
comp=Z,12nm,0.4s
OBN MLR MLR
comp=Z,2µm,17.0s
MIB Mutribah 48.73 277 *e*P 07 48 11.0
SOC Sochi 48.76 297 *e*P **P** **07 48 08.5 -3.8**
SOC *e*S **S** **07 55 12.6 -2.6**
SOC *e*SS **SS** **07 58 40.8 -4.4**
SOC MLR MLR
comp=Z,2µm,18.0s
QRN Al-Qurain 48.80 276 *e*P 07 48 11.4
RDF Al-Radifah 48.99 276 *e*P 07 48 12.3
VALR Valaam 49.39 322 *e*P **P** **07 48 16.5 -0.4**
VALR pmax pmax
comp=Z,20nm,0.9s
KEV Kevo 49.73 333 IAMs_20 IAMs_20 08 11 19.0
comp=Z,2µm,18.0s
ANN Anapa 49.89 300 *e*P **P** **07 48 20.3 -0.6**
ANN *e**PP **pP** **07 48 23.7 -0.2**
ANN *e* 07 50 18.8
ANN *e*PPP PPP 07 51 12.7
ANN *e*S **S** **07 55 30.5 -0.5**
ANN pmax pmax
comp=Z,30nm,0.7s
ANN MLR MLR
comp=E,936nm,12.0s
ANN MLR MLR
comp=Z,1µm,13.0s
ANN MLR MLR
comp=N,1µm,12.0s
ARA0 ARCESS Array S 50.28 333 *e*P **P** **07 48 23.6 0.0**
ARCES ARCESS Array B 50.28 333 P **P** **07 48 23.5 -0.1**
comp=N,3.7nm,0.6s,baz=70,slow=8.1,SNR=18
ARCES LR LR 08 12 20.5
comp=N,2µm,18.9s,baz=75,slow=39
ARCES ARCESS Array B 50.28 333 P **P** **07 48 23.3 -0.3**
HAMF Hammerfest 50.73 335 *e*P **P** **07 48 27.2 +0.2**
KTK1 Kautokeino 51.17 333 *e*P **P** **07 48 30.4 +0.1**
SPA0 Spitsbergen Ar 51.47 345 *e*P **P** **07 48 33.6 +1.2**
SPITS Spitsbergen Ar 51.47 345 P **P** **07 48 33.2 +0.7**
comp=N,7.3nm,0.8s,baz=147,slow=6.0,SNR=11
FINES FINESS Array B 51.63 323 P **P** **07 48 33.1 -0.7**
comp=N,4.3nm,0.6s,baz=87,slow=8.4,SNR=14
FINES LR LR 08 11 43.7
comp=N,2µm,19.0s,baz=76,slow=38
SOEI Soe 51.96 157 P **P** **07 48 35.3 -1.6**
JETT Jettan, Norway 52.04 334 *e*P **P** **07 48 37.1 +0.3**
VSU Vasula 52.09 319 *e*P **P** **07 48 37.4 +0.1**
VSU Vasula 52.09 319‖ *e*P **P** **07 48 37.4 +0.1**
VSU pmax pmax
comp=Z,54nm,1.2s
BATI Baumata 52.21 158 P **P** **07 48 37.1 -1.6**
comp=Z,14nm,0.3s,baz=297,slow=4.5,SNR=1.9
TRO Tromso 52.53 334 *e*P **P** **07 48 40.5 +0.1**
MNK Minsk 52.64 314 *i* P **P** **07 48 40.8 -0.7**
comp=E,2.0nm,0.8s
MNK *i* P **P** **07 48 40.8 -0.7**
comp=N,34nm,0.8s
MNK *i* P **P** **07 48 40.8 -0.7**
comp=Z,10.0nm,0.8s
MNK *i* PcP **PcP** **07 49 50.5 -0.8**
MNK *i* PP PP 07 51 01.1 +21
MNK *i* PPP PPP 07 51 43.4
MNK *i* ScP ScP 07 54 02.1 +13
MNK *i* PcS PcS 07 54 23.1 +34
MNK *i* S **S** **07 56 10.5 +1.7**

MNK *i* ScS **ScS** **07 58 30.7 -0.6**
MNK *i* SS **SKiKP** **08 00 09.4 +6.8**
MNK *i* SSS SSS 08 01 08.4
MNK *i* LQ LQ 08 05 38.0
MNK *i* LR LR 08 08 12.7
MNK *i* LRM MLR 08 12 15.4
comp=N,572nm,17.1s
MNK *i* LRM MLR 08 12 19.3
comp=Z,827nm,17.1s
MNK *i* LRM MLR 08 12 24.6
comp=E,162nm,17.1s
TNA Tin City **52.91 31** P **07 48 43.1**
baz=285
IDID Didziasalis **53.02 315** *e*P **P** **07 48 44.3 +0.1**
AKASG Malin Array Be **53.11 309** P **P** **07 48 44.0 -0.9**
comp=E,4.2nm,0.6s,baz=58,slow=7.2,SNR=18
AKASG LR LR 08 12 56.7
comp=E,1μm,18.6s,baz=25,slow=38
AKBB Malin Array Si **53.11 309**‖ *e*P **P** **07 48 44.0 -0.9**
AKBB Malin Array Si **53.11 309** IAmb IAmb 07 48 56.1
comp=Z,30nm,1.1s
NACGM Naroch **53.12 315** *i* P P 07 48 52.9 +7.9
NACGM *i* P P 07 48 52.9 +7.9
NACGM *i* P P 07 48 52.9 +7.9
NACGM *i* PP PP 07 50 53.0 +8.5
NACGM *i* PPP PPP 07 51 58.8
NACGM *i* S S 07 56 32.2 +17
NACGM *i* SS **SKiKP** **08 00 02.5 -0.6**
NACGM *i* SSS SSS 08 01 53.8
NACGM *i* LQ LQ 08 07 45.5
NACGM *i* LR LR 08 11 21.8
ISAL Salakas **53.27 316** *e*P **P** **07 48 45.9 -0.1**
IIGN Ignalina **53.28 315** *e*P **P** **07 48 46.0 -0.2**
RAYN Ar Rayn **53.34 272** *i* P **P** **07 48 49.1 +1.9**
SNR=7.4
RAYN Ar Rayn **53.34 272** P **P** **07 48 49.4 +2.3**
RAYN pmax pmax
comp=Z,15nm,0.9s
RAYN MLR MLR
comp=Z,2μm,21.0s
RAYN Ar Rayn **53.34 272** P **P** **07 48 49.4 +2.3**
RAYN IAMs_20 IAMs_20 08 13 38.8
comp=Z,2μm,21.0s
SOCY Socotra **53.59 254** P **P** **07 48 47.5 -1.6**
N2IH Innhavet **54.03 332** *e*P **P** **07 48 51.4 -0.1**
RDOG Red Dog Mine **54.09 28** IAMs_20 IAMs_20 08 09 49.9
comp=Z,2μm,18.0s
ANM Nome **54.23 32** P **P** **07 48 52.3 -0.7**
ANM pmax pmax
comp=Z,11nm,1.2s
ANM MLR MLR
comp=Z,1μm,18.0s
ANM Nome **54.23 32** P **P** **07 48 52.3 -0.7**
ANM Nome **54.23 32** P 07 48 52.6
baz=288
STEI Steigen **54.29 332** *e*P **P** **07 48 52.8 -0.5**
BR131 Keskin Array S **54.43 295** *de*P **P** **07 48 55.0 0.0**
BRTR Keskin Array B **54.43 295** P **P** **07 48 56.0 +1.0**
comp=Z,2.5nm,0.8s,baz=77,slow=7.7,SNR=10
BRTR Keskin Array B **54.43 295** P **P** **07 48 55.3 +0.3**
PABE Paberze **54.45 316** *e*P **P** **07 48 54.4 -0.2**
FAUS Fauske **54.45 332** *e*P **P** **07 48 55.1 +0.6**
SORM Soroca **54.56 306** ⇑P **P** **07 48 55.0 -0.6**
SORM Soroca **54.56 306** ⇑P **P** **07 48 55.0 -0.6**
LOF Lofoten **54.83 333** *e*P **P** **07 48 57.3 0.0**
A21K Barrow **55.08 23** IAmb IAmb 07 49 01.4
comp=Z,34nm,0.8s
A21K IAMs_20 IAMs_20 08 12 13.8
comp=Z,2μm,18.0s
A21K Barrow **55.08 23** P 07 48 59.4
baz=291,SNR=20
NBB17 Glomfjord BYr **55.13 331** *e*P **P** **07 48 57.6 -1.8**
MOR8 Moi Rana **55.17 330** *e*P **P** **07 48 58.8 -1.0**
NOR Nord **55.40 351** *i* P P 07 49 08.7 +7.5
NOR IAmb IAmb 07 49 09.2
comp=Z,17nm,0.8s
NOR Nord **55.40 351** *i* P P 07 49 08.7 +7.5
NOR pmax pmax
comp=Z,17nm,0.8s
TPGR Topolog **55.81 303** ⇑P **P** **07 49 04.9 +0.2**
MMAI Mount Meron Ar **56.20 287** P **P** **07 49 09.2 +1.4**
comp=Z,1.0nm,0.2s,baz=68,slow=9.4,SNR=1.9
TESR Tescani **56.27 305** ⇑P **P** **07 49 07.3 -0.7**
BIZ Bicaz **56.43 306** ‖P **P** **07 49 10.4 +1.3**
VRI Vrincioaia **56.48 304** ⇑P **P** **07 49 10.3 +0.8**
VRI Vrincioaia **56.48 304** ⇑P **P** **07 49 10.3 +0.8**
LVV L'vov **56.53 310** *e*P **P** **07 49 09.7 -0.1**
PLOR Plostina **56.54 304** ⇑P **P** **07 49 10.5 +0.5**
PLOR Plostina **56.54 304** ⇑P **P** **07 49 10.5 +0.5**
BUR08 Bucovina Ar. S **56.71 307** P **P** **07 49 10.8 -0.4**
BURAR Bucovina Array **56.71 307** ⇑P **P** **07 49 09.6 -1.6**
BURAR Bucovina Array **56.71 307** ⇑P **P** **07 49 09.6 -1.6**
BURAR Bucovina Array **56.71 307** P **P** **07 49 10.4 -0.8**
NSS Namsos **56.74 329** *e*P **P** **07 49 11.3 +0.3**
MLR Muntele Rosu **57.14 304** P **P** **07 49 14.5 +0.1**
comp=Z,3.1nm,0.6s,baz=121,slow=23,SNR=4.3
MLR Muntele Rosu **57.14 304** ⇑P **P** **07 49 15.1 +0.8**
MLR Muntele Rosu **57.14 304** P **P** **07 49 14.8 +0.5**
MLR IAmb IAmb 07 49 32.6
comp=Z,27nm,1.4s
MTN Manton Dam **57.15 151** P **P** **07 49 13.8 -0.7**
MTN IAmb IAmb 07 49 24.3
comp=Z,56nm,1.3s
DOPR Dopca **57.29 305** ⇑P **P** **07 49 15.7 +0.5**
KWP Kalwaria Pacla **57.39 310** P **P** **07 49 16.1 +0.2**
KWP Kalwaria Pacla **57.39 310** IAMs_20 IAMs_20 08 17 08.3
comp=Z,2μm,19.0s
VOIR **57.73 305** ⇑P **P** **07 49 18.1 -0.4**
VOIR **57.73 305** ⇑P **P** **07 49 18.1 -0.4**
UZH Uzhgorod **58.06 309** *e*P **P** **07 49 24.0 +3.4**
UZH *e* 07 49 29.4
IMAR Indian Mountai **58.21 28** P **P** **07 49 21.1 -0.3**
NC405 NORSAR Array S **58.26 325** P **P** **07 49 20.3 -1.5**
TOLK Toolik Lake Re **58.41 25** P **P** **07 49 23.2 +0.4**
TOLK IAmb IAmb 07 49 34.1
comp=Z,22nm,0.9s
TOLK IAMs_20 IAMs_20 08 13 45.8
comp=Z,2μm,18.0s
TOLK Toolik Lake Re **58.41 25** P 07 49 23.1
baz=299,SNR=12
NB201 NORSAR Array S **58.47 325** P **P** **07 49 22.0 -1.3**
NC602 NORSAR Array S **58.50 325** *e*P **P** **07 49 22.4 -1.0**
NB2 NORSAR Subarra **58.51 325** P **P** **07 49 21.9 -1.7**
baz=63,slow=6.9
NOA NORSAR Array B **58.51 325** P **P** **07 49 22.4 -1.2**
comp=Z,5.6nm,0.7s,baz=63,slow=6.9,SNR=24
NOA LR LR 08 15 12.1
comp=Z,1μm,20.1s,baz=65,slow=37
DAG Danmarks Havn **58.83 347** *i* P **P** **07 49 29.7 +4.1**
DAG IAmb IAmb 07 49 32.7
comp=Z,9.5nm,0.8s
DAG Danmarks Havn **58.83 347** P P 07 49 31.0 +5.5
OJC Ojcow **58.84 311** *e*P **P** **07 49 25.1 -0.9**
OJC Ojcow **58.84 311** P **P** **07 49 25.9 -0.1**
COLD Coldfoot **58.88 26** P 07 49 26.4
baz=299,SNR=21
KNRA Kununurra **58.94 155** P **P** **07 49 26.9 -0.1**
DOMB Dombas **58.99 327** *e*P **P** **07 49 27.1 +0.2**
GZR Gura Zlata **59.19 305** ‖P **P** **07 49 28.5 -0.1**
GZR Gura Zlata **59.19 305** ‖P **P** **07 49 28.5 -0.1**
KECS Kecovo **59.20 309** *e*P P 07 49 19.6 -9.0
KECS *e* 07 49 22.7
KECS pmax pmax
comp=N,28nm,0.3s
OSL Oslo **59.22 324** *e*P **P** **07 49 28.6 +0.1**
BSD Bornholm Skovb **59.35 318** *e*P **P** **07 49 25.5 -4.0**
BSD IAmb IAmb 07 49 28.4
comp=Z,16nm,0.7s
BSD Bornholm Skovb **59.35 318** *e*P **P** **07 49 25.5 -4.0**
BSD pmax pmax
comp=Z,16nm,0.7s
HERR Herculane **59.65 305** ⇑P **P** **07 49 31.9 +0.2**
CHUM Lake Minchumin **59.73 30** P 07 49 32.3
baz=299,SNR=6.3
MLY Manley **59.76 29** IAmb IAmb 07 49 42.9
comp=Z,20nm,0.9s
MLY Manley **59.77 29** P 07 49 32.4
baz=300,SNR=8.1
KONO Kongsberg **59.86 324** *ce*P **P** **07 49 33.7 +0.8**
KONO pmax pmax
comp=Z,34nm,1.7s
KONO Kongsberg **59.86 324** *e*P **P** **07 49 33.3 +0.5**
SKAR Skarslia **59.94 326** *e*P **P** **07 49 33.3 -0.2**
OKC Ostrava-Krasne **59.97 312** AMS AMS 08 15 50.0
comp=Z,2μm,10.8s
BPAW Bear Paw Mtn. **60.13 30** IAmb IAmb 07 49 45.6
comp=Z,15nm,1.0s
BPAW IAMs_20 IAMs_20 08 18 26.6
comp=Z,2μm,19.0s
BPAW Bear Paw Mtn. **60.13 30** P 07 49 34.7
baz=300
MDVR Moldovita **60.14 305** ⇑P **P** **07 49 34.2 -1.0**
VTS Vitosha **60.17 302** ⇑P **P** **07 49 35.4 -0.1**
VTS Vitosha **60.17 302** ⇑P **P** **07 49 35.4 -0.1**
VTS Vitosha **60.17 302** P **P** **07 49 35.8 +0.3**
VTS IAmb IAmb 07 50 03.6
comp=Z,26nm,0.9s
VYHS Vyhne **60.18 310** *e*P **P** **07 49 33.9 -1.4**
VYHS pmax pmax
comp=Z,43nm,1.4s
VYHS Vyhne **60.18 310** *e*P **P** **07 49 33.9 -1.4**
I23K Minto, Yukon-K **60.21 28** IAmb IAmb 07 49 45.6
comp=Z,16nm,0.8s
I23K Minto, Yukon-K **60.21 28** P 07 49 35.4
baz=301,SNR=7.5
EUNU Eureka **60.25 3** IAmb IAmb 07 49 44.0
comp=Z,18nm,0.7s
PPLA Purkeypile **60.26 31** IAmb IAmb 07 49 56.3
comp=Z,28nm,1.0s
PPLA Purkeypile **60.26 31** P 07 49 35.9
baz=300
FITZ Fitzroy Crossi **60.27 159** P **P** **07 49 35.1 -1.0**
comp=Z,29nm,1.0s,baz=352,slow=6.2,SNR=35
FITZ Fitzroy Crossi **60.27 159** P **P** **07 49 35.9 -0.3**
FITZ IAmb IAmb 07 49 36.7
comp=Z,26nm,0.9s
MORC Moravsky Berou **60.34 312** *e*P **P** **07 49 35.9 -0.5**
MORC *e* 07 49 47.6
MORC *e*PP PP 07 52 00.1 +11
MORC Moravsky Berou **60.34 312** P **P** **07 49 36.4 0.0**
MORC Moravsky Berou **60.34 312** IAmb IAmb 07 49 48.6
comp=Z,15nm,0.9s
KTH Kantishna Hill **60.43 30** P **P** **07 49 37.1 +0.3**
NEA2 Nenana **60.60 29** IAmb IAmb 07 49 47.8
comp=Z,24nm,1.2s
NEA2 IAMs_20 IAMs_20 08 19 14.0
comp=Z,1μm,20.0s
NEA2 Nenana **60.60 29** P 07 49 37.9
baz=301
LLD Lille Linde **60.63 319** *i* P **P** **07 49 35.4 -2.9**
LLD Lille Linde **60.63 319** *i* P **P** **07 49 35.3 -2.9**
KRLC Kraliky **60.64 312** P **P** **07 49 38.2 -0.3**
KRLC Kraliky **60.64 312** AMS AMS 08 16 10.0
comp=Z,1μm,13.5s
BMAR Burnt Mountain **60.64 25** P **P** **07 49 39.0 +0.8**
RABL Rabaul **60.65 125** P **P** **07 49 40.0 +1.1**
BWN Browne **60.67 29** IAMs_20 IAMs_20 08 18 00.5
comp=Z,2μm,20.0s
BOVS Bovan **60.68 304** ⇑P **P** **07 49 38.2 -0.6**
JAVC Velka Javorina **60.69 311** *e*P **P** **07 49 39.5 +0.6**
JAVC *e* 07 49 51.3
JAVC *e*PP PP 07 52 03.4 +11
MDM Murphy Dome **60.72 28** P **P** **07 49 39.2 +0.5**
MDM IAmb IAmb 07 49 58.8
comp=Z,23nm,1.3s
TRF Thorofare Moun **60.73 30** P 07 49 39.3
baz=301
DPC Dobruska-Polom **60.77 313** *e*P **P** **07 49 39.4 0.0**
DPC *e* 07 49 44.9
DPC MLR MLR
comp=Z,2μm,11.5s
DPC Dobruska-Polom **60.77 313** *e*P **P** **07 49 39.4 0.0**
DPC *e*pP **sP** **07 49 44.9 +1.4**
DPC AMS AMS 08 17 20.0
comp=Z,2μm,11.5s
DBG Daneborg **60.82 346** *i* P **P** **07 49 43.8 +4.5**
DBG IAmb IAmb 07 49 48.0
comp=Z,6.8nm,1.2s
UPC Upice **60.87 313** P **P** **07 49 40.1 +0.1**
TCOL CIGO, UAF Yank **60.90 28** IAmb IAmb 07 49 51.0
comp=Z,34nm,0.9s
TCOL IAMs_20 IAMs_20 08 18 10.7
comp=Z,2μm,18.0s
TCOL CIGO, UAF Yank **60.90 28** P 07 49 40.1
baz=302,SNR=10
COLA College **60.90 28***d* *i*P **P** **07 49 40.0 +0.1**
COLA pmax pmax
comp=Z,28nm,1.2s
COLA College **60.90 28** P **P** **07 49 40.2 +0.3**
COLA College **60.90 28** IAMs_20 IAMs_20 08 18 10.7
comp=Z,2μm,18.0s
COLA College **60.90 28** P 07 49 39.9
baz=302
FYU Fort Yukon **60.90 26** IAMs_20 IAMs_20 08 18 06.8
comp=Z,2μm,19.0s
POKR Poker Plat Res **60.92 28** IAMs_20 IAMs_20 08 17 08.4
comp=Z,2μm,19.0s
POKR Poker Plat Res **60.92 28** P 07 49 40.2
baz=302
SKT Skwentna **60.99 32** P 07 49 40.5
baz=300
WRH Wood River Hil **61.03 29** IAmb IAmb 07 49 51.8
comp=Z,15nm,0.9s
WRH IAMs_20 IAMs_20 08 18 31.2
comp=Z,2μm,19.0s
CCB Clear Creek Bu **61.04 28** IAMs_20 IAMs_20 08 18 15.5
comp=Z,2μm,18.0s
ODD1 Odda **61.05 325** *e*P **P** **07 49 40.8 -0.3**
MCK McKinley **61.10 29** IAMs_20 IAMs_20 08 18 13.2
comp=Z,2μm,18.0s
MCK McKinley **61.10 29** P 07 49 41.2
baz=302
SPCR Spurr Chakacha **61.10 33** P 07 49 41.3
baz=300
VRAC Vranov **61.11 312** P **P** **07 49 41.2 -0.5**
comp=Z,8.1nm,0.7s,baz=65,slow=7.8,SNR=6.9
VRAC Vranov **61.11 312** *e*P **P** **07 49 41.3 -0.3**
VRAC *e* 07 49 53.1
MODS Modra-Piesok **61.15 310** *e*P **P** **07 49 42.2 +0.2**
MODS pmax pmax
comp=Z,21nm,1.1s
MODS Modra-Piesok **61.15 310** *e*P **P** **07 49 42.2 +0.2**
MODS *e* 07 49 53.3
CUT Chulitna **61.28 31** P 07 49 42.1
baz=301
STIP Stip **61.30 302** *i* Pn **P** **07 49 41.7 -1.3**
IL31 **61.30 28** IAmb IAmb 07 49 52.8
comp=Z,16nm,0.8s
ILAR Eielson Array **61.30 28** P **P** **07 49 41.9 -0.9**
comp=Z,8.3nm,0.9s,baz=291,slow=5.3,SNR=53
ILAR LR LR 08 17 40.0
comp=Z,1μm,18.6s,baz=331,slow=37
ILAR Eielson Array **61.30 28** P **P** **07 49 41.6 -1.1**
RND Reindeer **61.30 30** IAmb IAmb 07 49 57.9
comp=Z,13nm,0.9s
RND IAMs_20 IAMs_20 08 18 13.5
comp=Z,2μm,19.0s
KRUC Moravsky **61.34 311** *e*P **P** **07 49 42.9 -0.3**
KRUC *e* 07 49 54.6
KRUC *e*PP PP 07 52 08.7 +11
MORH Mrgy, Hungar **61.37 308** ⇑P **P** **07 49 42.9 -0.5**
PRP Porcupine Dome **61.38 27** IAmb IAmb 07 50 11.5
comp=Z,26nm,1.3s
PRP IAMs_20 IAMs_20 08 18 11.4
comp=Z,2μm,19.0s
PRP Porcupine Dome **61.38 27** P 07 49 43.3
baz=303
HDA Harding Lake **61.48 28** P 07 49 43.2
baz=303
HDA P 07 49 43.2
baz=303
DIVS Divibare **61.55 305** IAmb IAmb 07 49 57.0
comp=Z,18nm,1.1s
SNART Snartemo **61.57 324** *e*P **P** **07 49 44.9 +0.3**
SUA Susitna One **61.57 32** P 07 49 44.1
baz=301,SNR=5.2
WAT2 Susitna Watana **61.65 30** P 07 49 43.8
baz=302
PVCC Panska Ves **61.67 314** AMS AMS 08 17 50.0
comp=Z,2μm,15.1s
TREC Trest **61.75 312** *e*P **P** **07 49 45.8 -0.2**
TREC Trest **61.75 312** *e*P **P** **07 49 45.8 -0.2**
PMG Port Moresby **61.78 133** P **P** **07 49 45.8 -0.6**
comp=Z,8.7nm,0.2s,baz=220,slow=19,SNR=3.4
PMG Port Moresby **61.78 133**‖ *e*P **P** **07 49 46.3 -0.2**
PMG pmax pmax
comp=Z,28nm,1.0s
BRG Berggiesshubel **61.85 314** *e*P **P** **07 49 45.9 -0.7**
BRG Amp 07 49 48.5
comp=Z,7.7nm,1.1s
BRG *ex* x 07 49 57.8
BRG Amp 07 49 59.4
comp=Z,31nm,1.4s
BRG Amp 08 19 30.0
comp=Z,2.0nm,13.1s
BRG Amp 08 19 34.0
comp=E,1.0nm,13.8s
BRG Amp 08 19 57.0
comp=N,1.5nm,16.5s
PRU Pruhonice **61.95 313** *e*P **P** **07 49 47.1 -0.2**
PRU MLR MLR
comp=Z,2μm,10.7s
PRU Pruhonice **61.95 313** *e*P **P** **07 49 47.1 -0.2**
PRU AMS AMS 08 17 50.0
comp=Z,2μm,10.7s
PRA Prague **61.97 313** AMS AMS 08 18 00.0
comp=Z,2μm,16.6s
CLL Collm **62.16 315** *e*P **P** **07 49 48.0 -0.6**
comp=Z,10.0nm,0.7s
CLL *e* 07 49 59.0
comp=Z,22nm,0.9s
CLL *e*SS SS 08 02 30.0 +14
CLL LmH 08 14 00.0
comp=N,2μm,19.6s
CLL LmH 08 14 00.0
comp=E,1μm,19.1s
CLL Collm **62.16 315** *e*P **P** **07 49 48.0 -0.6**
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm **62.16 315** IAmb IAmb 07 50 00.3
comp=Z,21nm,0.9s
PMR Palmer **62.16 32** IAmb IAmb 07 50 01.0
comp=Z,21nm,1.0s
PMR Palmer **62.16 32** P 07 49 48.0
baz=302
RC01 Rabbit Creek A **62.19 32** P 07 49 48.5
baz=302
CONA Conrad Observa **62.20 311** *e*P **P** **07 49 48.9 -0.2**
comp=Z,4.2nm,0.6s
NEEM North Greenlan **62.26 355** *i* P P 07 49 56.4 +7.1
NEEM IAmb IAmb 07 49 57.5
comp=Z,54nm,0.8s
PSA00 Pilbara Seismi **62.27 166** P **P** **07 49 47.7 -1.9**
PSA00 IAmb IAmb 07 49 50.6
comp=Z,35nm,1.1s
PSA00 Pilbara Seismi **62.27 166** P **P** **07 49 49.5 -0.2**
PSA00 IAmb IAmb 07 50 01.2
comp=Z,9.0nm,0.8s
SML Sawmill **62.37 31** P 07 49 49.2
baz=303
BRSE Bradley Lake S **62.48 34** P 07 49 49.9
baz=302
KNK Knik Glacier **62.53 32** P 07 49 50.4
baz=303
IDI Anoyia **62.65 294** P **P** **07 49 51.1 -1.2**
comp=Z,2.0nm,0.4s,baz=50,slow=6.2,SNR=2.7
IDI Anoyia **62.65 294** ⇑P P 07 49 59.7 +7.4
CKRC Cesky Krumlov **62.66 312** *e*P **P** **07 49 51.6 -0.5**
CKRC AMS AMS 08 17 30.0
comp=Z,1μm,16.5s
SCRK Sand Creek **62.80 28** IAmb IAmb 07 50 02.5
comp=Z,23nm,1.0s
SCRK Sand Creek **62.80 28** P 07 49 51.9
baz=305,SNR=11
PAX Paxson **62.83 29** P 07 49 52.7
baz=305
PDG Podgorica **62.84 304** ⇑P **P** **07 49 52.4 -0.9**
PDG Podgorica **62.84 304** P **P** **07 49 52.6 -0.7**
PDG IAmb IAmb 07 50 03.7
comp=Z,19nm,0.8s
SEW Seward **62.84 33** P 07 49 52.2
baz=303
KHC Kasperske Hory **62.92 313**‖ *i*P **P** **07 49 54.0 +0.2**
KHC pmax pmax
comp=Z,16nm,0.9s
KHC Kasperske Hory **62.92 313** *e*P **P** **07 49 53.4 -0.4**
KHC *ex* x 07 50 03.0
KHC AMS AMS 08 17 40.0
comp=Z,2μm,13.3s
KHC Kasperske Hory **62.92 313** IAmb IAmb 07 50 06.1
comp=Z,20nm,1.2s
DOT Dot Lake **62.96 28** P **P** **07 49 52.6 -1.3**
DOT IAmb IAmb 07 50 02.1
comp=Z,14nm,0.7s
GEC2 GERESS Array S **62.99 312** IAmb IAmb 07 50 06.5
comp=Z,19nm,1.2s
GERES GERESS Array B **62.99 312** P **P** **07 49 53.4 -1.0**
comp=Z,2.5nm,0.7s,baz=60,slow=7.9,SNR=12
GERES GERESS Array B **62.99 312** P **P** **07 49 53.9 -0.5**
NKC Novy Kostel **63.00 314** AMS AMS 08 19 30.0
comp=Z,2μm,13.6s
M24K Tolsona, Glenn **63.05 30** P 07 49 54.2
baz=304,SNR=5.4
GROS Grobnik **63.14 309** *i* P **P** **07 49 54.2 -1.2**
MOA Molln **63.17 311** *e*P **P** **07 49 55.1 -0.4**
comp=Z,2.0nm,0.4s
SOKA Soboth **63.31 310** *e*P **P** **07 49 55.7 -0.8**
comp=Z,6.0nm,0.8s
EGAK Eagle **63.31 26** IAmb IAmb 07 50 05.6
comp=Z,13nm,1.0s
EGAK Eagle **63.32 26** P 07 49 55.9
baz=307
INK Inuvik **63.43 21** P **P** **07 49 56.2 -0.6**
comp=Z,11nm,0.7s,baz=327,slow=7.4,SNR=43
INK Inuvik **63.43 21** IAmb IAmb 07 50 05.3
comp=Z,19nm,0.9s
K27K Chicken **63.45 27** IAmb IAmb 07 50 07.7
comp=Z,21nm,0.9s
K27K Chicken **63.45 27** P 07 49 57.2
baz=307
COEN Coen **63.45 139** P **P** **07 49 57.0 -0.6**
COEN IAmb IAmb 07 49 58.1
comp=Z,16nm,0.9s
KLU Klutina **63.50 31** P 07 49 57.5
baz=305
OBKA Obir **63.68 310** *e*P **P** **07 49 58.8 -0.2**
comp=Z,4.8nm,0.8s
EPYK Eagle Plains **63.76 24** IAmb IAmb 07 50 07.3
comp=Z,19nm,1.1s
EPYK Eagle Plains **63.76 24** P 07 49 58.8
baz=310
BOJS Bojanci **63.78 308** *i* P **P** **07 49 58.8 -0.7**
VISS Visnje **63.87 309** *i* P **P** **07 49 59.6 -0.5**
N25K Chitina, Valde **63.95 30** P 07 50 00.2
baz=306,SNR=5.3
GRA1 Grafenberg Arr **63.96 314** IAMs_20 IAMs_20 08 19 29.7
comp=Z,2μm,22.0s
GRF Grafenberg Arr **63.96 314** *e*P **P** **07 50 01.0 +0.3**
comp=Z,22nm,1.1s,baz=61,slow=5.8
GRFO Grafenberg **63.96 314** IAMs_20 IAMs_20 08 19 29.8
comp=Z,2μm,22.0s
TULEG Thule **63.96 359** *i* P P 07 50 06.3 +6.0
TULEG IAmb IAmb 07 50 07.1
comp=Z,17nm,0.8s
TULEG Thule **63.96 359** P **P** **07 50 02.0 +1.7**
TULEG IAmb IAmb 07 50 07.2
comp=Z,21nm,0.8s
KBA Koelnbreinsper **64.10 311** *i* P **P** **07 50 01.5 -0.4**
comp=Z,6.7nm,0.5s
KBA Koelnbreinsper **64.10 311** P **P** **07 50 01.4 -0.4**
EYAK Cordova Ski Ar **64.11 32** P 07 50 01.7
baz=305
BCAR Beaver Creek A **64.13 28** P **P** **07 50 00.8 -0.8**
MYKA Terra Mystica **64.16 310** *e*P **P** **07 50 01.7 -0.4**
comp=Z,5.9nm,0.7s
BMRM Bremner River **64.32 31** P 07 50 02.6
baz=306
GLB Gilahina Butte **64.35 30** IAmb IAmb 07 50 11.1
comp=Z,39nm,1.3s
GLB IAMs_20 IAMs_20 08 20 49.1
comp=Z,2μm,20.0s
ZOU Zoufplan **64.59 310** IAmb IAmb 07 50 16.2
comp=Z,38nm,1.4s
MCARA McCarthy VSAT **64.69 30** P **P** **07 50 04.8 -0.5**
MCARA McCarthy VSAT **64.69 30** P 07 50 05.5
baz=307
ABTA Abfaltersbach **64.76 311** P **P** **07 50 04.7 -1.4**
comp=Z,4.8nm,0.6s
WRAB Tennant Creek **64.85 151***c* *i*P **P** **07 50 05.6 -1.1**
WRAB pmax pmax
comp=Z,58nm,1.0s
WRAB Tennant Creek **64.85 151** P **P** **07 50 06.1 -0.6**
WRA Warramunga Arr **64.85 151** P **P** **07 50 05.5 -1.2**
comp=Z,34nm,0.9s,baz=347,slow=7.1,SNR=109
WRA LR LR 08 19 46.5
comp=Z,346nm,21.7s,baz=305,slow=37
WRA Warramunga Arr **64.85 151** P **P** **07 50 05.2 -1.5**

STAL STALIGIAL 64.90 310 P **P** 07 50 06.0 -0.9
STAL IAmb IAmb 07 50 17.9
comp=Z,27nm,1.0s
RES Resolute Bay 64.98 6 P **P** 07 50 06.3 -0.6
comp=Z,1.9nm,0.8s,baz=358,slow=6.6,SNR=7.0
RES Resolute Bay 64.98 6 IAmb IAmb 07 50 27.9
comp=Z,16nm,1.3s
WATA Walderalm 64.99 312 *e*P **P** 07 50 07.0 -0.7
comp=Z,10nm,1.0s
WTTA Wattenberg 65.00 312 *e*P **P** 07 50 07.2 -0.5
comp=Z,10nm,0.6s
WTTA Wattenberg 65.00 312 P **P** 07 50 07.3 -0.5
C36M Paulatuk 65.10 18 P **P** 07 50 06.9 -0.8
C36M Paulatuk 65.10 18 P 07 50 07.4
baz=319
TGL Tana Glacier 65.15 30 P **P** 07 50 07.2 -1.1
MOTA Moosalm 65.26 312 *e*P **P** 07 50 08.1 -1.3
comp=Z,12nm,0.9s
SQTA Sankt Quirin 65.27 312 *e*P **P** 07 50 08.9 -0.5
comp=Z,8.4nm,1.0s
SUMG Summit 65.34 349 *i* P P 07 50 15.9 +6.0
SUMG IAmb IAmb 07 50 22.2
comp=Z,13nm,0.8s
SUMG Summit 65.34 349 P **P** 07 50 08.6 -1.2
SUMG pmax pmax
comp=Z,40nm,1.3s
SUMG MLR MLR
comp=Z,1μm,20.0s
SUMG Summit 65.34 349 P **P** 07 50 08.6 -1.2
RETA Reutte 65.38 312 *e*P **P** 07 50 13.0 +2.9
comp=Z,4.7nm,0.8s
BARN Barnard Glacie 65.41 30 IAMs_20 IAMs_20 08 19 02.1
comp=Z,1μm,20.0s
CTI Castel Tesino 65.64 310 IAmb IAmb 07 50 22.8
comp=Z,13nm,1.0s
FETA Feichten 65.65 312 *e*P **P** 07 50 10.8 -1.2
comp=Z,8.9nm,1.1s
DAVA Damuels 65.99 312 *e*P **P** 07 50 13.7 -0.4
comp=Z,3.4nm,0.8s
TIP Timpagrande 66.14 302 ⇑P P 07 50 20.0 +4.9
BTNL Ternell 66.23 317 *d*P **P** 07 50 14.7 -0.7
BTNL *dx* x 07 50 24.4
BTNL *d*PcP **PcP** 07 50 43.7 -1.8
DAVOX Davos/Dischmat 66.27 312 P **P** 07 50 14.6 -1.3
comp=Z,5.0nm,0.7s,baz=94,slow=8.7,SNR=8.6
BFO Black Forest 66.29 314 IAMs_20 IAMs_20 08 20 57.6
comp=Z,1μm,21.0s
NRCA Norcia 66.49 307 IAmb IAmb 07 50 44.1
comp=Z,19nm,0.9s
WLF Walferdange 66.74 316 IAMs_20 IAMs_20 08 20 32.2
comp=Z,2μm,20.0s
TUE Stuetta 66.75 312 IAmb IAmb 07 50 30.5
comp=Z,18nm,1.0s
TUE IAMs_20 IAMs_20 08 25 06.7
comp=Z,2μm,19.0s
BCLA Clavier 66.76 317 *d*P **P** 07 50 18.1 -0.7
BCLA *dx* x 07 50 27.2
BCLA *d*PcP **PcP** 07 50 46.7 -1.0
BMRD Maredsous 67.11 317 *d*P **P** 07 50 21.5 +0.5
BMRD *dx* x 07 50 32.5
BMRD *d*PcP **PcP** 07 50 48.8 -0.3
HYT Haines Junctio 67.12 29 IAmb IAmb 07 50 31.5
comp=Z,22nm,0.8s
UPNV Upernavik 67.12 354 *i* P P 07 50 27.2 +6.5
UPNV IAmb IAmb 07 50 28.7
comp=Z,14nm,0.9s
DOU Dourbes 67.32 317 *d*P **P** 07 50 21.4 -1.0
DOU *dx* x 07 50 30.2
DOU *d*PcP **PcP** 07 50 49.6 -0.5
EKA Eskdalemuir Ar 67.97 324 P **P** 07 50 25.4 -1.0
comp=Z,1.3nm,0.5s,baz=58,slow=6.9,SNR=5.6
AS31 Alice Springs 68.10 153 IAmb IAmb 07 50 28.3
comp=Z,16nm,1.2s
ASAR Alice Springs 68.10 153 P **P** 07 50 27.1 -0.4
comp=Z,30nm,0.9s,baz=335,slow=6.2,SNR=237
ASAR Alice Springs 68.10 153 P **P** 07 50 26.7 -0.8
ASAR Alice Springs 68.10 153 P **P** 07 50 26.7 -0.8
ICESG Greenland Ices 68.61 348 *i* P P 07 50 37.4 +6.8
ICESG IAmb IAmb 07 50 38.1
comp=Z,14nm,0.8s
SKAG Skagway 68.85 29 IAmb IAmb 07 50 45.0
comp=Z,25nm,0.8s
SKAG Skagway 68.85 29 P 07 50 31.9
baz=313
BNI Bardonecchia 69.09 312 P **P** 07 50 33.3 -0.4
SSB Saint Sauveur 70.18 313 IAMs_20 IAMs_20 08 23 04.4
comp=Z,1μm,19.0s
CTAO Charters Tower 70.19 140 P **P** 07 50 42.0 +1.5
DY2G Dye2 72.05 349 *e*P P 07 50 56.9 +5.4
DY2G IAmb IAmb 07 51 03.9
comp=Z,25nm,0.8s
SFJD Kangerlussuaq 72.15 351 P **P** 07 50 52.2 +0.4
comp=Z,7.4nm,0.7s,baz=302,slow=16,SNR=3.0
SFJD Kangerlussuaq 72.15 351 *i* P P 07 50 56.6 +4.8
SFJD IAmb IAmb 07 50 59.4
comp=Z,13nm,0.7s
YKA Yellowknife Ar 72.92 19 P **P** 07 50 56.1 -0.3
comp=Z,9.5nm,1.0s,baz=328,slow=5.3,SNR=87
YKA LR LR 08 24 11.1
comp=Z,496nm,21.6s,baz=0.0,slow=37
YKA Yellowknife Ar 72.92 19 *i* P **P** 07 50 56.0 -0.5
YKA pmax pmax
comp=Z,10.0nm,1.0s
KEST Kesra 72.95 302 P **P** 07 50 57.2 0.0
comp=Z,2.7nm,0.7s,baz=74,slow=2.7,SNR=3.8
KEST Kesra 72.95 302 P **P** 07 50 56.6 -0.6
FORT Forrest 72.99 161 P **P** 07 50 55.8 -1.4
NWAO Narrogin (SRO) 72.99 170 P **P** 07 50 57.8 +0.7
NWAO pmax pmax
comp=Z,55nm,1.2s
NWAO Narrogin (SRO) 72.99 170 P **P** 07 50 57.8 +0.7
NWAO Narrogin (SRO) 72.99 170 IAmb IAmb 07 50 58.6
comp=Z,44nm,1.2s
KMBO Kilima Mbogo 74.80 255 P **P** 07 51 08.8 +0.3
comp=Z,1.2nm,0.3s,baz=359,slow=5.8,SNR=4.0
STKA Stephens Creek 78.38 150 P **P** 07 51 27.8 -0.2
comp=Z,43nm,0.8s,baz=336,slow=6.2,SNR=76
STKA LR LR 08 29 59.6
comp=Z,322nm,20.8s,baz=314,slow=39
STKA Stephens Creek 78.38 150*c* *i*P **P** 07 51 27.3 -0.7
ESDC Sonseca Array 78.59 312 P **P** 07 51 29.0 -0.4
comp=Z,2.2nm,0.8s,baz=48,slow=5.0,SNR=11
ESDC Sonseca Array 78.59 312 P **P** 07 51 26.8 -2.6
PBRG Braganca 78.68 315 *e*PcP **PcP** 07 51 38.6 -0.2
PBRG A A 07 53 01.3
comp=Z,25nm,1.7s
PAB San Pablo 78.89 313 IAMs_20 IAMs_20 08 33 05.1
comp=Z,873nm,18.0s
MVO Moncorvo 79.28 315 *e*P **P** 07 51 33.5 +0.3
MVO Moncorvo 79.28 315 *e*PcP **PcP** 07 51 42.5 +1.1
PVIS Viseu 80.06 315 *e*PcP **PcP** 07 51 44.5 -0.3
PVIS A A 07 52 21.5
comp=Z,25nm,1.5s
FCC Fort Churchill 80.39 11 IAmb IAmb 07 51 45.6
comp=Z,17nm,0.8s
PMRV Marv??o 80.68 314 *e*P **P** 07 51 40.6 -0.1
comp=Z,27nm,1.7s
COI Coimbra 80.69 315 IAMs_20 IAMs_20 08 33 53.6
comp=Z,1μm,18.0s
PMTG Montargil 81.39 314 *e*P **P** 07 51 44.2 -0.3
comp=Z,24nm,1.5s
PMTG Montargil 81.39 314 *e*PcP **PcP** 07 51 51.0 +0.4
ARMA Armidale 81.47 142 IAmb IAmb 07 51 47.2
comp=Z,23nm,1.2s
EVO Evora 81.66 314 *e*P **P** 07 51 46.8 +0.9
comp=Z,26nm,1.2s
PVAQ Vaqueiros 82.28 313 *e*PcP **PcP** 07 51 56.3 +1.8
FFC Flin Flon 82.82 16 P **P** 07 51 50.6 -1.1
FFC pmax pmax
comp=Z,25nm,1.3s
FFC MLR MLR
comp=Z,2μm,20.0s
FFC Flin Flon 82.82 16 P **P** 07 51 50.6 -1.1
FFC IAmb IAmb 07 51 59.1
comp=Z,25nm,1.3s
MSO Missoula 86.60 26 IAMs_20 IAMs_20 08 36 39.4
comp=Z,858nm,19.0s
MSO Missoula 86.60 26 P 07 52 10.8
baz=330
EGMT Eagleton 86.91 23 IAMs_20 IAMs_20 08 34 51.4
comp=Z,779nm,19.0s
BMO Blue Mountains 87.08 29 IAMs_20 IAMs_20 08 35 25.2
comp=Z,897nm,18.0s
PLID Pearl Lake 87.37 29 IAMs_20 IAMs_20 08 35 20.8
comp=Z,1μm,19.0s
MSVF Nonsavu 87.79 115⇓ *e*P **P** 07 52 18.5 +1.4
MSVF pmax pmax
comp=Z,19nm,0.9s
MSVF Nonsavu 87.79 115 P **P** 07 52 19.5 +2.4
J08A Circle Bar Ran 87.88 31 P **P** 07 52 17.4 +0.1
J08A IAmb IAmb 07 52 35.6
comp=Z,12nm,1.1s
DGMT Dagmar 88.08 20 IAmb IAmb 07 52 26.2
comp=Z,20nm,0.9s
ULM Lac du Bonnet 88.28 14 P **P** 07 52 17.6 -1.3
comp=Z,2.7nm,0.7s,baz=359,slow=7.5,SNR=9.1
ULM LR LR 08 36 58.3
comp=Z,890nm,18.1s,baz=347,slow=39
ULM Lac du Bonnet 88.28 14 IAmb IAmb 07 52 27.4
comp=Z,9.0nm,0.9s
DLMT Dillon 88.34 26 IAmb IAmb 07 52 29.7
comp=Z,14nm,1.2s
DLMT IAMs_20 IAMs_20 08 37 52.4
comp=Z,772nm,18.0s
MOD Modoc Plateau 88.35 33 IAmb IAmb 07 52 38.0
comp=Z,11nm,1.1s
BOZ Bozeman (W) 88.46 26 IAMs_20 IAMs_20 08 37 52.5
comp=Z,995nm,19.0s
BOZ Bozeman (W) 88.46 26 P 07 52 19.8
baz=332
LAO LASA Array 89.16 22 IAMs_20 IAMs_20 08 31 49.9
comp=Z,866nm,21.0s
HLID Hailey 89.26 28 IAmb IAmb 07 52 32.8
comp=Z,14nm,1.3s
H17A Grant Village 89.87 26 P **P** 07 52 27.7 +0.8
H17A IAmb IAmb 07 52 36.9
comp=Z,16nm,1.0s
FLWY Flagg Ranch 90.11 26 IAmb IAmb 07 52 48.3
comp=Z,37nm,1.4s
AGMN Agassiz Nation 90.15 15 IAMs_20 IAMs_20 08 38 25.8
comp=Z,822nm,20.0s
AGMN Agassiz Nation 90.15 15 P 07 52 26.7
baz=343
B35A Bob, Littlefor 90.49 13 IAmb IAmb 07 52 37.5
comp=Z,21nm,1.0s
SNOW Snow King Moun 90.64 26 IAMs_20 IAMs_20 08 39 26.2
comp=Z,732nm,19.0s
REDW Red Top Meadow 90.69 26 IAMs_20 IAMs_20 08 37 52.7
comp=Z,725nm,20.0s
AHID Auburn Hatcher 91.14 27 IAMs_20 IAMs_20 08 39 17.4
comp=Z,1μm,19.0s
EYMN Ely 91.26 12 IAmb IAmb 07 52 41.2
comp=Z,12nm,0.9s
EYMN Ely 91.26 12 IAMs_20 IAMs_20 08 33 25.2
comp=Z,928nm,20.0s
ELK Elko 91.37 30 IAMs_20 IAMs_20 08 37 14.9
comp=Z,905nm,19.0s
KVN Kaiserville 91.65 33 IAmb IAmb 07 52 53.8
comp=Z,11nm,1.2s
BW06 Boulder Array 91.66 26 IAMs_20 IAMs_20 08 37 05.2
comp=Z,831nm,18.0s
PDAR Pinedale Array 91.66 26 P **P** 07 52 34.5 -0.8
comp=Z,0.5nm,0.7s,baz=41,slow=4.7,SNR=6.2
PDAR LR LR 08 37 06.9
comp=Z,580nm,18.0s,baz=350,slow=38
HWUT Hardware Ranch 91.99 27 IAmb IAmb 07 52 45.2
comp=Z,14nm,1.4s
NVAR Mina Array Bea 92.09 34 P **P** 07 52 38.0 +0.7
comp=Z,0.8nm,0.6s,baz=319,slow=4.3,SNR=9.2
NVAR LR LR 08 35 26.5
comp=Z,335nm,18.9s,baz=9.0,slow=36
NVAR Mina Array Bea 92.09 34 P **P** 07 52 37.1 -0.2
RSSD Black Hills 92.13 21 P **P** 07 52 37.6 +0.3
RSSD pmax pmax
comp=Z,26nm,0.9s
RSSD MLR MLR
comp=Z,800nm,19.0s
RSSD Black Hills 92.13 21 P **P** 07 52 37.6 +0.3
RSSD Black Hills 92.13 21 IAMs_20 IAMs_20 08 35 30.4
comp=Z,845nm,19.0s
RSSD Black Hills 92.13 21 P 07 52 36.8
baz=337
TCUT Toone Canyon 92.48 28 IAmb IAmb 07 52 47.5
comp=Z,14nm,1.0s
TORD Torodi Ar. Bea 92.67 289 P **P** 07 52 39.7 -0.3
comp=Z,1.4nm,0.9s,baz=52,slow=4.7,SNR=4.2
TORD Torodi Ar. Bea 92.67 289 P **P** 07 52 40.1 +0.1
COWI Conover 93.42 11 IAMs_20 IAMs_20 08 37 18.3
comp=Z,904nm,18.0s
E43A Lone Tree Farm 93.44 9 IAmb IAmb 07 52 52.1
comp=Z,8.4nm,0.7s
RDMU Red Mountain 93.61 27 IAmb IAmb 07 52 53.4
comp=Z,13nm,1.2s
PQI Presque Isle 93.83 356 IAMs_20 IAMs_20 08 35 03.0
comp=Z,763nm,20.0s
E63A Oxbow 94.10 356 IAMs_20 IAMs_20 08 39 36.1
comp=Z,769nm,19.0s
PHWY Pilot Hill 94.30 23 IAMs_20 IAMs_20 08 36 04.8
comp=Z,732nm,20.0s
F64A Sherman 94.65 356 IAMs_20 IAMs_20 08 35 37.8
comp=Z,853nm,20.0s
F63A Nahmakanta, Br 94.85 357 IAMs_20 IAMs_20 08 39 57.9
comp=Z,984nm,20.0s
GLMI Grayling 95.24 8 IAMs_20 IAMs_20 08 40 12.4
comp=Z,877nm,19.0s
PKME Peaks-Kenny Pk 95.29 357 IAMs_20 IAMs_20 08 38 17.7
comp=Z,956nm,19.0s
KNB Kanab 95.54 31 IAmb IAmb 07 53 05.9
comp=Z,6.8nm,0.9s
ISCO Idaho Springs 95.62 24 IAMs_20 IAMs_20 08 36 32.8
comp=Z,999nm,20.0s
OGNE Ogallala 95.63 21 IAMs_20 IAMs_20 08 37 41.0
comp=Z,999nm,20.0s
WVL Waterville 96.01 357 IAMs_20 IAMs_20 08 38 37.6
comp=Z,867nm,19.0s
LONY Lake Ozonia 96.02 1 P 07 52 54.6
baz=359
H62A Milan 96.04 358 IAMs_20 IAMs_20 08 35 52.6
comp=Z,922nm,22.0s
VT1 Waterbury 96.31 359 IAMs_20 IAMs_20 08 37 50.9
comp=Z,979nm,20.0s
JFWS Jewell Farm 96.36 12 IAMs_20 IAMs_20 08 36 33.1
comp=Z,777nm,20.0s
I63A Otisfield 96.55 358 IAMs_20 IAMs_20 08 36 28.0
comp=Z,668nm,19.0s
I62A Tamworth 96.75 358 IAMs_20 IAMs_20 08 37 09.2
comp=Z,881nm,21.0s
SCIA State Center 96.81 15 IAMs_20 IAMs_20 08 39 57.0
comp=Z,810nm,22.0s
MVCO Mesa Verde 96.98 27 IAMs_20 IAMs_20 08 42 59.2
comp=Z,766nm,20.0s
J59A Piesco 97.18 1 IAMs_20 IAMs_20 08 38 34.6
comp=Z,705nm,20.0s
J57A Williamstown 97.21 2 IAMs_20 IAMs_20 08 37 22.4
comp=Z,772nm,20.0s
J56A Wolcott 97.32 2 IAMs_20 IAMs_20 08 35 25.3
comp=Z,885nm,21.0s
AAM Ann Arbor 97.84 8 IAMs_20 IAMs_20 08 35 51.0
comp=Z,931nm,20.0s
K58A Earlville 97.86 2 IAMs_20 IAMs_20 08 40 22.7
comp=Z,788nm,18.0s
K63A Dunstable 97.94 358 IAMs_20 IAMs_20 08 42 22.6
comp=Z,747nm,18.0s
HRV Adam Dziewonsk 98.12 358 IAMs_20 IAMs_20 08 42 18.5
comp=Z,751nm,19.0s
HRV Adam Dziewonsk 98.12 358 P 07 53 04.4
baz=1.6
WES Weston 98.23 358 IAMs_20 IAMs_20 08 44 34.5
comp=Z,668nm,19.0s
CBKS Cedar Bluff 98.25 20 IAMs_20 IAMs_20 08 38 50.3
comp=Z,867nm,18.0s
BCX Boston College 98.28 358 IAMs_20 IAMs_20 08 37 56.8
comp=Z,751nm,19.0s
ERPA Erie 98.32 5 IAMs_20 IAMs_20 08 37 37.9
comp=Z,853nm,21.0s
BINY Binghamton 98.42 2 IAMs_20 IAMs_20 08 40 40.4
comp=Z,808nm,18.0s
BINY Binghamton 98.42 2 P 07 53 04.4
baz=358
T25A Trinidad 98.43 24 IAMs_20 IAMs_20 08 41 41.2
comp=Z,781nm,21.0s
L56A Greenwood 98.43 3 IAMs_20 IAMs_20 08 38 38.7
comp=Z,739nm,21.0s
L59A Walton 98.44 1 IAMs_20 IAMs_20 08 41 27.1
comp=Z,590nm,18.0s
L64A Middleborough 98.67 358 IAMs_20 IAMs_20 08 38 05.1
comp=Z,831nm,19.0s
BRYW Bryant College 98.71 358 IAMs_20 IAMs_20 08 43 12.0
comp=Z,791nm,18.0s
L63A North Scituate 98.76 358 IAMs_20 IAMs_20 08 43 12.5
comp=Z,730nm,18.0s
M54A Oil Creek Stat 98.95 5 IAMs_20 IAMs_20 08 44 15.5
comp=Z,868nm,18.0s
M53A WI Miller and 98.95 5 IAMs_20 IAMs_20 08 37 08.5
comp=Z,682nm,21.0s
M56A Emporium 99.06 3 IAMs_20 IAMs_20 08 38 49.2
comp=Z,866nm,20.0s
M56A Emporium 99.06 3 P 07 53 08.5
baz=356
M64A Tiverton 99.06 358 IAMs_20 IAMs_20 08 38 28.5
comp=Z,904nm,20.0s
M63A Gales Ferry 99.23 359 IAMs_20 IAMs_20 08 42 52.9
comp=Z,614nm,19.0s
M57A Sunshine Farm, 99.25 3 IAMs_20 IAMs_20 08 36 34.3
comp=Z,871nm,20.0s
N54A Moraine State 99.47 5 IAMs_20 IAMs_20 08 43 01.3
comp=Z,712nm,19.0s
WSPT Westport, CT 99.47 360 IAMs_20 IAMs_20 08 39 56.3
comp=Z,973nm,21.0s
PAL Palisades 99.64 0 IAMs_20 IAMs_20 08 38 16.7
comp=Z,947nm,20.0s
N59A State Game Lan 99.70 2 IAMs_20 IAMs_20 08 41 45.4
comp=Z,761nm,18.0s
ANMO Albuquerque 99.74 27*de*P **Pdif** **07 53 11.4 -0.7**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 99.74 27 IAMs_20 IAMs_20 08 42 37.1
comp=Z,705nm,18.0s
N58A Sunbury 99.75 2 IAMs_20 IAMs_20 08 37 09.8
comp=Z,815nm,20.0s
SSPA Standing Stone 99.91 3 IAMs_20 IAMs_20 08 39 34.0
comp=Z,674nm,20.0s
ACSO Alum Creek Sta 99.95 7 IAMs_20 IAMs_20 08 38 00.1
comp=Z,869nm,21.0s
O56A Blue Knob Stat 100.25 4 IAMs_20 IAMs_20 08 39 25.8
comp=Z,868nm,20.0s
Y22D IRIS PASSCAL I 100.36 28 IAMs_20 IAMs_20 08 44 20.6
comp=Z,767nm,19.0s
P49A Miami Univ. Ec 100.46 9 IAMs_20 IAMs_20 08 38 14.4
comp=Z,792nm,20.0s
P52A Corning 100.63 7 IAMs_20 IAMs_20 08 38 35.9
comp=Z,899nm,20.0s
P60A Greenville 100.81 2 IAMs_20 IAMs_20 08 37 42.7
comp=Z,871nm,20.0s
P57A Homestead Farm 101.06 3 IAMs_20 IAMs_20 08 42 37.2
comp=Z,768nm,18.0s
Q56A Snyder Ridge, 101.44 4 IAMs_20 IAMs_20 08 39 42.3
comp=Z,788nm,22.0s
WCI Wyandotte Cave 101.55 10 IAMs_20 IAMs_20 08 40 19.2
comp=Z,738nm,20.0s
OK031 S. Brethren Rd 101.70 19 IAMs_20 IAMs_20 08 44 57.6
comp=Z,869nm,19.0s
R55A Marlinton 102.13 5 IAMs_20 IAMs_20 08 38 54.6
comp=Z,610nm,21.0s
S54A Dingess, Beckl 102.52 6 IAMs_20 IAMs_20 08 39 53.9
comp=Z,802nm,21.0s
EPT El Paso 102.58 28 IAMs_20 IAMs_20 08 47 01.5
comp=Z,788nm,18.0s
S57A Dark Hollow, R 102.72 4 IAMs_20 IAMs_20 08 40 21.4
comp=Z,719nm,20.0s
WVT Waverly 103.38 12 IAMs_20 IAMs_20 08 41 28.8
comp=Z,690nm,20.0s
T60A Surry 103.45 3 IAMs_20 IAMs_20 08 39 22.5
comp=Z,824nm,21.0s
X40A Basin Creek Fa 104.04 16 IAMs_20 IAMs_20 08 39 06.4
comp=Z,795nm,21.0s
U61A Possum Corner 104.26 2 P 07 53 30.1
baz=358
OXF Oxford 104.69 13 IAMs_20 IAMs_20 08 43 47.6
comp=Z,735nm,19.0s
CNNC Cliffs of the 105.29 4 IAMs_20 IAMs_20 08 45 00.3
comp=Z,713nm,20.0s
TXAR Lajitas Array 105.81 27 PKiKP **PKiKP** **07 57 50.7 -1.0**
comp=Z,0.3nm,0.8s,baz=9.9,slow=2.1,SNR=2.1
JCT Junction City 106.02 23 IAMs_20 IAMs_20 08 47 28.3
comp=Z,747nm,18.0s
LRAL Lakeview Retre 106.54 12 IAMs_20 IAMs_20 08 43 34.5
comp=Z,803nm,19.0s
GOGA Godfrey 106.65 9 P 07 57 52.5
baz=352
BBSR BB Station 107.78 352 IAMs_20 IAMs_20 08 42 28.4
comp=Z,593nm,20.0s
PPT2 Papeete2 111.69 95 *e*LQ LQ 08 26 22.2
comp=Z,934nm,38.8s
PPT2 *e*LR LR 08 31 10.7
comp=Z,510nm,22.5s
DWPF Disney Wildern 112.11 7 IAMs_20 IAMs_20 08 47 29.0
comp=Z,765nm,20.0s
TBI Tubuai 115.10 100 *e*LQ LQ 08 27 52.7
comp=Z,570nm,36.5s
TBI *e*LR LR 08 32 37.4
comp=Z,307nm,26.5s
TEIG Tepich 118.80 16 IAMs_20 IAMs_20 08 51 13.3
comp=Z,648nm,22.0s
SYO Syowa Base 118.98 202⇑ *e*Pdiff **Pdif** **07 54 36.4 +0.2**
SYO Syowa Base 118.98 202⇓ *es*Pdiff **Pdif** **07 54 45.0 +8.8**
RKT Rikitea 126.07 91 *e*LQ LQ 08 32 31.0
comp=Z,283nm,42.0s
RKT *e*LR LR 08 37 54.2
comp=Z,397nm,23.5s
QSPA South Pole Qui 129.49 180 **PKPdf** **07 58 33.8 -1.6**
BDFB Brasilia 147.20 310 PKPbc **PKPbc** **07 59 10.5 -1.0**
comp=Z,2.5nm,0.7s,baz=232,slow=3.5,SNR=4.1
BDFB Brasilia 147.20 310 **PKPbc** **07 59 11.6 +0.1**
SAML Samuel 147.96 340 PKP2 **PKPbc** **07 59 12.4 -1.1**
SAML Samuel 147.96 340 **PKPbc** **07 59 12.4 -1.1**
NNA Nana 152.22 7 PKPbc **PKiKP** **07 59 25.1 +0.9**
comp=Z,2.4nm,0.4s,baz=53,slow=4.7,SNR=1.8
SIV San Ignacio 153.93 332 PKPbc **PKPbc** **07 59 27.0 -0.6**
comp=Z,1.1nm,0.8s,baz=70,slow=4.7,SNR=4.6
LPAZ La Paz 156.16 347 PKP **PKPdf** **07 59 23.4 0.0**
comp=Z,0.4nm,0.6s,baz=283,slow=4.0,SNR=2.0

IDC ***15*** *07:44:33.6±0.7,39.68N×107.07E,h0km,mb4.3/19, mb1 4.4/21,mb1mx4.2/57,mbtmp4.3/21,ML4.5/1 Error ellipse: s-maj=23.3km s-min=14.5km az=52.0*
BJI ***15*** *07:44:35.7±0.0,39.82N×106.52E,h7km,ML4.9/6*
ISC 15 07:44:36.1±0.6,39.4N±0.1×106.50E±0.07,h10km,n35,
σ1s71/34,mb4.3/23,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**2.96**	**65**	*e*Pg	**Pn**	**07 45 25.3**	**+2.1**
BTO				Sg	**Sn**	**07 46 01.8**	**+3.0**
BTO				smax	smax		
	comp=N,13μm,0.5s						
BTO				smax	smax		
	comp=E,11μm,0.8s						
BTO	**Baotou**	**2.96**	**65**	Pg	**Pn**	**07 45 23.5**	**+0.3**
BTO				Sg	**Sn**	**07 45 59.0**	**+0.2**
BTO				smax	smax		
	comp=E,7μm,0.3s						
SONM	**Songino Array**	**8.43**	**360**	Pn	Pn	07 46 33.3	-5.1
	baz=177,slow=14,SNR=1.6						
SONM				Lg	Lg	07 48 45.9	
	comp=E,14nm,0.3s,baz=182,slow=29,SNR=4.9						
WMQ	**Urumqi**	**14.74**	**293**	*e*P	Pn	07 48 00.3	-4.3
MKAR	**Makanchi Array**	**19.11**	**301**	P	**P**	**07 48 59.7**	**+0.6**
	comp=E,1.3nm,0.3s,baz=97,slow=15,SNR=4.3						
TAPN	**Taplejung**	**19.72**	**238**	*e*P	**P**	**07 49 05.0**	**-1.1**
ODAN	**Odare**	**20.26**	**238**	*e*P	**P**	**07 49 10.1**	**-1.8**
JIRN	**Jiri**	**20.54**	**241**	*e*P	**P**	**07 49 14.2**	**-0.9**
	comp=E,67nm,0.6s						
GUN	**Gumba**	**20.59**	**242**	*e*P	**P**	**07 49 14.2**	**-1.4**
ZALV	**Zalesovo Beam**	**20.69**	**322**	P	**P**	**07 49 13.8**	**-2.3**
	comp=E,11nm,0.8s,baz=119,slow=10,SNR=7.7						
KKN	**Kakani**	**21.08**	**243**	*e*P	**P**	**07 49 19.6**	**-1.2**
	comp=E,25nm,0.5s						
PKI	**Pulchoki**	**21.13**	**242**	*e*P	**P**	**07 49 20.1**	**-1.3**
	comp=E,41nm,0.6s						
PKIN	**Phulchoki**	**21.13**	**242**	*e*P	**P**	**07 49 19.9**	**-1.5**
	comp=E,39nm,0.6s						
DMN	**Daman**	**21.31**	**243**	*e*P	**P**	**07 49 22.0**	**-1.3**
	comp=E,45nm,0.7s						
GKN	**Gorkha**	**21.39**	**245**	*e*P	**P**	**07 49 22.4**	**-1.7**
	comp=E,35nm,0.6s						
CMAR	**Chiang Mai Arr**	**21.88**	**200**	P	**P**	**07 49 31.3**	**+2.2**
	comp=E,5.0nm,1.0s,baz=16,slow=7.5,SNR=3.0						
KOLN	**Koldanda**	**22.26**	**246**	*e*P	**P**	**07 49 32.0**	**-1.5**
PYUN	**Piuthan**	**22.50**	**247**	*e*P	**P**	**07 49 35.0**	**-1.0**
KURBB	**Kurchatov Arra**	**22.60**	**309**	P	**P**	**07 49 35.6**	**-1.1**
	comp=E,8.1nm,0.6s,baz=111,slow=11,SNR=6.0						
AAK	**Ala-Archa**	**24.29**	**288**	P	**P**	**07 49 56.7**	**+2.9**
	comp=E,7.6nm,0.7s,baz=90,slow=4.0,SNR=2.4						
BVAR	**Borovoye Array**	**28.12**	**311**	P	**P**	**07 50 29.4**	**+1.3**
	comp=E,2.6nm,0.7s,baz=147,slow=8.9,SNR=2.3						
GEYT	**Alibeck**	**37.45**	**284**	P	**P**	**07 51 52.3**	**+2.7**
	comp=E,11nm,0.6s,baz=64,slow=5.1,SNR=7.6						
ARCES	**ARCESS Array B**	**50.62**	**333**	P	**P**	**07 53 35.2**	**+0.4**
	comp=E,2.1nm,0.8s,baz=85,slow=10.0,SNR=1.6						

AKASG	**Malin Array Be**	**53.39**	**309**	P		**P**	**07 53 56.0**	**+0.4**	
	comp=E,1.4nm,0.5s,baz=61,slow=7.3,SNR=3.7								
BRTR	**Keskin Array B**	**54.65**	**295**	P		**P**	**07 54 07.3**	**+2.1**	
	comp=E,1.6nm,0.8s,baz=90,slow=4.3,SNR=2.4								
NOA	**NORSAR Array B**	**58.83**	**326**	P		**P**	**07 54 33.8**	**-0.6**	
	comp=E,2.3nm,0.8s,baz=64,slow=6.9,SNR=3.5								
ILAR	**Eielson Array**	**61.56**	**28**	P		P	07 54 48.8	-4.3	
	comp=E,1.6nm,0.8s,baz=304,slow=4.5,SNR=4.8								
IDI	**Anoyia**	**62.87**	**295**	P		**P**	**07 55 03.1**	**+0.7**	
	comp=E,2.4nm,0.4s,baz=14,slow=6.9,SNR=3.1								
WRA	**Warramunga Arr**	**64.52**	**151**	P		**P**	**07 55 12.4**	**-0.8**	
	comp=E,0.5nm,0.3s,baz=338,slow=7.3,SNR=5.1								
ASAR	**Alice Springs**	**67.77**	**153**	P		**P**	**07 55 33.9**	**-0.2**	
	comp=E,2.7nm,0.6s,baz=341,slow=6.6,SNR=8.8								
KEST	**Kesra**	**73.20**	**303**	P		**P**	**07 56 07.7**	**+0.4**	
	comp=E,1.4nm,0.4s,baz=43,slow=5.9,SNR=1.7								
YKA	**Yellowknife Ar**	**73.21**	**19**	P		**P**	**07 56 03.1**	**-3.7**	
	comp=E,1.6nm,0.9s,baz=331,slow=5.0,SNR=4.9								
STKA	**Stephens Creek**	**78.05**	**150**	P		**P**	**07 56 34.1**	**-0.7**	
	comp=E,3.3nm,0.4s,baz=333,slow=5.3,SNR=5.0								
ESDC	**Sonseca Array**	**78.88**	**313**	P		**P**	**07 56 39.4**	**-0.2**	
	comp=E,1.1nm,0.9s,baz=27,slow=5.0,SNR=2.2								
NVAR	**Mina Array Bea**	**92.32**	**34**	P		**P**	**07 57 44.3**	**-2.6**	
	comp=E,0.3nm,0.6s,baz=317,slow=4.9,SNR=2.3								

KRSC 15 07:53:54.4±2.1, 48°.35N×157°.71E, h16km±35km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.56**	**337**	*e*P		Pn	07 54 36.2	+1.2
SKR				*e*S		Sn	07 55 06.3	+0.6
ALID	**Alaid**	**2.89**	**332**	*e*P		Pn	07 54 40.8	+1.0
PAU	**Pauzhetka**	**3.17**	**350**	*e*P		Pn	07 54 46.1	+2.6
PAU				*e*S		Sb	07 55 25.1	-3.6
KDTR	**Khodutka, Kamc**	**3.47**	**4**	*e*P		Pn	07 54 50.9	+3.3
KDTR				*e*S		Sb	07 55 33.0	-4.2
RUS	**Russkaya**	**4.12**	**7**	*e*P		Pn	07 55 00.1	+3.6
RUS				*e*S		Sn	07 55 49.0	+4.7
MTVR	**Mutnovka**	**4.15**	**4**	*e*P		Pn	07 55 00.9	+3.8
MTVR				*e*S		Sn	07 55 50.8	+5.6
GRL	**Gorelyy**	**4.21**	**3**	*e*P		Pn	07 55 02.0	+4.1
GRL				*e*S		Sn	07 55 52.6	+5.8
KRMR	**Karymshinskiy**	**4.49**	**3**	*e*P		Pn	07 55 06.6	+4.9
KRMR				*e*S		Sn	07 56 00.0	+6.5
DALK	**Dalny**	**4.73**	**8**	*e*P		Pn	07 55 09.0	+4.1
UGLR	**Uglovaya**	**4.92**	**8**	*e*P		Pn	07 55 12.5	+4.9
AVH	**Avacha**	**4.96**	**7**	*e*P		Pn	07 55 13.8	+5.6
SMAR	**Somma**	**4.97**	**8**	*e*P		Pn	07 55 14.1	+5.7
KOK	**Koryaka**	**4.98**	**6**	*e*P		Pn	07 55 13.8	+5.3
SDLR	**Sedlovina**	**4.99**	**8**	*e*P		Pn	07 55 12.6	+4.0
KRER	**Koryakskii**	**5.00**	**7**	*e*P		Pn	07 55 14.0	+5.1
KRX	**Arik**	**5.05**	**6**	*e*P		Pn	07 55 14.4	+4.9
MKZ	**Mys Kozlova**	**6.70**	**20**	*e*P		Pn	07 55 36.3	+4.4
KZV	**Kizimen**	**6.96**	**12**	*e*P		Pn	07 55 41.1	+5.4
KBTR	**Krutoberegovo**	**8.47**	**20**	*e*P		Pn	07 56 01.0	+4.8

*IDC **15** 08:02:49.0±1.3, 42°.62S×74°.16W, h0km, mb3.9/8, mb1 4.2/9, mb1mx4.0/24, mbtmp4.0/9, ML4.0/1, MS3.3/2, Ms1 3.3/2, ms1mx3.0/34, Error ellipse: s-maj=34.9km s-min=26.5km az=92.0*
*NEIC **15** 08:02:52.8±1.0, 42°.53S±0°.03×74°.2W±0°.2, h24km±5km, Error ellipse: s-maj=16.4km s-min=3.4km az=85.0*
*GUC **15** 08:02:54.3±0.5, 42°.53S×74°.18W, h32km±1km, ML4.2*

ISC 15 08:02:53.1±1.9, 42°.52S±0°.05×74°.15W±0°.08, h25km±13km, n51, σ0°.98/51, mb4.2/10, 5C-2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LL07	**Hotel Espejo d**	**0.59**	**122**	⇓*i*P		**Pn**	**08 03 06.2**	**+0.5**
LL07				*i* S		**Sn**	**08 03 14.9**	**+0.3**
LL07				IAML			08 03 17.4	
	comp=E,13μm,1.0s							
LL07	**Hotel Espejo d**	**0.59**	**122**			**Pn**	**08 03 06.3**	**+0.5**
GO07	**Milladeo Hill,**	**0.69**	**149**	⇓*i*P		**Pn**	**08 03 07.2**	**-0.1**
GO07				*i* S		**Sn**	**08 03 17.3**	**+0.1**
GO07				IAML			08 03 19.8	
	comp=E,12μm,0.4s							
GO07	**Milladeo Hill,**	**0.69**	**149**			**Pn**	**08 03 07.2**	**-0.1**
LL05	**Los Muermos**	**1.23**	**25**	⇑*i*P		**Pb**	**08 03 15.3**	**-0.2**
LL05				*i* S		**Sb**	**08 03 31.6**	**+0.7**
LL05				IAML			08 03 34.4	
	comp=N,9μm,0.5s							
LL05	**Los Muermos**	**1.23**	**25**	Pn		**Pn**	**08 03 15.0**	**+0.4**
LL01	**San Ignacio de**	**1.30**	**84**	⇑*i*P		**Pb**	**08 03 16.5**	**-0.2**
LL01				*i* S		**Sb**	**08 03 33.1**	**+0.1**
LL01	**San Ignacio de**	**1.30**	**84**			**Pn**	**08 03 16.2**	**+0.7**
LL02	**Futaleuf**	**1.82**	**112**	⇑*i*P		**Pn**	**08 03 24.0**	**+1.2**
LL02				*i* S		**Sn**	**08 03 46.2**	**+1.1**
LL02	**Futaleuf**	**1.82**	**112**	Pn		**Pn**	**08 03 24.3**	**+1.4**
LL03	**Petrohue**	**1.90**	**44**	⇑*i*P		**Pn**	**08 03 24.7**	**+0.7**
LL03				*i* S		**Sn**	**08 03 48.2**	**+1.1**
LL03				IAML			08 04 04.8	
	comp=E,5μm,0.6s							
LL03	**Petrohue**	**1.90**	**44**			**Pn**	**08 03 24.5**	**+0.5**
LL04	**Puerto Octay**	**2.08**	**40**	⇑*i*P		**Pn**	**08 03 27.1**	**+0.7**
LL04				*i* S		**Sn**	**08 03 52.2**	**+0.9**
LL04				IAML			08 03 54.1	
	comp=N,2μm,0.3s							
LL04	**Puerto Octay**	**2.08**	**40**			**Pn**	**08 03 26.6**	**+0.3**
PLCA	**Paso Flores**	**3.24**	**58**	Pn		**Pn**	**08 03 44.1**	**+1.7**
	comp=N,3.3nm,0.3s,baz=232,slow=11,SNR=64							
PLCA				Lg		Lg	08 04 30.1	
	comp=N,8.3nm,0.3s,baz=162,slow=5.5,SNR=3.8							
PLCA				LR		LR	08 04 57.0	
	comp=N,276nm,18.3s,baz=284,slow=39							
PLCA	**Paso Flores**	**3.24**	**58**	Pn		**Pn**	**08 03 43.9**	**+1.5**
BI02	**San Fabin de**	**6.26**	**22**	Pn		**Pn**	**08 04 24.1**	**+0.1**
ML02	**Panimavida**	**7.08**	**18**	Pn		**Pn**	**08 04 35.3**	**+0.2**
BO02	**Sierra Bellavi**	**8.16**	**20**	Pn		**Pn**	**08 04 49.3**	**-0.7**
MT09	**Talagante**	**9.08**	**17**	Pn		**Pn**	**08 05 00.5**	**-2.2**
H03S1	**Juan Fernandez**	**9.44**	**335**	T		T	08 14 21.0	
	baz=154,slow=75,SNR=65							
H03S2	**Juan Fernandez**	**9.45**	**335**	T		T	08 14 20.2	
	baz=154,slow=75,SNR=70							
H03S3	**Juan Fernandez**	**9.45**	**335**	T		T	08 14 21.6	
	baz=154,slow=75,SNR=87							
MT03	**Universidad Ad**	**9.46**	**19**	Pn		**Pn**	**08 05 06.3**	**-1.5**
MT02	**Curacav**	**9.55**	**15**	Pn		**Pn**	**08 05 07.6**	**-1.4**
H03N3	**Juan Fernandez**	**9.80**	**336**	Pn		**Pn**	**08 05 13.2**	**+1.0**
	baz=344,slow=24,SNR=12							
H03N3				T		T	08 15 00.9	
	baz=236,slow=70,SNR=4.9							
H03N1	**Juan Fernandez**	**9.81**	**336**	Pn		**Pn**	**08 05 12.3**	**0.0**
	baz=344,slow=24,SNR=8.9							
H03N1				T		T	08 14 53.3	
	baz=236,slow=70,SNR=3.9							
H03N2	**Juan Fernandez**	**9.82**	**336**	Pn		**Pn**	**08 05 13.5**	**+1.1**
	baz=344,slow=24,SNR=7.4							
H03N2				T		T	08 14 53.1	
	baz=236,slow=70,SNR=4.1							
CO03	**El Pedregal**	**11.99**	**14**	Pn		**Pn**	**08 05 40.0**	**-2.4**
GO04	**Tololo Observa**	**12.62**	**13**	Pn		**Pn**	**08 05 49.5**	**-1.6**
AC02	**Maricunga**	**16.18**	**16**	P		**P**	**08 06 41.8**	**-0.4**
PB15	**IPOC Station P**	**19.65**	**13**	P		**P**	**08 07 21.0**	**+0.7**
LVC	**Limon Verde**	**20.34**	**14**	P		**P**	**08 07 28.8**	**+1.0**
	comp=N,5.0nm,0.7s,baz=205,slow=8.5,SNR=6.3							
LVC				LR		LR	08 15 19.2	
	comp=N,128nm,20.3s,baz=198,slow=37							
PB07	**IPOC Station P**	**21.04**	**11**			**P**	**08 07 33.7**	**-1.6**
PB07				IAmb		IAmb	08 07 56.4	
	comp=Z,10nm,1.0s							
CPUP	**Villa Florida**	**21.23**	**46**	P		**P**	**08 07 36.4**	**-0.7**
	comp=Z,8.3nm,0.9s,baz=228,slow=8.9,SNR=17							
CPUP	**Villa Florida**	**21.23**	**46**	P		**P**	**08 07 36.5**	**-0.6**
CPUP				IAmb		IAmb	08 07 39.5	
	comp=Z,6.1nm,0.7s							
PB11	**IPOC Station P**	**23.01**	**11**			**P**	**08 07 55.6**	**-0.7**
PB11				IAmb		IAmb	08 08 15.5	
	comp=Z,11nm,1.0s							
MNMC	**Minye Minye**	**23.64**	**11**	P		**P**	**08 08 03.0**	**+0.3**
LPAZ	**La Paz**	**26.65**	**19**	P		**P**	**08 08 30.7**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=211,slow=12,SNR=5.5							
SIV	**San Ignacio**	**28.73**	**27**	P		**P**	**08 08 48.9**	**+0.4**
	comp=Z,1.4nm,0.9s,baz=202,slow=7.1,SNR=4.9							
SAML	**Samuel**	**34.80**	**19**	P		**P**	**08 09 41.5**	**-0.3**
SAML				IAmb		IAmb	08 09 42.1	
	comp=Z,3.8nm,1.1s							
SNAA	**Sanae**	**44.46**	**155**	P		**P**	**08 11 01.4**	**-0.3**
	comp=Z,2.2nm,0.9s,baz=285,slow=9.5,SNR=3.0							
SNAA	**Sanae**	**44.46**	**155**	IAmb		IAmb	08 11 06.3	
	comp=Z,5.8nm,1.2s							

TXAR	**Lajitas Array**	**76.50**	**334**	P		**P**	**08 14 41.7**	**+1.0**	
	comp=Z,0.5nm,0.9s,baz=150,slow=9.6,SNR=5.3								
TORD	**Torodi Ar. Bea**	**88.63**	**71**	P		**P**	**08 15 42.7**	**-1.5**	
	comp=Z,1.2nm,0.9s,baz=233,slow=4.8,SNR=4.8								
TORD	**Torodi Ar. Bea**	**88.63**	**71**	P		**P**	**08 15 44.0**	**-0.2**	
TORD				IAmb		IAmb	08 15 44.7		
	comp=Z,1.2nm,0.9s								
PDAR	**Pinedale Array**	**90.68**	**335**	P		**P**	**08 15 53.5**	**+0.1**	
	comp=Z,0.4nm,0.7s,baz=122,slow=5.4,SNR=3.9								
H11S2	**WAKE ISLAND Hyd**	**23.64**	**265**	T		T	10 37 21.0		
	baz=129,slow=75,SNR=49								
H11S1	**WAKE ISLAND Hyd**	**23.65**	**265**	T		T	10 37 22.3		
	baz=129,slow=75,SNR=28								
H11S3	**WAKE ISLAND Hyd**	**23.65**	**265**	T		T	10 37 22.3		
	baz=129,slow=75,SNR=55								
MKAR	**Makanchi Array**	**162.73**	**68**	PKPab		**PKPab**	**08 23 41.2**	**0.0**	
	comp=Z,1.0nm,0.8s,baz=262,slow=3.9,SNR=6.7								

IDC 15 08:06:02.0±3.2, 54°.16N×87°.42E, h0km, mb1 2.6/2, mb1mx2.6/40, mbtmp2.6/2, ML2.5/2, Error ellipse: s-maj=26.2km s-min=19.1km az=41.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.55**	**263**	*i*			08 16 10.0	
	baz=81,slow=308,SNR=2.6							
ZALV	**Zalesovo Beam**	**1.55**	**263**	Pg		Pn	08 06 30.1	-0.7
	2.8nm,0.3s,baz=80,slow=16,SNR=19							
ZALV				Lg		Lg	08 06 50.8	
	1.9nm,0.3s,baz=77,slow=24,SNR=9.7							
KURBB	**Kurchatov Arra**	**6.50**	**241**	Pn		Pn	08 07 40.6	+1.9
	0.1nm,0.3s,baz=56,slow=14,SNR=4.3							
KURBB				Sn		Sn	08 08 51.7	-1.8
	0.0nm,0.3s,baz=135,slow=32,SNR=1.4							
KURBB				Lg		Lg	08 09 29.6	
	0.0nm,0.3s,baz=59,slow=27,SNR=2.0							
MKAR	**Makanchi Array**	**8.07**	**206**	Pn		Pn	08 08 00.7	+0.3
	0.1nm,0.3s,baz=28,slow=14,SNR=4.0							

*DNK **15** 08:11:38.8±1.5, 58°.73N×18°.51E, h0km, ML2.0, Explosion*
*UPP **15** 08:11:38.2±0.2, 58°.72N×18°.51E, h0km, ML2.5, Explosion*
*HEL **15** 08:11:39.0±0.1, 58°.72N×18°.50E, h0km, ML2.1, ML2.5(UPP), Explosion*
*IDC **15** 08:11:41.5±2.9, 58°.90N×18°.30E, h0km, mb1 3.1/3, mb1mx2.9/53, mbtmp3.0/3, ML1.9/3, Error ellipse: s-maj=32.4km s-min=11.5km az=179.0*
*NAO **15** 08:11:42.4±2.2, 59°.00N×18°.43E, ML2.1*
*BER **15** 08:11:42.7±4.5, 58°.92N×18°.44E, h0km, ML2.1(NAO), Suspected explosion*

ISC 15 08:11:37.6±0.7, 58°.72N±0°.02×18°.51E±0°.02, h0km, n67, σ1s22/83, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.39**	**318**	P		**Pg**	**08 11 45.8**	**+0.7**
NYNU				S		**Sg**	**08 11 50.7**	**+0.6**
NYNU	**Nynaeshamn**	**0.39**	**318**	P		**Pg**	**08 11 45.8**	**+0.7**
NYNU				S		**Sg**	**08 11 50.7**	**+0.6**
NYNU	**Nynaeshamn**	**0.39**	**318**	*i* P		**Pg**	**08 11 45.8**	**+0.7**
NYNU				*i* S		**Sg**	**08 11 50.7**	**+0.6**
NRTU	**Norrtaelje**	**0.96**	**4**	P		**Pg**	**08 11 56.2**	**+0.2**
NRTU	**Norrtaelje**	**0.96**	**4**	P		**Pg**	**08 11 56.2**	**+0.2**
NRTU	**Norrtaelje**	**0.96**	**4**	*e*P		**Pg**	**08 11 56.2**	**+0.2**
NRTU				*e*S		**Sg**	**08 12 08.6**	**0.0**
VIKU	**Vikbolandet**	**0.97**	**258**	P		**Pg**	**08 11 56.4**	**+0.3**
VIKU	**Vikbolandet**	**0.97**	**258**	P		**Pg**	**08 11 56.4**	**+0.3**
VIKU	**Vikbolandet**	**0.97**	**258**	*e*P		**Pg**	**08 11 56.4**	**+0.3**
GOTU	**Gotland**	**1.04**	**178**	P		**Pg**	**08 11 57.7**	**+0.2**
GOTU	**Gotland**	**1.04**	**178**	P		**Pg**	**08 11 57.7**	**+0.2**
GOTU	**Gotland**	**1.04**	**178**	*e*P		**Pg**	**08 11 57.5**	**0.0**
GOTU				*e*S		**Sg**	**08 12 11.6**	**+0.7**
ESKU	**Eskilstuna**	**1.21**	**296**	P		**Pg**	**08 12 00.7**	**-0.1**
ESKU	**Eskilstuna**	**1.21**	**296**	P		**Pg**	**08 12 00.7**	**-0.1**
ESKU	**Eskilstuna**	**1.21**	**296**	*e*P		**Pg**	**08 12 00.7**	**-0.1**
UPP	**Uppsala**	**1.23**	**339**	P		**Pg**	**08 12 01.3**	**+0.1**
UPP	**Uppsala**	**1.23**	**339**	*e*P		**Pg**	**08 12 01.3**	**+0.1**
FIBU	**Brunna**	**1.33**	**334**	P		**Pg**	**08 12 02.9**	**-0.1**
FIBU	**Brunna**	**1.33**	**334**	P		**Pg**	**08 12 02.9**	**-0.1**
BACU	**Backbrunna**	**1.35**	**328**	P		**Pg**	**08 12 03.2**	**-0.2**
BACU	**Backbrunna**	**1.35**	**328**	P		**Pg**	**08 12 03.2**	**-0.2**
BACU	**Backbrunna**	**1.35**	**328**	*e*P		**Pg**	**08 12 03.2**	**-0.2**
FLYU	**Flymyra**	**1.45**	**348**	P		**Pn**	**08 12 05.2**	**+0.1**
FLYU	**Flymyra**	**1.45**	**348**	P		**Pn**	**08 12 05.2**	**+0.1**
FLYU	**Flymyra**	**1.45**	**348**	*e*P		**Pn**	**08 12 05.2**	**+0.1**
VSTU	**Vaestervik**	**1.49**	**225**	P		**Pn**	**08 12 05.5**	**0.0**
	baz=46							
VSTU	**Vaestervik**	**1.49**	**225**	P		**Pn**	**08 12 05.5**	**0.0**
	baz=46							
VSTU	**Vaestervik**	**1.49**	**225**	*e*P		**Pn**	**08 12 05.5**	**0.0**
GRAU	**Graesoe**	**1.62**	**1**	P		**Pn**	**08 12 07.9**	**+0.5**
GRAU	**Graesoe**	**1.62**	**1**	P		**Pn**	**08 12 07.9**	**+0.5**
GRAU	**Graesoe**	**1.62**	**1**	*e*P		**Pn**	**08 12 07.9**	**+0.5**
BYXU	**Byxelkrok**	**1.64**	**210**	P		**Pn**	**08 12 08.1**	**+0.5**
BYXU	**Byxelkrok**	**1.64**	**210**	P		**Pn**	**08 12 08.1**	**+0.5**
BYXU	**Byxelkrok**	**1.64**	**210**	*e*P		**Pn**	**08 12 08.1**	**+0.5**
AAL	**Aland**	**1.65**	**27**	P		**Pn**	**08 12 08.2**	**+0.4**
AAL	**Aland**	**1.65**	**27**	*e*P		**Pn**	**08 12 08.2**	**+0.4**
AAL				*e*S		**Sn**	**08 12 29.6**	**0.0**
LNKU	**Linkoeping**	**1.65**	**254**	P		**Pn**	**08 12 08.4**	**+0.6**
LNKU	**Linkoeping**	**1.65**	**254**	P		**Pn**	**08 12 08.4**	**+0.6**
LNKU	**Linkoeping**	**1.65**	**254**	*e*P		**Pn**	**08 12 08.4**	**+0.6**
OSTU	**Oestervaala**	**1.67**	**336**	P		**Pn**	**08 12 08.8**	**+0.7**
OSTU	**Oestervaala**	**1.67**	**336**	P		**Pn**	**08 12 08.8**	**+0.7**
OSTU	**Oestervaala**	**1.67**	**336**	*e*P		**Pn**	**08 12 08.8**	**+0.7**
SLIT	**Slitere, Latvi**	**2.28**	**117**	*e*P		**Pb**	**08 12 20.1**	**+0.4**
SLIT				*e*S		**Sb**	**08 12 49.0**	**+0.7**
BLEU	**Blekinge**	**2.82**	**212**	*e*		**Pn**	**08 12 24.8**	**+0.9**
	baz=19,slow=12							
BLEU				*i* P		**Pb**	**08 12 25.3**	**-3.5**
BLEU				*i* S		**Sn**	**08 13 01.0**	**+2.4**
RAF	**Rauma**	**2.83**	**34**	*e*P		**Pn**	**08 12 25.1**	**+1.0**
RAF				*e*S		**Sn**	**08 13 00.7**	**+1.9**
RAF				MSG			08 13 07.5	
	comp=Z,2.8nm,0.1s							
HFC2	**Hagfors New Ar**	**2.84**	**302**	*e*P		**Pn**	**08 12 24.9**	**+0.8**
HFC2				*e*S		**Sn**	**08 12 58.1**	**-0.9**
HFS	**Hagfors**	**2.84**	**302**	Pn		**Pn**	**08 12 25.6**	**+1.5**
	baz=119,slow=14							
HFS				Sn		**Sn**	**08 12 59.4**	**+0.4**
	baz=115,slow=28							
HFS				Lg		Lg	08 13 05.9	
	baz=123,slow=37							
HFS	**Hagfors**	**2.84**	**302**	Pn		**Pn**	**08 12 25.6**	**+1.5**
	baz=119,slow=14							
HFS				Sn		**Sn**	**08 12 59.4**	**+0.4**
	baz=115,slow=28							
HFS				Sg		**Sb**	**08 13 05.9**	**+1.5**
	baz=123,slow=37							
MEF	**Metsahovi**	**3.36**	**61**	MSG			08 13 26.5	
	comp=Z,2.2nm,0.1s							
DEL	**Delary**	**3.36**	**230**	*i* P		**Pn**	**08 12 32.0**	**+0.7**
DEL				IAML			08 13 30.3	
	comp=Z,1.7nm,0.4s							
ONAU	**Onsala**	**3.74**	**252**	*i* P		**Pn**	**08 12 38.7**	**+2.2**
STRU	**Stroemstad**	**3.81**	**278**	*i* P		**Pn**	**08 12 40.3**	**+2.7**
HEMU	**Hemsoen**	**3.98**	**357**	*e*P		**Pn**	**08 12 40.7**	**+0.9**
NRA0	**NORESS Array S**	**4.06**	**303**	Pn		**Pn**	**08 12 42.3**	**+1.3**
	baz=127,slow=11							
NRA0				Lg		Lg	08 13 45.4	
	baz=134,slow=28							
NRA0	**NORESS Array S**	**4.06**	**303**	Pn		**Pn**	**08 12 42.3**	**+1.3**
	baz=127,slow=11							
NRA0				Sg		**Sg**	**08 13 45.4**	**-2.7**
	baz=134,slow=28							
BSD	**Bornholm Skovb**	**4.12**	**210**	*e*P		**Pn**	**08 12 42.6**	**+1.0**
BSD				*i* S		**Sn**	**08 13 30.6**	**+0.1**
PVF	**Pernaja**	**4.16**	**61**	MSG			08 13 49.2	
	comp=Z,3.0nm,0.2s							
NOA	**NORSAR Array B**	**4.35**	**305**	Pn		**Pn**	**08 12 44.7**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=145,slow=12,SNR=1.5							
NOA				Pg		**Pb**	**08 12 54.4**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=130,slow=13,SNR=1.6							
NOA				Lg		Lg	08 13 49.6	
	comp=Z,0.1nm,0.3s,baz=224,slow=25,SNR=3.1							
FIA0	**FINESS Array S**	**4.67**	**51**	Pn		**Pn**	**08 12 51.7**	**+2.4**
	baz=238,slow=12							
FIA0				Sn		**Sn**	**08 13 45.2**	**+1.1**
	baz=256,slow=28							
FIA0				Lg		Lg	08 14 02.8	
	baz=245,slow=28							
FIA0	**FINESS Array S**	**4.67**	**51**	Pn		**Pn**	**08 12 51.7**	**+2.4**
	baz=238,slow=12							
FIA0				Sn		**Sn**	**08 13 45.2**	**+1.1**
	baz=256,slow=28							
FIA0				Sg		**Sg**	**08 14 02.8**	**-4.8**
	baz=245,slow=28							
FINES	**FINESS Array B**	**4.67**	**51**	Pn		**Pn**	**08 12 51.7**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=245,slow=12,SNR=1.9							
FINES				Sn		**Sn**	**08 13 45.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=242,slow=20,SNR=2.5							
FINES				Lg		Lg	08 14 02.2	
	comp=Z,0.6nm,0.3s,baz=245,slow=26,SNR=4.6							
FIA1	**FINESS Array S**	**4.67**	**51**	MSG			08 14 10.9	
	comp=Z,2.6nm,0.3s							
KEF	**Keuruu**	**4.68**	**40**	MSG			08 14 13.4	
	comp=Z,2.6nm,0.2s							
VAF	**Ylistaro**	**4.79**	**23**	MSG			08 14 09.4	
	comp=Z,5.4nm,0.4s							
ARA0	**ARCESS Array S**	**11.27**	**13**	Pn		**Pn**	**08 14 17.8**	**-1.9**
	baz=198,slow=14							
ARA0	**ARCESS Array S**	**11.27**	**13**	Pn		**Pn**	**08 14 17.8**	**-1.9**
	baz=198,slow=14							
ARCES	**ARCESS Array B**	**11.27**	**13**	Pn		**Pn**	**08 14 18.0**	**-1.7**
	baz=194,slow=14,SNR=1.5							
ARCES				Sn		Sn	08 16 17.3	-8.8
	baz=206,slow=25,SNR=1.7							

HEL 15 08:22:27.1±0.3, 63°.08N×27°.42E, h0km, ML1.1, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SUF	**Sumiainen**	**0.69**	**239**	PG		Pg	08 22 39.4	-0.8
SUF				SG		Sg	08 22 49.1	0.0
KAF	**Kangasniemi**	**1.10**	**209**	PG		Pg	08 22 46.5	-1.7
KEF	**Keuruu**	**1.50**	**233**	PG		Pn	08 22 53.8	-1.3
KEF				MSG			08 23 11.9	
	comp=Z,1.0nm,0.2s							
FIA0	**FINESS Array S**	**1.76**	**202**	PG		Pn	08 22 58.9	+0.1
	baz=18							
FIA0				SN		Sn	08 23 22.0	+0.1
OUF	**Merijarvi**	**1.76**	**318**	PG		Pn	08 22 58.6	-0.2
	baz=131							
OUF				MSG			08 23 19.7	
	comp=Z,1.0nm,0.2s							
OUF				SN		Sg	08 23 23.4	-0.2
OBF0	**Syolatti, Pyha**	**2.01**	**317**	SG		Sg	08 23 31.4	-0.1
OUL	**Oulu**	**2.12**	**342**	PB		Pn	08 23 04.2	+0.4
OUL				SG		Sb	08 23 33.2	0.0
VAF	**Ylistaro**	**2.16**	**271**	PG		Pn	08 23 05.4	+1.1
	baz=87							
VAF				MSG			08 23 31.4	
	comp=Z,0.8nm,0.2s							

*UPP **15** 08:23:06.6±0.2, 58°.72N×18°.52E, h0km, ML2.4, Explosion*
*HEL **15** 08:23:07.5±0.1, 58°.73N×18°.50E, h0km, ML2.3, ML2.4(UPP), Explosion*
*DNK **15** 08:23:07.1±0.5, 58°.73N×18°.51E, h0km, ML2.4(UPP), Explosion*
*NAO **15** 08:23:10.7±2.1, 58°.99N×18°.34E, ML2.4*
*BER **15** 08:23:12.2±2.9, 59°.09N×18°.46E, h0km, ML2.4(NAO), Suspected explosion*
*IDC **15** 08:23:12.6±2.2, 59°.10N×18°.53E, h0km, mb1 3.0/3, mb1mx2.9/56, mbtmp2.9/3, ML2.2/3, Error ellipse: s-maj=26.0km s-min=8.9km az=175.0*

ISC 15 08:23:05.9±0.8, 58°.72N±0°.02×18°.53E±0°.02, h0km, n63, σ1s34/78, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.40**	**317**	P		**Pg**	**08 23 14.2**	**+0.7**
NYNU				S		**Sg**	**08 23 19.1**	**+0.4**
NYNU	**Nynaeshamn**	**0.40**

NB2					Sg		**Sb**	**08 25 20.8 +4.3**
	baz=120,slow=37							
NOA	**NORSAR Array B**	**4.36**	**305**		Pn		**Pn**	**08 24 15.5 +2.2**
	comp=Z,0.0nm,0.3s,baz=169,slow=6.5,SNR=6.1							
NOA					Pg		**Pb**	**08 24 24.4 +1.0**
	comp=Z,0.1nm,0.3s,baz=112,slow=20,SNR=6.1							
NOA					Lg	Lg		08 25 21.1
	comp=Z,0.2nm,0.3s,baz=61,slow=12,SNR=6.8							
FIA0	**FINESS Array S**	**4.66**	**51**		Pn		**Pn**	**08 24 20.9 +3.4**
	baz=236,slow=11							
FIA0					Lg	Lg		08 25 31.2
	baz=242,slow=28							
FIA0	**FINESS Array S**	**4.66**	**51**		Pn		**Pn**	**08 24 20.9 +3.4**
	baz=236,slow=11							
FIA0					Sg		**Sg**	**08 25 31.2 -4.4**
	baz=242,slow=28							
FIA0	**FINESS Array S**	**4.66**	**51**		MSG			08 25 39.3
	comp=Z,4.3nm,0.2s							
FINES	**FINESS Array B**	**4.66**	**51**		Pn		**Pn**	**08 24 20.2 +2.7**
	comp=Z,0.4nm,0.3s,baz=240,slow=10,SNR=13							
FINES					Sn		**Sn**	**08 25 12.7 +0.5**
	comp=Z,0.3nm,0.3s,baz=246,slow=24,SNR=2.1							
FINES					Lg	Lg		08 25 30.1
	comp=Z,1.2nm,0.3s,baz=242,slow=20,SNR=9.2							
KEF	**Keuruu**	**4.67**	**40**		MSG			08 25 32.9
	comp=Z,6.6nm,0.4s							
VAF	**Ylistaro**	**4.79**	**23**		MSG			08 25 36.5
	comp=Z,6.9nm,0.4s							
ARA0	**ARCESS Array S**	**11.27**	**13**		Pn		**Pn**	**08 25 46.5 -1.5**
	baz=197,slow=14							
ARA0	**ARCESS Array S**	**11.27**	**13**		Pn		**Pn**	**08 25 46.5 -1.5**
	baz=197,slow=14							
ARCES	**ARCESS Array B**	**11.27**	**13**		Pn		**Pn**	**08 25 46.1 -1.8**
	baz=195,slow=14,SNR=10							
ARCES					Sn		Sn	08 27 43.2 -11
	baz=219,slow=23,SNR=1.3							

BGR ***15*** *08:25:02.3±2.4, 34.°08N×32.°99E, h10km, mb5.7, Ms4.4, Error ellipse: s-maj=50.0km s-min=26.7km az=98.0*

MOS ***15*** *08:25:08.5±1.1, 34.°63N×32.°30E, h8km, mb5.8/116, MS4.8/3, Error ellipse: s-maj=3.5km s-min=2.2km az=106.9*

DDA ***15*** *08:25:09.3, 34.°71N×32.°37E, h11km±1km, MW5.2*

IDC ***15*** *08:25:10.3±0.3, 34.°86N×32.°35E, h0km, mb5.5/42, mb1 5.6/53, mb1mx5.5/59, mbtmp5.5/53, ML5.1/10, MS4.7/49, Ms1 4.7/49, ms1mx4.6/70, Error ellipse: s-maj=9.1km s-min=8.4km az=28.0*

ISK ***15*** *08:25:10.9, 34.°71N×32.°34E, h14km, ML5.5/63*

NEIC ***15*** *08:25:11.6±2.2, 34.°81N±0.°06×32.°33E±0.°07, h10km±1km, mb5.7/565, Ms_20 4.9/103, Mww5.3, ML5.6(NIC), Mwc5.3(GCMT), Error ellipse: s-maj=10.4km s-min=8.4km az=219.0*

BJI ***15*** *08:25:11.0±0.0, 34.°70N×32.°40E, h20km, mB5.5/40, mb5.7/72, Ms5.1/59, Ms7 4.8/60*

PDG ***15*** *08:25:11.0±0.6, 34.°71N×32.°29E, h10km±1km, ML5.5/14, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

NIC ***15*** *08:25:12.7±0.0, 34.°82N×32.°37E, h28km, Ml5.6/6*

MED_RC ***15*** *08:25:13.0±0.3, 34.°74N×32.°52E, h18km±1km, MW5.3/32, Moment Tensor Solution. Body waves: s6,c6;Mantle waves: s32,c49; Duration: 1s9 Moment tensor: Scale 10^17Nm; Mrr0.63±.03; Mθθ -0.67±.02; Mφφ0.04±.02; Mrθ0.91±.07; Mθφ0.08±.02; Mφr0.02±.04; Best double couple: M0 1.12000×10^17 NP1:φs283.00000°, δ18.00000°, λ103.00000°. NP2:φs90.00000°, δ72.00000°, λ86.00000°. Principal axes: T 1.1000, Plg63.0000°, Azm354.0000°; N 0.0400, Plg4.0000°, Azm91.0000°; P -1.1400, Plg27.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

GRAL ***15*** *08:25:14.5±0.3, 34.°78N×32.°49E, h8km±3km, MD5.2*

GCMT ***15*** *08:25:14.6±0.1, 34.°72N±0.°01×32.°36E±0.°01, h18km, MW5.3/129, Moment Tensor Solution. s88,c119; s129,c244; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.76±.02; Mθθ -0.73±.01; Mφφ -0.03±.01; Mrθ0.86±.04; Mθφ0.12±.01; Mφr -0.10±.03; Best double couple: M0 1.15200×10^17 NP1:φs281.00000°, δ21.00000°, λ94.00000°. NP2:φs97.00000°, δ69.00000°, λ88.00000°. Principal axes: T 1.1580, Plg65.0000°, Azm4.0000°; N -0.0120, Plg1.0000°, Azm98.0000°; P -1.1460, Plg24.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

HLW ***15*** *08:25:15.2, 34.°62N×32.°39E, h23km±19km, Ml5.4*

GII ***15*** *08:25:16.0±0.0, 34.°78N×32.°35E, h31km, mb5.1/3, MD5.2/3, Mm4.9/12*

NEIC ***15*** *08:25:17, 34.°77N×32.°44E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.58; Mθθ-0.66; Mφφ0.08; Mrθ0.87; Mθφ0.11; Mφr-0.03; Fault plane solution: M0 1.08000×10^17 NP1:φs286.00000°, δ18.00000°, λ102.00000°. NP2:φs93.00000°, δ72.00000°, λ86.00000°. Principal axes: T 1.0311, Plg63.0000°, Azm357.0000°; N 0.0893, Plg4.0000°, Azm94.0000°; P -1.1204, Plg27.0000°, Azm186.0000°;*

THE ***15*** *08:25:18.6, 34.°78N×31.°91E, h11km±20km, ML5.4/12 Error ellipse: s-maj=26.9km s-min=1.2km az=112.0*

NEIC ***15*** *08:25:21, 34.°86N×32.°31E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.50; Mθθ-0.53; Mφφ0.03; Mrθ0.83; Mθφ0.14; Mφr-0.20; Fault plane solution: M0 1.01000×10^17 NP1:φs283.00000°, δ16.00000°, λ89.00000°. NP2:φs104.00000°, δ74.00000°, λ90.00000°. Principal axes: T 0.9770, Plg61.0000°, Azm14.0000°; N 0.0660, Plg0.0000°, Azm284.0000°; P -1.0430, Plg29.0000°, Azm194.0000°;*

ISC 15 08:25:13.3±0.2, 34.77N±0.02×32.33E±0.02, h21km±1km, n1495,σ1§68/1410, mb5.7/498, MS4.8/131, 834C-210D, Fault plane solution: NP1:φs284.75360°, δ16.95429°, λ106.77165°. NP2:φs87.26543°, δ73.78728°, λ84.97266°. Principal axes: T Plg60.9035°, Azm349.9446°; N Plg4.8269°, Azm88.6724°; P Plg28.6167°, Azm181.3131°; **Fault plane solution: NP1:φs124.93791°, δ71.11903°, λ118.53513°. NP2:φs245.69617°, δ33.77227°, λ35.60061°. Principal axes:** T Plg54.7466°, Azm70.7561°; N Plg26.8717°, Azm294.9583°; P Plg21.0365°, Azm193.7208°; **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NATA	**Nata**	**0.20**	**87**	P		**Pb**	**08 25 18.5**	**-0.6**
NATA				S		**Sb**	**08 25 22.5**	**-0.7**
NATA	**Nata**	**0.20**	**87**	P			08 25 18.5	
NATA				S			08 25 22.5	
NATA	**Nata**	**0.20**	**87**	P			08 25 18.5	
NATA				S			08 25 22.5	
AKMS	**Akamas**	**0.25**	**1**	P		**Pb**	**08 25 19.2**	**-0.1**
AKMS				S		**Sb**	**08 25 22.8**	**-0.8**
AKMS				AML	AML		08 25 23.6	
	6μm,0.7s							
AKMS				AML	AML		08 25 23.6	
	6μm,0.7s							
AKMS	**Akamas**	**0.25**	**1**	P			08 25 19.2	
AKMS				S			08 25 22.8	
AKMS				AMI			08 25 23.6	
	6μm,0.7s							
AKMS	**Akamas**	**0.25**	**1**	P			08 25 19.2	
AKMS				S			08 25 22.8	
AKMS				AMI			08 25 23.6	
	6μm,0.7s							
ALFC	**Alefka**	**0.44**	**30**	P		**Pb**	**08 25 21.7**	**-0.7**
ALFC				S		**Sb**	**08 25 27.4**	**-1.1**
ALFC				AML	AML		08 25 31.1	
	4μm,0.7s							
ALFC				AML	AML		08 25 31.1	
	4μm,0.7s							
ALFC	**Alefka**	**0.44**	**30**	P			08 25 21.7	
ALFC				S			08 25 27.4	
ALFC				AMI			08 25 31.1	
	4μm,0.7s							
ALFC	**Alefka**	**0.44**	**30**	P			08 25 21.7	
ALFC				S			08 25 27.4	
ALFC				AMI			08 25 31.1	
	4μm,0.7s							
SZAC	**Souni**	**0.45**	**92**	P		**Pb**	**08 25 22.5**	**0.0**
SZAC				S		**Sb**	**08 25 29.0**	**+0.2**
SZAC				AML	AML		08 25 36.3	
	4μm,1.1s							
SZAC				AML	AML		08 25 36.3	
	4μm,1.1s							
SZAC				AML	AML		08 25 37.3	
	2μm,0.8s							
SZAC				AML	AML		08 25 37.3	
	2μm,0.8s							
SZAC	**Souni**	**0.45**	**92**	P			08 25 22.5	
SZAC				S			08 25 29.0	
SZAC				AMI			08 25 36.3	
	4μm,1.1s							
SZAC				AMI			08 25 37.3	
	2μm,0.8s							
LEF	**Lefka**	**0.58**	**53**	PG		**Pb**	**08 25 22.9**	**-1.9**
LEF				SG		**Sb**	**08 25 31.5**	**-1.1**
AKDN	**Akdeniz- Kıbrı**	**0.74**	**45**	PG		**Pb**	**08 25 26.5**	**-1.0**
ASGA	**Asgata**	**0.76**	**88**	P		**Pb**	**08 25 26.4**	**-1.3**
ASGA				AML	AML		08 25 40.5	
	2μm,0.9s							
ASGA				AML	AML		08 25 42.2	
	862nm,0.6s							
ASGA	**Asgata**	**0.76**	**88**	P			08 25 26.4	
ASGA				AMI			08 25 40.5	
	2μm,0.9s							
ASGA				AMI			08 25 42.2	
	862nm,0.6s							
ASGA	**Asgata**	**0.76**	**88**	P			08 25 26.4	
ASGA				AMI			08 25 40.5	
	2μm,0.9s							
ASGA				AMI			08 25 42.2	
	862nm,0.6s							
CSS	**Mathiatis**	**0.84**	**77**	Pg		**Pb**	**08 25 27.6**	**-1.7**
CSS				Sg		**Sb**	**08 25 40.2**	**+0.1**
CSS	**Mathiatis**	**0.84**	**77**	PG		**Pb**	**08 25 28.3**	**-0.9**
CSS				SG		**Sb**	**08 25 40.0**	**-0.1**
CSS	**Mathiatis**	**0.84**	**77**	Pg		**Pb**	**08 25 29.1**	**-0.1**
CSS	**Mathiatis**	**0.84**	**77**	P		**Pb**	**08 25 27.5**	**-1.7**
CSS				S		**Sb**	**08 25 40.9**	**+0.8**
CSS				AML	AML		08 25 47.7	
	233nm,0.8s							
CSS				AML	AML		08 25 47.7	
	233nm,0.8s							
CSS				AML	AML		08 25 48.7	
	187nm,0.6s							
CSS				AML	AML		08 25 48.7	
	187nm,0.6s							
CSS	**Mathiatis**	**0.84**	**77**	P			08 25 27.5	
CSS				S			08 25 40.9	
CSS				AMI			08 25 47.7	
	233nm,0.8s							
CSS				AMI			08 25 48.7	
	187nm,0.6s							
CSS	**Mathiatis**	**0.84**	**77**	P			08 25 27.5	
CSS				S			08 25 40.9	
CSS				AMI			08 25 47.7	
	233nm,0.8s							
CSS				AMI			08 25 48.7	
	187nm,0.6s							
AKIN	**Akıncılar- Kıb**	**0.96**	**75**	PG		**Pb**	**08 25 30.1**	**-1.2**
MVOU	**Mavrovouni**	**1.10**	**77**	P		**Pn**	**08 25 32.0**	**-1.4**
MVOU				AML	AML		08 25 58.9	
	412nm,0.9s							
MVOU	**Mavrovouni**	**1.10**	**77**	P			08 25 32.0	
MVOU				AMI			08 25 58.9	
	412nm,0.9s							
MVOU	**Mavrovouni**	**1.10**	**77**	P			08 25 32.0	
MVOU				AMI			08 25 58.9	
	412nm,0.9s							
LFK	**Lefkose**	**1.11**	**62**	PN		**Pn**	**08 25 32.9**	**-0.8**
BOZY	**Bozyazi-Mersin**	**1.44**	**21**	PN		**Pn**	**08 25 38.2**	**+0.1**
GAZI	**Gazipasa**	**1.46**	**360**	⇓	*iP*	**Pn**	**08 25 37.9**	**-0.6**
GAZI					*i* S	**Sn**	**08 25 54.7**	**-2.3**
GAZI					IAML		08 26 00.0	
	comp=N,73μm,0.8s							
GAZI					IAML		08 26 04.0	
	comp=E,41μm,1.1s							
GAZI	**Gazipasa**	**1.46**	**360**	PN		**Pn**	**08 25 38.4**	**-0.1**
GAZI				SN		**Sb**	**08 25 58.7**	**+0.8**
OSC1	**CSNet OBS 1**	**1.54**	**215**	P		**Pn**	**08 25 39.2**	**-0.3**
OSC1				S		**Sn**	**08 25 58.6**	**-0.2**
OSC1	**CSNet OBS 1**	**1.54**	**215**	P			08 25 39.2	
OSC1				S			08 25 58.6	
OSC1	**CSNet OBS 1**	**1.54**	**215**	P			08 25 39.2	
OSC1				S			08 25 58.6	
YORU	**Yoruktepe-Mers**	**1.64**	**32**	PN		**Pn**	**08 25 41.0**	**+0.1**
EREN	**Erenkoy**	**1.69**	**63**	⇓	*iP*	**Pn**	**08 25 40.7**	**-0.9**
EREN					*i* S	**Sb**	**08 26 10.0**	**+5.6**
EREN					IAML		08 26 20.0	
	comp=N,36μm,0.9s							
EREN					IAML		08 26 31.0	
	comp=E,31μm,1.5s							
EREN	**Erenkoy**	**1.69**	**63**	PN		**Pn**	**08 25 40.9**	**-0.6**
AKK2	**Akkuyu-Mersin**	**1.69**	**36**	PN		**Pn**	**08 25 41.6**	**+0.1**
AKK1	**Akkuyu-Mersin**	**1.69**	**35**	PN		**Pn**	**08 25 41.2**	**-0.4**
OSC2	**CSNet OBS 4**	**1.69**	**182**	P		**Pn**	**08 25 40.8**	**-0.7**
OSC1	**CSNet OBS 4**	**1.69**	**182**	P			08 25 40.8	
OSC2	**CSNet OBS 4**	**1.69**	**182**	P			08 25 40.8	
OREN	**Orenkoy-Mersin**	**1.71**	**32**	PN		**Pn**	**08 25 41.9**	**+0.1**
AKKU	**Akkuyu-Mersin**	**1.71**	**35**	PN		**Pn**	**08 25 41.6**	**-0.2**
GULN	**MERSIN_Gulnar**	**1.72**	**35**	⇓	*iP*	**Pn**	**08 25 40.8**	**-1.3**
GULN					*i* S	**Sn**	**08 26 03.7**	**+0.3**
GULN					IAML		08 26 06.0	
	comp=E,15μm,0.8s							
GULN					IAML		08 26 08.0	
	comp=N,11μm,1.1s							
BERE	**Bereket-Mersin**	**1.73**	**25**	PN		**Pn**	**08 25 42.1**	**-0.2**
TEPK	**Tepekoy-MERSIN**	**1.76**	**34**	PN		**Pn**	**08 25 42.4**	**-0.2**
TISA	**Tisan-Mersin**	**1.77**	**38**	PN		**Pn**	**08 25 43.0**	**+0.3**
YESI	**Yesilovacik-Me**	**1.78**	**37**	PN		**Pn**	**08 25 42.8**	**0.0**
KARG	**Kargicak-Mersi**	**1.82**	**38**	PN		**Pn**	**08 25 43.1**	**+0.3**
IKL	**Isikli**	**1.84**	**37**	PN		**Pn**	**08 25 43.4**	**-0.2**
TEVE	**Tevekalti-Mers**	**1.89**	**28**	PN		**Pn**	**08 25 44.4**	**-0.1**
KEBE	**Keben-Mersin**	**2.02**	**34**	PN		**Pn**	**08 25 46.0**	**-0.2**
SILI	**Silifke-Mersin**	**2.06**	**39**	PN		**Pn**	**08 25 46.4**	**-0.2**
KEPZ	**Antalya-Kepez**	**2.21**	**345**	⇓	*iP*	**Pn**	**08 25 49.0**	**+0.3**
KEPZ					*i* S	**Sn**	**08 26 17.2**	**+1.8**
KEPZ					IAML		08 26 29.0	
	comp=N,33μm,1.1s							
KEPZ					IAML		08 26 31.0	
	comp=E,19μm,0.8s							
AKUM	**Antalya-Kumluc**	**2.24**	**314**	⇑	*iP*	**Pn**	**08 25 49.5**	**+0.3**
AKUM					*i* S	**Sb**	**08 26 28.8**	**+8.4**
AKUM					IAML		08 26 41.0	
	comp=N,23μm,0.8s							
AKUM					IAML		08 26 45.0	
	comp=E,20μm,0.7s							
KIZK	**Mersin**	**2.26**	**40**	⇓	*iP*	**Pn**	**08 25 49.2**	**-0.2**
KIZK					*i* S	**Sn**	**08 26 18.2**	**+1.6**
KIZK					IAML		08 26 21.0	
	comp=E,10μm,0.9s							
KIZK					IAML		08 26 26.0	
	comp=N,14μm,1.0s							
KIZK	**Mersin**	**2.26**	**40**	PN		**Pn**	**08 25 49.3**	**-0.1**
KKBE	**Karaman, Kazim**	**2.50**	**11**	⇓	*iP*	**Pn**	**08 25 54.7**	**+1.9**
KKBE					*i* S	**Sb**	**08 26 25.9**	**-1.9**
KKBE					IAML		08 26 31.0	
	comp=E,22μm,0.7s							
KKBE					IAML		08 26 40.0	
	comp=N,14μm,0.9s							
KRMN	**Karaman**	**2.52**	**17**	PN		**Pn**	**08 25 53.7**	**+0.7**
ANTB	**Antalya**	**2.52**	**328**	PN		**Pn**	**08 25 53.8**	**+0.8**
KSL	**Kastellorizon**	**2.63**	**302**	P		**Pn**	**08 25 55.1**	**+0.6**
KSL				S		**Sn**	**08 26 23.4**	**-2.4**
	comp=N,10μm,1.9s							
AKAS	**Kas**	**2.66**	**304**	⇑	*iP*	**Pn**	**08 25 54.1**	**-0.9**
AKAS					*i* S	**Sb**	**08 26 31.5**	**-1.0**
AKAS					IAML		08 26 59.0	
	comp=N,8μm,0.9s							
AKAS					IAML		08 27 02.0	
	comp=E,6μm,0.8s							
AKAS	**Kas**	**2.66**	**304**	PN		**Pn**	**08 25 54.7**	**-0.4**
AKAS	**Kas**	**2.66**	**304**	Pn		**Pn**	**08 25 54.8**	**-0.2**
SEDI	**Konya, Seydise**	**2.72**	**350**	⇓	*iP*	**Pn**	**08 25 57.9**	**+2.1**
SEDI					*i* S	**Sb**	**08 26 32.4**	**-1.7**
SEDI					IAML		08 26 43.0	
	comp=N,24μm,0.8s							
SEDI					IAML		08 26 44.0	
	comp=E,28μm,0.8s							
KORT	**Korkueli**	**2.75**	**325**	⇑	*iP*	**Pn**	**08 25 56.5**	**+0.2**
KORT					*i* S	Sb	08 26 44.3	+9.3
KORT					IAML		08 26 54.0	
	comp=N,15μm,1.0s							
KORT					IAML		08 26 56.0	
	comp=E,20μm,1.4s							
KORT	**Korkueli**	**2.75**	**325**	PN		**Pn**	**08 25 56.9**	**+0.7**
MERS	**Mersin**	**2.75**	**40**	PN		**Pn**	**08 25 56.9**	**+0.7**
BEYL	**Beirut**	**2.77**	**108**	*eP*		**Pn**	**08 25 56.4**	**+0.1**
ELL	**Elmali**	**2.79**	**316**	P		**Pn**	**08 25 58.1**	**+1.2**
ELL	**Elmali**	**2.79**	**316**	PN		**Pn**	**08 25 57.4**	**+0.6**
ELL	**Elmali**	**2.79**	**316**			**Pn**	**08 25 58.0**	**+1.2**
BHL	**Bhannes**	**2.88**	**106**	P		**Pn**	**08 25 58.0**	**-0.1**
BHL				S		**Sn**	**08 26 30.2**	**-1.9**
BHL	**Bhannes**	**2.88**	**106**	*eP*		**Pn**	**08 25 58.0**	**-0.1**
BHL				*eS*		**Sn**	**08 26 30.2**	**-1.9**
DQRL	**Deir Qamar**	**2.88**	**111**	*eP*		**Pn**	**08 25 58.1**	**0.0**
DQRL				*eS*		**Sn**	**08 26 30.3**	**-1.9**
HNTI	**Hanita**	**2.90**	**125**	Pn		**Pn**	**08 25 58.0**	**-0.2**
HNTI				Sn		**Sn**	**08 26 30.5**	**-2.0**
BUCA	**Burdur, Bucak-**	**2.93**	**331**	⇑	*iP*	**Pn**	**08 25 58.6**	**-0.1**
BUCA					IAML		08 27 02.0	
	comp=N,7μm,1.1s							
BUCA					IAML		08 27 07.0	
	comp=E,7μm,0.9s							
DED	**Mersin**	**2.97**	**42**	⇓	*iP*	**Pn**	**08 25 58.9**	**-0.3**
DED					*i* S	**Sn**	**08 26 34.3**	**+0.1**
DED					IAML		08 26 42.0	
	comp=E,7μm,0.7s							
DED					IAML		08 26 48.0	
	comp=N,6μm,1.1s							
KERG	**Konya-Eregli**	**3.01**	**28**	⇓	*iP*	**Pn**	**08 26 01.2**	**+1.3**
KERG					*i* S	**Sb**	**08 26 39.2**	**-3.5**
KERG					IAML		08 26 43.0	
	comp=N,17μm,0.8s							
KERG					IAML		08 26 45.0	
	comp=E,16μm,0.8s							
HWQ	**Hawqa**	**3.02**	**98**	*eP*		**Pn**	**08 25 59.7**	**-0.3**
HWQ				*eS*		**Sn**	**08 26 33.5**	**-2.2**
BCK	**Bucak**	**3.03**	**333**	P		**Pn**	**08 26 01.9**	**+1.8**
BCK	**Bucak**	**3.03**	**333**	PN		**Pn**	**08 26 01.1**	**+1.0**
QRWL	**Qaraoun**	**3.03**	**113**	*eP*		**Pn**	**08 26 00.4**	**+0.3**
KRTS	**Karatas**	**3.06**	**53**	PN		**Pn**	**08 26 01.1**	**+0.7**
OFRI	**`Ofer**	**3.08**	**133**	Pn		**Pn**	**08 26 00.2**	**-0.5**
OFRI				Sn		**Sn**	**08 26 34.9**	**-2.1**
MMA0B	**Mount Meron ar**	**3.10**	**124**	Pn		**Pn**	**08 26 01.2**	**+0.2**
MMA0B				Sn		**Sn**	**08 26 36.1**	**-1.3**
MMAI	**Mount Meron Ar**	**3.10**	**124**	Pn		**Pn**	**08 26 01.2**	**+0.2**
	comp=E,1μm,0.3s,baz=310,slow=13,SNR=1618							
MMAI					Sn		**Sn**	**08 26 38.8**	**+1.4**
	comp=E,1μm,0.3s,baz=313,slow=25,SNR=15							
MMAI					LR		LR	08 27 21.3
	comp=E,7μm,20.6s,baz=300,slow=42							
KRTD	**Karatas-Adana**	**3.10**	**53**	PN		**Pn**	**08 26 01.5**	**+0.5**
BLGI	**Bet Lehem HaGe**	**3.13**	**130**	Pn		**Pn**	**08 26 01.3**	**-0.1**
KONT	**Konya--Tatoy**	**3.17**	**0**	⇑	*iP*	**Pn**	**08 26 04.5**	**+2.5**
KONT					*i* S	**Sb**	**08 26 43.9**	**-3.1**
KONT					IAML		08 26 52.0	
	comp=N,9μm,1.7s							
KONT					IAML		08 26 52.0	
	comp=E,12μm,1.1s							
KONT	**Konya--Tatoy**	**3.17**	**0**	PN		**Pn**	**08 26 03.3**	**+1.3**
RCY	**Rachaya**	**3.17**	**113**	*eP*		**Pn**	**08 26 02.1**	**0.0**
GEM	**Giv'at Ha'Em**	**3.17**	**118**	Pn		**Pn**	**08 26 01.9**	**-0.1**
GEM				Sn		**Sn**	**08 26 37.9**	**-1.3**
ASUZ	**Hatay-Arsuz**	**3.20**	**61**	⇑	*iP*	**Pn**	**08 26 02.2**	**-0.1**
ASUZ					*i* S	**Sn**	**08 26 42.5**	**+2.7**
ASUZ					IAML		08 26 53.0	
	comp=N,7μm,0.6s							
ASUZ					IAML		08 26 56.0	
	comp=E,5μm,1.0s							
NATI	**Neve Ativ**	**3.20**	**117**	Pn		**Pn**	**08 26 02.8**	**+0.4**
NATI				Sn		**Sn**	**08 26 38.6**	**-1.3**
YESY	**Yesilyurt**	**3.22**	**20**	PN		**Pn**	**08 26 03.5**	**+0.8**
FETY	**Fethiye**	**3.23**	**306**	P		**Pn**	**08 26 03.1**	**+0.2**
FETY	**Fethiye**	**3.23**	**306**	⇑	*iP*	**Pn**	**08 26 03.0**	**+0.2**
FETY					*i* S	**Sn**	**08 26 37.6**	**-3.1**
FETY	**Fethiye**	**3.23**	**306**	PN		**Pn**	**08 26 03.2**	**+0.4**
KARA	**Karaisali**	**3.33**	**41**	PN		**Pn**	**08 26 05.1**	**+1.0**
GOLH	**Golhisar**	**3.33**	**318**	⇑	*iP*	**Pn**	**08 26 07.0**	**+2.7**
GOLH					IAML		08 27 25.0	
	comp=N,11μm,1.2s							
DOGA	**KONYA_Doganhis**	**3.37**	**351**	⇑	*iP*	**Pn**	**08 26 07.0**	**+2.1**
DOGA					IAML		08 27 05.0	
	comp=N,7μm,1.1s							
DOGA					IAML		08 27 08.0	
	comp=E,11μm,0.7s							
ISP	**Isparta**	**3.38**	**335**	P		**Pn**	**08 26 06.8**	**+1.9**
ISP	**Isparta**	**3.38**	**335**	Pn		**Pn**	**08 26 05.9**	**+1.0**
ISP				Sn		**Sn**	**08 26 40.5**	**-4.0**
ISP	**Isparta**	**3.38**	**335**	PN		**Pn**	**08 26 05.9**	**+1.0**
ISP	**Isparta**	**3.38**	**335**	Pn		**Pn**	**08 26 06.8**	**+1.9**
SLTI	**Sal'it**	**3.39**	**137**	Pn		**Pn**	**08 26 04.5**	**-0.4**
CAEL	**Denizli, Camel**	**3.39**	**315**	⇑	*iP*	**Pn**	**08 26 07.1**	**+2.0**
CAEL					IAML		08 27 26.0	
	comp=E,24μm,1.3s							
CAEL					IAML		08 27 28.0	
	comp=N,31μm,1.7s							
KSHT	**Keshet**	**3.40**	**121**	Pn		**Pn**	**08 26 06.0**	**+0.8**
LADK	**Ladik-KONYA**	**3.42**	**0**	PN		**Pn**	**08 26 06.5**	**+1.0**
BAGO	**Egridir - ISPA**	**3.45**	**339**	⇑	*iP*	**Pn**	**08 26 07.7**	**+1.1**
BAGO					*i* S	**Sb**	**08 26 59.2**	**+4.1**
BAGO					IAML		08 27 07.0	
	comp=E,4μm,1.5s							
BAGO					IAML		08 27 08.0	
	comp=N,4μm,1.6s							
BRDR	**BURDUR-Merkez**	**3.45**	**329**	⇑	*iP*	**Pn**	**08 26 07.7**	**+1.8**
BRDR					*i* S	**Sb**	**08 26 55.2**	**0.0**
BRDR					IAML		08 27 05.0	
	comp=E,6μm,0.9s							
BRDR					IAML		08 27 08.0	
	comp=N,4μm,2.1s							
MMLI	**Mount Malkishu**	**3.47**	**131**	Pn		**Pn**	**08 26 06.0**	**-0.1**
MMLI				Sn		**Sn**	**08 26 45.3**	**-1.3**
MMLI	**Mount Malkishu**	**3.47**	**131**	PN		**Pn**	**08 26 05.7**	**-0.4**
TAHT	**Tahtakopru-Hat**	**3.53**	**62**	PN		**Pn**	**08 26 07.6**	**+0.8**
ALIN	**Konya, Altinte**	**3.55**	**7**	⇑	*iP*	**Pn**	**08 26 09.4**	**+2.1**
ALIN					IAML		08 27 10.0	
	comp=N,3μm,1.4s							
ALIN					IA

TURN					*i* S	Sn	08 26 55.6	-1.0			
TURN					IAML		08 27 11.0				
	comp=N,4µm,0.9s										
TURN					IAML		08 27 12.0				
	comp=E,3µm,0.6s										
TURN	**Turunc**	**3.88**	**302**		PN	Pn	**08 26 12.8**	**+1.1**			
GULA	**Gulagac**	**3.88**	**23**		PN	Pn	**08 26 12.9**	**+1.1**			
AMAZ	**Amatzia**	**3.89**	**145**		Pn	Pn	**08 26 12.5**	**+0.7**			
AMAZ					Sn	Sn	**08 26 55.9**	**-1.0**			
KZIL	**AFYON_Kizioren**	**3.90**	**334**	⇑	*i*P	Pn	**08 26 13.3**	**+1.2**			
KZIL					IAML		08 27 22.0				
	comp=E,2µm,0.7s										
KZIL					IAML		08 27 39.0				
	comp=N,3µm,1.2s										
KOZT	**Kozan**	**3.92**	**45**		PN	Pn	**08 26 12.9**	**+0.7**			
SHUT	**Suhut-Afyon**	**4.04**	**340**		PN	Pn	**08 26 15.6**	**+1.6**			
AKSY	**AKSARAY - Alti**	**4.04**	**16**	⇑	*i*P	Pn	**08 26 15.5**	**+1.5**			
AKSY					IAML		08 27 33.0				
	comp=N,2µm,1.3s										
AKSY					IAML		08 27 40.0				
	comp=E,2µm,1.4s										
YER	**Yerkesik**	**4.04**	**307**		P	Pn	**08 26 15.4**	**+1.4**			
YER	**Yerkesik**	**4.04**	**307**		P	Pn	**08 26 15.4**	**+1.4**			
YER	**Yerkesik**	**4.04**	**307**		PN	Pn	**08 26 14.9**	**+0.9**			
DSI	**Dead Sea**	**4.09**	**140**		Pn	Pn	**08 26 15.5**	**+0.9**			
MULA	**Mugla, Merkez-**	**4.09**	**309**	⇑	*i*P	Pn	**08 26 15.6**	**+0.9**			
MULA					IAML		08 27 09.0				
	comp=E,4µm,0.6s										
MULA					IAML		08 27 45.0				
	comp=N,2µm,1.1s										
YAHY	**KAYSERI_Yahyal**	**4.12**	**35**	⇓	*i*P	Pn	**08 26 16.9**	**+1.8**			
YAHY					*i* S	Sn	**08 27 04.7**	**+1.9**			
YAHY					IAML		08 27 15.0				
	comp=N,2µm,1.2s										
YAHY					IAML		08 27 26.0				
	comp=E,3µm,1.3s										
YTIR	**Yattir**	**4.12**	**145**		Pn	Pn	**08 26 15.8**	**+0.7**			
YTIR					Sn	Sn	**08 27 02.4**	**-0.4**			
KZIT	**Kziot**	**4.23**	**155**		Pn	Pn	**08 26 17.0**	**+0.5**			
KAMA	**Osmaniye**	**4.26**	**54**	⇑	*i*P	Pn	**08 26 18.1**	**+1.0**			
KAMA					IAML		08 27 27.0				
	comp=N,958nm,0.7s										
KAMA					IAML		08 27 36.0				
	comp=E,1µm,1.3s										
SERE	**Serefiikochisa**	**4.29**	**13**		PN	Pn	**08 26 18.9**	**+1.5**			
ANDN	**Andirin**	**4.29**	**48**	⇑	*i*P	Pn	**08 26 18.0**	**+0.6**			
ANDN					*i* S	Sn	**08 27 09.6**	**+2.7**			
ANDN					IAML		08 27 37.0				
	comp=N,4µm,1.1s										
ANDN					IAML		08 27 57.0				
	comp=E,3µm,1.1s										
KULU	**Kulu**	**4.30**	**7**		PN	Pn	**08 26 19.1**	**+1.5**			
KARP	**Karpathos**	**4.31**	**282**		P	Pn	**08 26 18.2**	**+0.6**			
KARP					S	Sn	**08 27 03.3**	**-3.9**			
	comp=E,12µm,0.6s										
KARP	**Karpathos**	**4.31**	**282**		PN	Pn	**08 26 18.5**	**+0.9**			
KARP	**Karpathos**	**4.31**	**282**		Pn	Pn	**08 26 18.3**	**+0.7**			
AFYO	**Afyonkarahisar**	**4.33**	**338**	*eP*		Pn	**08 26 20.1**	**+2.1**			
AFYO					IAML		08 27 52.0				
	comp=E,9µm,1.4s										
AFYO					IAML		08 27 57.0				
	comp=N,8µm,1.4s										
KUZU	**Kuzuini**	**4.34**	**61**	⇑	*i*P	Pn	**08 26 18.5**	**+0.4**			
KUZU					IAML		08 27 32.0				
	comp=E,3µm,0.6s										
KUZU					IAML		08 27 39.0				
	comp=N,5µm,1.0s										
GHAJ	**Ghor Haditha**	**4.40**	**141**		Pn	Pn	**08 26 20.5**	**+1.7**			
KKUL	**Konya-Kulu**	**4.42**	**6**	⇑	*i*P	Pn	**08 26 21.5**	**+2.3**			
KKUL					*i* S	Sn	**08 27 14.5**	**+4.4**			
KKUL					IAML		08 27 41.0				
	comp=E,3µm,1.1s										
KKUL					IAML		08 27 51.0				
	comp=N,3µm,1.0s										
AVNS	**Nevsehir-Avano**	**4.51**	**26**	⇑	*i*P	Pn	**08 26 22.5**	**+2.0**			
AVNS					IAML		08 27 37.0				
	comp=N,5µm,0.9s										
AVNS					IAML		08 27 48.0				
	comp=E,4µm,0.7s										
HCB	**Kahramanmara**	**4.51**	**54**	⇑	*i*P	Pn	**08 26 21.1**	**+0.7**			
HCB					IAML		08 27 17.0				
	comp=E,2µm,0.9s										
HCB					IAML		08 27 25.0				
	comp=N,2µm,1.4s										
KIRS	**Kırehir-Merke**	**4.54**	**16**	⇑	*i*P	Pn	**08 26 22.6**	**+1.8**			
KIRS					IAML		08 28 00.0				
	comp=N,785nm,1.0s										
KIRS					IAML		08 28 01.0				
	comp=E,790nm,1.2s										
NIS1	**Nisyros Isl.**	**4.58**	**295**		P	Pn	**08 26 21.8**	**+0.5**			
NIS1					S	Sn	**08 27 10.8**	**-3.0**			
NIS1	**Nisyros Isl.**	**4.58**	**295**		PN	Pn	**08 26 22.5**	**+1.2**			
BDRM	**Kayabasi**	**4.58**	**301**	*i*	P	Pn	**08 26 22.3**	**+0.9**			
BDRM				⇑	*i*P	Pn	**08 26 22.3**	**+0.9**			
BDRM					IAML		08 27 18.0				
	comp=N,4µm,0.4s										
BDRM					IAML		08 27 24.0				
	comp=E,3µm,0.5s										
BDRM					IAML		08 27 24.0				
	comp=E,3µm,0.6s										
KARJ	**KARJ**	**4.59**	**142**		Pn	Pn	08 26 11.9	-10			
KARJ					Sn	Sn	08 26 55.0	-19			
KMRS	**Kahramanmaras**	**4.60**	**52**		PN	Pn	**08 26 22.9**	**+1.3**			
AYDN	**Tasoluk**	**4.61**	**310**	⇑	*i*P	Pn	**08 26 22.8**	**+1.0**			
AYDN					IAML		08 27 25.0				
	comp=E,1µm,0.5s										
AYDN					IAML		08 27 55.0				
	comp=N,2µm,1.3s										
GAZ	**Gaziantep**	**4.63**	**57**		PN	Pn	**08 26 22.7**	**+0.7**			
GAZ	**Gaziantep**	**4.63**	**57**			Pn	**08 26 22.6**	**+0.6**			
KAHM	**Kahramanmaras,**	**4.66**	**53**	⇑	*i*P	Pn	**08 26 23.1**	**+0.7**			
KAHM					IAML		08 27 27.0				
	comp=N,1µm,1.0s										
KAHM					IAML		08 27 53.0				
	comp=E,1µm,0.8s										
BODT	**Bodrum**	**4.67**	**301**		P	Pn	**08 26 22.3**	**-0.3**			
BODT	**Bodrum**	**4.67**	**301**		PN	Pn	**08 26 22.4**	**-0.2**			
CIFT	**Cifteler, Eski**	**4.69**	**348**		PN	Pn	**08 26 24.3**	**+1.3**			
AUSIV	**SIVRIHISAR**	**4.71**	**353**	⇑	*i*P	Pn	**08 26 24.1**	**+1.0**			
AUSIV					IAML		08 27 43.0				
	comp=N,792nm,1.4s										
AUSIV					IAML		08 27 59.0				
	comp=E,728nm,1.6s										
AFSR	**Afar-Bala (An**	**4.71**	**7**		PN	Pn	**08 26 24.4**	**+1.3**			
SVRH	**Sivrihisar-ESK**	**4.71**	**352**		PN	Pn	**08 26 24.8**	**+1.6**			
KAMT	**Kaman**	**4.72**	**13**		PN	Pn	**08 26 25.2**	**+1.8**			
YKAV	**Yalikavak-Bodr**	**4.72**	**301**		PN	Pn	**08 26 24.2**	**+0.9**			
AUKIR	**Kırka- Seyitga**	**4.72**	**343**	*i*	P	Pn	**08 26 25.9**	**+2.6**			
AUKIR					IAML		08 27 41.0				
	comp=E,2µm,1.1s										
AUKIR					IAML		08 27 58.0				
	comp=N,3µm,1.4s										
USAK	**Uak-Merkez**	**4.75**	**327**	⇑	*i*P	Pn	**08 26 24.5**	**+0.8**			
USAK					IAML		08 27 34.0				
	comp=N,1µm,0.6s										
USAK					IAML		08 27 36.0				
	comp=E,2µm,0.7s										
KULA	**Kula-Manisa**	**4.76**	**323**		PN	Pn	**08 26 24.8**	**+0.9**			
KOSK	**Kos Island**	**4.78**	**296**		P	Pn	**08 26 24.6**	**+0.6**			
AYDB	**Zeytinkoy-Aydi**	**4.79**	**313**		PN	Pn	**08 26 24.8**	**+0.6**			
MANT	**Manisa**	**4.80**	**322**		Pn	Pn	**08 26 25.5**	**+1.0**			
HHAG	**Hagoal**	**4.81**	**182**		P	Pn	**08 26 26.3**	**+1.8**			
	baz=184										
HHAG					AMP		08 27 00.0				
	baz=184										
BBAL	**Bala**	**4.81**	**7**	⇑	*i*P	Pn	**08 26 26.4**	**+1.9**			
BBAL					IAML		08 27 55.0				
	comp=N,2µm,1.4s										
BBAL					IAML		08 27 56.0				
	comp=E,2µm,1.7s										
ZFRI	**Zfri**	**4.84**	**149**		Pn	Pn	**08 26 25.2**	**+0.3**			
ZFRI					Sn	Sn	**08 27 19.0**	**-1.3**			
KOT	**Kottamia**	**4.85**	**185**		P	Pn	**08 26 26.1**	**+1.0**			
	baz=186										
KOT					AMP		08 27 00.0				
	baz=186										
KOT					S	Sn	**08 27 21.2**	**+0.7**			
	baz=186										
GEDZ	**Gediz**	**4.87**	**332**		PN	Pn	**08 26 26.7**	**+1.4**			
KOZK	**Kozakli-Nevseh**	**4.88**	**24**		PN	Pn	**08 26 27.3**	**+1.8**			
GDZ	**Gediz**	**4.88**	**333**	⇑	*i*P	Pn	**08 26 25.6**	**0.0**			
GDZ					IAML		08 27 30.0				
	comp=N,676nm,1.0s										
GDZ					IAML		08 27 35.0				
	comp=E,750nm,0.9s										
GUNE	**Kayseri**	**4.90**	**32**	⇑	*i*P	Pn	**08 26 28.1**	**+2.3**			
GUNE					IAML		08 27 59.0				
	comp=E,6µm,2.5s										
GUNE					IAML		08 28 29.0				
	comp=N,4µm,1.7s										
SARI	**SarD1z-Kayseri**	**4.90**	**41**		PN	Pn	**08 26 26.9**	**+1.0**			
SGAZ	**Eskisehir, Sey**	**4.90**	**346**	⇑	*i*P	Pn	**08 26 26.7**	**+0.9**			
SGAZ					IAML		08 27 33.0				
	comp=E,974nm,0.6s										
SGAZ					IAML		08 27 34.0				
	comp=N,1µm,0.9s										
DDIM	**Aydin, Didim**	**4.92**	**305**	⇑	*i*P	Pn	**08 26 26.7**	**+0.8**			
DDIM					IAML		08 27 32.0				
	comp=E,7µm,0.6s										
DDIM					IAML		08 28 23.0				
	comp=N,6µm,2.0s										
SHAP	**Saphane-Kutahy**	**4.92**	**331**		PN	Pn	**08 26 27.9**	**+1.8**			
SUZ	**Suez**	**4.93**	**175**		P	Pn	**08 26 26.9**	**+0.8**			
	baz=175										
PRNI	**Paran**	**4.95**	**152**		Pn	Pn	**08 26 26.8**	**+0.4**			
PRNI					Sn	Sn	**08 27 21.8**	**-1.3**			
GZT	**Gaziantep**	**4.96**	**57**	⇑	*i*P	Pn	**08 26 27.3**	**+0.6**			
GZT					IAML		08 27 48.0				
	comp=E,2µm,1.7s										
GZT					IAML		08 28 09.0				
	comp=N,2µm,1.7s										
ZKR	**Zakros**	**5.03**	**276**		P	Pn	**08 26 28.0**	**+0.4**			
ZKR					S	Sn	**08 27 21.9**	**-3.2**			
	comp=N,7µm,0.8s										
BR131	**Keskin Array S**	**5.06**	**12**	*c i*	P	Pn	**08 26 29.6**	**+1.6**			
BR131	**Keskin Array S**	**5.06**	**12**		Pn	Pn	**08 26 29.9**	**+1.9**			
BRTR	**Keskin Array B**	**5.06**	**12**		Pn	Pn	**08 26 29.7**	**+1.6**			
	comp=N,22nm,0.3s,baz=190,slow=16,SNR=121										
BRTR					Sn	Sn	**08 27 24.0**	**-1.8**			
	comp=N,7.7nm,0.3s,baz=184,slow=19,SNR=5.3										
BRTR					LR	LR	08 28 39.5				
	comp=N,29µm,19.8s,baz=183,slow=42										
BRTR	**Keskin Array B**	**5.06**	**12**	*i*	P	Pn	**08 26 29.8**	**+1.8**			
BRTR					pmax	pmax					
	comp=Z,240nm,0.6s										
KRMI	**Paran Flat**	**5.06**	**156**		Pn	Pn	**08 26 28.1**	**+0.1**			
KRMI					Sn	Sn	**08 27 25.2**	**-0.6**			
SIMA	**Simav-Kutahya**	**5.07**	**329**		PN	Pn	**08 26 27.9**	**-0.3**			
BR231	**Keskin MP Arra**	**5.08**	**4**		Pn	Pn	**08 26 31.3**	**+3.0**			
SIRC	**Yozgat**	**5.08**	**25**	⇑	*i*P	Pn	**08 26 30.6**	**+2.3**			
SIRC					IAML		08 27 54.0				
	comp=E,1µm,2.0s										
SIRC					IAML		08 28 00.0				
	comp=N,759nm,1.2s										
ANTO	**Ankara**	**5.10**	**4**		P	Pn	**08 26 30.7**	**+2.1**			
ANTO	**Ankara**	**5.10**	**4**		PN	Pn	**08 26 30.4**	**+1.8**			
ANTO	**Ankara**	**5.10**	**4**			Pn	**08 26 30.7**	**+2.1**			
CDAG	**Cicekdag**	**5.11**	**18**	⇑	*i*P	Pn	**08 26 31.3**	**+2.6**			
CDAG					IAML		08 28 17.0				
	comp=E,2µm,1.4s										
CDAG					IAML		08 28 20.0				
	comp=N,1µm,1.6s										
ANDZ	**Kutahya, Merke**	**5.12**	**338**	⇑	*i*P	Pn	**08 26 29.6**	**+0.9**			
ANDZ					IAML		08 28 07.0				
	comp=E,652nm,1.9s										
ANDZ					IAML		08 28 47.0				
	comp=N,580nm,2.2s										
LOD	**Lodumlu**	**5.12**	**4**		PN	Pn	**08 26 30.3**	**+1.5**			
HMYD	**Mayadein**	**5.12**	**195**		P	Pn	**08 26 30.5**	**+1.7**			
	baz=197										
AUMIH	**MIHALICIK**	**5.13**	**353**	⇑	*i*P	Pn	**08 26 30.4**	**+1.3**			
AUMIH					IAML		08 28 13.0				
	comp=E,1µm,1.5s										
AUMIH					IAML		08 28 19.0				
	comp=N,1µm,2.1s										
STIA	**Sitia Lasithi**	**5.14**	**277**		P	Pn	**08 26 28.6**	**-0.4**			
DEMI	**Demirci**	**5.16**	**327**	⇑	*i*P	Pn	**08 26 29.9**	**+0.6**			
DEMI					IAML		08 27 51.0				
	comp=E,1µm,0.8s										
DEMI					IAML		08 27 57.0				
	comp=N,826nm,0.7s										
HSAF	**As Saff**	**5.18**	**188**		P	Pn	**08 26 30.0**	**+0.4**			
	baz=189										
GLL	**Jalalah**	**5.20**	**186**		P	Pn	**08 26 30.4**	**+0.5**			
	baz=187										
HRFI	**Mount Harif**	**5.24**	**153**		Pn	Pn	**08 26 31.0**	**+0.5**			
HRFI	**Mount Harif**	**5.24**	**153**		PN	Pn	**08 26 31.0**	**+0.5**			
ELBS	**KAHRAMANMARAS**	**5.25**	**46**	⇑	*i*P	Pn	**08 26 32.4**	**+1.8**			
ELBS					IAML		08 27 56.0				
	comp=E,3µm,1.4s										
ELBS					IAML		08 28 01.0				
	comp=N,2µm,0.9s										
BORA	**Eskisehir**	**5.32**	**344**	⇑	*i*P	Pn	**08 26 32.3**	**+0.8**			
SMG	**Samos**	**5.32**	**305**		P	Pn	**08 26 31.7**	**+0.2**			
SMG					S	Sn	**08 27 30.6**	**-1.6**			
	comp=N,7µm,0.6s										
HNAT	**Natroun**	**5.32**	**196**		P	Pn	**08 26 32.9**	**+1.3**			
	baz=198										
DELI	**KIRIKKALE**	**5.37**	**13**	⇑	*i*P	Pn	**08 26 34.2**	**+1.9**			
DELI					IAML		08 28 22.0				
	comp=N,739nm,1.8s										
DELI					IAML		08 28 40.0				
	comp=E,797nm,1.7s										
MBRI	**Mt Berech**	**5.42**	**156**		Pn	Pn	**08 26 33.4**	**+0.4**			
MBRI					Sn	Sn	**08 27 34.2**	**-0.6**			
FRMA	**Ierapetra Chan**	**5.43**	**274**		P	Pn	**08 26 31.7**	**-1.3**			
FRMA					S	Sn	**08 27 28.5**	**-6.3**			
	comp=E,2µm,0.8s										
AUBOZ	**BOZOYUK**	**5.45**	**341**	*i*	P	Pn	**08 26 34.4**	**+1.1**			
AUBOZ					IAML		08 27 43.0				
	comp=N,1µm,1.0s										
AUBOZ					IAML		08 28 28.0				
	comp=E,797nm,1.1s										
ZAF	**Zafarana**	**5.47**	**178**		P	Pn	**08 26 33.2**	**-0.5**			
	baz=178										
MATC	**Matruh**	**5.48**	**233**		P	Pn	**08 26 34.9**	**+1.3**			
	baz=235										
MATC					S	Sn	**08 27 33.1**	**-2.9**			
	baz=235										
SURC	**SANLIURFA_SURC**	**5.52**	**66**	⇑	*i*P	Pn	**08 26 34.3**	**0.0**			
SURC					IAML		08 28 13.0				
	comp=E,2µm,1.2s										
SURC					IAML		08 28 18.0				
	comp=N,2µm,1.4s										
ATAB	**Bozova**	**5.53**	**59**	*i*	P	Pn	**08 26 34.4**	**0.0**			
ATAB					IAML		08 28 22.0				
	comp=E,1µm,1.1s										
AQBJ	**Aqaba**	**5.53**	**155**		Pn	Pn	**08 26 35.0**	**+0.6**			
NPS	**Neapolis**	**5.54**	**277**		P	Pn	**08 26 35.5**	**+1.0**			
NPS					S	Sn	**08 27 33.4**	**-4.1**			
	comp=E,9µm,0.8s										
NPS	**Neapolis**	**5.54**	**277**		P	Pn	**08 26 35.5**	**+1.0**			
EIL	**Elat**	**5.55**	**156**		Pn	Pn	**08 26 35.0**	**+0.4**			
	comp=E,95nm,0.3s,baz=334,slow=5.8,SNR=474										
EIL					Sn	Sn	**08 27 37.2**	**-0.6**			
	comp=E,141nm,0.3s,baz=111,slow=22,SNR=7.0										
EIL					LR	LR	08 29 19.5				
	comp=E,7µm,18.8s,baz=318,slow=44										
EIL	**Elat**	**5.55**	**156**		Pn	Pn	**08 26 35.0**	**+0.4**			
CUGUR	**Gurin_SVAS**	**5.59**	**44**	⇑	*i*P	Pn	**08 26 37.6**	**+2.2**			
CUGUR					IAML		08 28 13.0				
	comp=N,2µm,1.4s										
CUGUR					IAML		08 28 18.0				
	comp=E,1µm,1.5s										
CUSAR	**Sarkisla-SIVAS**	**5.60**	**33**	*i*	P	Pn	**08 26 37.0**	**+1.6**			
CUSAR					IAML		08 28 08.0				
	comp=E,747nm,1.7s										
CUSAR					IAML		08 28 33.0				
	comp=N,808nm,2.0s										
DARE	**Darende-Malaty**	**5.62**	**46**		PN	Pn	**08 26 37.4**	**+1.8**			
HACI	**Hacifakili, Ak**	**5.62**	**28**	⇑	*i*P	Pn	**08 26 38.3**	**+2.6**			
HACI					IAML		08 28 11.0				
	comp=E,802nm,1.6s										
HACI					IAML		08 28 15.0				
	comp=N,624nm,1.0s										
KIBS	**BOLU**	**5.65**	**356**	*i*	P	Pn	**08 26 35.8**	**-0.4**			
CORM	**Corum**	**5.70**	**18**		PN	Pn	**08 26 38.5**	**+1.7**			
AKCD	**Akcadag**	**5.71**	**50**	⇑	*i*P	Pn	**08 26 38.5**	**+1.5**			
AKCD					IAML		08 27 48.0				
	comp=E,1µm,1.3s										
AKCD					IAML		08 27 52.0				
	comp=N,2µm,0.7s										
CUALT	**Altinyayla-SIV**	**5.72**	**37**	⇑	*i*P	Pn	**08 26 39.2**	**+2.1**			
CUALT					IAML		08 28 26.0				
	comp=N,1µm,1.7s										
CUALT					IAML		08 28 39.0				
	comp=E,1µm,1.7s										
MDUB	**Mudurnu**	**5.76**	**351**		Pn	Pn	**08 26 38.2**	**+0.6**			
SANT	**Santorini**	**5.83**	**288**	⇑	P	Pn	**08 26 38.1**	**-0.4**			
SANT	**Santorini**	**5.83**	**288**		Pn	Pn	**08 26 38.0**	**-0.4**			
SNT1	**Gialos, Santor**	**5.86**	**288**		P	Pn	**08 26 38.8**	**-0.1**			
CKRK	**Yozgat, Cekere**	**5.86**	**25**	⇑	*i*P	Pn	**08 26 41.7**	**+2.6**			
CKRK					IAML		08 28 33.0				
	comp=N,723nm,1.2s										
CKRK					IAML		08 28 37.0				
	comp=E,656nm,1.7s										
SNT5	**Nea Kammeni, S**	**5.88**	**288**		P	Pn	**08 26 39.0**	**-0.2**			
HRKL	**Herakleio**	**5.96**	**277**		P	Pn	**08 26 42.0**	**+1.8**			
APE	**Apeiranthos**	**5.98**	**295**		P	Pn	**08 26 40.8**	**+0.3**			
APE	**Apeiranthos**	**5.98**	**295**	⇓	P	Pn	**08 26 39.9**	**-0.6**			
APE	**Apeiranthos**	**5.98**	**295**	*c i*	P	Pn	**08 26 40.2**	**-0.3**			
MALT	**Malatya**	**6.05**	**52**		P	Pn	**08 26 42.9**	**+1.3**			
MALT	**Malatya**	**6.05**	**52**		PN	Pn	**08 26 43.2**	**+1.6**			
HRDS	**Abu Rudays**	**6.09**	**172**		P	Pn	**08 26 43.3**	**+1.2**			
	baz=172										
IDI	**Anoyia**	**6.13**	**277**		Pn	Pn	**08 26 43.4**	**+0.7**			
	comp=E,70nm,0.3s,baz=60,slow=15,SNR=230										
IDI					Sn	Sn	**08 27 50.0**	**-2.2**			
	comp=E,114nm,0.3s,baz=263,slow=14,SNR=6.5										
IDI	**Anoyia**	**6.13**	**277**		P	Pn	**08 26 43.4**	**+0.7**			
IDI					S	Sn	**08 27 47.9**	**-4.2**			
	comp=E,3µm,0.6s										
IDI	**Anoyia**	**6.13**	**277**	⇑	P	Pn	**08 26 41.2**	**-1.4**			
IDI	**Anoyia**	**6.13**	**277**		Pn	Pn	**08 26 42.8**	**+0.1**			
SIVA	**Sivas**	**6.19**	**274**		P	Pn	**08 26 44.0**	**+0.6**			
SIVA					S	Sn	**08 27 49.2**	**-4.3**			
	comp=E,7µm,0.7s										
CHOS	**Chios island**	**6.21**	**307**		P	Pn	**08 26 44.0**	**+0.3**			
CHOS					S	Sn	**08 27 51.9**	**-2.2**			
	comp=E,3µm,0.6s										
ILGA	**Ilgaz**	**6.37**	**9**		Pn	Pn	**08 26 48.8**	**+2.7**			
HKAT	**Jabal Katrina**	**6.39**	**167**		P	Pn	**08 26 46.7**	**+0.3**			
	baz=166										
PRNS	**Prines Rethymn**	**6.45**	**278**		P	Pn	**08 26 47.9**	**+0.9**			
KDZE	**Karadeniz Ereo**	**6.57**	**354**	⇑	P	Pn	**08 26 52.2**	**+3.6**			
PRK	**Paraskevi**	**6.59**	**314**		P	Pn	**08 26 51.3**	**+2.4**			
PRK					S	Sn	**08 28 02.7**	**-0.7**			
	comp=E,2µm,0.9s										
PRK	**Paraskevi**	**6.59**	**314**		P	Pn	**08 26 51.3**	**+2.4**			
PRK					S	Sn	**08 28 02.7**	**-0.7**			
EDC	**Edincik**	**6.60**	**329**		P	Pn	**08 26 50.7**	**+1.6**			
VAM	**Vamos**	**6.70**	**278**		P	Pn	**08 26 50.3**	**-0.1**			
VAM	**Vamos**	**6.70**	**278**		P	Pn	**08 26 50.3**	**-0.1**			
GVDS	**Gavdos**	**6.78**	**273**		P	Pn	**08 26 51.6**	**+0.1**			
GVD	**Gavdhos**	**6.78**	**273**		P	Pn	**08 26 51.4**	**-0.2**			
GVD					S	Sn	**08 28 05.1**	**-3.1**			
	comp=E,3µm,0.6s										
SIGR	**SIGRI**	**6.82**	**312**		P	Pn	**08 26 52.7**	**+0.7**			
IMMV	**Iera Moni Meta**	**6.88**	**278**		P	Pn	**08 26 52.7**	**-0.2**			
EZN	**Ezine**	**6.96**	**318**		P	Pn	**08 26 54.9**	**+1.0**			
DIKM	**Dikmen**	**7.25**	**18**	⇓	P	Pn	**08 27 01.3**	**+3.4**			
BZK	**Bozkurt**	**7.30**	**10**	⇓	P	Pn	**08 27 01.8**	**+3.2**			
MARD	**Mardin**	**7.30**	**67**		Pn	Pn	**08 26 59.9**	**+1.1**			
ALN	**Alexandroupoli**	**7.88**	**323**		P	Pn	**08 27 08.0**	**+1.4**			
ALN					pmax	pmax					
	comp=Z,244nm,1.1s										
HFRF	**Wahat Farafira**	**8.34**	**206**		S	Sn	**08 28 43.8**	**-2.8**			
	baz=207										
HFRF					AMP		08 29 00.0				
	baz=207										
KOPT	**Kop Dagi**	**8.35**	**49**			Pn	**08 27 16.5**	**+3.2**			
KTUT	**Trabzon**	**8.55**	**41**	⇑	P	Pn

comp=Z,493nm,1.4s
PLOR Plostina 11.88 340 ⇓P **Pn 08 28 04.5 +3.0**
PLOR Plostina 11.88 340 P **Pn 08 28 04.5 +3.0**
SHA1 Shidzhatmaz 12.00 39 *ce*P **Pn 08 28 06.2 +2.9**
VOIR 12.02 335 ⇑P **Pn 08 28 04.4 +1.0**
VOIR 12.02 335 P **Pn 08 28 04.3 +1.0**
VOIR pmax pmax
comp=Z,75nm,1.3s
ZEI Tsey 12.06 45 *e*P **Pn 08 28 06.1 +2.1**
ZEI pmax pmax
comp=Z,211nm,1.5s
BOVS Bovan 12.09 320 ⇑P **Pn 08 28 05.3 +1.1**
ARR Arges 12.11 333 ⇑P **Pn 08 28 05.4 +0.8**
KBZ Khabaz 12.12 39 Pn **Pn 08 28 08.5 +3.9**
comp=Z,0.5nm,0.3s,baz=230,slow=9.9,SNR=50
KBZ LR LR 08 33 28.3
comp=Z,5μm,19.7s,baz=240,slow=41
KBZ Khabaz 12.12 39 *c* *i*P **Pn 08 28 07.5 +2.9**
KIV Kislovodsk 12.17 38 ⇑P **Pn 08 28 10.0 +4.6**
KIV Kislovodsk 12.17 38 *i* P **Pn 08 28 10.1 +4.7**
SNR=27
KIV Kislovodsk 12.17 38 *e*P **Pn 08 28 08.1 +2.6**
KIV pmax pmax
comp=Z,352nm,1.0s
KIV MLR MLR
comp=Z,4μm,12.0s
KIV Kislovodsk 12.17 38 **Pn 08 28 08.7 +3.2**
KIV Kislovodsk 12.17 38 P **Pn 08 28 08.6 +3.2**
KIV P **Pn 08 28 08.6 +3.2**
KIV P **Pn 08 28 08.8 +3.3**
KIV P **Pn 08 28 08.8 +3.3**
KVAR Kislovodsk Arr 12.18 38 Pn **Pn 08 28 08.6 +3.1**
baz=257,slow=19,SNR=14
NCK Nalchik 12.34 42 ⇑*e*P **Pn 08 28 08.8 +1.2**
NCK pmax pmax
comp=Z,90nm,1.4s
PVY Plav 12.42 313 *e*Pn **Pn 08 28 09.4 +0.5**
PVY *i* Sn **Sn 08 30 19.2 -7.5**
TESR Tescani 12.49 342 ⇑P **Pn 08 28 10.7 +0.9**
KIS Kishinev 12.50 349 *d* *i*P **Pn 08 28 12.0 +2.2**
KIS pmax pmax
comp=Z,570nm,5.9s
ULC Ulcinj 12.52 309 ⇑ *i*Pn **Pn 08 28 10.8 +0.6**
ULC *i* Sn **Sn 08 30 21.6 -7.5**
IVA Berane 12.62 314 ⇑ *i*Pn **Pn 08 28 12.1 +0.5**
IVA *i* Sn **Sn 08 30 24.0 -7.5**
HERR Herculane 12.64 326 ⇑P **Pn 08 28 12.7 +1.0**
DRME Dracevica, Mon 12.68 310 *e*Pn **Pn 08 28 13.5 +1.2**
DRME Dracevica, Mon 12.68 310 ⇑ *i*Pn **Pn 08 28 12.9 +0.6**
DRME *i* Sn **Sn 08 30 25.3 -7.5**
PDG Podgorica 12.76 311 ⇑P **Pn 08 28 14.0 +0.6**
PDG Podgorica 12.76 311 *e*Pn **Pn 08 28 15.0 +1.6**
TTG Podgorica 12.76 311 ⇑ *i*Pn **Pn 08 28 14.1 +0.7**
TTG *i* Sn **Sn 08 30 27.4 -7.4**
KOME Kolasin 12.84 313 ⇓ *i*Pn **Pn 08 28 15.1 +0.6**
KOME *i* Sn **Sn 08 30 29.1 -7.7**
GZR Gura Zlata 12.88 328 ⇑P **Pn 08 28 15.2 +0.2**
MDVR Moldovita 12.90 324 ⇓P **Pn 08 28 16.8 +1.4**
BUM Brajici-Budva 12.92 310 *e*Pn **Pn 08 28 16.2 +0.5**
BUM *i* Sn **Sn 08 30 31.1 -7.8**
LGD Lagodekhi 13.00 53 P **Pn 08 28 20.0 +3.3**
BIZ Bicaz 13.03 341 ⇑P **Pn 08 28 18.3 +1.2**
CEME Cevo 13.04 311 *e*Pn **Pn 08 28 17.9 +0.7**
CEME *i* Sn **Sn 08 30 33.9 -7.7**
NKME Niksic 13.13 311 ⇓ *i*Pn **Pn 08 28 19.1 +0.5**
NKME *i* Sn **Sn 08 30 36.2 -7.8**
NKY Niksic 13.13 312 ⇑ *i*Pn **Pn 08 28 19.1 +0.5**
NKY *i* Sn **Sn 08 30 36.2 -7.9**
GOF Gofitskoye 13.15 35 ⇑*e*P **Pn 08 28 21.9 +3.2**
GOF pmax pmax
comp=Z,55nm,1.3s
PLE Pljevlja 13.19 314 *e*Pn **Pn 08 28 20.0 +0.6**
PLE *i* Sn **Sn 08 30 37.5 -7.9**
TIP Timpagrande 13.21 294 **Pn 08 28 15.9 -3.7**
DEV Deva 13.21 330 ⇓P **Pn 08 28 22.1 +2.5**
DEV Deva 13.21 330 P **Pn 08 28 21.6 +2.0**
DEV pmax pmax
comp=Z,141nm,1.2s
HCY Herceg Novi 13.25 309 *e*Pn **Pn 08 28 20.6 +0.5**
HCY Herceg Novi 13.25 309 ⇓ *i*Pn **Pn 08 28 20.7 +0.6**
HCY *i* Sn **Sn 08 30 39.1 -7.7**
DIVS Divibare 13.32 318 *e*Pn **Pn 08 28 21.9 +0.8**
RUDO Rudo 13.37 315 *e*Pn **P 08 28 34.2 +3.0**
UPM Unac-Piva 13.40 313 *e*Pn **Pn 08 28 24.5 +2.1**
UPM Unac-Piva 13.40 313 *e*Pn **Pn 08 28 22.9 +0.5**
UPM *i* Sn **Sn 08 30 42.9 -7.9**
GROC Groznyy 13.43 47 *e*P **P 08 28 34.3 +2.5**
BRY Bratogost 13.46 311 *e*Pn **Pn 08 28 23.8 +0.7**
BRY Bratogost 13.46 311 ⇓ *i*Pn **Pn 08 28 23.6 +0.5**
BRY *i* Sn **Sn 08 30 44.1 -8.0**
TREB Trebinje 13.48 310 *e*Pn **Pn 08 28 23.9 +0.6**
BBLS Lazići 13.50 316 *e*Pn **Pn 08 28 24.8 +1.2**
BZS Buzias 13.57 326 ⇓P **Pn 08 28 26.3 +1.9**
BZS Buzias 13.57 326 P **Pn 08 28 26.7 +2.3**
BZS pmax pmax
comp=Z,108nm,1.2s
BANR Banloc 13.62 324 ⇑P **Pn 08 28 25.6 +0.5**
MIB Mutribah 13.62 107 *e*P 08 28 25.3
SORM Soroca 13.68 349 ⇑P **Pn 08 28 29.5 +3.5**
SORM Soroca 13.68 349 P **Pn 08 28 29.4 +3.5**
ARCR ARCALIA 13.69 336 ⇑P **Pn 08 28 26.3 +0.2**
GNBR Gunib 13.73 52 ⇑*e*P **Pn 08 28 25.4 -1.4**
AKT Akhty 13.84 57 *i* P **Pn 08 28 31.0 +2.7**
TEKS Tekeris 13.86 319 *e*Pn **Pn 08 28 29.7 +1.2**
HAPS Han Pijesak,BI 13.89 316 *e*Pn **Pn 08 28 29.9 +0.9**
BURAR Bucovina Array 13.90 340 ⇑P **Pn 08 28 32.3 +3.3**
BURAR Bucovina Array 13.90 340 **Pn 08 28 30.2 +1.2**
BUR08 Bucovina Ar. S 13.93 340 Pn **Pn 08 28 30.3 +0.9**
DBC Dubki 13.96 50 *i* P **Pn 08 28 32.6 +2.7**
UMR Umm Al-Rimmam 14.03 108 *e*P 08 28 30.8
DRGR 14.03 332 ⇓P **Pn 08 28 31.8 +0.9**
SIRR Siria 14.05 328 ⇑P **Pn 08 28 32.0 +1.0**
FRGS Fruska Gora 14.12 321 ⇓P **Pn 08 28 32.5 +0.5**
FRGS Fruska Gora 14.12 321 *e*Pn **Pn 08 28 31.5 -0.5**
RDF Al-Radifah 14.18 110 *e*P 08 28 33.9
MAK Makhachkala 14.36 51 *e*P **Pn 08 28 34.8 -0.5**
MAK *e*S **Sn 08 31 14.6 +0.8**
MAK pmax pmax
comp=Z,3μm,0.9s
MAK MLR MLR
comp=Z,4μm,14.0s
BMR Baia Mare 14.49 335 ⇑P **Pn 08 28 39.2 +2.2**
BMR Baia Mare 14.49 335 P **P 08 28 41.6 -2.0**
BMR pmax pmax
comp=Z,234nm,0.8s
QRN Al-Qurain 14.55 110 *e*P 08 28 37.9
MQOL MQOL 14.66 162 *i* P 08 28 39.3
MQOL *i* 08 28 42.5
baz=1.6,slow=10
MQOL *i* S 08 31 30.6
VAE Valguarnera 14.73 286 Pn **Pn 08 28 40.2 -0.3**
comp=Z,3.0nm,0.3s,baz=158,slow=12,SNR=5.8
VAE Sn Sn 08 31 12.4 -11
comp=Z,13nm,0.3s,baz=19,slow=14,SNR=9.0
MGRS Mrkonjic Grad 15.18 314 *e*Pn **Pn 08 28 46.0 -0.3**
BLY Banja Luka 15.31 315 *e*Pn **Pn 08 28 48.7 +0.7**
MORH Mrgy, Hungar 15.44 322 *e*Pn **Pn 08 28 48.2 -1.5**
CORL Corleone 15.65 287 IAmb IAmb 08 29 18.2
comp=Z,542nm,0.9s
CLTB Caltabellotta 15.69 286 IAmb IAmb 08 29 00.8
comp=Z,274nm,0.8s
UZH Uzhgorod 15.73 335 *e*P **Pn 08 28 54.0 +0.6**
UZH *e*S **Sn 08 31 48.3 +1.3**
RAYN Ar Rayn 16.04 131 *i* P **P 08 28 59.8 -1.2**
SNR=44
RAYN Ar Rayn 16.04 131 P **P 08 29 00.2 -0.8**
RAYN pmax pmax
comp=Z,210nm,1.1s
RAYN Ar Rayn 16.04 131 P **P 08 29 00.2 -0.8**
AKASG Malin Array Be 16.08 353 Pn **Pn 08 28 55.8 -2.2**
comp=Z,1.4nm,0.3s,baz=172,slow=11,SNR=30
AKASG LR LR 08 36 10.7
comp=Z,3μm,18.8s,baz=180,slow=41
AKASG Malin Array Be 16.08 353 *ce*P **Pn 08 28 54.4 -3.6**
AKASG pmax pmax
comp=Z,17nm,0.7s
AKASG Malin Array Be 16.08 353 **Pn 08 28 55.0 -3.0**
AKBB Malin Array Si 16.08 353 ⇓*e*P **Pn 08 28 55.1 -2.9**
PSZ Piszkesteto 16.09 328 ⇑P **P 08 29 00.1 -1.3**
PSZ Piszkesteto 16.09 328 P **Pn 08 28 57.3 -0.9**
PSZ pmax pmax
comp=Z,226nm,0.8s
PSZ Piszkesteto 16.09 328 P **Pn 08 28 57.2 -0.9**
PSZ Piszkesteto 16.09 328 *e*P **Pn 08 28 57.2 -0.9**
BUD Budapest 16.15 326 P **P 08 29 02.9 +0.9**
BUD pmax pmax
comp=Z,55nm,0.7s
LVV L'vov 16.23 340 *e*P **Pn 08 29 01.0 +1.1**
LVV *e*S **Sn 08 32 03.0 +3.8**
LVV MLR MLR
comp=Z,3μm,15.0s
CRVS Cervenica-Dubn 16.25 334 *e*P **Pn 08 29 01.5 +1.3**
CRVS pmax pmax
comp=Z,167nm,1.4s
CRVS Cervenica-Dubn 16.25 334 *e*P **Pn 08 29 01.5 +1.3**
KECS Kecovo 16.29 331 *e*P **P 08 29 03.9 +0.4**
KECS pmax pmax
comp=Z,69nm,1.1s
KECS Kecovo 16.29 331 *e*P **P 08 29 03.9 +0.4**
KWP Kalwaria Pacla 16.45 337 *e*P **P 08 29 06.5 +1.2**
KWP Kalwaria Pacla 16.45 337 P **P 08 29 05.1 -0.3**
KWP pmax pmax
comp=Z,384nm,1.4s
AQU L'Aquila 16.61 303 *e*Pn **Pn 08 29 05.9 +1.1**
SRO Srobarova 16.72 325 P **P 08 29 09.1 +0.8**
SRO pmax pmax
comp=Z,3.0nm,0.9s
CRES Cresnjev 16.92 316 *e*Pn **Pn 08 29 07.9 -0.8**
VORD Divnogorie 16.96 15 *e*P **P 08 29 11.0 +0.1**
VORD *e*S **S 08 32 23.5 -3.2**
VORD pmax pmax
comp=Z,70nm,0.4s
VYHS Vyhne 16.99 328 *e*P **P 08 29 11.7 +0.4**
VYHS pmax pmax
comp=Z,277nm,1.2s
VYHS Vyhne 16.99 328 *e*P **P 08 29 11.7 +0.4**
VYHS *e*S S 08 32 46.7 +19
NIE Niedzica 17.11 332 *e*P **Pn 08 29 11.2 +0.1**
NIE Niedzica 17.11 332 P **P 08 29 12.4 -0.3**
NIE pmax pmax
comp=Z,46nm,1.3s
VSR Storozhevoye 17.17 15 *e*P **Pn 08 29 12.5 +0.8**
VSR *e*S **Sn 08 32 23.9 +1.9**
VSR pmax pmax
comp=Z,470nm,1.6s
VSR smax smax
comp=N,1μm,3.4s
LANS Liptovska Anna 17.23 330 *e*P **P 08 29 15.1 +1.1**
LANS pmax pmax
comp=Z,104nm,0.9s
LANS Liptovska Anna 17.23 330 *e*P **P 08 29 15.0 +1.1**
SOP Sopron 17.48 322 P **P 08 29 17.0 +0.2**
SOP pmax pmax
comp=Z,247nm,1.1s
SOP Sopron 17.48 322 *e*P **Pn 08 29 14.0 -1.7**
ZST Bratislava 17.57 324 *e*P **P 08 29 17.9 +0.2**
ZST pmax pmax
comp=Z,143nm,0.8s
ZST Bratislava 17.57 324 *e*P **P 08 29 17.9 +0.2**
LJU Ljubljana 17.58 315 *e*Pn **Pn 08 29 16.4 -0.5**
LJU *i* P **P 08 29 18.0 +0.1**
LJU *e*Sn **Sn 08 32 35.2 +3.1**
PERS Pernice 17.59 318 *i* Pn **Pn 08 29 16.3 -0.7**
MODS Modra-Piesok 17.61 325 *e*P **Pn 08 29 17.3 +0.1**
MODS pmax pmax
comp=Z,148nm,0.7s
MODS Modra-Piesok 17.61 325 *e*P **Pn 08 29 17.3 +0.1**
VORR Voronezh 17.61 14 *e*P **Pn 08 29 17.0 -0.2**
VORR pmax pmax
comp=Z,500nm,1.6s
SMOL Smolenice 17.64 326 *e*P **P 08 29 18.6 +0.1**
SMOL pmax pmax
comp=Z,69nm,0.6s
SMOL Smolenice 17.64 326 *e*P **P 08 29 18.6 +0.1**
SOKA Soboth 17.66 318 *e*Pn **Pn 08 29 16.9 -1.0**
comp=Z,81nm,0.7s,SNR=136
ARSA Arzberg 17.74 320 *i* Pn **Pn 08 29 17.9 -1.0**
comp=Z,105nm,0.6s,SNR=99
ARSA Arzberg 17.74 320 *e*P **Pn 08 29 18.1 -0.8**
comp=Z,177nm,0.7s
MOZS Mozjanca 17.77 316 *i* P **Pn 08 29 18.9 -0.4**
JAVC Velka Javorina 17.78 327 *e*P **P 08 29 19.8 -0.3**
JAVC Velka Javorina 17.78 327 *e*P **Pn 08 29 19.3 -0.1**
comp=Z,104nm,0.8s
VRH Novokhopyorsk 17.78 20 *e*P **P 08 29 20.0 +0.1**
VRH *e*S **Sn 08 32 32.2 -4.5**
VRH pmax pmax
comp=Z,840nm,0.8s
VRH smax smax
comp=E,2μm,3.6s
OBKA Obir 17.83 316 *e*Pn **Pn 08 29 19.3 -0.8**
comp=E,104nm,1.1s,SNR=88
OBKA Obir 17.83 316 *e*P **Pn 08 29 18.9 -1.2**
comp=E,315nm,1.4s
TRI Trieste 17.85 313 P **Pn 08 29 19.2 -1.0**
TRI pmax pmax
comp=Z,106nm,1.0s
TRI Trieste 17.85 313 P **Pn 08 29 19.2 -1.0**
OJC Ojcow 17.95 333 *e*P **P 08 29 21.9 0.0**
OJC Ojcow 17.95 333 P **Pn 08 29 21.1 -0.4**
OJC pmax pmax
comp=Z,139nm,0.9s
CONA Conrad Observa 18.00 322 *i* Pn **Pn 08 29 20.9 -1.2**
comp=Z,50nm,0.0s,SNR=43
OKC Ostrava-Krasne 18.30 330 *e*P **P 08 29 26.1 +0.3**
OKC MLR MLR
comp=Z,6μm,13.7s
OKC Ostrava-Krasne 18.30 330 *e*P **P 08 29 26.1 +0.3**
OKC AMS AMS 08 38 20.0
comp=Z,6μm,13.7s
MYKA Terra Mystica 18.42 316 *i* Pn **P 08 29 26.6 -0.5**
comp=Z,47nm,0.5s,SNR=73
LPSR Galich'ya Gora 18.44 13 *e*P **P 08 29 27.0 -0.2**
LPSR *e*S **Sn 08 32 53.6 +0.9**
LPSR pmax pmax
comp=Z,630nm,0.8s
LPSR smax smax
comp=E,2μm,2.6s
KRUC Moravsky 18.51 325 *e*P **P 08 29 27.3 -0.7**
KRUC Moravsky 18.51 325 P **P 08 29 27.5 -0.5**
KRUC pmax pmax
comp=Z,78nm,0.8s
MORC Moravsky Berou 18.51 329 *e*P **P 08 29 27.6 -0.5**
MORC Moravsky Berou 18.51 329 P **P 08 29 27.9 -0.2**
MORC pmax pmax
comp=Z,91nm,1.1s
CASP Castiglione de 18.52 302 P **P 08 29 26.5 -1.8**
VRAC Vranov 18.59 326 P **P 08 29 28.6 -0.3**
comp=Z,6.3nm,0.3s,baz=136,slow=9.7,SNR=59
VRAC LR LR 08 37 03.2
comp=Z,1μm,20.9s,baz=136,slow=38
VRAC Vranov 18.59 326 *e*P **P 08 29 28.9 -0.1**
MOA Molln 18.78 320 *i* Pn **Pn 08 29 31.6 0.0**
comp=Z,114nm,1.2s,SNR=100
MOA Molln 18.78 320 *e*P **P 08 29 31.0 -0.1**
comp=Z,212nm,1.1s
KEST Kesra 18.79 280 P **P 08 29 31.7 +0.3**
comp=Z,3.2nm,0.3s,baz=42,slow=5.8,SNR=43
KEST Kesra 18.79 280 P **Pn 08 29 31.8 -0.1**
KBA Koelnbreinsper 18.84 316 *i* Pn **P 08 29 32.2 +0.3**
comp=Z,82nm,0.6s,SNR=148
KBA Koelnbreinsper 18.84 316 P **Pn 08 29 32.3 -0.2**
KBA pmax pmax
comp=Z,177nm,1.1s
KBA Koelnbreinsper 18.84 316 *e*P **P 08 29 32.0 +0.2**
comp=Z,361nm,1.4s
VSL Villasalto 18.88 291 P **P 08 29 31.4 -0.9**
VSL IAmb IAmb 08 29 36.4
comp=Z,288nm,0.8s
CIMO Cimolais 18.95 313 P **P 08 29 31.9 -1.1**
BEL Belsk 18.97 338 *e*P **Pn 08 29 33.7 -0.1**
BEL Belsk 18.97 338 P **Pn 08 29 33.9 0.0**
BEL pmax pmax
comp=Z,426nm,0.7s
TEOL Teolo 18.97 310 P **P 08 29 32.4 -0.8**
KRLC Kraliky 19.06 328 *e*P **P 08 29 34.4 +0.2**
KRLC MLR MLR
comp=Z,4μm,13.7s
KRLC Kraliky 19.06 328 *e*P **P 08 29 34.4 +0.2**
KRLC AMS AMS 08 38 40.0
comp=Z,4μm,13.7s
TREC Trest 19.10 325 *e*P **P 08 29 34.7 +0.1**
TREC MLR MLR
comp=Z,2μm,12.6s
TREC Trest 19.10 325 *e*P **P 08 29 34.7 +0.1**
TREC AMS AMS 08 38 40.0
comp=Z,2μm,12.6s
ABTA Abfaltersbach 19.14 315 *i* Pn **P 08 29 35.1 0.0**
comp=Z,37nm,1.1s,SNR=53
CTI Castel Tesino 19.30 312 P **P 08 29 37.0 0.0**
CTI pmax pmax
comp=Z,203nm,0.9s
CTI Castel Tesino 19.30 312 P **P 08 29 37.0 0.0**
CKRC Cesky Krumlov 19.36 322 *e*P **P 08 29 37.6 +0.1**
CKRC AMS AMS 08 38 50.0
comp=Z,3μm,13.6s
DPC Dobruska-Polom 19.47 328 *e*P **P 08 29 38.4 -0.2**
DPC MLR MLR
comp=Z,4μm,15.0s
DPC Dobruska-Polom 19.47 328 *e*P **P 08 29 38.4 -0.2**
DPC AMS AMS 08 39 00.0
comp=Z,4μm,15.0s
RJOB Jochberg 19.52 317 *e*P **P 08 29 38.5 -0.6**
comp=Z,694nm,0.7s
OSTC Ostas 19.66 328 *e*P **P 08 29 40.9 +0.2**
OSTC AMS AMS 08 39 10.0
comp=Z,4μm,13.9s
GEC2 GERESS Array S 19.69 321 P **P 08 29 41.7 +0.6**
GEC2 IAmb IAmb 08 29 42.5
comp=Z,268nm,0.8s
GEC2 GERESS Array S 19.69 321 *e*P **P 08 29 40.9 -0.3**
comp=Z,341nm,0.9s
GERES GERESS Array B 19.69 321 P **P 08 29 41.3 +0.2**
comp=Z,14nm,0.3s,baz=128,slow=11,SNR=857
GERES S **Sn 08 33 31.8 +8.7**
baz=124,slow=16,SNR=3.2
GERES PcP **PcP 08 33 59.5 0.0**
comp=Z,0.4nm,0.3s,baz=128,slow=2.9,SNR=3.1
GERES LR LR 08 39 04.5
comp=Z,2μm,18.3s,baz=131,slow=42
GERES GERESS Array B 19.69 321 P **P 08 29 40.8 -0.4**
UPC Upice 19.72 328 *e*P **P 08 29 40.9 -0.4**
UPC MLR MLR
comp=Z,3μm,13.3s
UPC Upice 19.72 328 *e*P **P 08 29 40.9 -0.4**
UPC AMS AMS 08 39 10.0
comp=Z,3μm,13.3s
SALO Salr 19.81 310 IAmb IAmb 08 29 49.5
comp=Z,383nm,0.8s
KSP Ksiaz 19.84 329 *e*P **P 08 29 42.3 -0.4**
KSP Ksiaz 19.84 329 P **P 08 29 42.4 -0.2**
KSP pmax pmax
comp=Z,126nm,0.7s
WTTA Wattenberg 19.92 315 *i* Pn **P 08 29 44.1 +0.5**
comp=Z,162nm,0.6s,SNR=146
WTTA Wattenberg 19.92 315 P **P 08 29 44.2 +0.5**
WTTA pmax pmax
comp=Z,532nm,0.9s
WTTA Wattenberg 19.92 315 *e*P **P 08 29 43.3 -0.4**
comp=Z,436nm,1.2s
KHC Kasperske Hory 19.93 322 *c* *i*P **P 08 29 43.2 -0.5**
KHC pmax pmax
comp=Z,1μm,0.8s
KHC MLR MLR
comp=Z,6μm,15.0s
KHC Kasperske Hory 19.93 322 *e*P **P 08 29 43.7 0.0**
KHC *e*pP **pP 08 29 49.8 +0.7**
KHC AMS AMS 08 39 00.0
comp=Z,4μm,14.9s
KHC Kasperske Hory 19.93 322 P **P 08 29 43.8 0.0**
MNK Minsk 19.98 352 ⇑ *i*P **P 08 29 42.0 -2.0**
MNK *e* 08 29 58.0
MNK *e*S **S 08 33 20.0 -7.6**
MNK pmax pmax
comp=N,3μm,1.0s
MNK pmax pmax
comp=E,450nm,1.0s
MNK pmax pmax
comp=Z,3μm,1.0s
MNK MLR MLR
comp=Z,5μm,12.0s
MNK Minsk 19.98 352 *i* P **P 08 29 42.8 -1.3**
comp=E,14nm,0.6s
MNK *i* P **P 08 29 42.8 -1.3**
comp=N,301nm,0.6s
MNK *i* P **P 08 29 42.8 -1.3**
comp=Z,733nm,0.6s
MNK *i* PP **PnPn 08 29 58.4 -1.7**
MNK *i* S **S 08 33 28.2 +0.6**
MNK *i* SS **SnSn 08 33 44.7 +0.5**
MNK *i* LR LR 08 37 44.1
MNK *i* LRM MLR 08 40 25.8
comp=E,98nm,14.8s
MNK *i* LRM MLR 08 40 25.8
comp=N,2μm,14.8s
MNK *i* LRM MLR 08 40 29.1
comp=Z,2μm,14.8s
WATA Walderalm 19.99 315 *i* Pn **P 08 29 44.4 0.0**
comp=Z,158nm,0.7s,SNR=135
PRU Pruhonice 20.02 325 *e*P **P 08 29 44.3 -0.3**
PRU MLR MLR
comp=Z,3μm,14.1s
PRU Pruhonice 20.02 325 *e*P **P 08 29 44.3 -0.3**
PRU AMS AMS 08 39 30.0
comp=Z,3μm,14.1s
PBCC Pribram 20.08 323 *e*P **P 08 29 45.1 -0.2**
PRA Prague 20.13 325 *e*P **P 08 29 46.0 +0.2**
PRA MLR MLR
comp=Z,2μm,13.8s
PRA Prague 20.13 325 *e*P **P 08 29 46.0 +0.2**
PRA AMS AMS 08 39 40.0
comp=Z,2μm,13.8s
SQTA Sankt Quirin 20.15 315 *i* Pn **P 08 29 46.3 +0.2**
comp=Z,135nm,0.5s,SNR=91
MOTA Moosalm 20.27 315 *i* Pn **P 08 29 47.2 -0.3**
comp=Z,131nm,0.8s,SNR=139
SUW Suwalki 20.29 344 *e*P **P 08 29 46.2 -1.2**
SUW Suwalki 20.29 344 *e*P **P 08 29 46.2 -1.2**
SUW Suwalki 20.29 344 P **P 08 29 46.4 -1.0**
SUW pmax pmax
comp=Z,704nm,1.1s
WET Wettzell 20.30 321 P **P 08 29 47.4 -0.3**
WET pmax pmax
comp=Z,864nm,0.8s
WET Wettzell 20.30 321 *e*P **P 08 29 46.9 -0.8**
comp=Z,664nm,0.8s
CMAH Djebel Manchou 20.30 282 P Pn 08 30 11.2 +21
FETA Feichten 20.33 314 *i* Pn **P 08 29 48.8 +0.6**
comp=Z,133nm,0.6s,SNR=203
PVCC Panska Ves 20.38 326 *e*P **P 08 29 48.6 +0.1**
PVCC MLR MLR
comp=Z,4μm,14.9s
PVCC Panska Ves 20.38 326 *e*P **P 08 29 48.6 +0.1**
PVCC AMS AMS 08 39 30.0
comp=Z,4μm,14.9s
NACGM Naroch 20.50 351 *i* P **P 08 29 49.1 -0.6**
NACGM *i* P **P 08 29 49.1 -0.6**
NACGM *i* P **P 08 29 49.1 -0.6**
NACGM *i* PP sP 08 30 08.1 +10
NACGM *i* S Sn 08 33 41.5 -0.8
NACGM *i* SS **SnSn 08 34 05.6 +8.5**
NACGM *i* SSS SSS 08 34 18.6
NACGM *i* LQ LQ 08 36 36.0
NACGM *i* LR LR 08 38 01.8
RETA Reutte 20.54 315 *i* Pn **P 08 29 49.9 -0.5**
comp=Z,73nm,0.5s,SNR=118
OBN Obninsk 20.56 7 P **P 08 29 49.1 -1.2**
comp=Z,108nm,0.5s,baz=181,slow=1.7,SNR=34
OBN LR LR 08 40 03.3
comp=Z,737nm,18.6s,baz=182,slow=44
OBN Obninsk 20.56 7 *c* *i*P **P 08 29 48.9 -1.4**
OBN *e* 08 29 53.7
OBN *e* 08 30 08.4
OBN *e*S **S 08 33 39.3 +0.2**
OBN pmax pmax
comp=Z,420nm,0.6s
OBN MLR MLR
comp=Z,2μm,17.0s
OBN Obninsk 20.56 7 P **P 08 29 48.9 -1.4**
FUR Furstenfeldbru 20.60 317 P **P 08 29 50.3 -0.7**
FUR pmax pmax
comp=Z,459nm,0.9s
FUR Furstenfeldbru 20.60 317 *e*P **P 08 29 49.7 -1.2**
comp=Z,392nm,0.9s
DAVOX Davos/Dischmat 20.73 312 P **P 08 29 52.6 0.0**
comp=Z,179nm,0.8s,baz=123,slow=8.2,SNR=190
DAVOX LR LR 08 39 21.7
comp=Z,4μm,18.7s,baz=114,slow=41
BELG Belogornoye 20.73 27 P **P 08 29 52.0 -0.2**
comp=Z,2μm,0.8s,baz=14,slow=0.5,SNR=195
BELG LR LR 08 39 57.4
comp=Z,3μm,19.1s,baz=217,slow=43

BELG Belogornoye 20.73 27*c* iP P 08 29 51.8 -0.5**
BELG pmax pmax
comp=Z,126nm,1.0s
BELG MLR MLR
comp=Z,534nm,16.0s
CKFL Kef-Lekhel 20.88 282 P Pn 08 30 17.5 +21
BRG Berggiesshubel 20.91 326 P **P 08 29 53.8 -0.4**
BRG pmax pmax
comp=Z,453nm,1.0s
BRG Berggiesshubel 20.91 326⇑ iP **P 08 29 53.7 -0.4**
BRG Amp 08 29 55.0
comp=Z,391nm,0.9s
BRG *ex* x 08 29 58.5
BRG Amp 08 29 59.7
comp=Z,211nm,1.0s
BRG Amp 08 40 08.0
comp=E,2.6nm,13.7s
BRG Amp 08 40 10.0
comp=N,2.6nm,12.4s
BRG Amp 08 40 12.0
comp=Z,3.8nm,12.9s
IDID Didziasalis 20.91 351 *e*P **P 08 29 53.4 -0.7**
TUE Stuetta 20.92 311 P **P 08 29 53.9 -0.7**
TUE IAMs_20 IAMs_20 08 39 16.3
comp=Z,5µm,21.0s
GRC1 Grafenberg Arr 20.93 319 P **P 08 29 54.2 -0.3**
DAVA Damuels 20.97 313 *i* Pn **P 08 29 54.5 -0.6**
comp=Z,267nm,0.5s,SNR=148
DAVA Damuels 20.97 313 *e*P **P 08 29 54.1 -0.9**
comp=Z,287nm,0.6s
GEYT Alibeck 20.99 74 P **P 08 29 56.0 +0.8**
comp=Z,281nm,0.9s,baz=259,slow=13,SNR=279
GEYT LR LR 08 39 48.2
comp=Z,2µm,19.2s,baz=245,slow=42
GEYT Alibeck 20.99 74 P **P 08 29 56.0 +0.8**
GEYT IAmb IAmb 08 29 57.3
comp=Z,281nm,1.0s
GYA0B ALIBECK ARRAY 20.99 74 IAmb IAmb 08 29 57.8
comp=Z,398nm,0.9s
IIGN Ignalina 21.01 350 *e*P **P 08 29 54.8 -0.4**
UBR Ueberruh 21.02 315 *e*P **P 08 29 54.3 -1.3**
comp=Z,305nm,0.9s
ROTZ Rotzenmuhle 21.03 322 *e*P **P 08 29 54.3 -1.2**
comp=Z,348nm,0.8s
CASM Ain Smara 21.07 282 P P 08 30 19.2 +23
CTEI Djebel Teioual 21.15 281 P P 08 30 20.4 +23
SAOF Saorge 21.18 303 P **P 08 29 56.9 -0.4**
SAOF pmax pmax
comp=Z,222nm,1.0s
ASHT Ashkhabad 21.20 74 P **P 08 29 59.6 +2.1**
ASHT pmax pmax
comp=Z,534nm,1.1s
NKC Novy Kostel 21.20 323 *e*P **P 08 29 57.0 -0.4**
NKC MLR MLR
comp=Z,3µm,13.8s
NKC Novy Kostel 21.20 323 *e*P **P 08 29 57.0 -0.4**
NKC AMS AMS 08 40 10.0
comp=Z,3µm,13.8s
MANZ Manzenberg 21.22 322 *e*P **P 08 29 56.5 -1.1**
comp=Z,390nm,0.8s
SBF Sospel 21.23 303 *e*P **P 08 29 56.6 -1.2**
SBF pmax pmax
comp=Z,511nm,0.8s
ISAL Salakas 21.24 350 *e*P **P 08 29 57.0 -0.7**
MOS Moscow 21.29 8 *e*P **P 08 29 56.0 -2.2**
MOS *e* 08 30 17.9
MOS *e*S Sn 08 34 00.3 -0.9
MOS pmax pmax
comp=Z,556nm,0.7s
MOS pmax pmax
comp=Z,700nm,0.8s
MOS MLR MLR
comp=Z,3µm,17.0s
GKP Gorka Klasztor 21.36 335 *e*P **P 08 29 58.2 -0.9**
GKP Gorka Klasztor 21.36 335 *e*P **P 08 29 58.6 -0.5**
GKP Gorka Klasztor 21.36 335 P **P 08 29 58.1 -0.9**
GKP pmax pmax
comp=Z,545nm,0.9s
GRA1 Grafenberg Arr 21.50 320 P **P 08 29 58.9 -1.7**
GRA1 IAmb IAmb 08 30 20.1
comp=Z,172nm,0.8s
GRF Grafenberg Arr 21.50 320 P **P 08 29 58.9 -1.7**
GRF pmax pmax
comp=Z,173nm,0.8s
GRF MLR MLR
comp=Z,2µm,20.0s
GRF Grafenberg Arr 21.50 320 *e*P **P 08 29 58.7 -1.8**
comp=Z,227nm,1.1s
GRF *e*L L 08 39 51.4
comp=Z,2µm,19.3s
GRFO Grafenberg 21.50 320 P **P 08 29 59.4 -1.2**
GRFO pmax pmax
comp=Z,173nm,0.8s
GRFO MLR MLR
comp=Z,2µm,20.0s
GRFO Grafenberg 21.50 320 P **P 08 29 59.4 -1.2**
PABE Paberze 21.53 347 *e*P **P 08 29 59.7 -1.1**
DFRA Djebel Bou Aff 21.55 282 P P 08 30 24.7 +23
ISO Isola 21.59 303 P **P 08 30 02.0 +0.3**
ISO pmax pmax
comp=Z,75nm,1.0s
CLL Collm 21.64 326⇑ iP **P 08 30 01.0 -1.0**
comp=Z,161nm,1.2s
CLL *i* 08 30 13.7
comp=Z,190nm,1.0s
CLL *i* PcP **PcP 08 34 03.4 +0.4**
comp=Z,16nm,0.8s
CLL *e*S **S 08 34 04.0 +3.4**
CLL LmH 08 39 00.0
comp=N,1µm,19.1s
CLL LmH 08 39 00.0
comp=E,2µm,19.4s
CLL Lmax 08 40 00.0
CLL Collm 21.64 326⇑ iP **P 08 30 01.0 -1.0**
CLL *e*S **S 08 34 04.0 +3.4**
CLL pmax pmax
comp=Z,161nm,1.2s
CLL Collm 21.64 326 P **P 08 30 00.8 -1.2**
FRF La Foret Royal 21.70 302 *e*P **P 08 30 01.4 -1.4**
FRF pmax pmax
comp=Z,231nm,1.1s
LMR La Mourre 21.74 301 *e*P **P 08 30 01.6 -1.6**
LMR pmax pmax
comp=Z,135nm,0.9s
MOX Moxa 21.87 323 P **P 08 30 04.0 -0.6**
MOX pmax pmax
comp=Z,314nm,0.8s
MOX Moxa 21.87 323 *e*P **P 08 30 03.3 -1.3**
comp=Z,343nm,1.1s
MBDF Montbardon 21.95 305 *e*P **P 08 30 04.4 -1.2**
MBDF pmax pmax
comp=Z,105nm,0.6s
SLE Schleitheim 22.02 313 P **P 08 30 04.6 -1.6**
SLE pmax pmax
comp=Z,165nm,0.9s
BNI Bardonecchia 22.11 305 P **P 08 30 07.0 -0.3**
BNI pmax pmax
comp=Z,190nm,0.8s
AJN Ajban 22.11 111 *i* P **P 08 30 08.5 +1.2**
SNR=5.6
AJN Ajban 22.11 111 P **P 08 30 07.8 +0.5**
SNR=12
SENIN Lac Senin/Sane 22.17 309 P **P 08 30 06.5 -1.5**
LPG La Plagne 22.21 307 *e*P **P 08 30 07.2 -1.4**
LPG pmax pmax
comp=Z,153nm,0.8s
LPL La Plagne 22.23 307 *e*P **P 08 30 07.7 -1.0**
LPL pmax pmax
comp=Z,97nm,0.6s
SHME Shamm 22.26 107 *i* P **P 08 30 08.0 -0.9**
SNR=15
ASUD Al Ashush, Dub 22.34 111 *i* P **P 08 30 10.9 +1.1**
SNR=17
ASUD Al Ashush, Dub 22.34 111 P **P 08 30 11.1 +1.3**
SNR=8.3
BFO Black Forest 22.38 315 P **P 08 30 09.0 -1.1**
BFO pmax pmax
comp=Z,281nm,0.9s
BFO Black Forest 22.38 315 P **P 08 30 09.0 -1.1**
BFO IAmb IAmb 08 30 12.0
comp=Z,281nm,0.9s
BFO Black Forest 22.38 315 *e*P **P 08 30 08.9 -1.1**
comp=Z,324nm,0.9s
NAZ Nazwa, Dubai 22.41 109 *i* P **P 08 30 11.4 +0.9**
SNR=24
PBUR Paburge 22.43 345 *e*P **P 08 30 09.5 -1.0**

BANOM Banah 22.44 107 *i* P **P 08 30 11.1 +0.2**
SNR=20
BANOM Banah 22.44 107 P **P 08 30 11.2 +0.2**
SNR=28
BANOM S **S 08 34 17.5 +1.1**
FAQ Al Faqa, Dubai 22.48 110 *i* P **P 08 30 12.1 +0.8**
SNR=20
FAQ Al Faqa, Dubai 22.48 110 P **P 08 30 09.5 -1.8**
SNR=13
MASF Masafi 22.60 108 P **P 08 30 13.2 +0.5**
SNR=26
ORIF Oris-en-Rattie 22.61 305 P **P 08 30 11.4 -1.2**
ORIF pmax pmax
comp=Z,210nm,0.9s
MSFE Esma-Masafi 22.61 108 *i* P **P 08 30 12.8 0.0**
SNR=49
MDH Madha 22.75 108 *i* P **P 08 30 14.4 +0.3**
SNR=19
MDH Madha 22.75 108 P **P 08 30 14.4 +0.3**
SNR=12
MDH P **P 08 30 14.4 +0.3**
SNR=12
TOD Tromm 22.75 318 P **P 08 30 12.2 -1.8**
UOSS Minazif 22.85 109 *i* P **P 08 30 15.7 +0.4**
SNR=25
UOSS Minazif 22.85 109 P **P 08 30 15.6 +0.4**
UOSS Minazif 22.85 109 P **P 08 30 15.7 +0.4**
UOSS P **P 08 30 15.7 +0.4**
HATD Hatta, Dubai 22.86 109 *i* P **P 08 30 15.6 +0.3**
SNR=26
HATD Hatta, Dubai 22.86 109 P **P 08 30 15.5 +0.2**
SNR=19
MOF Molkenrain 22.88 312 P **P 08 30 14.0 -1.4**
ALNE Al Ain 22.97 111 *i* P **P 08 30 17.6 +1.1**
SNR=18
KTD Kalmit 23.01 317 P **P 08 30 15.0 -1.7**
ECH Echery 23.02 313 P **P 08 30 15.8 -1.1**
ECH pmax pmax
comp=Z,252nm,0.9s
ECH Echery 23.02 313 IAmb IAmb 08 30 17.2
comp=Z,246nm,1.0s
HINF Hinteralfeld 23.04 312 *e*P **P 08 30 14.4 -2.6**
HINF pmax pmax
comp=Z,67nm,0.7s
CABF La Chapelle 23.04 309 *e*P **P 08 30 15.1 -2.0**
CABF pmax pmax
comp=Z,135nm,0.9s
CDF Champ du Feu 23.04 314 *e*P **P 08 30 15.0 -2.1**
CDF pmax pmax
comp=Z,118nm,0.9s
TNS Taunus Mts 23.28 319 P **P 08 30 17.5 -1.9**
TNS pmax pmax
comp=Z,163nm,1.1s
TNS Taunus Mts 23.28 319 *e*P **P 08 30 16.9 -2.5**
comp=Z,152nm,1.0s
UMZA Um Al Zommool 23.28 115 P **P 08 30 19.6 0.0**
VIVF Saint-Julien-l 23.41 304 *e*P **P 08 30 19.0 -1.8**
VIVF pmax pmax
comp=Z,120nm,0.9s
HAU Haudompre 23.42 312 *e*P **P 08 30 18.8 -2.1**
HAU pmax pmax
comp=Z,171nm,0.7s
SOHO SOHO 23.53 110 *i* P **P 08 30 22.8 +0.7**
SNR=49
SOHO SOHO 23.53 110 P **P 08 30 22.0 -0.1**
SOHO P **P 08 30 22.0 -0.1**
SOHO S **S 08 34 37.3 +2.3**
SOHO S **S 08 34 37.3 +2.3**
SSB Saint Sauveur 23.62 305 P **P 08 30 19.8 -3.1**
SSB pmax pmax
comp=Z,46nm,0.6s
SSB Saint Sauveur 23.62 305 P **P 08 30 19.8 -3.1**
BSD Bornholm Skovb 23.66 335 *e*P **P 08 30 19.8 -3.2**
BSD Bornholm Skovb 23.66 335⇑ iP **P 08 30 19.4 -3.7**
BSD IAmb IAmb 08 30 21.3
comp=Z,176nm,0.7s
BSD Bornholm Skovb 23.66 335⇑ iP **P 08 30 19.3 -3.7**
BSD pmax pmax
comp=Z,180nm,0.7s
SLIT Slitere, Latvi 23.85 347 *e*P **P 08 30 22.7 -2.1**
ARQ Araqi 23.96 112 P **P 08 30 26.4 +0.2**
SNR=22
ARQ S **S 08 34 43.9 +2.0**
VSU Vasula 23.99 353 *e*P **P 08 30 25.6 -0.6**
VSU Vasula 23.99 353*c* iP **P 08 30 24.9 -1.3**
VSU pmax pmax
comp=Z,598nm,0.7s
VSU MLR MLR
comp=Z,7µm,15.0s
WLF Walferdange 24.28 316 *d*P **P 08 30 27.7 -1.2**
comp=Z,88nm,1.0s
WLF *d*x x 08 30 43.7
WLF Walferdange 24.28 316 IAmb IAmb 08 30 29.1
comp=Z,173nm,1.1s
WLF Walferdange 24.28 316 *e*P **P 08 30 27.4 -1.6**
comp=Z,160nm,1.0s
AKTO Aktyubinsk 24.37 42 P **P 08 30 29.4 -0.4**
comp=Z,73nm,0.6s,baz=237,slow=6.7,SNR=139
AKTO LR LR 08 42 39.3
comp=Z,2µm,18.9s,baz=232,slow=43
BUG Bochum--Univer 24.57 320 P **P 08 30 30.6 -0.9**
BUG pmax pmax
comp=Z,184nm,1.0s
LUNU Lund 24.59 334 *i* P **P 08 30 30.1 -1.6**
HRA Herat 24.59 82 P **P 08 30 32.6 +0.3**
HRA IAmb IAmb 08 30 35.5
comp=Z,217nm,1.1s
MTSE Matsula 24.61 349 *e*P **P 08 30 31.7 -0.1**
BSEG Bad Segeberg 24.62 328 P **P 08 30 30.6 -1.4**
BSEG pmax pmax
comp=Z,203nm,1.3s
BHOU Houvegnez 24.69 317 *d*P **P 08 30 32.1 -0.6**
comp=Z,108nm,1.1s
BTNL Ternell 24.73 318 *d*P **P 08 30 32.3 -0.8**
comp=Z,78nm,1.0s
BSY Bisya 24.80 112 P **P 08 30 34.8 +0.8**
SNR=49
BSY S **S 08 34 56.6 +1.1**
MEM Membach 24.81 318 *d*P **P 08 30 32.8 -1.0**
comp=Z,64nm,0.9s
MEM *d*x x 08 30 44.8
MEM *d*x x 08 30 53.4
MEM Membach 24.81 318 P **P 08 30 33.1 -0.7**
MEM pmax pmax
comp=Z,124nm,1.1s
LLD Lille Linde 24.83 332 *i* P **P 08 30 33.5 -0.2**
comp=Z,6.0nm,0.8s
LLD *i* P **P 08 30 33.7 -0.1**
LLD Lille Linde 24.83 332 *i* P **P 08 30 33.6 -0.2**
AVF Avril sur Loir 24.87 308 *e*P **P 08 30 32.4 -1.9**
AVF pmax pmax
comp=Z,64nm,0.8s
AB31 Akbulak array 24.93 46 *i* P **P 08 30 34.6 -0.3**
ABKAR Akbulak array 24.93 46 P **P 08 30 33.7 -1.2**
COP Copenhagen 25.01 333⇑ iP **P 08 30 34.5 -0.9**
COP IAmb IAmb 08 30 35.5
comp=Z,172nm,1.0s
COP Copenhagen 25.01 333⇑ iP **P 08 30 34.5 -0.9**
COP pmax pmax
comp=Z,170nm,1.0s
RCHB Rochefort 25.04 316 *b*P **P 08 30 35.0 -0.8**
comp=Z,58nm,0.9s
ATD Arta Tunnel 25.04 155 P **P 08 30 37.7 +1.6**
comp=Z,12nm,0.9s,baz=338,slow=11,SNR=4.3
ATD LR LR 08 39 12.7
comp=Z,701nm,21.0s,baz=355,slow=34
PUL Pulkovo 25.05 358*d* iP **P 08 30 35.1 -0.7**
PUL pmax pmax
comp=Z,373nm,0.5s
DEL Delary 25.10 336 *i* P **P 08 30 34.8 -1.5**
BCLA Clavier 25.12 317 *b*P **P 08 30 35.8 -0.7**
comp=Z,70nm,1.0s
BGES Gesves 25.22 317 *b*P **P 08 30 36.8 -0.7**
comp=Z,179nm,1.1s
BGES *d*x x 08 30 44.9
BGES *d*x x 08 30 53.0
CAF Calviac 25.22 303 *e*P **P 08 30 37.0 -0.6**
CAF pmax pmax
comp=Z,88nm,0.9s
SMDO Samad 25.28 111 S **S 08 35 05.4 +2.1**
BMRD Maredsous 25.36 316 *b*P **P 08 30 38.1 -0.7**
comp=Z,128nm,0.8s
DOU Dourbes 25.37 316 *b*P **P 08 30 37.9 -0.9**
comp=Z,125nm,1.0s
DOU Dourbes 25.37 316 P **P 08 30 38.0 -0.8**
DOU pmax pmax
comp=Z,243nm,0.9s
GID Gilleleje 25.43 333 *i* P **P 08 30 39.5 +0.2**
WSAR Wadi Sarin 25.63 110 P **P 08 30 42.0 +0.5**
comp=Z,46nm,1.0s,baz=320,slow=9.2,SNR=25
WSAR LR LR 08 43 06.9
comp=Z,2µm,20.3s,baz=327,slow=42
RJF Les Rejaudoux 25.69 303 *e*P **P 08 30 41.3 -0.5**
RJF pmax pmax
comp=Z,289nm,1.0s
JMDO Jabal Madar 25.70 112 S **S 08 35 11.4 +1.5**
SNF Seneffe 25.73 316 *b*P **P 08 30 41.2 -0.9**
comp=Z,237nm,0.8s
FABU Falkenberg 25.91 335 *i* P **P 08 30 42.5 -1.1**
RBK Rabkut 26.01 126 P **P 08 30 45.0 +0.1**
SNR=19
TAM Tamanrasset 26.27 250 P **P 08 30 50.1 +2.7**
TAM pmax pmax
comp=Z,64nm,1.1s
TAM Tamanrasset 26.27 250 P **P 08 30 50.1 +2.7**
BORU Boraas 26.39 336 *i* P **P 08 30 47.0 -1.0**
KIRV Kirov 26.39 20 P **P 08 30 47.1 -0.9**
comp=Z,825nm,0.7s,baz=224,slow=3.7,SNR=258
KIRV LR LR 08 43 13.1
comp=Z,1µm,19.2s,baz=219,slow=41
KIRV Kirov 26.39 20*c* iP **P 08 30 46.9 -1.1**
MHTO MHTO 26.40 115 P **P 08 30 49.5 +1.0**
SNR=27
ONAU Onsala 26.49 335⇑ iP **P 08 30 47.9 -0.9**
KLMR Klimovskoe 26.51 8*c* iP **P 08 30 47.7 -1.3**
KLMR *e*S **S 08 35 23.0 +1.2**
KLMR pmax pmax
comp=Z,408nm,0.8s
KLMR MLR MLR
comp=Z,3µm,15.0s
KLMR Klimovskoe 26.51 8⇑ iP **P 08 30 47.7 -1.3**
KLMR ⇑ iP **P 08 30 47.7 -1.3**
KLMR ⇑ iP **P 08 30 47.7 -1.3**
KLMR AMP 08 30 49.8
comp=Z,408nm,0.8s
KLMR *e*S **S 08 35 23.0 +1.2**
KLMR *e*S **S 08 35 23.0 +1.2**
KLMR LQ LQ 08 39 37.0
KLMR LQ LQ 08 39 37.0
KLMR LR LR 08 41 49.4
KLMR AMP 08 43 53.5
comp=Z,3µm,15.0s
VALR Valaam 26.62 358 *i* P **P 08 30 48.5 -1.5**
VALR pmax pmax
comp=Z,260nm,1.0s
VALR MLR MLR
comp=Z,2µm,15.7s
DQM DQM 26.73 117 P **P 08 30 51.8 +0.4**
SNR=9.4
DQM P **P 08 30 51.8 +0.4**
SNR=9.4
ETSF Etsaut 26.75 298 *e*P **P 08 30 51.5 0.0**
ETSF pmax pmax
comp=Z,92nm,0.8s
MUD Monsted U'grnd 26.83 331⇑ iP **P 08 30 51.7 -0.2**
MUD IAmb IAmb 08 30 52.4
comp=Z,157nm,0.8s
MUD Monsted U'grnd 26.83 331 P **P 08 30 51.8 -0.1**
MUD pmax pmax
comp=Z,210nm,1.1s
FINES FINESS Array B 26.99 353 P **P 08 30 52.1 -1.3**
comp=Z,428nm,0.7s,baz=148,slow=11,SNR=793
FINES LR LR 08 43 27.9
comp=Z,2µm,18.5s,baz=162,slow=41
FINES FINESS Array B 26.99 353 *i* P **P 08 30 52.0 -1.3**
FINES pmax pmax
comp=Z,433nm,0.6s
FINES FINESS Array B 26.99 353 P **P 08 30 52.0 -1.3**
FIA1 FINESS Array S 26.99 353 P **P 08 30 51.7 -1.7**
TJOU Tjoern 27.08 336 *i* P **P 08 30 53.3 -0.8**
GOET G??ttrup 27.21 332 *i* P **P 08 30 55.5 +0.1**
GOET IAmb IAmb 08 30 58.0
comp=Z,306nm,0.8s
STRU Stroemstad 28.00 337 *i* P **P 08 31 01.1 -1.3**
ARU Arti 28.08 31 P **P 08 31 02.6 -0.5**
comp=Z,14nm,0.6s,baz=225,slow=7.3,SNR=73
ARU LR LR 08 44 39.3
comp=Z,1µm,18.1s,baz=232,slow=42
ARU Arti 28.08 31*c* iP **P 08 31 02.7 -0.5**
ARU 08 31 49.2
ARU PPP PPP 08 32 01.3
ARU 08 34 15.5
ARU S **S 08 35 49.5 +2.8**
ARU SSS SSS 08 37 17.5
ARU pmax pmax
comp=Z,93nm,1.0s
ARU MLR MLR
comp=Z,1µm,16.0s
ARU Arti 28.08 31 P **P 08 31 02.7 -0.5**
ARU IAmb IAmb 08 31 09.0
comp=Z,111nm,0.8s
HFS Hagfors 28.13 340 P **P 08 31 02.2 -1.3**
comp=Z,120nm,0.8s,baz=140,slow=7.7,SNR=83
HFS LR LR 08 44 06.9
comp=Z,2µm,19.6s,baz=154,slow=40
PRGR Permogore 28.19 13⇑ iP **P 08 31 02.8 -1.3**
PRGR *e*S **S 08 35 44.0 -4.3**
PRGR pmax pmax
comp=Z,270nm,0.6s
HOMB Homborsund 28.37 333 *i* P **P 08 31 04.4 -1.2**
HOMB Homborsund 28.37 333⇑ iP **P 08 31 04.4 -1.2**
TDRA Tendrara 28.49 276 P 08 31 11.0
JBK JBK 28.66 279 P 08 31 12.0
WACR West Acre 28.77 318 *e*P **P 08 31 07.7 -1.6**
WACR IAmb IAmb 08 31 08.5
comp=Z,103nm,0.9s
OSL Oslo 28.86 337 *e*P **P 08 31 08.3 -1.7**
SNART Snartemo 28.90 332 *i* P **P 08 31 09.9 -0.5**
SNART Snartemo 28.90 332 *e*P **P 08 31 09.9 -0.5**
VAF Ylistaro 28.93 351 P **P 08 31 09.6 -1.1**
VAF pmax pmax
comp=Z,133nm,1.0s
KONO Kongsberg 29.00 336*c* iP **P 08 31 09.8 -1.5**
KONO pmax pmax
comp=Z,57nm,0.9s
KONO MLR MLR
comp=Z,2µm,17.0s
KONO Kongsberg 29.00 336⇑ iP **P 08 31 09.7 -1.5**
JSA Saint Aubin 29.13 310⇑ *e*P **P 08 31 09.5 -3.0**
JSA IAmb IAmb 08 31 10.5
comp=Z,46nm,1.0s
JVM Valle D.L. Mar 29.16 310⇑ *e*P **P 08 31 10.7 -2.1**
ESDC Sonseca Array 29.18 290 P **P 08 31 13.5 +0.2**
comp=Z,57nm,0.9s,baz=80,slow=9.1,SNR=202
ESDC PcP **PcP 08 34 21.0 +0.6**
comp=Z,8.6nm,0.9s,baz=59,slow=2.6,SNR=7.9
ESDC ScP **ScP 08 38 02.2 +1.4**
comp=Z,3.2nm,1.1s,baz=66,slow=3.2,SNR=4.4
ESDC Sonseca Array 29.18 290 P **P 08 31 13.4 +0.2**
SVE Sverdlovsk 29.23 32 *e*P **P 08 31 13.0 -0.4**
SVE *e*S **S 08 36 09.5 +4.7**
SVE pmax pmax
comp=Z,172nm,0.9s
SVE MLR MLR
comp=Z,1µm,14.0s
NC602 NORSAR Array S 29.24 339 *e*P **P 08 31 11.5 -2.0**
NORES NORESS Array B 29.24 339 P **P 08 31 11.9 -1.5**
QUIF Quistinic 29.43 307 *e*P **P 08 31 13.4 -1.9**
QUIF pmax pmax
comp=Z,9.0nm,0.6s
PAB San Pablo 29.48 290 P **P 08 31 15.9 0.0**
PAB pmax pmax
comp=Z,61nm,1.1s
PAB San Pablo 29.48 290 P **P 08 31 15.9 0.0**
PAB San Pablo 29.48 290 P 08 31 16.7
NC405 NORSAR Array S 29.49 340 IAmb IAmb 08 31 22.5
comp=Z,102nm,0.8s
NAO01 NORSAR Array S 29.52 339 P **P 08 31 14.2 -1.7**
NB201 NORSAR Array S 29.56 339 P **P 08 31 14.2 -2.1**
NB201 IAmb IAmb 08 31 22.8
comp=Z,124nm,0.8s
NB2 NORSAR Subarra 29.58 339 P **P 08 31 14.9 -1.6**
baz=143,slow=9.3
NOA NORSAR Array B 29.58 339 P **P 08 31 14.8 -1.7**
comp=Z,57nm,0.8s,baz=143,slow=9.2,SNR=171
NOA LR LR 08 45 45.0
comp=Z,2µm,18.0s,baz=150,slow=42
ROSF Rostrenen 29.61 308⇑ *e*P **P 08 31 14.8 -2.1**
PALE Palemas 29.62 281 P 08 31 19.0
SWN1 Swindon 29.65 315⇑ *e*P **P 08 31 16.0 -1.2**

SWN1 IAmb IAmb 08 31 18.1
comp=Z,133nm,0.8s
NBO00 NORSAR Array S 29.70 339 IAmb IAmb 08 31 22.9
comp=Z,189nm,0.9s
CWF Charnwood Fore 29.84 317 *e*P **P 08 31 15.8 -3.0**
CWF IAmb IAmb 08 31 16.9
comp=Z,198nm,1.7s
SOCY Socotra 29.87 134 P P **08 31 17.9 -1.6**
SOCY IAMs_20 IAMs_20 08 43 40.0
comp=Z,2µm,20.0s
CHM Chimkent 29.93 64 *e*P **P 08 31 18.7 -1.1**
baz=64
CHM Chimkent 29.93 64 *e*P **P 08 31 18.6 -1.1**
BLS5 Blasjo 29.94 333⇑*i*P **P 08 31 18.9 -0.8**
KBL Kabul 30.09 80 P **P 08 31 22.4 +0.8**
KBL pmax pmax
comp=Z,46nm,1.1s
KBL MLR MLR
comp=Z,2µm,19.0s
KBL Kabul 30.09 80 P **P 08 31 22.4 +0.8**
SKAR Skarslia 30.20 337⇑*i*P **P 08 31 21.1 -1.0**
ODD1 Odda 30.22 334⇑*i*P **P 08 31 21.5 -0.6**
IUG luzhnay 30.24 65 *e*P **P 08 31 21.4 -1.2**
comp=Z,50nm,0.9s,baz=65
IUG *e*S **S 08 36 22.1 +0.9**
baz=65
IUG luzhnay 30.24 65 *e*P **P 08 31 21.4 -1.2**
IUG *e*S **S 08 36 22.1 +0.9**
IUG pmax pmax
comp=Z,50nm,0.9s
KMY Karmoy 30.25 332 *e*P **P 08 31 21.2 -1.1**
HORN Hornachuelos 30.32 287 P 08 31 23.2
MCH1 Michaelchurch 30.52 315⇑*e*P **P 08 31 23.1 -1.8**
MCH1 IAmb IAmb 08 31 23.9
comp=Z,53nm,0.8s
GAR Garm 30.53 71 IAmb IAmb 08 31 28.8
comp=Z,68nm,0.8s
KK31 Karatay Array 30.63 63 *i* P **P 08 31 26.2 +0.2**
KK31 Karatay Array 30.63 63 P **P 08 31 26.2 +0.2**
KK31 IAmb IAmb 08 31 27.6
comp=Z,101nm,0.9s
KKAR Karatay Array 30.63 63 P **P 08 31 25.6 -0.4**
KKAR Karatay Array 30.63 63 P **P 08 31 25.6 -0.4**
KKAR Karatay Array 30.63 63 IAmb IAmb 08 31 27.6
comp=Z,101nm,0.9s
HLM1 Long Mynd 30.64 316⇑*e*P **P 08 31 24.1 -1.9**
HLM1 IAmb IAmb 08 31 25.2
comp=Z,54nm,0.8s
MDT Midelt 30.65 277 P 08 31 28.6
LCRM LCR 30.66 279 P 08 31 30.0
ARF Arif 30.69 274 P 08 31 29.2
CHEFC Chefchaouen 30.77 282 P 08 31 29.0
CZD Col de Zad 30.95 278 P 08 31 32.0
FOEL Foel Wylfa 30.96 317⇑*e*P **P 08 31 26.7 -2.0**
FOEL IAmb IAmb 08 31 28.8
comp=Z,50nm,0.9s
DOMB Dombas 31.01 339 *e*P **P 08 31 28.6 -0.5**
BER Bergen 31.01 334 *e*P **P 08 31 28.8 -0.3**
EDMD Edmundbyers 31.07 321⇑*e*P **P 08 31 27.9 -1.8**
ASK Askoy 31.13 334 *e*P **P 08 31 29.5 -0.6**
RSA Sarsar 31.20 281 P 08 31 33.0
GOLM Goulmima 31.22 275 P 08 31 35.0
DZA Taraz 31.22 63 *e*P **P 08 31 30.2 -1.1**
comp=Z,28nm,0.8s,baz=63
DZA Taraz 31.22 63 *e*P **P 08 31 30.1 -1.1**
DZA pmax pmax
comp=Z,28nm,0.8s
PBRG Braganca 31.26 295 *e*P **P 08 31 31.8 +0.2**
comp=Z,92nm,1.1s
HYA Hoyanger 31.27 336 *e*P **P 08 31 30.6 -0.7**
MVO Moncorvo 31.48 294 *e*P **P 08 31 33.9 +0.3**
comp=Z,69nm,1.3s
RSBS Rosebush, Pemb 31.53 314⇑*e*P **P 08 31 32.3 -1.5**
RSBS IAmb IAmb 08 31 33.3
comp=Z,82nm,0.8s
KESW Keswick, Cumbr 31.57 320⇑*e*P **P 08 31 34.0 0.0**
PBAR Barrancos 31.68 288 *e*P **P 08 31 35.7 +0.5**
comp=Z,137nm,1.2s
PBAR Barrancos 31.68 288 *e*PcP **PcP 08 34 28.3 +1.5**
SUE Sulen 31.68 335 *e*P **P 08 31 34.1 -0.8**
AKN Aaknes 31.74 338 *e*P **P 08 31 35.3 -0.2**
WLF1 Llynfaes 31.77 317 *e*P **P 08 31 34.5 -1.4**
WLF1 IAmb IAmb 08 31 34.7
comp=Z,58nm,0.9s
PMRV Marv??o 31.84 290 *e*P **P 08 31 37.0 +0.3**
comp=Z,87nm,1.1s
PMRV Marv??o 31.84 290 *e*PcP **PcP 08 34 28.2 +1.0**
YRC Rhoscolyn 31.86 317 *e*P **P 08 31 35.1 -1.5**
MOL Molde 31.87 338⇑*i*P **P 08 31 35.0 -1.5**
PCBR Castelo Branco 31.88 291 *e*P **P 08 31 37.0 0.0**
comp=Z,96nm,1.4s
PCBR Castelo Branco 31.88 291 *e*PcP **PcP 08 34 29.1 +1.8**
ESK Eskdalemuir 31.93 321 P **P 08 31 36.1 -1.1**
ESK pmax pmax
comp=Z,53nm,1.2s
ESK Eskdalemuir 31.93 321 P **P 08 31 36.1 -1.1**
FOO Floro 31.96 336 *e*P **P 08 31 37.0 -0.4**
TZRR Tazzarine 31.99 274 P 08 31 41.0
PVRL Vila Real 32.00 294 *e*P **P 08 31 38.6 +0.5**
comp=Z,78nm,1.3s
PESTR Estremoz 32.04 289 *e*P **P 08 31 38.9 +0.4**
comp=Z,112nm,1.1s
PESTR Estremoz 32.04 289 *e*PcP **PcP 08 34 29.6 +1.8**
PESTR Estremoz 32.04 289 P 08 31 38.8
POLO Lamas de Olo 32.05 294 *e*P **P 08 31 38.9 +0.3**
comp=Z,66nm,1.0s
PVIS Viseu 32.15 293 *e*P **P 08 31 40.0 +0.6**
comp=Z,101nm,1.3s
PVIS Viseu 32.15 293 *e*PcP **PcP 08 34 29.6 +1.5**
ZHG ZHG 32.16 279 P 08 31 42.0
EDI Edinburgh 32.18 322 *e*P **P 08 31 38.5 -0.9**
PCAB Cabril 32.22 295 *e*P **P 08 31 40.6 +0.6**
comp=Z,117nm,1.4s
PCAB Cabril 32.22 295 *e*PcP **PcP 08 34 30.0 +1.7**
ZGR Zagora 32.23 272 P 08 31 43.0
WIM Isle of Man 32.24 318 *e*P **P 08 31 38.7 -1.3**
NSS Namsos 32.26 344 *e*P **P 08 31 38.7 -1.3**
PVAQ Vaqueiros 32.30 287 *e*P **P 08 31 41.3 +0.5**
comp=Z,100nm,1.0s
PVAQ Vaqueiros 32.30 287 *e*PcP **PcP 08 34 30.1 +1.6**
PVAQ Vaqueiros 32.30 287 P **P 08 31 40.8 0.0**
PVAQ IAmb IAmb 08 31 42.4
comp=Z,88nm,0.9s
PVAQ Vaqueiros 32.31 287 P 08 31 41.4
PBEJ Beja 32.34 288 *e*P **P 08 31 41.7 +0.6**
comp=Z,26nm,1.3s
PBEJ Beja 32.34 288 *e*PcP **PcP 08 34 30.5 +1.9**
NEWG New Galloway 32.38 320 *e*P **P 08 31 39.9 -1.2**
NEWG IAmb IAmb 08 31 41.6
comp=Z,78nm,0.9s
BRVK Borovoye 32.39 44 P **P 08 31 41.1 -0.2**
BRVK Borovoye 32.39 44 P **P 08 31 40.7 -0.6**
PGAV Gavieira, Arco 32.40 295 *e*P **P 08 31 42.4 +0.7**
comp=Z,88nm,0.9s
EVO Evora 32.40 289 *e*P **P 08 31 42.3 +0.7**
comp=Z,51nm,1.4s
PBDV Barranco-do-Ve 32.50 286 *e*P **P 08 31 43.2 +0.7**
comp=Z,142nm,1.2s
PBDV Barranco-do-Ve 32.50 286 *e*PcP **PcP 08 34 31.4 +2.3**
PMTG Montargil 32.52 290 *e*P **P 08 31 43.2 +0.6**
comp=Z,82nm,1.0s
PCVE Castro Verde 32.53 287 *e*P **P 08 31 43.2 +0.5**
comp=Z,70nm,1.6s
PCVE Castro Verde 32.53 287 *e*PcP **PcP 08 34 31.2 +2.1**
COI Coimbra 32.57 292 *e*P **P 08 31 44.0 +0.9**
comp=Z,146nm,0.9s
COI Coimbra 32.57 292 IAmb IAmb 08 31 44.7
comp=Z,101nm,0.8s
PCAS Casmilo, Conde 32.65 292 *e*P **P 08 31 44.5 +0.7**
comp=Z,84nm,1.2s
IWEX Carrickbyrne, 32.85 315 *e*P **P 08 31 43.6 -1.7**
APA Apatity 32.85 1⇓*i*P **P 08 31 42.5 -2.6**
APA *i* 08 33 06.0
APA *i* S **S 08 36 57.0 -4.1**
APA pmax pmax
comp=Z,31nm,0.9s
PNCL Nicolau / Gran 32.85 288 *e*P **P 08 31 46.5 +1.0**
comp=Z,73nm,1.3s
PNCL Nicolau / Gran 32.85 288 *e*PcP **PcP 08 34 31.8 +1.8**
PSBE So Bento 32.92 291 *e*P **P 08 31 46.7 +0.6**
comp=Z,54nm,1.1s
AML Almayashu 32.96 65 P **P 08 31 47.6 +0.7**
SNR=89
MCD Coleburn Disti 32.97 325⇑*e*P **P 08 31 45.0 -1.3**

BRZS Berezniki 33.01 50 *e*P **P 08 31 45.0 -1.8**
comp=Z,29nm,1.3s,baz=50
BRZS Berezniki 33.01 50 *e*P **P 08 31 45.0 -1.8**
BRZS pmax pmax
comp=Z,29nm,1.3s
EKS2 Erkin-Say 33.02 64 P **P 08 31 48.4 +1.2**
SNR=38
MORF Marmelete 33.05 287 *e*PcP **PcP 08 34 32.9 +2.2**
PTEO Sao Teotonio 33.08 287 *e*P **P 08 31 48.5 +1.0**
comp=Z,148nm,1.0s
ILTH Belurgan, Co L 33.11 318 *e*P **P 08 31 45.9 -1.7**
MOR8 Moi Rana 33.17 347⇑*i*P **P 08 31 46.7 -1.3**
LVZ Lovozero 33.20 2*c i*P **P 08 31 46.9 -1.4**
LVZ pmax pmax
comp=Z,78nm,1.0s
LVZ MLR MLR
comp=Z,3µm,18.0s
LVZ Lovozero 33.20 2 P **P 08 31 46.5 -1.8**
LVZ IAmb IAmb 08 32 55.3
comp=Z,96nm,0.8s
PFVI Vila Bisbo 33.22 286 *e*P **P 08 31 49.6 +0.8**
BTLS Baital 33.28 59 *e*P **P 08 31 47.6 -1.6**
comp=Z,35nm,1.2s,baz=60
BTLS Baital 33.28 59 *e*P **P 08 31 47.5 -1.6**
BTLS pmax pmax
comp=Z,35nm,1.2s
PMAFR Mafra 33.35 290 *e*P **P 08 31 50.9 +1.0**
comp=Z,129nm,1.1s
PMAFR Mafra 33.35 290 *e*PcP **PcP 08 34 33.3 +1.9**
CLGH Cloghs, Cushen 33.36 319⇑*e*P **P 08 31 48.2 -1.5**
CLGH IAmb IAmb 08 31 50.4
comp=Z,47nm,0.6s
MLA1 Latheron 33.37 326⇑*e*P **P 08 31 48.5 -1.4**
LRW Lerwick 33.38 330 *e*P **P 08 31 48.8 -1.1**
LRW IAmb IAmb 08 31 49.7
comp=Z,215nm,0.9s
MDO Dochfour 33.44 324⇑*e*P **P 08 31 48.3 -2.1**
LAWE Loch Awe, Argy 33.45 322 *e*P **P 08 31 49.3 -1.2**
AAK Ala-Archa 33.55 64 P **P 08 31 52.6 +0.9**
comp=Z,85nm,0.9s,baz=239,slow=7.8,SNR=164
AAK PcP **PcP 08 34 32.8 +0.7**
comp=Z,11nm,0.7s,baz=212,slow=4.9,SNR=3.4
AAK LR LR 08 47 55.2
comp=Z,1µm,19.2s,baz=274,slow=41
AAK Ala-Archa 33.55 64 P **P 08 31 53.0 +1.2**
SNR=81
AAK Ala-Archa 33.55 64 *i* P **P 08 31 52.5 +0.7**
SNR=94
AAK Ala-Archa 33.55 64*c i*P **P 08 31 52.7 +0.9**
AAK pmax pmax
comp=Z,349nm,1.1s
AAK MLR MLR
comp=Z,4µm,17.0s
AAK Ala-Archa 33.55 64 P **P 08 31 52.4 +0.6**
AAK IAmb IAmb 08 31 54.1
comp=Z,86nm,0.9s
USP Ospenovka 33.55 63 P **P 08 31 52.1 +0.5**
SNR=49
UCH Uchtor 33.57 64 P **P 08 31 53.1 +0.8**
SNR=63
STOK Stokkvaagen 33.59 346 *e*P **P 08 31 50.7 -0.9**
SGDS Sogindy 33.65 62 *e*P **P 08 31 51.3 -1.3**
comp=Z,27nm,1.1s,baz=62
SGDS Sogindy 33.65 62 *e*P **P 08 31 51.2 -1.3**
SGDS pmax pmax
comp=Z,27nm,1.1s
NIL Nilore 33.70 80 P **P 08 31 54.2 +1.2**
NIL pmax pmax
comp=Z,179nm,0.8s
NIL MLR MLR
comp=Z,1µm,20.0s
NIL Nilore 33.70 80 P **P 08 31 54.2 +1.2**
BIGH Upper Bighouse 33.72 326⇑*e*P **P 08 31 51.3 -1.5**
BIGH IAmb IAmb 08 31 51.8
comp=Z,202nm,0.8s
KONS Konsvik 33.72 346⇑*i*P **P 08 31 51.3 -1.4**
CHMS Chumysh 33.73 63 P **P 08 31 54.2 +1.0**
SNR=48
OUK Oukaimeden 33.75 275 P 08 31 57.0
NBB40 Tonnes 33.75 346 *e*P **P 08 31 52.1 -0.9**
NBB17 Glomfjord B¥r 33.84 347 *e*P **P 08 31 53.2 -0.5**
KBK Karagaybulak 33.88 64 P **P 08 31 56.2 +1.5**
SNR=85
KAC Achnashellach 33.92 324 *e*P **P 08 31 52.9 -1.7**
NBB30 Firnes 34.02 347 *e*P **P 08 31 54.4 -0.9**
NBB05 Inndyr 34.02 347 *e*P **P 08 31 54.4 -0.9**
N2ST Straumen 34.03 349 *e*P **P 08 31 54.5 -0.9**
NBB28 Valnes 34.08 348 *e*P **P 08 31 55.1 -0.8**
FAUS Fauske 34.11 348 *e*P **P 08 31 55.0 -1.2**
N2TV T¥rnvik 34.31 348 *e*P **P 08 31 56.9 -1.0**
TKM2 Tokmak 2 34.36 63 P **P 08 31 59.7 +0.8**
SNR=66
TKM2 Tokmak 2 34.36 63 P **P 08 31 59.0 +0.2**
TTIG Tnine Tigouga, 34.42 275 P 08 32 02.4
N2IH Innhavet 34.54 349 *e*P **P 08 31 58.4 -1.4**
STEI Steigen 34.62 349 *e*P **P 08 32 00.0 -0.4**
IGLA Glengowla, Co 34.65 316 *e*P **P 08 31 59.3 -1.6**
KTK1 Kautokeino 34.67 354⇑*i*P **P 08 31 59.7 -1.3**
N2RO R st 34.80 347 *e*P **P 08 32 00.3 -1.7**
ULHL Ulahol 34.85 64 P **P 08 32 04.6 +1.5**
SNR=111
KSH Kashi 34.85 69 P **P 08 32 01.8 -1.3**
KSH pP pP 08 32 08.3 -1.2
KSH PcP **PcP 08 34 36.3 +0.4**
KSH sS S 08 37 35.4 +2.3
KSH pmax pmax
comp=Z,48nm,0.8s
KSH pmax pmax
comp=Z,360nm,4.3s
KSH LR LR
comp=Z,1µm,9.7s
KSH LR LR
comp=Z,1µm,10.7s
KSH LR LR
comp=Z,480nm,11.1s
N2SV S¸rvÅgen 34.96 347 *e*P **P 08 32 02.4 -1.1**
ARA0 ARCESS Array S 35.02 356⇑*i*P **P 08 32 03.0 -1.0**
ARCES ARCESS Array B 35.02 356 P **P 08 32 02.9 -1.1**
comp=Z,168nm,0.7s,baz=164,slow=8.1,SNR=538
ARCES LR LR 08 48 40.8
comp=Z,2µm,18.4s,baz=165,slow=40
ARCES ARCESS Array B 35.02 356 P **P 08 32 02.5 -1.5**
EAH EAH 35.03 277 P 08 32 07.1
TOB1 Torodi Ar. Sit 35.08 240 IAMs_20 IAMs_20 08 48 44.5
comp=Z,2µm,19.0s
LOF Lofoten 35.08 348 *e*P **P 08 32 03.1 -1.4**
TOA0 Torodi Ar. Sit 35.08 240 P **P 08 32 05.6 +0.5**
TORD Torodi Ar. Bea 35.08 240 P **P 08 32 06.1 +1.0**
comp=Z,31nm,0.6s,baz=47,slow=7.3,SNR=138
TORD PcP **PcP 08 34 37.4 +0.7**
comp=Z,17nm,1.1s,baz=35,slow=2.6,SNR=5.0
TORD ScP **ScP 08 38 22.4 +1.3**
comp=Z,3.1nm,1.0s,baz=41,slow=3.0,SNR=4.9
TORD LR LR 08 48 56.3
comp=Z,1µm,19.5s,baz=60,slow=41
TORD Torodi Ar. Bea 35.08 240 P **P 08 32 06.0 +0.9**
KEV Kevo 35.16 357 P **P 08 32 04.3 -0.9**
KEV pmax pmax
comp=Z,65nm,0.8s
KEV MLR MLR
comp=Z,2µm,21.0s
KEV Kevo 35.16 357 P **P 08 32 04.3 -0.9**
KEV IAmb IAmb 08 32 05.4
comp=Z,65nm,0.8s
KEV IAMs_20 IAMs_20 08 47 34.7
comp=Z,2µm,21.0s
MBAR Mbarara 35.22 183⇑*e*P **P 08 32 07.0 +0.6**
MBAR pmax pmax
comp=Z,9.0nm,1.1s
MBAR MLR MLR
comp=Z,1µm,15.0s
AAA Alma-Ata 35.31 63 *e*P **P 08 32 05.8 -1.2**
baz=63
AAA Alma-Ata 35.31 63 *e*P **P 08 32 05.7 -1.2**
TNSS Tian-Shan 35.34 63 *e*P **P 08 32 06.5 -1.2**
baz=63
TNSS Tian-Shan 35.34 63 *e*P **P 08 32 06.4 -1.2**
MDOK Medeo 35.41 63 *e*P **P 08 32 06.5 -1.5**
baz=63
MDOK *e*S **S 08 37 42.3 +0.5**
baz=63
MDOK LR LR 08 48 21.6
comp=Z,310nm,17.3s,baz=63
MDOK Medeo 35.41 63 *e*P **P 08 32 06.4 -1.5**
MDOK *e*S **S 08 37 42.2 +0.5**

MDOK MLR MLR
comp=Z,310nm,17.0s
JETT Jettan, Norway 35.46 353⇑*i*P **P 08 32 06.6 -1.3**
CGR Cap Guir 35.57 275 P 08 32 12.0
TRO Tromso 35.70 352 *e*P **P 08 32 08.5 -1.2**
KMBO Kilima Mbogo 36.01 172 P **P 08 32 17.5 +4.2**
comp=Z,1.4nm,0.3s,baz=351,slow=9.6,SNR=7.8
HAMF Hammerfest 36.24 355 *e*P **P 08 32 14.4 +0.1**
TDK Taldyqorghan 36.37 60 *e*P **P 08 32 14.6 -1.3**
comp=Z,102nm,0.8s,baz=60
TDK *e*S **S 08 37 56.7 +0.7**
baz=60
TDK LR LR 08 48 28.3
comp=Z,837nm,13.4s,baz=60
TDK Taldyqorghan 36.37 60 *e*P **P 08 32 14.5 -1.3**
TDK *e*S **S 08 37 56.7 +0.7**
TDK pmax pmax
comp=Z,102nm,0.8s
TDK MLR MLR
comp=Z,837nm,13.0s
SATY Saty 36.41 63 *e*P **P 08 32 14.8 -1.7**
comp=Z,76nm,1.1s,baz=63
SATY *e*S **S 08 37 57.4 +0.5**
baz=63
SATY Saty 36.41 63 *e*P **P 08 32 14.7 -1.7**
SATY *e*S **S 08 37 57.4 +0.5**
SATY pmax pmax
comp=Z,76nm,1.1s
KPKS Kokpek 36.60 62 *e*P **P 08 32 16.4 -1.6**
comp=Z,74nm,1.5s,baz=62
KPKS *e*S **S 08 38 00.1 +0.4**
baz=62
KPKS Kokpek 36.60 62 *e*P **P 08 32 16.4 -1.6**
KPKS *e*S **S 08 38 00.1 +0.4**
KPKS pmax pmax
comp=Z,74nm,1.5s
KURBB Kurchatov Arra 36.81 50 P **P 08 32 19.0 -0.6**
UZB Uzynbulak 36.86 63 *e*P **P 08 32 18.7 -1.6**
comp=Z,26nm,0.8s,baz=63
UZB *e*S **S 08 38 04.1 +0.3**
baz=63
UZB Uzynbulak 36.86 63 *e*P **P 08 32 18.6 -1.6**
UZB *e*S **S 08 38 04.1 +0.3**
UZB pmax pmax
comp=Z,26nm,0.8s
BHK Bhakra 36.87 82 *ex* **P 08 32 21.0 +0.7**
SHLS Shalkode 37.18 63 *e*P **P 08 32 24.0 +1.0**
comp=Z,37nm,0.9s,baz=63
SHLS Shalkode 37.18 63 *e*P **P 08 32 23.9 +1.0**
SHLS pmax pmax
comp=Z,37nm,0.9s
PDGK Podgornoye 37.19 62 P **P 08 32 23.0 -0.1**
SMLA Simla 37.57 83 *e*P **P 08 32 27.1 +0.9**
SMLA IAmb IAmb 08 32 27.8
comp=Z,261nm,0.9s
SEM Semipalatinsk 37.88 51 *e*P **P 08 32 27.1 -1.8**
comp=Z,56nm,1.3s,baz=51
SEM *e*S **S 08 38 19.4 +0.1**
baz=51
SEM LR LR 08 49 16.4
comp=Z,370nm,13.9s,baz=51
SEM Semipalatinsk 37.88 51 *e*P **P 08 32 27.1 -1.8**
SEM *e*S **S 08 38 19.3 +0.1**
SEM pmax pmax
comp=Z,56nm,1.3s
SEM MLR MLR
comp=Z,370nm,14.0s
NDI New Delhi 38.41 86 *e*P **P 08 32 34.5 +1.1**
KOWA Kowa 38.42 247 P **P 08 32 34.7 +1.2**
DDI Dehra Dun 38.55 83 *e*P **P 08 32 35.0 +0.5**
DDI IAmb IAmb 08 32 36.0
comp=Z,152nm,0.9s
MAKZ Makanchi 38.86 57 P **P 08 32 37.0 +0.1**
MAKZ pmax pmax
comp=Z,52nm,0.9s
MAKZ Makanchi 38.86 57 P **P 08 32 37.0 +0.1**
MK31 Makanchi Array 39.07 57 *i* P **P 08 32 38.9 +0.2**
MKAR Makanchi Array 39.07 57 P **P 08 32 39.2 +0.4**
comp=Z,65nm,0.8s,baz=275,slow=6.3,SNR=348
MKAR LR LR 08 51 11.5
comp=Z,682nm,20.6s,baz=266,slow=40
MKAR Makanchi Array 39.07 57 P **P 08 32 38.0 -0.8**
MKAR Makanchi Array 39.07 57 P **P 08 32 38.0 -0.8**
PMPST Porto Santo, M 40.10 282 *e*P **P 08 32 49.4 +1.9**
comp=Z,247nm,1.0s
PMPS Porto Santo 40.11 282 *e*P **P 08 32 49.7 +2.2**
BJO1 Bjornoya 40.34 355 *e*P **P 08 32 47.0 -1.8**
PMAR Madeira 40.67 282 *e*P **P 08 32 54.7 +2.3**
comp=Z,395nm,1.0s
BHPL Bhopal 40.77 94 *e*P **P 08 32 52.9 -0.3**
BHPL IAmb IAmb 08 32 53.9
comp=Z,59nm,0.8s
ZSN Zaisan 40.82 55 *e*P **P 08 32 52.0 -1.2**
comp=Z,21nm,1.1s,baz=56
ZSN Zaisan 40.82 55 *e*P **P 08 32 52.0 -1.2**
ZSN pmax pmax
comp=Z,21nm,1.1s
ZAA0 Zalesovo Array 41.04 46 P **P 08 32 53.7 -1.3**
ZALV Zalesovo Beam 41.04 46 P **P 08 32 54.3 -0.6**
comp=Z,36nm,0.5s,baz=265,slow=9.7,SNR=142
ZALV LR LR 08 52 45.5
comp=Z,835nm,19.1s,baz=263,slow=40
ZALV Zalesovo Beam 41.04 46 P **P 08 32 53.5 -1.5**
MACI Morro de la Ar 41.81 275 P **P 08 33 02.8 +1.0**
MACI IAmb IAmb 08 33 05.9
comp=Z,231nm,1.0s
HOPEN Hopen 41.97 357 *e*P **P 08 33 01.6 -0.7**
JMIC Jan Mayen 42.23 341 LR LR 08 51 43.7
comp=Z,951nm,20.2s,baz=80,slow=38
HSPB Hornsund (broa 43.00 354⇑*i*P **P 08 33 09.8 -0.8**
WMQ Urumqi 43.08 61 *e*P **P 08 33 13.1 +1.3**
WMQ pP pP 08 33 17.3 -1.0
WMQ sP sP 08 33 23.3 +2.3
WMQ pmax pmax
comp=Z,180nm,1.3s
WMQ pmax pmax
comp=Z,790nm,9.5s
WMQ LR LR
comp=Z,2µm,14.5s
WMQ LR LR
comp=Z,2µm,19.3s
WMQ LR LR
comp=Z,3µm,17.7s
WMQ Urumqi 43.08 61 IAmb IAmb 08 34 40.4
comp=Z,107nm,0.7s
PYUN Piuthan 43.36 84 *e*P **P 08 33 15.4 +1.0**
comp=Z,376nm,0.7s
BORG Borgarnes 43.77 330 LR LR 08 53 25.3
comp=Z,889nm,20.0s,baz=118,slow=39
BORG Borgarnes 43.77 330 P **P 08 33 17.8 +0.8**
BORG pmax pmax
comp=Z,284nm,1.3s
BORG Borgarnes 43.77 330 P **P 08 33 17.8 +0.8**
DANN Dangsing 43.90 84 *e*P **P 08 33 20.3 +1.4**
comp=Z,969nm,0.8s
KOLN Koldanda 43.98 84 *e*P **P 08 33 20.1 +0.6**
comp=Z,376nm,0.9s
SPA0 Spitsbergen Ar 44.05 355 IAmb IAmb 08 33 19.7
comp=Z,149nm,0.8s
SPA0 Spitsbergen Ar 44.05 355 *e*P **P 08 33 18.7 -0.4**
DBIC Dimbokro 44.20 239 P **P 08 33 21.4 +0.4**
comp=Z,42nm,0.8s,baz=28,slow=8.8,SNR=29
DBIC LR LR 08 54 21.9
comp=Z,1µm,19.8s,baz=28,slow=40
DBIC Dimbokro 44.20 239 P **P 08 33 20.7 -0.3**
DBIC pmax pmax
comp=Z,49nm,0.9s
DBIC Dimbokro 44.20 239 P **P 08 33 20.6 -0.3**
HYB Hyderabad 44.55 101 *i* P **P 08 33 23.0 -0.8**
HYB *e*PP **PcP 08 35 07.0 +0.1**
HYB Hyderabad 44.55 101 *e*P **P 08 33 23.1 -0.8**
GKN Gorkha 44.75 84 *e*P **P 08 33 26.3 +0.8**
comp=Z,674nm,0.8s
KBS Kingsbay 45.08 355⇑*i*P **P 08 33 26.5 -0.7**
KBS IAmb IAmb 08 33 27.9
comp=Z,228nm,0.8s
KBS Kingsbay 45.08 355*c i*P **P 08 33 26.4 -0.8**
KBS pmax pmax
comp=Z,146nm,1.1s
KBS MLR MLR
comp=Z,2µm,16.0s
KBS Kingsbay 45.08 355 P **P 08 33 26.4 -0.8**
KBS Kingsbay 45.08 355 IAMs_20 IAMs_20 08 53 28.3
comp=Z,2µm,20.0s
KBS Kingsbay 45.08 355⇑*e*P **P 08 33 26.7 -0.6**

DMN	**Daman**	**45.28**	**84**	*e*P		**P**	**08 33 30.8**	**+0.9**
KKN	**Kakani**	**45.35**	**84**	*e*P		**P**	**08 33 31.2**	**+0.8**
	comp=Z,180nm,0.7s							
PKIN	**Phulchoki**	**45.53**	**84**	*e*P		**P**	**08 33 32.5**	**+0.6**
	comp=Z,528nm,1.0s							
NRIK	**Noril'sk**	**45.78**	**24**	P		**P**	**08 33 33.2**	**+0.2**
	comp=Z,56nm,0.5s,baz=226,slow=4.2,SNR=110							
NRIK				PP		**PP**	**08 35 22.0**	**+1.9**
	comp=Z,61nm,1.0s,baz=254,slow=8.1,SNR=9.4							
NRIK				LR		LR	08 56 18.2	
	comp=Z,1μm,18.9s,baz=258,slow=41							
NRIK	**Noril'sk**	**45.78**	**24***c i*P			**P**	**08 33 33.4**	**+0.5**
NRIK				pmax		pmax		
	comp=Z,214nm,1.5s							
NRIK				MLR		MLR		
	comp=Z,1μm,19.0s							
NRIK	**Noril'sk**	**45.78**	**24**	P		**P**	**08 33 33.5**	**+0.5**
NRIK				IAmb		IAmb	08 33 34.1	
	comp=Z,77nm,0.6s							
NRIK				IAMs_20		IAMs_20	08 55 47.6	
	comp=Z,1μm,20.0s							
GUN	**Gumba**	**45.80**	**83**	*e*P		**P**	**08 33 34.8**	**+0.7**
	comp=Z,729nm,0.9s							
SCO	**Scoresbysund**	**45.88**	**338**	*i* P		**P**	**08 33 34.3**	**+0.6**
SCO				IAmb		IAmb	08 33 35.4	
	comp=Z,43nm,1.0s							
SCO				IAMs_20		IAMs_20	08 53 28.0	
	comp=Z,970nm,16.4s							
SCO	**Scoresbysund**	**45.88**	**338**	P		**P**	**08 33 33.6**	**-0.1**
SCO				pmax		pmax		
	comp=Z,90nm,1.1s							
SCO	**Scoresbysund**	**45.88**	**338**	P		**P**	**08 33 33.6**	**-0.1**
SCO				IAmb		IAmb	08 33 35.4	
	comp=Z,90nm,1.1s							
JIRN	**Jiri**	**46.15**	**83**	*e*P		**P**	**08 33 37.6**	**+0.7**
	comp=Z,743nm,0.7s							
RAMN	**Ramite**	**46.76**	**84**	*e*P		**P**	**08 33 41.5**	**0.0**
	comp=Z,294nm,0.9s							
DBG	**Daneborg**	**46.96**	**343**⇑	*i*P		**P**	**08 33 42.3**	**+0.2**
DBG				IAmb		IAmb	08 33 45.1	
	comp=Z,30nm,1.0s							
DBG				IAMs_20		IAMs_20	08 55 59.1	
	comp=Z,912nm,16.7s							
ODAN	**Odare**	**47.44**	**84**	*e*P		**P**	**08 33 46.9**	**+0.1**
	comp=Z,344nm,1.0s							
BOK	**Bokaro**	**47.49**	**88**	*e*P		**P**	**08 33 46.7**	**-0.2**
BOK				IAmb		IAmb	08 33 47.7	
	comp=Z,99nm,0.8s							
TAPN	**Taplejung**	**47.51**	**83**	*e*P		**P**	**08 33 47.8**	**+0.4**
	comp=Z,248nm,0.9s							
DAG	**Danmarks Havn**	**47.80**	**346**⇑	*i*P		**P**	**08 33 47.5**	**-1.1**
DAG				IAmb		IAmb	08 33 48.4	
	comp=Z,15nm,0.7s							
DAG				IAMs_20		IAMs_20	08 56 45.7	
	comp=Z,968nm,15.4s							
DAG	**Danmarks Havn**	**47.80**	**346**⇑	*i*P		**P**	**08 33 47.4**	**-1.1**
DAG				pmax		pmax		
	comp=Z,15nm,0.7s							
DAG				MLR		MLR		
	comp=Z,980nm,15.0s							
GTK	**Tadong**	**48.25**	**83**	*e*P		**P**	**08 33 53.6**	**+0.6**
GTK				IAmb		IAmb	08 33 54.4	
	comp=Z,196nm,0.9s							
LSA	**Lhasa**	**49.41**	**79**	Pn		**P**	**08 34 02.5**	**+0.3**
LSA				smax		smax		
	comp=N,100nm,0.7s							
LSA				smax		smax		
	comp=E,120nm,0.9s							
LSA	**Lhasa**	**49.41**	**79**	IAmb		IAmb	08 34 04.5	
	comp=Z,50nm,0.9s							
LSZ	**Lusaka**	**49.92**	**185**	P		**P**	**08 34 07.6**	**+1.9**
LSZ				pmax		pmax		
	comp=Z,51nm,1.5s							
LSZ				MLR		MLR		
	comp=Z,1μm,20.0s							
LSZ	**Lusaka**	**49.92**	**185**	P		**P**	**08 34 07.6**	**+1.9**
LSZ	**Lusaka**	**49.92**	**185**	IAMs_20		IAMs_20	08 55 57.3	
	comp=Z,1μm,20.0s							
NOR	**Nord**	**50.14**	**352**⇑	*i*P		**P**	**08 34 05.5**	**-1.1**
NOR				IAmb		IAmb	08 34 06.3	
	comp=Z,94nm,0.8s							
NOR	**Nord**	**50.14**	**352**⇑	*i*P		**P**	**08 34 05.4**	**-1.1**
NOR				pmax		pmax		
	comp=Z,94nm,0.8s							
ANGG	**Ammassalik, Gr**	**50.69**	**330**	*i* P		**P**	**08 34 10.5**	**-0.3**
ANGG				IAmb		IAmb	08 34 11.8	
	comp=Z,29nm,1.0s							
ANGG	**Ammassalik, Gr**	**50.69**	**330**	IAmb		IAmb	08 34 11.8	
	comp=Z,70nm,1.1s							
MOY	**Mondy**	**50.90**	**48**	*e*P		**P**	**08 34 14.0**	**+1.2**
MOY				pmax		pmax		
	comp=Z,176nm,1.5s							
GUWA	**GUWAHATI**	**51.23**	**83**	*e*P		**P**	**08 34 14.7**	**-0.8**
ISOG	**Isortoq, Green**	**51.24**	**330**⇑	*i*P		**P**	**08 34 14.7**	**-0.3**
ISOG				IAmb		IAmb	08 34 16.0	
	comp=Z,173nm,1.0s							
SUMG	**Summit**	**51.47**	**339**⇑	*i*P		**P**	**08 34 16.8**	**-0.3**
SUMG				IAmb		IAmb	08 34 21.3	
	comp=Z,62nm,0.9s							
SUMG	**Summit**	**51.47**	**339**⇑	*i*P		**P**	**08 34 16.8**	**-0.3**
SUMG				pmax		pmax		
	comp=Z,62nm,0.9s							
SUMG	**Summit**	**51.47**	**339**	P		**P**	**08 34 16.7**	**-0.3**
SUMG				IAmb		IAmb	08 34 21.1	
	comp=Z,75nm,1.0s							
ICESG	**Greenland Ices**	**51.59**	**334**⇑	*i*P		**P**	**08 34 17.6**	**-0.4**
ICESG				IAmb		IAmb	08 34 19.0	
	comp=Z,115nm,0.9s							
SHL	**Shillong**	**51.65**	**83**	P		**P**	**08 34 17.7**	**-1.2**
SHL				pmax		pmax		
	comp=Z,106nm,0.8s							
SHL	**Shillong**	**51.65**	**83**	*e*P		**P**	**08 34 17.9**	**-1.0**
SHL				IAmb		IAmb	08 34 18.8	
	comp=Z,81nm,0.8s							
SHL	**Shillong**	**51.65**	**83**	P		**P**	**08 34 17.7**	**-1.2**
SHL				IAmb		IAmb	08 34 19.0	
	comp=Z,106nm,0.8s							
PALK	**Pallekele**	**52.12**	**110**	P		**P**	**08 34 23.2**	**+0.8**
PALK				LR		LR	08 57 29.9	
	comp=Z,1μm,20.9s,baz=47,slow=37							
PALK	**Pallekele**	**52.12**	**110***de*P			**P**	**08 34 23.3**	**+0.9**
PALK				pmax		pmax		
	comp=Z,16nm,1.1s							
PALK				MLR		MLR		
	comp=Z,1μm,20.0s							
PALK	**Pallekele**	**52.12**	**110**	IAMs_20		IAMs_20	08 57 19.2	
	comp=Z,1μm,21.0s							
TLY	**Talaya**	**52.52**	**48**	P		**P**	**08 34 25.6**	**+0.7**
	comp=Z,33nm,0.9s,baz=261,slow=8.7,SNR=38							
TLY				LR		LR	08 59 33.6	
	comp=Z,532nm,18.1s,baz=289,slow=39							
TLY	**Talaya**	**52.52**	**48**	*e*P		**P**	**08 34 26.0**	**+1.2**
TLY				*e*			08 36 29.3	
TLY				*e*S		**S**	**08 41 49.0**	**-1.3**
TLY				pmax		pmax		
	comp=Z,290nm,1.4s							
TLY				MLR		MLR		
	comp=Z,1μm,15.0s							
TLY	**Talaya**	**52.52**	**48**	P		**P**	**08 34 25.9**	**+1.0**
TLY				IAmb		IAmb	08 34 27.4	
	comp=Z,106nm,1.2s							
ZAK	**Zakamensk**	**52.55**	**50**	*e*P		**P**	**08 34 25.5**	**+0.4**
ZAK				pmax		pmax		
	comp=Z,94nm,1.1s							
IRK	**Irkutsk**	**52.80**	**47**	*e*P		**P**	**08 34 25.6**	**-1.2**
IRK				pmax		pmax		
	comp=Z,218nm,2.0s							
GTA	**Gaotai**	**52.90**	**64**	⇑P		**P**	**08 34 28.3**	**+0.3**
GTA				pP		pP	08 34 32.3	-2.0
GTA				sP		sP	08 34 35.1	-2.1
GTA				PcP		**PcP**	**08 35 37.8**	**+0.9**
GTA				pmax		pmax		
	comp=Z,90nm,1.0s							
GTA				pmax		pmax		
	comp=Z,470nm,5.5s							
GTA				LR		LR		
	comp=Z,440nm,18.2s							
GTA				LR		LR		
	comp=Z,470nm,17.1s							
GTA				LR		LR		
	comp=Z,520nm,17.8s							
KOHI	**KOHIMA**	**53.40**	**82**	*e*P		**P**	**08 34 31.8**	**0.0**
KOHI				*ex*		x	08 34 33.5	
KOHI				IAmb		IAmb	08 34 33.6	
	comp=Z,113nm,0.9s							
MOKO	**MOKOCHONG**	**53.48**	**81**	*e*P		**P**	**08 34 32.3**	**-0.1**
MOKO				IAmb		IAmb	08 34 33.3	
	comp=Z,209nm,1.0s							
IMP	**Imphal**	**53.65**	**83**	*e*P		**P**	**08 34 34.1**	**+0.5**
IMP				IAmb		IAmb	08 34 35.2	
	comp=Z,87nm,1.0s							
DY2G	**Dye2**	**54.18**	**331**	*i* P		**P**	**08 34 37.0**	**0.0**
NRS	**Narsarsuaq**	**54.47**	**324**	IAmb		IAmb	08 34 39.5	
	comp=Z,142nm,1.2s							
NEEM	**North Greenlan**	**54.92**	**345**⇑	*i*P		**P**	**08 34 41.5**	**-0.9**
NEEM				IAmb		IAmb	08 34 44.2	
	comp=Z,150nm,1.0s							
SONM	**Songino Array**	**55.12**	**52**	P		**P**	**08 34 44.3**	**+0.2**
	comp=Z,77nm,0.8s,baz=286,slow=7.6,SNR=260							
SONM				LR		LR	09 01 13.9	
	comp=Z,1μm,18.6s,baz=290,slow=39							
SONM	**Songino Array**	**55.12**	**52**	P		**P**	**08 34 43.2**	**-0.8**
SONM				IAmb		IAmb	08 34 45.8	
	comp=Z,74nm,0.9s							
ABPO	**Ambohimpanom**	**55.33**	**163**	P		**P**	**08 34 46.6**	**+0.8**
ABPO				pmax		pmax		
	comp=Z,24nm,1.2s							
ABPO	**Ambohimpanom**	**55.33**	**163**	P		**P**	**08 34 46.6**	**+0.8**
ULN	**Ulaanbaatar**	**55.54**	**52***c i*P			**P**	**08 34 47.4**	**+0.3**
ULN				pmax		pmax		
	comp=Z,201nm,1.3s							
ULN				MLR		MLR		
	comp=Z,2μm,16.0s							
ULN	**Ulaanbaatar**	**55.54**	**52**	P		**P**	**08 34 47.6**	**+0.5**
ULN	**Ulaanbaatar**	**55.54**	**52**	IAMs_20		IAMs_20	09 00 42.4	
	comp=Z,842nm,21.0s							
SFJD	**Kangerlussuaq**	**55.83**	**332**	P		**P**	**08 34 47.8**	**-0.8**
	comp=Z,30nm,0.6s,baz=77,slow=7.0							
SFJD	**Kangerlussuaq**	**55.83**	**332**	*i* P		**P**	**08 34 47.4**	**-1.2**
SFJD				IAmb		IAmb	08 34 48.5	
	comp=Z,21nm,0.6s							
SFJD	**Kangerlussuaq**	**55.83**	**332**	*i* P		**P**	**08 34 47.4**	**-1.2**
SFJD				pmax		pmax		
	comp=Z,21nm,0.6s							
SFJD	**Kangerlussuaq**	**55.83**	**332**	IAmb		IAmb	08 34 48.8	
	comp=Z,120nm,1.3s							
UPNV	**Upernavik**	**56.74**	**339**⇑	*i*P		**P**	**08 34 54.6**	**-0.4**
UPNV				IAmb		IAmb	08 34 55.3	
	comp=Z,101nm,1.0s							
NUUK	**Nuuk**	**56.79**	**329**	*i* P		**P**	**08 34 54.7**	**-0.8**
NUUK				IAmb		IAmb	08 34 55.6	
	comp=Z,39nm,0.9s							
LZH	**Lanzhou**	**57.02**	**66**	⇑P		**P**	**08 34 58.1**	**+0.3**
LZH				pP		pP	08 35 03.0	-1.3
LZH				sP		sP	08 35 05.3	-1.9
LZH				pmax		pmax		
	comp=Z,110nm,1.0s							
LZH				pmax		pmax		
	comp=Z,180nm,4.3s							
LZH				LR		LR		
	comp=Z,710nm,15.2s							
LZH				LR		LR		
	comp=Z,530nm,15.4s							
LZH				LR		LR		
	comp=Z,770nm,16.7s							
BOD	**Bodaibo**	**57.09**	**39**	*e*P		**P**	**08 34 56.9**	**-0.8**
BOD				pmax		pmax		
	comp=Z,346nm,0.8s							
CIT	**Chita**	**58.40**	**46**	*e*P		**P**	**08 35 07.5**	**+0.3**
CIT				pmax		pmax		
	comp=Z,238nm,1.5s							
CD2	**Chengdu**	**58.97**	**72**	P		**P**	**08 35 11.5**	**+0.1**
CD2				sP		pP	08 35 18.3	+0.4
CD2				S		**S**	**08 43 14.0**	**-2.8**
CD2				pmax		pmax		
	comp=Z,160nm,1.0s							
CD2				LR		LR		
	comp=Z,760nm,18.0s							
CD2				LR		LR		
	comp=Z,590nm,14.4s							
CD2				LR		LR		
	comp=Z,810nm,17.3s							
TULEG	**Thule**	**59.03**	**344**⇑	*i*P		**P**	**08 35 09.6**	**-1.5**
TULEG				IAmb		IAmb	08 35 11.0	
	comp=Z,201nm,1.0s							
PBA	**Port Blair**	**59.19**	**97**	IAMs_20		IAMs_20	09 04 54.0	
	comp=Z,1μm,19.0s							
TIXI	**Tiksi**	**59.42**	**21***c i*P			**P**	**08 35 13.1**	**-0.7**
TIXI				pmax		pmax		
	comp=Z,242nm,1.0s							
TIXI	**Tiksi**	**59.42**	**21**	P		**P**	**08 35 12.2**	**-1.6**
TIXI				IAmb		IAmb	08 35 14.4	
	comp=Z,47nm,0.9s							
LBTB	**Lobatse**	**59.80**	**187**	LR		LR	09 02 05.4	
	comp=Z,820nm,18.1s,baz=5.5,slow=37							
LBTB	**Lobatse**	**59.80**	**187**	P		**P**	**08 35 17.6**	**+0.5**
LBTB				pmax		pmax		
	comp=Z,71nm,1.8s							
LBTB	**Lobatse**	**59.80**	**187**	P		**P**	**08 35 17.6**	**+0.5**
BTO	**Baotou**	**59.89**	**59**	*e*P		**P**	**08 35 17.0**	**-0.7**
BTO				S		**S**	**08 43 25.8**	**-2.8**
BTO				LR		LR		
	comp=Z,2μm,19.7s							
BTO				LR		LR		
	comp=Z,2μm,17.3s							
BTO				LR		LR		
	comp=Z,2μm,17.2s							
CM32	**Chiang Mai Arr**	**60.56**	**87**	P		**P**	**08 35 22.0**	**-0.5**
CHTO	**Chiang Mai**	**60.56**	**87**	P		**P**	**08 35 22.1**	**-0.4**
CHTO				pmax		pmax		
	comp=Z,39nm,1.1s							
CHTO	**Chiang Mai**	**60.56**	**87**	P		**P**	**08 35 22.1**	**-0.4**
CMMT	**Chiang Mai**	**60.56**	**87**	P		**P**	**08 35 21.1**	**-1.4**
EUNU	**Eureka**	**60.65**	**350**	IAmb		IAmb	08 35 23.1	
	comp=Z,130nm,1.3s							
KMI	**Kunming**	**60.66**	**78**	⇑P		**P**	**08 35 23.1**	**-0.3**
KMI				pP		pP	08 35 28.9	-1.0
KMI				sP		sP	08 35 32.3	-0.3
KMI				PcP		**PcP**	**08 36 04.9**	**-2.6**
KMI				S		**S**	**08 43 39.6**	**+0.4**
KMI				pmax		pmax		
	comp=Z,250nm,3.5s							
KMI				LR		LR		
	comp=Z,210nm,16.4s							
KMI				LR		LR		
	comp=Z,250nm,18.7s							
KMI				LR		LR		
	comp=Z,390nm,16.7s							
CM31	**Chiang Mai Arr**	**60.74**	**87**	IAmb		IAmb	08 35 24.5	
	comp=Z,51nm,1.0s							
CMAR	**Chiang Mai Arr**	**60.74**	**87**	P		**P**	**08 35 23.3**	**-0.4**
	comp=Z,28nm,0.9s,baz=297,slow=8.2,SNR=160							
CMAR				LR		LR	09 08 16.6	
	comp=Z,445nm,19.5s,baz=320,slow=43							
CMAR	**Chiang Mai Arr**	**60.74**	**87**	*i* P		**P**	**08 35 23.2**	**-0.4**
CMAR				pmax		pmax		
	comp=Z,29nm,0.9s							
HHC	**Hu-ho-hao-te**	**60.89**	**59**⇑	*i*P		**P**	**08 35 25.3**	**+0.8**
HHC				pmax		pmax		
	comp=Z,140nm,1.1s							
HHC				pmax		pmax		
	comp=Z,210nm,5.8s							
XAN	**Xi'an**	**61.65**	**67**	P		**P**	**08 35 29.5**	**-0.2**
XAN				pP		sP	08 35 38.3	-0.8
XAN				sP		pP	08 35 45.8	+10
XAN				pmax		pmax		
	comp=Z,99nm,4.4s							
XAN	**Xi'an**	**61.65**	**67**	IAmb		IAmb	08 35 30.8	
	comp=Z,86nm,1.0s							
SUKH	**Sukhothai**	**61.79**	**88**	P		**P**	**08 35 30.0**	**-0.8**
UTTA	**Uttaradit**	**62.42**	**87**	P		**P**	**08 35 34.9**	**-0.1**
PHIT	**Phitsanulok**	**62.58**	**87**	P		**P**	**08 35 36.7**	**+0.6**
UTHA	**Uthaitani**	**62.62**	**90**	P		**P**	**08 35 36.5**	**+0.1**
TIY	**Taiyuan**	**62.74**	**62**	*e*P		**P**	**08 35 37.3**	**+0.3**
TIY				pmax		pmax		
	comp=Z,22nm,0.8s							
TIY				LR		LR		
	comp=Z,140nm,10.9s							
TIY				LR		LR		
	comp=Z,610nm,15.9s							
TIY				LR		LR		
	comp=Z,420nm,19.5s							
HIA	**Hailar**	**63.05**	**47**	P		**P**	**08 35 39.0**	**+0.2**
HIA				pmax		pmax		
	comp=Z,101nm,0.8s							
HIA	**Hailar**	**63.05**	**47**	P		**P**	**08 35 39.0**	**+0.2**
YAK	**Yakutsk**	**63.19**	**32**	LR		LR	09 07 50.0	
	comp=Z,712nm,18.5s,baz=274,slow=41							
YAK	**Yakutsk**	**63.19**	**32***c i*P			**P**	**08 35 38.4**	**-1.1**
YAK				*e**PP		**pP**	**08 35 46.1**	**+0.1**
YAK				*e*			08 36 16.0	
YAK				*e*PPP		PPP	08 39 27.6	
YAK				*e*S		**S**	**08 44 08.4**	**-1.1**
YAK				*e**SS		**sS**	**08 44 27.9**	**+7.1**
YAK				*e*			08 45 28.6	
YAK				pmax		pmax		
	comp=Z,62nm,0.9s							
YAK				pmax		pmax		
	comp=N,7.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,34nm,1.1s							
YAK				smax		smax		
	comp=N,229nm,5.9s							
YAK				smax		smax		
	comp=E,86nm,4.9s							
YAK				MLR		MLR		
	comp=Z,795nm,22.0s							
YAK				MLR		MLR		
	comp=N,166nm,18.0s							
YAK				MLR		MLR		
	comp=E,765nm,21.0s							
YAK	**Yakutsk**	**63.19**	**32**	P		**P**	**08 35 38.9**	**-0.6**
YAK				IAMs_20		IAMs_20	09 07 39.3	
	comp=Z,739nm,19.0s							
GYA	**Guiyang**	**63.20**	**75**	⇑P		**P**	**08 35 39.8**	**-0.5**
GYA				PP		**PP**	**08 37 54.8**	**-4.4**
GYA				S		**S**	**08 44 08.4**	**-2.6**
GYA				pmax		pmax		
	comp=Z,53nm,1.2s							
GYA				LR		LR		
	comp=Z,370nm,16.3s							
GYA				LR		LR		
	comp=Z,460nm,20.5s							
GYA				LR		LR		
	comp=Z,580nm,18.0s							
SLVN	**Son La**	**63.39**	**82**	P		**P**	**08 35 40.7**	**-0.8**
BOSA	**Boshof**	**63.40**	**187**	P		**P**	**08 35 42.8**	**+1.6**
	comp=Z,15nm,0.7s,baz=3.0,slow=7.1,SNR=19							
BOSA				LR		LR	09 04 22.9	
	comp=Z,788nm,18.2s,baz=8.0,slow=37							
BOSA	**Boshof**	**63.40**	**187**	P		**P**	**08 35 43.4**	**+2.1**
BOSA				IAmb		IAmb	08 36 00.5	
	comp=Z,78nm,1.6s							
FRB	**Frobisher Bay**	**63.94**	**331**	P		**P**	**08 35 43.6**	**-0.7**
	comp=Z,77nm,0.7s,baz=65,slow=7.0,SNR=142							
NONG	**Nongkai**	**64.38**	**85**	P		**P**	**08 35 47.4**	**-0.7**
	comp=Z,0.2nmcomp=Z,60nm,1.0s							
BJI	**Beijing**	**64.43**	**58**	P		**P**	**08 35 48.4**	**+0.4**
BJI				pmax		pmax		
	comp=Z,65nm,0.9s							
BJI				LR		LR		
	comp=Z,470nm,22.9s							
BJI				LR		LR		
	comp=Z,290nm,17.0s							
BJI				LR		LR		
	comp=Z,350nm,16.7s							
BJT	**Baijiatuau**	**64.44**	**58**	IAmb		IAmb	08 35 49.5	
	comp=Z,75nm,1.1s							
BJT	**Baijiatuau**	**64.44**	**58**	IAMs_20		IAMs_20	09 06 57.2	
	comp=Z,502nm,18.0s							
DRLN	**Deer Lake**	**64.51**	**313**	P		**P**	**08 35 48.3**	**-0.1**
KHON	**Khomkaen**	**65.00**	**87**	P		**P**	**08 35 52.0**	**0.0**
RES	**Resolute Bay**	**65.49**	**347**	P		**P**	**08 35 53.9**	**-0.4**
	comp=Z,33nm,0.7s,baz=36,slow=11							
RES	**Resolute Bay**	**65.49**	**347**	P		**P**	**08 35 54.2**	**-0.1**
RES				pmax		pmax		
	comp=Z,34nm,0.7s							
RES	**Resolute Bay**	**65.49**	**347**	P		**P**	**08 35 54.2**	**-0.1**
RES				IAmb		IAmb	08 35 55.1	
	comp=Z,34nm,0.7s							
ZEA	**Zeya**	**65.50**	**41**	*e*P		**P**	**08 35 55.6**	**+0.9**
ZEA				pmax		pmax		
	comp=E,20nm,1.0s							
ZEA				pmax		pmax		
	comp=Z,60nm,1.2s							
ZEA				MLR		MLR		
	comp=E,400nm,15.0s							
TIA	**Tai'an**	**66.78**	**61**	P		**P**	**08 36 03.1**	**-0.2**
TIA				pmax		pmax		
	comp=E,67nm,1.0s							
TIA				LR		LR		
	comp=E,360nm,18.6s							
TIA				LR		LR		
	comp=E,440nm,18.6s							
TIA				LR		LR		
	comp=E,480nm,18.6s							
WHN	**Wuhan**	**67.31**	**68**	⇑P		**P**	**08 36 07.0**	**+0.3**
TPTI		**67.58**	**102**	P		**P**	**08 36 08.4**	**-0.2**
	comp=E,19nm,1.0s							
SNY	**Shenyang**	**68.67**	**53**	⇑P		**P**	**08 36 14.3**	**-0.8**
SNY				S		**S**	**08 45 11.4**	**-5.5**
SNY				pmax		pmax		
	comp=E,58nm,0.8s							
SNY				LR		LR		
	comp=E,760nm,17.1s							
SNY				LR		LR		
	comp=E,1μm,15.7s							
SNY				LR		LR		
	comp=E,2μm,15.2s							
DL2	**Dalian**	**68.72**	**57**	P		**P**	**08 36 15.5**	**+0.1**
DL2				pmax		pmax		
	comp=E,98nm,0.9s							
DL2				LR		LR		
	comp=E,420nm,20.6s							
DL2				LR		LR		
	comp=E,340nm,16.9s							
DL2				LR		LR		
	comp=E,460nm,20.1s							
CN2	**Changchun**	**68.95**	**51**	⇑P		**P**	**08 36 16.3**	**-0.5**
CN2				*e*pP		sP	08 36 26.6	+0.4
CN2				*e*S		**S**	**08 45 19.8**	**-0.4**
CN2				pmax		pmax		
	comp=E,50nm,0.8s							
CN2				LR		LR		
	comp=E,440nm,15.0s							
CN2				LR		LR		
	comp=E,680nm,15.0s							
CN2				LR		LR		
	comp=E,730nm,16.0s							
KULM	**Kulim**	**69.22**	**98**	P		**P**	**08 36 18.4**	**-0.5**
KULM				IAmb		IAmb	08 36 19.8	
	comp=Z,89nm,1.4s							
PSI	**Prapat**	**69.25**	**101**	P		**P**	**08 36 19.2**	**0.0**
	comp=Z,14nm,0.7s,baz=357,slow=0.8,SNR=11							
RPSI	**Rantau Prapat**	**69.32**	**102**	IAmb		IAmb	08 36 20.4	
	comp=Z,83nm,1.3s							
QIZ	**Qiongzhong**	**69.37**	**81**	P		**P**	**08 36 19.8**	**0.0**
QIZ				S		**S**	**08 45 25.6**	**-0.2**
QIZ				pmax		pmax		
	comp=Z,29nm,1.0s							
QIZ				LR		LR		
	comp=Z,320nm,16.7s							
QIZ				LR		LR		
	comp=Z,270nm,15.1s							
QIZ				LR		LR		
	comp=Z,250nm,14.3s							
QIZ	**Qiongzhong**	**69.37**	**81**	P		**P**	**08 36 18.7**	**-1.1**
NJ2	**Nanjing**	**69.99**	**64**⇑	*i*P		**P**	**08 36 23.3**	**-0.1**
NJ2				pmax		pmax		
	comp=Z,71nm,1.1s							
NJ2				LR		LR		
	comp=Z,500nm,20.1s							
NJ2				LR		LR		
	comp=Z,290nm,20.1s							
NJ2				LR		LR		
	comp=Z,310nm,15.2s							
KLR	**Kul'dur**	**70.10**	**43**	LR		LR	09 12 30.5	
	comp=Z,1μm,18.6s,baz=300,slow=41							
KLR	**Kul'dur**	**70.10**	**43***c i*P			**P**	**08 36 23.8**	**0.0**
KLR				pmax		pmax		
	comp=Z,123nm,1.1s							
KLR				MLR		MLR		
	comp=Z,1μm,17.0s							
MNSI	**Mandailing Nat**	**70.96**	**103**	P		**P**	**08 36 29.5**	**-0.1

comp=Z,78nm,1.3s
BILL Bilibino 71.87 17 P P 08 36 33.5 -0.7
BILL IAmb IAmb 08 36 35.5
comp=Z,83nm,1.2s
PQI Presque Isle 71.95 315 P P 08 36 35.0 -0.1
PQI IAmb IAmb 08 36 36.8
comp=Z,106nm,1.0s
E64A Bridgewater 71.97 314 P 08 36 35.7
baz=58,SNR=23
SSE Sheshan 72.19 64 P P 08 36 36.8 0.0
SSE pmax pmax
comp=Z,33nm,1.3s
E63A Oxbow 72.32 314 P 08 36 38.1
baz=58,SNR=22
E63A S 08 45 57.2
baz=58
BKNI Bangkinang 72.41 102 IAMs_20 IAMs_20 09 12 08.6
comp=Z,644nm,18.0s
BKNI Bangkinang 72.41 102 P P 08 36 38.1 -0.2
comp=Z,9µmcomp=Z,123nm,1.3s
G65A Princeton 72.46 313 P 08 36 38.8
baz=58,SNR=19
H66A Whiting 72.52 313 P 08 36 39.3
baz=58,SNR=31
F64A Sherman 72.57 314 IAmb IAmb 08 36 40.9
comp=Z,86nm,1.0s
F64A Sherman 72.58 314 P 08 36 39.6
baz=58,SNR=17
F64A S 08 45 58.2
baz=58
USA0B Ussuriysk Arra 72.84 48*c i*P P **08 36 39.8 -0.6**
USA0B Ussuriysk Arra 72.84 48 IAmb IAmb 08 36 41.0
comp=Z,93nm,0.9s
USRK Ussuriysk Ar. 72.84 48 P P **08 36 39.8 -0.6**
comp=Z,66nm,0.8s,baz=295,slow=5.3,SNR=88
USRK LR LR 09 12 39.2
comp=Z,456nm,18.6s,baz=304,slow=39
USRK Ussuriysk Ar. 72.84 48 P P **08 36 39.0 -1.4**
INCN Inchon 72.85 56 P P **08 36 40.6 -0.1**
INCN pmax pmax
comp=Z,97nm,0.9s
INCN MLR MLR
comp=Z,1µm,19.0s
INCN Inchon 72.85 56 P P **08 36 40.6 -0.1**
INCN IAmb IAmb 08 36 41.5
comp=Z,97nm,0.8s
INCN Inchon 72.85 56 IAMs_20 IAMs_20 09 12 45.6
comp=Z,971nm,19.0s
D61A St Aubert, Com 72.93 316 P 08 36 41.8
baz=57,SNR=12
F63A Nahmakanta, Br 73.11 314 P P **08 36 42.4 +0.4**
F63A IAmb IAmb 08 36 44.2
comp=Z,77nm,1.0s
F63A Nahmakanta, Br 73.11 314 P 08 36 42.9
baz=57,SNR=15
H65A Eastbrook 73.14 313 P 08 36 42.9
baz=58,SNR=20
G64A Maxfield 73.14 314 P 08 36 43.3
baz=57,SNR=16
MSHR Mys Shultsa 73.18 50*ce*P P **08 36 41.6 -0.8**
MSHR pmax pmax
comp=Z,23nm,1.7s
MA2 Magadan 73.19 28*c i*P P **08 36 42.7 +0.4**
MA2 pmax pmax
comp=Z,139nm,0.8s
MA2 Magadan 73.19 28 P P **08 36 42.5 +0.3**
PKME Peaks-Kenny Pk 73.45 314 P P **08 36 44.6 +0.5**
PKME IAmb IAmb 08 36 46.5
comp=Z,101nm,1.1s
PKME Peaks-Kenny Pk 73.45 314 P 08 36 45.0
baz=57,SNR=12
D60A Saint Jean D'O 73.51 316 P 08 36 44.7
baz=56,SNR=5.7
E61A Lac Etchemin 73.52 315 P 08 36 45.2
baz=57,SNR=10
KS19 Wonju Array Si 73.68 56 IAmb IAmb 08 36 46.8
comp=Z,78nm,0.9s
KSAR Wonju Array Be 73.72 56 P P **08 36 45.4 -0.4**
KSAR Wonju Array Be 73.72 56 P P **08 36 45.4 -0.4**
G63A Kingsbury 73.73 314 P 08 36 46.7
baz=57,SNR=13
CHGQ Chibougamau 73.73 320 P 08 36 45.6
baz=55,SNR=22
KSRS Korea Array 73.74 56 P P **08 36 45.7 -0.2**
comp=Z,58nm,0.8s,baz=295,slow=5.3,SNR=149
KSRS LR LR 09 13 22.5
comp=Z,835nm,19.2s,baz=306,slow=39
H64A Troy 73.75 313 P 08 36 46.7
baz=57,SNR=16
TJN Taejon 73.92 57*c i*P P **08 36 45.8 -1.1**
D59A Saint-Raymond 73.98 316 P 08 36 47.6
baz=56,SNR=6.2
A21K Barrow 74.01 3 IAMs_20 IAMs_20 09 08 16.1
comp=Z,745nm,22.0s
A21K Barrow 74.02 3 P 08 36 47.5
baz=352,SNR=54
A21K S 08 46 17.2
baz=352
WVL Waterville 74.05 313 P P **08 36 48.0 +0.4**
WVL IAmb IAmb 08 36 49.6
comp=Z,71nm,1.0s
F61A St Evariste 74.07 315 P 08 36 48.8
baz=56,SNR=13
E60A Ste Agathe de 74.11 316 P 08 36 48.4
baz=56,SNR=14
G62A West of Eustis 74.21 314 IAmb IAmb 08 36 51.0
comp=Z,109nm,1.3s
G62A West of Eustis 74.21 314 P 08 36 49.8
baz=56,SNR=12
H63A New Sharon 74.23 314 P 08 36 49.6
baz=56,SNR=14
LATQ La Tuque 74.30 317 P 08 36 49.5
baz=56,SNR=9.9
I64A Boothbay 74.39 313 P 08 36 50.7
baz=57,SNR=7.3
I64A S 08 46 23.2
baz=57
D58A Chemin du LacG 74.52 317 P 08 36 50.5
baz=55,SNR=10
D58A S 08 46 25.5
baz=55
F60A Warwick 74.62 315 P 08 36 51.5
baz=56,SNR=24
E59A St. Maurice 74.66 316 P 08 36 51.5
baz=56
C36M Paulatuk 74.75 352 P 08 36 50.8
baz=20,SNR=174
G61A St-Isidore-de- 74.76 315 P 08 36 52.9
baz=56,SNR=28
I63A Otisfield 74.89 313 IAmb IAmb 08 36 54.8
comp=Z,82nm,1.4s
I63A Otisfield 74.89 313 P 08 36 53.4
baz=56,SNR=8.2
H62A Milan 74.94 314 IAmb IAmb 08 36 55.0
comp=Z,75nm,1.1s
H62A Milan 74.94 314 P 08 36 53.9
baz=56,SNR=20
TYV Tymovskoe 75.05 38*e*P P **08 36 54.0 +0.8**
TYV pmax pmax
comp=Z,300nm,2.5s
TYV pmax pmax
comp=Z,84nm,1.0s
TEY Ternei 75.14 45⇑*i*P P **08 36 53.5 -0.4**
TEY pmax pmax
comp=N,40nm,1.0s
TEY pmax pmax
comp=E,30nm,1.0s
TEY pmax pmax
comp=Z,110nm,1.0s
E58A La Victoria 75.16 316 P 08 36 54.6
baz=55,SNR=29
F59A Saint Guilaume 75.17 316 P 08 36 54.8
baz=55,SNR=11
G60A Masonville 75.34 315 P 08 36 55.8
baz=55,SNR=12
H61A Lyndonville 75.42 314 P 08 36 56.9
baz=55,SNR=18
I62A Tamworth 75.44 313 IAmb IAmb 08 36 58.4
comp=Z,90nm,1.1s
I62A Tamworth 75.44 313 P 08 36 57.1
baz=56,SNR=20
MATQ Matagami 75.54 321 P 08 36 56.0
baz=53,SNR=31
TATO Taipei 75.56 70 P P **08 36 57.1 +0.5**
LBNH Lisbon 75.58 314 IAmb IAmb 08 36 59.2
comp=Z,104nm,1.1s
LBNH Lisbon 75.58 314 P 08 36 58.1
baz=55,SNR=14
D56A ZEC Mazanza, M 75.59 318 P 08 36 56.9
baz=54,SNR=28
J63A Strafford 75.62 313 P 08 36 58.2
baz=56,SNR=16
L65A Cape Cod Natio 75.69 311 P 08 36 58.5
baz=56
DSRI Dabo 75.74 101 P P **08 36 57.7 -0.1**
comp=Z,4µmcomp=Z,28nm,1.0s
F58A St-Lin Laurent 75.75 316 P 08 36 58.1
baz=54
TPUB Ta-pu 75.77 71 IAmb IAmb 08 37 00.2
comp=Z,122nm,1.2s
FFD Franklin Falls 75.86 313 IAmb IAmb 08 37 00.9
comp=Z,42nm,0.9s
H60A Morristown 75.86 315 P 08 36 59.3
baz=55,SNR=18
I61A Oroboro, Fairl 75.93 314 P 08 36 59.9
baz=55,SNR=12
TRQ Mont Tremblant 75.96 317 P P **08 36 58.6 -0.1**
D55A Sainte-Anne-du 76.01 318 P 08 36 59.5
baz=54,SNR=31
VT1 Waterbury 76.02 314 P P **08 36 59.7 +0.8**
VT1 IAmb IAmb 08 37 01.5
comp=Z,58nm,1.2s
E56A St. Veronique 76.05 317 P 08 36 59.6
baz=54,SNR=13
J62A Henniker 76.09 313 P 08 37 00.7
baz=55,SNR=10.0
BCX Boston College 76.21 312 P P **08 37 00.4 +0.4**
FRNY Flat Rock 76.22 315 IAmb IAmb 08 37 01.9
comp=Z,84nm,1.4s
K63A Dunstable 76.23 313 IAmb IAmb 08 37 02.6
comp=Z,57nm,1.1s
K63A Dunstable 76.23 313 P 08 37 01.3
baz=55,SNR=9.8
L64A Milleborough 76.23 312 IAmb IAmb 08 37 02.7
comp=Z,136nm,1.3s
L64A Middleborough 76.23 312 P 08 37 01.5
baz=56,SNR=9.2
YULB Yu-li 76.25 71 IAmb IAmb 08 37 02.9
comp=Z,63nm,0.9s
WES Weston 76.27 312 IAmb IAmb 08 37 02.9
comp=Z,138nm,1.4s
F57A Harrington 76.28 316 P 08 37 01.2
baz=54
G58A Ormstown 76.31 316 P 08 37 01.1
baz=54,SNR=14
M65A Busby, Falmout 76.32 311 P 08 37 02.0
baz=56
HRV Adam Dziewonsk 76.35 312 P P **08 37 02.4 +1.6**
HRV pmax pmax
comp=Z,39nm,1.1s
HRV Adam Dziewonsk 76.35 312 P P **08 37 02.4 +1.6**
HRV Adam Dziewonsk 76.35 312 P 08 37 01.9
baz=55
TWG Pinlang 76.37 72 P P **08 36 59.7 -1.6**
TWG IAmb IAmb 08 37 04.8
comp=Z,80nm,1.2s
H59A Cadyville 76.39 315 P 08 37 01.9
baz=54,SNR=12
VLDQ Val d'Or 76.43 320 IAmb IAmb 08 37 03.0
comp=Z,48nm,0.7s
VLDQ IAMs_20 IAMs_20 09 09 52.2
comp=Z,538nm,21.0s
J61A Chester 76.47 314 P 08 37 03.1
baz=55,SNR=9.7
I60A Shoreham 76.62 314 P 08 37 03.7
baz=54,SNR=8.0
K62A Royalston 76.67 313 IAmb IAmb 08 37 05.5
comp=Z,96nm,1.2s
E55A Montcerf-Lytto 76.67 318 P 08 37 03.1
baz=53,SNR=6.9
K62A Royalston 76.67 313 P 08 37 04.3
baz=55,SNR=10.0
BRYW Bryant College 76.67 312 P P **08 37 02.6 -0.1**
BRYW IAmb IAmb 08 37 05.2
comp=Z,132nm,1.3s
M64A Tiverton 76.68 311 P P **08 37 03.2 +0.5**
M64A Tiverton 76.68 311 P 08 37 04.0
baz=55,SNR=11
INK Inuvik 76.69 355 P P **08 37 01.5 -0.8**
baz=21,slow=6.3
INK Inuvik 76.69 355 IAmb IAmb 08 37 02.8
comp=Z,39nm,1.1s
FCC Fort Churchill 76.72 334 IAmb IAmb 08 37 03.3
comp=Z,59nm,1.1s
FCC IAMs_20 IAMs_20 09 14 17.8
comp=Z,559nm,18.0s
L63A North Scituate 76.75 312 IAmb IAmb 08 37 05.6
comp=Z,94nm,1.1s
L63A North Scituate 76.75 312 P 08 37 04.3
baz=55,SNR=11
H58A Gabriels 76.81 315 P 08 37 04.2
baz=54,SNR=14
RDOG Red Dog Mine 76.85 6 P P **08 37 02.4 -0.9**
RDOG IAmb IAmb 08 37 04.3
comp=Z,49nm,0.9s
RDOG IAMs_20 IAMs_20 09 13 20.1
comp=Z,756nm,20.0s
RDOG Red Dog Mine 76.85 6 P 08 37 03.2
baz=347
G57A Newington 76.87 316 P 08 37 04.4
baz=54,SNR=8.2
LHSI Lahat 76.87 104 P P **08 37 03.4 -0.7**
comp=Z,79nm,1.3s
TOLK Toolik Lake Re 76.89 1 IAmb IAmb 08 37 05.5
comp=Z,72nm,0.9s
TOLK Toolik Lake Re 76.89 1 P 08 37 04.3
baz=358,SNR=44
LONY Lake Ozonia 76.92 315 IAmb IAmb 08 37 06.0
comp=Z,71nm,1.2s
LONY IAMs_20 IAMs_20 09 13 01.4
comp=Z,560nm,18.0s
LONY Lake Ozonia 76.92 315 P 08 37 04.9
baz=54,SNR=14
I59A Olmsteadville 76.99 314 P 08 37 05.7
baz=54,SNR=12
J60A Lant Hill Farm 77.04 314 P 08 37 06.1
baz=54,SNR=9.9
L61B Northampton 77.06 313 P 08 37 06.3
baz=54,SNR=7.7
ACCN Adirondack Com 77.11 314 P P **08 37 05.9 +0.7**
ACCN IAmb IAmb 08 37 07.6
comp=Z,116nm,1.3s
M63A Gales Ferry 77.28 312 P 08 37 07.5
baz=55,SNR=12
K61A Williamstown 77.29 313 P 08 37 07.8
baz=54,SNR=13
L62A Suffield 77.29 312 IAmb IAmb 08 37 08.9
comp=Z,141nm,1.4s
L62A Suffield 77.29 312 P 08 37 07.6
baz=54
PMBI Palembang 77.33 103 IAMs_20 IAMs_20 09 14 17.1
comp=Z,791nm,19.0s
BBSR BB Station 77.45 301 P P **08 37 08.1 +0.9**
BBSR IAmb IAmb 08 37 09.9
comp=Z,80nm,1.0s
H57A Richville 77.48 316 P 08 37 08.2
baz=53,SNR=10.0
YSS Yuzh-Sakhalins 77.48 41⇑*i*P P **08 37 07.6 +0.5**
YSS *e* 08 37 11.6
YSS *e*S S **08 46 52.9 -3.9**
YSS *e*PPS PPS 08 47 40.6
YSS *e*SSS SSS 08 55 17.8
YSS Yuzh-Sakhalins 77.48 41 P P **08 37 07.6 +0.5**
J59A Piesco 77.55 314 P P **08 37 07.8 +0.2**
J59A IAmb IAmb 08 37 10.1
comp=Z,96nm,1.2s
J59A Piesco 77.55 314 P 08 37 08.9
baz=54,SNR=17
K60A Five Rivers En 77.69 313 P 08 37 09.8
baz=54,SNR=12
I58A Old Forge 77.70 315 P 08 37 09.6
baz=53,SNR=11
L61A Hillsdale 1, H 77.74 313 P 08 37 10.1
baz=54,SNR=15
M62A Hamden 77.78 312 P 08 37 09.7
baz=54,SNR=15
N63A Mattituck 77.81 312 P 08 37 09.8
baz=54
I57A Carthage 77.95 315 P 08 37 10.7
baz=53,SNR=9.9
KSCT Kent School, K 77.97 313 IAmb IAmb 08 37 12.3
comp=Z,153nm,1.4s
PPBI Pangkal Pinang 77.98 101 P P **08 37 10.1 -0.3**
ALGO Algonquin Park 78.07 318 P 08 37 10.8
baz=55,SNR=25
PLVO Plevna 78.09 317 IAmb IAmb 08 37 12.8
comp=Z,217nm,1.9s
PLVO IAMs_20 IAMs_20 09 13 44.2
comp=Z,599nm,18.0s
BMAR Burnt Mountain 78.09 359 P P **08 37 11.1 +0.8**
JNU Nakatsue 78.11 58 P P **08 37 10.7 -0.2**
comp=Z,60nm,0.9s,baz=49,slow=3.0,SNR=13
JNU Nakatsue 78.11 58 IAmb IAmb 08 37 12.1
comp=Z,110nm,1.1s
K59A Cooperstown 78.17 314 P 08 37 12.2
baz=53,SNR=19
WSPT Westport, CT 78.20 312 P P **08 37 11.1 -0.1**
WSPT IAmb IAmb 08 37 13.1
comp=Z,90nm,1.4s
L60A Shokan 78.26 313 P 08 37 12.7
baz=54
COLD Coldfoot 78.30 1 IAmb IAmb 08 37 13.1
comp=Z,74nm,1.1s
COLD Coldfoot 78.30 1 P 08 37 11.8
baz=358,SNR=44
M61A Granite Spring 78.39 312 P 08 37 12.7
baz=54
N62A Caumsett State 78.42 312 P 08 37 13.3
baz=54
G54A Lake Saint Pet 78.44 318 P 08 37 13.2
baz=52,SNR=42
J57A Williamstown 78.46 315 IAmb IAmb 08 37 14.7
comp=Z,169nm,1.8s
J57A Williamstown 78.46 315 P 08 37 13.6
baz=53,SNR=7.8
L59A Walton 78.63 314 IAmb IAmb 08 37 16.1
comp=Z,61nm,0.8s
L59A Walton 78.63 314 P 08 37 14.9
baz=53,SNR=15
K58A Earlville 78.64 314 P P **08 37 14.2 +0.4**
K58A IAmb IAmb 08 37 15.9
comp=Z,83nm,1.1s
K58A Earlville 78.64 314 P 08 37 14.8
baz=53,SNR=16
PAL Palisades 78.65 312 IAmb IAmb 08 37 15.7
comp=Z,94nm,1.4s
PAL Palisades 78.65 312 P 08 37 14.4
baz=54,SNR=5.6
KASI Kota Agung 78.66 105 P P **08 37 13.3 -0.8**
comp=Z,1µmcomp=Z,92nm,1.0s
DELO Deloro Mine 78.71 317 IAmb IAmb 08 37 15.9
comp=Z,75nm,1.2s
PECO Prince Edward 78.72 316 IAmb IAmb 08 37 16.2
comp=Z,158nm,1.7s
TRNY Table Rock, Ra 78.76 312 P P **08 37 14.8 +0.4**
TRNY IAmb IAmb 08 37 16.5
comp=Z,112nm,1.5s
TNA Tin City 78.76 8 IAmb IAmb 08 37 15.1
comp=Z,51nm,1.0s
TNA Tin City 78.76 8 P 08 37 13.9
baz=343,SNR=42
CPNY Central Park 78.81 312 IAmb IAmb 08 37 16.8
comp=Z,68nm,1.3s
EPYK Eagle Plains 78.83 356 IAmb IAmb 08 37 15.0
comp=Z,59nm,1.0s
EPYK Eagle Plains 78.83 356 P 08 37 13.9
baz=9.2,SNR=26
M60A Port Jervis 78.89 313 P 08 37 15.9
baz=53,SNR=11
FYU Fort Yukon 78.97 359 IAmb IAmb 08 37 17.4
comp=Z,108nm,1.2s
ODNJ Ogdensburg 79.03 313 P P **08 37 16.0 +0.2**
N61A South Mountain 79.04 312 P 08 37 17.2
baz=53,SNR=5.1
J56A Wolcott 79.04 315 IAmb IAmb 08 37 17.8
comp=Z,84nm,0.9s
J56A Wolcott 79.04 315 P 08 37 16.7
baz=52,SNR=16
JKA Kamikawa-asahi 79.14 43 IAmb IAmb 08 37 17.4
comp=Z,48nm,0.8s
JKA IAMs_20 IAMs_20 09 16 23.9
comp=Z,890nm,20.0s
K57A Scipio Center 79.17 315 P 08 37 17.6
baz=52,SNR=10
BINY Binghamton 79.19 314 P 08 37 17.7
baz=53,SNR=8.7
L58A Harry Jones Me 79.20 314 P 08 37 17.7
baz=53,SNR=6.9
H53A Bobcaygeon 79.22 317 P 08 37 17.3
baz=51,SNR=19
BRNJ Basking Ridge 79.24 312 IAmb IAmb 08 37 18.8
comp=Z,54nm,0.8s
M59A Waymart 79.25 313 P 08 37 18.0
baz=53,SNR=6.6
NBPS Pedro II - PI 79.27 257*e*P P **08 37 19.6 +2.0**
KSM Kuching 79.28 96 IAMs_20 IAMs_20 09 17 25.4
comp=Z,476nm,19.0s
SADO Sadowa 79.41 318 P P **08 37 18.2 +0.4**
comp=Z,47nm,0.7s,baz=51,slow=4.1,SNR=71
SADO LR LR 09 14 07.4
comp=Z,374nm,18.2s,baz=60,slow=37
SADO Sadowa 79.41 318 IAmb IAmb 08 37 19.2
comp=Z,53nm,0.8s
KSPA Keystone Colle 79.44 313 P P **08 37 18.0 -0.1**
KSPA IAmb IAmb 08 37 20.2
comp=Z,142nm,1.6s
N60A Cedar Hill Far 79.46 313 P 08 37 19.2
baz=53,SNR=7.8
IMAR Indian Mountai 79.46 3 P P **08 37 17.0 -0.7**
YKA Yellowknife Ar 79.49 345 P P **08 37 17.4 -0.4**
comp=Z,32nm,0.9s,baz=33,slow=5.2,SNR=364
YKA PKKPbc **PKKPbc 08 56 04.8 -1.9**
comp=Z,0.1nm,0.7s,baz=178,slow=1.9,SNR=6.8
YKA LR LR 09 14 02.1
comp=Z,192nm,18.8s,baz=0.0,slow=37
TPI Tanjungpandan 79.56 101 P P **08 37 19.2 +0.1**
comp=Z,26nm,1.3s
O61A Allentown 79.59 312 P 08 37 19.8
baz=53
J55A Hilton 79.60 316 IAmb IAmb 08 37 20.7
comp=Z,86nm,1.4s
K56A Middlesex 79.67 315 P 08 37 20.2
baz=52,SNR=15
JOW Kunigami 79.71 65 P P **08 37 19.8 +0.1**
comp=Z,138nm,0.9s,baz=313,slow=5.2,SNR=4.2
L57A Andrews Acres 79.81 314 P 08 37 21.1
baz=52,SNR=26
N59A State Game Lan 79.83 313 IAmb IAmb 08 37 22.0
comp=Z,44nm,0.8s
N59A State Game Lan 79.83 313 P 08 37 21.4
baz=52,SNR=18
JMN Monobe 79.84 56 IAMs_20 IAMs_20 09 12 57.6
comp=Z,569nm,19.0s
GAMB Gambell 79.95 11 P 08 37 20.3
baz=340
M58A Price's Panora 79.97 314 P 08 37 22.0
baz=52
JWT Wachi 79.97 54 IAmb IAmb 08 37 22.5
comp=Z,111nm,1.1s
O60A Telford 79.97 312 P 08 37 22.0
baz=53,SNR=15
ANM Nome 80.02 8 IAmb IAmb 08 37 22.1
comp=Z,70nm,0.8s
ANM Nome 80.02 8 P 08 37 21.0
baz=345,SNR=40
MEDO Medina 80.03 316 IAmb IAmb 08 37 22.9
comp=Z,73nm,1.1s
PRP Porcupine Dome 80.03 359 P 08 37 21.3
baz=1.8
L56A Greenwood 80.15 315 IAmb IAmb 08 37 23.7
comp=Z,67nm,0.8s
L56A Greenwood 80.15 315 P 08 37 22.8
baz=52,SNR=20
SBUM Sibu 80.30 94 IAMs_20 IAMs_20 09 18 59.0
comp=Z,364nm,20.0s
M57A Sunshine Farm, 80.39 314 IAmb IAmb 08 37 24.7
comp=Z,55nm,0.8s
M57A Sunshine Farm, 80.39 314 P 08 37 24.1
baz=52,SNR=16
I23K Minto, Yukon-K 80.40 1 P 08 37 23.5
baz=359,SNR=14
P60A Greenville 80.42 312 P 08 37 24.0
baz=52,SNR=6.6
POKR Poker Plat Res 80.44 360 IAmb IAmb 08 37 25.0
comp=Z,79nm,1.0s
POKR Poker Plat Res 80.44 360 P 08 37 23.7
baz=0.2,SNR=16
N58A Sunbury 80.45 313 P 08 37 24.3
baz=52,SNR=11
O59A Robesonia 80.45 313 P 08 37 24.3
baz=52,SNR=14
PEA0B Petropavlovsk- 80.47 30⇓*e*P P **08 37 21.5 -1.9**

PEA0B **Petropavlovsk-** **80.47 30** IAmb IAmb 08 37 23.2
comp=Z,102nm,1.1s
PETK **Petropavlovsk-** **80.47 30** P **P** **08 37 22.5 -0.9**
comp=Z,344nm,0.8s,baz=305,slow=5.2,SNR=26
PETK LR LR 09 17 56.3
comp=Z,447nm,19.8s,baz=308,slow=39
PETK **Petropavlovsk-** **80.47 30** P **P** **08 37 21.9 -1.5**
MLY **Manley** **80.50 1** P 08 37 24.1
baz=358,SNR=29
WVNY **West Valley, N** **80.59 315** IAmb IAmb 08 37 26.0
comp=Z,80nm,0.9s
MDM **Murphy Dome** **80.60 0** IAmb IAmb 08 37 25.6
comp=Z,110nm,1.0s
EGAK **Eagle** **80.65 357** P **P** **08 37 24.2 0.0**
EGAK IAmb IAmb 08 37 26.3
comp=Z,58nm,0.9s
EGAK **Eagle** **80.65 357** P 08 37 24.2
baz=5.4,SNR=28
COLA **College** **80.69 0***c i*P **P** **08 37 24.4 +0.1**
COLA pmax pmax
comp=Z,65nm,1.1s
COLA **College** **80.69 0** P **P** **08 37 24.6 +0.3**
COLA IAmb IAmb 08 37 25.9
comp=Z,80nm,1.1s
TCOL **CIGO, UAF Yank** **80.69 0** IAmb IAmb 08 37 25.9
comp=Z,81nm,1.1s
COLA **College** **80.69 0** P 08 37 24.6
baz=360
TCOL **CIGO, UAF Yank** **80.69 0** P 08 37 24.6
baz=360,SNR=22
MVL **Millersville** **80.74 312** P **P** **08 37 25.0 -0.1**
MVL IAmb IAmb 08 37 27.2
comp=Z,78nm,1.0s
MVL IAMs_20 IAMs_20 09 18 18.7
comp=Z,391nm,20.0s
ERM **Erimo** **80.77 45***de*P **P** **08 37 25.9 +0.7**
ERM pmax pmax
comp=Z,215nm,1.3s
ILAR **Eielson Array** **80.79 360** P **P** **08 37 24.8 -0.1**
comp=Z,16nm,0.9s,baz=328,slow=2.3,SNR=74
ILAR PP **PP** **08 40 25.8 -2.5**
comp=Z,2.7nm,0.8s,baz=1.2,slow=6.0,SNR=4.8
ILAR PKKPbc **PKKPbc** **08 56 02.7 -1.2**
comp=Z,0.7nm,0.8s,baz=242,slow=1.9,SNR=5.3
ILAR LR LR 09 17 33.4
comp=Z,207nm,18.6s,baz=6.5,slow=39
ILAR **Eielson Array** **80.79 360** P **P** **08 37 24.0 -0.9**
Q61A **Milford** **80.80 311** P 08 37 25.6
baz=52
CCB **Clear Creek Bu** **80.91 0** IAmb IAmb 08 37 26.6
comp=Z,65nm,1.0s
M56A **Emporium** **80.92 315** IAmb IAmb 08 37 28.0
comp=Z,97nm,0.8s
PET **Petropavlovsk** **80.92 30**⇑*e*P **P** **08 37 24.5 -1.3**
PET pmax pmax
comp=Z,55nm,1.3s
M56A **Emporium** **80.92 315** P 08 37 26.9
baz=51,SNR=30
NEA2 **Nenana** **80.96 1** P **P** **08 37 25.2 -0.7**
NEA2 **Nenana** **80.96 1** P 08 37 25.7
baz=359,SNR=13
N57A **Milroy** **81.00 314** P 08 37 27.2
baz=52,SNR=22
O58A **Lewisberry** **81.01 313** P 08 37 27.2
baz=52
P59A **Jarrettsville** **81.03 312** P 08 37 27.3
baz=52,SNR=11
I51A **Listowel** **81.07 318** P 08 37 27.3
baz=50,SNR=29
MAJO **Matsushiro** **81.07 52***c i*P **P** **08 37 26.6 -0.4**
MAJO pmax pmax
comp=Z,119nm,1.0s
MAJO MLR MLR
comp=Z,576nm,17.0s
MAJO **Matsushiro** **81.07 52** P **P** **08 37 26.9 -0.1**
MAJO IAmb IAmb 08 37 28.7
comp=Z,109nm,0.9s
MAT **Matsushiro** **81.07 52** P **P** **08 37 26.6 -0.4**
MAT *e*S **S** **08 47 41.2 +5.7**
MJAR **Matsushiro Arr** **81.07 52** P **P** **08 37 27.2 +0.2**
comp=Z,106nm,1.0s,baz=312,slow=4.1,SNR=111
MJAR LR LR 09 15 38.2
comp=Z,221nm,21.1s,baz=280,slow=37
MJAR **Matsushiro Arr** **81.07 52** P **P** **08 37 27.4 +0.4**
MJAR pmax pmax
comp=Z,68nm,0.9s
MJAR **Matsushiro Arr** **81.07 52** P **P** **08 37 27.4 +0.4**
MJAR IAmb IAmb 08 37 28.4
comp=Z,68nm,0.8s
JGF **Kuroka** **81.08 53** IAmb IAmb 08 37 28.3
comp=Z,102nm,1.3s
WRH **Wood River Hil** **81.09 0** IAmb IAmb 08 37 27.5
comp=Z,68nm,1.0s
E46A **Sault Ste Mari** **81.14 321** P **P** **08 37 26.1 -1.1**
E46A IAmb IAmb 08 37 28.2
comp=Z,48nm,0.8s
HDA **Harding Lake** **81.15 360** P 08 37 26.6
baz=0.6,SNR=25
HDA P 08 37 26.6
baz=0.6,SNR=25
SSPA **Standing Stone** **81.27 314** P **P** **08 37 28.8 +0.9**
SSPA **Standing Stone** **81.27 314** P 08 37 28.8
baz=51
DAWY **Dawson** **81.28 356** IAmb IAmb 08 37 29.1
comp=Z,74nm,1.1s
N56A **West Decatur** **81.34 314** P 08 37 29.2
baz=51,SNR=24
O57A **Ambenson** **81.39 313** P 08 37 29.2
baz=51,SNR=13
BPAW **Bear Paw Mtn.** **81.43 1** IAmb IAmb 08 37 29.2
comp=Z,53nm,0.9s
BPAW **Bear Paw Mtn.** **81.43 1** P 08 37 28.1
baz=357,SNR=24
K27K **Chicken** **81.43 358** IAmb IAmb 08 37 30.3
comp=Z,93nm,1.1s
K27K **Chicken** **81.44 358** P 08 37 29.1
baz=4.7
SCRK **Sand Creek** **81.54 358** IAmb IAmb 08 37 31.0
comp=Z,117nm,1.2s
SCRK **Sand Creek** **81.54 358** P 08 37 29.8
baz=3.1,SNR=45
SKR **Severo-Kuril's** **81.56 32** *e*P **P** **08 37 29.1 -0.1**
SKR *e*S **S** **08 47 39.9 0.0**
SKR pmax pmax
comp=Z,40nm,2.3s
SKR pmax pmax
comp=Z,200nm,4.5s
SKR MLR MLR
comp=Z,300nm,18.0s
ERPA **Erie** **81.56 316** IAmb IAmb 08 37 30.5
comp=Z,71nm,0.7s
ERPA **Erie** **81.57 316** P 08 37 30.0
baz=50,SNR=12
CHUM **Lake Minchumin** **81.61 2** P 08 37 29.6
baz=356,SNR=21
Q59A **Harwood** **81.62 312** P 08 37 30.7
baz=52,SNR=9.2
M54A **Oil Creek Stat** **81.77 315** IAmb IAmb 08 37 32.4
comp=Z,65nm,0.9s
M54A **Oil Creek Stat** **81.77 315** P 08 37 31.2
baz=50,SNR=20
L53A **Girard** **81.83 316** P 08 37 31.3
baz=50,SNR=22
MCK **McKinley** **81.83 1** IAmb IAmb 08 37 31.3
comp=Z,79nm,1.1s
MCK **McKinley** **81.83 1** P 08 37 30.0
baz=359,SNR=17
DOT **Dot Lake** **81.87 358** P **P** **08 37 31.2 +0.5**
DOT IAmb IAmb 08 37 32.6
comp=Z,81nm,1.1s
O56A **Blue Knob Stat** **81.91 314** P 08 37 32.1
baz=51,SNR=21
LEM **Lembang** **81.92 104** P **P** **08 37 30.8 -1.1**
comp=Z,18nm,0.5s,baz=248,slow=4.0,SNR=4.8
R60A **Leonardtown, M** **81.95 311** P 08 37 32.7
baz=52,SNR=5.7
ALLY **Alegheny Colle** **81.95 316** IAmb IAmb 08 37 32.4
comp=Z,37nm,0.7s
KTH **Kantishna Hill** **81.98 1** IAmb IAmb 08 37 32.9
comp=Z,98nm,1.1s
P57A **Homestead Farm** **82.07 313** P **P** **08 37 31.5 -0.7**
P57A **Homestead Farm** **82.07 313** P 08 37 33.0
baz=51,SNR=27
CAST **Castle Rocks** **82.08 2** IAMs_20 IAMs_20 09 09 40.3
comp=Z,369nm,18.0s
CAST **Castle Rocks** **82.08 2** P 08 37 32.7
baz=356

TRF **Thorofare Moun** **82.09 1** IAmb IAmb 08 37 33.1
comp=Z,56nm,1.1s
TRF **Thorofare Moun** **82.09 1** P 08 37 31.8
baz=358,SNR=11
NBPN **Ponto Novo - B** **82.15 251** *e*P **P** **08 37 34.1 +1.2**
RND **Reindeer** **82.16 1** IAmb IAmb 08 37 44.5
comp=Z,128nm,2.0s
Q58A **Fox Den Farm,** **82.21 312** P 08 37 33.3
baz=51,SNR=10
N54A **Moraine State** **82.30 315** IAmb IAmb 08 37 35.1
comp=Z,55nm,0.9s
N54A **Moraine State** **82.30 315** P 08 37 33.8
baz=50,SNR=12
R59A **King George, V** **82.32 311** P 08 37 34.3
baz=51,SNR=12
GLMI **Grayling** **82.34 320** P 08 37 33.8
baz=48,SNR=8.3
S60A **Water View** **82.34 311** P 08 37 34.7
baz=52
BCAR **Beaver Creek A** **82.39 357** P **P** **08 37 33.4 -0.1**
M53A **WI Miller and** **82.39 316** P 08 37 33.9
baz=50,SNR=8.2
CBN **Corbin Frederi** **82.48 312** P 08 37 35.1
baz=51,SNR=12
E43A **Lone Tree Farm** **82.50 322** IAmb IAmb 08 37 34.9
comp=Z,45nm,0.7s
P56A **Dayton Farm, R** **82.55 313** P 08 37 35.3
baz=51,SNR=18
MENT **Mentasta** **82.58 358** IAmb IAmb 08 37 44.8
comp=Z,45nm,0.8s
PAX **Paxson** **82.58 359** P 08 37 34.3
baz=1.8
Q57A **Strasburg** **82.59 313** P 08 37 35.5
baz=51,SNR=12
FFC **Flin Flon** **82.60 335** P **P** **08 37 34.2 -0.4**
FFC pmax pmax
comp=Z,68nm,1.3s
FFC **Flin Flon** **82.60 335** P **P** **08 37 34.2 -0.4**
FFC IAmb IAmb 08 37 35.6
comp=Z,68nm,1.2s
PPLA **Purkeypile** **82.60 2** IAmb IAmb 08 37 55.1
comp=Z,48nm,1.2s
PPLA **Purkeypile** **82.61 2** P 08 37 35.1
baz=356,SNR=5.7
S59A **Mechanicsville** **82.70 311** P 08 37 36.2
baz=51,SNR=14
M52A **Chesterland** **82.72 316** P **P** **08 37 34.9 -0.6**
T60A **Surry** **82.74 310** P 08 37 36.5
baz=52
D41A **Chassel** **82.80 324** P **P** **08 37 35.1 -0.8**
D41A IAmb IAmb 08 37 36.2
comp=Z,32nm,0.7s
R58A **Rapidan** **82.80 312** P 08 37 36.2
baz=51,SNR=5.3
N53A **Lisbon** **82.89 315** IAmb IAmb 08 37 38.0
comp=Z,67nm,1.0s
R58B **Mineral** **82.94 312** IAmb IAmb 08 37 38.3
comp=Z,68nm,0.8s
R58B **Mineral** **82.94 312** P 08 37 37.3
baz=51,SNR=17
WAT6 **Susitna Watana** **82.99 0** P 08 37 36.5
baz=360,SNR=12
O54A **Avella** **83.03 315** IAmb IAmb 08 37 38.8
comp=Z,63nm,1.1s
MCWV **Mont Chateau** **83.05 314** IAmb IAmb 08 37 39.2
comp=Z,44nm,0.8s
MCWV **Mont Chateau** **83.05 314** P 08 37 38.2
baz=50,SNR=20
Q56A **Snyder Ridge,** **83.05 313** P 08 37 38.0
baz=50,SNR=23
U61A **Possum Corner** **83.06 310** P **P** **08 37 37.3 0.0**
U61A **Possum Corner** **83.06 310** P 08 37 38.5
baz=52
R57A **Stanardsville** **83.12 312** P 08 37 38.4
baz=51,SNR=16
CUT **Chulitna** **83.14 1** IAmb IAmb 08 37 37.6
comp=Z,82nm,1.2s
CUT **Chulitna** **83.14 1** P 08 37 37.7
baz=358
S58A **Poland Farm, P** **83.26 311** P 08 37 39.0
baz=51,SNR=34
M51A **Elyria** **83.33 316** P 08 37 38.7
baz=49,SNR=8.5
T59A **Double "B" Far** **83.36 311** IAmb IAmb 08 37 40.5
comp=Z,47nm,0.9s
GDU01 **Guandu, BA** **83.42 248** *e*P **P** **08 37 41.9 +2.5**
U60A **Pendleton** **83.42 310** P 08 37 40.1
baz=51,SNR=7.9
M24K **Tolsona, Glenn** **83.46 359** IAmb IAmb 08 37 40.9
comp=Z,62nm,1.1s
O53A **New Philadelph** **83.47 315** P 08 37 40.1
baz=49,SNR=28
F42A **Maple Grove Fa** **83.50 323** IAmb IAmb 08 37 40.3
comp=Z,33nm,0.8s
AAM **Ann Arbor** **83.51 318** IAmb IAmb 08 37 40.1
comp=Z,35nm,0.7s
AAM **Ann Arbor** **83.51 318** P 08 37 39.4
baz=48
J47A **Sunmer** **83.52 319** IAmb IAmb 08 37 42.0
comp=Z,70nm,1.1s
SKT **Skwentna** **83.54 2** P 08 37 38.6
baz=357,SNR=9.2
EYMN **Ely** **83.56 326** P 08 37 39.2
baz=43,SNR=15
R56A **Bull Pasture M** **83.59 313** P 08 37 41.0
baz=50,SNR=17
N51A **Ashland** **83.70 316** IAmb IAmb 08 37 41.3
comp=Z,46nm,0.8s
S57A **Dark Hollow, R** **83.72 312** IAmb IAmb 08 37 42.4
comp=Z,37nm,0.8s
S57A **Dark Hollow, R** **83.72 312** P 08 37 41.4
baz=50,SNR=10.0
COWI **Conover** **83.76 323** P **P** **08 37 40.0 -0.8**
COWI IAmb IAmb 08 37 41.5
comp=Z,57nm,0.8s
M50A **Fremont** **83.76 317** IAmb IAmb 08 37 41.4
comp=Z,40nm,0.7s
SML **Sawmill** **83.76 0** P 08 37 40.5
baz=360
ULM **Lac du Bonnet** **83.78 330** P **P** **08 37 40.0 -0.8**
comp=Z,54nm,0.6s,baz=42,slow=4.8,SNR=176
ULM LR LR 09 17 16.9
comp=Z,653nm,18.5s,baz=66,slow=37
ULM **Lac du Bonnet** **83.78 330***c i*P **P** **08 37 39.8 -1.0**
ULM **Lac du Bonnet** **83.78 330** IAMs_20 IAMs_20 09 16 57.9
comp=Z,725nm,19.0s
GHO **Glory Hole Cre** **83.79 1** IAmb IAmb 08 37 48.2
comp=Z,64nm,1.0s
U59A **Littleton** **83.89 310** IAmb IAmb 08 37 43.5
comp=Z,57nm,0.8s
MYLDM **Lahad Datu** **83.93 88** IAmb IAmb 08 37 44.9
comp=Z,56nm,1.1s
N25K **Chitina, Valde** **83.93 359** IAmb IAmb 08 37 43.3
comp=Z,62nm,1.4s
N25K **Chitina, Valde** **83.94 359** P 08 37 41.6
baz=2.5
PMR **Palmer** **83.97 1** IAmb IAmb 08 37 42.8
comp=Z,46nm,1.1s
PMR **Palmer** **83.97 1** P 08 37 41.7
baz=359,SNR=5.1
KLU **Klutina** **84.07 359** IAmb IAmb 08 37 45.6
comp=Z,85nm,1.4s
KLU **Klutina** **84.07 359** P 08 37 42.6
baz=1.5,SNR=8.2
SUA **Susitna One** **84.08 1** P 08 37 42.4
baz=358
GLB **Gilahina Butte** **84.08 358** IAmb IAmb 08 37 43.1
comp=Z,40nm,1.2s
R55A **Marlinton** **84.10 313** P 08 37 43.5
baz=50
S56A **Natural Bridge** **84.15 312** P 08 37 43.7
baz=50,SNR=7.5
KNK **Knik Glacier** **84.16 0** P 08 37 42.9
baz=359
L48A **N Adams** **84.18 318** IAmb IAmb 08 37 43.5
comp=Z,51nm,0.8s
H43A **Windswept, Lux** **84.22 321** IAmb IAmb 08 37 44.1
comp=Z,55nm,0.8s
B35A **Bob, Littlefor** **84.27 327** IAmb IAmb 08 37 43.2
comp=Z,28nm,0.8s
VRDI **Verde Repeater** **84.28 358** IAmb IAmb 08 38 00.2
comp=Z,42nm,1.1s
SPCR **Spurr Chakacha** **84.30 2** P 08 37 43.7
baz=356
CMC01 **Camacan, BA** **84.38 247** *e*P **P** **08 37 46.3 +2.0**
HYT **Haines Junctio** **84.39 355** IAmb IAmb 08 37 46.3
comp=Z,78nm,1.0s
BARN **Barnard Glacie** **84.39 357** IAmb IAmb 08 37 46.0
comp=Z,52nm,1.3s
T57A **Hurt** **84.39 312** IAmb IAmb 08 37 46.1
comp=Z,41nm,0.8s
P52A **Corning** **84.41 315** IAmb IAmb 08 37 45.0
comp=Z,55nm,0.7s
P52A **Corning** **84.41 315** P 08 37 44.3
baz=49,SNR=22
MTKI **Muara Teweh, K** **84.42 95** P **P** **08 37 40.5 -4.2**
SEUS **St. Eustatius** **84.44 287** IAMs_20 IAMs_20 09 02 40.9
comp=Z,333nm,20.0s
CTG **Chitna Glacier** **84.47 357** P 08 37 44.7
baz=5.2
RC01 **Rabbit Creek A** **84.47 1** IAmb IAmb 08 37 45.3
comp=Z,31nm,0.8s
RC01 **Rabbit Creek A** **84.47 1** P 08 37 44.3
baz=358
ACSO **Alum Creek Sta** **84.51 316** IAmb IAmb 08 37 45.9
comp=Z,57nm,0.8s
ACSO IAMs_20 IAMs_20 09 17 24.1
comp=Z,582nm,19.0s
ACSO **Alum Creek Sta** **84.51 316** P 08 37 44.8
baz=48,SNR=18
E38A **The Farm, Brul** **84.56 325** IAmb IAmb 08 37 44.6
comp=Z,32nm,0.7s
Q53A **Leroy** **84.56 314** P 08 37 45.5
baz=49,SNR=16
LOGN **Logan Glacier** **84.59 357** IAmb IAmb 08 37 46.7
comp=Z,63nm,1.1s
CNNC **Cliffs of the** **84.66 310** IAmb IAmb 08 37 47.4
comp=Z,51nm,0.7s
CNNC **Cliffs of the** **84.66 310** P 08 37 46.3
baz=51
R54A **Victor** **84.69 313** P 08 37 46.1
baz=49
GLI **Glacier Island** **84.70 360** P 08 37 45.5
baz=0.5
GRNC **Granite Creek** **84.72 357** IAmb IAmb 08 37 47.2
comp=Z,77nm,1.1s
N49A **Columbus Grove** **84.72 317** IAMs_20 IAMs_20 09 14 27.8
comp=Z,497nm,20.0s
TGL **Tana Glacier** **84.74 358** IAmb IAmb 08 37 48.6
comp=Z,45nm,1.1s
CRQE **Cirque** **84.75 358** P 08 37 46.0
baz=3.8
CAPN **Captain Cook N** **84.77 2** P 08 37 45.7
baz=357
G40A **Rib Lake** **84.88 323** IAmb IAmb 08 37 47.1
comp=Z,53nm,0.8s
BLA **Blacksburg** **84.97 312** P 08 37 47.5
baz=50
EYAK **Cordova Ski Ar** **85.02 359** P 08 37 47.6
baz=1.6
P51A **Williamsport** **85.05 315** IAmb IAmb 08 37 47.8
comp=Z,42nm,0.7s
V58A **Windy Hill, Pi** **85.08 311** IAmb IAmb 08 37 49.7
comp=Z,82nm,1.2s
O22K **Cooper Landing** **85.08 1** P 08 37 47.3
baz=358
S54A **Dingess, Beckl** **85.13 313** IAmb IAmb 08 37 49.2
comp=Z,39nm,0.8s
S54A **Dingess, Beckl** **85.13 313** P 08 37 48.0
baz=49,SNR=9.0
AGMN **Agassiz Nation** **85.26 328** IAmb IAmb 08 37 48.2
comp=Z,22nm,0.7s
AGMN **Agassiz Nation** **85.26 328** P 08 37 47.6
baz=40,SNR=19
PINM **Pinnacle** **85.28 356** P 08 37 47.4
baz=6.1
Q51A **Peebles** **85.52 315** IAMs_20 IAMs_20 09 17 49.9
comp=Z,374nm,19.0s
SKAG **Skagway** **85.56 354** P 08 37 49.8
baz=10
MCPB **Macapa, AP** **85.59 267** *e*P **P** **08 37 52.5 +1.9**
BBKI **Banjar Baru** **85.81 97** P **P** **08 37 52.1 +0.5**
comp=Z,11nm,0.6s
HOM **Homer** **85.86 2** P 08 37 50.8
baz=357
L44A **Lake County Fo** **85.90 320** IAmb IAmb 08 37 52.3
comp=Z,74nm,0.8s
L44A **Lake County Fo** **85.90 320** P 08 37 51.2
baz=45,SNR=9.3
P49A **Miami Univ. Ec** **85.96 316** P **P** **08 37 50.5 -1.5**
P49A **Miami Univ. Ec** **85.96 316** P 08 37 51.7
baz=47
DLBC **Dease Lake** **85.98 351** P **P** **08 37 52.4 +0.6**
comp=Z,20nm,1.1s,baz=67,slow=2.3,SNR=6.9
DLBC LR LR 09 21 10.8
comp=Z,356nm,18.2s,baz=16,slow=39
X58A **Rowland** **86.01 310** IAmb IAmb 08 37 54.5
comp=Z,95nm,1.0s
W57A **Gilead** **86.03 311** IAmb IAmb 08 37 54.1
comp=Z,70nm,0.8s
F36A **Milaca** **86.04 325** IAmb IAmb 08 37 52.6
comp=Z,47nm,0.8s
SPMN **Marine on St.** **86.17 325** IAmb IAmb 08 37 53.6
comp=Z,47nm,0.9s
SPMN **Marine on St.** **86.17 325** P 08 37 52.4
baz=42,SNR=18
V55A **Taylorsville** **86.34 312** P **P** **08 37 54.5 +0.5**
V55A IAmb IAmb 08 37 56.0
comp=Z,62nm,1.0s
GCPR **Guaynabo City** **86.40 290** IAmb IAmb 08 37 56.6
comp=Z,126nm,1.6s
P48A **Milroy** **86.42 317** IAmb IAmb 08 37 54.5
comp=Z,59nm,0.7s
S51A **Beattyville** **86.59 314** IAmb IAmb 08 37 56.7
comp=Z,44nm,0.8s
JFWS **Jewell Farm** **86.59 322** IAmb IAmb 08 37 55.4
comp=Z,62nm,1.1s
JFWS **Jewell Farm** **86.59 322** P 08 37 54.3
baz=44,SNR=16
SFIN **Lafayette** **86.71 318** IAmb IAmb 08 37 55.8
comp=Z,28nm,0.8s
SFIN **Lafayette** **86.71 318** P 08 37 55.2
baz=46,SNR=7.9
SDBA **SAO DESIDERIO** **86.76 253** *e*P **P** **08 37 58.0 +1.7**
KBKI **Kotabaru** **86.80 96** P **P** **08 37 56.3 -0.2**
comp=Z,2µmcomp=Z,63nm,1.1s
SMTB **Santa Maria do** **86.82 257** *e*P **P** **08 37 58.9 +2.3**
KMSC **Kings Mountain** **86.88 311** P 08 37 57.3
baz=49,SNR=23
PRPB **Parauapebas** **87.06 260** *e*P **P** **08 37 59.7 +1.9**
MDND **Maddock** **87.19 330** P 08 37 57.1
baz=38
P46A **Rosedale** **87.30 318** P **P** **08 37 57.7 -0.9**
P46A IAmb IAmb 08 37 58.7
comp=Z,25nm,0.8s
MLPR **Magueyes Islan** **87.34 290** IAmb IAmb 08 38 01.3
comp=Z,58nm,0.9s
I37A **Lemond, Waseca** **87.35 324** IAmb IAmb 08 37 59.5
comp=Z,50nm,0.8s
JSC **Jenkinsville** **87.39 311** IAmb IAmb 08 38 01.0
comp=Z,30nm,0.9s
V53A **Saluda** **87.44 312** IAmb IAmb 08 38 01.2
comp=Z,72nm,0.9s
NHSC **New Hope** **87.47 309** P 08 38 00.8
baz=49,SNR=14
O44A **Mansfield** **87.62 319** P **P** **08 37 59.2 -0.9**
O44A IAmb IAmb 08 38 01.1
comp=Z,57nm,0.8s
KDAK **Kodiak Island** **87.71 3**⇓*e*P **P** **08 38 00.8 +0.7**
KDAK pmax pmax
comp=Z,82nm,0.9s
KDAK **Kodiak Island** **87.71 3** P **P** **08 38 01.1 +0.9**
KDAK **Kodiak Island** **87.71 3** P 08 38 00.8
baz=356
WCI **Wyandotte Cave** **87.75 316** P **P** **08 38 00.9 +0.1**
WCI pmax pmax
comp=Z,83nm,0.8s
WCI **Wyandotte Cave** **87.75 316** P **P** **08 38 00.9 +0.1**
WCI **Wyandotte Cave** **87.75 316** P 08 38 00.9
baz=46
HDIL **Hopedale** **87.78 320** P 08 38 00.7
baz=44,SNR=11
JANB **Januaria** **87.87 250** *e*P **P** **08 38 04.2 +2.5**
SIT **Sitka** **87.94 353** P 08 38 01.5
baz=10
BG3 **Lake Jocassee** **87.96 312** IAmb IAmb 08 38 03.8
comp=Z,49nm,1.0s
TKL **Tuckaleechee C** **88.03 313** P **P** **08 38 02.8 +0.7**
comp=Z,87nm,0.9s,baz=95,slow=5.3,SNR=79
K38A **Parkersburg** **88.06 323** IAmb IAmb 08 38 01.8
comp=Z,24nm,0.6s
JAGI **Jajag, Banyuwa** **88.12 102** IAMs_20 IAMs_20 09 19 48.9
comp=Z,476nm,20.0s
WRAK **Wrangell Islan** **88.24 352** P 08 38 03.1
baz=13
OHAK **Old Harbor** **88.24 3** P 08 38 03.2

baz=355
MALB Monte Alegre 88.25 267 *e*P **P 08 38 04.7 +1.3**
V51A Loudon 88.27 313 IAmb IAmb 08 38 06.3
comp=Z,55nm,1.3s
N41A Harden Midland 88.50 320 IAmb IAmb 08 38 04.5
comp=Z,44nm,0.8s
W52A Murphy 88.50 313 IAmb IAmb 08 38 06.9
comp=Z,56nm,1.1s
DGMT Dagmar 88.50 333 P 08 38 04.3
baz=34,SNR=8.0
P43A Skaggs, Pawnee 88.55 319 IAmb IAmb 08 38 05.5
comp=Z,58nm,0.8s
CPCT Cooper Cave 88.61 313 P **P 08 38 05.0 +0.1**
U49A Red Boiling Sp 88.64 315 IAmb IAmb 08 38 06.0
comp=Z,38nm,0.7s
E28A Huff 88.65 330 IAmb IAmb 08 38 07.0
comp=Z,30nm,0.8s
SCIA State Center 88.83 323 IAmb IAmb 08 38 06.2
comp=Z,38nm,0.7s
SCIA State Center 88.83 323 P 08 38 05.3
baz=42
SII Sitkinak Islan 88.86 4 P 08 38 06.1
baz=355
T47A Sharon Grove 89.08 316 IAMs_20 IAMs_20 09 20 16.1
comp=Z,591nm,19.0s
ECSD EROS Data Cent 89.08 326 IAmb IAmb 08 38 07.5
comp=Z,40nm,0.7s
ECSD EROS Data Cent 89.09 326 P 08 38 06.6
baz=40,SNR=45
CLTN Cedars of Leba 89.25 315 IAmb IAmb 08 38 08.8
comp=Z,28nm,0.9s
W50A Signal Mountai 89.26 313 IAmb IAmb 08 38 09.3
comp=Z,29nm,0.8s
PEXB Peixe 89.27 255 *e*P **P 08 38 10.0 +1.8**
GOGA Godfrey 89.34 311 P 08 38 09.0
baz=48,SNR=10.0
Y52A Lilburn 89.41 312 IAmb IAmb 08 38 11.7
comp=Z,55nm,1.0s
MRSI Marisa 89.41 90 P **P 08 38 08.0 -0.9**
comp=Z,24nm,1.1s
JCJ Chichijima 89.55 57 LR LR 09 21 49.3
comp=Z,101nm,19.8s,baz=326,slow=38
SUSD Miller 89.60 327 IAmb IAmb 08 38 10.1
comp=Z,60nm,0.8s
SUSD Miller 89.60 327 P 08 38 09.0
baz=38
SLM Saint Louis 89.66 319 IAmb IAmb 08 38 10.7
comp=Z,42nm,0.7s
SIUC Southern Illin 89.76 317 IAmb IAmb 08 38 11.4
comp=Z,74nm,1.1s
S44A Carbondale 89.80 317 IAmb IAmb 08 38 11.5
comp=Z,84nm,1.1s
T45A Paducah 89.93 317 IAmb IAmb 08 38 11.5
comp=Z,43nm,0.7s
WVT Waverly 90.09 316 P **P 08 38 10.9 -0.9**
WVT pmax pmax
comp=Z,21nm,0.8s
WVT MLR MLR
comp=Z,700nm,19.0s
WVT Waverly 90.09 316 P **P 08 38 10.9 -0.9**
WVT Waverly 90.09 316 IAMs_20 IAMs_20 09 20 48.0
comp=Z,655nm,19.0s
WVT Waverly 90.09 316 P 08 38 11.0
baz=45
FVM French Village 90.23 318 P **P 08 38 11.8 -0.7**
FVM pmax pmax
comp=Z,22nm,0.9s
FVM French Village 90.23 318 P **P 08 38 11.8 -0.7**
152A Waverly Hall 90.62 311 IAmb IAmb 08 38 15.7
comp=Z,60nm,1.2s
CCM Cathedral Cave 90.63 319 P **P 08 38 14.2 -0.1**
CCM pmax pmax
comp=Z,29nm,0.7s
CCM MLR MLR
comp=Z,500nm,20.0s
CCM Cathedral Cave 90.63 319 P **P 08 38 14.2 -0.1**
CCM IAmb IAmb 08 38 15.0
comp=Z,29nm,0.7s
CCM Cathedral Cave 90.63 319 IAMs_20 IAMs_20 09 17 50.9
comp=Z,498nm,20.0s
CCM Cathedral Cave 90.63 319 P 08 38 14.1
baz=43
P38A Dawn 90.68 321 IAmb IAmb 08 38 15.3
comp=Z,49nm,1.2s
TIGA Tifton 90.74 310 IAmb IAmb 08 38 16.5
comp=Z,56nm,1.1s
TIGA Tifton 90.74 310 P 08 38 15.3
baz=48
LAO LASA Array 90.75 333 P 08 38 15.5
baz=33,SNR=10
PARMO Parma 90.81 317 IAmb IAmb 08 38 17.0
comp=Z,70nm,1.2s
N35A Tabor 90.81 323 IAmb IAmb 08 38 17.1
comp=Z,48nm,0.8s
Y49A Blount Mountai 90.84 313 IAmb IAmb 08 38 16.3
comp=Z,42nm,1.2s
ITTB Itaituba 90.87 265 *e*P **P 08 38 17.2 +1.5**
R40A Maddies Statio 91.00 320 IAmb IAmb 08 38 17.8
comp=Z,44nm,0.9s
PLAL Pickwick Lake 91.04 315 IAmb IAmb 08 38 16.3
comp=Z,29nm,0.9s
LNXT Lenox 91.06 317 IAMs_20 IAMs_20 09 20 03.6
comp=Z,383nm,20.0s
BDFB Brasilia 91.09 252 P **P 08 38 19.0 +2.2**
comp=Z,10nm,0.8s,baz=53,slow=3.3,SNR=23
BDFB Brasilia 91.09 252 P **P 08 38 17.5 +0.7**
BDFB pmax pmax
comp=Z,13nm,0.8s
BDFB Brasilia 91.09 252 P **P 08 38 17.5 +0.7**
PBMO Poplar Bluff 91.10 318 IAmb IAmb 08 38 17.5
comp=Z,64nm,1.3s
WALA Waterton Lakes 91.30 339 IAmb IAmb 08 38 17.6
comp=Z,19nm,0.8s
656A Williston 91.44 308 IAmb IAmb 08 38 20.1
comp=Z,53nm,0.8s
DWPF Disney Wildern 91.55 306 P **P 08 38 20.0 +1.3**
DWPF IAmb IAmb 08 38 20.7
comp=Z,46nm,0.8s
DWPF Disney Wildern 91.55 306 P 08 38 19.4
baz=49
352A Blakely 91.56 311 IAmb IAmb 08 38 20.1
comp=Z,45nm,0.8s
W45A Hickory Valley 91.56 316 IAMs_20 IAMs_20 09 21 33.9
comp=Z,574nm,18.0s
BGNE Belgrade 91.60 325 P 08 38 18.6
baz=39,SNR=9.9
BBB Bella Bella 91.74 348 LR LR 09 22 19.4
comp=Z,182nm,20.0s,baz=64,slow=37
LRAL Lakeview Retre 91.76 313 IAmb IAmb 08 38 20.5
comp=Z,62nm,1.1s
LRAL Lakeview Retre 91.76 313 P 08 38 19.4
baz=46,SNR=24
N33A J Bar K, Exete 91.79 324 P **P 08 38 18.8 -0.9**
S39A Bolivar 92.01 320 IAmb IAmb 08 38 21.5
comp=Z,35nm,1.1s
LCAR Lake Charles 92.02 317 IAmb IAmb 08 38 22.2
comp=Z,57nm,1.3s
RSSD Black Hills 92.02 330 P **P 08 38 21.2 +0.3**
RSSD pmax pmax
comp=Z,33nm,1.1s
RSSD MLR MLR
comp=Z,500nm,20.0s
RSSD Black Hills 92.02 330 P **P 08 38 21.2 +0.3**
RSSD IAmb IAmb 08 38 22.0
comp=Z,33nm,1.1s
RSSD Black Hills 92.02 330 IAMs_20 IAMs_20 09 20 01.0
comp=Z,515nm,20.0s
RSSD Black Hills 92.02 330 P 08 38 20.7
baz=34
NPGB Novo Progresso 92.08 263 *e*P **P 08 38 22.8 +1.5**
HBAR Harrisburg 92.11 317 IAMs_20 IAMs_20 09 24 02.4
comp=Z,635nm,20.0s
OXF Oxford 92.15 315 P **P 08 38 19.8 -1.6**
OXF pmax pmax
comp=Z,31nm,1.1s
OXF MLR MLR
comp=Z,600nm,19.0s
OXF Oxford 92.15 315 P **P 08 38 19.8 -1.6**
OXF IAmb IAmb 08 38 21.2
comp=Z,31nm,1.1s
OXF IAMs_20 IAMs_20 09 22 10.0
comp=Z,589nm,19.0s
OXF Oxford 92.15 315 P 08 38 20.0
baz=44
Z47A Carrollton 92.29 314 IAmb IAmb 08 38 22.8
comp=Z,28nm,1.1s
PTGA Pitinga 92.30 271 P **P 08 38 23.6 +1.2**
comp=Z,3.8nm,0.4s,baz=49,slow=4.4,SNR=11
PTGA Pitinga 92.30 271 P **P 08 38 24.4 +2.0**
PTGA IAmb IAmb 08 38 25.1
comp=Z,29nm,1.2s
PTGA Pitinga 92.30 271 *e*P **P 08 38 23.7 +1.2**
JTMT Jette 92.58 338 IAmb IAmb 08 38 24.5
comp=Z,46nm,1.2s
KSU1 Kansas State U 92.64 323 IAmb IAmb 08 38 24.0
comp=Z,41nm,0.8s
KSU1 Kansas State U 92.64 323 P 08 38 23.0
baz=40
FCAR Ozark Folk Cen 92.69 318 P **P 08 38 22.6 -1.2**
FCAR IAmb IAmb 08 38 24.5
comp=Z,29nm,1.3s
U40A Yellville 92.74 319 IAMs_20 IAMs_20 09 20 15.9
comp=Z,523nm,21.0s
U40A Yellville 92.75 319 P 08 38 23.6
baz=42,SNR=12
NEW Newport 92.94 340 P **P 08 38 25.1 +0.2**
comp=Z,28nm,0.9s,baz=33,slow=4.7,SNR=52
NEW Newport 92.94 340 P **P 08 38 24.1 -0.8**
NEW pmax pmax
comp=Z,72nm,1.3s
NEW Newport 92.94 340 P **P 08 38 24.1 -0.8**
NEW Newport 92.95 340 P 08 38 24.8
baz=25,SNR=35
X43A Marvell 92.99 316 P 08 38 25.3
baz=43,SNR=7.3
BRAL Brewton 93.09 312 P 08 38 26.1
baz=46
WHAR Wooly Hollow 93.22 318 IAMs_20 IAMs_20 09 23 28.6
comp=Z,529nm,19.0s
W41B Gary Mavity, V 93.28 317 P 08 38 26.1
baz=43,SNR=7.9
MSO Missoula 93.29 338 P 08 38 26.1
baz=27,SNR=18
HHAR Hobbs 93.39 319 IAmb IAmb 08 38 27.5
comp=Z,34nm,0.8s
U38A Gravette 93.51 320 P **P 08 38 26.4 -1.3**
YNE Yellowstone No 93.57 334 IAmb IAmb 08 38 29.6
comp=Z,41nm,1.0s
BOZ Bozeman (W) 93.62 336 P 08 38 28.3
baz=29,SNR=16
OGNE Ogallala 93.75 327 P 08 38 28.3
baz=36
A04D Lummi Island 93.95 344 P 08 38 28.5
baz=20
YNR Norris Junctio 94.06 335 P **P 08 38 30.4 +0.1**
X40A Basin Creek Fa 94.11 317 IAMs_20 IAMs_20 09 19 14.2
comp=Z,543nm,20.0s
W39A Magazine 94.11 318 P 08 38 30.0
baz=42,SNR=8.8
X40A Basin Creek Fa 94.11 317 P 08 38 30.0
baz=42
YMR Madison River 94.20 335 IAmb IAmb 08 38 32.9
comp=Z,24nm,1.0s
R32A Long Quarter, 94.20 324 IAmb IAmb 08 38 31.1
comp=Z,36nm,0.9s
B05A Bryant 94.24 343 P 08 38 29.7
baz=21
K22A Casper 94.25 331 IAMs_20 IAMs_20 09 25 01.9
comp=Z,535nm,21.0s
T35A Sooner Cattle 94.26 321 IAmb IAmb 08 38 31.7
comp=Z,41nm,0.8s
H17A Grant Village 94.30 334 IAmb IAmb 08 38 35.2
comp=Z,26nm,1.1s
H17A Grant Village 94.30 334 P 08 38 33.1
baz=30,SNR=18
CBKS Cedar Bluff 94.39 324 IAmb IAmb 08 38 32.8
comp=Z,54nm,1.0s
CBKS Cedar Bluff 94.39 324 P 08 38 31.0
baz=38,SNR=10
346A Big Creek Wild 94.40 313 IAmb IAmb 08 38 33.4
comp=Z,31nm,0.8s
VBMS Vicksburg 94.43 314 IAmb IAmb 08 38 33.3
comp=Z,38nm,0.8s
VBMS Vicksburg 94.44 314 P 08 38 32.0
baz=44
MIAR Mount Ida 94.48 318 P **P 08 38 31.1 -1.0**
MIAR pmax pmax
comp=Z,102nm,1.5s
MIAR Mount Ida 94.48 318 P **P 08 38 31.1 -1.0**
MIAR Mount Ida 94.48 318 P 08 38 32.3
baz=42,SNR=24
KS20 Mayfield South 94.55 322 IAmb IAmb 08 38 32.9
comp=Z,38nm,0.9s
KS20 IAMs_20 IAMs_20 09 24 58.5
comp=Z,429nm,20.0s
TUL1 Leonard 94.65 320 P 08 38 32.6
baz=40,SNR=40
KAN13 South Haven SW 94.68 322 IAmb IAmb 08 38 33.5
comp=Z,48nm,1.1s
KAN01 Argonia South 94.72 322 IAmb IAmb 08 38 33.5
comp=Z,34nm,0.7s
KAN05 Caldwell Mor 94.81 322 IAmb IAmb 08 38 33.9
comp=Z,25nm,0.8s
E09A Wood Farm, Sta 94.83 340 IAmb IAmb 08 38 34.5
comp=Z,39nm,1.4s
KAN10 Anthony SW Sta 94.91 322 IAmb IAmb 08 38 34.2
comp=Z,23nm,0.6s
PHWY Pilot Hill **94.94 329** IAmb IAmb 08 38 35.1
comp=Z,40nm,0.8s
PHWY IAMs_20 IAMs_20 09 26 21.3
comp=Z,455nm,20.0s
Z41A Richland Creek 95.00 317 P 08 38 34.8
baz=42,SNR=7.4
D03D Eldon 95.15 344 P 08 38 35.4
baz=20,SNR=5.0
OK031 S. Brethren Rd 95.17 321 IAmb IAmb 08 38 36.0
comp=Z,32nm,1.1s
OK032 Salt Plains WL 95.21 322 IAmb IAmb 08 38 35.6
comp=Z,13nm,0.6s
OK032 IAMs_20 IAMs_20 09 24 23.0
comp=Z,493nm,20.0s
BW06 Boulder Array 95.33 333 P **P 08 38 33.8 -2.4**
PDAR Pinedale Array 95.33 333 P **P 08 38 35.1 -1.1**
comp=Z,4.6nm,0.7s,baz=63,slow=4.4,SNR=43
PDAR PP **PP 08 42 24.1 -1.5**
comp=Z,7.4nm,1.1s,baz=46,slow=6.4,SNR=9.9
PDAR LR LR 09 24 41.0
comp=Z,384nm,18.1s,baz=32,slow=38
PDAR Pinedale Array 95.33 333 P **P 08 38 33.4 -2.8**
BW06 Boulder Array 95.33 333 P 08 38 35.1
baz=31,SNR=11
RWWY Rawlins 95.34 331 IAmb IAmb 08 38 35.6
comp=Z,21nm,1.0s
D04E Lakebay 95.41 343 P 08 38 36.9
baz=20
N23A Red Feather La 95.48 330 P 08 38 36.4
baz=33,SNR=15
KSCO Kaye Shedlock' 95.58 326 P 08 38 37.1
baz=36
OK029 Liberty Lake 95.61 321 IAmb IAmb 08 38 38.0
comp=Z,37nm,0.8s
OK025 Westminster Rd 95.71 321 IAmb IAmb 08 38 38.4
comp=Z,45nm,1.0s
ECR Eagle Creek 95.75 334 P **P 08 38 37.5 -0.6**
OKCFA Oklahoma City 95.90 321 IAmb IAmb 08 38 39.3
comp=Z,29nm,0.8s
E04D Cinebar 95.95 343 P 08 38 38.6
baz=20
BMO Blue Mountains 96.10 339 IAmb IAmb 08 38 39.8
comp=Z,23nm,0.9s
ISCO Idaho Springs 96.26 329 P **P 08 38 39.8 -0.8**
ISCO pmax pmax
comp=Z,8.0nm,0.9s
ISCO Idaho Springs 96.26 329 P **P 08 38 39.8 -0.8**
ISCO Idaho Springs 96.26 329 P 08 38 39.9
baz=34,SNR=16
F05D White Salmon 96.30 342 P 08 38 40.0
baz=21
Q24A Divide 96.75 328 P 08 38 41.9
baz=34
MFID Camas Ranch 96.94 337 IAmb IAmb 08 38 44.5
comp=Z,21nm,0.8s
O20A White River Ci 97.07 331 P 08 38 43.1
baz=32
HWUT Hardware Ranch 97.08 334 IAmb IAmb 08 38 44.7
comp=Z,20nm,0.8s
WMOK Wichita Mounta 97.11 321 IAmb IAmb 08 38 44.8
comp=Z,26nm,0.8s
WMOK Wichita Mounta 97.11 321 P 08 38 43.9
baz=38,SNR=40
NATX Nacogdoches 97.16 317 IAmb IAmb 08 38 45.9
comp=Z,21nm,0.7s
NATX Nacogdoches 97.16 317 P 08 38 44.9
baz=41
RDMU Red Mountain 97.22 332 IAmb IAmb 08 38 45.1
comp=Z,12nm,0.8s
HVU Hansel Valley 97.37 334 IAmb IAmb 08 38 46.4
comp=Z,14nm,0.9s
I07A Izee 97.44 340 IAmb IAmb 08 39 13.5
comp=Z,28nm,1.8s
TCUT Toone Canyon 97.45 333 P **P 08 38 44.7 -1.2**
TCUT IAmb IAmb 08 38 46.4
comp=Z,18nm,1.2s
237A Washetta, Mont 97.62 318 IAMs_20 IAMs_20 09 21 00.1
comp=Z,530nm,21.0s
I05D Terrebonne, OR 97.71 341 P 08 38 46.9
baz=22
JLU Jordanelle 97.91 333 IAmb IAmb 08 38 48.8
comp=Z,24nm,1.4s
PINE Pine Mountain 98.11 341 IAmb IAmb 08 38 50.8
comp=Z,25nm,1.4s
AMTX Amarillo 98.46 323 P 08 38 49.5
baz=37
I04A Tendick Farm, 98.49 342 P 08 38 49.9
baz=21
S22A 4UR Ranch, Cre 98.49 328 P 08 38 50.0
baz=33,SNR=7.0
WHTX Lake Whitney, 98.53 319 IAmb IAmb 08 38 51.9
comp=Z,22nm,1.1s
WHTX Lake Whitney, 98.53 319 P 08 38 50.1
baz=40
J05D Fort Rock, OR 98.66 341 P 08 38 51.7
baz=22,SNR=5.1
WVOR Wild Horse Val 98.70 339 IAmb IAmb 08 38 52.6
comp=Z,16nm,1.0s
DUG Dugway, Tooele 98.77 334 P 08 38 51.7
baz=28,SNR=7.8
I03D Drain, OR 98.82 342 P 08 38 51.6
baz=20
HKT Hockley 99.18 316⇑ *e*P **Pdif 08 38 53.2 -0.2**
HKT pmax pmax
comp=Z,9.0nm,1.4s
HKT MLR MLR
comp=Z,452nm,18.0s
HKT Hockley 99.18 316 P **Pdif 08 38 52.9 -0.5**
ABTX Abilene, Hawle 99.21 321 IAmb IAmb 08 38 54.5
comp=Z,23nm,0.8s
ABTX Abilene, Hawle 99.21 321 P 08 38 53.6
baz=38
435B Jarrell 99.53 318 IAmb IAmb 08 38 57.0
comp=Z,14nm,0.8s
SAML Samuel 99.55 266 IAMs_20 IAMs_20 09 14 23.5
comp=Z,340nm,22.0s
MVCO Mesa Verde 99.66 329 P 08 38 55.5
baz=32
MSTX Muleshoe 99.73 323 P 08 38 55.5
baz=36
L04D Klamath Falls 99.94 341 P 08 38 56.0
baz=21
M04C Macdoel 100.22 341 P 08 38 58.1
baz=21
ANMO Albuquerque 100.66 327⇓ *e*P **Pdif 08 38 58.0 -2.3**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO MLR MLR
comp=Z,355nm,20.0s
M02C Callahan 100.85 341 P 08 39 00.5
baz=20
JCT Junction City 100.97 319 P 08 39 01.5
baz=38
N02D Trinity Center 101.20 341 P 08 39 02.0
baz=21
SIV San Ignacio 101.68 259 P **Pdif 08 39 07.0 +2.2**
baz=101,slow=5.2
NVAR Mina Array Bea 102.25 337 P **Pdif 08 39 07.5 +0.2**
comp=Z,0.6nm,0.7s,baz=20,slow=2.5,SNR=5.3
NVAR PP **PP 08 43 15.3 -3.0**
comp=Z,2.0nm,0.9s,baz=31,slow=6.2,SNR=7.2
NVAR PKKPbc **PKKPbc 08 55 09.0 -0.2**
comp=Z,0.8nm,0.9s,baz=208,slow=3.6,SNR=3.9
NVAR Mina Array Bea 102.25 337 **Pdif 08 39 08.0 +0.7**
NVAR **PP 08 43 17.0 -1.3**
FITZ Fitzroy Crossi 102.74 103 Pdiff **Pdif 08 39 07.9 -1.4**
comp=Z,2.3nm,0.8s,baz=346,slow=1.3,SNR=3.9
MNTX Cornudas Mount 102.84 324 P 08 39 09.5
baz=34,SNR=9.9
TPNV Topopah Spring 102.89 335 P 08 39 09.4
baz=26
SYO Syowa Base 103.61 177⇑ *e*pPdiff pPdif 08 39 18.4 -0.4
SYO Syowa Base 103.61 177⇓ *e*PP **PKiKP 08 43 31.0 +0.8**
TXAR Lajitas Array 103.91 321 Pdiff **Pdif 08 39 14.8 +0.1**
comp=Z,5.3nm,0.9s,baz=66,slow=3.9,SNR=56
TXAR PP PP 08 43 23.1 -7.9
comp=Z,0.7nm,0.8s,baz=62,slow=6.8,SNR=4.5
TXAR PKKPbc **PKKPbc 08 55 04.4 +0.5**
comp=Z,0.6nm,0.9s,baz=201,slow=6.6,SNR=4.4
TXAR Lajitas Array 103.91 321 P **Pdif 08 39 14.6 -0.1**
TXAR Lajitas Array 103.91 321 Pdif **Pdif 08 39 14.6 -0.1**
KNRA Kununurra 103.96 99 IAMs_20 IAMs_20 09 29 03.6
comp=Z,182nm,19.0s
CRIN San Cristobal 105.67 298 IAMs_20 IAMs_20 09 19 46.5
comp=Z,387nm,21.0s
LPAZ La Paz 107.57 262 PKiKP **PKiKP 08 43 39.4 -0.5**
comp=Z,1.5nm,0.8s,baz=51,slow=2.3,SNR=6.4
WRA Warramunga Arr 110.71 100 PKiKP **PKiKP 08 43 44.0 -1.0**
comp=Z,1.1nm,0.5s,baz=317,slow=1.7,SNR=22
WRA Warramunga Arr 110.71 100 *i* PKiKP **PKiKP 08 43 44.0 -1.0**
ASAR Alice Springs 112.21 104 PKiKP **PKiKP 08 43 47.2 -0.5**
comp=Z,4.8nm,0.8s,baz=318,slow=1.6,SNR=44
ASAR PKKPbc **PKKPbc 08 54 38.7 +1.0**
comp=Z,0.9nm,0.8s,baz=128,slow=4.0,SNR=7.2
BO02 Sierra Bellavi 118.44 246 PKPdf **PKiKP 08 44 00.7 +1.3**
BELA Belgrano 2 119.13 193 **PKPdf 08 43 58.7 -0.7**
CTA Charters Tower 120.50 94 PKP **PKPdf 08 44 03.8 +0.1**
comp=Z,12nm,0.8s,baz=312,slow=2.8,SNR=9.6
PLCA Paso Flores 120.56 239 PKP **PKiKP 08 44 04.2 +0.9**
comp=Z,6.2nm,0.8s,baz=118,slow=2.1,SNR=20
PLCA Paso Flores 120.56 239 PKPdf **PKiKP 08 44 04.9 +1.5**
STKA Stephens Creek 121.97 109 PKP **PKPdf 08 44 05.9 -0.2**
comp=Z,10.0nm,0.9s,baz=333,slow=4.1,SNR=23
STKA Stephens Creek 121.97 109 PKPdf **PKPdf 08 44 06.1 -0.1**
QSPA South Pole Qui 124.62 180 **PKPdf 08 44 10.0 -0.3**
VNDA Vanda 131.92 167 PKP **PKiKP 08 44 24.7 -0.1**
comp=Z,0.9nm,0.8s,baz=304,slow=3.1,SNR=5.0
DZM Mont Dzumac 138.04 85 PKP **PKiKP 08 44 39.1 +0.1**
comp=Z,18nm,0.8s,baz=19,slow=10,SNR=4.2
WHZ Wether Hill Ro 144.81 122 PKPdf **PKPdf 08 44 48.1 -0.2**
MSZ Milford Sound 144.82 120 P **PKPdf 08 44 48.5 +0.2**
MSVF Nonsavu 145.10 70 PKPbc **PKPdf 08 44 50.5 +0.8**
comp=Z,138nm,0.8s,baz=239,slow=4.1,SNR=73
JCZ Jackson Bay 145.45 119 P **PKPdf 08 44 49.6 0.0**
EAZ Darnescleugh 145.79 121 P **PKPab 08 44 51.4 +0.5**
FOZ Fox Glacier 146.20 118 P **PKPab 08 44 52.3 -0.2**
GCSZ Gaunt Creek Bo 146.57 118 P **PKPbc 08 44 53.5 +0.6**
ODZ Otahua Downs 146.74 121 P **PKPab 08 44 54.5 -0.1**
WVZ Waitaha Valley 146.87 117 P **PKPbc 08 44 53.8 0.0**
RPZ Rata Peaks 147.09 118 PKPbc **PKPbc 08 44 55.0 +0.5**
comp=Z,78nm,1.0s,baz=223,slow=2.5,SNR=8.7
RPZ Rata Peaks 147.09 118 **PKPbc 08 44 53.9 -0.5**
RPZ Rata Peaks 147.09 118 P **PKPbc 08 44 54.4 0.0**
ARCZ Arundel 147.17 119 P **PKPab 08 44 55.6 -0.8**
INZ Inchbonnie 147.39 116 P **PKPbc 08 44 54.4 -0.9**
OXZ Oxford 147.82 118 P **PKPbc 08 44 56.7 +0.3**
LTZ Lake Taylor 148.00 117 P **PKPbc 08 44 57.0 0.0**
AFI Afiamalu 149.92 52 PKPbc **PKPbc 08 45 03.1 +0.4**
comp=Z,66nm,0.9s,baz=232,slow=3.7,SNR=10
AFI Afiamalu 149.92 52 PKIKP **PKiKP 08 45 03.8 +0.2**
AFI Afiamalu 149.92 52 **PKiKP 08 45 03.8 +0.2**
URZ Urewera 151.58 107 PKPbc **PKPbc 08 45 04.3 -1.5**
comp=Z,58nm,0.8s,baz=120,slow=24,SNR=18

VAO ***15*** *08:27:18.8±0.9, 15°.13S×72°.37W, h113km, mb4.3*
IDC ***15*** *08:27:19.2±1.5, 15°.23S×72°.29W, h119km±23km, mb3.6/2, mb1 3.8/8, mb1mx3.5/46, mbtmp4.2/8, Error ellipse: s-maj=36.0km s-min=14.8km az=37.0*
GUC ***15*** *08:27:22.9±0.7, 15°.53S×72°.46W, h142km±14km, ML4.6*
ISC 15 08:27:18.5±0.8,**15°27S**±0°.08×**72°33W**±0°.09,**h108**km,**n31**,
σ=**1.2**46/30,**1C-1D**,**Southern Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**3.62 149**	⇓	*i*P	**Pn**	**08 28 14.7**	**+2.0**
AP01				*i* S	**Sn**	**08 28 55.5**	**+0.8**
LPAZ	**La Paz**	**4.17 105**		P	**Pn**	**08 28 22.8**	**+2.2**
	10nm,0.3s,baz=284,slow=9.8,SNR=320						
LPAZ	**La Paz**	**4.17 105**	⇑	*i*P	**Pn**	**08 28 22.8**	**+2.2**
NNA	**Nana**	**5.47 306**		P	**Pn**	**08 28 40.1**	**+2.4**
	68nm,0.3s,baz=128,slow=11,SNR=106						
NNA				S	**Sn**	**08 29 40.1**	**+0.6**
	4.3nm,0.3s,baz=209,slow=22,SNR=1.4						

CZSB	**Cruzeiro do Su**	**7.50**	**357**	*e*P		**Pn**	**08 29 03.7**	**-1.6**
LVC	**Limon Verde**	**7.99**	**157**	P		**Pn**	**08 29 12.3**	**+0.1**
	0.8nm,0.3s,baz=8.0,slow=7.5,SNR=16							
LVC				S		**Sn**	**08 30 36.2**	**-4.8**
	2.8nm,0.3s,baz=209,slow=19,SNR=14							
ETMB	**Extrema**	**8.06**	**48**	*e*P		**Pn**	**08 29 11.7**	**-1.1**
SIV	**San Ignacio**	**10.87**	**95**	P		**Pn**	**08 29 49.2**	**-1.8**
	0.8nm,0.3s,baz=278,slow=15,SNR=27							
AQDB	**Aquidauana**	**16.65**	**111**	*e*P		**Pn**	**08 31 05.0**	**-0.4**
CLDB	**Colider**	**16.68**	**77**	*e*P		**P**	**08 31 06.7**	**+0.3**
PP1B	**Ponte de Pedra**	**16.90**	**100**	*e*P		**P**	**08 31 09.6**	**+0.8**
CPUP	**Villa Florida**	**17.81**	**131**	P		**Pn**	**08 31 19.2**	**-0.2**
	0.2nm,0.3s,baz=300,slow=11,SNR=6.6							
NPGB	**Novo Progresso**	**18.53**	**66**	*e*P		**P**	**08 31 26.3**	**-0.5**
PTGA	**Pitinga**	**18.91**	**41**	P		**P**	**08 31 30.1**	**-0.8**
	1.4nm,0.3s,baz=215,slow=13,SNR=6.0							
H03N1	**Juan Fernandez**	**19.05**	**197**	T		T	08 50 27.5	
	baz=17,slow=74,SNR=51							
H03N2	**Juan Fernandez**	**19.05**	**197**	T		T	08 50 27.0	
	baz=17,slow=74,SNR=38							
H03N3	**Juan Fernandez**	**19.07**	**197**	T		T	08 50 26.2	
	baz=17,slow=74,SNR=34							
ITTB	**Itaituba**	**19.59**	**58**	*e*P		**P**	**08 31 37.6**	**-0.7**
TRCB	**Terra Rica**	**20.05**	**115**	*e*P		**P**	**08 31 43.2**	**-0.1**
ITQB	**Itaqui**	**20.36**	**137**	*e*P		Pn	08 31 48.5	-1.0
PCMB	**Pacaembu**	**20.95**	**111**	*e*P		**P**	**08 31 53.2**	**+0.3**
ITRB	**Iturama**	**21.41**	**105**	*e*P		**P**	**08 31 58.8**	**+0.9**
ITAB	**Concordia**	**22.23**	**126**	*e*P		**P**	**08 32 07.0**	**+0.6**
FRTB	**Fartura**	**22.91**	**114**	*e*P		**P**	**08 32 13.7**	**+0.3**
BDFB	**Brasilia**	**23.44**	**94**	P		**P**	**08 32 17.5**	**-0.9**
	2.2nm,0.5s,baz=254,slow=10,SNR=6.7							
PEXB	**Peixe**	**23.55**	**85**	*e*P		**P**	**08 32 20.2**	**+0.9**
MCPB	**Macapa, AP**	**24.91**	**55**	*e*P		**P**	**08 32 32.6**	**+1.0**
JANB	**Januaria**	**27.04**	**93**	*e*P		**P**	**08 32 51.0**	**+0.1**
GDU01	**Guandu, BA**	**31.73**	**91**	*e*P		**P**	**08 33 32.9**	**+0.5**
NBIT	**Itapeh - BA**	**31.74**	**94**	*e*P		**P**	**08 33 33.3**	**+0.8**
TORD	**Torodi Ar. Bea**	**78.48**	**73**	P		**P**	**08 39 07.9**	**-0.3**
	0.7nm,0.6s,baz=270,slow=5.0,SNR=1.9							

MOS ***15*** *08:33:45.1±1.2,34˚.59N×32˚.38E,h12km,mb4.6/12,Error ellipse: s-maj=9.4km s-min=5.5km az=87.3*
IDC ***15*** *08:33:46.2±0.9,34˚.87N×32˚.37E,h0km,mb4.2/17, mb1 4.3/21,mb1mx4.1/55,mbtmp4.2/21,ML4.3/4,Error ellipse: s-maj=19.4km s-min=15.0km az=30.0*
ISK ***15*** *08:33:46.1,34˚.63N×32˚.37E,h6km,ML4.1/34*
NEIC ***15*** *08:33:47.9±2.6,34˚.83N±0˚.05×32˚.47E±0˚.06,h10km±1km, mb4.3/5,ML4.0(NIC),Error ellipse: s-maj=10.6km s-min=7.3km az=220.0*
NIC ***15*** *08:33:49.1±0.0,34˚.84N×32˚.42E,h24km,MI4.0/6*
DDA ***15*** *08:33:50.0,34˚.99N×32˚.52E,h6km±8km,MW4.5*
GII ***15*** *08:33:52.9±0.0,34˚.68N×32˚.43E,h25km,mb4.1/4, MD3.8/8*
THE ***15*** *08:33:56.2,35˚.10N×32˚.00E,h14km±30km,ML4.0/4,Error ellipse: s-maj=38.7km s-min=2.1km az=108.0*

ISC 15 08:33:46.7±1.0,34˚63N±0˚02×32˚37E±0˚02,h13km±6km, n174,σ2§52/208,mb4.2/20,6C-6D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res
NATA	**Nata**	**0.22**	**47**	P	**Pb**	**08 33 54.3**	**+1.8**
NATA				S	**Sg**	**08 33 57.9**	**+3.1**
NATA				AML	AML	08 33 58.0	
	979nm,0.4s						
NATA				AML	AML	08 33 58.0	
	979nm,0.4s						
NATA				AML	AML	08 33 58.1	
	1µm,0.5s						
NATA				AML	AML	08 33 58.1	
	1µm,0.5s						
AKMS	**Akamas**	**0.39**	**356**	P	**Pb**	**08 33 55.0**	**-0.4**
AKMS				S	**Sg**	**08 33 59.2**	**-0.6**
AKMS				AML	AML	08 33 59.4	
	91nm,0.2s						
AKMS				AML	AML	08 33 59.4	
	91nm,0.2s						
AKMS				AML	AML	08 33 59.5	
	256nm,0.3s						
AKMS				AML	AML	08 33 59.5	
	256nm,0.3s						
SZAC	**Souni**	**0.44**	**73**	⇓P	**Pn**	**08 33 57.7**	**-1.0**
SZAC				AML	AML	08 34 04.5	
	54nm,0.3s						
SZAC				AML	AML	08 34 04.5	
	54nm,0.3s						
SZAC				S	**Sb**	**08 34 04.6**	**+1.9**
SZAC				AML	AML	08 34 04.9	
	58nm,0.3s						
SZAC				AML	AML	08 34 04.9	
	58nm,0.3s						
ALFC	**Alefka**	**0.56**	**19**	⇓P	**Pb**	**08 33 57.1**	**-1.2**
ALFC				S	**Sg**	**08 34 02.6**	**-2.5**
ALFC				AML	AML	08 34 04.0	
	77nm,0.7s						
ALFC				AML	AML	08 34 04.0	
	77nm,0.7s						
ALFC				AML	AML	08 34 05.3	
	74nm,0.4s						
ALFC				AML	AML	08 34 05.3	
	74nm,0.4s						
LEF	**Lefka**	**0.65**	**41**	PG	**Pg**	**08 33 58.4**	**-0.9**
LEF				SG	**Sb**	**08 34 07.8**	**-1.0**
ASGA	**Asgata**	**0.74**	**78**	P	**Pn**	**08 34 02.5**	**-0.3**
ASGA				S	**Sn**	**08 34 12.4**	**-1.4**
ASGA				AML	AML	08 34 14.9	
	25nm,1.0s						
ASGA				AML	AML	08 34 14.9	
	50nm,0.9s						
ASGA				AML	AML	08 34 14.9	
	25nm,1.0s						
ASGA				AML	AML	08 34 14.9	
	50nm,0.9s						
AKDN	**Akdeniz- Kıbrı**	**0.83**	**36**	PG	**Pb**	**08 34 02.2**	**-0.7**
AKDN				SG	**Sb**	**08 34 14.3**	**+0.4**
CSS	**Mathiatis**	**0.86**	**67**	Pg	**Pn**	**08 34 03.6**	**-0.8**
CSS				Sg	**Sn**	**08 34 15.9**	**-0.9**
CSS	**Mathiatis**	**0.86**	**67**	PG	**Pn**	**08 34 02.9**	**-1.5**
CSS				SG	**Sn**	**08 34 15.6**	**-1.2**
CSS	**Mathiatis**	**0.86**	**67**		**Pn**	**08 34 04.1**	**-0.3**
CSS	**Mathiatis**	**0.86**	**67**	⇑P	**Pn**	**08 34 03.8**	**-0.6**
AKIN	**Akıncılar- Kıb**	**0.98**	**67**	PG	**Pn**	**08 34 04.9**	**-1.2**
MVOU	**Mavrovouni**	**1.11**	**69**	⇓P	**Pg**	**08 34 08.0**	**0.0**
MVOU				S	**Sn**	**08 34 22.1**	**-0.8**
MVOU				AML	AML	08 34 24.8	
	9.4nm,0.8s						
MVOU				AML	AML	08 34 24.8	
	9.4nm,0.8s						
MVOU				AML	AML	08 34 24.9	
	7.1nm,0.7s						
MVOU				AML	AML	08 34 24.9	
	7.1nm,0.7s						
LFK	**Lefkose**	**1.15**	**55**	PN	**Pg**	**08 34 08.7**	**-0.2**
OSC1	**CSNet OBS 1**	**1.45**	**219**	P	**Pg**	**08 34 16.0**	**+1.5**
OSC1				S	**Sg**	**08 34 37.9**	**+4.6**
OSC2	**CSNet OBS 4**	**1.55**	**183**	P	**Pg**	**08 34 17.8**	**+1.3**
OSC2				S	**Sg**	**08 34 40.9**	**+4.2**
BOZY	**Bozyazi-Mersin**	**1.56**	**18**	PN	**Pb**	**08 34 14.1**	**-1.2**
GAZI	**Gazipasa**	**1.60**	**358**	*i* P	**Pn**	**08 34 13.8**	**-0.8**
EREN	**Erenkoy**	**1.73**	**58**	*i* P	**Pg**	**08 34 18.1**	**-1.7**
EREN				*i* S	**Sg**	**08 34 44.6**	**+2.4**
EREN	**Erenkoy**	**1.73**	**58**	PN	**Pb**	**08 34 17.7**	**-0.5**
YORU	**Yoruktepe-Mers**	**1.74**	**29**	PN	**Pb**	**08 34 16.7**	**-1.7**
AKK2	**Akkuyu-Mersin**	**1.79**	**32**	PN	**Pb**	**08 34 17.9**	**-1.3**
AKK1	**Akkuyu-Mersin**	**1.79**	**32**	PN	**Pb**	**08 34 18.1**	**-1.1**
AKKU	**Akkuyu-Mersin**	**1.81**	**32**	PN	**Pb**	**08 34 18.4**	**-1.1**
AKKU					**Sb**	**08 34 40.8**	**-1.2**
OREN	**Orenkoy-Mersin**	**1.81**	**29**	PN	**Pb**	**08 34 18.6**	**-1.0**
GULN	**MERSIN_Gulnar**	**1.82**	**31**	*i* P	**Pn**	**08 34 17.4**	**-0.2**
GULN				*i* S	**Sn**	**08 34 39.7**	**-0.9**
BERE	**Bereket-Mersin**	**1.85**	**22**	PN	**Pb**	**08 34 19.1**	**-1.3**
TEPK	**Tepekoy-MERSIN**	**1.86**	**31**	PN	**Pb**	**08 34 19.1**	**-1.4**
TISA	**Tisan-Mersin**	**1.86**	**35**	PN	**Pb**	**08 34 18.9**	**-1.7**
YESI	**Yesilovacik-Me**	**1.88**	**33**	PN	**Pb**	**08 34 19.3**	**-1.4**
IKL	**Isikli**	**1.93**	**33**	PN	**Pb**	**08 34 19.7**	**-2.0**
TEVE	**Tevekalti-Mers**	**2.00**	**26**	PN	**Pb**	**08 34 21.6**	**-1.4**
KEBE	**Keben-Mersin**	**2.12**	**31**	PN	**Pb**	**08 34 23.4**	**-1.5**
SILI	**Silifke-Mersin**	**2.15**	**36**	PN	**Pb**	**08 34 23.6**	**-1.8**
KIZK	**Mersin**	**2.34**	**38**	*i* P	**Pb**	**08 34 26.1**	**-2.7**
KIZK				*i* S	**Sn**	**08 34 54.7**	**+1.2**
KIZK	**Mersin**	**2.34**	**38**	PN	**Pb**	**08 34 26.4**	**-2.3**
KEPZ	**Antalya-Kepez**	**2.35**	**345**	*i* P	**Pn**	**08 34 25.9**	**+0.9**
AKUM	**Antalya-Kumluc**	**2.37**	**316**	*i* P	**Pg**	**08 34 32.0**	**-0.1**
AKUM				*i* S	**Sg**	**08 35 05.7**	**+3.0**
KKBE	**Karaman, Kazim**	**2.63**	**10**	*i* P	**Pb**	**08 34 30.9**	**-2.7**
KKBE				*i* S	**Sn**	**08 35 02.2**	**+1.7**
KRMN	**Karaman**	**2.64**	**16**	PN	**Pb**	**08 34 30.8**	**-3.0**
KSL	**Kastellorizon**	**2.74**	**304**	P	**Pn**	**08 34 30.6**	**+0.4**
KSL				S	**Sn**	**08 34 57.2**	**-5.9**
AKAS	**Kas**	**2.77**	**306**	PN	**Pn**	**08 34 32.4**	**+1.6**
AKAS	**Kas**	**2.77**	**306**	Pn	**Pn**	**08 34 31.5**	**+0.7**
MERS	**Mersin**	**2.84**	**37**	PN	**Pn**	**08 34 33.3**	**+1.6**
SEDI	**Konya, Seydise**	**2.86**	**350**	*i* P	**Pb**	**08 34 34.2**	**-3.4**
SEDI				*i* S	**Sb**	**08 35 09.5**	**-3.0**
ELL	**Elmali**	**2.91**	**317**	P	**Pb**	**08 34 36.2**	**-2.3**
ELL	**Elmali**	**2.91**	**317**	PN	**Pn**	**08 34 34.5**	**+1.7**
ELL	**Elmali**	**2.91**	**317**		**Pb**	**08 34 36.2**	**-2.3**
OFRI	**`Ofer**	**2.96**	**132**	Pn	**Pb**	**08 34 37.1**	**-2.2**
OFRI				Sn	**Sb**	**08 35 12.8**	**-2.5**
MMA0B	**Mount Meron ar**	**2.99**	**122**	Pn	**Pb**	**08 34 36.8**	**-3.0**
MMA0B				Sn	**Sb**	**08 35 12.8**	**-3.5**
MMAI	**Mount Meron Ar**	**2.99**	**122**	Pn	**Pb**	**08 34 37.1**	**-2.7**
	38nm,0.3s,baz=307,slow=13,SNR=54						
MMAI				Sn	**Sb**	**08 35 14.1**	**-2.2**
	78nm,0.3s,baz=320,slow=27,SNR=19						
BLGI	**Bet Lehem HaGe**	**3.02**	**128**	Pn	**Pb**	**08 34 37.5**	**-2.7**
BLGI				Sn	**Sb**	**08 35 13.4**	**-3.5**
DED	**Mersin**	**3.05**	**40**	*i* P	**Pn**	**08 34 36.5**	**+2.0**
DED				*i* S	**Sn**	**08 35 12.7**	**+1.7**
GEM	**Giv'at Ha'Em**	**3.08**	**116**	Pn	**Pb**	**08 34 38.6**	**-2.7**
GEM				Sn	**Sb**	**08 35 14.6**	**-4.2**
NATI	**Neve Ativ**	**3.11**	**115**	Pn	**Pb**	**08 34 37.7**	**-4.1**
NATI				Sn	**Sb**	**08 35 15.9**	**-3.7**
KRTS	**Karatas**	**3.12**	**51**	PN	**Pn**	**08 34 37.1**	**+1.6**
BCK	**Bucak**	**3.17**	**333**	P	**Pn**	**08 34 38.0**	**+1.7**
BCK	**Bucak**	**3.17**	**333**	PN	**Pn**	**08 34 38.1**	**+1.7**
ASUZ	**Hatay-Arsuz**	**3.24**	**58**	*i* P	**Pb**	**08 34 40.3**	**-3.7**
ASUZ				*i* S	**Sb**	**08 35 21.5**	**-1.9**
SLTI	**Sal'it**	**3.26**	**136**	Pn	**Pb**	**08 34 41.6**	**-2.8**
SLTI				Sn	**Sb**	**08 35 19.6**	**-4.4**
KONT	**Konya--Tatoy**	**3.31**	**360**	*i* P	**Pb**	**08 34 41.4**	**-3.8**
KONT				*i* S	**Sb**	**08 35 23.2**	**-2.2**
KONT	**Konya--Tatoy**	**3.31**	**360**	PN	**Pn**	**08 34 40.6**	**+2.5**
YESY	**Yesilyurt**	**3.34**	**19**	PN	**Pn**	**08 34 40.8**	**+2.2**
FETY	**Fethiye**	**3.34**	**308**	P	**Pn**	**08 34 39.4**	**+0.8**
MMLI	**Mount Malkishu**	**3.36**	**130**	Pn	**Pb**	**08 34 42.5**	**-3.5**
MMLI				Sn	**Sb**	**08 35 22.5**	**-4.2**
MMLI	**Mount Malkishu**	**3.36**	**130**	PN	**Pb**	**08 34 41.5**	**-4.5**
KARA	**Karaisali**	**3.41**	**39**	PN	**Pn**	**08 34 41.4**	**+2.0**
DOGA	**KONYA_Doganhis**	**3.52**	**351**	*i* P	**Pb**	**08 34 44.4**	**-4.4**
DOGA				*i* S	**Sb**	**08 35 26.9**	**-4.6**
ISP	**Isparta**	**3.52**	**335**	P	**Pn**	**08 34 44.1**	**+3.0**
ISP	**Isparta**	**3.52**	**335**	Pn	**Pb**	**08 34 45.2**	**-3.6**
ISP	**Isparta**	**3.52**	**335**	Pn	**Pn**	**08 34 44.1**	**+3.0**
HMDT	**Nahal Hemdat**	**3.54**	**131**	Pn	**Pb**	**08 34 45.9**	**-3.3**
HMDT				Sn	**Sb**	**08 35 26.8**	**-5.3**
LADK	**Ladik-KONYA**	**3.56**	**360**	PN	**Pn**	**08 34 44.2**	**+2.5**
TAHT	**Tahtakopru-Hat**	**3.57**	**60**	PN	**Pn**	**08 34 43.8**	**+2.2**
CEYT	**Ceyhan**	**3.63**	**48**	PN	**Pn**	**08 34 43.8**	**+1.3**
ALIN	**Konya, Altinte**	**3.69**	**6**	*i* P	**Pn**	**08 34 46.1**	**+2.7**
CMRD	**Camardi-Nigde**	**3.69**	**34**	PN	**Pn**	**08 34 45.6**	**+2.1**
DALY	**Dalyan (Mula)**	**3.73**	**307**	PN	**Pn**	**08 34 45.4**	**+1.5**
AMAZ	**Amatzia**	**3.75**	**145**	Pn	**Pb**	**08 34 48.2**	**-4.6**
AMAZ				Sn	**Sb**	**08 35 33.1**	**-5.1**
AKO	**Adana**	**3.77**	**41**	*i* P	**Pn**	**08 34 46.6**	**+2.2**
AKO				*i* S	**Sn**	**08 35 32.2**	**+3.6**
ARG	**Arkhangelos**	**3.81**	**296**	P	**Pn**	**08 34 47.2**	**+2.2**
ARG				S	**Sn**	**08 35 25.6**	**-4.1**
	278nm,0.5s						
ARG	**Arkhangelos**	**3.81**	**296**	P	**Pn**	**08 34 47.2**	**+2.2**
ARG	**Arkhangelos**	**3.81**	**296**	PN	**Pn**	**08 34 46.9**	**+1.9**
NIDE	**Nigde/Merkez-G**	**3.88**	**29**	*i* P	**Pn**	**08 34 49.3**	**+3.1**
NIDE				*i* S	**Sb**	**08 35 36.8**	**-5.2**
DSI	**Dead Sea**	**3.96**	**140**	Pn	**Pb**	**08 34 51.8**	**-4.5**
CHBY	**Cihanbeyli**	**3.97**	**6**	PN	**Pn**	**08 34 49.9**	**+2.7**
YTIR	**Yattir**	**3.99**	**144**	Pn	**Pb**	**08 34 52.2**	**-4.7**
YTIR				Sn	**Sb**	**08 35 38.9**	**-6.1**
KOZT	**Kozan**	**3.99**	**44**	PN	**Pn**	**08 34 49.5**	**+2.0**
GULA	**Gulagac**	**4.00**	**22**	PN	**Pn**	**08 34 49.9**	**+2.2**
KZIT	**Kziot**	**4.08**	**155**	Pn	Pb	08 34 53.4	-5.0
KZIT				Sn	**Sb**	**08 35 40.7**	**-7.0**
YER	**Yerkesik**	**4.16**	**308**	P	**Pn**	**08 34 52.1**	**+2.3**
YER	**Yerkesik**	**4.16**	**308**	P	**Pn**	**08 34 52.1**	**+2.3**
SHUT	**Suhut-Afyon**	**4.18**	**340**	PN	**Pn**	**08 34 53.1**	**+2.9**
KAMA	**Osmaniye**	**4.32**	**53**	*i* P	**Pn**	**08 34 53.3**	**+1.2**
KARP	**Karpathos**	**4.37**	**284**	P	**Pn**	**08 34 54.3**	**+1.6**
KARP				S	**Sn**	**08 35 41.2**	**-2.3**
	575nm,0.5s						
KARP	**Karpathos**	**4.37**	**284**		**Pn**	**08 34 54.3**	**+1.6**
KARP	**Karpathos**	**4.37**	**284**	⇑P	**Pn**	**08 34 54.2**	**+1.5**
KARJ	**KARJ**	**4.46**	**141**	Pn	Pn	08 34 47.2	-6.7
HCB	**Kahramanmara**	**4.57**	**52**	*i* P	**Pn**	**08 34 57.4**	**+2.0**
NIS1	**Nisyros Isl.**	**4.67**	**296**	P	**Pn**	**08 34 58.3**	**+1.5**
GAZ	**Gaziantep**	**4.68**	**56**		**Pn**	**08 34 57.9**	**+1.0**
ZFRI	**Zfri**	**4.70**	**149**	Pn	Pn	08 35 01.1	+3.9
ZFRI				Sn	**Sn**	**08 35 55.5**	**+3.9**
BODT	**Bodrum**	**4.78**	**302**	P	**Pn**	**08 34 58.6**	**+0.3**
PRNI	**Paran**	**4.81**	**152**	Pn	Pb	08 35 03.0	-7.8
PRNI				Sn	**Sn**	**08 35 58.3**	**+4.0**
MANT	**Manisa**	**4.93**	**323**	Pn	**Pn**	**08 35 00.1**	**-0.4**
SARI	**SarD1z-Kayseri**	**4.98**	**40**	PN	**Pn**	**08 35 03.5**	**+2.2**
ZKR	**Zakros**	**5.08**	**277**	P	**Pn**	**08 35 04.9**	**+2.4**
ZKR				S	**Sn**	**08 36 00.2**	**-0.8**
HRFI	**Mount Harif**	**5.10**	**153**	Pn	Pn	08 35 07.1	+4.3
HRFI				Sn	**Sn**	**08 36 06.0**	**+4.4**
BR131	**Keskin Array S**	**5.19**	**11**	⇑P	**Pn**	**08 35 06.8**	**+2.7**
BR131	**Keskin Array S**	**5.19**	**11**		**Pn**	**08 35 04.9**	**+0.8**
BRTR	**Keskin Array B**	**5.19**	**11**	Pn	**Pn**	**08 35 07.0**	**+2.9**
	3.7nm,0.3s,baz=190,slow=15,SNR=44						
BRTR	**Keskin Array B**	**5.19**	**11**	*e*P	**Pn**	**08 35 07.0**	**+2.9**
BRTR				pmax	pmax		
	comp=Z,12nm,0.5s						
BRTR	**Keskin Array B**	**5.19**	**11**		**Pn**	**08 35 06.8**	**+2.8**
ANTO	**Ankara**	**5.24**	**4**	P	**Pn**	**08 35 04.6**	**-0.1**
ANTO	**Ankara**	**5.24**	**4**	Pn	**Pn**	**08 35 04.6**	**-0.1**
MBRI	**Mt Berech**	**5.28**	**155**	Pn	Pn	08 35 09.9	+4.6
MBRI				Sn	**Sn**	**08 36 10.4**	**+4.4**
EIL	**Elat**	**5.41**	**155**	Pn	Pn	08 35 11.4	+4.5
	comp=Z,8.0nm,0.3s,baz=351,slow=4.7,SNR=47						
EIL				Sn	**Sn**	**08 36 13.1**	**+4.1**
	comp=Z,9.5nm,0.3s,baz=283,slow=21,SNR=6.5						
EIL	**Elat**	**5.41**	**155**	Pn	Pn	08 35 11.1	+4.2
EIL				Sn	**Sn**	**08 36 13.3**	**+4.3**
SMG	**Samos**	**5.43**	**306**	P	**Pn**	**08 35 07.9**	**+0.6**
SMG				S	**Sn**	**08 36 04.4**	**-5.2**
	comp=Z,310nm,0.3s						
APE	**Apeiranthos**	**6.07**	**296**	⇓*i*P	**Pn**	**08 35 17.0**	**+1.0**
IDI	**Anoyia**	**6.18**	**278**	Pn	**Pn**	**08 35 19.5**	**+1.9**
	comp=Z,5.6nm,0.3s,baz=64,slow=14,SNR=14						
IDI				Sn	**Sn**	**08 36 27.0**	**-1.2**
	comp=Z,11nm,0.3s,baz=325,slow=19,SNR=10						
IDI	**Anoyia**	**6.18**	**278**	P	**Pn**	**08 35 20.3**	**+2.7**
IDI				S	**Sn**	**08 36 26.5**	**-1.6**
	comp=Z,112nm,0.4s						
IDI	**Anoyia**	**6.18**	**278**		**Pn**	**08 35 20.5**	**+2.9**
CHOS	**Chios island**	**6.32**	**308**	P	**Pn**	**08 35 20.5**	**+1.0**
CHOS				S	**Sn**	**08 36 24.9**	**-6.7**
SOC	**Sochi**	**10.60**	**30**	*e*P	**Pn**	**08 36 20.1**	**+1.9**
SOC				*e*		08 38 21.3	
SOC				pmax	pmax		
	comp=Z,44nm,0.8s						
SOC				MLR	MLR		
	comp=Z,1µm,13.0s						
GNI	**Garni**	**11.27**	**57**	*e*P	**Pn**	**08 36 29.1**	**+1.6**
KBZ	**Khabaz**	**12.21**	**39**	*i* P	**Pn**	**08 36 41.3**	**+1.2**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	**12.26**	**38**	*e*P	**Pn**	**08 36 42.6**	**+1.7**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
AKASG	**Malin Array Be**	**16.23**	**353**	Pn	**P**	**08 37 36.3**	**-0.9**
	comp=Z,3.3nm,0.3s,baz=176,slow=10,SNR=13						
AKBB	**Malin Array Si**	**16.23**	**353**	⇑*i*P	**P**	**08 37 35.6**	**-1.6**
AKBB				pmax	pmax		
	comp=Z,26nm,1.3s						
AKBB	**Malin Array Si**	**16.23**	**353**		**P**	**08 37 35.4**	**-1.8**
AKBB				IAmb	IAmb	08 37 37.8	
	comp=Z,26nm,1.2s						
GERES	**GERESS Array B**	**19.82**	**321**	P	**Pn**	**08 38 17.4**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=131,slow=8.6,SNR=9.7						
GERES	**GERESS Array B**	**19.82**	**321**	P	**P**	**08 38 16.7**	**-0.2**
KHC	**Kasperske Hory**	**20.06**	**322**	*e*P	Pn	08 38 19.5	-1.8
KHC	**Kasperske Hory**	**20.06**	**322**	*e*P	Pn	08 38 19.5	-1.8
KHC	**Kasperske Hory**	**20.06**	**322**	P	**P**	**08 38 19.1**	**-0.5**
KHC				IAmb	IAmb	08 38 20.4	
	comp=Z,9.1nm,0.6s						
OBN	**Obninsk**	**20.69**	**7**	⇑*i*P	Pn	08 38 28.5	0.0
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BELG	**Belogornoye**	**20.84**	**27**	P	Pn	08 38 28.3	-2.1
	comp=Z,39nm,0.9s,baz=147,slow=12,SNR=4.6						
BELG	**Belogornoye**	**20.84**	**27**	⇓*i*P	Pn	08 38 29.2	-1.1
BELG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GEYT	**Alibeck**	**20.99**	**73**	P	Pn	08 38 30.7	-1.6
	comp=Z,1.6nm,0.5s,baz=286,slow=8.6,SNR=3.7						
VSU	**Vasula**	**24.14**	**353**	*i* P	**P**	**08 39 01.6**	**-0.4**
VSU				pmax	pmax		
	comp=Z,29nm,1.0s						
AKTO	**Aktyubinsk**	**24.45**	**42**	P	**P**	**08 39 05.2**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=234,slow=10,SNR=5.0						
KIRV	**Kirov**	**26.51**	**20**	⇑*i*P	**P**	**08 39 22.8**	**-0.7**
KLMR	**Klimovskoe**	**26.64**	**8**	*e*P	**P**	**08 39 20.8**	**-3.9**
KLMR				pmax	pmax		
	comp=Z,17nm,1.1s						
KLMR	**Klimovskoe**	**26.64**	**8**	*e*P	**P**	**08 39 20.9**	**-3.8**
KLMR				AMP		08 39 27.9	
	comp=Z,17nm,1.1s						
VALR	**Valaam**	**26.77**	**358**	*i* P	**P**	**08 39 26.3**	**+0.5**
VALR				pmax	pmax		
	comp=Z,20nm,0.8s						
FINES	**FINESS Array B**	**27.13**	**353**	P	**P**	**08 39 28.0**	**-1.1**
	comp=Z,8.2nm,0.5s,baz=156,slow=11,SNR=27						
ARU	**Arti**	**28.18**	**31**	*e*P	**P**	**08 39 39.2**	**+0.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HFS	**Hagfors**	**28.27**	**340**	P	**P**	**08 39 38.5**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=90,slow=22,SNR=1.6						
AAK	**Ala-Archa**	**33.58**	**63**	*d i*P	**P**	**08 40 28.0**	**+1.4**
AAK				pmax	pmax		
	comp=Z,20nm,1.5s						
TORD	**Torodi Ar. Bea**	**35.04**	**240**	P	**P**	**08 40 42.4**	**+3.1**
	comp=Z,1.0nm,0.5s,baz=30,slow=7.9,SNR=5.5						
TORD	**Torodi Ar. Bea**	**35.04**	**240**	IAmb	IAmb	08 40 43.5	
	comp=Z,0.9nm,0.7s						
ARCES	**ARCESS Array B**	**35.17**	**356**	P	**P**	**08 40 38.8**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=166,slow=9.1,SNR=23						
MK31	**Makanchi Array**	**39.12**	**56**	*e*P	**P**	**08 41 15.0**	**+1.3**
MKAR	**Makanchi Array**	**39.12**	**56**	P	**P**	**08 41 15.1**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=259,slow=8.1,SNR=4.8						
MKAR	**Makanchi Array**	**39.12**	**56**	*e*P	**P**	**08 41 14.7**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV	**Zalesovo Beam**	**41.12**	**45**	P	**P**	**08 41 30.0**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=268,slow=9.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**41.12**	**45**	*e*P	**P**	**08 41 30.3**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SPITS	**Spitsbergen Ar**	**44.20**	**355**	P	**P**	**08 41 54.6**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=153,slow=13,SNR=9.2			

0.9nm,0.9s
MVOU AML AML 08 38 46.2
0.9nm,1.0s
LFK Lefkose 1.09 62 PN **Pn** **08 38 29.1 +0.1**
LFK SN **Sg** **08 38 45.8 +2.0**
GAZI Gazipasa 1.46 359 *i* P **Pn** **08 38 33.7 -0.5**
GAZI *i* S **Sn** **08 38 52.9 -0.1**
GAZI Gazipasa 1.46 359 PN **Pn** **08 38 33.5 -0.6**
EREN Erenkoy 1.67 62 *i* P **Pg** **08 38 41.3 +0.8**
EREN Erenkoy 1.67 62 PN **Pn** **08 38 37.6 +0.7**
OSC2 CSNet OBS 4 1.69 183 P **Pn** **08 38 37.0 -0.2**
AKKU Akkuyu-Mersin 1.69 35 PN **Pn** **08 38 37.6 +0.3**
GULN MERSIN_Gulnar 1.71 34 *i* P **Pn** **08 38 37.6 +0.1**
GULN *i* S **Sb** **08 39 00.7 0.0**
BERE Bereket-Mersin 1.73 24 PN **Pn** **08 38 38.0 +0.2**
KARG Kargicak-Mersi 1.81 37 PN **Pn** **08 38 38.8 0.0**
IKL Isikli 1.82 36 PN **Pn** **08 38 39.1 +0.1**
TEVE Tevekalti-Mers 1.88 28 PN **Pn** **08 38 40.2 +0.2**
KEBE Keben-Mersin 2.00 33 PN **Pn** **08 38 42.1 +0.5**
SILI Silifke-Mersin 2.04 38 PN **Pn** **08 38 42.7 +0.7**
KEPZ Antalya-Kepez 2.22 344 *i* P **Pn** **08 38 44.6 +0.1**
KEPZ *i* S **Sb** **08 39 14.1 -1.2**
KIZK Mersin 2.24 40 *eP* **Pb** **08 38 46.9 -1.6**
KIZK *i* S **Sb** **08 39 16.2 +0.2**
KIZK Mersin 2.24 40 PN **Pn** **08 38 44.9 +0.1**
AKUM Antalya-Kumluc 2.26 314 *i* P **Pg** **08 38 52.0 +0.1**
AKUM *i* S **Sg** **08 39 29.1 +7.9**
KKBE Karaman, Kazim 2.49 11 *i* P **Pb** **08 38 51.1 -1.7**
KKBE *i* S **Sb** **08 39 25.6 +2.3**
SEDI Konya, Seydise 2.72 350 *i* P **Pb** **08 38 55.1 -1.7**
SEDI *i* S **Sb** **08 39 30.7 +0.7**
SEDI IAML 08 39 40.0
comp=N,58nm,0.6s
SEDI IAML 08 39 43.0
comp=E,53nm,0.9s
MERS Mersin 2.73 39 PN **Pn** **08 38 51.6 0.0**
KERG Konya-Eregli 3.00 28 *i* S **Sb** **08 39 38.4 +0.4**
OFRI `Ofer 3.06 134 Pn **Pn** **08 38 56.1 0.0**
OFRI Sn **Sn** **08 39 31.7 -0.6**
MMA0B Mount Meron ar 3.08 124 Pn **Pn** **08 38 56.2 -0.1**
MMA0B Sn **Sn** **08 39 32.2 -0.5**
MMAI Mount Meron Ar 3.08 124 Pn **Pn** **08 38 56.3 0.0**
comp=E,13nm,0.3s,baz=306,slow=13,SNR=12
MMAI Sn **Sn** **08 39 32.6 -0.2**
comp=E,14nm,0.3s,baz=314,slow=30,SNR=5.6
GEM Giv'at Ha'Em 3.15 119 Pn **Pn** **08 38 57.4 +0.1**
GEM Sn **Sn** **08 39 34.2 -0.3**
NATI Neve Ativ 3.18 117 Pn **Pn** **08 38 58.3 +0.6**
DOGA KONYA_Doganhis 3.38 351 *i* P **Pn** **08 39 04.2 +3.7**
DOGA *i* S **Sb** **08 39 48.2 -0.6**
DOGA IAML 08 39 58.0
comp=E,33nm,1.1s
MMLI Mount Malkishu 3.45 131 Pn **Pn** **08 39 01.7 +0.2**
MMLI Sn **Sn** **08 39 41.6 -0.4**
BAGO Egridir - ISPA 3.46 339 *i* P **Pn** **08 39 06.1 -3.2**
BAGO *i* S **Sb** **08 39 54.1 +3.1**
YVAC Isparta, Yalva 3.61 346 *i* P **Pn** **08 39 02.0 -1.7**
YVAC *i* S **Sn** **08 39 50.3 +4.2**
DALY Dalyan (Mula) 3.64 305 *i* P **Pn** **08 39 04.6 +0.6**
DALY *i* S **Sn** **08 39 46.0 -0.5**
DALY IAML 08 39 59.0
comp=N,24nm,0.8s
HMDT Nahal Hemdat 3.64 133 Pn **Pn** **08 39 04.9 +0.8**
HMDT Sn **Sn** **08 39 46.4 -0.3**
TAVA DENIZLI_Tavas 3.88 315 *i* P **Pn** **08 39 08.6 +1.2**
TAVA *i* S **Sn** **08 39 50.5 -2.1**
TAVA IAML 08 40 24.0
comp=E,17nm,0.7s
TURN Turunc 3.90 302 *i* P **Pn** **08 39 08.5 +0.9**
KZIL AFYON_Kizioren 3.92 333 *i* P **Pn** **08 39 09.9 +2.0**
DSI Dead Sea 4.07 141 Pn **Pn** **08 39 10.9 +0.9**
DSI Sn **Sn** **08 39 56.9 -0.3**
YTIR Yattir 4.11 145 Pn **Pn** **08 39 10.3 -0.3**
YTIR Sn **Sn** **08 39 58.2 -0.1**
MULA Mugla, Merkez- 4.11 308 *i* P **Pn** **08 39 12.7 +2.2**
MULA *i* S **Sn** **08 39 58.3 0.0**
KARJ KARJ 4.57 142 Pn Pn 08 39 07.0 -10
KARJ Sn Sn 08 39 50.7 -19
BDRM Kayabasi 4.60 301 *i* P **Pn** **08 39 16.6 -0.7**
BDRM *i* S **Sn** **08 40 07.8 -2.5**
BDRM IAML 08 40 44.0
comp=N,12nm,0.9s
BDRM IAML 08 40 44.0
comp=E,15nm,1.6s
AYDN Tasoluk 4.63 310 *i* P **Pn** **08 39 18.6 +0.8**
AYDN *i* S **Sn** **08 40 10.2 -0.9**
USAK Uak-Merkez 4.77 327 *i* P **Pn** **08 39 20.1 +0.6**
USAK *i* S **Sn** **08 40 14.2 -0.3**
PRNI Paran 4.94 152 Pn **Pn** **08 39 21.9 0.0**
PRNI Sn **Sn** **08 40 18.2 -0.4**
BRTR Keskin Array B 5.05 11 Pn **Pn** **08 39 25.2 +1.6**
comp=E,0.3nm,0.3s,baz=200,slow=14,SNR=3.1
HRFI Mount Harif 5.23 154 Pn **Pn** **08 39 26.2 +0.2**
MBRI Mt Berech 5.41 156 Pn **Pn** **08 39 29.0 +0.6**
MBRI Sn **Sn** **08 40 31.1 +0.8**
EIL Elat 5.54 156 Pn **Pn** **08 39 30.4 +0.3**
comp=E,2.0nm,0.3s,baz=327,slow=2.3,SNR=13
EIL Sn **Sn** **08 40 32.7 -0.7**
comp=E,1.3nm,0.3s,baz=158,slow=19,SNR=2.7
EIL Elat 5.54 156 Pn **Pn** **08 39 30.3 +0.2**
EIL Sn **Sn** **08 40 33.2 -0.2**
IDI Anoyia 6.15 277 Pn **Pn** **08 39 38.8 +0.2**
comp=E,0.8nm,0.3s,baz=345,slow=22,SNR=2.1
IDI Sn **Sn** **08 40 46.8 -1.8**
comp=E,1.1nm,0.3s,baz=293,slow=21,SNR=2.3
ARCES ARCESS Array B 35.03 356 P **P** **08 44 58.8 -1.1**
comp=E,0.8nm,0.8s,baz=165,slow=8.9,SNR=1.1
TORD Torodi Ar. Bea 35.10 240 P **P** **08 45 01.2 +0.1**
comp=E,0.4nm,0.6s,baz=41,slow=7.9,SNR=2.6

*IDC **15** 08:52:28.0±0.6,58°.80S×24°.90W,h0km,mb4.2/9, mb1 4.3/10,mb1mx4.2/27, mbtmp4.2/10,ML4.7/1,MS4.2/10, Ms1 4.2/10,ms1mx3.9/32,Error ellipse: s-maj=26.1km s-min=17.5km az=67.0*
*NEIC **15** 08:52:29.1±2.0,58°.9S±0°.1×24°.8W±0°.3,h10km±1km, mb4.7/35,Error ellipse: s-maj=25.6km s-min=15.2km az=50.0*
ISC 15 08:52:30.1±0.4,58°.98S±0°.07×24°.8W±0°.1,h18km,n125, σ1§45/110,mb4.6/22,MS4.2/8,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.96**	**301**	Pn		**Pn**	**08 54 24.1**	**-0.6**
VNA1	**Neumayer--Stat**	**13.60**	**156**	P		**Pn**	**08 55 42.5**	**+0.8**
VNA1				S		**Sn**	**08 58 10.2**	**-1.8**
VNA3	**Neumayer Olymp**	**13.80**	**159**	P		**Pn**	**08 55 44.7**	**+0.2**
VNA3				S		Sn	08 58 04.7	-12
VNA2	**Neumayer--Watz**	**13.99**	**156**	P		**Pn**	**08 55 48.0**	**+0.9**
	baz=322,slow=14							
VNA2				S		Sn	08 58 12.8	-9.0
SNAA	**Sanae**	**15.54**	**154**	P		**Pn**	**08 56 08.0**	**0.0**
SNAA				S		Sn	08 58 49.7	-10
SNAA	**Sanae**	**15.54**	**154**	Pn		**Pn**	**08 56 08.4**	**+0.3**
	3.3nm,0.3s,baz=318,slow=15,SNR=84							
SNAA				Sn		**Sn**	**08 58 50.2**	**-9.3**
	0.5nm,0.3s,baz=346,slow=22,SNR=1.4							
SNAA				LR		LR	09 00 44.8	
	comp=Z,354nm,21.7s,baz=315,slow=32							
SNAA	**Sanae**	**15.54**	**154**			**Pn**	**08 56 08.1**	**+0.1**
SNAA				IAmb		IAmb	08 56 20.0	
	comp=Z,16nm,0.6s							
PMSA	**Palmer Station**	**19.11**	**236**	LR		LR	09 03 49.7	
	comp=Z,946nm,18.7s,baz=123,slow=36							
BELA	**Belgrano 2**	**19.27**	**186**	P		**Pn**	**08 56 55.8**	**+1.6**
EFI	**East Falkland**	**20.09**	**277**	P		Pn	08 57 03.6	-0.7
MG02	**Cerro Sombrero**	**25.26**	**265**	P		**P**	**08 57 55.0**	**+0.2**
MG04	**Isla Riesco**	**26.43**	**263**	P		**P**	**08 58 05.5**	**+0.1**
MG05	**Puerto Natales**	**27.56**	**264**	P		**P**	**08 58 15.0**	**-0.5**
MG05				IAmb		IAmb	08 58 29.4	
	comp=Z,36nm,1.5s							
GO09	**Cerro Castillo**	**27.70**	**265**	P		**P**	**08 58 16.4**	**-0.5**
QSPA	**South Pole Qui**	**31.26**	**180**	P		**P**	**08 58 51.1**	**+2.6**
	comp=Z,1.6nm,0.6s,baz=196,slow=2.7,SNR=17							
QSPA	**South Pole Qui**	**31.26**	**180**	P		**P**	**08 58 50.8**	**+2.3**
PLTB	**Pedras Altas**	**33.40**	**312**	*eP*		**P**	**08 59 07.1**	**-0.2**
PLCA	**Paso Flores**	**33.81**	**282**	P		**P**	**08 59 11.2**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=143,slow=4.8,SNR=25							
PLCA	**Paso Flores**	**33.81**	**282**	P		**P**	**08 59 11.3**	**+0.4**
PLCA				IAmb		IAmb	08 59 28.6	
	comp=Z,9.4nm,1.3s							
PLCA	**Paso Flores**	**33.81**	**282**	*eP*		**P**	**08 59 11.4**	**+0.4**
CPSB	**Cacapava Do Su**	**34.55**	**313**	*eP*		**P**	**08 59 16.8**	**-0.5**
LL04	**Puerto Octay**	**34.63**	**280**	P		**P**	**08 59 17.8**	**0.0**
LL04				IAmb		IAmb	08 59 25.4	
	comp=Z,5.6nm,0.7s							
TER01	**Tubaro-SC**	**34.73**	**321**	*eP*		**P**	**08 59 19.6**	**+0.7**
LL05	**Los Muermos**	**34.81**	**278**	P		**P**	**08 59 19.8**	**+0.4**
ITAB	**Concordia**	**36.95**	**317**	*eP*		**P**	**08 59 38.0**	**+0.1**
BI02	**San Fabin de**	**37.29**	**286**	P		**P**	**08 59 39.4**	**-1.4**
ML02	**Panimavida**	**38.07**	**287**	P		**P**	**08 59 46.7**	**-0.6**
ML02				IAmb		IAmb	09 00 07.4	
	comp=Z,31nm,1.4s							
BO02	**Sierra Bellavi**	**38.53**	**288**	IAmb		IAmb	09 00 00.6	
	comp=Z,16nm,1.4s							
PARB	**Paraibuna**	**38.55**	**328**	*eP*		**P**	**08 59 52.4**	**+0.8**
PTGB	**Pitanga**	**39.24**	**319**	*eP*		**P**	**08 59 56.4**	**-0.9**
MT09	**Talagante**	**39.45**	**289**	P		**P**	**08 59 59.1**	**0.0**
MT09				IAmb		IAmb	08 59 59.8	
	comp=Z,44nm,1.5s							
CPUP	**Villa Florida**	**39.70**	**311**	P		**P**	**08 59 59.1**	**-2.0**
	comp=Z,6.5nm,1.3s,baz=142,slow=7.7,SNR=5.3							
CPUP	**Villa Florida**	**39.70**	**311**	IAmb		IAmb	09 00 03.1	
	comp=Z,5.5nm,1.4s							
CPUP	**Villa Florida**	**39.70**	**311**	*eP*		**P**	**08 59 59.3**	**-1.7**
PEL	**Peldehue**	**39.81**	**290**	P		**P**	**09 00 01.5**	**-0.5**
VA05	**Santo Domingo**	**39.85**	**288**	P		**P**	**09 00 02.9**	**+0.6**
MT02	**Curacav**	**39.94**	**289**	P		**P**	**09 00 03.3**	**+0.3**
MT02				IAmb		IAmb	09 00 14.4	
	comp=Z,27nm,1.1s							
VA03	**San Esteban**	**40.05**	**290**	P		**P**	**09 00 04.6**	**+0.5**
VA03				IAmb		IAmb	09 00 06.6	
	comp=Z,40nm,1.5s							
BSCB	**Bom Sucesso**	**40.57**	**331**	*eP*		**P**	**09 00 09.1**	**+0.7**
RIB01	**Linhares ES**	**41.20**	**337**	*eP*		**P**	**09 00 14.5**	**+1.0**
TRCB	**Terra Rica**	**41.21**	**319**	*eP*		**P**	**09 00 13.3**	**-0.3**
BB19B	**Bebedouro**	**41.53**	**326**	*eP*		**P**	**09 00 16.4**	**+0.2**
CO03	**El Pedregal**	**41.70**	**292**	P		**P**	**09 00 19.1**	**+1.4**
CO03				IAmb		IAmb	09 00 22.6	
	comp=Z,13nm,1.3s							
BSFB	**Barra de Sao F**	**41.76**	**337**	*eP*		**P**	**09 00 19.4**	**+1.4**
PCMB	**Pacaembu**	**41.86**	**322**	*eP*		**P**	**09 00 20.1**	**+1.1**
SJMB	**Sao Joao De Ma**	**41.95**	**336**	*eP*		**P**	**09 00 20.9**	**+1.3**
GO04	**Tololo Observa**	**42.31**	**292**	P		**P**	**09 00 24.3**	**+1.5**
GO04				IAmb		IAmb	09 00 34.1	
	comp=Z,30nm,1.4s							
NAN01	**Guarapari, ES**	**42.58**	**338**	*eP*		**P**	**09 00 25.6**	**+0.9**
SBA	**Scott Base**	**43.23**	**184**	P		**P**	**09 00 31.9**	**+2.4**
ITRB	**Iturama**	**43.36**	**324**	*eP*		**P**	**09 00 31.3**	**+0.1**
VNDA	**Vanda**	**43.69**	**182**	P		**P**	**09 00 36.3**	**+3.1**
	comp=Z,0.5nm,0.5s,baz=188,slow=8.6,SNR=6.7							
VNDA	**Vanda**	**43.69**	**182**	P		**P**	**09 00 35.7**	**+2.5**
GUA01	**Guaratinga, BA**	**43.74**	**339**	*eP*		**P**	**09 00 35.5**	**+1.3**
AC04	**Llanos de Chal**	**44.08**	**294**	P		**P**	**09 00 36.2**	**-0.6**
IPMB	**Ipameri, GO**	**44.36**	**327**	*eP*		**P**	**09 00 41.2**	**+2.0**
AQDB	**Aquidauana**	**44.41**	**317**	*eP*		**P**	**09 00 38.2**	**-1.3**
NBIT	**Itapeh - BA**	**45.29**	**340**	*eP*		**P**	09 00 50.4	+3.9
BOSA	**Boshof**	**45.60**	**71**	LR		LR	09 15 57.5	
	comp=Z,351nm,19.0s,baz=8.0,slow=31							
GO02	**Mina Guanaco**	**45.97**	**297**	P		**P**	**09 00 52.8**	**+0.5**
GO02				IAmb		IAmb	09 01 05.5	
	comp=Z,16nm,1.4s							
JANB	**Januaria**	**46.17**	**333**	*eP*		**P**	**09 00 53.9**	**+0.3**
GDU01	**Guandu, BA**	**46.50**	**340**	*eP*		**P**	**09 00 59.2**	**+3.0**
BDFB	**Brasilia**	**46.54**	**329**	P		**P**	**09 00 56.8**	**+0.2**
	comp=Z,6.0nm,0.5s,baz=141,slow=3.6,SNR=13							
BDFB	**Brasilia**	**46.54**	**329**	P		**P**	**09 00 57.0**	**+0.5**
ARAG	**Araguaiana, MT**	**47.57**	**324**	*eP*		**P**	**09 01 04.5**	**0.0**
LVC	**Limon Verde**	**47.87**	**300**	P		**P**	**09 01 06.9**	**-0.3**
LVC				IAmb		IAmb	09 01 32.5	
	comp=Z,6.0nm,1.2s							
LVC	**Limon Verde**	**47.87**	**300**	*eP*		**P**	**09 01 06.3**	**-0.9**
LBTB	**Lobatse**	**48.77**	**68**	LR		LR	09 17 45.8	
	comp=Z,240nm,21.1s,baz=298,slow=31							
SDBA	**SAO DESIDERIO**	**48.86**	**334**	*eP*		**P**	**09 01 14.6**	**+0.1**
PB07	**IPOC Station P**	**49.08**	**299**	P		**P**	**09 01 15.3**	**-1.0**
NBPN	**Ponto Novo - B**	**49.42**	**340**	*eP*		**P**	**09 01 18.1**	**-0.6**
PEXB	**Peixe**	**49.99**	**329**	*eP*		**P**	**09 01 23.2**	**+0.1**
PTLB	**Pontes e Lacer**	**50.28**	**315**	*eP*		**P**	**09 01 24.6**	**-0.7**
NBTA	**Tacaratu-PE**	**50.76**	**343**	*eP*		**P**	**09 01 28.3**	**-0.6**
SNDB	**Serra Nova Dou**	**50.95**	**326**	*eP*		**P**	**09 01 30.6**	**+0.3**
H10N1	**ASCENSION HYDR**	**51.63**	**13**	T		T	09 57 30.8	
	baz=192							
H10N3	**ASCENSION HYDR**	**51.63**	**13**	T		T	09 57 27.3	
	baz=192,slow=75							
H10N2	**ASCENSION HYDR**	**51.65**	**13**	T		T	09 57 25.3	
	baz=192,slow=75							
SMTB	**Santa Maria do**	**52.92**	**331**	*eP*		**P**	**09 01 45.5**	**+0.4**
VILB	**Vilhena**	**52.97**	**315**	*eP*		**P**	**09 01 44.6**	**-0.7**
NBPV	**Pedro Velho**	**53.05**	**347**	*eP*		**P**	**09 01 48.0**	**+2.1**
LPAZ	**La Paz**	**53.10**	**305**	P		**P**	**09 01 46.3**	**-0.7**
	comp=Z,2.0nm,0.4s,baz=100,slow=6.5,SNR=21							
LPAZ	**La Paz**	**53.10**	**305**	P		**P**	**09 01 46.5**	**-0.6**
LPAZ	**La Paz**	**53.10**	**305**	*eP*		**P**	**09 01 45.7**	**-1.3**
CLDB	**Colider**	**53.38**	**321**	*eP*		**P**	**09 01 47.2**	**-1.2**
NBPB	**Pedra_Branca-C**	**54.51**	**342**	*eP*		**P**	**09 01 58.0**	**+1.4**
NBPS	**Pedro II - PI**	**55.95**	**340**	*eP*		**P**	**09 02 07.2**	**+0.1**
PRPB	**Parauapebas**	**56.07**	**330**	*eP*		**P**	**09 02 08.3**	**+0.4**
NPGB	**Novo Progresso**	**56.84**	**323**	*eP*		**P**	**09 02 12.6**	**-0.8**
SAML	**Samuel**	**57.76**	**314**	P		**P**	**09 02 18.4**	**-1.5**
SAML				IAmb		IAmb	09 02 19.6	
	comp=Z,4.3nm,0.6s							
SAML	**Samuel**	**57.76**	**314**	*eP*		**P**	**09 02 18.8**	**-1.0**
LSZ	**Lusaka**	**58.36**	**65**	LR		LR	09 24 35.5	
	comp=Z,252nm,18.8s,baz=144,slow=33							
ITTB	**Itaituba**	**59.48**	**324**	*eP*		**P**	**09 02 31.6**	**-0.3**
MALB	**Monte Alegre**	**61.42**	**326**	*eP*		**P**	**09 02 44.9**	**-0.2**
MACA	**Manacapuru-AM**	**62.22**	**319**	*eP*		**P**	**09 02 48.9**	**-1.6**
MCPB	**Macapa, AP**	**62.23**	**329**	*eP*		**P**	**09 02 51.0**	**+0.4**
CZSB	**Cruzeiro do Su**	**62.70**	**304**	*eP*		**P**	**09 02 51.9**	**-1.8**
PTGA	**Pitinga**	**64.25**	**320**	*eP*		**P**	**09 03 02.8**	**-1.1**
OPO	**Ambohidratompo**	**65.01**	**85**	LR		LR	09 27 02.8	
	comp=Z,71nm,19.8s,baz=60,slow=32							
BOAV	**Boa Vista**	**67.37**	**321**	*eP*		**P**	**09 03 22.6**	**-1.4**
DBIC	**Dimbokro**	**67.37**	**22**	P		**P**	**09 03 25.4**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=164,slow=7.4,SNR=1.2							
DBIC	**Dimbokro**	**67.37**	**22**	IAmb		IAmb	09 03 36.3	
	comp=Z,8.0nm,0.9s							
MBAR	**Mbarara**	**72.44**	**60**	LR		LR	09 33 15.5	
	comp=Z,111nm,18.8s,baz=190,slow=34							
KMBO	**Kilima Mbogo**	**74.98**	**66**	LR		LR	09 34 22.2	
	comp=Z,211nm,18.7s,baz=77,slow=34							
TOA0	**Torodi Ar. Sit**	**75.05**	**27**	P		**P**	**09 04 10.3**	**-0.1**
TOA0				IAmb		IAmb	09 04 22.1	
	comp=Z,5.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**75.05**	**27**	P		**P**	**09 04 10.0**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=198,slow=6.3,SNR=20							
TORD				LR		LR	09 31 02.0	
	comp=Z,105nm,21.7s,baz=275,slow=31							
TORD	**Torodi Ar. Bea**	**75.05**	**27**	P		**P**	**09 04 10.0**	**-0.4**
TGUH	**Tegucigalpa,Un**	**88.50**	**301**	P		**P**	**09 05 20.1**	**-1.3**
ASAR	**Alice Springs**	**95.80**	**160**	P		**P**	**09 05 54.8**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=180,slow=3.9,SNR=1.4							
DZM	**Mont Dzumac**	**98.72**	**191**	LR		LR	09 48 39.7	
	comp=Z,175nm,19.1s,baz=254,slow=34							
CMAR	**Chiang Mai Arr**	**122.86**	**110**	PKP		**PKiKP**	**09 11 27.7**	**+2.8**
	comp=Z,0.4nm,0.6s,baz=243,slow=4.0,SNR=3.3							
PDAR	**Pinedale Array**	**122.93**	**299**	PKP		**PKiKP**	**09 11 24.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=131,slow=5.0,SNR=4.1							
NVAR	**Mina Array Bea**	**123.65**	**290**	PKP		**PKiKP**	**09 11 27.3**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=183,slow=3.6,SNR=2.5							
FINES	**FINESS Array B**	**126.39**	**28**	PKP		**PKiKP**	**09 11 30.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=169,slow=0.7,SNR=6.5							
ARCES	**ARCESS Array B**	**133.20**	**22**	PKP		**PKPdf**	**09 11 42.2**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=70,slow=1.4,SNR=6.6							
ARCES	**ARCESS Array B**	**133.20**	**22**			**PKPdf**	**09 11 40.6**	**-2.3**
MKAR	**Makanchi Array**	**136.58**	**73**	PKP		**PKiKP**	**09 11 51.6**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=241,slow=3.9,SNR=1.5							
YKA	**Yellowknife Ar**	**139.17**	**315**	PKhKP		PKPpre	09 11 43.8	
	comp=Z,0.1nm,0.5s,baz=116,slow=3.5,SNR=7.5							
YKA				PKP		**PKPdf**	**09 11 54.4**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=360,slow=19,SNR=11							
RES	**Resolute Bay**	**141.06**	**337**	PKhKP		PKPpre	09 11 51.1	
	comp=Z,0.3nm,0.5s,baz=120,slow=18,SNR=1.7							
ZALV	**Zalesovo Beam**	**142.47**	**66**	PKP		**PKPdf**	**09 12 00.4**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=210,slow=5.0,SNR=1.9							
INK	**Inuvik**	**148.85**	**317**	PKPbc		**PKiKP**	**09 12 14.7**	**-1.3**
	comp=Z,5.9nm,0.5s,baz=70,slow=3.3,SNR=21							
INK	**Inuvik**	**148.85**	**317**			**PKiKP**	**09 12 15.0**	**-1.1**
SONM	**Songino Array**	**149.56**	**90**	PKPbc		**PKPbc**	**09 12 16.2**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=190,slow=4.1,SNR=2.5							
ILAR	**Eielson Array**	**152.96**	**307**	PKPbc		**PKiKP**	**09 12 25.1**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=137,slow=4.9,SNR=23							
ILAR	**Eielson Array**	**152.96**	**307**			**PKPbc**	**09 12 23.9**	**-0.6**
KDAK	**Kodiak Island**	**153.15**	**290**	PKPbc		**PKiKP**	**09 12 26.0**	**+0.7**
	comp=Z,19nm,1.1s,baz=179,slow=3.3,SNR=6.7							

*IDC **15** 09:15:57.0±0.9,58°.85S×24°.74W,h0km,mb4.1/6, mb1 4.2/7,mb1mx3.9/37,mbtmp4.1/7,ML4.2/1,Error ellipse: s-maj=34.4km s-min=21.8km az=66.0*
*NEIC **15** 09:15:57.8±0.9,58°.92S±0°.10×24°.8W±0°.3,h10km±1km, mb4.6/19,Error ellipse: s-maj=32.4km s-min=7.5km az=62.0*
ISC 15 09:15:58.1±0.7,58°.9S±0°.1×24°.8W±0°.2,h10km,n37, σ0§64/35,mb4.6/15,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.69**	**156**	P		**Pn**	**09 19 11.4**	**-0.6**
VNA3	**Neumayer Olymp**	**13.89**	**159**	P		**Pn**	**09 19 13.6**	**-1.2**
VNA2	**Neumayer--Watz**	**14.09**	**156**	P		**Pn**	**09 19 17.4**	**0.0**
	baz=319,slow=13							
SNAA	**Sanae**	**15.64**	**154**	P		**Pn**	**09 19 37.5**	**-0.8**
SNAA	**Sanae**	**15.64**	**154**	Pn		**Pn**	**09 19 37.4**	**-0.8**
	0.9nm,0.3s,baz=314,slow=14,SNR=21							
SNAA				Sn		Sn	09 22 19.3	-12
	0.1nm,0.3s,baz=50,slow=12,SNR=1.7							
SNAA	**Sanae**	**15.64**	**154**			**Pn**	**09 19 37.4**	**-0.9**
GO09	**Cerro Castillo**	**27.72**	**265**	P		**P**	**09 21 45.8**	**-0.5**
QSPA	**South Pole Qui**	**31.37**	**180**	P		**P**	**09 22 19.7**	**+1.0**
	1.0nm,0.8s,baz=178,slow=7.2,SNR=2.1							
LL07	**Hotel Espejo d**	**33.77**	**277**	P		**P**	**09 22 38.5**	**-1.3**
PLCA	**Paso Flores**	**33.80**	**282**	P		**P**	**09 22 40.7**	**+0.6**
	4.1nm,0.9s,baz=147,slow=6.7,SNR=9.5							
PLCA	**Paso Flores**	**33.80**	**282**	P		**P**	**09 22 40.2**	**+0.1**
PLCA				IAmb		IAmb	09 22 42.9	
	comp=Z,6.9nm,1.1s							
LL04	**Puerto Octay**	**34.62**	**280**	P		**P**	**09 22 47.0**	**-0.1**

LL04					IAmb	IAmb	09 22 56.2		
	comp=Z,8.2nm,1.1s								
BI02	**San Fabin de**	**37.27**	**286**		P	**P**	**09 23 09.2**	**-0.8**	
BO02	**Sierra Bellavi**	**38.51**	**288**		P	**P**	**09 23 20.2**	**-0.2**	
BO02					IAmb	IAmb	09 23 25.8		
	comp=Z,18nm,1.5s								
MT09	**Talagante**	**39.42**	**289**		P	**P**	**09 23 28.0**	**-0.1**	
MT09					IAmb	IAmb	09 23 35.1		
	comp=Z,16nm,1.1s								
MT02	**Curacav**	**39.91**	**289**		P	**P**	**09 23 31.3**	**-0.8**	
MT02					IAmb	IAmb	09 23 57.0		
	comp=Z,18nm,1.1s								
VNDA	**Vanda**	**43.80**	**182**		P	**P**	**09 24 04.3**	**+0.9**	
	comp=Z,1.0nm,0.8s,baz=216,slow=11,SNR=3.2								
GO02	**Mina Guanaco**	**45.93**	**297**		P	**P**	**09 24 21.3**	**0.0**	
GO02					IAmb	IAmb	09 24 24.4		
	comp=Z,10nm,1.2s								
BDFB	**Brasilia**	**46.45**	**328**		P	**P**	**09 24 26.4**	**+1.3**	
	comp=Z,6.0nm,0.8s,baz=156,slow=6.5,SNR=7.7								
BDFB	**Brasilia**	**46.45**	**328**		P	**P**	**09 24 25.4**	**+0.3**	
BDFB					IAmb	IAmb	09 24 27.0		
	comp=Z,8.2nm,1.0s								
LVC	**Limon Verde**	**47.83**	**300**		P	**P**	**09 24 36.0**	**-0.2**	
LVC					IAmb	IAmb	09 24 36.6		
	comp=Z,14nm,1.4s								
PB07	**IPOC Station P**	**49.03**	**299**		P	**P**	**09 24 45.3**	**0.0**	
PB11	**IPOC Station P**	**50.65**	**301**		P	**P**	**09 24 57.6**	**+0.1**	
PB11					IAmb	IAmb	09 24 58.4		
	comp=Z,14nm,1.3s								
PSGCX	**Pisagua**	**51.00**	**300**		P	**P**	**09 24 59.5**	**-0.6**	
MNMC	**Minye Minye**	**51.17**	**301**		P	**P**	**09 25 01.3**	**-0.3**	
MNMC					IAmb	IAmb	09 25 08.5		
	comp=Z,7.2nm,1.2s								
H10N1	**ASCENSION HYDR**	**51.52**	**13**		T	T	10 20 51.7		
	baz=202								
H10N3	**ASCENSION HYDR**	**51.52**	**13**		T	T	10 20 55.7		
	baz=202								
H10N2	**ASCENSION HYDR**	**51.54**	**13**		T	T	10 20 53.2		
	baz=202								
LPAZ	**La Paz**	**53.05**	**304**		P	**P**	**09 25 15.8**	**-0.2**	
	comp=Z,1.5nm,0.5s,baz=100,slow=4.5,SNR=11								
LPAZ	**La Paz**	**53.05**	**304**		P	**P**	**09 25 15.7**	**-0.2**	
SAML	**Samuel**	**57.69**	**313**		P	**P**	**09 25 48.3**	**-0.4**	
SAML					IAmb	IAmb	09 25 48.6		
	comp=Z,3.6nm,0.6s								
TORD	**Torodi Ar. Bea**	**74.95**	**27**		P	**P**	**09 27 39.5**	**+0.3**	
	comp=Z,1.0nm,0.5s,baz=196,slow=5.8,SNR=6.2								
TORD	**Torodi Ar. Bea**	**74.95**	**27**		P	**P**	**09 27 38.7**	**-0.5**	
YKA	**Yellowknife Ar**	**139.10**	**315**		PKP	**PKPdf**	**09 35 23.4**	**0.0**	
	comp=Z,0.6nm,0.8s,baz=127,slow=2.6,SNR=9.2								
SONM	**Songino Array**	**149.54**	**89**		PKPbc	**PKPbc**	**09 35 46.3**	**-0.5**	
	comp=Z,0.6nm,0.7s,baz=197,slow=3.0,SNR=2.6								
ILAR	**Eielson Array**	**152.90**	**307**		PKPbc	**PKiKP**	**09 35 54.5**	**+0.5**	
	comp=Z,1.9nm,0.8s,baz=175,slow=1.1,SNR=16								
ILAR	**Eielson Array**	**152.90**	**307**			**PKiKP**	**09 35 54.2**	**+0.2**	
ILAR					PKPab	**PKPab**	**09 36 04.6**	**-0.6**	

IDC 15 09:36:01.9±3.3, 54°.15N×87°.20E, h0km, mb1 2.8/2, mb1mx2.7/48, mbtmp2.8/2, ML2.4/2, Error ellipse: s-maj=30.7km s-min=19.0km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**263**	*i*		09 46 01.9	
	baz=83,slow=314,SNR=1.2						
ZALV	**Zalesovo Beam**	**1.42**	**263**	Pg	Pn	09 36 26.9	-2.0
	2.4nm,0.3s,baz=82,slow=16,SNR=19						
ZALV				Lg	Lg	09 36 47.0	
	0.9nm,0.3s,baz=80,slow=30,SNR=4.5						
KURBB	**Kurchatov Arra**	**6.38**	**240**	Pn	Pn	09 37 38.1	+1.1
	0.1nm,0.3s,baz=53,slow=13,SNR=4.3						
MKAR	**Makanchi Array**	**8.00**	**205**	Pn	Pn	09 38 00.8	+1.4
	0.1nm,0.3s,baz=25,slow=13,SNR=1.6						

*KRNET **15** 09:44:24.8±0.1, 41°.31N×70°.70E, h13km, mb2.5*
ISC 15 09:44:25.8±1.1, 41°.23N±0°.04×70°.70E±0°.07, h10km, n8, σ1≥44/16, 13C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.45**	**47**	↑*iP*		**09 44 32.5**	**-2.2**
	baz=67						
TRKS				↑*iS*		**09 44 38.2**	**-2.6**
	baz=67						
BTK	**Batken**	**1.17**	**175**	↑*iP*		**09 44 48.6**	**+0.3**
	baz=76						
BTK				↑*iS*		**09 45 06.3**	**+1.9**
	baz=76						
ARSB	**Arslanbob**	**1.73**	**86**	↑*eP*		**09 44 56.5**	**+0.4**
	baz=89						
ARSB				↑*iS*		**09 45 20.5**	**+1.0**
	baz=89						
MNAS	**Manas**	**1.85**	**46**	↑*eP*		**09 44 58.7**	**+1.0**
	baz=48						
MNAS				↑*iS*		**09 45 22.5**	**+1.2**
	baz=48						
KK31	**Karatay Array**	**1.88**	**356**	P		**Pb 09 45 00.6**	**+0.3**
	0.9nm,0.2s,baz=157,slow=16,SNR=35						
KK31				↑S		**Sb 09 45 24.7**	**+0.8**
	2.0nm,0.3s,baz=160,slow=23,SNR=11						
GAR	**Garm**	**2.24**	**188**	↑*iP*		**Pb 09 45 06.3**	**-0.2**
	baz=87						
GAR				↑*iS*		**Sb 09 45 34.0**	**-0.3**
	baz=87						
AML	**Almayashu**	**2.42**	**67**	↑*iP*		**Pn 09 45 07.2**	**+1.3**
	baz=69						
AML				↑*iS*		**Sn 09 45 37.2**	**+1.5**
	baz=69						
UCH	**Uchtor**	**3.03**	**69**	↓*iP*		**Pn 09 45 15.7**	**+1.5**
	baz=71						
UCH				↓*iS*		**Sn 09 45 51.9**	**+1.1**
	baz=71						

IDC 15 09:56:33.7±2.4, 62°.38S×160°.47W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.8/26, mbtmp3.7/3, ML3.8/1, MS3.5/4, Ms1 3.5/4, ms1mx3.2/25, Error ellipse: s-maj=62.9km s-min=46.0km az=92.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**19.30**	**204**	P		P 10 00 59.7	0.0
	0.3nm,0.3s,baz=74,slow=16,SNR=22						
VNDA				LR	LR	10 06 22.8	
	comp=Z,123nm,20.2s,baz=63,slow=30						
QSPA	**South Pole Qui**	**27.73**	**180**	LR	LR	10 10 32.2	
	comp=Z,125nm,20.9s,baz=76,slow=30						
RAR	**Rarotonga**	**41.14**	**1**	LR	LR	10 16 46.3	
	comp=Z,98nm,19.5s,baz=161,slow=30						
PLCA	**Paso Flores**	**54.86**	**112**	LR	LR	10 23 58.9	
	comp=Z,28nm,20.5s,baz=172,slow=30						
H03S2	**Juan Fernandez**	**56.81**	**100**	T	T	11 06 50.3	
	baz=211,slow=74,SNR=36						
H03S1	**Juan Fernandez**	**56.81**	**100**	T	T	11 06 51.9	
	baz=211,slow=74,SNR=35						
H03S3	**Juan Fernandez**	**56.83**	**100**	T	T	11 06 44.1	
	baz=211,slow=74,SNR=41						
ASAR	**Alice Springs**	**58.03**	**280**	P	P	10 06 28.2	0.0
	0.7nm,0.8s,baz=147,slow=6.2,SNR=6.9						
WRA	**Warramunga Arr**	**61.05**	**283**	P	P	10 06 48.9	-0.2
	0.7nm,1.0s,baz=150,slow=6.2,SNR=2.9						
ILAR	**Eielson Array**	**127.25**	**7**	PKP	PKPdf	10 15 38.0	-0.2
	0.3nm,0.6s,baz=195,slow=2.5,SNR=4.5						

IDC 15 09:56:50.4±7.8, 29°.27S×61°.88E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/53, mbtmp3.7/2, Error ellipse: s-maj=459.0km s-min=51.0km az=34.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**63.81**	**104**	P	P	10 07 24.9	+0.1
	0.5nm,0.7s,baz=252,slow=6.0,SNR=7.8						
WRA	**Warramunga Arr**	**65.63**	**100**	P	P	10 07 36.6	-0.1
	0.8nm,0.8s,baz=246,slow=6.1,SNR=7.3						
YKA	**Yellowknife Ar**	**146.69**	**357**	PKPbc	PKPbc	10 16 32.6	-0.8
	0.2nm,0.5s,baz=357,slow=3.2,SNR=9.3						

*IDC **15** 10:12:18.4±1.2, 1°.74S×79°.18W, h0km, mb3.3/4, mb1 3.9/7, mb1mx3.6/30, mbtmp3.7/7, ML4.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/21, Error ellipse: s-maj=71.8km s-min=19.3km az=62.0*

*IGQ **15** 10:12:28±0.2, 2°.5S×2°.4×8°.0W±°, h49km*
ISC 15 10:12:27.1±0.8, 2°.32S±0°.04×79°.79W±0°.04, h75km±6km, n81, σ1≥39/85, mb3.3/4, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MILO	**Milagro-Astudi**	**0.23**	**79**	P	**Pn**	**10 12 38.0**	**-0.5**
AMIL	**Milagro (Trans**	**0.27**	**46**	P	**Pn**	**10 12 39.0**	**+0.3**
AMIL				S	**Sn**	**10 12 48.0**	**+0.8**
AGUAY	**Guayaquil**	**0.31**	**328**	P	**Pn**	**10 12 39.0**	**0.0**
AGUAY				S	**Sn**	**10 12 48.0**	**+0.3**
COHC	**Cochancay**	**0.55**	**105**	P	**Pn**	**10 12 40.0**	**-0.9**
COHC				S	**Sn**	**10 12 50.0**	**-1.0**
MORR	**Playas El Morr**	**0.64**	**240**	P	**Pn**	**10 12 43.0**	**+1.3**
MORR				S	**Sn**	**10 12 56.0**	**+3.5**
ACH2	**Ecuador-Machal**	**0.93**	**181**	P	**Pn**	**10 12 45.0**	**-0.1**
ACH2				S	**Sn**	**10 12 59.0**	**+0.5**
ACUE	**Ecuador-Cuenca**	**1.01**	**125**	P	**Pn**	**10 12 47.0**	**+0.6**
CHSH	**Refugio Sur-Vo**	**1.23**	**48**	P	**Pn**	**10 12 49.0**	**-0.4**
ARNL	**Arenillas**	**1.25**	**193**	P	**Pn**	**10 12 49.0**	**0.0**
PPLP	**Puerto Lpez**	**1.25**	**308**	P	**Pn**	**10 12 49.0**	**-0.2**
TAMH	**Tambohuasha Ch**	**1.27**	**52**	P	**Pn**	**10 12 49.2**	**-0.8**
IGUA	**Iguala**	**1.42**	**54**	P	**Pn**	**10 12 52.0**	**+0.3**
SANGA	**Volcan Sangay**	**1.44**	**79**	P	**Pn**	**10 12 52.0**	**+0.1**
BOSC	**San Juan Bosco**	**1.53**	**123**	P	**Pn**	**10 12 54.0**	**+1.2**
BMAS	**Trigal station**	**1.54**	**58**	P	**Pn**	**10 12 53.0**	**-0.2**
BIL2	**Estacion Bilba**	**1.55**	**56**	P	**Pn**	**10 12 54.0**	**+0.8**
ARRY	**Arrayan**	**1.56**	**59**	P	**Pn**	**10 12 53.0**	**-0.4**
BBIL	**Ulba Tungurahu**	**1.56**	**56**	P	**Pn**	**10 12 54.0**	**+0.6**
PAT1	**Patacocha**	**1.57**	**59**	P	**Pn**	**10 12 54.0**	**+0.3**
JUI6	**Juive**	**1.59**	**56**	P	**Pn**	**10 12 54.0**	**+0.2**
RETU	**Refugio**	**1.59**	**57**	P	**Pn**	**10 12 54.0**	**0.0**
SAGO	**Sagoatoa**	**1.61**	**44**	P	**Pn**	**10 12 55.0**	**+0.7**
RUN5	**Runtun**	**1.63**	**56**	P	**Pn**	**10 12 55.0**	**+0.6**
BULB	**Ulba Tungurahu**	**1.63**	**57**	P	**Pn**	**10 12 55.0**	**+0.6**
BRUN	**Tungurahua Vol**	**1.64**	**57**	P	**Pn**	**10 12 54.0**	**-0.5**
PIS1	**Pisayambo**	**1.88**	**48**	P	**Pn**	**10 12 59.0**	**+1.2**
ILLI	**Illinizas Sur**	**1.92**	**34**	P	**Pn**	**10 12 59.0**	**+0.7**
GONZ	**Gonzanam**	**1.94**	**168**	P	**Pn**	**10 12 59.0**	**+0.5**
PUYO	**Puyo, Santa Ro**	**1.94**	**65**	P	**Pn**	**10 12 59.0**	**+0.7**
FLF1	**Flavio Alfaro-**	**1.95**	**358**	P	**Pn**	**10 12 58.0**	**-0.4**
PIAT	**Ana Tenorio**	**2.02**	**49**	P	**Pn**	**10 13 00.0**	**+0.5**
CAB1	**Cabo Pasado-Ma**	**2.03**	**342**	P	**Pn**	**10 13 00.0**	**+0.7**
MCRA	**Macar, Loja**	**2.04**	**185**	P	**Pn**	**10 12 59.0**	**-0.5**
BMOR	**Cotopaxi Volca**	**2.06**	**40**	P	**Pn**	**10 13 02.0**	**+1.7**
CAMI	**Rancho Maria**	**2.08**	**38**	P	**Pn**	**10 13 02.0**	**+1.6**
BNAS	**Cotopaxi Volca**	**2.10**	**39**	P	**Pn**	**10 13 02.0**	**+1.3**
BREF	**Cotopaxi Volca**	**2.12**	**39**	P	**Pn**	**10 13 02.0**	**+0.8**
BTAM	**Cotopaxi Volca**	**2.15**	**40**	P	**Pn**	**10 13 02.0**	**+0.6**
VC1	**Cotopaxi 1**	**2.17**	**40**	P	**Pn**	**10 13 03.0**	**+1.3**
MAG1	**Magdalena**	**2.24**	**0**	P	**Pn**	**10 13 02.0**	**-0.1**
ANTM	**Antisana-La Mi**	**2.37**	**41**	P	**Pn**	**10 13 07.0**	**+2.7**
ANTG	**Antisana-Guama**	**2.37**	**40**	P	**Pn**	**10 13 06.0**	**+1.6**
GGPT	**Toaza - Volcan**	**2.39**	**29**	P	**Pn**	**10 13 05.0**	**+0.5**
ANTS	**Antisana-Sarah**	**2.43**	**42**	P	**Pn**	**10 13 08.0**	**+2.7**
GGPC	**Guagua Pichinc**	**2.44**	**29**	P	**Pn**	**10 13 06.0**	**+0.6**
TEFV	**Terraza Guagua**	**2.44**	**29**	P	**Pn**	**10 13 06.0**	**+0.6**
GGP	**Refugio Guagua**	**2.44**	**29**	P	**Pn**	**10 13 07.0**	**+1.5**
PINO	**Pino**	**2.45**	**29**	P	**Pn**	**10 13 06.0**	**+0.4**
ANTI	**Antisana**	**2.47**	**41**	P	**Pn**	**10 13 08.0**	**+2.2**
YANA	**Yana**	**2.50**	**29**	P	**Pn**	**10 13 07.0**	**+0.8**
BV15	**Puerto Quito-O**	**2.53**	**13**	P	**Pn**	**10 13 04.0**	**-2.1**
PULU	**Pululahua**	**2.66**	**29**	P	**Pn**	**10 13 10.0**	**+1.8**
PAC1	**Pacto, Paraso**	**2.76**	**21**	P	**Pn**	**10 13 09.0**	**-0.3**
OTAV	**Otavalo**	**2.87**	**28**	*eP*	**Pn**	**10 13 12.0**	**+0.9**
OTAV	**Otavalo**	**2.87**	**28**	P	**Pn**	**10 13 12.0**	**+0.9**
CAYR	**Refugio Cayamb**	**2.93**	**37**	P	**Pn**	**10 13 14.0**	**+2.0**
CUSE	**Cuicocha Este**	**2.96**	**28**	P	**Pn**	**10 13 13.0**	**+0.7**
CUSW	**Cuicocha Oeste**	**2.96**	**29**	P	**Pn**	**10 13 13.0**	**+0.7**
CUIC	**Cuicocha-Domo**	**2.97**	**29**	P	**Pn**	**10 13 13.0**	**+0.5**
IMBA	**Imbabura, San**	**3.03**	**32**	P	**Pn**	**10 13 15.0**	**+1.7**
URCU	**Urcuqui**	**3.14**	**29**	P	**Pn**	**10 13 15.0**	**+0.2**
YAHU	**Yahuarcocha**	**3.18**	**33**	P	**Pn**	**10 13 16.0**	**+0.8**
CHL1	**Volcn Chiles**	**3.60**	**31**	P	**Pn**	**10 13 22.0**	**+0.9**
CHMA	**Chilma**	**3.60**	**29**	P	**Pn**	**10 13 22.0**	**+1.1**
ECEN	**Cerro Negro**	**3.62**	**30**	P	**Pn**	**10 13 25.0**	**+3.7**
CHL2	**Volcn Chiles**	**3.62**	**31**	P	**Pn**	**10 13 24.0**	**+2.6**
GCUF	**Volcan Galeras**	**4.29**	**35**	*eP*	**Pn**	**10 13 29.5**	**-0.9**
ATAH	**Atahualpa**	**4.98**	**164**	Pn	**Pn**	**10 13 41.5**	**+1.7**
	5.4nm,0.3s,baz=5.6,slow=8.5,SNR=37						
ATAH					Sn	**10 14 38.7**	**+2.5**
	11nm,0.3s,baz=29,slow=15,SNR=8.8						
BBAC	**Balboa, Cauca**	**5.01**	**30**	*eP*	**Pn**	**10 13 41.1**	**+1.1**
SOTA	**Rioblanco**	**5.45**	**36**	*eP*	**Pn**	**10 13 48.6**	**+2.3**
PTLC	**Puerto Leguiza**	**5.57**	**64**	*eP*	Pn	10 13 53.0	+5.4
PCON	**Cinco Dias**	**5.73**	**36**	*eP*	**Pn**	**10 13 53.5**	**+3.3**
GARC	**Garzon, Huila**	**6.21**	**44**	*eP*	**Pn**	**10 13 58.5**	**+2.1**
MARP	**Paez Belalcaza**	**6.40**	**37**	*eP*	**Pn**	**10 14 02.6**	**+3.4**
NNA	**Nana**	**10.04**	**163**	Pn	**Pn**	**10 14 48.3**	**-0.3**
	4.5nm,0.3s,baz=349,slow=13,SNR=5.6						
LPAZ	**La Paz**	**18.01**	**141**	P	**P**	**10 16 32.0**	**-0.7**
	0.2nm,0.3s,baz=335,slow=11,SNR=7.1						
LVC	**Limon Verde**	**22.76**	**153**	LR	LR	10 25 40.1	
	comp=Z,68nm,19.1s,baz=264,slow=35						
SIV	**San Ignacio**	**22.89**	**128**	P	**P**	**10 17 23.2**	**-1.7**
	0.8nm,0.6s,baz=323,slow=10,SNR=4.1						
PDAR	**Pinedale Array**	**52.31**	**332**	P	**P**	**10 21 29.0**	**-2.4**
	0.2nm,0.6s,baz=134,slow=7.4,SNR=2.3						
NVAR	**Mina Array Bea**	**53.91**	**323**	P	**P**	**10 21 44.6**	**+1.3**
	0.2nm,0.6s,baz=122,slow=8.7,SNR=2.6						
YKA	**Yellowknife Ar**	**69.81**	**344**	P	**P**	**10 23 28.2**	**-1.1**
	0.2nm,0.6s,baz=141,slow=6.3,SNR=5.3						

*IDC **15** 10:13:55.4±5.3, 6°.61S×147°.74E, h74km±49km, mb3.1/3, mb1 3.2/5, mb1mx3.1/36, mbtmp3.3/5, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/17, Error ellipse: s-maj=74.2km s-min=36.2km az=119.0*
ISC 15 10:13:54.0±1.4, 6°.5S±0°.1×147°.6E±0°.4, h63km, n7, σ0≥99/7, mb3.5/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.93**	**188**	P	**Pn**	**10 14 38.5**	**+0.2**
	5.8nm,0.3s,baz=321,slow=6.2,SNR=9.8						
PMG				S	**Sn**	**10 15 12.4**	**0.0**
	4.1nm,0.3s,baz=189,slow=9.5,SNR=1.7						
WRA	**Warramunga Arr**	**18.55**	**223**	P	**P**	**10 18 04.7**	**-1.1**
	0.1nm,0.3s,baz=48,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**21.55**	**216**	P	**P**	**10 18 39.5**	**+1.2**
	0.2nm,0.4s,baz=50,slow=9.3,SNR=7.3						
STKA	**Stephens Creek**	**25.87**	**192**	P	**P**	**10 19 19.2**	**-0.8**
	1.2nm,0.8s,baz=32,slow=9.5,SNR=1.5						
KAPI	**Kappang**	**27.71**	**272**	LR	LR	10 33 18.9	
	comp=Z,87nm,18.9s,baz=178,slow=42						
ILAR	**Eielson Array**	**85.70**	**23**	P	**P**	**10 26 25.6**	**-0.2**
	0.3nm,0.8s,baz=244,slow=5.6,SNR=2.0						
TORD	**Torodi Ar. Bea**	**145.75**	**284**	PKPbc	**PKPbc**	**10 33 27.7**	**+0.7**
	1.1nm,0.7s,baz=89,slow=3.9,SNR=5.3						

*ANF **15** 10:14:48.4±0.3, 46°.35N×122°.25W, h14km±2km, ML2.9/9, Error ellipse: s-maj=2.6km s-min=1.5km az=79.0, Hypocentre not reviewed by the ISC*
*SEA **15** 10:14:48.9±1.6, 46°.345N±0°.010×122°.25W±0°.02, h12km±2km, ML2.8/55, ML2.6/40(NEIC), Error ellipse: s-maj=1.5km s-min=1.5km az=60.0*
NEIC 15 10:14:48.3±1.6, 46°.34N±0°.01×122°.24W±0°.02, h18km, Error ellipse: s-maj=2.1km s-min=1.9km az=86.0, Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TDL	**Tradedollar La**	**0.02**	**64**		Pg	10 14 51.1	-0.6
B201	**Coldwater, Mou**	**0.04**	**205**		Pg	10 14 52.8	+1.1
JRO	**Jston Ridge Ob**	**0.07**	**168**		Pg	10 14 51.5	-0.4
JRO					Sg	10 14 53.6	-0.7
ERK	**Elk Rock**	**0.08**	**242**		Pg	10 14 51.4	-0.6
STD	**Studebaker Rid**	**0.11**	**174**		Pg	10 14 51.9	-0.3
STD					Sg	10 14 54.2	-0.6
STD	**Studebaker Rid**	**0.11**	**174**		Pg	10 14 51.9	-0.2
B202	**Windy Ridge, M**	**0.12**	**144**		Pg	10 14 51.9	-0.4
B202					Sg	10 14 54.2	-0.8
SOSW	**Source of Smit**	**0.12**	**145**		Pg	10 14 52.0	-0.3
VALT	**Mount Saint He**	**0.13**	**165**		Pg	10 14 52.5	-0.1
VALT					Sg	10 14 55.5	+0.1
BOLM	**Sugar Bowl**	**0.14**	**161**		Pg	10 14 52.6	0.0
SHW	**Mount Saint He**	**0.15**	**180**		Pg	10 14 52.7	0.0
ESD	**East Dome**	**0.16**	**157**		Pg	10 14 52.8	-0.1
FL2	**Flat Top 2**	**0.17**	**208**		Pg	10 14 52.6	-0.3
SWF2	**Southwest Flan**	**0.17**	**175**		Pg	10 14 52.9	0.0
HSR	**South Ridge**	**0.17**	**167**		Pg	10 14 53.1	0.0
B203	**Quarry, Mount**	**0.19**	**201**		Pb	10 14 52.8	+0.2
B203					Sg	10 14 56.0	-0.4
JLK	**June Lake**	**0.20**	**163**		Pg	10 14 53.4	0.0
CDFW	**Cedar Flats**	**0.26**	**150**		Pg	10 14 54.3	0.0
LVP	**Lakeview Peak**	**0.30**	**203**		Pg	10 14 54.8	-0.1
E04D	**Cinebar**	**0.31**	**313**		Pg	10 14 55.0	-0.1
E04D					Sb	10 14 60.0	-0.1
E04D	**Cinebar**	**0.31**	**313**	P		10 14 55.0	
	baz=134,SNR=428						
E04D				S		10 14 59.5	
	baz=134						
MTMW	**Mount Mitchell**	**0.32**	**177**		Pg	10 14 55.2	0.0
RVW	**Rose Valley**	**0.40**	**241**		Pg	10 14 56.2	-0.4
LCW	**Lucas Creek**	**0.46**	**316**		Pg	10 14 57.3	-0.3
LCW					Sg	10 15 04.0	+0.1
ASR	**Mount Adams--S**	**0.49**	**113**		Pg	10 14 58.1	-0.1
GLK	**Glacier Lake**	**0.49**	**63**		Pg	10 14 58.2	0.0
LON	**Longmire**	**0.50**	**36**		Pg	10 14 58.2	-0.3
LON					Sg	10 15 05.3	0.0
LON	**Longmire**	**0.50**	**36**		Pg	10 14 58.2	-0.2
WPW	**White Pass**	**0.59**	**53**		Pb	10 14 59.9	-0.2
F04D	**Rainier, OR**	**0.60**	**244**		Pb	10 14 59.8	-0.3
F04D					Sg	10 15 08.5	+0.4
F04D	**Rainier, OR**	**0.60**	**244**	P		10 14 59.8	
	baz=63,SNR=17						
F04D				S		10 15 08.4	
	baz=63						
B023	**Clatskanie**	**0.63**	**249**		Pb	10 15 00.1	-0.5
B023					Sb	10 15 08.9	-0.1
OBSR	**Observation Ro**	**0.63**	**27**		Pb	10 15 00.4	-0.4
OBSR					Sb	10 15 09.3	0.0
RCS	**Mount Rainier-**	**0.63**	**33**		Pb	10 15 00.4	-0.5
B941	**Kapowsin**	**0.64**	**1**		Pb	10 15 00.1	-0.8
PANH	**Panhandle Gap,**	**0.66**	**38**		Pb	10 15 00.7	-0.6
BMW	**Boistfort Moun**	**0.70**	**281**		Pb	10 15 01.2	-0.7
GHW	**Garrison Hill**	**0.70**	**358**		Pb	10 15 01.1	-0.8
FMW	**Mount Fremont**	**0.71**	**33**		Pb	10 15 01.8	-0.3
F05D	**White Salmon**	**0.71**	**130**		Pb	10 15 01.9	-0.1
F05D					Sg	10 15 12.3	+0.6
F05D	**White Salmon**	**0.71**	**130**	P		10 15 01.9	
	baz=310,SNR=68						
F05D				S		10 15 12.3	
	baz=310						
RRHS	**Rochester High**	**0.72**	**310**		Pb	10 15 02.2	0.0
APM	**Augspurger Mou**	**0.72**	**147**		Pb	10 15 02.0	-0.3
WPO	**West Portland**	**0.86**	**207**		Pb	10 15 04.4	-0.2
D05A	**Enumclaw**	**0.86**	**11**		Pb	10 15 04.2	-0.5
D05A					Sb	10 15 15.9	0.0
NLO	**Nicolai Mounta**	**0.88**	**254**		Pb	10 15 04.9	-0.1
CPW	**Capitol Peak**	**0.88**	**316**		Pb	10 15 04.5	-0.6
D04E	**Lakebay**	**0.91**	**337**	P		10 15 05.3	
	baz=156,SNR=19						
D04E				S		10 15 18.5	
	baz=156						
GSM	**Grass Mountain**	**0.91**	**19**		Pb	10 15 05.1	-0.6
E03A	**Lebam**	**0.94**	**283**		Pb	10 15 05.2	-0.8
E03A					Sb	10 15 18.2	+0.2
E03A				IAML		10 15 24.2	
	comp=E,231nm,0.5s						
E03A				IAML		10 15 25.2	
	comp=N,220nm,0.5s						
HIYU	**Hiyu Mountain**	**0.96**	**162**		Pb	10 15 06.4	0.0
VLL	**Laurance Lake**	**0.96**	**156**		Pb	10 15 06.5	+0.1
B019	**Raymond**	**1.02**	**288**		Pb	10 15 07.1	-0.4
NAC	**Naches**	**1.05**	**68**		Pg	10 15 08.9	+0.2
RADR	**Rader Ridge**	**1.08**	**275**		Pb	10 15 07.8	-0.7
VVHS	**Vashon High Sc**	**1.09**	**352**		Pb	10 15 08.2	-0.4
TDH	**Tom, Dick, Har**	**1.10**	**163**		Pb	10 15 08.6	-0.

NLW	**Nelson Butte**	**2.17**	**36**			Pb		10 15 27.4	+0.4
B06A	**Marblemount**	**2.24**	**13**			Pn		10 15 25.9	+1.6
MBW	**Mount Baker**	**2.45**	**5**			Pb		10 15 30.6	-1.3
G08A	**Pilot Rock**	**2.52**	**113**			Pn		10 15 28.7	+0.3
SHUK	**Shuksan-Mt. Ba**	**2.54**	**8**			Pn		10 15 30.7	+2.0
I04A	**Tendick Farm,**	**2.55**	**183**			Pb		10 15 32.5	-1.0
A05A	**Maple Falls**	**2.66**	**2**			Pb		10 15 33.5	-1.8
A05A					IAML			10 16 09.7	
	comp=E,34nm,0.4s								
PINE	**Pine Mountain**	**2.71**	**160**	Pn		Pn		10 15 33.2	+2.1
PINE					IAML			10 16 26.0	
	comp=E,19nm,3.1s								
PINE					IAML			10 16 57.9	
	comp=N,16nm,4.9s								
B08A	**Colville Reser**	**2.82**	**43**			Pn		10 15 34.3	+1.9
I07A	**Izee**	**2.97**	**139**	Pn		Pn		10 15 36.3	+1.7
I07A					IAML			10 16 43.4	
	comp=E,12nm,4.4s								
I07A					IAML			10 16 60.0	
	comp=N,11nm,4.3s								
C09A	**Chrisman Ranch**	**3.08**	**60**			Pn		10 15 36.9	+1.0
F10A	**Beach Ranch, E**	**3.50**	**94**	Pn		Pn		10 15 40.1	-1.8
F10A					IAML			10 17 00.9	
	comp=E,17nm,4.5s								
F10A					IAML			10 17 33.5	
	comp=N,14nm,5.0s								
NEW	**Newport**	**3.98**	**59**	Pn		Pn		10 15 49.1	+0.8
NEW					IAML			10 17 02.7	
	comp=N,7.8nm,4.7s								
NEW					IAML			10 17 45.2	
	comp=N,10nm,4.5s								
J08A	**Circle Bar Ran**	**4.01**	**137**			Pn		10 15 49.8	+1.0
J08A					IAML			10 17 32.1	
	comp=N,9.8nm,4.5s								

IDC ***15*** *10:22:07.5±0.4,3˚.84S×151˚.49E,h0km,mb4.6/36, mb1 4.7/40,mb1mx4.6/49,mbtmp4.6/40,ML3.5/4,MS4.9/35, Ms1 4.9/35,ms1mx4.9/38,Error ellipse: s-maj=15.4km s-min=10.7km az=99.0*

NEIC ***15*** *10:22:07.7±1.5,3.80S±0.06×151˚.67E±0.03,h10km±1km, mb5.2/69,Ms_20 5.3/246,Mwb5.4/50,Mwc5.5(GCMT), Error ellipse: s-maj=11.0km s-min=3.6km az=18.0*

BJI ***15*** *10:22:08.0±0.0,3˚.90S×151˚.70E,h10km,mB5.4/55, mb4.9/56,Ms5.2/67,Ms7 5.1/64*

NEIC ***15*** *10:22:08.2,3˚.89S×151˚.70E,h9km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.25; Mθθ=0.89; Mϕϕ=-1.15; Mrθ=0.41; Mrϕ=1.19; Mθϕ=0.01; Fault plane solution: Mo=1.64000×10¹⁷ NP1:ϕs=111.45000°, δ=82.13000°,λ=15.07000°. NP2:ϕs=19.33000°,δ=75.07000°, λ=171.85000°. Principal axes: T 1.5525, Plg16.0000°, Azm336.0000°; N 0.1570, Plg73.0000°, Azm138.0000°; P -1.7095, Plg5.0000°, Azm245.0000°;*

MOS ***15*** *10:22:09.2±1.5,3˚.87S×151˚.61E,h22km,mb5.2/43, MS4.9/7 Error ellipse: s-maj=7.7km s-min=5.4km az=107.7*

DJA ***15*** *10:22:11.6±0.4,4˚S×3˚×15˚2E±˚,h19kmx3km,M5.2/58, mb5.1/58,mB5.7/43,MLv5.4/3,Mw(mB)5.2/43, MwMwp5.2/12,Mwp5.4/12*

GCMT ***15*** *10:22:12.7±0.1,3.69S×151˚.54E,h12km,MW5.5/159, Moment Tensor Solution. s137,c236; s159,c325; Duration: 1s3 Moment tensor: Scale 10¹⁷Nm; Mrr-0.23±.02; Mθθ1.40±.02; Mϕϕ-1.17±.02; Mrθ0.14±.04; Mθϕ1.56±.02; Mϕr-0.13±.04; Best double couple: Mo2.03200×10¹⁷ NP1:ϕs20.00000°,δ84.00000°, λ-177.00000°. NP2:ϕs290.00000°,δ87.00000°, λ-6.00000°. Principal axes: T 2.1380, Plg2.0000°, Azm335.0000°; N -0.2140, Plg84.0000°, Azm81.0000°; P -1.9260, Plg6.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *10:22:13,3˚.71S×151˚.54E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.20; Mθθ1.47; Mϕϕ-1.27; Mrθ-0.09; Mθϕ1.60; Mϕr-0.09; Fault plane solution: Mo2.12000×10¹⁷ NP1:ϕs290.00000°, δ87.00000°,λ1.00000°. NP2:ϕs200.00000°,δ89.00000°, λ177.00000°. Principal axes: T 2.2122, Plg3.0000°, Azm155.0000°; N -0.2046, Plg87.0000°, Azm359.0000°; P -2.0076, Plg1.0000°, Azm245.0000°;*

ISC 15 10:22:09.9±0.6,**3.94S**±0.03×**151.65E**±0.04,**h15**km±3km, **n482,σ2**ϕ**35**/390,**mb5.1**/148,**MS5.2**/186,**19C-8D,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.57**	**116**	Pg	**Pb**	**10 22 21.6**	**-0.1**
RABL				Sg	**Sg**	**10 22 26.0**	**-2.9**
MANU	**Manus Island**	**4.67**	**294**		**Pn**	**10 23 18.4**	**-1.6**
PMG	**Port Moresby**	**7.02**	**219**	Pn	**Pn**	**10 23 53.2**	**+0.9**
	6.9nm,0.3s,baz=39,slow=9.5,SNR=26						
PMG				Sn	**Sn**	**10 25 15.7**	**+3.7**
	baz=66,slow=22,SNR=0.4						
PMG				LR	LR	10 26 47.5	
	comp=Z,10μm,18.6s,baz=46,slow=40						
PMG	**Port Moresby**	**7.02**	**219**	*i*P	**Pn**	**10 23 54.1**	**+1.8**
HNR	**Honiara**	**9.88**	**124**	Pn	**Pn**	**10 24 34.3**	**+2.7**
	3.9nm,0.3s,baz=197,slow=15,SNR=1.3						
HNR				Sn	Sn	10 26 35.7	+13
	5.4nm,0.3s,baz=302,slow=3.4,SNR=1.7						
HNR				LR	LR	10 28 32.1	
	comp=Z,17μm,20.9s,baz=296,slow=38						
HNR	**Honiara**	**9.88**	**124**	P	**Pn**	**10 24 33.7**	**+2.1**
HNR				pmax	pmax		
	comp=Z,146nm,0.8s						
HNR	**Honiara**	**9.88**	**124**		**Pn**	**10 24 30.5**	**-1.0**
JAY	**Jayapura**	**11.02**	**277**	Pn	**Pn**	**10 24 45.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=321,slow=19,SNR=1.6						
JAY				Sn	**Sn**	**10 26 48.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=324,slow=20,SNR=0.7						
JAY				LR	LR	10 28 13.0	
	comp=Z,13μm,18.7s,baz=82,slow=34						
JAY	**Jayapura**	**11.02**	**277**	P	**Pn**	**10 24 47.0**	**-0.2**
JAY				pmax	pmax		
	comp=Z,42nm,1.1s						
JAY	**Jayapura**	**11.02**	**277**	P	**Pn**	**10 24 46.9**	**-0.2**
	comp=Z,4μmcomp=Z,1μmcomp=Z,27nm,1.2s						
GENI	**Genyem**	**11.54**	**276**	P	**Pn**	**10 24 56.2**	**+2.0**
	comp=Z,8μmcomp=Z,5μmcomp=Z,83nm,1.2s						
COEN	**Coen**	**13.00**	**219**	Pn	**Pn**	**10 25 13.3**	**-0.9**
SRPI	**Serui, Papua**	**15.52**	**277**	P	**Pn**	**10 25 50.0**	**+1.6**
MTSU	**Mount Surprise**	**15.83**	**206**	P	**P**	**10 25 55.7**	**-0.5**
	baz=16,SNR=15						
CTA	**Charters Tower**	**16.89**	**198**	Pn	**P**	**10 26 07.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=355,slow=16,SNR=2.2						
CTA				Sn	**S**	**10 29 19.3**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=35,slow=22,SNR=1.3						
CTA				LR	LR	10 32 24.2	
	comp=Z,5μm,18.8s,baz=18,slow=36						
CTAO	**Charters Tower**	**16.89**	**198**	P	**Pn**	**10 26 06.8**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,95nm,1.3s						
CTAO	**Charters Tower**	**16.89**	**198**	P	**Pn**	**10 26 06.8**	**+0.9**
GUMO	**Guam**	**18.67**	**339**	P	**P**	**10 26 25.3**	**-2.3**
GUMO				pmax	pmax		
	comp=Z,456nm,1.2s						
GUMO	**Guam**	**18.67**	**339**	P	**P**	**10 26 22.3**	**-5.2**
SANVU	**Saraoutou**	**19.11**	**128**	P	**P**	**10 26 29.5**	**-2.9**
FAKI	**Fak Fak**	**19.39**	**272**	P	**P**	**10 26 34.1**	**-1.5**
FAKI				IAmb	IAmb	10 26 52.4	
	comp=Z,85nm,1.0s						
FAKI	**Fak Fak**	**19.39**	**272**	P	**Pn**	**10 26 36.3**	**-0.4**
	comp=Z,5μmcomp=Z,3μmcomp=Z,109nm,1.7s						
QIS	**Mount Isa**	**20.25**	**214**	P	Pn	10 26 46.3	-0.6
	baz=20,SNR=19						
KWAJ	**Kwajalein Atol**	**20.34**	**51**	P	Pn	10 26 47.2	-0.7
KWAJ				pmax	pmax		
	comp=Z,268nm,0.8s						
KWAJ	**Kwajalein Atol**	**20.34**	**51**	P	**P**	**10 26 42.7**	**-3.1**
SIJI	**Sorong**	**20.59**	**278**	P	**P**	**10 26 48.4**	**-0.2**
	comp=Z,12nm,0.7s,baz=136,slow=9.0,SNR=3.2						
SIJI				S	**S**	**10 30 39.8**	**+1.2**
	comp=Z,2.7nm,0.3s,baz=153,slow=23,SNR=1.5						
SWI	**Sorong**	**20.59**	**278**	P	**P**	**10 26 48.7**	**0.0**
SWI				pmax	pmax		
	comp=Z,89nm,1.1s						
SWI	**Sorong**	**20.59**	**278**	P	Pn	10 26 49.9	-1.0
	comp=Z,2μmcomp=Z,90nm,1.1s						
SAUI	**Saumlaki**	**20.63**	**258**	IAMs_20	IAMs_20	10 35 21.6	
	comp=Z,10μm,19.0s						
KDU	**Kakadu**	**20.85**	**244**	P	**P**	**10 26 50.0**	**-1.4**
	baz=21,SNR=20						
ANA2	**Anatahan**	**20.99**	**344**	P	**P**	**10 26 50.3**	**-2.6**
ANA2				IAmb	IAmb	10 27 06.6	
	comp=Z,160nm,0.9s						
EIDS	**Eidsvold**	**21.31**	**181**		**P**	**10 26 56.5**	**+0.2**
BNDI	**Bandanaira**	**21.69**	**268**	P	**P**	**10 27 02.7**	**+2.2**
	comp=Z,644nm,1.0s						
MTN	**Manton Dam**	**22.12**	**245**	P	**P**	**10 27 06.1**	**+1.0**
	baz=21,SNR=5.9						
MTN	**Manton Dam**	**22.12**	**245**	P	**P**	**10 27 05.0**	**-0.1**
RMQ	**Roma**	**22.59**	**187**	P	**P**	**10 27 11.7**	**+1.7**
	baz=23,SNR=14						
WB0	**Warramunga Arr**	**23.04**	**226**	P	**P**	**10 27 14.1**	**-0.7**
WB0				IAmb	IAmb	10 27 23.3	
	comp=Z,69nm,1.2s						
DZM	**Mont Dzumac**	**23.04**	**143**	P	**P**	**10 27 17.0**	**+2.1**
	comp=Z,71nm,0.7s,baz=334,slow=16,SNR=34						
DZM				S	**S**	**10 31 24.4**	**-1.0**
	comp=Z,11nm,1.0s,baz=335,slow=21,SNR=1.5						
DZM				LR	LR	10 35 17.6	
	comp=Z,6μm,21.8s,baz=304,slow=34						
WR0	**Warramunga Arr**	**23.06**	**225**	P	**P**	**10 27 14.4**	**-0.5**
WRAB	**Tennant Creek**	**23.17**	**225**	P	**P**	**10 27 16.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,89nm,1.2s						
WRAB				MLR	MLR		
	comp=Z,3μm,19.0s						
WRAB	**Tennant Creek**	**23.17**	**225**	P	**P**	**10 27 16.0**	**-0.2**
WRAB				IAmb	IAmb	10 27 24.9	
	comp=Z,89nm,1.1s						
WB2	**Warramunga Arr**	**23.18**	**225**	P	**P**	**10 27 15.8**	**-0.5**
WB2				IAmb	IAmb	10 27 25.0	
	comp=Z,100nm,1.2s						
WRA	**Warramunga Arr**	**23.19**	**225**	P	**P**	**10 27 15.8**	**-0.6**
	comp=Z,16nm,0.9s,baz=50,slow=9.4,SNR=42						
WRA				PcP	**PcP**	**10 31 03.7**	**-0.9**
	comp=Z,1.3nm,0.9s,baz=36,slow=2.4,SNR=2.2						
WRA				S	**S**	**10 31 23.2**	**-4.6**
	comp=Z,0.5nm,0.8s,baz=53,slow=15,SNR=0.6						
WRA				LR	LR	10 37 00.7	
	comp=Z,3μm,19.9s,baz=55,slow=39						
WRA	**Warramunga Arr**	**23.19**	**225**	P	**P**	**10 27 15.3**	**-1.0**
QLP	**Quilpie**	**23.61**	**197**	P	**P**	**10 27 23.0**	**+2.6**
	baz=24,SNR=8.8						
NLAI	**Namlea**	**24.51**	**271**	P	**P**	**10 27 30.5**	**+1.5**
	comp=Z,3μmcomp=Z,66nm,1.0s						
TNTI	**Ternate**	**24.71**	**280**	P	**P**	**10 27 30.8**	**0.0**
	comp=Z,1μmcomp=Z,46nm,1.4s						
KNRA	**Kununurra**	**25.35**	**241**	P	**P**	**10 27 35.5**	**-1.1**
KNRA				IAmb	IAmb	10 27 44.0	
	comp=Z,35nm,0.9s						
SANI	**Sanana**	**25.69**	**273**	P	**P**	**10 27 41.7**	**+2.0**
	comp=Z,2μmcomp=Z,2μmcomp=Z,107nm,1.1s						
AS31	**Alice Springs**	**26.04**	**220**	P	**P**	**10 27 42.7**	**-0.1**
ASAR	**Alice Springs**	**26.04**	**220**	P	**P**	**10 27 42.3**	**-0.5**
	comp=Z,11nm,0.8s,baz=57,slow=8.4,SNR=47						
ASAR				PcP	**PcP**	**10 31 11.2**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=61,slow=2.9,SNR=3.1						
ASAR				S	**S**	**10 32 13.3**	**-0.2**
	comp=Z,0.2nm,0.8s,baz=47,slow=30,SNR=0.7						
ASAR				LR	LR	10 38 58.2	
	comp=Z,3μm,18.1s,baz=45,slow=39						
ASAR	**Alice Springs**	**26.04**	**220**	P	**P**	**10 27 42.1**	**-0.7**
ASAR	**Alice Springs**	**26.04**	**220**	P	**P**	**10 27 42.1**	**-0.7**
ARMA	**Armidale**	**26.34**	**180**	P	**P**	**10 27 47.2**	**+1.7**
	baz=27,SNR=6.2						
ARMA	**Armidale**	**26.34**	**180**	P	**P**	**10 27 45.3**	**-0.2**
H11S3	**WAKE ISLAND Hy**	**26.77**	**33**	T	T	10 55 23.0	
	baz=206						
H11S2	**WAKE ISLAND Hy**	**26.78**	**33**	T	T	10 55 33.7	
	baz=206						
H11S1	**WAKE ISLAND Hy**	**26.79**	**33**	T	T	10 55 32.8	
	baz=206						
SOEI	**Soe**	**27.78**	**257**	P	**P**	**10 27 58.3**	**-0.4**
SOEI	**Soe**	**27.78**	**257**	P	**P**	**10 28 00.0**	**+1.3**
	comp=Z,3μmcomp=Z,161nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**27.88**	**32**	T	T	10 56 54.5	
	baz=221,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.89**	**32**	T	T	10 56 52.7	
	baz=221						
H11N2	**WAKE ISLAND Hy**	**27.89**	**32**	T	T	10 56 53.3	
	baz=221,slow=75						
KMSI	**Cibinong**	**28.01**	**279**	P	**P**	**10 28 01.7**	**+1.1**
	comp=Z,89nm,0.4s						
CMSA	**Cobar Meteorol**	**28.02**	**191**	P	**P**	**10 28 02.4**	**+1.9**
	baz=28,SNR=7.4						
DAV	**Davao City (W)**	**28.22**	**293**	LR	LR	10 38 38.3	
	comp=Z,1μm,19.9s,baz=94,slow=35						
BATI	**Baumata**	**28.44**	**256**	S	**S**	**10 32 53.1**	**+1.4**
	comp=Z,9.6nm,0.3s,baz=300,slow=22,SNR=0.7						
BATI				LR	LR	10 40 37.5	
	comp=Z,3μm,21.2s,baz=90,slow=39						
BATI	**Baumata**	**28.44**	**256**	P	**P**	**10 28 04.5**	**0.0**
	comp=Z,2μmcomp=Z,63nm,0.9s						
GTOI	**Gorontalo**	**28.97**	**278**	P	**P**	**10 28 11.8**	**+2.6**
	comp=Z,388nmcomp=Z,21nm,0.9s						
LUWI	**Luwuk**	**28.99**	**275**	P	**P**	**10 28 10.6**	**+1.3**
	comp=Z,2μmcomp=Z,62nm,1.3s						
FITZ	**Fitzroy Crossi**	**29.08**	**239**	P	**P**	**10 28 08.8**	**-1.3**
	comp=Z,11nm,1.1s,baz=43,slow=8.8,SNR=9.0						
FITZ				S	**S**	**10 32 55.2**	**-6.3**
	comp=Z,2.2nm,0.9s,baz=204,slow=22,SNR=1.5						
FITZ				LR	LR	10 40 19.0	
	comp=Z,5μm,21.5s,baz=73,slow=38						
FITZ	**Fitzroy Crossi**	**29.08**	**239**	P	**P**	**10 28 08.9**	**-1.3**
	baz=29,SNR=9.0						
FITZ	**Fitzroy Crossi**	**29.08**	**239**	P	**P**	**10 28 09.5**	**-0.7**
MSVF	**Nonsavu**	**29.27**	**120**	LR	LR	10 39 18.7	
	comp=Z,4μm,18.7s,baz=298,slow=35						
MSVF	**Nonsavu**	**29.27**	**120**	*e*P	**P**	**10 28 10.5**	**-1.4**
MSVF				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MSVF	**Nonsavu**	**29.27**	**120**	IAMs_20	IAMs_20	10 38 59.4	
	comp=Z,5μm,19.0s						
STKA	**Stephens Creek**	**29.35**	**198**	P	**P**	**10 28 12.6**	**+0.2**
	comp=Z,5.6nm,0.8s,baz=9.0,slow=9.5,SNR=15						
STKA				LR	LR	10 39 33.6	
	comp=Z,2μm,18.4s,baz=10,slow=36						
STKA	**Stephens Creek**	**29.35**	**198**	P	**P**	**10 28 13.3**	**+0.9**
	baz=30,SNR=6.3						
STKA	**Stephens Creek**	**29.35**	**198**	*e*P	**P**	**10 28 12.9**	**+0.5**
STKA	**Stephens Creek**	**29.35**	**198**	P	**P**	**10 28 12.5**	**+0.2**
MMRI	**Maumere**	**29.59**	**259**	P	**P**	**10 28 14.2**	**-0.5**
MMRI	**Maumere**	**29.59**	**259**	P	**P**	**10 28 13.8**	**-0.9**
	comp=Z,2μmcomp=Z,87nm,1.0s						
MRSI	**Marisa**	**30.01**	**278**	P	**P**	**10 28 20.6**	**+2.2**
	comp=Z,1μmcomp=Z,22nm,0.4s						
APSI	**Ampana**	**30.12**	**275**	P	**P**	**10 28 20.9**	**+1.5**
	comp=Z,465nmcomp=Z,41nm,1.1s						
WRKA	**Warakurna**	**30.73**	**225**	P	**P**	**10 28 23.7**	**-1.0**
	baz=31,SNR=6.3						
BNSI	**Bone**	**31.46**	**268**	P	**P**	**10 28 31.5**	**+0.3**
	comp=Z,26nm,0.9s						
HTT	**Hallett**	**31.65**	**201**	P	**P**	**10 28 34.2**	**+1.5**
	baz=32,SNR=4.3						
TTSI	**Tana Toraja**	**31.78**	**271**	P	**P**	**10 28 36.7**	**+2.7**
	comp=Z,2μmcomp=Z,18nm,1.1s						
SPSI	**Sidrap Palu**	**31.80**	**269**	P	**P**	**10 28 34.8**	**+0.6**
	comp=Z,735nmcomp=Z,19nm,1.0s						
KAPI	**Kappang**	**31.81**	**267**	P	**P**	**10 28 33.3**	**-1.1**
	comp=Z,4.3nm,0.3s,baz=199,slow=7.4,SNR=3.6						
TOO	**Toolangi**	**33.94**	**189**	P	**P**	**10 28 51.5**	**-1.2**
TOO				pmax	pmax		
	comp=Z,14nm,1.1s						
TOO	**Toolangi**	**33.94**	**189**	P	**P**	**10 28 51.5**	**-1.2**
PLAI	**Plampang**	**33.99**	**260**	P	**P**	**10 28 53.7**	**+0.3**
	comp=Z,1μmcomp=Z,58nm,0.9s						
MYLDM	**Lahad Datu**	**34.33**	**285**	P	**P**	**10 28 54.5**	**-1.8**
MYLDM				IAmb	IAmb	10 29 16.1	
	comp=Z,49nm,1.3s						
MYLDM				IAMs_20	IAMs_20	10 40 29.9	
	comp=Z,5μm,20.0s						
FORT	**Forrest**	**34.75**	**217**	P	**P**	**10 28 59.3**	**-0.4**
	baz=35,SNR=8.2						
FORT	**Forrest**	**34.75**	**217**	IAmb	IAmb	10 29 12.7	
	comp=Z,26nm,0.9s						
TWSI	**Taliwang, Sumb**	**34.86**	**260**	P	**P**	**10 29 02.4**	**+1.4**
	comp=Z,371nmcomp=Z,26nm,0.8s						
MBWA	**Marble Bar**	**35.42**	**238**	IAMs_20	IAMs_20	10 44 09.6	
	comp=Z,4μm,19.0s						
PSA00	**Pilbara Seismi**	**35.49**	**238**	P	**P**	**10 29 04.8**	**-1.6**
PSA00				IAmb	IAmb	10 29 11.1	
	comp=Z,43nm,1.5s						
BBKI	**Banjar Baru**	**36.73**	**269**	P	P	10 29 28.7	+12
KKM	**Kota Kinabalu**	**36.74**	**285**	P	**P**	**10 29 15.4**	**-1.8**
KKM				IAmb	IAmb	10 29 28.9	
	comp=Z,29nm,1.0s						
MTKI	**Muara Teweh, K**	**36.83**	**274**	P	**P**	**10 29 20.2**	**+2.3**
OUZ	**Omahuta**	**37.17**	**150**	IAMs_20	IAMs_20	10 41 38.0	
	comp=Z,3μm,20.0s						
JAGI	**Jajag, Banyuwa**	**37.53**	**261**	P	**P**	**10 29 22.8**	**-1.0**
JAGI				IAmb	IAmb	10 29 27.0	
	comp=Z,40nm,0.9s						
TAU	**Tasmania Unive**	**38.99**	**185**	IAMs_20	IAMs_20	10 44 41.1	
	comp=Z,4μm,19.0s						
SBUM	**Sibu**	**39.91**	**279**	P	**P**	**10 29 42.2**	**-1.6**
YULB	**Yu-li**	**40.17**	**314**	IAMs_20	IAMs_20	10 42 28.9	
	comp=Z,3μm,20.0s						
STKI	**Sintang**	**40.33**	**275**	P	**P**	**10 29 48.7**	**+1.4**
NIUE	**Niue**	**40.42**	**115**	P	**P**	**10 29 47.0**	**-0.9**
NIUE				IAmb	IAmb	10 29 53.3	
	comp=Z,144nm,1.5s						
NACB	**Ninganchiao**	**40.45**	**315**	P	**P**	**10 29 45.9**	**-2.2**
NACB				IAmb	IAmb	10 30 12.2	
	comp=Z,43nm,1.1s						
SSLB	**Suanglung**	**40.67**	**314**	IAMs_20	IAMs_20	10 42 34.9	
	comp=Z,4μm,21.0s						
TATO	**Taipei**	**41.04**	**316**	IAMs_20	IAMs_20	10 43 22.5	
	comp=Z,3μm,20.0s						
SMRI	**Semarang**	**41.12**	**264**	P	**P**	**10 29 53.6**	**-0.2**
	comp=Z,80nm,0.9s						
QRZ	**Quartz Range**	**41.25**	**156**	IAMs_20	IAMs_20	10 44 37.2	
	comp=Z,4μm,20.0s						
KSM	**Kuching**	**41.66**	**277**	P	**P**	**10 29 56.6**	**-1.7**
KSM				IAmb	IAmb	10 30 10.8	
	comp=Z,29nm,0.9s						
NNZ	**Nelson**	**41.93**	**155**	IAMs_20	IAMs_20	10 44 00.2	
	comp=Z,4μm,21.0s						
MJAR	**Matsushiro Arr**	**42.18**	**344**	P	**P**	**10 29 59.6**	**-2.6**
	comp=Z,13nm,1.2s,baz=156,slow=9.2,SNR=5.8						
MJAR				PcP	**PcP**	**10 31 56.1**	**-0.3**
	comp=Z,6.8nm,1.0s,baz=153,slow=3.1,SNR=3.2						
MJAR				LR	LR	10 45 59.9	
	comp=Z,1μm,21.1s,baz=190,slow=34						
MJAR	**Matsushiro Arr**	**42.18**	**344**	P	**P**	**10 29 59.5**	**-2.6**
MJAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MJAR	**Matsushiro Arr**	**42.18**	**344**	P	**P**	**10 29 59.5**	**-2.6**
MAJO	**Matsushiro**	**42.19**	**344**	*e*P	**P**	**10 30 02.0**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,13nm,1.1s						
MAJO	**Matsushiro**	**42.19**	**344**	P	**P**	**10 30 00.1**	**-2.1**
MAJO				IAmb	IAmb	10 30 08.4	
	comp=Z,35nm,1.2s						
MAT	**Matsushiro**	**42.19**	**344**	P	**P**	**10 30 00.6**	**-1.6**
MAT				S	**S**	**10 36 18.4**	**-3.5**
TUWZ	**Tuamarina**	**42.34**	**155**	P	**P**	**10 30 02.1**	**-1.3**
QZH	**Quanzhou**	**43.07**	**314**	P	**P**	**10 30 06.6**	**-2.9**
QZH				S	**S**	**10 36 33.8**	**-1.4**
QZH				LR	LR		
	comp=Z,870nm,19.4s						
QZH				LR	LR		
	comp=Z,1μm,19.4s						
QZH				LR	LR		
	comp=Z,2μm,27.0s						
NWAO	**Narrogin (SRO)**	**43.19**	**224**	P	**P**	**10 30 09.6**	**-0.8**
NWAO				pmax	pmax		
	comp=Z,26nm,1.4s						
NWAO	**Narrogin (SRO)**	**43.19**	**224**	P	**P**	**10 30 09.6**	**-0.8**
JCJI	**Jatiwangi**	**43.26**	**265**	P	**P**	**10 30 12.5**	**+1.2**
LEM	**Lembang**	**43.92**	**264**	P	**P**	**10 30 17.7**	**+0.9**
	comp=Z,17nm,0.5s						
TPI	**Tanjungpandan**	**43.93**	**270**	P	**P**	**10 30 17.9**	**+1.2**
CBJI	**Citeko**	**44.67**	**265**	P	**P**	**10 30 23.7**	**+1.1**
DBJI	**Dramaga**	**44.77**	**265**	P	**P**	**10 30 24.3**	**+0.9**
	comp=Z,25μmcomp=Z,74nm,0.6s						
SSE	**Sheshan**	**45.36**	**322**	P	**P**	**10 30 25.8**	**-2.0**
SSE				S	**S**	**10 37 07.3**	**-1.1**
SSE				pmax	pmax		
	comp=Z,11nm,0.8s						
SSE				pmax	pmax		
	comp=Z,170nm,6.3s						
SSE				LR	LR		
	comp=Z,410nm,25.7s						
SSE				LR	LR		
	comp=Z,730nm,23.3s						
PPBI	**Pangkal Pinang**	**45.48**	**271**	P	**P**	**10 30 30.0**	**+1.0**
DLV	**T Lat**	**45.72**	**291**	P	**P**	**10 30 30.0**	**-1.2**
DLV				IAmb	IAmb	10 30 33.0	
	comp=Z,50nm,1.1s						
TJN	**Taejon**	**46.08**	**333**	*e*P	**P**	**10 30 31.7**	**-1.7**
BLSI	**Bandar Lampung**	**46.26**	**266**	P	**P**	**10 30 35.3**	**+0.1**
KSRS	**Korea Array**	**46.72**	**334**	P	**P**	**10 30 36.4**	**-2.1**
	comp=Z,1.5nm,0.9s,baz=144,slow=11,SNR=5.2						
KSRS				PcP	**PcP**	**10 32 12.2**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=160,slow=3.9,SNR=2.9						
KSRS				LR	LR	10 48 12.3	
	comp=Z,1μm,21.9s,baz=146,slow=34						
KSAR	**Wonju Array Be**	**46.73**	**334**	P	**P**	**10 30 37.0**	**-1.5**
KSAR	**Wonju Array Be**	**46.73**	**334**	P	**P**	**10 30 37.0**	**-1.5**
PMBI	**Palembang**	**46.80**	**270**	P	**P**	**10 30 41.8**	**+2.4**
QIZ	**Qiongzhong**	**47.04**	**301**	P	**

YSS MLR MLR
comp=E,800nm,15.0s
TIA Tai'an 51.35 324 P **P** **10 31 17.1 +3.2**
TIA S **S** **10 38 30.8 -2.1**
TIA pmax pmax
comp=E,11nm,2.1s
TIA pmax pmax
comp=E,150nm,5.3s
TIA LR LR
comp=E,620nm,17.8s
TIA LR LR
comp=E,960nm,17.8s
TIA LR LR
comp=E,1μm,22.1s
MDJ Mudanjiang 52.22 340 P **P** **10 31 22.4 +2.1**
MDJ S **S** **10 38 44.1 -0.5**
MDJ pmax pmax
comp=E,23nm,1.4s
MDJ pmax pmax
comp=E,250nm,3.0s
MDJ LR LR
comp=E,760nm,22.2s
MDJ LR LR
comp=E,410nm,21.0s
MDJ LR LR
comp=E,1μm,24.5s
MDJ Mudanjiang 52.22 340 P **P** **10 31 17.8 -2.5**
MDJ IAmb IAmb 10 31 37.6
comp=Z,40nm,1.2s
KHON Khomkaen 52.30 294 P P 10 31 26.8 +5.4
comp=Z,42nm,1.0s
NONG Nongkai 52.56 296 P **P** **10 31 26.2 +2.9**
comp=Z,54nm,1.0s
ENH Enshi 52.73 313 P **P** **10 31 23.0 -1.4**
ENH IAmb IAmb 10 31 39.0
comp=Z,49nm,1.2s
CHAI Chaiyaphum 52.93 293 P P 10 31 30.9 +4.8
comp=Z,27nm,1.1s
GYA Guiyang 52.96 307 ⇓P **P** **10 31 30.1 +3.8**
GYA S **S** **10 38 56.4 +0.8**
GYA SS **SS** **10 42 29.9 -5.1**
GYA pmax pmax
comp=Z,220nm,4.3s
GYA LR LR
comp=Z,380nm,14.7s
GYA LR LR
comp=Z,890nm,19.0s
GYA LR LR
comp=Z,2μm,19.2s
CN2 Changchun 53.05 336 *e*P P 10 31 32.8 +6.3
CN2 PcP **PcP** **10 32 39.4 +4.5**
CN2 *e*S **S** **10 38 51.0 -5.0**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 LR LR
comp=N,760nm,15.0s
CN2 LR LR
comp=E,430nm,15.0s
CN2 LR LR
comp=Z,790nm,19.0s
GSI Gunungsitoli 54.29 274 P **P** **10 31 33.5 -2.6**
GSI IAmb IAmb 10 32 01.1
comp=Z,61nm,1.5s
PHET Kaeng Krachan 54.30 289 P P 10 31 45.9 +10
comp=Z,26nm,1.0s
SKR Severo-Kuril's 54.54 3 *e*P **P** **10 31 34.6 -2.6**
SKR *e*S **S** **10 39 18.1 +2.2**
SKR pmax pmax
comp=Z,100nm,2.7s
SKR pmax pmax
comp=Z,30nm,1.8s
SKR MLR MLR
comp=Z,1μm,15.0s
SKR MLR MLR
comp=Z,1μm,16.0s
BJI Beijing 54.55 327 P **P** **10 31 40.8 +3.3**
BJI S **S** **10 39 17.0 +0.6**
BJI pmax pmax
comp=Z,9.0nm,1.1s
BJI pmax pmax
comp=Z,290nm,3.6s
BJI LR LR
comp=Z,890nm,19.3s
BJI LR LR
comp=Z,710nm,23.0s
BJI LR LR
comp=Z,2μm,27.5s
PHIT Phitsanulok 54.75 294 P P 10 31 47.7 +8.3
comp=Z,63nm,1.0s
UTTA Uttaradit 54.80 295 P P 10 31 46.0 +6.3
comp=Z,30nm,1.0s
COCO West Island 54.80 258 *i* P **P** **10 31 41.6 +1.8**
TYV Tymovskoe 55.13 353 *e*P **P** **10 31 41.3 -0.2**
TYV *e* 10 39 26.4
TYV pmax pmax
comp=Z,200nm,3.4s
TYV pmax pmax
comp=Z,14nm,1.3s
SRDT SRDT 55.15 290 P P 10 31 50.1 +7.9
comp=Z,19nm,1.3s
UTHA Uthaitani 55.17 292 P P 10 31 49.1 +6.6
comp=Z,17nm,1.0s
XAN Xi'an 55.21 317 P **P** **10 31 46.8 +4.3**
XAN pP pwP 10 31 54.0 +4.7
XAN pmax pmax
comp=Z,17nm,0.3s
XAN Xi'an 55.21 317 P **P** **10 31 40.1 -2.4**
XAN pmax pmax
comp=Z,31nm,1.4s
XAN Xi'an 55.21 317 P **P** **10 31 40.1 -2.4**
XAN IAmb IAmb 10 31 51.1
comp=Z,31nm,1.4s
XAN Xi'an 55.21 317 IAMs_20 IAMs_20 10 52 00.7
comp=Z,2μm,22.0s
SUKH Sukhothai 55.55 294 P **P** **10 31 49.0 +3.8**
comp=Z,25nm,1.0s
KMI Kunming 55.55 304 ⇑P **P** **10 31 46.9 +1.5**
KMI sP pwP 10 31 51.3 -0.9
KMI PP **PP** **10 33 51.8 +2.2**
KMI S **S** **10 39 34.6 +3.7**
KMI ScS **ScS** **10 41 34.8 -0.1**
KMI SS **SS** **10 43 15.3 -0.9**
KMI pmax pmax
comp=Z,20nm,1.9s
KMI pmax pmax
comp=Z,330nm,5.0s
KMI LR LR
comp=Z,440nm,14.0s
KMI LR LR
comp=Z,1μm,20.1s
KMI LR LR
comp=Z,1μm,29.1s
KLR Kul'dur 55.71 344 P **P** **10 31 44.4 -1.3**
comp=Z,19nm,1.2s,baz=144,slow=6.6,SNR=13
KLR LR LR 10 52 46.4
comp=Z,1μm,21.9s,baz=162,slow=33
KLR Kul'dur 55.71 344⇑*e*P **P** **10 31 43.7 -2.0**
KLR pmax pmax
comp=Z,5.0nm,1.3s
LAMP Lampang 55.87 295 P P 10 31 52.7 +5.3
comp=Z,291nmcomp=Z,24nm,1.0s
UMPA Umpang Tak 55.89 292 P P 10 32 00.0 +12
CM09 Chiang Mai Arr 56.42 295 P **P** **10 31 55.4 +3.9**
comp=Z,146nmcomp=Z,21nm,1.0s
CM31 Chiang Mai Arr 56.47 295 P **P** **10 31 56.0 +4.2**
comp=Z,5μmcomp=Z,485nm,0.9s
CMAR Chiang Mai Arr 56.47 295 P **P** **10 31 51.5 -0.3**
comp=Z,12nm,1.1s,baz=117,slow=5.5,SNR=20
CMAR LR LR 10 54 16.3
comp=Z,549nm,22.0s,baz=138,slow=34
CMAR PKP2bc 11 02 03.2
comp=Z,0.4nm,0.6s,baz=301,slow=2.5,SNR=5.6
CMAR Chiang Mai Arr 56.47 295 P **P** **10 31 52.2 +0.4**
CMAR Chiang Mai Arr 56.47 295 P **P** **10 31 52.2 +0.4**
CMMT Chiang Mai 56.58 295 P **P** **10 31 57.0 +4.5**
comp=Z,258nmcomp=Z,7.3nm,1.1s
CHTO Chiang Mai 56.58 295 P **P** **10 31 52.4 -0.1**
CHTO pmax pmax
comp=Z,9.0nm,1.1s
PET Petropavlovsk 57.06 5 *e*P **P** **10 31 55.4 +0.2**
PET *e*S **S** **10 39 48.2 -1.2**
PET *e*SS **SS** **10 43 42.5 +4.1**
PEA0B Petropavlovsk- 57.07 4⇓*e*P **P** **10 31 54.3 -1.0**
PETK Petropavlovsk- 57.07 4 P **P** **10 31 55.0 -0.3**
comp=Z,10nm,0.8s,baz=153,slow=5.7,SNR=33
PETK LR LR 10 52 28.0
comp=Z,966nm,21.7s,baz=182,slow=32
PETK Petropavlovsk- 57.07 4 P **P** **10 31 53.3 -2.1**
PETK Petropavlovsk- 57.07 4 P **P** **10 31 53.3 -2.1**
NKL Nikolayevsk 57.63 352 *e*P **P** **10 31 56.7 -2.5**
NKL *e*S **S** **10 39 54.6 -2.2**
NKL *e*SS **SS** **10 43 43.7 -3.6**
NKL pmax pmax
comp=E,50nm,1.4s
NKL pmax pmax
comp=N,322nm,1.1s
NKL pmax pmax
comp=Z,20nm,1.3s
NKL smax smax
comp=E,65nm,1.3s
NKL smax smax
comp=N,1.0nm,1.5s
NKL MLR MLR
comp=E,2μm,14.0s
NKL MLR MLR
comp=N,17nm,16.0s
NKL MLR MLR
comp=Z,345nm,16.0s
HHC Hu-ho-hao-te 57.68 325 *e*P **P** **10 31 59.8 -0.3**
HHC S **S** **10 39 55.5 -2.9**
HHC pmax pmax
comp=Z,20nm,1.2s
HHC pmax pmax
comp=Z,250nm,5.8s
HHC LR LR
comp=Z,730nm,18.2s
HHC LR LR
comp=Z,1μm,18.2s
HHC LR LR
comp=Z,2μm,19.8s
BTO Baotou 58.43 324 *e*P **P** **10 32 08.3 +3.0**
BTO S **S** **10 40 11.3 +3.2**
BTO LR LR
comp=Z,2μm,19.7s
BTO LR LR
comp=Z,3μm,18.2s
BTO LR LR
comp=Z,4μm,20.1s
PPT Papeete 59.08 108 LR LR 10 54 12.8
comp=Z,462nm,19.4s,baz=274,slow=32
PPT2 Papeete2 59.09 108 *e*S **S** **10 40 16.5 -0.8**
comp=Z,802nm,25.8s
PPT2 *e*LQ LQ 10 47 04.3
comp=Z,3μm,31.0s
PPT2 *e*LR LR 10 49 25.8
comp=Z,616nm,22.8s
HIA Hailar 59.79 336 P **P** **10 32 13.2 -1.3**
HIA pmax pmax
comp=Z,33nm,1.1s
HIA Hailar 59.79 336 P **P** **10 32 13.2 -1.3**
HIA IAmb IAmb 10 32 32.5
comp=Z,33nm,1.1s
LZH Lanzhou 59.82 316 *e*P **P** **10 32 16.4 +1.3**
LZH pP pwP 10 32 21.3 -0.6
LZH sP sP 10 32 24.4 +3.6
LZH S **S** **10 40 28.5 +2.1**
LZH sS sS 10 40 39.4 +5.9
LZH pmax pmax
comp=Z,15nm,1.2s
LZH pmax pmax
comp=Z,220nm,4.2s
LZH LR LR
comp=Z,830nm,14.1s
LZH LR LR
comp=Z,1μm,12.5s
LZH LR LR
comp=Z,1μm,15.2s
TBI Tubuai 59.96 115 *e*S **S** **10 40 30.6 +2.3**
comp=Z,570nm,27.5s
TBI *e*LQ LQ 10 47 28.9
comp=Z,4μm,34.5s
TBI *e*LR LR 10 50 02.0
comp=Z,2μm,28.8s,baz=286
ZEA Zeya 61.00 344 *e*P **P** **10 32 24.7 +2.1**
ZEA *e*S **S** **10 40 47.4 +6.9**
ZEA pmax pmax
comp=N,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.9s
ZEA smax smax
comp=E,200nm,8.0s
ADK Adak 61.79 22 P **P** **10 32 30.2 +2.3**
ADK pmax pmax
comp=Z,68nm,1.3s
MA2 Magadan 63.32 360 P **P** **10 32 36.1 -2.0**
comp=Z,12nm,0.8s,baz=146,slow=6.5,SNR=11
MA2 Magadan 63.32 360⇑*e*P **P** **10 32 37.8 -0.3**
MA2 pmax pmax
comp=Z,11nm,0.9s
MA2 Magadan 63.32 360 P **P** **10 32 35.0 -3.1**
MA2 IAmb IAmb 10 32 52.7
comp=Z,37nm,1.2s
GTA Gaotai 64.25 317 *e*P **P** **10 32 46.3 +1.5**
GTA pP pwP 10 32 50.3 -1.4
GTA sP sP 10 32 53.6 +3.1
GTA S **S** **10 41 27.8 +5.6**
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,150nm,4.7s
GTA LR LR
comp=Z,540nm,18.9s
GTA LR LR
comp=Z,690nm,18.5s
GTA LR LR
comp=Z,1μm,18.9s
CIT Chita 64.44 335 *e*P **P** **10 32 46.2 +0.6**
CIT *e* 10 32 59.7
ULN Ulaanbaatar 64.66 328*ce*P **P** **10 32 47.3 -0.1**
ULN pmax pmax
comp=Z,7.0nm,1.1s
ULN Ulaanbaatar 64.66 328 P **P** **10 32 46.0 -1.4**
ULN IAmb IAmb 10 32 53.8
comp=Z,30nm,1.2s
SHL Shillong 64.88 300 P **P** **10 32 47.4 -1.8**
SHL pmax pmax
comp=Z,36nm,1.1s
SHL Shillong 64.88 300 P **P** **10 32 47.4 -1.8**
SONM Songino Array 64.99 328 P **P** **10 32 48.5 -1.0**
comp=Z,2.1nm,0.7s,baz=147,slow=6.6,SNR=11
SONM LR LR 10 59 29.0
comp=Z,1μm,21.9s,baz=126,slow=35
SONM PKP2bc 11 01 43.8
comp=Z,0.8nm,1.1s,baz=224,slow=4.1,SNR=4.7
SONM Songino Array 64.99 328 P **P** **10 32 49.1 -0.4**
SONM pmax pmax
comp=Z,22nm,1.3s
SONM Songino Array 64.99 328 P **P** **10 32 49.0 -0.4**
SONM IAmb IAmb 10 32 56.5
comp=Z,22nm,1.3s
NIKH Nikolski High 65.72 25 P **P** **10 32 50.5 -3.3**
SEY Seymchan 66.69 0 P **P** **10 32 59.6 -0.3**
comp=Z,3.9nm,0.8s,baz=166,slow=5.2,SNR=14
LSA Lhasa 66.81 305 P **P** **10 32 59.5 -2.5**
LSA pmax pmax
comp=Z,28nm,1.2s
LSA Lhasa 66.81 305 P **P** **10 32 59.5 -2.5**
LSA IAmb IAmb 10 33 17.2
comp=Z,28nm,1.2s
YAK Yakutsk 67.91 349 P **P** **10 33 07.1 -0.6**
comp=Z,7.3nm,0.4s,baz=225,slow=0.3,SNR=1.4
YAK LR LR 11 00 45.8
comp=Z,646nm,21.9s,baz=121,slow=34
YAK Yakutsk 67.91 349 *e*P **P** **10 33 07.5 -0.1**
YAK *e* 10 33 30.4
YAK *e*S **S** **10 42 03.1 -2.5**
YAK *e**SS sS 10 42 28.5 +16
YAK *e* 10 42 56.9
YAK pmax pmax
comp=Z,98nm,1.5s
YAK pmax pmax
comp=N,35nm,1.4s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,212nm,4.4s
YAK pmax pmax
comp=N,97nm,3.2s
YAK pmax pmax
comp=E,79nm,4.4s
YAK smax smax
comp=N,186nm,5.3s
YAK smax smax
comp=E,161nm,4.4s
YAK Yakutsk 67.91 349 P **P** **10 33 05.2 -2.5**
ZAK Zakamensk 68.17 329 *e*P **P** **10 33 08.9 -0.8**
ZAK pmax pmax
comp=Z,27nm,1.2s
CASY Casey 68.50 197 P **P** **10 33 12.1 +0.8**
CASY IAmb IAmb 10 33 18.5
comp=Z,12nm,0.9s
BOD Bodaibo 68.58 339 *e*P **P** **10 33 13.5 +1.5**
BOD pmax pmax
comp=Z,38nm,1.4s
TLY Talaya 68.76 330 P **P** **10 33 08.7 -4.5**
comp=Z,1.2nm,0.3s,baz=277,slow=20,SNR=4.0
TLY LR LR 11 04 21.8
comp=Z,606nm,18.3s,baz=125,slow=37
TLY Talaya 68.76 330 *e*P **P** **10 33 16.3 +3.0**
TLY *e*S **S** **10 42 08.7 -7.6**
TLY *e*SS **SS** **10 46 44.3 +2.8**
TLY pmax pmax
comp=Z,42nm,1.0s
TLY MLR MLR
comp=Z,2μm,17.0s
TLY Talaya 68.76 330 P **P** **10 33 09.2 -4.1**
TLY IAmb IAmb 10 33 23.2
comp=Z,21nm,1.2s
IRK Irkutsk 68.80 331 *e*P **P** **10 33 15.6 +2.1**
IRK pmax pmax
comp=Z,49nm,1.8s
TAPN Taplejung 68.98 301 *e*P **P** **10 33 16.9 +1.4**
comp=Z,47nm,0.9s
ODAN Odare 69.12 301 *e*P **P** **10 33 18.9 +2.6**
comp=Z,105nm,1.2s
RAMN Ramite 69.82 300 *e*P **P** **10 33 23.1 +2.5**
comp=Z,47nm,1.4s
MOY Mondy 70.09 329 *e*P **P** **10 33 25.2 +3.6**
MOY pmax pmax
comp=Z,64nm,1.6s
JIRN Jiri 70.36 301 *e*P **P** **10 33 26.0 +1.9**
comp=Z,37nm,1.0s
GUN Gumba 70.69 301 *e*P **P** **10 33 26.9 +0.8**
comp=Z,62nm,1.0s
PKI Pulchoki 71.01 301 *e*P **P** **10 33 29.3 +1.3**
comp=Z,48nm,1.2s
PKIN Phulchoki 71.02 301 *e*P **P** **10 33 29.5 +1.5**
DMN Daman 71.28 301 *e*P **P** **10 33 31.3 +1.8**
PALK Pallekele 71.67 279⇑*e*P **P** **10 33 32.8 +1.0**
PALK pmax pmax
comp=Z,36nm,2.8s
GKN Gorkha 71.78 301 *e*P **P** **10 33 33.0 +0.6**
BILL Bilibino 72.55 6⇑*e*P **P** **10 33 37.4 +1.4**
BILL *e* 10 36 13.3
BILL *e*S **S** **10 43 04.6 +4.8**
BILL *e*SS **SS** **10 47 41.2 +2.2**
BILL pmax pmax
comp=Z,44nm,2.5s
BILL MLR MLR
comp=Z,402nm,18.0s
BILL Bilibino 72.55 6 P **P** **10 33 35.1 -0.9**
BILL IAmb IAmb 10 33 43.6
comp=Z,18nm,1.0s
KOLN Koldanda 72.61 301 *e*P **P** **10 33 37.4 -0.1**
comp=Z,7nm,0.9s
GAMB Gambell 72.87 16 P 10 33 39.5
baz=218
RKT Rikitea 73.18 113 *e*S **S** **10 43 09.7 +1.1**
comp=Z,404nm,28.0s
RKT *e*LQ LQ 10 53 03.3
comp=Z,1μm,32.5s
RKT *e*LR LR 10 55 59.6
comp=Z,2μm,23.0s
PYUN Piuthan 73.21 301 *e*P **P** **10 33 40.2 -0.8**
comp=Z,68nm,0.9s
VNDA Vanda 73.73 178 P **P** **10 33 42.9 +0.1**
comp=Z,2.0nm,0.9s,baz=331,slow=6.2,SNR=8.5
VNDA LR LR 11 02 43.8
comp=Z,466nm,18.7s,baz=344,slow=33
VNDA Vanda 73.73 178 P **P** **10 33 42.7 -0.2**
VNDA pmax pmax
comp=Z,10.0nm,1.2s
VNDA Vanda 73.73 178 P **P** **10 33 42.7 -0.2**
SBA Scott Base 74.29 177 P **P** **10 33 48.5 +2.4**
WMQ Urumqi 74.33 318 *e*P **P** **10 33 48.8 +1.7**
WMQ pP pwP 10 33 52.8 -1.3
WMQ sP sP 10 33 56.5 +3.7
WMQ S **S** **10 43 20.3 -0.7**
WMQ SS **SS** **10 48 08.1 +0.8**
WMQ pmax pmax
comp=Z,45nm,1.1s
WMQ pmax pmax
comp=Z,460nm,4.1s
WMQ LR LR
comp=Z,900nm,22.7s
WMQ LR LR
comp=Z,950nm,19.1s
WMQ LR LR
comp=Z,2μm,25.7s
SII Sitkinak Islan 74.54 28 P 10 33 48.5
baz=237
HYB Hyderabad 75.12 289 *i* P **P** **10 33 54.0 +1.8**
TNA Tin City 75.29 16 P 10 33 50.8
baz=222
ANM Nome 75.31 18 P 10 33 52.7
baz=225
OHAK Old Harbor 75.32 27 P 10 33 51.6
baz=238
KDAK Kodiak Island 75.94 27⇓*e*P **P** **10 33 54.1 -1.8**
KDAK pmax pmax
comp=Z,269nm,2.3s
TIXI Tiksi 76.90 353 P **P** **10 34 01.3 +0.2**
comp=Z,4.5nm,0.7s,baz=118,slow=8.5,SNR=13
TIXI LR LR 11 09 15.9
comp=Z,342nm,18.8s,baz=175,slow=37
TIXI Tiksi 76.90 353⇓*e*P **P** **10 34 01.8 +0.7**
TIXI pmax pmax
comp=Z,112nm,2.5s
TIXI Tiksi 76.90 353 P **P** **10 33 59.0 -2.1**
TIXI IAmb IAmb 10 34 07.6
comp=Z,13nm,1.1s
ZSN Zaisan 77.48 320 *e*P **P** **10 34 05.6 +0.6**
baz=320
ZSN *i* S **S** **10 43 54.7 -0.8**
baz=320
ZSN *i* LR LR 11 09 03.7
baz=320
ZSN *i* LRM MLR 11 10 21.6
baz=320
ZSN Zaisan 77.48 320 *e*P **P** **10 34 05.5 +0.6**
BRSE Bradley Lake S 77.77 26 P 10 34 05.9
baz=240
RDOG Red Dog Mine 78.47 16 P 10 34 08.3
baz=226
SKT Skwentna 78.60 24 P 10 34 08.5
baz=238
SUA Susitna One 78.65 24 P 10 34 11.7
baz=239
PPLA Purkeypile 78.83 23 P 10 34 12.5
baz=238
RC01 Rabbit Creek A 78.88 25 P 10 34 12.3
baz=240,SNR=7.3
MK31 Makanchi Array 78.93 319⇓*e*P **P** **10 34 14.1 +1.1**
MKAR Makanchi Array 78.93 319 P **P** **10 34 11.1 -1.9**
comp=Z,2.1nm,0.7s,baz=103,slow=5.4,SNR=1.0
MKAR S S 10 44 00.4 -11
comp=Z,0.2nm,0.7s,baz=83,slow=15,SNR=1.5
MKAR LR LR 11 07 11.2
comp=Z,814nm,22.0s,baz=91,slow=34
CHUM Lake Minchumin 79.31 22 P 10 34 14.9
baz=237,SNR=20
PMR Palmer 79.39 25 P 10 34 15.7
baz=241,SNR=6.6
KNK Knik Glacier 79.58 25 P 10 34 15.6
baz=241
KTH Kantishna Hill 79.66 23 P **P** **10 34 14.6 -2.1**
KTH IAmb IAmb 10 34 27.6
comp=Z,62nm,1.4s
ZAA0 Zalesovo Array 79.80 326 P **P** **10 34 16.3 -1.2**
ZALV Zalesovo Beam 79.80 326 P **P** **10 34 15.3 -2.2**
comp=Z,2.9nm,0.8s,baz=106,slow=3.9,SNR=8.2
ZALV S S 10 44 08.1 -12
comp=Z,0.4nm,0.4s,baz=94,slow=19,SNR=1.2
ZALV LR LR 11 09 40.8
comp=Z,691nm,20.2s,baz=104,slow=36
ZALV Zalesovo Beam 79.80 326 *i* P **P** **10 34 18.7 +1.2**
ZALV pmax pmax
comp=Z,10.0nm,0.9s

ZALV Zalesovo Beam 79.80 326 P **P** **10 34 15.0 -2.5**
SHLS Shalkode 79.81 315 *e*P **P** **10 34 16.9 -1.2**
comp=Z,8.8nm,1.0s,baz=315
SHLS Shalkode 79.81 315 *e*P **P** **10 34 16.8 -1.2**
SHLS pmax pmax
comp=Z,9.0nm,1.0s
SML Sawmill 79.82 25 P 10 34 16.9
baz=241,SNR=16
TRF Thorofare Moun 79.85 23 P **P** **10 34 15.3 -2.5**
TRF IAmb IAmb 10 34 23.9
comp=Z,31nm,1.2s
TRF Thorofare Moun 79.85 23 P 10 34 17.1
baz=239
GLI Glacier Island 79.91 26 P 10 34 15.2
baz=243
BPAW Bear Paw Mtn. 79.92 22 P 10 34 17.1
baz=238
BPAW Bear Paw Mtn. 79.92 22 P **P** **10 34 15.2 -2.9**
BPAW IAmb IAmb 10 34 24.5
comp=Z,37nm,1.2s
IMAR Indian Mountai 79.97 20 P **P** **10 34 14.2 -4.0**
UZB Uzynbulak 80.12 315 *e*P **P** **10 34 20.1 +0.3**
comp=Z,9.8nm,1.2s,baz=315
UZB *i* PP **PP** **10 37 23.6 +1.5**
baz=315
UZB Uzynbulak 80.12 315 *e*P **P** **10 34 20.0 +0.3**
UZB pmax pmax
comp=Z,10.0nm,1.2s
WAT2 Susitna Watana 80.28 24 P 10 34 18.9
baz=241
EYAK Cordova Ski Ar 80.36 26 P 10 34 15.8
baz=244
RND Reindeer 80.39 23 P **P** **10 34 18.4 -2.3**
RND pmax pmax
comp=Z,86nm,1.2s
RND Reindeer 80.39 23 P **P** **10 34 18.4 -2.3**
WAT6 Susitna Watana 80.44 24 P 10 34 19.8
baz=242,SNR=5.5
KPKS Kokpek 80.44 315 *e*P **P** **10 34 21.6 +0.1**
comp=Z,7.2nm,0.9s,baz=315
KPKS Kokpek 80.44 315 *e*P **P** **10 34 21.5 +0.1**
KPKS pmax pmax
comp=Z,7.0nm,0.9s
MLY Manley 80.50 21 P 10 34 20.8
baz=239,SNR=21
MCK McKinley 80.52 23 P **P** **10 34 19.5 -1.8**
MCK pmax pmax
comp=Z,138nm,1.2s
MCK McKinley 80.52 23 P 10 34 20.7
baz=240
BWN Browne 80.53 22 P **P** **10 34 18.8 -2.5**
SATY Saty 80.54 315 *e*P **P** **10 34 21.9 0.0**
baz=315
SATY Saty 80.54 315 *e*P **P** **10 34 21.9 0.0**
KLU Klutina 80.70 26 P 10 34 21.7
baz=244,SNR=11
M24K Tolsona, Glenn 80.87 25 P 10 34 22.8
baz=243
NEA2 Nenana 80.89 22 P 10 34 22.5
baz=240,SNR=19
TDK Taldyqorghan 81.03 317 *e*P **P** **10 34 24.8 +0.4**
comp=Z,23nm,0.9s,baz=316
TDK Taldyqorghan 81.03 317 *e*P **P** **10 34 24.7 +0.4**
TDK pmax pmax
comp=Z,23nm,0.9s
BMRM Bremner River 81.04 26 P 10 34 23.1
baz=245
BMRM Bremner River 81.05 26 P **P** **10 34 22.6 -1.6**
I23K Minto, Yukon-K 81.06 22 P 10 34 23.4
baz=240
SEM Semipalatinsk 81.30 322 *e*P **P** **10 34 25.9 -0.1**
baz=322
SEM Semipalatinsk 81.30 322 *e*P **P** **10 34 25.8 -0.1**
N25K Chitina, Valde 81.32 26 P 10 34 24.7
baz=245,SNR=5.2
TCOL CIGO, UAF Yank 81.48 22 **P** **10 34 24.9 -1.4**
TCOL CIGO, UAF Yank 81.48 22 P 10 34 25.7
baz=241,SNR=12
COLA College 81.49 22⇑ *e*P **P** **10 34 24.9 -1.4**
COLA pmax pmax
comp=Z,25nm,1.1s
COLA College 81.49 22 P 10 34 25.7
baz=241
KSH Kashi 81.50 311 P **P** **10 34 31.8 +4.6**
KSH S **S** **10 44 35.3 -3.5**
KSH pmax pmax
comp=Z,15nm,1.9s
KSH pmax pmax
comp=Z,440nm,4.1s
KSH LR LR
comp=Z,410nm,10.8s
KSH LR LR
comp=Z,1µm,16.2s
KSH LR LR
comp=Z,740nm,12.2s
MDOK Medeo 81.53 315 *e*P **P** **10 34 27.4 +0.1**
baz=314
MDOK Medeo 81.53 315 *e*P **P** **10 34 27.3 +0.1**
PAX Paxson 81.54 24 P 10 34 26.0
baz=244
TNSS Tian-Shan 81.57 314 *i* P **P** **10 34 25.2 -2.6**
baz=314
HDA Harding Lake 81.61 23 P 10 34 26.3
baz=242
HDA P 10 34 26.3
baz=242
CRQE Cirque 81.63 27 P 10 34 25.9
baz=246
AAA Alma-Ata 81.63 315 *i* P **P** **10 34 25.5 -2.2**
baz=314
POKR Poker Plat Res 81.76 22 P 10 34 26.1
baz=242
IL31 81.80 22 P **P** **10 34 25.9 -2.1**
IL31 IAmb IAmb 10 34 33.7
comp=Z,28nm,1.1s
ILAR Eielson Array 81.80 22 P **P** **10 34 27.0 -1.0**
comp=Z,13nm,1.0s,baz=255,slow=4.7,SNR=31
ILAR LR LR 11 10 13.9
comp=Z,260nm,18.0s,baz=256,slow=35
ILAR Eielson Array 81.80 22 P **P** **10 34 26.3 -1.7**
ILAR Eielson Array 81.80 22 P **P** **10 34 26.3 -1.7**
COLD Coldfoot 81.83 20 P 10 34 26.9
baz=239
MCARA McCarthy VSAT 81.91 26 P 10 34 26.8
baz=246
A21K Barrow 82.27 15 P 10 34 29.2
baz=232
KURBB Kurchatov Arra 82.42 322 P **P** **10 34 30.4 -1.1**
comp=Z,2.5nm,0.8s,baz=108,slow=4.8,SNR=9.1
CTG Chitna Glacier 82.50 27 P 10 34 30.4
baz=248
NIL Nilore 82.54 305 P **P** **10 34 33.1 +0.4**
NIL pmax pmax
comp=Z,25nm,1.9s
SCRK Sand Creek 82.58 24 P 10 34 31.1
baz=245,SNR=5.2
PRP Porcupine Dome 82.66 22 P 10 34 31.2
baz=244
PINM Pinnacle 82.68 28 P 10 34 31.3
baz=249
TOLK Toolik Lake Re 82.77 18 IAMs_20 IAMs_20 11 09 07.3
comp=Z,1µm,20.0s
TOLK Toolik Lake Re 82.77 18 P 10 34 31.9
baz=239
AAK Ala-Archa 83.24 314 P **P** **10 34 35.5 -0.8**
comp=Z,2.2nm,0.7s,baz=79,slow=4.3,SNR=3.0
AAK Ala-Archa 83.24 314⇑ *e*P **P** **10 34 36.9 +0.6**
AAK pmax pmax
comp=Z,8.0nm,0.7s
SGDS Sogindy 83.31 314 *e*P **P** **10 34 36.8 +0.3**
baz=314
SGDS Sogindy 83.31 314 *e*P **P** **10 34 36.7 +0.3**
K27K Chicken 83.37 24 P 10 34 34.5
baz=247
BTLS Baital 84.05 316 *e*P **P** **10 34 40.5 +0.4**
comp=Z,10nm,1.1s,baz=316
BTLS Baital 84.05 316 *e*P **P** **10 34 40.5 +0.4**
BTLS pmax pmax
comp=Z,10.0nm,1.1s
NRIK Noril'sk 84.78 341 P **P** **10 34 43.1 -0.2**
comp=Z,23nm,1.2s,baz=121,slow=5.3,SNR=10
NRIK S **S** **10 45 06.9 -3.7**
comp=Z,0.9nm,0.4s,baz=353,slow=12,SNR=1.3
NRIK LR LR 11 14 18.4
comp=Z,448nm,18.0s,baz=124,slow=37
NRIK Noril'sk 84.78 341 *de*P **P** **10 34 43.6 +0.3**
NRIK pmax pmax
comp=Z,112nm,1.4s
NRIK Noril'sk 84.78 341 P **P** **10 34 42.1 -1.2**
DZA Taraz 85.58 313 *i* P **P** **10 34 47.9 -0.1**
comp=Z,18nm,1.1s,baz=313
DZA Taraz 85.58 313 *i* P **P** **10 34 47.8 -0.1**
DZA pmax pmax
comp=Z,18nm,1.1s
MAW Mawson 85.92 203 P **P** **10 34 47.5 -1.5**
comp=Z,1.4nm,0.8s,baz=6.4,slow=10,SNR=1.8
MAW LR LR 11 10 23.0
comp=Z,784nm,21.9s,baz=82,slow=34
BRZS Berezniki 85.92 321 *i* P **P** **10 34 47.4 -2.1**
baz=320
QSPA South Pole Qui 86.01 180 P **P** **10 34 49.5 -0.2**
QSPA IAmb IAmb 10 34 57.3
comp=Z,24nm,1.2s
QSPA South Pole Qui 86.01 180 IAMs_20 IAMs_20 11 17 37.0
comp=Z,823nm,18.0s
KBL Kabul 86.13 305 P **P** **10 34 53.0 +1.9**
KBL pmax pmax
comp=Z,10.0nm,1.1s
KKAR Karatay Array 86.21 314 P **P** **10 34 50.0 -1.0**
KKAR pmax pmax
comp=Z,60nm,1.4s
KKAR Karatay Array 86.21 314 P **P** **10 34 50.0 -1.0**
KKAR Karatay Array 86.21 314 P **P** **10 34 49.2 -1.9**
IUG luzhnay 86.41 313 *e*P **P** **10 34 52.6 +0.4**
comp=Z,8.9nm,1.2s,baz=312
IUG luzhnay 86.41 313 *e*P **P** **10 34 52.6 +0.4**
IUG pmax pmax
comp=Z,9.0nm,1.2s
CHM Chimkent 86.75 313 *e*P **P** **10 34 54.2 +0.4**
baz=313
CHM Chimkent 86.75 313 *e*P **P** **10 34 54.1 +0.4**
DLBC Dease Lake 87.24 31 P **P** **10 34 56.0 +0.2**
comp=Z,27nm,1.2s,baz=189,slow=11,SNR=7.0
BVAR Borovoye Array 87.87 323 P **P** **10 34 58.0 -0.9**
comp=Z,4.5nm,0.8s,baz=162,slow=6.1,SNR=19
BRVK Borovoye 87.94 323⇑ *e*P **P** **10 34 57.8 -1.3**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK Borovoye 87.94 323 P **P** **10 34 56.8 -2.4**
BRVK IAmb IAmb 10 35 04.2
comp=Z,22nm,1.1s
BRVK IAMs_20 IAMs_20 11 16 16.2
comp=Z,1µm,19.0s
INK Inuvik 88.07 21 P **P** **10 35 00.2 +0.8**
comp=Z,18nm,1.0s,baz=255,slow=7.0,SNR=16
INK Inuvik 88.07 21 P **P** **10 35 00.6 +1.2**
INK pmax pmax
comp=Z,28nm,1.6s
K02D Willamette Mer 88.74 47 P 10 35 00.9
baz=264
I02D Swisshome 88.77 46 P 10 35 01.3
baz=263
I03D Drain, OR 89.08 46 P 10 35 03.2
baz=264
M02C Callahan 89.20 49 P 10 35 03.2
baz=264
N02D Trinity Center 89.27 49 P 10 35 03.1
baz=264
YBH Yreka Blue Hor 89.34 48 P **P** **10 35 09.7 +3.5**
comp=Z,4.7nm,1.1s,baz=180,slow=5.1,SNR=5.7
YBH Yreka Blue Hor 89.34 48 IAMs_20 IAMs_20 11 08 27.5
comp=Z,1µm,21.0s
H04D Lebanon 89.61 46 P 10 35 05.2
baz=264
D03D Eldon 89.68 42 P 10 35 04.8
baz=264
CMB Columbia Colle 90.80 52 IAMs_20 IAMs_20 11 05 30.5
comp=Z,1µm,21.0s
C36M Paulatuk 91.64 21 P 10 35 16.1
baz=263
WVOR Wild Horse Val 92.42 48 IAMs_20 IAMs_20 11 13 22.9
comp=Z,1µm,20.0s
NVAR Mina Array Bea 92.46 52 P **P** **10 35 23.0 +2.1**
comp=Z,1.5nm,1.1s,baz=267,slow=4.5,SNR=4.0
NVAR PP **PP** **10 39 08.1 +6.0**
comp=Z,0.4nm,0.7s,baz=232,slow=15,SNR=1.7
NVAR LR LR 11 08 58.6
comp=Z,543nm,21.9s,baz=270,slow=30
NEW Newport 93.73 42 P **P** **10 35 27.3 +0.9**
comp=Z,0.8nm,0.4s,baz=76,slow=7.8,SNR=3.6
NEW Newport 93.73 42 P **P** **10 35 28.1 +1.8**
NEW pmax pmax
comp=Z,8.0nm,1.4s
NEW Newport 93.73 42 IAMs_20 IAMs_20 11 08 25.0
comp=Z,914nm,21.0s
NEW Newport 93.73 42 P 10 35 24.0
baz=268
TPNV Topopah Spring 94.03 53 IAMs_20 IAMs_20 11 16 58.0
comp=Z,972nm,18.0s
ABKAR Akbulak array 94.07 319 P P 10 35 22.2 -5.6
SYO Syowa Base 94.09 200⇑ *e*pP pP 10 35 31.4 -0.6
PLID Pearl Lake 94.43 45 IAMs_20 IAMs_20 11 13 20.8
comp=Z,904nm,18.0s
MFID Camas Ranch 94.52 47 IAMs_20 IAMs_20 11 10 45.4
comp=Z,896nm,20.0s
ELK Elko 94.91 50 IAMs_20 IAMs_20 11 14 08.0
comp=Z,873nm,19.0s
ARU Arti 94.97 326 P **P** **10 35 31.4 -0.3**
comp=Z,0.6nm,0.3s,baz=98,slow=3.7,SNR=6.4
ARU LR LR 11 17 50.0
comp=Z,1µm,21.4s,baz=90,slow=35
ARU Arti 94.97 326*c i*P **P** **10 35 29.9 -1.8**
ARU 10 39 18.8
ARU S **SKSac** **10 46 05.2 -1.7**
ARU SS **SS** **10 53 16.8 +6.2**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU MLR MLR
comp=Z,2µm,22.0s
GEYT Alibeck 95.18 308 LR LR 11 19 05.4
comp=Z,464nm,21.8s,baz=60,slow=36
YKA Yellowknife Ar 95.21 28 P **P** **10 35 32.9 +0.2**
comp=Z,8.6nm,1.2s,baz=268,slow=4.3,SNR=27
YKA PP **PP** **10 39 20.2 -2.3**
comp=Z,2.0nm,1.1s,baz=270,slow=6.5,SNR=4.7
YKA PKKPbc **PKKPbc** **10 52 29.2 +0.2**
comp=Z,0.5nm,0.9s,baz=92,slow=3.2,SNR=7.0
YKA LR LR 11 18 10.8
comp=Z,348nm,18.4s,baz=0.0,slow=35
AKTO Aktyubinsk 95.33 320 P **P** **10 35 33.1 -0.4**
comp=Z,3.9nm,1.0s,baz=193,slow=11,SNR=5.8
AKTO LR LR 11 18 22.2
comp=Z,555nm,21.8s,baz=87,slow=36
MSO Missoula 95.87 43 IAMs_20 IAMs_20 11 10 34.8
comp=Z,766nm,20.0s
DUG Dugway, Tooele 96.76 50 IAMs_20 IAMs_20 11 11 57.0
comp=Z,817nm,20.0s
BOZ Bozeman (W) 97.51 45 IAMs_20 IAMs_20 11 11 39.1
comp=Z,696nm,21.0s
HWUT Hardware Ranch 97.68 49 IAMs_20 IAMs_20 11 16 09.2
comp=Z,887nm,19.0s
WUAZ Wupatki 97.95 55 IAMs_20 IAMs_20 11 11 44.2
comp=Z,972nm,21.0s
AHID Auburn Hatcher 97.99 48 IAMs_20 IAMs_20 11 17 35.2
comp=Z,987nm,20.0s
REDW Red Top Meadow 98.15 47 IAMs_20 IAMs_20 11 13 24.4
comp=Z,1µm,20.0s
MOOW Moose Ponds 98.21 47 IAMs_20 IAMs_20 11 11 27.9
comp=Z,882nm,22.0s
SNOW Snow King Moun 98.21 47 IAMs_20 IAMs_20 11 10 51.1
comp=Z,1µm,22.0s
FLWY Flagg Ranch 98.23 46 IAMs_20 IAMs_20 11 19 40.4
comp=Z,907nm,18.0s
LOHW Long Hollow 98.32 47 IAMs_20 IAMs_20 11 13 18.8
comp=Z,783nm,19.0s
EGMT Eagleton 98.67 42 IAMs_20 IAMs_20 11 11 51.6
comp=Z,871nm,21.0s
BW06 Boulder Array 99.12 47 IAMs_20 IAMs_20 11 17 38.2
comp=Z,938nm,20.0s
PDAR Pinedale Array 99.12 47 P **Pdif** **10 35 52.9 +1.7**
comp=Z,1.5nm,1.1s,baz=224,slow=4.1,SNR=5.8
PDAR PP **PP** **10 39 57.8 +4.2**
comp=Z,0.6nm,0.8s,baz=271,slow=5.0,SNR=2.7
PDAR LR LR 11 14 16.9
comp=Z,720nm,20.7s,baz=269,slow=32
PDAR Pinedale Array 99.12 47 P **Pdif** **10 35 48.9 -2.3**
RES Resolute Bay 99.86 14 P **Pdif** **10 35 53.6 +0.2**
comp=Z,4.4nm,0.9s,baz=214,slow=8.8,SNR=3.9
RES Resolute Bay 99.86 14 P **Pdif** **10 35 55.3 +1.9**
ALE Alert 100.15 4 IAMs_20 IAMs_20 11 21 54.4
comp=Z,664nm,20.0s
MVCO Mesa Verde 100.22 53 IAMs_20 IAMs_20 11 20 14.0
comp=Z,680nm,20.0s
PRGR Permogore 101.04 332 *e*P **Pdif** **10 35 55.5 -3.4**
PRGR pmax pmax
comp=Z,11nm,0.9s
LAO LASA Array 101.18 43 IAMs_20 IAMs_20 11 13 10.1
comp=Z,906nm,21.0s
SMCO Snowmass 101.30 51 IAMs_20 IAMs_20 11 25 10.3
comp=Z,678nm,19.0s
Y22D IRIS PASSCAL I 101.67 56 IAMs_20 IAMs_20 11 13 24.7
comp=Z,1µm,22.0s
PHWY Pilot Hill 102.28 49 IAMs_20 IAMs_20 11 15 42.9
comp=Z,679nm,21.0s
ISCO Idaho Springs 102.30 50 IAMs_20 IAMs_20 11 20 20.7
comp=Z,781nm,18.0s
SNAA Sanae 102.72 188 P **Pdif** **10 36 10.9 +4.6**
RSSD Black Hills 103.01 46 IAMs_20 IAMs_20 11 18 27.8
comp=Z,881nm,19.0s
MNTX Cornudas Mount 103.10 59 IAMs_20 IAMs_20 11 17 33.8
comp=Z,799nm,20.0s
T25A Trinidad 103.48 53 IAMs_20 IAMs_20 11 24 44.3
comp=Z,546nm,18.0s
KLMR Klimovskoe 104.09 332 *e*P **Pdif** **10 36 13.3 +0.8**
KLMR *e* 10 40 33.7
KLMR *e*SS SS 10 55 26.6 +8.9
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 104.09 332 *e*Pdif **Pdif** **10 36 13.4 +0.9**
KLMR AMP 10 36 16.7
comp=Z,12nm,1.2s
KLMR *e*PP **PP** **10 40 33.7 +3.6**
KLMR *e*SS **SS** **10 55 26.6 +8.9**
KLMR *e*SS **SS** **10 55 26.6 +8.9**
KLMR LQ LQ 11 16 32.8
KLMR LQ LQ 11 16 32.8
KLMR LR LR 11 19 25.5
CBKS Cedar Bluff 106.94 51 IAMs_20 IAMs_20 11 20 09.6
comp=Z,795nm,19.0s
AGMN Agassiz Nation 107.80 40 IAMs_20 IAMs_20 11 26 22.9
comp=Z,587nm,20.0s
U32A Winter Ranch, 107.89 53 IAMs_20 IAMs_20 11 17 59.9
comp=Z,881nm,20.0s
WMOK Wichita Mounta 108.30 55 IAMs_20 IAMs_20 11 21 29.1
comp=Z,789nm,20.0s
ECSD EROS Data Cent 108.35 45 IAMs_20 IAMs_20 11 19 44.3
comp=Z,826nm,21.0s
OK032 Salt Plains WL 108.45 53 IAMs_20 IAMs_20 11 18 08.8
comp=Z,1µm,22.0s
KS21 Milan North St 108.80 52 IAMs_20 IAMs_20 11 16 19.1
comp=Z,709nm,20.0s
KS20 Mayfield South 108.90 52 IAMs_20 IAMs_20 11 20 30.6
comp=Z,642nm,19.0s
OK029 Liberty Lake 109.21 54 IAMs_20 IAMs_20 11 20 22.1
comp=Z,950nm,21.0s
KSU1 Kansas State U 109.30 50 IAMs_20 IAMs_20 11 35 47.9
comp=Z,628nm,18.0s
OK031 S. Brethren Rd 109.68 53 IAMs_20 IAMs_20 11 20 16.4
comp=Z,871nm,20.0s
OK030 Cody Creek RV 109.73 53 IAMs_20 IAMs_20 11 20 20.7
comp=Z,827nm,18.0s
435B Jarrell 109.83 59 IAMs_20 IAMs_20 11 19 55.1
comp=Z,830nm,20.0s
SCIA State Center 111.21 46 IAMs_20 IAMs_20 11 19 04.0
comp=Z,738nm,21.0s
NATX Nacogdoches 112.16 57 IAMs_20 IAMs_20 11 27 12.8
comp=Z,666nm,19.0s
W39A Magazine 112.27 54 IAMs_20 IAMs_20 11 20 44.0
comp=Z,888nm,21.0s
NACGM Naroch 112.65 329 *i* PKP PKiKP 10 40 29.6 -16
NACGM *i* PKP PKiKP 10 40 29.6 -16
NACGM *i* PKP PKiKP 10 40 29.6 -16
NACGM *i* PP PP 10 41 50.9 +18
NACGM *i* PPP PPP 10 44 36.6
NACGM *i* SKS SKSac 10 47 15.0 -14
NACGM *i* PS **PS** **10 50 54.3 -13**
NACGM *i* SS SS 10 57 58.8 +45
NACGM *i* SSS SSS 11 02 15.7
NACGM *i* LR LR 11 24 44.1
COWI Conover 112.82 41 IAMs_20 IAMs_20 11 19 60.0
comp=Z,732nm,22.0s
JFWS Jewell Farm 113.05 45 IAMs_20 IAMs_20 11 24 07.6
comp=Z,756nm,20.0s
CCM Cathedral Cave 113.63 50 IAMs_20 IAMs_20 11 27 49.5
comp=Z,652nm,19.0s
HDIL Hopedale 114.42 47 IAMs_20 IAMs_20 11 26 46.1
comp=Z,848nm,20.0s
L44A Lake County Fo 114.92 45 IAMs_20 IAMs_20 11 25 45.0
comp=Z,686nm,20.0s
HQIL Hanson Quary C 115.08 45 IAMs_20 IAMs_20 11 23 49.4
comp=Z,844nm,20.0s
GLMI Grayling 116.25 41 IAMs_20 IAMs_20 11 26 44.6
comp=Z,776nm,21.0s
WVT Waverly 116.76 51 IAMs_20 IAMs_20 11 23 37.7
comp=Z,777nm,21.0s
WCI Wyandotte Cave 117.33 49 IAMs_20 IAMs_20 11 35 07.3
comp=Z,654nm,18.0s
AAM Ann Arbor 117.84 44 IAMs_20 IAMs_20 11 23 50.2
comp=Z,782nm,22.0s
P49A Miami Univ. Ec 118.08 47 IAMs_20 IAMs_20 11 29 06.8
comp=Z,636nm,20.0s
LRAL Lakeview Retre 118.24 55 IAMs_20 IAMs_20 11 29 49.2
comp=Z,783nm,19.0s
ACSO Alum Creek Sta 119.08 46 IAMs_20 IAMs_20 11 31 28.2
comp=Z,743nm,19.0s
TEIG Tepich 119.54 69 IAMs_20 IAMs_20 11 26 33.7
comp=Z,569nm,20.0s
P52A Corning 119.91 46 IAMs_20 IAMs_20 11 30 27.2
comp=Z,622nm,20.0s
VYHS Vyhne 120.13 326 *e*PKIKP **PKPdf** **10 41 00.2 -0.2**
VYHS Vyhne 120.13 326 *e*PKP **PKPdf** **10 41 00.2 -0.2**
M53A WI Miller and 120.23 44 IAMs_20 IAMs_20 11 28 51.4
comp=Z,767nm,20.0s
KRLC Kraliky 120.38 328 AMS AMS 11 32 50.0
comp=Z,800nm,21.9s
ERPA Erie 120.42 43 IAMs_20 IAMs_20 11 32 56.2
comp=Z,721nm,19.0s
CHVC Chvalec 120.46 329 AMS AMS 11 34 20.0
comp=Z,700nm,21.1s
DPC Dobruska-Polom 120.46 328 AMS AMS 11 32 10.0
comp=Z,800nm,20.7s
N54A Moraine State 120.90 44 IAMs_20 IAMs_20 11 27 35.1
comp=Z,700nm,21.0s
GOGA Godfrey 120.98 53 IAMs_20 IAMs_20 11 26 35.5
comp=Z,782nm,20.0s
MODS Modra-Piesok 121.07 326 *e*PKIKP **PKiKP** **10 41 03.0 +0.7**
MODS Modra-Piesok 121.07 326 *e*PKP **PKiKP** **10 41 03.0 +0.7**
PLCA Paso Flores 121.15 143 PKP **PKiKP** **10 41 03.8 +0.9**
comp=Z,2.9nm,1.0s,baz=85,slow=19,SNR=3.2
S54A Dingess, Beckl 121.18 48 IAMs_20 IAMs_20 11 31 23.1
comp=Z,672nm,21.0s
TREC Trest 121.51 328 AMS AMS 11 33 20.0
comp=Z,1µm,22.1s
R55A Marlinton 121.87 47 IAMs_20 IAMs_20 11 27 04.3
comp=Z,742nm,20.0s
J56A Wolcott 121.97 40 IAMs_20 IAMs_20 11 36 38.8
comp=Z,669nm,20.0s
BLA Blacksburg 122.06 48 IAMs_20 IAMs_20 11 35 02.3
comp=Z,692nm,18.0s
O56A Blue Knob Stat 122.17 44 IAMs_20 IAMs_20 11 27 18.8
comp=Z,707nm,20.0s
CKRC Cesky Krumlov 122.42 328 AMS AMS 11 33 20.0
comp=Z,1µm,20.9s
SSPA Standing Stone 122.48 43 IAMs_20 IAMs_20 11 25 49.9
comp=Z,818nm,22.0s
KHC Kasperske Hory 122.61 329⇑ *i*PKIKP **PKPdf** **10 41 03.5 -1.7**
KHC Kasperske Hory 122.61 329 *e*PKP **PKiKP** **10 41 10.5 +5.1**
KHC AMS AMS 11 34 30.0
comp=Z,800nm,20.9s
GERES GERESS Array B 122.72 328 PKP **PKPdf** **10 41 05.3 -0.2**
comp=Z,0.7nm,0.8s,baz=64,slow=2.3,SNR=1.7
LONY Lake Ozonia 122.73 38 IAMs_20 IAMs_20 11 30 28.6
comp=Z,549nm,20.0s
P57A Homestead Farm 122.89 45 IAMs_20 IAMs_20 11 32 06.9
comp=Z,813nm,22.0s
S57A Dark Hollow, R 122.92 47 IAMs_20 IAMs_20 11 30 43.1
comp=Z,645nm,20.0s
PDG Podgorica 122.95 319 IAMs_20 IAMs_20 11 35 01.8
comp=Z,634nm,22.0s
K58A Earlville 122.99 40 IAMs_20 IAMs_20 11 36 59.9
comp=Z,729nm,19.0s
BINY Binghamton 123.04 41 IAMs_20 IAMs_20 11 27 07.3
comp=Z,645nm,20.0s
J59A Piesco 123.37 39 IAMs_20 IAMs_20 11 34 13.7
comp=Z,708nm,19.0s
R58B Mineral 123.62 46 IAMs_20 IAMs_20 11 28 08.4
comp=Z,841nm,22.0s
S58A Poland Farm, P 123.64 47 IAMs_20 IAMs_20 11 32 03.0
comp=Z,760nm,21.0s
NHSC New Hope 123.69 52 IAMs_20 IAMs_20 11 26 11.2
comp=Z,701nm,21.0s

CBN	**Corbin Frederi**	**123.88**	**46**	IAMs_20	IAMs_20	11 33 11.3	
	comp=E,619nm,21.0s						
VT1	**Waterbury**	**123.99**	**37**	IAMs_20	IAMs_20	11 28 43.2	
	comp=E,637nm,22.0s						
ESPN	**Las Esperanzas**	**124.09**	**78**	IAMs_20	IAMs_20	11 33 45.4	
	comp=E,465nm,19.0s						
DWPF	**Disney Wildern**	**124.15**	**59**	IAMs_20	IAMs_20	11 30 34.4	
	comp=E,519nm,20.0s						
P60A	**Greenville**	**124.39**	**43**	IAMs_20	IAMs_20	11 26 37.4	
	comp=E,696nm,20.0s						
D62A	**Allapoint, All**	**124.53**	**33**	IAMs_20	IAMs_20	11 31 58.5	
	comp=E,686nm,20.0s						
LBNH	**Lisbon**	**124.54**	**37**	IAMs_20	IAMs_20	11 28 59.5	
	comp=E,757nm,22.0s						
HNH	**Hanover**	**124.61**	**38**	IAMs_20	IAMs_20	11 33 41.5	
	comp=E,589nm,20.0s						
G62A	**West of Eustis**	**124.81**	**35**	IAMs_20	IAMs_20	11 29 56.3	
	comp=E,556nm,20.0s						
I62A	**Tamworth**	**125.10**	**37**	IAMs_20	IAMs_20	11 35 40.2	
	comp=E,578nm,20.0s						
FFD	**Franklin Falls**	**125.13**	**38**	IAMs_20	IAMs_20	11 30 56.1	
	comp=E,640nm,20.0s						
E63A	**Oxbow**	**125.27**	**33**	IAMs_20	IAMs_20	11 28 30.3	
	comp=E,617nm,20.0s						
PQI	**Presque Isle**	**125.34**	**33**	IAMs_20	IAMs_20	11 32 29.9	
	comp=E,761nm,21.0s						
I63A	**Otisfield**	**125.45**	**37**	IAMs_20	IAMs_20	11 29 48.4	
	comp=E,765nm,21.0s						
PKME	**Peaks-Kenny Pk**	**125.49**	**35**	IAMs_20	IAMs_20	11 32 51.3	
	comp=E,752nm,22.0s						
WVL	**Waterville**	**125.69**	**36**	IAMs_20	IAMs_20	11 30 23.7	
	comp=E,740nm,20.0s						
TIP	**Timpagrande**	**126.17**	**317**	IAMs_20	IAMs_20	11 37 43.6	
	comp=E,516nm,22.0s						
G65A	**Princeton**	**126.50**	**34**	IAMs_20	IAMs_20	11 33 45.9	
	comp=E,540nm,20.0s						
AQU	**L'Aquila**	**126.69**	**322**	IAMs_20	IAMs_20	11 39 46.5	
	comp=E,577nm,22.0s						
EMMW	**East Machias**	**126.86**	**34**	IAMs_20	IAMs_20	11 30 17.5	
	comp=E,629nm,20.0s						
OTAV	**Otavalo**	**129.81**	**93**	IAMs_20	IAMs_20	11 27 41.2	
	comp=E,621nm,21.0s						
SDDR	**Presa de Saban**	**135.50**	**67**	IAMs_20	IAMs_20	11 38 57.3	
	comp=E,595nm,19.0s						
BBSR	**BB Station**	**135.76**	**46**	IAMs_20	IAMs_20	11 34 04.8	
	comp=E,448nm,22.0s						
LPAZ	**La Paz**	**135.84**	**118**	PKP	**PKPdf**	**10 41 31.6**	**-0.3**
	comp=E,0.7nm,0.6s,baz=220,slow=7.9,SNR=2.8						
SDV	**Santo Domingo**	**137.72**	**81**	IAMs_20	IAMs_20	11 36 41.9	
	comp=E,529nm,21.0s						
ESDC	**Sonseca Array**	**138.13**	**331**	PP	PP	10 44 21.2	-1.3
	comp=E,0.3nm,0.4s,baz=322,slow=2.3,SNR=1.6						
CPUP	**Villa Florida**	**138.87**	**139**	PKP	**PKPdf**	**10 41 35.7**	**-0.8**
	comp=E,1.5nm,0.9s,baz=244,slow=9.9,SNR=3.1						
SJG	**San Juan**	**140.43**	**66**	IAMs_20	IAMs_20	11 42 17.9	
	comp=E,544nm,20.0s						
SAML	**Samuel**	**142.99**	**110**	IAMs_20	IAMs_20	11 40 29.8	
	comp=E,412nm,20.0s						
PTGA	**Pitinga**	**148.07**	**98**	IAMs_20	IAMs_20	11 41 11.3	
	comp=E,445nm,19.0s						
TOA0	**Torodi Ar. Sit**	**148.94**	**289**	PKPbc	**PKiKP**	**10 41 59.7**	**0.0**
TORD	**Torodi Ar. Bea**	**148.94**	**289**	PKPbc	**PKPbc**	**10 41 56.7**	**-1.7**
	comp=E,7.5nm,1.0s,baz=70,slow=2.7,SNR=10.0						
BDFB	**Brasília**		**152.48**	**135**	PKPbc	**PKPbc**	**10 42 05.6**	**-1.3**
	comp=E,4.0nm,0.7s,baz=161,slow=4.0,SNR=6.4						

*IDC **15** 10:30:12.4±1.1, 43.37N×87.89E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.4/46, mbtmp3.5/7, ML3.2/2, MS4.0/1, Ms1 4.0/1, ms1mx2.8/53, Error ellipse: s-maj=58.0km s-min=16.1km az=54.0*
*SOME **15** 10:30:17.3, 43.00N×87.00E, h15km*
*NNC **15** 10:30:18.6±1.8, 43.16N×87.02E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=13.0km s-min=8.3km az=118.0*
ISC 15 10:30:13.8±1.0, 42.89N±0.06×87.16E±0.05, h10km, n24, σ2§10/32, mb3.4/4, 7C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZSN	**Zaisan**	**4.84**	**341**	*e*P	**Pg**	**10 31 45.9**	**-0.6**
	7.9nm,0.2s						
ZSN				*e*S	**Sg**	**10 32 49.7**	**+0.5**
	31nm,0.7s						
ZSN	**Zaisan**	**4.84**	**341**	Pg	**Pg**	**10 31 45.9**	**-0.6**
	12nm,0.4s						
ZSN				Lg	Lg	10 32 49.8	
	29nm,0.5s						
KTMS	**Ketmen**	**5.01**	**279**	*e*P	**Pg**	**10 31 46.2**	**-3.6**
	9.3nm,0.4s						
KTMS				*e*S	**Sg**	**10 32 50.4**	**-4.3**
	13nm,0.5s						
MK31	**Makanchi Array**	**5.22**	**320**	⇑Pn	**Pn**	**10 31 32.9**	**+1.0**
	1.1nm,0.3s,baz=132,slow=14,SNR=95						
MK31				⇑Sn	**Sn**	**10 32 33.1**	**+0.9**
	5.7nm,0.5s						
MK31				⇓Lg	Lg	10 32 53.7	
	6.5nm,0.5s,baz=140,slow=31,SNR=3.6						
MKAR	**Makanchi Array**	**5.22**	**320**	Pn	**Pn**	**10 31 32.7**	**+0.8**
	1.7nm,0.3s,baz=127,slow=14,SNR=78						
MKAR				Sn	**Sn**	**10 32 31.9**	**-0.3**
	1.2nm,0.3s,baz=128,slow=23,SNR=5.6						
MKAR				Lg	Lg	10 32 51.6	
	1.7nm,0.3s,baz=128,slow=28,SNR=7.1						
MAKZ	**Makanchi**	**5.38**	**319**	⇑Pn	**Pn**	**10 31 35.7**	**+1.5**
	4.5nm,0.7s						
MAKZ				⇑Sn	**Sn**	**10 32 37.4**	**+1.3**
	2.5nm,0.5s						
MAKZ				⇑Lg	Lg	10 32 59.6	
	6.8nm,0.7s						
PDGK	**Podgornoye**	**5.63**	**277**	⇑Pn	Pn	10 31 41.6	+3.9
	1.8nm,0.4s						
PDGK				⇑Sn	**Sn**	**10 32 46.5**	**+4.0**
	5.8nm,0.5s						
PDGK				⇓Lg	Lg	10 33 12.9	
	19nm,0.8s						
SHLS	**Shalkode**	**5.65**	**275**	*e*P	**Pb**	**10 31 54.3**	**+1.7**
	8.0nm,0.6s						
SHLS				*e*S	**Sb**	**10 33 03.8**	**+3.4**
	53nm,0.7s						
SHLS	**Shalkode**	**5.65**	**275**	Pg	**Pb**	**10 31 54.3**	**+1.7**
	8.0nm,0.6s						
SHLS				Lg	Lg	10 33 03.8	
	53nm,0.7s						
UZB	**Uzynbulak**	**5.97**	**275**	*e*P	**Pg**	**10 32 05.8**	**-2.4**
	4.2nm,0.7s						
UZB				*e*S	**Sg**	**10 33 23.5**	**-2.0**
	7.4nm,0.8s						
UZB	**Uzynbulak**	**5.97**	**275**	Pg	**Pg**	**10 32 05.8**	**-2.4**
	4.2nm,0.7s						
UZB				Lg	Lg	10 33 23.5	
	7.4nm,0.8s						
KPKS	**Kokpek**	**6.22**	**278**	*e*P	**Pg**	**10 32 11.5**	**-1.5**
	5.2nm,0.2s						
KPKS				*e*S	**Sg**	**10 33 33.8**	**+0.2**
	30nm,0.5s						
SATY	**Saty**	**6.42**	**274**	*e*P	**Pg**	**10 32 15.9**	**-1.0**
	3.0nm,0.9s						
SATY				*e*S	**Sg**	**10 33 41.5**	**+1.5**
	9.6nm,0.7s						
SATY	**Saty**	**6.42**	**274**	Pg	**Pg**	**10 32 15.9**	**-1.0**
	3.0nm,0.9s						
SATY				Lg	Lg	10 33 41.5	
	9.6nm,0.7s						
ARXS	**Arharly**	**6.91**	**284**	*e*P	**Pg**	**10 32 23.6**	**-2.5**
	5.1nm,0.6s						
ARXS				*e*S	**Sg**	**10 33 54.9**	**-0.6**
	7.2nm,0.6s						
ARXS	**Arharly**	**6.91**	**284**	Pg	**Pg**	**10 32 23.6**	**-2.5**
	5.1nm,0.6s						
ARXS				Lg	Lg	10 33 54.9	
	7.2nm,0.6s						
KURBB	**Kurchatov Arra**	**9.74**	**326**	Pn	**Pn**	**10 32 31.7**	**-2.2**
	0.1nm,0.3s,baz=133,slow=13,SNR=15						
ZALV	**Zalesovo Beam**	**11.18**	**353**	Pn	Pn	10 32 48.2	-5.3
	baz=163,slow=10,SNR=1.7						
BVAR	**Borovoye Array**	**15.10**	**318**	Pn	**P**	**10 33 51.6**	**-0.8**
	0.4nm,0.3s,baz=146,slow=16,SNR=8.2						
CMAR	**Chiang Mai Arr**	**26.32**	**154**	P	**P**	**10 35 52.6**	**+2.8**
	0.7nm,0.9s,baz=332,slow=9.7,SNR=5.0						
BRTR	**Keskin Array B**	**39.77**	**284**	LR	LR	10 58 27.2	
	comp=Z,186nm,18.2s,baz=105,slow=42						
YKA	**Yellowknife Ar**	**73.52**	**10**	P	**P**	**10 41 43.5**	**-2.8**
	0.2nm,0.9s,baz=343,slow=4.8,SNR=4.3						
WRA	**Warramunga Arr**	**76.11**	**135**	P	**P**	**10 42 01.7**	**-0.1**
	0.5nm,0.8s,baz=322,slow=4.0,SNR=4.7						
ASAR	**Alice Springs**	**78.98**	**137**	P	**P**	**10 42 17.4**	**-0.4**
	0.3nm,0.6s,baz=335,slow=6.1,SNR=4.6						

*IDC **15** 10:49:55.5±1.2, 39.70N×106.56E, h0km, mb3.2/5, mb1 3.5/7, mb1mx3.2/71, mbtmp3.3/7, ML3.5/2, MS3.7/1, Ms1 3.7/1, ms1mx3.1/32, Error ellipse: s-maj=36.8km s-min=20.7km az=74.0*
ISC 15 10:49:57.0±1.1, 39.70N±0.09×106.5E±0.2, h10km, n9, σ0§67/8, mb3.3/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**8.14**	**359**	Pn	**Pn**	**10 51 55.0**	**-0.3**
	0.8nm,0.3s,baz=178,slow=14,SNR=18						
SONM				Sn	**Sn**	**10 53 27.5**	**+0.2**
	1.1nm,0.3s,baz=181,slow=25,SNR=3.8						
SONM				Lg	Lg	10 54 08.6	
	2.1nm,0.3s,baz=161,slow=27,SNR=3.5						
TLY	**Talaya**	**12.15**	**351**	Lg	Lg	10 56 15.1	
	0.0nm,0.3s,baz=323,slow=20,SNR=2.3						
MKAR	**Makanchi Array**	**18.98**	**300**	P	**Pn**	**10 54 19.9**	**+0.7**
	0.1nm,0.3s,baz=97,slow=15,SNR=3.0						
ZALV	**Zalesovo Beam**	**20.47**	**321**	P	**P**	**10 54 33.5**	**-1.1**
	0.5nm,0.3s,baz=112,slow=11,SNR=1.3						
CMAR	**Chiang Mai Arr**	**22.16**	**199**	P	**P**	**10 54 52.7**	**-0.4**
	0.2nm,0.4s,baz=7.3,slow=10.0,SNR=1.9						
KURBB	**Kurchatov Arra**	**22.43**	**308**	P	**P**	**10 54 55.8**	**+0.1**
	0.6nm,0.6s,baz=106,slow=13,SNR=5.1						
AAK	**Ala-Archa**	**24.22**	**287**	LR	LR	11 06 16.3	
	comp=Z,164nm,19.4s,baz=101,slow=40						
ASAR	**Alice Springs**	**68.02**	**153**	P	**P**	**11 00 56.7**	**+0.2**
	0.2nm,0.4s,baz=339,slow=6.6,SNR=5.1						
YKA	**Yellowknife Ar**	**72.92**	**19**	P	**P**	**11 01 26.3**	**+0.3**
	0.3nm,0.9s,baz=329,slow=6.1,SNR=4.4						

*INET **15** 10:49:56.7, 11.12N×87.00W, h5km, MW3.4*
UCR 15 10:49:57.9±2.0, 11.14N×86.87W, h11km±20km, MW4.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNGN	**Cerro Negro**	**1.37**	**7**	*e*P	Pn	10 50 21.1	-1.8
BUEV	**Buena Vista**	**1.48**	**103**	*i* P	Pn	10 50 24.4	-0.1
BUEV				*i* S	Sn	10 50 44.0	+0.1
GB1A	**Borinquen Arri**	**1.48**	**102**	*i* P	Pn	10 50 24.7	+0.1
SAJU	**San Juanillo,**	**1.56**	**133**	*e*P	Pn	10 50 24.0	-1.6
SAJU				*e*S	Sn	10 50 42.6	-3.1
PLVR	**Palo Verde**	**1.69**	**117**	*e*P	Pb	10 50 29.3	+0.2
DUNO	**Dulce Nombre,**	**1.72**	**128**	*e*P	Pn	10 50 26.6	-1.1
GRZA	**Playa Garza**	**1.72**	**135**	*e*P	Pn	10 50 26.2	-1.5
ACON	**Acoyapa**	**1.86**	**63**	*e*P	Pn	10 50 28.5	-1.2
ACAL	**Aguas Claras**	**1.87**	**105**	*i* P	Pb	10 50 31.1	-1.1
ACAL				*i* S	Sn	10 50 54.5	+0.8
JTS	**Las Juntas de**	**2.07**	**114**	*e*P	Pb	10 50 36.4	+0.9
ARE1	**Arenal 1**	**2.22**	**107**	*e*P	Pg	10 50 39.4	-1.1
LAFE	**Finca La Fe, P**	**2.34**	**124**	*e*P	Pn	10 50 35.3	-1.0
ESPN	**Las Esperanzas**	**2.73**	**67**	*e*P	Pn	10 50 42.1	+0.4
LCR2	**La Lucha 2**	**3.15**	**116**	*e*P	Pn	10 50 50.1	+2.6
RIMA	**Rio Macho**	**3.26**	**114**	*e*P	Pn	10 50 49.4	+0.2
CDM	**Cerro de Muert**	**3.44**	**117**	*e*P	Pn	10 50 53.4	+1.6
DRK0	**Durika**	**4.03**	**117**	*e*P	Pn	10 51 01.9	+2.2

IDC 15 11:00:41.3±3.3, 17.25S×179.12W, h552km±20km, mb2.6/4, mb1 3.0/5, mb1mx2.7/52, mbtmp3.5/5, Error ellipse: s-maj=167.9km s-min=25.8km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.74**	**259**	P	P	11 01 55.1	0.0
	0.7nm,0.3s,baz=134,slow=8.3,SNR=7.1						
WRA	**Warramunga Arr**	**44.09**	**259**	P	P	11 08 00.6	-0.7
	0.1nm,0.3s,baz=93,slow=7.8,SNR=6.4						
ASAR	**Alice Springs**	**44.32**	**254**	P	P	11 08 03.1	+0.1
	1.1nm,0.5s,baz=88,slow=8.1,SNR=27						
ILAR	**Eielson Array**	**85.40**	**13**	P	P	11 12 20.7	+0.5
	0.4nm,0.9s,baz=223,slow=4.7,SNR=2.3						
PDAR	**Pinedale Array**	**87.34**	**44**	P	P	11 12 29.7	-0.6
	0.1nm,0.4s,baz=219,slow=7.0,SNR=1.8						

*BGR **15** 11:11:42.9±0.0, 48.59N×154.78E, h33km, mb4.8*
*BJI **15** 11:11:44.8±0.0, 48.28N×154.15E, h95km, mB5.0/28, mb4.8/44*
*SKHL **15** 11:11:44.8±0.7, 47.90N×154.30E, h87km±4km, mb5.3/13, mbv5.8/2, msha6.0/8*
*IDC **15** 11:11:45.4±0.5, 48.17N×153.76E, h72km±3km, mb4.1/34, mb1 4.3/39, mb1mx4.2/50, mbtmp4.4/39, MS3.6/14, Ms1 3.7/14, ms1mx3.4/46, Error ellipse: s-maj=11.4km s-min=7.8km az=151.0*
*MOS **15** 11:11:45.0±0.9, 48.13N×153.94E, h82km, mb4.7/88, Error ellipse: s-maj=6.0km s-min=3.2km az=73.2*
*NEIC **15** 11:11:50.0±1.2, 48.25N±0.09×153.7E±0.1, h109km±5km, mb4.7/170, Error ellipse: s-maj=14.1km s-min=9.7km az=139.0*
ISC 15 11:11:45.4±0.4, 48.07N±0.04×153.99E±0.04, h74km±3km, h74km:pP-P, n560, σ1§59/594, mb4.7/200, 32C-14D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.96**	**27**	*e*PN	**Pn**	**11 12 30.6**	**+0.6**
SKR				*e*S	**Sn**	**11 13 03.4**	**-1.0**
SKR				pmax	pmax		
	comp=E,827nm,0.6s						
SKR				smax	smax		
	comp=E,943nm,0.4s						
SKR				smax	smax		
	comp=N,2µm,0.6s						
SKR				MLR	MLR		
	comp=Z,500nm,14.0s						
SKR				MLR	MLR		
	comp=N,500nm,13.0s						
SKR				MLR	MLR		
	comp=E,500nm,12.0s						
SKR	**Severo-Kuril's**	**2.96**	**27**	*i* P	**Pn**	**11 12 30.6**	**+0.6**
SKR				AMB	AMB	11 12 34.5	
	comp=E,830nm,0.6s						
SKR				*i* S	**Sn**	**11 13 04.7**	**+0.3**
SKR				A	A	11 13 08.1	
	comp=E,2µm,0.5s						
SKR				A	A	11 13 08.1	
	comp=E,950nm,0.5s						
PAU	**Pauzhetka**	**3.86**	**27**	PN	**Pn**	**11 12 42.7**	**+0.5**
PAU				S	**Sn**	**11 13 26.7**	**+0.4**
PAU	**Pauzhetka**	**3.86**	**27**	*e*P	**Pn**	**11 12 42.8**	**+0.5**
PAU				AMB	AMB	11 12 49.3	
	comp=E,380nm,0.4s						
PAU				*e*S	**Sn**	**11 13 26.9**	**+0.6**
PAU				A	A	11 13 39.5	
	comp=E,3µm,0.8s						
PAU				A	A	11 13 39.5	
	comp=E,5µm,0.8s						
KDTR	**Khodutka, Kamc**	**4.58**	**34**	PN	**Pn**	**11 12 50.6**	**-1.5**
KDTR				S	**Sn**	**11 13 40.0**	**-3.9**
KUR	**Kuril'sk**	**5.08**	**238**	*e*PN	**Pn**	**11 13 00.4**	**+1.4**
KUR				*i* S	**Sn**	**11 13 59.1**	**+2.7**
KUR				pmax	pmax		
	comp=Z,151nm,0.5s						
KUR				pmax	pmax		
	comp=N,46nm,0.2s						
KUR				pmax	pmax		
	comp=E,23nm,0.2s						
KUR				smax	smax		
	comp=E,1µm,1.6s						
KUR				smax	smax		
	comp=N,1µm,0.8s						
KUR				smax	smax		
	comp=N,495nm,0.6s						
KUR				smax	smax		
	comp=E,138nm,0.7s						
KUR	**Kuril'sk**	**5.08**	**238**	*i* P	**Pn**	**11 13 01.3**	**+2.3**
KUR				AMB	AMB	11 13 02.0	
	comp=E,1µm,2.0s						
KUR				AMB	AMB	11 13 02.0	
	comp=E,50nm,0.2s						
KUR				AMB	AMB	11 13 02.0	
	comp=E,20nm,0.2s						
KUR				AMB	AMB	11 13 02.0	
	comp=E,150nm,0.5s						
KUR				*e*S	**Sn**	**11 13 58.4**	**+2.0**
KUR				A	A	11 14 03.7	
	comp=E,1µm,1.6s						
KUR				A	A	11 14 03.7	
	comp=E,1µm,1.0s						
KUR				A	A	11 14 08.0	
	comp=E,500nm,0.6s						
KUR				A	A	11 14 08.0	
	comp=E,240nm,0.6s						
GRL	**Gorelyy**	**5.19**	**29**	PN	**Pn**	**11 13 01.1**	**+0.5**
RUS	**Russkaya**	**5.24**	**32**	PN	**Pn**	**11 12 59.0**	**-2.1**
RUS				S	**Sn**	**11 13 55.6**	**-4.5**
RUS	**Russkaya**	**5.24**	**32**	*e*P	**Pn**	**11 12 59.0**	**-2.1**
APC	**Apacha**	**5.26**	**21**	PN	**Pn**	**11 13 03.5**	**+2.1**
KRMR	**Karymshinskiy**	**5.45**	**27**	PN	**Pn**	**11 13 06.8**	**+2.9**
PEA0B	**Petropavlovsk-**	**5.57**	**24**	*ce*PN	**Pn**	**11 13 07.2**	**+1.6**
PEA0B	**Petropavlovsk-**	**5.57**	**24**	Pn	**Pn**	**11 13 06.8**	**+1.2**
PETK	**Petropavlovsk-**	**5.57**	**24**	P	**Pn**	**11 13 07.0**	**+1.4**
	comp=E,11nm,0.3s,baz=170,slow=12,SNR=212						
PETK				S	**Sn**	**11 14 15.2**	**+7.1**
	comp=E,5.1nm,0.3s,baz=182,slow=13,SNR=1.8						
PETK				LR	LR	11 15 30.0	
	comp=E,623nm,20.6s,baz=195,slow=40						
PETK	**Petropavlovsk-**	**5.57**	**24**	PN	**Pn**	**11 13 06.7**	**+1.1**
PETK	**Petropavlovsk-**	**5.57**	**24**		**Pn**	**11 13 06.7**	**+1.1**
PET	**Petropavlovsk**	**5.78**	**29**	*e*PN	**Pn**	**11 13 08.2**	**-0.2**
PET				*e*S	**Sn**	**11 14 10.2**	**-3.0**
PET				pmax	pmax		
	comp=Z,274nm,1.1s						
PET				smax	smax		
	comp=N,680nm,0.6s						
PET				smax	smax		
	comp=E,617nm,0.5s						
PET				MLR	MLR		
	comp=Z,500nm,17.0s						
PET	**Petropavlovsk**	**5.78**	**29**		**Pn**	**11 13 09.7**	**+1.2**
PET				Sn	**Sn**	**11 14 11.7**	**-1.5**
PET	**Petropavlovsk**	**5.78**	**29**	*e*P	**Pn**	**11 13 08.2**	**-0.2**
PET				AMB	AMB	11 13 09.5	
	comp=Z,170nm,0.8s						
PET				*e*S	**Sn**	**11 14 10.2**	**-3.0**
PET				A	A	11 14 15.8	
	comp=Z,680nm,0.6s						
PET				A	A	11 14 15.8	
	comp=Z,620nm,0.6s						
DALK	**Dalny**	**5.82**	**30**	PN	**Pn**	**11 13 08.7**	**-0.3**
DALK				S	**Sn**	**11 14 12.0**	**-2.2**
UGLR	**Uglovaya**	**5.99**	**29**	PN	**Pn**	**11 13 11.7**	**+0.2**
KOK	**Koryaka**	**6.00**	**28**	PN	**Pn**	**11 13 12.9**	**+1.3**
KOK	**Koryaka**	**6.00**	**28**	*e*P	**Pn**	**11 13 12.9**	**+1.3**
AVH	**Avacha**	**6.01**	**28**	PN	**Pn**	**11 13 13.5**	**+1.8**
SMAR	**Somma**	**6.03**	**29**	PN	**Pn**	**11 13 14.0**	**+1.9**
KRER	**Koryakskii**	**6.05**	**28**	PN	**Pn**	**11 13 13.3**	**+1.0**
KRX	**Arik**	**6.06**	**27**	PN	**Pn**	**11 13 13.4**	**+0.9**
SDLR	**Sedlovina**	**6.07**	**29**	PN	**Pn**	**11 13 12.3**	**-0.2**
NLC	**Nalytchevo**	**6.13**	**32**	PN	**Pn**	**11 13 14.0**	**+0.7**
NLC	**Nalytchevo**	**6.13**	**32**	*e*P	**Pn**	**11 13 14.0**	**+0.7**
GNL	**Ganaly**	**6.16**	**22**	PN	**Pn**	**11 13 14.3**	**+0.5**
SPN	**Mys Shipunski**	**6.33**	**35**	PN	**Pn**	**11 13 14.3**	**-1.7**
SPN	**Mys Shipunski**	**6.33**	**35**	*e*P	**Pn**	**11 13 14.3**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**6.95**	**237**	*e*PN	**Pn**	**11 13 24.9**	**+0.4**
YUK				*e*S	**Sn**	**11 14 41.8**	**-0.2**
YUK				pmax	pmax		
	comp=Z,580nm,1.4s						
YUK				pmax	pmax		
	comp=E,105nm,0.2s						
YUK				pmax	pmax		
	comp=Z,177nm,0.2s						
YUK				pmax	pmax		
	comp=N,30nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**6.95**	**237**	*i* P	**Pn**	**11 13 25.4**	**+0.9**
YUK				AMB	AMB	11 13 28.0	
	comp=N,600nm,1.4s						
YUK				AMB	AMB	11 13 29.0	
	comp=N,30nm,0.2s						
YUK				AMB	AMB	11 13 29.0	
	comp=N,110nm,0.2s						
YUK				AMB	AMB	11 13 29.0	
	comp=N,180nm,0.2s						
YUK				*i* S	**Sn**	**11 14 42.2**	**+0.2**
GRPR	**Tuman**	**7.03**	**238**	*e*PN	**Pn**	**11 13 27.2**	**+1.7**
GRPR				*e*S	**Sn**	**11 14 44.4**	**+0.5**
GRPR				pmax	pmax		
	comp=Z,176nm,0.5s						
GRPR				pmax	pmax		
	comp=N,109nm,0.2s						
GRPR				smax	smax		
	comp=N,493nm,1.9s						
GRPR				smax	smax		
	comp=E,171nm,1.3s						
GRPR	**Tuman**	**7.03**	**238**	*e*P	**Pn**	**11 13 27.5**	**+2.0**
GRPR				AMB	AMB	11 13 30.0	
	comp=E,180nm,0.5s						
GRPR				AMB	AMB	11 13 30.0	
	comp=E,110nm,0.2s						
GRPR				*e*S	**Sn**	**11 14 44.4**	**+0.5**
GRPR				A	A	11 14 47.0	
	comp=E,500nm,2.0s						
GRPR				A	A	11 14 47.0	
	comp=E,200nm,2.0s						
RUSJ	**Misakicho**	**7.26**	**240**	*e*PN	**Pn**	**11 13 31.2**	**+2.5**
RUSJ				*e*S	**Sn**	**11 14 53.3**	**+3.7**
NEM2	**Nemuro 2**	**7.45**	**234**	P	**Pn**	**11 13 29.4**	**-1.9**
NEM2				*e*S	**Sn**	**11 14 47.6**	**-6.6**
NMR	**Nemuro--Hokkai**	**7.45**	**234**	*e*PN	**Pn**	**11 13 29.0**	**-2.4**
NMR	**Nemuro--Hokkai**	**7.45**	**234**	*e*P	**Pn**	**11 13 29.0**	**-2.4**
YSS	**Yuzh-Sakhalins**	**7.69**	**266**	⇑*e*PN	**Pn**	**11 13 37.5**	**+2.9**
YSS				*e*S	**Sn**	**11 15 02.3**	**+2.2**
YSS				pmax	pmax		
	comp=Z,150nm,0.6s						
YSS				smax	smax		
	comp=E,170nm,0.7s						
YSS	**Yuzh-Sakhalins**	**7.69**	**266**	Pn	**Pn**	**11 13 36.8**	**+2.1**
YSS	**Yuzh-Sakhalins**	**7.69**	**266**	*i* P	**Pn**	**11 13 37.8**	**+3.2**
YSS				AMB	AMB	11 13 38.0	
	comp=E,150nm,0.6s						
YSS				*i* S	**Sn**	**11 15 02.0**	**+1.9**
YSS				A	A	11 15 05.0	
	comp=E,170nm,0.7s						
JNK	**Nakash**	**7.88**	**239**	P	**Pn**	**11 13 37.0**	**-0.2**
JNK				*e*S	**Sn**	**11 15 02.9**	**-1.8**
TYV	**Tymovskoe**	**7.89**	**295**	*e*PN	**Pn**	**11 13 40.8**	**+3.4**
TYV				*e*

JKK2 Kamakawa 2 8.88 246 P **Pn** **11 13 52.8 +1.9**
OKH Okha 8.89 312 *eP* **Pn** **11 13 54.9 +4.0**
OKH AMB AMB 11 13 58.7
comp=Z,90nm,0.5s
SRDR Sredinnyy 8.97 21 PN Pn 11 13 57.5 +5.4
JFR Furan 9.37 243 P **Pn** **11 14 00.0 +2.4**
JAB Ashibetsu 9.40 245 P **Pn** **11 14 00.0 +2.0**
BDR Baidarnaya 9.58 25 PN **Pn** **11 14 00.9 +0.5**
SRKR Sorokina 9.64 24 PN **Pn** **11 14 03.0 +1.7**
JBT2 Biratori 2 9.73 241 P **Pn** **11 14 02.3 -0.2**
ERM Erimo 9.77 236 PN **Pn** **11 14 02.9 0.0**
ERM Erimo 9.77 236 Pn Pn **11 14 02.9 0.0**
KBG Krutoberegovo 9.78 30 PN **Pn** **11 14 02.5 -0.5**
KBTR Krutoberegovo 9.78 30 PN **Pn** **11 14 00.7 -2.4**
NKL Nikolayevsk 9.86 306 *i* P **Pn** **11 14 07.0 +2.8**
NKL AMB AMB 11 14 07.7
comp=Z,110nm,0.8s
NKL *eS* **Sn** **11 15 55.4 +2.3**
JEW Eniwo 10.24 244 Pn **Pn** **11 14 12.0 +2.6**
BKI Bering 10.31 42 PN **Pn** **11 14 07.7 -2.5**
JNB Noboribetsu 10.71 243 *eS* **Sn** **11 16 08.8 -5.0**
JKB Kayabe 11.06 241 P **Pn** **11 14 17.8 -2.8**
JKB *eS* Sn 11 16 13.1 -9.3
JSH Shimam 11.21 246 P **Pn** **11 14 24.6 +2.0**
JYM2 Yakumo 2 11.31 243 P **Pn** **11 14 22.7 -1.3**
JSR Shiriuchi 11.64 241 P **Pn** **11 14 26.1 -2.4**
MA2 Magadan 11.68 352 P **Pn** **11 14 30.1 +1.2**
comp=Z,8.4nm,0.3s,baz=169,slow=9.2,SNR=70
MA2 S **Sn** **11 16 33.3 -4.0**
comp=Z,0.2nm,0.3s,baz=157,slow=23,SNR=1.0
MA2 LR LR 11 18 41.0
comp=Z,367nm,20.1s,baz=139,slow=36
MA2 Magadan 11.68 352⇑ *eP* **Pn** **11 14 29.2 +0.3**
MA2 pmax pmax
comp=Z,63nm,1.0s
MA2 Magadan 11.68 352 Pn **Pn** **11 14 30.2 +1.3**
MA2 Magadan 11.68 352 *eP* **Pn** **11 14 29.2 +0.3**
GRNR Gornyy 11.76 290⇑ PN **Pn** **11 14 33.8 +3.8**
GRNR pmax pmax
comp=Z,5.0nm,0.6s
GRNR MLR MLR
comp=E,130nm,12.0s
GRNR MLR MLR
comp=N,140nm,13.0s
GRNR MLR MLR
comp=Z,210nm,13.0s
GRNR Gornyy 11.76 290 *i* P **Pn** **11 14 33.8 +3.8**
GRNR AMB AMB 11 14 34.2
comp=Z,10.0nm,0.6s
JOSM Okushiri--Mats 11.87 245 P **Pn** **11 14 30.9 -0.8**
JRG Rokugo 12.97 233 P **Pn** **11 14 43.0 -3.5**
SMY Shemya 13.63 63 P **Pn** **11 14 54.4 -0.8**
SMY Shemya 13.63 63 Pn **Pn** **11 14 54.4 -0.8**
EKMR Ekimchan 14.26 298 *i* P **P** **11 15 05.8 -2.7**
EKMR AMB AMB 11 15 12.8
comp=Z,40nm,0.9s
KLR Kul'dur 14.74 283 P **Pn** **11 15 09.7 -0.1**
comp=Z,0.8nm,0.3s,baz=84,slow=11,SNR=29
KLR LR LR 11 20 32.7
comp=Z,261nm,20.0s,baz=98,slow=36
KLR Kul'dur 14.74 283 *deP* **P** **11 15 12.2 -1.7**
KLR Kul'dur 14.74 283 *eP* **Pn** **11 15 10.1 +0.4**
SEY Seymchan 14.92 357 P **Pn** **11 15 11.7 -0.3**
comp=Z,1.2nm,0.3s,baz=173,slow=11,SNR=23
JSD Sado 15.23 235 Pn **Pn** **11 15 18.0 +1.9**
JSD IAmb IAmb 11 15 36.9
comp=Z,34nm,0.9s
USA0B Ussuriysk Arra 15.72 264 *deP* **P** **11 15 23.9 -0.9**
USA0B Ussuriysk Arra 15.72 264 **P** **11 15 24.3 -0.6**
USRK Ussuriysk Ar. 15.72 264 P **P** **11 15 24.0 -0.9**
baz=64,slow=12,SNR=31
USRK LR LR 11 20 33.6
comp=Z,196nm,20.9s,baz=85,slow=34
USRK Ussuriysk Ar. 15.72 264 P **Pn** **11 15 22.8 +0.5**
USRK Ussuriysk Ar. 15.72 264 **Pn** **11 15 22.8 +0.5**
MJAR Matsushiro Arr 16.37 231 P **Pn** **11 15 28.7 -1.8**
comp=Z,0.1nm,0.3s,baz=28,slow=11,SNR=8.6
MJAR pP **pP** **11 15 44.8 -1.7**
comp=Z,0.1nm,0.3s,baz=31,slow=11,SNR=6.8
MJAR LR LR 11 21 31.8
comp=Z,145nm,18.9s,baz=100,slow=36
MJAR Matsushiro Arr 16.37 231 P **Pn** **11 15 29.2 -1.2**
MJAR pmax pmax
comp=Z,6.0nm,0.8s
MJAR Matsushiro Arr 16.37 231 P **Pn** **11 15 29.2 -1.2**
MAJO Matsushiro 16.37 231⇑ *eP* **P** **11 15 32.4 +0.3**
MAJO Matsushiro 16.37 231 Pn **Pn** **11 15 28.2 -2.2**
MAJO IAmb IAmb 11 15 50.5
comp=Z,38nm,1.1s
MAT Matsushiro 16.37 231 P **Pn** **11 15 27.8 -2.6**
AMKA Amchitka 16.67 69 Pn **P** **11 15 35.9 +0.7**
MSHR Mys Shultsa 16.94 260⇑ *eP* **Pn** **11 15 36.8 -0.7**
MSHR pmax pmax
comp=Z,28nm,0.9s
BMKR Bomnak 16.98 302 *eP* **P** **11 15 39.5 +0.8**
BMKR AMB AMB 11 15 43.0
comp=Z,20nm,0.7s
MDJ Mudanjiang 17.18 267 P **Pn** **11 15 38.8 -1.6**
MDJ Mudanjiang 17.18 267 **Pn** **11 15 40.5 +0.1**
JGF Kuroka 17.53 231 P **Pn** **11 15 46.4 +1.6**
JGF IAmb IAmb 11 16 05.0
comp=Z,65nm,1.5s
ZEA Zeya 17.73 299 *eP* **Pn** **11 15 48.3 +1.2**
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA Zeya 17.73 299 *eP* **Pn** **11 15 48.3 +1.2**
ZEA AMB AMB 11 15 52.5
comp=E,10.0nm,0.8s
ZEA AMB AMB 11 15 52.5
comp=E,10.0nm,0.8s
ZEA AMB AMB 11 15 52.5
comp=E,20nm,0.8s
JHJ2 Mitsune 18.37 221 P **Pn** **11 15 55.6 +0.7**
JWT Wachi 18.81 234 P **P** **11 15 59.1 +0.2**
JWT IAmb IAmb 11 16 03.7
comp=Z,25nm,0.9s
ADK Adak 19.18 68 P **P** **11 16 02.4 -0.4**
ADK pmax pmax
comp=Z,36nm,1.1s
YAK Yakutsk 19.56 325 P **P** **11 16 06.3 -0.5**
comp=Z,0.4nm,0.3s,baz=39,slow=0.6,SNR=19
YAK LR LR 11 23 23.2
comp=Z,252nm,19.7s,baz=90,slow=36
YAK Yakutsk 19.56 325 *eP* **Pn** **11 16 08.0 -0.8**
YAK *eS* **S** **11 19 41.2 -2.3**
YAK pmax pmax
comp=Z,124nm,0.9s
YAK pmax pmax
comp=N,32nm,1.1s
YAK pmax pmax
comp=E,34nm,1.2s
YAK smax smax
comp=E,62nm,2.4s
YAK smax smax
comp=N,65nm,2.3s
YAK Yakutsk 19.56 325 P **P** **11 16 06.8 -0.1**
CN2 Changchun 20.25 268⇑ P **P** **11 16 13.4 -1.1**
CN2 pmax pmax
comp=N,40nm,0.8s
BILL Bilibino 20.97 13 *ceP* **P** **11 16 21.3 -0.7**
BILL *i* 11 17 00.6
BILL *eS* **S** **11 20 08.6 -2.6**
BILL pmax pmax
comp=Z,9.0nm,1.3s
BILL Bilibino 20.97 13 P **P** **11 16 20.8 -1.2**
BILL Bilibino 20.97 13 *eP* **P** **11 16 21.3 -0.7**
KSRS Korea Array 21.78 250 P **P** **11 16 31.9 +1.0**
comp=Z,22nm,0.9s,baz=50,slow=10,SNR=52
KSRS LR LR 11 24 14.5
comp=Z,157nm,19.2s,baz=90,slow=34
KSRS Korea Array 21.78 250 P **P** **11 16 32.0 +1.0**
KS19 Wonju Array Si 21.79 251 P **P** **11 16 31.4 +0.3**
KS19 IAmb IAmb 11 16 33.3
comp=Z,22nm,0.9s
KSAR Wonju Array Be 21.81 250 P **P** **11 16 32.0 +0.7**
KSAR Wonju Array Be 21.81 250 P **P** **11 16 31.9 +0.7**
KSAR Wonju Array Be 21.81 250 *eP* **P** **11 16 32.0 +0.7**
HIA Hailar 22.54 286⇓ *eP* **P** **11 16 40.8 +1.7**
HIA pmax pmax
comp=Z,3.0nm,0.8s

TJN Taejon 22.80 249⇓ *eP* **P** **11 16 44.2 +2.3**
JCJ Chichijima 22.88 208 LR LR 11 24 26.7
comp=Z,82nm,19.9s,baz=34,slow=33
JNU Nakatsue 22.92 238 P **P** **11 16 44.2 +1.0**
comp=Z,12nm,0.9s,baz=354,slow=18,SNR=2.8
JNU LR LR 11 24 14.5
comp=Z,141nm,21.9s,baz=61,slow=33
JNU Nakatsue 22.92 238 IAmb IAmb 11 16 54.6
comp=Z,55nm,1.3s
GAMB Gambell 24.40 37 P **P** **11 16 58.0 +1.6**
GAMB IAmb IAmb 11 16 58.7
comp=Z,22nm,1.0s
GAMB Gambell 24.40 37 P 11 16 57.0
baz=247,SNR=15
BOD Bodaibo 25.63 307 *eP* **P** **11 17 07.1 -0.5**
BOD pmax pmax
comp=Z,12nm,1.2s
BOD Bodaibo 25.63 307 *eP* **P** **11 17 07.1 -0.5**
TIXI Tiksi 26.38 342 P **P** **11 17 13.5 -0.7**
comp=Z,1.6nm,0.3s,baz=137,slow=9.8,SNR=8.6
TIXI pP **pP** **11 17 30.9 -0.6**
comp=Z,10nm,0.9s,baz=127,slow=12,SNR=6.0
TIXI LR LR 11 27 00.7
comp=Z,204nm,19.5s,baz=180,slow=35
TIXI Tiksi 26.38 342⇓ *eP* **P** **11 17 16.2 +2.0**
TIXI Tiksi 26.38 342 P **P** **11 17 13.9 -0.3**
TIXI Tiksi 26.38 342 *eP* **P** **11 17 16.2 +2.0**
TNA Tin City 26.60 35 P **P** **11 17 17.3 +1.0**
TNA IAmb IAmb 11 17 34.5
comp=Z,16nm,1.0s
TNA Tin City 26.60 35 P 11 17 17.1
baz=248,SNR=9.8
ANM Nome 27.27 38 P **P** **11 17 23.8 +1.4**
ANM pmax pmax
comp=Z,6.0nm,0.9s
ANM Nome 27.27 38 P **P** **11 17 23.8 +1.4**
ANM Nome 27.27 38 P 11 17 23.8
baz=253
JOW Kunigami 29.20 233 P **P** **11 17 39.6 -0.3**
comp=Z,9.4nm,0.7s,baz=1.4,slow=9.0,SNR=4.6
RDOG Red Dog Mine 29.37 32 P **P** **11 17 41.7 +0.6**
RDOG IAmb IAmb 11 17 44.4
comp=Z,8.6nm,0.7s
RDOG Red Dog Mine 29.38 32 P 11 17 41.9
baz=250
H11N2 WAKE ISLAND Hy 30.15 155 T T 11 49 55.5
baz=342,slow=76,SNR=2681
H11N1 WAKE ISLAND Hy 30.16 155 T T 11 49 57.8
baz=342,slow=76,SNR=3486
H11N3 WAKE ISLAND Hy 30.16 155 T T 11 49 58.0
baz=342,slow=76,SNR=1377
HHC Hu-ho-hao-te 30.81 272 *eP* **P** **11 17 55.9 +1.8**
HHC pmax pmax
comp=Z,17nm,1.1s
HHC pmax pmax
comp=Z,130nm,6.0s
NJ2 Nanjing 30.97 252 *eP* **P** **11 17 56.1 +0.7**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
ULN Ulaanbaatar 31.05 287⇓ *eP* **P** **11 17 56.9 +0.7**
ULN pmax pmax
comp=Z,2.0nm,1.0s
ULN Ulaanbaatar 31.05 287 P **P** **11 17 55.2 -1.0**
ULN Ulaanbaatar 31.05 287 *eP* **P** **11 17 56.9 +0.7**
H11S1 WAKE ISLAND Hy 31.26 156 T T 11 51 12.4
baz=343,slow=76,SNR=6958
H11S3 WAKE ISLAND Hy 31.27 156 T T 11 51 13.0
baz=343,slow=76,SNR=5155
H11S2 WAKE ISLAND Hy 31.27 156 T T 11 51 16.3
baz=343,slow=76,SNR=3866
SONM Songino Array 31.48 288 P **P** **11 17 59.3 -0.7**
comp=Z,1.8nm,0.9s,baz=68,slow=9.0,SNR=6.8
SONM pP **pP** **11 18 16.4 -0.9**
comp=Z,0.9nm,0.7s,baz=74,slow=9.7,SNR=2.7
SONM PcP **PcP** **11 20 51.0 -0.2**
comp=Z,0.3nm,0.4s,baz=114,slow=1.6,SNR=1.7
SONM ScP **ScP** **11 24 25.4 -2.2**
comp=Z,1.9nm,0.7s,baz=96,slow=3.3,SNR=13
SONM LR LR 11 30 17.2
comp=Z,192nm,20.8s,baz=90,slow=36
SONM Songino Array 31.48 288 P **P** **11 17 59.5 -0.4**
TLY Talaya 32.12 296 P **P** **11 18 04.3 -1.1**
TLY pP **pP** **11 18 21.6 -1.0**
comp=Z,3.3nm,0.6s,baz=56,slow=5.2,SNR=4.1
TLY Talaya 32.12 296 *eP* **P** **11 18 05.5 +0.1**
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY Talaya 32.12 296 P **P** **11 18 05.5 +0.1**
TLY Talaya 32.12 296 *eP* **P** **11 18 05.5 +0.1**
IMAR Indian Mountai 32.35 37 P **P** **11 18 08.0 +0.8**
A21K Barrow 32.56 27 P **P** **11 18 09.4 +0.5**
A21K Barrow 32.56 27 P 11 18 08.9
baz=251,SNR=13
ZAK Zakamensk 32.68 293 *eP* **P** **11 18 09.7 -0.7**
ZAK *e* 11 18 27.3
ZAK pmax pmax
comp=Z,3.0nm,0.9s
ZAK pmax pmax
comp=Z,3.0nm,1.1s
KDAK Kodiak Island 32.81 53 P **P** **11 18 11.4 +0.1**
comp=Z,5.6nm,0.7s,baz=310,slow=3.2,SNR=5.0
KDAK Kodiak Island 32.81 53 P **P** **11 18 11.2 -0.1**
KDAK pmax pmax
comp=Z,22nm,1.0s
KDAK Kodiak Island 32.81 53 P **P** **11 18 11.2 -0.1**
SKT Skwentna 33.09 45 P 11 18 15.0
baz=271
CNPM China Poot 33.35 49 P **P** **11 18 16.6 +0.6**
BPAW Bear Paw Mtn. 33.36 41 P **P** **11 18 17.5 +1.4**
BPAW IAmb IAmb 11 18 37.9
comp=Z,9.9nm,1.0s
BPAW Bear Paw Mtn. 33.36 41 P 11 18 17.1
baz=268
BRLK Bradley Lake 33.51 49 P **P** **11 18 18.3 +0.9**
MLY Manley 33.51 39 P **P** **11 18 19.4 +2.0**
MLY Manley 33.51 39 P 11 18 18.7
baz=267
TRF Thorofare Moun 33.66 42 P 11 18 19.3
baz=270
COLD Coldfoot 33.90 35 P **P** **11 18 21.6 +0.9**
COLD IAmb IAmb 11 18 39.8
comp=Z,10nm,0.9s
COLD Coldfoot 33.91 35 P 11 18 21.4
baz=264
RC01 Rabbit Creek A 33.98 46 P **P** **11 18 22.8 +1.3**
O22K Cooper Landing 34.03 47 P **P** **11 18 22.8 +1.0**
O22K Cooper Landing 34.03 47 P 11 18 22.6
baz=275
I23K Minto, Yukon-K 34.10 39 P **P** **11 18 24.1 +1.7**
I23K IAmb IAmb 11 18 41.7
comp=Z,6.5nm,0.8s
I23K Minto, Yukon-K 34.10 39 P 11 18 23.4
baz=268
NEA2 Nenana 34.21 40 P 11 18 23.9
baz=269
PMR Palmer 34.24 45 P **P** **11 18 24.3 +0.6**
PMR pmax pmax
comp=Z,18nm,1.3s
PMR Palmer 34.24 45 P **P** **11 18 24.3 +0.6**
PMR IAmb IAmb 11 18 38.4
comp=Z,18nm,1.3s
PMR Palmer 34.24 45 P 11 18 24.5
baz=274
MCK McKinley 34.26 42 P **P** **11 18 24.5 +0.6**
MCK pmax pmax
comp=Z,17nm,1.1s
MCK McKinley 34.26 42 P **P** **11 18 24.5 +0.6**
MCK IAmb IAmb 11 18 25.7
comp=Z,17nm,1.1s
MCK McKinley 34.26 42 P 11 18 24.5
baz=271
TOLK Toolik Lake Re 34.31 33 P **P** **11 18 25.2 +0.9**
TOLK IAmb IAmb 11 18 42.4
comp=Z,12nm,0.9s
TOLK Toolik Lake Re 34.31 33 P 11 18 24.1
baz=263,SNR=9.8
WAT2 Susitna Watana 34.43 43 P 11 18 25.3
baz=272
MDM Murphy Dome 34.57 39 P **P** **11 18 28.1 +1.5**
MDM IAmb IAmb 11 18 46.2
comp=Z,9.9nm,0.8s
KNK Knik Glacier 34.57 46 P 11 18 26.8
baz=274
SML Sawmill 34.61 45 P **P** **11 18 28.3 +1.3**
SML Sawmill 34.61 45 P 11 18 27.9
baz=274,SNR=5.3
WRH Wood River Hil 34.63 40 P **P** **11 18 28.2 +1.2**
TCOL CIGO, UAF Yank 34.73 40 P **P** **11 18 28.7 +0.9**
TCOL CIGO, UAF Yank 34.73 40 P 11 18 27.6
baz=270,SNR=8.2
COLA College 34.73 40 *deP* **P** **11 18 29.2 +1.3**
COLA *i* *PP **sP** **11 18 55.2 +1.4**
COLA pmax pmax
comp=Z,14nm,0.9s
COLA College 34.73 40 P **P** **11 18 28.6 +0.8**
COLA College 34.73 40 P 11 18 28.6
baz=270
CCB Clear Creek Bu 34.75 40 P **P** **11 18 28.7 +0.6**
WAT6 Susitna Watana 34.84 44 P 11 18 29.4
baz=273
WHN Wuhan 34.85 254⇑ P **P** **11 18 29.1 -0.2**
POKR Poker Plat Res 34.91 39 P **P** **11 18 30.8 +1.4**
POKR Poker Plat Res 34.91 39 P 11 18 30.3
baz=270,SNR=9.3
HDA Harding Lake 35.12 40 P 11 18 31.1
baz=272,SNR=5.7
HDA P 11 18 31.1
baz=272,SNR=5.7
IL31 35.15 40 P **P** **11 18 32.3 +0.9**
IL31 IAmb IAmb 11 18 50.1
comp=Z,8.2nm,0.8s
ILAR Eielson Array 35.15 40 P **P** **11 18 32.4 +0.9**
comp=Z,4.9nm,1.0s,baz=258,slow=5.8,SNR=68
ILAR pP **pP** **11 18 49.1 +0.2**
comp=Z,3.6nm,0.7s,baz=256,slow=6.2,SNR=8.5
ILAR PcP **PcP** **11 20 59.0 -2.1**
comp=Z,0.3nm,0.6s,baz=290,slow=3.6,SNR=1.6
ILAR Eielson Array 35.15 40 P **P** **11 18 30.7 -0.8**
ILAR Eielson Array 35.15 40 P **P** **11 18 30.7 -0.8**
M24K Tolsona, Glenn 35.60 44 P **P** **11 18 37.2 +1.7**
M24K Tolsona, Glenn 35.60 44 P 11 18 35.8
baz=275
PRP Porcupine Dome 35.71 38 P **P** **11 18 37.6 +1.1**
PRP Porcupine Dome 35.71 38 P 11 18 36.9
baz=271
FYU Fort Yukon 35.83 37 P **P** **11 18 39.6 +2.4**
BMAR Burnt Mountain 36.09 35 P **P** **11 18 41.1 +1.6**
TPUB Ta-pu 36.22 239 P **P** **11 18 41.7 +0.6**
XAN Xi'an 36.23 264 P **P** **11 18 41.8 +0.6**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN pmax pmax
comp=Z,13nm,3.7s
N25K Chitina, Valde 36.40 45 P **P** **11 18 43.9 +1.6**
N25K Chitina, Valde 36.40 45 P 11 18 42.8
baz=277
DOT Dot Lake 36.43 42 P **P** **11 18 42.9 +0.3**
DOT IAmb IAmb 11 19 01.3
comp=Z,9.0nm,0.8s
SCRK Sand Creek 36.44 41 P **P** **11 18 43.7 +1.0**
SCRK IAmb IAmb 11 19 01.3
comp=Z,17nm,1.3s
SCRK Sand Creek 36.44 41 P 11 18 43.1
baz=275
MENT Mentasta 36.65 43 P **P** **11 18 46.2 +1.8**
CRQE Cirque 37.24 46 P 11 18 50.6
baz=280
K27K Chicken 37.27 41 P **P** **11 18 51.2 +1.6**
K27K IAmb IAmb 11 19 09.2
comp=Z,13nm,0.9s
K27K Chicken 37.27 41 P 11 18 51.0
baz=276
EGAK Eagle 37.59 39 P **P** **11 18 53.3 +1.0**
EGAK Eagle 37.59 39 P 11 18 52.7
baz=276,SNR=7.8
NRIK Noril'sk 37.94 328⇑ *eP* **P** **11 18 54.1 -1.1**
NRIK pmax pmax
comp=Z,5.0nm,1.8s
CTG Chitna Glacier 38.05 46 P 11 18 57.0
baz=281
DAWY Dawson 38.44 40 P **P** **11 19 01.0 +1.5**
DAWY IAmb IAmb 11 19 02.6
comp=Z,12nm,1.4s
LZH Lanzhou 38.45 271 *eP* **P** **11 19 01.8 +1.7**
LZH pmax pmax
comp=Z,29nm,1.1s
EPYK Eagle Plains 39.25 37 P **P** **11 19 08.1 +1.9**
EPYK IAmb IAmb 11 19 08.8
comp=Z,9.7nm,0.7s
EPYK Eagle Plains 39.25 37 P 11 19 06.3
baz=278,SNR=5.6
GTA Gaotai 39.36 278⇑ P **P** **11 19 08.6 +1.0**
GTA pP sP 11 19 32.8 -1.0
GTA sP pP 11 19 44.4 +19
GTA pmax pmax
comp=Z,10.0nm,1.0s
GTA pmax pmax
comp=Z,92nm,5.5s
GTA LR LR
comp=Z,120nm,16.0s
GTA LR LR
comp=Z,230nm,16.0s
GTA LR LR
comp=Z,200nm,17.1s
HYT Haines Junctio 39.91 45 P **P** **11 19 14.3 +2.4**
HYT IAmb IAmb 11 19 40.2
comp=Z,25nm,1.4s
INK Inuvik 40.21 33 P **P** **11 19 15.5 +1.4**
comp=Z,4.0nm,0.5s,baz=283,slow=6.3,SNR=27
INK Inuvik 40.21 33 P **P** **11 19 15.4 +1.4**
INK pmax pmax
comp=Z,8.0nm,0.8s
INK Inuvik 40.21 33 P **P** **11 19 15.4 +1.4**
INK IAmb IAmb 11 19 33.1
comp=Z,8.4nm,0.8s
ZAA0 Zalesovo Array 42.33 305 P **P** **11 19 31.0 -0.6**
ZALV Zalesovo Beam 42.33 305 P **P** **11 19 30.1 -1.6**
comp=Z,1.4nm,0.4s,baz=69,slow=7.0,SNR=5.3
ZALV PcP **PcP** **11 21 22.1 -1.7**
comp=Z,0.5nm,0.3s,baz=60,slow=4.0,SNR=2.2
ZALV ScP **ScP** **11 25 05.4 -2.1**
comp=Z,0.6nm,0.6s,baz=5.7,slow=4.3,SNR=2.0
ZALV LR LR 11 36 07.8
comp=Z,133nm,20.9s,baz=44,slow=35
ZALV Zalesovo Beam 42.33 305 *i* P **P** **11 19 34.0 +2.4**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
DGZ Jazzator, Alta 42.49 298⇑ *eP* **P** **11 19 34.1 +0.9**
DGZ pmax pmax
comp=Z,3.0nm,0.9s
GYA Guiyang 42.59 257 ⇓P **P** **11 19 35.5 +1.3**
GYA pmax pmax
comp=Z,20nm,1.0s
C36M Paulatuk 43.37 31 P **P** **11 19 41.2 +1.3**
C36M Paulatuk 43.38 31 P 11 19 39.9
baz=285,SNR=19
DLBC Dease Lake 44.25 47 P **P** **11 19 48.4 +1.2**
comp=Z,4.8nm,0.9s,baz=296,slow=9.3,SNR=5.2
DLBC pP **pP** **11 20 04.4 -0.7**
comp=Z,4.7nm,0.7s,baz=325,slow=9.8,SNR=3.6
WMQ Urumqi 45.01 290 *eP* **P** **11 19 54.3 +0.9**
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,230nm,5.1s
KMI Kunming 46.08 259⇑ P **P** **11 20 03.4 +1.2**
KMI pP pP 11 20 25.3 +5.3
KMI sP sP 11 20 34.1 +5.8
KMI pmax pmax
comp=Z,13nm,0.8s
MK31 Makanchi Array 46.87 297 P **P** **11 20 07.6 -0.3**
MK31 pmax pmax
comp=Z,7.0nm,0.9s
MK31 Makanchi Array 46.87 297 P **P** **11 20 07.6 -0.3**
MK31 IAmb IAmb 11 20 08.7
comp=Z,7.3nm,0.8s
MKAR Makanchi Array 46.87 297 P **P** **11 20 07.6 -0.3**
comp=Z,7.0nm,0.8s,baz=64,slow=7.5,SNR=36
MKAR pP **pP** **11 20 23.1 -2.6**
comp=Z,6.0nm,0.7s,baz=60,slow=7.2,SNR=11
MKAR PcP **PcP** **11 21 38.2 -1.3**
comp=Z,1.1nm,0.8s,baz=46,slow=4.2,SNR=1.1
MKAR ScP **ScP** **11 25 24.0 -2.4**
comp=Z,0.7nm,0.8s,baz=68,slow=3.6,SNR=3.8
MKAR Makanchi Array 46.87 297 P **P** **11 20 07.0 -0.9**
EUNU Eureka 47.71 12 P **P** **11 20 14.1 +0.1**
SLVN Son La 47.97 254 P **P** **11 20 15.5 -1.2**
SLVN IAmb IAmb 11 20 21.3
comp=Z,7.3nm,0.9s
RES Resolute Bay 49.39 19 P **P** **11 20 26.9 +0.1**
comp=Z,3.4nm,0.4s,baz=223,slow=4.6,SNR=18

RES Resolute Bay 49.39 19 P **P** **11 20 27.4 +0.5**
RES pmax pmax
comp=Z,6.0nm,0.7s
RES Resolute Bay 49.39 19 P **P** **11 20 27.4 +0.5**
RES IAmb IAmb 11 20 32.1
comp=Z,6.3nm,0.7s
YKA Yellowknife Ar 49.51 38 P **P** **11 20 29.1 +1.2**
comp=Z,4.4nm,0.7s,baz=298,slow=6.8,SNR=64
YKA pP **pP** **11 20 46.1 -0.1**
comp=Z,5.7nm,0.9s,baz=298,slow=7.2,SNR=7.8
YKA PcP **PcP** **11 21 47.1 -1.6**
comp=Z,0.7nm,0.6s,baz=311,slow=2.8,SNR=4.2
TDK Taldyqorghan 50.12 296 *eP* **P** **11 20 32.8 -0.1**
baz=296
TDK Taldyqorghan 50.12 296 *eP* **P** **11 20 32.7 -0.1**
BRVK Borovoye 50.52 309 P **P** **11 20 34.7 -1.0**
BRVK pmax pmax
comp=Z,7.0nm,0.7s
BRVK Borovoye 50.52 309 P **P** **11 20 34.7 -1.0**
BRVK IAmb IAmb 11 20 40.0
comp=Z,6.9nm,0.7s
UZB Uzynbulak 50.75 294 *eP* **P** **11 20 37.4 -0.4**
baz=294
UZB Uzynbulak 50.75 294 *eP* **P** **11 20 37.3 -0.4**
KPKS Kokpek 50.78 295 *eP* **P** **11 20 37.5 -0.5**
baz=295
KPKS Kokpek 50.78 295 *eP* **P** **11 20 37.4 -0.5**
LSA Lhasa 50.80 273 P **P** **11 20 37.2 -1.5**
LSA pmax pmax
comp=Z,12nm,1.0s
LSA Lhasa 50.80 273 P **P** **11 20 37.2 -1.5**
LSA IAmb IAmb 11 20 42.7
comp=Z,12nm,1.0s
NONG Nongkai 50.84 252 P **P** **11 20 40.5 +1.9**
comp=Z,16nm,0.9s
SATY Saty 51.17 294 *eP* **P** **11 20 40.7 -0.3**
baz=294
SATY Saty 51.17 294 *eP* **P** **11 20 40.6 -0.3**
MDOK Medeo 51.94 295 *eP* **P** **11 20 46.6 -0.2**
baz=295
MDOK Medeo 51.94 295 *eP* **P** **11 20 46.5 -0.2**
TULEG Thule 52.71 12 *i* P **P** **11 20 50.9 -0.8**
TULEG IAmb IAmb 11 20 53.8
comp=Z,6.7nm,0.6s
TULEG Thule 52.71 12 P **P** **11 20 50.1 -1.5**
TULEG IAmb IAmb 11 20 53.8
comp=Z,7.4nm,0.7s
LAMP Lampang 52.77 256 P **P** **11 20 56.3 +3.4**
comp=Z,16nm,0.7s
CMMT Chiang Mai 53.00 256 P **P** **11 20 55.0 +0.4**
comp=Z,8.7nm,0.9s
SHL Shillong 53.01 268 P **P** **11 20 55.2 +0.4**
SHL pmax pmax
comp=Z,21nm,0.6s
CHTO Chiang Mai 53.01 256 P **P** **11 20 55.0 +0.3**
CHTO pmax pmax
comp=Z,12nm,0.8s
CHTO Chiang Mai 53.01 256 P **P** **11 20 55.0 +0.3**
CM36 Chiang Mai Arr 53.12 256 P **P** **11 20 58.0 +2.5**
CHAI Chaiyaphum 53.19 251 P **P** **11 20 57.7 +1.8**
comp=Z,19nm,0.8s
CM32 Chiang Mai Arr 53.19 256 P **P** **11 20 59.0 +3.0**
SGDS Sogindy 53.24 297 *eP* **P** **11 20 55.9 -0.3**
baz=297
SGDS Sogindy 53.24 297 *eP* **P** **11 20 55.9 -0.3**
CM31 Chiang Mai Arr 53.26 256 P **P** **11 20 56.5 -0.1**
CM31 IAmb IAmb 11 21 14.8
comp=Z,5.9nm,0.8s
CMAR Chiang Mai Arr 53.26 256 P **P** **11 20 57.5 +0.9**
comp=Z,4.6nm,0.8s,baz=35,slow=7.2,SNR=25
CMAR pP **pP** **11 21 14.4 -0.3**
comp=Z,3.2nm,1.0s,baz=34,slow=14,SNR=5.3
CMAR PcP **PcP** **11 22 02.1 -1.3**
comp=Z,1.2nm,0.8s,baz=38,slow=4.6,SNR=1.5
CMAR ScP **ScP** **11 25 52.3 -1.9**
comp=Z,1.9nm,1.1s,baz=9.8,slow=4.2,SNR=4.5
CMAR LR LR 11 44 53.9
comp=Z,81nm,19.4s,baz=110,slow=37
CMAR Chiang Mai Arr 53.26 256 P **P** **11 20 57.3 +0.8**
CM01 Chiang Mai Arr 53.28 256 P **P** **11 20 59.8 +3.1**
comp=Z,8.1nm,0.8s
B06A Marblemount 53.37 56 P **P** **11 20 57.6 +0.7**
B06A IAmb IAmb 11 21 17.5
comp=Z,6.9nm,0.9s
NEEM North Greenlan 53.78 7 *i* P **P** **11 20 58.9 -1.0**
NEEM IAmb IAmb 11 21 00.6
comp=Z,7.4nm,0.9s
AAK Ala-Archa 53.78 296⇓ *eP* **P** **11 20 59.9 -0.4**
AAK pmax pmax
comp=Z,14nm,1.0s
AAK Ala-Archa 53.78 296 P **P** **11 20 58.7 -1.6**
AAK Ala-Archa 53.78 296 *eP* **P** **11 20 59.9 -0.4**
ARU Arti 54.44 317 P **P** **11 21 02.5 -2.2**
comp=Z,1.3nm,0.4s,baz=102,slow=9.3,SNR=2.6
ARU Arti 54.44 317 *c i* P **P** **11 21 03.2 -1.4**
ARU *PP **sP** **11 21 30.8 -0.6**
ARU 11 22 01.0
ARU S **S** **11 28 34.6 -2.7**
ARU SS **SKiKP** **11 32 12.1 +5.6**
ARU pmax pmax
comp=Z,9.0nm,1.3s
ARU Arti 54.44 317 P **P** **11 21 04.2 -0.4**
ARU IAmb IAmb 11 21 33.6
comp=Z,5.5nm,0.8s
SRAK Srakaew 54.57 250 P **P** **11 21 08.7 +2.6**
comp=Z,93nm,0.8s
JIRN Jiri 55.44 274 *eP* **P** **11 21 14.3 +1.6**
comp=Z,21nm,0.7s
K02D Willamette Mer 55.46 63 P 11 21 13.6
baz=306
I04A Tendick Farm, 55.55 61 P 11 21 14.1
baz=306
RAMN Ramite 55.63 273 *eP* **P** **11 21 14.5 +0.6**
comp=Z,20nm,0.6s
L02E Cave Junction 55.81 63 P 11 21 16.3
baz=307
I05D Terrebonne, OR 55.85 60 P 11 21 16.1
baz=306
KK31 Karatay Array 55.89 298 P **P** **11 21 13.6 -1.7**
KK31 pmax pmax
comp=Z,4.0nm,1.2s
KK31 Karatay Array 55.89 298 P **P** **11 21 13.6 -1.7**
KKAR Karatay Array 55.89 298 P **P** **11 21 12.9 -2.4**
KKAR Karatay Array 55.89 298 P **P** **11 21 12.9 -2.4**
NEW Newport 55.90 54 P **P** **11 21 15.1 -0.3**
NEW pmax pmax
comp=Z,5.0nm,2.1s
PKI Pulchoki 56.02 275 *eP* **P** **11 21 19.1 +2.3**
J04D Umpqua Nationa 56.05 61 P 11 21 17.4
baz=307,SNR=5.1
DMN Daman 56.20 275 *eP* **P** **11 21 20.0 +2.0**
comp=Z,9.7nm,0.5s
GKN Gorkha 56.25 276 *eP* **P** **11 21 20.4 +2.2**
PINE Pine Mountain 56.41 60 P **P** **11 21 21.8 +2.6**
J05D Fort Rock, OR 56.54 61 P 11 21 21.6
baz=307
L04D Klamath Falls 56.55 62 P 11 21 21.2
baz=307
PRGR Permogore 56.58 327 *eP* **P** **11 21 17.3 -2.5**
PRGR pmax pmax
comp=Z,9.0nm,0.8s
YBH Yreka Blue Hor 56.60 63 P **P** **11 21 22.7 +2.3**
comp=Z,2.9nm,0.8s,baz=356,slow=5.9,SNR=8.5
YBH Yreka Blue Hor 56.60 63 P **P** **11 21 22.8 +2.3**
YBH pmax pmax
comp=Z,4.0nm,0.9s
M02C Callahan 56.72 63 P 11 21 22.8
baz=308
IUG luzhnay 56.74 298 *eP* **P** **11 21 21.2 -0.3**
baz=298
IUG luzhnay 56.74 298 *eP* **P** **11 21 21.2 -0.3**
ARCES ARCESS Array B 56.80 341 P **P** **11 21 20.6 -0.7**
comp=Z,2.7nm,0.8s,baz=29,slow=8.3,SNR=3.6
ARCES ARCESS Array B 56.80 341 P **P** **11 21 20.7 -0.7**
ARCES pmax pmax
comp=Z,6.0nm,1.1s
ARCES ARCESS Array B 56.80 341 IAmb IAmb 11 21 38.4
comp=Z,5.6nm,1.1s
CHM Chimkent 56.89 298 *eP* **P** **11 21 22.3 -0.2**
baz=298
CHM Chimkent 56.89 298 *eP* **P** **11 21 22.2 -0.2**
PHET Kaeng Krachan 56.93 251 P P 11 21 29.0 +6.1
N02D Trinity Center 57.06 64 P 11 21 25.2
baz=308
K05A Summer Lake 57.08 61 P **P** **11 21 26.4 +2.5**
KIRV Kirov 57.08 323⇓ *eP* **P** **11 21 22.4 -1.0**

M04C Macdoel 57.09 62 P 11 21 25.0
baz=308
KOLN Koldanda 57.10 276 *eP* **P** **11 21 25.5 +1.2**
comp=Z,8.6nm,0.6s
WALA Waterton Lakes 57.14 51 P **P** **11 21 25.6 +1.4**
WALA IAmb IAmb 11 21 44.9
comp=Z,7.0nm,0.8s
PYUN Piuthan 57.29 277 *eP* **P** **11 21 27.7 +2.1**
comp=Z,12nm,0.6s
WDC Whiskeytown Da 57.40 64 P **P** **11 21 28.0 +2.0**
WDC pmax pmax
comp=Z,6.0nm,1.1s
WDC Whiskeytown Da 57.40 64 P **P** **11 21 28.0 +2.0**
WDC IAmb IAmb 11 21 48.0
comp=Z,6.2nm,1.1s
UPNV Upernavik 57.63 10 *i* P **P** **11 21 25.6 -1.6**
UPNV IAmb IAmb 11 21 29.0
comp=Z,10nm,0.6s
MOD Modoc Plateau 57.92 61 P **P** **11 21 31.8 +2.0**
MOD IAmb IAmb 11 21 51.6
comp=Z,5.9nm,0.8s
O03E Paynes Creek 58.02 64 P 11 21 31.4
baz=308
ABKAR Akbulak array 58.04 310 P **P** **11 21 28.7 -1.6**
ABKAR IAmb IAmb 11 21 32.8
comp=Z,7.1nm,1.4s
ABKAR Akbulak array 58.04 310 P **P** **11 21 29.1 -1.2**
HOPS Hopland Field 58.05 66 P **P** **11 21 32.4 +1.8**
PLID Pearl Lake 58.43 56 P **P** **11 21 35.1 +1.7**
PLID IAmb IAmb 11 21 55.1
comp=Z,8.2nm,0.8s
GAR Garm 58.50 295 P **P** **11 21 33.6 -0.3**
GAR IAmb IAmb 11 21 35.8
comp=Z,12nm,1.1s
WVOR Wild Horse Val 58.57 60 P **P** **11 21 36.4 +2.0**
WVOR pmax pmax
comp=Z,9.0nm,1.0s
WVOR Wild Horse Val 58.57 60 P **P** **11 21 36.4 +2.0**
WVOR IAmb IAmb 11 21 54.4
comp=Z,8.6nm,0.9s
ORV Oroville 58.66 64 P **P** **11 21 35.7 +0.8**
ORV pmax pmax
comp=Z,4.0nm,0.7s
ORV Oroville 58.66 64 P **P** **11 21 35.7 +0.8**
ORV IAmb IAmb 11 21 36.2
comp=Z,3.9nm,0.7s
BEKR Beckworth 59.15 63 P **P** **11 21 40.0 +1.6**
BEKR IAmb IAmb 11 21 40.2
comp=Z,3.8nm,0.8s
KLMR Klimovskoe 59.28 329 *eP* **P** **11 21 34.7 -4.1**
KLMR pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 59.28 329 *eP* **P** **11 21 34.7 -4.1**
KLMR AMP 11 21 36.3
comp=Z,10.0nm,1.2s
SUMG Summit 59.34 4 *i* P **P** **11 21 39.2 -0.3**
SUMG IAmb IAmb 11 21 40.8
comp=Z,5.6nm,1.0s
SUMG Summit 59.34 4 *i* P **P** **11 21 39.2 -0.3**
SUMG pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 59.34 4 P **P** **11 21 39.6 +0.1**
FFC Flin Flon 59.34 41 P **P** **11 21 40.8 +1.5**
FFC pmax pmax
comp=Z,11nm,1.2s
FFC Flin Flon 59.34 41 P **P** **11 21 40.8 +1.5**
FFC IAmb IAmb 11 21 59.4
comp=Z,11nm,1.2s
FCC Fort Churchill 59.83 34 P **P** **11 21 43.2 +0.7**
FCC pmax pmax
comp=Z,9.0nm,1.0s
FCC Fort Churchill 59.83 34 P **P** **11 21 43.2 +0.7**
FCC IAmb IAmb 11 22 01.9
comp=Z,8.6nm,1.0s
PAHR Pah Rah Range 59.84 63 P **P** **11 21 44.2 +1.1**
PAHR IAmb IAmb 11 22 04.7
comp=Z,5.4nm,0.9s
VCNR Virginia City 59.94 63 P **P** **11 21 45.2 +1.3**
VCNR IAmb IAmb 11 21 46.4
comp=Z,6.4nm,0.7s
NIL Nilore 60.06 288 P **P** **11 21 43.6 -1.0**
NIL pmax pmax
comp=Z,18nm,0.9s
NIL Nilore 60.06 288 P **P** **11 21 43.6 -1.0**
PNTR Pine Nut 60.10 64 P **P** **11 21 46.8 +1.7**
HLID Hailey 60.28 57 P 11 21 46.6
baz=310
BCYI Bear Canyon 60.36 56 P **P** **11 21 47.5 +0.8**
YERR Yerington 60.38 64 P **P** **11 21 48.9 +2.0**
YERR IAmb IAmb 11 21 49.4
comp=Z,6.1nm,0.7s
BOZ Bozeman (W) 60.51 54 P **P** **11 21 49.4 +1.7**
BOZ pmax pmax
comp=Z,11nm,0.9s
BOZ Bozeman (W) 60.51 54 P **P** **11 21 49.4 +1.7**
BOZ Bozeman (W) 60.51 54 P 11 21 48.6
baz=310,SNR=7.0
WAKR Walker 60.57 64 P **P** **11 21 50.3 +2.1**
WAKR IAmb IAmb 11 21 50.9
comp=Z,6.8nm,0.8s
KVN Kaiserville 61.02 63 P **P** **11 21 52.8 +1.5**
KVN Kaiserville 61.02 63 P **P** **11 21 52.8 +1.5**
KVN IAmb IAmb 11 22 13.6
comp=Z,8.7nm,1.0s
RYN Ryan 61.04 63 P **P** **11 21 53.0 +1.6**
RYN IAmb IAmb 11 21 53.7
comp=Z,5.1nm,0.7s
LHV Little Huntoon 61.29 64 P **P** **11 21 55.4 +2.5**
NVAR Mina Array Bea 61.30 63 P **P** **11 21 54.8 +1.6**
comp=Z,4.8nm,0.6s,baz=300,slow=7.2,SNR=56
NVAR pP **pP** **11 22 13.2 +0.9**
comp=Z,3.3nm,0.7s,baz=289,slow=7.3,SNR=6.7
NVAR Mina Array Bea 61.30 63 P **P** **11 21 54.6 +1.4**
NV11 Mina Array Sit 61.39 63 P **P** **11 21 55.3 +1.6**
ELK Elko 61.61 60 P **P** **11 21 56.1 +0.8**
ELK pmax pmax
comp=Z,3.0nm,0.9s
ELK Elko 61.61 60 P **P** **11 21 56.1 +0.8**
TPH Tonopah 62.18 63 P **P** **11 22 00.3 +1.2**
TPH pmax pmax
comp=Z,25nm,0.8s
TPH Tonopah 62.18 63 P **P** **11 22 00.3 +1.2**
MOOW Moose Ponds 62.19 55 P **P** **11 21 59.3 +0.2**
MOOW IAmb IAmb 11 22 21.1
comp=Z,6.0nm,1.1s
LOHW Long Hollow 62.36 55 P **P** **11 22 01.4 +1.2**
LOHW IAmb IAmb 11 22 23.0
comp=Z,8.9nm,1.1s
REDW Red Top Meadow 62.38 55 P **P** **11 22 02.9 +2.4**
REDW IAmb IAmb 11 22 23.1
comp=Z,15nm,1.3s
COEN Coen 62.50 192 P **P** **11 22 02.0 +1.0**
COEN IAmb IAmb 11 22 12.2
comp=Z,11nm,1.1s
ICESG Greenland Ices 62.72 5 *i* P **P** **11 22 02.4 0.0**
ICESG IAmb IAmb 11 22 03.6
comp=Z,18nm,0.9s
CWC Cottonwood Cre 62.73 65 P 11 22 03.6
baz=311
GRAC Grapevine Rang 62.80 64 P 11 22 04.1
baz=311
R11A Troy Canyon, C 62.97 62 P 11 22 04.9
baz=312,SNR=5.5
FIA1 FINESS Array S 63.09 335 P **P** **11 22 02.8 -1.7**
FIA1 IAmb IAmb 11 22 21.4
comp=Z,10nm,1.1s
FINES FINESS Array B 63.09 335 P **P** **11 22 02.6 -1.9**
comp=Z,2.2nm,0.6s,baz=36,slow=7.3,SNR=16
FINES pP **pP** **11 22 21.7 -1.9**
comp=Z,1.4nm,0.4s,baz=37,slow=7.2,SNR=2.2
FINES FINESS Array B 63.09 335 P **P** **11 22 03.1 -1.4**
FINES FINESS Array B 63.09 335 P **P** **11 22 03.1 -1.4**
DUG Dugway, Tooele 63.37 59 P **P** **11 22 08.0 +1.1**
DUG pmax pmax
comp=Z,7.0nm,1.0s
DUG Dugway, Tooele 63.37 59 P **P** **11 22 08.0 +1.1**
DUG IAmb IAmb 11 22 28.7
comp=Z,6.8nm,0.9s
DUG Dugway, Tooele 63.37 59 P 11 22 07.9
baz=312
FURC Furnace Creek, 63.45 64 P 11 22 07.2
baz=312,SNR=8.2
BW06 Boulder Array 63.49 55 P **P** **11 22 08.6 +0.8**
BW06 IAmb IAmb 11 22 29.5
comp=Z,8.6nm,1.0s

PD31 Pinedale Array 63.49 55 P **P** **11 22 09.2 +1.5**
PD31 IAmb IAmb 11 22 29.5
comp=Z,7.7nm,1.0s
PDAR Pinedale Array 63.49 55 P **P** **11 22 09.0 +1.2**
comp=Z,1.9nm,0.8s,baz=285,slow=1.1,SNR=21
PDAR pP **pP** **11 22 25.9 -0.9**
comp=Z,6.4nm,0.9s,baz=167,slow=0.7,SNR=14
PDAR Pinedale Array 63.49 55 P **P** **11 22 08.6 +0.9**
BW06 Boulder Array 63.49 55 P 11 22 07.9
baz=312,SNR=5.2
TPNV Topopah Spring 63.50 64 P **P** **11 22 09.3 +1.5**
TPNV pmax pmax
comp=Z,7.0nm,0.8s
TPNV Topopah Spring 63.50 64 P **P** **11 22 09.2 +1.5**
TPNV IAmb IAmb 11 22 10.0
comp=Z,6.8nm,0.8s
TPNV Topopah Spring 63.50 64 P 11 22 08.1
baz=312
FRB Frobisher Bay 63.60 20 P **P** **11 22 07.5 -0.3**
FRB pmax pmax
comp=Z,12nm,0.9s
LRMC Laurel Mtn Rad 63.60 66 P 11 22 08.5
baz=312
EDW2 Edwards Air Fo 63.81 66 P 11 22 10.2
baz=312
PSUT Pine Spring 63.87 61 P **P** **11 22 12.0 +1.7**
PRN Pahroc Range 63.91 62 P **P** **11 22 12.4 +1.9**
BFSC Mount Baldy Ra 64.44 67 P 11 22 14.7
baz=312
SHPR Sheep Range 64.45 63 P **P** **11 22 15.2 +1.2**
CCUT Cedar City 64.81 61 P **P** **11 22 18.4 +1.9**
HEC Hector,Ludlow 64.86 65 P 11 22 17.2
baz=312
RDMU Red Mountain 64.96 57 P **P** **11 22 19.4 +2.0**
ULM Lac du Bonnet 65.13 42 P **P** **11 22 18.4 +0.3**
comp=Z,1.5nm,0.6s,baz=308,slow=4.6,SNR=3.7
ULM Lac du Bonnet 65.13 42⇑ *eP* **P** **11 22 18.7 +0.7**
MURC Murrieta 65.16 67 P 11 22 18.6
baz=313
LCMT Little Creek M 65.25 62 P **P** **11 22 21.2 +2.0**
LCMT IAmb IAmb 11 22 41.1
comp=Z,6.8nm,0.9s
GMRC Granite Mounta 65.30 65 P 11 22 19.6
baz=313
SRU San Rafael Swe 65.41 58 P **P** **11 22 22.0 +1.7**
SRU pmax pmax
comp=Z,7.0nm,0.8s
SRU San Rafael Swe 65.41 58 P **P** **11 22 21.9 +1.7**
SRU IAmb IAmb 11 22 22.4
comp=Z,6.6nm,0.8s
KNB Kanab 65.49 61 P **P** **11 22 23.0 +2.2**
KNB pmax pmax
comp=Z,10.0nm,1.0s
KNB Kanab 65.49 61 P **P** **11 22 23.0 +2.2**
KNB IAmb IAmb 11 22 43.5
comp=Z,9.6nm,1.0s
BAR Barrett 66.10 67 P **P** **11 22 25.6 +1.0**
GEYT Alibeck 66.44 301 P **P** **11 22 26.6 -0.1**
comp=Z,2.5nm,0.5s,baz=305,slow=5.1,SNR=2.6
IKP In-Ko-Pah, Jac 66.47 67 P 11 22 27.6
baz=313
NOA NORSAR Array B 67.17 341 P **P** **11 22 29.1 -1.9**
comp=Z,0.8nm,0.5s,baz=26,slow=6.4,SNR=5.8
KNRA Kununurra 67.34 206 P **P** **11 22 33.2 +0.7**
KNRA IAmb IAmb 11 22 33.5
comp=Z,15nm,1.1s
SMCO Snowmass 67.37 56 P **P** **11 22 34.5 +1.4**
WUAZ Wupatki 67.37 62 P 11 22 33.3
baz=314
ISCO Idaho Springs 67.69 55 P **P** **11 22 35.6 +0.7**
ISCO pmax pmax
comp=Z,6.0nm,1.1s
ISCO Idaho Springs 67.69 55 P **P** **11 22 35.6 +0.7**
MVCO Mesa Verde 67.87 59 P **P** **11 22 37.5 +1.5**
MVCO IAmb IAmb 11 22 57.4
comp=Z,7.3nm,1.1s
MVCO Mesa Verde 67.87 59 P 11 22 36.2
baz=314
CTAO Charters Tower 68.20 188 P **P** **11 22 38.1 +0.3**
CTAO pmax pmax
comp=Z,17nm,1.3s
CTAO Charters Tower 68.20 188 P **P** **11 22 38.1 +0.3**
CTAO IAmb IAmb 11 22 45.2
comp=Z,17nm,1.2s
S22A 4UR Ranch, Cre 68.45 57 P 11 22 40.2
baz=315
Q24A Divide 68.53 55 P 11 22 40.2
baz=315
W18A Petrified Fore 68.61 61 P 11 22 41.7
baz=315
MSVF Nonsavu 68.95 155 P **P** **11 22 43.8 +1.2**
214A Organ Pipe Nat 68.97 65 P 11 22 43.4
baz=314
ECSD EROS Data Cent 69.54 47 P **P** **11 22 46.7 +0.7**
ECSD IAmb IAmb 11 23 06.2
comp=Z,14nm,0.9s
WB0 Warramunga Arr 69.78 200 P **P** **11 22 47.7 +0.1**
WR0 Warramunga Arr 69.93 199 P **P** **11 22 48.5 -0.1**
WR0 IAmb IAmb 11 22 49.5
comp=Z,12nm,0.8s
WRAB Tennant Creek 69.95 200⇑ *eP* **P** **11 22 48.5 -0.1**
WRAB *i* *PP **sP** **11 23 17.4 +1.9**
WRAB pmax pmax
comp=Z,18nm,0.9s
WRAB Tennant Creek 69.95 200 P **P** **11 22 48.6 -0.1**
TUC Tucson 69.95 64 P **P** **11 22 50.5 +1.7**
TUC Tucson 69.95 64 P 11 22 49.5
baz=315
WB2 Warramunga Arr 69.96 200 P **P** **11 22 48.2 -0.5**
WRA Warramunga Arr 69.96 200 P **P** **11 22 48.7 0.0**
comp=Z,10nm,0.7s,baz=17,slow=6.4,SNR=105
WRA Warramunga Arr 69.96 200 P **P** **11 22 48.6 -0.1**
T25A Trinidad 70.23 56 P 11 22 51.2
baz=316
KIV Kislovodsk 70.30 314 *eP* **P** **11 22 51.6 +0.8**
KIV pmax pmax
comp=Z,27nm,1.1s
KIV Kislovodsk 70.30 314 *eP* **P** **11 22 51.6 +0.8**
KBZ Khabaz 70.37 314 P **P** **11 22 50.3 -0.7**
comp=Z,2.9nm,0.8s,baz=112,slow=3.3,SNR=5.8
FITZ Fitzroy Crossi 70.59 209 P **P** **11 22 53.3 +0.7**
ANMO Albuquerque 70.64 59 P **P** **11 22 54.7 +1.6**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 70.64 59 P **P** **11 22 54.7 +1.6**
ANMO Albuquerque 70.64 59 P 11 22 53.7
baz=316
AKASG Malin Array Be 70.78 326 P **P** **11 22 51.4 -2.0**
comp=Z,2.0nm,0.5s,baz=34,slow=6.3,SNR=4.3
AKBB Malin Array Si 70.78 326 P **P** **11 22 52.9 -0.5**
AKBB pmax pmax
comp=Z,4.0nm,0.8s
AKBB Malin Array Si 70.78 326 P **P** **11 22 52.9 -0.5**
319A Douglas 71.51 64 P **P** **11 22 59.5 +1.1**
319A IAmb IAmb 11 23 00.7
comp=Z,12nm,0.8s
EIDS Eidsvold 73.15 183 P **P** **11 23 09.4 +1.7**
EIDS IAmb IAmb 11 23 09.8
comp=Z,8.9nm,0.9s
AMTX Amarillo 73.39 56 P 11 23 09.7
baz=318
MNTX Cornudas Mount 73.59 61 P **P** **11 23 12.0 +1.4**
MNTX Cornudas Mount 73.59 61 P 11 23 10.6
baz=317
AS31 Alice Springs 73.65 199 P **P** **11 23 12.2 +1.4**
ASAR Alice Springs 73.65 199 P **P** **11 23 11.8 +0.9**
comp=Z,8.6nm,0.6s,baz=13,slow=5.5,SNR=170
ASAR pP **pP** **11 23 29.7 -0.2**
comp=Z,4.8nm,0.7s,baz=13,slow=6.2,SNR=6.6
ASAR Alice Springs 73.65 199 P **P** **11 23 12.0 +1.2**
ASAR Alice Springs 73.65 199 P **P** **11 23 12.0 +1.2**
N41A Harden Midland 74.62 46 P **P** **11 23 17.1 +0.7**
BUR08 Bucovina Ar. S 74.79 327 P **P** **11 23 15.7 -1.7**
BURAR Bucovina Array 74.81 327⇑ P **P** **11 23 17.5 0.0**
BURAR Bucovina Array 74.81 327⇑ P **P** **11 23 17.5 0.0**
BURAR Bucovina Array 74.81 327 P **P** **11 23 16.6 -0.9**
WMOK Wichita Mounta 75.10 54 P **P** **11 23 20.3 +1.0**
WMOK pmax pmax
comp=Z,5.0nm,1.0s
WMOK Wichita Mounta 75.10 54 P **P** **11 23 20.3 +1.0**
WMOK Wichita Mounta 75.10 54 P 11 23 19.8
baz=319
TESR Tescani 75.20 325⇑ P **P** **11 23 19.2 -0.4**
OK031 S. Brethren Rd 75.23 52 P **P** **11 23 20.2 +0.2**
OK030 Cody Creek RV 75.28 52 P **P** **11 23 19.6 -0.7**

OK030					IAmb	IAmb	11 23 21.7	
	comp=Z,9.9nm,0.7s							
DPC	**Dobruska-Polom**	**75.41**	**334**	*e*P		**P**	**11 23 20.2**	**-0.6**
DPC	**Dobruska-Polom**	**75.41**	**334**	*e*P		**P**	**11 23 20.2**	**-0.6**
CLL	**Collm**	**75.50**	**336**	⇑*i*P		**P**	**11 23 20.5**	**-0.8**
	comp=Z,10.0nm,0.9s							
CLL	**Collm**	**75.50**	**336**	⇑*i*P		**P**	**11 23 20.5**	**-0.8**
CLL					pmax	pmax		
	comp=Z,10.0nm,0.9s							
CLL	**Collm**	**75.50**	**336**	P		**P**	**11 23 20.3**	**-1.0**
CLL					IAmb	IAmb	11 23 21.6	
	comp=Z,8.6nm,0.8s							
BRG	**Berggiesshubel**	**75.63**	**335**	P		**P**	**11 23 21.3**	**-0.7**
BRG					pmax	pmax		
	comp=Z,5.0nm,0.9s							
CFR	**Carcaliu**	**75.73**	**324**	⇑P		P	11 23 27.6	+5.0
CFR	**Carcaliu**	**75.73**	**324**	⇑P		P	11 23 27.6	+5.0
TUL1	**Leonard**	**75.82**	**52**	P			11 23 23.7	
	baz=320							
TPGR	**Topolog**	**75.88**	**323**	⇑P		**P**	**11 23 22.9**	**-0.7**
D56A	**ZEC Mazanza, M**	**76.18**	**32**	P			11 23 25.2	
	baz=329							
ABTX	**Abilene, Hawle**	**76.20**	**56**	P			11 23 26.1	
	baz=319							
MLR	**Muntele Rosu**	**76.32**	**325**	⇑P		**P**	**11 23 30.2**	**+4.0**
MLR	**Muntele Rosu**	**76.32**	**325**	P		**P**	**11 23 26.8**	**+0.6**
MLR					pmax	pmax		
	comp=Z,7.0nm,0.7s							
TX31	**Lajitas Ar. Si**	**76.33**	**61**	P		**P**	**11 23 27.6**	**+1.1**
TX32	**Lajitas Array**	**76.33**	**61**	P		**P**	**11 23 27.6**	**+1.1**
TX32					IAmb	IAmb	11 23 28.4	
	comp=Z,7.9nm,0.7s							
TXAR	**Lajitas Array**	**76.33**	**61**	P		**P**	**11 23 27.8**	**+1.3**
	comp=Z,7.1nm,0.6s,baz=299,slow=4.4,SNR=116							
TXAR	**Lajitas Array**	**76.33**	**61**	P		**P**	**11 23 27.5**	**+1.0**
TXAR	**Lajitas Array**	**76.33**	**61**	P		**P**	**11 23 27.4**	**+1.0**
CCM	**Cathedral Cave**	**76.49**	**47**	P			11 23 27.4	
	baz=322							
HHAR	**Hobbs**	**76.50**	**50**	P		**P**	**11 23 27.7**	**+0.4**
KRUC	**Moravsky**	**76.53**	**333**	P		**P**	**11 23 27.0**	**-0.1**
KRUC					pmax	pmax		
	comp=Z,6.0nm,1.1s							
VOIR		**76.70**	**326**	⇑P		**P**	**11 23 28.8**	**+0.5**
VOIR		**76.70**	**326**	⇑P		**P**	**11 23 28.8**	**+0.5**
FVM	**French Village**	**76.95**	**47**	P		**P**	**11 23 30.9**	**+1.1**
FVM					pmax	pmax		
	comp=Z,8.0nm,0.8s							
FVM	**French Village**	**76.95**	**47**	P		**P**	**11 23 30.9**	**+1.1**
FVM					IAmb	IAmb	11 23 50.1	
	comp=Z,8.4nm,0.8s							
U40A	**Yellville**	**77.00**	**50**	P		**P**	**11 23 30.4**	**+0.3**
U40A					IAmb	IAmb	11 23 30.9	
	comp=Z,11nm,0.7s							
U40A	**Yellville**	**77.00**	**50**	P			11 23 29.8	
	baz=321,SNR=13							
E58A	**La Victoria**	**77.29**	**31**	P			11 23 31.3	
	baz=330							
KHC	**Kasperske Hory**	**77.30**	**335**	*e*P		**P**	**11 23 31.4**	**-0.1**
KHC				*e*			11 23 53.0	
KHC	**Kasperske Hory**	**77.30**	**335**	*e*P		**P**	**11 23 31.4**	**-0.1**
KHC				*ex*		x	11 23 53.0	
KHC	**Kasperske Hory**	**77.30**	**335**	P		**P**	**11 23 31.1**	**-0.4**
CKRC	**Cesky Krumlov**	**77.37**	**334**	*e*P		**P**	**11 23 31.7**	**-0.2**
W39A	**Magazine**	**77.42**	**51**	P			11 23 32.3	
	baz=321							
GRF	**Grafenberg Arr**	**77.45**	**336**	*e*P		**P**	**11 23 32.0**	**-0.4**
	comp=Z,7.4nm,0.9s,baz=22,slow=4.8							
WET	**Wettzell**	**77.49**	**335**	P		**P**	**11 23 32.8**	**+0.2**
WET					pmax	pmax		
	comp=Z,8.0nm,1.0s							
GERES	**GERESS Array B**	**77.52**	**334**	P		**P**	**11 23 31.8**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=45,slow=4.5,SNR=9.2							
GERES	**GERESS Array B**	**77.52**	**334**	P		**P**	**11 23 32.0**	**-0.9**
GERES	**GERESS Array B**	**77.52**	**334**	P		**P**	**11 23 32.0**	**-0.9**
GZR	**Gura Zlata**	**77.58**	**327**	⇑P		**P**	**11 23 32.4**	**-0.8**
GZR	**Gura Zlata**	**77.58**	**327**	⇑P		**P**	**11 23 32.4**	**-0.8**
TNS	**Taunus Mts**	**77.69**	**338**	P		**P**	**11 23 33.3**	**-0.4**
TNS					pmax	pmax		
	comp=Z,9.0nm,1.1s							
JCT	**Junction City**	**77.72**	**58**	P		**P**	**11 23 35.1**	**+0.9**
JCT					pmax	pmax		
	comp=Z,4.0nm,0.7s							
JCT	**Junction City**	**77.72**	**58**	P		**P**	**11 23 35.1**	**+0.9**
JCT	**Junction City**	**77.72**	**58**	P			11 23 34.6	
	baz=319							
FCAR	**Ozark Folk Cen**	**77.73**	**49**	P		**P**	**11 23 34.4**	**+0.2**
FCAR					IAmb	IAmb	11 23 34.8	
	comp=Z,6.6nm,0.6s							
BZS	**Buzias**	**77.81**	**328**	⇑P		**P**	**11 23 33.4**	**-1.0**
BZS	**Buzias**	**77.81**	**328**	⇑P		**P**	**11 23 33.4**	**-1.0**
BRTR	**Keskin Array B**	**77.83**	**317**	P		**P**	**11 23 34.0**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=25,slow=6.1,SNR=5.6							
BRTR	**Keskin Array B**	**77.83**	**317**	P		**P**	**11 23 33.2**	**-1.5**
WHTX	**Lake Whitney,**	**77.89**	**55**	P		**P**	**11 23 35.8**	**+0.7**
WHTX					IAmb	IAmb	11 23 56.2	
	comp=Z,8.9nm,1.0s							
WHTX	**Lake Whitney,**	**77.89**	**55**	P			11 23 35.7	
	baz=320							
PBMO	**Poplar Bluff**	**77.89**	**48**	P		**P**	**11 23 35.8**	**+0.8**
PBMO					IAmb	IAmb	11 23 56.4	
	comp=Z,18nm,1.4s							
F59A	**Saint Guilaume**	**77.91**	**31**	P			11 23 34.6	
	baz=330							
MEM	**Membach**	**77.91**	**340**	P		**P**	**11 23 34.4**	**-0.4**
MEM					pmax	pmax		
	comp=Z,14nm,0.8s							
MIAR	**Mount Ida**	**78.03**	**51**	P		**P**	**11 23 36.7**	**+0.9**
MIAR					pmax	pmax		
	comp=Z,7.0nm,0.8s							
MIAR	**Mount Ida**	**78.03**	**51**	P		**P**	**11 23 36.7**	**+0.9**
MIAR					IAmb	IAmb	11 23 56.6	
	comp=Z,6.5nm,0.8s							
MIAR	**Mount Ida**	**78.03**	**51**	P			11 23 36.5	
	baz=321							
W41B	**Gary Mavity, V**	**78.23**	**50**	P			11 23 37.2	
	baz=322							
PARMO	**Parma**	**78.32**	**47**	P		**P**	**11 23 38.1**	**+0.8**
BGES	**Gesves**	**78.33**	**340**	*d*P		**P**	**11 23 36.5**	**-0.7**
L53A	**Girard**	**78.36**	**38**	P			11 23 37.2	
	baz=326							
X40A	**Basin Creek Fa**	**78.46**	**51**	P			11 23 38.6	
	baz=321							
BMRD	**Maredsous**	**78.48**	**340**	*d*P		**P**	**11 23 37.5**	**-0.5**
GIVF	**Givet**	**78.66**	**340**	*e*P		**P**	**11 23 38.8**	**-0.2**
GIVF					pmax	pmax		
	comp=Z,26nm,1.5s							
FRGS	**Fruska Gora**	**78.84**	**329**	⇓P		P	11 23 32.2	-8.0
SOKA	**Soboth**	**79.07**	**333**	*e*P		**P**	**11 23 40.7**	**-0.7**
	comp=Z,5.0nm,1.0s							
KBA	**Koelnbreinsper**	**79.22**	**334**	*e*P		**P**	**11 23 42.6**	**+0.3**
	comp=Z,8.5nm,0.6s							
KBA	**Koelnbreinsper**	**79.22**	**334**	P		**P**	**11 23 42.7**	**+0.3**
KBA					pmax	pmax		
	comp=Z,21nm,0.8s							
BFO	**Black Forest**	**79.46**	**337**	P		**P**	**11 23 43.4**	**0.0**
BFO					pmax	pmax		
	comp=Z,7.0nm,1.7s							
WATA	**Walderalm**	**79.50**	**335**	*e*P		**P**	**11 23 43.8**	**0.0**
	comp=Z,9.5nm,0.6s							
WTTA	**Wattenberg**	**79.55**	**335**	*e*P		**P**	**11 23 44.0**	**-0.2**
	comp=Z,12nm,0.6s							
WTTA	**Wattenberg**	**79.55**	**335**	P		**P**	**11 23 44.2**	**+0.1**
WTTA					pmax	pmax		
	comp=Z,18nm,1.0s							
RETA	**Reutte**	**79.59**	**336**	*e*P		**P**	**11 23 44.1**	**-0.1**
	comp=Z,5.6nm,0.9s							
MOTA	**Moosalm**	**79.62**	**335**	*e*P		**P**	**11 23 44.4**	**-0.1**
	comp=Z,12nm,0.8s							
CDF	**Champ du Feu**	**79.65**	**338**	*e*P		**P**	**11 23 44.3**	**-0.3**
CDF					pmax	pmax		
	comp=Z,12nm,1.1s							
DIVS	**Divbare**	**79.70**	**328**	P		**P**	**11 23 43.5**	**-1.4**
SQTA	**Sankt Quirin**	**79.70**	**335**	*e*P		**P**	**11 23 45.1**	**+0.2**
	comp=Z,14nm,1.0s							
VTS	**Vitosha**	**79.79**	**325**	P		**P**	**11 23 44.9**	**-0.6**
VTS					pmax	pmax		
	comp=Z,10.0nm,0.9s							
VTS	**Vitosha**	**79.79**	**325**	P		**P**	**11 23 44.9**	**-0.6**
VTS					IAmb	IAmb	11 23 46.7	
	comp=Z,10.0nm,0.9s							
ECH	**Echery**	**79.86**	**338**	P		**P**	**11 23 45.3**	**-0.3**
ECH					pmax	pmax		
	comp=Z,4.0nm,0.8s							
ECH	**Echery**	**79.86**	**338**	P		**P**	**11 23 45.3**	**-0.3**
SLE	**Schleitheim**	**79.94**	**337**	P		**P**	**11 23 45.7**	**-0.4**
SLE					pmax	pmax		
	comp=Z,12nm,0.9s							
DAVA	**Damuels**	**80.01**	**336**	*e*P		**P**	**11 23 46.7**	**+0.1**
	comp=Z,6.9nm,1.1s							
FETA	**Feichten**	**80.02**	**335**	*e*P		**P**	**11 23 46.7**	**0.0**
	comp=Z,4.1nm,0.7s							
ALN	**Alexandroupoli**	**80.14**	**323**	P		**P**	**11 23 46.8**	**-0.4**
ALN					pmax	pmax		
	comp=Z,7.0nm,1.3s							
STAL	**STALIGIAL**	**80.14**	**334**	P		**P**	**11 23 46.7**	**-0.5**
HAU	**Haudompre**	**80.26**	**339**	*e*P		**P**	**11 23 47.4**	**-0.4**
HAU					pmax	pmax		
	comp=Z,7.0nm,1.0s							
STKA	**Stephens Creek**	**80.36**	**191**	P		**P**	**11 23 48.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=1.9,slow=4.9,SNR=8.4							
TUE	**Stuetta**	**80.91**	**336**	P		**P**	**11 23 51.0**	**-0.5**
TUE					IAmb	IAmb	11 23 54.7	
	comp=Z,13nm,0.7s							
SRS	**Serrai**	**80.94**	**324**	P		**P**	**11 23 51.7**	**+0.2**
SRS					pmax	pmax		
	comp=Z,11nm,0.9s							
FLN	**La Foliniere**	**81.04**	**343**	*e*P		**P**	**11 23 51.6**	**-0.3**
FLN					pmax	pmax		
	comp=Z,10.0nm,1.0s							
LDF	**La Druitiere**	**81.13**	**343**	*e*P		**P**	**11 23 52.0**	**-0.4**
LDF					pmax	pmax		
	comp=Z,6.0nm,1.0s							
SWET	**Sewanee**	**81.34**	**46**	P		**P**	**11 23 53.7**	**0.0**
SWET					IAmb	IAmb	11 23 54.7	
	comp=Z,7.8nm,0.7s							
PDG	**Podgorica**	**81.42**	**328**	⇓P		**P**	**11 23 52.7**	**-1.2**
PDG	**Podgorica**	**81.42**	**328**	P		**P**	**11 23 52.6**	**-1.4**
PDG					IAmb	IAmb	11 23 53.5	
	comp=Z,19nm,1.3s							
GRR	**Gorron**	**81.47**	**343**	*e*P		**P**	**11 23 57.4**	**+3.3**
GRR					pmax	pmax		
	comp=Z,10.0nm,1.0s							
LOR	**Lormes**	**81.54**	**340**	P		**P**	**11 23 53.9**	**-0.7**
LOR					pmax	pmax		
	comp=Z,7.0nm,1.0s							
CABF	**La Chapelle**	**81.62**	**338**	*e*P		**P**	**11 23 55.2**	**+0.1**
CABF					pmax	pmax		
	comp=Z,7.0nm,1.0s							
FORT	**Forrest**	**81.87**	**202**	P		**P**	**11 23 57.0**	**+0.7**
SGMF	**Saint Gilles**	**81.92**	**344**	*e*P		**P**	**11 23 55.9**	**-0.6**
SGMF					pmax	pmax		
	comp=Z,8.0nm,0.7s							
FNA	**Florina**	**82.08**	**326**	P		**P**	**11 23 56.4**	**-1.2**
FNA					pmax	pmax		
	comp=Z,7.0nm,0.9s							
AVF	**Avril sur Loir**	**82.11**	**340**	*e*P		**P**	**11 23 56.6**	**-0.9**
AVF					pmax	pmax		
	comp=Z,8.0nm,0.9s							
BBOO	**Buckleboo**	**82.11**	**195**	P		**P**	**11 23 58.2**	**+0.7**
BBOO					IAmb	IAmb	11 23 58.7	
	comp=Z,6.8nm,0.8s							
SMF	**Signal de Mont**	**82.13**	**340**	*e*P		**P**	**11 23 56.7**	**-1.0**
SMF					pmax	pmax		
	comp=Z,10.0nm,0.9s							
Y49A	**Blount Mountai**	**82.20**	**47**	P		**P**	**11 23 58.7**	**+0.4**
PPT2	**Papeete2**	**82.48**	**127**	*e*LR		LR	11 50 02.6	
	comp=Z,110nm,26.0s							
PPT2	**Papeete2**	**82.48**	**127**	*e*T		T	12 54 15.4	
	comp=Z,2.6nm,0.3s							
LPL	**La Plagne**	**82.48**	**337**	*e*P		**P**	**11 24 00.3**	**+0.5**
LPL					pmax	pmax		
	comp=Z,9.0nm,0.8s							
LPG	**La Plagne**	**82.49**	**337**	*e*P		**P**	**11 24 00.6**	**+0.7**
LPG					pmax	pmax		
	comp=Z,8.0nm,0.8s							
PAE	**Paea**	**82.54**	**127**	*e*T		T	12 54 19.3	
	comp=Z,1.5nm,0.3s							
LRAL	**Lakeview Retre**	**82.58**	**48**	P			11 24 00.4	
	baz=324							
TIAR	**Tiarei**	**82.58**	**127**	*e*T		T	12 54 21.6	
	comp=Z,89nm,0.2s							
TCF	**Toulx Ste Croi**	**82.84**	**341**	*e*P		**P**	**11 24 01.6**	**+0.2**
TCF					pmax	pmax		
	comp=Z,6.0nm,1.0s							
BNI	**Bardonecchia**	**82.93**	**337**	P		**P**	**11 24 01.2**	**-0.8**
BNI					pmax	pmax		
	comp=Z,5.0nm,0.8s							
BNI	**Bardonecchia**	**82.93**	**337**	P		**P**	**11 24 01.2**	**-0.8**
MBDF	**Montbardon**	**83.21**	**337**	*e*P		**P**	**11 24 02.9**	**-0.6**
MBDF					pmax	pmax		
	comp=Z,6.0nm,0.8s							
SSB	**Saint Sauveur**	**83.25**	**339**	P		**P**	**11 24 03.6**	**0.0**
SSB					pmax	pmax		
	comp=Z,7.0nm,1.0s							
ORIF	**Oris-en-Rattie**	**83.26**	**338**	P		**P**	**11 24 04.3**	**+0.6**
ORIF					pmax	pmax		
	comp=Z,9.0nm,1.0s							
VIVF	**Saint-Julien-l**	**83.62**	**339**	*e*P		**P**	**11 24 05.9**	**+0.5**
VIVF					pmax	pmax		
	comp=Z,7.0nm,1.1s							
RJF	**Les Rejaudoux**	**83.93**	**341**	*e*P		**P**	**11 24 09.7**	**+2.7**
RJF					pmax	pmax		
	comp=Z,9.0nm,1.1s							
CAF	**Calviac**	**84.16**	**340**	*e*P		**P**	**11 24 10.4**	**+2.2**
CAF					pmax	pmax		
	comp=Z,7.0nm,1.0s							
RAYN	**Ar Rayn**	**84.31**	**299**	P		**P**	**11 24 08.8**	**-0.5**
RAYN					pmax	pmax		
	comp=Z,4.0nm,0.7s							
RAYN	**Ar Rayn**	**84.31**	**299**	P		**P**	**11 24 08.8**	**-0.5**
LFF	**La Frestale**	**84.44**	**341**	*e*P		**P**	**11 24 11.5**	**+1.9**
LFF					pmax	pmax		
	comp=Z,9.0nm,1.0s							
LMR	**La Mourre**	**84.57**	**337**	*e*P		**P**	**11 24 10.3**	**+0.1**
LMR					pmax	pmax		
	comp=Z,16nm,1.0s							
PGF	**Pioggiola**	**84.61**	**335**	*e*P		**P**	**11 24 09.2**	**-1.4**
PGF					pmax	pmax		
	comp=Z,13nm,1.3s							
TIP	**Timpagrande**	**85.18**	**328**	⇑P		**P**	**11 24 12.9**	**-0.6**
TIP	**Timpagrande**	**85.18**	**328**	P		**P**	**11 24 12.9**	**-0.6**
TIP					IAmb	IAmb	11 24 14.7	
	comp=Z,16nm,1.2s							
TBI	**Tubuai**	**87.28**	**130**	*e*LR		LR	11 52 05.7	
	comp=Z,121nm,23.8s							
TBI	**Tubuai**	**87.28**	**130**	*e*T		T	13 00 13.7	
	comp=Z,7.5nm,0.3s							
ESDC	**Sonseca Array**	**90.46**	**343**	P		**P**	**11 24 37.7**	**-1.1**
	comp=Z,1.1nm,0.9s,baz=5.9,slow=3.4,SNR=4.6							
ESDC	**Sonseca Array**	**90.46**	**343**	P		**P**	**11 24 37.5**	**-1.3**
ESDC					IAmb	IAmb	11 24 58.1	
	comp=Z,6.1nm,1.1s							
KEST	**Kesra**	**90.79**	**332**	P		**P**	**11 24 40.4**	**0.0**
	comp=Z,5.0nm,0.9s,baz=56,slow=8.3,SNR=3.9							
TORD	**Torodi Ar. Bea**	**114.25**	**330**	PKP		**PKiKP**	**11 30 15.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=36,slow=2.8,SNR=4.0							
H03N2	**Juan Fernandez**	**138.15**	**89**	T		T	14 04 33.6	
	baz=310,slow=77,SNR=215							
H03N1	**Juan Fernandez**	**138.17**	**89**	T		T	14 04 35.0	
	baz=310,slow=77,SNR=203							
H03N3	**Juan Fernandez**	**138.17**	**89**	T		T	14 04 34.4	
	baz=310,slow=77,SNR=164							
CPUP	**Villa Florida**	**147.29**	**60**	PKPbc		**PKPdf**	**11 31 18.4**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=321,slow=5.3,SNR=4.7							
CPUP	**Villa Florida**	**147.29**	**60**	PKP2		**PKPbc**	**11 31 20.8**	**+0.6**
CPUP	**Villa Florida**	**147.29**	**60**			**PKPbc**	**11 31 20.8**	**+0.6**
PLCA	**Paso Flores**	**147.72**	**94**	PKPbc		**PKPbc**	**11 31 21.7**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=262,slow=4.1,SNR=16							
PLCA	**Paso Flores**	**147.72**	**94**			**PKPbc**	**11 31 22.0**	**+0.9**
SNAA	**Sanae**	**153.99**	**196**	PKPab		**PKPab**	**11 31 50.0**	**+1.3**
VNA2	**Neumayer--Watz**	**155.44**	**195**	PKPdf		**PKPdf**	**11 31 28.8**	**0.0**
VNA3	**Neumayer Olymp**	**155.52**	**193**	PKPab		**PKPab**	**11 31 55.1**	**0.0**

BEO 15 11:22:27.2±0.4, 42°03N×24°48E, h0km, ML1.8/8, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLD	**Plovdiv**	**0.18**	**66**	*e*Pg	Pg	11 22 30.4	-0.2
PLD				*e*Sg	Sg	11 22 32.3	-0.7
VTS	**Vitosha**	**1.09**	**303**	*e*Pg	Pg	11 22 47.3	-0.9
VTS				*e*Sg	Sg	11 23 02.0	-0.4
SRS	**Serrai**	**1.13**	**216**	*e*Pn	Pb	11 22 49.4	-0.3
SRS				*e*Sg	Sg	11 23 03.7	+0.1
BOSS	**Bosilegrad**	**1.56**	**288**	*e*Pg	Pn	11 22 56.2	0.0
BOSS				*e*Sg	Sn	11 23 16.8	-0.3
VAY	**Valandovo**	**1.60**	**244**	*e*Sg	Sn	11 23 17.7	-0.4
ZAPS	**Zavoj**	**1.84**	**313**	*e*Pg	Pb	11 23 01.5	-0.3
ZAPS				*e*Sg	Sg	11 23 26.2	-0.3

BARS	**Barje**	**2.12**	**293**	*e*Sg		Sb	11 23 33.8	+0.3

ROM 15 11:25:26.0±0.1, 42°397N×0°004×13°172E±0°009, h15km±1km, ML1.2/3, Error ellipse: s-maj=0.7km s-min=0.1km az=277.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RM33	**Pellescritta (**	**0.12**	**16**	P	Pb	11 25 29.9	-0.2
RM33				S	Sg	11 25 32.3	+0.3
RM33				AML	AML		
	comp=E,420μm,1.0s						
RM33				AML	AML		
	comp=E,420μm,1.0s						
RM33				AML	AML		
	comp=N,263μm,1.0s						
FIAM	**Fiamignano**	**0.14**	**198**	P	Pg	11 25 30.1	+0.3
FIAM				S	Sg	11 25 32.6	+0.4
FIAM				AML	AML		
	comp=E,146μm,0.2s						
FIAM				AML	AML		
	comp=N,88μm,0.8s						
FIAM				AML	AML		
	comp=E,146μm,0.2s						
LNSS	**Leonessa**	**0.23**	**335**	P	Pg	11 25 31.5	+0.3
LNSS				S	Sg	11 25 35.3	+0.6
ARRO	**Arrone**	**0.35**	**301**	AML	AML		
	comp=N,61μm,0.1s						
ARRO				AML	AML		
	comp=E,45μm,0.9s						
TERO	**Teramo**	**0.39**	**55**	P	Pg	11 25 34.1	+0.2
TERO				S	Sb	11 25 40.1	-0.5
TERO				AML	AML		
	comp=E,6μm,1.1s						
TERO				AML	AML		
	comp=N,7μm,0.7s						
TERO				AML	AML		
	comp=N,7μm,0.7s						
NRCA	**Norcia**	**0.44**	**354**	P	Pg	11 25 27.8	-7.1
FDMO	**Fiordimonte**	**0.64**	**354**	P	Pg	11 25 38.1	-0.5

IDC ***15*** *11:52:10.6±0.9, 39°.82N×143°.60E, h0km, mb3.8/12, mb1 3.9/16, mb1mx3.7/60, mbtmpb3.8/16, ML2.9/4, MS3.0/3, Ms1 3.0/3, ms1mx2.7/55, Error ellipse: s-maj=22.9km s-min=17.6km az=94.0*
JMA ***15*** *11:52:12.2±0.3, 39°.89N×143°.56E, h17km±5km, M3.7*
NIED ***15*** *11:52:12.3, 39°.89N×143°.56E, h17km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr6.28; Mθθ0.71; Mϕϕ-6.99; Mrθ3.03; Mϕϕ-2.49; Mϕr3.32; Fault plane solution: M08.38000×10¹⁴ NP1:ϕs32.00000°, δ62.00000°, λ107.00000°. NP2:ϕs179.00000°, δ32.00000°, λ61.00000°.*

ISC 15 11:52:12.0±0.8, 39°87N±0°06×143°55E±0°07, h6km, n37, σ1s04/37, mb3.8/11, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.30**	**274**	P	**Pn**	**11 52 35.5**	**-1.2**
MIYJ	**Miyakonagasawa**	**1.37**	**258**	P	**Pn**	**11 52 37.1**	**-0.5**
MIYJ				*e*S	**Sb**	**11 52 54.5**	**-1.2**
JKEN	**Kujiedanarisaw**	**1.45**	**284**	P	**Pn**	**11 52 37.8**	**-1.0**
JANG	**Nango**	**1.64**	**289**	P	**Pn**	**11 52 40.5**	**-0.9**
JOM	**Ohasama**	**1.79**	**258**	P	**Pn**	**11 52 43.7**	**+0.3**
JOM				*e*S	**Sn**	**11 53 06.9**	**+0.5**
JMK	**Ichinoseki**	**2.02**	**244**	P	**Pn**	**11 52 46.4**	**-0.2**
JMK				*e*S	**Sn**	**11 53 12.1**	**-0.1**
JTM	**Tenmabayashi**	**2.11**	**297**	P	**Pn**	**11 52 48.0**	**+0.2**
JTM				*e*S	**Sn**	**11 53 13.9**	**-0.5**
JEM	**Erimo**	**2.17**	**352**	P	**Pn**	**11 52 49.0**	**+0.4**
JOT	**Ohata**	**2.43**	**309**	P	**Pn**	**11 52 52.5**	**+0.2**
JOT				*e*S	**Sn**	**11 53 22.4**	**0.0**
JNBK	**Urakawa-nobuka**	**2.49**	**346**	P	**Pn**	**11 52 53.9**	**+0.9**
JNBK				*e*S	**Sn**	**11 53 24.2**	**+0.5**
JYK	**Kaneyama**	**2.65**	**250**	P	**Pn**	**11 52 55.7**	**+0.4**
JCH	**Churui**	**2.75**	**357**	P	**Pn**	**11 52 56.4**	**-0.2**
JCH				*e*S	**Sn**	**11 53 27.6**	**-2.6**
ASAJ	**Asahikawa**	**4.31**	**351**	Pn	**Pn**	**11 53 17.7**	**-0.3**
	1.3nm,0.3s,baz=196,slow=12,SNR=21						
ASAJ				Sn	**Sn**	**11 54 07.2**	**-1.4**
	1.3nm,0.3s,baz=255,slow=29,SNR=1.6						
MJAR	**Matsushiro Arr**	**5.36**	**233**	Pn	**Pn**	**11 53 33.7**	**+1.1**
	0.3nm,0.3s,baz=44,slow=11,SNR=15						
MJAR				LR	LR	11 55 38.6	
	comp=Z,77nm,20.3s,baz=100,slow=39						
MAT	**Matsushiro**	**5.36**	**233**	P	**Pn**	**11 53 33.1**	**+0.6**
JHJ	**Hachijo jima 2**	**7.38**	**205**	Sn	Sn	11 55 13.6	-11
	10nm,0.3s,baz=78,slow=21,SNR=1.7						
USRK	**Ussuriysk Ar.**	**9.63**	**300**	Pn	**Pn**	**11 54 33.4**	**+2.3**
	baz=98,slow=15,SNR=7.0						
KSRS	**Korea Array**	**12.45**	**264**	LR	LR	11 59 49.5	
	comp=Z,104nm,18.4s,baz=48,slow=37						
KLR	**Kul'dur**	**12.57**	**322**	Pn	**Pn**	**11 55 13.7**	**+2.4**
	0.1nm,0.3s,baz=111,slow=16,SNR=1.9						
MA2	**Magadan**	**20.25**	**11**	P	**P**	**11 56 47.5**	**-0.3**
	2.4nm,0.5s,baz=191,slow=8.5,SNR=8.9						
SEY	**Seymchan**	**23.70**	**10**	P	**P**	**11 57 23.6**	**-0.6**
	2.2nm,0.8s,baz=192,slow=5.2,SNR=13						
**S

baz=218,slow=74,SNR=7.0
H03S3 Juan Fernandez 50.87 93 T T 12 57 57.1
baz=218,slow=74,SNR=8.6
H03N3 Juan Fernandez 51.15 92 T T 12 58 14.5
baz=221,slow=72,SNR=109
H03N2 Juan Fernandez 51.15 92 T T 12 58 09.4
baz=221,slow=72,SNR=147
H03N1 Juan Fernandez 51.16 92 T T 12 58 13.7
baz=221,slow=72,SNR=112
STKA Stephens Creek 53.65 267 LR LR 12 23 33.1
comp=Z,60nm,18.3s,baz=196,slow=33
ASAR Alice Springs 64.27 266 P P 12 04 27.1 -0.7
0.4nm,0.7s,baz=134,slow=6.1,SNR=5.6
WRA Warramunga Arr 67.08 269 P P 12 04 48.0 +2.0
0.3nm,0.8s,baz=148,slow=5.3,SNR=1.9
WRA LR LR 12 31 08.6
comp=Z,73nm,18.8s,baz=190,slow=33
TXAR Lajitas Array 94.43 37 P P 12 07 13.1 +0.7
0.4nm,1.0s,baz=219,slow=2.3,SNR=2.4
H10S3 ASCENSION HYDR 103.08 132 T T 14 04 05.7
baz=204,slow=74,SNR=16
H10S2 ASCENSION HYDR 103.09 132 T T 14 04 05.8
baz=16,slow=74,SNR=6.3
H10N3 ASCENSION HYDR 104.16 132 T T 14 05 25.1
baz=204,slow=75,SNR=43
H10N1 ASCENSION HYDR 104.17 132 T T 14 05 27.9
baz=204,slow=75,SNR=37
H10N2 ASCENSION HYDR 104.18 132 T T 14 05 26.0
baz=204,slow=75,SNR=42
ILAR Eielson Array 122.47 0 PKP PKPdf 12 12 45.1 -1.4
0.7nm,0.8s,baz=194,slow=2.2,SNR=2.3
MKAR Makanchi Array 148.36 271 PKPbc PKPbc 12 13 36.8 -1.4
0.8nm,0.8s,baz=169,slow=2.3,SNR=5.8
ESDC Sonseca Array 150.29 112 PKPbc PKPbc 12 13 43.3 +0.1
0.7nm,0.9s,baz=228,slow=3.5,SNR=4.5
KURBB Kurchatov Arra 152.64 274 PKPbc PKPbc 12 13 47.7 -0.5
0.4nm,0.3s,baz=143,slow=2.3,SNR=1.5

UPP ***15*** *12:03:13.0±0.2,58.°78N×18.°58E,h0km,ML2.2, Explosion*
DNK ***15*** *12:03:13.5±1.8,58.°78N×18.°54E,h0km,ML2.2, Explosion*
HEL ***15*** *12:03:14.0±0.1,58.°78N×18.°54E,h0km,ML1.8, ML2.2(UPP), Explosion*
NAO ***15*** *12:03:15.7±2.1,58.°92N×18.°46E,ML2.2*
IDC ***15*** *12:03:16.1±2.3,58.°95N×18.°59E,h0km,mb1 2.9/4, mb1mx2.8/41,mbtmp2.8/4,ML2.1/4, Error ellipse: s-maj=29.7km s-min=8.4km az=174.0*
BER ***15*** *12:03:16.3±3.7,58.°91N×18.°47E,h0km,ML2.2(NAO), Suspected explosion*
ISC 15 12:03:13.2±0.8, 58.°78N±0.°02×18.°52E±0.°02, h0km, n81, σ1§**02**/104**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.35**	**310**			P	**Pg**	**12 03 20.2**	**+0.4**
NYNU	**Nynaeshamn**	**0.35**	**310**			P	**Pg**	**12 03 20.2**	**+0.4**
NYNU	**Nynaeshamn**	**0.35**	**310**			P	**Pg**	**12 03 20.2**	**+0.4**
NYNU	**Nynaeshamn**	**0.35**	**310**		*i*	P	**Pg**	**12 03 20.2**	**+0.4**
NRTU	**Norrtaelje**	**0.90**	**4**			P	**Pg**	**12 03 29.9**	**-0.6**
NRTU						S	**Sg**	**12 03 42.4**	**+0.3**
NRTU	**Norrtaelje**	**0.90**	**4**			P	**Pg**	**12 03 29.9**	**-0.6**
NRTU						S	**Sg**	**12 03 42.4**	**+0.3**
NRTU	**Norrtaelje**	**0.90**	**4**			P	**Pg**	**12 03 29.9**	**-0.6**
NRTU						S	**Sg**	**12 03 42.4**	**+0.3**
NRTU	**Norrtaelje**	**0.90**	**4**		*eP*	P	**Pg**	**12 03 29.8**	**-0.6**
NRTU					*eS*	S	**Sg**	**12 03 42.2**	**+0.1**
VIKU	**Vikbolandet**	**0.99**	**254**			P	**Pg**	**12 03 32.0**	**-0.1**
VIKU	**Vikbolandet**	**0.99**	**254**			P	**Pg**	**12 03 32.0**	**-0.1**
VIKU	**Vikbolandet**	**0.99**	**254**			P	**Pg**	**12 03 32.0**	**-0.1**
VIKU	**Vikbolandet**	**0.99**	**254**		*eP*	P	**Pg**	**12 03 32.0**	**-0.1**
GOTU	**Gotland**	**1.10**	**179**			P	**Pg**	**12 03 33.4**	**-0.8**
GOTU	**Gotland**	**1.10**	**179**			P	**Pg**	**12 03 33.4**	**-0.8**
GOTU	**Gotland**	**1.10**	**179**			P	**Pg**	**12 03 33.4**	**-0.8**
GOTU	**Gotland**	**1.10**	**179**		*eP*	P	**Pg**	**12 03 33.2**	**-1.0**
GOTU					*eS*	S	**Sg**	**12 03 48.3**	**-0.2**
UPP	**Uppsala**	**1.17**	**337**			P	**Pg**	**12 03 34.8**	**-0.9**
UPP	**Uppsala**	**1.17**	**337**		*eP*	P	**Pg**	**12 03 34.8**	**-0.9**
ESKU	**Eskilstuna**	**1.19**	**293**			P	**Pg**	**12 03 35.4**	**-0.6**
ESKU						S	**Sg**	**12 03 51.3**	**0.0**
ESKU	**Eskilstuna**	**1.19**	**293**			P	**Pg**	**12 03 35.4**	**-0.6**
ESKU						S	**Sg**	**12 03 51.3**	**0.0**
ESKU	**Eskilstuna**	**1.19**	**293**			P	**Pg**	**12 03 35.4**	**-0.6**
ESKU					*eS*	S	**Sg**	**12 03 51.3**	**0.0**
FIBU	**Brunna**	**1.27**	**333**			P	**Pg**	**12 03 37.0**	**-0.5**
FIBU	**Brunna**	**1.27**	**333**			P	**Pg**	**12 03 37.0**	**-0.5**
FIBU	**Brunna**	**1.27**	**333**			P	**Pg**	**12 03 37.0**	**-0.5**
FIBU	**Brunna**	**1.27**	**333**		*eP*	P	**Pg**	**12 03 37.0**	**-0.5**
BACU	**Backbrunna**	**1.30**	**327**			P	**Pg**	**12 03 37.6**	**-0.4**
BACU	**Backbrunna**	**1.30**	**327**			P	**Pg**	**12 03 37.6**	**-0.4**
BACU	**Backbrunna**	**1.30**	**327**			P	**Pg**	**12 03 37.6**	**-0.4**
BACU	**Backbrunna**	**1.30**	**327**		*eP*	P	**Pg**	**12 03 37.6**	**-0.4**
FLYU	**Flymyra**	**1.39**	**347**			P	**Pn**	**12 03 38.9**	**-0.9**
FLYU	**Flymyra**	**1.39**	**347**			P	**Pn**	**12 03 38.9**	**-0.9**
FLYU	**Flymyra**	**1.39**	**347**			P	**Pn**	**12 03 38.9**	**-0.9**
FLYU	**Flymyra**	**1.39**	**347**		*eP*	P	**Pn**	**12 03 38.9**	**-0.9**
GRAU	**Graesoe**	**1.56**	**0**			P	**Pn**	**12 03 41.7**	**-0.4**
GRAU	**Graesoe**	**1.56**	**0**			P	**Pn**	**12 03 41.7**	**-0.4**
GRAU	**Graesoe**	**1.56**	**0**			P	**Pn**	**12 03 41.7**	**-0.4**
GRAU	**Graesoe**	**1.56**	**0**		*eP*	P	**Pn**	**12 03 41.7**	**-0.4**
AAL	**Aland**	**1.59**	**28**			P	**Pn**	**12 03 41.9**	**-0.7**
AAL	**Aland**	**1.59**	**28**		*eP*	P	**Pn**	**12 03 41.9**	**-0.7**
AAL					*eS*	S	**Sn**	**12 04 02.1**	**-1.7**
OSTU	**Oestervaala**	**1.61**	**335**			P	**Pn**	**12 03 43.0**	**0.0**
OSTU	**Oestervaala**	**1.61**	**335**			P	**Pn**	**12 03 43.0**	**0.0**
OSTU	**Oestervaala**	**1.61**	**335**			P	**Pn**	**12 03 43.0**	**0.0**
OSTU	**Oestervaala**	**1.61**	**335**		*eP*	P	**Pn**	**12 03 43.0**	**0.0**
FORU	**Forsmark**	**1.62**	**354**			P	**Pn**	**12 03 43.2**	**+0.3**
FORU	**Forsmark**	**1.62**	**354**			P	**Pn**	**12 03 43.2**	**+0.3**
FORU	**Forsmark**	**1.62**	**354**			P	**Pn**	**12 03 43.2**	**+0.3**
FORU	**Forsmark**	**1.62**	**354**		*eP*	P	**Pn**	**12 03 43.2**	**+0.3**
LNKU	**Linkoeping**	**1.68**	**252**			P	**Pn**	**12 03 43.9**	**+0.2**
LNKU	**Linkoeping**	**1.68**	**252**			P	**Pn**	**12 03 43.9**	**+0.2**
LNKU	**Linkoeping**	**1.68**	**252**			P	**Pn**	**12 03 43.9**	**+0.2**
LNKU	**Linkoeping**	**1.68**	**252**		*eP*	P	**Pn**	**12 03 43.9**	**+0.2**
BYXU	**Byxelkrok**	**1.70**	**209**			P	**Pn**	**12 03 44.0**	**-0.1**
BYXU	**Byxelkrok**	**1.70**	**209**			P	**Pn**	**12 03 44.0**	**-0.1**
BYXU	**Byxelkrok**	**1.70**	**209**			P	**Pn**	**12 03 44.0**	**-0.1**
BYXU	**Byxelkrok**	**1.70**	**209**		*eP*	P	**Pn**	**12 03 44.0**	**-0.1**
SLIT	**Slitere, Latvi**	**2.31**	**118**		*eP*	P	**Pn**	**12 03 53.1**	**+0.7**
SLIT					*eS*	S	**Sn**	**12 04 20.9**	**-0.6**
RAF	**Rauma**	**2.78**	**35**		*eP*	P	**Pn**	**12 04 00.2**	**+1.3**
RAF					*eS*	S	**Sn**	**12 04 33.5**	**+0.3**
RAF				MSG				12 04 40.0	
	comp=Z,2.8nm,0.1s								
HFC2	**Hagfors New Ar**	**2.81**	**301**		*eP*		**Pn**	**12 04 00.4**	**+1.1**
HFC2					*eS*		**Sn**	**12 04 33.2**	**-0.7**
HFS	**Hagfors**	**2.81**	**301**	Pn			**Pn**	**12 04 00.2**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=112,slow=14,SNR=10								
HFS				Sn			**Sn**	**12 04 36.1**	**+2.2**
	comp=Z,1.0nm,0.3s,baz=106,slow=23,SNR=3.5								
HFS	**Hagfors**	**2.81**	**301**	Pn			**Pn**	**12 04 00.6**	**+1.3**
	baz=127,slow=16								
HFS				Lg			Lg	12 04 40.4	
	baz=120,slow=28								
HFS	**Hagfors**	**2.81**	**301**	Pn			**Pn**	**12 04 00.6**	**+1.3**
	baz=127,slow=16								
HFS				Sg			**Sb**	**12 04 40.4**	**+1.2**
	baz=120,slow=28								
BLEU	**Blekinge**	**2.88**	**212**	*e*			**Pn**	**12 03 60.0**	**-0.3**
	baz=16,slow=11								
BLEU				*i*	P		**Pn**	**12 04 00.7**	**+0.4**
BLEU				*i*				12 04 05.3	
BLEU				*i*	S		**Sn**	**12 04 37.5**	**+1.9**
MEF	**Metsahovi**	**3.33**	**62**	MSG				12 05 04.3	
	comp=Z,1.8nm,0.1s								
DEL	**Delary**	**3.41**	**229**	*i*	P		**Pn**	**12 04 08.1**	**+0.5**
DEL				IAML				12 05 06.0	
	comp=Z,2.6nm,0.4s								
STRU	**Stroemstad**	**3.81**	**277**	*i*	P		**Pn**	**12 04 14.5**	**+1.5**
BJUU	**Bjuv**	**4.02**	**230**	*i*	P		**Pn**	**12 04 16.0**	**0.0**
NRA0	**NORESS Array S**	**4.04**	**302**	Pn			**Pn**	**12 04 15.9**	**-0.3**
	baz=122,slow=12								
NRA0				Lg			Lg	12 05 20.7	
	baz=115,slow=28								
NRA0	**NORESS Array S**	**4.04**	**302**	Pn			**Pn**	**12 04 15.9**	**-0.3**
	baz=122,slow=12								
NRA0				Sg			**Sg**	**12 05 20.7**	**-2.0**
	baz=115,slow=28								
BSD	**Bornholm Skovb**	**4.17**	**210**	*eP*			**Pn**	**12 04 17.2**	**-0.9**
BSD				*i*	S		**Sn**	**12 05 06.4**	**-1.0**
NB2	**NORSAR Subarra**	**4.32**	**305**	Pn			**Pn**	**12 04 20.1**	**-0.1**
	baz=130,slow=14								
NB2				Lg			Lg	12 05 27.6	
	baz=116,slow=37								
NB2	**NORSAR Subarra**	**4.32**	**305**	Pn			**Pn**	**12 04 20.1**	**-0.1**
	baz=130,slow=14								
NB2				Sg			**Sg**	**12 05 27.6**	**-4.2**
	baz=116,slow=37								
NOA	**NORSAR Array B**	**4.32**	**305**	Pn			**Pn**	**12 04 19.9**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=113,slow=14,SNR=5.2								
NOA				Lg			Lg	12 05 29.4	
	comp=Z,0.2nm,0.3s,baz=132,slow=15,SNR=7.9								
FIA0	**FINESS Array S**	**4.63**	**52**	Pn			**Pn**	**12 04 25.6**	**+1.4**
	baz=243,slow=11								
FIA0				Sn			**Sn**	**12 05 19.0**	**+0.3**
	baz=247,slow=22								
FIA0				Lg			Lg	12 05 36.0	
	baz=237,slow=28								
FIA0	**FINESS Array S**	**4.63**	**52**	Pn			**Pn**	**12 04 25.6**	**+1.4**
	baz=243,slow=11								
FIA0				Sn			**Sn**	**12 05 19.0**	**+0.3**
	baz=247,slow=22								
FIA0				Sg			**Sb**	**12 05 36.0**	**+4.6**
	baz=237,slow=28								
FINES	**FINESS Array B**	**4.63**	**52**	Pn			**Pn**	**12 04 24.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=247,slow=13,SNR=6.1								
FINES				Sn			**Sn**	**12 05 18.4**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=241,slow=22,SNR=6.3								
FINES				Lg			Lg	12 05 35.5	
	comp=Z,1.3nm,0.3s,baz=245,slow=26,SNR=11								
APA0	**Apatity Array**	**10.97**	**30**	Pn			**Pn**	**12 05 50.4**	**-0.8**
	baz=233,slow=12								
APA0	**Apatity Array**	**10.97**	**30**	Pn			**Pn**	**12 05 50.4**	**-0.8**
	baz=233,slow=12								
ARA0	**ARCESS Array S**	**11.21**	**13**	Pn			**Pn**	**12 05 52.3**	**-2.1**
	baz=196,slow=16								
ARA0	**ARCESS Array S**	**11.21**	**13**	Pn			**Pn**	**12 05 52.3**	**-2.1**
	baz=196,slow=16								
ARCES	**ARCESS Array B**	**11.21**	**13**	Pn			**Pn**	**12 05 51.6**	**-2.8**
	baz=195,slow=14,SNR=8.6								

DNK ***15*** *12:03:18.7±0.9,58.°79N×18.°44E,h0km,ML1.7(UPP), Explosion*
UPP 15 12:03:18.2±0.3, 58.°79N×18.°47E, h0km, ML1.7, Explosion, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.33**	**312**			P	**Pg**	**12 03 24.5**	**+0.1**
NYNU						S	**Sg**	**12 03 29.2**	**+0.5**
NYNU	**Nynaeshamn**	**0.33**	**312**			P	**Pg**	**12 03 24.5**	**+0.1**
NYNU						S	**Sg**	**12 03 29.2**	**+0.5**
NRTU	**Norrtaelje**	**0.89**	**5**			P	**Pg**	**12 03 34.8**	**-0.5**
NRTU						S	**Sg**	**12 03 47.1**	**+0.2**
NRTU	**Norrtaelje**	**0.89**	**5**			P	**Pg**	**12 03 34.8**	**-0.5**
NRTU						S	**Sg**	**12 03 47.1**	**+0.2**
VIKU	**Vikbolandet**	**0.97**	**253**			P	**Pg**	**12 03 36.4**	**-0.4**
VIKU	**Vikbolandet**	**0.97**	**253**			P	**Pg**	**12 03 36.4**	**-0.4**
UPP	**Uppsala**	**1.16**	**338**			P	**Pg**	**12 03 39.9**	**-0.4**
UPP						S	**Sg**	**12 03 55.1**	**-0.2**
ESKU	**Eskilstuna**	**1.16**	**293**			P	**Pg**	**12 03 39.0**	**-1.5**
ESKU	**Eskilstuna**	**1.16**	**293**			P	**Pg**	**12 03 39.0**	**-1.5**
FIBU	**Brunna**	**1.25**	**333**			P	**Pg**	**12 03 41.5**	**-0.7**
FIBU						S	**Sg**	**12 03 57.2**	**-1.2**
FIBU	**Brunna**	**1.25**	**333**			P	**Pg**	**12 03 41.5**	**-0.7**
FIBU						S	**Sg**	**12 03 57.2**	**-1.2**
FLYU	**Flymyra**	**1.38**	**348**			P	**Pg**	**12 03 43.8**	**-0.8**
FLYU	**Flymyra**	**1.38**	**348**			P	**Pg**	**12 03 43.8**	**-0.8**

DNK ***15*** *12:18:16.8±1.7,58.°77N×18.°58E,h0km,ML2.3,Explosion*
UPP ***15*** *12:18:16.4±0.2,58.°77N×18.°58E,h0km,ML2.2,Explosion*
HEL ***15*** *12:18:17.2±0.1,58.°77N×18.°56E,h0km,ML2.2, ML2.2(UPP),Explosion*
IDC ***15*** *12:18:18.9±2.0,58.°83N×18.°58E,h0km,mb1 3.0/4, mb1mx2.9/40,mbtmp2.9/4,ML2.2/4,Error ellipse: s-maj=22.7km s-min=8.1km az=172.0*
NAO ***15*** *12:18:20.5±2.0,59.°07N×18.°47E,ML2.1*
BER ***15*** *12:18:21.3±3.3,59.°14N×18.°56E,h0km,ML2.1(NAO), Suspected explosion*
ISC 15 12:18:16.1±0.7, 58.°76N±0.°02×18.°58E±0.°03, h0km, n69, σ1§**22**/91**, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.39**	**309**			P	**Pg**	**12 18 23.7**	**+0.2**
NYNU						S	**Sg**	**12 18 28.5**	**-0.1**
NYNU	**Nynaeshamn**	**0.39**	**309**			P	**Pg**	**12 18 23.7**	**+0.2**
NYNU						S	**Sg**	**12 18 28.5**	**-0.1**
NYNU	**Nynaeshamn**	**0.39**	**309**		*i*	P	**Pg**	**12 18 23.7**	**+0.2**
NYNU					*i*	S	**Sg**	**12 18 28.5**	**-0.1**
NRTU	**Norrtaelje**	**0.92**	**1**			P	**Pg**	**12 18 33.5**	**-0.2**
NRTU	**Norrtaelje**	**0.92**	**1**			P	**Pg**	**12 18 33.5**	**-0.2**
NRTU	**Norrtaelje**	**0.92**	**1**		*eP*	P	**Pg**	**12 18 33.4**	**-0.2**
NRTU					*eS*	S	**Sg**	**12 18 45.1**	**-0.5**
VIKU	**Vikbolandet**	**1.02**	**256**			P	**Pg**	**12 18 35.5**	**-0.1**
VIKU	**Vikbolandet**	**1.02**	**256**			P	**Pg**	**12 18 35.5**	**-0.1**
VIKU	**Vikbolandet**	**1.02**	**256**		*eP*	P	**Pg**	**12 18 35.5**	**-0.1**
GOTU	**Gotland**	**1.08**	**180**			P	**Pg**	**12 18 36.6**	**-0.1**
GOTU	**Gotland**	**1.08**	**180**			P	**Pg**	**12 18 36.6**	**-0.1**
GOTU	**Gotland**	**1.08**	**180**		*eP*	P	**Pg**	**12 18 36.5**	**-0.1**
GOTU					*eS*	S	**Sg**	**12 18 51.6**	**+1.0**
UPP	**Uppsala**	**1.21**	**336**			P	**Pg**	**12 18 38.7**	**-0.4**
UPP	**Uppsala**	**1.21**	**336**		*eP*	P	**Pg**	**12 18 38.7**	**-0.4**
ESKU	**Eskilstuna**	**1.23**	**294**			P	**Pg**	**12 18 39.1**	**-0.5**
ESKU	**Eskilstuna**	**1.23**	**294**			P	**Pg**	**12 18 39.1**	**-0.5**
ESKU	**Eskilstuna**	**1.23**	**294**		*eP*	P	**Pg**	**12 18 39.1**	**-0.5**
FIBU	**Brunna**	**1.31**	**332**			P	**Pg**	**12 18 40.6**	**-0.5**
FIBU	**Brunna**	**1.31**	**332**			P	**Pg**	**12 18 40.6**	**-0.5**
FIBU	**Brunna**	**1.31**	**332**		*eP*	P	**Pg**	**12 18 40.6**	**-0.5**
BACU	**Backbrunna**	**1.33**	**326**			P	**Pg**	**12 18 41.1**	**-0.5**
BACU	**Backbrunna**	**1.33**	**326**			P	**Pg**	**12 18 41.1**	**-0.5**
BACU	**Backbrunna**	**1.33**	**326**		*eP*	P	**Pg**	**12 18 41.1**	**-0.5**
FLYU	**Flymyra**	**1.42**	**346**			P	**Pn**	**12 18 42.5**	**-0.6**
FLYU	**Flymyra**	**1.42**	**346**			P	**Pn**	**12 18 42.5**	**-0.6**
FLYU	**Flymyra**	**1.42**	**346**		*eP*	P	**Pn**	**12 18 42.5**	**-0.6**
VSTU	**Vaestervik** baz=54	**1.55**	**225**			P	**Pn**	**12 18 44.8**	**0.0**
VSTU						S	**Sn**	**12 19 05.6**	**+0.1**
VSTU	**Vaestervik** baz=54	**1.55**	**225**			P	**Pn**	**12 18 44.8**	**0.0**
VSTU						S	**Sn**	**12 19 05.6**	**+0.1**
VSTU	**Vaestervik**	**1.55**	**225**		*eP*	P	**Pn**	**12 18 44.8**	**0.0**
VSTU					*eS*	S	**Sn**	**12 19 05.6**	**+0.1**
GRAU	**Graesoe**	**1.58**	**359**			P	**Pn**	**12 18 45.3**	**0.0**
GRAU	**Graesoe**	**1.58**	**359**			P	**Pn**	**12 18 45.3**	**0.0**
GRAU	**Graesoe**	**1.58**	**359**		*eP*	P	**Pn**	**12 18 45.3**	**0.0**
AAL	**Aland**	**1.59**	**26**			P	**Pn**	**12 18 45.5**	**0.0**
AAL	**Aland**	**1.59**	**26**		*eP*	P	**Pn**	**12 18 45.4**	**0.0**
AAL					*eS*	S	**Sn**	**12 19 06.3**	**-0.4**
FORU	**Forsmark**	**1.65**	**353**			P	**Pb**	**12 18 47.0**	**-0.2**
FORU	**Forsmark**	**1.65**	**353**			P	**Pb**	**12 18 47.0**	**-0.2**
FORU	**Forsmark**	**1.65**	**353**		*eP*	P	**Pb**	**12 18 47.0**	**-0.2**
OSTU	**Oestervaala**	**1.65**	**334**			P	**Pn**	**12 18 46.5**	**+0.2**
OSTU	**Oestervaala**	**1.65**	**334**			P	**Pn**	**12 18 46.5**	**+0.2**
OSTU	**Oestervaala**	**1.65**	**334**		*eP*	P	**Pn**	**12 18 46.5**	**+0.2**
BYXU	**Byxelkrok**	**1.70**	**210**			P	**Pn**	**12 18 47.3**	**+0.5**
BYXU	**Byxelkrok**	**1.70**	**210**			P	**Pn**	**12 18 47.3**	**+0.5**
BYXU	**Byxelkrok**	**1.70**	**210**		*eP*	P	**Pn**	**12 18 47.3**	**+0.5**
SLIT	**Slitere, Latvi**	**2.27**	**118**		*eP*	P	**Pn**	**12 18 56.5**	**+1.8**
RAF	**Rauma**	**2.78**	**34**		*eP*	P	**Pn**	**12 19 02.6**	**+0.9**
RAF					*eS*	S	**Sn**	**12 19 36.2**	**+0.3**
RAF				MSG				12 19 43.8	
	comp=Z,7.0nm,0.2s								
HFC2	**Hagfors New Ar**	**2.85**	**301**		*eP*		**Pn**	**12 19 03.7**	**+0.9**
HFC2					*eS*		**Sn**	**12 19 37.9**	**+0.1**
HFS	**Hagfors**	**2.85**	**301**	Pn			**Pn**	**12 19 04.0**	**+1.3**
	comp=Z,0.7nm,0.3s,baz=87,slow=12,SNR=14								
HFS				Sn			**Sn**	**12 19 40.1**	**+2.4**
	comp=Z,3.0nm,0.3s,baz=104,slow=28,SNR=14								
HFS	**Hagfors**	**2.85**	**301**	Pn			**Pn**	**12 19 04.1**	**+1.3**
	baz=100,slow=12								
HFS				Sn			**Sn**	**12 19 35.2**	**-2.5**
	baz=110,slow=28								
HFS				Lg			Lg	12 19 44.1	
	baz=109,slow=37								
HFS	**Hagfors**	**2.85**	**301**	Pn			**Pn**	**12 19 04.1**	**+1.3**
	baz=100,slow=12								
HFS				Sn			**Sn**	**12 19 35.2**	**-2.5**
	baz=110,slow=28								
HFS				Sg			**Sb**	**12 19 44.1**	**+0.9**
	baz=109,slow=37								
BLEU	**Blekinge**	**2.88**	**212**	*e*			**Pn**	**12 19 03.5**	**+0.3**
	baz=22,slow=11								
BLEU				*i*	P		**Pb**	**12 19 04.1**	**-4.1**
BLEU				*i*				12 19 06.8	
BLEU				*i*	S		**Sn**	**12 19 40.6**	**+2.2**
DEL	**Delary**	**3.42**	**230**	*i*	P		**Pn**	**12 19 11.2**	**+0.7**
DEL				IAML				12 20 08.5	
	comp=Z,2.1nm,0.3s								
STRU	**Stroemstad**	**3.85**	**277**	*i*	P		**Pn**	**12 19 17.6**	**+1.2**
BJUU	**Bjuv**	**4.04**	**231**	*i*	P		**Pn**	**12 19 19.4**	**+0.4**
NRA0	**NORESS Array S**	**4.08**	**302**	Pn			**Pn**	**12 19 20.4**	**+0.8**
	baz=93,slow=10								
NRA0				Lg			Lg	12 20 21.5	
	baz=117,slow=28								
NRA0	**NORESS Array S**	**4.08**	**302**	Pn			**Pn**	**12 19 20.4**	**+0.8**
	baz=93,slow=10								
NRA0				Sg			**Sb**	**12 20 21.5**	**+3.1**
	baz=117,slow=28								
PVF	**Pernaja**	**4.10**	**61**	MSG				12 20 29.7	
	comp=Z,4.5nm,0.2s								
BSD	**Bornholm Skovb**	**4.17**	**210**	*eP*			**Pn**	**12 19 21.2**	**+0.3**
BSD				IAML				12 20 31.5	
	comp=Z,4.9nm,0.3s								
NB2	**NORSAR Subarra**	**4.36**	**305**	Pn			**Pn**	**12 19 24.1**	**+0.6**
	baz=127,slow=12								
NB2				Lg			Lg	12 20 30.8	
	baz=120,slow=37								
NB2	**NORSAR Subarra**	**4.36**	**305**	Pn			**Pn**	**12 19 24.1**	**+0.6**
	baz=127,slow=12								
NB2				Sg			**Sb**	**12 20 30.8**	**+4.2**
	baz=120,slow=37								
NOA	**NORSAR Array B**	**4.36**	**305**	Pn			**Pn**	**12 19 23.9**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=115,slow=12,SNR=7.9								
NOA				Lg			Lg	12 20 31.9	
	comp=Z,0.2nm,0.3s,baz=102,slow=13,SNR=14								
FIA0	**FINESS Array S**	**4.62**	**51**	Pn			**Pn**	**12 19 28.4**	**+1.4**
	baz=231,slow=11								
FIA0				Pg			**Pb**	**12 19 38.0**	**+0.3**
	baz=232,slow=12								
FIA0				Sn			**Sn**	**12 20 22.1**	**+0.9**
	baz=244,slow=22								
FIA0				Lg			Lg	12 20 39.7	
	baz=248,slow=28								
FIA0	**FINESS Array S**	**4.62**	**51**	Pn			**Pn**	**12 19 28.4**	**+1.4**
	baz=231,slow=11								
FIA0				Pg			**Pb**	**12 19 38.0**	**+0.3**
	baz=232,slow=12								
FIA0				Sg			**Sg**	**12 20 39.7**	**-4.5**
	baz=248,slow=28								
FINES	**FINESS Array B**	**4.62**	**51**	Pn			**Pn**	**12 19 29.1**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=238,slow=11,SNR=9.2								
FINES				Sn			**Sn**	**12 20 22.7**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=251,slow=20,SNR=6.4								
FINES				Lg			Lg	12 20 39.5	
	comp=Z,1.9nm,0.3s,baz=252,slow=28,SNR=14								
KEF	**Keuruu**	**4.62**	**40**	MSG				12 20 42.9	
	comp=Z,2.3nm,0.2s								
APA0	**Apatity Array**	**10.97**	**30**	Pn			**Pn**	**12 20 53.3**	**-0.7**
	baz=222,slow=16								
APA0	**Apatity Array**	**10.97**	**30**	Pn			**Pn**	**12 20 53.3**	**-0.7**
	baz=222,slow=16								
ARA0	**ARCESS Array S**	**11.22**	**13**	Pn			**Pn**	**12 20 55.6**	**-1.8**
	baz=193,slow=14								
ARA0	**ARCESS Array S**	**11.22**	**13**	Pn			**Pn**	**12 20 55.6**	**-1.8**
	baz=193,slow=14								
ARCES	**ARCESS Array B**	**11.22**	**13**	Pn			**Pn**	**12 20 55.7**	**

GRAU	**Graesoe**	**1.57**	**360**	P		**Pn**	**12 36 44.8**	**+0.5**
GRAU	**Graesoe**	**1.57**	**360**	*e*P		**Pn**	**12 36 44.8**	**+0.5**
AAL	**Aland**	**1.59**	**27**	P		**Pn**	**12 36 45.0**	**+0.4**
AAL	**Aland**	**1.59**	**27**	*e*P		**Pn**	**12 36 45.0**	**+0.4**
AAL				*e*S		**Sn**	**12 37 05.2**	**-0.7**
FORU	**Forsmark**	**1.64**	**353**	P		**Pb**	**12 36 46.3**	**+0.1**
FORU	**Forsmark**	**1.64**	**353**	P		**Pb**	**12 36 46.3**	**+0.1**
FORU	**Forsmark**	**1.64**	**353**	*e*P		**Pb**	**12 36 46.3**	**+0.1**
OSTU	**Oestervaala**	**1.64**	**334**	P		**Pn**	**12 36 46.1**	**+0.9**
OSTU	**Oestervaala**	**1.64**	**334**	P		**Pn**	**12 36 46.1**	**+0.9**
OSTU	**Oestervaala**	**1.64**	**334**	*e*P		**Pn**	**12 36 46.1**	**+0.9**
BYXU	**Byxelkrok**	**1.69**	**210**	P		**Pn**	**12 36 47.1**	**+1.2**
BYXU	**Byxelkrok**	**1.69**	**210**	P		**Pn**	**12 36 47.1**	**+1.2**
BYXU	**Byxelkrok**	**1.69**	**210**	*e*P		**Pn**	**12 36 47.1**	**+1.2**
LNKU	**Linkoeping**	**1.70**	**253**	P		**Pn**	**12 36 47.1**	**+1.1**
LNKU	**Linkoeping**	**1.70**	**253**	P		**Pn**	**12 36 47.1**	**+1.1**
LNKU	**Linkoeping**	**1.70**	**253**	*e*P		**Pn**	**12 36 47.1**	**+1.1**
SLIT	**Slitere, Latvi**	**2.28**	**118**	*e*P		**Pb**	**12 36 56.3**	**-0.8**
SLIT				*e*S		**Sb**	**12 37 26.4**	**+0.7**
SLIT	**Slitere, Latvi**	**2.28**	**118**	*e*P		**Pb**	**12 36 56.2**	**-0.8**
SLIT				*e*S		**Sb**	**12 37 26.0**	**+0.3**
MTSE	**Matsula**	**2.74**	**89**	*e*P		**Pn**	**12 37 01.7**	**+1.5**
MTSE				*e*S		**Sn**	**12 37 35.1**	**+1.1**
RAF	**Rauma**	**2.78**	**34**	*e*P		**Pn**	**12 37 02.4**	**+1.5**
RAF				*e*S		**Sn**	**12 37 36.6**	**+1.5**
RAF				MSG			12 37 49.7	
	comp=Z,12nm,0.3s							
HFC2	**Hagfors New Ar**	**2.84**	**301**	*e*P		**Pn**	**12 37 03.6**	**+1.9**
HFC2				*e*S		**Sn**	**12 37 37.7**	**+1.1**
HFS	**Hagfors**	**2.84**	**301**	Pn		**Pn**	**12 37 03.6**	**+1.9**
	comp=Z,4.5nm,0.3s,baz=123,slow=16,SNR=69							
HFS				Sn		**Sn**	**12 37 37.9**	**+1.3**
	comp=Z,4.3nm,0.3s,baz=118,slow=25,SNR=16							
HFS	**Hagfors**	**2.84**	**301**	Pn		**Pn**	**12 37 03.6**	**+1.9**
	baz=122,slow=16							
HFS				Sn		**Sn**	**12 37 38.1**	**+1.5**
	baz=100,slow=28							
HFS				Lg		Lg	12 37 43.0	
	baz=111,slow=37							
HFS	**Hagfors**	**2.84**	**301**	Pn		**Pn**	**12 37 03.6**	**+1.9**
	baz=122,slow=16							
HFS				Sn		**Sn**	**12 37 38.1**	**+1.5**
	baz=100,slow=28							
HFS				Sg		**Sb**	**12 37 43.0**	**+1.0**
	baz=111,slow=37							
BLEU	**Blekinge**	**2.88**	**212**	*e*		**Pn**	**12 37 03.4**	**+1.2**
	baz=20,slow=11							
BLEU				*i* P		**Pb**	**12 37 04.2**	**-3.1**
BLEU				*i* S		**Sn**	**12 37 41.1**	**+3.7**
MEF	**Metsahovi**	**3.31**	**61**	MSG			12 38 03.8	
	comp=Z,18nm,0.3s							
DEL	**Delary**	**3.42**	**230**	*i* P		**Pn**	**12 37 11.4**	**+1.8**
DEL				IAML			12 38 10.4	
	comp=Z,8.3nm,0.4s							
NUR	**Nurmijrvi**	**3.55**	**58**	MSG			12 38 07.4	
	comp=Z,15nm,0.3s							
STRU	**Stroemstad**	**3.84**	**277**	*i* P		**Pn**	**12 37 18.6**	**+3.2**
STRU	**Stroemstad**	**3.84**	**277**	*e*P		**Pn**	**12 37 17.1**	**+1.7**
HEMU	**Hemsoen**	**3.93**	**356**	*e*P		**Pn**	**12 37 18.2**	**+1.6**
HEMU				*e*S		**Sn**	**12 38 03.3**	**-0.2**
BJUU	**Bjuv**	**4.03**	**230**	*i* P		**Pn**	**12 37 19.2**	**+1.2**
NC602	**NORSAR Array S**	**4.07**	**302**	*e*P		**Pn**	**12 37 19.3**	**+0.8**
NRA0	**NORESS Array S**	**4.07**	**302**	Pn		**Pn**	**12 37 19.4**	**+0.9**
	baz=126,slow=12							
NRA0				Lg		Lg	12 38 22.4	
	baz=99,slow=37							
NRA0	**NORESS Array S**	**4.07**	**302**	Pn		**Pn**	**12 37 19.4**	**+0.9**
	baz=126,slow=12							
NRA0				Sg		**Sg**	**12 38 22.4**	**-3.2**
	baz=99,slow=37							
PVF	**Pernaja**	**4.11**	**61**	*e*P		**Pn**	**12 37 21.5**	**+2.4**
PVF				MSG			12 38 27.7	
	comp=Z,28nm,0.4s							
BSD	**Bornholm Skovb**	**4.17**	**210**	*e*P		**Pn**	**12 37 20.7**	**+0.8**
BSD	**Bornholm Skovb**	**4.17**	**210**	*i* P		**Pn**	**12 37 20.2**	**+0.3**
LUNU	**Lund**	**4.20**	**224**	*i* P		**Pn**	**12 37 21.1**	**+0.8**
NB2	**NORSAR Subarra**	**4.35**	**305**	Pn		**Pn**	**12 37 23.7**	**+1.3**
	baz=126,slow=14							
NB2				Lg		Lg	12 38 30.4	
NB2	**NORSAR Subarra**	**4.35**	**305**	Pn		**Pn**	**12 37 23.7**	**+1.3**
	baz=126,slow=14							
NB2				Sg		**Sb**	**12 38 30.4**	**+5.1**
NOA	**NORSAR Array B**	**4.35**	**305**	Pn		**Pn**	**12 37 23.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=122,slow=14,SNR=39							
NOA				Lg		Lg	12 38 35.7	
	comp=Z,0.8nm,0.3s,baz=108,slow=14,SNR=5.5							
NAO01	**NORSAR Array S**	**4.40**	**302**	*e*P		**Pn**	**12 37 22.9**	**-0.2**
NAO01				IAML			12 38 34.5	
	comp=Z,19nm,0.4s							
FIA0	**FINESS Array S**	**4.62**	**51**	Pn		**Pn**	**12 37 28.3**	**+2.2**
	baz=238,slow=11							
FIA0				Sn		**Sn**	**12 38 21.4**	**+1.0**
	baz=240,slow=22							
FIA0				Lg		Lg	12 38 36.4	
	baz=253,slow=28							
FIA0	**FINESS Array S**	**4.62**	**51**	Pn		**Pn**	**12 37 28.3**	**+2.2**
	baz=238,slow=11							
FIA0				Sn		**Sn**	**12 38 21.4**	**+1.0**
	baz=240,slow=22							
FIA0				Sg		**Sb**	**12 38 36.4**	**+3.3**
	baz=253,slow=28							
FINES	**FINESS Array B**	**4.62**	**51**	Pn		**Pn**	**12 37 28.4**	**+2.2**
	comp=Z,1.4nm,0.3s,baz=246,slow=11,SNR=32							
FINES				Sn		**Sn**	**12 38 21.2**	**+0.8**
	comp=Z,3.4nm,0.3s,baz=242,slow=21,SNR=8.8							
FINES				Lg		Lg	12 38 38.6	
	comp=Z,9.2nm,0.3s,baz=248,slow=27,SNR=22							
KEF	**Keuruu**	**4.62**	**40**	*e*S		**Sn**	**12 38 20.9**	**+0.4**
KEF				MSG			12 38 41.5	
	comp=Z,14nm,0.3s							
VAF	**Ylistaro**	**4.74**	**23**	MSG			12 38 45.9	
	comp=Z,21nm,0.3s							
HOMB	**Homborsund**	**5.30**	**269**	*i* P		**Pn**	**12 37 36.6**	**+1.2**
HOMB	**Homborsund**	**5.30**	**269**	*e*P		**Pn**	**12 37 36.5**	**+1.2**
SKAR	**Skarslia**	**5.54**	**295**	*e*P		**Pn**	**12 37 39.4**	**+0.7**
SKAR				IAML			12 39 14.1	
	comp=Z,7.5nm,0.4s							
DOMB	**Dombas**	**5.74**	**309**	*e*P		**Pn**	**12 37 43.9**	**+2.4**
DOMB				IAML			12 39 20.8	
	comp=Z,8.9nm,0.3s							
SNART	**Snartemo**	**5.96**	**271**	*e*P		**Pn**	**12 37 46.1**	**+1.5**
SNART	**Snartemo**	**5.96**	**271**	*e*P		**Pn**	**12 37 44.7**	**+0.2**
SNART				*e*S		**Sn**	**12 38 49.6**	**-3.8**
SNART				IAML			12 39 23.7	
	comp=Z,16nm,0.3s							
ODD1	**Odda**	**6.22**	**286**	*e*P		**Pn**	**12 37 49.0**	**+0.9**
BLS5	**Blasjo**	**6.28**	**281**	*e*P		**Pn**	**12 37 49.5**	**+0.6**
BLS5				*e*S		**Sn**	**12 38 56.4**	**-4.8**
BLS5				IAML			12 39 36.9	
	comp=Z,7.4nm,0.4s							
NSS	**Namsos**	**6.58**	**334**	*e*P		**Pn**	**12 37 52.8**	**-0.2**
NSS				IAML			12 39 44.6	
	comp=Z,3.6nm,0.4s							
AKN	**Aaknes**	**6.66**	**306**	*e*P		**Pn**	**12 37 54.6**	**+0.4**
BER	**Bergen**	**6.92**	**289**	*e*P		**Pn**	**12 37 59.6**	**+2.0**
BER				IAML			12 40 04.3	
	comp=Z,9.5nm,1.2s							
ASK	**Askoy**	**7.00**	**290**	*e*P		**Pn**	**12 37 59.2**	**+0.5**
ASK				IAML			12 40 04.7	
	comp=Z,14nm,0.4s							
MOR8	**Moi Rana**	**7.67**	**347**	*e*P		**Pn**	**12 38 08.2**	**+0.2**
MOR8				IAML			12 39 37.5	
	comp=Z,2.8nm,0.8s							
FAUS	**Fauske**	**8.78**	**352**	*e*P		**Pn**	**12 38 23.5**	**+0.4**
FAUS				IAML			12 40 24.0	
	comp=Z,3.3nm,0.6s							
HEF	**Hetta**	**9.94**	**11**	*e*P		**Pn**	**12 38 37.1**	**-1.9**
KIF	**Kilpisjarvi**	**10.33**	**4**	*e*P		**Pn**	**12 38 43.5**	**-0.8**
KTK1	**Kautokeino**	**10.49**	**9**	*e*P		**Pn**	**12 38 44.7**	**-1.8**
APA0	**Apatity Array**	**10.97**	**30**	Pn		**Pn**	**12 38 52.4**	**-0.7**
	baz=239,slow=16							
APA0	**Apatity Array**	**10.97**	**30**	Pn		**Pn**	**12 38 52.4**	**-0.7**
	baz=239,slow=16							
ARA0	**ARCESS Array S**	**11.22**	**13**	Pn		**Pn**	**12 38 54.9**	**-1.6**
	baz=193,slow=14							
ARA0	**ARCESS Array S**	**11.22**	**13**	Pn		**Pn**	**12 38 54.9**	**-1.6**
	baz=193,slow=14							
ARCES	**ARCESS Array B**	**11.22**	**13**	Pn		**Pn**	**12 38 55.2**	**-1.3**
	baz=196,slow=13,SNR=36							
ARCES				Sn		**Sn**	**12 40 56.5**	**-5.9**
	baz=196,slow=22,SNR=2.9							
EKA	**Eskdalemuir Ar**	**12.30**	**263**	Pn		**Pn**	**12 39 11.8**	**+0.5**
	baz=73,slow=12,SNR=1.6							

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IDC ***15*** *12:42:42.8±1.0, 30.07N×67.96E, h0km, mb3.8/17, mb1 4.0/18, mb1mx3.8/65, mbtmp3.9/18, ML4.3/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/56, Error ellipse: s-maj=22.5km s-min=20.4km az=15.0*

NEIC ***15*** *12:42:44.0±2.0, 29.9N±0.1×67.9E±0.1, h18km±6km, mb4.0/5, Error ellipse: s-maj=17.1km s-min=12.1km az=146.0*

ISC 15 12:42:45.6±0.6, **29.92N**±0.06×**67.93E**±0.06, **h24km**, **n54**, **σ1§61/56**, **mb4.0/17**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**4.70**	**11**	Pn		**Pn**	**12 43 54.3**	**-0.9**
KBL	**Kabul**	**4.70**	**11**	P		**Pn**	**12 43 57.5**	**+2.2**
	SNR=12							
KBL				S		**Sn**	**12 44 51.2**	**+2.0**
NIL	**Nilore**	**5.86**	**49**			**Pn**	**12 44 12.6**	**+1.6**
NIL	**Nilore**	**5.86**	**49**	P		**Pn**	**12 44 12.8**	**+1.8**
HRA	**Herat**	**6.56**	**314**	Pn		**Pn**	**12 44 20.9**	**+0.1**
BHUJ	**Bhuj**	**6.82**	**167**	*e*S		**Sn**	**12 45 40.9**	**-0.1**
SMLA	**Simla**	**8.06**	**79**	*e*P		**Pn**	**12 44 43.0**	**+1.9**
SMLA				*e*S		**Sn**	**12 46 10.2**	**-1.4**
SMLA				IAML			12 46 14.2	
	comp=E,48nm,0.3s							
SMLA				IAML			12 46 14.2	
	comp=N,43nm,0.2s							
CHGR	**Chuyangaron**	**8.77**	**6**			**Pn**	**12 44 50.6**	**-0.4**
GAR	**Garm**	**9.27**	**12**	Pn		**Pn**	**12 44 57.2**	**-0.6**
WSAR	**Wadi Sarin**	**10.65**	**234**	Pn		**Pn**	**12 45 14.8**	**-1.9**
	comp=N,2.2nm,0.3s,baz=58,slow=4.8,SNR=23							
WSAR				Sn		Sn	12 47 03.9	-11
	comp=N,2.6nm,0.3s,baz=193,slow=17,SNR=10							
BHPL	**Bhopal**	**10.79**	**126**	*e*P		**Pn**	**12 45 20.2**	**+1.6**
BHPL				IAmb	IAmb		12 45 21.0	
	comp=Z,4.7nm,0.4s							
BHPL				*e*S		**Sn**	**12 47 14.6**	**-4.1**
BHPL				IAML			12 47 18.8	
	comp=E,129nm,0.3s							
BHPL				IAML			12 47 19.1	
	comp=N,129nm,0.2s							
WBK	**Wadi Bani Khal**	**10.84**	**230**	P		**Pn**	**12 45 17.5**	**-1.9**
	SNR=11							
JLN	**Jalan Bani Buh**	**10.88**	**227**	P		**Pn**	**12 45 18.7**	**-1.2**
	SNR=14							
BANOM	**Banah**	**11.03**	**252**	P		**Pn**	**12 45 20.9**	**-1.0**
	SNR=13							
SHME	**Shamm**	**11.11**	**253**	P		**Pn**	**12 45 22.4**	**-0.6**
SMDO	**Samad**	**11.18**	**235**	P		**Pn**	**12 45 23.6**	**-0.4**
MDH	**Madha**	**11.29**	**249**	P		**Pn**	**12 45 23.6**	**-1.9**
HOQ	**Hoqain**	**11.39**	**239**	P		**Pn**	**12 45 25.1**	**-1.8**
UOSS	**Minazif**	**11.53**	**247**	P		**Pn**	**12 45 28.5**	**-0.3**
JMDO	**Jabal Madar**	**11.59**	**232**	P		**Pn**	**12 45 29.5**	**-0.1**
	SNR=22							
MHTO	**MHTO**	**12.65**	**228**	P		**Pn**	**12 45 43.6**	**-0.4**
KK31	**Karatay Array**	**13.32**	**8**	Pn		**Pn**	**12 45 49.2**	**-3.9**
KKAR	**Karatay Array**	**13.32**	**8**	Pn		**Pn**	**12 45 49.2**	**-3.9**
KKAR	**Karatay Array**	**13.32**	**8**			**Pn**	**12 45 50.7**	**-2.4**
AAK	**Ala-Archa**	**13.74**	**21**	Pn		**Pn**	**12 45 57.1**	**-2.0**
	comp=N,1.4nm,0.3s,baz=227,slow=3.6,SNR=16							
AAK				LR		LR	12 50 52.6	
	comp=N,91nm,20.1s,baz=308,slow=36							
AAK	**Ala-Archa**	**13.74**	**21**	Pn		**Pn**	**12 45 57.3**	**-1.8**
AAK	**Ala-Archa**	**13.74**	**21**	P		**Pn**	**12 45 57.3**	**-1.8**
FRU1	**Bishkek**	**13.94**	**21**	Pn		**Pn**	**12 46 00.7**	**-1.0**
MK31	**Makanchi Array**	**20.21**	**30**	P		**P**	**12 47 17.6**	**-1.0**
MK31				IAmb	IAmb		12 47 46.3	
	comp=Z,5.3nm,1.2s							
MKAR	**Makanchi Array**	**20.21**	**30**	P		**P**	**12 47 17.6**	**-1.1**
	comp=Z,2.2nm,0.6s,baz=209,slow=11,SNR=16							
MKAR				LR		LR	12 56 43.4	
	comp=Z,110nm,20.4s,baz=265,slow=42							
MKAR	**Makanchi Array**	**20.21**	**30**	P		**P**	**12 47 17.4**	**-1.3**
ABKAR	**Akbulak array**	**20.25**	**345**	P		**P**	**12 47 18.2**	**-0.8**
ABKAR	**Akbulak array**	**20.25**	**345**	P		**P**	**12 47 18.5**	**-0.5**
ABKAR				IAmb	IAmb		12 47 19.8	
	comp=Z,6.1nm,0.7s							
AKTO	**Aktyubinsk**	**21.81**	**343**	P		**P**	**12 47 35.8**	**0.0**
	comp=Z,8.9nm,0.7s,baz=156,slow=13,SNR=32							
KURBB	**Kurchatov Arra**	**22.16**	**18**	P		**P**	**12 47 38.3**	**-1.3**
	comp=Z,6.0nm,0.8s,baz=208,slow=11,SNR=20							
KURK	**Kurchatov**	**22.27**	**18**	P		**P**	**12 47 38.4**	**-2.4**
BVAR	**Borovoye Array**	**23.16**	**4**	P		**P**	**12 47 49.5**	**-0.6**
	comp=Z,3.3nm,0.5s,baz=153,slow=18,SNR=28							
BRVK	**Borovoye**	**23.18**	**4**	P		**P**	**12 47 50.1**	**-0.3**
KBZ	**Khabaz**	**24.20**	**312**	P		**P**	**12 48 01.1**	**+0.9**
	comp=Z,2.2nm,0.5s,baz=111,slow=7.3,SNR=4.4							
ZAA0	**Zalesovo Array**	**26.96**	**22**	P		**P**	**12 48 25.3**	**+0.2**
ZAA0				IAmb	IAmb		12 48 37.0	
	comp=Z,4.6nm,1.1s							
ZALV	**Zalesovo Beam**	**26.96**	**22**	P		**P**	**12 48 24.4**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=224,slow=9.8,SNR=7.8							
ZALV	**Zalesovo Beam**	**26.96**	**22**	P		**P**	**12 48 25.4**	**+0.3**
BRTR	**Keskin Array B**	**29.65**	**299**	LR		LR	13 02 08.2	
	comp=Z,40nm,18.4s,baz=272,slow=39							
SONM	**Songino Array**	**34.44**	**48**	P		**P**	**12 49 32.7**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=253,slow=9.5,SNR=3.8							
FINES	**FINESS Array B**	**41.76**	**331**	P		**P**	**12 50 32.0**	**-0.6**
	comp=Z,3.4nm,1.1s,baz=134,slow=8.0,SNR=2.0							
ARCES	**ARCESS Array B**	**46.37**	**341**	P		**P**	**12 51 09.0**	**-0.6**
	comp=Z,2.7nm,0.8s,baz=132,slow=7.9,SNR=7.0							
NOA	**NORSAR Array B**	**48.28**	**327**	P		**P**	**12 51 22.5**	**-2.1**
	comp=Z,1.3nm,1.1s,baz=111,slow=7.6,SNR=2.2							
KLR	**Kul'dur**	**51.26**	**49**	P		**P**	**12 51 47.7**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=302,slow=8.9,SNR=5.2							
ESDC	**Sonseca Array**	**58.41**	**301**	P		**P**	**12 52 39.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=80,slow=8.0,SNR=2.1							
TORD	**Torodi Ar. Bea**	**63.06**	**270**	P		**P**	**12 53 13.9**	**+2.6**
	comp=Z,0.5nm,0.8s,baz=35,slow=5.3,SNR=2.2							
WRA	**Warramunga Arr**	**80.88**	**119**	P		**P**	**12 54 58.7**	**+0.7**
	comp=Z,0.3nm,0.9s,baz=268,slow=4.4,SNR=2.4							
ILAR	**Eielson Array**	**81.78**	**14**	P		**P**	**12 55 01.5**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=307,slow=5.2,SNR=1.9							
ASAR	**Alice Springs**	**82.76**	**122**	P		**P**	**12 55 09.1**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=311,slow=5.5,SNR=5.0							
YKA	**Yellowknife Ar**	**87.89**	**1**	P		**P**	**12 55 33.2**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=351,slow=4.7,SNR=18							

MAN ***15*** *12:54:19.0, 9.90N×126.02E, h10km, MS3.3*

MAN INTENSITY I - GENERAL LUNA.

NEIC ***15*** *12:54:21.6±2.4, 10.02N±0.08×126.0E±0.2, h80km±8km, mb4.3/29, Error ellipse: s-maj=24.6km s-min=11.3km az=79.0*

IDC ***15*** *12:54:23.9±2.0, 9.88N×125.92E, h105km±20km, mb3.6/17, mb1 3.8/19, mb1mx3.6/49, mbtmp4.0/19, MS2.9/1, Ms1 3.1/1, ms1mx2.5/30, Error ellipse: s-maj=26.3km s-min=11.9km az=76.0*

ISC 15 12:54:16.6±0.9, **9.92N**±0.03×**126.08E**±0.05, **h34km**±3km, **n70**, **σ1§34/80**, **mb4.2/29**, **4D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.14**	**159**	*e*P		**Pb**	**12 54 23.1**	**+0.2**
GLSP				*e*S		**Sb**	**12 54 28.8**	**+1.7**
BUTP	**Butuan**	**1.05**	**205**	*e*P		**Pb**	**12 54 37.0**	**+0.7**
BUTP				*e*S		**Sb**	**12 54 51.6**	**+1.9**
MSLP	**Maasin**	**1.22**	**280**	*e*P		**Pb**	**12 54 39.7**	**+0.6**
MSLP				*e*S		**Sb**	**12 54 58.3**	**+3.7**
OCLP	**Ormoc**	**1.83**	**308**	*e*P		**Pb**	**12 54 48.5**	**-1.0**
OCLP				*e*S		**Sb**	**12 55 14.9**	**+2.9**
CGP	**Cagayan de Oro**	**2.00**	**223**	*e*P		**Pb**	**12 54 51.8**	**-0.5**
CGP				*e*S		**Sb**	**12 55 17.9**	**+1.0**
LLP	**Lapu-Lapu**	**2.11**	**281**	*e*P		**Pb**	**12 54 53.6**	**-0.7**
LLP				*e*S		**Sb**	**12 55 20.9**	**+0.7**
BUKP	**Musuan**	**2.26**	**206**	*e*P		**Pb**	**12 54 55.7**	**-1.2**
BUKP				*e*S		**Sb**	**12 55 27.6**	**+3.1**
DAV	**Davao City (W)**	**2.87**	**190**	P		**Pb**	**12 55 09.0**	**+1.7**
	47nm,0.3s,baz=217,slow=13,SNR=1.6							
DAV				S		**Sb**	**12 55 40.9**	**-1.1**
	56nm,0.3s,baz=344,slow=20,SNR=3.8							
DAV	**Davao City (W)**	**2.87**	**190**			**Pb**	**12 55 08.1**	**+0.8**
MATI	**Mati**	**2.96**	**176**	*e*P		**Pb**	**12 55 07.5**	**-1.3**
MATI				*e*S		**Sn**	**12 55 39.4**	**+3.7**
KCP	**Kidapawan**	**3.05**	**199**	*e*P		**Pb**	**12 55 09.1**	**-1.3**
KCP				*i* S		**Sb**	**12 55 45.5**	**-1.7**
PAGZ	**Pagadian**	**3.36**	**232**	*e*P		Pb	12 55 10.3	-5.3
PAGZ				*e*S		**Sn**	**12 55 47.9**	**+2.3**
GUIM	**Jordan**	**3.50**	**282**	*e*P		Pb	12 55 11.8	-6.2
GUIM				*e*S		**Sb**	**12 55 56.1**	**-3.9**
RCP	**Roxas**	**3.66**	**297**	*e*P		Pb	12 55 15.2	-5.3
DDMP	**Don Marcelino,**	**3.81**	**185**	*e*P		**Pb**	**12 55 21.1**	**-2.1**
DDMP				*e*S		**Sn**	**12 55 54.0**	**-2.6**
SZP	**Santa**	**9.34**	**325**	Pn		**Pn**	**12 56 30.0**	**+1.0**
TPUB	**Ta-pu**	**14.29**	**339**			**P**	**12 57 42.7**	**-0.7**
SSLB	**Suanglung**	**14.63**	**341**	Pn		**Pn**	**12 57 42.9**	**+1.6**
SBUM	**Sibu**	**15.64**	**243**	P		**P**	**12 57 59.0**	**+0.6**
JOW	**Kunigami**	**16.95**	**7**	P		**P**	**12 58 16.2**	**+3.3**
	0.7nm,0.3s,baz=281,slow=6.3,SNR=3.7							
JOW	**Kunigami**	**16.95**	**7**	IAmb	IAmb		12 58 35.6	
	comp=Z,28nm,1.3s							
MTN	**Manton Dam**	**23.17**	**167**	P		**P**	**12 59 20.3**	**-0.1**
MTN				IAmb	IAmb		12 59 28.3	
	comp=Z,19nm,1.4s							
KNRA	**Kununurra**	**25.57**	**174**	P		**P**	**12 59 42.9**	**+0.2**
KNRA				IAmb	IAmb		12 59 53.4	
	comp=Z,7.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**27.61**	**291**	P		**P**	**13 00 00.1**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=94,slow=7.3,SNR=5.9							
CMAR				LR		LR	13 10 54.5	
	comp=Z,23nm,19.7s,baz=240,slow=36							
CMAR	**Chiang Mai Arr**	**27.61**	**291**	P		**P**	**13 00 00.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**27.84**	**181**	P		**P**	**13 00 03.6**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=11,slow=10,SNR=11							
FITZ	**Fitzroy Crossi**	**27.84**	**181**	P		**P**	**13 00 03.7**	**+0.6**
WB0	**Warramunga Arr**	**30.62**	**164**	P		**P**	**13 00 27.3**	**-0.5**
WB0				IAmb	IAmb		13 00 42.8	
	comp=Z,11nm,1.5s							
WRAB	**Tennant Creek**	**30.76**	**165**	P		**P**	**13 00 28.4**	**-0.7**
WRAB				IAmb	IAmb		13 00 34.7	
	comp=Z,4.7nm,1.1s							
WRA	**Warramunga Arr**	**30.77**	**165**	P		**P**	**13 00 28.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=343,slow=8.2,SNR=11							
WRA	**Warramunga Arr**	**30.77**	**165**	P		**P**	**13 00 29.7**	**+0.6**
WB2	**Warramunga Arr**	**30.77**	**165**	P		**P**	**13 00 30.3**	**+1.1**
WB2				IAmb	IAmb		13 00 30.4	
	comp=Z,13nm,1.4s							
WR0	**Warramunga Arr**	**30.84**	**164**	P		**P**	**13 00 29.6**	**-0.1**
PSA00	**Pilbara Seismi**	**31.89**	**191**	P		**P**	**13 00 39.0**	**+0.1**
ASAR	**Alice Springs**	**34.25**	**167**	P		**P**	**13 00 59.4**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=352,slow=7.0,SNR=18							
ASAR				PcP		**PcP**	**13 03 35.5**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=344,slow=2.1,SNR=4.1							
ASAR	**Alice Springs**	**34.25**	**167**	P		**P**	**13 00 59.7**	**+0.1**
KLR	**Kul'dur**	**39.47**	**6**	P		**P**	**13 01 43.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=209,slow=13,SNR=1.9							
FORT	**Forrest**	**40.51**	**177**	P		**P**	**13 01 53.5**	**+1.0**
SONM	**Songino Array**	**41.28**	**340**	P		**P**	**13 01 58.7**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=159,slow=11,SNR=5.0							
SONM	**Songino Array**	**41.28**	**340**	P		**P**	**13 01 58.7**	**-0.1**
BBOO	**Buckleboo**	**43.55**	**168**	P		**P**	**13 02 18.0**	**+0.7**
STKA	**Stephens Creek**	**44.13**	**161**	P		**P**	**13 02 22.0**	**0.0**
	comp=Z,0.7nm,0.4s,baz=337,slow=13,SNR=4.4							
STKA	**Stephens Creek**	**44.13**	**161**	P		**P**	**13 02 22.0**	**0.0**
CAN	**Canberra**	**49.94**	**155**	P		**P**	**13 03 07.7**	**+0.3**
PETK	**Petropavlovsk-**	**50.03**	**24**	P		**P**	**13 03 08.5**	**+0.7**
	comp=Z,0.

SNAA Sn Sn 13 33 25.9 -13
0.3nm,0.3s,baz=331,slow=21,SNR=2.1
SNAA LR LR 13 35 33.0
comp=Z,278nm,19.8s,baz=322,slow=32
SNAA Sanae 15.56 154 Pn **Pn 13 30 46.9 +0.5**
PMSA Palmer Station 19.18 236 LR LR 13 38 28.0
comp=Z,974nm,18.1s,baz=82,slow=35
BELA Belgrano 2 19.31 186 P **Pn 13 31 34.5 +1.4**
EFI East Falkland 20.14 277 P **P 13 31 42.0 +0.7**
MG02 Cerro Sombrero 25.32 264 P **P 13 32 32.2 -1.6**
GO09 Cerro Castillo 27.76 265 P **P 13 32 55.5 -0.3**
GO09 IAmb IAmb 13 33 17.1
comp=Z,35nm,1.4s
QSPA South Pole Qui 31.30 180 P **P 13 33 30.1 +2.7**
comp=Z,5.2nm,0.8s,baz=209,slow=3.8,SNR=25
QSPA South Pole Qui 31.30 180 P **P 13 33 29.8 +2.4**
QSPA IAmb IAmb 13 33 44.6
comp=Z,20nm,1.4s
PLTB Pedras Altas 33.41 312 *eP* **P 13 33 45.1 -0.8**
PLCA Paso Flores 33.86 282 P **P 13 33 49.4 -0.4**
comp=Z,12nm,1.0s,baz=148,slow=8.5,SNR=19
PLCA PcP **PcP 13 36 29.2 +0.9**
comp=Z,2.4nm,0.7s,baz=190,slow=3.3,SNR=5.4
PLCA LR LR 13 48 02.1
comp=Z,437nm,18.1s,baz=132,slow=37
PLCA Paso Flores 33.86 282 P **P 13 33 49.3 -0.5**
PLCA IAmb IAmb 13 33 52.3
comp=Z,16nm,1.1s
CPSB Cacapava Do Su 34.56 313 *eP* **P 13 33 55.7 -0.2**
LL04 Puerto Octay 34.67 280 P **P 13 33 55.9 -0.8**
LL04 IAmb IAmb 13 33 59.0
comp=Z,7.7nm,0.8s
MAW Mawson 37.05 141 P **P 13 34 18.3 +1.5**
comp=Z,5.2nm,1.0s,baz=229,slow=5.2,SNR=5.1
MAW LR LR 13 47 58.0
comp=Z,167nm,19.6s,baz=242,slow=34
MAW Mawson 37.05 141 P **P 13 34 18.0 +1.2**
MAN01 Angra dos Reis 38.56 331 *eP* **P 13 34 31.9 +1.8**
SPB Sao Paulo 38.82 326 P **P 13 34 32.3 +0.2**
SPB IAmb IAmb 13 34 34.6
comp=Z,35nm,1.1s
SPB Sao Paulo 38.82 326 *eP* **P 13 34 33.5 +1.4**
VAO Valinhos 39.24 327 *eP* **P 13 34 37.2 +1.4**
PTGB Pitanga 39.24 319 *eP* **P 13 34 35.0 -0.8**
MT09 Talagante 39.48 289 P **P 13 34 37.9 0.0**
FRTB Fartura 39.70 323 *eP* **P 13 34 40.3 +0.7**
CPUP Villa Florida 39.71 311 P **P 13 34 38.2 -1.4**
comp=Z,2.4nm,0.8s,baz=132,slow=7.8,SNR=4.9
CPUP PcP **PcP 13 36 46.4 +0.4**
comp=Z,1.0nm,0.3s,baz=164,slow=2.1,SNR=4.3
CPUP LR LR 13 50 09.3
comp=Z,97nm,18.9s,baz=163,slow=35
CPUP Villa Florida 39.71 311 IAmb IAmb 13 34 38.9
comp=Z,9.3nm,1.3s
PEL Peldehue 39.85 290 P **P 13 34 38.5 -2.2**
MT02 Curacav 39.98 289 P **P 13 34 40.7 -1.1**
MT02 IAmb IAmb 13 34 42.6
comp=Z,32nm,0.9s
BSCB Bom Sucesso 40.56 330 *eP* **P 13 34 47.4 +0.6**
SBA Scott Base 43.28 184 P **P 13 35 10.4 +2.1**
VNDA Vanda 43.74 182 P **P 13 35 15.4 +3.4**
comp=Z,5.2nm,0.8s,baz=183,slow=7.1,SNR=28
VNDA LR LR 13 53 00.9
comp=Z,58nm,19.2s,baz=164,slow=35
VNDA Vanda 43.74 182 P **P 13 35 14.0 +2.0**
AC04 Llanos de Chal 44.12 293 P **P 13 35 15.5 -0.1**
IPMB Ipameri, GO 44.35 327 *eP* **P 13 35 18.2 +0.6**
BOSA Boshof 45.53 71 LR LR 13 51 05.7
comp=Z,181nm,18.6s,baz=198,slow=32
GO02 Mina Guanaco 46.00 297 P **P 13 35 30.6 -0.3**
GO02 IAmb IAmb 13 35 45.4
comp=Z,12nm,1.1s
JANB Januaria 46.15 333 *eP* **P 13 35 32.4 +0.4**
BDFB Brasilia 46.53 328 P **P 13 35 35.8 +0.9**
comp=Z,23nm,0.9s,baz=143,slow=4.9,SNR=21
BDFB Brasilia 46.53 328 P **P 13 35 35.3 +0.3**
PP1B Ponte de Pedra 46.79 319 *eP* **P 13 35 36.4 -0.5**
ARAG Araguaiana, MT 47.57 324 *eP* **P 13 35 43.4 +0.4**
LBTB Lobatse 48.71 68 P **P 13 35 51.8 0.0**
comp=Z,7.6nm,1.0s,baz=207,slow=10,SNR=5.9
LBTB Lobatse 48.71 68 P **P 13 35 51.4 -0.4**
LBTB IAmb IAmb 13 35 52.5
comp=Z,11nm,1.0s
SDBA SAO DESIDERIO 48.85 333 *eP* **P 13 35 53.4 +0.5**
PB07 IPOC Station P 49.10 299 P **P 13 35 54.2 -0.8**
PB07 IAmb IAmb 13 36 15.8
comp=Z,20nm,1.4s
PB01 IPOC Station P 49.52 300 P **P 13 35 57.4 -0.7**
PB01 IAmb IAmb 13 35 58.7
comp=Z,9.2nm,1.1s
PEXB Peixe 49.98 329 *eP* **P 13 36 02.3 +0.8**
PTLB Pontes e Lacer 50.29 315 *eP* **P 13 36 02.4 -1.4**
H10S2 ASCENSION HYDR 50.46 13 T T 14 30 42.5
baz=33,slow=74,SNR=9.4
H10S3 ASCENSION HYDR 50.46 13 T T 14 30 36.3
baz=187,slow=74,SNR=14
PB11 IPOC Station P 50.72 301 P **P 13 36 06.5 -0.7**
PB11 IAmb IAmb 13 36 08.7
comp=Z,15nm,1.1s
PSGCX Pisagua 51.07 300 P **P 13 36 09.4 -0.4**
PSGCX IAmb IAmb 13 36 21.5
comp=Z,17nm,1.4s
MNMC Minye Minye 51.24 301 P **P 13 36 10.3 -1.0**
MNMC IAmb IAmb 13 36 11.6
comp=Z,10nm,1.0s
H10N1 ASCENSION HYDR 51.58 13 T T 14 31 54.8
baz=202,slow=75,SNR=3.9
H10N3 ASCENSION HYDR 51.58 13 T T 14 32 05.7
baz=202,slow=75,SNR=7.5
H10N2 ASCENSION HYDR 51.59 13 T T 14 32 08.5
baz=202,slow=75,SNR=7.8
VILB Vilhena 52.98 315 *eP* **P 13 36 23.1 -0.8**
LPAZ La Paz 53.12 304 P **P 13 36 25.2 -0.5**
comp=Z,4.1nm,0.7s,baz=152,slow=7.6,SNR=15
LPAZ LR LR 14 01 48.2
comp=Z,72nm,18.4s,baz=166,slow=39
LPAZ La Paz 53.12 304 P **P 13 36 24.0 -1.7**
LPAZ La Paz 53.12 304 *eP* **P 13 36 24.0 -1.7**
CLDB Colider 53.38 321 *eP* **P 13 36 25.9 -1.0**
PRPB Parauapebas 56.06 329 *eP* **P 13 36 46.1 -0.2**
NPGB Novo Progresso 56.83 323 *eP* **P 13 36 51.1 -0.7**
SAML Samuel 57.77 313 P **P 13 36 56.6 -1.9**
ETMB Extrema 58.15 310 *eP* **P 13 36 59.8 -1.3**
LSZ Lusaka 58.29 65 P **P 13 37 01.3 -0.9**
LSZ IAmb IAmb 13 37 07.3
comp=Z,9.0nm,1.2s
TMAB Tom-Au,PA,Br 59.29 333 *eP* **P 13 37 10.6 +1.6**
ITTB Itaituba 59.48 323 *eP* **P 13 37 09.8 -0.6**
MALB Monte Alegre 61.42 326 *eP* **P 13 37 23.5 -0.1**
MCPB Macapa, AP 62.23 329 *eP* **P 13 37 30.0 +1.0**
PTGA Pitinga 64.26 320 LR LR 14 05 20.9
comp=Z,81nm,18.1s,baz=96,slow=36
PTGA Pitinga 64.26 320 P **P 13 37 41.5 -1.0**
PTGA IAmb IAmb 13 37 56.6
comp=Z,12nm,1.4s
DBIC Dimbokro 67.31 21 P **P 13 38 02.7 +0.6**
comp=Z,3.5nm,0.7s,baz=128,slow=8.5,SNR=3.9
DBIC LR LR 14 00 14.5
comp=Z,56nm,19.9s,baz=155,slow=30
BOAV Boa Vista 67.37 321 *eP* **P 13 38 02.3 -0.2**
OTAV Otavalo 72.34 302 P **P 13 38 32.5 -1.2**
OTAV IAmb IAmb 13 38 35.0
comp=Z,13nm,1.4s
ROSC El Rosal 74.73 308 LR LR 14 12 23.4
comp=Z,83nm,21.1s,baz=200,slow=36
KMBO Kilima Mbogo 74.92 66 LR LR 14 09 01.3
comp=Z,272nm,19.0s,baz=104,slow=34
TOA0 Torodi Ar. Sit 74.98 27 P **P 13 38 48.9 +0.3**
TOA0 IAmb IAmb 13 39 02.2
comp=Z,7.1nm,0.8s
TORD Torodi Ar. Bea 74.98 27 P **P 13 38 49.4 +0.8**
comp=Z,5.7nm,0.7s,baz=192,slow=6.2,SNR=21
TORD LR LR 14 06 10.7
comp=Z,81nm,19.5s,baz=205,slow=31
TORD Torodi Ar. Bea 74.98 27 P **P 13 38 48.7 +0.2**
KOWA Kowa 75.10 21 LR LR 14 04 19.6
comp=Z,72nm,21.4s,baz=202,slow=30
MLZ Mavora Lakes 75.52 189 P **P 13 38 52.5 +1.0**
STKA Stephens Creek 88.81 168 P **P 13 40 01.7 +0.5**
comp=Z,2.0nm,0.8s,baz=169,slow=8.4,SNR=5.2
ASAR Alice Springs 95.82 160 P **P 13 40 34.4 +0.5**
comp=Z,0.6nm,0.8s,baz=181,slow=6.3,SNR=3.4
ESDC Sonseca Array 99.76 16 LR LR 14 22 32.8
comp=Z,49nm,18.2s,baz=130,slow=33
CMAR Chiang Mai Arr 122.82 110 PKP **PKiKP 13 46 03.6 +0.1**
comp=Z,1.1nm,0.8s,baz=234,slow=3.6,SNR=9.8
CMAR Chiang Mai Arr 122.82 110 PKPdf **PKPdf 13 46 03.0 -0.3**
PDAR Pinedale Array 122.96 299 PKP **PKiKP 13 46 03.2 -0.1**
comp=Z,0.2nm,0.4s,baz=123,slow=3.2,SNR=3.5
ULM Lac du Bonnet 123.23 313 PKP **PKPdf 13 46 02.0 -1.0**
comp=Z,1.9nm,1.0s,baz=232,slow=4.0,SNR=3.0
NVAR Mina Array Bea 123.69 290 PKP **PKiKP 13 46 06.2 +1.3**
comp=Z,0.4nm,0.6s,baz=151,slow=2.1,SNR=3.4
FINES FINESS Array B 126.33 28 PKP **PKPdf 13 46 08.4 -0.2**
comp=Z,0.9nm,0.5s,baz=219,slow=2.4,SNR=6.9
ARCES ARCESS Array B 133.14 22 PKP **PKPdf 13 46 21.5 +0.1**
comp=Z,2.5nm,0.8s,baz=28,slow=2.9,SNR=4.4
BVAR Borovoye Array 135.19 59 PKP **PKPdf 13 46 25.9 +0.2**
comp=Z,1.6nm,0.9s,baz=152,slow=16,SNR=6.3
MKAR Makanchi Array 136.52 73 PKP **PKPdf 13 46 27.7 -0.7**
comp=Z,0.8nm,0.9s,baz=259,slow=1.2,SNR=4.3
KURBB Kurchatov Arra 137.30 66 PKP **PKPdf 13 46 29.8 +0.2**
comp=Z,0.6nm,0.8s,baz=227,slow=2.2,SNR=4.6
YKA Yellowknife Ar 139.18 315 PKhKP PKPpre 13 46 22.3
comp=Z,0.4nm,0.8s,baz=111,slow=2.4,SNR=4.8
YKA PKP **PKPdf 13 46 32.5 -0.2**
comp=Z,2.6nm,0.8s,baz=125,slow=2.5,SNR=20
YKA PP **PP 13 49 24.2 -2.9**
comp=Z,0.5nm,0.9s,baz=116,slow=7.0,SNR=3.6
YKA SKPbc **SKPbc 13 50 07.8 +0.2**
comp=Z,1.0nm,0.9s,baz=127,slow=2.5,SNR=5.3
ZALV Zalesovo Beam 142.40 66 PKP **PKPdf 13 46 38.3 -0.5**
comp=Z,0.7nm,0.5s,baz=236,slow=1.0,SNR=4.4
INK Inuvik 148.86 317 PKPbc **PKPbc 13 46 53.9 +0.5**
comp=Z,13nm,0.8s,baz=86,slow=2.8,SNR=36
SONM Songino Array 149.50 90 PKP **PKPdf 13 46 50.9 -0.4**
comp=Z,0.4nm,0.6s,baz=201,slow=2.1,SNR=2.9
SONM PKPbc **PKPbc 13 46 56.2 +0.4**
comp=Z,2.2nm,0.9s,baz=204,slow=1.3,SNR=12
SONM Songino Array 149.50 90 **PKPbc 13 46 55.5 -0.4**
NRIK Noril'sk 150.36 42 PKPbc **PKiKP 13 46 57.8 0.0**
comp=Z,1.9nm,0.4s,baz=28,slow=1.9,SNR=3.7
KSRS Korea Array 152.17 128 PKPbc **PKiKP 13 47 02.9 +0.4**
comp=Z,2.9nm,1.1s,baz=182,slow=1.9,SNR=5.2
ILAR Eielson Array 152.98 307 PKPbc **PKiKP 13 47 03.7 +0.3**
comp=Z,7.4nm,0.9s,baz=150,slow=1.6,SNR=33

*IDC **15** 13:54:29.9±2.8, 47.°07S×165.°53E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/23, mbtmp3.8/3, ML3.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/17, Error ellipse: s-maj=74.1km s-min=30.4km az=167.0*
*NEIC **15** 13:54:30.6±0.8, 47.°6S±0.°1×165.°6E±0.°2, h25km±10km, mb4.0/7, Error ellipse: s-maj=21.8km s-min=16.2km az=123.0*
ISC 15 13:54:29.6±1.2, 47.°6S±0.°1×165.°65E±0.°08, h14km, n50, σ1s24/54, mb3.9/7, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	**1.58**	**27**		**Pn**	**13 54 55.8**	**-1.5**
PYZ	**Puysegur Point**	**1.58**	**27**	P	**Pn**	**13 54 57.0**	**-0.3**
APZ	**The Paps**	**1.76**	**66**	P	**Pn**	**13 54 60.0**	**+0.2**
APZ				S	**Sn**	**13 55 21.8**	**-0.2**
WHZ	**Wether Hill Ro**	**2.31**	**44**		**Pn**	**13 55 06.8**	**-0.5**
WHZ	**Wether Hill Ro**	**2.31**	**44**	P	**Pn**	**13 55 07.2**	**-0.1**
WHZ				S	**Sn**	**13 55 35.7**	**+0.1**
DCZ	**Deep Cove**	**2.36**	**27**		**Pn**	**13 55 07.3**	**-0.6**
DCZ	**Deep Cove**	**2.36**	**27**	P	**Pn**	**13 55 07.7**	**-0.2**
SYZ	**Scrubby Hill**	**2.60**	**68**	P	**Pn**	**13 55 13.3**	**+2.0**
MLZ	**Mavora Lakes**	**2.79**	**38**		**Pn**	**13 55 14.3**	**+0.3**
MLZ	**Mavora Lakes**	**2.79**	**38**	P	**Pn**	**13 55 14.5**	**+0.5**
TUZ	**Tuapeka**	**3.18**	**61**	P	**Pn**	**13 55 20.5**	**+1.3**
TUZ				S	**Sn**	**13 55 58.4**	**+1.4**
MSZ	**Milford Sound**	**3.31**	**29**	P	**Pn**	**13 55 23.0**	**+2.1**
EAZ	**Earnscleugh**	**3.45**	**48**	P	**Pn**	**13 55 23.6**	**+0.6**
WKZ	**Wanaka**	**3.61**	**42**		**Pn**	**13 55 26.3**	**+1.1**
WKZ	**Wanaka**	**3.61**	**42**	P	**Pn**	**13 55 26.6**	**+1.4**
WKZ				S	**Sn**	**13 56 10.4**	**+2.8**
JCZ	**Jackson Bay**	**4.13**	**33**	P	**Pn**	**13 55 34.7**	**+2.3**
ODZ	**Otahua Downs**	**4.29**	**56**	Pn	**Pn**	**13 55 33.9**	**-0.6**
ODZ	**Otahua Downs**	**4.29**	**56**	P	**Pn**	**13 55 33.7**	**-0.8**
LBZ	**Lake Benmore**	**4.49**	**46**	Pn	**Pn**	**13 55 36.7**	**-0.6**
LBZ	**Lake Benmore**	**4.49**	**46**	P	**Pn**	**13 55 37.1**	**-0.2**
FOZ	**Fox Glacier**	**4.99**	**37**	Pn	**Pn**	**13 55 43.4**	**-0.7**
FOZ	**Fox Glacier**	**4.99**	**37**	P	**Pn**	**13 55 45.3**	**+1.2**
GCSZ	**Gaunt Creek Bo**	**5.38**	**39**	P	**Pn**	**13 55 50.3**	**+0.8**
RPZ	**Rata Peaks**	**5.41**	**46**	Pn	**Pn**	**13 55 48.7**	**-1.2**
	1.5nm,0.3s,baz=117,slow=14,SNR=3.0						
RPZ				Sn	**Sn**	**13 56 48.7**	**-3.3**
	1.7nm,0.3s,baz=160,slow=19,SNR=1.8						
RPZ	**Rata Peaks**	**5.41**	**46**		**Pn**	**13 55 48.1**	**-1.8**
RPZ	**Rata Peaks**	**5.41**	**46**	P	**Pn**	**13 55 48.9**	**-1.0**
WVZ	**Waitaha Valley**	**5.76**	**40**	P	**Pn**	**13 55 56.1**	**+1.5**
OXZ	**Oxford**	**6.19**	**49**	Pn	**Pn**	**13 56 00.7**	**+0.2**
INZ	**Inchbonnie**	**6.35**	**42**	P	**Pn**	**13 56 03.2**	**+0.4**
LTZ	**Lake Taylor**	**6.70**	**47**	Pn	**Pn**	**13 56 07.0**	**-0.6**
LTZ	**Lake Taylor**	**6.70**	**47**	P	**Pn**	**13 56 06.3**	**-1.3**
DSZ	**Denniston Nort**	**7.30**	**39**	P	**Pn**	**13 56 15.8**	**0.0**
KHZ	**Kahutara**	**7.61**	**50**	P	**Pn**	**13 56 18.2**	**-1.8**
THZ	**Tophouse**	**7.78**	**44**	Pn	**Pn**	**13 56 22.1**	**-0.3**
THZ	**Tophouse**	**7.78**	**44**	P	**Pn**	**13 56 22.4**	**0.0**
QRZ	**Quartz Range**	**8.36**	**39**	Pn	**Pn**	**13 56 30.7**	**+0.3**
QRZ	**Quartz Range**	**8.36**	**39**	P	**Pn**	**13 56 30.8**	**+0.4**
VRZ	**Vera Road**	**10.73**	**41**	P	**Pn**	**13 57 01.6**	**-1.3**
HIZ	**Hauiti**	**11.28**	**40**	Pn	**Pn**	**13 57 09.8**	**-0.6**
URZ	**Urewera**	**12.53**	**46**	LR	LR	14 02 05.3	
	comp=Z,214nm,20.3s,baz=211,slow=37						
STKA	**Stephens Creek**	**24.11**	**302**	P	**P**	**13 59 46.9**	**+2.0**
STKA				IAmb	IAmb	13 59 52.8	
	comp=Z,0.5nm,1.1s						
ASAR	**Alice Springs**	**34.75**	**302**	P	**P**	**14 01 19.1**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=131,slow=8.5,SNR=29						
AS31	**Alice Springs**	**34.75**	**302**	P	**P**	**14 01 19.2**	**-0.3**
AS31				IAmb	IAmb	14 01 26.0	
	comp=Z,0.7nm,0.6s						
WR0	**Warramunga Arr**	**37.35**	**307**	P	**P**	**14 01 41.0**	**-0.7**
WB2	**Warramunga Arr**	**37.46**	**307**	P	**P**	**14 01 41.8**	**-0.9**
WB2				IAmb	IAmb	14 02 01.5	
	comp=Z,6.0nm,1.2s						
WRA	**Warramunga Arr**	**37.47**	**307**	P	**P**	**14 01 41.9**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=138,slow=7.8,SNR=9.2						
WRAB	**Tennant Creek**	**37.47**	**307**	P	**P**	**14 01 41.7**	**-1.0**
WRAB				IAmb	IAmb	14 02 04.6	
	comp=Z,5.7nm,1.2s						
WB0	**Warramunga Arr**	**37.58**	**307**	P	**P**	**14 01 41.9**	**-1.8**
WB0				IAmb	IAmb	14 02 01.2	
	comp=Z,4.8nm,1.1s						
BRTR	**Keskin Array B**	**144.88**	**275**	PKP	**PKiKP**	**14 14 07.8**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=189,slow=7.4,SNR=3.6						
FINES	**FINESS Array B**	**153.26**	**316**	PKPbc	**PKiKP**	**14 14 27.3**	**+1.3**
	comp=Z,1.5nm,0.9s,baz=64,slow=4.7,SNR=1.6						

*IDC **15** 14:07:46.4±1.9, 37.°78N×90.°92E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.1/55, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=71.6km s-min=25.5km az=56.0*
*NNC **15** 14:07:53.1±1.4, 38.°68N×90.°96E, h0km, mb3.7, Error ellipse: s-maj=14.9km s-min=10.4km az=57.0*
ISC 15 14:07:51.1±1.5, 38.°3N±0.°2×91.°2E±0.°1, h35km, n7, σ0s90/10, 3C-2D, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**10.20**	**303**	⇑P	**Pn**	**14 10 15.7**	**+0.6**
	2.9nm,1.1s						
PDGK				⇑S	**Sn**	**14 12 08.7**	**+0.4**
	6.5nm,0.6s						
MK31	**Makanchi Array**	**10.73**	**325**	⇓P	**Pn**	**14 10 22.6**	**+0.4**
	0.3nm,0.3s,baz=141,slow=14,SNR=44						
MK31				⇑S	**Sn**	**14 12 19.9**	**-1.0**
	2.7nm,0.6s,baz=138,slow=25,SNR=11						
MKAR	**Makanchi Array**	**10.73**	**325**	Pn	**Pn**	**14 10 22.7**	**+0.5**
	0.5nm,0.3s,baz=136,slow=14,SNR=38						
MKAR				Sn	**Sn**	**14 12 20.4**	**-0.6**
	0.6nm,0.3s,baz=141,slow=25,SNR=11						
MAKZ	**Makanchi**	**10.88**	**324**	⇓S	**Sn**	**14 12 23.5**	**-1.3**
	3.5nm,0.8s						
SONM	**Songino Array**	**14.60**	**44**	Pn	**P**	**14 11 21.7**	**+0.7**
	baz=235,slow=12,SNR=1.5						
SONM				Lg	Lg	14 15 27.6	
	0.1nm,0.3s,baz=234,slow=32,SNR=2.2						
KURBB	**Kurchatov Arra**	**15.26**	**328**	Pn	**Pn**	**14 11 24.3**	**+0.6**
	0.0nm,0.3s,baz=140,slow=12,SNR=1.1						
ASAR	**Alice Springs**	**73.51**	**140**	P	**P**	**14 19 19.4**	**-0.8**
	0.3nm,0.8s,baz=321,slow=5.2,SNR=4.7						

IDC 15 14:14:21.1±7.3, 10.°19S×161.°70E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/27, mbtmp3.6/5, Error ellipse: s-maj=198.6km s-min=39.8km az=118.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**28.10**	**247**	P	P	14 20 15.1	+0.2
	0.7nm,0.7s,baz=74,slow=9.5,SNR=5.4						
H11S2	**WAKE ISLAND Hy**	**28.93**	**10**	T	T	14 51 22.5	
	baz=187						
H11S3	**WAKE ISLAND Hy**	**28.93**	**10**	T	T	14 51 05.1	
	baz=187						
H11S1	**WAKE ISLAND Hy**	**28.94**	**10**	T	T	14 49 34.9	
	baz=187						
ASAR	**Alice Springs**	**29.70**	**240**	P	P	14 20 28.3	-0.8
	0.5nm,0.9s,baz=61,slow=9.6,SNR=3.3						
H11N1	**WAKE ISLAND Hy**	**30.16**	**10**	T	T	14 52 32.8	
	baz=193						
H11N3	**WAKE ISLAND Hy**	**30.16**	**10**	T	T	14 51 52.9	
	baz=193						
H11N2	**WAKE ISLAND Hy**	**30.17**	**10**	T	T	14 51 56.7	
	baz=193						
CMAR	**Chiang Mai Arr**	**68.14**	**295**	P	P	14 25 24.6	+1.1
	0.3nm,0.7s,baz=104,slow=6.6,SNR=1.8						
SONM	**Songino Array**	**75.67**	**325**	P	P	14 26 08.6	+0.2
	0.4nm,0.7s,baz=130,slow=4.5,SNR=3.0						
MKAR	**Makanchi Array**	**90.20**	**318**	P	P	14 27 22.7	-0.9
	0.5nm,0.7s,baz=99,slow=4.5,SNR=4.7						

*NEIC **15** 14:45:38.4±1.5, 59.°1S±0.°1×24.°8W±0.°3, h10km±1km, mb4.3/10, Error ellipse: s-maj=25.7km s-min=16.4km az=61.0*
*IDC **15** 14:45:40.6±1.9, 58.°37S×25.°22W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/21, mbtmp3.9/3, MS3.2/2, Ms1 3.1/2, ms1mx2.7/20, Error ellipse: s-maj=83.2km s-min=37.0km az=177.0*
ISC 15 14:45:38.4±0.6, 59.°27S±0.°09×24.°4W±0.°1, h10km, n23, σ1s96/24, mb4.2/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**8.30**	**302**		**Pn**	**14 47 42.7**	**+4.0**
VNA1	**Neumayer--Stat**	**13.24**	**156**	P	**P**	**14 48 53.3**	**-2.8**
VNA3	**Neumayer Olymp**	**13.45**	**159**	P	**P**	**14 48 55.1**	**-3.3**
VNA3				S	**Sn**	**14 51 19.8**	**+1.5**
VNA2	**Neumayer--Watz**	**13.64**	**156**	P	**P**	**14 48 58.2**	**-2.3**
	baz=325,slow=15						
VNA2				S	**Sn**	**14 51 22.0**	**-0.9**
SNAA	**Sanae**	**15.19**	**154**	P	**P**	**14 49 19.0**	**+1.2**
SNAA				S	**Sn**	**14 52 02.1**	**+1.4**
SNAA	**Sanae**	**15.19**	**154**		**P**	**14 49 18.8**	**+1.1**
SNAA				IAmb	IAmb	14 49 22.7	
	comp=Z,14nm,1.4s						
BELA	**Belgrano 2**	**19.00**	**187**	P	**Pn**	**14 50 00.5**	**0.0**
BELA				IAmb	IAmb	14 50 03.7	
	comp=Z,6.5nm,0.7s						
EFI	**East Falkland**	**20.36**	**277**	P	**P**	**14 50 15.0**	**+0.3**
QSPA	**South Pole Qui**	**30.98**	**180**	P	**P**	**14 51 57.3**	**+1.7**
PLCA	**Paso Flores**	**34.10**	**282**	P	**P**	**14 52 21.0**	**-1.9**
	comp=Z,2.4nm,1.0s,baz=110,slow=13,SNR=4.0						
PLCA				LR	LR	15 06 17.9	
	comp=Z,42nm,19.1s,baz=168,slow=37						
PLCA	**Paso Flores**	**34.10**	**282**	P	**P**	**14 52 21.1**	**-1.9**
PLCA				IAmb	IAmb	14 52 30.1	
	comp=Z,2.4nm,1.0s						
BOSA	**Boshof**	**45.48**	**70**	LR	LR	15 08 13.0	
	comp=Z,21nm,20.1s,baz=191,slow=30						
BDFB	**Brasilia**	**46.90**	**328**	P	**P**	**14 54 07.2**	**-1.8**
BDFB				IAmb	IAmb	14 54 09.4	
	comp=Z,3.6nm,0.8s						
LBTB	**Lobatse**	**48.67**	**68**	P	**P**	**14 54 23.7**	**+1.0**
CASY	**Casey**	**50.36**	**158**	P	**P**	**14 54 35.8**	**+0.9**
CASY				IAmb	IAmb	14 54 52.8	
	comp=Z,13nm,1.1s						
LPAZ	**La Paz**	**53.45**	**304**	P	**P**	**14 54 56.9**	**-2.3**
	comp=Z,0.6nm,0.5s,baz=180,slow=4.5,SNR=1.8						
LPAZ	**La Paz**	**53.45**	**304**	IAmb	IAmb	14 55 01.3	
	comp=Z,1.6nm,1.0s						
SAML	**Samuel**	**58.12**	**313**	P	**P**	**14 55 29.6**	**-2.4**
SAML				IAmb	IAmb	14 55 30.0	
	comp=Z,2.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**75.20**	**26**	P	**P**	**14 57 21.1**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=195,slow=5.4,SNR=5.5						
YKA	**Yellowknife Ar**	**139.54**	**314**	PKP	**PKiKP**	**15 05 08.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=124,slow=2.6,SNR=6.0						
SONM	**Songino Array**	**149.33**	**90**	PKPbc	**PKPab**	**15 05 30.9**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=236,slow=1.6,SNR=2.3						
ILAR	**Eielson Array**	**153.31**	**306**	PKPbc	**PKiKP**	**15 05 36.7**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=115,slow=0.8,SNR=12						
ILAR	**Eielson Array**	**153.31**	**306**		**PKPbc**	**15 05 34.7**	**-0.3**

*IDC **15** 14:52:27.9±1.1, 36.°45N×141.°78E, h0km, mb3.6/5, mb1 3.8/8, mb1mx3.5/34, mbtmp3.7/8, ML3.3/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/52, Error ellipse: s-maj=29.5km s-min=20.6km az=90.0*
*JMA **15** 14:52:31.8±0.1, 36.°49N×141.°56E, h64km±3km, M3.3*
ISC 15 14:52:32.5±1.0, 36.°47N±0.°06×141.°72E±0.°08, h35km, n22, σ1s05/18, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.93**	**262**	P	**Pn**	**14 52 47.8**	**-1.2**
JHYU				S	**Sn**	**14 52 59.4**	**-1.6**
JHO	**Hitachi**	**0.94**	**279**	P	**Pn**	**14 52 47.6**	**-1.6**
ONAJ	**Iwakimizuishiy**	**0.97**	**311**	P	**Pn**	**14 52 48.3**	**-1.4**
CHOJ	**Chosi**	**1.04**	**222**	P	**Pn**	**14 52 49.8**	**-0.8**
MJAR	**Matsushiro Arr**	**2.83**	**272**	Pn	**Pn**	**14 53 16.0**	**+0.8**
	4.4nm,0.3s,baz=108,slow=10,SNR=199						
MJAR				Sn	**Sn**	**14 53 47.9**	**-0.2**
	1.4nm,0.3s,baz=76,slow=20,SNR=8.9						
MJAR				LR	LR	14 54 38.7	
	comp=Z,171nm,18.5s,baz=100,slow=46						
MAT	**Matsushiro**	**2.83**	**272**	P	**Pn**	**14 53 15.3**	**+0.1**
MAT				eS	**Sn**	**14 53 49.1**	**+0.9**
JHJ	**Hachijo jima 2**	**3.71**	**206**	Pn	**Pn**	**14 53 27.5**	**+0.

EMPR	**Esperanza - Ma**	**0.66 163**	‖	*eP*	**Pn**	**15 42 36.0**	**+0.6**
EMPR	**Esperanza - Ma**	**0.66 163**		*eS*	**Sn**	**15 42 45.6**	**+0.8**
EMPR	**Esperanza - Ma**	**0.66 163**			**Pn**	**15 42 36.0**	**+0.6**
EMPR					**Sn**	**15 42 45.6**	**+0.8**
AGPR	**Aguadilla, PR**	**0.73 209**	‖	*eP*	**Pb**	**15 42 35.8**	**-0.3**
AGPR	**Aguadilla, PR**	**0.73 209**		*eS*	**Sb**	**15 42 45.8**	**0.0**
AGPR	**Aguadilla, PR**	**0.73 209**			**Pb**	**15 42 35.8**	**-0.3**
AGPR					**Sb**	**15 42 45.8**	**0.0**
AOPR	**Arecibo Observ**	**0.76 181**	‖	*eP*	**Pn**	**15 42 36.5**	**-0.3**
AOPR	**Arecibo Observ**	**0.76 181**			**Pn**	**15 42 36.5**	**-0.3**
LSP	**Las Mesas**	**0.99 200**	‖	*eP*	**Pb**	**15 42 40.3**	**-0.2**
LSP	**Las Mesas**	**0.99 200**		*eS*	**Sb**	**15 42 53.4**	**+0.3**
LSP	**Las Mesas**	**0.99 200**			**Pb**	**15 42 40.3**	**-0.2**
LSP					**Sb**	**15 42 53.4**	**+0.3**
GCPR	**Guaynabo City**	**1.01 142**	‖	*eP*	**Pb**	**15 42 40.9**	**+0.2**
GCPR	**Guaynabo City**	**1.01 142**		*eS*	**Sb**	**15 42 54.6**	**+0.9**
GCPR	**Guaynabo City**	**1.01 142**			**Pb**	**15 42 40.6**	**-0.2**
CELP	**Cerrillos**	**1.04 172**	‖	*eP*	**Pb**	**15 42 41.0**	**-0.3**
CELP	**Cerrillos**	**1.04 172**		*eS*	**Sb**	**15 42 54.3**	**-0.3**
CELP	**Cerrillos**	**1.04 172**			**Pb**	**15 42 41.0**	**-0.3**
CELP					**Sb**	**15 42 54.3**	**-0.3**
OBIP	**Obispado Ponce**	**1.07 173**	‖	*eP*	**Pb**	**15 42 41.5**	**-0.3**
OBIP	**Obispado Ponce**	**1.07 173**		*eS*	**Sn**	**15 42 54.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.07 173**			**Pb**	**15 42 41.5**	**-0.3**
OBIP					**Sn**	**15 42 54.8**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.14 187**	‖	*eP*	**Pb**	**15 42 42.3**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.14 187**		*eS*	**Sb**	**15 42 56.7**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.14 187**			**Pb**	**15 42 42.3**	**-0.6**
GBPR					**Sb**	**15 42 56.7**	**-0.6**
SJG	**San Juan**	**1.14 151**	Pn		**Pb**	**15 42 43.4**	**+0.5**
SJG			IAML			15 43 07.0	
	401nm,0.4s						
MLPR	**Magueyes Islan**	**1.17 195**	‖	*eP*	**Pn**	**15 42 42.4**	**-0.1**
MLPR	**Magueyes Islan**	**1.17 195**		*eS*	**Sn**	**15 42 56.9**	**-0.7**
MLPR	**Magueyes Islan**	**1.17 195**			**Pn**	**15 42 42.4**	**-0.1**
MLPR					**Sn**	**15 42 56.9**	**-0.7**
CBYP	**Canovanas**	**1.18 135**	‖	*eP*	**Pb**	**15 42 43.2**	**-0.5**
CBYP	**Canovanas**	**1.18 135**			**Pn**	**15 42 43.0**	**+0.4**
HUMP	**Col San Antoni**	**1.28 139**	‖	*eP*	**Pb**	**15 42 45.0**	**-0.3**
HUMP	**Col San Antoni**	**1.28 139**		*eS*	**Sb**	**15 43 01.3**	**0.0**
HUMP	**Col San Antoni**	**1.28 139**	Pn		**Pn**	**15 42 44.1**	**+0.2**
IGPR	**InterUniversit**	**1.28 152**	‖	*eP*	**Pb**	**15 42 44.9**	**-0.6**
IGPR	**InterUniversit**	**1.28 152**		*eS*	**Sn**	**15 43 00.5**	**+0.2**
IGPR	**InterUniversit**	**1.28 152**			**Sn**	**15 43 00.5**	**+0.2**
MTP	**Monte Pirata**	**1.51 132**	‖	*eP*	**Pn**	**15 42 47.7**	**+0.6**
MTP	**Monte Pirata**	**1.51 132**		*eS*	**Sn**	**15 43 06.4**	**+0.6**
MTP	**Monte Pirata**	**1.51 132**			**Pn**	**15 42 47.7**	**+0.6**
MTP					**Sn**	**15 43 06.4**	**+0.6**
CUPR	**Culebra, Puert**	**1.59 120**	‖	*eP*	**Pn**	**15 42 48.4**	**+0.1**
CUPR	**Culebra, Puert**	**1.59 120**		*eS*	**Sn**	**15 43 08.3**	**+0.4**
CUPR	**Culebra, Puert**	**1.59 120**			**Pn**	**15 42 48.4**	**+0.1**
CUPR					**Sn**	**15 43 08.3**	**+0.4**
STVI	**Saint Thomas**	**1.85 114**	‖	*eP*	**Pb**	**15 42 53.6**	**-1.5**
STVI	**Saint Thomas**	**1.85 114**			**Pb**	**15 42 53.6**	**-1.5**
SDDR	**Presa de Saban**	**4.31 269**	Pn		**Pn**	**15 43 27.3**	**+1.6**
SDDR			IAML			15 44 40.4	
	79nm,0.9s						
SDDR			IAML			15 44 41.8	
	78nm,0.8s						
GRTK	**Grand Turk**	**4.77 301**	Pn		**Pn**	**15 43 31.8**	**-0.2**
GRTK			IAML			15 46 14.8	
	70nm,2.6s						

JMA 15 16:17:19.6±0.2, 24°84N×123°82E, h0km, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.51**	**189**	P	Pg	16 17 30.0	+0.6
IRIF				*eS*	Sg	16 17 37.2	+1.2
JISG	**Ishigakijimahi**	**0.51**	**119**	P	Pg	16 17 30.1	+0.7
JISG				S	Sb	16 17 37.9	-1.6
JIJ	**Ishigaki jima**	**0.56**	**148**	P	Pg	16 17 30.7	+0.4
JIJ				S	Sg	16 17 38.4	+0.9
JKRS	**Kuro-shima**	**0.62**	**164**	P	Pg	16 17 32.4	+0.8
JKRS				S	Sb	16 17 41.4	-1.3
HATJ	**Hateruma jima**	**0.78**	**181**	*eS*	Sb	16 17 46.1	-1.1
JTJ	**Tarama**	**0.83**	**104**	P	Pg	16 17 36.1	+0.7
JTJ				*eS*	Sb	16 17 48.0	-0.5

TAP 15 16:17:39.2, 24°28N×121°92E, h36km, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.21**	**323**	P	Pn	16 17 46.3	-1.6
	baz=330						
EWUT				S	Sn	16 17 52.2	-3.9
	baz=330						
NACB	**Ninganchiao**	**0.31**	**251**	P	Pn	16 17 47.1	-0.3
	baz=250						
NACB				S	Sn	16 17 52.6	-1.5
	baz=250						
TWC	**Suao**	**0.34**	**350**	P	Pn	16 17 47.9	+0.4
	baz=357						
TWC				S	Sn	16 17 53.9	-0.3
	baz=357						
TWD	**Chiawan**	**0.35**	**236**	*eP*	Pn	16 17 47.9	+0.2
	baz=234						
TWD				*eS*	Sn	16 17 54.5	+0.3
	baz=234						
NDS	**Dongshan**	**0.40**	**333**	P	Pn	16 17 48.7	+0.4
	baz=334						
NDS				S	Sn	16 17 55.6	+0.6
	baz=334						
ETLH	**Xiulin Townshi**	**0.40**	**260**	P	Pn	16 17 48.6	+0.2
	baz=253						
ETLH				S	Sn	16 17 55.3	+0.1
	baz=253						
ENTT	**Nioudou**	**0.48**	**319**	P	Pn	16 17 49.8	+0.2
	baz=314						
ENTT				S	Sn	16 17 57.9	+1.1
	baz=314						
NDT	**Datong Townshi**	**0.49**	**311**	P	Pn	16 17 50.2	+0.5
	baz=312						
NDT				S	Sn	16 17 58.0	+1.0
	baz=312						
TWE	**Neicheng**	**0.50**	**333**	P	Pn	16 17 50.1	+0.4
	baz=335						
TWE				S	Sn	16 17 58.7	+1.6
	baz=335						
NNSB	**Datong**	**0.51**	**287**	P	Pn	16 17 50.4	+0.3
	baz=287						
NNSB				S	Sn	16 17 58.2	+0.5
	baz=287						
NNSH	**Datong**	**0.51**	**287**	P	Pn	16 17 50.4	+0.3
	baz=287						
NNSH				S	Sn	16 17 58.1	+0.5
	baz=287						
NNS	**Nan Shan**	**0.52**	**288**	P	Pn	16 17 50.6	+0.3
	baz=288						
NNS				S	Sn	16 17 58.5	+0.5
	baz=288						
WHF	**Hehuan Shan**	**0.61**	**258**	*eP*	Pn	16 17 52.5	+0.6
	baz=257						
WHF				*eS*	Sn	16 18 01.6	+1.0
	baz=257						
NWLT	**Wulai**	**0.62**	**323**	P	Pn	16 17 52.1	+0.4
	baz=323						
NWLT				S	Sn	16 18 01.2	+0.7
	baz=323						
YHNB	**Yeheng**	**0.63**	**309**	P	Pn	16 17 52.3	+0.4
	baz=298						
YHNB				*eS*	Sn	16 18 01.0	+0.4
	baz=298						
ESL	**Shilin**	**0.64**	**224**	P	Pn	16 17 51.8	-0.1
	baz=235						
ESL				S	Sn	16 18 01.3	+0.6
	baz=235						
NSK	**Sanguang**	**0.65**	**308**	P	Pn	16 17 52.3	+0.2
	baz=298						
NSK				S	Sn	16 18 01.6	+0.6
	baz=298						
TIPB	**Shuangxi**	**0.70**	**353**	P	Pn	16 17 53.5	+0.8
	baz=359						
TIPB				S	Sn	16 18 03.6	+1.4
	baz=359						
CHGB	**Renai**	**0.71**	**252**	*eP*	Pn	16 17 53.4	+0.4
	baz=242						
CHGB				*eS*	Sn	16 18 04.5	+1.7
	baz=242						
EGFH	**Guangfu**	**0.75**	**217**	*eP*	Pn	16 17 53.9	+0.6
	baz=229						
EGFH				*eS*	Sn	16 18 04.3	+0.8
	baz=229						
VWDT	**VWDT**	**0.88**	**234**	*eP*	Pn	16 17 56.0	+0.9
	baz=232						
VWDT				*eS*	Sn	16 18 07.2	+0.6
	baz=232						
WHP	**Taichung City**	**0.89**	**270**	*eP*	Pn	16 17 56.9	+1.7
	baz=269						
WHP				*eS*	Sn	16 18 07.9	+0.9
	baz=269						
LIOB	**Emei**	**0.90**	**294**	*eP*	Pn	16 17 57.2	+1.8
	baz=294						
LIOB				*eS*	Sn	16 18 08.5	+1.3
	baz=294						
HGSD	**Ruisui**	**0.90**	**210**	*eP*	Pn	16 17 56.0	+0.7
	baz=219						
HGSD				*eS*	Sn	16 18 09.7	+2.5
	baz=219						
NSTT	**Nanjuang**	**0.91**	**293**	*eP*	Pn	16 17 57.0	+1.6
	baz=293						
NSTT				*eS*	Sn	16 18 09.3	+2.0
	baz=293						
YM01	**YM01**	**0.92**	**340**	*eP*	Pn	16 17 57.8	+2.1
	baz=327						
YM10	**YM10**	**0.93**	**340**	*eP*	Pn	16 17 57.0	+1.1
	baz=341						
YM10				*eS*	Sn	16 18 09.2	+1.1
	baz=341						
DPDB	**Guoxing**	**0.94**	**255**	*eP*	Pn	16 17 57.5	+1.6
	baz=248						
DPDB				*eS*	Sn	16 18 10.4	+2.3
	baz=248						
YM04	**YM04**	**0.94**	**338**	*eP*	Pn	16 17 56.7	+0.8
	baz=329						
YM04				*eS*	Sn	16 18 10.0	+1.8
	baz=329						
YM05	**YM05**	**0.94**	**340**	*eP*	Pn	16 17 57.4	+1.4
	baz=341						
YM05				*eS*	Sn	16 18 10.2	+2.0
	baz=341						
EHY	**Hungye**	**0.94**	**215**	*eP*	Pn	16 17 55.6	-0.3
	baz=224						
EHY				*eS*	Sn	16 18 09.1	+0.9
	baz=224						
WCS	**Beigang Elemen**	**0.94**	**257**	*eP*	Pn	16 17 57.0	+1.1
	baz=249						
WCS				*eS*	Sn	16 18 09.7	+1.5
	baz=249						
SSLB	**Suanglung**	**1.01**	**241**	*eP*	Pn	16 17 57.3	+0.5
	baz=232						
SSLB				*eS*	Sn	16 18 10.7	+1.0
	baz=232						
SMLT	**Sun Moon Lake**	**1.01**	**247**	*eP*	Pn	16 17 58.5	+1.6
	baz=240						
YOJ	**Yonaguni jima**	**1.01**	**79**	*eP*	Pn	16 17 57.2	+0.3
	baz=79						
TYC	**Yuchr**	**1.04**	**249**	*eP*	Pn	16 17 58.0	+0.8
	baz=239						
TYC				*eS*	Sn	16 18 13.2	+2.7
	baz=239						
YULB	**Yu-li**	**1.05**	**213**	*eP*	Pn	16 17 56.6	-0.7
	baz=221						
YULB				*eS*	Sn	16 18 08.8	-2.0
	baz=221						
TWF1	**Yuli**	**1.08**	**212**	*eP*	Pn	16 17 58.1	+0.2
	baz=221						
TWF1				*eS*	Sn	16 18 11.7	+0.1
	baz=221						
WJS	**Zhushan**	**1.18**	**248**	*eP*	Pn	16 18 02.0	+2.9
	baz=234						
WJS				*eS*	Sn	16 18 18.2	+4.3
	baz=234						
FULB	**Fuli**	**1.22**	**208**	*eP*	Pn	16 18 01.8	+2.1
	baz=216						
FULB				*eS*	Sn	16 18 16.6	+1.7
	baz=216						
ALS	**Alishan**	**1.27**	**233**	*eP*	Pn	16 18 02.5	+1.8
	baz=231						
ALS				*eS*	Sn	16 18 19.7	+3.1
	baz=231						
CHN5	**Tsauling**	**1.32**	**239**	*eP*	Pn	16 18 03.4	+2.2
	baz=225						
CHN5				*eS*	Sn	16 18 21.0	+3.4
	baz=225						
EDH	**Donghe**	**1.42**	**204**	*eP*	Pn	16 18 02.7	+0.3
	baz=189						
EDH				*eS*	Sn	16 18 18.8	-1.0
	baz=189						
STYH	**Taoyuan**	**1.52**	**224**	*eP*	Pn	16 18 05.6	+1.7
	baz=220						
STYH				*eS*	Sn	16 18 24.8	+2.4
	baz=220						
TPUB	**Ta-pu**	**1.53**	**231**	*eP*	Pn	16 18 06.7	+2.7
	baz=218						
TPUB				*eS*	Sn	16 18 25.8	+3.1
	baz=218						
STYT	**Tauyuan**	**1.54**	**224**	*eP*	Pn	16 18 05.7	+1.5
	baz=220						
STYT				*eS*	Sn	16 18 25.8	+2.9
	baz=220						
WTP	**Ta-pu**	**1.57**	**230**	*eP*	Pn	16 18 07.5	+2.9
	baz=227						
WTP				*eS*	Sn	16 18 27.5	+3.7
	baz=227						
TWK	**Hsinying**	**1.65**	**233**	*eP*	Pn	16 18 08.9	+3.1
	baz=230						
TWK				*eS*	Sn	16 18 30.0	+4.3
	baz=230						
SGST	**Jiashian**	**1.71**	**226**	*eP*	Pn	16 18 09.3	+2.9
	baz=211						
SGST				*eS*	Sn	16 18 30.8	+3.8
	baz=211						
SLGT	**Liugui**	**1.73**	**223**	*eP*	Pn	16 18 09.2	+2.4
	baz=219						
SLGT				*eS*	Sn	16 18 30.7	+3.1
	baz=219						
SNJT	**Kaohsiung City**	**2.10**	**224**	*eP*	Pn	16 18 15.4	+3.6
	baz=222						

IDC 15 16:29:51.1±0.8, 66°41N×36°03E, h0km, Error ellipse: s-maj=1.1km s-min=0.3km az=29.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**7.13**	**300**	*i*		17 14 50.0	
	baz=95,slow=328,SNR=10						
I31KZ	**AKTYUBINSK INF**	**19.56**	**134**	*i*		18 31 50.0	
	baz=336,slow=322,SNR=1.4						
I46RU	**ZALESOVO INFRA**	**26.48**	**94**	*i*		19 13 20.0	
	baz=315,slow=335,SNR=1.2						
I18DK	**QAANAAQ INFRAS**	**29.52**	**335**	*i*		19 28 40.0	
	baz=51,slow=340,SNR=1.0						

IDC 15 16:38:38.0±1.6, 28°30N×102°83E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.1/46, mbtmp3.2/4, Error ellipse: s-maj=49.4km s-min=30.7km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**22.91**	**60**	P	P	16 43 43.0	-0.4
	0.7nm,0.6s,baz=244,slow=9.8,SNR=2.3						
MKAR	**Makanchi Array**	**24.49**	**324**	P	P	16 43 58.8	0.0
	0.2nm,0.6s,baz=124,slow=13,SNR=2.1						
WRA	**Warramunga Arr**	**56.82**	**144**	P	P	16 48 24.1	-0.2
	0.2nm,0.6s,baz=334,slow=7.5,SNR=1.7						
ASAR	**Alice Springs**	**59.72**	**147**	P	P	16 48 44.8	+0.1
	0.2nm,0.6s,baz=326,slow=6.9,SNR=5.5						

TAP 15 16:52:40.2, 24°84N×122°95E, h133km±1km, ML2.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.89**	**281**	*eP*	Pn	16 53 02.6	+0.3
	baz=280						
TWB1				*eS*	Sn	16 53 19.0	0.0
	baz=280						
TWC	**Suao**	**1.02**	**257**	*eP*	Pn	16 53 03.6	0.0
	baz=257						
TWC				*eS*	Sn	16 53 20.3	-0.9
	baz=257						
TIPB	**Shuangxi**	**1.03**	**277**	P	Pn	16 53 03.8	+0.2
	baz=271						
TIPB				S	Sn	16 53 21.3	-0.1
	baz=271						
EWUT	**Wuta**	**1.13**	**250**	*eP*	Pn	16 53 05.1	+0.5
	baz=250						
EWUT				*eS*	Sn	16 53 22.5	-0.6
	baz=250						
NDS	**Dongshan**	**1.14**	**260**	*eP*	Pn	16 53 04.9	+0.3
	baz=255						
NDS				*eS*	Sn	16 53 22.9	-0.3
	baz=255						
TWA	**Mucha**	**1.25**	**277**	*eP*	Pn	16 53 07.5	+1.8
	baz=269						
ENTT	**Nioudou**	**1.27**	**261**	P	Pn	16 53 07.0	+0.9
	baz=257						
ENTT				S	Sn	16 53 26.4	+0.7
	baz=257						
YM01	**YM01**	**1.29**	**284**	*eP*	Pn	16 53 07.1	+0.9
	baz=284						
YM01				*eS*	Sn	16 53 26.4	+0.4
	baz=284						
YM10	**YM10**	**1.30**	**284**	*eP*	Pn	16 53 07.2	+0.9
	baz=285						
NWLT	**Wulai**	**1.31**	**267**	*eP*	Pn	16 53 07.3	+0.8
	baz=262						
NWLT				*eS*	Sn	16 53 26.0	-0.5
	baz=262						
NDT	**Datong Townshi**	**1.33**	**260**	*eP*	Pn	16 53 07.6	+1.0
	baz=256						
NDT				S	Sn	16 53 27.1	+0.4
	baz=256						
NACB	**Ninganchiao**	**1.40**	**242**	*eP*	Pn	16 53 07.3	0.0
	baz=242						
NACB				*eS*	Sn	16 53 27.1	-1.0
	baz=242						
YHNB	**Yeheng**	**1.44**	**263**	P	Pn	16 53 08.5	+0.6
	baz=264						
YHNB				S	Sn	16 53 28.7	-0.2
	baz=264						
TWD	**Chiawan**	**1.45**	**239**	*eP*	Pn	16 53 08.0	+0.2
	baz=233						
TWD				*eS*	Sn	16 53 27.7	-1.3
	baz=233						
ETLH	**Xiulin Townshi**	**1.48**	**245**	*eP*	Pn	16 53 08.9	+0.6
	baz=245						
ETLH				S	Sn	16 53 29.3	-0.4
	baz=245						
NNSB	**Datong**	**1.48**	**254**	P	Pn	16 53 08.5	+0.1
	baz=254						
NNSB				S	Sn	16 53 29.2	-0.7
	baz=254						
NNSH	**Datong**	**1.48**	**254**	*eS*	Sn	16 53 29.4	-0.5
	baz=254						
NNS	**Nan Shan**	**1.49**	**255**	*eP*	Pn	16 53 09.0	+0.5
	baz=255						
NNS				*eS*	Sn	16 53 29.5	-0.5
	baz=255						
FUSS	**Fushou**	**1.66**	**249**	P	Pn	16 53 10.9	+0.4
	baz=245						
FUSS				S	Sn	16 53 32.7	-1.0
	baz=245						
WHF	**Hehuan Shan**	**1.68**	**246**	P	Pn	16 53 10.9	-0.1
	baz=246						
WHF				S	Sn	16 53 33.6	-0.9
	baz=246						
TDCB	**Techi**	**1.73**	**251**	*eS*	Sn	16 53 34.5	-0.4
	baz=244						
LIOB	**Emei**	**1.77**	**264**	*eP*	Pn	16 53 12.5	+0.9
	baz=264						
LIOB				*eS*	Sn	16 53 35.0	-0.5
	baz=264						
NSTT	**Nanjuang**	**1.78**	**264**	*eS*	Sn	16 53 34.9	-0.9
	baz=264						
CHGB	**Renai**	**1.79**	**245**	*eP*	Pn	16 53 12.5	+0.4
	baz=240						
CHGB				*eS*	Sn	16 53 36.6	+0.2
	baz=240						
EGFH	**Guangfu**	**1.81**	**230**	*eP*	Pn	16 53 11.7	-0.4
	baz=230						
EGFH				*eS*	Sn	16 53 35.4	-1.1
	baz=230						
WHP	**Taichung City**	**1.91**	**253**	*eP*	Pn	16 53 14.5	+1.2
	baz=252						
WHP				*eS*	Sn	16 53 38.5	-0.1
	baz=252						
HGSD	**Ruisui**	**1.93**	**226**	*eP*	Pn	16 53 13.5	0.0
	baz=222						
HGSD				*eS*	Sn	16 53 38.8	-0.2
	baz=222						
VWDT	**VWDT**	**1.97**	**237**	*eP*	Pn	16 53 14.4	+0.4
	baz=237						
VWDT				*eS*	Sn	16 53 38.4	-1.4
	baz=237						
EHY	**Hungye**	**1.99**	**228**	*eP*	Pn	16 53 13.9	-0.3
	baz=228						
EHY				*eS*	Sn	16 53 38.6	-1.7
	baz=228						
DPDB	**Guoxing**	**2.01**	**247**	*eP*	Pn	16 53 15.1	+0.6
	baz=247						
DPDB				*eS*	Sn	16 53 41.2	+0.5
	baz=247						
WCS	**Beigang Elemen**	**2.01**	**248**	*eP*	Pn	16 53 15.4	+0.9
	baz=248						
WCS				*eS*	Sn	16 53 40.8	+0.1
	baz=248						
YULB	**Yu-li**	**2.09**	**227**	S	Sn	16 53 40.3	-2.1
	baz=232						
SMLT	**Sun Moon Lake**	**2.10**	**243**	*eP*	Pn	16 53 16.9	+1.3
	baz=238						
SMLT				*eS*	Sn	16 53 42.9	+0.1
	baz=238						
SSLB	**Suanglung**	**2.10**	**240**	*eP*	Pn	16 53 16.7	+1.2
	baz=238						
SSLB				*eS*	Sn	16 53 41.8	-0.9
	baz=238						
EYUL	**Yuli**	**2.10**	**225**	*eP*	Pn	16 53 16.1	+0.4
	baz=222						
TYC	**Yuchr**	**2.12**	**244**	*eP*	Pn	16 53 16.9	+1.1
	baz=248						
TYC				*eS*	Sn	16 53 43.4	+0.3
	baz=248						

TAP 15 16:53:05.9, 23°03N×121°31E, h20km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDH	**Donghe**	**0.05**	**185**	P	Pb	16 53 10.2	+0.7
	baz=185						
EDH				S	Sb	16 53 12.2	+0.2
	baz=185						
CHKT	**Chengkung**	**0.09**	**35**	P	Pb	16 53 10.3	+0.5
	baz=39						
CHKT				S	Sb	16 53 13.4	+0.9
	baz=39						
FULB	**Fuli**	**0.17**	**355**	P	Pb	16 53 11.5	+0.6
	baz=355						
FULB				*eS*	Sb	16 53 16.0	+1.7
	baz=355						
LONT	**Longtian**	**0.20**	**234**	*eP*	Pb	16 53 12.3	+1.1
	baz=234						
LONT				*eS*	Sb	16 53 16.6	+1.7
	baz=234						
TWGBT	**Beinan**	**0.30**	**226**	*eP*	Pb	16 53 13.4	+0.9
	baz=225						
TWGBT				*eS*	Sb	16 53 18.2	+1.2
	baz=225						
TWG	**Pinlang**	**0.30**	**227**	P	Pb	16 53 13.4	+0.8
	baz=225						
TWG				S	Sb	16 53 18.2	+1.1
	baz=225						
ELDTW	**Lidau**	**0.31**	**301**	*i* P	Pb	16 53 13.2	+0.3
	baz=301						
ELDTW				S	Sb	16 53 17.8	+0.2
	baz=301						
EYUL	**Yuli**	**0.32**	**2**	*eP*	Pb	16 53 13.9	+1.0
	baz=1.0						
EYUL				*eS*	Sn	16 53 19.6	-1.9
	baz=1.0						
TWF1	**Yuli**	**0.33**	**358**	*eP*	Pb	16 53 13.1	+0.1
	baz=359						
TWF1				*eS*	Sb	16 53 18.7	+0.8
	baz=359						
YULB	**Yu-li**	**0.36**	**358**	P	Pb	16 53 13.9	+0.2
	baz=358						
YULB				*eS*	Sb	16 53 19.1	+0.1
	baz=358						
YULB	**Yu-li**	**0.36**	**358**	P	Pb	16 53 13.9	+0.2
	baz=232						
LDUT	**Ludao**	**0.38**	**157**	P	Pb	16 53 14.1	+0.2
	baz=157						
LDUT				S	Sb	16 53 20.3	+1.0
	baz=157						

HGSD	**Ruisui**	**0.48**	**13**	*e*P	Pn	16 53 17.0	-0.6
	baz=12								
HGSD				*e*S	Sn	16 53 24.2	-1.2
	baz=12								
EHY	**Hungye**	**0.48**	**1**	*e*P	Pb	16 53 16.2	+0.6
	baz=2.0								
EHY				*e*S	Sb	16 53 23.2	+1.0
	baz=2.0								
STYH	**Taoyuan**	**0.51**	**286**	P	Pb	16 53 16.9	+0.6
	baz=286								
STYH				S	Sb	16 53 24.1	+0.9
	baz=286								
STYT	**Tauyuan**	**0.53**	**285**	P	Pb	16 53 17.2	+0.7
	baz=284								
STYT				S	Sb	16 53 24.7	+1.0
	baz=284								
ECL	**Taimali**	**0.54**	**218**	*e*P	Pn	16 53 18.0	-0.4
	baz=216								
SLGT	**Liugui**	**0.61**	**267**	P	Pn	16 53 18.9	-0.6
	baz=266								
SLGT				*e*S	Sb	16 53 26.7	+0.6
	baz=266								
ALS	**Alishan**	**0.67**	**316**	*e*P	Pn	16 53 20.3	-0.3
	baz=316								
ALS				*e*S	Sb	16 53 29.2	+1.1
	baz=316								
SGST	**Jiashian**	**0.67**	**275**	*e*P	Pn	16 53 21.3	+1.1
	baz=274								
SGST				*e*S	Sn	16 53 29.9	-0.3
	baz=274								
WTP	**Ta-pu**	**0.68**	**289**	*e*P	Pn	16 53 20.4	0.0
	baz=288								
WTP				*e*S	Sn	16 53 30.2	-0.2
	baz=288								
TPUB	**Ta-pu**	**0.68**	**294**	*e*P	Pn	16 53 19.9	-0.5
	baz=293								
TPUB				*e*S	Sn	16 53 29.9	-0.7
	baz=293								
SSD	**Sandimen**	**0.68**	**246**	*e*P	Pn	16 53 20.3	-0.1
	baz=245								
SSD				*e*S	Sn	16 53 30.0	-0.5
	baz=245								
VWDT	**VWDT**	**0.74**	**348**	*e*P	Pb	16 53 20.5	+0.4
	baz=347								
VWDT				*e*S	Sn	16 53 31.4	-0.5
	baz=347								
MASBT	**Mashibuluo**	**0.75**	**237**	*e*P	Pn	16 53 21.0	-0.3
	baz=236								
MASBT				*e*S	Sn	16 53 31.7	-0.3
	baz=236								
EAST	**Anshuo**	**0.77**	**214**	*e*P	Pn	16 53 21.7	0.0
	baz=213								
EAST				*e*S	Sn	16 53 32.5	-0.1
	baz=213								
CHN5	**Tsauling**	**0.81**	**315**	*e*P	Pn	16 53 22.8	+0.5
	baz=314								
CHN5				*e*S	Sn	16 53 34.7	+0.9
	baz=314								
SSLB	**Suanglung**	**0.82**	**337**	*e*P	Pn	16 53 22.8	+0.3
	baz=336								
SCZT	**Fangliau**	**0.91**	**224**	*e*P	Pn	16 53 24.3	+0.7
	baz=223								
SCZT				*e*S	Sn	16 53 37.2	+1.2
	baz=223								
WGK	**Gukeng**	**0.95**	**314**	*e*P	Pn	16 53 25.2	+1.1
	baz=313								
WGK				*e*S	Sn	16 53 38.1	+1.0
	baz=313								
WJS	**Zhushan**	**0.95**	**326**	*e*P	Pn	16 53 25.5	+1.3
	baz=325								
WJS				*e*S	Sn	16 53 37.5	+0.3
	baz=325								
TYC	**Yuchr**	**0.97**	**335**	*e*P	Pn	16 53 24.9	+0.5
	baz=335								
TYC				*e*S	Sn	16 53 38.1	+0.6
	baz=335								

LDG ***15*** *16:57:02.5,38.99N×15.49E,h257km*
MED_RC ***15*** *16:57:02.0±1.2,38.88N×15.49E,h289km±7km,MW4.3/6, Moment Tensor Solution.Mantle waves: s6,c8; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr-1.62±.42; Mθθ-1.34±.64; Mϕϕ2.96±.86; Mrθ-1.81±.36; Mϕθ-0.08±.62; Mϕr-1.93±.36; Best double couple: M₀3.69000×10¹⁵ NP1:ϕs145.00000°,δ37.00000°,λ-153.00000°. NP2: ϕs32.00000°,δ74.00000°,λ-56.00000°. Principal axes: T 3.7300, Plg22.0000°, Azm97.0000°; N -0.0900, Plg32.0000°, Azm202.0000°; P -3.6400, Plg50.0000°, Azm339.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
ROM ***15*** *16:57:02.5±0.2,38.906N±0.008×15.47E±0.01, h257km±1km,ML4.1/1,Mw4.3 Error ellipse: s-maj=1.2km s-min=0.6km az=117.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-1.46; Mθθ-0.18; Mϕϕ1.64; Mrθ-1.38; Mϕθ0.42; Mϕr-2.60; Fault plane solution: M₀3.34848×10¹⁵ NP1:ϕs175.00000°,δ16.00000°, λ-120.00000°. NP2:ϕs26.00000°,δ76.00000°, λ-82.00000°.*
IDC ***15*** *16:57:03.5±0.6,39.08N×15.23E,h254km±6km,mb3.8/26, mb1 3.9/37,mb1mx3.7/60,mbtmp4.4/37 Error ellipse: s-maj=9.4km s-min=8.0km az=141.0*
NEIC ***15*** *16:57:03.3±1.5,38.97N±0.06×15.38E±0.07,h253km±5km, mb4.5/144,ML4.2(ROM),Error ellipse: s-maj=9.1km s-min=8.0km az=175.0*
MOS ***15*** *16:57:03.3±0.9,39.01N×15.36E,h265km,mb4.3/18,Error ellipse: s-maj=4.5km s-min=2.9km az=84.9*
PDG ***15*** *16:57:09.4±3.5,39.37N×15.60E,h23km±11km,ML3.6/12, Error ellipse: s-maj=4.2km s-min=5.1km az=0.0*
ISC 15 16:57:03.0±0.4,38.99N±0.04×15.42E±0.03,h250km±4km, n808,σ1ş29/875,mb4.4/130,59C-92D,Sicily

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IST3	**Stromboli F**	**0.24**	**218**	⇓*i*P		**Pn**		**16 57 36.8**	**+1.4**
IST3				S		**S**		**16 58 02.4**	**+1.7**
IST3				AML		AML			
	comp=E,4210μm,0.4s								
IST3				AML		AML			
	comp=N,7670μm,0.4s								
ISTR	**Stromboli Gino**	**0.27**	**222**	P		**Pn**		**16 57 36.6**	**+1.2**
ISTR				AML		AML			
	comp=E,2285μm,1.1s								
ISTR				AML		AML			
	comp=N,3215μm,0.4s								
JOPP	**Joppolo**	**0.53**	**136**	⇓*i*P		**Pn**		**16 57 36.5**	**+0.5**
JOPP				S		**S**		**16 58 01.2**	**-0.7**
JOPP				AML		AML			
	comp=E,819μm,0.3s								
JOPP				AML		AML			
	comp=N,1530μm,0.3s								
JOPP				AML		AML			
	comp=E,4680μm,1.1s								
JOPP				AML		AML			
	comp=N,5125μm,0.3s								
LLI	**Lipari**	**0.66**	**215**	⇓*i*P		**Pn**		**16 57 37.7**	**+1.3**
CAR1	**CAROLEI**	**0.67**	**66**	⇓*i*P		**Pn**		**16 57 37.3**	**+0.8**
CAR1				S		**S**		**16 58 02.1**	**-0.7**
CAR1				AML		AML			
	comp=E,1725μm,1.5s								
CAR1				AML		AML			
	comp=N,1595μm,1.4s								
CAR1				AML		AML			
	comp=E,1745μm,0.3s								
CAR1				AML		AML			
	comp=N,1555μm,0.3s								
CAR1				AML		AML			
	comp=E,12600μm,0.5s								
CAR1				AML		AML			
	comp=N,12330μm,0.7s								
CAR1				AML		AML			
	comp=E,12550μm,0.5s								
CAR1				AML		AML			
	comp=N,12340μm,0.7s								
CAR1				AML		AML			
	comp=E,12350μm,0.4s								
CAR1				AML		AML			
	comp=N,10925μm,0.7s								
CET2	**Cetraro**	**0.68**	**37**	⇓*i*P		**Pn**		**16 57 37.5**	**+1.1**
CET2				S		**S**		**16 58 02.4**	**-0.5**
CET2				AML		AML			
	comp=E,1365μm,0.5s								
CET2				AML		AML			
	comp=N,1665μm,0.7s								
CET2				AML		AML			
	comp=E,12100μm,0.4s								
CET2				AML		AML			
	comp=N,14550μm,0.4s								
VPL	**Vulcano Piano**	**0.70**	**210**	⇓P		**Pn**		**16 57 37.1**	**+0.5**
VPL				S		**S**		**16 58 03.9**	**+0.9**
VPL				AML		AML			
	comp=N,7680μm,0.8s								
VPL				AML		AML			
	comp=E,8985μm,1.2s								
MSRU	**Castanea**	**0.73**	**175**	⇓*i*P		**Pn**		**16 57 36.7**	**-0.1**
MSRU				S		**S**		**16 58 02.0**	**-1.2**
MSRU				AML		AML			
	comp=E,7065μm,1.2s								
MSRU				AML		AML			
	comp=N,5120μm,0.3s								
MILZ	**Milazzo**	**0.73**	**192**	⇓*i*P		**Pn**		**16 57 36.9**	**+0.2**
MILZ				S		**S**		**16 58 02.3**	**-0.9**
MILZ				AML		AML			
	comp=E,1455μm,0.7s								
MILZ				AML		AML			
	comp=N,751μm,0.6s								
MILZ				AML		AML			
	comp=E,7185μm,0.5s								
MILZ				AML		AML			
	comp=N,4130μm,0.5s								
SPS2	**Spezzano della**	**0.77**	**67**	*e*P		**Pn**		**16 57 37.9**	**+1.0**
SPS2				S		**S**		**16 58 03.0**	**-0.6**
SPS2				AML		AML			
	comp=E,446μm,0.3s								
SPS2				AML		AML			
	comp=N,638μm,0.5s								
SPS2				AML		AML			
	comp=E,1500μm,1.0s								
SPS2				AML		AML			
	comp=N,2210μm,0.6s								
IFIL	**Filicudi I Eol**	**0.79**	**238**	⇓*i*P		**Pn**		**16 57 38.0**	**+1.0**
IFIL				AML		AML			
	comp=N,2140μm,0.3s								
IFIL				AML		AML			
	comp=E,5885μm,0.3s								
GRI	**Girifalco**	**0.80**	**102**	⇓*e*P		**Pn**		**16 57 38.2**	**+1.2**
GRI				S		**S**		**16 58 03.9**	**+0.2**
GRI				AML		AML			
	comp=N,3015μm,0.3s								
GRI				AML		AML			
	comp=E,2925μm,0.6s								
MSCL	**Scilla**	**0.81**	**159**	⇓*i*P		**Pn**		**16 57 37.2**	**0.0**
MSCL				S		**S**		**16 58 02.5**	**-1.5**
MSCL				AML		AML			
	comp=E,2395μm,0.6s								
MSCL				AML		AML			
	comp=N,2780μm,1.5s								
MSCL				AML		AML			
	comp=E,9020μm,0.4s								
MSCL				AML		AML			
	comp=N,8065μm,0.4s								
MSCL				AML		AML			
	comp=N,8060μm,0.4s								
CEL	**Celeste**	**0.82**	**153**	Pn		**Pn**		**16 57 37.2**	**0.0**
CEL				S		**S**		**16 58 03.1**	**-0.9**
CEL	**Celeste**	**0.82**	**153**	⇓*i*P		**Pn**		**16 57 37.3**	**0.0**
CEL				S		**S**		**16 58 03.1**	**-0.9**
CEL				AML		AML			
	comp=E,2225μm,0.5s								
CEL				AML		AML			
	comp=N,2180μm,0.6s								
CEL				AML		AML			
	comp=E,2670μm,0.5s								
CEL				AML		AML			
	comp=N,2645μm,0.6s								
MPNC	**Port Mandanici**	**0.84**	**184**	⇓*i*P		**Pn**		**16 57 37.2**	**-0.1**
GMB	**Gambarie**	**0.88**	**159**	⇓*e*P		**Pn**		**16 57 37.8**	**+0.2**
GMB				S		**S**		**16 58 03.8**	**-0.9**
GMB				AML		AML			
	comp=E,20750μm,0.5s								
GMB				AML		AML			
	comp=N,8035μm,0.4s								
T0702	**Acquaformosa (**	**0.89**	**35**	⇓*i*P		**Pn**		**16 57 38.5**	**+1.1**
T0702				S		**S**		**16 58 04.3**	**-0.4**
T0702				AML		AML			
	comp=E,6040μm,0.8s								
T0702				AML		AML			
	comp=N,2915μm,1.4s								
T0702				AML		AML			
	comp=N,2885μm,1.4s								
T0702				AML		AML			
	comp=E,6020μm,0.8s								
MCSR	**Castroreale**	**0.93**	**188**	⇓*i*P		**Pn**		**16 57 38.2**	**+0.4**
MCSR				AML		AML			
	comp=N,8520μm,0.3s								
MCSR				AML		AML			
	comp=E,10800μm,0.3s								
CELI	**Celico**	**0.94**	**64**	⇓*e*P		**Pn**		**16 57 39.6**	**+1.8**
CELI				S		**S**		**16 58 06.4**	**+1.3**
CELI				AML		AML			
	comp=E,6535μm,0.7s								
CELI				AML		AML			
	comp=N,6470μm,0.7s								
CELI				AML		AML			
	comp=E,2625μm,0.6s								
CELI				AML		AML			
	comp=N,2580μm,0.7s								
IACL	**Alicudi**	**0.95**	**242**	⇓*i*P		**Pn**		**16 57 38.8**	**+1.1**
PLAC	**Placanica**	**0.96**	**124**	⇓*i*P		**Pn**		**16 57 38.6**	**+0.8**
PLAC				S		**S**		**16 58 04.7**	**-0.5**
PLAC				AML		AML			
	comp=E,3080μm,0.6s								
PLAC				AML		AML			
	comp=N,2845μm,0.3s								
PLAC				AML		AML			
	comp=N,3170μm,0.6s								
PLAC				AML		AML			
	comp=E,3000μm,0.3s								
TDS	**Terranova Siba**	**0.98**	**46**	⇓P		**Pn**		**16 57 39.4**	**+1.6**
TDS				S		**S**		**16 58 06.2**	**+1.0**
TDS	**Terranova Siba**	**0.98**	**46**	⇓*i*P		**Pn**		**16 57 39.4**	**+1.6**
TDS				S		**S**		**16 58 05.9**	**+0.7**
TDS				AML		AML			
	comp=N,1165μm,0.7s								
TDS				AML		AML			
	comp=N,1063μm,1.0s								
TDS				AML		AML			
	comp=E,1615μm,1.6s								
NOV	**Novara**	**0.98**	**193**	⇓*e*P		**Pn**		**16 57 38.7**	**+0.6**
NOV				S		**S**		**16 58 06.4**	**+0.8**
NOV				AML		AML			
	comp=E,1505μm,0.4s								
NOV				AML		AML			
	comp=N,2170μm,0.3s								
NOV				AML		AML			
	comp=E,5195μm,0.5s								
NOV				AML		AML			
	comp=N,4860μm,1.0s								
SERS	**Sersale**	**0.99**	**87**	⇓*i*P		**Pn**		**16 57 39.2**	**+1.2**
MMN	**Mormanno**	**1.00**	**26**	⇓*i*P		**Pn**		**16 57 39.2**	**+1.3**
MMN				AML		AML			
	comp=N,818μm,0.6s								
MMN				AML		AML			
	comp=E,441μm,1.4s								
MTTG	**Motta San Giov**	**1.01**	**168**	⇓*i*P		**Pn**		**16 57 38.6**	**+0.5**
MTTG				S		**S**		**16 58 05.2**	**-0.5**
MTTG				AML		AML			
	comp=E,2030μm,0.7s								
MTTG				AML		AML			
	comp=N,4075μm,0.4s								
MTTG				AML		AML			
	comp=E,2825μm,0.8s								
MUCR	**Ucria**	**1.04**	**205**	⇓P		**Pn**		**16 57 38.4**	**0.0**
MUCR				AML		AML			
	comp=E,1335μm,0.5s								
MUCR				AML		AML			
	comp=N,701μm,0.5s								
MUCR				AML		AML			
	comp=E,1795μm,0.5s								
MUCR				AML		AML			
	comp=N,1910μm,0.5s								
SOI	**Samo**	**1.04**	**151**	⇓P		**Pn**		**16 57 38.7**	**+0.4**
SOI				S		**S**		**16 58 05.7**	**-0.3**
SOI	**Samo**	**1.04**	**151**	⇓*i*P		**Pn**		**16 57 38.6**	**+0.4**
SOI				S		**S**		**16 58 04.7**	**-1.3**
SOI				AML		AML			
	comp=N,1465μm,0.6s								
SOI				AML		AML			
	comp=E,1885μm,0.6s								
SOI				AML		AML			
	comp=E,2495μm,0.6s								
SOI				AML		AML			
	comp=N,1910μm,0.7s								
CUC	**Castrocucco**	**1.05**	**17**	⇓*i*P		**Pn**		**16 57 39.6**	**+1.3**
CUC				S		**S**		**16 58 06.4**	**+0.3**
CUC				AML		AML			
	comp=N,744μm,1.0s								
CUC				AML		AML			
	comp=E,1205μm,0.8s								
CUC				AML		AML			
	comp=N,852μm,1.0s								
CUC				AML		AML			
	comp=E,982μm,0.8s								
TIP	**Timpagrande**	**1.06**	**79**	Pn		**Pn**		**16 57 39.7**	**+1.3**
TIP				S		**S**		**16 58 06.0**	**-0.2**
TIP	**Timpagrande**	**1.06**	**79**	⇓P		**Pn**		**16 57 39.7**	**+1.3**
TIP				S		**S**		**16 58 06.1**	**-0.1**
TIP				AML		AML			
	comp=N,1700μm,1.1s								
TIP				AML		AML			
	comp=E,1585μm,0.4s								
TIP				AML		AML			
	comp=N,1460μm,0.9s								
TIP				AML		AML			
	comp=E,1875μm,0.4s								
TIP				AML		AML			
	comp=E,742μm,1.4s								
TIP				AML		AML			
	comp=E,642μm,1.4s								
TIP				AML		AML			
	comp=N,1358μm,1.1s								
TIP				AML		AML			
	comp=N,1835μm,0.9s								
MPAZ	**Palizzi**	**1.13**	**156**	⇓P		**Pn**		**16 57 39.2**	**+0.3**
MPAZ				AML		AML			
	comp=N,4365μm,0.8s								
MPAZ				AML		AML			
	comp=E,2840μm,0.5s								
T0701	**Viggianello (P**	**1.13**	**28**	P		**Pn**		**16 57 40.9**	**+2.1**
SALB	**San Lorenzo Be**	**1.14**	**39**	⇓*i*P		**Pn**		**16 57 40.6**	**+1.7**
SALB				S		**S**		**16 58 07.9**	**+0.7**
SALB				AML		AML			
	comp=E,3080μm,1.2s								
SALB				AML		AML			
	comp=E,3255μm,1.3s								
SALB				AML		AML			
	comp=N,1675μm,0.7s								
SALB				AML		AML			
	comp=N,1575μm,0.7s								
MGR	**Morigerati**	**1.15**	**5**	⇓*e*P		**Pn**		**16 57 40.5**	**+1.7**
MGR				S		**S**		**16 58 07.7**	**+0.6**
MGR				AML		AML			
	comp=N,408μm,1.2s								
MGR				AML		AML			
	comp=E,428μm,1.4s								
MGR				AML		AML			
	comp=E,695μm,0.6s								
MGR				AML		AML			
	comp=N,660μm,1.5s								
MSFR	**San Fratello**	**1.16**	**215**	⇓P		**Pn**		**16 57 39.6**	**+0.6**
MSFR				S		**S**		**16 58 07.4**	**+0.1**
MSFR				AML		AML			
	comp=N,448μm,1.6s								
MSFR				AML		AML			
	comp=E,294μm,1.1s								
EMSG	**Monte Spagnolo**	**1.22**	**198**	P		**Pn**		**16 57 40.9**	**+1.3**
EMSG				AML		AML			
	comp=E,5330μm,0.8s								
EMSG				AML		AML			
	comp=N,2605μm,0.6s								
SIRI	**Monte Sirino -**	**1.24**	**16**	⇓*i*P		**Pn**		**16 57 41.0**	**+1.5**
SIRI				AML		AML			
	comp=N,401μm,0.3s								
SIRI				AML		AML			
	comp=N,404μm,0.3s								
SIRI				AML		AML			
	comp=E,583μm,0.3s								
SIRI				AML		AML			
	comp=E,596μm,0.3s								
SIRI				AML		AML			
	comp=N,785μm,0.8s								
SIRI				AML		AML			
	comp=N,807μm,0.8s								
SIRI				AML		AML			
	comp=E,922μm,0.6s								
SIRI				AML		AML			
	comp=E,912μm,0.6s								
EPZF	**Pizzo Felice**	**1.25**	**201**	P		**Pn**		**16 57 40.9**	**+1.2**
EPZF				AML		AML			
	comp=E,1765μm,0.5s								
EPZF				AML		AML			
	comp=N,2180μm,0.5s								
EPZF				AML		AML			
	comp=E,2460μm,0.5s								
EPZF				AML		AML			
	comp=N,2470μm,0.4s								
LADO	**San Nicola del**	**1.25**	**76**	⇓*i*P		**Pn**		**16 57 40.5**	**+1.0**
LADO				AML		AML			
	comp=E,123μm,1.6s								
LADO				AML		AML			
	comp=E,124μm,1.6s								
LADO				AML		AML			
	comp=N,124μm,1.4s								
MTSN	**Montesano sull**	**1.30**	**11**	⇓*e*P		**Pn**		**16 57 41.2**	**+1.3**
MTSN				AML		AML			
	comp=E,734μm,0.5s								
MTSN				AML		AML			
	comp=N,714μm,0.8s								
MTSN				AML		AML			
	comp=N,446μm,0.8s								
MTSN				AML		AML			
	comp=E,824μm,0.6s								
SCHR	**S. Chirico Rap**	**1.31**	**22**	⇓*e*P		**Pn**		**16 57 41.9**	**+1.9**
SCHR				S		**S**		**16 58 11.2**	**+2.1**
SCHR				AML		AML			
	comp=E,236μm,0.8s								
SCHR				AML		AML			
	comp=N,292μm,0.2s								
SCHR				AML		AML			
	comp=E,1615μm,0.7s								
SCHR				AML		AML			
	comp=N,1060μm,0.6s								
CMPR	**Campora**	**1.33**	**356**	P		**Pn**		**16 57 42.0**	**+1.9**
CMPR				AML		AML			
	comp=N,770μm,0.6s								
CMPR				AML		AML			
	comp=N,770μm,0.6s								
CMPR				AML		AML			
	comp=E,500μm,1.1s								
ORI	**Oriolo Calabro**	**1.33**	**36**	P		**Pn**		**16 57 41.7**	**+1.7**
ORI				AML		AML			
	comp=N,5110μm,1.6s								
ORI				AML		AML			
	comp=E,4380μm,0.5s								
MCEL	**Monticello**	**1.37**	**12**	P		**Pn**		**16 57 42.4**	**+2.1**
MCEL				AML		AML			
	comp=E,1800μm,0.8s								
MCEL				AML		AML			
	comp=N,1026μm,0.7s								
MCEL				AML		AML			
	comp=E,1825μm,0.8s								
MCEL				AML		AML			
	comp=N,1042μm,0.7s								
AG11	**Viggiano (PZ)**	**1.40**	**17**	*e*P		**Pn**		**16 57 41.9**	**+1.3**
AG11				AML		AML			
	comp=N,2610μm,0.6s								
AG11				AML		AML			
	comp=E,2940μm,1.2s								
GALF	**Gagliano Caste**	**1.44**	**208**	P		**Pn**		**16 57 42.1**	**+1.1**
GALF				AML		AML			
	comp=N,913μm,0.8s								
GALF				AML		AML			
	comp=E,1050μm,0.7s								
GIB	**Gibilmanna**	**1.48**	**228**	⇓*i*P		**Pn**		**16 57 41.9**	**+0.6**
GIB				S		**S**		**16 58 11.4**	**0.0**
GIB				AML		AML			
	comp=E,2770μm,0.8s								
GIB				AML		AML			
	comp=N,3320μm,0.5s								
ECNV	**Catenanuova**	**1.50**	**202**	P		**Pn**		**16 57 42.9**	**+1.5**
ECNV				AML		AML			
	comp=N,2615μm,1.3s								
ECNV				AML		AML			
	comp=E,2145μm,1.6s								
CSLB	**Castelbuono**	**1.50**	**226**	⇓*i*P		**Pn**		**16 57 41.8**	**+0.4**
CSLB				S		**S**		**16 58 11.0**	**-0.5**
CSLB				AML		AML			

comp=E,364µm,0.8s
CSLB AML AML
comp=E,358µm,0.8s
CSLB AML AML
comp=N,398µm,1.0s
CDRU Civita di Ruta 1.50 357 ⇑P Pn 16 57 43.4 +2.0
PETRA Petralia Sopra 1.54 222 ⇓*i*P Pn 16 57 42.7 +0.9
PETRA AML AML
comp=E,1495µm,0.6s
PETRA AML AML
comp=N,1155µm,1.1s
CAGR Agira 1.54 208 AML AML
comp=N,3515µm,0.4s
CAGR AML AML
comp=E,2525µm,0.9s
CRAC Craco 1.58 29⇓*e*P Pn 16 57 43.5 +1.7
CRAC AML AML
comp=N,5325µm,1.3s
CRAC AML AML
comp=E,6025µm,1.2s
HLNI Lentini 1.69 195⇓*e*P Pn 16 57 42.9 +0.1
HLNI AML AML
comp=N,678µm,0.3s
HLNI AML AML
comp=E,790µm,0.7s
VAE Valguarnera 1.71 208 P Pn 16 57 44.8 +1.8
comp=E,21nm,0.3s,baz=326,slow=0.7,SNR=23
VAE S **S 16 58 17.1 +2.6**
comp=E,19nm,0.3s,baz=332,slow=19,SNR=4.3
HAGA Augusta 1.71 187 P Pn 16 57 42.7 -0.3
HAGA AML AML
comp=N,1140µm,0.9s
HAGA AML AML
comp=E,1270µm,1.1s
RESU Resuttano 1.72 219⇓*e*P Pn 16 57 44.8 +1.6
RESU AML AML
comp=N,1345µm,0.6s
RESU AML AML
comp=E,941µm,0.7s
SOLUN Solunto 1.73 239 P Pn 16 57 44.0 +0.9
SOLUN AML AML
comp=N,634µm,0.8s
SOLUN AML AML
comp=E,466µm,1.5s
AGST Augusta-Monte 1.74 185 P Pn 16 57 42.6 -0.6
AGST AML AML
comp=E,1421µm,0.7s
AGST AML AML
comp=N,2380µm,0.9s
MRLC Muro Lucano 1.77 2 P Pn 16 57 45.6 +2.3
MRLC AML AML
comp=E,232µm,1.3s
MRLC AML AML
comp=N,266µm,1.5s
USI Ustica 1.77 262⇑*i*P Pn 16 57 44.8 +1.4
USI S **S 16 58 16.1 +0.8**
USI AML AML
comp=N,1460µm,1.1s
USI AML AML
comp=E,1440µm,1.0s
ALJA Alia 1.80 227⇓*i*P Pn 16 57 45.2 +1.4
ALJA AML AML
comp=E,1690µm,1.1s
ALJA AML AML
comp=N,1955µm,1.6s
MCRV Calabrutti - M 1.80 354⇑*i*P Pn 16 57 46.0 +2.2
MCRV AML AML
comp=N,298µm,0.3s
MCRV AML AML
comp=E,296µm,0.8s
MPG Monte Pellegri 1.81 244⇑*i*P Pn 16 57 44.8 +0.9
MPG S **S 16 58 16.5 +0.5**
ACER Acerenza 1.84 12 P Pn 16 57 45.4 +1.4
ACER AML AML
comp=E,658µm,0.5s
ACER AML AML
comp=E,669µm,0.4s
ACER AML AML
comp=N,771µm,0.6s
ACER AML AML
comp=N,715µm,0.6s
SSY Sortino 1.85 189⇓*i*P Pn 16 57 44.3 +0.1
SSY AML AML
comp=E,1163µm,0.5s
SSY AML AML
comp=N,1870µm,1.1s
MEU Monte Lauro 1.92 192⇓*e*P Pn 16 57 45.3 +0.4
MEU AML AML
comp=N,1930µm,1.2s
MEU AML AML
comp=E,1820µm,1.4s
MATE Matera 1.93 30 AML AML
comp=N,3260µm,0.4s
MATE AML AML
comp=E,1605µm,1.0s
SNAL S. Angelo Dei 1.94 355 P Pn 16 57 47.1 +2.2
SNAL AML AML
comp=N,478µm,1.6s
SNAL AML AML
comp=N,508µm,1.5s
SNAL AML AML
comp=E,410µm,1.1s
SNAL AML AML
comp=E,446µm,1.1s
RAFF Raffo Rosso 1.95 206 Pn 16 57 46.1 +1.1
RAFF S **S 16 58 19.0 +0.8**
RAFF Raffo Rosso 1.95 206⇓*i*P Pn 16 57 46.2 +1.1
RAFF AML AML
comp=E,1279µm,0.7s
RAFF AML AML
comp=N,1755µm,0.8s
CORL Corleone 1.99 237 Pn 16 57 46.2 +0.8
CORL Corleone 1.99 237⇑*e*P Pn 16 57 46.2 +0.8
CORL AML AML
comp=N,1042µm,0.4s
CORL AML AML
comp=E,1370µm,1.2s
PALZ Palazzo San Ge 2.00 12 P Pn 16 57 46.6 +1.2
HAVL Avola 2.04 187⇓*i*P Pn 16 57 46.0 +0.1
HAVL AML AML
comp=N,3070µm,0.3s
HAVL AML AML
comp=E,1620µm,0.3s
CAFE Carife 2.04 356 P Pn 16 57 48.2 +2.4
CAFE AML AML
comp=N,1087µm,1.3s
CAFE AML AML
comp=N,226µm,0.9s
CAFE AML AML
comp=E,326µm,1.0s
CAFE AML AML
comp=E,993µm,1.3s
HMDC Modica 2.09 194⇓*i*P Pn 16 57 46.8 +0.4
HMDC S **S 16 58 20.7 +0.2**
HMDC AML AML
comp=N,940µm,1.1s
HMDC AML AML
comp=E,1440µm,0.8s
PAOL Paolisi 2.14 342 Pn 16 57 48.8 +2.0
PAOL Paolisi 2.14 342⇑*i*P Pn 16 57 48.8 +2.0
PAOL AML AML
comp=E,428µm,0.3s
PAOL AML AML
comp=N,499µm,0.5s
MRVN Minervino Murg 2.15 16 P Pn 16 57 48.0 +1.2
MRVN AML AML
comp=N,404µm,0.5s
MRVN AML AML
comp=E,626µm,0.6s
CLTA Licata 2.16 213⇓*i*P Pn 16 57 48.1 +1.2
CLTA AML AML
comp=E,2345µm,0.9s
CLTA AML AML
comp=N,2895µm,1.0s
CAPA Cerignola FG 2.19 8 AML AML
comp=E,612µm,1.1s
CAPA AML AML
comp=N,429µm,1.1s
NOCI Noci 2.20 35 AML AML
comp=E,684µm,1.6s
NOCI AML AML
comp=N,737µm,0.3s
FAVR Favara 2.21 219 P Pn 16 57 48.8 +1.4
FAVR AML AML
comp=N,392µm,0.6s
FAVR AML AML
comp=E,400µm,0.4s
CLTB Caltabellotta 2.24 232 Pn 16 57 48.2 +0.5
VITU Vitulano (BN) 2.27 345 *i*P Pn 16 57 50.2 +2.2
VITU AML AML
comp=E,446µm,0.4s
VITU AML AML
comp=E,420µm,0.9s
VITU AML AML
comp=N,720µm,0.5s
VITU AML AML
comp=N,648µm,0.5s
HPAC Pachino 2.30 186 P Pn 16 57 48.8 +0.5
HPAC AML AML
comp=E,1920µm,0.8s
HPAC AML AML
comp=N,1925µm,0.9s
SGG Gregorio Mates 2.52 342⇑*i*P Pn 16 57 52.9 +2.5
SGG AML AML
comp=N,406µm,0.5s
SGG AML AML
comp=E,440µm,0.5s
VAGA Valle Agricola 2.59 340 AML AML
comp=N,382µm,0.5s
VAGA AML AML
comp=E,242µm,0.6s
SCTE Santa Cesarea 2.59 64 Pn Pn 16 57 51.9 +0.8
SCTE Santa Cesarea 2.59 64 AML AML
comp=E,1215µm,0.6s
SCTE AML AML
comp=N,1755µm,0.5s
BSSO Busso 2.63 346 AML AML
comp=E,65µm,0.7s
BSSO AML AML
comp=N,91µm,0.9s
MSAG Monte S. Angel 2.75 8 AML AML
comp=E,117µm,0.7s
MSAG AML AML
comp=N,253µm,1.6s
SGRT San Giovanni R 2.77 5 Pn Pn 16 57 54.1 +1.1
SGRT San Giovanni R 2.77 5⇑*i*P Pn 16 57 54.2 +1.2
SGRT AML AML
comp=N,118µm,1.2s
SGRT AML AML
comp=E,110µm,1.1s
MIDA Miranda 2.80 342⇑*i*P Pn 16 57 56.0 +2.7
MIDA AML AML
comp=E,734µm,0.4s
MIDA AML AML
comp=N,631µm,0.5s
MIDA AML AML
comp=N,627µm,0.4s
MIDA AML AML
comp=E,763µm,0.4s
RNI2 Rionero Sannit 2.88 341 AML AML
comp=N,636µm,0.5s
RNI2 AML AML
comp=N,632µm,0.5s
RNI2 AML AML
comp=E,1005µm,0.5s
RNI2 AML AML
comp=E,992µm,0.5s
POFI Posta Fibreno 3.02 335⇑*i*P Pn 16 57 58.0 +2.3
TREM Isole Tremiti 3.13 1 *i*P Pn 16 57 58.4 +1.7
TREM AML AML
comp=N,436µm,1.0s
TREM AML AML
comp=E,278µm,1.1s
VVLD Villa Vallelon 3.19 335⇑*i*P Pn 16 57 59.9 +2.4
VVLD AML AML
comp=E,71µm,0.9s
VVLD AML AML
comp=N,86µm,0.8s
INTR Introdacqua 3.23 340 Pn Pn 16 58 00.3 +2.3
KEK Kerkira 3.47 77 P Pn 16 58 01.8 +1.2
KEK Kerkira 3.47 77 P Pn 16 58 01.8 +1.2
KEK AML AML
comp=E,59µm,0.6s
KEK AML AML
comp=N,51µm,1.1s
SRN Sarande 3.66 74 P Pn 16 58 03.9 +1.2
SRN Sarande 3.66 74⇓*i*P Pn 16 58 03.9 +1.2
SRN AML AML
comp=E,178µm,0.4s
SRN AML AML
comp=N,190µm,0.9s
AQU L'Aquila 3.70 336 P Pn 16 58 06.2 +3.0
AQU L'Aquila 3.70 336 *e*Pn Pn 16 58 06.3 +3.0
AQU L'Aquila 3.70 336 Pn 16 58 06.2 +3.0
FIAM Fiamignano 3.72 333⇑*i*P Pn 16 58 06.4 +2.9
FIAM AML AML
comp=E,150µm,0.8s
FIAM AML AML
comp=N,136µm,0.7s
IGT Igoumenitsa 3.85 80 P Pn 16 58 06.4 +1.4
IGT Igoumenitsa 3.85 80 P Pn 16 58 06.4 +1.4
TERO Teramo 3.88 340⇑*i*P Pn 16 58 08.0 +2.6
TERO AML AML
comp=E,27µm,0.7s
TERO AML AML
comp=N,34µm,0.4s
KEF3 Kipouria, Keph 3.94 100 P Pn 16 58 07.6 +1.6
DMLN Damoulianata-K 3.95 99 P Pn 16 58 07.6 +1.4
KEF5 Kardakata, Kep 4.01 99 P Pn 16 58 08.2 +1.3
FSK Fiskardo 4.05 96 P Pn 16 58 08.8 +1.4
LKD2 Lefkada island 4.09 91 P Pn 16 58 09.4 +1.6
EVGI Lefkada island 4.11 93 P Pn 16 58 09.5 +1.5
NYDR Nydri-Lefkada 4.13 92 P Pn 16 58 09.6 +1.4
VLS Valsamata 4.13 100 P Pn 16 58 09.5 +1.2
TIR Tirane 4.14 54 P Pn 16 58 09.7 +1.4
PSDA Pessada-Kefalo 4.14 101 P Pn 16 58 09.9 +1.5
ULC Ulcinj 4.16 43⇓*i*Pn Pn 16 58 09.8 +1.2
ULC *i* Sn **S 16 59 00.0 -0.8**
LSK Leskovik 4.17 72 P Pn 16 58 10.4 +1.6
HCY Herceg Novi 4.17 33 *e*Pn Pn 16 58 10.0 +1.3
HCY Herceg Novi 4.17 33⇓*i*Pn Pn 16 58 10.0 +1.3
HCY *i* Sn **S 16 59 00.1 -0.8**
NRCA Norcia 4.22 336 Pn 16 58 11.7 +2.3
BUM Brajici-Budva 4.23 37⇓*i*Pn Pn 16 58 10.8 +1.3
BUM *i* Sn **S 16 59 01.5 -0.9**
JAN Janina 4.26 79 P Pn 16 58 12.1 +2.2
JAN Janina 4.26 79 P Pn 16 58 12.1 +2.2
VLMS Volimes, Zakyn 4.26 103 P Pn 16 58 10.9 +1.0
DRME Dracevica, Mon 4.29 41 *e*Pn Pn 16 58 11.7 +1.6
DRME Dracevica, Mon 4.29 41⇑*i*Pn Pn 16 58 11.4 +1.3
DRME *i* Sn **S 16 59 02.6 -0.9**
TREB Trebinje 4.34 30 *e*Pn Pn 16 58 11.9 +1.3
CSP1 Cessapalombo 4.43 338 P Pn 16 58 14.3 +2.4
CEME Cevo 4.44 36⇓*i*Pn Pn 16 58 13.1 +1.2
CEME *i* Sn **S 16 59 05.8 -1.0**
KBN Korca 4.44 67 P Pn 16 58 14.4 +2.4
KBN Korca 4.44 67 P Pn 16 58 14.4 +2.4
LTHK Lithakia 4.44 105 P Pn 16 58 13.0 +1.0
PDG Podgorica 4.51 39 ⇑P Pn 16 58 14.2 +1.6
PDG Podgorica 4.51 39 *e*Pn Pn 16 58 14.0 +1.3
PDG Podgorica 4.51 39 Pn Pn 16 58 13.6 +0.9
TTG Podgorica 4.51 39⇓*i*Pn Pn 16 58 14.0 +1.3
TTG *i* Sn **S 16 59 07.3 -0.8**
LATE Laterza 4.54 324 Pn 16 58 15.5 +2.3
BRY Bratogost 4.57 30 P Pn 16 58 15.5 +1.9
BRY Bratogost 4.57 30 *e*Pn Pn 16 58 14.6 +1.0
BRY Bratogost 4.57 30⇑*i*Pn Pn 16 58 14.8 +1.2
BRY *i* Sn **S 16 59 08.5 -1.2**
NEST Nestorio 4.57 70 P Pn 16 58 16.4 +2.8
PENT Pentalofos 4.58 73 P Pn 16 58 16.7 +3.0
NKME Niksic 4.63 34⇑*i*Pn Pn 16 58 15.5 +1.3
NKME *i* Sn **S 16 59 09.8 -1.1**
OHR Ohrid 4.64 61 *i* Pn Pn 16 58 15.2 +0.8
NKY Niksic 4.68 34⇑*i*Pn Pn 16 58 16.2 +1.3
NKY *i* Sn **S 16 59 11.0 -1.2**
KPRO Kipourio 4.70 76 P Pn 16 58 17.8 +2.7
VSL Villasalto 4.72 278 Pn Pn 16 58 16.8 +1.5
VSL Villasalto 4.72 278⇑*i*P Pn 16 58 16.8 +1.5
CGL Cagliari Serpe 4.78 276⇑*i*P Pn 16 58 17.3 +1.2
PVO Paravola 4.78 93 P Pn 16 58 18.5 +2.4
MURB Monte Urbino 4.80 334 Pn Pn 16 58 19.0 +2.7
ATTE AVT- Monte Tez 4.80 332 AML AML
comp=N,43µm,0.6s
ATTE AML AML
comp=E,46µm,0.6s
FNA Florina 4.92 67 P Pn 16 58 19.6 +1.9
FNA Florina 4.92 67 P Pn 16 58 19.7 +1.9
FNA Florina 4.92 67 Pn 16 58 19.7 +1.9
KOME Kolasin 4.95 37⇓*i*Pn Pn 16 58 19.5 +1.4
KOME *i* Sn **S 16 59 16.8 -1.3**
UPM Unac-Piva 4.96 31⇓*i*Pn Pn 16 58 20.1 +1.7
UPM Unac-Piva 4.96 31⇓*i*Pn Pn 16 58 19.8 +1.4
UPM *i* Sn **S 16 59 17.2 -1.3**
EVR Evrytania 4.98 89 P Pn 16 58 21.5 +2.9
PVY Plav 4.98 42⇑*i*Pn Pn 16 58 19.9 +1.3
PVY *i* Sn **S 16 59 17.7 -1.1**
CASP Castiglione de 5.13 319 Pn Pn 16 58 22.3 +2.0
THL Klokotos Trika 5.15 82 P Pn 16 58 22.6 +2.1
IVA Berane 5.15 40⇑*i*Pn Pn 16 58 22.0 +1.4
IVA *i* Sn **S 16 59 21.3 -1.2**
LAKA Lakka 5.19 96 P Pn 16 58 23.3 +2.2
MAKR Makrakomi, Fth 5.23 88 P Pn 16 58 24.9 +3.4
TRIZ Trizonia 5.24 95 P Pn 16 58 24.6 +2.9
KALE Kalithea 5.29 94 P Pn 16 58 25.3 +2.9
KLV Kalavryta, Ach 5.36 98 P Pn 16 58 25.5 +2.3
AGG Agios Georgios 5.38 87 P Pn 16 58 25.9 +2.4
AGG Agios Georgios 5.38 87 P Pn 16 58 25.9 +2.4
AGG Agios Georgios 5.38 87 Pn Pn 16 58 25.9 +2.4
PYL PYLOS 5.41 111 P Pn 16 58 24.9 +1.1
ITM Ithomi 5.44 107 P Pn 16 58 25.8 +1.7
ITM Ithomi 5.44 107 Pn Pn 16 58 25.9 +1.7
OSSC Osservatorio P 5.52 327 Pn Pn 16 58 27.4 +2.3
MGRS Mrkonjic Grad 5.56 12 *e*Pn Pn 16 58 27.2 +1.6
LIT Litokhoron 5.58 76 P Pn 16 58 27.2 +1.5
LIT Litokhoron 5.58 76 P Pn 16 58 27.3 +1.5
LIT Litokhoron 5.58 76 Pn Pn 16 58 27.3 +1.5
AXAR Agios Charalam 5.65 90 P Pn 16 58 28.9 +2.1
GRG Griva 5.71 68 P Pn 16 58 28.8 +1.3
GRG Griva 5.71 68 P Pn 16 58 29.0 +1.5
GRG pmax pmax
comp=Z,19nm,1.0s
BBLS Lazići 5.72 30 *e*Pn Pn 16 58 29.1 +1.5
KEST Kesra 5.83 238 P Pn 16 58 29.6 +0.5
comp=Z,2.7nm,0.3s,baz=327,slow=2.2,SNR=67
KEST S **S 16 59 33.8 -4.1**
baz=340,slow=14,SNR=1.1
KEST Kesra 5.83 238 Pn Pn 16 58 31.0 +1.9
STIP Stip 5.83 60 *i* Pn Pn 16 58 32.0 +3.1
BLY Banja Luka 5.90 12 *e*Pn Pn 16 58 29.4 -0.4
VAY Valandovo 5.95 65 *i* Pn Pn 16 58 31.0 +0.6
LTK Loutraki 6.00 97 P Pn 16 58 32.5 +1.4
PGF Pioggiola 6.03 308 *e*P Pn 16 58 32.6 +1.0
PGF *e*Sn **S 16 59 44.3 +1.9**
comp=Z,6.0nm,0.8s
PGF Pioggiola 6.03 308 P Pn 16 58 33.2 +1.6
PGF pmax pmax
comp=Z,37nm,1.2s
XOR Xorichti 6.05 84 P Pn 16 58 33.7 +2.0
KNT Kendrikon 6.13 67 P Pn 16 58 34.0 +1.3
KNT Kendrikon 6.13 67 P Pn 16 58 34.2 +1.5
KNT pmax pmax
comp=Z,24nm,0.8s
DIVS Divibare 6.15 32 *e*Pn Pn 16 58 33.5 +0.6
VILL Villia 6.24 95 P Pn 16 58 35.5 +1.4
ZCCA Zocca 6.31 330 Pn Pn 16 58 38.1 +3.2
SOH Sokhos 6.37 71 P Pn 16 58 37.2 +1.5
SOH Sokhos 6.37 71 P Pn 16 58 37.4 +1.7
SOH pmax pmax
comp=Z,33nm,0.9s
VLC Villacollemand 6.40 325 Pn Pn 16 58 38.1 +2.1
PAIG Paliouri 6.46 79 P Pn 16 58 37.8 +1.0
PAIG Paliouri 6.46 79 P Pn 16 58 38.0 +1.2
PAIG pmax pmax
comp=Z,48nm,0.9s
SRS Serrai 6.62 69 P Pn 16 58 40.0 +1.1
SRS Serrai 6.62 69 P Pn 16 58 39.9 +1.1
SRS pmax pmax
comp=Z,26nm,0.8s
VLY Voula,Athens 6.67 97 P Pn 16 58 40.7 +1.2
PTL Penteli 6.69 95 P Pn 16 58 41.1 +1.4
DION Dionisos Attik 6.73 95 P Pn 16 58 41.8 +1.5
OUR Ouranopolis 6.74 76 P Pn 16 58 41.2 +0.9
OUR Ouranopolis 6.74 76 P Pn 16 58 41.2 +0.9
CEY Cerknica 6.79 354 *e*Pn Pn 16 58 41.4 +0.5
TRI Trieste 6.83 350 P Pn 16 58 42.1 +0.8
TRI Trieste 6.83 350 Pn Pn 16 58 42.1 +0.8
CRES Cresnjev 6.83 0 *e*Pn Pn 16 58 42.9 +1.5
NVR Nevrokopi 6.88 67 P Pn 16 58 43.7 +1.6
MSSA Maissana 6.92 322 Pn Pn 16 58 44.2 +1.6
VTS Vitosha 6.95 56 ⇓P Pn 16 58 44.7 +1.6
VTS Vitosha 6.95 56 P Pn 16 58 44.7 +1.6
VTS Vitosha 6.95 56 Pn Pn 16 58 44.6 +1.6
TEOL Teolo 6.95 338 Pn Pn 16 58 42.6 -0.3
FRGS Fruska Gora 6.97 26 ⇑P Pn 16 58 44.6 +1.4
LJU Ljubljana 7.08 355 *i* P Pn 16 58 46.2 +1.7
comp=Z,76nm,0.5s
LJU *i* S **S 17 00 08.1 +2.0**
THAS Thassos island 7.34 74 P Pn 16 58 48.4 +0.6
MDVR Moldovita 7.45 37 ⇑P Pn 16 58 50.5 +1.3
STAL STALIGIAL 7.54 346 Pn Pn 16 58 50.2 -0.1
OBKA Obir 7.54 355 *i* Pn Pn 16 58 51.7 +1.2
comp=Z,40nm,0.6s,SNR=23
OBKA Obir 7.54 355 *e*P Pn 16 58 51.7 +1.2
baz=163,slow=12
SALO Salr 7.55 333 Pn Pn 16 58 50.3 -0.2
CTI Castel Tesino 7.58 340 P Pn 16 58 51.1 +0.1
CTI Castel Tesino 7.58 340 Pn Pn 16 58 51.1 +0.1
MORH Mrgy, Hungar 7.60 17 ⇑P Pn 16 58 52.2 +1.1
MORH Mrgy, Hungar 7.60 17 *e*Pn Pn 16 58 51.8 +0.7
LIA Limnos Island 7.61 80 P Pn 16 58 52.6 +1.3
SOKA Soboth 7.69 358 *i* Pn Pn 16 58 53.4 +1.0
comp=Z,12nm,0.6s,SNR=16
PLD Plovdiv 7.72 63 P Pn 16 58 55.0 +2.3
PLD pmax pmax
comp=Z,110nm,1.0s
SBF Sospel 7.73 312 *e*P Pn 16 58 53.7 +0.9
SBF *e*Sn **S 17 00 22.9 +1.8**
comp=Z,13nm,0.8s
MYKA Terra Mystica 7.75 351 *i* Pn Pn 16 58 54.9 +1.8
comp=Z,12nm,0.5s,SNR=9.4
ZOU Zoufplan 7.78 347 Pn 16 58 54.3 +0.8
HERR Herculane 7.86 39 ⇑P Pn 16 58 55.6 +1.2
LMR La Mourre 8.00 306 *e*P Pn 16 58 58.1 +1.9
LMR *e*Sn **S 17 00 28.7 +1.3**
comp=Z,3.9nm,0.6s
FRF La Foret Royal 8.03 307 *e*P Pn 16 58 58.1 +1.5
FRF *e*Sn **S 17 00 29.4 +1.3**
comp=Z,1.3nm,0.4s
ABTA Abfaltersbach 8.04 346 *i* Pn Pn 16 58 58.0 +1.2
comp=Z,16nm,0.5s,SNR=24
RDO Rodhopi 8.05 71 P Pn 16 58 58.0 +1.2
BZS Buzias 8.06 33 ⇑P Pn 16 58 59.0 +2.1
BZS Buzias 8.06 33 P Pn 16 58 58.9 +2.1
APE Apeiranthos 8.20 100 ⇑P Pn 16 58 59.3 +0.4
APE Apeiranthos 8.20 100 *ce*P Pn 16 58 59.6 +0.7
PLVB Pleven 8.21 55 ⇓P Pn 16 59 00.0 +1.2
KBA Koelnbreinsper 8.23 350 *i* Pn Pn 16 59 00.5 +1.3
comp=Z,11nm,0.8s,SNR=9.5
KBA Koelnbreinsper 8.23 350 *e*P Pn 16 59 00.4 +1.3
baz=163,slow=12
ARSA Arzberg 8.26 0 *e*Pn Pn 16 59 00.5 +1.1
comp=Z,3.3nm,0.5s
ARSA Arzberg 8.26 0 *e*P Pn 16 58 59.2 -0.2
baz=163,slow=12
SANT Santorini 8.38 105 Pn Pn 16 59 00.9 -0.2
ALN Alexandroupoli 8.38 73 P Pn 16 59 02.3 +1.3
ALN Alexandroupoli 8.38 73 P Pn 16 59 02.1 +1.1
ALN Alexandroupoli 8.38 73 Pn Pn 16 59 02.1 +1.1
GZR Gura Zlata 8.41 38 ⇓P Pn 16 59 03.2 +1.8
IDI Anoyia 8.41 113 P Pn 16 59 02.6 +1.0
comp=Z,2.3nm,0.3s,baz=311,slow=14,SNR=7.9
IDI Anoyia 8.41 113 ⇑P Pn 16 59 00.6 -1.0
IDI Anoyia 8.41 113 Pn Pn 16 59 02.4 +0.8
MBDF Montbardon 8.63 314 *e*P Pn 16 59 07.4 +3.1
MBDF *e*Sn **S 17 00 43.4 +1.2**
comp=Z,1.4nm,0.4s
TUE Stuetta 8.71 331 Pn Pn 16 59 05.9 +0.6
WTTA Wattenberg 8.72 343 *i* Pn Pn 16 59 07.6 +2.2
comp=Z,38nm,0.6s,SNR=19
WTTA Wattenberg 8.72 343 P Pn 16 59 07.7 +2.2
WTTA pmax pmax
comp=Z,51nm,0.8s
WTTA Wattenberg 8.72 343 *e*P Pn 16 59 07.8 +2.3
baz=163,slow=12
FETA Feichten 8.73 338 *e*Pn Pn 16 59 07.6 +2.1
comp=Z,50nm,0.8s,SNR=44
DAVOX Davos/Dischmat 8.78 334 P Pn 16 59 07.2 +1.0
comp=Z,3.8nm,0.3s,baz=144,slow=11,SNR=42
SQTA Sankt Quirin 8.78 341 *i* Pn Pn 16 59 08.1 +1.9
comp=Z,53nm,0.4s,SNR=48
WATA Walderalm 8.80 343 *i* Pn Pn 16 59 07.9 +1.4
comp=Z,45nm,0.5s,SNR=28
BNI Bardonecchia 8.89 316 P Pn 16 59 10.7 +3.2
BNI Bardonecchia 8.89 316 Pn Pn 16 59 10.7 +3.2

MOA	**Molln**	**8.90**	**355**	*e*Pn		**Pn**	**16 59 09.0**	**+1.5**		
	comp=Z,7.9nm,0.5s,SNR=14									
MOA	**Molln**	**8.90**	**355**	*e*P		**Pn**	**16 59 08.5**	**+1.0**		
	baz=163,slow=12									
SMRF	**Simiane la Rot**	**8.91**	**307**	*e*P		**Pn**	**16 59 09.7**	**+2.0**		
SMRF				*e*Sn		**S**	**17 00 49.5**	**+0.9**		
	comp=Z,0.8nm,0.4s									
MOTA	**Moosalm**	**8.93**	**341**	*i* Pn		**Pn**	**16 59 09.7**	**+1.7**		
	comp=Z,18nm,0.4s,SNR=18									
CONA	**Conrad Observa**	**8.94**	**2**	*i* Pn		**Pn**	**16 59 09.4**	**+1.2**		
	comp=Z,5.1nm,0.6s,SNR=8.4									
RJOB	**Jochberg**	**8.95**	**349**	*e*P		**Pn**	**16 59 09.3**	**+1.1**		
	baz=163,slow=12									
LPG	**La Plagne**	**9.14**	**318**	*e*P		**Pn**	**16 59 14.2**	**+3.3**		
LPG				*e*Sn		**S**	**17 00 55.5**	**+1.2**		
	comp=Z,3.2nm,0.4s									
RETA	**Reutte**	**9.15**	**340**	*i* Pn		**Pn**	**16 59 12.7**	**+1.9**		
	comp=Z,21nm,0.5s,SNR=10									
LPL	**La Plagne**	**9.16**	**318**	*e*P		**Pn**	**16 59 14.5**	**+3.4**		
LPL				*e*Sn		**S**	**17 00 55.8**	**+1.1**		
	comp=Z,5.0nm,0.6s									
DAVA	**Damuels**	**9.23**	**336**	*i* Pn		**Pn**	**16 59 13.5**	**+1.6**		
	comp=Z,24nm,0.6s,SNR=13									
DAVA	**Damuels**	**9.23**	**336**	*e*P		**Pn**	**16 59 13.3**	**+1.5**		
	baz=163,slow=12									
ORIF	**Oris-en-Rattie**	**9.25**	**313**	*e*P		**Pn**	**16 59 14.0**	**+1.9**		
ORIF				*e*Sn		**S**	**17 00 57.6**	**+1.1**		
	comp=Z,3.1nm,0.5s									
ORIF	**Oris-en-Rattie**	**9.25**	**313**	P		**Pn**	**16 59 14.2**	**+2.1**		
ORIF				pmax		pmax				
	comp=Z,27nm,0.7s									
ZST	**Bratislava**	**9.28**	**7**	*e*P		**Pn**	**16 59 10.7**	**-1.6**		
ZST	**Bratislava**	**9.28**	**7**	*e*P		**Pn**	**16 59 10.7**	**-1.6**		
ZST				*e*S		S	17 00 43.7	-13		
DRGR		**9.45**	**32**	⇑P		**Pn**	**16 59 16.0**	**+1.4**		
MODS	**Modra-Piesok**	**9.48**	**8**	*e*P		**Pn**	**16 59 14.0**	**-0.8**		
MODS	**Modra-Piesok**	**9.48**	**8**	*e*P		**Pn**	**16 59 14.0**	**-0.8**		
SENIN	**Lac Senin/Sane**	**9.49**	**324**	Pn		**Pn**	**16 59 15.4**	**+0.2**		
PSZ	**Piszkesteto**	**9.50**	**19**	⇓P		**Pn**	**16 59 16.1**	**+1.0**		
UBR	**Ueberruh**	**9.51**	**338**	*e*P		**Pn**	**16 59 16.4**	**+1.1**		
	baz=163,slow=12									
VOIR		**9.61**	**45**	⇑P		**Pn**	**16 59 18.8**	**+2.1**		
VOIR		**9.61**	**45**	P		**Pn**	**16 59 19.7**	**+3.0**		
VOIR				pmax		pmax				
	comp=Z,6.0nm,0.9s									
FUR	**Furstenfeldbru**	**9.65**	**343**	P		**Pn**	**16 59 18.4**	**+1.4**		
FUR				pmax		pmax				
	comp=Z,125nm,0.8s									
FUR	**Furstenfeldbru**	**9.65**	**343**	*e*P		**Pn**	**16 59 17.6**	**+0.6**		
	baz=163,slow=12									
VYHS	**Vyhne**	**9.82**	**13**	*e*P		**Pn**	**16 59 19.9**	**+0.8**		
VYHS	**Vyhne**	**9.82**	**13**	*e*P		**Pn**	**16 59 19.8**	**+0.7**		
VIVF	**Saint-Julien-l**	**9.92**	**310**	*e*P		**Pn**	**16 59 21.3**	**+0.8**		
GEC2	**GERESS Array S**	**9.93**	**353**	Pn		**Pn**	**16 59 21.1**	**+0.5**		
GEC2	**GERESS Array S**	**9.93**	**353**	*e*P		**Pn**	**16 59 21.4**	**+0.8**		
	baz=163,slow=12									
GERES	**GERESS Array B**	**9.93**	**353**	P		**Pn**	**16 59 21.0**	**+0.3**		
	comp=Z,1.2nm,0.3s,baz=167,slow=13,SNR=40									
GERES	**GERESS Array B**	**9.93**	**353**	P		**Pn**	**16 59 20.9**	**+0.3**		
GERES	**GERESS Array B**	**9.93**	**353**			**Pn**	**16 59 20.9**	**+0.3**		
KARP	**Karpathos**	**9.97**	**107**	Pn		**Pn**	**16 59 21.4**	**+0.2**		
JAVC	**Velka Javorina**	**10.00**	**9**	*e*PN		**Pn**	**16 59 23.5**	**+2.1**		
LASF	**Ste Croix**	**10.05**	**304**	*e*P		**Pn**	**16 59 22.7**	**+0.6**		
KRUC	**Moravsky**	**10.10**	**4**	*e*PN		**Pn**	**16 59 23.6**	**+1.0**		
KRUC	**Moravsky**	**10.10**	**4**	P		**Pn**	**16 59 23.9**	**+1.3**		
KRUC				pmax		pmax				
	comp=Z,29nm,0.8s									
SLE	**Schleitheim**	**10.11**	**332**	P		**Pn**	**16 59 23.6**	**+0.7**		
SLE				pmax		pmax				
	comp=Z,64nm,1.4s									
DOPR	**Dopca**	**10.13**	**43**	⇑P		**Pn**	**16 59 24.4**	**+1.2**		
MLR	**Muntele Rosu**	**10.15**	**47**	P		**Pn**	**16 59 26.1**	**+2.7**		
	comp=Z,0.8nm,0.3s,baz=156,slow=14,SNR=6.0									
MLR	**Muntele Rosu**	**10.15**	**47**	⇑P		**Pn**	**16 59 24.8**	**+1.3**		
KHC	**Kasperske Hory**	**10.23**	**353**	⇑*i*P		**Pn**	**16 59 24.5**	**+0.3**		
KHC	**Kasperske Hory**	**10.23**	**353**	*e*PN		**Pn**	**16 59 24.6**	**+0.3**		
SSB	**Saint Sauveur**	**10.23**	**311**	P		**Pn**	**16 59 26.7**	**+2.3**		
SSB	**Saint Sauveur**	**10.23**	**311**	Pn		**Pn**	**16 59 26.6**	**+2.3**		
CABF	**La Chapelle**	**10.24**	**321**	*e*P		**Pn**	**16 59 24.9**	**+0.3**		
TREC	**Trest**	**10.30**	**0**	*e*P		**Pn**	**16 59 27.9**	**+2.1**		
TREC	**Trest**	**10.30**	**0**	*e*PN		**Pn**	**16 59 27.3**	**+2.1**		
WET	**Wettzell**	**10.32**	**351**	P		**Pn**	**16 59 25.7**	**+0.3**		
WET				pmax		pmax				
	comp=Z,23nm,0.7s									
WET	**Wettzell**	**10.32**	**351**	*e*P		**Pn**	**16 59 25.6**	**+0.3**		
	baz=163,slow=12									
VRAC	**Vranov**	**10.35**	**4**	P		**Pn**	**16 59 27.0**	**+1.2**		
	comp=Z,2.0nm,0.3s,baz=194,slow=11,SNR=16									
VRAC	**Vranov**	**10.35**	**4**	⇑P		**Pn**	**16 59 27.6**	**+1.7**		
VRAC	**Vranov**	**10.35**	**4**	*e*PN		**Pn**	**16 59 26.5**	**+0.7**		
VRAC	**Vranov**	**10.35**	**4**	P		**Pn**	**16 59 27.0**	**+1.2**		
TRPA	**Tarpa**	**10.49**	**27**	⇓P		**Pn**	**16 59 30.1**	**-2.6**		
BFO	**Black Forest**	**10.65**	**334**	P		**Pn**	**16 59 30.3**	**+0.7**		
BFO	**Black Forest**	**10.65**	**334**	Pn		**Pn**	**16 59 30.3**	**+0.7**		
BFO	**Black Forest**	**10.65**	**334**	*e*P		**Pn**	**16 59 29.9**	**+0.3**		
	baz=163,slow=12									
PBCC	**Pribram**	**10.74**	**355**	*e*PN		**Pn**	**16 59 31.5**	**+0.8**		
PLOR	**Plostina**	**10.76**	**47**	⇓P		**Pn**	**16 59 33.2**	**+2.2**		
PLOR	**Plostina**	**10.76**	**47**	P		**Pn**	**16 59 33.2**	**+2.2**		
HINF	**Hinteralfeld**	**10.80**	**328**	*e*P		**Pn**	**16 59 31.0**	**-0.5**		
HINF	**Hinteralfeld**	**10.80**	**328**	P		**Pn**	**16 59 30.7**	**-0.8**		
VRI	**Vrincioaia**	**10.81**	**47**	⇓P		**P**	**16 59 34.1**	**-2.2**		
VRI	**Vrincioaia**	**10.81**	**47**	P		**P**	**16 59 34.0**	**-2.2**		
CRVS	**Cervenica-Dubn**	**10.82**	**22**	*e*P		**P**	**16 59 35.3**	**-1.0**		
CRVS	**Cervenica-Dubn**	**10.82**	**22**	*e*P		**P**	**16 59 35.3**	**-1.0**		
MTLF	**Montolieu**	**10.86**	**298**	*e*P		**P**	**16 59 36.1**	**-0.7**		
MORC	**Moravsky Berou**	**10.89**	**7**	*e*PN		**Pn**	**16 59 34.0**	**+1.4**		
MORC	**Moravsky Berou**	**10.89**	**7**	P		**Pn**	**16 59 33.7**	**+1.1**		
MORC	**Moravsky Berou**	**10.89**	**7**	Pn		**Pn**	**16 59 33.7**	**+1.1**		
ECH	**Echery**	**10.99**	**330**	P		**Pn**	**16 59 33.7**	**-0.2**		
ECH	**Echery**	**10.99**	**330**	Pn		**Pn**	**16 59 33.7**	**-0.2**		
NIE	**Niedzica**	**11.00**	**17**	P		**P**	**16 59 36.6**	**-1.7**		
NIE				pmax		pmax				
	comp=Z,6.0nm,1.3s									
PRU	**Pruhonice**	**11.02**	**357**	P		**P**	**16 59 39.1**	**+0.6**		
PRU				pmax		pmax				
	comp=Z,3.0nm,1.2s									
ROTZ	**Rotzenmuhle**	**11.02**	**349**	*e*P		**Pn**	**16 59 33.5**	**-0.7**		
	baz=163,slow=12									
CDF	**Champ du Feu**	**11.11**	**331**	*e*P		**Pn**	**16 59 35.6**	**+0.2**		
GRA1	**Grafenberg Arr**	**11.11**	**346**	Pn		**Pn**	**16 59 36.3**	**+0.9**		
GRF	**Grafenberg Arr**	**11.11**	**346**	P		**Pn**	**16 59 36.3**	**+0.9**		
GRF	**Grafenberg Arr**	**11.11**	**346**	*e*P		**Pn**	**16 59 35.8**	**+0.4**		
	baz=163,slow=12									
GRFO	**Grafenberg**	**11.11**	**346**	P		**Pn**	**16 59 36.1**	**+0.8**		
GRFO	**Grafenberg**	**11.11**	**346**	Pn		**Pn**	**16 59 36.1**	**+0.8**		
BIZ	**Bicaz**	**11.14**	**41**	⇑P		**Pn**	**16 59 37.4**	**+1.6**		
HAU	**Haudompre**	**11.16**	**327**	*e*P		**Pn**	**16 59 35.7**	**-0.2**		
HAU	**Haudompre**	**11.16**	**327**	P		**Pn**	**16 59 36.0**	**+0.1**		
BURAR	**Bucovina Array**	**11.18**	**36**	⇑P		**P**	**16 59 38.7**	**-1.8**		
BURAR	**Bucovina Array**	**11.18**	**36**	P		**P**	**16 59 38.6**	**-1.8**		
BURAR	**Bucovina Array**	**11.18**	**36**	P		**P**	**16 59 43.3**	**+2.9**		
BUR08	**Bucovina Ar. S**	**11.20**	**36**	P		**P**	**16 59 42.8**	**+2.2**		
MANZ	**Manzenberg**	**11.25**	**349**	*e*P		**Pn**	**16 59 37.2**	**+0.1**		
	baz=163,slow=12									
CFR	**Carcaliu**	**11.29**	**53**	⇓P		**Pn**	**16 59 38.7**	**+1.2**		
CFR	**Carcaliu**	**11.29**	**53**	P		**Pn**	**16 59 38.7**	**+1.2**		
DPC	**Dobruska-Polom**	**11.38**	**3**	*e*P		**Pn**	**16 59 39.4**	**+0.7**		
DPC	**Dobruska-Polom**	**11.38**	**3**	*e*PN		**Pn**	**16 59 39.4**	**+0.7**		
SMF	**Signal de Mont**	**11.43**	**316**	*e*P		**Pn**	**16 59 38.7**	**-0.7**		
SMF	**Signal de Mont**	**11.43**	**316**	P		**Pn**	**16 59 37.7**	**-1.7**		
NKC	**Novy Kostel**	**11.44**	**350**	*e*P		**Pn**	**16 59 39.8**	**+0.4**		
NKC	**Novy Kostel**	**11.44**	**350**	*e*PN		**Pn**	**16 59 39.8**	**+0.4**		
PVCC	**Panska Ves**	**11.55**	**357**	P		**Pn**	**16 59 42.0**	**+1.2**		
PVCC				pmax		pmax				
	comp=Z,10.0nm,0.7s									
CAF	**Calviac**	**11.57**	**305**	*e*P		**P**	**16 59 44.0**	**-0.8**		
AKAS	**Kas**	**11.58**	**99**	Pn		**Pn**	**16 59 39.6**	**-1.9**		
OJC	**Ojcow**	**11.65**	**14**	P		**Pn**	**16 59 43.7**	**+1.6**		
OJC	**Ojcow**	**11.65**	**14**	P		**Pn**	**16 59 43.7**	**+1.6**		
ELL	**Elmali**	**11.67**	**97**	P		**Pn**	**16 59 43.7**	**+1.2**		
ELL	**Elmali**	**11.67**	**97**	Pn		**Pn**	**16 59 43.7**	**+1.2**		
AVF	**Avril sur Loir**	**11.79**	**315**	*e*P		**Pn**	**16 59 43.1**	**-0.7**		
AVF	**Avril sur Loir**	**11.79**	**315**	P		**Pn**	**16 59 43.8**	**0.0**		
LOR	**Lormes**	**11.81**	**318**	*e*P		**Pn**	**16 59 43.0**	**-1.2**		
	baz=138									
LOR	**Lormes**	**11.81**	**318**	P		**Pn**	**16 59 43.2**	**-1.0**		
PAGF	**Fort de Pagny**	**11.85**	**327**	*e*P		**Pn**	**16 59 44.6**	**+0.1**		
KSP	**Ksiaz**	**11.87**	**3**	P		**Pn**	**16 59 46.2**	**+1.4**		
KSP				pmax		pmax				
	comp=Z,9.0nm,0.8s									
SSF	**Saint Saulge**	**11.87**	**317**	*e*P		**Pn**	**16 59 43.8**	**-1.0**		
SFTF	**Sexfontaines**	**11.89**	**324**	*e*P		**Pn**	**16 59 44.7**	**-0.3**		
	baz=145									
ISP	**Isparta**	**11.91**	**91**	P		**P**	**16 59 47.8**	**-0.8**		
ISP	**Isparta**	**11.91**	**91**	P		**P**	**16 59 47.8**	**-0.8**		
BRG	**Berggiesshubel**	**11.93**	**355**	P		**Pn**	**16 59 46.5**	**+1.0**		
BRG				pmax		pmax				
	comp=Z,32nm,0.8s									
BRG	**Berggiesshubel**	**11.93**	**355**	*i* P		**Pn**	**16 59 46.3**	**+0.8**		
BRG				Amp			16 59 48.0			
	comp=Z,5.6nm,0.7s									
BRG				*i* x		x	16 59 50.6			
BRG				Amp			16 59 51.4			
	comp=Z,24nm,0.9s									
BGF	**Bois d'Agland**	**11.93**	**313**	*e*P		**Pn**	**16 59 45.9**	**+0.3**		
MOX	**Moxa**	**11.96**	**348**	P		**P**	**16 59 47.6**	**-1.4**		
MOX				pmax		pmax				
	comp=Z,32nm,1.0s									
MOX	**Moxa**	**11.96**	**348**	*e*P		**P**	**16 59 47.5**	**-1.4**		
	baz=163,slow=12									
EPF	**Esparros**	**12.09**	**294**	*e*P		**P**	**16 59 49.2**	**-1.3**		
RJF	**Les Rejaudoux**	**12.09**	**306**	*e*P		**P**	**16 59 49.5**	**-1.0**		
MEZF	**Maizieres J'vi**	**12.10**	**325**	*e*P		**Pn**	**16 59 47.8**	**+0.2**		
	baz=145									
TCF	**Toulx Ste Croi**	**12.15**	**311**	*e*P		**P**	**16 59 50.4**	**-0.8**		
SAVF	**Savonnieres en**	**12.15**	**326**	*e*P		**Pn**	**16 59 48.5**	**+0.2**		
MDUB	**Mudurnu**	**12.24**	**78**	P		**Pn**	**16 59 50.6**	**+1.0**		
TNS	**Taunus Mts**	**12.28**	**338**	P		**P**	**16 59 51.6**	**-0.9**		
TNS				pmax		pmax				
	comp=Z,34nm,0.7s									
TNS	**Taunus Mts**	**12.28**	**338**	*e*P		**Pn**	**16 59 50.8**	**+0.9**		
	baz=163,slow=12									
LFF	**La Frestale**	**12.43**	**303**	*e*P		**P**	**16 59 53.7**	**-0.6**		
CLL	**Collm**	**12.44**	**353**	*i* P		**Pn**	**16 59 52.7**	**+0.9**		
	comp=Z,12nm,0.8s									
CLL				*i*			16 59 55.1			
	comp=Z,33nm,1.5s									
CLL				*e*			17 00 11.0			
CLL	**Collm**	**12.44**	**353**	*i* P		**Pn**	**16 59 52.7**	**+0.9**		
CLL				pmax		pmax				
	comp=Z,12nm,0.8s									
CLL	**Collm**	**12.44**	**353**	P		**P**	**16 59 53.7**	**-0.5**		
KMPD	**K-Podol'skiy**	**12.45**	**36**	P		**P**	**16 59 56.0**	**+1.7**		
WLF	**Walferdange**	**12.56**	**331**	*d*P		**P**	**16 59 55.1**	**-0.5**		
WLF				*dx*		x	17 00 03.2			
WLF	**Walferdange**	**12.56**	**331**	P		**P**	**16 59 55.1**	**-0.5**		
WLF	**Walferdange**	**12.56**	**331**	P		**P**	**16 59 55.0**	**-0.5**		
WLF	**Walferdange**	**12.56**	**331**	*e*P		**Pn**	**16 59 53.9**	**+0.7**		
	baz=163,slow=12									
ETSF	**Etsaut**	**12.70**	**293**	*e*P		**P**	**16 59 57.4**	**+0.1**		
CLF	**Chambon-Foret**	**13.13**	**318**	P		**Pn**	**17 00 00.6**	**+0.2**		
BTNL	**Ternell**	**13.33**	**333**	*d*P		**P**	**17 00 04.8**	**+0.6**		
MEM	**Membach**	**13.39**	**333**	*d*P		**P**	**17 00 05.4**	**+0.6**		
MEM				*dx*		x	17 00 14.3			
MEM	**Membach**	**13.39**	**333**	P		**P**	**17 00 05.4**	**+0.6**		
MEM				pmax		pmax				
	comp=Z,14nm,1.0s									
GIVF	**Givet**	**13.42**	**329**	*e*P		**P**	**17 00 05.3**	**+0.1**		
ANTO	**Ankara**	**13.46**	**81**	P		**P**	**17 00 09.4**	**+3.5**		
ANTO	**Ankara**	**13.46**	**81**	P		**P**	**17 00 09.4**	**+3.5**		
BCLA	**Clavier**	**13.49**	**331**	*d*P		**P**	**17 00 06.0**	**+0.1**		
BCLA				*dx*		x	17 00 13.9			
DOU	**Dourbes**	**13.51**	**329**	*d*P		**P**	**17 00 05.5**	**-0.6**		
DOU				*dx*		x	17 00 15.8			
DOU	**Dourbes**	**13.51**	**329**	P		**P**	**17 00 05.7**	**-0.4**		
DOU				pmax		pmax				
	comp=Z,4.0nm,1.1s									
BGES	**Gesves**	**13.54**	**331**	*d*P		**P**	**17 00 06.8**	**+0.3**		
BGES				*dx*		x	17 00 28.2			
BMRD	**Maredsous**	**13.60**	**330**	*d*P		**Pn**	**17 00 06.6**	**+0.5**		
BAIF	**Baives**	**13.64**	**328**	*e*P		**P**	**17 00 07.1**	**-0.5**		
MFF	**Saint Martin d**	**13.72**	**309**	*e*P		**P**	**17 00 09.3**	**+0.8**		
BR131	**Keskin Array S**	**14.12**	**81**	*d*/P		**P**	**17 00 15.2**	**+2.1**		
BR131	**Keskin Array S**	**14.12**	**81**	P		**P**	**17 00 14.7**	**+1.5**		
BRTR	**Keskin Array B**	**14.12**	**81**	P		**P**	**17 00 15.4**	**+2.2**		
	comp=Z,1.0nm,0.3s,baz=270,slow=12,SNR=17									
BRTR	**Keskin Array B**	**14.12**	**81**	*c e*P		**P**	**17 00 15.3**	**+2.1**		
BRTR				pmax		pmax				
	comp=Z,5.0nm,0.5s									
BRTR	**Keskin Array B**	**14.12**	**81**	P		**P**	**17 00 14.7**	**+1.5**		
LEF	**Lefka**	**14.47**	**100**	⇑P		**Pn**	**17 00 16.4**	**-0.4**		
LDF	**La Druitiere**	**14.75**	**316**	*e*P		**P**	**17 00 18.9**	**-0.9**		
CSS	**Mathiatis**	**14.87**	**100**			**P**	**17 00 21.4**	**0.0**		
ESBB	**Sonseca Array**	**15.02**	**279**	P		**Pn**	**17 00 23.8**	**+0.3**		
ESDC	**Sonseca Array**	**15.02**	**279**	P		**P**	**17 00 23.1**	**+0.1**		
	comp=Z,0.3nm,0.3s,baz=76,slow=11,SNR=16									
ESDC	**Sonseca Array**	**15.02**	**279**	P		**Pn**	**17 00 24.7**	**+1.2**		
FLN	**La Foliniere**	**15.04**	**316**	*e*P		**P**	**17 00 22.4**	**-0.7**		
	baz=135									
GRR	**Gorron**	**15.04**	**314**	*e*P		**P**	**17 00 22.6**	**-0.5**		
KIEV	**Kiev**	**15.22**	**35**	P		**P**	**17 00 25.0**	**0.0**		
AKASG	**Malin Array Be**	**15.23**	**35**	P		**P**	**17 00 25.0**	**-0.1**		
	comp=Z,3.6nm,0.3s,baz=225,slow=9.6,SNR=16									
AKASG				S		**S**	**17 03 11.5**	**-1.6**		
	comp=Z,1.3nm,0.3s,baz=226,slow=19,SNR=13									
AKASG	**Malin Array Be**	**15.23**	**35**	P		**P**	**17 00 24.8**	**-0.4**		
AKBB	**Malin Array Si**	**15.23**	**35**	*de*P		**P**	**17 00 24.8**	**-0.3**		
AKBB	**Malin Array Si**	**15.23**	**35**	P		**P**	**17 00 25.0**	**-0.1**		
AKBB				PcP		**PcP**	**17 05 12.9**	**-0.6**		
PAB	**San Pablo**	**15.33**	**278**	P		**P**	**17 00 26.1**	**-0.4**		
PAB				pmax		pmax				
	comp=Z,6.0nm,0.5s									
PAB	**San Pablo**	**15.33**	**278**	P		**P**	**17 00 26.1**	**-0.4**		
PAB				lAmb		lAmb	17 00 32.6			
	comp=Z,6.2nm,0.5s									
DIKM	**Dikmen**	**15.36**	**74**	⇑P		**Pn**	**17 00 28.8**	**+1.4**		
SUW	**Suwalki**	**15.93**	**17**	*e*P		**P**	**17 00 32.8**	**0.0**		
SUW	**Suwalki**	**15.93**	**17**	P		**P**	**17 00 32.8**	**0.0**		
SUW				pmax		pmax				
	comp=Z,33nm,0.9s									
SUW	**Suwalki**	**15.93**	**17**	P		**P**	**17 00 32.8**	**0.0**		
SGMF	**Saint Gilles**	**15.95**	**311**	*e*P		**P**	**17 00 32.2**	**-0.8**		
BSD	**Bornholm Skovb**	**16.14**	**359**	*e*P		**P**	**17 00 34.4**	**-0.6**		
BSD	**Bornholm Skovb**	**16.14**	**359**	*i* P		**P**	**17 00 34.0**	**-1.0**		
BSD	**Bornholm Skovb**	**16.14**	**359**	*i* P		**P**	**17 00 34.0**	**-1.0**		
QUIF	**Quistinic**	**16.15**	**310**	*e*P		**P**	**17 00 35.0**	**-0.2**		
JVM	**Valle D.L. Mar**	**16.24**	**315**	*e*P		**P**	**17 00 35.3**	**-0.9**		
ROSF	**Rostrenen**	**16.41**	**311**	*e*P		**P**	**17 00 37.5**	**-0.6**		
LUNU	**Lund**	**16.70**	**356**	*i* P		**P**	**17 00 41.0**	**-0.2**		
PBRG	**Braganca**	**17.11**	**287**	*e*P		**P**	**17 00 45.9**	**0.0**		
MMAI	**Mount Meron Ar**	**17.22**	**104**	P		**Pn**	**17 00 49.0**	**-0.5**		
	comp=Z,3.6nm,0.3s,baz=320,slow=7.6,SNR=15									
GAZ	**Gaziantep**	**17.25**	**89**	Pn		**Pn**	**17 00 49.9**	**+0.2**		
GAZ				lAmb		lAmb	17 00 50.4			
	comp=Z,25nm,1.0s									
MVO	**Moncorvo**	**17.32**	**284**	*e*P		**P**	**17 00 48.4**	**+0.2**		
	comp=Z,29nm,0.8s									
BLEU	**Blekinge**	**17.33**	**1**	*i* P		**P**	**17 00 47.0**	**-1.0**		
MDT	**Midelt**	**17.34**	**255**	P		**P**	**17 00 48.2**	**-0.4**		
	comp=Z,0.5nm,0.3s,baz=296,slow=4.3,SNR=5.4									
ANN	**Anapa**	**17.36**	**63**	⇓*e*P		**Pn**	**17 00 50.1**	**-0.8**		
PABE	**Paberze**	**17.49**	**16**	*e*P		**P**	**17 00 50.1**	**+0.3**		
DEL	**Delary**	**17.52**	**357**	*i* P		**P**	**17 00 50.8**	**+0.6**		
PBAR	**Barrancos**	**17.58**	**274**	*e*P		**P**	**17 00 51.0**	**0.0**		
PBUR	**Paburge**	**17.59**	**12**	*e*P		**P**	**17 00 51.1**	**+0.2**		
MNK	**Minsk**	**17.67**	**24**	*i* P		**P**	**17 00 49.6**	**-2.2**		
	comp=E,6.0nm,0.9s									
MNK				*i* P		**P**	**17 00 49.6**	**-2.2**		
	comp=N,30nm,0.9s									
MNK				*i* P		**P**	**17 00 49.6**	**-2.2**		
	comp=Z,69nm,0.9s									
MNK				*i* S		**S**	**17 03 57.8**	**-4.0**		
MNK				*i* LRM		MLR	17 06 50.2			
	comp=E,12nm,17.8s									
MNK				*i* LRM		MLR	17 08 57.9			
	comp=N,155nm,17.8s									
MNK				*i* LRM		MLR	17 08 57.9			
	comp=Z,317nm,17.8s									
NACGM	**Naroch**	**17.67**	**22**	*i* P		**P**	**17 00 51.2**	**-0.5**		
NACGM				*i* P		**P**	**17 00 51.2**	**-0.5**		
NACGM				*i* P		**P**	**17 00 51.2**	**-0.5**		
NACGM				*i* pP		**pP**	**17 01 31.2**	**+0.9**		
NACGM				*i* sP		sP	17 01 40.8	-22		
NACGM				*i* S		S	17 03 43.5	-18		
NACGM				*i* LQ		LQ	17 05 35.9			
NACGM				*i* LR		LR	17 06 29.2			
PMRV	**Marv??o**	**17.68**	**279**	*e*P		**P**	**17 00 51.9**	**-0.2**		
	comp=Z,22nm,1.1s									
PCBR	**Castelo Branco**	**17.71**	**280**	*e*P		**P**	**17 00 52.4**	**0.0**		
STRD	**Stroud**	**17.72**	**322**	*e*P		**P**	**17 00 50.8**	**-1.6**		
STRD				lAmb		lAmb	17 00 51.6			
	comp=Z,36nm,0.6s									
MTE	**Manteigas**	**17.73**	**282**	*e*P		**P**	**17 00 52.5**	**-0.1**		
	comp=Z,27nm,2.6s									
MTE	**Manteigas**	**17.73**	**282**	P		**P**	**17 00 52.5**	**-0.1**		
MTE				lAmb		lAmb	17 00 53.3			
	comp=Z,15nm,0.9s									
PVRL	**Vila Real**	**17.83**	**285**	*e*P		**P**	**17 00 54.4**	**+0.6**		
POLO	**Lamas de Olo**	**17.89**	**285**	*e*P		**P**	**17 00 54.5**	**0.0**		
PESTR	**Estremoz**	**17.90**	**277**	*e*P		**P**	**17 00 54.5**	**0.0**		
PESTR	**Estremoz**	**17.90**	**277**	P		**P**	**17 00 54.2**	**-0.3**		
MALT	**Malatya**	**17.98**	**85**	P		**Pn**	**17 00 58.1**	**-0.3**		
PVIS	**Viseu**	**17.98**	**283**	*e*P		**P**	**17 00 55.4**	**0.0**		
	comp=Z,32nm,1.4s									
PCAB	**Cabril**	**18.07**	**286**	*e*P		**P**	**17 00 56.2**	**-0.1**		
ISAL	**Salakas**	**18.07**	**20**	*e*P		**P**	**17 00 56.1**	**0.0**		
PBEJ	**Beja**	**18.25**	**274**	*e*P		**P**	**17 00 59.2**	**+1.0**		
PVAQ	**Vaqueiros**	**18.25**	**272**	*e*P		**P**	**17 00 58.0**	**-0.3**		
PVAQ	**Vaqueiros**	**18.25**	**272**	P		**P**	**17 00 57.2**	**-1.0**		
PVAQ				lAmb		lAmb	17 01 02.1			
	comp=Z,13nm,0.9s									
EVO	**Evora**	**18.28**	**276**	*e*P		**P**	**17 00 58.1**	**-0.4**		

MAK pmax pmax
comp=Z,19nm,0.6s
VAF Ylistaro 24.48 8 P **P** **17 01 58.7 -0.4**
SUF Sumiainen 24.64 12 P **P** **17 02 00.0 -0.6**
SUF pmax pmax
comp=Z,24nm,0.8s
NSS Namsos 25.66 357 *eP* **P** **17 02 09.2 -0.6**
BELG Belogornoye 25.94 48⇑ *eP* **P** **17 02 14.0 +1.7**
BELG pmax pmax
comp=Z,1.0nm,1.1s
KLMR Klimovskoe 26.54 27 *eP* **P** **17 02 16.3 -1.3**
KLMR pmax pmax
comp=Z,11nm,0.7s
KLMR Klimovskoe 26.54 27 *eP* **P** **17 02 16.3 -1.3**
KLMR AMP 17 02 17.6
comp=Z,11nm,0.7s
MOR8 Moi Rana 27.23 359 *eP* **P** **17 02 22.5 -1.3**
TORD Torodi Ar. Bea 28.46 209 P **P** **17 02 35.1 -0.1**
comp=Z,0.2nm,0.3s,baz=11,slow=10.0,SNR=2.7
STEI Steigen 29.00 360 *eP* **P** **17 02 38.3 -1.0**
LOF Lofoten 29.22 359 *eP* **P** **17 02 39.5 -1.7**
KIRV Kirov 29.28 37 P **P** **17 02 41.4 -0.5**
comp=Z,8.3nm,0.4s,baz=246,slow=4.0,SNR=5.7
KIRV Kirov 29.28 37 *ceP* **P** **17 02 42.0 +0.1**
RAYN Ar Rayn 29.81 112 P **P** **17 02 48.9 +1.8**
RAYN pmax pmax
comp=Z,3.0nm,0.6s
RAYN Ar Rayn 29.81 112 P **P** **17 02 48.9 +1.8**
JETT Jettan, Norway 30.75 3 *eP* **P** **17 02 53.6 -1.1**
TRO Tromso 30.76 2 *eP* **P** **17 02 53.4 -1.4**
LVZ Lovozero 30.85 14 P **P** **17 02 55.8 +0.1**
LVZ pmax pmax
comp=Z,21nm,1.1s
LVZ Lovozero 30.85 14 P **P** **17 02 55.8 +0.1**
LVZ IAmb IAmb 17 03 11.0
comp=Z,21nm,1.1s
ARA0 ARCESS Array S 31.08 7 *eP* **P** **17 02 56.4 -1.3**
ARCES ARCESS Array B 31.08 7 P **P** **17 02 56.4 -1.2**
comp=Z,10nm,0.7s,baz=190,slow=8.3,SNR=90
ARCES PcP **PcP** **17 05 45.2 -1.1**
comp=Z,3.3nm,1.0s,baz=127,slow=3.2,SNR=1.2
ARCES ARCESS Array B 31.08 7 P **P** **17 02 56.1 -1.5**
KEV Kevo 31.44 8 P **P** **17 02 59.4 -1.3**
KEV pmax pmax
comp=Z,22nm,1.1s
KEV Kevo 31.44 8 P **P** **17 02 59.4 -1.3**
KEV IAmb IAmb 17 02 59.5
comp=Z,22nm,1.1s
HAMF Hammerfest 32.01 5 *eP* **P** **17 03 04.9 -0.8**
ABKAR Akbulak array 33.13 57 P **P** **17 03 16.2 +0.6**
ABKAR PcP **PcP** **17 05 52.1 -0.2**
ABKAR Akbulak array 33.13 57 P **P** **17 03 16.3 +0.6**
ABKAR IAmb IAmb 17 03 19.0
comp=Z,4.2nm,1.5s
ARU Arti 33.18 44 *c iP* **P** **17 03 16.3 +0.3**
ARU 17 04 35.9
ARU S **S** **17 08 17.7 +1.2**
ARU SS **SS** **17 10 40.4 -8.0**
ARU pmax pmax
comp=Z,8.0nm,1.8s
ARU Arti 33.18 44 P **P** **17 03 16.3 +0.3**
GEYT Alibeck 33.23 78 P **P** **17 03 18.0 +1.3**
comp=Z,0.8nm,0.3s,baz=276,slow=7.1,SNR=2.1
UOSS Minazif 37.01 100 P **P** **17 03 49.7 +0.7**
UOSS IAmb IAmb 17 03 50.3
comp=Z,12nm,0.8s
DBIC Dimbokro 37.02 215 P **P** **17 03 48.4 -0.7**
comp=Z,1.6nm,0.3s,baz=13,slow=9.2,SNR=6.3
DBIC Dimbokro 37.02 215 P **P** **17 03 48.7 -0.4**
DBIC pmax pmax
comp=Z,14nm,1.4s
DBIC Dimbokro 37.02 215 P **P** **17 03 48.7 -0.4**
DBIC IAmb IAmb 17 03 52.4
comp=Z,14nm,1.4s
SCO Scoresbysund 37.03 340 P **P** **17 03 49.2 +0.6**
SCO Scoresbysund 37.03 340 P **P** **17 03 49.2 +0.6**
SPA0 Spitsbergen Ar 39.30 0 P **P** **17 04 07.4 +0.1**
SPA0 Spitsbergen Ar 39.30 0 *eP* **P** **17 04 07.5 +0.1**
BRVK Borovoye 39.62 51⇓ *eP* **P** **17 04 10.9 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK Borovoye 39.62 51 P **P** **17 04 11.4 +1.1**
KK31 Karatay Array 41.12 66 P **P** **17 04 24.4 +1.6**
KK31 pmax pmax
comp=Z,2.0nm,0.6s
KK31 Karatay Array 41.12 66 P **P** **17 04 24.4 +1.6**
KKAR Karatay Array 41.12 66 P **P** **17 04 23.0 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 41.12 66 P **P** **17 04 23.0 +0.2**
KKAR Karatay Array 41.12 66 P **P** **17 04 24.4 +1.7**
KKAR IAmb IAmb 17 04 25.8
comp=Z,2.0nm,0.6s
SOCY Socotra 43.34 117 P **P** **17 04 39.4 -1.6**
NRIK Noril'sk 47.88 27 P **P** **17 05 16.2 +0.7**
comp=Z,6.4nm,0.6s,baz=252,slow=5.0,SNR=17
NRIK Noril'sk 47.88 27 *d iP* **P** **17 05 16.6 +1.0**
NRIK pmax pmax
comp=Z,8.0nm,0.9s
NRIK Noril'sk 47.88 27 P **P** **17 05 16.8 +1.2**
MAKZ Makanchi 48.06 58 P **P** **17 05 17.8 +0.5**
MAKZ pmax pmax
comp=Z,4.0nm,1.4s
MAKZ Makanchi 48.06 58 P **P** **17 05 17.8 +0.5**
ZAA0 Zalesovo Array 48.12 48 P **P** **17 05 17.8 +0.2**
ZALV Zalesovo Beam 48.12 48 P **P** **17 05 17.8 +0.1**
comp=Z,2.9nm,0.4s,baz=294,slow=8.1,SNR=11
ZALV Zalesovo Beam 48.12 48 P **P** **17 05 17.6 0.0**
MK31 Makanchi Array 48.27 58 *deP* **P** **17 05 19.1 +0.2**
MK31 Makanchi Array 48.27 58 P **P** **17 05 19.2 +0.3**
MKAR Makanchi Array 48.27 58 P **P** **17 05 19.3 +0.3**
comp=Z,0.9nm,0.4s,baz=282,slow=7.3,SNR=22
DGZ Jazzator, Alta 50.74 53⇑ *eP* **P** **17 05 38.2 +0.6**
DGZ pmax pmax
comp=Z,2.0nm,1.0s
TULEG Thule 51.14 343 P **P** **17 05 39.0 -1.0**
DRLN Deer Lake 51.44 307 P **P** **17 05 41.3 -1.3**
DRLN IAmb IAmb 17 05 42.8
comp=Z,19nm,0.8s
WMQ Urumqi 52.84 60 *eP* **P** **17 05 55.3 +2.2**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,130nm,4.5s
EUNU Eureka 53.90 348 P **P** **17 06 00.3 +0.1**
EUNU PcP **PcP** **17 07 02.6 +0.4**
GBN Guysborough 55.33 303 P **P** **17 06 10.7 -0.1**
PYUN Piuthan 56.20 79 *eP* **P** **17 06 17.8 +0.2**
comp=Z,3.4nm,0.3s
HAL Halifax 56.99 303 P **P** **17 06 22.0 -0.6**
HAL pmax pmax
comp=Z,22nm,0.7s
HAL Halifax 56.99 303 **P** **17 06 22.0 -0.6**
LMN Caledonia Moun 57.28 305 P **P** **17 06 23.3 -1.3**
LMN IAmb IAmb 17 06 25.8
comp=Z,12nm,0.9s
BATG Bathurst New B 57.49 307 P **P** **17 06 24.9 -1.2**
BATG IAmb IAmb 17 06 41.9
comp=Z,16nm,1.3s
GKN Gorkha 57.51 79 *eP* **P** **17 06 26.0 -0.7**
comp=Z,8.1nm,0.7s
RES Resolute Bay 57.85 343 P **P** **17 06 28.0 -0.1**
RES pmax pmax
comp=Z,3.0nm,1.0s
RES Resolute Bay 57.85 343 P **P** **17 06 28.0 -0.1**
DMN Daman 58.06 79 *eP* **P** **17 06 30.8 +0.1**
comp=Z,8.4nm,0.5s
KKN Kakani 58.10 78 *eP* **P** **17 06 30.7 -0.2**
comp=Z,8.3nm,0.6s
PKIN Phulchoki 58.30 79 *eP* **P** **17 06 31.9 -0.4**
comp=Z,5.3nm,0.5s
PKI Pulchoki 58.31 79 *eP* **P** **17 06 32.1 -0.4**
comp=Z,4.4nm,0.5s
GUN Gumba 58.50 78 *eP* **P** **17 06 33.4 -0.4**
comp=Z,7.5nm,0.5s
JIRN Jiri 58.87 78 *eP* **P** **17 06 36.2 -0.1**
comp=Z,4.5nm,0.5s
PQI Presque Isle 58.96 307 P **P** **17 06 35.4 -0.7**
PQI IAmb IAmb 17 06 36.1
comp=Z,13nm,1.1s
E63A Oxbow 59.32 307 P **P** **17 06 38.0 -0.6**
E63A IAmb IAmb 17 06 44.3
comp=Z,9.8nm,1.1s
F64A Sherman 59.52 306 P **P** **17 06 39.4 -0.6**
F64A IAmb IAmb 17 06 52.7
comp=Z,18nm,1.3s
RAMN Ramite 59.54 79 *eP* **P** **17 06 40.5 -0.3**
comp=Z,14nm,0.6s
F63A Nahmakanta, Br 60.06 306 P **P** **17 06 43.1 -0.7**
TAPN Taplejung 60.18 78 *eP* **P** **17 06 45.2 0.0**
TIXI Tiksi 60.26 20⇓ *eP* **P** **17 06 44.5 -0.1**
TIXI pmax pmax
comp=Z,15nm,0.6s
TIXI Tiksi 60.26 20 P **P** **17 06 44.7 +0.1**
TIXI IAmb IAmb 17 06 46.0
comp=Z,4.8nm,0.6s
PKME Peaks-Kenny Pk 60.37 306 P **P** **17 06 45.5 -0.4**
PKME IAmb IAmb 17 06 50.0
comp=Z,14nm,1.4s
G62A West of Eustis 61.17 306 P **P** **17 06 51.9 +0.7**
G62A IAmb IAmb 17 06 59.8
comp=Z,10nm,1.2s
I63A Otisfield 61.75 305 P **P** **17 06 54.9 -0.2**
I63A IAmb IAmb 17 07 12.3
comp=Z,18nm,1.4s
I62A Tamworth 62.31 305 P **P** **17 06 58.8 0.0**
I62A IAmb IAmb 17 07 18.2
comp=Z,8.9nm,1.1s
LBNH Lisbon 62.51 306 P **P** **17 07 00.2 0.0**
LBNH pmax pmax
comp=Z,12nm,1.3s
LBNH Lisbon 62.51 306 P **P** **17 07 00.1 0.0**
LBNH IAmb IAmb 17 07 09.3
comp=Z,12nm,1.2s
GTA Gaotai 62.92 60 *eP* **P** **17 07 03.3 +0.2**
GTA pP pP 17 08 00.8 +1.6
GTA sP sP 17 08 25.3 -1.0
GTA pmax pmax
comp=Z,2.0nm,0.9s
GTA pmax pmax
comp=Z,93nm,5.5s
GTA LR LR
comp=N,110nm,15.3s
GTA LR LR
comp=E,160nm,15.6s
GTA LR LR
comp=Z,120nm,15.6s
SONM Songino Array 62.99 49 P **P** **17 07 03.7 +0.3**
comp=Z,1.2nm,0.6s,baz=292,slow=7.1,SNR=11
SONM Songino Array 62.99 49 P **P** **17 07 03.5 +0.2**
ULN Ulaanbaatar 63.36 49⇑ *eP* **P** **17 07 06.4 +0.5**
ULN pmax pmax
comp=Z,2.0nm,1.8s
M63A Gales Ferry 63.98 303 P **P** **17 07 09.6 -0.1**
PLVO Plevna 65.30 309 P **P** **17 07 18.1 -0.1**
PLVO IAmb IAmb 17 07 19.4
comp=Z,11nm,0.9s
PALK Pallekele 66.29 100 P **P** **17 07 25.6 +0.6**
PALK pmax pmax
comp=Z,15nm,1.4s
PALK Pallekele 66.29 100 P **P** **17 07 25.6 +0.6**
PALK IAmb IAmb 17 07 31.4
comp=Z,15nm,1.4s
YAK Yakutsk 66.32 28⇑ *eP* **P** **17 07 24.2 -0.2**
YAK pmax pmax
comp=Z,6.0nm,1.1s
FCC Fort Churchill 66.47 328 P **P** **17 07 25.3 -0.1**
FCC pmax pmax
comp=Z,4.0nm,1.0s
FCC Fort Churchill 66.47 328 P **P** **17 07 25.2 -0.1**
SADO Sadowa 66.69 309 P **P** **17 07 26.2 -0.9**
SADO IAmb IAmb 17 07 29.4
comp=Z,5.8nm,0.7s
WUPA West Chester U 67.05 303 P **P** **17 07 29.2 -0.2**
WUPA IAmb IAmb 17 07 48.0
comp=Z,9.0nm,1.2s
L56A Greenwood 67.13 306 P **P** **17 07 29.6 -0.3**
L56A IAmb IAmb 17 07 38.4
comp=Z,12nm,1.4s
M57A Sunshine Farm, 67.28 305 P **P** **17 07 31.2 +0.4**
M57A IAmb IAmb 17 07 31.4
comp=Z,7.5nm,0.7s
BOSA Boshof 67.88 171 P **P** **17 07 34.9 +0.3**
comp=Z,1.6nm,0.7s,baz=141,slow=16,SNR=1.2
BOSA Boshof 67.88 171 P **P** **17 07 35.1 +0.5**
BOSA pmax pmax
comp=Z,20nm,1.5s
BOSA Boshof 67.88 171 P **P** **17 07 35.1 +0.5**
BOSA IAmb IAmb 17 07 42.2
comp=Z,20nm,1.4s
SSPA Standing Stone 68.14 305 P **P** **17 07 35.9 -0.4**
SSPA IAmb IAmb 17 07 44.1
comp=Z,21nm,1.4s
O56A Blue Knob Stat 68.78 305 P **P** **17 07 40.3 +0.1**
R58B Mineral 69.61 303 P **P** **17 07 44.9 -0.3**
JSRW J. Sargeant Re 69.76 302 P **P** **17 07 46.5 +0.3**
HHC Hu-ho-hao-te 69.82 53 *eP* **P** **17 07 47.5 +0.9**
HHC pmax pmax
comp=Z,11nm,1.1s
HHC pmax pmax
comp=Z,77nm,5.4s
A21K Barrow 69.85 357 **P** **17 07 46.8 +0.7**
A21K IAmb IAmb 17 07 47.4
comp=Z,8.6nm,0.8s
Q56A Snyder Ridge, 69.86 304 P **P** **17 07 46.9 +0.1**
Q56A IAmb IAmb 17 07 47.3
comp=Z,11nm,0.8s
E43A Lone Tree Farm 70.36 314 P **P** **17 07 49.3 -0.3**
E43A IAmb IAmb 17 07 50.3
comp=Z,11nm,0.8s
INK Inuvik 70.52 348 P **P** **17 07 49.6 -0.6**
comp=Z,1.4nm,0.3s,baz=5.5,slow=2.8,SNR=6.7
INK Inuvik 70.52 348 P **P** **17 07 49.5 -0.7**
D41A Chassel 70.82 315 P **P** **17 07 52.4 -0.1**
D41A IAmb IAmb 17 07 52.6
comp=Z,8.8nm,0.7s
Q54A Coxs Mills 70.95 305 P **P** **17 07 53.0 -0.4**
BILL Bilibino 71.06 11⇑ *eP* **P** **17 07 53.0 -0.5**
BILL *i* *PP **pP** **17 08 51.0 -0.4**
BILL pmax pmax
comp=Z,13nm,2.5s
BILL Bilibino 71.06 11 P **P** **17 07 53.5 0.0**
YKA Yellowknife Ar 71.20 338 P **P** **17 07 54.0 -0.3**
comp=Z,3.0nm,0.4s,baz=44,slow=5.6,SNR=93
COWI Conover 71.72 315 P **P** **17 07 57.6 -0.2**
COWI IAmb IAmb 17 07 58.2
comp=Z,11nm,0.7s
EYMN Ely 71.86 317 P **P** **17 07 57.9 -0.7**
EYMN IAmb IAmb 17 07 59.1
comp=Z,20nm,1.5s
H43A Windswept, Lux 71.93 313 P **P** **17 07 58.8 -0.3**
TOLK Toolik Lake Re 72.10 354 P **P** **17 08 00.8 +1.1**
TOLK IAmb IAmb 17 08 01.8
comp=Z,7.1nm,0.7s
FFC Flin Flon 72.40 327 P **P** **17 08 01.5 -0.2**
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 72.40 327 P **P** **17 08 01.5 -0.2**
FFC IAmb IAmb 17 08 02.4
comp=Z,4.0nm,0.8s
O49A Covington 72.45 308 P **P** **17 08 01.2 -1.0**
ULM Lac du Bonnet 72.62 321 P **P** **17 08 02.3 -0.7**
comp=Z,7.3nm,0.6s,baz=54,slow=6.2,SNR=11
ULM Lac du Bonnet 72.62 321 P **P** **17 08 02.1 -0.9**
ULM IAmb IAmb 17 08 03.1
comp=Z,8.6nm,0.7s
SEY Seymchan 72.75 19 P **P** **17 08 03.6 +0.1**
comp=Z,1.8nm,0.6s,baz=310,slow=3.8,SNR=12
SEY Seymchan 72.75 19⇓ *eP* **P** **17 08 03.7 +0.2**
COLD Coldfoot 73.54 354 P **P** **17 08 08.6 +0.4**
COLD IAmb IAmb 17 08 09.3
comp=Z,7.5nm,1.1s
HODGE Hodges 74.66 302 P **P** **17 08 14.4 -0.8**
HODGE IAmb IAmb 17 08 14.8
comp=Z,2.6nm,0.5s
PRP Porcupine Dome 74.77 352 P **P** **17 08 16.1 +0.6**
PRP IAmb IAmb 17 08 16.5
comp=Z,3.7nm,0.4s
EGAK Eagle 74.94 350 P **P** **17 08 16.2 0.0**
MA2 Magadan 75.09 22 P **P** **17 08 17.8 +0.7**
comp=Z,7.4nm,0.5s,baz=337,slow=8.9,SNR=39
MA2 Magadan 75.09 22 *deP* **P** **17 08 17.6 +0.4**
MA2 pmax pmax
comp=Z,9.0nm,0.8s
MA2 Magadan 75.09 22 P **P** **17 08 18.0 +0.8**
MA2 IAmb IAmb 17 08 18.6
comp=Z,10nm,0.8s
DAWY Dawson 75.36 349 **P** **17 08 19.2 +0.5**
DAWY IAmb IAmb 17 08 19.7
comp=Z,5.8nm,0.6s
CPCT Cooper Cave 75.41 304 P **P** **17 08 18.6 -0.8**
CPCT IAmb IAmb 17 08 28.8
comp=Z,20nm,1.5s
I23K Minto, Yukon-K 75.52 353 P **P** **17 08 20.2 +0.8**
MDM Murphy Dome 75.60 353 P **P** **17 08 20.0 0.0**
IL31 75.64 352 P **P** **17 08 20.4 +0.2**
ILAR Eielson Array 75.64 352 P **P** **17 08 20.4 +0.2**
comp=Z,1.0nm,0.5s,baz=355,slow=3.5,SNR=13
ILAR Eielson Array 75.64 352 P **P** **17 08 20.6 +0.4**
K27K Chicken 75.78 350 P **P** **17 08 21.9 +0.9**
CCB Clear Creek Bu 75.86 353 P **P** **17 08 21.4 0.0**
WRH Wood River Hil 76.06 353 P **P** **17 08 22.6 +0.1**
WRH IAmb IAmb 17 08 23.0
comp=Z,6.8nm,1.0s
SCRK Sand Creek 76.08 351 P **P** **17 08 23.6 +0.7**
T47A Sharon Grove 76.11 306 P **P** **17 08 22.5 -0.8**
DOT Dot Lake 76.41 351 P **P** **17 08 25.1 +0.5**
DOT IAmb IAmb 17 08 26.0
comp=Z,4.3nm,0.8s
BPAW Bear Paw Mtn. 76.69 354 P **P** **17 08 26.0 -0.1**
MENT Mentasta 77.05 350 P **P** **17 08 29.2 +1.0**
MENT IAmb IAmb 17 08 40.7
comp=Z,12nm,1.4s
WVT Waverly 77.10 306 P **P** **17 08 27.6 -1.3**
WVT pmax pmax
comp=Z,4.0nm,0.8s
WVT Waverly 77.10 306 P **P** **17 08 27.6 -1.3**
WVT IAmb IAmb 17 08 27.9
comp=Z,4.2nm,0.8s
RND Reindeer 77.18 353 P **P** **17 08 28.2 -0.7**
RND pmax pmax
comp=Z,1.0nm,0.8s
RND Reindeer 77.18 353 P **P** **17 08 28.2 -0.7**
KTH Kantishna Hill 77.22 354 P **P** **17 08 29.6 +0.5**
TRF Thorofare Moun 77.27 353 P **P** **17 08 29.7 +0.1**
TRF IAmb IAmb 17 08 38.5
comp=Z,12nm,1.3s
ECSD EROS Data Cent 77.31 316 P **P** **17 08 29.4 -0.5**
FVM French Village 77.53 309 P **P** **17 08 30.6 -0.7**
FVM pmax pmax
comp=Z,9.0nm,0.6s
FVM French Village 77.53 309 P **P** **17 08 30.6 -0.7**
FVM IAmb IAmb 17 08 31.2
comp=Z,9.1nm,0.6s
X48A Hartselle 77.65 304 P **P** **17 08 31.1 -0.8**
WHY Whitehorse 77.76 346 P **P** **17 08 32.1 -0.2**
WHY IAmb IAmb 17 08 38.3
comp=Z,7.9nm,1.4s
PPLA Purkeypile 77.97 354 P **P** **17 08 33.1 -0.3**
CCM Cathedral Cave 77.98 309 P **P** **17 08 32.9 -0.9**
CCM pmax pmax
comp=Z,10.0nm,0.7s
CCM Cathedral Cave 77.98 309 **P** **17 08 32.9 -0.9**
CCM IAmb IAmb 17 08 33.5
comp=Z,9.8nm,0.7s
P38A Dawn 78.32 312 P **P** **17 08 34.8 -0.7**
P38A IAmb IAmb 17 08 35.6
comp=Z,12nm,0.9s
R40A Maddies Statio 78.44 310 P **P** **17 08 35.7 -0.6**
R40A IAmb IAmb 17 08 36.4
comp=Z,9.2nm,0.7s
N25K Chitina, Valde 78.45 350 P **P** **17 08 36.6 +0.6**
N25K IAmb IAmb 17 08 52.1
comp=Z,9.3nm,1.2s
MCARA McCarthy VSAT 78.45 350 P **P** **17 08 37.2 +1.3**
SCM Sheep Creek Mo 78.56 352 P **P** **17 08 37.0 +0.5**
SCM pmax pmax
comp=Z,29nm,1.4s
SCM Sheep Creek Mo 78.56 352 P **P** **17 08 37.0 +0.5**
CTGM Chitina Glacie 78.60 349 P **P** **17 08 37.8 +0.9**
SML Sawmill 78.69 352 P **P** **17 08 37.2 0.0**
SML pmax pmax
comp=Z,28nm,1.3s
SML Sawmill 78.69 352 P **P** **17 08 37.2 0.0**
KLU Klutina 78.72 351 P **P** **17 08 37.8 +0.3**
GHO Glory Hole Cre 78.79 352 P **P** **17 08 37.9 +0.1**
GHO IAmb IAmb 17 08 45.3
comp=Z,9.8nm,1.0s
GRNC Granite Creek 78.89 349 P **P** **17 08 38.4 -0.1**
CRQM Cirque 79.07 349 P **P** **17 08 39.3 -0.1**
MGMO Mountain Grove 79.19 309 P **P** **17 08 40.0 -0.4**
MGMO IAmb IAmb 17 08 41.7
comp=Z,17nm,1.4s
LCAR Lake Charles 79.21 308 P **P** **17 08 39.8 -0.6**
LCAR IAmb IAmb 17 08 40.1
comp=Z,4.1nm,0.6s
USRK Ussuriysk Ar. 79.36 41 P **P** **17 08 41.1 0.0**
comp=Z,1.8nm,0.6s,baz=314,slow=2.7,SNR=5.4
USRK Ussuriysk Ar. 79.36 41 P **P** **17 08 40.7 -0.4**
S39A Bolivar 79.47 310 **P** **17 08 41.2 -0.6**
S39A IAmb IAmb 17 08 42.0
comp=Z,9.1nm,0.7s
RC01 Rabbit Creek A 79.54 353 P **P** **17 08 41.7 0.0**
NJ2 Nanjing 79.79 57 *eP* **P** **17 08 43.3 -0.3**
NJ2 pmax pmax
comp=Z,13nm,0.6s
FCAR Ozark Folk Cen 79.92 308 P **P** **17 08 43.8 -0.5**
FCAR IAmb IAmb 17 08 44.1
comp=Z,5.1nm,0.6s
U40A Yellville 80.06 309 **P** **17 08 44.6 -0.4**
U40A IAmb IAmb 17 08 45.2
comp=Z,9.6nm,1.0s
BDFB Brasilia 80.34 241 P **P** **17 08 47.2 +0.5**
comp=Z,3.6nm,0.4s,baz=56,slow=7.7,SNR=4.2
WHAR Wooly Hollow 80.42 308 P **P** **17 08 46.5 -0.4**
EGMT Eagleton 80.62 326 P **P** **17 08 48.5 +0.6**
EGMT IAmb IAmb 17 08 49.2
comp=Z,10nm,0.7s
RSSD Black Hills 80.87 321 P **P** **17 08 49.6 +0.1**
RSSD pmax pmax
comp=Z,8.0nm,1.3s
RSSD Black Hills 80.87 321 P **P** **17 08 49.6 +0.1**
RSSD IAmb IAmb 17 08 50.9
comp=Z,8.3nm,1.3s
CNPM China Poot 81.22 353 P **P** **17 08 50.8 +0.1**
WALA Waterton Lakes 81.55 329 P **P** **17 08 52.6 -0.2**
WALA IAmb IAmb 17 08 56.5
comp=Z,8.9nm,1.5s
MIAR Mount Ida 81.70 308 P **P** **17 08 53.5 -0.2**
MIAR pmax pmax
comp=Z,7.0nm,1.0s
MIAR Mount Ida 81.70 308 P **P** **17 08 53.5 -0.2**
MIAR IAmb IAmb 17 08 54.5
comp=Z,7.5nm,0.9s
T35A Sooner Cattle 81.87 311 P **P** **17 08 54.5 -0.1**
GCMT Greycliff 82.29 325 P **P** **17 08 57.2 +0.5**
YSS Yuzh-Sakhalins 82.37 33 P **P** **17 08 57.2 +0.3**
YSS pmax pmax
comp=Z,14nm,0.6s
YSS Yuzh-Sakhalins 82.37 33 P **P** **17 08 57.2 +0.3**
JTMT Jette 82.74 328 P **P** **17 08 59.6 +0.6**
JTMT IAmb IAmb 17 09 00.2
comp=Z,8.3nm,0.8s
YNE Yellowstone No 83.04 324 P **P** **17 09 01.2 +0.5**
KDAK Kodiak Island 83.06 354 P **P** **17 09 00.9 +0.7**
KDAK pmax pmax
comp=Z,42nm,1.5s
KDAK Kodiak Island 83.06 354 P **P** **17 09 00.9 +0.7**
K22A Casper 83.18 321 P **P** **17 09 01.5 +0.1**
BOZ Bozeman (W) 83.31 326 P **P** **17 09 02.4 +0.4**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 83.31 326 P **P** **17 09 02.4 +0.4**
NEW Newport 83.45 330 P **P** **17 09 02.5 0.0**
NEW pmax pmax
comp=Z,4.0nm,0.7s
NEW Newport 83.45 330 P **P** **17 09 02.5 0.0**
NEW IAmb IAmb 17 09 03.0
comp=Z,3.7nm,0.7s
PHWY Pilot Hill 83.65 319 P **P** **17 09 04.5 +0.5**
MOOW Moose Ponds 84.35 324 P **P** **17 09 08.2 +0.8**
BW06 Boulder Array 84.55 323 P **P** **17 09 07.9 -0.5**
PD31 Pinedale Array 84.55 323 P **P** **17 09 07.6 -0.8**
PDAR Pinedale Array 84.55 323 P **P** **17 09 07.5 -0.8**
comp=Z,0.8nm,0.4s,baz=63,slow=7.0,SNR=25
ISCO Idaho Springs 84.84 318 P **P** **17 09 10.3 +0.3**
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO Idaho Springs 84.84 318 P **P** **17 09 10.3 +0.3**
HKT Hockley 86.21 306⇓ *eP* **P** **17 09 15.2 -1.2**
HKT pmax pmax
comp=Z,4.0nm,1.0s
JLU Jordanelle 87.12 322 P **P** **17 09 20.7 -0.4**

JLU			IAmb	IAmb	17 09 21.5	
	comp=Z,4.0nm,0.7s					
ANMO	**Albuquerque**	**88.90 316**	*eP*	**P**	**17 09 29.8**	**+0.4**
ANMO			pmax	pmax		
	comp=Z,7.0nm,2.5s					
MSU	**Marysvale**	**89.11 322**	P	**P**	**17 09 30.5**	**+0.1**
MSU	**Marysvale**	**89.11 322**	P	**P**	**17 09 30.5**	**+0.1**
TXAR	**Lajitas Array**	**91.46 310**	P	**P**	**17 09 41.4**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=51,slow=5.2,SNR=15					
TXAR	**Lajitas Array**	**91.46 310**	P	**P**	**17 09 41.2**	**-0.1**
TXAR	**Lajitas Array**	**91.46 310**	P	**P**	**17 09 41.2**	**-0.1**
NVAR	**Mina Array Bea**	**92.02 325**	P	**P**	**17 09 42.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=18,slow=6.6,SNR=1.6					
ASAR	**Alice Springs**	**126.22 93**	PKP	**PKPdf**	**17 15 35.4**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=301,slow=1.6,SNR=12					
ASAR	**Alice Springs**	**126.22 93**	PKPdf	**PKPdf**	**17 15 35.7**	**-0.3**

IDC ***15*** *16:58:25.0±2.9,38°.42N×141°.98E,h53km±27km,mb3.4/8, mb1 3.6/11,mb1mx3.3/40,mbtmp3.7/11,ML3.0/3,MS2.7/2, Ms1 2.7/2,ms1mx2.2/33,Error ellipse: s-maj=28.3km s-min=18.3km az=115.0*

JMA ***15*** *16:58:25.1,38°.46N×141°.86E,h50km±1km,M3.9*

JMA Felt II J1.

NIED ***15*** *16:58:25.1,38°.46N×141°.86E,h50km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.35; $M_{\theta\theta}$1.85; $M_{\phi\phi}$-1.49; $M_{r\theta}$1.47; $M_{\theta\phi}$-5.53; $M_{\phi r}$1.00; Fault plane solution: $M_0$6.05000×10^{14} NP1: ϕ_s263.00000°,δ82.00000°,λ-164.00000°. NP2: ϕ_s171.00000°,δ75.00000°,λ-8.00000°.*

ISC 15 16:58:24.2±1.5,38°.44N±0°.06×142°.02E±0°.10,h44km±12km, n33,σ1§34/37,mb3.7/8,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibobu**	**0.45**	**254**	P	**Pn**	**16 58 34.6**	**+0.1**
JIKH				S	**Sn**	**16 58 41.1**	**-0.7**
JIO	**Ouri**	**0.53**	**272**	P	**Pn**	**16 58 35.2**	**-0.2**
JIO				S	**Sn**	**16 58 42.2**	**-1.2**
JKMT	**Kesennumamotoy**	**0.57**	**311**	P	**Pn**	**16 58 36.0**	**0.0**
JKMT				*eS*	**Sn**	**16 58 43.6**	**-0.7**
OFUJ	**Ofunato**	**0.70**	**337**	P	**Pn**	**16 58 38.0**	**+0.3**
OFUJ				*eS*	**Sn**	**16 58 47.1**	**-0.3**
JMK	**Ichinoseki**	**0.81**	**310**	P	**Pn**	**16 58 39.1**	**-0.1**
JMK				S	**Sn**	**16 58 49.0**	**-1.1**
JOU	**Okura**	**1.07**	**266**	P	**Pn**	**16 58 42.2**	**-0.6**
JOU				S	**Sn**	**16 58 54.7**	**-1.7**
JMM	**Marumori**	**1.12**	**240**	P	**Pn**	**16 58 42.8**	**-0.7**
JMM				*eS*	**Sn**	**16 58 55.7**	**-2.1**
JOM	**Ohasama**	**1.18**	**331**	P	**Pn**	**16 58 44.5**	**+0.3**
JYK	**Kaneyama**	**1.39**	**291**	P	**Pn**	**16 58 46.7**	**-0.4**
JFK	**Kawauchi**	**1.40**	**221**	P	**Pn**	**16 58 47.0**	**-0.4**
JFK				S	**Sn**	**16 59 03.3**	**-1.4**
JRG	**Rokugo**	**1.44**	**312**	P	**Pn**	**16 58 47.7**	**-0.2**
JYS	**Shirataka**	**1.55**	**263**	P	**Pn**	**16 58 49.2**	**-0.2**
JYS				S	**Sn**	**16 59 06.9**	**-1.4**
JFT	**Otama**	**1.62**	**236**	P	**Pn**	**16 58 50.3**	**0.0**
JFT				S	**Sn**	**16 59 08.5**	**-1.4**
MJAR	**Matsushiro Arr**	**3.57**	**239**	P	**Pn**	**16 59 17.5**	**+0.4**
	0.3nm,0.3s,baz=38,slow=13,SNR=12						
MJAR				LR	LR	17 00 57.7	
	comp=Z,44nm,18.3s,baz=5.0,slow=43						
MAT	**Matsushiro**	**3.58**	**239**	P	**Pn**	**16 59 18.6**	**+1.4**
MAT				*eS*	**Sn**	**17 00 02.3**	**+4.1**
JHJ	**Hachijo jima 2**	**5.61**	**200**	LR	LR	17 01 38.6	
	comp=Z,124nm,18.7s,baz=108,slow=35						
ASAJ	**Asahikawa**	**5.69**		P	**Pn**	**16 59 46.0**	**-0.2**
	1.8nm,0.3s,baz=203,slow=13,SNR=20						
USRK	**Ussuriysk Ar.**	**9.49**	**311**	P	**Pn**	**17 00 38.9**	**+0.7**
	baz=219,slow=12,SNR=4.3						
KSRS	**Korea Array**	**11.18**	**269**	P	**Pn**	**17 01 04.9**	**+3.5**
	0.2nm,0.3s,baz=79,slow=15,SNR=1.9						
MA2	**Magadan**	**21.88**	**12**	P	**P**	**17 03 13.7**	**+0.6**
	3.0nm,0.7s,baz=180,slow=4.5,SNR=11						
SEY	**Seymchan**	**25.32**	**11**	P	**P**	**17 03 48.2**	**+1.7**
	1.0nm,0.5s,baz=200,slow=8.2,SNR=8.8						
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**17 04 06.9**	**+1.0**
	0.2nm,0.5s,baz=93,slow=7.7,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.49**	**124**	T	T	17 34 29.8	
	baz=316,slow=75,SNR=140						
H11N1	**WAKE ISLAND Hy**	**28.50**	**124**	T	T	17 34 31.7	
	baz=316,slow=75,SNR=156						
H11N3	**WAKE ISLAND Hy**	**28.51**	**124**	T	T	17 34 32.5	
	baz=316,slow=75,SNR=149						
H11S1	**WAKE ISLAND Hy**	**29.25**	**126**	T	T	17 35 29.5	
	baz=318,slow=76,SNR=52						
H11S3	**WAKE ISLAND Hy**	**29.26**	**126**	T	T	17 35 29.5	
	baz=318,slow=76,SNR=142						
H11S2	**WAKE ISLAND Hy**	**29.27**	**126**	T	T	17 35 29.5	
	baz=318,slow=76,SNR=78						
ZALV	**Zalesovo Beam**	**41.34**	**311**	P	**P**	**17 06 04.7**	**-0.8**
	0.9nm,0.4s,baz=24,slow=31,SNR=4.1						
MKAR	**Makanchi Array**	**43.79**	**301**	P	**P**	**17 06 24.4**	**-1.1**
	0.6nm,0.8s,baz=60,slow=5.8,SNR=2.6						
KURBB	**Kurchatov Arra**	**45.53**	**307**	P	**P**	**17 06 38.4**	**-0.9**
	1.8nm,0.5s,baz=82,slow=8.2,SNR=6.4						
ILAR	**Eielson Array**	**48.05**	**33**	P	**P**	**17 06 57.7**	**-1.2**
	0.4nm,0.7s,baz=279,slow=6.3,SNR=2.9						
WRA	**Warramunga Arr**	**58.52**	**188**	P	**P**	**17 08 15.7**	**-0.4**
	1.0nm,1.1s,baz=6.0,slow=7.3,SNR=7.7						

IDC ***15*** *17:07:05.8±1.4,33°.72N×94°.20E,h0km,mb3.5/3, mb1 3.4/6,mb1mx3.2/36,mbtmp3.3/6,ML3.0/3,MS3.2/4, Ms1 3.2/4,ms1mx2.9/31,Error ellipse: s-maj=67.0km s-min=22.4km az=61.0*

DMN ***15*** *17:08:22.1±9.4,29°.96N×89°.38E,h2km,Error ellipse: s-maj=233.4km s-min=19.3km az=46.0*

ISC 15 17:07:06.4±1.0,33°.8N±0°.1×94°.4E±0°.1,h10km,n16, σ1§49/14,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**8.64**	**223**	*eP*	**Pn**	**17 09 11.1**	**-0.6**
	3.0nm,0.4s						
ODAN	**Odare**	**9.20**	**223**	*eP*	**Pn**	**17 09 20.2**	**+0.9**
	6.9nm,0.5s						
JIRN	**Jiri**	**9.34**	**231**	*eP*	**Pn**	**17 09 20.5**	**-0.9**
	4.3nm,0.5s						
GUN	**Gumba**	**9.38**	**233**	*eP*	**Pn**	**17 09 22.3**	**+0.4**
	12nm,0.5s						
RAMN	**Ramite**	**9.59**	**226**	*eP*	**Pn**	**17 09 24.5**	**-0.2**
	4.3nm,0.4s						
PKI	**Pulchoki**	**9.91**	**233**	*eP*	**Pn**	**17 09 29.0**	**-0.2**
	5.5nm,0.4s						
PKIN	**Phulchoki**	**9.92**	**233**	*eP*	**Pn**	**17 09 29.4**	**+0.2**
	5.1nm,0.3s						
GKN	**Gorkha**	**10.17**	**238**	*eP*	**Pn**	**17 09 34.3**	**+1.7**
	4.1nm,0.4s						
MKAR	**Makanchi Array**	**15.85**	**328**	Pn	**Pn**	**17 10 46.8**	**-2.7**
	0.0nm,0.3s,baz=178,slow=15,SNR=3.1						
MKAR				LR	LR	17 17 35.4	
	comp=Z,52nm,18.9s,baz=134,slow=40						
CMAR	**Chiang Mai Arr**	**15.86**	**164**	Pn	**Pn**	**17 10 48.0**	**-1.8**
	0.0nm,0.3s,baz=33,slow=31,SNR=1.4						
CMAR				LR	LR	17 16 25.8	
	comp=Z,14nm,20.5s,baz=65,slow=36						
SONM	**Songino Array**	**16.66**	**29**	Pn	**P**	**17 11 02.5**	**+0.2**
	0.1nm,0.3s,baz=219,slow=12,SNR=6.1						
KURBB	**Kurchatov Arra**	**20.38**	**330**	P	**P**	**17 11 43.0**	**-0.1**
	1.7nm,0.7s,baz=137,slow=11,SNR=15						
BVAR	**Borovoye Array**	**25.69**	**326**	P	**P**	**17 12 39.1**	**+2.7**
	1.4nm,0.8s,baz=134,slow=19,SNR=3.6						
GEYT	**Alibeck**	**29.52**	**288**	LR	LR	17 26 38.7	
	comp=Z,63nm,18.1s,baz=255,slow=40						
PMG	**Port Moresby**	**66.02**	**121**	LR	LR	17 47 59.7	
	comp=Z,162nm,21.6s,baz=187,slow=37						
ASAR	**Alice Springs**	**68.46**	**141**	P	**P**	**17 18 10.0**	**+1.2**
	0.6nm,0.7s,baz=325,slow=6.7,SNR=8.7						

IDC ***15*** *17:10:30.9±2.3,39°.40N×142°.42E,h0km,mb3.3/3, mb1 3.5/4,mb1mx3.3/32,mbtmp3.3/4,ML2.4/1,Error ellipse: s-maj=48.2km s-min=35.6km az=64.0*

JMA ***15*** *17:10:40.7±0.1,38°.78N×142°.06E,h35km±1km,M4.0*

JMA Felt II J1.

ISC 15 17:10:41.1±2.1,38°.81N±0°.06×142°.1E±0°.1,h37km±3km, n21,σ1§62/24,mb3.5/3,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.42**	**310**	P	**Pn**	**17 10 50.3**	**-0.2**
OFUJ				S	**Sn**	**17 10 56.6**	**-0.7**
JKMT	**Kesennumamotoy**	**0.48**	**271**	P	**Pn**	**17 10 50.6**	**-0.7**
JKMT				*eS*	**Sn**	**17 10 57.0**	**-1.5**
JIO	**Ouri**	**0.68**	**239**	P	**Pn**	**17 10 53.1**	**-1.1**
JIO				S	**Sn**	**17 11 01.2**	**-2.3**
JMK	**Ichinoseki**	**0.69**	**282**	P	**Pn**	**17 10 53.8**	**-0.6**
JMK				S	**Sn**	**17 11 02.8**	**-1.0**
JOM	**Ohasama**	**0.91**	**317**	P	**Pn**	**17 10 57.3**	**0.0**
JOM				S	**Sn**	**17 11 09.1**	**-0.1**
JTH	**Tanohata**	**1.14**	**351**	P	**Pn**	**17 11 00.2**	**-0.3**
JTH				*eS*	**Sn**	**17 11 15.5**	**+0.6**
JOU	**Okura**	**1.20**	**249**	P	**Pn**	**17 11 01.1**	**-0.2**
JOU				S	**Sn**	**17 11 16.0**	**-0.3**
JRG	**Rokugo**	**1.27**	**298**	P	**Pn**	**17 11 02.7**	**+0.4**
JRG				S	**Sn**	**17 11 19.4**	**+1.2**
JYK	**Kaneyama**	**1.35**	**275**	P	**Pn**	**17 11 03.6**	**+0.2**
JMM	**Marumori**	**1.39**	**228**	P	**Pn**	**17 11 03.2**	**-0.6**
JMM				*eS*	**Sn**	**17 11 19.5**	**-1.4**
MAT	**Matsushiro**	**3.82**	**235**	P	**Pn**	**17 11 37.8**	**+0.5**
MAT				*eS*	**Sn**	**17 12 26.7**	**+5.7**
MJAR	**Matsushiro Arr**	**3.82**	**235**	Pn	**Pn**	**17 11 39.2**	**+1.9**
	0.2nm,0.3s,baz=33,slow=14,SNR=8.6						
MJAR				Sn	Sn	17 12 29.9	+8.9
	0.3nm,0.3s,baz=50,slow=26,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	17 46 55.0	
	baz=317,slow=76,SNR=140						
H11N1	**WAKE ISLAND Hy**	**28.66**	**125**	T	T	17 46 55.6	
	baz=317,slow=76,SNR=274						
H11N3	**WAKE ISLAND Hy**	**28.67**	**124**	T	T	17 46 56.4	
	baz=317,slow=76,SNR=233						
H11S1	**WAKE ISLAND Hy**	**29.43**	**126**	T	T	17 47 48.8	
	baz=318,slow=76,SNR=143						
H11S3	**WAKE ISLAND Hy**	**29.43**	**126**	T	T	17 47 52.4	
	baz=318,slow=76,SNR=182						
H11S2	**WAKE ISLAND Hy**	**29.45**	**126**	T	T	17 47 52.1	
	baz=318,slow=76,SNR=142						
MKAR	**Makanchi Array**	**43.65**	**301**	P	P	17 18 36.2	-5.8
	0.1nm,0.5s,baz=82,slow=10,SNR=1.6						
WRA	**Warramunga Arr**	**58.89**	**189**	P	**P**	**17 20 35.7**	**-0.6**
	0.5nm,0.6s,baz=6.6,slow=6.9,SNR=8.2						
ASAR	**Alice Springs**	**62.62**	**188**	P	**P**	**17 21 01.4**	**-0.2**
	0.3nm,0.7s,baz=10,slow=8.3,SNR=4.5						

IDC 15 17:24:53.8±3.4,57°.31N×2°.42E,h0km,Error ellipse: s-maj=1.8km s-min=0.6km az=82.0,North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**10.84**	**137**	*i*		18 33 00.0	
	baz=324,slow=321,SNR=2.2						
I37NO	**I37NO**	**13.81**	**25**	*i*		18 51 40.0	
	baz=226,slow=329,SNR=2.4						
I43RU	**DUBNA INFRASON**	**18.84**	**77**	*i*		19 23 10.0	
	baz=286,slow=327,SNR=0.9						

IDC ***15*** *17:46:44.0±0.5,29°.72S×178°.61W,h170km±6km,mb3.7/6, mb1 4.0/6,mb1mx3.7/27,mbtmp4.2/6,Error ellipse: s-maj=23.2km s-min=19.4km az=161.0*

NEIC ***15*** *17:46:44.4±1.7,29°.7S±0°.1×178°.64W±0°.10,h176km±6km, mb4.4/20,Error ellipse: s-maj=19.4km s-min=12.5km az=183.0*

ISC 15 17:46:42.6±0.5,30°.19S±0°.07×178°.6W±0°.1,h150km,n65, σ2§16/80,mb4.2/14,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.11**	**34**	P	**Pn**	**17 47 09.9**	**+1.5**
GLKZ				S	**Sn**	**17 47 28.4**	**+0.4**
RAO	**Raoul Island**	**1.12**	**34**	P	**Pn**	**17 47 10.2**	**+1.8**
	409nm,0.3s,baz=97,slow=10,SNR=15						
RAO				S	**Sn**	**17 47 28.7**	**+0.5**
	2µm,0.3s,baz=83,slow=21,SNR=31						
RAO	**Raoul Island**	**1.12**	**34**		**Pn**	**17 47 10.3**	**+1.8**
RAO				Sn	**Sn**	**17 47 27.6**	**-0.6**
RIZ	**Raoul Island**	**1.12**	**33**	P	**Pn**	**17 47 10.8**	**+2.3**
RIZ				S	**Sn**	**17 47 28.4**	**+0.2**
MXZ	**Matakaoa Point**	**7.78**	**198**	Pn	**Pn**	**17 48 33.2**	**+0.2**
MXZ	**Matakaoa Point**	**7.78**	**198**	P	**Pn**	**17 48 28.4**	**-4.6**
MXZ				S	**Sn**	**17 49 56.4**	**-3.4**
WMGZ	**Waiomatatini S**	**7.99**	**197**	P	**Pn**	**17 48 33.6**	**-2.3**
WMGZ				S	**Sn**	**17 50 05.8**	**+0.9**
HAZ	**Te Kaha**	**8.11**	**201**	P	**Pn**	**17 48 35.7**	**-1.7**
HAZ				S	**Sn**	**17 50 08.0**	**+0.3**
PKGZ	**Pakihiroa**	**8.15**	**199**	P	**Pn**	**17 48 36.6**	**-1.4**
PKGZ				S	**Sn**	**17 50 09.3**	**+0.5**
OUZ	**Omahuta**	**8.25**	**231**	Pn	Pn	17 48 45.0	+5.8
PUZ	**Puketiti**	**8.27**	**197**	P	**Pn**	**17 48 37.5**	**-2.2**
PUZ				S	**Sn**	**17 50 08.8**	**-2.8**
URZ	**Urewera**	**8.79**	**202**	P	**Pn**	**17 48 44.4**	**-2.0**
	2.2nm,0.3s,baz=121,slow=24,SNR=21						
URZ				S	**Sn**	**17 50 24.6**	**+0.6**
	10nm,0.3s,baz=209,slow=22,SNR=6.6						
URZ	**Urewera**	**8.79**	**202**	P	**Pn**	**17 48 44.5**	**-2.0**
URZ				S	**Sn**	**17 50 23.1**	**-0.8**
MUGZ	**Murupara**	**9.10**	**203**	P	**Pn**	**17 48 48.8**	**-1.8**
MUGZ				S	**Sn**	**17 50 30.9**	**-0.5**
RTZ	**Ruatahuna**	**9.15**	**202**	P	**Pn**	**17 48 49.5**	**-1.9**
RTZ				S	**Sn**	**17 50 30.1**	**-2.8**
SNGZ	**Shannon Statio**	**9.19**	**200**	P	**Pn**	**17 48 49.5**	**-2.4**
SNGZ				S	**Sn**	**17 50 32.5**	**-1.3**
RAHZ	**Arahi**	**9.39**	**201**	P	**Pn**	**17 48 50.9**	**-3.6**
RAHZ				S	**Sn**	**17 50 37.7**	**-0.9**
BKZ	**Black Stump Fm**	**9.81**	**203**		**Pn**	**17 48 56.3**	**-3.8**
BKZ	**Black Stump Fm**	**9.81**	**203**	P	**Pn**	**17 48 56.5**	**-3.6**
BKZ				S	**Sn**	**17 50 46.6**	**-2.1**
HIZ	**Hauiti**	**9.89**	**211**	Pn	**Pn**	**17 49 02.4**	**+1.3**
HIZ	**Hauiti**	**9.89**	**211**	P	**Pn**	**17 49 03.5**	**+2.4**
PKE	**Pukeiti**	**10.84**	**212**	P	**Pn**	**17 49 17.4**	**+3.7**
BFZ	**Birch Farm**	**11.27**	**200**		**Pn**	**17 49 18.0**	**-1.2**
NIUE	**Niue**	**13.60**	**38**	P	Pn	17 49 43.5	-6.0
OXZ	**Oxford**	**15.08**	**207**		**Pn**	**17 50 02.8**	**-5.1**
RPZ	**Rata Peaks**	**15.80**	**208**		**Pn**	**17 50 13.3**	**-3.5**
WKZ	**Wanaka**	**17.56**	**210**	P	**Pn**	**17 50 34.6**	**-2.3**
WKZ				IAmb	IAmb	17 50 50.7	
	comp=Z,52nm,1.2s						
MLZ	**Mavora Lakes**	**18.38**	**211**	P	**P**	**17 50 45.5**	**-0.4**
MLZ				IAmb	IAmb	17 50 53.6	
	comp=Z,45nm,1.4s						
WHZ	**Wether Hill Ro**	**18.86**	**210**	P	**P**	**17 50 50.7**	**-0.5**
CTAO	**Charters Tower**	**33.22**	**279**	P	**P**	**17 53 06.0**	**+0.5**
CTAO				IAmb	IAmb	17 53 08.3	
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**33.99**	**257**	P	**P**	**17 53 12.9**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=96,slow=10,SNR=9.3						
STKA	**Stephens Creek**	**33.99**	**257**	P	**P**	**17 53 14.2**	**+2.1**
BBOO	**Buckleboo**	**38.50**	**254**	P	**P**	**17 53 52.0**	**+1.7**
BBOO				IAmb	IAmb	17 53 55.9	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**42.57**	**267**	P	**P**	**17 54 21.7**	**-2.3**
ASAR	**Alice Springs**	**42.57**	**267**	P	**P**	**17 54 23.5**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=104,slow=7.0,SNR=31						
ASAR				ScP	**ScP**	**17 59 46.4**	**-4.0**
	comp=Z,0.5nm,0.9s,baz=111,slow=4.2,SNR=4.2						
ASAR	**Alice Springs**	**42.57**	**267**	P	**P**	**17 54 22.7**	**-1.3**
WR0	**Warramunga Arr**	**43.36**	**272**	P	**P**	**17 54 29.2**	**-1.0**
WB2	**Warramunga Arr**	**43.53**	**272**	P	**P**	**17 54 30.1**	**-1.5**
WB2				IAmb	IAmb	17 54 55.0	
	comp=Z,12nm,1.3s						
WRAB	**Tennant Creek**	**43.54**	**272**	P	**P**	**17 54 30.3**	**-1.3**
WRAB				IAmb	IAmb	17 54 32.7	
	comp=Z,7.1nm,0.9s						
WRA	**Warramunga Arr**	**43.54**	**272**	P	**P**	**17 54 31.2**	**-0.6**
	comp=Z,3.6nm,0.6s,baz=110,slow=8.1,SNR=27						
WRA	**Warramunga Arr**	**43.54**	**272**	P	**P**	**17 54 30.9**	**-0.8**
WB0	**Warramunga Arr**	**43.56**	**273**	P	**P**	**17 54 31.5**	**-0.4**
WB0				IAmb	IAmb	17 54 32.8	
	comp=Z,5.4nm,0.8s						
SBA	**Scott Base**	**48.21**	**184**	P	**P**	**17 55 11.0**	**+3.6**
SBA				IAmb	IAmb	17 55 13.3	
	comp=Z,15nm,0.8s						
VNDA	**Vanda**	**48.25**	**186**	P	**P**	**17 55 10.9**	**+3.2**
	comp=Z,1.8nm,0.7s,baz=4.2,slow=8.3,SNR=14						
VNDA	**Vanda**	**48.25**	**186**	P	**P**	**17 55 11.0**	**+3.2**
CASY	**Casey**	**55.07**	**208**	P	**P**	**17 55 58.7**	**+0.3**
QSPA	**South Pole Qui**	**59.92**	**180**	P	**P**	**17 56 35.8**	**+3.1**
QSPA				IAmb	IAmb	17 56 40.9	
	comp=Z,5.5nm,0.8s						
MAW	**Mawson**	**72.31**	**201**	P	**P**	**17 57 51.7**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=148,slow=9.5,SNR=2.3						
MAW	**Mawson**	**72.31**	**201**	P	**P**	**17 57 51.2**	**-0.1**

PMSA	**Palmer Station**	**72.68**	**156**	P	**P**	**17 57 54.0**	**+0.4**
SNAA	**Sanae**	**78.38**	**179**	P	**P**	**17 58 26.8**	**+0.7**
SNAA	**Sanae**	**78.38**	**179**	P	**P**	**17 58 29.2**	**+3.2**
SNAA				IAmb	IAmb	17 58 31.6	
	comp=Z,7.0nm,1.5s						
VNA3	**Neumayer Olymp**	**78.55**	**176**	P	**P**	**17 58 28.4**	**+1.5**
VNA2	**Neumayer--Watz**	**78.98**	**177**	P	**P**	**17 58 31.2**	**+2.0**
	baz=180,slow=4.1						
VNA1	**Neumayer--Stat**	**79.21**	**177**	P	**P**	**17 58 32.6**	**+2.1**
NVAR	**Mina Array Bea**	**88.46**	**43**	P	**P**	**17 59 15.9**	**-2.2**
	comp=Z,1.3nm,0.7s,baz=215,slow=9.8,SNR=6.9						
NVAR	**Mina Array Bea**	**88.46**	**43**	P	**P**	**17 59 14.9**	**-3.2**
KURK	**Kurchatov**	**120.51**	**314**		**PKPdf**	**18 05 13.8**	**-2.1**
KURBB	**Kurchatov Arra**	**120.55**	**314**	PKP	**PKPdf**	**18 05 13.8**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=154,slow=42,SNR=2.8						
FINES	**FINESS Array B**	**144.76**	**340**	PKP	**PKPab**	**18 05 57.6**	**-2.5**
	comp=Z,3.5nm,0.5s,baz=51,slow=3.6,SNR=23						
NOA	**NORSAR Array B**	**148.46**	**351**	PKPbc	**PKPdf**	**18 06 08.3**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=17,slow=4.3,SNR=4.7						
AKASG	**Malin Array Be**	**150.80**	**322**	PKPbc	**PKPbc**	**18 06 14.6**	**-2.3**
	comp=Z,2.1nm,0.6s,baz=51,slow=2.6,SNR=8.6						
AKASG	**Malin Array Be**	**150.80**	**322**		**PKPbc**	**18 06 15.1**	**-1.8**
TORD	**Torodi Ar. Bea**	**163.04**	**181**	PKPab	**PKPab**	**18 07 19.1**	**+1.2**
	comp=Z,1.9nm,0.7s,baz=167,slow=3.9,SNR=7.5						
TORD	**Torodi Ar. Bea**	**163.04**	**181**		**PKPab**	**18 07 19.3**	**+1.4**

IDC ***15*** *17:56:55.7±0.8,24°.48N×96°.08E,h0km,mb3.9/13, mb1 4.0/14,mb1mx3.8/52,mbtmp3.9/14,ML4.0/1,MS3.0/5, Ms1 3.1/5,ms1mx2.8/51,Error ellipse: s-maj=42.2km s-min=13.8km az=60.0*

NDI ***15*** *17:56:59.4±3.0,24°.58N×96°.26E,h10km,ML3.8, mb4.2(NEIC)*

NEIC ***15*** *17:57:00.9±1.5,24°.40N±0°.09×96°.18E±0°.09,h42km±7km, mb4.2/17,Error ellipse: s-maj=15.2km s-min=9.7km az=219.0*

ISC 15 17:56:57.2±0.4,24°.48N±0°.04×96°.18E±0°.04,h10km,n78, σ2§01/87,mb4.2/20,MS3.0/5,1D,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**2.25**	**304**	*eP*	**Pb**	**17 57 37.9**	**-0.2**
KOHI				*eS*	**Sb**	**17 58 06.4**	**+0.4**
KOHI				IAML		17 58 14.7	
	comp=N,1µm,0.7s						
KOHI				IAML		17 58 16.1	
	comp=E,1µm,0.7s						
MOKO	**MOKOCHONG**	**2.38**	**321**	*eP*	**Pb**	**17 57 38.4**	**-1.8**
MOKO				*eS*	**Sb**	**17 58 08.4**	**-1.2**
MOKO				IAML		17 58 14.2	
	comp=E,1µm,0.7s						
MOKO				IAML		17 58 14.7	
	comp=N,1µm,0.5s						
LKP	**Lekhapani**	**2.86**	**354**	*eP*	**Pb**	**17 57 45.5**	**-2.9**
LKP				IAML		17 58 37.4	
	comp=N,398nm,0.8s						
LKP				IAML		17 58 37.9	
	comp=E,581nm,1.1s						
SILR	**SILCHAR**	**3.09**	**276**	*eP*	**Pn**	**17 57 49.0**	**+3.0**
SAIH	**SAIHA**	**3.54**	**237**	*eP*	**Pn**	**17 57 55.0**	**+2.8**
SAIH				*eS*	**Sb**	**17 58 39.9**	**-3.1**
SAIH				IAML		17 58 51.6	
	comp=E,260nm,0.6s						
ZIRO	**ZIRO**	**3.69**	**326**	*eP*	**Pn**	**17 57 55.8**	**+1.3**
SHL	**Shillong**	**4.05**	**286**	*eP*	**Pn**	**17 58 00.5**	**+1.1**
SHL				*eS*	**Sn**	**17 58 47.6**	**+0.7**
SHL				*eS*	**Sn**	**17 58 47.8**	**+0.9**
SHL				IAML		17 58 52.9	
	comp=E,142nm,0.6s						
SHL	**Shillong**	**4.05**	**286**	Pn	**Pn**	**17 58 00.3**	**+1.0**
GUWA	**GUWAHATI**	**4.41**	**294**	*eP*	**Pn**	**17 58 05.0**	**+0.9**
GUWA				*eS*	**Sn**	**17 58 54.6**	**-0.9**
GUWA				IAML		17 58 57.6	
	comp=N,114nm,0.4s						
CRAI	**Chiangrai**	**5.74**	**137**	P	**Pn**	**17 58 24.7**	**+2.2**
CRAI				S	**Sg**	**17 59 58.9**	**-2.5**
KMI	**Kunming**	**6.00**	**82**	Pg	**Pg**	**17 58 50.5**	**-1.6**
KMI				Sg	**Sg**	**18 00 06.3**	**-3.5**
KMI				smax	smax		
	comp=N,71nm,1.1s						
KMI				smax	smax		

HHC	**Hu-ho-hao-te**	**20.79**	**35**	*e*P		Pn		18 01 41.5	+0.5
HHC					pmax	pmax			
	comp=Z,17nm,1.1s								
HHC					pmax	pmax			
	comp=Z,50nm,5.7s								
HHC					LR	LR			
	comp=N,230nm,12.1s								
HHC					LR	LR			
	comp=E,180nm,9.0s								
HHC					LR	LR			
	comp=Z,230nm,9.4s								
NIL	**Nilore**	**21.99**	**300**	P		**P**		**18 01 52.5**	**+1.0**
SONM	**Songino Array**	**24.68**	**17**	P		**P**		**18 02 19.1**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=194,slow=10,SNR=7.3								
SONM	**Songino Array**	**24.68**	**17**	P		**P**		**18 02 18.6**	**+0.2**
ULN	**Ulaanbaatar**	**24.89**	**18**	P		**P**		**18 02 19.2**	**-1.1**
MK31	**Makanchi Array**	**24.89**	**337**	P		**P**		**18 02 21.1**	**+0.9**
MK31				IAmb		IAmb		18 02 22.1	
	comp=Z,4.7nm,0.8s								
MKAR	**Makanchi Array**	**24.89**	**337**	P		**P**		**18 02 21.1**	**+0.9**
	comp=Z,4.6nm,0.7s,baz=146,slow=10,SNR=51								
MKAR				LR		LR		18 14 24.7	
	comp=Z,33nm,19.7s,baz=94,slow=42								
MKAR	**Makanchi Array**	**24.89**	**337**	P		**P**		**18 02 20.5**	**+0.3**
MAKZ	**Makanchi**	**25.02**	**337**	P		**P**		**18 02 21.9**	**+0.6**
MAKZ				IAmb		IAmb		18 02 24.8	
	comp=Z,6.7nm,1.1s								
AAK	**Ala-Archa**	**25.46**	**321**	P		**P**		**18 02 26.0**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=150,slow=7.4,SNR=6.3								
AAK				LR		LR		18 12 39.5	
	comp=Z,38nm,19.2s,baz=356,slow=37								
AAK	**Ala-Archa**	**25.46**	**321**	P		**P**		**18 02 25.9**	**+0.4**
KBL	**Kabul**	**25.59**	**299**	P		**P**		**18 02 26.6**	**-0.2**
KBL				IAmb		IAmb		18 02 39.3	
	comp=Z,6.4nm,1.1s								
GAR	**Garm**	**26.22**	**310**	P		**P**		**18 02 33.0**	**+0.6**
TLY	**Talaya**	**27.76**	**10**	LR		LR		18 15 22.1	
	comp=Z,40nm,18.0s,baz=239,slow=40								
KURBB	**Kurchatov Arra**	**29.46**	**337**	P		**P**		**18 03 01.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=148,slow=9.3,SNR=4.5								
KURK	**Kurchatov**	**29.51**	**337**	P		**P**		**18 03 01.0**	**-0.5**
KSRS	**Korea Array**	**29.99**	**57**	LR		LR		18 14 52.0	
	comp=Z,40nm,18.1s,baz=202,slow=36								
ZAA0	**Zalesovo Array**	**30.64**	**347**	P		**P**		**18 03 11.7**	**+0.2**
ZAA0				IAmb		IAmb		18 03 12.9	
	comp=Z,6.5nm,1.4s								
ZALV	**Zalesovo Beam**	**30.64**	**347**	P		**P**		**18 03 11.5**	**0.0**
	comp=Z,1.5nm,0.5s,baz=167,slow=7.8,SNR=10								
ZALV	**Zalesovo Beam**	**30.64**	**347**	P		**P**		**18 03 11.9**	**+0.4**
ABKAR	**Akbulak array**	**37.55**	**321**	P		**P**		**18 04 11.3**	**-0.2**
ABKAR				IAmb		IAmb		18 04 16.3	
	comp=Z,2.4nm,0.7s								
ABKAR	**Akbulak array**	**37.55**	**321**	P		**P**		**18 04 11.8**	**+0.2**
ARU	**Arti**	**41.97**	**330**	P		**P**		**18 04 48.2**	**+0.1**
ARU				IAmb		IAmb		18 04 49.0	
	comp=Z,2.3nm,0.5s								
RAYN	**Ar Rayn**	**46.09**	**280**	P		**P**		**18 05 22.1**	**+0.3**
MA2	**Magadan**	**51.44**	**32**	P		**P**		**18 06 02.1**	**-0.2**
MA2				IAmb		IAmb		18 06 03.1	
	comp=Z,3.8nm,0.8s								
AKASG	**Malin Array Be**	**56.99**	**316**	P		**P**		**18 06 41.5**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=80,slow=6.3,SNR=7.1								
AKASG	**Malin Array Be**	**56.99**	**316**	P		**P**		**18 06 41.5**	**-1.4**
AKASG				IAmb		IAmb		18 06 51.2	
	comp=Z,1.4nm,0.8s								
AKBB	**Malin Array Si**	**56.99**	**316**	P		**P**		**18 06 39.5**	**-3.4**
ELL	**Elmali**	**57.32**	**299**	P		**P**		**18 06 45.2**	**-0.5**
WRA	**Warramunga Arr**	**57.70**	**137**	P		**P**		**18 06 48.5**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=321,slow=7.6,SNR=2.6								
FINES	**FINESS Array B**	**59.31**	**328**	P		**P**		**18 06 57.9**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=106,slow=8.0,SNR=2.2								
ASAR	**Alice Springs**	**60.24**	**140**	P		**P**		**18 07 06.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=320,slow=6.8,SNR=25								
ARCES	**ARCESS Array B**	**60.55**	**338**	P		**P**		**18 07 07.3**	**0.0**
	comp=Z,2.5nm,1.0s,baz=93,slow=7.2,SNR=1.1								
NOA	**NORSAR Array B**	**66.50**	**328**	P		**P**		**18 07 45.8**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=81,slow=6.2,SNR=3.0								
GERES	**GERESS Array B**	**67.16**	**315**	P		**P**		**18 07 50.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=35,slow=3.6,SNR=2.6								
ILAR	**Eielson Array**	**78.73**	**23**	P		**P**		**18 08 58.5**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=309,slow=5.7,SNR=3.4								
TXAR	**Lajitas Array**	**123.20**	**21**	PKP		**PKiKP**		**18 15 56.7**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=110,slow=1.9,SNR=4.0								
TXAR	**Lajitas Array**	**123.20**	**21**			**PKPdf**		**18 15 54.7**	**-0.2**

*IDC **15** 18:13:47.3±1.2, 1.°06S×120.°45E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/38, mbtmp3.5/6, ML3.5/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/28, Error ellipse: s-maj=51.6km s-min=18.3km az=68.0*

*DJA **15** 18:13:51.5±4.5, 1.°S±4.°×12.°1E±.°, h29km±50km, M3.7/11, mb3.8/2, MLv3.6/11*

ISC 15 18:13:53.2±0.9, 1.°12S±0.°06×120.°55E±0.°07, h49km, n17, σ1s35/17, mb3.4/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.12**	**79**	P	**Pn**	**18 14 11.5**	**-1.1**
TTSI	**Tana Toraja**	**2.04**	**201**	P	**Pn**	**18 14 23.8**	**-1.4**
MRSI	**Marisa**	**2.11**	**41**	P	**Pn**	**18 14 25.3**	**-0.8**
LUWI	**Luwuk**	**2.23**	**88**	P	**Pn**	**18 14 26.8**	**-0.9**
SPSI	**Sidrap Palu**	**2.93**	**195**	P	**Pn**	**18 14 36.2**	**-1.1**
GTOI	**Gorontalo**	**3.02**	**55**	P	**Pn**	**18 14 37.5**	**-1.1**
BNSI	**Bone**	**3.29**	**188**	P	**Pn**	**18 14 41.7**	**-0.5**
KAPI	**Kappang**	**3.95**	**192**	Pn	**Pn**	**18 14 50.1**	**-1.2**
	3.4nm,0.3s,baz=32,slow=4.9,SNR=15						
KAPI				Sn	**Sn**	**18 15 37.7**	**+1.3**
	1.2nm,0.3s,baz=144,slow=16,SNR=1.6						
KAPI				LR	LR	18 16 39.7	
	comp=Z,215nm,18.2s,baz=326,slow=43						
KBKI	**Kotabaru**	**4.88**	**244**	P	**Pn**	**18 15 03.1**	**-1.0**
SANI	**Sanana**	**5.52**	**100**	P	**Pn**	**18 15 11.3**	**-1.6**
	0.1nm11nm,1.0s						
BBKI	**Banjar Baru**	**6.16**	**248**	P	**Pn**	**18 15 19.9**	**-1.7**
DAV	**Davao City (W)**	**9.56**	**32**	LR	LR	18 20 42.9	
	comp=Z,45nm,19.4s,baz=304,slow=43						
WRA	**Warramunga Arr**	**23.07**	**145**	P	**P**	**18 18 53.9**	**-0.8**
	1.2nm,0.9s,baz=329,slow=9.0,SNR=5.9						
ASAR	**Alice Springs**	**25.89**	**151**	P	**P**	**18 19 23.1**	**+2.4**
	0.3nm,0.8s,baz=342,slow=13,SNR=3.0						
CMAR	**Chiang Mai Arr**	**28.81**	**314**	P	**P**	**18 19 46.5**	**-0.5**
	0.4nm,0.7s,baz=149,slow=7.6,SNR=5.5						
SONM	**Songino Array**	**50.30**	**348**	P	**P**	**18 22 46.4**	**+1.4**
	0.2nm,0.5s,baz=159,slow=8.6,SNR=2.1						
MKAR	**Makanchi Array**	**58.31**	**330**	P	**P**	**18 23 43.0**	**-0.2**
	0.8nm,0.7s,baz=128,slow=7.8,SNR=8.6						

*DJA **15** 18:31:46.5±1.7, 2.°N±4.°×12.°7E±.°, h24km±18km, M4.1/8, mb4.5/2, MLv3.9/8*

*IDC **15** 18:31:48.0±4.7, 2.°40N×126.°64E, h63km±50km, mb3.5/10, mb1 3.7/11, mb1mx3.5/34, mbtmp3.8/11, ML3.3/1, MS2.7/3, Ms1 2.7/3, ms1mx2.5/33, Error ellipse: s-maj=39.7km s-min=15.3km az=75.0*

ISC 15 18:31:47.3±0.7, 2.°45N±0.°07×126.°83E±0.°08, h53km, n18, σ1s23/18, mb3.9/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.75**	**162**	P	**Pn**	**18 32 15.4**	**0.0**
SGSI	**Sangihe**	**1.79**	**313**	P	**Pn**	**18 32 16.8**	**+1.0**
SGSI				S	**Sn**	**18 32 38.4**	**+1.1**
KMSI	**Cibinong**	**3.40**	**237**	P	**Pn**	**18 32 39.0**	**+1.0**
GTOI	**Gorontalo**	**4.22**	**245**	P	**Pn**	**18 32 51.3**	**+2.1**
SANI	**Sanana**	**4.55**	**191**	P	**Pn**	**18 32 54.1**	**+0.4**
DAV	**Davao City (W)**	**4.75**	**345**	LR	LR	18 34 42.5	
	comp=Z,36nm,21.3s,baz=154,slow=37						
LUWI	**Luwuk**	**5.34**	**229**	P	**Pn**	**18 33 05.5**	**+1.0**
SIJI	**Sorong**	**5.53**	**127**	P	**Pn**	**18 33 09.4**	**+2.3**
	1.0nm,0.3s,baz=128,slow=23,SNR=6.1						
SIJI				LR	LR	18 35 33.8	
	comp=Z,142nm,20.0s,baz=315,slow=40						
FITZ	**Fitzroy Crossi**	**20.45**	**183**	P	**P**	**18 36 21.6**	**+1.0**
	1.4nm,0.5s,baz=16,slow=11,SNR=13						
WRA	**Warramunga Arr**	**23.45**	**162**	P	**P**	**18 36 51.2**	**-1.0**
	1.2nm,0.4s,baz=338,slow=10,SNR=41						
ASAR	**Alice Springs**	**26.86**	**166**	P	**P**	**18 37 22.6**	**-0.6**
	0.4nm,0.4s,baz=343,slow=7.9,SNR=18						
CMAR	**Chiang Mai Arr**	**31.61**	**302**	P	**P**	**18 38 03.5**	**-2.0**
	0.9nm,0.8s,baz=118,slow=6.9,SNR=13						
KSRS	**Korea Array**	**34.85**	**2**	P	**P**	**18 38 33.2**	**-0.2**
	1.1nm,0.8s,baz=181,slow=9.4,SNR=3.2						
KSRS				LR	LR	18 54 51.4	
	comp=Z,14nm,18.1s,baz=175,slow=40						

STKA	**Stephens Creek**	**36.91**	**159**	P		**P**		**18 38 51.3**	**+0.2**
	2.0nm,0.6s,baz=337,slow=8.7,SNR=5.2								
USRK	**Ussuriysk Ar.**	**41.82**	**6**	P		**P**		**18 39 32.5**	**+0.6**
	2.5nm,0.9s,baz=178,slow=11,SNR=3.2								
SONM	**Songino Array**	**48.53**	**342**	P		**P**		**18 40 25.5**	**+0.2**
	0.3nm,0.3s,baz=175,slow=8.7,SNR=3.6								
MKAR	**Makanchi Array**	**58.66**	**326**	P		**P**		**18 41 38.8**	**-0.5**
	0.5nm,0.3s,baz=120,slow=6.6,SNR=14								
ZALV	**Zalesovo Beam**	**61.76**	**333**	P		**P**		**18 41 59.1**	**-1.3**
	0.5nm,0.4s,baz=125,slow=7.7,SNR=4.5								

IDC 15 18:36:04.7±2.6, 1.°60S×135.°68E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/32, mbtmp3.5/4, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/21, Error ellipse: s-maj=65.2km s-min=27.7km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.47**	**279**	Pn	Pn	18 37 13.7	-0.1
	1.3nm,0.3s,baz=239,slow=22,SNR=9.1						
SIJI				Sn	Sn	18 38 02.6	-4.0
	1.2nm,0.3s,baz=54,slow=18,SNR=4.5						
WRA	**Warramunga Arr**	**18.27**	**184**	P	Pn	18 40 17.9	-2.0
	0.2nm,0.3s,baz=4.3,slow=12,SNR=6.8						
ASAR	**Alice Springs**	**22.00**	**184**	P	P	18 41 02.1	+1.5
	1.8nm,0.6s,baz=10.0,slow=11,SNR=28						
USRK	**Ussuriysk Ar.**	**45.72**	**356**	LR	LR	19 01 51.1	
	comp=Z,14nm,18.5s,baz=247,slow=34						
MKAR	**Makanchi Array**	**67.08**	**323**	P	P	18 46 59.7	-0.4
	0.1nm,0.5s,baz=111,slow=8.2,SNR=2.3						

*IDC **15** 18:41:09.6±2.8, 6.°20S×153.°77E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/30, mbtmp3.7/5, ML2.1/1, Error ellipse: s-maj=82.9km s-min=31.1km az=119.0*

ISC 15 18:41:15.9±2.7, 6.°4S±0.°3×153.°9E±0.°4, h48km, n6, σ1s12/6, mb3.4/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.27**	**246**	Pn	**Pn**	**18 42 59.5**	**-0.1**
	1.7nm,0.3s,baz=77,slow=23,SNR=2.4						
WRA	**Warramunga Arr**	**23.23**	**233**	P	**P**	**18 46 19.5**	**+0.3**
	0.8nm,0.4s,baz=56,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**25.72**	**226**	P	**P**	**18 46 43.0**	**+1.0**
	0.3nm,0.5s,baz=58,slow=9.1,SNR=7.1						
FITZ	**Fitzroy Crossi**	**29.86**	**245**	P	**P**	**18 47 18.4**	**-0.7**
	1.3nm,0.4s,baz=56,slow=9.4,SNR=14						
SONM	**Songino Array**	**68.27**	**328**	P	**P**	**18 52 12.7**	**+0.7**
	0.2nm,0.6s,baz=130,slow=5.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	**151.80**	**286**	PKPbc	**PKPbc**	**19 01 05.2**	**-1.3**
	0.8nm,0.7s,baz=69,slow=2.4,SNR=4.9						

IDC 15 19:13:00.2±60.0, 15.°52S×176.°41W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/35, mbtmp3.9/3, Error ellipse: s-maj=1115.0km s-min=177.4km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.47**	**239**	P	P	19 20 49.0	-0.1
	0.6nm,0.4s,baz=90,slow=9.1,SNR=2.0						
WRA	**Warramunga Arr**	**46.99**	**257**	P	P	19 21 33.0	-0.5
	0.5nm,0.8s,baz=90,slow=8.2,SNR=12						
ASAR	**Alice Springs**	**47.31**	**252**	P	P	19 21 36.2	+0.2
	2.6nm,0.5s,baz=90,slow=7.7,SNR=80						

*VAO **15** 19:13:13.1±0.8, 14.°87S×72.°47W, h110km, mb4.6*
*NEIC **15** 19:13:15.9±2.5, 15.°04S±0.°08×72.°32W±0.°10, h120km±8km, mb4.3/13, Error ellipse: s-maj=14.1km s-min=11.0km az=107.0*
*IDC **15** 19:13:18.4±2.9, 14.°83S×72.°06W, h132km±24km, mb3.8/7, mb1 3.9/11, mb1mx3.7/46, mbtmp4.2/11, MS3.3/3, Ms1 3.3/3, ms1mx2.8/28, Error ellipse: s-maj=25.3km s-min=21.0km az=51.0*

ISC 15 19:13:13.9±0.5, 14.°99S±0.°06×72.°44W±0.°07, h114km, n87, σ1s62/87, mb4.1/9, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.91**	**149**	Pn	**Pn**	**19 14 10.1**	**-2.1**
LPAZ	**La Paz**	**4.34**	**108**	P	**Pn**	**19 14 20.6**	**+2.0**
	4.7nm,0.3s,baz=291,slow=8.6,SNR=77						
LPAZ				S	**Sn**	**19 15 08.2**	**-0.4**
	baz=310,slow=16,SNR=1.7						
LPAZ				LR	LR	19 16 16.8	
	comp=Z,105nm,18.4s,baz=234,slow=44						
LPAZ	**La Paz**	**4.34**	**108**	Pn	**Pn**	**19 14 21.0**	**+2.4**
PB16	**IPOC Station P**	**4.35**	**140**		**Pn**	**19 14 20.6**	**+2.0**
MNMC	**Minye Minye**	**4.93**	**147**	Pn	**Pn**	**19 14 26.6**	**+0.5**
PSGCX	**Pisagua**	**5.08**	**155**	Pn	**Pn**	**19 14 28.5**	**+0.4**
NNA	**Nana**	**5.22**	**304**	P	**Pn**	**19 14 30.1**	**+0.2**
	64nm,0.3s,baz=126,slow=11,SNR=69						
NNA				S	**Sn**	**19 15 25.7**	**-3.4**
	9.7nm,0.3s,baz=171,slow=6.5,SNR=4.1						
NNA	**Nana**	**5.22**	**304**	Pn	**Pn**	**19 14 29.9**	**0.0**
PB11	**IPOC Station P**	**5.43**	**151**		**Pn**	**19 14 32.4**	**-0.4**
TA01	**Diego Aracena**	**5.95**	**159**	Pn	**Pn**	**19 14 38.7**	**-0.9**
TA01					**Sn**	**19 15 43.9**	**-2.5**
PB08	**IPOC Station P**	**6.00**	**149**		**Pn**	**19 14 40.8**	**+0.1**
PATCX	**Punta Patache**	**6.19**	**160**	Pn	**Pn**	**19 14 39.6**	**-3.4**
PB01	**IPOC Station P**	**6.64**	**155**		**Pn**	**19 14 46.9**	**-2.2**
PB07	**IPOC Station P**	**7.12**	**161**		**Pn**	**19 14 54.7**	**-1.0**
CZSB	**Cruzeiro do Su**	**7.22**	**358**	*e*P	**Pn**	**19 14 54.0**	**-2.9**
PB09	**IPOC Station P**	**7.42**	**156**	Pn	**Pn**	**19 14 58.9**	**-0.8**
ETMB	**Extrema**	**7.96**	**50**	*e*P	**Pn**	**19 15 05.6**	**-1.3**
PB06	**IPOC Station P**	**8.14**	**161**	Pn	**Pn**	**19 15 06.6**	**-2.8**
LVC	**Limon Verde**	**8.28**	**157**	P	**Pn**	**19 15 11.8**	**+0.3**
	0.7nm,0.3s,baz=4.1,slow=11,SNR=6.5						
LVC				S	**Sn**	**19 16 38.7**	**-4.9**
	3.0nm,0.3s,baz=77,slow=20,SNR=8.2						
LVC	**Limon Verde**	**8.28**	**157**		**Pn**	**19 15 10.7**	**-0.8**
PB15	**IPOC Station P**	**8.64**	**162**	Pn	**Pn**	**19 15 15.7**	**-0.6**
ATAH	**Atahualpa**	**9.75**	**323**	LR	LR	19 20 01.1	
	comp=Z,54nm,21.0s,baz=205,slow=41						
GO02	**Mina Guanaco**	**10.46**	**166**	Pn	**Pn**	**19 15 37.9**	**-3.2**
SAML	**Samuel**	**10.86**	**57**	Pn	**Pn**	**19 15 42.1**	**-4.1**
SIV	**San Ignacio**	**11.00**	**97**	P	**Pn**	**19 15 45.8**	**-2.3**
	1.2nm,0.3s,baz=282,slow=14,SNR=9.6						
SIV				S	Sn	19 17 35.4	-14
	0.4nm,0.3s,baz=320,slow=15,SNR=1.5						
PTLB	**Pontes e Lacer**	**12.84**	**94**	*e*P	**Pn**	**19 16 11.3**	**-1.1**
CLDB	**Colider**	**16.72**	**78**	*e*P	**Pn**	**19 17 01.1**	**-0.4**
AQDB	**Aquidauana**	**16.84**	**111**	*e*P	**Pn**	**19 17 03.3**	**+0.1**
PP1B	**Ponte de Pedra**	**17.05**	**101**	*e*P	**Pn**	**19 17 06.4**	**+0.9**
CPUP	**Villa Florida**	**18.07**	**131**	P	**Pn**	**19 17 18.5**	**+0.8**
	0.5nm,0.3s,baz=305,slow=11,SNR=13						
CPUP	**Villa Florida**	**18.07**	**131**	P	**Pn**	**19 17 17.2**	**-0.4**
NPGB	**Novo Progresso**	**18.52**	**67**	*e*P	**P**	**19 17 21.2**	**-0.4**
PTGA	**Pitinga**	**18.78**	**42**	P	**P**	**19 17 23.3**	**-1.1**
	2.9nm,0.3s,baz=223,slow=15,SNR=20						
PTGA	**Pitinga**	**18.78**	**42**	P	**P**	**19 17 24.1**	**-0.4**
PTGA				IAmb	IAmb	19 17 49.0	
	comp=Z,12nm,0.9s						
PTGA	**Pitinga**	**18.78**	**42**	*e*P	**P**	**19 17 23.2**	**-1.2**
ITTB	**Itatituba**	**19.54**	**59**	*e*P	**P**	**19 17 32.4**	**-0.4**
BO02	**Sierra Bellavi**	**19.77**	**176**	P	**Pn**	**19 17 38.8**	**+1.1**
BO02				IAmb	IAmb	19 17 40.4	
	comp=Z,9.7nm,0.7s						
ARAG	**Araguaiana, MT**	**19.90**	**95**	*e*P	**P**	**19 17 36.4**	**-0.2**
TRCB	**Terra Rica**	**20.26**	**115**	*e*P	**P**	**19 17 40.8**	**+0.2**
ITQB	**Itaqui**	**20.64**	**138**	*e*P	Pn	19 17 46.1	-1.6
ML02	**Panimavida**	**20.70**	**178**	P	**P**	**19 17 46.7**	**+1.6**
SNDB	**Serra Nova Dou**	**20.77**	**84**	*e*P	**P**	**19 17 45.7**	**-0.3**
BOAV	**Boa Vista**	**20.92**	**35**	*e*P	**P**	**19 17 46.5**	**-1.1**
PCMB	**Pacaembu**	**21.14**	**111**	*e*P	**P**	**19 17 51.6**	**+1.7**
PTGB	**Pitanga**	**21.44**	**120**	*e*P	**P**	**19 17 53.7**	**+0.5**
ITRB	**Iturama**	**21.58**	**106**	*e*P	**P**	**19 17 54.6**	**-0.1**
ITAB	**Concordia**	**22.48**	**126**	*e*P	**P**	**19 18 03.5**	**-0.4**
FRTB	**Fartura**	**23.12**	**115**	*e*P	**P**	**19 18 09.6**	**-0.6**
CPSB	**Cacapava Do Su**	**23.23**	**135**	*e*P	**P**	**19 18 13.2**	**+2.0**
IPMB	**Ipameri, GO**	**23.41**	**101**	*e*P	**P**	**19 18 11.5**	**-1.5**
BB19B	**Bebedouro**	**23.51**	**108**	*e*P	**P**	**19 18 13.9**	**+0.1**
BDFB	**Brasilia**	**23.56**	**95**	P	**P**	**19 18 13.2**	**-1.2**
	comp=Z,3.1nm,0.4s,baz=267,slow=10.0,SNR=4.8						
BDFB	**Brasilia**	**23.56**	**95**	P	**P**	**19 18 13.2**	**-1.2**
BDFB				IAmb	IAmb	19 18 16.1	
	comp=Z,16nm,1.4s						
PEXB	**Peixe**	**23.63**	**86**	*e*P	**P**	**19 18 14.8**	**-0.2**
PRPB	**Parauapebas**	**23.88**	**71**	*e*P	**P**	**19 18 17.0**	**-0.2**
MCPB	**Macapa, AP**	**24.84**	**56**	*e*P	**P**	**19 18 25.5**	**-0.4**

SMTB	**Santa Maria do**	**25.05**	**79**	*e*P		**P**		**19 18 28.6**	**+0.8**
PLCA	**Paso Flores**	**25.70**	**177**	P		**P**		**19 18 36.8**	**+3.3**
	comp=Z,2.6nm,1.1s,baz=358,slow=11,SNR=4.4								
PLCA	**Paso Flores**	**25.70**	**177**	IAmb		IAmb		19 18 37.2	
	comp=Z,6.0nm,1.2s								
PARB	**Paraibuna**	**26.62**	**112**	*e*P		**P**		**19 18 41.7**	**-0.3**
SDBA	**SAO DESIDERIO**	**26.86**	**88**	*e*P		**P**		**19 18 43.7**	**-0.6**
JANB	**Januaria**	**27.16**	**94**	*e*P		**P**		**19 18 46.0**	**-0.8**
GUA01	**Guaratinga, BA**	**31.42**	**97**	*e*P		**P**		**19 19 24.4**	**-0.2**
NBPN	**Ponto Novo - B**	**31.67**	**86**	*e*P		**P**		**19 19 25.4**	**-1.5**
CMC01	**Camacan, BA**	**31.75**	**95**	*e*P		**P**		**19 19 26.1**	**-1.4**
GDU01	**Guandu, BA**	**31.84**	**92**	*e*P		**P**		**19 19 27.9**	**-0.5**
NBIT	**Itapeh - BA**	**31.87**	**94**	*e*P		**P**		**19 19 28.5**	**0.0**
NBLA	**Lagarto - SE**	**33.97**	**87**	*e*P		**P**		**19 19 45.8**	**-1.0**
TXAR	**Lajitas Array**	**53.40**	**326**	P		**P**		**19 22 24.7**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=153,slow=9.4,SNR=7.1								
T47A	**Sharon Grove**	**53.52**	**345**	P		**P**		**19 22 25.2**	**+2.5**
J56A	**Wolcott**	**58.12**	**356**	P		**P**		**19 22 55.5**	**+0.1**
DBIC	**Dimbokro**	**70.34**	**77**	P		**P**		**19 24 15.4**	**-0.5**
	comp=Z,4.0nm,1.0s,baz=245,slow=4.2,SNR=1.5								
DBIC	**Dimbokro**	**70.34**	**77**	IAmb		IAmb		19 24 21.1	
	comp=Z,10nm,1.1s								
QSPA	**South Pole Qui**	**75.16**	**180**	P		**P**		**19 24 44.4**	**+0.8**
QSPA				IAmb		IAmb		19 24 53.4	
	comp=Z,6.0nm,1.4s								
TOA0	**Torodi Ar. Sit**	**78.50**	**73**	P		**P**		**19 25 03.1**	**0.0**
TOA0				IAmb		IAmb		19 25 04.0	
	comp=Z,9.6nm,0.9s								
TORD	**Torodi Ar. Bea**	**78.50**	**73**	P		**P**		**19 25 03.1**	**-0.1**
	comp=Z,3.9nm,0.5s,baz=257,slow=4.6,SNR=29								
TORD	**Torodi Ar. Bea**	**78.50**	**73**	P		**P**		**19 25 02.4**	**-0.8**
TORD				IAmb		IAmb		19 25 04.0	
	comp=Z,5.8nm,0.8s								
ESDC	**Sonseca Array**	**83.67**	**46**	P		**P**		**19 25 31.3**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=259,slow=5.0,SNR=17								
ESDC	**Sonseca Array**	**83.67**	**46**	P		**P**		**19 25 31.6**	**+1.4**
YKA	**Yellowknife Ar**	**83.98**	**342**	P		**P**		**19 25 32.9**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=135,slow=5.5,SNR=21								
YKA				pP		**pP**		**19 26 01.9**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=134,slow=5.5,SNR=3.9								
URZ	**Urewera**	**96.16**	**228**	LR		LR		19 59 54.1	
	comp=Z,116nm,20.3s,baz=31,slow=29								
WRA	**Warramunga Arr**	**136.43**	**218**	PKP		**PKiKP**		**19 32 27.5**	**+2.5**
	comp=Z,0.3nm,0.6s,baz=143,slow=1.9,SNR=4.6								
ZALV	**Zalesovo Beam**	**137.24**	**20**	PKP		**PKiKP**		**19 32 26.9**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=276,slow=4.2,SNR=4.5								
MKAR	**Makanchi Array**	**141.92**	**28**	PKhKP		**PKPdf**		**19 32 29.3**	**-3.1**
	comp=Z,0.3nm,0.8s,baz=325,slow=2.3,SNR=2.9								
**MKA

TOA0						IAmb	IAmb	19 39 07.0											
	comp=Z,3.6nm,0.6s																		
TORD	**Torodi Ar. Bea**	**73.51**	**30**	P		**P**		**19 39 06.2**	**+0.2**										
	comp=Z,3.8nm,0.4s,baz=201,slow=6.4,SNR=29																		
TORD	**Torodi Ar. Bea**	**73.51**	**30**	P		**P**		**19 39 06.2**	**+0.2**										
TORD						IAmb	IAmb	19 39 06.9											
	comp=Z,3.0nm,0.7s																		
FINES	**FINESS Array B**	**124.84**	**28**	PKP		**PKPdf**		**19 46 30.0**	**-0.3**										
	comp=Z,0.7nm,0.5s,baz=186,slow=1.9,SNR=10.0																		
FINES	**FINESS Array B**	**124.84**	**28**			**PKPdf**		**19 46 29.4**	**-1.0**										
ARCES	**ARCESS Array B**	**131.41**	**22**	PKP		**PKPdf**		**19 46 43.2**	**+0.5**										
	comp=Z,0.9nm,0.6s,baz=302,slow=2.7,SNR=4.5																		
ARCES	**ARCESS Array B**	**131.41**	**22**			**PKPdf**		**19 46 42.8**	**+0.1**										
YKA	**Yellowknife Ar**	**136.44**	**318**	PKP		**PKPdf**		**19 46 52.2**	**-0.1**										
	comp=Z,0.2nm,0.4s,baz=120,slow=3.0,SNR=6.2																		
ILAR	**Eielson Array**	**150.34**	**311**	PKPbc		**PKPbc**		**19 47 22.1**	**+0.2**										
	comp=Z,1.5nm,0.7s,baz=137,slow=2.0,SNR=15																		
SONM	**Songino Array**	**150.86**	**87**	PKPbc		**PKPbc**		**19 47 23.7**	**-0.1**										
	comp=Z,0.3nm,0.5s,baz=214,slow=3.9,SNR=5.8																		

IDC ***15*** *19:36:33.6±1.7,5.°88S×106.°78E,h271^{km}±16^{km},mb2.8/7, mb1 2.9/7,mb1mx2.8/46,mbtmp3.4/7,Error ellipse: s-maj=76.7km s-min=13.4km az=50.0*

ISC 15 19:36:33.8±1.2,5.4S±0.2×107.3E±0.3,h250^{km},n9, σ0^{s}85/9,mb3.0/7,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
LEM	**Lembang**	**1.41**	**167**	P		**Pn**	**19**	**37 12.3**	**+0.6**
	6.2nm,0.3s,baz=31,slow=5.1,SNR=11								
BATI	**Baumata**	**16.89**	**107**	P		**Pn**	**19**	**40 17.2**	**+0.7**
	5.3nm,0.3s,baz=121,slow=1.8,SNR=9.0								
FITZ	**Fitzroy Crossi**	**21.89**	**127**	P		**P**	**19**	**41 06.8**	**-0.2**
	0.8nm,0.7s,baz=270,slow=6.1,SNR=1.2								
CMAR	**Chiang Mai Arr**	**25.14**	**341**	P		**P**	**19**	**41 37.6**	**+1.1**
	0.1nm,0.6s,baz=175,slow=8.7,SNR=5.1								
WRA	**Warramunga Arr**	**29.99**	**121**	P		**P**	**19**	**42 19.3**	**-0.3**
	0.1nm,0.4s,baz=320,slow=11,SNR=10.0								
ASAR	**Alice Springs**	**31.38**	**128**	P		**P**	**19**	**42 31.0**	**-0.8**
	0.4nm,0.4s,baz=302,slow=7.8,SNR=28								
SONM	**Songino Array**	**53.06**	**359**	P		**P**	**19**	**45 25.8**	**+0.2**
	0.1nm,0.5s,baz=168,slow=7.4,SNR=4.0								
MKAR	**Makanchi Array**	**56.53**	**340**	P		**P**	**19**	**45 49.5**	**-0.9**
	0.2nm,0.5s,baz=156,slow=8.5,SNR=4.8								
ZALV	**Zalesovo Beam**	**62.11**	**345**	P		**P**	**19**	**46 27.4**	**-0.8**
	0.3nm,0.3s,baz=152,slow=6.0,SNR=2.5								

NEIC ***15*** *19:43:35.0±0.9,30.°84S±0.°03×177.°7W±0.°2,h10^{km}±2^{km}, mb4.4/9,Error ellipse: s-maj=27.9km s-min=3.7km az=97.0*

IDC ***15*** *19:43:35.0±3.1,30.°71S×177.°81W,h0^{km},mb3.9/3, mb1 4.0/3,mb1mx3.7/38,mbtmp3.9/3,Error ellipse: s-maj=69.2km s-min=24.3km az=114.0*

ISC 15 19:43:31.1±2.8,30.82S±0.08×177.1W±0.4,h10^{km},n24, σ0^{s}68/16,mb4.3/8,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
RAO	**Raoul Island**	**1.72**	**335**	Pn		**Pg**	**19**	**44 03.8**	**-0.3**
	133nm,0.3s,baz=73,slow=22,SNR=2.2								
RAO				Sn		**Sn**	**19**	**44 22.3**	**-0.9**
	184nm,0.3s,baz=52,slow=22,SNR=6.1								
RAO	**Raoul Island**	**1.72**	**335**			**Pb**	**19**	**44 03.1**	**+0.3**
URZ	**Urewera**	**8.83**	**211**	Pn		**Pn**	**19**	**45 37.9**	**-0.8**
OUZ	**Omahuta**	**8.96**	**238**	Pn		**Pn**	19	45 47.1	+6.5
SANVU	**Saraoutou**	**21.00**	**313**	P		**P**	**19**	**48 15.7**	**+0.8**
SANVU				IAmb		IAmb	19	48 20.3	
	comp=Z,32nm,1.0s								
STKA	**Stephens Creek**	**35.15**	**257**	P		**P**	**19**	**50 26.5**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=102,slow=10,SNR=6.5								
STKA	**Stephens Creek**	**35.15**	**257**	IAmb		IAmb	19	50 27.9	
	comp=Z,1.7nm,1.1s								
BBOO	**Buckleboo**	**39.61**	**255**	P		**P**	**19**	**51 02.4**	**-0.5**
ASAR	**Alice Springs**	**43.87**	**267**	P		**P**	**19**	**51 37.9**	**0.0**
	comp=Z,0.6nm,0.8s,baz=107,slow=7.7,SNR=5.1								
WR0	**Warramunga Arr**	**44.72**	**272**	P		**P**	**19**	**51 44.2**	**-0.5**
WR0				IAmb		IAmb	19	51 51.0	
	comp=Z,4.7nm,1.2s								
WB2	**Warramunga Arr**	**44.89**	**272**	P		**P**	**19**	**51 45.8**	**-0.3**
WB2				IAmb		IAmb	19	52 09.1	
	comp=Z,7.1nm,1.3s								
WRAB	**Tennant Creek**	**44.89**	**272**	P		**P**	**19**	**51 45.4**	**-0.7**
WRAB				IAmb		IAmb	19	51 54.3	
	comp=Z,11nm,1.5s								
WRA	**Warramunga Arr**	**44.90**	**272**	P		**P**	**19**	**51 45.9**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=110,slow=8.0,SNR=10								
WRA	**Warramunga Arr**	**44.90**	**272**	IAmb		IAmb	19	51 51.1	
	comp=Z,0.3nm,1.2s								
WB0	**Warramunga Arr**	**44.92**	**272**	P		**P**	**19**	**51 46.1**	**-0.3**
WB0				IAmb		IAmb	19	51 54.4	
	comp=Z,5.8nm,1.4s								
NWAO	**Narrogin (SRO)**	**54.98**	**249**	P		**P**	**19**	**53 03.4**	**+0.7**
MBWA	**Marble Bar**	**56.96**	**264**	P		**P**	**19**	**53 16.9**	**-0.1**
H03S2	**Juan Fernandez**	**79.58**	**123**	T		T	21	24 57.4	
	baz=237,slow=74,SNR=10								
H03S1	**Juan Fernandez**	**79.59**	**123**	T		T	21	24 59.3	
	baz=237,slow=74,SNR=9.4								
H03S3	**Juan Fernandez**	**79.60**	**123**	T		T	21	24 54.0	
	baz=237,slow=74,SNR=9.8								
H03N3	**Juan Fernandez**	**79.77**	**123**	T		T	21	25 06.9	
	baz=242,slow=72,SNR=13								
H03N2	**Juan Fernandez**	**79.77**	**123**	T		T	21	25 04.3	
	baz=242,slow=72,SNR=14								
H03N1	**Juan Fernandez**	**79.79**	**123**	T		T	21	25 01.5	
	baz=242,slow=72,SNR=14								
FINES	**FINESS Array B**	**145.81**	**340**	PKPbc		**PKiKP**	**20**	**03 13.2**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=47,slow=4.1,SNR=14								

IDC ***15*** *19:48:32.1±0.5,22.°57N×121.°39E,h0^{km},mb4.0/23, mb1 4.1/24,mb1mx4.0/48,mbtmp4.0/24,ML3.6/1,MS3.5/4, Ms1 3.6/4,ms1mx3.2/39,Error ellipse: s-maj=20.1km s-min=12.5km az=78.0*

NIED ***15*** *19:48:34.5,22.°63N×121.°24E,h44^{km},MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10^{15}Nm; M$_{rr}$2.40; M$_{\theta\theta}$0.56; M$_{\phi\phi}$-2.96; M$_{r\theta}$-0.87; M$_{\theta\phi}$-0.18; M$_{\phi r}$-1.83; Fault plane solution: M$_o$3.39000×10^{15} NP1: ϕ$_s$198.00000°,δ64.00000°,λ106.00000°. NP2: ϕ$_s$345.00000°,δ30.00000°,λ61.00000°.*

JMA ***15*** *19:48:34.5,22.°63N×121.°24E,h44^{km}±2^{km},M4.3*

NEIC ***15*** *19:48:36.5±2.4,22.°75N±0.°05×121.°37E±0.°03,h30^{km}±4^{km}, Error ellipse: s-maj=8.1km s-min=4.5km az=173.0*

TAP ***15*** *19:48:36.7,22.°74N×121.°35E,h26^{km},ML4.7,B*

BJI ***15*** *19:48:36.0±0.0,22.°79N×121.°36E,h17^{km},mB4.4/22, mb4.1/29,ML4.1/9,Ms4.1/20,Ms7 3.9/21*

ASIES ***15*** *19:48:37.5,22.°76N×121.°34E,h24^{km},MW4.3*

ISC 15 19:48:36.5±0.6,22.71N±0.02×121.41E±0.02,h27^{km}±4^{km}, n297,σ1^{s}56/422,mb4.2/61,MS3.5/4,12C-56D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
LDUT	**Ludao**	**0.07**	**124**	⇓	*iP*	**Pb**	**19**	**48 41.8**	**+0.5**
	baz=119								
LDUT					*i* S	**Sb**	**19**	**48 45.4**	**+1.0**
	baz=119								
TTN	**Taitung**	**0.24**	**280**	⇑	*iP*	**Pb**	**19**	**48 42.7**	**-0.3**
	baz=276								
TTN					*i* S	**Sb**	**19**	**48 47.2**	**-0.2**
	baz=276								
EDH	**Donghe**	**0.28**	**340**	⇑	*iP*	**Pb**	**19**	**48 43.1**	**-0.3**
	baz=350								
EDH					S	**Sb**	**19**	**48 47.8**	**-0.4**
	baz=350								
LONT	**Longtian**	**0.32**	**307**	⇑	*iP*	**Pb**	**19**	**48 43.4**	**-0.7**
	baz=310								
LONT					S	**Sb**	**19**	**48 49.1**	**-0.1**
	baz=310								
TWGBT	**Beinan**	**0.32**	**289**	⇑	*iP*	**Pb**	**19**	**48 43.4**	**-0.7**
	baz=288								
TWGBT					*i* S	**Sb**	**19**	**48 48.6**	**-0.6**
	baz=288								
TWG	**Pinlang**	**0.33**	**289**	⇑	*iP*	**Pb**	**19**	**48 43.4**	**-0.8**
	baz=289								
TWG					*i* S	**Sb**	**19**	**48 48.6**	**-0.8**
	baz=289								
TWG	**Pinlang**	**0.33**	**289**			**Pb**	**19**	**48 43.3**	**-0.8**
CHKT	**Chengkung**	**0.39**	**354**	⇑	*iP*	**Pb**	**19**	**48 44.9**	**-0.2**
	baz=4.0								
CHKT					*i* S	**Sb**	**19**	**48 50.6**	**-0.2**
	baz=4.0								
ECL	**Taimali**	**0.43**	**255**	⇓	*iP*	**Pb**	**19**	**48 44.7**	**-1.1**
	baz=249								
ECL					S	**Sb**	**19**	**48 50.2**	**-1.8**
	baz=249								
FULB	**Fuli**	**0.50**	**348**	⇑	*iP*	**Pb**	**19**	**48 46.4**	**-0.4**
	baz=354								
FULB					*i* S	**Sb**	**19**	**48 54.1**	**+0.3**
	baz=354								
TAW	**Tawu**	**0.59**	**233**	⇓	*iP*	**Pb**	**19**	**48 47.4**	**-0.9**
	baz=227								
TAW					*e*S	**Sb**	**19**	**48 55.0**	**-1.3**
	baz=227								
ELDTW	**Lidau**	**0.60**	**323**	⇓	*iP*	**Pb**	**19**	**48 47.3**	**-1.2**
	baz=327								
ELDTW					*e*S	**Sb**	**19**	**48 53.8**	**-2.9**
	baz=327								
EAST	**Anshuo**	**0.61**	**238**	⇓	*iP*	**Pb**	**19**	**48 47.7**	**-1.0**
	baz=232								
EAST					*e*S	**Sb**	**19**	**48 55.5**	**-1.6**
	baz=232								
EYUL	**Yuli**	**0.64**	**353**	*e*P		**Pb**	**19**	**48 48.8**	**-0.4**
	baz=357								
EYUL					*e*S	**Sn**	**19**	**48 58.7**	**-0.4**
	baz=357								
TWF1	**Yuli**	**0.65**	**351**	⇓	*iP*	**Pb**	**19**	**48 48.4**	**-0.9**
	baz=356								
TWF1					*e*S	**Sb**	**19**	**48 58.5**	**+0.6**
	baz=356								
LAY	**Lan-yu**	**0.68**	**169**	⇓	*iP*	**Pb**	**19**	**48 49.4**	**-0.5**
	baz=164								
LAY					*i* S	**Sb**	**19**	**48 59.4**	**+0.4**
	baz=164								
YULB	**Yu-li**	**0.69**	**351**	⇓	*iP*	**Pb**	**19**	**48 48.8**	**-1.1**
	baz=356								
YULB					*e*S	**Sn**	**19**	**48 59.8**	**-0.4**
	baz=356								
YULB	**Yu-li**	**0.69**	**351**			**Pb**	**19**	**48 48.7**	**-1.3**
TSMG	**Majia**	**0.70**	**270**	⇓	*iP*	**Pb**	**19**	**48 49.0**	**-1.2**
	baz=267								
TSMG					*e*S	**Sb**	**19**	**48 56.8**	**-2.8**
	baz=267								
SSD	**Sandimen**	**0.72**	**273**	⇓	*iP*	**Pb**	**19**	**48 49.1**	**-1.4**
	baz=271								
SSD					*e*S	**Sb**	**19**	**48 58.4**	**-1.5**
	baz=271								
MASBT	**Mashibuluo**	**0.72**	**262**	⇓	*iP*	**Pb**	**19**	**48 49.4**	**-1.1**
	baz=260								
MASBT					*e*S	**Sb**	**19**	**48 58.1**	**-2.0**
	baz=260								
STYH	**Taoyuan**	**0.74**	**308**	⇓	*iP*	**Pb**	**19**	**48 50.0**	**-0.8**
	baz=309								
STYH					*e*S	**Sb**	**19**	**48 59.5**	**-1.1**
	baz=309								
SLIU	**Shizi**	**0.75**	**229**	⇓	*iP*	**Pb**	**19**	**48 49.8**	**-1.2**
	baz=225								
SLIU					*e*S	**Sb**	**19**	**48 59.2**	**-1.6**
	baz=225								
STYT	**Tauyuan**	**0.75**	**307**	⇓	*iP*	**Pb**	**19**	**48 50.1**	**-1.0**
	baz=308								
STYT					*e*S	**Sb**	**19**	**48 59.2**	**-1.7**
	baz=308								
SLGT	**Liugui**	**0.76**	**292**	⇓	*iP*	**Pb**	**19**	**48 50.2**	**-0.9**
	baz=292								
SLGT					*e*S	**Sn**	**19**	**49 01.7**	**-0.3**
	baz=292								
HGSD	**Ruisui**	**0.78**	**1**	P		**Pb**	**19**	**48 50.5**	**-0.9**
	baz=5.0								
HGSD					*e*S	**Sb**	**19**	**49 01.6**	**0.0**
	baz=5.0								
EHY	**Hungye**	**0.80**	**354**	⇓	*iP*	**Pb**	**19**	**48 50.5**	**-1.3**
	baz=359								
EHY					*e*S	**Sb**	**19**	**49 02.2**	**0.0**
	baz=359								
SCZT	**Fangliau**	**0.80**	**245**	⇓	*iP*	**Pb**	**19**	**48 50.8**	**-1.1**
	baz=241								
SCZT					*e*S	**Sb**	**19**	**49 00.5**	**-1.9**
	baz=241								
SSPT	**Xinbi**	**0.81**	**254**	⇓	*iP*	**Pb**	**19**	**48 51.6**	**-0.4**
	baz=251								
SSPT					*e*S	**Sn**	**19**	**49 03.2**	**-0.1**
	baz=251								
TSPT	**Pingtung City**	**0.84**	**268**	⇓	*e*P	**Pb**	**19**	**48 52.6**	**0.0**
	baz=266								
TSPT					*e*S	**Sn**	**19**	**49 05.7**	**+1.6**
	baz=266								
SGST	**Jiashian**	**0.84**	**296**	⇓	*iP*	**Pb**	**19**	**48 51.4**	**-1.2**
	baz=296								
SGST					S	**Sb**	**19**	**49 03.1**	**-0.5**
	baz=296								
SGLT	**Jiouru**	**0.85**	**271**	⇓	P	**Pb**	**19**	**48 52.5**	**-0.1**
	baz=269								
SGLT					*e*S	**Sn**	**19**	**49 06.2**	**+2.0**
	baz=269								
SCST	**Cishan**	**0.86**	**282**	⇓	*iP*	**Pn**	**19**	**48 52.7**	**-0.1**
	baz=281								
SCST					*e*S	**Sn**	**19**	**49 07.6**	**+3.0**
	baz=281								
YUS	**Yu-Shan**	**0.88**	**332**	⇓	*iP*	**Pb**	**19**	**48 52.5**	**-1.1**
	baz=334								
YUS					*e*S	**Sb**	**19**	**49 03.5**	**-1.6**
	baz=334								
WTP	**Ta-pu**	**0.90**	**306**	⇓	*iP*	**Pn**	**19**	**48 53.2**	**-0.3**
	baz=307								
WTP					*e*S	**Sn**	**19**	**49 05.9**	**+0.1**
	baz=307								
TWM1	**Shoushan**	**0.92**	**277**	⇓	*e*P	**Pb**	**19**	**48 54.3**	**+0.5**
	baz=276								
TPUB	**Ta-pu**	**0.93**	**309**	⇓	P	**Pn**	**19**	**48 53.7**	**-0.1**
	baz=310								
TPUB					*e*S	**Sb**	**19**	**49 05.8**	**-0.2**
	baz=310								
TPUB	**Ta-pu**	**0.93**	**309**			**Pn**	**19**	**48 53.6**	**-0.2**
TSEB	**Hengchuen, Pin**	**0.94**	**210**	⇑	*iP*	**Pn**	**19**	**48 53.5**	**-0.4**
	baz=209								
TSEB					*e*S	**Sn**	**19**	**49 06.5**	**+0.1**
	baz=209								
HEN	**Hengchun**	**0.94**	**222**	P		**Pn**	**19**	**48 53.4**	**-0.6**
	baz=217								
HEN					*e*S	**Sb**	**19**	**49 05.9**	**-0.3**
	baz=217								
CHN1	**Nanshi**	**0.94**	**300**	⇓	P	**Pb**	**19**	**48 54.2**	**0.0**
	baz=301								
CHN1					*e*S	**Sn**	**19**	**49 07.3**	**+0.8**
	baz=301								
TWKBT	**Hengchun**	**0.94**	**216**	⇑	*iP*	**Pb**	**19**	**48 53.2**	**-0.8**
	baz=212								
TWKBT					S	**Sb**	**19**	**49 05.7**	**-0.8**
	baz=212								
TWK1	**Hengchun**	**0.95**	**216**	⇑	*iP*	**Pb**	**19**	**48 53.2**	**-0.8**
	baz=212								
TWK1					S	**Sb**	**19**	**49 05.3**	**-1.1**
	baz=212								
EGFH	**Guangfu**	**0.95**	**1**	*e*P		**Pn**	**19**	**48 52.9**	**-1.2**
	baz=4.0								
SNW	**Nanwan**	**0.96**	**219**	*e*P		**Pn**	**19**	**48 54.5**	**+0.2**
	baz=216								
SNW					*e*S	**Sb**	**19**	**49 07.0**	**0.0**
	baz=216								
ALS	**Alishan**	**0.97**	**325**	⇓	*iP*	**Pn**	**19**	**48 54.3**	**-0.3**
	baz=327								
ALS					*e*S	**Sb**	**19**	**49 07.0**	**-0.5**
	baz=327								
SNST	**Tainan City**	**0.98**	**301**	⇓	P	**Pb**	**19**	**48 54.9**	**0.0**
	baz=302								
SNST					*e*S	**Sn**	**19**	**49 08.4**	**+0.8**
	baz=302								
CHN4	**Tsaushan**	**0.98**	**310**	⇓	P	**Pn**	**19**	**48 54.8**	**+0.2**
	baz=311								
CHN4					*e*S	**Sn**	**19**	**49 08.2**	**+0.6**
	baz=311								
SNJT	**Kaohsiung City**	**0.99**	**273**	*e*P		**Pb**	**19**	**48 56.3**	**+1.2**
	baz=271								
TWK	**Hsinying**	**1.01**	**303**	⇓	P	**Pn**	**19**	**48 55.2**	**+0.2**
	baz=304								
TWK					*e*S	**Sb**	**19**	**49 10.7**	**+2.3**
	baz=304								
WLCH	**Liuqiu**	**1.02**	**250**	*e*P		**Pb**	**19**	**48 57.6**	**+2.1**
	baz=247								
KAU	**Kaohsiung**	**1.03**	**262**	⇓	*e*P	**Pb**	**19**	**48 57.8**	**+2.2**
	baz=260								
CHN3	**Shinhua**	**1.03**	**291**	*e*P		**Pb**	**19**	**48 56.7**	**+1.0**
	baz=291								
CHN3					*e*S	**Sb**	**19**	**49 12.5**	**+3.7**
	baz=291								
TWP	**Hsiaoliuchiu**	**1.03**	**250**	*e*P		**Pb**	**19**	**48 58.0**	**+2.2**
	baz=247								
TWP					*e*S	**Sb**	**19**	**49 15.2**	**+6.3**
	baz=247								
VWDT	**VWDT**	**1.07**	**347**	⇓	*iP*	**Pn**	**19**	**48 55.4**	**-0.3**
	baz=349								
ESL	**Shilin**	**1.10**	**1**	P		**Pn**	**19**	**48 54.8**	**-1.3**
	baz=5.0								
ESL					*e*S	**Sn**	**19**	**49 10.0**	**-0.4**
	baz=5.0								
WHYT	**Xinyi Township**	**1.10**	**333**	*e*P		**Pb**	**19**	**48 56.8**	**-0.2**
	baz=335								
WHYT					*e*S	**Sb**	**19**	**49 11.6**	**+0.5**
	baz=335								
CHN5	**Tsauling**	**1.11**	**323**	⇓	P	**Pb**	**19**	**48 56.9**	**-0.2**
	baz=324								
CHN5					*e*S	**Sb**	**19**	**49 12.9**	**+1.7**
	baz=324								
TAI1	**Yung-k'ang**	**1.14**	**287**	*e*P		**Pb**	**19**	**48 57.3**	**-0.2**
	baz=286								
TAI1					*e*S	**Sb**	**19**	**49 14.8**	**+2.9**
	baz=286								
SSLB	**Suanglung**	**1.15**	**339**	⇓	P	**Pn**	**19**	**48 56.8**	**-0.1**
	baz=341								
SSLB					*e*S	**Sn**	**19**	**49 11.6**	**-0.1**
	baz=341								
SSLB	**Suanglung**	**1.15**	**339**			**Pn**	**19**	**48 56.7**	**-0.2**
TAI	**Tainan**	**1.15**	**284**	*e*P		**Pn**	**19**	**48 56.8**	**-0.1**
	baz=284								
TAI					*e*S	**Sb**	**19**	**49 14.2**	**+1.9**
	baz=284								
CHN2	**Minshiung**	**1.19**	**314**	⇓	*e*P	**Pb**	**19**	**48 58.8**	**+0.4**
	baz=315								
CHN2					*e*S	**Sb**	**19**	**49 15.1**	**+1.8**
	baz=315								
CHY	**Chiayi**	**1.20**	**311**	⇓	*e*P	**Pb**	**19**	**48 58.6**	**0.0**
	baz=312								
CHY					*e*S	**Sb**	**19**	**49 14.7**	**+1.0**
	baz=312								
SCLT	**Jiali**	**1.21**	**293**	*e*P		**Pb**	**19**	**48 58.6**	**-0.2**
	baz=292								
SCLT					*e*S	**Sb**	**19**	**49 16.0**	**+1.9**
	baz=292								
ICHU	**Yijhu**	**1.22**	**302**	⇓	*e*P	**Pn**	**19**	**48 58.1**	**+0.2**
	baz=302								
WGK	**Gukeng**	**1.24**	**321**	⇓	*e*P	**Pb**	**19**	**48 59.5**	**+0.1**
	baz=323								
WGK					*e*S	**Sb**	**19**	**49 16.9**	**+1.9**
	baz=323								
SMLT	**Sun Moon Lake**	**1.26**	**338**	⇓	*e*P	**Pn**	**19**	**48 58.9**	**+0.5**
	baz=340								
SMLT					*e*S	**Sb**	**19**	**49 16.3**	**+0.8**
	baz=340								
WDLH	**Douliu**	**1.26**	**321**	⇓	*e*P	**Pb**	**19**	**48 59.9**	**+0.3**
	baz=322								
WDLH					*e*S	**Sb**	**19**	**49 16.8**	**+1.4**
	baz=322								
WJS	**Zhushan**	**1.27**	**331**	⇓	*e*P	**Pb**	**19**	**49 00.1**	**+0.3**
	baz=332								
WJS					*e*S	**Sb**	**19**	**49 16.7**	**+0.9**
	baz=332								
CHN8	**Yiju**	**1.27**	**300**	*e*P		**Pb**	**19**	**48 59.4**	**-0.4**
	baz=300								
CHN8					*e*S	**Sb**	**19**	**49 17.1**	**+1.3**
	baz=300								
HWA	**Hwalien**	**1.27**	**8**	*e*P		**Pn**	**19**	**48 59.1**	**+0.6**
	baz=11								
TYC	**Yuchr**	**1.29**	**337**	⇓	*e*P	**Pb**	**19**	**48 59.8**	**-0.4**
	baz=339								
TYC					*e*S	**Sb**	**19**	**49 16.9**	**+0.6**
	baz=339								
WNT	**Mingjian**	**1.34**	**330**	*e*P		**Pb**	**19**	**49 01.1**	**+0.1**
	baz=332								
WNT					*e*S	**Sb**	**19**	**49 18.7**	**+1.0**
	baz=332								
WTK	**Tuku**	**1.35**	**316**	⇓	*e*P	**Pb**	**19**	**49 00.6**	**-0.6**
	baz=317								
WTK					*e*S	**Sb**	**19**	**49 18.2**	**+0.2**
	baz=317								
CHGB	**Renai**	**1.36**	**351**	⇓	*e*P	**Pn**	**19**	**48 59.9**	**-0.1**
	baz=353								
CHGB					*e*S	**Sb**	**19**	**49 20.3**	**+1.8**
	baz=353								
WPL	**Puli Township**	**1.36**	**342**	*e*P		**Pb**	**19**	**49 00.6**	**-0.8**
	baz=344								
WPL					*e*S	**Sb**	**19**	**49 18.1**	**-0.3**
	baz=344								
WNT1	**Nantou City**	**1.36**	**331**	*e*P		**Pb**	**19**	**49 01.1**	**-0.3**
	baz=332								
WNT1					*e*S	**Sb**	**19**	**49 20.0**	**+1.5**
	baz=332								
TWD	**Chiawan**	**1.37**	**7**	*e*P		**Pn**	**19**	**48 59.5**	**-0.4**
	baz=10.0								
TWD					*e*S	**Sn**	**19**	**49 17.3**	**+0.1**
	baz=10.0								
DPDB	**Guoxing**	**1.39**	**342**	*e*P		**Pb**	**19**	**49 01.3**	**-0.6**
	baz=343								
DPDB					*e*S	**Sn**	**19**	**49 18.2**	**+0.5**
	baz=343								
WCS	**Beigang Elemen**	**1.42**	**341**	⇓	*e*P	**Pb**	**19**	**49 01.9**	**-0.4**
	baz=343								
WCS					*e*S	**Sb**	**19**

ENA eS Sn 19 49 26.4 +0.2
baz=12
EWUT Wuta 1.76 11 eP Pn 19 49 05.5 +0.3
baz=13
EWUT eS Sn 19 49 26.9 +0.2
baz=13
WDJ Dajia District 1.77 337 eP Pb 19 49 07.2 -1.2
baz=338
WDJ eS Sb 19 49 30.5 +0.2
baz=338
NSY Sanyi 1.80 341 eP Pb 19 49 08.1 -0.7
baz=342
NSY eS Sb 19 49 31.4 +0.5
baz=342
PHUB P'eng-hu 1.87 296 eP Pn 19 49 06.3 -0.5
baz=295
PHUB eS Sn 19 49 28.9 -0.6
baz=295
NDT Datong Townshi 1.89 3 eP Pn 19 49 07.7 +0.7
baz=5.0
VCHM Qimei 1.89 286 eP Pn 19 49 06.6 -0.4
baz=285
VCHM eS Sn 19 49 29.2 -0.8
baz=285
NMLH Miaoli 1.90 343 eP Pb 19 49 09.2 -1.4
baz=344
NMLH eS Sb 19 49 32.7 -1.3
baz=344
PNG Penghu 1.91 297 eP Pn 19 49 07.4 +0.1
baz=297
PNG eS Sn 19 49 30.0 -0.3
baz=297
ENTT Nioudou 1.93 4 eP Pn 19 49 08.2 +0.6
baz=6.0
ENTT eS Sn 19 49 31.2 +0.3
baz=6.0
TWC Suao 1.93 12 eP Pn 19 49 08.5 +0.9
baz=14
TWC eS Sb 19 49 33.1 -1.6
baz=14
NDS Dongshan 1.93 8 eP Pn 19 49 08.4 +0.8
baz=10.0
NSTT Nanjuang 1.95 349 eP Pn 19 49 09.5 +1.7
baz=351
NSTT eS Sb 19 49 34.9 -0.3
baz=351
YHNB Yeheng 1.95 359 eP Pn 19 49 08.6 +0.6
baz=1.0
YHNB eS Sn 19 49 31.6 0.0
baz=1.0
YHNB Yeheng 1.95 359 Pn 19 49 08.1 +0.2
NSK Sanguang 1.96 359 eP Pn 19 49 08.9 +0.9
baz=1.0
NSK eS Sn 19 49 32.5 +0.8
baz=1.0
LIOB Emei 1.96 349 eP Pn 19 49 09.6 +1.6
baz=351
LIOB eS Sb 19 49 34.7 -0.9
baz=351
TWE Neicheng 2.01 7 eP Pn 19 49 09.2 +0.5
baz=9.0
NWLT Wulai 2.06 2 eP Pn 19 49 09.7 +0.3
baz=4.0
ILA Ilan 2.07 9 eP Pb 19 49 12.8 -0.6
baz=10.0
NTC Toucheng 2.17 10 eP Pb 19 49 13.2 -1.9
baz=12
JYNG Yonagunijimaku 2.23 39 P Pn 19 49 13.3 +1.6
JYNG S Sn 19 49 39.2 +0.8
NHDH Xindian Distri 2.24 3 eP Pn 19 49 12.8 +1.0
baz=4.0
TATO Taipei 2.25 2 eP Pn 19 49 14.0 +2.0
baz=3.0
TATO Taipei 2.25 2 Pn 19 49 12.5 +0.4
TWA Mucha 2.26 4 eP Pb 19 49 14.7 -2.1
baz=6.0
YOJ Yonaguni jima 2.28 40 P Pn 19 49 14.0 +1.6
YOJ S Sn 19 49 40.6 +1.0
YOJ Yonaguni jima 2.28 40 eP Pn 19 49 13.4 +1.0
baz=41
YOJ eS Sn 19 49 39.6 0.0
baz=41
YOJ Yonaguni jima 2.28 40 Pn 19 49 13.4 +1.0
TIPB Shuangxi 2.28 10 eP Pn 19 49 14.3 +1.8
baz=11
TIPB eS Sn 19 49 39.9 +0.1
baz=11
TWB1 Santiao Chiao 2.35 13 eP Pn 19 49 14.7 +1.4
baz=15
TWB1 eS Sn 19 49 42.5 +1.2
baz=15
NWF Wu-fen Shan 2.37 8 eP Pn 19 49 15.6 +1.8
baz=10.0
WFSB Wu-fen Shan 2.37 8 eP Pn 19 49 15.4 +1.7
baz=10.0
TWS1 Kuangyinshan 2.38 0 eP Pn 19 49 16.2 +2.5
baz=2.0
TWS1 eS Sn 19 49 43.9 +1.8
baz=2.0
YM01 YM01 2.43 3 eP Pn 19 49 15.6 +1.1
baz=5.0
YM04 YM04 2.43 3 eP Pn 19 49 16.2 +1.7
baz=4.0
YM10 YM10 2.44 3 eP Pn 19 49 15.8 +1.2
baz=5.0
YM05 YM05 2.44 3 eP Pn 19 49 16.2 +1.5
baz=5.0
YM11 YM11 2.45 4 eP Pn 19 49 15.6 +0.8
baz=5.0
ANP Anpu 2.47 2 eP Pn 19 49 17.3 +2.3
baz=4.0
YM08 YM08 2.47 4 eP Pn 19 49 16.1 +1.1
baz=5.0
TWY Chenhua 2.56 4 eP Pb 19 49 19.4 -2.3
baz=5.0
HATJ Hateruma jima 2.58 58 P Pn 19 49 17.2 +0.7
HATJ S Sn 19 49 46.4 -0.5
IRIF Iriomote-Funau 2.67 52 P Pn 19 49 18.9 +1.1
IRIF S Sn 19 49 50.6 +1.3
JKRS Kuro-shima 2.83 57 P Pn 19 49 21.0 +1.0
JKRS S Sn 19 49 56.0 +2.8
VWUC VWUC 2.89 322 eP Pn 19 49 21.0 +0.2
baz=322
VWUC eS Sn 19 49 52.4 -2.3
baz=322
JIJ Ishigaki jima 3.00 56 P Pn 19 49 23.0 +0.7
JIJ S Sn 19 49 55.8 -1.6
PTMZ Houxiangcun 3.12 318⇓ eP Pn 19 49 24.3 +0.3
baz=318
PTMZ eS Sn 19 49 59.0 -1.4
baz=318
KNM Kinmen 3.21 302⇓ eP Pn 19 49 26.9 +1.7
baz=301
KNM eS Sn 19 50 03.7 +1.1
baz=301
JISG Ishigakijimahi 3.25 54 P Pn 19 49 25.7 0.0
JISG S Sn 19 50 03.0 -0.6
KNMB Chin-men Tao 3.27 303⇓ eP Pn 19 49 26.1 0.0
baz=302
KNMB eS Sn 19 50 02.2 -2.0
baz=302
KNMB Chin-men Tao 3.27 303 Pn Pn 19 49 26.1 0.0
QZH Quanzhou 3.40 311 ⇓↑ Pn Pn 19 49 27.8 0.0
QZH Sn Sn 19 50 04.9 -2.4
QZH smax smax
comp=N,560nm,0.4s
QZH smax smax
comp=E,480nm,0.6s
QZH LR LR
comp=Z,1μm,15.6s
ZPLA Ao Xicun 3.57 291⇓ eP Pn 19 49 30.5 +0.3
baz=290
ZPLA eS Sn 19 50 10.1 -1.4
baz=290
JTJ Tarama 3.58 57 P Pn 19 49 31.3 +1.0
JTJ S Sn 19 50 12.1 +0.4
MATB Ma-tsu 3.67 339 eP Pn 19 49 31.7 +0.1
baz=339
MATB eS Sn 19 50 11.9 -2.1
baz=339
AXDP Jialang 3.83 305⇓ eP Pn 19 49 34.0 +0.3
baz=305
AXDP eS Sn 19 50 15.6 -2.2
baz=305
MHZQ Yeshan 4.01 328⇓ eP Pn 19 49 36.5 +0.3
baz=328
MHZQ eS Sn 19 50 20.0 -2.3
baz=328
JIRB Irabujima 4.04 58 P Pn 19 49 36.9 +0.3
JIRB S Sn 19 50 22.4 -0.7
LYJJ Jianjiangzhen 4.11 339 eP Pn 19 49 37.9 +0.4
baz=339
LYJJ eS Sn 19 50 23.6 -1.0
baz=339
JMJ2 Miyako jima3 4.12 60 P Pn 19 49 38.6 +0.9
JMJ2 S Sn 19 50 26.0 +1.0
JMJ Miyako jima 2 4.13 59 eP Pn 19 49 38.8 +1.0
baz=60
JMJ eS Sn 19 50 26.1 +0.9
baz=60
JIKM Ikemajima 4.15 57 P Pn 19 49 38.8 +0.7
JIKM S Sn 19 50 24.9 -0.8
JOGS Gusukube 4.19 60 P Pn 19 49 39.9 +1.2
JOGS S Sn 19 50 28.5 +1.7
XPSS Dashiqiu 4.34 345 eP Pn 19 49 40.8 0.0
baz=346
VDOS Pratas Island 4.79 246 eP Pn 19 49 47.8 +0.9
baz=245
VDOS eS Sn 19 50 39.2 -2.3
baz=245
SZP Santa 5.21 190 Pn Pn 19 49 54.2 +1.5
HKPS Hong Kong Po S 6.73 268 eP Pn 19 50 14.8 +1.1
baz=266
HKPS eS Sn 19 51 24.1 -5.4
baz=266
GZH Guangzhou 7.44 274 Pn Pn 19 50 21.3 -2.1
GZH Sn Sn 19 51 41.5 -5.5
GZH smax smax
comp=N,170nm,1.3s
GZH smax smax
comp=E,150nm,1.0s
JOW Kunigami 7.47 55 Pn Pn 19 50 22.3 -1.4
2.1nm,0.3s,baz=121,slow=26,SNR=6.3
JOW Kunigami 7.47 55 eP Pn 19 50 22.4 -1.3
baz=57
JOW Kunigami 7.47 55 Pn Pn 19 50 20.8 -3.0
NJ2 Nanjing 9.58 347 eP Pn 19 50 53.4 +0.8
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=N,340nm,4.4s
NJ2 LR LR
comp=E,240nm,4.6s
NJ2 LR LR
comp=Z,360nm,7.9s
WHN Wuhan 10.03 323 ⇑ P Pn 19 51 02.3 +3.4
WHN S Sn 19 52 46.3 -4.2
WHN LR LR
comp=N,1μm,10.6s
WHN LR LR
comp=E,1μm,15.4s
WHN LR LR
comp=Z,1μm,13.9s
QIZ Qiongzhong 11.41 253 P Pn 19 51 17.3 -0.6
QIZ S Sn 19 53 26.4 +1.8
QIZ LR LR
comp=N,430nm,12.9s
QIZ LR LR
comp=E,420nm,14.1s
QIZ LR LR
comp=Z,550nm,13.3s
GYA Guiyang 13.92 289 P Pn 19 51 52.0 -0.2
GYA S Sn 19 54 23.9 -2.1
GYA pmax pmax
comp=Z,6.0nm,0.5s
GYA LR LR
comp=Z,520nm,13.1s
KSAR Wonju Array Be 15.71 19 Pn Pn 19 52 15.3 -0.6
KSRS Korea Array 15.73 19 Pn P 19 52 19.0 -0.9
0.2nm,0.3s,baz=196,slow=11,SNR=8.1
DAV Davao City (W) 16.06 165 LR LR 19 58 43.4
comp=Z,176nm,19.1s,baz=340,slow=38
SLVN Son La 16.29 268 Pn Pn 19 52 22.2 -1.4
KMI Kunming 17.24 282 ⇑ P Pn 19 52 35.5 -0.2
KMI pP P 19 52 40.5 +3.5
KMI S Sn 19 55 43.8 -3.0
KMI SS SnSn 19 56 05.6 +5.4
KMI pmax pmax
comp=Z,7.0nm,0.8s
KMI pmax pmax
comp=Z,41nm,3.8s
KMI LR LR
comp=N,91nm,10.7s
KMI LR LR
comp=E,320nm,14.5s
KMI LR LR
comp=Z,430nm,14.1s
MYLDM Lahad Datu 17.66 190 Pn 19 52 40.3 -0.3
CHAI Chaiyaphum 19.53 253 P Pn 19 53 09.8 +6.4
HHC Hu-ho-hao-te 19.90 338 eP Pn 19 53 07.4 -0.4
HHC pmax pmax
comp=Z,9.0nm,1.1s
HHC pmax pmax
comp=Z,60nm,5.1s
HHC LR LR
comp=N,350nm,9.0s
HHC LR LR
comp=E,340nm,8.3s
HHC LR LR
comp=Z,510nm,9.8s
MAJO Matsushiro 20.04 43 P P 19 53 07.6 +0.1
MAT Matsushiro 20.04 43 P Pn 19 53 09.3 -0.1
MJAR Matsushiro Arr 20.04 43 P Pn 19 53 09.9 +0.5
5.9nm,0.8s,baz=230,slow=8.0,SNR=10
MJAR Matsushiro Arr 20.04 43 P P 19 53 06.0 -1.4
SRAK Srakaew 20.30 248 P Pn 19 53 16.1 +3.5
LAMP Lampang 20.80 262 P Pn 19 53 25.1 +6.8
CM34 Chiang Mai Arr 21.16 264 P P 19 53 23.0 +3.3
CM35 Chiang Mai Arr 21.20 263 P P 19 53 23.0 +2.8
CM36 Chiang Mai Arr 21.29 263 P P 19 53 24.0 +2.8
CM33 Chiang Mai Arr 21.35 264 P P 19 53 24.0 +2.2
CMMT Chiang Mai 21.35 264 P P 19 53 24.4 +2.5
4.5nm,1.0s
CHTO Chiang Mai 21.36 264 P P 19 53 21.2 -0.7
CM09 Chiang Mai Arr 21.41 263 P P 19 53 26.9 +4.5
46nm6.0nm,1.0s
CM04 Chiang Mai Arr 21.43 263 P P 19 53 26.6 +3.9
5.9nm,1.0s
CM01 Chiang Mai Arr 21.44 263 P P 19 53 27.0 +4.2
6.6nm,1.0s
CM31 Chiang Mai Arr 21.45 263 P P 19 53 27.4 +4.6
127nm,0.8s
CM31 Chiang Mai Arr 21.45 263 P P 19 53 22.3 -0.5
CMAR Chiang Mai Arr 21.45 263 P P 19 53 24.7 +1.9
2.9nm,0.9s,baz=69,slow=8.8,SNR=23
CMAR PcP PcP 19 57 26.6 +1.0
1.6nm,0.7s,baz=42,slow=0.6,SNR=22
CMAR LR LR 20 02 51.5
comp=Z,285nm,18.4s,baz=138,slow=40
CMAR Chiang Mai Arr 21.45 263 P P 19 53 23.0 +0.2
CM02 Chiang Mai Arr 21.45 263 P P 19 53 27.3 +4.4
41nm6.2nm,0.9s
CM05 Chiang Mai Arr 21.46 263 P P 19 53 26.0 +3.0
32nm3.8nm,0.9s
CM15 Chiang Mai Arr 21.46 263 P P 19 53 26.0 +3.0
38nm5.9nm,0.9s
TOLI2 Tolitoli 21.48 182 P P 19 53 23.2 0.0
TOLI2 lAmb lAmb 19 53 27.6
comp=Z,14nm,0.8s
CM32 Chiang Mai Arr 21.48 263 P P 19 53 28.2 +4.9
CM13 Chiang Mai Arr 21.49 263 P P 19 53 27.5 +4.2
comp=Z,4.1nm,0.8s
GTOI Gorontalo 22.00 176 P P 19 53 29.6 +0.9
comp=Z,287nmcomp=Z,22nm,1.1s
SBUM Sibu 22.03 205 P P 19 53 29.7 +0.7
SBUM lAmb lAmb 19 53 34.7
comp=Z,8.6nm,0.8s
MRSI Marisa 22.11 179 P P 19 53 33.3 +3.4
TNTI Ternate 22.57 164 P P 19 53 34.0 -0.9
TNTI lAmb lAmb 19 53 36.7
comp=Z,15nm,1.0s
PHET Kaeng Krachan 22.88 248 P P 19 53 47.0 +8.8
USRK Ussuriysk Ar. 23.14 20 P P 19 53 40.5 0.0
comp=Z,1.6nm,0.8s,baz=212,slow=9.9,SNR=2.3
APSI Ampana 23.48 179 P P 19 53 47.1 +2.9
comp=Z,34nm,1.3s
LUWI Luwuk 23.65 177 P P 19 53 46.3 +0.5
LUWI Luwuk 23.65 177 P P 19 53 47.7 +1.9
KSM Kuching 23.71 209 P P 19 53 46.8 +0.4
KSM lAmb lAmb 19 54 04.1
comp=Z,14nm,1.2s
MTKI Muara Teweh, K 24.35 196 P P 19 53 54.9 +2.5
comp=Z,25nm,0.7s
GTA Gaotai 24.79 317 eP P 19 53 54.4 -1.9
GTA pP pP 19 53 59.6 -4.4
GTA sP sP 19 54 03.0 -4.3
GTA SS SnSn 19 59 11.8 +6.7
GTA pmax pmax
comp=Z,73nm,5.5s
GTA LR LR
comp=Z,130nm,14.9s
GTA LR LR
comp=Z,260nm,15.3s
GTA LR LR
comp=Z,280nm,16.0s
KAPI Kappang 27.60 184 LR LR 20 04 44.4
comp=Z,70nm,21.9s,baz=22,slow=35
ULN Ulaanbaatar 27.61 339 P P 19 54 17.9 -3.8
ULN lAmb lAmb 19 54 26.8
comp=Z,3.5nm,0.7s
KLR Kul'dur 27.70 15 P P 19 54 24.4 +2.0
comp=Z,1.0nm,0.6s,baz=269,slow=3.7,SNR=4.2
SONM Songino Array 27.80 338 P P 19 54 23.7 +0.2
comp=Z,3.1nm,0.8s,baz=155,slow=8.1,SNR=19
SONM Songino Array 27.80 338 P P 19 54 22.8 -0.7
LSA Lhasa 27.97 291 P P 19 54 27.4 +1.8
LSA Lhasa 27.97 291 P P 19 54 23.2 -2.3
LSA lAmb lAmb 19 54 36.9
comp=Z,4.3nm,0.6s
PSI Prapat 29.45 231 LR LR 20 06 04.9
comp=Z,78nm,19.9s,baz=281,slow=36
WMQ Urumqi 34.83 315 eP P 19 55 29.8 +4.5
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ pmax pmax
comp=Z,120nm,4.5s
KNRA Kununurra 38.83 169 P P 19 55 57.7 -1.6
KNRA lAmb lAmb 19 56 08.5
comp=Z,11nm,1.2s
MK31 Makanchi Array 39.54 317 P P 19 56 04.8 -0.3
MKAR Makanchi Array 39.54 317 P P 19 56 06.0 +0.9
comp=Z,3.5nm,0.9s,baz=111,slow=8.8,SNR=24
MKAR PcP PcP 19 58 13.0 +0.7
comp=Z,0.9nm,0.8s,baz=67,slow=4.1,SNR=4.2
MAKZ Makanchi 39.74 317 P P 19 56 04.9 -1.9
MAKZ lAmb lAmb 19 56 13.2
comp=Z,8.1nm,1.1s
FITZ Fitzroy Crossi 40.77 174 P P 19 56 13.8 -1.7
comp=Z,1.8nm,0.8s,baz=22,slow=5.7,SNR=13
FITZ Fitzroy Crossi 40.77 174 P P 19 56 14.2 -1.3
FITZ lAmb lAmb 19 56 27.3
comp=Z,7.3nm,1.3s
PEA0B Petropavlovsk- 40.98 33 P P 19 56 16.0 -0.9
PEA0B lAmb lAmb 19 56 34.3
comp=Z,16nm,1.1s
ZAA0 Zalesovo Array 41.59 328 P P 19 56 21.8 -0.1
ZAA0 lAmb lAmb 19 56 26.7
comp=Z,8.8nm,0.9s
ZALV Zalesovo Beam 41.59 328 P P 19 56 22.6 +0.7
comp=Z,3.9nm,0.4s,baz=117,slow=8.5,SNR=19
ZALV PcP PcP 19 58 18.4 -0.3
comp=Z,0.8nm,0.6s,baz=134,slow=4.3,SNR=2.2
ZALV Zalesovo Beam 41.59 328 P P 19 56 22.1 +0.1
COEN Coen 42.22 148 P P 19 56 24.5 -3.0
COEN lAmb lAmb 19 56 40.7
comp=Z,8.0nm,1.0s
H11N1 WAKE ISLAND Hy 42.38 85 T T 20 41 42.0
baz=282,slow=75,SNR=222
H11N2 WAKE ISLAND Hy 42.39 85 T T 20 41 42.1
baz=282,slow=75,SNR=162
H11N3 WAKE ISLAND Hy 42.40 85 T T 20 41 45.7
baz=282,slow=75,SNR=165
H11S3 WAKE ISLAND Hy 42.47 87 T T 20 41 49.5
baz=284,slow=75,SNR=314
H11S1 WAKE ISLAND Hy 42.48 87 T T 20 41 51.9
baz=284,slow=75,SNR=349
H11S2 WAKE ISLAND Hy 42.49 87 T T 20 41 50.8
baz=284,slow=75,SNR=355
KURK Kurchatov 43.35 321 PcP PcP 19 58 24.7 0.0
KURBB Kurchatov Arra 43.37 321 PcP PcP 19 58 24.7 0.0
comp=Z,0.4nm,0.7s,baz=100,slow=3.2,SNR=2.9
PSA00 Pilbara Seismi 44.04 182 P P 19 56 39.1 -3.0
PSA00 lAmb lAmb 19 56 46.7
comp=Z,8.8nm,0.9s
WB0 Warramunga Arr 44.08 162 P P 19 56 41.4 -1.1
WB0 lAmb lAmb 19 56 51.3
comp=Z,9.5nm,1.3s
WRAB Tennant Creek 44.23 162 P P 19 56 42.9 -0.8
WRAB lAmb lAmb 19 56 45.8
comp=Z,5.7nm,1.1s
WRA Warramunga Arr 44.23 162 P P 19 56 41.5 -2.2
comp=Z,2.0nm,0.9s,baz=343,slow=9.2,SNR=11
WRA Warramunga Arr 44.23 162 P P 19 56 42.5 -1.3
WB2 Warramunga Arr 44.24 162 P P 19 56 42.2 -1.5
WB2 lAmb lAmb 19 56 58.4
comp=Z,13nm,1.3s
WR0 Warramunga Arr 44.31 162 P P 19 56 43.2 -1.1
WR0 lAmb lAmb 19 56 52.7
comp=Z,4.3nm,0.7s
SEY Seymchan 45.29 19 P P 19 56 53.4 +1.8
comp=Z,0.5nm,0.7s,baz=172,slow=14,SNR=2.3
SEY PcP PcP 19 58 31.4 +0.4
comp=Z,0.7nm,0.6s,baz=90,slow=22,SNR=8.3
GAR Garm 46.17 303 P P 19 56 56.3 -2.9
GAR lAmb lAmb 19 57 03.4
comp=Z,4.0nm,0.7s
KK31 Karatay Array 46.53 308 P P 19 57 00.0 -1.8
KK31 lAmb lAmb 19 57 13.0
comp=Z,3.8nm,1.2s
KKAR Karatay Array 46.53 308 P P 19 57 00.8 -1.0
KKAR Karatay Array 46.53 308 P P 19 56 59.0 -2.8
KKAR lAmb lAmb 19 57 13.0
comp=Z,3.8nm,1.2s
AS31 Alice Springs 47.67 164 P P 19 57 09.8 -1.0
ASAR Alice Springs 47.67 164 P P 19 57 09.8 -1.0
comp=Z,0.6nm,0.5s,baz=345,slow=7.6,SNR=22
ASAR PcP PcP 19 58 39.5 -0.5
comp=Z,0.6nm,0.8s,baz=348,slow=3.1,SNR=4.1
ASAR Alice Springs 47.67 164 P P 19 57 10.5 -0.3
BRVK Borovoye 49.01 322 P P 19 57 19.9 -0.9
BRVK lAmb lAmb 19 57 26.4
comp=Z,6.6nm,1.1s
TIXI Tiksi 49.15 3 P P 19 57 21.6 0.0
comp=Z,0.3nm,0.5s,baz=55,slow=2.4,SNR=1.8
MORW Morawa 51.74 186 P P 19 57 42.8 +1.1
ABKAR Akbulak array 54.62 315 P P 19 58 02.6 -0.1
GEYT Alibeck 55.72 301 P P 19 58 11.7 +0.8
comp=Z,0.9nm,0.4s,baz=49,slow=32,SNR=3.2
ARU Arti 56.41 324 P P 19 58 15.0 -0.4
ARU lAmb lAmb 19 58 16.6
comp=Z,4.9nm,0.5s
ATKA Atka Island 56.76 42 P P 19 58 16.7 -1.3
BBOO Buckleboo 56.96 165 P P 19 58 19.1 -0.4
STKA Stephens Creek 57.62 160 P P 19 58 23.1 -1.1
comp=Z,1.5nm,0.6s,baz=359,slow=4.9,SNR=5.3
STKA Stephens Creek 57.62 160 P P 19 58 24.1 -0.2
ARMA Armidale 60.27 150 P P 19 58 43.4 +0.5
KBZ Khabaz 66.56 309 P P 19 59 25.9 +1.6
comp=Z,2.2nm,0.9s,baz=86,slow=7.0,SNR=4.1
BPAW Bear Paw Mtn. 68.79 28 P P 19 59 37.9 -0.1
BPAW lAmb lAmb 20 00 03.8
comp=Z,9.6nm,1.4s
RAYN Ar Rayn 68.98 287 P P 19 59 40.5 +0.6
RAYN lAmb lAmb 19 59 50.3
comp=Z,2.7nm,1.1s
MDM Murphy Dome 69.82 27 P P 19 59 45.0 +0.6
MDM lAmb lAmb 19 59 46.6
comp=Z,4.3nm,1.0s
ILAR Eielson Array 70.42 27 P P 19 59 49.2 +1.1
comp=Z,0.2nm,0.6s,baz=280,slow=5.4,SNR=2.1
ARCES ARCESS Array B 70.98 338 P P 19 59 50.8 -0.5
comp=Z,3.5nm,1.0s,baz=64,slow=4.1,SNR=1.8
FIA1 FINESS Array S 72.81 330 P P 20 00 00.9 -1.5
FINES FINESS Array B 72.82 330 P P 20 00 02.5 +0.1
comp=Z,1.3nm,0.7s,baz=44,slow=5.4,SNR=13
FINES FINESS Array B 72.82 330 P P 20 00 02.8 +0.3
BRTR Keskin Array B 74.21 307 P P 20 00 12.5 +1.2
comp=Z,0.3nm,0.4s,baz=304,slow=37,SNR=1.9
INK Inuvik 74.51 22 P P 20 00 13.3 +1.1
comp=Z,1.0nm,0.6s,baz=335,slow=3.8,SNR=4.7
BURAR Bucovina Array 77.57 316 P P 20 00 29.0 -1.2
BUR08 Bucovina Ar. S 77.57 316 P P 20 00 28.8 -1.5
BUR08 lAmb lAmb 20 00 31.2
comp=Z,2.5nm,1.1s
NC405 NORSAR Array S 79.37 332 P P 20 00 39.9 +0.1
NC303 NORSAR Array S 79.46 332 P P 20 00 39.9 -0.4
NB201 NORSAR Array S 79.58 332 P P 20 00 41.0 +0.1
NOA NORSAR Array B 79.62 332 P P 20 00 40.6 -0.6
comp=Z,0.4nm,0.7s,baz=60,slow=7.2,SNR=4.6

NC602 NORSAR Array S 79.62 332 P P 20 00 40.2 -0.9
NC204 NORSAR Array S 79.70 333 P P 20 00 40.1 -1.6
GERES GERESS Array B 84.11 321 P P 20 01 03.8 -1.4
comp=Z,0.5nm,0.7s,baz=53,slow=5.2,SNR=3.6
YKA Yellowknife Ar 84.24 23 P P 20 01 05.0 -0.4
comp=Z,0.8nm,0.9s,baz=314,slow=4.4,SNR=9.1
KMBO Kilima Mbogo 85.04 267 P P 20 01 10.6 0.0
comp=Z,0.5nm,0.2s,baz=58,slow=2.3,SNR=4.0

BJI ***15*** *19:54:58.7±0.0, 39.˙38N×143.˙32E, h5km, mB5.2/62, mb5.1/86, Ms5.2/89, Ms7 5.1/83*

IDC ***15*** *19:54:59.1±0.4, 39.˙38N×143.˙48E, h0km, mb4.7/39, mb1 4.8/49, mb1mx4.7/60, mbtmp4.8/49, ML4.3/9, MS4.4/28, Ms1 4.4/28, ms1mx4.2/45, Error ellipse: s-maj=11.8km s-min=9.0km az=117.0*

NIED ***15*** *19:55:00.8, 39.˙36N×143.˙64E, h45km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr2.81; Mθθ0.31; Mϕϕ-3.12; Mrθ1.13; Mθϕ-1.36; Mϕr1.43; Fault plane solution: M0 3.70000×10¹⁶ NP1:φs31.00000°, δ60.00000°, λ104.00000°. NP2:φs185.00000°, δ32.00000°, λ68.00000°.*

JMA ***15*** *19:55:00.7±0.3, 39.˙35N×143.˙64E, h45km, M5.1*
JMA Felt II J1.

NEIC ***15*** *19:55:00.6±1.7, 39.˙39N±0.˙06×143.˙5E±0.˙1, h10km±1km, mb5.1/219, Error ellipse: s-maj=14.8km s-min=9.2km az=111.0*

MOS ***15*** *19:55:01.9±0.9, 39.˙50N×143.˙44E, h25km, mb5.3/66, MS4.9/19, Error ellipse: s-maj=5.4km s-min=3.2km az=105.6*

GCMT ***15*** *19:55:04.6±0.2, 39.˙38N±0.˙01×143.˙64E±0.˙02, h20km, MW5.1/124, Moment Tensor Solution. s64,c90; s124,c196; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.78±.15; Mθθ-0.63±.09; Mϕϕ-3.16±.10; Mrθ1.49±.18; Mθϕ-0.96±.06; Mϕr3.55±.20; Best double couple: M0 5.29200×10¹⁶ NP1:φs196.00000°, δ22.00000°, λ85.00000°. NP2:φs22.00000°, δ68.00000°, λ92.00000°. Principal axes: T 5.4450, Plg67.0000°, Azm295.0000°; N -0.3110, Plg2.0000°, Azm201.0000°; P -5.1400, Plg23.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***15*** *19:55:13.5±0.0, 40.˙47N×142.˙15E, h34km, mb5.1*

ISC 15 19:55:02.1±0.4, **39.˙33N**±0.˙03×**143.˙62E**±0.˙03, **h24**km±2km, **h24km:pP-P, n841**, σ1§**48**/919, **mb5.1**/300, **MS4.9**/67, **232C-80D, Fault plane solution: NP1:**φs25.87684°, δ74.91161°, λ100.92527°. **NP2:**φs169.31876°, δ18.55377°, λ54.89315°. **Principal axes:** T Plg58.6959°, Azm310.8243°; N Plg10.5442°, Azm203.0003°; P Plg29.0970°, Azm107.0544°; **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.41**	**281**	⇑P	**Pn**	**19 55 24.8**	**-1.6**
JTH	**Tanohata**	**1.48**	**295**	⇑P	**Pn**	**19 55 25.6**	**-1.8**
OFUJ	**Ofunato**	**1.53**	**261**	⇑P	**Pn**	**19 55 26.7**	**-1.3**
OFUJ				*e*S	**Sn**	**19 55 44.8**	**-2.4**
JKMT	**Kesennumamotoy**	**1.75**	**253**	⇑P	**Pn**	**19 55 29.7**	**-1.3**
JOM	**Ohasama**	**1.81**	**275**	⇑P	**Pn**	**19 55 30.9**	**-0.9**
JMK	**Ichinoseki**	**1.90**	**259**	⇑P	**Pn**	**19 55 32.2**	**-0.9**
JMK				*e*S	**Sn**	**19 55 54.4**	**-1.9**
JANG	**Nango**	**1.93**	**303**	P	**Pn**	**19 55 31.3**	**-2.1**
JIKH	**Ishinomakikobu**	**1.96**	**239**	⇑P	**Pn**	**19 55 32.5**	**-1.4**
JIO	**Ouri**	**1.97**	**244**	⇑P	**Pn**	**19 55 32.7**	**-1.4**
JIO				*e*S	**Sn**	**19 55 55.0**	**-3.1**
JTM	**Tenmabayashi**	**2.44**	**307**	Pn	**Pn**	**19 55 39.0**	**-1.5**
JYK	**Kaneyama**	**2.57**	**262**	⇑P	**Pn**	**19 55 41.9**	**-0.3**
JMM	**Marumori**	**2.65**	**237**	Pn	**Pn**	**19 55 41.9**	**-1.5**
ERM	**Erimo**	**2.71**	**353**	*c* *i*P	**Pn**	**19 55 42.3**	**-1.8**
ERM				pmax	pmax		
	comp=Z,411nm,1.3s						
ERM	**Erimo**	**2.71**	**353**	Pn	**Pn**	**19 55 42.0**	**-2.1**
JOT	**Ohata**	**2.84**	**317**	⇓P	**Pn**	**19 55 45.1**	**-0.9**
JNBK	**Urakawa-nobuka**	**3.02**	**348**	P	**Pn**	**19 55 47.8**	**-0.7**
JNBK				*e*S	**Sn**	**19 56 22.8**	**-1.1**
JFT	**Otama**	**3.15**	**236**	P	**Pn**	**19 55 49.5**	**-0.8**
JKB	**Kayabe**	**3.23**	**323**	S	**Sn**	**19 56 26.5**	**-2.4**
JCH	**Churui**	**3.29**	**357**	P	**Pn**	**19 55 50.7**	**-1.4**
JCH				S	**Sn**	**19 56 27.4**	**-3.1**
JEW	**Eniwo**	**3.87**	**336**	Pn	**Pn**	**19 55 59.4**	**-0.8**
JYT	**Yasato**	**4.12**	**222**	Pn	**Pn**	**19 56 01.6**	**-1.9**
NMR	**Nemuro--Hokkai**	**4.34**	**21**	⇓*i*P	**Pn**	**19 56 04.1**	**-2.4**
NMR				*i*S	**Sn**	**19 56 50.6**	**-5.7**
JSD	**Sado**	**4.39**	**255**	Pn	**Pn**	**19 56 06.6**	**-0.6**
ASAJ	**Asahikawa**	**4.84**	**351**	Pn	**Pn**	**19 56 13.2**	**-0.4**
	comp=Z,26nm,0.3s,baz=206,slow=11,SNR=169						
ASAJ				Sn	**Sn**	**19 57 07.3**	**-1.5**
	comp=Z,19nm,0.3s,baz=234,slow=18,SNR=4.3						
JKA	**Kamikawa-asahi**	**4.84**	**351**	Pn	**Pn**	**19 56 12.6**	**-0.9**
RUSJ	**Misakicho**	**4.92**	**14**	*e*P	**Pn**	**19 56 12.7**	**-1.9**
RUSJ				*e*S	**Sn**	**19 57 09.4**	**-1.4**
GRPR	**Tuman**	**4.93**	**18**	*e*P	**Pn**	**19 56 12.1**	**-2.6**
GRPR				*e*S	**Sn**	**19 57 05.2**	**-5.8**
GRPR				pmax	pmax		
	comp=Z,811nm,0.3s						
GRPR				pmax	pmax		
	comp=N,447nm,0.5s						
GRPR				pmax	pmax		
	comp=E,236nm,0.4s						
GRPR				smax	smax		
	comp=E,4μm,0.5s						
GRPR				smax	smax		
	comp=N,5μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.99**	**19**	*e*P	**Pn**	**19 56 13.0**	**-2.5**
YUK				*e*S	**Sn**	**19 57 06.8**	**-5.7**
YUK				pmax	pmax		
	comp=Z,986nm,0.5s						
YUK				pmax	pmax		
	comp=E,277nm,0.4s						
YUK				pmax	pmax		
	comp=N,160nm,0.3s						
YUK				pmax	pmax		
	comp=Z,1μm,1.1s						
YUK				smax	smax		
	comp=N,10μm,1.2s						
YUK				smax	smax		
	comp=E,5μm,1.0s						
YUK				smax	smax		
	comp=N,4μm,0.5s						
YUK				smax	smax		
	comp=E,2μm,0.6s						
YUK				MLR	MLR		
	comp=Z,4μm,20.0s						
MJAR	**Matsushiro Arr**	**5.10**	**239**	Pn	**Pn**	**19 56 17.1**	**0.0**
	comp=Z,5.8nm,0.3s,baz=36,slow=14,SNR=445						
MJAR				LR	LR	19 58 30.3	
	comp=Z,4μm,19.7s,baz=65,slow=42						
MJAR	**Matsushiro Arr**	**5.10**	**239**		**Pn**	**19 56 17.4**	**+0.3**
MAJO	**Matsushiro**	**5.10**	**239**	*c* *i*P	**Pn**	**19 56 18.2**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,550nm,0.8s						
MAJO	**Matsushiro**	**5.10**	**239**	Pn	**Pn**	**19 56 17.3**	**+0.2**
MAT	**Matsushiro**	**5.10**	**239**	P	**Pn**	**19 56 17.9**	**+0.8**
MAT				*e*S	**Sn**	**19 57 20.2**	**+4.9**
MJB9	**Matsu-Tunnel**	**5.10**	**239**		**Pn**	**19 56 17.5**	**+0.3**
JGF	**Kuroka**	**6.22**	**235**		**Pn**	**19 56 32.1**	**-0.4**
JSG	**Sagara**	**6.36**	**225**	Pn	**Pn**	**19 56 33.8**	**-0.6**
KUR	**Kuril'sk**	**6.69**	**27**	*e*P	**Pn**	**19 56 37.7**	**-1.1**
KUR				*e*S	**Sn**	**19 57 47.6**	**-6.6**
KUR				*e*S	**Sn**	**19 57 47.7**	**-6.5**
KUR				pmax	pmax		
	comp=Z,593nm,2.6s						
KUR				pmax	pmax		
	comp=Z,280nm,0.4s						
KUR				smax	smax		
	comp=E,364nm,1.6s						
KUR				smax	smax		
	comp=N,1μm,1.3s						
JHJ2	**Mitsune**	**6.92**	**207**	Pn	**Pn**	**19 56 42.4**	**+0.3**
JHJ	**Hachijo jima 2**	**6.93**	**208**	Pn	**Pn**	**19 56 42.5**	**+0.3**
	comp=N,64nm,0.3s,baz=2.6,slow=4.4,SNR=12						
JHJ				Sn	**Sn**	**19 57 54.1**	**-6.1**
	comp=N,33nm,0.3s,baz=237,slow=22,SNR=2.1						
YSS	**Yuzh-Sakhalins**	**7.65**	**356**	*e*P	**Pn**	**19 56 51.9**	**-0.1**
YSS				*e*S	**Sn**	**19 58 14.0**	**-3.8**
YSS				pmax	pmax		
	comp=Z,90nm,0.5s						
YSS				pmax	pmax		
	comp=Z,600nm,3.8s						
YSS				smax	smax		
	comp=N,130nm,1.2s						
YSS				smax	smax		
	comp=E,800nm,3.0s						
YSS				MLR	MLR		
	comp=N,6μm,14.0s						
YSS				MLR	MLR		
	comp=Z,9μm,14.0s						
YSS	**Yuzh-Sakhalins**	**7.65**	**356**	Pn	**Pn**	**19 56 50.3**	**-1.7**
JWT	**Wachi**	**7.69**	**241**		**Pn**	**19 56 52.5**	**-0.1**
TEY	**Ternei**	**7.72**	**320**	⇑*e*P	**Pn**	**19 56 54.4**	**+1.4**
TEY				pmax	pmax		
	comp=N,140nm,0.8s						
TEY				pmax	pmax		
	comp=E,140nm,0.8s						
TEY				pmax	pmax		
	comp=Z,230nm,0.8s						
JHS	**Saijyo**	**9.43**	**246**		**Pn**	**19 57 17.6**	**+1.1**
JMN	**Monobe**	**9.62**	**237**	Pn	**Pn**	**19 57 18.3**	**-0.9**
UGL	**Uglegorsk**	**9.81**	**354**	*e*P	**Pn**	**19 57 19.7**	**-1.9**
UGL				S	**Sn**	**19 59 10.5**	**-0.4**
UGL				pmax	pmax		
	comp=Z,81nm,0.9s						
UGL				MLR	MLR		
	comp=Z,5μm,14.0s						
UGL				MLR	MLR		
	comp=N,6μm,12.0s						
USA0B	**Ussuriysk Arra**	**9.95**	**303**	*c* *e*P	**Pn**	**19 57 24.2**	**+0.6**
USA0B	**Ussuriysk Arra**	**9.95**	**303**		**Pn**	**19 57 24.4**	**+0.8**
USRK	**Ussuriysk Ar.**	**9.95**	**303**	Pn	**Pn**	**19 57 23.1**	**-0.6**
	baz=111,slow=13,SNR=55						
USRK				LR	LR	20 01 02.7	
	comp=N,3μm,19.7s,baz=100,slow=37						
USRK	**Ussuriysk Ar.**	**9.95**	**303**	P	**Pn**	**19 57 24.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.95**	**303**		**Pn**	**19 57 24.1**	**+0.5**
MSHR	**Mys Shultsa**	**9.97**	**293**	⇑*e*P	**Pn**	**19 57 22.8**	**-1.0**
TYV	**Tymovskoe**	**11.55**	**357**	*e*P	**Pn**	**19 57 43.8**	**-1.7**
TYV				*e*S	**Sn**	**19 59 54.6**	**+1.0**
TYV				pmax	pmax		
	comp=Z,200nm,2.7s						
TYV				pmax	pmax		
	comp=Z,26nm,0.9s						
TYV				smax	smax		
	comp=E,10.0nm,1.6s						
MDJ	**Mudanjiang**	**11.70**	**301**	P	**Pn**	**19 57 48.3**	**+0.8**
MDJ				pP		19 57 50.5	
MDJ				pmax	pmax		
	comp=E,28nm,1.1s						
MDJ				pmax	pmax		
	comp=E,1μm,9.2s						
MDJ				LR	LR		
	comp=E,4μm,11.8s						
MDJ				LR	LR		
	comp=E,7μm,13.2s						
MDJ				LR	LR		
	comp=E,9μm,13.3s						
JNU	**Nakatsue**	**12.00**	**243**	Pn	**Pn**	**19 57 50.9**	**-0.9**
	comp=E,1.2nm,0.3s,baz=155,slow=4.5,SNR=11						
JNU				LR	LR	20 02 57.5	
	comp=E,5μm,18.9s,baz=52,slow=40						
JNU	**Nakatsue**	**12.00**	**243**		**Pn**	**19 57 50.6**	**-1.1**
JCJ	**Chichijima**	**12.26**	**186**	Pn	**Pn**	**19 57 56.0**	**+0.7**
	comp=E,9.4nm,0.3s,baz=269,slow=18,SNR=2.0						
JCJ				Sn	Sn	19 59 58.5	-13
	comp=E,2.9nm,0.3s,baz=277,slow=22,SNR=1.5						
JTU	**Tsushima**	**12.34**	**252**		**Pn**	**19 57 56.9**	**+0.5**
KSRS	**Korea Array**	**12.46**	**266**	Pn	**Pn**	**19 57 57.4**	**-0.5**
	comp=E,0.6nm,0.3s,baz=82,slow=13,SNR=40						
KSRS				LR	LR	20 02 25.7	
	comp=E,2μm,18.6s,baz=82,slow=36						
KS19	**Wonju Array Si**	**12.49**	**267**		**Pn**	**19 57 57.6**	**-0.8**
KSAR	**Wonju Array Be**	**12.49**	**266**	P	**Pn**	19 57 53.4	-4.9
KSAR	**Wonju Array Be**	**12.49**	**266**	Pn	**Pn**	19 57 53.4	-4.9
GRNR	**Gornyy**	**12.51**	**338**	⇓*i*P	**Pn**	**19 57 58.0**	**-0.6**
GRNR				*e*S	**Sn**	**20 00 20.1**	**+3.0**
GRNR				pmax	pmax		
	comp=E,20nm,0.9s						
GRNR				pmax	pmax		
	comp=N,30nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,30nm,1.0s						
GRNR				smax	smax		
	comp=N,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,2μm,13.0s						
GRNR				MLR	MLR		
	comp=E,2μm,13.0s						
GRNR				MLR	MLR		
	comp=Z,3μm,14.0s						
KLR	**Kul'dur**	**13.03**	**323**	Pn	**Pn**	**19 58 04.4**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=130,slow=13,SNR=31						
KLR				LR	LR	20 03 22.2	
	comp=Z,4μm,18.2s,baz=118,slow=39						
KLR	**Kul'dur**	**13.03**	**323**	*de*P	**Pn**	**19 58 04.6**	**-1.1**
TJN	**Taejon**	**13.18**	**262**	⇓*e*P	**Pn**	**19 58 07.9**	**+0.1**
JSU	**Suzuyama**	**13.26**	**238**	Pn	**Pn**	**19 58 07.8**	**-1.1**
NKL	**Nikolayevsk**	**13.97**	**353**	*e*P	**Pn**	**19 58 16.3**	**-2.1**
NKL				*e*S	**Sn**	**20 00 52.3**	**-0.3**
NKL				pmax	pmax		
	comp=E,194nm,1.1s						
NKL				pmax	pmax		
	comp=N,195nm,0.5s						
NKL				pmax	pmax		
	comp=Z,49nm,1.0s						
NKL				smax	smax		
	comp=E,194nm,1.1s						
NKL				smax	smax		
	comp=N,1.0nm,0.6s						
NKL				MLR	MLR		
	comp=N,3.0nm,14.0s						
NKL				MLR	MLR		
	comp=E,2μm,14.0s						
NKL				MLR	MLR		
	comp=Z,2μm,14.0s						
OKH	**Okha**	**14.23**	**358**	*de*P	Pn	19 58 17.1	-4.9
OKH				*e*S	**Sn**	**20 00 57.5**	**-1.5**
CN2	**Changchun**	**14.31**	**294**	*e*P	**Pn**	**19 58 21.5**	**-1.7**
CN2				*e*S	**Sn**	**20 01 00.4**	**-0.7**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,590nm,9.0s						
CN2				LR	LR		
	comp=Z,3μm,13.0s						
CN2				LR	LR		
	comp=Z,3μm,13.0s						
CN2				LR	LR		
	comp=Z,3μm,14.0s						
SKR	**Severo-Kuril's**	**14.36**	**34**	⇑*e*P	**Pn**	**19 58 26.5**	**+2.7**
SNY	**Shenyang**	**15.43**	**286**	⇓P	**Pn**	**19 58 38.1**	**-0.1**
SNY				S	**Sn**	**20 01 34.9**	**+6.6**
SNY				pmax	pmax		
	comp=Z,12nm,0.9s						
SNY				pmax	pmax		
	comp=Z,780nm,8.8s						
SNY				LR	LR		
	comp=Z,2μm,13.9s						
SNY				LR	LR		
	comp=Z,3μm,15.1s						
SNY				LR	LR		
	comp=Z,5μm,15.1s						
PEA0B	**Petropavlovsk-**	**16.83**	**30**	P	**P**	**19 58 57.2**	**-0.8**
PEA0B				pmax	pmax		
	comp=Z,75nm,1.2s						
PEA0B	**Petropavlovsk-**	**16.83**	**30**	P	**P**	**19 58 57.2**	**-0.8**
PETK	**Petropavlovsk-**	**16.83**	**30**	Pn	**P**	**19 58 57.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=215,slow=7.0,SNR=15						
PETK				LR	LR	20 06 37.6	
	comp=Z,620nm,18.1s,baz=218,slow=42						
PETK	**Petropavlovsk-**	**16.83**	**30**	P	**Pn**	**19 58 56.3**	**+0.2**
PETK	**Petropavlovsk-**	**16.83**	**30**	P	**Pn**	**19 58 56.3**	**+0.2**
DL2	**Dalian**	**17.07**	**276**	P	**Pn**	**19 58 59.9**	**+0.8**
DL2				*e*S	**Sn**	**20 02 10.8**	**+2.7**
DL2				pmax	pmax		
	comp=Z,120nm,1.1s						
DL2				pmax	pmax		
	comp=Z,730nm,5.1s						
DL2				LR	LR		
	comp=Z,3μm,15.1s						
DL2				LR	LR		
	comp=Z,3μm,15.5s						
DL2				LR	LR		
	comp=Z,3μm,17.2s						
PET	**Petropavlovsk**	**17.15**	**32**	*e*P	**P**	**19 59 01.6**	**+0.1**
PET				*e*S	**Sn**	**20 02 11.2**	**+1.2**
PET				pmax	pmax		
	comp=Z,65nm,1.0s						
PET				pmax	pmax		
	comp=Z,200nm,11.8s						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
PET	**Petropavlovsk**	**17.15**	**32**	P	**P**	**19 59 00.3**	**-1.3**
JOW	**Kunigami**	**17.87**	**230**	P	**Pn**	**19 59 07.9**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=88,slow=11,SNR=2.7						
ZEA	**Zeya**	**18.22**	**328**	*e*P	**Pn**	**19 59 09.9**	**-3.4**
ZEA				*e*S	Sn	20 02 19.8	-16
ZEA				pmax	pmax		
	comp=N,40nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,70nm,0.6s						
ZEA				smax	smax		
	comp=E,200nm,9.3s						
ZEA				MLR	MLR		
	comp=N,2μm,16.0s						
ZEA				MLR	MLR		
	comp=E,3μm,16.0s						
ZEA				MLR	MLR		
	comp=Z,2μm,15.0s						
HIA	**Hailar**	**19.69**	**308**	P	**P**	**19 59 27.0**	**-2.6**
HIA				pmax	pmax		
	comp=Z,50nm,0.9s						
HIA	**Hailar**	**19.69**	**308**	P	**P**	**19 59 27.0**	**-2.6**
SSE	**Sheshan**	**20.05**	**253**	P	**P**	**19 59 34.4**	**+0.9**
SSE				S	Sn	20 03 20.5	+0.3
SSE				pmax	pmax		
	comp=Z,30nm,0.9s						
SSE				pmax	pmax		
	comp=Z,210nm,5.6s						
SSE				LR	LR		
	comp=Z,930nm,12.9s						
SSE				LR	LR		
	comp=Z,1μm,16.0s						
MA2	**Magadan**	**20.77**	**10**	P	**P**	**19 59 41.4**	**+0.3**
	comp=Z,50nm,0.8s,baz=196,slow=9.1,SNR=94						
MA2	**Magadan**	**20.77**	**10**	*c* *i*P	**P**	**19 59 41.5**	**+0.4**
MA2				pmax	pmax		
	comp=Z,185nm,2.5s						
MA2	**Magadan**	**20.77**	**10**	P	**P**	**19 59 41.1**	**0.0**
MA2				IAmb	IAmb	19 59 52.0	
	comp=Z,65nm,0.8s						
BJI	**Beijing**	**21.11**	**281**	P	**P**	**19 59 42.3**	**-2.6**
BJI				S	**S**	**20 03 37.6**	**-0.9**
BJI				pmax	pmax		
	comp=Z,61nm,0.9s						
BJI				pmax	pmax		
	comp=Z,270nm,3.5s						
BJI				LR	LR		
	comp=Z,1μm,13.2s						
BJI				LR	LR		
	comp=Z,3μm,15.4s						
BJI				LR	LR		
	comp=Z,2μm,16.5s						
BJT	**Baijiatuau**	**21.11**	**281**	P	**P**	**19 59 41.8**	**-3.2**
BJT				pmax	pmax		
	comp=Z,49nm,0.8s						
BJT	**Baijiatuau**	**21.11**	**281**	P	**P**	**19 59 41.8**	**-3.2**
TIA	**Tai'an**	**21.15**	**270**	P	**P**	**19 59 42.6**	**-2.8**
TIA				S	**S**	**20 03 31.8**	**-7.7**
TIA				pmax	pmax		
	comp=Z,47nm,1.5s						
TIA				pmax	pmax		
	comp=Z,420nm,6.1s						
TIA				LR	LR		
	comp=Z,1μm,15.2s						
TIA				LR	LR		
	comp=Z,4μm,11.4s						
TIA				LR	LR		
	comp=Z,7μm,14.5s						
NJ2	**Nanjing**	**21.34**	**258**	⇑*i*P	**P**	**19 59 49.0**	**+1.5**
NJ2				pP	**pP**	**19 59 52.8**	**-0.5**
NJ2				sP	**pwP**	**19 59 58.3**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,34nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,290nm,4.1s						
NJ2				LR	LR		
	comp=Z,790nm,15.6s						
NJ2				LR	LR		
	comp=Z,2μm,15.2s						
NJ2				LR	LR		
	comp=Z,3μm,15.7s						
TATO	**Taipei**	**23.49**	**239**	P	**P**	**20 00 09.1**	**-1.0**
YHNB	**Yeheng**	**23.77**	**239**	P	**P**	**20 00 10.1**	**-2.9**
YHNB				IAmb	IAmb	20 00 11.6	
	comp=Z,32nm,0.7s						
NACB	**Ninganchiao**	**23.97**	**237**	P	**P**	**20 00 12.1**	**-2.7**
SEY	**Seymchan**	**24.22**	**10**	P	**P**	**20 00 17.3**	**+0.6**
	comp=Z,72nm,0.9s,baz=180,slow=8.1,SNR=192						
SEY	**Seymchan**	**24.22**	**10**	⇓*e*P	**P**	**20 00 17.6**	**+0.9**
YAK	**Yakutsk**	**24.28**	**344**	P	**P**	**20 00 15.6**	**-1.7**
	comp=Z,63nm,0.7s,baz=147,slow=7.7,SNR=39						
YAK				LR	LR	20 10 15.9	
	comp=Z,936nm,19.4s,baz=139,slow=38						
YAK	**Yakutsk**	**24.28**	**344**	*c* *i*P	**P**	**20 00 15.5**	**-1.7**
YAK				*e*PP	**sP**	**20 00 25.3**	**-0.5**
YAK				*e*PPP	PPP	20 00 52.9	
YAK				*e*S	**S**	**20 04 32.2**	**-2.2**
YAK				pmax	pmax		
	comp=Z,126nm,1.0s						
YAK				pmax	pmax		
	comp=N,47nm,1.0s						
YAK				pmax	pmax		
	comp=E,17nm,0.9s						
YAK				pmax	pmax		
	comp=Z,313nm,2.3s						
YAK				pmax	pmax		
	comp=N,202nm,2.2s						
YAK				pmax	pmax		
	comp=E,84nm,2.0s						
YAK				smax	smax		
	comp=N,132nm,2.1s						
YAK				smax	smax		
	comp=E,119nm,2.7s						
YAK				MLR	MLR		
	comp=Z,2μm,14.0s						
YAK				MLR	MLR		
	comp=N,1μm,16.0s						
YAK				MLR	MLR		
	comp=E,942nm,19.0s						
YAK	**Yakutsk**	**24.28**	**344**	P	**P**	**20 00 15.5**	**-1.7**
CIT	**Chita**	**24.34**	**311**	*e*P	**P**	**20 00 15.6**	**-2.5**
CIT				*e*		20 00 27.0	
CIT				*e*		20 00 49.9	
CIT				pmax	pmax		
	comp=Z,308nm,1.8s						
TIY	**Taiyuan**	**24.39**	**276**	*e*P	**P**	**20 00 19.5**	**+0.8**
TIY				S	**S**	**20 04 41.3**	**+4.3**
TIY				pmax	pmax		
	comp=Z,28nm,0.7s						
TIY				LR	LR		
	comp=Z,2μm,14.4s						
TIY				LR	LR		
	comp=Z,2μm,15.6s						
TIY				LR	LR		
	comp=Z,3μm,17.2s						
HHC	**Hu-ho-hao-te**	**24.50**	**284**	*e*P	**P**	**20 00 17.3**	**-2.4**
HHC				pP	pP	20 00 26.6	+0.8
HHC				S	**S**	**20 04 32.8**	**-5.9**
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,380nm,5.3s						
HHC				LR	LR		
	comp=Z,940nm,13.9s						
HHC				LR	LR		
	comp=Z,4μm,16.9s						
HHC				LR	LR		
	comp=Z,5μm,15.9s						
SSLB	**Suanglung**	**24.66**	**238**	P	**P**	**20 00 18.2**	**-2.9**
SSLB				IAmb	IAmb	20 00 21.0	
	comp=Z,44nm,0.8s						
YULB	**Yu-li**	**24.71**	**237**	P	**P**	**20 00 19.7**	**-1.9**
YULB				IAmb	IAmb	20 00 25.6	
	comp=Z,34nm,0.8s						
TPUB	**Ta-pu**	**25.21**	**237**	P	**P**	**20 00 24.1**	**-2.0**
TPUB				IAmb	IAmb	20 00 28.7	
	comp=Z,70nm,1.0s						
TWG	**Pinlang**	**25.27**	**236**	P	**P**	**20 00 25.4**	**-1.2**
TWG				IAmb	IAmb	20 00 36.5	
	comp=Z,60nm,0.9s						

WHN Wuhan 25.46 259 ⇑P P 20 00 28.3 +0.1
WHN S S 20 04 53.3 -0.6
WHN pmax pmax
comp=Z,410nm,1.0s
WHN LR LR
comp=Z,2μm,14.5s
WHN LR LR
comp=Z,6μm,13.6s
WHN LR LR
comp=Z,7μm,13.9s
QZH Quanzhou 25.48 243⇑*i*P P 20 00 25.9 -2.6
QZH S S 20 04 53.6 -0.8
QZH pmax pmax
comp=Z,450nm,2.9s
QZH LR LR
comp=Z,2μm,14.7s
QZH LR LR
comp=Z,1μm,14.2s
QZH LR LR
comp=Z,3μm,13.7s
BTO Baotou 25.70 284 *e*P P 20 00 29.4 -1.0
BTO S S 20 04 50.6 -7.2
BTO LR LR
comp=N,5μm,13.3s
BTO LR LR
comp=E,15μm,17.5s
BTO LR LR
comp=Z,18μm,17.8s
BTO Baotou 25.70 284 *e*P P 20 00 29.5 -1.0
BTO S S 20 04 56.6 -1.2
BTO pmax pmax
comp=Z,91nm,1.2s
BTO pmax pmax
comp=Z,2μm,8.3s
BTO LR LR
comp=Z,5μm,12.8s
BTO LR LR
comp=Z,15μm,18.1s
BTO LR LR
comp=Z,19μm,16.2s
KNMB Chin-men Tao 25.93 243 P P 20 00 31.9 -0.7
KNMB IAmb IAmb 20 00 33.6
comp=Z,59nm,0.9s
BOD Bodaibo 26.61 324 *e*P P 20 00 38.1 -0.3
BOD pmax pmax
comp=Z,107nm,0.9s
ULN Ulaanbaatar 27.61 300*c i*P P 20 00 47.8 0.0
ULN pmax pmax
comp=Z,66nm,1.3s
ULN Ulaanbaatar 27.61 300 P P 20 00 47.7 0.0
H11N2 WAKE ISLAND Hy 28.00 128 T T 20 30 12.5
baz=318,slow=75,SNR=346
H11N1 WAKE ISLAND Hy 28.01 128 T T 20 30 12.5
baz=318,slow=75,SNR=329
H11N3 WAKE ISLAND Hy 28.02 128 T T 20 30 12.5
baz=318,slow=75,SNR=416
SONM Songino Array 28.05 300 P P 20 00 51.7 0.0
comp=Z,13nm,0.6s,baz=94,slow=8.7,SNR=128
SONM LR LR 20 12 35.3
comp=Z,2μm,19.8s,baz=74,slow=38
SONM Songino Array 28.05 300 P P 20 00 50.7 -0.9
XAN Xi'an 28.21 270 P P 20 00 52.6 -0.5
XAN pP sP 20 01 01.8 +0.1
XAN pmax pmax
comp=Z,44nm,0.5s
XAN pmax pmax
comp=Z,54nm,4.5s
XAN Xi'an 28.21 270 P P 20 00 51.4 -1.7
XAN pmax pmax
comp=Z,25nm,0.8s
XAN Xi'an 28.21 270 P P 20 00 51.4 -1.7
XAN IAmb IAmb 20 00 54.0
comp=Z,25nm,0.8s
H11S1 WAKE ISLAND Hy 28.81 129 T T 20 31 15.8
SNR=63
H11S3 WAKE ISLAND Hy 28.81 130 T T 20 31 18.1
H11S2 WAKE ISLAND Hy 28.83 129 T T 20 31 18.1
ENH Enshi 29.30 263 P P 20 01 01.6 -1.3
IRK Irkutsk 29.93 309 *e*P P 20 01 07.6 -0.6
IRK pmax pmax
comp=Z,62nm,2.2s
TLY Talaya 30.23 307 P P 20 01 10.7 -0.1
comp=Z,11nm,0.7s,baz=106,slow=7.4,SNR=18
TLY Talaya 30.23 307 *e*P P 20 01 11.4 +0.6
TLY *e* 20 02 06.8
TLY *e*S S 20 06 07.3 -1.5
TLY pmax pmax
comp=Z,60nm,1.1s
TLY MLR MLR
comp=Z,6μm,17.0s
TLY Talaya 30.23 307 P P 20 01 10.6 -0.1
TLY IAmb IAmb 20 01 14.2
comp=Z,20nm,0.9s
ZAK Zakamensk 30.30 305 *e*P P 20 01 10.9 -0.6
ZAK pmax pmax
comp=Z,23nm,1.1s
BILL Bilibino 31.34 16*de*P P 20 01 20.3 -0.1
BILL *e* 20 02 22.7
BILL *e*S S 20 06 26.8 +1.0
BILL *e*SS SnSn 20 08 15.2 +5.4
BILL pmax pmax
comp=Z,24nm,1.2s
BILL MLR MLR
comp=Z,564nm,16.0s
BILL Bilibino 31.34 16 P P 20 01 20.2 -0.1
BILL IAmb IAmb 20 01 21.6
comp=Z,21nm,1.1s
LZH Lanzhou 31.46 277 *e*P P 20 01 21.8 -0.2
LZH pP pP 20 01 26.3 -1.9
LZH sP sP 20 01 29.0 -1.6
LZH SS SS 20 08 12.1 -31
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,220nm,5.4s
LZH LR LR
comp=Z,2μm,13.0s
LZH LR LR
comp=Z,5μm,10.2s
LZH LR LR
comp=Z,3μm,14.9s
ATKA Atka Island 31.66 52 P P 20 01 23.4 +0.1
MOY Mondy 31.86 307 *e*P P 20 01 24.9 -0.4
MOY pmax pmax
comp=Z,84nm,2.7s
TIXI Tiksi 33.25 352 P P 20 01 36.5 -0.6
comp=Z,5.3nm,0.7s,baz=134,slow=6.2,SNR=16
TIXI Tiksi 33.25 352⇑*e*P P 20 01 36.3 -0.7
TIXI pmax pmax
comp=Z,30nm,0.8s
TIXI Tiksi 33.25 352 P P 20 01 36.1 -0.9
GYA Guiyang 33.35 259 ⇑P P 20 01 38.0 -0.6
GYA PP PnPn 20 02 45.8 -3.6
GYA S S 20 06 56.4 -1.7
GYA pmax pmax
comp=Z,41nm,1.2s
GYA LR LR
comp=Z,1μm,12.4s
GYA LR LR
comp=Z,1μm,15.1s
GYA LR LR
comp=Z,830nm,18.6s
CD2 Chengdu 33.45 268 P P 20 01 38.8 -0.5
CD2 PP PnPn 20 02 50.3 -0.3
CD2 S S 20 07 01.8 +2.3
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 LR LR
comp=Z,3μm,14.4s
CD2 LR LR
comp=Z,2μm,13.7s
CD2 LR LR
comp=Z,4μm,14.4s
GTA Gaotai 33.61 284 ⇑P P 20 01 41.0 +0.2
GTA pP pP 20 01 47.3 +0.3
GTA sP sP 20 01 50.6 +1.2
GTA PcP PcP 20 04 21.6 +0.9
GTA S S 20 07 03.5 +1.4
GTA ScS ScS 20 12 05.9 +0.9
GTA pmax pmax
comp=Z,75nm,1.0s
GTA pmax pmax
comp=Z,330nm,6.5s
GTA LR LR
comp=Z,1μm,17.1s
GTA LR LR
comp=Z,4μm,17.1s
GTA LR LR
comp=Z,4μm,17.4s
QIZ Qiongzhong 35.46 245 P P 20 01 57.8 +1.0
QIZ PP PP 20 03 18.4 +0.9
QIZ S S 20 07 32.3 +1.7
QIZ sS pS 20 07 37.5 -0.6
QIZ LR LR
comp=Z,1μm,12.6s
QIZ LR LR
comp=Z,1μm,16.5s
QIZ LR LR
comp=Z,2μm,16.1s
GAMB Gambell 35.85 32 P 20 02 01.0
baz=249
KMI Kunming 37.05 260 ⇑P P 20 02 10.3 -0.3
KMI pP pP 20 02 15.1 -1.8
KMI sP sP 20 02 17.5 -1.8
KMI PP PnPn 20 03 37.0 +1.6
KMI S S 20 07 54.9 -0.4
KMI SS SnSn 20 10 24.4 -5.1
KMI pmax pmax
comp=Z,33nm,1.4s
KMI pmax pmax
comp=Z,220nm,4.3s
KMI LR LR
comp=Z,740nm,18.8s
KMI LR LR
comp=Z,1μm,15.4s
KMI LR LR
comp=Z,1μm,12.4s
KMI Kunming 37.05 260 P P 20 02 10.1 -0.5
KMI pmax pmax
comp=Z,112nm,1.6s
KMI Kunming 37.05 260 P P 20 02 10.1 -0.5
TNA Tin City 38.00 30 P P 20 02 19.8 +1.9
TNA Tin City 38.00 30 P 20 02 18.8
baz=251
SLVN Son La 38.32 254 P P 20 02 21.1 0.0
ANM Nome 38.73 32 P P 20 02 25.8 +1.8
ANM pmax pmax
comp=Z,14nm,1.1s
ANM Nome 38.73 32 P P 20 02 25.8 +1.8
ANM Nome 38.73 32 P 20 02 25.1
baz=255
DGZ Jazzator, Alta 40.51 304*ce*P P 20 02 39.9 +0.7
DGZ pmax pmax
comp=Z,28nm,0.7s
RDOG Red Dog Mine 40.67 28 P P 20 02 41.2 +1.1
RDOG Red Dog Mine 40.67 28 P 20 02 40.7
baz=253
MYLDM Lahad Datu 40.88 220 P P 20 02 44.7 +2.3
MYLDM IAmb IAmb 20 03 40.3
comp=Z,53nm,1.2s
NONG Nongkai 40.90 251 P P 20 02 43.8 +1.2
comp=Z,6μmcomp=Z,25nm,0.7s
TNTI Ternate 41.15 205 P P 20 02 44.5 -0.1
comp=Z,19nm,2.0s
LKP Lekhapani 41.23 268 *e*P P 20 02 46.1 +0.9
LKP IAmb IAmb 20 03 00.4
comp=Z,84nm,0.9s
DLV T Lat 41.36 238 P P 20 02 47.4 +0.8
DLV IAmb IAmb 20 02 48.5
comp=Z,52nm,1.1s
WMQ Urumqi 41.40 295 *e*P P 20 02 47.6 +1.0
WMQ pP pP 20 02 53.3 +0.4
WMQ sP sP 20 02 56.5 +1.2
WMQ pmax pmax
comp=Z,140nm,0.9s
WMQ pmax pmax
comp=Z,500nm,4.3s
WMQ LR LR
comp=Z,1μm,15.1s
WMQ LR LR
comp=Z,1μm,13.1s
WMQ LR LR
comp=Z,1μm,14.7s
WMQ Urumqi 41.40 295 P P 20 02 46.0 -0.5
WMQ pmax pmax
comp=Z,247nm,1.6s
WMQ Urumqi 41.40 295 P P 20 02 46.0 -0.5
SIJI Sorong 41.58 199 P P 20 02 48.9 +0.8
comp=Z,13nm,1.0s,baz=175,slow=2.6,SNR=3.8
ZAA0 Zalesovo Array 41.70 311 P P 20 02 48.1 -0.6
ZAA0 IAmb IAmb 20 02 58.8
comp=Z,45nm,0.7s
ZALV Zalesovo Beam 41.70 311 P P 20 02 48.5 -0.2
comp=Z,43nm,0.6s,baz=91,slow=8.0,SNR=185
ZALV PcP PcP 20 04 45.3 +0.3
comp=Z,7.3nm,0.7s,baz=128,slow=3.3,SNR=4.0
ZALV LR LR 20 20 29.4
comp=Z,494nm,19.4s,baz=80,slow=37
ZALV Zalesovo Beam 41.70 311 *i*P P 20 02 49.0 +0.3
ZALV pmax pmax
comp=Z,43nm,0.6s
ZALV Zalesovo Beam 41.70 311 P P 20 02 47.3 -1.4
JAY Jayapura 41.73 184 P P 20 02 50.2 +0.8
comp=Z,4.2nm,0.9s,baz=3.2,slow=18,SNR=1.5
JAY LR LR 20 17 21.5
comp=Z,322nm,21.7s,baz=352,slow=32
NRIK Noril'sk 41.94 334 P P 20 02 50.3 -0.3
comp=Z,6.4nm,0.5s,baz=112,slow=7.8,SNR=14
NRIK Noril'sk 41.94 334 *i*P P 20 02 50.2 -0.3
NRIK pmax pmax
comp=Z,24nm,1.3s
NRIK Noril'sk 41.94 334 P P 20 02 50.1 -0.5
KHON Khomkaen 42.25 249 P P 20 02 54.4 +0.8
comp=Z,41nm,0.6s
KMSI Cibinong 42.55 210 P P 20 02 58.6 +2.6
comp=Z,3μmcomp=Z,45nm,0.8s
ZSN Zaisan 42.55 301⇑*i*P P 20 02 56.5 +0.6
comp=Z,55nm,1.5s,baz=301
ZSN Zaisan 42.55 301*c i*P P 20 02 56.4 +0.6
ZSN pmax pmax
comp=Z,55nm,1.5s
ZIRO ZIRO 42.69 270 *e*P P 20 02 57.7 +0.3
ZIRO IAmb IAmb 20 03 00.6
comp=Z,58nm,0.9s
MOKO MOKOCHONG 42.77 268 *e*P P 20 02 58.6 +0.6
MOKO IAmb IAmb 20 03 01.5
comp=Z,118nm,0.7s
UTTA Uttaradit 43.01 253 P P 20 03 00.7 +0.9
comp=Z,208nmcomp=Z,23nm,1.0s
CHAI Chaiyaphum 43.14 249 P P 20 03 01.3 +0.4
comp=Z,333nmcomp=Z,33nm,0.9s
LAMP Lampang 43.21 254 P P 20 03 02.4 +1.0
comp=Z,312nmcomp=Z,31nm,0.7s
KOHI KOHIMA 43.39 267 *e*P P 20 03 02.5 -0.6
KOHI IAmb IAmb 20 03 05.7
comp=Z,91nm,0.9s
MRSI Marisa 43.45 212 P P 20 03 04.4 +1.0
comp=Z,632nmcomp=Z,30nm,1.0s
CMMT Chiang Mai 43.55 255 P P 20 03 03.5 -0.7
comp=Z,11nm,0.7s
CHTO Chiang Mai 43.55 255 P P 20 03 04.2 0.0
CHTO pmax pmax
comp=Z,17nm,0.8s
CHTO Chiang Mai 43.55 255 P P 20 03 04.2 0.0
A21K Barrow 43.66 24 P P 20 03 04.3 -0.1
A21K IAmb IAmb 20 03 15.1
comp=Z,37nm,0.8s
A21K Barrow 43.66 24 P 20 03 05.1
baz=256
CM09 Chiang Mai Arr 43.74 255 P P 20 03 06.0 +0.3
comp=Z,67nmcomp=Z,12nm,0.8s
LSA Lhasa 43.76 274 *i* P P 20 03 07.7 +1.4
SNR=17
LSA Lhasa 43.76 274 P P 20 03 06.1 -0.2
LSA pmax pmax
comp=Z,18nm,0.8s
LSA Lhasa 43.76 274 P 20 03 06.1 -0.2
CM31 Chiang Mai Arr 43.77 255 P P 20 03 06.1 +0.1
CMAR Chiang Mai Arr 43.77 255 P P 20 03 06.1 +0.1
comp=Z,4.0nm,0.7s,baz=45,slow=7.2,SNR=64
CMAR LR LR 20 22 33.6
comp=Z,272nm,18.2s,baz=93,slow=38
CMAR Chiang Mai Arr 43.77 255 *i* P P 20 03 06.3 +0.3
CMAR pmax pmax
comp=Z,4.0nm,0.7s
IMAR Indian Mountai 43.79 32 P P 20 03 06.2 +0.6
SUKH Sukhothai 43.86 253 P P 20 03 07.8 +1.1
comp=Z,24nm,0.7s
KDAK Kodiak Island 44.24 44 P P 20 03 10.4 +1.1
comp=Z,17nm,0.9s,baz=302,slow=12,SNR=7.6
KDAK Kodiak Island 44.24 44⇓*e*P P 20 03 09.6 +0.4
KDAK pmax pmax
comp=Z,22nm,0.9s
KDAK Kodiak Island 44.24 44 P P 20 03 10.1 +0.8
CHUM Lake Minchumin 44.26 35 P 20 03 10.3
baz=268
SPCR Spurr Chakacha 44.28 39 P 20 03 10.5
baz=271
PPLA Purkeypile 44.29 36 P 20 03 10.0
baz=269
SRAK Srakaew 44.35 247 P P 20 03 08.6 -2.0
comp=Z,2μmcomp=Z,178nm,0.9s
MK31 Makanchi Array 44.41 301*c i*P P 20 03 10.5 -0.4
MK31 Makanchi Array 44.41 301 P P 20 03 10.9 +0.1
MK31 IAmb IAmb 20 03 21.0
comp=Z,39nm,0.8s
MKAR Makanchi Array 44.41 301 P P 20 03 10.8 0.0
comp=Z,19nm,0.7s,baz=84,slow=9.4,SNR=184
MKAR LR LR 20 22 32.7
comp=Z,1μm,18.2s,baz=72,slow=37
MKAR Makanchi Array 44.41 301 P P 20 03 09.9 -1.0
LUWI Luwuk 44.49 211 P P 20 03 12.0 +0.3
comp=Z,982nmcomp=Z,27nm,1.0s
MAKZ Makanchi 44.62 301 P P 20 03 12.0 -0.5
MAKZ pmax pmax
comp=Z,45nm,0.9s
MAKZ Makanchi 44.62 301 P P 20 03 12.0 -0.5
MHMT Maesarieng 44.70 255 P P 20 03 13.0 -0.4
comp=Z,34nm,0.8s
BPAW Bear Paw Mtn. 44.85 34 P 20 03 15.8
baz=269
KTH Kantishna Hill 44.88 35 P P 20 03 15.4 +1.0
KTH IAmb IAmb 20 03 34.1
comp=Z,22nm,1.0s
SUA Susitna One 44.98 38 P 20 03 16.9
baz=272
MLY Manley 44.98 33 P P 20 03 16.4 +1.2
MLY IAmb IAmb 20 04 13.1
comp=Z,72nm,2.0s
MLY Manley 44.98 33 P 20 03 16.9
baz=268
GUWA GUWAHATI 45.02 269⇑*e*P P 20 03 16.0 +0.1
GUWA IAmb IAmb 20 03 20.2
comp=Z,23nm,0.6s
SHL Shillong 45.19 268 P P 20 03 16.7 -0.8
SHL pmax pmax
comp=Z,28nm,1.1s
SHL Shillong 45.19 268 P P 20 03 16.7 -0.8
SHL IAmb IAmb 20 03 45.8
comp=Z,28nm,1.1s
SHL Shillong 45.19 268 P P 20 03 20.4 +2.9
SNR=6.2
UTHA Uthaitani 45.22 251 P P 20 03 21.5 +3.9
comp=Z,20nm,0.7s
UMPA Umpang Tak 45.23 252 P P 20 03 21.6 +3.9
COLD Coldfoot 45.30 30 P P 20 03 18.9 +1.2
COLD Coldfoot 45.30 30 P 20 03 18.5
baz=267
RC01 Rabbit Creek A 45.49 39 P 20 03 20.2
baz=273
BWN Browne 45.52 34 P P 20 03 21.3 +1.9
O22K Cooper Landing 45.53 40 P 20 03 20.9
baz=274
I23K Minto, Yukon-K 45.57 33 P P 20 03 21.2 +1.5
I23K Minto, Yukon-K 45.57 33 P 20 03 19.9
baz=270
TOLK Toolik Lake Re 45.63 28 P P 20 03 21.9 +1.6
TOLK Toolik Lake Re 45.63 28 P 20 03 20.9
baz=266
NEA2 Nenana 45.69 34 P P 20 03 22.2 +1.4
NEA2 IAmb IAmb 20 03 37.0
comp=Z,22nm,0.9s
NEA2 Nenana 45.69 34 P 20 03 21.5
baz=270
PMR Palmer 45.75 38 P 20 03 21.3
baz=273
MCK McKinley 45.76 35 P P 20 03 22.7 +1.4
MCK pmax pmax
comp=Z,17nm,1.0s
MCK McKinley 45.76 35 P P 20 03 22.7 +1.4
MCK IAmb IAmb 20 03 39.3
comp=Z,17nm,1.0s
MCK McKinley 45.76 35 P 20 03 21.0
baz=271
RND Reindeer 45.80 35 P P 20 03 22.5 +0.8
RND pmax pmax
comp=Z,16nm,1.2s
RND Reindeer 45.80 35 P P 20 03 22.5 +0.8
GHO Glory Hole Cre 45.84 38 P P 20 03 23.0 +0.9
KURK Kurchatov 45.92 307 P P 20 03 23.2 +0.5
WAT2 Susitna Watana 45.94 36 P 20 03 23.0
baz=272
SAIH SAIHA 45.97 264 *e*P P 20 03 22.8 -0.8
SAIH IAmb IAmb 20 03 28.8
comp=Z,84nm,0.6s
KURBB Kurchatov Arra 45.99 307 P P 20 03 23.1 -0.2
comp=Z,63nm,0.7s,baz=80,slow=8.3,SNR=480
MDM Murphy Dome 46.05 33 P P 20 03 24.7 +1.1
KNK Knik Glacier 46.08 38 P 20 03 24.3
baz=274
WRH Wood River Hil 46.12 34 P P 20 03 25.1 +1.0
SML Sawmill 46.12 38 P P 20 03 24.6 +0.4
SML Sawmill 46.12 38 P 20 03 24.0
baz=274
TCOL CIGO, UAF Yank 46.21 33 P P 20 03 25.9 +1.2
TCOL IAmb IAmb 20 03 49.2
comp=Z,21nm,0.8s
COLA College 46.21 33 P P 20 03 25.9 +1.1
COLA pmax pmax
comp=Z,20nm,0.8s
COLA College 46.21 33 P P 20 03 25.9 +1.1
COLA IAmb IAmb 20 03 48.7
comp=Z,20nm,0.8s
CCB Clear Creek Bu 46.24 34 P P 20 03 26.3 +1.3
POKR Poker Plat Res 46.38 33 P P 20 03 27.9 +1.7
POKR IAmb IAmb 20 03 39.5
comp=Z,23nm,0.9s
POKR Poker Plat Res 46.38 33 P 20 03 27.0
baz=271
HDA Harding Lake 46.61 34 P 20 03 28.4
baz=272
HDA P 20 03 28.4
baz=272
IL31 46.63 34 P P 20 03 28.8 +0.8
IL31 IAmb IAmb 20 03 44.0
comp=Z,25nm,1.1s
ILAR Eielson Array 46.63 34 P P 20 03 29.1 +1.0
comp=Z,4.5nm,0.8s,baz=267,slow=6.4,SNR=38
ILAR Eielson Array 46.63 34 P P 20 03 28.2 +0.1
M24K Tolsona, Glenn 47.11 37 P 20 03 32.9
baz=275
PRP Porcupine Dome 47.17 32 P P 20 03 33.6 +1.1
PRP IAmb IAmb 20 03 47.9
comp=Z,15nm,0.8s
PRP Porcupine Dome 47.17 32 P 20 03 33.3
baz=273
FYU Fort Yukon 47.25 31 P P 20 03 35.2 +2.3
FYU IAmb IAmb 20 03 56.5
comp=Z,21nm,0.8s
KLU Klutina 47.29 38 P P 20 03 34.8 +1.4
KLU IAmb IAmb 20 03 53.0
comp=Z,29nm,1.1s
KLU Klutina 47.29 38 P 20 03 34.1
baz=276
SHLS Shalkode 47.34 296⇑*i*P P 20 03 31.7 -2.5
comp=Z,60nm,2.5s,baz=296
SHLS Shalkode 47.34 296*c i*P P 20 03 31.6 -2.5
SHLS pmax pmax
comp=Z,60nm,2.5s
BMAR Burnt Mountain 47.48 30 P P 20 03 35.7 +0.9
TDK Taldyqorghan 47.50 299 *e*P P 20 03 35.6 +0.4
baz=299
TDK *e*S S 20 10 30.8 +2.2
baz=299
TDK LR LR 20 23 26.9
comp=Z,990nm,14.1s,baz=299
TDK Taldyqorghan 47.50 299 *e*P P 20 03 35.6 +0.4
TDK *e*S S 20 10 30.7 +2.2
TDK MLR MLR
comp=Z,989nm,14.0s
TTSI Tana Toraja 47.52 213 P P 20 03 37.1 +1.5
TAPN Taplejung 47.53 273 *e*P P 20 03 36.5 +0.5
UZB Uzynbulak 47.65 297⇑*i*P P 20 03 36.5 -0.1
comp=Z,22nm,1.5s,baz=296
UZB *e*S S 20 10 32.5 +1.5
baz=296
UZB Uzynbulak 47.65 297*c i*P P 20 03 36.4 -0.1

UZB eS S 20 10 32.5 +1.5
UZB pmax pmax
comp=Z,22nm,1.5s
KPKS Kokpek 47.78 297⇑ *i* P P **20 03 37.7 +0.1**
comp=Z,30nm,1.4s,baz=297
KPKS eS S **20 10 34.6 +1.8**
baz=297
KPKS Kokpek 47.78 297*c i* P P **20 03 37.6 +0.1**
KPKS eS S **20 10 34.5 +1.8**
KPKS pmax pmax
comp=Z,30nm,1.4s
SCRK Sand Creek 47.94 34 P P **20 03 39.0 +0.6**
SCRK IAmb IAmb 20 04 02.3
comp=Z,25nm,1.2s
SCRK Sand Creek 47.94 34 P 20 03 38.3
baz=275
MTKI Muara Teweh, K 47.95 220 P P **20 03 39.3 +0.4**
comp=Z,2µmcomp=Z,24nm,0.5s
ODAN Odare 48.02 273 *eP* P **20 03 39.4 -0.4**
SATY Saty 48.10 297⇑ *i* P P **20 03 40.3 +0.2**
comp=Z,45nm,1.8s,baz=297
SATY Saty 48.10 297*c i* P P **20 03 40.2 +0.2**
SATY pmax pmax
comp=Z,45nm,1.8s
MENT Mentasta 48.16 36 P P **20 03 42.3 +2.2**
MENT IAmb IAmb 20 03 50.9
comp=Z,11nm,0.8s
JIRN Jiri 48.56 274 *eP* P **20 03 44.3 +0.3**
comp=Z,62nm,0.6s
RAMN Ramite 48.59 273 *eP* P **20 03 44.2 +0.1**
comp=Z,129nm,0.7s
GUN Gumba 48.68 275 *eP* P **20 03 45.2 +0.3**
comp=Z,167nm,0.6s
MCARA McCarthy VSAT 48.69 38 P 20 03 44.2
baz=278
K27K Chicken 48.77 34 P P **20 03 45.9 +1.2**
K27K IAmb IAmb 20 04 01.9
comp=Z,23nm,1.0s
K27K Chicken 48.77 34 P 20 03 45.4
baz=277
MDOK Medeo 49.01 297 *i* P P **20 03 47.5 +0.4**
baz=297
MDOK eS S **20 10 52.4 +2.1**
baz=297
MDOK Medeo 49.01 297 *i* P P **20 03 47.4 +0.4**
MDOK eS S **20 10 52.3 +2.1**
BCAR Beaver Creek A 49.02 36 P P **20 03 48.0 +1.2**
EGAK Eagle 49.07 33 P P **20 03 48.6 +1.6**
EGAK IAmb IAmb 20 04 02.5
comp=Z,16nm,0.8s
KKN Kakani 49.20 275 *eP* P **20 03 48.7 -0.1**
comp=Z,124nm,0.7s
PKI Pulchoki 49.20 275 *eP* P **20 03 48.8 -0.2**
comp=Z,34nm,0.6s
PKIN Phulchoki 49.21 275 *eP* P **20 03 48.8 -0.1**
comp=Z,26nm,0.5s
KAPI Kappang 49.32 212 P P **20 03 50.0 +0.5**
comp=Z,4.5nm,0.5s,baz=86,slow=13,SNR=3.0
KAPI LR LR 20 25 45.2
comp=Z,172nm,18.5s,baz=26,slow=37
KAPI Kappang 49.32 212 P P **20 03 50.0 +0.5**
DMN Daman 49.42 275 *eP* P **20 03 50.5 0.0**
comp=Z,87nm,1.1s
GKN Gorkha 49.59 276 *eP* P **20 03 51.6 -0.1**
comp=Z,87nm,0.7s
ULHL Ulahol 49.88 296 P P **20 03 54.0 +0.1**
SNR=8.4
TKM2 Tokmak 2 50.09 297 P P **20 03 56.2 +0.8**
SNR=40
TKM2 Tokmak 2 50.09 297 *i* P P **20 03 55.8 +0.4**
TKM2 pmax pmax
comp=Z,48nm,0.8s
DANN Dangsing 50.10 277 *eP* P **20 03 56.4 +0.7**
comp=Z,442nm,0.6s
BRVK Borovoye 50.39 311*c i* P P **20 03 57.5 +0.3**
BRVK pmax pmax
comp=Z,38nm,0.9s
BRVK Borovoye 50.39 311 P P **20 03 56.9 -0.4**
KOLN Koldanda 50.51 276 *eP* P **20 03 59.0 +0.3**
comp=Z,214nm,1.1s
SGDS Sogindy 50.57 298 *eP* P **20 03 58.7 -0.2**
comp=Z,39nm,2.4s,baz=298
SGDS Sogindy 50.57 298 *eP* P **20 03 58.6 -0.2**
SGDS pmax pmax
comp=Z,39nm,2.4s
KBK Karagaybulak 50.63 297 P P **20 03 60.0 +0.5**
SNR=39
CHMS Chumysh 50.65 298 P P **20 03 59.4 0.0**
SNR=5.9
EPYK Eagle Plains 50.67 31 P P **20 04 00.3 +1.1**
EPYK IAmb IAmb 20 04 12.6
comp=Z,28nm,0.9s
EPYK Eagle Plains 50.67 31 P 20 04 00.2
baz=280
USP Ospenovka 50.73 298 P P **20 04 00.2 +0.2**
SNR=15
BOK Bokaro 50.76 270 *eP* P **20 04 00.2 -0.3**
BOK IAmb IAmb 20 04 01.4
comp=Z,14nm,0.8s
FRU1 Bishkek 50.80 298 P P **20 04 00.7 +0.2**
FRU1 pmax pmax
comp=Z,27nm,0.9s
FRU1 Bishkek 50.80 298 P P **20 04 00.7 +0.2**
FRU1 IAmb IAmb 20 04 11.2
comp=Z,27nm,0.9s
PYUN Piuthan 50.81 277 *eP* P **20 04 01.3 +0.3**
comp=Z,174nm,0.8s
HNR Honiara 50.83 159 LR LR 20 23 27.4
comp=Z,301nm,21.5s,baz=326,slow=34
AAK Ala-Archa 50.95 297 P P **20 04 01.7 -0.2**
SNR=11
AAK Ala-Archa 50.95 297 *i* P P **20 04 02.0 +0.1**
SNR=18
AAK Ala-Archa 50.95 297*ce* P P **20 04 01.9 +0.1**
AAK pmax pmax
comp=Z,51nm,1.4s
AAK Ala-Archa 50.95 297 P P **20 04 01.5 -0.4**
KSH Kashi 51.08 293 P P **20 04 06.8 +4.0**
KSH sP pwP 20 04 15.8 +2.5
KSH S S **20 11 24.5 +5.4**
KSH sS sS 20 11 32.8 +2.8
KSH pmax pmax
comp=Z,15nm,0.8s
KSH pmax pmax
comp=Z,170nm,4.7s
KSH LR LR
comp=Z,820nm,10.1s
KSH LR LR
comp=Z,2µm,14.5s
KSH LR LR
comp=Z,3µm,13.1s
HYT Haines Junctio 51.42 38 P P **20 04 07.0 +2.0**
HYT IAmb IAmb 20 04 26.4
comp=Z,32nm,1.0s
EKS2 Erkin-Say 51.44 298 P P **20 04 05.5 +0.1**
SNR=17
INK Inuvik 51.55 28 P P **20 04 06.8 +1.1**
comp=Z,6.2nm,0.7s,baz=294,slow=6.9,SNR=23
INK LR LR 20 30 13.6
comp=Z,226nm,18.2s,baz=286,slow=41
INK Inuvik 51.55 28 P P **20 04 07.0 +1.3**
INK pmax pmax
comp=Z,13nm,0.6s
INK Inuvik 51.55 28 P P **20 04 07.0 +1.3**
INK IAmb IAmb 20 04 17.3
comp=Z,13nm,0.6s
DGPR DIGLIPUR 51.57 254 *eP* P **20 04 07.2 +0.7**
DGPR IAmb IAmb 20 04 14.4
comp=Z,27nm,0.7s
MMRI Maumere 51.69 207 P P **20 04 07.8 +0.5**
comp=Z,28nm,1.0s
AML Almayashu 51.69 297 P P **20 04 08.3 +0.7**
SNR=21
KK31 Karatay Array 53.50 299 P P **20 04 20.0 -0.6**
KK31 pmax pmax
comp=Z,23nm,1.0s
KK31 Karatay Array 53.50 299 P P **20 04 20.0 -0.6**
KK31 IAmb IAmb 20 04 30.7
comp=Z,22nm,1.0s
KKAR Karatay Array 53.50 299 P P **20 04 19.9 -0.7**
KKAR pmax pmax
comp=Z,23nm,1.0s
KKAR Karatay Array 53.50 299 P P **20 04 19.9 -0.7**
KKAR IAmb IAmb 20 04 30.7
comp=Z,22nm,1.0s
PPBI Pangkal Pinang 53.74 229 P P **20 04 23.2 +0.6**

SMLA Simla 53.81 283 *eP* P **20 04 22.8 -0.1**
SMLA IAmb IAmb 20 04 28.8
comp=Z,87nm,0.7s
PSI Prapat 54.45 240 P P **20 04 27.9 -0.1**
comp=Z,7.9nm,0.6s,baz=359,slow=2.6,SNR=6.6
RPSI Rantau Prapat 54.53 240 P P **20 04 27.6 -0.7**
RPSI IAmb IAmb 20 04 29.3
comp=Z,14nm,1.0s
SVE Sverdlovsk 54.59 318*d i* P P **20 04 29.1 +0.8**
SVE pmax pmax
comp=Z,118nm,0.9s
SVE MLR MLR
comp=Z,4µm,14.0s
C36M Paulatuk 54.62 26 P P **20 04 28.6 +0.4**
C36M IAmb IAmb 20 04 48.9
comp=Z,38nm,1.5s
C36M Paulatuk 54.62 26 P 20 04 28.9
baz=288
BKNI Bangkinang 54.92 236 P P **20 04 32.3 +1.1**
BKNI Bangkinang 54.92 236 P P **20 04 32.1 +0.9**
comp=Z,1µmcomp=Z,116nm,1.0s
GAR Garm 55.30 295 P P **20 04 33.4 -0.5**
NIL Nilore 55.56 288 P P **20 04 36.4 +0.7**
NIL pmax pmax
comp=Z,68nm,0.9s
NIL Nilore 55.56 288 P P **20 04 36.4 +0.7**
SDSI Sungai Dareh 55.64 234 P P **20 04 35.8 -0.5**
comp=Z,1µmcomp=Z,81nm,1.0s
DLBC Dease Lake 55.75 39 P P **20 04 39.6 +2.9**
DLBC IAmb IAmb 20 04 51.0
comp=Z,15nm,0.9s
ARU Arti 55.81 318*c i* P P **20 04 37.3 +0.3**
ARU 20 06 44.2
ARU S S **20 12 27.5 +5.0**
ARU SS SS **20 16 09.3 +1.7**
ARU pmax pmax
comp=Z,107nm,1.3s
ARU MLR MLR
comp=Z,3µm,15.0s
ARU Arti 55.81 318 P P **20 04 37.0 -0.1**
KNRA Kununurra 56.45 197 P P **20 04 43.2 +1.2**
KNRA IAmb IAmb 20 04 46.2
comp=Z,13nm,0.8s
LHSI Lahat 56.62 230 P P **20 04 43.5 +0.2**
comp=Z,83nm,1.2s
TNG Tangerang 56.72 226 P P 20 04 33.1 -11
BHPL Bhopal 57.61 275 *eP* P **20 04 48.5 -2.0**
BHPL IAmb IAmb 20 04 49.8
comp=Z,24nm,1.1s
EUNU Eureka 57.66 9 P P **20 04 49.6 -0.3**
EUNU IAmb IAmb 20 05 09.0
comp=Z,63nm,1.9s
ABKAR Akbulak array 57.80 310 P P **20 04 50.8 -0.5**
ABKAR Akbulak array 57.80 310 P P **20 04 50.0 -1.3**
KBL Kabul 58.23 291 P P **20 04 53.8 -1.0**
KBL pmax pmax
comp=Z,37nm,1.0s
KBL Kabul 58.23 291 P P **20 04 53.8 -1.0**
KBL Kabul 58.23 291 P P **20 04 54.6 -0.2**
SNR=25
SPA0 Spitsbergen Ar 58.61 349 *eP* P **20 04 57.4 +0.8**
NOR Nord 58.87 357 *i* P P **20 04 58.6 +0.3**
NOR IAmb IAmb 20 04 59.4
comp=Z,4.3nm,0.7s
NOR Nord 58.87 357 *i* P P **20 04 58.6 +0.3**
NOR pmax pmax
comp=Z,4.0nm,0.7s
WB0 Warramunga Arr 59.42 190 P P **20 05 02.1 -0.7**
WB0 IAmb IAmb 20 05 05.7
comp=Z,12nm,0.7s
KIRV Kirov 59.47 323*c i* P P **20 05 02.7 0.0**
FITZ Fitzroy Crossi 59.55 200 P P **20 05 03.8 +0.1**
FITZ IAmb IAmb 20 05 49.1
comp=Z,34nm,1.7s
WRAB Tennant Creek 59.59 190⇑ *eP* P **20 05 02.6 -1.3**
WRAB pmax pmax
comp=Z,8.0nm,0.7s
WRAB Tennant Creek 59.59 190 P P **20 05 03.8 -0.1**
WRAB IAmb IAmb 20 05 06.9
comp=Z,9.3nm,0.8s
WR0 Warramunga Arr 59.59 190 P P **20 05 03.5 -0.4**
WR0 IAmb IAmb 20 05 06.8
comp=Z,9.3nm,0.8s
WB2 Warramunga Arr 59.59 190 P P **20 05 04.2 +0.1**
WB2 IAmb IAmb 20 05 07.0
comp=Z,10nm,0.8s
WRA Warramunga Arr 59.60 190 P P **20 05 03.5 -0.6**
comp=Z,10nm,0.8s,baz=8.8,slow=6.9,SNR=32
WRA Warramunga Arr 59.60 190 *i* P P **20 05 06.1 +2.1**
WRA pmax pmax
comp=Z,10.0nm,0.8s
WRA Warramunga Arr 59.60 190 P P **20 05 03.1 -1.0**
PRGR Permogore 59.79 327 *eP* P **20 05 04.6 -0.3**
PRGR *e* 20 05 13.8
PRGR pmax pmax
comp=Z,42nm,1.0s
RES Resolute Bay 59.94 15 P P **20 05 05.9 +0.1**
comp=Z,14nm,0.9s,baz=310,slow=6.4,SNR=31
RES Resolute Bay 59.94 15 P P **20 05 05.6 -0.1**
RES IAmb IAmb 20 05 19.3
comp=Z,22nm,0.8s
HYB Hyderabad 60.00 268 *i* P P **20 05 05.0 -2.1**
HYB *e* 20 05 15.0
HYB *e*PcP PcP **20 05 52.0 -1.0**
HYB Hyderabad 60.00 268 *eP* P **20 05 05.7 -1.3**
HYB IAmb IAmb 20 05 06.5
comp=Z,15nm,0.8s
YKA Yellowknife Ar 60.95 31 P P **20 05 13.4 +0.6**
comp=Z,2.5nm,0.7s,baz=303,slow=6.3,SNR=29
YKA Yellowknife Ar 60.95 31 *i* P P **20 05 13.6 +0.8**
YKA pmax pmax
comp=Z,3.0nm,0.7s
APA Apatity 61.31 336⇓ *i* P P 20 05 24.0 +8.8
APA pmax pmax
comp=Z,17nm,1.0s
HAMF Hammerfest 62.22 341 *eP* P **20 05 22.2 +0.9**
ARA0 ARCESS Array S 62.46 340 *eP* P **20 05 23.4 +0.5**
ARCES ARCESS Array B 62.46 340 P P **20 05 22.4 -0.6**
comp=Z,7.5nm,0.9s,baz=41,slow=6.4,SNR=6.2
ARCES ARCESS Array B 62.46 340 P P **20 05 22.1 -0.8**
ARCES IAmb IAmb 20 05 33.8
comp=Z,13nm,1.1s
TULEG Thule 62.59 8 *i* P P **20 05 23.0 -0.7**
TULEG IAmb IAmb 20 05 24.5
comp=Z,10nm,0.7s
TULEG Thule 62.59 8 P P **20 05 23.2 -0.5**
TULEG IAmb IAmb 20 05 24.1
comp=Z,12nm,0.8s
KLMR Klimovskoe 62.75 328 *eP* P **20 05 21.9 -3.0**
KLMR *e* 20 07 38.6
KLMR pmax pmax
comp=Z,70nm,1.5s
KLMR Klimovskoe 62.75 328 *eP* P **20 05 22.0 -3.0**
KLMR AMP 20 05 35.5
comp=Z,70nm,1.5s
KLMR *e*PP PP **20 07 38.6 -4.0**
KLMR LQ LQ 20 27 34.7
KLMR LQ LQ 20 27 34.7
KLMR LR LR 20 31 47.9
POO Poona 63.01 272 *eP* P **20 05 24.0 -3.4**
NEEM North Greenlan 63.14 4 *i* P P **20 05 27.8 0.0**
NEEM IAmb IAmb 20 05 28.7
comp=Z,11nm,0.9s
HRA Herat 63.19 294 P P **20 05 28.4 -0.3**
HRA IAmb IAmb 20 05 38.8
comp=Z,13nm,0.9s
BELG Belogornoye 63.31 317*c i* P P **20 05 28.8 0.0**
BELG pmax pmax
comp=Z,10.0nm,0.9s
AS31 Alice Springs 63.32 190 P P **20 05 30.1 +1.0**
ASAR Alice Springs 63.32 190 P P **20 05 29.2 +0.1**
comp=Z,4.8nm,0.7s,baz=14,slow=6.2,SNR=25
ASAR LR LR 20 33 38.1
comp=Z,113nm,20.1s,baz=7.5,slow=37
ASAR Alice Springs 63.32 190 P P **20 05 28.5 -0.7**
KTK1 Kautokeino 63.41 340 *eP* P **20 05 29.9 +0.6**
DAG Danmarks Havn 63.63 356 *i* P P **20 05 30.0 -0.6**
DAG IAmb IAmb 20 05 32.4
comp=Z,7.9nm,1.2s
DAG Danmarks Havn 63.63 356 *i* P P **20 05 30.0 -0.6**
DAG pmax pmax
comp=Z,8.0nm,1.2s
JETT Jettan, Norway 63.78 341 *eP* P **20 05 32.6 +0.8**
TRO Tromso 64.10 341 *eP* P **20 05 34.3 +0.6**
GEYT Alibeck 64.25 299 P P **20 05 34.7 -0.6**
comp=Z,9.8nm,0.7s,baz=17,slow=1.5,SNR=22
GEYT LR LR 20 35 23.0
comp=Z,379nm,19.0s,baz=80,slow=38
GYA0B ALIBECK ARRAY 64.25 299 P P **20 05 34.8 -0.5**
GYA0B IAmb IAmb 20 05 56.3
comp=Z,15nm,0.8s
D03D Eldon 64.28 49 P 20 05 37.6
baz=301
DZM Mont Dzumac 64.71 157 LR LR 20 29 50.4
comp=Z,250nm,20.6s,baz=20,slow=32
E04D Cinebar 65.09 49 P 20 05 40.6
baz=302
B08A Colville Reser 65.99 46 P P **20 05 48.4 +1.9**
B08A IAmb IAmb 20 05 58.3
comp=Z,17nm,1.1s
I03D Drain, OR 66.12 52 P 20 05 47.3
baz=302
DBG Daneborg 66.13 355 *i* P P **20 05 46.2 -0.7**
DBG IAmb IAmb 20 05 47.5
comp=Z,2.4nm,1.0s
STEI Steigen 66.27 341 *eP* P **20 05 48.1 +0.3**
H04A Detroit Lake 66.30 51 P P **20 05 51.3 +2.8**
H04A IAmb IAmb 20 06 00.8
comp=Z,20nm,0.9s
MOS Moscow 66.44 324 *eP* P **20 05 47.4 -1.7**
MOS *e* 20 05 58.0
MOS *e* 20 08 20.7
MOS pmax pmax
comp=Z,41nm,1.2s
MOS MLR MLR
comp=N,900nm,15.0s
MOS MLR MLR
comp=Z,1µm,15.0s
MOS MLR MLR
comp=E,600nm,14.0s
G05D Wamic, OR 66.53 50 P 20 05 51.0
baz=303
LOF Lofoten 66.53 342 *eP* P **20 05 50.3 +0.8**
I04A Tendick Farm, 66.65 52 P 20 05 51.7
baz=303
E07A Sunnyside 66.67 48 P P **20 05 51.8 +1.0**
C09A Chrisman Ranch 66.89 47 P P **20 05 53.2 +1.0**
C09A IAmb IAmb 20 06 04.6
comp=Z,21nm,0.9s
D08A Wollman Farm, 66.94 47 P P **20 05 53.8 +1.3**
D08A IAmb IAmb 20 06 04.3
comp=Z,20nm,1.1s
F07A Phinny Hill Vi 66.99 49 P P **20 05 53.5 +0.6**
F07A IAmb IAmb 20 06 05.2
comp=Z,20nm,1.0s
VRH Novokhoyorsk 67.04 318 *eP* P **20 05 52.2 -0.8**
VRH *e**SP pP **20 06 00.9 +1.3**
VRH pmax pmax
comp=Z,30nm,1.1s
VRH MLR MLR
comp=Z,2µm,14.0s
J04D Umpqua Nationa 67.13 52 P 20 05 55.2
baz=303
NEW Newport 67.28 46 P P **20 05 56.3 +1.6**
comp=Z,6.5nm,1.1s,baz=323,slow=6.3,SNR=4.7
NEW Newport 67.28 46 P P **20 05 56.1 +1.4**
NEW pmax pmax
comp=Z,17nm,1.1s
NEW Newport 67.28 46 P P **20 05 56.1 +1.4**
NEW IAmb IAmb 20 06 06.5
comp=Z,17nm,1.1s
OBN Obninsk 67.29 323*ce* P P **20 05 54.4 -0.2**
OBN *i* 20 06 04.2
OBN *i* 20 08 25.0
OBN *e*S S **20 14 53.8 +5.8**
OBN *e*SS SS **20 19 07.7 +0.7**
OBN pmax pmax
comp=Z,33nm,1.7s
OBN MLR MLR
comp=Z,1µm,16.0s
OBN Obninsk 67.29 323 P P **20 05 53.8 -0.8**
PINE Pine Mountain 67.54 51 P P **20 05 58.2 +1.6**
L04D Klamath Falls 67.57 53 P 20 05 57.6
baz=303
YBH Yreka Blue Hor 67.58 54 P P **20 05 58.6 +1.8**
comp=Z,2.5nm,0.7s,baz=341,slow=3.7,SNR=4.5
YBH Yreka Blue Hor 67.58 54 P P **20 05 59.2 +2.4**
FIA1 FINESS Array S 67.59 333 P P **20 05 56.4 0.0**
FINES FINESS Array B 67.59 333 P P **20 05 56.4 +0.1**
comp=Z,15nm,0.7s,baz=49,slow=8.6,SNR=36
FINES LR LR 20 38 26.7
comp=Z,2µm,18.3s,baz=33,slow=39
FINES FINESS Array B 67.59 333 P P **20 05 56.0 -0.4**
J05D Fort Rock, OR 67.64 52 P 20 05 58.5
baz=304
LPSR Galich'ya Gora 67.65 320 *eP* P **20 05 56.8 -0.1**
LPSR *e**SP sP **20 06 05.8 -0.1**
LPSR pmax pmax
comp=Z,20nm,0.9s
LPSR MLR MLR
comp=Z,2µm,13.0s
E09A Wood Farm, Sta 67.68 48 P P **20 05 59.5 +2.3**
E09A IAmb IAmb 20 06 09.3
comp=Z,17nm,1.0s
MOR8 Moi Rana 67.81 340 *eP* P **20 05 56.8 -0.9**
G08A Pilot Rock 67.89 49 P P **20 06 00.8 +2.1**
KONS Konsvik 67.90 341 *eP* P **20 05 59.1 +0.9**
N02D Trinity Center 68.00 55 P 20 06 02.6
baz=304
M04C Macdoel 68.10 53 P 20 06 02.5
baz=304
K05A Summer Lake 68.16 52 P P **20 06 04.2 +3.6**
WDC Whiskeytown Da 68.32 55 P P **20 06 03.0 +1.7**
WDC pmax pmax
comp=Z,7.0nm,0.8s
WDC Whiskeytown Da 68.32 55 P P **20 06 03.0 +1.7**
VSR Storozhevoye 68.34 319 *eP* P **20 06 00.7 -0.6**
VSR *e**SP sP **20 06 09.7 -0.6**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR MLR MLR
comp=Z,2µm,21.0s
SUMG Summit 68.38 1 *i* P P **20 06 02.9 +1.2**
SUMG IAmb IAmb 20 06 03.6
comp=Z,11nm,0.8s
SUMG Summit 68.38 1 P P **20 06 02.0 +0.3**
SUMG pmax pmax
comp=Z,31nm,1.2s
SUMG Summit 68.38 1 P P **20 06 02.0 +0.3**
O02D Mt. Diablo Mer 68.39 55 P 20 06 03.8
baz=304
MAK Makhachkala 68.41 308 *eP* P **20 05 57.9 -3.9**
MAK *e* 20 08 28.6
MAK *e*S S **20 14 56.9 -4.9**
MAK *e*SS SS **20 19 22.0 -2.8**
MAK pmax pmax
comp=Z,478nm,2.0s
VORD Divnogorie 68.43 319 *eP* P **20 06 00.4 -1.4**
VORD *e**SP pP **20 06 09.0 +0.6**
VORD pmax pmax
comp=Z,30nm,1.2s
WALA Waterton Lakes 68.58 44 P P **20 06 04.3 +1.4**
WALA IAmb IAmb 20 06 14.7
comp=Z,17nm,1.2s
O03E Paynes Creek 68.95 55 P 20 06 07.6
baz=304
MOD Modoc Plateau 68.98 53 P P **20 06 06.7 +1.1**
MOD IAmb IAmb 20 06 17.7
comp=Z,8.7nm,0.8s
BMO Blue Mountains 69.11 49 P P **20 06 07.4 +1.1**
BMO pmax pmax
comp=Z,6.0nm,0.9s
BMO Blue Mountains 69.11 49 P P **20 06 07.4 +1.1**
JTMT Jette 69.14 45 P P **20 06 08.2 +1.6**
JTMT IAmb IAmb 20 06 18.6
comp=Z,20nm,1.1s
J08A Circle Bar Ran 69.27 51 P P **20 06 09.2 +1.8**
J08A IAmb IAmb 20 06 19.8
comp=Z,15nm,1.0s
GROC Groznyy 69.30 309 *eP* P **20 06 04.7 -2.7**
GROC *e* 20 06 27.0
GROC pmax pmax
comp=Z,29nm,0.7s
VSU Vasula 69.35 330 *eP* P **20 06 08.0 +0.6**
VSU Vasula 69.35 330⇑ *eP* P **20 06 07.5 +0.1**
VSU pmax pmax
comp=Z,76nm,0.9s
SEKA Sheki 69.58 307 P P **20 06 09.4 +0.1**
ZKTA Zakatala 69.69 308 P P **20 06 10.3 +0.4**
WVOR Wild Horse Val 69.70 51 P P **20 06 12.9 +2.9**

WVOR						pmax	pmax												
	comp=Z,16nm,1.2s																		
WVOR	**Wild Horse Val**	**69.70**	**51**	P	**P**	**20 06 12.9 +2.9**													
WVOR				IAmb	IAmb	20 06 22.2													
	comp=Z,16nm,1.1s																		
PLID	**Pearl Lake**	**69.73**	**48**	P	**P**	**20 06 11.5 +1.3**													
NSS	**Namsos**	**69.74**	**340**	*eP*	**P**	**20 06 10.4 +0.7**													
LGD	**Lagodekhi**	**69.81**	**308**	P	**P**	**20 06 11.0 +0.4**													
MSO	**Missoula**	**69.87**	**46**	P	**P**	**20 06 12.2 +1.3**													
MSO				IAmb	IAmb	20 06 22.6													
	comp=Z,21nm,1.3s																		
MNGR	**Mingechevir, A**	**69.90**	**307**	P	**P**	**20 06 11.4 +0.3**													
LKRN	**Lenkeran, Azer**	**70.00**	**304**	P	**P**	**20 06 11.7 -0.1**													
BEKR	**Beckworth**	**70.10**	**54**	P	**P**	**20 06 13.9 +1.3**													
BEKR				IAmb	IAmb	20 06 24.4													
	comp=Z,13nm,0.8s																		
DDFL	**Dedoflistskaro**	**70.11**	**308**	P	**P**	**20 06 12.8 +0.3**													
AFDM	**Forest Hills D**	**70.23**	**56**	P	**P**	**20 06 12.9 -0.4**													
MTSE	**Matsula**	**70.29**	**331**	*eP*	**P**	**20 06 10.3 -2.8**													
GANJ	**Ganja**	**70.45**	**307**	P	**P**	**20 06 14.8 +0.3**													
ZEI	**Tsey**	**70.68**	**310**	*eP*	P	20 06 10.7 -5.4													
ZEI				pmax	pmax														
	comp=Z,21nm,1.0s																		
KIV	**Kislovodsk**	**70.71**	**311**	*i* P	**P**	**20 06 17.2 +1.0**													
	SNR=33																		
KIV	**Kislovodsk**	**70.71**	**311**	*e*P	**P**	**20 06 16.8 +0.7**													
KIV				*e*S	**S**	**20 15 31.6 +2.5**													
KIV				*e*SS	**SS**	**20 20 04.2 +3.8**													
KIV				pmax	pmax														
	comp=Z,240nm,1.0s																		
KIV				pmax	pmax														
	comp=Z,205nm,4.4s																		
KIV	**Kislovodsk**	**70.71**	**311**	P	**P**	**20 06 15.8 -0.4**													
KBZ	**Khabaz**	**70.72**	**311**	P	**P**	**20 06 16.9 +0.9**													
	comp=Z,27nm,0.9s,baz=57,slow=5.1,SNR=52																		
KBZ	**Khabaz**	**70.72**	**311**	*c i*P	**P**	**20 06 16.7 +0.7**													
KBZ				pmax	pmax														
	comp=Z,42nm,1.0s																		
BTNK	**Botanikuri**	**70.78**	**308**	P	**P**	**20 06 16.9 +0.3**													
PAHR	**Pah Rah Range**	**70.81**	**54**	P	**P**	**20 06 19.0 +2.1**													
PAHR				IAmb	IAmb	20 06 28.8													
	comp=Z,11nm,0.9s																		
FFC	**Flin Flon**	**70.84**	**34**	P	**P**	**20 06 17.3 +0.7**													
FFC				pmax	pmax														
	comp=Z,57nm,2.0s																		
FFC	**Flin Flon**	**70.84**	**34**	P	**P**	**20 06 17.3 +0.7**													
STKA	**Stephens Creek**	**70.87**	**182**	P	**P**	**20 06 19.7 +2.8**													
	comp=Z,1.4nm,0.5s,baz=316,slow=5.7,SNR=4.7																		
STKA				LR	LR	20 42 27.1													
	comp=Z,84nm,18.6s,baz=17,slow=40																		
STKA	**Stephens Creek**	**70.87**	**182**	P	**P**	**20 06 19.3 +2.4**													
STKA				pmax	pmax														
	comp=Z,3.0nm,1.5s																		
STKA	**Stephens Creek**	**70.87**	**182**	P	**P**	**20 06 19.3 +2.4**													
HRY	**Holter Researc**	**71.10**	**45**	P	**P**	**20 06 18.8 +0.3**													
CMB	**Columbia Colle**	**71.14**	**56**	P	**P**	**20 06 19.6 +0.8**													
CMB				pmax	pmax														
	comp=Z,7.0nm,0.8s																		
CMB	**Columbia Colle**	**71.14**	**56**	P	**P**	**20 06 19.6 +0.8**													
FCC	**Fort Churchill**	**71.17**	**28**	P	**P**	**20 06 18.8 +0.3**													
FCC				pmax	pmax														
	comp=Z,27nm,1.5s																		
FCC	**Fort Churchill**	**71.17**	**28**	P	**P**	**20 06 18.8 +0.3**													
FCC				IAmb	IAmb	20 06 35.2													
	comp=Z,27nm,1.5s																		
LRM	**Limekiln Ridge**	**71.30**	**46**	P	**P**	**20 06 18.8 -1.1**													
YERR	**Yerington**	**71.32**	**55**	P	**P**	**20 06 21.1 +1.0**													
YERR				IAmb	IAmb	20 06 32.2													
	comp=Z,13nm,0.9s																		
WAKR	**Walker**	**71.47**	**55**	P	**P**	**20 06 22.3 +1.3**													
IDID	**Didziasalis**	**71.49**	**327**	*eP*	**P**	**20 06 21.2 +0.7**													
DLMT	**Dillon**	**71.50**	**46**	P	**P**	**20 06 22.3 +1.3**													
DLMT				IAmb	IAmb	20 06 32.9													
	comp=Z,25nm,1.3s																		
HLID	**Hailey**	**71.55**	**49**	P	**P**	**20 06 22.8 +1.4**													
MNK	**Minsk**	**71.56**	**326**	*i* P	**P**	**20 06 21.8 +0.8**													
	comp=E,3.0nm,1.0s																		
MNK				*i* P	**P**	**20 06 21.8 +0.8**													
	comp=N,12nm,0.9s																		
MNK				*i* P	**P**	**20 06 21.8 +0.8**													
	comp=Z,33nm,0.9s																		
MNK				*i* PcP	**PcP**	**20 06 46.5 +6.3**													
MNK				*i* PP	PP	20 08 02.1 -57													
MNK				*i* PPP	PPP	20 10 18.5													
MNK				*i* S	**S**	**20 15 40.4 +2.1**													
MNK				*i* ScS	**ScS**	**20 16 26.6 +2.2**													
MNK				*i* SS	**SS**	**20 20 16.4 +3.8**													
MNK				*i* SSS	SSS	20 23 35.7													
MNK				*i* LQ	LQ	20 31 17.7													
MNK				*i* LR	LR	20 33 28.9													
MNK				*i* LRM	MLR	20 40 38.5													
	comp=E,69nm,17.7s																		
MNK				*i* LRM	MLR	20 40 43.1													
	comp=Z,824nm,17.7s																		
MNK				*i* LRM	MLR	20 40 46.4													
	comp=N,812nm,17.7s																		
ISAL	**Salakas**	**71.57**	**328**	*e*P	**P**	**20 06 21.8 +0.8**													
IIGN	**Ignalina**	**71.68**	**328**	*e*P	**P**	**20 06 22.4 +0.7**													
GNI	**Garni**	**71.72**	**307**	P	**P**	**20 06 23.2 +0.8**													
GNI	**Garni**	**71.72**	**307⇑**	*e*P	**P**	**20 06 22.3 -0.1**													
GNI				pmax	pmax														
	comp=Z,13nm,1.1s																		
GNI	**Garni**	**71.72**	**307**	P	**P**	**20 06 23.4 +1.0**													
AKH	**Akhalkalaki**	**71.74**	**309**	⇑P	**P**	**20 06 23.8 +1.3**													
AKH	**Akhalkalaki**	**71.74**	**309**	P	**P**	**20 06 23.8 +1.3**													
NACGM	**Naroch**	**71.75**	**327**	*i* P	**P**	**20 06 21.3 -0.8**													
NACGM				*i* P	**P**	**20 06 21.3 -0.8**													
NACGM				*i* P	**P**	**20 06 21.3 -0.8**													
NACGM				*i* PP	**PP**	**20 09 02.5 +1.5**													
NACGM				*i* PPP	PPP	20 10 46.9													
NACGM				*i* S	**S**	**20 15 43.7 +3.1**													
NACGM				*i* PS	PnS	20 16 57.3 +46													
NACGM				*i* SS	SS	20 20 29.5 +14													
NACGM				*i* SSS	SSS	20 23 37.3													
NACGM				*i* LQ	LQ	20 33 53.3													
NACGM				*i* LR	LR	20 38 57.2													
CHVG	**Ch'k'valeri**	**71.80**	**311**	⇑P	**P**	**20 06 23.3 +0.7**													
CHVG	**Ch'k'valeri**	**71.80**	**311**	⇑P	**P**	**20 06 23.3 +0.7**													
NAX	**Nakhchivan**	**71.82**	**306**	P	**P**	**20 06 23.2 +0.2**													
ICESG	**Greenland Ices**	**71.87**	**1**	*i* P	**P**	**20 06 23.8 +0.7**													
ICESG				IAmb	IAmb	20 06 25.1													
	comp=Z,17nm,0.9s																		
BOZ	**Bozeman (W)**	**71.89**	**46**	P	**P**	**20 06 24.3 +0.9**													
BOZ				pmax	pmax														
	comp=Z,9.0nm,0.8s																		
BOZ	**Bozeman (W)**	**71.89**	**46**	P	**P**	**20 06 24.3 +0.9**													
RYN	**Ryan**	**71.98**	**55**	P	**P**	**20 06 23.1 -0.9**													
JLN	**Jalan Bani Buh**	**71.99**	**284**	P	**P**	**20 06 26.0 +1.9**													
	SNR=8.1																		
KVN	**Kaiserville**	**72.00**	**54**	P	**P**	**20 06 26.4 +2.2**													
KVN				pmax	pmax														
	comp=Z,16nm,0.9s																		
KVN	**Kaiserville**	**72.00**	**54**	P	**P**	**20 06 26.4 +2.2**													
KVN				IAmb	IAmb	20 06 36.3													
	comp=Z,16nm,0.9s																		
WBK	**Wadi Bani Khal**	**72.05**	**285**	P	**P**	**20 06 26.0 +1.5**													
	SNR=9.8																		
BANOM	**Banah**	**72.11**	**289**	*i* P	**P**	**20 06 25.0 +0.2**													
	SNR=5.3																		
BIDO	**Bidbid**	**72.15**	**286**	P	**P**	**20 06 27.0 +1.9**													
	SNR=6.3																		
SHME	**Shamm**	**72.16**	**289**	P	**P**	**20 06 24.9 -0.1**													
LHV	**Little Huntoon**	**72.21**	**55**	P	**P**	**20 06 26.6 +1.4**													
LHV				IAmb	IAmb	20 06 38.0													
	comp=Z,20nm,0.9s																		
NVAR	**Mina Array Bea**	**72.23**	**55**	P	**P**	**20 06 27.8 +2.2**													
	comp=Z,3.8nm,0.7s,baz=292,slow=5.5,SNR=11																		
NVAR				LR	LR	20 31 07.5													
	comp=Z,84nm,21.6s,baz=287,slow=30																		
NV11	**Mina Array Sit**	**72.33**	**55**	P	**P**	**20 06 29.2 +3.1**													
NV11				IAmb	IAmb	20 06 59.9													
	comp=Z,32nm,1.9s																		
SMDO	**Samad**	**72.48**	**286**	P	**P**	**20 06 29.0 +1.9**													
	SNR=12																		
PABE	**Paberze**	**72.49**	**329**	*e*P	**P**	**20 06 27.1 +0.6**													
MOL	**Molde**	**72.50**	**340**	*e*P	**P**	**20 06 27.0 +0.6**													
DOMB	**Dombas**	**72.52**	**339**	*e*P	**P**	**20 06 27.2 +0.6**													
NC405	**NORSAR Array S**	**72.52**	**338**	P	**P**	**20 06 26.8 +0.1**													
NC303	**NORSAR Array S**	**72.54**	**338**	P	**P**	**20 06 26.3 -0.4**													
MSFE	**Esma-Masafi**	**72.54**	**289**	*i* P	**P**	**20 06 27.7 +0.3**													
	SNR=5.8																		
YHL	**Hebgen Lake**	**72.60**	**46**	P	**P**	**20 06 29.2 +1.4**													
YHL				IAmb	IAmb	20 08 56.0													
	comp=Z,12nm,0.8s																		
SOC	**Sochi**	**72.65**	**312**	*e*P	**P**	**20 06 26.7 -1.0**													
SOC				*e*		20 09 04.5													
SOC				*e*PPP	PPP	20 10 50.3													
SOC				*e*S	**S**	**20 15 53.0 +1.8**													
SOC				*e*SS	**SS**	**20 20 25.9 -4.0**													
SOC				pmax	pmax														
	comp=Z,29nm,0.9s																		
SOC				MLR	MLR														
	comp=Z,442nm,14.0s																		
NC204	**NORSAR Array S**	**72.67**	**338**	P	**P**	**20 06 27.9 +0.3**													
NB201	**NORSAR Array S**	**72.70**	**338**	P	**P**	**20 06 27.5 -0.2**													
HOQ	**Hoqain**	**72.72**	**287**	P	**P**	**20 06 30.0 +1.5**													
	SNR=8.5																		
NB2	**NORSAR Subarra**	**72.73**	**338**	P	**P**	**20 06 28.1 +0.2**													
	baz=37,slow=6.2																		
NOA	**NORSAR Array B**	**72.73**	**338**	P	**P**	**20 06 27.9 0.0**													
	comp=Z,1.1nm,0.5s,baz=38,slow=4.6,SNR=30																		
UOSS	**Minazif**	**72.75**	**288**	*i* P	**P**	**20 06 28.3 -0.3**													
	SNR=10																		
UOSS	**Minazif**	**72.75**	**288**	P	**P**	**20 06 28.3 -0.3**													
UOSS				IAmb	IAmb	20 06 29.7													
	comp=Z,24nm,0.9s																		
ELK	**Elko**	**72.75**	**51**	P	**P**	**20 06 30.4 +1.7**													
	comp=Z,0.7nm,0.5s,baz=208,slow=0.9,SNR=1.8																		
ELK	**Elko**	**72.75**	**51**	P	**P**	**20 06 29.5 +0.8**													
ELK				pmax	pmax														
	comp=Z,6.0nm,1.0s																		
ELK	**Elko**	**72.75**	**51**	P	**P**	**20 06 29.5 +0.8**													
JMDO	**Jabal Madar**	**72.84**	**285**	P	**P**	**20 06 30.0 +0.8**													
	SNR=10																		
NBO00	**NORSAR Array S**	**72.86**	**338**	P	**P**	**20 06 28.5 -0.2**													
HATD	**Hatta, Dubai**	**72.87**	**288**	*i* P	**P**	**20 06 29.7 +0.4**													
	SNR=13																		
HATD	**Hatta, Dubai**	**72.87**	**288**	P	**P**	**20 06 31.0 +1.7**													
	SNR=9.4																		
NC602	**NORSAR Array S**	**72.88**	**338**	*e*P	**P**	**20 06 28.9 +0.1**													
NORES	**NORESS Array B**	**72.88**	**338**	P	**P**	**20 06 28.7 0.0**													
SOHO	**SOHO**	**72.98**	**287**	*i* P	**P**	**20 06 29.8 -0.2**													
	SNR=8.6																		
NAO01	**NORSAR Array S**	**72.98**	**338**	P	**P**	**20 06 29.1 -0.3**													
TPH	**Tonopah**	**73.13**	**55**	P	**P**	**20 06 33.1 +2.2**													
TPH				pmax	pmax														
	comp=Z,70nm,1.0s																		
TPH	**Tonopah**	**73.13**	**55**	P	**P**	**20 06 33.1 +2.2**													
H17A	**Grant Village**	**73.22**	**46**	P	**P**	**20 06 32.8 +1.3**													
H17A				IAmb	IAmb	20 08 37.6													
	comp=Z,20nm,0.8s																		
H17A	**Grant Village**	**73.22**	**46**	P		20 06 33.1													
	baz=309																		
BSY	**Bisya**	**73.30**	**286**	P	**P**	**20 06 33.0 +1.1**													
	SNR=14																		
FAQ	**Al Faqa, Dubai**	**73.32**	**288**	P	**P**	**20 06 31.7 -0.3**													
SFJD	**Kangerlussuaq**	**73.44**	**6**	P	**P**	**20 06 31.6 -0.4**													
SFJD				pmax	pmax														
	comp=Z,20nm,1.2s																		
SFJD	**Kangerlussuaq**	**73.44**	**6**	P	**P**	**20 06 31.6 -0.4**													
SFJD				IAmb	IAmb	20 06 39.4													
	comp=Z,20nm,1.2s																		
ARQ	**Araqi**	**73.45**	**287**	P	**P**	**20 06 34.0 +1.2**													
	SNR=7.0																		
RLMT	**Red Lodge**	**73.49**	**45**	P	**P**	**20 06 33.9 +0.9**													
AKASG	**Malin Array Be**	**73.53**	**323**	P	**P**	**20 06 32.7 -0.1**													
	comp=Z,12nm,0.6s,baz=44,slow=6.1,SNR=41																		
AKASG				LR	LR	20 42 58.4													
	comp=Z,507nm,18.9s,baz=25,slow=39																		
AKASG	**Malin Array Be**	**73.53**	**323**	P	**P**	**20 06 33.0 +0.2**													
AKASG				pmax	pmax														
	comp=Z,7.0nm,1.0s																		
AKASG	**Malin Array Be**	**73.53**	**323**	P	**P**	**20 06 33.0 +0.2**													
AKBB	**Malin Array Si**	**73.53**	**323**	*ce*P	**P**	**20 06 32.8 0.0**													
AKBB	**Malin Array Si**	**73.53**	**323**	P	**P**	**20 06 32.1 -0.7**													
AKBB				IAmb	IAmb	20 06 43.1													
	comp=Z,23nm,0.8s																		
MOOW	**Moose Ponds**	**73.53**	**47**	P	**P**	**20 06 34.9 +1.6**													
KIEV	**Kiev**	**73.55**	**323**	P	**P**	**20 06 32.0 -0.8**													
ASUD	**Al Ashush, Dub**	**73.58**	**288**	P	**P**	**20 06 33.4 -0.1**													
HVU	**Hansel Valley**	**73.59**	**49**	P	**P**	**20 06 35.6 +2.1**													
HVU				pmax	pmax														
	comp=Z,9.0nm,1.0s																		
HVU	**Hansel Valley**	**73.59**	**49**	P	**P**	**20 06 35.6 +2.1**													
ALNE	**Al Ain**	**73.60**	**288**	*i* P	**P**	**20 06 33.7 0.0**													
	SNR=6.6																		
ALNE	**Al Ain**	**73.60**	**288**	P	**P**	**20 06 34.2 +0.5**													
	SNR=6.9																		
LOHW	**Long Hollow**	**73.70**	**47**	P	**P**	**20 06 34.6 +0.4**													
LOHW				IAmb	IAmb	20 07 46.1													
	comp=Z,18nm,0.9s																		
MHTO	**MHTO**	**73.75**	**284**	P	**P**	**20 06 35.1 +0.6**													
	SNR=18																		
OSL	**Oslo**	**73.76**	**337**	*e*P	**P**	**20 06 34.8 +0.8**													
SKAR	**Skarslia**	**73.85**	**339**	*e*P	**P**	**20 06 35.2 +0.6**													
GEVA	**Gevas**	**73.86**	**306**	P	**P**	**20 06 34.6 -0.6**													
SUW	**Suwalki**	**73.88**	**328**	*e*P	**P**	**20 06 35.2 +0.4**													
R11A	**Troy Canyon, C**	**73.99**	**53**	P	**P**	**20 06 36.9 +1.0**													
DY2G	**Dye2**	**74.25**	**4**	*i* P	**P**	**20 06 37.8 +0.7**													
DY2G				IAmb	IAmb	20 06 39.2													
	comp=Z,8.3nm,0.7s																		
KONO	**Kongsberg**	**74.33**	**338**	*e*P	**P**	**20 06 38.0 +0.7**													
KOPT	**Kop Dagi**	**74.39**	**309**	P	**P**	**20 06 39.4 +1.0**													
KOPT				IAmb	IAmb	20 06 52.6													
	comp=Z,35nm,1.3s																		
HWUT	**Hardware Ranch**	**74.41**	**49**	P	**P**	**20 06 40.5 +2.2**													
HWUT				IAmb	IAmb	20 09 21.5													
	comp=Z,14nm,0.7s																		
DUG	**Dugway, Tooele**	**74.55**	**51**	P	**P**	**20 06 41.1 +2.0**													
DUG				pmax	pmax														
	comp=Z,10.0nm,1.0s																		
DUG	**Dugway, Tooele**	**74.55**	**51**	P	**P**	**20 06 41.1 +2.0**													
DQM	**DQM**	**74.70**	**283**	P	**P**	**20 06 41.0 +0.8**													
	SNR=5.4																		
BW06	**Boulder Array**	**74.83**	**47**	P	**P**	**20 06 41.6 +0.8**													
PD31	**Pinedale Array**	**74.83**	**47**	P	**P**	**20 06 41.7 +0.9**													
PDAR	**Pinedale Array**	**74.83**	**47**	P	**P**	**20 06 41.9 +1.0**													
	comp=Z,1.2nm,0.6s,baz=277,slow=1.9,SNR=13																		
PDAR				LR	LR	20 41 57.5													
	comp=Z,49nm,18.8s,baz=334,slow=38																		
PDAR	**Pinedale Array**	**74.83**	**47**	P	**P**	**20 06 41.3 +0.5**													
ASK	**Askoy**	**74.86**	**340⇑**	*e*P	**P**	**20 06 40.9 +0.6**													
CTU	**Camp Tracy**	**74.87**	**50**	P	**P**	**20 06 41.6 +0.6**													
PSUT	**Pine Spring**	**74.95**	**52**	P	**P**	**20 06 41.3 -0.3**													
JLU	**Jordanelle**	**75.11**	**50**	P	**P**	**20 06 42.7 +0.2**													
NLU	**North Lily Min**	**75.14**	**50**	P	**P**	**20 06 44.4 +1.7**													
SHPR	**Sheep Range**	**75.39**	**55**	P	**P**	**20 06 45.3 +1.3**													
SORM	**Soroca**	**75.70**	**321**	⇓P	**P**	**20 06 45.6 +0.1**													
SORM	**Soroca**	**75.70**	**321**	P	**P**	**20 06 45.5 +0.1**													
HORU	**Horodok**	**75.87**	**323**	P	**P**	**20 06 46.2 -0.2**													
MARD	**Mardin**	**75.90**	**307**	P	**P**	**20 06 47.3 +0.3**													
RDMU	**Red Mountain**	**76.23**	**49**	P	**P**	**20 06 50.0 +1.2**													
RDMU				IAmb	IAmb	20 08 56.1													
	comp=Z,25nm,0.9s																		
TOKA	**Tokat**	**76.58**	**311**	P	**P**	**20 06 51.7 +1.1**													
ULM	**Lac du Bonnet**	**76.63**	**35**	P	**P**	**20 06 50.4 -0.3**													
	comp=Z,2.5nm,0.7s,baz=313,slow=7.8,SNR=3.7																		
ULM	**Lac du Bonnet**	**76.63**	**35⇑**	*e*P	**P**	**20 06 50.7 0.0**													
MALT	**Malatya**	**76.71**	**309**	P	**P**	**20 06 53.1 +1.6**													
MORS	**Morshin**	**77.09**	**324**	P	**P**	**20 06 53.8 +0.5**													
KSV	**Kosov**	**77.14**	**323**	P	**P**	**20 06 53.8 +0.2**													
KWP	**Kalwaria Pacla**	**77.26**	**325**	P	**P**	**20 06 54.5 +0.3**													
KWP				pmax	pmax														
	comp=Z,40nm,0.9s																		
KWP	**Kalwaria Pacla**	**77.26**	**325**	P	**P**	**20 06 54.5 +0.3**													
BUR08	**Bucovina Ar. S**	**77.56**	**322**	P	**P**	**20 06 56.3 +0.2**													
BURAR	**Bucovina Array**	**77.57**	**322**	⇑P	**P**	**20 06 56.8 +0.6**													
BURAR	**Bucovina Array**	**77.57**	**322**	⇑P	**P**	**20 06 56.8 +0.6**													
BURAR	**Bucovina Array**	**77.57**	**322**	P	**P**	**20 06 56.4 +0.2**													
BIZ	**Bicaz**	**77.63**	**322**	⇑P	**P**	**20 06 57.1 +0.8**													
TESR	**Tescani**	**77.67**	**321**	⇑P	**P**	**20 06 56.3 -0.3**													
ILGA	**Ilgaz**	**77.68**	**313**	P	**P**	**20 06 57.5 +0.5**													
ILGA				IAmb	IAmb	20 07 09.1													
	comp=Z,28nm,1.0s																		
CFR	**Carcaliu**	**77.86**	**319**	⇑P	**P**	**20 06 56.9 -0.8**													

GZR Gura Zlata 80.34 322 ⇑P P 20 07 11.9 +0.6
GZR Gura Zlata 80.34 322 ⇑P P 20 07 11.9 +0.6
KRUC Moravsky 80.39 328 eP P 20 07 12.2 +0.8
KRUC e 20 07 21.6
PRU Pruhonice 80.41 329 eP P 20 07 12.3 +0.8
PRU e*PP sP 20 07 21.5 +1.0
PRU MLR MLR
comp=Z,900nm,20.6s
PRU Pruhonice 80.41 329 eP P 20 07 12.3 +0.8
PRU ePCP sP 20 07 21.5 +1.0
PRU AMS AMS 20 45 50.0
comp=Z,900nm,20.6s
MODS Modra-Piesok 80.56 327 eP P 20 07 13.1 +0.7
MODS pmax pmax
comp=Z,19nm,1.3s
MODS Modra-Piesok 80.56 327 eP P 20 07 13.1 +0.7
TREC Trest 80.58 329 epP pP 20 07 22.8 +3.6
TREC AMS AMS 20 47 20.0
comp=Z,1μm,14.1s
BZS Buzias 80.72 323 ⇓P P 20 07 13.6 +0.3
BZS Buzias 80.72 323 ⇓P P 20 07 13.6 +0.3
HERR Herculane 80.89 322 ⇓P P 20 07 14.0 -0.2
PLVB Pleven 80.91 320 ⇓P P 20 07 15.3 +0.9
NKC Novy Kostel 81.03 331 AMS AMS 20 49 50.0
comp=Z,800nm,16.6s
ECSD EROS Data Cent 81.04 40 P P 20 07 15.3 +0.3
ECSD IAmb IAmb 20 10 07.8
comp=Z,16nm,0.9s
MDVR Moldovita 81.30 322 ⇓P P 20 07 16.7 +0.2
RAYN Ar Rayn 81.37 293 iP P 20 07 17.4 +0.2
SNR=19
RAYN Ar Rayn 81.37 293 P P 20 07 17.0 -0.2
RAYN pmax pmax
comp=Z,18nm,1.0s
RAYN Ar Rayn 81.37 293 P P 20 07 17.0 -0.2
RAYN IAmb IAmb 20 07 18.5
comp=Z,18nm,1.0s
SOP Sopron 81.40 327 P P 20 07 18.3 +1.5
SOP pmax pmax
comp=Z,32nm,1.3s
CKRC Cesky Krumlov 81.43 329 eP P 20 07 17.4 +0.4
CKRC epP sP 20 07 26.7 +0.7
CKRC AMS AMS 20 46 30.0
comp=Z,900nm,19.3s
KHC Kasperske Hory 81.47 329c iP P 20 07 17.9 +0.6
KHC pmax pmax
comp=Z,28nm,0.8s
KHC Kasperske Hory 81.47 329 eP P 20 07 18.1 +0.8
KHC ex x 20 07 27.8
KHC AMS AMS 20 46 30.0
comp=Z,1μm,19.0s
KHC Kasperske Hory 81.47 329 P P 20 07 17.6 +0.3
KHC IAmb IAmb 20 07 28.7
comp=Z,14nm,0.9s
CONA Conrad Observa 81.50 327 iP P 20 07 18.9 +1.4
comp=Z,23nm,1.7s,SNR=9.2
ESK Eskdalemuir 81.56 342 P P 20 07 23.2 +5.7
MORH Mrgy, Hungar 81.63 325 ⇑P P 20 07 18.0 -0.1
MORH Mrgy, Hungar 81.63 325 ⇑iP P 20 07 18.0 -0.1
GEC2 GERESS Array S 81.66 329 P P 20 07 18.2 -0.1
GERES GERESS Array B 81.66 329 P P 20 07 18.4 +0.1
comp=Z,3.2nm,0.6s,baz=40,slow=5.5,SNR=29
GERES PP PP 20 10 14.2 -10
comp=Z,0.2nm,0.3s,baz=33,slow=5.1,SNR=3.5
GERES LR LR 20 47 02.2
comp=Z,718nm,18.6s,baz=16,slow=38
GERES GERESS Array B 81.66 329 P P 20 07 17.8 -0.5
GERES GERESS Array B 81.66 329 P P 20 07 17.8 -0.5
WET Wettzell 81.74 330 P P 20 07 19.8 +1.1
ANMO Albuquerque 81.79 51⇑eP P 20 07 19.5 +0.1
ANMO pmax pmax
comp=Z,3.0nm,1.2s
PLD Plovdiv 81.80 319 P P 20 07 21.8 +2.7
PLD pmax pmax
comp=Z,46nm,1.8s
FRGS Fruska Gora 81.91 324 ⇓P P 20 07 20.5 +0.9
FRGS Fruska Gora 81.91 324 ⇑iP P 20 07 19.8 +0.2
GRA1 Grafenberg Arr 81.93 331 P P 20 07 20.1 +0.5
GRF Grafenberg Arr 81.93 331 P P 20 07 20.1 +0.5
GRF pmax pmax
comp=Z,37nm,1.1s
GRF Grafenberg Arr 81.93 331 eP P 20 07 20.1 +0.5
comp=Z,29nm,1.1s,baz=37,slow=4.5
GRF epP sP 20 07 29.9 +1.3
GRFO Grafenberg 81.93 331 P P 20 07 20.1 +0.5
GRFO pmax pmax
comp=Z,37nm,1.1s
GRFO Grafenberg 81.93 331 P P 20 07 20.1 +0.5
ALN Alexandroupoli 81.98 317 P P 20 07 20.7 +0.7
ALN pmax pmax
comp=Z,11nm,1.2s
ALN Alexandroupoli 81.98 317 P P 20 07 20.7 +0.7
CSS Mathiatis 82.00 309 P P 20 07 20.2 0.0
CSS IAmb IAmb 20 07 22.7
comp=Z,19nm,0.8s
SOCY Socotra 82.11 279 P P 20 07 19.3 -1.9
BOVS Bovan 82.16 322 ⇓P P 20 07 20.1 -0.8
VTS Vitosha 82.17 320 ⇑P P 20 07 22.5 +1.4
VTS Vitosha 82.17 320 P P 20 07 21.7 +0.5
VTS pmax pmax
comp=Z,16nm,0.8s
VTS Vitosha 82.17 320 P P 20 07 21.7 +0.5
VTS IAmb IAmb 20 07 32.8
comp=Z,16nm,0.8s
ARSA Arzberg 82.18 327 eP P 20 07 21.9 +0.9
comp=Z,5.5nm,0.8s
MOA Molln 82.22 328 eP P 20 07 23.4 +2.2
comp=Z,6.8nm,0.9s
TEKS Tekeris 82.50 323 eP P 20 07 21.0 -1.7
DIVS Divibare 82.63 323 ⇑iP P 20 07 23.7 +0.2
DIVS Divibare 82.63 323 P P 20 07 23.4 0.0
DIVS IAmb IAmb 20 07 35.4
comp=Z,15nm,1.1s
ELL Elmali 82.79 312 P P 20 07 24.9 +0.4
ELL pmax pmax
comp=Z,58nm,1.1s
ELL Elmali 82.79 312 P P 20 07 24.9 +0.4
PERS Pernice 82.83 327 iP P 20 07 25.0 +0.6
comp=Z,36nm,0.8s
PERS iP sP 20 07 34.4 +0.9
SOKA Soboth 82.83 327 iP P 20 07 25.0 +0.5
comp=Z,21nm,0.7s,SNR=22
BTNL Ternell 83.00 334 dP P 20 07 24.9 -0.3
BTNL dx x 20 07 35.3
MEM Membach 83.02 334 dP P 20 07 25.8 +0.5
BBLS Lazići 83.08 323 ⇑iP P 20 07 26.5 +0.7
SRS Serrai 83.09 319 P P 20 07 26.8 +1.0
SRS pmax pmax
comp=Z,14nm,1.2s
HAPS Han Pijesak,BI 83.12 323 ⇑iP P 20 07 25.5 -0.6
OBKA Obir 83.17 327 iP P 20 07 26.5 +0.2
comp=Z,8.0nm,0.7s,SNR=6.2
KBA Koelnbreinsper 83.22 328 iP P 20 07 27.4 +0.8
comp=Z,12nm,0.8s,SNR=11
KBA Koelnbreinsper 83.22 328 P P 20 07 27.3 +0.8
CRES Cresnjev 83.33 326 ⇑iP P 20 07 27.0 0.0
STIP Stip 83.37 320 iP P 20 07 27.1 -0.2
KNT Kendrikon 83.41 319 P P 20 07 28.4 +0.9
BLY Banja Luka 83.42 325 eP P 20 07 37.4 +10
MYKA Terra Mystica 83.45 328 iP P 20 07 27.7 +0.1
comp=Z,8.8nm,0.8s,SNR=6.6
VAY Valandovo 83.46 319 P P 20 07 29.3 +1.6
VAY Valandovo 83.46 319 iP P 20 07 28.7 +1.0
PLE Pljevlja 83.50 323 P P 20 07 30.1 +2.1
PLE Pljevlja 83.50 323 eP P 20 07 28.8 +0.8
BGES Gesves 83.52 335 dP P 20 07 28.2 +0.3
SKO Skopje 83.54 321 iP P 20 07 29.8 +1.6
LJU Ljubljana 83.55 327 iP P 20 07 28.1 0.0
IVA Berane 83.61 322 eP P 20 07 29.1 +0.5
BMRD Maredsous 83.69 335 dP P 20 07 29.3 +0.5
BMRD dx x 20 07 38.3
WATA Walderalm 83.72 329 eP P 20 07 29.9 +0.8
comp=Z,9.7nm,1.0s,SNR=5.1
MGRS Mrkonjic Grad 83.72 325 ⇑iP P 20 07 30.2 +1.2
WTTA Wattenberg 83.75 329 iP P 20 07 30.0 +0.7
comp=Z,8.3nm,0.9s,SNR=5.4
WTTA Wattenberg 83.75 329 P P 20 07 30.3 +1.0
WLF Walferdange 83.77 334 dP P 20 07 30.6 +1.4
ZOU Zoufplan 83.79 328 P P 20 07 28.6 -0.9
ZOU IAmb IAmb 20 07 39.5
comp=Z,19nm,1.3s
KOME Kolasin 83.80 322 eP P 20 07 27.5 -2.1
GRG Griva 83.81 319 P P 20 07 30.1 +0.5
ABTA Abfaltersbach 83.82 329 iP P 20 07 29.1 -0.5
comp=Z,9.7nm,0.9s,SNR=6.6
UPM Unac-Piva 83.82 323 ⇑iP P 20 07 29.5 -0.3
UPM Unac-Piva 83.82 323 eP P 20 07 29.4 -0.3
CEY Cerknica 83.84 327 ⇑iP P 20 07 29.5 -0.1
MOTA Moosalm 83.89 330 iP P 20 07 30.6 +0.6
comp=Z,24nm,1.1s,SNR=14
RETA Reutte 83.91 330 iP P 20 07 30.8 +0.8
comp=Z,21nm,1.0s,SNR=9.7
PAIG Paliouri 83.92 318 P P 20 07 30.9 +0.8
DOU Dourbes 83.93 335 dP P 20 07 29.6 -0.3
SQTA Sankt Quirin 83.95 330 iP P 20 07 30.9 +0.6
comp=Z,20nm,1.5s,SNR=8.0
KNDS Knezji Dol 84.03 327 iP P 20 07 30.3 -0.4
KNDS iPP sP 20 07 39.8 +0.1
NKY Niksic 84.08 322 eP P 20 07 30.7 -0.3
BAIF Baives 84.09 335 eP P 20 07 30.7 0.0
BAIF pmax pmax
comp=Z,5.0nm,0.8s
BFO Black Forest 84.13 332 P P 20 07 31.1 +0.1
BFO pmax pmax
comp=Z,46nm,1.7s
BFO Black Forest 84.13 332 P P 20 07 31.1 +0.1
NKME Niksic 84.13 322 eP P 20 07 30.9 -0.3
STAL STALIGIAL 84.13 328 P P 20 07 30.1 -1.0
STAL IAmb IAmb 20 07 40.7
comp=Z,18nm,0.9s
PPT2 Papeete2 84.16 118 eS S 20 17 54.8 -0.5
comp=Z,79nm,25.0s
PPT2 Papeete2 84.16 118 eLR LR 20 34 08.0
comp=Z,453nm,22.8s,baz=316
BRY Bratogost 84.22 323 ⇑iP P 20 07 31.4 -0.4
BRY Bratogost 84.22 323 eP P 20 07 31.3 -0.5
PDG Podgorica 84.25 322 ⇑iP P 20 07 31.8 +0.2
PDG Podgorica 84.25 322 ⇑iP P 20 07 31.9 +0.2
PDG Podgorica 84.25 322 P P 20 07 31.6 -0.1
TTG Podgorica 84.25 322 eP P 20 07 31.9 +0.2
FETA Feichten 84.31 330 iP P 20 07 32.7 +0.6
comp=Z,11nm,0.8s,SNR=7.0
CEME Cevo 84.32 322 eP P 20 07 32.0 -0.2
LIT Litokhoron 84.41 319 P P 20 07 32.5 -0.1
LIT pmax pmax
comp=Z,20nm,1.0s
LIT Litokhoron 84.41 319 P P 20 07 32.5 -0.1
LIT IAmb IAmb 20 07 43.0
comp=Z,20nm,1.0s
DAVA Damuels 84.42 330 iP P 20 07 33.4 +0.7
comp=Z,18nm,0.8s,SNR=10.0
CDF Champ du Feu 84.44 332 eP P 20 07 32.4 -0.3
CDF pmax pmax
comp=Z,17nm,1.2s
TREB Trebinje 84.45 323 ⇑iP P 20 07 32.5 -0.3
FNA Florina 84.46 320 P P 20 07 32.8 -0.1
FNA pmax pmax
comp=Z,11nm,0.9s
FNA Florina 84.46 320 P P 20 07 32.8 -0.1
FNA IAmb IAmb 20 07 33.9
comp=Z,11nm,0.9s
DRME Dracevica, Mon 84.47 322 ⇑iP P 20 07 33.2 +0.4
DRME Dracevica, Mon 84.47 322 eP P 20 07 33.0 +0.2
OHR Ohrid 84.50 320 iP P 20 07 33.5 +0.4
BUM Brajici-Budva 84.52 322 eP P 20 07 32.9 -0.3
HCY Herceg Novi 84.59 323 ⇑iP P 20 07 32.9 -0.6
HCY Herceg Novi 84.59 323 eP P 20 07 31.5 -2.0
ULC Ulcinj 84.61 322 eP P 20 07 33.6 0.0
ECH Echery 84.65 332 P P 20 07 33.2 -0.5
ECH pmax pmax
comp=Z,15nm,1.1s
ECH Echery 84.65 332 P P 20 07 33.2 -0.5
ECH IAmb IAmb 20 07 44.6
comp=Z,15nm,1.1s
CTI Castel Tesino 84.74 329 P P 20 07 33.3 -1.0
CTI pmax pmax
comp=Z,11nm,0.9s
CTI Castel Tesino 84.74 329 P P 20 07 33.3 -1.0
CTI IAmb IAmb 20 07 44.0
comp=Z,11nm,0.9s
TAOE Nuku Hiva Isla 85.08 106 eLR LR 20 34 27.8
comp=Z,396nm,21.5s
HINF Hinteralfeld 85.10 332 eP P 20 07 35.5 -0.5
HINF pmax pmax
comp=Z,48nm,2.1s
HAU Haudompre 85.12 333 eP P 20 07 34.8 -1.2
HAU pmax pmax
comp=Z,7.0nm,0.8s
TUE Stuetta 85.30 330 P P 20 07 37.0 -0.2
SENIN Lac Senin/Sane 86.16 331 P P 20 07 41.6 +0.1
CABF La Chapelle 86.39 332 eP P 20 07 42.1 -0.4
CABF pmax pmax
comp=Z,32nm,1.8s
SGRT San Giovanni R 86.42 324 P P 20 07 42.1 -0.6
SGRT IAmb IAmb 20 07 52.9
comp=Z,23nm,1.0s
LOR Lormes 86.61 334 eP P 20 07 43.0 -0.5
LOR pmax pmax
comp=Z,17nm,0.9s
MURB Monte Urbino 86.64 327 P P 20 07 44.3 +0.6
FLN La Foliniere 86.70 337 eP P 20 07 43.3 -0.5
FLN pmax pmax
comp=Z,64nm,1.8s
NRCA Norcia 86.73 326 P P 20 07 44.3 +0.1
NRCA IAmb IAmb 20 07 45.8
comp=Z,17nm,0.9s
LDF La Druitiere 86.74 337 eP P 20 07 43.9 -0.1
LDF pmax pmax
comp=Z,70nm,1.9s
ITM Ithomi 86.88 317 P P 20 07 44.0 -1.0
AQU L'Aquila 86.99 325 eP P 20 07 45.4 0.0
INTR Introdacqua 87.04 325 P P 20 07 44.6 -1.1
INTR IAmb IAmb 20 08 00.7
comp=Z,7.2nm,0.8s
LPL La Plagne 87.09 331 eP P 20 07 45.8 -0.3
LPL pmax pmax
comp=Z,9.0nm,0.8s
LPG La Plagne 87.10 331 eP P 20 07 46.0 -0.2
LPG pmax pmax
comp=Z,11nm,0.8s
GRR Gorron 87.15 337 eP P 20 07 45.8 -0.2
GRR pmax pmax
comp=Z,46nm,1.4s
AVF Avril sur Loir 87.20 334 eP P 20 07 46.1 -0.2
AVF pmax pmax
comp=Z,17nm,0.8s
S39A Bolivar 87.21 42 P P 20 07 45.7 -0.9
TXAR Lajitas Array 87.36 54 P P 20 07 47.9 +0.4
comp=Z,0.5nm,0.5s,baz=297,slow=3.2,SNR=7.3
TXAR PP PP 20 11 09.2 -2.2
comp=Z,0.5nm,0.8s,baz=355,slow=10.0,SNR=3.0
TXAR LR LR 20 41 24.0
comp=Z,64nm,21.3s,baz=0.0,slow=32
TXAR Lajitas Array 87.36 54 P P 20 07 48.1 +0.6
LATE Laterza 87.47 327 P P 20 07 47.1 -0.6
ORIF Oris-en-Rattie 87.91 331 eP P 20 07 49.7 -0.2
ORIF pmax pmax
comp=Z,9.0nm,1.3s
CCM Cathedral Cave 87.99 40 P P 20 07 50.5 +0.2
CCM pmax pmax
comp=Z,13nm,0.9s
CCM Cathedral Cave 87.99 40 P P 20 07 50.5 +0.2
CCM IAmb IAmb 20 08 10.8
comp=Z,13nm,0.9s
TBI Tubuai 88.24 122 eS S 20 18 32.3 -2.5
comp=Z,94nm,25.5s
TBI Tubuai 88.24 122 eLR LR 20 35 53.3
comp=Z,218nm,26.8s,baz=322
TBI Tubuai 88.24 122 eT T 21 45 04.0
comp=Z,10nm,0.4s
VIVF Saint-Julien-l 88.41 332 eP P 20 07 52.0 -0.2
VIVF pmax pmax
comp=Z,8.0nm,1.1s
U40A Yellville 88.47 42 P P 20 07 51.8 -0.8
PGF Pioggiola 88.70 328 eP P 20 07 53.2 -0.5
PGF pmax pmax
comp=Z,27nm,2.1s
RJF Les Rejaudoux 89.12 334 eP P 20 07 56.6 +1.1
RJF pmax pmax
comp=Z,18nm,1.4s
CAF Calviac 89.27 334 eP P 20 07 54.2 -2.0
CAF pmax pmax
comp=Z,8.0nm,1.0s
MTLF Montolieu 90.60 333 eP P 20 08 02.5 +0.1
MTLF pmax pmax
comp=Z,9.0nm,1.1s
KEST Kesra 94.22 324 LR LR 20 54 08.0
comp=Z,298nm,19.2s,baz=319,slow=38
ESDC Sonseca Array 95.96 335 P P 20 08 26.6 -0.6
comp=Z,0.7nm,0.8s,baz=18,slow=4.1,SNR=4.9
ESDC LR LR 20 57 22.5
comp=Z,452nm,18.2s,baz=10.0,slow=39
TORD Torodi Ar. Bea 116.88 318 PKP PKPdf 20 13 44.6 -0.6
comp=Z,0.5nm,0.8s,baz=336,slow=3.3,SNR=3.8
TORD PP PP 20 14 50.7 -2.4
comp=Z,4.4nm,1.1s,baz=23,slow=7.7,SNR=8.3
SYO Syowa Base 131.04 208 iePKPdf PKiKP 20 14 10.8 -0.7
SYO Syowa Base 131.04 208 iePKiKP PKiKP 20 14 17.2 +5.7
SNAA Sanae 143.45 197 PKPdf PKPdf 20 14 32.7 -0.8
SNAA Sanae 143.45 197 PKIKP PKPbc 20 14 31.7 +0.9
SNAA Sanae 143.45 197 PKPdf PKPbc 20 14 31.7 +0.9
LPAZ La Paz 144.03 59 PKP PKPdf 20 14 35.8 -1.0
comp=Z,1.4nm,0.7s,baz=60,slow=3.5,SNR=4.5
LPAZ La Paz 144.03 59 PKIKP PKPbc 20 14 35.2 +0.4
LPAZ La Paz 144.03 59 PKPbc 20 14 35.1 +0.4
MNMC Minye Minye 145.00 65 PKPdf 20 14 38.8 +0.7
VNA2 Neumayer--Watz 145.00 196 PKPdf PKPdf 20 14 35.9 -0.3
baz=123,slow=2.1
VNA3 Neumayer Olymp 145.23 195 PKPdf PKPdf 20 14 36.3 -0.2
PB11 IPOC Station P 145.37 65 PKPbc 20 14 37.6 -0.8
VNA1 Neumayer--Stat 145.40 196 PKPdf PKPab 20 14 37.0 0.0
BI02 San Fabin de 152.48 96 PKPbc 20 14 55.4 -0.9

IDC ***15*** *20:06:29.4±2.0, 43.°55N×105.°41W, h0km, mb1 3.6/3, mb1mx3.3/50, mbtmp3.4/3, ML3.5/3 Error ellipse: s-maj=43.0km s-min=7.9km az=150.0*
NEIC ***15*** *20:06:30.4±2.5, 43.°60N±0.°07×105.°21W±0.°05, h0km±2km, ML3.4/52, Error ellipse: s-maj=12.1km s-min=4.8km az=195.0*
ISC 15 20:06:29.7±0.9, **43.°67N**±0.°04×**105.°16W**±0.°05, **h0**km, **n38,** σ1§**26**/39, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.93**	**61**	P		P	**Pb**	**20 06 50.0**	**+1.1**
RSSD	**Black Hills**	**0.93**	**61**	Pg		Pg	**Pb**	**20 06 49.6**	**+0.7**
K22A	**Casper**	**1.43**	**225**			Pg	**Pg**	**20 06 55.5**	**-1.5**
K22A				IAML				20 07 20.1	
	comp=E,481nm,0.3s								
K22A				IAML				20 07 20.8	
	comp=N,959nm,0.3s								
PHWY	**Pilot Hill**	**2.38**	**185**	Pn		Pn	**Pn**	**20 07 11.2**	**+1.0**
RWWY	**Rawlins**	**2.49**	**218**	Pn		Pn	**Pn**	**20 07 12.3**	**+0.6**
RWWY				IAML				20 07 46.6	
	comp=N,264nm,1.0s								
RWWY				IAML				20 07 47.1	
	comp=N,188nm,0.9s								
RLMT	**Red Lodge**	**3.28**	**298**	Pn		Pn	**Pn**	**20 07 22.8**	**+0.2**
RLMT				IAML				20 08 15.4	
	comp=N,64nm,0.3s								
RLMT				IAML				20 08 23.0	
	comp=N,58nm,0.7s								
BW06	**Boulder Array**	**3.34**	**256**				**Pn**	**20 07 23.9**	**+0.5**
BW06				IAML				20 08 11.7	
	comp=N,98nm,0.4s								
BW06				IAML				20 08 13.0	
	comp=N,75nm,0.3s								
PD31	**Pinedale Array**	**3.34**	**256**	Pn		Pn	**Pn**	**20 07 23.4**	**+0.1**
PDAR	**Pinedale Array**	**3.34**	**256**	Pn		Pn	**Pn**	**20 07 23.9**	**+0.5**
	comp=N,6.5nm,0.3s,baz=79,slow=16,SNR=71								
PDAR				Lg		Lg		20 08 06.9	
	comp=N,29nm,0.3s,baz=76,slow=34,SNR=18								
OGNE	**Ogallala**	**3.58**	**138**				**Pn**	**20 07 25.9**	**-0.6**
OGNE				IAML				20 08 37.1	
	comp=N,101nm,1.6s								
YNE	**Yellowstone No**	**3.72**	**293**	Pn		Pn	**Pn**	**20 07 28.4**	**-0.3**
YNE				IAML				20 08 25.1	
	comp=N,82nm,0.3s								
YNE				IAML				20 08 31.0	
	comp=E,91nm,0.4s								
YMP	**Mirror Lake Pl**	**3.75**	**288**				**Pn**	**20 07 29.2**	**+0.1**
GCMT	**Greycliff**	**3.85**	**305**	Pn		Pn	**Pn**	**20 07 28.6**	**-1.7**
LKWY	**Lake**	**3.88**	**285**				**Pn**	**20 07 30.3**	**-0.5**
LKWY				IAML				20 08 39.1	
	comp=E,54nm,1.1s								
LKWY				IAML				20 08 41.9	
	comp=E,36nm,0.9s								
ISCO	**Idaho Springs**	**3.88**	**185**	Pn		Pn	**Pn**	**20 07 30.9**	**-0.1**
LOHW	**Long Hollow**	**3.95**	**271**				**Pn**	**20 07 33.5**	**+1.8**
LOHW				IAML				20 08 35.2	
	comp=E,32nm,1.0s								
H17A	**Grant Village**	**3.97**	**282**				**Pn**	**20 07 33.6**	**+1.5**
H17A				IAML				20 08 34.5	
	comp=N,42nm,0.3s								
H17A				IAML				20 08 37.1	
	comp=E,39nm,0.7s								
FLWY	**Flagg Ranch**	**4.02**	**278**				**Pn**	**20 07 33.7**	**+0.9**
MOOW	**Moose Ponds**	**4.05**	**273**	Pn		Pn	**Pn**	**20 07 34.6**	**+1.5**
SNOW	**Snow King Moun**	**4.07**	**269**				**Pn**	**20 07 33.0**	**-0.5**
SNOW				IAML				20 08 49.3	
	comp=E,70nm,1.2s								
YNR	**Norris Junctio**	**4.10**	**287**	Pn		Pn	**Pn**	**20 07 35.3**	**+1.4**
YPP	**Pitchstone Pla**	**4.12**	**280**				**Pn**	**20 07 35.2**	**+1.1**
REDW	**Red Top Meadow**	**4.15**	**268**				**Pn**	**20 07 36.0**	**+1.5**
O20A	**White River Ci**	**4.21**	**214**	Pn		Pn	**Pn**	**20 07 34.9**	**-0.6**
O20A				IAML				20 08 46.3	
	comp=E,54nm,0.7s								
O20A				IAML				20 08 57.9	
	comp=N,47nm,1.3s								
E28A	**Huff**	**4.29**	**46**	Pn		Pn	**Pn**	**20 07 38.0**	**+1.7**
AHID	**Auburn Hatcher**	**4.43**	**260**	Pn		Pn	**Pn**	**20 07 36.2**	**-2.2**
AHID				IAML				20 08 55.0	
	comp=E,57nm,0.7s								
YHL	**Hebgen Lake**	**4.48**	**287**				**Pn**	**20 07 38.4**	**-0.7**
YHL				IAML				20 09 05.8	
	comp=N,32nm,0.9s								
QLMT	**Earthquake Lak**	**4.65**	**287**				**Pn**	**20 07 39.7**	**-1.7**
SMCO	**Snowmass**	**4.69**	**197**				**Pb**	**20 07 55.8**	**+2.7**
SMCO				IAML				20 09 04.0	
	comp=N,20nm,1.4s								
SMCO				IAML				20 09 06.1	
	comp=N,29nm,0.5s								
BOZ	**Bozeman (W)**	**5.00**	**295**	Pn		Pn	**Pn**	**20 07 46.7**	**+0.6**
HWUT	**Hardware Ranch**	**5.15**	**249**	Pn		Pn	**Pn**	**20 07 46.9**	**-1.4**
HWUT				IAML				20 09 19.8	
	comp=N,25nm,0.7s								
HWUT				IAML				20 09 33.1	
	comp=N,30nm,1.1s								
TCUT	**Toone Canyon**	**5.28**	**243**	Pn		Pn	**Pn**	**20 07 48.3**	**-1.8**
EGMT	**Eagleton**	**5.41**	**325**	Pn		Pn	**Pn**	**20 07 52.8**	**+1.1**
HRY	**Holter Researc**	**5.61**	**305**				**Pn**	**20 07 55.4**	**+1.0**
HVU	**Hansel Valley**	**5.92**	**254**	Pn		Pn	**Pn**	**20 07 58.3**	**-0.4**
P17A	**Butcher Ranch,**	**5.92**	**227**	Pn		Pn	**Pn**	**20 07 56.5**	**-2.4**
ULM	**Lac du Bonnet**	**9.14**	**41**	Pn		Pn	**Pn**	**20 08 42.2**	**-0.6**
	comp=N,1.6nm,0.3s,baz=230,slow=12,SNR=9.9								
ULM				Sn		Sn	**Sn**	**20 10 26.2**	**-0.1**
	comp=N,0.1nm,0.3s,baz=232,slow=3.5,SNR=4.8								
ULM				Lg		Lg		20 11 19.4	
	comp=N,0.3nm,0.3s,baz=322,slow=19,SNR=2.0								
YKA	**Yellowknife Ar**	**19.65**	**347**	P		P	**20 11 00.6**		**+0.8**
	comp=N,0.1nm,0.3s,baz=155,slow=9.0,SNR=2.3								

NEIC ***15*** *20:16:45.9±1.3, 38.°44N±0.°06×142.°15E±0.°10, h10km±1km, mb4.4/40, Error ellipse: s-maj=14.9km s-min=7.1km az=122.0*
MOS ***15*** *20:16:48.9±0.9, 38.°49N×142.°18E, h45km, mb4.5/18, Error ellipse: s-maj=8.4km s-min=5.6km az=102.1*
NIED ***15*** *20:16:50.4, 38.°47N×142.°12E, h40km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.72; Mθθ-0.24; Mϕϕ-1.48; Mrθ0.82; Mrϕ-0.37; Mθϕ1.44; Fault plane solution: M₀2.3300×10¹⁵ NP1:ϕs25.00000°, δ68.00000°, λ97.00000°. NP2:ϕs188.00000°, δ23.00000°, λ74.00000°.*
JMA ***15*** *20:16:50.4±0.1, 38.°47N×142.°12E, h40km±1km, M4.1*
JMA Felt I J1.
IDC ***15*** *20:16:52.0±2.0, 38.°48N×142.°09E, h55km±17km, mb3.8/25, mb1 4.0/31, mb1mx3.9/51, mbtmp4.1/31, ML3.4/6, MS3.2/5, Ms1 3.2/5, ms1mx2.9/43, Error ellipse: s-maj=16.0km s-min=11.0km az=105.0*
ISC 15 20:16:48.2±1.0, **38.°44N**±0.°04×**142.°27E**±0.°05, **h28**km±5km, **n178,** σ1§**29**/181, **mb4.4**/74, **MS3.4**/3, **6C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.64**	**259**	P		P	**Pn**	**20 17 01.6**	**+0.1**
JIKH				S		S	**Sb**	**20 17 09.1**	**-0.4**
JIO	**Ouri**	**0.72**	**272**	P		P	**Pn**	**20 17 02.6**	**0.0**
JIO				S		S	**Sb**	**20 17 11.1**	**-0.7**

JKMT Kesennumamotoy 0.73 301 P **Pn** **20 17 02.7 +0.1**
JKMT S **Sb** **20 17 11.4 -0.5**
OFUJ Ofunato 0.80 324 P **Pn** **20 17 04.0 +0.4**
OFUJ S **Sb** **20 17 13.6 -0.3**
JMK Ichinoseki 0.97 303 P **Pb** **20 17 06.2 -0.2**
JMK *e*S **Sb** **20 17 17.2 -1.6**
JOU Okura 1.26 267 P **Pn** **20 17 10.5 +0.5**
JOU *e*S **Sn** **20 17 25.4 -0.7**
JOM Ohasama 1.29 324 P **Pb** **20 17 11.2 -0.6**
JMM Marumori 1.29 244 P **Pn** **20 17 10.4 0.0**
JMM Marumori 1.29 244 **Pn** **20 17 10.1 -0.3**
JFK Kawauchi 1.53 226 P **Pn** **20 17 14.0 +0.2**
JYK Kaneyama 1.57 288 P **Pn** **20 17 14.9 +0.7**
JRG Rokugo 1.60 307 P **Pn** **20 17 15.3 +0.7**
JYS Shirataka 1.75 264 P **Pn** **20 17 17.7 +1.0**
JTM Tennabayashi 2.52 339 **Pn** **20 17 29.5 +2.1**
JYT Yasato 2.75 218 Pn **Pn** **20 17 29.7 -0.8**
JSD Sado 3.18 264 Pn **Pn** **20 17 36.2 -0.1**
ERM Erimo 3.64 10‖ *e*P **Pn** **20 17 44.6 +1.9**
ERM Erimo 3.64 10 Pn **Pn** **20 17 44.3 +1.6**
JEM Erimo 3.64 10 Pn Pb 20 18 10.6 +19
MJAR Matsushiro Arr 3.74 241 P **Pn** **20 17 46.1 +2.0**
0.9nm,0.3s,baz=53,slow=9.6,SNR=34
MJAR S **Sb** **20 18 33.7 -4.7**
0.4nm,0.3s,baz=61,slow=21,SNR=2.7
MAJO Matsushiro 3.74 241 *de*P **Pn** **20 17 46.5 +2.4**
MAJO Matsushiro 3.74 241 Pn **Pn** **20 17 46.0 +1.9**
MAT Matsushiro 3.74 241 P **Pn** **20 17 46.1 +2.0**
MAT *e*S **Sn** **20 18 28.5 +1.2**
MJB9 Matsu-Tunnel 3.74 241 **Pn** **20 17 46.1 +2.0**
JEW Eniwo 4.45 352 Pn **Pn** **20 17 55.5 +1.7**
JGF Kuroka 4.84 236 Pn **Pn** **20 18 02.5 +3.2**
JSG Sagara 4.99 222 Pn **Pn** **20 18 03.2 +1.9**
NMR Nemuro--Hokkai 5.58 27 *e*P **Pn** **20 18 09.7 +0.3**
NMR *e*S **Sn** **20 19 07.3 -5.2**
JHJ Hachijo jima 2 5.67 202 P **Pn** **20 18 13.6 +2.9**
14nm,0.3s,baz=66,slow=9.8,SNR=2.3
JHJ S **Sn** **20 19 13.2 -1.8**
7.0nm,0.3s,baz=72,slow=16,SNR=1.2
ASAJ Asahikawa 5.68 2 P **Pn** **20 18 12.8 +2.1**
2.9nm,0.3s,baz=201,slow=16,SNR=9.7
ASAJ S **Sn** **20 19 15.2 +0.2**
1.1nm,0.3s,baz=265,slow=25,SNR=1.4
JKA Kamikawa-asahi 5.68 2 **Pn** **20 18 12.8 +2.1**
RUSJ Misakicho 6.09 21 *e*P **Pn** **20 18 18.3 +1.9**
RUSJ *e*S **Sn** **20 19 22.4 -2.7**
GRPR Tuman 6.15 24 P **Pn** **20 18 17.9 +0.8**
GRPR *e*S **Sn** **20 19 21.8 -4.7**
GRPR pmax pmax
comp=Z,86nm,0.6s
GRPR smax smax
comp=N,257nm,0.4s
GRPR smax smax
comp=E,188nm,0.4s
JWT Wachi 6.34 242 Pn **Pn** **20 18 23.3 +3.5**
YSS Yuzh-Sakhalins 8.52 2 *e*P Pn 20 18 58.9 +9.2
USA0B Ussuriysk Arra 9.64 310 P **Pn** **20 19 05.9 +0.9**
USA0B Ussuriysk Arra 9.64 310 Pn **Pn** **20 19 05.8 +0.9**
USRK Ussuriysk Ar. 9.64 310 P **Pn** **20 19 06.3 +1.3**
baz=116,slow=14,SNR=4.2
USRK LR LR 20 22 11.2
comp=E,188nm,20.2s,baz=101,slow=34
USRK Ussuriysk Ar. 9.64 310 Pn **Pn** **20 19 05.4 +0.4**
KSRS Korea Array 11.37 269 P **Pn** **20 19 31.6 +2.9**
comp=E,0.2nm,0.3s,baz=86,slow=14,SNR=2.7
KSRS LR LR 20 22 56.3
comp=E,82nm,20.7s,baz=94,slow=32
KLR Kul'dur 13.18 328 P **Pn** **20 19 54.1 +0.8**
comp=E,0.1nm,0.3s,baz=177,slow=13,SNR=1.8
KLR LR LR 20 25 11.7
comp=E,156nm,20.9s,baz=82,slow=38
ZEA Zeya 18.45 331 *e*P **Pn** **20 21 01.8 +0.1**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,10.0nm,0.7s
NJ2 Nanjing 20.13 259 *e*P **P** **20 21 20.5 +0.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
MA2 Magadan 21.85 12 P **P** **20 21 39.3 +1.1**
comp=Z,3.7nm,0.7s,baz=199,slow=7.4,SNR=12
MA2 Magadan 21.85 12‖ *e*P **P** **20 21 39.6 +1.3**
MA2 pmax pmax
comp=Z,6.0nm,0.8s
MA2 Magadan 21.85 12 P **P** **20 21 38.5 +0.3**
HHC Hu-ho-hao-te 23.71 286 *e*P **P** **20 21 57.5 -0.4**
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.6s
YAK Yakutsk 24.87 346 P **P** **20 22 06.5 -1.5**
comp=Z,5.4nm,0.4s,baz=285,slow=3.5,SNR=6.1
YAK Yakutsk 24.87 346 *e*P **P** **20 22 06.6 -1.5**
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK Yakutsk 24.87 346 P **P** **20 22 06.2 -1.9**
YAK IAmb IAmb 20 22 11.2
comp=Z,18nm,1.1s
SEY Seymchan 25.29 11 P **P** **20 22 13.9 +2.0**
comp=Z,7.5nm,0.8s,baz=196,slow=6.2,SNR=50
SEY Seymchan 25.29 11‖ *e*P **P** **20 22 13.3 +1.4**
BOD Bodaibo 26.73 326 *e*P **P** **20 22 24.9 -0.2**
BOD pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 27.16 302‖ *e*P **P** **20 22 30.1 +0.8**
ULN pmax pmax
comp=Z,3.0nm,1.0s
ULN Ulaanbaatar 27.16 302 P **P** **20 22 29.2 -0.1**
SONM Songino Array 27.60 302 P **P** **20 22 32.9 -0.2**
comp=Z,0.7nm,0.5s,baz=105,slow=9.2,SNR=5.8
SONM Songino Array 27.60 302 P **P** **20 22 32.5 -0.7**
ENH Enshi 28.15 263 P **P** **20 22 37.6 -0.5**
H11N2 WAKE ISLAND Hy 28.33 124 T T 20 52 52.3
baz=316,slow=75,SNR=416
H11N1 WAKE ISLAND Hy 28.34 124 T T 20 53 03.6
baz=316,slow=75,SNR=328
H11N3 WAKE ISLAND Hy 28.34 124 T T 20 53 04.1
baz=316,slow=75,SNR=360
H11S1 WAKE ISLAND Hy 29.09 126 T T 20 53 52.5
baz=318,slow=76,SNR=86
H11S3 WAKE ISLAND Hy 29.10 126 T T 20 53 56.6
baz=318,slow=76,SNR=90
H11S2 WAKE ISLAND Hy 29.11 126 T T 20 54 01.9
baz=318,slow=76,SNR=73
TLY Talaya 29.95 309 P **P** **20 22 54.0 +0.1**
comp=Z,4.6nm,0.8s,baz=164,slow=4.3,SNR=4.9
TLY LR LR 20 33 48.4
comp=Z,94nm,21.1s,baz=144,slow=34
TLY Talaya 29.95 309 P **P** **20 22 53.7 -0.2**
TLY IAmb IAmb 20 22 55.2
comp=Z,5.2nm,0.9s
ZAK Zakamensk 29.96 306 *e*P **P** **20 22 53.9 -0.2**
ZAK pmax pmax
comp=Z,5.0nm,0.9s
GYA Guiyang 32.14 259 *e*P **P** **20 23 14.0 +0.5**
GYA pmax pmax
comp=Z,11nm,0.7s
BILL Bilibino 32.49 17⇑ *e*P **P** **20 23 17.1 +1.1**
BILL *e* 20 23 28.9
BILL pmax pmax
comp=Z,2.0nm,1.0s
GTA Gaotai 32.82 285 *e*P **P** **20 23 19.6 +0.2**
GTA pP sP 20 23 29.9 -0.8
GTA sP pP 20 23 33.8 +6.4
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA LR LR
comp=N,160nm,15.6s
GTA LR LR
comp=E,240nm,14.5s
GTA LR LR
comp=Z,270nm,14.2s
TIXI Tiksi 33.99 352 P **P** **20 23 28.7 -0.2**
comp=Z,1.2nm,0.6s,baz=154,slow=9.9,SNR=9.1
TIXI Tiksi 33.99 352‖ *e*P **P** **20 23 28.8 -0.2**
TIXI pmax pmax
comp=Z,25nm,2.5s
TIXI Tiksi 33.99 352 P **P** **20 23 28.4 -0.6**
KMI Kunming 35.86 260 ⇑P **P** **20 23 47.3 +1.4**
KMI pP sP 20 23 56.4 -0.9
KMI pmax pmax
comp=Z,10.0nm,0.7s
TNA Tin City 39.30 30 P **P** **20 24 17.0 +2.7**
TNA IAmb IAmb 20 24 30.8
comp=Z,8.0nm,1.3s
DGZ Jazzator, Alta 40.14 305 *ce*P **P** **20 24 22.8 +1.1**
DGZ pmax pmax
comp=Z,8.0nm,0.9s
WMQ Urumqi 40.83 296 *e*P **P** **20 24 28.3 +0.9**
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,74nm,8.3s
WMQ Urumqi 40.83 296 P **P** **20 24 27.1 -0.3**
WMQ pmax pmax
comp=Z,9.0nm,0.5s
WMQ Urumqi 40.83 296 P **P** **20 24 27.1 -0.3**
ZAA0 Zalesovo Array 41.49 311 P **P** **20 24 32.0 -0.6**
ZAA0 IAmb IAmb 20 24 33.4
comp=Z,4.1nm,0.6s
ZALV Zalesovo Beam 41.49 311 P **P** **20 24 32.8 +0.3**
comp=Z,3.9nm,0.5s,baz=86,slow=8.0,SNR=18
ZALV PcP **PcP** **20 26 30.1 +0.4**
comp=Z,0.8nm,0.5s,baz=81,slow=2.0,SNR=4.0
ZALV Zalesovo Beam 41.49 311 P **P** **20 24 32.0 -0.6**
CHTO Chiang Mai 42.30 255 P **P** **20 24 40.2 +0.6**
CHTO pmax pmax
comp=Z,3.0nm,0.9s
CHTO Chiang Mai 42.30 255 P **P** **20 24 40.2 +0.6**
CMAR Chiang Mai Arr 42.52 255 P **P** **20 24 41.1 -0.3**
comp=Z,0.7nm,0.8s,baz=42,slow=7.4,SNR=10
LSA Lhasa 42.77 274 P **P** **20 24 42.0 -1.9**
LSA pmax pmax
comp=Z,8.0nm,1.5s
LSA Lhasa 42.77 274 P **P** **20 24 42.0 -1.9**
LSA IAmb IAmb 20 24 49.8
comp=Z,8.1nm,1.5s
MK31 Makanchi Array 43.96 301 *de*P **P** **20 24 52.9 +0.1**
MK31 Makanchi Array 43.96 301 P **P** **20 24 52.6 -0.1**
MK31 IAmb IAmb 20 25 09.7
comp=Z,6.5nm,0.7s
MKAR Makanchi Array 43.96 301 P **P** **20 24 52.6 -0.1**
comp=Z,2.5nm,0.7s,baz=85,slow=9.3,SNR=22
MKAR Makanchi Array 43.96 301 *i* P **P** **20 24 52.9 +0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 43.96 301 P **P** **20 24 52.2 -0.6**
SHL Shillong 44.11 268 P **P** **20 24 53.2 -1.2**
SHL pmax pmax
comp=Z,6.0nm,1.0s
SHL Shillong 44.11 268 P **P** **20 24 53.1 -1.2**
SHL IAmb IAmb 20 24 58.1
comp=Z,6.2nm,1.0s
MAKZ Makanchi 44.17 301 P **P** **20 24 54.6 +0.2**
MAKZ pmax pmax
comp=Z,6.0nm,0.7s
MAKZ Makanchi 44.17 301 P **P** **20 24 54.6 +0.2**
MAKZ IAmb IAmb 20 25 11.0
comp=Z,6.2nm,0.7s
TAPN Taplejung 46.53 273 *e*P **P** **20 25 13.6 -0.1**
comp=Z,4.5nm,0.7s
ODAN Odare 47.01 273 *e*P **P** **20 25 17.2 -0.2**
comp=Z,16nm,0.8s
JIRN Jiri 47.58 274 *e*P **P** **20 25 22.1 +0.1**
comp=Z,8.4nm,0.9s
RAMN Ramite 47.59 273 *e*P **P** **20 25 22.0 +0.1**
comp=Z,22nm,0.9s
GUN Gumba 47.70 275 *e*P **P** **20 25 23.1 +0.2**
comp=Z,14nm,0.6s
ILAR Eielson Array 47.95 33 P **P** **20 25 25.0 +1.1**
comp=Z,1.0nm,0.7s,baz=265,slow=6.5,SNR=11
ILAR Eielson Array 47.95 33 P **P** **20 25 25.0 +1.1**
KKN Kakani 48.23 275 *e*P **P** **20 25 26.9 +0.1**
comp=Z,18nm,0.8s
PKI Pulchoki 48.23 275 *e*P **P** **20 25 26.8 -0.2**
comp=Z,4.1nm,0.6s
PKIN Phulchoki 48.24 275 *e*P **P** **20 25 26.7 -0.3**
comp=Z,4.6nm,0.5s
GKN Gorkha 48.63 276 *e*P **P** **20 25 29.7 -0.2**
comp=Z,17nm,1.0s
KOLN Koldanda 49.55 276 *e*P **P** **20 25 37.0 0.0**
comp=Z,3.9nm,0.5s
PYUN Piuthan 49.87 277 *e*P **P** **20 25 40.0 +0.6**
comp=Z,12nm,0.5s
BRVK Borovoye 50.20 312‖ *e*P **P** **20 25 41.4 +0.1**
BRVK pmax pmax
comp=Z,6.0nm,2.5s
BRVK Borovoye 50.20 312 P **P** **20 25 41.4 +0.1**
BRVK IAmb IAmb 20 25 42.4
comp=Z,3.2nm,1.1s
AAK Ala-Archa 50.43 298⇑ *e*P **P** **20 25 43.3 -0.1**
AAK pmax pmax
comp=Z,1.0nm,0.3s
AAK Ala-Archa 50.43 298 P **P** **20 25 43.5 +0.1**
INK Inuvik 52.83 28 P **P** **20 26 01.2 +0.5**
comp=Z,1.4nm,0.8s,baz=241,slow=6.2,SNR=5.0
KK31 Karatay Array 53.02 299 P **P** **20 26 00.5 -2.0**
KK31 pmax pmax
comp=Z,3.0nm,0.9s
KK31 Karatay Array 53.02 299 P **P** **20 26 00.5 -2.0**
KK31 IAmb IAmb 20 26 19.1
comp=Z,2.8nm,0.9s
KKAR Karatay Array 53.02 299 P **P** **20 26 01.1 -1.5**
KKAR Karatay Array 53.02 299 P **P** **20 26 01.1 -1.5**
KKAR Karatay Array 53.02 299 P **P** **20 26 00.8 -1.8**
KKAR IAmb IAmb 20 26 19.1
comp=Z,2.8nm,0.9s
NIL Nilore 54.83 288 P **P** **20 26 13.3 -2.6**
NIL pmax pmax
comp=Z,5.0nm,0.7s
NIL Nilore 54.83 288 P **P** **20 26 13.3 -2.6**
ARU Arti 55.77 318 *d* iP **P** **20 26 22.6 +0.3**
ARU *PP **sP** **20 26 34.2 +0.3**
ARU 20 27 21.0
ARU 20 28 22.5
ARU S **S** **20 34 06.0 -1.1**
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU Arti 55.77 318 P **P** **20 26 21.6 -0.7**
ARU IAmb IAmb 20 26 23.4
comp=Z,5.0nm,0.9s
KBL Kabul 57.55 291 P **P** **20 26 34.1 -1.5**
KBL pmax pmax
comp=Z,5.0nm,1.1s
KBL Kabul 57.55 291 P **P** **20 26 34.1 -1.5**
KBL IAmb IAmb 20 26 36.1
comp=Z,4.6nm,1.1s
ABKAR Akbulak array 57.56 310 P **P** **20 26 34.5 -0.6**
ABKAR IAmb IAmb 20 26 35.8
comp=Z,3.4nm,0.9s
ABKAR Akbulak array 57.56 310 P **P** **20 26 34.6 -0.5**
FITZ Fitzroy Crossi 58.36 199 P **P** **20 26 41.6 +0.7**
comp=Z,0.8nm,0.6s,baz=14,slow=7.5,SNR=1.7
WRAB Tennant Creek 58.53 189 P **P** **20 26 42.7 +0.5**
WRAB pmax pmax
comp=Z,13nm,1.4s
WRAB Tennant Creek 58.53 189 P **P** **20 26 42.6 +0.5**
WRA Warramunga Arr 58.54 189 P **P** **20 26 42.3 +0.1**
comp=Z,2.8nm,0.7s,baz=5.9,slow=7.0,SNR=28
WRA Warramunga Arr 58.54 189 P **P** **20 26 42.2 -0.1**
KIRV Kirov 59.54 323⇑ *e*P **P** **20 26 49.1 +0.4**
YKA Yellowknife Ar 62.26 31 P **P** **20 27 08.2 +1.0**
comp=Z,0.6nm,0.7s,baz=302,slow=6.3,SNR=7.1
ASAR Alice Springs 62.27 189 P **P** **20 27 08.6 +0.9**
comp=Z,1.3nm,0.7s,baz=13,slow=5.6,SNR=19
HRA Herat 62.58 293 P **P** **20 27 10.0 0.0**
HRA IAmb IAmb 20 27 11.5
comp=Z,3.0nm,1.0s
ARCES ARCESS Array B 62.93 339 P **P** **20 27 10.9 -0.6**
comp=Z,2.8nm,0.9s,baz=38,slow=4.6,SNR=4.5
BELG Belogornoye 63.24 317⇑ *e*P **P** **20 27 14.6 +0.8**
BELG pmax pmax
comp=Z,2.0nm,1.0s
GEYT Alibeck 63.75 299 P **P** **20 27 17.0 -0.6**
comp=Z,1.2nm,0.4s,baz=26,slow=44,SNR=2.4
GEYT Alibeck 63.75 299 IAmb IAmb 20 27 18.6
comp=Z,1.7nm,0.6s
FIA1 FINESS Array S 67.89 332 P **P** **20 27 43.0 -0.7**
FINES FINESS Array B 67.89 332 P **P** **20 27 43.7 0.0**
comp=Z,4.6nm,0.7s,baz=40,slow=9.9,SNR=11
FINES FINESS Array B 67.89 332 *i* P **P** **20 27 43.5 -0.2**
FINES pmax pmax
comp=Z,5.0nm,0.7s
C09A Chrisman Ranch 68.27 46 P **P** **20 27 48.1 +1.7**
D08A Wollman Farm, 68.31 47 P **P** **20 27 48.1 +1.5**
KIV Kislovodsk 70.50 311 *e*P **P** **20 27 59.8 -0.6**
KIV pmax pmax
comp=Z,40nm,1.1s
KIV Kislovodsk 70.50 311 P **P** **20 28 01.0 +0.6**
KBZ Khabaz 70.50 311 P **P** **20 28 00.3 +0.1**
comp=Z,4.2nm,0.8s,baz=53,slow=2.9,SNR=10
KBZ Khabaz 70.50 311 *de*P **P** **20 28 01.2 +1.0**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
NOA NORSAR Array B 73.16 337 P **P** **20 28 15.9 0.0**
comp=Z,2.6nm,0.7s,baz=38,slow=6.0,SNR=7.7
NBO00 NORSAR Array S 73.30 338 P **P** **20 28 16.6 -0.1**
AKASG Malin Array Be 73.60 322 P **P** **20 28 18.1 -0.6**
comp=Z,5.0nm,0.7s,baz=45,slow=6.0,SNR=15
AKASG Malin Array Be 73.60 322 *i* P **P** **20 28 18.7 0.0**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKBB Malin Array Si 73.60 322 P **P** **20 28 18.8 +0.1**
AKBB pmax pmax
comp=Z,6.0nm,0.9s
AKBB Malin Array Si 73.60 322 P **P** **20 28 18.8 +0.1**
AKBB IAmb IAmb 20 28 19.8
comp=Z,5.9nm,0.9s
HVU Hansel Valley 74.97 48 P **P** **20 28 28.1 +1.1**
HVU pmax pmax
comp=Z,4.0nm,1.0s
HVU Hansel Valley 74.97 48 P **P** **20 28 28.1 +1.1**
HVU IAmb IAmb 20 28 31.4
comp=Z,4.4nm,1.0s
R11A Troy Canyon, C 75.37 53 P **P** **20 28 28.9 -0.5**
PD31 Pinedale Array 76.20 46 P **P** **20 28 35.1 +0.9**
PDAR Pinedale Array 76.20 46 P **P** **20 28 36.0 +1.8**
comp=Z,0.9nm,0.6s,baz=270,slow=2.5,SNR=9.1
PDAR Pinedale Array 76.20 46 P **P** **20 28 35.2 +1.0**
BUR08 Bucovina Ar. S 77.62 322 P **P** **20 28 42.0 +0.1**
BUR08 IAmb IAmb 20 28 43.5
comp=Z,3.0nm,0.8s
BURAR Bucovina Array 77.63 322 P **P** **20 28 41.7 -0.3**
BURAR Bucovina Array 77.63 322 P **P** **20 28 41.7 -0.3**
BURAR IAmb IAmb 20 28 43.4
comp=Z,2.8nm,0.7s
LCMT Little Creek M 77.66 52 P **P** **20 28 40.8 -1.6**
LCMT IAmb IAmb 20 28 41.3
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 78.43 312 P **P** **20 28 46.5 -0.1**
comp=Z,0.6nm,0.5s,baz=207,slow=32,SNR=2.5
CLL Collm 80.22 330 *e*P **P** **20 28 55.0 -0.9**
comp=Z,7.0nm,1.2s
ASF Jabal al Asfar 81.29 304 LR LR 21 07 35.5
comp=Z,5.8nm,19.3s,baz=88,slow=38
GERES GERESS Array B 81.88 329 P **P** **20 29 05.1 +0.2**
comp=Z,0.7nm,0.6s,baz=34,slow=5.5,SNR=6.8
SOKA Soboth 83.01 326 *e*P **P** **20 29 11.4 +0.5**
comp=Z,1.2nm,0.4s
OBKA Obir 83.35 327 *e*P **P** **20 29 13.1 +0.5**
comp=Z,1.3nm,0.7s
KBA Koelnbreinsper 83.41 328 *e*P **P** **20 29 14.1 +1.0**
comp=Z,0.5nm,0.2s
FETA Feichten 84.54 329 *e*P **P** **20 29 19.1 +0.2**
comp=Z,3.6nm,1.2s
TXAR Lajitas Array 88.73 53 P **P** **20 29 40.4 +0.8**
comp=Z,0.4nm,0.7s,baz=308,slow=3.7,SNR=5.2
QSPA South Pole Qui 128.18 180 PKP **PKPdf** **20 35 50.3 -0.5**
comp=Z,1.1nm,0.9s,baz=284,slow=14,SNR=2.1
H03N2 Juan Fernandez 146.47 94 T T 23 21 03.4
baz=290
H03N3 Juan Fernandez 146.49 94 T T 23 21 05.5
baz=290
H03N1 Juan Fernandez 146.49 94 T T 23 21 04.1
baz=290

NEIC ***15*** *20:17:02.7±1.1, 18.°8N±0.°4×68.°7W±0.°1, h167km±22km, Error ellipse: s-maj=58.3km s-min=14.1km az=185.0*
RSPR ***15*** *20:17:03.3, 18.°69N×68.°57W, h183km±2km, MD3.8/7*
OSPL ***15*** *20:17:05.2±0.7, 18.°68N×69.°04W, h109km±10km, ML2.8*
ISC 15 20:16:59.4±1.2, 18.°7N±0.°1×69.°04W±0.°04, h150km, n35,
σ1§52/46, 7C-3D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SDD	**Santo Domingo**	**0.87**	**253**	*i* P		**Pn**		**20 17 23.4**	**+0.4**
SDD				*e*S		**Sn**		**20 17 37.6**	**-3.5**
BANI	**BANI**	**1.29**	**256**	*i* P		**Pn**		**20 17 28.5**	**+1.5**
BANI				*e*S		**Sn**		**20 17 46.0**	**-2.0**
BANI				IAML				20 17 52.5	
	comp=Z,140nm,0.5s								
AGPR	**Aguadilla, PR**	**1.85**	**98**‖	*e*P		**Pn**		**20 17 35.2**	**+2.5**
AGPR	**Aguadilla, PR**	**1.85**	**98**	*e*S		**Sn**		**20 17 58.9**	**+0.6**
AGPR	**Aguadilla, PR**	**1.85**	**98**			**Pn**		**20 17 35.2**	**+2.5**
AGPR						**Sn**		**20 17 58.9**	**+0.6**
AGPR	**Aguadilla, PR**	**1.85**	**98**	*i* P		**Pn**		**20 17 35.0**	**+2.3**
AGPR				IAML				20 18 07.2	
	comp=Z,55nm,0.7s								
LSP	**Las Mesas**	**1.93**	**106**⇑	*e*P		**Pn**		**20 17 35.6**	**+1.9**
LSP	**Las Mesas**	**1.93**	**106**	*e*S		**Sn**		**20 18 00.9**	**+0.8**
LSP	**Las Mesas**	**1.93**	**106**			**Pn**		**20 17 35.6**	**+1.9**
LSP						**Sn**		**20 18 00.9**	**+0.8**
MLPR	**Magueyes Islan**	**2.04**	**111**⇑	*e*P		**Pn**		**20 17 35.9**	**+1.0**
MLPR	**Magueyes Islan**	**2.04**	**111**	*e*S		**Sn**		**20 18 02.6**	**+0.4**
MLPR	**Magueyes Islan**	**2.04**	**111**			**Pn**		**20 17 35.9**	**+1.0**
MLPR						**Sn**		**20 18 02.6**	**+0.4**
SDDR	**Presa de Saban**	**2.15**	**277**	*i* P		**Pn**		**20 17 38.5**	**+2.3**
SDDR				IAML				20 18 12.9	
	comp=Z,19nm,0.6s								
AOPR	**Arecibo Observ**	**2.20**	**99**⇑	*e*P		**Pn**		**20 17 38.0**	**+1.2**
AOPR	**Arecibo Observ**	**2.20**	**99**	*e*S		**Sn**		**20 18 04.7**	**-1.0**
AOPR	**Arecibo Observ**	**2.20**	**99**			**Pn**		**20 17 38.0**	**+1.2**
AOPR						**Sn**		**20 18 04.7**	**-1.0**
EMPR	**Esperanza - Ma**	**2.39**	**95**⇑	*e*P		**Pn**		**20 17 39.4**	**+0.2**
EMPR	**Esperanza - Ma**	**2.39**	**95**	*e*S		**Sn**		**20 18 09.4**	**-0.3**
EMPR	**Esperanza - Ma**	**2.39**	**95**			**Pn**		**20 17 39.4**	**+0.2**
EMPR						**Sn**		**20 18 09.4**	**-0.3**
CELP	**Cerrillos**	**2.42**	**105**⇑	*e*P		**Pn**		**20 17 40.7**	**+1.2**
CELP	**Cerrillos**	**2.42**	**105**	*e*S		**Sn**		**20 18 10.3**	**-0.1**
CELP	**Cerrillos**	**2.42**	**105**			**Pn**		**20 17 40.7**	**+1.2**
CELP						**Sn**		**20 18 10.3**	**-0.1**
CBYP	**Canovanas**	**3.05**	**98**‖	*e*P		**Pn**		**20 17 47.9**	**+0.5**
CBYP	**Canovanas**	**3.05**	**98**	*e*S		**Sn**		**20 18 22.6**	**-2.1**
CBYP	**Canovanas**	**3.05**	**98**			**Pn**		**20 17 47.9**	**+0.5**
CBYP						**Sn**		**20 18 22.6**	**-2.1**
MTP	**Monte Pirata**	**3.37**	**100**‖	*e*P		**Pn**		**20 17 51.6**	**+0.2**
MTP	**Monte Pirata**	**3.37**	**100**	*e*S		**Sn**		**20 18 29.4**	**-2.4**
MTP	**Monte Pirata**	**3.37**	**100**			**Pn**		**20 17 51.6**	**+0.2**
MTP						**Sn**		**20 18 29.4**	**-2.4**
GRTK	**Grand Turk**	**3.40**	**325**	*e*S		**Sn**		**20 18 31.9**	**-0.7**
GRTK				IAML				20 18 38.0	
	comp=Z,38nm,0.8s								
CUPR	**Culebra, Puert**	**3.59**	**96**⇑	*e*P		**Pn**		**20 17 54.7**	**+0.5**
CUPR	**Culebra, Puert**	**3.59**	**96**	*e*S		**Sn**		**20 18 34.8**	**-2.0**
CUPR	**Culebra, Puert**	**3.59**	**96**			**Pn**		**20 17 54.7**	**+0.5**
CUPR						**Sn**		**20 18 34.8**	**-2.0**
VGBI	**Virgin Gorda,**	**4.40**	**92**‖	*e*P		**Pn**		**20 18 05.4**	**+0.5**
VGBI	**Virgin Gorda,**	**4.40**	**92**	*e*S		**Sn**		**20 18 52.9**	**-3.1**
VGBI	**Virgin Gorda,**	**4.40**	**92**			**Pn**		**20 18 05.4**	**+0.5**

JMA ***15*** *20:27:48.8±0.1, 39.°36N×143.°90E, h22km, M3.4*
IDC ***15*** *20:27:49.9±5.5, 39.°53N×143.°63E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.3/33, mbtmp3.5/5, ML2.4/2, Error ellipse: s-maj=104.2km s-min=38.9km az=132.0*
ISC 15 20:27:50.1±1.5, 39.°43N±0.°09×143.°75E±0.°10, h11km, n19,
σ0§93/18, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.50**	**276**	P		**Pn**		**20 28 16.8**	**-0.1**
MIYJ				*e*S		**Sb**		**20 28 37.0**	**+0.1**
JTH	**Tanohata**	**1.54**	**290**	P		**Pb**		**20 28 17.6**	**-1.0**
OFUJ	**Ofunato**	**1.65**	**259**	P		**Pn**		**20 28 18.7**	**-0.3**
JOM	**Ohasama**	**1.90**	**272**	P		**Pn**		**20 28 22.8**	**+0.4**
JOM				*e*S		**Sb**		**20 28 47.4**	**-1.1**
JANG	**Nango**	**1.96**	**300**	P		**Pn**		**20 28 23.4**	**+0.2**
JMK	**Ichinoseki**	**2.02**	**257**	P		**Pn**		**20 28 24.2**	**+0.2**
JYK	**Kaneyama**	**2.68**	**260**	P		**Pn**		**20 28 34.0**	**+0.8**
JNBK	**Urakawa-nobuka**	**2.95**	**345**	*e*S		**Sn**		**20 29 14.2**	**+2.0**
JCH	**Churui**	**3.20**	**355**	*e*S		**Sn**		**20 29 19.1**	**+0.8**
JFT	**Otama**	**3.29**	**236**	P		**Pn**		**20 28 41.6**	**+0.1**
JAR	**Ashorobuto**	**3.87**	**0**	*e*S		**Sn**		**20 29 34.0**	**-0.8**
MJAR	**Matsushiro Arr**	**5.24**	**238**	Pn		**Pn**		**20 29 09.2**	**+0.9**
	0.1nm,0.3s,baz=34,slow=11,SNR=6.3								
PETK	**Petropavlovsk-**	**16.70**	**30**	Pn		**P**		**20 31 44.9**	**-1.3**
	0.1nm,0.3s,baz=223,slow=9.6,SNR=2.7								
H11N2	**WAKE ISLAND Hy**	**27.98**	**128**	T		T		21 03 16.6	

baz=320
H11N1 WAKE ISLAND Hy 27.99 128 T T 21 03 12.8
baz=320
H11N3 WAKE ISLAND Hy 28.00 128 T T 21 03 08.7
baz=320
SONM Songino Array 28.09 300 P **P** **20 33 43.1 +1.3**
0.2nm,0.4s,baz=84,slow=7.7,SNR=1.6
ZALV Zalesovo Beam 41.71 310 P **P** **20 35 38.7 +0.1**
0.6nm,0.5s,baz=87,slow=8.7,SNR=2.9
MKAR Makanchi Array 44.45 300 P **P** **20 36 00.6 -0.4**
0.4nm,0.8s,baz=76,slow=6.1,SNR=2.9

*IDC **15** 20:30:13.9±2.1,9°.97S×118°.48E,h0km,mb3.1/2,*
mb1 3.5/5,mb1mx3.3/25,mbtmp3.3/5,ML3.2/3,Error
ellipse: s-maj=78.0km s-min=26.5km az=46.0
*DJA **15** 20:30:20.6±0.5,10°.5S±4°.×118°.8E±°,h10km,M3.3/8,*
MLv3.3/8
ISC 15 20:30:16.3±1.0,10°.3S±0°.1×118°.48E±0°.06,h10km,n11,
σ2s04/14,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.59**	**334**	P	**Pb**	**20 30 45.3**	**-0.4**
PLAI				S	**Sn**	**20 31 04.5**	**-0.6**
BASI	**Baing, Sumba**	**2.07**	**89**	P	**Pg**	**20 30 55.9**	**0.0**
TWSI	**Taliwang, Sumb**	**2.19**	**314**	P	**Pn**	**20 30 54.5**	**+1.8**
TWSI				S	**Sn**	**20 31 19.7**	**-0.2**
DNP	**Denpasar**	**3.59**	**296**	P	**Pn**	**20 31 14.9**	**+2.9**
SRBI	**Singaraja**	**3.88**	**304**	P	**Pn**	**20 31 18.5**	**+2.4**
MMRI	**Maumere**	**4.05**	**67**	P	**Pn**	**20 31 22.2**	**+3.9**
BATI	**Baumata**	**5.10**	**90**	Pn	**Pn**	**20 31 32.3**	**-0.6**
	1.1nm,0.3s,baz=277,slow=12,SNR=1.6						
BATI				Sn	**Sn**	**20 32 30.1**	**-1.8**
	1.4nm,0.3s,baz=10,slow=17,SNR=1.4						
FITZ	**Fitzroy Crossi**	**10.43**	**139**	Pn	**Pn**	**20 32 47.5**	**+1.6**
	0.2nm,0.3s,baz=318,slow=8.1,SNR=25						
FITZ				Sn	Sn	20 34 34.6	-8.4
	0.1nm,0.3s,baz=298,slow=21,SNR=1.8						
WRA	**Warramunga Arr**	**18.07**	**124**	P	**Pn**	**20 34 28.1**	**+0.5**
	0.1nm,0.3s,baz=300,slow=13,SNR=5.0						
ASAR	**Alice Springs**	**19.85**	**134**	P	**Pn**	**20 34 49.6**	**+0.4**
	0.6nm,0.7s,baz=311,slow=8.5,SNR=8.9						
MKAR	**Makanchi Array**	**65.35**	**333**	P	**P**	**20 40 56.2**	**-2.5**
	0.2nm,0.6s,baz=152,slow=6.5,SNR=2.4						

*IDC **15** 20:49:34.1±3.1,36°.46N×71°.26E,h163km±29km,mb3.4/10,*
mb1 3.5/16,mb1mx3.2/47,mbtmp3.9/16,MS3.8/1,
Ms1 3.8/1,ms1mx2.7/40,Error ellipse: s-maj=25.0km
s-min=13.6km az=32.0
*NNC **15** 20:49:36.6±4.3,37°.13N×71°.00E,h0km,mb4.4,mpv4.0,*
Error ellipse: s-maj=34.7km s-min=23.1km az=172.0
ISC 15 20:49:36.9±0.5,36°.64N±0°.05×71°.37E±0°.06,h200km,n50,
σ2s44/61,mb3.5/10,7C-4D,Afghanistan-Tajikistan
border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.84**	**171**	P	**Pn**	**20 50 24.7**	**-0.2**
CEP				S	**Sn**	**20 51 01.0**	**-1.3**
CHCP	**Chirah Chowk**	**3.35**	**152**	P	**Pn**	**20 50 31.2**	**+0.4**
THW	**Thamme Wali**	**3.85**	**175**	P	**Pn**	**20 50 36.8**	**0.0**
THN	**Thein Dam**	**5.52**	**138**	eP	**Pn**	**20 50 58.0**	**+0.1**
THN				eS	**Sn**	**20 51 59.0**	**-2.9**
AML	**Almayashu**	**5.77**	**17**	P	**Pn**	**20 51 00.4**	**-1.1**
	SNR=110						
UCH	**Uchtor**	**6.09**	**23**	P	**Pn**	**20 51 05.8**	**+0.2**
	SNR=7.8						
EKS2	**Erkin-Say**	**6.29**	**16**	P	**Pn**	**20 51 06.5**	**-1.5**
	SNR=14						
AAK	**Ala-Archa**	**6.46**	**21**	P	**Pn**	**20 51 09.7**	**-0.4**
	3.1nm,0.3s,baz=180,slow=6.6,SNR=45						
AAK				S	**Sn**	**20 52 17.4**	**-6.6**
	1.6nm,0.3s,baz=88,slow=22,SNR=15						
AAK	**Ala-Archa**	**6.46**	**21**	P	**Pn**	**20 51 09.8**	**-0.4**
	SNR=15						
AAK	**Ala-Archa**	**6.46**	**21**	⇓P	**Pn**	**20 51 09.4**	**-0.7**
	3.4nm,0.3s						
AAK				⇓S	**Sn**	**20 52 18.9**	**-5.1**
	27nm,0.8s						
KK31	**Karatay Array**	**6.49**	**354**	⇑P	**Pn**	**20 51 08.8**	**-1.6**
	12nm,0.4s,baz=175,slow=12,SNR=145						
KK31				⇑S	**Sn**	**20 52 18.5**	**-6.1**
	19nm,0.6s,baz=180,slow=22,SNR=11						
CHMS	**Chumysh**	**6.86**	**21**	P	**Pn**	**20 51 14.7**	**-0.6**
	SNR=5.1						
USP	**Ospenovka**	**7.04**	**19**	P	**Pn**	**20 51 16.4**	**-1.2**
	SNR=7.4						
TKM2	**Tokmak 2**	**7.07**	**26**	P	**Pn**	**20 51 17.7**	**-0.4**
	SNR=6.0						
TKM2	**Tokmak 2**	**7.07**	**26**	⇑P	**Pn**	**20 51 17.5**	**-0.6**
	3.5nm,0.4s						
TKM2				⇑S	**Sn**	**20 52 34.4**	**-4.0**
	10nm,1.0s						
SMLA	**Simla**	**7.31**	**137**	eP	**Pn**	**20 51 20.0**	**-1.1**
SMLA				eS	**Sn**	**20 52 39.1**	**-4.8**
SMLA				IAML		20 52 40.7	
	comp=N,233nm,0.4s						
SMLA				IAML		20 52 40.9	
	comp=E,191nm,0.2s						
MDOK	**Medeo**	**7.84**	**32**	⇑P	**Pn**	**20 51 27.9**	**-0.2**
	comp=E,9.4nm,0.6s						
MDOK				S	**Sn**	**20 52 58.9**	**+2.3**
	comp=E,4.6nm,0.8s						
DDI	**Dehra Dun**	**8.41**	**137**	eS	**Sn**	**20 53 04.1**	**-6.1**
DDI				IAML		20 53 06.5	
	comp=E,92nm,0.3s						
DDI				IAML		20 53 06.8	
	comp=N,189nm,0.4s						
GEYT	**Alibeck**	**10.64**	**281**	P	**Pn**	**20 52 01.1**	**-3.2**
	comp=N,0.5nm,0.3s,baz=84,slow=9.2,SNR=2.0						
GEYT				S	Sn	20 53 54.7	-8.4
	comp=N,0.1nm,0.3s,baz=302,slow=22,SNR=1.3						
PYUN	**Piuthan**	**12.99**	**128**	eP	**Pn**	**20 52 33.9**	**-0.5**
	comp=N,16nm,0.2s						
MKAR	**Makanchi Array**	**13.00**	**35**	P	**Pn**	**20 52 34.0**	**-0.3**
	comp=N,0.5nm,0.3s,baz=205,slow=10,SNR=14						
MKAR				S	**Sn**	**20 55 05.7**	**+6.4**
	comp=N,0.1nm,0.3s,baz=220,slow=22,SNR=1.1						
KOLN	**Koldanda**	**13.61**	**127**	eP	**Pn**	**20 52 41.4**	**-0.7**
	comp=N,6.1nm,0.3s						
GKN	**Gorkha**	**14.13**	**124**	eP	**Pn**	**20 52 48.8**	**+0.2**
	comp=N,26nm,0.5s						
BHPL	**Bhopal**	**14.34**	**157**	eP	**P**	**20 52 53.9**	**+1.4**
BHPL				eS	S	20 55 19.8	-11
KKN	**Kakani**	**14.70**	**123**	eP	**Pn**	**20 52 56.0**	**+0.4**
	comp=N,31nm,0.6s						
DMN	**Daman**	**14.70**	**124**	eP	**P**	**20 52 57.0**	**+0.3**
	comp=N,14nm,0.4s						
KURBB	**Kurchatov Arra**	**14.90**	**18**	P	**Pn**	**20 52 55.6**	**-2.0**
	comp=N,0.0nm,0.3s,baz=208,slow=10,SNR=15						
PKIN	**Phulchoki**	**14.91**	**123**	eP	**P**	**20 52 59.4**	**+0.3**
	comp=N,31nm,0.5s						
PKI	**Pulchoki**	**14.93**	**123**	eP	**P**	**20 52 59.4**	**+0.1**
	comp=N,34nm,0.6s						
GUN	**Gumba**	**15.03**	**121**	eP	**P**	**20 53 01.7**	**+1.2**
	comp=N,16nm,0.4s						
AB31	**Akbulak array**	**15.11**	**330**	⇑P	**P**	**20 53 01.5**	**+0.8**
	comp=N,1.0nm,0.4s,baz=140,slow=11,SNR=38						
AB31				⇑S	**S**	**20 55 44.5**	**-3.4**
	comp=N,1.7nm,0.5s,baz=150,slow=22,SNR=9.2						
JIRN	**Jiri**	**15.40**	**121**	eP	**P**	**20 53 05.1**	**+0.5**
	comp=N,32nm,0.5s						
RAMN	**Ramite**	**16.14**	**122**	eP	**P**	**20 53 12.8**	**+0.2**
	comp=N,18nm,0.6s						
BVAR	**Borovoye Array**	**16.40**	**358**	P	**Pn**	**20 53 15.7**	**0.0**
	comp=N,0.6nm,0.3s,baz=66,slow=16,SNR=12						
TAPN	**Taplejung**	**16.65**	**119**	eP	**Pn**	**20 53 19.2**	**-0.1**
	comp=N,13nm,0.5s						
ODAN	**Odare**	**16.73**	**121**	eP	**Pn**	**20 53 21.0**	**+0.8**
	comp=N,15nm,0.7s						
AKTO	**Aktyubinsk**	**16.81**	**329**	P	**Pn**	**20 53 21.9**	**+1.2**
	comp=N,1.5nm,0.3s,baz=137,slow=10,SNR=37						
AKTO				S	**S**	**20 56 20.1**	**-4.5**
	comp=N,0.1nm,0.3s,baz=14,slow=21,SNR=1.3						
AKTO	**Aktyubinsk**	**16.81**	**329**	⇓P	**Pn**	**20 53 23.7**	**+3.0**
	comp=N,12nm,0.8s						
AKTO				⇓S	**S**	**20 56 27.2**	**+2.6**
	comp=N,7.3nm,0.9s						
ZALV	**Zalesovo Beam**	**19.67**	**24**	P	**P**	**20 53 51.5**	**+1.1**
	comp=N,0.7nm,0.3s,baz=224,slow=10,SNR=11						
ARU	**Arti**	**21.60**	**340**	P	**P**	**20 54 12.6**	**+1.8**
	comp=N,0.8nm,0.5s,baz=108,slow=21,SNR=3.8						
CMAR	**Chiang Mai Arr**	**30.26**	**119**	P	**P**	**20 55 31.4**	**+2.1**
	comp=N,0.4nm,0.3s,baz=299,slow=8.8,SNR=5.9						

AKASG Malin Array Be 33.09 309 P **P** **20 55 54.9 +1.4**
comp=N,0.3nm,0.3s,baz=78,slow=6.8,SNR=2.8
FINES FINESS Array B 37.54 326 P **P** **20 56 33.1 +1.8**
comp=N,1.5nm,0.6s,baz=121,slow=9.4,SNR=13
ARCES ARCESS Array B 41.13 337 P **P** **20 57 03.2 +2.3**
comp=N,3.6nm,0.8s,baz=109,slow=7.7,SNR=9.0
NOA NORSAR Array B 44.45 323 P **P** **20 57 29.7 +2.0**
comp=N,1.0nm,0.6s,baz=96,slow=7.8,SNR=4.5
JHJ Hachijo jima 2 55.15 72 LR LR 21 26 23.6
comp=N,99nm,20.5s,baz=82,slow=40
ESDC Sonseca Array 57.66 298 P **P** **20 59 06.2 -0.1**
comp=N,0.2nm,0.7s,baz=54,slow=7.9,SNR=4.9
TORD Torodi Ar. Bea 66.02 269 P **P** **21 00 02.6 +0.3**
comp=N,0.7nm,0.8s,baz=46,slow=6.2,SNR=2.8
WRA Warramunga Arr 81.81 122 P **P** **21 01 34.5 +0.8**
comp=N,1.0nm,0.8s,baz=323,slow=4.7,SNR=10
ASAR Alice Springs 84.09 125 P **P** **21 01 46.1 +0.7**
comp=N,0.5nm,0.6s,baz=309,slow=4.8,SNR=9.6

*KRSC **15** 21:16:04.6±1.7,48°.58N×156°.18E,h44km±25km,ML4.1*
*IDC **15** 21:16:06.2±3.2,48°.71N×154°.73E,h88km±31km,mb3.2/4,*
mb1 3.4/6,mb1mx3.1/33,mbtmp3.6/6,Error ellipse:
s-maj=40.1km s-min=31.2km az=124.0
ISC 15 21:16:01.1±1.2,48°.4N±0°.1×155°.1E±0°.2,h35km,n24,
σ2s32/20,mb3.5/4,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.34**	**16**	S	**Sn**	**21 17 04.4**	**-0.2**
PAU	**Pauzhetka**	**3.22**	**19**	S	**Sn**	**21 17 27.1**	**+0.7**
KDTR	**Khodutka, Kamc**	**3.88**	**28**	eP	**Pn**	**21 16 59.4**	**+1.3**
KDTR				eS	**Sn**	**21 17 40.4**	**-2.0**
MTVR	**Mutnovka**	**4.50**	**25**	P	**Pn**	**21 17 09.2**	**+2.3**
GRL	**Gorelyy**	**4.53**	**23**	P	**Pn**	**21 17 09.9**	**+2.6**
RUS	**Russkaya**	**4.55**	**27**	eP	**Pn**	**21 17 08.4**	**+1.0**
RUS				S	**Sn**	**21 17 56.6**	**-2.4**
PETK	**Petropavlovsk-**	**4.96**	**18**	P	**Pn**	**21 17 16.0**	**+3.0**
	0.6nm,0.3s,baz=168,slow=12,SNR=10.0						
PETK				S	Sn	21 17 58.0	-11
	0.5nm,0.3s,baz=171,slow=10,SNR=4.8						
UGLR	**Uglovaya**	**5.32**	**25**	P	**Pn**	**21 17 20.8**	**+2.7**
KOK	**Koryaka**	**5.35**	**23**	P	**Pn**	**21 17 21.9**	**+3.4**
SDLR	**Sedlovina**	**5.40**	**25**	P	**Pn**	**21 17 21.0**	**+1.8**
SPN	**Mys Shipunski**	**5.61**	**32**	P	**Pn**	**21 17 24.7**	**+2.8**
MKZ	**Mys Kozlova**	**7.38**	**31**	P	**Pn**	**21 17 47.5**	**+1.2**
KBTR	**Krutoberegovo**	**9.09**	**28**	P	**Pn**	**21 18 11.3**	**+1.6**
ASAJ	**Asahikawa**	**9.69**	**248**	P	**Pn**	**21 18 20.5**	**+2.6**
	0.9nm,0.3s,baz=59,slow=16,SNR=5.9						
H11N2	**WAKE ISLAND Hy 30.17 158**			T	T	21 54 25.5	
	baz=342,slow=76,SNR=16						
H11N1	**WAKE ISLAND Hy 30.19 158**			T	T	21 54 41.4	
	baz=342,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy 30.19 158**			T	T	21 54 39.1	
	baz=342,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy 31.30 159**			T	T	21 55 22.7	
	baz=345,slow=76,SNR=79						
H11S3	**WAKE ISLAND Hy 31.31 159**			T	T	21 55 31.4	
	baz=345,slow=76,SNR=57						
H11S2	**WAKE ISLAND Hy 31.32 158**			T	T	21 55 24.8	
	baz=345,slow=76,SNR=56						
MKAR	**Makanchi Array 47.38 297**			P	**P**	**21 24 27.8**	**-3.9**
	0.4nm,0.7s,baz=64,slow=7.0,SNR=4.5						
CMAR	**Chiang Mai Arr 54.09 257**			P	**P**	**21 25 21.1**	**-1.3**
	0.9nm,0.7s,baz=35,slow=7.4,SNR=8.0						
WRA	**Warramunga Arr 70.56 201**			P	**P**	**21 27 12.6**	**+0.2**
	0.5nm,0.9s,baz=16,slow=6.6,SNR=1.7						
ASAR	**Alice Springs 74.25 200**			P	**P**	**21 27 34.4**	**0.0**
	0.2nm,0.5s,baz=14,slow=5.2,SNR=1.8						

*JMA **15** 21:29:36.6±0.2,39°.35N×143°.62E,h36km,M3.3*
*IDC **15** 21:29:47.3±9.7,39°.95N×141°.45E,h0km,mb3.2/3,*
mb1 3.3/4,mb1mx3.0/50,mbtmp3.2/4,ML2.3/1,MS3.0/1,
Ms1 3.0/1,ms1mx2.2/24,Error ellipse: s-maj=187.5km
s-min=43.3km az=93.0
ISC 15 21:29:38.8±1.8,39°.41N±0°.08×143°.5E±0°.1,h35km,n20,
σ0s80/21,mb3.1/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.33**	**278**	P	**Pn**	**21 30 00.6**	**-0.3**
JTH	**Tanohata**	**1.39**	**293**	P	**Pn**	**21 30 01.4**	**-0.3**
OFUJ	**Ofunato**	**1.48**	**258**	P	**Pn**	**21 30 02.5**	**-0.4**
JOM	**Ohasama**	**1.73**	**273**	P	**Pn**	**21 30 06.7**	**+0.3**
JANG	**Nango**	**1.82**	**302**	P	**Pn**	**21 30 07.3**	**-0.3**
JMK	**Ichinoseki**	**1.85**	**256**	P	**Pn**	**21 30 08.0**	**0.0**
JMK				eS	**Sn**	**21 30 30.7**	**+0.5**
JIO	**Ouri**	**1.95**	**241**	P	**Pn**	**21 30 08.7**	**-0.7**
JIO				eS	**Sn**	**21 30 31.9**	**-0.7**
JYK	**Kaneyama**	**2.51**	**260**	P	**Pn**	**21 30 17.7**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.92**	**349**	P	**Pn**	**21 30 23.4**	**+0.6**
JNBK				eS	**Sn**	**21 30 58.5**	**+1.8**
JFT	**Otama**	**3.14**	**234**	P	**Pn**	**21 30 25.8**	**0.0**
JFT				eS	**Sn**	**21 31 02.7**	**+0.3**
JCH	**Churui**	**3.20**	**358**	P	**Pn**	**21 30 26.2**	**-0.4**
JCH				eS	**Sn**	**21 31 02.7**	**-0.8**
MJAR	**Matsushiro Arr**	**5.08**	**237**	Pn	**Pn**	**21 30 53.4**	**+0.9**
	0.2nm,0.3s,baz=35,slow=15,SNR=8.6						
MAT	**Matsushiro**	**5.08**	**237**	P	**Pn**	**21 30 53.7**	**+1.2**
YAK	**Yakutsk**	**24.18**	**344**	LR	LR	21 44 54.5	
	comp=Z,32nm,18.0s,baz=94,slow=39						
SONM	**Songino Array 27.94 300**			P	**P**	**21 35 25.1**	**-0.8**
	0.2nm,0.7s,baz=94,slow=9.4,SNR=1.4						
H11N2	**WAKE ISLAND Hy 28.11 128**			T	T	22 06 31.8	
	baz=320						
H11N1	**WAKE ISLAND Hy 28.11 128**			T	T	22 06 28.7	
	baz=320						
H11N3	**WAKE ISLAND Hy 28.12 128**			T	T	22 06 26.2	
	baz=320						
MKAR	**Makanchi Array 44.31 300**			P	**P**	**21 37 44.2**	**-1.0**
	0.3nm,0.8s,baz=91,slow=9.1,SNR=2.9						
KURBB	**Kurchatov Arra 45.89 306**			P	**P**	**21 37 58.7**	**+1.1**
	0.5nm,0.7s,baz=81,slow=8.8,SNR=5.6						

*IDC **15** 21:35:38.7±1.2,53°.30N×108°.13E,h0km,mb3.5/4,*
mb1 3.6/9,mb1mx3.3/58,mbtmp3.4/9,ML2.8/5,Error
ellipse: s-maj=20.8km s-min=12.1km az=139.0
*BYKL **15** 21:35:40.6±0.1,53°.29N×107°.95E,h16km±2km*
ISC 15 21:35:40.4±0.6,53°.26N±0°.02×108°.05E±0°.02,h10km,n45,
σ2s13/117,mb3.6/3,4C-3D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXMB	**Maximikha**	**0.42**	**89**	⇑iPg	**Pg**	**21 35 49.5**	**+0.9**
MXMB				eSg	**Sb**	**21 35 56.5**	**+0.2**
OGRR	**Ongureny**	**0.47**	**325**	⇑iPg	**Pg**	**21 35 49.7**	**+0.1**
OGRR				e		21 35 54.5	
OGRR				eSg	**Sg**	**21 35 55.4**	**-0.4**
OGRR				Pmax			
	812nm,0.2s						
OGRR				Smax			
	5µm,0.2s						
KELR	**Kotokel**	**0.50**	**178**	⇑iPg	**Pb**	**21 35 50.7**	**-0.5**
KELR				eSg	**Sb**	**21 35 58.0**	**-0.5**
ZRHB	**Zarechye**	**0.89**	**218**	ePg	**Pg**	**21 35 57.5**	**+0.1**
ZRHB				ePb	**Pn**	**21 35 59.1**	**+0.2**
ZRHB				eSg	**Sb**	**21 36 09.1**	**-0.6**
ZRHB				e		21 36 11.2	
ZRHB				eSb	**Sn**	**21 36 13.6**	**+1.8**
ZRHB				e		21 36 15.3	
ZRHB				max			
	596nm,0.3s						
ZRHB				max			
	5µm,0.5s						
TRG	**Tyrgan**	**1.14**	**245**	⇑iPg	**Pb**	**21 36 00.2**	**-2.0**
TRG				e		21 36 03.0	
TRG				eSg	**Sg**	**21 36 15.2**	**-1.8**
TRG				e		21 36 17.2	
TRG				e		21 36 19.6	
TRG				max			
	273nm,0.2s						
TRG				max			
	2µm,0.3s						
SYVR	**Suvo**	**1.23**	**70**	ePg	**Pn**	**21 36 03.6**	**-0.1**
SYVR				eSg	**Sn**	**21 36 21.1**	**+0.7**
SYVR				Pmax			
	137nm,0.4s						
SYVR				Smax			
	660nm,0.4s						
UUDB	**Ulan-Yde**	**1.41**	**190**	⇓iPg	**Pb**	**21 36 06.8**	**0.0**
UUDB				eSg	**Sg**	**21 36 26.2**	**+0.5**
UUDB				Pmax			
	213nm,0.3s						
UUDB				Smax			
	1µm,0.4s						
FFNB	**Fofonovo**	**1.44**	**213**	ePg	**Pn**	**21 36 06.6**	**+0.1**
FFNB				eSg	**Sg**	**21 36 26.4**	**-0.3**
KAB	**Kabansk**	**1.48**	**216**	ePg	**Pb**	**21 36 07.9**	**0.0**
KAB				eSg	**Sg**	**21 36 27.3**	**-0.5**
KAB				Pmax			
	203nm,0.3s						
KAB				Smax			
	3µm,0.8s						
STDB	**Stepnoy Dvoret**	**1.49**	**224**	ePg	**Pn**	**21 36 07.7**	**+0.5**
STDB				ePb	**Pg**	**21 36 08.8**	**-0.2**
STDB				eSg	**Sg**	**21 36 28.0**	**-0.3**
STDB				eSb	**Sb**	**21 36 29.9**	**+2.7**
HRMR	**Khuramsha**	**1.76**	**203**	⇓iPn	**Pn**	**21 36 11.6**	**+0.7**
HRMR				ePg	**Pb**	**21 36 12.6**	**-0.2**
HRMR				eSg	**Sg**	**21 36 35.6**	**-1.4**
BGT	**Bolshoye Golou**	**2.01**	**234**	eSg	**Pn**	**21 36 14.3**	**-0.1**
BGT				eSg	**Pb**	**21 36 16.4**	**-0.6**
BGT				e	**Pg**	**21 36 18.7**	**-0.2**
BGT				eSn	**Sn**	**21 36 39.3**	**-0.3**
BGT				eSg	**Sb**	**21 36 42.4**	**+0.3**
BGT				Smax			
	278nm,0.2s						
LSTR	**Listvyanka**	**2.40**	**236**	ePn	**Pn**	**21 36 20.1**	**+0.4**
LSTR				ePg	**Pb**	**21 36 23.2**	**-0.5**
LSTR				eSn	**Sn**	**21 36 48.7**	**-0.5**
LSTR				eSg	**Sb**	**21 36 54.2**	**+0.8**
LSTR				Pmax			
	33nm,0.5s						
LSTR				Smax			
	124nm,0.4s						
YLYR	**Ulyunkhan**	**2.45**	**47**	⇓iPn	**Pn**	**21 36 21.2**	**+0.8**
YLYR				ePg	**Pb**	**21 36 24.6**	**+0.1**
YLYR				eSn	**Sn**	**21 36 50.1**	**-0.3**
YLYR				eSg	**Sb**	**21 36 57.5**	**+2.8**
YLYR				Pmax			
	40nm,0.5s						
YLYR				Smax			
	239nm,0.8s						
IRK	**Irkutsk**	**2.51**	**248**	ePn	**Pn**	**21 36 21.7**	**+0.5**
IRK				ePg	**Pb**	**21 36 24.4**	**-1.1**
IRK				e		21 36 25.6	
IRK				eSn	**Sn**	**21 36 50.1**	**-1.7**
IRK				e		21 36 53.2	
IRK				eSg	**Sb**	**21 36 56.4**	**0.0**
IRK				e		21 36 59.1	
IRK				eSgSg	**SnSn**	**21 37 04.2**	**+1.8**
IRK				max			
	111nm,0.3s						
IRK				max			
	1µm,0.9s						
IVK	**Ivanovka**	**2.65**	**238**	ePn	**Pn**	**21 36 23.3**	**+0.1**
IVK				ePg	**Pb**	**21 36 27.6**	**-0.4**
IVK				eSn	**Sn**	**21 36 54.2**	**-1.2**
IVK				eSg	**Sb**	**21 37 01.3**	**+0.7**
IVK				Pmax			
	30nm,0.3s						
IVK				Smax			
	188nm,0.2s						
NIZ	**Nizh Angarsk**	**2.67**	**18**	ePn	**Pn**	**21 36 24.4**	**+1.0**
NIZ				e		21 36 27.7	
NIZ				e		21 36 31.9	
NIZ				eSn	**Sn**	**21 36 55.4**	**-0.4**
NIZ				eSg	**Sb**	**21 37 03.2**	**+2.2**
NIZ				max			
	29nm,0.3s						
NIZ				Smax			
	220nm,0.6s						
TLY	**Talaya**	**3.12**	**241**	Pn	**Pn**	**21 36 29.9**	**+0.2**
	0.0nm,0.3s,baz=51,slow=12,SNR=8.5						
TLY				Pg	**Pb**	**21 36 35.9**	**0.0**
	0.1nm,0.3s,baz=44,slow=8.4,SNR=21						
TLY				Sn	**Sn**	**21 37 06.7**	**-0.3**
	0.1nm,0.3s,baz=231,slow=23,SNR=7.9						
TLY				Lg	Lg	21 37 13.8	
	0.2nm,0.3s,baz=265,slow=16,SNR=8.9						
TLY	**Talaya**	**3.12**	**241**	ePn	**Pn**	**21 36 29.8**	**+0.2**
TLY				ePg	**Pb**	**21 36 35.8**	**-0.1**
TLY				eSn	**Sn**	**21 37 06.0**	**-0.9**
TLY				e		21 37 13.9	
TLY				eSg	**Sb**	**21 37 16.3**	**+2.3**
TLY				Pmax			
	32nm,0.4s						
TLY				Smax			
	167nm,0.5s						
KMO	**Kumora**	**3.21**	**34**	ePn	**Pn**	**21 36 31.9**	**+1.0**
KMO				ePg	**Pb**	**21 36 38.1**	**+0.6**
KMO				eSg	**Sb**	**21 37 20.8**	**+4.2**
KMO				Pmax			
	44nm,0.7s						
KMO				Smax			
	200nm,1.1s						
CIT	**Chita**	**3.58**	**108**	ePn	**Pn**	**21 36 36.8**	**+0.9**
CIT				e		21 36 40.5	
CIT				ePg	**Pb**	**21 36 45.8**	**+2.1**
CIT				eSn	**Sn**	**21 37 18.2**	**0.0**
CIT				eSg	**Sg**	**21 37 33.1**	**-2.0**
CIT				Pmax			
	61nm,0.4s						
CIT				Smax			
	413nm,0.4s						
YOA	**Uoyan**	**3.59**	**35**	ePn	**Pn**	**21 36 36.5**	**+0.5**
YOA				ePg	**Pb**	**21 36 45.3**	**+1.5**
YOA				eSg	**Sb**	**21 37 32.2**	**+4.8**
YOA				Pmax			
	55nm,0.3s						
YOA				Smax			
	445nm,0.9s						
ARS	**Arshan**	**3.68**	**251**	ePn	**Pn**	**21 36 37.5**	**+0.1**
ARS				e		21 36 40.9	
ARS				ePg	**Pb**	**21 36 46.0**	**+0.5**
ARS				eSn	**Sn**	**21 37 19.1**	**-1.7**
ARS				e		21 37 28.8	
ARS				eSg	**Sb**	**21 37 33.6**	**+3.4**
ARS				Pmax			
	64nm,0.4s						
ARS				Smax			
	821nm,0.5s						
UKT	**Uakit**	**3.96**	**53**	ePn	**Pn**	**21 36 42.2**	**+1.0**
UKT				ePg	**Pb**	**21 36 51.4**	**+1.2**
UKT				eSn	**Sn**	**21 37 27.2**	**-0.4**
UKT				eSg	**Sg**	**21 37 44.0**

ORL				*e*Pg		**Pb**	**21 37 10.3**	**+1.7**	
ORL				*e*Sn		**Sn**	**21 37 50.3**	**-4.0**	
ORL				*e*			21 37 53.6		
ORL				*e*Sg		**Sb**	**21 38 13.9**	**+4.7**	
ORL				Pmax					
	35nm,1.0s								
ORL				Smax					
	98nm,0.8s								
NLYR	**Nelyaty**	**5.48**	**51**	*e*Pn		**Pn**	**21 37 03.1**	**+1.1**	
NLYR				*e*Pg		**Pb**	**21 37 19.8**	**+3.7**	
NLYR				*e*			21 37 22.1		
NLYR				*e*Sn		**Sn**	**21 38 03.4**	**-1.7**	
NLYR				*e*Sg		**Sg**	**21 38 31.3**	**-4.9**	
NLYR				max					
	23nm,1.4s								
NLYR				Smax					
	126nm,0.9s								
SONM	**Songino Array**	**5.53**	**192**	Pn		**Pn**	**21 37 03.4**	**+0.6**	
	0.9nm,0.3s,baz=6.3,slow=15,SNR=50								
SONM				Pg		**Pb**	**21 37 20.0**	**+3.0**	
	2.2nm,0.3s,baz=5.4,slow=15,SNR=14								
SONM				Sn		**Sn**	**21 38 08.4**	**+2.0**	
	1.3nm,0.3s,baz=5.3,slow=22,SNR=1.6								
SONM				Lg		Lg	21 38 35.0		
	10.0nm,0.3s,baz=5.9,slow=32,SNR=22								
BOD	**Bodaibo**	**5.69**	**34**	*e*Pn		**Pn**	**21 37 05.2**	**+0.4**	
BOD				*e*			21 37 11.7		
BOD				*e*Pg		**Pb**	**21 37 22.2**	**+2.6**	
BOD				*e*Sg		**Sb**	**21 38 35.8**	**+8.1**	
BOD				Pmax					
	26nm,1.2s								
BOD				Smax					
	38nm,1.4s								
CRS	**Chara**	**6.91**	**54**	*e*Pn		**Pn**	**21 37 23.1**	**+1.5**	
CRS				*e*Pg		Pb	21 37 45.5	+5.1	
CRS				*e*Sg		**Sg**	**21 39 14.7**	**-7.2**	
CRS				Pmax					
	13nm,1.2s								
CRS				Smax					
	87nm,1.8s								
KNGR	**Kungurtug, Tuv**	**7.03**	**252**	*e*Pn		**Pn**	**21 37 24.2**	**+0.8**	
KNGR				*e*			21 37 36.5		
KNGR				*e*Pg		**Pb**	**21 37 46.0**	**+3.4**	
KNGR				*e*			21 39 00.1		
KNGR				*e*Sg		Sg	21 39 16.7	-9.2	
TUP	**Tupik**	**7.14**	**76**	*e*Pn		**Pn**	**21 37 24.2**	**-0.6**	
TUP				*e*			21 37 45.7		
TUP				*e*Pg		Pb	21 37 50.0	+5.6	
TUP				*e*Sg		**Sg**	**21 39 22.6**	**-6.9**	
TUP				Pmax					
	5.0nm,0.9s								
TUP				Smax					
	130nm,1.0s								
KHNR	**Khani**	**7.77**	**57**	*e*Sg		Sg	21 39 41.2	-8.2	
KZLR	**Kyzyl**	**8.44**	**265**	*e*Pg		Pb	21 38 11.9	+5.4	
KZLR				*e*Sg		Sg	21 39 59.3	-12	
YKLR	**Yuktali**	**8.52**	**61**	*e*Sg		Sg	21 40 05.0	-8.4	
ZALV	**Zalesovo Beam**	**13.80**	**282**	Pn		**Pn**	**21 38 55.6**	**-0.2**	
	0.1nm,0.3s,baz=83,slow=12,SNR=1.8								
ZALV				Lg		Lg	21 42 43.6		
	0.1nm,0.3s,baz=87,slow=25,SNR=1.2								
MKAR	**Makanchi Array**	**17.71**	**259**	P		**Pn**	**21 39 47.4**	**+0.5**	
	0.0nm,0.3s,baz=58,slow=10,SNR=2.9								
KURBB	**Kurchatov Arra**	**18.33**	**274**	P		**Pn**	**21 39 52.7**	**-1.7**	
	0.1nm,0.3s,baz=68,slow=12,SNR=6.3								
TIXI	**Tiksi**	**20.59**	**19**	P		**P**	**21 40 17.4**	**-1.6**	
	0.8nm,0.5s,baz=214,slow=4.9,SNR=4.8								
BVAR	**Borovoye Array**	**22.42**	**285**	P		**P**	**21 40 39.7**	**+0.8**	
	1.5nm,0.5s,baz=90,slow=4.4,SNR=13								
ILAR	**Eielson Array**	**49.06**	**33**	P		**P**	**21 44 26.5**	**-0.5**	
	0.5nm,0.8s,baz=304,slow=8.3,SNR=4.6								
WRA	**Warramunga Arr**	**76.37**	**155**	P		**P**	**21 47 29.4**	**-0.1**	
	0.4nm,0.7s,baz=345,slow=6.0,SNR=1.8								

MAN ***15*** *21:37:22.1,* 8.˝34*N*×122.˚49*E, h25km, MS3.6*
NEIC ***15*** *21:37:27.5*±*1.0,* 8.˚44*N*±0.˚09×122.˚56*E*±0.˚08*, h49km*±*8km, mb4.2/24, Error ellipse: s-maj=13.3km s-min=11.0km az=183.0*
IDC ***15*** *21:37:33.3*±*2.8,* 8.˚51*N*×122.˚76*E, h105km*±*27km, mb3.7/15, mb1 3.8/18, mb1mx3.5/51, mbtmp4.1/18, MS3.2/7, Ms1 3.2/7, ms1mx2.9/39, Error ellipse: s-maj=33.8km s-min=10.8km az=66.0*

ISC 15 21:37:22.3±0.4**, 8˚49N**±0.˚03×**122˚75E**±0.˚04**, h10**km**, n79,** σ1**18/86, mb4.3/32, MS3.3/4, 1C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s	ISC
PAGZ	**Pagadian**	**0.90**	**136**	*e*P		**Pn**	**21 37 40.9**		**-0.2**
PAGZ				*e*S		**Sn**	**21 37 54.1**		**0.0**
ZCP	**Zamboanga City**	**1.69**	**203**	*i*P		**Pg**	**21 37 58.0**		**+3.3**
ZCP				*i* S		**Sg**	**21 38 15.9**		**-0.7**
CGP	**Cagayan de Oro**	**1.93**	**91**	*e*P		**Pn**	**21 37 56.2**		**+1.0**
CGP				*e*S		**Sg**	**21 38 26.2**		**+1.9**
GUIM	**Jordan**	**2.12**	**356**	*e*P		**Pn**	**21 37 59.1**		**+1.2**
GUIM				*e*S		**Sn**	**21 38 22.9**		**-1.4**
LLP	**Lapu-Lapu**	**2.17**	**34**	*e*P		**Pb**	**21 38 01.1**		**-0.7**
LLP				*e*S		**Sb**	**21 38 30.1**		**+1.3**
CUYO	**Cuyo Island**	**2.90**	**324**	*e*P		**Pn**	**21 38 07.5**		**-1.0**
RCP	**Roxas**	**3.05**	**360**	*e*P		**Pn**	**21 38 13.6**		**+3.0**
DAV	**Davao City (W)**	**3.14**	**117**	P		**Pg**	**21 38 21.9**		**-0.7**
	45nm,0.3s,baz=292,slow=13,SNR=1.8								
DAV				S		**Sb**	**21 38 54.5**		**-2.2**
	23nm,0.3s,baz=310,slow=20,SNR=3.8								
DAV				LR		LR	21 39 51.5		
	comp=Z,463nm,20.3s,baz=322,slow=44								
DAV	**Davao City (W)**	**3.14**	**117**			**Pb**	**21 38 16.6**		**-1.7**
ENPP	**El Nido**	**4.24**	**310**	*e*P		**Pn**	**21 38 24.2**		**-2.8**
ENPP				*e*S		Sn	21 39 05.8		-11
MYLDM	**Lahad Datu**	**5.35**	**232**	Pn		**Pn**	**21 38 42.2**		**-0.1**
LQP	**Lukban**	**5.71**	**348**	*e*P		**Pb**	**21 39 01.4**		**-0.8**
LUBP	**Lubang**	**5.76**	**335**	*e*P		**Pn**	**21 38 47.9**		**0.0**
KKM	**Kota Kinabalu**	**6.92**	**250**	Pn		**Pn**	**21 39 04.1**		**+0.1**
TOLI2	**Tolitoli**	**7.59**	**195**	Pn		**Pn**	**21 39 12.7**		**-0.4**
LUWI	**Luwuk**	**9.47**	**180**	Pn		**Pn**	**21 39 41.2**		**+2.2**
SIJI	**Sorong**	**12.59**	**137**	LR		LR	21 45 52.5		
	comp=Z,47nm,19.3s,baz=42,slow=40								
KAPI	**Kappang**	**13.75**	**193**	LR		LR	21 46 18.5		
	comp=Z,77nm,19.4s,baz=350,slow=38								
TPUB	**Ta-pu**	**14.86**	**352**			**P**	**21 40 59.4**		**+0.9**
SSLB	**Suanglung**	**15.30**	**354**	P		**P**	**21 41 04.5**		**+1.1**
SSLB				IAmb		IAmb	21 41 13.5		
	comp=Z,9.3nm,0.9s								
UBPT	**Khong Chiam**	**18.19**	**293**	P		**P**	**21 41 38.4**		**+3.0**
BATI	**Baumata**	**18.60**	**177**	P		**Pn**	**21 41 42.8**		**+2.6**
	comp=Z,14nm,0.3s,baz=331,slow=21,SNR=1.8								
JOW	**Kunigami**	**18.98**	**15**	P		**Pn**	**21 41 46.1**		**+1.4**
	comp=Z,0.8nm,0.3s,baz=270,slow=28,SNR=1.7								
JOW	**Kunigami**	**18.98**	**15**	P		**Pn**	**21 41 45.3**		**+0.6**
JOW				IAmb		IAmb	21 42 00.4		
	comp=Z,25nm,1.1s								
CM31	**Chiang Mai Arr**	**25.15**	**296**	P		**P**	**21 42 48.0**		**+0.1**
CMAR	**Chiang Mai Arr**	**25.15**	**296**	P		**P**	**21 42 48.7**		**+0.8**
	comp=Z,1.2nm,0.7s,baz=121,slow=8.1,SNR=15								
FITZ	**Fitzroy Crossi**	**26.58**	**174**	P		**P**	**21 43 02.1**		**+1.3**
	comp=Z,1.8nm,0.9s,baz=350,slow=6.1,SNR=2.4								
FITZ	**Fitzroy Crossi**	**26.58**	**174**	P		**P**	**21 43 00.7**		**-0.1**
FITZ				IAmb		IAmb	21 43 03.6		
	comp=Z,7.2nm,1.4s								
KSRS	**Korea Array**	**29.21**	**8**	LR		LR	21 56 01.8		
	comp=Z,36nm,19.2s,baz=183,slow=38								
WRAB	**Tennant Creek**	**30.47**	**158**	P		**P**	**21 43 35.8**		**+0.3**
WRAB				IAmb		IAmb	21 43 42.0		
	comp=Z,6.7nm,1.2s								
WRA	**Warramunga Arr**	**30.48**	**158**	P		**P**	**21 43 35.4**		**-0.2**
	comp=Z,0.3nm,0.4s,baz=330,slow=11,SNR=11								
WRA				PcP		**PcP**	**21 46 33.3**		**-1.7**
	comp=Z,0.3nm,0.6s,baz=344,slow=2.7,SNR=1.7								
WRA				LR		LR	21 57 24.2		
	comp=Z,50nm,20.4s,baz=250,slow=39								
AS31	**Alice Springs**	**33.77**	**161**	P		**P**	**21 44 04.8**		**+0.3**
ASAR	**Alice Springs**	**33.77**	**161**	P		**P**	**21 44 05.4**		**+0.8**
	comp=Z,1.3nm,0.5s,baz=340,slow=7.1,SNR=23								
ASAR				PcP		**PcP**	**21 46 43.2**		**-0.8**
	comp=Z,0.6nm,0.6s,baz=347,slow=2.8,SNR=9.2								
TAPN	**Taplejung**	**38.05**	**304**	*e*P		**P**	**21 44 42.3**		**+0.7**
	comp=Z,24nm,0.9s								
ODAN	**Odare**	**38.13**	**303**	*e*P		**P**	**21 44 42.9**		**+0.7**
	comp=Z,15nm,0.9s								
RAMN	**Ramite**	**38.82**	**303**	*e*P		**P**	**21 44 49.1**		**+1.1**
	comp=Z,20nm,0.8s								
JIRN	**Jiri**	**39.42**	**304**	*e*P		**P**	**21 44 54.0**		**+0.9**
	comp=Z,32nm,0.9s								
GUN	**Gumba**	**39.77**	**304**	*e*P		**P**	**21 44 56.8**		**+0.8**
	comp=Z,46nm,0.8s								
PKI	**Pulchoki**	**40.03**	**303**	*e*P		**P**	**21 44 58.3**		**+0.1**
	comp=Z,12nm,0.7s								
PKIN	**Phulchoki**	**40.04**	**303**	*e*P		**P**	**21 44 58.4**		**+0.2**
	comp=Z,13nm,0.8s								
KKN	**Kakani**	**40.22**	**303**	*e*P		**P**	**21 44 59.9**		**+0.3**
	comp=Z,20nm,0.8s								
DMN	**Daman**	**40.29**	**303**	*e*P		**P**	**21 45 01.0**		**+0.7**
	comp=Z,26nm,1.0s								
GKN	**Gorkha**	**40.82**	**303**	*e*P		**P**	**21 45 04.8**		**+0.2**
	comp=Z,19nm,0.9s								
SONM	**Songino Array**	**41.59**	**343**	P		**P**	**21 45 10.4**		**-0.2**
	comp=Z,1.3nm,0.8s,baz=156,slow=10,SNR=5.8								
SONM	**Songino Array**	**41.59**	**343**	P		**P**	**21 45 10.3**		**-0.2**
KOLN	**Koldanda**	**41.60**	**303**	*e*P		**P**	**21 45 11.6**		**+0.6**
	comp=Z,30nm,0.8s								
PYUN	**Piuthan**	**42.22**	**303**	*e*P		**P**	**21 45 17.0**		**+0.9**
STKA	**Stephens Creek**	**44.00**	**157**	P		**P**	**21 45 30.1**		**0.0**
	comp=Z,1.3nm,0.7s,baz=339,slow=14,SNR=5.2								
STKA	**Stephens Creek**	**44.00**	**157**	P		**P**	**21 45 31.2**		**+1.0**
MK31	**Makanchi Array**	**51.41**	**325**	P		**P**	**21 46 28.0**		**+0.4**
MK31				IAmb		IAmb	21 46 29.3		
	comp=Z,3.8nm,1.0s								
MKAR	**Makanchi Array**	**51.41**	**325**	P		**P**	**21 46 27.9**		**+0.3**
	comp=Z,2.7nm,0.8s,baz=132,slow=8.7,SNR=26								
MKAR				PcP		**PcP**	**21 47 41.3**		**-0.8**
	comp=Z,1.4nm,0.7s,baz=132,slow=3.6,SNR=8.9								
MKAR				LR		LR	22 08 39.4		
	comp=Z,46nm,18.5s,baz=4.5,slow=36								
MAKZ	**Makanchi**	**51.59**	**325**	P		**P**	**21 46 28.5**		**-0.4**
NIL	**Nilore**	**51.91**	**306**	P		**P**	**21 46 31.4**		**-0.2**
PEA0B	**Petropavlovsk-**	**52.71**	**26**	P		**P**	**21 46 37.5**		**+0.4**
ZALV	**Zalesovo Beam**	**54.58**	**334**	P		**P**	**21 46 49.7**		**-1.1**
	comp=Z,1.6nm,0.6s,baz=116,slow=6.8,SNR=7.5								
ZALV				PcP		**PcP**	**21 47 51.6**		**-2.3**
	comp=Z,0.4nm,0.3s,baz=116,slow=6.6,SNR=1.9								
ZALV	**Zalesovo Beam**	**54.58**	**334**	P		**P**	**21 46 50.3**		**-0.4**
KBL	**Kabul**	**55.52**	**306**	P		**P**	**21 46 57.6**		**-0.5**
KBL				IAmb		IAmb	21 46 59.6		
	comp=Z,4.4nm,1.1s								
KURBB	**Kurchatov Arra**	**55.62**	**327**	P		**P**	**21 46 58.4**		**0.0**
	comp=Z,4.9nm,0.8s,baz=126,slow=6.6,SNR=54								
KURBB				PcP		**PcP**	**21 47 57.1**		**-0.8**
	baz=122,slow=3.3								
KURK	**Kurchatov**	**55.62**	**328**	P		**P**	**21 46 58.4**		**0.0**
GAR	**Garm**	**55.81**	**312**	P		**P**	**21 47 00.1**		**0.0**
KK31	**Karatay Array**	**57.07**	**316**	P		**P**	**21 47 08.3**		**-0.5**
KK31				IAmb		IAmb	21 47 10.3		
	comp=Z,3.7nm,1.1s								
KKAR	**Karatay Array**	**57.07**	**316**	P		**P**	**21 47 08.3**		**-0.6**
BVAR	**Borovoye Array**	**61.19**	**327**	P		**P**	**21 47 36.8**		**-0.4**
	comp=Z,1.0nm,0.7s,baz=114,slow=13,SNR=7.4								
BRVK	**Borovoye**	**61.27**	**327**	P		**P**	**21 47 37.5**		**-0.2**
ABKAR	**Akbulak array**	**65.98**	**320**	P		**P**	**21 48 08.2**		**-0.8**
ABKAR	**Akbulak array**	**65.98**	**320**	P		**P**	**21 48 08.1**		**-0.8**
ABKAR				IAmb		IAmb	21 48 20.8		
	comp=Z,1.8nm,1.1s								
ARU	**Arti**	**68.82**	**328**	P		**P**	**21 48 26.0**		**-0.8**
	comp=Z,1.2nm,0.6s,baz=210,slow=2.4,SNR=7.0								
ARU	**Arti**	**68.82**	**328**	P		**P**	**21 48 26.0**		**-0.8**
ARU				IAmb		IAmb	21 48 27.0		
	comp=Z,3.1nm,0.6s								
BELG	**Belogornoye**	**74.24**	**322**	P		**P**	**21 48 58.9**		**-0.6**
	comp=Z,6.1nm,0.8s,baz=319,slow=22,SNR=4.2								
BMAR	**Burnt Mountain**	**83.25**	**23**	P		**P**	**21 49 49.5**		**+0.6**
ARCES	**ARCESS Array B**	**84.63**	**339**	P		**P**	**21 49 54.4**		**-1.5**
	comp=Z,4.3nm,0.9s,baz=69,slow=4.9,SNR=3.9								
AKASG	**Malin Array Be**	**85.72**	**320**	P		**P**	**21 50 00.3**		**-1.3**
	comp=Z,0.8nm,0.6s,baz=74,slow=4.8,SNR=5.5								
AKASG	**Malin Array Be**	**85.72**	**320**	P		**P**	**21 50 00.6**		**-1.1**
AKASG				IAmb		IAmb	21 50 01.2		
	comp=Z,1.0nm,0.9s								
FIA1	**FINESS Array S**	**85.78**	**331**	P		**P**	**21 50 01.4**		**-0.3**
FINES	**FINESS Array B**	**85.79**	**331**	P		**P**	**21 50 00.4**		**-1.3**
	comp=Z,1.0nm,0.6s,baz=76,slow=8.0,SNR=6.0								
FINES	**FINESS Array B**	**85.79**	**331**			**P**	**21 50 01.7**		**0.0**
BURAR	**Bucovina Array**	**88.83**	**318**	P		**P**	**21 50 15.8**		**-1.2**
BURAR				IAmb		IAmb	21 50 17.8		
	comp=Z,0.9nm,0.8s								
NOA	**NORSAR Array B**	**92.78**	**333**	LR		LR	22 34 36.4		
	comp=Z,14nm,20.7s,baz=5.0,slow=37								
PLCA	**Paso Flores**	**145.78**	**162**	PKPbc		**PKPdf**	**21 56 59.0**		**-2.8**
	comp=Z,2.9nm,0.8s,baz=320,slow=3.6,SNR=6.0								

IDC ***15*** *22:08:33.5*±*1.0,* 7.˚26*S*×109.˚21*E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.5/33, mbtmp3.5/7, ML3.5/1, MS2.8/1, Ms1 3.0/1, ms1mx2.4/31, Error ellipse: s-maj=33.1km s-min=11.9km az=25.0*
DJA ***15*** *22:08:36.4*±*0.4,* 8.˚5*S*×5.˚5×10.˚8*E*±.˚*, h10km, M4.0/12, mb4.2/3, MLv4.0/12*

ISC 15 22:08:39.8±1.0**, 8˚1S**±0.˚1×**108˚30E**±0.˚09**, h78**km**, n18,** σ1**10/15, mb3.4/6, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s	ISC
LEM	**Lembang**	**1.42**	**331**	Pg		**Pn**	**22 09 04.6**		**+0.5**
	108nm,0.3s,baz=173,slow=2.8,SNR=64								
LEM				Lg		Lg	22 09 24.7		
	144nm,0.3s,baz=270,slow=22,SNR=6.3								
LEM				LR		LR	22 09 52.5		
	comp=Z,93nm,20.7s,baz=100,slow=48								
LEM	**Lembang**	**1.42**	**331**	P		**Pn**	**22 09 04.4**		**+0.3**
DBJI	**Dramaga**	**2.16**	**315**	P		**Pn**	**22 09 14.7**		**+0.9**
UGM	**Wanagama**	**2.21**	**86**	P		**Pn**	**22 09 14.6**		**+0.1**
SMRI	**Semarang**	**2.36**	**64**	P		**Pn**	**22 09 17.6**		**+1.1**
KASI	**Kota Agung**	**4.55**	**304**	P		**Pn**	**22 09 46.6**		**+0.4**
TPI	**Tanjungpandan**	**5.33**	**353**	P		**Pn**	**22 09 58.9**		**+2.0**
	0.0nm11nm,0.8s								
JAGI	**Jajag, Banyuwa**	**5.81**	**94**	P		**Pn**	**22 10 03.3**		**-0.1**
	0.2nm15nm,0.6s								
FITZ	**Fitzroy Crossi**	**19.59**	**122**	P		**P**	**22 13 00.9**		**-0.9**
	0.1nm,0.3s,baz=305,slow=12,SNR=2.3								
WRA	**Warramunga Arr**	**27.83**	**118**	P		**P**	**22 14 21.5**		**-0.6**
	0.5nm,0.8s,baz=292,slow=11,SNR=2.7								
CMAR	**Chiang Mai Arr**	**27.94**	**341**	P		**P**	**22 14 22.3**		**-0.7**
	0.3nm,0.7s,baz=182,slow=9.7,SNR=2.6								
CMAR				LR		LR	22 25 37.1		
	comp=Z,20nm,19.0s,baz=205,slow=37								
ASAR	**Alice Springs**	**29.02**	**125**	P		**P**	**22 14 32.8**		**+0.2**
	0.3nm,0.7s,baz=301,slow=8.5,SNR=2.1								
H08S2	**Diego Garcia H**	**35.46**	**268**	T		T	22 53 02.1		
	baz=93,slow=76,SNR=24								
H08S3	**Diego Garcia H**	**35.48**	**268**	T		T	22 53 02.1		
	baz=93,slow=76,SNR=35								
H08S1	**Diego Garcia H**	**35.48**	**268**	T		T	22 53 02.1		
	baz=93,slow=76,SNR=4.3								
STKA	**Stephens Creek**	**38.97**	**132**	P		**P**	**22 16 00.5**		**+1.9**
	0.7nm,0.4s,baz=313,slow=7.9,SNR=4.7								
SONM	**Songino Array**	**55.70**	**358**	P		**P**	**22 18 07.1**		**-1.1**
	0.3nm,0.4s,baz=172,slow=7.8,SNR=3.7								
MKAR	**Makanchi Array**	**59.34**	**339**	P		**P**	**22 18 32.5**		**-1.2**
	0.3nm,0.5s,baz=148,slow=8.0,SNR=4.4								

TAP ***15*** *22:14:50.7,* 24.˚60*N*×122.˚88*E, h103km, ML2.9, C*
JMA ***15*** *22:14:51.1*±*0.1,* 24.˚55*N*×122.˚84*E, h102km*±*1km, M2.1*

ISC 15 22:14:51.4±1.3**, 24˚56N**±0.˚05×**122˚85E**±0.˚02**, h99**km±8**km,**
n75, σ0**75/130, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s	ISC
JYNG	**Yonagunijimaku**	**0.14**	**140**	P		**Pn**	**22 15 05.5**		**+0.2**
JYNG				S		**Sn**	**22 15 16.1**		**+0.5**
YOJ	**Yonaguni jima**	**0.17**	**122**	P		**Pn**	**22 15 05.6**		**+0.3**
YOJ				*e*S		**Sn**	**22 15 16.0**		**+0.3**
YOJ	**Yonaguni jima**	**0.17**	**122**	*i* P		**Pn**	**22 15 05.5**		**+0.1**
	baz=145								
YOJ				*i* S		**Sn**	**22 15 16.1**		**+0.3**
	baz=145								
IRIF	**Iriomote-Funau**	**0.83**	**105**	P		**Pn**	**22 15 10.0**		**+0.1**
IRIF				*e*S		**Sn**	**22 15 23.8**		**-0.1**
TWC	**Suao**	**0.91**	**274**	P		**Pn**	**22 15 10.5**		**-0.2**
	baz=270								
TWC				*e*S		**Sn**	**22 15 24.6**		**-0.7**
	baz=270								
NTC	**Toucheng**	**0.97**	**288**	*e*P		**Pn**	**22 15 11.4**		**0.0**
	baz=277								
NTC				*e*S		**Sn**	**22 15 26.1**		**-0.4**
	baz=277								
EWUT	**Wuta**	**0.98**	**264**	P		**Pn**	**22 15 11.7**		**+0.2**
	baz=256								
EWUT				*e*S		**Sn**	**22 15 27.2**		**+0.5**
	baz=256								
HATJ	**Hateruma jima**	**1.00**	**119**	P		**Pn**	**22 15 12.3**		**+0.6**
HATJ				S		**Sn**	**22 15 27.7**		**+0.6**
TIPB	**Shuangxi**	**1.02**	**294**	P		**Pn**	**22 15 11.5**		**-0.5**
	baz=286								
TIPB				*e*S		**Sn**	**22 15 26.4**		**-1.1**
	baz=286								
NDS	**Dongshan**	**1.03**	**275**	*e*P		**Pn**	**22 15 12.2**		**+0.1**
	baz=271								
NDS				*e*S		**Sn**	**22 15 26.9**		**-0.8**
	baz=271								
TWE	**Neicheng**	**1.09**	**279**	P		**Pn**	**22 15 12.9**		**+0.2**
	baz=271								
TWE				*e*S		**Sn**	**22 15 28.4**		**-0.4**
	baz=271								
NWF	**Wu-fen Shan**	**1.10**	**298**	P		**Pn**	**22 15 13.2**		**+0.3**
	baz=287								
NWF				*e*S		**Sn**	**22 15 30.0**		**+0.9**
	baz=287								
WFSB	**Wu-fen Shan**	**1.10**	**298**	P		**Pn**	**22 15 13.2**		**+0.4**
	baz=287								
WFSB				*e*S		**Sn**	**22 15 30.0**		**+1.0**
	baz=287								
JKRS	**Kuro-shima**	**1.10**	**106**	P		**Pn**	**22 15 13.4**		**+0.5**
JKRS				S		**Sn**	**22 15 29.4**		**+0.4**
ENTT	**Nioudou**	**1.17**	**274**	P		**Pn**	**22 15 13.8**		**+0.1**
	baz=267								
ENTT				*e*S		**Sn**	**22 15 30.8**		**+0.4**
	baz=267								
JIJ	**Ishigaki jima**	**1.19**	**99**	P		**Pn**	**22 15 14.0**		**+0.1**
JIJ				S		**Sn**	**22 15 29.8**		**-1.1**
NACB	**Ninganchiao**	**1.21**	**252**	P		**Pn**	**22 15 13.7**		**-0.4**
	baz=244								
NACB				*e*S		**Sn**	**22 15 30.1**		**-1.0**
	baz=244								
NDT	**Datong Townshi**	**1.22**	**272**	P		**Pn**	**22 15 14.7**		**+0.5**
	baz=269								
NDT				*e*S		**Sn**	**22 15 31.1**		**-0.3**
	baz=269								
TWD	**Chiawan**	**1.24**	**248**	P		**Pn**	**22 15 14.2**		**-0.3**
	baz=246								
TWD				*e*S		**Sn**	**22 15 31.2**		**-0.6**
	baz=246								
NWLT	**Wulai**	**1.25**	**280**	P		**Pn**	**22 15 14.5**		**0.0**
	baz=283								
NWLT				*e*S		**Sn**	**22 15 31.6**		**-0.4**
	baz=283								
NHDH	**Xindian Distri**	**1.27**	**289**	*e*P		**Pn**	**22 15 16.2**		**+1.5**
	baz=276								
ETLH	**Xiulin Townshi**	**1.29**	**255**	P		**Pn**	**22 15 14.5**		**-0.6**
	baz=248								
ETLH				*e*S		**Sn**	**22 15 32.7**		**-0.4**
	baz=248								
YM01	**YM01**	**1.30**	**297**	*e*P		**Pn**	**22 15 15.6**		**+0.4**
	baz=287								
JISG	**Ishigakijimahi**	**1.33**	**88**	P		**Pn**	**22 15 15.5**		**0.0**
JISG				S		**Sn**	**22 15 32.7**		**-1.1**
YM04	**YM04**	**1.33**	**297**	*e*P		**Pn**	**22 15 15.6**		**0.0**
	baz=285								
NNSB	**Datong**	**1.34**	**265**	P		**Pn**	**22 15 15.6**		**-0.2**
	baz=256								
NNSB				*e*S		**Sn**	**22 15 33.5**		**-0.7**
	baz=256								
NNSH	**Datong**	**1.34**	**265**	*e*P		**Pn**	**22 15 15.7**		**0.0**
	baz=256								
NNSH				*e*S		**Sn**	**22 15 33.4**		**-0.8**
	baz=256								
YHNB	**Yeheng**	**1.35**	**275**	P		**Pn**	**22 15 16.1**		**+0.3**
	baz=265								
YHNB				*e*S		**Sn**	**22 15 33.8**		**-0.5**
	baz=265								
NNS	**Nan Shan**	**1.35**	**265**	P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=235						
ALS				*e*S	**Sn**	**22 15 53.5**	**+1.1**
	baz=235						
ELDTW	**Lidau**	**2.16**	**231**	*i* P	**Pn**	**22 15 25.9**	**-0.2**
	baz=227						
ELDTW				*e*S	**Sn**	**22 15 51.8**	**-0.9**
	baz=227						
CHN5	**Tsauling**	**2.20**	**245**	P	**Pn**	**22 15 27.9**	**+1.3**
	baz=237						
CHN5				*e*S	**Sn**	**22 15 55.4**	**+1.8**
	baz=237						
LDUT	**Ludao**	**2.26**	**214**	*i* P	**Pn**	**22 15 26.5**	**-0.8**
	baz=212						
LDUT				*e*S	**Sn**	**22 15 53.5**	**-1.4**
	baz=212						
JMJ2	**Miyako jima3**	**2.26**	**85**	P	**Pn**	**22 15 28.0**	**+0.7**
JMJ2				*e*S	**Sn**	**22 15 54.5**	**-0.4**
JOGS	**Gusukube**	**2.34**	**84**	P	**Pn**	**22 15 28.5**	**+0.2**
JOGS				*e*S	**Sn**	**22 15 56.1**	**-0.5**
STYH	**Taoyuan**	**2.35**	**234**	*e*P	**Pn**	**22 15 29.0**	**+0.6**
	baz=230						
STYH				*e*S	**Sn**	**22 15 57.9**	**+1.1**
	baz=230						
STYT	**Tauyuan**	**2.37**	**235**	*e*P	**Pn**	**22 15 29.6**	**+0.9**
	baz=230						
STYT				*e*S	**Sn**	**22 15 58.1**	**+0.8**
	baz=230						
TWGBT	**Beinan**	**2.37**	**224**	*e*P	**Pn**	**22 15 28.4**	**-0.4**
	baz=230						
TWG	**Pinlang**	**2.37**	**224**	*e*P	**Pn**	**22 15 28.1**	**-0.7**
	baz=230						
WTK	**Tuku**	**2.41**	**249**	*e*P	**Pn**	**22 15 29.9**	**+0.7**
	baz=249						
WTP	**Ta-pu**	**2.43**	**238**	*e*P	**Pn**	**22 15 30.9**	**+1.4**
	baz=246						
TWK	**Hsinying**	**2.51**	**240**	*e*P	**Pn**	**22 15 32.0**	**+1.3**
	baz=240						
SGST	**Jiashian**	**2.54**	**235**	*e*P	**Pn**	**22 15 32.0**	**+0.9**
	baz=235						
MASBT	**Mashibuluo**	**2.81**	**227**	*e*P	**Pn**	**22 15 35.5**	**+1.0**
	baz=225						
VWUC	**VWUC**	**3.12**	**279**	*e*P	**Pn**	**22 15 37.3**	**-1.4**
	baz=276						
TWKBT	**Hengchun**	**3.21**	**216**	*e*P	**Pn**	**22 15 42.6**	**+2.7**
	baz=217						
PTMZ	**Houxiangcun**	**3.42**	**279**	*e*P	**Pn**	**22 15 41.5**	**-1.2**
	baz=276						

*IDC **15** 22:39:21.9±2.6, 51.42N×175.07W, h0km, mb3.2/4, mb1 3.5/5, mb1mx3.3/56, mbtmp3.2/5, ML3.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/18, Error ellipse: s-maj=74.6km s-min=27.8km az=13.0*
*AEIC **15** 22:39:28±2.2, 51.63N±0.08×174.82W±0.04, h19km±5km, ML3.4, mb3.7/14(NEIC), Error ellipse: s-maj=11.4km s-min=1.6km az=163.0*
*NEIC **15** 22:39:29.8±1.3, 51.69N±0.07×174.84W±0.05, h43km±10km, Error ellipse: s-maj=11.3km s-min=3.1km az=161.0*
ISC 15 22:39:29.6±1.7, 51.6N±0.1×174.79W±0.05, h45km±16km, n52, σ1§17/52, mb3.4/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.67**	**33**		**Pn**	**22 39 41.6**	**-1.2**
ATKA					**Sn**	**22 39 51.6**	**-0.7**
KOFP	**Korovin Flat P**	**0.77**	**34**		**Pn**	**22 39 43.6**	**-0.5**
KOKL	**Mount Kliuchef**	**0.77**	**28**		**Pn**	**22 39 43.7**	**-0.6**
KOKL					**Sn**	**22 39 54.6**	**-0.2**
KOWE	**Korovin West**	**0.80**	**25**		**Pn**	**22 39 44.2**	**-0.3**
GSMY	**Great Sitkin M**	**0.88**	**298**		**Pn**	**22 39 44.7**	**-1.0**
GSMY					**Sn**	**22 39 56.6**	**-0.7**
GSTR	**Great Sitkin T**	**0.91**	**300**		**Pn**	**22 39 45.5**	**-0.5**
GSTD	**Great Sitkin T**	**0.94**	**297**		**Pn**	**22 39 45.3**	**-1.1**
GSTD					**Sn**	**22 39 59.0**	**+0.3**
ETKA	**Kagalaska Isla**	**1.03**	**283**		**Pn**	**22 39 46.3**	**-1.3**
ADAG	**Mount Adagdak**	**1.17**	**287**		**Pn**	**22 39 49.3**	**-0.3**
ADK	**Adak**	**1.20**	**282**		**Pn**	**22 39 48.5**	**-1.5**
ADK	**Adak**	**1.20**	**282**		**Sn**	**22 40 04.4**	**-0.6**
KIRH	**Kanaga Island**	**1.45**	**281**		**Pn**	**22 39 52.7**	**-0.7**
KIKV	**Kanaga Island**	**1.50**	**280**		**Pn**	**22 39 53.5**	**-0.5**
KICM	**Kanaga Island**	**1.52**	**281**		**Pn**	**22 39 53.8**	**-0.5**
KICM					**Sn**	**22 40 14.7**	**+1.9**
KIMD	**Kanaga Island**	**1.52**	**275**		**Pn**	**22 39 53.5**	**-0.9**
TAFP	**Tanaga Falls P**	**2.00**	**279**		**Pn**	**22 40 00.7**	**-0.2**
TASE	**Tanaga Southea**	**2.03**	**277**		**Pn**	**22 40 01.1**	**-0.2**
TASE					**Sn**	**22 40 28.5**	**+3.1**
CERAA	**Semis' Rag'd T**	**3.44**	**277**		**Pn**	**22 40 21.2**	**+0.5**
AMKA	**Amchitka**	**3.70**	**268**		**Pn**	**22 40 23.0**	**-1.2**
NIKH	**Nikolski High**	**3.88**	**68**		**Pn**	**22 40 27.4**	**+0.7**
NIKH					**Sn**	**22 41 12.4**	**+1.5**
SPIA	**Saint Paul Isl**	**6.15**	**24**	Pn	**Pn**	**22 40 59.4**	**+1.7**
SMY	**Shemya**	**6.92**	**283**	Pn	**Pn**	**22 41 09.3**	**+1.0**
GAMB	**Gambell**	**12.28**	**6**	Pn	**Pn**	**22 42 23.8**	**+2.3**
KDAK	**Kodiak Island**	**14.19**	**56**	Pn	**P**	**22 42 50.9**	**-3.2**
CNPM	**China Poot**	**15.41**	**50**	Pn	**Pn**	**22 43 05.4**	**+1.7**
PPLA	**Purkeypile**	**16.52**	**38**		**P**	**22 43 20.3**	**+0.3**
PPLA				IAmb	IAmb	22 43 37.5	
	comp=Z,5.9nm,1.3s						
KNK	**Knik Glacier**	**17.39**	**46**	P	**P**	**22 43 29.8**	**+0.4**
BPAW	**Bear Paw Mtn.**	**17.63**	**36**	P	**P**	**22 43 32.6**	**+0.5**
BPAW				IAmb	IAmb	22 43 50.5	
	comp=Z,3.4nm,1.1s						
MLY	**Manley**	**18.25**	**34**	P	**P**	**22 43 38.7**	**-0.3**
I23K	**Minto, Yukon-K**	**18.80**	**34**	P	**Pn**	**22 43 45.2**	**-0.5**
WRH	**Wood River Hil**	**18.90**	**37**	P	**Pn**	**22 43 46.6**	**-0.4**
CCB	**Clear Creek Bu**	**19.09**	**37**	P	**P**	**22 43 47.2**	**-0.9**
CCB				IAmb	IAmb	22 44 00.2	
	comp=Z,4.4nm,1.4s						
IL31		**19.50**	**37**	P	**P**	**22 43 52.7**	**+0.1**
IL31				IAmb	IAmb	22 44 07.8	
	comp=Z,8.7nm,1.4s						
ILAR	**Eielson Array**	**19.50**	**37**	P	**Pn**	**22 43 53.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=222,slow=9.3,SNR=8.6						
ILAR	**Eielson Array**	**19.50**	**37**	P	**P**	**22 43 52.9**	**+0.3**
SCRK	**Sand Creek**	**20.28**	**41**	P	**P**	**22 44 01.1**	**-0.1**
SCRK				IAmb	IAmb	22 44 05.1	
	comp=Z,6.7nm,1.1s						
PRP	**Porcupine Dome**	**20.36**	**36**	P	**P**	**22 44 02.2**	**0.0**
PRP				IAmb	IAmb	22 44 14.9	
	comp=Z,5.0nm,1.4s						
SEY	**Seymchan**	**20.77**	**316**	P	**P**	**22 44 04.3**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=106,slow=15,SNR=1.8						
K27K	**Chicken**	**21.08**	**41**	P	**P**	**22 44 10.4**	**+0.7**
K27K				IAmb	IAmb	22 44 11.8	
	comp=Z,5.3nm,1.4s						
EGAK	**Eagle**	**21.72**	**40**	P	**P**	**22 44 16.5**	**0.0**
EGAK				IAmb	IAmb	22 44 26.7	
	comp=Z,4.1nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**34.94**	**211**	T	T	23 23 33.1	
	baz=19,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**34.95**	**211**	T	T	23 23 10.1	
	baz=19,slow=76,SNR=17						
H11N1	**WAKE ISLAND Hy**	**34.96**	**211**	T	T	23 23 11.5	
	baz=19,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**36.15**	**211**	T	T	23 25 22.7	
	baz=20,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**36.16**	**211**	T	T	23 25 22.8	
	baz=20,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**36.16**	**211**	T	T	23 25 21.5	
	baz=20,slow=76,SNR=9.8						
NEW	**Newport**	**36.43**	**72**	LR	LR	22 58 13.6	
	comp=Z,92nm,19.6s,baz=313,slow=31						
AHID	**Auburn Hatcher**	**42.90**	**76**	P	**P**	**22 47 25.9**	**+2.2**
PDAR	**Pinedale Array**	**43.83**	**75**	P	**P**	**22 47 31.4**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=316,slow=7.7,SNR=2.0						
PDAR	**Pinedale Array**	**43.83**	**75**	P	**P**	**22 47 32.0**	**+0.8**
TXAR	**Lajitas Array**	**56.14**	**84**	P	**P**	**22 49 04.5**	**0.0**
	comp=Z,0.1nm,0.5s,baz=331,slow=7.2,SNR=1.8						
MKAR	**Makanchi Array**	**61.80**	**311**	P	**P**	**22 49 42.3**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=51,slow=6.3,SNR=4.4						

*NEIC **15** 22:49:30.8±2.1, 41.22N±0.04×117.14W±0.04, h0km±2km, ML2.4/36, Error ellipse: s-maj=7.8km s-min=3.0km az=324.0*
*IDC **15** 22:49:33.7±2.3, 41.46N×117.26W, h0km, mb1 2.9/1, mb1mx2.7/38, mbtmp2.4/1, ML2.3/1, Error ellipse: s-maj=19.2km s-min=7.6km az=162.0*
ISC 15 22:49:27.1±1.0, 41.24N±0.03×117.62W±0.04, h0km, n23, σ1§37/21, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVOR	**Wild Horse Val**	**1.41**	**328**	Pn	Pb	22 49 59.3	+4.9
ELK	**Elko**	**1.87**	**105**	Pg	**Pg**	**22 50 05.0**	**+2.1**
	0.6nm,0.3s,baz=296,slow=19,SNR=5.9						
ELK				Lg	Lg	22 50 26.7	
	3.8nm,0.3s,baz=41,slow=22,SNR=10						
ELK	**Elko**	**1.87**	**105**	Pn	**Pn**	**22 49 58.6**	**-2.0**
PAHR	**Pah Rah Range**	**2.04**	**222**	Pn	**Pg**	**22 50 08.0**	**+1.7**
J08A	**Circle Bar Ran**	**2.21**	**344**		**Pg**	**22 50 10.4**	**+1.0**
KVN	**Kaiserville**	**2.22**	**190**	Pn	**Pg**	**22 50 09.6**	**-0.1**
VCNR	**Virginia City**	**2.49**	**219**	Pn	**Pg**	**22 50 16.5**	**+1.7**
VCNR				IAML		22 50 36.0	
	comp=N,11nm,2.7s						
MFID	**Camas Ranch**	**2.54**	**31**	Pn	**Pb**	**22 50 11.9**	**-1.8**
MFID				IAML		22 50 58.8	
	comp=N,14nm,1.0s						
PNTR	**Pine Nut**	**2.63**	**216**		**Pg**	**22 50 17.4**	**-0.1**
PNTR				IAML		22 51 21.9	
	comp=N,15nm,2.7s						
RYN	**Ryan**	**2.70**	**195**	Pn	**Pb**	**22 50 16.1**	**-0.4**
RYN				IAML		22 51 12.6	
	comp=E,12nm,1.5s						
RYN				IAML		22 51 14.3	
	comp=N,12nm,0.8s						
NV11	**Mina Array Sit**	**2.84**	**189**		**Pb**	**22 50 18.1**	**-0.7**
NV11				IAML		22 50 51.6	
	comp=N,9.0nm,4.7s						
NV11				IAML		22 51 02.0	
	comp=E,11nm,4.6s						
K05A	**Summer Lake**	**2.85**	**302**		**Pg**	**22 50 23.0**	**+1.1**
NVAR	**Mina Array Bea**	**2.86**	**191**	Pn	**Pg**	**22 50 24.3**	**+2.4**
	comp=E,0.4nm,0.3s,baz=13,slow=12,SNR=7.0						
NVAR				Pg	Pb	22 50 31.0	+12
	comp=E,1.5nm,0.3s,baz=14,slow=15,SNR=8.6						
NVAR				Lg	Lg	22 51 11.7	
	comp=E,1.6nm,0.3s,baz=125,slow=20,SNR=5.9						
NVAR	**Mina Array Bea**	**2.86**	**191**		**Pb**	**22 50 19.4**	**+0.3**
I07A	**Izee**	**3.16**	**335**		**Pb**	**22 50 24.6**	**+0.5**
I07A				IAML		22 51 27.0	
	comp=N,7.4nm,4.5s						
I07A				IAML		22 51 50.8	
	comp=E,9.2nm,2.7s						
HLID	**Hailey**	**3.32**	**45**		**Pn**	**22 50 19.7**	**-0.7**
HLID				IAML		22 51 00.8	
	comp=E,6.0nm,4.9s						
HLID				IAML		22 51 34.6	
	comp=E,6.2nm,4.3s						
BGU	**Big Grassy Mou**	**3.48**	**94**		**Pn**	**22 50 22.2**	**-0.5**
BGU				IAML		22 51 24.6	
	comp=N,9.7nm,4.9s						
BGU				IAML		22 51 26.3	
	comp=E,10.0nm,4.8s						
HVU	**Hansel Valley**	**3.68**	**80**		**Pn**	**22 50 24.6**	**-0.7**
HVU				IAML		22 51 31.7	
	comp=N,9.5nm,0.7s						
DUG	**Dugway, Tooele**	**3.80**	**104**		**Pn**	**22 50 26.0**	**-1.1**
DUG				IAML		22 50 52.2	
	comp=N,8.6nm,4.8s						
DUG				IAML		22 51 40.6	
	comp=N,8.4nm,4.0s						
SPUT	**South Promonto**	**3.90**	**87**	Pn	**Pn**	**22 50 27.1**	**-1.3**
PSUT	**Pine Spring**	**3.96**	**132**	Pn	**Pn**	**22 50 27.8**	**-1.5**
PSUT				IAML		22 51 36.8	
	comp=N,6.6nm,0.7s						
PSUT				IAML		22 51 43.0	
	comp=E,7.9nm,1.9s						
PDAR	**Pinedale Array**	**6.20**	**73**	Pg	**Pb**	**22 51 16.9**	**+0.9**
	comp=E,0.0nm,0.3s,baz=252,slow=14,SNR=2.4						
I56US	**NEWPORT INFRAS**	**7.03**	**3**	*i*		23 34 40.0	
	baz=181,slow=327,SNR=4.3						

KRSC 15 22:52:49.3±2.4, 49.55N×157.16E, h46km±25km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.32**	**330**	*e*P	Pn	22 53 12.6	+1.4
SKR				*e*S	Sn	22 53 26.9	-0.7
PAU	**Pauzhetka**	**1.93**	**354**	*e*P	Pn	22 53 21.5	+1.9
PAU				*e*S	Sn	22 53 46.0	+3.3
KDTR	**Khodutka, Kamc**	**2.34**	**14**	*e*P	Pn	22 53 28.0	+2.8
KDTR				*e*S	Sn	22 53 57.3	+4.7
MTVR	**Mutnovka**	**3.01**	**12**	*e*P	Pn	22 53 38.0	+3.5
MTVR				*e*S	Sn	22 54 14.5	+5.1
RUS	**Russkaya**	**3.01**	**16**	*e*P	Pn	22 53 37.3	+2.9
RUS				*e*S	Sn	22 54 11.6	+2.4
GRL	**Gorelyy**	**3.06**	**11**	*e*P	Pn	22 53 38.8	+3.6
GRL				*e*S	Sn	22 54 14.9	+4.2
KRMR	**Karymshinskiy**	**3.34**	**10**	*e*P	Pn	22 53 43.7	+4.8
KRMR				*e*S	Sn	22 54 24.2	+6.9
UGLR	**Uglovaya**	**3.81**	**15**	*e*P	Pn	22 53 49.5	+4.0
AVH	**Avacha**	**3.85**	**14**	*e*P	Pn	22 53 50.7	+4.7
SMAR	**Somma**	**3.86**	**15**	*e*P	Pn	22 53 51.3	+5.0
KOK	**Koryaka**	**3.86**	**13**	*e*P	Pn	22 53 50.8	+4.6
SDLR	**Sedlovina**	**3.89**	**15**	*e*P	Pn	22 53 50.0	+3.4
KRX	**Arik**	**3.93**	**13**	*e*P	Pn	22 53 51.4	+4.3
SPN	**Mys Shipunski**	**3.98**	**26**	*e*P	Pn	22 53 51.5	+3.8
SPN				*e*S	Sn	22 54 36.9	+3.8
GNL	**Ganaly**	**4.18**	**6**	*e*P	Pn	22 53 54.5	+3.9
MKZ	**Mys Kozlova**	**5.75**	**28**	*e*P	Pn	22 54 15.1	+3.1

IDC 15 23:11:05.3±8.9, 30.33S×179.95E, h448km±97km, mb3.0/2, mb1 3.5/3, mb1mx3.1/29, mbtmp4.2/3, Error ellipse: s-maj=95.1km s-min=43.9km az=23.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.25**	**196**	P	P	23 13 04.5	+1.3
	16nm,0.3s,baz=121,slow=24,SNR=44						
URZ				S	S	23 14 38.5	-1.6
	1.6nm,0.3s,baz=120,slow=24,SNR=2.0						
ASAR	**Alice Springs**	**41.34**	**268**	P	P	23 18 10.8	0.0
	0.6nm,0.3s,baz=103,slow=7.2,SNR=8.1						
WRA	**Warramunga Arr**	**42.32**	**273**	P	P	23 18 18.3	-0.3
	0.6nm,0.4s,baz=110,slow=7.9,SNR=17						
FINES	**FINESS Array B**	**144.46**	**339**	PKP	PKPbc	23 29 48.1	-0.6
	3.4nm,0.8s,baz=61,slow=3.5,SNR=14						

IDC 15 23:11:26.3±6.3, 6.54S×147.55E, h135km±58km, mb3.3/2, mb1 3.3/4, mb1mx3.0/31, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.5/14, Error ellipse: s-maj=91.1km s-min=54.2km az=126.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.87**	**188**	P	Pn	23 12 11.9	+0.4
	4.5nm,0.3s,baz=350,slow=12,SNR=4.7						
PMG				S	Sn	23 12 46.9	+0.5
	8.0nm,0.3s,baz=193,slow=19,SNR=6.3						
WRA	**Warramunga Arr**	**18.49**	**223**	P	P	23 15 31.2	-1.0
	0.2nm,0.3s,baz=47,slow=11,SNR=7.9						
ASAR	**Alice Springs**	**21.50**	**216**	P	P	23 16 04.6	+0.1
	0.6nm,0.4s,baz=50,slow=8.0,SNR=9.2						
FITZ	**Fitzroy Crossi**	**24.26**	**240**	P	P	23 16 31.2	+0.2
	1.7nm,0.4s,baz=69,slow=8.9,SNR=7.5						
KAPI	**Kappang**	**27.70**	**272**	LR	LR	23 29 12.3	
	comp=Z,21nm,19.6s,baz=256,slow=38						
TORD	**Torodi Ar. Bea**	**145.75**	**284**	PKPbc	PKPdf	23 30 49.8	-0.1
	0.6nm,0.8s,baz=72,slow=2.9,SNR=2.8						

*MEX **16** 00:15:47.0±1.2, 14.66N×92.44W, h84km±15km, MD4.0*
*GCG **16** 00:15:47.0±0.5, 14.99N×92.46W, h27km±74km, MD3.7*
ISC 16 00:15:44.4±2.6, 14.4N±0.1×92.79W±0.08, h32km±15km, n8, σ1§03/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.71**	**46**	*i* P	**Pb**	**00 15 58.3**	**-0.1**
THIG				*i* S	**Sb**	**00 16 07.4**	**-0.4**
ERG	**Entre ros, C**	**1.18**	**89**	*e*P	**Pn**	**00 16 05.3**	**+0.6**
ERG				*e*S	**Sn**	**00 16 19.8**	**+0.1**
PCIG		**1.35**	**342**	*e*P	**Pn**	**00 16 08.4**	**+1.3**
PCIG				*e*S	**Sn**	**00 16 23.6**	**-0.3**
FUG	**Fuego 3**	**1.89**	**89**	*e*P	**Pn**	**00 16 14.6**	**0.0**
FUG				*e*S	**Sn**	**00 16 36.3**	**-1.1**
CCIG	**Comitan**	**1.96**	**19**	*e*P	**Pn**	**00 16 16.3**	**+0.7**
CCIG				*e*S	**Sn**	**00 16 39.3**	**0.0**
PCG	**Pacaya**	**2.11**	**90**	*e*P	**Pn**	**00 16 18.6**	**+0.8**
PCG				*e*S	**Sn**	**00 16 42.9**	**-0.2**
TGIG		**2.37**	**352**	*e*P	**Pn**	**00 16 22.9**	**+1.7**
TGIG				*e*S	**Sn**	**00 16 47.2**	**-2.1**
CMIG	**Matias Romero**	**3.34**	**323**	*e*P	**Pn**	**00 16 34.5**	**0.0**
CMIG				*e*S	**Sn**	**00 17 12.1**	**-1.0**

*IDC **16** 00:49:12.1±1.9, 4.48N×125.71E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/41, mbtmp3.5/4, Error ellipse: s-maj=118.5km s-min=24.3km az=68.0*
ISC 16 00:49:16.8±2.0, 4.2N±0.3×126.4E±0.8, h10km, n5, σ0§51/5, mb3.5/4, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.03**	**336**	*e*P	**Pg**	**00 50 14.6**	**-0.3**
KCP				*e*S	**Sb**	**00 50 48.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**22.20**	**182**	P	**P**	**00 54 13.8**	**+0.2**
	0.8nm,0.4s,baz=4.3,slow=10,SNR=6.4						
WRA	**Warramunga Arr**	**25.28**	**162**	P	**P**	**00 54 44.0**	**+0.4**
	0.4nm,0.3s,baz=338,slow=10,SNR=14						
ASAR	**Alice Springs**	**28.69**	**165**	P	**P**	**00 55 14.2**	**-0.1**
	0.3nm,0.5s,baz=343,slow=7.0,SNR=6.9						
MKAR	**Makanchi Array**	**56.93**	**325**	P	P	00 58 55.2	-7.2
	0.2nm,0.4s,baz=122,slow=8.2,SNR=6.5						

NOU 16 01:10:17.6, 32.58S×151.33E, h0km, MLv3.5, Near SE Coast of Australia, Near southeast coast of Australia

*TEH **16** 01:10:31.8, 37.62N×48.95E, h8km, ML3.0*
*THR **16** 01:10:34.3±0.6, 36.93N×47.89E, h69km, ML3.5*
ISC 16 01:10:34.7±1.1, 37.53N±0.05×48.83E±0.05, h10km, n22, σ1§65/24, Northwestern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZNJK	**Zanjan**	**0.86**	**188**	*e*Pg	**Pg**	**01 10 50.0**	**-1.4**
ZNJK				*e*Sg	**Sg**	**01 11 00.8**	**-1.7**
ZNJK	**Zanjan**	**0.86**	**188**	*e*Pg	**Pg**	**01 10 50.0**	**-1.4**
ISRB	**Sarab**	**0.97**	**288**	*e*Pg	**Pg**	**01 10 51.8**	**-1.6**
ISRB				*e*Sg	**Sg**	**01 11 05.9**	**-0.1**
ISRB				*e*		01 11 11.9	
	comp=Z,7μm,0.4s						
IHSH	**Hashtrud**	**1.26**	**260**	*e*Pg	**Pb**	**01 10 57.3**	**-1.5**
IGZV	**Ghazvin**	**1.59**	**135**	*e*Pg	**Pn**	**01 11 02.3**	**-0.9**
IHRS	**Heris**	**1.62**	**300**	*e*		01 11 04.7	
	comp=Z,3μm,0.4s						
IHRS				*e*Pg	**Pn**	**01 11 03.2**	**-0.4**
QALM	**Alamut, Qazvin**	**1.82**	**126**	*e*Pn	Pn	01 11 04.0	-2.4
QABG	**Abgarm-Qazvin**	**1.91**	**161**	*e*Pn	**Pn**	**01 11 05.6**	**-2.0**
ITBZ	**Tabriz**	**2.23**	**289**	*e*Pn	**Pn**	**01 11 13.1**	**+1.1**
IRAZ	**Razeghan**	**2.29**	**157**	*e*Pn	**Pn**	**01 11 13.1**	**+0.2**
THKV	**Tehran--Karaj**	**2.30**	**134**	*e*Pn	**Pn**	**01 11 14.0**	**+1.3**
THKV				*e*Sg	**Sn**	**01 11 45.9**	**+4.5**
THKV				IAML		01 11 47.1	
	comp=N,173nm,0.5s						
THKV	**Tehran--Karaj**	**2.30**	**134**	*e*Pn	**Pn**	**01 11 14.2**	**+1.3**
CHTH	**Charan**	**2.45**	**130**	*e*Pn	**Pn**	**01 11 16.2**	**+1.1**
CHTH	**Charan**	**2.45**	**130**	*e*Pn	**Pn**	**01 11 16.2**	**+1.1**
HAGD	**Aghdareh**	**2.71**	**175**	*e*Pn	**Pn**	**01 11 19.1**	**+0.5**
IMRD	**Marand**	**2.73**	**297**	*e*	**Pb**	**01 11 25.0**	**+1.1**
	comp=Z,908nm,0.2s						
IPRN	**Peran**	**3.09**	**113**	*e*Pn	**Pn**	**01 11 22.1**	**-1.7**
ASAO	**Ashtian**	**3.13**	**162**	*e*Pn	**Pn**	**01 11 25.2**	**+1.0**
ASAO	**Ashtian**	**3.13**	**162**	*e*Pn	**Pn**	**01 11 25.3**	**+1.0**
IDHR	**Dehrash**	**3.44**	**216**	*e*Pn	**Pn**	**01 11 29.7**	**+1.1**
ISHM	**Shahmirzad**	**3.98**	**114**	*e*Pn	**Pn**	**01 11 35.1**	**-1.0**
IKFM	**Kafar-mosalman**	**4.07**	**192**	*e*Pn	**Pn**	**01 11 39.3**	**+2.3**

*JMA **16** 01:10:45.1±0.1, 24.62N×122.69E, h19km±3km, M2.0*
*TAP **16** 01:10:45.2, 24.60N×122.70E, h18km, ML2.6, C*
ISC 16 01:10:44.8±1.2, 24.58N±0.04×122.69E±0.02, h16km±10km, n43, σ0§43/73, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.26**	**119**	P	**Pb**	**01 10 51.4**	**+0.2**
JYNG				S	**Sb**	**01 10 55.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.31**	**112**	P	**Pb**	**01 10 52.2**	**+0.1**
YOJ				S	**Sb**	**01 10 57.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.31**	**112**	*i* P	**Pb**	**01 10 52.1**	**+0.1**
	baz=110						
YOJ				*i* S	**Sb**	**01 10 57.2**	**+0.3**
	baz=110						
EGS		**0.74**	**291**	*e*P	**Pg**	**01 10 59.9**	**+0.6**
	baz=289						
TWB1	**Santiao Chiao**	**0.77**	**304**	P	**Pb**	**01 10 59.9**	**0.0**
	baz=302						
TWB1				*e*S	**Sb**	**01 11 09.6**	**-0.5**
	baz=302						
TWC	**Suao**	**0.77**	**272**	P	**Pb**	**01 10 59.2**	**-0.6**
	baz=270						
TWC				S	**Sb**	**01 11 09.8**	**-0.3**
	baz=270						
NTC	**Toucheng**	**0.83**	**289**	*e*P	**Pb**	**01 11 00.9**	**0.0**
	baz=274						
EWUT	**Wuta**	**0.84**	**261**	*e*P	**Pb**	**01 11 01.2**	**+0.1**
	baz=259						
EWUT				S	**Sb**	**01 11 12.3**	**+0.1**
	baz=259						
TIPB	**Shuangxi**	**0.88**	**296**	P	**Pb**	**01 11 01.9**	**+0.1**
	baz=295						
TIPB				*e*S	**Sb**	**01 11 13.2**	**-0.1**
	baz=295						
NDS	**Dongshan**	**0.89**	**274**	P	**Pb**	**

NSK	**Sanguang** baz=273	**1.22**	**275**	*e*P	**Pb**	**01 11 07.7**	**+0.2**
NSK	baz=273			*e*S	**Sb**	**01 11 23.0**	**-0.1**
JKRS	**Kuro-shima**	**1.25**	**106**	P	**Pn**	**01 11 07.8**	**+0.2**
JKRS				S	**Sn**	**01 11 24.2**	**+0.2**
JIJ	**Ishigaki jima**	**1.34**	**99**	P	**Pn**	**01 11 08.8**	**0.0**
JIJ				*e*S	**Sn**	**01 11 25.5**	**-0.8**
WHF	**Hehuan Shan** baz=257	**1.37**	**252**	*e*P	**Pb**	**01 11 10.8**	**+0.4**
WHF	baz=257			*e*S	**Sb**	**01 11 28.6**	**+0.7**
TWT	**Tachien** baz=256	**1.42**	**257**	*e*P	**Pg**	**01 11 12.0**	**-0.2**
TWT	baz=256			*e*S	**Sg**	**01 11 30.3**	**-0.5**
TDCB	**Techi** baz=256	**1.44**	**257**	*e*P	**Pb**	**01 11 12.1**	**+0.8**
TDCB	baz=256			*e*S	**Sg**	**01 11 31.0**	**-0.3**
CHGB	**Renai** baz=249	**1.48**	**250**	*e*P	**Pb**	**01 11 12.4**	**+0.3**
LIOB	**Emei** baz=286	**1.53**	**273**	*e*P	**Pb**	**01 11 13.1**	**+0.3**
NSTT	**Nanjuang** baz=286	**1.54**	**272**	*e*P	**Pb**	**01 11 13.2**	**+0.1**
HGSD	**Ruisui** baz=227	**1.59**	**227**	*e*P	**Pn**	**01 11 12.4**	**+0.1**
HGSD	baz=227			*e*S	**Sb**	**01 11 33.2**	**-0.4**
HGSD	**Ruisui** baz=174	**1.59**	**227**	P	**Sn**	**01 11 33.5**	**+1.1**
WHP	**Taichung City** baz=259	**1.62**	**260**	*e*P	**Pg**	**01 11 15.5**	**-0.5**
WHP	baz=259			*e*S	**Sb**	**01 11 35.6**	**+0.9**
VWDT	**VWDT** baz=227	**1.64**	**240**	*e*P	**Pn**	**01 11 13.5**	**+0.5**
EHY	**Hungye** baz=218	**1.65**	**230**	*e*P	**Pb**	**01 11 14.7**	**-0.2**
EHY	baz=218			*e*S	**Sb**	**01 11 35.7**	**+0.3**
SMLT	**Sun Moon Lake** baz=246	**1.78**	**247**	*e*P	**Pb**	**01 11 16.7**	**-0.4**
CHN5	**Tsauling** baz=243	**2.09**	**242**	*e*P	**Pb**	**01 11 21.6**	**-0.7**
CHN5	baz=243			*e*S	**Sb**	**01 11 47.4**	**-0.6**

TAP 16 01:11:25.2,23°.73N×121°.39E,h47km,ML1.7,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu** baz=150	**0.07**	**152**	P	Pn	01 11 32.1	-0.3
EGFH	baz=150			S	Sn	01 11 37.6	0.0
ESL	**Shilin** baz=42	**0.09**	**26**	*e*P	Pn	01 11 32.4	-0.2
ESL	baz=42			*e*S	Sn	01 11 37.3	-0.5
VWDT	**VWDT** baz=275	**0.23**	**275**	*e*P	Pn	01 11 33.6	+0.3
VWDT	baz=275			*e*S	Sn	01 11 39.9	+0.7
EHY	**Hungye** baz=183	**0.23**	**196**	P	Pn	01 11 32.7	-0.7
EHY	baz=183			*e*S	Sn	01 11 39.2	0.0
HGSD	**Ruisui** baz=174	**0.24**	**173**	*e*S	Sn	01 11 39.9	+0.6
YULB	**Yu-li** baz=185	**0.35**	**194**	P	Pn	01 11 34.0	-0.6
YULB	baz=185			*e*S	Sn	01 11 40.9	-0.2
CHGB	**Renai** baz=329	**0.38**	**329**	*e*P	Pn	01 11 35.6	+0.5
CHGB	baz=329			*e*S	Sn	01 11 43.5	+1.4
TWF1	**Yuli** baz=191	**0.39**	**193**	*e*P	Pn	01 11 34.4	-0.5
EYUL	**Yuli** baz=193	**0.39**	**190**	*e*P	Pn	01 11 35.2	+0.3
WHF	**Hehuan Shan** baz=345	**0.43**	**344**	*e*P	Pn	01 11 35.6	-0.2
SMLT	**Sun Moon Lake** baz=292	**0.47**	**288**	*e*S	Sn	01 11 45.3	+1.5
NACB	**Ninganchiao** baz=29	**0.48**	**23**	*e*P	Pn	01 11 34.3	-1.6

IDC 16 01:20:41.5±1.1,55°.72S×28°.13W,h0km,mb3.8/3, mb1 3.8/4,mb1mx3.6/21,mbtmp3.7/4,ML3.3/1,Error ellipse: s-maj=48.9km s-min=28.5km az=73.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae** 0.1nm,0.3s,baz=327,slow=16,SNR=1.8	**19.26**	**156**	P	Pn	01 25 08.7	+0.6
QSPA	**South Pole Qui** 0.8nm,0.6s,baz=180,slow=12,SNR=1.8	**34.53**	**180**	P	P	01 27 31.3	0.0
LPAZ	**La Paz** 1.1nm,0.8s,baz=153,slow=4.5,SNR=3.6	**49.75**	**306**	P	P	01 29 37.0	+0.7
TORD	**Torodi Ar. Bea** 0.4nm,0.4s,baz=202,slow=6.2,SNR=4.5	**73.03**	**30**	P	P	01 32 13.9	+1.0
ILAR	**Eielson Array** 0.9nm,0.9s,baz=88,slow=1.8,SNR=7.6	**149.50**	**312**	PKPbc	PKPbc	01 40 29.7	-1.4
SONM	**Songino Array** 0.5nm,0.5s,baz=227,slow=4.3,SNR=4.4	**151.23**	**87**	PKPbc	PKPbc	01 40 34.2	-1.7

*IDC **16** 01:25:37.3±1.3,58°.88S×24°.74W,h0km,mb4.0/3, mb1 4.2/4,mb1mx3.8/22,mbtmp4.0/4,ML4.1/1,Error ellipse: s-maj=48.6km s-min=33.7km az=17.0*

ISC 16 01:25:38.7±0.9,58°.9S±0°.2×24°.8W±0°.2,h10km,n11, σ0s28/11,mb4.0/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.64**	**156**	P	**Pn**	**01 28 52.2**	**+0.4**
VNA3	**Neumayer Olymp**	**13.84**	**159**	P	**Pn**	**01 28 54.3**	**-0.4**
VNA2	**Neumayer--Watz** baz=321,slow=14	**14.03**	**156**	P	**Pn**	**01 28 57.3**	**+0.1**
SNAA	**Sanae**	**15.58**	**154**	P	**Pn**	**01 29 18.1**	**0.0**
SNAA	**Sanae** 0.7nm,0.3s,baz=312,slow=15,SNR=45	**15.58**	**154**	Pn	**Pn**	**01 29 18.2**	**0.0**
SNAA	0.1nm,0.3s,baz=248,slow=19,SNR=1.0			Sn	Sn	01 31 57.6	-13
PLCA	**Paso Flores** 1.2nm,0.5s,baz=163,slow=7.4,SNR=3.0	**33.84**	**282**	P	**P**	**01 32 21.1**	**+0.1**
LPAZ	**La Paz** 0.6nm,0.3s,baz=202,slow=5.4,SNR=6.0	**53.10**	**304**	P	**P**	**01 34 57.0**	**+0.1**
TORD	**Torodi Ar. Bea** 0.5nm,0.6s,baz=200,slow=5.7,SNR=7.6	**74.97**	**27**	P	**P**	**01 37 19.9**	**0.0**
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=116,slow=2.6,SNR=3.2	**139.16**	**315**	PKP	**PKPdf**	**01 45 03.5**	**-0.5**
SONM	**Songino Array** 0.2nm,0.4s,baz=300,slow=2.8,SNR=2.0	**149.51**	**90**	PKPbc	**PKPbc**	**01 45 27.3**	**+0.1**
ILAR	**Eielson Array** 0.5nm,0.6s,baz=180,slow=2.2,SNR=5.3	**152.95**	**307**	PKPbc	**PKiKP**	**01 45 34.7**	**0.0**

*ISK **16** 01:47:30.3,34°.48N×32°.03E,h26km,ML2.9/19*
*NIC **16** 01:47:31.1±0.0,34°.49N×32°.08E,h28km,MI3.1/6*
*GII **16** 01:47:32.3±0.0,34°.44N×32°.18E,h25km,MD2.6/1, Mm2.7/6*
*DDA **16** 01:47:34.8,34°.65N×32°.26E,h4km±4km,ML2.6*

ISC 16 01:47:30.2±1.3,34°.49N±0°.03×32°.05E±0°.04,h19km±14km, n51,σ1s21/77,4C-3D,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NATA	**Nata**	**0.52**	**56**	⇑P	**Pn**	**01 47 41.9**	**-0.7**
NATA				S	**Sn**	**01 47 49.7**	**-1.3**
NATA	8.3nm,0.6s			AML	AML	01 47 51.9	
NATA	8.3nm,0.6s			AML	AML	01 47 51.9	
NATA	9.0nm,0.6s			AML	AML	01 47 52.7	
NATA	9.0nm,0.6s			AML	AML	01 47 52.7	
AKMS	**Akamas**	**0.58**	**24**	⇑P	**Pn**	**01 47 42.7**	**-0.7**
AKMS	4.8nm,0.3s			AML	AML	01 47 51.3	
AKMS	4.8nm,0.3s			AML	AML	01 47 51.3	
AKMS				S	**Sn**	**01 47 51.8**	**-0.6**
AKMS	4.6nm,0.3s			AML	AML	01 47 51.9	
AKMS	4.6nm,0.3s			AML	AML	01 47 51.9	
SZAC	**Souni**	**0.74**	**69**	⇓P	**Pn**	**01 47 45.3**	**-0.4**
SZAC				S	**Sn**	**01 47 55.5**	**-0.9**
SZAC	5.6nm,0.3s			AML	AML	01 47 56.2	
SZAC	5.6nm,0.3s			AML	AML	01 47 56.2	
SZAC	3.6nm,0.3s			AML	AML	01 47 57.1	
SZAC	3.6nm,0.3s			AML	AML	01 47 57.1	
ALFC	**Alefka**	**0.81**	**34**	⇑P	**Pg**	**01 47 45.9**	**-0.1**
ALFC	2.9nm,0.2s			AML	AML	01 47 56.9	
ALFC	2.9nm,0.2s			AML	AML	01 47 56.9	
ALFC	3.3nm,0.2s			S	**Sg**	**01 47 57.2**	**+0.4**
ALFC	3.3nm,0.2s			AML	AML	01 47 58.7	
ALFC	3.3nm,0.2s			AML	AML	01 47 58.7	
LEF	**Lefka**	**0.94**	**48**	*i* P	**Pb**	**01 47 46.2**	**-1.6**
LEF				*i* S	**Sb**	**01 47 56.2**	**-3.6**
LEF	comp=E,417nm,0.6s			IAML		01 48 01.0	
LEF	comp=N,336nm,0.4s			IAML		01 48 02.0	
LEF	**Lefka**	**0.94**	**48**	PG	**Pb**	**01 47 47.9**	**+0.1**
LEF				SG	**Sg**	**01 48 00.7**	**-0.2**
ASGA	**Asgata**	**1.03**	**73**	⇓P	**Pb**	**01 47 49.3**	**-0.2**
ASGA				S	**Sb**	**01 48 03.1**	**+0.5**
ASGA	comp=N,2.2nm,0.4s			AML	AML	01 48 03.6	
ASGA	comp=N,2.2nm,0.4s			AML	AML	01 48 03.6	
ASGA	comp=N,1.7nm,0.3s			AML	AML	01 48 04.5	
ASGA	comp=N,1.7nm,0.3s			AML	AML	01 48 04.5	
AKDN	**Akdeniz- Kıbrı**	**1.11**	**43**	PN	**Pb**	**01 47 50.9**	**+0.2**
CSS	**Mathiatis**	**1.16**	**66**	Pg	**Pn**	**01 47 51.2**	**-0.2**
CSS				Sg	**Sb**	**01 48 05.7**	**-0.6**
CSS	**Mathiatis**	**1.16**	**66**	PN	**Pn**	**01 47 51.4**	**0.0**
CSS				SN	**Sb**	**01 48 06.4**	**+0.1**
CSS	**Mathiatis**	**1.16**	**66**	⇓P	**Pn**	**01 47 51.1**	**-0.2**
CSS				S	**Sn**	**01 48 06.5**	**-0.2**
OSC1	**CSNet OBS 1**	**1.17**	**213**	S	**Sg**	**01 48 07.9**	**-0.4**
AKIN	**Akıncılar- Kıb**	**1.28**	**65**	PN	**Pb**	**01 47 53.6**	**-0.1**
AKIN				SN	**Sb**	**01 48 10.2**	**+0.4**
MVOU	**Mavrovouni**	**1.41**	**68**	⇑P	**Pn**	**01 47 55.2**	**+0.4**
MVOU				S	**Sn**	**01 48 12.7**	**-0.1**
MVOU	comp=N,0.8nm,0.3s			AML	AML	01 48 15.9	
MVOU	comp=N,0.8nm,0.3s			AML	AML	01 48 15.9	
MVOU	comp=N,0.6nm,0.5s			AML	AML	01 48 21.2	
MVOU	comp=N,0.6nm,0.5s			AML	AML	01 48 21.2	
OSC2	**CSNet OBS 4**	**1.42**	**173**	P	**Pn**	**01 47 54.7**	**-0.3**
OSC2				S	**Sn**	**01 48 13.3**	**+0.2**
LFK	**Lefkose**	**1.46**	**57**	PN	**Pn**	**01 47 55.9**	**+0.4**
GAZI	**Gazipasa**	**1.76**	**7**	*i* P	**Pn**	**01 47 58.6**	**-1.0**
GAZI				*i* S	**Sn**	**01 48 15.4**	**-6.1**
GAZI	**Gazipasa**	**1.76**	**7**	PN	**Pn**	**01 47 59.7**	**+0.1**
EREN	**Erenkoy**	**2.03**	**59**	PN	**Pn**	**01 48 03.9**	**+0.6**
AKKU	**Akkuyu-Mersin**	**2.07**	**36**	PN	**Pn**	**01 48 04.2**	**+0.3**
GULN	**MERSIN_Gulnar**	**2.09**	**35**	*i* P	**Pb**	**01 48 07.4**	**-0.1**
GULN				*i* S	**Sn**	**01 48 30.9**	**+1.3**
GULN	comp=E,31nm,0.4s			IAML		01 48 32.0	
BERE	**Bereket-Mersin**	**2.09**	**27**	PN	**Pn**	**01 48 05.2**	**+0.9**
IKL	**Isikli**	**2.20**	**37**	PN	**Pn**	**01 48 06.6**	**+0.9**
TEVE	**Tevekalti-Mers**	**2.25**	**30**	PN	**Pn**	**01 48 06.5**	**0.0**
KEBE	**Keben-Mersin**	**2.38**	**34**	PN	**Pn**	**01 48 09.5**	**+1.2**
KIZK	**Mersin**	**2.62**	**40**	PN	**Pn**	**01 48 12.3**	**+0.8**
AKAS	**Kas**	**2.65**	**312**	PN	**Pn**	**01 48 12.4**	**+0.4**
KKBE	**Karaman, Kazim**	**2.82**	**15**	*i* P	**Pb**	**01 48 17.3**	**-2.7**
KKBE				*i* S	**Sn**	**01 48 49.4**	**+1.5**
KRMN	**Karaman**	**2.86**	**20**	PN	**Pn**	**01 48 15.9**	**+1.1**
SEDI	**Konya, Seydise**	**2.97**	**356**	*i* P	**Pb**	**01 48 21.3**	**-1.2**
OFRI	**`Ofer**	**3.08**	**126**	Pn	**Pn**	**01 48 17.8**	**0.0**
OFRI				Sn	**Sn**	**01 48 53.1**	**-1.1**
MERS	**Mersin**	**3.12**	**40**	PN	**Pn**	**01 48 19.5**	**+1.2**
MMA0B	**Mount Meron ar**	**3.16**	**117**	Pn	**Pn**	**01 48 19.3**	**+0.3**
MMA0B				Sn	**Sn**	**01 48 54.7**	**-1.5**
FETY	**Fethiye**	**3.23**	**312**	PN	**Pn**	**01 48 20.6**	**+0.7**
GEM	**Giv'at Ha'Em**	**3.27**	**112**	Pn	**Pn**	**01 48 20.8**	**+0.4**
GEM				Sn	**Sn**	**01 48 56.9**	**-1.8**
NATI	**Neve Ativ**	**3.30**	**111**	Sn	**Sn**	**01 48 57.8**	**-1.8**
KERG	**Konya-Eregli**	**3.37**	**29**	*i* P	**Pn**	**01 48 23.2**	**+1.3**
KERG	comp=E,11nm,0.8s			IAML		01 48 46.0	
KERG	comp=N,30nm,1.0s			IAML		01 48 47.0	
KERG				*i* S	**Sn**	**01 49 02.4**	**+0.8**
MMLI	**Mount Malkishu**	**3.48**	**125**	Pn	**Pn**	**01 48 23.3**	**-0.1**
MMLI				Sn	**Sn**	**01 49 03.3**	**-0.8**
MMLI	**Mount Malkishu**	**3.48**	**125**	PN	**Pn**	**01 48 24.5**	**+1.1**
YESY	**Yesilyurt**	**3.56**	**22**	PN	**Pn**	**01 48 25.5**	**+0.9**
SHMJ	**Saham**	**3.56**	**118**	Pn	**Pn**	**01 48 24.2**	**-0.3**
SHMJ				Sn	**Sn**	**01 49 04.5**	**-1.6**
HMDT	**Nahal Hemdat**	**3.67**	**126**	Pn	**Pn**	**01 48 26.0**	**+0.1**
KARA	**Karaisali**	**3.69**	**41**	PN	**Pn**	**01 48 27.8**	**+1.6**
TAHT	**Tahtakopru-Hat**	**3.87**	**60**	PN	**Pn**	**01 48 30.4**	**+1.8**
CMRD	**Camardi-Nigde**	**3.96**	**36**	PN	**Pn**	**01 48 31.4**	**+1.3**
DSI	**Dead Sea**	**4.04**	**135**	Pn	**Pn**	**01 48 30.7**	**-0.3**
YTIR	**Yattir**	**4.05**	**140**	Pn	**Pn**	**01 48 31.3**	**+0.1**
YTIR				Sn	**Sn**	**01 49 17.6**	**-0.5**
KZIT	**Kziot**	**4.08**	**150**	Pn	**Pn**	**01 48 31.6**	**0.0**
KZIT				Sn	**Sn**	**01 49 18.9**	**0.0**
PRNI	**Paran**	**4.82**	**148**	Pn	**Pn**	**01 48 42.4**	**+0.6**
PRNI				Sn	**Sn**	**01 49 36.8**	**-0.3**
HRFI	**Mount Harif**	**5.11**	**149**	Pn	**Pn**	**01 48 46.6**	**+0.9**
HRFI				Sn	**Sn**	**01 49 43.7**	**-0.5**
EIL	**Elat**	**5.40**	**152**	Pn	**Pn**	**01 48 50.2**	**+0.5**

*SOME **16** 01:50:31.8,42°.53N×79°.68E,h20km*
*KRNET **16** 01:50:32.3±0.1,42°.61N×79°.64E,h16km,mb3.1*
*NNC **16** 01:50:32.4±0.8,42°.63N×79°.62E,h2km±4km,mb3.3, mpv3.3,Error ellipse: s-maj=4.9km s-min=2.6km az=146.0*

ISC 16 01:50:33.4±1.7,42°.66N±0°.05×79°.67E±0°.04,h8km±10km, n41,σ1s22/71,17C-8D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode** baz=18	**0.52**	**343**	⇓*e*P	**Pg**	**01 50 43.8**	**+0.4**
SHLS	baz=18			⇓*e*S	**Sb**	**01 50 52.4**	**-0.2**
SHLS	**Shalkode** 56nm,0.1s	**0.52**	**343**	⇓*e*P	**Pg**	**01 50 43.8**	**+0.4**
SHLS	84nm,0.2s			*e*S	**Sb**	**01 50 52.4**	**-0.2**
SHLS	**Shalkode** 56nm,0.1s	**0.52**	**343**	P	**Pg**	**01 50 43.8**	**+0.4**
SHLS	84nm,0.2s			S	**Sb**	**01 50 52.2**	**-0.4**
PDGK	**Podgornoye** 11nm,0.5s	**0.68**	**349**	S	**Sg**	**01 50 56.3**	**+0.9**
UZB	**Uzynbulak** baz=20	**0.68**	**316**	*e*P	**Pb**	**01 50 45.8**	**-1.8**
UZB	baz=20			*e*S	**Sg**	**01 50 56.0**	**+0.6**
UZB	**Uzynbulak** 6.0nm,0.1s	**0.68**	**316**	*e*P	**Pb**	**01 50 45.8**	**-1.8**
UZB	83nm,0.2s			*e*S	**Sg**	**01 50 56.0**	**+0.6**
UZB	**Uzynbulak** 6.0nm,0.1s	**0.68**	**316**	P	**Pb**	**01 50 45.8**	**-1.8**
UZB	83nm,0.2s			S	**Sb**	**01 50 55.5**	**-1.7**
KTMS	**Ketmen** baz=32	**0.93**	**32**	*e*P	**Pb**	**01 50 50.5**	**-1.4**
KTMS	baz=32			*e*S	**Sb**	**01 51 03.6**	**-0.8**
KTMS	**Ketmen**	**0.93**	**32**	*e*P	**Pb**	**01 50 50.5**	**-1.4**
KTMS	0.4nm,0.1s			*e*S	**Sb**	**01 51 03.6**	**-0.8**
PRZ	**Przheval'sk** baz=64	**0.96**	**260**	⇑*i*P	**Pb**	**01 50 50.0**	**-2.4**
PRZ	baz=64			⇑*i*S	**Sb**	**01 51 02.7**	**-2.6**
SATY	**Saty** baz=97	**1.01**	**293**	*e*P	**Pb**	**01 50 51.7**	**-1.6**
SATY	baz=97			*e*S	**Sb**	**01 51 05.7**	**-1.1**
SATY	**Saty** 3.6nm,0.1s	**1.01**	**293**	*e*P	**Pb**	**01 50 51.7**	**-1.6**
SATY	20nm,0.1s			*e*S	**Sb**	**01 51 05.7**	**-1.1**
SATY	**Saty** 3.6nm,0.1s	**1.01**	**293**	P	**Pb**	**01 50 51.7**	**-1.6**
SATY	20nm,0.1s			S	**Sb**	**01 51 05.7**	**-1.1**
KPKS	**Kokpek** baz=21	**1.08**	**318**	*e*P	**Pb**	**01 50 53.0**	**-1.4**
KPKS	baz=21			*e*S	**Sn**	**01 51 08.2**	**-2.0**
KPKS	**Kokpek** 17nm,0.1s	**1.08**	**318**	*e*P	**Pb**	**01 50 53.0**	**-1.4**
KPKS	81nm,0.2s			*e*S	**Sn**	**01 51 08.2**	**-2.0**
ANVS	**Anan'yevo** baz=78	**1.48**	**275**	⇑*i*P	**Pn**	**01 50 59.7**	**-0.9**
ANVS	baz=78			⇑*i*S	**Sb**	**01 51 19.5**	**-0.9**
KDJ	**Kajisay** baz=56	**1.92**	**255**	⇑*i*P	**Pn**	**01 51 06.8**	**+0.2**
KDJ	baz=56			⇑*i*S	**Sb**	**01 51 32.3**	**-0.7**
KOTS	**Kotyrbulak** baz=89	**1.96**	**288**	*e*P	**Pb**	**01 51 08.6**	**-0.9**
KOTS	baz=89			*e*S	**Sb**	**01 51 35.1**	**+0.8**
KOTS	**Kotyrbulak** 11nm,0.2s	**1.96**	**288**	*e*P	**Pb**	**01 51 08.6**	**-0.9**
KOTS	30nm,0.3s			*e*S	**Sb**	**01 51 35.0**	**+0.8**
KOTS	**Kotyrbulak** 11nm,0.2s	**1.96**	**288**	Pg	**Pn**	**01 51 07.8**	**+0.6**
KOTS	30nm,0.3s			Lg	Lg	01 51 33.5	
MDOK	**Medeo** baz=87	**1.99**	**285**	*e*P	**Pb**	**01 51 08.7**	**-1.3**
MDOK	baz=87			*e*S	**Sb**	**01 51 35.0**	**0.0**
MDOK	**Medeo** 3.2nm,0.4s	**1.99**	**285**	*e*P	**Pb**	**01 51 08.7**	**-1.3**
MDOK	12nm,0.2s			*e*S	**Sb**	**01 51 35.0**	**0.0**
MDOK	**Medeo** 3.1nm,0.4s	**1.99**	**285**	⇑Pn	**Pn**	**01 51 07.9**	**+0.3**
MDOK	9.2nm,0.4s			⇓Lg	Lg	01 51 34.8	
MDOK	**Medeo** 3.8nm,0.6s	**1.99**	**285**	Pg	**Pn**	**01 51 08.2**	**+0.7**
MDOK	12nm,0.2s			Lg	Lg	01 51 34.3	
TNSS	**Tian-Shan** 6.7nm,0.1s	**2.04**	**281**	*e*P	**Pn**	**01 51 08.9**	**+0.5**
TNSS	6.1nm,0.1s			*e*S	**Sb**	**01 51 35.5**	**-1.2**
TNSS	**Tian-Shan** 6.7nm,0.1s	**2.04**	**281**	Pg	**Pn**	**01 51 08.9**	**+0.5**
TNSS	6.1nm,0.1s			Lg	Lg	01 51 35.4	
ARXS	**Arharly** 9.8nm,0.3s	**2.05**	**320**	*e*P	**Pb**	**01 51 10.7**	**-0.3**
ARXS	26nm,0.2s			*e*S	**Sg**	**01 51 38.3**	**-1.0**
ARXS	**Arharly** 9.8nm,0.3s	**2.05**	**320**	Pg	**Pb**	**01 51 10.7**	**-0.3**
ARXS	26nm,0.2s			Lg	Lg	01 51 38.3	
IZV	**Izvestkoviy** 5.1nm,0.1s	**2.28**	**280**	*e*P	**Pn**	**01 51 13.1**	**+1.5**
IZV	13nm,0.2s			*e*S	**Sb**	**01 51 42.9**	**-0.5**
IZV	**Izvestkoviy** 5.1nm,0.1s	**2.28**	**280**	Pg	**Pn**	**01 51 13.1**	**+1.5**
IZV	13nm,0.2s			Lg	Lg	01 51 42.7	
KTBS	**Karatobe** 1.5nm,0.2s	**2.42**	**297**	*e*P	**Pb**	**01 51 16.7**	**-0.6**
KTBS	20nm,0.3s			*e*S	**Sb**	**01 51 48.5**	**+1.1**
ULHL	**Ulahol** baz=63	**2.57**	**262**	⇑*i*P	**Pn**	**01 51 16.8**	**+1.2**
ULHL	baz=63			⇑*i*S	**Sn**	**01 51 48.7**	**+1.5**
KST	**Kastek** 3.4nm,0.2s	**2.75**	**279**	*e*P	**Pb**	**01 51 22.1**	**-0.9**
KST	6.1nm,0.5s			*e*S	**Sb**	**01 51 57.9**	**+1.0**
BOOM	**Boomskoye usch** baz=69	**2.76**	**268**	⇑*i*P	**Pn**	**01 51 19.3**	**+1.1**
BOOM	baz=69			⇑*i*S	**Sn**	**01 51 53.2**	**+1.4**
DGS	**Degeres** 3.9nm,0.4s	**2.92**	**283**	*e*P	**Pb**	**01 51 24.6**	**-1.2**
DGS	11nm,0.3s			*e*S	**Sb**	**01 52 02.5**	**+0.8**
DGS	**Degeres** 3.9nm,0.4s	**2.92**	**283**	Pg	**Pb**	**01 51 24.6**	**-1.2**
DGS	11nm,0.3s			Lg	Lg	01 52 02.5	
TKM2	**Tokmak 2** baz=77	**3.01**	**276**	⇑*e*P	**Pn**	**01 51 23.1**	**+1.5**
TKM2	baz=77			⇑*i*S	**Sn**	**01 52 00.0**	**+2.0**
TKM2	**Tokmak 2** 0.8nm,0.2s	**3.01**	**276**	⇑Pg	**Pb**	**01 51 26.0**	**-1.4**
TKM2	3.6nm,0.3s			⇓Lg	Lg	01 52 08.2	
AAK	**Ala-Archa** 2.5nm,0.7s	**3.82**	**271**	⇑Lg	Lg	01 52 33.5	
AML	**Almayashu** baz=66	**4.46**	**265**	⇓*e*P	**Pn**	**01 51 43.3**	**+1.6**
AML	baz=66			⇓*i*S	**Sn**	**01 52 35.0**	**+1.0**
MK31	**Makanchi Array** 0.1nm,0.4s,baz=203,slow=13,SNR=8.2	**4.53**	**23**	⇓Pn	**Pn**	**01 51 43.4**	**+1.0**
MK31	0.5nm,0.5s,baz=204,slow=26			⇑Sn	**Sn**	**01 52 36.3**	**+1.0**
MK31	0.5nm,0.5s,baz=202,slow=26			⇑Lg	Lg	01 52 56.9	

*JSN **16** 01:56:43.5±1.2,18°.67N×73°.50W,h50km±999km,MD4.5*
*IDC **16** 01:56:45.7±1.4,18°.34N×73°.93W,h0km,mb3.7/5, mb1 4.0/6,mb1mx3.7/26,mbtmp3.8/6,ML2.9/1,Error ellipse: s-maj=40.5km s-min=30.7km az=84.0*
*NEIC **16** 01:56:47.9±1.4,18°.48N±0°.05×74°.09W±0°.04,h13km±6km, mb4.2/1,Error ellipse: s-maj=8.1km s-min=4.7km az=199.0*
*OSPL **16** 01:56:49.4±0.9,18°.45N×74°.12W,h6km±13km,ML3.7*

ISC 16 01:56:48.1±1.6,18°.49N±0°.05×74°.02W±0°.04,h12km±11km, n58,σ1s26/69,mb3.8/5,Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGNH	**Logne**	**1.34**	**89**		**Pn**	**01 57 12.6**	**-0.1**
LGNH				Sn	**Sg**	**01 57 31.9**	**+0.4**
LGNH	**Logne**	**1.34**	**89**	*i* P	**Pg**	**01 57 13.9**	**-0.1**
LGNH				*e*S	**Sg**	**01 57 32.1**	**+0.7**
LGNH	comp=Z,577nm,0.8s			IAML		01 57 35.7	
JAKH	**Jacmel**	**1.45**	**100**		**Pn**	**01 57 14.2**	**+0.2**
JAKH	**Jacmel**	**1.45**	**100**	*i* P	**Pb**	**01 57 15.1**	**+0.1**
JAKH				*e*S	**Sg**	**01 57 37.2**	**+2.4**
JAKH	comp=Z,1μm,0.4s			IAML		01 57 39.3	
NQWLB	**Fermate**	**1.62**	**90**	Pn	**Pb**	**01 57 17.3**	**-0.7**
NQWLB				Sn	**Sb**	**01 57 38.8**	**+0.4**
NQUSE	**US Embassy, Po**	**1.69**	**87**	Pn	**Pn**	**01 57 17.9**	**+0.6**
NQUSE				Sn	**Sg**	**01 57 42.5**	**+0.2**
GTBY	**Guantanamo Bay**	**1.76**	**324**		**Pn**	**01 57 18.0**	**-0.4**
GTBY				Sn	**Sn**	**01 57 40.1**	**-0.6**
GTBY	**Guantanamo Bay**	**1.76**	**324**	*i* P	**Pn**	**01 57 18.0**	**-0.4**
GTBY				*e*S	**Sn**	**01 57 40.2**	**-0.6**
GTBY				IAML		01 57 40.5	

	comp=Z,601nm,0.5s								
GWJ	**Greenwich**	**2.60**	**261**	*i*	P		**Pn**	**01 57 29.4**	**-0.6**
HOJ	**Hope**	**2.64**	**260**	*i*	P		**Pn**	**01 57 29.8**	**-0.6**
SDDR	**Presa de Saban**	**2.64**	**79**				**Pn**	**01 57 31.2**	**+0.7**
SDDR						Sn	**Sb**	**01 58 05.3**	**-2.4**
SDDR	**Presa de Saban**	**2.64**	**79**	*i*	P		**Pb**	**01 57 32.7**	**-2.6**
SDDR						IAML		01 58 15.2	
	comp=Z,330nm,0.5s								
STH	**Stony Hill**	**2.68**	**262**	*i*	P		**Pn**	**01 57 30.4**	**-0.7**
STH				*i*	S		**Sn**	**01 58 05.5**	**+2.1**
MTDJ	**Mount Denham**	**3.35**	**266**			Pn	**Pn**	**01 57 39.2**	**-1.1**
MTDJ						Sn	**Sn**	**01 58 17.6**	**-2.4**
BANI	**BANI**	**3.48**	**91**	*i*	P		**Pn**	**01 57 44.0**	**+1.9**
MCJ	**Malvern**	**3.53**	**261**	*i*	P		**Pn**	**01 57 43.2**	**+0.4**
MCJ				*i*	S		**Sn**	**01 58 26.6**	**+2.2**
GRTK	**Grand Turk**	**4.05**	**42**			Pn	**Pn**	**01 57 51.2**	**+1.3**
GRTK						Sn	**Sn**	**01 58 37.8**	**+0.6**
GRTK	**Grand Turk**	**4.05**	**42**	*i*	P		**Pn**	**01 57 51.3**	**+1.4**
GRTK						IAML		01 58 40.4	
	comp=Z,127nm,0.5s								
NEJ	**Negril**	**4.10**	**267**	*i*	P		**Pn**	**01 57 49.5**	**-1.0**
AGPR	**Aguadilla, PR**	**6.56**	**89**			Pn	**Pn**	**01 58 24.7**	**+0.3**
MLPR	**Magueyes Islan**	**6.65**	**93**			Pn	**Pn**	**01 58 26.0**	**+0.3**
AOPR	**Arecibo Observ**	**6.90**	**90**			Pn	**Pn**	**01 58 30.2**	**+1.1**
OBIP	**Obispado Ponce**	**7.06**	**92**			Pn	**Pn**	**01 58 32.4**	**+1.2**
SMRC	**Santa Marta, M**	**7.29**	**182**	*eP*		Pn	**Pn**	**01 58 29.9**	**-4.4**
SJG	**San Juan**	**7.49**	**92**			Pn	**Pn**	**01 58 42.5**	**+5.4**
CRJC	**Cerrejon, Guaj**	**7.51**	**171**	*eP*			**Pn**	**01 58 36.5**	**-1.0**
GCPR	**Guaynabo City**	**7.54**	**90**			Pn	**Pn**	**01 58 40.3**	**+2.4**
PDPR	**Patillas Dam,**	**7.62**	**92**			Pn	**Pn**	**01 58 39.4**	**+0.5**
CBYP	**Canovanas**	**7.76**	**90**			Pn	**Pn**	**01 58 41.2**	**+0.3**
HUMP	**Col San Antoni**	**7.77**	**91**			Pn	**Pn**	**01 58 41.8**	**+0.8**
MTP	**Monte Pirata**	**8.06**	**91**			Pn	**Pn**	**01 58 44.7**	**-0.2**
SJCC	**San Jacinto, C**	**8.62**	**188**	*eP*			**Pn**	**01 58 52.9**	**+0.2**
SOR	**Soroa**	**9.44**	**298**			Pn	**Pn**	**01 59 02.6**	**-1.3**
SMLC	**San Martn de**	**9.63**	**180**	*eP*			**Pn**	**01 59 05.9**	**-0.6**
MOTC	**Monteria, Cord**	**9.78**	**190**	*eP*			**Pn**	**01 59 06.2**	**-2.5**
CAPC	**Capurgana**	**10.31**	**199**	*eP*			**Pn**	**01 59 13.8**	**-2.1**
UREC	**San Jos de Ur**	**10.77**	**188**	*eP*			**Pn**	**01 59 22.8**	**+0.5**
BCIP	**Isla Barro Col**	**10.85**	**212**			Pn	**Pn**	**01 59 21.1**	**-2.1**
ZARC	**Zaragoza, Cauc**	**10.96**	**184**	*eP*			**Pn**	**01 59 23.8**	**-1.0**
PAMC	**Pamplona, Colo**	**11.16**	**173**	*eP*			**Pn**	**01 59 27.3**	**-0.6**
PTBC	**PUERTO BERRIO,**	**11.88**	**182**	*eP*			**Pn**	**01 59 36.6**	**-0.8**
HELC	**Santa Helena**	**12.31**	**187**	*eP*			**Pn**	**01 59 44.0**	**+0.4**
RUSC	**La Rusia**	**12.55**	**176**	*eP*			**Pn**	**01 59 46.6**	**-0.4**
CBOC	**Ciudad Bolivar**	**12.70**	**189**	*eP*			**Pn**	**01 59 49.5**	**+0.8**
GUY2C	**Guyana, Caldas**	**13.25**	**186**	*eP*			**Pn**	**01 59 56.7**	**+0.1**
TEIG	**Tepich**	**13.56**	**280**			Pn	**Pn**	**02 00 00.8**	**+0.4**
ROSC	**El Rosal**	**13.57**	**181**			Pn	**Pn**	**01 59 58.2**	**-2.6**
	comp=Z,1.4nm,0.3s,baz=282,slow=20,SNR=1.6								
ROSC						Sn	**Sn**	**02 02 29.5**	**-2.3**
	comp=Z,1.1nm,0.3s,baz=307,slow=20,SNR=1.3								
ROSC	**El Rosal**	**13.57**	**181**			Pn	**Pn**	**02 00 00.2**	**-0.6**
ORTC	**Ortega, Tolima**	**14.54**	**185**	*eP*			**Pn**	**02 00 15.3**	**+1.4**
CSU	**Charleston Sou**	**15.42**	**341**			P	**P**	**02 00 31.0**	**+1.0**
BBSR	**BB Station**	**16.17**	**29**			Pn	**Pn**	**02 00 33.5**	**-1.7**
BBSR						IAmb	IAmb	02 00 43.4	
	comp=Z,17nm,0.9s								
TXAR	**Lajitas Array**	**29.09**	**297**			P	**P**	**02 02 50.2**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=102,slow=8.4,SNR=3.1								
PDAR	**Pinedale Array**	**38.56**	**317**			P	**P**	**02 04 11.6**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=119,slow=10,SNR=2.2								
YKA	**Yellowknife Ar**	**52.13**	**338**			P	**P**	**02 05 58.7**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=130,slow=8.4,SNR=22								
ARCES	**ARCESS Array B**	**76.12**	**21**			P	**P**	**02 08 34.9**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=297,slow=4.0,SNR=5.2								
FINES	**FINESS Array B**	**78.67**	**29**			P	**P**	**02 08 51.3**	**+1.5**
	comp=Z,2.1nm,1.0s,baz=284,slow=5.6,SNR=1.7								
XAN	**Xi'an**	**127.69**	**357**			PKP	**PKiKP**	**02 15 55.0**	**+0.5**
XAN						sPKP		02 16 07.3	
WRA	**Warramunga Arr**	**153.19**	**262**			PKPbc	**PKPbc**	**02 16 46.1**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=89,slow=3.3,SNR=1.8								

IDC **16** *01:58:45.0±1.0, 10.°45N×91.°63E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.7/49, mbtmp3.8/10, ML3.8/2, MS3.0/3, Ms1 3.0/3, ms1mx2.7/32, Error ellipse: s-maj=30.5km s-min=20.7km az=61.0*

ISC 16 01:58:47.8±0.9, 10.°4N±0.°2×91.°6E±0.°1, h17km, n15, σ0°61/11, mb3.7/8, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**10.49**	**136**		LR	LR	02 06 11.1	
	comp=Z,74nm,20.3s,baz=90,slow=42							
CMAR	**Chiang Mai Arr**	**10.67**	**41**		Pn	**Pn**	**02 01 20.8**	**+0.8**
	0.3nm,0.3s,baz=230,slow=14,SNR=4.9							
PALK	**Pallekele**	**11.24**	**255**		Pn	**Pn**	**02 01 28.2**	**+0.4**
	0.5nm,0.3s,baz=114,slow=9.6,SNR=1.9							
PALK					Sn	Sn	02 03 19.7	-14
	1.0nm,0.3s,baz=257,slow=18,SNR=4.5							
PALK					LR	LR	02 05 05.3	
	comp=Z,72nm,18.4s,baz=191,slow=34							
H08S3	**Diego Garcia H**	**26.18**	**227**		T	T	02 31 23.1	
	baz=47,slow=75,SNR=175							
H08S2	**Diego Garcia H**	**26.18**	**227**		T	T	02 31 23.3	
	baz=47,slow=75,SNR=134							
H08S1	**Diego Garcia H**	**26.19**	**227**		T	T	02 31 24.2	
	baz=47,slow=75,SNR=75							
MKAR	**Makanchi Array**	**37.09**	**349**		P	**P**	**02 05 56.2**	**-1.0**
	0.6nm,0.7s,baz=172,slow=8.6,SNR=6.6							
MKAR					PcP	**PcP**	**02 08 17.6**	**0.0**
	0.3nm,0.5s,baz=206,slow=4.0,SNR=4.2							
SONM	**Songino Array**	**39.30**	**16**		P	**P**	**02 06 16.0**	**+0.1**
	0.8nm,0.4s,baz=201,slow=8.4,SNR=7.2							
KURBB	**Kurchatov Arra**	**41.50**	**347**		P	**P**	**02 06 33.4**	**-0.6**
	0.5nm,0.7s,baz=170,slow=8.0,SNR=5.1							
ZALV	**Zalesovo Beam**	**43.74**	**354**		P	**P**	**02 06 51.6**	**-0.5**
	0.5nm,0.4s,baz=170,slow=9.0,SNR=4.7							
WRA	**Warramunga Arr**	**51.76**	**126**		P	**P**	**02 07 54.6**	**-0.3**
	2.2nm,0.7s,baz=304,slow=8.3,SNR=6.1							
ASAR	**Alice Springs**	**53.45**	**130**		P	**P**	**02 08 07.0**	**-0.4**
	1.6nm,0.8s,baz=310,slow=7.2,SNR=6.0							
KMBO	**Kilima Mbogo**	**55.29**	**261**		LR	LR	02 30 20.0	
	comp=Z,21nm,21.1s,baz=275,slow=34							
FINES	**FINESS Array B**	**69.30**	**332**		P	**P**	**02 09 53.7**	**-0.3**
	1.5nm,0.9s,baz=111,slow=6.1,SNR=1.5							
TORD	**Torodi Ar. Bea**	**87.60**	**283**		P	**P**	**02 11 36.4**	**+0.5**
	0.2nm,0.6s,baz=50,slow=4.5,SNR=1.9							

IDC **16** *02:01:49.0±2.1, 5.°80S×146.°56E, h98km±20km, mb4.0/10, mb1 4.1/14, mb1mx3.9/31, mbtmp4.3/14, MS3.2/8, Ms1 3.2/8, ms1mx2.9/29, Error ellipse: s-maj=22.4km s-min=14.9km az=72.0*

NEIC **16** *02:01:48.2±1.7, 5.°77S±0.°06×146.°5E±0.°1, h94km±8km, mb4.1/12, Error ellipse: s-maj=18.5km s-min=7.7km az=104.0*

ISC 16 02:01:49.2±0.5, 5.°80S±0.°06×146.°53E±0.°09, h100km, n46, σ1°06/45, mb4.2/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.64**	**170**		P	**Pn**	**02 02 42.9**	**-0.6**
	20nm,0.3s,baz=6.3,slow=9.2,SNR=17							
PMG					S	**Sn**	**02 03 25.6**	**0.0**
	12nm,0.3s,baz=10,slow=16,SNR=4.5							
PMG					LR	LR	02 03 57.2	
	comp=Z,104nm,21.4s,baz=324,slow=35							
PMG	**Port Moresby**	**3.64**	**170**			**Pn**	**02 02 42.7**	**-0.8**
PMG						**Sn**	**02 03 25.1**	**-0.5**
PMG	**Port Moresby**	**3.64**	**170**		P	**Pn**	**02 02 42.9**	**-0.6**
RABL	**Rabaul**	**5.83**	**74**		Pn	**Pn**	**02 03 12.0**	**-1.3**
JAY	**Jayapura**	**6.67**	**299**		P	**Pn**	**02 03 25.6**	**+1.0**
	1.1nm,0.3s,baz=153,slow=9.0,SNR=2.5							
JAY					LR	LR	02 06 08.9	
	comp=Z,108nm,20.8s,baz=234,slow=39							
COEN	**Coen**	**8.76**	**202**			**Pn**	**02 03 52.6**	**-0.5**
CTA	**Charters Tower**	**14.21**	**181**		P	**P**	**02 05 08.8**	**-1.4**
	1.4nm,0.3s,baz=3.0,slow=16,SNR=2.1							
CTAO	**Charters Tower**	**14.21**	**181**		Pn	**Pn**	**02 05 06.4**	**+0.5**
SIJI	**Sorong**	**16.00**	**287**		P	**P**	**02 05 30.1**	**-0.2**
	3.1nm,0.3s,baz=98,slow=6.7,SNR=8.6							
WB0	**Warramunga Arr**	**18.23**	**219**		P	**P**	**02 05 54.8**	**+0.1**
WR0	**Warramunga Arr**	**18.28**	**219**		P	**P**	**02 05 55.1**	**-0.2**
WR0						IAmb	IAmb	02 05 59.1	
	comp=Z,5.5nm,0.4s							
WRAB	**Tennant Creek**	**18.38**	**219**		P	**P**	**02 05 55.4**	**-1.0**
WRAB						IAmb	IAmb	02 06 05.5	
	comp=Z,5.8nm,0.7s							
WB2	**Warramunga Arr**	**18.39**	**219**		P	**P**	**02 05 55.9**	**-0.5**
WB2						IAmb	IAmb	02 06 14.8	
	comp=Z,6.0nm,0.8s							

WRA	**Warramunga Arr**	**18.39**	**219**		P	**P**	**02 05 56.2**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=45,slow=12,SNR=32								
WRA					PcP	**PcP**	**02 10 25.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=17,slow=1.7,SNR=5.6								
WRA					LR	LR	02 14 41.9		
	comp=Z,94nm,19.2s,baz=160,slow=42								
WRA	**Warramunga Arr**	**18.39**	**219**		P	**P**	**02 05 55.2**	**-1.3**
AS31	**Alice Springs**	**21.53**	**213**		P	**P**	**02 06 30.3**	**-0.1**
ASAR	**Alice Springs**	**21.53**	**213**		P	**P**	**02 06 30.7**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=50,slow=8.5,SNR=22								
ASAR					PcP	**PcP**	**02 10 30.0**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=50,slow=2.2,SNR=5.2								
ASAR					LR	LR	02 15 19.6		
	comp=Z,82nm,20.7s,baz=40,slow=38								
ASAR	**Alice Springs**	**21.53**	**213**		P	**P**	**02 06 29.7**	**-0.7**
BATI	**Baumata**	**23.06**	**258**		P	**P**	**02 06 47.1**	**+0.8**
	comp=Z,28nm,0.4s,baz=61,slow=4.1,SNR=4.0								
FITZ	**Fitzroy Crossi**	**23.78**	**237**		P	**P**	**02 06 52.4**	**-0.4**
	comp=Z,5.1nm,0.4s,baz=47,slow=7.5,SNR=40								
FITZ					LR	LR	02 17 00.9		
	comp=Z,76nm,19.3s,baz=66,slow=38								
LUWI	**Luwuk**	**24.18**	**280**		P	**P**	**02 06 54.0**	**-2.5**
MMRI	**Maumere**	**24.27**	**262**		P	**P**	**02 06 57.0**	**-0.2**
STKA	**Stephens Creek**	**26.36**	**189**		LR	LR	02 17 41.8		
	comp=Z,78nm,18.1s,baz=26,slow=36								
LBZ	**Lake Benmore**	**43.66**	**155**		P	**P**	**02 09 46.7**	**+2.7**
KSRS	**Korea Array**	**46.40**	**339**		LR	LR	02 25 52.9		
	comp=Z,18nm,20.9s,baz=46,slow=31								
USRK	**Ussuriysk Ar.**	**51.47**	**347**		P	**P**	**02 10 44.9**	**+0.6**
	comp=Z,2.4nm,0.5s,baz=164,slow=7.0,SNR=12								
USRK	**Ussuriysk Ar.**	**51.47**	**347**		P	**P**	**02 10 44.7**	**+0.5**
USA0B	**Ussuriysk Arra**	**51.47**	**347**		P	**P**	**02 10 44.5**	**+0.3**
USA0B						IAmb	IAmb	02 10 59.9	
	comp=Z,6.1nm,1.1s								
CMAR	**Chiang Mai Arr**	**52.75**	**298**		P	**P**	**02 10 54.5**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=121,slow=6.2,SNR=7.8								
CMAR	**Chiang Mai Arr**	**52.75**	**298**		P	**P**	**02 10 53.0**	**-1.3**
PETK	**Petropavlovsk-**	**59.44**	**8**		LR	LR	02 34 17.0		
	comp=Z,36nm,20.3s,baz=101,slow=33								
SONM	**Songino Array**	**64.00**	**331**		P	**P**	**02 12 12.3**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=149,slow=6.9,SNR=6.1								
SONM	**Songino Array**	**64.00**	**331**		P	**P**	**02 12 12.2**	**0.0**
SONM						IAmb	IAmb	02 12 14.9	
	comp=Z,1.1nm,0.9s								
VNDA	**Vanda**	**72.14**	**177**		P	**P**	**02 13 05.0**	**+2.5**
	comp=Z,2.1nm,0.6s,baz=330,slow=6.2,SNR=10.0								
VNDA	**Vanda**	**72.14**	**177**		P	**P**	**02 13 03.6**	**+1.2**
VNDA						IAmb	IAmb	02 13 05.8	
	comp=Z,1.9nm,0.6s								
MKAR	**Makanchi Array**	**77.05**	**321**		P	**P**	**02 13 31.2**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=99,slow=8.7,SNR=10								
MKAR	**Makanchi Array**	**77.05**	**321**		P	**P**	**02 13 30.9**	**-0.5**
ZALV	**Zalesovo Beam**	**78.59**	**328**		P	**P**	**02 13 39.2**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=105,slow=6.1,SNR=6.5								
NRIK	**Noril'sk**	**84.94**	**342**		P	**P**	**02 14 12.8**	**0.0**
	comp=Z,2.3nm,0.6s,baz=134,slow=3.9,SNR=3.8								
ILAR	**Eielson Array**	**85.48**	**23**		P	**P**	**02 14 15.3**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=253,slow=4.9,SNR=33								
TORD	**Torodi Ar. Bea**	**144.59**	**284**		PKP	PKPbc	02 21 13.9	-0.1
	comp=Z,2.4nm,0.9s,baz=74,slow=4.0,SNR=9.8								
TORD	**Torodi Ar. Bea**	**144.59**	**284**			PKPbc	02 21 14.4	+0.4
DBIC	**Dimbokro**	**151.55**	**273**		PKPbc	**PKPbc**	**02 21 32.2**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=127,slow=3.6,SNR=5.9								
DBIC	**Dimbokro**	**151.55**	**273**			**PKPbc**	**02 21 31.9**	**-0.9**
BDFB	**Brasilia**	**154.28**	**146**		PKPbc	**PKiKP**	**02 21 39.2**	**+0.3**
	comp=Z,1.8nm,0.5s,baz=271,slow=2.1,SNR=4.0								
BDFB	**Brasilia**	**154.28**	**146**			**PKPbc**	**02 21 36.4**	**-2.6**

PRU **16** *02:08:06.0±0.0, 43.°66N×18.°73E, h0km*
KRSZO **16** *02:08:07.8±0.8, 43.°77N×18.°54E, h9km±6km, ML3.5/18, Error ellipse: s-maj=3.1km s-min=2.2km az=124.0*
LDG **16** *02:08:08.4±0.1, 43.°74N×18.°66E, h6km, Ml3.0/13, Error ellipse: s-maj=3.9km s-min=2.7km az=40.0*
BEO **16** *02:08:08.2±0.3, 43.°75N×18.°50E, h5km±2km, ML3.2/13*
RHSSO **16** *02:08:08.5±0.2, 43.°75N×18.°55E, h3km±2km, ML3.2/16*
PDG **16** *02:08:08.2±0.4, 43.°72N×18.°58E, h7km, MD3.1/2, ML3.0/13, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

ISC 16 02:08:07.8±1.0, 43.°74N±0.°01×18.°53E±0.°01, h11km±8km, n141, σ1°92/253, 20C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HAPS	**Han Pijesak,Bl**	**0.46**	**42**		*ePg*	**Pg**	**02 08 15.9**	**-1.0**
HAPS					*eSg*	**Sg**	**02 08 22.7**	**-0.3**
HAPS	**Han Pijesak,Bl**	**0.46**	**42**	↑	*iPg*	**Pg**	**02 08 15.8**	**-1.1**
HAPS					*eSg*	**Sg**	**02 08 22.7**	**-0.3**
UPM	**Unac-Piva**	**0.61**	**153**	↓	*iPg*	**Pg**	**02 08 19.9**	**+0.2**
UPM					*eSg*	**Sg**	**02 08 28.0**	**+0.3**
UPM	**Unac-Piva**	**0.61**	**153**	↓	*iPg*	**Pg**	**02 08 18.7**	**-1.0**
UPM					*i Sg*	**Sg**	**02 08 27.8**	**+0.1**
RUDO	**Rudo**	**0.63**	**101**	↓	*iPg*	**Pg**	**02 08 18.9**	**-1.1**
RUDO					*eSg*	**Sg**	**02 08 28.8**	**+0.6**
BBLS	**Lazići**	**0.65**	**79**		*ePg*	**Pg**	**02 08 20.3**	**-0.1**
BBLS					*eSg*	**Sb**	**02 08 29.7**	**-0.6**
BBLS	**Lazići**	**0.65**	**79**	↑	*iPg*	**Pg**	**02 08 20.5**	**+0.1**
BBLS					*eSg*	**Sg**	**02 08 28.8**	**-0.2**
BBLS	**Lazići**	**0.65**	**79**		Pg	**Pg**	**02 08 20.3**	**-0.1**
BBLS					Pb	**Pg**	**02 08 20.5**	**+0.1**
BBLS					Pg	**Pg**	**02 08 20.6**	**+0.2**
	comp=Z,17nm,SNR=180							
BBLS					Lg	Lg	02 08 28.8	
BBLS					Lg	Lg	02 08 29.4	
BBLS					Sg	**Sb**	**02 08 29.7**	**-0.6**
PLE	**Pljevlja**	**0.75**	**123**	↑	*iPg*	**Pg**	**02 08 21.4**	**-1.0**
PLE					*i Sg*	**Sg**	**02 08 32.5**	**+0.3**
BRY	**Bratogost**	**0.84**	**179**	↓	*iPg*	**Pg**	**02 08 23.4**	**-0.7**
BRY					*eSg*	**Sb**	**02 08 36.1**	**+0.2**
BRY	**Bratogost**	**0.84**	**179**	↑	*iPg*	**Pg**	**02 08 23.3**	**-0.8**
BRY					*i Sg*	**Sb**	**02 08 36.1**	**+0.2**
NKY	**Niksic**	**0.99**	**160**	↓	*iPg*	**Pg**	**02 08 25.9**	**-1.0**
NKY					*i Sg*	**Sb**	**02 08 40.9**	**+0.7**
NKME	**Niksic**	**1.03**	**162**	↓	*iPg*	**Pg**	**02 08 26.5**	**-1.0**
NKME					*i Sg*	**Sn**	**02 08 42.1**	**-0.7**
TREB	**Trebinje**	**1.03**	**187**		*ePg*	**Pb**	**02 08 27.0**	**-0.7**
TREB					*eSg*	**Sg**	**02 08 40.8**	**-0.4**
TREB	**Trebinje**	**1.03**	**187**		*ePg*	**Pb**	**02 08 26.6**	**-1.1**
TREB					*eSg*	**Sn**	**02 08 42.4**	**-0.4**
RICI	**Ricice**	**1.04**	**257**		*i Pg*	**Pb**	**02 08 27.9**	**0.0**
RICI					Sg	**Sn**	**02 08 42.6**	**-0.4**
STON	**Ston**	**1.06**	**215**		*ePg*	**Pb**	**02 08 27.8**	**-0.3**
STON					Sg	**Sg**	**02 08 42.2**	**+0.3**
TEKS	**Tekeris**	**1.08**	**42**		*ePg*	**Pn**	**02 08 29.3**	**+0.3**
TEKS					*eSg*	**Sn**	**02 08 43.6**	**-0.4**
TEKS	**Tekeris**	**1.08**	**42**		*ePg*	**Pb**	**02 08 28.3**	**-0.3**
TEKS					*eSg*	**Sb**	**02 08 42.6**	**-0.1**
DIVS	**Divibare**	**1.12**	**71**		*ePg*	**Pb**	**02 08 29.0**	**-0.2**
DIVS					*eSg*	**Sn**	**02 08 46.0**	**+1.0**
DIVS	**Divibare**	**1.12**	**71**	↑	*iPg*	**Pb**	**02 08 28.8**	**-0.4**
DIVS					*eSg*	**Sb**	**02 08 43.3**	**-0.5**
DIVS	**Divibare**	**1.12**	**71**		Pg	**Pb**	**02 08 28.6**	**-0.6**
	comp=Z,2.4nm,SNR=92							
DIVS					Pn	**Pb**	**02 08 28.8**	**-0.4**
DIVS					Pb	**Pb**	**02 08 29.0**	**-0.2**
DIVS					Lg	Lg	02 08 42.8	
DIVS					Sg	**Sb**	**02 08 43.3**	**-0.5**
DIVS					Sn	**Sn**	**02 08 46.0**	**+1.0**
KOME	**Kolasin**	**1.15**	**141**	↑	*iPg*	**Pb**	**02 08 28.7**	**-1.1**
KOME					*i Sg*	**Sn**	**02 08 46.0**	**+0.3**
MAKA	**Makarska**	**1.19**	**248**		*ePn*	**Pn**	**02 08 30.0**	**-0.4**
IVAS	**Ivanjica**	**1.19**	**98**		*ePg*	**Pb**	**02 08 29.4**	**-1.1**
IVAS					*eSg*	**Sn**	**02 08 47.9**	**+1.1**
CEME	**Cevo**	**1.23**	**166**	↓	*iPg*	**Pn**	**02 08 30.3**	**-0.7**
CEME					*i Sg*	**Sn**	**02 08 49.2**	**+1.5**
MGRS	**Mrkonjic Grad**	**1.24**	**303**		*ePg*	**Pn**	**02 08 30.6**	**-0.5**
MGRS					*eSg*	**Sg**	**02 08 48.3**	**+0.6**
HCY	**Herceg Novi**	**1.30**	**181**	↑	*iPg*	**Pn**	**02 08 32.0**	**+0.1**
HCY					*eSg*	**Sg**	**02 08 50.2**	**+0.7**
HCY	**Herceg Novi**	**1.30**	**181**	↑	*iPg*	**Pn**	**02 08 31.7**	**-0.2**
HCY					*i Sg*	**Sg**	**02 08 51.7**	**+2.2**
IVA	**Berane**	**1.33**	**131**	↓	*iPg*	**Pn**	**02 08 31.9**	**-0.5**
IVA					*i Sg*	**Sg**	**02 08 51.9**	**+1.4**
BLY	**Banja Luka**	**1.39**	**317**		*ePg*	**Pg**	**02 08 34.4**	**-0.1**
BLY					*eSg*	**Sg**	**02 08 52.9**	**+0.3**
BLY	**Banja Luka**	**1.39**	**317**	↑	*iPg*	**Pb**	**02 08 33.9**	**+0.1**
BLY					*eSg*	**Sg**	**02 08 53.0**	**+0.3**
BLY	**Banja Luka**	**1.39**	**317**		Pg	**Pb**	**02 08 34.0**	**+0.1**
	comp=Z,1.0nm,SNR=44							
BLY					Pn	**Pg**	**02 08 34.4**	**-0.1**
BLY					Lg	Lg	02 08 50.4	
BLY					Sn	**Sg**	**02 08 52.9**	**+0.3**
BLY					Sn	**Sg**	**02 08 53.0**	**+0.3**
PDG	**Podgorica**	**1.42**	**158**		*ePg*	**Pn**	**02 08 33.5**	**0.0**
PDG					*eSg*	**Sg**	**02 08 54.5**	**+1.0**
PDG	**Podgorica**	**1.42**	**158**	↑	*iPg*	**Pn**	**02 08 33.2**	**-0.3**
PDG					*eSg*	**Sg**	**02 08 54.4**	**+1.0**
TTG	**Podgorica**	**1.42**	**158**		*ePg*	**Pn**	**02 08 33.1**	**-0.4**
TTG					*i Sg*	**Sg**	**02 08 55.4**	**+2.0**
TRUS	**Trudelj**	**1.44**	**70**		*ePn*	**Pb**	**02 08 34.6**	**-0.1**
TRUS					*eSg*	**Sb**	**02 08 53.3**	**+0.3**
BUM	**Brajici-Budva**	**1.47**	**169**	↓	*iPg*	**Pn**	**02 08 34.7**	**+0.4**
BUM					*i Sg*	**Sg**	**02 08 57.3**	**+2.3**
KIJV	**Kijevo**	**1.56**	**280**		*ePg*	**Pg**	**02 08 38.6**	**+0.9**
KIJV					Sg	**Sg**	**02 09 00.3**	**+2.5**
PVY	**Plav**	**1.56**	**137**	↓	*iPg*	**Pb**	**02 08 36.2**	**-0.5**
PVY					*i Sg*	**Sg**	**02 08 59.4**	**+1.5**
GRUS	**Gruza**	**1.59**	**84**		*ePg*	**Pb**	**02 08 36.9**	**-0.4**
GRUS					*eSg*	**Sg**	**02 08 59.7**	**+0.7**
HVAR	**Hvar**	**1.61**	**250**		*ePg*	**Pg**	**02 08 39.5**	**+0.7**
HVAR					Sg	**Sg**	**02 09 01.2**	**+1.5**
DRME	**Dracevica, Mon**	**1.63**	**163**		*ePn*	**Pb**	**02 08 37.7**	**-0.2**
DRME					*eSn*	**Sg**	**02 08 59.6**	**-0.6**
DRME	**Dracevica, Mon**	**1.63**	**163**	↓	*iPn*	**Pb**	**02 08 37.7**	**-0.2**
DRME					*i Sn*	**Sg**	**02 09 01.5**	**+1.3**
FRGS	**Fruska Gora**	**1.69**	**33**		*ePn*	**Pn**	**02 08 37.2**	**-0.1**
FRGS					*eSg*	**Sg**	**02 09 01.7**	**-0.4**
FRGS	**Fruska Gora**	**1.69**	**33**	↓	*iP*	**Pn**	**02 08 37.5**	**+0.2**
FRGS	**Fruska Gora**	**1.69**	**33**		*ePn*	**Pb**	**02 08 38.8**	**-0.1**
FRGS					*eSn*	**Sb**	**02 09 00.5**	**+0

MOA					*e*Sn	**Sn**	02 10 22.8	+0.5
	comp=Z,5.2nm,0.2s							
ABTA	**Abfaltersbach**	**5.20**	**307**		Pn	**Pn**	02 09 28.1	+2.4
	comp=Z,1.9nm,0.3s,SNR=18							
ABTA					*e*Sn	**Sn**	02 10 29.2	+3.6
	comp=Z,1.0nm,0.2s							
LANS	**Liptovska Anna**	**5.45**		**7**	*e*PN	**Pn**	02 09 29.0	0.0
CRVS	**Cervenica-Dubn**	**5.54**		**20**	*e*PN	**Pn**	02 09 30.9	+0.6
CKRC	**Cesky Krumlov**	**5.86**	**332**		*e*PN	**Pn**	02 09 35.5	+0.9
CKRC					*e*SN	**Sn**	02 10 43.5	+1.8
WTTA	**Wattenberg**	**5.98**	**308**		*i* Pn	**Pn**	02 09 39.9	+3.4
	comp=Z,3.5nm,0.4s,SNR=10							
WTTA					*e*Sn	**Sn**	02 10 48.8	+3.8
	comp=Z,1.5nm,0.3s							
WATA	**Walderalm**	**6.06**	**309**		*i* Pn	**Pn**	02 09 41.1	+3.7
	comp=Z,1.9nm,0.3s,SNR=4.6							
WATA					*e*Sn	**Sn**	02 10 50.6	+3.7
	comp=Z,3.0nm,0.4s							
SQTA	**Sankt Quirin**	**6.21**	**307**		*i* Pn	**Pn**	02 09 43.1	+3.6
	comp=Z,3.5nm,0.3s,SNR=9.4							
SQTA					*e*Sn	**Sn**	02 10 51.9	+1.4
	comp=Z,2.4nm,0.3s							
MOTA	**Moosalm**	**6.33**	**307**		*i* Pn	**Pn**	02 09 44.7	+3.4
	comp=Z,2.3nm,0.3s,SNR=16							
MOTA					*e*Sn	**Sn**	02 10 57.4	+3.8
	comp=Z,5.6nm,0.8s							
KHC	**Kasperske Hory**	**6.38**	**329**		*e*PN	**Pn**	02 09 44.3	+2.5
KHC					*e*SN	**Sn**	02 10 56.7	+2.1
FETA	**Feichten**	**6.39**	**304**		*e*Pn	**Pn**	02 09 45.2	+3.1
	comp=Z,0.6nm,0.3s							
FETA					*e*Sn	**Sn**	02 10 59.2	+4.1
	comp=Z,1.0nm,0.4s							
KRLC	**Kraliky**	**6.45**	**350**		*e*SN	**Sn**	02 10 55.4	-0.8
DPC	**Dobruska-Polom**	**6.78**	**348**		*e*PN	**Pn**	02 09 47.9	+0.7
DPC					*e*SN	**Sn**	02 11 04.7	+0.3
DAVA	**Damuels**	**7.03**	**303**		*e*Pn	**Pn**	02 09 53.5	+2.7
	comp=Z,0.5nm,0.3s							
DAVA					*e*Sn	**Sn**	02 11 13.9	+3.2
	comp=Z,4.0nm,0.5s							
PGF	**Pioggiola**	**7.07**	**264**		*e*Pn	**Pn**	02 09 53.6	+2.3
PGF					*e*Sn	**Sn**	02 11 07.4	-4.3
	comp=Z,0.1nm,0.2s							
SBF	**Sospel**	**8.02**	**275**		*e*Pn	**Pn**	02 10 05.7	+1.3
SBF					*e*Sn	**Sn**	02 11 31.7	-3.4
SBF					*e*Sg	**Sg**	02 12 23.2	-2.0
	comp=Z,2.4nm,0.3s							
MBDF	**Montbardon**	**8.50**	**281**		*e*Pn	**Pn**	02 10 10.5	-0.4
LPG	**La Plagne**	**8.58**	**286**		*e*Pn	**Pn**	02 10 12.7	+0.5
LPG					*e*Sn	**Sn**	02 11 43.8	-5.3
	comp=Z,1.6nm,0.4s							
FRF	**La Foret Royal**	**8.62**	**273**		*e*Pn	**Pn**	02 10 14.0	+1.6
FRF					*e*Sn	**Sn**	02 11 44.9	-4.7
	comp=Z,0.6nm,0.3s							
LMR	**La Mourre**	**8.74**	**271**		*e*Pn	**Pn**	02 10 15.6	+1.5
LMR					*e*Sn	**Sn**	02 11 47.5	-5.1
	comp=Z,0.4nm,0.3s							
CDF	**Champ du Feu**	**9.10**	**305**		*e*Pn	**Pn**	02 10 19.8	+0.6
HINF	**Hinteralfeld**	**9.11**	**301**		*e*Pn	**Pn**	02 10 18.8	-0.5
HINF					*e*Sn	**Sn**	02 11 56.3	-5.6
	comp=Z,1.7nm,0.4s							
ORIF	**Oris-en-Rattie**	**9.14**	**282**		*e*Pn	**Pn**	02 10 21.3	+1.6
ORIF					*e*Sn	**Sn**	02 11 58.8	-3.8
	comp=Z,1.0nm,0.4s							
CABF	**La Chapelle**	**9.24**	**292**		*e*Pn	**Pn**	02 10 21.7	+0.6
CABF					*e*Sn	**Sn**	02 11 59.3	-5.7
	comp=Z,0.7nm,0.3s							
SMRF	**Simiane la Rot**	**9.36**	**276**		*e*Pn	**Pn**	02 10 22.1	-0.6
HAU	**Haudompre**	**9.50**	**301**		*e*Pn	**Pn**	02 10 25.7	+1.1
VIVF	**Saint-Julien-l**	**10.00**	**281**		*e*Pn	**Pn**	02 10 30.5	-0.9
MEZF	**Maizieres J`vi**	**10.49**	**302**		*e*Pn	**Pn**	02 10 38.4	+0.3
SMF	**Signal de Mont**	**10.76**	**291**		*e*Pn	**Pn**	02 10 42.7	+0.9
SMF					*e*Sn	**Sn**	02 12 35.0	-7.2
	comp=Z,0.9nm,0.4s							
LOR	**Lormes**	**10.88**	**294**		*e*Pn	**Pn**	02 10 44.0	+0.6
	baz=114							
LOR					*e*Sn	**Sn**	02 12 38.4	-6.7
	comp=Z,1.0nm,0.4s							
SSF	**Saint Saulge**	**11.07**	**293**		*e*Pn	**Pn**	02 10 46.3	+0.3
AVF	**Avril sur Loir**	**11.12**	**291**		*e*Pn	**Pn**	02 10 46.7	0.0
AVF					*e*Sn	**Sn**	02 12 43.5	-7.4
	comp=Z,1.0nm,0.7s							
HYF	**Humbligny**	**11.69**	**293**		*e*Pn	**Pn**	02 10 56.1	+1.6

VAO **16** *02:24:09.9±0.3, 10°.84N×62°.36W, h10km, mb5.2*
BGR **16** *02:24:12.3±0.0, 10°.75N×62°.25W, h33km, mb5.3*
TRN **16** *02:24:15.5, 10°.80N×62°.46W, h25km, MD5.2*
TRN Felt in Trinidad, MMI III, IV; Saint Lucia MMI III.
BJI **16** *02:24:15.5±0.0, 10°.80N×62°.50W, h80km, mB5.3/7, Ms5.2/6, Ms7 5.1/6*
MOS **16** *02:24:15.7±1.0, 10°.92N×62°.53W, h82km, mb5.2/56, Error ellipse: s-maj=6.2km s-min=4.2km az=57.8*
NEIC **16** *02:24:16.1±1.2, 10°.83N±0°.06×62°.41W±0°.07, h77km±4km, mb5.1/549, Error ellipse: s-maj=9.6km s-min=8.9km az=110.0*
FUNV **16** *02:24:17.3, 10°.74N×62°.32W, h27km, MW5.1*
GCMT **16** *02:24:18.9±0.1, 10°.77N±0°.01×62°.24W±0°.01, h78km±1km, MW5.1/125, Moment Tensor Solution. s77,c104; s125,c196; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.22±.12; Mθθ-0.85±.13; Mϕϕ-2.37±.14; Mrθ2.67±.07; Mθϕ-1.82±.11; Mϕr2.89±.08; Best double couple: M₀5.20300×10¹⁶ NP1:ϕs205.00000°, δ21.00000°, λ75.00000°. NP2:ϕs41.00000°, δ70.00000°, λ96.00000°. Principal axes: T 5.0510, Plg65.0000°, Azm320.0000°; N 0.3080, Plg5.0000°, Azm219.0000°; P -5.3550, Plg25.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC **16** *02:24:19.9±1.0, 10°.91N×62°.54W, h108km±9km, mb4.7/33, mb1 4.9/36, mb1mx4.8/42, mbtmp5.1/36, MS3.9/28, Ms1 3.9/28, ms1mx3.8/38 Error ellipse: s-maj=8.6km s-min=8.1km az=77.0*
ISC 16 02:24:16.3±0.4, **10.79N**±0°.03×**62.48W**±0°.03, **h82**km±3km, **h83**km:**pP-P, n1219,** σ**1934**/1159, **mb5.1**/456, **431C-153D, Fault plane solution: NP1:**ϕs39.34996°, δ58.37523°, λ103.94279°. **NP2:**ϕs194.01366°, δ34.26805°, λ68.63038°.
Principal axes: T Plg72.7725°, Azm344.4693°; N Plg11.8395°, Azm211.9329°; P Plg12.3327°, Azm119.3060°; **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.75**	**261**	*e*P			**Pn**	**02 24 34.1**	**+1.4**
CRUV				*e*S			**Sn**	**02 24 46.1**	**+1.2**
TRN	**Trinidad (W)**	**1.07**	**98**	*i* P			**Pn**	**02 24 35.2**	**-1.2**
TRN	**Trinidad (W)**	**1.07**	**98**	*e*P			**Pn**	**02 24 34.9**	**-1.5**
TRN				*e*S			**Sn**	**02 24 47.1**	**-4.3**
TPP	**Pointe-a-Pierr**	**1.12**	**115**	*i* P			**Pn**	**02 24 36.0**	**-0.9**
TBH	**Brigand Hill**	**1.43**	**102**	*i* P			**Pn**	**02 24 40.0**	**-0.8**
GRGR	**Grenville**	**1.56**	**31**	*e*P			**Pn**	**02 24 42.2**	**-0.4**
GRGR				*e*S			**Sn**	**02 25 01.4**	**-1.0**
GRGR	**Grenville**	**1.56**	**31**				**Pn**	**02 24 41.8**	**-0.8**
GRGR						Sn	**Sn**	**02 25 01.1**	**-1.3**
GRGR	**Grenville**	**1.56**	**31**	*e*P			**Pn**	**02 24 41.6**	**-1.0**
GRGR				*e*S			**Sn**	**02 25 01.1**	**-1.3**
TPR	**Prospect**	**1.72**	**77**	*e*P			**Pn**	**02 24 43.0**	**-1.6**
GCMP	**Grenada, Carri**	**1.98**	**32**	*e*P			**Pn**	**02 24 47.3**	**-0.7**
GCMP				*e*S			**Sn**	**02 25 09.9**	**-2.2**
TOSP	**Speyside**	**1.98**	**75**	*i* P			**Pn**	**02 24 46.7**	**-1.3**
TOSP				*e*S			**Sn**	**02 25 10.6**	**-1.6**
TOSP	**Speyside**	**1.98**	**75**				**Pn**	**02 24 46.7**	**-1.3**
TOSP	**Speyside**	**1.98**	**75**	*i*ₚP			**Pn**	**02 24 46.4**	**-1.6**
TOSP				*e*S			**Sn**	**02 25 07.9**	**-4.3**
PCRV	**Puerto La Cruz**	**2.20**	**254**	P			**Pn**	**02 24 54.6**	**+3.5**
	270nm,0.3s,baz=72,slow=3.8,SNR=1817								
PCRV				S			**Sn**	**02 25 22.1**	**+4.5**
	451nm,0.3s,baz=226,slow=18,SNR=5.8								
PCRV	**Puerto La Cruz**	**2.20**	**254**	*e*P			**Pn**	**02 24 53.7**	**+2.7**
PCRV				*e*S			**Sn**	**02 25 19.6**	**+2.0**
SVOC	**Richmond Hill,**	**2.65**	**28**	*e*P			**Pn**	**02 24 57.1**	**+0.1**
SVOC				*e*S			**Sn**	**02 25 27.3**	**-1.0**
SVB	**Belmont**	**2.74**	**26**	*e*P			**Pn**	**02 24 57.5**	**-0.8**
SVB				*e*S			**Sn**	**02 25 29.4**	**-1.1**
SVB	**Belmont**	**2.74**	**26**				**Pn**	**02 24 57.5**	**-0.8**
RIOV	**Rio Grande**	**2.79**	**166**	*e*P			**Pn**	**02 24 58.7**	**-0.2**
SVV	**Soufriere Volc**	**2.80**	**26**	*e*P			**Pn**	**02 24 59.8**	**+0.7**
SVV				*e*S			**Sn**	**02 25 29.9**	**-2.1**
BHS	**Barnard House**	**2.82**	**28**	*e*P			**Pn**	**02 24 59.8**	**+0.5**
BHS				*e*S			**Sn**	**02 25 31.6**	**-0.8**
MCLT	**Moule a Chique**	**3.27**	**27**	*e*P			**Pn**	**02 25 05.2**	**-0.2**
MCLT				*e*S			**Sn**	**02 25 42.4**	**-0.8**
MCLT	**Moule a Chique**	**3.27**	**27**				**Pn**	**02 25 05.2**	**-0.2**
SLDE	**Delcer**	**3.30**	**25**	*e*P			**Pn**	**02 25 06.4**	**+0.5**
SLDE				*e*S			**Sn**	**02 25 42.8**	**-1.3**
SLB	**Belfond**	**3.33**	**25**	*e*P			**Pn**	**02 25 07.2**	**+0.9**
SLB				*e*S			**Sn**	**02 25 43.6**	**-1.3**
SLPA	**Patience**	**3.41**	**27**	*e*P			**Pn**	**02 25 08.1**	**+0.9**
SLPA				*e*S			**Sn**	**02 25 46.4**	**-0.2**
SLCP	**Castries, St.**	**3.52**	**24**	*e*P			**Pn**	**02 25 10.1**	**+1.3**
SLCP				*e*S			**Sn**	**02 25 47.6**	**-1.6**
SLBI	**Saint Lucia, B**	**3.53**	**25**	*e*P			**Pn**	**02 25 08.6**	**-0.4**
SLBI				*e*S			**Sn**	**02 25 48.6**	**-1.1**
SLW	**Petit Monier**	**3.55**	**25**	*e*P			**Pn**	**02 25 10.2**	**+1.0**
SLW				*e*S			**Sn**	**02 25 48.8**	**-1.2**
BCHC	**Barbados, Cave**	**3.63**	**50**	*e*P			**Pn**	**02 25 10.8**	**+0.5**
BCHC				*e*S			**Sn**	**02 25 52.0**	**-0.2**
BBGH	**Gun Hill**	**3.69**	**50**	*e*P			**Pn**	**02 25 12.0**	**+0.8**
BBGH				*e*S			**Sn**	**02 25 52.8**	**-0.9**
BBGH	**Gun Hill**	**3.69**	**50**				**Pn**	**02 25 09.8**	**-1.4**
BBGH	**Gun Hill**	**3.69**	**50**	*e*P			**Pn**	**02 25 11.1**	**-0.1**
BBGH				*e*S			**Sn**	**02 25 48.8**	**-4.8**
BIRV	**Birongo**	**3.73**	**266**	*e*P			**Pn**	**02 25 14.7**	**+2.9**
BIRV				*e*S			**Sn**	**02 25 56.5**	**+1.9**
BBSP	**Saint Philip**	**3.75**	**52**	*e*P			**Pn**	**02 25 12.9**	**+1.0**
BBSP				*e*S			**Sn**	**02 25 52.8**	**-2.1**
BIM	**Bigot**	**3.95**	**20**	*e*P			**Pn**	**02 25 14.4**	**-0.3**
BIM				*e*S			**Sn**	**02 25 59.3**	**-0.6**
MPOM	**Morne Pois Mar**	**3.96**	**23**	*e*P			**Pn**	**02 25 14.9**	**+0.1**
MPOM				*e*S			**Sn**	**02 25 58.5**	**-1.6**
MERV	**Las Mercedes**	**4.06**	**248**	*e*P			**Pn**	**02 25 18.0**	**+1.9**
MERV				*e*S			**Sn**	**02 25 59.0**	**+0.5**
FDF	**Fort de France**	**4.13**	**18**	*e*P			**Pn**	**02 25 16.7**	**-0.4**
FDF	**Fort de France**	**4.13**	**18**	*e*S			**Sn**	**02 26 02.8**	**-1.4**
FDF	**Fort de France**	**4.13**	**18**	P			**Pn**	**02 25 16.8**	**-0.3**
FDF	**Fort de France**	**4.13**	**18**	Pn			**Pn**	**02 25 16.8**	**-0.3**
FDF	**Fort de France**	**4.13**	**18**	*e*P			**Pn**	**02 25 16.5**	**-0.6**
ILAM	**Ilet Lapin Mar**	**4.26**	**21**	*e*P			**Pn**	**02 25 19.1**	**+0.3**
ILAM	**Ilet Lapin Mar**	**4.26**	**21**	*e*S			**Sn**	**02 26 05.5**	**-1.8**
FUNV	**FUNVISIS**	**4.26**	**266**	*e*P			**Pn**	**02 25 22.1**	**+3.0**
CARV	**Caracas**	**4.38**	**267**	*e*P			**Pn**	**02 25 23.3**	**+2.7**
TACV	**Tcata**	**4.51**	**262**	*e*P			**Pn**	**02 25 24.4**	**+2.1**
TACV				*e*S			**Sn**	**02 26 14.7**	**+1.0**
DLPL	**La Plaine**	**4.67**	**15**	*e*P			**Pn**	**02 25 24.9**	**+0.4**
DLPL	**La Plaine**	**4.67**	**15**	*e*S			**Sn**	**02 26 16.1**	**-1.4**
DLPL	**La Plaine**	**4.67**	**15**					**02 25 23.8**	**-0.7**
DSLB	**Salisbury**	**4.73**	**13**	*e*P			**Pn**	**02 25 25.1**	**-0.2**
DSLB	**Salisbury**	**4.73**	**13**	*e*S			**Sn**	**02 26 17.6**	**-1.4**
LUEV	**Luepa**	**5.02**	**168**	*e*P			**Pn**	**02 25 27.3**	**-2.1**
TDBA	**Terre de Bas,**	**5.09**	**9**	*e*P			**Pn**	**02 25 30.8**	**+0.6**
TDBA	**Terre de Bas,**	**5.09**	**9**	*e*S			**Sn**	**02 26 25.5**	**-2.3**
TBG	**Guadaloupe-3**	**5.09**	**9**	*e*P			**Pn**	**02 25 30.8**	**+0.6**
TBG	**Guadaloupe-3**	**5.09**	**9**	*e*S			**Sn**	**02 26 26.1**	**-1.7**
MAGL	**Barre de l'ile**	**5.26**	**13**	*e*P			**Pn**	**02 25 33.2**	**+0.7**
MAGL	**Barre de l'ile**	**5.26**	**13**	*e*S			**Sn**	**02 26 29.9**	**-1.9**
TURV	**Turiamo**	**5.28**	**267**	*e*P			**Pn**	**02 25 35.1**	**+2.3**
TURV				*e*S			**Sn**	**02 26 31.5**	**-0.7**
CBE	**Ff, Capester**	**5.32**	**9**	*e*P			**Pn**	**02 25 34.4**	**+1.1**
CBE	**Ff, Capester**	**5.32**	**9**	*e*S			**Sn**	**02 26 30.7**	**-2.5**
ABD	**La Joyeuse, An**	**5.73**	**10**	*e*P			**Pn**	**02 25 39.5**	**+0.6**
ABD	**La Joyeuse, An**	**5.73**	**10**	*e*S			**Sn**	**02 26 41.5**	**-1.8**
BAUV	**El Baul**	**5.78**	**252**	*e*P			**Pn**	**02 25 40.4**	**+0.8**
BAUV	**El Baul**	**5.78**	**252**	*e*P			**Pn**	**02 25 40.9**	**+1.3**
BAUV				*e*S			**Sn**	**02 26 43.1**	**-1.4**
MLYT	**Lee's Yard**	**5.90**	**3**	*e*P			**Pn**	**02 25 43.6**	**+2.3**
MLYT	**Lee's Yard**	**5.90**	**3**	*e*S			**Sn**	**02 26 47.5**	**0.0**
MAPV	**Macapo**	**5.96**	**261**	*e*P			**Pn**	**02 25 43.2**	**+1.1**
JACV	**Jacura**	**6.24**	**273**	*e*P			**Pn**	**02 25 48.4**	**+2.5**
JACV				*e*S			**Sn**	**02 26 54.8**	**-1.1**
ANBD	**Bethesda, Anti**	**6.26**	**6**	*e*P			**Pn**	**02 25 47.6**	**+1.5**
ANBD	**Bethesda, Anti**	**6.26**	**6**	*e*S			**Sn**	**02 26 54.8**	**-1.4**
SKOC	**St. Kitts, UWI**	**6.47**	**358**	*e*P			**Pn**	**02 25 50.7**	**+1.7**
SKOC	**St. Kitts, UWI**	**6.47**	**358**	*e*S			**Sn**	**02 26 59.8**	**-1.5**
SEUS	**St. Eustatius**	**6.68**	**356**	*e*P			**Pn**	**02 25 52.5**	**+0.6**
SEUS	**St. Eustatius**	**6.68**	**356**				**Pn**	**02 25 51.5**	**-0.4**
ANWB	**Willy Bob**	**6.87**	**6**	*e*P			**Pn**	**02 25 55.1**	**+0.7**
ANWB	**Willy Bob**	**6.87**	**6**	*e*S			**Sn**	**02 27 08.5**	**-2.7**
ANWB	**Willy Bob**	**6.87**	**6**	Pn			**Pn**	**02 25 53.8**	**-0.6**
SANV	**Sanarito**	**7.06**	**260**	*e*P			**Pn**	**02 25 58.6**	**+1.4**
SANV				*e*S			**Sn**	**02 27 13.9**	**-2.2**
SIQV	**Siquisique**	**7.20**	**270**	*e*P			**Pn**	**02 26 01.1**	**+2.1**
SIQV				*e*S			**Sn**	**02 27 17.4**	**-2.0**
CDVI	**St. Croix**	**7.26**	**343**	*e*P			**Pn**	**02 26 00.3**	**+0.5**
CDVI	**St. Croix**	**7.26**	**343**	Pn			**Pn**	**02 25 59.8**	**0.0**
CURV	**Curarigua**	**7.40**	**265**	*e*P			**Pn**	**02 26 03.7**	**+1.9**
PAYV	**Puerto Ayacuch**	**7.40**	**224**	*e*P			**Pn**	**02 26 01.5**	**-0.2**
MONV	**Montecano**	**7.43**	**280**	*e*P			**Pn**	**02 26 04.1**	**+2.0**
MONV				*e*S			**Sn**	**02 27 23.1**	**-1.9**
MTP	**Monte Pirata**	**7.85**	**338**				**Pn**	**02 26 08.0**	**+0.2**
ELOV	**Elorza**	**7.87**	**242**	*e*P			**Pn**	**02 26 08.5**	**+0.3**
STVI	**Saint Thomas**	**7.89**	**343**				**Pn**	**02 26 08.4**	**+0.1**
CUPR	**Culebra, Puert**	**7.95**	**340**				**Pn**	**02 26 09.2**	**0.0**
PDPR	**Patillas Dam,**	**7.96**	**335**				**Pn**	**02 26 09.4**	**+0.1**
HUMP	**Col San Antoni**	**8.00**	**336**				**Pn**	**02 26 10.1**	**+0.2**
ICMP	**Isla Caja de M**	**8.07**	**331**				**Pn**	**02 26 11.0**	**+0.2**
SJG	**San Juan**	**8.10**	**334**	P			**Pn**	**02 26 11.8**	**+0.6**
	52nm,0.3s,baz=134,slow=19,SNR=39								
SJG				S			**Sn**	**02 27 35.0**	**-6.1**
	100nm,0.3s,baz=330,slow=16,SNR=9.9								
SJG				LR			LR	02 29 41.5	
	comp=Z,1μm,18.4s,baz=178,slow=40								
SJG	**San Juan**	**8.10**	**334**	*e*P			**Pn**	**02 26 11.2**	**0.0**
SJG	**San Juan**	**8.10**	**334**				**Pn**	**02 26 10.8**	**-0.4**
SJG	**San Juan**	**8.10**	**334**	*e*P			**Pn**	**02 26 10.7**	**-0.5**
CBYP	**Canovanas**	**8.12**	**337**				**Pn**	**02 26 11.7**	**+0.1**
OBIP	**Obispado Ponce**	**8.24**	**331**				**Pn**	**02 26 13.4**	**+0.2**
GCPR	**Guaynabo City**	**8.24**	**335**				**Pn**	**02 26 13.4**	**+0.2**
MLPR	**Magueyes Islan**	**8.39**	**329**				**Pn**	**02 26 15.0**	**-0.2**
AOPR	**Arecibo Observ**	**8.57**	**332**	*e*P			**Pn**	**02 26 19.1**	**+1.4**
AOPR	**Arecibo Observ**	**8.57**	**332**				**Pn**	**02 26 17.8**	**+0.1**
EMPR	**Esperanza - Ma**	**8.58**	**333**				**Pn**	**02 26 17.9**	**+0.1**
EMPR							**Sn**	**02 27 52.5**	**-0.6**
SOCV	**Socops**	**8.62**	**254**	*e*P			**Pn**	**02 26 18.9**	**+0.4**
SOCV				*e*S			**Sn**	**02 27 51.1**	**-3.1**
MPR	**Mayaguez**	**8.64**	**329**				**Pn**	**02 26 19.0**	**+0.3**
AGPR	**Aguadilla, PR**	**8.85**	**330**				**Pn**	**02 26 21.6**	**+0.2**
URIC	**Uribia, Colomb**	**9.37**	**276**	*e*P			**Pn**	**02 26 29.5**	**+0.8**
MCQV	**Machiques**	**9.91**	**267**	*e*P			**Pn**	**02 26 37.3**	**+1.2**
CAPV	**Capacho**	**10.13**	**254**	*e*P			**Pn**	**02 26 39.3**	**+0.2**
CRJC	**Cerrejon, Guaj**	**10.21**	**272**	*e*P			**Pn**	**02 26 41.5**	**+1.2**
PAMC	**Pamplona, Colo**	**10.65**	**252**	*e*P			**Pn**	**02 26 46.2**	**-0.4**
OCAC	**Ocana**	**10.98**	**258**	*e*P			**Pn**	**02 26 49.4**	**-1.4**
MDP	**Montagnes des**	**11.27**	**119**	P			Pn	02 26 48.4	-6.1
	53nm,0.3s,baz=321,slow=15,SNR=150								
MDP				S			Sn	02 28 43.2	-15
	217nm,0.3s,baz=229,slow=22,SNR=30								
MDP				LR			LR	02 32 09.8	
	comp=Z,2μm,21.0s,baz=301,slow=41								
BARC	**Barichara**	**11.37**	**249**	*e*P			**Pn**	**02 26 57.4**	**+1.3**
SMRC	**Santa Marta, M**	**11.53**	**273**	*e*P			**Pn**	**02 26 55.3**	**-2.8**
RUSC	**La Rusia**	**11.56**	**246**	*e*P			**Pn**	**02 26 58.6**	**-0.3**
RUSC	**La Rusia**	**11.56**	**246**	*e*P			**Pn**	**02 26 57.7**	**-1.2**
SMLC	**San Martn de**	**11.59**	**261**	*e*P			**Pn**	**02 26 58.0**	**-0.9**
PTGC	**Puerto Gaitan,**	**11.59**	**236**	*e*P			**Pn**	**02 26 58.6**	**-0.3**
ARGC	**Ariguani, Magd**	**11.61**	**266**	*e*P			**Pn**	**02 26 59.8**	**+0.6**
BRRC	**Barranca, Sant**	**11.68**	**253**	*e*P			**Pn**	**02 27 00.2**	**+0.1**
PTGA	**Pitinga**	**11.72**	**168**	P			**Pn**	**02 26 57.9**	**-2.7**
	200nm,0.3s,baz=353,slow=17,SNR=947								
PTGA				S			Sn	02 28 57.2	-12
	142nm,0.3s,baz=92,slow=20,SNR=16								
PTGA				LR			LR	02 32 08.3	
	comp=Z,905nm,19.8s,baz=356,slow=40								
PTGA	**Pitinga**	**11.72**	**168**	*e*P			**Pn**	**02 26 57.7**	**-2.9**
SDDR	**Presa de Saban**	**11.77**	**315**	*e*P			**Pn**	**02 27 03.7**	**+2.4**
SDDR	**Presa de Saban**	**11.77**	**315**	Pn			**Pn**	**02 27 02.1**	**+0.7**
JAKH	**Jacmel**	**12.21**	**308**				**Pn**	**02 27 07.9**	**+0.7**
LGNH	**Logne**	**12.44**	**309**	Pn			**Pn**	**02 27 11.2**	**+0.9**
SJCC	**San Jacinto, C**	**12.52**	**267**	*e*P			**Pn**	**02 27 12.4**	**+0.9**
PTBC	**PUERTO BERRIO,**	**12.57**	**251**	*e*P			**Pn**	**02 27 10.4**	**-1.7**
ZARC	**Zaragoza, Cauc**	**12.65**	**256**	*e*P			**Pn**	**02 27 12.3**	**-1.0**
VILC	**Villavicencio,**	**12.94**	**240**	*e*P			**Pn**	**02 27 19.2**	**+2.0**
GUVC	**San Jose del G**	**12.98**	**232**	*e*P			**Pn**	**02 27 15.4**	**-2.3**
ROSC	**El Rosal**	**13.13**	**244**	P			**Pn**	**02 27 22.6**	**+2.6**
	14nm,0.3s,baz=194,slow=5.1,SNR=14								
ROSC				LR			LR	02 33 56.1	
	comp=Z,1μm,18.5s,baz=54,slow=44								
ROSC	**El Rosal**	**13.13**	**244**	Pn			**Pn**	**02 27 21.3**	**+1.3**
ROSC	**El Rosal**	**13.13**	**244**	*e*P			**Pn**	**02 27 21.4**	**+1.4**
MOTC	**Monteria, Cord**	**13.14**	**262**	*e*P			**Pn**	**02 27 18.2**	**-1.6**
URCC	**San Jos de Ur**	**13.23**	**258**	*e*P			**Pn**	**02 27 21.1**	**+0.2**
NORC	**Norcasia**	**13.31**	**248**	*e*P			**Pn**	**02 27 20.5**	**-1.6**
GRTK	**Grand Turk**	**13.51**	**323**				**Pn**	**02 27 24.8**	**+0.3**
HELC	**Santa Helena**	**13.69**	**252**	*e*P			**Pn**	**02 27 28.4**	**+1.1**
GUY2C	**Guyana, Caldas**	**13.90**	**248**	*e*P			**Pn**	**02 27 30.6**	**+0.4**
MACA	**Manacapuru-AM**	**13.98**	**173**	*e*P			**Pn**	**02 27 27.5**	**-3.3**
DBBC	**Dabeiba**	**14.07**	**256**	*e*P			**Pn**	**02 27 34.0**	**+2.0**
MACC	**Macarena, Meta**	**14.18**	**233**	*e*P			**Pn**	**02 27 32.3**	**-1.1**
CBOC	**Ciudad Bolivar**	**14.25**	**251**	*e*P			**Pn**	**02 27 36.4**	**+1.9**
ORTC	**Ortega, Tolima**	**14.38**	**243**	*e*P			**Pn**	**02 27 36.3**	**+0.2**
BETC	**Betania**	**15.17**	**239**	*e*P			**Pn**	**02 27 50.4**	**+0.9**
GTBY	**Guantanamo Bay**	**15.18**	**308**	P			**Pn**	**02 27 46.9**	**+0.6**
GTBY				IAmb			IAmb	02 27 56.0	
	comp=Z,213nm,1.0s								
YOTC	**Yotoco, Valle**	**15.31**	**245**	*e*P			**P**	**02 27 50.1**	**-1.0**
GARC	**Garzon, Huila**	**15.49**	**237**	*e*P			**Pn**	**02 27 51.5**	**+1.1**
MARP	**Paez Belalcaza**	**15.53**	**240**	*e*P			**Pn**	**02 27 52.1**	**+1.1**
GWJ	**Greenwich**	**15.57**	**299**	*i* P			**P**	**02 27 59.8**	**+5.9**
STH	**St

S60A **Water View** **29.67 337** P 02 30 15.3
baz=151,SNR=5.4
KMSC **Kings Mountain** **29.70 328** P 02 30 15.7
baz=140
KMSC **Kings Mountain** **29.70 328** P **P** **02 30 13.5 -1.0**
PAULI **Pauline** **29.71 327** P **P** **02 30 13.9 -0.8**
PAULI **PcP** **02 33 15.9 -1.1**
NBMA **Muriti-CE** **29.71 126** *e*P **P** **02 30 16.2 +1.2**
PB16 **IPOC Station P** **29.76 194** P **P** **02 30 14.4 -1.5**
PB16 IAmb IAmb 02 30 17.9
comp=Z,17nm,0.5s
152A **Waverly Hall** **29.88 320** P **P** **02 30 15.5 -0.8**
152A IAmb IAmb 02 30 19.1
comp=Z,36nm,0.7s
BDFB **Brasilia** **29.92 151** P **P** **02 30 18.9 +2.0**
comp=Z,31nm,0.6s,baz=317,slow=10,SNR=65
BDFB LR LR 02 43 01.7
comp=Z,632nm,21.6s,baz=305,slow=37
BDFB **Brasilia** **29.92 151** P **P** **02 30 15.5 -1.3**
BDFB IAmb IAmb 02 30 20.0
comp=Z,44nm,0.7s
S59A **Mechanicsville** **29.97 336** P 02 30 18.1
baz=150
NBPA **Parau_RN** **30.13 122** *e*P **P** **02 30 19.7 +1.0**
R60A **Leonardtown, M** **30.13 338** P 02 30 19.7
baz=151
S58A **Poland Farm, P** **30.15 335** P 02 30 19.3
baz=148
T57A **Hurt** **30.16 333** P **P** **02 30 17.9 -0.7**
T57A IAmb IAmb 02 30 22.7
comp=Z,40nm,1.0s
V55A **Taylorsville** **30.18 329** P **P** **02 30 18.2 -0.7**
Q61A **Milford** **30.23 340** P 02 30 20.5
baz=154
R59A **King George, V** **30.28 337** P 02 30 20.8
baz=150
Y52A **Lilburn** **30.29 323** P **P** **02 30 19.2 -0.7**
R58B **Mineral** **30.38 335** P 02 30 21.6
baz=149
CBN **Corbin Frederi** **30.38 336** P 02 30 21.6
baz=150
250A **Grady** **30.44 317** P **P** **02 30 20.5 -0.7**
250A **PcP** **02 33 17.6 -1.4**
BG3 **Lake Jocassee** **30.45 326** P **P** **02 30 20.9 -0.4**
BG3 **PcP** **02 33 18.0 -0.9**
BRAL **Brewton** **30.48 315** P **P** **02 30 20.4 -1.1**
BRAL **Brewton** **30.48 315** P 02 30 23.7
baz=126,SNR=8.5
MNMC **Minye Minye** **30.55 193** P **P** **02 30 21.8 -0.8**
MNMC IAmb IAmb 02 30 23.7
comp=Z,22nm,0.5s
Z51A **Franklin** **30.60 321** P **P** **02 30 21.7 -0.9**
S57A **Dark Hollow, R** **30.66 334** P **P** **02 30 22.3 -0.7**
S57A **Dark Hollow, R** **30.66 334** P 02 30 24.1
baz=147
Q59A **Harwood** **30.69 338** P 02 30 24.3
baz=152
S56A **Natural Bridge** **30.86 333** P 02 30 26.1
baz=146
BLA **Blacksburg** **30.87 331** P **P** **02 30 24.1 -0.9**
BLA pmax pmax
comp=Z,34nm,1.0s
BLA **Blacksburg** **30.87 331** P **P** **02 30 24.1 -0.9**
BLA IAmb IAmb 02 30 29.5
comp=Z,34nm,1.0s
BLA **Blacksburg** **30.87 331** P 02 30 26.6
baz=144,SNR=7.1
V53A **Saluda** **30.89 327** P **P** **02 30 24.4 -0.7**
R57A **Stanardsville** **30.93 335** P 02 30 26.8
baz=148,SNR=5.3
W52A **Murphy** **31.08 325** P **P** **02 30 26.2 -0.7**
W52A **PcP** **02 33 19.5 -1.1**
PSGCX **Pisagua** **31.12 194** P **P** **02 30 26.7 -0.7**
PSGCX IAmb IAmb 02 30 28.1
comp=Z,18nm,0.6s
Q58A **Fox Den Farm,** **31.14 337** P 02 30 28.2
baz=150
NBLI **Livramento-PB** **31.17 124** *e*P **P** **02 30 28.2 +0.4**
PB11 **IPOC Station P** **31.17 193** P **P** **02 30 27.1 -0.7**
PB11 IAmb IAmb 02 30 28.6
comp=Z,34nm,1.0s
RCBR **Riachuelo** **31.19 121** P **P** **02 30 29.5 +1.4**
comp=Z,54nm,0.9s,baz=296,slow=9.7
RCBR **Riachuelo** **31.19 121** P **P** **02 30 26.0 -2.0**
RCBR **Riachuelo** **31.19 121** *e*P **P** **02 30 29.5 +1.4**
P59A **Jarrettsville** **31.27 339** P 02 30 29.4
baz=153
NBTA **Tacaratu-PE** **31.33 128** *e*P **P** **02 30 29.8 +0.6**
JANB **Januaria** **31.37 145** *e*P **P** **02 30 30.6 +1.1**
R56A **Bull Pasture M** **31.39 334** P 02 30 30.7
baz=147
PB08 **IPOC Station P** **31.43 192** P **P** **02 30 28.6 -1.8**
PB08 IAmb IAmb 02 30 39.2
comp=Z,17nm,0.6s
V52A **Sevierville** **31.44 326** P **P** **02 30 29.7 -0.2**
Q57A **Strasburg** **31.51 336** P 02 30 31.8
baz=149
LRAL **Lakeview Retre** **31.58 318** P **P** **02 30 30.5 -0.7**
LRAL IAmb IAmb 02 30 33.6
comp=Z,30nm,0.6s
LRAL **Lakeview Retre** **31.58 318** P 02 30 33.0
baz=129,SNR=22
MVL **Millersville** **31.58 339** P **P** **02 30 30.3 -0.8**
MVL **PcP** **02 33 20.9 -0.9**
R55A **Marlinton** **31.60 333** P 02 30 32.6
baz=145
M63A **Gales Ferry** **31.63 346** P 02 30 32.1
baz=162
CPCT **Cooper Cave** **31.68 324** P **P** **02 30 31.2 -0.8**
CPCT **PcP** **02 33 20.8 -1.5**
FPAL **Fort Paine** **31.69 322** P **P** **02 30 31.4 -0.9**
FPAL IAmb IAmb 02 30 34.5
comp=Z,24nm,1.0s
Y49A **Blount Mountai** **31.73 320** IAmb IAmb 02 30 35.2
comp=Z,27nm,0.7s
P57A **Homestead Farm** **31.74 337** P 02 30 34.0
baz=150
S54A **Dingess, Beckl** **31.76 331** P 02 30 34.5
baz=143,SNR=8.0
S54A **Dingess, Beckl** **31.77 331** P **P** **02 30 31.5 -1.3**
S54A IAmb IAmb 02 30 35.4
comp=Z,34nm,0.7s
AQDB **Aquidauana** **31.78 168** *e*P **P** **02 30 35.2 +2.1**
O59A **Robesonia** **31.81 340** P 02 30 34.4
baz=154
Q56A **Snyder Ridge,** **31.83 335** P 02 30 34.7
baz=148
Q56A **Snyder Ridge,** **31.83 335** P **P** **02 30 32.0 -1.4**
V51A **Loudon** **31.83 325** P **P** **02 30 32.7 -0.7**
V51A **PcP** **02 33 21.7 -0.9**
IPMB **Ipameri, GO** **31.88 154** *e*P **P** **02 30 35.9 +1.9**
O58A **Lewisberry** **31.89 339** P 02 30 35.1
baz=152
R54A **Victor** **31.92 332** P 02 30 35.7
baz=144
TRNY **Table Rock, Ra** **31.95 343** P **P** **02 30 33.5 -0.9**
N60A **Cedar Hill Far** **31.96 342** P 02 30 35.5
baz=156
W50A **Signal Mountai** **31.96 323** P **P** **02 30 33.9 -0.7**
W50A IAmb IAmb 02 30 37.1
comp=Z,26nm,1.1s
W50A **PcP** **02 33 21.8 -1.2**
M61A **Granite Spring** **31.98 344** P 02 30 35.2
baz=159
ODNJ **Ogdensburg** **32.01 343** P **P** **02 30 34.1 -0.8**
NBPV **Pedro Velho** **32.02 121** *e*P **P** **02 30 36.8 +1.6**
CMIG **Matias Romero** **32.03 285** P **P** **02 30 32.8 -2.6**
comp=Z,9.0nm,0.7s,baz=85,slow=8.0,SNR=17
CMIG PcP **PcP** **02 33 22.8 -0.7**
comp=Z,3.8nm,0.6s,baz=64,slow=3.9,SNR=4.9
P56A **Dayton Farm, R** **32.08 336** P 02 30 37.0
baz=148
N59A **State Game Lan** **32.22 341** P 02 30 37.8
baz=155
O57A **Amberson** **32.23 338** P 02 30 38.3
baz=151,SNR=7.1
M60A **Port Jervis** **32.24 343** P 02 30 37.9
baz=157
KSCT **Kent School, K** **32.29 344** P **P** **02 30 36.3 -1.1**
SWET **Sewanee** **32.34 322** P **P** **02 30 37.0 -1.0**
SWET IAmb IAmb 02 30 40.2
comp=Z,28nm,1.2s
SWET **PcP** **02 33 22.8 -1.3**
PB01 **IPOC Station P** **32.38 192** P **P** **02 30 37.5 -0.9**
PB01 IAmb IAmb 02 30 39.7
comp=Z,24nm,0.6s
Z47A **Carrollton** **32.39 317** P **P** **02 30 37.5 -0.8**
N58A **Sunbury** **32.46 340** P **P** **02 30 37.7 -1.1**
N58A **Sunbury** **32.46 340** P 02 30 39.7
baz=153
R53A **Hurricane** **32.49 331** P **P** **02 30 38.2 -0.9**
R53A IAmb IAmb 02 30 41.4
comp=Z,31nm,0.8s
Q54A **Coxs Mills** **32.50 333** P **P** **02 30 38.3 -0.9**
Q54A IAmb IAmb 02 30 41.8
comp=Z,23nm,0.8s
X48A **Hartselle** **32.52 320** P **P** **02 30 38.7 -0.7**
X48A IAmb IAmb 02 30 42.2
comp=Z,45nm,1.1s
X48A PcP **PcP** **02 33 23.5 -1.1**
ITRB **Iturama** **32.57 158** *e*P **P** **02 30 42.5 +2.5**
HRV **Adam Dziewonsk** **32.57 347** P 02 30 40.7
baz=163
MCWV **Mont Chateau** **32.63 335** P 02 30 41.9
baz=147
O56A **Blue Knob Stat** **32.63 337** P **P** **02 30 39.5 -0.9**
O56A IAmb IAmb 02 30 43.3
comp=Z,28nm,1.1s
O56A **PcP** **02 33 23.6 -1.2**
O56A **Blue Knob Stat** **32.63 337** P 02 30 42.1
baz=150,SNR=6.8
M59A **Waymart** **32.68 342** P 02 30 41.8
baz=156,SNR=5.1
N57A **Milroy** **32.68 339** P 02 30 41.6
baz=152
SSPA **Standing Stone** **32.69 338** P 02 30 42.1
baz=151
SSPA **Standing Stone** **32.70 338** P **P** **02 30 39.9 -0.9**
SSPA IAmb IAmb 02 30 43.5
comp=Z,25nm,1.1s
Q53A **Leroy** **32.71 332** P 02 30 42.5
baz=144
146A **Union** **32.72 316** P **P** **02 30 40.5 -0.8**
146A IAmb IAmb 02 30 43.5
comp=Z,33nm,0.8s
NBLA **Lagarto - SE** **32.73 131** *e*P **P** **02 30 41.7 +0.3**
L60A **Shokan** **32.74 344** P 02 30 42.1
baz=158
K63A **Dunstable** **32.74 348** P 02 30 42.1
baz=163
L61A **Hillsdale 1, H** **32.75 345** P 02 30 42.3
baz=160
L61B **Northampton** **32.77 346** P 02 30 43.0
baz=161
S51A **Beattyville** **32.78 328** P **P** **02 30 40.9 -0.8**
S51A IAmb IAmb 02 30 43.8
comp=Z,22nm,0.8s
S51A **PcP** **02 33 24.1 -1.1**
M58A **Price's Panora** **32.85 340** P 02 30 43.4
baz=154
T50A **Nancy** **32.98 326** P **P** **02 30 42.6 -0.9**
T50A IAmb IAmb 02 30 47.6
comp=Z,40nm,1.1s
T50A PcP **PcP** **02 33 25.0 -0.8**
M57A **Sunshine Farm,** **33.04 340** P **P** **02 30 42.8 -1.1**
M57A IAmb IAmb 02 30 46.0
comp=Z,20nm,1.0s
M57A **PcP** **02 33 24.6 -1.2**
M57A **Sunshine Farm,** **33.04 340** P 02 30 45.2
baz=153,SNR=6.3
NBAN **Anadia - AL** **33.06 127** *e*P **P** **02 30 45.2 +0.8**
PB09 **IPOC Station P** **33.06 192** P **P** **02 30 43.6 -0.8**
N56A **West Decatur** **33.09 338** P 02 30 45.6
baz=151
K61A **Williamstown** **33.12 345** P 02 30 45.4
baz=160
PB07 **IPOC Station P** **33.12 193** P **P** **02 30 44.0 -1.0**
U49A **Red Boiling Sp** **33.15 324** P **P** **02 30 44.6 -0.3**
U49A PcP **PcP** **02 33 25.5 -0.7**
L59A **Walton** **33.16 343** P 02 30 45.7
baz=157
CLTN **Cedars of Leba** **33.18 323** P **P** **02 30 44.7 -0.4**
CLTN **PcP** **02 33 25.6 -0.7**
J63A **Strafford** **33.22 349** P 02 30 46.0
baz=164
V48A **Smith Brothers** **33.23 322** P **P** **02 30 45.3 -0.3**
V48A IAmb IAmb 02 30 48.0
comp=Z,34nm,1.1s
344A **Westbrook Farm** **33.25 312** P **P** **02 30 46.0 +0.2**
L58A **Harry Jones Me** **33.26 342** P 02 30 46.8
baz=155
O54A **Avella** **33.29 335** P **P** **02 30 45.2 -0.9**
O54A IAmb IAmb 02 30 49.0
comp=Z,36nm,1.1s
GDU01 **Guandu, BA** **33.31 136** *e*P **P** **02 30 47.0 +0.5**
J62A **Henniker** **33.32 348** P 02 30 47.2
baz=163
BINY **Binghamton** **33.45 342** P **P** **02 30 46.8 -0.6**
BINY **Binghamton** **33.45 342** P 02 30 48.6
baz=155
PLAL **Pickwick Lake** **33.51 320** P **P** **02 30 47.6 -0.5**
PLAL IAmb IAmb 02 30 50.6
comp=Z,42nm,0.9s
PLAL **PcP** **02 33 25.9 -1.4**
VBMS **Vicksburg** **33.51 314** P **P** **02 30 47.6 -0.4**
VBMS **Vicksburg** **33.51 314** P 02 30 49.8
baz=123,SNR=16
L57A **Andrews Acres** **33.54 340** P 02 30 49.3
baz=154
M56A **Emporium** **33.54 338** P **P** **02 30 47.6 -0.7**
M56A **Emporium** **33.54 338** P 02 30 49.4
baz=151,SNR=5.6
I64A **Boothbay** **33.58 351** P 02 30 49.3
baz=167
P52A **Corning** **33.62 332** P 02 30 50.1
baz=143,SNR=5.4
P52A **Corning** **33.62 332** P **P** **02 30 47.5 -1.4**
P52A IAmb IAmb 02 30 50.8
comp=Z,24nm,0.8s
K59A **Cooperstown** **33.64 343** P 02 30 49.9
baz=158
R50A **Paris** **33.64 328** P **P** **02 30 48.5 -0.7**
R50A IAmb IAmb 02 30 51.9
comp=Z,28nm,0.9s
J60A **Lant Hill Farm** **33.70 346** P 02 30 50.7
baz=160
O53A **New Philadelph** **33.70 334** PcP **02 33 25.8 -1.9**
O53A **New Philadelph** **33.70 334** P 02 30 50.6
baz=145
Q51A **Peebles** **33.71 330** P **P** **02 30 49.3 -0.5**
Q51A IAmb IAmb 02 30 54.0
comp=Z,20nm,0.8s
M55A **Ridgway** **33.74 338** P **P** **02 30 48.7 -1.4**
M55A IAmb IAmb 02 30 52.6
comp=Z,28nm,0.9s
M55A PcP **02 33 26.9 -1.0**
Y45A **Yeager Farm, C** **33.77 317** P **P** **02 30 50.0 -0.3**
Y45A PcP **02 33 27.3 -0.7**
N54A **Moraine State** **33.78 336** P 02 30 51.6
baz=148
LVC **Limon Verde** **33.79 191** P **P** **02 30 51.9 +1.0**
comp=Z,12nm,0.6s,baz=27,slow=6.2,SNR=31
LVC PcP **PcP** **02 33 29.2 +0.6**
comp=Z,6.1nm,0.8s,baz=0.2,slow=4.7,SNR=3.9
LVC LR LR 02 45 53.4
comp=Z,457nm,20.8s,baz=346,slow=38
LVC **Limon Verde** **33.79 191** P **P** **02 30 51.0 +0.1**
LVC IAmb IAmb 02 30 53.0
comp=Z,12nm,0.6s
LVC **PcP** **02 33 27.0 -1.6**
LVC **Limon Verde** **33.79 191** *e*P **P** **02 30 52.3 +1.3**
K58A **Earlville** **33.86 342** P 02 30 51.9
baz=156
O52A **Adamsville** **33.87 333** P **P** **02 30 50.1 -1.0**
O52A IAmb IAmb 02 30 53.0
comp=Z,19nm,0.9s
L56A **Greenwood** **33.90 340** P **P** **02 30 50.4 -1.0**
L56A IAmb IAmb 02 30 54.8
comp=Z,18nm,0.8s
L56A PcP **PcP** **02 33 27.0 -1.3**
L56A **Greenwood** **33.90 340** P 02 30 52.4
baz=153,SNR=7.6
P51A **Williamsport** **33.93 331** P **P** **02 30 51.4 -0.3**
P51A IAmb IAmb 02 30 53.6
comp=Z,31nm,0.7s
N53A **Lisbon** **34.00 335** P **P** **02 30 51.8 -0.5**
N53A IAmb IAmb 02 30 54.3
comp=Z,23nm,1.0s
N53A **PcP** **02 33 28.1 -0.5**
PB06 **IPOC Station P** **34.01 192** P **P** **02 30 51.4 -1.3**
PB06 IAmb IAmb 02 30 54.0
comp=Z,13nm,0.7s
PCMB **Pacaembu** **34.03 161** *e*P **P** **02 30 54.9 +2.2**
OXF **Oxford** **34.07 318** P 02 30 53.9
baz=127,SNR=11
I61A **Oroboro, Fairl** **34.08 347** P 02 30 53.9
baz=163
K57A **Scipio Center** **34.09 341** P 02 30 53.7
baz=155
WVT **Waverly** **34.10 322** P **P** **02 30 54.2 +1.0**
WVT pmax pmax
comp=Z,30nm,0.8s
WVT **Waverly** **34.10 322** P **P** **02 30 52.7 -0.4**
WVT IAmb IAmb 02 30 55.2
comp=Z,30nm,0.8s
WVT PcP **PcP** **02 33 27.8 -1.1**
WVT **Waverly** **34.10 322** P 02 30 54.0
baz=131
M54A **Oil Creek Stat** **34.12 337** P 02 30 54.3
baz=149
H65A **Eastbrook** **34.15 353** P 02 30 54.5
baz=170
H64A **Troy** **34.22 351** P 02 30 55.2
baz=168
I60A **Shoreham** **34.24 346** P 02 30 55.0
baz=161
T47A **Sharon Grove** **34.24 324** IAmb IAmb 02 30 56.5
comp=Z,47nm,1.1s
NBIT **Itapeh - BA** **34.28 138** *e*P **P** **02 30 55.9 +1.0**
LBNH **Lisbon** **34.31 348** P 02 30 55.7
baz=163
K56A **Middlesex** **34.32 340** P 02 30 55.7
baz=153
M53A **WI Miller and** **34.47 335** IAmb IAmb 02 30 58.0
comp=Z,14nm,0.7s
M53A **WI Miller and** **34.47 335** P 02 30 57.3
baz=147
H62A **Milan** **34.48 349** P 02 30 57.3
baz=165
ACSO **Alum Creek Sta** **34.49 332** IAmb IAmb 02 30 58.5
comp=Z,22nm,0.8s
ACSO **Alum Creek Sta** **34.49 332** P 02 30 58.0
baz=142,SNR=6.1
BB19B **Bebedouro** **34.50 157** *e*P **P** **02 30 59.0 +2.2**
WVNY **West Valley, N** **34.50 339** IAmb IAmb 02 30 58.9
comp=Z,14nm,0.8s
I58A **Old Forge** **34.52 344** P 02 30 57.6
baz=158
MMNY **Mt. Morris Dam** **34.55 340** IAmb IAmb 02 30 59.0
comp=Z,20nm,1.0s
J57A **Williamstown** **34.55 343** P 02 30 57.8
baz=156
H61A **Lyndonville** **34.59 348** P 02 30 58.2
baz=163
WCI **Wyandotte Cave** **34.66 326** P **P** **02 30 57.9 -0.1**
WCI pmax pmax
comp=Z,13nm,0.8s
WCI **Wyandotte Cave** **34.66 326** P **P** **02 30 57.9 -0.1**
WCI IAmb IAmb 02 31 05.5
comp=Z,13nm,0.8s
WCI **Wyandotte Cave** **34.66 326** P 02 30 59.3
baz=136
J56A **Wolcott** **34.69 341** P 02 30 58.5
baz=155
L53A **Girard** **34.73 336** P 02 30 59.3
baz=148
G63A **Kingsbury** **34.75 351** P 02 30 59.5
baz=168
TRCB **Terra Rica** **34.75 164** *e*P **P** **02 31 00.8 +1.9**
G64A **Maxfield** **34.76 352** P 02 30 59.2
baz=169
N51A **Ashland** **34.76 333** IAmb IAmb 02 31 00.4
comp=Z,22nm,0.8s
H60A **Morristown** **34.78 347** P 02 30 59.7
baz=162
P49A **Miami Univ. Ec** **34.78 329** P 02 31 00.4
baz=139,SNR=39
PKME **Peaks-Kenny Pk** **34.84 352** P 02 31 00.1
baz=168
I57A **Carthage** **34.94 343** P 02 31 01.1
baz=157
H58A **Gabriels** **34.99 345** P 02 31 01.3
baz=160
J55A **Hilton** **34.99 340** IAmb IAmb 02 31 06.8
comp=Z,19nm,1.1s
G62A **West of Eustis** **34.99 350** P 02 31 01.9
baz=166
M51A **Elyria** **35.01 334** P 02 31 01.9
baz=145
X43A **Marvell** **35.05 317** P 02 31 02.4
baz=126
P48A **Milroy** **35.09 328** IAmb IAmb 02 31 03.0
comp=Z,17nm,0.7s
MEDO **Medina** **35.12 340** P **P** **02 31 01.3 -0.5**
MEDO IAmb IAmb 02 31 03.1
comp=Z,15nm,0.8s
MEDO **PcP** **02 33 31.0 -0.7**
G60A **Masonville** **35.22 348** P 02 31 03.5
baz=163,SNR=5.3
G61A **St-Isidore-de-** **35.23 349** P 02 31 03.8
baz=164
F63A **Nahmakanta, Br** **35.25 352** P 02 31 03.8
baz=169
J54A **Appleton** **35.28 339** IAmb IAmb 02 31 05.2
comp=Z,21nm,0.9s
LONY **Lake Ozonia** **35.28 345** P 02 31 03.4
baz=159
F64A **Sherman** **35.31 353** P 02 31 03.6
baz=170
H57A **Richville** **35.35 344** P 02 31 04.4
baz=158,SNR=5.4
M50A **Fremont** **35.45 333** IAmb IAmb 02 31 06.5
comp=Z,37nm,0.9s
BLO **Bloomington** **35.46 327** IAmb IAmb 02 31 07.0
comp=Z,30nm,0.8s
HBAR **Harrisburg** **35.52 318** **PcP** **02 33 32.1 -0.9**
Z41A **Richland Creek** **35.69 314** P 02 31 07.9
baz=122,SNR=7.0
E64A **Bridgewater** **35.80 354** P 02 31 08.5
baz=171
G57A **Newington** **35.84 345** P 02 31 08.2
baz=159
E63A **Oxbow** **35.87 353** P 02 31 08.8
baz=170
NAN01 **Guarapari, ES** **36.02 142** *e*P **P** **02 31 10.6 +0.8**
OLIL **Olney** **36.02 325** P **P** **02 31 09.3 -0.3**
OLIL **PcP** **02 33 33.8 -0.7**
DELO **Deloro Mine** **36.05 341** IAmb IAmb 02 31 12.7
comp=Z,15nm,0.8s
SJMB **Sao Joao De Ma** **36.06 144** *e*P **P** **02 31 11.3 +1.1**
PQI **Presque Isle** **36.06 354** P **P** **02 31 07.9 -1.9**
PQI PcP **PcP** **02 33 33.8 -0.6**
RCLB **Rio Claro- Sao** **36.12 156** *e*P **P** **02 31 12.7 +2.1**
LCAR **Lake Charles** **36.15 319** IAmb IAmb 02 31 14.0
comp=Z,19nm,0.9s
E61A **Lac Etchemin** **36.16 351** P 02 31 11.6
baz=166,SNR=10
FRTB **Fartura** **36.21 160** *e*P **P** **02 31 13.2 +1.8**
NATX **Nacogdoches** **36.31 310** P 02 31 13.6
baz=118,SNR=16
W41B **Gary Mavity, V** **36.35 317** P 02 31 13.2
baz=125,SNR=18
BSFB **Barra de Sao F** **36.36 144** *e*P **P** **02 31 14.0 +1.3**
X40A **Basin Creek Fa** **36.37 315** P 02 31 13.1
baz=123,SNR=15
X40A **Basin Creek Fa** **36.37 315** IAmb IAmb 02 31 15.0
comp=Z,20nm,0.8s
GO02 **Mina Guanaco** **36.40 191** IAmb IAmb 02 31 14.7
comp=Z,21nm,0.6s
H53A **Bobcaygeon** **36.41 340** P 02 31 13.2
baz=153,SNR=7.8
HKT **Hockley** **36.41 307** *c i*P **P** **02 31 13.8 +0.8**
HKT pmax pmax
comp=Z,36nm,0.9s
HKT **Hockley** **36.41 307** P **P** **02 31 13.3 +0.2**
D63A **Stockholm** **36.44 354** P 02 31 14.0
baz=171
AAM **Ann Arbor** **36.44 333** P 02 31 14.4
baz=143
WHAR **Wooly Hollow** **36.44 317** IAmb IAmb 02 31 16.1
comp=Z,33nm,1.0s
AAM **Ann Arbor** **36.44 333** IAmb IAmb 02 31 15.0
comp=Z,25nm,0.8s
BATG **Bathurst New B** **36.49 356** IAmb IAmb 02 31 15.8
comp=Z,19nm,1.1s
L48A **N Adams** **36.51 332** IAmb IAmb 02 31 15.8
comp=Z,29nm,0.7s

I51A Listowel 36.60 337 P 02 31 14.9
baz=148,SNR=5.2
E58A La Victoria 36.63 347 P 02 31 15.7
baz=162
SFIN Lafayette 36.64 328 P 02 31 16.1
baz=137
SFIN Lafayette 36.64 328 IAmb IAmb 02 31 19.2
comp=Z,19nm,0.9s
D60A Saint Jean D'O 36.70 350 P 02 31 16.7
baz=166
PTGB Pitanga 36.73 164 eP P 02 31 17.0 +1.2
VAO Valinhos 36.86 156 eP P 02 31 19.4 +2.4
D61A St Aubert, Com 36.87 351 P 02 31 18.0
baz=167
FVM French Village 36.88 322 IAmb IAmb 02 31 19.7
comp=Z,25nm,0.9s
MIAR Mount Ida 36.91 315 P 02 31 17.5
baz=122,SNR=11
MIAR Mount Ida 36.91 315 IAmb IAmb 02 31 18.2
comp=Z,17nm,1.0s
D59A Saint-Raymond 36.95 349 P 02 31 18.5
baz=164
G54A Lake Saint Pet 36.99 342 P 02 31 18.4
baz=154
RIB01 Linhares ES 37.00 144 eP P 02 31 19.2 +1.1
E56A St. Veronique 37.19 346 P 02 31 20.0
baz=159
O44A Mansfield 37.21 326 P P 02 31 19.3 -0.4
O44A PcP 02 33 37.5 -0.6
SPB Sao Paulo 37.21 157 P P 02 31 20.0 +0.1
CPUP Villa Florida 37.24 172 P P 02 31 21.1 +1.0
comp=Z,13nm,0.4s,baz=353,slow=7.8,SNR=57
CPUP PcP PcP 02 33 39.5 +1.2
comp=Z,16nm,0.8s,baz=343,slow=2.7,SNR=11
CPUP LR LR 02 47 35.3
comp=Z,211nm,20.2s,baz=2.5,slow=37
CPUP Villa Florida 37.24 172 IAmb IAmb 02 31 21.7
comp=Z,36nm,1.1s
D58A Chemin du LacG 37.24 348 P 02 31 20.4
baz=163
W39A Magazine 37.41 316 P 02 31 22.6
baz=123,SNR=29
CCM Cathedral Cave 37.42 321 P P 02 31 21.6 0.0
CCM pmax pmax
comp=Z,21nm,0.8s
CCM Cathedral Cave 37.42 321 P P 02 31 21.6 0.0
CCM IAmb IAmb 02 31 22.5
comp=Z,21nm,0.8s
CCM Cathedral Cave 37.42 321 P 02 31 21.8
baz=129
U40A Yellville 37.43 318 IAmb IAmb 02 31 22.7
comp=Z,28nm,0.8s
U40A Yellville 37.43 318 P 02 31 22.1
baz=125,SNR=26
P43A Skaggs, Pawnee 37.44 325 P P 02 31 22.5 +0.8
P43A PcP 02 33 38.1 -0.7
L46A Eue Claire 37.45 330 IAmb IAmb 02 31 23.1
comp=Z,26nm,0.7s
ALGO Algonquin Park 37.48 342 P 02 31 22.3
baz=154
LATQ La Tuque 37.49 348 P 02 31 22.9
baz=163
D56A ZEC Mazanza, M 37.60 346 P 02 31 23.2
baz=160,SNR=7.6
J47A Sunmer 37.71 333 IAmb IAmb 02 31 26.0
comp=Z,36nm,1.1s
D55A Sainte-Anne-du 37.75 345 P 02 31 24.5
baz=159
M44A Midewin, Midew 37.86 328 IAmb IAmb 02 31 26.5
comp=Z,35nm,0.8s
PET01 Itanhaem-SP 37.90 157 eP P 02 31 27.3 +1.6
HDIL Hopedale 37.94 326 P 02 31 26.6
baz=134
HDIL Hopedale 37.94 326 IAmb IAmb 02 31 28.6
comp=Z,23nm,0.7s
MAN01 Angra dos Reis 38.05 152 eP P 02 31 28.7 +1.6
435B Jarrell 38.14 307 P 02 31 28.8
baz=114,SNR=22
X37A Clayton 38.20 314 IAmb IAmb 02 31 29.0
comp=Z,20nm,0.9s
R40A Maddies Statio 38.20 321 IAmb IAmb 02 31 28.7
comp=Z,13nm,0.8s
L44A Lake County Fo 38.37 329 P 02 31 30.3
baz=137
U38A Gravette 38.50 317 IAmb IAmb 02 31 31.0
comp=Z,15nm,0.6s
WHTX Lake Whitney, 38.54 309 P 02 31 31.8
baz=115,SNR=39
833A Chaparral WMA, 38.70 302 P 02 31 33.1
baz=109,SNR=29
GLMI Grayling 38.89 335 P 02 31 34.6
baz=144,SNR=5.5
N41A Harden Midland 38.91 325 IAmb IAmb 02 31 35.3
comp=Z,34nm,0.8s
K43A Burlington 38.97 329 IAmb IAmb 02 31 35.5
comp=Z,35nm,0.9s
ITAB Concordia 39.11 165 eP P 02 31 37.5 +1.7
TUL1 Leonard 39.17 315 P 02 31 36.2
baz=121,SNR=29
VLDQ Val d'Or 39.27 344 P P 02 31 39.0 +2.2
VLDQ PcP PcP 02 33 44.0 -0.2
G45A Suttons Bay 39.50 334 IAmb IAmb 02 31 41.5
comp=Z,24nm,0.8s
JCT Junction City 39.78 305 P 02 31 42.0
baz=111,SNR=43
P38A Dawn 39.80 322 IAmb IAmb 02 31 42.1
comp=Z,26nm,1.0s
OK030 Cody Creek RV 39.87 314 IAmb IAmb 02 31 42.4
comp=Z,32nm,0.7s
QUOK Quay 39.94 315 IAmb IAmb 02 31 43.5
comp=Z,49nm,1.1s
FNO Franklin 39.98 313 IAmb IAmb 02 31 44.0
comp=Z,34nm,0.8s
E46A Sault Ste Mari 40.02 336 IAmb IAmb 02 31 44.5
comp=Z,22nm,1.1s
L40A Anamosa 40.03 326 IAmb IAmb 02 31 44.0
comp=Z,28nm,0.6s
ZAIG Zacatecas 40.05 293 IAmb IAmb 02 31 46.6
comp=Z,20nm,1.0s
OKCFA Oklahoma City 40.09 313 P P 02 31 43.8 -0.2
JFWS Jewell Farm 40.10 328 P 02 31 44.2
baz=135,SNR=13
JFWS Jewell Farm 40.10 328 P P 02 31 43.8 -0.1
JFWS pmax pmax
comp=Z,28nm,1.0s
JFWS Jewell Farm 40.10 328 P P 02 31 43.8 -0.1
JFWS IAmb IAmb 02 31 47.6
comp=Z,28nm,1.0s
CHGQ Chibougamau 40.22 348 P 02 31 45.0
baz=162,SNR=9.2
ABTX Abilene, Hawle 40.48 308 P 02 31 47.7
baz=114,SNR=33
ABTX Abilene, Hawle 40.48 308 P P 02 31 47.3 0.0
ITQB Itaqui 40.62 172 eP P 02 31 49.0 +0.7
WMOK Wichita Mounta 40.74 312 IAmb IAmb 02 31 49.9
comp=Z,34nm,0.8s
WMOK Wichita Mounta 40.74 312 P 02 31 48.6
baz=117,SNR=25
MATQ Matagami 40.83 345 P 02 31 49.7
baz=157,SNR=6.2
I40A Norwalk 40.98 329 IAmb IAmb 02 31 51.9
comp=Z,34nm,0.6s
SCIA State Center 41.04 324 IAmb IAmb 02 31 52.9
comp=Z,42nm,1.1s
SCIA State Center 41.04 324 P 02 31 51.8
baz=130
KAN09 Caldwell North 41.06 316 IAmb IAmb 02 31 54.0
comp=Z,64nm,1.1s
KS20 Mayfield South 41.07 316 IAmb IAmb 02 31 52.5
comp=Z,38nm,0.7s
F42A Maple Grove Fa 41.16 333 IAmb IAmb 02 31 54.4
comp=Z,42nm,0.8s
KAN01 Argonia South 41.17 316 IAmb IAmb 02 31 53.9
comp=Z,48nm,0.9s
OK032 Salt Plains WL 41.31 315 P P 02 31 53.9 -0.1
OK032 IAmb IAmb 02 31 54.5
comp=Z,41nm,0.8s
OK032 PcP PcP 02 33 50.6 -0.5
KAN08 Anthony NE Sta 41.35 315 IAmb IAmb 02 31 55.0
comp=Z,41nm,0.8s
KAN12 Harper NE Stat 41.41 316 IAmb IAmb 02 31 59.3
comp=Z,21nm,0.8s
KSU1 Kansas State U 41.43 319 P 02 31 54.0
baz=124,SNR=14
N35A Tabor 41.83 322 IAmb IAmb 02 31 58.5
comp=Z,43nm,0.8s
CPSB Cacapava Do Su 41.87 168 eP P 02 31 59.1 +0.6

D41A Chassel 42.34 333 IAmb IAmb 02 32 03.6
comp=Z,28nm,0.9s
R32A Long Quarter, 42.46 317 IAmb IAmb 02 32 05.2
comp=Z,21nm,0.9s
TX32 Lajitas Array 42.58 302 IAmb IAmb 02 32 08.4
comp=Z,27nm,0.8s
TXAR Lajitas Array 42.58 302 P P 02 32 05.2 +0.7
comp=Z,26nm,0.8s,baz=119,slow=8.5,SNR=190
TXAR PcP PcP 02 33 55.8 +0.2
comp=Z,17nm,0.7s,baz=119,slow=5.8,SNR=17
TXAR ScP ScP 02 37 36.6 -2.6
comp=Z,0.6nm,0.7s,baz=114,slow=5.6,SNR=3.5
TXAR Lajitas Array 42.58 302 P P 02 32 04.5 0.0
L34A Svendsen Farm, 42.93 322 IAmb IAmb 02 32 07.1
comp=Z,34nm,0.7s
AMTX Amarillo 42.95 310 IAmb IAmb 02 32 07.9
comp=Z,29nm,0.7s
AMTX Amarillo 42.95 310 P 02 32 07.0
baz=114
SPMN Marine on St. 43.03 328 IAmb IAmb 02 32 08.6
comp=Z,22nm,1.1s
SPMN Marine on St. 43.03 328 P 02 32 07.2
baz=133,SNR=5.9
PLTB Pedras Altas 43.16 169 eP P 02 32 09.8 +0.9
CBKS Cedar Bluff 43.35 316 P 02 32 10.1
baz=120,SNR=7.8
MSTX Muleshoe 43.42 309 P 02 32 11.6
baz=112,SNR=62
HPIG 43.66 298 IAmb IAmb 02 32 15.3
comp=Z,40nm,0.7s
VA03 San Esteban 43.99 190 P P 02 32 16.1 +0.4
VA03 IAmb IAmb 02 32 20.2
comp=Z,23nm,1.1s
ECSD EROS Data Cent 44.13 324 P 02 32 16.3
baz=128,SNR=13
ECSD EROS Data Cent 44.13 324 P P 02 32 16.3 -0.4
EYMN Ely 44.32 332 P P 02 32 17.9 -0.2
EYMN Ely 44.32 332 P 02 32 17.6
baz=137,SNR=5.1
MT02 Curacav 44.58 190 P P 02 32 20.6 +0.3
MNTX Cornudas Mount 44.70 304 P P 02 32 21.4 0.0
MNTX IAmb IAmb 02 32 22.7
comp=Z,21nm,0.8s
MNTX Cornudas Mount 44.70 304 P 02 32 22.1
baz=108,SNR=50
F33A 5 Mile Ranch, 45.27 327 IAmb IAmb 02 32 26.8
comp=Z,15nm,0.8s
KSCO Kaye Shedlock' 45.43 315 IAmb IAmb 02 32 27.4
comp=Z,26nm,0.6s
KSCO Kaye Shedlock' 45.43 315 P 02 32 26.9
baz=117,SNR=5.0
B35A Bob, Littlefor 45.66 331 IAmb IAmb 02 32 28.6
comp=Z,16nm,0.9s
BO01 Tunca 45.67 190 P P 02 32 28.2 -0.7
BO01 PcP 02 34 06.1 +0.3
T25A Trinidad 45.89 312 IAmb IAmb 02 32 32.0
comp=Z,23nm,0.6s
T25A Trinidad 45.89 312 P 02 32 31.4
baz=114,SNR=18
SUSD Miller 45.91 324 P 02 32 30.3
baz=126,SNR=6.6
OGNE Ogallala 45.95 318 P 02 32 30.5
baz=120
BO02 Sierra Bellavi 46.01 190 IAmb IAmb 02 32 33.6
comp=Z,18nm,0.6s
D32A Dogwood Acres, 46.48 328 IAmb IAmb 02 32 36.9
comp=Z,19nm,0.8s
ANMO Albuquerque 46.61 308c iP P 02 32 37.6 +0.9
ANMO pmax pmax
comp=Z,34nm,1.1s
ANMO Albuquerque 46.61 308 P P 02 32 36.5 -0.1
ANMO IAmb IAmb 02 32 39.1
comp=Z,35nm,0.9s
ANMO Albuquerque 46.61 308 P 02 32 37.8
baz=110
AGMN Agassiz Nation 46.66 330 P 02 32 35.8
baz=132,SNR=5.4
AGMN Agassiz Nation 46.66 330 IAmb IAmb 02 32 36.9
comp=Z,18nm,0.8s
Y22D IRIS PASSCAL I 46.68 307 IAmb IAmb 02 32 49.8
comp=Z,31nm,0.7s
121A Cookes Peak, D 46.89 305 IAmb IAmb 02 32 41.5
comp=Z,34nm,0.9s
121A Cookes Peak, D 46.89 305 P 02 32 40.4
baz=107,SNR=23
SLBS Sierra La Lagu 46.90 292 P P 02 32 38.8 -0.1
SLBS IAmb IAmb 02 32 41.1
comp=Z,37nm,0.8s
PMOZ Porto Moniz, M 46.97 55 eP P 02 32 41.7 +2.3
comp=Z,174nm,1.4s
PMOZ Porto Moniz, M 46.97 55 P P 02 32 38.5 -0.9
ML02 Panimavida 47.06 190 P P 02 32 39.8 -0.1
ML02 PcP 02 34 10.5 -0.2
Q24A Divide 47.17 314 P 02 32 40.7
baz=115,SNR=7.1
319A Douglas 47.80 303 IAmb IAmb 02 32 47.6
comp=Z,24nm,0.9s
ISCO Idaho Springs 47.85 315 IAmb IAmb 02 32 47.6
comp=Z,24nm,0.8s
ISCO Idaho Springs 47.85 315 P 02 32 46.5
baz=115,SNR=40
S22A 4UR Ranch, Cre 47.90 312 P 02 32 47.3
baz=112,SNR=18
BI02 San Fabin de 47.92 190 P P 02 32 46.3 -0.2
BI02 PcP PcP 02 34 12.4 -1.4
ULM Lac du Bonnet 47.99 332 P P 02 32 45.6 -1.2
comp=Z,16nm,0.6s,baz=133,slow=8.9,SNR=40
ULM PcP PcP 02 34 12.5 -1.3
comp=Z,13nm,0.6s,baz=104,slow=2.5,SNR=5.1
ULM LR LR 02 53 11.0
comp=Z,125nm,21.2s,baz=94,slow=36
ULM Lac du Bonnet 47.99 332c iP P 02 32 45.2 -1.6
ULM Lac du Bonnet 47.99 332 P P 02 32 45.6 -1.2
ULM IAmb IAmb 02 32 46.6
comp=Z,18nm,0.7s
MDND Maddock 48.30 327 P 02 32 49.3
baz=127
PHWY Pilot Hill 48.40 317 IAmb IAmb 02 32 50.7
comp=Z,13nm,0.7s
N23A Red Feather La 48.55 316 P 02 32 51.4
baz=116,SNR=7.9
SMCO Snowmass 48.56 313 P P 02 32 51.1 -0.9
SMCO IAmb IAmb 02 32 52.8
comp=Z,17nm,0.8s
SMCO PcP 02 34 15.5 -1.2
RSSD Black Hills 48.80 321 P P 02 32 53.3 -0.2
RSSD 02 34 16.3
RSSD pmax pmax
comp=Z,8.0nm,0.8s
RSSD Black Hills 48.80 321 P P 02 32 53.3 -0.2
RSSD PcP 02 34 16.3 -0.9
RSSD Black Hills 48.80 321 P 02 32 53.2
baz=120
MVCO Mesa Verde 48.94 310 IAmb IAmb 02 33 02.4
comp=Z,20nm,1.0s
MVCO Mesa Verde 48.94 310 P 02 32 55.4
baz=110,SNR=13
X18A Snowflake 49.20 307 IAmb IAmb 02 33 00.0
comp=Z,22nm,1.0s
W18A Petrified Fore 49.21 307 IAmb IAmb 02 33 00.2
comp=Z,16nm,0.9s
W18A Petrified Fore 49.21 307 P 02 32 57.4
baz=108
TUC Tucson 49.28 303 P P 02 32 57.0 -0.2
TUC pmax pmax
comp=Z,17nm,1.1s
TUC Tucson 49.28 303 P P 02 32 57.0 -0.2
TUC IAmb IAmb 02 32 59.1
comp=Z,17nm,1.1s
TUC Tucson 49.28 303 P 02 32 57.8
baz=104
PV07 Paradox Valley 49.49 312 IAmb IAmb 02 33 00.1
comp=Z,30nm,0.8s
PV03 Paradox Valley 49.57 312 IAmb IAmb 02 33 01.4
comp=Z,26nm,0.8s
PV18 Skein Mesa, Pa 49.61 312 IAmb IAmb 02 33 01.8
comp=Z,22nm,0.8s
PV22 Blue Mesa, Par 49.63 312 IAmb IAmb 02 33 02.2
comp=Z,16nm,0.8s
PV16 Nyswonger Mesa 49.64 312 IAmb IAmb 02 33 01.3
comp=Z,22nm,0.7s
PV04 Paradox Valley 49.66 312 IAmb IAmb 02 33 01.4
comp=Z,24nm,1.0s
PV17 East Wray Mesa 49.66 312 IAmb IAmb 02 33 01.4
comp=Z,20nm,0.7s
PV19 Morning Glory 49.69 312 IAmb IAmb 02 33 01.5
comp=Z,17nm,0.7s

PV20 West Nyswonger 49.69 312 IAmb IAmb 02 33 01.5
comp=Z,24nm,0.7s
K22A Casper 49.71 318 P 02 33 00.2
baz=116,SNR=15
RWWY Rawlins 49.75 316 IAmb IAmb 02 33 00.3
comp=Z,16nm,0.7s
PV10 Paradox Valley 49.76 312 IAmb IAmb 02 33 01.8
comp=Z,19nm,0.9s
O20A White River Ci 49.83 314 IAmb IAmb 02 33 04.8
comp=Z,18nm,0.8s
O20A White River Ci 49.83 314 P 02 33 01.6
baz=113,SNR=22
WUAZ Wupatki 50.61 307 IAmb IAmb 02 33 09.2
comp=Z,25nm,0.9s
WUAZ Wupatki 50.61 307 P 02 33 08.4
baz=107,SNR=10
214A Organ Pipe Nat 50.86 302 P 02 33 09.9
baz=103
RDMU Red Mountain 50.94 314 IAmb IAmb 02 33 10.3
comp=Z,17nm,0.8s
P17A Butcher Ranch, 51.38 312 IAmb IAmb 02 33 14.2
comp=Z,28nm,0.8s
LAO LASA Array 51.42 322 IAmb IAmb 02 33 13.7
comp=Z,20nm,0.7s
LAO LASA Array 51.42 322 P 02 33 13.1
baz=120,SNR=8.0
Q16A Castle Valley 51.51 312 IAmb IAmb 02 33 18.6
comp=Z,12nm,0.8s
TMUT Trail Mountain 51.66 312 IAmb IAmb 02 33 16.8
comp=Z,24nm,0.8s
BW06 Boulder Array 51.78 317 P 02 33 15.6
baz=114,SNR=62
PDAR Pinedale Array 51.78 317 P P 02 33 15.7 -0.4
comp=Z,30nm,0.6s,baz=114,slow=9.6,SNR=316
PDAR PcP PcP 02 34 27.1 -1.1
comp=Z,6.6nm,0.7s,baz=104,slow=6.3,SNR=5.6
PDAR ScP ScP 02 38 15.2 -2.7
comp=Z,1.1nm,0.7s,baz=118,slow=5.2,SNR=3.8
PDAR LR LR 02 56 17.3
comp=Z,82nm,21.1s,baz=127,slow=37
PLCA Paso Flores 51.80 188 P P 02 33 17.4 +1.5
comp=Z,7.5nm,0.5s,baz=5.9,slow=8.5,SNR=24
PLCA PcP PcP 02 34 29.2 +1.2
comp=Z,14nm,0.6s,baz=28,slow=5.0,SNR=11
PLCA LR LR 02 57 08.1
comp=Z,177nm,19.5s,baz=360,slow=38
PLCA Paso Flores 51.80 188 IAmb IAmb 02 33 22.1
comp=Z,17nm,1.1s
PLCA Paso Flores 51.80 188 eP P 02 33 17.8 +1.9
NRS Narsarsuaq 51.82 10 iP P 02 33 16.8 +1.1
NRS IAmb IAmb 02 33 17.9
comp=Z,39nm,0.8s
NRS Narsarsuaq 51.82 10 iP P 02 33 16.7 +1.1
NRS pmax pmax
comp=Z,39nm,0.8s
NRS Narsarsuaq 51.82 10 P P 02 33 15.5 -0.1
113A Mohawk Valley, 51.83 303 P P 02 33 15.5 -0.5
113A PcP 02 34 27.7 -0.6
MTPU Mount Pierson 51.98 310 IAmb IAmb 02 33 19.3
comp=Z,15nm,0.9s
MSU Marysvale 52.12 311 P P 02 33 18.0 -0.7
MSU 02 34 28.3
MSU Marysvale 52.12 311 P P 02 33 18.0 -0.7
MSU PcP 02 34 28.3 -1.3
KNB Kanab 52.16 309 IAmb IAmb 02 33 21.3
comp=Z,26nm,0.9s
MPU Maple Canyon 52.21 313 IAmb IAmb 02 33 23.8
comp=Z,13nm,1.0s
LL04 Puerto Octay 52.25 190 IAmb IAmb 02 33 25.8
comp=Z,15nm,0.7s
JLU Jordanelle 52.28 313 IAmb IAmb 02 33 21.5
comp=Z,39nm,1.1s
W13A Hualapai Mount 52.48 306 IAmb IAmb 02 33 23.1
comp=Z,12nm,0.9s
PDMCI Parker Dam,Lak 52.49 305 P 02 33 21.6
baz=104
NLU North Lily Min 52.51 312 IAmb IAmb 02 33 23.0
comp=Z,17nm,1.0s
SZCU Shurtz Canyon 52.53 309 IAmb IAmb 02 33 22.7
comp=Z,13nm,1.0s
RLMT Red Lodge 52.58 319 IAmb IAmb 02 33 23.0
comp=Z,36nm,0.9s
YMP Mirror Lake Pl 52.99 319 IAmb IAmb 02 33 27.2
comp=Z,11nm,0.7s
FRB Frobisher Bay 53.05 357 P P 02 33 22.5 -2.2
LKWY Lake 53.07 318 IAmb IAmb 02 33 29.6
comp=Z,12nm,0.9s
FLWY Flagg Ranch 53.07 318 IAmb IAmb 02 33 26.7
comp=Z,11nm,0.8s
H17A Grant Village 53.12 318 P 02 33 25.9
baz=114,SNR=6.0
DUG Dugway, Tooele 53.13 313 IAmb IAmb 02 33 27.3
comp=Z,29nm,0.8s
DUG Dugway, Tooele 53.13 313 P 02 33 26.3
baz=109,SNR=38
SPUT South Promonto 53.24 314 IAmb IAmb 02 33 27.1
comp=Z,13nm,0.8s
IRM Iron Mountain 53.26 305 P 02 33 27.9
baz=103,SNR=14
BC3 Big Chuckawall 53.40 304 P 02 33 28.5
baz=102,SNR=5.9
YHH Holmes Hill 53.46 319 IAmb IAmb 02 33 31.1
comp=Z,9.2nm,0.7s
YMR Madison River 53.48 318 IAmb IAmb 02 33 30.3
comp=Z,21nm,0.8s
SWSC Sam W. Stewart 53.54 303 P 02 33 29.4
baz=102
HVU Hansel Valley 53.63 314 IAmb IAmb 02 33 30.2
comp=Z,21nm,0.9s
LL01 San Ignacio de 53.69 189 IAmb IAmb 02 33 36.1
comp=Z,20nm,0.7s
FFC Flin Flon 53.75 333 P P 02 33 28.8 -1.2
FFC pmax pmax
comp=Z,11nm,1.2s
FFC Flin Flon 53.75 333 P P 02 33 28.8 -1.2
GMRC Granite Mounta 53.82 305 P 02 33 31.7
baz=103,SNR=6.9
MONP2 Monument Peak 54.04 303 P 02 33 33.7
baz=101,SNR=7.8
EGMT Eagleton 54.17 323 IAmb IAmb 02 33 34.1
comp=Z,30nm,0.8s
EGMT Eagleton 54.17 323 P 02 33 33.6
baz=117,SNR=26
TUQ Turquoise Moun 54.17 306 P 02 33 34.3
baz=103
TPFO Pinon Flats 54.21 304 P 02 33 34.3
baz=102
PFO Pinyon Flats O 54.22 304 P P 02 33 34.2 +0.2
comp=Z,5.0nm,0.9s,baz=113,slow=4.3,SNR=5.0
PFO PcP PcP 02 34 37.7 +0.2
comp=Z,5.4nm,0.7s,baz=69,slow=2.6,SNR=9.0
PFO Pinyon Flats O 54.22 304⇑ eP P 02 33 34.4 +0.4
PFO pmax pmax
comp=Z,12nm,1.3s
PFO Pinyon Flats O 54.22 304 P P 02 33 33.8 -0.2
PFO Pinyon Flats O 54.22 304 P 02 33 34.3
baz=102
BOZ Bozeman (W) 54.29 319 IAmb IAmb 02 33 35.0
comp=Z,18nm,0.8s
BOZ Bozeman (W) 54.29 319 P 02 33 34.4
baz=114,SNR=38
OUK Oukaimeden 54.31 59 P 02 33 37.0
HEC Hector,Ludlow 54.37 305 P 02 33 35.9
baz=102,SNR=7.7
109C Camp Elliot, M 54.61 303 P 02 33 37.4
baz=101
R11A Troy Canyon, C 54.63 310 P 02 33 37.7
baz=106,SNR=21
PFVI Vila Bisbo 54.75 52 ePcP PcP 02 34 40.6 +1.3
TPNV Topopah Spring 54.79 308 IAmb IAmb 02 33 40.5
comp=Z,23nm,1.0s
TPNV Topopah Spring 54.79 308 P 02 33 39.1
baz=104,SNR=22
MURC Murrieta 54.82 304 P 02 33 38.9
baz=101
DLMT Dillon 54.82 319 IAmb IAmb 02 33 38.9
comp=Z,14nm,0.7s
PMAFR Mafra 54.87 50 ePcP PcP 02 34 40.9 +1.2
PMST Lisbon--Monsan 54.89 50 eP P 02 33 40.3 +1.7
comp=Z,85nm,1.0s
LIS Lisbon 54.91 50 eP P 02 33 40.5 +1.8
LIS IAmb IAmb 02 33 41.9
comp=Z,85nm,1.0s
LIS Lisbon 54.91 50 eP P 02 33 40.5 +1.8
LIS Lisbon 54.91 50 eP P 02 33 41.0 +2.3
MORF Marmelete 54.93 52 eP P 02 33 41.0 +2.0
MORF IAmb IAmb 02 33 41.7

comp=Z,60nm,1.0s
MORF Marmelete 54.93 52 *e*P **P 02 33 41.0 +2.0**
MORF Marmelete 54.93 52 *e*P **P 02 33 40.9 +2.0**
comp=Z,69nm,1.3s
MORF Marmelete 54.93 52 *e*PcP **PcP 02 34 41.3 +1.3**
PTEO Sao Teotonio 54.93 52 *e*P **P 02 33 40.6 +1.7**
comp=Z,52nm,1.1s
PTEO Sao Teotonio 54.93 52 *e*PcP **PcP 02 34 41.6 +1.7**
FURC Furnace Creek, 55.15 307 P 02 33 41.5
baz=103
PNCL Nicolau / Gran 55.22 51 *e*P **P 02 33 42.9 +1.9**
comp=Z,59nm,0.9s
BFSC Mount Baldy Ra 55.32 304 P 02 33 42.4
baz=101
HLID Hailey 55.38 316 IAmb IAmb 02 33 43.5
comp=Z,26nm,0.9s
HLID Hailey 55.38 316 P 02 33 42.4
baz=110,SNR=45
MESJ Messejana 55.39 51 *e*P **P 02 33 44.0 +1.8**
MESJ IAmb IAmb 02 33 44.5
comp=Z,13nm,1.0s
MESJ Messejana 55.39 51 *e*P **P 02 33 44.0 +1.8**
MESJ Messejana 55.39 51 *e*P **P 02 33 44.2 +2.0**
MESJ Messejana 55.39 51 *e*PcP **PcP 02 34 43.0 +1.3**
PSBE So Bento 55.39 49 *e*P **P 02 33 44.3 +2.1**
comp=Z,94nm,1.3s
PSBE So Bento 55.39 49 *e*PcP **PcP 02 34 43.2 +1.5**
PBDV Barranco-do-Ve 55.47 52 *e*P **P 02 33 45.2 +2.4**
comp=Z,62nm,1.0s
PCVE Castro Verde 55.48 52 *e*P **P 02 33 45.2 +2.3**
comp=Z,40nm,1.3s
PCVE Castro Verde 55.48 52 *e*PcP **PcP 02 34 43.7 +1.6**
LRMC Laurel Mtn Rad 55.59 306 P 02 33 44.5
baz=102,SNR=8.8
GRAC Grapevine Rang 55.67 308 P 02 33 45.3
baz=103
PVAQ Vaqueiros 55.67 52 *e*P **P 02 33 46.3 +2.0**
PVAQ Vaqueiros 55.67 52 *e*PcP **PcP 02 34 44.3 +1.5**
PVAQ Vaqueiros 55.67 52 IAmb IAmb 02 33 47.1
comp=Z,15nm,0.8s
PMTG Montargil 55.70 50 *e*P **P 02 33 46.4 +2.0**
comp=Z,107nm,0.8s
PMTG Montargil 55.70 50 *e*PcP **PcP 02 34 43.8 +0.9**
PBEJ Beja 55.71 51 *e*P **P 02 33 46.9 +2.4**
comp=Z,9.9nm,0.8s
PBEJ Beja 55.71 51 *e*PcP **PcP 02 34 44.3 +1.3**
EDW2 Edwards Air Fo 55.71 305 P 02 33 45.2
baz=101
EVO Evora 55.72 51 *e*P **P 02 33 46.1 +1.5**
comp=Z,35nm,1.6s
EVO Evora 55.72 51 *e*PcP **PcP 02 34 44.7 +1.7**
PCAS Casmilo, Conde 55.76 49 *e*P **P 02 33 46.6 +1.8**
comp=Z,78nm,1.0s
PCAS Casmilo, Conde 55.76 49 *e*PcP **PcP 02 34 44.6 +1.5**
CIS Catalina Islan 55.78 303 P 02 33 45.5
baz=100
COI Coimbra 55.86 49 *e*P **P 02 33 47.6 +2.0**
comp=Z,123nm,1.1s
COI Coimbra 55.86 49 *e*PcP **PcP 02 34 44.9 +1.4**
CWC Cottonwood Cre 56.10 307 P 02 33 48.4
baz=102
PESTR Estremoz 56.12 50 IAmb IAmb 02 33 50.7
comp=Z,34nm,1.0s
PESTR Estremoz 56.12 50 P 02 33 49.6
MSO Missoula 56.25 320 P 02 33 48.2
baz=112,SNR=5.9
ISA Isabella, Lake 56.26 306 P 02 33 48.9
baz=102
MFID Camas Ranch 56.30 315 IAmb IAmb 02 33 49.9
comp=Z,18nm,1.1s
PBAR Barrancos 56.38 51 *e*P **P 02 33 51.3 +2.0**
comp=Z,32nm,1.9s
PVIS Viseu 56.38 48 *e*P **P 02 33 50.7 +1.4**
comp=Z,46nm,0.9s
PVIS Viseu 56.38 48 *e*PcP **PcP 02 34 46.4 +0.8**
PMRV Marv??o 56.42 50 *e*P **P 02 33 51.2 +1.6**
comp=Z,43nm,1.5s
PMRV Marv??o 56.42 50 *e*PcP **PcP 02 34 46.1 +0.4**
ARVC Arvin 56.44 305 P 02 33 50.2
baz=101,SNR=7.2
PCBR Castelo Branco 56.46 49 *e*P **P 02 33 51.4 +1.6**
comp=Z,50nm,1.3s
PCBR Castelo Branco 56.46 49 *e*PcP **PcP 02 34 46.6 +0.8**
PGAV Gavieira, Arco 56.47 47 *e*P **P 02 33 51.4 +1.4**
comp=Z,34nm,1.2s
MTE Manteigas 56.55 49 *e*P **P 02 33 52.3 +1.7**
comp=Z,45nm,1.1s
MTE Manteigas 56.55 49 *e*PcP **PcP 02 34 46.9 +0.6**
PCAB Cabril 56.57 47 *e*P **P 02 33 52.0 +1.4**
comp=Z,30nm,0.8s
PCAB Cabril 56.57 47 *e*PcP **PcP 02 34 47.2 +0.9**
NV11 Mina Array Sit 56.61 309 IAmb IAmb 02 33 54.0
comp=Z,11nm,1.0s
POLO Lamas de Olo 56.64 47 *e*P **P 02 33 52.9 +1.7**
comp=Z,31nm,1.1s
POLO Lamas de Olo 56.64 47 *e*PcP **PcP 02 34 47.7 +1.0**
PVRL Vila Real 56.67 47 *e*P **P 02 33 53.1 +1.8**
comp=Z,65nm,0.9s
PVRL Vila Real 56.67 47 *e*PcP **PcP 02 34 47.6 +0.9**
DY2G Dye2 56.69 8⇑ *i*P **P 02 33 51.4 +0.1**
DY2G IAmb IAmb 02 33 52.6
comp=Z,93nm,0.8s
SFJD Kangerlussuaq 56.70 6 *i*P **P 02 33 50.9 0.0**
SFJD IAmb IAmb 02 33 52.0
comp=Z,7.2nm,0.8s
SFJD Kangerlussuaq 56.70 6 P **P 02 33 51.0 0.0**
SFJD pmax pmax
comp=Z,17nm,0.9s
SFJD Kangerlussuaq 56.70 6 P **P 02 33 51.0 0.0**
SFJD IAmb IAmb 02 33 52.1
comp=Z,17nm,0.8s
NVAR Mina Array Bea 56.72 309 P **P 02 33 52.3 +0.3**
comp=Z,3.6nm,0.7s,baz=114,slow=6.7,SNR=21
NVAR PcP **PcP 02 34 47.5 +0.3**
comp=Z,5.7nm,0.7s,baz=130,slow=4.5,SNR=9.1
NVAR LR LR 03 01 36.2
comp=Z,150nm,18.1s,baz=92,slow=40
NVAR Mina Array Bea 56.72 309 P **P 02 33 51.8 -0.3**
VES Vestal, Richgr 56.78 306 P 02 33 52.9
baz=101,SNR=9.1
LHV Little Huntoon 56.84 309 IAmb IAmb 02 33 59.7
comp=Z,13nm,1.0s
RYN Ryan 56.94 309 IAmb IAmb 02 33 56.8
comp=Z,13nm,1.1s
MLAC Mammoth, Mammo 56.95 308 P 02 33 54.0
baz=103
PLID Pearl Lake 56.96 317 IAmb IAmb 02 33 53.5
comp=Z,18nm,0.9s
CZD Col de Zad 56.97 58 P 02 33 56.3
ISOG Isortoq, Green 57.03 11 *i*P **P 02 33 53.6 +0.2**
ISOG IAmb IAmb 02 33 54.6
comp=Z,33nm,0.7s
DBIC Dimbokro 57.04 89 P **P 02 33 55.1 +0.8**
comp=Z,7.4nm,0.8s,baz=262,slow=7.3,SNR=14
DBIC Dimbokro 57.04 89 P **P 02 33 53.4 -1.0**
DBIC IAmb IAmb 02 33 58.4
comp=Z,9.7nm,0.9s
KOWA Kowa 57.05 80 P **P 02 33 53.5 -0.9**
KOWA IAmb IAmb 02 33 56.6
comp=Z,17nm,0.8s
WALA Waterton Lakes 57.11 322 IAmb IAmb 02 33 55.1
comp=Z,20nm,1.1s
MVO Moncorvo 57.14 48 *e*P **P 02 33 56.3 +1.6**
comp=Z,81nm,1.0s
MVO Moncorvo 57.14 48 *e*PcP **PcP 02 34 49.8 +1.2**
PKM Mcpherson Peak 57.19 305 P 02 33 55.7
baz=100
LCRM LCR 57.22 57 P 02 33 58.0
MDT Midelt 57.30 58 P 02 33 57.9
ANGG Ammassalik, Gr 57.36 12 *i*P **P 02 33 55.5 -0.1**
ANGG IAmb IAmb 02 33 56.6
comp=Z,23nm,0.8s
ANGG Ammassalik, Gr 57.36 12 P **P 02 33 55.7 0.0**
PBRG Braganca 57.52 47 *e*P **P 02 33 58.9 +1.6**
comp=Z,23nm,1.5s
PBRG Braganca 57.52 47 *e*PcP **PcP 02 34 51.6 +1.6**
HORN Hornachuelos 57.67 52 P 02 34 00.2
BMO Blue Mountains 57.77 317 IAmb IAmb 02 33 58.8
comp=Z,13nm,1.1s
PNTR Pine Nut 57.86 309 IAmb IAmb 02 34 01.4
comp=Z,12nm,1.0s
WVOR Wild Horse Val 57.98 314 IAmb IAmb 02 34 01.0
comp=Z,11nm,1.1s
F10A Beach Ranch, E 58.07 318 IAmb IAmb 02 34 00.7
comp=Z,8.2nm,0.8s
J08A Circle Bar Ran 58.12 315 IAmb IAmb 02 34 03.9

comp=Z,15nm,1.2s
AKLM AKL 58.17 56 P 02 34 04.0
PAB San Pablo 58.73 50 P **P 02 34 05.1 -0.8**
PAB pmax pmax
comp=Z,27nm,0.8s
PAB San Pablo 58.73 50 P **P 02 34 05.1 -0.8**
PAB San Pablo 58.73 50 P 02 34 07.6
NEW Newport 58.78 320 P **P 02 34 05.3 -0.7**
NEW Newport 58.78 320 IAmb IAmb 02 34 05.8
comp=Z,21nm,0.8s
NEW Newport 58.78 320 P 02 34 05.3
baz=110,SNR=20
ESDC Sonseca Array 59.05 50 P **P 02 34 09.9 +1.8**
comp=Z,28nm,0.8s,baz=261,slow=7.4,SNR=227
ESDC PcP **PcP 02 34 57.1 +0.9**
comp=Z,11nm,0.8s,baz=273,slow=4.0,SNR=16
ESDC LR LR 02 56 29.0
comp=Z,52nm,21.3s,baz=235,slow=33
ESDC PKP2bc 03 03 45.5
comp=Z,0.3nm,0.9s,baz=98,slow=2.6,SNR=2.4
C09A Chrisman Ranch 59.35 320 IAmb IAmb 02 34 09.9
comp=Z,17nm,0.9s
HAWA Hanford 59.72 318 IAmb IAmb 02 34 12.6
comp=Z,13nm,0.8s
O03E Paynes Creek 59.78 310 P 02 34 12.4
baz=102
F07A Phinny Hill Vi 59.84 317 IAmb IAmb 02 34 13.9
comp=Z,13nm,0.8s
PINE Pine Mountain 59.97 315 IAmb IAmb 02 34 16.2
comp=Z,15nm,0.8s
E07A Sunnyside 59.98 318 IAmb IAmb 02 34 14.6
comp=Z,13nm,0.8s
J05D Fort Rock, OR 60.05 314 P 02 34 15.0
baz=104,SNR=16
ICESG Greenland Ices 60.08 9⇑ *i*P **P 02 34 14.9 -0.1**
ICESG IAmb IAmb 02 34 15.8
comp=Z,53nm,0.9s
M04C Macdoel 60.13 312 P 02 34 15.6
baz=103,SNR=12
B08A Colville Reser 60.20 320 IAmb IAmb 02 34 15.5
comp=Z,14nm,0.9s
K04D Chiloquin, OR 60.26 313 P 02 34 16.8
baz=103
I05D Terrebonne, OR 60.38 315 P 02 34 17.5
baz=105
L04D Klamath Falls 60.56 312 P 02 34 18.3
baz=103,SNR=7.7
G05D Wamic, OR 60.60 316 P 02 34 18.6
baz=105
J04D Umpqua Nationa 60.66 314 P 02 34 19.3
baz=103,SNR=9.1
LTY Liberty 60.72 318 IAmb IAmb 02 34 19.6
comp=Z,22nm,0.8s
YBH Yreka Blue Hor 60.75 312 P **P 02 34 18.8 -1.0**
YBH pmax pmax
comp=Z,6.0nm,0.9s
YBH Yreka Blue Hor 60.75 312 P **P 02 34 18.8 -1.0**
F05D White Salmon 60.87 317 P 02 34 20.5
baz=105
I04A Tendick Farm, 61.00 314 P 02 34 20.7
baz=104
H04A Detroit Lake 61.05 315 P **P 02 34 21.6 0.0**
H04A IAmb IAmb 02 34 21.9
comp=Z,17nm,0.9s
LON Longmire 61.33 318 IAmb IAmb 02 34 23.4
comp=Z,7.7nm,0.8s
H04D Lebanon 61.40 315 P 02 34 23.1
baz=104
DSB Dublin 61.45 35 IAmb IAmb 02 34 26.1
comp=Z,24nm,0.9s
L02E Cave Junction 61.49 312 P 02 34 24.3
baz=102
D05A Enumclaw 61.57 318 IAmb IAmb 02 34 25.9
comp=Z,14nm,0.9s
B06A Marblemount 61.61 320 IAmb IAmb 02 34 25.7
comp=Z,17nm,0.6s
I03D Drain, OR 61.64 314 P 02 34 25.3
baz=103
QUIF Quistinic 61.65 41 *e*P **P 02 34 25.9 +0.4**
QUIF pmax pmax
comp=Z,26nm,1.0s
K02D Willamette Mer 61.65 313 P 02 34 25.6
baz=102
ROSF Rostrenen 61.70 41⇑ *e*P **P 02 34 27.2 +1.4**
ROSF IAmb IAmb 02 34 28.0
comp=Z,25nm,0.7s
ROSF Rostrenen 61.70 41 *e*P **P 02 34 26.2 +0.4**
ROSF pmax pmax
comp=Z,28nm,0.7s
RSBS Rosebush, Pemb 61.92 36⇑ *e*P **P 02 34 28.2 +0.9**
RSBS IAmb IAmb 02 34 28.9
comp=Z,54nm,0.7s
G03D McMinnville, O 61.92 316 P 02 34 27.3
baz=104
B05A Bryant 61.93 319 P 02 34 25.4
baz=106,SNR=13
I02D Swisshome 62.08 314 P 02 34 28.4
baz=102
D04E Lakebay 62.08 318 P 02 34 28.2
baz=105
SGMF Saint Gilles 62.13 41 *e*P **P 02 34 29.2 +0.4**
SGMF pmax pmax
comp=Z,37nm,1.0s
A05A Maple Falls 62.13 320 P **P 02 34 28.1 -0.7**
A05A IAmb IAmb 02 34 29.1
comp=Z,15nm,0.8s
ETSF Etsaut 62.23 47 *e*P **P 02 34 30.5 +0.9**
ETSF pmax pmax
comp=Z,14nm,0.8s
CLGH Cloghs, Cushen 62.29 33⇑ *e*P **P 02 34 30.6 +0.9**
CLGH IAmb IAmb 02 34 31.5
comp=Z,33nm,0.8s
D03D Eldon 62.38 318 P 02 34 30.2
baz=105
A04D Lummi Island 62.45 320 P 02 34 30.5
baz=106
YRC Rhosolyn 62.46 35⇑ *e*P **P 02 34 31.7 +0.9**
WPS Cemaes, Angles 62.55 35⇑ *e*P **P 02 34 32.2 +0.8**
WPS IAmb IAmb 02 34 32.6
comp=Z,39nm,0.9s
WLF1 Llynfaes 62.57 35⇑ *e*P **P 02 34 32.4 +0.8**
WLF1 IAmb IAmb 02 34 33.3
comp=Z,129nm,0.8s
JVM Valle D.L. Mar 62.62 40 *e*P **P 02 34 32.8 +0.8**
YLL Llanberis 62.65 35⇑ *e*P **P 02 34 33.2 +1.0**
WME Myndd Eilian 62.66 35⇑ *e*P **P 02 34 32.9 +0.7**
TOA0 Torodi Ar. Sit 62.68 81 P **P 02 34 32.0 -1.0**
TOA0 IAmb IAmb 02 34 34.6
comp=Z,10nm,0.6s
TORD Torodi Ar. Bea 62.68 81 P **P 02 34 34.1 +1.1**
comp=Z,8.5nm,0.6s,baz=292,slow=7.4,SNR=84
TORD PKP2bc 03 03 36.2
comp=Z,1.6nm,1.0s,baz=103,slow=3.7,SNR=5.1
TORD Torodi Ar. Bea 62.68 81 P **P 02 34 32.1 -0.9**
WIM Isle of Man 62.72 34⇑ *e*P **P 02 34 33.6 +1.0**
IOMK Kirk Michael 62.82 34⇑ *e*P **P 02 34 33.9 +0.7**
IOMK IAmb IAmb 02 34 34.5
comp=Z,69nm,0.8s
NLWA Neilton Lookou 62.86 318 P **P 02 34 33.7 0.0**
NLWA IAmb IAmb 02 34 34.5
comp=Z,29nm,1.1s
EPF Esparros 62.90 47 *e*P **P 02 34 35.0 +0.9**
EPF pmax pmax
comp=Z,37nm,0.6s
GAL1 Galloway 62.95 33⇑ *e*P **P 02 34 34.7 +0.6**
GAL1 IAmb IAmb 02 34 35.2
comp=Z,34nm,0.8s
MCH1 Michaelchurch 62.96 37⇑ *e*P **P 02 34 34.8 +0.6**
MCH1 IAmb IAmb 02 34 35.7
comp=Z,31nm,0.8s
LAWE Loch Awe, Argy 63.11 32 *e*P **P 02 34 35.6 +0.5**
OLDB Oldbury-Upon-S 63.12 37 *e*P **P 02 34 36.1 +0.8**
FOEL Foel Wylfa 63.12 36⇑ *e*P **P 02 34 35.0 -0.3**
FOEL IAmb IAmb 02 34 35.4
comp=Z,32nm,0.7s
LEWI Lewis, Hebride 63.13 29⇑ *e*P **P 02 34 35.7 +0.5**
LEWI IAmb IAmb 02 34 36.6
comp=Z,63nm,0.6s
HLM1 Long Mynd 63.19 36⇑ *e*P **P 02 34 36.4 +0.7**
HLM1 IAmb IAmb 02 34 37.3
comp=Z,58nm,0.9s
GRR Gorron 63.26 41 *e*P **P 02 34 36.4 +0.1**
GRR pmax pmax
comp=Z,47nm,0.8s
NEWG New Galloway 63.30 33⇑ *e*P **P 02 34 37.1 +0.7**
NEWG IAmb IAmb 02 34 38.0

comp=Z,60nm,1.0s
STRD Stroud 63.38 37⇑ *e*P **P 02 34 37.8 +0.8**
STRD IAmb IAmb 02 34 38.5
comp=Z,53nm,0.8s
SUMG Summit 63.40 8⇑ *i*P **P 02 34 37.5 +0.2**
SUMG IAmb IAmb 02 34 38.8
comp=Z,47nm,0.9s
SUMG Summit 63.40 8⇑ *i*P **P 02 34 37.4 +0.2**
SUMG pmax pmax
comp=Z,47nm,0.9s
YKA Yellowknife Ar 63.59 336 P **P 02 34 36.5 -1.6**
comp=Z,2.6nm,0.4s,baz=102,slow=8.6,SNR=74
YKA LR LR 03 01 05.5
comp=Z,167nm,21.7s,baz=0.0,slow=35
YKA PKP2bc 03 03 26.7
comp=Z,0.6nm,1.1s,baz=293,slow=2.3,SNR=4.1
YKA Yellowknife Ar 63.59 336*c*e**P P 02 34 36.4 -1.7**
YKA pmax pmax
comp=Z,3.0nm,0.4s
FLN La Foliniere 63.60 41 *e*P **P 02 34 38.7 +0.2**
FLN pmax pmax
comp=Z,71nm,0.7s
KESW Keswick, Cumbr 63.73 34⇑ *e*P **P 02 34 39.8 +0.6**
KESW IAmb IAmb 02 34 40.8
comp=Z,71nm,1.4s
STNC Stoke 63.76 36 *e*P **P 02 34 40.4 +1.0**
ESK Eskdalemuir 63.92 33⇑ *e*P **P 02 34 40.7 +0.2**
ESK IAmb IAmb 02 34 42.6
comp=Z,14nm,0.7s
ESK Eskdalemuir 63.92 33 P **P 02 34 39.6 -0.9**
ESK pmax pmax
comp=Z,15nm,0.7s
ESK Eskdalemuir 63.92 33 P **P 02 34 39.6 -0.9**
ESK IAmb IAmb 02 34 43.2
comp=Z,14nm,0.7s
MDO Dochfour 64.08 31 *e*P **P 02 34 41.7 +0.2**
LBWR Ladybower, Pea 64.13 35⇑ *e*P **P 02 34 42.7 +0.8**
LBWR IAmb IAmb 02 34 43.7
comp=Z,62nm,1.1s
EDI Edinburgh 64.14 33⇑ *e*P **P 02 34 42.0 +0.1**
EDI IAmb IAmb 02 34 42.9
comp=Z,19nm,0.7s
EBL Broad Law 64.17 33⇑ *e*P **P 02 34 42.5 +0.4**
RJF Les Rejaudoux 64.17 45 *e*P **P 02 34 42.4 +0.1**
RJF pmax pmax
comp=Z,20nm,0.9s
CWF Charnwood Fore 64.17 36⇑ *e*P **P 02 34 41.6 -0.5**
CWF IAmb IAmb 02 34 42.1
comp=Z,20nm,0.7s
HPK Haverah Park 64.35 35⇑ *e*P **P 02 34 43.9 +0.6**
HPK IAmb IAmb 02 34 44.5
comp=Z,41nm,0.7s
EDMD Edmundbyers 64.44 34 *e*P **P 02 34 44.3 +0.4**
EDMD IAmb IAmb 02 34 45.2
comp=Z,43nm,0.7s
ESY Stoneypath 64.44 33⇑ *e*P **P 02 34 44.2 +0.3**
CAF Calviac 64.48 45 *e*P **P 02 34 44.4 0.0**
CAF pmax pmax
comp=Z,26nm,0.8s
MCD Coleburn Disti 64.69 31⇑ *e*P **P 02 34 45.8 +0.3**
BIGH Upper Bighouse 64.70 30 *e*P **P 02 34 45.8 +0.3**
SCO Scoresbysund 64.77 14 *i*P **P 02 34 46.4 +0.7**
SCO IAmb IAmb 02 34 47.4
comp=Z,5.4nm,0.8s
SCO Scoresbysund 64.77 14 *i*P **P 02 34 46.4 +0.7**
SCO pmax pmax
comp=Z,5.0nm,0.8s
MLA1 Latheron 64.90 30⇑ *e*P **P 02 34 47.4 +0.6**
GDLE Glaisdale, N Y 64.95 35 *e*P **P 02 34 47.9 +0.7**
WACR West Acre 65.30 37 *e*P **P 02 34 50.1 +0.6**
WACR IAmb IAmb 02 34 50.7
comp=Z,80nm,0.8s
AVF Avril sur Loir 65.70 43 *e*P **P 02 34 51.9 -0.3**
AVF pmax pmax
comp=Z,12nm,0.7s
TAM Tamanrasset 65.72 70 P **P 02 34 55.4 +2.4**
TULEG Thule 65.82 358⇑ *i*P **P 02 34 51.4 -1.0**
TULEG IAmb IAmb 02 34 52.5
comp=Z,11nm,0.7s
SSF Saint Saulge 65.85 43 *e*P **P 02 34 52.7 -0.5**
SSF pmax pmax
comp=Z,61nm,1.5s
SSB Saint Sauveur 66.26 45 IAmb IAmb 02 34 58.4
comp=Z,18nm,0.9s
LRW Lerwick 66.60 29⇑ *e*P **P 02 34 58.0 +0.3**
LRW IAmb IAmb 02 34 58.9
comp=Z,316nm,1.7s
NEEM North Greenlan 66.91 3⇑ *i*P **P 02 34 59.3 -0.5**
NEEM IAmb IAmb 02 34 59.9
comp=Z,18nm,0.7s
SNF Seneffe 67.00 40 *d*P **P 02 35 00.9 +0.5**
comp=Z,22nm,0.7s
SNF *d*PcP **PcP 02 35 28.0 -0.3**
UCC Uccle 67.11 39 *d*P **P 02 35 01.4 +0.3**
comp=Z,21nm,0.9s
UCC Uccle 67.11 39 IAmb IAmb 02 35 02.5
comp=Z,23nm,0.7s
DOU Dourbes 67.12 40 *d*P **P 02 35 01.7 +0.5**
DOU *d*PcP **PcP 02 35 29.6 +0.8**
GIVF Givet 67.27 40 *e*P **P 02 35 01.8 -0.4**
GIVF pmax pmax
comp=Z,35nm,0.9s
BMRD Maredsous 67.27 40 *d*P **P 02 35 02.7 +0.5**
comp=Z,15nm,0.8s
BMRD *dp*P **pP 02 35 20.6 -2.8**
BGES Gesves 67.49 40 *d*P **P 02 35 04.1 +0.5**
BGES *d*PcP **PcP 02 35 31.1 +0.8**
FRF La Foret Royal 67.53 47 *e*P **P 02 35 03.9 -0.1**
FRF pmax pmax
comp=Z,17nm,0.8s
RCHB Rochefort 67.53 40 *d*P **P 02 35 04.5 +0.6**
RCHB *dp*P **pP 02 35 23.3 -1.8**
RCHB *d*PcP **PcP 02 35 31.0 +0.5**
BCLA Clavier 67.63 40 *d*P **P 02 35 05.1 +0.7**
BNI Bardonecchia 67.73 46 P **P 02 35 07.5 +2.1**
BSTI Sart Tilman 67.82 40 *d*P **P 02 35 06.3 +0.7**
BSTI *d*PcP **PcP 02 35 32.4 +0.7**
LPL La Plagne 67.83 45 *e*P **P 02 35 06.7 +0.6**
LPL pmax pmax
comp=Z,27nm,0.7s
DBG Daneborg 67.86 11⇑ *i*P **P 02 35 06.1 +0.7**
DBG IAmb IAmb 02 35 07.1
comp=Z,31nm,0.8s
BEBN Eben Emael 67.93 39 *d*P **P 02 35 07.0 +0.7**
comp=Z,37nm,0.7s
WLF Walferdange 68.04 41 *d*P **P 02 35 07.8 +0.8**
comp=Z,21nm,0.8s
WLF Walferdange 68.04 41 IAmb IAmb 02 35 08.9
comp=Z,27nm,0.8s
WLF Walferdange 68.04 41 *e*P **P 02 35 07.7 +0.7**
comp=Z,30nm,0.9s,baz=264,slow=6.1
BHOU Houvegnez 68.06 40 *d*P **P 02 35 08.2 +1.0**
BHOU *dx* x 02 35 24.3
MEM Membach 68.10 40 *d*P **P 02 35 07.8 +0.4**
comp=Z,16nm,0.8s
BTNL Ternell 68.18 40 *d*P **P 02 35 08.5 +0.6**
BTNL *d*PcP **PcP 02 35 32.6 -0.7**
HINF Hinteralfeld 68.22 43 *e*P **P 02 35 07.4 -0.8**
HINF pmax pmax
comp=Z,15nm,0.6s
SENIN Lac Senin/Sane 68.33 44 IAmb IAmb 02 35 11.4
comp=Z,15nm,0.8s
ECH Echery 68.47 42 IAmb IAmb 02 35 10.9
comp=Z,17nm,0.8s
AHRW Bad Neuenahr-A 68.77 40 *e*P **P 02 35 12.6 +1.1**
comp=Z,25nm,0.8s,baz=264,slow=6.1
BUG Bochum--Univer 69.03 39 *e*P **P 02 35 13.7 +0.6**
comp=Z,21nm,0.8s,baz=264,slow=6.1
BUG *e*PcP **PcP 02 35 36.5 -0.2**
KEST Kesra 69.06 56 P **P 02 35 15.3 +1.6**
comp=Z,9.7nm,0.5s,baz=168,slow=3.1,SNR=48
KEST LR LR 03 03 17.4
comp=Z,44nm,20.1s,baz=249,slow=34
KEST Kesra 69.06 56 IAmb IAmb 02 35 15.9
comp=Z,14nm,0.7s
VSL Villasalto 69.24 52 IAmb IAmb 02 35 17.1
comp=Z,18nm,0.8s
BFO Black Forest 69.27 42 P **P 02 35 14.3 -0.4**
BFO pmax pmax
comp=Z,8.0nm,0.6s
BFO Black Forest 69.27 42 P **P 02 35 14.3 -0.4**
BFO Black Forest 69.27 42 *e*P **P 02 35 14.7 0.0**
comp=Z,8.3nm,0.7s,baz=264,slow=6.1
KMY Karmoy 69.45 31 *e*P **P 02 35 16.1 +0.6**
IBBN Ibbenburen 69.46 38 *e*P **P 02 35 16.5 +0.7**

comp=Z,70nm,0.7s,baz=264,slow=6.1
TNS Taunus Mts 69.59 40 *e*P **P 02 35 17.3 +0.6**
comp=Z,40nm,0.8s,baz=264,slow=6.1
SUE Sulen 69.67 29 *e*P **P 02 35 18.1 +1.2**
KASTN Kahler Asten 69.70 39 *e*P **P 02 35 17.7 +0.4**
comp=Z,12nm,1.0s,baz=264,slow=6.1
ASK Askoy 69.73 29 *e*P **P 02 35 18.2 +0.9**
TUE Stuetta 69.75 44 IAmb IAmb 02 35 22.6
comp=Z,12nm,0.7s
BER Bergen 69.77 29 *e*P **P 02 35 18.5 +1.0**
FOO Floro 69.94 28 *e*P **P 02 35 19.6 +1.0**
BLS5 Blasjo 70.10 30 *e*P **P 02 35 20.8 +1.2**
EUNU Eureka 70.16 356 IAmb IAmb 02 35 20.5
comp=Z,18nm,1.0s
DAVA Damuels 70.19 44 *i*P **P 02 35 21.6 +1.0**
comp=Z,8.3nm,0.5s,SNR=20
CRAG Craig 70.22 325 P 02 35 21.4
baz=100
SNART Snartemo 70.25 32 *i*P **P 02 35 19.0 -1.5**
SNART *i*P **P 02 35 21.4 +0.9**
SNART Snartemo 70.25 32 *e*P **P 02 35 21.4 +0.9**
ODD1 Odda 70.29 30 *e*P **P 02 35 22.0 +1.2**
HYA Hoyanger 70.37 29 *e*P **P 02 35 22.5 +1.4**
UBR Ueberruh 70.38 43 *e*P **P 02 35 22.4 +0.7**
comp=Z,15nm,1.1s,baz=264,slow=6.1
CASP Castiglione de 70.54 48 IAmb IAmb 02 35 24.4
comp=Z,30nm,0.9s
UBBA Unterbreizbach 70.65 40 *e*P **P 02 35 23.8 +0.8**
comp=Z,5.8nm,0.9s,baz=264,slow=6.1
UBBA *e*PcP **pP 02 35 44.5 +0.1**
GTTG Gottingen 70.71 39 *e*P **P 02 35 24.2 +0.7**
comp=Z,22nm,0.7s,baz=264,slow=6.1
FETA Feichten 70.74 44 *i*P **P 02 35 25.0 +1.0**
comp=Z,23nm,0.7s,SNR=26
RETA Reutte 70.80 43 *i*P **P 02 35 25.2 +1.0**
comp=Z,3.7nm,0.3s,SNR=7.3
SKMB Sankelmark Bun 70.83 36 *e*P **P 02 35 25.3 +1.2**
comp=Z,62nm,0.8s,baz=264,slow=6.1
HOMB Homborsund 70.91 32 *i*P **P 02 35 25.7 +1.2**
HOMB Homborsund 70.91 32 *e*P **P 02 35 25.8 +1.3**
NRDL Niedersach Rie 70.91 38 *e*P **P 02 35 25.7 +1.1**
comp=Z,29nm,0.9s,baz=264,slow=6.1
MUD Monsted U'grnd 70.95 34 *i*P **P 02 35 26.2 +1.4**
MUD IAmb IAmb 02 35 26.6
comp=Z,27nm,0.6s
MUD Monsted U'grnd 70.95 34 *i*P **P 02 35 26.1 +1.4**
MUD pmax pmax
comp=Z,27nm,0.6s
AKN Aaknes 70.98 28 *e*P **P 02 35 26.2 +1.3**
CLZ Clausthal 71.00 39 *e*P **P 02 35 26.0 +0.7**
comp=Z,23nm,0.8s,baz=264,slow=6.1
MOTA Moosalm 71.02 44 *i*P **P 02 35 26.2 +0.6**
comp=Z,19nm,0.8s,SNR=10
SQTA Sankt Quirin 71.08 44 *i*P **P 02 35 26.7 +0.7**
comp=Z,29nm,0.7s,SNR=22
ASSE Asse, Remlinge 71.22 39 *e*P **P 02 35 27.5 +1.1**
comp=Z,48nm,1.2s,baz=264,slow=6.1
BSEG Bad Segeberg 71.23 37 *e*P **P 02 35 27.1 +0.6**
comp=Z,39nm,1.0s,baz=264,slow=6.1
SKAR Skarslia 71.27 29 *e*P **P 02 35 28.0 +1.2**
CTI Castel Tesino 71.30 45 IAmb IAmb 02 35 28.5
comp=Z,19nm,0.6s
GRFO Grafenberg 71.31 41 P **P 02 35 26.8 -0.3**
GRFO pmax pmax
comp=Z,11nm,0.9s
GRFO Grafenberg 71.31 41 P **P 02 35 26.8 -0.3**
GRF Grafenberg Arr 71.31 41 *e*P **P 02 35 27.7 +0.6**
comp=Z,55nm,1.6s,baz=264,slow=6.1
MOL Molde 71.32 27 *e*P **P 02 35 27.1 +0.2**
WATA Walderalm 71.34 44 *i*P **P 02 35 28.1 +0.5**
comp=Z,5.0nm,0.6s,SNR=6.3
WTTA Wattenberg 71.38 44 *i*P **P 02 35 28.4 +0.5**
comp=Z,9.8nm,0.6s,SNR=9.7
WTTA Wattenberg 71.38 44 P **P 02 35 28.3 +0.5**
FLTG Flechtingen 71.58 38 *e*P **P 02 35 29.0 +0.3**
comp=Z,21nm,0.9s,baz=264,slow=6.1
MOX Moxa 71.65 40 *e*P **P 02 35 29.5 +0.3**
comp=Z,7.0nm,0.9s,baz=264,slow=6.1
MOX *e*PcP **PcP 02 35 48.7 +0.8**
KONO Kongsberg 71.71 31⇓ *e*P **P 02 35 30.5 +1.2**
KONO pmax pmax
comp=Z,99nm,2.5s
KONO Kongsberg 71.71 31 P **P 02 35 29.2 -0.2**
KONO IAmb IAmb 02 35 31.6
comp=Z,26nm,1.0s
KONO Kongsberg 71.71 31 *e*P **P 02 35 30.6 +1.2**
MURB Monte Urbino 71.78 48 IAmb IAmb 02 35 30.8
comp=Z,23nm,0.7s
NEUB Neuenburg 71.80 40 *e*P **P 02 35 30.6 +0.5**
comp=Z,26nm,0.8s,baz=264,slow=6.1
DOMB Dombas 71.90 28 *e*P **P 02 35 31.7 +1.2**
MANZ Manzenberg 71.91 41 *e*P **P 02 35 31.6 +0.8**
comp=Z,20nm,0.9s,baz=264,slow=6.1
ABTA Abfaltersbach 71.94 44 *i*P **P 02 35 31.6 +0.5**
comp=Z,14nm,0.9s,SNR=13
ROTZ Rotzenmuhle 71.95 41 *e*P **P 02 35 31.7 +0.7**
comp=Z,11nm,1.0s,baz=264,slow=6.1
ROTZ *e*PcP **pP 02 35 51.0 -1.5**
PLN Plauen 71.98 40 *e*P **P 02 35 31.6 +0.5**
comp=Z,12nm,1.0s,baz=264,slow=6.1
STAL STALIGIAL 72.05 45 IAmb IAmb 02 35 33.1
comp=Z,19nm,1.1s
WERD Werda 72.07 40 *e*P **P 02 35 32.2 +0.5**
comp=Z,19nm,1.0s,baz=264,slow=6.1
GUNZ Gunzen 72.08 41 *e*P **P 02 35 32.4 +0.6**
comp=Z,9.9nm,0.8s,baz=264,slow=6.1
WERN Wernitzgruen 72.10 41 *e*P **P 02 35 32.7 +0.7**
comp=Z,19nm,1.1s,baz=264,slow=6.1
NKC Novy Kostel 72.14 41 *e*P **P 02 35 32.8 +0.6**
NKC Novy Kostel 72.14 41 *e*P **P 02 35 32.8 +0.6**
TANN Tannenbergstha 72.17 40 *e*P **P 02 35 33.0 +0.6**
comp=Z,15nm,0.9s,baz=264,slow=6.1
TANN *e*PcP **pP 02 35 52.1 -1.7**
CLTB Caltabellotta 72.19 54 IAmb IAmb 02 35 35.4
comp=Z,22nm,1.1s
RJOB Jochberg 72.19 43 *e*P **P 02 35 33.0 +0.5**
comp=Z,76nm,0.8s,baz=264,slow=6.1
ZOU Zoufplan 72.25 45 IAmb IAmb 02 35 34.5
comp=Z,23nm,1.0s
CORL Corleone 72.26 54 IAmb IAmb 02 35 40.9
comp=Z,16nm,0.9s
OSL Oslo 72.32 30 *e*P **P 02 35 34.2 +1.3**
WET Wettzell 72.34 42 *e*P **P 02 35 33.9 +0.6**
comp=Z,15nm,1.0s,baz=264,slow=6.1
AQU L'Aquila 72.39 49 P **P 02 35 36.7 +2.8**
AQU pmax pmax
comp=Z,18nm,0.8s
STRU Stroemstad 72.42 31 *i*P **P 02 35 34.9 +1.4**
TJOU Tjoern 72.50 32 *i*P **P 02 35 35.3 +1.2**
KBA Koelnbreinsper 72.53 44 *i*P **P 02 35 35.2 +0.5**
comp=Z,19nm,0.7s,SNR=29
KBA Koelnbreinsper 72.53 44 P **P 02 35 35.2 +0.5**
NC204 NORSAR Array S 72.56 29 IAmb IAmb 02 35 51.1
comp=Z,35nm,1.1s
CLL Collm 72.58 40⇑ *i*P **P 02 35 35.2 +0.5**
comp=Z,22nm,1.1s
CLL Collm 72.58 40⇑ *i*P **P 02 35 35.2 +0.5**
CLL pmax pmax
comp=Z,22nm,1.1s
CLL Collm 72.58 40 IAmb IAmb 02 35 36.5
comp=Z,17nm,0.9s
CLL Collm 72.58 40 *e*P **P 02 35 35.3 +0.5**
comp=Z,20nm,1.0s,baz=264,slow=6.1
TBLU Trondheim 72.68 27 *e*P **P 02 35 36.0 +1.0**
MYKA Terra Mystica 72.71 44 *i*P **P 02 35 36.2 +0.5**
comp=Z,8.5nm,0.5s,SNR=8.2
NB2 NORSAR Subarra 72.74 29 P **P 02 35 36.6 +1.1**
NB2 NORSAR Subarra 72.74 29 P **P 02 35 36.7 +1.2**
baz=261,slow=6.2
NOA NORSAR Array B 72.74 29 P **P 02 35 36.9 +1.4**
comp=Z,46nm,0.8s,baz=262,slow=6.1,SNR=144
NOA LR LR 03 02 49.5
comp=Z,25nm,21.9s,baz=260,slow=32
FBE Freiberg 72.77 40 *e*P **P 02 35 36.8 +0.9**
comp=Z,24nm,1.2s,baz=264,slow=6.1
KHC Kasperske Hory 72.80 42 *c i*P **P 02 35 36.6 +0.5**
KHC pmax pmax
comp=Z,31nm,1.3s
KHC Kasperske Hory 72.80 42 *e*P **P 02 35 36.3 +0.2**
NC602 NORSAR Array S 72.85 30 *e*P **P 02 35 37.9 +1.8**
NORES NORESS Array B 72.85 30 P **P 02 35 37.8 +1.7**
GEC2 GERESS Array S 72.86 42 IAmb IAmb 02 35 38.1
comp=Z,26nm,0.9s
GEC2 GERESS Array S 72.86 42 *e*P **P 02 35 37.0 +0.5**
comp=Z,26nm,0.9s,baz=264,slow=6.1
GERES GERESS Array B 72.86 42 P **P 02 35 37.0 +0.5**
comp=Z,14nm,0.8s,baz=255,slow=4.0,SNR=124
GERES GERESS Array B 72.86 42 P **P 02 35 36.0 -0.6**
FABU Falkenberg 72.96 34 *i*P **P 02 35 37.9 +1.1**
INK Inuvik 73.06 338 P **P 02 35 36.2 -0.9**
comp=Z,15nm,0.9s,baz=94,slow=5.5,SNR=48
INK Inuvik 73.06 338 IAmb IAmb 02 35 36.9
comp=Z,19nm,1.0s
BORU Boraas 73.06 33 *i*P **P 02 35 38.5 +1.1**
PBCC Pribram 73.10 41 *e*P **P 02 35 38.4 +0.6**
RAFF Raffo Rosso 73.11 54 IAmb IAmb 02 35 40.6
comp=Z,20nm,0.8s
BRG Berggiesshubel 73.14 40 *i*P **P 02 35 38.8 +0.8**
BRG Amp 02 35 41.7
comp=Z,20nm,1.0s
BRG Berggiesshubel 73.14 40 *e*P **P 02 35 38.8 +0.8**
comp=Z,19nm,1.0s,baz=264,slow=6.1
RUE Ruedersdorf 73.15 38 *e*P **P 02 35 38.6 +0.6**
comp=Z,47nm,0.9s,baz=264,slow=6.1
MOA Molln 73.19 43 *i*P **P 02 35 38.9 +0.5**
comp=Z,11nm,0.7s,SNR=17
CEY Cerknica 73.22 45⇑ *i*P **P 02 35 39.5 +0.8**
CKRC Cesky Krumlov 73.26 42 *e*P **P 02 35 39.2 +0.4**
OBKA Obir 73.33 45 *i*P **P 02 35 40.0 +0.6**
comp=Z,14nm,0.6s,SNR=13
PRA Prague 73.41 41 *e*P **P 02 35 40.7 +1.1**
PRA Prague 73.41 41 *e*P **P 02 35 40.7 +1.1**
NOR Nord 73.46 6⇑ *i*P **P 02 35 38.5 -0.9**
NOR IAmb IAmb 02 35 39.5
comp=Z,9.2nm,0.7s
NOR Nord 73.46 6⇑ *i*P **P 02 35 38.4 -0.9**
NOR pmax pmax
comp=Z,9.0nm,0.7s
PRU Pruhonice 73.47 41 *e*P **P 02 35 40.7 +0.7**
PRU *e* 02 35 52.7
PRU Pruhonice 73.47 41 *e*P **P 02 35 40.7 +0.7**
PRU *ex* x 02 35 44.0
PRU *e*PCP **PcP 02 35 52.7 -3.0**
PVCC Panska Ves 73.52 40 *e*P **P 02 35 41.0 +0.8**
PVCC Panska Ves 73.52 40 *e*P **P 02 35 41.0 +0.8**
DEL Delary 73.54 34 *i*P **P 02 35 40.0 -0.2**
DEL *i*P **P 02 35 40.7 +0.5**
NSS Namsos 73.64 26 *e*P **P 02 35 41.6 +1.0**
SOKA Soboth 73.67 44 *i*P **P 02 35 41.3 0.0**
comp=Z,5.4nm,0.6s,SNR=10
EPYK Eagle Plains 73.87 336 P 02 35 41.0
baz=100,SNR=9.3
CRES Cresnjev 73.95 45⇑ *i*P **P 02 35 43.7 +0.8**
BSD Bornholm Skovb 74.01 36 *e*P **P 02 35 43.6 +0.6**
ARSA Arzberg 74.02 44 *i*P **P 02 35 43.8 +0.4**
comp=Z,10.0nm,0.6s,SNR=8.1
TREC Trest 74.06 42 *e*P **P 02 35 44.3 +0.8**
TREC Trest 74.06 42 *e*P **P 02 35 44.3 +0.8**
N2RO R_st 74.21 23 *e*P **P 02 35 44.9 +1.0**
CONA Conrad Observa 74.27 43 *i*P **P 02 35 45.4 +0.6**
comp=Z,5.0nm,0.6s,SNR=8.3
STOK Stokkvaagen 74.36 24 *e*P **P 02 35 46.1 +1.3**
KONS Konsvik 74.43 24 *e*P **P 02 35 46.6 +1.4**
CHVC Chvalec 74.47 40 *e*P **P 02 35 46.7 +0.9**
OSTC Ostas 74.57 40 *e*P **P 02 35 47.5 +1.1**
N2SV S_rv¥gen 74.61 22 *e*P **P 02 35 48.0 +1.7**
KSP Ksiaz 74.63 40 *e*P **P 02 35 47.9 +1.2**
DPC Dobruska-Polom 74.63 41 *e*P **P 02 35 47.4 +0.6**
DPC Dobruska-Polom 74.63 41 *e*P **P 02 35 47.4 +0.6**
KRUC Moravsky 74.65 42 *e*P **P 02 35 47.6 +0.7**
SOP Sopron 74.73 43 P **P 02 35 49.3 +1.9**
SOP pmax pmax
comp=Z,15nm,0.8s
NBB30 Finnes 74.75 23 *e*P **P 02 35 48.2 +1.2**
VRAC Vranov 74.78 42⇑ P **P 02 35 48.8 +1.2**
VRAC Vranov 74.78 42 *e*P **P 02 35 48.6 +0.9**
VRAC Vranov 74.78 42⇑ P **P 02 35 48.8 +1.2**
NBB17 Glomfjord B¥r 74.81 24 *e*P **P 02 35 48.8 +1.4**
PRIJ Prijedor 74.83 46 *e*P **P 02 35 55.4 +7.4**
LOF Lofoten 74.85 22 *e*P **P 02 35 48.2 +0.6**
NBB05 Inndyr 74.87 23 *e*P **P 02 35 49.3 +1.5**
MOR8 Moi Rana 74.91 24 *e*P **P 02 35 49.8 +1.7**
KRLC Kraliky 74.92 41 *e*P **P 02 35 49.5 +1.0**
KRLC Kraliky 74.92 41 *e*P **P 02 35 49.5 +1.0**
KRLC *ex* x 02 35 53.2
TIP Timpagrande 74.95 52⇑ P **P 02 35 48.4 -0.5**
NBB28 Valnes 75.06 23 *e*P **P 02 35 50.3 +1.4**
MGRS Mrkonjic Grad 75.09 47⇑ *i*P **P 02 35 50.8 +1.2**
ZST Bratislava 75.10 43 *e*P **P 02 35 50.7 +1.2**
ZST pmax pmax
comp=Z,61nm,0.8s
ZST Bratislava 75.10 43 *e*P **P 02 35 50.7 +1.2**
NBB08 Skaug oppvekst 75.15 23 *e*P **P 02 35 50.6 +1.2**
BLY Banja Luka 75.16 46⇑ *i*P **P 02 35 50.7 +0.8**
CTGM Chitina Glacie 75.22 330 IAmb IAmb 02 35 52.3
comp=Z,14nm,0.8s
MODS Modra-Piesok 75.22 43 *e*P **P 02 35 50.5 +0.2**
MODS pmax pmax
comp=Z,47nm,0.9s
MODS Modra-Piesok 75.22 43 *e*P **P 02 35 50.4 +0.2**
CTG Chitna Glacier 75.22 330 P 02 35 50.5
baz=94
GKP Gorka Klasztor 75.28 38 *e*P **P 02 35 51.1 +0.7**
SMOL Smolenice 75.32 43 *e*P **P 02 35 51.9 +1.1**
SMOL pmax pmax
comp=Z,9.0nm,1.0s
SMOL Smolenice 75.32 43 *e*P **P 02 35 51.9 +1.1**
N2TV T¥rnvik 75.36 23 *e*P **P 02 35 51.7 +1.1**
FAUS Fauske 75.40 23 *e*P **P 02 35 51.9 +1.1**
MORC Moravsky Berou 75.41 41 *e*P **P 02 35 52.4 +1.1**
STEI Steigen 75.45 22 *e*P **P 02 35 52.0 +0.9**
EGAK Eagle 75.48 334 IAmb IAmb 02 35 52.1
comp=Z,34nm,1.1s
EGAK Eagle 75.48 334 P 02 35 50.8
baz=96,SNR=13
JAVC Velka Javorina 75.48 42 *e*P **P 02 35 53.6 +1.8**
N2ST Straumen 75.52 23 *e*P **P 02 35 52.7 +1.3**
BCAR Beaver Creek A 75.60 332 P **P 02 35 52.3 +0.2**
N2IH Innhavet 75.72 22 *e*P **P 02 35 53.7 +1.1**
K27K Chicken 75.81 333 IAmb IAmb 02 35 54.5
comp=Z,33nm,1.1s
K27K Chicken 75.81 333 P 02 35 53.4
baz=94
SRO Srobarova 75.92 43 *e*P **P 02 35 55.6 +1.5**
SRO Srobarova 75.92 43 *e*P **P 02 35 55.6 +1.5**
TREB Trebinje 76.05 49 *e*P **P 02 35 55.5 +0.5**
MCARA McCarthy VSAT 76.07 331 IAmb IAmb 02 35 58.0
comp=Z,24nm,1.0s
MCARA McCarthy VSAT 76.07 331 P 02 35 55.1
baz=93
MORH Mrgy, Hungar 76.17 45 ⇓P **P 02 35 56.8 +1.3**
MORH Mrgy, Hungar 76.17 45⇑ *i*P **P 02 35 56.7 +1.1**
BRY Bratogost 76.18 48⇑ *i*P **P 02 35 57.0 +1.0**
VYHS Vyhne 76.26 43 *e*P **P 02 35 57.1 +1.0**
VYHS pmax pmax
comp=Z,22nm,1.2s
VYHS Vyhne 76.26 43 *e*P **P 02 35 57.1 +1.0**
UPM Unac-Piva 76.44 48⇑ *i*P **P 02 35 58.8 +1.3**
HAPS Han Pijesak,BI 76.44 47⇑ *i*P **P 02 35 57.9 +0.5**
SCRK Sand Creek 76.64 333 P 02 35 57.5
baz=93,SNR=10
LANS Liptovska Anna 76.67 42 *e*P **P 02 36 01.0 +2.6**
LANS pmax pmax
comp=Z,8.0nm,0.9s
LANS Liptovska Anna 76.67 42 *e*P **P 02 36 01.0 +2.6**
DRME Dracevica, Mon 76.69 49⇑ *i*P **P 02 36 00.4 +1.8**
PDG Podgorica 76.73 49⇑ *i*P **P 02 36 00.1 +1.3**
PDG Podgorica 76.73 49 IAmb IAmb 02 36 01.5
comp=Z,22nm,1.1s
BBLS Lazići 76.78 47⇑ *i*P **P 02 36 00.6 +1.4**
BMRM Bremner River 76.81 330 P 02 35 58.9
baz=92
N25K Chitina, Valde 76.83 331 P 02 35 59.1
baz=92
TEKS Tekeris 76.84 47 *e*P **P 02 36 01.2 +1.7**
OJC Ojcow 76.86 41 *e*P **P 02 36 00.9 +1.5**
OJC Ojcow 76.86 41 IAmb IAmb 02 36 02.1
comp=Z,28nm,1.0s
TRO Tromso 76.96 21 *e*P **P 02 36 00.5 +0.9**
PSZ Piszkesteto 76.98 43⇑ P **P 02 36 01.0 +0.7**
PSZ Piszkesteto 76.98 43⇑ P **P 02 36 01.0 +0.7**
FRGS Fruska Gora 77.02 46 ⇓P **P 02 36 02.0 +1.6**
FRGS Fruska Gora 77.02 46⇑ *i*P **P 02 36 01.5 +1.0**
BMAR Burnt Mountain 77.07 337 P **P 02 36 00.2 -0.2**
DIVS Divibare 77.19 47⇑ *i*P **P 02 36 02.7 +1.1**
DIVS Divibare 77.19 47 IAmb IAmb 02 36 04.8
comp=Z,15nm,0.9s
NIE Niedzica 77.20 42 *e*P **P 02 36 04.2 +2.8**
SPA0 Spitsbergen Ar 77.22 12 *e*P **P 02 36 01.3 +0.3**
PAX Paxson 77.27 332 P 02 36 00.9
baz=91,SNR=5.1
FYU Fort Yukon 77.28 336 IAmb IAmb 02 36 02.1
comp=Z,43nm,1.2s
KECS Kecovo 77.36 43 *e*P **P 02 36 04.0 +1.7**
KECS pmax pmax
comp=Z,10.0nm,0.8s
KECS Kecovo 77.36 43 *e*P **P 02 36 04.0 +1.7**
PRP Porcupine Dome 77.37 335 IAmb IAmb 02 36 02.6
comp=Z,18nm,1.1s
PRP Porcupine Dome 77.37 335 P 02 36 01.5
baz=92
KLU Klutina 77.46 331 P 02 36 02.5
baz=90
JETT Jettan, Norway 77.47 21 *e*P **P 02 36 03.4 +0.8**
M24K Tolsona, Glenn 77.59 331 P 02 36 03.0
baz=90
AMBH Ambrzfalva 77.61 45 ⇓P **P 02 36 06.3 +2.7**
PHP Peshkopia 77.65 50 P **P 02 36 06.0 +1.9**
IGT Igoumenitsa 77.70 52 P **P 02 36 06.3 +1.9**
IGT Igoumenitsa 77.70 52 P **P 02 36 06.3 +1.9**
IGT pmax pmax
comp=Z,24nm,1.1s
LSK Leskovik 77.87 51 P **P 02 36 07.2 +1.8**
ILAR Eielson Array 77.93 334 P **P 02 36 04.3 -0.8**
comp=Z,3.2nm,0.6s,baz=96,slow=4.2,SNR=50
ILAR PKKPbc **PKKPbc 02 55 04.3 -3.7**
comp=Z,0.1nm,0.5s,baz=235,slow=3.2,SNR=4.1
ILAR LR LR 03 12 53.2
comp=Z,171nm,18.8s,baz=126,slow=37
HDA Harding Lake 77.95 334 P 02 36 05.0
baz=90
HDA P 02 36 05.0
baz=90
CRVS Cervenica-Dubn 77.98 42 *e*P **P 02 36 07.8 +2.0**
CRVS pmax pmax
comp=Z,30nm,0.9s
CRVS Cervenica-Dubn 77.98 42 *e*P **P 02 36 07.8 +2.0**
PSDA Pessada-Kefalo 78.00 53 P **P 02 36 07.0 +1.0**
VLS Valsamata 78.00 53 P **P 02 36 07.0 +0.9**
EVGI Lefkada island 78.02 53 P **P 02 36 07.7 +1.5**
NYDR Nydri-Lefkada 78.05 53 P **P 02 36 07.9 +1.6**
JAN Janina 78.09 52 P **P 02 36 08.6 +2.0**
POKR Poker Plat Res 78.16 334 P 02 36 06.6
baz=90
LTHK Lithakia 78.23 54 P **P 02 36 08.4 +1.1**
BZS Buzias 78.26 45 ⇓P **P 02 36 08.8 +1.4**
BZS Buzias 78.26 45 ⇓P **P 02 36 08.8 +1.4**
WAT6 Susitna Watana 78.32 332 P 02 36 06.6
baz=89,SNR=5.4
COLA College 78.34 334 *de*P **P 02 36 06.7 -0.7**
COLA pmax pmax
comp=Z,12nm,1.2s
COLA College 78.34 334 P **P 02 36 07.0 -0.3**
TCOL CIGO_UAF Yank 78.34 334 P 02 36 06.7
baz=90
MDVR Moldovita 78.38 46 ⇑P **P 02 36 09.2 +1.1**
FNA Florina 78.41 50 P **P 02 36 09.8 +1.4**
FNA Florina 78.41 50 P **P 02 36 09.6 +1.2**
FNA pmax pmax
comp=Z,41nm,0.8s
FNA Florina 78.41 50 IAmb IAmb 02 36 10.9
comp=Z,26nm,0.7s
WRH Wood River Hil 78.45 334 IAmb IAmb 02 36 08.8
comp=Z,17nm,1.1s
KPRO Kipourio 78.47 51 P **P 02 36 10.7 +2.0**
KTK1 Kautokeino 78.47 22 *e*P **P 02 36 08.6 +0.6**
MDM Murphy Dome 78.50 334 IAmb IAmb 02 36 08.7
comp=Z,37nm,1.0s
UZH Uzhgorod 78.55 42 *d i*P **P 02 36 10.0 +1.2**
UZH *e* 02 36 19.7
UZH *i* 02 36 30.2
UZH *e* 02 36 38.5
SML Sawmill 78.61 331 P 02 36 08.6
baz=88
AXS Araxos 78.62 53 P **P 02 36 11.4 +1.9**
HAMF Hammerfest 78.62 20 *e*P **P 02 36 10.1 +1.3**
KNK Knik Glacier 78.68 331 P 02 36 09.3
baz=88
WAT2 Susitna Watana 78.70 332 P 02 36 09.2
baz=88
PVO Paravola 78.70 53 P **P 02 36 12.1 +2.2**
TRPA Tarpa 78.74 43 ⇑P **P 02 36 11.5 +1.5**
KZN Kozani 78.75 51 P **P 02 36 11.8 +1.5**
KWP Kalwaria Pacla 78.76 41 *e*P **P 02 36 12.4 +2.4**
RND Reindeer 78.81 333 IAmb IAmb 02 36 11.1
comp=Z,25nm,1.2s
SUW Suwalki 78.81 37 *e*P **P 02 36 11.3 +1.1**
MCK McKinley 78.83 333 P 02 36 09.7
baz=88
NEA2 Nenana 78.87 334 IAmb IAmb 02 36 11.2
comp=Z,28nm,0.9s
NEA2 Nenana 78.87 334 P 02 36 09.3
baz=88,SNR=26
HERR Herculane 78.88 46 ⇑P **P 02 36 11.6 +0.8**
EVR Evrytania 78.89 52 P **P 02 36 13.6 +2.5**
DRO Drossia 78.90 53 P **P 02 36 13.4 +2.3**
AMT Artemida-Makis 78.94 54 P **P 02 36 13.2 +1.9**
MTSE Matsula 78.94 32 *e*P **P 02 36 11.7 +1.0**
DRGR 78.95 44 ⇑P **P 02 36 12.4 +1.2**
DRGR 78.95 44 ⇑P **P 02 36 12.4 +1.2**
STIP Stip 78.95 49 *i*P **P 02 36 13.2 +2.0**
TOLK Toolik Lake Re 78.97 338 P 02 36 09.9
baz=89,SNR=6.2
I23K Minto, Yukon-K 78.98 335 P 02 36 10.2
baz=88,SNR=8.5
PMR Palmer 79.00 331 P 02 36 11.3
baz=88
THL Klokotos Trika 79.00 52 P **P 02 36 12.9 +1.4**
TRSU Trosnyk 79.02 43 P **P 02 36 12.3 +0.8**
LAKA Lakka 79.09 53 P **P 02 36 14.1 +2.0**
GZR Gura Zlata 79.09 46 ⇑P **P 02 36 13.1 +1.1**
GZR Gura Zlata 79.09 46 ⇑P **P 02 36 13.1 +1.1**
MAKR Makrakomi, Fth 79.14 52 P **P 02 36 14.3 +1.9**
ITM Ithomi 79.14 54 P **P 02 36 14.2 +1.8**
ITM Ithomi 79.14 54 IAmb IAmb 02 36 15.2
comp=Z,30nm,0.7s
TRIZ Trizonia 79.15 53 P **P 02 36 14.5 +2.1**
GRG Griva 79.17 50 P **P 02 36 14.1 +1.6**
PABE Paberze 79.19 35 *e*P **P 02 36 13.8 +1.6**
KALE Kalithea 79.20 53 P **P 02 36 14.7 +2.0**
KLV Kalavryta, Ach 79.24 53 P **P 02 36 15.0 +2.0**
COLD Coldfoot 79.25 337 P 02 36 12.3
baz=88
ARA0 ARCESS Array S 79.27 21 *e*P **P 02 36 12.7 +0.3**
ARCES ARCESS Array B 79.27 21 P **P 02 36 12.6 +0.1**
comp=Z,24nm,0.7s,baz=284,slow=4.9,SNR=61
ARCES LR LR 03 08 17.0
comp=Z,20nm,19.1s,baz=320,slow=33
ARCES ARCESS Array B 79.27 21 P **P 02 36 12.5 +0.1**
ARCES IAmb IAmb 02 36 13.7
comp=Z,28nm,0.8s
AGG Agios Georgios 79.29 52 P **P 02 36 14.4 +1.2**
AGG Agios Georgios 79.29 52 IAmb IAmb 02 36 16.1
comp=Z,37nm,1.1s
RC01 Rabbit Creek A 79.31 330 P 02 36 12.9
baz=87
TRF Thorofare Moun 79.45 333 IAmb IAmb 02 36 15.8
comp=Z,20nm,0.7s
TRF Thorofare Moun 79.45 333 P 02 36 13.2
baz=87,SNR=11
VLX Vlachokerasia 79.48 54 P **P 02 36 16.8 +2.4**
CUT Chulitna 79.50 332 IAmb IAmb 02 36 17.6
comp=Z,41nm,1.2s
CUT Chulitna 79.50 332 P 02 36 13.2
baz=87
KNT Kandrikon 79.53 50 P **P 02 36 15.0 +0.6**
MLY Manley 79.56 334 P 02 36 13.3
baz=87,SNR=10
AXAR Agios Charalam 79.57 52 P **P 02 36 16.4 +1.7**
MORS Morshin 79.57 42 P **P 02 36 16.1 +1.7**
LVV L'vov 79.61 41 *e*P **P 02 36 15.7 +1.1**
THAL Thalero 79.64 53 P **P 02 36 16.5 +1.4**
VTS Vitosha 79.65 48 ⇑P **P 02 36 16.8 +1.6**
VTS Vitosha 79.65 48 ⇑P **P 02 36 16.8 +1.6**
BPAW Bear Paw Mtn. 79.72 334 IAmb IAmb 02 36 15.4
comp=Z,27nm,1.2s
BPAW Bear Paw Mtn. 79.72 334 P 02 36 14.1
baz=86,SNR=12
KTH Kantishna Hill 79.73 333 IAmb IAmb 02 36 15.9
comp=Z,38nm,1.1s
SUA Susitna One 79.78 331 P 02 36 15.2
baz=86
LOT Lotru 79.79 46 ⇑P **P 02 36 16.6 +0.7**

LTK	Loutraki	79.88	53	P		P	02 36 17.6	+1.2
BRSE	Bradley Lake S	79.89	329	P			02 36 15.9	
	baz=86							
SOH	Sokhos	79.91	50	P		P	02 36 18.3	+1.8
FINES	FINESS Array B	79.92	29	P		P	02 36 16.7	+0.7
	comp=Z,60nm,0.8s,baz=269,slow=3.5,SNR=288							
FINES				PKKPbc		PKKPbc	02 55 00.5	-2.8
	comp=Z,1.9nm,1.1s,baz=90,slow=4.4,SNR=3.4							
FINES				LR		LR	03 05 31.5	
	comp=Z,50nm,21.2s,baz=311,slow=31							
FINES	FINESS Array B	79.92	29	P		P	02 36 16.0	0.0
XOR	Xorichti	79.92	52	P		P	02 36 17.6	+1.0
NEO	Neokhori	79.95	52	P		P	02 36 17.9	+1.1
BRLK	Bradley Lake	79.96	329	IAmb		IAmb	02 36 17.2	
	comp=Z,22nm,0.9s							
VLI	Veliai	79.99	54	P		P	02 36 18.6	+1.6
PLG	Polygyros	80.02	51	P		P	02 36 18.7	+1.6
ARCR	ARCALIA	80.05	44	⇓P		P	02 36 18.7	+1.7
SRS	Serrai	80.06	50	P		P	02 36 18.7	+1.4
SRS	Serrai	80.06	50	P		P	02 36 18.9	+1.6
SRS				pmax		pmax		
	comp=Z,18nm,1.4s							
SKT	Skwentna	80.11	331	P			02 36 16.6	
	baz=86							
VILL	Villia	80.14	53	P		P	02 36 19.0	+1.2
CNPM	China Poot	80.16	329	IAmb		IAmb	02 36 18.5	
	comp=Z,30nm,0.7s							
NVR	Nevrokopi	80.24	50	P		P	02 36 19.8	+1.5
PAIG	Paliouri	80.24	51	P		P	02 36 19.6	+1.3
PAIG	Paliouri	80.24	51	P		P	02 36 19.8	+1.5
CHUM	Lake Minchumin	80.32	333	P			02 36 17.4	
	baz=85,SNR=6.5							
PPLA	Purkeypile	80.35	332	P			02 36 17.7	
	baz=85							
ARR	Arges	80.40	46	⇓P		P	02 36 20.6	+1.5
ISAL	Salakas	80.41	35	*e*P		P	02 36 20.7	+1.9
KSV	Kosov	80.41	43	P		P	02 36 18.9	-0.1
OUR	Ouranopolis	80.43	51	P		P	02 36 20.9	+1.7
OUR	Ouranopolis	80.43	51	P		P	02 36 20.9	+1.7
ATH	Athens Observa	80.48	53	P		P	02 36 20.8	+1.3
IIGN	Ignalina	80.48	35	*e*P		P	02 36 20.9	+1.7
VSU	Vasula	80.48	32	*e*P		P	02 36 20.1	+1.0
VSU	Vasula	80.48	32	*c i*P		P	02 36 19.6	+0.5
VSU				pmax		pmax		
	comp=Z,230nm,0.9s							
SPCR	Spurr Chakacha	80.50	331	P			02 36 19.1	
	baz=85,SNR=7.0							
ATHU	Athens Univers	80.53	53	P		P	02 36 21.3	+1.4
VLY	Voula,Athens	80.55	53	P		P	02 36 21.3	+1.3
BURAR	Bucovina Array	80.58	43	⇓P		P	02 36 22.2	+2.1
BURAR	Bucovina Array	80.58	43	⇓P		P	02 36 22.2	+2.1
BURAR	Bucovina Array	80.58	43	P		P	02 36 19.2	-0.8
PTL	Penteli	80.58	53	P		P	02 36 21.7	+1.5
PLVB	Pleven	80.59	48	⇑P		P	02 36 21.3	+1.2
DION	Dionisos Attik	80.64	53	P		P	02 36 21.9	+1.4
VOIR		80.68	45	⇓P		P	02 36 21.9	+1.3
VOIR		80.68	45	⇓P		P	02 36 21.9	+1.3
HUMR	Humele	80.73	46	⇓P		P	02 36 22.4	+1.6
IMAR	Indian Mountai	80.74	336	P		P	02 36 19.8	-0.6
IDID	Didziasalis	80.78	35	*e*P		P	02 36 22.5	+1.8
PLD	Plovdiv	80.78	49	P		P	02 36 23.0	+1.9
PLD				pmax		pmax		
	comp=Z,54nm,1.3s							
NACGM	Naroch	80.84	36	*i* P		P	02 36 22.5	+1.4
NACGM				*i* P		P	02 36 22.5	+1.4
NACGM				*i* P		P	02 36 22.5	+1.4
NACGM				*i* PP		PP	02 39 32.6	+6.4
NACGM				*i* PPP		PPP	02 41 30.9	
NACGM				*i* S		ScS	02 46 40.0	-1.2
NACGM				*i* SS		SS	02 52 02.8	+25
NACGM				*i* SSS		SSS	02 55 31.8	
NACGM				*i* SSS		SSS	02 55 42.4	
NACGM				*i* LR		LR	03 14 04.5	
DOPR	Dopca	80.86	45	⇑P		P	02 36 22.8	+1.3
THAS	Thassos island	80.96	50	P		P	02 36 23.3	+1.2
KDAK	Kodiak Island	81.02	327	⇓*e*P		P	02 36 22.1	+0.1
KDAK	Kodiak Island	81.02	327	P			02 36 21.8	
	baz=84							
SKY	Skiros Island	81.03	52	P		P	02 36 24.4	+1.9
OZUR		81.13	45	⇓P		P	02 36 24.3	+1.4
GVDS	Gavdos	81.14	56	P		P	02 36 24.3	+1.2
A21K	Barrow	81.18	341	IAmb		IAmb	02 36 24.0	
	comp=Z,39nm,1.1s							
A21K	Barrow	81.18	341	P			02 36 22.7	
	baz=82,SNR=11							
HORU	Horodok	81.22	42	P		P	02 36 23.8	+0.5
BIZ	Bicaz	81.25	44	⇑P		P	02 36 25.7	+2.1
PRAR	RASCA	81.29	43	⇑P		P	02 36 25.0	+1.3
MLR	Muntele Rosu	81.31	45	⇑P		P	02 36 25.7	+1.7
MLR	Muntele Rosu	81.31	45	⇑P		P	02 36 25.7	+1.7
KMPD	K-Podol'skiy	81.31	42	P		P	02 36 24.0	+0.3
LIA	Limnos Island	81.39	51	P		P	02 36 25.8	+1.4
OHAK	Old Harbor	81.45	327	P			02 36 24.2	
	baz=83							
RDO	Rodhopi	81.51	50	P		P	02 36 26.1	+1.1
MNK	Minsk	81.52	36	⇑*e*P		P	02 36 24.0	-0.7
MNK				pmax		pmax		
	comp=Z,310nm,1.5s							
MNK	Minsk	81.52	36	*i* P		P	02 36 25.7	+0.9
	comp=E,7.0nm,0.9s							
MNK				*i* P		P	02 36 25.7	+0.9
	comp=N,22nm,0.9s							
MNK				*i* P		P	02 36 25.7	+0.9
	comp=Z,154nm,0.9s							
MNK				*i* PcP		PcP	02 36 30.6	+0.1
MNK				*i* pP		pP	02 36 47.1	+0.4
MNK				*i* sP		sP	02 36 56.0	+0.4
MNK				*i* PP		PP	02 39 34.5	+2.7
MNK				*i* PPP		PPP	02 41 25.5	
MNK				*i* S		S	02 46 29.0	-0.9
MNK				*i* sS		sS	02 47 11.8	+4.5
MNK				*i* SS		SS	02 51 56.8	+9.0
MNK				*i* SSS		SSS	02 55 25.1	
MNK				*i* LQ		LQ	03 00 34.8	
MNK				*i* LR		LR	03 03 59.4	
MNK				*i* LRM		MLR	03 12 41.4	
	comp=N,89nm,19.0s							
MNK				*i* LRM		MLR	03 12 45.3	
	comp=E,25nm,19.0s							
MNK				*i* LRM		MLR	03 12 54.5	
	comp=Z,197nm,19.0s							
NEHR	Nehoiu	81.56	45	⇑P		P	02 36 26.5	+1.3
SMTH	Samothraki Isl	81.59	50	P		P	02 36 25.7	+0.2
SULR		81.62	46	⇓P		P	02 36 26.3	+0.9
TESR	Tescani	81.67	44	⇑P		P	02 36 27.0	+1.2
IDI	Anoyia	81.73	56	P		P	02 36 27.2	+0.8
IDI	Anoyia	81.73	56	⇓P		P	02 36 29.0	+2.6
PLOR	Plostina	81.75	45	⇑P		P	02 36 27.7	+1.4
PLOR	Plostina	81.75	45	⇑P		P	02 36 27.7	+1.4
VRI	Vrincioaia	81.81	45	⇓P		P	02 36 27.6	+1.1
VRI	Vrincioaia	81.81	45	⇓P		P	02 36 27.6	+1.1
BISRR	Bisoca	81.83	45	⇑P		P	02 36 26.6	-0.1
GADA	Gvkgeada	81.90	51	P		P	02 36 28.3	+1.2
ALN	Alexandroupoli	81.93	50	P		P	02 36 28.2	+1.1
ALN	Alexandroupoli	81.93	50	P		P	02 36 28.3	+1.1
ALN	Alexandroupoli	81.93	50	IAmb		IAmb	02 36 29.4	
	comp=Z,20nm,0.9s							
SIGR	SIGRI	82.00	52	P		P	02 36 28.9	+1.3
ENEZ	Enez	82.03	50	P		P	02 36 28.8	+1.1
ODBI	Odobesti	82.05	45	⇓P		P	02 36 29.2	+1.5
SVW2	Sparrevohn	82.14	331	IAmb		IAmb	02 36 28.1	
	comp=Z,20nm,0.6s							
PUL	Pulkovo	82.18	31	*de*P		P	02 36 29.3	+1.2
PUL				pmax		pmax		
	comp=Z,67nm,0.5s							
VALR	Valaam	82.23	29	*i* P		P	02 36 28.5	+0.2
VALR				pmax		pmax		
	comp=Z,97nm,0.9s							
EZN	Ezine	82.28	51	P		P	02 36 30.1	+1.1
EZN	Ezine	82.28	51	P		P	02 36 30.3	+1.3
EDRB	Edirne	82.33	49	P		P	02 36 30.3	+1.0
APA	Apatity	82.35	23	⇓*i*P		P	02 36 28.9	+0.1
APA				pmax		pmax		
	comp=Z,12nm,0.9s							
SORM	Soroca	82.61	42	⇑P		P	02 36 31.0	+0.4
SORM	Soroca	82.61	42	⇑P		P	02 36 31.0	+0.4
LVZ	Lovozero	82.76	22	⇑*e*P		P	02 36 30.8	-0.2
LVZ				pmax		pmax		
	comp=Z,70nm,2.5s							
HARR	Harsova	82.80	46	⇑P		P	02 36 32.2	+0.6
HARR	Harsova	82.80	46	⇑P		P	02 36 32.2	+0.6
KIEV	Kiev	82.81	40	P		P	02 36 31.0	-0.6
AKASG	Malin Array Be	82.82	40	P		P	02 36 32.1	+0.5
	comp=Z,15nm,0.7s,baz=291,slow=4.2,SNR=30							
AKASG				PKKPbc		PKKPbc	02 54 54.4	-2.0
	comp=Z,0.6nm,0.6s,baz=93,slow=1.9,SNR=4.1							
AKASG				LR		LR	03 10 52.9	
	comp=Z,22nm,19.5s,baz=25,slow=34							
AKASG	Malin Array Be	82.82	40	P		P	02 36 31.3	-0.3
AKBB	Malin Array Si	82.82	40	*c i*P		P	02 36 31.8	+0.2
AKBB	Malin Array Si	82.82	40	IAmb		IAmb	02 36 33.2	
	comp=Z,20nm,0.9s							
CFR	Carcaliu	82.88	45	⇓P		P	02 36 31.9	-0.1
CFR	Carcaliu	82.88	45	⇓P		P	02 36 31.9	-0.1
TLBR	Topalu	82.90	46	⇑P		P	02 36 32.8	+0.6
MILM	Milestii Mici	83.10	44	⇑P		P	02 36 33.5	+0.4
TPGR	Topolog	83.12	46	⇑P		P	02 36 34.0	+0.7
TIRR	Tirgusor	83.17	46	P		P	02 36 35.7	+2.1
TIRR	Tirgusor	83.17	46	IAmb		IAmb	02 36 35.1	
	comp=Z,31nm,0.8s							
MFTR	Murfatlar	83.22	46	⇑P		P	02 36 35.2	+1.4
TLCR		83.35	45	⇑P		P	02 36 35.7	+1.2
TLCR		83.35	45	⇑P		P	02 36 35.7	+1.2
JURR	Jurilovca	83.46	46	⇑P		P	02 36 37.1	+2.1
RDOG	Red Dog Mine	83.94	338	IAmb		IAmb	02 36 37.9	
	comp=Z,28nm,0.8s							
RDOG	Red Dog Mine	83.94	338	P			02 36 37.1	
	baz=76							
ARG	Arkhangelos	84.20	54	P		P	02 36 39.4	+0.4
FETY	Fethiye	84.90	54	P		P	02 36 41.8	-0.8
AKAS	Kas	85.38	54	IAmb		IAmb	02 36 46.3	
	comp=Z,15nm,0.9s							
ELL	Elmali	85.53	54	P		P	02 36 47.8	+1.9
ANM	Nome	85.81	335	P			02 36 46.5	
	baz=74,SNR=6.6							
OBN	Obninsk	86.36	35	*c i*P		P	02 36 50.1	+0.8
OBN				*e**PP		pP	02 37 11.0	-0.4
OBN				*e**SP		sP	02 37 20.0	-0.3
OBN				*e*			02 40 14.4	
OBN				*e*PPP		PPP	02 42 04.4	
OBN				*e*S		SKSac	02 47 07.7	-0.6
OBN				pmax		pmax		
	comp=Z,228nm,1.3s							
OBN				MLR		MLR		
	comp=Z,55nm,13.0s							
OBN	Obninsk	86.36	35	P		P	02 36 49.1	-0.2
KLMR	Klimovskoe	86.43	29	*e*P		P	02 36 47.3	-2.3
KLMR				pmax		pmax		
	comp=Z,124nm,1.3s							
KLMR	Klimovskoe	86.43	29	*e*P		P	02 36 47.4	-2.2
KLMR				AMP			02 36 51.7	
	comp=Z,124nm,1.3s							
TNA	Tin City	86.54	336	P			02 36 50.5	
	baz=72,SNR=36							
MOS	Moscow	86.80	34	*e*P		P	02 36 51.3	-0.2
MOS				*e**PP		pP	02 37 12.8	-0.8
MOS				pmax		pmax		
	comp=Z,86nm,1.2s							
SIM	Simferopol'	87.09	45	*d i*P		P	02 36 53.8	+0.6
SIM				pmax		pmax		
	comp=Z,65µm,0.9s							
ANTO	Ankara	87.18	50	P		P	02 36 53.0	-0.8
ANTO				pmax		pmax		
	comp=Z,58nm,0.9s							
ANTO	Ankara	87.18	50	P		P	02 36 53.0	-0.8
FALS	False Pass	87.48	325	P			02 36 54.7	
	baz=75							
ILGA	Ilgaz	87.62	49	IAmb		IAmb	02 36 59.7	
	comp=Z,9.8nm,0.9s							
BR131	Keskin Array S	87.84	50	*c i*P		P	02 36 57.6	+0.5
BRTR	Keskin Array B	87.84	50	P		P	02 36 58.1	+1.0
	comp=Z,32nm,0.7s,baz=262,slow=4.6,SNR=162							
BRTR	Keskin Array B	87.84	50	P		P	02 36 56.2	-0.9
LPSR	Galich'ya Gora	88.35	37	*e*P		P	02 36 59.2	+0.2
LPSR				pmax		pmax		
	comp=Z,70nm,0.8s							
CSS	Mathiatis	88.60	55	IAmb		IAmb	02 37 03.4	
	comp=Z,22nm,0.9s							
DIKM	Dikmen	88.63	48	⇓P		P	02 37 00.1	-0.4
GAMB	Gambell	88.68	335	IAmb		IAmb	02 37 01.6	
	comp=Z,16nm,0.9s							
GAMB	Gambell	88.68	335	P			02 37 00.5	
	baz=68,SNR=15							
VSR	Storozhevoye	88.86	38	*e*P		P	02 37 01.2	-0.2
VSR				pmax		pmax		
	comp=Z,70nm,0.8s							
PRGR	Permogore	88.99	27	⇑*i*P		P	02 37 02.4	+0.6
PRGR				*e**PP		pP	02 37 21.8	-2.2
PRGR				pmax		pmax		
	comp=Z,56nm,0.9s							
VORD	Divnogorie	89.01	38	*e*P		P	02 37 01.7	-0.4
VORD				pmax		pmax		
	comp=Z,40nm,0.8s							
VNA1	Neumayer--Stat	89.08	164	P		P	02 37 03.9	+2.0
VNA3	Neumayer Olymp	89.08	165	P		P	02 37 03.8	+1.9
VNA3	Neumayer Olymp	89.08	165	PKiKP		PKiKP	02 42 02.6	+2.3
VNA3	Neumayer Olymp	89.08	165	pP		pP	02 37 26.5	+2.3
ANN	Anapa	89.42	45	*e*P		P	02 37 02.7	-1.4
ANN				*e**PP		pP	02 37 24.6	-1.8
ANN				*e*			02 47 37.0	
ANN				pmax		pmax		
	comp=Z,118nm,1.0s							
VNA2	Neumayer--Watz	89.47	164	P		P	02 37 05.4	+1.6
	baz=320,slow=4.5							
VNA2	Neumayer--Watz	89.47	164	PKiKP		PKiKP	02 42 00.7	-0.3
VNA2	Neumayer--Watz	89.47	164	PP		PP	02 40 38.7	+2.5
VNA2	Neumayer--Watz	89.47	164	pP		pP	02 37 27.5	+1.5
TOKA	Tokat	89.83	49	IAmb		IAmb	02 37 10.9	
	comp=Z,12nm,0.8s							
VRH	Novokhopyorsk	90.41	38	*e*P		P	02 37 08.9	+0.3
VRH				pmax		pmax		
	comp=Z,60nm,0.8s							
PPT	Papeete	90.47	252	LR		LR	03 11 00.2	
	comp=Z,58nm,21.6s,baz=96,slow=31							
EIL	Elat	91.09	60	LR		LR	03 21 04.0	
	comp=Z,22nm,18.4s,baz=272,slow=37							
SNAA	Sanae	91.11	164	P		P	02 37 12.9	+1.4
SNAA	Sanae	91.11	164	PKiKP		PKiKP	02 42 05.4	+1.6
SNAA	Sanae	91.11	164	pP		pP	02 37 35.9	+2.2
SNAA	Sanae	91.11	164	⇑*e*P		P	02 37 12.8	+1.4
SNAA				pmax		pmax		
	comp=Z,9.0nm,1.3s							
SNAA	Sanae	91.11	164	P		P	02 37 12.2	+0.7
SNAA				IAmb		IAmb	02 37 14.2	
	comp=Z,6.2nm,0.9s							
SOC	Sochi	91.32	45	*e*P		P	02 37 12.3	-0.8
SOC				*e*			02 40 50.2	
SOC				*e*PPP		PPP	02 42 51.4	
SOC				*e*S		SKSac	02 47 36.6	-1.7
SOC				*e*SS		SS	02 54 16.8	+5.0
SOC				*e*SSS		SSS	02 57 47.8	
SOC				MLR		MLR		
	comp=Z,58nm,16.0s							
KIRV	Kirov	91.92	29	*ce*P		P	02 37 15.1	-0.4
LBTB	Lobatse	92.77	115	LR		LR	03 15 44.8	
	comp=Z,47nm,19.5s,baz=270,slow=33							
BOSA	Boshof	93.13	118	P		P	02 37 23.2	+1.4
	comp=Z,2.7nm,0.7s,baz=307,slow=4.0,SNR=6.2							
BOSA				LR		LR	03 14 17.0	
	comp=Z,67nm,21.5s,baz=345,slow=32							
BOSA	Boshof	93.13	118	IAmb		IAmb	02 37 34.4	
	comp=Z,8.8nm,1.1s							
KIV	Kislovodsk	93.27	44	⇓P		P	02 37 23.6	+1.4
KIV	Kislovodsk	93.27	44	*e*P		P	02 37 22.9	+0.7
KIV				pmax		pmax		
	comp=Z,49nm,1.0s							
KIV	Kislovodsk	93.27	44	P		P	02 37 21.6	-0.6
BELG	Belogornoye	93.44	35	*c i*P		P	02 37 22.7	+0.1
BELG				pmax		pmax		
	comp=Z,9.0nm,1.0s							
KBZ	Khabaz	93.48	44	P		P	02 37 24.9	+1.8
	comp=Z,7.8nm,0.9s,baz=289,slow=4.8,SNR=12							
KBZ	Khabaz	93.48	44	*ce*P		P	02 37 24.7	+1.7
KBZ				pmax		pmax		
	comp=Z,11nm,1.0s							
BILL	Bilibino	94.09	344	⇓*e*P		P	02 37 24.3	-1.0
BILL				*e**PP		pP	02 37 46.6	-1.0
BILL				*e*S		SKSac	02 47 52.1	-0.5
BILL				*e*SS		SS	02 54 49.9	0.0
BILL				pmax		pmax		
	comp=Z,19nm,1.7s							
BILL				MLR		MLR		
	comp=Z,76nm,16.0s							
BILL	Bilibino	94.09	344	P		P	02 37 24.7	-0.6
BILL				IAmb		IAmb	02 37 24.9	
	comp=Z,6.4nm,0.7s							
ONI	Oni	94.23	45	P		P	02 37 28.9	+2.3
KARS	Kars	94.59	47	P		P	02 37 31.6	+3.2
AKH	Akhalkalaki	94.64	47	P		P	02 37 31.0	+2.3
GNI	Garni	95.94	47	*c i*P		P	02 37 36.1	+1.5
GNI				pmax		pmax		
	comp=Z,19nm,0.8s							
GNI	Garni	95.94	47	P		P	02 37 33.8	-0.8
ARU	Arti	97.29	29	P		Pdif	02 37 40.4	+0.2
ARU							02 41 38.4	
ARU				S		SKSac	02 48 10.1	+0.2
ARU				SS		SS	02 55 33.1	-2.6
NRIK	Noril'sk	97.36	10	P		P	02 37 38.7	-1.5
	comp=Z,2.5nm,0.7s,baz=28,slow=2.4,SNR=4.8							
NRIK				LR		LR	03 22 43.2	
	comp=Z,33nm,20.4s,baz=21,slow=36							
NRIK	Noril'sk	97.36	10	⇓*e*P		P	02 37 39.5	-0.7
NRIK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
TIXI	Tiksi	97.39	356	⇓*e*P		P	02 37 39.1	-1.2
TIXI				pmax		pmax		
	comp=Z,34nm,1.3s							
SEY	Seymchan	101.73	345	⇑*e*P		Pdif	02 37 59.4	-0.4
SYO	Syowa Base	104.34	159	⇓*e*Pdiff		Pdif	02 38 09.0	-2.1
ZALV	Zalesovo Beam	109.80	20	PKiKP		PKiKP	02 42 37.2	-0.7
	comp=Z,3.0nm,0.6s,baz=289,slow=2.2,SNR=15							
ABPO	Ambohimpanom	111.95	106	*i* PKiKP		PKiKP	02 42 43.5	+0.4
MAW	Mawson	112.94	160	PKiKP		PKiKP	02 42 44.2	+0.9
	comp=Z,3.2nm,0.7s,baz=210,slow=6.5,SNR=4.1							
AAK	Ala-Archa	113.86	33	⇑*i*PKiKP		PKiKP	02 42 45.5	-0.7
MKAR	Makanchi Array	114.60	26	PKiKP		PKiKP	02 42 46.3	-1.0
	comp=Z,1.2nm,0.7s,baz=14,slow=2.0,SNR=12							
MKAR				PKKPbc		PKKPbc	02 53 25.3	-1.9
	comp=Z,1.3nm,0.7s,baz=125,slow=6.1,SNR=16							
MKAR	Makanchi Array	114.60	26	*c i*PKiKP		PKiKP	02 42 46.0	-1.3
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
KLR	Kul'dur	118.94	349	⇓*i*PKiKP		PKPdf	02 42 53.3	-2.2
WMQ	Urumqi	119.25	24	*e*PKP		PKiKP	02 42 57.3	+0.8
SONM	Songino Array	120.80	9	PKP		PKPdf	02 42 58.7	-0.6
	comp=Z,3.7nm,0.6s,baz=302,slow=1.4,SNR=32							
SONM				PP		PP	02 44 26.6	-0.7
	comp=Z,1.0nm,0.9s,baz=331,slow=5.8,SNR=6.2							
SONM				PKKPbc		PKKPbc	02 53 03.7	-1.7
	comp=Z,2.9nm,0.5s,baz=164,slow=3.9,SNR=21							
ULN	Ulaanbaatar	120.87	8	⇑*i*PKiKP		PKPdf	02 42 58.9	-0.6
ULN				pmax		pmax		
	comp=Z,2.0nm,1.0s							
USRK	Ussuriysk Ar.	123.71	348	PKP		PKPdf	02 43 03.7	-1.1
	comp=Z,4.8nm,0.7s,baz=274,slow=1.7,SNR=15							
GTA	Gaotai	127.41	17	PKP		PKPdf	02 43 11.8	-0.5
HHC	Hu-ho-hao-te	128.32	6	*e*PKP		PKPdf	02 43 13.9	0.0
HHC				PP		PP	02 45 25.1	+7.5
HHC				SS		SS	03 02 29.3	+3.5
HHC				AMB		AMB		
	comp=Z,70nm,10.0s							
HHC				LR		LR		
	comp=Z,140nm,21.5s							
HHC				LR		LR		
	comp=Z,240nm,22.0s							
HHC				LR		LR		
	comp=Z,170nm,21.0s							
BTO	Baotou	128.39	7	*e*PKP		PKPdf	02 43 13.8	-0.3
BTO				AMB		AMB		
	comp=Z,280nm,11.0s							
BTO				LR		LR		
	comp=Z,500nm,14.7s							
PYUN	Piuthan	128.90	40	*e*P		PKPdf	02 43 15.6	+0.1
	comp=Z,31nm,0.5s							
MAJO	Matsushiro	129.05	339	PKiKP		PKPdf	02 43 14.9	-0.4
MAJO	Matsushiro	129.05	339	PKPdf		PKPdf	02 43 14.8	-0.4
MAT	Matsushiro	129.05	339	PKP		PKPdf	02 43 14.0	-1.3
MJAR	Matsushiro Arr	129.05	339	PKP		PKPdf	02 43 14.3	-1.1
	comp=Z,6.9nm,0.7s,baz=60,slow=1.4,SNR=14							
MJAR	Matsushiro Arr	129.05	339	PKiKP		PKPdf	02 43 14.5	-0.8
MJAR	Matsushiro Arr	129.05	339			PKPdf	02 43 14.5	-0.8
BJI	Beijing	129.41	1	PKP		PKPdf	02 43 15.8	0.0
BJI				LR		LR		
	comp=Z,120nm,6.1s							
BJI				LR		LR		
	comp=Z,140nm,8.8s							
KOLN	Koldanda	129.51	40	*e*P		PKPdf	02 43 16.6	-0.1
	comp=Z,15nm,0.7s							
GKN	Gorkha	130.00	39	*e*P		PKPdf	02 43 17.5	0.0
KKN	Kakani	130.54	38	*e*P		PKPdf	02 43 18.6	-0.1
DMN	Daman	130.57	39	*e*P		PKPdf	02 43 18.6	-0.2
	comp=Z,15nm,0.5s							
PKIN	Phulchoki	130.77	39	*e*P		PKPdf	02 43 18.7	-0.5
PKI	Pulchoki	130.78	39	*e*P		PKPdf	02 43 18.9	-0.4
GUN	Gumba	130.82	38	*e*P		PKPdf	02 43 19.1	-0.2
	comp=Z,24nm,0.7s							
KSRS	Korea Array	131.03	349	PKP		PKPdf	02 43 18.3	-0.6
	comp=Z,6.5nm,0.9s,baz=29,slow=1.2,SNR=13							
KSRS				SKPbc		SKPbc	02 46 32.9	-3.4
	comp=Z,1.8nm,0.7s,baz=357,slow=5.6,SNR=4.7							
KSAR	Wonju Array Be	131.04	349	PKiKP		PKPdf	02 43 18.0	-1.0
KSAR	Wonju Array Be	131.04	349			PKPdf	02 43 18.0	-1.0
JIR

Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.95**	**195**	P	Pn	02 26 17.0	+1.2
WMGZ				S	Sn	02 27 14.1	+2.3
HAZ	**Te Kaha**	**5.05**	**201**	P	Pn	02 26 16.0	-1.2
HAZ				S	Sn	02 27 13.5	-0.9
PKGZ	**Pakihiroa**	**5.09**	**198**	P	Pn	02 26 17.9	0.0
PKGZ				S	Sn	02 27 15.4	-0.1
PUZ	**Puketiti**	**5.22**	**196**	P	Pn	02 26 19.3	-0.3
RUGZ	**Raukumara Rang**	**5.28**	**201**	P	Pn	02 26 20.0	-0.5
RUGZ				S	Sn	02 27 23.2	+3.0
TWGZ	**Tauwhareparae**	**5.39**	**198**	P	Pn	02 26 22.8	+0.9
TWGZ				S	Sn	02 27 22.0	-0.8
CNGZ	**Carnagh Statio**	**5.63**	**195**	P	Pn	02 26 24.0	-1.2
MWZ	**Matawai**	**5.66**	**201**	P	Pn	02 26 26.4	+0.7
MWZ				S	Sn	02 27 29.4	-0.2
URZ	**Urewera**	**5.73**	**204**	P	Pn	02 26 26.6	+0.1
URZ				S	Sn	02 27 32.5	+1.4
RTZ	**Ruatahuna**	**6.09**	**203**	P	Pn	02 26 31.5	-0.1
RTZ				S	Sn	02 27 41.5	+1.3
SNGZ	**Shannon Statio**	**6.13**	**200**	P	Pn	02 26 32.5	+0.3
SNGZ				S	Sn	02 27 41.6	+0.5

*LDG **16** 02:34:08.0±0.1, 44.°20N×10.°91E, h10km, MI1.7/2, Error ellipse: s-maj=2.3km s-min=1.4km az=16.0*
ROM 16 02:34:07.4±0.1, 44.°198N±0.°005×10.°890E±0.°005, h10km, ML2.0/8, 8C-4D, Error ellipse: s-maj=0.6km s-min=0.2km az=192.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.17**	**22** ⇑	*i*P	Pg	02 34 11.7	+0.7
ZCCA				AML	AML		
	comp=E,550μm,1.4s						
ZCCA				AML	AML		
	comp=N,590μm,0.4s						
FNVD	**Fontana Vidola**	**0.17**	**100** ⇓	*i*P	Pg	02 34 11.1	0.0
FNVD				S	Sg	02 34 14.4	+0.7
POPM	**Popiglio**	**0.18**	**212** ⇓	*i*P	Pg	02 34 12.0	+0.7
POPM				S	Sg	02 34 15.8	+1.9
POPM				AML	AML		
	comp=E,2495μm,0.2s						
POPM				AML	AML		
	comp=N,2280μm,0.2s						
MTCR	**Monte La Croce**	**0.19**	**155** ⇓	*i*P	Pg	02 34 11.8	+0.3
MTCR				S	Sg	02 34 15.6	+1.4
BDI	**Bagni Di Lucca**	**0.25**	**237** ⇑	*i*P	Pg	02 34 13.1	+0.6
BDI				S	Sb	02 34 17.5	-1.0
BDI				AML	AML		
	comp=N,992μm,0.4s						
BDI				AML	AML		
	comp=E,608μm,0.4s						
BDI				AML	AML		
	comp=N,838μm,0.4s						
BDI				AML	AML		
	comp=E,576μm,0.2s						
SARO	**Sassorosso**	**0.35**	**268**	P	Pg	02 34 14.8	+0.4
SARO				S	Sb	02 34 20.6	-0.9
SARO				AML	AML		
	comp=N,492μm,0.5s						
SARO				AML	AML		
	comp=E,207μm,0.2s						
VLC	**Villacollemand**	**0.36**	**264** ⇑	*i*P	Pg	02 34 15.2	+0.5
VLC				S	Sb	02 34 20.9	-0.9
VLC				AML	AML		
	comp=E,784μm,0.4s						
VLC				AML	AML		
	comp=N,448μm,1.1s						
VLC				AML	AML		
	comp=E,789μm,0.4s						
VLC				AML	AML		
	comp=E,785μm,0.4s						
VLC				AML	AML		
	comp=N,426μm,1.1s						
SEI	**Scarperia**	**0.36**	**113**	P	Pg	02 34 15.1	+0.4
SEI				S	Sb	02 34 21.0	-0.8
SEI				AML	AML		
	comp=E,630μm,0.4s						
SEI				AML	AML		
	comp=N,640μm,0.4s						
ERBM	**Eremo**	**0.41**	**303** ⇑	*i*P	Pg	02 34 15.9	+0.4
ERBM				S	Sb	02 34 22.9	-0.2
MTRZ	**Monterenzio**	**0.45**	**67**	P	Pg	02 34 16.2	0.0
EQUI	**Equi**	**0.53**	**267**	P	Pg	02 34 17.8	+0.1
EQUI				S	Sg	02 34 25.0	+0.3
PII	**Pisa**	**0.54**	**209** ⇑	*i*P	Pg	02 34 18.2	+0.3
PII				S	Sg	02 34 25.5	+0.4
PII				AML	AML		
	comp=E,157μm,0.4s						
PII				AML	AML		
	comp=N,120μm,0.3s						
FIVI	**Fivizzano**	**0.55**	**275**	P	Pg	02 34 18.4	+0.3
FIVI				S	Sb	02 34 26.4	-0.7
RUFI	**Rufina**	**0.57**	**128**	P	Pg	02 34 18.9	+0.4
RUFI				S	Sb	02 34 27.1	-0.6
ASQU	**Asqua**	**0.76**	**121** ⇑	*i*P	Pb	02 34 22.5	-0.3
ASQU				S	Sg	02 34 32.6	+0.5
ASQU				AML	AML		
	comp=E,44μm,0.7s						
ASQU				AML	AML		
	comp=N,45μm,0.4s						
CSNT	**Castellina Chi**	**0.78**	**158** ⇑	*i*P	Pb	02 34 23.0	-0.1
CSNT				S	Sb	02 34 33.4	-0.4
MMUR	**Monte Murano**	**1.70**	**116** ⇑	P	Pn	02 34 36.8	-0.4
PGF	**Pioggiola**	**2.15**	**221**	*e*Pn	Pn	02 34 42.5	-0.9
SBF	**Sospel**	**2.51**	**264**	*e*Pn	Pn	02 34 47.1	-1.3
SBF				*e*Sn	Sn	02 35 16.3	-2.8
	comp=N,0.7nm,0.2s						
FIAM	**Fiamignano**	**2.52**	**139**	S	Sg	02 35 31.0	+2.5
TERO	**Teramo**	**2.53**	**128**	P	Pn	02 34 46.0	-2.5
TERO				AML	AML		
	comp=E,13μm,0.2s						
TERO				AML	AML		
	comp=N,8μm,0.1s						
ROM9	**Roma**	**2.65**	**153** ⇓	P	Pn	02 34 46.1	-4.1
ROM9				AML	AML		
	comp=E,882μm,0.2s						
ROM9				AML	AML		
	comp=N,1175μm,0.1s						
MA9	**Marino**	**2.75**	**151**	S	Sg	02 35 45.0	+9.2
MBDF	**Montbardon**	**3.00**	**282**	*e*Sn	Sn	02 35 27.5	-3.6
	comp=N,0.3nm,0.2s						
FRF	**La Foret Royal**	**3.13**	**260**	*e*Pn	Pn	02 34 55.8	-1.0

*ISK **16** 02:34:57.4, 37.°25N×28.°73E, h8km, ML1.6/10*
DDA 16 02:34:57.4, 37.°28N×28.°73E, h7km±2km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.24**	**38**	*i*P	Pg	02 35 02.0	-0.2
TAVA				*i*S	Sg	02 35 05.9	+0.4
TAVA				IAML		02 35 07.0	
	comp=E,45nm,0.1s						
TAVA				IAML		02 35 09.0	
	comp=N,49nm,0.1s						
MULA	**Mugla, Merkez-**	**0.32**	**267**	*i*P	Pb	02 35 05.4	-0.2
MULA				*i*S	Sg	02 35 08.9	+0.8
YER	**Yerkesik**	**0.38**	**248**	PG	Pg	02 35 05.6	+0.8
YER				SG	Sg	02 35 10.5	+0.6
DALY	**Dalyan (Mula)**	**0.46**	**187**	*i*P	Pg	02 35 06.6	+0.2
DALY	**Dalyan (Mula)**	**0.46**	**187**	PG	Pg	02 35 06.5	+0.2
CAEL	**Denizli, Camel**	**0.50**	**108**	*i*P	Pb	02 35 09.5	+0.9
TURN	**Turunc**	**0.63**	**218**	*i*P	Pb	02 35 10.4	-0.3
TURN				*i*S	Sb	02 35 19.7	-0.1
TURN				IAML		02 35 23.0	
	comp=E,15nm,0.7s						
TURN	**Turunc**	**0.63**	**218**	PG	Pg	02 35 09.6	+0.1
TURN				SG	Sb	02 35 19.1	-0.7
FETY	**Fethiye**	**0.70**	**156**	*i*P	Pg	02 35 10.2	-0.6
FETY	**Fethiye**	**0.70**	**156**	PG	Pg	02 35 09.9	-1.0
AYDN	**Tasoluk**	**0.78**	**300**	*i*P	Pb	02 35 13.1	-0.2
AYDN				*i*S	Sb	02 35 23.8	-0.2
AYDB	**Zeytinkoy-Aydi**	**0.94**	**316**	PG	Pb	02 35 16.3	+0.1
BDRM	**Kayabasi**	**1.04**	**259**	*i*P	Pb	02 35 18.1	+0.3
BDRM				*i*S	Sb	02 35 32.5	+0.7
BDRM				IAML		02 35 39.0	
	comp=N,12nm,0.4s						
ELL	**Elmali**	**1.08**	**119**	PG	Pb	02 35 18.7	+0.2
BODT	**Bodrum**	**1.15**	**260**	PN	Pb	02 35 19.7	+0.1
ARG	**Arkhangelos**	**1.16**	**205**	PN	Pg	02 35 19.2	-0.5
MANT	**Manisa**	**1.22**	**354**	*i*P	Pg	02 35 20.9	0.0
KULA	**Kula-Manisa**	**1.24**	**358**	PN	Pn	02 35 21.8	+0.6
AKAS	**Kas**	**1.26**	**146**	*i*P	Pg	02 35 22.4	+0.9
AKAS	**Kas**	**1.26**	**146**	PN	Pn	02 35 21.4	-0.1

TAP 16 02:36:24.5, 21.°33N×122.°27E, h136km±2km, ML3.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.97**	**316**	P	Pn	02 36 47.5	-0.2
	baz=317						
TSEB	**Hengchuen, Pin**	**1.40**	**294**	*e*P	Pn	02 36 51.7	-0.2
	baz=289						
TSEB				*e*S	Sn	02 37 14.2	+1.5
	baz=289						
TWKBT	**Hengchun**	**1.49**	**294**	*e*S	Sn	02 37 13.4	-1.1
	baz=289						
TWK1	**Hengchun**	**1.49**	**294**	P	Pn	02 36 53.3	+0.4
	baz=289						
TWK1				*e*S	Sn	02 37 14.2	-0.4
	baz=289						
HEN	**Hengchun**	**1.58**	**295**	*e*P	Pn	02 36 54.4	+0.6
	baz=297						
HEN				*e*S	Sn	02 37 15.5	-0.8
	baz=297						
SLIU	**Shizi**	**1.63**	**303**	P	Pn	02 36 54.4	0.0
	baz=305						
SLIU				*e*S	Sn	02 37 16.4	-1.0
	baz=305						
EAST	**Anshuo**	**1.69**	**309**	*i* P	Pn	02 36 55.2	0.0
	baz=309						
EAST				*i* S	Sn	02 37 17.5	-1.0
	baz=309						
ECL	**Taimali**	**1.75**	**316**	*e*P	Pn	02 36 55.2	-0.7
	baz=311						
TWGBT	**Beinan**	**1.84**	**323**	*e*P	Pn	02 36 58.5	+1.6
	baz=316						
SCZT	**Fangliau**	**1.85**	**304**	*e*P	Pn	02 36 57.1	+0.1
	baz=304						
SCZT				*e*S	Sn	02 37 21.4	-0.5
	baz=304						
LONT	**Longtian**	**1.89**	**326**	*e*S	Sn	02 37 22.6	-0.2
	baz=318						
MASBT	**Mashibuluo**	**1.98**	**310**	*e*P	Pn	02 36 58.9	+0.3
	baz=310						
MASBT				*e*S	Sn	02 37 23.0	-1.7
	baz=310						
SSD	**Sandimen**	**2.07**	**313**	*e*P	Pn	02 37 00.0	+0.4
	baz=309						
SSD				*e*S	Sn	02 37 25.4	-1.2
	baz=309						

*FUNV **16** 02:46:40.5, 10.°76N×62.°30W, h20km, MW3.1*
*TRN **16** 02:46:41.0, 10.°77N×62.°36W, h59km, MD3.3*
ISC 16 02:46:40.4±1.6, 10.°75N±0.°04×62.°37W±0.°03, h32km±16km, n16, σ1§05/29, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.86**	**265**	*e*P	**Pn**	**02 46 57.9**	**+1.6**
CRUV				*e*S	**Sn**	**02 47 08.6**	**+0.8**
TRN	**Trinidad (W)**	**0.95**	**96**	*e*P	**Pb**	**02 46 59.0**	**+0.5**
TRN				*e*S	**Sn**	**02 47 10.9**	**+0.8**
TPP	**Pointe-a-Pierr**	**1.00**	**115**	*e*P	**Pb**	**02 46 58.9**	**-0.3**
TBH	**Brigand Hill**	**1.30**	**101**	*e*P	**Pb**	**02 47 03.6**	**-0.8**
TBH				*e*S	**Sn**	**02 47 19.3**	**+0.4**
GRGR	**Grenville**	**1.54**	**27**	*e*P	**Pn**	**02 47 05.7**	**-0.1**
GRGR				*e*S	**Sn**	**02 47 25.3**	**+0.5**
GRGR	**Grenville**	**1.54**	**27**	*e*P	**Pn**	**02 47 06.0**	**+0.2**
GRGR				*e*S	**Sn**	**02 47 24.8**	**0.0**
TPR	**Prospect**	**1.62**	**74**	*e*P	**Pn**	**02 47 07.9**	**+1.0**
TPR				*e*S	**Sn**	**02 47 27.2**	**+0.5**
TOSP	**Speyside**	**1.88**	**73**	*e*P	**Pn**	**02 47 11.0**	**+0.6**
TOSP				*e*S	**Sn**	**02 47 32.3**	**-0.7**
GCMP	**Grenada, Carri**	**1.96**	**28**	*e*P	**Pn**	**02 47 11.4**	**0.0**
GCMP				*e*S	**Sn**	**02 47 34.1**	**-0.9**
PCRV	**Puerto La Cruz**	**2.30**	**256**	*e*P	**Pn**	**02 47 17.3**	**+1.1**
PCRV				*e*S	**Sn**	**02 47 44.9**	**+1.3**
RIOV	**Rio Grande**	**2.72**	**168**	*e*P	**Pn**	**02 47 23.0**	**+1.0**
RIOV				*e*S	**Sn**	**02 47 53.5**	**-0.3**
BIRV	**Birongo**	**3.84**	**266**	*e*P	**Pn**	**02 47 38.5**	**+1.1**
BIRV				*e*S	**Sn**	**02 48 21.5**	**-0.1**
MERV	**Las Mercedes**	**4.15**	**249**	*e*P	**Pn**	**02 47 42.3**	**+0.7**
MERV				*e*S	**Sn**	**02 48 28.1**	**-0.9**
LUEV	**Luepa**	**4.96**	**169**	*e*P	**Pn**	**02 47 51.9**	**-1.0**
BAUV	**El Baul**	**5.87**	**253**	*e*P	**Pn**	**02 48 04.8**	**-0.5**
MAPV	**Macapo**	**6.06**	**262**	*e*P	**Pn**	**02 48 08.0**	**0.0**
MAPV				*e*S	**Sn**	**02 49 13.0**	**-3.3**

JMA 16 02:49:26.3, 37.°06N×139.°35E, h8km±1km, M2.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.30**	**196**	P	Pg	02 49 32.4	+0.1
JKT				S	Sg	02 49 36.5	+0.1
JFY	**Yanaizu**	**0.45**	**39**	P	Pg	02 49 35.1	+0.1
JFY				S	Sg	02 49 40.9	0.0
JSB	**Shiboa**	**0.47**	**101**	P	Pg	02 49 35.8	+0.5
JSB				S	Sg	02 49 42.3	+0.8
JAG	**Ashikaga**	**0.64**	**173**	P	Pb	02 49 39.2	-0.5
JNS	**Sasagawa**	**0.76**	**358**	P	Pg	02 49 40.9	0.0
JNS				S	Sg	02 49 50.7	-0.1
JFT	**Otama**	**0.91**	**60**	P	Pg	02 49 43.6	-0.2
JFT				S	Sg	02 49 55.4	-0.2
MAT	**Matsushiro**	**1.05**	**241**	P	Pg	02 49 46.1	-0.4
MAT				S	Sg	02 49 59.7	-0.5

*IDC **16** 02:53:51.5±6.1, 12.°23S×166.°71E, h178km±57km, mb3.5/9, mb1 3.6/10, mb1mx3.4/40, mbtmp4.0/10, Error ellipse: s-maj=35.6km s-min=25.8km az=167.0*
*NEIC **16** 02:53:52.5±1.1, 12.°28S±0.°04×166.°5E±0.°3, h183km±17km, mb4.3/6, Error ellipse: s-maj=38.3km s-min=6.4km az=91.0*
ISC 16 02:53:53.8±0.9, 12.°3S±0.°1×166.°6E±0.°2, h200km, n20, σ1§03/20, mb3.8/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.70**	**181**	P	**Pn**	**02 56 08.9**	**-0.4**
	1.0nm,0.3s,baz=0.0,slow=20,SNR=7.6						
ARMA	**Armidale**	**22.75**	**215**	P	**P**	**02 58 40.6**	**+1.5**
BKZ	**Black Stump Fm**	**28.13**	**164**	P	**P**	**02 59 27.2**	**-0.1**
THZ	**Tophouse**	**29.84**	**171**	P	**P**	**02 59 42.9**	**+0.6**
THZ				IAmb	IAmb	02 59 59.2	
	comp=E,15nm,1.0s						
STKA	**Stephens Creek**	**30.16**	**226**	P	**P**	**02 59 46.3**	**+1.1**
	comp=E,1.1nm,0.7s,baz=44,slow=7.8,SNR=3.1						
RPZ	**Rata Peaks**	**31.52**	**174**	P	**P**	**02 59 57.4**	**+0.4**
	comp=E,11nm,0.9s,baz=0.0,slow=5.1,SNR=1.6						
WB0	**Warramunga Arr**	**31.82**	**252**	P	**P**	**02 59 57.7**	**-2.3**
WB0				IAmb	IAmb	03 00 06.9	
	comp=E,4.0nm,1.1s						
WB2	**Warramunga Arr**	**31.89**	**252**	P	**P**	**02 59 58.6**	**-2.0**
WB2				IAmb	IAmb	03 00 04.2	
	comp=E,5.7nm,1.1s						
WRA	**Warramunga Arr**	**31.90**	**252**	P	**P**	**03 00 01.0**	**+0.3**
	comp=E,0.6nm,0.9s,baz=85,slow=8.9,SNR=2.2						
ASAR	**Alice Springs**	**33.03**	**245**	P	**P**	**03 00 10.1**	**-0.5**
	comp=E,1.0nm,0.7s,baz=74,slow=9.1,SNR=8.7						
BBOO	**Buckleboo**	**34.63**	**229**	P	**P**	**03 00 23.8**	**-0.4**
BBOO				IAmb	IAmb	03 00 32.0	
	comp=E,8.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.92**	**257**	P	**P**	**03 01 09.1**	**+0.3**
	comp=E,2.9nm,0.9s,baz=74,slow=7.4,SNR=2.4						
FITZ	**Fitzroy Crossi**	**39.92**	**257**	P	**P**	**03 01 07.7**	**-1.1**
CMAR	**Chiang Mai Arr**	**73.42**	**294**	P	**P**	**03 05 05.7**	**+1.1**
	comp=E,0.6nm,0.6s,baz=132,slow=4.0,SNR=4.3						
SONM	**Songino Array**	**80.20**	**324**	P	**P**	**03 05 42.6**	**+0.5**
	comp=E,0.3nm,0.3s,baz=123,slow=5.3,SNR=2.5						
ILAR	**Eielson Array**	**84.44**	**18**	P	**P**	**03 06 02.5**	**-1.0**
	comp=E,0.4nm,0.6s,baz=241,slow=5.5,SNR=8.4						
MKAR	**Makanchi Array**	**95.04**	**317**	P	**P**	**03 06 54.1**	**+0.2**
	comp=E,0.8nm,0.6s,baz=93,slow=6.7,SNR=11						
ARCES	**ARCESS Array B**	**117.78**	**346**	PKP	**PKPdf**	**03 12 15.3**	**-0.4**
	comp=E,1.4nm,0.8s,baz=28,slow=2.0,SNR=5.4						
KEST	**Kesra**	**148.95**	**322**	PKPbc	**PKPbc**	**03 13 18.8**	**+0.2**
	comp=E,1.0nm,0.7s,baz=228,slow=2.8,SNR=4.0						
ESDC	**Sonseca Array**	**151.51**	**345**	PKPbc	**PKPbc**	**03 13 24.7**	**+0.2**
	comp=E,0.3nm,0.7s,baz=351,slow=3.2,SNR=2.9						

*IDC **16** 02:58:46.5±2.2, 20.°50S×177.°67W, h403km±21km, mb3.4/10, mb1 3.7/13, mb1mx3.4/36, mbtmp4.2/13, Error ellipse: s-maj=23.9km s-min=15.5km az=150.0*
ISC 16 02:58:46.1±0.8, 20.°5S±0.°2×177.°6W±0.°1, h400km, n18, σ0§71/18, mb3.7/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.92**	**303**	P	**Pn**	**03 00 07.3**	**-0.2**
	3.4nm,0.3s,baz=137,slow=16,SNR=9.4						
AFI	**Afiamalu**	**8.61**	**41**	S	S	03 02 16.0	-12
	6.8nm,0.3s,baz=37,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**14.93**	**261**	P	**P**	**03 01 58.5**	**+0.5**
	1.7nm,0.3s,baz=154,slow=6.9,SNR=12						
URZ	**Urewera**	**18.28**	**193**	P	**P**	**03 02 33.7**	**+0.3**
	3.3nm,0.3s,baz=300,slow=24,SNR=11						
CTA	**Charters Tower**	**33.84**	**264**	P	**P**	**03 04 53.3**	**+0.2**
	1.8nm,0.4s,baz=85,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**44.86**	**257**	P	**P**	**03 06 22.6**	**-0.3**
	2.9nm,0.6s,baz=98,slow=7.9,SNR=28						
ASAR				PcP	**PcP**	**03 07 56.4**	**-0.4**
	0.8nm,0.8s,baz=105,slow=5.9,SNR=4.7						
WRA	**Warramunga Arr**	**44.94**	**262**	P	**P**	**03 06 22.5**	**-1.1**
	1.3nm,0.3s,baz=95,slow=7.6,SNR=72						
WRA				PcP	**PcP**	**03 07 57.3**	**+0.2**
	0.5nm,0.8s,baz=95,slow=3.0,SNR=2.3						
FITZ	**Fitzroy Crossi**	**53.37**	**262**	P	**P**	**03 07 27.2**	**+0.6**
	1.1nm,0.8s,baz=90,slow=7.1,SNR=1.5						
SIJI	**Sorong**	**53.57**	**285**	P	**P**	**03 07 28.4**	**+0.3**
	7.4nm,0.6s,baz=79,slow=10,SNR=4.2						
NVAR	**Mina Array Bea**	**80.79**	**43**	P	**P**	**03 10 17.3**	**+0.6**
	0.8nm,0.5s,baz=221,slow=7.8,SNR=7.2						
TXAR	**Lajitas Array**	**86.76**	**57**	P	**P**	**03 10 47.6**	**+0.9**
	0.8nm,0.8s,baz=223,slow=6.5,SNR=11						
ILAR	**Eielson Array**	**88.24**	**13**	P	**P**	**03 10 51.9**	**-0.8**
	0.6nm,0.9s,baz=225,slow=5.7,SNR=14						
PDAR	**Pinedale Array**	**88.72**	**43**	P	**P**	**03 10 55.8**	**+0.1**
	0.9nm,0.8s,baz=221,slow=2.8,SNR=7.4						
CMAR	**Chiang Mai Arr**	**90.44**	**289**	P	**P**	**03 11 04.6**	**+0.7**
	0.5nm,0.4s,baz=120,slow=2.8,SNR=7.3						
MKAR	**Makanchi Array**	**111.45**	**313**	PKiKP	**PKiKP**	**03 16 32.0**	**-1.4**
	0.3nm,0.6s,baz=180,slow=0.3,SNR=3.6						
AKASG	**Malin Array Be**	**143.18**	**331**	PKhKP	PKPpre	03 17 29.8	
	0.3nm,0.4s,baz=41,slow=4.3,SNR=4.4						
GERES	**GERESS Array B**	**150.29**	**345**	PKPbc	**PKPbc**	**03 17 50.3**	**-0.4**
	0.4nm,0.5s,baz=352,slow=3.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**172.66**	**175**	PKPab	**PKPab**	**03 19 35.9**	**-0.8**
	0.2nm,0.5s,baz=197,slow=3.9,SNR=1.2						

*NEIC **16** 03:10:34.4±0.8, 7.°2S±0.°1×155.°9E±0.°1, h98km±9km, mb4.2/14, Error ellipse: s-maj=16.2km s-min=14.9km az=67.0*
*IDC **16** 03:10:37.8±2.1, 7.°08S×155.°78E, h115km±21km, mb3.8/15, mb1 3.9/18, mb1mx3.8/43, mbtmp4.2/18, MS3.2/4, Ms1 3.2/4, ms1mx2.9/24, Error ellipse: s-maj=18.3km s-min=12.4km az=162.0*
ISC 16 03:10:35.7±1.0, 7.°15S±0.°09×155.°9E±0.°1, h115km, n51, σ1§99/28, mb4.1/22, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.60**	**120**	P	Pn	03 11 47.6	+4.4
	7.0nm,0.3s,baz=216,slow=14,SNR=1.6						
HNR				S	Sn	03 12 41.8	+6.1
	baz=274,slow=19,SNR=1.2						
HNR				LR	LR	03 13 35.1	
	comp=Z,218nm,21.6s,baz=304,slow=37						
RABL	**Rabaul**	**4.74**	**308**	P	**Pn**	**03 11 44.0**	**-1.2**
RABL				Sn	**Sn**	**03 12 39.7**	**+0.5**
PMG	**Port Moresby**	**8.94**	**255**	P	**Pn**	**03 12 42.8**	**+0.8**
	4.9nm,0.3s,baz=70,slow=6.7,SNR=7.9						
PMG				S	**Sn**	**03 14 20.9**	**-0.1**
	2.2nm,0.3s,baz=15,slow=19,SNR=3.0						
PMG				LR	LR	03 15 52.5	
	comp=Z,78nm,20.2s,baz=84,slow=36						
PMG	**Port Moresby**	**8.94**	**255**		**Pn**	**03 12 40.8**	**-1.3**
PMG					**Sn**	**03 14 19.8**	**-1.2**
CTA	**Charters Tower**	**15.91**	**215**	P	**P**	**03 14 15.9**	**+1.3**
	0.4nm,0.3s,baz=45,slow=13,SNR=7.1						
EIDS	**Eidsvold**	**18.70**	**194**	P	**Pn**	**03 14 44.9**	**-2.1**
EIDS				IAmb	IAmb	03 14 52.0	
	comp=Z,24nm,1.4s						
WR0	**Warramunga Arr**	**24.32**	**236**	P	**P**	**03 15 43.4**	**+0.5**
WR0				IAmb	IAmb	03 15 44.8	
	comp=Z,9.2nm,1.1s						
WB0	**Warramunga Arr**	**24.35**	**237**	P	**P**	**03 15 44.1**	**+0.9**
WB0				IAmb	IAmb	03 15 45.5	
	comp=Z,8.7nm,1.1s						
WRAB	**Tennant Creek**	**24.47**	**237**	P	**P**	**03 15 45.3**	**+1.1**
WRAB				IAmb	IAmb	03 16 28.8	
	comp=Z,13nm,1.2s						
WB2	**Warramunga Arr**	**24.47**	**237**	P	**P**	**03 15 45.3**	**+1.1**
WB2				IAmb	IAmb	03 16 29.8	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**24.48**	**237**	P	**P**	**03 15 45.6**	**+1.3**
	comp=Z,2.3nm,0.7s,baz=62,slow=9.7,SNR=23						
WRA				PcP	**PcP**	**03 19 22.5**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=60,slow=2.5,SNR=2.3						
WRA	**Warramunga Arr**	**24.48**	**237**	P	**P**	**03 15 44.3**	**-0.1**
SIJI	**Sorong**	**25.35**	**283**	P	**P**	**03 15 53.1**	**+0.9**
	comp=Z,4.5nm,0.4s,baz=50,slow=16,SNR=4.3						
AS31	**Alice Springs**	**26.75**	**230**	P	**P**	**03 16 05.3**	**+0.3**
ASAR	**Alice Springs**	**26.76**	**230**	P	**P**	**03 16 05.8**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=60,slow=10.0,SNR=24						
ASAR	**Alice Springs**	**26.76**	**230**	P	**P**	**03 16 05.0**	**0.0**
H11S3	**WAKE ISLAND Hy**	**27.61**	**23**	T	T	03 44 24.5	
	baz=202,slow=76,SNR=112						
H11S2	**WAKE ISLAND Hy**	**27.61**	**23**	T	T	03 44 27.9	
	baz=202,slow=76,SNR=118						
H11S1	**WAKE ISLAND Hy**	**27.63**	**23**	T	T	03 44 31.4	
	baz=202,slow=76,SNR=81						
STKA	**Stephens Creek**	**27.99**	**207**	P	P	03 16 17.6	+

GERES	**GERESS Array B**	**127.65**	**329**	PKP	**PKiKP**	**03 29 29.7**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=87,slow=2.9,SNR=6.2						
TORD	**Torodi Ar. Bea**	**153.94**	**285**	PKPbc	**PKiKP**	**03 30 24.3**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=53,slow=2.4,SNR=2.8						
TORD				PKPab	**pPKPdf**	**03 30 37.6**	**-8.3**
	comp=Z,0.7nm,0.6s,baz=83,slow=5.2,SNR=4.9						
TORD	**Torodi Ar. Bea**	**153.94**	**285**		**PKiKP**	**03 30 23.4**	**+0.5**
DBIC	**Dimbokro**	**160.90**	**270**	PKPab	**PKPab**	**03 31 07.8**	**+1.3**
	comp=Z,2.3nm,0.7s,baz=72,slow=2.9,SNR=3.5						

*ANF **16** 03:59:57.4±0.1,34°.32N×118°.44W,h15km±1km, ML3.0/26, Error ellipse: s-maj=1.0km s-min=0.9km az=30.0, Hypocentre not reviewed by the ISC*
*SCEDC **16** 03:59:58.5,34°.34N×118°.46W,h9km, Hypocentre not reviewed by the ISC*
*PAS **16** 03:59:58.5±1.6,34°.335N±0°.008×118°.457W±0°.003, h9km±2km, ML3.1/209, ML2.8/37(NEIC), Error ellipse: s-maj=1.1km s-min=0.3km az=187.0*

NEIC 16 03:59:58.0±1.3,34°.341N±0°.009×118°.44W±0°.01, h16km±1km, Error ellipse: s-maj=1.5km s-min=1.2km az=56.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DECC	**Green Verdugo**	**0.13**	**134**		Pg	04 00 01.1	-0.6
DECC					Sg	04 00 03.7	-0.6
DECC	**Green Verdugo**	**0.13**	**134**	P		04 00 01.2	
	baz=309,SNR=327						
DECC				S		04 00 03.7	
	baz=309						
PDE	**Pardee, Santa**	**0.15**	**311**		Pg	04 00 01.9	-0.2
PDE					Sb	04 00 05.2	-0.2
HLLC	**North Hollywoo**	**0.18**	**157**		Pg	04 00 02.0	-0.4
HLLC					Sg	04 00 05.3	-0.2
DJJ	**Donna J Jenkin**	**0.23**	**182**		Pg	04 00 02.6	-0.7
DJJ					Sg	04 00 06.2	-0.7
DJJ	**Donna J Jenkin**	**0.23**	**182**		Pg	04 00 02.6	-0.8
DJJ					Sg	04 00 06.3	-0.6
PASC	**Pasadena Art C**	**0.27**	**128**		Pg	04 00 03.5	-0.4
PASC				Sg	Sg	04 00 07.6	-0.4
LEOC	**Leona Valley**	**0.31**	**22**		Pg	04 00 04.4	-0.3
LEOC					Sg	04 00 09.2	0.0
CBCC	**Caltech Broad**	**0.33**	**127**		Sg	04 00 10.1	+0.4
GSA	**Caltech--GSA**	**0.33**	**128**		Sg	04 00 10.0	+0.3
PYR	**Pyramid**	**0.33**	**313**		Pg	04 00 05.2	+0.1
CACC	**Caltech Cellar**	**0.34**	**127**		Pg	04 00 04.9	-0.1
CACC					Sg	04 00 10.2	+0.4
MWC	**Mount Wilson**	**0.34**	**110**		Pg	04 00 04.9	-0.3
MWC				Sg	Sg	04 00 10.1	0.0
LCGC	**La Cienega, Cu**	**0.34**	**171**		Pb	04 00 05.6	-0.2
LCGC					Sb	04 00 11.7	+0.8
CHFC	**Chilao Flat St**	**0.34**	**91**		Pg	04 00 05.0	-0.3
CHFC					Sg	04 00 10.3	0.0
USC	**University of**	**0.35**	**158**		Sb	04 00 11.4	+0.4
BHPC	**Baldwin Hills**	**0.36**	**169**		Pb	04 00 05.8	-0.2
BHPC					Sb	04 00 12.0	+0.7
BTPC	**Burnt Peak**	**0.36**	**342**		Pg	04 00 05.4	-0.1
OSI	**Osito Audit: C**	**0.36**	**320**		Pg	04 00 05.4	0.0
OSI				Sg	Sg	04 00 10.6	0.0
OSI				IAML		04 00 13.4	
	comp=E,983nm,0.3s						
OSI				IAML		04 00 14.9	
	comp=N,957nm,0.6s						
OSI	**Osito Audit: C**	**0.36**	**320**	P		04 00 05.5	
	baz=142,SNR=28						
OSI				S		04 00 10.6	
	baz=142						
ALPC	**Antelope**	**0.36**	**19**		Pg	04 00 05.5	-0.1
ALPC					Sg	04 00 11.0	+0.2
LRRC	**Littlerock Res**	**0.39**	**62**		Pg	04 00 05.9	-0.1
LRRC					Sb	04 00 11.9	-0.4
GVRC	**Garvey Reservo**	**0.40**	**137**		Sb	04 00 12.4	0.0
GVRC	**Garvey Reservo**	**0.40**	**137**		Pg	04 00 06.1	0.0
JNH	**Juniper Hills**	**0.42**	**75**		Pg	04 00 06.3	-0.3
JNH					Sg	04 00 12.4	+0.1
WTT2	**Watts, South G**	**0.42**	**158**		Pb	04 00 07.1	0.0
WTT2					Sb	04 00 14.1	+0.9
PT2	**Point Dume**	**0.45**	**222**		Pg	04 00 06.0	-1.0
XTL	**Crystal Lake,**	**0.48**	**95**		Pg	04 00 07.5	-0.3
PEM	**Pine Mountain**	**0.51**	**110**		Pg	04 00 07.9	-0.2
TPO	**Tropico Hills**	**0.56**	**18**		Pg	04 00 09.1	-0.1
TPO					Sb	04 00 17.6	+0.2
DLAC	**Del Amo**	**0.57**	**150**		Sn	04 00 19.5	-0.9
PSRC	**Puddingstone R**	**0.58**	**115**		Pg	04 00 09.3	-0.2
PSRC					Sb	04 00 17.7	-0.2
THC	**Tehachapi Micr**	**0.59**	**342**		Pg	04 00 09.7	-0.1
RPV	**Rancho Palos V**	**0.60**	**177**		Pg	04 00 09.2	-0.6
RPV					Sg	04 00 17.7	-0.1
SBB	**Saddle Back Bu**	**0.62**	**56**		Pg	04 00 09.8	-0.4
SBB					Sg	04 00 18.2	-0.2
STCC	**Santa Clara**	**0.62**	**267**		Pb	04 00 10.6	+0.2
SSK	**Sunset Peak**	**0.64**	**102**		Pg	04 00 10.2	-0.4
FMP	**Fort Macarthur**	**0.64**	**169**		Pg	04 00 09.7	-0.9
FMP					Sg	04 00 18.6	-0.5
FMP	**Fort Macarthur**	**0.64**	**169**	P		04 00 09.8	
	baz=348						
FMP				S		04 00 18.4	
	baz=348						
EDW2	**Edwards Air Fo**	**0.65**	**34**		Pg	04 00 10.5	-0.4
EDW2					Sg	04 00 19.1	-0.5
EDW2	**Edwards Air Fo**	**0.65**	**34**	P		04 00 10.4	
	baz=215,SNR=22						
EDW2				S		04 00 19.2	
	baz=215						
BREC	**Barre Substati**	**0.66**	**144**		Pb	04 00 11.6	+0.5
BREC					Sn	04 00 21.8	-0.7
BFSC	**Mount Baldy Ra**	**0.66**	**99**		Pg	04 00 10.4	-0.6
BFSC					Sg	04 00 19.4	-0.3
BFSC	**Mount Baldy Ra**	**0.66**	**99**	P		04 00 10.2	
	baz=278,SNR=49						
BFSC				S		04 00 19.1	
	baz=278						
CHNC	**Chino**	**0.72**	**118**		Pg	04 00 12.0	0.0
CHNC					Sb	04 00 22.2	+0.4
TJR	**Tejon Ranch**	**0.73**	**340**		Pg	04 00 11.9	-0.3
MPI	**Mount Pinos, F**	**0.75**	**309**		Pg	04 00 12.6	0.0
MPI					Sb	04 00 23.8	+0.9
SS2	**San Sevaine**	**0.79**	**99**		Pb	04 00 13.2	-0.2
MLSC	**Mira Loma**	**0.80**	**114**		Pb	04 00 13.0	-0.6
MLSC					Sb	04 00 23.6	-0.6
ABL	**Mount Abel**	**0.82**	**309**		Pb	04 00 13.7	-0.3
ARVC	**Arvin**	**0.85**	**338**		Pb	04 00 14.2	-0.2
ARVC	**Arvin**	**0.85**	**338**	P		04 00 14.1	
	baz=159,SNR=32						
ARVC				S		04 00 26.3	
	baz=159						
CCAC	**Calif City Air**	**0.88**	**23**		Pb	04 00 14.9	-0.1
CCAC					Sg	04 00 26.9	+0.1
HYS	**Haystack Butte**	**0.89**	**54**		Pb	04 00 14.8	-0.3
HYS					Sb	04 00 26.7	-0.1
CSP	**Cedar Springs**	**0.90**	**92**		Pb	04 00 14.9	-0.4
TEJ	**El Tejon**	**0.91**	**347**		Pb	04 00 15.2	-0.2
CIAC	**Catalina I. Ai**	**0.94**	**178**		Pb	04 00 15.3	-0.6
CIAC					Sb	04 00 28.1	0.0
CIS	**Catalina Islan**	**0.94**	**179**	P		04 00 15.3	
	baz=358,SNR=13						
CIS				S		04 00 28.2	
	baz=358						
VTV	**Victorville**	**0.95**	**76**		Sg	04 00 28.9	0.0
RVR	**Riverside**	**0.95**	**111**		Pb	04 00 15.4	-0.7
RVR					Sb	04 00 28.1	-0.4
RSBC	**Riverside Bore**	**1.00**	**111**		Sb	04 00 29.6	-0.1
BCW	**Bitter Crk WRg**	**1.00**	**307**		Pb	04 00 17.1	+0.1
BCW					Sn	04 00 31.4	+0.1
SME	**Santa Rosa Min**	**1.04**	**120**		Pb	04 00 16.8	-0.8
DTP	**Desert Tortois**	**1.05**	**28**		Pb	04 00 17.6	-0.2
SCZ2	**Santa Cruz Isl**	**1.05**	**251**	P		04 00 17.0	
	baz=70						
SCZ2				S		04 00 30.9	
	baz=70						
SBC	**Santa Barbara**	**1.05**	**276**	P		04 00 17.7	
	baz=96						
SBC				S		04 00 32.5	
	baz=96						
ELS	**Elsinore Mount**	**1.09**	**129**		Pb	04 00 17.9	-0.7
ELS					Sb	04 00 32.2	-0.4
CFT	**Crafton Hills**	**1.15**	**105**		Pb	04 00 19.5	0.0
PEC	**Perris**	**1.15**	**112**		Pn	04 00 19.1	-0.5
BTL	**Butler Peak**	**1.20**	**94**		Pb	04 00 20.6	+0.1
WOFM	**Oak Flat**	**1.21**	**350**		Pn	04 00 20.5	+0.1
WBSM	**Bird Springs**	**1.22**	**12**		Pg	04 00 21.7	+0.1
PKM	**Mcpherson Peak**	**1.25**	**296**	P		04 00 21.4	
	baz=116						
BBRC	**Big Bear Solar**	**1.26**	**93**		Pb	04 00 21.6	+0.1
BBRC	**Big Bear Solar**	**1.26**	**93**	P		04 00 21.6	
	baz=274,SNR=23						
BBRC				Sg		04 00 39.3	
	baz=274						
MURC	**Murrieta**	**1.27**	**125**		Pb	04 00 21.6	0.0
MURC	**Murrieta**	**1.27**	**125**	P		04 00 20.5	
	baz=305,SNR=23						
MURC				S		04 00 37.6	
	baz=305						
LRMC	**Laurel Mtn Rad**	**1.30**	**29**	Pb		04 00 22.3	
	baz=209,SNR=20						
LRMC				S		04 00 39.5	
	baz=209						
RRX	**Edison Barstow**	**1.31**	**66**		Pg	04 00 23.2	0.0
RRX	**Edison Barstow**	**1.31**	**66**	P		04 00 21.3	
	baz=246						
RRX				Sg		04 00 40.8	
	baz=246						
ISA	**Isabella, Lake**	**1.32**	**359**		Pb	04 00 22.6	+0.2
ISA	**Isabella, Lake**	**1.32**	**359**	P		04 00 22.3	
	baz=179,SNR=35						
ISA				S		04 00 39.6	
	baz=179						
HMTC	**Hemet**	**1.35**	**117**		Pn	04 00 21.9	-0.4
WHFM	**Hanning Flat**	**1.35**	**3**		Pg	04 00 23.7	-0.4
SCI2	**San Clemente I**	**1.36**	**184**	Sg		04 00 41.9	
	baz=3.1						
BACC	**Bachelor Mtn.**	**1.37**	**122**		Pn	04 00 22.3	-0.2
DGR	**Domenigoni Val**	**1.38**	**120**		Pn	04 00 22.0	-0.5
WASM	**Alta Sierra Ca**	**1.40**	**356**		Pb	04 00 23.9	+0.1
POB	**Polly Butte**	**1.42**	**117**		Pn	04 00 22.8	-0.4
SRTC	**Snort**	**1.46**	**23**		Pb	04 00 24.7	-0.1
CARC	**Carrizo Plain**	**1.50**	**310**		Pb	04 00 25.5	0.0
TOW	**Tower One**	**1.57**	**21**		Pb	04 00 26.1	-0.6
VES	**Vestal, Richgr**	**1.59**	**341**	Pb		04 00 27.2	
	baz=161,SNR=37						
VES				Sb		04 00 48.3	
	baz=161						
SMMC	**Simmler**	**1.60**	**308**	P		04 00 26.0	
	baz=127						
CRY	**Cary Ranch**	**1.61**	**118**		Pn	04 00 25.9	-0.1
BZNA	**Buzz No.'s Pla**	**1.70**	**119**		Pn	04 00 27.1	-0.1
BLAC	**Blackrock camp**	**1.72**	**98**		Pb	04 00 28.7	-0.6
GTM	**Goat Mountain**	**1.73**	**91**		Pb	04 00 28.5	-0.9
EW2	**E Wide Canyon**	**1.73**	**103**		Pb	04 00 28.7	-0.8
FRD	**Ford Ranch, An**	**1.75**	**118**		Pn	04 00 27.9	+0.1
PFO	**Pinyon Flats O**	**1.80**	**113**		Pn	04 00 28.8	+0.3
PFO	**Pinyon Flats O**	**1.80**	**113**	P		04 00 28.6	
	baz=294,SNR=12						
PFO				Sb		04 00 53.6	
	baz=294						
HEC	**Hector,Ludlow**	**1.81**	**74**	P		04 00 28.2	
	baz=255,SNR=6.2						
HEC				Sg		04 00 57.1	
	baz=255						
TPFO	**Pinon Flats**	**1.81**	**113**	P		04 00 28.7	
	baz=294						
TPFO				Sb		04 00 53.6	
	baz=294						
WLHM	**Little Horse**	**1.81**	**3**		Pb	04 00 30.2	-0.8
109C	**Camp Elliot, M**	**1.83**	**142**		Pn	04 00 27.8	-0.9
109C				IAML		04 00 54.7	
	comp=E,146nm,0.4s						
109C				IAML		04 00 55.0	
	comp=N,126nm,0.3s						
109C	**Camp Elliot, M**	**1.83**	**142**	P		04 00 28.2	
	baz=322,SNR=7.5						
109C				S		04 00 51.3	
	baz=322						
PMD	**Palm Desert**	**1.85**	**111**		Pn	04 00 30.1	+1.0
MATG	**Mataguay Scout**	**1.88**	**127**		Pn	04 00 29.8	+0.2
PAGB	**Antelope Grade**	**2.03**	**314**	Pn	Pn	04 00 32.8	+1.2
PAGB				IAML		04 01 18.6	
	comp=N,54nm,1.9s						
BELC	**Belle Mtn. Jos**	**2.06**	**99**	Sb		04 01 02.0	
	baz=280						
BAR	**Barrett**	**2.22**	**138**		Pn	04 00 33.9	-0.3
BAR				IAML		04 01 07.3	
	comp=N,87nm,0.5s						
MONP2	**Monument Peak**	**2.22**	**130**	P		04 00 34.1	
	baz=311						
GMRC	**Granite Mounta**	**2.34**	**78**	P		04 00 35.7	
	baz=260						
CBX	**Cerro Bola**	**2.51**	**143**		Pn	04 00 38.2	-0.1
CBX				IAML		04 01 17.2	
	comp=E,39nm,0.6s						
RMX	**La Rumorosa**	**2.63**	**131**	Pn	Pn	04 00 41.6	+1.7
RMX				IAML		04 01 22.1	
	comp=E,44nm,0.6s						
RMX				IAML		04 01 24.9	
	comp=N,33nm,0.7s						
IRM	**Iron Mountain**	**2.74**	**93**	P		04 00 41.2	
	baz=275,SNR=16						
TPNV	**Topopah Spring**	**3.16**	**34**	Pn	Pn	04 00 48.3	+1.1
TPNV				IAML		04 01 41.1	
	comp=N,23nm,0.6s						
TPNV				IAML		04 01 45.8	
	comp=N,28nm,0.9s						
SHPR	**Sheep Range**	**3.44**	**50**	Pn	Pn	04 00 52.4	+1.3
W13A	**Hualapai Mount**	**3.83**	**77**	Pn	Pn	04 00 57.0	+0.5
W13A				IAML		04 02 04.9	
	comp=N,14nm,1.0s						
LHV	**Little Huntoon**	**3.90**	**359**	Pn	Pn	04 01 00.0	+2.8
NV11	**Mina Array Sit**	**4.09**	**3**	Pn	Pn	04 01 01.7	+1.7
NV11				IAML		04 02 15.2	
	comp=E,9.7nm,4.2s						
WAKR	**Walker**	**4.23**	**349**	Pn	Pn	04 01 03.1	+1.1
WAKR				IAML		04 02 06.2	
	comp=E,14nm,4.2s						
WAKR				IAML		04 03 50.6	
	comp=N,11nm,4.8s						
KVN	**Kaiserville**	**4.71**	**3**	Pn	Pn	04 01 10.7	+2.2
KVN				IAML		04 02 25.3	
	comp=N,6.6nm,4.8s						
KVN				IAML		04 02 27.5	
	comp=E,5.3nm,4.6s						
PNTR	**Pine Nut**	**4.83**	**349**	Pn	Pn	04 01 11.7	+1.5

*SOME **16** 04:00:25.4,41°.28N×78°.15E,h15km*
*NNC **16** 04:00:26.4±1.1,41°.31N×78°.25E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=8.0km s-min=5.0km az=168.0*
*KRNET **16** 04:00:27.4±0.1,41°.37N×78°.09E,h15km,mb2.8*

ISC 16 04:00:25.2±2.1,41°.27N±0°.08×78°.10E±0°.04,h6km±12km, n42,σ1°.21/66,18C-8D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.10**	**321**	⇓*iP*	**Pb**	**04 00 46.5**	**-0.2**
	baz=19						
KDJ				⇓*iS*	**Sg**	**04 01 00.8**	**+0.2**
	baz=19						
PRZ	**Przheval'sk**	**1.23**	**10**	⇑*iP*	**Pn**	**04 00 49.0**	**-0.1**
	baz=11						
PRZ				⇑*iS*	**Sn**	**04 01 05.5**	**-0.6**
	baz=11						
ANVS	**Anan'yevo**	**1.54**	**348**	⇑*iP*	**Pb**	**04 00 54.5**	**+0.2**
	baz=48						
ANVS				⇑*iS*	**Sg**	**04 01 14.8**	**0.0**
	baz=48						
ULHL	**Ulahol**	**1.70**	**306**	⇓*eP*	**Pg**	**04 00 58.3**	**+0.6**
	baz=3.0						
ULHL				⇓*iS*	**Sg**	**04 01 20.5**	**+0.7**
	baz=3.0						
SATY	**Saty**	**1.80**	**7**	*eP*	**Pb**	**04 00 58.6**	**0.0**
	6.1nm,0.3s						
SATY				*eS*	**Sg**	**04 01 23.1**	**+0.1**
	22nm,0.2s						
SATY	**Saty**	**1.80**	**7**	P	**Pb**	**04 00 58.6**	**0.0**
	6.1nm,0.3s						
SATY				S	**Sg**	**04 01 23.1**	**+0.1**
	22nm,0.2s						
TNSS	**Tian-Shan**	**1.96**	**334**	*eP*	**Pb**	**04 01 02.0**	**+0.5**
	11nm,0.3s						
TNSS				*eS*	**Sg**	**04 01 28.7**	**+0.5**
	13nm,0.2s						
TNSS	**Tian-Shan**	**1.96**	**334**	Pg	**Pb**	**04 01 02.0**	**+0.5**
	11nm,0.3s						
TNSS				Lg	Lg	04 01 28.7	
	13nm,0.2s						
UZB	**Uzynbulak**	**1.99**	**20**	*eP*	**Pb**	**04 01 00.8**	**-1.1**
	2.1nm,0.3s						
UZB				*eS*	**Sb**	**04 01 26.6**	**-0.5**
	67nm,0.3s						
UZB	**Uzynbulak**	**1.99**	**20**	Pg	**Pb**	**04 01 00.8**	**-1.1**
	7.8nm,0.3s						
UZB				Lg	Lg	04 01 26.6	
	67nm,0.3s						
BOOM	**Boomskoye usch**	**2.02**	**308**	⇑*iP*	**Pb**	**04 01 03.5**	**+1.1**
	baz=6.0						
BOOM				⇑*iS*	**Sg**	**04 01 30.1**	**0.0**
	baz=6.0						
MDOK	**Medeo**	**2.04**	**338**	*eP*	**Pb**	**04 01 03.4**	**+0.6**
	9.2nm,0.4s						
MDOK				*eS*	**Sg**	**04 01 31.1**	**+0.2**
	36nm,0.3s						
MDOK	**Medeo**	**2.04**	**338**	Pn	**Pb**	**04 01 03.1**	**+0.3**
	12nm,0.9s						
MDOK				⇓Sn	**Sg**	**04 01 31.4**	**+0.5**
	29nm,0.6s						
MDOK	**Medeo**	**2.04**	**338**	Pg	**Pb**	**04 01 03.4**	**+0.6**
	9.2nm,0.4s						
MDOK				Lg	Lg	04 01 31.1	
	36nm,0.3s						
IZV	**Izvestkoviy**	**2.08**	**328**	*eP*	**Pb**	**04 01 04.1**	**+0.7**
	5.8nm,0.2s						
IZV				*eS*	**Sg**	**04 01 32.4**	**+0.3**
	48nm,0.4s						
IZV	**Izvestkoviy**	**2.08**	**328**	Pg	**Pb**	**04 01 04.1**	**+0.7**
	5.8nm,0.2s						
IZV				Lg	Lg	04 01 32.4	
	48nm,0.4s						
KOTS	**Kotyrbulak**	**2.09**	**340**	*eP*	**Pb**	**04 01 04.4**	**+0.8**
	39nm,0.4s						
KOTS				*eS*	**Sg**	**04 01 33.0**	**+0.5**
	26nm,0.2s						
KOTS	**Kotyrbulak**	**2.09**	**340**	Pg	**Pb**	**04 01 04.4**	**+0.8**
	39nm,0.4s						
KOTS				Lg	Lg	04 01 33.0	
	26nm,0.2s						
SHLS	**Shalkode**	**2.14**	**28**	*eP*	**Pg**	**04 01 05.8**	**-0.3**
	16nm,0.1s						
SHLS				*eS*	**Sg**	**04 01 35.2**	**+1.4**
	45nm,0.4s						
SHLS	**Shalkode**	**2.14**	**28**	Pg	**Pg**	**04 01 05.8**	**-0.3**
	16nm,0.1s						
SHLS				Lg	Lg	04 01 35.2	
	45nm,0.4s						
KPKS	**Kokpek**	**2.23**	**11**	*eP*	**Pb**	**04 01 05.7**	**-0.3**
	24nm,0.2s						
KPKS				*eS*	**Sg**	**04 01 35.1**	**-1.8**
	53nm,0.3s						
PDGK	**Podgornoye**	**2.30**	**26**	Pg	**Pb**	**04 01 06.6**	**-0.5**
	4.6nm,0.3s						
PDGK				Lg	Lg	04 01 36.4	
	23nm,0.5s						
KST	**Kastek**	**2.38**	**319**	*eP*	**Pb**	**04 01 09.6**	**+1.2**
	6.8nm,0.3s						
KST				*eS*	**Sg**	**04 01 41.9**	**+0.3**
	11nm,0.2s						
KST	**Kastek**	**2.38**	**319**	Pg	**Pb**	**04 01 09.6**	**+1.2**
	6.8nm,0.3s						
KST				Lg	Lg	04 01 41.9	
	11nm,0.2s						
TKM2	**Tokmak 2**	**2.49**	**312**	⇑*eP*	**Pb**	**04 01 10.3**	**-0.1**
	baz=11						
TKM2				⇑*iS*	**Sb**	**04 01 40.8**	**-0.5**
	baz=11						
TKM2	**Tokmak 2**	**2.49**	**312**	⇑Pn	**Pb**	**04 01 10.3**	**-0.1**
	3.0nm,0.5s						
TKM2				Lg	Lg	04 01 46.3	
DGS	**Degeres**	**2.62**	**319**	*eP*	**Pb**	**04 01 14.0**	**+1.5**
	4.7nm,0.3s						
DGS				*eS*	**Sg**	**04 01 49.5**	**+0.1**
	13nm,0.5s						
DGS	**Degeres**	**2.62**	**319**	Pg	**Pb**	**04 01 14.0**	**+1.5**
	4.7nm,0.3s						
DGS				Lg	Lg	04 01 49.5	
	13nm,0.5s						
KTBS	**Karatobe**	**2.65**	**337**	*eP*	**Pb**	**04 01 14.0**	**+0.9**
	4.7nm,0.3s						
KTBS				*eS*	**Sg**	**04 01 49.4**	**-1.1**
	27nm,0.5s						
KTBS	**Karatobe**	**2.65**	**337**	Pg	**Pb**	**04 01 14.0**	**+0.9**
	4.7nm,0.3s						
KTBS				Lg	Lg	04 01 49.4	
	27nm,0.5s						
KBK	**Karagaybulak**	**2.73**	**301**	⇑*iP*	**Pb**	**04 01 14.2**	**-0.3**
	baz=0.0						
KBK				⇑*iS*	**Sb**	**04 01 47.7**	**-0.5**
	baz=0.0						
KTMS	**Ketmen**	**2.74**	**37**	*eP*	**Pb**	**04 01 14.3**	**-0.3**
	6.1nm,0.3s						
KTMS				*eS*	**Sb**	**04 01 49.8**	**+1.4**
	39nm,0.4s						
KTMS	**Ketmen**	**2.74**	**37**	Pg	**Pb**	**04 01 14.3**	**-0.3**
	6.1nm,0.3s						
KTMS				Lg	Lg	04 01 49.8	
	39nm,0.4s						
UCH	**Uchtor**	**2.85**	**291**	⇓*iP*	**Pb**	**04 01 15.5**	**-1.2**
	baz=89						
UCH				⇓*iS*	**Sb**	**04 01 50.5**	**-1.5**
	baz=89						
ARXS	**Arharly**	**2.94**	**356**	*eP*	**Pb**	**04 01 18.9**	**+0.8**
	14nm,0.3s						
ARXS				*eS*	**Sg**	**04 01 57.8**	**-2.0**
	16nm,0.2s						
ARXS	**Arharly**	**2.94**	**356**	Pg	**Pb**	**04 01 18.9**	**+0.8**
	14nm,0.3s						
ARXS				Lg	Lg	04 01 57.8	
	16nm,0.2s						
AAK	**Ala-Archa**	**3.02**	**298**	⇑*iP*	**Pb**	**04 01 18.0**	**-1.4**
	baz=96						
AAK				⇑*iS*	**Sb**	**04 01 54.5**	**-2.0**
	baz=96						
AAK	**Ala-Archa**	**3.02**	**298**	Pg	**Pg**	**04 01 22.2**	**-0.8**
AAK				Lg	Lg	04 02 05.1	
	18nm,0.9s						
USP	**Ospenovka**	**3.33**	**308**	⇑*eP*	**Pb**	**04 01 22.3**	**-2.4**
	baz=7.0						
USP				⇑*eS*	**Sb**	**04 02 02.5**	**-3.0**
	baz=7.0						
AML	**Almayashu**	**3.41**	**286**	⇑*iP*	**Pn**	**04 01 23.4**	**+4.2**
	baz=84						
AML				⇑*iS*	**Sb**	**04 02 04.1**	**-3.9**
	baz=84						
KK31	**Karatay Array**	**5.93**	**290**	⇓Lg	Lg	04 03 37.7	
	0.9nm,0.6s						
MK31	**Makanchi Array**	**6.29**	**27**	⇑Lg	Lg	04 03 43.8	
	0.7nm,0.6s,baz=209,slow=27,SNR=4.0						

*IDC **16** 04:45:09.3±1.8,7°.24S×146°.20E,h182km±23km, mb3.4/6, mb1 3.5/8, mb1mx3.3/36, mbtmp3.9/8, MS3.4/1, Ms1 3.4/1, ms1mx2.6/17, Error ellipse: s-maj=40.9km s-min=19.5km az=105.0*

ISC 16 04:45:08.7±0.8,7°.2S±0°.1×146°.1E±0°.2,h170km,n10, σ0°.73/11,mb3.7/5,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.46**	**154**	P	**Pn**	**04 45 50.8**	**+0.5**
	20nm,0.3s,baz=54,slow=5.8,SNR=16				

Ms1 3.2/2,ms1mx2.6/37,Error ellipse: s-maj=31.3km s-min=16.3km az=166.0
*AEIC **16** 04:59:23.8±1.9,51.68N±0.07°×175.23W±0.04,h28km±5km, Error ellipse: s-maj=10.0km s-min=3.5km az=171.0*
*NEIC **16** 04:59:25.0±1.5,51.76N±0.08°×175.24W±0.05,h45km±8km, mb3.9/12,ML3.8/24(AEIC),Error ellipse: s-maj=12.4km s-min=3.9km az=169.0*

ISC 16 04:59:24.0±0.7,51.73N±0.09°×175.25W±0.04,h35km,n63, σ1§21/59,mb4.0/10,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSMY	**Great Sitkin M**	**0.59**	**303**		**Pn**	**04 59 36.6**	**+0.6**
GSTR	**Great Sitkin T**	**0.62**	**306**		**Pn**	**04 59 37.5**	**+1.1**
GSTR				Sn	**Sn**	**04 59 46.0**	**+0.9**
GSTD	**Great Sitkin T**	**0.65**	**301**		**Pn**	**04 59 37.4**	**+0.6**
GSTD					**Sn**	**04 59 46.4**	**+0.6**
ATKA	**Atka Island**	**0.81**	**53**		**Pn**	**04 59 39.2**	**+0.3**
ATKA				Sn	**Sn**	**04 59 49.4**	**-0.2**
ADAG	**Mount Adagdak**	**0.88**	**287**		**Pn**	**04 59 40.7**	**+0.9**
KOWE	**Korovin West**	**0.89**	**44**		**Pn**	**04 59 41.4**	**+1.4**
KOFP	**Korovin Flat P**	**0.90**	**52**		**Pn**	**04 59 41.1**	**+0.9**
ADK	**Adak**	**0.91**	**280**		**Pn**	**04 59 40.0**	**-0.3**
ADK	**Adak**	**0.91**	**280**	Sn	**Sn**	**04 59 52.4**	**+0.3**
KIKV	**Kanaga Island**	**1.20**	**278**		**Pn**	**04 59 44.4**	**+0.1**
KICM	**Kanaga Island**	**1.22**	**280**		**Pn**	**04 59 45.1**	**+0.5**
KIMD	**Kanaga Island**	**1.24**	**272**		**Pn**	**04 59 44.5**	**-0.2**
TAFP	**Tanaga Falls P**	**1.71**	**277**		**Pn**	**04 59 52.0**	**+0.7**
TAFP					**Sn**	**05 00 13.6**	**+1.8**
TASE	**Tanaga Southea**	**1.74**	**275**		**Pn**	**04 59 52.5**	**+0.8**
GAEA	**Gareloi East**	**2.17**	**273**		**Pn**	**04 59 59.2**	**+1.6**
CERAA	**Semis' Rag'd T**	**3.15**	**275**		**Pn**	**05 00 12.8**	**+1.7**
CESW	**Semis' Southwe**	**3.23**	**275**		**Pn**	**05 00 13.6**	**+1.5**
AMKA	**Amchitka**	**3.42**	**266**		**Pn**	**05 00 15.6**	**+0.8**
AMKA				Sn	**Sn**	**05 00 58.4**	**+4.4**
LSPA	**Little Sitkin**	**3.84**	**276**		**Pn**	**05 00 22.2**	**+1.7**
LSNW	**Little Sitkin**	**3.87**	**276**		**Pn**	**05 00 22.6**	**+1.6**
NIKH	**Nikolski High**	**4.11**	**70**	Pn	**Pn**	**05 00 26.5**	**+2.2**
MAPS	**Pakushin South**	**5.46**	**64**		**Pn**	**05 00 46.0**	**+3.2**
KDAK	**Kodiak Island**	**14.38**	**56**	Pn	**Pn**	**05 02 43.3**	**-1.5**
	0.3nm,0.3s,baz=263,slow=3.6,SNR=8.6						
KDAK				Sn	**Sn**	**05 05 21.8**	**-1.0**
	0.1nm,0.3s,baz=140,slow=19,SNR=1.3						
KDAK	**Kodiak Island**	**14.38**	**56**		**Pn**	**05 02 45.5**	**+0.7**
PETK	**Petropavlovsk-**	**16.53**	**285**	LR	LR	05 08 44.4	
	comp=Z,5.1nm,20.9s,baz=78,slow=34						
KTH	**Kantishna Hill**	**17.46**	**38**	P	**Pn**	**05 03 24.4**	**-0.1**
KTH				IAmb	IAmb	05 03 30.0	
	comp=Z,14nm,1.1s						
BPAW	**Bear Paw Mtn.**	**17.73**	**36**	P	**P**	**05 03 30.7**	**+2.4**
MLY	**Manley**	**18.34**	**34**	Pn	**Pn**	**05 03 36.7**	**+1.5**
MDM	**Murphy Dome**	**19.19**	**36**	P	**Pn**	**05 03 45.4**	**-0.2**
IL31		**19.60**	**37**	P	**P**	**05 03 49.6**	**+0.8**
IL31				IAmb	IAmb	05 04 04.7	
	comp=Z,3.2nm,0.6s						
ILAR	**Eielson Array**	**19.60**	**37**	P	**P**	**05 03 47.6**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=216,slow=9.8,SNR=35						
ILAR	**Eielson Array**	**19.60**	**37**	P	**P**	**05 03 47.9**	**-1.0**
COLD	**Coldfoot**	**19.84**	**29**	P	**P**	**05 03 51.7**	**+0.2**
COLD				IAmb	IAmb	05 03 58.9	
	comp=Z,4.8nm,0.8s						
DOT	**Dot Lake**	**20.25**	**42**	P	**P**	**05 03 55.9**	**-0.1**
DOT				IAmb	IAmb	05 03 59.8	
	comp=Z,4.4nm,0.7s						
SCRK	**Sand Creek**	**20.40**	**41**	P	**P**	**05 03 57.2**	**-0.5**
SEY	**Seymchan**	**20.51**	**316**	P	**P**	**05 03 59.2**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=109,slow=10,SNR=7.7						
TOLK	**Toolik Lake Re**	**20.94**	**26**	P	**P**	**05 04 04.3**	**+0.9**
TOLK				IAmb	IAmb	05 04 16.2	
	comp=Z,4.8nm,0.8s						
K27K	**Chicken**	**21.21**	**42**	P	**P**	**05 04 06.3**	**0.0**
EGAK	**Eagle**	**21.84**	**40**	P	**P**	**05 04 13.0**	**0.0**
EGAK				IAmb	IAmb	05 04 22.0	
	comp=Z,4.1nm,0.7s						
INK	**Inuvik**	**25.91**	**34**	P	**P**	**05 04 51.8**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=231,slow=9.3,SNR=5.2						
YAK	**Yakutsk**	**30.86**	**311**	LR	LR	05 17 45.3	
	comp=Z,63nm,19.1s,baz=100,slow=36						
YKA	**Yellowknife Ar**	**33.37**	**47**	P	**P**	**05 05 58.2**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=280,slow=9.3,SNR=6.8						
YKA				PcP	**PcP**	**05 08 38.8**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=287,slow=3.0,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**34.87**	**210**	T	T	05 43 33.3	
	baz=20,slow=76,SNR=60						
H11N3	**WAKE ISLAND Hy**	**34.88**	**210**	T	T	05 43 33.9	
	baz=20,slow=76,SNR=48						
H11N1	**WAKE ISLAND Hy**	**34.89**	**210**	T	T	05 43 32.9	
	baz=20,slow=76,SNR=48						
H11S1	**WAKE ISLAND Hy**	**36.08**	**210**	T	T	05 45 10.0	
	baz=19,slow=76,SNR=85						
H11S2	**WAKE ISLAND Hy**	**36.09**	**210**	T	T	05 44 48.6	
	baz=19,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**36.09**	**210**	T	T	05 44 53.7	
	baz=19,slow=76,SNR=31						
PDAR	**Pinedale Array**	**44.08**	**75**	P	**P**	**05 07 28.7**	**0.0**
	comp=Z,2.1nm,0.6s,baz=306,slow=4.0,SNR=24						
YULB	**Yu-li**	**55.63**	**265**	P	**P**	**05 08 56.3**	**0.0**
TX32	**Lajitas Array**	**56.41**	**84**	P	**P**	**05 09 02.3**	**+0.3**
TXAR	**Lajitas Array**	**56.41**	**84**	P	**P**	**05 09 02.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=317,slow=4.9,SNR=2.0						
TXAR	**Lajitas Array**	**56.41**	**84**	P	**P**	**05 09 01.9**	**0.0**
KURK	**Kurchatov**	**60.36**	**315**	P	**P**	**05 09 29.2**	**+0.1**
KURBB	**Kurchatov Arra**	**60.46**	**315**	P	**P**	**05 09 29.2**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=42,slow=6.4,SNR=5.3						
MKAR	**Makanchi Array**	**61.53**	**310**	P	**P**	**05 09 36.7**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=46,slow=6.0,SNR=2.0						
HFS	**Hagfors**	**68.26**	**355**	P	**P**	**05 10 19.3**	**-1.3**
	comp=Z,3.5nm,0.9s,baz=4.6,slow=9.0,SNR=3.0						
CMAR	**Chiang Mai Arr**	**73.17**	**278**	P	**P**	**05 10 50.5**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=28,slow=7.3,SNR=7.6						
ASAR	**Alice Springs**	**87.28**	**225**	P	**P**	**05 12 05.7**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=25,slow=5.0,SNR=6.2						
H03N2	**Juan Fernandez**	**119.12**	**108**	T	T	07 28 28.3	
	baz=317,slow=77,SNR=9.1						
H03N1	**Juan Fernandez**	**119.14**	**108**	T	T	07 28 39.4	
	baz=317,slow=77,SNR=10.0						
H03N3	**Juan Fernandez**	**119.14**	**108**	T	T	07 28 39.0	
	baz=317,slow=77,SNR=7.0						
BOSA	**Boshof**	**152.28**	**319**	PKPbc	**PKPbc**	**05 19 15.0**	**-0.9**
	comp=Z,6.8nm,1.0s,baz=68,slow=1.6,SNR=6.5						

*IDC **16** 05:06:43.5±5.6,36.55N×70.78E,h143km±37km,mb3.0/2, mb1 3.3/8,mb1mx3.0/71,mbtmp3.7/8,MS3.4/1,Ms1 3.4/1, ms1mx2.4/21,Error ellipse: s-maj=68.1km s-min=17.9km az=152.0*
*NNC **16** 05:06:48.1±3.1,36.85N×70.69E,h106km±59km,mb3.3, mpv3.8,Error ellipse: s-maj=28.1km s-min=25.8km az=163.0*

ISC 16 05:06:42.3±0.8,36.45N±0.07°×70.87E±0.07,h150km,n30, σ2§00/34,2C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.08**	**20**	P	**Pn**	**05 08 10.3**	**0.0**
	SNR=48						
UCH	**Uchtor**	**6.42**	**25**	P	**Pn**	**05 08 16.6**	**+1.7**
	SNR=7.4						
KK31	**Karatay Array**	**6.65**	**358**	⇑P	**Pn**	**05 08 18.1**	**+0.5**
	1.9nm,0.3s,baz=175,slow=12,SNR=44						
KK31				S	**Sn**	**05 09 28.8**	**-3.5**
	9.7nm,1.0s,baz=208,slow=31,SNR=7.6						
AAK	**Ala-Archa**	**6.78**	**23**	P	**Pn**	**05 08 19.9**	**+0.4**
	2.7nm,0.3s,baz=200,slow=6.2,SNR=21						
AAK				S	**Sn**	**05 09 34.1**	**-1.6**
	1.0nm,0.3s,baz=209,slow=8.4,SNR=7.3						
AAK	**Ala-Archa**	**6.78**	**23**	P	**Pn**	**05 08 22.1**	**+2.7**
	SNR=6.4						
AAK	**Ala-Archa**	**6.78**	**23**	⇓P	**Pn**	**05 08 21.2**	**+1.7**
	5.2nm,0.6s						
AAK				⇓S	**Sn**	**05 09 33.9**	**-1.8**
	13nm,0.8s						
KBK	**Karagaybulak**	**6.95**	**26**	P	**Pn**	**05 08 24.6**	**+2.9**
	SNR=6.0						
TKM2	**Tokmak 2**	**7.42**	**28**	P	**Pn**	**05 08 30.3**	**+2.3**
	SNR=5.8						
TKM2	**Tokmak 2**	**7.42**	**28**	⇑P	**Pn**	**05 08 29.5**	**+1.5**
	5.6nm,0.5s						
GEYT	**Alibeck**	**10.29**	**282**	P	**Pn**	**05 09 06.2**	**+0.1**
	1.3nm,0.3s,baz=90,slow=8.6,SNR=5.5						
GEYT				S	**Sn**	**05 10 59.4**	**-0.4**
	1.4nm,0.3s,baz=187,slow=10,SNR=2.7						
PYUN	**Piuthan**	**13.20**	**126**	*eP*	**Pn**	**05 09 41.1**	**-3.1**
MK31	**Makanchi Array**	**13.39**	**36**	P	**P**	**05 09 51.9**	**+1.4**
	1.0nm,0.6s,baz=214,slow=9.3,SNR=6.2						
MKAR	**Makanchi Array**	**13.39**	**36**	P	**Pn**	**05 09 48.1**	**+1.7**
	0.2nm,0.3s,baz=215,slow=11,SNR=7.0						
KOLN	**Koldanda**	**13.82**	**125**	*eP*	**Pn**	**05 09 49.7**	**-2.4**
GKN	**Gorkha**	**14.36**	**122**	*eP*	**Pn**	**05 09 56.3**	**-2.6**
DMN	**Daman**	**14.93**	**122**	*eP*	**Pn**	**05 10 04.0**	**-2.1**
	16nm,0.4s						
AB31	**Akbulak array**	**15.08**	**331**	⇓P	**Pn**	**05 10 09.0**	**+1.5**
	0.5nm,0.4s,baz=347,slow=26,SNR=28						
PKIN	**Phulchoki**	**15.15**	**122**	*eP*	**Pn**	**05 10 07.8**	**-1.0**
	23nm,0.5s						
PKI	**Pulchoki**	**15.16**	**122**	*eP*	**Pn**	**05 10 07.6**	**-1.4**
KURBB	**Kurchatov Arra**	**15.20**	**19**	P	**P**	**05 10 11.6**	**+1.1**
	0.1nm,0.3s,baz=208,slow=10,SNR=6.6						
GUN	**Gumba**	**15.28**	**120**	*eP*	**Pn**	**05 10 09.1**	**-1.4**
JIRN	**Jiri**	**15.65**	**120**	*eP*	**Pn**	**05 10 13.6**	**-1.5**
	40nm,0.3s						
RAMN	**Ramite**	**16.38**	**121**	*eP*	**Pn**	**05 10 21.6**	**-2.2**
AKTO	**Aktyubinsk**	**16.77**	**330**	P	**Pn**	**05 10 29.4**	**+1.2**
	0.2nm,0.3s,baz=134,slow=14,SNR=4.9						
AKTO				S	**S**	**05 13 29.8**	**-4.8**
	0.2nm,0.3s,baz=108,slow=20,SNR=1.6						
TAPN	**Taplejung**	**16.91**	**118**	*eP*	**P**	**05 10 29.9**	**0.0**
	11nm,0.3s						
ODAN	**Odare**	**16.98**	**120**	*eP*	**P**	**05 10 30.0**	**-0.6**
	23nm,0.8s						
ZALV	**Zalesovo Beam**	**20.00**	**25**	P	**P**	**05 11 04.5**	**+1.5**
	1.0nm,0.3s,baz=222,slow=11,SNR=9.0						
SONM	**Songino Array**	**28.45**	**55**	LR	LR	05 24 51.2	
	comp=Z,67nm,19.4s,baz=108,slow=38						
TORD	**Torodi Ar. Bea**	**65.61**	**269**	P	**P**	**05 17 11.6**	**+1.1**
	0.2nm,0.4s,baz=49,slow=6.2,SNR=1.4						
YKA	**Yellowknife Ar**	**81.30**	**3**	P	**P**	**05 18 42.8**	**+1.4**
	0.2nm,0.4s,baz=352,slow=5.0,SNR=6.7						

*NEIC **16** 05:11:08.3±0.5,27.3S±0.1×177.3W±0.1,h101km±8km, mb4.5/14, Error ellipse: s-maj=19.8km s-min=13.1km az=116.0*
*IDC **16** 05:11:14.6±1.7,27.03S×177.61W,h138km±17km, mb3.9/10,mb1 4.1/11,mb1mx3.9/27,mbtmp4.3/11,MS3.0/1, Ms1 3.0/1,ms1mx2.5/23,Error ellipse: s-maj=23.2km s-min=20.8km az=128.0*

ISC 16 05:11:13.9±0.7,27.47S±0.04×177.6W±0.1,h150km,n52, σ1§87/56,mb4.2/15,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**1.79**	**188**	P	**Pn**	**05 11 50.1**	**+3.5**
RIZ				S	Sn	05 12 24.7	+13
RAO	**Raoul Island**	**1.79**	**188**	P	**Pn**	**05 11 50.2**	**+3.5**
	652nm,0.3s,baz=51,slow=6.5,SNR=18						
RAO				S	Sn	05 12 21.7	+10
	436nm,0.3s,baz=310,slow=18,SNR=3.6						
RAO				LR	LR	05 12 30.7	
	comp=Z,289nm,18.8s,baz=60,slow=34						
GLKZ	**Green Lake**	**1.81**	**188**	P	Pn	05 11 52.0	+5.2
GLKZ				S	Sn	05 12 23.3	+11
MSVF	**Nonsavu**	**10.48**	**337**	P	**Pn**	**05 13 35.9**	**-4.5**
	1.9nm,0.3s,baz=159,slow=12,SNR=13						
MSVF	**Nonsavu**	**10.48**	**337**		**Pn**	**05 13 36.6**	**-3.8**
MXZ	**Matakaoa Point**	**10.63**	**198**	S	**Sn**	**05 15 39.3**	**-0.5**
NIUE	**Niue**	**10.94**	**42**	Pn	Pn	05 13 36.9	-10
PUZ	**Puketiti**	**11.12**	**197**	P	**Pn**	**05 13 46.5**	**-2.3**
PUZ				S	**Sn**	**05 15 49.8**	**-1.9**
RUGZ	**Raukumara Rang**	**11.19**	**199**	P	**Pn**	**05 13 48.9**	**-0.7**
RUGZ				S	**Sn**	**05 15 52.2**	**-1.1**
URZ	**Urewera**	**11.63**	**201**	P	**Pn**	**05 13 54.2**	**-1.1**
	0.4nm,0.3s,baz=122,slow=24,SNR=8.2						
URZ				S	**Sn**	**05 16 03.7**	**-0.1**
	3.7nm,0.3s,baz=288,slow=20,SNR=2.8						
URZ	**Urewera**	**11.63**	**201**	Pn	**Pn**	**05 13 54.5**	**-0.8**
BKZ	**Black Stump Fm**	**12.65**	**201**	Pn	**Pn**	**05 14 08.6**	**-0.1**
BKZ	**Black Stump Fm**	**12.65**	**201**	P	Pn	05 14 05.2	-3.4
BKZ				S	**Sn**	**05 16 27.2**	**-1.4**
MCHZ	**McNeill Hill**	**12.84**	**200**	P	**Pn**	**05 14 13.6**	**+2.6**
MCHZ				S	**Sn**	**05 16 32.7**	**-0.3**
KWHZ	**Kaweka Forest**	**12.91**	**201**	P	**Pn**	**05 14 12.1**	**+0.1**
KWHZ				P	**Sn**	**05 16 34.7**	**0.0**
BHHZ	**Black Hill Sta**	**13.09**	**202**	P	**Pn**	**05 14 11.7**	**-2.5**
BHHZ				S	**Sn**	**05 16 37.4**	**-1.6**
KAHZ	**Kahuranaki**	**13.11**	**199**	P	Pn	05 14 11.5	-3.1
KAHZ				P	**Sn**	**05 16 37.9**	**-1.7**
KRHZ	**Kereru**	**13.13**	**201**	P	**Pn**	**05 14 16.5**	**+1.8**
KRHZ				P	**Sn**	**05 16 38.0**	**-1.9**
AFI	**Afiamalu**	**14.55**	**23**	P	Pn	05 14 19.3	-14
	5.9nm,0.3s,baz=130,slow=5.4,SNR=5.8						
AFI				S	Sn	05 16 38.2	-36
	4.1nm,0.3s,baz=253,slow=17,SNR=1.4						
THZ	**Tophouse**	**16.23**	**206**		**P**	**05 14 57.3**	**+3.5**
THZ				IAmb	IAmb	05 15 25.8	
	comp=Z,50nm,1.4s						
KNTN	**Kanton**	**25.20**	**14**	P	**P**	**05 16 20.7**	**-5.1**
EIDS	**Eidsvold**	**28.07**	**267**	P	**P**	**05 16 52.7**	**+1.2**
EIDS				IAmb	IAmb	05 17 04.6	
	comp=Z,10nm,1.1s						
ASAR	**Alice Springs**	**43.67**	**264**	P	**P**	**05 19 06.4**	**+2.3**
	comp=Z,0.6nm,0.4s,baz=95,slow=6.9,SNR=10						
ASAR				PcP	**PP**	**05 20 49.9**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=64,slow=2.3,SNR=3.5						
WR0	**Warramunga Arr**	**44.21**	**269**	P	**P**	**05 19 10.0**	**+1.6**
WR0				IAmb	IAmb	05 19 10.3	
	comp=Z,5.1nm,0.9s						
WB2	**Warramunga Arr**	**44.38**	**269**	P	**P**	**05 19 11.7**	**+1.9**
WB2				IAmb	IAmb	05 19 22.4	
	comp=Z,7.3nm,1.1s						
WRA	**Warramunga Arr**	**44.40**	**269**	P	**P**	**05 19 11.7**	**+1.8**
	comp=Z,3.1nm,0.7s,baz=105,slow=7.7,SNR=10						
WRA	**Warramunga Arr**	**44.40**	**269**	P	**P**	**05 19 11.7**	**+1.8**
WB0	**Warramunga Arr**	**44.41**	**269**	P	**P**	**05 19 11.8**	**+1.9**
WB0				IAmb	IAmb	05 19 17.6	
	comp=Z,13nm,1.5s						
FITZ	**Fitzroy Crossi**	**52.75**	**267**	P	**P**	**05 20 15.7**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=111,slow=5.4,SNR=1.4						
QSPA	**South Pole Qui**	**62.63**	**180**	P	**P**	**05 21 23.1**	**+1.0**
TOLI2	**Tolitoli**	**65.56**	**285**	P	**P**	**05 21 43.5**	**+1.6**
TOLI2				IAmb	IAmb	05 21 45.6	
	comp=Z,5.7nm,0.8s						
MJAR	**Matsushiro Arr**	**76.04**	**325**	P	**P**	**05 22 44.1**	**-0.6**
	comp=Z,4.3nm,0.6s,baz=162,slow=5.3,SNR=9.2						
MJAR	**Matsushiro Arr**	**76.04**	**325**	P	**P**	**05 22 44.6**	**-0.1**
JWT	**Wachi**	**76.57**	**322**	P	**P**	**05 22 47.7**	**0.0**
JHS	**Saijyo**	**77.64**	**320**	P	**P**	**05 22 54.0**	**+0.3**
ADK	**Adak**	**79.01**	**1**	P	**P**	**05 22 59.7**	**-1.1**
YSS	**Yuzh-Sakhalins**	**82.26**	**334**	P	**P**	**05 23 19.6**	**+1.4**
KSRS	**Korea Array**	**82.34**	**319**	P	**P**	**05 23 19.6**	**+0.8**
	comp=Z,4.8nm,0.6s,baz=131,slow=5.9,SNR=16						
KSAR	**Wonju Array Be**	**82.36**	**319**	P	**P**	**05 23 19.2**	**+0.3**
PETK	**Petropavlovsk-**	**83.07**	**345**	P	**P**	**05 23 22.4**	**+0.1**
	comp=Z,2.6nm,0.5s,baz=98,slow=9.1,SNR=4.8						
USRK	**Ussuriysk Ar.**	**84.91**	**326**	P	**P**	**05 23 32.7**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=153,slow=4.1,SNR=6.7						
USRK	**Ussuriysk Ar.**	**84.91**	**326**	P	**P**	**05 23 31.2**	**-0.6**
NVAR	**Mina Array Bea**	**85.87**	**43**	P	**P**	**05 23 37.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=223,slow=8.2,SNR=8.3						
NVAR	**Mina Array Bea**	**85.87**	**43**	P	**P**	**05 23 37.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**92.74**	**289**	P	**P**	**05 24 12.4**	**+2.8**
	comp=Z,0.5nm,0.3s,baz=144,slow=3.2,SNR=6.1						
PDAR	**Pinedale Array**	**93.79**	**43**	P	**P**	**05 24 14.6**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=208,slow=2.9,SNR=6.8						
MKAR	**Makanchi Array**	**116.12**	**311**	PKP	**PKiKP**	**05 29 39.6**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=193,slow=0.6,SNR=3.7						
BVAR	**Borovoye Array**	**124.51**	**317**	PKP	**PKiKP**	**05 29 56.2**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=134,slow=4.2,SNR=3.7						
FINES	**FINESS Array B**	**142.50**	**342**	PKhKP	PKPpre	05 30 23.7	
	comp=Z,0.9nm,0.4s,baz=44,slow=6.4,SNR=7.2						
NOA	**NORSAR Array B**	**145.91**	**352**	PKPbc	**PKPab**	**05 30 35.1**	**-0.8**
	comp=Z,4.5nm,0.8s,baz=14,slow=2.9,SNR=14						
AKASG	**Malin Array Be**	**149.12**	**326**	PKPbc	**PKiKP**	**05 30 44.7**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=42,slow=3.9,SNR=11						
BRTR	**Keskin Array B**	**151.38**	**303**	PKPbc	**PKiKP**	**05 30 51.1**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=144,slow=4.4,SNR=5.3						

*IDC **16** 05:11:43.3±0.6,5.05S×153.13E,h0km,mb4.2/16, mb1 4.3/17,mb1mx4.2/39,mbtmp4.2/17,ML2.2/1,MS3.3/3, Ms1 3.3/3,ms1mx2.9/26,Error ellipse: s-maj=22.2km s-min=14.9km az=102.0*
*NEIC **16** 05:11:48.5±2.0,5.02S±0.07°×153.14E±0.05,h35km±1km, mb4.3/15, Error ellipse: s-maj=12.4km s-min=8.2km az=179.0*

ISC 16 05:11:49.2±0.5,5.07S±0.06°×153.15E±0.09,h43km,n48, σ0§97/49,mb4.2/23,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.32**	**312**		**Pn**	**05 12 08.8**	**-2.4**
RABL				Sn	**Sn**	**05 12 29.3**	**+1.7**
PMG	**Port Moresby**	**7.34**	**234**	Pn	**Pn**	**05 13 32.9**	**-1.1**
	2.4nm,0.3s,baz=37,slow=5.1,SNR=2.3						
PMG				Sn	**Sn**	**05 14 57.0**	**+1.1**
	3.9nm,0.3s,baz=197,slow=12,SNR=5.0						
PMG	**Port Moresby**	**7.34**	**234**		**Pn**	**05 13 34.3**	**+0.4**
HNR	**Honiara**	**8.01**	**123**	LR	LR	05 16 52.1	
	comp=Z,192nm,18.4s,baz=309,slow=38						
PATS	**Pohnpei**	**12.90**	**24**	Pn	**Pn**	**05 14 49.6**	**-0.5**
EIDS	**Eidsvold**	**20.28**	**185**	P	**P**	**05 16 17.8**	**-3.6**
EIDS				IAmb	IAmb	05 16 39.7	
	comp=Z,19nm,1.4s						
DZM	**Mont Dzumac**	**21.24**	**144**	P	**P**	**05 16 32.4**	**+0.5**
	comp=Z,17nm,0.7s,baz=269,slow=9.2,SNR=9.3						
MTN	**Manton Dam**	**23.06**	**249**	P	**P**	**05 16 51.4**	**+0.1**
MTN				IAmb	IAmb	05 17 11.7	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**23.39**	**229**	P	**P**	**05 16 54.2**	**-0.2**
WR0				IAmb	IAmb	05 16 56.0	
	comp=Z,10.0nm,1.1s						
WB2	**Warramunga Arr**	**23.52**	**229**	P	**P**	**05 16 55.0**	**-0.7**
WB2				IAmb	IAmb	05 17 06.0	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**23.53**	**229**	P	**P**	**05 16 55.0**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=53,slow=9.3,SNR=11						
WRA				LR	LR	05 25 49.2	
	comp=Z,81nm,18.9s,baz=350,slow=36						
WRA	**Warramunga Arr**	**23.53**	**229**	P	**P**	**05 16 54.9**	**-0.8**
KNRA	**Kununurra**	**26.17**	**244**	P	**P**	**05 17 19.4**	**-0.5**
KNRA				IAmb	IAmb	05 17 26.7	
	comp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**26.19**	**223**	P	**P**	**05 17 19.7**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=57,slow=8.7,SNR=9.0						
ASAR	**Alice Springs**	**26.19**	**223**	P	**P**	**05 17 19.3**	**-0.8**
STKA	**Stephens Creek**	**28.78**	**201**	P	**P**	**05 17 42.2**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=34,slow=7.3,SNR=3.3						
STKA	**Stephens Creek**	**28.78**	**201**	P	**P**	**05 17 42.5**	**-0.6**
FITZ	**Fitzroy Crossi**	**29.84**	**242**	P	**P**	**05 17 51.8**	**-0.8**
	comp=Z,2.4nm,0.5s,baz=114,slow=8.8,SNR=6.7						
FITZ	**Fitzroy Crossi**	**29.84**	**242**	P	**P**	**05 17 51.6**	**-1.0**
FORT	**Forrest**	**34.80**	**220**	P	**P**	**05 18 35.5**	**-0.5**
PSA00	**Pilbara Seismi**	**36.19**	**240**	P	**P**	**05 18 47.3**	**-0.9**
PSA00				IAmb	IAmb	05 18 50.5	
	comp=Z,6.2nm,0.8s						
MJAR	**Matsushiro Arr**	**43.70**	**343**	LR	LR	05 36 31.9	
	comp=Z,30nm,20.1s,baz=240,slow=34						
USRK	**Ussuriysk Ar.**	**52.62**	**341**	P	**P**	**05 20 59.0**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=163,slow=8.2,SNR=5.5						
PETK	**Petropavlovsk-**	**58.09**	**3**	P	**P**	**05 21 38.4**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=149,slow=3.4,SNR=2.5						
CMAR	**Chiang Mai Arr**	**58.31**	**295**	P	**P**	**05 21 41.1**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=109,slow=5.2,SNR=5.2						
ULN	**Ulaanbaatar**	**66.41**	**328**	P	**P**	**05 22 33.6

comp=Z,429nm,0.3s
STOK Stokkvaagen 0.35 207 Pg Pg 05 12 38.1 -0.2
STOK Lg Lg 05 12 43.0
STOK Stokkvaagen 0.35 207 eP Pg 05 12 38.2 -0.2
STOK eS Sg **05 12 43.1 +0.1**
STOK IAML 05 12 44.6
comp=N,320nm,0.6s
NBB05 Inndyr 0.46 32 eP Pg 05 12 40.3 -0.1
NBB05 Inndyr 0.46 32 eS Sg 05 12 46.2 -0.3
NBB05 IAML 05 12 46.7
comp=Z,436nm,0.5s
MOR8 Moi Rana 0.63 139 eP Pg 05 12 42.5 -1.1
MOR8 eS Sg **05 12 51.0 -0.9**
MOR8 IAML 05 12 52.8
comp=Z,295nm,0.7s
NBB28 Valnes 0.69 37 eP Pg 05 12 44.2 -0.5
NBB28 eS Sg **05 12 52.9 -0.7**
NBB28 IAML 05 12 54.1
comp=Z,190nm,0.5s
NBB03 Karbol 0.77 53 eP Pg 05 12 45.0 -1.2
NBB03 Karbol 0.77 53 eS Sg 05 12 55.2 -1.0
NBB29 Rokland skole 0.83 65 eS Sg 05 12 58.3 -0.1
N2RO R¸st 1.01 330 eP Pg 05 12 49.6 -1.2
N2RO eS Sg **05 13 03.1 -0.8**
N2RO IAML 05 13 05.1
comp=Z,102nm,0.3s
FAUS Fauske 1.04 44 eP Pg 05 12 50.2 -1.3
FAUS eS Sg **05 13 03.7 -1.3**
FAUS IAML 05 13 14.6
comp=Z,124nm,0.3s
N2VA Vr¸y 1.06 345 eP Pg 05 12 51.1 -0.7
N2VA eS Sg **05 13 03.6 -1.9**
N2VA IAML 05 13 13.2
comp=Z,44nm,0.5s
N2ST Straumen 1.11 50 eS Sg 05 13 07.4 +0.3
N2TV TÆrnvik 1.14 35 eP Pg 05 12 52.1 -1.3
N2TV eS Sg **05 13 08.0 -0.2**
N2TV IAML 05 13 14.2
comp=Z,153nm,0.6s
N2SV S¸rvÅgen 1.26 353 eP Pg 05 12 53.0 -2.6
N2SV eS Sg **05 13 10.0 -2.0**
N2SV IAML 05 13 12.2
comp=Z,81nm,0.4s
N2NF Nordfold 1.32 31 eP Pn 05 12 55.0 -1.1
N2NF eS Sb **05 13 13.3 -0.1**
N2NF IAML 05 13 20.7
comp=Z,74nm,0.3s
STEI Steigen 1.47 28 Pg Pn 05 12 56.6 -1.5
STEI Lg Lg 05 13 17.2
STEI Steigen 1.47 28⇑ ePg Pn 05 12 57.6 -0.5
STEI eSg Sn **05 13 17.7 +0.3**
STEI IAML 05 13 21.2
comp=Z,65nm,0.5s
STEI Steigen 1.47 28 eP Pn 05 12 57.6 -0.5
STEI eS Sb **05 13 18.3 +0.7**
LOF Lofoten 1.49 2 Pg Pn 05 12 57.2 -1.1
LOF Lg Lg 05 13 18.4
LOF Lofoten 1.49 2 eP Pn 05 12 56.6 -1.7
LOF eS Sn **05 13 14.8 -3.1**
LOF IAML 05 13 21.1
comp=Z,92nm,0.5s
N2IH Innhavet 1.65 35 eP Pn 05 13 00.6 +0.1
N2HS Hamsund 1.67 28 eP Pn 05 13 00.8 0.0
N2HS eS Sb **05 13 24.7 +1.3**
N2HS IAML 05 13 28.0
comp=Z,111nm,0.4s
N2DI Digermulen 1.78 19 eP Pn 05 13 03.4 +1.1
N2DI eS Sn **05 13 26.1 +1.2**
N2DI IAML 05 13 29.0
comp=Z,49nm,0.4s
NSS Namsos 2.21 196 Pn Pn 05 13 10.1 +1.9
NSS Sn Sb **05 13 39.4 +0.5**
NSS Namsos 2.21 196 ePg Pb 05 13 11.0 -0.5
NSS eSg Sb **05 13 39.6 +0.7**
NSS IAML 05 13 43.9
comp=Z,82nm,0.4s
NSS Namsos 2.21 196 eP Pn 05 13 09.9 +1.7
N2SO Sortland 2.22 20 eP Pn 05 13 09.8 +1.5
N2SO eS Sn **05 13 34.5 -1.2**
N2HA Harstad 2.46 28 eP Pn 05 13 13.1 +1.5
N2HA eS Sn **05 13 43.8 +2.1**
N2HA IAML 05 13 52.4
comp=Z,51nm,0.4s
NOD Norderasen 3.28 169 ePg Pb 05 13 29.7 0.0
NOD eSg Sg **05 14 13.4 -3.1**
LANU Lannavaara 3.60 63 eP Pn 05 13 29.2 +1.8
LANU eS Sn **05 14 12.8 +2.8**
LANU Lannavaara 3.60 63 eP Pn 05 13 29.2 +1.8
LANU eS Sn **05 14 12.8 +2.8**
TRO Tromso 3.64 32 eS Sn 05 14 10.8 +0.1
KIF Kilpisjarvi 3.67 46 Pn Pn 05 13 28.1 -0.1
KIF Pg Pb **05 13 37.8 +1.5**
KIF Sn Sn **05 14 13.7 +2.2**
KIF Lg Lg 05 14 25.0
KIF Kilpisjarvi 3.67 46 eS Sn 05 14 13.8 +2.3
KIF MSN 05 14 32.5
comp=Z,24nm,0.3s
KIF Kilpisjarvi 3.67 46 eS Sn 05 14 13.8 +2.3
KIF MSN 05 14 32.5
comp=Z,24nm,0.3s
BURU Burvik 3.90 118 eP Pn 05 13 32.3 +0.9
BURU eS Sn **05 14 18.3 +1.1**
BURU Burvik 3.90 118 eP Pn 05 13 32.3 +0.9
BURU eS Sn **05 14 18.3 +1.1**
JETT Jettan, Norway 3.92 39 Pn Pn 05 13 33.4 +1.6
JETT Sg Sg **05 14 33.5 -3.8**
KALU Kalix 4.10 97 eP Pn 05 13 34.2 +0.1
KALU eS Sn **05 14 21.5 -0.7**
KALU Kalix 4.10 97 eP Pn 05 13 34.2 +0.1
KALU eS Sn **05 14 21.5 -0.7**
HEF Hetta 4.31 61 eP Pn 05 13 38.1 +1.0
HEF eS Sn **05 14 28.0 +0.6**
HEF MSN 05 14 51.4
comp=Z,8.0nm,0.3s
HEF Hetta 4.31 61 eP Pn 05 13 38.1 +1.0
HEF eS Sn **05 14 28.0 +0.6**
HEF MSN 05 14 51.4
comp=Z,8.0nm,0.3s
TOF Tornio 4.43 92 eP Pn 05 13 38.8 +0.1
TOF MPN 05 13 41.1
comp=Z,7.2nm,0.2s
TOF eS Sn **05 14 30.2 -0.1**
TOF Tornio 4.43 92 eP Pn 05 13 38.8 +0.1
TOF MPN 05 13 41.1
comp=Z,7.2nm,0.2s
TOF eS Sn **05 14 30.2 -0.1**
OBF0 Syolatti, Pyha 4.98 111 eP Pn 05 13 46.4 +0.1
OBF0 eS Sn **05 14 42.2 -1.7**
OBF0 MSN 05 15 12.1
comp=Z,14nm,0.3s
OBF0 Syolatti, Pyha 4.98 111 eP Pn 05 13 46.4 +0.1
OBF0 eS Sn **05 14 42.2 -1.7**
OBF0 MSN 05 15 12.1
comp=Z,14nm,0.3s
RNF Rovaniemi 5.02 85 eP Pn 05 13 46.6 -0.2
RNF eS Sn **05 14 43.8 -0.9**
RNF MSN 05 15 09.3
comp=Z,10nm,0.3s
RNF Rovaniemi 5.02 85 eP Pn 05 13 46.6 -0.2
RNF eS Sn **05 14 43.8 -0.9**
RNF MSN 05 15 09.3
comp=Z,10nm,0.3s
OBF4 Vikkela, Lumij 5.16 105 eP Pn 05 13 48.6 -0.1
OBF4 eS Sn **05 14 46.7 -1.6**
OBF4 MSN 05 15 13.3
comp=Z,7.3nm,0.3s
OBF4 Vikkela, Lumij 5.16 105 eP Pn 05 13 48.6 -0.1
OBF4 eS Sn **05 14 46.7 -1.6**
OBF4 MSN 05 15 13.3
comp=Z,7.3nm,0.3s
SGF Sodankyl 5.20 75 eP Pn 05 13 49.4 +0.2
SGF eS Sn **05 14 47.4 -1.7**
SGF Sodankyl 5.20 75 eP Pn 05 13 49.4 +0.2
SGF eS Sn **05 14 47.4 -1.7**
ARA0 ARCESS Array S 5.37 52 Pn Pn 05 13 50.8 -0.9
baz=233,slow=14
ARA0 Sn Sn **05 14 51.2 -2.3**
baz=237,slow=22
ARA0 Lg Lg 05 15 16.4
baz=237,slow=28
ARA0 ARCESS Array S 5.37 52 Pn Pn 05 13 50.8 -0.9
baz=233,slow=14
ARA0 Sn Sn **05 14 51.2 -2.3**
baz=237,slow=22
ARA0 Sg Sb **05 15 16.4 +6.6**
baz=237,slow=28
ARCES ARCESS Array B 5.37 52 Pn Pn 05 13 50.8 -0.8
baz=239,slow=12,SNR=18
ARCES Sn Sn **05 14 51.6 -2.0**
baz=237,slow=22,SNR=10.0
ARCES Lg Lg 05 15 17.0
baz=239,slow=28,SNR=8.0
NB2 NORSAR Subarra 5.71 191 Pn Pn 05 13 56.8 +0.4
baz=4.9,slow=14
NB2 Lg Lg 05 15 26.9
baz=14,slow=37
NB2 NORSAR Subarra 5.71 191 Pn Pn 05 13 56.8 +0.4
baz=4.9,slow=14
NB2 Sg Sb **05 15 26.9 +7.2**
baz=14,slow=37
NOA NORSAR Array B 5.71 191 Pn Pn 05 13 56.8 +0.4
comp=Z,0.0nm,0.3s,baz=2.5,slow=12,SNR=1.5
NOA Sn Sn **05 15 02.3 +0.3**
comp=Z,0.1nm,0.3s,baz=20,slow=20,SNR=2.3
NOA Lg Lg 05 15 26.0
comp=Z,0.3nm,0.3s,baz=39,slow=11,SNR=4.0
NRA0 NORESS Array S 5.99 189 Pn Pn 05 14 01.1 +0.9
baz=4.4,slow=14
NRA0 Sn Sn **05 15 11.1 +2.3**
baz=11,slow=28
NRA0 Lg Lg 05 15 36.0
baz=357,slow=37
NRA0 NORESS Array S 5.99 189 Pn Pn 05 14 01.1 +0.9
baz=4.4,slow=14
NRA0 Sg Sg **05 15 36.0 -7.6**
baz=357,slow=37
HFS Hagfors 6.54 179 Pn Pn 05 14 08.0 +0.3
comp=Z,0.5nm,0.3s,baz=2.5,slow=11,SNR=15
HFS Sn Sn **05 15 22.0 -0.3**
comp=Z,0.7nm,0.3s,baz=359,slow=20,SNR=5.9
HFS Lg Lg 05 15 55.6
comp=Z,2.7nm,0.3s,baz=357,slow=28,SNR=12
HFS Hagfors 6.54 179 Sn Sn 05 15 22.2 -0.1
baz=8.4,slow=22
HFS Lg Lg 05 15 54.2
baz=354,slow=37
FIA0 FINESS Array S 7.61 127 Pn Pn 05 14 22.4 +0.1
baz=319,slow=12
FIA0 Sn Sn **05 15 44.8 -3.9**
baz=326,slow=28
FIA0 Lg Lg 05 16 25.8
baz=324,slow=28
FIA0 FINESS Array S 7.61 127 Pn Pn 05 14 22.4 +0.1
baz=319,slow=12
FIA0 Sn Sn **05 15 44.8 -3.9**
baz=326,slow=28
FIA0 Sg Sg 05 16 25.8 -10
baz=324,slow=28
FINES FINESS Array B 7.61 127 Pn Pn 05 14 21.6 -0.7
comp=Z,0.4nm,0.3s,baz=325,slow=12,SNR=13
FINES Sn Sn **05 15 45.4 -3.2**
comp=Z,1.2nm,0.3s,baz=326,slow=24,SNR=12
FINES Lg Lg 05 16 26.2
comp=Z,2.2nm,0.3s,baz=322,slow=27,SNR=11
APA0 Apatity Array 7.68 74 Pn Pn 05 14 21.2 -2.0
baz=255,slow=14
APA0 Sn Sn **05 15 45.8 -4.5**
baz=273,slow=28
APA0 Lg Lg 05 16 26.6
baz=270,slow=28
APA0 Apatity Array 7.68 74 Pn Pn 05 14 21.2 -2.0
baz=255,slow=14
APA0 Sn Sn **05 15 45.8 -4.5**
baz=273,slow=28
APA0 Apatity Array 7.68 74 P Pn 05 14 21.7 -1.6
APA0 S Sn **05 15 45.1 -5.2**
APA Apatity 7.84 74 S Sn 05 15 48.7 -5.5

*IDC **16** 06:13:47.0±1.9, 17°.47S×178°.84W, h589km±18km, mb3.1/8, mb1 3.4/10, mb1mx3.2/39, mbtmp4.0/10, Error ellipse: s-maj=75.0km s-min=15.2km az=150.0*
ISC 16 06:13:47.9±1.4, 17.4S±0.5×178.9W±0.3, h600km, n11, σ0s53/13, mb3.5/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.89**	**263**	P		**P**		**06 15 05.3**	**-1.3**
	6.3nm,0.3s,baz=93,slow=2.0,SNR=24								
DZM	**Mont Dzumac**	**14.52**	**249**	P		**P**		**06 16 52.1**	**+0.2**
	0.8nm,0.3s,baz=276,slow=21,SNR=7.6								
STKA	**Stephens Creek**	**38.44**	**240**	P		**P**		**06 20 19.6**	**-0.3**
	6.8nm,0.7s,baz=86,slow=10.0,SNR=9.5								
WRA	**Warramunga Arr**	**44.23**	**259**	P		**P**		**06 21 05.5**	**-0.1**
	2.9nm,0.5s,baz=96,slow=7.0,SNR=83								
WRA				PcP		**PcP**		**06 22 37.1**	**+0.3**
	0.4nm,0.8s,baz=90,slow=3.3,SNR=2.2								
ASAR	**Alice Springs**	**44.44**	**254**	P		**P**		**06 21 07.5**	**+0.2**
	30nm,0.6s,baz=88,slow=8.4,SNR=474								
ASAR				PcP		**PcP**		**06 22 37.4**	**-0.1**
	0.6nm,0.5s,baz=105,slow=3.9,SNR=3.8								
FITZ	**Fitzroy Crossi**	**52.61**	**260**	P		**P**		**06 22 08.5**	**+0.9**
	0.9nm,0.3s,baz=119,slow=2.9,SNR=13								
NVAR	**Mina Array Bea**	**79.40**	**44**	P		**P**		**06 24 52.9**	**-0.3**
	0.3nm,0.5s,baz=234,slow=7.4,SNR=4.0								
ILAR	**Eielson Array**	**85.50**	**13**	P		**P**		**06 25 23.1**	**+0.2**
	0.3nm,0.4s,baz=220,slow=5.3,SNR=5.7								
TXAR	**Lajitas Array**	**86.15**	**58**	P		**P**		**06 25 27.3**	**+0.3**
	0.9nm,0.8s,baz=223,slow=6.8,SNR=6.0								
PDAR	**Pinedale Array**	**87.33**	**44**	P		**P**		**06 25 32.5**	**+0.1**
	0.4nm,0.6s,baz=209,slow=2.7,SNR=5.1								
YKA	**Yellowknife Ar**	**94.07**	**25**	P		**P**		**06 26 02.7**	**0.0**
	0.1nm,0.9s,baz=262,slow=4.3,SNR=1.7								

*IDC **16** 06:21:17.9±1.5, 10°.07S×125°.04E, h0km, mb3.6/2, mb1 3.6/5, mb1mx3.5/36, mbtmp3.5/5, ML3.4/3, MS3.7/2, Ms1 3.7/2, ms1mx2.6/40, Error ellipse: s-maj=27.8km s-min=23.2km az=29.0*
ISC 16 06:21:18.5±1.1, 10.15S±0.10×125.10E±0.10, h10km, n8, σ2s16/10, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.42**	**268**	Pn		**Pn**		**06 21 44.6**	**+0.2**
	67nm,0.3s,baz=120,slow=4.2,SNR=18								
BATI				Sn		**Sn**		**06 22 02.2**	**-0.9**
	39nm,0.3s,baz=344,slow=14,SNR=4.7								
FITZ	**Fitzroy Crossi**	**7.91**	**176**	Pn		**Pn**		**06 23 16.2**	**+2.6**
	0.3nm,0.3s,baz=356,slow=10,SNR=9.2								
FITZ				Sn		**Sn**		**06 24 41.4**	**-2.0**
	1.2nm,0.3s,baz=203,slow=6.3,SNR=8.4								
WRA	**Warramunga Arr**	**13.20**	**139**	Pn		**Pn**		**06 24 27.0**	**+1.0**
	0.2nm,0.3s,baz=315,slow=14,SNR=9.4								
WRA				Sn		**Sn**		**06 26 50.8**	**-2.2**
	0.2nm,0.3s,baz=314,slow=22,SNR=2.7								
ASAR	**Alice Springs**	**15.85**	**149**	Pn		**Pn**		**06 25 03.7**	**+1.8**
	0.1nm,0.3s,baz=321,slow=12,SNR=8.4								
ASAR				Sn		**Sn**		**06 27 54.5**	**-3.2**
	0.1nm,0.3s,baz=320,slow=22,SNR=2.8								
STKA	**Stephens Creek**	**26.46**	**147**	LR		LR		06 39 45.7	
	comp=Z,84nm,19.2s,baz=17,slow=42								
MSVF	**Nonsavu**	**51.80**	**105**	LR		LR		06 50 14.8	
	comp=Z,161nm,19.8s,baz=177,slow=34								
SONM	**Songino Array**	**60.08**	**346**	P		**P**		**06 31 25.1**	**-0.8**
	0.4nm,0.7s,baz=146,slow=8.0,SNR=2.3								
MKAR	**Makanchi Array**	**68.35**	**330**	P		**P**		**06 32 21.2**	**+1.2**
	0.9nm,0.9s,baz=147,slow=8.1,SNR=5.6								

*IDC **16** 06:23:31.6±1.4, 10°.41S×151°.99E, h0km, mb3.6/6, mb1 3.8/9, mb1mx3.7/38, mbtmp3.7/9, ML2.8/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/44, Error ellipse: s-maj=36.9km s-min=22.7km az=121.0*
ISC 16 06:23:33.2±1.1, 10.50S±0.10×152.0E±0.1, h10km, n11, σ1s47/12, mb3.8/6, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.92**	**282**	Pn		**Pn**		**06 24 48.1**	**+0.8**
	5.8nm,0.3s,baz=145,slow=13,SNR=2.7								
PMG				Sn		**Sn**		**06 25 44.5**	**+0.2**
	3.3nm,0.3s,baz=115,slow=22,SNR=1.4								
PMG				LR		LR		06 26 21.9	
	comp=Z,207nm,19.2s,baz=106,slow=35								
CTA	**Charters Tower**	**11.04**	**210**	Pn		**Pn**		**06 26 13.2**	**+1.9**
	0.2nm,0.3s,baz=97,slow=21,SNR=1.2								
CTA				Sn		**Sn**		**06 28 13.0**	**-1.9**
	0.3nm,0.3s,baz=92,slow=19,SNR=1.3								
WRA	**Warramunga Arr**	**19.46**	**239**	P		**P**		**06 27 58.9**	**-1.4**
	baz=62,slow=11,SNR=4.2								
WRA				LR		LR		06 35 32.5	
	comp=Z,55nm,18.2s,baz=85,slow=37								
ASAR	**Alice Springs**	**21.68**	**231**	P		**P**		**06 28 23.7**	**-0.7**
	0.9nm,0.8s,baz=101,slow=33,SNR=5.3								
STKA	**Stephens Creek**	**23.36**	**203**	P		**P**		**06 28 42.9**	**+0.9**
	0.7nm,0.3s,baz=44,slow=8.7,SNR=1.3								
FITZ	**Fitzroy Crossi**	**26.64**	**251**	P		**P**		**06 29 12.7**	**+0.4**
	1.7nm,0.7s,baz=89,slow=6.5,SNR=5.2								
FITZ				LR		LR		06 39 08.6	
	comp=Z,59nm,19.2s,baz=64,slow=35								
KLR	**Kul'dur**	**62.09**	**345**	LR		LR		07 00 05.3	
	comp=Z,34nm,18.1s,baz=117,slow=35								
SONM	**Songino Array**	**70.76**	**329**	P		**P**		**06 34 48.0**	**-1.9**
	0.6nm,0.6s,baz=144,slow=5.5,SNR=4.9								
MKAR	**Makanchi Array**	**84.12**	**320**	P		**P**		**06 36 05.4**	**+0.8**
	0.3nm,0.7s,baz=36,slow=2.3,SNR=2.8								
ILAR	**Eielson Array**	**87.70**	**22**	P		**P**		**06 36 22.6**	**+0.8**
	0.5nm,0.7s,baz=249,slow=5.1,SNR=5.1								
TORD	**Torodi Ar. Bea**	**150.85**	**278**	PKPbc		**PKPbc**		**06 43 25.4**	**-1.8**
	0.8nm,0.9s,baz=115,slow=2.1,SNR=3.6								

ROM 16 06:26:44.9±0.1, 44.181N±0.008×10.895E±0.007, h16km±1km, ML1.4/3, Error ellipse: s-maj=0.9km s-min=0.2km az=170.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.17**	**95**	P		P	Pg	06 26 49.1	0.0
FNVD				S		S	Sg	06 26 51.9	-0.1
POPM	**Popiglio**	**0.17**	**216**	P		P	Pb	06 26 49.5	-0.2
POPM				S		S	Sb	06 26 53.0	+0.1
POPM				AML		AML			
	comp=E,367μm,0.1s								
POPM				AML		AML			
	comp=N,420μm,0.2s								
MTCR	**Monte La Croce**	**0.17**	**154**	P		P	Pg	06 26 49.4	+0.2
MTCR				S		S	Sb	06 26 52.9	-0.2
ZCCA	**Zocca**	**0.18**	**19**	P		P	Pg	06 26 49.2	-0.2
ZCCA				S		S	Sb	06 26 53.7	+0.4
ZCCA				AML		AML			
	comp=E,113μm,0.3s								
ZCCA				AML		AML			
	comp=N,127μm,0.4s								
BDI	**Bagni Di Lucca**	**0.24**	**241**	P		P	Pg	06 26 50.6	+0.2
BDI				S		S	Sb	06 26 55.0	-0.2
BDI				AML		AML			
	comp=E,115μm,1.1s								
BDI				AML		AML			
	comp=N,166μm,0.4s								
CARD	**Cardoso**	**0.34**	**243**	P		P	Pg	06 26 51.2	-0.6
CARD				S		S	Sg	06 26 57.1	+0.5
SARO	**Sassorosso**	**0.35**	**271**	P		P	Pg	06 26 52.2	0.0
SARO				S		S	Sb	06 26 57.9	-0.4
SEI	**Scarperia**	**0.36**	**111**	P		P	Pb	06 26 52.9	0.0
SEI				S		S	Sb	06 26 58.3	0.0
SEI				AML		AML			
	comp=N,98μm,0.3s								
SEI				AML		AML			
	comp=E,104μm,1.2s								
VLC	**Villacollemand**	**0.37**	**267**	P		P	Pg	06 26 52.5	+0.1
VLC				S		S	Sb	06 26 58.6	0.0

*BEO **16** 06:27:35.8±0.4, 44°.86N×25°.38E, h6km±3km, ML3.3/12*
*SOF **16** 06:27:35.4, 45°.00N×25°.27E, h19km, MD3.2*
*BUC **16** 06:27:37.9±0.2, 45°.10N×25°.33E, h17km±1km, ml3.2/43, Error ellipse: s-maj=1.3km s-min=1.0km az=169.0*
ISC 16 06:27:37.9±0.9, 45.07N±0.02×25.31E±0.01, h25km±7km, n119, σ1s23/192, 106C-52D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MTUR	**Matau**	**0.24**	**312**	⇓P		**P**	**Pb**	**06 27 44.2**	**+0.1**
MTUR	**Matau**	**0.24**	**312**	⇓P		**P**	**Pb**	**06 27 44.2**	**+0.1**
STFAR	**Stefanesti-Arg**	**0.32**	**231**	⇑P		**Pn**	**Pn**	**06 27 46.0**	**-1.1**
STFAR				⇓S		**Sb**	**Sb**	**06 27 50.1**	**-0.1**
STFAR	**Stefanesti-Arg**	**0.32**	**231**	⇑P		**Pn**	**Pn**	**06 27 46.0**	**-1.1**
STFAR				⇓S		**Sb**	**Sb**	**06 27 50.1**	**-0.1**
VOIR		**0.42**	**334**	⇓P		**Pb**	**Pb**	**06 27 46.3**	**-0.5**
VOIR				⇑S		**Sb**	**Sb**	**06 27 52.5**	**-0.4**
VOIR		**0.42**	**334**	⇓P		**Pb**	**Pb**	**06 27 46.3**	**-0.5**
VOIR				⇑S		**Sb**	**Sb**	**06 27 52.5**	**-0.4**
SECR		**0.54**	**93**	⇓P		**Pb**	**Pb**	**06 27 48.5**	**-0.2**
SECR				⇑S		**Sn**	**Sn**	**06 27 56.6**	**-1.6**
SECR		**0.54**	**93**	⇓P		**Pb**	**Pb**	**06 27 48.5**	**-0.2**
SECR				⇑S		**Sn**	**Sn**	**06 27 56.6**	**-1.6**
ARR	**Arges**	**0.57**	**302**	⇓P		**Pb**	**Pb**	**06 27 48.6**	**-0.7**
ARR				⇑S		**Sn**	**Sn**	**06 27 57.7**	**-1.4**
ARR	**Arges**	**0.57**	**302**	⇓P		**Pb**	**Pb**	**06 27 48.6**	**-0.7**
ARR				⇑S		**Sn**	**Sn**	**06 27 57.7**	**-1.4**
HUMR	**Humele**	**0.59**	**204**	⇑P		**Pn**	**Pn**	**06 27 49.1**	**-1.5**
HUMR				⇓S		**Sn**	**Sn**	**06 27 58.9**	**-0.5**
HUMR	**Humele**	**0.59**	**204**	⇑P		**Pn**	**Pn**	**06 27 49.1**	**-1.5**
HUMR				⇓S		**Sn**	**Sn**	**06 27 58.9**	**-0.5**
MLR	**Muntele Rosu**	**0.62**	**46**	⇑P		**Pb**	**Pb**	**06 27 49.5**	**-0.7**
MLR				⇑S		**Sb**	**Sb**	**06 27 57.5**	**-1.0**
MLR	**Muntele Rosu**	**0.62**	**46**	ePg		**Pb**	**Pb**	**06 27 49.5**	**-0.7**
MLR				eSg		**Sn**	**Sn**	**06 27 59.5**	**-0.9**
MLR	**Muntele Rosu**	**0.62**	**46**	⇑P		**Pb**	**Pb**	**06 27 49.5**	**-0.7**
MLR				⇑S		**Sb**	**Sb**	**06 27 57.5**	**-1.0**
RMVG	**GOVORA**	**0.73**	**268**	⇑S		**Sn**	**Sn**	**06 28 03.7**	**+0.7**
RMVG	**GOVORA**	**0.73**	**268**	⇑S		**Sn**	**Sn**	**06 28 03.7**	**+0.7**
SULR		**0.77**	**120**	⇓P		**Pn**	**Pn**	**06 27 52.2**	**-1.0**
SULR				⇓S		**Sn**	**Sn**	**06 28 05.1**	**+1.1**
SULR		**0.77**	**120**	⇓P		**Pn**	**Pn**	**06 27 52.2**	**-1.0**
SULR				⇓S		**Sn**	**Sn**	**06 28 05.1**	**+1.1**
NEHR	**Nehoiu**	**0.78**	**62**	⇑P		**Pb**	**Pb**	**06 27 52.4**	**-0.5**
NEHR				⇑S		**Sn**	**Sn**	**06 28 03.4**	**-0.9**
NEHR	**Nehoiu**	**0.78**	**62**	⇑P		**Pb**	**Pb**	**06 27 52.4**	**-0.5**
NEHR				⇑S		**Sn**	**Sn**	**06 28 03.4**	**-0.9**
ISR	**Istrita**	**0.87**	**86**	⇑P		**Pn**	**Pn**	**06 27 54.0**	**-0.6**
ISR				⇑S		**Sn**	**Sn**	**06 28 07.4**	**+0.9**
ISR	**Istrita**	**0.87**	**86**	⇑P		**Pn**	**Pn**	**06 27 54.0**	**-0.6**
ISR				⇑S		**Sn**	**Sn**	**06 28 07.4**	**+0.9**
DOPR	**Dopca**	**0.90**	**3**	⇑P		**Pb**	**Pb**	**06 27 54.1**	**-0.8**
DOPR				⇓S		**Sn**	**Sn**	**06 28 07.6**	**+0.3**
DOPR	**Dopca**	**0.90**	**3**	⇑P		**Pb**	**Pb**	**06 27 54.1**	**-0.8**
DOPR				⇓S		**Sn**	**Sn**	**06 28 07.6**	**+0.3**
OZUR		**1.08**	**18**	⇑P		**Pn**	**Pn**	**06 27 57.3**	**-0.2**
OZUR				⇓S		**Sn**	**Sn**	**06 28 12.6**	**+0.8**
OZUR		**1.08**	**18**	⇑P		**Pn**	**Pn**	**06 27 57.3**	**-0.2**
OZUR				⇓S		**Sn**	**Sn**	**06 28 12.6**	**+0.8**
BISRR	**Bisoca**	**1.10**	**63**	⇑P		**Pb**	**Pb**	**06 27 58.2**	**-0.1**
BISRR				⇑S		**Sn**	**Sn**	**06 28 12.9**	**+0.7**
BISRR	**Bisoca**	**1.10**	**63**	⇑P		**Pb**	**Pb**	**06 27 58.2**	**-0.1**
BISRR				⇑S		**Sn**	**Sn**	**06 28 12.9**	**+0.7**
LOT	**Lotru**	**1.16**	**290**	⇑P		**Pb**	**Pb**	**06 27 58.7**	**-0.6**
LOT				⇑S		**Sb**	**Sb**	**06 28 14.4**	**+0.6**
LOT	**Lotru**	**1.16**	**290**	⇑P		**Pb**	**Pb**	**06 27 58.7**	**-0.6**
LOT				⇑S		**Sb**	**Sb**	**06 28 14.4**	**+0.6**
PGOR	**Pogoanele**	**1.20**	**97**	⇑S		**Sb**	**Sb**	**06 28 15.5**	**+0.6**
PGOR	**Pogoanele**	**1.20**	**97**	⇑S		**Sb**	**Sb**	**06 28 15.5**	**+0.6**
GRER		**1.22**	**74**	⇑P		**Pb**	**Pb**	**06 28 00.8**	**+0.5**
GRER				⇓S		**Sb**	**Sb**	**06 28 15.8**	**+0.3**
GRER		**1.22**	**74**	⇑P		**Pb**	**Pb**	**06 28 00.8**	**+0.5**
GRER				⇓S		**Sb**	**Sb**	**06 28 15.8**	**+0.3**
LEHL	**Lehliu**	**1.23**	**118**	⇑S		**Sb**	**Sb**	**06 28 16.3**	**+0.6**
LEHL	**Lehliu**	**1.23**	**118**	⇑S		**Sb**	**Sb**	**06 28 16.3**	**+0.6**
PLOR	**Plostina**	**1.23**	**50**	⇑P		**Pb**	**Pb**	**06 27 59.6**	**-0.8**
PLOR				⇓S		**Sb**	**Sb**	**06 28 15.9**	**+0.1**
PLOR	**Plostina**	**1.23**	**50**	⇑P		**Pb**	**Pb**	**06 27 59.6**	**-0.8**
PLOR				⇓S		**Sb**	**Sb**	**06 28 15.9**	**+0.1**
VLAD	**Vladila**	**1.25**	**212**	⇓P		**Pb**	**Pb**	**06 28 00.3**	**-0.4**
VLAD				⇑S		**Sb**	**Sb**	**06 28 18.1**	**+1.7**
VLAD	**Vladila**	**1.25**	**212**	⇓P		**Pb**	**Pb**	**06 28 00.3**	**-0.4**
VLAD				⇑S		**Sb**	**Sb**	**06 28 18.1**	**+1.7**
MDB

SRE	**Strehaia**	**1.55**	**256**	⇑P		**Pb**	**06 28 05.6**	**-0.3**
SRE				⇑S		**Sb**	**06 28 26.1**	**+1.0**
SRE	**Strehaia**	**1.55**	**256**	⇑P		**Pb**	**06 28 05.6**	**-0.3**
SRE				⇑S		**Sb**	**06 28 26.1**	**+1.0**
TESR	**Tescani**	**1.72**	**32**	⇑P		**Pn**	**06 28 05.9**	**-0.4**
TESR				⇑S		**Sn**	**06 28 27.6**	**+0.1**
TESR	**Tescani**	**1.72**	**32**	⇑P		**Pn**	**06 28 05.9**	**-0.4**
TESR				⇑S		**Sn**	**06 28 27.6**	**+0.1**
TUDR		**1.74**	**72**	⇑P		**Pb**	**06 28 07.6**	**-1.6**
TUDR				⇓S		**Sb**	**06 28 29.8**	**-0.8**
TUDR		**1.74**	**72**	⇑P		**Pb**	**06 28 07.6**	**-1.6**
TUDR				⇓S		**Sb**	**06 28 29.8**	**-0.8**
PLVB	**Pleven**	**1.75**	**197**	⇑P		**Pb**	**06 28 08.2**	**-1.1**
PLVB				⇑S		**Sb**	**06 28 32.3**	**+1.5**
PLVB	**Pleven**	**1.75**	**197**	⇑P		**Pb**	**06 28 08.2**	**-1.1**
PLVB				⇑S		**Sb**	**06 28 32.3**	**+1.5**
GHRR		**1.78**	**55**	⇑P		**Pb**	**06 28 08.1**	**-1.6**
GHRR				⇑S		**Sn**	**06 28 29.6**	**+0.8**
GHRR		**1.78**	**55**	⇑P		**Pb**	**06 28 08.1**	**-1.6**
GHRR				⇑S		**Sn**	**06 28 29.6**	**+0.8**
GZR	**Gura Zlata**	**1.82**	**281**	⇓P		**Pb**	**06 28 09.0**	**-1.5**
GZR				⇓S		**Sb**	**06 28 32.9**	**0.0**
GZR	**Gura Zlata**	**1.82**	**281**	⇓P		**Pb**	**06 28 09.0**	**-1.5**
GZR				⇓S		**Sb**	**06 28 32.9**	**0.0**
SCHL	**Schela**	**1.83**	**75**	⇓S		**Sb**	**06 28 31.7**	**-1.4**
SCHL	**Schela**	**1.83**	**75**	⇓S		**Sb**	**06 28 31.7**	**-1.4**
PVL	**Pavlikeni**	**1.85**	**180**	P		**Pb**	**06 28 12.9**	**+1.9**
SZH	**Strazhica**	**1.85**	**166**	P		**Pn**	**06 28 06.8**	**-1.2**
PUNG	**Punghina**	**1.87**	**246**	⇑P		**Pb**	**06 28 09.8**	**-1.5**
PUNG				⇓S		**Sb**	**06 28 34.1**	**-0.2**
PUNG	**Punghina**	**1.87**	**246**	*e*Sg		**Pb**	**06 28 10.8**	**-0.6**
PUNG	**Punghina**	**1.87**	**246**	*e*Pg		**Sg**	**06 28 34.5**	**+4.1**
PUNG	**Punghina**	**1.87**	**246**	⇑P		**Pb**	**06 28 09.8**	**-1.5**
PUNG				⇓S		**Sb**	**06 28 34.1**	**-0.2**
BIZ	**Bicaz**	**1.95**	**16**	⇑P		**Pn**	**06 28 09.7**	**+0.2**
BIZ				⇑S		**Sn**	**06 28 34.1**	**+0.9**
BIZ	**Bicaz**	**1.95**	**16**	⇑P		**Pn**	**06 28 09.7**	**+0.2**
BIZ				⇑S		**Sn**	**06 28 34.1**	**+0.9**
VARL	**Varlezi**	**1.97**	**64**	⇓S		**Sn**	**06 28 34.8**	**+1.3**
VARL	**Varlezi**	**1.97**	**64**	⇓S		**Sn**	**06 28 34.8**	**+1.3**
CFR	**Carcaliu**	**2.00**	**86**	⇑S		**Sb**	**06 28 35.9**	**-2.2**
CFR	**Carcaliu**	**2.00**	**86**	⇑S		**Sb**	**06 28 35.9**	**-2.2**
TLBR	**Topalu**	**2.02**	**104**	⇓P		**Pn**	**06 28 09.8**	**-0.4**
TLBR				⇑S		**Sb**	**06 28 36.9**	**-1.5**
TLBR	**Topalu**	**2.02**	**104**	⇓P		**Pn**	**06 28 09.8**	**-0.4**
TLBR				⇑S		**Sb**	**06 28 36.9**	**-1.5**
CJR	**Cluj-Napoca**	**2.04**	**325**	⇓S		**Sn**	**06 28 36.7**	**+1.4**
CJR	**Cluj-Napoca**	**2.04**	**325**	⇓S		**Sn**	**06 28 36.7**	**+1.4**
HERR	**Herculane**	**2.06**	**266**	⇑P		**Pn**	**06 28 11.9**	**+1.0**
HERR				⇑S		**Sb**	**06 28 38.1**	**-1.7**
HERR	**Herculane**	**2.06**	**266**	⇑P		**Pn**	**06 28 11.9**	**+1.0**
HERR				⇑S		**Sb**	**06 28 38.1**	**-1.7**
ARCR	**ARCALIA**	**2.13**	**342**	⇑P		**Pn**	**06 28 11.7**	**-0.2**
ARCR				⇑S		**Sn**	**06 28 37.3**	**-0.2**
ARCR	**ARCALIA**	**2.13**	**342**	⇑P		**Pn**	**06 28 11.7**	**-0.2**
ARCR				⇑S		**Sn**	**06 28 37.3**	**-0.2**
TPGR	**Topolog**	**2.21**	**94**	⇓P		**Pn**	**06 28 14.2**	**+1.2**
TPGR				⇑S		**Sb**	**06 28 41.9**	**-2.3**
TPGR	**Topolog**	**2.21**	**94**	⇓P		**Pn**	**06 28 14.2**	**+1.2**
TPGR				⇑S		**Sb**	**06 28 41.9**	**-2.3**
VASR	**Vaslui**	**2.34**	**47**	⇑P		**Pn**	**06 28 14.5**	**-0.2**
VASR				⇑S		**Sn**	**06 28 43.0**	**+0.2**
VASR	**Vaslui**	**2.34**	**47**	⇑P		**Pn**	**06 28 14.5**	**-0.2**
VASR				⇑S		**Sn**	**06 28 43.0**	**+0.2**
PRAR	**RASCA**	**2.38**	**15**	⇑P		**Pn**	**06 28 16.0**	**+0.6**
PRAR	**RASCA**	**2.38**	**15**	⇑P		**Pn**	**06 28 16.0**	**+0.6**
PRD	**Provadia**	**2.40**	**140**	P		**Pn**	**06 28 18.8**	**-0.2**
ROIA	**ROIAK**	**2.47**	**142**	P		**Pn**	**06 28 15.0**	**-1.5**
PSN	**Preselentsi**	**2.48**	**123**	P		**Pb**	**06 28 21.4**	**-0.3**
TLCR		**2.48**	**86**	⇑S		**Sn**	**06 28 48.2**	**+2.0**
TLCR		**2.48**	**86**	⇑S		**Sn**	**06 28 48.2**	**+2.0**
ZAGS	**Zajecar**	**2.54**	**242**	*e*Pn		**Pn**	**06 28 16.8**	**-0.6**
ZAGS				*e*Sn		**Sn**	**06 28 47.6**	**+0.1**
BURAR	**Bucovina Array**	**2.55**	**359**	⇑P		**Pn**	**06 28 17.6**	**-0.1**
BURAR	**Bucovina Array**	**2.55**	**359**	⇑P		**Pn**	**06 28 17.6**	**-0.1**
MDVR	**Moldovita**	**2.57**	**265**	⇓S		**Sb**	**06 28 51.1**	**-3.5**
MDVR	**Moldovita**	**2.57**	**265**	*e*Pn		**Pn**	**06 28 19.2**	**+1.2**
MDVR				*e*Sg		**Sb**	**06 28 57.6**	**+3.1**
MDVR	**Moldovita**	**2.57**	**265**	⇓S		**Sb**	**06 28 51.1**	**-3.5**
ZAPS	**Zavoj**	**2.63**	**228**	*e*Pn		**Pn**	**06 28 17.1**	**-1.7**
ZAPS				*e*Sn		**Sn**	**06 28 49.4**	**-0.5**
BZS	**Buzias**	**2.66**	**283**	⇑P		**Pn**	**06 28 18.8**	**-0.4**
BZS				⇑S		**Sn**	**06 28 51.3**	**+0.7**
BZS	**Buzias**	**2.66**	**283**	*e*Pn		**Pb**	**06 28 21.3**	**-3.6**
BZS				*e*Sn		**Sb**	**06 28 53.7**	**-3.4**
BZS	**Buzias**	**2.66**	**283**	⇑P		**Pn**	**06 28 18.8**	**-0.4**
BZS				⇑S		**Sn**	**06 28 51.3**	**+0.7**
KUBS	**Kucevo**	**2.67**	**257**	*e*Pn		**Pn**	**06 28 20.0**	**+0.7**
KUBS				*e*Sn		**Sn**	**06 28 52.9**	**+2.0**
VTS	**Vitosha**	**2.87**	**212**	*e*Pn		**Pn**	**06 28 19.7**	**-2.5**
VTS				*e*Sg		**Sb**	**06 29 02.9**	**-0.3**
VTS	**Vitosha**	**2.87**	**212**	P		**Pn**	**06 28 21.2**	**-1.0**
BOSS	**Bosilegrad**	**3.29**	**220**	*e*Pn		**Pn**	**06 28 26.6**	**-1.2**
BOSS				*e*Sn		**Sn**	**06 29 04.9**	**-1.2**
BARS	**Barje**	**3.38**	**230**	*e*Pn		**Pn**	**06 28 27.8**	**-1.3**
GRUS	**Gruza**	**3.49**	**252**	*e*Pn		**Pn**	**06 28 30.5**	**-0.1**
GRUS				*e*Sn		**Sn**	**06 29 12.2**	**+1.0**
SELS	**Selova**	**3.54**	**240**	*e*Pn		**Pn**	**06 28 29.4**	**-1.8**
TRUS	**Trudelj**	**3.60**	**258**	*e*Pn		**Pn**	**06 28 33.4**	**+1.3**
TRUS				*e*Sn		**Sn**	**06 29 13.7**	**-0.1**
DIVS	**Divibare**	**3.92**	**258**	*e*Pn		**Pn**	**06 28 36.7**	**+0.1**
IVAS	**Ivanjica**	**3.99**	**250**	*e*Pn		**Pn**	**06 28 35.8**	**-1.7**
STIP	**Stip**	**4.07**	**215**	*i* Pn		**Pn**	**06 28 34.4**	**-4.1**
VAY	**Valandovo**	**4.25**	**209**	*i* Pn		Pb	06 28 56.1	+4.3
OHR	**Ohrid**	**5.15**	**221**	*i* Pn		**Pn**	**06 28 54.9**	**+1.4**

IDC ***16*** *06:36:54.5±0.8,6˙04S×152˚52E,h0km,mb4.1/14, mb1 4.3/15,mb1mx4.1/43,mbtmp4.1/15,ML2.4/1,MS3.2/9, Ms1 3.2/9,ms1mx3.0/42,Error ellipse: s-maj=29.4km s-min=15.4km az=119.0*

NEIC ***16*** *06:36:56.1±1.8,6˙10S±0˙08×152˚63E±0˙06,h10km±1km, mb4.3/15,Error ellipse: s-maj=15.1km s-min=8.8km az=152.0*

ISC 16 06:36:56.6±0.7,6˙07S±0˙10×152˚6E±0˙1,h10km,n41, σ1$02/34,mb4.2/21,MS3.3/6,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.91**	**348**				**Pn**	**06 37 29.7**	**+0.5**
PMG	**Port Moresby**	**6.31**	**238**	Pn			**Pn**	**06 38 30.5**	**+0.7**
	5.4nm,0.3s,baz=68,slow=6.7,SNR=4.6								
PMG				Sn			**Sn**	**06 39 42.2**	**+0.4**
	4.4nm,0.3s,baz=158,slow=23,SNR=1.8								
PMG				LR			LR	06 40 41.1	
	comp=Z,111nm,21.2s,baz=101,slow=36								
PMG	**Port Moresby**	**6.31**	**238**				**Pn**	**06 38 30.8**	**+1.1**
HNR	**Honiara**	**8.04**	**115**	LR			LR	06 41 39.9	
	comp=Z,58nm,20.7s,baz=275,slow=35								
JAY	**Jayapura**	**12.35**	**286**	LR			LR	06 44 28.3	
	comp=Z,79nm,19.2s,baz=24,slow=37								
DZM	**Mont Dzumac**	**20.81**	**141**	LR			LR	06 48 14.4	
	comp=Z,127nm,19.3s,baz=225,slow=33								
MTN	**Manton Dam**	**22.18**	**251**	P			**P**	**06 41 52.4**	**-0.8**
MTN				IAmb			IAmb	06 42 18.9	
	comp=Z,8.1nm,0.6s								
WR0	**Warramunga Arr**	**22.31**	**230**	P			**P**	**06 41 54.9**	**+0.4**
WR0				IAmb			IAmb	06 41 56.5	
	comp=Z,8.5nm,1.1s								
WB0	**Warramunga Arr**	**22.31**	**231**	P			**P**	**06 41 55.0**	**+0.5**
WB0				IAmb			IAmb	06 41 56.5	
	comp=Z,5.2nm,0.9s								
WRAB	**Tennant Creek**	**22.44**	**230**	P			**P**	**06 41 54.8**	**-1.1**
WRAB				IAmb			IAmb	06 42 09.7	
	comp=Z,7.2nm,0.9s								
WB2	**Warramunga Arr**	**22.44**	**230**	P			**P**	**06 41 55.8**	**-0.2**
WB2				IAmb			IAmb	06 42 14.3	
	comp=Z,18nm,1.4s								
WRA	**Warramunga Arr**	**22.45**	**230**	P			**P**	**06 41 55.8**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=51,slow=9.8,SNR=15								
WRA				LR			LR	06 50 25.3	
	comp=Z,41nm,20.3s,baz=70,slow=36								
WRA	**Warramunga Arr**	**22.45**	**230**	P			**P**	**06 41 55.1**	**-0.9**
AS31	**Alice Springs**	**25.07**	**224**	P			**P**	**06 42 21.5**	**0.0**
ASAR	**Alice Springs**	**25.07**	**224**	P			**P**	**06 42 21.9**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=55,slow=8.6,SNR=21								
ASAR	**Alice Springs**	**25.07**	**224**	P			**P**	**06 42 21.0**	**-0.5**
KNRA	**Kununurra**	**25.23**	**246**	P			**P**	**06 42 22.7**	**-0.3**
KNRA				IAmb			IAmb	06 42 24.6	
	comp=Z,14nm,0.8s								
STKA	**Stephens Creek**	**27.65**	**200**	P			**P**	**06 42 43.1**	**-1.6**
	comp=Z,2.8nm,0.8s,baz=43,slow=18,SNR=5.6								
STKA				LR			LR	06 52 50.6	
	comp=Z,91nm,21.0s,baz=27,slow=35								
STKA	**Stephens Creek**	**27.65**	**200**	P			**P**	**06 42 43.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**28.87**	**243**	P			**P**	**06 42 54.4**	**-1.3**
	comp=Z,7.2nm,0.8s,baz=55,slow=7.7,SNR=19								
FITZ				LR			LR	06 54 53.4	
	comp=Z,82nm,18.1s,baz=66,slow=37								
FITZ	**Fitzroy Crossi**	**28.87**	**243**	P			**P**	**06 42 55.0**	**-0.7**
FITZ				IAmb			IAmb	06 43 04.5	
	comp=Z,7.3nm,0.7s								
MJAR	**Matsushiro Arr**	**44.47**	**343**	LR			LR	07 01 46.8	
	comp=Z,31nm,21.1s,baz=230,slow=34								
KSRS	**Korea Array**	**49.03**	**334**	LR			LR	07 04 44.9	
	comp=Z,26nm,19.8s,baz=120,slow=34								
KLR	**Kul'dur**	**57.99**	**344**	P			**P**	**06 46 48.9**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=161,slow=10,SNR=4.0								
CMAR	**Chiang Mai Arr**	**58.22**	**296**	P			P	06 46 49.9	-1.7
	comp=Z,0.4nm,0.3s,baz=108,slow=5.8,SNR=4.5								
SONM	**Songino Array**	**67.27**	**328**	P			**P**	**06 47 51.3**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=138,slow=4.8,SNR=5.2								
VNDA	**Vanda**	**71.58**	**178**	P			**P**	**06 48 16.8**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=321,slow=6.5,SNR=3.7								
VNDA	**Vanda**	**71.58**	**178**	P			P	06 48 16.1	-1.5
VNDA				IAmb			IAmb	06 48 17.8	
	comp=Z,4.4nm,1.3s								
TIXI	**Tiksi**	**79.12**	**353**	P			**P**	**06 49 00.0**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=134,slow=5.5,SNR=1.7								
MKAR	**Makanchi Array**	**81.13**	**319**	P			**P**	**06 49 11.7**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=100,slow=6.4,SNR=9.0								
SML	**Sawmill**	**81.36**	**24**	P			**P**	**06 49 13.7**	**+0.4**
IMAR	**Indian Mountai**	**81.65**	**19**	P			**P**	**06 49 15.2**	**+0.5**
RND	**Reindeer**	**81.98**	**23**	P			**P**	**06 49 16.4**	**-0.2**
ZALV	**Zalesovo Beam**	**82.08**	**326**	P			**P**	**06 49 16.3**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=104,slow=6.3,SNR=6.8								
CCB	**Clear Creek Bu**	**83.01**	**22**	P			**P**	**06 49 21.2**	**-0.6**
ILAR	**Eielson Array**	**83.41**	**22**	P			P	06 49 22.9	-1.1
	comp=Z,2.8nm,0.7s,baz=243,slow=5.5,SNR=26								
ILAR	**Eielson Array**	**83.41**	**22**	P			**P**	**06 49 23.2**	**-0.8**
DAWY	**Dawson**	**86.03**	**24**	P			**P**	**06 49 38.1**	**+0.9**
DAWY				IAmb			IAmb	06 49 38.8	
	comp=Z,1.8nm,0.8s								
NVAR	**Mina Array Bea**	**93.04**	**52**	P			**P**	**06 50 12.1**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=253,slow=6.5,SNR=7.1								
YKA	**Yellowknife Ar**	**96.65**	**28**	P			**P**	**06 50 27.3**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=269,slow=4.1,SNR=7.0								
TORD	**Torodi Ar. Bea**	**150.46**	**286**	PKPbc			**PKPdf**	**06 56 48.0**	**+3.7**
	comp=Z,2.7nm,0.7s,baz=54,slow=2.9,SNR=12								

GEN ***16*** *06:38:02.8,44˚48N×7˚28E,h11km±2km,Ml1.5*

LDG ***16*** *06:38:02.9±0.1,44˚49N×7˚29E,h11km,Md2.5/2,Ml2.3/15, Error ellipse: s-maj=2.2km s-min=1.5km az=56.0*

ROM ***16*** *06:38:02.2±0.1,44˚475N±0˙009×7˚26E±0˙01,h14km±2km, ML1.7/8,Error ellipse: s-maj=1.1km s-min=0.7km az=223.0*

STR ***16*** *06:38:02.5±0.6,44˚N±2˚×°±°,h13km±5km,MLv1.9/7, MLv1.9/5,smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

ISC 16 06:38:02.5±0.8,44˚50N±0˙02×7˚30E±0˙02,h12km±6km, n52,σ1$02/93,3C,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PZZ	**Stroppo**	**0.13**	**274**	P			**Pg**	**06 38 06.0**	**+0.1**
PZZ				S			**Sg**	**06 38 08.1**	**-0.2**
PZZ	**Stroppo**	**0.13**	**274**	⇑*i*P			**Pg**	**06 38 06.0**	**+0.1**
PZZ				S			**Sg**	**06 38 08.1**	**-0.2**
PZZ				AML			AML		
	comp=N,1540μm,0.2s								
PZZ				AML			AML		
	comp=E,2070μm,0.3s								
STV	**Sant Anna di V**	**0.25**	**176**	P			**Pg**	**06 38 07.9**	**+0.1**
STV				S			**Sg**	**06 38 11.1**	**-0.3**
STV	**Sant Anna di V**	**0.25**	**176**	P			**Pg**	**06 38 07.9**	**+0.1**
STV				S			**Sg**	**06 38 11.0**	**-0.3**
STV				AML			AML		
	comp=N,356μm,0.1s								
STV				AML			AML		
	comp=E,207μm,0.6s								
ENR	**Entracque**	**0.28**	**162**	P			**Pg**	**06 38 08.4**	**+0.1**
ENR				S			**Sg**	**06 38 12.2**	**-0.2**
ENR	**Entracque**	**0.28**	**162**	⇑P			**Pg**	**06 38 08.5**	**+0.1**
ENR				AML			AML		
	comp=E,676μm,0.1s								
ENR				AML			AML		
	comp=N,574μm,1.1s								
BHB	**Bricherasio**	**0.34**	**356**	P			**Pg**	**06 38 09.5**	**0.0**
ISO	**Isola**	**0.36**	**210**	Pg			**Pg**	**06 38 09.7**	**-0.1**
ISO				Sg			**Sg**	**06 38 14.2**	**-0.5**
MBDF	**Montbardon**	**0.44**	**302**	*e*Pg			**Pg**	**06 38 11.3**	**0.0**
MBDF				*e*Sg			**Sg**	**06 38 15.3**	**-1.9**
	comp=N,35nm,0.2s								
GBOS	**Grotte di Boss**	**0.47**	**123**	P			**Pg**	**06 38 11.9**	**+0.2**
GBOS				S			**Sg**	**06 38 18.1**	**+0.3**
GBOS	**Grotte di Boss**	**0.47**	**123**	P			**Pg**	**06 38 11.9**	**+0.2**
GBOS				S			**Sg**	**06 38 18.2**	**+0.3**
GBOS				AML			AML		
	comp=N,120μm,0.4s								
GBOS				AML			AML		
	comp=E,97μm,0.4s								
TURF	**col de Turini**	**0.53**	**173**	Pg			**Pg**	**06 38 12.7**	**-0.1**
TURF				Sg			**Sg**	**06 38 19.7**	**-0.2**
SAOF	**Saorge**	**0.54**	**160**	Pg			**Pg**	**06 38 13.0**	**-0.2**
SAOF				Sg			**Sg**	**06 38 19.9**	**-0.4**
SAOF	**Saorge**	**0.54**	**160**	⇑P			**Pg**	**06 38 13.0**	**-0.2**
SAOF				S			**Sg**	**06 38 20.0**	**-0.4**
SAOF	**Saorge**	**0.54**	**160**	AML			AML		
	comp=N,88μm,0.8s								
SAOF				AML			AML		
	comp=E,77μm,0.9s								
OGAG	**Argentiere**	**0.54**	**266**	Pg			**Pb**	**06 38 14.8**	**+0.7**
OGAG				Sg			**Sb**	**06 38 23.0**	**+1.1**
RRL	**Rocca Remolon**	**0.56**	**320**	P			**Pg**	**06 38 13.5**	**0.0**
RRL				S			**Sg**	**06 38 20.9**	**0.0**
RRL	**Rocca Remolon**	**0.56**	**320**	P			**Pg**	**06 38 13.5**	**0.0**
RRL				S			**Sg**	**06 38 21.1**	**+0.2**
RRL				AML			AML		
	comp=E,43μm,0.4s								
RRL				AML			AML		
	comp=N,38μm,0.3s								
SBF	**Sospel**	**0.64**	**171**	*e*Pg			**Pg**	**06 38 15.0**	**0.0**
SBF				*e*Sg			**Sg**	**06 38 23.4**	**-0.1**
	comp=N,40nm,0.2s								
RSP	**Reno Superiore**	**0.65**	**358**	P			**Pg**	**06 38 14.7**	**-0.6**
RSP	**Reno Superiore**	**0.65**	**358**	P			**Pg**	**06 38 14.6**	**-0.6**
RSP				S			**Sg**	**06 38 24.4**	**+0.6**
ESCA	**l'Escarene**	**0.67**	**175**	Pg			**Pg**	**06 38 15.0**	**-0.5**
ESCA				Sg			**Sg**	**06 38 23.8**	**-0.5**
RORO	**Rocca Rossa**	**0.67**	**125**	P			**Pg**	**06 38 15.5**	**-0.1**
RORO				S			**Sg**	**06 38 24.5**	**+0.1**
RORO	**Rocca Rossa**	**0.67**	**125**	P			**Pg**	**06 38 15.4**	**-0.1**
RORO				S			**Sg**	**06 38 24.7**	**+0.3**
RORO				AML			AML		
	comp=E,100μm,0.2s								
RORO				AML			AML		
	comp=N,85μm,1.4s								
IMI	**Imperia**	**0.73**	**144**	P			**Pg**	**06 38 16.3**	**-0.2**
IMI				S			**Sg**	**06 38 25.8**	**-0.3**
IMI	**Imperia**	**0.73**	**144**	P			**Pg**	**06 38 16.4**	**-0.2**
IMI				S			**Sg**	**06 38 26.4**	**+0.3**
IMI				AML			AML		
	comp=E,92μm,0.5s								
IMI				AML			AML		
	comp=N,82μm,0.5s								
MONC	**Moncucco Torin**	**0.73**	**38**	P			**Pg**	**06 38 17.1**	**+0.4**
CALF	**Calern**	**0.79**	**200**	Pg			**Pg**	**06 38 18.0**	**+0.1**
CALF				Pn			**Pb**	**06 38 18.8**	**+0.5**
CALF				Sg			**Sg**	**06 38 28.0**	**-0.2**
OGDI	**Digne**	**0.81**	**242**	Pg			**Pn**	**06 38 20.3**	**+0.3**
OGDI				Sg			**Sn**	**06 38 35.8**	**+3.8**
PCP	**Piancastagn**	**0.89**	**87**	P			**Pg**	**06 38 19.9**	**+0.1**
PCP				S			**Sg**	**06 38 31.9**	**+0.5**
PCP	**Piancastagn**	**0.89**	**87**	P			**Pg**	**06 38 19.8**	**+0.1**
PCP				S			**Sg**	**06 38 31.6**	**+0.1**
PCP				AML			AML		
	comp=E,59μm,0.5s								
PCP				AML			AML		
	comp=N,59μm,0.3s								
LSD	**Lago del Serru**	**0.97**	**353**	AML			AML		
	comp=E,31μm,0.3s								
LSD				AML			AML		
	comp=N,20μm,1.3s								
FRF	**La Foret Royal**	**1.05**	**207**	*e*Pg			**Pg**	**06 38 22.7**	**0.0**
FRF				*e*Sg			**Sb**	**06 38 35.2**	**-1.1**
	comp=N,24nm,0.3s								
LPG	**La Plagne**	**1.07**	**339**	*e*Pg			**Pb**	**06 38 23.3**	**0.0**
LPG				*e*Sg			**Sb**	**06 38 36.4**	**-1.0**
	comp=N,5.1nm,0.3s								
LPL	**La Plagne**	**1.09**	**339**	*e*Pg			**Pg**	**06 38 24.0**	**+0.3**
LPL				*e*Sg			**Sb**	**06 38 38.2**	**+0.2**
	comp=N,4.4nm,0.3s								
ORIF	**Oris-en-Rattie**	**1.10**	**293**	*e*Pg			**Pb**	**06 38 23.2**	**-0.3**
ORIF				*e*Sg			**Sb**	**06 38 34.5**	**-3.3**
	comp=N,7.4nm,0.3s								
ORIF	**Oris-en-Rattie**	**1.10**	**293**	Pg			**Pb**	**06 38 23.4**	**-0.2**
ORIF				Sg			**Sb**	**06 38 36.8**	**-1.0**
MLYF	**Mely**	**1.21**	**246**	Pg			**Pb**	**06 38 25.4**	**-0.1**
MLYF				Sg			**Sg**	**06 38 42.6**	**+1.0**
LMR	**La Mourre**	**1.30**	**206**	*e*Pg			**Pn**	**06 38 26.5**	**0.0**
LMR				*e*Sg			**Sb**	**06 38 42.7**	**-0.8**
	comp=N,30nm,0.2s								
BSTF	**la Bastide-des**	**1.34**	**243**	Pg			**Pg**	**06 38 29.6**	**+1.3**
SMRF	**Simiane la Rot**	**1.34**	**248**	*e*Pg			**Pg**	**06 38 28.5**	**+0.1**
SMRF				*e*Sg			**Sb**	**06 38 44.6**	**-0.3**
	comp=N,12nm,0.4s								
ARTF	**Artigues**	**1.41**	**230**	Pg			**Pb**	**06 38 29.2**	**+0.3**
ARTF				Sg			**Sg**	**06 38 48.0**	**+0.1**
RUSF	**Rustrel**	**1.42**	**248**	Pg			**Pg**	**06 38 30.3**	**+0.6**
RUSF				Sg			**Sg**	**06 38 50.6**	**+2.4**
VIVF	**Saint-Julien-l**	**1.91**	**282**	*e*P			**Pb**	**06 38 36.5**	**-0.8**
VIVF	**Saint-Julien-l**	**1.91**	**282**	*e*Pg			**Pb**	**06 38 38.3**	**+1.0**
VIVF				*e*Sg			**Sb**	**06 39 01.9**	**+0.8**
	comp=N,4.2nm,0.5s								
PGF	**Pioggiola**	**2.31**	**147**	*e*Pn			**Pn**	**06 38 41.8**	**+1.3**
PGF				*e*Sn			**Sn**	**06 39 06.9**	**-2.0**
	comp=N,1.8nm,0.3s								
LASF	**Ste Croix**	**2.51**	**262**	*e*Pn			**Pn**	**06 38 43.0**	**-0.2**
LASF	**Ste Croix**	**2.51**	**262**	*e*Pg			**Pb**	**06 38 48.8**	**+1.3**
LASF				*e*Sn			**Sn**	**06 39 11.1**	**-2.6**
	comp=N,1.2nm,0.3s								
HINF	**Hinteralfeld**	**3.33**	**355**	*e*P			**Pn**	**06 38 57.5**	**+2.9**
HINF				*e*Sn			**Sn**	**06 39 33.1**	**-1.1**
	comp=N,8.4nm,0.4s								
HAU	**Haudompre**	**3.57**	**350**	*e*Pn			**Pn**	**06 38 58.5**	**+0.7**
HAU				*e*Sn			**Sn**	**06 39 38.0**	**-1.9**
	comp=N,14nm,0.4s								
LOR	**Lormes**	**3.67**	**320**	*e*P			**Pn**	**06 39 01.7**	**+2.6**
LOR				*e*Sn			**Sn**	**06 39 40.1**	**-2.2**
	comp=N,3.1nm,0.6s								
CAF	**Calviac**	**3.76**	**278**	*e*Pn			**Pn**	**06 38 58.9**	**-1.5**

DNK ***16*** *06:38:07.9±1.5,51˚61N×12˚08E,h

comp=E,1µm,0.2s
CHRS Christianenhau 0.81 284⇑ *e*Pg Pn 06 38 24.7 0.0
CHRS *e*Sg Sn 06 38 36.0 -0.5
MOX Moxa 0.83 201 *e*Pg Pb 06 38 24.5 +0.4
MOX *e*Sg Sb 06 38 36.2 +1.1
MOX AML AML 06 38 37.1
comp=N,899nm,0.1s
MOX Moxa 0.83 201⇑ *e*Pn Pb 06 38 24.5 +0.4
MOX *e*Pg Pn 06 38 25.0 -0.1
MOX *e*Sg Sb 06 38 36.2 +1.1
comp=N,899nm,0.1s
HWTS Hohenwarte Tal 0.92 205⇑ *i*Pn Pb 06 38 25.7 +0.2
HWTS *e*Pg Pn 06 38 26.4 +0.1
HWTS *e*Sg Sb 06 38 38.0 +0.6
PLN Plauen 0.94 177 *i*Pg Pg 06 38 25.8 -0.5
PLN *e*Sg Sb 06 38 39.0 +0.9
PLN AML AML 06 38 39.8
comp=N,332nm,0.2s
PLN Plauen 0.94 177⇑ *i*Pn Pg 06 38 25.8 -0.5
PLN *e*Pg Pb 06 38 26.3 +0.3
PLN *e*Sn Sb 06 38 38.6 +0.4
PLN *e*Sg Sb 06 38 39.0 +0.9
comp=N,332nm,0.2s
FBE Freiberg 0.95 122 *e*Pg Pg 06 38 25.7 -0.7
FBE *i*Sg Sg 06 38 38.2 -0.6
FBE Freiberg 0.95 122⇓ *e*Pn Pg 06 38 25.7 -0.7
FBE *e*Pg Pb 06 38 26.3 +0.3
FBE *e*Sn Sg 06 38 37.7 -1.1
FBE *i*Sg Sg 06 38 38.2 -0.6
WERD Werda 0.99 172 *e*Pg Pg 06 38 26.4 -0.8
WERD *i*Sg Sb 06 38 40.5 +0.9
WERD AML AML 06 38 40.7
comp=E,597nm,0.1s
WERD Werda 0.99 172⇑ *e*Pn Pg 06 38 26.4 -0.8
WERD *e*Pg Pn 06 38 27.2 0.0
WERD *i*Sg Sb 06 38 40.5 +0.9
comp=E,597nm,0.1s
LEIB1 TS Leibis 1.02 214 *i*Pg Pg 06 38 27.0 -0.6
LEIB1 *e*Sg Sn 06 38 41.6 +0.1
LEIB1 AML AML 06 38 50.8
comp=N,206nm,0.5s
MULD Muldenberg 1.03 168 *e*Pg Pg 06 38 27.1 -1.0
MULD *i*Sg Sb 06 38 41.6 +0.7
MULD AML AML 06 38 42.5
comp=N,342nm,0.1s
MULD Muldenberg 1.03 168⇑ *e*Pn Pg 06 38 27.0 -1.0
MULD *e*Pg Pn 06 38 28.0 +0.1
MULD *i*Sg Sb 06 38 41.6 +0.7
comp=N,342nm,0.1s
TANN Tannenbergstha 1.04 166 *e*Pg Pg 06 38 27.1 -1.0
TANN *e*Sg Sb 06 38 41.7 +0.6
TANN AML AML 06 38 42.9
comp=E,660nm,0.6s
TANN Tannenbergstha 1.04 166⇑ *e*Pn Pg 06 38 27.1 -1.0
TANN *e*Pg Pn 06 38 28.3 +0.3
TANN *e*Sg Sb 06 38 41.7 +0.6
comp=E,660nm,0.6s
WESF Westfeld 1.04 212⇑ *i*Pn Pg 06 38 27.5 -0.7
WESF *e*Sg Sn 06 38 42.2 0.0
FLTG Flechtingen 1.05 330 *e*Pn Pg 06 38 27.4 -0.8
FLTG *e*Sn Sg 06 38 40.7 -1.3
FLTG *e*Sg Sn 06 38 42.1 -0.2
GUNZ Gunzen 1.07 171 *e*Pg Pg 06 38 27.5 -1.3
GUNZ *i*Sg Sb 06 38 42.8 +0.7
GUNZ AML AML 06 38 44.0
comp=E,473nm,0.3s
GUNZ Gunzen 1.07 171⇑ *e*Pn Pg 06 38 27.5 -1.3
GUNZ *e*Pg Pn 06 38 28.8 +0.3
GUNZ *i*Sg Sb 06 38 42.8 +0.7
comp=E,473nm,0.3s
TRIB Obertriebel 1.07 178 *e*Pg Pg 06 38 27.5 -1.3
TRIB *i*Sg Sb 06 38 42.6 +0.6
TRIB AML AML 06 38 47.6
comp=E,258nm,0.6s
TRIB Obertriebel 1.07 178⇑ *e*Pn Pg 06 38 27.5 -1.3
TRIB *i*Sg Sb 06 38 42.6 +0.6
comp=E,258nm,0.6s
ASSE Asse, Remlinge 1.12 310 *e*Pn Pb 06 38 28.8 -0.2
ASSE *e*Pg Pn 06 38 30.4 +1.4
ASSE *e*Sg Sn 06 38 45.8 +1.7
CLZ Clausthal 1.14 292⇑ *e*Pn Pn 06 38 29.6 +0.2
CLZ *e*Pg Pg 06 38 30.9 +0.8
CLZ *e*Sn Sg 06 38 44.3 -0.8
CLZ *e*Sg Sn 06 38 46.2 +1.5
WERN Wernitzgruen 1.15 170 *e*Pg Pb 06 38 28.9 -0.8
WERN *e*Sg Sg 06 38 45.0 -0.4
WERN AML AML 06 38 47.1
comp=N,386nm,0.2s
WERN Wernitzgruen 1.15 170⇑ *e*Pn Pb 06 38 28.8 -0.8
WERN *e*Sn Sb 06 38 43.2 -1.1
WERN *e*Sg Sg 06 38 45.0 -0.4
comp=N,386nm,0.2s
CRUX Bergwerk Schwa 1.16 225 *e*Pg Pb 06 38 29.1 -0.5
CRUX *e*Sg Sn 06 38 45.9 +0.8
CRUX Bergwerk Schwa 1.16 225⇑ *e*Pn Pb 06 38 29.1 -0.5
CRUX *e*Sg Sn 06 38 45.9 +0.8
ROHR Rohrbach 1.20 173 *e*Pg Pb 06 38 29.4 -1.0
ROHR *e*Sg Sn 06 38 46.6 +0.5
ROHR AML AML 06 38 47.8
comp=N,507nm,0.3s
ROHR Rohrbach 1.20 173⇑ *e*Pn Pb 06 38 29.4 -1.0
ROHR *e*Pg Pg 06 38 31.6 +0.4
ROHR *e*Sg Sn 06 38 46.6 +0.5
comp=N,507nm,0.3s
NKC Novy Kostel 1.22 169 *e*PG Pn 06 38 29.5 -0.8
NKC *e*SG Sb 06 38 44.6 -1.5
comp=N,482nm,0.4s
NKC Novy Kostel 1.22 169 *e*Pg Pn 06 38 29.5 -0.8
NKC *e*Sg Sn 06 38 47.4 +1.0
NKC AML AML 06 38 49.5
comp=N,610nm,0.5s
NKC Novy Kostel 1.22 169⇑ *e*Pn Pn 06 38 29.5 -0.8
NKC *e*Sg Sn 06 38 47.4 +1.0
comp=N,610nm,0.5s
VIEL Selb-Vielitz 1.24 179 *e*Pg Pn 06 38 29.9 -0.8
VIEL *e*Sg Sn 06 38 48.2 +1.1
VIEL Selb-Vielitz 1.24 179⇑ *e*Pn Pn 06 38 29.9 -0.8
VIEL *e*Sg Sn 06 38 48.2 +1.1
BRG Berggiesshubel 1.30 114 Pn Pn 06 38 30.4 -1.0
BRG Berggiesshubel 1.30 114 Pn Pg 06 38 34.5 +1.5
BRG Pg Pb 06 38 35.4 +3.4
BRG *ex* x 06 38 45.3
BRG *ex* x 06 38 47.8
BRG Berggiesshubel 1.30 114 Sg Sg 06 38 53.7 +3.8
BRG Amp 06 38 55.0
comp=Z,160nm,0.8s
BRG Berggiesshubel 1.30 114 *e*Pg Pn 06 38 30.6 -0.9
BRG *e*Sg Sb 06 38 48.0 -0.4
BRG AML AML 06 38 54.4
comp=N,199nm,0.4s
BRG Berggiesshubel 1.30 114⇓ *e*Pn Pn 06 38 30.6 -0.9
BRG *e*Sg Sb 06 38 48.0 -0.4
comp=N,199nm,0.4s
GTTG Gottingen 1.33 276⇑ *e*Pn Pg 06 38 33.3 -0.3
GTTG *e*Sg Sg 06 38 51.5 +0.6
VITZ Vitzeroda 1.36 247⇓ *i*Pn Pn 06 38 32.6 +0.3
VITZ *e*Sg Sg 06 38 52.8 +0.8
MANZ Manzenberg 1.44 179 *e*Pn Pn 06 38 32.5 -0.9
MANZ *e*Sn Sn 06 38 50.1 -1.9
MANZ *e*Sg Sg 06 38 54.1 -0.4
UBBA Unterbreizbach 1.44 246⇑ *e*Pn Pn 06 38 33.2 -0.1
UBBA *e*Sg Sg 06 38 55.9 +1.4
HROE Hohe Rhon--Fla 1.50 235 *e*Pn Pn 06 38 34.3 -0.1
HROE *e*Sn Sn 06 38 52.3 -1.3
HROE *e*Sg Sg 06 38 57.1 +0.6
ROTZ Rotzenmuhle 1.66 177 *e*Pn Pn 06 38 35.6 -0.9
ROTZ *e*Sg Sg 06 39 01.1 -0.4
PVCC Panska Ves 1.81 119 *e*PG Pg 06 38 42.1 -0.7
PVCC *e*SG Sg 06 39 05.3 -1.0
comp=N,310nm,0.6s
GRA1 Grafenberg Arr 1.82 198 Pn Pn 06 38 38.0 -0.6
GRF Grafenberg Arr 1.82 198 *e*Pn Pn 06 38 38.0 -0.6
GRF *e*Sn Sn 06 38 59.9 -1.5
GRF *e*Sg Sg 06 39 07.2 +0.6
GRFO Grafenberg 1.82 198 Pn Pn 06 38 37.8 -0.8
PRA Prague 2.02 131 *e*SG Sg 06 39 11.9 -1.0
comp=N,77nm,0.6s
PRU Pruhonice 2.13 132 *e*PG Pb 06 38 46.5 +0.4
PRU *e*SG Sg 06 39 14.8 -1.6
comp=N,58nm,0.4s
KASTN Kahler Asten 2.31 266 *e*Pn Pn 06 38 45.6 +0.2
KASTN *e*Pg Pg 06 38 52.7 +0.4
KASTN *e*Sn Sn 06 39 11.0 -2.4
KASTN *e*Sg Sg 06 39 23.4 +1.2
WET Wettzell 2.34 167 *e*Sg Sg 06 39 22.5 -0.7
KHC Kasperske Hory 2.49 157 *e*PN Pn 06 38 48.0 +0.1
KHC *e*PG Pb 06 38 52.5 +0.1
KHC *e*SG Sg 06 39 26.5 -1.5
comp=N,78nm,0.7s
KHC Kasperske Hory 2.49 157 Pn Pn 06 38 46.7 -1.2
TNS Taunus Mts 2.60 244 *e*Sg Sg 06 39 31.9 +0.4
CHVC Chvalec 2.65 107 *e*SG Sg 06 39 31.4 -1.7
comp=N,166nm,0.8s
KSP Ksiaz 2.72 101 *e*Pg Pg 06 38 59.8 -0.3
KSP *e*Sg Sg 06 39 35.1 -0.2
BSEG Bad Segeberg 2.73 338 *e*Pn Pn 06 38 51.0 -0.2
OSTC Ostas 2.75 107 *e*PG Pg 06 38 59.0 -1.8
GEC2 GERESS Array S 2.79 157 Pn Pn 06 38 52.4 +0.4
GERES GERESS Array B 2.79 157 Pn Pn 06 38 51.6 -0.3
comp=N,0.3nm,0.3s,baz=330,slow=13,SNR=4.2
GERES Pg Pb 06 38 57.8 +0.4
comp=N,1.3nm,0.3s,baz=337,slow=12,SNR=11
GERES Sn Sn 06 39 27.4 +2.1
comp=N,4.8nm,0.3s,baz=345,slow=19,SNR=6.5
GERES Lg Lg 06 39 35.4
comp=N,15nm,0.3s,baz=332,slow=32,SNR=14
GERES GERESS Array B 2.79 157 Pn Pn 06 38 52.7 +0.7
DPC Dobruska-Polom 2.89 110 *e*SG Sg 06 39 38.8 -2.2
comp=N,128nm,0.6s
KOE Koeppel 2.93 252 *e*Pn Pn 06 38 54.5 +0.6
CKRC Cesky Krumlov 2.98 150 *e*SG Sg 06 39 40.4 -3.2
comp=N,34nm,0.6s
HOBG Hohbusch 3.02 263 *e*Pn Pn 06 38 56.8 +1.7
TREC Trest 3.05 133 *e*SG Sg 06 39 42.5 -3.5
comp=N,32nm,0.4s
BGG Burgeitz 3.25 250 *e*Pn Pn 06 38 59.5 +1.3
STB Steinbach 3.41 258 *e*Pn Pn 06 39 01.9 +1.4
VRAC Vranov 3.58 124 *e*Pn Pb 06 39 13.2 +2.3
comp=N,0.8nm,0.3s,baz=298,slow=18,SNR=2.2
VRAC Lg Lg 06 39 57.2
comp=N,6.4nm,0.3s,baz=229,slow=22,SNR=18
VRAC Vranov 3.58 124 *e*PN Pn 06 39 01.1 -1.8
VRAC *e*SN Sn 06 39 44.5 -0.3
KRUC Moravsky 3.64 129 *e*PN Pn 06 39 02.7 -1.0
KRUC *e*SN Sn 06 39 43.8 -2.5
DREG Dreilaegerbach 3.77 261 *e*Pn Pn 06 39 06.3 +0.9
BTNL Ternell 3.85 260 *d*Pn Pn 06 39 07.3 +0.8
BTNL *d*Pg Pg 06 39 20.7 -1.0
BTNL *d*Sg Sg 06 40 08.4 -3.1
MOA Molln 3.85 157 *e*Pn Pn 06 39 06.6 0.0
comp=N,0.2nm,0.1s
MOA *e*Sn Sg 06 40 07.9 -3.7
comp=N,20nm,0.4s
MORC Moravsky Berou 3.85 113 *e*PN Pn 06 39 06.1 -0.5
MORC *e*SN Sn 06 39 48.8 -2.7
MORC Moravsky Berou 3.85 113 Pn Pn 06 39 06.5 -0.1
MEM Membach 3.92 260 *d*Pn Pn 06 39 08.4 +1.0
MEM *d*Sn Sn 06 39 50.8 -2.3
BFO Black Forest 3.93 220 Pn Pn 06 39 07.6 -0.1
RETA Reutte 4.03 193 *e*Pn Pn 06 39 10.4 +1.2
comp=N,2.6nm,0.2s
RETA *e*Sn Sb 06 40 10.7 +3.5
comp=N,33nm,0.5s
BSD Bornholm Skovb 4.07 24 *i*P Pn 06 39 07.7 -1.8
BSD *i*S Sn 06 39 51.0 -5.8
BSD IAML 06 39 54.1
comp=Z,7.0nm,0.3s
WATA Walderalm 4.11 185 *e*Pn Pn 06 39 08.5 -1.7
comp=Z,2.2nm,0.3s
WATA *e*Sn Sb 06 40 13.8 +4.5
comp=Z,16nm,0.5s
MOTA Moosalm 4.13 189 *e*Pn Pn 06 39 09.2 -1.3
comp=Z,0.6nm,0.1s
MOTA *e*Sn Sb 06 40 14.8 +4.7
comp=Z,59nm,0.6s
WLF Walferdange 4.17 247 Pn Pn 06 39 12.3 +1.4
WTTA Wattenberg 4.17 184 *e*Pn Pn 06 39 10.2 -1.0
comp=Z,0.7nm,0.2s
WTTA *e*Sn Sg 06 40 18.4 -3.6
comp=Z,18nm,0.3s
SQTA Sankt Quirin 4.25 188 *e*Pn Pn 06 39 11.8 -0.3
comp=Z,1.8nm,0.2s
SQTA *e*Sn Sg 06 40 22.3 -2.0
comp=Z,16nm,0.6s
CONA Conrad Observa 4.28 143 *e*Pn Pn 06 39 13.5 +1.0
comp=Z,0.4nm,0.1s
CONA *e*Sn Sb 06 40 19.5 +5.4
comp=Z,6.2nm,0.3s
LUNU Lund 4.29 10 *i*P Pn 06 39 10.6 -1.9
LUNU *i*S Sn 06 39 57.0 -5.2
CDF Champ du Feu 4.33 228 *e*Pn Pn 06 39 12.4 -0.8
CDF Champ du Feu 4.33 228 *e*Pg Pg 06 39 30.2 -0.6
CDF *e*Sn Sn 06 40 00.0 -3.3
CDF *e*Sg Sg 06 40 27.2 +0.3
comp=Z,21nm,0.4s
DAVA Damuels 4.38 200 *e*Pn Pn 06 39 13.9 -0.1
comp=Z,1.8nm,0.3s
DAVA *e*Sn Sb 06 40 22.9 +5.5
comp=Z,20nm,0.4s
KBA Koelnbreinsper 4.43 169 *e*Pn Pn 06 39 15.2 +0.5
comp=Z,1.8nm,0.2s
KBA *e*Sn Sb 06 40 22.5 +3.8
comp=Z,11nm,0.5s
FETA Feichten 4.50 192 *e*Pn Pn 06 39 15.7 +0.1
comp=Z,1.0nm,0.3s
FETA *e*Sn Sb 06 40 25.1 +4.6
comp=Z,11nm,0.5s
SMOL Smolenice 4.52 128 *e*SG Sg 06 40 33.4 +0.4
SMOL *e*LG Lg 06 40 41.7
ECH Echery 4.52 227 Pn Pn 06 39 15.1 -0.7
MODS Modra-Piesok 4.54 130 *e*SG Sg 06 40 31.6 -2.1
MODS *e*LG Lg 06 40 41.2
ZST Bratislava 4.58 133 *e*SG Sg 06 40 33.7 -1.4
ZST *e*LG Lg 06 40 40.8
ABTA Abfaltersbach 4.69 176 *e*Pn Pn 06 39 18.6 +0.4
comp=Z,0.4nm,0.1s
ABTA *e*Sn Sb 06 40 29.7 +3.6
comp=Z,6.4nm,0.3s
ARSA Arzberg 4.75 150 *e*Pn Pn 06 39 20.5 +1.7
comp=Z,0.8nm,0.2s
ARSA *e*Sn Sb 06 40 30.5 +2.9
comp=Z,9.7nm,0.5s
GIVF Givet 4.79 257 *e*Pn Pn 06 39 19.3 -0.2
GIVF Givet 4.79 257 *e*Pg Pg 06 39 37.6 -2.1
GIVF *e*Sn Sn 06 40 11.4 -3.2
comp=Z,22nm,0.4s
GIVF *e*Sg Sg 06 40 41.0 -0.7
DAVOX Davos/Dischmat 4.87 198 Pn Pn 06 39 20.9 +0.2
comp=Z,0.3nm,0.3s,baz=149,slow=24,SNR=1.6
DAVOX Sn Sg 06 40 14.5 -2.2
comp=Z,1.2nm,0.3s,baz=255,slow=19,SNR=8.4
DAVOX Lg Lg 06 40 35.4
comp=Z,1.4nm,0.3s,baz=151,slow=22,SNR=2.0
MYKA Terra Mystica 4.91 167 *e*Pn Pn 06 39 20.7 -0.4
comp=Z,1.9nm,0.3s
MYKA *e*Sn Sb 06 40 35.2 +2.9
comp=Z,4.2nm,0.4s
HINF Hinteralfeld 4.96 225 *e*Pn Pn 06 39 20.4 -1.4
HINF Hinteralfeld 4.96 225 *e*P Pn 06 39 26.4 +4.6
HINF Hinteralfeld 4.96 225 *e*Pg Pg 06 39 41.5 -1.4
HINF *e*Sn Sn 06 40 14.2 -4.6
HINF *e*Sg Sg 06 40 45.3 -1.8
comp=Z,20nm,0.4s
PAGF Fort de Pagny 5.00 237 *e*Sg Sg 06 40 46.3 -2.3
comp=Z,9.4nm,0.3s
OJC Ojcow 5.04 101 Pn Pn 06 39 22.6 -0.2
HAU Haudompre 5.05 230 *e*Pn Pn 06 39 22.6 -0.5
HAU Haudompre 5.05 230 *e*Pg Pg 06 39 42.9 -1.8
HAU *e*Sn Sn 06 40 16.7 -4.4
HAU *e*Sg Sg 06 40 47.7 -2.4
comp=Z,23nm,0.4s
SOKA Soboth 5.13 157 *e*Pn Pn 06 39 24.0 -0.3
comp=Z,0.9nm,0.3s
SOKA *e*Sn Sn 06 40 24.0 +0.9
comp=Z,2µm,0.0s
DEL Delary 5.17 11 *e* Pn 06 39 21.7 -2.8
baz=200,slow=9.3
DEL *i*P Pn 06 39 22.6 -1.9
DEL *i*S Sn 06 40 17.6 -6.1
DEL IAML 06 40 21.3
comp=Z,2.6nm,0.3s
OBKA Obir 5.18 161 *e*Pn Pn 06 39 24.4 -0.5
comp=Z,0.3nm,0.2s
OBKA *e*Sn Sn 06 40 24.9 +0.5
comp=Z,11nm,0.5s
BAIF Baives 5.18 258 *e*Pn Pn 06 39 23.4 -1.4
BAIF Baives 5.18 258 *e*Pg Pg 06 39 46.0 -1.2
BAIF *e*Sn Sn 06 40 20.2 -4.0
comp=Z,4.4nm,0.3s
BAIF *e*Sg Sg 06 40 51.5 -2.7
comp=Z,4.9nm,0.3s
LANS Liptovska Anna 5.25 113 *e*SG Sg 06 40 55.9 -0.7
LANS *e*LG Lg 06 41 02.3
VYHS Vyhne 5.25 121 *e*SG Sg 06 40 54.7 -1.9
VYHS *e*LG Lg 06 41 00.0
SAVF Savonnieres en Perthois 5.29 241 *e*Sg Sg 06 40 55.9 -1.9
comp=Z,11nm,0.4s,baz=67
BLEU Blekinge 5.37 23 *i*P Pn 06 39 25.9 -1.4
BLEU *e*S Sn 06 40 21.8 -6.8
SFTF Sexfontaines 5.58 237 *e*Pn Pn 06 39 28.7 -1.6
SFTF *e*Sg Sg 06 41 05.0 -2.0
comp=Z,6.6nm,0.3s,baz=53
SENIN Lac Senin/Sane 5.96 214 Pn Pn 06 39 36.0 +0.2
CABF La Chapelle 6.22 222 *e*P Pn 06 39 42.8 +3.6
CABF La Chapelle 6.22 222 *e*Pg Pg 06 40 04.2 -2.9
CABF *e*Sn Sn 06 40 44.2 -5.8
CABF *e*Sg Sg 06 41 25.6 -2.0
comp=Z,4.5nm,0.5s
LOR Lormes 6.79 235 *e*Pn Pn 06 39 47.1 +0.2
LOR Lormes 6.79 235 *e*P Pn 06 39 52.8 +5.9
baz=50
LOR Lormes 6.79 235 *e*Pg Pg 06 40 15.6 -2.3
baz=63
LOR *e*Sn Sn 06 40 59.1 -4.8
comp=Z,2.6nm,0.3s,baz=51
LOR *e*Sg Sg 06 41 43.0 -2.8
comp=Z,5.7nm,0.5s,baz=57
SSF Saint Saulge 7.11 235 *e*Pn Pn 06 39 49.4 -1.9
SSF Saint Saulge 7.11 235 *e*Pg Pg 06 40 20.6 -3.4
SSF *e*Sn Sn 06 41 06.0 -5.7
SSF *e*Sg Sg 06 41 53.7 -2.3
comp=Z,5.9nm,0.5s
SMF Signal de Mont 7.22 232 *e*Pn Pn 06 39 50.4 -2.4
SMF Signal de Mont 7.22 232 *e*Pg Pg 06 40 23.8 -2.4
SMF *e*Sn Sn 06 41 09.9 -4.6
SMF *e*Sg Sg 06 41 57.2 -2.4
comp=Z,4.0nm,0.4s
AVF Avril sur Loir 7.37 234 *e*Pn Pn 06 39 54.7 -0.1
BGF Bois d'Agland 7.78 235 *e*Sg 06 42 13.8
comp=Z,9.7nm,0.5s
EKA Eskdalemuir Ar 9.91 299 Pn Pn 06 40 28.8 -0.8
baz=107,slow=14,SNR=2.0
EKA Sn Sn 06 42 24.9 +4.6
baz=120,slow=26,SNR=4.6
AKASG Malin Array Be 10.82 87 Pn Pn 06 40 44.3 +2.2
comp=Z,0.6nm,0.3s,baz=277,slow=11,SNR=2.4
AKASG Lg Lg 06 44 00.7
comp=Z,0.4nm,0.3s,baz=274,slow=29,SNR=2.0
FINES FINESS Array B 12.65 32 Pn Pn 06 41 08.8 +1.9
comp=Z,0.2nm,0.3s,baz=222,slow=11,SNR=1.8

IDC ***16*** *06:40:48.8±0.8, 35°.40N×140°.65E, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.6/57, mbtmp3.6/8, ML3.2/2, MS2.8/3, Ms1 2.8/3, ms1mx2.5/48, Error ellipse: s-maj=24.0km s-min=19.6km az=97.0*

NIED ***16*** *06:40:54.3, 35°.44N×140°.49E, h56km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-4.41; $M_{\theta\theta}$5.87; $M_{\phi\phi}$-1.46; $M_{r\theta}$-3.50; $M_{\theta\phi}$-1.27; $M_{\phi r}$5.94; Fault plane solution: $M_0$8.72000×10^{14} NP1: ϕ_s134.00000°, δ74.00000°, λ-63.00000°. NP2: ϕ_s253.00000°, δ31.00000°, λ-148.00000°.*

JMA ***16*** *06:40:54.2±0.2, 35°.44N×140°.49E, h56km±2km, M3.4*

JMA Felt I J1.

ISC 16 06:40:55.5±0.8, 35°.36N±0°.04×140°.45E±0°.06, h53km±5km, n35, σ1°11/33, mb3.7/6, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.21**	**287**	⇓P	**Pn**	**06 41 03.9**	**-0.3**
JCN				S	**Sn**	**06 41 11.6**	**+1.1**
KTR	**Katsuura**	**0.23**	**207**	P	**Pn**	**06 41 03.5**	**-0.9**
KTR				S	**Sn**	**06 41 11.0**	**+0.3**
JKUC	**kamogawauchiur**	**0.28**	**226**	⇓P	**Pn**	**06 41 04.5**	**-0.3**
JKUC				S	**Sn**	**06 41 11.8**	**+0.4**
JSMT	**Sammumatsuo**	**0.28**	**1**	⇓P	**Pn**	**06 41 03.6**	**-1.2**
JSMT				S	**Sn**	**06 41 10.7**	**-0.8**
BSO4	**Boso 4**	**0.38**	**193**	⇓P	**Pn**	**06 41 05.8**	**+0.3**
BSO4				X		06 41 15.0	
BSO3	**Boso 3**	**0.56**	**174**	⇓P	**Pn**	**06 41 07.5**	**+0.1**
BSO3				X		06 41 17.7	
BSO1	**Boso 1**	**0.83**	**148**	P	**Pn**	**06 41 10.1**	**-0.4**
JIM2	**Oshima 3**	**1.05**	**233**	P	**Pn**	**06 41 13.3**	**-0.7**
JIM2				S	**Sn**	**06 41 26.5**	**-1.1**
JOD2	**Odawara 2**	**1.11**	**266**	⇓P	**Pn**	**06 41 14.0**	**-0.8**
JOD2				S	**Sn**	**06 41 28.2**	**-1.0**
JAG	**Ashikaga**	**1.33**	**323**	⇓P	**Pn**	**06 41 16.5**	**-1.3**
JRY	**Ryogami san**	**1.42**	**298**	⇓P	**Pn**	**06 41 18.1**	**-0.9**
JIZS	**Izushimoda**	**1.44**	**244**	P	**Pn**	**06 41 18.5**	**-0.7**
JFNN	**Fujinakano**	**1.45**	**264**	P	**Pn**	**06 41 18.8**	**-0.5**
JYN	**Shimob**	**1.56**	**276**	⇓P	**Pn**	**06 41 20.0**	**-0.9**
MJAR	**Matsushiro Arr**	**2.17**	**304**	Pn	**Pn**	**06 41 28.2**	**-0.9**
	1.1nm,0.3s,baz=194,slow=2.4,SNR=25						
MJAR					Sn	**06 41 56.3**	**+1.5**
	1.8nm,0.3s,baz=55,slow=39,SNR=3.4						
MJAR					LR	06 42 34.7	
	comp=Z,111nm,20.8s,baz=150,slow=47						
MAT	**Matsushiro**	**2.17**	**304**	P	**Pn**	**06 41 28.5**	**-0.7**
MAT				*e*S	**Sn**	**06 41 58.1**	**+3.2**
JHJ	**Hachijo jima 2**	**2.30**	**194**	Pn	**Pn**	**06 41 30.5**	**-0.4**
	79nm,0.3s,baz=31,slow=2.6,SNR=20						
JHJ					Sn	**06 41 57.0**	**-1.1**
	90nm,0.3s,baz=164,slow=22,SNR=15						
KSRS	**Korea Array**	**10.31**	**285**	LR	LR	06 47 05.3	
	comp=Z,52nm,19.5s,baz=102,slow=36						
PETK	**Petropavlovsk-**	**21.53**	**29**	LR	LR	06 54 20.6	
	comp=Z,41nm,20.2s,baz=134,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.03**	**117**	T	T	07 16 00.5	
	baz=309,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	**28.04**	**117**	T	T	07 16 07.1	
	baz=309,slow=75,SNR=46						
H11N3	**WAKE ISLAND Hy**	**28.05**	**117**	T	T	07 16 07.9	
	baz=309,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**28.67**	**119**	T	T	07 16 47.1	
	baz=311,slow=75,SNR=41						
H11S3	**WAKE ISLAND Hy**	**28.67**	**119**	T	T	07 16 40.4	
	baz=311,slow=75,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.69**	**119**	T	T	07 16 49.3	
	baz=311,slow=75,SNR=28						
MKAR	**Makanchi Array**	**44.37**	**303**	P	**P**	**06 49 01.2**	**+0.7**
	0.4nm,0.6s,baz=82,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**55.30**	**187**	P	**P**	**06 50 23.3**	**-0.3**
	1.1nm,0.8s,baz=0.7,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**59.03**	**187**	P	**P**	**06 50 51.5**	**+1.6**
	0.4nm,0.8s,baz=14,slow=10.0,SNR=4.1						
YKA	**Yellowknife Ar**	**65.65**	**29**	P	**P**	**06 51 33.3**	**-0.4**
	0.3nm,0.7s,baz=299,slow=6.8,SNR=6.7						
NVAR	**Mina Array Bea**	**76.62**	**52**	P	**P**	**06 52 41.9**	**+1.0**
	0.5nm,0.6s,baz=292,slow=4.8,SNR=3.1						
PDAR	**Pinedale Array**	**79.40**	**45**	P	**P**	**06 52 56.5**	**+0.2**
	0.6nm,0.6s,baz=271,slow=2.1,SNR=9.4						
H03N2	**Juan Fernandez**	**147.60**	**98**	T	T	09 45 22.5	
	baz=290						
H03N3	**Juan Fernandez**	**147.61**	**98**	T	T	09 45 24.4	
	baz=290						
H03N1	**Juan Fernandez**	**147.61**	**98**	T	T	09 45 28.3	
	baz=290						
LPAZ	**La Paz**	**148.21**	**61**	PKPbc	**PKiKP**	**07 00 36.5**	**-2.0**
	0.5nm,0.7s,baz=325,slow=3.7,SNR=1.8						

IDC ***16*** *07:05:17.1±1.1, 58°.83S×24°.89W, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.9/17, mbtmp3.9/5, Error ellipse: s-maj=38.0km s-min=31.6km az=70.0*

NEIC ***16*** *07:05:18.7±1.8, 58°.9S±0°.1×25°.0W±0°.3, h10km±1km, mb4.4/14, Error ellipse: s-maj=28.2km s-min=15.7km az=48.0*

ISC 16 07:05:19.6±0.7, 59°.0S±0°.1×25°.0W±0°.1, h18km, n32, σ0°86/31, mb4.3/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.88**	**301**	Pn	**Pn**	**07 07 12.7**	**-0.5**
VNA1	**Neumayer--Stat**	**13.65**	**156**	P	**Pn**	**07 08 31.2**	**-0.8**
VNA3	**Neumayer Olymp**	**13.85**	**159**	P	**Pn**	**07 08 33.3**	**-1.4**
VNA2	**Neumayer--Watz**	**14.05**	**156**	P	**Pn**	**07 08 36.2**	**-1.2**
	baz=323,slow=14						
SNAA	**Sanae**	**15.60**	**154**	P	**Pn**	**07 08 56.9**	**-1.5**
SNAA	**Sanae**	**15.60**	**154**		**Pn**	**07 08 57.1**	**-1.2**

SNAA				IAmb	IAmb	07 09 08.1	
	comp=Z,6.1nm,0.6s						
BELA	**Belgrano 2**	**19.29**	**186**	P	**Pn**	**07 09 43.2**	**-0.9**
MG02	**Cerro Sombrero**	**25.20**	**265**	P	**P**	**07 10 43.5**	**-0.3**
GO09	**Cerro Castillo**	**27.64**	**265**	P	**P**	**07 11 05.2**	**-0.7**
QSPA	**South Pole Qui**	**31.29**	**180**	P	**P**	**07 11 39.9**	**+1.6**
QSPA				IAmb	IAmb	07 11 42.5	
	comp=Z,7.0nm,1.3s						
PLCA	**Paso Flores**	**33.74**	**282**	P	**P**	**07 12 00.4**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=155,slow=6.0,SNR=6.8						
PLCA	**Paso Flores**	**33.74**	**282**	P	**P**	**07 11 58.8**	**-1.0**
PLCA				IAmb	IAmb	07 12 14.2	
	comp=Z,8.6nm,1.5s						
LL04	**Puerto Octay**	**34.55**	**280**	P	**P**	**07 12 07.0**	**+0.2**
LL04				IAmb	IAmb	07 12 10.1	
	comp=Z,4.3nm,1.1s						
MT09	**Talagante**	**39.37**	**289**	P	**P**	**07 12 48.2**	**+0.2**
MT02	**Curacav**	**39.86**	**289**	P	**P**	**07 12 52.3**	**+0.3**
MT02				IAmb	IAmb	07 12 52.4	
	comp=Z,11nm,1.1s						
VNDA	**Vanda**	**43.72**	**182**	P	**P**	**07 13 24.3**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=183,slow=2.2,SNR=2.4						
BDFB	**Brasilia**	**46.48**	**329**	P	**P**	**07 13 46.1**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=151,slow=5.0,SNR=5.9						
BDFB	**Brasilia**	**46.48**	**329**	IAmb	IAmb	07 13 46.3	
	comp=Z,3.1nm,0.7s						
LPAZ	**La Paz**	**53.02**	**305**	P	**P**	**07 14 35.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=149,slow=4.0,SNR=7.6						
LPAZ	**La Paz**	**53.02**	**305**	IAmb	IAmb	07 14 38.1	
	comp=Z,2.1nm,1.1s						
SAML	**Samuel**	**57.69**	**314**	P	**P**	**07 15 07.9**	**-1.0**
SAML				IAmb	IAmb	07 15 08.3	
	comp=Z,3.0nm,0.7s						
TOA0	**Torodi Ar. Sit**	**75.05**	**27**	P	**P**	**07 16 59.6**	**-0.3**
TOA0				IAmb	IAmb	07 17 07.3	
	comp=Z,5.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**75.05**	**27**	P	**P**	**07 16 59.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=201,slow=6.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**75.05**	**27**	P	**P**	**07 16 59.8**	**-0.2**
YKA	**Yellowknife Ar**	**139.10**	**315**	PKP	**PKPdf**	**07 24 43.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=124,slow=2.1,SNR=4.8						
C36M	**Paulatuk**	**145.96**	**321**	PKPdf	**PKPab**	**07 24 56.8**	**-0.1**
INK	**Inuvik**	**148.78**	**317**	PKPbc	**PKPbc**	**07 25 03.7**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=102,slow=4.5,SNR=4.5						
INK				PKPab	**sPKPdf**	**07 25 07.1**	**0.0**
	comp=Z,2.1nm,0.6s,baz=102,slow=4.4,SNR=6.5						
INK	**Inuvik**	**148.78**	**317**		**PKPdf**	**07 25 01.6**	**+1.4**
DAWY	**Dawson**	**149.58**	**308**	PKPbc	**PKPbc**	**07 25 06.3**	**0.0**
EYAK	**Cordova Ski Ar**	**150.99**	**299**	PKPab	**PKPab**	**07 25 18.4**	**+1.0**
ILAR	**Eielson Array**	**152.89**	**307**	PKPbc	**PKiKP**	**07 25 14.3**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=143,slow=3.3,SNR=6.6						
KDAK	**Kodiak Island**	**153.07**	**290**	PKPbc	**PKiKP**	**07 25 15.3**	**+0.7**
	comp=Z,4.3nm,0.9s,baz=243,slow=2.3,SNR=4.2						

IDC 16 07:28:05.6±2.9, 54°33N×86°74E, h0km, mb1 3.0/2, mb1mx2.9/48, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=23.2km s-min=15.8km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.20**	**252**	*i*		07 36 50.0	
	baz=73,slow=319,SNR=2.8						
ZALV	**Zalesovo Beam**	**1.20**	**252**	Pg	Pg	07 28 26.7	-1.8
	3.1nm,0.3s,baz=72,slow=17,SNR=19						
ZALV				Lg	Lg	07 28 44.4	
	2.2nm,0.3s,baz=69,slow=33,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.24**	**237**	Pn	Pn	07 29 39.7	+0.8
	0.2nm,0.3s,baz=52,slow=13,SNR=11						
KURBB				Sn	Sn	07 30 50.2	-0.6
	0.0nm,0.3s,baz=45,slow=14,SNR=1.5						
KURBB				Lg	Lg	07 31 25.7	
	0.1nm,0.3s,baz=57,slow=32,SNR=5.1						
MKAR	**Makanchi Array**	**8.06**	**202**	Pn	Pn	07 30 05.2	+1.4
	0.2nm,0.3s,baz=21,slow=13,SNR=6.2						
MKAR				Sn	Sn	07 31 35.4	-0.3
	0.1nm,0.3s,baz=23,slow=28,SNR=3.3						
MKAR				Lg	Lg	07 32 22.5	
	0.1nm,0.3s,baz=22,slow=29,SNR=2.8						

RSNC 16 07:34:04.7±0.9, 11°22N×73°89W, h10km±3km, ML3.5, Mw3.5, 1C-1D, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRC	**Santa Marta, M**	**0.34**	**260**	⇑*i*P	Pg	07 34 11.0	-0.4
SMRC				*e*S	Sg	07 34 16.3	+0.4
SMRC				*i*		07 34 17.2	
	comp=Z,5μm,0.3s						
CRJC	**Cerrejon, Guaj**	**1.01**	**101**	⇓*i*P	Pg	07 34 22.0	-2.1
CRJC				*e*S	Sg	07 34 36.2	-1.0
CRJC				*i*		07 34 37.0	
	comp=Z,2μm,0.4s						
ARGC	**Ariguani, Magd**	**1.40**	**195**	*e*P	Pn	07 34 27.6	-2.8
ARGC				*e*S	Sn	07 34 48.3	-0.7
ARGC				*i*		07 34 52.5	
	comp=Z,339nm,0.3s						
SJCC	**San Jacinto, C**	**1.83**	**224**	*e*P	Pn	07 34 33.2	-3.1
SJCC				*e*S	Sn	07 34 58.6	-1.0
SJCC				*i*		07 35 04.5	
	comp=Z,152nm,0.7s						
URIC	**Uribia, Colomb**	**1.92**	**75**	*e*P	Pn	07 34 36.6	-0.9
URIC				*e*S	Sn	07 35 00.8	-0.8
URIC				*i*		07 35 07.6	
	comp=Z,152nm,0.4s						
SMLC	**San Martn de**	**2.41**	**184**	*e*P	Pn	07 34 41.8	-2.5
SMLC				*e*S	Sn	07 35 13.0	-0.9
SMLC				*i*		07 35 19.9	
	comp=Z,352nm,0.1s						
MOTC	**Monteria, Cord**	**3.00**	**216**	*e*P	Pn	07 34 50.0	-2.3
MOTC				*e*S	Sn	07 35 26.9	-1.4
OCAC	**Ocana**	**3.02**	**169**	*e*P	Pn	07 34 49.9	-2.9
OCAC				*e*S	Sn	07 35 28.5	-0.6
OCAC				*i*		07 35 36.7	
	comp=Z,327nm,0.6s						
UREC	**San Jos de Ur**	**3.81**	**205**	*e*P	Pn	07 35 02.0	-1.6
UREC				*e*S	Sn	07 35 46.7	-1.8
UREC				*i*		07 35 51.4	
	comp=Z,39nm,0.2s						
ZARC	**Zaragoza, Cauc**	**3.83**	**195**	*e*P	Pn	07 35 03.0	-0.8
ZARC				*e*S	Sn	07 35 47.8	-1.1
ZARC				*i*		07 35 56.8	
	comp=Z,102nm,0.3s						
PTBC	**PUERTO BERRIO,**	**4.69**	**187**	*e*P	Pn	07 35 14.1	-1.5
PTBC				*e*S	Sn	07 36 09.1	-1.0
PTBC				*i*		07 36 18.4	
	comp=Z,64nm,0.5s						
HELC	**Santa Helena**	**5.26**	**198**	*e*P	Pn	07 35 23.0	-0.7
HELC				*i*		07 36 39.9	
	comp=Z,32nm,0.3s						
SPBC	**San Pablo de B**	**5.54**	**182**	*e*P	Pn	07 35 29.3	+1.9
SPBC				*e*S	Sn	07 36 30.6	-0.6
SPBC				*i*		07 36 44.6	
	comp=Z,28nm,0.4s						
NORC	**Norcasia**	**5.71**	**190**	*e*P	Pn	07 35 26.9	-2.7
NORC				*e*S	Sn	07 36 40.9	+5.6
NORC				*i*		07 36 45.9	
	comp=Z,37nm,0.4s						
GUY2C	**Guyana, Caldas**	**6.14**	**194**	*e*P	Pn	07 35 36.5	+0.5
GUY2C				*i*		07 37 05.6	
	comp=Z,37nm,0.6s						

BJI 16 07:38:49.1±0.0, 36°63N×140°91E, h55km, mB4.9/13, mb4.4/21, Ms4.3/3, Ms7 4.1/3
NIED 16 07:38:49.5, 36°64N×140°94E, h49km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.85; Mθθ-0.14; Mϕϕ-0.72; Mrθ-0.07; Mθϕ-0.39; Mϕr0.79; Fault plane solution: M₀1.19000×10¹⁵ NP1:φs7.00000°, δ67.00000°, λ73.00000°. NP2:φs224.00000°, δ29.00000°, λ124.00000°.
NEIC 16 07:38:49.8±2.3, 36°65N±0°05×140°96E±0°09, h42km±7km, mb4.5/30 Error ellipse: s-maj=11.2km s-min=4.8km az=117.0
JMA 16 07:38:49.5±0.1, 36°64N×140°94E, h49km±1km, M4.0
JMA Felt III J1.
IDC 16 07:38:51.7±0.7, 36°62N×140°91E, h64km±5km, mb3.9/25, mb1 4.0/30, mb1mx2.8/52, mbtmp4.1/30, MS3.0/6, Ms1 3.1/6, ms1mx2.8/46, Error ellipse: s-maj=11.9km s-min=7.9km az=165.0

ISC 16 07:38:50.6±0.6, 36°64N±0°04×140°97E±0°06, h52km±5km, n108, σ1§30/115, mb4.4/42, MS3.6/4, 1C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.33**	**264**	P	**Pn**	**07 38 58.6**	**-1.6**
JHO				S	**Sn**	**07 39 04.8**	**-2.3**
JHYU	**Hitachinakayam**	**0.43**	**226**	P	**Pn**	**07 38 59.7**	**-1.5**
JHYU				S	**Sn**	**07 39 06.8**	**-2.1**
ONAJ	**Iwakimizuishiy**	**0.48**	**343**	P	**Pn**	**07 39 00.2**	**-1.6**
ONAJ				S	**Sn**	**07 39 07.5**	**-2.4**
JFFD	**Fukushimafurud**	**0.56**	**324**	P	**Pn**	**07 39 01.2**	**-1.5**
JFFD				S	**Sn**	**07 39 09.1**	**-2.3**
JFK	**Kawauchi**	**0.73**	**354**	P	**Pn**	**07 39 03.1**	**-1.7**
JFK				S	**Sn**	**07 39 12.6**	**-2.6**
JYT	**Yasato**	**0.75**	**237**	P	**Pn**	**07 39 03.4**	**-1.7**
JYT				*e*S	**Sn**	**07 39 13.2**	**-2.5**
JYT	**Yasato**	**0.75**	**237**	Pn	**Pn**	**07 39 03.7**	**-1.4**
JYT				Sn	**Sn**	**07 39 13.2**	**-2.5**
JFT	**Otama**	**1.01**	**330**	P	**Pn**	**07 39 07.7**	**-0.8**
JFT				*e*S	**Sn**	**07 39 20.8**	**-1.0**
JMM	**Marumori**	**1.23**	**353**	P	**Pn**	**07 39 10.2**	**-1.2**
JMM				*e*S	**Sn**	**07 39 25.6**	**-1.4**
JMM	**Marumori**	**1.23**	**353**		**Pn**	**07 39 09.8**	**-1.6**
JMM				Sn	**Sn**	**07 39 25.0**	**-2.0**
MJAR	**Matsushiro Arr**	**2.23**	**268**	P	**Pn**	**07 39 24.6**	**-0.5**
	15nm,0.3s,baz=90,slow=14,SNR=235						
MJAR				S	**Sn**	**07 39 52.6**	**+1.1**
	6.5nm,0.3s,baz=101,slow=9.8,SNR=13						
MJAR				LR	LR	07 40 24.0	
	comp=Z,214nm,21.5s,baz=100,slow=43						
MJAR	**Matsushiro Arr**	**2.23**	**268**		**Pn**	**07 39 23.7**	**-1.4**
MAJO	**Matsushiro**	**2.23**	**268**	Pn	**Pn**	**07 39 25.0**	**-0.1**
MAT	**Matsushiro**	**2.23**	**268**	P	**Pn**	**07 39 25.1**	**0.0**
MAT				S	**Sn**	**07 39 53.8**	**+2.4**
MJB9	**Matsu-Tunnel**	**2.23**	**268**	Pn	**Pn**	**07 39 25.6**	**+0.4**
JSD	**Sado**	**2.57**	**304**		**Pn**	**07 39 28.8**	**-1.0**
JGF	**Kuroka**	**3.11**	**251**	Pn	**Pn**	**07 39 38.2**	**+1.1**
JHJ	**Hachijo jima 2**	**3.65**	**196**	P	**Pn**	**07 39 44.2**	**-0.4**
	38nm,0.3s,baz=79,slow=23,SNR=13						
JHJ				S	**Sn**	**07 40 24.9**	**-1.5**
	95nm,0.3s,baz=242,slow=20,SNR=11						
JHJ2	**Mitsune**	**3.65**	**195**	Pn	**Pn**	**07 39 44.3**	**-0.2**
JTM	**Tenmabayashi**	**4.14**	**1**	Pn	**Pn**	**07 39 52.9**	**+1.7**
JWT	**Wachi**	**4.72**	**255**	Pn	**Pn**	**07 40 00.2**	**+1.0**
ERM	**Erimo**	**5.62**	**17**	Pn	**Pn**	**07 40 10.8**	**-0.8**
JEW	**Eniwo**	**6.20**	**3**	Pn	**Pn**	**07 40 18.6**	**-0.9**
JMN	**Monobe**	**6.50**	**245**		**Pn**	**07 40 25.3**	**+1.7**
JHS	**Saijyo**	**6.59**	**258**	Pn	**Pn**	**07 40 26.8**	**+1.9**
ASAJ	**Asahikawa**	**7.57**	**9**	P	**Pn**	**07 40 37.4**	**-0.8**
	2.8nm,0.3s,baz=227,slow=9.7,SNR=8.3						
ASAJ				S	**Sn**	**07 42 01.2**	**-1.3**
	0.8nm,0.3s,baz=91,slow=32,SNR=1.7						
ASAJ				LR	LR	07 44 38.4	
	comp=Z,47nm,18.5s,baz=338,slow=46						
JKA	**Kamikawa-asahi**	**7.57**	**9**	Pn	**Pn**	**07 40 37.9**	**-0.3**
USRK	**Ussuriysk Ar.**	**10.19**	**321**	P	**Pn**	**07 41 15.3**	**+1.2**
	baz=136,slow=14,SNR=7.6						
KSRS	**Korea Array**	**10.46**	**278**	P	**Pn**	**07 41 17.6**	**-0.2**
	0.3nm,0.3s,baz=90,slow=14,SNR=3.7						
KSRS				LR	LR	07 44 53.5	
	comp=Z,99nm,18.0s,baz=88,slow=35						
KLR	**Kul'dur**	**14.26**	**335**	P	**Pn**	**07 42 09.6**	**+0.1**
	0.1nm,0.3s,baz=112,slow=15,SNR=1.9						
KLR				LR	LR	07 46 46.2	
	comp=Z,51nm,21.2s,baz=87,slow=33						
NJ2	**Nanjing**	**18.82**	**262**	*e*P	**Pn**	**07 43 06.4**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
PETK	**Petropavlovsk-**	**20.20**	**30**	P	**P**	**07 43 19.7**	**-1.1**
HHC	**Hu-ho-hao-te**	**23.27**	**289**	*e*P	**P**	**07 43 54.3**	**+0.7**
HHC				S	S	07 47 49.6	-12
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,85nm,4.8s						
HHC				LR	LR		
	comp=N,170nm,11.5s						
HHC				LR	LR		
	comp=E,130nm,11.5s						
HHC				LR	LR		
	comp=Z,100nm,12.5s						
MA2	**Magadan**	**23.81**	**12**	P	**P**	**07 43 57.3**	**-1.0**
SEY	**Seymchan**	**27.24**	**11**	P	**P**	**07 44 30.1**	**+0.7**
	3.7nm,0.7s,baz=202,slow=7.4,SNR=15						
SONM	**Songino Array**	**27.71**	**305**	P	**P**	**07 44 33.0**	**-0.9**
	2.8nm,0.6s,baz=106,slow=10.0,SNR=13						
SONM	**Songino Array**	**27.71**	**305**	P	**P**	**07 44 34.0**	**0.0**
H11N2	**WAKE ISLAND Hy**	**28.26**	**120**	T	T	08 14 38.3	
	baz=313,slow=75,SNR=157						
H11N1	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	08 14 38.9	
	baz=313,slow=75,SNR=191						
H11N3	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	08 14 39.7	
	baz=313,slow=75,SNR=192						
H11S1	**WAKE ISLAND Hy**	**28.95**	**122**	T	T	08 15 31.5	
	baz=314,slow=76,SNR=456						
H11S3	**WAKE ISLAND Hy**	**28.95**	**122**	T	T	08 15 29.4	
	baz=314,slow=76,SNR=242						
H11S2	**WAKE ISLAND Hy**	**28.97**	**122**	T	T	08 15 28.3	
	baz=314,slow=76,SNR=354						
GTA	**Gaotai**	**32.34**	**288**	*e*P	**P**	**07 45 14.3**	**-0.7**
GTA				pP	pP	07 45 26.4	-2.1
GTA				sP	sP	07 45 31.9	-2.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,69nm,7.6s						
GTA				LR	LR		
	comp=N,150nm,11.1s						
GTA				LR	LR		
	comp=E,230nm,11.9s						
GTA				LR	LR		
	comp=Z,240nm,11.9s						
KMI	**Kunming**	**34.55**	**262**	⇑P	**P**	**07 45 33.9**	**-0.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TIXI	**Tiksi**	**35.63**	**353**	P	**P**	**07 45 41.7**	**-1.2**
	3.8nm,0.5s,baz=128,slow=4.1,SNR=9.0						
TIXI	**Tiksi**	**35.63**	**353**	P	**P**	**07 45 42.5**	**-0.4**
TIXI				IAmb	IAmb	07 45 42.7	
	comp=Z,5.9nm,1.4s						
FAKI	**Fak Fak**	**40.19**	**194**	P	**P**	**07 46 21.9**	**-0.1**
FAKI				IAmb	IAmb	07 46 23.4	
	comp=Z,12nm,0.8s						
WMQ	**Urumqi**	**40.70**	**297**	*e*P	**P**	**07 46 27.6**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,37nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.9s						
ZAA0	**Zalesovo Array**	**41.92**	**313**	P	**P**	**07 46 35.4**	**-0.3**
ZAA0				IAmb	IAmb	07 46 35.9	
	comp=Z,4.1nm,0.7s						
ZALV	**Zalesovo Beam**	**41.92**	**313**	P	**P**	**07 46 35.1**	**-0.6**
	comp=Z,3.8nm,0.6s,baz=95,slow=7.2,SNR=13						
ZALV				PcP	**PcP**	**07 48 29.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=116,slow=3.4,SNR=1.6						
ZALV	**Zalesovo Beam**	**41.92**	**313**	P	**P**	**07 46 34.9**	**-0.8**
MKAR	**Makanchi Array**	**44.03**	**302**	P	**P**	**07 46 52.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=260,slow=29,SNR=4.5						
MKAR				pP	**pP**	**07 47 09.8**	**+2.9**
	comp=Z,1.1nm,0.7s,baz=89,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**44.03**	**302**	P	**P**	**07 46 52.2**	**-0.7**
KURK	**Kurchatov**	**45.90**	**308**	P	**P**	**07 47 07.3**	**-0.3**
KURBB	**Kurchatov Arra**	**45.96**	**308**	P	**P**	**07 47 07.3**	**-0.9**
	comp=Z,1.3nm,0.5s,baz=83,slow=7.9,SNR=4.6						
KURBB				pP	**pP**	**07 47 24.5**	**+2.4**
	comp=Z,3.6nm,0.7s,baz=85,slow=7.9,SNR=6.3						
KDAK	**Kodiak Island**	**47.62**	**42**	P	**P**	**07 47 22.1**	**+1.1**
	comp=Z,1.1nm,1.0s,baz=299,slow=3.1,SNR=27						
KDAK	**Kodiak Island**	**47.62**	**42**	P	**P**	**07 47 21.9**	**+0.8**
PPLA	**Purkeypile**	**47.69**	**35**	P	**P**	**07 47 24.0**	**+2.3**
PPLA				IAmb	IAmb	07 47 38.8	
	comp=Z,15nm,1.4s						
BPAW	**Bear Paw Mtn.**	**48.24**	**33**	P	**P**	**07 47 27.2**	**+1.3**
BPAW				IAmb	IAmb	07 47 53.1	
	comp=Z,5.6nm,1.4s						
MLY	**Manley**	**48.37**	**32**	P	**P**	**07 47 28.6**	**+1.8**
TOLK	**Toolik Lake Re**	**48.98**	**27**	P	**P**	**07 47 34.2**	**+2.8**
TOLK				IAmb	IAmb	07 47 49.5	
	comp=Z,4.6nm,1.4s						
RND	**Reindeer**	**49.20**	**34**	P	**P**	**07 47 34.1**	**+0.9**
RND				IAmb	IAmb	07 47 48.2	
	comp=Z,5.3nm,1.1s						
GHO	**Glory Hole Cre**	**49.24**	**36**	P	**P**	**07 47 34.8**	**+1.2**
MDM	**Murphy Dome**	**49.43**	**32**	P	**P**	**07 47 36.7**	**+1.8**
MDM				IAmb	IAmb	07 47 37.4	
	comp=Z,3.2nm,0.8s						
IL31		**50.01**	**32**	P	**P**	**07 47 40.4**	**+1.2**
IL31				IAmb	IAmb	07 47 41.2	
	comp=Z,2.6nm,0.7s						
ILAR	**Eielson Array**	**50.01**	**32**	P	**P**	**07 47 40.2**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=270,slow=6.6,SNR=24						
ILAR				pP	**pP**	**07 47 55.0**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=269,slow=6.4,SNR=5.7						
GSI	**Gunungsitoli**	**53.30**	**239**	P	**P**	**07 48 04.3**	**-0.1**
EPYK	**Eagle Plains**	**54.04**	**30**	P	**P**	**07 48 11.4**	**+2.2**
INK	**Inuvik**	**54.89**	**27**	P	**P**	**07 48 16.1**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=310,slow=6.7,SNR=22						
INK	**Inuvik**	**54.89**	**27**	P	**P**	**07 48 16.2**	**+0.9**
INK				IAmb	IAmb	07 48 17.1	
	comp=Z,2.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**56.34**	**198**	P	**P**	**07 48 25.7**	**-0.5**
	baz=352,slow=7.1						
ARU	**Arti**	**56.42**	**319**	P	**P**	**07 48 24.8**	**-1.7**
	comp=Z,1.5nm,0.2s,baz=275,slow=20,SNR=3.7						
ARU	**Arti**	**56.42**	**319**	IAmb	IAmb	07 48 26.4	
	comp=Z,6.3nm,0.9s						
WB0	**Warramunga Arr**	**56.45**	**187**	P	**P**	**07 48 25.9**	**-1.1**
WB0				IAmb	IAmb	07 48 29.7	
	comp=Z,3.6nm,0.7s						
WRA	**Warramunga Arr**	**56.63**	**187**	P	**P**	**07 48 27.4**	**-0.9**
	comp=Z,2.7nm,0.5s,baz=4.3,slow=7.4,SNR=45						
WRA	**Warramunga Arr**	**56.63**	**187**	P	**P**	**07 48 27.9**	**-0.3**
ABKAR	**Akbulak array**	**57.92**	**310**	P	**P**	**07 48 36.5**	**-0.7**
ABKAR	**Akbulak array**	**57.92**	**310**	P	**P**	**07 48 36.3**	**-0.9**
ABKAR				IAmb	IAmb	07 48 36.9	
	comp=Z,1.9nm,0.6s						
C36M	**Paulatuk**	**57.93**	**25**	P	**P**	**07 48 38.0**	**+1.0**
C36M				IAmb	IAmb	07 48 38.5	
	comp=Z,4.1nm,0.8s						
AS31	**Alice Springs**	**60.35**	**187**	P	**P**	**07 48 54.8**	**+0.6**
ASAR	**Alice Springs**	**60.35**	**187**	P	**P**	**07 48 53.8**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=18,slow=6.5,SNR=13						
EUNU	**Eureka**	**60.62**	**8**	P	**P**	**07 48 55.4**	**-0.1**
GEYT	**Ailbeck**	**63.71**	**299**	LR	LR	08 18 47.0	
	comp=Z,38nm,18.6s,baz=175,slow=38						
BELG	**Belogornoye**	**63.84**	**317**	P	**P**	**07 49 16.7**	**-0.6**
	comp=Z,6.4nm,0.6s,baz=242,slow=4.9,SNR=3.1						
ARCES	**ARCESS Array B**	**64.24**	**339**	P	**P**	**07 49 19.4**	**-0.2**
	comp=Z,7.7nm,1.1s,baz=61,slow=8.5,SNR=6.7						
ARCES	**ARCESS Array B**	**64.24**	**339**	IAmb	IAmb	07 49 23.4	
	comp=Z,15nm,1.4s						
YKA	**Yellowknife Ar**	**64.32**	**30**	P	**P**	**07 49 20.8**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=305,slow=6.5,SNR=12						
TULEG	**Thule**	**65.53**	**7**	P	**P**	**07 49 29.5**	**+1.5**
FINES	**FINESS Array B**	**68.99**	**332**	P	**P**	**07 49 49.4**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=64,slow=8.9,SNR=6.3						
KBZ	**Khabaz**	**70.89**	**311**	P	**P**	**07 50 01.4**	**-0.5**
	comp=Z,2.3nm,1.0s,baz=55,slow=1.9,SNR=4.1						
SUMG	**Summit**	**71.07**	**360**	P	**P**	**07 50 03.4**	**+0.3**
SUMG				IAmb	IAmb	07 50 03.9	
	comp=Z,8.6nm,1.3s						
NC405	**NORSAR Array S**	**74.19**	**337**	P	**P**	**07 50 21.1**	**-0.3**
AKASG	**Malin Array Be**	**74.39**	**322**	P	**P**	**07 50 21.7**	**-1.0**
	comp=Z,2.4nm,0.5s,baz=47,slow=6.0,SNR=9.9						
NOA	**NORSAR Array B**	**74.41**	**337**	P	**P**	**07 50 22.1**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=39,slow=5.8,SNR=7.5						
NOA				LR	LR	08 26 23.2	
	comp=Z,15nm,18.4s,baz=320,slow=38						
FCC	**Fort Churchill**	**74.51**	**26**	P	**P**	**07 50 23.3**	**+0.1**
NVAR	**Mina Array Bea**	**75.50**	**53**	P	**P**	**07 50 30.7**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=291,slow=5.7,SNR=1.9						
PDAR	**Pinedale Array**	**78.19**	**45**	P	**P**	**07 50 46.0**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=240,slow=2.9,SNR=3.6						
BUR08	**Bucovina Ar. S**	**78.39**	**322**	P	**P**	**07 50 44.9**	**-0.7**
BUR08				IAmb	IAmb	07 50 51.4	
	comp=Z,5.2nm,1.4s						
BURAR	**Bucovina Array**	**78.40**	**322**	P	**P**	**07 50 45.1**	**-0.5**
BRTR	**Keskin Array B**	**78.84**	**311**	P	**P**	**07 50 47.3**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=54,slow=7.4,SNR=3.5						
ULM	**Lac du Bonnet**	**80.02**	**33**	P	**P**	**07 50 54.4**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=322,slow=6.3,SNR=3.9						
GERES	**GERESS Array B**	**82.86**	**328**	P	**P**	**07 51 08.8**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=46,slow=3.9,SNR=4.6						
TXAR	**Lajitas Array**	**90.64**	**52**	P	**P**	**07 51 48.7**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=308,slow=3.3,SNR=3.1						
LPAZ	**La Paz**	**147.19**	**60**	PKPbc	**PKPab**	**07 58 30.5**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=315,slow=2.9,SNR=4.3	

JNU	**Nakatsue**	**1.00 281**	Pg		**Pn**	**08 17 46.9**	**+0.1**
	140nm,0.3s,baz=122,slow=8.2,SNR=574						
JNU			Lg		Lg	08 18 00.7	
	195nm,0.3s,baz=142,slow=19,SNR=8.7						
JNU			LR		LR	08 18 07.1	
	comp=Z,211nm,21.4s,baz=61,slow=41						
JIU3	**Izumi3**	**1.11 250**	⇑P		**Pn**	**08 17 48.9**	**+0.7**
JHM	**Kurahashi**	**1.26 19**	P		**Pn**	**08 17 49.7**	**-0.6**
KSRS	**Korea Array**	**5.63 324**	Pn		**Pn**	**08 18 50.1**	**0.0**
	1.5nm,0.3s,baz=144,slow=14,SNR=20						
KSRS			Sn		**Sn**	**08 19 52.2**	**-1.1**
	2.3nm,0.3s,baz=137,slow=25,SNR=4.7						
KSRS			LR		LR	08 21 13.2	
	comp=Z,175nm,20.5s,baz=129,slow=40						
MAT	**Matsushiro**	**6.22 53**	P		**Pn**	**08 18 58.7**	**+0.5**
MAT			*e*S		**Sn**	**08 20 06.4**	**-1.5**
MJAR	**Matsushiro Arr**	**6.22 53**	Pn		**Pn**	**08 18 58.0**	**-0.2**
	0.4nm,0.3s,baz=244,slow=14,SNR=10						
JHJ	**Hachijo jima 2**	**6.50 86**	Pn		**Pn**	**08 19 02.5**	**+0.4**
	11nm,0.3s,baz=342,slow=13,SNR=2.1						
JOW	**Kunigami**	**6.91 209**	Sn		**Sn**	**08 20 21.3**	**-3.7**
	0.8nm,0.3s,baz=90,slow=19,SNR=1.4						
JCJ	**Chichijima**	**10.54 121**	LR		LR	08 23 29.2	
	comp=Z,80nm,21.7s,baz=290,slow=34						
USRK	**Ussuriysk Ar.**	**11.24 360**	Pn		**Pn**	**08 20 09.8**	**+2.8**
	baz=179,slow=13,SNR=1.5						
KLR	**Kul'dur**	**16.28 359**	Pn		**P**	**08 21 17.9**	**+1.4**
	0.3nm,0.3s,baz=158,slow=9.9,SNR=26						
KLR			LR		LR	08 27 05.3	
	comp=Z,56nm,18.2s,baz=189,slow=36						
SONM	**Songino Array**	**24.41 315**	P		**P**	**08 22 42.0**	**-0.8**
	3.0nm,0.8s,baz=119,slow=9.9,SNR=12						
SONM			LR		LR	08 33 26.1	
	comp=Z,102nm,18.4s,baz=66,slow=39						
CMAR	**Chiang Mai Arr**	**32.97 252**	LR		LR	08 37 52.9	
	comp=Z,48nm,18.4s,baz=190,slow=37						
ZALV	**Zalesovo Beam**	**39.28 317**	LR		LR	08 42 16.5	
	comp=Z,72nm,18.5s,baz=52,slow=38						
MKAR	**Makanchi Array**	**39.96 305**	P		**P**	**08 24 56.9**	**-1.7**
	0.2nm,0.5s,baz=88,slow=9.1,SNR=2.1						
MKAR			LR		LR	08 41 28.6	
	comp=Z,42nm,19.1s,baz=34,slow=36						
NRIK	**Noril'sk**	**44.04 339**	LR		LR	08 45 11.6	
	comp=Z,53nm,18.8s,baz=169,slow=38						
BVAR	**Borovoye Array**	**47.74 314**	P		**P**	**08 25 59.6**	**-1.3**
	0.5nm,0.5s,baz=184,slow=8.9,SNR=3.8						
FITZ	**Fitzroy Crossi**	**51.12 188**	P		**P**	**08 26 27.2**	**+0.3**
	1.2nm,0.6s,baz=333,slow=6.1,SNR=5.6						
WRA	**Warramunga Arr**	**52.63 177**	P		**P**	**08 26 37.9**	**-0.3**
	1.1nm,0.8s,baz=360,slow=7.8,SNR=9.7						
ASAR	**Alice Springs**	**56.32 178**	P		**P**	**08 27 05.3**	**+0.4**
	0.5nm,0.6s,baz=9.7,slow=13,SNR=13						
DZM	**Mont Dzumac**	**63.80 144**	LR		LR	08 52 40.4	
	comp=Z,46nm,19.1s,baz=140,slow=33						
ARCES	**ARCESS Array B**	**65.01 338**	LR		LR	09 00 47.1	
	comp=Z,28nm,18.8s,baz=330,slow=40						
STKA	**Stephens Creek**	**65.10 171**	P		**P**	**08 28 05.0**	**+0.6**
	2.8nm,1.0s,baz=301,slow=11,SNR=4.0						
OBN	**Obninsk**	**66.62 321**	LR		LR	08 58 41.2	
	comp=Z,18nm,18.5s,slow=37						
YKA	**Yellowknife Ar**	**71.06 27**	P		**P**	**08 28 42.4**	**+0.9**
	0.2nm,0.7s,baz=307,slow=5.4,SNR=4.2						
NVAR	**Mina Array Bea**	**83.52 48**	P		**P**	**08 29 53.5**	**+1.5**
	0.3nm,0.7s,baz=286,slow=4.6,SNR=2.5						

*IDC **16** 08:22:44.0±4.2, 5°.29S×149°.47E, h136km±36km, mb3.5/5, mb1 3.7/7, mb1mx3.3/35, mbtmp4.1/7, Error ellipse: s-maj=39.5km s-min=27.9km az=114.0*
ISC 16 08:22:44.9±1.4, 5°.3S±0°.1×149°.3E±0°.2, h147km, n8, σ1§44/9, mb3.8/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.59**	**208**	P		**Pn**	**08 23 53.4**	**+0.5**
	6.7nm,0.3s,baz=32,slow=15,SNR=10							
PMG				S		**Sn**	**08 24 43.5**	**-2.4**
	8.6nm,0.3s,baz=330,slow=20,SNR=4.8							
SIJI	**Sorong**	**18.58**	**283**	P		**Pn**	**08 26 53.0**	**0.0**
	2.1nm,0.3s,baz=72,slow=20,SNR=2.6							
WRA	**Warramunga Arr**	**20.59**	**224**	P		**P**	**08 27 13.2**	**+0.6**
	1.0nm,0.3s,baz=49,slow=10,SNR=31							
ASAR	**Alice Springs**	**23.52**	**218**	P		**P**	**08 27 42.9**	**+0.9**
	0.9nm,0.3s,baz=51,slow=9.0,SNR=27							
FITZ	**Fitzroy Crossi**	**26.40**	**239**	P		**P**	**08 28 09.1**	**+1.1**
	1.4nm,0.3s,baz=66,slow=8.9,SNR=14							
STKA	**Stephens Creek**	**27.39**	**194**	P		**P**	**08 28 18.1**	**+1.4**
	2.0nm,0.7s,baz=12,slow=7.9,SNR=3.2							
ILAR	**Eielson Array**	**83.96**	**23**	P		**P**	**08 34 57.5**	**-0.8**
	0.4nm,0.6s,baz=254,slow=4.7,SNR=5.1							
TORD	**Torodi Ar. Bea**	**147.17**	**286**	PKPbc		**PKiKP**	**08 42 12.9**	**-1.3**
	0.1nm,0.3s,baz=74,slow=3.5,SNR=1.3							

IDC 16 08:44:45.4±2.7, 54°.26N×87°.22E, h0km, mb1 3.0/3, mb1mx2.9/46, mbtmp3.0/3, ML2.7/3, Error ellipse: s-maj=23.6km s-min=17.3km az=48.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.45**	**259**	*i*			08 54 20.0	
	baz=77,slow=321,SNR=1.6							
ZALV	**Zalesovo Beam**	**1.45**	**259**	Pg		Pn	08 45 10.2	-2.6
	1.3nm,0.3s,baz=75,slow=16,SNR=18							
ZALV				Lg		Lg	08 45 33.5	
	1.5nm,0.3s,baz=73,slow=22,SNR=4.6							
KURBB	**Kurchatov Arra**	**6.44**	**239**	Pn		Pn	08 46 21.9	+0.6
	0.1nm,0.3s,baz=55,slow=14,SNR=14							
KURBB				Sn		Sn	08 47 33.5	-1.9
	baz=53,slow=18,SNR=1.1							
KURBB				Lg		Lg	08 48 09.5	
	0.0nm,0.3s,baz=53,slow=32,SNR=2.2							
MKAR	**Makanchi Array**	**8.10**	**205**	Pn		Pn	08 46 45.4	+1.2
	0.1nm,0.3s,baz=24,slow=13,SNR=4.3							
BVAR	**Borovoye Array**	**10.07**	**270**	Pn		Pn	08 47 11.4	+0.2
	0.1nm,0.3s,baz=88,slow=15,SNR=2.4							
BVAR				Sn		Sn	08 48 58.6	-6.2
	0.3nm,0.3s,baz=85,slow=27,SNR=2.0							

*IDC **16** 09:16:16.7±1.2, 39°.68N×106°.36E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.4/41, mbtmp3.5/8, ML3.2/3, Error ellipse: s-maj=51.1km s-min=19.0km az=57.0*
*BJI **16** 09:16:21.3±0.6, 39°.78N×106°.45E, h10km, ML4.1/14*
ISC 16 09:16:19.2±0.6, 39°.93N±0°.05×106°.44E±0°.04, h10km, n17, σ2§43/23, mb3.6/4, 1C, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.82**	**75**	*e*Pn		**Pn**	**09 17 04.6**	**+0.1**
BTO				Pg		**Pb**	**09 17 09.8**	**+0.1**
BTO				Sg		**Sb**	**09 17 46.5**	**+2.1**
BTO				smax	smax			
	comp=N,4μm,0.3s							
BTO				smax	smax			
	comp=E,2μm,0.3s							
LZH	**Lanzhou**	**4.35**	**209**	*e*Pg		**Pb**	**09 17 38.8**	**+3.0**
LZH				Sg		**Sb**	**09 18 30.5**	**+2.1**
LZH				smax	smax			
	comp=N,500nm,1.2s							
LZH				smax	smax			
	comp=E,430nm,0.8s							
GTA	**Gaotai**	**5.14**	**266**	Pn		**Pn**	**09 17 35.9**	**-0.5**
GTA				Pg		**Pb**	**09 17 46.9**	**-2.4**
GTA				Sn		**Sn**	**09 18 32.9**	**-2.9**
GTA				smax	smax			
	comp=N,170nm,1.0s							
GTA				smax	smax			
	comp=E,140nm,1.0s							
TIY	**Taiyuan**	**5.17**	**113**	*e*Pg		**Pb**	**09 17 51.8**	**+2.0**
TIY				Sn		**Sn**	**09 18 35.1**	**-1.5**
TIY				smax	smax			
	comp=N,380nm,0.5s							
TIY				smax	smax			
	comp=E,260nm,0.6s							
XAN	**Xi'an**	**6.20**	**161**	Pn		Pn	09 17 56.0	+5.1
XAN				Pg		**Pg**	**09 18 14.3**	**-3.7**
XAN				Sg		**Sb**	**09 19 26.5**	**+4.9**
XAN				smax	smax			
	comp=N,140nm,0.8s							
XAN				smax	smax			
	comp=E,99nm,1.0s							
BJI	**Beijing**	**7.47**	**86**	Pg		**Pg**	**09 18 41.5**	**-0.8**
BJI				Sg		Sb	09 20 10.4	+12
BJI				smax	smax			
	comp=N,64nm,0.9s							
BJI				smax	smax			
	comp=E,40nm,0.7s							
SONM	**Songino Array**	**7.91**	**360**	Pn		**Pn**	**09 18 17.3**	**+3.0**
	comp=E,0.7nm,0.3s,baz=179,slow=13,SNR=13							
SONM				Sn		**Sn**	**09 19 41.9**	**-1.9**
	comp=E,3.0nm,0.3s,baz=186,slow=25,SNR=6.7							
SONM				Lg		Lg	09 20 29.6	
	comp=E,5.1nm,0.3s,baz=180,slow=28,SNR=7.6							
TIA	**Tai'an**	**9.20**	**110**	Pg		Pn	09 19 03.8	+32
TIA				Sg		Sn	09 20 55.6	+40
TIA				smax	smax			
	comp=N,25nm,0.9s							
TIA				smax	smax			
	comp=E,27nm,0.8s							
WHN	**Wuhan**	**11.37**	**143**	⇑P		Pn	09 18 57.0	-4.7
TLY	**Talaya**	**11.91**	**352**	Pn		**Pn**	**09 19 11.5**	**+2.4**
	comp=E,0.0nm,0.3s,baz=184,slow=13,SNR=1.7							
TLY				Lg		Lg	09 22 36.3	
	comp=E,0.0nm,0.3s,baz=99,slow=21,SNR=3.1							
WMQ	**Urumqi**	**14.50**	**292**	*e*P		**Pn**	**09 19 48.0**	**+3.6**
MKAR	**Makanchi Array**	**18.81**	**299**	P		**P**	**09 20 39.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=101,slow=11,SNR=5.2							
ZALV	**Zalesovo Beam**	**20.25**	**321**	P		**P**	**09 20 54.3**	**-0.1**
	comp=E,0.6nm,0.4s,baz=125,slow=9.5,SNR=2.5							
KURBB	**Kurchatov Arra**	**22.23**	**308**	P		**P**	**09 21 16.4**	**+0.5**
	comp=E,1.7nm,0.8s,baz=109,slow=12,SNR=7.3							
BVAR	**Borovoye Array**	**27.25**	**310**	P		**P**	**09 22 07.1**	**-0.7**
	comp=E,0.3nm,0.4s,baz=98,slow=10,SNR=2.4							
WRA	**Warramunga Arr**	**65.00**	**151**	P		**P**	**09 26 56.9**	**-2.5**
	comp=E,0.4nm,0.7s,baz=341,slow=7.0,SNR=1.8							
ASAR	**Alice Springs**	**68.26**	**153**	P		**P**	**09 27 18.4**	**-1.8**
	comp=E,0.3nm,0.6s,baz=333,slow=6.1,SNR=5.8							

*IDC **16** 09:16:25.7±4.8, 14°.56N×90°.37W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/28, mbtmp3.4/3, ML3.5/1, Error ellipse: s-maj=178.8km s-min=81.4km az=48.0*
*GCG **16** 09:16:30.2±0.5, 13°.99N×92°.78W, h35km±999km, MD3.8*
ISC 16 09:16:30.9±3.1, 13°.8N±0°.5×92°.78W±0°.10, h37km, n8, σ1§77/10, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**1.33**	**62**	*e*P		**Pn**	**09 16 51.3**	**-1.6**
FUG	**Fuego 3**	**1.98**	**71**	*e*P		**Pn**	**09 16 60.0**	**-2.1**
FUG				*e*S		**Sn**	**09 17 25.5**	**-0.2**
PCG	**Pacaya**	**2.18**	**75**	*e*P		**Pn**	**09 17 04.4**	**-0.5**
PCG				*e*S		**Sn**	**09 17 31.4**	**+0.6**
NBG	**Las Nubes**	**2.48**	**72**	*e*P		**Pn**	**09 17 08.8**	**-0.2**
NBG				*e*S		**Sn**	**09 17 40.7**	**+2.6**
TXAR	**Lajitas Array**	**18.45**	**329**	P		Pn	09 20 50.8	+7.0
	0.0nm,0.3s,baz=137,slow=11,SNR=3.9							
YKA	**Yellowknife Ar**	**51.03**	**347**	P		**P**	**09 25 27.8**	**-1.3**
	1.4nm,1.0s,baz=148,slow=7.9,SNR=12							
ILAR	**Eielson Array**	**62.71**	**337**	P		**P**	**09 26 54.2**	**+2.4**
	0.2nm,0.6s,baz=115,slow=6.1,SNR=2.1							
CMAR	**Chiang Mai Arr**	**145.91**	**340**	PKPbc		**PKPab**	**09 36 07.1**	**-0.7**
	0.5nm,0.5s,baz=350,slow=4.6,SNR=1.6							

IDC 16 09:26:06.9±3.0, 53°.55N×87°.86E, h0km, mb1 2.8/2, mb1mx2.7/52, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=25.2km s-min=16.6km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.85**	**284**	*i*			09 38 51.7	
	baz=98,slow=316,SNR=1.5							
ZALV	**Zalesovo Beam**	**1.85**	**284**	Pg		Pn	09 26 39.5	-0.3
	1.7nm,0.3s,baz=98,slow=12,SNR=21							
ZALV				Lg		Lg	09 27 06.2	
	3.9nm,0.3s,baz=102,slow=28,SNR=17							
KURBB	**Kurchatov Arra**	**6.45**	**247**	Pn		Pn	09 27 44.1	+1.1
	0.1nm,0.3s,baz=61,slow=14,SNR=6.4							
KURBB				Sn		Sn	09 28 55.5	-1.9
	0.0nm,0.3s,baz=58,slow=23,SNR=1.8							
KURBB				Lg		Lg	09 29 32.2	
	0.1nm,0.3s,baz=62,slow=30,SNR=6.7							
MKAR	**Makanchi Array**	**7.65**	**210**	Pn		Pn	09 28 00.9	+1.4
	0.1nm,0.3s,baz=28,slow=14,SNR=5.5							
MKAR				Lg		Lg	09 30 06.7	
	0.1nm,0.3s,baz=32,slow=31,SNR=2.7							

*IDC **16** 09:38:11.1±1.8, 7°.02S×120°.46E, h443km±15km, mb3.1/4, mb1 3.3/7, mb1mx2.9/57, mbtmp4.0/7, Error ellipse: s-maj=140.8km s-min=13.8km az=56.0*
ISC 16 09:38:11.7±1.4, 6°.8S±0°.8×12°.1E±°, h450km, n7, σ0§49/8, mb3.6/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.05**	**328**	P		**P**	**09 39 12.3**	**-0.3**
	11nm,0.3s,baz=168,slow=10.0,SNR=16							
BATI	**Baumata**	**4.42**	**141**	P		**P**	**09 39 30.7**	**+0.1**
	21nm,0.3s,baz=299,slow=15,SNR=8.6							
BATI				S		**S**	**09 40 34.0**	**-0.9**
	28nm,0.3s,baz=239,slow=21,SNR=9.0							
WRA	**Warramunga Arr**	**18.53**	**136**	P		**P**	**09 42 00.2**	**+0.5**
	0.7nm,0.3s,baz=312,slow=11,SNR=6.4							
ASAR	**Alice Springs**	**20.98**	**145**	P		**P**	**09 42 22.3**	**+0.2**
	1.3nm,0.4s,baz=318,slow=8.4,SNR=29							
STKA	**Stephens Creek**	**31.61**	**145**	P		**P**	**09 43 56.2**	**+0.1**
	1.1nm,0.3s,baz=322,slow=10,SNR=4.6							
MKAR	**Makanchi Array**	**63.35**	**331**	P		**P**	**09 47 55.8**	**+0.2**
	0.4nm,0.6s,baz=131,slow=5.9,SNR=5.4							
ZALV	**Zalesovo Beam**	**67.64**	**338**	P		**P**	**09 48 22.4**	**0.0**
	0.8nm,0.5s,baz=122,slow=5.2,SNR=2.2							

IDC 16 09:41:17.1±2.6, 53°.40N×87°.20E, h0km, mb1 2.9/2, mb1mx2.8/50, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=24.1km s-min=14.5km az=70.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.52**	**292**	Pg		Pn	09 41 43.9	-1.6
	0.8nm,0.3s,baz=112,slow=15,SNR=8.1							
ZALV				Lg		Lg	09 42 05.2	
	1.4nm,0.3s,baz=113,slow=27,SNR=16							
ZALV				Rg		Rg	09 42 14.7	
	2.9nm,0.5s,baz=100,slow=25,SNR=5.3							
I46RU	**ZALESOVO INFRA**	**1.52**	**292**	*i*			09 51 50.0	
	baz=108,slow=321,SNR=3.1							
KURBB	**Kurchatov Arra**	**6.04**	**246**	Pn		Pn	09 42 48.5	+0.9
	0.1nm,0.3s,baz=62,slow=14,SNR=4.3							
KURBB				Lg		Lg	09 44 29.2	
	0.0nm,0.3s,baz=60,slow=32,SNR=6.0							
MKAR	**Makanchi Array**	**7.33**	**207**	Pn		Pn	09 43 06.8	+1.4
	0.2nm,0.3s,baz=27,slow=14,SNR=7.0							
MKAR				Lg		Lg	09 45 07.0	
	0.0nm,0.3s,baz=28,slow=32,SNR=3.4							

*NEIC **16** 09:48:17.6±2.2, 5°.44S±0°.03×152°.6E±0°.1, h41km±8km, mb4.5/25, Error ellipse: s-maj=15.7km s-min=4.7km az=82.0*
*DJA **16** 09:48:17.9±0.6, 5°.S±4°.×15°.3E±°, h50km±7km, M4.9/12, mB4.8/2, mb4.6/12, MLv5.0/2, Mw(mB)4.0/2*
*IDC **16** 09:48:21.4±4.4, 5°.68S×152°.52E, h84km±38km, mb3.9/14, mb1 4.1/16, mb1mx3.9/40, mbtmp4.3/16, MS3.6/10, Ms1 3.7/10, ms1mx3.3/37, Error ellipse: s-maj=31.6km s-min=19.4km az=108.0*
ISC 16 09:48:17.1±0.7, 5°.47S±0°.07×152°.6E±0°.1, h40km, n58, σ1§34/54, mb4.4/23, MS3.6/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.33**	**342**	Pn		**Pn**	**09 48 39.9**	**+0.8**
RABL	**Rabaul**	**1.33**	**342**	P		**Pn**	**09 48 40.0**	**+0.8**
PMG	**Port Moresby**	**6.64**	**234**	P		**Pn**	**09 49 54.5**	**+2.3**
	3.3nm,0.3s,baz=72,slow=9.6,SNR=6.9							
PMG				S		**Sn**	**09 51 08.0**	**+1.2**
	16nm,0.3s,baz=230,slow=21,SNR=11							
PMG				LR		LR	09 52 48.5	
	comp=Z,310nm,18.8s,baz=336,slow=41							
PMG	**Port Moresby**	**6.64**	**234**	Pn		**Pn**	**09 49 53.2**	**+1.0**
PMG	**Port Moresby**	**6.64**	**234**	P		**Pn**	**09 49 56.1**	**+3.9**
HNR	**Honiara**	**8.30**	**119**	LR		LR	09 53 13.7	
	comp=Z,287nm,18.9s,baz=288,slow=35							
CTA	**Charters Tower**	**15.78**	**202**	P		**Pn**	**09 51 57.2**	**+0.7**
	0.1nm,0.3s,baz=11,slow=11,SNR=3.6							

EIDS	**Eidsvold**	**19.84**	**184**	P		**P**	**09 52 44.8**	**+0.2**
EIDS				IAmb		IAmb	09 52 55.6	
	comp=Z,30nm,1.4s							
FAKI	**Fak Fak**	**20.43**	**276**	P		**P**	**09 52 51.1**	**0.0**
	comp=Z,11nm,1.0s							
DZM	**Mont Dzumac**	**21.27**	**142**	LR		LR	09 59 45.5	
	comp=Z,260nm,20.4s,baz=332,slow=32							
SIJI	**Sorong**	**21.75**	**281**	P		**P**	**09 53 05.9**	**+0.5**
	comp=Z,5.1nm,0.6s,baz=151,slow=12,SNR=2.3							
MTN	**Manton Dam**	**22.39**	**249**	P		**P**	**09 53 13.8**	**+1.5**
WB0	**Warramunga Arr**	**22.70**	**230**	P		**P**	**09 53 15.8**	**+0.3**
WR0	**Warramunga Arr**	**22.70**	**229**	P		**P**	**09 53 16.1**	**+0.6**
WRAB	**Tennant Creek**	**22.83**	**229**	P		**P**	**09 53 16.6**	**-0.3**
WRAB				IAmb		IAmb	09 53 37.7	
	comp=Z,10nm,0.7s							
WB2	**Warramunga Arr**	**22.83**	**229**	P		**P**	**09 53 15.9**	**-1.0**
WB2				IAmb		IAmb	09 53 38.3	
	comp=Z,28nm,1.4s							
WRA	**Warramunga Arr**	**22.84**	**229**	P		**P**	**09 53 15.7**	**-1.3**
	comp=Z,5.3nm,0.9s,baz=54,slow=9.8,SNR=20							
WRA				LR		LR	10 02 52.6	
	comp=Z,138nm,18.4s,baz=40,slow=38							
WRA	**Warramunga Arr**	**22.84**	**229**	P		**P**	**09 53 15.7**	**-1.3**
KNRA	**Kununurra**	**25.48**	**245**	P		**P**	**09 53 41.4**	**-0.4**
AS31	**Alice Springs**	**25.51**	**223**	P		**P**	**09 53 41.7**	**-0.3**
ASAR	**Alice Springs**	**25.51**	**223**	P		**P**	**09 53 40.6**	**-1.5**
	comp=Z,6.8nm,0.9s,baz=54,slow=9.1,SNR=43							
STKA	**Stephens Creek**	**28.22**	**200**	P		**P**	**09 54 03.2**	**-3.0**
	comp=Z,1.2nm,0.8s,baz=8.1,slow=14,SNR=1.6							
STKA				LR		LR	10 06 02.6	
	comp=Z,207nm,18.4s,baz=24,slow=38							
FITZ	**Fitzroy Crossi**	**29.15**	**242**	P		**P**	**09 54 13.2**	**-1.4**
	comp=Z,4.9nm,0.8s,baz=58,slow=6.4,SNR=11							
FITZ	**Fitzroy Crossi**	**29.15**	**242**	P		**P**	**09 54 13.7**	**-0.9**
FITZ				IAmb		IAmb	09 54 34.2	
	comp=Z,8.3nm,0.8s							
PLAI	**Plampang**	**34.68**	**262**	P		**P**	**09 55 00.1**	**-3.2**
	comp=Z,16nm,1.1s							
TWSI	**Taliwang, Sumb**	**35.56**	**263**	P		**P**	**09 55 08.9**	**-1.9**
JOW	**Kunigami**	**39.80**	**325**	LR		LR	10 10 09.6	
	comp=Z,47nm,20.8s,baz=181,slow=33							
KLR	**Kul'dur**	**57.42**	**344**	P		**P**	**09 58 01.0**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=162,slow=6.4,SNR=2.5							
CMAR	**Chiang Mai Arr**	**57.96**	**296**	P		**P**	**09 58 06.3**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=115,slow=5.8,SNR=6.8							
PETK	**Petropavlovsk-**	**58.51**	**4**	P		**P**	**09 58 10.9**	**+1.7**
	comp=Z,1.0nm,0.4s,baz=180,slow=7.2,SNR=2.5							
PETK				LR		LR	10 18 55.8	
	comp=Z,37nm,20.4s,baz=140,slow=31							
SONM	**Songino Array**	**66.77**	**328**	P		**P**	**09 59 05.4**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=146,slow=5.7,SNR=10							
SONM	**Songino Array**	**66.77**	**328**	P		**P**	**09 59 04.4**	**-0.1**
SONM				IAmb		IAmb	09 59 06.9	
	comp=Z,5.5nm,1.4s							
SONM						**pP**	**09 59 15.8**	**+0.7**
BILL	**Bilibino**	**73.97**	**5**	P		**P**	**09 59 49.2**	**+1.2**
GAMB	**Gambell**	**74.08**	**16**	P		**P**	**09 59 50.5**	**+1.8**
GAMB				IAmb		IAmb	09 59 51.3	
	comp=Z,9.7nm,1.1s							
ANM	**Nome**	**76.47**	**17**	P		**P**	**10 00 03.4**	**+0.9**
ANM				IAmb		IAmb	10 00 05.4	
	comp=Z,6.4nm,0.8s							
TNA	**Tin City**	**76.49**	**16**	P		**P**	**10 00 04.3**	**+1.8**
TNA				IAmb		IAmb	10 00 05.0	
	comp=Z,4.0nm,1.0s							
RDOG	**Red Dog Mine**	**79.68**	**16**	P		**P**	**10 00 20.3**	**+0.1**
MK31	**Makanchi Array**	**80.68**	**319**	P		**P**	**10 00 25.8**	**-0.2**
MKAR	**Makanchi Array**	**80.68**	**319**	P		**P**	**10 00 26.3**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=109,slow=5.9,SNR=13							
MKAR	**Makanchi Array**	**80.68**	**319**	P		**P**	**10 00 25.4**	**-0.7**
MAKZ	**Makanchi**	**80.89**	**319**			**PcP**	**10 00 31.2**	**-2.4**
IMAR	**Indian Mountai**	**81.08**	**19**	P		**P**	**10 00 28.1**	**+0.4**
MCK	**McKinley**	**81.56**	**23**	P		**P**	**10 00 30.6**	**+0.3**
ZALV	**Zalesovo Beam**	**81.58**	**326**	P		**P**	**10 00 30.2**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=116,slow=5.9,SNR=10							
ZALV				LR		LR	10 38 30.7	
	comp=Z,24nm,19.0s,baz=63,slow=37							
ZALV	**Zalesovo Beam**	**81.58**	**326**	P		**P**	**10 00 30.4**	**-0.2**
CCB	**Clear Creek Bu**	**82.45**	**22**	IAmb		IAmb	10 00 54.9	
	comp=Z,5.1nm,1.0s							
ILAR	**Eielson Array**	**82.86**	**22**	P		**P**	**10 00 37.0**	**0.0**
	comp=Z,2.3nm,0.9s,baz=254,slow=5.3,SNR=17							
ILAR				LR		LR	10 35 30.1	
	comp=Z,74nm,18.9s,baz=157,slow=34							
ILAR	**Eielson Array**	**82.86**	**22**	P		**P**	**10 00 36.3**	**-0.8**
DOT	**Dot Lake**	**83.42**	**24**	IAmb		IAmb	10 01 01.2	
	comp=Z,6.4nm,1.0s	

baz=318,slow=75
H11S1 WAKE ISLAND Hy 29.09 128 T T 10 34 24.7
baz=320,slow=76
H11S3 WAKE ISLAND Hy 29.09 128 T T 10 34 26.2
baz=320,slow=76
H11S2 WAKE ISLAND Hy 29.10 128 T T 10 34 27.4
baz=320,slow=76
ZALV Zalesovo Beam 41.45 311 P **P 10 05 48.3 +0.5**
0.7nm,0.4s,baz=87,slow=9.9,SNR=2.4
MKAR Makanchi Array 44.04 301 P **P 10 06 09.4 +0.5**
1.1nm,0.7s,baz=83,slow=9.9,SNR=9.9
ILAR Eielson Array 47.34 33 P **P 10 06 34.9 +0.2**
0.6nm,0.8s,baz=262,slow=5.6,SNR=4.7
WRA Warramunga Arr 59.08 189 P **P 10 08 00.8 -0.8**
1.5nm,0.7s,baz=6.2,slow=7.1,SNR=21
ASAR Alice Springs 62.81 189 P **P 10 08 26.6 -0.4**
0.2nm,0.5s,baz=352,slow=4.8,SNR=7.6
TXAR Lajitas Array 88.14 53 P **P 10 10 52.1 -0.3**
0.4nm,0.9s,baz=324,slow=4.5,SNR=2.6
KEST Kesra 94.14 324 P **P 10 11 21.9 +1.7**
3.8nm,0.4s,baz=21,slow=2.9,SNR=3.2

*MAN **16** 10:05:48.2, 16°47N×120°68E, h21km, MS3.2*
*IDC **16** 10:05:59.7±2.3, 14°29N×119°24E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.2/36, mbtmp3.3/3, ML4.0/1, Error ellipse: s-maj=55.7km s-min=29.1km az=14.0*
ISC 16 10:05:48.4±0.9, **16°49N**±0°04×**120°61E**±0°06, **h17**km±5km, **n12**, σ1°**52**/19, **2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BCP	**Baguio City**	**0.07**	**179**	⇑*iP*		**Pg**	**10 05 52.1**	**+0.2**
BCP				*i*S		**Sg**	**10 05 54.2**	**0.0**
BOLP	**Bolinao**	**0.68**	**261**	*e*P		**Pn**	**10 06 03.3**	**+0.2**
BOLP				*e*S		**Sb**	**10 06 10.2**	**-0.6**
SIPP	**Brgy, Tapao**	**1.44**	**354**	⇓*i*P		**Pb**	**10 06 14.9**	**+0.2**
SIPP				*e*S		Sg	10 06 51.7	+17
APYP	**Conner**	**1.50**	**24**	*e*P		**Pn**	**10 06 13.4**	**-1.1**
APYP				*e*S		**Sn**	**10 06 32.9**	**-0.6**
QVP	**Quezon City--P**	**1.89**	**168**	*e*P		**Pn**	**10 06 15.8**	**-4.1**
QVP				*e*S		**Sb**	**10 06 45.5**	**-0.3**
MACP	**Maragondon, Ca**	**2.21**	**177**	*e*P		**Pn**	**10 06 24.3**	**0.0**
MACP				*e*S		**Sb**	**10 06 56.5**	**+1.4**
TGY	**Tagaytay City**	**2.39**	**172**	Pn		**Pb**	**10 06 29.9**	**-1.1**
TGY	94nm,0.3s,baz=174,slow=6.1,SNR=6.5			Sn		**Sn**	**10 06 56.4**	**+0.7**
LQP	**Lukban**	**2.52**	**159**	⇑*eP*		**Pn**	**10 06 29.9**	**+1.2**
LQP	82nm,0.3s,baz=255,slow=14,SNR=3.7			*e*S		**Sb**	**10 07 06.4**	**+2.2**
LUBP	**Lubang**	**2.76**	**187**	*e*P		**Pn**	**10 06 31.8**	**0.0**
LUBP				*e*S		**Sb**	**10 07 08.7**	**-2.1**
CMAR	**Chiang Mai Arr**	**20.76**	**279**	P		Pn	10 10 33.0	+2.1
	0.2nm,0.3s,baz=94,slow=8.5,SNR=2.7							
WRA	**Warramunga Arr**	**38.63**	**159**	P		**P**	**10 13 11.4**	**+0.4**
	0.5nm,0.9s,baz=332,slow=10,SNR=2.8							
ASAR	**Alice Springs**	**41.97**	**162**	P		**P**	**10 13 40.0**	**+1.3**
	0.2nm,0.5s,baz=342,slow=6.9,SNR=6.5							

ISC 16 10:12:04.0±1.1, **48°82N**±0°06×**18°14E**±0°04, **h10**km±10km, **n6**, σ0°**61**/12, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOLL	**Kolacno**	**0.30**	**144**	*e*PG		**Pb**	**10 12 10.7**	**-0.7**
KOLL				*e*SG		**Sg**	**10 12 15.0**	**+1.0**
JAVC	**Velka Javorina**	**0.31**	**277**	*e*PG		**Pg**	**10 12 09.8**	**-0.5**
JAVC				*e*SG		**Sg**	**10 12 14.9**	**+0.4**
VYHS	**Vyhne**	**0.57**	**125**	*e*PG		**Pg**	**10 12 14.9**	**-0.1**
VYHS				*e*SG		**Sg**	**10 12 22.3**	**-0.1**
VYHS				*e*LG		Lg	10 12 31.1	
MODS	**Modra-Piesok**	**0.73**	**232**	*e*PG		**Pb**	**10 12 18.5**	**-0.2**
MODS				*e*SG		**Sb**	**10 12 29.3**	**+0.6**
MODS				*e*LG		Lg	10 12 30.7	
MORC	**Moravsky Berou**	**1.03**	**338**	*e*PG		**Pg**	**10 12 24.1**	**+0.2**
MORC				*e*SG		**Sn**	**10 12 39.5**	**+0.4**
VRAC	**Vranov**	**1.13**	**296**	*e*PG		**Pb**	**10 12 24.9**	**-0.7**
VRAC				*e*SG		**Sn**	**10 12 41.3**	**0.0**

*NNC **16** 10:23:09.5±2.1, 43°41N×69°43E, h0km, mb3.6, mpv2.6, Error ellipse: s-maj=11.3km s-min=7.7km az=110.0, Suspected Mining explosion.*
*KRNET **16** 10:23:14.4±0.1, 43°50N×69°63E, mb2.5*
ISC 16 10:23:13.4±3.0, **43°5N**±0°1×**69°7E**±0°1, **h0**km, **n7**, σ1°**36**/11, **7C-3D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.75**	**124**	⇑P		**Pg**	**10 23 26.0**	**-1.8**
	1.1nm,0.4s,baz=316,slow=17,SNR=30							
KK31				S		**Sg**	**10 23 37.7**	**+0.3**
	5.9nm,0.3s,baz=291,slow=31,SNR=22							
TRKS	**Terek-Say**	**2.27**	**151**	⇑*iP*		**Pb**	**10 23 54.7**	**-0.7**
	baz=50							
TRKS				⇑*iS*		**Sb**	**10 24 23.9**	**-0.2**
	baz=50							
MNAS	**Manas**	**2.33**	**115**	⇑*iP*		**Pn**	**10 23 54.6**	**+1.5**
	baz=15							
MNAS				⇑*iS*		**Sn**	**10 24 24.1**	**+1.6**
	baz=15							
ARSB	**Arslanbob**	**3.30**	**131**	⇑*iP*		**Pn**	**10 24 07.9**	**+1.5**
	baz=30							
ARSB				⇑*iS*		**Sn**	**10 24 47.3**	**+0.9**
	baz=30							
BTK	**Batken**	**3.57**	**166**	⇓*iP*		**Pn**	**10 24 11.3**	**+1.2**
	baz=65							
BTK				⇓*iS*		**Sn**	**10 24 52.9**	**-0.1**
	baz=65							
AAK	**Ala-Archa**	**3.65**	**102**	Pg		**Pb**	**10 24 17.6**	**-1.2**
	5.0nm,0.8s							
AAK				Lg		Lg	10 25 09.2	
	3.5nm,0.5s							
TKM2	**Tokmak 2**	**4.38**	**96**	⇓Lg		Lg	10 25 30.8	
	8.0nm,0.9s							

VIE 16 10:29:58.5±0.4, **46°63N**×**15°30E**, **h0**km, **mlO.6/2**, **Error ellipse: s-maj=5.2km s-min=1.2km az=26.0 8 km SSE of Eibiswald Suspected Mining explosion., Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SOKA	**Soboth**	**0.19**	**285**	*e*Pg		Pg	10 30 02.2	0.0
	1.3nm,0.2s							
SOKA				*e*Sg		Sg	10 30 04.8	+0.1
	0.7nm,0.2s							
OBKA	**Obir**	**0.53**	**257**	*e*Pg		Pg	10 30 09.4	+0.7
	0.3nm,0.1s							
OBKA				*e*Sg		Sg	10 30 16.0	+0.4
	1.2nm,0.3s							

BUC 16 10:31:21.1±0.2, **45°94N**×**22°69E**, **h8**km±2km, **ml1.9**/10, **38C-6D, Error ellipse: s-maj=2.0km s-min=1.6km az=125.0, Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DEV	**Deva**	**0.16**	**109**	⇑P		Pg	10 31 23.7	-0.6
DEV				⇑S		Sg	10 31 27.6	+1.0
DEV	**Deva**	**0.16**	**109**	⇑P		Pg	10 31 23.7	-0.6
DEV				⇑S		Sg	10 31 27.6	+1.0
GZR	**Gura Zlata**	**0.55**	**174**	⇑P		Pg	10 31 31.8	+0.2
GZR				⇑S		Sb	10 31 40.1	-0.9
GZR	**Gura Zlata**	**0.55**	**174**	⇑P		Pg	10 31 31.8	+0.2
GZR				⇑S		Sb	10 31 40.1	-0.9
BZS	**Buzias**	**0.82**	**247**	⇑P		Pg	10 31 36.3	-0.5
BZS				⇑S		Sg	10 31 47.2	-0.3
BZS	**Buzias**	**0.82**	**247**	⇑P		Pg	10 31 36.3	-0.5
BZS				⇑S		Sg	10 31 47.2	-0.3
DRGR		**0.86**	**1**	⇓P		Pg	10 31 36.7	-0.8
DRGR				⇑S		Sb	10 31 49.8	-0.1
DRGR		**0.86**	**1**	⇓P		Pg	10 31 36.7	-0.8
DRGR				⇑S		Sb	10 31 49.8	-0.1
LOT	**Lotru**	**0.90**	**122**	⇑P		Pg	10 31 38.0	-0.4
LOT				⇑S		Sg	10 31 50.2	+0.2
LOT	**Lotru**	**0.90**	**122**	⇑P		Pg	10 31 38.0	-0.4
LOT				⇑S		Sg	10 31 50.2	+0.2
CJR	**Cluj-Napoca**	**1.00**	**39**	⇓P		Pn	10 31 41.3	-0.2
CJR				⇑S		Sb	10 31 54.9	+0.9
CJR	**Cluj-Napoca**	**1.00**	**39**	⇓P		Pn	10 31 41.3	-0.2
CJR				⇑S		Sb	10 31 54.9	+0.9
HERR	**Herculane**	**1.07**	**191**	⇑P		Pb	10 31 41.9	0.0
HERR				⇑S		Sb	10 31 56.6	+0.6
HERR	**Herculane**	**1.07**	**191**	⇑P		Pb	10 31 41.9	0.0
HERR				⇑S		Sb	10 31 56.6	+0.6
MDVR	**Moldovita**	**1.34**	**211**	⇑P		Pb	10 31 46.6	+0.1
MDVR				⇑S		Sg	10 32 05.8	+1.5
MDVR	**Moldovita**	**1.34**	**211**	⇑P		Pb	10 31 46.6	+0.1
MDVR				⇑S		Sg	10 32 05.8	+1.5
ARR	**Arges**	**1.48**	**112**	⇑P		Pn	10 31 48.0	0.0
ARR				⇑S		Sg	10 32 08.2	-0.3
ARR	**Arges**	**1.48**	**112**	⇑P		Pn	10 31 48.0	0.0
ARR				⇑S		Sg	10 32 08.2	-0.3
VOIR		**1.73**	**106**	⇑P		Pn	10 31 52.0	+0.6
VOIR				⇑S		Sb	10 32 15.0	+0.1
VOIR		**1.73**	**106**	⇑P		Pn	10 31 52.0	+0.6
VOIR				⇑S		Sb	10 32 15.0	+0.1
MLR	**Muntele Rosu**	**2.32**	**100**	⇑P		Pn	10 31 59.1	-0.6
MLR				⇓S		Sn	10 32 28.7	+0.2
MLR	**Muntele Rosu**	**2.32**	**100**	⇑P		Pn	10 31 59.1	-0.6
MLR				⇓S		Sn	10 32 28.7	+0.2

*UPP **16** 10:43:49.5±0.2, 58°75N×18°59E, h0km, ML2.2, Explosion*
*DNK **16** 10:43:50.0±2.2, 58°74N×18°57E, h0km, ML2.9, Explosion*
*HEL **16** 10:43:50.5±0.1, 58°75N×18°56E, h0km, ML2.6, ML2.2(UPP), Explosion*
*BER **16** 10:43:54.1±2.7, 59°03N×18°57E, h0km, ML2.6(NAO), Suspected explosion*
*NAO **16** 10:43:54.0±2.0, 59°10N×18°37E, ML2.6*
*IDC **16** 10:43:55.0±1.9, 59°16N×18°40E, h0km, mb1 3.2/4, mb1mx3.0/49, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=25.5km s-min=7.5km az=179.0*
ISC 16 10:43:48.9±0.8, **58°76N**±0°02×**18°57E**±0°03, **h0**km, **n69**, σ1°**29**/88, **Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.39**	**311**	P		**Pg**	**10 43 57.2**	**+1.0**
NYNU	**Nynaeshamn**	**0.39**	**311**	P		**Pg**	**10 43 57.2**	**+1.0**
NYNU	**Nynaeshamn**	**0.39**	**311**	*i* P		**Pg**	**10 43 57.2**	**+1.0**
NRTU	**Norrtaelje**	**0.92**	**2**	P		**Pg**	**10 44 07.0**	**+0.4**
NRTU				S		**Sg**	**10 44 19.5**	**+1.0**
NRTU	**Norrtaelje**	**0.92**	**2**	P		**Pg**	**10 44 07.0**	**+0.4**
NRTU				S		**Sg**	**10 44 19.5**	**+1.0**
NRTU	**Norrtaelje**	**0.92**	**2**	*e*P		**Pg**	**10 44 06.9**	**+0.4**
NRTU				*e*S		**Sg**	**10 44 19.2**	**+0.6**
VIKU	**Vikbolandet**	**1.01**	**256**	P		**Pg**	**10 44 08.6**	**+0.3**
VIKU				S		**Sg**	**10 44 21.5**	**+0.2**
VIKU	**Vikbolandet**	**1.01**	**256**	P		**Pg**	**10 44 08.6**	**+0.3**
VIKU				S		**Sg**	**10 44 21.5**	**+0.2**
VIKU	**Vikbolandet**	**1.01**	**256**	*e*P		**Pg**	**10 44 08.6**	**+0.3**
VIKU				*e*S		**Sg**	**10 44 21.5**	**+0.2**
GOTU	**Gotland**	**1.07**	**180**	P		**Pg**	**10 44 09.4**	**0.0**
GOTU				S		**Sg**	**10 44 23.6**	**+0.3**
GOTU	**Gotland**	**1.07**	**180**	P		**Pg**	**10 44 09.4**	**0.0**
GOTU				S		**Sg**	**10 44 23.6**	**+0.3**
GOTU	**Gotland**	**1.07**	**180**	*e*P		**Pg**	**10 44 09.5**	**0.0**
GOTU				*e*S		**Sg**	**10 44 23.2**	**-0.1**
UPP	**Uppsala**	**1.21**	**337**	P		**Pg**	**10 44 12.2**	**+0.3**
UPP				S		**Sg**	**10 44 28.1**	**+0.5**
UPP	**Uppsala**	**1.21**	**337**	*e*P		**Pg**	**10 44 12.2**	**+0.3**
UPP				*e*S		**Sg**	**10 44 28.1**	**+0.5**
ESKU	**Eskilstuna**	**1.22**	**294**	P		**Pg**	**10 44 12.6**	**+0.3**
ESKU	**Eskilstuna**	**1.22**	**294**	P		**Pg**	**10 44 12.6**	**+0.3**
ESKU	**Eskilstuna**	**1.22**	**294**	*e*P		**Pg**	**10 44 12.6**	**+0.3**
FIBU	**Brunna**	**1.31**	**332**	P		**Pg**	**10 44 14.2**	**+0.2**
FIBU	**Brunna**	**1.31**	**332**	P		**Pg**	**10 44 14.2**	**+0.2**
BACU	**Backbrunna**	**1.33**	**326**	P		**Pg**	**10 44 14.6**	**+0.2**
BACU	**Backbrunna**	**1.33**	**326**	P		**Pg**	**10 44 14.6**	**+0.2**
BACU	**Backbrunna**	**1.33**	**326**	*e*P		**Pg**	**10 44 14.6**	**+0.2**
FLYU	**Flymyra**	**1.42**	**346**	P		**Pn**	**10 44 16.0**	**+0.1**
FLYU	**Flymyra**	**1.42**	**346**	P		**Pn**	**10 44 16.0**	**+0.1**
FLYU	**Flymyra**	**1.42**	**346**	*e*P		**Pn**	**10 44 16.0**	**+0.1**
GRAU	**Graesoe**	**1.58**	**359**	P		**Pn**	**10 44 18.8**	**+0.7**
GRAU	**Graesoe**	**1.58**	**359**	P		**Pn**	**10 44 18.8**	**+0.7**
GRAU	**Graesoe**	**1.58**	**359**	*e*P		**Pn**	**10 44 18.8**	**+0.7**
AAL	**Aland**	**1.60**	**26**	P		**Pn**	**10 44 18.9**	**+0.6**
AAL	**Aland**	**1.60**	**26**	*e*P		**Pn**	**10 44 18.9**	**+0.6**
AAL				*e*S		**Sn**	**10 44 39.6**	**-0.1**
FORU	**Forsmark**	**1.65**	**353**	P		**Pb**	**10 44 20.5**	**+0.4**
FORU	**Forsmark**	**1.65**	**353**	P		**Pb**	**10 44 20.5**	**+0.4**
FORU	**Forsmark**	**1.65**	**353**	*e*P		**Pb**	**10 44 20.5**	**+0.4**
OSTU	**Oestervaala**	**1.65**	**334**	P		**Pb**	**10 44 20.1**	**0.0**
OSTU	**Oestervaala**	**1.65**	**334**	P		**Pb**	**10 44 20.1**	**0.0**
OSTU	**Oestervaala**	**1.65**	**334**	*e*P		**Pb**	**10 44 20.1**	**0.0**
SLIT	**Slitere, Latvi**	**2.27**	**118**	*e*P		**Pb**	**10 44 29.6**	**-1.1**
SLIT				*e*S		**Sn**	**10 44 57.6**	**+1.3**
RAF	**Rauma**	**2.79**	**34**	*e*P		**Pn**	**10 44 36.5**	**+1.8**
RAF				*e*S		**Sn**	**10 45 10.2**	**+1.3**
HFC2	**Hagfors New Ar**	**2.85**	**301**	*e*P		**Pn**	**10 44 37.3**	**+1.7**
HFS	**Hagfors**	**2.85**	**301**	Pn		**Pn**	**10 44 37.3**	**+1.8**
	1.9nm,0.3s,baz=109,slow=17,SNR=26							
HFS				Lg		Lg	10 45 14.2	
	6.3nm,0.3s,baz=108,slow=28,SNR=15							
HFS	**Hagfors**	**2.85**	**301**	Pn		**Pn**	**10 44 37.5**	**+2.0**
	baz=118,slow=14							
HFS				Lg		Lg	10 45 13.6	
	baz=114,slow=28							
HFS	**Hagfors**	**2.85**	**301**	Pn		**Pn**	**10 44 37.5**	**+2.0**
	baz=118,slow=14							
BLEU	**Blekinge**	**2.87**	**212**	*i* P		**Pn**	**10 44 37.5**	**+1.7**
ARNU	**Arnoeviken**	**3.00**	**349**	*e*P		**Pn**	**10 44 38.8**	**+1.1**
ARNU				*e*S		**Sn**	**10 45 15.7**	**+1.3**
BORU	**Boraas**	**3.27**	**252**	*i* P		**Pn**	**10 44 44.1**	**+2.8**
DEL	**Delary**	**3.41**	**230**	*i* P		**Pn**	**10 44 44.1**	**+0.9**
DEL				IAML			10 45 42.1	
	comp=Z,8.7nm,0.4s							
ONAU	**Onsala**	**3.79**	**252**	*e*P		**Pn**	**10 44 51.0**	**+2.6**
HEMU	**Hemsoen**	**3.94**	**356**	*e*P		**Pn**	**10 44 52.3**	**+1.8**
HEMU				*e*S		**Sn**	**10 45 36.5**	**-0.9**
NRA0	**NORESS Array S**	**4.07**	**302**	Pn		**Pn**	**10 44 52.8**	**+0.4**
	baz=108,slow=16							
NRA0				Sn		**Sn**	**10 45 40.6**	**0.0**
	baz=121,slow=16							
NRA0				Lg		Lg	10 45 56.3	
	baz=110,slow=37							
NRA0	**NORESS Array S**	**4.07**	**302**	Pn		**Pn**	**10 44 52.8**	**+0.4**
	baz=108,slow=16							
NRA0				Sn		**Sn**	**10 45 40.6**	**0.0**
	baz=121,slow=16							
NRA0				Sg		**Sg**	**10 45 56.3**	**-3.2**
	baz=110,slow=37							
PVF	**Pernaja**	**4.11**	**61**	MSG			10 46 05.5	
	comp=Z,11nm,0.3s							
BSD	**Bornholm Skovb**	**4.16**	**210**	*i* P		**Pn**	**10 44 53.6**	**0.0**
BSD				IAML			10 46 09.4	
	comp=Z,14nm,0.4s							
LUNU	**Lund**	**4.19**	**224**	*i* P		**Pn**	**10 44 54.2**	**+0.2**
NB2	**NORSAR Subarra**	**4.36**	**305**	Pn		**Pn**	**10 44 57.6**	**+1.3**
	baz=125,slow=14							
NB2				Lg		Lg	10 46 04.5	
	baz=118,slow=28							
NB2	**NORSAR Subarra**	**4.36**	**305**	Pn		**Pn**	**10 44 57.6**	**+1.3**
	baz=125,slow=14							
NB2				Sg		**Sg**	**10 46 04.5**	**-4.1**
	baz=118,slow=28							
NOA	**NORSAR Array B**	**4.36**	**305**	Pn		**Pn**	**10 44 57.8**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=124,slow=16,SNR=13							
NOA				Lg		Lg	10 46 03.1	
	comp=Z,0.5nm,0.3s,baz=329,slow=22,SNR=6.3							
FIA0	**FINESS Array S**	**4.62**	**51**	Pn		**Pn**	**10 45 02.3**	**+2.4**
	baz=243,slow=14							
FIA0				Lg		Lg	10 46 13.2	
	baz=247,slow=28							
FIA0	**FINESS Array S**	**4.62**	**51**	Pn		**Pn**	**10 45 02.3**	**+2.4**
	baz=243,slow=14							
FIA0				Sg		**Sg**	**10 46 13.2**	**-4.0**
	baz=247,slow=28							
FINES	**FINESS Array B**	**4.62**	**51**	Pn		**Pn**	**10 45 02.3**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=240,slow=11,SNR=11							
FINES				Lg		Lg	10 46 13.4	
	comp=Z,3.5nm,0.3s,baz=243,slow=25,SNR=14							
FIA1	**FINESS Array S**	**4.62**	**51**	MSG			10 46 21.8	
	comp=Z,11nm,0.4s							
VAF	**Ylistaro**	**4.74**	**23**	MSG			10 46 18.9	
	comp=Z,10nm,0.4s							
KAF	**Kangasniemi**	**5.10**	**45**	MSG			10 46 38.2	
	comp=Z,6.3nm,0.4s							
HOMB	**Homborsund**	**5.30**	**269**	*e*		**Pn**	**10 45 06.9**	**-2.2**
	baz=64,slow=12							
HOMB				*e*P		Pb	10 45 09.6	-13
HOMB				*e*S		**Sn**	**10 46 09.0**	**-1.8**
HOMB				IAML			10 46 40.8	
	comp=Z,5.8nm,0.4s							
SNART	**Snartemo**	**5.96**	**271**	*e*P		**Pn**	**10 45 18.4**	**+0.1**
SNART				*e*S		**Sn**	**10 46 26.3**	**-1.0**
SNART				IAML			10 47 04.3	
	comp=Z,12nm,0.4s							
APA0	**Apatity Array**	**10.98**	**30**	Pn		**Pn**	**10 46 26.7**	**-0.2**
	baz=226,slow=14							
APA0	**Apatity Array**	**10.98**	**30**	Pn		**Pn**	**10 46 26.7**	**-0.2**
	baz=226,slow=14							
ARA0	**ARCESS Array S**	**11.22**	**13**	Pn		**Pn**	**10 46 28.7**	**-1.6**
	baz=194,slow=14							
ARA0	**ARCESS Array S**	**11.22**	**13**	Pn		**Pn**	**10 46 28.7**	**-1.6**
	baz=194,slow=14							
ARCES	**ARCESS Array B**	**11.22**	**13**	Pn		**Pn**	**10 46 28.8**	**-1.5**
	baz=197,slow=14,SNR=17							

*IDC **16** 10:49:22.6±1.9, 7°19S×129°66E, h98km±20km, mb3.5/3, mb1 3.8/8, mb1mx3.5/39, mbtmp4.0/8, Error ellipse: s-maj=28.3km s-min=14.8km az=91.0*
ISC 16 10:49:21.9±0.8, **7°35S**±0°06×**129°77E**±0°10, **h100**km, **n9**, σ2°**65**/14, **mb3.6/3, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.61**	**13**	P		**Pn**	**10 50 56.9**	**+0.4**
	1.0nm,0.3s,baz=50,slow=23,SNR=17							
SIJI				S		**Sn**	**10 52 07.5**	**-2.9**
	2.1nm,0.3s,baz=247,slow=23,SNR=2.8							
BATI	**Baumata**	**6.67**	**244**	P		**Pn**	**10 50 59.7**	**+2.2**
	2.9nm,0.3s,baz=290,slow=21,SNR=2.4							
BATI				S		**Sn**	**10 52 11.0**	**-1.1**
	4.9nm,0.3s,baz=128,slow=23,SNR=2.2							
FITZ	**Fitzroy Crossi**	**11.42**	**200**	P		**Pn**	**10 52 02.6**	**+0.7**
	1.3nm,0.3s,baz=34,slow=10,SNR=68							
FITZ				S		**Sn**	**10 54 03.3**	**-4.2**
	0.9nm,0.3s,baz=42,slow=16,SNR=3.7							
WRA	**Warramunga Arr**	**13.28**	**161**	P		**Pn**	**10 52 28.0**	**+1.4**
	2.4nm,0.3s,baz=340,slow=13,SNR=72							
WRA				S		**Sn**	**10 54 50.3**	**-2.5**
	1.6nm,0.3s,baz=338,slow=23,SNR=10							
ASAR	**Alice Springs**	**16.70**	**167**	P		**Pn**	**10 53 12.8**	**+2.8**
	0.7nm,0.3s,baz=342,slow=10,SNR=46							
ASAR				S		**Sn**	**10 56 11.6**	**-3.9**
	0.3nm,0.3s,baz=353,slow=27,SNR=4.3							
STKA	**Stephens Creek**	**26.78**	**157**	P		**P**	**10 54 55.8**	**+3.2**
	0.3nm,0.4s,baz=354,slow=9.2,SNR=1.2							
CMAR	**Chiang Mai Arr**	**39.78**	**311**	P		**P**	**10 56 44.1**	**-1.3**
	0.4nm,0.4s,baz=142,slow=6.6,SNR=5.2							
MKAR	**Makanchi Array**	**68.39**	**327**	P		**P**	**11 00 12.3**	**-0.6**
	1.0nm,0.5s,baz=115,slow=8.1,SNR=7.5							
TXAR	**Lajitas Array**	**125.30**	**59**	PKP		**PKiKP**	**11 08 13.2**	**+1.0**
	0.1nm,0.4s,baz=174,slow=1.8,SNR=4.2							

*NEIC **16** 10:49:43.9±0.4, 19°3N±0°1×156°68W±0°04, h21km±9km, Error ellipse: s-maj=15.7km s-min=5.5km az=185.0*
*IDC **16** 10:49:46.7±1.2, 19°56N×156°84W, h0km, mb3.5/8, mb1 3.9/8, mb1mx3.7/46, mbtmp3.5/8, MS3.2/1, Ms1 3.2/1, ms1mx2.6/38, Error ellipse: s-maj=51.9km s-min=24.1km az=142.0*
*HVO **16** 10:49:47.2±0.5, 19°3N±0°1×156°68W±0°04, h8km±6km, ML3.8/44, ML3.8/42(NEIC), Error ellipse: s-maj=16.0km s-min=5.6km az=187.0*
ISC 16 10:49:46.8±1.0, **19°4N**±0°1×**156°54W**±0°07, **h10**km, **n41**, σ2°**05**/34, **mb3.6/8, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KHLU	**Kahalu`u**	**0.65**	**70**			**Pb**	**10 50 00.2**	**-0.1**
HUH	**Hualalai**	**0.73**	**65**			**Pb**	**10 50 01.3**	**-0.5**
HUH				IAML			10 50 29.8	
	comp=E,4μm,0.5s							
HUH				IAML			10 50 33.1	
	comp=N,3μm,0.8s							
KHU	**Kahuku**	**0.88**	**98**			**Pg**	**10 50 03.5**	**-0.4**
MWH	**Moku'aweowe**	**0.90**	**83**			**Pb**	**10 50 03.8**	**-0.9**
MWH				IAML			10 50 31.6	
	comp=N,3μm,0.8s							
MWH				IAML			10 50 39.2	
	comp=E,4μm,0.9s							
MLOA	**Mauna Loa Obse**	**0.92**	**80**			**Pb**	**10 50 04.2**	**-0.9**
AIN	**Ainahou**	**1.02**	**90**			**Pg**	**10 50 05.3**	**-1.1**
AIN				IAML			10 50 33.6	
	comp=E,2μm,0.3s							
AIN				IAML			10 50 36.8	
	comp=N,3μm,0.3s							
HMH	**Humu'ula Sheep**	**1.02**	**77**			**Pb**	**10 50 05.8**	**-1.0**
HMH				IAML			10 50 26.4	
	comp=E,2μm,0.6s							
HMH				IAML			10 50 40.1	
	comp=N,2μm,0.6s							
POHA	**Pohakuloa**	**1.02**	**68**			**Pb**	**10 50 05.5**	**-1.2**
POHA				IAML			10 50 26.4	
	comp=N,2μm,0.5s							
MLH	**Mauna Loa**	**1.10**	**84**			**Pg**	**10 50 06.3**	**-1.6**
MLH				IAML	

YKA	**Yellowknife Ar**	**51.82**	**23**	P		**P**	**10 58 56.2**	**+1.5**
	comp=N,0.5nm,1.0s,baz=233,slow=7.3,SNR=4.0							
WRA	**Warramunga Arr**	**78.19**	**244**	P		**P**	**11 01 48.3**	**+1.3**
	comp=N,0.6nm,1.0s,baz=59,slow=5.7,SNR=1.7							
ASAR	**Alice Springs**	**80.17**	**241**	P		**P**	**11 01 57.8**	**+0.1**
	comp=N,0.5nm,0.9s,baz=70,slow=6.2,SNR=2.5							

KRNET 16 11:10:39.6±0.1, 41°.39N×78°.52E, h18km, mb2.2, 8C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.10**	**355**	⇑	*i* P	Pn	11 11 00.6	+0.3
	baz=55							
PRZ				⇑	*i* S	Sg	11 11 16.0	+0.6
	baz=55							
KDJ	**Kajisay**	**1.25**	**307**	⇑	*i* P	Pb	11 11 03.0	+0.2
	baz=7.0							
KDJ				⇑	*i* S	Sg	11 11 19.7	-0.5
	baz=7.0							
ANVS	**Anan'yevo**	**1.53**	**336**	⇑	*i* P	Pb	11 11 07.9	+0.3
	baz=36							
ANVS				⇑	*i* S	Sg	11 11 28.9	-0.3
	baz=36							
BOOM	**Boomskoye usch**	**2.22**	**301**	⇑	*i* P	Pb	11 11 18.9	-0.4
	baz=1.0							
BOOM				⇑	*i* S	Sb	11 11 47.5	+0.9
	baz=1.0							

*SOME **16** 11:10:42.1, 40°.17N×77°.08E, h5km*
NNC 16 11:10:45.0±2.5, 40°.26N×77°.00E, h0km, mb3.1, mpv2.8, 1C-1D, Error ellipse: s-maj=16.7km s-min=15.8km az=0.0, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNSS	**Tian-Shan**	**2.78**	**359**	*e* P		Pb	11 11 35.9	+0.1
	1.7nm,0.2s							
TNSS				*e* S		Sg	11 12 14.7	+0.5
	3.4nm,0.4s							
TNSS	**Tian-Shan**	**2.78**	**359**	Pg		Pg	11 11 37.1	-1.1
	1.9nm,0.6s							
TNSS				Lg		Lg	11 12 14.9	
	2.7nm,0.6s							
TKM2	**Tokmak 2**	**2.86**	**339**	⇓	Pg	Pb	11 11 36.3	-0.8
	2.6nm,1.0s							
TKM2				⇑	Lg	Lg	11 12 15.3	
	1.7nm,0.5s							
MDOK	**Medeo**	**2.90**	**1**	*e* P		Pb	11 11 37.4	-0.3
	4.7nm,0.7s							
MDOK				*e* S		Sg	11 12 17.4	-0.8
	7.4nm,0.3s							
MDOK	**Medeo**	**2.90**	**1**	Pg		Pb	11 11 37.8	+0.1
	2.5nm,0.6s							
MDOK				Lg		Lg	11 12 17.4	
	4.4nm,0.5s							
MDOK	**Medeo**	**2.90**	**1**	Pg		Pb	11 11 38.3	+0.6
	9.3nm,1.0s							
MDOK				Lg		Lg	11 12 16.9	
	7.4nm,0.3s							
KOTS	**Kotyrbulak**	**2.97**	**2**	*e* P		Pb	11 11 38.3	-0.6
	1.9nm,0.3s							
KOTS				*e* S		Sg	11 12 18.9	-1.7
	4.7nm,0.5s							
SATY	**Saty**	**2.99**	**20**	*e* P		Pb	11 11 39.0	-0.2
	0.7nm,0.1s							
SATY				*e* S		Sg	11 12 20.0	-1.0
	5.4nm,0.2s							
SATY	**Saty**	**2.99**	**20**	Pg		Pb	11 11 40.1	+0.9
	0.7nm,0.1s							
SATY				Lg		Lg	11 12 19.9	
	5.4nm,0.2s							
UZB	**Uzynbulak**	**3.26**	**27**	*e* P		Pb	11 11 43.5	-0.3
	1.2nm,0.3s							
UZB				*e* S		Sg	11 12 27.6	-2.1
	2.0nm,0.6s							
KPKS	**Kokpek**	**3.44**	**21**	*e* P		Pb	11 11 46.5	-0.3
	2.9nm,0.3s							
KPKS				*e* S		Sg	11 12 32.9	-2.7
	2.1nm,0.1s							
KTBS	**Karatobe**	**3.46**	**356**	*e* P		Pb	11 11 47.9	+0.8
	0.6nm,0.4s							
KTBS				*e* S		Sg	11 12 35.2	-0.8
	2.5nm,0.5s							
PDGK	**Podgornoye**	**3.59**	**30**	Pg		Pb	11 11 49.7	+0.3
	0.2nm,0.2s							
PDGK				Lg		Lg	11 12 36.5	
	1.2nm,0.6s							

*UPP **16** 11:11:09.7±0.2, 58.76N×18.57E, h0km, ML2.4, Explosion*
*HEL **16** 11:11:10.7±0.1, 58.77N×18.55E, h0km, ML2.4, ML2.4(UPP), Explosion*
*DNK **16** 11:11:10.4±1.3, 58.76N×18.57E, h0km, ML2.7, Explosion*
*IDC **16** 11:11:13.8±2.1, 58.97N×18.39E, h0km, mb1 3.2/4, mb1mx2.9/63, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=28.7km s-min=7.7km az=2.0*
*NAO **16** 11:11:14.1±2.2, 59.14N×18.41E, ML2.4*
*BER **16** 11:11:15.8±3.6, 59.23N×18.56E, h0km, ML2.4(NAO), Suspected explosion*
ISC 16 11:11:09.5±0.7, 58.78N±0.02×18.53E±0.02, h0km, n68, σ1§29/93, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.36**	**311**	P		**Pg**	**11 11 17.1**	**+0.8**
NYNU				S		**Sg**	**11 11 21.9**	**+1.0**
NYNU	**Nynaeshamn**	**0.36**	**311**	P		**Pg**	**11 11 17.1**	**+0.8**
NYNU				S		**Sg**	**11 11 21.9**	**+1.0**
NYNU	**Nynaeshamn**	**0.36**	**311**	*i* P		**Pg**	**11 11 17.1**	**+0.8**
NYNU				*i* S		**Sg**	**11 11 21.9**	**+1.0**
NRTU	**Norrtaelje**	**0.91**	**3**	P		**Pg**	**11 11 26.9**	**0.0**
NRTU	**Norrtaelje**	**0.91**	**3**	P		**Pg**	**11 11 26.9**	**0.0**
NRTU	**Norrtaelje**	**0.91**	**3**	*e* P		**Pg**	**11 11 26.9**	**0.0**
NRTU				*e* S		**Sg**	**11 11 38.2**	**-0.5**
VIKU	**Vikbolandet**	**0.99**	**255**	P		**Pg**	**11 11 28.6**	**0.0**
VIKU				S		**Sg**	**11 11 41.7**	**+0.3**
VIKU	**Vikbolandet**	**0.99**	**255**	P		**Pg**	**11 11 28.6**	**0.0**
VIKU				S		**Sg**	**11 11 41.7**	**+0.3**
VIKU	**Vikbolandet**	**0.99**	**255**	*e* P		**Pg**	**11 11 28.6**	**0.0**
VIKU				*e* S		**Sg**	**11 11 41.7**	**+0.3**
GOTU	**Gotland**	**1.09**	**179**	P		**Pg**	**11 11 29.6**	**-0.8**
GOTU				S		**Sg**	**11 11 44.0**	**-0.6**
GOTU	**Gotland**	**1.09**	**179**	P		**Pg**	**11 11 29.6**	**-0.8**
GOTU				S		**Sg**	**11 11 44.0**	**-0.6**
GOTU	**Gotland**	**1.09**	**179**	*e* P		**Pg**	**11 11 29.8**	**-0.6**
GOTU				*e* S		**Sg**	**11 11 44.1**	**-0.5**
UPP	**Uppsala**	**1.18**	**337**	P		**Pg**	**11 11 32.3**	**+0.1**
UPP	**Uppsala**	**1.18**	**337**	*e* P		**Pg**	**11 11 32.3**	**+0.1**
ESKU	**Eskilstuna**	**1.20**	**293**	P		**Pg**	**11 11 32.4**	**0.0**
ESKU	**Eskilstuna**	**1.20**	**293**	P		**Pg**	**11 11 32.4**	**0.0**
ESKU	**Eskilstuna**	**1.20**	**293**	*e* P		**Pg**	**11 11 32.4**	**0.0**
FIBU	**Brunna**	**1.28**	**332**	P		**Pg**	**11 11 34.1**	**0.0**
FIBU	**Brunna**	**1.28**	**332**	P		**Pg**	**11 11 34.1**	**0.0**
BACU	**Backbrunna**	**1.30**	**327**	P		**Pg**	**11 11 34.5**	**0.0**
BACU	**Backbrunna**	**1.30**	**327**	P		**Pg**	**11 11 34.5**	**0.0**
BACU	**Backbrunna**	**1.30**	**327**	*e* P		**Pg**	**11 11 34.5**	**0.0**
FLYU	**Flymyra**	**1.40**	**347**	P		**Pn**	**11 11 36.0**	**-0.3**
FLYU				S		**Sg**	**11 11 54.6**	**+0.2**
FLYU	**Flymyra**	**1.40**	**347**	P		**Pn**	**11 11 36.0**	**-0.3**
FLYU				S		**Sg**	**11 11 54.6**	**+0.2**
FLYU	**Flymyra**	**1.40**	**347**	*e* P		**Pn**	**11 11 36.0**	**-0.3**
FLYU				*e* S		**Sg**	**11 11 54.6**	**+0.2**
GRAU	**Graesoe**	**1.56**	**0**	P		**Pn**	**11 11 38.8**	**+0.2**
GRAU	**Graesoe**	**1.56**	**0**	P		**Pn**	**11 11 38.8**	**+0.2**
GRAU	**Graesoe**	**1.56**	**0**	*e* P		**Pn**	**11 11 38.8**	**+0.2**
AAL	**Aland**	**1.59**	**27**	P		**Pn**	**11 11 39.0**	**0.0**
AAL	**Aland**	**1.59**	**27**	*e* P		**Pn**	**11 11 39.0**	**0.0**
AAL				*e* S		**Sn**	**11 11 59.8**	**-0.4**
OSTU	**Oestervaala**	**1.62**	**335**	P		**Pb**	**11 11 40.0**	**-0.3**
OSTU	**Oestervaala**	**1.62**	**335**	P		**Pb**	**11 11 40.0**	**-0.3**
OSTU	**Oestervaala**	**1.62**	**335**	*e* P		**Pb**	**11 11 40.0**	**-0.3**
FORU	**Forsmark**	**1.63**	**354**	P		**Pb**	**11 11 40.3**	**0.0**
FORU	**Forsmark**	**1.63**	**354**	P		**Pb**	**11 11 40.3**	**0.0**
FORU	**Forsmark**	**1.63**	**354**	*e* P		**Pb**	**11 11 40.3**	**0.0**
LNKU	**Linkoeping**	**1.68**	**252**	P		**Pn**	**11 11 40.5**	**+0.4**
LNKU	**Linkoeping**	**1.68**	**252**	P		**Pn**	**11 11 40.5**	**+0.4**
LNKU	**Linkoeping**	**1.68**	**252**	*e* P		**Pn**	**11 11 40.5**	**+0.4**
SLIT	**Slitere, Latvi**	**2.30**	**118**	*e* P		**Pn**	**11 11 49.7**	**+1.0**
SLIT				*e* S		**Sb**	**11 12 19.8**	**-1.0**
RAF	**Rauma**	**2.78**	**34**	*e* P		**Pn**	**11 11 56.0**	**+0.8**
RAF				*e* S		**Sn**	**11 12 31.1**	**+1.6**
HFC2	**Hagfors New Ar**	**2.82**	**301**	*e* P		**Pn**	**11 11 57.2**	**+1.4**
HFC2				*e* S		**Sn**	**11 12 29.1**	**-1.3**
HFS	**Hagfors**	**2.82**	**301**	Pn		**Pn**	**11 11 57.5**	**+1.6**
	1.7nm,0.3s,baz=84,slow=15,SNR=27							
HFS				Lg		Lg	11 12 36.3	
	6.7nm,0.3s,baz=113,slow=30,SNR=11							
HFS	**Hagfors**	**2.82**	**301**	Pn		**Pn**	**11 11 57.4**	**+1.6**
	baz=98,slow=14							
HFS				Lg		Lg	11 12 33.9	
	baz=108,slow=28							
HFS	**Hagfors**	**2.82**	**301**	Pn		**Pn**	**11 11 57.4**	**+1.6**
	baz=98,slow=14							
HFS				Sg		**Sb**	**11 12 33.9**	**-1.8**
	baz=108,slow=28							
BLEU	**Blekinge**	**2.88**	**212**	*i* P		**Pn**	**11 11 57.7**	**+1.2**
BLEU				*i* S		**Sn**	**11 12 33.7**	**+1.8**
ARNU	**Arnoeviken**	**2.98**	**349**	*e* P		**Pn**	**11 11 58.9**	**+0.9**
ARNU				*e* S		**Sn**	**11 12 35.1**	**+0.6**
BORU	**Boraas**	**3.25**	**252**	*i* P		**Pn**	**11 12 03.5**	**+1.8**
DEL	**Delary**	**3.41**	**229**	*i* P		**Pn**	**11 12 06.1**	**+2.2**
DEL				IAML			11 13 11.2	
	comp=Z,8.2nm,0.4s							
STRU	**Stroemstad**	**3.82**	**277**	*e* P		**Pn**	**11 12 12.3**	**+2.8**
NRA0	**NORESS Array S**	**4.04**	**302**	Pn		**Pn**	**11 12 13.2**	**+0.6**
	baz=102,slow=11							
NRA0				Sn		**Sn**	**11 13 00.6**	**0.0**
	baz=106,slow=28							
NRA0				Lg		Lg	11 13 16.6	
	baz=104,slow=37							
NRA0	**NORESS Array S**	**4.04**	**302**	Pn		**Pn**	**11 12 13.2**	**+0.6**
	baz=102,slow=11							
NRA0				Sn		**Sn**	**11 13 00.6**	**0.0**
	baz=106,slow=28							
NRA0				Sg		**Sg**	**11 13 16.6**	**-2.7**
	baz=104,slow=37							
PVF	**Pernaja**	**4.12**	**61**	MSG			11 13 23.3	
	comp=Z,5.3nm,0.2s							
BSD	**Bornholm Skovb**	**4.17**	**210**	*i* P		**Pn**	**11 12 14.4**	**+0.1**
BSD				*i* S		**Sn**	**11 13 03.2**	**-0.5**
BSD				IAML			11 13 22.5	
	comp=Z,10.0nm,0.4s							
NB2	**NORSAR Subarra**	**4.33**	**305**	Pn		**Pn**	**11 12 17.2**	**+0.6**
	baz=124,slow=14							
NB2				Lg		Lg	11 13 24.7	
	baz=118,slow=37							
NB2	**NORSAR Subarra**	**4.33**	**305**	Pn		**Pn**	**11 12 17.2**	**+0.6**
	baz=124,slow=14							
NB2				Sg		**Sg**	**11 13 24.7**	**-3.6**
	baz=118,slow=37							
NOA	**NORSAR Array B**	**4.33**	**305**	Pn		**Pn**	**11 12 17.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=131,slow=12,SNR=11							
NOA				Sn		**Sn**	**11 13 09.3**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=222,slow=23,SNR=3.9							
NOA				Lg		Lg	11 13 24.4	
	comp=Z,0.3nm,0.3s,baz=169,slow=19,SNR=8.6							
FIA0	**FINESS Array S**	**4.63**	**51**	Pn		**Pn**	**11 12 22.2**	**+1.6**
	baz=239,slow=10							
FIA0				Lg		Lg	11 13 31.5	
	baz=241,slow=28							
FIA0	**FINESS Array S**	**4.63**	**51**	Pn		**Pn**	**11 12 22.2**	**+1.6**
	baz=239,slow=10							
FIA0				Sg		**Sb**	**11 13 31.5**	**+3.8**
	baz=241,slow=28							
FINES	**FINESS Array B**	**4.63**	**51**	Pn		**Pn**	**11 12 22.7**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=242,slow=10,SNR=20							
FINES				Sn		**Sn**	**11 13 18.1**	**+3.1**
	comp=Z,0.9nm,0.3s,baz=242,slow=21,SNR=5.9							
FINES				Lg		Lg	11 13 31.8	
	comp=Z,2.5nm,0.3s,baz=238,slow=25,SNR=12							
KEF	**Keuruu**	**4.63**	**40**	MSG			11 13 34.2	
	comp=Z,3.3nm,0.3s							
FIA1	**FINESS Array S**	**4.63**	**51**	MSG			11 13 35.6	
	comp=Z,4.6nm,0.2s							
VAF	**Ylistaro**	**4.74**	**24**	MSG			11 13 40.0	
	comp=Z,8.5nm,0.4s							
APA0	**Apatity Array**	**10.97**	**30**	Pn		**Pn**	**11 13 46.7**	**-0.8**
	baz=231,slow=16							
APA0	**Apatity Array**	**10.97**	**30**	Pn		**Pn**	**11 13 46.7**	**-0.8**
	baz=231,slow=16							
ARA0	**ARCESS Array S**	**11.21**	**13**	Pn		**Pn**	**11 13 48.2**	**-2.6**
	baz=194,slow=14							
ARA0	**ARCESS Array S**	**11.21**	**13**	Pn		**Pn**	**11 13 48.2**	**-2.6**
	baz=194,slow=14							
ARCES	**ARCESS Array B**	**11.21**	**13**	Pn		**Pn**	**11 13 48.8**	**-2.0**
	baz=196,slow=12,SNR=19							
ARCES				Sn		**Sn**	**11 15 52.1**	**-4.5**
	baz=198,slow=24,SNR=1.3							

*IDC **16** 11:17:38.4±2.9, 17°.98S×70°.17W, h123km±24km, mb3.4/2, mb1 3.5/6, mb1mx3.2/39, mbtmp3.8/6, Error ellipse: s-maj=46.3km s-min=16.1km az=100.0*
ISC 16 11:17:36.1±1.2, 17°.83S±0°.06×70°.4W±0°.1, h98km±9km, n19, σ1§36/20, 4C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AP01	**Chacalluta**	**0.54**	**179**	⇑	*i* P	**Pn**	**11 17 51.8**	**-0.1**
AP01					*i* S	**Sn**	**11 18 03.0**	**-0.7**
AP01					IAML		11 18 03.5	
	comp=N,8μm,0.3s							
MNMC	**Minye Minye**	**1.48**	**151**	⇑	*i* P	**Pn**	**11 18 02.9**	**+0.7**
MNMC					*i* S	**Sn**	**11 18 22.0**	**0.0**
MNMC					IAML		11 18 26.2	
	comp=E,2μm,0.2s							
PSGC	**Pisagua**	**1.77**	**173**	⇑	*e* P	**Pn**	**11 18 06.1**	**+0.4**
PSGC					*e* S	**Sn**	**11 18 28.1**	**-0.1**
PSGC					IAML		11 18 35.3	
	comp=E,541nm,0.5s							
PB11	**IPOC Station P**	**2.03**	**161**	⇑	*i* P	**Pn**	**11 18 09.6**	**+0.6**
PB11					*i* S	**Sn**	**11 18 34.1**	**-0.1**
PB11					IAML		11 18 44.0	
	comp=N,657nm,0.2s							
PB08	**IPOC Station P**	**2.56**	**154**	*e* P		**Pn**	**11 18 17.9**	**+1.6**
PB08				*i* S		**Sn**	**11 18 47.8**	**+0.7**
PB08				IAML			11 18 53.8	
	comp=E,446nm,0.2s							
PB08				IAML			11 18 57.7	
	comp=N,452nm,0.3s							
LPAZ	**La Paz**	**2.62**	**54**	P		**Pn**	**11 18 20.4**	**+3.1**
	comp=N,8.4nm,0.3s,baz=230,slow=8.3,SNR=208							
LPAZ				S		**Sn**	**11 18 45.6**	**-3.2**
	comp=N,1.5nm,0.3s,baz=241,slow=20,SNR=5.1							
TA01	**Diego Aracena**	**2.72**	**177**	*e* P		**Pn**	**11 18 18.4**	**+0.3**
PB01	**IPOC Station P**	**3.30**	**166**	*e* P		**Pn**	**11 18 26.0**	**+0.1**
PB01				IAML			11 19 18.7	
	comp=N,296nm,0.5s							
LVC	**Limon Verde**	**4.94**	**164**	P		**Pn**	**11 18 49.4**	**+1.1**
	comp=N,1.1nm,0.3s,baz=359,slow=8.1,SNR=30							
LVC				S		**Sn**	**11 19 42.6**	**-1.9**
	comp=N,5.2nm,0.3s,baz=187,slow=22,SNR=13							
SIV	**San Ignacio**	**9.07**	**80**	P		**Pn**	**11 19 44.0**	**-0.1**
	comp=N,1.4nm,0.3s,baz=276,slow=9.9,SNR=18							
H03N1	**Juan Fernandez**	**17.34**	**205**	T		T	11 39 07.6	
	baz=28,slow=73,SNR=126							
H03N2	**Juan Fernandez**	**17.35**	**205**	T		T	11 39 09.6	
	baz=28,slow=73,SNR=107							
H03N3	**Juan Fernandez**	**17.36**	**205**	T		T	11 39 06.8	
	baz=28,slow=73,SNR=111							
PTGA	**Pitinga**	**19.82**	**32**	P		**P**	**11 21 58.8**	**-0.3**
	comp=N,0.5nm,0.3s,baz=323,slow=20,SNR=1.8							
TORD	**Torodi Ar. Bea**	**77.45**	**72**	P		**P**	**11 29 20.7**	**-0.6**
	comp=N,0.4nm,0.4s,baz=251,slow=5.7,SNR=5.0							
YKA	**Yellowknife Ar**	**87.30**	**341**	P		**P**	**11 30 11.5**	**+0.1**
	comp=N,0.3nm,0.9s,baz=138,slow=5.0,SNR=6.8							
H11S2	**WAKE ISLAND Hyd**	**25.98**	**280**	T		T	13 55 12.8	
	baz=93,slow=74,SNR=4.5							
H11S1	**WAKE ISLAND Hyd**	**25.99**	**280**	T		T	13 55 12.9	
	baz=93,slow=74,SNR=5.3							
H11S3	**WAKE ISLAND Hyd**	**26.00**	**280**	T		T	13 55 12.2	
	baz=93							

IDC 16 11:20:22.7±4.9, 19°.67S×177°.91W, h500km±40km, mb2.8/3, mb1 3.2/4, mb1mx2.8/41, mbtmp3.9/4, Error ellipse: s-maj=243.9km s-min=22.3km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**8.20**	**47**	P		P	11 22 20.4	-1.0
	0.8nm,0.3s,baz=83,slow=21,SNR=1.5							
AFI				S		S	11 24 00.6	+1.9
	2.0nm,0.3s,baz=348,slow=23,SNR=2.6							
ASAR	**Alice Springs**	**44.80**	**256**	P		P	11 27 51.5	-0.1
	0.7nm,0.7s,baz=88,slow=8.2,SNR=13							
WRA	**Warramunga Arr**	**44.81**	**261**	P		P	11 27 51.6	-0.1
	0.4nm,0.3s,baz=97,slow=7.0,SNR=16							
ILAR	**Eielson Array**	**87.49**	**13**	P		P	11 32 16.1	-0.1
	0.5nm,0.9s,baz=216,slow=5.6,SNR=7.1							

*IDC **16** 11:25:15.6±4.0, 24°.64S×140°.42W, h0km, mb3.8/5, mb1 4.4/6, mb1mx4.0/30, mbtmp4.0/6, ML5.3/1, MS3.1/2, Ms1 3.1/2, ms1mx2.9/21, Error ellipse: s-maj=107.4km s-min=47.2km az=7.0*
*PPT **16** 11:25:19.8±0.1, 24°.55S×140°.09W, h10km, Ml3.2/14, Ms3.0/3, Error ellipse: s-maj=3.9km s-min=1.5km az=168.0*
ISC 16 11:25:20.3±1.3, 24°.05S±0°.2×140°.56W±0°.09, h10km, n14, σ2§03/15, mb3.9/5, Tuamotu Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RKT	**Rikitea**	**5.20**	**81**	*e*	Pn	Pn	11 26 28.3	-10
	7.6nm,0.1s							
RKT				*e*	Sn	Sn	11 27 14.4	-24
	10.0nm,0.1s							
RKT				*e*	T	T	11 31 06.2	
	3.0nm,0.3s							
TBI	**Tubuai**	**8.19**	**273**	*e*	Pn	**Pn**	**11 27 19.6**	**+0.4**
	3.6nm,0.1s							
TBI				*e*	Sn	**Sn**	**11 28 52.5**	**+0.7**
	0.9nm,0.1s							
TBI				*e*	LR	LR	11 29 18.6	
	comp=Z,151nm,26.8s							
TBI				*e*	T	T	11 35 37.3	
	14nm,0.3s							
TIAR	**Tiarei**	**10.44**	**306**	*e*	Pn	**Pn**	**11 27 52.5**	**+2.4**
PAE	**Paea**	**10.54**	**305**	*e*	Pn	**Pn**	**11 27 54.0**	**+2.5**
	1.7nm,0.2s							
PPT2	**Papeete2**	**10.59**	**306**	*e*	Pn	**Pn**	**11 27 54.6**	**+2.4**
	11nm,0.2s							
PPT2				*e*	Sn	**Sn**	**11 29 48.0**	**-2.9**
	3.9nm,0.3s							
PPT2				*e*	LR	LR	11 30 36.5	
	comp=Z,103nm,23.2s							
PPT	**Papeete**	**10.60**	**306**	Pn		**Pn**	**11 27 54.7**	**+2.4**
	20nm,0.3s,baz=119,slow=12,SNR=43							
PPT				Sn		**Sn**	**11 29 48.1**	**-3.1**
	2.7nm,0.3s,baz=61,slow=19,SNR=1.3							
PPT				LR		LR	11 31 03.5	
	comp=Z,92nm,20.4s,baz=140,slow=32							
TAOE	**Nuku Hiva Isla**	**15.09**	**2**	*e*	Pn	**Pn**	**11 28 54.5**	**+0.7**
	17nm,0.2s							
TXAR	**Lajitas Array**	**63.82**	**36**	P		**P**	**11 35 52.5**	**-0.5**
	1.4nm,0.8s,baz=200,slow=9.3,SNR=17							
NVAR	**Mina Array Bea**	**65.54**	**19**	P		**P**	**11 36 05.9**	**+1.7**
	0.4nm,0.7s,baz=211,slow=10,SNR=3.3							
PDAR	**Pinedale Array**	**72.35**	**23**	P		**P**	**11 36 46.0**	**-0.5**
	1.0nm,0.8s,baz=193,slow=4.9,SNR=8.9							
ILAR	**Eielson Array**	**88.64**	**357**	P		**P**	**11 38 13.1**	**0.0**
	0.3nm,0.9s,baz=204,slow=6.5,SNR=2.5							
YKA	**Yellowknife Ar**	**88.68**	**12**	P		**P**	**11 38 12.2**	**-1.0**
	0.6nm,0.9s,baz=199,slow=4.6,SNR=7.5							
MJAR	**Matsushiro Arr**	**97.34**	**307**	LR		LR	12 21 23.6	
	comp=Z,6.9nm,18.3s,baz=110,slow=34							
AKASG	**Malin Array Be**	**152.22**	**14**	PKPbc		**PKPbc**	**11 45 14.5**	**-1.4**
	0.6nm,0.3s,baz=326,slow=1.9,SNR=3.4							

*SOME **16** 11:26:52.0, 47°.63N×81°.32E, h0km*
*NNC **16** 11:26:53.8±1.0, 47°.63N×81°.55E, h24km±11km, mb3.9, mpv3.6, Error ellipse: s-maj=7.3km s-min=6.5km az=104.0*
*ASRS **16** 11:26:55.4±0.3, 48°.N±2°×8°.2E±°, h5km, MLh3.5/8, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 16 11:26:51.6±1.1, 47°.65N±0°.02×81°.36E±0°.03, h15km±11km, n37, σ2§73/66, 4C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MAKZ	**Makanchi**	**0.94**	**153**	Pg		**Pb**	**11 27 10.7**	**+1.0**
MAKZ				Sg		**Sb**	**11 27 22.9**	**+1.0**
MAKZ	**Makanchi**	**0.94**	**153**	⇓	P	**Pb**	**11 27 10.7**	**+1.0**
	22nm,0.3s							
MAKZ				⇑	S	**Sb**	**11 27 22.7**	**+0.8**
	29nm,0.2s							
MK31	**Makanchi Array**	**1.06**	**143**	⇓	P	**Pg**	**11 27 11.9**	**-0.2**
	3.9nm,0.1s,baz=344,slow=17,SNR=575							
MK31				⇑	S	**Sg**	**11 27 25.0**	**-1.0**
	15nm,0.2s,baz=337,slow=27,SNR=8.6							
MKAR	**Makanchi Array**	**1.06**	**143**	Pg		**Pg**	**11 27 11.9**	**-0.2**
MKAR				Sg		**Sg**	**11 27 25.0**	**-1.0**
ZSN	**Zaisan**	**2.38**	**93**	*e*	P	**Pn**	**11 27 31.4**	**+1.2**
	17nm,0.1s							
ZSN				*e*	S	**Sn**	**11 28 00.3**	**+1.2**
	83nm,0.3s							
ZSN	**Zaisan**	**2.38**	**93**	Pg		**Pn**	**11 27 31.2**	**+1.0**
	17nm,0.1s							
ZSN				Lg		Lg	11 28 00.3	
	80nm,0.2s							
SEM	**Semipalatinsk**	**2.86**	**346**	*e*	P	**Pb**	**11 27 44.9**	**+2.4**
	9.8nm,0.1s							
SEM				*e*	S	**Sg**	**11 28 22.8**	**-0.7**

KTBS	**Karatobe**	**5.12**	**222**	Pg	**Pg**	**11 28 27.3**	**-2.4**
	1.4nm,0.3s							
KTBS				Lg	Lg	11 29 37.1		
	12nm,0.5s							
CUR	**Chagan-Uzun**	**5.22**	**59**	Pn	**Pn**	**11 28 11.2**	**+1.9**
CUR				Pg	**Pb**	**11 28 19.9**	**-2.8**
CUR				S	**Sn**	**11 29 05.2**	**-4.2**
CUR				Sg	**Sb**	**11 29 25.7**	**+0.4**
ULGR	**Ulagan, Altay**	**5.26**	**53**	Pn	**Pn**	**11 28 11.4**	**+1.7**
ULGR				S	**Sn**	**11 29 08.3**	**-1.9**
ULGR				Sg	**Sb**	**11 29 28.9**	**+2.6**
TNSS	**Tian-Shan**	**5.56**	**216**	*e*P	**Pg**	**11 28 35.6**	**-2.5**
	1.0nm,0.5s							
TNSS				*e*S	**Sg**	**11 29 51.4**	**+1.3**
	1.9nm,0.4s							
TNSS	**Tian-Shan**	**5.56**	**216**	Pg	**Pg**	**11 28 35.6**	**-2.5**
	1.0nm,0.5s							
TNSS				Lg	Lg	11 29 51.4		
	1.9nm,0.4s							
ARTR	**Artybash**	**5.66**	**41**	Pn	**Pn**	**11 28 16.2**	**+1.1**
ARTR				S	**Sn**	**11 29 16.9**	**-2.9**
ARTR				Sg	**Sb**	**11 29 41.0**	**+3.4**
BRZS	**Berezniki**	**6.19**	**295**	*e*P	**Pg**	**11 28 46.3**	**-3.8**
	2.3nm,0.3s							
BRZS				*e*S	**Sg**	**11 30 09.7**	**-0.6**
	8.4nm,0.2s							
BRZS	**Berezniki**	**6.19**	**295**	Pg	**Pg**	**11 28 46.3**	**-3.8**
	2.3nm,0.3s							
BRZS				Lg	Lg	11 30 09.7		
	8.4nm,0.2s							
ELT	**Eltsovka**	**6.42**	**27**	Pn	**Pn**	**11 28 27.2**	**+1.5**
ELT				S	**Sn**	**11 29 34.8**	**-3.9**
ELT				Sg	Sb	11 30 09.4	+10
TASR	**Tashtagol**	**6.61**	**37**	S	**Sn**	**11 29 38.6**	**-4.7**
TASR				Sg	**Sb**	**11 30 13.6**	**+8.7**
TEL	**Teeli**	**6.69**	**56**	S	Sn	11 29 35.5	-10
TEL				Sg	**Sb**	**11 30 14.4**	**+7.1**
LUZB	**Luzhba, Kemero**	**7.69**	**36**	S	**Sn**	**11 30 03.6**	**-6.3**
LUZB				Sg	Sb	11 30 47.8	+12

UPP ***16*** *11:31:36.0±0.2,58.˚73N×18.˚57E,h0km,ML2.4,Explosion*
HEL ***16*** *11:31:36.9,58.˚73N×18.˚60E,h0km,ML2.2,Explosion*
DNK ***16*** *11:31:36.5±1.0,58.˚73N×18.˚58E,h0km,ML2.1,Explosion*
IDC ***16*** *11:31:40.8±2.1,59.˚06N×18.˚34E,h0km,mb1 3.0/4, mb1mx2.8/45,mbtmp2.9/4,ML2.2/4,Error ellipse: s-maj=28.5km s-min=8.0km az=2.0*

ISC 16 11:31:36.3±0.9,**58.74N**±0.˚03×**18.58E**±0.˚03,**h0km**,**n58**, σ0:**86**/64,**Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.40**	**311**	P	**Pg**		**11 31 43.8**	**-0.1**
NYNU				S	**Sg**		**11 31 48.8**	**-0.3**
NYNU	**Nynaeshamn**	**0.40**	**311**	P	**Pg**		**11 31 43.8**	**-0.1**
NYNU				S	**Sg**		**11 31 48.8**	**-0.3**
NYNU	**Nynaeshamn**	**0.40**	**311**	*i* P	**Pg**		**11 31 43.8**	**-0.1**
NYNU				*i* S	**Sg**		**11 31 48.8**	**-0.3**
NRTU	**Norrtaelje**	**0.94**	**1**	P	**Pg**		**11 31 53.8**	**-0.5**
NRTU				S	**Sg**		**11 32 06.6**	**+0.2**
NRTU	**Norrtaelje**	**0.94**	**1**	P	**Pg**		**11 31 53.8**	**-0.5**
NRTU				S	**Sg**		**11 32 06.6**	**+0.2**
NRTU	**Norrtaelje**	**0.94**	**1**	*e*P	**Pg**		**11 31 53.8**	**-0.5**
NRTU				*e*S	**Sg**		**11 32 06.8**	**+0.4**
VIKU	**Vikbolandet**	**1.01**	**257**	P	**Pg**		**11 31 54.8**	**-0.9**
VIKU	**Vikbolandet**	**1.01**	**257**	P	**Pg**		**11 31 54.8**	**-0.9**
VIKU	**Vikbolandet**	**1.01**	**257**	*e*P	**Pg**		**11 31 54.8**	**-0.9**
GOTU	**Gotland**	**1.06**	**180**	P	**Pg**		**11 31 55.5**	**-1.1**
GOTU	**Gotland**	**1.06**	**180**	P	**Pg**		**11 31 55.5**	**-1.1**
GOTU	**Gotland**	**1.06**	**180**	*e*P	**Pg**		**11 31 55.7**	**-0.9**
UPP	**Uppsala**	**1.22**	**337**	*e*P	**Pg**		**11 31 59.0**	**-0.7**
UPP	**Uppsala**	**1.22**	**337**	P	**Pg**		**11 31 59.0**	**-0.7**
UPP	**Uppsala**	**1.22**	**337**	*e*P	**Pg**		**11 31 59.0**	**-0.7**
ESKU	**Eskilstuna**	**1.23**	**294**	P	**Pg**		**11 31 59.0**	**-1.0**
ESKU	**Eskilstuna**	**1.23**	**294**	P	**Pg**		**11 31 59.0**	**-1.0**
ESKU	**Eskilstuna**	**1.23**	**294**	*e*P	**Pg**		**11 31 59.0**	**-1.0**
FIBU	**Brunna**	**1.32**	**332**	P	**Pg**		**11 32 00.8**	**-0.8**
FIBU	**Brunna**	**1.32**	**332**	P	**Pg**		**11 32 00.8**	**-0.8**
BACU	**Backbrunna**	**1.35**	**326**	P	**Pg**		**11 32 01.2**	**-0.9**
BACU	**Backbrunna**	**1.35**	**326**	P	**Pg**		**11 32 01.2**	**-0.9**
BACU	**Backbrunna**	**1.35**	**326**	*e*P	**Pg**		**11 32 01.2**	**-0.9**
FLYU	**Flymyra**	**1.44**	**346**	P	**Pn**		**11 32 02.8**	**-0.8**
FLYU	**Flymyra**	**1.44**	**346**	P	**Pn**		**11 32 02.8**	**-0.8**
FLYU	**Flymyra**	**1.44**	**346**	*e*P	**Pn**		**11 32 02.8**	**-0.8**
AAL	**Aland**	**1.61**	**26**	*e*P	**Pn**		**11 32 05.7**	**-0.2**
AAL				IAML			11 32 31.6	
	comp=Z,8μm,0.2s							
AAL	**Aland**	**1.61**	**26**	P	**Pn**		**11 32 05.8**	**-0.2**
AAL	**Aland**	**1.61**	**26**	*e*P	**Pn**		**11 32 05.5**	**-0.4**
AAL				*e*S	**Sn**		**11 32 27.3**	**0.0**
FORU	**Forsmark**	**1.66**	**353**	P	**Pn**		**11 32 06.7**	**0.0**
FORU	**Forsmark**	**1.66**	**353**	P	**Pn**		**11 32 06.7**	**0.0**
FORU	**Forsmark**	**1.66**	**353**	*e*P	**Pn**		**11 32 06.7**	**0.0**
OSTU	**Oestervaala**	**1.67**	**334**	P	**Pn**		**11 32 06.8**	**+0.1**
OSTU	**Oestervaala**	**1.67**	**334**	P	**Pn**		**11 32 06.8**	**+0.1**
OSTU	**Oestervaala**	**1.67**	**334**	*e*P	**Pn**		**11 32 06.8**	**+0.1**
SLIT	**Slitere, Latvi**	**2.26**	**118**	*e*P	**Pn**		**11 32 15.9**	**+1.1**
SLIT	**Slitere, Latvi**	**2.26**	**118**	*e*P	**Pn**		**11 32 15.6**	**+0.7**
MTSE	**Matsula**	**2.73**	**88**	*e*P	**Pn**		**11 32 21.9**	**+0.6**
RAF	**Rauma**	**2.79**	**34**	*e*P	**Pn**		**11 32 23.1**	**+0.9**
RAF				*e*S	**Sn**		**11 32 55.6**	**-0.9**
HFC2	**Hagfors New Ar**	**2.86**	**301**	*e*P	**Pn**		**11 32 23.7**	**+0.5**
HFC2				*e*S	**Sn**		**11 32 55.0**	**+1.8**
HFS	**Hagfors**	**2.86**	**301**	Pn	**Pn**		**11 32 23.9**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=110,slow=14,SNR=22							
HFS				Lg	Lg		11 33 00.9	
	comp=Z,1.9nm,0.3s,baz=115,slow=24,SNR=11							
BLEU	**Blekinge**	**2.87**	**213**	*i* P	**Pn**		**11 32 23.4**	**+0.2**
ARNU	**Arnoeviken**	**3.02**	**349**	*e*P	**Pn**		**11 32 25.0**	**-0.3**
ARNU				*e*S	**Sn**		**11 33 04.4**	**+2.3**
BORU	**Boraas**	**3.27**	**253**	*i* P	**Pn**		**11 32 30.2**	**+1.4**
DEL	**Delary**	**3.41**	**230**	*i* P	**Pn**		**11 32 30.7**	**0.0**
DEL				IAML			11 33 32.7	
	comp=Z,1.5nm,0.4s							
TJOU	**Tjoern**	**3.73**	**262**	*e*P	**Pn**		**11 32 36.4**	**+1.3**
ONAU	**Onsala**	**3.79**	**252**	*e*P	**Pn**		**11 32 36.9**	**+1.0**
STRU	**Stroemstad**	**3.85**	**278**	*e*P	**Pn**		**11 32 37.8**	**+1.1**
PVF	**Pernaja**	**4.11**	**61**	MSG			11 33 51.6	
	comp=Z,4.0nm,0.2s							
BSD	**Bornholm Skovb**	**4.16**	**210**	*i* P	**Pn**		**11 32 40.4**	**-0.6**
BSD				IAML			11 33 55.1	
	comp=Z,2.5nm,0.4s							
NOA	**NORSAR Array B**	**4.37**	**305**	Pn	**Pn**		**11 32 43.5**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=111,slow=13,SNR=5.6							
NOA				Lg	Lg		11 33 49.0	
	comp=Z,0.1nm,0.3s,baz=100,slow=13,SNR=8.6							
FINES	**FINESS Array B**	**4.63**	**51**	Pn	**Pn**		**11 32 49.0**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=252,slow=12,SNR=11							
FINES				Sn	**Sn**		**11 33 42.8**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=260,slow=22,SNR=2.6							
FINES				Lg	Lg		11 33 59.7	
	comp=Z,1.5nm,0.3s,baz=243,slow=26,SNR=14							
FIA1	**FINESS Array S**	**4.63**	**51**	MSG			11 34 05.4	
	comp=Z,3.9nm,0.2s							
KEF	**Keuruu**	**4.63**	**40**	MSG			11 34 06.5	
	comp=Z,2.3nm,0.2s							
ISAL	**Salakas**	**5.19**	**125**	IAML			11 33 24.4	
	comp=Z,3.9nm,0.4s							
IIGN	**Ignalina**	**5.38**	**126**	*e*P	**Pn**		**11 32 58.3**	**+0.5**
IDID	**Didziasalis**	**5.62**	**124**	IAML			11 33 25.6	
	comp=Z,6.6nm,0.5s							
ARCES	**ARCESS Array B**	**11.24**	**13**	Pn	**Pn**		**11 34 16.0**	**-2.0**
	baz=195,slow=14,SNR=9.0							

IDC ***16*** *11:34:15.6±1.4,42.˚00N×15.˚58E,h0km,mb3.4/2, mb1 3.8/7,mb1mx3.5/44,mbtmp3.8/7,ML3.7/5,MS2.9/3, Ms1 2.9/3,ms1mx2.4/37,Error ellipse: s-maj=35.6km s-min=13.1km az=87.0*
ROM ***16*** *11:34:17.4±0.1,41.˚783N±0.˚005×15.˚345E±0.˚006, h23km,ML3.9/61,Mw3.3,Mw3.7,Mw3.3,Error ellipse: s-maj=0.6km s-min=0.2km az=10.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.47; $M_{\theta\theta}$-2.26; $M_{\phi\phi}$-0.21; $M_{r\theta}$-1.94; $M_{\theta\phi}$-3.69; $M_{\phi r}$1.30; Fault plane solution: M_o4.95735×10^{14} NP1:ϕ_s17.00000°, δ55.00000°,λ31.00000°. NP2:ϕ_s268.00000°,δ65.00000°, λ141.00000°.*
LDG ***16*** *11:34:17.3±0.1,41.˚78N×15.˚37E,h10km,Ml3.6/21 Error ellipse: s-maj=3.7km s-min=2.1km az=50.0*
PDG ***16*** *11:34:17.2±0.7,41.˚79N×15.˚33E,h18km±1km,ML4.0/14,*

Error ellipse: s-maj=0.8km s-min=0.8km az=90.0
PRU ***16*** *11:34:19.1±0.0,41.˚93N×15.˚41E,h13km*
ISC 16 11:34:17.8±0.8,**41.78N**±0.˚02×**15.32E**±0.˚02,**h26**km±6km, **n256**,σ2**s00**/299,**30C-20D**,**Southern Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MELA	**Melanico ??? S**	**0.16**	**243**	⇑P	**Pb**		**11 34 22.3**	**-0.9**
MELA				S	**Sb**		**11 34 26.0**	**-0.8**
MELA				AML	AML			
	comp=E,67550μm,0.5s							
MELA				AML	AML			
MELA				AML	AML			
	comp=E,67600μm,0.5s							
MELA				AML	AML			
MELA				AML	AML			
	comp=E,67600μm,0.5s							
MELA				AML	AML			
MELA				AML	AML			
	comp=E,73700μm,0.5s							
MELA				AML	AML			
MELA				AML	AML			
MELA				AML	AML			
	comp=E,73700μm,0.5s							
MELA				AML	AML			
	comp=E,67600μm,0.5s							
SGRT	**San Giovanni R**	**0.32**	**95**	P	**Pb**		**11 34 24.4**	**-0.8**
SGRT				S	**Sb**		**11 34 29.3**	**-1.0**
SGRT				AML	AML			
	comp=N,97300μm,0.4s							
SGRT				AML	AML			
	comp=N,97300μm,0.4s							
SGRT				AML	AML			
CIGN	**Sant'Elia a Pi**	**0.34**	**248**	⇑P	**Pb**		**11 34 25.2**	**-0.3**
CIGN				S	**Sb**		**11 34 31.2**	**+0.6**
CIGN				AML	AML			
	comp=E,7680μm,0.5s							
CIGN				AML	AML			
	comp=N,9125μm,0.7s							
CIGN				AML	AML			
	comp=E,7685μm,0.5s							
TREM	**Isole Tremiti**	**0.37**	**23**	P	**Pb**		**11 34 25.5**	**-0.5**
TREM				S	**Sb**		**11 34 31.6**	**0.0**
TREM				AML	AML			
	comp=E,68800μm,1.3s							
TREM				AML	AML			
	comp=N,48450μm,0.5s							
TREM				AML	AML			
	comp=N,48450μm,0.5s							
TREM				AML	AML			
	comp=E,68800μm,1.3s							
GATE	**Gambatesa**	**0.41**	**229**	⇓P	**Pb**		**11 34 26.8**	**+0.2**
GATE				AML	AML			
	comp=E,8075μm,0.7s							
GATE				AML	AML			
	comp=E,8080μm,0.7s							
GATE				AML	AML			
	comp=N,7325μm,0.5s							
GATE				AML	AML			
	comp=N,7050μm,0.5s							
GATE				AML	AML			
	comp=E,5230μm,1.3s							
MOCO	**Biccari - m.te**	**0.43**	**197**	⇑P	**Pb**		**11 34 26.8**	**-0.2**
MOCO				S	**Sb**		**11 34 33.5**	**+0.3**
MOCO				AML	AML			
	comp=E,15250μm,0.6s							
MOCO				AML	AML			
	comp=N,12500μm,0.5s							
MOCO				AML	AML			
	comp=E,15650μm,0.6s							
MOCO				AML	AML			
	comp=N,12900μm,0.5s							
MOCO				AML	AML			
	comp=E,15650μm,0.6s							
MOCO				AML	AML			
	comp=E,15300μm,0.6s							
MSAG	**Monte S. Angel**	**0.45**	**99**	P	**Pb**		**11 34 26.5**	**-0.7**
MSAG				S	**Sb**		**11 34 33.4**	**-0.3**
MSAG				AML	AML			
	comp=E,38350μm,1.6s							
MSAG				AML	AML			
MSAG				AML	AML			
MSAG				AML	AML			
MSAG				AML	AML			
	comp=E,43000μm,0.6s							
MSAG				AML	AML			
	comp=E,38350μm,1.6s							
MSAG				AML	AML			
MSAG				AML	AML			
	comp=E,38350μm,1.6s							
MSAG				AML	AML			
MSAG				AML	AML			
FRES	**Fresagrandinar**	**0.52**	**292**	⇓P	**Pb**		**11 34 28.1**	**-0.4**
FRES				AML	AML			
	comp=N,3945μm,1.5s							
FRES				AML	AML			
	comp=E,5610μm,1.5s							
TRIV	**Trivento**	**0.58**	**269**	⇓P	**Pb**		**11 34 29.5**	**+0.2**
TRIV				S	**Sn**		**11 34 38.3**	**-0.6**
TRIV				AML	AML			
	comp=N,15950μm,0.8s							
TRIV				AML	AML			
	comp=N,17050μm,0.9s							
TRIV				AML	AML			
	comp=E,6815μm,1.1s							
TRIV				AML	AML			
	comp=E,7665μm,0.5s							
TRIV				AML	AML			
	comp=N,15950μm,0.8s							
BSSO	**Busso**	**0.59**	**247**	⇑P	**Pb**		**11 34 29.3**	**-0.3**
BSSO				AML	AML			
	comp=E,3575μm,1.0s							
BSSO				AML	AML			
	comp=N,3460μm,0.8s							
BSSO				AML	AML			
	comp=N,3465μm,0.8s							
BSSO				AML	AML			
	comp=N,1445μm,0.8s							
BSSO				AML	AML			
	comp=E,1535μm,1.0s							
BSSO				AML	AML			
	comp=E,3570μm,1.0s							
SACR	**S. Croce Del S**	**0.60**	**230**	⇑P	**Pb**		**11 34 29.2**	**-0.5**
SACR				S	**Sn**		**11 34 39.2**	**-0.4**
SACR				AML	AML			
	comp=N,3655μm,0.6s							
SACR				AML	AML			
	comp=E,3485μm,0.5s							
SACR				AML	AML			
	comp=N,3650μm,0.6s							
SACR				AML	AML			
	comp=E,3480μm,0.5s							
SACR				AML	AML			
	comp=E,3490μm,0.5s							
SACR				AML	AML			
	comp=N,3785μm,0.6s							
SGTA	**Sant Agata di**	**0.65**	**177**	⇓P	**Pb**		**11 34 29.9**	**-0.7**
SGTA				S	**Sn**		**11 34 40.3**	**-0.4**
SGTA				AML	AML			
	comp=N,16100μm,0.5s							
SGTA				AML	AML			
	comp=E,35050μm,0.7s							
SGTA				AML	AML			
	comp=N,16100μm,0.5s							
SGTA				AML	AML			
	comp=E,36400μm,0.7s							
SGTA				AML	AML			
	comp=N,16250μm,0.5s							
SGTA				AML	AML			
	comp=E,36400μm,0.7s							
SGTA				AML	AML			
	comp=E,35050μm,0.7s							
PSB1	**Pescosannita**	**0.68**	**215**	⇑P	**Pb**		**11 34 30.4**	**-0.6**
PSB1				S	**Sn**		**11 34 40.9**	**-0.5**
PSB1				AML	AML			
	comp=E,5825μm,1.2s							
PSB1				AML	AML			
	comp=N,5430μm,0.4s							
PSB1				AML	AML			
	comp=N,5430μm,0.4s							
PSB1				AML	AML			
	comp=E,5820μm,1.2s							
PSB1				AML	AML			
	comp=N,5435μm,0.4s							
PSB1				AML	AML			
	comp=N,5435μm,0.4s							
PSB1				AML	AML			
	comp=E,5985μm,1.2s							
MRB1	**Monte Rocchett**	**0.70**	**202**	⇑P	**Pb**		**11 34 31.2**	**-0.3**
MRB1				S	**Sn**		**11 34 42.4**	**+0.4**
MRB1				AML	AML			
	comp=E,27550μm,0.6s							
MRB1				AML	AML			
	comp=N,18700μm,0.5s							
MRB1				AML	AML			
	comp=E,27550μm,0.6s							
MRB1				AML	AML			
	comp=N,19350μm,0.5s							
MRB1				AML	AML			
	comp=N,18750μm,0.5s							
MRB1				AML	AML			
	comp=N,19350μm,0.5s							
MRB1				AML	AML			
	comp=E,27550μm,0.6s							
MRB1				AML	AML			
	comp=E,27950μm,0.6s							
PTRJ	**Pietraroja**	**0.72**	**235**	P	**Pb**		**11 34 30.7**	**-1.1**
CAPA	**Cerignola FG**	**0.73**	**149**	P	**Pb**		**11 34 30.7**	**-1.1**
CAPA				S	**Sb**		**11 34 42.1**	**+0.7**
CAPA				AML	AML			
	comp=E,25900μm,0.9s							
CAPA				AML	AML			
	comp=E,25900μm,0.9s							
CAPA				AML	AML			
	comp=N,15100μm,1.2s							
CAFE	**Carife**	**0.76**	**185**	P	**Pb**		**11 34 32.1**	**-0.3**
CAFE				S	**Sn**		**11 34 43.6**	**+0.2**
CAFE				AML	AML			
	comp=E,29350μm,0.4s							
CAFE				AML	AML			
	comp=N,13650μm,0.4s							
CAFE				AML	AML			
	comp=N,13950μm,0.4s							
CAFE				AML	AML			
	comp=E,29350μm,0.4s							
CAFE				AML	AML			
	comp=E,29950μm,0.4s							
VITU	**Vitulano (BN)**	**0.79**	**221**	P	**Pb**		**11 34 32.1**	**-0.8**
VITU				AML	AML			
	comp=E,2445μm,0.3s							
VITU				AML	AML			
	comp=N,14150μm,0.6s							
VITU				AML	AML			
	comp=E,9460μm,0.4s							
VITU				AML	AML			
	comp=E,2440μm,0.3s							
VITU				AML	AML			
	comp=N,14750μm,0.6s							
VITU				AML	AML			
	comp=N,14200μm,0.6s							
SGG	**Gregorio Mates**	**0.81**	**241**	⇑P	**Pb**		**11 34 32.2**	**-1.0**
SGG				AML	AML			
	comp=E,18nm,0.6s							
SGG				AML	AML			
	comp=N,8.5nm,0.9s							
SGG				AML	AML			
	comp=E,5895μm,0.6s							
SGG				AML	AML			
	comp=N,9.0nm,0.9s							
SGG				AML	AML			
	comp=E,18nm,0.6s							
SGG				AML	AML			
	comp=N,2860μm,0.9s							
MIDA	**Miranda**	**0.81**	**260**	P	**Pb**		**11 34 32.4**	**-0.8**
MIDA				S	**Sn**		**11 34 45.5**	**+0.7**
MIDA				AML	AML			
	comp=E,4125μm,1.4s							
MIDA				AML	AML			
	comp=E,4350μm,1.4s							
MIDA				AML	AML			
	comp=E,4130μm,1.4s							
MIDA				AML	AML			
	comp=N,3635μm,0.7s							
MIDA				AML	AML			
	comp=N,3545μm,0.7s							
VULT	**Monte Vulture**	**0.85**	**165**	P	**Pb**		**11 34 33.4**	**-0.7**
VULT				S	**Sn**		**11 34 46.4**	**+0.5**
VULT				AML	AML			
	comp=E,35050μm,0.4s							
VULT				AML	AML			
	comp=E,35050μm,0.4s							
VULT				AML	AML			
	comp=N,42950μm,0.7s							
VULT				AML	AML			
	comp=E,36300μm,0.4s							
VULT				AML	AML			
	comp=N,43950μm,0.7s							
VULT				AML	AML			
	comp=N,43950μm,0.7s							
VULT				AML	AML			
	comp=E,36300μm,0.4s							
VULT				AML	AML			
	comp=E,35050μm,0.4s							
VULT				AML	AML			
	comp=N,42950μm,0.7s							
SNAL	**S. Angelo Dei**	**0.86**	**186**	⇓P	**Pb**		**11 34 33.2**	**-0.9**
SNAL				S	**Sn**		**11 34 46.3**	**+0.3**
SNAL				AML	AML			
	comp=N,14450μm,1.0s							
SNAL				AML	AML			
	comp=N,14400μm,1.0s							
SNAL				AML	AML			
	comp=N,15450μm,1.0s							
SNAL				AML	AML			
	comp=E,19650μm,0.9s							
SNAL				AML	AML			
	comp=E,20150μm,0.9s							
RNI2	**Rionero Sannit**	**0.88**	**265**	P	**Pb**		**11 34 33.7**	**-0.7**
RNI2				S	**Sn**		**11 34 47.0**	**+0.6**
RNI2				AML	AML			
	comp=N,4005μm,0.6s							
RNI2				AML	AML			
	comp=N,4045μm,0.6s							
RNI2				AML	AML			
	comp=E,5740μm,0.5s							
RNI2				AML	AML			
	comp=E,5610μm,0.5s							
VAGA	**Valle Agricola**	**0.89**	**246**	P	**Pb**		**11 34 33.7**	**-1.0**
VAGA				S	**Sn**		**11 34 46.7**	**0.0**
VAGA				AML	AML			
	comp=E,3600μm,1.0s							
VAGA				AML	AML			
	comp=N,5655μm,0.8s							
VAGA				AML	AML			
	comp=E,3605μm,1.0s							
VAGA				AML	AML			
	comp=N,5820μm,0.8s							
VAGA				AML	AML			
	comp=E,3725μm,1.0s							
PAOL	**Paolisi**	**0.94**	**217**	P	**Pn**		**11 34 35.0**	**-0.3**
PAOL				S	**Sn**		**11 34 49.6**	**+1.7**
PAOL				AML	AML			
	comp=E,3350μm,0.5s							
PAOL				AML	AML			
	comp=N,3875μm,0.4s							
PAOL				AML	AML			
	comp=E,3505μm,0.5s							
PAOL				AML	AML			
	comp=N,3875μm,0.5s							
PAOL				AML	AML			
	comp=E,3510μm,0.5s							
PAOL				AML	AML			
	comp=N,3980μm,0.4s							
PAOL				AML	AML			
	comp=E,3345μm,0.5s							
PALZ	**Palazzo San Ge**	**0.96**	**150**	P	**Pn**		**11 34 35.5**	**-0.1**
PALZ				S	**Sn**		**11 34 49.4**	**+1.0**
MRVN	**Minervino Murg**	**0.98**	**137**	P	**Pn**		**11 34 35.2**	**-0.6**
MRVN				S	**Sn**		**11 34 49.5**	**+0.8**
MRVN				AML	AML			
	comp=N,9845μm,0.1s							
MRVN				AML	AML			
	comp=E,10500μm,1.6s							
CERA	**Filignano**	**0.99**	**260**	P	**Pn**		**11 34 35.4**	**-0.7**
CERA				S	**Sn**		**11 34 52.4**	**+3.2**
MCRV	**Calabrutti - M**	**1.00**	**187**	P	**Pn**		**11 34 35.6**	**-0.6**
MCRV				S	**Sn**		**11 34 50.7**	**+1.1**
MCRV				AML	AML			
	comp=E,19350μm,0.6s							
MCRV				AML	AML			
	comp=N,13150μm,0.6s							
MRLC	**Muro Lucano**	**1.03**	**173**	P	**Pn**		**11 34 36.2**	**-0.4**
MRLC				S	**Sn**		**11 34 51.0**	**+0.9**
MRLC				AML	AML			

comp=N,10500µm,1.1s
MRLC AML AML
comp=E,10920µm,0.8s
MRLC AML AML
comp=E,11380µm,0.5s
MRLC AML AML
comp=N,11550µm,0.4s
PIGN Pignataro Magg 1.03 236 ⇑P Pb 11 34 36.9 -0.1
PIGN AML AML
comp=E,1820µm,1.6s
PIGN AML AML
comp=E,1860µm,1.6s
PIGN AML AML
comp=N,1855µm,0.5s
PIGN AML AML
comp=N,1735µm,0.6s
INTR Introdacqua 1.08 283 P Pn 11 34 37.1 -0.2
INTR AML AML
comp=N,11800µm,0.7s
INTR AML AML
comp=E,5980µm,0.9s
ACER Acerenza 1.10 155 P Pn 11 34 37.5 0.0
ACER AML AML
comp=E,22600µm,0.4s
ACER AML AML
comp=N,18800µm,0.4s
ACER AML AML
comp=E,22600µm,0.4s
ACER AML AML
comp=E,23950µm,0.4s
ACER AML AML
comp=N,18800µm,0.4s
ACER AML AML
comp=E,22600µm,0.4s
ACER AML AML
comp=N,17900µm,0.4s
POFI Posta Fibreno 1.21 268 P Pn 11 34 39.1 +0.1
POFI S Sb 11 34 56.8 +1.6
POFI AML AML
comp=N,1995µm,1.6s
POFI AML AML
comp=E,2410µm,0.7s
T0110 Collepietro 1.23 292 P Pb 11 34 39.9 -0.6
T0110 AML AML
comp=N,7075µm,0.7s
T0110 AML AML
comp=E,9670µm,0.7s
MODR Mondragone 1.26 240 ⇑P Pn 11 34 40.0 +0.4
MODR AML AML
comp=E,2610µm,0.8s
MODR AML AML
comp=N,1820µm,0.8s
VVLD Villa Vallelon 1.27 275 P Pn 11 34 40.2 +0.3
VVLD AML AML
comp=E,1705µm,0.6s
VVLD AML AML
comp=N,1435µm,0.6s
CDRU Civita di Ruta 1.29 181 P Pn 11 34 40.1 -0.1
CDRU AML AML
comp=N,3165µm,0.4s
CDRU AML AML
comp=E,6800µm,1.4s
PTRP Pietrapertosa 1.38 156 AML AML
comp=N,12000µm,0.6s
PTRP AML AML
comp=E,12400µm,0.9s
FAGN Fagnano 1.38 291 P Pb 11 34 43.1 +0.2
FAGN AML AML
comp=E,6085µm,0.6s
FAGN AML AML
comp=N,4115µm,0.9s
PTQR Pietraquaria 1.45 280 AML AML
comp=N,1115µm,0.6s
PTQR AML AML
comp=E,1175µm,0.6s
CMPR Campora 1.46 181 ⇑P Pn 11 34 42.5 0.0
GIGS Gran Sasso 1.46 298 P Pb 11 34 43.6 -0.8
GIGS AML AML
comp=E,210µm,0.8s
GIGS AML AML
comp=N,158µm,0.8s
MCEL Monticello 1.50 166 ⇑P Pn 11 34 43.5 +0.5
MCEL AML AML
comp=E,3660µm,0.4s
MCEL AML AML
comp=E,3600µm,0.4s
MCEL AML AML
comp=N,3565µm,0.6s
MCEL AML AML
comp=N,3480µm,0.6s
AG11 Viggiano (PZ) 1.52 162 AML AML
comp=E,5530µm,0.6s
AG11 AML AML
comp=N,5090µm,0.5s
TERO Teramo 1.53 304 P Pb 11 34 44.5 -1.0
TERO AML AML
comp=E,1755µm,0.5s
TERO AML AML
comp=N,2155µm,0.6s
TERO AML AML
comp=N,885µm,0.6s
TERO AML AML
comp=E,732µm,0.6s
AQU L'Aquila 1.54 292 ePn Pb 11 34 45.5 -0.1
MATE Matera 1.54 137 ⇑P Pn 11 34 43.6 +0.1
MATE Matera 1.54 137 P Pn 11 34 43.5 0.0
MATE AML AML
comp=N,8505µm,0.2s
MATE AML AML
comp=E,9500µm,0.6s
MTSN Montesano sull 1.55 168 ⇑P Pn 11 34 43.7 0.0
MTSN AML AML
comp=E,3260µm,0.4s
MTSN AML AML
comp=N,2875µm,1.1s
GIUL Giuliano Di Ro 1.56 262 ⇑P Pn 11 34 44.4 +0.6
GIUL AML AML
comp=N,1420µm,1.0s
GIUL AML AML
comp=E,1270µm,0.8s
CAMP Campotosto 1.61 299 P Pb 11 34 46.0 -0.9
HVAR Hvar 1.63 31 iPg Pn 11 34 45.6 +0.9
HVAR Sg Sn 11 35 05.6 +0.8
GUMA Gualdo di Mace 1.64 322 AML AML
comp=N,5670µm,0.5s
GUMA AML AML
comp=E,4860µm,1.2s
GUMA AML AML
comp=N,4905µm,0.5s
GUMA AML AML
comp=E,4440µm,0.8s
CRAC Craco 1.65 149 P Pn 11 34 45.3 +0.3
NOCI Noci 1.65 126 ⇓P Pn 11 34 45.0 0.0
NOCI AML AML
comp=E,9910µm,0.3s
NOCI AML AML
comp=N,14250µm,0.2s
SIRI Monte Sirino - 1.65 165 ⇓P Pn 11 34 45.2 +0.1
SIRI AML AML
comp=N,2870µm,0.7s
SIRI AML AML
comp=E,3820µm,0.3s
SIRI AML AML
comp=N,2910µm,0.9s
SIRI AML AML
comp=E,3705µm,0.3s
MGR Morigerati 1.65 174 ⇑P Pb 11 34 46.5 -1.1
MGR AML AML
comp=E,3335µm,0.6s
MGR AML AML
comp=N,2005µm,0.4s
SCHR S. Chirico Rap 1.68 160 P Pn 11 34 46.2 +0.7
SCHR AML AML
comp=E,2180µm,0.7s
SCHR AML AML
comp=N,1910µm,0.5s
SMA1 SAN MARTINO 1.70 301 P Pb 11 34 47.1 -1.3
SMA1 AML AML
comp=E,3375µm,0.7s
SMA1 AML AML
comp=N,2905µm,0.7s
FIAM Fiamignano 1.71 287 P Pb 11 34 47.8 -0.8
FIAM AML AML
comp=N,1540µm,0.8s
FIAM AML AML
comp=E,2000µm,0.8s
RM33 Pellescritta (1.73 296 P Pb 11 34 47.9 -0.9
RM33 AML AML
comp=N,2005µm,0.9s
RM33 AML AML
comp=E,1840µm,0.8s
CERT Cerreto 1.75 276 P Pb 11 34 48.5 -0.8
CERT AML AML
comp=N,931µm,0.7s
CERT AML AML
comp=E,1620µm,0.8s
RCAV Rocca di Cave 1.78 273 P Pb 11 34 48.3 -1.4
LATB Latina 1.79 262 P Pn 11 34 46.9 0.0
LATB AML AML
comp=N,350µm,0.9s
LATB AML AML
comp=E,485µm,0.8s
CUC Castrocucco 1.82 168 ⇓P Pn 11 34 48.4 +0.9
CUC AML AML
comp=N,1180µm,0.6s
CUC AML AML
comp=N,1405µm,0.6s
CUC AML AML
comp=E,2075µm,1.3s
CUC AML AML
comp=E,1700µm,1.3s
LNSS Leonessa 1.88 297 P Pb 11 34 50.3 -1.2
LNSS AML AML
comp=N,2490µm,0.7s
LNSS AML AML
comp=E,2120µm,0.7s
ZIRJ Zirje 1.89 7 ePn Pn 11 34 48.8 +0.5
ZIRJ Sn Sn 11 35 11.2 0.0
NRCA Norcia 1.94 303 AML AML
comp=E,1295µm,0.8s
NRCA AML AML
comp=N,1715µm,0.7s
MAKA Makarska 1.96 39 iPn Pn 11 34 49.9 +0.6
MAKA Sn Sn 11 35 14.2 +1.3
SALB San Lorenzo Be 2.06 157 P Pn 11 34 50.9 +0.2
SALB AML AML
comp=E,1760µm,1.0s
SALB AML AML
comp=N,1240µm,1.3s
SALB AML AML
comp=E,1885µm,1.3s
SALB AML AML
comp=N,1315µm,1.3s
STON Ston 2.07 58 ePn Pn 11 34 51.8 +1.0
STON Sn Sn 11 35 16.2 +0.5
FDMO Fiordimonte 2.08 308 AML AML
comp=E,1180µm,0.5s
FDMO AML AML
comp=N,1885µm,0.5s
MORI Morici 2.10 8 ePn Pn 11 34 52.0 +0.7
MORI Sn Sn 11 35 17.6 +1.1
T0702 Acquaformosa (2.14 164 P Pn 11 34 52.7 +0.9
CESI CESI - Serrava 2.17 305 AML AML
comp=N,831µm,0.8s
CESI AML AML
comp=E,339µm,1.1s
RICI Ricice 2.17 37 ePn Pn 11 34 53.6 +1.4
RICI Sn Sn 11 35 18.8 +0.5
DUGI Dugi Otok 2.22 355 ePn Pn 11 34 53.3 +0.5
DUGI Sn Sn 11 35 20.0 +0.6
TDS Terranova Siba 2.26 160 AML AML
comp=N,468µm,1.1s
TDS AML AML
comp=E,384µm,0.8s
ASSB Assisi San Ben 2.34 303 AML AML
comp=N,847µm,0.5s
ASSB AML AML
comp=E,744µm,1.2s
KIJV Kijevo 2.36 19 ePg Pb 11 34 58.7 -0.9
KIJV Sn Sn 11 35 22.8 -0.1
FOSV Fossato di Vic 2.42 310 AML AML
comp=N,834µm,0.7s
FOSV AML AML
comp=E,914µm,1.3s
TREB Trebinje 2.44 66 ePn Pn 11 34 55.8 0.0
HCY Herceg Novi 2.45 73 ePn Pn 11 34 56.5 +0.4
HCY Herceg Novi 2.45 73⇓iPn Pn 11 34 57.5 +1.4
HCY iSn Sb 11 35 28.6 -2.4
ARVD Arcevia 2.45 315 AML AML
comp=N,446µm,0.9s
ARVD AML AML
comp=E,475µm,0.7s
TOLF Tolfa 2.49 278 AML AML
comp=N,290µm,0.8s
TOLF AML AML
comp=E,304µm,0.9s
SSFR Montelago di S 2.50 312 AML AML
comp=N,618µm,0.7s
SSFR AML AML
comp=E,737µm,0.3s
CELI Celico 2.54 159 AML AML
comp=E,1455µm,0.9s
CELI AML AML
comp=N,1435µm,1.1s
ATFO Monte Foce - G 2.58 309 AML AML
comp=N,918µm,1.3s
ATFO AML AML
comp=E,890µm,0.8s
ATTE AVT- Monte Tez 2.61 304 AML AML
comp=N,448µm,1.3s
ATTE AML AML
comp=E,532µm,1.1s
MGAB Montegabbione 2.63 297 AML AML
comp=N,616µm,1.1s
MGAB AML AML
comp=E,515µm,0.5s
BRY Bratogost 2.64 64 ePn Pn 11 34 59.9 +1.2
BRY Bratogost 2.64 64⇑iPn Pn 11 35 00.0 +1.2
BRY iSn Sn 11 35 33.1 +3.2
MPAG Monte Paganucc 2.64 315 AML AML
comp=N,746µm,0.7s
MPAG AML AML
comp=E,560µm,0.9s
FSSB Fossombrone 2.67 316 AML AML
comp=N,1060µm,0.6s
FSSB AML AML
comp=E,793µm,0.4s
BUM Brajici-Budva 2.71 78⇑iPn Pn 11 35 01.0 +1.3
BUM iSn Sn 11 35 34.9 +3.2
NARO Abbazia di Nar 2.72 313 AML AML
comp=N,350µm,0.9s
NARO AML AML
comp=E,416µm,0.9s
CEME Cevo 2.78 73⇑iPn Pn 11 35 01.9 +1.3
CEME iSn Sn 11 35 36.5 +3.1
TIP Timpagrande 2.82 157 ⇑P Pb 11 35 04.7 -2.8
PESA Pesaro 2.83 321 AML AML
comp=N,706µm,0.8s
PESA AML AML
comp=E,840µm,1.0s
PE3 Peglio 2.83 314 AML AML
comp=E,1250µm,0.6s
PE3 AML AML
comp=N,1350µm,0.6s
BADI Badiali 2.85 308 AML AML
comp=E,418µm,1.1s
BADI AML AML
comp=N,478µm,0.6s
NKME Niksic 2.87 69⇑iPn Pn 11 35 03.2 +1.4
NKME iSn Sn 11 35 38.6 +3.1
DRME Dracevica, Mon 2.91 81 ePn Pn 11 35 03.7 +1.4
DRME Dracevica, Mon 2.91 81⇑iPn Pn 11 35 03.7 +1.4
DRME iSn Sn 11 35 39.6 +3.2
NKY Niksic 2.91 68⇓iPn Pn 11 35 03.8 +1.3
NKY iSn Sn 11 35 39.7 +3.0
CAFI Castiglion Fio 2.92 303 AML AML
comp=N,298µm,0.9s
CAFI AML AML
comp=E,280µm,0.9s
SCTE Santa Cesarea 2.93 125 AML AML
comp=E,5280µm,1.0s
SCTE AML AML
comp=N,3310µm,0.4s
MGRS Mrkonjic Grad 2.93 26 ePn Pn 11 35 05.8 +3.1
ULC Ulcinj 2.94 85 ePn Pn 11 35 03.4 +0.7
ULC iSn Sn 11 35 40.2 +3.1
PDG Podgorica 3.00 76 ⇑P Pn 11 35 05.3 +1.7
PDG Podgorica 3.00 76 ePn Pn 11 35 05.3 +1.7
PDG Podgorica 3.00 76 P Pn 11 35 05.3 +1.7
PDG AML AML
comp=E,1009µm,0.6s
PDG AML AML
comp=N,1140µm,1.0s
PDG AML AML
comp=E,793µm,0.6s
PDG AML AML
comp=N,882µm,1.0s
TTG Podgorica 3.00 76⇓iPn Pn 11 35 05.0 +1.5
TTG iSn Sn 11 35 41.8 +3.2
UPM Unac-Piva 3.01 61 ePn Pn 11 35 07.5 +3.6
UPM Unac-Piva 3.01 61⇓iPn Pn 11 35 05.1 +1.2
UPM iSn Sn 11 35 42.1 +3.0
BLY Banja Luka 3.26 24 ePn Pn 11 35 09.4 +2.2
ASQU Asqua 3.29 309 AML AML
comp=E,220µm,1.0s
ASQU AML AML
comp=N,235µm,1.6s
KOME Kolasin 3.29 70 ePn Pn 11 35 09.0 +1.4
KOME iSn Sn 11 35 48.9 +3.0
PLE Pljevlja 3.38 61 ePn Pn 11 35 10.3 +1.4
PLE iSn Sn 11 35 51.1 +2.9
PUK Puka 3.42 84 P Pn 11 35 11.0 +1.6
PUK AML AML
comp=E,487µm,0.6s
PUK AML AML
comp=N,510µm,0.8s
MRAK Mrakovica 3.43 19 ePn Pn 11 35 13.2 +3.7
PLAC Placanica 3.44 165 AML AML
comp=N,304µm,1.4s
PLAC AML AML
comp=E,266µm,0.6s
TIR Tirane 3.44 96 ⇑P Pn 11 35 09.0 -0.6
RUDO Rudo 3.50 57 ePn Pn 11 35 13.4 +2.9
LMD Lutirano 3.51 312 AML AML
comp=N,186µm,1.0s
LMD AML AML
comp=E,200µm,1.3s
HAPS Han Pijesak,Bl 3.52 48 ePn Pn 11 35 12.4 +1.5
PVY Plav 3.54 75⇓iPn Pn 11 35 12.6 +1.5
PVY iSn Sn 11 35 55.0 +2.8
IVA Berane 3.56 71 ePn Pn 11 35 12.8 +1.4
IVA iSn Sn 11 35 55.5 +2.9
BBLS Lazići 3.66 54 ePn Pn 11 35 14.3 +1.6
BRIS BRISIGHELLA 3.66 312 AML AML
comp=N,264µm,0.9s
BRIS AML AML
comp=E,321µm,1.6s
PHP Peshkopia 3.83 90 P Pn 11 35 16.9 +1.8
SKDS Skadanscina 3.88 346 iPn Pn 11 35 15.6 -0.1
MOSL Moslavina 3.97 15 ePn Pn 11 35 17.1 +0.1
MOSL Sn Sn 11 36 02.8 +0.2
KEK Kerkira 3.98 120 P Pn 11 35 18.0 +0.9
CEY Cerknica 4.01 351 ePn Pn 11 35 20.7 +3.2
SRN Sarande 4.03 117 P Pn 11 35 19.1 +1.4
SRN Sarande 4.03 117 P Pn 11 35 19.4 +1.7
SRN AML AML
comp=E,522µm,0.5s
SRN AML AML
comp=N,548µm,1.0s
CRES Cresnjev 4.04 1 ePn Pn 11 35 19.3 +1.4
DIVS Divibare 4.14 54 ePn Pn 11 35 20.6 +1.3
TEKS Tekeris 4.14 47 ePn Pb 11 35 28.6 -1.3
PTJ Puntijarka 4.15 6 ePn Pn 11 35 20.6 +1.1
PTJ Sn Sn 11 36 06.9 -0.3
OHR Ohrid 4.17 97 iPn Pn 11 35 22.1 +2.3
JAVS Javornik 4.21 348 iPn Pn 11 35 20.3 0.0
VAE Valguarnera 4.35 190 Pn Pn 11 35 26.9 +4.7
comp=N,2.3nm,0.3s,baz=46,slow=18,SNR=1.7
SABO M.te Sabotino 4.38 344 P Pn 11 35 23.5 +1.0
IGT Igoumenitsa 4.42 119 P Pn 11 35 24.5 +1.3
KALN Kalnik 4.42 10 ePn Pn 11 35 23.9 +0.7
KALN Sn Sn 11 36 13.0 -0.8
NEST Nestorio 4.54 106 P Pn 11 35 27.4 +2.6
FNA Florina 4.67 100 P Pn 11 35 27.8 +1.2
FRGS Fruska Gora 4.70 43 ⇑P Pn 11 35 32.7 +5.8
FRGS Fruska Gora 4.70 43 ePn Pb 11 35 33.6 -5.8
GRAM Graiana 4.70 307 AML AML
comp=N,154µm,0.6s
GRAM AML AML
comp=E,190µm,0.3s
POLC Polcenigo 4.71 335 P Pn 11 35 27.7 +0.7
OBKA Obir 4.76 354 Pn Pn 11 35 28.1 +0.2
comp=E,14nm,0.4s,SNR=19
OBKA eSn **Sn 11 36 22.9 +0.8**
comp=E,21nm,0.3s
PGF Pioggiola 4.76 281 eP Pn 11 35 30.0 +2.1
PGF eSn **Sn 11 36 19.0 -3.2**
comp=E,6.3nm,0.5s
BEHE Becsehely 4.80 12 ePn Pn 11 35 31.9 +3.6
SOKA Soboth 4.90 358 Pn Pn 11 35 30.1 +0.4
comp=E,6.2nm,0.4s,SNR=4.0
SOKA eSn **Sn 11 36 23.7 -1.9**
comp=E,5.5nm,0.3s
KPRO Kipourio 4.93 110 P Pn 11 35 32.6 +2.4
ACOM Acomizza, Ital 4.94 345 AML AML
comp=N,412µm,0.9s
ACOM AML AML
comp=E,467µm,1.3s
MYKA Terra Mystica 5.00 347 ePn Pn 11 35 31.9 +0.9
comp=E,0.8nm,0.1s
MYKA eSn **Sn 11 36 27.3 -0.7**
comp=E,11nm,0.3s
MORH Mrgy, Hungar 5.04 27 ⇑P Pn 11 35 38.0 +6.4
MORH Mrgy, Hungar 5.04 27 ePn Pb 11 35 39.8 -5.4
LKD2 Lefkada island 5.06 124 P Pn 11 35 33.2 +1.3
DRAG Dragano-Lefkad 5.07 126 P Pn 11 35 33.1 +1.0
NYDR Nydri-Lefkada 5.13 125 P Pn 11 35 33.3 +0.5
STIP Stip 5.14 89 iPn Pn 11 35 36.2 +3.2
EVGI Lefkada island 5.16 126 P Pn 11 35 34.3 +1.0
DMLN Damoulianata-K 5.25 131 P Pn 11 35 35.3 +0.8
KEF3 Kipouria, Keph 5.26 131 P Pn 11 35 35.1 +0.5
KEF5 Kardakata, Kep 5.28 130 P Pn 11 35 35.8 +0.9
ABTA Abfaltersbach 5.36 339 Pn Pn 11 35 36.3 +0.2
comp=E,5.8nm,0.6s,SNR=7.0
ABTA eSn **Sn 11 36 37.3 +0.3**
comp=E,6.3nm,0.3s
VLS Valsamata 5.42 130 P Pn 11 35 37.6 +0.8
PSDA Pessada-Kefalo 5.46 130 P Pn 11 35 37.9 +0.6
VAY Valandovo 5.46 92 iPn Pn 11 35 41.1 +3.8
ARSA Arzberg 5.47 1 ePn Pn 11 35 39.2 +1.6
comp=E,1.4nm,0.2s
ARSA eSn **Sn 11 36 38.0 -1.6**
comp=E,2.6nm,0.2s
KBA Koelnbreinsper 5.48 346 Pn Pn 11 35 38.5 +0.7
comp=E,2.5nm,0.4s,SNR=7.2
KBA eSn **Sn 11 36 40.8 +0.7**
comp=E,12nm,0.4s
MDVR Moldovita 5.55 55 ⇑P Pn 11 35 42.2 +3.6
THL Klokotos Trika 5.55 111 P Pn 11 35 40.3 +1.7
VLMS Volimes, Zakyn 5.67 132 P Pn 11 35 40.3 0.0
LIT Litokhoron 5.68 105 P Pn 11 35 41.8 +1.3
PVO Paravola 5.71 122 P Pn 11 35 42.5 +1.7
EVR Evrytania 5.72 118 P Pn 11 35 43.5 +2.4
VTS Vitosha 5.94 79 ⇑P Pn 11 35 44.7 +0.6
BZS Buzias 5.96 48 ⇓P Pn 11 35 48.5 +4.2
ANX Ano Chora 5.97 120 P Pn 11 35 47.0 +2.5
RLS Riolos of Patr 6.01 126 P Pn 11 35 46.6 +1.6
AGG Agios Georgios 6.02 115 P Pn 11 35 47.0 +1.9
HERR Herculane 6.03 57 ⇑P Pn 11 35 48.3 +3.1
WTTA Wattenberg 6.08 336 ePn Pn 11 35 48.7 +2.7
comp=E,2.1nm,0.2s
WTTA eSn **Sn 11 36 56.0 +1.2**
comp=E,15nm,0.3s
MOA Molln 6.11 353 Pn Pn 11 35 47.1 +0.8
comp=E,5.4nm,0.3s,SNR=12
MOA eSn **Sn 11 36 54.3 -1.1**
comp=E,12nm,0.4s
CONA Conrad Observa 6.16 3 ePn Pn 11 35 47.4 +0.3
comp=E,1.2nm,0.3s
CONA eSn **Sn 11 36 58.0 +1.4**
comp=E,3.3nm,0.3s
SBF Sospel 6.16 292 eP Pn 11 35 51.9 +4.8
WATA Walderalm 6.16 336 ePn Pn 11 35 48.9 +1.8
comp=E,0.9nm,0.1s
WATA eSn **Sn 11 36 57.5 +0.7**
comp=E,3.8nm,0.2s
SQTA Sankt Quirin 6.18 333 ePn Pn 11 35 48.8 +1.5
comp=E,1.9nm,0.2s
SQTA eSn **Sn 11 36 57.9 +0.7**
comp=E,5.5nm,0.3s
FETA Feichten 6.18 329 Pn Pn 11 35 48.1 +0.6
comp=E,2.7nm,0.6s,SNR=7.6
FETA eSn **Sn 11 36 58.2 +0.8**
comp=E,2.3nm,0.3s
TRIZ Trizonia 6.20 121 P Pn 11 35 49.8 +2.3
DRO Drossia 6.23 126 P Pn 11 35 49.4 +1.5
KALE Kalithea 6.23 121 P Pn 11 35 51.2 +3.2

MOTA	**Moosalm**	**6.33**	**333**	*e*Pn	**Pn**	**11 35 51.2**	**+1.8**
	comp=E,1.1nm,0.3s						
MOTA				*e*Sn	**Sn**	**11 37 03.2**	**+2.4**
	comp=E,12nm,0.5s						
DAVOX	**Davos/Dischmat**	**6.34**	**324**	Pn	**Pn**	**11 35 51.3**	**+1.7**
	comp=E,1.0nm,0.3s,baz=145,slow=13,SNR=18						
DAVOX				Sn	**Sn**	**11 37 02.6**	**+1.4**
	comp=E,2.3nm,0.3s,baz=164,slow=22,SNR=1.8						
DAVOX				LR	LR	11 39 00.8	
	comp=E,51nm,19.8s,baz=79,slow=45						
KLV	**Kalavryta, Ach**	**6.44**	**123**	P	**Pn**	**11 35 52.7**	**+1.8**
XOR	**Xorichti**	**6.46**	**109**	P	**Pn**	**11 35 51.7**	**+0.5**
AMT	**Artemida-Makis**	**6.50**	**129**	P	**Pn**	**11 35 54.5**	**+2.8**
GZR	**Gura Zlata**	**6.51**	**54**	⇓P	**Pn**	**11 35 54.0**	**+2.2**
NEO	**Neokhori**	**6.51**	**110**	P	**Pn**	**11 35 53.2**	**+1.4**
RETA	**Reutte**	**6.56**	**332**	*e*Pn	**Pn**	**11 35 54.0**	**+1.3**
	comp=E,0.8nm,0.1s						
RETA				*e*Sn	**Sn**	**11 37 08.7**	**+2.1**
	comp=E,3.2nm,0.2s						
LMR	**La Mourre**	**6.69**	**286**	*e*P	Pn	11 35 59.1	+4.9
LMR				*e*Sn	**Sn**	**11 37 07.0**	**-2.5**
	comp=E,1.0nm,0.2s						
MODS	**Modra-Piesok**	**6.74**	**11**	*e*PN	**Pn**	**11 35 58.0**	**+3.1**
MODS				*e*SN	**Sn**	**11 37 08.9**	**-1.8**
MODS				*e*SG		11 39 07.9	
DAVA	**Damuels**	**6.74**	**327**	*e*Pn	**Pn**	**11 35 56.7**	**+1.6**
	comp=E,1.0nm,0.1s						
DAVA				*e*Sn	**Sn**	**11 37 10.3**	**-0.6**
	comp=E,16nm,0.6s						
ITM	**Ithomi**	**6.87**	**130**	P	**Pn**	**11 35 57.6**	**+0.8**
MBDF	**Montbardon**	**6.90**	**298**	*e*Pn	**Pn**	**11 35 57.0**	**-0.3**
MBDF	**Montbardon**	**6.90**	**298**	*e*P	**Pn**	**11 36 01.2**	**+3.9**
MBDF				*e*Sn	**Sn**	**11 37 11.9**	**-3.1**
	comp=E,3.4nm,0.5s						
PSZ	**Piszkesteto**	**6.94**	**26**	⇓P	Pn	11 36 05.7	+7.9
PYL	**PYLOS**	**6.97**	**132**	P	**Pn**	**11 35 58.3**	**+0.2**
CKRC	**Cesky Krumlov**	**7.08**	**355**	*e*PN	**Pn**	**11 35 59.4**	**-0.1**
CKRC				*e*SN	**Sn**	**11 37 15.4**	**-3.7**
GERES	**GERESS Array B**	**7.16**	**351**	Pn	**Pn**	**11 36 00.5**	**-0.2**
	comp=E,1.4nm,0.3s,baz=170,slow=14,SNR=19						
GERES				Sn	**Sn**	**11 37 17.7**	**-3.5**
	comp=E,3.0nm,0.3s,baz=162,slow=24,SNR=12						
VYHS	**Vyhne**	**7.16**	**19**	*e*PN	**Pn**	**11 36 01.9**	**+1.2**
VYHS				*e*SN	**Sn**	**11 37 17.4**	**-3.7**
LPG	**La Plagne**	**7.24**	**304**	*e*Pn	**Pn**	**11 36 02.4**	**+0.3**
LPG				*e*Sn	**Sn**	**11 37 20.3**	**-3.2**
	comp=E,8.3nm,0.4s						
LPL	**La Plagne**	**7.26**	**304**	*e*Pn	**Pn**	**11 36 02.3**	**0.0**
LPL				*e*Sn	**Sn**	**11 37 20.2**	**-3.7**
	comp=E,14nm,0.5s						
DRGR		**7.29**	**44**	⇓P	Pn	11 36 07.8	+5.2
KHC	**Kasperske Hory**	**7.45**	**351**	*e*PN	**Pn**	**11 36 04.3**	**-0.4**
KHC				*e*SN	**Sn**	**11 37 24.6**	**-3.7**
SMRF	**Simiane la Rot**	**7.49**	**290**	*e*P	Pn	11 36 10.2	+5.0
SMRF				*e*Sn	**Sn**	**11 37 25.6**	**-3.6**
	comp=E,1.7nm,0.5s						
ORIF	**Oris-en-Rattie**	**7.56**	**298**	*e*Pn	**Pn**	**11 36 06.1**	**-0.2**
ORIF	**Oris-en-Rattie**	**7.56**	**298**	*e*P	Pn	11 36 11.5	+5.2
ORIF				*e*Sn	**Sn**	**11 37 26.1**	**-5.0**
	comp=E,2.1nm,0.3s						
KEST	**Kesra**	**7.63**	**220**	Pn	**Pn**	**11 36 10.7**	**+3.4**
	comp=E,1.4nm,0.3s,baz=0.7,slow=0.9,SNR=8.4						
ARR	**Arges**	**7.65**	**59**	⇓P	**Pn**	**11 36 11.1**	**+3.6**
VLI	**Veliai**	**7.78**	**128**	P	**Pn**	**11 36 08.8**	**-0.4**
VOIR		**7.95**	**59**	⇑P	**Pn**	**11 36 14.6**	**+3.0**
KTHR	**Kythira**	**8.13**	**130**	P	**Pn**	**11 36 16.5**	**+2.4**
KTHA	**Kythira Island**	**8.17**	**130**	P	**Pn**	**11 36 16.3**	**+1.7**
CABF	**La Chapelle**	**8.20**	**309**	*e*Pn	**Pn**	**11 36 14.1**	**-1.0**
CABF				*e*Sn	**Sn**	**11 37 42.7**	**-4.2**
	comp=E,9.6nm,0.5s						
HINF	**Hinteralfeld**	**8.52**	**318**	*e*Pn	**Pn**	**11 36 18.3**	**-1.1**
HINF				*e*Sn	**Sn**	**11 37 49.8**	**-4.8**
	comp=E,11nm,0.3s						
MLR	**Muntele Rosu**	**8.55**	**61**	LR	LR	11 40 06.5	
	comp=E,103nm,21.7s,baz=309,slow=42						
MLR	**Muntele Rosu**	**8.55**	**61**	⇓P	**Pn**	**11 36 21.8**	**+1.9**
ANKY	**Antikythira Is**	**8.58**	**131**	P	**Pn**	**11 36 21.1**	**+0.9**
CDF	**Champ du Feu**	**8.73**	**322**	*e*Pn	**Pn**	**11 36 22.0**	**-0.3**
CDF	**Champ du Feu**	**8.73**	**322**	*e*P	Pn	11 36 27.5	+5.2
CDF				*e*Sn	**Sn**	**11 37 55.5**	**-4.4**
	comp=E,8.7nm,0.6s						
HAU	**Haudompre**	**8.90**	**317**	*e*Pn	**Pn**	**11 36 23.8**	**-0.8**
HAU				*e*Sn	**Sn**	**11 37 58.4**	**-5.5**
	comp=E,26nm,0.6s						
KSP	**Ksiaz**	**9.09**	**4**	*e*Pg	Pn	11 36 32.2	+5.1
KSP				*e*Sg	Pn	11 36 34.6	+7.4
VRI	**Vrincioaia**	**9.20**	**60**	⇓P	**Pn**	**11 36 31.0**	**+2.3**
SMF	**Signal de Mont**	**9.57**	**304**	*e*Pn	**Pn**	**11 36 32.7**	**-1.0**
SMF	**Signal de Mont**	**9.57**	**304**	*e*P	**Pn**	**11 36 38.4**	**+4.7**
SMF				*e*Sn	**Sn**	**11 38 14.4**	**-5.9**
	comp=E,6.6nm,0.5s						
PAGF	**Fort de Pagny**	**9.57**	**318**	*e*Pn	**Pn**	**11 36 32.8**	**-1.0**
PAGF				*e*Sn	**Sn**	**11 38 15.4**	**-5.1**
	comp=E,8.8nm,0.4s						
SFTF	**Sexfontaines**	**9.71**	**315**	*e*Pn	Pn	**11 36 34.8**	**-0.8**
	baz=137						
SFTF				*e*Sn	**Sn**	**11 38 18.1**	**-5.6**
	comp=E,8.9nm,0.5s						
LOR	**Lormes**	**9.85**	**308**	*e*Pn	Pn	**11 36 37.4**	**-0.2**
	baz=130						
LOR	**Lormes**	**9.85**	**308**	*e*P	Pn	11 36 43.1	+5.5
	baz=128						
LOR				*e*Sn	**Sn**	**11 38 21.7**	**-5.5**
	comp=E,6.0nm,0.4s						
IDI	**Anoyia**	**9.91**	**128**	Pn	**Pn**	**11 36 38.5**	**+0.1**
	comp=E,0.6nm,0.3s,baz=59,slow=6.4,SNR=2.4						
IDI				Sn	**Sn**	**11 38 22.0**	**-6.8**
	comp=E,1.0nm,0.3s,baz=189,slow=23,SNR=3.6						
AVF	**Avril sur Loir**	**9.93**	**304**	*e*Pn	**Pn**	**11 36 38.3**	**-0.4**
AVF				*e*Sn	**Sn**	**11 38 24.2**	**-5.0**
	comp=E,1.4nm,0.3s						
SSF	**Saint Saulge**	**9.96**	**306**	*e*Pn	**Pn**	**11 36 38.4**	**-0.7**
SSF				*e*Sn	**Sn**	**11 38 24.8**	**-5.1**
	comp=E,1.7nm,0.3s						
BGF	**Bois d'Agland**	**10.15**	**302**	*e*Pn	**Pn**	**11 36 41.4**	**-0.3**
BGF	**Bois d'Agland**	**10.15**	**302**	*e*P	Pn	11 36 47.2	+5.5
BGF				*e*Sn	**Sn**	**11 38 28.9**	**-5.7**
	comp=E,9.9nm,0.5s						
FINES	**FINESS Array B**	**20.74**	**15**	P	**P**	**11 38 56.4**	**+0.4**
	comp=E,2.5nm,0.8s,baz=198,slow=8.7,SNR=2.7						
KIRV	**Kirov**	**27.14**	**40**	LR	LR	11 50 49.2	
	comp=E,31nm,19.6s,baz=41,slow=37						
TORD	**Torodi Ar. Bea**	**30.90**	**207**	P	**P**	**11 40 36.1**	**+3.9**
	comp=E,0.4nm,0.8s,baz=17,slow=9.0,SNR=1.9						

TRN ***16*** *11:51:29.0, 10.˚84N×62.˚21W, h91km, MD2.8*
FUNV ***16*** *11:51:29.1, 10.˚15N×62.˚19W, h5km, MW3.3*

ISC 16 1:51:27.1±1.8, 10.˚82N±0.˚08×62.˚22W±0.˚06, h112km±16km, n8, σ1°61/15, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.82**	**102**	*e*P	**Pn**	**11 51 47.6**	**+1.0**
TRN				*e*S	**Sn**	**11 51 59.6**	**-1.8**
CRUV	**Carupano**	**1.01**	**262**	*e*P	**Pn**	**11 51 49.6**	**+1.1**
CRUV				*e*S	**Sn**	**11 52 03.8**	**-0.9**
GRGR	**Grenville**	**1.42**	**23**	*e*P	**Pn**	**11 51 53.7**	**+0.7**
GRGR				*e*S	**Sn**	**11 52 11.8**	**-0.9**
TOSP	**Speyside**	**1.72**	**74**	*e*P	**Pn**	**11 51 58.1**	**+1.5**
TOSP				*e*S	**Sn**	**11 52 17.9**	**-1.2**
GCMP	**Grenada, Carri**	**1.83**	**25**	*e*P	**Pn**	**11 51 58.7**	**+0.7**
GCMP				*e*S	**Sn**	**11 52 20.8**	**-0.8**
PCRV	**Puerto La Cruz**	**2.46**	**255**	*e*P	**Pn**	**11 52 07.9**	**+1.8**
PCRV				*e*S	**Sn**	**11 52 36.8**	**+0.6**
BAUV	**El Baul**	**6.04**	**253**	*e*S	**Sn**	**11 53 59.8**	**-2.0**
BAUV	**El Baul**	**6.04**	**253**	*e*P	**Pn**	**11 52 54.6**	**+0.6**
BAUV				*e*S	**Sn**	**11 53 58.9**	**-2.8**

JMA ***16*** *12:05:47.4±0.1, 24.˚82N×122.˚48E, h2km, M2.3*
TAP ***16*** *12:05:47.4, 24.˚90N×122.˚48E, h14km, ML2.8, D*

ISC 16 12:05:47.4±1.1, 24.˚86N±0.˚03×122.˚49E±0.˚03, h10km±9km, n65, σ0°57/88, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.48**	**289**	*i* P	**Pg**	**12 05 56.8**	**0.0**
	baz=283						
TWB1				S	**Sg**	**12 06 03.2**	**+0.1**
	baz=283						
EGS		**0.51**	**269**	*i* P	**Pb**	**12 05 58.1**	**-0.3**
	baz=252						
EGS				*i* S	**Sb**	**12 06 05.3**	**-0.5**
	baz=252						
JYNG	**Yonagunijimaku**	**0.58**	**134**	P	**Pg**	**12 05 58.4**	**-0.2**
JYNG				*e*S	**Sg**	**12 06 06.8**	**+0.6**
NTC	**Toucheng**	**0.60**	**270**	P	**Pb**	**12 05 59.6**	**-0.4**
	baz=266						
TIPB	**Shuangxi**	**0.61**	**281**	*i* P	**Pg**	**12 05 59.7**	**+0.4**
	baz=277						
TIPB				*i* S	**Sb**	**12 06 08.8**	**-0.2**
	baz=277						
YOJ	**Yonaguni jima**	**0.61**	**130**	P	**Pg**	**12 05 59.3**	**0.0**
YOJ				*e*S	**Sg**	**12 06 06.9**	**-0.5**
YOJ	**Yonaguni jima**	**0.61**	**130**	P	**Pg**	**12 05 59.8**	**+0.5**
	baz=132						
TWC	**Suao**	**0.63**	**247**	P	**Pg**	**12 05 59.7**	**0.0**
	baz=243						
TWC				*e*S	**Sn**	**12 06 11.3**	**-1.3**
	baz=243						
NWF	**Wu-fen Shan**	**0.68**	**289**	*i* P	**Pb**	**12 06 01.0**	**-0.4**
	baz=285						
NWF				*e*S	**Sg**	**12 06 09.3**	**-0.1**
	baz=285						
WFSB	**Wu-fen Shan**	**0.68**	**289**	P	**Pb**	**12 06 01.1**	**-0.2**
	baz=285						
WFSB				S	**Sb**	**12 06 10.2**	**-0.6**
	baz=285						
TNOU	**National Taiwa**	**0.71**	**294**	P	**Pg**	**12 06 01.4**	**+0.3**
	baz=291						
NDS	**Dongshan**	**0.74**	**253**	P	**Pb**	**12 06 02.0**	**-0.4**
	baz=241						
TWE	**Neicheng**	**0.76**	**260**	*i* P	**Pg**	**12 06 01.9**	**-0.1**
	baz=256						
EWUT	**Wuta**	**0.77**	**238**	P	**Pb**	**12 06 02.7**	**-0.1**
	baz=234						
EWUT				S	**Sb**	**12 06 13.5**	**+0.1**
	baz=234						
TWA	**Mucha**	**0.83**	**279**	P	**Pn**	**12 06 04.8**	**-0.4**
	baz=276						
PCYT	**Pengchaiyu**	**0.86**	**334**	*i* P	**Pg**	**12 06 03.7**	**-0.2**
	baz=333						
PCYT				*e*S	**Sg**	**12 06 14.3**	**-0.8**
	baz=333						
ENTT	**Nioudou**	**0.87**	**256**	*i* P	**Pb**	**12 06 05.0**	**+0.4**
	baz=253						
YM08	**YM08**	**0.88**	**292**	P	**Pg**	**12 06 04.3**	**0.0**
	baz=289						
NHDH	**Xindian Distri**	**0.88**	**277**	P	**Pb**	**12 06 04.7**	**-0.1**
	baz=274						
NHDH				*e*S	**Sb**	**12 06 16.2**	**-0.5**
	baz=274						
YM01	**YM01**	**0.88**	**289**	P	**Pb**	**12 06 04.7**	**-0.2**
	baz=287						
YM11	**YM11**	**0.89**	**291**	P	**Pb**	**12 06 05.0**	**+0.1**
	baz=288						
YM05	**YM05**	**0.89**	**290**	P	**Pb**	**12 06 05.0**	**-0.1**
	baz=288						
YM10	**YM10**	**0.89**	**290**	P	**Pb**	**12 06 05.0**	**-0.1**
	baz=287						
NWLT	**Wulai**	**0.90**	**265**	P	**Pb**	**12 06 05.5**	**+0.3**
	baz=278						
NWLT				*e*S	**Sb**	**12 06 17.8**	**+0.5**
	baz=278						
TWY	**Chenhua**	**0.91**	**298**	*i* P	**Pb**	**12 06 05.2**	**-0.1**
	baz=294						
TWY				*e*S	**Sn**	**12 06 19.5**	**0.0**
	baz=294						
YM04	**YM04**	**0.92**	**289**	P	**Pb**	**12 06 05.2**	**-0.2**
	baz=286						
TATO	**Taipei**	**0.92**	**278**	P	**Pg**	**12 06 04.7**	**-0.4**
	baz=275						
NDT	**Datong Townshi**	**0.92**	**254**	P	**Pb**	**12 06 06.0**	**+0.4**
	baz=251						
NDT				S	**Sb**	**12 06 18.7**	**+0.8**
	baz=251						
ANP	**Anpu**	**0.94**	**291**	P	**Pg**	**12 06 05.6**	**+0.1**
	baz=288						
YHNB	**Yeheng**	**1.03**	**260**	P	**Pg**	**12 06 07.1**	**-0.1**
	baz=240						
YHNB				S	**Sg**	**12 06 20.5**	**-0.1**
	baz=240						
NSK	**Sanguang**	**1.04**	**260**	*i* P	**Pb**	**12 06 07.7**	**+0.1**
	baz=240						
NSK				S	**Sb**	**12 06 21.9**	**+0.5**
	baz=240						
NACB	**Ninganchiao**	**1.06**	**230**	P	**Pg**	**12 06 07.4**	**-0.4**
	baz=228						
NNSB	**Datong**	**1.09**	**247**	P	**Pg**	**12 06 08.1**	**-0.4**
	baz=245						
NNSH	**Datong**	**1.09**	**247**	P	**Pb**	**12 06 08.5**	**0.0**
	baz=245						
NNSH				S	**Sg**	**12 06 22.6**	**-0.1**
	baz=245						
NNS	**Nan Shan**	**1.10**	**248**	*i* P	**Pg**	**12 06 08.2**	**-0.3**
	baz=245						
ETLH	**Xiulin Townshi**	**1.12**	**235**	P	**Pg**	**12 06 08.5**	**-0.4**
	baz=233						
IRIF	**Iriomote-Funau**	**1.24**	**114**	P	**Pn**	**12 06 10.8**	**0.0**
FUSS	**Fushou**	**1.29**	**242**	P	**Pn**	**12 06 11.8**	**+0.1**
	baz=239						
FUSS				S	**Sn**	**12 06 30.5**	**+1.4**
	baz=239						
WHF	**Hehuan Shan**	**1.32**	**238**	*i* P	**Pb**	**12 06 12.6**	**0.0**
	baz=249						
WHF				*e*S	**Sg**	**12 06 29.4**	**-0.7**
	baz=249						
TDCB	**Techi**	**1.35**	**244**	P	**Pg**	**12 06 13.5**	**+0.2**
	baz=232						
TDCB				*e*S	**Sb**	**12 06 28.9**	**-1.5**
	baz=232						
LIOB	**Emei**	**1.36**	**261**	*e*P	**Pg**	**12 06 14.3**	**+0.9**
	baz=260						
NSTT	**Nanjuang**	**1.37**	**261**	*e*P	**Pg**	**12 06 13.7**	**-0.1**
	baz=258						
NSTT				*e*S	**Sg**	**12 06 31.8**	**+0.2**
	baz=258						
ESL	**Shilin**	**1.42**	**223**	*e*P	**Pg**	**12 06 14.8**	**+0.3**
	baz=203						
OWD	**Renai**	**1.50**	**233**	P	**Pg**	**12 06 15.8**	**-0.3**
	baz=213						
WHP	**Taichung City**	**1.52**	**248**	P	**Pg**	**12 06 16.4**	**-0.1**
	baz=262						
EGFH	**Guangfu**	**1.53**	**220**	*e*P	**Pb**	**12 06 15.6**	**-0.2**
	baz=202						
TWQ1	**Liyutan**	**1.64**	**252**	*e*P	**Pg**	**12 06 18.7**	**-0.2**
	baz=267						
WCS	**Beigang Elemen**	**1.64**	**241**	P	**Pg**	**12 06 18.5**	**-0.4**
	baz=239						
WCS				S	**Sg**	**12 06 40.2**	**-0.1**
	baz=239						
VWDT	**VWDT**	**1.65**	**229**	*e*P	**Pb**	**12 06 18.1**	**+0.2**
	baz=211						
HGSD	**Ruisui**	**1.67**	**216**	*e*P	**Pb**	**12 06 17.9**	**-0.3**
	baz=199						
SMLT	**Sun Moon Lake**	**1.74**	**237**	P	**Pb**	**12 06 20.0**	**+0.4**
	baz=217						
SSLB	**Suanglung**	**1.76**	**233**	*e*P	**Pg**	**12 06 20.5**	**-0.7**
	baz=215						
TYC	**Yuchr**	**1.77**	**238**	*i* P	**Pb**	**12 06 20.5**	**+0.6**
	baz=218						
YULB	**Yu-li**	**1.82**	**217**	*e*P	**Pn**	**12 06 19.1**	**+0.3**
	baz=216						
FULB	**Fuli**	**1.98**	**214**	*e*P	**Pn**	**12 06 22.1**	**+1.1**
	baz=197						
ALS	**Alishan**	**2.04**	**229**	P	**Pb**	**12 06 24.5**	**-0.2**
	baz=211						
CHN5	**Tsauling**	**2.08**	**233**	*e*P	**Pb**	**12 06 25.5**	**+0.3**
	baz=214						
ELDTW	**Lidau**	**2.14**	**219**	*e*P	**Pn**	**12 06 23.8**	**+0.5**
	baz=204						
EDH	**Donghe**	**2.17**	**210**	*e*P	**Pn**	**12 06 24.0**	**+0.5**
	baz=196						
EDH				S	**Sn**	**12 06 49.2**	**-1.3**
	baz=196						
CHN4	**Tsaushan**	**2.29**	**230**	P	**Pb**	**12 06 28.4**	**-0.5**
	baz=212						
TPUB	**Ta-pu**	**2.30**	**228**	*e*P	**Pb**	**12 06 28.7**	**-0.3**
	baz=210						
LONT	**Longtian**	**2.31**	**213**	*e*P	**Pn**	**12 06 26.8**	**+1.3**
	baz=212						
SLGT	**Liugui**	**2.51**	**223**	*e*P	**Pb**	**12 06 31.6**	**-0.9**
	baz=221						
MATB	**Ma-tsu**	**2.64**	**300**	*e*P	**Pn**	**12 06 31.4**	**+1.4**
	baz=298						
MASBT	**Mashibuluo**	**2.81**	**218**	P	**Pn**	**12 06 34.4**	**+1.9**
	baz=205						

TAP ***16*** *12:13:18.6, 24.˚90N×122.˚42E, h3km, ML2.7, C*
JMA ***16*** *12:13:18.4±0.1, 24.˚83N×122.˚48E, h1km±2km, M2.1*

ISC 16 12:13:18.3±1.1, 24.˚88N±0.˚04×122.˚49E±0.˚03, h7km±10km, n58, σ0°55/65, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.47**	**285**	*i* P	**Pg**	**12 13 28.0**	**+0.5**
	baz=285						
TWB1				*i* S	**Sg**	**12 13 33.7**	**0.0**
	baz=285						
EGS		**0.51**	**266**	*i* P	**Pb**	**12 13 28.9**	**-0.7**
	baz=262						
EGS				*i* S	**Sg**	**12 13 34.8**	**-0.1**
	baz=262						
JYNG	**Yonagunijimaku**	**0.60**	**136**	P	**Pg**	**12 13 29.8**	**0.0**
JYNG				*e*S	**Sg**	**12 13 37.9**	**+0.3**
TIPB	**Shuangxi**	**0.61**	**278**	P	**Pb**	**12 13 30.7**	**-0.7**
	baz=277						
YOJ	**Yonaguni jima**	**0.63**	**132**	P	**Pg**	**12 13 30.5**	**0.0**
YOJ				*e*S	**Sg**	**12 13 38.7**	**0.0**
YOJ	**Yonaguni jima**	**0.63**	**132**	P	**Pn**	**12 13 33.9**	**+0.2**
	baz=129						
YOJ				S	**Sn**	**12 13 43.8**	**-0.3**
	baz=129						
TWC	**Suao**	**0.65**	**245**	*i* P	**Pg**	**12 13 30.6**	**-0.2**
	baz=240						
NWF	**Wu-fen Shan**	**0.67**	**286**	*e*P	**Pg**	**12 13 30.7**	**-0.6**
	baz=286						
WFSB	**Wu-fen Shan**	**0.67**	**286**	*e*P	**Pg**	**12 13 30.7**	**-0.6**
	baz=286						
TNOU	**National Taiwa**	**0.70**	**292**	P	**Pb**	**12 13 32.4**	**-0.6**
	baz=292						
NDS	**Dongshan**	**0.75**	**251**	P	**Pg**	**12 13 32.8**	**+0.1**
	baz=247						
TWE	**Neicheng**	**0.77**	**258**	P	**Pg**	**12 13 33.1**	**0.0**
	baz=254						
EWUT	**Wuta**	**0.78**	**236**	*e*P	**Pg**	**12 13 33.4**	**0.0**
	baz=232						
TWA	**Mucha**	**0.83**	**277**	P	**Pb**	**12 13 34.9**	**-0.2**
	baz=275						
PCYT	**Pengchaiyu**	**0.83**	**333**	*i* P	**Pg**	**12 13 34.8**	**+0.4**
	baz=336						
YM08	**YM08**	**0.87**	**290**	P	**Pb**	**12 13 35.4**	**-0.5**
	baz=290						
ENTT	**Nioudou**	**0.88**	**254**	P	**Pb**	**12 13 36.0**	**+0.1**
	baz=251						
ENTT				*e*S	**Sb**	**12 13 48.5**	**+0.6**
	baz=251						
YM01	**YM01**	**0.88**	**288**	P	**Pg**	**12 13 34.9**	**-0.3**
	baz=287						
YM11	**YM11**	**0.88**	**289**	P	**Pb**	**12 13 35.7**	**-0.3**
	baz=288						
YM05	**YM05**	**0.89**	**289**	P	**Pb**	**12 13 35.8**	**-0.3**
	baz=288						
YM10	**YM10**	**0.89**	**288**	P	**Pb**	**12 13 35.7**	**-0.5**
	baz=288						
TWY	**Chenhua**	**0.90**	**296**	*i* P	**Pb**	**12 13 36.1**	**-0.2**
	baz=296						
TWY				*e*S	**Sn**	**12 13 49.8**	**-0.8**
	baz=296						
YM04	**YM04**	**0.91**	**287**	P	**Pb**	**12 13 36.1**	**-0.3**
	baz=287						
TATO	**Taipei**	**0.92**	**276**	P	**Pb**	**12 13 36.3**	**-0.3**
	baz=274						
ANP	**Anpu**	**0.93**	**289**	P	**Pb**	**12 13 36.7**	**-0.2**
	baz=289						
NDT	**Datong Townshi**	**0.93**	**253**	P	**Pb**	**12 13 37.2**	**+0.3**
	baz=250						
YHNB	**Yeheng**	**1.04**	**258**	P	**Pb**	**12 13 38.5**	**-0.2**
	baz=256						
NSK	**Sanguang**	**1.05**	**259**	P	**Pb**	**12 13 38.7**	**-0.3**
	baz=256						
NACB	**Ninganchiao**	**1.08**	**229**	*e*P	**Pg**	**12 13 38.4**	**-0.7**
	baz=226						
NNSB	**Datong**	**1.11**	**246**	P	**Pb**	**12 13 39.7**	**-0.2**
	baz=243						
NNSH	**Datong**	**1.11**	**246**	P	**Pb**	**12 13 39.4**	**-0.5**
	baz=243						
NNS	**Nan Shan**	**1.11**	**247**	*i* P	**Pb**	**12 13 40.2**	**+0.2**
	baz=244						
ETLH	**Xiulin Townshi**	**1.14**	**234**	*e*P	**Pg**	**12 13 39.6**	**-0.7**
	baz=231						
IRIF	**Iriomote-Funau**	**1.25**	**116**	P	**Pg**	**12 13 41.9**	**-0.5**
FUSS	**Fushou**	**1.30**	**241**	P	**Pn**	**12 13 43.4**	**+0.2**
	baz=238						
WHF	**Hehuan Shan**	**1.34**	**237**	*i* P	**Pb**	**12 13 43.8**	**-0.2**
	baz=234						
LIOB	**Emei**	**1.36**	**260**	P	**Pb**	**12 13 44.2**	**0.0**
	baz=258						
TDCB	**Techi**	**1.37**	**243**	P	**Pb**	**12 13 44.9**	**+0.5**
	baz=240						
NSTT	**Nanjuang**	**1.38**	**260**	*e*P	**Pb**	**12 13 47.0**	**+2.5**
	baz=258						
ESL	**Shilin**	**1.44**	**222**	P	**Pb**	**12 13 45.8**	**+0.3**
	baz=219						
OWD	**Renai**	**1.52**	**233**	P	**Pb**	**12 13 46.5**	**-0.4**
	baz=230						
WHP	**Taichung City**	**1.53**	**247**	*e*P	**Pg**	**12 13 47.9**	**+0.1**
	baz=245						
WPL	**Puli Township**	**1.65**	**239**	*e*P	**Pn**	**12 13 47.7**	**0.0**
	baz=236						
WCS	**Beigang Elemen**	**1.66**	**241**	*e*P	**Pg**	**12 13 50.1**	**0.0**
	baz=238						
DPDB	**Guoxing**	**1.66**	**240**	P	**Pb**	**12 13 49.2**	**-0.1**
	baz=237						
VWDT	**VWDT**	**1.67**	**228**	P	**Pn**	**12 13 48.6**	**+0.6**
	baz=225						
HGSD	**Ruisui**	**1.69**	**215**	P	**Pb**	**12 13 49.7**	**-0.2**
	baz=213						
EHY	**Hungye**	**1.74**	**218**	P	**Pn**	**12 13 49.8**	**+0.8**
	baz=215						
SMLT	**Sun Moon Lake**	**1.76**	**236**	*i* P	**Pb**	**12 13 51.0**	**0.0**
	baz=233						
SSLB	**Suanglung**	**1.78**	**232**	*e*P	**Pg**	**12 13 51.9**	**-0.5**

	1.2nm,0.3s,baz=114,slow=16,SNR=28						
FINES				Lg	Lg	12 29 19.0	
	3.3nm,0.3s,baz=116,slow=30,SNR=27						
FINES				Rg	Rg	12 29 27.7	
	24nm,0.7s,baz=118,slow=38,SNR=18						
PVF	**Pernaja**	**1.60 256**		PG	**Pb**	**12 29 00.5**	**-0.7**
PVF				MSG		12 29 20.7	
	comp=Z,13nm,0.2s						
PVF				SG	**Sg**	**12 29 22.6**	**+0.5**
KAF	**Kangasniemi**	**1.74 313**		PG	**Pg**	**12 29 04.1**	**+0.1**
	baz=133						
KAF				SN	**Sg**	**12 29 26.6**	**0.0**
ARBE	**Arbavere**	**2.15 226**		PG	**Pg**	**12 29 11.0**	**-0.9**
ARBE				SG	**Sg**	**12 29 40.2**	**+0.5**
NUR	**Nurmijrvi**	**2.19 260**		PG	**Pg**	**12 29 11.8**	**-0.9**
NUR				SG	**Sg**	**12 29 41.7**	**+0.7**
SUF	**Sumiainen**	**2.23 324**		PG	**Pb**	**12 29 12.2**	**+0.3**
SUF				MSG		12 29 38.6	
	comp=Z,6.5nm,0.2s						
SUF				SG	**Sg**	**12 29 41.8**	**-0.5**
JOF	**Joensuu**	**2.25 28**		PG	**Pb**	**12 29 11.9**	**-0.3**
JOF				SG	**Sb**	**12 29 40.3**	**-0.3**
KEF	**Keuruu**	**2.32 303**		PG	**Pb**	**12 29 13.2**	**-0.3**
KEF				MSG		12 29 41.4	
	comp=Z,4.1nm,0.2s						
KEF				SG	**Sb**	**12 29 43.2**	**+0.6**
MEF	**Metsahovi**	**2.40 254**		PB	**Pb**	**12 29 13.4**	**-1.3**
	baz=74						
MEF				MSG		12 29 43.5	
	comp=Z,5.0nm,0.2s						
MEF				SG	**Sb**	**12 29 44.5**	**-0.3**
VAF	**Ylistaro**	**3.65 308**		PG	**Pg**	**12 29 39.3**	**-1.3**
	baz=119						
OUL	**Oulu**	**4.38 342**		SG	**Sg**	**12 30 48.4**	**-2.9**
I43RU	**DUBNA INFRASON**	**6.01 131**	*i*			13 06 30.0	
	baz=317,slow=313,SNR=3.1						
NOA	**NORSAR Array B**	**8.64 278**		Pn	**Pn**	**12 30 37.9**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=98,slow=17,SNR=1.7						
ARCES	**ARCESS Array B**	**8.74 352**		Pn	**Pn**	**12 30 39.8**	**+1.6**
	baz=168,slow=12,SNR=8.4						
ARCES				Lg	Lg	12 33 03.2	
	baz=156,slow=27,SNR=7.1						

IDC 16 12:54:07.0±2.4, 6°61.S×129°92.E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.3/35, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=89.5km s-min=30.6km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.16**	**200**	Pn	Pn	12 57 01.6	0.0
	0.1nm,0.3s,baz=11,slow=15,SNR=2.1						
FITZ				Sn	Sn	12 59 00.9	-17
	0.4nm,0.3s,baz=230,slow=14,SNR=7.9						
WRA	**Warramunga Arr**	**13.93**	**162**	Pn	Pn	12 57 26.3	+0.5
	0.1nm,0.3s,baz=346,slow=13,SNR=12						
WRA				Sn	Sn	12 59 48.2	-13
	0.3nm,0.3s,baz=334,slow=22,SNR=7.2						
ASAR	**Alice Springs**	**17.39**	**168**	P	Pn	12 58 10.8	-0.4
	0.0nm,0.3s,baz=347,slow=11,SNR=5.6						
ASAR				S	Sn	13 01 12.5	-13
	0.1nm,0.3s,baz=347,slow=25,SNR=1.6						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	13 05 07.2	0.0
	0.1nm,0.4s,baz=120,slow=8.5,SNR=1.8						

DJA 16 13:00:17.2±2.0, 8°S±5°×107°E±°, h34km±38km, M3.6/7, mb3.8/1, MLv3.5/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.25**	**72**	P	Pn	13 00 38.7	+0.4
CISI				S	Sn	13 00 54.9	+1.0
DBJI	**Dramaga**	**1.38**	**5**	S	Sn	13 00 57.7	+0.4
LEM	**Lembang**	**1.48**	**42**	P	Pn	13 00 41.7	0.0
LEM				S	Sn	13 01 00.8	+0.8
KASI	**Kota Agung**	**3.19**	**319**	P	Pn	13 01 05.2	+0.1
UGM	**Wanagama**	**3.87**	**90**	P	Pn	13 01 14.2	-0.1

*IDC **16** 13:29:46.4±2.0, 13°.34N×121°.54E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.3/44, mbtmp3.6/3, MS3.3/3, Ms1 3.3/3, ms1mx2.7/45, Error ellipse: s-maj=83.8km s-min=10.7km az=56.0*

*MAN **16** 13:29:47.0, 13°.65N×121°.64E, h15km, MS3.3*

ISC 16 13:29:46.5±1.4, 13°.63N±0°.05×121°.64E±0°.03, h10km±11km, n18, σ1°31/24, mb3.6/3, MS3.5/3, 2C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LQP	**Lukban**	**0.49**	**348**	↑*i*P	**Pb**	**13 29 57.1**	**-0.2**
LQP				*i* S	**Sb**	**13 30 05.0**	**+0.3**
PGP	**Puerto Galera**	**0.69**	**259**	↓*e*P	**Pg**	**13 30 00.2**	**+0.4**
PGP				*i* S	**Sb**	**13 30 09.9**	**-0.3**
GQP	**Guinayangan**	**0.82**	**71**	↓*e*P	**Pb**	**13 30 02.1**	**-0.8**
GQP				*e*S	**Sb**	**13 30 14.3**	**+0.2**
TGY	**Tagaytay City**	**0.83**	**304**	Pg	**Pn**	**13 30 04.0**	**-0.4**
	388nm,0.3s,baz=132,slow=3.7,SNR=40						
TGY				Lg	Lg	13 30 18.3	
	965nm,0.3s,baz=100,slow=22,SNR=9.4						
TGY	**Tagaytay City**	**0.83**	**304**	↑*e*P	**Pn**	**13 30 03.9**	**-0.4**
TGY				*i* S	**Sn**	**13 30 19.1**	**+2.4**
AUQP	**San Andres**	**1.05**	**107**	*e*P	**Pb**	**13 30 06.7**	**-0.1**
AUQP				*e*S	**Sn**	**13 30 24.7**	**+2.7**
MACP	**Maragondon, Ca**	**1.09**	**305**	*e*P	**Pb**	**13 30 06.4**	**-1.1**
MACP				*e*S	**Sg**	**13 30 21.9**	**+0.1**
QVP	**Quezon City--P**	**1.16**	**328**	*e*P	**Pn**	**13 30 07.6**	**-1.2**
QVP				*e*S	**Sg**	**13 30 25.0**	**+1.0**
JCNP	**Jose Panganiba**	**1.21**	**57**	*e*P	**Pn**	**13 30 07.3**	**-2.2**
JCNP				*e*S	**Sb**	**13 30 24.3**	**-1.0**
LUBP	**Lubang**	**1.36**	**274**	*e*P	**Pn**	**13 30 10.3**	**-1.3**
LUBP				*e*S	**Sn**	**13 30 28.8**	**-1.0**
SCSP	**San Jose Seism**	**1.82**	**89**	*e*P	**Pn**	**13 30 17.9**	**-0.1**
SCSP				*e*S	**Sb**	**13 30 42.4**	**-0.5**
ENPP	**El Nido**	**3.24**	**222**	*e*P	Pn	13 30 31.0	-6.5
ENPP				*e*S	Sn	13 30 42.5	-34
CMAR	**Chiang Mai Arr**	**22.33**	**285**	P	**P**	**13 34 46.9**	**+2.2**
	2.2nm,1.0s,baz=95,slow=7.6,SNR=12						
JCJ	**Chichijima**	**23.41**	**52**	LR	LR	13 43 11.8	
	comp=Z,41nm,20.7s,baz=93,slow=34						
WRA	**Warramunga Arr**	**35.63**	**159**	P	**P**	**13 36 43.2**	**-1.6**
	0.4nm,0.3s,baz=331,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**38.96**	**162**	P	**P**	**13 37 13.1**	**0.0**
	0.3nm,0.4s,baz=339,slow=7.2,SNR=6.8						
MSVF	**Nonsavu**	**63.78**	**118**	LR	LR	14 06 05.4	
	comp=Z,40nm,20.6s,baz=211,slow=34						
ARU	**Arti**	**63.94**	**327**	LR	LR	14 07 05.2	
	comp=Z,29nm,20.0s,baz=7.5,slow=35						

*IDC **16** 13:36:14.7±2.0, 7°.20S×120°.84E, h625km±19km, mb2.8/4, mb1 3.0/6, mb1mx2.6/42, mbtmp3.8/6, Error ellipse: s-maj=167.2km s-min=17.9km az=58.0*

ISC 16 13:36:12.3±1.6, 7°.38S±0°.4×119°.7E±0°.5, h600km, n6, σ1°26/7, mb3.3/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.55**	**122**	P	**P**	**13 37 43.3**	**+1.5**
	12nm,0.3s,baz=319,slow=9.3,SNR=14						
BATI				S	**S**	**13 38 54.4**	**-0.4**
	4.7nm,0.3s,baz=215,slow=21,SNR=6.3						
WRA	**Warramunga Arr**	**18.59**	**132**	P	**P**	**13 39 52.0**	**-1.3**
	0.3nm,0.3s,baz=309,slow=9.4,SNR=20						
ASAR	**Alice Springs**	**20.81**	**141**	P	**P**	**13 40 12.9**	**-0.5**
	0.7nm,0.3s,baz=321,slow=8.4,SNR=31						
STKA	**Stephens Creek**	**31.42**	**143**	P	**P**	**13 41 46.0**	**-0.1**
	1.3nm,0.3s,baz=328,slow=9.7,SNR=8.9						
MKAR	**Makanchi Array**	**63.75**	**332**	P	**P**	**13 45 47.3**	**+0.8**
	0.4nm,0.5s,baz=146,slow=6.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**68.21**	**339**	P	**P**	**13 46 12.7**	**-1.2**
	0.3nm,0.3s,baz=142,slow=7.3,SNR=1.9						

*IDC **16** 13:37:05.0±2.5, 4°.97S×129°.63E, h223km±38km, mb2.9/1, mb1 3.0/5, mb1mx2.7/38, mbtmp3.6/5, Error ellipse: s-maj=66.0km s-min=16.3km az=84.0*

ISC 16 13:37:02.2±1.0, 5°.23S±0°.08×129°.4E±0°.2, h200km, n5, σ3°80/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.72**	**23**	P	**Pn**	**13 38 14.0**	**+0.9**
	2.5nm,0.3s,baz=240,slow=20,SNR=48						
SIJI				S	**Sn**	**13 39 05.6**	**-3.4**
	6.6nm,0.3s,baz=74,slow=24,SNR=31						
FITZ	**Fitzroy Crossi**	**13.31**	**196**	P	**P**	**13 40 09.0**	**+2.6**
	0.2nm,0.3s,baz=35,slow=12,SNR=1.9						
FITZ				S	**S**	**13 42 27.7**	**-4.4**
	0.1nm,0.3s,baz=88,slow=21,SNR=1.1						
WRA	**Warramunga Arr**	**15.40**	**162**	P	**P**	**13 40 34.4**	**+4.8**
	0.0nm,0.3s,baz=343,slow=11,SNR=1.9						
WRA				S	**S**	**13 43 17.2**	**-3.4**
	0.2nm,0.3s,baz=333,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**18.84**	**167**	P	**Pn**	**13 41 10.0**	**-0.3**
	0.2nm,0.3s,baz=351,slow=12,SNR=10						
MKAR	**Makanchi Array**	**66.42**	**327**	P	**P**	**13 47 30.0**	**0.0**
	0.3nm,0.6s,baz=144,slow=6.2,SNR=2.2						

*SOF **16** 13:42:05.2, 41°.11N×24°.11E, h9km, MD3.0*
*ATH **16** 13:42:06.7, 41°.18N×24°.13E, h13km±1km, ML2.4/15, Error ellipse: s-maj=1.8km s-min=0.7km az=353.0*
*ISK **16** 13:42:06.3, 41°.17N×24°.10E, h7km, ML2.4/6*
*THE **16** 13:42:07.1, 41°.20N×24°.08E, h17km±1km, ML2.4/8, Error ellipse: s-maj=1.3km s-min=0.6km az=3.0*
*BEO **16** 13:42:08.6±0.8, 41°.20N×24°.13E, h0km, ML2.6/6*
*SKO **16** 13:42:08.8, 41°.19N×24°.06E, h3km*

ISC 16 13:42:06.9±0.9, 41°.16N±0°.02×24°.12E±0°.02, h9km±8km, n69, σ0°89/106, 6C-2D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	**0.27**	**314**	P	**Pg**	**13 42 12.2**	**-0.1**
NVR				S	**Sg**	**13 42 15.9**	**-0.1**
NVR				AML	AML	13 42 16.9	
	comp=N,2028μm,0.5s						
NVR				AML	AML	13 42 17.4	
	comp=E,2866μm,0.2s						
NVR	**Nevrokopi**	**0.27**	**314**	P	**Pg**	**13 42 12.2**	**-0.1**
NVR				S	**Sg**	**13 42 15.6**	**-0.4**
	comp=E,1μm,0.3s						
KVLA	**Kavala**	**0.30**	**138**	P	**Pg**	**13 42 12.7**	**-0.3**
KVLA				S	**Sg**	**13 42 17.4**	**+0.4**
KAVA	**Kavala**	**0.34**	**119**	P	**Pg**	**13 42 13.4**	**-0.3**
KAVA				S	**Sg**	**13 42 18.2**	**0.0**
KAVA				AML	AML	13 42 26.8	
	comp=E,1129μm,0.2s						
KAVA				AML	AML	13 42 26.9	
	comp=N,662μm,0.1s						
KAVA	**Kavala**	**0.34**	**119**	P	**Pb**	**13 42 14.8**	**-0.4**
KAVA				S	**Sb**	**13 42 21.1**	**+0.4**
	comp=N,352nm,0.2s						
SRS	**Serrai**	**0.40**	**263**	P	**Pg**	**13 42 14.6**	**-0.1**
SRS				S	**Sg**	**13 42 20.8**	**+0.8**
SRS				AML	AML	13 42 21.4	
	comp=E,2393μm,0.3s						
SRS				AML	AML	13 42 21.9	
	comp=N,1983μm,0.2s						
SRS	**Serrai**	**0.40**	**263**	P	**Pg**	**13 42 14.7**	**-0.1**
SRS				S	**Sg**	**13 42 20.5**	**+0.4**
	comp=N,1μm,0.3s						
SRS	**Serrai**	**0.40**	**263**	*i* Pg	**Pg**	**13 42 14.6**	**-0.1**
SRS				*i* Sg	**Sg**	**13 42 20.9**	**+0.8**
MMB	**Musomiste**	**0.52**	**325**	P	**Pg**	**13 42 15.9**	**-1.1**
SOH	**Sokhos**	**0.67**	**240**	P	**Pg**	**13 42 19.8**	**-0.1**
SOH				AML	AML	13 42 35.5	
	comp=E,591μm,0.4s						
SOH				AML	AML	13 42 36.7	
	comp=N,888μm,0.4s						
SOH	**Sokhos**	**0.67**	**240**	P	**Pg**	**13 42 20.0**	**+0.1**
SOH				S	**Sg**	**13 42 29.6**	**+0.9**
	comp=N,295nm,0.4s						
SOH	**Sokhos**	**0.67**	**240**	*i* Pg	**Pg**	**13 42 19.9**	**-0.1**
SOH				*i* Sg	**Sb**	**13 42 29.9**	**-0.4**
RZN	**Rozhen**	**0.69**	**40**	P	**Pg**	**13 42 20.1**	**-0.2**
THAS	**Thassos island**	**0.72**	**141**	P	**Pg**	**13 42 20.9**	**+0.1**
THAS				S	**Sg**	**13 42 30.8**	**+0.6**
THAS				AML	AML	13 42 34.4	
	comp=N,1346μm,0.3s						
THAS				AML	AML	13 42 34.5	
	comp=E,1156μm,0.4s						
THAS	**Thassos island**	**0.72**	**141**	P	**Pg**	**13 42 21.1**	**+0.3**
THAS				S	**Sb**	**13 42 32.9**	**+1.3**
	comp=E,625nm,0.3s						
OUR	**Ouranopolis**	**0.83**	**187**	P	**Pg**	**13 42 23.3**	**+0.4**
OUR				S	**Sg**	**13 42 34.6**	**+0.7**
OUR				AML	AML	13 42 36.7	
	comp=E,998μm,0.3s						
OUR				AML	AML	13 42 36.8	
	comp=N,738μm,0.3s						
OUR	**Ouranopolis**	**0.83**	**187**	P	**Pg**	**13 42 23.4**	**+0.4**
OUR				S	**Sb**	**13 42 35.2**	**+0.3**
	comp=N,440nm,0.3s						
OUR	**Ouranopolis**	**0.83**	**187**	PG	**Pb**	**13 42 23.5**	**-0.1**
OUR				SG	**Sb**	**13 42 34.8**	**-0.1**
KNT	**Kendrikon**	**0.92**	**270**	P	**Pg**	**13 42 23.9**	**-0.7**
KNT				AML	AML	13 42 41.5	
	comp=E,332μm,0.3s						
KNT				AML	AML	13 42 43.6	
	comp=N,509μm,0.3s						
KNT	**Kendrikon**	**0.92**	**270**	P	**Pg**	**13 42 24.3**	**-0.4**
KNT				S	**Sg**	**13 42 36.1**	**-0.5**
	comp=N,212nm,0.3s						
KNT	**Kendrikon**	**0.92**	**270**	PG	**Pg**	**13 42 24.1**	**-0.6**
KNT	**Kendrikon**	**0.92**	**270**	*i* Pg	**Pg**	**13 42 24.1**	**-0.6**
KNT				*i* Sg	**Sg**	**13 42 36.5**	**-0.1**
PLG	**Polygyros**	**0.94**	**213**	P	**Pg**	**13 42 25.0**	**0.0**
PLG				AML	AML	13 42 41.8	
	comp=N,2066μm,0.4s						
PLG				AML	AML	13 42 41.8	
	comp=E,1861μm,0.4s						
PLG	**Polygyros**	**0.94**	**213**	P	**Pg**	**13 42 25.3**	**+0.3**
PLG				S	**Sb**	**13 42 38.3**	**+0.3**
HORT	**Hortiatis**	**0.96**	**234**	P	**Pg**	**13 42 24.7**	**-0.6**
HORT				S	**Sb**	**13 42 38.4**	**-0.1**
HORT				AML	AML	13 42 42.3	
	comp=N,204μm,0.2s						
HORT				AML	AML	13 42 42.6	
	comp=E,391μm,0.3s						
HORT	**Hortiatis**	**0.96**	**234**	P	**Pg**	**13 42 25.4**	**+0.1**
HORT				S	**Sb**	**13 42 38.7**	**+0.2**
	comp=E,142nm,0.3s						
HORT	**Hortiatis**	**0.96**	**234**	PG	**Pg**	**13 42 24.9**	**-0.4**
				SG	**Sb**	**13 42 38.9**	**+0.4**
THE	**Thessaloniki**	**1.02**	**239**	*i* Pg	**Pg**	**13 42 25.2**	**-1.3**
THE				*i* Sg	**Sb**	**13 42 40.9**	**+0.5**
PLD	**Plovdiv**	**1.04**	**25**	PG	**Pb**	**13 42 27.0**	**0.0**
PLD				SG	**Sb**	**13 42 41.1**	**+0.4**
PLD	**Plovdiv**	**1.04**	**25**	P	**Pn**	**13 42 27.5**	**-0.1**
PLD	**Plovdiv**	**1.04**	**25**	*i* Pg	**Pn**	**13 42 27.4**	**-0.3**
PLD				*i* Sg	**Sn**	**13 42 43.0**	**+0.7**
KKB	**Krupnik**	**1.05**	**312**	P	**Pg**	**13 42 25.8**	**-1.3**
RDO	**Rodhopi**	**1.07**	**90**	P	**Pb**	**13 42 26.7**	**-0.9**
RDO				S	**Sg**	**13 42 41.1**	**-0.3**
RDO				AML	AML	13 42 43.6	
	comp=N,436μm,0.5s						
RDO				AML	AML	13 42 45.5	
	comp=E,340μm,0.2s						
RDO	**Rodhopi**	**1.07**	**90**	P	**Pb**	**13 42 27.3**	**-0.3**
RDO				S	**Sb**	**13 42 41.8**	**+0.1**
RDO	**Rodhopi**	**1.07**	**90**	PN	**Pb**	**13 42 27.3**	**-0.3**
KDZ	**Kurdzhali**	**1.09**	**63**	PG	**Pb**	**13 42 26.2**	**-1.7**
KDZ	**Kurdzhali**	**1.09**	**63**	P	**Pb**	**13 42 26.3**	**-1.7**
VAY	**Valandovo**	**1.18**	**278**	*e*Pg	**Pg**	**13 42 30.6**	**+1.0**
VAY				*e*Sg	**Sn**	**13 42 45.9**	**+0.2**
VAY	**Valandovo**	**1.18**	**278**	*i* Pg	**Pg**	**13 42 30.5**	**+1.0**
VAY				*i* Sg	**Sn**	**13 42 46.7**	**+0.9**
VAY				*e*Lg	Lg	13 42 48.5	
	comp=N,31nm,0.4s						
SMTH	**Samothraki Isl**	**1.27**	**122**	P	**Pn**	**13 42 30.4**	**-0.5**
SMTH				S	**Sb**	**13 42 45.8**	**-1.8**
SMTH				AML	AML	13 42 49.6	
	comp=N,137μm,0.4s						
SMTH				AML	AML	13 42 50.0	
	comp=E,83μm,0.3s						
PAIG	**Paliouri**	**1.28**	**195**	P	**Pn**	**13 42 30.7**	**-0.3**
PAIG				S	**Sb**	**13 42 46.5**	**-1.2**
PAIG				AML	AML	13 42 51.3	
	comp=E,158μm,0.3s						
PAIG				AML	AML	13 42 52.4	
	comp=N,133μm,0.5s						
GRG	**Griva**	**1.31**	**261**	P	**Pn**	**13 42 31.3**	**-0.2**
GRG				AML	AML	13 42 54.8	
	comp=N,125μm,0.4s						
GRG				AML	AML	13 42 55.1	
	comp=E,146μm,0.4s						
GRG	**Griva**	**1.31**	**261**	PN	**Pn**	**13 42 31.4**	**-0.1**
GRG	**Griva**	**1.31**	**261**	*i* Pg	**Pg**	**13 42 32.9**	**+0.7**
ALN	**Alexandroupoli**	**1.48**	**100**	P	**Pn**	**13 42 33.9**	**+0.2**
ALN				S	**Sn**	**13 42 52.0**	**-1.2**
ALN				AML	AML	13 42 56.9	
	comp=E,66μm,0.3s						
ALN				AML	AML	13 43 01.1	
	comp=N,74μm,0.7s						
ALN	**Alexandroupoli**	**1.48**	**100**	PN	**Pn**	**13 42 33.9**	**+0.2**
LIA	**Limnos Island**	**1.50**	**147**	P	**Pn**	**13 42 33.6**	**-0.4**
LIA				S	**Sn**	**13 42 52.5**	**-1.1**
LIA				AML	AML	13 42 58.1	
	comp=N,302μm,0.4s						
LIA				AML	AML	13 42 58.2	
	comp=E,342μm,0.4s						
STIP	**Stip**	**1.55**	**291**	*i* Pg	**Pn**	**13 42 33.2**	**-1.4**
STIP				*i* Sg	**Sn**	**13 42 52.1**	**-2.7**
STIP				*e*Lg	Lg	13 42 54.4	
	comp=N,70nm,0.3s						
VTS	**Vitosha**	**1.60**	**336**	*e*Pg	**Pb**	**13 42 36.4**	**-0.3**
VTS				*e*Sg	**Sg**	**13 42 58.5**	**+0.2**
VTS	**Vitosha**	**1.60**	**336**	↑P	**Pb**	**13 42 36.2**	**-0.5**
VTS				↑S	**Sg**	**13 42 58.4**	**+0.1**
VTS	**Vitosha**	**1.60**	**336**	*i* Pg	**Pb**	**13 42 36.4**	**-0.3**
VTS				*i* Sg	**Sg**	**13 42 58.4**	**+0.1**
BOSS	**Bosilegrad**	**1.81**	**318**	*e*Pg	**Pb**	**13 42 39.8**	**-0.4**
BOSS				*e*Sg	**Sg**	**13 43 04.9**	**-0.2**
XOR	**Xorichti**	**1.93**	**202**	P	**Pn**	**13 42 40.0**	**0.0**
BOZC	**Bozcaada**	**1.98**	**131**	PN	**Pn**	**13 42 41.7**	**+1.1**
EDRB	**Edirne**	**2.09**	**70**	PN	**Pn**	**13 42 42.9**	**+0.8**
ZAPS	**Zavoj**	**2.38**	**333**	*e*Pn	**Pn**	**13 42 47.8**	**+1.7**
BARS	**Barje**	**2.38**	**315**	*e*Pn	**Pb**	**13 42 49.5**	**-0.5**
MAR4	**Marsite Statio**	**2.44**	**98**	PN	**Pn**	**13 42 47.7**	**+0.7**
AGG	**Agios Georgios**	**2.54**	**213**	PN	**Pn**	**13 42 49.0**	**+0.6**
MRMT	**Marmara Adasi**	**2.69**	**101**	PN	**Pn**	**13 42 51.6**	**+1.1**
MAR9	**Marsite Statio**	**2.77**	**100**	PN	**Pn**	**13 42 53.0**	**+1.6**
SELS	**Selova**	**3.03**	**314**	*e*Sg	**Pn**	**13 42 58.6**	**+3.5**
SELS	**Selova**	**3.03**	**314**	*e*Pn	**Sg**	**13 43 44.7**	**+0.4**
PDG	**Podgorica**	**3.85**	**291**	↓P	**Pn**	**13 43 05.5**	**-0.8**
ARP	**Arges**	**4.22**	**5**	↑P	**Pn**	**13 43 13.2**	**+1.7**
VOIR		**4.33**	**9**	↑P	**Pn**	**13 43 14.4**	**+1.5**
MLR	**Muntele Rosu**	**4.53**	**17**	↑P	**Pn**	**13 43 17.9**	**+2.2**
BZS	**Buzias**	**4.81**	**339**	↑P	**Pn**	**13 43 20.3**	**+0.8**
VRI	**Vrincioaia**	**5.07**	**21**	↓P	**Pn**	**13 43 25.1**	**+2.1**

DJA 16 13:47:02.5±0.4, 0°S±3°×127°3E±°, h74km±7km, M3.6/12, mb3.7/2, MLv3.6/12, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.80**	**186**	P	Pn	13 47 19.7	+0.8
LUWI				S	Sn	13 47 32.7	+1.7
GTOI	**Gorontalo**	**0.88**	**10**	P	Pn	13 47 21.3	+1.5
GTOI				S	Sn	13 47 35.3	+2.6
MRSI	**Marisa**	**1.16**	**308**	P	Pn	13 47 23.4	+0.1
APSI	**Ampana**	**1.38**	**241**	P	Pn	13 47 26.7	+0.6
APSI				S	Sn	13 47 44.4	+0.6
KMSI	**Cibinong**	**1.38**	**54**	P	Pn	13 47 26.4	+0.3
SANI	**Sanana**	**3.61**	**120**	P	Pn	13 47 55.8	-0.2
TTSI	**Tana Toraja**	**4.12**	**227**	P	Pn	13 48 02.7	-0.4
SPSI	**Sidrap Palu**	**4.82**	**220**	P	Pn	13 48 13.3	+0.7
BNSI	**Bone**	**4.96**	**214**	P	Pn	13 48 14.9	+0.3
NLAI	**Namlea**	**5.18**	**125**	P	Pn	13 48 17.7	+0.2

*IDC **16** 13:55:53.2±1.0, 1°.21S×126°.64E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.5/59, mbtmp3.8/8, ML3.9/1, Error ellipse: s-maj=33.8km s-min=17.5km az=68.0*

*DJA **16** 13:55:55.7±0.2, 1°.5±3°×127°.7E±°, h10km, M4.2/12, mb4.5/4, mB5.3/2, MLv4.0/12, Mw(mB)4.7/2*

ISC 16 13:55:58.4±0.8, 1°.05±0°.05×126°.76E±0°.06, h34km, n19, σ1°32/23, mb3.7/6, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANI	**Sanana**	**1.26**	**218**	P	**Pn**	**13 56 19.1**	**-0.6**
SANI				S	**Sn**	**13 56 36.3**	**+0.9**
TNTI	**Ternate**	**1.91**	**19**	P	**Pn**	**13 56 26.8**	**-1.7**
TNTI				S	**Sn**	**13 56 51.2**	**-0.2**
NLAI	**Namlea**	**2.20**	**171**	P	**Pn**	**13 56 32.7**	**+0.1**
NLAI				S	**Sn**	**13 56 58.2**	**-0.5**
LUWI	**Luwuk**	**3.99**	**270**	P	**Pn**	**13 56 56.9**	**-0.3**
SWI	**Sorong**	**4.50**	**88**	P	**Pn**	**13 57 04.4**	**+0.1**
SIJI	**Sorong**	**4.51**	**88**	Pn	**Pn**	**13 57 05.1**	**+0.8**
	5.0nm,0.3s,baz=82,slow=23,SNR=52						
SIJI				Sn	**Sn**	**13 57 59.0**	**+3.4**
	baz=213,slow=22,SNR=1.2						
BNDI	**Bandanaira**	**4.67**	**138**	P	**Pn**	**13 57 06.4**	**-0.1**
APSI	**Ampana**	**5.11**	**271**	P	**Pn**	**13 57 13.6**	**+0.9**
FAKI	**Fak Fak**	**5.79**	**109**	P	**Pn**	**13 57 20.8**	**-1.2**
	0.1nm23nm,0.8s						
TTSI	**Tana Toraja**	**7.22**	**254**	P	**Pn**	**13 57 42.2**	**+0.6**
	0.1nm39nm,1.1s						
BNSI	**Bone**	**7.43**	**243**	P	**Pn**	**13 57 45.5**	**+0.9**
	0.1nm11nm,0.5s						
SPSI	**Sidrap Palu**	**7.56**	**247**	P	**Pn**	**13 57 46.6**	**+0.3**
WRA	**Warramunga Arr**	**20.19**	**159**	P	**P**	**14 00 28.0**	**-2.4**
	2.2nm,0.6s,baz=340,slow=11,SNR=18						
ASAR	**

TOA0					IAmb	IAmb	14 38 34.3	
	comp=Z,2.7nm,0.9s							
TORD	**Torodi Ar. Bea**	**46.53 324**		P	**P**		**14 38 33.4**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=142,slow=6.8,SNR=6.5							
SNAA	**Sanae**	**48.41 192**		P	**P**		**14 38 45.4**	**-1.1**
SNAA					IAmb	IAmb	14 38 48.7	
	comp=Z,5.8nm,1.2s							
ESDC	**Sonseca Array**	**71.89 335**		P	**P**		**14 41 28.8**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=146,slow=6.3,SNR=4.5							
ESDC	**Sonseca Array**	**71.89 335**		IAmb	IAmb		14 41 30.1	
	comp=Z,1.4nm,1.1s							
CMAR	**Chiang Mai Arr**	**82.47 65**		P	**P**		**14 42 28.3**	**+0.7**
	comp=Z,0.1nm,0.6s,baz=224,slow=5.0,SNR=4.4							
NVAR	**Mina Array Bea**	**148.81 301**		PKPbc	**PKiKP**		**14 49 54.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=56,slow=4.8,SNR=2.5							

IDC ***16*** *14:49:29.9±1.1, 14°.48N×60°.48W, h72km±11km, mb3.3/6, mb1 3.5/6, mb1mx3.2/51, mbtmp3.6/6, Error ellipse: s-maj=30.9km s-min=9.0km az=88.0*
TRN ***16*** *14:49:30.9, 14°.44N×60°.51W, h75km, MD4.1*
TRN Felt in Saint Lucia, MMI II, III.
NEIC ***16*** *14:49:33.1±2.4, 14°.52N±0°.03×60°.38W±0°.05, h53km±19km, ML4.0/8, Error ellipse: s-maj=7.6km s-min=3.9km az=88.0*

ISC 16 14:49:30.6±0.8, 14°.45N±0°.03×60°.45W±0°.05, h76km±6km, n70, σ1§62/102, mb3.6/6, 9C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H05S1	**Guadeloupe/Mar**	**0.38 266**		P		**P**	**Pn**	**14 49 43.6**	**+0.7**
H05S1				S			**Sn**	**14 49 52.5**	**+0.5**
MPOM	**Morne Pois Mar**	**0.40 269**		⇑*iP*			**Pn**	**14 49 43.9**	**+0.8**
MPOM				*eS*			**Sn**	**14 49 53.3**	**+1.0**
MVM	**Montagne Vaucl**	**0.44 283**		*eP*			**Pn**	**14 49 44.5**	**+1.0**
LPMF	**Morne Lapointe**	**0.51 284**		⇑*eP*			**Pn**	**14 49 44.9**	**+0.8**
ILAM	**Ilet Lapin Mar**	**0.52 308**		*eP*			**Pn**	**14 49 45.1**	**+1.0**
ZAM	**Aeronautique**	**0.57 282**		⇑*eP*			**Pn**	**14 49 45.5**	**+0.9**
TRMF	**Trois Ilets**	**0.59 278**		⇑*eP*			**Pn**	**14 49 45.8**	**+1.0**
BIM	**Bigot**	**0.60 276**		*eP*			**Pn**	**14 49 46.1**	**+1.1**
BIM				*eS*			**Sn**	**14 49 57.2**	**+1.6**
SLW	**Petit Monier**	**0.64 228**		*eP*			**Pn**	**14 49 46.1**	**+0.7**
SLBI	**Saint Lucia, B**	**0.67 230**		*eP*			**Pn**	**14 49 46.2**	**+0.6**
SLBI				*eS*			**Sn**	**14 49 56.8**	**+0.2**
SLCP	**Castries, St.**	**0.69 230**		*eP*			**Pn**	**14 49 46.6**	**+0.8**
SLCP				*eS*			**Sn**	**14 49 57.2**	**+0.2**
FDF	**Fort de France**	**0.73 292**		⇑*iP*			**Pn**	**14 49 47.3**	**+0.9**
FDF				*eS*			**Sn**	**14 49 59.6**	**+1.5**
FDF	**Fort de France**	**0.73 292**					**Pn**	**14 49 47.1**	**+0.8**
FDF					Sn		**Sn**	**14 49 59.5**	**+1.4**
SLPA	**Patience**	**0.75 217**		*eP*			**Pn**	**14 49 47.2**	**+0.7**
SLPA				*eS*			**Sn**	**14 49 58.6**	**+0.3**
BAMF	**Morne Balai**	**0.77 298**		*eP*			**Pn**	**14 49 47.9**	**+1.1**
GBMF	**Grand Be**	**0.77 296**		⇑*eP*			**Pn**	**14 49 47.9**	**+1.0**
CXM	**Morne La Croix**	**0.78 297**		*eP*			**Pn**	**14 49 48.1**	**+1.1**
PML	**Morne Lenard**	**0.78 295**		⇑*eP*			**Pn**	**14 49 48.0**	**+1.1**
SVN	**Savane Anatole**	**0.79 299**		*eP*			**Pn**	**14 49 48.1**	**+1.1**
PCM	**Pelee Case Pet**	**0.82 296**		*eP*			**Pn**	**14 49 48.1**	**+0.8**
PCM	**Pelee Case Pet**	**0.82 296**		⇑*eP*			**Pn**	**14 49 48.5**	**+1.2**
SLB	**Belfond**	**0.85 225**		*eP*			**Pn**	**14 49 48.5**	**+0.9**
SLDE	**Delcer**	**0.88 222**		*eP*			**Pn**	**14 49 49.3**	**+1.3**
SLDE				*eS*			**Sn**	**14 50 01.9**	**+1.0**
MCLT	**Moule a Chique**	**0.88 213**		*eP*			**Pn**	**14 49 48.4**	**+0.3**
MCLT				*eS*			**Sn**	**14 50 00.7**	**-0.3**
MCLT	**Moule a Chique**	**0.88 213**			Pn		**Pn**	**14 49 48.4**	**+0.3**
DLPL	**La Plaine**	**1.16 319**		*eP*			**Pn**	**14 49 52.9**	**+1.4**
DLPL				*eS*			**Sn**	**14 50 08.4**	**+1.3**
DLPL	**La Plaine**	**1.16 319**			Pn		**Pn**	**14 49 53.1**	**+1.6**
SVV	**Soufriere Volc**	**1.35 213**		⇑*iP*			**Pn**	**14 49 55.1**	**+1.3**
SVV				*eS*			**Sn**	**14 50 12.2**	**+0.8**
DSLB	**Salisbury**	**1.35 316**		*eP*			**Pn**	**14 49 55.5**	**+1.6**
DSLB				*eS*			**Sn**	**14 50 13.3**	**+1.8**
SVB	**Belmont**	**1.41 214**		*eP*			**Pn**	**14 49 55.6**	**+1.0**
SVB				*eS*			**Sn**	**14 50 12.8**	**+0.1**
SVB	**Belmont**	**1.41 214**			Pn		**Pn**	**14 49 57.7**	**+3.1**
SVOC	**Richmond Hill,**	**1.50 210**		*eP*			**Pn**	**14 49 56.3**	**+0.5**
SVOC				*eS*			**Sn**	**14 50 15.3**	**+0.7**
BCHC	**Barbados, Cave**	**1.54 149**		*eP*			**Pn**	**14 49 58.5**	**+2.3**
BCHC				*eS*			**Sn**	**14 50 17.0**	**+1.4**
BBGH	**Gun Hill**	**1.56 146**		*eP*			**Pn**	**14 49 58.4**	**+1.8**
BBGH				*eS*			**Sn**	**14 50 18.5**	**+2.2**
BBGH	**Gun Hill**	**1.56 146**			Pn		**Pn**	**14 49 58.5**	**+1.8**
BBGH					Sn		**Sn**	**14 50 19.0**	**+2.7**
BBGH				IAML				14 50 20.1	
	2μm,0.6s								
BBGH				IAML				14 50 20.8	
	1μm,0.6s								
BBSP	**Saint Philip**	**1.65 144**		*eS*			**Sn**	**14 50 21.1**	**+2.7**
MAGL	**Barre de l'Ile**	**1.69 332**		⇓*iP*			**Pn**	**14 49 59.0**	**+0.7**
MAGL				*eS*			**Sn**	**14 50 20.0**	**+0.8**
TDBA	**Terre de Bas,**	**1.80 321**		*eP*			**Pn**	**14 50 01.1**	**+1.3**
TDBA				*eS*			**Sn**	**14 50 23.6**	**+1.8**
TBG	**Guadaloupe-3**	**1.81 320**		*eP*			**Pn**	**14 50 00.5**	**+0.6**
TBG				*eS*			**Sn**	**14 50 23.1**	**+1.1**
DEG	**La Desirade**	**1.94 342**		*eP*			**Pn**	**14 50 04.0**	**+2.3**
DEG				*eS*			**Sn**	**14 50 27.2**	**+1.9**
H05N1	**Guadeloupe/Mar**	**1.94 343**		P			**Pn**	**14 50 01.7**	**+0.1**
	SNR=17								
H05N1				S			**Sn**	**14 50 24.0**	**-1.3**
CBE	**Ff, Capester**	**1.96 325**		*eP*			**Pn**	**14 50 02.8**	**+1.0**
CBE				*eS*			**Sn**	**14 50 27.0**	**+1.3**
GCMP	**Grenada, Carri**	**2.17 206**		*eP*			**Pn**	**14 50 05.9**	**+1.1**
GCMP				*eS*			**Sn**	**14 50 31.8**	**+0.9**
ABD	**La Joyeuse, An**	**2.24 334**		*eP*			**Pn**	**14 50 06.9**	**+1.2**
ABD				*eS*			**Sn**	**14 50 33.6**	**+1.1**
GRGR	**Grenville**	**2.59 207**		*eP*			**Pn**	**14 50 11.9**	**+1.6**
GRGR				*eS*			**Sn**	**14 50 40.7**	**-0.2**
GRGR	**Grenville**	**2.59 207**					**Pn**	**14 50 12.1**	**+1.7**
GRGR					Sn		**Sn**	**14 50 44.8**	**+4.0**
GRGR				IAML				14 50 49.9	
	938nm,0.3s								
GRGR				IAML				14 50 50.6	
	642nm,0.5s								
MLYT	**Lee's Yard**	**2.81 324**		*eP*			**Pn**	**14 50 14.8**	**+1.5**
MLYT				*eS*			**Sn**	**14 50 47.4**	**+1.1**
ANBD	**Bethesda, Anti**	**2.87 334**		*eP*			**Pn**	**14 50 14.6**	**+0.5**
ANBD				*eS*			**Sn**	**14 50 47.7**	**0.0**
TOSP	**Speyside**	**3.14 182**		*eP*			**Pn**	**14 50 18.8**	**+1.0**
TOSP				*eS*			**Sn**	**14 50 54.5**	**+0.3**
TOSP	**Speyside**	**3.14 182**					**Pn**	**14 50 19.3**	**+1.5**
TPR	**Prospect**	**3.26 186**		*eP*			**Pn**	**14 50 21.1**	**+1.5**
ANWB	**Willy Bob**	**3.44 338**		*eP*			**Pn**	**14 50 23.8**	**+1.8**
ANWB				*eS*			**Sn**	**14 51 01.4**	**-0.2**
ANWB	**Willy Bob**	**3.44 338**			Pn		**Pn**	**14 50 22.6**	**+0.7**
TRN	**Trinidad (W)**	**3.90 194**		*eP*			**Pn**	**14 50 29.5**	**+1.4**
TRN				*eS*			**Sn**	**14 51 13.5**	**+0.8**
TBH	**Brigand Hill**	**3.99 189**		*eP*			**Pn**	**14 50 31.3**	**+1.8**
CUPR	**Culebra, Puert**	**6.02 310**			Pn		**Pn**	**14 51 00.5**	**+3.5**
MTP	**Monte Pirata**	**6.09 307**			Pn		**Pn**	**14 51 02.0**	**+3.9**
HUMP	**Col San Antoni**	**6.35 306**			Pn		**Pn**	**14 51 03.8**	**+2.2**
PDPR	**Patillas Dam,**	**6.42 304**			Pn		**Pn**	**14 51 07.2**	**+4.7**
CBYP	**Canovanas**	**6.43 307**			Pn		**Pn**	**14 51 06.3**	**+3.5**
AOPR	**Arecibo Observ**	**7.18 303**			Pn		**Pn**	**14 51 17.1**	**+4.1**
MLPR	**Magueyes Islan**	**7.23 300**			Pn		**Pn**	**14 51 15.4**	**+1.8**
SDDR	**Presa de Saban**	**11.31 295**			Pn		Pn	14 52 14.4	+5.0
PTGA	**Pitinga**	**15.10 178**		*eP*			**Pn**	**14 52 56.7**	**-3.0**
	6.8nm,0.3s,baz=343,slow=22,SNR=8.4								
PTGA				S			Sn	14 55 32.8	-13
	1.7nm,0.3s,baz=63,slow=23,SNR=4.6								
LPAZ	**La Paz**	**31.47 194**		P			**P**	**14 55 46.5**	**+0.5**
	0.7nm,0.6s,baz=352,slow=7.1,SNR=2.3								
PDAR	**Pinedale Array**	**50.59 314**		P			**P**	**14 58 20.8**	**-1.3**
	0.2nm,0.6s,baz=97,slow=7.4,SNR=2.8								
ESDC	**Sonseca Array**	**55.21 52**		P			**P**	**14 58 56.3**	**+0.3**
	0.5nm,0.7s,baz=265,slow=7.6,SNR=5.2								
TORD	**Torodi Ar. Bea**	**60.20 83**		P			**P**	**14 59 29.3**	**-2.0**
	0.7nm,0.9s,baz=287,slow=7.4,SNR=2.7								
YKA	**Yellowknife Ar**	**61.11 335**		P			**P**	**14 59 36.0**	**-0.6**
	0.1nm,0.5s,baz=107,slow=7.8,SNR=2.8								
FINES	**FINESS Array B**	**75.78 30**		P			**P**	**15 01 07.5**	**-0.6**
	1.7nm,0.9s,baz=268,slow=11,SNR=3.5								

IDC 16 14:53:10.0±2.2, 64°.71S×171°.98W, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.7/28, mbtmp3.7/4, ML3.4/1, MS3.5/4, Ms1 3.4/4, ms1mx3.1/21, Error ellipse: s-maj=77.9km s-min=42.4km az=51.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.14 202**		Pn			Pn	14 56 45.0	+0.2
	0.1nm,0.3s,baz=52,slow=17,SNR=11								
VNDA				LR			LR	15 00 25.9	
	comp=Z,86nm,20.3s,baz=320,slow=29								
RPZ	**Rata Peaks**	**23.10 327**		LR			LR	15 05 05.3	
	comp=Z,135nm,18.9s,baz=203,slow=31								
URZ	**Urewera**	**27.26 341**		LR			LR	15 07 56.5	
	comp=Z,86nm,20.3s,baz=211,slow=32								
MAW	**Mawson**	**42.33 208**		LR			LR	15 17 12.6	
	comp=Z,83nm,18.3s,baz=62,slow=34								
STKA	**Stephens Creek**	**43.40 296**		P			P	15 01 12.5	-1.5
	1.1nm,0.8s,baz=143,slow=15,SNR=1.8								
ASAR	**Alice Springs**	**53.75 293**		P			P	15 02 34.0	+0.2
	0.5nm,0.6s,baz=154,slow=7.3,SNR=10.0								
WRA	**Warramunga Arr**	**56.94 295**		P			P	15 02 57.6	+0.8
	0.6nm,0.8s,baz=157,slow=6.5,SNR=2.9								
TORD	**Torodi Ar. Bea**	**128.32 172**		PKP			PKPdf	15 12 17.3	-0.8
	0.8nm,1.0s,baz=197,slow=3.0,SNR=3.2								
SONM	**Songino Array**	**128.69 301**		PKP			PKPdf	15 12 18.2	+0.2
	0.2nm,0.6s,baz=118,slow=2.0,SNR=2.2								

RSNC ***16*** *14:54:05.5±0.9, 6°.79N×73°.13W, h149km±4km, ML3.2*
IDC ***16*** *14:54:07.4±3.5, 6°.68N×73°.63W, h189km±25km, mb2.7/2, mb1 3.2/2, mb1mx2.8/40, mbtmp3.2/2, Error ellipse: s-maj=89.9km s-min=33.2km az=84.0*

ISC 16 14:54:03.5±0.9, 6°.86N±0°.03×73°.11W±0°.05, h162km±6km, n27, σ1§35/49, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28 196**		*eP*			**Pn**	**14 54 25.7**	**+0.1**
BARC				*eS*			**Sn**	**14 54 40.8**	**-1.8**
BARC				*i*				14 54 42.3	
	comp=Z,220nm,0.4s								
PAMC	**Pamplona, Colo**	**0.62 40**		*eP*			**Pn**	**14 54 28.5**	**+1.1**
PAMC				*eS*			**Sn**	**14 54 45.7**	**0.0**
PAMC				*i*				14 54 47.7	
	comp=Z,191nm,0.4s								
BRRC	**Barranca, Sant**	**0.65 292**		⇑*iP*			**Pn**	**14 54 27.6**	**+0.7**
BRRC				*eS*			**Sn**	**14 54 44.7**	**-0.2**
BRRC				*i*				14 54 46.9	
	comp=Z,139nm,0.1s								
RUSC	**La Rusia**	**0.96 179**		⇓*eP*			**Pn**	**14 54 29.5**	**-0.1**
RUSC				*eS*			**Sn**	**14 54 48.0**	**-1.6**
RUSC				*i*				14 54 50.0	
	comp=Z,86nm,0.4s								
PTBC	**PUERTO BERRIO,**	**1.38 257**		*eP*			**Pn**	**14 54 32.2**	**-0.5**
PTBC				*eS*			**Sn**	**14 54 53.8**	**-1.5**
PTBC				*i*				14 55 00.9	
	comp=Z,324nm,0.4s								
OCAC	**Ocana**	**1.39 351**		*eP*			**Pn**	**14 54 34.0**	**+1.0**
OCAC				*eS*			**Sn**	**14 54 56.1**	**+0.3**
OCAC				*i*				14 55 01.4	
	comp=Z,394nm,0.3s								
SPBC	**San Pablo de B**	**1.54 219**		*eP*			**Pn**	**14 54 34.6**	**+0.2**
SPBC				*eS*			**Sn**	**14 54 56.7**	**-1.6**
SPBC				*i*				14 55 03.6	
	comp=Z,257nm,0.2s								
ZARC	**Zaragoza, Cauc**	**1.85 290**		*eP*			**Pn**	**14 54 38.1**	**+0.5**
ZARC				*eS*			**Sn**	**14 55 04.4**	**+0.4**
ZARC				*i*				14 55 10.2	
	comp=Z,181nm,0.5s								
SMLC	**San Martn de**	**2.15 334**		*eP*			**Pn**	**14 54 42.1**	**+1.0**
SMLC				*eS*			**Sn**	**14 55 10.4**	**+0.2**
SMLC				*i*				14 55 21.9	
	comp=Z,190nm,0.2s								
NORC	**Norcasia**	**2.17 234**		*eP*			**Pn**	**14 54 41.5**	**+0.1**
NORC				*eS*			**Sn**	**14 55 08.9**	**-1.7**
NORC				*i*				14 55 14.7	
	comp=Z,91nm,0.4s								
ROSC	**El Rosal**	**2.34 211**		P			**Pn**	**14 54 45.0**	**+1.4**
	comp=Z,31nm,0.3s,baz=311,slow=20,SNR=19								
ROSC					S		**Sn**	**14 55 14.5**	**-0.2**
	comp=Z,49nm,0.3s,baz=37,slow=20,SNR=5.6								
HELC	**Santa Helena**	**2.50 255**		*eP*			**Pn**	**14 54 46.9**	**+1.3**
HELC				*eS*			**Sn**	**14 55 17.7**	**-0.2**
HELC				*i*				14 55 23.9	
	comp=Z,66nm,0.3s								
UREC	**San Jos de Ur**	**2.57 290**		*eP*			**Pn**	**14 54 45.2**	**-0.8**
UREC				*eS*			**Sn**	**14 55 18.4**	**-0.5**
UREC				*i*				14 55 26.6	
	comp=Z,85nm,0.2s								
GUY2C	**Guyana, Caldas**	**2.77 234**		*eP*			**Pn**	**14 54 49.4**	**+0.4**
GUY2C				*eS*			**Sn**	**14 55 25.8**	**+1.7**
GUY2C				*i*				14 55 30.6	
	comp=Z,94nm,0.3s								
VILC	**Villavicencio,**	**2.79 192**		*eP*			**Pn**	**14 54 48.9**	**0.0**
VILC				*eS*			**Sn**	**14 55 23.0**	**-1.1**
VILC				*i*				14 55 31.0	
	comp=Z,54nm,0.3s								
PTGC	**Puerto Gaitan,**	**2.81 160**		*eP*			**Pn**	**14 54 48.4**	**-0.6**
PTGC				*i*				14 55 21.1	
	comp=Z,44nm,0.1s								
PTGC				*eS*			**Sn**	**14 55 21.2**	**-3.2**
RREF	**El Recreo**	**2.96 229**		*eS*			**Sn**	**14 55 30.0**	**+1.5**
CBOC	**Ciudad Bolivar**	**3.05 251**		*eP*			**Pn**	**14 54 53.2**	**+1.1**
CBOC				*eS*			**Sn**	**14 55 29.7**	**-0.1**
CBOC				*i*				14 55 41.2	
	comp=Z,35nm,0.5s								
DBBC	**Dabeiba**	**3.09 273**		*eP*			**Pn**	**14 54 53.1**	**+0.6**
DBBC				*eS*			**Sn**	**14 55 30.9**	**+0.4**
MOTC	**Monteria, Cord**	**3.17 307**		*eP*			**Pn**	**14 54 52.8**	**-0.7**
MOTC				*eS*			**Sn**	**14 55 31.0**	**-1.3**
ORTC	**Ortega, Tolima**	**3.62 216**		*eP*			**Pn**	**14 54 59.7**	**+0.4**
ORTC				*eS*			**Sn**	**14 55 42.0**	**-0.7**
ORTC				*i*				14 55 49.2	
	comp=Z,40nm,0.5s								
SJCC	**San Jacinto, C**	**3.65 326**		*eP*			**Pn**	**14 54 59.3**	**-0.3**
SJCC				*eS*			**Sn**	**14 55 40.4**	**-3.0**
SJCC				*i*				14 55 45.6	
	comp=Z,37nm,0.3s								
CAPC	**Capurgana**	**4.56 293**		*eP*			**Pn**	**14 55 09.1**	**-2.2**
CAPC				*eS*			**Sn**	**14 56 00.5**	**-3.9**
TXAR	**Lajitas Array**	**36.45 312**		P			**P**	**15 00 52.2**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=118,slow=11,SNR=1.6								
YKA	**Yellowknife Ar**	**63.23 340**		P			**P**	**15 04 15.2**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=133,slow=6.9,SNR=8.0								
ASAR	**Alice Springs**	**149.15 234**		PKPbc			**PKPdf**	**15 13 31.7**	**+2.4**
	comp=Z,0.5nm,0.9s,baz=113,slow=3.2,SNR=2.4								
WRA	**Warramunga Arr**	**150.37 241**		PKPbc			**PKPbc**	**15 13 36.4**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=106,slow=3.2,SNR=2.0								

IDC ***16*** *14:57:40.9±1.9, 6°.10N×92°.73E, h0km, mb3.5/5, mb1 3.7/7, mb1mx3.4/53, mbtmp3.5/7, ML3.7/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/34, Error ellipse: s-maj=71.1km s-min=20.7km az=64.0*

ISC 16 14:57:45.1±0.9, 6°.0N±0°.1×92°.6E±0°.1, h35km, n12, σ1§24/10, mb3.6/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.06 117**		Pn			**Pn**	**14 59 24.6**	**-1.5**
	1.1nm,0.3s,baz=1.1,slow=1.6,SNR=2.9								
PALK	**Pallekele**	**11.89 277**		Pn			Pn	15 00 39.4	+7.0
	0.5nm,0.3s,baz=303,slow=9.7,SNR=1.8								
PALK					Sn		**Sn**	**15 02 42.9**	**-1.0**
	0.2nm,0.3s,baz=218,slow=18,SNR=2.0								
PALK					LR		LR	15 04 07.0	
	comp=Z,23nm,21.2s,baz=230,slow=32								
CMAR	**Chiang Mai Arr**	**13.81 26**		Pn			**Pn**	**15 00 58.1**	**-0.4**
	0.1nm,0.3s,baz=230,slow=14,SNR=13								
H08S3	**Diego Garcia H**	**24.23 236**		T			T	15 28 43.7	
	baz=57,slow=75,SNR=150								
H08S2	**Diego Garcia H**	**24.23 236**		T			T	15 28 43.8	
	baz=57,slow=75,SNR=108								
H08S1	**Diego Garcia H**	**24.25 236**		T			T	15 28 45.7	
	baz=57,slow=75,SNR=60								
MKAR	**Makanchi Array**	**41.58 349**		P			**P**	**15 05 29.2**	**-0.2**
	0.2nm,0.5s,baz=163,slow=6.4,SNR=2.9								
SONM	**Songino Array**	**43.29 14**		P			**P**	**15 05 43.7**	**+0.2**
	0.2nm,0.4s,baz=163,slow=5.6,SNR=2.1								
ZALV	**Zalesovo Beam**	**48.20 354**		P			**P**	**15 06 22.4**	**+0.4**
	0.7nm,0.3s,baz=158,slow=8.9,SNR=5.3								
WRA	**Warramunga Arr**	**48.48 123**		P			**P**	**15 06 25.0**	**+0.3**
	0.7nm,1.1s,baz=312,slow=10,SNR=5.7								
WRA					PcP		**PcP**	**15 07 52.6**	**+2.0**
	0.8nm,1.2s,baz=317,slow=2.9,SNR=1.3								
ASAR	**Alice Springs**	**49.95 128**		P			**P**	**15 06 36.2**	**+0.3**
	0.5nm,0.8s,baz=302,slow=7.8,SNR=10								
ASAR					PcP		**PcP**	**15 07 57.6**	**+1.7**
	0.7nm,1.0s,baz=318,slow=3.3,SNR=2.7								
PMG	**Port Moresby**	**56.48 105**		LR			LR	15 35 23.0	
	comp=Z,34nm,18.6s,baz=266,slow=40								

BGR ***16*** *15:01:21.0±0.9, 43°.89N×10°.94E, h10km, ML3.7/4, Error ellipse: s-maj=21.1km s-min=14.5km az=112.0*
ROM ***16*** *15:01:22.8±0.1, 44°.195N±0°.006×10°.885E±0°.005, h10km, ML3.3/34, Mw3.3, Error ellipse: s-maj=0.6km s-min=0.4km az=20.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.16; $M_{\theta\theta}$=0.02; $M_{\phi\phi}$=0.18; $M_{r\theta}$=0.06; $M_{r\phi}$=0.85; $M_{\theta\phi}$=0.67; Fault plane solution: M_0=1.09066×10^{14} NP1:ϕ_S=273.00000°, δ51.00000°, λ-175.00000°. NP2:ϕ_S=180.00000°, δ86.00000°, λ-39.00000°.*
STR ***16*** *15:01:22.1±1.0, 44°.N±3°×1°.1E±°, h9km±8km, mb3.9/2, MLv3.6/19, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
PRU ***16*** *15:01:23.3±0.0, 44°.42N×10°.79E, h2km*
LDG ***16*** *15:01:23.7±0.1, 44°.15N×10°.95E, h14km, Md3.3/2, Ml3.4/31, Error ellipse: s-maj=3.5km s-min=3.1km az=21.0*
IDC ***16*** *15:01:23.9±4.2, 44°.23N×10°.94E, h20km±27km, mb3.4/4, mb1 3.6/9, mb1mx3.3/43, mbtmp3.6/9, ML3.3/5, MS3.0/2, Ms1 3.0/2, ms1mx2.4/37, Error ellipse: s-maj=30.2km s-min=12.9km az=107.0*
GEN ***16*** *15:01:23.1, 44°.20N×10°.90E, h14km±4km, Ml3.5*

ISC 16 15:01:22.6±0.6, 44°.21N±0°.02×10°.92E±0°.01, h17km±3km, n213, σ1§84/277, mb3.6/4, 11C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.14 15**		⇑*iP*			**Pb**	**15 01 27.1**	**+0.2**
ZCCA					AML	AML			
	comp=N,69550μm,0.4s								
ZCCA					AML	AML			
	comp=N,69500μm,0.4s								
ZCCA					AML	AML			
	comp=E,45900μm,0.9s								
ZCCA					AML	AML			
	comp=N,69550μm,0.4s								
ZCCA					AML	AML			
	comp=E,50200μm,0.9s								
ZCCA					AML	AML			
	comp=N,69550μm,0.4s								
ZCCA					AML	AML			
	comp=N,68750μm,0.4s								
ZCCA					AML	AML			
	comp=E,45900μm,0.9s								
ZCCA					AML	AML			
	comp=E,50200μm,0.9s								
FNVD	**Fontana Vidola**	**0.15 107**		⇓*iP*			**Pg**	**15 01 26.6**	**-0.2**
FNVD				S			**Sb**	**15 01 29.8**	**-0.3**
FNVD					AML	AML			
	comp=E,22400μm,1.6s								
FNVD					AML	AML			
	comp=N,26400μm,0.5s								
FNVD					AML	AML			
	comp=N,26400μm,0.5s								
FNVD					AML	AML			
	comp=E,22400μm,1.6s								
FNVD					END				
MTCR	**Monte La Croce**	**0.19 164**		⇑*iP*			**Pg**	**15 01 27.4**	**-0.1**
MTCR				S			**Sb**	**15 01 31.0**	**-0.3**
MTCR					AML	AML			
	comp=E,27250μm,0.7s								
MTCR					AML	AML			
	comp=N,17300μm,1.0s								
MTCR					AML	AML			
	comp=N,17300μm,1.0s								
MTCR					END				
POPM	**Popiglio**	**0.21 216**		P			**Pg**	**15 01 27.4**	**-0.1**
POPM				S			**Sg**	**15 01 31.3**	**+0.4**
POPM	**Popiglio**	**0.21 216**		⇑*iP

GRAM				S	Sb	15 01 46.1	+0.9
GRAM	**Graiana**	**0.68**	**295**	P	Pg	15 01 35.7	-0.2
GRAM				AML	AML		
	comp=N,6245µm,0.4s						
GRAM				AML	AML		
	comp=E,8300µm,0.4s						
OSSC	**Osservatorio P**	**0.73**	**161**	P	Pb	15 01 37.4	+0.5
OSSC				S	Sb	15 01 47.3	+0.7
OSSC				AML	AML		
	comp=E,2860µm,0.8s						
OSSC				AML	AML		
	comp=N,3665µm,1.2s						
OSSC				AML	AML		
	comp=N,3660µm,1.2s						
OSSC				AML	AML		
	comp=N,2775µm,0.8s						
OSSC				AML	AML		
	comp=E,3660µm,1.1s						
OSSC				AML	AML		
	comp=E,2860µm,0.7s						
CMPO	**Campotto Po**	**0.73**	**59**	AML	AML		
	comp=N,13200µm,0.7s						
CMPO				AML	AML		
	comp=E,8715µm,1.1s						
CMPO				AML	AML		
	comp=N,13200µm,0.8s						
CMPO				AML	AML		
	comp=E,8665µm,1.1s						
CMPO				AML	AML		
	comp=E,8720µm,1.1s						
SFI	**Santa Sofia**	**0.73**	**115**	P	Pb	15 01 37.2	+0.2
ASQU	**Asqua**	**0.75**	**123**	*i*P	Pb	15 01 37.6	+0.3
ASQU				S	Sn	15 01 48.7	-0.9
CSNT	**Castellina Chi**	**0.79**	**160**	P	Pb	15 01 38.2	+0.3
CSNT				S	Sb	15 01 48.7	+0.4
PLMA	**Palmaria, Port**	**0.79**	**258**	P	Pg	15 01 37.0	-1.0
PLMA				S	Sg	15 01 47.5	-1.0
PLMA				AML	AML		
	comp=E,2245µm,0.7s						
PLMA				AML	AML		
	comp=N,2380µm,0.4s						
SERM	**Sermide**	**0.84**	**18**	P	Pn	15 01 40.4	+0.7
CRE	**Caprese Michel**	**0.95**	**128**	*i*P	Pg	15 01 40.9	-0.1
MSSA	**Maissana**	**1.02**	**276**	P	Pb	15 01 41.4	-0.4
MSSA				AML	AML		
	comp=N,1965µm,0.9s						
MSSA				AML	AML		
	comp=N,1970µm,0.9s						
MSSA				AML	AML		
	comp=E,1365µm,0.5s						
SSP9	**Sansepolcro**	**1.08**	**126**	P	Pg	15 01 43.3	-0.3
GROG	**Isola di Gorgo**	**1.08**	**224**	P	Pb	15 01 41.9	-1.1
GROG				AML	AML		
	comp=E,818µm,1.2s						
GROG				AML	AML		
	comp=N,645µm,1.0s						
CPGN	**Carpegna, Ital**	**1.09**	**112**	P	Pg	15 01 44.4	+0.7
CPGN				AML	AML		
	comp=E,1845µm,0.7s						
CPGN				AML	AML		
	comp=N,2080µm,0.7s						
CPGN				AML	AML		
	comp=E,1955µm,1.3s						
CPGN				AML	AML		
	comp=N,2110µm,1.5s						
CPGN				AML	AML		
	comp=E,530µm,0.5s						
CPGN				AML	AML		
	comp=N,547µm,0.6s						
CPGN				AML	AML		
	comp=E,583µm,1.6s						
CPGN				AML	AML		
	comp=N,484µm,0.4s						
CPGN				AML	AML		
	comp=E,1845µm,0.7s						
CPGN				AML	AML		
	comp=N,2080µm,0.7s						
CPGN				AML	AML		
	comp=E,2020µm,1.3s						
CPGN				AML	AML		
	comp=N,2105µm,1.5s						
PARC	**Parchiule**	**1.10**	**120**	*i*P	Pn	15 01 43.5	+0.1
CAFI	**Castiglion Fio**	**1.16**	**139**	P	Pb	15 01 43.9	-0.4
BADI	**Badiali**	**1.19**	**126**	P	Pn	15 01 44.3	-0.2
GORR	**Gorreto**	**1.23**	**289**	P	Pb	15 01 46.2	+0.7
GORR	**Gorreto**	**1.23**	**289**	P	Pb	15 01 46.1	+0.5
GORR				AML	AML		
	comp=E,1780µm,0.4s						
GORR				AML	AML		
	comp=N,2285µm,0.5s						
TEOL	**Teolo**	**1.26**	**25**	ePg	Pn	15 01 45.4	-0.2
TEOL				eSg	Sg	15 02 04.1	+0.5
ATMI	**Monte Miggiano**	**1.31**	**132**	P	Pb	15 01 46.7	-0.2
NARO	**Abbazia di Nar**	**1.34**	**116**	P	Pg	15 01 47.9	-0.6
ATVO	**AVT- Monte Val**	**1.36**	**127**	P	Pn	15 01 46.4	-0.5
LEOD	**Capriano del C**	**1.37**	**336**	AML	AML		
	comp=E,1680µm,0.8s						
LEOD				AML	AML		
	comp=N,2095µm,0.5s						
CASP	**Castiglione de**	**1.42**	**182**	P	Pn	15 01 46.9	-0.9
CASP				AML	AML		
	comp=E,694µm,0.6s						
CASP				AML	AML		
	comp=N,459µm,0.5s						
FSSB	**Fossombrone**	**1.44**	**111**	P	Pg	15 01 49.8	-0.5
MARN	**Marana (Italy)**	**1.44**	**8**	ePg	Pn	15 01 48.2	+0.2
MARN				eSg	Sg	15 02 08.9	-0.2
BALD	**Monte Baldo**	**1.47**	**357**	ePg	Pb	15 01 49.8	0.0
GARGN	**Gargnano BS**	**1.49**	**353**	ePg	Pn	15 01 49.6	+0.8
MCIV	**Monte Civitell**	**1.53**	**159**	AML	AML		
	comp=E,487µm,0.7s						
MCIV				AML	AML		
	comp=N,461µm,1.3s						
EUCT	**Pavia**	**1.61**	**308**	AML	AML		
	comp=E,1730µm,1.2s						
EUCT				AML	AML		
	comp=N,3030µm,0.2s						
ARVD	**Arcevia**	**1.62**	**115**	P	Pb	15 01 51.6	-0.6
DOSS	**Dosso del Somm**	**1.68**	**6**	ePn	Pn	15 01 51.2	-0.2
PCP	**Piancastagn**	**1.74**	**282**	P	Pn	15 01 52.3	+0.2
PCP	**Piancastagn**	**1.74**	**282**	P	Pn	15 01 52.7	+0.5
PCP				AML	AML		
	comp=E,328µm,0.6s						
PCP				AML	AML		
	comp=N,388µm,0.8s						
CGRP	**Cima Grappa**	**1.78**	**20**	ePn	Pn	15 01 52.8	0.0
CGRP				eSn	Sb	15 02 17.4	+0.4
GAG1	**Gagliole**	**1.83**	**121**	AML	AML		
	comp=N,1748µm,1.3s						
GAG1				AML	AML		
	comp=E,2835µm,1.1s						
QLNO	**Quiliano**	**1.86**	**274**	P	Pn	15 01 54.9	+1.1
QLNO				AML	AML		
	comp=E,352µm,0.8s						
QLNO				AML	AML		
	comp=N,635µm,0.6s						
CSP1	**Cessapalombo**	**2.00**	**123**	P	Pn	15 01 56.3	+0.6
MUGIO	**Muggio**	**2.17**	**323**	AML	AML		
	comp=E,198µm,0.6s						
MUGIO				AML	AML		
	comp=N,250µm,1.5s						
PGF	**Pioggiola**	**2.18**	**221**	ePn	Pn	15 01 57.7	-0.5
PGF				eSn	Sn	15 02 21.2	-3.6
	comp=N,89nm,0.7s						
PGF	**Pioggiola**	**2.18**	**221**	P	Pn	15 01 57.8	-0.4
PGF	**Pioggiola**	**2.18**	**221**	S	Sn	15 02 23.5	-1.3
PGF	**Pioggiola**	**2.18**	**221**	P	Pn	15 01 57.4	-0.8
PGF				AML	AML		
	comp=E,157µm,1.0s						
PGF				AML	AML		
	comp=N,422µm,0.7s						
IMI	**Imperia**	**2.21**	**263**	AML	AML		
	comp=E,239µm,1.4s						
IMI				AML	AML		
	comp=N,384µm,1.0s						
VARE	**Varese**	**2.25**	**318**	AML	AML		
	comp=E,369µm,0.7s						
VARE				AML	AML		
	comp=N,350µm,0.5s						
SMPL	**Sampolo**	**2.43**	**210**	P	Pn	15 02 02.3	+0.7
SAOF	**Saorge**	**2.44**	**266**	P	Pn	15 02 01.4	-0.3
TUE	**Stuetta**	**2.52**	**334**	AML	AML		
	comp=N,252µm,0.7s						
TUE				AML	AML		
	comp=N,172µm,0.4s						
TUE				AML	AML		
	comp=E,202µm,1.4s						
TUE				AML	AML		
	comp=E,245µm,1.3s						
SBF	**Sospel**	**2.54**	**263**	*e*Pn	Pn	15 02 03.3	+0.1
SBF	**Sospel**	**2.54**	**263**	*e*P	Pb	15 02 06.2	-1.6
SBF				*e*Sn	Sn	15 02 34.3	+0.5
	comp=E,133nm,0.4s						
TURF	**col de Turini**	**2.56**	**266**	P	Pn	15 02 03.7	+0.3
SKDS	**Skadanscina**	**2.57**	**58**	*i*Pn	Pn	15 02 03.0	-0.5
SKDS				*i* Sn	Sn	15 02 33.5	-0.9
SKDS				IAML		15 02 55.8	
	comp=Z,115nm,0.6s						
STV	**Sant Anna di V**	**2.59**	**272**	AML	AML		
	comp=N,140µm,0.7s						
STV				AML	AML		
	comp=E,130µm,1.1s						
ESCA	**l'Escarene**	**2.59**	**263**	P	Pn	15 02 02.3	-1.5
TRAV	**Traversella**	**2.61**	**301**	AML	AML		
	comp=E,241µm,1.0s						
TRAV				AML	AML		
	comp=N,216µm,1.4s						
DAVOX	**Davos/Dischmat**	**2.67**	**344**	Pn	Pn	15 02 07.1	+2.0
	comp=N,3.7nm,0.3s,baz=179,slow=10.0,SNR=21						
DAVOX				Lg	Lg	15 02 47.8	
	comp=N,8.5nm,0.3s,baz=310,slow=23,SNR=5.9						
PZZ	**Stroppo**	**2.75**	**277**	AML	AML		
	comp=E,206µm,0.5s						
PZZ				AML	AML		
	comp=N,228µm,0.7s						
ABTA	**Abfaltersbach**	**2.77**	**23**	*e*Pn	Pn	15 02 08.6	+2.2
	comp=N,18nm,0.3s,SNR=14						
ABTA				*e*Sn	Sn	15 02 41.3	+1.8
	comp=N,107nm,0.7s						
FETA	**Feichten**	**2.81**	**357**	*i* Pn	Pn	15 02 09.7	+2.7
	comp=N,15nm,0.3s,SNR=10						
FETA				*e*Sn	Sn	15 02 44.0	+3.4
	comp=N,28nm,0.7s						
CALF	**Calern**	**2.92**	**262**	P	Pn	15 02 08.0	-0.6
SURF	**Saint Ours**	**2.96**	**277**	P	Pn	15 02 10.2	+1.2
SQTA	**Sankt Quirin**	**3.02**	**4**	*i* Pn	Pn	15 02 12.5	+2.7
	comp=N,46nm,0.3s,SNR=15						
SQTA				*e*Sn	Sn	15 02 48.1	+2.5
	comp=N,88nm,0.5s						
MBDF	**Montbardon**	**3.02**	**281**	*e*Pn	Pn	15 02 10.9	+1.1
MBDF	**Montbardon**	**3.02**	**281**	*e*P	Pn	15 02 13.4	+3.6
MBDF				*e*Sn	Sn	15 02 47.0	+1.3
	comp=N,58nm,0.6s						
MYKA	**Terra Mystica**	**3.08**	**37**	*i* Pn	Pn	15 02 11.6	+1.0
	comp=N,6.3nm,0.2s,SNR=6.3						
MYKA				*e*Sn	Sn	15 02 48.8	+1.7
	comp=N,32nm,0.4s						
WTTA	**Wattenberg**	**3.09**	**9**	*i* Pn	Pn	15 02 13.4	+2.6
	comp=N,20nm,0.2s,SNR=11						
WTTA				*i* Sn	Sn	15 02 51.1	+3.5
	comp=N,57nm,0.5s						
WTTA	**Wattenberg**	**3.09**	**9**	*e*Pn	Pn	15 02 13.5	+2.6
WTTA				*e*Sn	Sb	15 02 52.3	-2.5
MOTA	**Moosalm**	**3.13**	**2**	*e*Pn	Pn	15 02 13.6	+2.2
	comp=N,4.3nm,0.2s,SNR=6.9						
MOTA				*e*Sn	Sn	15 02 52.6	+4.0
	comp=N,38nm,0.6s						
OGAG	**Argentiere**	**3.15**	**276**	P	Pn	15 02 15.1	+3.4
WATA	**Walderalm**	**3.16**	**8**	*i* Pn	Pn	15 02 14.6	+2.8
	comp=N,22nm,0.2s,SNR=17						
WATA				*e*Sn	Sn	15 02 51.6	+2.5
	comp=N,62nm,0.5s						
DAVA	**Damuels**	**3.16**	**347**	*i* Pn	Pn	15 02 14.8	+3.0
	comp=N,9.8nm,0.3s						
DAVA				*i* Sn	Sn	15 02 53.1	+3.9
	comp=N,33nm,0.5s						
DAVA	**Damuels**	**3.16**	**347**	*e*Pn	Pn	15 02 14.6	+2.8
FRF	**La Foret Royal**	**3.16**	**260**	*e*Pn	Pn	15 02 11.4	-0.2
FRF	**La Foret Royal**	**3.16**	**260**	*e*P	Pn	15 02 14.6	+3.0
FRF				*e*Sn	Sn	15 02 48.3	-0.7
	comp=N,21nm,0.3s						
BNALP	**Bannalp**	**3.19**	**327**	AML	AML		
	comp=E,109µm,0.8s						
BNALP				AML	AML		
	comp=N,120µm,0.7s						
ZUGS	**Zugspitze, Sch**	**3.20**	**1**	*e*Pn	Pn	15 02 15.0	+2.5
ZUGS				*e*Sn	Sn	15 02 52.9	+2.5
OBER	**Oberstdorf**	**3.23**	**352**	*e*Pn	Pn	15 02 15.7	+3.0
LPG	**La Plagne**	**3.23**	**295**	*e*Pn	Pn	15 02 13.7	+0.8
LPG	**La Plagne**	**3.23**	**295**	*e*P	Pn	15 02 16.9	+4.0
LPG				*e*Sn	Sn	15 02 52.5	+1.3
	comp=N,60nm,0.7s						
LPL	**La Plagne**	**3.25**	**295**	*e*Pn	Pn	15 02 13.9	+0.8
LPL	**La Plagne**	**3.25**	**295**	*e*P	Pn	15 02 16.9	+3.8
LPL				*e*Sn	Sn	15 02 52.5	+0.9
	comp=N,48nm,0.6s						
RETA	**Reutte**	**3.28**	**358**	*e*Pn	Pn	15 02 15.4	+2.1
	comp=N,14nm,0.3s,SNR=8.4						
RETA				*i* Sn	Sn	15 02 55.4	+3.4
	comp=N,26nm,0.5s						
PART	**Garmisch-Parte**	**3.29**	**2**	*e*Pn	Pn	15 02 15.7	+2.2
PART				*e*Sn	Sn	15 02 54.4	+2.2
LMR	**La Mourre**	**3.32**	**256**	*e*Pn	Pn	15 02 13.4	-0.4
LMR	**La Mourre**	**3.32**	**256**	*e*P	Pn	15 02 16.6	+2.8
LMR				*e*Sn	Sn	15 02 52.6	-0.2
	comp=N,42nm,0.4s						
KBA	**Koelnbreinsper**	**3.33**	**30**	*e*Pn	Pn	15 02 15.9	+1.8
	comp=N,6.0nm,0.3s						
KBA				*e*Sn	Sn	15 02 55.5	+2.1
	comp=N,31nm,0.4s						
OBKA	**Obir**	**3.44**	**47**	*e*Pn	Pn	15 02 16.0	+0.5
	comp=N,3.9nm,0.3s						
OBKA				*e*Sn	Sn	15 02 57.9	+2.0
	comp=N,50nm,0.4s						
UBR	**Ueberruh**	**3.52**	**351**	*e*Pn	Pn	15 02 18.9	+2.3
UBR				*e*Sn	Sn	15 02 59.7	+1.9
GDM	**Grand'Maison**	**3.57**	**288**	P	Pn	15 02 22.1	+4.7
ORIF	**Oris-en-Rattie**	**3.67**	**283**	*e*P	Pn	15 02 22.6	+3.8
ORIF				*e*Sn	Sn	15 03 03.2	+1.4
	comp=N,87nm,0.7s						
ORIF	**Oris-en-Rattie**	**3.67**	**283**	P	Pn	15 02 22.3	+3.5
ORIF	**Oris-en-Rattie**	**3.67**	**283**	AML	AML		
	comp=N,62µm,1.5s						
ORIF				AML	AML		
	comp=E,68µm,0.5s						
ASEAF	**Site Antares,**	**3.74**	**249**	P	Pn	15 02 19.4	+0.1
RJOB	**Jochberg**	**3.76**	**20**	*e*Pn	Pn	15 02 22.4	+2.5
RJOB				*e*Sn	Sn	15 03 07.4	+3.5
SOKA	**Soboth**	**3.80**	**48**	*i* Pn	Pn	15 02 21.1	+0.6
	comp=E,8.0nm,0.6s,SNR=7.8						
SOKA				*e*Sn	Sn	15 03 04.9	+0.1
	comp=E,13nm,0.5s						
BSTF	**la Bastide-des**	**3.82**	**267**	P	Pn	15 02 21.9	+1.1
GRN	**Grenoble**	**3.83**	**287**	P	Pn	15 02 25.2	+4.3
BALST	**Balsthal**	**3.85**	**325**	P	Pn	15 02 22.7	+1.4
SMRF	**Simiane la Rot**	**3.86**	**268**	*e*Pn	Pn	15 02 21.4	+0.1
SMRF				*e*Sn	Sn	15 03 05.6	-0.7
	comp=E,27nm,0.5s						
SLE	**Schleitheim**	**3.94**	**335**	P	Pn	15 02 24.0	+1.7
OGSM	**Saint Maurice**	**3.97**	**292**	P	Pn	15 02 25.6	+2.9
BOURR	**Bourrignon**	**4.10**	**322**	P	Pn	15 02 26.1	+1.5
BRANT	**Les Verrieres**	**4.15**	**313**	P	Pn	15 02 27.3	+2.0
CABF	**La Chapelle**	**4.17**	**307**	*e*Pn	Pn	15 02 27.2	+1.7
CABF				*e*Sn	Sn	15 03 13.4	-0.5
	comp=E,32nm,0.7s						
FELD	**Feldberg im Sc**	**4.19**	**332**	P	Pn	15 02 27.5	+1.6
LOMF	**Lomont**	**4.25**	**319**	S	Sn	15 03 14.2	-1.7
KIZ	**Kirchzarten**	**4.29**	**332**	P	Pn	15 02 28.5	+1.3
MOA	**Molln**	**4.32**	**31**	*e*Pn	Pn	15 02 29.0	+1.4
	comp=E,6.6nm,0.2s,SNR=7.2						
MOA				*e*Sn	Sn	15 03 19.1	+1.5
	comp=E,12nm,0.3s						
ARSA	**Arzberg**	**4.43**	**45**	*i* Pn	Pn	15 02 29.3	+0.2
	comp=E,11nm,0.3s,SNR=8.2						
ARSA				*e*Sn	Sn	15 03 19.1	-1.1
	comp=E,11nm,0.5s						
BFO	**Black Forest**	**4.49**	**337**	P	Pn	15 02 31.1	+1.1
BFO	**Black Forest**	**4.49**	**337**	P	Pn	15 02 31.1	+1.1
BFO				S	Sn	15 03 19.9	-2.0
BFO	**Black Forest**	**4.49**	**337**	P	Pn	15 02 31.1	+1.1
BFO	**Black Forest**	**4.49**	**337**	*e*Pn	Pn	15 02 30.7	+0.7
MOF	**Molkenrain**	**4.50**	**325**	P	Pn	15 02 31.4	+1.3
VIVF	**Saint-Julien-l**	**4.52**	**280**	*e*Pn	Pn	15 02 31.2	+0.9
VIVF	**Saint-Julien-l**	**4.52**	**280**	*e*P	Pn	15 02 34.4	+4.1
VIVF				*e*Sn	Sn	15 03 22.5	+0.1
	comp=E,10.0nm,0.4s						
HINF	**Hinteralfeld**	**4.59**	**323**	*e*Pn	Pn	15 02 31.2	-0.1
HINF	**Hinteralfeld**	**4.59**	**323**	*e*P	Pn	15 02 35.4	+4.1
HINF				*e*Sn	Sn	15 03 23.9	-0.3
	comp=E,26nm,0.5s						
SSB	**Saint Sauveur**	**4.67**	**285**	P	Pn	15 02 34.8	+2.4
OPP	**Oppenau**	**4.69**	**337**	P	Pn	15 02 33.5	+0.9
ECH	**Echery**	**4.78**	**328**	P	Pn	15 02 34.7	+0.7
ECH	**Echery**	**4.78**	**328**	P	Pn	15 02 35.0	+1.1
ECH	**Echery**	**4.78**	**328**	P	Pn	15 02 34.7	+0.7
WLS	**Welschbruch**	**4.88**	**331**	P	Pn	15 02 36.4	+1.2
CDF	**Champ du Feu**	**4.90**	**330**	*e*Pn	Pn	15 02 35.8	+0.2
CDF	**Champ du Feu**	**4.90**	**330**	*e*P	Pn	15 02 40.5	+4.9
CDF				*e*Sn	Sn	15 03 31.3	-0.7
	comp=E,21nm,0.5s						
HAU	**Haudompre**	**4.95**	**322**	*e*Pn	Pn	15 02 36.5	+0.2
HAU	**Haudompre**	**4.95**	**322**	*e*P	Pn	15 02 40.6	+4.3
HAU				*e*Sn	Sn	15 03 31.9	-1.2
	comp=E,38nm,0.4s						
GEC2	**GERESS Array S**	**5.01**	**21**	*e*Pn	Pn	15 02 37.7	+0.5
GEC2				*e*Sn	Sn	15 03 32.8	-2.0
GERES	**GERESS Array B**	**5.01**	**21**	Pn	Pn	15 02 37.0	-0.2
	comp=E,1.9nm,0.3s,baz=193,slow=12,SNR=36						
GERES				Sn	Sn	15 03 32.9	-1.9
	comp=E,4.9nm,0.3s,baz=199,slow=24,SNR=14						
CONA	**Conrad Observa**	**5.06**	**41**	*i* Pn	Pn	15 02 38.1	+0.3
	comp=E,12nm,0.5s,SNR=16						
CONA				*e*Sn	Sn	15 03 38.0	+2.1
	comp=E,13nm,0.4s						
LASF	**Ste Croix**	**5.09**	**271**	*e*Pn	Pn	15 02 38.7	+0.5
LASF	**Ste Croix**	**5.09**	**271**	*e*P	Pn	15 02 42.3	+4.1
LASF				*e*Sn	Sn	15 03 36.4	-0.1
	comp=E,7.5nm,0.7s						
WET	**Wettzell**	**5.11**	**15**	*e*Pn	Pn	15 02 38.6	+0.1
CKRC	**Cesky Krumlov**	**5.17**	**26**	*e*Pn	Pn	15 02 39.2	0.0
CKRC				*e*SN	Sn	15 03 37.0	-1.4
KHC	**Kasperske Hory**	**5.25**	**19**	*e*Pn	Pn	15 02 40.9	+0.6
KHC				*e*SN	Sn	15 03 37.6	-2.9
SMF	**Signal de Mont**	**5.55**	**298**	*e*Pn	Pn	15 02 44.3	-0.1
SMF	**Signal de Mont**	**5.55**	**298**	*e*P	Pn	15 02 49.5	+5.1
SMF				*e*Sn	Sn	15 03 47.1	-0.7
	comp=E,14nm,0.4s						
SMF				*e*Sg	Sg	15 04 21.4	+0.8
	comp=E,8.4nm,0.6s						
PAGF	**Fort de Pagny**	**5.64**	**322**	*e*Pn	Pn	15 02 46.3	+0.6
PAGF	**Fort de Pagny**	**5.64**	**322**	*e*P	Pn	15 02 50.5	+4.8
PAGF				*e*Sn	Sn	15 03 48.6	-1.4
	comp=E,14nm,0.3s						
SFTF	**Sexfontaines**	**5.71**	**316**	*e*Pn	Pn	15 02 47.7	+1.0
	baz=133						
SFTF	**Sexfontaines**	**5.71**	**316**	*e*P	Pn	15 02 51.2	+4.5
SFTF				*e*Sn	Sn	15 03 50.8	-1.0
	comp=E,9.8nm,0.3s						
LOR	**Lormes**	**5.81**	**304**	*e*Pn	Pn	15 02 49.0	+0.9
	baz=122						
LOR				*e*Sn	Sn	15 03 54.7	+0.3
	comp=E,15nm,0.4s						
LOR	**Lormes**	**5.81**	**304**	P	Pn	15 02 49.8	+1.7
ZST	**Bratislava**	**5.85**	**45**	*e*PN	Pn	15 02 48.7	+0.1
ZST				*e*SN	Sn	15 03 53.4	-1.9
PBCC	**Pribram**	**5.87**	**20**	*e*PN	Pn	15 02 48.5	-0.3
MEZF	**Maizieres J'vi**	**5.91**	**319**	*e*Pn	Pn	15 02 50.2	+0.8
	baz=138						
MEZF	**Maizieres J'vi**	**5.91**	**319**	*e*P	Pn	15 02 54.7	+5.3
MEZF				*e*Sn	Sn	15 03 56.2	-0.5
	comp=E,10nm,0.4s						
AVF	**Avril sur Loir**	**5.91**	**298**	*e*Pn	Pn	15 02 49.8	+0.4
SSF	**Saint Saulge**	**5.93**	**301**	*e*Pn	Pn	15 02 50.6	+0.9
SSF				*e*Sn	Sn	15 03 55.7	-1.5
	comp=E,5.3nm,0.3s						
SAVF	**Savonnieres en**	**5.96**	**320**	*e*Pn	Pn	15 02 51.2	+1.2
	baz=138						
SAVF	**Savonnieres en**	**5.96**	**320**	*e*P	Pn	15 02 55.3	+5.3
SAVF				*e*Sn	Sn	15 03 57.1	-0.7
	comp=E,14nm,0.5s						
MODS	**Modra-Piesok**	**6.06**	**44**	*e*PN	Pn	15 02 50.3	-1.1
MODS				*e*SN	Sn	15 03 56.5	-3.9
NKC	**Novy Kostel**	**6.11**	**9**	*e*PN	Pn	15 02 51.3	-0.9
NKC				*e*SN	Sn	15 03 57.4	-4.3
BGF	**Bois d'Agland**	**6.15**	**295**	*e*Pn	Pn	15 02 53.2	+0.4
BGF	**Bois d'Agland**	**6.15**	**295**	*e*P	Pn	15 02 56.6	+3.8
BGF				*e*Sn	Sn	15 04 01.0	-1.7
	comp=E,13nm,0.4s						
SMOL	**Smolenice**	**6.22**	**44**	*e*PN	Pn	15 02 54.2	+0.5
SMOL				*e*SN	Sn	15 04 02.5	-2.0
PRU	**Pruhonice**	**6.28**	**22**	*e*PN	Pn	15 02 54.4	-0.1
PRU				*e*SN	Sn	15 04 01.6	-4.3
MTLF	**Montolieu**	**6.36**	**265**	*e*Pn	Pn	15 02 56.3	+0.6
MTLF	**Montolieu**	**6.36**	**265**	*e*P	Pn	15 02 59.6	+3.9
MTLF				*e*Sn	Sn	15 04 06.4	-1.5
	comp=E,5.9nm,0.5s						
MTLF	**Montolieu**	**6.36**	**265**	P	Pn	15 02 56.6	+0.9
CAF	**Calviac**	**6.37**	**280**	*e*Pn	Pn	15 02 56.1	+0.3
CAF	**Calviac**	**6.37**	**280**	*e*P	Pn	15 03 00.1	+4.3
CAF				*e*Sn	Sn	15 04 07.3	-0.8
	comp=E,8.3nm,0.5s						
VRAC	**Vranov**	**6.41**	**35**	Sn	Sn	15 04 03.2	-5.9
	comp=E,0.8nm,0.3s,baz=294,slow=16,SNR=2.2						
VRAC				Lg	Lg	15 04 45.1	
	comp=E,0.5nm,0.3s,baz=103,slow=19,SNR=3.7						
TCF	**Toulx Ste Croi**	**6.49**	**292**	*e*Pn	Pn	15 02 57.6	+0.2
TCF				*e*Sn	Sn	15 04 10.6	-0.5
	comp=E,5.4nm,0.5s						
FNEB	**Nbias**	**6.54**	**262**	P	Pn	15 02 57.2	-0.9
HYF	**Humbligny**	**6.55**	**301**	*e*Pn	Pn	15 02 58.6	+0.4
HYF				*e*Sn	Sn	15 04 10.9	-1.7
KOLL	**Kolacno**	**6.77**	**47**	*e*PN	Pn	15 03 01.0	-0.2
KOLL				*e*SN	Sn	15 04 13.2	-4.6
RJF	**Les Rejaudoux**	**6.79**	**283**	*e*P	Pn	15 03 06.8	+5.3
VYHS	**Vyhne**	**6.95**	**49**	*e*PN	Pn	15 03 02.9	-0.8
VYHS				*e*SN	Sn	15 04 15.7	-6.6
BRG	**Berggiesshubel**	**6.97**	**16**	Pn	Pn	15 03 04.6	+0.7
BRG				Amp		15 03 06.3	
	comp=Z,6.2nm,0.6s						
BRG				*ex*	x	15 04 21.2	
BRG				*ex*	x	15 05 04.3	
BRG				Amp		15 05 20.0	
	comp=Z,7.5nm,1.1s						
DPC	**Dobruska-Polom**	**7.15**	**29**	*e*PN	Pn	15 03 06.0	-0.5
DPC				*e*SN	Sn	15 04 22.8	-4.5
CLL	**Collm**	**7.24**	**10**	*e*P

USAK				*i*	S	**Sg**	**15 20 00.1**	**-1.5**
DST	**Dursunbey**	**0.60**	**319**		P	**Pg**	**15 19 58.9**	**+0.3**
DURS	**Dursunbey**	**0.68**	**312**	*i*	P	**Pg**	**15 20 00.7**	**+0.7**
ANDZ	**Kutahya, Merke**	**0.70**	**59**	*i*	P	**Pg**	**15 20 01.2**	**+0.8**
ANDZ				*i*	S	**Sg**	**15 20 08.2**	**-1.4**
KULA	**Kula-Manisa**	**0.73**	**210**		P	**Pg**	**15 20 01.1**	**+0.1**
KULA					S	**Sg**	**15 20 10.5**	**-0.1**
KULA	**Kula-Manisa**	**0.73**	**210**		PG	**Pg**	**15 20 01.1**	**+0.1**
KUTH	**Kutahya**	**0.73**	**70**		PG	**Pg**	**15 20 01.3**	**+0.3**
MANT	**Manisa**	**0.79**	**214**	*i*	P	**Pg**	**15 20 02.3**	**+0.1**
MANT				*i*	S	**Sg**	**15 20 08.2**	**-4.5**
ORLT	**Orhaneli**	**0.92**	**349**		PG	**Pg**	**15 20 04.6**	**+0.2**
AFYO	**Afyonkarahisar**	**0.98**	**111**	*i*	P	**Pn**	**15 20 07.2**	**+1.3**
AFYO				*i*	S	**Sg**	**15 20 16.0**	**-2.6**
ULDT	**Uludag**	**0.99**	**0**	*i*	P	**Pg**	**15 20 06.4**	**+0.5**
ULDT				*i*	S	**Sg**	**15 20 16.3**	**-2.7**
AUBOZ	**BOZOYUK**	**1.03**	**42**		PG	**Pg**	**15 20 07.0**	**+0.3**
GOMA	**Golmarmara-Man**	**1.04**	**245**		PG	**Pg**	**15 20 06.6**	**-0.2**
BALB	**Balikesir**	**1.09**	**297**		PG	**Pb**	**15 20 08.1**	**+1.0**
BILE	**Bilecik/Merkez**	**1.16**	**29**	*i*	P	**Pb**	**15 20 09.8**	**+1.3**
BILE				*i*	S	**Sb**	**15 20 21.1**	**-2.3**
CAVI	**Cavuskoy**	**1.19**	**27**		PN	**Pb**	**15 20 09.9**	**+1.0**
KZIL	**AFYON_Kizioren**	**1.19**	**138**	*i*	P	**Pb**	**15 20 10.1**	**+1.2**
KZIL				*i*	S	**Sb**	**15 20 20.7**	**-3.5**
BORA	**Eskisehir**	**1.26**	**54**		PN	**Pn**	**15 20 11.2**	**+1.5**
SHUT	**Suhut-Afyon**	**1.26**	**118**		PN	**Pb**	**15 20 11.6**	**+1.5**
KCTX	**Karacabey (Bur**	**1.27**	**332**		PN	**Pn**	**15 20 10.9**	**+1.2**
GEMT	**Gemlik**	**1.29**	**2**		PN	**Pn**	**15 20 11.2**	**+1.2**
BALY	**Balya**	**1.31**	**297**	*i*	P	**Pn**	**15 20 11.2**	**+0.8**
BALY				*i*	S	**Sb**	**15 20 22.6**	**-5.0**
ADVT	**Abdulvahap**	**1.37**	**20**		PN	**Pn**	**15 20 12.7**	**+1.6**
SGAZ	**Eskisehir, Sey**	**1.38**	**73**	*i*	S	**Sb**	**15 20 25.9**	**-3.7**
BASM	**Basmaki-Afyon**	**1.42**	**149**		PN	**Pn**	**15 20 13.6**	**+1.6**
YLV	**Yalova**	**1.43**	**7**		PN	**Pn**	**15 20 13.4**	**+1.4**
TRML	**Termal-Yalova**	**1.46**	**1**		PN	**Pn**	**15 20 13.5**	**+1.1**
CIFT	**Ciftеler, Eski**	**1.52**	**81**		PN	**Pn**	**15 20 14.8**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**1.54**	**219**		PN	**Pn**	**15 20 14.2**	**+0.5**
EDC	**Edincik**	**1.54**	**321**		PN	**Pn**	**15 20 14.7**	**+1.1**
BUHA	**Balikesir, Bur**	**1.63**	**283**	*i*	P	**Pn**	**15 20 16.4**	**+1.6**
GULT	**Gulveren**	**1.67**	**39**		PN	**Pn**	**15 20 17.1**	**+1.8**
KNL	**Balıkesir**	**1.67**	**313**	*i*	P	**Pn**	**15 20 17.3**	**+2.0**
KNL				*i*	S	**Sn**	**15 20 32.0**	**-4.4**
TAVA	**DENIZLI_Tavas**	**1.69**	**186**	*i*	P	**Pb**	**15 20 18.4**	**+1.0**
BUY	**Buyukada**	**1.70**	**360**	*i*	P	**Pn**	**15 20 16.9**	**+1.2**
BUY				*i*	S	**Sn**	**15 20 33.7**	**-3.5**
ISP	**Isparta**	**1.72**	**140**		PN	**Pn**	**15 20 17.3**	**+1.3**
HRT	**Hereke**	**1.72**	**14**		PN	**Pn**	**15 20 17.3**	**+1.3**
DKL	**Dikili**	**1.73**	**268**		PN	**Pn**	**15 20 17.6**	**+1.5**
CAND	**Candarli**	**1.82**	**265**		PN	**Pn**	**15 20 18.6**	**+1.2**
MAR9	**Marsite Statio**	**1.83**	**324**		PN	**Pn**	**15 20 19.1**	**+1.6**
SAUV	**Serdivan-Sakar**	**1.84**	**30**		PN	**Pn**	**15 20 19.2**	**+1.6**
AVCI	**Avcilar-stanb**	**1.87**	**351**		PN	**Pn**	**15 20 19.2**	**+1.2**
MRMT	**Marmara Adasi**	**1.87**	**321**		PN	**Pn**	**15 20 19.6**	**+1.5**
KRBG	**Karabiga-Canak**	**1.88**	**312**		PN	**Pn**	**15 20 19.7**	**+1.5**
SVRH	**Sivrihisar-ESK**	**1.88**	**80**		PN	**Pn**	**15 20 19.6**	**+1.3**
KAVV	**Kandilli-Istan**	**1.91**	**358**		PN	**Pn**	**15 20 19.7**	**+1.1**
ISK	**Istanbul-Kandi**	**1.92**	**358**		PN	**Pn**	**15 20 19.6**	**+0.9**
FOCM	**Foa**	**1.92**	**258**		PN	**Pn**	**15 20 19.6**	**+0.9**
KAYN	**Sakarya, Kayna**	**2.04**	**27**	*i*	P	**Pn**	**15 20 21.9**	**+1.6**
SILT	**Sile**	**2.04**	**11**		PN	**Pn**	**15 20 21.9**	**+1.5**
BGKT	**Bogazkoy**	**2.05**	**352**		PN	**Pn**	**15 20 21.4**	**+0.9**
MDUB	**Mudurnu**	**2.07**	**50**		PN	**Pn**	**15 20 22.4**	**+1.5**
MAR2	**Marsite Statio**	**2.10**	**319**		PN	**Pn**	**15 20 22.6**	**+1.4**
KLYT	**Kilyos**	**2.10**	**358**		PN	**Pn**	**15 20 22.6**	**+1.4**
KAND	**Kocaeli-Kandir**	**2.11**	**22**	*i*	P	**Pn**	**15 20 24.2**	**+2.9**
MAR6	**Marsite Statio**	**2.11**	**318**		PN	**Pn**	**15 20 22.7**	**+1.3**
GZKV	**Gazikoy-Tekird**	**2.12**	**320**		PN	**Pn**	**15 20 23.0**	**+1.2**
YER	**Yerkesik**	**2.12**	**199**		PN	**Pn**	**15 20 23.3**	**+1.8**
MAR3	**Marsite Statio**	**2.13**	**319**		PN	**Pn**	**15 20 23.4**	**+1.8**
URLA	**Izmir**	**2.13**	**249**		PN	**Pn**	**15 20 23.0**	**+1.3**
CTKS	**Kestanelik-??a**	**2.14**	**347**		PN	**Pn**	**15 20 22.8**	**+1.1**
RKY	**Sarkoy-Tekirda**	**2.15**	**316**		PN	**Pn**	**15 20 23.5**	**+1.6**
MAR4	**Marsite Statio**	**2.16**	**320**		PN	**Pn**	**15 20 23.4**	**+1.3**
SLVT	**Silivri**	**2.19**	**342**		PN	**Pn**	**15 20 23.9**	**+1.4**
LPK	**Lapseki**	**2.20**	**305**		PN	**Pn**	**15 20 23.2**	**+0.7**
TKR	**Tekirdag**	**2.21**	**327**		PN	**Pn**	**15 20 24.3**	**+1.6**
PRK	**Paraskevi**	**2.22**	**273**		P	**Pn**	**15 20 25.2**	**+2.3**
PRK					S	**Sn**	**15 20 51.5**	**+1.5**
	712nm,0.6s							
EZN	**Ezine**	**2.27**	**288**		P	**Pn**	**15 20 25.6**	**+2.1**
EZN					S	**Sn**	**15 20 53.9**	**+2.7**
EZN	**Ezine**	**2.27**	**288**		PN	**Pn**	**15 20 25.1**	**+1.6**
SMG	**Samos**	**2.30**	**232**		P	**Pn**	**15 20 23.6**	**-0.4**
SMG					S	**Sn**	**15 20 51.5**	**-0.5**
	352nm,0.4s							
KIBS	**BOLU**	**2.45**	**58**	*i*	P	**Pg**	**15 20 34.0**	**+0.3**
CHOS	**Chios island**	**2.52**	**253**		P	**Pn**	**15 20 28.3**	**+1.3**
CHOS					S	**Sn**	**15 20 58.7**	**+1.2**
	238nm,0.6s							
BODT	**Bodrum**	**2.53**	**215**		P	**Pn**	**15 20 27.1**	**0.0**
BODT					S	**Sn**	**15 20 55.7**	**-1.9**
SIGR	**SIGRI**	**2.55**	**272**		P	**Pn**	**15 20 28.9**	**+1.6**
SIGR					S	**Sn**	**15 20 59.9**	**+1.9**
	392nm,0.5s							
GADA	**Gvkgeada**	**2.70**	**294**		P	**Pn**	**15 20 31.6**	**+2.1**
GADA					S	**Sn**	**15 21 05.8**	**+4.0**
ENEZ	**Enez**	**2.78**	**306**		P	**Pn**	**15 20 32.9**	**+2.3**
ENEZ					S	**Sb**	**15 21 08.2**	**-1.7**
	688nm,0.4s							
KDZE	**Karadeniz Ereo**	**2.79**	**39**	⇑	P	**Pb**	**15 20 36.3**	**+0.1**
ALN	**Alexandroupoli**	**2.94**	**307**		P	**Pn**	**15 20 34.7**	**+1.9**
ALN					S	**Sn**	**15 21 11.6**	**+3.8**
	572nm,0.4s							
KEPZ	**Antalya-Kepez**	**2.98**	**138**	*i*	P	**Pn**	**15 20 36.1**	**+2.8**
KIRK	**Kırklareli**	**3.05**	**330**	*i*	P	**Pn**	**15 20 35.3**	**+1.0**
LIA	**Limnos Island**	**3.14**	**285**		P	**Pn**	**15 20 37.6**	**+2.1**
IDI	**Anoyia**	**5.13**	**223**	⇑	P	**Pn**	**15 21 05.5**	**+2.7**
PLVB	**Pleven**	**5.43**	**323**	⇑	P	**Pn**	**15 21 09.3**	**+2.4**
VTS	**Vitosha**	**5.65**	**310**	⇑	P	**Pn**	**15 21 12.8**	**+2.7**
MLR	**Muntele Rosu**	**6.76**	**341**	⇑	P	**Pn**	**15 21 27.9**	**+2.6**
VRI	**Vrincioaia**	**6.94**	**346**	⇑	P	**Pn**	**15 21 31.0**	**+3.2**
VOIR		**6.97**	**336**	⇑	P	**Pn**	**15 21 30.1**	**+1.9**
DOPR	**Dopca**	**7.35**	**339**	⇓	P	**Pn**	**15 21 36.0**	**+2.7**
TESR	**Tescani**	**7.58**	**347**	⇑	P	**Pn**	**15 21 38.6**	**+2.1**
HERR	**Herculane**	**7.60**	**321**	⇑	P	**Pn**	**15 21 37.4**	**+0.6**
GZR	**Gura Zlata**	**7.82**	**325**	⇑	P	**Pn**	**15 21 41.6**	**+1.8**
MDVR	**Moldovita**	**7.88**	**318**	⇓	P	**Pn**	**15 21 41.4**	**+0.7**
BIZ	**Bicaz**	**8.10**	**345**	⇓	P	**Pn**	**15 21 46.0**	**+2.4**

WEL 16 15:31:07.4±1.0,35°S±12″×17°9W±1′6,h33km,M3.9/17, mB4.2/1,ML4.2/17,MLv3.9/17,Mw(mB)3.3/1,Error ellipse: s-maj=0.0km s-min=0.0km az=126.4,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.37**	**222**	P	Pn	15 31 57.4	-0.2
MXZ				S	Sn	15 32 36.6	+0.2
WMGZ	**Waiomatatini S**	**3.50**	**218**	P	Pn	15 32 01.0	+1.5
WMGZ				S	Sn	15 32 42.3	+2.6
PKGZ	**Pakihiroa**	**3.73**	**220**	P	Pn	15 32 03.2	+0.6
PKGZ				S	Sn	15 32 46.8	+1.3
PUZ	**Puketiti**	**3.77**	**217**	P	Pn	15 32 03.2	-0.1
PUZ				S	Sn	15 32 48.0	+1.4
HAZ	**Te Kaha**	**3.79**	**224**	P	Pn	15 32 04.0	+0.5
HAZ				S	Sn	15 32 49.1	+2.1
TWGZ	**Tauwhareparae**	**3.99**	**218**	P	Pn	15 32 06.9	+0.6
TWGZ				S	Sn	15 32 53.6	+1.6
RUGZ	**Raukumara Rang**	**4.00**	**223**	P	Pn	15 32 06.4	-0.1
RUGZ				S	Sn	15 32 53.2	+0.9
CNGZ	**Carnagh Statio**	**4.13**	**214**	P	Pn	15 32 08.3	+0.2
TKGZ	**Te Karaka**	**4.26**	**217**	P	Pn	15 32 10.4	+0.4
TKGZ				S	Sn	15 32 59.1	+0.6
MWZ	**Matawai**	**4.35**	**221**	P	Pn	15 32 11.0	-0.2
MWZ				S	Sn	15 33 00.7	0.0
RIGZ	**Rimuhau**	**4.51**	**216**	P	Pn	15 32 13.0	-0.4
RIGZ				S	Sn	15 33 06.3	+1.5
URZ	**Urewera**	**4.53**	**224**	P	Pn	15 32 12.8	-0.8
URZ				S	Sn	15 33 05.7	+0.7
OPRZ	**Ohinepanea**	**4.60**	**232**	P	Pn	15 32 12.8	-1.9
SNGZ	**Shannon Statio**	**4.78**	**218**	P	Pn	15 32 17.5	+0.5
SNGZ				S	Sn	15 33 11.6	+0.3
RTZ	**Ruatahuna**	**4.85**	**222**	P	Pn	15 32 17.4	-0.7
RTZ				S	Sn	15 33 13.4	+0.3
MUGZ	**Murupara**	**4.87**	**225**	P	Pn	15 32 15.6	-2.8
MUGZ				S	Sn	15 33 11.3	-2.2
RAHZ	**Arahi**	**5.01**	**219**	P	Pn	15 32 21.3	+1.0
RAHZ				S	Sn	15 33 16.6	-0.4
MTHZ	**Maungataniwha**	**5.09**	**221**	P	Pn	15 32 21.4	0.0
MTHZ				S	Sn	15 33 19.8	+0.7
WIAZ	**Waiheke Island**	**5.15**	**249**	P	Pn	15 32 25.5	+3.3
TOZ	**Tahuroa Road**	**5.25**	**238**	P	Pn	15 32 22.9	-0.6
BKZ	**Black Stump Fm**	**5.51**	**221**	P	Pn	15 32 26.2	-0.9

*NNC **16** 15:32:15.4±2.1,41°.93N×81°.14E,h0km,mb3.5,mpv3.3, Error ellipse: s-maj=21.7km s-min=13.2km az=50.0*
SOME 16 15:32:14.2,42°.03N×81°.33E,h10km,1C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.78**	**310**	*eP*	Pn	15 32 43.5	-1.7
	12nm,0.1s						
SHLS				*eS*	Sn	15 33 04.7	-3.2
	60nm,0.2s						
SHLS	**Shalkode**	**1.78**	**310**	P	Pn	15 32 43.5	-1.7
	12nm,0.1s						
SHLS				S	Sn	15 33 04.7	-3.2
	60nm,0.2s						
PDGK	**Podgornoye**	**1.88**	**314**	⇓P	Pb	15 32 48.7	0.0
	5.4nm,0.3s						
PDGK				⇑S	Sg	15 33 13.8	-0.7
	7.6nm,0.3s						
UZB	**Uzynbulak**	**2.04**	**304**	*eP*	Pb	15 32 52.3	+0.9
	9.9nm,0.3s						
UZB				*eS*	Sg	15 33 19.9	+0.2
	11nm,0.2s						
UZB	**Uzynbulak**	**2.04**	**304**	Pg	Pb	15 32 52.3	+0.9
	9.9nm,0.3s						
UZB				Lg	Lg	15 33 20.1	
	11nm,0.2s						
SATY	**Saty**	**2.39**	**296**	*eP*	Pg	15 32 59.3	-0.8
	3.7nm,0.1s						
SATY				*eS*	Sg	15 33 31.7	+0.6
	27nm,0.1s						
SATY	**Saty**	**2.39**	**296**	Pg	Pg	15 32 59.3	-0.8
	3.7nm,0.1s						
SATY				Lg	Lg	15 33 31.7	
	27nm,0.1s						
KPKS	**Kokpek**	**2.42**	**307**	*eP*	Pb	15 32 57.4	-0.5
	14nm,0.1s						
KPKS				*eS*	Sb	15 33 28.6	+0.8
	27nm,0.3s						
KOTS	**Kotyrbulak**	**3.34**	**292**	*eP*	Pb	15 33 13.4	-0.2
	5.3nm,0.4s						
KOTS				*eS*	Sb	15 33 55.7	+1.4
	6.5nm,0.5s						
KOTS	**Kotyrbulak**	**3.34**	**292**	Pg	Pb	15 33 13.4	-0.2
	5.3nm,0.4s						
KOTS				Lg	Lg	15 33 55.7	
	6.5nm,0.5s						
MDOK	**Medeo**	**3.36**	**291**	*eP*	Pb	15 33 14.9	+1.0
	2.0nm,0.4s						
MDOK				*eS*	Sg	15 33 58.7	-3.4
	4.4nm,0.3s						
MDOK	**Medeo**	**3.36**	**291**	Pg	Pb	15 33 14.9	+1.0
	2.0nm,0.4s						
MDOK				Lg	Lg	15 33 58.7	
	4.4nm,0.3s						
ARXS	**Arharly**	**3.37**	**312**	*eP*	Pb	15 33 15.1	+1.1
	2.9nm,0.6s						
ARXS				*eS*	Sb	15 33 58.6	+3.6
	5.9nm,0.6s						
ARXS	**Arharly**	**3.37**	**312**	Pg	Pb	15 33 15.1	+1.1
	2.9nm,0.6s						
ARXS				Lg	Lg	15 33 58.6	
	5.9nm,0.6s						
KTBS	**Karatobe**	**3.81**	**298**	*eP*	Pb	15 33 23.9	+2.4
	2.1nm,0.5s						
KTBS				*eS*	Sg	15 34 14.3	-2.1
	6.5nm,0.4s						
KTBS	**Karatobe**	**3.81**	**298**	Pg	Pb	15 33 23.9	+2.4
	2.1nm,0.5s						
KTBS				Lg	Lg	15 34 14.3	
	6.5nm,0.4s						

*IDC **16** 15:33:25.7±1.6,65°.24S×178°.26E,h0km,mb4.3/4, mb1 4.3/5,mb1mx4.0/28,mbtmp4.2/5,ML3.4/1,MS3.6/7, Ms1 3.6/7,ms1mx3.3/27,Error ellipse: s-maj=61.5km s-min=22.5km az=60.0*
*NEIC **16** 15:33:26.7±1.5,65°.3S±0°.2×178°.3E±0°.5,h9km±6km, mb4.6/9,Error ellipse: s-maj=37.3km s-min=11.6km az=50.0*
ISC 16 15:33:27.0±1.2,65°.3S±0°.1×178°.4E±0°.3,h10km,n34, σ0°95/15,mb4.6/8,MS3.6/8,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	**Scott Base**	**13.12**	**191**		**Pn**	**15 36 31.8**	**-1.1**
VNDA	**Vanda**	**13.29**	**196**	Pn	**Pn**	**15 36 35.8**	**+0.5**
	0.2nm,0.3s,baz=47,slow=17,SNR=22						
VNDA				LR	LR	15 40 37.6	
	comp=Z,161nm,19.7s,baz=336,slow=32						
VNDA	**Vanda**	**13.29**	**196**		**Pn**	**15 36 35.5**	**+0.2**
RPZ	**Rata Peaks**	**21.99**	**346**	LR	LR	15 45 06.7	
	comp=Z,174nm,18.3s,baz=171,slow=32						
QSPA	**South Pole Qui**	**24.81**	**180**	P	**P**	**15 38 49.1**	**+0.1**
	3.2nm,0.9s,baz=41,slow=7.1,SNR=7.7						
QSPA				LR	LR	15 47 35.6	
	comp=Z,153nm,18.3s,baz=26,slow=34						
QSPA	**South Pole Qui**	**24.81**	**180**	IAmb	IAmb	15 38 51.0	
	comp=Z,6.0nm,1.0s						
TOO	**Toolangi**	**33.74**	**309**	P	**P**	**15 40 09.7**	**+1.4**
TOO				IAmb	IAmb	15 40 27.6	
	comp=Z,20nm,1.5s						
MAW	**Mawson**	**39.77**	**213**	LR	LR	15 57 04.2	
	comp=Z,152nm,19.7s,baz=82,slow=36						
PMSA	**Palmer Station**	**42.59**	**146**	P	**P**	**15 41 23.2**	**+0.8**
	comp=Z,36nm,1.0s,baz=209,slow=23,SNR=1.6						
TBI	**Tubuai**	**46.78**	**42**	eLR	LR	15 54 55.0	
	comp=Z,77nm,27.2s						
TBI	**Tubuai**	**46.78**	**42**	*eT*	T	16 31 12.3	
	comp=Z,17nm,0.3s						
AS31	**Alice Springs**	**50.41**	**304**	P	**P**	**15 42 24.6**	**+0.3**
ASAR	**Alice Springs**	**50.41**	**304**	P	**P**	**15 42 24.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=154,slow=7.3,SNR=29						
PPT2	**Papeete2**	**52.23**	**40**	eLR	LR	15 57 07.4	
	comp=Z,85nm,26.5s						
PPT2	**Papeete2**	**52.23**	**40**	*eT*	T	16 37 58.5	
	comp=Z,2.4nm,0.3s						
PPT	**Papeete**	**52.25**	**40**	LR	LR	16 00 16.9	
	comp=Z,24nm,19.7s,baz=158,slow=31						
WR0	**Warramunga Arr**	**53.61**	**306**	P	**P**	**15 42 47.6**	**-0.6**
WR0				IAmb	IAmb	15 43 03.9	
	comp=Z,8.6nm,1.4s						
WB2	**Warramunga Arr**	**53.69**	**306**	P	**P**	**15 42 48.2**	**-0.5**
WB2				IAmb	IAmb	15 42 50.8	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	**53.69**	**306**	P	**P**	**15 42 48.2**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=155,slow=6.3,SNR=12						
WRA	**Warramunga Arr**	**53.69**	**306**	IAmb	IAmb	15 42 53.6	
	comp=Z,0.3nm,0.9s						
WRAB	**Tennant Creek**	**53.70**	**306**	P	**P**	**15 42 47.9**	**-0.9**
WRAB				IAmb	IAmb	15 42 53.7	
	comp=Z,11nm,1.4s						
WRAB				PcP	**PcP**	**15 43 53.1**	**-1.8**
WB0	**Warramunga Arr**	**53.84**	**306**	P	**P**	**15 42 48.6**	**-1.2**
RPN	**Rapa Nui**	**58.30**	**86**	LR	LR	16 02 10.7	
	comp=Z,88nm,20.7s,baz=353,slow=30						
H03S2	**Juan Fernandez**	**64.80**	**116**	T	T	16 54 42.7	
	baz=205,slow=74,SNR=9.1						
H03S1	**Juan Fernandez**	**64.80**	**116**	T	T	16 54 42.7	
	baz=205,slow=74,SNR=8.0						
H03S3	**Juan Fernandez**	**64.81**	**116**	T	T	16 54 44.8	
	baz=205,slow=74,SNR=8.3						
H03N3	**Juan Fernandez**	**65.14**	**116**	T	T	16 55 04.5	
	baz=220						
H03N2	**Juan Fernandez**	**65.15**	**116**	T	T	16 55 01.8	
	baz=220						
H03N1	**Juan Fernandez**	**65.15**	**116**	T	T	16 55 03.8	
	baz=220						
BOSA	**Boshof**	**84.12**	**204**	LR	LR	16 21 34.7	
	comp=Z,32nm,18.2s,baz=186,slow=34						
H08S2	**Diego Garcia H**	**89.67**	**252**	T	T	17 26 49.4	
	baz=164						
H08S1	**Diego Carcia H**	**89.67**	**252**	T	T	17 26 47.8	
	baz=164						
H08S3	**Diego Garcia H**	**89.69**	**252**	T	T	17 26 48.6	
	baz=164						
ILAR	**Eielson Array**	**132.19**	**19**	PKP	**PKiKP**	**15 52 40.0**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=194,slow=2.2,SNR=3.5						

*NEIC **16** 15:49:45.8±1.9,36°.53N±0°.03×98°.94W±0°.04,h9km±6km, mb_Lg3.4/98,ML3.5(TUL),Error ellipse: s-maj=4.9km s-min=3.7km az=102.0*
*TUL **16** 15:49:45±1.6,36°.52N±0°.03×99°.01W±0°.04,h5km±6km, Error ellipse: s-maj=4.3km s-min=3.3km az=118.0*
*ANF **16** 15:49:46.5±0.4,36°.49N×98°.96W,h9km,ML4.2/13,Error ellipse: s-maj=5.3km s-min=3.9km az=71.0*
ISC 16 15:49:45.5±0.9,36°.51N±0°.03×98°.96W±0°.04,h9km±8km, n125,σ0°96/130,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.14**	**194**		**Pg**	**15 49 48.6**	**0.0**
U32A				Sg	**Sg**	**15 49 50.9**	**+0.2**
U32A	**Winter Ranch,**	**0.14**	**194**	P	**Pg**	**15 49 48.3**	**-0.2**
	baz=18,SNR=469						
U32A	**Winter Ranch,**	**0.14**	**194**	P		15 49 48.3	
	baz=18,SNR=469						
OK032	**Salt Plains WL**	**0.67**	**64**		**Pg**	**15 49 58.3**	**-0.2**
OK032				Sg	**Sg**	**15 50 07.5**	**+0.3**
CROK	**Carrier**	**0.79**	**90**		**Pg**	**15 50 00.7**	**0.0**
CROK				Sg	**Sg**	**15 50 11.8**	**+0.9**
KAN10	**Anthony SW Sta**	**0.93**	**48**		**Pg**	**15 50 03.0**	**-0.3**
KAN10				Sg	**Sg**	**15 50 15.5**	**+0.1**
GC02	**Grant County #**	**0.95**	**69**		**Pg**	**15 50 03.5**	**-0.2**
GC02				Sg	**Sg**	**15 50 16.5**	**+0.4**
KAN05	**Bluff City Nor**	**1.06**	**55**		**Pg**	**15 50 05.5**	**-0.3**
KAN05				Sg	**Sg**	**15 50 19.8**	**+0.2**
KAN08	**Anthony NE Sta**	**1.07**	**48**		**Pg**	**15 50 05.6**	**-0.5**
KAN08				Sg	**Sb**	**15 50 20.6**	**+0.4**
KAN12	**Harper NE Stat**	**1.10**	**44**		**Pg**	**15 50 06.1**	**-0.6**
KAN12				Sg	**Sg**	**15 50 21.1**	**+0.1**
KAN01	**Argonia South**	**1.16**	**56**		**Pb**	**15 50 07.2**	**-0.5**
KAN01				Sg	**Sb**	**15 50 23.2**	**+0.4**
KAN09	**Caldwell North**	**1.25**	**60**		**Pn**	**15 50 08.8**	**-0.3**
KAN09					**Sb**	**15 50 25.6**	**+0.2**
KAN13	**South Haven SW**	**1.29**	**67**		**Pn**	**15 50 09.5**	**-0.2**
KAN13					**Sn**	**15 50 27.5**	**+0.3**
KS20	**Mayfield South**	**1.34**	**57**		**Pn**	**15 50 10.3**	**-0.1**
KS20					**Sb**	**15 50 28.4**	**+0.4**
BCOK	**Bluff Creek, N**	**1.39**	**128**		**Pn**	**15 50 11.2**	**+0.1**
BCOK					**Sg**	**15 50 30.5**	**+0.3**
OK029	**Liberty Lake**	**1.41**	**120**		**Pn**	**15 50 11.4**	**0.0**
OK029					**Sg**	**15 50 31.3**	**+0.3**
OK025	**Westminster Rd**	**1.61**	**125**		**Pn**	**15 50 14.8**	**+0.7**
OKCFA	**Oklahoma City**	**1.64**	**131**		**Pn**	**15 50 15.3**	**+0.8**
OKCFA	**Oklahoma City**	**1.64**	**131**	P	**Pn**	**15 50 15.4**	**+0.8**
	baz=313,SNR=6.6						
OKCFA				S	**Sg**	**15 50 38.1**	**-0.2**
	baz=313						
OKCFA	**Oklahoma City**	**1.64**	**131**	P		15 50 15.4	
	baz=313,SNR=6.6						
OKCFA				S		15 50 38.1	
	baz=313						
OK001	**Jones High Sch**	**1.65**	**124**	Pn	**Pb**	**15 50 15.9**	**-0.3**
OKCSW	**OKLAHOMA CITY**	**1.66**	**131**	Pn	**Pn**	**15 50 15.2**	**+0.4**
WMOK	**Wichita Mounta**	**1.77**	**175**		**Pn**	**15 50 16.6**	**+0.1**
WMOK				IAmb_Lg		15 50 46.2	
	comp=Z,107nm,0.9s						
WMOK	**Wichita Mounta**	**1.77**	**175**	P	**Pn**	**15 50 16.5**	**+0.1**
	baz=356,SNR=60						
WMOK	**Wichita Mounta**	**1.77**	**175**	P		15 50 16.5	
	baz=356,SNR=60						
FNO	**Franklin**	**1.78**	**134**		**Pb**	**15 50 18.4**	**0.0**
OK031	**S. Brethren Rd**	**1.80**	**107**		**Pn**	**15 50 17.6**	**+0.9**
QUOK	**Quay**	**1.85**	**100**		**Pn**	**15 50 18.5**	**+1.1**
OK030	**Cody Creek RV**	**1.85**	**108**		**Pn**	**15 50 18.4**	**+1.0**
R32A	**Long Quarter,**	**1.92**	**6**		**Pn**	**15 50 19.4**	**+1.0**
R32A	**Long Quarter,**	**1.92**	**6**	S	**Sb**	**15 50 45.4**	**+0.6**
	baz=186						
R32A	**

BGNE	**Belgrade**	**4.93**	**7**			**Pn**	15 50 60.0	**+0.2**
BGNE				IAmb_Lg			15 52 34.7	
	comp=Z,124nm,0.8s							
BGNE	**Belgrade**	**4.93**	**7**	P		**Pn**	15 50 59.7	**0.0**
	baz=187,SNR=6.0							
BGNE	**Belgrade**	**4.93**	**7**	P			15 50 59.7	
	baz=187,SNR=6.0							
OGNE	**Ogallala**	**5.04**	**332**			**Pn**	15 51 00.2	**-1.1**
N35A	**Tabor**	**5.06**	**30**			**Pn**	15 51 03.6	**+2.0**
237A	**Washetta, Mont**	**5.20**	**149**	Pn		**Pn**	15 51 03.5	**0.0**
237A				IAmb_Lg			15 52 40.1	
	comp=Z,50nm,0.8s							
P38A	**Dawn**	**5.29**	**52**	Pn		**Pn**	15 51 05.4	**+0.7**
P38A				IAmb_Lg			15 52 45.2	
	comp=Z,64nm,0.7s							
X40A	**Basin Creek Fa**	**5.39**	**110**			**Pn**	15 51 04.9	**-1.2**
X40A				IAmb_Lg			15 52 45.7	
	comp=Z,37nm,0.8s							
MGMO	**Mountain Grove**	**5.41**	**81**			**Pn**	15 51 05.5	**-0.8**
MGMO				IAmb_Lg			15 52 44.6	
	comp=Z,75nm,0.9s							
WHAR	**Wooly Hollow**	**5.55**	**101**			**Pn**	15 51 08.1	**-0.2**
WHAR				IAmb_Lg			15 52 53.3	
	comp=Z,95nm,1.0s							
FCAR	**Ozark Folk Cen**	**5.56**	**94**			**Pn**	15 51 08.9	**+0.5**
FCAR				IAmb_Lg			15 52 53.8	
	comp=Z,49nm,0.7s							
R40A	**Maddies Statio**	**5.62**	**70**			**Pn**	15 51 09.1	**0.0**
R40A				IAmb_Lg			15 52 49.2	
	comp=Z,48nm,0.8s							
L34A	**Svendsen Farm,**	**5.80**	**19**			**Pn**	15 51 13.8	**+2.0**
435B	**Jarrell**	**5.83**	**168**	Pn		**Pn**	15 51 14.7	**+2.6**
435B				IAmb_Lg			15 53 06.3	
	comp=Z,79nm,0.7s							
JCT	**Junction City**	**6.06**	**187**			**Pn**	15 51 15.5	**+0.2**
JCT				IAmb_Lg			15 53 09.6	
	comp=Z,69nm,0.8s							
K31A	**O'Neill**	**6.11**	**1**			**Pn**	15 51 14.4	**-1.6**
K31A				IAmb_Lg			15 53 11.8	
	comp=Z,101nm,0.8s							
K31A	**O'Neill**	**6.11**	**1**	P		**Pn**	15 51 17.1	**+1.2**
	baz=181							
K31A	**O'Neill**	**6.11**	**1**	P			15 51 17.1	
	baz=181							
ISCO	**Idaho Springs**	**6.18**	**304**			**Pn**	15 51 18.1	**+0.8**
ISCO				IAmb_Lg			15 53 13.3	
	comp=Z,41nm,0.9s							
N38A	**Joes South For**	**6.19**	**45**			**Pn**	15 51 17.4	**+0.3**
GDL2	**Guadalupe Moun**	**6.20**	**228**			**Pn**	15 51 17.6	**+0.3**
P40A	**Paris**	**6.23**	**59**			**Pn**	15 51 16.2	**-1.4**
ANMO	**Albuquerque**	**6.29**	**258**			**Pn**	15 51 18.2	**-0.5**
LCAR	**Lake Charles**	**6.32**	**92**			**Pn**	15 51 18.1	**-0.8**
LCAR				IAmb_Lg			15 53 14.5	
	comp=Z,38nm,0.8s							
CCM	**Cathedral Cave**	**6.34**	**74**			**Pn**	15 51 18.0	**-1.1**
CCM				IAmb_Lg			15 53 13.3	
	comp=Z,83nm,0.8s							
BNM	**Barren Site**	**6.70**	**252**			**Pn**	15 51 27.3	**+3.1**
SMCO	**Snowmass**	**6.88**	**295**			**Pn**	15 51 29.5	**+2.6**
LENM	**Lemitar**	**6.95**	**253**	Pn		**Pn**	15 51 28.4	**+0.7**
FVM	**French Village**	**6.96**	**75**	Pn		**Pn**	15 51 26.3	**-1.4**
FVM				IAmb_Lg			15 53 32.3	
	comp=Z,86nm,0.8s							
PHWY	**Pilot Hill**	**6.97**	**315**	Pn		**Pn**	15 51 28.2	**+0.3**
PHWY				IAmb_Lg			15 53 34.0	
	comp=Z,54nm,0.8s							
SCIA	**State Center**	**6.99**	**38**	IAmb_Lg			15 53 41.4	
	comp=Z,53nm,0.7s							
MNTX	**Cornudas Mount**	**7.17**	**230**			**Pn**	15 51 30.3	**-0.2**
SLM	**Saint Louis**	**7.25**	**70**	IAmb_Lg			15 53 48.1	
	comp=Z,52nm,0.7s							
ECSD	**EROS Data Cent**	**7.43**	**13**	Pn		**Pn**	15 51 33.5	**-0.6**
441A	**DeRidder**	**7.49**	**138**	Pn		**Pn**	15 51 34.1	**-0.8**
N41A	**Harden Midland**	**7.60**	**54**	Pn		**Pn**	15 51 36.1	**-0.4**
MVCO	**Mesa Verde**	**7.68**	**278**	IAmb_Lg			15 54 02.4	
	comp=Z,24nm,1.0s							
K38A	**Parkersburg**	**7.77**	**36**	IAmb_Lg			15 54 12.4	
	comp=Z,78nm,1.0s							
S44A	**Carbondale**	**7.84**	**78**	Pn		**Pn**	15 51 38.8	**-1.0**
SIUC	**Southern Illin**	**7.88**	**78**	Pn		**Pn**	15 51 40.2	**0.0**
SIUC				IAmb_Lg			15 53 59.1	
	comp=Z,76nm,0.8s							
SUSD	**Miller**	**7.92**	**0**	IAmb_Lg			15 54 12.5	
	comp=Z,38nm,0.8s							
PV02	**Paradox Valley**	**7.97**	**285**	Pn		**Pn**	15 51 43.2	**+1.5**
PV13	**Radium Mtn., P**	**8.03**	**285**	Pn		**Pn**	15 51 40.6	**-1.9**
OXF	**Oxford**	**8.04**	**102**	Pn		**Pn**	15 51 41.8	**-0.6**
OXF				IAmb_Lg			15 54 22.4	
	comp=Z,37nm,1.1s							
W45A	**Hickory Valley**	**8.05**	**97**	IAmb_Lg			15 54 10.1	
	comp=Z,47nm,0.9s							
PV03	**Paradox Valley**	**8.06**	**285**	Pn		**Pn**	15 51 43.9	**+0.9**
PV22	**Blue Mesa, Par**	**8.06**	**287**	Pn		**Pn**	15 51 43.1	**+0.1**
P43A	**Skaggs, Pawnee**	**8.07**	**64**	Pn		**Pn**	15 51 42.0	**-0.9**
PV11	**David Mesa, Pa**	**8.09**	**286**	Pn		**Pn**	15 51 46.4	**+3.1**
PV11				IAmb_Lg			15 54 11.9	
	comp=Z,25nm,0.7s							
O20A	**White River Ci**	**8.14**	**299**	IAmb_Lg			15 54 24.8	
	comp=Z,22nm,1.2s							
PV17	**East Wray Mesa**	**8.15**	**285**	Pn		**Pn**	15 51 46.6	**+2.4**
L40A	**Anamosa**	**8.17**	**45**	Pn		**Pn**	15 51 43.7	**-0.4**
TX31	**Lajitas Ar. Si**	**8.18**	**210**			**Pn**	15 51 43.9	**-0.6**
TX32	**Lajitas Array**	**8.18**	**210**			**Pn**	15 51 44.0	**-0.4**
TXAR	**Lajitas Array**	**8.18**	**210**	Pn		**Pn**	15 51 44.1	**-0.4**
PV14	**Lion Creek, Pa**	**8.22**	**286**	Pn		**Pn**	15 51 45.0	**-0.1**
RWWY	**Rawlins**	**8.24**	**311**	IAmb_Lg			15 54 20.8	
	comp=Z,37nm,1.1s							
T45A	**Paducah**	**8.29**	**83**	Pn		**Pn**	15 51 46.7	**+0.8**
K22A	**Casper**	**8.46**	**319**	IAmb_Lg			15 54 33.2	
	comp=Z,36nm,1.0s							
344A	**Westbrook Farm**	**8.49**	**124**	Pn		**Pn**	15 51 47.7	**-0.9**
RSSD	**Black Hills**	**8.53**	**335**	Pn		**Pn**	15 51 49.5	**+0.1**
RSSD				IAmb_Lg			15 54 28.6	
	comp=Z,38nm,1.0s							
I37A	**Lemond, Waseca**	**8.61**	**28**	IAmb_Lg			15 54 36.8	
	comp=Z,28nm,0.8s							
L42A	**Oliver, Polo**	**9.05**	**50**	Pn		**Pn**	15 51 55.6	**-0.8**
JFWS	**Jewell Farm**	**9.27**	**44**	Pn		**Pn**	15 51 59.0	**-0.3**
JFWS				IAmb_Lg			15 54 53.9	
	comp=Z,49nm,0.7s							
T47A	**Sharon Grove**	**9.53**	**84**	Pn		**Pn**	15 52 02.5	**-0.3**
T47A				IAmb_Lg			15 55 03.6	
	comp=Z,24nm,0.8s							
F33A	**5 Mile Ranch,**	**9.53**	**11**	Pn		**Pn**	15 52 02.6	**-0.3**
F33A				IAmb_Lg			15 55 05.4	
	comp=Z,17nm,0.8s							
I40A	**Norwalk**	**9.74**	**38**	IAmb_Lg			15 55 02.8	
	comp=Z,15nm,0.7s							
P46A	**Rosedale**	**9.77**	**68**	Pn		**Pn**	15 52 06.2	**-0.1**
V48A	**Smith Brothers**	**9.85**	**91**	IAmb_Lg			15 55 06.2	
	comp=Z,18nm,1.0s							
F36A	**Milaca**	**10.20**	**22**	Pn		**Pn**	15 52 11.0	**-1.0**

IDC ***16*** *15:59:10.8±3.3, 34.70S×179.95E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/40, mbtmp3.7/3, ML3.4/1, Error ellipse: s-maj=70.7km s-min=36.6km az=109.0*
WEL ***16*** *15:59:11.0±1.3, 35°S±18"×17°9W±2°5, h33km, M4.0/9, ML4.2/9, MLv4.0/9, Error ellipse: s-maj=0.0km s-min=0.0km az=124.9*

ISC 16 15:59:10.6±2.2, 34.8S±0.1×179.2W±0.3, h35km, n15, σ1s03/25, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.59**	**212**	P	**Pn**	**16 00 04.4**	**+0.6**
WMGZ				S	**Sn**	**16 00 46.1**	**+1.2**
PKGZ	**Pakihiroa**	**3.80**	**214**	P	**Pn**	**16 00 05.5**	**-1.1**
PKGZ				S	**Sn**	**16 00 49.3**	**-0.8**
HAZ	**Te Kaha**	**3.84**	**218**	P	**Pn**	**16 00 07.8**	**+0.7**
HAZ				S	**Sn**	**16 00 52.9**	**+1.9**
PUZ	**Puketiti**	**3.87**	**211**	P	**Pn**	**16 00 06.8**	**-0.8**
PUZ				S	**Sn**	**16 00 50.6**	**-1.2**
RUGZ	**Raukumara Rang**	**4.05**	**217**	P	**Pn**	**16 00 10.4**	**+0.2**
RUGZ				S	**Sn**	**16 00 58.4**	**+1.9**
TWGZ	**Tauwhareparae**	**4.08**	**213**	P	**Pn**	**16 00 10.9**	**+0.4**
TWGZ				S	**Sn**	**16 00 58.9**	**+1.9**
CNGZ	**Carnagh Statio**	**4.24**	**208**	P	**Pn**	**16 00 13.1**	**+0.4**
URZ	**Urewera**	**4.57**	**219**	Pn	**Pn**	**16 00 16.3**	**-0.8**
	2.4nm,0.3s,baz=127,slow=20,SNR=23						
URZ				Sn	**Sn**	**16 01 08.1**	**-0.9**
	2.7nm,0.3s,baz=317,slow=23,SNR=5.4						
URZ	**Urewera**	**4.57**	**219**	P	**Pn**	**16 00 16.7**	**-0.5**
URZ				S	**Sn**	**16 01 08.0**	**-1.0**
OPRZ	**Ohinepanea**	**4.59**	**227**	P	**Pn**	**16 00 18.3**	**+0.8**
RIGZ	**Rimuhau**	**4.61**	**211**	P	**Pn**	**16 00 17.6**	**-0.2**
RIGZ				S	**Sn**	**16 01 09.5**	**-0.7**
MUGZ	**Murupara**	**4.91**	**220**	P	**Pn**	**16 00 21.3**	**-0.6**
MUGZ				S	**Sn**	**16 01 16.3**	**-1.1**
ASAR	**Alice Springs**	**42.05**	**272**	P	**P**	**16 06 58.8**	**-0.3**
	1.1nm,0.8s,baz=115,slow=7.9,SNR=15						
WRA	**Warramunga Arr**	**43.44**	**277**	P	**P**	**16 07 09.9**	**-0.4**
	1.0nm,0.7s,baz=119,slow=7.6,SNR=8.3						
FINES	**FINESS Array B**	**148.82**	**337**	PKPbc	**PKPab**	**16 18 58.0**	**+0.6**
	1.1nm,0.8s,baz=46,slow=4.0,SNR=2.2						

IDC ***16*** *15:59:34.3±0.8, 18"58N×147"22E, h0km, mb3.7/9, mb1 4.0/9, mb1mx3.7/50, mbtmp3.7/9, Error ellipse: s-maj=37.4km s-min=21.0km az=115.0*

ISC 16 15:59:41.4±0.8, 18.6N±0.1×147.2E±0.2, h52km, n17, σ0s73/12, mb3.6/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**18.52**	**87**	T	T	16 22 40.1	
	baz=265,slow=79						
H11S1	**WAKE ISLAND Hy**	**18.54**	**87**	T	T	16 22 39.4	
	baz=265,slow=79						
H11S2	**WAKE ISLAND Hy**	**18.54**	**87**	T	T	16 22 41.9	
	baz=265,slow=79						
H11N1	**WAKE ISLAND Hy**	**18.69**	**83**	T	T	16 22 52.8	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**18.69**	**83**	T	T	16 22 52.2	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**18.70**	**83**	T	T	16 22 53.9	
	baz=265						
MJAR	**Matsushiro Arr**	**19.58**	**338**	P	**Pn**	**16 04 07.0**	**+0.1**
	0.0nm,0.3s,baz=151,slow=15,SNR=1.8						
WRA	**Warramunga Arr**	**40.27**	**199**	PcP	**PcP**	**16 09 16.5**	**-0.1**
	0.6nm,0.8s,baz=19,slow=3.5,SNR=3.1						
FITZ	**Fitzroy Cossi**	**42.11**	**211**	P	**P**	**16 07 28.4**	**-0.2**
	1.1nm,0.8s,baz=83,slow=20,SNR=1.5						
ASAR	**Alice Springs**	**43.91**	**198**	P	**P**	**16 07 43.0**	**-0.2**
	0.4nm,0.5s,baz=19,slow=7.6,SNR=7.9						
ASAR				PcP	**PcP**	**16 09 30.3**	**+1.7**
	0.2nm,0.7s,baz=35,slow=3.4,SNR=1.9						
SONM	**Songino Array**	**44.12**	**321**	P	**P**	**16 07 45.4**	**+0.6**
	0.3nm,0.6s,baz=130,slow=8.0,SNR=2.9						
ZALV	**Zalesovo Beam**	**58.97**	**322**	P	**P**	**16 09 34.7**	**-0.8**
	0.5nm,0.5s,baz=79,slow=9.1,SNR=1.8						
ILAR	**Eielson Array**	**63.17**	**26**	P	**P**	**16 10 03.2**	**-0.6**
	1.1nm,0.9s,baz=265,slow=5.5,SNR=8.3						
YKA	**Yellowknife Ar**	**77.47**	**28**	P	**P**	**16 11 31.6**	**+0.6**
	0.4nm,0.6s,baz=284,slow=5.5,SNR=6.9						
NVAR	**Mina Array Bea**	**82.14**	**52**	P	**P**	**16 11 57.4**	**+0.3**
	0.8nm,0.7s,baz=261,slow=6.9,SNR=6.8						
ELK	**Elko**	**83.67**	**49**	P	**P**	**16 12 04.9**	**-0.2**
	1.1nm,0.6s,baz=307,slow=5.9,SNR=6.2						
PDAR	**Pinedale Array**	**86.94**	**46**	P	**P**	**16 12 20.8**	**-0.5**
	0.2nm,0.6s,baz=297,slow=4.0,SNR=2.1						

SKO ***16*** *16:00:15.6, 40.62N×19.54E, h0km*
ATH ***16*** *16:00:16.1, 40.79N×19.55E, h50km±10km, ML2.4/8, Error ellipse: s-maj=10.8km s-min=2.4km az=207.0*
TIR ***16*** *16:00:16.8, 40.80N×19.75E, h1km±1km, Md2.7, Ml2.6*
THE ***16*** *16:00:19.0, 40.80N×19.72E, h12km±2km, ML2.4/3, Error ellipse: s-maj=3.2km s-min=0.7km az=304.0*

ISC 16 16:00:17.7±1.1, 40.78N±0.02×19.64E±0.03, h15km±9km, n35, σ0s81/55, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.33**	**200**	P	**Pb**	**16 00 25.7**	**+0.5**
VLO				S	**Sn**	**16 00 32.2**	**-2.2**
	1µm,0.2s						
VLO	**Vlora**	**0.33**	**200**	P	**Pb**	**16 00 25.6**	**+0.4**
	baz=211						
VLO				S	**Sn**	**16 00 32.1**	**-2.2**
	baz=211						
VLO				AMP			
	comp=N,6.4nm,0.2s,baz=211						
TIR	**Tirane**	**0.59**	**16**	P	**Pg**	**16 00 29.0**	**-0.3**
TIR				AML	AML	16 00 40.8	
	comp=N,988µm,0.5s						
TIR				AML	AML	16 00 42.3	
	comp=E,840µm,0.4s						
TIR	**Tirane**	**0.59**	**16**	P	**Pg**	**16 00 28.5**	**-0.8**
	baz=8.0						
TIR				S	**Sb**	**16 00 37.6**	**-0.4**
	baz=8.0						
TIR				AMP			
	comp=E,0.7nm,0.4s,baz=8.0						
TIR	**Tirane**	**0.59**	**16**	*i* Pg	**Pb**	**16 00 29.4**	**-0.3**
KBN	**Korca**	**0.88**	**100**	P	**Pb**	**16 00 33.8**	**-1.0**
	baz=102						
KBN				S	**Sb**	**16 00 46.1**	**-0.3**
	baz=102						
KBN				AMP			
	comp=N,0.7nm,0.6s,baz=102						
OHR	**Ohrid**	**0.94**	**69**	*i* Pg	**Pb**	**16 00 34.6**	**-1.1**
OHR				*i* Sg	**Sn**	**16 00 49.7**	**+0.2**
OHR				*e*Lg	Lg	16 00 50.9	
	comp=N,55nm,0.6s						
SRN	**Sarande**	**0.94**	**163**	P	**Pn**	**16 00 35.8**	**-0.5**
	baz=168						
SRN				S	**Sn**	**16 00 50.5**	**+1.1**
	baz=168						
SRN				AMP			
	comp=N,0.6nm,0.4s,baz=168						
LSK	**Leskovik**	**0.96**	**130**	P	**Pb**	**16 00 35.6**	**-0.4**
	baz=135						
LSK				S	**Sn**	**16 00 50.1**	**-0.1**
	baz=135						
KASA	**Kassiopi**	**1.05**	**168**	P	**Pb**	**16 00 36.7**	**-0.9**
KASA				S	**Sg**	**16 00 51.7**	**-0.1**
KASA				AML	AML	16 00 55.2	
	comp=E,1127µm,0.3s						
KASA				AML	AML	16 00 55.6	
	comp=N,598µm,0.3s						
KEK	**Kerkira**	**1.07**	**174**	P	**Pb**	**16 00 37.4**	**-0.5**
KEK				S	**Sg**	**16 00 51.7**	**-0.6**
KEK				AML	AML	16 00 58.6	
	comp=E,386µm,0.6s						
KEK				AML	AML	16 01 00.3	
	comp=N,323µm,0.5s						
KEK	**Kerkira**	**1.07**	**174**	P	**Pg**	**16 00 39.4**	**+1.1**
KEK				S	**Sn**	**16 00 54.7**	**+2.0**
	comp=N,178nm,0.6s						
PHP	**Peshkopia**	**1.09**	**33**	P	**Pb**	**16 00 37.4**	**-0.9**
	baz=30						
PHP				S	**Sn**	**16 00 53.1**	**-0.1**
	baz=30						
PHP				AMP			
	comp=N,0.8nm,0.5s,baz=30						
NEST	**Nestorio**	**1.13**	**108**	P	**Pg**	**16 00 39.2**	**-0.3**
NEST				AML	AML	16 01 02.3	
	comp=E,172µm,0.4s						
NEST				AML	AML	16 01 03.0	
	comp=N,121µm,0.4s						
NEST	**Nestorio**	**1.13**	**108**	P	**Pg**	**16 00 39.6**	**+0.1**
NEST				S	**Sg**	**16 00 54.5**	**+0.2**
ULC	**Ulcinj**	**1.22**	**346**	*i* Pn	**Pb**	**16 00 40.2**	**-0.3**
PUK	**Puka**	**1.28**	**8**	P	**Pg**	**16 00 42.0**	**-0.2**
	baz=4.0						
PUK				S	**Sg**	**16 01 00.6**	**+1.6**
	baz=4.0						
PUK				AMP			
	comp=E,0.5nm,0.5s,baz=4.0						
PENT	**Pentalofos**	**1.28**	**117**	P	**Pn**	**16 00 40.9**	**-0.2**
FNA	**Florina**	**1.32**	**89**	P	**Pn**	**16 00 41.1**	**-0.4**
FNA				S	**Sb**	**16 00 59.4**	**+0.5**
FNA				AML	AML	16 01 03.5	
	comp=E,443µm,0.3s						
FNA				AML	AML	16 01 03.5	
	comp=N,465µm,0.3s						
FNA	**Florina**	**1.32**	**89**	P	**Pn**	**16 00 41.4**	**-0.2**
FNA				S	**Sb**	**16 00 59.1**	**+0.3**
FNA	**Florina**	**1.32**	**89**	P	**Pn**	**16 00 41.1**	**-0.4**
	baz=90						
FNA				S	**Sg**	**16 01 00.5**	**+0.4**
	baz=90						
FNA	**Florina**	**1.32**	**89**	*i* Pn	**Pn**	**16 00 41.5**	**0.0**
IGT	**Igoumenitsa**	**1.35**	**157**	P	**Pg**	**16 00 42.9**	**-0.7**
IGT				S	**Sb**	**16 00 60.0**	**+0.2**
IGT				AML	AML	16 01 03.5	
	comp=E,175µm,0.6s						
IGT				AML	AML	16 01 07.5	
	comp=N,184µm,0.3s						
IGT	**Igoumenitsa**	**1.35**	**157**	P	**Pg**	**16 00 43.0**	**-0.7**
IGT				S	**Sg**	**16 01 01.3**	**0.0**
	comp=N,85nm,0.5s						
IGT	**Igoumenitsa**	**1.35**	**157**	P	**Pg**	**16 00 43.2**	**-0.5**
	baz=160						
JAN	**Janina**	**1.45**	**140**	P	**Pb**	**16 00 44.4**	**0.0**
JAN				AML	AML	16 01 09.6	
	comp=E,202µm,0.3s						
JAN				AML	AML	16 01 11.5	
	comp=N,172µm,0.4s						
KPRO	**Kipourio**	**1.55**	**121**	P	**Pb**	**16 00 46.1**	**0.0**
KPRO				AML	AML	16 01 15.4	
	comp=E,121µm,0.4s						
KPRO				AML	AML	16 01 18.3	
	comp=N,121µm,0.6s						
BCI	**Bajram Curri**	**1.62**	**11**	P	**Pg**	**16 00 48.0**	**-0.7**
	baz=8.0						
BCI				S	**Sg**	**16 01 11.3**	**+1.5**
	baz=8.0						
PRZK	**Prizren**	**1.66**	**30**	*i* Pn	**Pb**	**16 00 47.7**	**-0.3**
KZN	**Kozani**	**1.69**	**106**	P	**Pb**	**16 00 49.1**	**+0.6**
SKO	**Skopje**	**1.80**	**48**	*i* Pn	**Pn**	**16 00 48.6**	**+0.4**
SKO				*i* Sn	**Sb**	**16 01 13.6**	**+0.8**
SKO				*e*Lg	Lg	16 01 13.8	
	comp=N,5.2nm,0.5s						
GRG	**Griva**	**2.10**	**84**	*i* Pn	**Pn**	**16 00 53.3**	**+1.0**
LKD2	**Lefkada island**	**2.13**	**158**	P	**Pn**	**16 00 53.3**	**+0.5**
NYDR	**Nydri-Lefkada**	**2.22**	**158**	P	**Pn**	**16 00 54.3**	**+0.5**
EVGI	**Lefkada island**	**2.29**	**160**	P	**Pn**	**16 00 55.8**	**+0.8**

ROM 16 16:01:55.5±0.1, 44.193N±0.004×10.918E±0.005, h20km±1km, ML1.6/4, 14C, Error ellipse: s-maj=0.5km s-min=0.3km az=352.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.15**	**100**	P	Pb	16 01 59.9	-1.3
FNVD	**Fontana Vidola**	**0.15**	**100**	P	Pb	16 01 59.9	-1.3
FNVD				S	Sb	16 02 03.5	-1.7
ZCCA	**Zocca**	**0.16**	**15**	↑↑P	Pb	16 02 00.4	-0.8
ZCCA	**Zocca**	**0.16**	**15**	↑↑P	Pb	16 02 00.4	-0.8
ZCCA				S	Sb	16 02 04.0	-1.1
ZCCA				AML	AML		
	comp=E,152µm,0.3s						
ZCCA				AML	AML		
	comp=N,222µm,0.4s						
ZCCA				AML	AML		
	comp=E,152µm,0.3s						
ZCCA	**Zocca**	**0.16**	**15**	↑↑P	Pb	16 02 00.4	-0.8
MTCR	**Monte La Croce**	**0.18**	**161**	↑↑P	Pb	16 02 00.6	-0.6
MTCR				S	Sb	16 02 04.3	-1.0
MTCR				AML	AML		
	comp=N,185µm,0.2s						
MTCR				AML	AML		
	comp=E,295µm,0.2s						
MTCR	**Monte La Croce**	**0.18**	**161**	↑↑P	Pb	16 02 00.6	-0.6
MTCR	**Monte La Croce**	**0.18**	**161**	↑↑P	Pb	16 02 00.6	-0.6
POPM	**Popiglio**	**0.19**	**218**	P	Pb	16 02 00.7	-0.4
POPM	**Popiglio**	**0.19**	**218**	↑↑P	Pb	16 02 00.7	-0.4
POPM				S	Sb	16 02 04.4	-0.7
POPM				AML	AML		
	comp=E,604µm,0.2s						
POPM				AML	AML		
	comp=N,591µm,0.2s						
POPM	**Popiglio**	**0.19**	**218**	↑↑P	Pb	16 02 00.7	-0.4
POPM	**Popiglio**	**0.19**	**218**	↑↑P	Pb	16 02 00.7	-0.4
BDI	**Bagni Di Lucca**	**0.27**	**241**	↑↑P	Pb	16 02 01.8	0.0
BDI	**Bagni Di Lucca**	**0.27**	**241**	↑↑P	Pb	16 02 01.8	0.0
BDI				S	Sb	16 02 06.2	+0.1
BDI				AML	AML		
	comp=E,182µm,1.1s						
BDI				AML	AML		
	comp=N,264µm,0.4s						
BDI				AML	AML		
	comp=E,182µm,1.1s						
BDI	**Bagni Di Lucca**	**0.27**	**241**	↑↑P	Pb	16 02 01.8	0.0
CARD	**Cardoso**	**0.36**	**242**	P	Pb	16 02 03.3	+0.3
CARD	**Cardoso**	**0.36**	**242**	P	Pb	16 02 03.3	+0.3
CARD				S	Sb	16 02 09.0	+0.8
CARD	**Cardoso**	**0.36**	**242**	S	Sb	16 02 09.0	+0.8
CARD	**Cardoso**	**0.36**	**242**	S	Sb	16 02 10.0	+1.8
SARO	**Sassorosso**	**0.37**	**269**	P	Pb	16 02 03.5	+0.1
SARO	**Sassorosso**	**0.37**	**269**	P	Pb	16 02 03.4	+0.1
SARO				S	Sb	16 02 09.2	+0.5
SARO				AML	AML		
	comp=E,67µm,0.2s						
SARO				AML	AML		
	comp=N,137µm,0.5s						
SARO				AML	AML		
	comp=E,67µm,0.2s						
SARO				AML	AML		
	comp=N,138µm,0.5s						
SARO	**Sassorosso**	**0.37**	**269**	S	Sb	16 02 09.2	+0.5
VLC	**Villacollemand**	**0.38**	**265**	P	Pb	16 02 03.8	+0.3
VLC				S	Sb	16 02 10.1	+1.1
VLC	**Villacollemand**	**0.38**	**265**	P	Pb	16 02 03.8	+0.3
VLC	**Villacollemand**	**0.38**	**265**	S	Sb	16 02 10.1	+1.1
EQUI	**Equi**	**0.55**	**267**	P	Pb	16 02 06.4	-0.2
EQUI	**Equi**	**0.55**	**267**	P	Pb	16 02 06.4	-0.2
EQUI				S	Sb	16 02 14.3	+0.2
EQUI	**Equi**	**0.55**	**267**	S	Sb	16 02 14.3	+0.2
EQUI	**Equi**	**0.55**	**267**	S	Sb	16 02 15.0	+1.0
CSNT	**Castellina Chi**	**0.77**	**159**	P	Pb	16 02 06.7	-3.5
CSNT	**Castellina Chi**	**0.77**	**159**	P	Pb	16 02 06.7	-3.5
FOSV	**Fossato di Vic**	**1.61**	**123**	P	Pn	16 02 20

Ms1 2.9/1,ms1mx2.5/12,Error ellipse: s-maj=261.6km s-min=24.2km az=76.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.41**	**341**	Pn	Pn	16 08 47.6	-2.0
	1.6nm,0.3s,baz=28,slow=23,SNR=11						
SIJI				Sn	Sn	16 09 15.4	-4.4
	2.1nm,0.3s,baz=189,slow=23,SNR=7.7						
FITZ	**Fitzroy Crossi**	**16.11**	**202**	LR	LR	16 18 43.1	
	comp=Z,39nm,18.5s,baz=86,slow=39						
WRA	**Warramunga Arr**	**16.82**	**173**	Pn	Pn	16 12 06.4	+0.4
	0.1nm,0.3s,baz=350,slow=11,SNR=1.3						
ASAR	**Alice Springs**	**20.46**	**175**	P	P	16 12 47.3	-0.9
	0.8nm,0.6s,baz=350,slow=11,SNR=18						
MKAR	**Makanchi Array**	**66.21**	**325**	P	P	16 19 00.0	+1.4
	0.1nm,0.7s,baz=134,slow=8.3,SNR=1.7						

IDC 16 16:11:02.9±1.4,25°37N×142°27E,h0km,mb3.1/4, mb1 3.3/4,mb1mx3.2/47,mbtmp3.1/4,Error ellipse: s-maj=63.2km s-min=30.1km az=92.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.70**	**190**	P	P	16 19 24.9	-0.9
	0.1nm,0.5s,baz=20,slow=7.5,SNR=1.2						
ASAR	**Alice Springs**	**49.42**	**190**	P	P	16 19 55.1	+0.5
	0.1nm,0.7s,baz=17,slow=6.7,SNR=4.6						
MKAR	**Makanchi Array**	**51.64**	**311**	P	P	16 20 11.0	-0.4
	0.2nm,0.7s,baz=95,slow=7.2,SNR=2.0						
YKA	**Yellowknife Ar**	**73.62**	**28**	P	P	16 22 38.2	+0.3
	0.1nm,0.3s,baz=299,slow=6.8,SNR=2.8						

*SKHL **16** 16:13:25.3±0.5,45°30N×151°20E,h72km±3km,mb4.3/3*
*IDC **16** 16:13:28.5±3.5,45°53N×150°97E,h61km±31km,mb3.2/5, mb1 3.4/7,mb1mx3.1/48,mbtmp3.5/7,ML2.7/2,Error ellipse: s-maj=40.4km s-min=17.6km az=145.0*
ISC 16 16:13:25.7±1.1,45°3N±0°1×151°15E±0°10,h42km,n22, σ1s23/17,mb3.5/5,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.32**	**268**	*eP*	**Pn**	**16 14 01.3**	**-0.1**
KUR				AMB	AMB	16 14 03.0	
	60nm,0.4s						
KUR				*eS*	**Sn**	**16 14 27.9**	**-0.8**
KUR				A	A	16 14 33.1	
	340nm,0.4s						
KUR				A	A	16 14 33.1	
	60nm,0.4s						
GRPR	**Tuman**	**4.07**	**253**	*eS*	**Sn**	**16 15 10.5**	**-1.2**
GLVR	**Golovnino**	**4.33**	**250**	*eS*	**Sn**	**16 15 17.2**	**-1.0**
NMR	**Nemuro--Hokkai**	**4.36**	**245**	*i* P	**Pn**	**16 14 29.1**	**-0.3**
NMR				*i* S	**Sn**	**16 15 17.2**	**-1.7**
YSS	**Yuzh-Sakhalins**	**6.05**	**288**	*eP*	**Pn**	**16 14 54.0**	**+1.4**
YSS				AMB	AMB	16 14 55.1	
	10.0nm,0.5s						
ASAJ	**Asahikawa**	**6.22**	**262**	P	**Pn**	**16 14 56.2**	**+1.3**
	0.3nm,0.3s,baz=337,slow=33,SNR=1.5						
ASAJ				S	**Sn**	**16 16 06.0**	**+1.4**
	baz=254,slow=28,SNR=1.4						
SKR	**Severo-Kuril's**	**6.29**	**30**	*eP*	**Pn**	**16 14 56.2**	**+0.3**
SKR				AMB	AMB	16 14 58.0	
	40nm,0.7s						
SKR				*eS*	**Sn**	**16 16 04.5**	**-1.9**
SKR				A	A	16 16 10.0	
	60nm,0.7s						
SKR				A	A	16 16 10.0	
	120nm,0.7s						
PETK	**Petropavlovsk-**	**8.87**	**26**	P	**Pn**	**16 15 31.9**	**+0.7**
	0.1nm,0.3s,baz=176,slow=11,SNR=12						
H11N2	**WAKE ISLAND Hy**	**28.68**	**148**	T	T	16 50 00.2	
	baz=336						
H11N1	**WAKE ISLAND Hy**	**28.69**	**148**	T	T	16 50 00.8	
	baz=336						
H11N3	**WAKE ISLAND Hy**	**28.69**	**148**	T	T	16 50 00.7	
	baz=336						
H11S1	**WAKE ISLAND Hy**	**29.72**	**149**	T	T	16 51 19.2	
	baz=338,slow=76,SNR=23						
H11S3	**WAKE ISLAND Hy**	**29.73**	**149**	T	T	16 51 19.6	
	baz=338,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**29.74**	**149**	T	T	16 51 17.5	
	baz=338,slow=76,SNR=18						
ILAR	**Eielson Array**	**38.50**	**37**	P	**P**	**16 20 44.4**	**+1.0**
	0.4nm,0.5s,baz=267,slow=7.3,SNR=7.2						
INK	**Inuvik**	**43.57**	**31**	P	**P**	**16 21 24.7**	**-0.2**
	0.6nm,0.6s,baz=278,slow=7.7,SNR=3.7						
MKAR	**Makanchi Array**	**46.38**	**298**	P	**P**	**16 21 46.7**	**-1.0**
	0.1nm,0.5s,baz=62,slow=7.0,SNR=2.3						
FINES	**FINESS Array B**	**64.72**	**334**	P	**P**	**16 23 58.0**	**-1.0**
	1.9nm,0.9s,baz=32,slow=5.6,SNR=1.8						
ASAR	**Alice Springs**	**70.45**	**197**	P	**P**	**16 24 37.0**	**+1.4**
	0.3nm,0.7s,baz=22,slow=6.2,SNR=2.4						
H03N2	**Juan Fernandez**	**140.11**	**91**	T	T	19 09 16.3	
	baz=307						
H03N3	**Juan Fernandez**	**140.12**	**91**	T	T	19 09 17.2	
	baz=307						
H03N1	**Juan Fernandez**	**140.12**	**91**	T	T	19 09 16.9	
	baz=307						

*TIR **16** 16:30:25.7,43°19N×18°65E,h7km,Md3.4*
*IDC **16** 16:30:27.2±1.3,42°84N×18°83E,h0km,mb3.6/3, mb1 3.8/10,mb1mx3.5/49,mbtmp3.6/10,ML3.3/7,MS2.8/8, Ms1 2.8/8,ms1mx2.5/55,Error ellipse: s-maj=20.8km s-min=13.1km az=7.0*
*KRSZO **16** 16:30:29.1±0.6,43°08N×18°72E,h0km±1km,ML3.8/21, Error ellipse: s-maj=3.4km s-min=2.4km az=93.0*
*RHSSO **16** 16:30:29.9±0.2,43°05N×18°79E,h2km±1km,ML3.6/15*
*THE **16** 16:30:29.8,43°20N×18°51E,h7km±24km,ML3.3/2,Error ellipse: s-maj=32.4km s-min=2.0km az=323.0*
*PDG **16** 16:30:29.6±0.0,43°02N×18°76E,h1km,MD3.4/14, ML3.3/13,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BEO **16** 16:30:30.1±0.3,43°01N×18°74E,h8km±2km,ML3.4/13*
*LDG **16** 16:30:31.3±0.1,43°19N×18°88E,h4km,Ml3.5/13,Error ellipse: s-maj=3.1km s-min=1.6km az=29.0*
*PRU **16** 16:30:32.7±0.0,43°21N×18°82E,h0km*
ISC 16 16:30:29.4±0.9,43°05N±0°01×18°75E±0°01,h9km±6km, n166,σ2s07/283,mb3.6/3,23C-16D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.20**	**37**	⇑*i* Pg	**Pg**	**16 30 33.3**	**-0.2**
UPM				*e*Sg	**Sg**	**16 30 36.7**	**+0.4**
UPM	**Unac-Piva**	**0.20**	**37**	⇑*i* Pg	**Pg**	**16 30 33.4**	**-0.1**
UPM				*i* Sg	**Sg**	**16 30 36.7**	**+0.4**
BRY	**Bratogost**	**0.21**	**226**	*e*Pg	**Pg**	**16 30 33.6**	**-0.1**
BRY				*e*Sg	**Sg**	**16 30 37.2**	**+0.6**
BRY	**Bratogost**	**0.21**	**226**	⇓*i* Pg	**Pg**	**16 30 33.3**	**-0.4**
BRY				*i* Sg	**Sg**	**16 30 36.5**	**-0.1**
NKY	**Niksic**	**0.30**	**142**	⇓*i* Pg	**Pg**	**16 30 34.6**	**-0.7**
NKY				*i* Sg	**Sg**	**16 30 38.9**	**-0.3**
NKME	**Niksic**	**0.32**	**151**	⇓*i* Pg	**Pg**	**16 30 35.0**	**-0.7**
NKME				*i* Sg	**Sg**	**16 30 39.6**	**-0.3**
TREB	**Trebinje**	**0.44**	**222**	*e*Pg	**Pg**	**16 30 37.5**	**-0.4**
TREB				*e*Sg	**Sb**	**16 30 45.2**	**-0.8**
TREB	**Trebinje**	**0.44**	**222**	⇑*i* Pg	**Pg**	**16 30 37.5**	**-0.4**
TREB				*e*Sg	**Sb**	**16 30 45.3**	**-0.8**
CEME	**Cevo**	**0.52**	**166**	⇓*i* Pg	**Pg**	**16 30 38.6**	**-0.8**
CEME				*i* Sg	**Sg**	**16 30 46.3**	**+0.2**
PLE	**Pljevlja**	**0.55**	**59**	⇓*i* Pg	**Pg**	**16 30 39.8**	**-0.2**
PLE				*i* Sg	**Sb**	**16 30 48.4**	**-0.9**
KOME	**Kolasin**	**0.60**	**109**	⇑*i* Pg	**Pg**	**16 30 40.3**	**-0.6**
KOME				*i* Sg	**Sg**	**16 30 49.5**	**+0.7**
HCY	**Herceg Novi**	**0.63**	**197**	⇑*i* Pg	**Pg**	**16 30 41.5**	**0.0**
HCY				*e*Sg	**Sb**	**16 30 51.1**	**-0.3**
HCY	**Herceg Novi**	**0.63**	**197**	*e*Pg	**Pg**	**16 30 40.8**	**-0.7**
HCY				*i* Sg	**Sg**	**16 30 50.2**	**+0.5**
PDG	**Podgorica**	**0.72**	**148**	*e*Pg	**Pg**	**16 30 41.9**	**-1.3**
PDG				*e*Sg	**Sg**	**16 30 52.0**	**-0.6**
PDG	**Podgorica**	**0.72**	**148**	⇓P	**Pg**	**16 30 41.7**	**-1.5**
PDG				⇑S	**Sg**	**16 30 52.6**	**-0.1**
PDG	**Podgorica**	**0.72**	**148**	⇑*i* Pg	**Pg**	**16 30 41.9**	**-1.3**
PDG				*e*Sg	**Sg**	**16 30 52.6**	**-0.1**
TTG	**Podgorica**	**0.72**	**148**	⇑*i* Pg	**Pg**	**16 30 41.9**	**-1.3**
TTG				*i* Sg	**Sg**	**16 30 53.3**	**+0.7**
RUDO	**Rudo**	**0.73**	**38**	⇑*i* Pg	**Pg**	**16 30 42.7**	**-0.7**
RUDO				*e*Sg	**Sg**	**16 30 52.6**	**-0.4**
BUM	**Brajici-Budva**	**0.75**	**172**	⇓*i* Pg	**Pg**	**16 30 43.0**	**-0.9**
BUM				*i* Sg	**Sg**	**16 30 54.4**	**+0.7**
STON	**Ston**	**0.79**	**258**	*e*Pg	**Pg**	**16 30 44.1**	**-0.4**
STON				Sg	**Sb**	**16 30 55.8**	**-0.2**
IVA	**Berane**	**0.86**	**101**	⇑*i* Pg	**Pg**	**16 30 45.2**	**-0.7**
IVA				*i* Sg	**Sb**	**16 30 58.5**	**+0.3**
DRME	**Dracevica, Mon**	**0.92**	**159**	*e*Pg	**Pg**	**16 30 45.4**	**-1.6**
DRME				*e*Sg	**Sg**	**16 30 59.4**	**+0.5**
DRME	**Dracevica, Mon**	**0.92**	**159**	⇑*i* Pg	**Pg**	**16 30 46.1**	**-0.9**
DRME				*i* Sg	**Sb**	**16 31 00.0**	**+0.2**
BBLS	**Lazići**	**0.95**	**30**	*e*Pg	**Pb**	**16 30 48.0**	**-0.1**
BBLS				*e*Sg	**Sg**	**16 31 00.3**	**+0.3**
BBLS	**Lazići**	**0.95**	**30**	⇑*i* Pg	**Pg**	**16 30 47.1**	**-0.5**
BBLS				*e*Sg	**Sg**	**16 30 59.5**	**-0.5**
BBLS	**Lazići**	**0.95**	**30**	Pg	**Pg**	**16 30 47.1**	**-0.5**
BBLS				x	x	16 30 47.9	
	comp=Z,14nm,SNR=214						
BBLS				Pb	**Pb**	**16 30 48.0**	**-0.1**
BBLS				Lg	Lg	16 30 59.5	
BBLS				Sb	**Sg**	**16 31 00.0**	**+0.1**
BBLS				Sg	**Sg**	**16 31 00.3**	**+0.3**
PVY	**Plav**	**1.00**	**116**	⇓*i* Pg	**Pg**	**16 30 47.7**	**-0.9**
PVY				*i* Sg	**Sb**	**16 31 03.0**	**+0.7**
HAPS	**Han Pijesak,Bl**	**1.05**	**8**	⇑*i* Pg	**Pg**	**16 30 48.1**	**-1.4**
HAPS				*e*Sg	**Sg**	**16 31 02.6**	**-0.6**
ULC	**Ulcinj**	**1.14**	**161**	⇓*i* Pg	**Pg**	**16 30 50.2**	**-1.1**
ULC				*i* Sg	**Sn**	**16 31 07.7**	**+0.3**
IVAS	**Ivanjica**	**1.16**	**62**	*e*Pg	**Pg**	**16 30 50.8**	**-0.7**
IVAS				*e*Sg	**Sn**	**16 31 07.4**	**-0.4**
BCI	**Bajram Curri**	**1.19**	**124**	P	**Pb**	**16 30 51.8**	**-0.3**
	baz=127						
BCI				S	**Sn**	**16 31 11.6**	**+3.1**
	baz=127						
RICI	**Ricice**	**1.26**	**291**	*e*Pg	**Pg**	**16 30 54.7**	**+1.1**
RICI				Sg	**Sn**	**16 31 12.1**	**+1.8**
MAKA	**Makarska**	**1.29**	**281**	*e*Pg	**Pg**	**16 30 55.5**	**+1.5**
MAKA				Sg	**Sn**	**16 31 11.4**	**+0.5**
PUK	**Puka**	**1.31**	**139**	P	**Pn**	**16 30 54.0**	**0.0**
	baz=140						
PUK				S	**Sn**	**16 31 16.8**	**+5.1**
	baz=140						
DIVS	**Divibare**	**1.39**	**40**	*e*Pg	**Pb**	**16 30 55.6**	**+0.1**
DIVS				*e*Sg	**Sg**	**16 31 16.8**	**+2.8**
DIVS	**Divibare**	**1.39**	**40**	⇑*i* Pg	**Pn**	**16 30 55.2**	**+0.2**
DIVS				*e*Sg	**Sg**	**16 31 13.9**	**-0.1**
DIVS	**Divibare**	**1.39**	**40**	Pb	**Pn**	**16 30 55.2**	**+0.2**
DIVS				Pn	**Pb**	**16 30 55.6**	**+0.1**
DIVS				Pg	**Pg**	**16 30 55.9**	**0.0**
	comp=Z,2.6nm,SNR=98						
DIVS				Sn	**Sb**	**16 31 13.0**	**-0.4**
DIVS				Lg	Lg	16 31 13.9	
DIVS				Sg	**Sg**	**16 31 16.8**	**+2.8**
TEKS	**Tekeris**	**1.60**	**20**	*e*Pg	**Pb**	**16 30 59.4**	**+0.2**
TEKS				*e*Sg	**Sg**	**16 31 21.7**	**+0.7**
TEKS	**Tekeris**	**1.60**	**20**	*e*Pn	**Pb**	**16 30 58.7**	**-0.5**
TEKS				*e*Sn	**Sb**	**16 31 19.8**	**+0.2**
GRUS	**Gruza**	**1.66**	**59**	*e*Pg	**Pb**	**16 31 00.4**	**+0.2**
TRUS	**Trudelj**	**1.68**	**45**	*e*Pg	**Pb**	**16 31 00.3**	**-0.2**
TRUS				*e*Sg	**Sg**	**16 31 25.4**	**+1.9**
HVAR	**Hvar**	**1.69**	**275**	*i* Pn	**Pb**	**16 31 00.9**	**+0.3**
HVAR				Sn	**Sg**	**16 31 25.6**	**+2.0**
SELS	**Selova**	**1.75**	**84**	*e*Pn	**Pn**	**16 31 00.3**	**+0.4**
MGRS	**Mrkonjic Grad**	**1.82**	**319**	*e*Pn	**Pb**	**16 31 02.8**	**-0.1**
MGRS				*e*Sn	**Sb**	**16 31 26.0**	**+0.1**
PHP	**Peshkopia**	**1.85**	**137**	P	**Pg**	**16 31 04.5**	**-0.3**
PHP				S	**Sg**	**16 31 31.4**	**+2.5**
PHP	**Peshkopia**	**1.85**	**137**	P	**Pg**	**16 31 04.8**	**-0.1**
	baz=137						
PHP				S	**Sg**	**16 31 33.3**	**+4.5**
	baz=137						
TIR	**Tirane**	**1.89**	**154**	P	**Pb**	**16 31 04.9**	**+0.9**
TIR				S	**Sg**	**16 31 33.0**	**+2.9**
	comp=Z,450nm,0.7s						
TIR	**Tirane**	**1.89**	**154**	P	**Pg**	**16 31 05.5**	**-0.1**
	baz=153						
TIR				S	**Sg**	**16 31 33.9**	**+3.8**
	baz=153						
TIR	**Tirane**	**1.89**	**154**	Pg	**Pb**	**16 31 04.9**	**+0.9**
TIR				Pn	**Pg**	**16 31 05.0**	**-0.5**
	comp=Z,1.7nm,SNR=27						
TIR				Pb	**Sg**	**16 31 31.2**	**+1.1**
TIR				Lg	Lg	16 31 33.0	
	comp=Z,450nm,0.7s						
TIR				Sn	**Sg**	**16 31 33.9**	**+3.8**
TIR				Sg	Sn	16 31 59.7	+34
KIJV	**Kijevo**	**1.95**	**300**	*e*Pg	**Pg**	**16 31 07.6**	**+0.8**
KIJV				Sn	**Sg**	**16 31 31.1**	**-1.1**
BLY	**Banja Luka**	**2.04**	**327**	*e*Pn	**Pb**	**16 31 06.4**	**-0.2**
BLY	**Banja Luka**	**2.04**	**327**	⇑*i* Pn	**Pb**	**16 31 05.5**	**-1.1**
BLY				*e*Sn	**Sb**	**16 31 31.6**	**-0.6**
BLY	**Banja Luka**	**2.04**	**327**	Pn	**Pb**	**16 31 05.5**	**-1.1**
BLY				Pg	**Pb**	**16 31 06.4**	**-0.2**
BLY				Pb	**Pn**	**16 31 06.5**	**+2.6**
	comp=Z,1.5nm,SNR=80						
BLY				Sn	**Sb**	**16 31 31.6**	**-0.6**
BLY				Lg	Lg	16 31 33.1	
BEO	**Beograd**	**2.16**	**35**	Pn	**Pn**	**16 31 06.7**	**+1.2**
	comp=Z,1.2nm,SNR=10						
SVIS	**Svilajnac**	**2.17**	**55**	*e*Pn	**Pn**	**16 31 06.5**	**+0.9**
BOVS	**Bovan**	**2.24**	**74**	*e*Pn	**Pb**	**16 31 08.4**	**-1.6**
FRGS	**Fruska Gora**	**2.25**	**20**	*e*Pn	**Pn**	**16 31 06.9**	**+0.1**
FRGS				*e*Sg	**Sg**	**16 31 43.1**	**+1.6**
FRGS	**Fruska Gora**	**2.25**	**20**	⇓P	**Pn**	**16 31 06.8**	**0.0**
FRGS				⇓S	**Sn**	**16 31 36.3**	**+1.7**
FRGS	**Fruska Gora**	**2.25**	**20**	*e*Pn	**Pn**	**16 31 07.3**	**+0.5**
FRGS				*e*Sn	**Sn**	**16 31 35.8**	**+1.2**
SKO	**Skopje**	**2.26**	**117**	*i* Pn	**Pg**	**16 31 12.6**	**-0.1**
BARS	**Barje**	**2.27**	**95**	*e*Pn	**Pn**	**16 31 06.4**	**-0.6**
BARS				*e*Sg	**Sg**	**16 31 43.4**	**+1.3**
ZIRJ	**Zirje**	**2.34**	**286**	*e*Pg	**Pg**	**16 31 13.3**	**-0.9**
ZIRJ				Sn	**Sb**	**16 31 41.1**	**+0.3**
MORI	**Morici**	**2.36**	**291**	*e*Pg	**Pg**	**16 31 14.3**	**-0.2**
MORI				Sn	**Sb**	**16 31 41.4**	**+0.2**
OHR	**Ohrid**	**2.46**	**141**	*i* Pn	**Pb**	**16 31 15.1**	**+1.2**
KUBS	**Kucevo**	**2.52**	**56**	*e*Pn	**Pn**	**16 31 12.6**	**+2.0**
ZAGS	**Zajecar**	**2.65**	**72**	*e*Pn	**Pn**	**16 31 13.8**	**+1.5**
MDVR	**Moldovita**	**2.76**	**50**	⇑P	**Pn**	**16 31 14.2**	**+0.4**
BOSS	**Bosilegrad**	**2.80**	**100**	*e*Pn	**Pn**	**16 31 16.3**	**+1.9**
MATE	**Matera**	**2.84**	**213**	⇑P	**Pn**	**16 31 15.3**	**+0.4**
MATE	**Matera**	**2.84**	**213**	Pn	**Pn**	**16 31 15.3**	**+0.4**
MATE				Pg	**Pb**	**16 31 17.9**	**-2.3**
	comp=Z,0.3nm,SNR=14						
MATE				Sn	**Sn**	**16 31 49.5**	**+0.3**
DUGI	**Dugi Otok**	**2.84**	**291**	*e*Pn	**Pn**	**16 31 17.7**	**+2.7**
ZAPS	**Zavoj**	**2.85**	**84**	*e*Pn	**Pn**	**16 31 15.8**	**+0.7**
KBN	**Korca**	**2.86**	**147**	P	**Pb**	**16 31 19.0**	**-1.7**
KBN				S	**Sb**	**16 31 56.8**	**+1.0**
	comp=Z,165nm,0.7s						
KBN	**Korca**	**2.86**	**147**	P	**Pb**	**16 31 19.6**	**-1.1**
	baz=147						
KBN				S	**Sg**	**16 31 58.8**	**-2.5**
	baz=147						
STIP	**Stip**	**2.88**	**117**	*i* Pn	**Pb**	**16 31 21.1**	**+0.1**
FNA	**Florina**	**2.99**	**138**	P	**Pb**	**16 31 21.0**	**-1.9**
NEST	**Nestorio**	**3.14**	**146**	P	**Pn**	**16 31 22.4**	**+3.2**
NEST				S	**Sb**	**16 32 02.9**	**-1.1**
MORH	**Mrgy, Hungar**	**3.17**	**359**	⇓P	**Pn**	**16 31 19.8**	**+0.4**
MORH	**Mrgy, Hungar**	**3.17**	**359**	Pn	**Pn**	**16 31 19.8**	**+0.4**
MORH				Pg	Pb	16 31 20.3	-5.5
	comp=Z,0.3nm,SNR=15						
MORH				Lg	Lg	16 31 56.9	
MORH				Sn	**Sn**	**16 31 58.2**	**+0.9**
HERR	**Herculane**	**3.22**	**54**	⇑P	**Pn**	**16 31 20.1**	**-0.1**
BZS	**Buzias**	**3.29**	**38**	⇑P	**Pn**	**16 31 21.8**	**+0.7**
BZS				⇑S	**Sn**	**16 32 00.3**	**-0.1**
BZS	**Buzias**	**3.29**	**38**	Pn	**Pn**	**16 31 21.9**	**+0.7**
	comp=Z,0.2nm,SNR=12						
BZS				Sn	**Sn**	**16 32 00.3**	**-0.1**
SRN	**Sarande**	**3.30**	**163**	P	**Pn**	**16 31 23.9**	**+2.7**
SRN				S	**Sb**	**16 32 06.5**	**-1.9**
SRN	**Sarande**	**3.30**	**163**	P	**Pn**	**16 31 24.7**	**+3.5**
	baz=162						
VAY	**Valandovo**	**3.32**	**120**	*i* Pn	**Pn**	**16 31 24.9**	**+3.4**
VTS	**Vitosha**	**3.33**	**96**	⇓P	**Pn**	**16 31 21.4**	**-0.4**
VTS				⇑S	**Sn**	**16 32 03.1**	**+1.6**
VTS	**Vitosha**	**3.33**	**96**	Pg	**Pn**	**16 31 21.4**	**-0.4**
VTS				Pn	**Pn**	**16 31 22.3**	**+0.6**
	comp=Z,0.2nm,SNR=11						
VTS				Pb	**Pn**	**16 31 22.8**	**+1.0**
VTS				Sn	**Sn**	**16 32 02.9**	**+1.3**
VTS				Lg	Lg	16 32 03.1	
GRG	**Griva**	**3.43**	**126**	P	**Pn**	**16 31 26.6**	**+3.5**
BOJS	**Bojanci**	**3.51**	**316**	*i* Pn	**Pn**	**16 31 26.5**	**+2.3**
BOJS				*e*Sn	**Sn**	**16 32 08.4**	**+2.5**
BOJS				IAML		16 32 44.7	
	comp=Z,308nm,1.5s						
KNT	**Kendrikon**	**3.62**	**120**	P	**Pn**	**16 31 29.1**	**+3.5**
CRES	**Cresnjev**	**3.64**	**321**	*e*Pn	**Pn**	**16 31 27.6**	**+1.6**
CRES				*e*Sn	**Sn**	**16 32 10.8**	**+1.7**
CRES	**Cresnjev**	**3.64**	**321**	Pg	**Pn**	**16 31 27.6**	**+1.6**
CRES				Sn	**Sn**	**16 32 10.8**	**+1.7**
BEHE	**Becsehely**	**3.70**	**338**	*e*Pn	**Pn**	**16 31 28.5**	**+1.8**
BEHE				*e*Sn	**Sn**	**16 32 12.1**	**+1.7**
BEHE	**Becsehely**	**3.70**	**338**	Pn	**Pn**	**16 31 28.5**	**+1.8**
BEHE				Pg	**Pb**	**16 31 30.8**	**-4.1**
BEHE				Sn	**Sn**	**16 32 12.1**	**+1.7**
GZR	**Gura Zlata**	**3.73**	**50**	⇑P	**Pn**	**16 31 27.3**	**+0.1**
GZR	**Gura Zlata**	**3.73**	**50**	Pn	**Pn**	**16 31 27.3**	**+0.1**
GZR				Pg	**Pn**	**16 31 28.3**	**+1.1**
	comp=Z,0.2nm,SNR=9.6						
GZR				Sn	**Sn**	**16 32 12.5**	**+1.3**
KOGS	**Kog**	**3.84**	**333**	Pn	**Pn**	**16 31 30.9**	**+2.3**
	comp=Z,0.5nm,SNR=11						
TIH	**Tihany**	**3.90**	**351**	Pn	**Pn**	**16 31 30.4**	**+1.0**
	comp=Z,1.0nm,SNR=7.3						
AQU	**L'Aquila**	**4.00**	**262**	Pn	**Pn**	**16 31 34.2**	**+3.3**
	comp=Z,0.3nm,SNR=9.0						
AQU				Sn	**Sn**	**16 32 19.3**	**+1.4**
AQU				Lg	Lg	16 32 21.1	
CEY	**Cerknica**	**4.10**	**312**	*e*Pn	**Pn**	**16 31 34.2**	**+1.9**
CEY				*e*Sn	**Sn**	**16 32 21.4**	**+1.0**
MPLH	**Magyarpolny**	**4.21**	**349**	Pn	**Pn**	**16 31 35.3**	**+1.5**
	comp=Z,0.2nm,SNR=13						
MPLH				Sn	**Sn**	**16 32 22.5**	**-0.6**
CSKK	**Cskako**	**4.33**	**356**	Pn	**Pn**	**16 31 33.5**	**-1.9**
	comp=Z,0.3nm,SNR=11						
CSKK				Sn	**Sn**	**16 32 22.2**	**-3.8**
LOT	**Lotru**	**4.33**	**55**	⇑P	**Pn**	**16 31 36.0**	**+0.5**
LOT	**Lotru**	**4.33**	**55**	Pg	**Pn**	**16 31 36.0**	**+0.5**
LOT				Pn	**Pn**	**16 31 37.1**	**+1.6**
	comp=Z,0.1nm,SNR=3.9						
LOT				Sn	**Sn**	**16 32 27.1**	**+0.8**
BUD	**Budapest**	**4.44**	**2**	Pn	**Pn**	**16 31 40.1**	**+3.2**
	comp=Z,0.1nm,SNR=2.9						
TRI	**Trieste**	**4.45**	**308**	Pn	**Pn**	**16 31 41.5**	**+4.5**
	comp=Z,0.4nm,SNR=14						
TRI				Sn	**Sn**	**16 32 33.7**	**+4.7**
SOKA	**Soboth**	**4.49**	**325**	*i* Pn	**Pn**	**16 31 39.5**	**+1.9**
	comp=Z,15nm,0.5s,SNR=15						
SOKA				*e*Sn	**Sn**	**16 32 30.2**	**+0.1**
	comp=Z,11nm,0.4s						
OBKA	**Obir**	**4.57**	**321**	*e*Pn	**Pn**	**16 31 42.8**	**+4.0**
	comp=Z,4.5nm,0.4s						
ARSA	**Arzberg**	**4.78**	**333**	*i* Pn	**Pn**	**16 31 43.6**	**+2.0**
	comp=Z,26nm,0.4s,SNR=28						
ARSA				*e*Sn	**Sn**	**16 32 37.1**	**-0.1**
	comp=Z,11nm,0.4s						
ARSA	**Arzberg**	**4.78**	**333**	Pn	**Pn**	**16 31 42.6**	**+1.0**
	comp=Z,0.2nm,SNR=6.6						
ARSA				Pg	Pb	16 31 43.6	-10
	comp=Z,26nm,0.4s,SNR=28						
ARSA				Sn	**Sn**	**16 32 35.2**	**-2.0**
ARSA				Lg	Lg	16 32 37.1	
	comp=Z,11nm,0.4s						
SOP	**Sopron**	**4.89**	**342**	Pn	**Pn**	**16 31 44.2**	**+1.2**
	comp=Z,0.1nm,SNR=3.8						
SOP				Sn	**Sn**	**16 32 38.8**	**-0.9**
PSZ	**Piszkesteto**	**4.94**	**9**	⇓P	**Pn**	**16 31 44.0**	**+0.2**
PSZ	**Piszkesteto**	**4.94**	**9**	Pn	**Pn**	**16 31 44.0**	**+0.2**
PSZ				Pg	**Pn**	**16 31 44.2**	**+0.4**
	comp=Z,0.1nm,SNR=4.8						
VOIR		**5.12**	**60**	⇓P	**Pn**	**16 31 46.7**	**+0.4**
CONA	**Conrad Observa**	**5.29**	**338**	*e*Pn	**Pn**	**16 31 51.1**	**+2.5**
	comp=Z,4.5nm,0.5s						
CONA				*e*Sn	**Sn**	**16 32 50.9**	**+1.2**
	comp=Z,13nm,0.4s						

comp=Z,0.3nm,0.3s,baz=50,slow=18,SNR=1.5
IDI LR LR 16 37 13.1

comp=Z,29nm,19.1s,baz=334,slow=46
ORIF Oris-en-Rattie 9.46 286 *e*Pn **Pn 16 32 46.9 +1.0**
ORIF *e*Sn **Sn 16 34 28.4 -4.1**

comp=Z,6.9nm,0.6s
SMRF Simiane la Rot 9.62 280 *e*Pn **Pn 16 32 48.6 +0.6**
CDF Champ du Feu 9.65 308 *e*Pn **Pn 16 32 49.5 +1.1**
VIVF Saint-Julien-l 10.31 285 *e*Pn **Pn 16 32 58.3 +0.8**
VIVF Saint-Julien-l 10.31 285 *e*Pn Pn 16 33 03.3 +5.8
PAGF Fort de Pagny 10.62 306 *e*P Pn 16 33 07.0 +5.3
baz=124
LASF Ste Croix 10.86 281 *e*Pn **Pn 16 33 05.8 +0.9**
SMF Signal de Mont 11.18 294 *e*Pn **Pn 16 33 09.6 +0.3**
SMF *e*Sn **Sn 16 35 08.8 -5.5**
comp=Z,1.8nm,0.4s
LOR Lormes 11.32 297 *e*Pn **Pn 16 33 12.0 +0.7**
baz=116
LOR *e*Sn **Sn 16 35 11.2 -6.8**
comp=Z,1.9nm,0.4s
AVF Avril sur Loir 11.54 294 *e*Pn **Pn 16 33 15.5 +1.3**
BRTR Keskin Array B 11.67 101 LR LR 16 38 17.1
comp=Z,45nm,18.8s,baz=296,slow=41
MMAI Mount Meron Ar 16.48 122 LR LR 16 41 29.7
comp=Z,28nm,19.3s,baz=245,slow=41
HFS Hagfors 17.39 352 P **P 16 34 33.2 -0.1**
comp=Z,0.2nm,0.3s,baz=186,slow=29,SNR=4.8
NOA NORSAR Array B 18.58 348 LR LR 16 42 25.8
comp=Z,18nm,19.1s,baz=345,slow=38
EKA Eskdalemuir Ar 18.77 319 P **Pn 16 34 48.9 -0.1**
baz=111,slow=10.0,SNR=4.5
FINES FINESS Array B 18.94 11 P **Pn 16 34 51.4 +0.3**
comp=Z,0.1nm,0.3s,baz=194,slow=11,SNR=2.5
ARU Arti 28.56 48 LR LR 16 47 05.7
comp=Z,46nm,20.2s,baz=310,slow=35
YKA Yellowknife Ar 68.36 339 P **P 16 41 29.9 -0.8**
comp=Z,0.2nm,0.5s,baz=41,slow=5.3,SNR=6.5
PDAR Pinedale Array 82.79 324 P **P 16 42 54.2 +0.1**
comp=Z,0.3nm,0.7s,baz=32,slow=3.5,SNR=4.2
TXAR Lajitas Array 90.67 313 P **P 16 43 33.5 +0.8**
comp=Z,0.2nm,0.3s,baz=87,slow=2.6,SNR=4.5
ASAR Alice Springs 123.86 92 PKP **PKPdf 16 49 27.3 -0.7**
comp=Z,0.2nm,0.6s,baz=307,slow=1.9,SNR=2.3

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*IDC **16** 16:40:08.9±1.2,36.07N×142.11E,h0km,mb3.3/5, mb1 3.5/8,mb1mx3.4/43,mbtmp3.4/8,ML3.3/3,MS2.4/1, Ms1 2.4/1,ms1mx2.0/19,Error ellipse: s-maj=31.4km s-min=21.8km az=91.0*
*JMA **16** 16:40:14.6±0.2,36.06N×141.83E,h57km±4km,M3.0*
ISC 16 16:40:12.0±1.0,36.04N±0.04×141.97E±0.08,h23km,n27, σ1**839**/27**,mb3.3/5,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.96**	**250**	P	**Pn**	**16 40 30.7**	**+0.6**
JHYU	**Hitachinakayam**	**1.16**	**285**	P	**Pb**	**16 40 33.4**	**+0.1**
JHYU				S	**Sb**	**16 40 47.1**	**-0.8**
JIHU	**Itakohorinouch**	**1.17**	**267**	P	**Pb**	**16 40 34.0**	**+0.4**
JHO	**Hitachi**	**1.27**	**297**	P	**Pb**	**16 40 34.6**	**-0.6**
JHO				*e*S	**Sn**	**16 40 49.7**	**-0.9**
JFK	**Kawauchi**	**1.59**	**327**	P	**Pb**	**16 40 39.7**	**-1.0**
JFK				*e*S	**Sb**	**16 40 58.5**	**-1.9**
BSO1	**Boso 1**	**1.60**	**211**	P	**Pb**	**16 40 39.8**	**-0.8**
BSO1				*e*S	**Sb**	**16 40 59.3**	**-0.9**
BSO3	**Boso 3**	**1.72**	**224**	P	**Pb**	**16 40 41.4**	**-1.3**
BSO3				S	**Sn**	**16 41 01.7**	**+0.4**
JFT	**Otama**	**1.98**	**319**	P	**Pb**	**16 40 45.8**	**-1.5**
JAG	**Ashikaga**	**2.07**	**281**	P	**Pn**	**16 40 50.0**	**+0.6**
JKT	**Katashina**	**2.31**	**289**	P	**Pb**	**16 40 50.2**	**-2.9**
JRY	**Ryogami san**	**2.49**	**270**	P	**Pn**	**16 40 52.0**	**+0.9**
MJAR	**Matsushiro Arr**	**3.08**	**280**	Pn	**Pn**	**16 41 00.9**	**+1.6**
	0.4nm,0.3s,baz=48,slow=20,SNR=21						
MAT	**Matsushiro**	**3.08**	**280**	P	**Pn**	**16 41 01.3**	**+2.0**
MAT				*e*S	**Sn**	**16 41 37.0**	**+1.6**
JHJ	**Hachijo jima 2**	**3.43**	**212**	Pn	**Pn**	**16 41 04.6**	**+0.6**
	10nm,0.3s,baz=328,slow=20,SNR=6.6						
JHJ				Sn	**Sn**	**16 41 40.5**	**-3.4**
	37nm,0.3s,baz=253,slow=23,SNR=12						
ASAJ	**Asahikawa**	**8.08**	**3**	Pn	**Pn**	**16 42 08.7**	**+0.8**
	1.1nm,0.3s,baz=215,slow=11,SNR=13						
KSRS	**Korea Array**	**11.36**	**281**	LR	LR	16 47 02.9	
	comp=Z,17nm,18.7s,baz=75,slow=36						
H11N2	**WAKE ISLAND Hy**	**27.26**	**120**	T	T	17 14 37.4	
	baz=311						
H11N1	**WAKE ISLAND Hy**	**27.27**	**120**	T	T	17 14 41.9	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**27.28**	**120**	T	T	17 14 38.5	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**27.95**	**122**	T	T	17 15 24.2	
	baz=315						
H11S3	**WAKE ISLAND Hy**	**27.95**	**122**	T	T	17 15 23.7	
	baz=315						
H11S2	**WAKE ISLAND Hy**	**27.96**	**122**	T	T	17 15 25.9	
	baz=315						
SONM	**Songino Array**	**28.72**	**305**	P	**P**	**16 46 07.7**	**+0.2**
	0.4nm,0.6s,baz=105,slow=8.3,SNR=4.3						
MKAR	**Makanchi Array**	**45.03**	**303**	P	**P**	**16 48 26.5**	**+0.8**
	0.6nm,0.7s,baz=95,slow=9.9,SNR=4.9						
WRA	**Warramunga Arr**	**56.14**	**189**	P	**P**	**16 49 50.8**	**+1.0**
	0.2nm,0.6s,baz=6.4,slow=7.0,SNR=1.5						
ASAR	**Alice Springs**	**59.87**	**189**	P	**P**	**16 50 16.8**	**+0.9**
	0.2nm,0.6s,baz=4.8,slow=7.0,SNR=4.6						
YKA	**Yellowknife Ar**	**64.44**	**30**	P	**P**	**16 50 45.8**	**-0.3**
	0.2nm,0.9s,baz=319,slow=8.2,SNR=3.8						

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*UPP **16** 17:04:56.3±0.1,67.04N×20.97E,h1km,ML2.6,Explosion*
*IDC **16** 17:04:56.3±1.2,67.04N×20.87E,h0km,mb1 2.9/3, mb1mx2.7/49,mbtmp2.7/3,ML1.9/3,Error ellipse: s-maj=18.2km s-min=8.7km az=103.0*
*HEL **16** 17:04:57.0±0.1,67.06N×20.93E,h0km,ML2.6(UPP), Explosion*
*NAO **16** 17:04:57.1±0.8,67.05N×21.27E,ML2.5*
*BER **16** 17:04:59.0±5.0,67.04N×21.11E,h0km,ML1.7, ML2.5(NAO),Suspected explosion*
ISC 16 17:04:56.1±0.7,67.07N±0.02×20.92E±0.02,h0km,n52, σ0**889**/74**,Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.15**	**292**	P	**Pg**	**17 04 59.7**	**+0.7**
DUNU	**Dundret**	**0.15**	**292**	*i* P	**Pg**	**17 04 59.7**	**+0.7**
MASU	**Masugnsbyn**	**0.57**	**46**	P	**Pg**	**17 05 07.2**	**+0.1**
MASU	**Masugnsbyn**	**0.57**	**46**	*i* P	**Pg**	**17 05 07.2**	**+0.1**
PAJU	**Pajala**	**0.86**	**92**	P	**Pg**	**17 05 11.8**	**-0.7**
PAJU				S	**Sg**	**17 05 23.5**	**-0.2**
PAJU	**Pajala**	**0.86**	**92**	*i* P	**Pg**	**17 05 11.8**	**-0.7**
PAJU				*i* S	**Sg**	**17 05 23.5**	**-0.2**
HARU	**Harads**	**0.91**	**179**	P	**Pg**	**17 05 12.7**	**-0.8**
HARU	**Harads**	**0.91**	**179**	*i* P	**Pg**	**17 05 12.7**	**-0.8**
KUA	**Kurravaara**	**0.92**	**346**	P	**Pg**	**17 05 13.6**	**-0.2**
KUA				S	**Sb**	**17 05 26.6**	**-1.1**
KUA	**Kurravaara**	**0.92**	**346**	*e*P	**Pg**	**17 05 13.6**	**-0.2**
KUA				*e*S	**Sb**	**17 05 26.6**	**-1.1**
SALU	**Saltoluokta**	**0.99**	**290**	*e*P	**Pb**	**17 05 15.4**	**-0.8**
LANU	**Lannavaara**	**1.07**	**22**	P	**Pg**	**17 05 16.1**	**-0.5**
LANU	**Lannavaara**	**1.07**	**22**	*e*P	**Pg**	**17 05 16.1**	**-0.5**
NIKU	**Nikkaluokta**	**1.08**	**319**	P	**Pg**	**17 05 16.7**	**-0.2**
NIKU				S	**Sb**	**17 05 32.4**	**-0.1**
NIKU	**Nikkaluokta**	**1.08**	**319**	*e*P	**Pg**	**17 05 16.7**	**-0.2**
NIKU				*e*S	**Sb**	**17 05 32.4**	**-0.1**
KOVU	**Salmi**	**1.20**	**346**	P	**Pg**	**17 05 18.7**	**-0.4**
KOVU	**Salmi**	**1.20**	**346**	*e*P	**Pg**	**17 05 18.7**	**-0.4**
KALU	**Kalix**	**1.56**	**140**	*e*P	**Pn**	**17 05 24.0**	**-1.0**
TOF	**Tornio**	**1.68**	**125**	*e*P	**Pn**	**17 05 26.3**	**-0.5**
TOF				*e*SG	**Sn**	**17 05 48.5**	**-0.4**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn	**Pb**	**17 05 32.6**	**+0.2**
KIF				Sn	**Sg**	**17 06 00.2**	**+1.5**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn	**Pb**	**17 05 32.6**	**+0.2**
KIF				Sn	**Sg**	**17 06 00.2**	**+1.5**
RNF	**Rovaniemi**	**2.06**	**101**	*e*SG	**Sb**	**17 06 00.5**	**-0.1**
KTK1	**Kautokeino**	**2.14**	**23**	Pn	**Pb**	**17 05 35.0**	**-0.7**
KTK1				Sn	**Sn**	**17 05 59.4**	**-0.9**
KTK1				Lg	Lg	17 06 04.3	
KTK1	**Kautokeino**	**2.14**	**23**	*e*P	**Pb**	**17 05 35.0**	**-0.7**
KTK1				*e*Sg	**Sb**	**17 06 03.7**	**+0.9**
KTK1				IAML		17 06 08.2	
	comp=Z,10nm,0.2s						
I37NO	**I37NO**	**2.20**	**338**	*i*		17 19 20.0	
	baz=160,slow=330,SNR=4.9						
JETT	**Jettan, Norway**	**2.51**	**356**	Pn	**Pb**	**17 05 41.7**	**-0.3**
JETT				Sn	**Sb**	**17 06 12.2**	**-1.2**
JETT				Sg	**Sg**	**17 06 16.4**	**-0.3**
OUL	**Oulu**	**2.84**	**132**	*e*P	**Pn**	**17 05 43.7**	**+1.1**
OBF0	**Syolatti, Pyha**	**2.92**	**151**	*e*P	**Pn**	**17 05 44.9**	**+1.2**
ARA0	**ARCESS Array S**	**3.01**	**32**	Pn	**Pn**	**17 05 45.5**	**+0.5**
	baz=206,slow=16						
ARA0				Sn	**Sn**	**17 06 21.3**	**-0.4**
	baz=204,slow=22						
ARA0	**ARCESS Array S**	**3.01**	**32**	Pn	**Pn**	**17 05 45.5**	**+0.5**
	baz=206,slow=16						
ARA0				Sn	**Sn**	**17 06 21.3**	**-0.4**
	baz=204,slow=22						
ARA0	**ARCESS Array S**	**3.01**	**32**	*e*S	**Sn**	**17 06 19.5**	**-2.2**
ARCES	**ARCESS Array B**	**3.01**	**32**	Pn	**Pn**	**17 05 45.5**	**+0.6**
	baz=211,slow=14,SNR=49						
ARCES				Sn	**Sn**	**17 06 23.4**	**+1.7**
	baz=213,slow=22,SNR=9.4						
OLKF	**Oulanka, Finla**	**3.45**	**99**	*e*PG	**Pb**	**17 05 59.7**	**+1.6**
MSF	**Maaselka**	**3.45**	**106**	*e*PG	**Pb**	**17 05 59.4**	**+1.3**
HUSU	**Husum**	**3.81**	**192**	*e*S	**Sn**	**17 06 41.6**	**+0.2**
APA0	**Apatity Array**	**4.70**	**78**	Pn	**Pn**	**17 06 08.5**	**+0.3**
	baz=259,slow=14						
APA0				Sn	**Sn**	**17 07 02.4**	**-0.9**
	baz=268,slow=28						
APA0				Lg	Lg	17 07 18.1	
	baz=280,slow=28						
APA0	**Apatity Array**	**4.70**	**78**	Pn	**Pn**	**17 06 08.5**	**+0.3**
	baz=259,slow=14						
APA0				Sn	**Sn**	**17 07 02.4**	**-0.9**
	baz=268,slow=28						
APA0				Sg	**Sb**	**17 07 18.1**	**+1.8**
	baz=280,slow=28						
SUF	**Sumiainen**	**4.90**	**151**	*e*P	**Pn**	**17 06 11.8**	**+0.9**
KEF	**Keuruu**	**5.20**	**159**	*e*P	**Pn**	**17 06 16.4**	**+1.3**
KAF	**Kangasniemi**	**5.49**	**153**	*e*P	**Pn**	**17 06 20.2**	**+1.3**
JOF	**Joensuu**	**6.06**	**129**	*e*P	**Pn**	**17 06 27.6**	**+0.8**
JOF				*e*S	**Sn**	**17 07 34.8**	**-1.9**
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**17 06 27.7**	**+0.6**
	baz=344,slow=16						
FIA0				Sn	**Sn**	**17 07 37.2**	**+0.1**
	baz=350,slow=28						
FIA0	**FINESS Array S**	**6.07**	**156**	Pn	**Pn**	**17 06 27.7**	**+0.6**
	baz=344,slow=16						
FIA0				Sn	**Sn**	**17 07 37.2**	**+0.1**
	baz=350,slow=28						
FIA0	**FINESS Array S**	**6.07**	**156**	*e*P	**Pn**	**17 06 27.6**	**+0.6**
FINES	**FINESS Array B**	**6.07**	**156**	Pn	**Pn**	**17 06 27.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=347,slow=12,SNR=15						
FINES				Sn	**Sn**	**17 07 35.3**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=343,slow=22,SNR=5.3						
FINES				Lg	Lg	17 08 06.8	
	comp=Z,0.1nm,0.3s,baz=338,slow=26,SNR=1.3						
NB2	**NORSAR Subarra**	**7.39**	**220**	Pn	**Pn**	**17 06 45.8**	**+0.6**
	baz=29,slow=14						
NB2	**NORSAR Subarra**	**7.39**	**220**	Pn	**Pn**	**17 06 45.8**	**+0.6**
	baz=29,slow=14						
NOA	**NORSAR Array B**	**7.39**	**220**	Pn	**Pn**	**17 06 43.7**	**-1.4**
	comp=Z,0.0nm,0.3s,baz=21,slow=19,SNR=1.4						
NOA				Lg	Lg	17 08 46.1	
	comp=Z,0.0nm,0.3s,baz=27,slow=19,SNR=1.4						
NRA0	**NORESS Array S**	**7.57**	**217**	Pn	**Pn**	**17 06 47.1**	**-0.5**
	baz=28,slow=14						
NRA0	**NORESS Array S**	**7.57**	**217**	Pn	**Pn**	**17 06 47.1**	**-0.5**
	baz=28,slow=14						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**17 06 48.5**	**-0.3**
	baz=26,slow=12						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**17 06 48.5**	**-0.3**
	baz=26,slow=12						

IDC 16 17:24:36.9±5.0,6.53S×148.75E,h92km±48km,mb3.4/3, mb1 3.6/5,mb1mx3.2/32,mbtmp3.7/5,Error ellipse: s-maj=86.7km s-min=33.2km az=134.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.27**	**209**	P	Pn	17 25 26.5	+0.4
	13nm,0.3s,baz=23,slow=14,SNR=43						
PMG				S	Sn	17 26 04.2	+0.2
	3.3nm,0.3s,baz=158,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**19.33**	**225**	P	P	17 28 55.7	+0.6
	0.2nm,0.3s,baz=52,slow=11,SNR=12						
ASAR	**Alice Springs**	**22.23**	**218**	P	P	17 29 27.1	+0.9
	0.9nm,0.4s,baz=52,slow=9.1,SNR=36						
FITZ	**Fitzroy Crossi**	**25.30**	**241**	P	P	17 29 54.4	-0.7
	2.6nm,0.9s,baz=52,slow=9.4,SNR=12						
ILAR	**Eielson Array**	**85.28**	**23**	P	P	17 37 03.1	-0.1
	0.3nm,0.6s,baz=260,slow=4.5,SNR=3.4						

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*SJA **16** 18:05:55.3±0.9,24.16S×66.97W,h201km±5km,ML4.5, MW4.1*
*NEIC **16** 18:05:55.1±1.8,24.16S±0.02×66.83W±0.09,h175km±8km, mb4.9/23,Error ellipse: s-maj=12.6km s-min=2.4km az=81.0*
*IDC **16** 18:05:56.1±1.1,24.03S×66.84W,h185km±9km,mb3.7/9, mb1 4.0/15,mb1mx3.8/41,mbtmp4.4/15,Error ellipse: s-maj=14.3km s-min=13.3km az=67.0*
*VAO **16** 18:05:57.4±0.4,24.00S×66.93W,h213km,mb4.5*
*GUC **16** 18:05:57.4±0.5,24.11S×67.20W,h213km±12km,ML4.9, MW4.5*
ISC 16 18:05:55.5±0.6,24.13S±0.04×66.98W±0.04,h187km±6km, n178,σ1**839**/200**,mb4.4**/14**,5C-2D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.47**	**114**	*i* P	**Pn**	**18 06 30.0**	**+2.0**
SLA				*i* S	**Sn**	**18 06 54.8**	**+1.6**
FSA	**Cafayete**	**2.17**	**155**	*e*P	**Pn**	**18 06 36.5**	**+1.4**
FSA				*e*S	**Sn**	**18 07 06.3**	**+0.3**
LVC	**Limon Verde**	**2.33**	**310**	P	**Pn**	**18 06 38.7**	**+1.6**
	50nm,0.3s,baz=116,slow=8.0,SNR=417						
LVC				S	**Sn**	**18 07 10.7**	**+1.3**
	207nm,0.3s,baz=330,slow=20,SNR=20						
LVC	**Limon Verde**	**2.33**	**310**	*e*P	**Pn**	**18 06 38.9**	**+1.8**
LVC				*e*S	**Sn**	**18 07 10.1**	**+0.8**
LVC	**Limon Verde**	**2.33**	**310**	*e*P	**Pn**	**18 06 38.9**	**+1.8**
LVC	**Limon Verde**	**2.33**	**310**	*i* P	**Pn**	**18 06 38.9**	**+1.8**
LVC				IAML		18 07 14.1	
	comp=Z,853nm,1.1s						
YJA	**Yavi**	**2.37**	**35**	*i* P	**Pn**	**18 06 39.2**	**+1.6**
YJA				*i* S	**Sn**	**18 07 12.3**	**+1.9**
PB15	**IPOC Station P**	**2.46**	**291**	*e*P	**Pn**	**18 06 40.2**	**+1.9**
PB15				*e*S	**Sn**	**18 07 12.5**	**+0.8**
PB15	**IPOC Station P**	**2.46**	**291**		**Pn**	**18 06 39.9**	**+1.5**
PB15	**IPOC Station P**	**2.46**	**291**	*i* P	**Pn**	**18 06 40.3**	**+1.9**
PB15				*i* S	**Sn**	**18 07 12.8**	**+1.2**
GO02	**Mina Guanaco**	**2.58**	**246**	⇑*i*P	**Pn**	**18 06 41.6**	**+1.7**
GO02				*e*S	**Sn**	**18 07 15.9**	**+1.4**
GO02				IAML		18 07 17.4	
	comp=E,3μm,0.4s						
GO02	**Mina Guanaco**	**2.58**	**246**		**Pn**	**18 06 41.6**	**+1.7**
PB06	**IPOC Station P**	**2.77**	**300**	*e*P	**Pn**	**18 06 43.6**	**+1.7**
PB06				*e*S	**Sn**	**18 07 18.0**	**0.0**
PB06				IAML		18 07 19.9	
	comp=N,4μm,0.4s						
PB06	**IPOC Station P**	**2.77**	**300**		**Pn**	**18 06 43.5**	**+1.6**
PB09	**IPOC Station P**	**3.12**	**318**	*e*P	**Pn**	**18 06 48.1**	**+2.0**
PB09				*e*S	**Sn**	**18 07 26.0**	**+0.4**
PB09				IAML		18 07 28.2	
	comp=N,2μm,0.5s						
PB09	**IPOC Station P**	**3.12**	**318**		**Pn**	**18 06 47.1**	**+1.0**
PB09	**IPOC Station P**	**3.12**	**318**	*i* P	**Pn**	**18 06 48.1**	**+2.0**
PB09				IAML		18 07 33.5	
	comp=Z,1μm,0.6s						
PB14	**IPOC Station P**	**3.16**	**260**		**Pn**	**18 06 47.6**	**+0.9**
PB14	**IPOC Station P**	**3.16**	**260**	*e*P	**Pn**	**18 06 47.6**	**+0.9**
PB14				IAML		18 07 31.7	
	comp=Z,689nm,0.7s						
PB05	**IPOC Station P**	**3.22**	**293**	⇑*i*P	**Pn**	**18 06 48.4**	**+1.1**
PB05				*e*S	**Sn**	**18 07 25.9**	**-1.7**
PB05				IAML		18 07 29.0	
	comp=E,2μm,0.5s						
PB05	**IPOC Station P**	**3.22**	**293**	*i* P	**Pn**	**18 06 48.3**	**+1.0**
PB05				IAML		18 07 33.6	
	comp=Z,1μm,0.5s						
PB03	**IPOC Station P**	**3.29**	**309**	*e*P	**Pn**	**18 06 49.2**	**+1.1**
PB03				*e*S	**Sn**	**18 07 28.2**	**-1.0**
PB03				IAML		18 07 33.0	
	comp=N,2μm,0.6s						
AC02	**Maricunga**	**3.32**	**215**	⇑*i*P	**Pn**	**18 06 50.6**	**+1.8**
AC02				IAML		18 07 37.9	
	comp=N,328nm,0.6s						
AC02	**Maricunga**	**3.32**	**215**		**Pn**	**18 06 50.6**	**+1.8**
PB10	**IPOC Station P**	**3.33**	**280**	⇑*i*P	**Pn**	**18 06 49.8**	**+1.3**
PB10				*e*S	**Sn**	**18 07 28.7**	**-1.1**
PB10				IAML		18 07 34.3	
	comp=E,1μm,0.6s						
PB10	**IPOC Station P**	**3.33**	**280**		**Pn**	**18 06 49.3**	**+0.9**
PB10	**IPOC Station P**	**3.33**	**280**	*i* P	**Pn**	**18 06 49.8**	**+1.4**
PB10				IAML		18 07 34.1	
	comp=Z,1μm,0.5s						
PB04	**IPOC Station P**	**3.42**	**301**	*i* P	**Pn**	**18 06 50.8**	**+1.0**
PB04				*e*S	**Sn**	**18 07 30.2**	**-1.9**
PB04	**IPOC Station P**	**3.42**	**301**		**Pn**	**18 06 50.7**	**+1.0**
PB04	**IPOC Station P**	**3.42**	**301**	*i* P	**Pn**	**18 06 51.0**	**+1.2**
PB07	**IPOC Station P**	**3.59**	**311**	*e*P	**Pn**	**18 06 52.8**	**+0.9**
PB07	**IPOC Station P**	**3.59**	**311**		**Pn**	**18 06 52.5**	**+0.6**
AC01	**Pan de Azucar**	**3.84**	**238**	*e*P	**Pn**	**18 06 55.0**	**+0.1**
AC01	**Pan de Azucar**	**3.84**	**238**	Pn	**Pn**	**18 06 55.0**	**+0.1**
PB01	**IPOC Station P**	**3.85**	**323**	*e*P	**Pn**	**18 06 55.5**	**+0.5**
PB01	**IPOC Station P**	**3.85**	**323**		**Pn**	**18 06 55.2**	**+0.2**
PATCX	**Punta Patache**	**4.41**	**318**	*e*P	**Pn**	**18 07 02.0**	**-0.1**
PATCX	**Punta Patache**	**4.41**	**318**		**Pn**	**18 07 02.0**	**-0.1**
PB08	**IPOC Station P**	**4.45**	**333**	*e*P	**Pn**	**18 07 04.1**	**+1.2**
PB08				*e*S	**Sn**	**18 07 55.9**	**0.0**
PB08	**IPOC Station P**	**4.45**	**333**		**Pn**	**18 07 03.7**	**+0.7**
GO03	**Copiap**	**4.52**	**220**	*e*P	**Pn**	**18 07 03.2**	**-0.3**
GO03				*e*S	**Sn**	**18 07 55.4**	**-1.6**
GO03	**Copiap**	**4.52**	**220**		**Pn**	**18 07 03.2**	**-0.3**
GO03	**Copiap**	**4.52**	**220**	*i* P	**Pn**	**18 07 03.5**	**0.0**
GO03				*i* S	**Sn**	**18 07 55.8**	**-1.2**
TA01	**Diego Aracena**	**4.62**	**320**	*e*P	**Pn**	**18 07 04.4**	**-0.3**
TA01				*e*S	**Sn**	**18 07 55.6**	**-3.6**
TA01	**Diego Aracena**	**4.62**	**320**	Pn	**Pn**	**18 07 04.3**	**-0.5**
HMBC	**Humberstone**	**4.68**	**324**	*e*P	**Pn**	**18 07 04.9**	**-0.8**
HMBC				*e*S	**Sn**	**18 07 56.9**	**-3.9**
TA02	**Huaiquique**	**4.82**	**322**		**Pn**	**18 07 06.8**	**-0.6**
PB11	**IPOC Station P**	**5.01**	**330**	*e*P	**Pn**	**18 07 09.3**	**-0.7**
PB11				*e*S	**Sn**	**18 08 05.1**	**-3.2**
PB11	**IPOC Station P**	**5.01**	**330**		**Pn**	**18 07 09.2**	**-0.7**
PSGC	**Pisagua**	**5.37**	**327**	*e*P	**Pn**	**18 07 12.9**	**-1.6**
PSGCX	**Pisagua**	**5.37**	**327**	Pn	**Pn**	**18 07 12.7**	**-1.8**
AC04	**Llanos de Chal**	**5.47**	**221**	*e*P	**Pn**	**18 07 14.6**	**-1.1**
AC04	**Llanos de Chal**	**5.47**	**221**	Pn	**Pn**	**18 07 15.1**	**-0.6**
MNMC	**Minye Minye**	**5.54**	**333**	*e*P	**Pn**	**18 07 16.8**	**-0.1**
MNMC				*e*S	**Sn**	**18 08 18.4**	**-2.6**
MNMC	**Minye Minye**	**5.54**	**333**	Pn	**Pn**	**18 07 16.1**	**-0.8**
LCO	**Las Campanas**	**5.89**	**214**	Pn	**Pn**	**18 07 20.2**	**-1.1**
PB16	**IPOC Station P**	**6.23**	**337**		**Pn**	**18 07 26.0**	**-0.2**
APLL	**PUNTA DE LOS L**	**6.25**	**176**	*i* P	**Pn**	**18 07 25.9**	**0.0**
APLL				*i* S	**Sn**	**18 08 33.2**	**-4.2**
GO04	**Tololo Observa**	**6.91**	**209**	Pn	**Pn**	**18 07 33.0**	**-1.7**
GO04	**Tololo Observa**	**6.91**	**209**	*i* P	**Pn**	**18 07 33.4**	**-1.2**
RTLL	**Cerro Villicun**	**7.29**	**190**	*i* P	**Pn**	**18 07 39.7**	**+0.2**
RTLL				IAML		18 09 04.7	
	comp=Z,57nm,0.6s						
CO03	**El Pedregal**	**7.45**	**205**		**Pn**	**18 07 40.0**	**-1.5**
ZON	**Zonda**	**7.54**	**191**		**Pn**	**18 07 42.4**	**-0.3**
ZON	**Zonda**	**7.54**	**191**	*i* P	**Pn**	**18 07 43.7**	**+1.0**
ZON				IAML		18 09 19.0	
	comp=Z,24nm,0.9s						
RTCV	**Cerro Valdivia**	**7.82**	**190**	*i* P	**Pn**	**18 07 46.9**	**+0.4**
RTCV				*i* S	**Sn**	**18 09 09.9**	**-4.6**
RTCV				IAML		18 09 15.9	
	comp=Z,48nm,0.8s						
LPAZ	**La Paz**	**7.88**	**352**	P	**Pn**	**18 07 48.5**	**+0.7**
	comp=Z,6.0nm,0.3s,baz=156,slow=8.7,SNR=91						
LPAZ				S	**Sn**	**18 09 14.9**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=17,slow=21,SNR=2.3						
LPAZ	**La Paz**	**7.88**	**352**	Pn	**Pn**	**18 07 48.0**	**+0.2**
LPAZ	**La Paz**	**7.88**	**352**	*e*P	**Pn**	**18 07 48.2**	**+0.4**
LPAZ	**La Paz**	**7.88**	**352**	*i* P	**Pn**	**18 07 48.5**	**+0.7**
RTLS	**Leoncito**	**7.91**	**194**	*i* P	**Pn**	**18 07 48.6**	**+0.8**
RTLS				IAML		18 09 21.4	
	comp=Z,32nm,0.7s						
MRA	**San Martin**	**8.33**	**173**	*i* P	**Pn**	**18 07 52.4**	**-0.8**
MRA				IAML		18 09 38.1	
	comp=Z,28nm,0.7s						
AUSP	**Uspallata**	**8.34**	**194**	*i* P	**Pn**	**18 07 54.6**	**+1.2**
ASAL	**Salagasta**	**8.59**	**191**	*i* P	**Pn**	**18 07 56.5**	**+0.1**
ASAL			

SJMB	**Sao Joao De Ma**	**24.60**	**82**	*e*P		**P**	**18 10 58.1**	**-0.5**
BSFB	**Barra de Sao F**	**24.87**	**83**	*e*P		**P**	**18 10 59.5**	**-1.5**
RIB01	**Linhares ES**	**25.14**	**84**	*e*P		**P**	**18 11 02.5**	**-1.1**
MALB	**Monte Alegre**	**25.34**	**31**	*e*P		**P**	**18 11 04.1**	**-1.1**
GO09	**Cerro Castillo**	**27.41**	**187**	P		**P**	**18 11 23.9**	**+0.5**
GO09				IAmb	IAmb		18 11 38.2	
	comp=Z,32nm,1.3s							
NBIT	**Itapeh - BA**	**27.49**	**76**	*e*P		**P**	**18 11 23.6**	**-1.0**
GDU01	**Guandu, BA**	**27.87**	**73**	*e*P		**P**	**18 11 26.3**	**-1.7**
GO10	**Punta Arenas**	**29.15**	**185**	P		**P**	**18 11 38.9**	**0.0**
NBLA	**Lagarto - SE**	**30.67**	**70**	*e*P		**P**	**18 11 50.8**	**-1.9**
NBTA	**Tacaratu-PE**	**31.38**	**67**	*e*P		**P**	**18 11 57.5**	**-1.4**
NBMA	**Muriti-CE**	**31.76**	**63**	*e*P		**P**	**18 12 01.8**	**-0.5**
NBAN	**Anadia - AL**	**32.61**	**69**	*e*P		**P**	**18 12 08.0**	**-1.7**
NBLI	**Livramento-PB**	**33.25**	**65**	*e*P		**P**	**18 12 14.1**	**-1.2**
NBPA	**Parau_RN**	**34.03**	**62**	*e*P		**P**	**18 12 21.1**	**-0.8**
RCBR	**Riachuelo**	**34.97**	**64**	P		**P**	**18 12 29.8**	**-0.2**
RCBR				IAmb	IAmb		18 12 36.4	
	comp=Z,33nm,1.4s							
RPN	**Rapa Nui**	**38.17**	**256**	P		**P**	**18 12 58.3**	**+1.4**
BELA	**Belgrano 2**	**55.91**	**172**	P		**P**	**18 15 14.9**	**+1.5**
BELA				IAmb	IAmb		18 15 15.6	
	comp=Z,8.2nm,0.8s							
VNA3	**Neumayer Olymp**	**57.02**	**161**	P		**P**	**18 15 22.3**	**+1.0**
VNA1	**Neumayer--Stat**	**57.22**	**160**	P		**P**	**18 15 23.7**	**+1.0**
VNA2	**Neumayer--Watz**	**57.59**	**160**	P		**P**	**18 15 26.0**	**+0.7**
	baz=279,slow=7.8							
SNAA	**Sanae**	**59.22**	**161**	P		**P**	**18 15 37.1**	**+0.5**
SNAA	**Sanae**	**59.22**	**161**	P		**P**	**18 15 37.3**	**+0.6**
SNAA				IAmb	IAmb		18 15 39.0	
	comp=Z,8.2nm,0.7s							
CPCT	**Cooper Cave**	**61.54**	**344**	P		**P**	**18 15 51.5**	**-1.2**
CPCT				IAmb	IAmb		18 16 12.9	
	comp=Z,11nm,1.4s							
TXAR	**Lajitas Array**	**63.79**	**324**	P		**P**	**18 16 07.6**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=148,slow=8.6,SNR=3.5							
TXAR	**Lajitas Array**	**63.79**	**324**	P		**P**	**18 16 09.6**	**+1.8**
CCM	**Cathedral Cave**	**65.92**	**339**	P		**P**	**18 16 22.2**	**+1.0**
ANMO	**Albuquerque**	**69.66**	**326**	P		**P**	**18 16 47.3**	**+2.4**
SYO	**Syowa Base**	**73.42**	**159**‖	*e*P		**P**	**18 17 03.3**	**-3.4**
SYO	**Syowa Base**	**73.42**	**159**‖	*e*PcP		**PcP**	**18 17 19.6**	**-2.2**
SYO	**Syowa Base**	**73.42**	**159**‖	*e*pP		pP	18 17 45.8	-7.0
VNDA	**Vanda**	**74.58**	**190**	P		**P**	**18 17 15.7**	**+2.5**
	comp=Z,2.6nm,1.0s,baz=125,slow=3.7,SNR=9.9							
VNDA	**Vanda**	**74.58**	**190**	P		**P**	**18 17 16.4**	**+3.2**
CCUT	**Cedar City**	**75.27**	**323**	P		**P**	**18 17 21.2**	**+3.1**
MSU	**Marysvale**	**75.34**	**325**	P		**P**	**18 17 21.5**	**+3.1**
TORD	**Torodi Ar. Bea**	**76.60**	**69**	P		**P**	**18 17 25.9**	**+0.2**
	comp=Z,19nm,1.1s,baz=278,slow=4.3,SNR=1.7							
PDAR	**Pinedale Array**	**77.27**	**329**	P		**P**	**18 17 31.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=156,slow=9.8,SNR=3.5							
ULM	**Lac du Bonnet**	**78.36**	**342**	P		**P**	**18 17 35.6**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=173,slow=5.5,SNR=5.8							
NVAR	**Mina Array Bea**	**78.65**	**321**	P		**P**	**18 17 37.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=170,slow=5.9,SNR=2.6							
MAW	**Mawson**	**81.31**	**163**	P		**P**	**18 17 51.0**	**+0.5**
	comp=Z,9.4nm,0.8s,baz=228,slow=6.6,SNR=15							
YKA	**Yellowknife Ar**	**94.25**	**340**	P		**P**	**18 18 53.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=128,slow=4.9,SNR=9.1							
ASAR	**Alice Springs**	**128.34**	**205**	PKP		**PKiKP**	**18 24 41.2**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=137,slow=2.0,SNR=12							
WRA	**Warramunga Arr**	**131.52**	**207**	PKP		**PKiKP**	**18 24 47.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=154,slow=1.8,SNR=12							
ZALV	**Zalesovo Beam**	**143.50**	**28**	PKP	PKPbc		18 25 06.2	+1.0
	comp=Z,1.8nm,0.6s,baz=273,slow=3.3,SNR=1.9							
BATI	**Baumata**	**144.32**	**198**	PKP		**PKPdf**	**18 25 10.3**	**+0.3**
	comp=Z,9.1nm,0.5s,baz=162,slow=3.2,SNR=2.1							
MKAR	**Makanchi Array**	**146.62**	**40**	PKPbc		**PKPbc**	**18 25 15.0**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=356,slow=2.3,SNR=7.0							

DDA **16** *18:07:37.6,34˚.86N×26˚.73E,h12km±2km,MW5.9*
BJI **16** *18:07:40.8±0.0,35˚.10N×26˚.85E,h20km,mB5.9/78, mb5.7/88,Ms6.1/98,Ms7 5.9/90*
NIC **16** *18:07:41.7±0.0,34˚.99N×26˚.98E,h6km±2km,Ml6.1/5*
IDC **16** *18:07:43.7±1.0,35˚.29N×26˚.82E,h21km±6km, mb5.6/49, mb1 5.6/61,mb1mx5.6/65,mbtmp5.7/61,ML4.8/11, MS5.9/46,Ms1 6.0/46,ms1mx5.8/55, Error ellipse: s-maj=7.5km s-min=6.5km az=145.0*
NEIC **16** *18:07:43.6±1.7,35˚.19N±0˚.06×26˚.82E±0˚.06,h20km±1km, mb6.0/667,Ms_20 6.1/864,Mwb6.0/94,Mww6.0, ML6.1(THE),Mwc6.1(GCMT), Error ellipse: s-maj=9.9km s-min=8.4km az=182.0*
PDG **16** *18:07:43.6±0.7,35˚.12N×26˚.92E,h18km±2km,MD6.1/3, ML6.1/14, Error ellipse: s-maj=1.1km s-min=0.6km az=90.0*
NEIC **16** *18:07:43.2,35˚.18N×26˚.84E,h35km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.65; Mθθ=1.06; Mθφ=0.41; Mrθ=-0.17; Mφφ=0.32; Mrφ=0.77; Fault plane solution: M₀=1.26000×10¹⁸ NP1:φs=44.68000°, δ=57.97000°, λ=38.22000°. NP2:φs=292.01000°, δ=58.37000°, λ=141.47000°. Principal axes: T 1.3582, Plg48.0000°, Azm258.0000°; N -0.2353, Plg42.0000°, Azm79.0000°; P -1.1229, Plg0.0000°, Azm348.0000°;*
ISK **16** *18:07:44.8,35˚.16N×26˚.91E,h29km, ML6.1/25*
THE **16** *18:07:44.0,35˚.14N×26˚.88E,h23km, Mw6.0, Fault plane solution: NP1:φs=46.00000°, δ=82.00000°, λ=37.00000°. NP2:φs=310.00000°, δ=53.00000°, λ=170.00000°., Stations used: ARG,NIS1,BODT,VLY,KRND*
ATH **16** *18:07:44.9,35˚.23N×26˚.82E,h37km±6km, ML6.1/11, Error ellipse: s-maj=7.4km s-min=1.9km az=139.0*
HLW **16** *18:07:44.3,34˚.91N×27˚.18E,h10km±14km, Ml6.0*
MED_RC **16** *18:07:44.0±0.2,35˚.03N×26˚.81E,h26km, MW6.2/35, Moment Tensor Solution. Body waves: s16,c31;Mantle waves: s35,c89; Duration: 2s6 Moment tensor: Scale 10¹⁸Nm; Mrr=0.59±.06; Mθθ=1.44±.04; Mφφ=0.86±.04; Mrθ=-0.78±.07; Mθφ=0.10±.04; Mφr=2.20±.11; Best double couple: M₀=2.55000×10¹⁸ NP1:φs=65.00000°, δ=28.00000°, λ=12.00000°. NP2:φs=325.00000°, δ=85.00000°, λ=117.00000°. Principal axes: T 2.9800, Plg44.0000°, Azm262.0000°; N -0.8500, Plg27.0000°, Azm142.0000°; P -2.1200, Plg34.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
MOS **16** *18:07:46.6±1.1,35˚.25N×26˚.79E, h25km, mb6.0/62, MS5.9/100 Error ellipse: s-maj=3.5km s-min=2.1km az=95.3*
GCMT **16** *18:07:48.0±0.1,35˚.03N×26˚.85E,h24km,MW6.1/150, Moment Tensor Solution. s150,c306; s138,c369; Duration: 3s1 Moment tensor: Scale 10¹⁸Nm; Mrr=0.55±.01; Mθθ=1.23±.01; Mφφ=0.68±.01; Mrθ=-0.36±.02; Mθφ=-0.30±.01; Mφr=1.80±.02; Best double couple: M₀=1.89300×10¹⁸ NP1:φs=56.00000°, δ=43.00000°, λ=21.00000°. NP2:φs=310.00000°, δ=76.00000°, λ=131.00000°. Principal axes: T 2.4780, Plg44.0000°, Azm260.0000°; N -1.1660, Plg40.0000°, Azm118.0000°; P -1.3090, Plg20.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC **16** *18:07:49,35˚.06N×26˚.79E,h24km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.62; Mθθ=1.29; Mφφ=0.67; Mrθ=-0.27; Mθφ=-0.27; Mφr=1.41; Fault plane solution: M₀=1.84000×10¹⁸ NP1:φs=48.00000°, δ=56.00000°, λ=31.00000°. NP2:φs=300.00000°, δ=64.00000°, λ=142.00000°. Principal axes: T 2.0987, Plg44.0000°, Azm261.0000°; N -0.7655, Plg45.0000°, Azm91.0000°; P -1.3332, Plg5.0000°, Azm356.0000°;*
NEIC **16** *18:07:51,35˚.09N×26˚.74E,h30km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.76; Mθθ=1.08; Mφφ=0.32; Mrθ=-0.10; Mθφ=-0.22; Mφr=1.06; Fault plane solution: M₀=1.46000×10¹⁸ NP1:φs=292.00000°, δ=54.00000°, λ=141.00000°. NP2:φs=47.00000°, δ=60.00000°, λ=43.00000°. Principal axes: T 1.6447, Plg50.0000°, Azm263.0000°; N -0.5215, Plg39.0000°, Azm76.0000°; P -1.1231, Plg3.0000°, Azm169.0000°;*
ISC **16** **18:07:43.6**±0.3,**35˚.20N**±0˚.02×**26˚.84E**±0˚.02,**h23**km±1km, **h23**km:**pP-P,n2410,**c1**983**/2632,**mb6.0**/608,**MS6.1**/587, **647C-308D,Fault plane solution: NP1:**φs=326.75147°, δ68.40140°,λ178.71027°. **NP2:**φs=57.22629°,δ88.80084°, λ21.60357°. **Principal axes:** T Plg15.9671°, Azm284.0836°; N Plg68.3648°, Azm60.2514°; P Plg14.2107°, Azm189.9285°; **Fault plane solution: NP1:**φs=309.42465°,δ56.06054°,λ134.65767°. **NP2:** φs=68.89234°,δ53.83376°,λ43.75516°. **Principal axes:** T Plg54.2991°, Azm277.8200°; N Plg35.6703°, Azm100.5398°; P Plg1.2890°, Azm9.6144°; **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.44**	**37**	P	**Pb**	**18 07 53.7**	**+0.9**
KARP				S	**Sn**	**18 08 01.7**	**-0.2**
KARP	**Karpathos**	**0.44**	**37**	P	**Pb**	**18 07 53.6**	**+0.9**
KARP				S	**Sn**	**18 08 02.2**	**+0.3**
KARP	**Karpathos**	**0.44**	**37**	PG	**Pn**	**18 07 54.1**	**-0.5**
KARP				SG	**Sn**	**18 08 02.6**	**+0.7**
KARP	**Karpathos**	**0.44**	**37**	Pg	**Pb**	**18 07 53.1**	**+0.3**
KARP	**Karpathos**	**0.44**	**37**	⇑P	**Pb**	**18 07 53.6**	**+0.8**
KARP				S	**Sn**	**18 08 01.9**	**0.0**
KARP				AML	AML	18 08 07.2	
	4μm,0.4s						
KARP				AML	AML	18 08 07.2	
	4μm,0.4s						
KARP				AML	AML	18 08 11.3	
	5μm,0.8s						
KARP				AML	AML	18 08 11.3	
	5μm,0.8s						
KARP	**Karpathos**	**0.44**	**37**	⇑P	**Pb**	**18 07 53.0**	**+0.3**
ZKR	**Zakros**	**0.52**	**261**	P	**Pb**	**18 07 54.8**	**+0.7**
ZKR				S	**Sn**	**18 08 03.4**	**-0.4**
ZKR				AML	AML	18 08 05.4	
ZKR				AML	AML	18 08 05.9	
ZKR	**Zakros**	**0.52**	**261**	P	**Pn**	**18 07 55.0**	**-0.6**
ZKR				S	**Sn**	**18 08 04.0**	**+0.3**
ZKR	**Zakros**	**0.52**	**261**	PG	**Pn**	**18 07 55.0**	**-0.6**
ZKR				SG	**Sn**	**18 08 05.7**	**+2.0**
ZKR	**Zakros**	**0.52**	**261**	P	**Pb**	**18 07 54.6**	**+0.6**
ZKR				AML	AML	18 08 04.2	
	5μm,0.7s						
ZKR				AML	AML	18 08 04.2	
	5μm,0.7s						
ZKR				S	**S**	**18 08 04.2**	**+3.1**
ZKR				AML	AML	18 08 04.7	
	3μm,0.5s						
ZKR				AML	AML	18 08 04.7	
	3μm,0.5s						
FRMA	**Ierapetra Chan**	**0.92**	**259**	P	**Pb**	**18 07 59.8**	**-1.1**
FRMA				S	**Sn**	**18 08 13.8**	**+0.1**
NPS	**Neapolis**	**1.00**	**274**	P	**Pb**	**18 08 04.3**	**+2.0**
NPS				S	**Sn**	**18 08 17.4**	**+1.6**
NPS				AML	AML	18 08 23.0	
NPS				AML	AML	18 08 24.5	
NPS	**Neapolis**	**1.00**	**274**	P	**Pb**	**18 08 04.1**	**+1.7**
NPS				S	**Sn**	**18 08 19.8**	**+4.0**
	2705μm,0.8s						
NPS	**Neapolis**	**1.00**	**274**	P	**Pb**	**18 08 04.3**	**+2.0**
NPS				S	**Sn**	**18 08 17.4**	**+1.6**
NIS1	**Nisyros Isl.**	**1.43**	**11**	P	**Pb**	**18 08 10.3**	**+0.7**
NIS1	**Nisyros Isl.**	**1.43**	**11**	PN	**Pb**	**18 08 09.6**	**0.0**
NIS1				SN	**Sb**	**18 08 27.7**	**+0.3**
IACM	**Heraklion**	**1.45**	**275**	P	**Pb**	**18 08 12.0**	**+2.1**
IACM	**Heraklion**	**1.45**	**275**	P	**Pb**	**18 08 11.9**	**+2.0**
KSTL	**Kastelli Herak**	**1.45**	**275**	P	**Pn**	**18 08 08.0**	**-0.5**
KSTL				S	**Sn**	**18 08 26.9**	**+0.1**
ARG	**Arkhangelos**	**1.46**	**45**	P	**Pb**	**18 08 11.5**	**+1.3**
ARG				AML	AML	18 08 42.8	
ARG				AML	AML	18 08 45.0	
ARG	**Arkhangelos**	**1.46**	**45**	P	**Pb**	**18 08 11.3**	**+1.2**
ARG				S	**Sb**	**18 08 31.0**	**+2.7**
	319μm,0.8s						
ARG	**Arkhangelos**	**1.46**	**45**	P	**Pb**	**18 08 11.3**	**+1.2**
ARG				S	**Sb**	**18 08 31.0**	**+2.7**
ARG	**Arkhangelos**	**1.46**	**45**	PN	**Pb**	**18 08 09.9**	**-0.2**
ARG	**Arkhangelos**	**1.46**	**45**	⇑P	**Pb**	**18 08 10.9**	**+0.7**
ARG				S	**Sb**	**18 08 31.4**	**+3.2**
ARG	**Arkhangelos**	**1.46**	**45**	⇑P	**Pb**	**18 08 11.2**	**+1.0**
KOSK	**Kos Island**	**1.56**	**4**	P	**Pb**	**18 08 12.3**	**+0.6**
KOSK	**Kos Island**	**1.56**	**4**	PN	**Pb**	**18 08 11.6**	**-0.1**
IDI	**Anoyia**	**1.60**	**274**	Pg	**Pb**	**18 08 13.7**	**+1.2**
	2μm,0.3s,baz=94,slow=15,SNR=2066						
IDI				Lg	Lg	18 08 36.5	
	8μm,0.3s,baz=252,slow=21,SNR=13						
IDI	**Anoyia**	**1.60**	**274**	P	**Pb**	**18 08 14.3**	**+1.8**
IDI				AML	AML	18 08 46.7	
IDI				AML	AML	18 08 58.9	
IDI	**Anoyia**	**1.60**	**274**	P	**Pb**	**18 08 14.2**	**+1.8**
IDI				S	**Sb**	**18 08 36.2**	**+4.0**
IDI	**Anoyia**	**1.60**	**274**	PN	**Pb**	**18 08 12.7**	**+0.2**
IDI	**Anoyia**	**1.60**	**274**		**Pb**	**18 08 13.2**	**+0.8**
IDI	**Anoyia**	**1.60**	**274**	⇑P	**Pb**	**18 08 13.3**	**+0.8**
SANT	**Santorini**	**1.62**	**317**	P	**Pb**	**18 08 13.5**	**+0.6**
SANT				AML	AML	18 08 44.9	
SANT				AML	AML	18 08 49.9	
SANT	**Santorini**	**1.62**	**317**	P	**Pb**	**18 08 13.0**	**+0.1**
SANT	**Santorini**	**1.62**	**317**	⇓P	**Pb**	**18 08 12.9**	**+0.1**
SANT				⇓S	**Sb**	**18 08 38.5**	**+5.5**
SANT	**Santorini**	**1.62**	**317**	⇓P	**Pb**	**18 08 12.9**	**-0.1**
SANT				*i* S	**Sb**	**18 08 38.8**	**+5.8**
SANT	**Santorini**	**1.62**	**317**	PN	**Pb**	**18 08 13.2**	**+0.3**
SANT	**Santorini**	**1.62**	**317**	Pn	**Pb**	**18 08 12.8**	**-0.1**
SANT	**Santorini**	**1.62**	**317**	⇓P	**Pb**	**18 08 12.7**	**-0.2**
THR8	**Santorini-Mono**	**1.64**	**318**	P	**Pb**	**18 08 13.3**	**+0.1**
THR6	**Thira Island,**	**1.65**	**315**	P	**Pb**	**18 08 13.7**	**+0.4**
SIVA	**Sivas**	**1.67**	**264**	P	**Pb**	**18 08 15.4**	**+1.8**
SIVA				AML	AML	18 08 59.4	
SIVA				AML	AML	18 09 06.7	
SIVA	**Sivas**	**1.67**	**264**	P	**Pb**	**18 08 14.9**	**+1.2**
SNT1	**Gialos, Santor**	**1.67**	**317**	P	**Pb**	**18 08 14.0**	**+0.3**
SNT1				S	**Sb**	**18 08 37.8**	**+3.5**
	443μm,0.9s						
THR9	**Santorini-Faro**	**1.67**	**314**	P	**Pb**	**18 08 14.0**	**+0.3**
THR7	**Fira-Santorini**	**1.68**	**317**	P	**Pb**	**18 08 14.2**	**+0.4**
SNT5	**Nea Kammeni, S**	**1.68**	**316**	P	**Pb**	**18 08 14.2**	**+0.3**
THR3	**Thira Island,**	**1.68**	**316**	P	**Pb**	**18 08 14.3**	**+0.4**
THT2	**Imerovigli**	**1.69**	**317**	PN	**Pb**	**18 08 14.0**	**0.0**
THR2	**Thira island,**	**1.69**	**318**	P	**Pb**	**18 08 15.1**	**+1.0**
TMBK	**Timbaki Herakl**	**1.70**	**266**	P	**Pb**	**18 08 15.2**	**+1.0**
TMBK				S	**Sb**	**18 08 38.8**	**+3.6**
THR5	**Thira Island,**	**1.72**	**316**	P	**Pb**	**18 08 14.7**	**+0.2**
SAP3	**Santorini-Thir**	**1.73**	**316**	P	**Pb**	**18 08 14.9**	**+0.2**
SAP4	**Santorini-Oia**	**1.75**	**317**	P	**Pb**	**18 08 15.2**	**+0.3**
BODT	**Bodrum**	**1.90**	**11**	P	**Pn**	**18 08 16.0**	**+1.3**
BODT	**Bodrum**	**1.90**	**11**	PN	**Pb**	**18 08 16.4**	**-1.3**
PRNS	**Prines Rethymn**	**1.92**	**276**	P	**Pb**	**18 08 19.1**	**+1.2**
PRNS				S	**Sb**	**18 08 45.5**	**+4.1**
BDRM	**Kayabasi**	**1.93**	**15**	⇓P	**Pb**	**18 08 17.3**	**-0.8**
BDRM				*i* P	**Pn**	**18 08 17.5**	**+2.4**
BDRM				*i* S	Sb	18 08 51.0	+9.3
TURN	**Turunc**	**1.95**	**35**	⇓P	**Pb**	**18 08 17.4**	**-1.0**
TURN				*i* S	**Sb**	**18 08 47.4**	**+5.2**
TURN	**Turunc**	**1.95**	**35**	PN	**Pn**	**18 08 16.8**	**+1.5**
YKAV	**Yalikavak-Bodr**	**1.96**	**10**	PN	**Pb**	**18 08 17.3**	**-1.3**
APE	**Apeiranthos**	**2.15**	**331**	P	**Pn**	**18 08 20.1**	**+2.0**
APE				AML	AML	18 08 58.4	
APE				AML	AML	18 09 08.7	
APE	**Apeiranthos**	**2.15**	**331**	P	**Pb**	**18 08 20.4**	**-1.5**
APE	**Apeiranthos**	**2.15**	**331**	⇑P	**Pn**	**18 08 20.2**	**+2.0**
APE				⇓S	**Sb**	**18 08 51.9**	**+3.8**
APE	**Apeiranthos**	**2.15**	**331**	⇓P	**Pn**	**18 08 20.2**	**+2.0**
APE				*i* S	**Sb**	**18 08 51.3**	**+3.2**
APE	**Apeiranthos**	**2.15**	**331**	*d* P		**18 08 19.8**	**+1.7**
APE	**Apeiranthos**	**2.15**	**331**	PN	**Pb**	**18 08 20.4**	**-1.5**
APE	**Apeiranthos**	**2.15**	**331**	⇑P	**Pb**	**18 08 20.4**	**-1.5**
APE	**Apeiranthos**	**2.15**	**331**	⇓P	**Pn**	**18 08 20.1**	**+2.0**
VAM	**Vamos**	**2.17**	**276**	P	**Pb**	**18 08 21.3**	**-0.8**
VAM				AML	AML	18 09 01.7	
VAM				AML	AML	18 09 02.7	
VAM	**Vamos**	**2.17**	**276**	P	**Pb**	**18 08 20.9**	**-1.3**
VAM	**Vamos**	**2.17**	**276**	P	**Pb**	**18 08 20.9**	**-1.3**
DALY	**Dalyan (Mula)**	**2.19**	**42**	*i* P	**Pb**	**18 08 21.7**	**-0.8**
DALY				*i* S	**Sn**	**18 08 47.1**	**+2.2**
DALY	**Dalyan (Mula)**	**2.19**	**42**	PN	**Pn**	**18 08 20.4**	**+1.8**
YER	**Yerkesik**	**2.26**	**31**	P	**Pb**	**18 08 22.5**	**-1.3**
YER	**Yerkesik**	**2.26**	**31**	PN	**Pn**	**18 08 21.1**	**+1.4**
DDIM	**Aydin, Didim**	**2.28**	**8**	⇓P	**Pb**	**18 08 22.7**	**-1.4**
DDIM				*i* S	**Sb**	**18 08 58.4**	**+6.5**
GVDS	**Gavdos**	**2.28**	**262**	P	**Pb**	**18 08 23.3**	**-0.8**
GVDS	**Gavdos**	**2.28**	**262**	PN	**Pb**	**18 08 23.0**	**-1.1**
GVD	**Gavdhos**	**2.29**	**262**	P	**Pb**	**18 08 23.2**	**-1.0**
GVD				AML	AML	18 09 20.9	
GVD				AML	AML	18 09 31.3	
GVD	**Gavdhos**	**2.29**	**262**	P	**Pb**	**18 08 23.2**	**-1.0**
GVD	**Gavdhos**	**2.29**	**262**	PN	**Pb**	**18 08 22.8**	**-1.4**
FETY	**Fethiye**	**2.32**	**51**	PN	**Pn**	**18 08 21.2**	**+0.7**
IMMV	**Iera Moni Meta**	**2.35**	**277**	P	**Pb**	**18 08 24.5**	**-0.8**
IMMV					AML	AML	18 09 13.6
IMMV					AML	AML	18 09 29.3
IMMV	**Iera Moni Meta**	**2.35**	**277**	P	**Pb**	**18 08 23.7**	**-1.5**
IMMV				S	**Sb**	**18 08 55.1**	**+1.2**
	409μm,1.1s						
IMMV	**Iera Moni Meta**	**2.35**	**277**	PN	**Pb**	**18 08 23.8**	**-1.5**
MULA	**Mugla, Merkez-**	**2.38**	**30**‖	*i* P	**Pb**	**18 08 24.2**	**-1.7**
MULA				*i* S	**Sb**	**18 08 59.3**	**+4.4**
KSL	**Kastellorizon**	**2.43**	**66**	P	**Pn**	**18 08 23.2**	**+1.3**
KSL	**Kastellorizon**	**2.43**	**66**	⇑P	**Pn**	**18 08 22.1**	**+0.2**
MHLO	**Agia Marina, M**	**2.48**	**308**	P	**Pb**	**18 08 26.8**	**-0.6**
AKAS	**Kas**	**2.48**	**65**‖	*i* P	**Pn**	**18 08 22.9**	**+0.2**
AKAS				*i* S	Sb	18 09 10.1	+12
AKAS	**Kas**	**2.48**	**65**	PN	**Pn**	**18 08 23.2**	**+0.5**
AKAS	**Kas**	**2.48**	**65**	Pn	**Pn**	**18 08 23.1**	**+0.3**
MHLA	**Plaka, Milos I**	**2.50**	**309**	P	**Pb**	**18 08 26.6**	**-1.2**
MHLA				AML	AML	18 09 17.4	
MHLA				AML	AML	18 09 28.0	
KNDR	**Palaiochora Ch**	**2.58**	**272**	P	**Pb**	**18 08 27.0**	**-2.2**
KNDR	**Palaiochora Ch**	**2.58**	**272**	PN	**Pb**	**18 08 26.9**	**-2.2**
AYDN	**Tasoluk**	**2.60**	**19**‖	*i* P	**Pb**	**18 08 27.2**	**-2.4**
AYDN				*i* S	**Sb**	**18 09 07.9**	**+6.8**
CAEL	**Denizli, Camel**	**2.78**	**46**	*i* P	**Pn**	**18 08 29.5**	**+2.6**
CAEL				*i* S	Sb	18 09 18.1	+12
TAVA	**DENIZLI_Tavas**	**2.82**	**36**‖	*i* P	**Pn**	**18 08 30.0**	**+2.7**
TAVA				*i* S	**Sb**	**18 09 12.0**	**+4.6**
DGB	**zmir**	**2.85**	**1**‖	*i* P	**Pn**	**18 08 29.9**	**+2.2**
DGB				*i* S	Sb	18 09 23.2	+15
AYDB	**Zeytinkoy-Aydi**	**2.87**	**17**	PN	**Pn**	**18 08 30.7**	**+2.5**
ELL	**Elmali**	**2.93**	**57**	P	**Pn**	**18 08 31.5**	**+2.5**
ELL	**Elmali**	**2.93**	**57**	PN	**Pn**	**18 08 30.2**	**+1.2**
ELL	**Elmali**	**2.93**	**57**		**Pn**	**18 08 31.5**	**+2.5**
ANKY	**Antikythira Is**	**2.96**	**284**	P	**Pn**	**18 08 31.7**	**+2.5**
GOLH	**Golhisar**	**3.00**	**46**	*i* P	**Pn**	**18 08 32.9**	**+3.0**
GOLH				*i* S	**Sb**	**18 09 17.4**	**+4.8**
ZEYE	**Izmir, Urla-Ze**	**3.05**	**355**	*i* P	**Pn**	**18 08 32.2**	**+1.7**
AKUM	**Antalya-Kumluc**	**3.06**	**67**‖	*i* P	**Pn**	**18 08 31.8**	**+1.1**
AKUM				*i* S	Sb	18 09 44.4	+30
CESE	**eme**	**3.16**	**352**	PN	**Pn**	**18 08 34.8**	**+2.8**
URLA	**Izmir**	**3.17**	**357**‖	*i* P	**Pn**	**18 08 33.0**	**+1.0**
URLA				*i* S	Sb	18 09 28.3	+11
URLA	**Izmir**	**3.17**	**357**	PN	**Pn**	**18 08 34.0**	**+1.9**
CHOS	**Chios island**	**3.25**	**349**	P	**Pn**	**18 08 35.1**	**+1.8**
CHOS	**Chios island**	**3.25**	**349**	PN	**Pn**	**18 08 35.7**	**+2.4**
KTHA	**Kythira Island**	**3.25**	**290**	PN	**Pn**	**18 08 36.0**	**+2.8**
KEMT	**Kemer-ANTALYA**	**3.33**	**64**	PN	**Pn**	**18 08 36.0**	**+1.7**
KORT	**Korkueli**	**3.37**	**57**	*i* P	**Pn**	**18 08 37.9**	**+3.0**
KORT				*i* S	**Sb**	**18 09 21.3**	**-2.0**
KORT	**Korkueli**	**3.37**	**57**	PN	**Pn**	**18 08 36.7**	**+1.7**
FOCM	**Foa**	**3.51**	**359**	PN	**Pn**	**18 08 39.8**	**+3.0**
ANTB	**Antalya**	**3.53**	**60**	PN	**Pn**	**18 08 39.2**	**+2.2**
MANT	**Manisa**	**3.57**	**22**‖	*i* P	**Pn**	**18 08 40.5**	**+2.7**
MANT				*i* S	Sb	18 09 45.0	+16
MANT	**Manisa**	**3.57**	**22**	Pn	**Pn**	**18 08 40.2**	**+2.4**
BRDR	**BURDUR-Merkez**	**3.60**	**45**‖	*i* P	**Pn**	**18 08 40.4**	**+2.3**
BRDR				*i* S	Sb	18 09 42.6	+13
GOMA	**Golmarmara-Man**	**3.61**	**14**	PN	**Pn**	**18 08 40.7**	**+2.5**
VLY	**Voula,Athens**	**3.61**	**318**	P	**Pn**	**18 08 41.2**	**+3.0**
KULA	**Kula-Manisa**	**3.62**	**23**	PN	**Pn**	**18 08 40.9**	**+2.5**
BUCA	**Burdur, Bucak-**	**3.68**	**

SART	**Tekirdag**	**5.49**	**3**	*i* P		**Pn**	**18 09 06.5**	**+2.5**
BILE	**Bilecik/Merkez**	**5.51**	**25**	⇓*i*P		**Pn**	**18 09 06.9**	**+2.5**
BILE				*i* S		Sb	18 10 45.4	+21
CAVK	**Edirne/Enez-Ca**	**5.51**	**355**	*i* P		**Pn**	**18 09 07.5**	**+3.2**
GULN	**MERSIN_Gulnar**	**5.55**	**78**	*i* P		**Pn**	**18 09 05.9**	**+1.1**
MVOU	**Mavrovouni**	**5.57**	**90**	⇑P		**Pn**	**18 09 04.1**	**-1.0**
OUR	**Ouranopolis**	**5.61**	**337**	P		**Pn**	**18 09 09.3**	**+3.7**
KESN	**Edirne-Kesan**	**5.62**	**359**	*i* P		**Pn**	**18 09 09.2**	**+3.0**
AUSIV	**SIVRIHISAR**	**5.66**	**40**	*i* P		**Pn**	**18 09 08.3**	**+1.9**
AUSIV				*i* S		Sb	18 10 43.3	+14
ALN	**Alexandroupoli**	**5.73**	**354**	⇓*i*P		**Pn**	**18 09 09.9**	**+2.6**
ALN				*i* S		**Sb**	**18 10 30.2**	**-0.7**
ALN	**Alexandroupoli**	**5.73**	**354**	P		**Pn**	**18 09 09.1**	**+1.9**
ALN	**Alexandroupoli**	**5.73**	**354**			**Pn**	**18 09 09.1**	**+1.9**
ALN	**Alexandroupoli**	**5.73**	**354**	⇓P		**Pn**	**18 09 10.0**	**+2.7**
ALIN	**Konya, Altinte**	**5.75**	**56**	⇓*i*P		**Pn**	**18 09 09.7**	**+2.0**
PARAL	**Paralimni**	**5.91**	**90**	P		**Pn**	**18 09 09.5**	**-0.3**
BUY	**Buyukada**	**5.93**	**17**	⇓*i*P		**Pn**	**18 09 12.3**	**+2.3**
BUY				*i* S		Sb	18 10 46.5	+10
GEYV	**SAKARYA_Geyve**	**5.95**	**26**	*i* P		**Pn**	**18 09 13.6**	**+3.3**
AUMIH	**MIHALICIK**	**5.95**	**37**	*i* P		**Pn**	**18 09 12.1**	**+1.6**
LIT	**Litokhoron**	**5.99**	**326**	P		**Pn**	**18 09 14.6**	**+3.7**
LIT	**Litokhoron**	**5.99**	**326**			**Pn**	**18 09 14.6**	**+3.7**
LIT	**Litokhoron**	**5.99**	**326**	⇓P		**Pn**	**18 09 14.6**	**+3.7**
RDO	**Rodhopi**	**6.03**	**351**	⇑P		**Pn**	**18 09 13.8**	**+2.5**
SWA2		**6.05**	**192**	P		**Pn**	**18 09 10.9**	**-0.8**
	baz=195							
ISK	**Istanbul-Kandi**	**6.12**	**16**	P		**Pn**	**18 09 16.0**	**+3.4**
THE	**Thessaloniki**	**6.23**	**332**	P		**Pn**	**18 09 18.8**	**+4.6**
THE				pmax	pmax			
	comp=Z,3μm,1.2s							
SOH	**Sokhos**	**6.25**	**335**	P		**Pn**	**18 09 18.5**	**+4.0**
SOH				pmax	pmax			
	comp=Z,867nm,0.8s							
KKUL	**Konya-Kulu**	**6.27**	**49**	*i* P		**Pn**	**18 09 17.7**	**+2.9**
BTAS	**Taskesti**	**6.29**	**30**	*i* P		**Pn**	**18 09 17.6**	**+2.5**
BTAS				*i* S		Sb	18 11 25.2	+38
MDUB	**Mudurnu**	**6.30**	**32**	Pn		**Pn**	**18 09 17.0**	**+1.9**
HMYD	**Mayadein**	**6.34**	**147**	P		**Pn**	**18 09 13.6**	**-2.1**
	baz=148							
KAYN	**Sakarya, Kayna**	**6.39**	**25**	*i* P		**Pn**	**18 09 19.6**	**+3.2**
SRS	**Serrai**	**6.44**	**338**	P		**Pn**	**18 09 20.5**	**+3.4**
SRS				pmax	pmax			
	comp=Z,2μm,1.8s							
KAND	**Kocaeli-Kandir**	**6.46**	**23**	*i* P		**Pn**	**18 09 19.9**	**+2.7**
SAHE	**Sakarya_HENDEK**	**6.48**	**28**	*i* P		**Pn**	**18 09 20.4**	**+2.9**
AKSY	**AKSARAY - Alti**	**6.53**	**56**	⇓*i*P		**Pn**	**18 09 20.1**	**+1.7**
BR231	**Keskin MP Arra**	**6.62**	**44**	Pn		**Pn**	**18 09 21.7**	**+2.1**
BBAL	**Bala**	**6.62**	**47**	*i* P		**Pn**	**18 09 21.2**	**+1.5**
BBAL				*i* S		Sb	18 11 23.6	+27
ANTO	**Ankara**	**6.64**	**44**	P		**Pn**	**18 09 22.0**	**+2.1**
ANTO	**Ankara**	**6.64**	**44**	Pn		**Pn**	**18 09 22.0**	**+2.1**
ARMN	**Kirklareli, Me**	**6.67**	**4**	⇓*i*P		**Pn**	**18 09 23.3**	**+3.0**
ARMN				*i* S		Sb	18 11 15.4	+17
KNT	**Kendrikon**	**6.72**	**334**	P		Pn	18 09 25.7	+4.9
KNT				pmax	pmax			
	comp=Z,3μm,1.4s							
GRG	**Griva**	**6.73**	**330**	P		**Pn**	**18 09 25.3**	**+4.2**
GRG				pmax	pmax			
	comp=Z,5μm,1.0s							
KOT	**Kottamia**	**6.73**	**140**	P		**Pn**	**18 09 17.7**	**-3.4**
	baz=140							
KOT				AMP			18 10 00.0	
	baz=140							
KOT				S		Sn	18 10 26.2	-11
	baz=140							
IGT	**Igoumenitsa**	**6.75**	**312**	P		**Pn**	**18 09 22.5**	**+1.2**
IGT				pmax	pmax			
	comp=Z,1μm,1.2s							
GLL	**Jalalah**	**6.95**	**142**	P		**Pn**	**18 09 21.3**	**-2.8**
	baz=143							
BCAM	**Yenicaga**	**6.96**	**35**	*i* P		**Pn**	**18 09 26.8**	**+2.5**
BCAM				*i* S		Sb	18 11 31.2	+25
VAY	**Valandovo**	**6.98**	**333**	P		Pn	18 09 30.0	+5.6
VAY				pmax	pmax			
	comp=Z,2μm,1.4s							
VAY	**Valandovo**	**6.98**	**333**	*i* Pn		**Pn**	**18 09 29.1**	**+4.7**
BR131	**Keskin Array S**	**7.05**	**48**	*d i*P		**Pn**	**18 09 26.2**	**+0.7**
BR131	**Keskin Array S**	**7.05**	**48**	Pn		**Pn**	**18 09 26.6**	**+1.1**
BRTR	**Keskin Array B**	**7.05**	**48**	Pn		**Pn**	**18 09 26.9**	**+1.3**
	comp=Z,4.9nm,0.3s,baz=233,slow=15,SNR=67							
BRTR				Sn		**Sn**	**18 10 46.3**	**+1.3**
	comp=Z,3.3nm,0.3s,baz=215,slow=23,SNR=2.0							
BRTR				LR		LR	18 13 04.2	
	comp=Z,277μm,19.9s,baz=238,slow=46							
FNA	**Florina**	**7.05**	**324**	P		**Pn**	**18 09 27.5**	**+2.0**
FNA	**Florina**	**7.05**	**324**	Pn		**Pn**	**18 09 27.5**	**+2.0**
FNA	**Florina**	**7.05**	**324**	⇑P		**Pn**	**18 09 28.7**	**+3.2**
PLD	**Plovdiv**	**7.10**	**347**	P		**Pn**	**18 09 29.6**	**+3.5**
PLD				pmax	pmax			
	comp=Z,4μm,1.2s							
KDZE	**Karadeniz Ereo**	**7.10**	**29**	⇑P		**Pn**	**18 09 29.7**	**+3.6**
KEK	**Kerkira**	**7.19**	**311**	⇑P		**Pn**	**18 09 28.0**	**+0.7**
KBN	**Korca**	**7.23**	**320**	P		Pn	18 09 33.6	+5.7
AVNS	**Nevsehir-Avano**	**7.35**	**58**	*i* P		**Pn**	**18 09 32.5**	**+2.8**
AVNS				*i* S		Sb	18 11 55.7	+38
DQRL	**Deir Qamar**	**7.37**	**99**	*e*P		**Pn**	**18 09 28.2**	**-1.6**
BHL	**Bhannes**	**7.39**	**98**	*e*P		**Pn**	**18 09 34.5**	**+4.3**
MMAI	**Mount Meron Ar**	**7.43**	**105**	Pn		**Pn**	**18 09 30.2**	**-0.5**
	comp=Z,40nm,0.3s,baz=311,slow=12,SNR=113							
MMAI				Sn		**Sn**	**18 10 53.5**	**-0.9**
	comp=Z,454nm,0.3s,baz=317,slow=23,SNR=8.8							
STIP	**Stip**	**7.44**	**332**	*i* Pn		**Pn**	**18 09 34.3**	**+3.5**
QRWL	**Qaraoun**	**7.50**	**100**	*e*P		Pn	**18 09 29.5**	**-2.1**
HWQ	**Hawqa**	**7.55**	**94**	*e*P		**Pn**	**18 09 31.5**	**-1.0**
OHR	**Ohrid**	**7.58**	**323**	*i* Pn		**Pn**	**18 09 37.4**	**+4.6**
ZAF	**Zafarana**	**7.62**	**139**	P		**Pn**	**18 09 30.3**	**-3.0**
	baz=139							
RCY	**Rachaya**	**7.63**	**100**	*e*P		**Pn**	**18 09 31.9**	**-1.7**
BTIN	**Bartın**	**7.71**	**32**	*i* P		**Pn**	**18 09 36.9**	**+2.4**
BTIN				*i* S		Sb	18 11 58.9	+31
VTS	**Vitosha**	**7.92**	**340**	⇓P		**Pn**	**18 09 41.6**	**+4.1**
VTS	**Vitosha**	**7.92**	**340**	P		**Pn**	**18 09 41.4**	**+3.8**
VTS	**Vitosha**	**7.92**	**340**	Pn		**Pn**	**18 09 41.4**	**+3.8**
VTS	**Vitosha**	**7.92**	**340**	⇓P		**Pn**	**18 09 41.4**	**+3.8**
ILGA	**Ilgaz**	**7.97**	**41**	Pn		**Pn**	**18 09 40.2**	**+2.0**
SKO	**Skopje**	**7.98**	**330**	*i* Pn		**Pn**	**18 09 42.3**	**+4.1**
SCTE	**Santa Cesarea**	**8.23**	**309**	Pn		**Pn**	**18 09 41.4**	**-0.3**
TIR	**Tirane**	**8.23**	**320**	⇓P		**Pn**	**18 09 44.5**	**+2.9**
TIR	**Tirane**	**8.23**	**320**	P		**Pn**	**18 09 42.6**	**+1.0**
TIR	**Tirane**	**8.23**	**320**	Pn		**Pn**	**18 09 42.6**	**+1.0**
TIR	**Tirane**	**8.23**	**320**	⇑P		**Pn**	**18 09 42.8**	**+1.1**
PLVB	**Pleven**	**8.36**	**349**	⇑P		**Pn**	**18 09 46.7**	**+3.3**
ZIMR		**8.53**	**353**	⇑P		**Pn**	**18 09 50.3**	**+4.6**
PSN	**Preselentsi**	**8.54**	**7**	P		**Pn**	**18 09 49.2**	**+3.4**
GAZ	**Gaziantep**	**8.62**	**74**	Pn		**Pn**	**18 09 46.0**	**-1.0**
BZK	**Bozkurt**	**8.78**	**38**	⇑P		**Pn**	**18 09 52.3**	**+3.2**
EIL	**Elat**	**8.79**	**127**	Pn		**Pn**	**18 09 48.6**	**-0.8**
	comp=Z,14nm,0.3s,baz=237,slow=2.6,SNR=118							
EIL				Sn		**Sn**	**18 11 23.9**	**-4.0**
	comp=Z,249nm,0.3s,baz=339,slow=9.5,SNR=8.1							
EIL	**Elat**	**8.79**	**127**	⇑P		**Pn**	**18 09 46.9**	**-2.5**
BOYA	**Sinop/Boyabat-**	**8.83**	**42**	*i* P		**Pn**	**18 09 53.7**	**+3.9**
TIP	**Timpagrande**	**8.97**	**299**	⇑P		**Pn**	**18 09 52.0**	**+0.1**
TIP	**Timpagrande**	**8.97**	**299**	Pn		**Pn**	**18 09 51.9**	**+0.1**
TIP	**Timpagrande**	**8.97**	**299**	⇑P		**Pn**	**18 09 51.5**	**-0.3**
VLAD	**Vladila**	**8.99**	**349**	⇑P		**Pn**	**18 09 55.4**	**+3.4**
ULC	**Ulcinj**	**9.00**	**321**	⇓*i*Pn		**Pn**	**18 09 54.9**	**+2.7**
ULC				*i* Sn		**Sn**	**18 11 32.4**	**-0.4**
RASA	**Rasa**	**9.01**	**1**	⇓P		Pn	18 09 57.1	+4.8
HKAT	**Jabal Katrina**	**9.01**	**136**	P		**Pn**	**18 09 48.8**	**-3.8**
	baz=135							
TSCT	**Constanta Port**	**9.06**	**8**	⇑P		**Pn**	**18 09 57.4**	**+4.4**
PVY	**Plav**	**9.12**	**326**	⇑*i*Pn		**Pn**	**18 09 56.9**	**+2.9**
PVY				*i* Sn		**Sn**	**18 11 35.5**	**-0.6**
CVDA	**Cernavoda**	**9.17**	**5**	⇑P		**Pn**	**18 09 58.3**	**+3.8**
TOKA	**Tokat**	**9.19**	**53**	Pn		**Pn**	**18 09 55.4**	**+0.5**
DRME	**Dracevica, Mon**	**9.19**	**322**	*e*Pn		**Pn**	**18 09 54.0**	**-0.8**
DRME	**Dracevica, Mon**	**9.19**	**322**	⇓*i*Pn		**Pn**	**18 09 57.7**	**+2.9**
DRME				*i* Sn		**Sn**	**18 11 37.0**	**-0.5**
BAIL	**Bailesti**	**9.21**	**344**	⇑P		**Pn**	**18 09 59.4**	**+4.3**
DIKM	**Dikmen**	**9.23**	**43**	⇓P		**Pn**	**18 09 58.5**	**+3.3**
LEHL	**Lehliu**	**9.27**	**360**	⇑P		**Pn**	**18 09 59.5**	**+3.7**
CEL	**Celeste**	**9.30**	**292**			**Pn**	**18 09 54.4**	**-2.0**
CEL	**Celeste**	**9.30**	**292**	⇑P		**Pn**	**18 09 56.2**	**-0.1**
BOVS	**Bovan**	**9.31**	**336**	⇓P		**Pn**	**18 10 00.2**	**+3.7**
TIRR	**Tirgusor**	**9.33**	**7**	P		**Pn**	**18 09 59.2**	**+2.5**
TIRR	**Tirgusor**	**9.33**	**7**			**Pn**	**18 09 59.2**	**+2.5**
TIRR	**Tirgusor**	**9.33**	**7**	*e*P		**Pn**	**18 09 58.8**	**+2.1**
	baz=136,slow=11							
TIRR	**Tirgusor**	**9.33**	**7**	⇑P		**Pn**	**18 09 59.4**	**+2.7**
PDG	**Podgorica**	**9.33**	**323**	⇑P		**Pn**	**18 09 57.7**	**+1.0**
PDG	**Podgorica**	**9.33**	**323**	*e*Pn		**Pn**	**18 09 57.0**	**+0.3**
PDG	**Podgorica**	**9.33**	**323**			**Pn**	**18 09 56.4**	**-0.3**
PDG	**Podgorica**	**9.33**	**323**	⇑P		**Pn**	**18 09 56.5**	**-0.2**
TTG	**Podgorica**	**9.33**	**323**	⇓*i*Pn		**Pn**	**18 09 59.7**	**+3.0**
TTG				*i* Sn		**Sn**	**18 11 40.5**	**-0.5**
IVA	**Berane**	**9.37**	**327**	⇓*i*Pn		**Pn**	**18 10 00.2**	**+2.8**
IVA				*i* Sn		**Sn**	**18 11 41.5**	**-0.6**
AMRR	**Amara**	**9.41**	**2**	⇑P		**Pn**	**18 10 01.3**	**+3.5**
BUM	**Brajici-Budva**	**9.42**	**321**	*e*Pn		**Pn**	**18 10 00.5**	**+2.5**
BUM				*i* Sn		**Sn**	**18 11 42.5**	**-0.7**
HUMR	**Humele**	**9.43**	**352**	⇑P		**Pn**	**18 10 01.1**	**+3.1**
SULR		**9.48**	**357**	⇑P		**Pn**	**18 10 02.5**	**+3.7**
HARR	**Harsova**	**9.52**	**5**	⇓P		**Pn**	**18 10 02.8**	**+3.5**
KOME	**Kolasin**	**9.53**	**326**	⇓*i*Pn		**Pn**	**18 10 02.2**	**+2.7**
KOME				*i* Sn		**Sn**	**18 11 45.2**	**-0.7**
PUNG	**Punghina**	**9.55**	**343**	⇓P		**Pn**	**18 10 02.7**	**+3.0**
CEME	**Cevo**	**9.59**	**322**	*e*Pn		**Pn**	**18 10 03.0**	**+2.7**
CEME				*i* Sn		**Sn**	**18 11 46.5**	**-0.8**
MATE	**Matera**	**9.68**	**307**	⇑P		**Pn**	**18 10 01.5**	**+0.1**
MATE	**Matera**	**9.68**	**307**	⇑P		**Pn**	**18 10 00.3**	**-1.1**
JURR	**Jurilovca**	**9.69**	**9**	⇑P		**Pn**	**18 10 05.5**	**+4.0**
PGOR	**Pogoanele**	**9.70**	**1**	⇑P		Pn	18 10 06.7	+5.0
TPGR	**Topolog**	**9.73**	**7**	⇑P		**Pn**	**18 10 05.5**	**+3.4**
HCY	**Herceg Novi**	**9.73**	**321**	*e*Pn		**Pn**	**18 10 02.4**	**+0.2**
HCY	**Herceg Novi**	**9.73**	**321**	*e*Pn		**Pn**	**18 10 05.0**	**+2.8**
HCY				*i* Sn		**Sn**	**18 11 50.0**	**-0.8**
NKME	**Niksic**	**9.73**	**323**	*e*Pn		**Pn**	**18 10 05.1**	**+2.8**
NKME				*i* Sn		**Sn**	**18 11 50.1**	**-0.8**
NKY	**Niksic**	**9.75**	**324**	⇓*i*Pn		**Pn**	**18 10 05.3**	**+2.8**
NKY				*i* Sn		**Sn**	**18 11 50.4**	**-0.9**
MALT	**Malatya**	**9.81**	**68**	P		Pn	**18 10 04.6**	**+1.3**
SECR		**9.85**	**357**	⇑P		**Pn**	**18 10 08.5**	**+4.8**
SRE	**Strehaia**	**9.86**	**345**	⇑P		**Pn**	**18 10 06.8**	**+2.9**
SRE	**Strehaia**	**9.86**	**345**	P		**Pn**	**18 10 06.7**	**+2.9**
ISR	**Istrita**	**9.91**	**359**	⇑P		**Pn**	**18 10 08.9**	**+4.2**
ISR	**Istrita**	**9.91**	**359**	P		**Pn**	**18 10 09.0**	**+4.2**
ISR				pmax	pmax			
	comp=Z,1μm,0.9s							
PLE	**Pljevlja**	**9.96**	**327**	⇑*i*Pn		**Pn**	**18 10 08.2**	**+2.7**
PLE				*i* Sn		**Sn**	**18 11 55.5**	**-1.1**
TREB	**Trebinje**	**10.00**	**321**	*e*Pn		**Pn**	**18 10 04.1**	**-1.8**
CFR	**Carcaliu**	**10.02**	**5**	P		**Pn**	**18 10 08.8**	**+2.7**
CFR				pmax	pmax			
	comp=Z,650nm,1.0s							
DJES	**Djerdap**	**10.02**	**342**	⇑P		**Pn**	**18 10 09.8**	**+3.6**
BRY	**Bratogost**	**10.04**	**323**	*e*Pn		**Pn**	**18 10 06.0**	**-0.5**
BRY	**Bratogost**	**10.04**	**323**	*e*Pn		**Pn**	**18 10 09.2**	**+2.7**
BRY				*i* Sn		**Sn**	**18 11 57.3**	**-1.2**
UPM	**Unac-Piva**	**10.09**	**325**	*e*Pn		**Pn**	**18 10 10.1**	**+2.9**
UPM	**Unac-Piva**	**10.09**	**325**	⇑*i*Pn		**Pn**	**18 10 09.9**	**+2.7**
UPM				*i* Sn		**Sn**	**18 11 58.5**	**-1.2**
TLCR		**10.09**	**8**	⇑P		**Pn**	**18 10 11.1**	**+4.0**
TLCR		**10.09**	**8**	P		**Pn**	**18 10 11.1**	**+4.0**
RUDO	**Rudo**	**10.20**	**328**	*e*Pn		**Pn**	**18 10 10.8**	**+2.2**
MRVN	**Minervino Murg**	**10.22**	**308**	⇑P		**Pn**	**18 10 07.6**	**-1.3**
NEHR	**Nehoiu**	**10.23**	**358**	⇓P		**Pn**	**18 10 13.8**	**+4.8**
HERR	**Herculane**	**10.25**	**342**	⇓P		**Pn**	**18 10 12.2**	**+3.0**
VAE	**Valguarnera**	**10.28**	**286**	Pn		**Pn**	**18 10 11.8**	**+2.0**
	comp=Z,19nm,0.3s,baz=54,slow=0.8,SNR=32							
VAE				Sn		**Sn**	**18 12 02.2**	**-2.1**
	comp=Z,30nm,0.3s,baz=45,slow=1.4,SNR=1.3							
RAFF	**Raffo Rosso**	**10.28**	**285**			**Pn**	**18 10 08.8**	**-1.0**
ARR	**Arges**	**10.30**	**351**	⇑P		**Pn**	**18 10 13.2**	**+3.2**
MLR	**Muntele Rosu**	**10.31**	**356**	Pn		**Pn**	**18 10 14.0**	**+3.8**
	baz=212,slow=12							
MLR				LR		LR	18 15 08.7	
	comp=Z,220μm,18.8s,baz=198,slow=44							
MLR	**Muntele Rosu**	**10.31**	**356**	⇑P		**Pn**	**18 10 14.4**	**+4.2**
MLR	**Muntele Rosu**	**10.31**	**356**	P		**Pn**	**18 10 12.7**	**+2.5**
MLR	**Muntele Rosu**	**10.31**	**356**			**Pn**	**18 10 12.7**	**+2.5**
MLR	**Muntele Rosu**	**10.31**	**356**	*e*P		**Pn**	**18 10 13.5**	**+3.3**
	baz=136,slow=11							
VOIR		**10.32**	**353**	⇑P		**Pn**	**18 10 13.5**	**+3.1**
VOIR		**10.32**	**353**	P		**Pn**	**18 10 13.1**	**+2.8**
VOIR				pmax	pmax			
	comp=Z,433nm,1.6s							
SCHL	**Schela**	**10.32**	**4**	⇑P		**Pn**	**18 10 13.9**	**+3.6**
GIUM	**Giurgiulesti**	**10.33**	**5**	⇑P		Pn	18 10 15.2	+4.8
DIVS	**Divibare**	**10.34**	**331**	*e*Pn		**Pn**	**18 10 12.2**	**+1.7**
DIVS	**Divibare**	**10.34**	**331**			**Pn**	**18 10 13.2**	**+2.7**
DIVS	**Divibare**	**10.34**	**331**	⇑P		**Pn**	**18 10 12.7**	**+2.1**
BISRR	**Bisoca**	**10.34**	**360**	⇑P		**Pn**	**18 10 14.6**	**+4.0**
MDVR	**Moldovita**	**10.35**	**339**	⇓P		**Pn**	**18 10 14.5**	**+3.9**
BBLS	**Lazići**	**10.38**	**329**	*e*Pn		**Pn**	**18 10 11.9**	**+0.7**
TUDR		**10.41**	**3**	⇓P		**Pn**	**18 10 16.0**	**+4.6**
LOT	**Lotru**	**10.50**	**348**	⇓P		**Pn**	**18 10 15.9**	**+3.1**
ODBI	**Odobesti**	**10.56**	**1**	⇑P		**Pn**	**18 10 16.4**	**+2.9**
GZR	**Gura Zlata**	**10.65**	**344**	⇑P		**Pn**	**18 10 17.4**	**+2.7**
PLOR	**Plostina**	**10.65**	**359**	⇓P		**Pn**	**18 10 18.6**	**+4.8**
PLOR	**Plostina**	**10.65**	**359**	P		**Pn**	**18 10 18.5**	**+3.8**
VRI	**Vrincioaia**	**10.66**	**360**	⇑P		**Pn**	**18 10 19.5**	**+4.6**
VRI	**Vrincioaia**	**10.66**	**360**	P		**Pn**	**18 10 19.5**	**+4.6**
VRI				pmax	pmax			
	comp=Z,1μm,1.6s							
VARL	**Varlezi**	**10.72**	**4**	⇑P		**Pn**	**18 10 20.3**	**+4.6**
HAPS	**Han Pijesak,BI**	**10.76**	**328**	*e*Pn		**Pn**	**18 10 15.4**	**-0.9**
BEO	**Beograd**	**10.77**	**335**	P		**Pn**	**18 10 20.8**	**+4.5**
DOPR	**Dopca**	**10.82**	**355**	⇑P		**Pn**	**18 10 20.5**	**+3.5**
GHRR		**10.86**	**2**	⇑P		**Pn**	**18 10 21.5**	**+3.9**
SGRT	**San Giovanni R**	**10.88**	**310**			**Pn**	**18 10 16.4**	**-1.6**
TEKS	**Tekeris**	**10.89**	**331**	*e*Pn		**Pn**	**18 10 18.2**	**+0.1**
OZUR		**10.92**	**356**	⇑P		**Pn**	**18 10 21.8**	**+3.3**
BANR	**Banloc**	**11.06**	**339**	⇑P		**Pn**	**18 10 24.2**	**+3.8**
DEV	**Deva**	**11.09**	**346**	⇑P		**Pn**	**18 10 24.8**	**+4.1**
BZS	**Buzias**	**11.14**	**341**	⇑P		**Pn**	**18 10 24.6**	**+3.1**
CORL	**Corleone**	**11.21**	**288**			**Pn**	**18 10 22.9**	**+0.3**
SIM	**Simferopol'**	**11.22**	**28**	*de*P		**Pn**	**18 10 25.2**	**+2.7**
SIM				MLR	MLR			
	comp=N,26μm,14.0s							
CLTB	**Caltabellotta**	**11.23**	**286**			**Pn**	**18 10 23.3**	**+0.4**
CLTB	**Caltabellotta**	**11.23**	**286**	⇑P		**Pn**	**18 10 22.6**	**-0.3**
PAOL	**Paolisi**	**11.28**	**305**			**Pn**	**18 10 21.2**	**-2.2**
FRGS	**Fruska Gora**	**11.30**	**334**	⇑P		**Pn**	**18 10 27.1**	**+3.4**
FRGS	**Fruska Gora**	**11.30**	**334**	*e*Pn		**Pn**	**18 10 26.5**	**+2.8**
TESR	**Tescani**	**11.31**	**359**	⇓P		**Pn**	**18 10 26.9**	**+3.1**
MARD	**Mardin**	**11.45**	**75**			**Pn**	**18 10 25.9**	**0.0**
SIRR	**Siria**	**11.73**	**342**	⇑P		**Pn**	**18 10 33.6**	**+4.1**
BIZ	**Bicaz**	**11.75**	**358**	⇓P		**Pn**	**18 10 33.5**	**+3.8**
CJR	**Cluj-Napoca**	**11.76**	**349**	⇑P		**Pn**	**18 10 33.4**	**+3.4**
MILM	**Milestii Mici**	**11.81**	**7**	⇑P		**Pn**	**18 10 34.1**	**+3.6**
KOPT	**Kop Dagi**	**11.85**	**62**			**Pn**	**18 10 31.8**	**+0.3**
MGRS	**Mrkonjic Grad**	**11.87**	**324**	*e*Pn		**Pn**	**18 10 31.7**	**+0.2**
KIS	**Kishinev**	**11.88**	**7**	*e*P		**Pn**	**18 10 34.0**	**+2.4**
	comp=N,3μm,1.8s							
KIS	**Kishinev**	**11.88**	**7**	*i* PP		Pn	18 10 44.0	+12
KIS				*e*S		**Sn**	**18 12 52.0**	**+8.5**
KIS				*e*L		L	18 14 22.0	
KIS				LRM		MLR	18 15 40.0	
	comp=N,38μm,18.0s							
KIS	**Kishinev**	**11.88**	**7**	⇑P		**Pn**	**18 10 36.3**	**+4.7**
KIS	**Kishinev**	**11.88**	**7**	*e*P		**Pn**	**18 10 34.0**	**+2.4**
KIS				*e*S		**Sn**	**18 12 52.0**	**+8.5**
KIS				pmax	pmax			
	comp=Z,3μm,1.8s							
DRGR		**11.99**	**346**	⇓P		**Pn**	**18 10 36.7**	**+3.5**
IAS	**Iasi**	**12.00**	**2**	⇑P		**Pn**	**18 10 36.1**	**+3.0**
ARCR	**ARCALIA**	**12.03**	**352**	⇓P		**Pn**	**18 10 37.2**	**+3.7**
AMBH	**Ambrzfalva**	**12.06**	**339**	⇓P		**Pn**	**18 10 36.4**	**+2.4**
BLY	**Banja Luka**	**12.07**	**325**	*e*Pn		**Pn**	**18 10 34.2**	**+0.1**
BLY	**Banja Luka**	**12.07**	**325**	⇑P		**Pn**	**18 10 33.6**	**-0.5**
PRAR	**RASCA**	**12.16**	**358**	⇓P		**Pn**	**18 10 40.2**	**+4.7**
INTR	**Introdacqua**	**12.19**	**308**	Pn		**Pn**	**18 10 35.4**	**-0.5**
BURAR	**Bucovina Array**	**12.47**	**355**	⇑P		**Pn**	**18 10 44.0**	**+4.3**
BURAR	**Bucovina Array**	**12.47**	**355**	P		**Pn**	**18 10 41.9**	**+2.2**
BURAR	**Bucovina Array**	**12.47**	**355**			**Pn**	**18 10 41.9**	**+2.2**
BUR08	**Bucovina Ar. S**	**12.50**	**355**			**Pn**	**18 10 42.6**	**+2.5**
ANN	**Anapa**	**12.56**	**37**	*e*P		**Pn**	**18 10 44.0**	**+3.2**
ANN				*e*S		**Sn**	**18 13 04.3**	**+4.4**
ANN				pmax	pmax			
	comp=Z,384nm,1.8s							
ANN				MLR	MLR			
	comp=E,22μm,14.0s							
ANN				MLR	MLR			
	comp=N,30μm,17.0s							
ANN				MLR	MLR			
	comp=Z,29μm,17.0s							
MORH	**Mrgy, Hungar**	**12.63**	**333**	⇑P		**Pn**	**18 10 43.6**	**+1.8**
MORH	**Mrgy, Hungar**	**12.63**	**333**	*e*Pn		**Pn**	**18 10 43.0**	**+1.2**
AQU	**L'Aquila**	**12.68**	**308**	P		**Pn**	**18 10 44.2**	**+1.6**
AQU	**L'Aquila**	**12.68**	**308**	*e*Pn		**Pn**	**18 10 44.2**	**+1.6**
AQU	**L'Aquila**	**12.68**	**308**			**Pn**	**18 10 44.2**	**+1.6**
AQU	**L'Aquila**	**12.68**	**308**	⇑P		**Pn**	**18 10 41.5**	**-1.1**
BMR	**Baia Mare**	**12.71**	**350**	P		**Pn**	**18 10 46.6**	**+3.6**
BMR				pmax	pmax			
	comp=Z,355nm,1.1s							
SOC	**Sochi**	**13.00**	**46**	*i* P		**Pn**	**18 10 49.5**	**+2.6**
SOC				*e*			18 13 17.9	
SOC				pmax	pmax			
	comp=Z,49nm,1.0s							
SOC				MLR	MLR			
	comp=Z,33μm,12.0s							
NRCA	**Norcia**	**13.11**	**310**			**Pn**	**18 10 47.6**	**-0.8**
KSV	**Kosov**	**13.18**	**355**	P		**Pn**	**18 10 52.8**	**+3.5**
**T

TEOL IAmb IAmb 18 11 31.6
comp=Z,569nm,0.9s
NAX Nakhchivan 15.39 70 P **P 18 11 22.6 -1.3**
ZOU Zoufplan 15.43 322 **Pn 18 11 19.2 -0.7**
ZOU IAmb IAmb 18 11 44.6
comp=Z,777nm,1.1s
BTNK Botanikuri 15.48 60 P **P 18 11 24.3 -0.5**
VLC Villacollemand 15.49 310 **Pn 18 11 19.7 -0.9**
AKASG Malin Array Be 15.60 6 Pn **Pn 18 11 21.5 -0.3**
comp=Z,7.6nm,0.3s,baz=195,slow=10,SNR=57
AKASG LR LR 18 18 05.9
comp=Z,51µm,18.9s,baz=190,slow=40
AKASG Malin Array Be 15.60 6 *i* P **Pn 18 11 21.7 -0.2**
AKASG pmax pmax
comp=Z,209nm,0.8s
AKASG Malin Array Be 15.60 6 **Pn 18 11 21.3 -0.5**
AKBB Malin Array Si 15.60 6 *c* eP **Pn 18 11 21.6 -0.2**
AKBB Malin Array Si 15.60 6 **Pn 18 11 21.7 -0.2**
KBA Koelnbreinsper 15.60 324 *i* Pn **Pn 18 11 22.7 +0.5**
comp=Z,92nm,0.7s,SNR=80
KBA *e*S **PcS 18 19 58.9 +0.4**
comp=Z,50nm,1.2s
PGF Pioggiola 15.70 303 P **Pn 18 11 24.5 +1.1**
PGF pmax pmax
comp=Z,737nm,0.9s
PGF Pioggiola 15.70 303 P **Pn 18 11 22.4 -1.0**
MOA Molln 15.73 327 *i* Pn **Pn 18 11 25.4 +1.6**
comp=Z,205nm,1.1s,SNR=103
MOA Molln 15.73 327 *e*P **Pn 18 11 24.9 +1.1**
baz=136,slow=11
ABSA Djebel Ababsia 15.76 280 P **P 18 11 27.7 -0.3**
ABTA Abfaltersbach 15.79 321 *i* Pn **Pn 18 11 24.9 +0.4**
comp=Z,152nm,0.7s,SNR=88
ABTA *i* S **PcS 18 19 59.2 +0.6**
comp=Z,41nm,1.3s,SNR=5.1
CTI Castel Tesino 15.80 318 P **Pn 18 11 23.5 -1.2**
CTI pmax pmax
comp=Z,730nm,1.2s
CTI Castel Tesino 15.80 318 P **Pn 18 11 23.5 -1.2**
CMAH Djebel Manchou 15.80 281 P **P 18 11 26.8 -1.6**
GOF Gofitskoye 15.81 47 ⇓ *e*P **P 18 11 27.1 -1.2**
GOF *e*S **Sn 18 14 10.3 -8.8**
GOF pmax pmax
comp=Z,822nm,1.0s
GOF smax smax
comp=N,847nm,1.4s
GOF smax smax
comp=E,943nm,1.6s
PRMA PARMA 15.84 312 P **Pn 18 11 26.2 +1.1**
KRUC Moravsky 15.85 334 *e*PN **Pn 18 11 25.2 0.0**
KRUC Moravsky 15.85 334 *e*SN **Sn 18 14 26.7 +6.5**
KRUC *e* 18 23 36.4
KRUC Moravsky 15.85 334 P **Pn 18 11 26.8 +1.6**
KRUC pmax pmax
comp=Z,656nm,1.8s
OJC Ojcow 15.87 343 *e*P **P 18 11 29.6 +0.6**
OJC *e*S **S 18 14 36.0 +1.4**
OJC *e*L L 18 17 50.7
comp=Z,55µm,21.1s
OJC Ojcow 15.87 343 P **Pn 18 11 26.2 +0.8**
OJC pmax pmax
comp=Z,399nm,0.9s
OJC Ojcow 15.87 343 P **Pn 18 11 26.2 +0.8**
OJC Ojcow 15.87 343 ⇓ P **Pn 18 11 27.2 +1.8**
OKC Ostrava-Krasne 15.96 339 *e*P **P 18 11 30.0 0.0**
OKC MLR MLR
comp=Z,96µm,12.2s
OKC Ostrava-Krasne 15.96 339 *e*P **P 18 11 30.0 0.0**
OKC *e*S **S 18 14 44.6 +8.3**
OKC AMS AMS 18 18 40.0
comp=Z,96µm,12.2s
VRAC Vranov 15.99 335 Pn **Pn 18 11 27.8 +0.8**
comp=Z,2.1nm,0.3s,baz=145,slow=9.2,SNR=52
VRAC LR LR 18 19 03.5
comp=Z,67µm,18.9s,baz=159,slow=43
VRAC Vranov 15.99 335 ⇑ P **P 18 11 30.2 -0.2**
VRAC Vranov 15.99 335 *e*PN **Pn 18 11 27.5 +0.5**
VRAC Vranov 15.99 335 *e*SN **S 18 14 30.9 -6.2**
VRAC *e* 18 23 37.1
MORC Moravsky Berou 16.08 338 *e*PN **Pn 18 11 29.6 +1.4**
MORC Moravsky Berou 16.08 338 *e*SN **Sn 18 14 32.5 +6.6**
MORC *e* 18 23 37.1
MORC Moravsky Berou 16.08 338 P **Pn 18 11 29.0 +0.8**
MORC pmax pmax
comp=Z,387nm,1.0s
MORC Moravsky Berou 16.08 338 P **Pn 18 11 29.0 +0.8**
MORC Moravsky Berou 16.08 338 ⇑ P **Pn 18 11 29.0 +0.8**
MSSA Maissana 16.11 310 P **Pn 18 11 28.8 +0.2**
RAC Raciborz 16.16 340 *e*P **Pn 18 11 30.0 +0.8**
RAC MLR MLR
comp=Z,104µm,17.9s
SALO Salr 16.18 315 P **Pn 18 11 29.4 -0.1**
SALO Salr 16.18 315 ⇑ P **Pn 18 11 28.4 -1.0**
GANJ Ganja 16.30 65 P **P 18 11 34.7 +0.8**
RJOB Jochberg 16.33 324 *e*P **Pn 18 11 31.7 +0.3**
comp=Z,722nm,0.8s,baz=136,slow=11
DDFL Dedoflistskaro 16.35 62 P **P 18 11 35.5 +1.0**
CKFL Kef-Lekhel 16.37 280 P **P 18 11 33.7 -1.1**
BOB Bobbio (Coli) 16.37 311 ⇑ P **Pn 18 11 31.4 -0.7**
TREC Trest 16.38 333 P **Pn 18 11 33.3 +1.3**
TREC pmax pmax
comp=Z,187nm,1.3s
TREC Trest 16.38 333 *e*P **P 18 11 35.5 +0.8**
TREC *e*S **S 18 14 45.5 +0.5**
TREC AMS AMS 18 17 40.0
comp=Z,60µm,24.0s
CKRC Cesky Krumlov 16.46 330 *e*P **Pn 18 11 34.1 +1.1**
CKRC *e*S **S 18 14 44.6 -2.1**
CASM Ain Smara 16.56 280 P **P 18 11 35.7 -1.1**
WTTA Wattenberg 16.58 321 *i* Pn **P 18 11 36.7 -0.4**
comp=Z,139nm,0.5s,SNR=193
WTTA *e*Sn **S 18 14 53.6 +4.2**
comp=Z,5µm,3.0s
WTTA *i* S **ScP 18 20 00.7 +2.9**
comp=Z,96nm,1.4s,SNR=4.5
WTTA Wattenberg 16.58 321 P **Pn 18 11 35.8 +1.1**
WTTA pmax pmax
comp=Z,725nm,1.6s
KRLC Kraliky 16.59 337 *e*P **P 18 11 36.4 -0.6**
KRLC MLR MLR
comp=Z,58µm,21.5s
KRLC Kraliky 16.59 337 *e*P **P 18 11 36.4 -0.6**
KRLC *e*S **S 18 14 51.6 +2.3**
KRLC AMS AMS 18 19 40.0
comp=Z,58µm,21.5s
CTEI Djebel Teioual 16.64 279 P **P 18 11 37.4 -0.4**
WATA Walderalm 16.66 321 *i* Pn **Pn 18 11 36.5 +0.8**
comp=Z,346nm,1.2s,SNR=244
WATA *i* S **PcS 18 20 00.3 -0.1**
comp=Z,120nm,1.6s,SNR=5.4
KW1 Garching a.d. 16.70 325 *e*P **Pn 18 11 36.7 +0.7**
baz=136,slow=11
GROC Groznyy 16.71 56 *e*P **P 18 11 39.4 +1.1**
GROC pmax pmax
comp=Z,447nm,1.2s
GEC2 GERESS Array S 16.74 329 P **Pn 18 11 37.3 +0.7**
GEC2 GERESS Array S 16.74 329 *e*P **P 18 11 37.9 -0.8**
comp=Z,370nm,0.8s,baz=136,slow=11
GERES GERESS Array B 16.74 329 Pn **Pn 18 11 37.3 +0.7**
comp=Z,3.6nm,0.3s,baz=145,slow=13,SNR=72
GERES Sn **S 18 14 48.0 -4.5**
comp=Z,1.1nm,0.3s,baz=151,slow=25,SNR=1.0
GERES LR LR 18 19 02.8
comp=Z,41µm,20.9s,baz=145,slow=41
GERES ScP **ScP 18 19 59.2 +1.3**
comp=Z,0.1nm,0.3s,baz=134,slow=3.9,SNR=7.7
GERES GERESS Array B 16.74 329 P **Pn 18 11 35.4 -1.2**
ZKTA Zakatala 16.77 62 P **P 18 11 40.9 +1.8**
SQTA Sankt Quirin 16.77 320 *i* Pn **P 18 11 39.0 -0.2**
comp=Z,328nm,0.8s,SNR=147
SQTA *i* S **PcS 18 20 01.2 +0.5**
comp=Z,85nm,1.3s,SNR=5.0
MNGR Mingechevir, A 16.89 65 P **P 18 11 42.2 +1.8**
FETA Feichten 16.90 319 *i* Pn **P 18 11 40.0 -0.6**
comp=Z,300nm,1.0s,SNR=430
FETA *e*S **PcS 18 20 02.0 +1.0**
comp=Z,98nm,1.2s
MOTA Moosalm 16.91 321 *i* Pn **Pn 18 11 39.9 +1.0**
comp=Z,188nm,1.0s,SNR=145
MOTA *i* S **PcS 18 20 01.3 +0.3**
comp=Z,52nm,1.2s,SNR=4.8
DPC Dobruska-Polom 16.97 336 *e*P **P 18 11 41.3 0.0**
DPC MLR MLR
comp=Z,75µm,13.1s
DPC Dobruska-Polom 16.97 336 *e*P **P 18 11 41.3 0.0**
DPC *e*S **S 18 14 59.2 +2.0**
DPC AMS AMS 18 19 20.0
comp=Z,75µm,13.1s
KHC Kasperske Hory 17.01 329 *c* iP **Pn 18 11 39.8 -0.2**
KHC Kasperske Hory 17.01 329 *e*P **P 18 11 41.0 -0.7**
KHC *ex* x 18 11 51.0
KHC *ex* x 18 12 01.5
KHC *e*S **S 18 14 56.6 -1.3**
KHC AMS AMS 18 19 20.0
comp=Z,82µm,13.8s
KHC Kasperske Hory 17.01 329 P **Pn 18 11 40.7 +0.7**
KHC Kasperske Hory 17.01 329 ⇑ P **Pn 18 11 39.6 -0.3**
ZUGS Zugspitze, Sch 17.02 321 *e*P **P 18 11 43.2 +1.1**
baz=136,slow=11
MQOL MQOL 17.04 145 *i* P 18 11 41.0
MQOL *i* 18 11 48.0
baz=164,slow=7.4
MQOL *i* S 18 14 55.3
DFRA Djebel Bou Aff 17.04 281 P **P 18 11 42.5 +0.2**
SEKA Sheki 17.08 63 P **P 18 11 45.5 +3.0**
RETA Reutte 17.18 321 *i* Pn **Pn 18 11 42.8 +0.7**
comp=Z,46nm,0.4s,SNR=124
RETA *i* S **PcS 18 20 00.8 -0.5**
comp=Z,63nm,1.3s,SNR=4.6
OSTC Ostas 17.18 337 *e*P **Pn 18 11 42.8 +0.7**
OSTC *e*S **S 18 15 02.2 +0.7**
OSTC AMS AMS 18 19 40.0
comp=Z,66µm,14.0s
BEL Belsk 17.19 347 *e*P **P 18 11 45.8 +2.2**
BEL *e*S **S 18 15 02.0 +0.5**
BEL *e*L L 18 18 56.9
comp=Z,77µm,18.9s
BEL Belsk 17.19 347 P **P 18 11 46.3 +2.7**
BEL pmax pmax
comp=Z,1µm,1.4s
BEL Belsk 17.19 347 ⇑ P **P 18 11 44.5 +0.8**
UPC Upice 17.21 336 *e*P **P 18 11 45.3 +1.4**
UPC MLR MLR
comp=Z,70µm,18.6s
UPC Upice 17.21 336 *e*P **P 18 11 45.3 +1.4**
UPC AMS AMS 18 19 20.0
comp=Z,70µm,18.6s
DAVOX Davos/Dischmat 17.22 317 P **Pn 18 11 43.5 +0.8**
comp=Z,3.0nm,0.3s,baz=128,slow=12,SNR=57
DAVOX S **Sn 18 14 52.0 -1.6**
comp=Z,0.6nm,0.3s,baz=162,slow=20,SNR=1.7
DAVOX LR LR 18 20 53.1
comp=Z,44µm,18.8s,baz=122,slow=46
BE1 Monatshausen 17.22 322 *e*P **Pn 18 11 42.2 -0.4**
baz=136,slow=11
SAOF Saorge 17.23 306 P **Pn 18 11 43.2 +0.4**
SAOF pmax pmax
comp=Z,1µm,1.0s
CHVC Chvalec 17.26 336 *e*P **P 18 11 44.6 +0.1**
CHVC *e*S **S 18 15 05.3 +2.2**
CHVC AMS AMS 18 19 30.0
comp=Z,76µm,13.4s
PBCC Pribram 17.27 331 *e*P **P 18 11 44.1 -0.4**
PBCC *e*S **S 18 15 02.0 -1.2**
PRU Pruhonice 17.30 332 *e*P **Pn 18 11 44.2 +0.7**
PRU *e*S **Sn 18 14 57.9 +2.6**
PRU MLR MLR
comp=Z,55µm,11.6s
PRU Pruhonice 17.30 332 *e*P **Pn 18 11 44.2 +0.7**
PRU *e*S **Sn 18 14 57.9 +2.6**
PRU AMS AMS 18 19 20.0
comp=Z,55µm,11.6s
WET Wettzell 17.32 328 P **Pn 18 11 44.4 +0.6**
WET pmax pmax
comp=Z,456nm,1.5s
WET Wettzell 17.32 328 *e*P **Pn 18 11 43.8 0.0**
comp=Z,121nm,0.6s,baz=136,slow=11
TUE Stuetta 17.34 316 P **P 18 11 45.6 +0.1**
TUE Stuetta 17.34 316 ⇑ P **Pn 18 11 44.0 -0.3**
CKHR Kef el Ahmar 17.36 279 P **P 18 11 47.8 +2.0**
KSP Ksiaz 17.41 337 *e*P **P 18 11 45.8 -0.3**
KSP *e*S **S 18 15 03.6 -2.4**
KSP *e*L L 18 18 07.6
comp=Z,53µm,23.5s
KSP Ksiaz 17.41 337 P **P 18 11 46.2 +0.2**
KSP Ksiaz 17.41 337 ⇑ P **P 18 11 45.9 -0.1**
PRA Prague 17.41 332 *e*P **P 18 11 46.5 +0.5**
PRA MLR MLR
comp=Z,54µm,11.6s
PRA Prague 17.41 332 *e*P **P 18 11 46.5 +0.5**
PRA *e*S **S 18 15 06.0 +0.1**
PRA AMS AMS 18 19 20.0
comp=Z,54µm,11.6s
SET Setif 17.44 280 P **P 18 11 50.0 +3.4**
MONC Moncucco Torin 17.47 310 ⇑ P **Pn 18 11 44.6 -1.1**
DAVA Damuels 17.52 319 *i* Pn **P 18 11 47.5 0.0**
comp=Z,248nm,0.6s,SNR=162
DAVA *e*S **PcS 18 20 02.2 -0.1**
comp=Z,92nm,1.2s
DAVA Damuels 17.52 319 *e*P **Pn 18 11 47.0 +0.5**
comp=Z,180nm,0.5s,baz=136,slow=11
UBR Ueberruh 17.64 320 *e*P **P 18 11 48.7 -0.1**
comp=Z,449nm,0.8s,baz=136,slow=11
ISO Isola 17.64 307 P **P 18 11 49.5 +0.7**
ISO pmax pmax
comp=Z,440nm,1.0s
PVCC Panska Ves 17.73 334 *e*P **P 18 11 50.4 +0.8**
PVCC MLR MLR
comp=Z,56µm,13.0s
PVCC Panska Ves 17.73 334 *e*P **P 18 11 50.4 +0.8**
PVCC AMS AMS 18 20 30.0
comp=Z,56µm,13.0s
MAK Makhachkala 17.79 58 *c* iP **P 18 11 53.7 +3.4**
MAK pmax pmax
comp=Z,4µm,1.3s
MAK MLR MLR
comp=Z,23µm,20.0s
LKRN Lenkeran, Azer 17.88 72 P **P 18 11 54.1 +2.8**
ROTZ Rotzenmuhle 18.07 328 *e*P **Pn 18 11 52.8 -0.4**
comp=Z,123nm,0.8s,baz=136,slow=11
VORD Divnogorie 18.16 26 *e*P **P 18 11 54.4 +0.1**
VORD *e*S **Sn 18 15 17.8 +1.8**
VORD pmax pmax
comp=Z,340nm,1.1s
VORD smax smax
comp=E,430nm,4.8s
VORD MLR MLR
comp=Z,13µm,14.0s
BRG Berggiesshubel 18.24 333 P **P 18 11 55.9 +0.7**
BRG pmax pmax
comp=Z,437nm,0.9s
BRG Berggiesshubel 18.24 333 ⇓ *i*P **P 18 11 55.8 +0.5**
BRG Amp 18 11 57.6
comp=Z,100nm,0.9s
BRG *i* x x 18 11 58.7
BRG Amp 18 12 01.3
comp=Z,375nm,1.0s
BRG *ex* x 18 12 11.2
BRG Amp 18 12 14.6
comp=Z,925nm,1.4s
BRG Berggiesshubel 18.24 333 S **Sn 18 15 20.0 +1.9**
BRG Amp 18 20 36.0
comp=N,53nm,13.2s
BRG Amp 18 21 05.0
comp=E,42nm,10.7s
BRG Amp 18 21 14.0
comp=Z,64nm,14.2s
BRG ⇑ SS **ScS 18 23 43.2 +1.8**
BRG Amp 18 23 45.1
comp=Z,95nm,2.3s
BNI Bardonecchia 18.25 309 P **Pn 18 11 54.7 -0.8**
BNI pmax pmax
comp=Z,910nm,1.2s
BNI Bardonecchia 18.25 309 P **Pn 18 11 54.7 -0.8**
BNI Bardonecchia 18.25 309 ⇑ P **Pn 18 11 54.2 -1.2**
MANZ Manzenberg 18.28 328 *e*P **Pn 18 11 55.2 -0.4**
comp=Z,149nm,0.8s,baz=136,slow=11
VSR Storozhevoye 18.32 25 *e*P **Pn 18 11 56.3 +0.2**
VSR *e*S **Sn 18 15 17.8 -2.1**
VSR pmax pmax
comp=Z,330nm,0.8s
VSR smax smax
comp=E,12µm,11.3s
VSR MLR MLR
comp=Z,35µm,15.0s
NKC Novy Kostel 18.32 329 *e*P **P 18 11 56.2 0.0**
NKC MLR MLR
comp=Z,76µm,17.4s
NKC Novy Kostel 18.32 329 *e*P **P 18 11 56.2 0.0**
NKC *e*S **S 18 15 25.4 +1.0**
NKC AMS AMS 18 20 00.0
comp=Z,76µm,17.4s
LPG La Plagne 18.40 310 *e*P **Pn 18 11 58.6 +1.2**
LPG pmax pmax
comp=Z,244nm,0.6s
LPL La Plagne 18.42 310 *e*P **Pn 18 11 58.5 +0.9**
LPL pmax pmax
comp=Z,371nm,0.6s
GRA1 Grafenberg Arr 18.46 326 P **P 18 11 57.2 -0.4**
GRA1 IAmb IAmb 18 12 23.0
comp=Z,1µm,1.3s
GRF Grafenberg Arr 18.46 326 P **P 18 11 57.2 -0.4**
GRF pmax pmax
comp=Z,1µm,1.3s
GRF Grafenberg Arr 18.46 326 *e*P **P 18 11 57.4 -0.2**
comp=Z,315nm,0.7s,baz=136,slow=11
GRFO Grafenberg 18.46 326 P **P 18 11 57.0 -0.6**
GRFO pmax pmax
comp=Z,1µm,1.3s
GRFO Grafenberg 18.46 326 P **P 18 11 57.0 -0.6**
GRFO IAmb IAmb 18 12 22.9
comp=Z,1µm,1.3s
SENIN Lac Senin/Sane 18.48 313 P **P 18 11 57.1 -1.0**
MAHO Mahon 18.49 291 ⇑ *i*P **P 18 11 56.5 -1.5**
MAHO *i* S **Sn 18 15 20.7 -3.4**
MAHO Mahon 18.49 291 ⇑ P **P 18 11 58.0 -0.1**
UMR Umm Al-Rimmam 18.50 102 *e*P 18 11 57.7
SLE Schleitheim 18.56 318 P **P 18 11 58.2 -0.6**
SLE pmax pmax
comp=Z,468nm,1.0s
RDF Al-Radifah 18.62 104 *e*P 18 11 58.8
VORR Voronezh 18.71 25 *e*P **Pn 18 12 01.0 +0.1**
VORR *e*S **Sn 18 15 26.0 -3.5**
VORR pmax pmax
comp=Z,450nm,1.6s
STU Stuttgart 18.81 322 P **P 18 12 00.5 -0.9**
STU pmax pmax
comp=Z,372nm,0.7s
STU Stuttgart 18.81 322 P **P 18 12 00.5 -0.9**
STU Stuttgart 18.81 322 ⇑ P **P 18 12 00.3 -1.1**
CLL Collm 18.94 332 *e*P **Pn 18 12 04.0 +0.3**
CLL *i* Pmax 18 12 06.5
comp=Z,690nm,1.6s
CLL *i* sP **pP 18 12 09.8 +0.9**
CLL *e*Plp 18 12 12.0
comp=Z,9µm,17.4s
CLL *e*pPP 18 12 22.0
CLL *e* 18 12 36.0
CLL *e*S **S 18 15 37.0 +0.5**
comp=N,11µm,19.7s
CLL *e*S **S 18 15 37.0 +0.5**
comp=E,12µm,19.2s
CLL *e*S **S 18 15 37.0 +0.5**
comp=Z,13µm,25.0s
CLL *e*ScP **ScP 18 20 04.0 +1.6**
CLL *e*Lmax 18 20 28.0
CLL Lm MLR 18 21 00.0
comp=N,50µm,18.9s
CLL Lm MLR 18 21 00.0
comp=E,40µm,18.9s
CLL Lm MLR 18 21 00.0
comp=Z,49µm,20.8s
CLL *i* ScS **ScS 18 23 42.7 -0.9**
CLL LmV(360 21 20 00.0
comp=Z,500nm,22.0s
CLL Collm 18.94 332 *e*P **Pn 18 12 04.0 +0.3**
CLL *e*S **S 18 15 37.0 +0.5**
CLL MLR MLR
comp=Z,49µm,20.8s
CLL Collm 18.94 332 P **P 18 12 02.2 -0.7**
BFO Black Forest 18.98 319 P **P 18 12 02.6 -0.8**
BFO pmax pmax
comp=Z,475nm,1.2s
BFO Black Forest 18.98 319 P **P 18 12 02.6 -0.8**
BFO Black Forest 18.98 319 *e*P **P 18 12 03.4 -0.1**
comp=Z,180nm,0.8s,baz=136,slow=11
BFO Black Forest 18.98 319 P **P 18 12 03.0 -0.5**
MOX Moxa 18.98 329 P **P 18 12 03.8 +0.4**
MOX pmax pmax
comp=Z,456nm,1.1s
MOX Moxa 18.98 329 *e*P **P 18 12 03.7 +0.4**
comp=Z,167nm,0.8s,baz=136,slow=11
SUW Suwalki 18.99 353 *e*P **P 18 12 02.8 -0.6**
SUW *e*S **S 18 15 38.8 +1.5**
SUW *e*L L 18 20 14.7
comp=Z,94µm,20.9s
SUW Suwalki 18.99 353 *e*P **P 18 12 03.5 +0.1**
SUW Suwalki 18.99 353 P **P 18 12 02.7 -0.7**
SUW pmax pmax
comp=Z,1µm,1.0s
SUW Suwalki 18.99 353 P **P 18 12 02.7 -0.7**
SUW IAmb IAmb 18 12 23.4
comp=Z,1µm,1.0s
SUW Suwalki 18.99 353 ⇑ P **P 18 12 02.8 -0.6**
VRH Novokhopyorsk 19.27 29 *e*P **Pn 18 12 07.3 -0.3**
VRH *e*S **Sn 18 15 43.0 +0.1**
VRH pmax pmax
comp=Z,930nm,0.6s
VRH smax smax
comp=E,12µm,10.8s
VRH MLR MLR
comp=Z,20µm,20.0s
GKP Gorka Klasztor 19.30 342 *e*P **P 18 12 07.1 +0.3**
GKP *e*S **S 18 15 45.5 +1.8**
GKP *e*L L 18 20 34.9
comp=Z,86µm,19.8s
GKP Gorka Klasztor 19.30 342 *e*P **P 18 12 07.4 +0.5**
MNK Minsk 19.32 2 ⇑ *e*P **P 18 12 05.0 -2.0**
MNK *e*S **Sn 18 15 35.0 -9.0**
MNK pmax pmax
comp=Z,900nm,1.0s
MNK MLR MLR
comp=N,4µm,14.0s
MNK MLR MLR
comp=Z,135µm,14.0s
MNK MLR MLR
comp=N,43µm,18.0s
MNK MLR MLR
comp=Z,59µm,12.0s
MNK MLR MLR
comp=E,24µm,18.0s
MNK Minsk 19.32 2 *i* P **P 18 12 05.5 -1.5**
comp=E,49nm,0.9s
MNK *i* P **P 18 12 05.5 -1.5**
comp=N,840nm,0.9s
MNK *i* P **P 18 12 05.5 -1.5**
comp=Z,778nm,0.9s
MNK *i* PP **sP 18 12 18.7 +2.7**
MNK *i* S **Sn 18 15 39.5 -4.5**
MNK *i* SS **SnSn 18 15 55.7 -2.5**
MNK *i* LQ LQ 18 17 47.8
MNK *i* LR LR 18 19 14.7
MNK *i* LRM MLR 18 20 34.6
comp=E,2µm,11.7s
MNK *i* LRM MLR 18 20 37.9
comp=N,24µm,11.8s
MNK *i* LRM MLR 18 20 55.0
comp=Z,29µm,15.1s
LPSR Galich'ya Gora 19.41 23 *e*P **P 18 12 08.2 +0.2**
LPSR *e*S **S 18 15 43.0 -3.0**
LPSR pmax pmax
comp=Z,670nm,0.8s
LPSR smax smax
comp=E,9µm,9.1s
LPSR MLR MLR
comp=Z,22µm,17.0s
ECH Echery 19.55 318 P **P 18 12 09.5 -0.2**
ECH pmax pmax
comp=Z,407nm,1.2s
ECH Echery 19.55 318 P **P 18 12 09.5 -0.2**
ECH Echery 19.55 318 ⇑ P **P 18 12 09.2 -0.5**
RUE Ruedersdorf 19.62 336 ⇓ P **P 18 12 10.6 +0.3**
NACGM Naroch 19.71 360 *i* P **P 18 12 11.4 +0.2**
NACGM *i* P **P 18 12 11.4 +0.2**
NACGM *i* P **P 18 12 11.4 +0.2**
NACGM *i* PP sP 18 12 35.3 +15
NACGM *i* PPP PPP 18 13 07.4
NACGM *i* S **Sn 18 15 54.5 +1.2**
NACGM *i* SS S 18 16 09.4 +17
NACGM *i* LQ LQ 18 18 31.0
NACGM *i* LR LR 18 19 45.5
SSB Saint Sauveur 19.72 307 P **P 18 12 10.2 -1.4**
SSB pmax pmax
comp=Z,446nm,1.1s
SSB Saint Sauveur 19.72 307 P **P 18 12 10.2 -1.4**

SSB **Saint Sauveur** 19.72 307 ⇑P **P** 18 12 09.8 -1.7
HAU **Haudompre** 19.89 316 *e*P **P** 18 12 13.6 +0.3
HAU pmax pmax
comp=Z,686nm,1.2s
RAYN **Ar Rayn** 19.96 121 *i* P **Pn** 18 12 15.6 -0.5
SNR=236
RAYN **Ar Rayn** 19.96 121 P **P** 18 12 14.1 -0.2
RAYN pmax pmax
comp=Z,481nm,1.1s
RAYN **Ar Rayn** 19.96 121 P **P** 18 12 14.1 -0.2
IDID **Didziasalis** 20.12 360 *e*P **P** 18 12 16.3 +0.5
TNS **Taunus Mts** 20.12 324 *e*P **P** 18 12 16.1 +0.2
comp=Z,272nm,0.7s,baz=136,slow=11
IIGN **Ignalina** 20.16 359 *e*P **P** 18 12 16.7 +0.6
ISAL **Salakas** 20.38 359 *e*P **P** 18 12 19.1 +0.6
PABE **Paberze** 20.41 355 *e*P **P** 18 12 18.4 -0.4
FLTG **Flechtingen** 20.43 332 P **P** 18 12 17.9 -1.2
EBNR **Beni Rached** 20.56 280 P **P** 18 12 21.5 +0.8
ECHA **Ech Chlef** 20.70 280 P **P** 18 12 22.0 -0.2
ETRT **Tiaret** 20.83 278 P **P** 18 12 24.0 +0.2
WLF **Walferdange** 20.93 320 *d*P **P** 18 12 24.8 +0.2
comp=Z,371nm,1.0s
WLF **Walferdange** 20.93 320 P **P** 18 12 25.0 +0.4
WLF pmax pmax
comp=Z,599nm,1.0s
WLF MLR MLR
comp=Z,96µm,18.0s
WLF **Walferdange** 20.93 320 P **P** 18 12 25.0 +0.4
WLF IAmb IAmb 18 12 40.6
comp=Z,600nm,1.0s
WLF IAMs_20 IAMs_20 18 21 58.9
comp=Z,96µm,18.0s
WLF **Walferdange** 20.93 320 *e*P **P** 18 12 25.0 +0.4
comp=Z,271nm,0.7s,baz=136,slow=11
WLF **Walferdange** 20.93 320 ⇑P **P** 18 12 24.6 0.0
EANR **'Ain N'Sour** 20.93 280 P **P** 18 12 24.7 -0.1
OBN **Obninsk** 21.03 16 P **P** 18 12 24.8 -0.8
comp=Z,31nm,0.6s,baz=12,slow=4.2,SNR=14
OBN S **S** 18 16 18.0 -0.5
comp=Z,40nm,0.9s,baz=38,slow=19,SNR=3.9
OBN LR LR 18 21 34.1
comp=Z,10µm,19.9s,baz=214,slow=40
OBN **Obninsk** 21.03 16 *e*P **P** 18 12 24.2 -1.3
OBN *e* 18 12 44.4
OBN *e* 18 12 52.6
OBN *e*S **S** 18 16 17.3 -1.2
OBN *e* 18 16 32.4
OBN *e*SS Sn 18 16 40.8 +16
OBN pmax pmax
comp=Z,224nm,0.8s
OBN MLR MLR
comp=Z,36µm,17.0s
OBN **Obninsk** 21.03 16 P **P** 18 12 24.4 -1.1
OBN IAmb IAmb 18 12 44.5
comp=Z,828nm,0.9s
OBN **Obninsk** 21.03 16 ⇑P **P** 18 12 24.8 -0.8
PBUR **Paburge** 21.10 352 *e*P **P** 18 12 27.1 +0.7
OJGS **Djebel Guires** 21.27 278 P **P** 18 12 30.0 +1.6
OKGL **Djebel Kef Gue** 21.30 280 P **P** 18 12 31.0 +2.3
BHOU **Houvegnez** 21.42 321 *d*P **P** 18 12 30.2 +0.4
comp=Z,323nm,1.2s
BUG **Bochum--Univer** 21.49 325 P **P** 18 12 30.7 +0.2
BUG pmax pmax
comp=Z,585nm,2.0s
BTNL **Ternell** 21.50 322 *d*P **P** 18 12 30.2 -0.5
BTNL *d*PnPn **PnPn** 18 12 49.5 -1.6
RGN **Rugen** 21.52 338 P **P** 18 12 30.7 -0.2
RGN IAmb IAmb 18 12 51.9
comp=Z,902nm,1.1s
RGN **Rugen** 21.52 338 ⇑P **P** 18 12 30.2 -0.6
BSD **Bornholm Skovb** 21.56 341 *e*P **P** 18 12 32.6 +1.3
BSD **Bornholm Skovb** 21.56 341 *i* P **P** 18 12 30.4 -0.8
BSD IAmb IAmb 18 12 38.2
comp=Z,146nm,0.9s
BSD IAMs_20 IAMs_20 18 22 56.9
comp=Z,81µm,14.2s
BSD **Bornholm Skovb** 21.56 341 *i* P **P** 18 12 30.4 -0.8
BSD pmax pmax
comp=Z,150nm,0.9s
BSD MLR MLR
comp=Z,81µm,14.0s
BSD **Bornholm Skovb** 21.56 341 ⇑P **P** 18 12 30.1 -1.1
MEM **Membach** 21.57 322 *d*P **P** 18 12 31.8 +0.3
comp=Z,490nm,1.0s
MEM **Membach** 21.57 322 P **P** 18 12 32.6 +1.1
MEM pmax pmax
comp=Z,1µm,1.1s
OJBR **Djebel Berber** 21.58 279 P **P** 18 12 31.0 -0.8
RCHB **Rochefort** 21.70 320 *d*P **P** 18 12 32.9 0.0
comp=Z,155nm,0.8s
BSTI **Sart Tilman** 21.78 321 *d*P **P** 18 12 34.4 +0.7
comp=Z,147nm,1.2s
BCLA **Clavier** 21.82 321 *b*P **P** 18 12 34.5 +0.4
comp=Z,339nm,1.0s
MOS **Moscow** 21.84 17 *e*P **P** 18 12 35.0 +0.7
MOS *e* 18 12 56.6
MOS *e* 18 13 10.7
MOS *e*S **S** 18 16 33.6 -0.9
MOS *e*SS Sn 18 17 02.7 +18
MOS *e* 18 23 54.0
MOS pmax pmax
comp=Z,2µm,1.6s
MOS MLR MLR
comp=Z,37µm,19.0s
MOS MLR MLR
comp=N,38µm,17.0s
BEBN **Eben Emael** 21.85 322 *b*P **P** 18 12 34.9 +0.4
IBBN **Ibbenburen** 21.86 327 ⇑P **P** 18 12 34.4 -0.1
BGES **Gesves** 21.91 321 *d*P **P** 18 12 35.2 +0.1
comp=Z,356nm,1.1s
DOU **Dourbes** 22.00 319 *d*P **P** 18 12 35.5 -0.6
comp=Z,237nm,0.8s
ODJA **Bouhanifia** 22.02 278 P **P** 18 12 38.0 +1.5
BSEG **Bad Segeberg** 22.03 333 P **P** 18 12 36.0 -0.3
BSEG pmax pmax
comp=Z,477nm,1.2s
BMRD **Maredsous** 22.03 320 *d*P **P** 18 12 36.2 -0.2
USTO **Oran** 22.29 279 P **P** 18 12 42.0 +2.7
CLF **Chambon-Foret** 22.29 313 P **P** 18 12 39.0 -0.3
CLF **Chambon-Foret** 22.29 313 ⇑P **P** 18 12 39.1 -0.1
TAM **Tamanrasset** 22.31 242 P **P** 18 12 40.5 +0.7
TAM pmax pmax
comp=Z,475nm,0.9s
TAM MLR MLR
comp=Z,36µm,22.0s
TAM **Tamanrasset** 22.31 242 P **P** 18 12 40.5 +0.7
TAM IAmb IAmb 18 13 01.1
comp=Z,475nm,0.9s
TAM **Tamanrasset** 22.31 242 ⇑P **P** 18 12 40.9 +1.0
SNF **Seneffe** 22.40 320 *d*P **P** 18 12 40.6 +0.2
comp=Z,508nm,1.0s
BLEU **Blekinge** 22.41 344 *i* P **P** 18 12 37.7 -2.7
LUNU **Lund** 22.42 340 *i* P **P** 18 12 39.2 -1.2
CART **Cartagena** 22.51 284 ⇑*i*P **P** 18 12 38.7 -2.9
CART *i* S **S** 18 16 39.5 -7.8
CART **Cartagena** 22.51 284 P **P** 18 12 40.3 -1.4
CART IAmb IAmb 18 13 04.8
comp=Z,331nm,0.8s
CART **Cartagena** 22.51 284 ⇑P **P** 18 12 40.5 -1.1
LLD **Lille Linde** 22.53 338 *i* P **P** 18 12 41.3 -0.4
LLD **Lille Linde** 22.53 338 *i* P **P** 18 12 41.2 -0.4
UCC **Uccle** 22.53 321 *d*P **P** 18 12 42.1 +0.4
comp=Z,346nm,1.1s
UCC *d*PnPn **PnPn** 18 13 04.2 -1.0
UCC **Uccle** 22.53 321 P **P** 18 12 42.0 +0.3
UCC pmax pmax
comp=Z,468nm,0.9s
UCC MLR MLR
comp=Z,67µm,22.0s
UCC **Uccle** 22.53 321 P **P** 18 12 42.0 +0.3
UCC IAmb IAmb 18 12 57.0
comp=Z,468nm,0.9s
UCC IAMs_20 IAMs_20 18 22 49.1
comp=Z,67µm,22.0s
OTSS **Djebel Tessala** 22.55 278 P **P** 18 12 46.0 +3.8
SLIT **Slitere, Latvi** 22.65 354 *e*P **P** 18 12 43.2 +0.3
SLIT **Slitere, Latvi** 22.65 354 ⇑P **P** 18 12 42.5 -0.4
BELG **Belogornoye** 22.68 34 P **P** 18 12 42.8 -0.5
comp=Z,672nm,0.9s,baz=22,slow=0.9,SNR=78
BELG S **S** 18 16 51.5 +1.3
comp=Z,351nm,0.9s,baz=346,slow=23,SNR=6.1
BELG LR LR 18 24 25.2
comp=Z,15µm,18.2s,baz=236,slow=44
BELG **Belogornoye** 22.68 34 *d*P **P** 18 12 42.6 -0.7
BELG pmax pmax
comp=Z,343nm,1.1s
BELG MLR MLR
comp=Z,2µm,17.0s
COP **Copenhagen** 22.76 339 *i* P **P** 18 12 44.5 +0.4
COP IAmb IAmb 18 13 03.6
comp=Z,159nm,0.8s
COP IAMs_20 IAMs_20 18 23 41.5
comp=Z,36µm,14.9s
COP **Copenhagen** 22.76 339 *i* P **P** 18 12 44.4 +0.4
COP pmax pmax
comp=Z,160nm,0.8s
COP MLR MLR
comp=Z,36µm,15.0s
DEL **Delary** 23.04 341 *i* P **P** 18 12 45.9 -1.1
HLG **Helgoland** 23.15 331 ⇑P **P** 18 12 50.8 +2.7
MTSE **Matsula** 23.61 356 *e*P **P** 18 12 53.0 +0.3
TAF **Taforalt** 23.93 278 P 18 12 57.0
JBK **JBK** 24.14 276 P 18 12 59.0
SLWR **Sila** 24.22 111 P **P** 18 13 00.3 +1.6
SLWR S **S** 18 17 16.4 +0.4
FLN **La Foliniere** 24.26 312 *e*P **P** 18 12 57.9 -1.0
FLN pmax pmax
comp=Z,714nm,1.1s
UCM **Universidad Co** 24.26 291 ⇑*i*P **P** 18 12 57.5 -1.6
UCM *i* S **S** 18 17 15.4 -1.1
MELI **Melilla** 24.28 279 ⇑*i*P **P** 18 12 56.0 -3.1
MELI *i* S **S** 18 17 25.3 +8.6
ONAU **Onsala** 24.37 340 *i* P **P** 18 13 00.3 +0.5
MUD **Monsted U'grnd** 24.43 336 *i* P **P** 18 13 00.1 -0.2
MUD IAmb IAmb 18 13 11.7
comp=Z,132nm,0.9s
MUD IAMs_20 IAMs_20 18 23 55.5
comp=Z,51µm,20.3s
MUD **Monsted U'grnd** 24.43 336 *i* P **P** 18 13 00.1 -0.2
MUD pmax pmax
comp=Z,130nm,0.9s
MUD MLR MLR
comp=Z,51µm,20.0s
ELSH **Elham, Standar** 24.43 319 *e*P **P** 18 12 59.4 -0.9
ELSH IAMs_20 IAMs_20 18 24 14.0
comp=Z,78µm,14.2s
JRN **Qarnain Island** 24.66 107 P **P** 18 13 04.9 +2.2
SNR=182
JRN S **S** 18 17 23.4 +0.4
PUL **Pulkovo** 24.70 4 *c*e P **P** 18 13 02.6 -0.1
PUL pmax pmax
comp=Z,249nm,0.6s
HMNX **Herstmonceux** 24.73 317 *e*P **P** 18 13 01.6 -1.5
HMNX IAMs_20 IAMs_20 18 24 42.2
comp=Z,89µm,14.0s
ESBB **Sonseca Array** 24.80 290 P **P** 18 13 03.7 -0.2
ESDC **Sonseca Array** 24.80 290 P **P** 18 13 03.7 -0.3
comp=Z,165nm,0.6s,baz=82,slow=9.6,SNR=342
ESDC PcP **PcP** 18 16 40.8 +0.8
comp=Z,18nm,0.9s,baz=35,slow=2.6,SNR=4.2
ESDC ScP **ScP** 18 20 18.6 +1.2
comp=Z,14nm,1.0s,baz=74,slow=1.9,SNR=7.7
ESDC LR LR 18 24 16.4
comp=Z,20µm,18.7s,baz=95,slow=40
ESDC **Sonseca Array** 24.80 290 P **P** 18 13 02.3 -1.7
GOET **G??ttrup** 24.88 337 *e*P **P** 18 13 02.7 -1.6
GOET IAMs_20 IAMs_20 18 25 19.6
comp=Z,46µm,18.6s
TJOU **Tjoern** 25.00 341 *i* P **P** 18 13 04.7 -0.8
PAB **San Pablo** 25.09 289 P **P** 18 13 06.7 +0.1
PAB pmax pmax
comp=Z,477nm,1.2s
PAB MLR MLR
comp=Z,20µm,18.0s
PAB **San Pablo** 25.09 289 P **P** 18 13 06.7 +0.1
PAB IAmb IAmb 18 13 30.2
comp=Z,477nm,1.2s
PAB **San Pablo** 25.09 289 ⇑P **P** 18 13 06.8 +0.1
PAB **San Pablo** 25.09 289 P 18 13 06.9
PALE **Palemas** 25.10 279 P 18 13 08.0
GEYT **Alibeck** 25.21 75 P **P** 18 13 08.4 +0.7
comp=Z,114nm,0.6s,baz=292,slow=7.8,SNR=58
GEYT PcP **PcP** 18 16 41.8 +0.9
comp=Z,9.0nm,0.5s,baz=264,slow=5.4,SNR=1.1
GEYT **Alibeck** 25.21 75 P **P** 18 13 07.7 0.0
GYA0 **ALIBECK ARRAY** 25.21 75 P **P** 18 13 08.2 +0.5
GYA0B **ALIBECK ARRAY** 25.21 75 P **P** 18 13 08.4 +0.7
GYA0B IAmb IAmb 18 13 14.7
comp=Z,652nm,1.3s
PVLZ **Peæn de** 25.40 279 ⇑*i*P **P** 18 13 08.8 -0.5
PVLZ *i* S S 18 17 45.8 +11
ASHT **Ashkhabad** 25.42 74 P **P** 18 13 09.8 +0.2
ASHT pmax pmax
comp=Z,616nm,0.9s
ASHT **Ashkhabad** 25.42 74 **P** 18 13 09.8 +0.2
JLP **Les Platons** 25.43 312 *e*P **P** 18 13 08.6 -0.9
JSA **Saint Aubin** 25.45 312 *e*P **P** 18 13 07.7 -2.0
JSA IAMs_20 IAMs_20 18 24 29.6
comp=Z,50µm,17.6s
JSA **Saint Aubin** 25.45 312 ⇑P **P** 18 13 07.6 -2.0
JSA ⇑P **pP** 18 13 08.8 -7.3
JVM **Valle D.L. Mar** 25.48 312 *e*P **P** 18 13 09.2 -0.8
WACR **West Acre** 25.53 321 IAMs_20 IAMs_20 18 24 46.0
comp=Z,38µm,17.0s
WOL **Wolverton** 25.80 317 *e*P **P** 18 13 12.5 -0.4
HORN **Hornachuelos** 25.86 285 P 18 13 13.7
REAL **Reales** 25.95 282 *e*P **P** 18 13 14.2 -0.4
STRU **Stroemstad** 25.99 341 *i* P **P** 18 13 13.3 -1.1
LIJA **Lijar** 26.06 283 *e*P **P** 18 13 14.9 -0.6
MZWR **Madinat Zayed** 26.07 109 P **P** 18 13 18.2 +2.7
MZWR S **S** 18 17 47.7 +2.1
HOMB **Homborsund** 26.11 338 *i* P **P** 18 13 17.1 +1.6
HOMB **Homborsund** 26.11 338 *e*P **P** 18 13 15.9 +0.4
MDT **Midelt** 26.12 274 P **P** 18 13 16.6 +0.6
comp=Z,110nm,0.9s,baz=90,slow=7.7,SNR=52
MDT LR LR 18 25 51.4
comp=Z,50µm,22.0s,baz=88,slow=42
MDT **Midelt** 26.12 274 P 18 13 17.0
LCRM **LCR** 26.13 276 P 18 13 18.0
CEU **Ceuta** 26.16 281 ⇑*i*P **P** 18 13 13.9 -2.3
CEU *i* S S 18 17 58.0 +11
ARF **Arif** 26.17 271 P 18 13 18.0
SWN1 **Swindon** 26.21 317 *e*P **P** 18 13 16.1 -0.5
SWN1 IAMs_20 IAMs_20 18 25 40.3
comp=Z,59µm,14.6s
CHEFC **Chefchaouen** 26.25 279 P 18 13 18.0
FINES **FINESS Array B** 26.27 359 P **P** 18 13 15.9 -1.0
comp=Z,38nm,0.5s,baz=152,slow=12,SNR=55
FINES PcP **PcP** 18 16 42.8 0.0
comp=Z,38nm,0.7s,baz=183,slow=2.4,SNR=3.6
FINES S **S** 18 17 47.6 -0.4
comp=Z,23nm,0.8s,baz=170,slow=17,SNR=2.0
FINES ScP **ScP** 18 20 21.4 +0.2
comp=Z,20nm,0.7s,baz=156,slow=6.1,SNR=3.4
FINES **FINESS Array B** 26.27 359 P **P** 18 13 15.5 -1.5
FIA1 **FINESS Array S** 26.27 359 P **P** 18 13 16.1 -0.9
FIA1 IAmb IAmb 18 13 43.1
comp=Z,289nm,1.1s
ALJ **Aljibe** 26.30 282 *e*P **P** 18 13 17.6 0.0
VALR **Valaam** 26.31 4 *i* P **P** 18 13 16.1 -1.2
VALR pmax pmax
comp=Z,149nm,0.8s
VALR MLR MLR
comp=Z,13µm,14.6s
HFS **Hagfors** 26.37 345 P **P** 18 13 16.5 -1.4
comp=Z,118nm,0.8s,baz=159,slow=13,SNR=78
HFS ScP **ScP** 18 20 21.4 -0.1
comp=Z,18nm,0.9s,baz=128,slow=11,SNR=1.6
HFS LR LR 18 25 34.1
comp=Z,89µm,18.2s,baz=161,slow=41
IFR **Ifrane** 26.39 276 ⇑*i*P **P** 18 13 16.5 -2.1
IFR *i* S **S** 18 18 00.5 +10
LMK **Market Rasen** 26.41 322 *e*P **P** 18 13 16.4 -1.9
LMK IAMs_20 IAMs_20 18 23 48.9
comp=Z,44µm,24.1s
CZD **Col de Zad** 26.43 275 P 18 13 21.0
AJN **Ajban** 26.52 106 *i* P **P** 18 13 21.1 +1.5
SNR=16
AJN **Ajban** 26.52 106 P **P** 18 13 23.1 +3.5
SNR=57
AJN P **P** 18 13 23.1 +3.5
SNR=57
AJN S **S** 18 17 52.3 -0.4
AJN S **S** 18 17 52.3 -0.4
STRD **Stroud** 26.54 318 *e*P **P** 18 13 18.7 -0.7
STRD IAMs_20 IAMs_20 18 25 39.9
comp=Z,57µm,15.6s
CWF **Charnwood Fore** 26.54 320 *e*P **P** 18 13 17.3 -2.2
CWF IAMs_20 IAMs_20 18 25 25.6
comp=Z,40µm,16.0s
SNART **Snartemo** 26.57 337 *e*P **P** 18 13 18.5 -1.2
SNART **Snartemo** 26.57 337 *e*P **P** 18 13 19.1 -0.6
SNART *e*S **S** 18 17 55.0 +2.2
CNIL **Conil** 26.64 282 *e*P **P** 18 13 20.2 -0.4
DESE **Dese** 26.65 151 *e*P **P** 18 13 25.8 +4.7
DESE *e*S S 18 18 08.4 +13
RSA **Sarsar** 26.68 279 P 18 13 22.0
OLDB **Oldbury-Upon-S** 26.70 317 *e*P **P** 18 13 18.6 -2.4
OLDB IAMs_20 IAMs_20 18 25 56.7
comp=Z,55µm,14.8s
SHME **Shamm** 26.74 102 *i* P **P** 18 13 21.9 +0.4
SNR=40
SHME **Shamm** 26.74 102 P **P** 18 13 24.6 +3.1
SNR=35
SHME P **P** 18 13 24.6 +3.1
SNR=35
SFS **San Fernando** 26.75 282 P **P** 18 13 20.9 -0.7
SFS pmax pmax
comp=Z,991nm,0.8s
SFS MLR MLR
comp=Z,24µm,22.0s
SFS **San Fernando** 26.75 282 ⇑*i*P **P** 18 13 19.6 -2.0
SFS *i* S S 18 18 09.0 +13
SFS **San Fernando** 26.75 282 P **P** 18 13 20.9 -0.7
SFS **San Fernando** 26.75 282 ⇑P **P** 18 13 19.6 -2.0
ASUD **Al Ashush, Dub** 26.76 105 *i* P **P** 18 13 22.4 +0.7
SNR=43
ASUD **Al Ashush, Dub** 26.76 105 P **P** 18 13 24.3 +2.5
SNR=59
ASUD P **P** 18 13 24.3 +2.5
SNR=59
ASUD S **S** 18 17 56.0 -0.5
ASUD S **S** 18 17 56.0 -0.5
NAZ **Nazwa, Dubai** 26.85 104 *i* P **P** 18 13 23.6 +1.0
SNR=69
NAZ **Nazwa, Dubai** 26.85 104 P **P** 18 13 26.6 +4.0
SNR=180
NAZ P **P** 18 13 26.6 +4.0
SNR=180
NAZ S **S** 18 17 59.5 +1.6
NAZ S **S** 18 17 59.5 +1.6
OSL **Oslo** 26.89 342 *e*P **P** 18 13 20.9 -1.6
OSL *e*S **S** 18 17 59.9 +2.2
FAQ **Al Faqa, Dubai** 26.91 105 *i* P **P** 18 13 23.9 +0.7
SNR=47
FAQ **Al Faqa, Dubai** 26.91 105 P **P** 18 13 24.3 +1.1
SNR=98
FAQ P **P** 18 13 24.3 +1.1
SNR=98
BANOM **Banah** 26.92 102 *i* P **P** 18 13 24.4 +1.1
SNR=57
BANOM **Banah** 26.92 102 P **P** 18 13 23.1 -0.2
SNR=62
BANOM P **P** 18 13 23.1 -0.2
SNR=62
BANOM S **S** 18 18 00.3 +1.3
BANOM S **S** 18 18 00.3 +1.3
MONM **Monmouth** 26.92 317 IAMs_20 IAMs_20 18 25 52.9
comp=Z,50µm,16.3s
KONO **Kongsberg** 26.94 341 *i* P **P** 18 13 23.3 +0.3
KONO pmax pmax
comp=Z,95nm,1.2s
KONO MLR MLR
comp=Z,44µm,17.0s
KONO **Kongsberg** 26.94 341 P **P** 18 13 22.0 -1.0
KONO **Kongsberg** 26.94 341 *e*P **P** 18 13 22.0 -1.0
KONO **Kongsberg** 26.94 341 ⇑P **P** 18 13 22.1 -0.9
KLMR **Klimovskoe** 26.94 14 *e*P **P** 18 13 21.4 -1.6
KLMR *e*S **S** 18 17 58.1 -0.5
KLMR pmax pmax
comp=Z,341nm,1.2s
KLMR MLR MLR
comp=Z,32µm,14.0s
KLMR **Klimovskoe** 26.94 14 *e*P **P** 18 13 21.4 -1.6
KLMR AMP 18 13 34.6
comp=Z,341nm,1.2s
KLMR *e*S **S** 18 17 58.2 -0.4
KLMR *e*S **S** 18 17 58.2 -0.4
KLMR LQ LQ 18 21 55.1
KLMR LQ LQ 18 21 55.1
KLMR LR LR 18 23 32.9
KLMR AMP 18 25 09.4
comp=Z,32µm,14.0s
PBRG **Braganca** 26.98 294 *e*P **P** 18 13 23.4 -0.2
comp=Z,1µm,1.5s
PBRG *e*S **S** 18 18 02.5 +2.8
DYA **Yadsworthy** 26.98 314 *e*P **P** 18 13 22.7 -0.8
DYA IAMs_20 IAMs_20 18 26 10.3
comp=Z,39µm,16.7s
MASF **Masafi** 27.06 103 P **P** 18 13 25.9 +1.3
SNR=100
MASF P **P** 18 13 25.9 +1.3
SNR=100
MASF S **S** 18 18 00.6 -0.7
MASF S **S** 18 18 00.6 -0.7
MSFE **Esma-Masafi** 27.07 103 *i* P **P** 18 13 25.7 +1.2
SNR=105
LBWR **Ladybower, Pea** 27.09 321 *e*P **P** 18 13 23.0 -1.5
LBWR IAMs_20 IAMs_20 18 25 44.7
comp=Z,32µm,16.3s
MCH1 **Michaelchurch** 27.10 318 *e*P **P** 18 13 23.5 -1.0
MCH1 IAMs_20 IAMs_20 18 25 58.4
comp=Z,53µm,13.7s
MVO **Moncorvo** 27.17 293 *e*P **P** 18 13 25.4 0.0
comp=Z,1µm,1.7s
MVO *e*S **S** 18 18 01.2 -1.5
MVO *e*LR LR 18 22 04.2
comp=Z,17µm,18.0s
GDLE **Glaisdale, N Y** 27.18 324 *e*P **P** 18 13 23.9 -1.4
GDLE IAMs_20 IAMs_20 18 26 18.6
comp=Z,47µm,18.8s
STNC **Stoke** 27.19 320 *e*P **P** 18 13 24.6 -0.8
STNC IAMs_20 IAMs_20 18 25 47.5
comp=Z,38µm,16.2s
MDH **Madha** 27.21 103 *i* P **P** 18 13 26.9 +1.1
SNR=42
MDH **Madha** 27.21 103 P **P** 18 13 27.4 +1.6
SNR=65
MDH P **P** 18 13 27.4 +1.6
SNR=65
AKTO **Aktyubinsk** 27.23 46 P **P** 18 13 25.7 0.0
comp=Z,135nm,0.7s,baz=247,slow=8.7,SNR=176
AKTO LR LR 18 27 25.4
comp=Z,11µm,21.3s,baz=246,slow=44
PBAR **Barrancos** 27.24 286 *e*P **P** 18 13 25.9 -0.1
comp=Z,890nm,1.2s
PBAR *e*S **S** 18 18 04.8 +1.0
UOSS **Minazif** 27.30 104 *i* P **P** 18 13 27.3 +0.6
SNR=71
UOSS **Minazif** 27.30 104 P **P** 18 13 26.0 -0.6
UOSS IAmb IAmb 18 13 54.6
comp=Z,314nm,0.8s
UOSS **Minazif** 27.30 104 P **P** 18 13 28.0 +1.4
UOSS P **P** 18 13 28.0 +1.4
UOSS S **S** 18 18 05.0 0.0
UOSS S **S** 18 18 05.0 0.0
HATD **Hatta, Dubai** 27.30 104 *i* P **P** 18 13 27.2 +0.6
SNR=87
HATD **Hatta, Dubai** 27.30 104 P **P** 18 13 27.5 +0.9
SNR=95
HATD P **P** 18 13 27.5 +0.9
SNR=95
HATD S **S** 18 18 05.0 0.0
HATD S **S** 18 18 05.0 0.0
HPK **Haverah Park** 27.33 322 *e*P **P** 18 13 25.5 -1.1
HPK IAMs_20 IAMs_20 18 24 15.4
comp=Z,44µm,24.4s
ALNE **Al Ain** 27.38 106 *i* P **P** 18 13 27.7 +0.3
SNR=21
ALNE **Al Ain** 27.38 106 P **P** 18 13 29.7 +2.3
SNR=81
ALNE P **P** 18 13 29.7 +2.3
SNR=81
ALNE S **S** 18 18 06.5 +0.2
ALNE S **S** 18 18 06.5 +0.2
NC602 **NORSAR Array S** 27.39 344 P **P** 18 13 25.4 -1.7
NC602 IAmb IAmb 18 13 48.4
comp=Z,313nm,1.2s
NC602 **NORSAR Array S** 27.39 344 *e*P **P** 18 13 25.9 -1.1
NORES **NORESS Array B** 27.39 344 P **P** 18 13 29.3 +2.3
PMRV **Marv??o** 27.45 289 *e*P **P** 18 13 27.4 -0.5
comp=Z,851nm,1.3s
PMRV *e*S **S** 18 18 06.3 -0.8

PMRV eLR LR 18 22 17.1
comp=Z,14µm,16.0s
TZRR Tazzarine 27.47 270 P 18 13 30.0
PCBR Castelo Branco 27.50 290 *e*P **P 18 13 27.9 -0.4**
comp=Z,548nm,1.2s
HTL Hartland 27.52 315 *e*P **P 18 13 27.8 -0.6**
HTL IAMs_20 IAMs_20 18 26 28.3
comp=Z,67µm,15.4s
MTE Manteigas 27.55 291 *e*P **P 18 13 28.4 -0.4**
comp=Z,707nm,1.7s
MTE eS **S 18 18 10.5 +1.7**
MTE eLR LR 18 22 34.3
comp=Z,26µm,18.0s
MTE Manteigas 27.55 291 P **P 18 13 28.2 -0.6**
MTE Manteigas 27.55 291 ⇑P **P 18 13 28.4 -0.4**
MTE ⇓P **pP 18 13 28.9 -6.3**
FOEL Foel Wylfa 27.62 319 *e*P **P 18 13 27.3 -1.9**
FOEL IAMs_20 IAMs_20 18 26 00.2
comp=Z,48µm,20.4s
UMZA Um Al Zommool 27.63 109 P **P 18 13 30.4 +0.9**
UMZA S **S 18 18 10.9 +0.8**
PESTR Estremoz 27.63 288 *e*P **P 18 13 29.1 -0.4**
comp=Z,841nm,1.1s
PESTR eS **S 18 18 11.2 +1.2**
PESTR Estremoz 27.63 288 P **P 18 13 28.6 -0.8**
PESTR IAmb IAmb 18 13 52.0
comp=Z,404nm,1.1s
PESTR Estremoz 27.63 288 P 18 13 28.9
ZHG ZHG 27.64 276 P 18 13 31.0
NAO01 NORSAR Array S 27.64 343 P **P 18 13 27.4 -1.9**
NAO01 IAmb IAmb 18 13 55.7
comp=Z,270nm,0.9s
CCA1 Carnmenellis 27.66 313 *e*P **P 18 13 29.6 0.0**
CCA1 IAMs_20 IAMs_20 18 26 51.2
comp=Z,53µm,15.0s
BLS5 Blasjo 27.67 337 *e*P **P 18 13 28.3 -1.4**
BLS5 IVmB_BB 18 13 37.3
comp=Z,2µm,2.8s
BLS5 eS **S 18 18 10.3 +0.1**
BLS5 IVMs_BB IVMs_BB 18 18 58.3
comp=Z,5µm,12.9s
ATD Arta Tunnel 27.68 144 P **P 18 13 32.0 +1.9**
comp=Z,66nm,1.1s,baz=310,slow=6.5,SNR=18
ATD Arta Tunnel 27.68 144 ⇑p **P 18 13 29.0 -1.1**
ATD Arta Tunnel 27.68 144 ⇑p **P 18 13 35.2 +5.0**
ATD ⇓p **pP 18 13 35.8 -0.5**
ATD Arta Tunnel 27.68 144 *e*P **P 18 13 35.0 +4.8**
ATD eS S 18 18 26.5 +15
ATD Arta Tunnel 27.68 144 *i* P **P 18 13 35.2 +5.0**
ATD IAmb IAmb 18 13 48.2
comp=Z,204nm,1.2s
ATD IVMs_BB IVMs_BB 18 25 47.1
comp=Z,8µm,13.8s
NC405 NORSAR Array S 27.68 344 P **P 18 13 27.7 -2.0**
PVRL Vila Real 27.69 293 *e*P **P 18 13 30.1 +0.1**
comp=Z,508nm,1.7s
ZGR Zagora 27.72 269 P 18 13 32.0
NB201 NORSAR Array S 27.72 344 P **P 18 13 28.7 -1.4**
NB2 NORSAR Subarra 27.73 344 P **P 18 13 28.5 -1.7**
baz=156,slow=9.3
NOA NORSAR Array B 27.73 344 P **P 18 13 28.5 -1.7**
comp=Z,25nm,0.8s,baz=147,slow=11,SNR=78
NOA PcP **PcP 18 16 45.8 -0.5**
comp=Z,8.1nm,0.7s,baz=134,slow=2.5,SNR=2.6
NOA ScP **ScP 18 20 24.8 -0.8**
comp=Z,13nm,0.9s,baz=142,slow=3.4,SNR=3.4
NOA LR LR 18 26 26.5
comp=Z,38µm,20.1s,baz=155,slow=41
POLO Lamas de Olo 27.75 293 *e*P **P 18 13 30.6 0.0**
comp=Z,264nm,1.6s
POLO eS **S 18 18 11.5 -0.5**
KIRV Kirov 27.76 26 P **P 18 13 29.6 -0.8**
comp=Z,64nm,0.5s,baz=221,slow=3.3,SNR=21
KIRV S **S 18 18 10.1 -1.4**
comp=Z,40nm,0.6s,baz=220,slow=19,SNR=13
KIRV Kirov 27.76 26*d* *i*P **P 18 13 29.2 -1.2**
PVIS Viseu 27.82 292 *e*P **P 18 13 31.2 0.0**
comp=Z,595nm,1.7s
NBO00 NORSAR Array S 27.83 343 P **P 18 13 29.7 -1.3**
PVAQ Vaqueiros 27.85 285 *e*P **P 18 13 30.9 -0.5**
comp=Z,639nm,1.5s
PVAQ eS **S 18 18 13.9 +0.5**
PVAQ eLR LR 18 21 55.5
comp=Z,9µm,18.0s
PVAQ Vaqueiros 27.85 285 P **P 18 13 30.1 -1.3**
PVAQ IAmb IAmb 18 13 41.4
comp=Z,641nm,1.3s
PVAQ Vaqueiros 27.85 285 P 18 13 31.1
NC303 NORSAR Array S 27.86 344 P **P 18 13 29.6 -1.7**
JOF Joensuu 27.89 4 P **P 18 13 30.6 -0.9**
JOF pmax pmax
comp=Z,177nm,1.3s
KMY Karmoy 27.90 336 *e*P **P 18 13 31.3 -0.3**
PBEJ Beja 27.91 286 *e*P **P 18 13 32.0 +0.1**
comp=Z,195nm,1.1s
PCAB Cabril 27.93 294 *e*P **P 18 13 32.3 +0.1**
comp=Z,720nm,1.6s
SOHO SOHO 27.96 105 *i* P **P 18 13 32.8 +0.3**
SNR=116
SOHO SOHO 27.96 105 P **P 18 13 32.9 +0.3**
SOHO P **P 18 13 32.9 +0.3**
SOHO S **S 18 18 15.3 -0.1**
SOHO S **S 18 18 15.3 -0.1**
EDMD Edmundbyers 27.96 324 *e*P **P 18 13 30.7 -1.6**
EDMD IAMs_20 IAMs_20 18 24 46.1
comp=Z,44µm,28.0s
EVO Evora 27.98 287 ⇑ *i*P **P 18 13 30.6 -2.0**
EVO *i* S **S 18 18 14.1 -1.4**
EVO Evora 27.98 287 *e*P **P 18 13 32.5 -0.1**
comp=Z,479nm,1.9s
VAF Ylistaro 27.99 356 P **P 18 13 31.8 -0.6**
VAF pmax pmax
comp=Z,199nm,1.0s
AB31 Akbulak array 28.00 50 *i* P **P 18 13 32.9 +0.3**
ABKAR Akbulak array 28.00 50 P **P 18 13 32.1 -0.5**
ABKAR Akbulak array 28.00 50 P **P 18 13 32.7 0.0**
ABKAR IAmb IAmb 18 14 01.0
comp=Z,149nm,0.8s
ODD1 Odda 28.01 338 *e*P **P 18 13 31.0 -1.7**
ODD1 eScP **ScP 18 20 24.8 -1.7**
PBDV Barranco-do-Ve 28.03 284 *e*P **P 18 13 33.1 0.0**
comp=Z,805nm,1.6s
PBDV eS **S 18 18 18.1 +1.7**
NC204 NORSAR Array S 28.05 343 P **P 18 13 31.8 -1.2**
NC204 IAmb IAmb 18 14 00.3
comp=Z,256nm,1.1s
RSBS Rosebush, Pemb 28.06 316 IAMs_20 IAMs_20 18 26 49.1
comp=Z,52µm,14.4s
PCVE Castro Verde 28.08 285 *e*P **P 18 13 33.0 -0.5**
comp=Z,422nm,2.0s
PCVE eS **S 18 18 15.9 -1.1**
PMTG Montargil 28.11 288 *e*P **P 18 13 33.2 -0.6**
comp=Z,446nm,1.3s
PMTG eS S 18 18 31.7 +14
PGAV Gavieira, Arco 28.12 295 *e*P **P 18 13 34.4 +0.4**
comp=Z,455nm,1.9s
PGAV eS **S 18 18 19.6 +1.7**
PGAV eLR LR 18 22 47.2
comp=Z,19µm,18.0s
SKAR Skarslia 28.16 341 *e*P **P 18 13 34.3 +0.3**
SKAR IVmB_BB 18 13 42.5
comp=Z,1µm,3.2s
SKAR eS **S 18 18 20.0 +2.1**
SKAR eScS **ScS 18 24 18.8 -0.5**
MESJ Messejana 28.20 286 *e*P **P 18 13 34.5 -0.1**
MESJ IAmb IAmb 18 13 39.5
comp=Z,833nm,1.8s
MESJ eS **S 18 18 19.2 +0.3**
MESJ Messejana 28.20 286 *e*P **P 18 13 34.5 -0.1**
MESJ Messejana 28.20 286 *e*P **P 18 13 34.4 -0.1**
comp=Z,379nm,1.0s
COI Coimbra 28.21 291 P **P 18 13 34.2 -0.4**
COI pmax pmax
comp=Z,350nm,0.9s
COI MLR MLR
comp=Z,33µm,19.0s
COI Coimbra 28.21 291 *e*P **P 18 13 36.8 +2.1**
comp=Z,529nm,1.1s
COI eS **S 18 18 20.5 +1.4**
COI Coimbra 28.21 291 P **P 18 13 34.2 -0.4**
COI IAmb IAmb 18 13 55.3
comp=Z,350nm,0.9s
AAE Adis Abeba 28.24 154 *e*P **P 18 13 38.9 +3.5**
AAE eS S 18 18 34.4 +14
YLL Llanberis 28.25 319 *e*P **P 18 13 34.5 -0.3**

PCAS Casmilo, Conde 28.28 290 *e*P **P 18 13 35.0 -0.3**
comp=Z,341nm,1.3s
PCAS eS **S 18 18 22.6 +2.4**
AVE Averroes 28.30 276 ⇑ *i*P **P 18 13 35.1 -0.4**
AVE *i* S **S 18 18 16.9 -3.6**
AVE Averroes 28.30 276 ⇑P **P 18 13 36.4 +0.9**
AVE ⇓P **pP 18 13 36.6 -5.3**
AVE ⇓p **sP 18 13 38.9 -5.6**
FURI Furi 28.33 155 P **P 18 13 35.9 -0.4**
FURI Furi 28.33 155 IAMs_20 IAMs_20 18 25 55.4
comp=Z,65µm,18.0s
FURI Furi 28.33 155 ⇓p **P 18 13 39.3 +3.1**
FURI Furi 28.33 155 *e*P **P 18 13 39.2 +3.0**
FURI eS S 18 18 36.7 +15
FURI Furi 28.33 155 *i* P S 18 13 41.3 +5.1
FURI IAmb IAmb 18 14 09.6
comp=Z,307nm,1.2s
FURI IVMs_BB IVMs_BB 18 28 52.4
comp=Z,38µm,9.8s
ARQ Araqi 28.36 107 P **P 18 13 37.3 +1.1**
SNR=70
ARQ S **S 18 18 20.6 -1.0**
KESW Keswick, Cumbr 28.40 322 *e*P **P 18 13 34.0 -2.2**
KESW IAMs_20 IAMs_20 18 24 45.5
comp=Z,39µm,26.5s
PNCL Nicolau / Gran 28.42 286 *e*P **P 18 13 36.9 +0.4**
comp=Z,461nm,1.5s
PNCL eS **S 18 18 25.1 +2.7**
WME Myndd Eilian 28.44 319 *e*P **P 18 13 35.2 -1.3**
WLF1 Llynfaes 28.44 319 *e*P **P 18 13 35.3 -1.2**
WLF1 IAMs_20 IAMs_20 18 26 36.9
comp=Z,75µm,15.6s
YRC Rhoscolyn 28.52 319 *e*P **P 18 13 38.4 +1.2**
PSBE So Bento 28.53 289 *e*P **P 18 13 37.2 -0.3**
comp=Z,362nm,1.2s
PSBE eS **S 18 18 26.2 +2.0**
WPS Cemaes, Angles 28.55 319 *e*P **P 18 13 36.5 -0.9**
WPS IAMs_20 IAMs_20 18 26 39.1
comp=Z,37µm,16.7s
MORF Marmelete 28.60 285 *e*P **P 18 13 38.0 -0.2**
MORF IAmb IAmb 18 13 44.9
comp=Z,2µm,2.9s
MORF eS **S 18 18 25.4 +0.1**
MORF Marmelete 28.60 285 *e*P **P 18 13 38.0 -0.2**
MORF eS **S 18 18 25.4 +0.1**
MORF Marmelete 28.60 285 *e*P **P 18 13 37.7 -0.5**
comp=Z,255nm,1.4s
MORF eS **S 18 18 25.4 +0.1**
PTEO Sao Teotonio 28.63 285 *e*P **P 18 13 38.5 +0.1**
comp=Z,667nm,1.2s
PFVI Vila Bisbo 28.76 284 *e*P **P 18 13 39.4 -0.1**
comp=Z,416nm,1.6s
PFVI eS **S 18 18 30.7 +3.0**
PFVI Vila Bisbo 28.76 284 P **P 18 13 39.0 -0.5**
PFVI Vila Bisbo 28.76 284 P 18 13 39.7
BER Bergen 28.78 338 P **P 18 13 43.6 +4.2**
BER Bergen 28.78 338 *e*P **P 18 13 39.6 +0.2**
BER IVMs_BB IVMs_BB 18 20 31.6
comp=Z,6µm,13.0s
BER eScS ScS 18 24 22.6 +0.7
EKA Eskdalemuir Ar 28.82 324 P **P 18 13 38.7 -1.1**
comp=Z,70nm,0.8s,baz=127,slow=11,SNR=132
EKA PcP **PcP 18 16 49.1 0.0**
comp=Z,11nm,0.5s,baz=109,slow=3.2,SNR=7.1
EKA S **S 18 18 24.2 -4.0**
comp=Z,4.9nm,0.8s,baz=108,slow=6.8,SNR=1.2
EKA ScP **ScP 18 20 28.6 -0.4**
comp=Z,15nm,0.9s,baz=128,slow=4.6,SNR=7.0
EKA LR LR 18 27 24.5
comp=Z,16µm,18.1s,baz=120,slow=41
ESK Eskdalemuir 28.83 324 *e*P **P 18 13 38.0 -1.9**
ESK IAMs_20 IAMs_20 18 28 07.5
comp=Z,26µm,17.5s
ESK Eskdalemuir 28.83 324 P **P 18 13 38.9 -1.0**
ESK pmax pmax
comp=Z,186nm,0.8s
ESK MLR MLR
comp=Z,17µm,18.0s
ESK Eskdalemuir 28.83 324 P **P 18 13 38.9 -1.0**
ESK IAmb IAmb 18 13 54.6
comp=Z,186nm,0.8s
HOQ Hoqain 28.85 105 P **P 18 13 41.0 +0.5**
SNR=101
HOQ P **P 18 13 41.0 +0.5**
SNR=101
HOQ S **S 18 18 28.5 -1.0**
HOQ S **S 18 18 28.5 -1.0**
LIS Lisbon 28.86 288 *e*P **P 18 13 40.3 -0.1**
LIS IAmb IAmb 18 13 50.4
comp=Z,403nm,1.0s
LIS eS **S 18 18 29.6 +0.4**
LIS Lisbon 28.86 288 *e*P **P 18 13 40.3 -0.1**
LIS eS **S 18 18 29.6 +0.4**
LIS Lisbon 28.86 288 *e*P **P 18 13 41.3 +0.9**
comp=Z,824nm,1.3s
ESY Stoneypath 28.87 325 *e*P **P 18 13 38.8 -1.5**
PMST Lisbon--Monsan 28.88 288 *e*P **P 18 13 41.2 +0.6**
comp=Z,506nm,1.1s
SRHM Skhour des Reh 28.90 275 P 18 13 43.1
ASK Askoy 28.90 338 *e*P **P 18 13 40.9 +0.4**
ASK eScP **ScP 18 20 28.5 -0.6**
PMAFR Mafra 28.94 288 *e*P **P 18 13 41.5 +0.3**
comp=Z,538nm,1.5s
PMAFR eS **S 18 18 35.2 +4.6**
IOMK Kirk Michael 28.98 321 *e*P **P 18 13 40.7 -0.6**
IOMK IAMs_20 IAMs_20 18 28 15.4
comp=Z,60µm,17.6s
WIM Isle of Man 28.98 321 *e*P **P 18 13 40.5 -0.8**
EBL Broad Law 29.00 324 *e*P **P 18 13 39.8 -1.6**
HRA Herat 29.00 81 P **P 18 13 41.9 0.0**
PRGR Permogore 29.03 18 ⇓ *i*P **P 18 13 40.6 -1.0**
PRGR *i* S **S 18 18 28.8 -2.6**
PRGR pmax pmax
comp=Z,198nm,0.8s
DOMB Dombas 29.12 343 *e*P **P 18 13 42.4 -0.1**
DOMB IVmB_BB 18 13 50.9
comp=Z,2µm,2.2s
EDI Edinburgh 29.14 325 *e*P **P 18 13 41.4 -1.3**
EDI IAMs_20 IAMs_20 18 27 22.8
comp=Z,43µm,18.4s
HYA Hoyanger 29.15 339 *e*P **P 18 13 43.1 +0.4**
HYA *e*pP **sP 18 13 52.7 +1.2**
HYA *e*ScS ScS 18 24 25.3 +1.7
BSY Bisya 29.20 107 P **P 18 13 45.8 +2.2**
SNR=100
BSY P **P 18 13 45.8 +2.2**
SNR=100
BSY S **S 18 18 33.5 -1.4**
BSY S **S 18 18 33.5 -1.4**
OUK Oukaimeden 29.22 272 P 18 13 46.0
NEWG New Galloway 29.23 323 *e*P **P 18 13 42.6 -0.9**
NEWG IAMs_20 IAMs_20 18 25 10.3
comp=Z,39µm,26.8s
DOK Doka 29.27 117 P **P 18 13 46.2 +2.0**
SNR=80
DOK P **P 18 13 46.2 +2.0**
SNR=80
DOK S **S 18 18 34.8 -1.3**
DOK S **S 18 18 34.8 -1.3**
GAL1 Galloway 29.35 322 *e*P **P 18 13 43.4 -1.2**
GAL1 IAMs_20 IAMs_20 18 28 29.5
comp=Z,31µm,16.4s
IWEX Carrickbyrne, 29.37 316 IAMs_20 IAMs_20 18 26 35.3
comp=Z,56µm,21.7s
DRUM Mains of Drumt 29.38 327 *e*P **P 18 13 42.4 -2.4**
DRUM IAMs_20 IAMs_20 18 28 31.9
comp=Z,46µm,12.9s
WHFO Wadi Hawf 29.46 119 P **P 18 13 47.4 +1.4**
SNR=64
WHFO P **P 18 13 47.4 +1.4**
SNR=64
WHFO S **S 18 18 39.6 +0.4**
WHFO S **S 18 18 39.6 +0.4**
SUE Sulen 29.48 338 *e*P **P 18 13 45.6 0.0**
SUE IVmB_BB 18 13 47.0
comp=Z,2µm,3.7s
SUE eScS ScS 18 24 25.2 0.0
DSB Dublin 29.50 318 P **P 18 13 45.5 -0.4**
DSB IAMs_20 IAMs_20 18 27 25.0
comp=Z,36µm,18.0s
ABTO Aybut 29.50 120 P **P 18 13 48.2 +1.9**
SNR=94
ABTO P **P 18 13 48.2 +1.9**
SNR=94

ABTO S **S 18 18 38.6 -1.1**
ABTO S **S 18 18 38.6 -1.1**
BIDO Bidbid 29.53 105 P **P 18 13 47.2 +0.8**
SNR=37
BIDO S **S 18 18 40.3 +0.3**
SMDO Samad 29.70 106 P **P 18 13 48.3 +0.1**
SNR=99
SMDO P **P 18 13 48.3 +0.1**
SNR=99
SMDO S **S 18 18 41.9 -1.1**
SMDO S **S 18 18 41.9 -1.1**
AKN Aaknes 29.75 341 *e*P **P 18 13 47.8 -0.3**
AKN IVmB_BB 18 14 17.9
comp=Z,3µm,3.1s
FOO Floro 29.82 339 *e*P **P 18 13 46.5 -2.1**
FOO IVmB_BB 18 14 19.4
comp=Z,3µm,4.0s
FOO eS **S 18 18 46.7 +2.8**
TTIG Tnine Tigouga, 29.89 271 P 18 13 52.0
TBLU Trondheim 29.90 345 *e*P **P 18 13 49.0 -0.4**
TBLU eScP **ScP 18 20 27.9 -4.5**
OUL Oulu 29.93 359 P **P 18 13 48.6 -1.0**
OUL pmax pmax
comp=Z,188nm,1.0s
MOL Molde 29.94 342 *e*P **P 18 13 48.4 -1.3**
MOL IVmB_BB 18 13 57.7
comp=Z,2µm,3.3s
MOL IAMs_20 IAMs_20 18 19 42.1
comp=Z,12µm,22.5s
RBK Rabkut 30.05 119 P **P 18 13 51.7 +0.5**
SNR=86
RBK S **S 18 18 48.7 +0.4**
WSAR Wadi Sarin 30.07 105 LR LR 18 29 52.4
comp=Z,31µm,21.7s,baz=331,slow=44
JMDO Jabal Madar 30.10 107 P **P 18 13 53.2 +1.6**
SNR=56
JMDO P **P 18 13 53.2 +1.6**
SNR=56
JMDO S **S 18 18 48.5 -0.6**
JMDO S **S 18 18 48.5 -0.6**
CLGH Cloghs, Cushen 30.16 322 *e*P **P 18 13 51.1 -0.6**
CLGH IAMs_20 IAMs_20 18 29 02.1
comp=Z,31µm,16.0s
ARU Arti 30.22 35 P **P 18 13 51.6 -0.7**
comp=Z,11nm,0.3s,baz=232,slow=4.9,SNR=53
ARU LR LR 18 27 57.6
comp=Z,12µm,20.4s,baz=239,slow=40
ARU Arti 30.22 35*d* *i*P **P 18 13 52.0 -0.3**
ARU 18 14 49.8
ARU 18 16 50.8
ARU S **S 18 18 50.9 +0.6**
ARU pmax pmax
comp=Z,80nm,0.8s
ARU MLR MLR
comp=Z,11µm,15.0s
ARU Arti 30.22 35 P **P 18 13 51.8 -0.5**
ARU IAmb IAmb 18 14 01.3
comp=Z,247nm,1.3s
LAWE Loch Awe, Argy 30.38 324 *e*P **P 18 13 52.2 -1.4**
LAWE IAMs_20 IAMs_20 18 25 58.1
comp=Z,32µm,23.9s
DMTO DMTO 30.45 118 P **P 18 13 55.0 +0.4**
SNR=98
DMTO P **P 18 13 55.0 +0.4**
SNR=98
DMTO S **S 18 18 54.6 +0.2**
DMTO S **S 18 18 54.6 +0.2**
WBK Wadi Bani Khal 30.66 105 P **P 18 13 59.3 +2.8**
SNR=60
WBK P **P 18 13 59.3 +2.8**
SNR=60
WBK S **S 18 18 56.8 -1.1**
WBK S **S 18 18 56.8 -1.1**
NSS Namsos 30.72 347 *e*P **P 18 13 55.3 -1.3**
SHAO Shalim 30.75 116 *i* P **P 18 13 58.1 +0.8**
SNR=16
SHAO Shalim 30.75 116 P **P 18 13 59.1 +1.8**
SNR=40
SHAO S **S 18 18 59.0 -0.2**
MHTO MHTO 30.75 109 P **P 18 13 58.8 +1.5**
SNR=75
MHTO P **P 18 13 58.8 +1.5**
SNR=75
MHTO S **S 18 18 59.5 +0.3**
MHTO S **S 18 18 59.5 +0.3**
LRW Lerwick 30.84 333 IAMs_20 IAMs_20 18 30 19.1
comp=Z,41µm,18.3s
BIGH Upper Bighouse 30.91 328 IAMs_20 IAMs_20 18 30 51.0
comp=Z,76µm,16.1s
KAC Achnashellach 30.98 326 *e*P **P 18 13 56.8 -2.2**
DQM DQM 31.02 111 P **P 18 14 01.1 +1.4**
SNR=185
DQM P **P 18 14 01.1 +1.4**
SNR=185
DQM S **S 18 19 02.6 -0.9**
DQM S **S 18 19 02.6 -0.9**
KPL Plockton 31.05 326 *e*P **P 18 13 57.1 -2.4**
KPL IAMs_20 IAMs_20 18 28 41.9
comp=Z,45µm,18.0s
IGLA Glengowla, Co 31.22 317 IAMs_20 IAMs_20 18 27 15.4
comp=Z,42µm,23.5s
JLN Jalan Bani Buh 31.25 106 P **P 18 14 02.9 +1.2**
SNR=104
JLN P **P 18 14 02.9 +1.2**
SNR=104
JLN S **S 18 19 06.1 -0.9**
JLN S **S 18 19 06.1 -0.9**
SVE Sverdlovsk 31.41 36*d* *e*P **P 18 14 03.0 +0.2**
SVE eS **S 18 19 10.5 +1.6**
SVE pmax pmax
comp=Z,168nm,0.9s
SVE MLR MLR
comp=Z,13µm,15.0s
TOA0 Torodi Ar. Sit 31.58 232 P **P 18 14 04.5 -0.2**
TOA0 IAmb IAmb 18 14 26.2
comp=Z,366nm,1.0s
TORD Torodi Ar. Bea 31.58 232 P **P 18 14 04.4 -0.2**
comp=Z,196nm,0.4s,baz=32,slow=8.8,SNR=1259
TORD PcP **PcP 18 16 56.3 -0.6**
comp=Z,14nm,0.7s,baz=37,slow=1.4,SNR=1.6
TORD S **S 18 19 10.0 -2.3**
comp=Z,27nm,1.2s,baz=50,slow=12,SNR=3.8
TORD ScP **ScP 18 20 39.8 +1.1**
comp=Z,51nm,1.3s,baz=34,slow=2.5,SNR=5.7
TORD LR LR 18 30 11.0
comp=Z,60µm,18.2s,baz=30,slow=43
MOR8 Moi Rana 31.87 350 *e*P **P 18 14 06.1 -0.6**
MOR8 IVmB_BB 18 14 29.0
comp=Z,2µm,2.0s
MOR8 eS **S 18 19 20.8 +4.9**
MOR8 IVMs_BB IVMs_BB 18 19 36.8
comp=Z,2µm,5.0s
LEWI Lewis, Hebride 32.03 326 *e*P **P 18 14 06.9 -1.3**
LEWI IAMs_20 IAMs_20 18 30 09.8
comp=Z,38µm,14.4s
STOK Stokkvaagen 32.22 350 *e*P **P 18 14 09.3 -0.4**
KONS Konsvik 32.36 350 *e*P **P 18 14 10.0 -1.0**
NBB40 Tonnes 32.39 350 *e*P **P 18 14 10.4 -0.8**
NBB40 eS **S 18 19 25.7 +1.8**
NBB17 Glomfjord B¥r 32.54 351 *e*P **P 18 14 12.1 -0.5**
LODK Lodwar 32.59 164 P **P 18 14 13.7 +0.1**
SNR=50
APA Apatity 32.64 5 ⇑ *i*P **P 18 14 11.8 -1.6**
APA *i* 18 15 21.0
APA *i* S **S 18 19 23.0 -4.8**
APA pmax pmax
comp=Z,90nm,0.8s
NBB30 Finnes 32.72 351 *e*P **P 18 14 13.4 -0.7**
NBB30 eS **S 18 19 31.4 +2.3**
NBB05 Inndyr 32.74 351 *e*P **P 18 14 13.6 -0.7**
N2ST Straumen 32.85 352 *e*P **P 18 14 14.3 -0.9**
FAUS Fauske 32.91 352 *e*P **P 18 14 14.7 -1.1**
FAUS IVmB_BB 18 14 18.7
comp=Z,1µm,1.0s
FAUS eS **S 18 19 34.0 +2.0**
FAUS eScS **ScS 18 24 43.8 +1.9**
NBB08 Skaug oppvekst 33.00 351 *e*P **P 18 14 16.0 -0.5**
LVZ Lovozero 33.05 5*c* *e*P **P 18 14 16.1 -1.0**
LVZ pmax pmax
comp=Z,159nm,1.3s
LVZ MLR MLR
comp=Z,24µm,20.0s
LVZ Lovozero 33.05 5 P **P 18 14 16.4 -0.7**
LVZ IAmb IAmb 18 14 23.9
comp=Z,218nm,1.2s

N2TV **TVrnvik** **33.11 352** *e*P **P** **18 14 16.7 -0.8**
N2TV *e*S **S** **18 19 36.1 +1.0**
N2IH **Innhavet** **33.40 353** *e*P **P** **18 14 19.3 -0.8**
N2IH *e*S **S** **18 19 42.4 +2.8**
STEI **Steigen** **33.44 352** *e*P **P** **18 14 19.7 -0.7**
N2RO **R_st** **33.46 350** *e*P **P** **18 14 19.2 -1.3**
N2VA **Vr_y** **33.51 350** *e*P **P** **18 14 19.4 -1.6**
N2VA *e*S **S** **18 19 44.3 +3.0**
SOCY **Socotra** **33.60 126** P **P** **18 14 20.5 -1.9**
SOCY IAmb IAmb 18 14 32.3
comp=Z,192nm,1.1s
SOCY **Socotra** **33.60 126** P **P** **18 14 22.8 +0.3**
SNR=18
N2SV **S_rv¥gen** **33.68 351** *e*P **P** **18 14 21.0 -1.5**
CHM **Chimkent** **33.82 65** *e*P **P** **18 14 23.8 -0.2**
comp=Z,31nm,0.8s,baz=65
CHM **Chimkent** **33.82 65** *e*P **P** **18 14 23.8 -0.2**
CHM pmax pmax
comp=Z,31nm,0.8s
LOF **Lofoten** **33.84 351** *e*P **P** **18 14 22.4 -1.5**
LOF IVmB_BB 18 14 23.5
comp=Z,2µm,4.3s
KTK1 **Kautokeino** **33.93 358** *e*P **P** **18 14 23.7 -1.0**
KTK1 *e*S **S** **18 19 47.7 -0.1**
BRLS **Borolday** **33.97 64** *e*P **P** **18 14 24.4 -1.0**
comp=Z,20nm,0.4s,baz=64
BRLS *i*S **S** **18 19 48.1 -1.0**
comp=Z,181nm,2.5s,baz=64
BRLS **Borolday** **33.97 64** *e*P **P** **18 14 24.3 -1.0**
BRLS *i*S **S** **18 19 48.0 -1.0**
BRLS pmax pmax
comp=Z,19nm,0.4s
BRLS smax smax
comp=N,181nm,2.5s
IUG **luzhnay** **34.14 65** *e*P **P** **18 14 26.8 -0.2**
comp=N,252nm,1.0s,baz=65
IUG *e*S **S** **18 19 52.5 +0.5**
baz=65
IUG **luzhnay** **34.14 65** *e*P **P** **18 14 26.7 -0.2**
IUG *e*S **S** **18 19 52.4 +0.5**
IUG pmax pmax
comp=Z,252nm,1.0s
SOFL **Sornfelli, Far** **34.24 332** *e*P **P** **18 14 27.9 +0.3**
ARA0 **ARCESS Array S** **34.40 359** *i*P **P** **18 14 27.6 -1.1**
ARCES **ARCESS Array B** **34.40 359** P **P** **18 14 27.6 -1.2**
comp=Z,54nm,0.6s,baz=178,slow=9.2,SNR=117
ARCES S **S** **18 19 49.4 -5.7**
comp=Z,23nm,0.9s,baz=186,slow=14,SNR=1.7
ARCES LR LR 18 29 32.8
comp=Z,21µm,18.3s,baz=180,slow=38
ARCES **ARCESS Array B** **34.40 359** P **P** **18 14 27.3 -1.5**
KBL **Kabul** **34.45 79** P **P** **18 14 30.4 +0.6**
KBL pmax pmax
comp=Z,154nm,1.2s
KBL MLR MLR
comp=Z,6µm,19.0s
KBL **Kabul** **34.45 79** P **P** **18 14 30.4 +0.6**
KBL **Kabul** **34.45 79** P **P** **18 14 31.0 +1.2**
SNR=55
KBL P **P** **18 14 31.0 +1.2**
SNR=55
KBL S **S** **18 19 55.9 -1.1**
KBL S **S** **18 19 55.9 -1.1**
KK31 **Karatay Array** **34.46 63** *i*P **P** **18 14 30.1 +0.5**
KK31 **Karatay Array** **34.46 63** P **P** **18 14 30.4 +0.8**
KK31 IAmb IAmb 18 14 51.8
comp=Z,302nm,1.0s
KKAR **Karatay Array** **34.46 63** P **P** **18 14 30.3 +0.7**
KKAR pmax pmax
comp=Z,302nm,1.0s
KKAR **Karatay Array** **34.46 63** P **P** **18 14 30.3 +0.7**
KKAR IAmb IAmb 18 14 51.8
comp=Z,302nm,1.0s
KOWA **Kowa** **34.54 241** P **P** **18 14 30.5 0.0**
comp=Z,95nm,0.7s,baz=48,slow=7.6,SNR=120
KOWA **Kowa** **34.54 241** P **P** **18 14 30.4 -0.2**
JETT **Jettan, Norway** **34.60 356** *e*P **P** **18 14 29.5 -1.0**
KEV **Kevo** **34.62 0** P **P** **18 14 29.8 -0.8**
KEV pmax pmax
comp=Z,88nm,0.8s
KEV MLR MLR
comp=Z,26µm,18.0s
KEV **Kevo** **34.62 0** P **P** **18 14 29.8 -0.8**
KEV IAMs_20 IAMs_20 18 29 19.2
comp=Z,26µm,18.0s
GAR **Garm** **34.64 71** P **P** **18 14 32.7 +1.3**
TRO **Tromso** **34.77 355** *e*P **P** **18 14 30.7 -1.1**
TRO IVmB_BB 18 14 37.9
comp=Z,3µm,2.3s
TRO *e*S **S** **18 20 00.7 +0.1**
TRO IVMs_BB IVMs_BB 18 20 43.6
comp=Z,2µm,3.9s
DZA **Taraz** **35.07 64** *e*P **P** **18 14 35.0 0.0**
comp=Z,152nm,0.8s,baz=64
DZA **Taraz** **35.07 64** *e*P **P** **18 14 34.9 0.0**
DZA pmax pmax
comp=Z,152nm,0.8s
BRVK **Borovoye** **35.28 46** *i*P **P** **18 14 37.0 +0.5**
BRVK pmax pmax
comp=Z,324nm,1.7s
BRVK MLR MLR
comp=Z,33µm,25.0s
BRVK **Borovoye** **35.28 46** P **P** **18 14 37.2 +0.8**
BRVK IAmb IAmb 18 15 03.9
comp=Z,163nm,0.8s
BRVK **Borovoye** **35.28 46** P **P** **18 14 37.4 +0.9**
BRVK S **S** **18 20 04.6 -4.3**
TEBE **Entebbe** **35.35 170** *i*P **P** **18 14 40.7 +3.0**
HAMF **Hammerfest** **35.55 358** *e*P **P** **18 14 37.8 -0.8**
HAMF IVmB_BB 18 14 38.6
comp=Z,3µm,4.2s
HAMF *e*S **S** **18 20 13.1 +0.4**
HAMF *e*ScP **ScP** **18 20 51.5 -0.2**
HAMF IVMs_BB IVMs_BB 18 20 56.8
comp=Z,3µm,3.8s
PMPST **Porto Santo, M** **35.59 279** *e*P **P** **18 14 40.2 +0.7**
comp=Z,934nm,1.6s
PMPST *e*S **S** **18 20 20.8 +6.6**
PMPS **Porto Santo** **35.60 279** *e*P **P** **18 14 40.4 +0.9**
comp=Z,816nm,1.6s
MBAR **Mbarara** **35.80 173** LR LR 18 30 19.4
comp=Z,25µm,19.2s,baz=345,slow=38
MBAR **Mbarara** **35.80 173** *c i*P **P** **18 14 42.3 +0.8**
MBAR pmax pmax
comp=Z,99nm,1.3s
MBAR MLR MLR
comp=Z,19µm,18.0s
MBAR **Mbarara** **35.80 173** P **P** **18 14 42.1 +0.6**
MBAR **Mbarara** **35.80 173** IAMs_20 IAMs_20 18 30 08.2
comp=Z,26µm,18.0s
MBAR **Mbarara** **35.80 173** P **P** **18 14 42.1 +0.6**
MBAR **Mbarara** **35.80 173** *i*P **P** **18 14 42.4 +0.9**
MBAR IAmb IAmb 18 14 46.0
comp=Z,116nm,1.2s
MBAR IVMs_BB IVMs_BB 18 33 43.5
comp=Z,12µm,12.8s
PMAR **Madeira** **36.16 279** *e*P **P** **18 14 45.6 +1.1**
comp=Z,1µm,1.5s
FUL **Funchal** **36.16 279** *e*P **P** **18 14 46.7 +2.4**
comp=Z,568nm,1.7s
BRZS **Berezniki** **36.24 52** *e*P **P** **18 14 44.4 -0.4**
comp=Z,131nm,1.8s,baz=52
BRZS *e*S **S** **18 20 24.0 +0.2**
baz=52
BRZS **Berezniki** **36.24 52** *e*P **P** **18 14 44.4 -0.4**
BRZS *e*S **S** **18 20 24.0 +0.2**
BRZS pmax pmax
comp=Z,131nm,1.8s
PMOZ **Porto Moniz, M** **36.36 279** *e*P **P** **18 14 47.5 +1.3**
comp=Z,648nm,1.6s
PMOZ *e*S **S** **18 20 30.7 +4.5**
PMOZ *e*LR LR 18 26 03.0
comp=Z,7µm,18.0s
PMOZ **Porto Moniz, M** **36.36 279** P **P** **18 14 45.6 -0.5**
AML **Almayashu** **36.86 65** P **P** **18 14 51.9 +1.2**
SNR=40
EKS2 **Erkin-Say** **36.88 64** P **P** **18 14 51.9 +1.3**
SNR=133
BTLS **Baital** **36.95 60** *e*P **P** **18 14 50.6 -0.4**
comp=Z,126nm,1.1s,baz=60
BTLS *e*S **S** **18 20 35.0 +0.2**
baz=60
BTLS **Baital** **36.95 60** *e*P **P** **18 14 50.5 -0.4**
BTLS *e*S **S** **18 20 35.0 +0.2**
BTLS pmax pmax
comp=Z,126nm,1.1s
MACI **Morro de la Ar** **37.29 272** P **P** **18 14 54.0 -0.2**
USP **Ospenovka** **37.37 63** P **P** **18 14 55.1 +0.6**
SNR=68
AAK **Ala-Archa** **37.41 64** LR LR 18 33 29.0
comp=Z,9µm,19.3s,baz=288,slow=41
AAK **Ala-Archa** **37.41 64** P **P** **18 14 56.6 +1.6**
SNR=65
AAK **Ala-Archa** **37.41 64** *i*P **P** **18 14 56.4 +1.3**
SNR=369
AAK **Ala-Archa** **37.41 64** P **P** **18 14 56.3 +1.3**
AAK **Ala-Archa** **37.41 64** P **P** **18 14 56.3 +1.3**
AAK **Ala-Archa** **37.41 64** P **P** **18 14 56.4 +1.3**
AAK P **P** **18 14 56.4 +1.3**
KMBO **Kilima Mbogo** **37.42 163** P **P** **18 14 57.6 +2.2**
comp=Z,17nm,1.1s,baz=341,slow=8.1,SNR=24
KMBO ScP **ScP** **18 21 00.7 +0.9**
comp=Z,14nm,1.1s,baz=355,slow=5.9,SNR=6.7
KMBO LR LR 18 32 05.7
comp=Z,26µm,19.6s,baz=338,slow=39
KMBO **Kilima Mbogo** **37.42 163** *i*P **P** **18 14 58.0 +2.6**
KMBO pmax pmax
comp=Z,17nm,1.0s
SGDS **Sogindy** **37.45 63** *e*P **P** **18 14 54.9 -0.4**
comp=Z,121nm,1.7s,baz=63
SGDS *e*S **S** **18 20 42.9 +0.3**
baz=63
SGDS **Sogindy** **37.45 63** *e*P **P** **18 14 54.9 -0.4**
SGDS *e*S **S** **18 20 42.8 +0.3**
SGDS pmax pmax
comp=Z,121nm,1.7s
UCH **Uchtor** **37.46 65** P **P** **18 14 57.2 +1.4**
SNR=92
CHMS **Chumysh** **37.57 63** P **P** **18 14 57.4 +1.1**
SNR=108
KBK **Karagaybulak** **37.74 64** P **P** **18 14 59.5 +1.6**
SNR=95
NIL **Nilore** **38.05 79** P **P** **18 15 00.8 +0.4**
NIL pmax pmax
comp=Z,258nm,0.8s
NIL MLR MLR
comp=Z,5µm,20.0s
NIL **Nilore** **38.05 79** P **P** **18 15 00.8 +0.4**
NIL IAmb IAmb 18 15 22.2
comp=Z,258nm,0.8s
TKM2 **Tokmak 2** **38.19 63** P **P** **18 15 02.8 +1.0**
SNR=74
TKM2 **Tokmak 2** **38.19 63** P **P** **18 15 02.5 +0.8**
ULHL **Ulahol** **38.73 64** P **P** **18 15 08.4 +2.1**
SNR=14
KIBK **Kibwezi** **38.79 162** P **P** **18 15 07.1 +0.4**
SNR=34
KSH **Kashi** **38.91 69** P **P** **18 15 06.3 -1.4**
KSH pP pP 18 15 10.6 -3.4
KSH S **S** **18 20 57.5 -7.3**
KSH pmax pmax
comp=Z,71nm,2.1s
KSH pmax pmax
comp=Z,3µm,4.8s
KSH LR LR
comp=Z,7µm,14.7s
KSH LR LR
comp=Z,12µm,19.9s
KSH LR LR
comp=Z,20µm,13.4s
AAA **Alma-Ata** **39.13 63** *e*P **P** **18 15 09.4 -0.1**
comp=Z,98nm,1.2s,baz=63
AAA LR LR 18 29 42.0
comp=Z,3µm,19.1s,baz=63
AAA **Alma-Ata** **39.13 63** *e*P **P** **18 15 09.3 -0.1**
AAA pmax pmax
comp=Z,98nm,1.2s
AAA MLR MLR
comp=Z,3µm,19.0s
KNDC **Almaty** **39.16 63** P **P** **18 15 11.1 +1.4**
TNSS **Tian-Shan** **39.17 63** *e*P **P** **18 15 10.5 +0.4**
baz=63
TNSS **Tian-Shan** **39.17 63** *e*P **P** **18 15 10.5 +0.4**
MDOK **Medeo** **39.23 63** *e*P **P** **18 15 10.1 -0.3**
baz=63
MDOK *e*S **S** **18 21 10.0 +0.3**
baz=63
MDOK LR LR 18 29 07.4
comp=Z,4µm,19.5s,baz=63
MDOK **Medeo** **39.23 63** *e*P **P** **18 15 10.0 -0.3**
MDOK *e*S **S** **18 21 09.9 +0.3**
MDOK MLR MLR
comp=Z,4µm,19.0s
BJO1 **Bjornoya** **39.57 357** *e*P **P** **18 15 11.3 -1.3**
KURBB **Kurchatov Arra** **40.03 51** P **P** **18 15 17.4 +0.7**
TDK **Taldyqorghan** **40.05 60** *e*P **P** **18 15 16.9 -0.1**
comp=Z,122nm,0.7s,baz=60
TDK *e*S **S** **18 21 22.4 +0.9**
baz=60
TDK LR LR 18 30 54.8
comp=Z,5µm,17.9s,baz=60
TDK **Taldyqorghan** **40.05 60** *e*P **P** **18 15 16.8 -0.1**
TDK *e*S **S** **18 21 22.4 +0.9**
TDK pmax pmax
comp=Z,122nm,0.7s
TDK MLR MLR
comp=Z,5µm,18.0s
SATY **Saty** **40.23 63** *e*P **P** **18 15 17.8 -0.9**
comp=Z,347nm,1.4s,baz=63
SATY *e*S **S** **18 21 24.4 -0.1**
baz=63
SATY **Saty** **40.23 63** *e*P **P** **18 15 17.8 -0.9**
SATY *e*S **S** **18 21 24.4 -0.1**
SATY pmax pmax
comp=Z,347nm,1.4s
KPKS **Kokpek** **40.39 62** *e*P **P** **18 15 18.7 -1.2**
comp=Z,205nm,1.7s,baz=62
KPKS **Kokpek** **40.39 62** *e*P **P** **18 15 18.7 -1.2**
KPKS pmax pmax
comp=Z,205nm,1.7s
JMIC **Jan Mayen** **40.44 343** LR LR 18 34 20.2
comp=Z,19µm,18.6s,baz=133,slow=40
JMIC **Jan Mayen** **40.44 343** *e*P **P** **18 15 19.7 -0.1**
UZB **Uzynbulak** **40.67 63** *e*P **P** **18 15 21.3 -1.0**
comp=Z,154nm,1.9s,baz=63
UZB *e*S **S** **18 21 30.9 -0.3**
baz=63
UZB **Uzynbulak** **40.67 63** *e*P **P** **18 15 21.3 -1.0**
UZB *e*S **S** **18 21 30.8 -0.3**
UZB pmax pmax
comp=Z,154nm,1.9s
DBIC **Dimbokro** **40.67 233** P **P** **18 15 21.6 -0.8**
comp=Z,96nm,0.5s,baz=25,slow=8.7,SNR=95
DBIC LR LR 18 35 26.6
comp=Z,38µm,18.1s,baz=23,slow=41
DBIC **Dimbokro** **40.67 233** P **P** **18 15 21.4 -1.0**
DBIC IAmb IAmb 18 15 43.5
comp=Z,458nm,1.3s
PDGK **Podgornoye** **40.98 62** P **P** **18 15 25.1 +0.2**
SHLS **Shalkode** **40.99 62** *e*P **P** **18 15 26.4 +1.5**
comp=Z,155nm,2.0s,baz=63
SHLS **Shalkode** **40.99 62** *e*P **P** **18 15 26.4 +1.5**
SHLS pmax pmax
comp=Z,155nm,2.0s
SEM **Semipalatinsk** **41.12 51** *e*P **P** **18 15 24.8 -1.3**
comp=Z,257nm,1.6s,baz=52
SEM *e*S **S** **18 21 37.1 -0.8**
baz=52
SEM LR LR 18 32 34.9
comp=Z,3µm,16.8s,baz=52
SEM **Semipalatinsk** **41.12 51** *e*P **P** **18 15 24.7 -1.3**
SEM *e*S **S** **18 21 37.0 -0.8**
SEM pmax pmax
comp=Z,257nm,1.6s
SEM MLR MLR
comp=Z,3µm,17.0s
BORG **Borgarnes** **41.18 331** P **P** **18 15 26.6 +0.6**
comp=Z,83nm,1.0s,baz=137,slow=6.1,SNR=11
BORG LR LR 18 36 01.7
comp=Z,10µm,18.9s,baz=122,slow=41
BORG **Borgarnes** **41.18 331** P **P** **18 15 27.4 +1.4**
HOPEN **Hopen** **41.42 359** *e*P **P** **18 15 27.2 -0.6**
BART **Pico Bartolome** **41.45 289** *e*P **P** **18 15 31.4 +2.7**
comp=Z,556nm,1.3s
PSMN **Pico do Norte,** **41.55 288** *e*P **P** **18 15 31.5 +2.1**
comp=Z,483nm,1.5s
PSMA **Santa Maria** **41.60 288** *e*P **P** **18 15 32.0 +2.2**
comp=Z,369nm,1.4s
CMLA **Cha da Macela** **41.73 289** *e*P **P** **18 15 33.4 +2.5**
comp=Z,554nm,2.3s
CMLA **Cha da Macela** **41.73 289** P **P** **18 15 29.2 -1.7**
CMLA pmax pmax
comp=Z,406nm,1.1s
CMLA MLR MLR
comp=Z,13µm,20.0s
CMLA **Cha da Macela** **41.73 289** P **P** **18 15 29.2 -1.7**
CMLA IAmb IAmb 18 15 45.6
comp=Z,406nm,1.1s
GRON **Grota Negra** **41.74 289** *e*P **P** **18 15 32.6 +1.6**
comp=Z,456nm,1.4s
PSET **Sete Cidades** **41.87 290** *e*P **P** **18 15 35.0 +2.9**
comp=Z,530nm,1.4s
SMLA **Simla** **41.97 81** *e*P **P** **18 15 33.4 +0.5**
SMLA IAmb IAmb 18 15 54.8
comp=Z,484nm,0.7s
DODT **Dodoma, Tanzan** **42.01 167** *i*P **P** **18 15 33.6 +0.1**
HSPB **Hornsund (broa** **42.21 356** *e*P **P** **18 15 36.6 +2.3**
HSPB *e*L L 18 34 38.9
comp=Z,25µm,21.8s
HSPB **Hornsund (broa** **42.21 356** *e*P **P** **18 15 34.3 0.0**
MAKZ **Makanchi** **42.39 57** P **P** **18 15 36.8 +0.6**
MAKZ **Makanchi** **42.39 57** P **P** **18 15 36.8 +0.6**
MAKZ IAmb IAmb 18 15 41.5
comp=Z,187nm,0.8s
MK31 **Makanchi Array** **42.61 57** *i*P **P** **18 15 38.6 +0.6**
MK31 **Makanchi Array** **42.61 57** P **P** **18 15 38.7 +0.6**
MK31 IAmb IAmb 18 15 43.6
comp=Z,251nm,0.6s
MKAR **Makanchi Array** **42.61 57** P **P** **18 15 38.6 +0.6**
comp=Z,297nm,0.7s,baz=278,slow=6.8,SNR=2189
MKAR ScP **ScP** **18 21 20.8 +1.5**
comp=Z,8.3nm,0.8s,baz=269,slow=2.8,SNR=2.9
MKAR S **S** **18 22 00.3 +0.8**
comp=Z,23nm,1.1s,baz=278,slow=14,SNR=4.1
MKAR LR LR 18 36 05.7
comp=Z,11µm,20.7s,baz=270,slow=40
MKAR **Makanchi Array** **42.61 57** *i*P **P** **18 15 38.5 +0.5**
MKAR pmax pmax
comp=Z,301nm,0.7s
MKAR **Makanchi Array** **42.61 57** P **P** **18 15 38.4 +0.4**
PSCM **Serra do Cume** **42.74 291** *e*P **P** **18 15 42.0 +2.8**
comp=Z,407nm,1.4s
PAGU **Agualva, Azore** **42.78 291** *e*P **P** **18 15 42.4 +2.9**
comp=Z,406nm,1.5s
ADH **Angra Heroismo** **42.84 291** *e*P **P** **18 15 42.4 +2.4**
comp=Z,395nm,1.5s
DDI **Dehra Dun** **42.96 82** *e*P **P** **18 15 41.8 +0.7**
DDI IAmb IAmb 18 15 59.1
comp=Z,245nm,0.8s
SPA0 **Spitsbergen Ar** **43.32 357** P **P** **18 15 42.7 -0.6**
SPA0 IAmb IAmb 18 16 04.4
comp=Z,511nm,1.1s
SPA0 **Spitsbergen Ar** **43.32 357** *e*P **P** **18 15 42.8 -0.6**
SPITS **Spitsbergen Ar** **43.32 357** P **P** **18 15 42.5 -0.9**
comp=Z,108nm,0.8s,baz=161,slow=17,SNR=33
PGRA **Graciosa** **43.33 292** *e*P **P** **18 15 47.3 +3.4**
comp=Z,334nm,1.8s
SRBC **Serra Branca** **43.38 292** *e*P **P** **18 15 47.3 +3.0**
comp=Z,339nm,1.2s
PMAN **Manadas** **43.50 291** *e*P **P** **18 15 48.5 +3.2**
comp=Z,247nm,1.1s
ROSA **Rosais** **43.60 292** *e*P P 18 15 51.0 +4.9
comp=Z,347nm,1.7s
ROSA **Rosais** **43.60 292** P **P** **18 15 45.5 -0.5**
ROSA IAmb IAmb 18 16 05.3
comp=Z,203nm,1.0s
LOSI **Makongolosi** **43.76 171** *i*P **P** **18 15 49.3 +1.6**
LOSI IAmb IAmb 18 15 51.9
comp=Z,228nm,1.6s
LOSI IVMs_BB IVMs_BB 18 37 24.9
comp=Z,13µm,12.0s
PICO **Pico** **43.79 291** *e*P **P** **18 15 50.6 +2.9**
comp=Z,214nm,1.2s
SCO **Scoresbysund** **43.80 339** *i*P **P** **18 15 47.7 +0.5**
SCO IAmb IAmb 18 15 51.4
comp=Z,110nm,1.0s
SCO IAMs_20 IAMs_20 18 34 10.1
comp=Z,16µm,20.3s
SCO **Scoresbysund** **43.80 339** P **P** **18 15 47.7 +0.5**
SCO pmax pmax
comp=Z,143nm,1.1s
SCO MLR MLR
comp=Z,17µm,22.0s
SCO **Scoresbysund** **43.80 339** P **P** **18 15 47.7 +0.5**
PCAN **Candelaria** **43.84 291** *e*P **P** **18 15 51.5 +3.4**
comp=Z,279nm,1.6s
PCED **Cedros** **43.97 292** *e*P **P** **18 15 52.0 +3.0**
comp=Z,266nm,1.0s
CALA **Caldeira** **43.98 291** *e*P **P** **18 15 52.1 +2.9**
comp=Z,536nm,1.4s
ZAA0 **Zalesovo Array** **43.99 46** P **P** **18 15 48.9 0.0**
ZALV **Zalesovo Beam** **43.99 46** P **P** **18 15 49.2 +0.3**
comp=Z,416nm,0.5s,baz=269,slow=8.3,SNR=1074
ZALV ScP **ScP** **18 21 25.4 +0.7**
comp=Z,6.7nm,0.8s,baz=262,slow=5.1,SNR=2.2
ZALV LR LR 18 38 15.0
comp=Z,8µm,19.6s,baz=266,slow=42
ZALV **Zalesovo Beam** **43.99 46** *i*P **P** **18 15 49.2 +0.3**
ZALV pmax pmax
comp=Z,417nm,0.5s
ZALV **Zalesovo Beam** **43.99 46** P **P** **18 15 48.8 -0.2**
JILO **Lwanjilo** **44.14 170** *i*P **P** **18 15 52.2 +1.3**
JILO IAmb IAmb 18 15 55.7
comp=Z,103nm,1.2s
JILO IVMs_BB IVMs_BB 18 37 52.4
comp=Z,11µm,11.2s
KBS **Kingsbay** **44.28 356** *i*P **P** **18 15 50.9 -0.1**
KBS IAMs_20 IAMs_20 18 34 34.6
comp=Z,60µm,20.6s
KBS **Kingsbay** **44.28 356** *i*P **P** **18 15 48.5 -2.5**
KBS pmax pmax
comp=Z,180nm,1.0s
KBS MLR MLR
comp=Z,24µm,21.0s
KBS **Kingsbay** **44.28 356** P **P** **18 15 50.5 -0.4**
KBS IAmb IAmb 18 16 06.2
comp=Z,259nm,0.9s
KBS **Kingsbay** **44.28 356** *e*P **P** **18 15 50.9 -0.1**
ZSN **Zaisan** **44.30 56** *e*P **P** **18 15 50.7 -0.9**
comp=Z,48nm,0.9s,baz=56
ZSN *e*S **S** **18 22 23.6 -0.6**
baz=56
ZSN **Zaisan** **44.30 56** *e*P **P** **18 15 50.6 -1.0**
ZSN *e*S **S** **18 22 23.6 -0.6**
ZSN pmax pmax
comp=Z,47nm,0.9s
GAWA **Igawa** **44.30 169** *i*P **P** **18 15 54.4 +2.4**
GAWA IAmb IAmb 18 16 07.7
comp=Z,559nm,2.6s
GAWA IVMs_BB IVMs_BB 18 38 15.4
comp=Z,12µm,10.4s
CHML **Chimala** **44.31 170** *i*P **P** **18 15 53.4 +1.4**
CHML IAmb IAmb 18 16 45.2
comp=Z,368nm,1.5s
CHML IVMs_BB IVMs_BB 18 37 44.8
comp=Z,12µm,11.7s
PDHT **Panda Hill** **44.35 171** *i*P **P** **18 15 53.7 +1.3**
PDHT IAmb IAmb 18 16 08.6
comp=Z,172nm,1.4s
PDHT IVMs_BB IVMs_BB 18 37 45.2
comp=Z,11µm,11.3s
MBO **M'Bour** **44.39 253** P **P** **18 15 52.6 0.0**
MBO IAmb IAmb 18 15 56.7
comp=Z,460nm,1.2s
BAKO **Makambako** **44.44 169** *i*P **P** **18 15 53.9 +0.7**
BAKO IAmb IAmb 18 16 45.1
comp=Z,133nm,1.7s
BAKO IVMs_BB IVMs_BB 18 38 29.8
comp=Z,8µm,13.5s
MZUN **Kiwira** **44.55 171** *i*P **P** **18 15 56.5 +2.4**
MZUN IAmb IAmb 18 16 10.6
comp=Z,581nm,1.5s
MZUN IVMs_BB IVMs_BB 18 38 06.7
comp=Z,10µm,11.6s
NKAL **Nkalisi** **44.63 170** *i*P **P** **18 15 57.2 +2.6**
NKAL IAmb IAmb 18 16 10.9
comp=Z,368nm,1.5s
NKAL IVMs_BB IVMs_BB 18 38 16.8
comp=Z,12µm,14.1s
ILOM **Ilombo** **44.66 171** *i*P **P** **18 15 55.8 +0.8**
ILOM IAML 18 16 11.5
comp=Z,313nm,1.6s
ILOM IVMs_BB IVMs_BB 18 37 59.2
comp=Z,10µm,10.8s
POO **Poona** **44.68 99** *e*P **P** **18 15 56.3 +1.4**
POO IAmb IAmb 18 16 03.2
comp=Z,159nm,1.2s

MAKE	**Makete**	**44.75**	**170**	*i*	P	**P**	**18 15 55.5**	**-0.2**
MAKE					IAmb	IAmb	18 17 18.2	
	comp=Z,90nm,0.3s							
MAKE					IVMs_BB	IVMs_BB	18 37 58.5	
	comp=Z,11μm,11.8s							
ITUM	**Tunduma**	**44.76**	**171**	*i*	P	**P**	**18 15 58.2**	**+2.5**
ITUM					IAmb	IAmb	18 16 11.9	
	comp=Z,221nm,1.8s							
ITUM					IVMs_BB	IVMs_BB	18 35 28.0	
	comp=Z,8μm,16.7s							
KIPE	**Kipengere**	**44.83**	**169**	*i*	P	**P**	**18 15 58.1**	**+1.8**
KIPE					IAmb	IAmb	18 16 21.1	
	comp=Z,98nm,1.2s							
KIPE					IVMs_BB	IVMs_BB	18 38 31.0	
	comp=Z,12μm,10.9s							
KIDE	**Kidegembe**	**44.90**	**169**	*i*	P	**P**	**18 15 58.5**	**+1.7**
KIDE					IAmb	IAmb	18 16 12.3	
	comp=Z,480nm,2.2s							
KIDE					IVMs_BB	IVMs_BB	18 38 44.6	
	comp=Z,8μm,11.2s							
UKWA	**Ukwama**	**44.95**	**170**	*i*	P	**P**	**18 15 59.4**	**+2.0**
UKWA					IAmb	IAmb	18 16 02.3	
	comp=Z,852nm,3.1s							
UKWA					IVMs_BB	IVMs_BB	18 38 05.1	
	comp=Z,12μm,12.3s							
MFRI	**Mfriga**	**44.97**	**168**	*i*	P	**P**	**18 15 57.9**	**+0.6**
MFRI					IAmb	IAmb	18 16 02.0	
	comp=Z,2μm,3.7s							
MFRI					IVMs_BB	IVMs_BB	18 36 11.7	
	comp=Z,8μm,12.8s							
TOLA	**Matola**	**45.14**	**169**	*i*	P	**P**	**18 16 00.9**	**+2.1**
TOLA					IAmb	IAmb	18 16 04.4	
	comp=Z,48nm,1.0s							
TOLA					IVMs_BB	IVMs_BB	18 38 40.8	
	comp=Z,10μm,11.9s							
DBG	**Daneborg**	**45.25**	**344**	*i*	P	**P**	**18 15 58.5**	**-0.2**
DBG					IAmb	IAmb	18 16 05.6	
	comp=Z,28nm,0.8s							
DBG					IAmb_20	IAmb_20	18 37 05.7	
	comp=Z,23μm,14.2s							
BHPL	**Bhopal**	**45.30**	**91**	*eP*	P	**P**	**18 15 59.7**	**-0.2**
BHPL					IAmb	IAmb	18 16 21.7	
	comp=Z,204nm,0.9s							
UNDA	**Madunda**	**45.38**	**169**	*i*	P	**P**	**18 16 01.5**	**+0.8**
UNDA					IAmb	IAmb	18 16 06.6	
	comp=Z,408nm,2.1s							
UNDA					IVMs_BB	IVMs_BB	18 38 25.6	
	comp=Z,10μm,10.5s							
WINO	**Wino**	**45.42**	**168**	*i*	P	**P**	**18 16 03.0**	**+2.0**
WINO					IAmb	IAmb	18 16 16.4	
	comp=Z,484nm,1.6s							
WINO					IVMs_BB	IVMs_BB	18 39 02.6	
	comp=Z,8μm,11.7s							
H07N1	**FLORES T-PHASE**	**45.55**	**294**	*eP*	P	**P**	**18 16 04.9**	**+3.2**
NIND	**Nindi**	**45.68**	**169**	*i*	P	**P**	**18 16 04.8**	**+1.8**
NIND					IAmb	IAmb	18 16 50.3	
	comp=Z,436nm,2.6s							
NIND					IVMs_BB	IVMs_BB	18 38 28.7	
	comp=Z,9μm,10.5s							
H07S1	**FLORES T-PHASE**	**45.69**	**293**	*eP*	P	**P**	**18 16 05.7**	**+2.9**
BUMI	**Ibumi**	**45.72**	**169**	*i*	P	**P**	**18 16 04.6**	**+1.3**
BUMI					IAmb	IAmb	18 16 17.6	
	comp=Z,627nm,2.5s							
BUMI					IVMs_BB	IVMs_BB	18 39 02.7	
	comp=Z,8μm,10.4s							
DGZ	**Jazzator, Alta**	**45.77**	**52***c*	*i*	P	**P**	**18 16 04.2**	**+0.7**
DGZ					pmax	pmax		
	comp=Z,321nm,0.7s							
DGZ					MLR	MLR		
	comp=Z,13μm,20.0s							
BANG	**Mbangamawe**	**45.83**	**168**	*i*	P	**P**	**18 16 05.5**	**+1.4**
BANG					IAmb	IAmb	18 16 37.8	
	comp=Z,1μm,2.6s							
BANG					IVMs_BB	IVMs_BB	18 38 56.2	
	comp=Z,9μm,11.0s							
ZINI	**Mgazini**	**46.12**	**168**	*i*	P	**P**	**18 16 07.1**	**+0.7**
ZINI					IAmb	IAmb	18 17 14.0	
	comp=Z,119nm,1.6s							
ZINI					IVMs_BB	IVMs_BB	18 39 22.9	
	comp=Z,10μm,12.0s							
GOA	**Goa**	**46.29**	**103**	*eP*	P	**P**	**18 16 09.0**	**+1.3**
GOA					IAmb	IAmb	18 16 16.2	
	comp=Z,230nm,1.2s							
LIGA	**Liganga**	**46.32**	**169**	*i*	P	**P**	**18 16 11.2**	**+3.3**
LIGA					IAmb	IAmb	18 16 22.1	
	comp=Z,542nm,2.4s							
LIGA					IVMs_BB	IVMs_BB	18 41 07.0	
	comp=Z,10μm,12.2s							
TIRI	**Matiri**	**46.34**	**169**	*i*	P	**P**	**18 16 08.8**	**+0.7**
TIRI					IAmb	IAmb	18 16 12.7	
	comp=Z,102nm,1.0s							
TIRI					IVMs_BB	IVMs_BB	18 37 52.3	
	comp=Z,6μm,16.8s							
NGEA	**Songea**	**46.38**	**168**	*i*	P	**P**	**18 16 11.3**	**+2.8**
NGEA					IAmb	IAmb	18 16 12.7	
	comp=Z,140nm,1.6s							
NGEA					IVMs_BB	IVMs_BB	18 39 40.3	
	comp=Z,10μm,11.0s							
MKIL	**Mkili**	**46.42**	**169**	*i*	P	**P**	**18 16 10.2**	**+1.5**
MKIL					IAmb	IAmb	18 16 22.8	
	comp=Z,189nm,1.1s							
MKIL					IVMs_BB	IVMs_BB	18 39 12.1	
	comp=Z,7μm,14.6s							
KIMO	**Ikongo**	**46.46**	**167**	*i*	P	**P**	**18 16 09.6**	**+0.6**
KIMO					IAmb	IAmb	18 16 24.7	
	comp=Z,243nm,1.6s							
KIMO					IVMs_BB	IVMs_BB	18 37 37.5	
	comp=Z,10μm,18.2s							
WMQ	**Urumqi**	**46.80**	**60**		P	**P**	**18 16 13.1**	**+1.6**
WMQ					pP	pwP	18 16 19.3	-1.1
WMQ					sP	sP	18 16 21.8	+1.2
WMQ					S	**S**	**18 23 04.1**	**+3.6**
WMQ					sS	sS	18 23 17.0	+6.0
WMQ					ScS	**ScS**	**18 26 04.3**	**-0.5**
WMQ					pmax	pmax		
	comp=Z,330nm,1.3s							
WMQ					pmax	pmax		
	comp=Z,4μm,7.5s							
WMQ					LR	LR		
	comp=Z,21μm,24.7s							
WMQ					LR	LR		
	comp=Z,16μm,22.7s							
WMQ					LR	LR		
	comp=Z,43μm,28.8s							
WMQ	**Urumqi**	**46.80**	**60**		P	**P**	**18 16 12.6**	**+1.1**
WMQ					pmax	pmax		
	comp=Z,671nm,1.3s							
WMQ					MLR	MLR		
	comp=Z,5μm,21.0s							
WMQ	**Urumqi**	**46.80**	**60**		P	**P**	**18 16 12.6**	**+1.1**
MBAM	**Mbamba Bay**	**46.80**	**169**	*i*	P	**P**	**18 16 14.7**	**+3.0**
MBAM					IAmb	IAmb	18 16 39.0	
	comp=Z,65nm,1.2s							
MBAM					IVMs_BB	IVMs_BB	18 37 27.9	
	comp=Z,7μm,16.9s							
KURU	**Muhukuru**	**46.86**	**168**	*i*	P	**P**	**18 16 13.3**	**+1.2**
KURU					IAmb	IAmb	18 16 27.7	
	comp=Z,896nm,2.8s							
KURU					IVMs_BB	IVMs_BB	18 38 44.0	
	comp=Z,9μm,17.4s							
NRIK	**Noril'sk**	**47.27**	**25**		P	**P**	**18 16 15.7**	**+1.1**
	comp=Z,130nm,0.7s,baz=240,slow=4.2,SNR=164							
NRIK					LR	LR	18 39 18.3	
	comp=Z,12μm,18.9s,baz=253,slow=40							
NRIK	**Noril'sk**	**47.27**	**25***d*	*i*	P	**P**	**18 16 15.6**	**+0.9**
NRIK					pmax	pmax		
	comp=Z,173nm,0.8s							
NRIK					MLR	MLR		
	comp=Z,11μm,18.0s							
NRIK	**Noril'sk**	**47.27**	**25**		P	**P**	**18 16 15.5**	**+0.8**
NRIK					IAmb	IAmb	18 16 20.6	
	comp=Z,157nm,0.8s							
PYUN	**Piuthan**	**47.79**	**82**	*eP*	P	**P**	**18 16 20.3**	**+0.7**
	comp=Z,584nm,0.9s							
ANGG	**Ammassalik, Gr**	**48.05**	**330**	*i*	P	**P**	**18 16 20.6**	**-0.1**
ANGG					IAmb	IAmb	18 16 26.7	
	comp=Z,126nm,1.1s							
ANGG					IAms_20	IAms_20	18 39 44.9	
	comp=Z,26μm,16.3s							
ANGG	**Ammassalik, Gr**	**48.05**	**330**		P	**P**	**18 16 19.8**	**-0.9**
ANGG					IAmb	IAmb	18 16 30.2	
	comp=Z,143nm,1.1s							
ANGG					IAms_20	IAms_20	18 37 16.3	
	comp=Z,23μm,22.0s							
KOLN	**Koldanda**	**48.42**	**82**	*eP*	P	**P**	**18 16 24.7**	**+0.3**
	comp=Z,504nm,0.9s							
ISOG	**Isortoq, Green**	**48.59**	**330**	*i*	P	**P**	**18 16 25.2**	**+0.2**
ISOG					IAmb	IAmb	18 16 28.4	
	comp=Z,432nm,0.8s							
HYB	**Hyderabad**	**49.07**	**97**	*i*	P	**P**	**18 16 29.0**	**-0.3**
	comp=Z,220nm,1.0s							
HYB				*e*	PcP	**PcP**	**18 17 56.0**	**+3.1**
HYB				*e*	PP	**PP**	**18 18 29.0**	**+6.0**
HYB				*e*	PPP	PPP	18 19 16.0	
HYB				*e*			18 23 34.0	
HYB				*e*			18 26 21.0	
HYB				*e*	ScS	ScS	18 26 31.0	+10
HYB	**Hyderabad**	**49.07**	**97**	*eP*		**P**	**18 16 28.3**	**-1.0**
HYB					IAmb	IAmb	18 16 37.8	
	comp=Z,142nm,0.8s							
NOR	**Nord**	**49.09**	**352**	*i*	P	**P**	**18 16 27.0**	**-1.6**
NOR				*i*	P	**P**	**18 16 27.0**	**-1.6**
NOR					IAmb	IAmb	18 16 30.8	
	comp=Z,117nm,1.1s							
NOR	**Nord**	**49.09**	**352**	*i*	P	**P**	**18 16 27.0**	**-1.6**
NOR					pmax	pmax		
	comp=Z,120nm,1.1s							
GKN	**Gorkha**	**49.16**	**81**	*eP*	P	**P**	**18 16 30.3**	**+0.2**
	comp=Z,462nm,0.8s							
ICESG	**Greenland Ices**	**49.24**	**334**	*i*	P	**P**	**18 16 30.0**	**-0.3**
ICESG					IAmb	IAmb	18 16 34.4	
	comp=Z,138nm,0.9s							
ICESG					IAms_20	IAms_20	18 41 18.6	
	comp=Z,13μm,15.1s							
SACV	**Santiago Islan**	**49.35**	**259**		P	**P**	**18 16 32.6**	**+1.1**
SACV	**Santiago Islan**	**49.35**	**259**		P		18 16 33.8	
SUMG	**Summit**	**49.44**	**339**	*i*	P	**P**	**18 16 31.6**	**-0.3**
SUMG					IAmb	IAmb	18 16 35.4	
	comp=Z,109nm,0.8s							
SUMG					IAms_20	IAms_20	18 37 20.2	
	comp=Z,17μm,21.0s							
SUMG	**Summit**	**49.44**	**339**	*i*	P	**P**	**18 16 31.5**	**-0.3**
SUMG					pmax	pmax		
	comp=Z,110nm,0.8s							
SUMG					MLR	MLR		
	comp=Z,17μm,21.0s							
SUMG	**Summit**	**49.44**	**339**		P	**P**	**18 16 31.2**	**-0.7**
SUMG					IAmb	IAmb	18 16 51.1	
	comp=Z,240nm,1.2s							
SUMG					IAms_20	IAms_20	18 37 27.0	
	comp=Z,18μm,22.0s							
DMN	**Daman**	**49.70**	**82**	*eP*	P	**P**	**18 16 34.7**	**+0.3**
	comp=Z,537nm,0.9s							
KKN	**Kakani**	**49.77**	**81**	*eP*	P	**P**	**18 16 34.9**	**+0.1**
	comp=Z,358nm,0.9s							
PKIN	**Phulchoki**	**49.95**	**82**	*eP*	P	**P**	**18 16 36.2**	**-0.1**
	comp=Z,334nm,0.9s							
PKI	**Pulchoki**	**49.96**	**82**	*eP*	P	**P**	**18 16 36.3**	**-0.1**
	comp=Z,131nm,0.7s							
MNCI	**Minicoy**	**49.99**	**111**		P	**P**	**18 16 35.5**	**-0.8**
MNCI					IAmb	IAmb	18 17 01.6	
	comp=Z,168nm,1.0s							
MNCI					IAms_20	IAms_20	18 40 46.3	
	comp=Z,22μm,20.0s							
GUN	**Gumba**	**50.21**	**81**	*eP*	P	**P**	**18 16 38.3**	**0.0**
LSZ	**Lusaka**	**50.21**	**178**		IAms_20	IAms_20	18 37 24.9	
	comp=Z,24μm,20.0s							
LSZ	**Lusaka**	**50.21**	**178**		IVMs_BB	IVMs_BB	18 42 48.3	
	comp=Z,10μm,11.7s							
JIRN	**Jiri**	**50.56**	**81**	*eP*	P	**P**	**18 16 41.1**	**+0.1**
ZOMB	**Zomba**	**50.94**	**169**	*i*	P	**P**	**18 16 44.5**	**+1.0**
ZOMB					IAmb	IAmb	18 16 58.9	
	comp=Z,61nm,1.2s							
ZOMB					IVMs_BB	IVMs_BB	18 40 31.5	
	comp=Z,2μm,16.4s							
RAMN	**Ramite**	**51.19**	**82**	*eP*	P	**P**	**18 16 45.0**	**-0.6**
	comp=Z,85nm,0.8s							
NRS	**Narsarsuaq**	**51.48**	**324**	*i*	P	**P**	**18 16 49.5**	**+2.6**
NRS					IAmb	IAmb	18 16 50.2	
	comp=Z,106nm,0.9s							
NRS					IAms_20	IAms_20	18 41 12.6	
	comp=Z,16μm,16.7s							
NRS	**Narsarsuaq**	**51.48**	**324**		P	**P**	**18 16 47.2**	**+0.3**
NRS					pmax	pmax		
	comp=Z,378nm,1.3s							
NRS					MLR	MLR		
	comp=Z,14μm,20.0s							
NRS	**Narsarsuaq**	**51.48**	**324**		P	**P**	**18 16 47.2**	**+0.3**
NRS					IAmb	IAmb	18 17 01.6	
	comp=Z,378nm,1.3s							
NRS					IAms_20	IAms_20	18 40 26.1	
	comp=Z,14μm,20.0s							
DY2G	**Dye2**	**51.60**	**331**	*i*	P	**P**	**18 16 48.2**	**+0.1**
DY2G					IAmb	IAmb	18 16 51.6	
	comp=Z,539nm,0.8s							
DY2G					IAms_20	IAms_20	18 39 41.4	
	comp=Z,21μm,21.3s							
ODAN	**Odare**	**51.86**	**82**	*eP*	P	**P**	**18 16 50.1**	**-0.5**
	comp=Z,88nm,0.6s							
TAPN	**Taplejung**	**51.92**	**81**	*eP*	P	**P**	**18 16 51.0**	**-0.1**
BOK	**Bokaro**	**51.97**	**86**	*eP*	P	**P**	**18 16 50.4**	**-0.8**
BOK					IAmb	IAmb	18 17 00.2	
	comp=Z,156nm,0.9s							
GTK	**Tadong**	**52.65**	**80**	*eP*	P	**P**	**18 16 56.4**	**0.0**
GTK					IAmb	IAmb	18 17 17.1	
	comp=Z,217nm,0.8s							
TRD	**Trivandrum**	**52.86**	**108**	*eP*	P	**P**	**18 17 00.8**	**+2.9**
TRD					IAmb	IAmb	18 17 15.1	
	comp=Z,336nm,1.0s							
SBV	**Sambava**	**53.11**	**152**		P	**P**	**18 16 59.8**	**+0.3**
	SNR=6.4							
SFJD	**Kangerlussuaq**	**53.31**	**331**		P	**P**	**18 16 59.6**	**-0.8**
	comp=Z,87nm,0.5s,baz=97,slow=6.8,SNR=30							
SFJD	**Kangerlussuaq**	**53.31**	**331**	*i*	P	**P**	**18 16 59.7**	**-0.8**
SFJD					IAmb	IAmb	18 17 03.0	
	comp=Z,79nm,0.9s							
SFJD					IAms_20	IAms_20	18 40 10.9	
	comp=Z,10μm,21.0s							
SFJD	**Kangerlussuaq**	**53.31**	**331**		P	**P**	**18 16 58.7**	**-1.7**
SFJD					IAmb	IAmb	18 17 05.2	
	comp=Z,144nm,0.8s							
SFJD	**Kangerlussuaq**	**53.31**	**331**		IAms_20	IAms_20	18 40 18.4	
	comp=Z,17μm,22.0s							
NEEM	**North Greenlan**	**53.31**	**345**	*i*	P	**P**	**18 16 59.7**	**-1.0**
NEEM					IAmb	IAmb	18 17 04.8	
	comp=Z,87nm,0.9s							
NEEM					IAms_20	IAms_20	18 41 39.9	
	comp=Z,16μm,16.3s							
LSA	**Lhasa**	**53.72**	**77**		P	**P**	**18 17 05.3**	**+0.7**
LSA					S	**S**	**18 24 34.5**	**-3.5**
LSA					pmax	pmax		
	comp=Z,90nm,0.7s							
LSA					LR	LR		
	comp=Z,16μm,31.3s							
LSA					LR	LR		
	comp=Z,24μm,26.3s							
LSA					LR	LR		
	comp=Z,30μm,32.0s							
LSA	**Lhasa**	**53.72**	**77**		P	**P**	**18 17 04.7**	**+0.1**
LSA	**Lhasa**	**53.72**	**77**		P	**P**	**18 17 04.2**	**-0.4**
LSA					pmax	pmax		
	comp=Z,109nm,0.9s							
LSA					MLR	MLR		
	comp=Z,2μm,19.0s							
LSA	**Lhasa**	**53.72**	**77**		P	**P**	**18 17 04.2**	**-0.4**
LSA					IAmb	IAmb	18 17 20.1	
	comp=Z,109nm,0.9s							
LSA	**Lhasa**	**53.72**	**77**		P	**P**	**18 17 04.2**	**-0.4**
LSA					P	**P**	**18 17 04.2**	**-0.4**
MOY	**Mondy**	**53.97**	**48**	*eP*		**P**	**18 17 07.5**	**+1.8**
MOY					pmax	pmax		
	comp=Z,463nm,2.0s							
NUUK	**Nuuk**	**54.06**	**328**	*i*	P	**P**	**18 17 05.4**	**-0.5**
NUUK					IAmb	IAmb	18 17 09.1	
	comp=Z,130nm,0.9s							
NUUK					IAms_20	IAms_20	18 40 51.2	
	comp=Z,16μm,19.2s							
UPNV	**Upernavik**	**54.72**	**339**	*i*	P	**P**	**18 17 09.9**	**-0.7**
UPNV					IAmb	IAmb	18 17 13.6	
	comp=Z,78nm,0.8s							
UPNV					IAms_20	IAms_20	18 42 43.7	
	comp=Z,20μm,18.4s							
ALE	**Alert**	**55.23**	**351**		IAms_20	IAms_20	18 43 02.3	
	comp=Z,13μm,18.0s							
TLY	**Talaya**	**55.57**	**47**		LR	LR	18 45 33.1	
	comp=Z,8μm,19.0s,baz=298,slow=41							
TLY	**Talaya**	**55.57**	**47**	*i*	P	**P**	**18 17 19.1**	**+1.9**
TLY				*i*			18 19 21.8	
TLY				*e*	S	**S**	**18 25 00.2**	**-1.2**
TLY				*e*	SS	**SS**	**18 28 46.2**	**+0.2**
TLY				*e*	SSS	SSS	18 30 46.0	
TLY					pmax	pmax		
	comp=Z,757nm,1.6s							
TLY	**Talaya**	**55.57**	**47**		P	**P**	**18 17 18.4**	**+1.3**
TLY					IAmb	IAmb	18 17 28.7	
	comp=Z,248nm,1.2s							
TLY	**Talaya**	**55.57**	**47**		P	**P**	**18 17 15.7**	**-1.5**
GUWA	**GUWAHATI**	**55.63**	**80**	*eP*		**P**	**18 17 16.9**	**-0.9**
GUWA					IAmb	IAmb	18 17 26.8	
	comp=Z,112nm,1.1s							
ZAK	**Zakamensk**	**55.69**	**49**	*eP*		**P**	**18 17 19.2**	**+1.1**
ZAK				*e*			18 24 54.0	
ZAK					pmax	pmax		
	comp=Z,215nm,1.2s							
IRK	**Irkutsk**	**55.80**	**47**	*eP*		**P**	**18 17 19.4**	**+0.6**
IRK				*eS*		**S**	**18 25 08.0**	**+3.6**
IRK					pmax	pmax		
	comp=Z,592nm,2.2s							
SHL	**Shillong**	**56.06**	**81**		P	**P**	**18 17 20.1**	**-1.1**
SHL					pmax	pmax		
	comp=Z,117nm,0.8s							
SHL					MLR	MLR		
	comp=Z,5μm,22.0s							
SHL	**Shillong**	**56.06**	**81**	*eP*		**P**	**18 17 20.3**	**-1.0**
SHL					IAmb	IAmb	18 17 34.8	
	comp=Z,128nm,1.0s							
SHL	**Shillong**	**56.06**	**81**		P	**P**	**18 17 20.1**	**-1.1**
SHL					IAmb	IAmb	18 17 36.9	
	comp=Z,117nm,0.8s							
SHL	**Shillong**	**56.06**	**81**		P	**P**	**18 17 20.5**	**-0.7**
	SNR=60							
AGT	**Agartala**	**56.30**	**83**	*eP*		**P**	**18 17 23.3**	**+0.6**
AGT					IAmb	IAmb	18 17 30.8	
	comp=Z,158nm,0.9s							
PALK	**Pallekele**	**56.55**	**106***c*	*i*	P	**P**	**18 17 25.1**	**+0.5**
PALK					pmax	pmax		
	comp=Z,137nm,1.2s							
PALK					MLR	MLR		
	comp=Z,32μm,19.0s							
PALK	**Pallekele**	**56.55**	**106**		P	**P**	**18 17 24.4**	**-0.2**
PALK	**Pallekele**	**56.55**	**106**		P	**P**	**18 17 25.1**	**+0.5**
PALK					S	**S**	**18 25 14.4**	**-0.8**
GTA	**Gaotai**	**56.73**	**62**	⇓	P	**P**	**18 17 26.6**	**+0.8**
GTA					pP	pwP	18 17 33.6	-1.2
GTA					sP	sP	18 17 37.3	+2.3
GTA					PP	**PP**	**18 19 36.8**	**+5.0**
GTA					S	**S**	**18 25 15.3**	**-2.1**
GTA					sS	sS	18 25 28.1	0.0
GTA					SS	**SS**	**18 29 07.3**	**+2.3**
GTA					pmax	pmax		
	comp=Z,40nm,0.8s							
GTA					pmax	pmax		
	comp=Z,2μm,10.4s							
GTA					LR	LR		
	comp=Z,6μm,23.9s							
GTA					LR	LR		
	comp=Z,5μm,24.3s							
GTA					LR	LR		
	comp=Z,8μm,23.9s							
BELO	**BELONIA**	**56.76**	**83**	*eP*		**P**	**18 17 25.8**	**-0.2**
ZIRO	**ZIRO**	**56.78**	**78**	*eP*		**P**	**18 17 26.6**	**+0.2**
ZIRO					IAmb	IAmb	18 17 41.0	
	comp=Z,342nm,0.9s							
ABPO	**Ambohimpanom**	**57.28**	**157**		P	**P**	**18 17 30.2**	**+0.4**
ABPO					pmax	pmax		
	comp=Z,57nm,1.1s							
ABPO					MLR	MLR		
	comp=Z,10μm,20.0s							
ABPO	**Ambohimpanom**	**57.28**	**157**		P	**P**	**18 17 30.2**	**+0.4**
ABPO	**Ambohimpanom**	**57.28**	**157**		IVMs_BB	IVMs_BB	18 40 07.7	
	comp=Z,5μm,22.7s							
TULEG	**Thule**	**57.39**	**344**	*i*	P	**P**	**18 17 27.6**	**-2.1**
TULEG					IAmb	IAmb	18 17 31.7	
	comp=Z,75nm,0.9s							
TULEG					IAms_20	IAms_20	18 42 45.5	
	comp=Z,16μm,20.4s							
TULEG	**Thule**	**57.39**	**344**		P	**P**	**18 17 28.1**	**-1.6**
TULEG					IAmb	IAmb	18 17 48.6	
	comp=Z,154nm,0.9s							
TULEG					IAms_20	IAms_20	18 42 53.1	
	comp=Z,16μm,21.0s							
JORH	**JORHAT**	**57.45**	**78**	*eP*		**P**	**18 17 30.6**	**-0.2**
JORH					IAmb	IAmb	18 17 47.8	
	comp=Z,508nm,1.3s							
KOHI	**KOHIMA**	**57.78**	**80**	*eP*		**P**	**18 17 33.2**	**-0.2**
KOHI					IAmb	IAmb	18 17 48.0	
	comp=Z,221nm,0.9s							
MOKO	**MOKOCHONG**	**57.84**	**79**	*eP*		**P**	**18 17 33.7**	**-0.1**
MOKO					IAmb	IAmb	18 17 49.5	
	comp=Z,410nm,1.0s							
ASCN	**Ascension**	**57.88**	**230**		P	**P**	**18 17 32.9**	**-1.0**
SAIH	**SAIHA**	**58.37**	**83**	*eP*		**P**	**18 17 37.3**	**-0.3**
SAIH					IAmb	IAmb	18 17 52.7	
	comp=Z,386nm,1.1s							
SONM	**Songino Array**	**58.40**	**51**		P	**P**	**18 17 38.2**	**+0.8**
	comp=Z,55nm,0.5s,baz=285,slow=7.8,SNR=582							
SONM					S	**S**	**18 25 40.7**	**+1.7**
	comp=Z,9.2nm,1.3s,baz=294,slow=7.2,SNR=4.0							
SONM					LR	LR	18 46 31.5	
	comp=Z,16μm,20.6s,baz=292,slow=40							
SONM					PKPPKP		18 47 13.5	
	comp=Z,1.3nm,1.1s,baz=147,slow=2.6,SNR=4.9							
SONM					PKP2bc		18 47 31.3	
	comp=Z,0.6nm,0.9s,baz=122,slow=2.3,SNR=4.5							
SONM	**Songino Array**	**58.40**	**51**		P	**P**	**18 17 37.7**	**+0.3**
SONM					IAmb	IAmb	18 17 57.3	
	comp=Z,109nm,0.9s							
LKP	**Lekhapani**	**58.46**	**77**	*eP*		**P**	**18 17 38.3**	**+0.3**
LKP					IAmb	IAmb	18 17 53.0	
	comp=Z,384nm,1.0s							
ULN	**Ulaanbaatar**	**58.81**	**51***c*	*i*	P	**P**	**18 17 40.8**	**+0.5**
ULN					pmax	pmax		
	comp=Z,130nm,1.0s							
ULN					MLR	MLR		
	comp=Z,17μm,22.0s							
ULN	**Ulaanbaatar**	**58.81**	**51**		P	**P**	**18 17 41.0**	**+0.8**
ULN					IAmb	IAmb	18 18 00.2	
	comp=Z,178nm,0.9s							
ULN	**Ulaanbaatar**	**58.81**	**51**		IAms_20	IAms_20	18 46 33.4	
	comp=Z,15μm,22.0s							
ULN	**Ulaanbaatar**	**58.81**	**51**		P	**P**	**18 17 39.8**	**-0.5**
EUNU	**Eureka**	**59.41**	**349**		P	**P**	**18 17 43.2**	**-0.6**
EUNU					IAmb	IAmb	18 17 52.1	
	comp=Z,237nm,1.5s							
SHEL	**Horse Pasture**	**59.53**	**217**		P	**P**	**18 17 45.7**	**+0.3**
SHEL					pmax	pmax		
	comp=Z,204nm,1.1s							
SHEL					MLR	MLR		
	comp=Z,7μm,22.0s							
SHEL	**Horse Pasture

	comp=Z,3µm,14.1s								
LZH					LR	LR			
	comp=Z,8µm,15.7s								
LZH					LR	LR			
	comp=Z,7µm,17.9s								
CIT	**Chita**	**61.31**	**45**	*e*	**P**	**P**	**18 17 57.9**	**+0.7**	
CIT				*e*			18 18 16.7		
CIT				*e*			18 18 26.1		
CIT				*e*			18 21 45.1		
CIT				*e*S	**S**		**18 26 20.5**	**+4.4**	
CIT					pmax	pmax			
	comp=Z,445nm,2.2s								
FRB	**Frobisher Bay**	**61.33**	**330**		LR	LR	18 44 53.4		
	comp=Z,8µm,19.8s,baz=68,slow=36								
FRB	**Frobisher Bay**	**61.33**	**330**		P	**P**	**18 17 56.9**	**-0.2**	
FRB					pmax	pmax			
	comp=Z,209nm,1.2s								
RER	**Riviere de l'E**	**62.40**	**149**		P	**P**	**18 18 05.8**	**+0.9**	
RER					IAmb	IAmb	18 18 28.4		
	comp=Z,77nm,0.8s								
DGPR	**DIGLIPUR**	**63.05**	**93**	*e*	**P**	**P**	**18 18 09.6**	**+0.3**	
DGPR					IAmb	IAmb	18 18 20.4		
	comp=Z,203nm,1.1s								
CD2	**Chengdu**	**63.09**	**70**	⇓	P	**P**	**18 18 10.1**	**+0.6**	
CD2					PP	**PP**	**18 20 30.8**	**+2.6**	
CD2					S	**S**	**18 26 38.4**	**-0.9**	
CD2					ScS	**SKKSac**	**18 27 57.8**	**-3.5**	
CD2					SS	**SS**	**18 30 43.9**	**-1.0**	
CD2					pmax	pmax			
	comp=Z,220nm,0.7s								
CD2					pmax	pmax			
	comp=Z,2µm,10.6s								
CD2					LR	LR			
	comp=Z,7µm,24.1s								
CD2					LR	LR			
	comp=Z,10µm,22.9s								
CD2					LR	LR			
	comp=Z,10µm,26.0s								
BOSA	**Boshof**	**63.48**	**182**		P	**P**	**18 18 12.6**	**+0.6**	
	comp=Z,69nm,0.8s,baz=3.9,slow=7.2,SNR=76								
BOSA					LR	LR	18 47 13.1		
	comp=Z,20µm,19.4s,baz=2.5,slow=37								
BOSA	**Boshof**	**63.48**	**182**		P	**P**	**18 18 12.0**	**0.0**	
BOSA					IAmb	IAmb	18 18 31.7		
	comp=Z,219nm,1.2s								
BOSA	**Boshof**	**63.48**	**182**		IVMs_BB	IVMs_BB	18 49 12.5		
	comp=Z,9µm,9.6s								
BTO	**Baotou**	**63.51**	**58**	*e*	P	**P**	**18 18 11.9**	**-0.3**	
BTO					S	**S**	**18 26 36.4**	**-8.0**	
BTO					pmax	pmax			
	comp=Z,170nm,0.6s								
BTO					pmax	pmax			
	comp=Z,10µm,8.5s								
BTO					LR	LR			
	comp=Z,42µm,25.4s								
BTO					LR	LR			
	comp=Z,28µm,26.4s								
BTO					LR	LR			
	comp=Z,37µm,33.5s								
RES	**Resolute Bay**	**63.98**	**345**		P	**P**	**18 18 14.0**	**-0.6**	
RES					pmax	pmax			
	comp=Z,55nm,1.1s								
RES					MLR	MLR			
	comp=Z,8µm,19.0s								
RES	**Resolute Bay**	**63.98**	**345**		P	**P**	**18 18 14.0**	**-0.6**	
HHC	**Hu-ho-hao-te**	**64.47**	**57**	*e*	P	**P**	**18 18 19.8**	**+1.3**	
HHC					sP	sP	18 18 31.8	+4.0	
HHC					S	**S**	**18 26 58.4**	**+2.1**	
HHC					SS	**SS**	**18 31 09.9**	**+3.8**	
HHC					pmax	pmax			
	comp=Z,100nm,0.8s								
HHC					pmax	pmax			
	comp=Z,1µm,4.7s								
HHC					LR	LR			
	comp=Z,8µm,17.5s								
HHC					LR	LR			
	comp=Z,6µm,17.7s								
HHC					LR	LR			
	comp=Z,14µm,16.1s								
MHMT	**Maesarieng**	**64.52**	**85**		P	**P**	**18 18 18.4**	**-0.6**	
	comp=Z,5µmcomp=Z,402nm,1.0s								
GBN	**Guysborough**	**64.92**	**309**		P	**P**	**18 18 22.1**	**+0.9**	
KMI	**Kunming**	**64.97**	**76**	⇑	P	**P**	**18 18 22.4**	**+0.2**	
KMI					pP	pP	18 18 28.5	-0.3	
KMI					sP	pwP	18 18 30.8	-0.3	
KMI					PcP	**PcP**	**18 18 54.9**	**-0.2**	
KMI					PP	**PP**	**18 20 48.8**	**+3.8**	
KMI					S	**S**	**18 27 00.8**	**-2.3**	
KMI					ScS	**SKSac**	**18 28 15.3**	**-0.8**	
KMI					pmax	pmax			
	comp=Z,45nm,0.9s								
KMI					pmax	pmax			
	comp=Z,2µm,10.9s								
KMI					LR	LR			
	comp=Z,4µm,23.1s								
KMI					LR	LR			
	comp=Z,4µm,21.8s								
KMI					LR	LR			
	comp=Z,8µm,25.9s								
KMI	**Kunming**	**64.97**	**76**		P	**P**	**18 18 22.3**	**+0.2**	
KMI					pmax	pmax			
	comp=Z,111nm,1.1s								
KMI					MLR	MLR			
	comp=Z,4µm,21.0s								
KMI	**Kunming**	**64.97**	**76**		P	**P**	**18 18 22.3**	**+0.2**	
KMI					IAmb	IAmb	18 18 36.7		
	comp=Z,111nm,1.1s								
CHTO	**Chiang Mai**	**65.02**	**84**		P	**P**	**18 18 21.0**	**-1.3**	
CHTO					pmax	pmax			
	comp=Z,133nm,1.0s								
CHTO					MLR	MLR			
	comp=Z,5µm,22.0s								
CHTO	**Chiang Mai**	**65.02**	**84**		P	**P**	**18 18 21.0**	**-1.3**	
CHTO					IAmb	IAmb	18 18 36.9		
	comp=Z,133nm,0.9s								
CHTO	**Chiang Mai**	**65.02**	**84**		P	**P**	**18 18 22.3**	**+0.1**	
CHTO					P	**P**	**18 18 22.3**	**+0.1**	
CHTO					S	**S**	**18 26 58.6**	**-4.7**	
CHTO					S	**S**	**18 26 58.6**	**-4.7**	
CM33	**Chiang Mai Arr**	**65.02**	**84**		P	**P**	**18 18 21.0**	**-1.3**	
CM32	**Chiang Mai Arr**	**65.02**	**84**		P	**P**	**18 18 22.0**	**-0.3**	
CMMT	**Chiang Mai**	**65.03**	**84**		P	**P**	**18 18 21.0**	**-1.4**	
	comp=Z,1µmcomp=Z,84nm,1.2s								
YAK	**Yakutsk**	**65.15**	**30**	*d i*	P	**P**	**18 18 21.5**	**-0.9**	
YAK				*e*			18 18 49.1		
YAK				*e*			18 20 54.5		
YAK				*e*S	**S**		**18 27 03.6**	**-0.1**	
YAK				*e**SS	**sS**		**18 27 15.9**	**+0.6**	
YAK					pmax	pmax			
	comp=Z,57nm,0.8s								
YAK					pmax	pmax			
	comp=N,6.0nm,1.0s								
YAK					pmax	pmax			
	comp=E,20nm,1.3s								
YAK					pmax	pmax			
	comp=Z,269nm,2.3s								
YAK					pmax	pmax			
	comp=E,125nm,1.6s								
YAK					pmax	pmax			
	comp=N,137nm,1.5s								
YAK					smax	smax			
	comp=N,197nm,1.6s								
YAK					smax	smax			
	comp=E,800nm,3.3s								
YAK	**Yakutsk**	**65.15**	**30**		P	**P**	**18 18 21.3**	**-1.1**	
YAK					IAmb	IAmb	18 18 41.3		
	comp=Z,161nm,0.8s								
CM34	**Chiang Mai Arr**	**65.17**	**84**		P	**P**	**18 18 23.0**	**-0.3**	
CM34	**Chiang Mai Arr**	**65.17**	**84**		P	**P'P'ab**	**18 47 24.0**	**+6.8**	
CM15	**Chiang Mai Arr**	**65.19**	**84**		P	**P**	**18 18 23.1**	**-0.2**	
	comp=Z,1µmcomp=Z,115nm,0.9s								
CM15	**Chiang Mai Arr**	**65.19**	**84**		P	**P'P'ab**	**18 47 22.0**	**+4.9**	
CM13	**Chiang Mai Arr**	**65.19**	**84**		P	**P**	**18 18 23.0**	**-0.4**	
	comp=Z,981nmcomp=Z,125nm,1.1s								
CM13	**Chiang Mai Arr**	**65.19**	**84**		P	**P'P'ab**	**18 47 23.4**	**+6.3**	
CM31	**Chiang Mai Arr**	**65.20**	**84**		P	**P**	**18 18 23.3**	**-0.2**	
	comp=Z,29µmcomp=Z,4µm,1.0s								
CM31	**Chiang Mai Arr**	**65.20**	**84**		P	**P'P'ab**	**18 47 24.2**	**+7.2**	
CM31	**Chiang Mai Arr**	**65.20**	**84**		P	**P**	**18 18 23.0**	**-0.5**	
CMAR	**Chiang Mai Arr**	**65.20**	**84**		P	**P**	**18 18 23.1**	**-0.4**	
	comp=Z,22nm,0.6s,baz=298,slow=7.9,SNR=124								
CMAR					S	**S**	**18 27 03.3**	**-2.3**	
	comp=Z,0.5nm,1.0s,baz=194,slow=23,SNR=1.8								
CMAR					PKP2ab		18 47 15.3		
	comp=Z,1.3nm,1.0s,baz=87,slow=1.9,SNR=5.1								
CMAR					LR	LR	18 52 49.3		
	comp=Z,3µm,21.6s,baz=320,slow=42								
CMAR	**Chiang Mai Arr**	**65.20**	**84**		P	**P**	**18 18 22.7**	**-0.7**	
CM02	**Chiang Mai Arr**	**65.22**	**84**		P	**P**	**18 18 23.0**	**-0.6**	
	comp=Z,1µmcomp=Z,160nm,1.1s								
CM02	**Chiang Mai Arr**	**65.22**	**84**		P	**P'P'ab**	**18 47 23.0**	**+6.0**	
CM05	**Chiang Mai Arr**	**65.23**	**84**		P	**P**	**18 18 23.6**	**-0.1**	
	comp=Z,744nmcomp=Z,92nm,1.0s								
CM05	**Chiang Mai Arr**	**65.23**	**84**		P	**P'P'ab**	**18 47 23.0**	**+6.1**	
CM01	**Chiang Mai Arr**	**65.23**	**84**		P	**P**	**18 18 23.6**	**-0.1**	
	comp=Z,1µmcomp=Z,138nm,0.9s								
CM09	**Chiang Mai Arr**	**65.25**	**84**		P	**P**	**18 18 23.8**	**0.0**	
	comp=Z,1µmcomp=Z,154nm,1.0s								
CM04	**Chiang Mai Arr**	**65.26**	**84**		P	**P**	**18 18 23.8**	**-0.1**	
	comp=Z,976nmcomp=Z,143nm,1.0s								
CM04	**Chiang Mai Arr**	**65.26**	**84**		P	**P'P'ab**	**18 47 23.9**	**+7.1**	
CM35	**Chiang Mai Arr**	**65.26**	**84**		P	**P**	**18 18 23.0**	**-0.8**	
CM35	**Chiang Mai Arr**	**65.26**	**84**		P	**P'P'ab**	**18 47 23.0**	**+6.1**	
XAN	**Xi'an**	**65.58**	**65**		P	**P**	**18 18 25.5**	**-0.2**	
XAN					pP	sP	18 18 36.0	+0.9	
XAN					sP	pwP	18 18 41.1	+6.5	
XAN					PcP	**PcP**	**18 18 55.8**	**-1.5**	
XAN					ScP		18 23 01.5		
XAN					S	**S**	**18 27 08.4**	**-1.6**	
XAN					ScS	**SKSac**	**18 28 11.9**	**-8.2**	
XAN					SS	**SS**	**18 31 23.3**	**-0.3**	
XAN					pmax	pmax			
	comp=Z,110nm,1.1s								
XAN					pmax	pmax			
	comp=Z,3µm,7.5s								
XAN					LR	LR			
	comp=Z,9µm,25.5s								
XAN					LR	LR			
	comp=Z,8µm,23.9s								
XAN					LR	LR			
	comp=Z,14µm,26.5s								
XAN	**Xi'an**	**65.58**	**65**		P	**P**	**18 18 25.6**	**-0.2**	
XAN					pmax	pmax			
	comp=Z,182nm,0.9s								
XAN					MLR	MLR			
	comp=Z,4µm,21.0s								
XAN	**Xi'an**	**65.58**	**65**		P	**P**	**18 18 25.6**	**-0.2**	
XAN					IAmb	IAmb	18 18 40.5		
	comp=Z,182nm,0.9s								
LAMP	**Lampang**	**65.73**	**84**		P	**P**	**18 18 27.0**	**+0.1**	
	comp=Z,4µmcomp=Z,538nm,0.9s								
HIA	**Hailar**	**66.02**	**46**		P	**P**	**18 18 29.1**	**+0.7**	
HIA					pmax	pmax			
	comp=Z,159nm,1.0s								
HIA					MLR	MLR			
	comp=Z,11µm,20.0s								
HIA	**Hailar**	**66.02**	**46**		P	**P**	**18 18 29.1**	**+0.7**	
HIA					IAmb	IAmb	18 18 39.0		
	comp=Z,159nm,1.0s								
HIA	**Hailar**	**66.02**	**46**		IAMs_20	IAMs_20	18 52 05.3		
	comp=Z,11µm,20.0s								
SUKH	**Sukhothai**	**66.26**	**85**		P	**P**	**18 18 30.3**	**+0.1**	
	comp=Z,3µmcomp=Z,374nm,1.0s								
NANT	**Nan**	**66.46**	**83**		P	**P**	**18 18 34.4**	**+2.8**	
	comp=Z,25µmcomp=Z,2µm,1.1s								
TIY	**Taiyuan**	**66.46**	**60**	*e*	P	**P**	**18 18 32.3**	**+0.9**	
TIY					pP	**sP**	**18 18 43.8**	**+3.1**	
TIY					S	**S**	**18 27 21.3**	**+0.7**	
TIY					ScS	**SKSac**	**18 28 25.5**	**-1.2**	
TIY					pmax	pmax			
	comp=Z,55nm,0.5s								
TIY					pmax	pmax			
	comp=Z,850nm,3.6s								
TIY					LR	LR			
	comp=Z,3µm,14.7s								
TIY					LR	LR			
	comp=Z,4µm,15.2s								
TIY					LR	LR			
	comp=Z,6µm,19.8s								
HAL	**Halifax**	**66.58**	**309**		P	**P**	**18 18 32.2**	**+0.2**	
HAL					pmax	pmax			
	comp=Z,257nm,0.9s								
HAL					MLR	MLR			
	comp=Z,12µm,21.0s								
HAL	**Halifax**	**66.58**	**309**		P	**P**	**18 18 32.2**	**+0.2**	
HAL					IAMs_20	IAMs_20	18 47 54.8		
	comp=Z,13µm,21.0s								
LMN	**Caledonia Moun**	**66.80**	**311**		P	**P**	**18 18 33.4**	**+0.1**	
LMN					IAMs_20	IAMs_20	18 48 08.4		
	comp=Z,14µm,21.0s								
KHLT	**Khaolaem Dam**	**66.82**	**88**		P	**P**	**18 18 35.0**	**+1.1**	
	comp=Z,41nm,1.1s								
UTTA	**Uttaradit**	**66.88**	**84**		P	**P**	**18 18 34.0**	**-0.2**	
	comp=Z,2µmcomp=Z,220nm,0.9s								
BATG	**Bathurst New B**	**66.92**	**312**		P	**P**	**18 18 34.4**	**+0.4**	
BATG					IAMs_20	IAMs_20	18 48 06.5		
	comp=Z,8µm,19.0s								
PHIT	**Phitsanulok**	**67.06**	**85**		P	**P**	**18 18 35.8**	**+0.4**	
	comp=Z,8µmcomp=Z,1µm,1.1s								
UTHA	**Uthaitani**	**67.11**	**87**		P	**P**	**18 18 35.9**	**+0.2**	
	comp=Z,1µmcomp=Z,172nm,0.9s								
GYA	**Guiyang**	**67.42**	**73**	⇓	P	**P**	**18 18 37.5**	**-0.2**	
GYA					sP	pwP	18 18 46.0	-0.8	
GYA					S	**S**	**18 27 33.1**	**+0.5**	
GYA					sS	sS	18 27 43.0	-0.7	
GYA					pmax	pmax			
	comp=Z,34nm,1.2s								
GYA					pmax	pmax			
	comp=Z,690nm,3.5s								
GYA					LR	LR			
	comp=Z,3µm,16.2s								
GYA					LR	LR			
	comp=Z,4µm,22.3s								
GYA					LR	LR			
	comp=Z,6µm,24.0s								
SUR	**Sutherland**	**67.46**	**186**		P	**P**	**18 18 38.1**	**+0.4**	
SUR					IAmb	IAmb	18 18 57.3		
	comp=Z,106nm,0.9s								
SRDT	**SRDT**	**67.49**	**88**		P	**P**	**18 18 39.1**	**+0.9**	
	comp=Z,47nm,0.9s								
ENH	**Enshi**	**67.76**	**68**		P	**P**	**18 18 39.3**	**-0.4**	
SLVN	**Son La**	**67.77**	**79**		P	**P**	**18 18 39.3**	**-0.6**	
BJI	**Beijing**	**67.98**	**56**		P	**P**	**18 18 41.8**	**+0.9**	
BJI					sP	**pP**	**18 18 48.4**	**+0.8**	
BJI					PP	**PP**	**18 21 12.3**	**+1.7**	
BJI					S	**S**	**18 27 40.5**	**+1.9**	
BJI					pmax	pmax			
	comp=Z,32nm,0.7s								
BJI					pmax	pmax			
	comp=Z,640nm,3.5s								
BJI					LR	LR			
	comp=Z,6µm,26.7s								
BJI					LR	LR			
	comp=Z,4µm,28.4s								
BJI					LR	LR			
	comp=Z,8µm,22.7s								
BJT	**Baijiatuau**	**67.98**	**56**		P	**P**	**18 18 41.7**	**+0.8**	
BJT					pmax	pmax			
	comp=Z,202nm,1.2s								
BJT					MLR	MLR			
	comp=Z,11µm,20.0s								
BJT	**Baijiatuau**	**67.98**	**56**		P	**P**	**18 18 41.7**	**+0.8**	
BJT					IAmb	IAmb	18 18 55.2		
	comp=Z,202nm,1.2s								
BJT	**Baijiatuau**	**67.98**	**56**		IAMs_20	IAMs_20	18 53 19.0		
	comp=Z,11µm,20.0s								
ZEA	**Zeya**	**68.06**	**39**	*e*	P	**P**	**18 18 42.0**	**+0.8**	
ZEA				*e*			18 21 17.9		
ZEA				*e*S	**S**		**18 27 43.1**	**+3.9**	
ZEA					pmax	pmax			
	comp=Z,600nm,7.4s								
ZEA					pmax	pmax			
	comp=Z,60nm,1.6s								
ZEA					pmax	pmax			
	comp=E,300nm,11.6s								
ZEA					pmax	pmax			
	comp=Z,400nm,9.2s								
ZEA					smax	smax			
	comp=N,1µm,14.1s								
ZEA					smax	smax			
	comp=E,2µm,14.1s								
D63A	**Stockholm**	**68.27**	**313**		P		18 18 42.0		
	baz=61,SNR=20								
D63A					S		18 27 41.8		
	baz=61								
PQI	**Presque Isle**	**68.39**	**312**		P	**P**	**18 18 43.3**	**0.0**	
E64A	**Bridgewater**	**68.39**	**312**		P		18 18 42.9		
	baz=61,SNR=27								
E64A					S		18 27 43.1		
	baz=61								
GGN	**Saint George**	**68.41**	**311**		P	**P**	**18 18 42.9**	**-0.5**	
GGN					IAmb	IAmb	18 18 49.9		
	comp=Z,150nm,1.1s								
PHET	**Kaeng Krachan**	**68.68**	**89**		P	**P**	**18 18 45.6**	**0.0**	
	comp=Z,1µmcomp=Z,147nm,0.8s								
E63A	**Oxbow**	**68.75**	**312**		P	**P**	**18 18 45.6**	**0.0**	
E63A					IAmb	IAmb	18 19 08.6		
	comp=Z,236nm,1.1s								
E63A					IAMs_20	IAMs_20	18 51 05.0		
	comp=Z,8µm,18.0s								
E63A	**Oxbow**	**68.75**	**312**		P		18 18 45.5		
	baz=61,SNR=32								
E63A					S		18 27 46.9		
	baz=61								
G65A	**Princeton**	**68.82**	**311**		P	**P**	**18 18 45.6**	**-0.5**	
G65A					IAmb	IAmb	18 19 09.0		
	comp=Z,166nm,1.1s								
G65A					IAMs_20	IAMs_20	18 47 21.8		
	comp=Z,9µm,21.0s								
G65A	**Princeton**	**68.82**	**311**		P		18 18 45.7		
	baz=61,SNR=22								
G65A					S		18 27 48.4		
	baz=61								
NONG	**Nongkai**	**68.82**	**82**		P	**P**	**18 18 45.8**	**-0.7**	
H66A	**Whiting**	**68.86**	**310**		P		18 18 45.3		
	baz=61,SNR=32								
H66A					S		18 27 49.6		
	baz=61								
F64A	**Sherman**	**68.98**	**312**		P	**P**	**18 18 47.2**	**+0.2**	
F64A					IAmb	IAmb	18 18 53.2		
	comp=Z,196nm,1.2s								
F64A	**Sherman**	**68.98**	**312**		P		18 18 46.3		
	baz=61,SNR=24								
F64A					S		18 27 51.9		
	baz=61								
EMMW	**East Machias**	**68.99**	**310**		P	**P**	**18 18 48.0**	**+0.9**	
EMMW					IAMs_20	IAMs_20	18 49 45.4		
	comp=Z,11µm,20.0s								
CHAI	**Chaiyaphum**	**69.01**	**85**		P	**P**	**18 18 47.3**	**-0.4**	
D61A	**St Aubert, Com**	**69.43**	**314**		P		18 18 49.8		
	baz=60,SNR=8.7								
D61A					S		18 27 55.9		
	baz=60								
KHON	**Khomkaen**	**69.46**	**84**		P	**P**	**18 18 50.2**	**-0.2**	
H65A	**Eastbrook**	**69.49**	**311**		P		18 18 49.9		
	baz=60,SNR=14								
H65A					S		18 27 57.6		
	baz=60								
F63A	**Nahmakanta, Br**	**69.52**	**312**		P	**P**	**18 18 51.1**	**+0.7**	
F63A					IAmb	IAmb	18 19 13.6		
	comp=Z,195nm,1.4s								
F63A					IAMs_20	IAMs_20	18 51 34.3		
	comp=Z,8µm,18.0s								
F63A	**Nahmakanta, Br**	**69.52**	**312**		P		18 18 49.7		
	baz=60,SNR=19								
F63A					S		18 27 57.8		
	baz=60								
G64A	**Maxfield**	**69.53**	**311**		P		18 18 50.0		
	baz=60,SNR=47								
G64A					S		18 27 59.9		
	baz=60								
PATY	**Pattaya**	**69.68**	**88**		P	**P**	**18 18 55.2**	**+3.4**	
	comp=Z,3µmcomp=Z,116nm,0.7s								
PKME	**Peaks-Kenny Pk**	**69.85**	**312**		P	**P**	**18 18 53.3**	**+0.9**	
PKME					IAmb	IAmb	18 19 18.6		
	comp=Z,148nm,1.1s								
PKME					IAMs_20	IAMs_20	18 50 26.1		
	comp=Z,9µm,19.0s								
PKME	**Peaks-Kenny Pk**	**69.85**	**312**		P		18 18 51.3		
	baz=60,SNR=18								
PKME					S		18 28 00.3		
	baz=60								
E61A	**Lac Etchemin**	**69.99**	**313**		P		18 18 53.1		
	baz=60,SNR=17								
E61A					S		18 27 58.6		
	baz=60								
D60A	**Saint Jean D'O**	**70.01**	**314**		P		18 18 52.9		
	baz=60,SNR=7.1								
D60A					S		18 28 02.8		
	baz=60								
SRAK	**Srakaew**	**70.06**	**87**		P	**P**	**18 18 57.0**	**+2.8**	
	comp=Z,21µmcomp=Z,2µm,0.6s								
H64A	**Troy**	**70.12**	**311**		P		18 18 53.5		
	baz=60,SNR=17								
H64A					S		18 28 03.5		
	baz=60								
G63A	**Kingsbury**	**70.13**	**312**		P		18 18 53.9		
	baz=60,SNR=20								
G63A					S		18 28 03.5		
	baz=60								
SURT	**Suratani**	**70.16**	**93**		P	P	18 19 03.0	+8.2	
PKDT	**Phuket**	**70.38**	**94**		P	**P**	**18 18 58.5**	**+2.4**	
	comp=Z,2µmcomp=Z,96nm,1.0s								
WVL	**Waterville**	**70.42**	**311**		P	**P**	**18 18 56.9**	**+0.9**	
WVL					IAmb	IAmb	18 19 19.0		
	comp=Z,96nm,1.1s								
WVL					IAMs_20	IAMs_20	18 48 21.4		
	comp=Z,9µm,21.0s								
CHGQ	**Chibougamau**	**70.44**	**318**		P		18 18 55.9		
	baz=58,SNR=70								
CHGQ					S		18 28 06.4		
	baz=58								
TIA	**Tai'an**	**70.48**	**59**		P	**P**	**18 18 57.0**	**+0.5**	
TIA					S	**S**	**18 28 07.9**	**-0.4**	
TIA					pmax	pmax			
	comp=Z,82nm,1.1s								
TIA					pmax	pmax			
	comp=Z,1µm,10.4s								
TIA					LR	LR			
	comp=Z,6µm,24.5s								
TIA					LR	LR			
	comp=Z,4µm,26.3s								
TIA					LR	LR			
	comp=Z,8µm,31.4s								
D59A	**Saint-Raymond**	**70.50**	**314**		P		18 18 55.9		
	baz=59								
D59A					S		18 28 08.3		
	baz=59								
F61A	**St Evariste**	**70.53**	**313**		P		18 18 56.2		
	baz=59,SNR=19								
F61A					S		18 28 10.0		
	baz=59								
E60A	**Ste Agathe de**	**70.59**	**313**		P		18 18 57.1		
	baz=59,SNR=13								
E60A					S		18 28 08.9		
	baz=59								
H63A	**New Sharon**	**70.61**	**311**		P		18 18 57.0		
	baz=60,SNR=8.9								
H63A					S		18 28 08.5		
	baz=60								
G62A	**West of Eustis**	**70.63**	**312**		P	**P**	**18 18 58.1**	**+0.9**	
G62A					IAmb	IAmb	18 19 04.0		
	comp=Z,158nm,1.2s								
G62A					IAMs_20	IAMs_20	18 50 10.7		
	comp=Z,9µm,19.0s								
G62A	**West of Eustis**	**70.63**	**312**		P		18 18 57.0		
	baz=59,SNR=20								
G62A					S		18 28 10.7		
	baz=59								
I64A	**Boothbay**	**70.74**	**310**		P		18 18 57.8		
	baz=60								
I64A					S		18 28 12.4		
	baz=60								
LHMI	**Lhok Sumawe**	**70.77**	**97**		P	**P**	**18 18 58.2**	**-0.3**	
LHMI					IAmb	IAmb	18 19 27.1		
	comp=Z,121nm,1.2s								
LATQ	**La Tuque**	**70.86**	**315**		P	**P**	**18 18 59.1**	**+0.5**	
LATQ	**La Tuque**	**70.86**	**315**		P		18 18 58.2		
	baz=59,SNR=27								
LATQ					S		18 28 13.0		
	baz=59								
KRAB	**Krabi**	**70.90**	**93**		P	**P**	**18 19 02.0**	**+2.7**	
D58A	**Chemin du LacG**	**71.07**	**315**		P		18 18 59.6		
	baz=59,SNR=39								
D58A					S		18 28 14.8		
	baz=59

I63A Otisfield 71.26 311 P **P** 18 19 01.8 +0.7
I63A IAmb IAmb 18 19 24.5
comp=Z,175nm,1.5s
I63A IAMs_20 IAMs_20 18 52 04.4
comp=Z,7µm,18.0s
I63A Otisfield 71.26 311 P 18 19 01.4
baz=59,SNR=12
I63A S 18 28 19.6
baz=59
WHN Wuhan 71.29 66 ⇓P **P** **18 19 04.3 +2.9**
WHN S **S** **18 28 20.8 +2.9**
WHN pmax pmax
comp=Z,580nm,1.8s
WHN pmax pmax
comp=Z,1µm,4.2s
WHN LR LR
comp=Z,11µm,16.0s
WHN LR LR
comp=Z,7µm,21.6s
WHN LR LR
comp=Z,16µm,23.3s
H62A Milan 71.34 312 P **P** **18 19 01.6 0.0**
H62A IAmb IAmb 18 19 21.1
comp=Z,119nm,0.9s
H62A IAMs_20 IAMs_20 18 50 43.6
comp=Z,9µm,20.0s
H62A Milan 71.34 312 P 18 19 01.5
baz=59,SNR=29
H62A S 18 28 18.6
baz=59
RCBR Riachuelo 71.62 249 P **P** **18 19 04.7 +1.1**
RCBR pmax pmax
comp=Z,115nm,1.0s
RCBR MLR MLR
comp=Z,15µm,18.0s
RCBR Riachuelo 71.62 249 P **P** **18 19 04.7 +1.1**
RCBR IAmb IAmb 18 19 26.7
comp=Z,115nm,1.0s
RCBR Riachuelo 71.62 249 *e*P **P** **18 19 05.2 +1.5**
MOQ Mont Orford 71.62 313 P **P** **18 19 04.0 +0.7**
F59A Saint Guilaume 71.66 313 P 18 19 02.8
baz=58,SNR=20
F59A S 18 28 22.5
baz=58
E58A La Victoria 71.68 314 P 18 19 04.0
baz=58,SNR=52
E58A S 18 28 23.1
baz=58
G60A Masonville 71.78 313 P 18 19 04.1
baz=58,SNR=24
G60A S 18 28 23.8
baz=58
I62A Tamworth 71.81 311 P **P** **18 19 05.7 +1.3**
I62A IAmb IAmb 18 19 12.0
comp=Z,114nm,0.9s
I62A IAMs_20 IAMs_20 18 52 21.1
comp=Z,8µm,18.0s
I62A Tamworth 71.82 311 P 18 19 05.2
baz=58,SNR=29
I62A S 18 28 25.5
baz=58
H61A Lyndonville 71.83 312 P 18 19 04.9
baz=58,SNR=39
H61A S 18 28 24.6
baz=58
J63A Strafford 71.97 310 P 18 19 05.0
baz=58,SNR=8.0
J63A S 18 28 26.9
baz=58
L65A Cape Cod Natio 71.97 309 P 18 19 05.8
baz=59
SNY Shenyang 71.98 51 ⇓P **P** **18 19 05.3 -0.1**
SNY S **S** **18 28 25.3 -0.2**
SNY SKS **SKSac** **18 29 02.3 -5.8**
SNY pmax pmax
comp=Z,20nm,0.8s
SNY pmax pmax
comp=Z,2µm,8.6s
SNY LR LR
comp=Z,5µm,24.4s
SNY LR LR
comp=Z,7µm,21.4s
SNY LR LR
comp=Z,14µm,24.9s
LBNH Lisbon 71.99 312 P **P** **18 19 07.0 +1.5**
LBNH pmax pmax
comp=Z,141nm,0.9s
LBNH MLR MLR
comp=Z,7µm,20.0s
LBNH Lisbon 71.99 312 P **P** **18 19 07.0 +1.5**
LBNH IAmb IAmb 18 19 26.4
comp=Z,140nm,0.9s
LBNH Lisbon 71.99 312 P 18 19 06.3
baz=58,SNR=30
LBNH S 18 28 24.5
baz=58
TPTI 72.09 99 P **P** **18 19 06.3 -0.2**
comp=Z,1µmcomp=Z,54nm,0.7s
CN2 Changchun 72.12 49 ⇑P **P** **18 19 06.3 0.0**
CN2 *es*P sP 18 19 17.5 +1.9
CN2 PP **PP** **18 21 51.1 +4.9**
CN2 *e*S **S** **18 28 26.3 -0.8**
CN2 pmax pmax
comp=Z,70nm,0.9s
CN2 pmax pmax
comp=Z,2µm,6.0s
CN2 LR LR
comp=Z,7µm,19.0s
CN2 LR LR
comp=Z,6µm,19.0s
CN2 LR LR
comp=Z,8µm,17.0s
D56A ZEC Mazanza, M 72.18 315 P 18 19 07.1
baz=57,SNR=119
D56A S 18 28 28.6
baz=57
DL2 Dalian 72.21 55 P **P** **18 19 07.3 +0.5**
DL2 S **S** **18 28 29.5 +1.3**
DL2 SS **SS** **18 33 03.3 -2.1**
DL2 pmax pmax
comp=Z,140nm,0.8s
DL2 pmax pmax
comp=Z,1µm,6.1s
DL2 LR LR
comp=Z,5µm,22.3s
DL2 LR LR
comp=Z,4µm,23.8s
DL2 LR LR
comp=Z,9µm,20.1s
FFD Franklin Falls 72.22 311 P **P** **18 19 07.0 +0.2**
FFD IAMs_20 IAMs_20 18 51 59.9
comp=Z,9µm,19.0s
F58A St-Lin Laurent 72.26 314 P 18 19 06.9
baz=58
F58A S 18 28 29.7
baz=58
H60A Morristown 72.29 312 P 18 19 08.0
baz=58,SNR=40
H60A S 18 28 30.4
baz=58
MATQ Matagami 72.30 319 P 18 19 08.1
baz=56,SNR=80
MATQ S 18 28 28.3
baz=56
LSQQ Lebel-sur-Quev 72.33 318 P 18 19 07.4
baz=57
VT1 Waterbury 72.44 312 P **P** **18 19 09.5 +1.3**
VT1 IAmb IAmb 18 19 15.0
comp=Z,179nm,1.3s
VT1 IAMs_20 IAMs_20 18 50 55.8
comp=Z,8µm,19.0s
NBCL Cascavel-CE 72.45 252 *e*P **P** **18 19 09.5 +1.0**
J62A Henniker 72.45 311 P 18 19 09.6
baz=58,SNR=17
J62A S 18 28 29.3
baz=58
HNH Hanover 72.49 311 P **P** **18 19 09.7 +1.3**
HNH IAmb IAmb 18 19 16.1
comp=Z,256nm,1.2s
HNH IAMs_20 IAMs_20 18 51 30.0
comp=Z,9µm,20.0s
NBPA Parau_RN 72.50 250 *e*P **P** **18 19 10.3 +1.5**
TRQ Mont Tremblant 72.50 314 P **P** **18 19 09.0 +0.4**
BCX Boston College 72.52 310 P **P** **18 19 09.7 +1.1**
BCX IAmb IAmb 18 19 29.7
comp=Z,178nm,1.0s
BCX IAMs_20 IAMs_20 18 51 40.8
comp=Z,16µm,20.0s
L64A Middleborough 72.52 309 P **P** **18 19 09.5 +0.9**
L64A IAmb IAmb 18 19 32.9
comp=Z,198nm,1.1s
L64A IAMs_20 IAMs_20 18 51 51.8
comp=Z,14µm,19.0s
L64A Middleborough 72.52 309 P 18 19 09.1
baz=58,SNR=14
L64A S 18 28 31.8
baz=58
K63A Dunstable 72.56 310 P **P** **18 19 09.8 +1.0**
K63A IAmb IAmb 18 19 29.9
comp=Z,151nm,1.1s
K63A IAMs_20 IAMs_20 18 51 32.8
comp=Z,13µm,20.0s
K63A Dunstable 72.56 310 P 18 19 08.9
baz=58,SNR=11
K63A S 18 28 33.0
baz=58
WES Weston 72.59 310 P **P** **18 19 09.5 +0.5**
WES pmax pmax
comp=Z,197nm,1.0s
WES MLR MLR
comp=Z,16µm,20.0s
WES Weston 72.59 310 P **P** **18 19 09.5 +0.5**
WES IAmb IAmb 18 19 30.1
comp=Z,197nm,1.0s
M65A Busby, Falmout 72.59 309 P **P** **18 19 09.2 +0.2**
M65A IAMs_20 IAMs_20 18 51 13.8
comp=Z,13µm,20.0s
M65A Busby, Falmout 72.59 309 P 18 19 09.2
baz=58
M65A S 18 28 32.7
baz=58
D55A Sainte-Anne-du 72.61 316 P 18 19 09.4
baz=57,SNR=68
D55A S 18 28 34.7
baz=57
E56A St. Veronique 72.61 315 P 18 19 09.4
baz=57,SNR=54
E56A S 18 28 31.7
baz=57
HRV Adam Dziewonsk 72.67 310 P **P** **18 19 09.8 +0.3**
HRV pmax pmax
comp=Z,191nm,1.3s
HRV MLR MLR
comp=Z,14µm,20.0s
HRV Adam Dziewonsk 72.67 310 P **P** **18 19 09.8 +0.3**
HRV IAmb IAmb 18 19 33.8
comp=Z,191nm,1.3s
HRV Adam Dziewonsk 72.67 310 IAMs_20 IAMs_20 18 51 35.9
comp=Z,14µm,20.0s
HRV Adam Dziewonsk 72.67 310 P 18 19 10.0
baz=58
HRV S 18 28 33.7
baz=58
FRNY Flat Rock 72.68 313 P **P** **18 19 09.7 +0.2**
FRNY IAmb IAmb 18 19 16.4
comp=Z,120nm,0.9s
FRNY IAMs_20 IAMs_20 18 52 33.9
comp=Z,9µm,19.0s
BILL Bilibino 72.69 15*c i*P **P** **18 19 08.5 -0.7**
BILL *e* 18 19 30.2
BILL *e* 18 21 51.1
BILL *e*PPP PPP 18 23 35.6
BILL *i* S **S** **18 28 33.9 +1.2**
BILL *i* SS **SS** **18 33 14.6 +3.4**
BILL pmax pmax
comp=Z,104nm,1.6s
BILL MLR MLR
comp=Z,7µm,19.0s
BILL Bilibino 72.69 15 P **P** **18 19 08.5 -0.7**
G58A Ormstown 72.79 313 P 18 19 10.9
baz=57,SNR=37
G58A S 18 28 36.9
baz=57
F57A Harrington 72.81 314 P 18 19 11.1
baz=57,SNR=8.9
F57A S 18 28 33.9
baz=57
KLR Kul'dur 72.83 42*d i*P **P** **18 19 10.6 +0.2**
KLR pmax pmax
comp=Z,123nm,1.1s
KLR MLR MLR
comp=Z,6µm,18.0s
H59A Cadyville 72.84 313 P 18 19 11.3
baz=57,SNR=61
H59A S 18 28 34.7
baz=57
J61A Chester 72.85 311 P 18 19 12.0
baz=58,SNR=30
J61A S 18 28 34.2
baz=58
NBRF Rio Formoso - 72.87 246 *e*P **P** **18 19 12.2 +1.2**
M64A Tiverton 72.96 309 P **P** **18 19 11.9 +0.7**
M64A IAmb IAmb 18 19 17.9
comp=Z,230nm,1.4s
M64A IAMs_20 IAMs_20 18 51 24.5
comp=Z,13µm,20.0s
M64A Tiverton 72.96 309 P 18 19 12.1
baz=58,SNR=20
M64A S 18 28 37.5
baz=58
BRYW Bryant College 72.97 309 P **P** **18 19 12.6 +1.2**
BRYW IAmb IAmb 18 19 32.6
comp=Z,200nm,1.2s
BRYW IAMs_20 IAMs_20 18 51 55.7
comp=Z,13µm,20.0s
SEY Seymchan 73.00 23 S **S** **18 28 31.1 -5.4**
comp=Z,1.8nm,0.9s,baz=344,slow=19,SNR=1.8
SEY Seymchan 73.00 23*d i*P **P** **18 19 11.2 +0.1**
K62A Royalston 73.01 310 P **P** **18 19 11.3 -0.3**
K62A IAmb IAmb 18 19 33.2
comp=Z,120nm,1.1s
K62A IAMs_20 IAMs_20 18 51 36.8
comp=Z,9µm,20.0s
K62A Royalston 73.01 310 P 18 19 13.0
baz=58,SNR=21
K62A S 18 28 37.7
baz=58
I60A Shoreham 73.03 312 P 18 19 12.9
baz=57,SNR=21
I60A S 18 28 38.4
baz=57
L63A North Scituate 73.05 309 P **P** **18 19 12.7 +1.0**
L63A IAmb IAmb 18 19 33.0
comp=Z,209nm,1.2s
L63A IAMs_20 IAMs_20 18 52 07.8
comp=Z,15µm,20.0s
L63A North Scituate 73.05 309 P 18 19 13.0
baz=58,SNR=14
L63A S 18 28 39.0
baz=58
TSI Tuntungan 73.08 98 P **P** **18 19 12.4 +0.1**
comp=Z,4µmcomp=Z,3µmcomp=Z,264nm,1.2s
VLDQ Val d'Or 73.12 317 P **P** **18 19 13.1 +1.0**
VLDQ IAmb IAmb 18 19 16.9
comp=Z,183nm,0.9s
VLDQ IAMs_20 IAMs_20 18 52 29.6
comp=Z,11µm,18.0s
E55A Montcerf-Lytto 73.25 315 P 18 19 13.7
baz=56,SNR=6.2
E55A S 18 28 37.5
baz=56
NBMO Morrinhos-CE 73.25 254 *e*P **P** **18 19 14.6 +1.2**
H58A Gabriels 73.26 313 P 18 19 13.4
baz=57,SNR=54
H58A S 18 28 41.2
baz=57
BBSR BB Station 73.31 298 P **P** **18 19 11.7 -1.8**
G57A Newington 73.37 314 P 18 19 14.0
baz=57,SNR=34
G57A S 18 28 40.8
baz=57
LONY Lake Ozonia 73.39 313 P **P** **18 19 15.1 +1.3**
LONY IAmb IAmb 18 19 34.8
comp=Z,129nm,0.9s
LONY IAMs_20 IAMs_20 18 52 54.7
comp=Z,10µm,19.0s
LONY Lake Ozonia 73.39 313 P 18 19 14.2
baz=57
LONY S 18 28 42.5
baz=57
NBLI Livramento-PB 73.40 248 *e*P **P** **18 19 15.3 +1.1**
L61B Northampton 73.41 310 P 18 19 14.9
baz=57,SNR=17
L61B S 18 28 41.6
baz=57
I59A Olmsteadville 73.41 312 P 18 19 15.1
baz=57,SNR=34
I59A S 18 28 43.1
baz=57
J60A Lant Hill Farm 73.44 311 P 18 19 15.0
baz=57,SNR=13
J60A S 18 28 46.8
baz=57
UCCT U. Connecticut 73.47 310 P **P** **18 19 15.9 +1.6**
UCCT IAmb IAmb 18 19 21.1
comp=Z,164nm,1.1s
UCCT IAMs_20 IAMs_20 18 52 20.0
comp=Z,14µm,20.0s
ACCN Adirondack Com 73.51 312 P **P** **18 19 15.5 +1.0**
ACCN IAmb IAmb 18 19 35.4
comp=Z,149nm,1.0s
ACCN IAMs_20 IAMs_20 18 53 21.9
comp=Z,8µm,19.0s
NCB Newcomb 73.53 312 P **P** **18 19 15.4 +0.8**
GSI Gunungsitoli 73.56 100 P **P** **18 19 14.5 -0.7**
M63A Gales Ferry 73.57 309 P **P** **18 19 15.8 +1.0**
M63A IAmb IAmb 18 19 38.1
comp=Z,126nm,0.9s
M63A IAMs_20 IAMs_20 18 52 13.6
comp=Z,15µm,20.0s
M63A Gales Ferry 73.57 309 P 18 19 15.2
baz=58,SNR=17
M63A S 18 28 46.7
baz=58
C36M Paulatuk 73.59 350 P **P** **18 19 13.7 -0.8**
C36M IAmb IAmb 18 19 35.2
comp=Z,280nm,1.4s
C36M IAMs_20 IAMs_20 18 54 42.3
comp=Z,15µm,20.0s
C36M Paulatuk 73.59 350 P 18 19 14.1
baz=24
C36M S 18 28 42.7
baz=24
L62A Suffield 73.62 310 P **P** **18 19 15.2 0.0**
L62A IAmb IAmb 18 19 42.1
comp=Z,207nm,1.1s
L62A IAMs_20 IAMs_20 18 52 13.9
comp=Z,11µm,20.0s
K61A Williamstown 73.65 311 P 18 19 16.3
baz=57,SNR=26
K61A S 18 28 47.1
baz=57
QIZ Qiongzhong 73.72 78 P **P** **18 19 16.4 +0.3**
QIZ pP **pP** **18 19 21.1 -1.9**
QIZ PP **PP** **18 22 02.0 +1.5**
QIZ S **SKiKP** **18 28 45.1 +0.6**
QIZ SS **SS** **18 33 32.4 +2.9**
QIZ pmax pmax
comp=Z,25nm,0.9s
QIZ pmax pmax
comp=Z,1µm,9.2s
QIZ LR LR
comp=Z,2µm,24.0s
QIZ LR LR
comp=Z,4µm,24.0s
QIZ LR LR
comp=Z,4µm,25.1s
QIZ Qiongzhong 73.72 78 P **P** **18 19 16.4 +0.3**
QIZ IAmb IAmb 18 19 31.4
comp=Z,149nm,1.0s
KULM Kulim 73.75 95 P **P** **18 19 15.5 -0.8**
KULM IAmb IAmb 18 19 25.9
comp=Z,142nm,1.0s
A21K Barrow 73.75 1 P **P** **18 19 15.4 0.0**
A21K IAMs_20 IAMs_20 18 51 26.5
comp=Z,9µm,22.0s
A21K Barrow 73.75 1 P 18 19 15.7
baz=357
A21K S 18 28 45.2
baz=357
PSI Prapat 73.77 98 P **P** **18 19 15.7 -0.9**
PSI pmax pmax
comp=Z,99nm,0.8s
PSI MLR MLR
comp=Z,10µm,19.0s
NJ2 Nanjing 73.83 62 *e*P **P** **18 19 16.4 -0.1**
NJ2 pP **pP** **18 19 20.9 -2.4**
NJ2 sP **sP** **18 19 23.1 -2.8**
NJ2 PP **PP** **18 21 59.8 -1.2**
NJ2 S **S** **18 28 46.8 0.0**
NJ2 sS **sS** **18 28 56.8 -1.1**
NJ2 pmax pmax
comp=Z,26nm,0.8s
NJ2 pmax pmax
comp=Z,950nm,4.0s
NJ2 LR LR
comp=Z,5µm,23.2s
NJ2 LR LR
comp=Z,4µm,19.9s
NJ2 LR LR
comp=Z,6µm,18.0s
RPSI Rantau Prapat 73.83 98 P **P** **18 19 15.7 -1.1**
RPSI IAmb IAmb 18 19 31.1
comp=Z,99nm,0.8s
RPSI IAMs_20 IAMs_20 18 56 58.6
comp=Z,10µm,19.0s
TRY Troy 73.86 311 P **P** **18 19 18.1 +1.5**
H57A Richville 73.96 313 P 18 19 18.0
baz=56,SNR=36
H57A S 18 28 48.9
baz=56
J59A Piesco 73.98 312 P **P** **18 19 18.2 +0.9**
J59A IAmb IAmb 18 19 38.6
comp=Z,184nm,1.2s
J59A Piesco 73.98 312 P 18 19 18.2
baz=57,SNR=33
J59A S 18 28 51.0
baz=57
K60A Five Rivers En 74.06 311 P 18 19 18.3
baz=57,SNR=7.4
M62A Hamden 74.08 310 P 18 19 18.2
baz=57,SNR=32
M62A S 18 28 50.7
baz=57
L61A Hillsdale 1, H 74.09 311 P 18 19 18.8
baz=57,SNR=32
L61A S 18 28 51.2
baz=57
N63A Mattituck 74.09 309 P 18 19 18.2
baz=57
I58A Old Forge 74.14 312 P 18 19 19.0
baz=56,SNR=39
I58A S 18 28 53.0
baz=56
MDJ Mudanjiang 74.19 46 P **P** **18 19 16.8 -1.6**
MDJ pP pP 18 19 23.0 -2.2
MDJ sP pwP 18 19 26.6 -0.8
MDJ S **S** **18 28 49.4 -1.1**
MDJ pmax pmax
comp=Z,32nm,2.4s
MDJ pmax pmax
comp=Z,520nm,4.0s
MDJ LR LR
comp=Z,3µm,17.1s
MDJ LR LR
comp=Z,10µm,17.3s
MDJ LR LR
comp=Z,10µm,17.0s
MDJ Mudanjiang 74.19 46 P **P** **18 19 19.8 +1.4**
MDJ IAMs_20 IAMs_20 18 57 13.6
comp=Z,7µm,18.0s
KSCT Kent School, K 74.30 310 P **P** **18 19 20.2 +1.1**
KSCT IAmb IAmb 18 19 23.8
comp=Z,127nm,0.9s
KSCT IAMs_20 IAMs_20 18 52 24.9
comp=Z,8µm,20.0s
FCC Fort Churchill 74.31 332 P **P** **18 19 18.9 0.0**
FCC pmax pmax
comp=Z,137nm,1.3s
FCC MLR MLR
comp=Z,14µm,20.0s
FCC Fort Churchill 74.31 332 P **P** **18 19 18.9 0.0**
FCC IAMs_20 IAMs_20 18 53 11.1
comp=Z,14µm,20.0s
GZH Guangzhou 74.36 73 P **P** **18 19 22.0 +2.3**
GZH S **S** **18 28 54.8 +1.8**
GZH LR LR
comp=Z,4µm,21.9s
GZH LR LR
comp=Z,3µm,19.5s

NBAN Anadia - AL 74.37 246 *e*P P 18 19 20.3 +0.5
GRNR Gornyy 74.40 38 *i*P P 18 19 20.3 +0.7
GRNR pmax pmax
comp=N,3.0nm,0.7s
GRNR pmax pmax
comp=E,6.0nm,0.7s
GRNR pmax pmax
comp=Z,10.0nm,1.1s
I57A Carthage 74.41 313 P 18 19 20.6
baz=56,SNR=46
I57A S 18 28 55.6
baz=56
WSPT Westport, CT 74.51 310 P P 18 19 20.7 +0.4
WSPT IAMs_20 IAMs_20 18 53 09.4
comp=Z,13µm,19.0s
IPM Ipoh 74.51 95 P P 18 19 19.3 -1.5
IPM Ipoh 74.51 95 P P 18 19 20.0 -0.8
K59A Cooperstown 74.57 312 P 18 19 21.5
baz=56,SNR=59
K59A S 18 28 56.5
baz=56
L60A Shokan 74.62 311 P 18 19 21.4
baz=56,SNR=9.4
L60A S 18 28 57.3
baz=56
PLVO Plevna 74.63 314 P P 18 19 21.5 +0.5
PLVO IAmb IAmb 18 19 28.4
comp=Z,194nm,1.0s
PLVO IAMs_20 IAMs_20 18 51 09.5
comp=Z,12µm,22.0s
ALGO Algonquin Park 74.68 316 P 18 19 21.6
baz=55
ALGO S 18 28 57.1
baz=55
M61A Granite Spring 74.71 310 P 18 19 21.6
baz=56,SNR=9.7
M61A S 18 28 58.4
baz=56
NBMA Muriti-CE 74.78 249 *e*P P 18 19 23.4 +1.1
MA2 Magadan 74.86 26 *d i*P P 18 19 22.4 +0.4
MA2 pmax pmax
comp=Z,148nm,1.5s
MA2 MLR MLR
comp=Z,8µm,16.0s
MA2 Magadan 74.86 26 P P 18 19 21.8 -0.2
MA2 IAmb IAmb 18 19 44.9
comp=Z,384nm,1.5s
MA2 IAMs_20 IAMs_20 18 55 43.2
comp=Z,8µm,20.0s
J57A Williamstown 74.91 313 P P 18 19 23.2 +0.6
J57A IAmb IAmb 18 19 29.9
comp=Z,144nm,1.1s
J57A IAMs_20 IAMs_20 18 51 09.9
comp=Z,11µm,22.0s
J57A Williamstown 74.91 313 P 18 19 23.3
baz=56,SNR=39
J57A S 18 28 59.5
baz=56
PAL Palisades 74.96 310 P P 18 19 22.6 -0.4
PAL pmax pmax
comp=Z,135nm,1.3s
PAL MLR MLR
comp=Z,11µm,20.0s
PAL Palisades 74.96 310 P P 18 19 22.6 -0.4
PAL IAMs_20 IAMs_20 18 53 03.5
comp=Z,11µm,20.0s
PAL Palisades 74.96 310 P 18 19 23.5
baz=56
PAL S 18 29 00.9
baz=56
L59A Walton 75.01 311 P P 18 19 24.2 +0.9
L59A IAmb IAmb 18 19 44.7
comp=Z,273nm,1.3s
L59A Walton 75.01 311 P 18 19 24.3
baz=56,SNR=41
L59A S 18 29 00.6
baz=56
G54A Lake Saint Pet 75.02 315 P 18 19 24.0
baz=55,SNR=140
G54A S 18 28 59.1
baz=55
K58A Earlville 75.06 312 P P 18 19 24.5 +0.9
K58A IAmb IAmb 18 19 44.8
comp=Z,214nm,1.1s
K58A IAMs_20 IAMs_20 18 52 56.0
comp=Z,7µm,20.0s
K58A Earlville 75.06 312 P 18 19 24.8
baz=56,SNR=39
K58A S 18 29 01.9
baz=56
TRNY Table Rock, Ra 75.08 310 P P 18 19 24.9 +1.2
CPNY Central Park 75.11 309 P P 18 19 24.4 +0.6
CPNY IAMs_20 IAMs_20 18 53 26.5
comp=Z,14µm,20.0s
PECO Prince Edward 75.21 313 P P 18 19 25.1 +0.8
PECO IAMs_20 IAMs_20 18 55 02.8
comp=Z,10µm,18.0s
M60A Port Jervis 75.23 310 P 18 19 25.4
baz=56,SNR=17
M60A S 18 29 04.0
baz=56
DELO Deloro Mine 75.25 314 P P 18 19 25.4 +0.9
DELO IAmb IAmb 18 19 31.7
comp=Z,171nm,1.2s
DELO IAMs_20 IAMs_20 18 51 40.7
comp=Z,11µm,22.0s
N61A South Mountain 75.35 310 P 18 19 26.2
baz=56,SNR=5.2
N61A S 18 29 04.6
baz=56
ODNJ Ogdensburg 75.36 310 P P 18 19 26.4 +1.1
ODNJ IAmb IAmb 18 19 29.7
comp=Z,111nm,0.9s
ODNJ IAMs_20 IAMs_20 18 53 26.9
comp=Z,8µm,19.0s
NBTA Tacaratu-PE 75.36 248 *e*P P 18 19 26.5 +0.9
J56A Wolcott 75.50 313 P P 18 19 26.8 +0.7
J56A IAmb IAmb 18 19 30.7
comp=Z,232nm,1.0s
J56A IAMs_20 IAMs_20 18 51 40.6
comp=Z,9µm,20.0s
J56A Wolcott 75.50 313 P 18 19 26.8
baz=55,SNR=39
J56A S 18 29 07.5
baz=55
BRNJ Basking Ridge 75.56 310 P P 18 19 27.2 +0.8
BRNJ IAmb IAmb 18 19 33.1
comp=Z,114nm,0.9s
BRNJ IAMs_20 IAMs_20 18 54 09.2
comp=Z,12µm,19.0s
BINY Binghamton 75.59 312 P P 18 19 26.9 +0.2
BINY IAmb IAmb 18 19 47.8
comp=Z,254nm,1.1s
BINY IAMs_20 IAMs_20 18 56 40.9
comp=Z,8µm,19.0s
BINY Binghamton 75.59 312 P 18 19 26.9
baz=56
BINY S 18 29 08.5
baz=56
L58A Harry Jones Me 75.59 311 P 18 19 27.8
baz=56,SNR=28
L58A S 18 29 09.6
baz=56
M59A Waymart 75.62 311 P 18 19 27.2
baz=56,SNR=29
M59A S 18 29 07.2
baz=56
INK Inuvik 75.77 353 P P 18 19 26.0 -1.1
comp=Z,28nm,0.5s,baz=14,slow=8.3,SNR=88
INK S S 18 29 03.1 -4.1
comp=Z,6.9nm,1.1s,baz=260,slow=31,SNR=18
INK LR LR 18 56 24.0
comp=Z,6µm,19.6s,baz=30,slow=39
INK Inuvik 75.77 353 P P 18 19 25.9 -1.2
INK IAmb IAmb 18 19 47.8
comp=Z,138nm,1.3s
INK Inuvik 75.77 353 IAMs_20 IAMs_20 18 59 17.8
comp=Z,10µm,20.0s
H53A Bobcaygeon 75.78 315 P 18 19 28.4
baz=54,SNR=40
H53A S 18 29 09.6
baz=54
N60A Cedar Hill Far 75.79 310 P 18 19 28.1
baz=56,SNR=39
N60A S 18 29 11.2
baz=56
KSPA Keystone Colle 75.81 311 P P 18 19 28.7 +0.8

KSPA IAmb IAmb 18 19 49.0
comp=Z,256nm,1.2s
KSPA IAMs_20 IAMs_20 18 53 23.0
comp=Z,9µm,20.0s
USA0B Ussuriysk Arra 75.84 46 *d i*P P 18 19 28.0 0.0
USA0B Ussuriysk Arra 75.84 46 P P 18 19 27.9 -0.1
USA0B IAmb IAmb 18 19 46.1
comp=Z,193nm,0.8s
USRK Ussuriysk Ar. 75.84 46 P P 18 19 27.8 -0.2
comp=Z,156nm,0.7s,baz=294,slow=4.8,SNR=296
USRK LR LR 18 58 06.1
comp=Z,6µm,19.3s,baz=298,slow=40
USRK Ussuriysk Ar. 75.84 46 P P 18 19 27.6 -0.4
O61A Allentown 75.88 309 P 18 19 28.2
baz=56
O61A S 18 29 11.2
baz=56
SADO Sadowa 75.99 315 P P 18 19 28.8 -0.1
comp=Z,76nm,0.7s,baz=50,slow=4.0,SNR=33
SADO LR LR 18 52 23.5
comp=Z,12µm,21.3s,baz=66,slow=35
SADO Sadowa 75.99 315 P P 18 19 28.9 0.0
SADO IAmb IAmb 18 19 35.7
comp=Z,100nm,0.8s
SADO IAMs_20 IAMs_20 18 52 55.3
comp=Z,12µm,21.0s
SSE Sheshan 76.02 62 P P 18 19 27.6 -1.6
SSE S S 18 29 05.8 -5.5
SSE pmax pmax
comp=Z,21nm,0.7s
SSE pmax pmax
comp=Z,92nm,5.4s
SSE LR LR
comp=Z,2µm,17.8s
SSE LR LR
comp=Z,2µm,23.6s
SSE Sheshan 76.02 62 P P 18 19 28.8 -0.5
JRMM Jerantut 76.04 95 P P 18 19 29.0 -0.6
J55A Hilton 76.08 313 P P 18 19 30.1 +0.8
J55A IAmb IAmb 18 19 35.8
comp=Z,159nm,1.2s
J55A IAMs_20 IAMs_20 18 52 07.9
comp=Z,9µm,21.0s
LUPA Lehigh Univers 76.11 310 P P 18 19 30.3 +0.7
LUPA IAMs_20 IAMs_20 18 53 59.9
comp=Z,10µm,20.0s
K56A Middlesex 76.12 313 P 18 19 30.2
baz=55,SNR=42
K56A S 18 29 14.6
baz=55
N59A State Game Lan 76.18 310 P P 18 19 30.8 +0.8
N59A IAmb IAmb 18 19 34.2
comp=Z,103nm,0.7s
N59A IAMs_20 IAMs_20 18 54 02.7
comp=Z,11µm,19.0s
N59A State Game Lan 76.18 310 P 18 19 30.4
baz=55,SNR=32
N59A S 18 29 17.0
baz=55
L57A Andrews Acres 76.23 312 P 18 19 30.8
baz=55,SNR=68
L57A S 18 29 14.7
baz=55
P61A Hammonton 76.27 309 P P 18 19 28.6 -1.9
O60A Telford 76.29 310 P 18 19 31.2
baz=55,SNR=30
O60A S 18 29 16.6
baz=55
INCN Inchon 76.30 54 P P 18 19 31.2 +0.4
INCN pmax pmax
comp=Z,194nm,1.2s
INCN MLR MLR
comp=Z,9µm,22.0s
INCN Inchon 76.30 54 P P 18 19 31.1 +0.4
INCN IAmb IAmb 18 19 45.4
comp=Z,194nm,1.1s
INCN Inchon 76.30 54 IAMs_20 IAMs_20 18 57 08.7
comp=Z,9µm,22.0s
M58A Price's Panora 76.35 311 S 18 29 16.9
baz=55
NBLA Lagarto - SE 76.36 246 *e*P P 18 19 31.5 +0.2
TOLK Toolik Lake Re 76.44 359 P P 18 19 31.3 +0.3
TOLK IAmb IAmb 18 19 55.4
comp=Z,103nm,0.8s
TOLK IAMs_20 IAMs_20 18 52 12.6
comp=Z,8µm,22.0s
TOLK Toolik Lake Re 76.44 359 P 18 19 31.0
baz=3.0
TOLK S 18 29 14.4
baz=3.0
DLV T Lat 76.44 85 P P 18 19 32.1 0.0
DLV IAmb IAmb 18 19 42.0
comp=Z,144nm,1.2s
MMNY Mt. Morris Dam 76.45 313 P P 18 19 31.1 -0.4
MMNY IAmb IAmb 18 19 52.4
comp=Z,276nm,1.2s
MMNY IAMs_20 IAMs_20 18 52 08.6
comp=Z,11µm,22.0s
MEDO Medina 76.52 313 P P 18 19 31.4 -0.5
MEDO IAmb IAmb 18 19 38.8
comp=Z,174nm,1.1s
MEDO IAMs_20 IAMs_20 18 52 30.5
comp=Z,8µm,21.0s
J54A Appleton 76.57 314 P P 18 19 32.8 +0.6
J54A IAmb IAmb 18 19 39.7
comp=Z,175nm,1.1s
J54A IAMs_20 IAMs_20 18 52 31.8
comp=Z,8µm,22.0s
L56A Greenwood 76.58 312 P P 18 19 32.7 +0.4
L56A IAMs_20 IAMs_20 18 52 33.2
comp=Z,10µm,21.0s
L56A Greenwood 76.58 312 P 18 19 33.1
baz=55,SNR=56
L56A S 18 29 20.8
baz=55
WUPA West Chester U 76.64 309 P P 18 19 31.6 -0.9
P60A Greenville 76.72 309 P P 18 19 32.5 -0.5
P60A IAMs_20 IAMs_20 18 53 58.1
comp=Z,13µm,20.0s
P60A Greenville 76.72 309 P 18 19 33.6
baz=55,SNR=9.4
P60A S 18 29 20.1
baz=55
M57A Sunshine Farm, 76.78 311 P P 18 19 34.0 +0.6
M57A IAmb IAmb 18 19 54.6
comp=Z,249nm,1.1s
M57A IAMs_20 IAMs_20 18 53 53.5
comp=Z,8µm,20.0s
M57A Sunshine Farm, 76.78 311 P 18 19 34.2
baz=55,SNR=40
M57A S 18 29 20.9
baz=55
O59A Robesonia 76.78 310 P 18 19 34.2
baz=55,SNR=32
O59A S 18 29 21.0
baz=55
RDOG Red Dog Mine 76.80 4 P P 18 19 32.1 -0.9
RDOG Red Dog Mine 76.81 4 P 18 19 32.7
baz=352
RDOG S 18 29 17.4
baz=352
N58A Sunbury 76.81 311 P P 18 19 33.9 +0.3
N58A IAmb IAmb 18 19 54.6
comp=Z,240nm,1.1s
N58A IAMs_20 IAMs_20 18 53 53.4
comp=Z,8µm,20.0s
N58A Sunbury 76.81 311 P 18 19 34.1
baz=55,SNR=52
N58A S 18 29 20.6
baz=55
BKNI Bangkinang 76.93 99 P P 18 19 33.5 -1.1
BKNI IAmb IAmb 18 19 57.7
comp=Z,237nm,1.0s
BKNI IAMs_20 IAMs_20 18 58 30.6
comp=Z,11µm,20.0s
BKNI Bangkinang 76.93 99 P P 18 19 35.3 +0.7
comp=Z,4µmcomp=Z,4µmcomp=Z,308nm,1.0s
WVNY West Valley, N 77.06 313 P P 18 19 35.2 +0.3
WVNY IAmb IAmb 18 19 39.3
comp=Z,169nm,1.0s
WVNY IAMs_20 IAMs_20 18 52 26.7
comp=Z,13µm,22.0s
Q61A Milford 77.06 308 P 18 19 35.4
baz=55
Q61A S 18 29 25.6
baz=55
MVL Millersville 77.07 310 P P 18 19 36.1 +1.1

KS19 Wonju Array Si 77.10 53 P P 18 19 35.8 +0.6
KS19 IAmb IAmb 18 19 50.3
comp=Z,152nm,0.9s
KSRS Korea Array 77.17 53 P P 18 19 36.0 +0.5
comp=Z,78nm,0.7s,baz=309,slow=4.6,SNR=150
KSRS LR LR 18 57 56.5
comp=Z,10µm,21.5s,baz=306,slow=39
PAGS Pennsylvania G 77.17 310 P P 18 19 35.6 0.0
PAGS IAMs_20 IAMs_20 18 54 52.8
comp=Z,12µm,19.0s
M56A Emporium 77.34 312 P P 18 19 37.1 +0.5
M56A Emporium 77.34 312 P 18 19 37.2
baz=54,SNR=57
M56A S 18 29 28.6
baz=54
P59A Jarrettsville 77.34 310 P 18 19 36.9
baz=55
O58A Lewisberry 77.36 310 P 18 19 36.8
baz=55,SNR=21
O58A S 18 29 26.2
baz=55
N57A Milroy 77.38 311 P 18 19 37.1
baz=54
N57A S 18 29 26.8
baz=54
R61A Willards 77.38 308 IAMs_20 IAMs_20 18 57 20.5
comp=Z,12µm,18.0s
TJN Taejon 77.40 54 *i*P P 18 19 35.2 -1.8
QZH Quanzhou 77.42 68 *i*P P 18 19 36.3 -0.9
QZH pP pP 18 19 42.1 -2.0
QZH sP sP 18 19 45.6 -1.0
QZH S S 18 29 26.0 -0.7
QZH pmax pmax
comp=Z,1µm,11.2s
QZH LR LR
comp=Z,4µm,20.6s
QZH LR LR
comp=Z,3µm,20.1s
QZH LR LR
comp=Z,7µm,22.2s
TYV Tymovskoe 77.42 36 *e*P P 18 19 37.5 +0.7
TYV *e*S S 18 29 28.5 +2.6
TYV pmax pmax
comp=Z,20nm,1.3s
TYV smax smax
comp=E,13nm,1.5s
TYV smax smax
comp=E,1µm,4.2s
I51A Listowel 77.65 315 P 18 19 38.4
baz=53
I51A S 18 29 30.8
baz=53
SSPA Standing Stone 77.66 311 P P 18 19 38.9 +0.6
SSPA IAmb IAmb 18 20 03.3
comp=Z,198nm,1.1s
SSPA Standing Stone 77.66 311 IAMs_20 IAMs_20 18 54 19.7
comp=Z,9µm,20.0s
SSPA Standing Stone 77.66 311 P 18 19 39.0
baz=54
SSPA S 18 29 31.4
baz=54
N56A West Decatur 77.74 312 P 18 19 39.2
baz=54
N56A S 18 29 30.9
baz=54
O57A Amberson 77.75 311 P 18 19 38.7
baz=54
O57A S 18 29 30.9
baz=54
YKA Yellowknife Ar 77.83 343 P P 18 19 38.0 -0.8
comp=Z,122nm,1.0s,baz=34,slow=5.3,SNR=436
YKA S S 18 29 29.5 -0.5
YKA comp=Z,3.4nm,1.1s,baz=30,slow=10.0,SNR=4.3 PKKPbc PKKPbc 18 38 39.0 -1.3
YKA comp=Z,0.2nm,0.6s,baz=188,slow=1.7,SNR=2.2 PKPPKP P'P'df 18 46 46.0 -3.4
YKA comp=Z,2.1nm,1.1s,baz=202,slow=2.8,SNR=7.6 LR LR 18 57 04.3
YKA comp=Z,14µm,19.3s,baz=0.0,slow=38
YKA Yellowknife Ar 77.83 343 *i*P P 18 19 38.0 -0.8
YKA pmax pmax
comp=Z,123nm,1.0s
COLD Coldfoot 77.87 359 P P 18 19 38.9 -0.1
COLD IAmb IAmb 18 20 03.4
comp=Z,148nm,1.1s
COLD IAMs_20 IAMs_20 18 59 29.4
comp=Z,9µm,20.0s
COLD Coldfoot 77.87 359 P 18 19 39.1
baz=2.5
COLD S 18 29 31.1
baz=2.5
E46A Sault Ste Mari 77.91 319 P P 18 19 40.0 +0.4
E46A IAMs_20 IAMs_20 18 53 15.0
comp=Z,9µm,21.0s
Q59A Harwood 77.91 309 P 18 19 40.3
baz=54,SNR=7.3
Q59A S 18 29 31.4
baz=54
S61A Accomac 77.97 308 IAMs_20 IAMs_20 18 55 16.1
comp=Z,13µm,20.0s
EPYK Eagle Plains 77.97 353 P P 18 19 37.9 -1.7
EPYK IAmb IAmb 18 19 59.0
comp=Z,135nm,0.9s
EPYK IAMs_20 IAMs_20 18 58 02.0
comp=Z,8µm,19.0s
EPYK Eagle Plains 77.97 353 P 18 19 39.0
baz=14
EPYK S 18 29 28.0
baz=14
TEY Ternei 77.98 43 *e*P P 18 19 39.9 -0.1
TEY *e* 18 19 56.8
TEY pmax pmax
comp=Z,30nm,1.1s
ERPA Erie 78.05 313 P P 18 19 40.8 +0.3
ERPA IAMs_20 IAMs_20 18 53 09.1
comp=Z,11µm,22.0s
ERPA Erie 78.06 313 P 18 19 40.6
baz=53
ERPA S 18 29 34.1
baz=53
R60A Leonardtown, M 78.21 309 P 18 19 40.5
baz=54
R60A S 18 29 38.1
baz=54
M54A Oil Creek Stat 78.22 313 P P 18 19 41.9 +0.4
M54A IAmb IAmb 18 19 50.4
comp=Z,215nm,1.1s
M54A IAMs_20 IAMs_20 18 53 23.6
comp=Z,11µm,21.0s
M54A Oil Creek Stat 78.22 313 P 18 19 41.5
baz=53
M54A S 18 29 37.1
baz=53
O56A Blue Knob Stat 78.29 311 P P 18 19 41.7 -0.2
O56A IAmb IAmb 18 20 03.0
comp=Z,236nm,1.4s
O56A IAMs_20 IAMs_20 18 54 48.5
comp=Z,10µm,21.0s
O56A Blue Knob Stat 78.29 311 P 18 19 41.5
baz=54
O56A S 18 29 37.5
baz=54
L53A Girard 78.31 313 P 18 19 41.9
baz=53
L53A S 18 29 36.6
baz=53
MYKOM Kota Tinggi 78.36 96 P P 18 19 41.6 -0.9
MYKOM IAMs_20 IAMs_20 19 01 01.4
comp=Z,11µm,20.0s
MYKOM Kota Tinggi 78.36 96 P P 18 19 42.0 -0.6
FYU Fort Yukon 78.38 357 P P 18 19 41.7 -0.1
FYU IAmb IAmb 18 20 04.1
comp=Z,326nm,1.4s
P57A Homestead Farm 78.41 310 P P 18 19 42.9 +0.4
P57A IAmb IAmb 18 19 49.4
comp=Z,130nm,0.9s
P57A IAMs_20 IAMs_20 18 54 43.7
comp=Z,12µm,20.0s
P57A Homestead Farm 78.41 310 P 18 19 42.6
baz=54
P57A S 18 29 39.2
baz=54
ALLY Alegheny Colle 78.43 313 P P 18 19 42.9 +0.3
ALLY IAMs_20 IAMs_20 18 53 19.0
comp=Z,14µm,22.0s
Q58A Fox Den Farm, 78.52 310 P 18 19 42.7
baz=54

Q58A S 18 29 39.3
baz=54
S60A Water View 78.59 308 P 18 19 43.8
S60A baz=54 S 18 29 40.2
R59A King George, V 78.59 309 P 18 19 43.4
R59A baz=54 S 18 29 40.2
N54A Moraine State 78.75 312 P **P** **18 19 44.6 +0.3**
N54A IAmb IAmb 18 19 48.6
comp=Z,169nm,1.1s
N54A IAMs_20 IAMs_20 18 53 40.5
comp=Z,8µm,20.0s
N54A Moraine State 78.75 312 P 18 19 44.3
N54A baz=53 S 18 29 41.0
baz=53
CBN Corbin Frederi 78.75 309 P **P** **18 19 44.0 -0.4**
CBN IAMs_20 IAMs_20 18 56 05.9
comp=Z,11µm,20.0s
CBN Corbin Frederi 78.76 309 P 18 19 44.7
CBN baz=54 S 18 29 40.6
baz=54
M53A WI Miller and 78.87 313 P **P** **18 19 45.2 +0.2**
M53A IAmb IAmb 18 20 05.5
comp=Z,224nm,1.4s
M53A IAMs_20 IAMs_20 18 53 43.7
comp=Z,12µm,22.0s
M53A WI Miller and 78.87 313 P 18 19 45.1
M53A baz=53 S 18 29 43.2
baz=53
P56A Dayton Farm, R 78.91 311 P 18 19 45.3
P56A baz=53 S 18 29 44.0
baz=53
TNA Tin City 78.92 6 P **P** **18 19 44.1 -0.6**
TNA Tin City 78.92 6 P 18 19 44.2
TNA baz=348 S 18 29 40.4
baz=348
Q57A Strasburg 78.92 310 P 18 19 45.8
Q57A baz=54 S 18 29 44.6
baz=54
ANWB Willy Bob 78.94 284 *e*P **P** **18 19 45.1 -0.6**
ANWB Willy Bob 78.94 284 P **P** **18 19 44.7 -1.1**
S59A Mechanicsville 78.97 308 P 18 19 45.9
S59A baz=54 S 18 29 45.3
baz=54
T60A Surry 78.97 308 P **P** **18 19 45.0 -0.6**
T60A IAmb IAmb 18 19 50.3
comp=Z,227nm,0.9s
T60A IAMs_20 IAMs_20 18 55 45.6
comp=Z,13µm,20.0s
T60A Surry 78.97 308 P 18 19 45.5
T60A baz=54 S 18 29 43.8
baz=54
GLMI Grayling 79.05 318 P **P** **18 19 46.3 +0.4**
GLMI IAMs_20 IAMs_20 18 56 20.2
comp=Z,8µm,18.0s
GLMI Grayling 79.05 318 P 18 19 46.0
GLMI baz=51 S 18 29 44.6
baz=51
TMAB Tom-Au,PA,Br 79.10 259 *e*P **P** **18 19 47.5 +0.9**
K50A Casco 79.20 315 P **P** **18 19 47.4 +0.6**
M52A Chesterland 79.22 313 P **P** **18 19 47.4 +0.4**
M52A IAmb IAmb 18 19 53.6
comp=Z,143nm,0.9s
M52A IAMs_20 IAMs_20 18 53 42.8
comp=Z,11µm,22.0s
R58B Mineral 79.22 309 P **P** **18 19 47.0 0.0**
R58B IAmb IAmb 18 20 04.4
comp=Z,124nm,1.1s
R58B IAMs_20 IAMs_20 18 56 01.2
comp=Z,12µm,20.0s
R58B Mineral 79.22 309 P 18 19 47.1
R58B baz=54 S 18 29 47.7
baz=54
U61A Possum Corner 79.25 307 P **P** **18 19 48.2 +1.0**
U61A IAMs_20 IAMs_20 18 55 20.2
comp=Z,12µm,22.0s
U61A Possum Corner 79.25 307 P 18 19 47.4
U61A baz=54 S 18 29 49.5
baz=54
ANBD Bethesda, Anti 79.26 283 *e*P **P** **18 19 49.4 +1.9**
BPA Boggy Peak 79.34 283 *e*P **P** **18 19 48.5 +0.6**
E43A Lone Tree Farm 79.34 320 P **P** **18 19 47.1 -0.4**
E43A IAmb IAmb 18 19 51.3
comp=Z,201nm,1.1s
N53A Lisbon 79.35 313 P **P** **18 19 48.2 +0.5**
N53A IAmb IAmb 18 19 54.4
comp=Z,149nm,1.1s
N53A IAMs_20 IAMs_20 18 53 58.5
comp=Z,9µm,20.0s
ABD La Joyeuse, An 79.36 283 *e*P **P** **18 19 49.3 +1.3**
JSRW J. Sargeant Re 79.38 309 P **P** **18 19 47.7 -0.2**
V62A Hyde County Ai 79.38 306 P 18 19 47.9
baz=54
Q56A Snyder Ridge, 79.40 310 P **P** **18 19 48.5 +0.5**
Q56A IAmb IAmb 18 19 52.2
comp=Z,178nm,0.9s
Q56A IAMs_20 IAMs_20 18 55 24.0
comp=Z,12µm,20.0s
Q56A Snyder Ridge, 79.41 310 P 18 19 48.5
Q56A baz=53 S 18 29 49.7
baz=53
R57A Stanardsville 79.43 309 P 18 19 48.1
R57A baz=53 S 18 29 47.4
baz=53
PRP Porcupine Dome 79.44 357 P **P** **18 19 47.5 -0.3**
PRP IAMs_20 IAMs_20 19 00 44.8
comp=Z,7µm,20.0s
PRP Porcupine Dome 79.44 357 P 18 19 47.6
PRP baz=6.4 S 18 29 47.3
baz=6.4
GDU01 Guandu, BA 79.44 245 *e*P **P** **18 19 49.1 +0.7**
MCWV Mont Chateau 79.44 311 P **P** **18 19 48.6 +0.4**
MCWV Mont Chateau 79.44 311 P 18 19 48.6
MCWV baz=53 S 18 29 49.4
baz=53
O54A Avella 79.45 312 P **P** **18 19 48.8 +0.5**
O54A IAMs_20 IAMs_20 18 53 05.2
comp=Z,9µm,22.0s
MAGL Barre de l'ile 79.48 282 *e*P **P** **18 19 48.5 -0.3**
G45A Suttons Bay 79.48 318 P **P** **18 19 48.6 +0.2**
G45A IAMs_20 IAMs_20 18 56 50.6
comp=Z,8µm,18.0s
S58A Poland Farm, P 79.54 309 P **P** **18 19 49.0 +0.2**
S58A IAmb IAmb 18 19 52.8
comp=Z,132nm,0.8s
S58A IAMs_20 IAMs_20 18 56 10.6
comp=Z,12µm,20.0s
S58A Poland Farm, P 79.54 309 P 18 19 48.8
S58A baz=54 S 18 29 50.5
baz=54
TATO Taipei 79.59 67 P **P** **18 19 49.8 +0.5**
TATO IAmb IAmb 18 19 57.5
comp=Z,143nm,1.2s
T59A Double "B" Far 79.60 308 P **P** **18 19 49.5 +0.5**
T59A IAmb IAmb 18 19 55.5
comp=Z,152nm,1.1s
T59A IAMs_20 IAMs_20 18 53 10.3
comp=Z,11µm,22.0s
U60A Pendleton 79.64 307 P 18 19 49.1
U60A baz=54 S 18 29 52.6
baz=54
BBGH Gun Hill 79.64 279 *e*P **P** **18 19 46.5 -3.2**
V61A Roper 79.65 306 IAMs_20 IAMs_20 18 55 18.9
comp=Z,8µm,22.0s
CBE Ff, Capester 79.68 282 *e*P **P** **18 19 51.0 +1.2**
YHNB Yeheng 79.68 67 P **P** **18 19 50.9 +1.1**
YHNB IAmb IAmb 18 20 19.7
comp=Z,222nm,1.3s
D41A Chassel 79.72 321 P **P** **18 19 49.4 -0.1**
D41A IAmb IAmb 18 19 53.4
comp=Z,252nm,1.1s
D41A IAMs_20 IAMs_20 18 53 49.6
comp=Z,9µm,22.0s
MLYT Lee's Yard 79.78 283 *e*P **P** **18 19 53.6 +3.2**
DLPL La Plaine 79.79 282 *e*P P 18 19 56.9 +6.4
ILAM Ilet Lapin Mar 79.80 281 *e*P **P** **18 19 49.3 -1.1**
TDBA Terre de Bas, 79.82 282 *e*P **P** **18 19 50.4 -0.1**
M51A Elyria 79.84 314 P 18 19 50.1
M51A baz=52 S 18 29 50.0
baz=52
SSLB Suanglung 79.85 68 P **P** **18 19 51.5 +0.8**
TPUB Ta-pu 79.87 69 P **P** **18 19 50.8 0.0**
TPUB IAmb IAmb 18 20 15.9
comp=Z,119nm,1.0s
DSLB Salisbury 79.88 282 *e*P **P** **18 19 53.6 +2.8**
EGAK Eagle 79.91 355 P **P** **18 19 50.2 0.0**
EGAK Eagle 79.91 355 P 18 19 50.3
EGAK baz=10.0 S 18 29 52.9
baz=10.0
POKR Poker Plat Res 79.92 358 P **P** **18 19 50.4 +0.1**
POKR IAmb IAmb 18 19 56.1
comp=Z,104nm,0.6s
POKR IAMs_20 IAMs_20 18 58 14.4
comp=Z,9µm,21.0s
POKR Poker Plat Res 79.92 358 P 18 19 50.2
POKR baz=4.8 S 18 29 52.9
baz=4.8
O53A New Philadelph 79.92 312 P **P** **18 19 51.0 +0.3**
O53A IAmb IAmb 18 19 55.0
comp=Z,155nm,1.1s
O53A IAMs_20 IAMs_20 18 58 45.5
comp=Z,9µm,18.0s
O53A New Philadelph 79.92 312 P 18 19 51.2
O53A baz=52 S 18 29 51.5
baz=52
R56A Bull Pasture M 79.92 310 P 18 19 51.1
R56A baz=53 S 18 29 54.1
baz=53
MASI Maura Aman, Be 79.93 101 P **P** **18 19 51.8 +0.6**
comp=Z,5µmcomp=Z,377nm,1.0s
I23K Minto, Yukon-K 79.94 358 P **P** **18 19 50.1 -0.2**
I23K Minto, Yukon-K 79.94 358 P 18 19 51.0
I23K baz=3.2 S 18 29 52.6
baz=3.2
MPOM Morne Pois Mar 79.97 281 *e*P P 18 19 46.5 -4.9
SEUS St. Eustatius 79.99 284 *e*P P 18 19 45.5 -6.0
S57A Dark Hollow, R 80.02 309 P **P** **18 19 51.7 +0.4**
S57A IAMs_20 IAMs_20 18 58 40.5
comp=Z,11µm,18.0s
S57A Dark Hollow, R 80.03 309 P 18 19 52.2
S57A baz=53 S 18 29 54.6
baz=53
FDF Fort de France 80.05 281 *e*P **P** **18 19 52.0 +0.1**
YSS Yuzh-Sakhalins 80.05 39 *α i*P **P** **18 19 51.8 +0.5**
YSS *e* 18 22 56.0
YSS *e*S **S** **18 29 54.3 +0.1**
YSS *e*PPS PPS 18 30 00.5
YSS *e*SS **SS** **18 35 09.4 +6.0**
YSS pmax pmax
comp=Z,150nm,1.0s
YSS pmax pmax
comp=Z,1µm,4.8s
YSS smax smax
comp=E,2µm,5.9s
YSS Yuzh-Sakhalins 80.05 39 P **P** **18 19 51.3 0.0**
YSS IAmb IAmb 18 20 14.7
comp=Z,219nm,1.1s
YSS IAMs_20 IAMs_20 19 01 20.1
comp=Z,13µm,22.0s
MLY Manley 80.08 359 P **P** **18 19 51.0 -0.2**
MLY Manley 80.09 359 P 18 19 51.1
MLY baz=2.0 S 18 29 55.4
baz=2.0
AAM Ann Arbor 80.09 315 P **P** **18 19 51.3 -0.4**
AAM pmax pmax
comp=Z,114nm,1.0s
AAM MLR MLR
comp=Z,16µm,21.0s
AAM Ann Arbor 80.09 315 P **P** **18 19 51.3 -0.4**
AAM Ann Arbor 80.10 315 P 18 19 52.0
AAM baz=51 S 18 29 52.9
baz=51
MDM Murphy Dome 80.10 358 P **P** **18 19 51.0 -0.3**
MDM IAmb IAmb 18 20 03.7
comp=Z,124nm,0.9s
BIM Bigot 80.10 281 *e*P **P** **18 19 54.7 +2.5**
ANM Nome 80.11 5 P **P** **18 19 50.6 -0.7**
ANM pmax pmax
comp=Z,86nm,0.9s
ANM MLR MLR
comp=Z,6µm,21.0s
ANM Nome 80.11 5 P **P** **18 19 50.6 -0.7**
ANM Nome 80.11 5 P 18 19 51.0
ANM baz=350 S 18 29 54.0
baz=350
NBIT Itapeh - BA 80.11 244 *e*P **P** **18 19 53.5 +1.5**
U59A Littleton 80.12 308 P **P** **18 19 52.5 +0.6**
U59A IAmb IAmb 18 20 09.6
comp=Z,148nm,1.1s
J47A Sunmer 80.17 316 P **P** **18 19 52.1 +0.1**
J47A IAmb IAmb 18 19 56.6
comp=Z,254nm,1.0s
J47A IAMs_20 IAMs_20 18 58 14.8
comp=Z,9µm,19.0s
COLA College 80.17 358 *i* P **P** **18 19 51.8 +0.2**
COLA pmax pmax
comp=Z,189nm,2.1s
COLA MLR MLR
comp=Z,7µm,21.0s
COLA College 80.17 358 P **P** **18 19 51.7 0.0**
COLA IAmb IAmb 18 20 17.5
comp=Z,216nm,1.5s
COLA College 80.17 358 IAMs_20 IAMs_20 18 58 23.2
comp=Z,8µm,21.0s
COLA College 80.17 358 P 18 19 52.0
COLA baz=4.4 S 18 29 54.8
baz=4.4
TCOL CIGO, UAF Yank 80.17 358 P **P** **18 19 51.8 +0.2**
TCOL IAmb IAmb 18 20 17.5
comp=Z,202nm,1.4s
TCOL IAMs_20 IAMs_20 18 58 33.2
comp=Z,9µm,21.0s
JMBI JAMBI 80.17 99 P P 18 20 01.8 +9.3
TCOL CIGO, UAF Yank 80.17 358 P 18 19 51.9
baz=4.4
TCOL S 18 29 54.3
baz=4.4
N51A Ashland 80.20 313 P **P** **18 19 51.1 -1.2**
N51A IAmb IAmb 18 19 56.6
comp=Z,144nm,0.8s
N51A IAMs_20 IAMs_20 18 54 24.0
comp=Z,13µm,22.0s
FFC Flin Flon 80.24 333 P **P** **18 19 51.2 -1.0**
FFC pmax pmax
comp=Z,161nm,0.9s
FFC MLR MLR
comp=Z,11µm,19.0s
FFC Flin Flon 80.24 333 P **P** **18 19 51.1 -1.0**
FFC IAmb IAmb 18 20 12.2
comp=Z,161nm,0.9s
FFC Flin Flon 80.24 333 IAMs_20 IAMs_20 18 57 45.7
comp=Z,11µm,19.0s
IL31 80.24 357 P **P** **18 19 50.9 -1.0**
ILAR Eielson Array 80.24 357 P **P** **18 19 51.5 -0.6**
comp=Z,23nm,0.6s,baz=342,slow=3.5,SNR=174
ILAR PKKPbc **PKKPbc** **18 38 33.2 -1.9**
comp=Z,2.8nm,0.7s,baz=224,slow=2.7,SNR=13
ILAR PKPPKP **P'P'df** **18 46 38.2 -6.8**
comp=Z,1.5nm,0.9s,baz=232,slow=2.1,SNR=7.8
ILAR LR LR 18 56 24.5
comp=Z,4µm,20.3s,baz=34,slow=36
ILAR Eielson Array 80.24 357 P **P** **18 19 50.6 -1.4**
ILAR **PKKPbc** **18 38 29.4 -5.7**
GAMB Gambell 80.27 8 P **P** **18 19 51.4 -0.8**
GAMB IAMs_20 IAMs_20 19 01 14.6
comp=Z,10µm,20.0s
GAMB Gambell 80.27 8 P 18 19 51.7
GAMB baz=345 S 18 29 51.3
baz=345
M50A Fremont 80.30 314 P **P** **18 19 52.8 0.0**
M50A IAMs_20 IAMs_20 18 56 29.4
comp=Z,9µm,20.0s
SLBI Saint Lucia, B 80.30 280 *e*P P 18 19 46.5 -6.7
YULB Yu-li 80.33 68 P **P** **18 19 53.0 -0.3**
YULB IAmb IAmb 18 20 21.4
comp=Z,122nm,1.0s
O52A Adamsville 80.38 313 P **P** **18 19 53.5 +0.3**
O52A IAmb IAmb 18 19 57.2
comp=Z,191nm,0.9s
O52A IAMs_20 IAMs_20 18 54 30.6
comp=Z,10µm,21.0s
CCB Clear Creek Bu 80.40 358 P **P** **18 19 52.2 -0.7**
CCB IAMs_20 IAMs_20 18 58 28.2
comp=Z,7µm,21.0s
R55A Marlinton 80.44 310 P **P** **18 19 54.1 +0.4**
R55A IAmb IAmb 18 20 00.0
comp=Z,340nm,1.4s
R55A Marlinton 80.44 310 P 18 19 53.8
R55A baz=52 S 18 29 59.4
baz=52
MCLT Moule a Chique 80.45 280 *e*P **P** **18 19 50.4 -3.5**
I45A Fountain 80.45 318 P **P** **18 19 53.9 +0.4**
Q54A Coxs Mills 80.46 311 P **P** **18 19 53.0 -0.7**
Q54A IAmb IAmb 18 19 59.4
comp=Z,134nm,1.1s
Q54A IAMs_20 IAMs_20 18 54 57.9
comp=Z,7µm,21.0s
S56A Natural Bridge 80.46 309 P 18 19 53.7
S56A baz=53 S 18 29 55.0
baz=53
DAWY Dawson 80.47 354 P **P** **18 19 52.6 -0.8**
DAWY IAmb IAmb 18 20 14.8
comp=Z,126nm,0.9s
DAWY IAMs_20 IAMs_20 18 59 23.1
comp=Z,9µm,19.0s
NEA2 Nenana 80.49 358 P **P** **18 19 53.0 -0.4**
NEA2 Nenana 80.49 358 P 18 19 53.3
NEA2 baz=3.4 S 18 29 57.1
baz=3.4
WRH Wood River Hil 80.58 358 P **P** **18 19 53.0 -0.8**
WRH IAmb IAmb 18 19 59.3
comp=Z,168nm,0.6s
WRH IAMs_20 IAMs_20 18 58 34.1
comp=Z,7µm,21.0s
EYMN Ely 80.59 323 P **P** **18 19 53.9 -0.4**
EYMN Ely 80.59 323 IAMs_20 IAMs_20 18 54 03.7
comp=Z,10µm,22.0s
EYMN Ely 80.59 323 P 18 19 54.0
EYMN baz=47 S 18 29 59.5
baz=47
HDA Harding Lake 80.61 357 P 18 19 53.4
HDA baz=5.2 P 18 19 53.4
baz=5.2
HDA S 18 29 56.7
baz=5.2
HDA S 18 29 56.7
baz=5.2
COWI Conover 80.65 321 P **P** **18 19 54.0 -0.6**
COWI IAmb IAmb 18 19 58.3
comp=Z,272nm,1.1s
COWI IAMs_20 IAMs_20 18 56 32.2
comp=Z,9µm,19.0s
T57A Hurt 80.67 309 P **P** **18 19 55.4 +0.5**
T57A IAmb IAmb 18 20 01.1
comp=Z,193nm,1.3s
T57A IAMs_20 IAMs_20 18 56 53.7
comp=Z,11µm,19.0s
K27K Chicken 80.72 355 P **P** **18 19 54.9 +0.2**
K27K IAmb IAmb 18 20 09.6
comp=Z,259nm,1.1s
K27K IAMs_20 IAMs_20 18 59 43.7
comp=Z,7µm,20.0s
K27K Chicken 80.72 355 P 18 19 54.6
baz=9.2
L48A N Adams 80.77 315 P **P** **18 19 55.2 -0.1**
L48A IAmb IAmb 18 19 58.9
comp=Z,149nm,0.8s
CNNC Cliffs of the 80.84 307 IAMs_20 IAMs_20 19 01 15.3
comp=Z,9µm,18.0s
P52A Corning 80.85 312 P **P** **18 19 55.5 -0.3**
P52A IAmb IAmb 18 20 04.7
comp=Z,217nm,1.2s
P52A Corning 80.86 312 P 18 19 55.5
P52A baz=52 S 18 30 04.1
baz=52
SCRK Sand Creek 80.89 356 P **P** **18 19 55.8 +0.1**
SCRK IAmb IAmb 18 20 03.5
comp=Z,118nm,1.0s
SCRK Sand Creek 80.89 356 P 18 19 55.6
baz=7.6
SCRK S 18 30 00.2
baz=7.6
BWN Browne 80.92 358 P **P** **18 19 55.1 -0.6**
BWN IAmb IAmb 18 20 10.9
comp=Z,132nm,1.0s
SVB Belmont 80.94 280 *e*P P 18 19 46.5 -10
SVB Belmont 80.94 280 P **P** **18 19 56.6 -0.1**
Q53A Leroy 80.96 311 P 18 19 56.4
baz=52
Q53A S 18 30 03.7
baz=52
ACSO Alum Creek Sta 80.99 313 P **P** **18 19 56.5 0.0**
ACSO IAmb IAmb 18 20 02.9
comp=Z,201nm,0.9s
ACSO IAMs_20 IAMs_20 18 54 59.9
comp=Z,12µm,21.0s
ACSO Alum Creek Sta 80.99 313 P 18 19 56.5
baz=51
ACSO S 18 30 04.9
baz=51
H43A Windswept, Lux 81.00 319 P **P** **18 19 56.6 +0.1**
H43A IAmb IAmb 18 20 00.5
comp=Z,189nm,0.9s
H43A IAMs_20 IAMs_20 18 56 58.7
comp=Z,9µm,19.0s
BPAW Bear Paw Mtn. 81.02 359 P **P** **18 19 55.2 -1.0**
BPAW IAMs_20 IAMs_20 19 01 37.7
comp=Z,7µm,20.0s
BPAW Bear Paw Mtn. 81.02 359 P 18 19 55.5
baz=1.8
BPAW S 18 30 00.9
baz=1.8
ULM Lac du Bonnet 81.04 327 P **P** **18 19 55.9 -0.7**
comp=Z,84nm,0.5s,baz=45,slow=5.1,SNR=104
ULM PKKPbc **PKKPbc** **18 38 31.5 -1.5**
comp=Z,1.5nm,0.5s,baz=216,slow=4.7,SNR=4.2
ULM LR LR 18 55 09.7
comp=Z,12µm,21.9s,baz=46,slow=35
ULM Lac du Bonnet 81.04 327 *c i*P **P** **18 19 55.6 -1.0**
ULM Lac du Bonnet 81.04 327 P **P** **18 19 55.3 -1.3**
ULM IAmb IAmb 18 20 01.5
comp=Z,144nm,1.0s
ULM IAMs_20 IAMs_20 18 55 09.2
comp=Z,12µm,22.0s
R54A Victor 81.05 311 P 18 19 57.0
baz=52
R54A S 18 30 06.7
baz=52
STVI Saint Thomas 81.07 286 P **P** **18 19 56.9 -0.3**
MCPB Macapa, AP 81.13 263 *e*P **P** **18 19 58.5 +0.9**
COCO West Island 81.17 112 *i*P **P** **18 19 59.6 +1.9**
DOT Dot Lake 81.22 356 P **P** **18 19 57.4 +0.1**
DOT IAmb IAmb 18 20 11.5
comp=Z,135nm,1.0s
CDVI St. Croix 81.25 285 *e*P **P** **18 19 59.8 +1.5**
CDVI St. Croix 81.25 285 P **P** **18 19 59.2 +1.0**
CHUM Lake Minchumin 81.25 360 P 18 19 57.4
baz=0.7
CHUM S 18 30 06.7
baz=0.7
N49A Columbus Grove 81.27 314 P **P** **18 19 57.9 -0.1**

N49A IAmb IAmb 18 20 01.7
comp=Z,189nm,1.0s
N49A IAMs_20 IAMs_20 18 56 09.1
comp=Z,13µm,21.0s
BLA Blacksburg 81.28 310 P **P** **18 19 58.6 +0.4**
BLA pmax pmax
comp=Z,130nm,1.4s
BLA MLR MLR
comp=Z,12µm,20.0s
BLA Blacksburg 81.28 310 P **P** **18 19 58.6 +0.4**
BLA IAMs_20 IAMs_20 18 57 07.8
comp=Z,12µm,20.0s
BLA Blacksburg 81.28 310 P 18 19 58.0
baz=52
BLA S 18 30 07.1
baz=52
V58A Windy Hill, Pi 81.31 308 P **P** **18 19 58.7 +0.5**
V58A IAmb IAmb 18 20 09.1
comp=Z,183nm,1.4s
V58A IAMs_20 IAMs_20 18 56 43.6
comp=Z,9µm,20.0s
MCK McKinley 81.35 358 P **P** **18 19 57.3 -0.7**
MCK pmax pmax
comp=Z,230nm,1.2s
MCK MLR MLR
comp=Z,7µm,20.0s
MCK McKinley 81.35 358 P **P** **18 19 57.3 -0.7**
MCK IAmb IAmb 18 20 22.2
comp=Z,230nm,1.2s
MCK IAMs_20 IAMs_20 19 01 57.3
comp=Z,7µm,20.0s
MCK McKinley 81.35 358 P 18 19 57.4
baz=3.5
MCK S 18 30 07.1
baz=3.5
CUPR Culebra, Puert 81.35 286 P **P** **18 19 59.1 +0.3**
Q52A Bidwell 81.35 312 P **P** **18 19 57.9 -0.6**
Q52A IAmb IAmb 18 20 04.9
comp=Z,178nm,1.0s
Q52A IAMs_20 IAMs_20 18 59 23.5
comp=Z,11µm,18.0s
LHSI Lahat 81.36 101 P **P** **18 19 58.1 -0.7**
comp=Z,3µmcomp=Z,259nm,1.0s
B35A Bob, Littlefor 81.39 324 P **P** **18 19 58.0 -0.5**
B35A IAmb IAmb 18 20 04.4
comp=Z,82nm,0.8s
B35A IAMs_20 IAMs_20 18 57 20.5
comp=Z,12µm,21.0s
TOSP Speyside 81.46 278 *e*P **P** **18 19 59.8 +0.4**
S54A Dingess, Beckl 81.48 310 P **P** **18 19 59.5 +0.3**
S54A Dingess, Beckl 81.48 310 P 18 19 58.9
baz=52
S54A S 18 30 09.8
baz=52
P51A Williamsport 81.51 313 P **P** **18 19 58.7 -0.6**
P51A IAmb IAmb 18 20 02.6
comp=Z,139nm,1.1s
P51A IAMs_20 IAMs_20 18 55 04.6
comp=Z,9µm,22.0s
GCMP Grenada, Carri 81.52 279 *e*P **P** **18 19 56.8 -2.9**
E38A The Farm, Brul 81.54 322 P **P** **18 19 58.2 -1.1**
E38A IAmb IAmb 18 20 02.3
comp=Z,94nm,0.8s
E38A IAMs_20 IAMs_20 18 58 19.8
comp=Z,8µm,19.0s
R53A Hurricane 81.55 311 P **P** **18 19 59.8 +0.2**
R53A IAmb IAmb 18 20 03.7
comp=Z,308nm,1.2s
R53A IAMs_20 IAMs_20 18 54 43.8
comp=Z,10µm,22.0s
KTH Kantishna Hill 81.57 359 P **P** **18 19 58.2 -1.1**
KTH IAmb IAmb 18 20 27.0
comp=Z,246nm,1.3s
JNU Nakatsue 81.65 55 P **P** **18 20 00.8 +0.7**
JNU IAmb IAmb 18 20 22.3
comp=Z,153nm,1.3s
TRF Thorofare Moun 81.66 359 P **P** **18 19 58.9 -0.9**
TRF IAmb IAmb 18 20 06.7
comp=Z,120nm,1.1s
TRF Thorofare Moun 81.66 359 P 18 19 59.4
baz=2.4
TRF S 18 30 09.9
baz=2.4
RND Reindeer 81.67 358 P **P** **18 19 58.4 -1.4**
RND Reindeer 81.67 358 P **P** **18 19 58.4 -1.4**
RND IAMs_20 IAMs_20 18 59 29.9
comp=Z,7µm,21.0s
MTP Monte Pirata 81.68 286 P **P** **18 20 00.7 +0.1**
MTP IAmb IAmb 18 20 08.1
comp=Z,199nm,1.3s
G40A Rib Lake 81.76 321 P **P** **18 19 59.8 -0.7**
G40A IAmb IAmb 18 20 04.2
comp=Z,182nm,1.1s
G40A IAMs_20 IAMs_20 18 56 56.6
comp=Z,9µm,20.0s
L46A Eue Claire 81.79 316 P **P** **18 19 59.9 -0.8**
L46A IAmb IAmb 18 20 21.0
comp=Z,176nm,1.0s
L46A IAMs_20 IAMs_20 18 58 23.7
comp=Z,11µm,19.0s
Y60A Bolivia 81.80 306 IAMs_20 IAMs_20 18 58 41.1
comp=Z,6µm,18.0s
O49A Covington 81.83 314 P **P** **18 20 00.4 -0.6**
O49A IAmb IAmb 18 20 04.5
comp=Z,233nm,0.9s
O49A IAMs_20 IAMs_20 18 55 23.9
comp=Z,10µm,22.0s
PMBI Palembang 81.84 99 IAMs_20 IAMs_20 19 00 03.0
comp=Z,7µm,21.0s
ASAJ Asahikawa 81.86 41 P **P** **18 20 01.4 +0.4**
ASAJ pmax pmax
comp=Z,57nm,0.7s
ASAJ MLR MLR
comp=Z,6µm,19.0s
JKA Kamikawa-asahi 81.86 41 P **P** **18 20 01.4 +0.4**
JKA IAMs_20 IAMs_20 19 02 41.9
comp=Z,6µm,19.0s
HUMP Col San Antoni 81.89 286 P **P** **18 20 02.6 +1.0**
GRGR Grenville 81.90 279 *e*P P 18 19 56.8 -4.9
MENT Mentasta 81.91 356 P **P** **18 20 01.6 +0.6**
MENT IAmb IAmb 18 20 17.4
comp=Z,158nm,1.1s
MENT IAMs_20 IAMs_20 19 00 52.2
comp=Z,7µm,20.0s
Q51A Peebles 81.97 312 P **P** **18 20 01.7 0.0**
Q51A IAMs_20 IAMs_20 18 58 09.7
comp=Z,7µm,20.0s
PAX Paxson 81.98 356 P **P** **18 20 00.7 -0.7**
PAX pmax pmax
comp=Z,45nm,0.9s
PAX MLR MLR
comp=Z,8µm,22.0s
PAX Paxson 81.98 356 P **P** **18 20 00.7 -0.7**
PAX IAMs_20 IAMs_20 18 57 38.9
comp=Z,8µm,22.0s
PAX Paxson 81.98 356 P 18 20 01.0
baz=6.4
I42A Draeger Farm, 82.00 319 P **P** **18 20 01.5 -0.3**
I42A IAmb IAmb 18 20 05.4
comp=Z,173nm,1.1s
I42A IAMs_20 IAMs_20 18 57 39.2
comp=Z,10µm,18.0s
JHS Saijyo 82.00 53 IAMs_20 IAMs_20 19 00 21.6
comp=Z,10µm,22.0s
JEW Eniwo 82.08 42 P **P** **18 20 02.6 +0.4**
JEW IAMs_20 IAMs_20 19 03 10.9
comp=Z,9µm,18.0s
WAT2 Susitna Watana 82.11 358 P 18 20 01.3
baz=3.8
WAT2 S 18 30 13.4
baz=3.8
SJG San Juan 82.14 287 P **P** **18 20 03.8 +0.9**
SJG pmax pmax
comp=Z,79nm,0.9s
SJG MLR MLR
comp=Z,3µm,22.0s
SJG San Juan 82.14 287 P **P** **18 20 03.8 +0.9**
SJG San Juan 82.14 287 *e*P **P** **18 20 04.0 +1.1**
N47A Urbana 82.18 315 P **P** **18 20 02.1 -0.7**
X58A Rowland 82.20 307 IAMs_20 IAMs_20 18 57 10.4
comp=Z,11µm,22.0s
PPLA Purkeypile 82.24 360 P **P** **18 20 02.0 -0.9**
PPLA IAMs_20 IAMs_20 19 02 16.9
comp=Z,7µm,20.0s
PPLA Purkeypile 82.24 360 P 18 20 02.4
baz=0.8
PPLA S 18 30 14.4
baz=0.8
PEA0B Petropavlovsk- 82.26 27 *i* P **P** **18 20 01.5 -1.5**
PEA0B Petropavlovsk- 82.26 27 P **P** **18 20 01.5 -1.5**
PEA0B IAMs_20 IAMs_20 19 00 47.9
comp=Z,8µm,22.0s
PETK Petropavlovsk- 82.26 27 P **P** **18 20 01.3 -1.7**
comp=Z,33nm,0.9s,baz=355,slow=3.3,SNR=16
PETK PKKPbc **PKKPbc** **18 38 30.1 -0.2**
comp=Z,2.0nm,0.6s,baz=79,slow=4.8,SNR=6.1
PETK LR LR 19 00 58.3
comp=Z,6µm,19.8s,baz=312,slow=39
PETK Petropavlovsk- 82.26 27 P **P** **18 20 01.5 -1.5**
PETK Petropavlovsk- 82.26 27 P **P** **18 20 01.5 -1.5**
W57A Gilead 82.27 308 P **P** **18 20 02.0 -1.3**
W57A IAMs_20 IAMs_20 18 57 13.0
comp=Z,9µm,21.0s
AGMN Agassiz Nation 82.43 325 P **P** **18 20 03.5 -0.5**
AGMN IAmb IAmb 18 20 07.7
comp=Z,123nm,1.1s
AGMN IAMs_20 IAMs_20 18 58 29.2
comp=Z,12µm,19.0s
AGMN Agassiz Nation 82.44 325 P 18 20 03.6
baz=44
AGMN S 18 30 17.7
baz=44
WAT6 Susitna Watana 82.47 357 P 18 20 03.8
baz=4.5
WAT6 S 18 30 17.6
baz=4.5
P49A Miami Univ. Ec 82.47 313 P **P** **18 20 04.0 -0.3**
P49A IAmb IAmb 18 20 07.6
comp=Z,186nm,1.2s
P49A IAMs_20 IAMs_20 18 55 55.9
comp=Z,10µm,22.0s
P49A Miami Univ. Ec 82.47 313 P 18 20 04.0
baz=50
P49A S 18 30 19.3
baz=50
K43A Burlington 82.47 318 P **P** **18 20 04.6 +0.3**
K43A IAMs_20 IAMs_20 18 58 16.8
comp=Z,8µm,18.0s
AOPR Arecibo Observ 82.48 287 P **P** **18 20 05.3 +0.5**
AOPR IAmb IAmb 18 20 08.3
comp=Z,141nm,0.9s
LWLI Liwa 82.50 101 P **P** **18 20 04.4 -0.5**
comp=Z,14µmcomp=Z,305nm,0.6s
NAN01 Guarapari, ES 82.50 242 *e*P **P** **18 20 05.7 +1.0**
PPBI Pangkal Pinang 82.50 98 P **P** **18 20 01.0 -3.9**
TRN Trinidad (W) 82.53 278 *e*P **P** **18 20 06.5 +1.5**
OBIP Obispado Ponce 82.54 287 P **P** **18 20 05.4 +0.4**
SMTB Santa Maria do 82.56 254 *e*P **P** **18 20 06.6 +1.5**
L44A Lake County Fo 82.59 317 P **P** **18 20 04.7 -0.2**
L44A IAmb IAmb 18 20 08.4
comp=Z,206nm,0.9s
L44A Lake County Fo 82.59 317 P 18 20 04.8
baz=48
L44A S 18 30 20.7
baz=48
V55A Taylorsville 82.62 309 P **P** **18 20 05.2 -0.1**
V55A IAmb IAmb 18 20 12.1
comp=Z,149nm,1.2s
SDBA SAO DESIDERIO 82.64 249 *e*P **P** **18 20 06.2 +0.7**
PET Petropavlovsk 82.68 27 *e*P **P** **18 20 03.3 -1.8**
PET *e* 18 23 17.1
PET *e*S **S** **18 30 15.7 -5.5**
PET pmax pmax
comp=Z,53nm,0.9s
PET pmax pmax
comp=Z,1µm,12.4s
PET pmax pmax
comp=Z,900nm,9.8s
PET Petropavlovsk 82.68 27 P **P** **18 20 05.1 0.0**
PET IAMs_20 IAMs_20 19 01 02.1
comp=Z,9µm,21.0s
CUT Chulitna 82.71 359 P **P** **18 20 04.1 -1.0**
CUT IAMs_20 IAMs_20 19 02 11.3
comp=Z,6µm,20.0s
CUT Chulitna 82.71 359 P 18 20 03.6
baz=2.4
CUT S 18 30 20.0
baz=2.4
PRPB Paraupebas 82.72 257 *e*P **P** **18 20 07.0 +1.0**
HQIL Hanson Quary C 82.81 317 P **P** **18 20 05.7 -0.4**
HQIL IAMs_20 IAMs_20 18 59 44.6
comp=Z,11µm,19.0s
Y58A Scranton 82.81 307 IAMs_20 IAMs_20 18 58 15.6
comp=Z,9µm,20.0s
MPR Mayaguez 82.86 287 P **P** **18 20 05.6 -1.1**
M24K Tolsona, Glenn 82.87 357 P **P** **18 20 06.3 +0.3**
M24K IAmb IAmb 18 20 22.3
comp=Z,188nm,1.1s
M24K Tolsona, Glenn 82.88 357 P 18 20 06.1
baz=5.8
BIRD Birdtown, Kers 82.88 308 P **P** **18 20 07.1 +0.6**
BIRD IAmb IAmb 18 20 13.3
comp=Z,135nm,1.3s
BIRD IAMs_20 IAMs_20 18 57 19.3
comp=Z,11µm,21.0s
I40A Norwalk 82.91 320 P **P** **18 20 06.3 -0.2**
I40A IAmb IAmb 18 20 09.7
comp=Z,105nm,0.6s
P48A Milroy 82.94 314 P **P** **18 20 05.9 -0.9**
P48A IAmb IAmb 18 20 11.0
comp=Z,153nm,0.9s
P48A IAMs_20 IAMs_20 18 56 31.2
comp=Z,12µm,21.0s
SZP Santa 82.95 74 P **P** **18 20 07.1 0.0**
SZP IAmb IAmb 18 20 33.2
comp=Z,119nm,0.9s
S51A Beattyville 83.00 311 P **P** **18 20 07.6 +0.5**
S51A IAmb IAmb 18 20 11.4
comp=Z,86nm,0.9s
S51A IAMs_20 IAMs_20 18 55 40.0
comp=Z,12µm,22.0s
R50A Paris 83.03 312 P **P** **18 20 07.2 -0.1**
R50A IAmb IAmb 18 20 11.2
comp=Z,133nm,1.1s
R50A IAMs_20 IAMs_20 18 55 54.0
comp=Z,11µm,22.0s
F36A Milaca 83.04 323 P **P** **18 20 06.2 -1.0**
F36A IAmb IAmb 18 20 10.4
comp=Z,151nm,0.8s
SPMN Marine on St. 83.12 322 P **P** **18 20 07.5 -0.2**
SPMN IAmb IAmb 18 20 13.8
comp=Z,139nm,0.8s
SPMN IAMs_20 IAMs_20 18 58 30.7
comp=Z,8µm,18.0s
SPMN Marine on St. 83.13 322 P 18 20 07.2
baz=46
SPMN S 18 30 23.4
baz=46
KMSC Kings Mountain 83.14 308 P **P** **18 20 07.8 -0.1**
KMSC IAmb IAmb 18 20 14.6
comp=Z,98nm,1.1s
KMSC IAMs_20 IAMs_20 18 58 25.0
comp=Z,8µm,20.0s
KMSC Kings Mountain 83.14 308 P 18 20 08.0
baz=52
KMSC S 18 30 26.4
baz=52
KASI Kota Agung 83.14 102 P **P** **18 20 07.7 -0.4**
comp=Z,4µmcomp=Z,2µmcomp=Z,268nm,1.0s
SKT Skwentna 83.16 359 P **P** **18 20 06.0 -1.5**
SKT IAmb IAmb 18 20 34.7
comp=Z,203nm,1.0s
SKT Skwentna 83.16 359 P 18 20 06.5
baz=1.4
SKT S 18 30 23.8
baz=1.4
M44A Midewin, Midew 83.19 317 P **P** **18 20 08.2 +0.2**
M44A IAMs_20 IAMs_20 18 59 55.7
comp=Z,11µm,18.0s
SCM Sheep Creek Mo 83.20 357 P **P** **18 20 07.8 0.0**
SCM pmax pmax
comp=Z,382nm,1.2s
SCM MLR MLR
comp=Z,4µm,20.0s
SCM Sheep Creek Mo 83.20 357 P **P** **18 20 07.8 0.0**
JTM Tenmabayashi 83.22 44 P **P** **18 20 07.6 -0.5**
JTM IAMs_20 IAMs_20 19 02 59.2
comp=Z,6µm,18.0s
Y57A Sumter 83.22 307 IAMs_20 IAMs_20 18 57 51.3
comp=Z,11µm,21.0s
SML Sawmill 83.26 358 P **P** **18 20 07.5 -0.6**
SML pmax pmax
comp=Z,369nm,1.4s
SML Sawmill 83.26 358 P 18 20 07.6
baz=4.0
SML S 18 30 25.4
baz=4.0
JMN Monobe 83.28 53 P **P** **18 20 08.9 +0.3**
JMN IAmb IAmb 18 20 28.2
comp=Z,164nm,1.1s
JMN IAMs_20 IAMs_20 19 01 14.3
comp=Z,10µm,22.0s
N25K Chitina, Valde 83.29 356 P **P** **18 20 08.0 -0.3**
N25K IAmb IAmb 18 20 35.6
comp=Z,171nm,1.4s
N25K Chitina, Valde 83.29 356 P 18 20 07.6
baz=7.1
N25K S 18 30 25.5
baz=7.1
JWT Wachi 83.30 51 P **P** **18 20 08.8 +0.1**
JWT IAmb IAmb 18 20 27.8
comp=Z,132nm,1.0s
JWT IAMs_20 IAMs_20 19 02 47.9
comp=Z,6µm,21.0s
GHO Glory Hole Cre 83.31 358 P **P** **18 20 07.9 -0.4**
SFIN Lafayette 83.31 315 P **P** **18 20 08.1 -0.5**
SFIN IAmb IAmb 18 20 12.1
comp=Z,158nm,1.1s
SFIN Lafayette 83.31 315 P 18 20 08.0
baz=49
SFIN S 18 30 27.1
baz=49
WHY Whitehorse 83.32 351 P **P** **18 20 08.1 -0.4**
JSD Sado 83.35 48 P **P** **18 20 08.8 -0.1**
JFWS Jewell Farm 83.38 319 P **P** **18 20 07.9 -1.1**
JFWS pmax pmax
comp=Z,131nm,0.8s
JFWS MLR MLR
comp=Z,9µm,19.0s
JFWS Jewell Farm 83.38 319 P **P** **18 20 07.9 -1.1**
JFWS IAmb IAmb 18 20 12.2
comp=Z,131nm,0.8s
JFWS Jewell Farm 83.38 319 IAMs_20 IAMs_20 18 58 30.6
comp=Z,9µm,19.0s
JFWS Jewell Farm 83.38 319 P 18 20 08.6
baz=47
JFWS S 18 30 28.9
baz=47
GLB Gilahina Butte 83.40 355 P **P** **18 20 08.3 -0.6**
GLB IAMs_20 IAMs_20 19 01 37.7
comp=Z,8µm,21.0s
MCARA McCarthy VSAT 83.41 355 P **P** **18 20 09.1 +0.3**
MCARA IAmb IAmb 18 20 29.3
comp=Z,121nm,1.2s
MCARA McCarthy VSAT 83.41 355 P 18 20 08.4
baz=8.3
MCARA S 18 30 28.7
baz=8.3
HYT Haines Junctio 83.47 352 P **P** **18 20 09.7 +0.4**
KLU Klutina 83.47 357 P **P** **18 20 09.2 0.0**
KLU Klutina 83.48 357 P 18 20 09.0
baz=6.0
KLU S 18 30 28.0
baz=6.0
PMR Palmer 83.50 358 P **P** **18 20 09.0 -0.2**
PMR pmax pmax
comp=Z,282nm,1.3s
PMR MLR MLR
comp=Z,5µm,22.0s
PMR Palmer 83.50 358 P **P** **18 20 09.0 -0.2**
PMR Palmer 83.50 358 P 18 20 08.9
baz=3.3
PMR S 18 30 27.1
baz=3.3
SKR Severo-Kuril's 83.52 30 *e*P **P** **18 20 07.3 -2.2**
SKR *e*S **S** **18 30 22.6 -7.2**
SKR pmax pmax
comp=Z,400nm,11.0s
SKR MLR MLR
comp=Z,2µm,17.0s
R49A Shelbyville 83.54 313 P **P** **18 20 10.0 +0.1**
R49A IAMs_20 IAMs_20 18 56 28.2
comp=Z,7µm,21.0s
JOW Kunigami 83.54 62 P **P** **18 20 09.3 -0.8**
JOW IAmb IAmb 18 20 17.2
comp=Z,237nm,1.3s
JEM Erimo 83.57 42 IAMs_20 IAMs_20 19 03 36.9
comp=Z,9µm,20.0s
ERM Erimo 83.57 42 *i* P **P** **18 20 11.1 +1.2**
ERM pmax pmax
comp=Z,219nm,1.5s
ERM Erimo 83.57 42 P **P** **18 20 10.1 +0.1**
ERM Erimo 83.57 42 IAMs_20 IAMs_20 19 03 35.4
comp=Z,9µm,20.0s
VRDI Verde Repeater 83.59 355 P **P** **18 20 09.8 -0.2**
VRDI IAmb IAmb 18 20 27.6
comp=Z,174nm,1.4s
BARN Barnard Glacie 83.63 354 P **P** **18 20 09.7 -0.5**
YUK Yuzh-Kuril'sk 83.64 39 *e*P **P** **18 20 11.7 +1.5**
YUK *e* 18 23 21.1
YUK *e*PPP PPP 18 25 13.5
YUK *e*S **S** **18 30 29.8 -1.4**
YUK *e*SS **SS** **18 35 49.4 -7.4**
YUK *e*SSS SSS 18 39 22.5
YUK pmax pmax
comp=Z,700nm,1.1s
YUK pmax pmax
comp=E,308nm,0.9s
YUK pmax pmax
comp=N,473nm,1.1s
NHSC New Hope 83.64 306 IAMs_20 IAMs_20 18 58 41.5
comp=Z,7µm,22.0s
NHSC New Hope 83.64 306 P 18 20 10.9
baz=52
RIB01 Linhares ES 83.64 241 *e*P **P** **18 20 11.8 +1.3**
PAULI Pauline 83.65 308 P **P** **18 20 10.4 -0.1**
PAULI IAmb IAmb 18 20 17.3
comp=Z,93nm,1.0s
PAULI IAMs_20 IAMs_20 18 55 44.5
comp=Z,9µm,22.0s
BLSI Bandar Lampung 83.65 101 P **P** **18 20 09.9 -0.9**
comp=Z,3µmcomp=Z,237nm,1.0s
BSFB Barra de Sao F 83.66 242 *e*P **P** **18 20 11.7 +1.1**
KNK Knik Glacier 83.66 358 P 18 20 09.6
baz=3.9
KNK S 18 30 31.0
baz=3.9
SUA Susitna One 83.66 359 P **P** **18 20 10.2 -0.1**
SUA Susitna One 83.67 359 P 18 20 09.7
baz=2.0
SUA S 18 30 30.0
baz=2.0
L42A Oliver, Polo 83.68 318 P **P** **18 20 10.4 -0.1**
L42A IAMs_20 IAMs_20 18 58 19.6
comp=Z,8µm,20.0s
CTGM Chitina Glacie 83.70 354 P **P** **18 20 10.7 +0.3**
CTGM IAmb IAmb 18 20 34.7
comp=Z,71nm,0.9s
CTG Chitna Glacier 83.70 354 P 18 20 10.3
baz=9.7
CTG S 18 30 31.2
baz=9.7
V53A Saluda 83.75 310 P **P** **18 20 11.2 +0.1**
V53A IAmb IAmb 18 20 17.7
comp=Z,79nm,0.9s
V53A IAMs_20 IAMs_20 18 58 44.2
comp=Z,12µm,20.0s
BLO Bloomington 83.77 314 P **P** **18 20 11.2 +0.1**
BLO pmax pmax
comp=Z,272nm,1.0s
BLO MLR MLR
comp=Z,13µm,20.0s
BLO Bloomington 83.77 314 P **P** **18 20 11.2 +0.1**
MALB Monte Alegre 83.79 263 *e*P **P** **18 20 12.6 +1.1**
LOGN Logan Glacier 83.81 354 P **P** **18 20 10.6 -0.4**
LOGN IAMs_20 IAMs_20 18 59 55.3
comp=Z,7µm,20.0s
D32A Dogwood Acres, 83.81 325 P **P** **18 20 09.5 -1.6**
D32A IAMs_20 IAMs_20 18 59 11.7
comp=Z,11µm,19.0s
KSM Kuching 83.81 93 P **P** **18 20 10.0 -1.6**
KSM IAmb IAmb 18 20 38.9
comp=Z,244nm,1.5s
KSM IAMs_20 IAMs_20 19 04 12.9
comp=Z,9µm,20.0s
KSM Kuching 83.81 93 P **P** **18 20 12.0 +0.4**
KUR Kuril'sk 83.82 38 *i* P **P** **18 20 12.6 +1.5**
KUR pmax pmax

comp=Z,161nm,1.0s
SJMB Sao Joao De Ma 83.82 242 *e*P **P 18 20 12.0 +0.5**
JANB Januaria 83.83 247 *e*P **P 18 20 12.0 +0.4**
P46A Rosedale 83.88 315 P **P 18 20 11.2 -0.4**
P46A IAmb IAmb 18 20 16.9
comp=Z,140nm,0.9s
BMRM Bremner River 83.93 356 P **P 18 20 11.5 0.0**
BMRM IAMs_20 IAMs_20 19 02 08.4
comp=Z,6μm,21.0s
BMRM Bremner River 83.93 356 P 18 20 11.6
baz=7.0
BMRM S 18 30 32.3
baz=7.0
SPCR Spurr Chakacha 83.95 360 P 18 20 10.9
baz=0.8
GRNC Granite Creek 83.96 354 P **P 18 20 11.8 -0.1**
GRNC IAmb IAmb 18 20 33.4
comp=Z,124nm,1.0s
FIS Fire Island 83.97 359 P **P 18 20 11.9 +0.3**
RC01 Rabbit Creek A 84.02 358 P **P 18 20 11.6 -0.3**
TGL Tana Glacier 84.02 355 P **P 18 20 12.0 -0.1**
TGL IAmb IAmb 18 20 20.7
comp=Z,131nm,1.3s
RC01 Rabbit Creek A 84.02 358 P 18 20 11.4
baz=2.8
RC01 S 18 30 34.8
baz=2.8
SVW2 Sparrevohn 84.03 1 P **P 18 20 12.0 0.0**
SVW2 IAmb IAmb 18 20 39.3
comp=Z,91nm,1.0s
CRQM Cirque 84.04 355 P **P 18 20 12.2 -0.1**
CRQE Cirque 84.04 355 P 18 20 11.7
baz=8.3
CRQE S 18 30 34.4
baz=8.3
GRTK Grand Turk 84.06 292 P **P 18 20 13.7 +0.9**
GRTK IAmb IAmb 18 20 33.8
comp=Z,158nm,1.0s
TPI Tanjungpandan 84.08 98 P **P 18 20 13.0 0.0**
comp=Z,1μmcomp=Z,69nm,1.1s
V52A Sevierville 84.14 310 P **P 18 20 12.8 -0.2**
V52A IAmb IAmb 18 20 21.7
comp=Z,108nm,0.9s
GLI Glacier Island 84.14 357 P **P 18 20 12.9 +0.3**
GLI IAmb IAmb 18 20 33.3
comp=Z,168nm,1.2s
GLI Glacier Island 84.14 357 P 18 20 11.8
baz=5.0
GLI S 18 30 35.5
baz=5.0
T50A Nancy 84.15 312 P **P 18 20 13.0 -0.1**
T50A IAMs_20 IAMs_20 18 57 25.6
comp=Z,8μm,21.0s
TABL Table Mountain 84.20 354 P **P 18 20 13.2 0.0**
PWL Port Wells 84.21 358 P **P 18 20 12.8 -0.1**
PWL IAmb IAmb 18 20 26.5
comp=Z,92nm,1.0s
PWL IAMs_20 IAMs_20 18 58 40.9
comp=Z,7μm,21.0s
FID Port Fidalgo 84.24 357 P **P 18 20 13.7 +0.6**
FID IAmb IAmb 18 20 40.4
comp=Z,152nm,1.1s
O44A Mansfield 84.25 316 P **P 18 20 13.5 0.0**
O44A IAMs_20 IAMs_20 18 56 42.8
comp=Z,11μm,22.0s
WCI Wyandotte Cave 84.25 313 P **P 18 20 13.9 +0.4**
WCI pmax pmax
comp=Z,309nm,1.2s
WCI Wyandotte Cave 84.25 313 P **P 18 20 13.9 +0.4**
WCI Wyandotte Cave 84.25 313 P 18 20 13.4
baz=49
WCI S 18 30 38.6
baz=49
BG3 Lake Jocassee 84.25 309 P **P 18 20 14.4 +0.8**
BG3 IAMs_20 IAMs_20 18 59 42.5
comp=Z,7μm,19.0s
MJB9 Matsu-Tunnel 84.27 49 P **P 18 20 13.2 -0.5**
MJB9 IAMs_20 IAMs_20 19 03 47.4
comp=Z,8μm,21.0s
MAJO Matsushiro 84.27 49*c i*P **P 18 20 13.5 -0.2**
MAJO pmax pmax
comp=Z,106nm,1.0s
MAJO MLR MLR
comp=Z,7μm,23.0s
MAJO Matsushiro 84.27 49 P **P 18 20 13.5 -0.2**
MAJO Matsushiro 84.27 49 IAMs_20 IAMs_20 19 03 47.4
comp=Z,7μm,21.0s
MAT Matsushiro 84.27 49 P **P 18 20 13.6 -0.1**
MAT S **S 18 30 36.6 -1.4**
MJAR Matsushiro Arr 84.27 49 P **P 18 20 14.0 +0.3**
comp=Z,74nm,0.8s,baz=311,slow=4.2,SNR=70
MJAR LR LR 19 02 17.2
comp=Z,6μm,20.6s,baz=305,slow=39
MJAR Matsushiro Arr 84.27 49 P **P 18 20 13.6 -0.1**
MJAR pmax pmax
comp=Z,99nm,1.0s
MJAR Matsushiro Arr 84.27 49 P **P 18 20 13.6 -0.1**
MJAR IAmb IAmb 18 20 33.1
comp=Z,99nm,1.0s
I37A Lemond, Waseca 84.28 321 P **P 18 20 13.4 -0.2**
I37A IAMs_20 IAMs_20 18 57 03.2
comp=Z,11μm,22.0s
HODGE Hodges 84.30 308 P **P 18 20 14.0 +0.2**
HODGE IAmb IAmb 18 20 19.9
comp=Z,122nm,1.3s
HODGE IAMs_20 IAMs_20 18 56 03.8
comp=Z,10μm,22.0s
CRZF Crozet Islands 84.32 163 IAMs_20 IAMs_20 18 56 17.5
comp=Z,10μm,21.0s
YAH Yahtse 84.33 354 P **P 18 20 14.0 +0.2**
YAH IAmb IAmb 18 20 38.2
comp=Z,178nm,1.2s
YAH IAMs_20 IAMs_20 19 03 05.2
comp=Z,7μm,19.0s
JGF Kuroka 84.34 50 P **P 18 20 14.0 -0.1**
JGF IAmb IAmb 18 20 33.5
comp=Z,117nm,1.0s
JGF IAMs_20 IAMs_20 19 02 04.4
comp=Z,8μm,20.0s
TKL Tuckaleechee C 84.36 310 P **P 18 20 14.3 +0.1**
comp=Z,119nm,1.0s,baz=85,slow=5.7,SNR=27
TKL Tuckaleechee C 84.36 310 P **P 18 20 14.6 +0.4**
TKL IAmb IAmb 18 20 19.3
comp=Z,164nm,1.1s
CAPN Captain Cook N 84.37 359 P **P 18 20 14.4 +0.8**
CAPN IAMs_20 IAMs_20 19 04 37.1
comp=Z,6μm,19.0s
CAPN Captain Cook N 84.37 359 P 18 20 13.4
baz=1.7
CAPN S 18 30 39.1
baz=1.7
EYAK Cordova Ski Ar 84.41 356 P **P 18 20 13.2 -0.6**
EYAK IAmb IAmb 18 20 31.1
comp=Z,163nm,1.2s
EYAK Cordova Ski Ar 84.41 356 P 18 20 13.2
baz=6.1
EYAK S 18 30 39.4
baz=6.1
F33A 5 Mile Ranch, 84.41 324 P **P 18 20 13.8 -0.4**
F33A IAMs_20 IAMs_20 18 58 50.7
comp=Z,9μm,20.0s
HDIL Hopedale 84.45 317 P **P 18 20 15.0 +0.6**
HDIL IAMs_20 IAMs_20 19 00 42.0
comp=Z,9μm,18.0s
HDIL Hopedale 84.45 317 P 18 20 14.4
baz=48
HDIL S 18 30 38.5
baz=48
PCA Pinnacle 84.46 354 P **P 18 20 14.3 +0.1**
PCA IAMs_20 IAMs_20 19 00 12.7
comp=Z,7μm,21.0s
PINM Pinnacle 84.46 354 P 18 20 13.9
baz=11
PINM S 18 30 38.6
baz=11
MDND Maddock 84.47 327 P **P 18 20 14.5 0.0**
MDND IAMs_20 IAMs_20 18 59 48.9
comp=Z,11μm,20.0s
MDND Maddock 84.47 327 P 18 20 13.7
baz=41
MDND S 18 30 39.4
baz=41
L40A Anamosa 84.48 319 P **P 18 20 13.7 -0.9**
L40A IAMs_20 IAMs_20 18 59 15.9
comp=Z,10μm,19.0s
RAGM Ragged Mountai 84.51 356 IAMs_20 IAMs_20 19 02 13.9
comp=Z,8μm,21.0s
SKAG Skagway 84.54 351 P **P 18 20 13.9 -0.6**
BCPM Bancas Point 84.54 353 IAMs_20 IAMs_20 19 02 01.8
comp=Z,7μm,20.0s
O22K Cooper Landing 84.63 358 P **P 18 20 14.6 -0.3**
O22K Cooper Landing 84.63 358 P 18 20 14.6
baz=2.8
O22K S 18 30 38.9
baz=2.8
V51A Loudon 84.63 310 IAMs_20 IAMs_20 18 59 04.4
comp=Z,12μm,20.0s
RSO Redoubt South 84.69 360 P **P 18 20 14.8 -0.8**
ALF01 Guarapari-ES 84.72 240 *e*P **P 18 20 16.8 +0.8**
DLBC Dease Lake 84.73 348 P **P 18 20 16.4 +0.8**
comp=Z,48nm,1.0s,baz=22,slow=4.2,SNR=31
DLBC LR LR 18 57 27.5
comp=Z,571nm,21.4s,baz=21,slow=35
DLBC Dease Lake 84.73 348 P **P 18 20 16.7 +1.0**
W52A Murphy 84.82 310 P **P 18 20 16.9 +0.4**
W52A IAmb IAmb 18 20 21.6
comp=Z,104nm,0.8s
SBUM Sibu 84.82 91 P **P 18 20 17.0 +0.3**
SBUM IAmb IAmb 18 20 28.3
comp=Z,86nm,0.9s
SBUM Sibu 84.82 91 P **P 18 20 18.0 +1.2**
257A Skidaway Islan 84.90 306 IAMs_20 IAMs_20 18 59 54.3
comp=Z,6μm,20.0s
K38A Parkersburg 84.91 320 P **P 18 20 15.3 -1.5**
KAIM Kayak Island 84.95 356 P **P 18 20 17.1 +0.5**
CPCT Cooper Cave 84.97 310 P **P 18 20 17.8 +0.6**
JMM Marumori 84.98 47 P **P 18 20 16.1 -1.1**
JMM IAMs_20 IAMs_20 19 04 24.9
comp=Z,7μm,19.0s
U49A Red Boiling Sp 85.06 312 P **P 18 20 17.6 -0.1**
U49A IAMs_20 IAMs_20 18 58 03.5
comp=Z,9μm,21.0s
PEXB Peixe 85.07 252 *e*P **P 18 20 19.2 +1.3**
P43A Skaggs, Pawnee 85.19 316 P **P 18 20 18.0 -0.3**
P43A IAMs_20 IAMs_20 18 56 37.8
comp=Z,9μm,22.0s
N41A Harden Midland 85.21 318 P **P 18 20 17.4 -0.9**
USIN University of 85.24 314 P **P 18 20 17.9 -0.6**
TGY Tagaytay City 85.29 76 P **P 18 20 20.9 +1.7**
comp=Z,127nm,0.3s,baz=298,slow=2.1,SNR=3.5
BESE Bessie Mountai 85.33 350 P **P 18 20 18.9 +0.2**
BESE IAmb IAmb 18 20 25.4
comp=Z,91nm,1.0s
BESE IAMs_20 IAMs_20 19 01 50.8
comp=Z,11μm,19.0s
BRLK Bradley Lake 85.37 359 P **P 18 20 18.3 -0.5**
BRLK IAmb IAmb 18 20 43.6
comp=Z,171nm,1.3s
BRSE Bradley Lake S 85.39 359 P 18 20 18.9
baz=2.0
BRSE S 18 30 48.4
baz=2.0
Q44A Meyer Farm, Va 85.40 315 P **P 18 20 19.3 0.0**
JSG Sagara 85.46 50 IAMs_20 IAMs_20 19 02 49.9
comp=Z,7μm,20.0s
HOM Homer 85.49 359 P **P 18 20 18.7 -0.6**
HOM Homer 85.49 359 P 18 20 19.1
baz=1.2
HOM S 18 30 51.4
baz=1.2
T47A Sharon Grove 85.55 313 P **P 18 20 19.7 -0.3**
T47A IAMs_20 IAMs_20 18 57 33.5
comp=Z,8μm,20.0s
DBJI Dramaga 85.56 101 P **P 18 20 19.8 -0.6**
comp=Z,116nm,1.2s
Q23K Middleton Isla 85.56 357 P 18 20 19.7
baz=5.6
JIS Juneau Island 85.56 350 P **P 18 20 20.0 +0.3**
JIS IAmb IAmb 18 20 41.4
comp=Z,184nm,1.3s
STKI Sintang 85.58 93 P **P 18 20 21.0 +0.5**
comp=Z,30nm,0.8s
GOGA Godfrey 85.60 308 P **P 18 20 21.1 +0.7**
GOGA pmax pmax
comp=Z,78nm,0.8s
GOGA MLR MLR
comp=Z,9μm,22.0s
GOGA Godfrey 85.60 308 P **P 18 20 21.1 +0.7**
GOGA IAmb IAmb 18 20 37.7
comp=Z,78nm,0.8s
GOGA Godfrey 85.60 308 IAMs_20 IAMs_20 18 56 52.1
comp=Z,9μm,22.0s
GOGA Godfrey 85.60 308 P 18 20 20.5
baz=50
GOGA S 18 30 51.1
baz=50
CNPM China Poot 85.61 359 P **P 18 20 19.6 -0.4**
CNPM IAmb IAmb 18 20 40.6
comp=Z,178nm,1.5s
W50A Signal Mountai 85.62 310 P **P 18 20 20.9 +0.4**
SDDR Presa de Saban 85.64 290 P **P 18 20 22.2 +1.4**
SDDR Presa de Saban 85.64 290 *e*P **P 18 20 22.3 +1.4**
SCIA State Center 85.66 320 P **P 18 20 20.6 0.0**
SCIA IAMs_20 IAMs_20 19 01 18.0
comp=Z,10μm,18.0s
SCIA State Center 85.66 320 P 18 20 20.3
baz=45
SCIA S 18 30 49.1
baz=45
CLTN Cedars of Leba 85.67 312 P **P 18 20 20.7 0.0**
CLTN IAMs_20 IAMs_20 18 58 21.8
comp=Z,9μm,20.0s
Y52A Lilburn 85.69 309 P **P 18 20 21.1 +0.3**
Y52A IAMs_20 IAMs_20 18 57 00.6
comp=Z,9μm,22.0s
JYT Yasato 85.69 48 P **P 18 20 20.2 -0.6**
JYT IAmb IAmb 18 20 31.2
comp=Z,144nm,1.0s
X51A Calhoun 85.75 310 P **P 18 20 21.5 +0.4**
154A Montrose 85.87 307 P **P 18 20 22.8 +1.1**
154A IAMs_20 IAMs_20 18 59 09.4
comp=Z,10μm,22.0s
255A Hazlehurst 85.89 306 P **P 18 20 21.8 0.0**
255A IAmb IAmb 18 20 39.2
comp=Z,127nm,0.9s
255A IAMs_20 IAMs_20 18 59 57.1
comp=Z,8μm,21.0s
E28A Huff 85.92 327 P **P 18 20 21.4 -0.3**
E28A IAMs_20 IAMs_20 18 57 44.3
comp=Z,11μm,20.0s
DGMT Dagmar 85.96 330 P **P 18 20 21.8 -0.1**
DGMT Dagmar 85.96 330 IAMs_20 IAMs_20 18 58 08.2
comp=Z,12μm,21.0s
DGMT Dagmar 85.96 330 P 18 20 21.9
baz=38
SWET Sewanee 85.99 311 P **P 18 20 22.2 -0.2**
SWET IAmb IAmb 18 20 38.8
comp=Z,99nm,0.9s
KKM Kota Kinabalu 86.05 85 P **P 18 20 22.2 -0.8**
KKM IAmb IAmb 18 20 38.2
comp=Z,73nm,1.0s
ECSD EROS Data Cent 86.10 323 P **P 18 20 21.9 -0.8**
ECSD EROS Data Cent 86.10 323 IAMs_20 IAMs_20 18 57 36.4
comp=Z,8μm,22.0s
ECSD EROS Data Cent 86.10 323 P 18 20 22.8
baz=43
ECSD S 18 30 53.3
baz=43
CAM01 Campos-RJ 86.17 240 *e*P **P 18 20 24.4 +1.3**
V48A Smith Brothers 86.20 312 P **P 18 20 23.0 -0.3**
V48A IAMs_20 IAMs_20 18 58 26.8
comp=Z,11μm,21.0s
FPAL Fort Paine 86.23 310 P **P 18 20 23.6 0.0**
SLM Saint Louis 86.28 316 P **P 18 20 23.1 -0.6**
SLM pmax pmax
comp=Z,324nm,1.1s
SLM MLR MLR
comp=Z,9μm,21.0s
SLM Saint Louis 86.28 316 P **P 18 20 23.1 -0.6**
SLM IAMs_20 IAMs_20 18 58 59.7
comp=Z,9μm,21.0s
SIUC Southern Illin 86.32 314 P **P 18 20 23.6 -0.3**
456A Hilliard 86.35 305 IAMs_20 IAMs_20 19 00 39.6
comp=Z,6μm,19.0s
S44A Carbondale 86.35 314 P **P 18 20 24.1 0.0**
LEM Lembang 86.41 101 P **P 18 20 24.4 -0.4**
comp=Z,28nm,0.7s,baz=351,slow=18,SNR=6.9
ITTB Itaituba 86.44 262 *e*P **P 18 20 25.9 +1.1**
T45A Paducah 86.45 314 P **P 18 20 24.5 0.0**
N38A Joes South For 86.45 319 P **P 18 20 24.6 +0.1**
N38A IAMs_20 IAMs_20 19 00 25.8
comp=Z,10μm,19.0s
WVT Waverly 86.55 313 P **P 18 20 24.4 -0.7**
WVT pmax pmax
comp=Z,181nm,1.1s
WVT MLR MLR
comp=Z,10μm,22.0s
WVT Waverly 86.55 313 P **P 18 20 24.4 -0.7**
WVT IAmb IAmb 18 20 30.6
comp=Z,181nm,1.1s
WVT Waverly 86.55 313 IAMs_20 IAMs_20 18 58 03.1
comp=Z,10μm,22.0s
WVT Waverly 86.56 313 P 18 20 25.0
baz=48
WVT S 18 30 59.3
baz=48
P40A Paris 86.69 317 P **P 18 20 25.8 +0.1**
SUSD Miller 86.72 324 P **P 18 20 26.0 +0.2**
SUSD IAMs_20 IAMs_20 19 00 40.6
comp=Z,10μm,20.0s
SUSD Miller 86.72 324 P 18 20 25.6
baz=42
SUSD S 18 31 00.3
baz=42
Z51A Franklin 86.75 309 P **P 18 20 26.8 +0.7**
Z51A IAMs_20 IAMs_20 18 57 43.7
comp=Z,8μm,21.0s
FVM French Village 86.84 315 P **P 18 20 26.5 +0.1**
FVM pmax pmax
comp=Z,286nm,1.0s
FVM MLR MLR
comp=Z,11μm,20.0s
FVM French Village 86.84 315 P **P 18 20 26.5 +0.1**
FVM IAMs_20 IAMs_20 18 59 27.5
comp=Z,11μm,20.0s
DUB01 Friburgo-RJ 86.84 240 *e*P **P 18 20 27.9 +1.4**
SPIA Saint Paul Isl 86.86 9 P **P 18 20 26.6 +0.5**
SPIA IAmb IAmb 18 20 52.4
comp=Z,168nm,1.3s
SPIA IAMs_20 IAMs_20 19 03 16.1
comp=Z,10μm,22.0s
SPIA Saint Paul Isl 86.86 9 P 18 20 26.0
baz=346
SIT Sitka 86.87 350 P **P 18 20 27.1 +1.0**
SIT pmax pmax
comp=Z,172nm,1.2s
SIT MLR MLR
comp=Z,13μm,21.0s
SIT Sitka 86.87 350 P **P 18 20 27.1 +1.0**
SIT IAmb IAmb 18 20 47.0
comp=Z,172nm,1.2s
SIT Sitka 86.87 350 P 18 20 26.3
baz=15
152A Waverly Hall 86.88 308 P **P 18 20 26.7 0.0**
152A IAMs_20 IAMs_20 18 56 58.1
comp=Z,8μm,22.0s
TIGA Tifton 86.93 307 P **P 18 20 26.6 -0.4**
TIGA IAMs_20 IAMs_20 19 00 05.6
comp=Z,7μm,22.0s
TIGA Tifton 86.94 307 P 18 20 27.4
baz=50
TIGA S 18 31 04.8
baz=50
BDFB Brasilia 86.99 249 P **P 18 20 28.7 +1.2**
comp=Z,40nm,0.7s,baz=57,slow=5.9,SNR=30
BDFB LR LR 19 01 23.1
comp=Z,7μm,19.6s,baz=63,slow=37
BDFB Brasilia 86.99 249 P **P 18 20 27.6 +0.1**
BDFB pmax pmax
comp=Z,66nm,0.8s
BDFB MLR MLR
comp=Z,13μm,21.0s
BDFB Brasilia 86.99 249 P **P 18 20 27.6 +0.1**
BDFB IAmb IAmb 18 20 34.8
comp=Z,66nm,0.8s
CISI Cisompet, Garu 87.00 101 P **P 18 20 26.7 -0.9**
CISI Cisompet, Garu 87.00 101 P **P 18 20 28.3 +0.7**
comp=Z,3μmcomp=Z,5μmcomp=Z,282nm,1.2s
WRAK Wrangell Islan 87.04 349 P **P 18 20 27.6 +0.6**
WRAK IAmb IAmb 18 20 33.6
comp=Z,122nm,0.8s
WRAK Wrangell Islan 87.04 349 IAMs_20 IAMs_20 19 02 43.0
comp=Z,11μm,20.0s
WRAK Wrangell Islan 87.04 349 P 18 20 27.0
baz=17
HICK Hickman 87.12 314 P **P 18 20 27.6 -0.2**
HICK IAMs_20 IAMs_20 18 58 46.7
comp=Z,11μm,21.0s
HENM Henderson Moun 87.14 314 P **P 18 20 27.8 -0.1**
Y49A Blount Mountai 87.18 310 P **P 18 20 28.3 +0.1**
X48A Hartselle 87.19 311 P **P 18 20 28.1 0.0**
X48A IAmb IAmb 18 20 34.3
comp=Z,165nm,1.1s
CCM Cathedral Cave 87.26 316 P **P 18 20 28.3 -0.2**
CCM pmax pmax
comp=Z,248nm,0.9s
CCM MLR MLR
comp=Z,8μm,20.0s
CCM Cathedral Cave 87.26 316 P **P 18 20 28.2 -0.2**
CCM Cathedral Cave 87.26 316 IAMs_20 IAMs_20 19 02 35.5
comp=Z,8μm,20.0s
CCM Cathedral Cave 87.26 316 P 18 20 28.6
baz=46
CCM S 18 31 04.7
baz=46
L34A Svendsen Farm, 87.27 321 P **P 18 20 28.0 -0.5**
L34A IAMs_20 IAMs_20 18 58 45.3
comp=Z,9μm,21.0s
PBKI Pangkalan Bun 87.32 95 P **P 18 20 29.6 +0.5**
comp=Z,7μmcomp=Z,352nm,1.1s
GLAT Glass 87.33 313 IAMs_20 IAMs_20 18 59 38.7
comp=Z,11μm,21.0s
PARMO Parma 87.34 314 P **P 18 20 29.1 +0.2**
KDAK Kodiak Island 87.38 360 *i* P **P 18 20 28.4 -0.2**
KDAK pmax pmax
comp=Z,97nm,0.9s
KDAK Kodiak Island 87.38 360 P **P 18 20 29.1 +0.5**
KDAK IAmb IAmb 18 20 56.4
comp=Z,108nm,1.1s
KDAK Kodiak Island 87.38 360 IAMs_20 IAMs_20 19 05 26.6
comp=Z,8μm,22.0s
KDAK Kodiak Island 87.38 360 S 18 31 05.7
baz=0.5
P38A Dawn 87.44 318 P **P 18 20 29.5 +0.2**
P38A IAMs_20 IAMs_20 19 00 56.2
comp=Z,9μm,19.0s
PLAL Pickwick Lake 87.47 312 P **P 18 20 29.2 -0.4**
PLAL IAMs_20 IAMs_20 18 59 05.4
comp=Z,11μm,22.0s
JHJ2 Mitsune 87.50 51 IAMs_20 IAMs_20 19 06 41.0
comp=Z,5μm,18.0s
656A Willston 87.55 304 P **P 18 20 29.9 -0.1**
656A IAMs_20 IAMs_20 19 02 30.4
comp=Z,6μm,20.0s
LNXT Lenox 87.57 313 P **P 18 20 29.9 0.0**
DWPF Disney Wildern 87.58 303 P **P 18 20 29.0 -1.2**
DWPF Disney Wildern 87.59 303 S 18 31 10.1
baz=51
HALT Halls 87.61 313 P **P 18 20 30.0 -0.1**
R40A Maddies Statio 87.67 317 P **P 18 20 30.3 -0.2**
R40A IAMs_20 IAMs_20 19 02 40.6
comp=Z,6μm,20.0s
NPGB Novo Progresso 87.68 260 *e*P **P 18 20 31.4 +0.6**
N35A Tabor 87.69 320 P **P 18 20 30.3 -0.1**
N35A IAMs_20 IAMs_20 19 01 27.6
comp=Z,9μm,18.0s
VAS01 Vassouras-RJ 87.73 241 *e*P **P 18 20 32.2 +1.4**
PEBM Pemiscott Bayo 87.78 314 P **P 18 20 30.7 -0.3**
PEBM IAMs_20 IAMs_20 19 00 01.5
comp=Z,11μm,20.0s
352A Blakely 87.78 307 P **P 18 20 30.9 -0.2**
352A IAMs_20 IAMs_20 19 00 29.5
comp=Z,7μm,22.0s
PTGA Pitinga 87.80 268 P **P 18 20 31.9 +0.4**
PTGA IAMs_20 IAMs_20 19 00 36.9
comp=Z,6μm,21.0s
PTGA Pitinga 87.80 268 *e*P **P 18 20 32.4 +1.0**
PTGA Pitinga 87.80 268 *e*P **P 18 20 32.8 +1.4**
BSCB Bom Sucesso 87.88 243 *e*P **P 18 20 32.8 +1.1**
SMY Shemya 87.91 19 IAMs_20 IAMs_20 19 05 00.0
comp=Z,7μm,19.0s
OHAK Old Harbor 87.94 0 P **P 18 20 31.7 +0.4**
OHAK IAMs_20 IAMs_20 19 06 30.5
comp=Z,7μm,22.0s
OHAK Old Harbor 87.94 0 P 18 20 31.7
baz=360
OHAK S 18 31 11.5
baz=360

GNAR Gosnell 87.97 314 P P 18 20 32.4 +0.5
K31A O'Neill 87.98 323 P P 18 20 32.1 +0.3
K31A IAMs_20 IAMs_20 19 00 53.1
comp=Z,11µm,20.0s
GTBY Guantanamo Bay 88.00 293 IAMs_20 IAMs_20 18 55 22.9
comp=Z,7µm,22.0s
GTBY Guantanamo Bay 88.00 293 eP P 18 20 34.5 +2.2
W45A Hickory Valley 88.02 313 P P 18 20 32.1 0.0
W45A IAMs_20 IAMs_20 18 58 58.1
comp=Z,10µm,22.0s
CRAG Craig 88.08 349 S 18 31 15.3
baz=16
LRAL Lakeview Retre 88.09 310 P P 18 20 32.7 +0.2
LRAL Lakeview Retre 88.09 310 P 18 20 33.0
baz=48
LRAL S 18 31 13.9
baz=48
LAO LASA Array 88.21 330 P P 18 20 33.4 +0.5
LAO IAMs_20 IAMs_20 18 59 27.8
comp=Z,12µm,22.0s
LAO LASA Array 88.21 330 P 18 20 33.6
baz=37
LAO S 18 31 17.6
baz=37
553A Crawfordville 88.29 306 P P 18 20 33.4 -0.1
553A IAMs_20 IAMs_20 19 01 00.0
comp=Z,9µm,21.0s
250A Grady 88.32 309 P P 18 20 33.6 0.0
250A IAMs_20 IAMs_20 18 58 16.4
comp=Z,9µm,22.0s
LPAR Lepanto 88.39 313 P P 18 20 34.4 +0.5
MYLDM Lahad Datu 88.41 85 P P 18 20 34.5 +0.2
MGMO Mountain Grove 88.47 316 P P 18 20 34.7 +0.4
MGMO IAMs_20 IAMs_20 19 01 24.5
comp=Z,10µm,20.0s
MAN01 Angra dos Reis 88.47 241 eP P 18 20 33.6 -0.7
MET Memphis--Engin 88.50 313 IAMs_20 IAMs_20 18 59 31.5
comp=Z,10µm,20.0s
EGMT Eagleton 88.52 333 P P 18 20 34.5 +0.1
EGMT Eagleton 88.52 333 P 18 20 34.4
baz=34
EGMT S 18 31 18.5
baz=34
IPMB Ipameri, GO 88.57 247 eP P 18 20 36.0 +1.1
LCAR Lake Charles 88.57 314 P P 18 20 35.0 +0.3
LCAR IAmb IAmb 18 20 38.8
comp=Z,127nm,1.0s
BGNE Belgrade 88.58 322 P P 18 20 34.7 0.0
BGNE Belgrade 88.58 322 P 18 20 34.9
baz=42
BGNE S 18 31 17.5
baz=42
OXF Oxford 88.59 312 P P 18 20 34.4 -0.5
OXF pmax pmax
comp=Z,109nm,1.0s
OXF MLR MLR
comp=Z,12µm,22.0s
OXF Oxford 88.59 312 P P 18 20 34.4 -0.5
OXF IAmb IAmb 18 20 40.9
comp=Z,109nm,0.9s
OXF IAMs_20 IAMs_20 18 59 38.2
comp=Z,12µm,22.0s
OXF Oxford 88.60 312 P 18 20 34.2
baz=47
OXF S 18 31 18.8
baz=47
SII Sitkinak Islan 88.60 1 P P 18 20 35.2 +0.7
SII IAMs_20 IAMs_20 19 08 06.1
comp=Z,6µm,20.0s
Z47A Carrollton 88.65 310 P P 18 20 34.5 -0.7
Z47A IAmb IAmb 18 20 41.0
comp=Z,104nm,1.2s
S39A Bolivar 88.69 317 P P 18 20 35.2 0.0
S39A IAmb IAmb 18 20 44.5
comp=Z,176nm,1.4s
S39A IAMs_20 IAMs_20 19 02 06.4
comp=Z,7µm,19.0s
N33A J Bar K, Exete 88.72 321 P P 18 20 35.1 -0.3
SMRI Semarang 88.82 99 P P 18 20 35.9 -0.4
SMRI IAMs_20 IAMs_20 19 03 44.8
comp=Z,6µm,22.0s
SMRI Semarang 88.82 99 P P 18 20 35.8 -0.4
comp=Z,166nm,0.9s
BAUV El Baul 88.87 280 eP P 18 20 35.0 -1.4
451A Vernon 88.88 307 P P 18 20 36.4 +0.1
451A IAMs_20 IAMs_20 19 01 14.5
comp=Z,8µm,21.0s
MTKI Muara Teweh, K 88.95 92 P P 18 20 43.7 +6.9
Y45A Yeager Farm, C 89.11 312 P P 18 20 37.4 0.0
WALA Waterton Lakes 89.14 335 P P 18 20 37.1 -0.3
WALA IAmb IAmb 18 20 52.5
comp=Z,88nm,0.9s
FCAR Ozark Folk Cen 89.26 315 P P 18 20 37.6 -0.4
FCAR IAmb IAmb 18 20 48.2
comp=Z,99nm,1.3s
RSSD Black Hills 89.31 327 P P 18 20 38.4 0.0
RSSD pmax pmax
comp=Z,109nm,0.8s
RSSD MLR MLR
comp=Z,11µm,21.0s
RSSD Black Hills 89.31 327 P P 18 20 38.4 0.0
RSSD IAmb IAmb 18 20 44.8
comp=Z,109nm,0.8s
RSSD Black Hills 89.31 327 IAMs_20 IAMs_20 18 59 30.1
comp=Z,11µm,21.0s
RSSD Black Hills 89.31 327 P 18 20 38.3
baz=38
RSSD S 18 31 24.9
baz=38
BRAL Brewton 89.36 308 P P 18 20 38.6 0.0
BRAL IAMs_20 IAMs_20 18 58 24.8
comp=Z,6µm,22.0s
BRAL Brewton 89.36 308 P 18 20 38.5
baz=48
BRAL S 18 31 28.5
baz=48
U40A Yellville 89.36 315 P P 18 20 38.4 -0.1
U40A IAMs_20 IAMs_20 18 59 09.3
comp=Z,9µm,22.0s
U40A Yellville 89.36 315 P 18 20 38.4
baz=45
U40A S 18 31 26.9
baz=45
UGM Wanagama 89.38 100 P P 18 20 38.6 -0.3
UGM IAmb IAmb 18 20 53.7
comp=Z,132nm,1.0s
UGM Wanagama 89.38 100 P P 18 20 40.4 +1.5
comp=Z,3µmcomp=Z,228nm,1.4s
KSU1 Kansas State U 89.47 320 P P 18 20 38.8 -0.2
KSU1 IAmb IAmb 18 20 44.2
comp=Z,79nm,0.8s
KSU1 Kansas State U 89.47 320 IAMs_20 IAMs_20 19 02 22.0
comp=Z,9µm,19.0s
KSU1 Kansas State U 89.48 320 P 18 20 38.7
baz=43
KSU1 S 18 31 26.8
baz=43
X43A Marvell 89.48 313 P 18 20 39.4
baz=46
X43A S 18 31 27.5
baz=46
SDPT Sand Point 89.60 4 P P 18 20 38.6 -0.6
SDPT IAMs_20 IAMs_20 19 07 29.5
comp=Z,6µm,20.0s
SDPT Sand Point 89.60 4 P 18 20 38.3
baz=354
SDPT S 18 31 28.0
baz=354
146A Union 89.65 311 P P 18 20 39.4 -0.5
146A IAmb IAmb 18 20 50.3
comp=Z,100nm,1.0s
MACA Manacapuru-AM 89.77 266 eP P 18 20 42.1 +1.4
WHAR Wooly Hollow 89.78 314 P P 18 20 40.6 +0.2
WHAR IAmb IAmb 18 20 48.7
comp=Z,71nm,0.9s
W41B Gary Mavity, V 89.84 314 P 18 20 41.4
baz=46
W41B S 18 31 31.6
baz=46
FALS False Pass 89.88 6 P 18 20 40.7
baz=352
ARAG Araguaiana, MT 89.95 251 eP P 18 20 43.3 +1.9
PARB Paraibuna 89.95 241 eP P 18 20 43.3 +2.0
HHAR Hobbs 90.03 316 P P 18 20 41.5 -0.2
HHAR IAMs_20 IAMs_20 19 02 32.1
comp=Z,7µm,20.0s

U38A Gravette 90.17 316 P P 18 20 42.0 -0.3
U38A IAmb IAmb 18 20 46.7
comp=Z,111nm,0.9s
U38A IAMs_20 IAMs_20 19 00 30.8
comp=Z,6µm,21.0s
CLDB Colider 90.25 257 eP P 18 20 44.4 +1.5
BBB Bella Bella 90.27 345 P P 18 20 42.4 +0.1
comp=Z,24nm,0.9s,baz=346,slow=3.7,SNR=4.2
BBB Bella Bella 90.27 345 IAmb IAmb 18 20 51.5
comp=Z,122nm,1.2s
GCMT Greycliff 90.33 331 P P 18 20 43.2 +0.2
BBKI Banjar Baru 90.34 94 P P 18 20 43.4 0.0
comp=Z,870nmcomp=Z,40nm,1.1s
AKUT Akutan 90.37 7 IAMs_20 IAMs_20 19 07 00.9
comp=Z,6µm,20.0s
HRY Holter Researc 90.39 333 P P 18 20 43.3 +0.1
JTMT Jette 90.39 335 P P 18 20 43.5 +0.2
JTMT IAMs_20 IAMs_20 19 01 38.3
comp=Z,9µm,19.0s
CCAR Cane Creek 90.43 313 IAMs_20 IAMs_20 19 00 39.7
comp=Z,9µm,20.0s
URIC Uribia, Colomb 90.43 285 eP P 18 20 46.2 +2.4
X40A Basin Creek Fa 90.66 314 P P 18 20 44.7 +0.1
X40A Basin Creek Fa 90.66 314 P 18 20 44.2
baz=45
X40A S 18 31 39.1
baz=45
BB19B Bebedouro 90.67 245 eP P 18 20 47.7 +3.0
VAO Valinhos 90.71 242 eP P 18 20 46.7 +1.8
W39A Magazine 90.71 315 P P 18 20 44.7 -0.1
W39A IAMs_20 IAMs_20 19 01 47.1
comp=Z,9µm,20.0s
W39A Magazine 90.71 315 P 18 20 45.8
baz=45
W39A S 18 31 41.8
baz=45
RLMT Red Lodge 90.72 331 P P 18 20 45.0 +0.1
RLMT IAmb IAmb 18 20 52.6
comp=Z,57nm,0.9s
RLMT Red Lodge 90.72 331 P 18 20 45.4
baz=34
RLMT S 18 31 38.5
baz=34
346A Big Creek Wild 90.74 310 IAMs_20 IAMs_20 19 05 14.4
comp=Z,9µm,18.0s
RCLB Rio Claro- Sao 90.77 243 eP P 18 20 47.8 +2.7
BKB Balikpapan 90.77 91 IAMs_20 IAMs_20 19 06 36.8
comp=Z,7µm,22.0s
VBMS Vicksburg 90.83 311 P 18 20 46.2
baz=47
VBMS S 18 31 40.4
baz=47
OGNE Ogallala 90.85 324 P P 18 20 45.5 0.0
OGNE IAmb IAmb 18 20 54.4
comp=Z,125nm,1.2s
OGNE Ogallala 90.85 324 P 18 20 45.0
baz=40
MTDJ Mount Denham 90.85 293 eP P 18 20 48.0 +2.1
NEW Newport 90.89 337 P P 18 20 45.1 -0.4
comp=Z,69nm,0.8s,baz=18,slow=3.7,SNR=36
NEW Newport 90.89 337 P P 18 20 45.4 -0.1
NEW IAmb IAmb 18 20 52.1
comp=Z,155nm,1.2s
NEW Newport 90.90 337 P 18 20 45.8
baz=29
NEW S 18 31 37.2
baz=29
T35A Sooner Cattle 91.01 318 P P 18 20 46.3 +0.1
T35A IAMs_20 IAMs_20 19 04 30.9
comp=Z,10µm,20.0s
143A Socs Landing, 91.04 312 P P 18 20 46.3 0.0
MIAR Mount Ida 91.05 315 P P 18 20 47.1 +0.7
MIAR pmax pmax
comp=Z,135nm,1.0s
MIAR MLR MLR
comp=Z,12µm,22.0s
MIAR Mount Ida 91.05 315 P P 18 20 47.1 +0.7
MIAR IAmb IAmb 18 20 53.1
comp=Z,135nm,1.0s
MIAR Mount Ida 91.05 315 P 18 20 46.3
baz=45
MIAR S 18 31 41.9
baz=45
MSO Missoula 91.06 334 P P 18 20 46.0 -0.3
MSO IAmb IAmb 18 21 01.2
comp=Z,64nm,1.0s
MSO Missoula 91.06 334 P 18 20 46.1
baz=31
MSO S 18 31 40.6
baz=31
R32A Long Quarter, 91.08 320 P P 18 20 46.2 -0.3
R32A IAmb IAmb 18 20 49.6
comp=Z,107nm,0.9s
YNE Yellowstone No 91.11 331 P P 18 20 46.8 -0.1
YNE IAmb IAmb 18 21 15.9
comp=Z,104nm,1.2s
NIKH Nikolski High 91.14 9 IAMs_20 IAMs_20 19 08 56.4
comp=Z,6µm,21.0s
ELOV Elorza 91.15 279 eP P 18 20 48.4 +1.3
ITRB Iturama 91.22 247 eP P 18 20 49.4 +2.1
BOZ Bozeman (W) 91.25 332 P P 18 20 47.5 +0.2
BOZ pmax pmax
comp=Z,40nm,0.8s
BOZ MLR MLR
comp=Z,14µm,21.0s
BOZ Bozeman (W) 91.25 332 P P 18 20 47.5 +0.2
BOZ IAmb IAmb 18 20 53.4
comp=Z,40nm,0.8s
BOZ Bozeman (W) 91.25 332 P 18 20 47.4
baz=33
BOZ S 18 31 43.5
baz=33
CBKS Cedar Bluff 91.32 321 P P 18 20 47.2 -0.4
CBKS Cedar Bluff 91.32 321 P P 18 20 47.2 -0.4
CBKS IAMs_20 IAMs_20 19 04 55.8
comp=Z,10µm,20.0s
CBKS Cedar Bluff 91.32 321 P 18 20 47.3
baz=41
KBKI Kotabaru 91.33 93 P P 18 20 49.4 +1.5
comp=Z,455nmcomp=Z,40nm,1.1s
TUL1 Leonard 91.34 317 P 18 20 48.2
baz=44
TUL1 S 18 31 44.7
baz=44
KS21 Milan North St 91.37 319 IAMs_20 IAMs_20 19 03 18.2
comp=Z,7µm,19.0s
LRM Limekiln Ridge 91.37 333 P P 18 20 48.0 +0.1
YMP Mirror Lake Pl 91.39 331 P P 18 20 47.2 -1.0
SPB Sao Paulo 91.41 242 P P 18 20 47.7 -0.3
SPB IAmb IAmb 18 21 03.8
comp=Z,77nm,1.4s
SPB Sao Paulo 91.41 242 eP P 18 20 49.4 +1.3
KAN13 South Haven SW 91.47 319 P P 18 20 48.3 0.0
Z41A Richland Creek 91.50 313 P 18 20 48.8
baz=45
B08A Colville Reser 91.50 338 P P 18 20 48.0 -0.3
KAN01 Argonia South 91.52 319 P P 18 20 48.6 +0.1
CRJC Cerrejon, Guaj 91.53 285 eP P 18 20 51.5 +2.5
KAN12 Harper NE Stat 91.54 319 P P 18 20 49.0 +0.3
KAN12 IAmb IAmb 18 20 53.7
comp=Z,59nm,1.1s
K22A Casper 91.58 328 P P 18 20 48.0 -0.9
K22A Casper 91.58 328 P 18 20 48.2
baz=36
K22A S 18 31 45.6
baz=36
YHH Holmes Hill 91.63 331 P P 18 20 49.8 +0.5
YHH IAmb IAmb 18 20 56.8
comp=Z,68nm,1.3s
QUOK Quay 91.66 318 P P 18 20 48.4 -0.8
QUOK IAMs_20 IAMs_20 19 04 12.1
comp=Z,8µm,19.0s
C09A Chrisman Ranch 91.67 337 P P 18 20 48.7 -0.3
C09A IAmb IAmb 18 21 04.5
comp=Z,86nm,0.9s
YHL Hebgen Lake 91.71 332 P P 18 20 50.0 +0.3
YHL IAmb IAmb 18 21 10.4
comp=Z,67nm,1.1s
PET01 Itanhaem-SP 91.73 241 eP P 18 20 51.2 +1.7
A05A Maple Falls 91.73 340 P P 18 20 48.2 -1.0
A05A IAMs_20 IAMs_20 19 03 48.4
comp=Z,9µm,20.0s
YMR Madison River 91.77 331 P P 18 20 48.9 -0.9
YMR IAmb IAmb 18 21 05.9
comp=Z,62nm,1.0s
DLMT Dillon 91.82 333 P P 18 20 50.2 +0.3

DLMT IAmb IAmb 18 21 09.0
comp=Z,63nm,1.1s
QLMT Earthquake Lak 91.82 332 P P 18 20 49.7 -0.4
H17A Grant Village 91.85 331 P P 18 20 51.0 +0.8
H17A IAmb IAmb 18 20 59.2
comp=Z,90nm,1.3s
H17A Grant Village 91.85 331 P 18 20 50.8
baz=34
H17A S 18 31 51.9
baz=34
OK030 Cody Creek RV 91.88 317 P P 18 20 50.6 +0.4
OK031 S. Brethren Rd 91.90 318 P P 18 20 50.1 -0.2
OK031 IAMs_20 IAMs_20 19 04 23.3
comp=Z,10µm,19.0s
B06A Marblemount 92.00 340 P P 18 20 49.5 -0.9
OK032 Salt Plains WL 92.02 319 P P 18 20 49.6 -1.2
OK032 IAmb IAmb 18 20 56.0
comp=Z,58nm,0.9s
OK032 IAMs_20 IAMs_20 19 03 39.4
comp=Z,9µm,20.0s
SOR Soroa 92.04 300 P P 18 20 47.9 -3.3
SOR pmax pmax
comp=Z,32nm,0.9s
SOR MLR MLR
comp=Z,4µm,21.0s
SOR Soroa 92.04 300 P P 18 20 47.9 -3.3
YPP Pitchstone Pla 92.04 331 P P 18 20 51.9 +0.7
YPP IAmb IAmb 18 21 19.9
comp=Z,134nm,1.5s
X37A Clayton 92.06 316 P P 18 20 51.6 +0.5
X37A IAMs_20 IAMs_20 19 07 12.7
comp=Z,5µm,19.0s
CROK Carrier 92.12 319 P P 18 20 50.1 -1.3
A04D Lummi Island 92.16 340 P 18 20 51.6
baz=24
A04D S 18 31 52.7
baz=24
FLWY Flagg Ranch 92.16 331 P P 18 20 51.4 -0.2
FLWY IAmb IAmb 18 21 17.8
comp=Z,88nm,1.2s
FLWY IAMs_20 IAMs_20 19 05 50.2
comp=Z,9µm,18.0s
PHWY Pilot Hill 92.18 326 IAMs_20 IAMs_20 19 04 34.1
comp=Z,7µm,18.0s
545A Edgard 92.30 310 IAMs_20 IAMs_20 19 04 43.1
comp=Z,8µm,19.0s
OK029 Liberty Lake 92.35 318 P P 18 20 51.1 -1.3
OK029 IAmb IAmb 18 20 56.1
comp=Z,86nm,0.9s
OK029 IAMs_20 IAMs_20 19 04 38.3
comp=Z,9µm,18.0s
C06D Leavenworth 92.36 339 P 18 20 51.9
baz=26
MCMT McKenzie Canyo 92.36 333 P P 18 20 52.9 +0.3
B05A Bryant 92.40 340 P 18 20 52.2
baz=25
PGC Sidney 92.42 341 P P 18 20 52.1 -0.3
PGC IAmb IAmb 18 21 07.3
comp=Z,73nm,1.1s
OK025 Westminster Rd 92.44 318 P P 18 20 52.4 -0.4
OK025 IAMs_20 IAMs_20 19 04 47.8
comp=Z,9µm,20.0s
MOOW Moose Ponds 92.45 331 P P 18 20 53.3 +0.3
MOOW IAMs_20 IAMs_20 19 05 50.1
comp=Z,9µm,18.0s
LOHW Long Hollow 92.51 331 P P 18 20 52.6 -0.7
SMRC Santa Marta, M 92.51 285 eP P 18 20 56.6 +3.1
D08A Wollman Farm, 92.53 337 P P 18 20 52.4 -0.6
D08A IAmb IAmb 18 21 02.8
comp=Z,75nm,1.4s
BCOK Bluff Creek, N 92.54 318 P P 18 20 53.4 +0.1
PAF Port-aux-Franc 92.57 153 IAMs_20 IAMs_20 19 08 52.8
comp=Z,8µm,20.0s
TOLI2 Tolitoli 92.59 87 P P 18 20 52.4 -1.4
KSCO Kaye Shedlock' 92.63 323 P P 18 20 53.7 -0.1
OKCFA Oklahoma City 92.63 318 IAMs_20 IAMs_20 19 04 52.7
comp=Z,9µm,19.0s
KSCO Kaye Shedlock' 92.63 323 P 18 20 53.8
baz=39
RWWY Rawlins 92.65 327 P P 18 20 52.6 -1.5
RWWY IAmb IAmb 18 20 57.1
comp=Z,52nm,1.0s
SNOW Snow King Moun 92.69 331 P P 18 20 53.3 -0.9
LL3C La Loma 3 Cana 92.72 284 eP P 18 20 57.0 +2.6
N23A Red Feather La 92.72 326 P 18 20 53.9
baz=37,SNR=65
N23A S 18 31 57.0
baz=37
U32A Winter Ranch, 92.76 319 P P 18 20 53.9 -0.5
U32A IAMs_20 IAMs_20 19 04 12.0
comp=Z,10µm,20.0s
E09A Wood Farm, Sta 92.77 337 P P 18 20 54.0 0.0
E09A IAmb IAmb 18 20 59.4
comp=Z,57nm,1.1s
BW06 Boulder Array 92.78 329 P P 18 20 53.1 -1.4
BW06 IAMs_20 IAMs_20 19 06 09.9
comp=Z,8µm,19.0s
PD31 Pinedale Array 92.78 329 P P 18 20 53.3 -1.3
PDAR Pinedale Array 92.78 329 P P 18 20 53.5 -1.0
comp=Z,22nm,0.8s,baz=66,slow=4.9,SNR=51
PDAR LR LR 19 05 07.6
comp=Z,7µm,19.0s,baz=33,slow=37
PDAR Pinedale Array 92.78 329 P P 18 20 53.3 -1.3
BW06 Boulder Array 92.78 329 P 18 20 54.5
baz=34
Z38A Mt. Pleasant 92.79 315 P P 18 20 54.9 +0.5
REDW Red Top Meadow 92.82 331 P P 18 20 54.7 0.0
LTY Liberty 92.89 339 P P 18 20 54.2 -0.5
BCYI Bear Canyon 93.01 333 P P 18 20 55.2 -0.4
JCJ Chichijima 93.02 54 IAMs_20 IAMs_20 19 06 20.6
comp=Z,6µm,22.0s
PCMB Pacaembu 93.03 246 eP P 18 20 57.7 +2.1
E08A Dider Farm, El 93.08 337 P P 18 20 55.8 +0.3
E07A Sunnyside 93.27 338 P P 18 20 56.5 +0.1
ECR Eagle Creek 93.28 331 P P 18 20 56.4 -0.4
HAWA Hanford 93.32 337 P P 18 20 56.2 -0.5
HAWA IAmb IAmb 18 21 03.3
comp=Z,79nm,0.9s
D03D Eldon 93.34 340 P 18 20 57.3
baz=24
D05A Enumclaw 93.34 339 P P 18 20 56.6 -0.1
D05A IAmb IAmb 18 21 11.7
comp=Z,113nm,1.2s
AHID Auburn Hatcher 93.42 330 P P 18 20 57.2 -0.3
AHID IAmb IAmb 18 21 01.5
comp=Z,45nm,0.9s
PP1B Ponte de Pedra 93.43 251 eP P 18 20 59.9 +2.3
X34A Smith Ranch, M 93.44 317 P P 18 20 56.7 -0.7
X34A IAmb IAmb 18 21 04.1
comp=Z,73nm,1.0s
ISCO Idaho Springs 93.44 325 P P 18 20 57.4 -0.3
ISCO pmax pmax
comp=Z,40nm,0.9s
ISCO MLR MLR
comp=Z,10µm,18.0s
ISCO Idaho Springs 93.44 325 P P 18 20 57.4 -0.3
ISCO Idaho Springs 93.44 325 P 18 20 57.7
baz=37
OCAC Ocana 93.51 283 eP P 18 20 56.0 -2.3
PAMC Pamplona, Colo 93.54 281 eP P 18 20 58.8 -0.1
D04E Lakebay 93.58 340 P 18 20 58.2
baz=24
D04E S 18 32 02.8
baz=24
NATX Nacogdoches 93.67 313 IAMs_20 IAMs_20 19 02 40.5
comp=Z,9µm,20.0s
NATX Nacogdoches 93.67 313 P 18 20 58.9
baz=44
NATX S 18 32 06.7
baz=44
NLWA Neilton Lookou 93.69 341 P P 18 20 58.0 -0.3
NLWA IAmb IAmb 18 21 14.3
comp=Z,42nm,0.9s
LON Longmire 93.69 339 P P 18 20 57.6 -0.8
LON pmax pmax
comp=Z,42nm,0.8s
LON MLR MLR
comp=Z,16µm,19.0s
LON Longmire 93.69 339 P P 18 20 57.6 -0.8
LON IAmb IAmb 18 21 03.7
comp=Z,42nm,0.8s
SMLC San Martn de 93.78 283 eP P 18 21 00.8 +1.5
WMOK Wichita Mounta 93.86 318 P P 18 20 58.9 -0.5
WMOK pmax pmax
comp=Z,54nm,0.9s

WMOK MLR MLR
comp=Z,5µm,21.0s
WMOK Wichita Mounta 93.86 318 P **P** **18 20 58.9 -0.5**
WMOK IAmb IAmb 18 21 04.0
comp=Z,54nm,0.9s
WMOK Wichita Mounta 93.86 318 IAMs_20 IAMs_20 19 02 46.3
comp=Z,5µm,21.0s
WMOK Wichita Mounta 93.86 318 P 18 20 59.2
baz=42
F07A Phinny Hill Vi 93.89 337 P **P** **18 20 58.8 -0.4**
F07A IAmb IAmb 18 21 15.8
comp=Z,69nm,1.1s
Q24A Divide 93.89 324 P 18 20 59.2
baz=38
MRSI Marisa 93.91 87 P **P** **18 20 58.9 -1.0**
comp=Z,574nmcomp=Z,60nm,1.0s
BMO Blue Mountains 93.95 335 P **P** **18 20 58.5 -1.2**
BMO pmax pmax
comp=Z,44nm,0.8s
BMO MLR MLR
comp=Z,12µm,20.0s
BMO Blue Mountains 93.95 335 P **P** **18 20 58.5 -1.2**
BMO IAmb IAmb 18 21 04.4
comp=Z,44nm,0.8s
SJCC San Jacinto, C 94.02 285 *e*P **P** **18 21 01.8 +1.3**
HLID Hailey 94.03 333 P **P** **18 21 00.3 +0.1**
HLID Hailey 94.03 333 P 18 21 00.2
baz=31
HLID S 18 32 07.5
baz=31
Z35A Perchaven, San 94.04 316 P **P** **18 21 00.2 -0.1**
Z35A IAmb IAmb 18 21 05.7
comp=Z,68nm,0.9s
Z35A IAMs_20 IAMs_20 19 09 03.3
comp=Z,6µm,18.0s
E04D Cinebar 94.09 339 P 18 21 00.1
baz=25
G08A Pilot Rock 94.11 337 P **P** **18 20 60.0 -0.5**
237A Washetta, Mont 94.17 314 P **P** **18 21 00.3 -0.5**
237A IAmb IAmb 18 21 10.0
comp=Z,146nm,1.4s
TTSI Tana Toraja 94.18 91 P P 18 21 10.4 +9.3
F05D White Salmon 94.37 338 P 18 21 01.6
baz=26
O20A White River Ci 94.37 327 P **P** **18 21 00.7 -1.1**
O20A IAMs_20 IAMs_20 19 05 33.1
comp=Z,9µm,20.0s
O20A White River Ci 94.37 327 P 18 21 01.1
baz=35
E03A Lebam 94.38 340 P **P** **18 21 00.8 -0.7**
SMCO Snowmass 94.57 326 P **P** **18 21 01.8 -1.3**
HWUT Hardware Ranch 94.57 330 P **P** **18 21 01.5 -1.2**
HWUT IAmb IAmb 18 21 07.9
comp=Z,68nm,0.7s
RDMU Red Mountain 94.60 328 P **P** **18 21 02.0 -0.9**
RDMU IAmb IAmb 18 21 08.4
comp=Z,44nm,0.9s
SPSI Sidrap Palu 94.66 92 P **P** **18 21 07.2 +3.9**
MFID Camas Ranch 94.68 334 P **P** **18 21 02.9 -0.3**
MFID IAmb IAmb 18 21 09.4
comp=Z,92nm,1.1s
GTOI Gorontalo 94.69 86 P P 18 21 15.3 +12
RUSC La Rusia 94.69 281 *e*P **P** **18 21 03.8 -0.3**
TRCB Terra Rica 94.76 246 *e*P **P** **18 21 05.8 +2.3**
G05D Wamic, OR 94.90 338 P 18 21 04.0
baz=26
HVU Hansel Valley 94.92 331 P **P** **18 21 03.4 -0.9**
HVU pmax pmax
comp=Z,32nm,0.9s
HVU Hansel Valley 94.92 331 P **P** **18 21 03.4 -0.9**
TCUT Toone Canyon 94.92 330 P **P** **18 21 03.5 -0.9**
TCUT IAmb IAmb 18 21 09.3
comp=Z,42nm,0.8s
VILB Vilhena 94.96 258 *e*P **P** **18 21 06.2 +1.6**
T25A Trinidad 94.97 323 *i* P **P** **18 21 03.7 -1.0**
T25A IAmb IAmb 18 21 10.0
comp=Z,36nm,0.8s
T25A Trinidad 94.97 323 P 18 21 04.3
baz=38
MOTC Monteria, Cord 95.06 284 *e*P **P** **18 21 04.6 -0.6**
SAML Samuel 95.10 263 IAMs_20 IAMs_20 19 11 54.6
comp=Z,6µm,18.0s
WHTX Lake Whitney, 95.14 315 P **P** **18 21 05.6 +0.3**
WHTX IAMs_20 IAMs_20 19 03 13.4
comp=Z,9µm,22.0s
WHTX Lake Whitney, 95.14 315 P 18 21 05.1
baz=43
WHTX S 18 32 19.0
baz=43
BNSI Bone 95.18 92 P P 18 21 20.2 +15
ZARC Zaragoza, Cauc 95.18 283 *e*P **P** **18 21 08.1 +2.3**
KAPI Kappang 95.24 92 P **P** **18 21 06.4 +0.4**
comp=Z,15nm,0.8s,baz=266,slow=9.0,SNR=3.9
AMTX Amarillo 95.32 320 P **P** **18 21 06.3 +0.1**
AMTX IAMs_20 IAMs_20 19 07 45.7
comp=Z,9µm,19.0s
AMTX Amarillo 95.32 320 P 18 21 06.2
baz=40
I07A Izee 95.36 336 P **P** **18 21 06.8 +0.6**
PTBC PUERTO BERRIO, 95.42 282 *e*P **P** **18 21 06.2 -0.6**
G03D McMinnville, O 95.51 339 P 18 21 06.9
baz=24
PTLB Pontes e Lacer 95.53 255 *e*P **P** **18 21 08.7 +1.6**
UREC San Jos de Ur 95.57 283 *e*P **P** **18 21 09.3 +1.8**
SPBC San Pablo de B 95.63 281 *e*P **P** **18 21 08.9 +1.0**
S22A 4UR Ranch, Cre 95.65 325 P 18 21 07.5
baz=36
J08A Circle Bar Ran 95.66 335 P **P** **18 21 07.6 0.0**
HKT Hockley 95.66 313 *i* P **P** **18 21 07.0 -0.6**
HKT pmax pmax
comp=Z,42nm,1.7s
HKT MLR MLR
comp=Z,8µm,18.0s
H04A Detroit Lake 95.67 338 P **P** **18 21 07.0 -0.5**
I05D Terrebonne, OR 95.72 338 P 18 21 07.6
baz=26
AQDB Aquidauana 95.73 249 *e*P **P** **18 21 11.2 +3.2**
BGU Big Grassy Mou 95.74 331 P **P** **18 21 07.7 -0.4**
PLAI Plampang 95.78 97 P **P** **18 21 05.7 -2.7**
ABTX Abilene, Hawle 95.92 317 P **P** **18 21 08.9 0.0**
ABTX IAmb IAmb 18 21 13.5
comp=Z,64nm,0.9s
ABTX IAMs_20 IAMs_20 19 06 49.7
comp=Z,7µm,19.0s
ABTX Abilene, Hawle 95.92 317 P 18 21 09.2
baz=41
PV22 Blue Mesa, Par 95.92 327 P **P** **18 21 08.2 -0.8**
MPU Maple Canyon 95.94 329 P **P** **18 21 07.8 -1.3**
PV07 Paradox Valley 95.94 326 P **P** **18 21 08.4 -0.7**
PV07 IAMs_20 IAMs_20 19 06 03.4
comp=Z,10µm,20.0s
PV15 Paradox Valley 95.94 326 P **P** **18 21 08.7 -0.4**
PV15 IAmb IAmb 18 21 18.9
comp=Z,40nm,0.9s
PV15 IAMs_20 IAMs_20 19 06 02.6
comp=Z,10µm,21.0s
H04D Lebanon 95.98 339 P 18 21 08.5
baz=25
H04D S 18 32 22.9
baz=25
P17A Butcher Ranch, 96.01 328 P **P** **18 21 08.2 -1.1**
PV04 Paradox Valley 96.09 327 P **P** **18 21 07.3 -2.4**
PV04 IAmb IAmb 18 21 19.1
comp=Z,47nm,1.0s
PINE Pine Mountain 96.09 337 P **P** **18 21 10.1 +0.5**
PINE IAmb IAmb 18 21 17.0
comp=Z,106nm,1.1s
435B Jarrell 96.10 314 P 18 21 10.0
baz=43
435B S 18 32 29.5
baz=43
PV12 Saucer Basin, 96.10 326 P **P** **18 21 09.7 -0.1**
PV12 IAmb IAmb 18 21 38.5
comp=Z,37nm,0.9s
PV01 Paradox Valley 96.15 326 IAMs_20 IAMs_20 19 06 19.2
comp=Z,10µm,21.0s
PV11 David Mesa, Pa 96.15 326 P **P** **18 21 09.7 -0.4**
PV11 IAmb IAmb 18 21 18.2
comp=Z,52nm,0.8s
PV14 Lion Creek, Pa 96.16 327 P **P** **18 21 09.2 -1.0**
PV14 IAmb IAmb 18 21 38.1
comp=Z,56nm,1.1s
PV20 West Nyswonger 96.16 327 P **P** **18 21 08.1 -2.0**
PV16 Nyswonger Mesa 96.16 326 P **P** **18 21 08.1 -2.0**
PV16 IAmb IAmb 18 21 18.2
comp=Z,78nm,1.2s
PV16 IAMs_20 IAMs_20 19 06 10.5
comp=Z,9µm,20.0s
PV10 Paradox Valley 96.16 327 P **P** **18 21 09.7 -0.5**
PV10 IAmb IAmb 18 21 18.6
comp=Z,53nm,0.9s
PV02 Paradox Valley 96.16 326 P **P** **18 21 08.5 -1.6**
NLU North Lily Min 96.17 329 P **P** **18 21 07.9 -2.3**
PV03 Paradox Valley 96.18 326 P **P** **18 21 07.9 -2.3**
PV03 IAmb IAmb 18 21 25.8
comp=Z,55nm,1.3s
PV03 IAMs_20 IAMs_20 19 06 10.9
comp=Z,10µm,20.0s
PV19 Morning Glory 96.19 327 P **P** **18 21 07.8 -2.4**
PV19 IAMs_20 IAMs_20 19 06 11.3
comp=Z,9µm,20.0s
PV17 East Wray Mesa 96.20 326 P **P** **18 21 07.0 -3.2**
PV17 IAmb IAmb 18 21 17.4
comp=Z,41nm,0.9s
PV18 Skein Mesa, Pa 96.21 326 P **P** **18 21 08.7 -1.6**
PV18 IAmb IAmb 18 21 18.3
comp=Z,42nm,1.0s
PV18 IAMs_20 IAMs_20 19 06 11.6
comp=Z,9µm,21.0s
SRU San Rafael Swe 96.21 328 P **P** **18 21 08.9 -1.4**
SRU pmax pmax
comp=Z,35nm,0.7s
SRU San Rafael Swe 96.21 328 P **P** **18 21 08.9 -1.4**
SRU IAmb IAmb 18 21 14.7
comp=Z,34nm,0.7s
VILC Villavicencio, 96.22 279 *e*P **P** **18 21 12.5 +1.9**
PV13 Radium Mtn., P 96.24 326 P **P** **18 21 08.9 -1.6**
PV13 IAMs_20 IAMs_20 19 06 12.6
comp=Z,9µm,20.0s
DUG Dugway, Tooele 96.27 330 P **P** **18 21 09.6 -0.9**
DUG pmax pmax
comp=Z,36nm,0.8s
DUG MLR MLR
comp=Z,8µm,18.0s
DUG Dugway, Tooele 96.27 330 P **P** **18 21 09.6 -0.9**
DUG IAmb IAmb 18 21 15.9
comp=Z,36nm,0.8s
DUG IAMs_20 IAMs_20 19 07 38.2
comp=Z,8µm,18.0s
DUG Dugway, Tooele 96.27 330 P 18 21 10.3
baz=32
ROSC El Rosal 96.31 280 P **P** **18 21 11.5 +0.2**
comp=Z,9.1nm,0.4s,baz=344,slow=2.2,SNR=5.4
ROSC LR LR 19 04 33.0
comp=Z,3µm,19.9s,baz=84,slow=35
ROSC El Rosal 96.31 280 IAmb IAmb 18 21 19.3
comp=Z,71nm,1.4s
ROSC IAMs_20 IAMs_20 19 04 22.8
comp=Z,6µm,22.0s
ROSC El Rosal 96.31 280 *e*P **P** **18 21 12.5 +1.1**
NORC Norcasia 96.32 281 *e*P **P** **18 21 10.6 -0.4**
TMUT Trail Mountain 96.36 329 P **P** **18 21 10.2 -0.9**
PV05 Paradox Valley 96.43 326 P **P** **18 21 08.8 -2.6**
HELC Santa Helena 96.48 282 *e*P **P** **18 21 14.1 +1.9**
WVOR Wild Horse Val 96.53 335 P **P** **18 21 11.0 -0.6**
WVOR pmax pmax
WVOR comp=Z,32nm,1.2s
WVOR MLR MLR
comp=Z,13µm,19.0s
WVOR Wild Horse Val 96.53 335 P **P** **18 21 11.0 -0.6**
DBBC Dabeiba 96.54 283 *e*P **P** **18 21 11.9 -0.1**
I04A Tendick Farm, 96.55 338 P 18 21 11.5
baz=25
I04A S 18 32 28.5
baz=25
MSTX Muleshoe 96.59 320 P **P** **18 21 11.0 -1.0**
MSTX IAMs_20 IAMs_20 19 06 48.5
comp=Z,8µm,19.0s
MSTX Muleshoe 96.59 320 P 18 21 11.6
baz=39
J05D Fort Rock, OR 96.64 337 P 18 21 12.6
baz=26
Q16A Castle Valley 96.66 328 P **P** **18 21 11.7 -0.6**
ELK Elko 96.77 332 P **P** **18 21 13.1 +0.3**
comp=Z,7.2nm,0.8s,baz=1.0,slow=4.8,SNR=14
ELK Elko 96.77 332 P **P** **18 21 12.6 -0.2**
ELK pmax pmax
comp=Z,17nm,1.2s
ELK MLR MLR
comp=Z,12µm,22.0s
ELK Elko 96.77 332 P **P** **18 21 12.6 -0.2**
MVCO Mesa Verde 96.87 326 P **P** **18 21 11.8 -1.5**
MVCO Mesa Verde 96.87 326 P 18 21 13.2
baz=35
I03D Drain, OR 96.92 339 P 18 21 13.5
baz=24
GUY2C Guyana, Caldas 96.92 281 *e*P **P** **18 21 15.5 +1.2**
J04D Umpqua Nationa 96.95 338 P 18 21 13.5
baz=25
ITAB Concordia 96.99 242 *e*P **P** **18 21 15.2 +1.6**
K05A Summer Lake 97.03 337 P Pdif 18 21 14.2 +0.2
K05A IAmb IAmb 18 21 30.4
comp=Z,64nm,1.1s
CBOC Ciudad Bolivar 97.06 282 *e*P Pdif 18 21 16.9 +2.3
K04D Chiloquin, OR 97.40 337 P 18 21 15.8
baz=25
MSU Marysvale 97.42 329 P **P** **18 21 15.3 -0.5**
MSU Marysvale 97.42 329 P **P** **18 21 15.3 -0.5**
TCRU Three Creeks R 97.46 329 P **P** **18 21 15.1 -1.0**
TCRU IAmb IAmb 18 21 22.2
comp=Z,30nm,0.8s
MACC Macarena, Meta 97.49 278 *e*P Pdif 18 21 17.2 +0.9
MOD Modoc Plateau 97.57 336 P **P** **18 21 15.6 -0.7**
J01E Myrtle Point 97.58 339 P 18 21 16.5
baz=24
ORTC Ortega, Tolima 97.60 280 *e*P **P** **18 21 16.1 -0.7**
JCT Junction City 97.61 316 P **P** **18 21 15.7 -0.9**
JCT pmax pmax
JCT comp=Z,27nm,1.0s MLR MLR
comp=Z,8µm,22.0s
JCT Junction City 97.61 316 P **P** **18 21 15.7 -0.9**
JCT IAMs_20 IAMs_20 19 04 51.6
comp=Z,8µm,22.0s
JCT Junction City 97.61 316 P 18 21 16.6
baz=41
JCT S 18 32 39.8
baz=41
735A Kenedy 97.64 313 IAMs_20 IAMs_20 19 12 01.7
comp=Z,7µm,19.0s
ANMO Albuquerque 97.71 323 P **P** **18 21 16.4 -0.8**
comp=Z,8.5nm,0.9s,baz=47,slow=7.8,SNR=16
ANMO PKKPbc **PKKPdf** **18 37 54.0 +1.0**
comp=Z,1.9nm,0.6s,baz=177,slow=2.3,SNR=3.5
ANMO Albuquerque 97.71 323 P **P** **18 21 16.2 -1.0**
ANMO **PKKPdf** **18 37 55.0 +2.0**
ANMO Albuquerque 97.71 323 P 18 21 17.1
baz=37
ANMO S 18 32 40.1
baz=37
HUMO Hull Mountain 97.79 338 P **P** **18 21 15.9 -1.2**
HUMO IAmb IAmb 18 21 31.6
comp=Z,70nm,1.5s
MTPU Mount Pierson 97.82 328 P Pdif 18 21 17.9 +0.1
K02D Willamette Mer 97.93 338 P 18 21 17.0
baz=24
L04D Klamath Falls 97.94 337 P 18 21 17.7
baz=25
ETMB Extrema 98.06 264 *e*P Pdif 18 21 19.3 +0.6
BCIP Isla Barro Col 98.12 287 *e*P Pdif 18 21 31.2 +12
M04C Macdoel 98.19 337 P 18 21 18.8
baz=25
PKCU Pink Cliffs 98.38 328 P **P** **18 21 20.2 -0.1**
PKCU IAmb IAmb 18 21 24.6
comp=Z,29nm,0.9s
L02E Cave Junction 98.40 338 P 18 21 19.7
baz=24
BNM Barren Site 98.43 323 P **P** **18 21 19.1 -1.3**
YOTC Yotoco, Valle 98.44 281 *e*P Pdif 18 21 21.9 +1.2
YBH Yreka Blue Hor 98.51 337 P **P** **18 21 19.7 -0.8**
comp=Z,13nm,1.0s,baz=55,slow=3.2,SNR=13
YBH PKKPbc **PKKPdf** **18 37 51.3 0.0**
comp=Z,1.1nm,0.4s,baz=113,slow=18,SNR=2.6
YBH Yreka Blue Hor 98.51 337 P **P** **18 21 19.7 -0.8**
SZCU Shurtz Canyon 98.58 329 P **P** **18 21 20.0 -1.1**
Y22D IRIS PASSCAL I 98.64 323 IAMs_20 IAMs_20 19 05 48.4
comp=Z,9µm,22.0s
SANI Sanana 98.66 86 P **P** **18 21 21.0 -0.4**
CCUT Cedar City 98.74 329 P **P** **18 21 20.8 -0.9**
GDL2 Guadalupe Moun 98.81 320 P **P** **18 21 20.8 -1.2**

M02C Callahan 98.86 337 P 18 21 21.9
baz=25
KNB Kanab 98.96 328 P **P** **18 21 21.9 -0.8**
KNB pmax pmax
comp=Z,7.0nm,0.9s
KNB Kanab 98.96 328 P **P** **18 21 21.9 -0.8**
R11A Troy Canyon, C 98.97 331 P **P** **18 21 20.6 -2.1**
R11A IAMs_20 IAMs_20 19 09 07.4
comp=Z,9µm,19.0s
R11A Troy Canyon, C 98.97 331 P 18 21 22.8
baz=30
R11A S 18 32 52.1
baz=30
833A Chaparral WMA, 98.97 314 P 18 21 23.7
baz=42
833A S 18 32 50.0
baz=42
W18A Petrified Fore 99.15 325 S 18 32 51.5
baz=35
N02D Trinity Center 99.19 337 P 18 21 24.3
baz=25
N02D S 18 32 53.6
baz=25
PAHR Pah Rah Range 99.21 334 **Pdif** **18 21 22.5 -1.2**
AZU Azuero 99.29 286 *e*P **Pdif** **18 21 26.4 +2.1**
MMRI Maumere 99.31 94 IAMs_20 IAMs_20 19 11 47.9
comp=Z,7µm,21.0s
KVN Kaiserville 99.32 333 P **Pdif** **18 21 23.7 -0.6**
KVN pmax pmax
comp=Z,13nm,0.9s
KVN MLR MLR
comp=Z,14µm,21.0s
KVN Kaiserville 99.32 333 P **Pdif** **18 21 23.7 -0.6**
PTLC Puerto Leguiza 99.41 277 *e*P **Pdif** **18 21 26.8 +2.0**
BEKR Beckworth 99.41 335 P **Pdif** **18 21 23.1 -1.5**
PCON Cinco Dias 99.45 280 *e*P **Pdif** **18 21 27.8 +2.0**
WDC Whiskeytown Da 99.50 337 IAMs_20 IAMs_20 19 11 38.1
comp=Z,8µm,20.0s
O03E Paynes Creek 99.52 336 P 18 21 25.4
baz=26
POPC Popayan, Colom 99.55 280 *e*P **Pdif** **18 21 18.6 -7.2**
PRN Pahroc Range 99.56 330 P **Pdif** **18 21 24.1 -1.2**
PRN IAMs_20 IAMs_20 19 10 09.2
comp=Z,8µm,18.0s
WUAZ Wupatki 99.58 327 P 18 21 25.8
baz=34
VCNR Virginia City 99.67 334 IAMs_20 IAMs_20 19 08 35.8
comp=Z,8µm,20.0s
SOTA Rioblanco 99.73 280 *e*P **Pdif** **18 21 26.3 -0.6**
MNTX Cornudas Mount 99.74 320 P 18 21 26.2
baz=38
YERR Yerington 99.80 334 IAMs_20 IAMs_20 19 08 19.3
comp=Z,8µm,21.0s
PNTR Pine Nut 99.83 334 IAMs_20 IAMs_20 19 08 31.2
comp=Z,8µm,20.0s
NVAR Mina Array Bea 99.94 333 P **Pdif** **18 21 27.4 +0.3**
comp=Z,7.6nm,0.7s,baz=36,slow=3.8,SNR=24
NVAR PP **PP** **18 25 27.1 -4.0**
comp=Z,2.2nm,0.8s,baz=14,slow=5.0,SNR=2.7
NVAR PKKP **PKiKP** **18 25 55.6 +0.5**
comp=Z,5.5nm,1.0s,baz=12,slow=4.6,SNR=4.3
NVAR PKKPbc **PKKPbc** **18 37 46.2 +0.4**
comp=Z,2.3nm,0.7s,baz=202,slow=4.7,SNR=7.0
NVAR LR LR 19 07 49.1
comp=Z,14µm,21.8s,baz=28,slow=36
NVAR Mina Array Bea 99.94 333 **Pdif** **18 21 26.8 -0.3**
NVAR Mina Array Bea 99.94 333 PKKPdf 18 37 45.8 -3.1
O02D Mt. Diablo Mer 99.94 337 P 18 21 26.8
baz=25
RUBR Rubicon Trail 100.06 334 IAMs_20 IAMs_20 19 07 11.3
comp=Z,7µm,21.0s
CPUP Villa Florida 100.28 245 P **Pdif** **18 21 29.2 +0.9**
comp=Z,3.9nm,0.8s,baz=123,slow=5.6,SNR=5.2
121A Cookes Peak, D 100.30 322 IAMs_20 IAMs_20 19 08 59.5
comp=Z,8µm,20.0s
121A Cookes Peak, D 100.31 322 P 18 21 28.7
baz=36
BBAC Balboa, Cauca 100.32 280 *e*P **Pdif** **18 21 23.8 -5.3**
SHPR Sheep Range 100.38 330 IAMs_20 IAMs_20 19 06 31.8
comp=Z,8µm,22.0s
TPNV Topopah Spring 100.44 331 IAMs_20 IAMs_20 19 10 04.4
comp=Z,7µm,21.0s
TXAR Lajitas Array 100.65 318 P **Pdif** **18 21 30.5 +0.2**
comp=Z,6.8nm,0.8s,baz=68,slow=5.1,SNR=34
TXAR PP **PP** **18 25 33.2 -3.5**
comp=Z,5.1nm,1.0s,baz=51,slow=7.1,SNR=4.0
TXAR PKKP **PKKPbc** **18 37 45.3 +1.8**
comp=Z,0.8nm,0.7s,baz=200,slow=5.6,SNR=5.5
TGUH Tegucigalpa,Un 100.73 296 IAMs_20 IAMs_20 19 02 15.1
comp=Z,6µm,22.0s
GCUF Volcan Galeras 100.86 279 *e*P **Pdif** **18 21 33.9 +2.0**
CMB Columbia Colle 101.05 334 IAMs_20 IAMs_20 19 11 53.5
comp=Z,7µm,19.0s
RIOS Rincon, Osa 101.27 289 IAMs_20 IAMs_20 19 11 48.9
comp=Z,5µm,20.0s
BATI Baumata 101.35 95 P **Pdif** **18 21 34.2 +0.8**
comp=Z,11nm,0.8s,baz=55,slow=12,SNR=2.2
CRIN San Cristobal 101.44 294 IAMs_20 IAMs_20 19 03 46.1
comp=Z,5µm,22.0s
CWC Cottonwood Cre 101.60 332 P 18 21 34.0
baz=29
TUQ Turquoise Moun 101.61 330 P 18 21 33.3
baz=30
PDMCI Parker Dam,Lak 101.82 328 P 18 21 35.3
baz=32
CAO2 Cobano, Puntar 101.88 291 IAMs_20 IAMs_20 19 03 43.0
comp=Z,6µm,22.0s
TUC Tucson 101.95 324 P 18 21 36.3
baz=34
GMRC Granite Mounta 102.06 329 P 18 21 36.4
baz=31
OTAV Otavalo 102.33 279 *e*P **Pdif** **18 21 40.4 +2.0**
IRM Iron Mountain 102.38 328 P 18 21 38.2
baz=31
ISA Isabella, Lake 102.44 332 P 18 21 38.6
baz=28
APG El Apazote 102.44 298 Pdiff **Pdif** **18 21 40.5 +2.0**
comp=Z,7.3nm,0.9s,baz=206,slow=4.3,SNR=8.3
SAO San Andreas Ge 102.56 334 IAMs_20 IAMs_20 19 08 16.5
comp=Z,8µm,22.0s
CCIG Comitan 102.78 301 IAMs_20 IAMs_20 19 11 11.2
comp=Z,5µm,20.0s
PMPB Monarch Peak 102.82 334 IAMs_20 IAMs_20 19 09 14.3
comp=Z,8µm,20.0s
BELC Belle Mtn. Jos 102.88 329 P 18 21 40.0
baz=30
EDW2 Edwards Air Fo 102.93 331 P 18 21 39.9
baz=29
BC3 Big Chuckawall 102.94 328 P 18 21 40.3
baz=31
LPAZ La Paz 103.18 259 Pdiff **Pdif** **18 21 44.9 +2.7**
comp=Z,1.5nm,0.7s,baz=314,slow=3.7,SNR=3.6
GLA Glamis 103.19 328 P 18 21 40.6
baz=31
214A Organ Pipe Nat 103.20 326 IAMs_20 IAMs_20 19 11 35.9
comp=Z,7µm,18.0s
214A Organ Pipe Nat 103.20 326 P 18 21 41.3
baz=33
PFO Pinyon Flats O 103.41 329 Pdiff **Pdif** **18 21 44.5 +2.0**
comp=Z,4.9nm,0.7s,baz=24,slow=6.0,SNR=1.6
PFO Pinyon Flats O 103.41 329 IAMs_20 IAMs_20 19 10 26.1
comp=Z,7µm,21.0s
PFO Pinyon Flats O 103.41 329 P 18 21 40.2
baz=30
TPFO Pinon Flats 103.41 329 P 18 21 40.3
baz=30
HPIG 103.62 317 IAMs_20 IAMs_20 19 11 46.7
comp=Z,8µm,19.0s
UABX UABC, Campus M 103.81 328 IAMs_20 IAMs_20 19 10 52.0
comp=Z,8µm,21.0s
CPBX Cerro Prieto 103.93 328 IAMs_20 IAMs_20 19 10 59.2
comp=Z,8µm,22.0s
RMX La Rumorosa 104.11 328 IAMs_20 IAMs_20 19 11 35.4
comp=Z,8µm,20.0s
CMIG Matias Romero 104.14 303 Pdiff **Pdif** **18 21 47.2 +1.4**
comp=Z,1.4nm,0.5s,baz=351,slow=8.0,SNR=2.7
MBWA Marble Bar 104.15 106 IAMs_20 IAMs_20 19 09 26.4
comp=Z,7µm,21.0s
BAR Barrett 104.30 329 IAMs_20 IAMs_20 19 12 04.8
comp=Z,8µm,22.0s
109C Camp Elliot, M 104.30 329 IAMs_20 IAMs_20 19 13 18.8
comp=Z,6µm,20.0s
SYO Syowa Base 104.32 175 *i* ePdiff **Pdif** **18 21 47.6 +2.4**
SYO Syowa Base 104.32 175 *i* eX **Pdif** **18 21 51.4 +6.2**
TKX Tecate 104.37 329 IAMs_20 IAMs_20 19 09 10.6
comp=Z,6µm,19.0s
PSAD1 Pilbara Seismi 104.39 106 IAMs_20 IAMs_20 19 09 00.6

	comp=Z,7μm,22.0s						
CIS	**Catalina Islan**	**104.39**	**331**	P		18 21 46.5	
	baz=29						
PSAC1	**Pilbara Seismi**	**104.41**	**106**	IAMs_20	IAMs_20	19 09 11.3	
	comp=Z,9μm,22.0s						
PSAB1	**Pilbara Seismi**	**104.44**	**106**	IAMs_20	IAMs_20	19 09 14.0	
	comp=Z,8μm,22.0s						
PSAD3	**Pilbara Seismi**	**104.45**	**106**	IAMs_20	IAMs_20	19 09 14.2	
	comp=Z,7μm,22.0s						
PSAA2	**Pilbara Seismi**	**104.46**	**106**	IAMs_20	IAMs_20	19 09 04.5	
	comp=Z,7μm,21.0s						
PSA00	**Pilbara Seismi**	**104.46**	**106**	IAMs_20	IAMs_20	19 09 13.6	
	comp=Z,7μm,22.0s						
PSAB2	**Pilbara Seismi**	**104.47**	**106**	IAMs_20	IAMs_20	19 09 13.7	
	comp=Z,8μm,22.0s						
PSAA3	**Pilbara Seismi**	**104.47**	**106**	IAMs_20	IAMs_20	19 09 13.9	
	comp=Z,8μm,22.0s						
PSAB3	**Pilbara Seismi**	**104.48**	**106**	IAMs_20	IAMs_20	19 09 26.1	
	comp=Z,7μm,22.0s						
PSAC2	**Pilbara Seismi**	**104.50**	**106**	IAMs_20	IAMs_20	19 09 14.6	
	comp=Z,8μm,22.0s						
PSAD2	**Pilbara Seismi**	**104.58**	**106**	IAMs_20	IAMs_20	19 09 16.7	
	comp=Z,9μm,22.0s						
TJX	**Tijuana**	**104.61**	**329**	IAMs_20	IAMs_20	19 13 28.9	
	comp=Z,8μm,22.0s						
HSIG		**104.74**	**323**	IAMs_20	IAMs_20	19 11 50.9	
	comp=Z,6μm,19.0s						
SFX	**San Felipe**	**104.91**	**327**	IAMs_20	IAMs_20	19 12 06.0	
	comp=Z,6μm,20.0s						
CCX	**Cicese**	**104.99**	**328**	IAMs_20	IAMs_20	19 12 01.2	
	comp=Z,7μm,20.0s						
ZAIG	**Zacatecas**	**105.02**	**312**	IAMs_20	IAMs_20	19 10 37.1	
	comp=Z,6μm,21.0s						
SPX	**San Pedro Mart**	**105.18**	**327**	IAMs_20	IAMs_20	19 11 58.1	
	comp=Z,5μm,21.0s						
LPA	**La Plata**	**105.40**	**238**	PKIKP	**PKiKP**	**18 26 06.1**	**+1.5**
LPA				PPP	PPP	18 28 19.3	
LPA				PKIKS		18 29 45.6	
LPA				SKS	**SKSac**	**18 32 19.8**	**-10**
LPA				SKIKS		18 33 28.0	
LPA				SDIFF	**Sdif**	**18 33 46.2**	**+1.1**
LPA				PS	**PS**	**18 35 20.3**	**-8.3**
LPA				PSP	PSP	18 36 21.2	
LPA				SS	**SS**	**18 41 03.9**	**-5.0**
LPA				SSS	SSS	18 44 57.3	
MORW	**Morawa**	**105.51**	**115**	IAMs_20	IAMs_20	19 10 56.2	
	comp=Z,5μm,20.0s						
MNMC	**Minye Minye**	**105.88**	**258**	IAMs_20	IAMs_20	19 14 08.4	
	comp=Z,8μm,21.0s						
MAW	**Mawson**	**106.03**	**166**	Pdiff	**Pdif**	**18 21 54.8**	**+1.9**
	comp=Z,1.4nm,0.8s,baz=266,slow=16,SNR=1.6						
MAW				PKKPbc	**PKKPbc**	**18 37 29.8**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=354,slow=12,SNR=2.9						
PB08	**IPOC Station P**	**106.06**	**257**	IAMs_20	IAMs_20	19 13 40.2	
	comp=Z,7μm,20.0s						
AP01	**Chacalluta**	**106.08**	**259**	IAMs_20	IAMs_20	19 15 40.5	
	comp=Z,6μm,19.0s						
PB11	**IPOC Station P**	**106.26**	**257**	IAMs_20	IAMs_20	19 14 45.5	
	comp=Z,6μm,20.0s						
SAUI	**Saumlaki**	**106.36**	**88**	IAMs_20	IAMs_20	19 16 48.6	
	comp=Z,5μm,22.0s						
SRIG	**Santa Rosalia**	**106.78**	**323**	IAMs_20	IAMs_20	19 14 48.9	
	comp=Z,7μm,20.0s						
PB01	**IPOC Station P**	**106.80**	**256**	IAMs_20	IAMs_20	19 11 10.8	
	comp=Z,7μm,22.0s						
PB09	**IPOC Station P**	**107.00**	**255**	IAMs_20	IAMs_20	19 13 26.0	
	comp=Z,6μm,20.0s						
TA01	**Diego Aracena**	**107.11**	**257**	IAMs_20	IAMs_20	19 13 54.8	
	comp=Z,7μm,21.0s						
LVC	**Limon Verde**	**107.17**	**254**	IAMs_20	IAMs_20	19 15 29.4	
	comp=Z,5μm,21.0s						
PATCX	**Punta Patache**	**107.22**	**256**	IAMs_20	IAMs_20	19 16 23.7	
	comp=Z,8μm,20.0s						
FITZ	**Fitzroy Crossi**	**107.24**	**100**	Pdiff	**Pdif**	**18 21 59.0**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=183,slow=16,SNR=2.0						
FITZ				PKiKP	**PKiKP**	**18 26 09.4**	**+0.9**
	comp=Z,4.6nm,0.8s,baz=308,slow=4.0,SNR=6.9						
PB06	**IPOC Station P**	**107.74**	**254**	IAMs_20	IAMs_20	19 15 36.5	
	comp=Z,5μm,20.0s						
NNA	**Nana**	**107.93**	**268**	IAMs_20	IAMs_20	19 12 09.6	
	comp=Z,5μm,21.0s						
PB04	**IPOC Station P**	**108.00**	**255**	IAMs_20	IAMs_20	19 12 56.5	
	comp=Z,8μm,21.0s						
NWAO	**Narrogin (SRO)**	**108.37**	**118**	IAMs_20	IAMs_20	19 06 49.1	
	comp=Z,5μm,21.0s						
SLBS	**Sierra La Lagu**	**108.54**	**319**	IAMs_20	IAMs_20	19 19 42.0	
	comp=Z,7μm,19.0s						
SNAA	**Sanae**	**108.61**	**190**	PKiKP	**PKiKP**	**18 26 11.4**	**+1.8**
VNA2	**Neumayer--Watz**	**108.62**	**191**	PKiKP	**PKiKP**	**18 26 11.9**	**+2.4**
GO02	**Mina Guanaco**	**109.01**	**252**	IAMs_20	IAMs_20	19 13 03.2	
	comp=Z,9μm,22.0s						
VNA3	**Neumayer Olymp**	**109.27**	**192**	PKiKP	**PKiKP**	**18 26 10.5**	**-0.2**
PB14	**IPOC Station P**	**109.37**	**253**	IAMs_20	IAMs_20	19 13 43.8	
	comp=Z,7μm,22.0s						
AC01	**Pan de Azucar**	**110.29**	**252**	IAMs_20	IAMs_20	19 16 46.1	
	comp=Z,6μm,20.0s						
GO03	**Copiap**	**110.72**	**250**	IAMs_20	IAMs_20	19 19 36.6	
	comp=Z,6μm,19.0s						
AC04	**Llanos de Chal**	**111.67**	**250**	IAMs_20	IAMs_20	19 17 15.6	
	comp=Z,8μm,21.0s						
LCO	**Las Campanas**	**111.77**	**249**	IAMs_20	IAMs_20	19 17 10.6	
	comp=Z,7μm,20.0s						
GO04	**Tololo Observa**	**112.41**	**248**	IAMs_20	IAMs_20	19 14 53.1	
	comp=Z,8μm,22.0s						
EFI	**East Falkland**	**113.81**	**223**	IAMs_20	IAMs_20	19 12 31.9	
	comp=Z,6μm,21.0s						
BO01	**Tunca**	**114.58**	**244**	IAMs_20	IAMs_20	19 16 13.6	
	comp=Z,7μm,20.0s						
VA05	**Santo Domingo**	**114.64**	**245**	IAMs_20	IAMs_20	19 17 54.2	
	comp=Z,6μm,20.0s						
WRA	**Warramunga Arr**	**115.23**	**97**	PKP	**PKPdf**	**18 26 22.6**	**-1.1**
	comp=Z,4.3nm,0.7s,baz=322,slow=1.8,SNR=20						
WRA				PKKPab	**PKKPab**	**18 37 01.0**	**-2.2**
	comp=Z,8.7nm,1.2s,baz=111,slow=2.2,SNR=10						
WRA	**Warramunga Arr**	**115.23**	**97**		**PKPdf**	**18 26 21.8**	**-1.8**
WRA					**PKKPbc**	**18 36 58.2**	**+0.8**
FORT	**Forrest**	**115.43**	**111**		**PKPdf**	**18 26 21.0**	**-2.7**
FORT				IAMs_20	IAMs_20	19 17 11.0	
	comp=Z,5μm,20.0s						
ASAR	**Alice Springs**	**116.71**	**101**	PKP	**PKPdf**	**18 26 25.4**	**-1.0**
	comp=Z,5.8nm,0.5s,baz=309,slow=1.6,SNR=32						
ASAR				PKKPbc	**PKKPbc**	**18 36 53.3**	**+0.9**
	comp=Z,1.8nm,0.6s,baz=121,slow=3.8,SNR=12						
ASAR	**Alice Springs**	**116.71**	**101**	PKPdf	**PKPdf**	**18 26 24.7**	**-1.7**
ASAR				PKKPab	**PKKPab**	**18 36 55.8**	**-0.7**
AS31	**Alice Springs**	**116.71**	**101**	PKPdif	**PKPdf**	**18 26 24.7**	**-1.7**
PLCA	**Paso Flores**	**116.94**	**238**	PKP	**PKPdf**	**18 26 25.7**	**-0.7**
	comp=Z,4.8nm,0.6s,baz=17,slow=2.2,SNR=8.4						
PATS	**Pohnpei**	**118.08**	**57**	IAMs_20	IAMs_20	19 23 03.2	
	comp=Z,5μm,21.0s						
LL03	**Petrohue**	**118.38**	**238**	IAMs_20	IAMs_20	19 19 15.1	
	comp=Z,7μm,22.0s						
BELA	**Belgrano 2**	**118.56**	**192**		**PKPdf**	**18 26 27.4**	**-1.0**
LL02	**Futaleuf**	**118.80**	**236**	PKPdf	**PKPdf**	**18 26 27.8**	**-1.9**
LL02				IAMs_20	IAMs_20	19 21 23.0	
	comp=Z,4μm,21.0s						
LL01	**San Ignacio de**	**118.87**	**237**	IAMs_20	IAMs_20	19 16 47.0	
	comp=Z,6μm,22.0s						
CASY	**Casey**	**119.23**	**153**	IAMs_20	IAMs_20	19 15 10.9	
	comp=Z,7μm,22.0s						
LL07	**Hotel Espejo d**	**119.77**	**236**	IAMs_20	IAMs_20	19 25 04.8	
	comp=Z,6μm,20.0s						
GO07	**Milladeo Hill,**	**120.00**	**236**	IAMs_20	IAMs_20	19 25 10.9	
	comp=Z,5μm,19.0s						
MG05	**Puerto Natales**	**122.12**	**227**	IAMs_20	IAMs_20	19 19 11.6	
	comp=Z,6μm,18.0s						
BBOO	**Buckleboo**	**122.45**	**110**	IAMs_20	IAMs_20	19 20 11.4	
	comp=Z,4μm,22.0s						
CTA	**Charters Tower**	**125.03**	**91**	PKP	**PKPdf**	**18 26 41.4**	**-1.1**
	comp=Z,15nm,0.9s,baz=47,slow=2.0,SNR=8.2						
HUH	**Hualalai**	**125.36**	**3**	IAMs_20	IAMs_20	19 21 28.3	
	comp=Z,5μm,21.0s						
NPH	**North Pit**	**125.66**	**2**	IAMs_20	IAMs_20	19 19 13.1	
	comp=Z,4μm,20.0s						
BYL	**Byron's Ledge**	**125.66**	**2**	IAMs_20	IAMs_20	19 03 17.1	
	comp=Z,3μm,19.0s						
SDHHI	**Sand Hill**	**125.68**	**2**	IAMs_20	IAMs_20	19 19 32.6	
	comp=Z,4μm,22.0s						
STKA	**Stephens Creek**	**126.39**	**106**	PKP	**PKPdf**	**18 26 43.8**	**-0.9**
	comp=Z,18nm,0.9s,baz=335,slow=3.2,SNR=14						
STKA	**Stephens Creek**	**126.39**	**106**	PKPdf	**PKPdf**	**18 26 44.6**	**-0.1**
TOO	**Toolangi**	**131.33**	**112**	PKiKP	**PKiKP**	**18 26 55.1**	**+0.2**
TOO				MLR	MLR		
	comp=Z,3μm,20.0s						
TOO	**Toolangi**	**131.33**	**112**	PKPdf	**PKiKP**	**18 26 55.1**	**+0.2**
TOO				IAMs_20	IAMs_20	19 33 26.1	
	comp=Z,3μm,20.0s						
EIDS	**Eidsvold**	**131.41**	**94**	IAMs_20	IAMs_20	19 31 21.4	
	comp=Z,3μm,20.0s						
VNDA	**Vanda**	**133.32**	**168**	PKP	**PKPdf**	**18 26 56.3**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=281,slow=6.3,SNR=5.7						
VNDA				SKPbc	**SKPbc**	**18 30 23.4**	**+0.2**
	comp=Z,14nm,1.1s,baz=269,slow=5.3,SNR=7.0						
CAN	**Canberra**	**133.37**	**108**	IAMs_20	IAMs_20	19 28 01.8	
	comp=Z,3μm,22.0s						
SBA	**Scott Base**	**133.91**	**169**	PKIKP	**PKiKP**	**18 26 59.2**	**+0.3**
SBA				MLR	MLR		
	comp=Z,13μm,21.0s						
SBA	**Scott Base**	**133.91**	**169**		**PKiKP**	**18 26 59.2**	**+0.3**
LHI	**Lord Howe Isla**	**140.23**	**99**	IAMs_20	IAMs_20	19 29 24.4	
	comp=Z,3μm,22.0s						
DZM	**Mont Dzumac**	**142.46**	**81**	*e*SS	SS	18 49 00.4	+2.6
	comp=Z,4μm,31.9s						
DZM	**Mont Dzumac**	**142.46**	**81**	*e*LR	LR	19 13 31.6	
	comp=Z,9μm,25.2s						
DZM	**Mont Dzumac**	**142.46**	**81**	PKP	**PKPdf**	**18 27 13.9**	**-1.2**
	comp=Z,9.5nm,0.9s,baz=122,slow=7.5,SNR=2.3						
DZM	**Mont Dzumac**	**142.46**	**81**	IAMs_20	IAMs_20	19 40 12.5	
	comp=Z,3μm,20.0s						
KNTN	**Kanton**	**143.43**	**32**	IAMs_20	IAMs_20	19 32 15.3	
	comp=Z,3μm,21.0s						
PYZ	**Puysegur Point**	**147.95**	**122**		**PKPdf**	**18 27 24.8**	**+1.2**
DCZ	**Deep Cove**	**148.34**	**121**		**PKPdf**	**18 27 25.7**	**+1.5**
DCZ				IAMs_20	IAMs_20	19 34 58.1	
	comp=Z,4μm,21.0s						
WHZ	**Wether Hill Ro**	**148.86**	**122**		**PKPdf**	**18 27 26.1**	**+1.0**
WHZ				IAMs_20	IAMs_20	19 28 33.6	
	comp=Z,4μm,21.0s						
MSVF	**Nonsavu**	**149.07**	**63**	PKPbc	**PKPbc**	**18 27 30.3**	**-0.2**
	comp=Z,22nm,0.7s,baz=214,slow=3.2,SNR=6.9						
MSVF	**Nonsavu**	**149.07**	**63**		**PKPbc**	**18 27 30.0**	**-0.5**
WKZ	**Wanaka**	**149.71**	**120**		**PKPdf**	**18 27 24.9**	**-1.7**
FOZ	**Fox Glacier**	**150.39**	**118**	PKPdf	**PKPdf**	**18 27 27.5**	**-0.1**
ODZ	**Otahua Downs**	**150.84**	**121**	PKPdf	**PKPdf**	**18 27 30.7**	**+2.4**
TAOE	**Nuku Hiva Isla**	**151.20**	**332**	*e*PKPbc	**PKiKP**	**18 27 36.5**	**+0.1**
	comp=Z,621nm,1.1s						
TAOE	**Nuku Hiva Isla**	**151.20**	**332**	*e*LR	LR	19 17 48.0	
	comp=Z,5μm,22.7s						
TAOE	**Nuku Hiva Isla**	**151.20**	**332**		**PKPdf**	**18 27 29.8**	**-0.1**
RPZ	**Rata Peaks**	**151.27**	**118**	PKPbc	**PKiKP**	**18 27 35.5**	**0.0**
	baz=303,slow=9.5						
RPZ	**Rata Peaks**	**151.27**	**118**		**PKiKP**	**18 27 35.3**	**-0.2**
OXZ	**Oxford**	**152.02**	**117**		**PKPbc**	**18 27 35.8**	**-1.0**
LTZ	**Lake Taylor**	**152.23**	**116**		**PKiKP**	**18 27 37.6**	**0.0**
THZ	**Tophouse**	**152.76**	**114**		**PKPbc**	**18 27 36.5**	**-2.1**
THZ				IAMs_20	IAMs_20	19 46 44.6	
	comp=Z,5μm,22.0s						
AFI	**Afiamalu**	**152.97**	**43**	PKPbc	**PKiKP**	**18 27 41.3**	**+1.4**
	comp=Z,59nm,0.8s,baz=326,slow=6.5,SNR=6.1						
AFI				PKPab	**sPKPbc**	**18 27 49.7**	**+0.4**
	comp=Z,56nm,0.9s,baz=215,slow=19,SNR=4.9						
AFI	**Afiamalu**	**152.97**	**43**	IAMs_20	IAMs_20	19 50 59.4	
	comp=Z,3μm,21.0s						
KHZ	**Kahutara**	**153.19**	**116**		**PKPbc**	**18 27 37.5**	**-1.8**
TUWZ	**Tuamarina**	**153.56**	**114**		**PKPdf**	**18 27 32.0**	**-0.5**
HIZ	**Hauiti**	**154.26**	**107**	IAMs_20	IAMs_20	19 50 39.8	
	comp=Z,4μm,20.0s						
URZ	**Urewera**	**156.03**	**106**	PKPab	**PKPab**	**18 28 02.9**	**-0.4**
	comp=Z,19nm,0.7s,baz=299,slow=23,SNR=7.2						
URZ	**Urewera**	**156.03**	**106**	PKPdf		18 27 45.7	+10
TIAR	**Tiarei**	**162.11**	**348**	*e*PKPab	**PKPab**	**18 28 30.4**	**+0.4**
PPT2	**Papeete2**	**162.18**	**349**	*e*PKPab	**PKPab**	**18 28 30.7**	**+0.3**
	comp=Z,119nm,1.5s						
PPT2	**Papeete2**	**162.18**	**349**	*e*PP	PP	18 32 17.8	+4.5
	comp=Z,925nm,26.0s						
PPT2	**Papeete2**	**162.18**	**349**	*e*SS	SS	18 52 31.5	-0.1
	comp=Z,3μm,33.0s						
PPT2	**Papeete2**	**162.18**	**349**	*e*LR	LR	19 22 53.3	
	comp=Z,7μm,22.5s						
TBI	**Tubuai**	**167.76**	**344**	*e*PP	PP	18 32 37.7	-4.7
	comp=Z,844nm,27.0s						
TBI	**Tubuai**	**167.76**	**344**	*e*SS	SS	18 53 33.7	+5.0
	comp=Z,3μm,29.8s						
TBI	**Tubuai**	**167.76**	**344**	*e*LR	LR	19 25 28.7	
	comp=Z,7μm,28.5s						

IDC **16** *18:11:03.3±1.4, 10°.52S×152°.38E, h0km, mb3.7/3, mb1 4.0/7, mb1mx3.9/40, mbtmp4.0/7, ML3.9/3, MS2.9/2, Ms1 2.9/2, ms1mx2.7/41 Error ellipse: s-maj=40.7km s-min=23.9km az=143.0*

ISC 16 18:11:08.2±1.0, 10°.6S±0°.1×152°.4E±0°.1, h35km, n8, σ0s82/9, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.27**	**283**	Pn	**Pn**	**18 12 24.7**	**+0.2**
	1.2nm,0.3s,baz=138,slow=8.4,SNR=2.9						
PMG				Lg	Lg	18 13 44.3	
	baz=94,slow=17,SNR=1.2						
PMG				LR	LR	18 13 54.9	
	comp=Z,64nm,20.1s,baz=66,slow=33						
HNR	**Honiara**	**7.56**	**82**	Pn	**Pn**	**18 12 56.1**	**+0.1**
	2.8nm,0.3s,baz=214,slow=5.2,SNR=5.0						
HNR				LR	LR	18 15 19.6	
	comp=Z,143nm,18.6s,baz=235,slow=34						
CTA	**Charters Tower**	**11.10**	**211**	Pn	**Pn**	**18 13 45.9**	**+1.3**
	0.8nm,0.3s,baz=38,slow=14,SNR=6.5						
CTA				Sn	**Sn**	**18 15 46.3**	**-1.3**
	0.7nm,0.3s,baz=290,slow=17,SNR=2.5						
WRA	**Warramunga Arr**	**19.69**	**240**	P	**Pn**	**18 15 35.9**	**-0.4**
	0.2nm,0.3s,baz=63,slow=10,SNR=12						
ASAR	**Alice Springs**	**21.86**	**231**	P	**P**	**18 15 58.2**	**+0.1**
	0.3nm,0.6s,baz=59,slow=9.4,SNR=2.5						
STKA	**Stephens Creek**	**23.38**	**204**	P	**P**	**18 16 13.7**	**-0.2**
	2.7nm,0.8s,baz=45,slow=17,SNR=4.6						
ILAR	**Eielson Array**	**87.68**	**22**	P	**P**	**18 23 52.2**	**-0.6**
	2.9nm,0.7s,baz=249,slow=4.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**151.20**	**278**	PKPbc	**PKiKP**	**18 30 59.5**	**0.0**
	2.4nm,0.7s,baz=52,slow=3.6,SNR=4.3						

ISK **16** *18:14:15.7, 34°.97N×26°.75E, h18km, ML4.5/15*
IDC **16** *18:14:16.9±3.2, 34°.80N×26°.77E, h34km±25km, mb4.1/6, mb1 4.1/8, mb1mx3.8/58, mbtmp4.2/8, ML4.1/2, Error ellipse: s-maj=33.3km s-min=19.3km az=179.0*
THE **16** *18:14:17.6, 35°.13N×26°.66E, h2km±2km, ML3.6/4, Error ellipse: s-maj=5.5km s-min=0.9km az=157.0*
ATH **16** *18:14:18.1, 35°.11N×26°.63E, h31km±4km, ML3.9/2, Error ellipse: s-maj=5.1km s-min=1.3km az=159.0*

ISC 16 18:14:16.8±1.1, 35°.00N±0°.06×26°.70E±0°.03, h29km±7km, n64, σ1s30/76, mb4.3/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.41**	**286**	P	**Pb**	**18 14 25.3**	**-0.4**
ZKR				S	**Sb**	**18 14 32.1**	**+0.2**
ZKR				AML	AML	18 14 32.8	
	comp=N,22488μm,0.4s						
ZKR				AML	AML	18 14 33.4	
	comp=E,20846μm,0.5s						
ZKR	**Zakros**	**0.41**	**286**	P	**Pb**	**18 14 25.3**	**-0.4**
ZKR				S	**Sb**	**18 14 32.0**	**+0.2**
	comp=E,11μm,0.4s						
ZKR	**Zakros**	**0.41**	**286**	PG	**Pb**	**18 14 25.4**	**-0.4**
ZKR				SG	**Sb**	**18 14 32.5**	**+0.7**
STIA	**Sitia Lasithi**	**0.54**	**292**	P	**Pb**	**18 14 26.5**	**-1.2**
STIA				S	**Sb**	**18 14 35.3**	**+0.1**
KARP	**Karpathos**	**0.66**	**35**	P	**Pb**	**18 14 29.1**	**-0.7**
KARP				S	**Sn**	**18 14 39.7**	**0.0**
KARP				AML	AML	18 14 40.4	
	comp=N,42335μm,0.3s						
KARP				AML	AML	18 14 41.2	
	comp=E,50821μm,0.5s						
KARP	**Karpathos**	**0.66**	**35**	P	**Pb**	**18 14 29.0**	**-0.9**
KARP				S	**Sb**	**18 14 37.9**	**-0.8**
	comp=E,24μm,0.4s						
KARP	**Karpathos**	**0.66**	**35**	PG	**Pb**	**18 14 28.9**	**-0.9**
KARP				SG	**Sn**	**18 14 39.5**	**-0.2**
FRMA	**Ierapetra Chan**	**0.79**	**271**	P	**Pb**	**18 14 30.2**	**-1.8**
FRMA				S	**Sb**	**18 14 40.8**	**-1.6**
	comp=E,2μm,0.4s						
NPS	**Neapolis**	**0.93**	**286**	P	**Pb**	**18 14 34.6**	**+0.3**
NPS	**Neapolis**	**0.93**	**286**	P	**Pb**	**18 14 34.9**	**+0.6**
NPS				S	**Sn**	**18 14 47.4**	**+1.2**
	comp=E,6μm,0.6s						
KSTL	**Kastelli Herak**	**1.37**	**283**	P	**Pn**	**18 14 38.6**	**-1.3**
KSTL				S	**Sn**	**18 14 54.3**	**-2.7**
IDI	**Anoyia**	**1.51**	**281**	Pg	**Pb**	**18 14 45.7**	**+1.6**
	comp=E,62nm,0.3s,baz=82,slow=15,SNR=4.4						
IDI				Lg	Lg	18 15 11.2	
	comp=E,77nm,0.3s,baz=332,slow=9.8,SNR=5.3						
IDI	**Anoyia**	**1.51**	**281**	P	**Pb**	**18 14 44.1**	**0.0**
IDI	**Anoyia**	**1.51**	**281**	P	**Pb**	**18 14 44.2**	**0.0**
IDI				S	**Sb**	**18 15 03.5**	**+0.6**
IDI	**Anoyia**	**1.51**	**281**	PN	**Pb**	**18 14 43.5**	**-0.6**
SIVA	**Sivas**	**1.55**	**271**	P	**Pb**	**18 14 45.2**	**+0.4**
NIS1	**Nisyros Isl.**	**1.64**	**14**	P	**Pb**	**18 14 45.6**	**-0.8**
NIS1	**Nisyros Isl.**	**1.64**	**14**	P	**Pb**	**18 14 45.1**	**-1.3**
NIS1	**Nisyros Isl.**	**1.64**	**14**	PN	**Pn**	**18 14 44.6**	**+0.9**
ARG	**Arkhangelos**	**1.68**	**43**	P	**Pb**	**18 14 47.2**	**+0.2**
ARG				S	**Sb**	**18 15 09.3**	**+1.6**
ARG	**Arkhangelos**	**1.68**	**43**	P	**Pb**	**18 14 46.5**	**-0.5**
ARG	**Arkhangelos**	**1.68**	**43**	PN	**Pb**	**18 14 45.4**	**-1.6**
SANT	**Santorini**	**1.70**	**324**	P	**Pb**	**18 14 45.9**	**-1.4**
SANT	**Santorini**	**1.70**	**324**	PN	**Pb**	**18 14 45.7**	**+1.2**
THR6	**Thira Island,**	**1.71**	**322**	P	**Pb**	**18 14 46.6**	**-1.0**
THR8	**Santorini-Mono**	**1.72**	**325**	P	**Pb**	**18 14 46.4**	**-1.2**
THR9	**Santorini-Faro**	**1.74**	**321**	P	**Pb**	**18 14 47.1**	**-0.9**
SNT1	**Gialos, Santor**	**1.75**	**324**	P	**Pb**	**18 14 46.7**	**-1.4**
SNT5	**Nea Kammeni, S**	**1.75**	**323**	P	**Pb**	**18 14 46.9**	**-1.3**
THR3	**Thira Island,**	**1.75**	**323**	P	**Pb**	**18 14 47.0**	**-1.3**
KOSK	**Kos Island**	**1.76**	**7**	PN	**Pb**	**18 14 46.7**	**-1.6**
THT2	**Imerovigli**	**1.77**	**324**	P	**Pb**	**18 14 47.2**	**-1.3**
THT2	**Imerovigli**	**1.77**	**324**	PN	**Pn**	**18 14 46.9**	**+1.5**
THR5	**Thira Island,**	**1.79**	**322**	P	**Pb**	**18 14 47.4**	**-1.4**
SAP3	**Santorini-Thir**	**1.80**	**323**	P	**Pn**	**18 14 47.5**	**+1.5**
VAM	**Vamos**	**2.08**	**282**	P	**Pb**	**18 14 54.3**	**+0.4**
BODT	**Bodrum**	**2.11**	**13**	PN	**Pn**	**18 14 51.6**	**+1.4**
GVDS	**Gavdos**	**2.15**	**266**	PN	**Pb**	**18 14 52.9**	**-2.1**
GVD	**Gavdhos**	**2.15**	**266**	P	**Pb**	**18 14 54.9**	**-0.2**
GVD	**Gavdhos**	**2.15**	**266**	PN	**Pn**	**18 14 52.5**	**+1.8**
TURN	**Turunc**	**2.17**	**35**	PN	**Pn**	**18 14 52.2**	**+1.3**
YKAV	**Yalikavak-Bodr**	**2.17**	**12**	PN	**Pn**	**18 14 52.2**	**+1.3**
APE	**Apeiranthos**	**2.27**	**336**	PN	**Pn**	**18 14 53.8**	**+1.5**
IMMV	**Iera Moni Meta**	**2.27**	**282**	P	**Pb**	**18 14 56.4**	**-0.6**
IMMV	**Iera Moni Meta**	**2.27**	**282**	PN	**Pn**	**18 14 54.3**	**+2.0**
DALY	**Dalyan (Mula)**	**2.41**	**41**	PN	**Pn**	**18 14 55.8**	**+1.6**
KNDR	**Palaiochora Ch**	**2.48**	**276**	PN	**Pn**	**18 14 57.5**	**+2.3**
MHLO	**Agia Marina, M**	**2.51**	**313**	P	**Pb**	**18 14 59.4**	**-1.8**
MHLA	**Plaka, Milos I**	**2.54**	**314**	P	**Pb**	**18 14 59.3**	**-2.2**
AKAS	**Kas**	**2.67**	**62**	PN	**Pn**	**18 14 58.0**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**3.09**	**18**	PN	**Pn**	**18 15 06.5**	**+1.9**
KTHA	**Kythira Island**	**3.21**	**294**	PN	**Pn**	**18 15 07.3**	**+2.0**
URLA	**Izmir**	**3.35**	**359**	PN	**Pn**	**18 15 09.2**	**+2.0**
CHOS	**Chios island**	**3.42**	**351**	PN	**Pn**	**18 15 09.4**	**+1.2**
KORT	**Korkueli**	**3.57**	**55**	PN	**Pn**	**18 15 11.8**	**+1.5**
MMAI	**Mount Meron Ar**	**7.50**	**103**	Pn	**Pn**	**18 16 02.4**	**-1.8**
	comp=E,4.4nm,0.3s,baz=265,slow=13,SNR=1.9						
GERES	**CERESS Array B**	**16.84**	**329**	P	**P**	**18 18 12.2**	**-0.2**
	comp=E,0.3nm,0.3s,baz=145,slow=13,SNR=1.5						
ESDC	**Sonseca Array**	**24.75**	**290**	P	**

DALY	**Dalyan (Mula)**	**2.36**	**42**	PN	**Pn**	**18 21 51.6**	**+1.6**
DDIM	**Aydin, Didim**	**2.42**	**11**	*i* P	**Pb**	**18 21 58.4**	**+2.4**
DDIM				*i* S	**Sb**	**18 22 29.8**	**+4.3**
DDIM				IAML		18 23 17.0	
	comp=N,505nm,2.8s						
YER	**Yerkesik**	**2.43**	**32**	PN	**Pn**	**18 21 52.9**	**+1.9**
KNDR	**Palaiochora Ch**	**2.45**	**274**	PN	**Pb**	**18 21 53.9**	**-2.8**
FETY	**Fethiye**	**2.50**	**51**	PN	**Pn**	**18 21 53.0**	**+1.1**
MULA	**Mugla, Merkez-**	**2.55**	**31**	*i* P	**Pn**	**18 21 55.4**	**+2.7**
MULA				*i* S	**Sn**	**18 22 23.7**	**+0.9**
AKAS	**Kas**	**2.65**	**63**	*i* P	**Pn**	**18 21 54.1**	**0.0**
AKAS				*i* S	Sn	18 22 16.1	-9.2
AKAS	**Kas**	**2.65**	**63**	PN	**Pn**	**18 21 54.4**	**+0.3**
AKAS	**Kas**	**2.65**	**63**		**Pn**	**18 21 52.0**	**-2.2**
AYDN	**Tasoluk**	**2.75**	**20**	*i* P	**Pn**	**18 21 58.3**	**+2.8**
AYDN				*i* S	**Sb**	**18 22 32.7**	**-2.5**
CAEL	**Denizli, Camel**	**2.96**	**46**	*i* P	**Pn**	**18 22 01.2**	**+2.9**
CAEL				*i* S	**Sn**	**18 22 36.2**	**+3.2**
CAEL				IAML		18 23 14.0	
	comp=E,635nm,0.9s						
CAEL				IAML		18 23 20.0	
	comp=N,522nm,1.2s						
DGB	**zmir**	**2.97**	**3**	*i* P	**Pn**	**18 22 00.6**	**+2.2**
DGB				*i* S	**Sb**	**18 22 38.4**	**-3.0**
TAVA	**DENIZLI_Tavas**	**2.99**	**37**	*i* P	**Pn**	**18 22 01.3**	**+2.5**
TAVA				*i* S	**Sn**	**18 22 31.2**	**-2.5**
AYDB	**Zeytinkoy-Aydi**	**3.03**	**19**	PN	**Pn**	**18 22 01.6**	**+2.3**
ELL	**Elmali**	**3.11**	**57**		**Pn**	**18 21 59.0**	**-1.4**
KTHA	**Kythira Island**	**3.17**	**293**	PN	**Pn**	**18 22 03.7**	**+2.6**
GOLH	**Golhisar**	**3.18**	**46**	*i* P	**Pn**	**18 22 03.8**	**+2.5**
GOLH				*i* S	**Sn**	**18 22 36.2**	**-2.1**
GOLH				IAML		18 23 03.0	
	comp=N,329nm,1.2s						
AKUM	**Antalya-Kumluc**	**3.23**	**66**	*i* P	**Pn**	**18 22 02.8**	**+0.8**
AKUM				*i* S	**Sn**	**18 22 32.4**	**-7.1**
URLA	**Izmir**	**3.28**	**359**	PN	**Pn**	**18 22 03.9**	**+1.3**
CHOS	**Chios island**	**3.34**	**352**	PN	**Pn**	**18 22 05.5**	**+2.0**
KORT	**Korkueli**	**3.54**	**56**	*i* P	**Pn**	**18 22 09.0**	**+2.6**
KORT				*i* S	**Sn**	**18 22 49.5**	**+2.2**
KORT				IAML		18 23 20.0	
	comp=E,273nm,2.0s						
KORT	**Korkueli**	**3.54**	**56**	PN	**Pn**	**18 22 07.9**	**+1.5**
MANT	**Manisa**	**3.73**	**23**	*i* P	**Pn**	**18 22 10.9**	**+1.9**
MANT				*i* S	**Sn**	**18 22 53.7**	**+1.7**
MANT	**Manisa**	**3.73**	**23**		**Pn**	**18 22 07.8**	**-1.3**
ITM	**Ithomi**	**4.38**	**300**		**Pn**	**18 22 17.8**	**0.0**
AGG	**Agios Georgios**	**5.25**	**320**		**Pn**	**18 22 30.4**	**+0.6**
CSS	**Mathiatis**	**5.46**	**89**	Pn	**Pn**	**18 22 32.4**	**-0.3**
ALN	**Alexandroupoli**	**5.83**	**355**	Pn	**Pn**	**18 22 36.5**	**-1.1**
LIT	**Litokhoron**	**6.01**	**328**	Pn	**Pn**	**18 22 41.5**	**+1.2**
FNA	**Florina**	**7.07**	**325**	Pn	**Pn**	**18 22 53.1**	**-1.7**
BRTR	**Keskin Array B**	**7.23**	**48**	Pn	**Pn**	**18 22 56.0**	**-1.0**
	baz=216,slow=12,SNR=0.9						
BRTR	**Keskin Array B**	**7.23**	**48**		**Pn**	**18 22 56.0**	**-1.0**
MMAI	**Mount Meron Ar**	**7.53**	**103**	Pn	**Pn**	**18 22 60.0**	**-1.2**
	comp=E,1.6nm,0.3s,baz=284,slow=11,SNR=7.6						
MMAI				Sn	**Sn**	**18 24 21.3**	**-4.3**
	comp=E,6.7nm,0.3s,baz=325,slow=23,SNR=6.7						
VTS	**Vitosha**	**7.99**	**341**	⇓P	**Pn**	**18 23 12.0**	**+4.5**
VTS	**Vitosha**	**7.99**	**341**	Pn	**Pn**	**18 23 05.7**	**-1.8**
ILGA	**Ilgaz**	**8.15**	**41**	Pn	**Pn**	**18 23 11.0**	**+1.3**
SCTE	**Santa Cesarea**	**8.20**	**310**	Pn	**Pn**	**18 23 11.8**	**+1.6**
TIR	**Tirane**	**8.24**	**321**	Pn	Pn	18 23 15.2	+4.5
EIL	**Elat**	**8.83**	**125**	Pn	**Pn**	**18 23 17.0**	**-1.9**
	comp=E,0.8nm,0.3s,baz=295,slow=2.2,SNR=16						
EIL				Sn	Sn	18 24 48.5	-9.0
	comp=E,2.7nm,0.3s,baz=80,slow=2.3,SNR=8.8						
TIP	**Timpagrande**	**8.91**	**300**	Pn	**Pn**	**18 23 21.3**	**+1.2**
PDG	**Podgorica**	**9.35**	**324**	⇑P	**Pn**	**18 23 27.4**	**+1.5**
TOKA	**Tokat**	**9.37**	**53**	Pn	**Pn**	**18 23 24.9**	**-1.3**
DIKM	**Dikmen**	**9.40**	**43**	⇓P	Pn	18 23 40.0	+13
AMRR	**Amara**	**9.53**	**3**	⇓P	Pn	18 23 35.9	+7.5
CFR	**Carcaliu**	**10.15**	**6**	⇑P	Pn	18 23 43.2	+6.3
ESDC	**Sonseca Array**	**24.71**	**290**	P	**P**	**18 26 32.6**	**+0.7**
	comp=E,0.8nm,0.6s,baz=88,slow=9.4,SNR=3.0						
FINES	**FINESS Array B**	**26.39**	**359**	P	**P**	**18 26 45.8**	**-0.9**
	comp=E,2.7nm,0.9s,baz=174,slow=12,SNR=1.5						
HFS	**Hagfors**	**26.45**	**345**	P	**P**	**18 26 46.5**	**-0.8**
	comp=E,3.2nm,1.0s,baz=115,slow=6.5,SNR=1.3						
AKTO	**Aktyubinsk**	**27.40**	**46**	P	**P**	**18 26 54.7**	**-1.4**
	comp=E,5.8nm,1.1s,baz=260,slow=6.1,SNR=2.6						
EKA	**Eskdalemuir Ar**	**28.83**	**324**	P	**P**	**18 27 08.6**	**-0.1**
	comp=E,0.1nm,0.3s,baz=128,slow=10,SNR=1.5						
TORD	**Torodi Ar. Bea**	**31.40**	**232**	P	**P**	**18 27 33.9**	**+2.1**
	comp=E,0.8nm,0.7s,baz=23,slow=8.6,SNR=1.7						
TORD	**Torodi Ar. Bea**	**31.40**	**232**	IAmb	IAmb	18 27 44.2	
	comp=Z,5.7nm,1.4s						
ARCES	**ARCESS Array B**	**34.52**	**359**	P	**P**	**18 27 57.7**	**-0.7**
	comp=Z,4.4nm,0.9s,baz=184,slow=7.2,SNR=2.6						
ARCES	**ARCESS Array B**	**34.52**	**359**	IAmb	IAmb	18 28 05.2	
	comp=Z,18nm,1.4s						
KURBB	**Kurchatov Arra**	**40.21**	**51**	P	**P**	**18 28 47.9**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=277,slow=8.9,SNR=9.7						
MKAR	**Makanchi Array**	**42.78**	**57**	P	**P**	**18 29 08.7**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=268,slow=8.7,SNR=10						
ZALV	**Zalesovo Beam**	**44.16**	**46**	P	**P**	**18 29 19.8**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=267,slow=8.3,SNR=5.5						
SONM	**Songino Array**	**58.58**	**51**	P	**P**	**18 31 08.7**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=295,slow=7.5,SNR=1.2						
SONM	**Songino Array**	**58.58**	**51**	IAmb	IAmb	18 31 23.9	
	comp=Z,1.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**65.35**	**84**	P	**P**	**18 31 53.0**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=298,slow=8.7,SNR=5.2						
YKA	**Yellowknife Ar**	**77.90**	**343**	P	**P**	**18 33 07.6**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=33,slow=5.3,SNR=2.2						

*IDC **16** 18:23:51.7±1.0,34.°94N×26.°95E,h0km,mb3.9/14,*
mb1 3.9/19,mb1mx3.7/68,mbtmp3.8/19,ML3.6/4, Error
ellipse: s-maj=22.6km s-min=10.7km az=3.0
*ATH **16** 18:23:53.8,35.°04N×26.°84E,h28km±7km,ML3.7/8, Error*
ellipse: s-maj=7.5km s-min=1.6km az=358.0
*ISK **16** 18:23:54.5,35.°12N×26.°79E,h18km,ML3.9/18*
*THE **16** 18:23:54.7,35.°11N×26.°77E,h0km±1km,ML3.5/7, Error*
ellipse: s-maj=5.5km s-min=0.8km az=155.0
*HLW **16** 18:23:54.6,34.°98N×27.°00E,h11km±19km,Md3.9,Ml4.0*
*DDA **16** 18:23:59.1,35.°55N×26.°89E,h19km±3km,ML3.5*

ISC 16 18:23:52.0±1.2,**34.°94N**±0.°03×**26.°85E**±0.°02,**h8**km±8km,
n92,σ1°**71**/120,**mb3.9**/14,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.55**	**289**	P	**Pb**	**18 24 04.1**	**+0.1**
ZKR				S	**Sb**	**18 24 11.0**	**-1.0**
ZKR				AML	AML	18 24 13.6	
	comp=N,11812μm,0.3s						
ZKR				AML	AML	18 24 23.1	
	comp=E,14795μm,0.5s						
ZKR	**Zakros**	**0.55**	**289**	P	**Pb**	**18 24 04.0**	**+0.1**
ZKR				S	**Sb**	**18 24 12.0**	**0.0**
	comp=E,6μm,0.3s						
ZKR	**Zakros**	**0.55**	**289**	PG	**Pb**	**18 24 04.1**	**+0.1**
ZKR				SG	**Sb**	**18 24 12.1**	**0.0**
KARP	**Karpathos**	**0.66**	**23**	P	**Pg**	**18 24 05.2**	**+0.5**
KARP				S	**Sg**	**18 24 13.2**	**-0.2**
KARP				AML	AML	18 24 15.2	
KARP				AML	AML	18 24 15.6	
KARP	**Karpathos**	**0.66**	**23**	P	**Pg**	**18 24 05.2**	**+0.5**
KARP				S	**Sg**	**18 24 14.1**	**+0.7**
	comp=E,69μm,0.7s						
KARP	**Karpathos**	**0.66**	**23**	PG	**Pg**	**18 24 05.1**	**+0.4**
KARP				SG	**Sg**	**18 24 13.7**	**+0.3**
STIA	**Sitia Lasithi**	**0.68**	**293**	P	**Pb**	**18 24 05.4**	**-0.7**
STIA				S	**Sb**	**18 24 15.0**	**-0.7**
FRMA	**Ierapetra Chan**	**0.92**	**275**	P	**Pg**	**18 24 09.1**	**-0.6**
FRMA				S	**Sb**	**18 24 21.8**	**-0.9**
	comp=E,1μm,0.5s						
NPS	**Neapolis**	**1.07**	**288**	P	**Pn**	**18 24 13.7**	**+0.4**
NPS				S	**Sb**	**18 24 26.7**	**-0.2**
NPS				AML	AML	18 24 33.2	
	comp=E,12250μm,0.7s						
NPS				AML	AML	18 24 33.5	
	comp=N,7540μm,0.5s						
NPS	**Neapolis**	**1.07**	**288**	P	**Pn**	**18 24 13.5**	**+0.2**
NPS				S	**Sn**	**18 24 29.1**	**+0.7**
	comp=N,5μm,0.6s						
KSTL	**Kastelli Herak**	**1.50**	**285**	P	**Pn**	**18 24 17.6**	**-1.7**
KSTL				S	**Sb**	**18 24 34.4**	**-5.1**
ARG	**Arkhangelos**	**1.65**	**39**	P	**Pn**	**18 24 22.5**	**+1.2**
ARG				AML	AML	18 24 49.1	
	comp=E,7674μm,0.7s						
ARG				AML	AML	18 24 50.2	
	comp=N,3528μm,0.5s						

ARG	**Arkhangelos**	**1.65**	**39**	P	**Pg**	**18 24 23.4**	**-0.2**
ARG				S	**Sn**	**18 24 44.0**	**+1.3**
	comp=N,3μm,0.7s						
ARG	**Arkhangelos**	**1.65**	**39**	PN	**Pn**	**18 24 22.1**	**+0.8**
IDI	**Anoyia**	**1.65**	**283**	Pg	**Pg**	**18 24 24.0**	**+0.4**
	comp=N,26nm,0.3s,baz=129,slow=9.6,SNR=9.2						
IDI				Lg	Lg	18 24 45.3	
	comp=N,37nm,0.3s,baz=15,slow=11,SNR=3.5						
IDI	**Anoyia**	**1.65**	**283**	P	**Pg**	**18 24 22.6**	**-0.9**
IDI				S	**Sg**	**18 24 43.9**	**-1.0**
IDI				AML	AML	18 24 56.3	
	comp=E,1190μm,0.5s						
IDI				AML	AML	18 24 56.6	
	comp=N,1683μm,0.5s						
IDI	**Anoyia**	**1.65**	**283**	P	**Pn**	**18 24 21.6**	**+0.2**
IDI				S	**Sg**	**18 24 43.2**	**-1.7**
	comp=N,758nm,0.6s						
IDI	**Anoyia**	**1.65**	**283**	PN	**Pg**	**18 24 22.7**	**-0.9**
SIVA	**Sivas**	**1.68**	**273**	P	**Pg**	**18 24 23.8**	**-0.4**
SIVA				AML	AML	18 25 07.1	
	comp=E,5283μm,0.8s						
SIVA				AML	AML	18 25 11.5	
	comp=N,4406μm,0.8s						
SIVA	**Sivas**	**1.68**	**273**	P	**Pb**	**18 24 22.8**	**-0.4**
SIVA				S	**Sg**	**18 24 45.0**	**-1.0**
	comp=N,2μm,0.8s						
NIS1	**Nisyros Isl.**	**1.68**	**9**	P	**Pn**	**18 24 20.9**	**-0.9**
NIS1	**Nisyros Isl.**	**1.68**	**9**	P	**Pn**	**18 24 21.9**	**+0.1**
NIS1	**Nisyros Isl.**	**1.68**	**9**	PN	**Pn**	**18 24 21.7**	**-0.1**
KOSK	**Kos Island**	**1.81**	**3**	P	**Pn**	**18 24 24.4**	**+0.8**
KOSK	**Kos Island**	**1.81**	**3**	PN	**Pn**	**18 24 23.1**	**-0.5**
SANT	**Santorini**	**1.82**	**322**	P	**Pn**	**18 24 23.6**	**-0.2**
SANT				S	**Sb**	**18 24 48.0**	**-0.7**
SANT				AML	AML	18 24 53.0	
	comp=N,1168μm,0.5s						
SANT				AML	AML	18 24 54.6	
	comp=E,4306μm,1.0s						
SANT	**Santorini**	**1.82**	**322**	PN	**Pn**	**18 24 22.5**	**-1.3**
THR8	**Santorini-Mono**	**1.84**	**323**	P	**Pn**	**18 24 24.1**	**+0.1**
THR6	**Thira Island,**	**1.84**	**320**	P	**Pb**	**18 24 24.8**	**-1.3**
THR9	**Santorini-Faro**	**1.87**	**320**	P	**Pn**	**18 24 24.5**	**+0.2**
SNT1	**Gialos, Santor**	**1.88**	**322**	P	**Pn**	**18 24 24.7**	**+0.3**
THR7	**Fira-Santorini**	**1.88**	**322**	P	**Pb**	**18 24 25.3**	**-1.3**
SNT5	**Nea Kammeni, S**	**1.88**	**321**	P	**Pn**	**18 24 25.0**	**+0.5**
THT2	**Imerovigli**	**1.89**	**322**	P	**Pn**	**18 24 25.2**	**+0.5**
THT2	**Imerovigli**	**1.89**	**322**	PN	**Pn**	**18 24 24.5**	**-0.2**
SAP3	**Santorini-Thir**	**1.93**	**321**	P	**Pb**	**18 24 26.7**	**-0.8**
BODT	**Bodrum**	**2.15**	**10**	PN	**Pn**	**18 24 28.1**	**-0.2**
TURN	**Turunc**	**2.15**	**31**	*i* P	**Pb**	**18 24 30.9**	**-0.4**
TURN				*i* S	**Sn**	**18 24 51.8**	**-3.4**
TURN				IAML		18 25 04.0	
	comp=E,552nm,0.6s						
TURN				IAML		18 25 11.0	
	comp=N,461nm,0.7s						
TURN	**Turunc**	**2.15**	**31**	PN	**Pn**	**18 24 28.9**	**+0.6**
BDRM	**Kayabasi**	**2.18**	**13**	*i* S	**Sn**	**18 24 49.8**	**-6.0**
VAM	**Vamos**	**2.22**	**283**	P	**Pb**	**18 24 31.1**	**-1.4**
GVDS	**Gavdos**	**2.27**	**268**	PN	**Pb**	**18 24 32.6**	**-0.7**
GVD	**Gavdhos**	**2.27**	**268**	P	**Pb**	**18 24 33.1**	**-0.3**
GVD	**Gavdhos**	**2.27**	**268**	PN	**Pb**	**18 24 32.1**	**-1.3**
DALY	**Dalyan (Mula)**	**2.38**	**37**	P	**Pn**	**18 24 33.0**	**+1.6**
DALY				*i* S	**Sn**	**18 25 00.9**	**+0.2**
DALY				IAML		18 25 15.0	
	comp=E,331nm,0.7s						
DALY				IAML		18 25 16.0	
	comp=N,390nm,0.6s						
DALY	**Dalyan (Mula)**	**2.38**	**37**	PN	**Pn**	**18 24 32.5**	**+1.1**
APE	**Apeiranthos**	**2.38**	**334**	PN	**Pn**	**18 24 30.8**	**-0.7**
IMMV	**Iera Moni Meta**	**2.41**	**283**	P	**Pb**	**18 24 34.9**	**-0.8**
IMMV				AML	AML	18 25 19.8	
	comp=N,2234μm,1.2s						
IMMV				AML	AML	18 25 25.4	
	comp=E,1655μm,0.8s						
IMMV	**Iera Moni Meta**	**2.41**	**283**	PN	**Pn**	**18 24 33.1**	**+1.3**
YER	**Yerkesik**	**2.48**	**27**	PN	**Pn**	**18 24 33.7**	**+0.9**
FETY	**Fethiye**	**2.48**	**46**	PN	**Pn**	**18 24 33.5**	**+0.7**
DDIM	**Aydin, Didim**	**2.53**	**7**	*i* P	**Pb**	**18 24 36.5**	**-1.3**
DDIM				*i* S	**Sn**	**18 25 07.0**	**+2.4**
DDIM				IAML		18 25 24.0	
	comp=N,305nm,1.4s						
DDIM				IAML		18 25 26.0	
	comp=E,397nm,1.3s						
AKAS	**Kas**	**2.59**	**59**	*i* S	**Sn**	**18 25 01.1**	**-5.0**
AKAS	**Kas**	**2.59**	**59**	PN	**Pn**	**18 24 34.6**	**+0.2**
MULA	**Mugla, Merkez-**	**2.60**	**27**	*i* P	**Pb**	**18 24 37.9**	**-1.1**
MULA				*i* S	Sn	18 24 58.0	-8.4
MULA				IAML		18 25 27.0	
	comp=E,278nm,0.8s						
KNDR	**Palaiochora Ch**	**2.61**	**277**	PN	**Pb**	**18 24 36.8**	**-2.3**
MHLO	**Agia Marina, M**	**2.65**	**312**	P	**Pb**	**18 24 39.7**	**-0.1**
AYDN	**Tasoluk**	**2.84**	**17**	*i* P	**Pn**	**18 24 38.2**	**+0.4**
AYDN				*i* S	**Sn**	**18 25 07.8**	**-4.5**
CAEL	**Denizli, Camel**	**2.96**	**42**	*i* P	**Pn**	**18 24 42.2**	**+2.7**
CAEL				*i* S	**Sn**	**18 25 15.2**	**-0.1**
CAEL				IAML		18 25 38.0	
	comp=N,929nm,0.8s						
CAEL				IAML		18 25 43.0	
	comp=E,950nm,1.2s						
TAVA	**DENIZLI_Tavas**	**3.02**	**33**	*i* P	**Pn**	**18 24 41.5**	**+1.1**
TAVA				*i* S	**Sn**	**18 25 13.9**	**-2.9**
TAVA				IAML		18 25 29.0	
	comp=N,288nm,0.7s						
TAVA				IAML		18 25 34.0	
	comp=E,184nm,0.7s						
ANKY	**Antikythira Is**	**3.04**	**289**	P	**Pb**	**18 24 44.8**	**-1.7**
ELL	**Elmali**	**3.07**	**53**	PN	**Pn**	**18 24 42.6**	**+1.6**
AYDB	**Zeytinkoy-Aydi**	**3.12**	**15**	PN	**Pn**	**18 24 42.4**	**+0.7**
GOLH	**Golhisar**	**3.17**	**43**	*i* P	**Pn**	**18 24 44.5**	**+2.1**
GOLH				*i* S	**Sn**	**18 25 21.3**	**+0.7**
GOLH				IAML		18 25 38.0	
	comp=N,390nm,0.7s						
KTHA	**Kythira Island**	**3.36**	**294**	PN	**Pn**	**18 24 46.0**	**+1.2**
URLA	**Izmir**	**3.42**	**357**	PN	**Pn**	**18 24 45.4**	**-0.3**
CHOS	**Chios island**	**3.50**	**350**	PN	**Pn**	**18 24 46.5**	**-0.4**
KORT	**Korkueli**	**3.51**	**53**	PN	**Pn**	**18 24 48.8**	**+1.8**
SLUM	**Salum**	**3.70**	**202**	P	**Pn**	**18 24 52.9**	**+3.3**
	baz=204						
SLUM				AMP		18 25 00.0	
	baz=204						
SLUM				S	**Sn**	**18 25 34.4**	**+1.0**
	baz=204						
SWA2		**5.80**	**192**	P	**Pn**	**18 25 21.5**	**+3.1**
	baz=194						
SWA2				AMP		18 26 00.0	
	baz=194						
SWA2				S	**Sn**	**18 26 25.5**	**+0.3**
	baz=194						
RYAN	**Fayoum**	**6.52**	**153**	P	**Pn**	**18 25 30.8**	**+2.4**
	baz=153						
HSAF	**As Saff**	**6.63**	**142**	P	**Pn**	**18 25 31.7**	**+1.8**
	baz=143						
GLL	**Jalalah**	**6.74**	**141**	P	**Pn**	**18 25 32.7**	**+1.2**
	baz=142						
BRTR	**Keskin Array B**	**7.21**	**47**	Pn	**Pn**	**18 25 39.8**	**+1.9**
	comp=N,0.2nm,0.3s,baz=221,slow=15,SNR=1.2						
BRTR				Sn	**Sn**	**18 26 59.2**	**-1.0**
	baz=215,slow=25,SNR=2.2						
MMAI	**Mount Meron Ar**	**7.36**	**103**	Pn	**Pn**	**18 25 40.8**	**+0.9**
	baz=289,slow=14,SNR=1.7						
MMAI				Sn	**Sn**	**18 26 57.1**	**-6.5**
	comp=N,0.9nm,0.3s,baz=287,slow=20,SNR=1.5						
EIL	**Elat**	**8.63**	**125**	Pn	**Pn**	**18 25 58.5**	**+1.1**
	comp=N,0.4nm,0.3s,baz=347,slow=14,SNR=0.9						
EIL				Sn	**Sn**	**18 27 29.1**	**-5.9**
	comp=N,1.6nm,0.3s,baz=4.4,slow=13,SNR=2.2						
AKASG	**Malin Array Be**	**15.85**	**6**	Pn	**Pn**	**18 27 36.0**	**+0.6**
	comp=N,0.7nm,0.3s,baz=194,slow=11,SNR=5.3						
GERES	**GERESS Array B**	**16.96**	**329**	P	**P**	**18 27 51.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=146,slow=11,SNR=2.3						
ESDC	**Sonseca Array**	**24.89**	**290**	P	**P**	**18 29 17.9**	**+2.4**
	comp=N,0.6nm,0.8s,baz=83,slow=10,SNR=4.6						
GEYT	**Alibeck**	**25.27**	**74**	P	**P**	**18 29 20.7**	**+1.9**
	comp=N,1.3nm,0.5s,baz=284,slow=5.8,SNR=2.1						
FINES	**FINESS Array B**	**26.53**	**359**	P	**P**	**18 29 31.7**	**+1.7**
	comp=N,1.6nm,0.9s,baz=173,slow=13,SNR=1.2						
HFS	**Hagfors**	**26.62**	**345**	P	**P**	**18 29 31.2**	**+0.4**
	comp=N,9.0nm,1.2s,baz=141,slow=9.3,SNR=2.2						
AKTO	**Aktyubinsk**	**27.39**	**46**	P	**P**	**18 29 37.6**	**-0.3**
	comp=N,1.8nm,0.8s,baz=249,slow=8.6,SNR=2.8						
EKA	**Eskdalemuir Ar**	**29.03**	**324**	P	**P**	**18 29 54.1**	**+1.7**
	comp=N,1.3nm,0.9s,baz=118,slow=11,SNR=3.6						
TORD	**Torodi Ar. Bea**	**31.43**	**233**	P	**P**	**18 30 14.9**	**+0.9**
	comp=N,1.1nm,0.6s,baz=32,slow=8.8,SNR=4.6						
ARCES	**ARCESS Array B**	**34.66**	**359**	P	**P**	**18 30 42.4**	**+0.7**
	comp=N,0.8nm,0.7s,baz=181,slow=7.8,SNR=1.1						

KURBB	**Kurchatov Arra**	**40.18**	**51**	P	**P**	**18 31 28.9**	**+0.2**
	comp=N,3.0nm,0.7s,baz=277,slow=8.8,SNR=13						
MKAR	**Makanchi Array**	**42.74**	**56**	P	**P**	**18 31 50.0**	**+0.3**
	comp=N,2.5nm,0.8s,baz=280,slow=6.4,SNR=9.1						
ZALV	**Zalesovo Beam**	**44.16**	**46**	P	**P**	**18 32 00.1**	**-0.9**
	comp=N,2.4nm,0.7s,baz=268,slow=8.9,SNR=7.9						
SONM	**Songino Array**	**58.55**	**51**	P	**P**	**18 33 49.2**	**-0.1**
	comp=N,0.5nm,0.7s,baz=292,slow=9.0,SNR=3.3						
CMAR	**Chiang Mai Arr**	**65.22**	**84**	P	**P**	**18 34 34.1**	**-0.3**
	comp=N,0.3nm,0.7s,baz=306,slow=7.7,SNR=2.2						
USRK	**Ussuriysk Ar.**	**76.01**	**46**	P	**P**	**18 35 39.1**	**-0.7**
	comp=N,1.0nm,0.6s,baz=316,slow=6.0,SNR=2.5						

*ISK **16** 18:30:03.2,34.°97N×26.°74E,h17km,ML3.5/16*
*IDC **16** 18:30:04.7±3.1,35.°04N×26.°76E,h28km±27km,mb3.7/6,*
mb1 3.7/9,mb1mx3.3/53,mbtmp3.7/9,ML3.6/3, Error
ellipse: s-maj=26.3km s-min=21.2km az=10.0
*THE **16** 18:30:04.5,35.°02N×26.°68E,h11km±3km,ML3.4/4, Error*
ellipse: s-maj=4.2km s-min=1.0km az=341.0
*ATH **16** 18:30:05.4,35.°10N×26.°68E,h16km±2km,ML3.4/6, Error*
ellipse: s-maj=4.3km s-min=1.3km az=157.0

ISC 16 18:30:02.2±1.3,**34.°97N**±0.°05×**26.°75E**±0.°03,**h14**km±9km,
n63,σ1°**30**/76,**mb3.8**/6,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.47**	**289**	P	**Pb**	**18 30 12.4**	**+0.4**
ZKR				S	**Sb**	**18 30 19.1**	**+0.3**
ZKR				AML	AML	18 30 20.1	
	comp=N,10891μm,0.4s						
ZKR				AML	AML	18 30 20.4	
	comp=E,19950μm,0.2s						
ZKR	**Zakros**	**0.47**	**289**	P	**Pb**	**18 30 12.5**	**+0.4**
ZKR				S	**Sb**	**18 30 19.2**	**+0.3**
	comp=E,8μm,0.3s						
ZKR	**Zakros**	**0.47**	**289**	PG	**Pb**	**18 30 12.7**	**+0.6**
ZKR				SG	**Sb**	**18 30 19.7**	**+0.8**
STIA	**Sitia Lasithi**	**0.59**	**294**	P	**Pg**	**18 30 13.7**	**-0.1**
STIA				S	**Sb**	**18 30 22.4**	**-0.1**
KARP	**Karpathos**	**0.67**	**30**	P	**Pb**	**18 30 16.7**	**+1.0**
KARP				S	**Sn**	**18 30 26.0**	**-1.5**
KARP				AML	AML	18 30 27.7	
	comp=E,19713μm,0.5s						
KARP				AML	AML	18 30 27.9	
	comp=N,20082μm,0.4s						
KARP	**Karpathos**	**0.67**	**30**	P	**Pb**	**18 30 16.6**	**+1.0**
KARP				S	**Sn**	**18 30 27.2**	**-0.3**
	comp=N,10μm,0.5s						
KARP	**Karpathos**	**0.67**	**30**	PG	**Pb**	**18 30 16.6**	**+1.0**
KARP				SG	**Sn**	**18 30 26.9**	**-0.6**
FRMA	**Ierapetra Chan**	**0.84**	**274**	P	**Pg**	**18 30 17.2**	**-1.2**
FRMA				S	**Sg**	**18 30 27.5**	**-2.0**
	comp=N,965nm,0.4s						
NPS	**Neapolis**	**0.98**	**288**	P	**Pn**	**18 30 22.1**	**+0.5**
NPS				S	**Sg**	**18 30 34.0**	**0.0**
NPS				AML	AML	18 30 42.5	
	comp=E,7228μm,0.5s						
NPS				AML	AML	18 30 42.8	
	comp=N,6176μm,0.5s						
NPS	**Neapolis**	**0.98**	**288**	P	**Pn**	**18 30 22.0**	**+0.5**
NPS				S	**Sg**	**18 30 33.8**	**-0.2**
	comp=N,3μm,0.5s						
**I

ZKR					AML	AML	18 37 14.2	
	comp=E,23057μm,0.7s							
ZKR					AML	AML	18 37 14.9	
	comp=N,6222μm,0.3s							
ZKR	**Zakros**	**0.54**	**283**	P	**Pb**		**18 37 05.2**	**0.0**
ZKR				S	**Sb**		**18 37 13.2**	**+0.5**
	comp=N,7μm,0.5s							
ZKR	**Zakros**	**0.54**	**283**	PG	**Pb**		**18 37 04.9**	**-0.4**
ZKR				SG	**Sb**		**18 37 13.5**	**+0.8**
KARP	**Karpathos**	**0.61**	**24**	P	**Pb**		**18 37 05.7**	**-0.7**
KARP				S	**Sb**		**18 37 14.0**	**-0.5**
KARP				AML	AML		18 37 15.2	
	comp=E,7879μm,0.4s							
KARP				AML	AML		18 37 15.2	
	comp=N,10215μm,0.5s							
KARP	**Karpathos**	**0.61**	**24**	P	**Pb**		**18 37 05.7**	**-0.7**
KARP				S	**Sb**		**18 37 14.2**	**-0.3**
	comp=N,5μm,0.4s							
KARP	**Karpathos**	**0.61**	**24**	PG	**Pb**		**18 37 05.3**	**-1.1**
KARP				SG	**Sb**		**18 37 14.0**	**-0.5**
STIA	**Sitia Lasithi**	**0.67**	**289**	P	**Pb**		**18 37 06.4**	**-0.9**
STIA				S	**Sb**		**18 37 16.3**	**+0.1**
FRMA	**Ierapetra Chan**	**0.93**	**272**	P	**Pb**		**18 37 10.3**	**-1.4**
FRMA				S	**Sb**		**18 37 23.0**	**-0.6**
	comp=N,800nm,0.5s							
NPS	**Neapolis**	**1.06**	**285**	P	**Pn**		**18 37 14.7**	**+0.9**
NPS				AML	AML		18 37 33.4	
	comp=E,4311μm,0.5s							
NPS				AML	AML		18 37 35.1	
	comp=N,3455μm,0.7s							
NPS	**Neapolis**	**1.06**	**285**	P	**Pn**		**18 37 14.7**	**+0.9**
NPS				S	**Sn**		**18 37 28.8**	**+1.0**
	comp=N,2μm,0.5s							
KSTL	**Kastelli Herak**	**1.50**	**282**	P	**Pn**		**18 37 19.1**	**-0.7**
KSTL				S	**Sn**		**18 37 35.7**	**-2.9**
ARG	**Arkhangelos**	**1.60**	**40**	P	**Pb**		**18 37 23.6**	**+0.4**
ARG				AML	AML		18 37 51.0	
	comp=N,746μm,0.6s							
ARG				AML	AML		18 37 51.1	
	comp=E,875μm,0.4s							
ARG	**Arkhangelos**	**1.60**	**40**	P	**Pb**		**18 37 23.6**	**+0.4**
ARG				S	**Sb**		**18 37 44.1**	**+1.1**
	comp=E,392nm,0.6s							
ARG	**Arkhangelos**	**1.60**	**40**	PN	**Pn**		**18 37 21.6**	**+0.4**
NIS1	**Nisyros Isl.**	**1.63**	**9**	PN	**Pn**		**18 37 22.6**	**+1.0**
IDI	**Anoyia**	**1.64**	**281**	Pg	**Pb**		**18 37 25.7**	**+1.7**
	comp=E,13nm,0.3s,baz=103,slow=17,SNR=7.3							
IDI				Lg	Lg		18 37 49.0	
	comp=E,30nm,0.3s,baz=350,slow=18,SNR=8.6							
IDI	**Anoyia**	**1.64**	**281**	P	**Pb**		**18 37 25.1**	**+1.1**
IDI				AML	AML		18 37 50.7	
	comp=N,786μm,0.7s							
IDI				AML	AML		18 37 59.4	
	comp=E,638μm,0.5s							
IDI	**Anoyia**	**1.64**	**281**	P	**Pb**		**18 37 23.8**	**-0.3**
IDI				S	**Sb**		**18 37 44.1**	**-0.2**
	comp=E,365nm,0.6s							
IDI	**Anoyia**	**1.64**	**281**	PN	**Pb**		**18 37 23.7**	**-0.3**
SIVA	**Sivas**	**1.68**	**271**	AML	AML		18 38 01.1	
	comp=N,1769μm,0.6s							
SIVA				AML	AML		18 38 12.0	
	comp=E,1906μm,0.8s							
KOSK	**Kos Island**	**1.76**	**3**	PN	**Pb**		**18 37 24.9**	**-1.0**
SANT	**Santorini**	**1.79**	**321**	P	**Pb**		**18 37 25.8**	**-0.7**
SANT				AML	AML		18 37 58.2	
	comp=E,843μm,0.5s							
SANT				AML	AML		18 37 58.4	
	comp=N,507μm,0.8s							
SANT	**Santorini**	**1.79**	**321**	P	**Pn**		**18 37 25.0**	**+1.2**
SANT	**Santorini**	**1.79**	**321**	PN	**Pn**		**18 37 25.1**	**+1.2**
THR9	**Santorini-Faro**	**1.83**	**318**	P	**Pb**		**18 37 26.4**	**-0.7**
THR9	**Santorini-Faro**	**1.83**	**318**	P	**Pn**		**18 37 25.9**	**+1.5**
SNT5	**Nea Kammeni, S**	**1.85**	**320**	P	**Pn**		**18 37 26.1**	**+1.5**
THT2	**Imerovigli**	**1.86**	**321**	PN	**Pn**		**18 37 25.8**	**+1.1**
TURN	**Turunc**	**2.10**	**32**	PN	**Pn**		**18 37 29.1**	**+1.0**
GVDS	**Gavdos**	**2.28**	**267**	PN	**Pb**		**18 37 33.1**	**-1.8**
GVD	**Gavdhos**	**2.28**	**267**	PN	**Pn**		**18 37 32.9**	**+2.3**
DALY	**Dalyan (Mula)**	**2.33**	**38**	PN	**Pn**		**18 37 32.5**	**+1.3**
APE	**Apeiranthos**	**2.34**	**333**	PN	**Pn**		**18 37 32.6**	**+1.2**
IMMV	**Iera Moni Meta**	**2.40**	**282**	PN	**Pn**		**18 37 34.5**	**+2.2**
YER	**Yerkesik**	**2.43**	**28**	PN	**Pn**		**18 37 33.9**	**+1.2**
FETY	**Fethiye**	**2.44**	**47**	PN	**Pn**		**18 37 33.1**	**+0.3**
AKAS	**Kas**	**2.56**	**60**	PN	**Pn**		**18 37 34.6**	**+0.1**
KNDR	**Palaiochora Ch**	**2.61**	**276**	PN	**Pb**		**18 37 38.1**	**-2.4**
ELL	**Elmali**	**3.03**	**54**	PN	**Pn**		**18 37 42.5**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**3.06**	**15**	PN	**Pn**		**18 37 42.8**	**+1.4**
KTHA	**Kythira Island**	**3.34**	**293**	PN	**Pn**		**18 37 47.3**	**+2.1**
URLA	**Izmir**	**3.37**	**356**	PN	**Pn**		**18 37 47.0**	**+1.5**
CHOS	**Chios island**	**3.45**	**349**	PN	**Pn**		**18 37 48.1**	**+1.4**
ESDC	**Sonseca Array**	**24.88**	**290**	P	**P**		**18 42 14.3**	**-1.1**
	comp=N,0.8nm,0.6s,baz=83,slow=10,SNR=6.4							
TORD	**Torodi Ar. Bea**	**31.47**	**233**	P	**P**		**18 43 15.1**	**+0.8**
	comp=N,0.9nm,0.6s,baz=36,slow=9.3,SNR=5.0							
MKAR	**Makanchi Array**	**42.70**	**57**	P	**P**		**18 44 50.5**	**+1.1**
	comp=N,0.8nm,0.7s,baz=270,slow=7.8,SNR=9.3							
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**		**18 45 00.5**	**-0.2**
	comp=N,1.2nm,0.4s,baz=263,slow=8.4,SNR=6.6							
YKA	**Yellowknife Ar**	**78.03**	**343**	P	**P**		**18 48 49.3**	**-1.2**
	comp=N,0.1nm,0.5s,baz=35,slow=5.5,SNR=2.3							

*IDC **16** 18:43:16.0±2.9, 35.°04N×26.°70E, h31km±23km, mb3.4/6, mb1 3.4/7, mb1mx3.1/50, mbtmp3.4/7, ML3.3/1, Error ellipse: s-maj=32.1km s-min=18.1km az=176.0*

ISC 16 18:43:15.7±0.9, 35.°1N±0.°2×26.°71E±0.°08, h29km, n8, σ0°53/9, mb3.5/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.50**	**278**	Pg	**Pb**	**18 43 43.1**	**+0.1**
	6.1nm,0.3s,baz=102,slow=16,SNR=4.0						
IDI				Lg	Lg	18 44 05.5	
	29nm,0.3s,baz=354,slow=20,SNR=9.4						
MMAI	**Mount Meron Ar**	**7.50**	**104**	Pn	**Pn**	**18 45 02.9**	**-0.4**
	0.5nm,0.3s,baz=304,slow=10,SNR=2.0						
MMAI				Sn	**Sn**	**18 46 27.3**	**-0.1**
	1.0nm,0.3s,baz=265,slow=4.7,SNR=2.0						
ESDC	**Sonseca Array**	**24.73**	**290**	P	**P**	**18 48 33.9**	**-0.7**
	0.3nm,0.5s,baz=93,slow=9.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**31.44**	**232**	P	**P**	**18 49 35.0**	**+0.3**
	0.3nm,0.4s,baz=52,slow=9.3,SNR=2.4						
KURBB	**Kurchatov Arra**	**40.17**	**51**	P	**P**	**18 50 49.6**	**+0.5**
	0.5nm,0.6s,baz=277,slow=8.5,SNR=5.5						
MKAR	**Makanchi Array**	**42.75**	**57**	P	**P**	**18 51 11.2**	**+0.8**
	0.1nm,0.3s,baz=268,slow=8.4,SNR=6.6						
ZALV	**Zalesovo Beam**	**44.13**	**46**	P	**P**	**18 51 21.2**	**-0.1**
	0.5nm,0.5s,baz=265,slow=10.0,SNR=2.5						
YKA	**Yellowknife Ar**	**77.89**	**343**	P	**P**	**18 55 10.2**	**-0.1**
	0.0nm,0.3s,baz=32,slow=3.6,SNR=4.0						

*IDC **16** 18:44:12.3±1.4, 34.°90N×26.°98E, h0km, mb3.7/4, mb1 3.6/5, mb1mx3.2/49, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=39.4km s-min=13.3km az=180.0*

ISC 16 18:44:15.6±1.1, 34.°9N±0.°2×27.°0E±0.°1, h23km, n6, σ0°34/6, mb3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.73**	**283**	Pg	**Pn**	**18 44 44.4**	**0.0**
	12nm,0.3s,baz=115,slow=14,SNR=1.7						
IDI				Lg	Lg	18 45 08.2	
	23nm,0.3s,baz=349,slow=13,SNR=3.1						
MMAI	**Mount Meron Ar**	**7.27**	**103**	Pn	**Pn**	**18 46 00.4**	**-0.1**
	0.6nm,0.3s,baz=288,slow=10,SNR=2.2						
TORD	**Torodi Ar. Bea**	**31.49**	**233**	P	**P**	**18 50 35.7**	**0.0**
	0.5nm,0.6s,baz=35,slow=9.3,SNR=2.6						
KURBB	**Kurchatov Arra**	**40.13**	**51**	P	**P**	**18 51 49.8**	**+0.3**
	0.4nm,0.3s,baz=277,slow=8.9,SNR=7.5						
MKAR	**Makanchi Array**	**42.68**	**56**	P	**P**	**18 52 10.8**	**+0.3**
	0.6nm,0.7s,baz=269,slow=8.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**	**18 52 21.4**	**-0.5**
	1.0nm,0.4s,baz=260,slow=8.5,SNR=5.4						

*IDC **16** 18:46:02.2±1.2, 35.°40N×27.°09E, h0km, mb3.8/8, mb1 3.8/10, mb1mx3.4/50, mbtmp3.7/10, ML3.4/2, MS1.9/1, Ms1 1.9/1, ms1mx1.9/71, Error ellipse: s-maj=35.8km s-min=12.8km az=175.0*

ISC 16 18:46:02.5±0.9, 35.°3N±0.°2×27.°07E±0.°08, h10km, n13, σ1°31/12, mb3.7/8, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.78**	**271**	Pg	**Pb**	**18 46 35.5**	**+0.3**
	9.0nm,0.3s,baz=287,slow=8.9,SNR=1.5						
IDI				Lg	Lg	18 47 00.5	
	16nm,0.3s,baz=269,slow=21,SNR=1.9						
MMAI	**Mount Meron Ar**	**7.27**	**106**	Pn	**Pn**	**18 47 48.4**	**-0.5**
	0.6nm,0.3s,baz=293,slow=11,SNR=5.9						
MMAI				Sn	**Sn**	**18 49 10.2**	**-1.3**
	2.3nm,0.3s,baz=298,slow=25,SNR=7.4						
EIL	**Elat**	**8.69**	**128**	Pn	**Pn**	**18 48 08.2**	**-0.1**
	0.5nm,0.3s,baz=243,slow=4.5,SNR=1.7						
EIL				Sn	Sn	18 49 38.4	-7.9
	0.9nm,0.3s,baz=4.9,slow=12,SNR=4.3						
ASF	**Jabal al Asfar**	**8.75**	**108**	LR	LR	18 52 50.2	
	comp=Z,6.6nm,18.8s,baz=70,slow=46						
ARCES	**ARCESS Array B**	**34.34**	**359**	P	**P**	**18 52 47.4**	**-1.6**
	1.2nm,0.8s,baz=178,slow=8.1,SNR=4.0						
AAK	**Ala-Archa**	**37.21**	**64**	P	**P**	**18 53 16.0**	**+1.8**
	0.4nm,0.3s,baz=207,slow=9.0,SNR=2.4						
KURBB	**Kurchatov Arra**	**39.84**	**51**	P	**P**	**18 53 37.5**	**+1.6**
	1.1nm,0.5s,baz=276,slow=8.7,SNR=3.5						
MKAR	**Makanchi Array**	**42.41**	**57**	P	**P**	**18 53 58.6**	**+1.4**
	0.7nm,0.4s,baz=269,slow=8.9,SNR=9.1						
ZALV	**Zalesovo Beam**	**43.81**	**46**	P	**P**	**18 54 08.5**	**+0.2**
	1.1nm,0.4s,baz=266,slow=8.7,SNR=6.1						
SONM	**Songino Array**	**58.21**	**51**	P	**P**	**18 55 58.3**	**+1.4**
	0.2nm,0.4s,baz=278,slow=6.7,SNR=2.2						
USRK	**Ussuriysk Ar.**	**75.66**	**46**	P	**P**	**18 57 47.9**	**+0.1**
	1.9nm,1.0s,baz=274,slow=5.7,SNR=2.0						
YKA	**Yellowknife Ar**	**77.82**	**343**	P	**P**	**18 57 58.5**	**-1.2**
	0.2nm,0.7s,baz=30,slow=5.2,SNR=3.0						
MDP	**Montagnes des**	**78.67**	**268**	LR	LR	19 33 19.5	
	comp=Z,316nm,19.5s,baz=150,slow=36						

*HLW **16** 18:50:15.9, 35.°35N×26.°98E, h10km±25km, Ml4.3*
*NEIC **16** 18:50:18.3±2.0, 34.°89N±0.°10×26.°76E±0.°06, h10km±1km, mb4.2/36, ML4.1(THE), Error ellipse: s-maj=16.4km s-min=8.5km az=183.0*
*NIC **16** 18:50:19.7±0.0, 34.°95N×26.°84E, h17km±2km, Ml4.8/5*
*ISK **16** 18:50:21.5, 35.°12N×26.°77E, h18km, ML4.1/21*
*THE **16** 18:50:22.8, 35.°18N×26.°69E, h0km±1km, ML4.1/5, Error ellipse: s-maj=5.2km s-min=0.9km az=156.0*
*IDC **16** 18:50:22.1±2.0, 35.°20N×26.°67E, h33km±15km, mb3.9/28, mb1 4.0/37, mb1mx3.9/60, mbtmp4.1/37, ML3.7/9, MS4.4/1, Ms1 4.4/1, ms1mx3.4/72, Error ellipse: s-maj=17.5km s-min=9.7km az=163.0*
*ATH **16** 18:50:22.7, 35.°17N×26.°71E, h34km±4km, ML4.3/6, Error ellipse: s-maj=5.4km s-min=1.5km az=153.0*

ISC 16 18:50:21.1±1.0, 35.°02N±0.°03×26.°76E±0.°02, h31km±7km, n257, σ1°39/274, mb4.2/40, 13C-15D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.46**	**282**	P	**Pb**	**18 50 30.9**	**0.0**
ZKR				S	**Sn**	**18 50 38.3**	**-0.3**
ZKR				AML	AML	18 50 40.1	
ZKR				AML	AML	18 50 40.3	
	comp=N,39944μm,0.6s						
ZKR	**Zakros**	**0.46**	**282**	P	**Pb**	**18 50 30.8**	**-0.1**
ZKR				S	**Sn**	**18 50 38.3**	**-0.3**
	comp=N,37μm,0.6s						
ZKR	**Zakros**	**0.46**	**282**	PG	**Pb**	**18 50 30.9**	**0.0**
ZKR				SG	**Sn**	**18 50 38.4**	**-0.3**
ZKR	**Zakros**	**0.46**	**282**	P	**Pb**	**18 50 30.8**	**-0.1**
ZKR				S	**Sn**	**18 50 38.2**	**-0.3**
ZKR				AML	AML	18 50 38.9	
	comp=N,101nm,0.6s						
ZKR				AML	AML	18 50 38.9	
	comp=N,101nm,0.6s						
STIA	**Sitia Lasithi**	**0.58**	**288**	P	**Pb**	**18 50 31.8**	**-1.1**
STIA				S	**Sb**	**18 50 41.2**	**+0.2**
KARP	**Karpathos**	**0.62**	**32**	P	**Pb**	**18 50 32.8**	**-0.7**
KARP				S	**Sn**	**18 50 42.3**	**-0.3**
KARP				AML	AML	18 50 42.7	
KARP				AML	AML	18 50 43.4	
KARP	**Karpathos**	**0.62**	**32**	P	**Pb**	**18 50 32.8**	**-0.7**
KARP				S	**Sn**	**18 50 42.1**	**-0.5**
	comp=N,96μm,0.4s						
KARP	**Karpathos**	**0.62**	**32**	PG	**Pb**	**18 50 32.8**	**-0.7**
KARP				SG	**Sb**	**18 50 40.6**	**-1.4**
KARP	**Karpathos**	**0.62**	**32**	Pg	**Pb**	**18 50 32.8**	**-0.7**
KARP	**Karpathos**	**0.62**	**32**	P	**Pb**	**18 50 32.6**	**-0.9**
KARP				S	**Sn**	**18 50 42.1**	**-0.5**
KARP				AML	AML	18 50 42.4	
	comp=N,189nm,0.5s						
KARP				AML	AML	18 50 42.4	
	comp=N,189nm,0.5s						
KARP				AML	AML	18 50 43.0	
	comp=N,190nm,0.4s						
KARP				AML	AML	18 50 43.0	
	comp=N,190nm,0.4s						
FRMA	**Ierapetra Chan**	**0.85**	**270**	P	**Pn**	**18 50 35.7**	**-1.1**
FRMA				S	**Sn**	**18 50 47.2**	**-0.9**
	comp=N,5μm,0.5s						
NPS	**Neapolis**	**0.97**	**285**	P	**Pb**	**18 50 40.3**	**+0.8**
NPS				S	**Sb**	**18 50 51.9**	**-0.1**
NPS				AML	AML	18 50 59.3	
	comp=N,31333μm,0.6s						
NPS				AML	AML	18 51 01.8	
	comp=E,39931μm,0.7s						
NPS	**Neapolis**	**0.97**	**285**	P	**Pb**	**18 50 40.1**	**+0.6**
NPS				S	**Sb**	**18 50 53.2**	**+1.2**
	comp=E,18μm,0.7s						
IACM	**Heraklion**	**1.42**	**282**	P	**Pb**	**18 50 48.1**	**+1.2**
IACM				AML	AML	18 51 18.3	
	comp=E,64456μm,1.4s						
IACM				AML	AML	18 51 33.0	
	comp=N,46823μm,1.0s						
KSTL	**Kastelli Herak**	**1.42**	**282**	P	**Pn**	**18 50 44.8**	**+0.1**
KSTL				S	**Sn**	**18 51 00.3**	**-1.9**
IDI	**Anoyia**	**1.56**	**280**	Pg	**Pb**	**18 50 50.0**	**+0.6**
	comp=N,95nm,0.3s,baz=106,slow=15,SNR=44						
IDI				Lg	Lg	18 51 11.3	
	comp=N,108nm,0.3s,baz=310,slow=18,SNR=8.8						
IDI	**Anoyia**	**1.56**	**280**	P	**Pb**	**18 50 50.6**	**+1.2**
IDI				AML	AML	18 51 18.7	
	comp=E,5297μm,0.5s						
IDI				AML	AML	18 51 20.6	
	comp=N,5209μm,0.5s						
IDI	**Anoyia**	**1.56**	**280**	P	**Pb**	**18 50 50.6**	**+1.2**
IDI	**Anoyia**	**1.56**	**280**	Pg	**Pb**	**18 50 51.2**	**+1.9**
IDI	**Anoyia**	**1.56**	**280**	PN	**Pb**	**18 50 49.6**	**+0.2**
IDI	**Anoyia**	**1.56**	**280**	Pn	**Pb**	**18 50 49.4**	**0.0**
SIVA	**Sivas**	**1.60**	**270**	P	**Pb**	**18 50 51.6**	**+1.5**
SIVA	**Sivas**	**1.60**	**270**	P	**Pb**	**18 50 51.1**	**+1.0**
NIS1	**Nisyros Isl.**	**1.61**	**12**	P	**Pb**	**18 50 49.2**	**-1.0**
NIS1	**Nisyros Isl.**	**1.61**	**12**	P	**Pb**	**18 50 49.1**	**-1.2**
NIS1	**Nisyros Isl.**	**1.61**	**12**	PN	**Pb**	**18 50 49.1**	**-1.2**
ARG	**Arkhangelos**	**1.63**	**43**	P	**Pb**	**18 50 50.6**	**+0.1**
ARG				AML	AML	18 51 20.6	
	comp=E,10594μm,0.7s						
ARG				AML	AML	18 51 20.6	
	comp=N,8868μm,0.7s						
ARG	**Arkhangelos**	**1.63**	**43**	P	**Pb**	**18 50 50.3**	**-0.2**
ARG				S	**Sb**	**18 51 12.7**	**+2.0**
	comp=N,5μm,0.7s						
ARG	**Arkhangelos**	**1.63**	**43**	PN	**Pb**	**18 50 49.6**	**-0.9**
ARG	**Arkhangelos**	**1.63**	**43**	Pn	**Pb**	**18 50 49.3**	**-1.2**
SANT	**Santorini**	**1.71**	**322**	P	**Pb**	**18 50 50.6**	**-1.4**
SANT	**Santorini**	**1.71**	**322**	PN	**Pb**	**18 50 50.4**	**-1.6**
SANT	**Santorini**	**1.71**	**322**		**Pn**	**18 50 50.2**	**+1.4**
THR8	**Santorini-Mono**	**1.73**	**323**	P	**Pb**	**18 50 51.0**	**-1.3**
KOSK	**Kos Island**	**1.74**	**6**	PN	**Pn**	**18 50 50.5**	**+1.4**
THR6	**Thira Island,**	**1.74**	**321**	P	**Pb**	**18 50 51.2**	**-1.1**
THR9	**Santorini-Faro**	**1.76**	**320**	P	**Pb**	**18 50 51.2**	**-1.5**
THR9	**Santorini-Faro**	**1.76**	**320**	P	**Pb**	**18 50 51.2**	**-1.5**
SNT1	**Gialos, Santor**	**1.77**	**322**	P	**Pb**	**18 50 51.2**	**-1.7**
THR7	**Fira-Santorini**	**1.77**	**323**	P	**Pb**	**18 50 51.7**	**-1.2**
SNT5	**Nea Kammeni, S**	**1.77**	**321**	P	**Pb**	**18 50 51.7**	**-1.2**
SNT5	**Nea Kammeni, S**	**1.77**	**321**	P	**Pb**	**18 50 51.5**	**-1.5**
THR3	**Thira Island,**	**1.77**	**322**	P	**Pb**	**18 50 51.6**	**-1.4**
THT2	**Imerovigli**	**1.78**	**323**	P	**Pb**	**18 50 51.7**	**-1.5**
THT2	**Imerovigli**	**1.78**	**323**	PN	**Pn**	**18 50 51.3**	**+1.5**
THR5	**Thira Island,**	**1.81**	**321**	P	**Pb**	**18 50 52.3**	**-1.2**
SAP3	**Santorini-Thir**	**1.82**	**321**	P	**Pb**	**18 50 52.7**	**-1.1**
SAP4	**Santorini-Oia**	**1.84**	**322**	P	**Pb**	**18 50 52.4**	**-1.4**
BODT	**Bodrum**	**2.08**	**12**	PN	**Pn**	**18 50 54.6**	**+0.7**
TURN	**Turunc**	**2.12**	**34**	PN	**Pn**	**18 50 56.0**	**+1.6**
VAM	**Vamos**	**2.13**	**281**	P	**Pb**	**18 50 58.7**	**-0.4**
YKAV	**Yalikavak-Bodr**	**2.14**	**11**	PN	**Pn**	**18 50 56.2**	**+1.6**
GVDS	**Gavdos**	**2.20**	**266**	P	**Pb**	**18 50 59.7**	**-0.6**
GVDS	**Gavdos**	**2.20**	**266**	PN	**Pb**	**18 50 59.3**	**-1.0**
GVD	**Gavdhos**	**2.21**	**266**	P	**Pb**	**18 50 59.9**	**-0.5**
GVD	**Gavdhos**	**2.21**	**266**	P	**Pn**	**18 50 59.4**	**-0.9**
GVD	**Gavdhos**	**2.21**	**266**	PN	**Pb**	**18 50 59.0**	**-1.3**
APE	**Apeiranthos**	**2.27**	**334**	P	**Pn**	**18 50 58.0**	**+1.5**
APE	**Apeiranthos**	**2.27**	**334**	⇓P	**Pn**	**18 50 58.0**	**+1.5**
APE	**Apeiranthos**	**2.27**	**334**	PN	**Pn**	**18 50 57.8**	**+1.3**
APE	**Apeiranthos**	**2.27**	**334**	⇑P	**Pn**	**18 50 58.2**	**+1.6**
IMMV	**Iera Moni Meta**	**2.32**	**282**	P	**Pb**	**18 51 00.9**	**-1.4**
IMMV	**Iera Moni Meta**	**2.32**	**282**	PN	**Pb**	**18 50 59.8**	**-2.4**
DALY	**Dalyan (Mula)**	**2.36**	**40**	PN	**Pn**	**18 50 59.5**	**+1.9**
YER	**Yerkesik**	**2.44**	**30**	PN	**Pn**	**18 51 00.6**	**+1.8**
FETY	**Fethiye**	**2.48**	**49**	PN	**Pn**	**18 50 59.7**	**+0.4**
KNDR	**Palaiochora Ch**	**2.53**	**276**	PN	**Pb**	**18 51 03.2**	**-2.6**
KSL	**Kastellorizon**	**2.56**	**63**	⇑P	**Pn**	**18 51 01.2**	**+0.9**
KSL				S	**Sn**	**18 51 31.8**	**+1.3**
AKAS	**Kas**	**2.61**	**62**	PN	**Pn**	**18 51 01.9**	**+0.6**
AKAS	**Kas**	**2.61**	**62**		**Pn**	**18 51 01.9**	**+0.6**
ANKY	**Antikythira Is**	**2.95**	**288**	P	**Pb**	**18 51 11.1**	**-1.9**
ANKY	**Antikythira Is**	**2.95**	**288**	P	**Pn**	**18 51 08.2**	**+2.4**
AYDB	**Zeytinkoy-Aydi**	**3.06**	**17**	PN	**Pn**	**18 51 09.2**	**+1.8**
ELL	**Elmali**	**3.08**	**55**	PN	**Pn**	**18 51 09.9**	**+2.2**
ELL	**Elmali**	**3.08**	**55**		**Pn**	**18 51 09.6**	**+1.9**
KTHA	**Kythira Island**	**3.26**	**293**	PN	**Pn**	**18 51 12.3**	**+2.3**
URLA	**Izmir**	**3.33**	**358**	PN	**Pn**	**18 51 12.2**	**+1.1**
CHOS	**Chios island**	**3.41**	**351**	P	**Pn**	**18 51 13.6**	**+1.5**
CHOS	**Chios island**	**3.41**	**351**	PN	**Pn**	**18 51 13.7**	**+1.6**
KEMT	**Kemer-ANTALYA**	**3.46**	**62**	PN	**Pn**	**18 51 15.1**	**+2.3**
KORT	**Korkueli**	**3.52**	**55**	PN	**Pn**	**18 51 16.3**	**+2.6**
ANTB	**Antalya**	**3.67**	**58**	PN	**Pn**	**18 51 18.4**	**+2.8**
MANT	**Manisa**	**3.75**	**22**		**Pn**	**18 51 18.2**	**+1.3**
KULA	**Kula-Manisa**	**3.80**	**23**	PN	**Pn**	**18 51 19.6**	**+2.0**
OSC1	**CSNet OBS 1**	**4.03**	**111**	P	**Pn**	**18 51 19.9**	**-0.8**
DKL	**Ikili**	**4.04**	**2**	PN	**Pn**	**18 51 23.0**	**+2.2**
ISP	**Isparta**	**4.12**	**46**		**Pn**	**18 51 22.9**	**+1.0**
ITM	**Ithomi**	**4.47**	**300**	PN	**Pn**	**18 51 29.7**	**+3.0**
ITM	**Ithomi**	**4.47**	**300**	Pn	**Pn**	**18 51 28.9**	**+2.2**
AKMS	**Akamas**	**4.57**	**88**	P	**Pn**	**18 51 28.2**	**+0.1**
AKMS				AML	AML	18 52 20.9	
	comp=N,4.0nm,0.4s						
AKMS				AML	AML	18 52 21.5	
	comp=N,4.8nm,0.4s						
NATA	**Nata**	**4.78**	**91**	P	**Pn**	**18 51 31.2**	**+0.3**
ALFC	**Alefka**	**4.79**	**87**	P	**Pn**	**18 51 30.6**	**-0.4**
SZAC	**Souni**	**5.04**	**91**	⇑P	**Pn**	**18 51 34.5**	**+0.1**
SZAC				AML	AML	18 52 33.7	
	comp=N,3.2nm,0.4s						
SZAC				AML	AML	18 52 34.3	
	comp=N,3.2nm,0.7s						
ASGA	**Asgata**	**5.33**	**91**	P	**Pn**	**18 51 38.3**	**-0.2**
AGG	**Agios Georgios**	**5.34**	**320**	Pn	**Pn**	**18 51 41.3**	**+2.6**
CSS	**Mathiatis**	**5.39**	**89**	Pn	**Pn**	**18 51 39.4**	**+0.1**
CSS	**Mathiatis**	**5.39**	**89**	⇑P	**Pn**	**18 51 39.1**	**-0.2**
CSS				AML	AML	18 52 41.2	
	comp=N,0.5nm,0.7s						
CSS				AML	AML	18 52 45.6	
	comp=N,0.5nm,0.6s						
MVOU	**Mavrovouni**	**5.64**	**88**	⇑P	**Pn**	**18 51 42.8**	**+0.1**
SWA2		**5.87**	**191**	S	**Sn**	**18 52 55.0**	**+2.9**
	baz=193						
ALN	**Alexandroupoli**	**5.89**	**355**	Pn	**Pn**	**18 51 48.0**	**+1.8**
PARAL	**Paralimni**	**5.97**	**88**	P	**Pn**	**18 51 48.7**	**+1.4**
LIT	**Litokhoron**	**6.10**	**327**		**Pn**	**18 51 52.0**	**+2.9**
MDUB	**Mudurnu**	**6.47**	**32**	Pn	**Pn**	**18 51 54.

GERES	**GERESS Array B**	**16.85**	**329**	Pn		**Pn**	**18 54 14.4**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=137,slow=14,SNR=25							
GERES				LR		LR	19 02 13.7	
	comp=Z,1μm,20.9s,baz=158,slow=43							
GERES	**GERESS Array B**	**16.85**	**329**			**Pn**	**18 54 14.2**	**-0.5**
SQTA	**Sankt Quirin**	**16.87**	**321**	*i* Pn		**P**	**18 54 17.8**	**+1.2**
	comp=Z,3.6nm,0.5s							
FETA	**Feichten**	**16.99**	**320**	*i* Pn		**P**	**18 54 18.6**	**+0.5**
	comp=Z,5.0nm,0.7s,SNR=7.0							
MOTA	**Moosalm**	**17.00**	**321**	*i* Pn		**P**	**18 54 18.2**	**0.0**
	comp=Z,1.5nm,0.4s							
DPC	**Dobruska-Polom**	**17.11**	**337**	*e*P		**Pn**	**18 54 18.2**	**+0.5**
KHC	**Kasperske Hory**	**17.13**	**329**	*e*P		**Pn**	**18 54 18.1**	**+0.1**
KHC	**Kasperske Hory**	**17.13**	**329**			**P**	**18 54 18.9**	**-0.6**
KHC				IAmb		IAmb	18 54 20.4	
	comp=Z,30nm,1.9s							
RETA	**Reutte**	**17.27**	**321**	*i* Pn		**P**	**18 54 21.3**	**+0.2**
	comp=Z,4.0nm,0.5s,SNR=6.5							
DAVOX	**Davos/Dischmat**	**17.30**	**318**	P		**Pn**	**18 54 20.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=162,slow=20,SNR=1.5							
TUE	**Stuetta**	**17.42**	**316**			**P**	**18 54 22.7**	**-0.2**
TUE				IAmb		IAmb	18 54 28.9	
	comp=Z,14nm,1.3s							
PRU	**Pruhonice**	**17.43**	**333**	*e*P		**Pn**	**18 54 21.3**	**-0.4**
DAVA	**Damuels**	**17.61**	**319**	*i* Pn		**P**	**18 54 25.1**	**+0.1**
	comp=Z,4.9nm,0.4s,SNR=6.9							
BNI	**Bardonecchia**	**18.31**	**309**			**Pn**	**18 54 34.0**	**+1.3**
BRG	**Berggiesshubel**	**18.37**	**334**	*e*P		**P**	**18 54 30.4**	**-2.7**
BRG				Amp			18 54 32.1	
	comp=Z,1.3nm,0.8s							
BRG				*ex*		x	18 54 33.0	
BRG				Amp			18 54 34.5	
	comp=Z,5.4nm,0.8s							
SENIN	**Lac Senin/Sane**	**18.55**	**314**	P		**P**	**18 54 35.2**	**-0.2**
SENIN				IAmb		IAmb	18 54 37.8	
	comp=Z,7.9nm,0.8s							
CLL	**Collm**	**19.07**	**333**	*e*P		**P**	**18 54 40.0**	**-0.8**
CLL				*i* Pmax			18 54 40.9	
	comp=Z,6.0nm,0.7s							
CLL	**Collm**	**19.07**	**333**	P		**Pn**	**18 54 41.7**	**0.0**
CLL				IAmb		IAmb	18 54 41.8	
	comp=Z,6.3nm,0.7s							
BFO	**Black Forest**	**19.08**	**320**	P		**Pn**	**18 54 41.5**	**-0.4**
ECH	**Echery**	**19.64**	**318**	P		**Pn**	**18 54 48.4**	**-0.2**
ECH				IAmb		IAmb	18 55 21.4	
	comp=Z,12nm,1.4s							
BTNL	**Ternell**	**21.60**	**322**	*d*P		**P**	**18 55 08.0**	**-0.2**
BTNL				*d*PnPn		**PnPn**	**18 55 28.1**	**-1.1**
MEM	**Membach**	**21.67**	**322**	*d*P		**P**	**18 55 08.9**	**0.0**
	comp=Z,8.2nm,0.8s							
BCLA	**Clavier**	**21.91**	**321**	*d*P		**P**	**18 55 11.7**	**+0.2**
	comp=Z,6.6nm,1.0s							
BCLA				*d*PnPn		**PnPn**	**18 55 33.2**	**-0.3**
BGES	**Gesves**	**22.01**	**321**	*d*P		**P**	**18 55 14.2**	**+1.6**
BGES				*d*PnPn		**PnPn**	**18 55 35.6**	**+0.8**
DOU	**Dourbes**	**22.10**	**320**	*d*P		**P**	**18 55 13.1**	**-0.4**
DOU				*d*PnPn		**PnPn**	**18 55 34.3**	**-1.7**
BELG	**Belogornoye**	**22.86**	**34**	P		**P**	**18 55 21.8**	**+0.2**
	comp=Z,4.3nm,0.3s,baz=51,slow=23,SNR=5.0							
ESBB	**Sonseca Array**	**24.80**	**290**	P		**P**	**18 55 40.3**	**0.0**
ESBB				IAmb		IAmb	18 55 58.0	
	comp=Z,9.3nm,1.3s							
ESDC	**Sonseca Array**	**24.80**	**290**	P		**P**	**18 55 40.4**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=82,slow=9.7,SNR=30							
ESDC	**Sonseca Array**	**24.80**	**290**	P		**P**	**18 55 40.7**	**+0.4**
GEYT	**Alibeck**	**25.32**	**74**	P		**P**	**18 55 45.0**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=258,slow=12,SNR=4.0							
MDT	**Midelt**	**26.07**	**274**	P		**P**	**18 55 51.1**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=280,slow=8.0,SNR=1.9							
FINES	**FINESS Array B**	**26.45**	**359**	P		**P**	**18 55 53.0**	**-1.9**
	comp=Z,2.6nm,0.7s,baz=169,slow=10,SNR=7.5							
HFS	**Hagfors**	**26.53**	**345**	P		**P**	**18 55 54.2**	**-1.4**
	comp=Z,2.3nm,0.7s,baz=134,slow=11,SNR=7.8							
PBRG	**Braganca**	**26.90**	**295**	*e*P		**P**	**18 56 00.2**	**+0.1**
MVO	**Moncorvo**	**27.18**	**293**	*e*P		**P**	**18 56 02.4**	**+0.6**
PBAR	**Barrancos**	**27.23**	**287**	*e*P		**P**	**18 56 02.6**	**+0.4**
AKTO	**Aktyubinsk**	**27.39**	**46**	P		**P**	**18 56 03.7**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=215,slow=12,SNR=6.5							
MTE	**Manteigas**	**27.56**	**291**	*e*P		**P**	**18 56 04.1**	**-1.1**
NOA	**NORSAR Array B**	**27.88**	**344**	P		**P**	**18 56 06.1**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=48,slow=14,SNR=2.2							
ABKAR	**Akbulak array**	**28.16**	**49**	P		**P**	**18 56 11.7**	**+1.4**
ABKAR				IAmb		IAmb	18 57 11.1	
	comp=Z,13nm,1.9s							
ABKAR	**Akbulak array**	**28.16**	**49**	P		**P**	**18 56 12.0**	**+1.6**
EKA	**Eskdalemuir Ar**	**28.92**	**324**	P		**P**	**18 56 15.4**	**-1.7**
	comp=Z,1.7nm,0.6s,baz=128,slow=11,SNR=12							
ARU	**Arti**	**30.40**	**35**	P		**P**	**18 56 28.8**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=262,slow=19,SNR=2.0							
TOA0	**Torodi Ar. Sit**	**31.43**	**232**	P		**P**	**18 56 41.4**	**+1.8**
TORD	**Torodi Ar. Bea**	**31.43**	**232**	P		**P**	**18 56 41.2**	**+1.6**
	comp=Z,1.8nm,0.4s,baz=32,slow=8.8,SNR=14							
ARCES	**ARCESS Array B**	**34.58**	**359**	P		**P**	**18 57 05.0**	**-1.5**
	comp=Z,2.2nm,0.7s,baz=164,slow=8.5,SNR=15							
KK31	**Karatay Array**	**34.59**	**63**	P		**P**	**18 57 07.8**	**+0.7**
KK31				IAmb		IAmb	18 57 27.7	
	comp=Z,3.5nm,1.1s							
KKAR	**Karatay Array**	**34.59**	**63**	P		**P**	**18 57 08.0**	**+0.9**
KKAR				IAmb		IAmb	18 57 27.7	
	comp=Z,3.5nm,1.1s							
BRVK	**Borovoye**	**35.44**	**46**	P		**P**	**18 57 15.4**	**+1.2**
BRVK				IAmb		IAmb	18 58 31.0	
	comp=Z,10nm,1.9s							
BVAR	**Borovoye Array**	**35.49**	**46**	P		**P**	**18 57 15.3**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=264,slow=10.0,SNR=5.2							
AAK	**Ala-Archa**	**37.54**	**64**	P		**P**	**18 57 33.4**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=196,slow=2.0,SNR=6.3							
AAK	**Ala-Archa**	**37.54**	**64**	P		**P**	**18 57 33.8**	**+1.4**
AAK				IAmb		IAmb	18 57 59.0	
	comp=Z,2.8nm,0.8s							
KURBB	**Kurchatov Arra**	**40.19**	**51**	P		**P**	**18 57 55.3**	**+1.0**
	comp=Z,1.6nm,0.3s,baz=277,slow=8.8,SNR=14							
KURK	**Kurchatov**	**40.25**	**51**	P		**P**	**18 57 55.3**	**+0.5**
DBIC	**Dimbokro**	**40.52**	**233**	P		**P**	**18 57 57.3**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=41,slow=7.6,SNR=1.9							
DBIC	**Dimbokro**	**40.52**	**233**	P		**P**	**18 57 57.4**	**-0.1**
MAKZ	**Makanchi**	**42.54**	**57**	P		**P**	**18 58 15.4**	**+1.7**
MAKZ				IAmb		IAmb	18 58 19.2	
	comp=Z,3.1nm,1.1s							
MK31	**Makanchi Array**	**42.75**	**57**	P		**P**	**18 58 17.1**	**+1.7**
MK31				IAmb		IAmb	18 58 17.9	
	comp=Z,6.6nm,1.4s							
MKAR	**Makanchi Array**	**42.75**	**57**	P		**P**	**18 58 17.1**	**+1.6**
	comp=Z,2.5nm,0.4s,baz=270,slow=8.1,SNR=83							
SPITS	**Spitsbergen Ar**	**43.49**	**357**	P		**P**	**18 58 19.6**	**-1.4**
	comp=Z,18nm,1.0s,baz=160,slow=17,SNR=2.4							
ZAA0	**Zalesovo Array**	**44.15**	**46**	P		**P**	**18 58 27.5**	**+1.0**
ZALV	**Zalesovo Beam**	**44.15**	**46**	P		**P**	**18 58 27.1**	**+0.6**
	comp=Z,6.4nm,0.4s,baz=266,slow=8.2,SNR=34							
ZALV	**Zalesovo Beam**	**44.15**	**46**	P		**P**	**18 58 27.4**	**+0.8**
WMQ	**Urumqi**	**46.94**	**60**	*e*P		**P**	**18 58 52.3**	**+3.5**
NRIK	**Noril'sk**	**47.45**	**25**	P		**P**	**18 58 52.2**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=243,slow=4.2,SNR=3.7							
NRIK	**Noril'sk**	**47.45**	**25**	IAmb		IAmb	18 59 03.3	
	comp=Z,3.5nm,1.0s							
SUMG	**Summit**	**49.58**	**339**	P		**P**	**18 59 08.8**	**-0.4**
SONM	**Songino Array**	**58.55**	**51**	P		**P**	**19 00 16.2**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=287,slow=7.3,SNR=12							
TIXI	**Tiksi**	**60.83**	**21**	P		**P**	**19 00 29.7**	**-0.1**
TIXI				IAmb		IAmb	19 00 30.4	
	comp=Z,2.3nm,0.8s							
HHC	**Hu-ho-hao-te**	**64.62**	**57**	*e*P		**P**	**19 00 56.8**	**+1.1**
HHC				pmax		pmax		
	comp=Z,6.0nm,1.1s							
HHC				pmax		pmax		
	comp=Z,2μm,5.2s							
CMAR	**Chiang Mai Arr**	**65.28**	**84**	P		**P**	**19 01 00.9**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=297,slow=8.4,SNR=7.1							
CMAR	**Chiang Mai Arr**	**65.28**	**84**	P		**P**	**19 01 01.1**	**+1.0**
XAN	**Xi'an**	**65.71**	**64**	P		**P**	**19 01 00.9**	**-1.9**
XAN				pmax		pmax		
	comp=Z,9.0nm,1.0s							
BATG	**Bathurst New B**	**66.99**	**312**	P		**P**	**19 01 12.5**	**+1.8**
C36M	**Paulatuk**	**73.75**	**350**	P		**P**	**19 01 51.6**	**0.0**
INK	**Inuvik**	**75.93**	**353**	P		**P**	**19 02 03.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=12,slow=3.8,SNR=5.4							
INK	**Inuvik**	**75.93**	**353**	IAmb		IAmb	19 04 33.7	
	comp=Z,4.9nm,1.1s							
USA0B	**Ussuriysk Arra**	**76.00**	**46**	P		**P**	**19 02 05.9**	**+0.8**
USRK	**Ussuriysk Ar.**	**76.00**	**46**	P		**P**	**19 02 05.2**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=291,slow=4.9,SNR=14							
USRK	**Ussuriysk Ar.**	**76.00**	**46**	P		**P**	**19 02 06.1**	**+1.0**
TOLK	**Toolik Lake Re**	**76.61**	**359**	P		**P**	**19 02 09.6**	**+1.4**
KSRS	**Korea Array**	**77.32**	**53**	P		**P**	**19 02 13.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=307,slow=4.3,SNR=6.5							
YKA	**Yellowknife Ar**	**77.98**	**343**	P		**P**	**19 02 15.8**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=36,slow=5.3,SNR=23							
ILAR	**Eielson Array**	**80.41**	**357**	P		**P**	**19 02 28.8**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=351,slow=2.9,SNR=5.6							
ILAR	**Eielson Array**	**80.41**	**357**	P		**P**	**19 02 28.9**	**-0.2**
ULM	**Lac du Bonnet**	**81.15**	**327**	P		**P**	**19 02 32.8**	**-0.6**
	comp=Z,2.5nm,0.5s,baz=46,slow=4.8,SNR=7.0							
ULM	**Lac du Bonnet**	**81.15**	**327**	P		**P**	**19 02 33.0**	**-0.3**

BJI ***16*** *18:52:32.3±0.0, 34.°92N×26.°36E, h23km, mB5.5/7, mb4.8/52, Ms5.3/6, Ms7 5.0/6*

NEIC ***16*** *18:52:35.1±2.1, 35.°11N±0.°05×26.°79E±0.°06, h10km±1km, mb4.8/129, ML4.7(THE), Error ellipse: s-maj=10.3km s-min=5.3km az=218.0*

HLW ***16*** *18:52:36.1, 35.°09N×27.°08E, h10km±12km, Ml4.9*

NIC ***16*** *18:52:36.1±0.0, 35.°01N×26.°94E, h14km±2km, Ml5.1/3*

PDG ***16*** *18:52:37.5±0.7, 35.°11N×26.°92E, h18km±2km, ML4.7/14, Error ellipse: s-maj=1.3km s-min=0.8km az=90.0*

ATH ***16*** *18:52:37.9, 35.°18N×26.°90E, h29km±5km, ML4.6/10, Error ellipse: s-maj=6.1km s-min=1.3km az=140.0*

ISK ***16*** *18:52:37.0, 35.°10N×26.°90E, h18km, ML5.0/20*

MED_RC ***16*** *18:52:37.0±1.3, 34.°98N×26.°83E, h28km±2km, MW5.0/13, Moment Tensor Solution.Mantle waves: s13,c16; Duration: 1st2 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.13±.92; $M_{\theta\theta}$-1.46±.47; $M_{\phi\phi}$3.58±.49; $M_{r\theta}$-1.46±.87; $M_{\theta\phi}$-0.17±.40; $M_{r\phi}$0.36±.36; Best double couple: M_o3.46000×10^{16} NP1:φ_s30.00000°, δ53.00000°, λ-39.00000°. NP2:φ_s146.00000°, δ60.00000°, λ-135.00000°. Principal axes: T 3.6200, Plg4.0000°, Azm267.0000°; N -0.3300, Plg38.0000°, Azm173.0000°; P -3.3000, Plg52.0000°, Azm2.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

THE ***16*** *18:52:38.1, 35.°14N×26.°86E, h0km±1km, ML4.7/6 Error ellipse: s-maj=3.2km s-min=0.7km az=150.0*

DDA ***16*** *18:52:38.6, 35.°31N×27.°05E, h18km±2km, MW4.9*

IDC ***16*** *18:52:38.9±1.6, 35.°20N×26.°79E, h34km±13km, mb4.5/35, mb1 4.5/44, mb1mx4.4/59, mbtmp4.7/44, ML4.6/7, Error ellipse: s-maj=11.1km s-min=7.9km az=155.0*

MOS ***16*** *18:52:39.3±1.1, 35.°16N×26.°82E, h26km, mb5.0/32, Error ellipse: s-maj=4.0km s-min=2.5km az=91.4*

ISC 16 18:52:37.0±0.3, 35.°14N±0.°03×26.°87E±0.°02, h22km±3km, n819, σ1s93/882, mb4.8/148, 48C-35D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.47**	**30**	P	**Pb**	**18 52 47.3**	**+0.7**
KARP				S	**Sb**	**18 52 53.2**	**-0.1**
KARP				AML	AML	18 52 57.0	
KARP				AML	AML	18 52 57.7	
KARP	**Karpathos**	**0.47**	**30**	P	**Pb**	**18 52 47.3**	**+0.7**
KARP				S	**Sn**	**18 52 55.7**	**-0.6**
	352μm,0.6s						
KARP	**Karpathos**	**0.47**	**30**	PG	**Pb**	**18 52 47.4**	**+0.7**
KARP				SG	**Sn**	**18 52 55.4**	**-0.9**
KARP	**Karpathos**	**0.47**	**30**	Pg	**Pb**	**18 52 47.4**	**+0.7**
KARP	**Karpathos**	**0.47**	**30**	P	**Pb**	**18 52 47.6**	**+0.9**
KARP				S	**Sn**	**18 52 56.0**	**-0.3**
KARP				AML	AML	18 52 56.4	
	814nm,0.6s						
KARP				AML	AML	18 52 56.4	
	814nm,0.6s						
KARP				AML	AML	18 52 57.3	
	584nm,0.5s						
KARP				AML	AML	18 52 57.3	
	584nm,0.5s						
ZKR	**Zakros**	**0.54**	**268**	P	**Pb**	**18 52 48.0**	**+0.3**
ZKR				S	**Sn**	**18 52 56.8**	**-0.9**
ZKR				AML	AML	18 52 57.6	
ZKR				AML	AML	18 52 58.1	
	comp=E,97211μm,0.3s						
ZKR	**Zakros**	**0.54**	**268**	P	**Pb**	**18 52 48.0**	**+0.3**
ZKR				S	**Sn**	**18 52 57.4**	**-0.3**
	comp=E,53μm,0.4s						
ZKR	**Zakros**	**0.54**	**268**	PG	**Pb**	**18 52 48.1**	**+0.3**
ZKR				SG	**Sn**	**18 52 57.4**	**-0.3**
ZKR	**Zakros**	**0.54**	**268**	P	**Pb**	**18 52 48.0**	**+0.3**
ZKR				AML	AML	18 52 56.5	
	comp=E,108nm,0.3s						
ZKR				AML	AML	18 52 56.5	
	comp=E,108nm,0.3s						
ZKR				AML	AML	18 52 56.9	
	comp=E,88nm,0.3s						
ZKR				AML	AML	18 52 56.9	
	comp=E,88nm,0.3s						
ZKR				S	**Sn**	**18 52 57.0**	**-0.7**
FRMA	**Ierapetra Chan**	**0.94**	**263**	P	**Pb**	**18 52 53.1**	**-1.5**
FRMA				S	**Sb**	**18 53 07.0**	**+0.4**
	comp=E,10μm,0.5s						
NPS	**Neapolis**	**1.04**	**277**	P	**Pb**	**18 52 57.6**	**+1.4**
NPS				S	**Sn**	**18 53 12.4**	**+2.3**
NPS				AML	AML	18 53 23.1	
	comp=E,47588μm,0.6s						
NPS				AML	AML	18 53 27.1	
	comp=N,50699μm,0.7s						
NPS	**Neapolis**	**1.04**	**277**	P	**Pb**	**18 52 57.6**	**+1.4**
NPS				S	**Sn**	**18 53 13.2**	**+3.1**
	comp=N,24μm,0.6s						
NPS	**Neapolis**	**1.04**	**277**	P	**Pb**	**18 52 57.6**	**+1.4**
NPS				S	**Sn**	**18 53 13.2**	**+3.1**
IACM	**Heraklion**	**1.48**	**277**	P	**Pb**	**18 53 05.6**	**+1.7**
KSTL	**Kastelli Herak**	**1.48**	**277**	P	**Pn**	**18 53 01.8**	**-0.5**
KSTL				S	**Sn**	**18 53 19.5**	**-1.5**
NIS1	**Nisyros Isl.**	**1.48**	**10**	P	**Pb**	**18 53 04.5**	**+0.6**
NIS1	**Nisyros Isl.**	**1.48**	**10**	PN	**Pb**	**18 53 04.2**	**+0.3**
ARG	**Arkhangelos**	**1.49**	**43**	P	**Pb**	**18 53 04.8**	**+0.9**
ARG				S	**Sb**	**18 53 21.9**	**-0.5**
ARG				AML	AML	18 53 30.6	
ARG				AML	AML	18 53 31.6	
	comp=N,75510μm,0.5s						
ARG	**Arkhangelos**	**1.49**	**43**	P	**Pb**	**18 53 05.0**	**+1.1**
ARG				S	**Sb**	**18 53 26.6**	**+4.3**
	comp=N,46μm,0.6s						
ARG	**Arkhangelos**	**1.49**	**43**	P	**Pb**	**18 53 05.0**	**+1.1**
ARG				S	**Sb**	**18 53 26.6**	**+4.3**
ARG	**Arkhangelos**	**1.49**	**43**	PN	**Pb**	**18 53 05.2**	**+1.3**
KOSK	**Kos Island**	**1.61**	**3**	P	**Pb**	**18 53 06.3**	**+0.2**
KOSK	**Kos Island**	**1.61**	**3**	PN	**Pb**	**18 53 06.4**	**+0.3**
IDI	**Anoyia**	**1.63**	**276**	Pg	**Pb**	**18 53 07.5**	**+1.2**
	comp=N,247nm,0.3s,baz=38,slow=3.2,SNR=22						
IDI				Lg	Lg	18 53 30.8	
	comp=N,343nm,0.3s,baz=354,slow=19,SNR=3.8						
IDI	**Anoyia**	**1.63**	**276**	P	**Pb**	**18 53 07.9**	**+1.5**
IDI				AML	AML	18 53 38.1	
	comp=N,14654μm,0.5s						
IDI				AML	AML	18 53 49.0	
	comp=E,13814μm,0.6s						
IDI	**Anoyia**	**1.63**	**276**	P	**Pb**	**18 53 07.3**	**+0.9**
IDI	**Anoyia**	**1.63**	**276**	PN	**Pb**	**18 53 06.2**	**-0.2**
SANT	**Santorini**	**1.68**	**317**	P	**Pb**	**18 53 07.6**	**+0.3**
SANT				AML	AML	18 53 35.6	
	comp=E,51615μm,0.7s						
SANT				AML	AML	18 53 41.5	
	comp=N,16153μm,0.8s						
SANT	**Santorini**	**1.68**	**317**	P	**Pb**	**18 53 07.4**	**+0.1**
SANT	**Santorini**	**1.68**	**317**	PN	**Pb**	**18 53 07.1**	**-0.2**
SANT	**Santorini**	**1.68**	**317**	Pn	**Pn**	**18 53 05.1**	**-0.1**
SIVA	**Sivas**	**1.69**	**267**	P	**Pb**	**18 53 08.7**	**+1.3**
SIVA				AML	AML	18 53 43.6	
	comp=N,23058μm,0.6s						
SIVA				AML	AML	18 53 54.0	
	comp=E,35824μm,0.6s						
SIVA	**Sivas**	**1.69**	**267**	P	**Pb**	**18 53 08.1**	**+0.7**
THR8	**Santorini-Mono**	**1.70**	**319**	P	**Pb**	**18 53 07.8**	**+0.2**
THR8	**Santorini-Mono**	**1.70**	**319**	P	**Pb**	**18 53 07.7**	**+0.2**
THR6	**Thira Island,**	**1.71**	**316**	P	**Pb**	**18 53 08.0**	**+0.3**
THR6	**Thira Island,**	**1.71**	**316**	P	**Pb**	**18 53 08.0**	**+0.3**
TMBK	**Timbaki Herakl**	**1.73**	**268**	P	**Pb**	**18 53 08.7**	**+0.7**
THR9	**Santorini-Faro**	**1.73**	**315**	P	**Pb**	**18 53 08.0**	**-0.1**
THR9	**Santorini-Faro**	**1.73**	**315**	P	**Pb**	**18 53 08.2**	**+0.1**
SNT1	**Gialos, Santor**	**1.73**	**318**	P	**Pb**	**18 53 07.8**	**-0.3**
SFIR	**Foira Santorin**	**1.74**	**318**	P	**Pb**	**18 53 08.9**	**+0.7**
THR7	**Fira-Santorini**	**1.74**	**318**	P	**Pb**	**18 53 08.8**	**+0.6**
THR7	**Fira-Santorini**	**1.74**	**318**	P	**Pb**	**18 53 08.6**	**+0.4**
SNT5	**Nea Kammeni, S**	**1.74**	**317**	P	**Pb**	**18 53 08.4**	**+0.1**
THR3	**Thira Island,**	**1.74**	**317**	P	**Pb**	**18 53 08.3**	**0.0**
THR3	**Thira Island,**	**1.74**	**317**	P	**Pb**	**18 53 08.5**	**+0.2**
THT2	**Imerovigli**	**1.75**	**318**	P	**Pb**	**18 53 07.6**	**-0.8**
THT2	**Imerovigli**	**1.75**	**318**	PN	**Pb**	**18 53 07.9**	**-0.5**
THR5	**Thira Island,**	**1.78**	**316**	P	**Pb**	**18 53 08.8**	**-0.1**
THR5	**Thira Island,**	**1.78**	**316**	P	**Pb**	**18 53 08.8**	**-0.1**
SAP3	**Santorini-Thir**	**1.79**	**317**	P	**Pb**	**18 53 09.7**	**+0.6**
PRNS	**Prines Rethymn**	**1.95**	**277**	P	**Pb**	**18 53 12.9**	**+1.1**
BODT	**Bodrum**	**1.96**	**10**	P	**Pn**	**18 53 10.3**	**+1.4**
BODT	**Bodrum**	**1.96**	**10**	PN	**Pb**	**18 53 10.5**	**-1.4**
TURN	**Turunc**	**1.98**	**34**	*i* P	**Pb**	**18 53 11.3**	**-1.0**
TURN				*i* S	**Sn**	**18 53 34.1**	**+0.8**
TURN				IAML		18 53 46.0	
	comp=N,6μm,0.5s						
TURN				IAML		18 53 50.0	
	comp=E,5μm,0.7s						
TURN	**Turunc**	**1.98**	**34**	PN	**Pb**	**18 53 11.1**	**-1.2**
BDRM	**Kayabasi**	**1.98**	**13**	*i* P	**Pb**	**18 53 11.4**	**-1.0**
BDRM				*i* S	**Sn**	**18 53 32.0**	**-1.4**
BDRM				IAML		18 53 47.0	
	comp=N,3μm,0.4s						
BDRM				IAML		18 53 50.0	
	comp=E,2μm,0.8s						
YKAV	**Yalikavak-Bodr**	**2.01**	**9**	PN	**Pb**	**18 53 11.3**	**-1.6**
VAM	**Vamos**	**2.20**	**278**	P	**Pb**	**18 53 15.4**	**-0.7**
VAM				AML	AML	18 53 57.9	
	comp=N,21701μm,1.0s						
VAM				AML	AML	18 54 07.5	
	comp=E,10594μm,0.8s						
VAM	**Vamos**	**2.20**	**278**	P	**Pb**	**18 53 15.4**	**-0.7**
APE	**Apeiranthos**	**2.21**	**331**	P	**Pb**	**18 53 14.8**	**-1.6**
APE				AML	AML	18 53 43.8	
	comp=N,12647μm,1.0s						
APE				AML	AML	18 53 46.9	
	comp=E,12840μm,1.0s						
APE	**Apeiranthos**	**2.21**	**331**	P	**Pn**	**18 53 14.3**	**+1.8**
APE				S	**Sb**	**18 53 42.3**	**-1.0**
	comp=E,6μm,1.0s						
APE	**Apeiranthos**	**2.21**	**331**	*i* P	**Pn**	**18 53 14.2**	**+1.8**
APE	**Apeiranthos**	**2.21**	**331**	PN	**Pb**	**18 53 14.7**	**-1.6**
APE	**Apeiranthos**	**2.21**	**331**	P	**Pb**	**18 53 14.5**	**-1.8**
APE	**Apeiranthos**	**2.21**	**331**	⇑P	**Pb**	**18 53 15.0**	**-1.3**
DALY	**Dalyan (Mula)**	**2.21**	**40**	*i* P	**Pb**	**18 53 15.2**	**-1.1**
DALY				*i* S	**Sn**	**18 53 39.9**	**+0.8**
DALY				IAML		18 54 04.0	
	comp=N,6μm,0.8s						
DALY				IAML		18 54 05.0	
	comp=E,5μm,0.9s						
DALY	**Dalyan (Mula)**	**2.21**	**40**	PN	**Pn**	**18 53 14.3**	**+1.9**
YER	**Yerkesik**	**2.30**	**29**	P	**Pb**	**18 53 16.3**	**-1.5**
YER	**Yerkesik**	**2.30**	**29**	P	**Pb**	**18 53 16.3**	**-1.5**
YER	**Yerkesik**	**2.30**	**29**	PN	**Pn**	**18 53 15.6**	**+1.9**
GVDS	**Gavdos**	**2.30**	**264**	P	**Pb**	**18 53 16.9**	**-0.9**
GVDS	**Gavdos**	**2.30**	**264**	PN	**Pb**	**18 53 16.2**	**-1.6**
GVD	**Gavdhos**	**2.30**	**263**	P	**Pb**	**18 53 17.0**	**-0.8**
GVD	**Gavdhos**	**2.30**	**263**	PN	**Pb**	**18 53 15.9**	**-1.9**
DDIM	**Aydin, Didim**	**2.34**	**7**	*i* P	**Pb**	**18 53 16.6**	**-1.7**
DDIM				*i* S	**Sb**	**18 53 49.0**	**+2.2**
DDIM				IAML		18 54 14.0	
	comp=N,3μm,0.8s						
DDIM				IAML		18 54 21.0	
	comp=E,4μm,1.4s						
FETY	**Fethiye**	**2.34**	**50**	P	**Pn**	**18 53 14.8**	**+0.6**
FETY	**Fethiye**	**2.34**	**50**	PN	**Pn**	**18 53 15.0**	**+0.8**
IMMV	**Iera Moni Meta**	**2.38**	**279**	P	**Pb**	**18 53 18.2**	**-1.0**
IMMV				AML	AML	18 54 07.2	
	comp=N,13125μm,0.7s						
IMMV				AML	AML	18 54 19.6	
	comp=E,12517μm,0.7s						
IMMV	**Iera Moni Meta**	**2.38**	**279**	P	**Pb**	**18 53 17.3**	**-1.9**
IMMV	**Iera Moni Meta**	**2.38**	**279**	PN	**Pb**	**18 53 17.1**	**-2.1**
MULA	**Mugla, Merkez-**	**2.42**	**29**	*i* P	**Pn**	**18 53 16.0**	**+0.7**
MULA				*i* S	**Sn**	**18 53 43.2**	**-1.1**
MULA				IAML		18 54 06.0	
	comp=E,4μm,0.8s						
MULA				IAML		18 54 07.0	
	comp=N

VLY	Voula,Athens	3.67	318		P		Pn	18 53 34.6	+2.1
BUCA	Burdur, Bucak-	3.70	53	*i*	P		Pn	18 53 35.4	+2.5
BUCA				*i*	S		Sn	18 54 13.6	-2.3
BUCA					IAML			18 54 40.0	
	comp=N,777nm,1.4s								
BUCA					IAML			18 54 55.0	
	comp=E,1µm,0.8s								
KRND	KRANIDI	3.75	308		P		Pn	18 53 36.5	+3.0
ATHU	Athens Univers	3.76	320		P		Pn	18 53 36.6	+2.9
DION	Dionisos Attik	3.77	322		P		Pn	18 53 37.5	+3.7
PTL	Penteli	3.78	321		P		Pn	18 53 36.8	+2.8
BCK	Bucak	3.80	51		P		Pn	18 53 38.3	+4.1
ATH	Athens Observa	3.80	319		P		Pn	18 53 37.0	+2.8
ATH	Athens Observa	3.80	319		P		Pn	18 53 37.0	+2.8
AKHS	Akhisar	3.81	11	*i*	P		Pn	18 53 36.3	+1.9
AKHS				*i*	S		Sn	18 54 21.4	+2.8
AKHS					IAML			18 54 56.0	
	comp=E,361nm,0.8s								
CAND	Candarli	3.81	359		PN		Pn	18 53 37.2	+2.8
ZEDA	zmir-Bergama	3.83	2	*i*	P		Pn	18 53 36.9	+2.3
ZEDA					IAML			18 54 52.0	
	comp=N,629nm,1.6s								
ZEDA					IAML			18 54 57.0	
	comp=E,624nm,1.5s								
DKL	Dikili	3.93	0		PN		Pn	18 53 38.8	+2.8
USAK	Uak-Merkez	3.96	25	*i*	P		Pn	18 53 38.8	+2.2
USAK				*i*	S		Sn	18 54 21.1	-1.3
USAK					IAML			18 54 59.0	
	comp=E,486nm,1.0s								
ISP	Isparta	3.98	47		P		Pn	18 53 38.6	+1.8
ISP	Isparta	3.98	47		Pn		Pn	18 53 38.6	+1.8
OSC1	CSNet OBS 1	4.00	113		P		Pn	18 53 36.3	-0.6
OSC1					S		Sn	18 54 22.5	-0.6
EREA	Eretria	4.04	325		P		Pn	18 53 41.2	+3.7
KZIL	AFYON_Kizioren	4.08	39	*i*	P		Pn	18 53 39.2	+1.1
KZIL				*i*	S		Sn	18 54 30.0	+4.8
KZIL					IAML			18 54 56.0	
	comp=E,707nm,1.1s								
KZIL					IAML			18 55 09.0	
	comp=N,741nm,1.5s								
PRK	Paraskevi	4.13	354		P		Pn	18 53 41.8	+3.1
SIGR	SIGRI	4.15	349		P		Pn	18 53 40.9	+1.9
VILL	Villia	4.16	318		P		Pn	18 53 42.9	+3.7
AYVA	Ayvalik	4.17	358	*i*	P		Pb	18 53 45.9	-3.7
AYVA					IAML			18 54 57.0	
	comp=N,558nm,1.7s								
AYVA					IAML			18 55 01.0	
	comp=E,536nm,1.0s								
KEPZ	Antalya-Kepez	4.22	64	*i*	P		Pn	18 53 42.1	+2.0
KEPZ					IAML			18 54 34.0	
	comp=E,727nm,0.7s								
KEPZ					IAML			18 54 36.0	
	comp=N,732nm,0.7s								
LOUT	Loutraki	4.23	313		P		Pn	18 53 43.8	+3.6
BAGO	Egridir - ISPA	4.25	47	*i*	P		Pn	18 53 43.1	+2.6
BAGO					IAML			18 55 09.0	
	comp=E,228nm,0.8s								
BAGO					IAML			18 55 14.0	
	comp=N,259nm,2.0s								
VLX	Vlachokerasia	4.26	303		P		Pn	18 53 43.5	+2.9
STEP	BALIKESIR_Sava	4.29	9	*i*	P		Pn	18 53 42.8	+1.9
STEP					IAML			18 55 12.0	
	comp=E,753nm,1.0s								
STEP					IAML			18 55 20.0	
	comp=N,1µm,1.1s								
BUHA	Balikesir, Bur	4.36	2	*i*	P		Pn	18 53 44.7	+2.8
BUHA					IAML			18 55 10.0	
	comp=N,688nm,1.4s								
BUHA					IAML			18 55 12.0	
	comp=E,760nm,1.2s								
KOCA	Canakkale, Ayv	4.40	353	*i*	P		Pn	18 53 44.0	+1.6
KOCA					IAML			18 55 12.0	
	comp=N,375nm,1.9s								
KOCA					IAML			18 55 22.0	
	comp=E,360nm,1.1s								
GDZ	Gediz	4.46	27	*i*	P		Pn	18 53 44.1	+0.6
GDZ					IAML			18 55 13.0	
	comp=E,172nm,0.9s								
GDZ					IAML			18 55 19.0	
	comp=N,323nm,1.5s								
AKMS	Akamas	4.48	90		P		Pn	18 53 43.3	-0.3
AKMS					S		Sn	18 54 35.8	+0.7
ITM	Ithomi	4.49	298		PN		Pn	18 53 46.9	+3.2
ITM	Ithomi	4.49	298		Pn		Pn	18 53 43.7	0.0
AFYO	Afyonkarahisar	4.56	36	*i*	P		Pn	18 53 47.1	+2.3
AFYO					IAML			18 55 18.0	
	comp=N,1µm,1.1s								
AFYO					IAML			18 55 31.0	
	comp=E,1µm,1.9s								
GAZI	Gazipasa	4.57	75	*i*	P		Pn	18 53 44.8	0.0
GAZI					IAML			18 54 37.0	
	comp=N,2µm,0.8s								
GAZI					IAML			18 54 40.0	
	comp=E,2µm,0.7s								
SEDI	Konya, Seydise	4.57	58	*i*	P		Pn	18 53 47.5	+2.6
SEDI					IAML			18 54 44.0	
	comp=N,1µm,0.9s								
SEDI					IAML			18 54 55.0	
	comp=E,1µm,0.9s								
BAYC	CANAKKALE_Bayr	4.60	357	*i*	P		Pn	18 53 47.3	+2.0
BAYC					IAML			18 55 16.0	
	comp=E,178nm,1.4s								
BALY	Balya	4.63	7	*i*	P		Pn	18 53 46.7	+1.0
BALY					IAML			18 55 17.0	
	comp=N,374nm,0.6s								
BALY					IAML			18 55 23.0	
	comp=E,358nm,1.0s								
DURS	Dursunbey	4.64	16	*i*	P		Pn	18 53 48.1	+2.3
DURS					IAML			18 55 31.0	
	comp=N,223nm,0.9s								
DURS					IAML			18 55 40.0	
	comp=E,251nm,1.0s								
ALFC	Alefka	4.70	88		P		Pn	18 53 46.2	-0.4
NATA	Nata	4.70	93		P		Pn	18 53 46.5	0.0
EZN	Ezine	4.70	355		P		Pn	18 53 48.6	+2.0
EZN	Ezine	4.70	355		P		Pn	18 53 48.6	+2.0
YVAC	Isparta, Yalva	4.70	47	*i*	P		Pn	18 53 48.7	+2.0
YVAC					IAML			18 55 19.0	
	comp=N,234nm,1.4s								
YVAC					IAML			18 55 22.0	
	comp=E,275nm,1.7s								
BOZC	Bozcaada	4.74	352	*i*	P		Pn	18 53 49.0	+1.9
BOZC					IAML			18 55 28.0	
	comp=E,174nm,1.5s								
BOZC					IAML			18 55 32.0	
	comp=N,144nm,1.0s								
DOGA	KONYA_Doganhis	4.87	51	*i*	P		Pn	18 53 51.6	+2.6
DOGA					IAML			18 54 57.0	
	comp=N,613nm,0.7s								
DOGA					IAML			18 54 57.0	
	comp=E,568nm,0.7s								
OSC2	CSNet OBS 4	4.93	113		P		Pn	18 53 49.7	0.0
LEF	Lefka	4.93	88	⇑	P		Pn	18 53 46.8	-3.0
LIA	Limnos Island	4.94	345		P		Pn	18 53 52.1	+2.3
SZAC	Souni	4.95	93	⇑	P		Pn	18 53 49.7	-0.4
ANDZ	Kutahya, Merke	4.99	28	*i*	P		Pn	18 53 52.8	+2.1
ANDZ					IAML			18 55 32.0	
	comp=E,170nm,1.1s								
KALE	Kalithea	5.00	312		P		Pn	18 53 53.0	+2.3
LAKA	Lakka	5.00	310		P		Pn	18 53 54.1	+3.3
DRO	Drossia	5.01	306		P		Pn	18 53 54.5	+3.6
AUKIR	Kırka- Seyitga	5.06	34	*i*	P		Pn	18 53 53.3	+1.7
AUKIR					IAML			18 55 52.0	
	comp=N,349nm,1.9s								
AUKIR					IAML			18 56 00.0	
	comp=E,415nm,1.8s								
NEO	Neokhori	5.08	326		P		Pn	18 53 55.5	+3.7
KONT	Konya--Tatoy	5.24	56	*i*	P		Pn	18 53 56.9	+2.9
KONT					IAML			18 55 06.0	
	comp=E,331nm,0.8s								
KONT					IAML			18 55 38.0	
	comp=N,273nm,1.4s								
ASGA	Asgata	5.25	92		P		Pn	18 53 53.7	-0.5
EDC	Edincik	5.26	8		P		Pn	18 53 58.0	+3.7
CSS	Mathiatis	5.30	90		Pn		Pn	18 53 54.0	-0.9
CSS	Mathiatis	5.30	90	⇑	P		Pn	18 53 54.5	-0.4
CSS					AML		AML	18 54 59.9	
	comp=N,4.1nm,1.1s								
CSS					AML		AML	18 55 00.8	
	comp=N,3.4nm,0.6s								
AGG	Agios Georgios	5.31	318		P		Pn	18 53 57.9	+2.9
AGG	Agios Georgios	5.31	318		P		Pn	18 53 56.1	+1.1
AGG	Agios Georgios	5.31	318		Pn		Pn	18 53 56.1	+1.1
ULDT	Uludag	5.31	19	*i*	P		Pn	18 53 57.3	+2.1
ULDT					IAML			18 55 55.0	
	comp=N,218nm,1.3s								
ULDT					IAML			18 56 01.0	
	comp=E,273nm,1.4s								
AUBOZ	BOZOYUK	5.39	27	*i*	P		Pn	18 53 57.0	+0.9
AUBOZ					IAML			18 55 47.0	
	comp=E,277nm,1.0s								
AUBOZ					IAML			18 55 51.0	
	comp=N,168nm,0.9s								
SGAZ	Eskisehir, Sey	5.41	35	*i*	P		Pn	18 53 58.2	+1.8
SGAZ					IAML			18 55 47.0	
	comp=E,188nm,3.1s								
SGAZ					IAML			18 56 13.0	
	comp=N,114nm,1.6s								
MAKR	Makrakomi, Fth	5.42	317		P		Pn	18 54 00.0	+3.6
SMTH	Samothraki Isl	5.43	349		P		Pn	18 53 59.0	+2.4
MVOU	Mavrovouni	5.55	89	⇑	P		Pn	18 53 58.2	0.0
ALN	Alexandroupoli	5.79	354		P		Pn	18 54 04.0	+2.5
ALN	Alexandroupoli	5.79	354		Pn		Pn	18 54 04.0	+2.5
SWA2		6.00	192		P		Pn	18 54 04.6	+0.2
	baz=194								
SWA2					AMP			18 55 00.0	
	baz=194								
LIT	Litokhoron	6.05	326		P		Pn	18 54 09.0	+3.8
LIT	Litokhoron	6.05	326		P		Pn	18 54 07.7	+2.5
LIT	Litokhoron	6.05	326				Pn	18 54 07.7	+2.5
RDO	Rodhopi	6.09	350		P		Pn	18 54 08.5	+2.8
THE	Thessaloniki	6.29	332		P		Pn	18 54 14.8	+6.3
THE					pmax		pmax		
	comp=Z,61nm,1.0s								
MDUB	Mudurnu	6.33	31		Pn		Pn	18 54 10.6	+1.4
KZN	Kozani	6.55	323		P		Pn	18 54 15.8	+3.7
KZN	Kozani	6.55	323		P		Pn	18 54 15.8	+3.7
BR231	Keskin MP Arra	6.64	43				Pn	18 54 14.1	+0.8
ANTO	Ankara	6.67	43		P		Pn	18 54 15.7	+2.0
ANTO	Ankara	6.67	43		Pn		Pn	18 54 15.7	+2.0
KOT	Kottamia	6.67	140		P		Pn	18 54 12.3	-1.4
	baz=140								
KOT					AMP			18 55 00.0	
	baz=140								
HSAF	As Saff	6.78	143		P		Pn	18 54 14.0	-1.2
	baz=144								
KNT	Kendrikon	6.78	334		P		Pn	18 54 18.7	+3.5
GRG	Griva	6.80	330		P		Pn	18 54 21.1	+5.7
GRG					pmax		pmax		
	comp=Z,211nm,0.9s								
GLL	Jalalah	6.89	142		P		Pn	18 54 15.5	-1.3
	baz=143								
VAY	Valandovo	7.04	333	*i*	Pn		Pn	18 54 24.5	+5.8
BR131	Keskin Array S	7.07	48	*c i*	P		Pn	18 54 20.4	+1.2
BR131	Keskin Array S	7.07	48		Pn		Pn	18 54 20.2	+1.0
BRTR	Keskin Array B	7.07	48		Pn		Pn	18 54 20.5	+1.2
	comp=Z,4.5nm,0.3s,baz=222,slow=14,SNR=24								
BRTR					Sn		Sn	18 55 39.9	+0.9
	comp=Z,2.0nm,0.3s,baz=213,slow=25,SNR=6.9								
BRTR	Keskin Array B	7.07	48		P		Pn	18 54 20.1	+0.8
BRTR								18 55 39.9	
BRTR	Keskin Array B	7.07	48				Pn	18 54 20.1	+0.8
FNA	Florina	7.11	324		P		Pn	18 54 20.9	+1.1
FNA	Florina	7.11	324		Pn		Pn	18 54 20.9	+1.1
PLD	Plovdiv	7.16	347		P		Pn	18 54 24.5	+4.1
PLD					pmax		pmax		
	comp=Z,185nm,0.8s								
MMAI	Mount Meron Ar	7.39	104		Pn		Pn	18 54 23.4	-0.2
	comp=Z,28nm,0.3s,baz=300,slow=12,SNR=11								
MMAI					Sn		Sn	18 55 43.8	-3.1
	comp=Z,56nm,0.3s,baz=294,slow=14,SNR=8.8								
NBNS	Bani Suef	7.50	149		S		Sn	18 55 42.7	-6.9
	baz=149								
NBNS					AMP			18 55 00.0	
	baz=149								
STIP	Stip	7.51	332	*i*	Pn		Pn	18 54 29.4	+4.2
OHR	Ohrid	7.64	323	*i*	Pn		Pn	18 54 33.7	+6.6
VTS	Vitosha	7.99	340		P		Pn	18 54 36.1	+4.2
VTS	Vitosha	7.99	340		Pn		Pn	18 54 36.0	+4.2
VTS	Vitosha	7.99	340	⇑	P		Pn	18 54 36.3	+4.4
ILGA	Ilgaz	8.00	40				Pn	18 54 33.9	+1.8
SKO	Skopje	8.04	330	*i*	Pn		Pn	18 54 38.7	+6.2
HFRF	Wahat Farafira	8.06	171		S		Sn	18 55 57.8	-5.4
	baz=172								
SCTE	Santa Cesarea	8.29	309		Pn		Pn	18 54 35.9	+0.1
TIR	Tirane	8.29	320	⇓	P		Pn	18 54 39.4	+3.5
PLVB	Pleven	8.42	349	⇑	P		Pn	18 54 41.9	+4.2
ZIMR		8.59	353	⇑	P		Pn	18 54 43.6	+3.7
GAZ	Gaziantep	8.61	73		Pn		Pn	18 54 39.6	-0.7
EIL	Elat	8.74	126		Pn		Pn	18 54 42.1	0.0
	comp=Z,6.0nm,0.3s,baz=326,slow=2.6,SNR=6.2								
EIL					Sn		Sn	18 56 12.8	-7.1
	comp=Z,37nm,0.3s,baz=4.5,slow=11,SNR=12								
BZK	Bozkurt	8.81	37	⇑	P		Pn	18 54 45.8	+2.9
HBST	Basata	8.90	129		P		Pn	18 54 43.3	-1.0
	baz=130								
HKAT	Jabal Katrina	8.95	135		P		Pn	18 54 43.9	-1.3
	baz=136								
TIP	Timpagrande	9.02	300		Pn		Pn	18 54 45.5	-0.5
TIP	Timpagrande	9.02	300	⇓	P		Pn	18 54 49.0	+3.0
VLAD	Vladila	9.05	349	⇑	P		Pn	18 54 49.4	+3.1
ULC	Ulcinj	9.06	321	*e*	Pn		Pn	18 54 49.9	+3.4
ULC				*i*	Sn		Sn	18 56 26.5	-1.3
SGRR	Singureni	9.10	356	⇑	P		Pn	18 54 50.8	+3.9
PVY	Plav	9.19	326	*e*	Pn		Pn	18 54 51.6	+3.3
PVY				*i*	Sn		Sn	18 56 29.7	-1.4
CVDA	Cernavoda	9.23	5	⇑	P		Pn	18 54 53.4	+4.7
DRME	Dracevica, Mon	9.25	322	⇓ *i*	Pn		Pn	18 54 52.5	+3.4
DRME				*i*	Sn		Sn	18 56 31.1	-1.4
LEHL	Lehliu	9.33	360	⇑	P		Pn	18 54 54.2	+4.2
CEL	Celeste	9.35	293		Pn		Pn	18 54 50.5	+0.1
TIRR	Tirgusor	9.39	7		P		Pn	18 54 53.0	+2.2
TIRR	Tirgusor	9.39	7		Pn		Pn	18 54 53.0	+2.2
PDG	Podgorica	9.40	323	⇑	P		Pn	18 54 56.0	+5.0
PDG	Podgorica	9.40	323		Pn		Pn	18 54 51.2	+0.2
TTG	Podgorica	9.40	323	⇓ *i*	Pn		Pn	18 54 54.5	+3.5
TTG				*i*	Sn		Sn	18 56 34.7	-1.3
IVA	Berane	9.44	327	⇓ *i*	Pn		Pn	18 54 55.1	+3.4
IVA				*i*	Sn		Sn	18 56 35.6	-1.5
AMRR	Amara	9.47	2	⇓	P		Pn	18 54 56.7	+4.7
BUM	Brajici-Budva	9.48	321	⇓ *i*	Pn		Pn	18 54 55.7	+3.4
BUM				*i*	Sn		Sn	18 56 36.7	-1.5
HUMR	Humele	9.49	352	⇑	P		Pn	18 54 55.1	+2.8
SULR		9.54	357	⇓	P		Pn	18 54 57.7	+4.7
HARR	Harsova	9.58	5	⇑	P		Pn	18 54 57.1	+3.5
HARR	Harsova	9.58	5		P		Pn	18 54 57.0	+3.5
KOME	Kolasin	9.59	326	⇓ *i*	Pn		Pn	18 54 57.2	+3.4
KOME				*i*	Sn		Sn	18 56 39.4	-1.6
CEME	Cevo	9.65	322	⇓ *i*	Pn		Pn	18 54 58.0	+3.4
CEME				*i*	Sn		Sn	18 56 40.8	-1.5
MATE	Matera	9.73	307	⇑	P		Pn	18 54 59.5	+3.8
JURR	Jurilovca	9.74	8	⇑	P		Pn	18 54 59.6	+3.9
TPGR	Topolog	9.78	7	⇑	P		Pn	18 54 59.2	+2.9
HCY	Herceg Novi	9.79	321	⇓ *i*	Pn		Pn	18 55 00.0	+3.5
HCY				*i*	Sn		Sn	18 56 44.2	-1.6
NKME	Niksic	9.80	323	⇓ *i*	Pn		Pn	18 55 00.0	+3.4
NKME				*i*	Sn		Sn	18 56 44.2	-1.7
MALT	Malatya	9.80	68		P		Pn	18 54 59.2	+2.5
NKY	Niksic	9.81	324	⇑ *i*	Pn		Pn	18 55 00.3	+3.5
NKY				*i*	Sn		Sn	18 56 44.5	-1.8
SECR		9.91	357	⇑	P		Pn	18 55 01.9	+3.9
ISR	Istrita	9.97	359	⇑	P		Pn	18 55 03.1	+4.1
ISR	Istrita	9.97	359		P		Pn	18 55 03.0	+4.0
ISR					pmax		pmax		
	comp=Z,158nm,1.3s								
PLE	Pljevlja	10.03	327	⇑ *i*	Pn		Pn	18 55 03.1	+3.3
PLE				*i*	Sn		Sn	18 56 49.7	-1.9
CFR	Carcaliu	10.08	5	⇑	P		Pn	18 55 03.3	+3.0
CFR	Carcaliu	10.08	5		P		Pn	18 55 03.4	+3.0
CFR					pmax		pmax		
	comp=Z,41nm,0.9s								
BRY	Bratogost	10.10	323	*e*	Pn		Pn	18 55 04.3	+3.5
BRY				*i*	Sn		Sn	18 56 51.6	-1.9
TLCR		10.15	8	⇑	P		Pn	18 55 05.1	+3.8
TLCR		10.15	8		P		Pn	18 55 05.1	+3.8
UPM	Unac-Piva	10.15	325	⇓ *i*	Pn		Pn	18 55 04.9	+3.4
UPM				*i*	Sn		Sn	18 56 52.6	-2.1
MTUR	Matau	10.17	353	⇑	P		Pn	18 55 05.6	+3.9
GRER		10.23	0	⇑	P		Pn	18 55 07.0	+4.5
HERR	Herculane	10.31	342	⇑	P		Pn	18 55 07.0	+3.4
VAE	Valguarnera	10.32	287		Pn		Pn	18 55 04.5	+0.8
	comp=Z,1.8nm,0.3s,baz=112,slow=19,SNR=1.5								
VAE					Sn		Sn	18 56 58.9	0.0
	comp=Z,1.7nm,0.3s,baz=32,slow=9.5,SNR=1.1								
ARR	Arges	10.36	351	⇑	P		Pn	18 55 08.2	+3.9
MLR	Muntele Rosu	10.37	356		Pn		Pn	18 55 07.0	+2.5
	comp=Z,1.4nm,0.3s,baz=180,slow=5.2,SNR=59								
MLR	Muntele Rosu	10.37	356		P		Pn	18 55 07.0	+2.5
MLR	Muntele Rosu	10.37	356		Pn		Pn	18 55 09.1	+4.7
MLR	Muntele Rosu	10.37	356	⇓	P		Pn	18 55 08.7	+4.3
VOIR		10.38	353		P		Pn	18 55 07.6	+3.0
VOIR					pmax		pmax		
	comp=Z,37nm,1.1s								
VOIR		10.38	353	⇑	P		Pn	18 55 08.5	+3.9
DIVS	Divibare	10.40	331		Pn		Pn	18 55 09.2	+4.4
BISRR	Bisoca	10.40	359	⇑	P		Pn	18 55 10.3	+5.4
MDVR	Moldovita	10.41	339	⇓	P		Pn	18 55 09.5	+4.5
LOT	Lotru	10.57	348	⇑	P		Pn	18 55 09.9	+2.7
ODBI	Odobesti	10.62	1	⇓	P		Pn	18 55 12.5	+4.8
PLOR	Plostina	10.71	359		P		Pn	18 55 13.4	+4.4
PLOR	Plostina	10.71	359	⇓	P		Pn	18 55 13.5	+4.4
GZR	Gura Zlata	10.71	344	⇑	P		Pn	18 55 12.5	+3.5
VRI	Vrincioaia	10.72	359		P		Pn	18 55 14.7	+5.5
VRI					pmax		pmax		
	comp=Z,158nm,1.3s								
VRI	Vrincioaia	10.72	359	⇑	P		Pn	18 55 13.1	+3.9
VARL	Varlezi	10.78	4	⇑	P		Pn	18 55 14.0	+4.1
DOPR	Dopca	10.88	355	⇓	P		Pn	18 55 15.5	+4.1
GHRR		10.92	2	⇑	P		Pn	18 55 15.5	+3.6
DEV	Deva	11.15	346		P		Pn	18 55 20.2	+5.2
DEV					pmax		pmax		
	comp=Z,62nm,1.4s								
BZS	Buzias	11.21	341	⇓	P		Pn	18 55 19.1	+3.3
CORL	Corleone	11.26	288				Pn	18 55 16.6	0.0
SIM	Simferopol'	11.26	27	*de*	P		Pn	18 55 18.7	+2.2
SIM					pmax		pmax		
	comp=Z,35µm,0.8s								
PAOL	Paolisi	11.34	305		Pn		Pn	18 55 16.9	-0.8
TESR	Tescani	11.37	359	⇑	P		Pn	18 55 20.9	+2.9
MARD	Mardin	11.44	75				Pn	18 55 18.6	-0.6
BIZ	Bicaz	11.81	357	⇓	P		Pn	18 55 27.3	+3.2
KOPT	Kop Dagi	11.86	62		Pn		Pn	18 55 26.1	+1.1
IAS	Iasi	12.06	2		P		Pn	18 55 29.8	+2.4
IAS					pmax		pmax		
	comp=Z,161nm,1.2s								
INTR	Introdacqua	12.24	308		Pn		Pn	18 55 28.9	-1.2
BURAR	Bucovina Array	12.53	355	⇑	P		Pn	18 55 37.9	+3.9
BURAR	Bucovina Array	12.53	355		P		Pn	18 55 37.9	+3.9
BURAR	Bucovina Array	12.53	355		Pn		Pn	18 55 35.1	+1.1
BUR08	Bucovina Ar. S	12.56	355		Pn		Pn	18 55 36.3	+1.9
AQU	L'Aquila	12.74	308		P		Pn	18 55 37.0	+0.2
AQU	L'Aquila	12.74	308		Pn		Pn	18 55 37.0	+0.2
NRCA	Norcia	13.16	310				Pn	18 55 44.5	+1.8
KSV	Kosov	13.24	355		P		Pn	18 55 46.5	+3.0
GEVA	Gevas	13.37	72		Pn		Pn	18 55 46.3	+0.8
KMPD	K-Podol'skiy	13.42	359		P		Pn	18 55 48.0	+2.0
MURB	Monte Urbino	13.76	310		Pn		Pn	18 55 52.7	+2.0
PSZ	Piszkesteto	13.79	340		P		Pn	18 55 50.9	-0.3
PSZ	Piszkesteto	13.79	340		Pn		Pn	18 55 50.9	-0.3
UZH	Uzhgorod	13.90	347	*d i*	P		Pn	18 55 56.0	+3.4
KEST	Kesra	14.30	277		Pn		Pn	18 55 59.9	+1.6
	baz=63,slow=8.6,SNR=5.6								
KEST	Kesra	14.30	277		Pn		Pn	18 55 59.3	+1.0
SOKA	Soboth	14.57	326	*e*	Pn		P	18 56 07.5	-0.7
	comp=Z,9.8nm,0.7s								
VSL	Villasalto	14.58	293		Pn		Pn	18 56 03.2	+1.2
CASP	Castiglione de	14.60	306				P	18 56 08.1	-0.3
VYHS	Vyhne	14.62	338	*e*	P		P	18 56 08.9	+0.3
VYHS	Vyhne	14.62	338	*e*	PN		P	18 56 08.9	+0.3
OBKA	Obir	14.68	324	*e*	Pn		P	18 56 11.5	+2.2
	comp=Z,3.8nm,0.5s								
OSSC	Osservatorio P	14.69	309				Pn	18 56 04.0	+0.5
SOP	Sopron	14.71	332		P		P	18 56 09.7	+0.1
SOP					pmax		pmax		
	comp=Z,22nm,1.2s								
LVV	L'vov	14.82	353	*e*	P		Pn	18 56 07.5	+2.4
ONI	Oni	14.89	55		P		P	18 56 13.4	+1.6
GNI	Garni	15.01	65		Pn		P	18 56 13.5	+0.3
	comp=Z,1.3nm,0.3s,baz=300,slow=11,SNR=5.1			

GROC Groznyy 16.72 56 P **Pn** **18 56 30.2 +0.4**
GROC pmax pmax
comp=Z,36nm,1.2s
WATA Walderalm 16.72 321 *i* Pn **P** **18 56 33.1 +1.0**
comp=Z,9.9nm,0.6s
ZKTA Zakatala 16.78 61 P **P** **18 56 34.9 +2.3**
GEC2 GERESS Array S 16.80 329 **Pn** **18 56 30.7 -0.1**
GERES GERESS Array B 16.80 329 Pn **P** **18 56 32.0 -0.9**
comp=Z,0.4nm,0.3s,baz=134,slow=11,SNR=20
GERES Sn **Sn** **18 59 40.8 +4.0**
comp=Z,0.1nm,0.3s,baz=149,slow=19,SNR=1.2
SQTA Sankt Quirin 16.84 321 *i* Pn **Pn** **18 56 31.8 +0.5**
comp=Z,11nm,0.6s
FETA Feichten 16.96 319 *e*Pn **P** **18 56 35.1 +0.3**
comp=Z,10nm,0.8s
FETA *e*S S 19 00 10.1 +19
comp=Z,4.9nm,0.9s
MOTA Moosalm 16.97 321 *i* Pn **P** **18 56 35.3 +0.4**
comp=Z,9.7nm,0.7s
DPC Dobruska-Polom 17.04 336 *e*P **P** **18 56 35.9 +0.4**
DPC Dobruska-Polom 17.04 336 *e*P **P** **18 56 35.9 +0.4**
DPC *ex* x 18 56 43.7
KHC Kasperske Hory 17.07 329 *i* P **Pn** **18 56 35.0 +0.8**
KHC Kasperske Hory 17.07 329 *e*P **P** **18 56 37.2 +1.3**
KHC *ex* x 18 56 46.8
KHC Kasperske Hory 17.07 329 **Pn** **18 56 33.5 -0.7**
SEKA Sheki 17.08 63 P **P** **18 56 38.9 +2.9**
RETA Reutte 17.24 321 *i* Pn **P** **18 56 41.1 +3.3**
comp=Z,2.8nm,0.4s
OSTC Ostas 17.25 337 *e*P P 18 56 45.6 +7.8
DAVOX Davos/Dischmat 17.28 317 P **P** **18 56 39.5 +1.2**
comp=Z,0.3nm,0.3s,baz=159,slow=1.3,SNR=3.6
DAVOX S **Sn** **18 59 45.9 -2.6**
comp=Z,0.2nm,0.3s,baz=104,slow=12,SNR=2.0
SAOF Saorge 17.29 307 P **Pn** **18 56 37.2 +0.3**
SAOF pmax pmax
comp=Z,42nm,1.0s
CHVC Chvalec 17.33 336 *e*P **P** **18 56 44.3 +5.6**
PRU Pruhonice 17.36 332 *e*P **P** **18 56 40.6 +1.6**
PRU Pruhonice 17.36 332 *e*P **P** **18 56 40.6 +1.6**
PRU *ex* x 18 56 44.9
WET Wettzell 17.38 328 P **P** **18 56 41.8 +2.5**
TUE Stuetta 17.40 316 P **Pn** **18 56 38.2 -0.2**
KSP Ksiaz 17.47 337 *e*P **P** **18 56 44.4 +4.2**
KSP Ksiaz 17.47 337 P **P** **18 56 40.7 +0.5**
KSP pmax pmax
comp=Z,19nm,1.4s
DAVA Damuels 17.58 319 *i* Pn **P** **18 56 42.0 +0.3**
comp=Z,4.1nm,0.4s
ISO Isola 17.70 307 P **P** **18 56 45.2 +2.3**
ISO pmax pmax
comp=Z,15nm,1.1s
MAK Makhachkala 17.80 58 *e*P **P** **18 56 46.3 +2.4**
MAK pmax pmax
comp=Z,208nm,1.2s
MAK MLR MLR
comp=Z,717nm,16.0s
MBDF Montbardon 18.11 308 *e*P **P** **18 56 48.1 +0.7**
MBDF pmax pmax
comp=Z,20nm,0.9s
VORD Divnogorie 18.20 26 *e*P **Pn** **18 56 48.0 -0.1**
VORD pmax pmax
comp=Z,40nm,0.9s
BNI Bardonecchia 18.31 309 P **P** **18 56 49.7 +0.1**
BNI pmax pmax
comp=Z,20nm,1.0s
BNI Bardonecchia 18.31 309 P **P** **18 56 49.7 +0.1**
BRG Berggiesshubel 18.31 333 P **P** **18 56 49.9 +0.5**
BRG pmax pmax
comp=Z,16nm,1.1s
BRG Berggiesshubel 18.31 333 *e*P **P** **18 56 49.7 +0.3**
BRG Amp 18 56 52.7
comp=Z,5.6nm,0.9s
BRG *ex* x 18 56 56.0
BRG Amp 18 56 58.2
comp=Z,9.1nm,0.8s
VSR Storozhevoye 18.36 25 *e*P **P** **18 56 50.0 0.0**
VSR *e*S **S** **19 00 18.9 +0.3**
VSR pmax pmax
comp=Z,30nm,0.5s
VSR smax smax
comp=N,390nm,5.3s
NKC Novy Kostel 18.39 330 *e*P **Pn** **18 56 51.0 +0.6**
NKC Novy Kostel 18.39 330 *e*P **Pn** **18 56 51.0 +0.6**
LPG La Plagne 18.46 310 *e*P **Pn** **18 56 51.9 +0.3**
LPG pmax pmax
comp=Z,12nm,0.6s
LPL La Plagne 18.48 310 *e*P **P** **18 56 51.5 -0.1**
LPL pmax pmax
comp=Z,13nm,0.9s
GRA1 Grafenberg Arr 18.52 327 P **P** **18 56 51.2 -0.6**
GRF Grafenberg Arr 18.52 327 P **P** **18 56 51.2 -0.6**
GRF pmax pmax
comp=Z,21nm,0.8s
GRF Grafenberg Arr 18.52 327 *e*P **P** **18 56 51.2 -0.6**
comp=Z,22nm,1.0s,baz=136,slow=12
GRFO Grafenberg 18.52 327 P **Pn** **18 56 52.4 +0.4**
GRFO pmax pmax
comp=Z,34nm,1.1s
GRFO Grafenberg 18.52 327 P **Pn** **18 56 52.4 +0.4**
SENIN Lac Senin/Sane 18.54 313 P **P** **18 56 51.6 -0.6**
SLE Schleitheim 18.62 318 P **P** **18 56 53.1 +0.2**
SLE pmax pmax
comp=Z,20nm,0.6s
ORIF Oris-en-Rattie 18.76 308 *e*P **Pn** **18 56 57.0 +1.9**
ORIF pmax pmax
comp=Z,12nm,1.0s
CLL Collm 19.01 332 *e*PPP PPP 18 57 17.0
comp=Z,20nm,1.0s
CLL Collm 19.01 332 *e*P **Pn** **18 56 58.0 +0.1**
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL Collm 19.01 332 **P** **18 56 57.1 0.0**
CLL Collm 19.01 332 *e*P **Pn** **18 56 58.0 +0.1**
comp=Z,8.0nm,1.1s
CLL Collm 19.01 332 *e* **Pn** **18 57 05.0 +7.1**
CLL Collm 19.01 332 *e* Pn 18 57 13.0 +15
comp=Z,15nm,0.9s
BFO Black Forest 19.05 319 P **P** **18 56 57.1 -0.5**
BFO pmax pmax
comp=Z,14nm,0.8s
BFO Black Forest 19.05 319 **P** **18 56 57.0 -0.5**
MOX Moxa 19.05 329 P **Pn** **18 57 00.1 +1.7**
MOX pmax pmax
comp=Z,26nm,1.3s
SUW Suwalki 19.05 353 *e*P **P** **18 56 56.8 -0.8**
SUW Suwalki 19.05 353 *e*P **P** **18 56 57.6 0.0**
SUW Suwalki 19.05 353 P **P** **18 56 56.1 -1.4**
SUW pmax pmax
comp=Z,96nm,1.0s
SUW Suwalki 19.05 353 P **P** **18 56 56.1 -1.4**
SUW IAmb IAmb 18 57 22.7
comp=Z,96nm,1.0s
VRH Novokhopyorsk 19.31 29 *e*P **P** **18 57 00.7 +0.3**
VRH *e*S **Sn** **19 00 33.2 -4.1**
VRH pmax pmax
comp=Z,170nm,0.6s
VRH smax smax
comp=E,220nm,2.1s
GKP Gorka Klasztor 19.37 342 *e*P **Pn** **18 57 02.9 +0.7**
GKP Gorka Klasztor 19.37 342 *e*P **Pn** **18 57 02.8 +0.7**
MNK Minsk 19.38 2 *e*P **P** **18 57 00.0 -1.1**
MNK Minsk 19.38 2 *i* P **P** **18 56 59.2 -1.9**
comp=E,4.0nm,0.8s
MNK *i* P **P** **18 56 59.2 -1.9**
comp=N,69nm,0.9s
MNK *i* P **P** **18 56 59.2 -1.9**
comp=Z,79nm,0.8s
MNK *i* PP **sP** **18 57 11.4 +1.4**
MNK *i* S S 19 00 27.9 -11
MNK *i* SS **Sn** **19 00 43.8 +4.9**
MNK *i* LQ LQ 19 02 32.9
MNK *i* LR LR 19 03 57.9
MNK *i* LRM MLR 19 06 03.7
comp=E,54nm,17.9s
MNK *i* LRM MLR 19 06 03.7
comp=N,397nm,14.1s
MNK *i* LRM MLR 19 06 06.2
comp=Z,790nm,22.1s
LPSR Galich'ya Gora 19.46 22 *e*P **P** **18 57 01.4 -0.6**
LPSR *e*S **Sn** **19 00 42.6 +1.8**
LPSR pmax pmax
comp=Z,40nm,0.9s
LPSR smax smax
comp=N,480nm,2.3s

ECH Echery 19.61 318 P **P** **18 57 03.4 -0.4**
ECH pmax pmax
comp=Z,14nm,1.0s
ECH Echery 19.61 318 P **P** **18 57 03.4 -0.4**
NACGM Naroch 19.77 360 *i* P **P** **18 57 05.5 +0.1**
NACGM *i* P **P** **18 57 05.5 +0.1**
NACGM *i* P **P** **18 57 05.5 +0.1**
NACGM *i* PP **PnPn** **18 57 20.0 -0.9**
NACGM *i* PPP PPP 18 57 34.8
NACGM *i* S **S** **19 00 41.1 -5.8**
NACGM *i* SS **SnSn** **19 01 01.8 -0.9**
NACGM *i* SSS SSS 19 01 19.5
NACGM *i* LQ LQ 19 02 57.6
NACGM *i* LR LR 19 04 05.2
SSB Saint Sauveur 19.78 308 P **P** **18 57 05.6 0.0**
SSB pmax pmax
comp=Z,20nm,1.0s
SSB Saint Sauveur 19.78 308 P **P** **18 57 05.6 0.0**
RAYN Ar Rayn 19.91 121 P **Pn** **18 57 09.0 0.0**
RAYN pmax pmax
comp=Z,35nm,1.0s
RAYN Ar Rayn 19.91 121 **Pn** **18 57 09.0 0.0**
HAU Haudompre 19.95 316 *e*P **P** **18 57 07.0 -0.5**
HAU pmax pmax
comp=Z,12nm,0.8s
IDID Didziasalis 20.18 360 *e*P **P** **18 57 08.8 -1.0**
IIGN Ignalina 20.22 359 *e*P Pn 18 57 11.3 -0.9
ISAL Salakas 20.44 359 *e*P Pn 18 57 13.9 -1.0
PABE Paberze 20.47 355 *e*P **P** **18 57 12.3 -0.6**
WLF Walferdange 20.99 320 P **P** **18 57 18.9 +0.2**
WLF pmax pmax
comp=Z,24nm,0.8s
WLF Walferdange 20.99 320 P **P** **18 57 18.9 +0.2**
OBN Obninsk 21.08 16 P **P** **18 57 18.5 -1.0**
comp=Z,5.8nm,0.5s,baz=162,slow=9.9,SNR=7.5
OBN S **S** **19 01 07.7 -5.2**
comp=Z,3.2nm,0.7s,baz=30,slow=23,SNR=1.8
OBN Obninsk 21.08 16 *e*P **P** **18 57 18.0 -1.5**
OBN *e* 18 57 38.3
OBN *e* 18 57 52.4
OBN *e* 19 01 24.8
OBN pmax pmax
comp=Z,42nm,1.0s
OBN Obninsk 21.08 16 P **P** **18 57 16.3 -3.3**
OBN IAmb IAmb 18 57 39.9
comp=Z,111nm,1.4s
AVF Avril sur Loir 21.15 311 *e*P **P** **18 57 19.5 -0.9**
AVF pmax pmax
comp=Z,29nm,0.9s
PBUR Paburge 21.16 352 *e*P **P** **18 57 22.6 +2.1**
BUG Bochum--Univer 21.55 325 P **P** **18 57 30.2 +5.5**
BUG pmax pmax
comp=Z,17nm,1.0s
BTNL Ternell 21.56 322 *d*P **P** **18 57 26.8 +2.0**
BTNL *d*pP **sP** **18 57 33.1 -0.3**
BSD Bornholm Skovb 21.63 341 *i* P **P** **18 57 26.8 +1.3**
BSD Bornholm Skovb 21.63 341 *i* P **P** **18 57 26.7 +1.3**
MEM Membach 21.64 322 *d*P **P** **18 57 26.3 +0.7**
comp=Z,24nm,0.8s
MEM Membach 21.64 322 P **P** **18 57 26.5 +0.9**
MEM pmax pmax
comp=Z,34nm,0.8s
TCF Toulx Ste Croi 21.67 308 *e*P **P** **18 57 27.9 +1.8**
TCF pmax pmax
comp=Z,50nm,1.8s
RCHB Rochefort 21.77 320 *d*P **P** **18 57 28.7 +1.7**
RJF Les Rejaudoux 21.78 305 *e*P **P** **18 57 26.6 -0.6**
RJF pmax pmax
comp=Z,22nm,0.9s
BSTI Sart Tilman 21.84 322 *d*P **P** **18 57 28.9 +1.0**
BCLA Clavier 21.88 321 *d*P **P** **18 57 28.4 +0.2**
comp=Z,19nm,0.9s
MOS Moscow 21.89 16 *e*P **P** **18 57 25.7 -2.6**
MOS *e* 18 57 47.5
MOS *e*PPP PPP 18 57 53.7
MOS *e*S **S** **19 01 25.0 -4.0**
MOS *e*SS **SnSn** **19 01 59.5 +4.8**
MOS pmax pmax
comp=Z,77nm,1.0s
GIVF Givet 21.95 320 *e*P **P** **18 57 27.7 -1.3**
GIVF pmax pmax
comp=Z,14nm,0.7s
BGES Gesves 21.97 321 *d*P **P** **18 57 28.7 -0.5**
comp=Z,15nm,1.1s
EPF Esparros 21.99 299 *e*P **P** **18 57 29.7 +0.2**
EPF pmax pmax
comp=Z,6.0nm,1.0s
DOU Dourbes 22.07 319 *d*P **P** **18 57 30.2 0.0**
DOU Dourbes 22.07 319 P **P** **18 57 31.8 +1.6**
DOU pmax pmax
comp=Z,31nm,0.8s
BAIF Baives 22.25 319 *e*P **P** **18 57 31.1 -1.1**
BAIF pmax pmax
comp=Z,19nm,0.7s
TAM Tamanrasset 22.31 242 P **P** **18 57 33.4 +0.1**
TAM pmax pmax
comp=Z,40nm,1.4s
TAM Tamanrasset 22.31 242 P **P** **18 57 33.4 +0.1**
TAM IAmb IAmb 18 57 37.4
comp=Z,40nm,1.4s
CLF Chambon-Foret 22.35 313 P **P** **18 57 33.9 +0.6**
CLF IAmb IAmb 18 57 52.6
comp=Z,46nm,1.0s
BLEU Blekinge 22.48 344 *e* **P** **18 57 30.0 -4.6**
baz=158,slow=7.9
BLEU *i* P **pP** **18 57 33.0 -7.6**
LUNU Lund 22.48 340 *i* P **P** **18 57 33.6 -1.1**
ETSF Etsaut 22.61 298 *e*P **P** **18 57 39.0 +2.8**
ETSF pmax pmax
comp=Z,5.0nm,0.6s
BELG Belogornoye 22.72 34 P **P** **18 57 36.5 -0.6**
comp=Z,139nm,0.9s,baz=33,slow=1.3,SNR=26
BELG S **S** **19 01 42.7 -1.6**
comp=Z,8.7nm,0.7s,baz=221,slow=19,SNR=1.7
BELG Belogornoye 22.72 34 *i* P **P** **18 57 36.6 -0.6**
BELG pmax pmax
comp=Z,29nm,1.1s
DEL Delary 23.10 341 *i* P **P** **18 57 40.7 -0.4**
MTSE Matsula 23.68 356 *e*P **P** **18 57 46.0 -0.7**
FABU Falkenberg 23.88 341 *e*P **P** **18 57 51.5 +2.8**
ESBB Sonseca Array 24.84 290 P **P** **18 57 57.4 -0.4**
ESBB IAmb IAmb 18 57 59.8
comp=Z,17nm,1.1s
ESDC Sonseca Array 24.84 290 P **P** **18 57 57.7 -0.1**
comp=Z,6.6nm,0.7s,baz=81,slow=9.3,SNR=22
ESDC Sonseca Array 24.84 290 P **P** **18 57 56.9 -1.0**
PAB San Pablo 25.14 289 P **P** **18 58 00.4 -0.1**
PAB pmax pmax
comp=Z,11nm,0.9s
PAB San Pablo 25.14 289 P **P** **18 58 00.4 -0.1**
GEYT Alibeck 25.20 74 P **P** **18 58 01.2 +0.2**
comp=Z,7.9nm,0.4s,baz=260,slow=8.9,SNR=12
GEYT Alibeck 25.20 74 P **P** **18 58 00.7 -0.4**
GYA0 ALIBECK ARRAY 25.20 74 P **P** **18 58 02.2 +1.1**
GYA0B ALIBECK ARRAY 25.20 74 P **P** **18 58 01.5 +0.4**
GYA0B IAmb IAmb 18 58 26.6
comp=Z,22nm,0.8s
MDT Midelt 26.15 274 P **P** **18 58 10.0 +0.2**
comp=Z,12nm,1.1s,baz=91,slow=9.0,SNR=10
FINES FINESS Array B 26.33 359 P **P** **18 58 10.1 -0.9**
comp=Z,5.5nm,0.6s,baz=154,slow=12,SNR=9.3
FINES S **S** **19 02 38.0 -4.5**
comp=Z,2.8nm,0.7s,baz=173,slow=16,SNR=2.7
FINES FINESS Array B 26.33 359 P **P** **18 58 09.7 -1.3**
FIA1 FINESS Array S 26.33 359 **P** **18 58 11.9 +1.0**
FIA1 IAmb IAmb 18 58 27.7
comp=Z,47nm,1.3s
VALR Valaam 26.37 4 *i* P **P** **18 58 10.0 -1.3**
VALR pmax pmax
comp=Z,29nm,0.9s
HFS Hagfors 26.44 345 P **P** **18 58 10.6 -1.4**
comp=Z,7.7nm,0.7s,baz=150,slow=9.9,SNR=13
OSL Oslo 26.95 342 *e*P **P** **18 58 18.0 +1.4**
KLMR Klimovskoe 26.99 14 *e*P **P** **18 58 14.4 -2.5**
KLMR pmax pmax
comp=Z,31nm,1.1s
KLMR Klimovskoe 26.99 14 *e*P **P** **18 58 14.5 -2.5**
KLMR AMP 18 58 29.7
comp=Z,31nm,1.1s
KONO Kongsberg 27.00 341 *e*P **P** **18 58 18.0 +1.0**
PBRG Braganca 27.02 294 *e*P **P** **18 58 17.3 -0.2**
comp=Z,41nm,1.4s
MVO Moncorvo 27.21 293 *e*P **P** **18 58 18.9 -0.4**
comp=Z,42nm,1.6s

AKTO Aktyubinsk 27.25 46 P **P** **18 58 19.6 +0.2**
comp=Z,13nm,0.7s,baz=252,slow=8.3,SNR=21
UOSS Minazif 27.26 104 P **P** **18 58 20.9 +1.1**
UOSS IAmb IAmb 18 58 32.4
comp=Z,21nm,1.0s
PBAR Barrancos 27.29 286 *e*P **P** **18 58 19.7 -0.1**
comp=Z,32nm,1.3s
NC602 NORSAR Array S 27.45 344 P **P** **18 58 19.4 -1.7**
NC602 IAmb IAmb 18 58 47.8
comp=Z,26nm,1.1s
NC602 NORSAR Array S 27.45 344 *e*P **P** **18 58 21.2 +0.1**
NORES NORESS Array B 27.45 344 P **P** **18 58 20.9 -0.2**
PMRV Marv??o 27.49 289 *e*P **P** **18 58 19.9 -1.8**
comp=Z,22nm,1.2s
PCBR Castelo Branco 27.55 290 *e*P **P** **18 58 23.1 +0.9**
PESTR Estremoz 27.67 288 P **P** **18 58 20.9 -2.4**
NAO01 NORSAR Array S 27.70 343 P **P** **18 58 22.2 -1.2**
NAO01 IAmb IAmb 18 58 43.5
comp=Z,35nm,1.1s
NC405 NORSAR Array S 27.75 344 P **P** **18 58 22.2 -1.6**
NC405 IAmb IAmb 18 58 24.7
comp=Z,30nm,1.1s
NB201 NORSAR Array S 27.79 344 P **P** **18 58 23.4 -0.8**
POLO Lamas de Olo 27.80 293 *e*P **P** **18 58 24.7 +0.2**
NB2 NORSAR Subarra 27.80 344 P **P** **18 58 22.7 -1.5**
baz=156,slow=9.3
NOA NORSAR Array B 27.80 344 P **P** **18 58 22.1 -2.1**
comp=Z,1.9nm,0.7s,baz=147,slow=11,SNR=9.6
KIRV Kirov 27.80 26 P **P** **18 58 22.6 -1.6**
comp=Z,14nm,0.5s,baz=239,slow=4.8,SNR=8.7
KIRV Kirov 27.80 26 *e*P **P** **18 58 23.3 -0.9**
PVIS Viseu 27.86 292 *e*P **P** **18 58 23.3 -1.8**
comp=Z,34nm,1.8s
PVAQ Vaqueiros 27.89 285 *e*P **P** **18 58 24.8 -0.4**
comp=Z,30nm,1.5s
PVAQ Vaqueiros 27.89 285 P **P** **18 58 24.5 -0.8**
PVAQ IAmb IAmb 18 58 27.1
comp=Z,22nm,1.1s
NC303 NORSAR Array S 27.93 344 P **P** **18 58 22.1 -3.2**
AB31 Akbulak array 28.02 50 *e*P **P** **18 58 26.4 +0.1**
ABKAR Akbulak array 28.02 50 P **P** **18 58 26.1 -0.1**
ABKAR IAmb IAmb 18 58 46.0
comp=Z,9.2nm,0.7s
ABKAR Akbulak array 28.02 50 P **P** **18 58 25.7 -0.6**
EVO Evora 28.02 287 *e*P **P** **18 58 25.0 -1.5**
comp=Z,25nm,1.6s
PBDV Barranco-do-Ve 28.07 285 *e*P **P** **18 58 26.9 -0.1**
NC204 NORSAR Array S 28.11 343 P **P** **18 58 25.0 -2.0**
NC204 IAmb IAmb 18 58 33.5
comp=Z,14nm,1.1s
PMTG Montargil 28.16 288 *e*P **P** **18 58 30.1 +2.5**
comp=Z,24nm,1.5s
SKAR Skarslia 28.22 341 *e*P **P** **18 58 29.0 +1.0**
MESJ Messejana 28.24 286 *e*P **P** **18 58 28.4 +0.1**
MESJ IAmb IAmb 18 58 35.5
comp=Z,14nm,1.1s
MESJ Messejana 28.24 286 *e*P **P** **18 58 28.5 +0.1**
MESJ Messejana 28.24 286 *e*P **P** **18 58 29.4 +1.0**
comp=Z,20nm,1.5s
PNCL Nicolau / Gran 28.46 287 *e*P **P** **18 58 31.0 +0.7**
EKA Eskdalemuir Ar 28.88 324 P **P** **18 58 33.0 -0.9**
comp=Z,0.6nm,0.3s,baz=125,slow=11,SNR=12
EKA PcP **PcP** **19 01 43.0 +0.3**
comp=Z,0.7nm,0.6s,baz=119,slow=4.1,SNR=2.2
HRA Herat 28.98 81 P **P** **18 58 34.8 -0.5**
HRA IAmb IAmb 18 58 43.3
comp=Z,19nm,1.4s
PRGR Permogore 29.07 18 *e*P **P** **18 58 33.9 -1.6**
PRGR *e*S **S** **19 03 20.1 -5.6**
PRGR pmax pmax
comp=Z,24nm,0.8s
DOMB Dombas 29.18 343 *e*P **P** **18 58 37.9 +1.4**
WSAR Wadi Sarin 30.03 105 P **P** **18 58 46.1 +1.7**
comp=Z,1.4nm,0.5s,baz=291,slow=8.8,SNR=3.5
ARU Arti 30.25 35 P **P** **18 58 46.0 0.0**
comp=Z,2.3nm,0.3s,baz=233,slow=7.6,SNR=10
ARU Arti 30.25 35 *d i*P **P** **18 58 45.5 -0.5**
ARU 18 59 40.3
ARU S **S** **19 03 46.5 +2.2**
ARU pmax pmax
comp=Z,19nm,1.2s
ARU Arti 30.25 35 P **P** **18 58 46.0 0.0**
ARU IAmb IAmb 18 58 46.7
comp=Z,17nm,1.1s
NSS Namsos 30.79 347 *e*P **P** **18 58 50.8 +0.2**
SVE Sverdlovsk 31.44 36 *d*e**P** **P** **18 58 57.3 +0.8**
SVE pmax pmax
comp=Z,21nm,0.7s
TOA0 Torodi Ar. Sit 31.57 232 P **P** **18 58 58.1 +0.1**
TOA0 IAmb IAmb 18 58 59.6
comp=Z,17nm,1.1s
TORD Torodi Ar. Bea 31.57 232 P **P** **18 58 58.1 +0.1**
comp=Z,9.4nm,0.4s,baz=33,slow=9.0,SNR=66
TORD Torodi Ar. Bea 31.57 232 P **P** **18 58 57.8 -0.2**
TORD IAmb IAmb 18 58 59.2
comp=Z,12nm,1.3s
MOR8 Moi Rana 31.93 350 *e*P **P** **18 59 00.1 -0.6**
STOK Stokkvaagen 32.28 350 *e*P **P** **18 59 04.8 +1.0**
KONS Konsvik 32.42 350 *e*P **P** **18 59 05.5 +0.5**
FAUS Fauske 32.98 352 *e*P **P** **18 59 09.1 -0.7**
STEI Steigen 33.51 352 *e*P **P** **18 59 13.5 -0.9**
SOCY Socotra 33.55 126 P **P** **18 59 17.4 +2.0**
LOF Lofoten 33.90 351 *e*P **P** **18 59 16.8 -1.1**
KTK1 Kautokeino 33.99 358 *e*P **P** **18 59 18.0 -0.7**
IUG Iuzhnay 34.14 65 *e*P **P** **18 59 20.4 -0.1**
comp=Z,7.8nm,0.9s,baz=65
IUG *e*S **S** **19 04 46.3 +0.8**
baz=65
IUG Iuzhnay 34.14 65 *e*P **P** **18 59 20.3 -0.1**
IUG *e*S **S** **19 04 46.3 +0.8**
IUG pmax pmax
comp=Z,8.0nm,0.9s
KBL Kabul 34.43 79 P **P** **18 59 26.8 +3.6**
KBL pmax pmax
comp=Z,6.0nm,0.9s
ARA0 ARCESS Array S 34.46 359 *e*P **P** **18 59 21.6 -1.2**
ARCES ARCESS Array B 34.46 359 P **P** **18 59 21.4 -1.3**
comp=Z,7.1nm,0.8s,baz=175,slow=8.7,SNR=19
KK31 Karatay Array 34.46 63 *i* P **P** **18 59 23.9 +0.8**
KK31 Karatay Array 34.46 63 P **P** **18 59 23.8 +0.6**
KK31 IAmb IAmb 18 59 25.1
comp=Z,18nm,1.1s
KKAR Karatay Array 34.46 63 P **P** **18 59 23.9 +0.8**
KKAR pmax pmax
comp=Z,18nm,1.1s
KKAR Karatay Array 34.46 63 P **P** **18 59 23.9 +0.8**
KKAR IAmb IAmb 18 59 25.2
comp=Z,18nm,1.1s
KOWA Kowa 34.53 241 P **P** **18 59 23.3 -0.6**
comp=Z,1.4nm,0.4s,baz=360,slow=2.9,SNR=4.6
GAR Garm 34.64 71 P **P** **18 59 25.7 +0.9**
JETT Jettan, Norway 34.66 356 *e*P **P** **18 59 23.5 -1.0**
TRO Tromso 34.83 355 *e*P **P** **18 59 24.8 -1.1**
DZA Taraz 35.07 64 *e*P **P** **18 59 28.3 -0.1**
baz=64
DZA *e*S **S** **19 05 00.6 +0.9**
baz=64
DZA Taraz 35.07 64 *e*P **P** **18 59 28.3 -0.1**
DZA *e*S **S** **19 05 00.5 +0.9**
BRVK Borovoye 35.30 46 P **P** **18 59 30.9 +0.7**
BRVK pmax pmax
comp=Z,28nm,1.2s
BRVK Borovoye 35.30 46 P **P** **18 59 30.9 +0.7**
BRVK IAmb IAmb 18 59 32.0
comp=Z,28nm,1.2s
BVAR Borovoye Array 35.35 46 P **P** **18 59 30.8 +0.1**
comp=Z,7.6nm,0.7s,baz=186,slow=3.0,SNR=34
HAMF Hammerfest 35.61 358 *e*P **P** **18 59 30.8 -1.7**
MBAR Mbarara 35.74 173 P **P** **18 59 34.3 -0.1**
comp=Z,2.6nm,0.2s,baz=248,slow=5.4,SNR=1.8
BRZS Berezniki 36.26 52 *e*P **P** **18 59 38.4 -0.1**
baz=52
BRZS Berezniki 36.26 52 *e*P **P** **18 59 38.4 -0.1**
EKS2 Erkin-Say 36.88 64 P **P** **18 59 45.8 +1.8**
SNR=19
BTLS Baital 36.96 60 *e*P **P** **18 59 44.4 -0.2**
baz=60
BTLS Baital 36.96 60 *e*P **P** **18 59 44.3 -0.2**
USP Ospenovka 37.37 63 P **P** **18 59 48.9 +0.9**
SNR=12
AAK Ala-Archa 37.41 64 P **P** **18 59 49.7 +1.1**
comp=Z,16nm,0.8s,baz=249,slow=4.9,SNR=40
AAK Ala-Archa 37.41 64 P **P** **18 59 50.3 +1.8**
SNR=16
AAK Ala-Archa 37.41 64 P **P** **18 59 50.0 +1.4**

AAK Ala-Archa 37.41 64 P P 18 59 50.0 +1.4
AAK IAmb IAmb 18 59 59.1
comp=Z,19nm,0.8s

UCH Uchtor 37.46 64 P P 18 59 50.8 +1.5
SNR=6.8

CHMS Chumysh 37.57 63 P P 18 59 51.3 +1.5
SNR=15

KBK Karagaybulak 37.74 64 P P 18 59 53.1 +1.7
SNR=16

NIL Nilore 38.04 79 P P 18 59 54.9 +1.1
NIL pmax pmax
comp=Z,27nm,0.9s

NIL Nilore 38.04 79 P P 18 59 54.9 +1.1
NIL IAmb IAmb 19 00 11.2
comp=Z,27nm,0.9s

TKM2 Tokmak 2 38.20 63 P P 18 59 56.2 +1.0
SNR=12

TKM2 Tokmak 2 38.20 63 P P 18 59 56.2 +1.0

ULHL Ulahol 38.74 64 P P 19 00 02.7 +2.9
SNR=6.2

AAA Alma-Ata 39.13 63 *e*P P 19 00 03.8 +0.8
comp=Z,13nm,0.9s,baz=63
AAA *e*S S 19 06 02.6 +1.1
baz=63

AAA Alma-Ata 39.13 63 *e*P P 19 00 03.7 +0.8
AAA *e*S S 19 06 02.6 +1.1
AAA pmax pmax
comp=Z,13nm,0.9s

TNSS Tian-Shan 39.17 63 *e*P P 19 00 03.9 +0.2
baz=63

TNSS Tian-Shan 39.17 63 *e*P P 19 00 03.9 +0.2

MDOK Medeo 39.23 63 *e*P P 19 00 04.3 +0.5
baz=63

MDOK Medeo 39.23 63 *e*P P 19 00 04.3 +0.5

KURBB Kurchatov Arra 40.05 51 P P 19 00 11.3 +0.9
comp=Z,42nm,0.7s,baz=276,slow=8.8,SNR=98

TDK Taldyqorghan 40.05 60 *e*P P 19 00 10.9 +0.4
comp=Z,22nm,0.7s,baz=60
TDK *e*S S 19 06 16.7 +1.4
baz=60

TDK Taldyqorghan 40.05 60 *e*P P 19 00 10.9 +0.4
TDK *e*S S 19 06 16.6 +1.4
TDK pmax pmax
comp=Z,22nm,0.7s

KURK Kurchatov 40.11 51 P P 19 00 11.3 +0.5

KURK Kurchatov 40.11 51 P P 19 00 11.3 +0.5

SATY Saty 40.23 63 *e*P P 19 00 12.7 +0.5
comp=Z,20nm,1.0s,baz=63

SATY Saty 40.23 63 *e*P P 19 00 12.6 +0.5
SATY pmax pmax
comp=Z,20nm,1.0s

KPKS Kokpek 40.39 62 *e*P P 19 00 13.7 +0.2
baz=62

KPKS Kokpek 40.39 62 *e*P P 19 00 13.6 +0.2

DBIC Dimbokro 40.66 233 P P 19 00 15.3 -0.4
comp=Z,2.3nm,0.4s,baz=28,slow=8.6,SNR=12

UZB Uzynbulak 40.67 62 *e*P P 19 00 16.4 +0.5
baz=62

UZB Uzynbulak 40.67 62 *e*P P 19 00 16.3 +0.5

PDGK Podgornoye 40.99 62 P P 19 00 19.1 +0.7

SHLS Shalkode 40.99 62 *e*P P 19 00 21.2 +2.8
baz=62

SHLS Shalkode 40.99 62 *e*P P 19 00 21.2 +2.8

SEM Semipalatinsk 41.14 51 *i* P P 19 00 19.9 +0.3
comp=Z,10nm,0.7s,baz=51

SEM Semipalatinsk 41.14 51 *i* P P 19 00 19.8 +0.2
SEM pmax pmax
comp=Z,10.0nm,0.7s

MAKZ Makanchi 42.40 57 P P 19 00 30.8 +1.0
MAKZ pmax pmax
comp=Z,22nm,0.6s

MAKZ Makanchi 42.40 57 P P 19 00 30.8 +1.0

MK31 Makanchi Array 42.62 57 *i* P P 19 00 32.5 +0.9

MK31 Makanchi Array 42.62 57 P P 19 00 32.5 +0.9

MKAR Makanchi Array 42.62 57 P P 19 00 32.6 +1.0
comp=Z,36nm,0.6s,baz=279,slow=6.7,SNR=136

SPA0 Spitsbergen Ar 43.38 357 *e*P P 19 00 37.0 -0.3

SCO Scoresbysund 43.87 339 P P 19 00 41.5 +0.3
SCO pmax pmax
comp=Z,7.0nm,0.9s

SCO Scoresbysund 43.87 339 P P 19 00 41.5 +0.3

ZAA0 Zalesovo Array 44.01 46 P P 19 00 42.7 +0.1

ZALV Zalesovo Beam 44.01 46 P P 19 00 43.0 +0.4
comp=Z,42nm,0.6s,baz=269,slow=8.2,SNR=110

ZALV Zalesovo Beam 44.01 46 P P 19 00 42.6 0.0

ZSN Zaisan 44.31 55 *e*P P 19 00 45.5 +0.3
baz=56

ZSN Zaisan 44.31 55 *e*P P 19 00 45.5 +0.3

DGZ Jazzator, Alta 45.79 52 *d* iP P 19 00 58.2 +1.1
DGZ pmax pmax
comp=Z,18nm,0.8s

WMQ Urumqi 46.80 60 *e*P P 19 01 06.9 +1.9
WMQ pP sP 19 01 12.8 -0.8
WMQ sP pP 19 01 17.8 +6.4
WMQ pmax pmax
comp=Z,24nm,1.1s
WMQ pmax pmax
comp=Z,140nm,4.3s

WMQ Urumqi 46.80 60 P P 19 01 06.0 +1.0
WMQ pmax pmax
comp=Z,16nm,0.7s

WMQ Urumqi 46.80 60 P P 19 01 06.0 +1.0

NRIK Noril'sk 47.31 25 P P 19 01 09.3 +0.9
comp=Z,20nm,0.5s,baz=240,slow=3.7,SNR=34

NRIK Noril'sk 47.31 25 *ce*P P 19 01 08.8 +0.3
NRIK pmax pmax
comp=Z,20nm,0.5s

NRIK Noril'sk 47.31 25 P P 19 01 09.4 +0.9

PYUN Piuthan 47.77 82 *e*P P 19 01 13.8 +0.9

HYB Hyderabad 49.03 97 *i* P P 19 01 23.0 +0.4

GKN Gorkha 49.15 81 *e*P P 19 01 24.2 +0.7
comp=Z,14nm,0.4s

SUMG Summit 49.50 339 P P 19 01 25.4 -0.4
SUMG pmax pmax
comp=Z,11nm,1.1s

SUMG Summit 49.50 339 P P 19 01 25.4 -0.4
SUMG IAmb IAmb 19 01 31.2
comp=Z,11nm,1.1s

DMN Daman 49.69 82 *e*P P 19 01 28.5 +0.8
comp=Z,48nm,0.8s

PKIN Phulchoki 49.93 82 *e*P P 19 01 30.2 +0.6

PKI Pulchoki 49.95 82 *e*P P 19 01 30.7 +0.9

LSZ Lusaka 50.15 178 P P 19 01 31.6 +0.6
comp=Z,1.2nm,0.5s,baz=14,slow=8.1,SNR=3.7

GUN Gumba 50.19 81 *e*P P 19 01 32.4 +0.7
comp=Z,40nm,0.9s

JIRN Jiri 50.54 81 *e*P P 19 01 34.8 +0.5
comp=Z,30nm,0.9s

RAMN Ramite 51.17 82 *e*P P 19 01 38.8 -0.1
comp=Z,9.1nm,0.5s

ODAN Odare 51.84 81 *e*P P 19 01 44.4 +0.4

TAPN Taplejung 51.90 81 *e*P P 19 01 44.8 +0.3
comp=Z,6.9nm,0.4s

SFJD Kangerlussuaq 53.37 331 P P 19 01 54.3 -0.1
SFJD pmax pmax
comp=Z,6.0nm,0.8s

SFJD Kangerlussuaq 53.37 331 P P 19 01 54.3 -0.1

LSA Lhasa 53.71 77 P P 19 01 57.8 -0.2
LSA pmax pmax
comp=Z,6.0nm,0.7s

LSA Lhasa 53.71 77 P P 19 01 57.8 -0.2
LSA IAmb IAmb 19 02 14.9
comp=Z,5.7nm,0.7s

MOY Mondy 53.99 48 *e*P P 19 02 01.1 +1.8
MOY pmax pmax
comp=Z,24nm,1.8s

TLY Talaya 55.59 47 P P 19 02 12.3 +1.5
comp=Z,6.3nm,0.7s,baz=246,slow=7.6,SNR=4.6

TLY Talaya 55.59 47 *e*P P 19 02 12.8 +2.0
TLY pmax pmax
comp=Z,46nm,1.6s

TLY Talaya 55.59 47 P P 19 02 11.8 +1.0
TLY IAmb IAmb 19 02 26.6
comp=Z,16nm,0.9s

ZAK Zakamensk 55.71 49 *e*P P 19 02 12.5 +0.7
ZAK pmax pmax
comp=Z,18nm,1.2s

IRK Irkutsk 55.82 46 *e*P P 19 02 12.2 -0.2
IRK pmax pmax
comp=Z,29nm,2.7s

GTA Gaotai 56.73 62 *e*P P 19 02 19.6 +0.3
GTA pP sP 19 02 27.3 -0.7
GTA sP pP 19 02 30.6 +4.8
GTA pmax pmax
comp=Z,6.0nm,1.1s

TULEG Thule 57.46 344 P P 19 02 22.1 -1.5

ASCN Ascension 57.86 230 P P 19 02 25.4 -1.9

SONM Songino Array 58.41 51 P P 19 02 32.4 +1.4
comp=Z,5.8nm,0.5s,baz=285,slow=7.9,SNR=49

ULN Ulaanbaatar 58.82 51 *ce*P P 19 02 34.8 +0.9
ULN pmax pmax
comp=Z,12nm,0.8s

EUNU Eureka 59.48 349 P P 19 02 37.0 -0.8
EUNU IAmb IAmb 19 02 57.9
comp=Z,9.1nm,1.1s

BOD Bodaibo 59.61 38 *e*P P 19 02 38.6 -0.3
BOD pmax pmax
comp=Z,16nm,0.8s

TIXI Tiksi 60.69 21 ⇓*i*P P 19 02 45.7 -0.5

TIXI Tiksi 60.69 21 P P 19 02 45.6 -0.5
TIXI IAmb IAmb 19 02 46.7
comp=Z,7.8nm,0.7s

CD2 Chengdu 63.09 70 P P 19 03 04.0 +1.0
CD2 pmax pmax
comp=Z,20nm,0.9s

BOSA Boshof 63.43 182 P P 19 03 06.0 +1.0
comp=Z,4.9nm,1.1s,baz=12,slow=5.7,SNR=5.6

BOSA Boshof 63.43 182 IAmb IAmb 19 03 18.9
comp=Z,11nm,1.1s

BTO Baotou 63.52 58 *e*P P 19 03 05.8 0.0
BTO S S 19 11 34.3 -3.7
BTO pmax pmax
comp=Z,37nm,0.5s

HHC Hu-ho-hao-te 64.48 57 *e*P P 19 03 13.3 +1.2
HHC sP sP 19 03 23.0 +1.9
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,430nm,5.2s
HHC LR LR
comp=Z,1μm,15.3s
HHC LR LR
comp=Z,660nm,15.5s
HHC LR LR
comp=Z,1μm,16.4s

KMI Kunming 64.96 76 ⇑P P 19 03 17.4 +1.8
KMI pP sP 19 03 23.4 -0.7
KMI sP pwP 19 03 26.3 +1.4
KMI pmax pmax
comp=Z,10.0nm,0.6s

CHTO Chiang Mai 65.00 84 P P 19 03 15.3 -0.3
CHTO pmax pmax
comp=Z,6.0nm,0.8s

CHTO Chiang Mai 65.00 84 P P 19 03 15.3 -0.3
CHTO IAmb IAmb 19 03 34.3
comp=Z,5.7nm,0.8s

CM33 Chiang Mai Arr 65.00 84 P P 19 03 19.0 +3.3

CM32 Chiang Mai Arr 65.00 84 P P 19 03 31.0 +15

CMMT Chiang Mai 65.00 84 P P 19 03 18.0 +2.3

CM34 Chiang Mai Arr 65.15 84 P P 19 03 18.0 +1.4

CM15 Chiang Mai Arr 65.17 84 P P 19 03 23.9 +7.2

CM13 Chiang Mai Arr 65.17 84 P P 19 03 21.3 +4.6

CM31 Chiang Mai Arr 65.18 84 P P 19 03 24.1 +7.3

CM31 Chiang Mai Arr 65.18 84 P P 19 03 16.9 +0.1
CM31 IAmb IAmb 19 03 36.3
comp=Z,10nm,1.1s

CMAR Chiang Mai Arr 65.18 84 P P 19 03 17.1 +0.2
comp=Z,1.8nm,0.7s,baz=298,slow=8.0,SNR=12

CMAR Chiang Mai Arr 65.18 84 P P 19 03 16.8 0.0

CMAR Chiang Mai Arr 65.18 84 P P 19 03 16.8 0.0

YAK Yakutsk 65.19 30 *e*P P 19 03 15.6 -0.6
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.5s

YAK Yakutsk 65.19 30 P P 19 03 15.4 -0.8

CM02 Chiang Mai Arr 65.20 84 P P 19 03 21.0 +4.1

CM05 Chiang Mai Arr 65.21 84 P P 19 03 24.4 +7.4

CM01 Chiang Mai Arr 65.21 84 P P 19 03 23.9 +6.9

CM09 Chiang Mai Arr 65.23 84 P P 19 03 25.0 +7.9

CM04 Chiang Mai Arr 65.24 84 P P 19 03 26.1 +8.9

CM35 Chiang Mai Arr 65.24 84 P P 19 03 19.0 +1.8

XAN Xi'an 65.58 65 P P 19 03 20.3 +1.0
XAN pP sP 19 03 28.3 -0.1
XAN sP pwP 19 03 31.8 +3.1
XAN pmax pmax
comp=E,8.0nm,0.7s
XAN LR LR
comp=E,920nm,18.4s
XAN LR LR
comp=E,850nm,18.4s
XAN LR LR
comp=E,950nm,18.4s

XAN Xi'an 65.58 65 P P 19 03 19.3 0.0
XAN pmax pmax
comp=Z,9.0nm,0.8s

XAN Xi'an 65.58 65 P P 19 03 19.3 0.0
XAN IAmb IAmb 19 03 32.5
comp=Z,8.8nm,0.8s

LAMP Lampang 65.71 84 P P 19 03 22.4 +2.2

HIA Hailar 66.05 46 P P 19 03 23.0 +1.0
HIA pmax pmax
comp=Z,11nm,0.7s

HIA Hailar 66.05 46 P P 19 03 23.0 +1.0

SUKH Sukhothai 66.24 85 P P 19 03 27.0 +3.3

UMPA Umpang Tak 66.27 86 P P 19 03 36.9 +13

UTTA Uttaradit 66.86 84 P P 19 03 30.8 +3.2

PHIT Phitsanulok 67.03 85 P P 19 03 39.2 +10

GYA Guiyang 67.41 73 P P 19 03 34.0 +2.8
GYA pP pwP 19 03 40.3 -0.2
GYA pmax pmax
comp=Z,11nm,0.8s

SLVN Son La 67.75 79 P P 19 03 31.4 -1.8
SLVN IAmb IAmb 19 03 53.0
comp=Z,6.9nm,1.2s

ENH Enshi 67.76 68 P P 19 03 33.4 +0.2

BJT Baijiatuau 68.00 56 P P 19 03 33.7 -0.8
BJT pmax pmax
comp=Z,11nm,0.7s

BJT Baijiatuau 68.00 56 P P 19 03 33.7 -0.8

NONG Nongkai 68.80 82 P P 19 03 46.9 +7.1

CHAI Chaiyaphum 68.99 85 P P 19 03 44.3 +3.3

KHON Khomkaen 69.44 84 P P 19 03 48.0 +4.2

CN2 Changchun 72.14 49 *e*P P 19 04 06.1 +6.2
CN2 pmax pmax
comp=Z,10.0nm,0.7s

HNH Hanover 72.55 311 P P 19 04 00.9 -1.4
HNH IAmb IAmb 19 04 20.4
comp=Z,8.1nm,0.8s

BILL Bilibino 72.74 15 *e*P P 19 04 02.7 -0.3
BILL *i* 19 04 18.6
BILL *e* 19 04 25.1
BILL *e* 19 06 46.1
BILL *e*PPP PPP 19 08 29.8
BILL pmax pmax
comp=Z,10.0nm,1.7s

KLR Kul'dur 72.86 42 *ce*P P 19 04 03.9 -0.1
KLR pmax pmax
comp=Z,4.0nm,0.8s

SEY Seymchan 73.04 23 *i* P P 19 04 04.5 -0.3

C36M Paulatuk 73.65 350 P P 19 04 07.2 -1.1
C36M IAmb IAmb 19 04 08.4
comp=Z,8.6nm,0.6s

A21K Barrow 73.81 1 P P 19 04 08.5 -0.7
A21K IAmb IAmb 19 04 10.4
comp=Z,9.5nm,0.8s

NJ2 Nanjing 73.83 62 *e*P P 19 04 09.3 -0.7
NJ2 pmax pmax
comp=Z,7.0nm,0.5s

MA2 Magadan 74.90 26 *ce*P P 19 04 15.9 +0.1
MA2 pmax pmax
comp=Z,4.0nm,0.7s

MA2 Magadan 74.90 26 P P 19 04 16.3 +0.5
MA2 IAmb IAmb 19 04 37.5
comp=Z,7.4nm,0.8s

K58A Earlville 75.12 312 P P 19 04 15.3 -2.1

INK Inuvik 75.83 353 P P 19 04 19.7 -1.3
INK pmax pmax
comp=Z,5.0nm,1.1s

INK Inuvik 75.83 353 P P 19 04 19.6 -1.3

USA0B Ussuriysk Arra 75.86 46 P P 19 04 21.3 -0.3
USA0B pmax pmax
comp=Z,20nm,1.1s

USA0B Ussuriysk Arra 75.86 46 P P 19 04 21.3 -0.3

USRK Ussuriysk Ar. 75.86 46 P P 19 04 21.4 -0.2
comp=Z,7.8nm,0.6s,baz=295,slow=4.4,SNR=17

USRK Ussuriysk Ar. 75.86 46 P P 19 04 21.6 0.0

KSPA Keystone Colle 75.87 311 P P 19 04 19.7 -2.0
KSPA IAmb IAmb 19 04 35.3
comp=Z,15nm,1.2s

TOLK Toolik Lake Re 76.50 359 P P 19 04 25.0 +0.1
TOLK IAmb IAmb 19 04 45.3
comp=Z,5.2nm,0.8s

RDOG Red Dog Mine 76.86 4 P P 19 04 25.1 -1.7
RDOG IAmb IAmb 19 04 39.7
comp=Z,5.1nm,0.8s

N58A Sunbury 76.87 311 P P 19 04 25.9 -1.5

KSRS Korea Array 77.18 53 P P 19 04 29.6 +0.4
comp=Z,3.1nm,0.6s,baz=305,slow=4.6,SNR=11

YKA Yellowknife Ar 77.89 343 P P 19 04 32.3 -0.4
comp=Z,4.3nm,0.7s,baz=34,slow=5.6,SNR=43

COLD Coldfoot 77.93 359 P P 19 04 32.9 0.0

E46A Sault Ste Mari 77.98 319 P P 19 04 33.5 0.0
E46A IAmb IAmb 19 04 46.4
comp=Z,13nm,0.9s

EPYK Eagle Plains 78.03 353 P P 19 04 32.7 -0.7
EPYK IAmb IAmb 19 04 34.0
comp=Z,7.8nm,0.7s

ERPA Erie 78.11 313 P P 19 04 33.6 -0.8

TNA Tin City 78.97 6 P P 19 04 38.1 -0.5
TNA IAmb IAmb 19 04 57.5
comp=Z,10.0nm,1.3s

R58B Mineral 79.28 309 P P 19 04 38.9 -1.9
R58B IAmb IAmb 19 04 39.6
comp=Z,17nm,1.1s

E43A Lone Tree Farm 79.41 320 P P 19 04 40.5 -0.8
E43A IAmb IAmb 19 04 59.1
comp=Z,9.6nm,1.1s

PRP Porcupine Dome 79.50 357 P P 19 04 41.6 0.0

EGAK Eagle 79.97 355 P P 19 04 43.8 -0.3

YSS Yuzh-Sakhalins 80.08 39 *ce*P P 19 04 45.3 +0.3
YSS pmax pmax
comp=Z,31nm,1.7s

S57A Dark Hollow, R 80.08 309 P P 19 04 43.6 -1.5

MLY Manley 80.14 359 P P 19 04 45.1 +0.1

MDM Murphy Dome 80.16 358 P P 19 04 44.9 -0.2
MDM IAmb IAmb 19 04 46.0
comp=Z,8.7nm,0.7s

ANM Nome 80.16 5 P P 19 04 45.0 -0.1
ANM pmax pmax
comp=Z,11nm,1.0s

ANM Nome 80.16 5 P P 19 04 45.0 -0.1
ANM IAmb IAmb 19 04 58.0
comp=Z,11nm,1.0s

FFC Flin Flon 80.30 333 P P 19 04 46.0 -0.1
FFC pmax pmax
comp=Z,10.0nm,0.9s

FFC Flin Flon 80.30 333 P P 19 04 46.0 -0.1
FFC IAmb IAmb 19 05 05.2
comp=Z,10.0nm,0.8s

ILAR Eielson Array 80.30 357 P P 19 04 45.3 -0.6
comp=Z,1.7nm,0.7s,baz=340,slow=3.6,SNR=19

ILAR Eielson Array 80.30 357 P P 19 04 45.2 -0.7

CCB Clear Creek Bu 80.46 358 P P 19 04 46.1 -0.5

DAWY Dawson 80.53 354 P P 19 04 47.1 -0.1
DAWY IAmb IAmb 19 04 48.0
comp=Z,7.5nm,0.7s

WRH Wood River Hil 80.64 358 P P 19 04 47.5 -0.1
WRH IAmb IAmb 19 04 48.5
comp=Z,12nm,0.7s

COWI Conover 80.71 321 P P 19 04 48.3 -0.2
COWI IAmb IAmb 19 05 15.3
comp=Z,7.2nm,0.9s

K27K Chicken 80.78 355 P P 19 04 48.5 +0.1
K27K IAmb IAmb 19 04 49.7
comp=Z,6.6nm,0.8s

SCRK Sand Creek 80.95 356 P P 19 04 49.6 +0.1

BPAW Bear Paw Mtn. 81.08 359 P P 19 04 49.3 -0.7
BPAW IAmb IAmb 19 05 03.1
comp=Z,6.3nm,0.8s

ULM Lac du Bonnet 81.10 327 P P 19 04 49.5 -0.9
comp=Z,2.3nm,0.4s,baz=31,slow=3.9,SNR=6.8

ULM Lac du Bonnet 81.10 327 P P 19 04 49.5 -0.9
ULM pmax pmax
comp=Z,4.0nm,0.7s

ULM Lac du Bonnet 81.10 327 P P 19 04 49.5 -0.9

DOT Dot Lake 81.28 356 P P 19 04 51.2 +0.1
DOT IAmb IAmb 19 04 52.4
comp=Z,5.7nm,0.7s

RND Reindeer 81.73 358 P P 19 04 52.7 -0.9
RND pmax pmax
comp=Z,5.0nm,0.7s

RND Reindeer 81.73 358 P P 19 04 52.7 -0.9
RND IAmb IAmb 19 05 04.5
comp=Z,4.7nm,0.7s

MENT Mentasta 81.97 356 P P 19 04 54.3 -0.5
MENT IAmb IAmb 19 05 10.2
comp=Z,14nm,1.1s

PPLA Purkeypile 82.30 360 P P 19 04 55.9 -0.8
PPLA IAmb IAmb 19 05 10.0
comp=Z,10nm,0.8s

SKT Skwentna 83.22 359 P P 19 05 00.4 -0.9

SUA Susitna One 83.72 359 P P 19 05 03.8 -0.2

GRNC Granite Creek 84.02 354 P P 19 05 05.4 -0.3

T50A Nancy 84.21 312 P P 19 05 07.2 +0.4

MAT Matsushiro 84.29 49 P P 19 05 07.4 +0.1

MJAR Matsushiro Arr 84.29 49 P P 19 05 08.0 +0.7
comp=Z,3.4nm,0.7s,baz=320,slow=5.0,SNR=6.7

MJAR Matsushiro Arr 84.29 49 P P 19 05 07.6 +0.3
MJAR pmax pmax
comp=Z,8.0nm,1.0s

MJAR Matsushiro Arr 84.29 49 P P 19 05 07.6 +0.3
MJAR IAmb IAmb 19 05 21.4
comp=Z,8.3nm,1.0s

L40A Anamosa 84.55 319 P P 19 05 08.8 +0.4

CPCT Cooper Cave 85.02 310 P P 19 05 11.1 +0.1

U49A Red Boiling Sp 85.11 312 P P 19 05 11.4 0.0

ECSD EROS Data Cent 86.16 323 P P 19 05 17.1 +0.6
ECSD IAmb IAmb 19 05 31.3
comp=Z,5.5nm,0.8s

P40A Paris 86.75 317 P P 19 05 19.8 +0.3

CCM Cathedral Cave 87.32 316 P P 19 05 22.2 0.0
CCM pmax pmax
comp=Z,8.0nm,0.6s

CCM Cathedral Cave 87.32 316 P P 19 05 22.2 0.0

R40A Maddies Statio 87.73 317 P P 19 05 24.0 -0.3

EGMT Eagleton 88.58 333 P P 19 05 28.0 -0.2

JTMT Jette 90.46 335 P P 19 05 37.9 +0.8

NEW Newport 90.96 337 P P 19 05 41.8 +2.5
NEW pmax pmax
comp=Z,6.0nm,1.9s

WRA Warramunga Arr 115.20 97 PKP PKPdf 19 11 16.7 -0.3
comp=Z,0.4nm,0.8s,baz=316,slow=1.2,SNR=2.1

ASAR Alice Springs 116.67 101 PKP PKPdf 19 11 18.7 -1.1
comp=Z,0.2nm,0.3s,baz=301,slow=1.3,SNR=1.9

ROM 16 18:54:20.8±0.1,44°198N±0˝004×10°912E±0˝004,
h18km,Md1.2/4,1C,Error ellipse: s-maj=0.4km
s-min=0.2km az=3.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNVD	**Fontana Vidola**	**0.15**	**101**	P	Pg	18 54 25.3	+0.1
FNVD				S	Sg	18 54 28.3	+0.1
ZCCA	**Zocca**	**0.16**	**17**	⇑P	Pg	18 54 25.6	+0.3
ZCCA				AML	AML		
	comp=E,414μm,0.9s						
ZCCA				AML	AML		
	comp=N,542μm,0.4s						
ZCCA				AML	AML		
	comp=E,344μm,0.3s						
ZCCA				AML	AML		
	comp=N,615μm,0.4s						
ZCCA				AML	AML		
	comp=E,414μm,0.9s						
ZCCA				AML	AML		
	comp=N,542μm,0.4s						
MTCR	**Monte La Croce**	**0.18**	**160**	P	Pg	18 54 25.8	+0.1
MTCR				S	Sg	18 54 29.4	+0.5
MTCR				END			
POPM	**Popiglio**	**0.19**	**216**	P	Pb	18 54 24.9	-0.4
POPM				S	Sg	18 54 29.4	+0.5
POPM	**Popiglio**	**0.19**	**216**	P	Pg	18 54 25.9	+0.2
POPM				S	Sg	18 54 29.6	+0.7
POPM				AML	AML		
	comp=N,1140μm,0.2s						
POPM				AML	AML		
	comp=E,837μm,0.2s						
POPM				END			
BDI	**Bagni Di Lucca**	**0.26**	**239**	P	Pb	18 54 26.9	-0.1
BDI				S	Sb	18 54 31.5	+0.4
BDI				AML	AML		
	comp=E,344μm,1.1s						

BDI				AML	AML			
	comp=N,478μm,0.4s							
BDI				AML	AML			
	comp=N,522μm,0.4s							
BDI				AML	AML			
	comp=E,344μm,1.1s							
BDI				AML	AML			
	comp=N,478μm,0.4s							
BDI				AML	AML			
	comp=E,416μm,1.1s							
BDI				END				
SARO	**Sassorosso**	**0.37**	**268**	P	Pg	18 54 28.6	0.0	
SARO	**Sassorosso**	**0.37**	**268**	P	Pg	18 54 28.6	0.0	
SARO				S	Sb	18 54 34.3	0.0	
SARO				AML	AML			
	comp=N,271μm,0.2s							
SARO				AML	AML			
	comp=E,138μm,0.2s							
SARO				END				
PII	**Pisa**	**0.55**	**211**	AML	AML			
	comp=E,102μm,0.7s							
PII				AML	AML			
	comp=E,102μm,0.7s							
PII				AML	AML			
	comp=N,76μm,0.7s							
CSNT	**Castellina Chi**	**0.78**	**159**	AML	AML			
	comp=N,35μm,0.5s							
CSNT				AML	AML			
	comp=E,31μm,0.5s							
APEC	**Apecchio**	**1.26**	**120**	S	Sg	18 55 08.0	+6.2	

ROM 16 18:54:38.4±0.1, 44°210N×0°006×10°88E±0°01, h9km±1km, ML1.8/7, Error ellipse: s-maj=0.8km s-min=0.7km az=112.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.16**	**26**	P	Pg	18 54 42.6	+0.7
ZCCA				AML	AML		
	comp=E,414μm,0.9s						
ZCCA				AML	AML		
	comp=N,542μm,0.4s						
ZCCA				AML	AML		
	comp=N,615μm,0.4s						
ZCCA				AML	AML		
	comp=E,414μm,0.9s						
ZCCA				AML	AML		
	comp=E,344μm,0.3s						
ZCCA				AML	AML		
	comp=N,542μm,0.4s						
FNVD	**Fontana Vidola**	**0.18**	**104**	P	Pg	18 54 42.5	+0.3
FNVD				S	Sg	18 54 46.1	+1.2
POPM	**Popiglio**	**0.19**	**208**	P	Pg	18 54 42.9	+0.6
POPM				S	Sg	18 54 46.6	+1.6
POPM				AML	AML		
	comp=E,837μm,0.2s						
POPM				AML	AML		
	comp=N,1140μm,0.2s						
MTCR	**Monte La Croce**	**0.20**	**155**	P	Pg	18 54 43.2	+0.6
MTCR				S	Sg	18 54 46.4	+0.9
BDI	**Bagni Di Lucca**	**0.25**	**234**	P	Pb	18 54 44.9	-0.3
BDI				S	Sb	18 54 48.6	-1.0
BDI				AML	AML		
	comp=E,344μm,1.1s						
BDI				AML	AML		
	comp=N,478μm,0.4s						
BDI				AML	AML		
	comp=N,522μm,0.4s						
BDI				AML	AML		
	comp=E,344μm,1.1s						
BDI				AML	AML		
	comp=N,478μm,0.4s						
BDI				AML	AML		
	comp=E,416μm,1.1s						
CARD	**Cardoso**	**0.34**	**237**	AML	AML		
	comp=N,190μm,1.5s						
CARD				AML	AML		
	comp=E,297μm,0.7s						
CARD				AML	AML		
	comp=E,296μm,0.7s						
SARO	**Sassorosso**	**0.35**	**266**	P	Pg	18 54 45.6	+0.3
SARO				S	Sb	18 54 51.5	-0.9
SARO				AML	AML		
	comp=E,138μm,0.2s						
SARO				AML	AML		
	comp=N,271μm,0.2s						
VLC	**Villacollemand**	**0.36**	**262**	P	Pg	18 54 45.9	+0.4
VLC				S	Sb	18 54 52.0	-0.7
VLC				AML	AML		
	comp=E,392μm,0.4s						
VLC				AML	AML		
	comp=E,386μm,0.5s						
VLC				AML	AML		
	comp=E,391μm,0.4s						
VLC				AML	AML		
	comp=N,256μm,1.1s						
VLC				AML	AML		
	comp=N,274μm,1.1s						
ERBM	**Eremo**	**0.40**	**302**	P	Pg	18 54 46.7	+0.5
ERBM				AML	AML		
	comp=N,85μm,1.5s						
ERBM				AML	AML		
	comp=E,80μm,1.6s						
CRMI	**Carmignano**	**0.42**	**171**	P	Pb	18 54 47.7	-0.4

*IDC **16** 18:59:10.2±1.4, 37°01N×24°93E, h0km, mb3.6/5, mb1 3.6/5, mb1mx3.3/49, mbtmp3.6/5, MS4.2/1, Ms1 4.2/1, ms1mx3.3/59, Error ellipse: s-maj=45.4km s-min=13.0km az=103.0*

*ISK **16** 18:59:12.1, 34°95N×26°77E, h16km, ML3.2/15*

ISC 16 18:59:12.3±1.0, 34°95N±0°08×26°80E±0°04, h10km, n29, σ0884/29, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.51**	**289**	PG	**Pg**	**18 59 22.3**	**+0.1**
ZKR				SG	**Sg**	**18 59 29.5**	**+0.6**
KARP	**Karpathos**	**0.67**	**26**	PG	**Pg**	**18 59 25.7**	**+0.5**
KARP				SG	**Sb**	**18 59 35.8**	**+0.5**
IDI	**Anoyia**	**1.60**	**283**	Pg	**Pb**	**18 59 42.4**	**+0.4**
	9.2nm,0.3s,baz=316,slow=17,SNR=9.6						
IDI				Lg	Lg	19 00 03.6	
	11nm,0.3s,baz=256,slow=13,SNR=3.8						
IDI	**Anoyia**	**1.60**	**283**	PN	**Pn**	**18 59 40.4**	**-0.3**
ARG	**Arkhangelos**	**1.66**	**40**	PN	**Pn**	**18 59 41.9**	**+0.4**
NIS1	**Nisyros Isl.**	**1.68**	**10**	PN	**Pn**	**18 59 41.9**	**+0.2**
SANT	**Santorini**	**1.79**	**323**	PN	**Pn**	**18 59 42.9**	**-0.4**
KOSK	**Kos Island**	**1.81**	**4**	PN	**Pn**	**18 59 43.7**	**+0.3**
THT2	**Imerovigli**	**1.86**	**323**	PN	**Pn**	**18 59 44.1**	**-0.1**
BODT	**Bodrum**	**2.15**	**11**	PN	**Pn**	**18 59 48.5**	**+0.3**
TURN	**Turunc**	**2.17**	**32**	PN	**Pn**	**18 59 49.2**	**+0.8**
GVDS	**Gavdos**	**2.23**	**268**	PN	**Pn**	**18 59 49.9**	**+0.6**
GVD	**Gavdhos**	**2.23**	**268**	PN	**Pn**	**18 59 49.2**	**-0.1**
APE	**Apeiranthos**	**2.35**	**334**	PN	**Pn**	**18 59 50.9**	**-0.1**
IMMV	**Iera Moni Meta**	**2.37**	**283**	PN	**Pn**	**18 59 51.2**	**0.0**
DALY	**Dalyan (Mula)**	**2.40**	**38**	PN	**Pn**	**18 59 52.2**	**+0.7**
YER	**Yerkesik**	**2.49**	**28**	PN	**Pn**	**18 59 53.1**	**+0.2**
FETY	**Fethiye**	**2.50**	**47**	PN	**Pn**	**18 59 53.2**	**+0.1**
KNDR	**Palaiochora Ch**	**2.57**	**277**	PN	**Pn**	**18 59 54.9**	**+0.9**
AKAS	**Kas**	**2.62**	**60**	PN	**Pn**	**18 59 54.8**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**3.12**	**16**	PN	**Pn**	**19 00 02.1**	**+0.5**
KTHA	**Kythira Island**	**3.32**	**294**	PN	**Pn**	**19 00 04.5**	**+0.3**
CHOS	**Chios island**	**3.48**	**350**	PN	**Pn**	**19 00 06.4**	**-0.2**
GNI	**Garni**	**15.14**	**65**	LR	LR	19 09 51.1	
	comp=Z,909nm,18.9s,baz=223,slow=41						
TORD	**Torodi Ar. Bea**	**31.41**	**232**	P	**P**	**19 05 34.3**	**+0.7**
	0.7nm,0.9s,baz=33,slow=9.2,SNR=2.4						
MKAR	**Makanchi Array**	**42.77**	**56**	P	**P**	**19 07 09.8**	**0.0**
	0.9nm,0.9s,baz=269,slow=6.8,SNR=2.3						
ZALV	**Zalesovo Beam**	**44.18**	**46**	P	**P**	**19 07 17.4**	**-3.7**
	0.4nm,0.4s,baz=282,slow=9.2,SNR=2.1						
NRIK	**Noril'sk**	**47.50**	**25**	P	P	19 07 36.5	-11
	2.8nm,0.4s,baz=240,slow=15,SNR=4.4						
SONM	**Songino Array**	**58.58**	**51**	P	**P**	**19 09 09.3**	**+0.1**
	0.2nm,0.6s,baz=278,slow=6.5,SNR=2.4						

DJA 16 19:01:22.4±0.5, 1°N±5°×99°E±, h10km, M3.6/8, mb4.0/1, MLv3.4/8, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.96**	**98**	P	Pn	19 01 41.6	-0.3
MNSI				S	Sn	19 01 55.0	-0.7
MNSI	**Mandailing Nat**	**0.96**	**98**	P	Pb	19 01 41.2	+0.1
MNSI				S	Sb	19 01 54.2	+0.3
GSI	**Gunungsitoli**	**1.12**	**289**	P	Pb	19 01 43.4	-0.4
GSI	**Gunungsitoli**	**1.12**	**289**	P	Pb	19 01 43.2	-0.6
GSI				S	Sb	19 01 58.9	+0.4
BKNI	**Bangkinang**	**2.48**	**104**	P	Pn	19 02 02.7	-0.2
BKNI	**Bangkinang**	**2.48**	**104**	P	Pn	19 02 02.8	-0.1
TPTI		**2.73**	**328**	P	Pn	19 02 06.4	+0.1
TPTI		**2.73**	**328**	P	Pn	19 02 06.5	+0.2
LHMI	**Lhok Sumawe**	**4.59**	**339**	P	Pn	19 02 28.4	-3.5

*BJI **16** 19:02:11.5±0.0, 34°96N×26°58E, h30km, mB5.5/15, mb4.8/56, Ms5.2/13, Ms7 4.9/13*

*PDG **16** 19:02:12.9±0.1, 34°64N×25°82E, h15km±5km, ML4.9/13, Error ellipse: s-maj=5.3km s-min=3.5km az=90.0*

*NIC **16** 19:02:12.7±0.0, 34°96N×26°94E, h16km, Ml4.9/4*

*NEIC **16** 19:02:12.0±1.9, 35°07N±0°06×26°88E±0°06, h10km±1km, mb5.0/236, ML4.6(THE), Error ellipse: s-maj=10.7km s-min=8.8km az=186.0*

*HLW **16** 19:02:13.4, 35°05N×27°13E, h11km±20km, Ml4.9*

*ATH **16** 19:02:14.9, 35°13N×26°85E, h36km±4km, ML4.9/13, Error ellipse: s-maj=5.5km s-min=1.6km az=150.0*

*ISK **16** 19:02:14.6, 35°14N×26°86E, h17km, ML4.8/25*

*MED_RC **16** 19:02:15.0±1.0, 35°05N×26°74E, h24km, MW5.0/16, Moment Tensor Solution. Mantle waves: s16,c18; Duration: 1s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.98±.52; $M_{\theta\theta}$-3.44±.29; $M_{\phi\phi}$2.46±.29; $M_{r\theta}$-1.33±.42; $M_{r\phi}$1.28±.28; $M_{\theta\phi}$-2.14±.27; Best double couple: $M_0$4.15000×10^{16} NP1:ϕ_s141.00000°, δ56.00000°, λ162.00000°. NP2:ϕ_s241.00000°, δ75.00000°, λ35.00000°. Principal axes: T 4.4000, Plg35.0000°, Azm106.0000°; N -0.5100, Plg52.0000°, Azm261.0000°; P -3.8900, Plg12.0000°, Azm7.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=40s.*

*THE **16** 19:02:15.2, 35°14N×26°81E, h1km±1km, ML4.6/7 Error ellipse: s-maj=3.7km s-min=0.7km az=153.0*

*DDA **16** 19:02:15.5, 35°34N×26°93E, h12km±2km, MW4.9*

*IDC **16** 19:02:15.9±2.9, 35°24N×26°77E, h32km±21km, mb4.5/37, mb1 4.5/46, mb1mx4.5/58, mbtmp4.6/46, ML4.1/8, MS4.7/4, Ms1 4.7/4, ms1mx3.7/55, Error ellipse: s-maj=12.6km s-min=8.7km az=150.0*

*MOS **16** 19:02:16.4±1.2, 35°15N×26°80E, h21km, mb5.1/43, MS4.4/11, Error ellipse: s-maj=4.3km s-min=2.4km az=97.5*

*GCMT **16** 19:02:18.0±0.5, 35°17N±0°03×26°80E±0°03, h20km±2km, MW5.0/75, Moment Tensor Solution. s1,c1; s75,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.64±.35; $M_{\theta\theta}$-3.51±.24; $M_{\phi\phi}$1.87±.20; $M_{r\theta}$-1.49±.49; $M_{\theta\phi}$1.81±.18; $M_{r\phi}$-1.67±.47; Best double couple: $M_0$4.18700×10^{16} NP1:ϕ_s145.00000°, δ55.00000°, λ156.00000°. NP2: ϕ_s249.00000°, δ71.00000°, λ38.00000°. Principal axes: T 4.1450, Plg40.0000°, Azm112.0000°; N 0.0850, Plg48.0000°, Azm272.0000°; P -4.2300, Plg10.0000°, Azm14.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 19:02:14.5±0.7, 35°10N±0°03×26°86E±0°02, h25km±4km, n1029, σ1965/1119, mb5.0/226, MS4.8/12, 48C-39D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.51**	**28**	P	**Pb**	**19 02 24.5**	**-0.3**
KARP				S	**Sn**	**19 02 33.4**	**-0.8**
KARP				AML	AML	19 02 35.2	
KARP				AML	AML	19 02 35.5	
KARP	**Karpathos**	**0.51**	**28**	P	**Pb**	**19 02 24.8**	**-0.1**
KARP				S	**Sn**	**19 02 33.5**	**-0.7**
	103μm,0.5s						
KARP	**Karpathos**	**0.51**	**28**	PG	**Pb**	**19 02 24.6**	**-0.3**
KARP				SG	**Sb**	**19 02 31.7**	**-0.2**
KARP	**Karpathos**	**0.51**	**28**	Pg	**Pb**	**19 02 24.8**	**-0.1**
KARP	**Karpathos**	**0.51**	**28**	↑P	**Pb**	**19 02 24.8**	**-0.1**
KARP				S	**Sn**	**19 02 34.2**	**-0.1**
KARP				AML	AML	19 02 34.8	
	212nm,0.5s						
KARP				AML	AML	19 02 34.8	
	212nm,0.5s						
KARP				AML	AML	19 02 35.1	
	200nm,0.6s						
KARP				AML	AML	19 02 35.1	
	200nm,0.6s						
ZKR	**Zakros**	**0.53**	**272**	P	**Pb**	**19 02 25.1**	**-0.2**
ZKR				S	**Sn**	**19 02 34.0**	**-0.7**
ZKR				AML	AML	19 02 34.3	
ZKR				AML	AML	19 02 34.7	
ZKR	**Zakros**	**0.53**	**272**	P	**Pb**	**19 02 25.0**	**-0.2**
ZKR				S	**Sn**	**19 02 33.8**	**-1.0**
	133μm,0.4s						
ZKR	**Zakros**	**0.53**	**272**	PG	**Pb**	**19 02 25.2**	**0.0**
ZKR				SG	**Sn**	**19 02 33.7**	**-1.0**
ZKR	**Zakros**	**0.53**	**272**	P	**Pb**	**19 02 24.9**	**-0.3**
ZKR				AML	AML	19 02 32.9	
	172nm,0.5s						
ZKR				AML	AML	19 02 32.9	
	172nm,0.5s						
ZKR				AML	AML	19 02 33.3	
	306nm,0.3s						
ZKR				AML	AML	19 02 33.3	
	306nm,0.3s						
ZKR				S	**Sn**	**19 02 34.0**	**-0.7**
STIA	**Sitia Lasithi**	**0.64**	**279**	P	**Pb**	**19 02 26.0**	**-1.1**
STIA				S	**Sn**	**19 02 36.6**	**-0.8**
FRMA	**Ierapetra Chan**	**0.93**	**265**	P	**Pb**	**19 02 29.9**	**-2.1**
FRMA				S	**Sb**	**19 02 43.3**	**-0.6**
	25μm,0.6s						
NPS	**Neapolis**	**1.04**	**279**	P	**Pn**	**19 02 34.7**	**+1.2**
NPS				S	**Sn**	**19 02 48.3**	**+1.0**
NPS				AML	AML	19 02 55.8	
NPS				AML	AML	19 02 56.3	
NPS	**Neapolis**	**1.04**	**279**	P	**Pn**	**19 02 34.3**	**+0.8**
NPS				S	**Sn**	**19 02 48.5**	**+1.2**
	118μm,0.8s						
NPS	**Neapolis**	**1.04**	**279**	P	**Pn**	**19 02 34.3**	**+0.8**
NPS				S	**Sn**	**19 02 48.5**	**+1.2**
IACM	**Heraklion**	**1.48**	**278**	P	**Pb**	**19 02 42.1**	**+0.8**
KSTL	**Kastelli Herak**	**1.48**	**278**	P	**Pn**	**19 02 38.4**	**-1.2**
KSTL				S	**Sn**	**19 02 54.9**	**-3.3**
ARG	**Arkhangelos**	**1.52**	**42**	P	**Pb**	**19 02 42.5**	**+0.5**
ARG				AML	AML	19 03 16.8	
	comp=N,21303μm,0.6s						
ARG				AML	AML	19 03 24.5	
	comp=E,37991μm,1.2s						
ARG	**Arkhangelos**	**1.52**	**42**	P	**Pb**	**19 02 42.4**	**+0.5**
ARG				S	**Sb**	**19 03 02.4**	**+1.7**
	comp=E,14μm,1.1s						
ARG	**Arkhangelos**	**1.52**	**42**	P	**Pb**	**19 02 42.4**	**+0.5**
ARG				S	**Sb**	**19 03 01.8**	**+1.1**
ARG	**Arkhangelos**	**1.52**	**42**	PN	**Pb**	**19 02 41.7**	**-0.2**
NIS1	**Nisyros Isl.**	**1.52**	**10**	P	**Pb**	**19 02 41.9**	**-0.1**
NIS1	**Nisyros Isl.**	**1.52**	**10**	PN	**Pb**	**19 02 41.6**	**-0.4**
IDI	**Anoyia**	**1.63**	**277**	Pn	**Pn**	**19 02 41.0**	**-0.6**
	comp=E,269nm,0.3s,baz=62,slow=5.8,SNR=64						
IDI				Sn	**Sb**	**19 03 06.8**	**+2.7**
	comp=E,1μm,0.3s,baz=345,slow=15,SNR=7.1						
IDI				LR	LR	19 03 42.5	
	comp=E,8μm,21.3s,baz=118,slow=56						
IDI	**Anoyia**	**1.63**	**277**	P	**Pb**	**19 02 44.5**	**+0.7**
IDI				S	**Sb**	**19 03 03.6**	**-0.4**
IDI				AML	AML	19 03 14.5	
	comp=N,31630μm,1.0s						
IDI				AML	AML	19 03 27.4	
	comp=E,30392μm,0.7s						
IDI	**Anoyia**	**1.63**	**277**	P	**Pb**	**19 02 43.7**	**-0.2**
IDI	**Anoyia**	**1.63**	**277**	PN	**Pb**	**19 02 43.7**	**-0.2**
IDI	**Anoyia**	**1.63**	**277**		**Pb**	**19 02 44.2**	**+0.3**
KOSK	**Kos Island**	**1.65**	**3**	P	**Pb**	**19 02 43.5**	**-0.7**
KOSK	**Kos Island**	**1.65**	**3**	PN	**Pb**	**19 02 43.2**	**-1.0**
SIVA	**Sivas**	**1.69**	**268**	P	**Pb**	**19 02 45.4**	**+0.5**
SIVA				AML	AML	19 03 16.4	
	comp=N,90039μm,0.7s						
SIVA				AML	AML	19 03 23.9	
	comp=E,84583μm,0.8s						
SANT	**Santorini**	**1.71**	**318**	P	**Pb**	**19 02 44.4**	**-0.8**
SANT				AML	AML	19 03 16.5	
	comp=E,59054μm,0.9s						
SANT				AML	AML	19 03 19.2	
	comp=N,22910μm,0.7s						
SANT	**Santorini**	**1.71**	**318**	P	**Pb**	**19 02 44.3**	**-0.9**
SANT				S	**Sb**	**19 03 05.9**	**-0.4**
	comp=N,21μm,1.1s						
SANT	**Santorini**	**1.71**	**318**	⇓P	**Pb**	**19 02 44.4**	**-0.8**
SANT	**Santorini**	**1.71**	**318**	PN	**Pb**	**19 02 44.5**	**-0.8**
SANT	**Santorini**	**1.71**	**318**	Pn	**Pb**	**19 02 44.3**	**-0.9**
THR8	**Santorini-Mono**	**1.72**	**320**	P	**Pb**	**19 02 44.9**	**-0.6**
THR6	**Thira Island,**	**1.73**	**317**	P	**Pb**	**19 02 45.1**	**-0.5**
THR9	**Santorini-Faro**	**1.75**	**316**	P	**Pb**	**19 02 45.3**	**-0.7**
THR7	**Fira-Santorini**	**1.76**	**319**	P	**Pb**	**19 02 45.8**	**-0.3**
SNT5	**Nea Kammeni, S**	**1.77**	**318**	P	**Pb**	**19 02 45.2**	**-1.0**
THR3	**Thira Island,**	**1.77**	**318**	P	**Pb**	**19 02 45.9**	**-0.3**
THT2	**Imerovigli**	**1.78**	**319**	P	**Pb**	**19 02 45.7**	**-0.7**
THT2	**Imerovigli**	**1.78**	**319**	PN	**Pb**	**19 02 44.9**	**-1.5**
THR2	**Thira island,**	**1.78**	**320**	P	**Pb**	**19 02 47.1**	**+0.7**
THR5	**Thira Island,**	**1.80**	**317**	P	**Pb**	**19 02 45.9**	**-0.9**
SAP3	**Santorini-Thir**	**1.82**	**318**	P	**Pb**	**19 02 46.3**	**-0.8**
BODT	**Bodrum**	**1.99**	**10**	P	**Pn**	**19 02 47.3**	**+0.7**
BODT	**Bodrum**	**1.99**	**10**	PN	**Pn**	**19 02 47.3**	**+0.7**
TURN	**Turunc**	**2.01**	**33**	*i* P	**Pb**	**19 02 48.5**	**-1.8**
TURN	**Turunc**	**2.01**	**33**	PN	**Pb**	**19 02 48.8**	**-1.6**
BDRM	**Kayabasi**	**2.02**	**13**	*i* P	**Pb**	**19 02 48.8**	**-1.7**
BDRM				*i* S	**Sn**	**19 03 12.7**	**+1.3**
YKAV	**Yalikavak-Bodr**	**2.05**	**9**	PN	**Pb**	**19 02 49.3**	**-1.7**
VAM	**Vamos**	**2.20**	**279**	P	**Pb**	**19 02 52.7**	**-0.9**
VAM				AML	AML	19 03 31.2	
	comp=N,34104μm,0.5s						
VAM				AML	AML	19 03 43.0	
	comp=E,39273μm,0.8s						
APE	**Apeiranthos**	**2.24**	**332**	P	**Pb**	**19 02 51.8**	**-2.6**
APE				AML	AML	19 03 24.6	
	comp=N,15601μm,0.9s						
APE				AML	AML	19 03 33.4	
	comp=E,14707μm,0.8s						
APE	**Apeiranthos**	**2.24**	**332**	P	**Pn**	**19 02 51.6**	**+1.5**
APE				S	**Sb**	**19 03 19.2**	**-2.5**
	comp=E,8μm,0.9s						
APE	**Apeiranthos**	**2.24**	**332**	⇑P	**Pb**	**19 02 52.2**	**-2.1**
APE	**Apeiranthos**	**2.24**	**332**	*d* P	**Pn**	**19 02 51.6**	**+1.5**
APE	**Apeiranthos**	**2.24**	**332**	PN	**Pn**	**19 02 51.3**	**+1.2**
APE	**Apeiranthos**	**2.24**	**332**	⇑P	**Pb**	**19 02 51.7**	**-2.6**
APE				S	**Sb**	**19 03 21.5**	**-0.2**
DALY	**Dalyan (Mula)**	**2.25**	**40**	*i* P	**Pb**	**19 02 52.9**	**-1.5**
DALY				*i* S	**Sn**	**19 03 16.6**	**-0.4**
DALY	**Dalyan (Mula)**	**2.25**	**40**	PN	**Pb**	**19 02 52.2**	**-2.1**
GVDS	**Gavdos**	**2.29**	**264**	P	**Pb**	**19 02 53.5**	**-1.6**
GVDS	**Gavdos**	**2.29**	**264**	PN	**Pb**	**19 02 52.9**	**-2.2**
GVD	**Gavdhos**	**2.29**	**264**	P	**Pb**	**19 02 53.8**	**-1.4**
GVD				AML	AML	19 03 53.2	
	comp=E,19896μm,0.7s						
GVD				AML	AML	19 04 03.4	
	comp=N,17779μm,1.0s						
GVD	**Gavdhos**	**2.29**	**264**	PN	**Pb**	**19 02 52.9**	**-2.3**
YER	**Yerkesik**	**2.33**	**29**	P	**Pb**	**19 02 53.6**	**-2.3**
YER	**Yerkesik**	**2.33**	**29**	P	**Pb**	**19 02 53.6**	**-2.3**
YER	**Yerkesik**	**2.33**	**29**	PN	**Pn**	**19 02 53.1**	**+1.7**
FETY	**Fethiye**	**2.37**	**49**	PN	**Pn**	**19 02 52.4**	**+0.6**
DDIM	**Aydin, Didim**	**2.37**	**7**	*i* P	**Pb**	**19 02 54.0**	**-2.5**
DDIM				*i* S	**Sb**	**19 03 24.7**	**-0.7**
IMMV	**Iera Moni Meta**	**2.39**	**280**	P	**Pb**	**19 02 55.2**	**-1.5**
IMMV				AML	AML	19 03 43.1	
	comp=N,24186μm,0.7s						
IMMV				AML	AML	19 03 55.0	
	comp=E,35046μm,0.9s						
IMMV	**Iera Moni Meta**	**2.39**	**280**	PN	**Pb**	**19 02 54.1**	**-2.7**
KSL	**Kastellorizon**	**2.45**	**64**	P	**Pn**	**19 02 53.6**	**+0.7**
MULA	**Mugla, Merkez-**	**2.45**	**28**	*i* P	**Pb**	**19 02 55.3**	**-2.6**
MULA				*i* S	**Sn**	**19 03 20.8**	**-1.5**
AKAS	**Kas**	**2.50**	**62**	*i* P	**Pn**	**19 02 54.4**	**+0.7**
AKAS				*i* S	**Sn**	**19 03 21.6**	**-1.9**
AKAS	**Kas**	**2.50**	**62**	PN	**Pn**	**19 02 54.2**	**+0.5**
AKAS	**Kas**	**2.50**	**62**	Pn	**Pn**	**19 02 53.9**	**+0.1**
MHLO	**Agia Marina, M**	**2.55**	**309**	P	**Pb**	**19 02 57.7**	**-1.9**
MHLO				AML	AML	19 03 41.0	
	comp=E,47906μm,0.7s						
MHLO				AML	AML	19 04 02.1	
	comp=N,43484μm,0.8s						
MHLA	**Plaka, Milos I**	**2.57**	**310**	P	**Pb**	**19 02 57.3**	**-2.6**
MHLA				AML	AML	19 03 51.7	
	comp=N,40704μm,1.4s						
MHLA				AML	AML	19 03 59.1	
	comp=E,36362μm,1.7s						
SMG	**Samos**	**2.60**	**360**	P	**Pn**	**19 02 56.6**	**+1.6**
KNDR	**Palaiochora Ch**	**2.61**	**274**	PN	**Pb**	**19 02 57.6**	**-2.9**
AYDN	**Tasoluk**	**2.68**	**17**	*i* P	**Pn**	**19 02 58.6**	**+2.4**
AYDN				*i* S	**Sn**	**19 03 29.7**	**+1.8**
CAEL	**Denizli, Camel**	**2.83**	**44**	*i* P	**Pn**	**19 03 00.6**	**+2.3**
CAEL				*i* S	**Sb**	**19 03 37.0**	**-1.8**
DGB	**zmir**	**2.95**	**0**	*i* P	**Pn**	**19 03 01.5**	**+1.8**
DGB				*i* S	**Sn**	**19 03 29.2**	**-5.1**
AYDB	**Zeytinkoy-Aydi**	**2.96**	**16**	PN	**Pn**	**19 03 01.8**	**+1.8**
ELL	**Elmali**	**2.97**	**55**	P	**Pn**	**19 03 01.3**	**+1.2**
ELL	**Elmali**	**2.97**	**55**	PN	**Pn**	**19 03 02.2**	**+2.1**
ELL	**Elmali**	**2.97**	**55**		**Pn**	**19 03 01.3**	**+1.2**
ANKY	**Antikythira Is**	**3.01**	**286**	P	**Pn**	**19 03 03.0**	**+2.5**
GOLH	**Golhisar**	**3.05**	**45**	*i* P	**Pn**	**19 03 03.8**	**+2.6**
GOLH				*i* S	**Sb**	**19 03 41.5**	**-3.5**
AKUM	**Antalya-Kumluc**	**3.08**	**66**	*i* P	**Pn**	**19 03 02.9**	**+1.3**
ZEYE	**Izmir, Urla-Ze**	**3.15**	**355**	*i* P	**Pn**	**19 03 03.9**	**+1.4**
ZEYE				*i* S	**Sn**	**19 03 42.4**	**+3.2**
URLA	**Izmir**	**3.26**	**356**	*i* P	**Pn**	**19 03 04.7**	**+0.6**
URLA				*i* S	**Sn**	**19 03 45.7**	**+3.5**
URLA	**Izmir**	**3.26**	**356**	PN	**Pn**	**19 03 05.1**	**+1.0**
KTHA	**Kythira Island**	**3.30**	**292**	PN	**Pn**	**19 03 07.1**	**+2.4**
CHOS	**Chios island**	**3.34**	**349**	P	**Pn**	**19 03 06.9**	**+1.6**
CHOS	**Chios island**	**3.34**	**349**	PN	**Pn**	**19 03 06.9**	**+1.6**
KEMT	**Kemer-ANTALYA**	**3.35**	**62**	PN	**Pn**	**19 03 07.6**	**+2.3**
KORT	**Korkueli**	**3.40**	**55**	PN	**Pn**	**19 03 08.5**	**+2.4**
ANTB	**Antalya**	**3.56**	**59**	PN	**Pn**	**19 03 10.6**	**+2.5**
VLI	**Veliai**	**3.57**	**298**	P	**Pn**	**19 03 10.1**	**+1.8**
FOCM	**Foa**	**3.61**	**358**	PN	**Pn**	**19 03 10.9**	**+2.1**
MANT	**Manisa**	**3.65**	**21**	*i* P	**Pn**	**19 03 11.5**	**+1.9**
MANT	**Manisa**	**3.65**	**21**	Pn	**Pn**	**19 03 11.2**	**+1.6**
BRDR	**BURDUR-Merkez**	**3.66**	**44**	*i* P	**Pn**	**19 03 12.9**	**+3.3**
VLY	**Voula,Athens**	**3.70**	**319**	P	**Pn**	**19 03 12.3**	**+2.3**

comp=E,5.9nm,0.5s
ITM Ithomi 4.50 299 P Pn 19 03 23.5 +2.3
ITM Ithomi 4.50 299 PN Pn 19 03 23.4 +2.3
ITM Ithomi 4.50 299 Pn 19 03 23.2 +2.0
GAZI Gazipasa 4.58 74 *i* P **Pn 19 03 21.4 -0.8**
AFYO Afyonkarahisar 4.59 36 *i* P **Pn 19 03 22.2 -0.3**
SEDI Konya, Seydise 4.59 58 *i* P **Pn 19 03 26.0 +3.5**
BAYC CANAKKALE_Bayr 4.64 357 *i* P **Pn 19 03 24.8 +1.8**
BALY Balya 4.67 7 *i* P **Pn 19 03 24.9 +1.5**
DURS Dursunbey 4.67 15 *i* P **Pn 19 03 25.5 +1.9**
NATA Nata 4.70 92 P **Pn 19 03 23.5 -0.3**
ALFC Alefka 4.70 88 P **Pn 19 03 22.9 -0.9**
ALFC AML AML 19 04 18.3
comp=E,4.5nm,0.4s
YVAC Isparta, Yalva 4.73 47 *i* P **Pn 19 03 25.6 +1.2**
EZN Ezine 4.74 355 P **Pn 19 03 26.1 +1.8**
DOGA KONYA_Doganhis 4.89 51 *i* P **Pn 19 03 28.9 +2.3**
SZAC Souni 4.96 92 ⇑P **Pn 19 03 26.4 -1.0**
ECEA Canakkale, Ece 4.97 354 *i* P **Pn 19 03 29.7 +2.2**
ANDZ Kutahya, Merke 5.02 28 *i* P **Pn 19 03 30.0 +1.6**
NEO Neokhori 5.11 326 P **Pn 19 03 32.4 +3.0**
GOKA anakkale-Gk 5.14 352 *i* P **Pn 19 03 32.0 +2.1**
XOR Xorichti 5.17 327 P **Pn 19 03 33.3 +3.0**
ASGA Asgata 5.25 92 P **Pn 19 03 30.4 -1.0**
KONT Konya--Tatoy 5.26 56 *i* P **Pn 19 03 34.4 +2.8**
EDC Edincik 5.30 8 P **Pn 19 03 35.3 +3.3**
CSS Mathiatis 5.31 90 Pn **Pn 19 03 31.1 -1.1**
CSS Mathiatis 5.31 90 ⇑P **Pn 19 03 31.1 -1.1**
AGG Agios Georgios 5.34 319 P **Pn 19 03 32.2 +0.6**
AGG Agios Georgios 5.34 319 Pn 19 03 33.2 +0.6
ULDT Uludag 5.35 19 *i* P **Pn 19 03 34.9 +2.0**
KKBE Karaman, Kazim 5.35 65 *i* P **Pn 19 03 35.9 +3.0**
AUBOZ BOZOYUK 5.42 27 *i* P **Pn 19 03 34.2 +0.4**
SGAZ Eskisehir, Sey 5.44 34 *i* P **Pn 19 03 35.9 +1.8**
GULN MERSIN_Gulnar 5.55 77 *i* P **Pn 19 03 35.2 -0.2**
MVOU Mavrovouni 5.55 89 ⇑P **Pn 19 03 34.0 -1.5**
BORA Eskisehir 5.56 30 *i* P **Pn 19 03 37.0 +1.3**
KESN Edirne-Kesan 5.72 359 *i* P **Pn 19 03 41.5 +3.3**
ALIN Konya, Altinte 5.79 55 *i* P **Pn 19 03 41.4 +2.5**
ALN Alexandroupoli 5.82 354 P **Pn 19 03 40.2 +1.0**
ALN Alexandroupoli 5.82 354 Pn 19 03 40.2 +1.0
LIT Litokhoron 6.08 326 P **Pn 19 03 44.5 +1.7**
LIT Litokhoron 6.08 326 Pn 19 03 44.5 +1.7
HMYD Mayadein 6.25 147 P **Pn 19 03 43.9 -1.2**
baz=148
THE Thessaloniki 6.33 332 P Pn 19 03 50.8 +4.7
THE pmax pmax
comp=Z,193nm,1.1s
SOH Sokhos 6.35 335 P **Pn 19 03 50.9 +4.4**
SOH pmax pmax
comp=Z,95nm,1.0s
MDUB Mudurnu 6.37 31 Pn 19 03 47.7 +0.9
SRS Serrai 6.54 338 P **Pn 19 03 53.3 +4.2**
SRS pmax pmax
comp=Z,205nm,1.2s
KOT Kottamia 6.64 140 P **Pn 19 03 48.6 -2.0**
baz=140
RYAN Fayoum 6.66 153 S **Sn 19 04 59.2 -6.7**
baz=155
BR231 Keskin MP Arra 6.67 43 Pn 19 03 51.0 0.0
ANTO Ankara 6.70 43 P **Pn 19 03 53.3 +1.9**
ANTO Ankara 6.70 43 Pn 19 03 53.2 +1.9
HSAF As Saff 6.75 143 P **Pn 19 03 49.9 -2.2**
baz=144
KNT Kendrikon 6.81 334 P Pn 19 03 57.3 +4.5
KNT pmax pmax
comp=Z,160nm,0.9s
IGT Igoumenitsa 6.83 312 P **Pn 19 03 55.0 +1.9**
IGT pmax pmax
comp=Z,182nm,1.1s
VAY Valandovo 7.07 333 *i* Pn Pn 19 04 02.1 +5.8
BR131 Keskin Array S 7.10 47 *i* P **Pn 19 03 58.3 +1.4**
BR131 Keskin Array S 7.10 47 Pn 19 03 58.0 +1.1
BRTR Keskin Array B 7.10 47 Pn **Pn 19 03 57.5 +0.6**
comp=Z,1.8nm,0.3s,baz=221,slow=15,SNR=24
BRTR Sn **Sn 19 05 17.8 +1.0**
comp=Z,1.4nm,0.3s,baz=43,slow=22,SNR=4.4
BRTR LR LR 19 07 33.4
comp=Z,7µm,18.0s,baz=238,slow=45
FNA Florina 7.14 324 P **Pn 19 04 00.9 +3.5**
FNA Florina 7.14 324 Pn 19 04 00.9 +3.5
PLD Plovdiv 7.20 347 P **Pn 19 04 02.1 +4.0**
PLD pmax pmax
comp=Z,147nm,1.1s
DQRL Deir Qamar 7.33 98 *e*P **Pn 19 03 59.2 -0.8**
BHL Bhannes 7.35 97 *e*P Pn 19 04 05.1 +4.7
MMAI Mount Meron Ar 7.38 104 Pn **Pn 19 03 58.9 -1.9**
comp=Z,19nm,0.3s,baz=291,slow=11,SNR=34
MMAI Sn **Sn 19 05 18.7 -5.1**
comp=Z,14nm,0.3s,baz=303,slow=11,SNR=2.7
QRWL Qaraoun 7.46 99 *e*P **Pn 19 04 00.5 -1.3**
NBNS Bani Suef 7.47 149 AMP 19 05 00.0
baz=150
HWQ Hawqa 7.53 94 *e*P **Pn 19 04 02.2 -0.5**
STIP Stip 7.54 332 *i* Pn **Pn 19 04 06.2 +3.4**
RCY Rachaya 7.59 100 *e*P **Pn 19 04 02.4 -1.4**
OHR Ohrid 7.67 323 *i* Pn Pn 19 04 12.2 +7.5
HFRF Wahat Farafira 8.02 171 S **Sn 19 05 33.9 -5.6**
baz=172
VTS Vitosha 8.02 340 ⇓P **Pn 19 04 13.1 +3.5**
VTS Vitosha 8.02 340 P **Pn 19 04 13.0 +3.4**
VTS Vitosha 8.02 340 Pn 19 04 13.0 +3.4
ILGA Ilgaz 8.03 40 Pn 19 04 13.0 +0.3
SKO Skopje 8.07 330 *i* Pn Pn 19 04 14.8 +4.7
SCTE Santa Cesarea 8.31 309 Pn 19 04 13.0 -0.4
TIR Tirane 8.32 321 ⇑P **Pn 19 04 16.0 +2.5**
TIR Tirane 8.32 321 P **Pn 19 04 15.4 +1.9**
TIR Tirane 8.32 321 Pn 19 04 15.4 +1.9
PLVB Pleven 8.46 349 ⇑P **Pn 19 04 18.5 +3.2**
GAZ Gaziantep 8.62 73 Pn **Pn 19 04 17.6 -0.2**
EIL Elat 8.72 126 Pn **Pn 19 04 17.9 -1.2**
comp=Z,6.7nm,0.3s,baz=290,slow=1.8,SNR=58
EIL Sn **Sn 19 05 49.2 -7.3**
comp=Z,24nm,0.3s,baz=21,slow=3.3,SNR=11
BZK Bozkurt 8.84 37 ⇑P **Pn 19 04 23.4 +2.8**
HKAT Jabal Katrina 8.93 135 AMP 19 06 00.0
baz=136
TIP Timpagrande 9.04 300 ⇑P **Pn 19 04 23.5 0.0**
TIP Timpagrande 9.04 300 Pn 19 04 22.8 -0.7
ULC Ulcinj 9.09 321 ⇑*i*Pn **Pn 19 04 23.9 -0.1**
ULC *i* Sn **Sn 19 06 01.7 -3.8**
RASA Rasa 9.11 1 ⇑P **Pn 19 04 28.1 +3.8**
SGRR Singureni 9.14 356 ⇑P **Pn 19 04 27.4 +2.7**
PVY Plav 9.22 326 *e*Pn **Pn 19 04 26.9 +1.0**
PVY *i* Sn **Sn 19 06 06.9 -2.0**
DRME Dracevica, Mon 9.28 322 *e*Pn Pn 19 04 21.1 -5.6
DRME Dracevica, Mon 9.28 322 ⇓*i*Pn **Pn 19 04 26.8 +0.1**
DRME *i* Sn **Sn 19 06 06.6 -3.6**
CEL Celeste 9.36 293 Pn 19 04 27.4 -0.4
LEHL Lehliu 9.36 360 ⇑P Pn 19 04 32.4 +4.6
TIRR Tirgusor 9.42 7 P **Pn 19 04 28.4 -0.2**
TIRR Tirgusor 9.42 7 Pn 19 04 28.4 -0.2
PDG Podgorica 9.42 323 ⇑P **Pn 19 04 29.7 +1.0**
PDG Podgorica 9.42 323 *e*Pn **Pn 19 04 26.9 -1.7**
PDG Podgorica 9.42 323 Pn 19 04 27.9 -0.7
TTG Podgorica 9.42 323 ⇓*i*Pn **Pn 19 04 29.0 +0.4**
TTG *i* Sn **Sn 19 06 10.5 -3.2**
IVA Berane 9.47 327 ⇓*i*Pn **Pn 19 04 30.5 +1.2**
IVA *i* Sn **Sn 19 06 13.1 -1.8**
TLBR Topalu 9.48 5 ⇑P **Pn 19 04 33.7 +4.4**
AMRR Amara 9.51 2 ⇓P **Pn 19 04 34.2 +4.4**
BUM Brajici-Budva 9.51 321 ⇑*i*Pn **Pn 19 04 29.8 -0.1**
BUM *i* Sn **Sn 19 06 11.9 -4.1**
HUMR Humele 9.53 352 ⇑P **Pn 19 04 33.5 +3.5**
SULR 9.58 357 ⇓P **Pn 19 04 35.1 +4.3**
HARR Harsova 9.61 5 ⇓P **Pn 19 04 34.8 +3.5**
HARR Harsova 9.61 5 P **Pn 19 04 34.7 +3.5**
KOME Kolasin 9.62 326 ⇑*i*Pn **Pn 19 04 32.4 +1.0**
KOME *i* Sn **Sn 19 06 16.2 -2.5**
CEME Cevo 9.68 323 ⇓*i*Pn **Pn 19 04 32.4 +0.2**
CEME *i* Sn **Sn 19 06 16.3 -3.8**
MATE Matera 9.75 308 ⇑P **Pn 19 04 33.4 +0.2**
JURR Jurilovca 9.78 8 ⇑P **Pn 19 04 36.5 +3.1**
TPGR Topolog 9.82 6 ⇑P **Pn 19 04 37.0 +3.0**
HCY Herceg Novi 9.82 321 *e*Pn **Pn 19 04 35.7 +1.6**
HCY Herceg Novi 9.82 321 ⇑*i*Pn **Pn 19 04 34.0 -0.1**
HCY *i* Sn **Sn 19 06 19.1 -4.4**
NKME Niksic 9.82 324 ⇑*i*Pn **Pn 19 04 34.6 +0.4**
NKME *i* Sn **Sn 19 06 20.2 -3.5**
NKY Niksic 9.84 324 ⇑*i*Pn **Pn 19 04 34.9 +0.5**
NKY *i* Sn **Sn 19 06 20.7 -3.4**
PLE Pljevlja 10.05 327 ⇓*i*Pn **Pn 19 04 38.6 +1.2**
PLE *i* Sn **Sn 19 06 27.1 -2.3**
TREB Trebinje 10.09 321 *e*Pn **Pn 19 04 36.2 -1.5**
CFR Carcaliu 10.11 5 ⇑P **Pn 19 04 40.8 +2.7**
CFR Carcaliu 10.11 5 P **Pn 19 04 40.7 +2.6**
CFR pmax pmax
comp=Z,47nm,1.1s
BRY Bratogost 10.13 323 *e*Pn **Pn 19 04 39.1 +0.7**
BRY Bratogost 10.13 323 ⇓*i*Pn **Pn 19 04 38.6 +0.2**
BRY *i* Sn **Sn 19 06 27.2 -4.0**
UPM Unac-Piva 10.18 325 *e*Pn **Pn 19 04 39.3 +0.2**
UPM Unac-Piva 10.18 325 ⇓*i*Pn **Pn 19 04 39.8 +0.7**
UPM *i* Sn **Sn 19 06 29.3 -3.2**
TLCR 10.18 8 ⇑P **Pn 19 04 42.6 +3.5**
TLCR 10.18 8 P **Pn 19 04 42.5 +3.5**
NEHR Nehoiu 10.32 358 ⇑P **Pn 19 04 45.1 +4.1**
RAFF Raffo Rosso 10.33 285 Pn 19 04 41.2 +0.2
VAE Valguarnera 10.33 287 Pn **Pn 19 04 41.6 +0.5**
comp=Z,1.5nm,0.3s,baz=163,slow=2.7,SNR=5.7
VAE Sn Sn 19 06 26.8 -9.4
comp=Z,1.5nm,0.3s,baz=106,slow=13,SNR=1.6
ARR Arges 10.40 351 ⇑P **Pn 19 04 45.2 +3.2**
MLR Muntele Rosu 10.40 356 Pn **Pn 19 04 43.0 +0.8**
comp=Z,0.4nm,0.3s,baz=183,slow=4.4,SNR=51
MLR Muntele Rosu 10.40 356 ⇑P **Pn 19 04 45.3 +3.2**
MLR Muntele Rosu 10.40 356 P **Pn 19 04 43.0 +0.8**
MLR Muntele Rosu 10.40 356 Pn 19 04 43.9 +1.8
VOIR 10.42 353 ⇑P **Pn 19 04 46.1 +3.8**
VOIR 10.42 353 P **Pn 19 04 44.3 +2.0**
VOIR pmax pmax
comp=Z,41nm,1.5s
DIVS Divibare 10.43 332 *e*Pn **Pn 19 04 46.2 +3.7**
DIVS Divibare 10.43 332 Pn 19 04 43.4 +0.9
MDVR Moldovita 10.44 339 ⇓P **Pn 19 04 46.5 +3.8**
BBLS Lazići 10.48 329 *e*Pn **Pn 19 04 42.2 -0.9**
PLOR Plostina 10.74 359 ⇓P **Pn 19 04 50.0 +3.3**
PLOR Plostina 10.74 359 P **Pn 19 04 50.0 +3.3**
GZR Gura Zlata 10.74 344 ⇓P **Pn 19 04 49.9 +3.1**
VRI Vrincioaia 10.76 359 ⇓P **Pn 19 04 50.9 +3.9**
VRI Vrincioaia 10.76 359 P **Pn 19 04 50.8 +3.9**
VARL Varlezi 10.81 4 ⇓P **Pn 19 04 51.7 +4.1**
HAPS Han Pijesak,Bl 10.85 328 *e*Pn **Pn 19 04 47.4 -0.9**
DOPR Dopca 10.91 355 ⇓P **Pn 19 04 52.9 +3.8**
SGRT San Giovanni R 10.96 311 Pn 19 04 47.5 -2.2
TEKS Tekeris 10.99 331 *e*Pn **Pn 19 04 50.6 +0.5**
OZUR 11.02 356 ⇓P **Pn 19 04 53.1 +2.6**
BZS Buzias 11.24 341 P **Pn 19 04 55.8 +2.3**
BZS pmax pmax
comp=Z,26nm,1.0s
CORL Corleone 11.27 288 Pn 19 04 53.4 -0.5
CLTB Caltabellotta 11.28 287 Pn 19 04 52.5 -1.8
SIM Simferopol' 11.29 27 *e*P **Pn 19 04 57.9 +3.7**
SIM pmax pmax
comp=Z,36nm,1.4s
PAOL Paolisi 11.35 305 Pn 19 04 54.5 -0.7
FRGS Fruska Gora 11.40 334 ⇑P **Pn 19 04 58.6 +2.9**
FRGS Fruska Gora 11.40 334 *e*Pn **Pn 19 04 58.3 +2.6**
TESR Tescani 11.40 359 ⇓P Pn 19 05 00.2 +4.5
MARD Mardin 11.46 75 Pn 19 04 56.9 +0.2
BIZ Bicaz 11.84 357 ⇑P **Pn 19 05 04.8 +3.0**
KOPT Kop Dagi 11.88 62 Pn 19 05 01.9 -0.6
MGRS Mrkonjic Grad 11.96 324 *e*Pn **Pn 19 05 01.3 -2.1**
KIS Kishinev 11.98 6 *e*P **Pn 19 05 06.0 +2.4**
KIS *e*L L 19 07 39.0
KIS *e*LR LR 19 08 59.0
comp=Z,1µm,13.0s
KIS Kishinev 11.98 6 *e*P **Pn 19 05 06.0 +2.4**
KIS MLR MLR
comp=Z,1µm,13.0s
IAS Iasi 12.09 2 P **Pn 19 05 09.5 +4.4**
BLY Banja Luka 12.16 325 *e*Pn **Pn 19 05 07.4 +1.3**
INTR Introdacqua 12.26 308 Pn 19 05 07.3 -0.3
BURAR Bucovina Array 12.56 355 P **Pn 19 05 12.2 +0.5**
BURAR Bucovina Array 12.56 355 Pn 19 05 12.2 +0.5
BUR08 Bucovina Ar. S 12.60 355 Pn **Pn 19 05 12.6 +0.5**
MORH Mrgy, Hungar 12.73 333 *e*Pn **Pn 19 05 15.9 +2.1**
AQU L'Aquila 12.76 309 P **Pn 19 05 14.7 +0.4**
AQU L'Aquila 12.76 309 *e*Pn **Pn 19 05 17.5 +3.2**
AQU L'Aquila 12.76 309 Pn 19 05 14.7 +0.4
NRCA Norcia 13.18 310 Pn 19 05 19.5 -0.6
KSV Kosov 13.27 355 P **Pn 19 05 22.6 +1.3**
GEVA Gevas 13.38 71 Pn **Pn 19 05 22.0 -1.0**
KMPD K-Podol'skiy 13.46 359 P **Pn 19 05 25.0 +1.3**
CRES Cresnjev 13.78 324 *e*Pn **Pn 19 05 26.2 -1.9**
MURB Monte Urbino 13.78 311 Pn 19 05 27.5 -0.7
PSZ Piszkesteto 13.82 340 P **Pn 19 05 28.1 -0.7**
PSZ Piszkesteto 13.82 340 Pn **Pn 19 05 28.1 -0.7**
LATE Laterza 13.92 307 Pn **Pn 19 05 31.0 +0.9**
UZH Uzhgorod 13.94 347 *d*P **Pn 19 05 34.0 +3.7**
UZH *e*S **Sn 19 08 09.8 +5.6**
UZH MLR MLR
comp=N,400nm,12.0s
UZH MLR MLR
comp=E,300nm,12.0s
UZH MLR MLR
comp=Z,360nm,12.0s
CEY Cerknica 14.22 322 *e*Pn **Pn 19 05 31.8 -2.4**
KEST Kesra 14.30 278 Pn **Pn 19 05 35.6 +0.1**
comp=Z,0.3nm,0.3s,baz=187,slow=3.4,SNR=5.5
KEST Kesra 14.30 278 Pn **Pn 19 05 35.4 -0.1**
TRI Trieste 14.54 321 P **Pn 19 05 39.2 +0.7**
TRI Trieste 14.54 321 Pn **Pn 19 05 39.2 +0.7**
VSL Villasalto 14.59 293 Pn 19 05 38.0 -1.3
SOKA Soboth 14.60 326 *e*Pn **Pn 19 05 41.2 +1.7**
comp=Z,27nm,1.3s,SNR=15
CASP Castiglione de 14.61 306 Pn 19 05 39.0 -0.6
VYHS Vyhne 14.65 338 *e*P **P 19 05 43.1 -3.1**
VYHS Vyhne 14.65 338 *e*PN **P 19 05 43.0 -3.1**
OBKA Obir 14.71 325 *e*Pn **P 19 05 44.1 -2.8**
comp=Z,4.6nm,0.5s
OSSC Osservatorio P 14.71 310 Pn 19 05 41.6 +0.7
ARSA Arzberg 14.82 328 *e*Pn **Pn 19 05 43.8 +1.4**
comp=Z,6.3nm,0.8s
LVV L'vov 14.86 353 *e*P **Pn 19 05 43.8 +1.0**
LVV *e*S **Sn 19 08 29.0 +2.5**
LVV MLR MLR
comp=Z,4µm,11.0s
LVV MLR MLR
comp=N,3µm,10.0s
LVV MLR MLR
comp=E,3µm,12.0s
ONI Oni 14.92 55 P **P 19 05 48.6 -0.6**
ZST Bratislava 14.96 334 *e*P **P 19 05 52.8 +3.2**
ZST Bratislava 14.96 334 *e*PN **P 19 05 52.8 +3.2**
GNI Garni 15.03 65 Pn **P 19 05 52.6 +2.0**
comp=E,0.8nm,0.3s,baz=18,slow=4.0,SNR=5.8
GNI Garni 15.03 65 P **Pn 19 05 44.2 -1.2**
GNI pmax pmax
comp=Z,34nm,0.8s
GNI Garni 15.03 65 Pn 19 05 44.2 -1.2
GNI Garni 15.03 65 P **P 19 05 53.9 +3.3**
GNI S **S 19 08 50.4 +2.1**
KIV Kislovodsk 15.06 49 *i* P **P 19 05 52.0 +1.3**
SNR=15
KIV Kislovodsk 15.06 49 *e*P **Pn 19 05 47.7 +2.1**
KIV pmax pmax
comp=Z,54nm,1.0s
KIV MLR MLR
comp=Z,2µm,13.0s
KIV Kislovodsk 15.06 49 Pn 19 05 45.9 +0.3
KIV IAmb IAmb 19 06 12.6
comp=Z,49nm,0.9s
KIV Kislovodsk 15.06 49 P **P 19 05 52.7 +2.0**
KVAR Kislovodsk Arr 15.06 49 Pn **P 19 05 51.3 +0.4**
baz=268,slow=20,SNR=5.4
LANS Liptovska Anna 15.06 341 *e*P **P 19 05 51.7 +1.0**
LANS Liptovska Anna 15.06 341 *e*PN **P 19 05 51.7 +1.0**
KBZ Khabaz 15.07 50 Pn **P 19 05 49.4 -1.4**
comp=Z,0.7nm,0.3s,baz=242,slow=9.5,SNR=35
KBZ Khabaz 15.07 50 *ce*P **Pn 19 05 47.6 +1.9**
NIE Niedzica 15.10 343 *e*P **P 19 05 53.0 +1.9**
NIE Niedzica 15.10 343 P **P 19 05 52.3 +1.1**
CONA Conrad Observa 15.22 331 *e*Pn **P 19 05 54.5 +2.0**
comp=Z,5.4nm,0.7s
MYKA Terra Mystica 15.23 323 *i* Pn **P 19 05 53.2 +0.6**
comp=Z,6.7nm,0.6s
ZCCA Zocca 15.30 312 Pn 19 05 49.3 +0.5
ZEI Tsey 15.30 55 *e*P **P 19 05 53.1 -0.5**
ZEI pmax pmax
comp=Z,39nm,0.7s
JAVC Velka Javorina 15.34 336 *e*PN **Pn 19 05 49.2 -0.1**
NCK Nalchik 15.41 52 *i* P **P 19 05 55.7 +1.1**
NCK pmax pmax
comp=Z,68nm,1.0s
STAL STALIGIAL 15.45 320 Pn 19 05 51.9 +1.1
TEOL Teolo 15.46 316 Pn 19 05 49.9 -0.9
ZOU Zoufplan 15.51 322 Pn 19 05 50.5 -1.2
VLC Villacollemand 15.57 310 Pn **Pn 19 05 49.1 -3.2**
AKASG Malin Array Be 15.69 6 Pn **Pn 19 05 51.8 -1.9**
comp=Z,15nm,0.3s,baz=195,slow=11,SNR=58
AKASG Malin Array Be 15.69 6 *ce*P **P 19 05 55.7 -1.9**
AKASG pmax pmax
comp=Z,35nm,0.5s
AKASG Malin Array Be 15.69 6 P **Pn 19 05 55.5 +1.7**
AKBB Malin Array Si 15.69 6 *ce*P **Pn 19 05 54.1 +0.4**
AKBB Malin Array Si 15.69 6 Pn **Pn 19 05 53.3 -0.4**
KBA Koelnbreinsper 15.69 324 *i* Pn **Pn 19 05 54.0 0.0**
comp=Z,12nm,0.6s,SNR=12
KBA Koelnbreinsper 15.69 324 P **P 19 05 58.4 +0.5**
MOA Molln 15.83 327 *i* Pn **P 19 05 57.2 -2.0**
comp=Z,7.0nm,0.7s,SNR=19
CMAH Djebel Manchou 15.84 281 P **P 19 06 03.1 +3.6**
GOF Gofitskoye 15.86 46 ⇑*e*P **P 19 06 01.1 +1.6**
GOF pmax pmax
comp=Z,33nm,0.8s
ABTA Abfaltersbach 15.88 321 *e*Pn **Pn 19 05 55.2 -1.1**
comp=Z,14nm,0.6s,SNR=12
CTI Castel Tesino 15.88 318 P **Pn 19 05 55.6 -0.8**
CTI pmax pmax
comp=Z,51nm,1.1s
CTI Castel Tesino 15.88 318 Pn **Pn 19 05 55.6 -0.8**
PRMA PARMA 15.92 312 Pn **Pn 19 05 56.0 -0.7**
KRUC Moravsky 15.95 334 *e*PN **Pn 19 05 57.0 -0.1**
OJC Ojcow 15.97 343 *e*P **P 19 06 05.1 +4.3**
OJC Ojcow 15.97 343 P **Pn 19 05 55.1 -2.3**
OJC pmax pmax
comp=Z,31nm,0.9s
OJC Ojcow 15.97 343 Pn 19 05 55.1 -2.3
OKC Ostrava-Krasne 16.05 339 AMS AMS 19 14 00.0
comp=Z,1µm,13.4s
VRAC Vranov 16.09 335 Pn **Pn 19 05 59.4 +0.5**
comp=Z,0.5nm,0.3s,baz=138,slow=11,SNR=10.0
VRAC Vranov 16.09 335 *e*PN **Pn 19 06 00.1 +1.2**
MORC Moravsky Berou 16.18 338 *e*PN **Pn 19 05 59.4 -0.7**
MORC Moravsky Berou 16.18 338 P **Pn 19 05 59.7 -0.4**
MORC pmax pmax
comp=Z,52nm,1.1s
MORC Moravsky Berou 16.18 338 Pn **Pn 19 05 59.7 -0.4**
MSSA Maissana 16.19 310 P **Pn 19 06 01.1 +0.8**
SALO Salr 16.26 315 Pn 19 06 00.2 -1.0
SALO IAmb IAmb 19 06 08.5
comp=Z,116nm,0.8s
CKFL Kef-Lekhel 16.41 280 P **P 19 06 08.2 +2.4**
TREC Trest 16.47 333 *e*P **P 19 06 06.1 -0.3**
TREC MLR MLR
comp=Z,2µm,14.7s
TREC Trest 16.47 333 *e*P **P 19 06 06.1 -0.3**
TREC AMS AMS 19 11 00.0
comp=Z,2µm,14.7s
CKRC Cesky Krumlov 16.55 330 *e*P **P 19 06 07.0 -0.3**
CKRC *ex* x 19 06 13.5
LGD Lagodekhi 16.58 60 P **P 19 06 10.1 +2.5**
CASM Ain Smara 16.60 280 P **P 19 06 10.8 +2.9**
WTTA Wattenberg 16.67 321 *i* Pn **P 19 06 09.7 +1.0**
comp=Z,15nm,0.6s,SNR=9.3
WTTA Wattenberg 16.67 321 P **P 19 06 07.6 -1.1**
WTTA pmax pmax
comp=Z,42nm,0.8s
KRLC Kraliky 16.68 337 *e*P **P 19 06 09.4 +0.7**
KRLC MLR MLR
comp=Z,2µm,13.0s
KRLC Kraliky 16.68 337 *e*P **P 19 06 09.4 +0.7**
KRLC AMS AMS 19 13 00.0
comp=Z,2µm,13.0s
GROC Groznyy 16.74 55 *e*P **P 19 06 09.1 -0.2**
GROC pmax pmax
comp=Z,88nm,1.8s
WATA Walderalm 16.75 322 *i* Pn **P 19 06 10.4 +0.9**
comp=Z,18nm,0.5s,SNR=24
GEC2 GERESS Array S 16.83 329 Pn **Pn 19 06 08.0 -0.4**
GERES GERESS Array B 16.83 329 Pn **Pn 19 06 08.1 -0.4**
comp=Z,0.7nm,0.3s,baz=143,slow=12,SNR=37
GERES Sn **Sn 19 09 13.8 -0.9**
comp=Z,0.1nm,0.3s,baz=160,slow=27,SNR=1.3
GERES GERESS Array B 16.83 329 P **Pn 19 06 07.9 -0.5**
GERES GERESS Array B 16.83 329 Pn **Pn 19 06 07.9 -0.5**
SQTA Sankt Quirin 16.86 321 *i* Pn **P 19 06 11.4 +0.6**
comp=Z,27nm,0.6s,SNR=18
FETA Feichten 16.99 319 *i* Pn **P 19 06 12.1 -0.1**
comp=Z,16nm,0.6s,SNR=23
MOTA Moosalm 17.00 321 *i* Pn **P 19 06 11.7 -0.6**
comp=Z,19nm,0.8s
DPC Dobruska-Polom 17.07 336 *e*P **P 19 06 12.9 -0.1**
DPC MLR MLR
comp=Z,2µm,11.9s
DPC Dobruska-Polom 17.07 336 *e*P **P 19 06 12.9 -0.1**
DPC *ex* x 19 06 21.5
DPC AMS AMS 19 14 40.0
comp=Z,2µm,11.9s
DFRA Djebel Bou Aff 17.08 281 P **P 19 06 20.0 +6.7**
KHC Kasperske Hory 17.10 329 *i* P **Pn 19 06 10.4 -1.4**
KHC pmax pmax
comp=Z,98nm,1.2s
KHC Kasperske Hory 17.10 329 *e*P **P 19 06 14.0 +0.7**
KHC *ex* x 19 06 21.1
KHC AMS AMS 19 13 50.0
comp=Z,2µm,15.3s
KHC Kasperske Hory 17.10 329 Pn 19 06 10.2 -1.5
RETA Reutte 17.27 321 *i* Pn **P 19 06 15.6 +0.4**
comp=Z,6.5nm,0.4s,SNR=14
OSTC Ostas 17.28 337 *e*P **P 19 06 16.4 +1.1**
OSTC AMS AMS 19 13 10.0
comp=Z,2µm,27.6s
BEL Belsk 17.29 347 P **P 19 06 16.2 +0.9**
BEL pmax pmax
comp=Z,88nm,1.2s
DAVOX Davos/Dischmat 17.30 318 P **P 19 06 15.9 +0.2**
comp=Z,0.7nm,0.3s,baz=95,slow=9.8,SNR=13
DAVOX S Sn 19 09 14.9 -11
comp=Z,0.2nm,0.3s,baz=150,slow=22,SNR=1.5
UPC Upice 17.30 336 AMS AMS 19 14 00.0
comp=Z,2µm,11.8s
SAOF Saorge 17.31 307 P **P 19 06 15.9 +0.3**
SAOF pmax pmax
comp=Z,92nm,1.2s
CHVC Chvalec 17.36 336 *e*P **P 19 06 16.2 0.0**
CHVC AMS AMS 19 13 10.0
comp=Z,2µm,22.5s
PBCC Pribram 17.36 331 *e*P **Pn 19 06 15.2 +0.2**
PBCC *ex* x 19 06 20.0
PRU Pruhonice 17.39 333 *e*P **Pn 19 06 15.6 +0.2**
PRU MLR MLR
comp=Z,2µm,19.8s
PRU Pruhonice 17.39 333 *e*P **Pn 19 06 15.6 +0.2**
PRU *ex* x 19 06 27.3
PRU AMS AMS 19 12 40.0
comp=Z,2µm,19.8s
WET Wettzell 17.41 328 P **Pn 19 06 15.7 +0.1**
WET pmax pmax
comp=Z,47nm,1.3s
TUE Stuetta 17.42 316 P **Pn 19 06 15.8 -0.2**
FUR Furstenfeldbru 17.45 323 P **P 19 06 17.4 +0.2**
FUR pmax pmax
comp=Z,65nm,1.3s
SET Setif 17.48 280 P P 19 06 25.0 +7.3
PRA Prague 17.50 333 *e*P **P 19 06 18.3 +0.6**
PRA MLR MLR
comp=Z,2µm,16.3s
PRA Prague 17.50 333 *e*P **P 19 06 18.3 +0.6**
PRA *ep*P **pP 19 06 23.5 -0.8**
PRA AMS AMS 19 13 00.0
comp=Z,2µm,16.3s
KSP Ksiaz 17.50 337 *e*P **P 19 06 17.2 -0.5**
KSP Ksiaz 17.50 337 P **P 19 06 17.2 -0.5**
KSP pmax pmax
comp=Z,35nm,1.5s
DAVA Damuels 17.61 319 *i* Pn **P 19 06 19.0 0.0**
comp=Z,24nm,0.7s,SNR=13
ISO Isola 17.72 307 P **P 19 06 21.7 +1.5**
ISO pmax pmax
comp=Z,27nm,1.4s
PVCC Panska Ves 17.82 334 *e*P **P 19 06 21.5 +0.2**
PVCC Panska Ves 17.82 334 *e*P **P 19 06 21.5 +0.2**
VORD Divnogorie 18.23 26 *e*P **Pn 19 06 25.6 -0.1**
VORD pmax pmax
comp=Z,30nm,0.8s
BNI Bardonecchia 18.32 309 P **Pn 19 06 25.3 -1.7**
BNI pmax pmax

comp=Z,82nm,1.4s
BNI Bardonecchia 18.32 309 Pn 19 06 25.3 -1.7
BRG Berggiesshubel 18.34 333 P **Pn** 19 06 26.8 -0.2
BRG pmax pmax
comp=Z,30nm,1.1s
BRG Berggiesshubel 18.34 333 *eP* **P** 19 06 26.5 -0.4
BRG Amp 19 06 28.4
comp=Z,11nm,0.8s
BRG *ex* x 19 06 32.2
BRG Amp 19 06 35.0
comp=Z,27nm,1.1s
BRG *ex* x 19 06 53.8
BRG Amp 19 06 55.3
comp=Z,31nm,1.0s
VSR Storozhevoye 18.40 25 *eP* **P** 19 06 27.2 -0.3
VSR pmax pmax
comp=Z,60nm,1.2s
NKC Novy Kostel 18.42 330 *eP* **Pn** 19 06 28.3 +0.3
NKC MLR MLR
comp=Z,2µm,12.7s
NKC Novy Kostel 18.42 330 *eP* **Pn** 19 06 28.3 +0.3
NKC AMS AMS 19 14 40.0
comp=Z,2µm,12.7s
GRA1 Grafenberg Arr 18.55 327 P **P** 19 06 27.9 -1.4
GRA1 IAmb IAmb 19 06 42.9
comp=Z,109nm,1.2s
GRF Grafenberg Arr 18.55 327 P **P** 19 06 27.9 -1.4
GRF pmax pmax
comp=Z,109nm,1.2s
GRF Grafenberg Arr 18.55 327 *eP* **P** 19 06 27.9 -1.4
comp=Z,80nm,1.5s,baz=136,slow=12
GRFO Grafenberg 18.55 327 P **P** 19 06 28.0 -1.2
GRFO pmax pmax
comp=Z,106nm,1.2s
GRFO Grafenberg 18.55 327 P **P** 19 06 28.0 -1.2
GRFO IAmb IAmb 19 06 42.8
comp=Z,106nm,1.2s
SENIN Lac Senin/Sane 18.56 313 P **P** 19 06 28.9 -0.8
SLE Schleitheim 18.65 318 P **P** 19 06 29.2 -1.2
SLE pmax pmax
comp=Z,35nm,0.6s
STU Stuttgart 18.89 322 P **P** 19 06 32.0 -1.1
STU pmax pmax
comp=Z,25nm,0.7s
STU Stuttgart 18.89 322 P **P** 19 06 32.0 -1.1
CLL Collm 19.04 333 *eP* **P** 19 06 34.0 -0.6
comp=Z,111nm,0.8s
CLL *i* Pmax 19 06 36.1
comp=Z,23nm,0.8s
CLL *i* (sP) **pP** 19 06 39.0 -1.9
comp=Z,30nm,0.9s
CLL *e* 19 06 45.0
CLL *e*PPP PPP 19 06 56.0
CLL Collm 19.04 333 P **P** 19 06 33.1 -1.5
CLL pmax pmax
comp=Z,25nm,0.7s
CLL Collm 19.04 333 P **P** 19 06 33.1 -1.5
BFO Black Forest 19.07 320 P **P** 19 06 33.9 -1.1
BFO pmax pmax
comp=Z,22nm,0.8s
BFO Black Forest 19.07 320 P **P** 19 06 33.9 -1.1
MOX Moxa 19.08 329 P **Pn** 19 06 35.5 -0.5
MOX pmax pmax
comp=Z,29nm,1.1s
SUW Suwalki 19.09 353 *eP* **Pn** 19 06 35.6 -0.4
SUW Suwalki 19.09 353 *eP* **Pn** 19 06 35.6 -0.4
SUW Suwalki 19.09 353 P **P** 19 06 33.9 -1.2
SUW pmax pmax
comp=Z,150nm,1.0s
SUW Suwalki 19.09 353 P **P** 19 06 33.9 -1.2
SUW IAmb IAmb 19 06 42.5
comp=Z,150nm,1.0s
VRH Novokhopyorsk 19.34 29 *eP* **P** 19 06 38.4 +0.5
VRH pmax pmax
comp=Z,170nm,0.6s
GKP Gorka Klasztor 19.40 342 *eP* **P** 19 06 38.5 0.0
GKP Gorka Klasztor 19.40 342 *eP* **Pn** 19 06 39.1 -0.7
GKP Gorka Klasztor 19.40 342 P **Pn** 19 06 39.0 -0.7
GKP pmax pmax
comp=Z,195nm,0.9s
MNK Minsk 19.41 2 *eP* **P** 19 06 37.0 -1.7
MNK Minsk 19.41 2 *i* P **P** 19 06 38.3 -0.4
comp=E,8.0nm,1.3s
MNK *i* P **P** 19 06 38.3 -0.4
comp=N,115nm,1.3s
MNK *i* P **P** 19 06 38.3 -0.4
comp=Z,64nm,0.8s
MNK *i* PP **PnPn** 19 06 51.5 -1.8
MNK *i* S **Sn** 19 10 12.4 -4.5
MNK *i* SS **SnSn** 19 10 28.5 -2.6
MNK *i* LQ LQ 19 12 20.7
MNK *i* LR LR 19 13 47.6
MNK *i* LRM MLR 19 14 10.1
comp=E,106nm,14.1s
MNK *i* LRM MLR 19 14 17.7
comp=N,589nm,15.3s
MNK *i* LRM MLR 19 14 33.1
comp=Z,665nm,14.9s
LPSR Galich'ya Gora 19.49 22 *eP* **P** 19 06 38.9 -0.6
LPSR pmax pmax
comp=Z,20nm,0.7s
ECH Echery 19.64 318 P **P** 19 06 39.7 -1.5
ECH pmax pmax
comp=Z,40nm,1.3s
ECH Echery 19.64 318 P **P** 19 06 39.7 -1.5
SSB Saint Sauveur 19.80 308 P **P** 19 06 41.8 -1.2
SSB pmax pmax
comp=Z,27nm,0.8s
SSB Saint Sauveur 19.80 308 P **P** 19 06 41.8 -1.2
NACGM Naroch 19.80 360 *i* P **P** 19 06 42.5 -0.4
NACGM *i* P **P** 19 06 42.5 -0.4
NACGM *i* P **P** 19 06 42.5 -0.4
NACGM *i* PP **PnPn** 19 06 56.9 -1.8
NACGM *i* PPP PPP 19 07 04.6
NACGM *i* S **Sn** 19 10 26.7 +0.5
NACGM *i* SS **SnSn** 19 10 39.8 -0.9
NACGM *i* SSS SSS 19 10 55.8
NACGM *i* LQ LQ 19 12 33.5
NACGM *i* LR LR 19 13 31.3
RAYN Ar Rayn 19.89 120 *i* P **Pn** 19 06 45.4 -0.5
SNR=16
RAYN Ar Rayn 19.89 120 P **P** 19 06 44.0 -0.2
RAYN pmax pmax
comp=Z,30nm,0.9s
RAYN Ar Rayn 19.89 120 P **P** 19 06 44.0 -0.2
TNS Taunus Mts 20.21 324 P **P** 19 06 47.0 -0.5
TNS pmax pmax
comp=Z,56nm,1.0s
IDID Didziasalis 20.22 360 *eP* Pn 19 06 48.3 -1.1
IIGN Ignalina 20.26 359 *eP* **P** 19 06 48.6 +0.8
ISAL Salakas 20.48 359 *eP* **P** 19 06 51.2 +1.0
PABE Paberze 20.50 355 *eP* **P** 19 06 49.4 -1.1
MTLF Montolieu 20.74 301 P **P** 19 06 53.0 -0.2
MTLF pmax pmax
comp=Z,47nm,1.0s
WLF Walferdange 21.02 320 *dP* **P** 19 06 55.8 -0.4
WLF *d*PnPn **PnPn** 19 07 13.6 -1.7
WLF Walferdange 21.02 320 P **P** 19 06 55.4 -0.8
WLF pmax pmax
comp=Z,40nm,0.9s
WLF Walferdange 21.02 320 P **P** 19 06 55.4 -0.8
LOR Lormes 21.07 312 P **P** 19 06 56.1 -0.6
LOR pmax pmax
comp=Z,72nm,0.9s
OBN Obninsk 21.11 16 P **P** 19 06 55.1 -2.0
comp=Z,4.2nm,0.4s,baz=190,slow=14,SNR=8.8
OBN Obninsk 21.11 16 *eP* **P** 19 06 57.9 +0.8
OBN *e* 19 07 19.5
OBN *e* 19 11 00.3
OBN pmax pmax
comp=Z,85nm,1.3s
OBN MLR MLR
comp=Z,772nm,19.0s
OBN Obninsk 21.11 16 P **P** 19 06 55.5 -1.5
OBN IAmb IAmb 19 07 06.6
comp=Z,48nm,0.7s
BUG Bochum-Univer 21.58 325 P **P** 19 07 02.0 -0.1
BUG pmax pmax
comp=Z,41nm,1.2s
BTNL Ternell 21.59 322 *dP* **P** 19 07 02.4 +0.1
BSD Bornholm Skovb 21.66 341 *i* P **P** 19 07 03.8 +0.8
BSD Bornholm Skovb 21.66 341 *i* P **P** 19 07 03.7 +0.8
MEM Membach 21.66 322 *dP* **P** 19 07 02.8 -0.2
MEM Membach 21.66 322 P **P** 19 07 03.1 +0.1
MEM pmax pmax
comp=Z,104nm,0.9s
BSTI Sart Tilman 21.87 322 *dP* **P** 19 07 05.7 +0.5
BCLA Clavier 21.91 321 *dP* **P** 19 07 05.3 -0.3
BCLA *d*SP **pP** 19 07 11.3 -0.9
MOS Moscow 21.93 16 *eP* **P** 19 07 04.4 -1.4
MOS *e* 19 07 25.9
MOS *eS* **S** 19 11 02.7 -3.9
MOS *eSS* **SnSn** 19 11 28.4 -4.3
MOS pmax pmax
comp=Z,74nm,1.0s
MOS MLR MLR
comp=Z,1µm,17.0s
BGES Gesves 22.00 321 *dP* **P** 19 07 05.8 -0.8
BGES *d*PnPn **PnPn** 19 07 32.9 +4.2
DOU Dourbes 22.09 320 *dP* **P** 19 07 06.4 -1.2
DOU Dourbes 22.09 320 P **P** 19 07 06.8 -0.8
DOU pmax pmax
comp=Z,62nm,0.9s
BMRD Maredsous 22.12 320 *dP* **P** 19 07 07.4 -0.5
TAM Tamanrasset 22.29 242 P **P** 19 07 09.7 -0.5
TAM pmax pmax
comp=Z,114nm,1.5s
TAM Tamanrasset 22.29 242 P **P** 19 07 09.7 -0.5
TAM IAmb IAmb 19 07 31.8
comp=Z,114nm,1.5s
CLF Chambon-Foret 22.37 313 P **P** 19 07 10.2 -0.5
SNF Seneffe 22.49 320 *dP* **P** 19 07 11.6 -0.3
BLEU Blekinge 22.51 344 *e* **P** 19 07 06.2 -5.8
baz=155,slow=8.6
BLEU *i* P pP 19 07 08.5 -10
LUNU Lund 22.52 340 *i* P **P** 19 07 10.0 -2.1
UCC Uccle 22.61 321 *dP* **P** 19 07 13.3 +0.1
UCC *dx* x 19 07 23.9
UCC Uccle 22.61 321 P **P** 19 07 12.5 -0.8
UCC pmax pmax
comp=Z,107nm,1.4s
UCC Uccle 22.61 321 P **P** 19 07 12.5 -0.8
UCC IAmb IAmb 19 07 30.3
comp=Z,107nm,1.4s
BELG Belogornoye 22.75 34 P **P** 19 07 13.7 -0.9
comp=Z,19nm,0.4s,baz=41,slow=9.2,SNR=15
BELG Belogornoye 22.75 34 *i* P **P** 19 07 15.1 +0.5
BELG pmax pmax
comp=Z,31nm,1.3s
DEL Delary 23.14 341 *i* P **P** 19 07 17.9 -0.7
MTSE Matsula 23.71 356 *eP* **P** 19 07 24.7 +0.5
SLWR Sila 24.16 110 P **P** 19 07 31.0 +2.2
BORU Boraas 24.45 342 *i* P **P** 19 07 31.1 0.0
JRN Qarnain Island 24.61 107 P **P** 19 07 35.5 +2.6
SNR=15
JRN S **S** 19 12 01.0 +8.4
ESBB Sonseca Array 24.85 290 P **P** 19 07 34.7 -0.3
ESBB IAmb IAmb 19 07 54.2
comp=Z,57nm,1.3s
ESDC Sonseca Array 24.85 290 P **P** 19 07 35.0 -0.1
comp=Z,14nm,0.7s,baz=81,slow=9.3,SNR=111
ESDC PcP **PcP** 19 11 10.0 -0.7
comp=Z,0.9nm,0.7s,baz=70,slow=2.4,SNR=2.9
ESDC Sonseca Array 24.85 290 P **P** 19 07 34.2 -0.8
PAB San Pablo 25.15 289 P **P** 19 07 37.8 +0.1
PAB pmax pmax
comp=Z,36nm,1.3s
PAB San Pablo 25.15 289 P **P** 19 07 37.8 +0.1
PAB IAmb IAmb 19 07 57.1
comp=Z,36nm,1.2s
GEYT Alibeck 25.22 74 P **P** 19 07 39.0 +0.6
comp=Z,10nm,0.6s,baz=284,slow=7.5,SNR=21
GEYT Alibeck 25.22 74 P **P** 19 07 38.8 +0.5
GYA0 ALIBECK ARRAY 25.22 74 P **P** 19 07 39.1 +0.8
GYA0B ALIBECK ARRAY 25.22 74 P **P** 19 07 38.8 +0.5
GYA0B IAmb IAmb 19 08 07.9
comp=Z,48nm,1.1s
ROSF Rostrenen 25.91 310 P **P** 19 07 43.7 -0.7
ROSF pmax pmax
comp=Z,50nm,1.1s
MZWR Madinat Zayed 26.02 108 P **P** 19 07 48.7 +3.1
MDT Midelt 26.15 274 P **P** 19 07 47.4 +0.5
comp=Z,12nm,1.1s,baz=75,slow=5.5,SNR=9.2
FINES FINESS Array B 26.37 359 P **P** 19 07 46.8 -1.6
comp=Z,6.9nm,0.7s,baz=156,slow=12,SNR=29
FINES PcP **PcP** 19 11 12.8 -0.7
comp=Z,2.1nm,0.5s,baz=150,slow=3.1,SNR=1.7
FIA1 FINESS Array S 26.37 359 P **P** 19 07 47.4 -1.0
FIA1 IAmb IAmb 19 08 03.6
comp=Z,27nm,1.1s
VALR Valaam 26.40 4 *i* P **P** 19 07 47.1 -1.6
VALR pmax pmax
comp=Z,31nm,0.7s
HFS Hagfors 26.47 345 P **P** 19 07 47.4 -1.9
comp=Z,6.8nm,0.5s,baz=153,slow=12,SNR=27
AJN Ajban 26.48 106 P **P** 19 07 51.6 +1.8
SNART Snartemo 26.67 337 *eP* **P** 19 07 51.0 -0.2
SHME Shamm 26.70 102 P **P** 19 07 52.6 +0.8
SHME Shamm 26.70 102 P **P** 19 07 53.6 +1.8
ASUD Al Ashush, Dub 26.72 105 *i* P **P** 19 07 53.3 +1.4
SNR=6.3
ASUD Al Ashush, Dub 26.72 105 P **P** 19 07 55.3 +3.3
NAZ Nazwa, Dubai 26.80 104 *i* P **P** 19 07 54.1 +1.3
SNR=5.6
NAZ Nazwa, Dubai 26.80 104 P **P** 19 07 54.5 +1.8
SNR=11
FAQ Al Faqa, Dubai 26.87 105 P **P** 19 07 54.4 +1.1
FAQ Al Faqa, Dubai 26.87 105 P **P** 19 07 54.7 +1.4
BANOM Banah 26.88 102 *i* P **P** 19 07 53.7 +0.3
SNR=7.5
BANOM Banah 26.88 102 P **P** 19 07 54.3 +0.9
OSL Oslo 26.98 342 *eP* **P** 19 07 52.4 -1.6
MASF Masafi 27.02 103 P **P** 19 07 57.3 +2.6
SNR=6.4
MSFE Esma-Masafi 27.02 103 *i* P **P** 19 07 55.5 +0.7
SNR=5.7
KLMR Klimovskoe 27.03 14 *eP* **P** 19 07 51.5 -2.8
KLMR pmax pmax
comp=Z,33nm,1.0s
KLMR Klimovskoe 27.03 14 *eP* **P** 19 07 51.6 -2.8
KLMR AMP 19 08 08.4
comp=Z,33nm,1.0s
KONO Kongsberg 27.03 341 *eP* **P** 19 07 52.9 -1.5
PBRG Braganca 27.04 294 *eP* **P** 19 07 54.6 -0.2
comp=Z,55nm,1.3s
MDH Madha 27.16 103 P **P** 19 07 57.6 +1.6
MVO Moncorvo 27.22 293 *eP* **P** 19 07 56.6 +0.1
comp=Z,62nm,1.7s
HATD Hatta, Dubai 27.26 104 P **P** 19 07 57.5 +0.6
HATD Hatta, Dubai 27.26 104 P **P** 19 07 58.1 +1.3
SNR=8.9
HATD S **S** 19 12 42.8 +8.1
UOSS Minazif 27.26 104 *i* P **P** 19 07 56.8 0.0
SNR=5.8
UOSS Minazif 27.26 104 P **P** 19 07 57.2 +0.3
UOSS IAmb IAmb 19 08 16.6
comp=Z,38nm,0.8s
UOSS Minazif 27.26 104 P **P** 19 07 57.7 +0.8
AKTO Aktyubinsk 27.27 46 P **P** 19 07 57.0 +0.2
comp=Z,11nm,0.7s,baz=249,slow=7.9,SNR=33
AKTO Aktyubinsk 27.27 46 P **P** 19 07 56.7 -0.1
PBAR Barrancos 27.29 287 *eP* **P** 19 07 56.7 -0.3
comp=Z,76nm,1.4s
ALNE Al Ain 27.33 106 P **P** 19 07 58.9 +1.3
ALNE Al Ain 27.33 106 P **P** 19 07 59.0 +1.5
SNR=9.1
NC602 NORSAR Array S 27.49 344 P **P** 19 07 58.2 -0.3
NC602 IAmb IAmb 19 08 16.0
comp=Z,28nm,1.0s
NC602 NORSAR Array S 27.49 344 *eP* **P** 19 07 56.5 -2.0
NORES NORESS Array B 27.49 344 P **P** 19 07 56.2 -2.3
PMRV Marv??o 27.50 289 *eP* **P** 19 07 58.8 -0.1
comp=Z,52nm,1.3s
PCBR Castelo Branco 27.56 290 *eP* **P** 19 08 00.4 +1.0
comp=Z,33nm,1.6s
UMZA Um Al Zommool 27.57 109 P **P** 19 08 02.1 +2.4
MTE Manteigas 27.60 291 *eP* **P** 19 07 59.7 -0.2
comp=Z,34nm,1.7s
MTE Manteigas 27.60 291 P **P** 19 08 01.0 +1.1
PESTR Estremoz 27.68 288 P **P** 19 08 00.3 -0.2
NAO01 NORSAR Array S 27.74 343 P **P** 19 07 58.9 -1.9
BLS5 Blasjo 27.77 338 *eP* **P** 19 08 00.6 -0.5
NC405 NORSAR Array S 27.78 344 P **P** 19 07 59.2 -2.0
NC405 IAmb IAmb 19 08 23.9
comp=Z,58nm,1.4s
POLO Lamas de Olo 27.81 293 *eP* **P** 19 08 01.9 +0.2
comp=Z,24nm,1.6s
NB201 NORSAR Array S 27.82 344 P **P** 19 07 59.8 -1.8
NB2 NORSAR Subarra 27.83 344 P **P** 19 07 59.6 -2.1
baz=156,slow=9.3
NOA NORSAR Array B 27.83 344 P **P** 19 07 59.6 -2.1
comp=Z,0.7nm,0.4s,baz=146,slow=9.2,SNR=16
NOA PcP **PcP** 19 11 16.3 -0.8
comp=Z,1.9nm,0.8s,baz=135,slow=2.5,SNR=4.0
NOA LR LR 19 20 53.0
comp=Z,735nm,18.1s,baz=145,slow=40
KIRV Kirov 27.84 25 P **P** 19 08 00.2 -1.5
comp=Z,15nm,0.5s,baz=226,slow=5.7,SNR=10
KIRV Kirov 27.84 25 *i* P **P** 19 08 00.5 -1.2
PVIS Viseu 27.87 292 *eP* **P** 19 08 03.3 +1.0
comp=Z,40nm,1.3s
PVAQ Vaqueiros 27.89 285 *eP* **P** 19 08 01.7 -0.7
comp=Z,43nm,1.2s
PVAQ Vaqueiros 27.89 285 P **P** 19 08 00.7 -1.7
PVAQ IAmb IAmb 19 08 10.6
comp=Z,37nm,1.0s
SOHO SOHO 27.91 105 P **P** 19 08 03.4 +0.7
SOHO SOHO 27.91 105 P **P** 19 08 03.7 +1.0
NBO00 NORSAR Array S 27.93 343 P **P** 19 08 00.4 -2.1
NBO00 IAmb IAmb 19 08 15.4
comp=Z,40nm,1.2s
PBEJ Beja 27.95 286 *eP* **P** 19 08 05.2 +2.2
comp=Z,13nm,1.1s
NC303 NORSAR Array S 27.96 344 P **P** 19 08 00.8 -2.0
JOF Joensuu 27.98 4 P **P** 19 08 01.6 -1.3
JOF pmax pmax
comp=Z,15nm,2.4s
EVO Evora 28.03 287 *eP* **P** 19 08 04.4 +0.8
comp=Z,46nm,1.4s
AB31 Akbulak array 28.04 50 P **P** 19 08 04.0 +0.4
ABKAR Akbulak array 28.04 50 P **P** 19 08 04.1 +0.4
ABKAR Akbulak array 28.04 50 P **P** 19 08 03.9 +0.3
PBDV Barranco-do-Ve 28.08 285 *eP* **P** 19 08 04.5 +0.4
comp=Z,75nm,1.2s
ODD1 Odda 28.11 338 *eP* **P** 19 08 03.2 -0.9
PCVE Castro Verde 28.12 285 *eP* **P** 19 08 04.3 -0.2
comp=Z,33nm,1.3s
NC204 NORSAR Array S 28.14 343 P **P** 19 08 03.4 -1.1
PMTG Montargil 28.16 289 *eP* **P** 19 08 08.6 +3.8
comp=Z,34nm,1.8s
MESJ Messejana 28.25 286 *eP* **P** 19 08 05.7 +0.1
MESJ IAmb IAmb 19 08 16.8
comp=Z,13nm,0.7s
MESJ Messejana 28.25 286 *eP* **P** 19 08 05.7 +0.1
MESJ Messejana 28.25 286 *eP* **P** 19 08 05.6 +0.1
comp=Z,42nm,1.4s
SKAR Skarslia 28.25 341 *eP* **P** 19 08 04.9 -0.5
COI Coimbra 28.27 291 P **P** 19 08 05.1 -0.6
COI pmax pmax
comp=Z,33nm,1.1s
COI Coimbra 28.27 291 P **P** 19 08 05.1 -0.6
COI IAmb IAmb 19 08 23.3
comp=Z,33nm,1.1s
ARQ Araqi 28.31 106 P **P** 19 08 08.5 +2.2
SNR=7.9
ARQ P **P** 19 08 08.5 +2.2
SNR=7.9
PNCL Nicolau / Gran 28.47 287 *eP* **P** 19 08 10.7 +3.2
comp=Z,46nm,1.7s
HOQ Hoqain 28.80 105 P **P** 19 08 11.0 +0.3
SNR=8.5
EKA Eskdalemuir Ar 28.91 324 P **P** 19 08 10.1 -1.1
comp=Z,2.4nm,0.3s,baz=124,slow=11,SNR=55
EKA PcP **PcP** 19 11 19.4 -0.4
comp=Z,1.4nm,0.6s,baz=114,slow=3.0,SNR=4.2
ESK Eskdalemuir 28.92 324 P **P** 19 08 10.4 -0.9
ESK pmax pmax
comp=Z,24nm,1.1s
ESK Eskdalemuir 28.92 324 P **P** 19 08 10.4 -0.9
ESK IAmb IAmb 19 08 35.8
comp=Z,24nm,1.1s
HRA Herat 28.99 81 P **P** 19 08 12.7 +0.2
PRGR Permogore 29.11 18⇑ *i*P **P** 19 08 11.9 -1.0
PRGR *e*S **S** 19 12 57.1 -6.0
PRGR pmax pmax
comp=Z,29nm,0.7s
BSY Bisya 29.15 107 P **P** 19 08 14.5 +0.8
SNR=17
BSY P **P** 19 08 14.5 +0.8
SNR=17
DOK Doka 29.21 117 P **P** 19 08 15.0 +0.8
DOMB Dombas 29.21 343 *eP* **P** 19 08 13.0 -0.9
HYA Hoyanger 29.25 339 *eP* **P** 19 08 15.2 +1.1
WHFO Wadi Hawf 29.40 119 P **P** 19 08 17.0 +1.0
ABTO Aybut 29.43 120 P **P** 19 08 17.2 +0.9
BIDO Bidbid 29.48 105 P **P** 19 08 18.8 +2.1
SUE Sulen 29.58 338 *eP* **P** 19 08 17.1 0.0
SMDO Samad 29.65 105 P **P** 19 08 18.5 +0.2
SNR=11
AKN Aaknes 29.85 341 *eP* **P** 19 08 18.9 -0.7
RBK Rabkut 29.98 119 P **P** 19 08 22.2 +1.0
SNR=5.1
RBK P **P** 19 08 22.2 +1.0
SNR=5.1
OUL Oulu 30.02 359 P **P** 19 08 19.6 -1.4
OUL pmax pmax
comp=Z,29nm,2.4s
MOL Molde 30.04 342 *eP* **P** 19 08 21.4 +0.2
JMDO Jabal Madar 30.05 107 P **P** 19 08 22.2 +0.5
JMDO P **P** 19 08 22.2 +0.5
ARU Arti 30.28 35 P **P** 19 08 23.0 -0.4
comp=Z,2.5nm,0.4s,baz=233,slow=10.0,SNR=18
ARU Arti 30.28 35 *d* /P **P** 19 08 23.1 -0.4
ARU 19 09 20.2
ARU PPP PPP 19 09 33.9
ARU 19 11 16.6
ARU S **S** 19 13 23.2 +1.5
ARU SS **ScP** 19 15 06.0 +1.9
ARU SSS SSS 19 15 26.5
ARU pmax pmax
comp=Z,28nm,1.7s
ARU Arti 30.28 35 P **P** 19 08 23.0 -0.4
DMTO DMTO 30.38 117 P **P** 19 08 24.8 +0.1
WBK Wadi Bani Khal 30.61 105 P **P** 19 08 28.3 +1.6
SHAO Shalim 30.68 116 P **P** 19 08 29.3 +1.9
SHAO Shalim 30.68 116 P **P** 19 08 29.0 +1.7
MHTO MHTO 30.70 109 P **P** 19 08 29.4 +2.0
SNR=8.1
NSS Namsos 30.82 347 *eP* **P** 19 08 26.6 -1.4
MSF Maaselka 30.88 2 P **P** 19 08 27.8 -0.7
MSF pmax pmax
comp=Z,30nm,2.3s
DQM DQM 30.97 111 P **P** 19 08 30.3 +0.5
SNR=15
JLN Jalan Bani Buh 30.20 106 P **P** 19 08 32.8 +0.9
SNR=8.4
SVE Sverdlovsk 31.48 36‖ *eP* **P** 19 08 34.4 +0.5
SVE pmax pmax
comp=Z,23nm,1.0s
TOA0 Torodi Ar. Sit 31.54 232 P **P** 19 08 34.8 -0.1
TORD Torodi Ar. Bea 31.54 232 P **P** 19 08 35.3 +0.4
comp=Z,15nm,0.6s,baz=33,slow=8.9,SNR=92
MOR8 Moi Rana 31.96 350 *eP* **P** 19 08 36.9 -1.2
STOK Stokkvaagen 32.32 350 *eP* **P** 19 08 41.2 0.0
KONS Konsvik 32.46 350 *eP* **P** 19 08 40.9 -1.5
NBB40 Tonnes 32.49 350 *eP* **P** 19 08 41.5 -1.2
APA Apatity 32.73 5‖ *i*P **P** 19 08 40.8 -4.0
APA pmax pmax
comp=Z,16nm,0.7s
APA MLR MLR
comp=Z,1µm,15.0s
N2TV TVrnvik 33.21 352 *eP* **P** 19 08 48.3 -0.7
N2IH Innhavet 33.50 353 *eP* **P** 19 08 50.4 -1.1
SOCY Socotra 33.53 126 P **P** 19 08 50.3 -2.1
SOCY IAmb IAmb 19 08 51.9
comp=Z,17nm,1.0s
STEI Steigen 33.54 352 *eP* **P** 19 08 50.5 -1.4
N2RO R,st 33.55 350 *eP* **P** 19 08 50.6 -1.4
N2SV S,rvVgen 33.78 351 *eP* **P** 19 08 51.9 -2.0
LOF Lofoten 33.94 351 *eP* **P** 19 08 54.0 -1.3
KTK1 Kautokeino 34.02 358 *eP* **P** 19 08 54.7 -1.4
IUG Iuzhnay 34.16 65 *eP* **P** 19 08 57.8 0.0
comp=Z,6.4nm,0.8s,baz=65
IUG *e*S **S** 19 14 23.0 +0.3
baz=65
IUG Iuzhnay 34.16 65 *eP* **P** 19 08 57.7 0.0
IUG *e*S **S** 19 14 23.0 +0.3
IUG pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 34.44 79 P **P** 19 08 58.4 -2.0
KBL pmax pmax
comp=Z,11nm,1.1s
KBL Kabul 34.44 79 P **P** 19 08 58.4 -2.0

KK31 Karatay Array 34.48 63 *i* P **P 19 09 01.0 +0.6**
KK31 Karatay Array 34.48 63 P **P 19 09 01.2 +0.8**
KK31 IAmb IAmb 19 09 19.0
comp=Z,26nm,0.9s
KKAR Karatay Array 34.48 63 P **P 19 09 01.0 +0.6**
KKAR pmax pmax
comp=Z,26nm,1.0s
KKAR Karatay Array 34.48 63 P **P 19 09 00.9 +0.6**
KKAR IAmb IAmb 19 09 19.0
comp=Z,26nm,0.9s
ARA0 ARCESS Array S 34.50 359 *e*P **P 19 08 58.6 -1.5**
ARCES ARCESS Array B 34.50 359 P **P 19 08 58.8 -1.4**
comp=Z,3.7nm,0.4s,baz=176,slow=9.2,SNR=68
KOWA Kowa 34.51 241 P **P 19 09 00.9 0.0**
GAR Garm 34.66 70 P **P 19 09 03.3 +1.2**
JETT Jettan, Norway 34.70 356 *e*P **P 19 09 00.3 -1.6**
TRO Tromso 34.87 355 *e*P **P 19 09 01.6 -1.7**
DZA Taraz 35.09 64 *e*P **P 19 09 06.1 +0.4**
baz=64
DZA *e*S **S 19 14 37.6 +0.7**
baz=64
DZA Taraz 35.09 64 *e*P **P 19 09 06.1 +0.4**
DZA *e*S **S 19 14 37.5 +0.7**
BRVK Borovoye 35.33 46*ce*P **P 19 09 08.4 +0.9**
BRVK pmax pmax
comp=Z,30nm,1.7s
BRVK Borovoye 35.33 46 P **P 19 09 08.0 +0.5**
BRVK IAmb IAmb 19 09 21.8
comp=Z,29nm,1.1s
BRVK Borovoye 35.33 46 P **P 19 09 08.7 +1.2**
HAMF Hammerfest 35.65 358 *e*P **P 19 09 08.8 -1.2**
MBAR Mbarara 35.70 173 P **P 19 09 12.0 +0.8**
MBAR pmax pmax
comp=Z,6.0nm,0.8s
MBAR Mbarara 35.70 173 P **P 19 09 12.0 +0.8**
BRZS Berezniki 36.28 51 *e*P **P 19 09 15.8 0.0**
baz=52
BRZS Berezniki 36.28 51 *e*P **P 19 09 15.8 0.0**
EKS2 Erkin-Say 36.90 64 P **P 19 09 22.7 +1.4**
SNR=17
BTLS Baital 36.98 60 *e*P **P 19 09 22.1 +0.2**
baz=60
BTLS *e*S **S 19 15 06.3 +0.6**
baz=60
BTLS Baital 36.98 60 *e*P **P 19 09 22.0 +0.2**
BTLS *e*S **S 19 15 06.2 +0.6**
KMBO Kilima Mbogo 37.33 163 P **P 19 09 26.6 +1.4**
comp=Z,2.7nm,0.8s,baz=30,slow=12,SNR=4.2
USP Ospenovka 37.39 63 P **P 19 09 26.0 +0.6**
SNR=5.7
AAK Ala-Archa 37.43 64 P **P 19 09 27.3 +1.4**
comp=Z,17nm,0.8s
AAK Ala-Archa 37.43 64 P **P 19 09 27.4 +1.5**
SNR=16
AAK Ala-Archa 37.43 64 *i* P **P 19 09 27.0 +1.2**
SNR=35
AAK Ala-Archa 37.43 64 P **P 19 09 27.0 +1.2**
AAK Ala-Archa 37.43 64 P **P 19 09 27.0 +1.2**
AAK IAmb IAmb 19 09 46.5
comp=Z,38nm,1.1s
AAK Ala-Archa 37.43 64 P **P 19 09 27.5 +1.7**
SGDS Sogindy 37.47 62 *e*P **P 19 09 25.9 -0.1**
baz=62
SGDS Sogindy 37.47 62 *e*P **P 19 09 25.9 -0.1**
UCH Uchtor 37.48 64 P **P 19 09 27.7 +1.1**
SNR=7.9
CHMS Chumysh 37.59 63 P **P 19 09 27.6 +0.5**
SNR=16
KBK Karagaybulak 37.76 64 P **P 19 09 30.5 +1.9**
SNR=18
NIL Nilore 38.05 78 P **P 19 09 31.4 +0.4**
NIL pmax pmax
comp=Z,26nm,1.0s
NIL Nilore 38.05 78 P **P 19 09 31.4 +0.4**
NIL IAmb IAmb 19 09 48.9
comp=Z,26nm,0.9s
NIL Nilore 38.05 78 P **P 19 09 32.3 +1.3**
TKM2 Tokmak 2 38.22 63 P **P 19 09 33.6 +1.1**
SNR=14
TKM2 Tokmak 2 38.22 63 *i* P **P 19 09 33.2 +0.7**
TKM2 pmax pmax
comp=Z,12nm,0.7s
AAA Alma-Ata 39.15 63 *e*P **P 19 09 40.4 +0.1**
comp=Z,13nm,0.7s,baz=63
AAA Alma-Ata 39.15 63 *e*P **P 19 09 40.3 +0.1**
AAA pmax pmax
comp=Z,13nm,0.7s
MDOK Medeo 39.25 63 *e*P **P 19 09 41.3 +0.1**
baz=63
MDOK Medeo 39.25 63 *e*P **P 19 09 41.3 +0.1**
BJO1 Bjornoya 39.67 357 *e*P **P 19 09 42.1 -1.9**
KURBB Kurchatov Arra 40.07 51 P **P 19 09 48.2 +0.5**
TDK Taldyqorghan 40.07 60 *e*P **P 19 09 48.1 +0.3**
comp=Z,12nm,0.7s,baz=60
TDK *e*S **S 19 15 53.0 +0.6**
baz=60
TDK Taldyqorghan 40.07 60 *e*P **P 19 09 48.1 +0.3**
TDK *e*S **S 19 15 52.9 +0.6**
TDK pmax pmax
comp=Z,12nm,0.7s
SATY Saty 40.25 63 *e*P **P 19 09 49.8 +0.4**
comp=Z,10nm,0.9s,baz=63
SATY *e*S **S 19 15 55.9 +0.6**
baz=63
SATY Saty 40.25 63 *e*P **P 19 09 49.8 +0.4**
SATY *e*S **S 19 15 55.9 +0.6**
SATY pmax pmax
comp=Z,10.0nm,0.9s
KPKS Kokpek 40.41 62 *e*P **P 19 09 50.9 +0.2**
baz=62
KPKS *e*S **S 19 15 58.0 +0.3**
baz=62
KPKS Kokpek 40.41 62 *e*P **P 19 09 50.9 +0.2**
KPKS *e*S **S 19 15 57.9 +0.3**
DBIC Dimbokro 40.63 233 P **P 19 09 52.5 -0.2**
comp=Z,3.8nm,0.4s,baz=29,slow=10,SNR=13
DBIC Dimbokro 40.63 233 P **P 19 09 51.8 -0.9**
DBIC pmax pmax
comp=Z,18nm,0.8s
DBIC Dimbokro 40.63 233 P **P 19 09 51.8 -0.9**
UZB Uzynbulak 40.69 62 *e*P **P 19 09 53.1 -0.1**
baz=62
UZB Uzynbulak 40.69 62 *e*P **P 19 09 53.0 -0.1**
PDGK Podgornoye 41.01 62 P **P 19 09 56.2 +0.5**
SHLS Shalkode 41.01 62 *e*P **P 19 09 58.1 +2.4**
baz=62
SHLS *e*S **S 19 16 11.3 +4.7**
baz=62
SHLS Shalkode 41.01 62 *e*P **P 19 09 58.1 +2.4**
SHLS *e*S **S 19 16 11.2 +4.7**
SEM Semipalatinsk 41.16 51 *e*P **P 19 09 57.0 0.0**
baz=51
SEM *e*S **S 19 16 08.9 0.0**
baz=51
SEM Semipalatinsk 41.16 51 *e*P **P 19 09 56.9 0.0**
SEM *e*S **S 19 16 08.9 0.0**
MAKZ Makanchi 42.43 57 P **P 19 10 07.4 +0.3**
MAKZ Makanchi 42.43 57 P **P 19 10 07.6 +0.5**
MAKZ IAmb IAmb 19 10 21.4
comp=Z,40nm,1.4s
MK31 Makanchi Array 42.64 57 *i* P **P 19 10 09.4 +0.5**
MK31 Makanchi Array 42.64 57 P **P 19 10 09.4 +0.5**
MK31 IAmb IAmb 19 10 23.6
comp=Z,36nm,1.1s
MKAR Makanchi Array 42.64 57 P **P 19 10 09.6 +0.8**
comp=Z,24nm,0.7s,baz=280,slow=6.4,SNR=187
MKAR Makanchi Array 42.64 57 P **P 19 10 09.2 +0.4**
SPA0 Spitsbergen Ar 43.42 357 *e*P **P 19 10 14.2 -0.5**
SCO Scoresbysund 43.90 339 *i* P **P 19 10 18.2 -0.4**
SCO IAmb IAmb 19 10 19.5
comp=Z,3.9nm,0.6s
SCO Scoresbysund 43.90 339 P **P 19 10 18.2 -0.4**
SCO pmax pmax
comp=Z,10.0nm,0.9s
SCO Scoresbysund 43.90 339 P **P 19 10 18.2 -0.4**
ZAA0 Zalesovo Array 44.04 46 P **P 19 10 19.8 -0.2**
ZALV Zalesovo Beam 44.04 46 P **P 19 10 20.1 +0.1**
comp=Z,32nm,0.5s,baz=269,slow=8.1,SNR=187
ZALV Zalesovo Beam 44.04 46 P **P 19 10 19.8 -0.2**
ZSN Zaisan 44.33 55 *e*P **P 19 10 22.4 -0.1**
baz=56
ZSN *e*S **S 19 16 55.3 +0.2**
baz=56
ZSN Zaisan 44.33 55 *e*P **P 19 10 22.4 -0.1**
ZSN *e*S **S 19 16 55.3 +0.2**

DGZ Jazzator, Alta 45.82 52*c i*P **P 19 10 35.2 +0.8**
DGZ pmax pmax
comp=Z,18nm,0.6s
WMQ Urumqi 46.83 60 P **P 19 10 43.6 +1.3**
WMQ pP pP 19 10 47.6 -1.5
WMQ sP pwP 19 10 51.3 -0.9
WMQ pmax pmax
comp=Z,27nm,1.1s
WMQ LR LR
comp=Z,1μm,20.3s
WMQ LR LR
comp=Z,2μm,18.7s
WMQ LR LR
comp=Z,1μm,20.9s
WMQ Urumqi 46.83 60 P **P 19 10 42.9 +0.6**
WMQ pmax pmax
comp=Z,26nm,1.0s
WMQ Urumqi 46.83 60 P **P 19 10 42.9 +0.6**
NRIK Noril'sk 47.34 25 P **P 19 10 46.9 +1.0**
comp=Z,14nm,0.4s,baz=235,slow=3.2,SNR=23
NRIK LR LR 19 31 54.2
comp=Z,975nm,18.5s,baz=176,slow=38
NRIK Noril'sk 47.34 25*ce*P **P 19 10 46.6 +0.7**
NRIK pmax pmax
comp=Z,16nm,0.7s
NRIK Noril'sk 47.34 25 P **P 19 10 46.6 +0.7**
PYUN Piuthan 47.78 82 *e*P **P 19 10 50.8 +0.7**
comp=Z,60nm,0.6s
KOLN Koldanda 48.41 82 *e*P **P 19 10 55.3 +0.3**
ISOG Isortoq, Green 48.69 330 *i* P **P 19 10 56.4 +0.2**
ISOG IAmb IAmb 19 10 57.1
comp=Z,24nm,0.6s
HYB Hyderabad 49.03 97 *i* P **P 19 10 59.0 -0.7**
GKN Gorkha 49.16 81 *e*P **P 19 11 00.8 +0.2**
comp=Z,23nm,0.5s
NOR Nord 49.19 352 *i* P **P 19 10 58.3 -1.6**
NOR IAmb IAmb 19 10 59.4
comp=Z,5.4nm,0.5s
NOR Nord 49.19 352 *i* P **P 19 10 58.3 -1.6**
NOR pmax pmax
comp=Z,5.0nm,0.5s
ICESG Greenland Ices 49.34 334 *i* P **P 19 11 00.9 -0.8**
ICESG IAmb IAmb 19 11 03.5
comp=Z,7.0nm,0.9s
SUMG Summit 49.54 339 *i* P **P 19 11 02.4 -0.9**
SUMG Summit 49.54 339 *i* P **P 19 11 02.3 -0.9**
SUMG Summit 49.54 339 P **P 19 11 02.1 -1.1**
SUMG IAmb IAmb 19 11 12.0
comp=Z,16nm,1.0s
DMN Daman 49.69 82 *e*P **P 19 11 05.3 +0.4**
comp=Z,42nm,0.8s
KKN Kakani 49.76 81 *e*P **P 19 11 05.3 0.0**
comp=Z,27nm,0.7s
PKIN Phulchoki 49.94 82 *e*P **P 19 11 06.8 0.0**
PKI Pulchoki 49.96 82 *e*P **P 19 11 06.8 -0.1**
GUN Gumba 50.20 81 *e*P **P 19 11 09.0 +0.2**
comp=Z,79nm,1.3s
JIRN Jiri 50.55 81 *e*P **P 19 11 11.7 +0.2**
comp=Z,26nm,0.7s
RAMN Ramite 51.18 82 *e*P **P 19 11 15.5 -0.6**
comp=Z,30nm,1.0s
DY2G Dye2 51.70 331 *i* P **P 19 11 18.7 -0.7**
DY2G IAmb IAmb 19 11 20.8
comp=Z,25nm,0.6s
ODAN Odare 51.85 81 *e*P **P 19 11 21.3 +0.2**
comp=Z,16nm,0.5s
TAPN Taplejung 51.91 81 *e*P **P 19 11 21.4 -0.2**
comp=Z,29nm,0.8s
SFJD Kangerlussuaq 53.40 331 *i* P **P 19 11 30.9 -0.8**
SFJD Kangerlussuaq 53.40 331 *i* P **P 19 11 30.8 -0.8**
SFJD Kangerlussuaq 53.40 331 P **P 19 11 30.4 -1.2**
SFJD IAmb IAmb 19 11 47.7
comp=Z,14nm,0.7s
NEEM North Greenlan 53.41 345 *i* P **P 19 11 30.6 -1.4**
LSA Lhasa 53.72 77 P **P 19 11 35.8 +0.6**
LSA pmax pmax
comp=Z,32nm,0.7s
LSA Lhasa 53.72 77 P **P 19 11 35.6 +0.5**
LSA Lhasa 53.72 77 P **P 19 11 34.6 -0.6**
LSA pmax pmax
comp=Z,31nm,1.5s
LSA Lhasa 53.72 77 P **P 19 11 34.6 -0.6**
LSA IAmb IAmb 19 11 55.4
comp=Z,31nm,1.5s
MOY Mondy 54.02 48 *e*P **P 19 11 38.2 +1.6**
MOY pmax pmax
comp=Z,28nm,1.8s
UPNV Upernavik 54.82 339 *e*P **P 19 11 43.2 +1.2**
TLY Talaya 55.62 47 P **P 19 11 49.5 +1.4**
comp=Z,5.0nm,0.7s,baz=272,slow=6.2,SNR=12
TLY Talaya 55.62 47 *e*P **P 19 11 50.0 +1.9**
TLY pmax pmax
comp=Z,66nm,1.5s
TLY Talaya 55.62 47 P **P 19 11 49.0 +0.9**
TLY IAmb IAmb 19 12 03.3
comp=Z,18nm,1.0s
ZAK Zakamensk 55.73 49 *e*P **P 19 11 49.8 +0.8**
ZAK pmax pmax
comp=Z,22nm,1.1s
IRK Irkutsk 55.85 46 *e*P **P 19 11 51.3 +1.6**
IRK pmax pmax
comp=Z,50nm,2.7s
SHL Shillong 56.05 81 P **P 19 11 50.7 -1.1**
SHL pmax pmax
comp=Z,18nm,1.0s
SHL Shillong 56.05 81 P **P 19 11 50.7 -1.1**
SHL IAmb IAmb 19 12 05.5
comp=Z,18nm,1.0s
GTA Gaotai 56.76 62 P **P 19 11 57.4 +0.9**
GTA pP pwP 19 12 07.8 +1.3
GTA sP sP 19 12 11.8 +5.6
GTA pmax pmax
comp=Z,6.0nm,1.3s
GTA pmax pmax
comp=Z,640nm,10.8s
GTA LR LR
comp=Z,500nm,20.7s
GTA LR LR
comp=Z,640nm,17.5s
GTA LR LR
comp=Z,910nm,17.5s
ABPO Ambohimpanom 57.19 157 P **P 19 12 00.6 +0.9**
ABPO pmax pmax
comp=Z,19nm,1.3s
ABPO Ambohimpanom 57.19 157 P **P 19 12 00.6 +0.9**
ABPO IAmb IAmb 19 12 12.6
comp=Z,19nm,1.2s
SONM Songino Array 58.44 51 P **P 19 12 09.1 +0.9**
comp=Z,3.4nm,0.5s,baz=284,slow=7.6,SNR=49
SONM Songino Array 58.44 51 P **P 19 12 08.8 +0.5**
SONM pmax pmax
comp=Z,8.0nm,0.8s
SONM Songino Array 58.44 51 P **P 19 12 08.8 +0.5**
SONM IAmb IAmb 19 12 20.6
comp=Z,8.4nm,0.8s
ULN Ulaanbaatar 58.85 51*ce*P **P 19 12 11.8 +0.6**
ULN pmax pmax
comp=Z,16nm,1.7s
ULN Ulaanbaatar 58.85 51 P **P 19 12 11.7 +0.6**
ULN IAmb IAmb 19 12 23.5
comp=Z,16nm,0.8s
BOD Bodaibo 59.64 38 *e*P **P 19 12 16.1 -0.1**
BOD pmax pmax
comp=Z,23nm,1.2s
LBTB Lobatse 59.80 181 P **P 19 12 18.3 +0.6**
LBTB pmax pmax
comp=Z,13nm,0.9s
LBTB Lobatse 59.80 181 P **P 19 12 18.3 +0.6**
LBTB IAmb IAmb 19 12 40.8
comp=Z,13nm,0.9s
TIXI Tiksi 60.73 21 P **P 19 12 23.1 -0.4**
comp=Z,9.8nm,0.7s,baz=302,slow=5.2,SNR=29
TIXI LR LR 19 42 44.9
comp=Z,596nm,18.4s,baz=250,slow=40
TIXI Tiksi 60.73 21*ce*P **P 19 12 22.1 -1.3**
TIXI pmax pmax
comp=Z,53nm,0.8s
TIXI Tiksi 60.73 21 P **P 19 12 22.8 -0.7**
TIXI IAmb IAmb 19 12 34.4
comp=Z,14nm,0.8s
LZH Lanzhou 60.97 65 *e*P **P 19 12 27.1 +1.2**
LZH pP sP 19 12 33.5 -2.1
LZH pmax pmax
comp=Z,16nm,1.0s
CD2 Chengdu 63.10 70 P **P 19 12 40.8 +0.6**
CD2 pmax pmax
comp=Z,30nm,0.8s
BOSA Boshof 63.39 182 P **P 19 12 43.1 +1.2**
comp=Z,6.6nm,0.6s,baz=358,slow=7.6,SNR=21
BOSA Boshof 63.39 182 P **P 19 12 42.2 +0.3**
BOSA pmax pmax
comp=Z,22nm,1.2s
BOSA Boshof 63.39 182 P **P 19 12 42.2 +0.3**
BTO Baotou 63.55 58 *e*P **P 19 12 43.3 +0.3**
BTO S **S 19 21 11.0 -4.1**
BTO pmax pmax
comp=Z,31nm,1.3s
BTO LR LR
comp=Z,2μm,19.7s
BTO LR LR
comp=Z,1μm,21.6s
BTO LR LR
comp=Z,2μm,20.1s
RES Resolute Bay 64.08 345 P **P 19 12 45.5 -0.3**
RES pmax pmax
comp=Z,4.0nm,1.0s
RES Resolute Bay 64.08 345 P **P 19 12 45.5 -0.3**
HHC Hu-ho-hao-te 64.51 57 *e*P **P 19 12 50.3 +1.0**
HHC S **S 19 21 20.6 -6.5**
HHC pmax pmax
comp=Z,12nm,1.0s
HHC LR LR
comp=Z,640nm,16.1s
HHC LR LR
comp=Z,650nm,16.2s
HHC LR LR
comp=Z,740nm,17.4s
KMI Kunming 64.97 76 ⇑P P 19 12 57.6 +4.9
KMI sP pwP 19 13 03.3 +0.6
KMI pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 65.01 84 P **P 19 12 52.1 -0.7**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 65.01 84 P **P 19 12 52.1 -0.7**
CHTO IAmb IAmb 19 13 05.5
comp=Z,8.5nm,1.0s
CM31 Chiang Mai Arr 65.19 84 P **P 19 12 53.4 -0.6**
CM31 IAmb IAmb 19 13 14.9
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 65.19 84 P **P 19 12 53.8 -0.2**
comp=Z,4.6nm,0.8s,baz=298,slow=7.9,SNR=30
CMAR Chiang Mai Arr 65.19 84 P **P 19 12 53.1 -0.8**
YAK Yakutsk 65.22 30 P **P 19 12 52.8 -0.7**
comp=Z,3.4nm,0.4s,baz=123,slow=0.8,SNR=8.0
YAK Yakutsk 65.22 30 *e*P **P 19 12 53.8 +0.3**
YAK pmax pmax
comp=Z,13nm,0.9s
YAK Yakutsk 65.22 30 P **P 19 12 52.1 -1.3**
XAN Xi'an 65.61 65 P **P 19 12 57.9 +1.4**
XAN pP pwP 19 13 07.6 +1.1
XAN sP sP 19 13 12.1 +5.8
XAN pmax pmax
comp=Z,11nm,0.9s
XAN LR LR
comp=Z,540nm,21.7s
XAN LR LR
comp=Z,730nm,17.4s
XAN LR LR
comp=Z,500nm,18.4s
XAN Xi'an 65.61 65 P **P 19 12 55.0 -1.5**
XAN pmax pmax
comp=Z,10.0nm,0.5s
XAN Xi'an 65.61 65 P **P 19 12 55.0 -1.5**
HIA Hailar 66.08 46 *i* P **P 19 13 00.7 +1.5**
HIA pmax pmax
comp=Z,20nm,1.0s
HIA Hailar 66.08 46 P **P 19 12 57.6 -1.7**
HAL Halifax 66.66 309 P **P 19 13 02.6 -0.4**
HAL pmax pmax
comp=Z,61nm,1.4s
HAL Halifax 66.66 309 P **P 19 13 02.6 -0.4**
LMN Caledonia Moun 66.88 311 P **P 19 13 04.5 +0.1**
BATG Bathurst New B 67.00 312 P **P 19 13 06.0 +0.8**
BATG IAmb IAmb 19 13 34.9
comp=Z,15nm,0.8s
GYA Guiyang 67.43 73 P **P 19 13 08.6 +0.2**
GYA pP sP 19 13 16.8 -1.4
GYA pmax pmax
comp=Z,9.0nm,1.2s
SLVN Son La 67.76 79 P **P 19 13 10.2 -0.2**
SLVN IAmb IAmb 19 13 23.1
comp=Z,11nm,1.3s
ENH Enshi 67.78 68 P **P 19 13 09.0 -1.4**
BJT Baijiatuau 68.02 56 P **P 19 13 10.8 -0.9**
BJT pmax pmax
comp=Z,20nm,1.2s
BJT Baijiatuau 68.02 56 P **P 19 13 10.8 -0.9**
BJT IAmb IAmb 19 13 31.9
comp=Z,20nm,1.2s
ZEA Zeya 68.12 39 *e*P P 19 13 21.7 +10
ZEA pmax pmax
comp=Z,10.0nm,1.1s
D63A Stockholm 68.35 313 P 19 13 14.2
baz=61
PQI Presque Isle 68.47 312 P **P 19 13 14.1 -0.3**
PQI IAmb IAmb 19 13 29.0
comp=Z,22nm,1.3s
E64A Bridgewater 68.47 312 P 19 13 15.1
baz=61
GGN Saint George 68.49 311 P **P 19 13 14.4 -0.1**
E63A Oxbow 68.83 312 P **P 19 13 17.2 +0.5**
E63A Oxbow 68.83 312 P 19 13 17.7
baz=61
F64A Sherman 69.06 312 P 19 13 18.9
baz=61
H65A Eastbrook 69.57 311 P 19 13 22.3
baz=60
F63A Nahmakanta, Br 69.60 312 P 19 13 22.2
baz=60
G64A Maxfield 69.61 311 P 19 13 22.3
baz=60
PKME Peaks-Kenny Pk 69.93 312 P 19 13 25.1
baz=60
CHGQ Chibougamau 70.53 318 P 19 13 27.8
baz=58
G62A West of Eustis 70.71 312 P 19 13 29.3
baz=59
LATQ La Tuque 70.94 315 P 19 13 30.6
baz=59
D58A Chemin du LacG 71.15 315 P 19 13 31.7
baz=58
F60A Warwick 71.18 313 P 19 13 32.5
baz=59
G61A St-Isidore-de- 71.28 312 P 19 13 32.9
baz=59
I63A Otisfield 71.34 311 P 19 13 33.1
baz=59
H62A Milan 71.42 312 P 19 13 33.6
baz=59
E58A La Victoria 71.76 314 P 19 13 35.4
baz=58
G60A Masonville 71.87 313 P 19 13 36.2
baz=58
I62A Tamworth 71.89 311 P **P 19 13 36.9 +1.4**
I62A IAmb IAmb 19 13 49.3
comp=Z,18nm,1.4s
I62A Tamworth 71.90 311 P 19 13 36.8
baz=58
H61A Lyndonville 71.92 312 P 19 13 36.9
baz=58
J63A Strafford 72.05 311 P 19 13 38.1
baz=58
LBNH Lisbon 72.07 312 P **P 19 13 35.9 -0.6**
LBNH pmax pmax
comp=Z,30nm,1.4s
LBNH Lisbon 72.07 312 P **P 19 13 35.9 -0.6**
LBNH IAmb IAmb 19 13 47.7
comp=Z,30nm,1.4s
LBNH Lisbon 72.07 312 P 19 13 36.1
baz=58
CN2 Changchun 72.17 49 *e*P **P 19 13 40.6 +3.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
D56A ZEC Mazanza, M 72.26 315 P 19 13 38.2
baz=57,SNR=6.5
H60A Morristown 72.37 312 P 19 13 39.1
baz=58
MATQ Matagami 72.39 319 P 19 13 39.6
baz=56,SNR=6.1
LSQQ Lebel-sur-Quev 72.42 318 P 19 13 39.4

baz=56
TRQ Mont Tremblant 72.59 315 P P 19 13 39.7 0.0
WES Weston 72.67 310 P P 19 13 41.2 +1.2
WES pmax pmax
comp=Z,12nm,0.9s
WES Weston 72.67 310 P P 19 13 41.2 +1.2
WES IAmb IAmb 19 13 59.3
comp=Z,12nm,0.9s
D55A Sainte-Anne-du 72.69 316 P 19 13 41.3
baz=57,SNR=6.4
E56A St. Veronique 72.69 315 P 19 13 40.9
baz=57
FRNY Flat Rock 72.76 313 P P 19 13 41.4 +0.8
BILL Bilibino 72.77 15 *e*P **P 19 13 39.5 -0.8**
BILL *i* 19 13 58.0
BILL *e* 19 16 22.7
BILL *e*PPP PPP 19 18 07.6
BILL pmax pmax
comp=Z,14nm,2.5s
BILL MLR MLR
comp=Z,336nm,17.0s
BILL Bilibino 72.77 15 P P 19 13 39.9 -0.4
KLR Kul'dur 72.89 42 P **P 19 13 41.3 0.0**
comp=Z,5.3nm,0.9s,baz=306,slow=5.5,SNR=5.0
KLR Kul'dur 72.89 42*ce*P **P 19 13 40.7 -0.6**
KLR pmax pmax
comp=Z,15nm,1.0s
H59A Cadyville 72.92 313 P 19 13 42.5
baz=57
J61A Chester 72.93 311 P 19 13 43.2
baz=58
M64A Tiverton 73.03 309 P 19 13 43.7
baz=58
SEY Seymchan 73.08 23 P **P 19 13 42.1 0.0**
comp=Z,2.0nm,0.7s,baz=297,slow=8.4,SNR=10
SEY Seymchan 73.08 23 *i* P **P 19 13 41.4 -0.7**
I60A Shoreham 73.11 312 P 19 13 42.1
baz=57
VLDQ Val d'Or 73.20 317 P **P 19 13 43.6 +0.5**
VLDQ IAmb IAmb 19 13 54.8
comp=Z,14nm,0.9s
H58A Gabriels 73.34 313 P 19 13 45.0
baz=57
G57A Newington 73.45 314 P 19 13 45.6
baz=57
LONY Lake Ozonia 73.47 313 P **P 19 13 45.5 +0.6**
LONY IAmb IAmb 19 13 47.6
comp=Z,13nm,1.1s
LONY Lake Ozonia 73.47 313 P 19 13 46.0
baz=57
I59A Olmsteadville 73.49 312 P 19 13 46.1
baz=57
J60A Lant Hill Farm 73.52 311 P 19 13 46.3
baz=57
ACCN Adirondack Com 73.59 312 P **P 19 13 45.7 +0.2**
ACCN IAmb IAmb 19 14 00.4
comp=Z,9.0nm,0.8s
M63A Gales Ferry 73.65 309 P 19 13 46.9
baz=58
C36M Paulatuk 73.69 350 P P 19 13 44.7 -0.9
KULM Kulim 73.71 95 P P 19 13 46.2 -0.5
KULM IAmb IAmb 19 13 58.0
comp=Z,16nm,0.9s
K61A Williamstown 73.73 311 P 19 13 47.5
baz=57
PSI Prapat 73.74 98 P **P 19 13 46.3 -0.7**
PSI pmax pmax
comp=Z,11nm,0.8s
RPSI Rantau Prapat 73.80 98 P P 19 13 46.3 -0.8
RPSI IAmb IAmb 19 14 07.8
comp=Z,11nm,0.8s
A21K Barrow 73.85 1 P P 19 13 46.6 +0.1
A21K IAmb IAmb 19 13 56.1
comp=Z,20nm,1.1s
A21K Barrow 73.85 1 P 19 13 47.5
baz=357
NJ2 Nanjing 73.85 62 *e*P **P 19 13 46.3 -0.9**
NJ2 pmax pmax
comp=Z,11nm,0.5s
H57A Richville 74.04 313 P 19 13 49.1
baz=56
J59A Piesco 74.06 312 P P 19 13 46.7 -1.6
K60A Five Rivers En 74.14 311 P 19 13 50.2
baz=57
M62A Hamden 74.16 310 P 19 13 50.1
baz=57
L61A Hillsdale 1, H 74.17 311 P 19 13 49.3
baz=57
I58A Old Forge 74.22 312 P 19 13 49.4
baz=56
I57A Carthage 74.50 313 P 19 13 51.6
baz=56
K59A Cooperstown 74.65 312 P 19 13 52.5
baz=56
PLVO Plevna 74.72 314 P P 19 13 53.2 +1.2
PLVO IAmb IAmb 19 14 22.1
comp=Z,14nm,1.2s
ALGO Algonquin Park 74.76 316 P 19 13 53.5
baz=55,SNR=8.5
MA2 Magadan 74.93 26*ce*P **P 19 13 52.8 -0.3**
MA2 pmax pmax
comp=Z,14nm,1.7s
MA2 Magadan 74.93 26 P **P 19 13 53.0 -0.1**
MA2 IAmb IAmb 19 14 05.0
comp=Z,38nm,1.5s
J57A Williamstown 74.99 313 P 19 13 54.9
baz=56
PAL Palisades 75.04 310 P 19 13 55.0
baz=56
L59A Walton 75.09 311 P P 19 13 54.2 -0.2
L59A IAmb IAmb 19 14 21.6
comp=Z,10nm,0.8s
L59A Walton 75.09 311 P 19 13 54.9
baz=56
G54A Lake Saint Pet 75.10 315 P 19 13 54.9
baz=55,SNR=7.1
K58A Earlville 75.14 312 P P 19 13 55.6 +1.0
K58A IAmb IAmb 19 13 57.5
comp=Z,9.2nm,0.8s
K58A Earlville 75.14 312 P 19 13 55.3
baz=56
M60A Port Jervis 75.31 310 P 19 13 56.4
baz=56
ODNJ Ogdensburg 75.44 310 P P 19 13 56.0 -0.2
J56A Wolcott 75.59 313 P 19 13 58.7
baz=55
BINY Binghamton 75.67 312 P P 19 13 59.0 +1.4
BINY IAmb IAmb 19 14 00.6
comp=Z,12nm,0.9s
BINY Binghamton 75.67 312 P 19 13 59.0
baz=56
L58A Harry Jones Me 75.67 311 P 19 13 58.8
baz=56
M59A Waymart 75.70 311 P 19 13 58.6
baz=56
H53A Bobcaygeon 75.86 315 P 19 13 59.8
baz=54
INK Inuvik 75.86 353 P P 19 13 57.2 -1.0
INK pmax pmax
comp=Z,6.0nm,0.6s
INK Inuvik 75.86 353 P P 19 13 57.2 -1.0
N60A Cedar Hill Far 75.87 310 P 19 14 00.1
baz=56
USA0B Ussuriysk Arra 75.89 46 P P 19 13 58.3 -0.5
USA0B pmax pmax
comp=Z,16nm,0.8s
USA0B Ussuriysk Arra 75.89 46 P P 19 13 58.3 -0.5
USA0B IAmb IAmb 19 14 08.8
comp=Z,16nm,0.8s
USRK Ussuriysk Ar. 75.89 46 P P 19 13 58.8 0.0
comp=Z,13nm,0.8s,baz=293,slow=4.6,SNR=37
USRK Ussuriysk Ar. 75.89 46 P P 19 13 58.3 -0.5
USRK Ussuriysk Ar. 75.89 46 P P 19 13 58.3 -0.5
KSPA Keystone Colle 75.89 311 P P 19 14 00.5 +1.5
KSPA IAmb IAmb 19 14 01.8
comp=Z,16nm,1.0s
SADO Sadowa 76.07 315 P P 19 14 00.5 +0.6
SADO IAmb IAmb 19 14 29.3
comp=Z,20nm,1.4s
K56A Middlesex 76.20 313 P 19 14 02.0
baz=55
N59A State Game Lan 76.26 310 P P 19 14 02.1 +1.1
N59A IAmb IAmb 19 14 15.4
comp=Z,12nm,0.9s
N59A State Game Lan 76.26 310 P 19 14 02.4
baz=55
L57A Andrews Acres 76.31 312 P 19 14 02.0
baz=55,SNR=5.0
O60A Telford 76.37 310 P 19 14 03.0
baz=55
M58A Price's Panora 76.43 311 P 19 14 03.1
baz=55
TOLK Toolik Lake Re 76.54 359 P P 19 14 02.3 +0.1
TOLK Toolik Lake Re 76.54 359 P 19 14 02.6
baz=3.0
L56A Greenwood 76.66 312 P P 19 14 04.3 +0.9
L56A IAmb IAmb 19 14 21.4
comp=Z,18nm,1.1s
L56A Greenwood 76.66 312 P 19 14 03.8
baz=55
M57A Sunshine Farm, 76.86 311 P P 19 14 05.5 +1.1
M57A IAmb IAmb 19 14 31.1
comp=Z,9.9nm,0.9s
M57A Sunshine Farm, 76.86 311 P 19 14 04.8
baz=55
O59A Robesonia 76.86 310 P 19 14 05.2
baz=55
N58A Sunbury 76.89 311 P P 19 14 05.0 +0.4
N58A IAmb IAmb 19 14 22.7
comp=Z,12nm,0.9s
N58A Sunbury 76.89 311 P 19 14 05.2
baz=55
RDOG Red Dog Mine 76.90 4 P P 19 14 03.5 -0.7
RDOG IAmb IAmb 19 14 14.5
comp=Z,8.0nm,0.7s
RDOG Red Dog Mine 76.90 4 P 19 14 04.7
baz=352
WVNY West Valley, N 77.14 313 P P 19 14 06.7 +0.7
WVNY IAmb IAmb 19 14 08.6
comp=Z,21nm,1.1s
KSRS Korea Array 77.20 53 P **P 19 14 06.5 +0.2**
comp=Z,4.5nm,0.8s,baz=305,slow=4.4,SNR=9.3
M56A Emporium 77.42 312 P **P 19 14 08.0 +0.4**
M56A IAmb IAmb 19 14 25.8
comp=Z,20nm,1.1s
M56A Emporium 77.42 312 P 19 14 08.5
baz=54
O58A Lewisberry 77.43 310 P 19 14 08.2
baz=54
N57A Milroy 77.46 311 P 19 14 07.9
baz=54
I51A Listowel 77.73 315 P 19 14 09.2
baz=53
SSPA Standing Stone 77.73 311 P 19 14 09.5
baz=54
N56A West Decatur 77.82 312 P 19 14 10.9
baz=54
YKA Yellowknife Ar 77.93 343 P **P 19 14 09.3 -0.6**
comp=Z,5.5nm,0.7s,baz=34,slow=5.4,SNR=38
COLD Coldfoot 77.97 359 P **P 19 14 10.3 +0.2**
COLD IAmb IAmb 19 14 21.0
comp=Z,8.5nm,0.8s
COLD Coldfoot 77.97 359 P 19 14 10.5
baz=2.4,SNR=9.1
E46A Sault Ste Mari 78.00 319 P **P 19 14 11.1 +0.4**
E46A IAmb IAmb 19 14 13.1
comp=Z,22nm,1.1s
ERPA Erie 78.14 313 P 19 14 12.1
baz=53
M54A Oil Creek Stat 78.31 313 P 19 14 13.4
baz=53
L53A Girard 78.40 313 P 19 14 13.9
baz=53
FYU Fort Yukon 78.47 357 P **P 19 14 12.3 -0.6**
FYU IAmb IAmb 19 14 29.1
comp=Z,28nm,1.3s
P57A Homestead Farm 78.49 310 P 19 14 14.7
baz=54
N54A Moraine State 78.83 312 P 19 14 16.5
baz=53
TNA Tin City 79.01 6 P **P 19 14 15.1 -0.8**
TNA Tin City 79.01 6 P 19 14 16.2
baz=348
R58B Mineral 79.30 309 P **P 19 14 18.8 +0.8**
R58B IAmb IAmb 19 14 47.8
comp=Z,19nm,1.2s
R58B Mineral 79.30 309 P 19 14 18.4
baz=54
E43A Lone Tree Farm 79.43 320 P **P 19 14 18.4 -0.2**
E43A IAmb IAmb 19 14 36.6
comp=Z,18nm,1.3s
Q56A Snyder Ridge, 79.48 310 P 19 14 19.9
baz=53
PRP Porcupine Dome 79.53 357 P **P 19 14 18.8 -0.2**
PRP Porcupine Dome 79.53 357 P 19 14 19.2
baz=6.3
S58A Poland Farm, P 79.61 309 P **P 19 14 18.9 -0.8**
S58A IAmb IAmb 19 14 43.1
comp=Z,35nm,1.4s
S58A Poland Farm, P 79.61 309 P 19 14 20.1
baz=54
D41A Chassel 79.80 321 P **P 19 14 20.9 +0.4**
D41A IAmb IAmb 19 14 33.7
comp=Z,31nm,1.4s
R56A Bull Pasture M 80.00 310 P 19 14 22.7
baz=53
O53A New Philadelph 80.00 312 P 19 14 22.9
baz=52
EGAK Eagle 80.01 355 P **P 19 14 22.0 +0.7**
EGAK Eagle 80.01 355 P 19 14 21.8
baz=9.9
POKR Poker Plat Res 80.01 358 P **P 19 14 21.6 +0.3**
POKR IAmb IAmb 19 14 32.3
comp=Z,14nm,0.7s
POKR Poker Plat Res 80.01 358 P 19 14 22.0
baz=4.7
I23K Minto, Yukon-K 80.04 358 P P 19 14 21.8 +0.3
I23K Minto, Yukon-K 80.04 358 P 19 14 23.2
baz=3.1,SNR=5.3
YSS Yuzh-Sakhalins 80.11 39 *e*P **P 19 14 25.6 +3.4**
YSS *e* 19 14 44.7
YSS pmax pmax
comp=Z,10.0nm,0.9s
MLY Manley 80.18 359 P P 19 14 22.4 +0.1
MLY Manley 80.18 359 P 19 14 23.0
baz=2.0,SNR=6.3
MDM Murphy Dome 80.20 358 P P 19 14 22.5 +0.1
MDM IAmb IAmb 19 14 33.1
comp=Z,13nm,0.7s
ANM Nome 80.20 5 P P 19 14 22.0 -0.4
ANM pmax pmax
comp=Z,13nm,0.8s
ANM Nome 80.20 5 P P 19 14 22.0 -0.4
ANM IAmb IAmb 19 14 32.8
comp=Z,13nm,0.8s
ANM Nome 80.20 5 P 19 14 22.4
baz=350
COLA College 80.27 358 *i* P **P 19 14 22.1 -0.6**
COLA pmax pmax
comp=Z,4.0nm,0.7s
FFC Flin Flon 80.33 333 P P 19 14 23.0 -0.3
FFC pmax pmax
comp=Z,12nm,1.0s
FFC Flin Flon 80.33 333 P P 19 14 22.9 -0.3
IL31 80.34 357 P P 19 14 22.7 -0.4
ILAR Eielson Array 80.34 357 P P 19 14 22.9 -0.3
comp=Z,2.5nm,0.7s,baz=341,slow=3.8,SNR=33
ILAR Eielson Array 80.34 357 P P 19 14 22.3 -0.8
ILAR Eielson Array 80.34 357 P P 19 14 22.3 -0.8
GAMB Gambell 80.36 8 P P 19 14 22.7 -0.5
GAMB Gambell 80.36 8 P 19 14 22.7
baz=345
CCB Clear Creek Bu 80.50 358 P P 19 14 23.3 -0.7
R55A Marlinton 80.52 310 P 19 14 25.4
baz=52
DAWY Dawson 80.57 354 P P 19 14 24.2 -0.2
P53A Whipple 80.57 312 P P 19 14 24.4 -0.4
P53A IAmb IAmb 19 14 43.4
comp=Z,25nm,1.1s
NEA2 Nenana 80.59 358 P 19 14 25.3
baz=3.4
WRH Wood River Hil 80.68 358 P P 19 14 24.7 -0.3
WRH IAmb IAmb 19 14 39.4
comp=Z,16nm,0.8s
EYMN Ely 80.69 323 P 19 14 24.6
baz=47
HDA Harding Lake 80.70 357 P 19 14 24.5
baz=5.1,SNR=14
HDA P 19 14 24.5
baz=5.1,SNR=14
COWI Conover 80.73 321 P P 19 14 25.4 -0.2
COWI IAmb IAmb 19 14 43.6
comp=Z,17nm,1.0s
K27K Chicken 80.81 355 P P 19 14 25.4 -0.3
K27K IAmb IAmb 19 14 35.3
comp=Z,30nm,1.4s
P52A Corning 80.94 312 P 19 14 26.7
baz=52
SCRK Sand Creek 80.99 356 P P 19 14 26.7 -0.1
SCRK Sand Creek 80.99 356 P 19 14 26.9
baz=7.6
Q53A Leroy 81.04 311 P 19 14 27.7
baz=52
ACSO Alum Creek Sta 81.08 313 P P 19 14 27.5 0.0
ACSO IAmb IAmb 19 14 45.0
comp=Z,19nm,0.9s
ACSO Alum Creek Sta 81.08 313 P 19 14 27.7
baz=51
H43A Windswept, Lux 81.09 319 P P 19 14 27.7 +0.2
H43A IAmb IAmb 19 14 48.2
comp=Z,14nm,0.8s
BPAW Bear Paw Mtn. 81.12 359 P P 19 14 26.5 -0.9
BPAW IAmb IAmb 19 14 37.9
comp=Z,11nm,0.8s
BPAW Bear Paw Mtn. 81.12 359 P 19 14 27.2
baz=1.8
ULM Lac du Bonnet 81.13 327 P **P 19 14 27.2 -0.5**
comp=Z,8.2nm,0.5s,baz=43,slow=5.2,SNR=27
ULM Lac du Bonnet 81.13 327 *i* P **P 19 14 26.4 -1.2**
ULM Lac du Bonnet 81.13 327 P **P 19 14 27.1 -0.5**
ULM IAmb IAmb 19 14 44.8
comp=Z,12nm,1.0s
DOT Dot Lake 81.32 356 P P 19 14 28.5 +0.1
DOT IAmb IAmb 19 14 39.8
comp=Z,10nm,0.8s
LHSI Lahat 81.32 101 P **P 19 14 28.5 -0.7**
comp=Z,48nm,0.8s
MCK McKinley 81.44 358 P P 19 14 29.2 +0.1
MCK pmax pmax
comp=Z,18nm,1.0s
MCK McKinley 81.44 358 P P 19 14 29.2 +0.1
MCK IAmb IAmb 19 14 47.3
comp=Z,18nm,1.0s
MCK McKinley 81.45 358 P 19 14 28.5
baz=3.5
B35A Bob, Littlefor 81.48 325 P P 19 14 29.2 -0.3
KTH Kantishna Hill 81.67 359 P P 19 14 30.6 +0.3
KTH IAmb IAmb 19 14 49.2
comp=Z,22nm,1.4s
TRF Thorofare Moun 81.76 359 P P 19 14 32.0 +1.1
TRF IAmb IAmb 19 14 49.9
comp=Z,8.6nm,0.8s
TRF Thorofare Moun 81.76 359 P 19 14 30.4
baz=2.3
RND Reindeer 81.77 358 P P 19 14 30.5 -0.4
RND pmax pmax
comp=Z,11nm,1.0s
RND Reindeer 81.77 358 P P 19 14 30.5 -0.4
RND IAmb IAmb 19 14 47.9
comp=Z,11nm,1.0s
G40A Rib Lake 81.85 321 P P 19 14 31.6 0.0
G40A IAmb IAmb 19 14 48.9
comp=Z,18nm,1.2s
O49A Covington 81.91 314 P P 19 14 31.8 -0.2
MENT Mentasta 82.01 356 P P 19 14 33.2 +1.1
MENT IAmb IAmb 19 14 46.4
comp=Z,10nm,0.8s
Q51A Peebles 82.05 312 P P 19 14 33.0 +0.2
Q51A IAmb IAmb 19 14 35.4
comp=Z,20nm,1.0s
I42A Draeger Farm, 82.09 319 P P 19 14 33.0 +0.2
I42A IAmb IAmb 19 14 34.7
comp=Z,18nm,1.1s
N47A Urbana 82.26 315 P P 19 14 33.4 -0.4
PETK Petropavlovsk- 82.33 27 P **P 19 14 33.2 -0.7**
comp=Z,2.2nm,0.8s,baz=151,slow=3.4,SNR=3.7
PPLA Purkeypile 82.34 360 P **P 19 14 33.6 -0.4**
PPLA Purkeypile 82.34 360 P 19 14 33.6
baz=0.8,SNR=9.3
LWLI Liwa 82.45 101 P **P 19 14 34.9 -0.4**
comp=Z,3µmcomp=Z,53nm,1.0s
AGMN Agassiz Nation 82.53 325 P 19 14 34.7
baz=44
P49A Miami Univ. Ec 82.55 314 P 19 14 35.4
baz=50
WAT6 Susitna Watana 82.56 357 P 19 14 34.6
baz=4.4
CUT Chulitna 82.81 359 P 19 14 35.6
baz=2.4
KASI Kota Agung 83.10 102 P **P 19 14 38.6 +0.1**
comp=Z,30nm,0.9s
F36A Milaca 83.13 323 P P 19 14 37.9 -0.3
F36A IAmb IAmb 19 14 47.7
comp=Z,11nm,0.8s
SKT Skwentna 83.25 359 P P 19 14 37.6 -0.9
SKT Skwentna 83.25 359 P 19 14 37.5
baz=1.3,SNR=10
SML Sawmill 83.36 358 P 19 14 37.9
baz=3.9
SFIN Lafayette 83.40 315 P 19 14 39.4
baz=49
GHO Glory Hole Cre 83.41 358 P P 19 14 40.4 +0.9
JFWS Jewell Farm 83.46 319 P P 19 14 38.9 -1.1
JFWS pmax pmax
comp=Z,13nm,0.7s
JFWS Jewell Farm 83.46 319 P P 19 14 38.9 -1.1
JFWS Jewell Farm 83.47 319 P 19 14 39.3
baz=47
HYT Haines Junctio 83.56 352 P P 19 14 41.7 +1.4
HYT IAmb IAmb 19 14 52.5
comp=Z,12nm,0.9s
PMR Palmer 83.59 358 P P 19 14 41.2 +1.0
PMR pmax pmax
comp=Z,20nm,1.2s
PMR Palmer 83.59 358 P P 19 14 41.2 +1.0
PMR Palmer 83.60 358 P 19 14 40.3
baz=3.3
R49A Shelbyville 83.62 313 P P 19 14 41.5 +0.6
KNK Knik Glacier 83.75 358 P P 19 14 42.1 +1.0
KNK Knik Glacier 83.76 358 P 19 14 40.9
baz=3.8
SUA Susitna One 83.76 359 P P 19 14 41.1 -0.2
SUA Susitna One 83.76 359 P 19 14 41.1
baz=1.9,SNR=7.4
L42A Oliver, Polo 83.76 318 P P 19 14 42.4 +0.8
SPCR Spurr Chakacha 84.04 360 P 19 14 42.6
baz=0.8
RC01 Rabbit Creek A 84.11 358 P P 19 14 43.0 +0.1
RC01 Rabbit Creek A 84.12 358 P 19 14 43.0
baz=2.8
SVW2 Sparrevohn 84.13 1 P P 19 14 43.9 +0.8
SVW2 IAmb IAmb 19 14 54.0
comp=Z,9.9nm,0.8s
T50A Nancy 84.23 312 P P 19 14 45.0 +1.0
MAJO Matsushiro 84.32 49 *i* P **P 19 14 45.8 +1.3**
MAJO pmax pmax
comp=Z,17nm,1.2s
MAT Matsushiro 84.32 49 P P 19 14 43.8 -0.7
MJAR Matsushiro Arr 84.32 49 P **P 19 14 45.2 +0.7**
comp=Z,6.1nm,0.8s,baz=305,slow=4.7,SNR=9.4
I37A Lemond, Waseca 84.36 321 P P 19 14 44.9 +0.3
L40A Anamosa 84.57 319 P P 19 14 45.5 -0.1
RSO Redoubt South 84.78 360 P P 19 14 46.1 -0.5
CPCT Cooper Cave 85.04 310 P P 19 14 49.3 +1.1
U49A Red Boiling Sp 85.14 312 P P 19 14 49.5 +0.9
T47A Sharon Grove 85.63 313 P P 19 14 52.1 +1.0
GOGA Godfrey 85.67 308 P 19 14 52.9
baz=50
W50A Signal Mountai 85.70 310 P P 19 14 52.7 +1.2
CLTN Cedars of Leba 85.75 312 P P 19 14 53.1 +1.4
CLTN IAmb IAmb 19 15 09.2
comp=Z,17nm,1.0s
SCIA State Center 85.75 320 P 19 14 53.0
baz=45
Y52A Lilburn 85.77 309 P P 19 14 52.8 +1.0
Y52A IAmb IAmb 19 15 04.7
comp=Z,10.0nm,0.7s
ECSD EROS Data Cent 86.19 323 P P 19 14 53.5 -0.3
ECSD IAmb IAmb 19 14 55.1
comp=Z,10nm,0.9s
ECSD EROS Data Cent 86.19 323 P 19 14 54.5
baz=43
V48A Smith Brothers 86.28 312 P P 19 14 54.9 +0.6
V48A IAmb IAmb 19 15 11.4
comp=Z,14nm,0.9s
FPAL Fort Paine 86.31 310 P P 19 14 55.7 +1.2
FPAL IAmb IAmb 19 15 08.6
comp=Z,14nm,0.8s

SIUC	**Southern Illin**	**86.40**	**314**	P	**P**	**19 14 55.1**	**+0.3**
S44A	**Carbondale**	**86.44**	**314**	P	**P**	**19 14 55.8**	**+0.8**
N38A	**Joes South For**	**86.54**	**319**	P	**P**	**19 14 55.7**	**+0.3**
WVT	**Waverly**	**86.64**	**313**	P	**P**	**19 14 55.5**	**-0.5**
WVT				pmax	pmax		
	comp=Z,11nm,0.9s						
WVT	**Waverly**	**86.64**	**313**	P	**P**	**19 14 55.5**	**-0.5**
WVT				IAmb	IAmb	19 15 12.2	
	comp=Z,11nm,0.9s						
WVT	**Waverly**	**86.64**	**313**	P		19 14 55.9	
	baz=48						
P40A	**Paris**	**86.77**	**317**	P	**P**	**19 14 56.7**	**+0.1**
FVM	**French Village**	**86.92**	**315**	P	**P**	**19 14 57.7**	**+0.3**
FVM				pmax	pmax		
	comp=Z,23nm,1.0s						
FVM	**French Village**	**86.92**	**315**	P	**P**	**19 14 57.7**	**+0.3**
152A	**Waverly Hall**	**86.96**	**308**	P	**P**	**19 14 58.6**	**+1.0**
BDFB	**Brasilia**	**86.98**	**249**	P	**P**	**19 14 59.2**	**+1.2**
	comp=Z,6.8nm,0.7s,baz=90,slow=3.7,SNR=9.1						
BDFB	**Brasilia**	**86.98**	**249**	P	**P**	**19 14 59.2**	**+1.2**
BDFB				IAmb	IAmb	19 15 03.0	
	comp=Z,7.1nm,0.7s						
TIGA	**Tifton**	**87.01**	**307**	P		19 14 58.1	
	baz=50						
Y49A	**Blount Mountai**	**87.26**	**310**	P	**P**	**19 14 59.8**	**+0.7**
Y49A				IAmb	IAmb	19 15 01.5	
	comp=Z,14nm,0.9s						
X48A	**Hartselle**	**87.27**	**311**	P	**P**	**19 14 59.8**	**+0.7**
X48A				IAmb	IAmb	19 15 12.2	
	comp=Z,11nm,0.8s						
CCM	**Cathedral Cave**	**87.34**	**316**	P	**P**	**19 14 59.8**	**+0.4**
CCM				pmax	pmax		
	comp=Z,19nm,0.9s						
CCM	**Cathedral Cave**	**87.34**	**316**	P	**P**	**19 14 59.8**	**+0.4**
CCM	**Cathedral Cave**	**87.34**	**316**	P		19 15 00.1	
	baz=46						
P38A	**Dawn**	**87.53**	**318**	P	**P**	**19 15 00.5**	**+0.2**
PLAL	**Pickwick Lake**	**87.55**	**312**	P	**P**	**19 15 00.8**	**+0.3**
PLAL				IAmb	IAmb	19 15 09.4	
	comp=Z,11nm,0.9s						
R40A	**Maddies Statio**	**87.76**	**317**	P	**P**	**19 15 01.6**	**+0.2**
PTGA	**Pitinga**	**87.82**	**268**	P	**P**	**19 15 01.8**	**-0.2**
PTGA	**Pitinga**	**87.82**	**268**	*eP*	**P**	**19 15 02.9**	**+0.9**
LRAL	**Lakeview Retre**	**88.17**	**310**	P	**P**	**19 15 03.6**	**+0.1**
LRAL	**Lakeview Retre**	**88.17**	**310**	P		19 15 04.8	
	baz=48						
LAO	**LASA Array**	**88.30**	**330**	P	**P**	**19 15 05.7**	**+1.8**
LAO	**LASA Array**	**88.31**	**330**	P		19 15 05.2	
	baz=37						
MGMO	**Mountain Grove**	**88.55**	**316**	P	**P**	**19 15 06.1**	**+0.8**
MGMO				IAmb	IAmb	19 15 22.6	
	comp=Z,11nm,1.1s						
EGMT	**Eagleton**	**88.61**	**333**	P	**P**	**19 15 06.8**	**+1.4**
EGMT	**Eagleton**	**88.61**	**333**	P		19 15 06.2	
	baz=34						
LCAR	**Lake Charles**	**88.66**	**314**	P	**P**	**19 15 07.0**	**+1.3**
LCAR				IAmb	IAmb	19 15 24.0	
	comp=Z,13nm,1.2s						
BGNE	**Belgrade**	**88.67**	**322**	P	**P**	**19 15 05.7**	**-0.1**
BGNE	**Belgrade**	**88.67**	**322**	P		19 15 06.8	
	baz=42						
S39A	**Bolivar**	**88.77**	**317**	P	**P**	**19 15 06.3**	**0.0**
S39A				IAmb	IAmb	19 15 22.6	
	comp=Z,5.2nm,0.8s						
WALA	**Waterton Lakes**	**89.24**	**335**	P	**P**	**19 15 08.3**	**-0.1**
WALA				IAmb	IAmb	19 15 17.0	
	comp=Z,11nm,1.1s						
W41B	**Gary Mavity, V**	**89.92**	**314**	P		19 15 13.1	
	baz=46						
ARAG	**Araguaiana, MT**	**89.94**	**251**	*eP*	**P**	**19 15 12.1**	**+0.2**
U38A	**Gravette**	**90.26**	**316**	P	**P**	**19 15 12.8**	**-0.4**
U38A				IAmb	IAmb	19 15 31.4	
	comp=Z,16nm,1.2s						
JTMT	**Jette**	**90.49**	**335**	P	**P**	**19 15 14.3**	**0.0**
X40A	**Basin Creek Fa**	**90.74**	**314**	P	**P**	**19 15 16.2**	**+0.7**
X40A	**Basin Creek Fa**	**90.74**	**314**	P		19 15 18.5	
	baz=45						
NEW	**Newport**	**90.99**	**337**	P	**P**	**19 15 17.2**	**+0.7**
NEW				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NEW	**Newport**	**90.99**	**337**	P	**P**	**19 15 17.2**	**+0.7**
NEW				IAmb	IAmb	19 15 29.5	
	comp=Z,10nm,1.2s						
NEW	**Newport**	**90.99**	**337**	P		19 15 17.1	
	baz=29						
T35A	**Sooner Cattle**	**91.10**	**318**	P	**P**	**19 15 17.6**	**+0.4**
MIAR	**Mount Ida**	**91.14**	**315**	P	**P**	**19 15 18.7**	**+1.4**
MIAR	**Mount Ida**	**91.14**	**315**	P	**P**	**19 15 18.7**	**+1.4**
MIAR	**Mount Ida**	**91.14**	**315**	P		19 15 18.3	
	baz=45						
BOZ	**Bozeman (W)**	**91.35**	**332**	P	**P**	**19 15 19.3**	**+1.0**
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BOZ	**Bozeman (W)**	**91.35**	**332**	P	**P**	**19 15 19.3**	**+1.0**
BOZ				IAmb	IAmb	19 15 36.1	
	comp=Z,9.6nm,1.4s						
CBKS	**Cedar Bluff**	**91.41**	**321**	P		19 15 19.9	
	baz=41						
LRM	**Limekiln Ridge**	**91.47**	**333**	P	**P**	**19 15 18.7**	**-0.3**
A05A	**Maple Falls**	**91.83**	**340**	P	**P**	**19 15 21.8**	**+1.5**
PHWY	**Pilot Hill**	**92.27**	**326**	P	**P**	**19 15 22.0**	**-0.8**
N23A	**Red Feather La**	**92.82**	**326**	P		19 15 26.3	
	baz=37						
PDAR	**Pinedale Array**	**92.88**	**329**	P	**P**	**19 15 24.6**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=63,slow=2.5,SNR=4.9						
ISCO	**Idaho Springs**	**93.53**	**325**	P	**P**	**19 15 29.4**	**+0.7**
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ISCO	**Idaho Springs**	**93.53**	**325**	P	**P**	**19 15 29.4**	**+0.7**
ISCO				IAmb	IAmb	19 15 45.9	
	comp=Z,6.8nm,1.1s						
BMO	**Blue Mountains**	**94.04**	**335**	P	**P**	**19 15 30.6**	**-0.1**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BMO	**Blue Mountains**	**94.04**	**335**	P	**P**	**19 15 30.6**	**-0.1**
E04D	**Cinebar**	**94.18**	**339**	P		19 15 32.1	
	baz=25						
HWUT	**Hardware Ranch**	**94.67**	**330**	P	**P**	**19 15 33.3**	**-0.4**
HWUT				IAmb	IAmb	19 15 51.2	
	comp=Z,7.7nm,0.9s						
MFID	**Camas Ranch**	**94.78**	**334**	P	**P**	**19 15 34.6**	**+0.5**
MFID				IAmb	IAmb	19 15 49.8	
	comp=Z,6.7nm,1.1s						
I04A	**Tendick Farm,**	**96.64**	**338**	P		19 15 41.7	
	baz=25						
J05D	**Fort Rock, OR**	**96.74**	**337**	P		19 15 43.6	
	baz=26						
TXAR	**Lajitas Array**	**100.74**	**318**	P	**Pdif**	**19 16 01.6**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=64,slow=6.1,SNR=3.0						
TXAR				PP	PP	19 20 16.2	+8.2
	comp=Z,0.9nm,1.1s,baz=40,slow=7.1,SNR=4.5						
SYO	**Syowa Base**	**104.23**	**175**⇑	*e*Pdiff	**Pdif**	**19 16 14.2**	**-1.1**
SYO	**Syowa Base**	**104.23**	**175**⇑	*ep*Pdiff	pPdif	19 16 21.3	-1.4
WRA	**Warramunga Arr**	**115.20**	**97**	PKP	**PKPdf**	**19 20 53.6**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=310,slow=1.4,SNR=6.3						
ASAR	**Alice Springs**	**116.67**	**101**	PKP	**PKPdf**	**19 20 56.2**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=307,slow=1.4,SNR=11						
STKA	**Stephens Creek**	**126.35**	**106**	PKP	**PKPdf**	**19 21 15.3**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=304,slow=8.6,SNR=4.9						

*JMA **16** 19:15:53.9±0.2, 24°.89N×122°.92E, h134km±2km, M2.7*
*TAP **16** 19:15:53.8, 24°.84N×122°.93E, h140km±1km, ML2.8, C*
ISC 16 19:15:54.2±1.6, 24°.82N±0°.05×122°.93E±0°.03, h135km±9km, n82, σ0°63/144, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.37**	**168**	P	**Pn**	**19 16 13.2**	**0.0**
YOJ				*eS*	**Sn**	**19 16 27.7**	**+0.2**
YOJ	**Yonaguni jima**	**0.37**	**168**	P	**Pn**	**19 16 13.3**	**+0.1**
	baz=169						
YOJ				S	**Sn**	**19 16 28.0**	**+0.4**
	baz=169						
JYNG	**Yonagunijimaku**	**0.37**	**177**	P	**Pn**	**19 16 13.3**	**+0.1**
JYNG				*eS*	**Sn**	**19 16 27.8**	**+0.2**
TWB1	**Santiao Chiao**	**0.87**	**282**	P	**Pn**	**19 16 16.6**	**+0.2**
	baz=281						
IRIF	**Iriomote-Funau**	**0.88**	**123**	P	**Pn**	**19 16 16.5**	**0.0**
IRIF				S	**Sn**	**19 16 33.4**	**+0.1**
TWC	**Suao**	**1.00**	**258**	P	**Pn**	**19 16 18.0**	**+0.5**
	baz=256						
TWC				S	**Sn**	**19 16 35.4**	**+0.2**
	baz=256						
TIPB	**Shuangxi**	**1.01**	**279**	P	**Pn**	**19 16 17.4**	**-0.3**
	baz=277						
TIPB				*eS*	**Sn**	**19 16 35.3**	**-0.2**
	baz=277						
NWF	**Wu-fen Shan**	**1.07**	**284**	*eP*	**Pn**	**19 16 18.4**	**+0.1**
	baz=282						
NWF				S	**Sn**	**19 16 35.9**	**-0.6**
	baz=282						
WFSB	**Wu-fen Shan**	**1.07**	**284**	*eP*	**Pn**	**19 16 18.7**	**+0.5**
	baz=282						
HATJ	**Hateruma jima**	**1.10**	**133**	P	**Pn**	**19 16 19.2**	**+0.6**
HATJ				*eS*	**Sn**	**19 16 38.1**	**+1.1**
EWUT	**Wuta**	**1.11**	**250**	P	**Pn**	**19 16 19.0**	**+0.4**
	baz=249						
EWUT				*eS*	**Sn**	**19 16 37.6**	**+0.5**
	baz=249						
NDS	**Dongshan**	**1.12**	**261**	*eP*	**Pn**	**19 16 18.0**	**-0.6**
	baz=259						
NDS				*eS*	**Sn**	**19 16 36.9**	**-0.3**
	baz=259						
JKRS	**Kuro-shima**	**1.15**	**120**	P	**Pn**	**19 16 19.5**	**+0.6**
JKRS				S	**Sn**	**19 16 38.1**	**+0.4**
TWE	**Neicheng**	**1.15**	**265**	P	**Pn**	**19 16 18.5**	**-0.4**
	baz=263						
TWE				*eS*	**Sn**	**19 16 37.7**	**0.0**
	baz=263						
JIJ	**Ishigaki jima**	**1.20**	**112**	P	**Pn**	**19 16 19.4**	**-0.1**
JIJ				S	**Sn**	**19 16 37.6**	**-1.0**
TWA	**Mucha**	**1.23**	**278**	*eP*	**Pn**	**19 16 19.7**	**-0.1**
	baz=276						
TWA				*eS*	**Sn**	**19 16 38.9**	**-0.4**
	baz=276						
ENTT	**Nioudou**	**1.25**	**262**	P	**Pn**	**19 16 20.5**	**+0.5**
	baz=260						
ENTT				*eS*	**Sn**	**19 16 39.2**	**-0.4**
	baz=260						
YM01	**YM01**	**1.27**	**285**	P	**Pn**	**19 16 19.8**	**-0.4**
	baz=283						
YM01				*eS*	**Sn**	**19 16 40.0**	**-0.1**
	baz=283						
YM11	**YM11**	**1.27**	**286**	*eP*	**Pn**	**19 16 20.6**	**+0.3**
	baz=284						
JISG	**Ishigakijimahi**	**1.28**	**100**	P	**Pn**	**19 16 20.0**	**-0.3**
JISG				S	**Sn**	**19 16 39.3**	**-0.8**
NHDH	**Xindian Distri**	**1.28**	**277**	*eP*	**Pn**	**19 16 20.2**	**-0.1**
	baz=275						
NHDH				*eS*	**Sn**	**19 16 40.3**	**+0.2**
	baz=275						
YM10	**YM10**	**1.28**	**285**	*eP*	**Pn**	**19 16 20.3**	**-0.1**
	baz=284						
YM10				*eS*	**Sn**	**19 16 41.1**	**+0.8**
	baz=284						
TWY	**Chenhua**	**1.29**	**291**	*eP*	**Pn**	**19 16 20.6**	**+0.3**
	baz=289						
TWY				*eS*	**Sn**	**19 16 39.7**	**-0.5**
	baz=289						
NWLT	**Wulai**	**1.29**	**268**	*eP*	**Pn**	**19 16 19.8**	**-0.7**
	baz=267						
NWLT				*eS*	**Sn**	**19 16 41.0**	**+0.5**
	baz=267						
NDT	**Datong Townshi**	**1.30**	**261**	P	**Pn**	**19 16 21.6**	**+1.1**
	baz=259						
NDT				S	**Sn**	**19 16 41.6**	**+1.0**
	baz=259						
YM04	**YM04**	**1.30**	**285**	*eP*	**Pn**	**19 16 20.8**	**+0.2**
	baz=283						
YM04				*eS*	**Sn**	**19 16 41.5**	**+0.8**
	baz=283						
NACB	**Ninganchiao**	**1.38**	**242**	P	**Pn**	**19 16 21.0**	**-0.3**
	baz=241						
NACB				*eS*	**Sn**	**19 16 41.1**	**-0.8**
	baz=241						
TWS1	**Kuangyinshan**	**1.40**	**282**	*eP*	**Pn**	**19 16 21.6**	**+0.1**
	baz=280						
YHNB	**Yeheng**	**1.42**	**264**	P	**Pn**	**19 16 22.1**	**+0.3**
	baz=263						
YHNB				S	**Sn**	**19 16 42.6**	**-0.3**
	baz=263						
TWD	**Chiawan**	**1.42**	**239**	P	**Pn**	**19 16 21.5**	**-0.3**
	baz=237						
TWD				*eS*	**Sn**	**19 16 42.1**	**-0.6**
	baz=237						
ETLH	**Xiulin Townshi**	**1.45**	**245**	P	**Pn**	**19 16 21.8**	**-0.5**
	baz=244						
ETLH				S	**Sn**	**19 16 43.2**	**-0.3**
	baz=244						
NNSB	**Datong**	**1.46**	**255**	P	**Pn**	**19 16 22.3**	**-0.1**
	baz=253						
NNSB				S	**Sn**	**19 16 42.9**	**-0.8**
	baz=253						
NNSH	**Datong**	**1.46**	**255**	*eP*	**Pn**	**19 16 22.4**	**+0.1**
	baz=253						
NNSH				*eS*	**Sn**	**19 16 43.1**	**-0.7**
	baz=253						
NNS	**Nan Shan**	**1.46**	**255**	P	**Pn**	**19 16 22.4**	**0.0**
	baz=254						
NNS				S	**Sn**	**19 16 43.4**	**-0.4**
	baz=254						
NCU	**National Centr**	**1.59**	**276**	*eS*	**Sn**	**19 16 45.5**	**-0.5**
	baz=274						
NCUH	**Zhongli**	**1.59**	**276**	*eP*	**Pn**	**19 16 22.6**	**-1.0**
	baz=274						
NCUH				*eS*	**Sn**	**19 16 45.9**	**-0.2**
	baz=274						
JTJ	**Tarama**	**1.62**	**96**	P	**Pn**	**19 16 24.0**	**0.0**
JTJ				S	**Sn**	**19 16 46.2**	**-0.6**
FUSS	**Fushou**	**1.64**	**250**	*eP*	**Pn**	**19 16 24.6**	**+0.1**
	baz=248						
FUSS				S	**Sn**	**19 16 47.8**	**+0.3**
	baz=248						
WHF	**Hehuan Shan**	**1.66**	**246**	P	**Pn**	**19 16 25.0**	**+0.2**
	baz=245						
WHF				S	**Sn**	**19 16 47.1**	**-1.1**
	baz=245						
ESL	**Shilin**	**1.69**	**234**	P	**Pn**	**19 16 24.6**	**-0.3**
	baz=232						
ESL				S	**Sn**	**19 16 47.3**	**-0.9**
	baz=232						
TDCB	**Techi**	**1.71**	**251**	*eP*	**Pn**	**19 16 25.5**	**+0.4**
	baz=249						
TDCB				*eS*	**Sn**	**19 16 48.0**	**-0.8**
	baz=249						
NHW	**Xinwu Township**	**1.72**	**277**	S	**Sn**	**19 16 48.6**	**-0.1**
	baz=275						
LIOB	**Emei**	**1.75**	**265**	*eP*	**Pn**	**19 16 25.4**	**-0.1**
	baz=263						
LIOB				S	**Sn**	**19 16 48.6**	**-0.7**
	baz=263						
NSTT	**Nanjuang**	**1.76**	**264**	*eP*	**Pn**	**19 16 25.5**	**-0.1**
	baz=263						
NSTT				*eS*	**Sn**	**19 16 48.5**	**-1.2**
	baz=263						
EGFH	**Guangfu**	**1.79**	**230**	*eP*	**Pn**	**19 16 25.5**	**-0.4**
	baz=229						
EGFH				*eS*	**Sn**	**19 16 49.8**	**-0.4**
	baz=229						
OWD	**Renai**	**1.81**	**242**	*eP*	**Pn**	**19 16 26.8**	**+0.4**
	baz=241						
OWD				*eS*	**Sn**	**19 16 50.1**	**-0.9**
	baz=241						
WHP	**Taichung City**	**1.88**	**254**	P	**Pn**	**19 16 28.0**	**+0.8**
	baz=252						
WHP				*eS*	**Sn**	**19 16 52.4**	**0.0**
	baz=252						
HGSD	**Ruisui**	**1.91**	**226**	*eP*	**Pn**	**19 16 27.3**	**-0.1**
	baz=225						
HGSD				*eS*	**Sn**	**19 16 52.7**	**0.0**
	baz=225						
VWDT	**VWDT**	**1.95**	**237**	*eP*	**Pn**	**19 16 28.4**	**+0.7**
	baz=236						
VWDT				*eS*	**Sn**	**19 16 53.5**	**0.0**
	baz=236						
EHY	**Hungye**	**1.97**	**229**	*eP*	**Pn**	**19 16 27.8**	**-0.3**
	baz=227						
EHY				S	**Sn**	**19 16 53.8**	**-0.2**
	baz=227						
WPL	**Puli Township**	**1.97**	**246**	P	**Pn**	**19 16 28.9**	**+0.8**
	baz=245						
WPL				*eS*	**Sn**	**19 16 53.6**	**-0.4**
	baz=245						
DPDB	**Guoxing**	**1.98**	**247**	*eP*	**Pn**	**19 16 29.3**	**+0.9**
	baz=246						
WCS	**Beigang Elemen**	**1.99**	**248**	*eP*	**Pn**	**19 16 29.4**	**+1.1**
	baz=246						
TWQ1	**Liyutan**	**2.02**	**257**	*eP*	**Pn**	**19 16 29.4**	**+0.8**
	baz=255						
TWQ1				*eS*	**Sn**	**19 16 55.1**	**+0.1**
	baz=255						
JIRB	**Irabujima**	**2.04**	**89**	P	**Pn**	**19 16 28.8**	**-0.1**
JIRB				S	**Sn**	**19 16 55.9**	**+0.4**
YULB	**Yu-li**	**2.06**	**227**	*eP*	**Pn**	**19 16 28.8**	**-0.5**
	baz=225						
YULB				*eS*	**Sn**	**19 16 55.1**	**-0.9**
	baz=225						
SMLT	**Sun Moon Lake**	**2.07**	**244**	*eP*	**Pn**	**19 16 29.3**	**-0.2**
	baz=242						
SMLT				*eS*	**Sn**	**19 16 55.8**	**-0.6**
	baz=242						
SSLB	**Suanglung**	**2.07**	**241**	P	**Pn**	**19 16 30.9**	**+1.5**
	baz=239						
SSLB				*eS*	**Sn**	**19 16 56.9**	**+0.6**
	baz=239						
EYUL	**Yuli**	**2.08**	**225**	*eP*	**Pn**	**19 16 30.6**	**+1.1**
	baz=224						
TWF1	**Yuli**	**2.09**	**226**	*eP*	**Pn**	**19 16 28.9**	**-0.6**
	baz=224						
TWF1				S	**Sn**	**19 16 56.1**	**-0.5**
	baz=224						
TYC	**Yuchr**	**2.10**	**245**	P	**Pn**	**19 16 31.4**	**+1.7**
	baz=243						
JMJ	**Miyako jima 2**	**2.15**	**90**	*eS*	**Sn**	**19 16 57.1**	**-0.8**
	baz=90						
JMJ2	**Miyako jima3**	**2.18**	**92**	P	**Pn**	**19 16 31.1**	**+0.4**
JMJ2				*eS*	**Sn**	**19 16 58.3**	**-0.3**
WHYT	**Xinyi Township**	**2.20**	**240**	*eP*	**Pn**	**19 16 32.4**	**+1.4**
	baz=238						
FULB	**Fuli**	**2.20**	**223**	*eP*	**Pn**	**19 16 31.5**	**+0.6**
	baz=222						
FULB				*eS*	**Sn**	**19 16 58.5**	**-0.6**
	baz=222						
CHKT	**Chengkung**	**2.23**	**220**	*eP*	**Pn**	**19 16 31.2**	**-0.1**
	baz=219						
CHKT				*eS*	**Sn**	**19 16 58.9**	**-0.9**
	baz=219						
YUS	**Yu-Shan**	**2.24**	**234**	P	**Pn**	**19 16 32.5**	**+0.6**
	baz=233						
YUS				*eS*	**Sn**	**19 16 59.8**	**-0.9**
	baz=233						
ALS	**Alishan**	**2.34**	**236**	*eP*	**Pn**	**19 16 33.3**	**+0.4**
	baz=235						
EDH	**Donghe**	**2.37**	**219**	*eP*	**Pn**	**19 16 32.7**	**-0.3**
	baz=218						
EDH				*eS*	**Sn**	**19 17 02.3**	**-0.4**
	baz=218						
ELDTW	**Lidau**	**2.39**	**227**	P	**Pn**	**19 16 33.5**	**+0.1**
	baz=226						
ELDTW				S	**Sn**	**19 17 02.4**	**-0.9**
	baz=226						
CHN5	**Tsauling**	**2.39**	**240**	P	**Pn**	**19 16 33.7**	**+0.4**
	baz=238						
CHN5				*eS*	**Sn**	**19 17 02.8**	**-0.6**
	baz=238						
LONT	**Longtian**	**2.52**	**221**	*eP*	**Pn**	**19 16 35.0**	**+0.1**
	baz=220						
LONT				*eS*	**Sn**	**19 17 06.0**	**-0.2**
	baz=220						
LDUT	**Ludao**	**2.52**	**212**	*eP*	**Pn**	**19 16 35.1**	**+0.2**
	baz=211						
LDUT				*eS*	**Sn**	**19 17 06.2**	**0.0**
	baz=211						
STYH	**Taoyuan**	**2.56**	**231**	*eP*	**Pn**	**19 16 37.4**	**+1.9**
	baz=229						
WTK	**Tuku**	**2.58**	**245**	*eP*	**Pn**	**19 16 36.6**	**+1.0**
	baz=243						
STYT	**Tauyuan**	**2.58**	**231**	*eP*	**Pn**	**19 16 36.4**	**+0.7**
	baz=229						
STYT				*eS*	**Sn**	**19 17 07.3**	**-0.4**
	baz=229						
CHN4	**Tsaushan**	**2.59**	**236**	P	**Pn**	**19 16 37.1**	**+1.3**
	baz=235						
TPUB	**Ta-pu**	**2.59**	**235**	*eP*	**Pn**	**19 16 37.1**	**+1.3**
	baz=233						
WTP	**Ta-pu**	**2.63**	**234**	*eP*	**Pn**	**19 16 37.1**	**+0.7**
	baz=232						
TWK	**Hsinying**	**2.71**	**236**	*eP*	**Pn**	**19 16 38.0**	**+0.6**
	baz=234						
SGST	**Jiashian**	**2.76**	**232**	*eP*	**Pn**	**19 16 38.0**	**+0.1**
	baz=230						
SGST				*eS*	**Sn**	**19 17 10.7**	**-0.8**
	baz=230						
SLGT	**Liugui**	**2.77**	**229**	*eP*	**Pn**	**19 16 39.4**	**+1.3**
	baz=228						

*IDC **16** 19:31:57.0±2.7, 5°.34N×75°.01W, h139km±50km, mb3.3/3, mb1 3.7/4, mb1mx3.1/42, mbtmp4.0/4, Error ellipse: s-maj=170.3km s-min=29.7km az=91.0*
*RSNC **16** 19:31:56.4±0.9, 5°.28N×73°.73W, h151km±4km, ML3.4, Mw3.6, Fault plane solution: NP1:φs135.00000°, δ46.00000°, λ-146.00000°.*
ISC 16 19:31:55.3±0.8, 5°.31N±0°.03×73°.71W±0°.04, h161km±6km, n34, σ1s62/60, mb3.7/3, 5C-5D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPBC	**San Pablo de B**	**0.50**	**314**⇓	*eP*	**Pn**	**19 32 17.7**	**-0.4**
SPBC				*eS*	**Sn**	**19 32 33.9**	**-1.6**
SPBC				*i*		19 32 36.8	
	comp=Z,1μm,0.4s						
ROSC	**El Rosal**	**0.76**	**233**	P	**Pn**	**19 32 20.4**	**+0.4**
	comp=Z,132nm,0.3s,baz=295,slow=14,SNR=84						
ROSC				S	**Sn**	**19 32 37.8**	**-1.0**
	comp=Z,95nm,0.3s,baz=246,slow=20,SNR=6.1						
ROSC	**El Rosal**	**0.76**	**233**	⇓*iP*	**Pn**	**19 32 20.4**	**+0.4**
ROSC				*eS*	**Sn**	**19 32 37.9**	**-0.9**
ROSC				*i*		19 32 41.8	
	comp=Z,769nm,0.5s						
RUSC	**La Rusia**	**0.85**	**47**	⇓*iP*	**Pn**	**19 32 21.1**	**+0.4**
RUSC				*eS*	**Sn**	**19 32 39.2**	**-0.9**
RUSC				*i*		19 32 42.0	
	comp=Z,166nm,0.4s						
NORC	**Norcasia**	**1.18**	**283**⇑	*eP*	**Pn**	**19 32 22.3**	**-0.5**
NORC				*eS*	**Sn**	**19 32 42.3**	**-1.6**
NORC				*i*		19 32 43.9	
	comp=Z,550nm,0.2s						
VILC	**Villavicencio,**	**1.19**	**179**	⇓*iP*	**Pn**	**19 32 22.2**	**-0.8**
VILC				*eS*	**Sn**	**19 32 42.5**	**-1.7**
VILC				*i*		19 32 44.5	
	comp=Z,520nm,0.4s						
BARC	**Barichara**	**1.38**	**22**	*eP*	**Pn**	**19 32 24.8**	**-0.1**
BARC				*eS*	**Sn**	**19 32 46.0**	**-1.7**
BARC				*i*		19 32 52.2	
	comp=Z,221nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.43**	**329**⇑	*eP*	**Pn**	**19 32 24.4**	**-0.8**
PTBC				*eS*	**Sn**	**19 32 46.9**	**-1.2**
PTBC				*i*		19 32 48.4	
	comp=Z,202nm,0.1s						
GUY2C	**Guyana, Caldas**	**1.65**	**267**⇑	*eP*	**Pn**	**19 32 27.5**	**-0.3**
GUY2C				*eS*	**Sn**	**19 32 52.0**	**-0.8**
GUY2C				*i*		19 32 55.3	
	comp=Z,125nm,0.3s						
RREF	**El Recreo**	**1.68**	**256**	*eP*	**Pn**	**19 32 28.1**	**-0.2**
RREF				*eS*	**Sn**	**19 32 52.5**	**-1.1**
BRRC	**Barranca, Sant**	**1.79**	**360**	*eP*	**Pn**	**19 32 29.6**	**+0.7**
BRRC				*eS*	**Sn**	**19 32 54.7**	**-0.1**
BRRC				*i*		19 33 04.8	

OCAC				*e*S		**Sn**	**19 33 19.8**	**+0.5**
OCAC				*i*			19 33 29.4	
	comp=Z,207nm,0.3s							
GUVC	**San Jose del G**	**2.95**	**158**	*e*S		**Sn**	**19 33 16.3**	**-3.0**
GUVC				*i*			19 33 21.9	
	comp=Z,252nm,0.2s							
DBBC	**Dabeiba**	**3.01**	**305**	*e*P		**Pn**	**19 32 43.7**	**+0.3**
DBBC				*e*S		**Sn**	**19 33 17.9**	**-2.8**
DBBC				*i*			19 33 24.7	
	comp=Z,279nm,0.4s							
UREC	**San Jos de Ur**	**3.03**	**323**	*e*P		**Pn**	**19 32 42.1**	**-1.5**
UREC				*e*S		**Sn**	**19 33 18.3**	**-2.7**
UREC				*i*			19 33 20.1	
	comp=Z,109nm,0.2s							
MACC	**Macarena, Meta**	**3.14**	**182**	*e*P		**Pn**	**19 32 43.6**	**-1.5**
MACC				*e*S		**Sn**	**19 33 19.7**	**-3.9**
MACC				*i*			19 33 22.0	
	comp=Z,39nm,0.4s							
SMLC	**San Martn de**	**3.49**	**354**	*e*P		**Pn**	**19 32 48.6**	**-0.8**
SMLC				*e*S		**Sn**	**19 33 29.7**	**-1.8**
GARC	**Garzon, Huila**	**3.57**	**210**	*e*P		**Pn**	**19 32 49.9**	**-0.8**
MOTC	**Monteria, Cord**	**3.96**	**331** ⇓	*i*P		**Pn**	**19 32 53.8**	**-1.6**
MOTC				*e*S		**Sn**	**19 33 40.4**	**-1.8**
MOTC				*i*			19 33 43.0	
	comp=Z,39nm,0.4s							
PCON	**Cinco Dias**	**3.99**	**222**	*e*P		**Pn**	**19 32 56.5**	**+0.2**
SJCC	**San Jacinto, C**	**4.79**	**342**	*e*P		**Pn**	**19 33 04.3**	**-2.0**
SJCC				*e*S		**Sn**	**19 33 57.2**	**-4.6**
SJCC				*i*			19 34 00.1	
	comp=Z,51nm,0.4s							
CRJC	**Cerrejon, Guaj**	**5.74**	**8**	*e*P		**Pn**	**19 33 18.3**	**-0.5**
CRJC				*e*S		**Sn**	**19 34 19.2**	**-5.0**
CRJC				*i*			19 34 26.1	
	comp=Z,35nm,0.5s							
NNA	**Nana**	**17.46**	**190**	P		**Pn**	**19 35 51.3**	**+2.0**
	comp=Z,2.6nm,0.3s,baz=257,slow=3.4,SNR=2.6							
ULM	**Lac du Bonnet**	**48.51**	**341**	P		**P**	**19 40 22.3**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=163,slow=11,SNR=2.1							
YKA	**Yellowknife Ar**	**64.48**	**340**	P		**P**	**19 42 15.6**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=134,slow=6.8,SNR=13							
ILAR	**Eielson Array**	**78.08**	**335**	P		**P**	**19 43 37.2**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=107,slow=6.1,SNR=1.8							
ASAR	**Alice Springs**	**147.74**	**233**	PKPbc		**PKPbc**	**19 51 21.9**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=119,slow=3.2,SNR=4.5							

NEIC ***16*** *19:51:23.1±1.0, 19.°7N±0.°1×66.°02W±0.°08, h19km±19km, Error ellipse: s-maj=19.3km s-min=7.4km az=205.0*
RSPR ***16*** *19:51:24.5, 19.°77N×66.°05W, h14km±24km, MD3.0/4*
ISC 16 19:51:21.3±2.5, 19.°7N±0.°1×66.°00W±0.°10, h14km, n20, σ0§60/22, 3C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.45**	**175** ⇑	*e*P		**Pn**	**19 51 47.6**	**+0.4**
CBYP	**Canovanas**	**1.45**	**175**	*e*S		**Sn**	**19 52 06.1**	**0.0**
CBYP	**Canovanas**	**1.45**	**175**			**Pn**	**19 51 47.6**	**+0.4**
CBYP						**Sn**	**19 52 06.1**	**0.0**
CBYP	**Canovanas**	**1.45**	**175**	IAML			19 52 13.5	
	comp=N,100nm,0.2s							
AOPR	**Arecibo Observ**	**1.54**	**208** ⇑	*e*P		**Pn**	**19 51 49.7**	**+1.3**
AOPR	**Arecibo Observ**	**1.54**	**208**	*e*S		**Sn**	**19 52 07.7**	**-0.6**
AOPR	**Arecibo Observ**	**1.54**	**208**			**Pn**	**19 51 49.7**	**+1.3**
AOPR						**Sn**	**19 52 07.7**	**-0.6**
AOPR	**Arecibo Observ**	**1.54**	**208**	IAML			19 52 12.7	
	comp=E,152nm,0.4s							
CUPR	**Culebra, Puert**	**1.56**	**154** ⇑	*e*P		**Pb**	**19 51 49.7**	**-0.4**
CUPR	**Culebra, Puert**	**1.56**	**154**	*e*S		**Sb**	**19 52 09.7**	**0.0**
CUPR	**Culebra, Puert**	**1.56**	**154**			**Pb**	**19 51 49.7**	**-0.4**
CUPR						**Sb**	**19 52 09.7**	**0.0**
HUMP	**Col San Antoni**	**1.58**	**175**	Pn		**Pn**	**19 51 48.9**	**-0.1**
SJG	**San Juan**	**1.61**	**185**			**Pn**	**19 51 49.5**	**+0.2**
SJG				IAML			19 52 11.5	
	comp=E,41nm,0.7s							
SJG				IAML			19 52 13.3	
	comp=E,32nm,0.9s							
MTP	**Monte Pirata**	**1.67**	**165** ⇓	*e*P		**Pn**	**19 51 50.9**	**+0.7**
MTP	**Monte Pirata**	**1.67**	**165**	*e*S		**Sb**	**19 52 12.7**	**-0.2**
MTP	**Monte Pirata**	**1.67**	**165**			**Pn**	**19 51 50.9**	**+0.7**
MTP						**Sb**	**19 52 12.7**	**-0.2**
PDPR	**Patillas Dam,**	**1.70**	**181**	Pn		**Pn**	**19 51 51.3**	**+0.8**
OBIP	**Obispado Ponce**	**1.77**	**199**	Pn		**Pn**	**19 51 51.5**	**0.0**
MLPR	**Magueyes Islan**	**2.00**	**210**	Pn		**Pn**	**19 51 55.6**	**+0.8**
MLPR				IAML			19 53 13.3	
	comp=E,24nm,2.0s							
SDDR	**Presa de Saban**	**5.05**	**262**	Pn		**Pn**	**19 52 36.7**	**0.0**

HLW ***16*** *20:01:09.0, 35.°23N×26.°90E, h10km±16km, Md4.2, ML4.3*
NIC ***16*** *20:01:09.0±0.0, 34.°98N×26.°84E, h2km±2km, Ml4.4/3*
ISK ***16*** *20:01:12.1, 35.°16N×26.°78E, h18km, ML4.0/23*
THE ***16*** *20:01:13.3, 35.°22N×26.°72E, h1km±1km, ML4.0/6, Error ellipse: s-maj=3.8km s-min=0.8km az=153.0*
ATH ***16*** *20:01:13.0, 35.°19N×26.°75E, h27km±7km, ML4.1/9, Error ellipse: s-maj=8.5km s-min=1.7km az=157.0*
IDC ***16*** *20:01:13.4±2.3, 35.°13N×26.°77E, h36km±19km, mb3.7/19, mb1 3.8/27, mb1mx3.6/61, mbtmp3.8/27, ML3.5/8, Error ellipse: s-maj=19.0km s-min=12.0km az=171.0*
DDA ***16*** *20:01:14.5, 35.°53N×26.°77E, h8km±1km, MW4.2*
ISC 16 20:01:11.9±0.8, 35.°07N±0.°03×26.°83E±0.°02, h26km±6km, n168, σ1§71/202, mb3.8/19, 20C-7D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**276**	P		**Pb**	**20 01 21.5**	**-0.8**
ZKR				S		**Sb**	**20 01 29.5**	**+0.3**
ZKR				AML	AML		20 01 30.7	
	comp=N,50982μm,0.6s							
ZKR				AML	AML		20 01 31.2	
	comp=E,99529μm,0.3s							
ZKR	**Zakros**	**0.50**	**276**	P		**Pb**	**20 01 21.4**	**-0.8**
ZKR				S		**Sb**	**20 01 29.2**	**-0.1**
	comp=E,38μm,0.4s							
ZKR	**Zakros**	**0.50**	**276**	PG		**Pb**	**20 01 21.6**	**-0.6**
ZKR				SG		**Sb**	**20 01 29.6**	**+0.3**
KARP	**Karpathos**	**0.55**	**29**	P		**Pb**	**20 01 22.3**	**-0.8**
KARP				S		**Sb**	**20 01 30.9**	**+0.2**
KARP				AML	AML		20 01 31.7	
	comp=N,70519μm,0.5s							
KARP				AML	AML		20 01 32.9	
	comp=E,59708μm,0.7s							
KARP	**Karpathos**	**0.55**	**29**	P		**Pb**	**20 01 22.3**	**-0.8**
KARP				S		**Sb**	**20 01 30.6**	**0.0**
	comp=E,33μm,0.5s							
KARP	**Karpathos**	**0.55**	**29**	PG		**Pb**	**20 01 22.2**	**-0.8**
KARP				SG		**Sb**	**20 01 30.4**	**-0.2**
KARP	**Karpathos**	**0.55**	**29**	⇑P		**Pb**	**20 01 22.2**	**-0.8**
KARP				S		**Sb**	**20 01 31.0**	**+0.3**
KARP				AML	AML		20 01 31.3	
	comp=E,79nm,0.5s							
KARP				AML	AML		20 01 31.3	
	comp=E,79nm,0.5s							
KARP				AML	AML		20 01 32.6	
	comp=E,59nm,0.7s							
KARP				AML	AML		20 01 32.6	
	comp=E,59nm,0.7s							
STIA	**Sitia Lasithi**	**0.62**	**283**	P		**Pb**	**20 01 22.5**	**-1.7**
STIA				S		**Sb**	**20 01 32.2**	**-0.3**
FRMA	**Ierapetra Chan**	**0.90**	**267**	P		**Pb**	**20 01 26.8**	**-2.1**
FRMA				S		**Sb**	**20 01 38.8**	**-1.7**
	comp=E,8μm,0.5s							
NPS	**Neapolis**	**1.02**	**281**	P		**Pn**	**20 01 31.1**	**+0.6**
NPS				AML	AML		20 01 51.1	
	comp=N,16621μm,0.8s							
NPS				AML	AML		20 01 52.2	
	comp=E,27758μm,0.5s							
NPS	**Neapolis**	**1.02**	**281**	P		**Pn**	**20 01 30.7**	**+0.2**
NPS				S		**Sn**	**20 01 44.0**	**+0.1**
	comp=E,11μm,0.7s							
KSTL	**Kastelli Herak**	**1.46**	**280**	P		**Pn**	**20 01 34.9**	**-1.6**
NIS1	**Nisyros Isl.**	**1.56**	**10**	P		**Pb**	**20 01 39.0**	**-1.1**
NIS1	**Nisyros Isl.**	**1.56**	**10**	PN		**Pn**	**20 01 38.4**	**+0.5**
ARG	**Arkhangelos**	**1.56**	**42**	P		**Pb**	**20 01 40.3**	**+0.2**
ARG				AML	AML		20 02 05.7	
	comp=E,6915μm,0.4s							
ARG				AML	AML		20 02 07.3	
	comp=N,7198μm,1.2s							
ARG	**Arkhangelos**	**1.56**	**42**	P		**Pb**	**20 01 39.9**	**-0.2**
ARG				S		**Sb**	**20 02 01.0**	**+1.6**
	comp=N,4μm,0.8s							
ARG	**Arkhangelos**	**1.56**	**42**	PN		**Pb**	**20 01 39.5**	**-0.6**
ARG	**Arkhangelos**	**1.56**	**42**	⇑P		**Pb**	**20 01 39.5**	**-0.6**
ARG				S		**Sb**	**20 02 01.6**	**+2.2**

IDI	**Anoyia**	**1.60**	**278**	Pn		**Pn**	**20 01 39.2**	**+0.6**
	comp=N,129nm,0.3s,baz=82,slow=15,SNR=146							
IDI				Sn		**Sb**	**20 02 04.6**	**+3.8**
	comp=N,226nm,0.3s,baz=9.3,slow=19,SNR=6.2							
IDI	**Anoyia**	**1.60**	**278**	P		**Pb**	**20 01 41.0**	**+0.1**
IDI				AML	AML		20 02 09.6	
	comp=N,5199μm,0.6s							
IDI				AML	AML		20 02 17.9	
	comp=E,5524μm,0.5s							
IDI	**Anoyia**	**1.60**	**278**	P		**Pb**	**20 01 40.8**	**-0.1**
IDI	**Anoyia**	**1.60**	**278**	PN		**Pb**	**20 01 39.6**	**-1.3**
SIVA	**Sivas**	**1.66**	**269**	P		**Pb**	**20 01 42.3**	**+0.5**
SIVA				AML	AML		20 02 17.0	
	comp=N,13586μm,0.6s							
SIVA				AML	AML		20 02 17.8	
	comp=E,14181μm,0.5s							
SIVA	**Sivas**	**1.66**	**269**	P		**Pb**	**20 01 42.2**	**+0.5**
KOSK	**Kos Island**	**1.69**	**4**	PN		**Pn**	**20 01 40.4**	**+0.7**
SANT	**Santorini**	**1.71**	**320**	P		**Pn**	**20 01 40.9**	**+0.8**
SANT	**Santorini**	**1.71**	**320**	P		**Pn**	**20 01 40.9**	**+0.8**
SANT				S		**Sn**	**20 02 00.7**	**-0.5**
	comp=E,3μm,0.8s							
SANT	**Santorini**	**1.71**	**320**	⇑P		**Pb**	**20 01 41.4**	**-1.4**
SANT				⇑S		**Sn**	**20 02 01.2**	**+0.1**
SANT	**Santorini**	**1.71**	**320**	PN		**Pn**	**20 01 40.6**	**+0.5**
THR8	**Santorini-Mono**	**1.73**	**321**	P		**Pn**	**20 01 41.1**	**+0.8**
THR9	**Santorini-Faro**	**1.76**	**318**	P		**Pb**	**20 01 42.0**	**-1.5**
SNT1	**Gialos, Santor**	**1.76**	**320**	P		**Pn**	**20 01 41.7**	**+1.0**
THR7	**Fira-Santorini**	**1.77**	**320**	P		**Pb**	**20 01 42.3**	**-1.4**
SNT5	**Nea Kammeni, S**	**1.77**	**319**	P		**Pn**	**20 01 41.9**	**+1.1**
SNT5	**Nea Kammeni, S**	**1.77**	**319**	P		**Pn**	**20 01 41.8**	**+1.0**
THR3	**Thira Island,**	**1.77**	**319**	P		**Pn**	**20 01 41.9**	**+1.0**
THT2	**Imerovigli**	**1.78**	**320**	P		**Pb**	**20 01 42.6**	**-1.3**
THT2	**Imerovigli**	**1.78**	**320**	PN		**Pn**	**20 01 41.9**	**+0.9**
THR5	**Thira Island,**	**1.81**	**319**	P		**Pn**	**20 01 42.5**	**+1.1**
SAP3	**Santorini-Thir**	**1.82**	**319**	P		**Pb**	**20 01 43.5**	**-1.1**
BODT	**Bodrum**	**2.03**	**11**	P		**Pn**	**20 01 44.3**	**-0.1**
BODT	**Bodrum**	**2.03**	**11**	PN		**Pn**	**20 01 44.9**	**+0.5**
BDRM	**Kayabasi**	**2.06**	**14**	*i*P		**Pn**	**20 01 46.0**	**+1.2**
BDRM				*i*S		**Sn**	**20 02 07.2**	**-2.4**
BDRM				IAML			20 02 19.0	
	comp=N,325nm,0.5s							
BDRM				IAML			20 02 31.0	
	comp=E,226nm,0.6s							
TURN	**Turunc**	**2.06**	**34**	*i*P		**Pb**	**20 01 46.6**	**-2.0**
TURN				*i*S		**Sn**	**20 02 04.9**	**-4.6**
TURN				IAML			20 02 22.0	
	comp=E,416nm,0.4s							
TURN				IAML			20 02 24.0	
	comp=N,393nm,0.4s							
TURN	**Turunc**	**2.06**	**34**	PN		**Pn**	**20 01 46.4**	**+1.7**
YKAV	**Yalikavak-Bodr**	**2.09**	**10**	PN		**Pn**	**20 01 45.6**	**+0.4**
VAM	**Vamos**	**2.18**	**280**	P		**Pb**	**20 01 48.7**	**-1.9**
VAM				AML	AML		20 02 24.1	
	comp=E,4100μm,0.9s							
VAM				AML	AML		20 02 27.8	
	comp=N,6600μm,0.8s							
VAM	**Vamos**	**2.18**	**280**	P		**Pb**	**20 01 48.7**	**-1.9**
APE	**Apeiranthos**	**2.26**	**333**	P		**Pn**	**20 01 48.6**	**+1.0**
APE				AML	AML		20 02 20.8	
	comp=N,4024μm,0.5s							
APE				AML	AML		20 02 24.1	
	comp=E,3383μm,0.5s							
APE	**Apeiranthos**	**2.26**	**333**	P		**Pn**	**20 01 48.4**	**+0.8**
APE	**Apeiranthos**	**2.26**	**333**	⇓P		**Pn**	**20 01 48.2**	**+0.7**
APE				⇑S		**Sn**	**20 02 14.4**	**-0.3**
APE	**Apeiranthos**	**2.26**	**333**	PN		**Pn**	**20 01 47.9**	**+0.3**
APE	**Apeiranthos**	**2.26**	**333**	⇑P		**Pn**	**20 01 48.3**	**+0.7**
GVDS	**Gavdos**	**2.26**	**265**	PN		**Pb**	**20 01 49.7**	**-2.3**
GVD	**Gavdhos**	**2.26**	**265**	PN		**Pb**	**20 01 49.9**	**-2.2**
DALY	**Dalyan (Mula)**	**2.29**	**40**	*i*P		**Pb**	**20 01 52.4**	**-0.2**
DALY				*i*S		**Sb**	**20 02 18.6**	**-1.7**
DALY				IAML			20 02 31.0	
	comp=E,418nm,1.1s							
DALY				IAML			20 02 34.0	
	comp=N,405nm,0.8s							
DALY	**Dalyan (Mula)**	**2.29**	**40**	PN		**Pn**	**20 01 49.9**	**+1.9**
IMMV	**Iera Moni Meta**	**2.36**	**280**	P		**Pb**	**20 01 51.7**	**-2.1**
IMMV				AML	AML		20 02 37.8	
	comp=N,4440μm,0.9s							
IMMV				AML	AML		20 02 42.6	
	comp=E,4906μm,0.8s							
IMMV	**Iera Moni Meta**	**2.36**	**280**	P		**Pb**	**20 01 51.3**	**-2.5**
IMMV	**Iera Moni Meta**	**2.36**	**280**	PN		**Pn**	**20 01 50.5**	**+1.5**
YER	**Yerkesik**	**2.38**	**29**	P		**Pn**	**20 01 51.1**	**+1.9**
YER	**Yerkesik**	**2.38**	**29**	PN		**Pn**	**20 01 50.1**	**+0.9**
DDIM	**Aydin, Didim**	**2.41**	**8**	*i*P		**Pn**	**20 01 50.8**	**+1.1**
DDIM				*i*S		**Sn**	**20 02 14.7**	**-3.5**
DDIM				IAML			20 02 46.0	
	comp=N,557nm,1.1s							
DDIM				IAML			20 02 49.0	
	comp=E,492nm,1.1s							
FETY	**Fethiye**	**2.41**	**49**	PN		**Pn**	**20 01 50.4**	**+0.8**
KSL	**Kastellorizon**	**2.49**	**63**	⇑P		**Pn**	**20 01 51.6**	**+0.9**
MULA	**Mugla, Merkez-**	**2.50**	**28**	*i*P		**Pb**	**20 01 53.6**	**-2.5**
MULA				*i*S		**Sn**	**20 02 18.9**	**-1.6**
MULA				IAML			20 02 35.0	
	comp=E,283nm,1.1s							
MULA				IAML			20 02 41.0	
	comp=N,162nm,0.8s							
AKAS	**Kas**	**2.54**	**62**	*i*P		**Pn**	**20 01 49.6**	**-2.0**
AKAS	**Kas**	**2.54**	**62**	PN		**Pn**	**20 01 52.0**	**+0.4**
KNDR	**Palaiochora Ch**	**2.58**	**275**	PN		**Pn**	**20 01 54.3**	**+2.3**
AYDN	**Tasoluk**	**2.72**	**18**	*i*P		**Pn**	**20 01 55.7**	**+1.7**
AYDN				*i*S		**Sn**	**20 02 27.0**	**+0.9**
AYDN				IAML			20 02 52.0	
	comp=E,67nm,0.6s							
AYDN				IAML			20 03 00.0	
	comp=N,88nm,0.7s							
CAEL	**Denizli, Camel**	**2.88**	**44**	*i*P		**Pn**	**20 01 58.1**	**+1.9**
CAEL				IAML			20 03 00.0	
	comp=E,1μm,1.3s							
CAEL				IAML			20 03 09.0	
	comp=N,946nm,1.3s							
DGB	**zmir**	**2.98**	**1**	*i*P		**Pn**	**20 01 58.2**	**+0.7**
DGB				*i*S		**Sn**	**20 02 31.9**	**-0.4**
DGB				IAML			20 02 54.0	
	comp=N,140nm,0.6s							
DGB				IAML			20 02 55.0	
	comp=E,195nm,1.1s							
ANKY	**Antikythira Is**	**2.99**	**287**	P		**Pn**	**20 01 59.1**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**3.00**	**16**	PN		**Pn**	**20 01 59.2**	**+1.4**
ELL	**Elmali**	**3.01**	**55**	PN		**Pn**	**20 02 00.3**	**+2.3**
GOLH	**Golhisar**	**3.10**	**45**	*i*P		**Pn**	**20 02 01.8**	**+2.7**
GOLH				*i*S		**Sn**	**20 02 39.4**	**+4.0**
GOLH				IAML			20 03 03.0	
	comp=E,67nm,0.6s							
GOLH				IAML			20 03 04.0	
	comp=N,337nm,1.1s							
AKUM	**Antalya-Kumluc**	**3.12**	**65**	*i*P		**Pn**	**20 02 01.1**	**+1.7**
AKUM				IAML			20 03 19.0	
	comp=N,68nm,0.7s							
AKUM				IAML			20 03 28.0	
	comp=E,108nm,1.6s							
ZEYE	**Izmir, Urla-Ze**	**3.18**	**355**	*i*P		**Pn**	**20 02 01.1**	**+1.0**
ZEYE				*i*S		**Sn**	**20 02 36.5**	**-0.7**
ZEYE				IAML			20 03 04.0	
	comp=E,162nm,0.6s							
ZEYE				IAML			20 03 07.0	
	comp=N,236nm,0.8s							
KTHA	**Kythira Island**	**3.29**	**292**	P		**Pn**	**20 02 03.2**	**+1.5**
KTHA	**Kythira Island**	**3.29**	**292**	PN		**Pn**	**20 02 03.3**	**+1.5**
URLA	**Izmir**	**3.29**	**357**	*i*P		**Pn**	**20 02 01.4**	**-0.3**
URLA				*i*S		**Sn**	**20 02 39.1**	**-1.0**
URLA				IAML			20 03 01.0	
	comp=E,198nm,1.1s							
URLA				IAML			20 03 08.0	
	comp=N,209nm,0.8s							
URLA	**Izmir**	**3.29**	**357**	PN		**Pn**	**20 02 01.9**	**+0.1**
CHOS	**Chios island**	**3.37**	**350**	P		**Pn**	**20 02 03.5**	**+0.6**
CHOS	**Chios island**	**3.37**	**350**	PN		**Pn**	**20 02 03.8**	**+0.9**
KORT	**Korkueli**	**3.44**	**55**	*i*P		**Pb**	**20 02 08.4**	**-3.9**
KORT				IAML			20 03 20.0	
	comp=N,184nm,1.1s							
KORT				IAML			20 03 25.0	
	comp=E,225nm,1.4s							
KORT	**Korkueli**	**3.44**	**55**	PN		**Pn**	**20 02 06.5**	**+2.5**
VLI	**Veliai**	**3.56**	**299**	P		**Pn**	**20 02 07.2**	**+1.7**
ANTB	**Antalya**	**3.60**	**58**	PN		**Pn**	**20 02 08.8**	**+2.8**
MANT	**Manisa**	**3.69**	**22**	*i*P		**Pn**	**20 02 06.6**	**-0.8**
MANT				IAML			20 03 23.0	
	comp=N,37nm,1.7s							
MANT				IAML			20 03 25.0	
	comp=E,37nm,0.7s							

KULA	**Kula-Manisa**	**3.74**	**23**	PN		**Pn**	**20 02 09.9**	**+1.9**
SLUM	**Salum**	**3.81**	**201**	P		**Pn**	**20 02 10.0**	**+1.1**
	baz=202							
BASM	**Basmaki-Afyon**	**3.85**	**41**	PN		**Pn**	**20 02 11.7**	**+2.2**
ZEDA	**zmir-Bergama**	**3.90**	**3**	*i*P		**Pn**	**20 02 11.8**	**+1.7**
ZEDA				IAML			20 03 21.0	
	comp=N,77nm,0.9s							
ZEDA				IAML			20 03 21.0	
	comp=E,86nm,1.2s							
DKL	**Dikili**	**4.00**	**1**	PN		**Pn**	**20 02 12.9**	**+1.5**
OSC1	**CSNet OBS 1**	**4.00**	**112**	P		**Pn**	**20 02 12.0**	**+0.5**
OSC1				S		**Sn**	**20 02 59.3**	**+1.8**
USAK	**Uak-Merkez**	**4.04**	**25**	*i*P		**Pn**	**20 02 14.3**	**+2.2**
USAK				IAML			20 03 47.0	
	comp=E,40nm,1.6s							
USAK				IAML			20 04 11.0	
	comp=N,0.5nm,0.5s							
SIGR	**SIGRI**	**4.21**	**350**	PN		**Pn**	**20 02 15.4**	**+1.1**
STEP	**BALIKESIR_Sava**	**4.36**	**9**	*i*P		**Pn**	**20 02 18.3**	**+1.8**
STEP				IAML			20 03 55.0	
	comp=N,117nm,1.3s							
STEP				IAML			20 03 57.0	
	comp=E,108nm,0.9s							
BUHA	**Balikesir, Bur**	**4.43**	**2**	*i*P		**Pn**	**20 02 19.1**	**+1.7**
BUHA				IAML			20 03 39.0	
	comp=E,76nm,0.9s							
BUHA				IAML			20 03 52.0	
	comp=N,44nm,0.6s							
ITM	**Ithomi**	**4.49**	**299**	PN		**Pn**	**20 02 20.2**	**+1.9**
AKMS	**Akamas**	**4.52**	**89**	P		**Pn**	**20 02 18.8**	**+0.2**
AKMS				AML	AML		20 03 12.6	
	comp=N,0.8nm,0.6s							
AKMS				AML	AML		20 03 13.8	
	comp=N,1.3nm,1.1s							
BAYC	**CANAKKALE_Bayr**	**4.67**	**357**	*i*P		**Pn**	**20 02 22.0**	**+1.2**
BAYC				IAML			20 03 46.0	
	comp=E,19nm,0.8s							
BAYC				IAML			20 04 11.0	
	comp=N,15nm,2.4s							
DURS	**Dursunbey**	**4.71**	**16**	*i*P		**Pn**	**20 02 23.1**	**+1.7**
DURS				IAML			20 03 25.0	
	comp=N,39nm,0.8s							
DURS				IAML			20 04 00.0	
	comp=E,38nm,2.2s							
ALFC	**Alefka**	**4.73**	**87**	⇑P		**Pn**	**20 02 21.6**	**0.0**
ALFC				AML	AML		20 03 15.5	
	comp=E,1.5nm,0.7s							
ALFC				AML	AML		20 03 15.9	
	comp=E,1.1nm,0.6s							
OSC2	**CSNet OBS 4**	**4.93**	**112**	P		**Pn**	**20 02 23.8**	**-0.5**
OSC2				S		**Sn**	**20 03 23.2**	**+2.8**
SZAC	**Souni**	**4.98**	**92**	⇑P		**Pn**	**20 02 25.2**	**+0.2**
ASGA	**Asgata**	**5.28**	**91**	P		**Pn**	**20 02 28.9**	**-0.2**
CSS	**Mathiatis**	**5.34**	**89**	⇑P		**Pn**	**20 02 29.9**	**0.0**
MVOU	**Mavrovouni**	**5.58**	**89**	⇑P		**Pn**	**20 02 34.2**	**+1.0**
SWA2		**5.92**	**192**	P		**Pn**	**20 02 38.9**	**+1.0**
	baz=192							
RYAN	**Fayoum**	**6.64**	**153**	S		**Sn**	**20 04 01.1**	**-1.6**
	baz=154							
RYAN				AMP			20 04 00.0	
	baz=154							
HSAF	**As Saff**	**6.74**	**142**	S		**Sn**	**20 04 03.1**	**-2.2**
	baz=143							
HSAF				AMP			20 04 00.0	
	baz=143							
GLL	**Jalalah**	**6.86**	**142**	P		**Pn**	**20 02 50.5**	**-0.2**
	baz=142							
VAY	**Valandovo**	**7.09**	**333**	*i*Pn		**Pn**	**20 02 58.2**	**+4.4**
BRTR	**Keskin Array B**	**7.14**	**47**	Pn		**Pn**	**20 02 57.5**	**+2.7**
	comp=E,0.3nm,0.3s,baz=217,slow=16,SNR=5.0							
BRTR				Sn		**Sn**	**20 04 18.8**	**+3.7**
	comp=E,0.1nm,0.3s,baz=306,slow=37,SNR=1.5							
SUZ	**Suez**	**7.27**	**134**	P		**Pn**	**20 02 56.9**	**+0.4**
	baz=135							
MMAI	**Mount Meron Ar**	**7.41**	**104**	Pn		**Pn**	**20 02 58.4**	**+0.1**
	comp=E,0.8nm,0.3s,baz=301,slow=11,SNR=3.2							
MMAI				Sn		**Sn**	**20 04 20.4**	**-1.1**
	comp=E,3.1nm,0.3s,baz=304,slow=22,SNR=3.1							
STIP	**Stip**	**7.55**	**333**	*i*Pn		**Pn**	**20 03 04.0**	**+3.7**
VTS	**Vitosha**	**8.04**	**341**	⇓P		**Pn**	**20 03 08.8**	**+1.7**
EIL	**Elat**	**8.72**	**126**	Pn		**Pn**	**20 03 16.1**	**-0.3**
	comp=E,0.5nm,0.3s,baz=329,slow

ML2.3/17, Error ellipse: s-maj=0.9km s-min=0.3km az=47.0
*STR **16** 20:02:59.7±0.3, 44˚N±1˚×˚±˚, h6km±1km, MLv2.4/12, MLv2.3/19, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **16** 20:03:00.1±0.1, 44.44N×7.30E, h11km±1km, Md2.6/3, Ml2.8/37, Error ellipse: s-maj=1.6km s-min=1.1km az=62.0*
*GEN **16** 20:03:00.1, 44.44N×7.28E, h11km±1km, Ml2.4*

ISC 16 20:02:59.5±0.8, 44.45N±0.01×7.30E±0.01, h18km±5km, n106, σ1°43/176, 10C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PZZ	**Stroppo**	**0.14**	**293**	P	**Pb**	**20 03 03.9**	**0.0**
PZZ				S	**Sg**	**20 03 06.1**	**-0.5**
PZZ	**Stroppo**	**0.14**	**293**	⇑*i*P	**Pb**	**20 03 03.9**	**0.0**
PZZ				S	**Sg**	**20 03 06.2**	**-0.5**
PZZ				AML	AML		
	comp=N,15200μm,0.3s						
PZZ				AML	AML		
	comp=E,10735μm,0.1s						
STV	**Sant Anna di V**	**0.21**	**175**	P	**Pb**	**20 03 04.6**	**-0.3**
STV				S	**Sg**	**20 03 07.4**	**-0.6**
STV	**Sant Anna di V**	**0.21**	**175**	⇑*i*P	**Pb**	**20 03 04.6**	**-0.3**
STV				S	**Sg**	**20 03 07.4**	**-0.6**
STV				AML	AML		
	comp=N,2290μm,0.4s						
STV				AML	AML		
	comp=E,5025μm,0.2s						
ENR	**Entracque**	**0.24**	**159**	P	**Pb**	**20 03 05.1**	**-0.3**
ENR				S	**Sg**	**20 03 08.5**	**-0.4**
ENR	**Entracque**	**0.24**	**159**	⇑*i*P	**Pb**	**20 03 05.1**	**-0.3**
ENR				S	**Sg**	**20 03 08.4**	**-0.4**
ENR				AML	AML		
	comp=E,3275μm,1.6s						
ENR				AML	AML		
	comp=N,2680μm,0.1s						
ISO	**Isola**	**0.32**	**214**	Pg	**Pb**	**20 03 06.3**	**-0.5**
ISO				Sg	**Sg**	**20 03 10.3**	**-0.8**
SURF	**Saint Ours**	**0.35**	**275**	Pg	**Pg**	**20 03 07.0**	**0.0**
SURF				Sg	**Sg**	**20 03 11.7**	**-0.4**
BHB	**Bricherasio**	**0.39**	**356**	P	**Pg**	**20 03 07.5**	**-0.1**
BHB				S	**Sg**	**20 03 12.6**	**-0.6**
BHB	**Bricherasio**	**0.39**	**356**	⇑*i*P	**Pg**	**20 03 07.5**	**-0.1**
BHB				S	**Sb**	**20 03 13.6**	**-0.1**
GBOS	**Grotte di Boss**	**0.44**	**118**	P	**Pb**	**20 03 08.8**	**0.0**
GBOS				S	**Sb**	**20 03 14.9**	**-0.3**
GBOS	**Grotte di Boss**	**0.44**	**118**	⇑*i*P	**Pb**	**20 03 08.8**	**0.0**
GBOS				S	**Sb**	**20 03 14.6**	**-0.5**
GBOS				AML	AML		
	comp=E,2115μm,0.2s						
GBOS				AML	AML		
	comp=N,904μm,0.4s						
MBDF	**Montbardon**	**0.47**	**306**	*e*Pg	**Pg**	**20 03 09.2**	**+0.1**
MBDF				*e*Sg	**Sg**	**20 03 16.0**	**+0.5**
	comp=N,233nm,0.2s						
TURF	**col de Turini**	**0.48**	**172**	Pg	**Pb**	**20 03 09.2**	**-0.4**
TURF				Sg	**Sb**	**20 03 15.5**	**-0.9**
SAOF	**Saorge**	**0.50**	**158**	Pg	**Pb**	**20 03 09.5**	**-0.4**
SAOF				Sg	**Sg**	**20 03 15.5**	**-0.8**
SAOF	**Saorge**	**0.50**	**158**	P	**Pb**	**20 03 09.5**	**-0.4**
SAOF				S	**Sb**	**20 03 15.9**	**-0.9**
SAOF	**Saorge**	**0.50**	**158**	AML	AML		
	comp=N,198μm,0.9s						
SAOF				AML	AML		
	comp=E,250μm,0.7s						
OGAG	**Argentiere**	**0.54**	**271**	Pg	**Pn**	**20 03 12.3**	**-0.3**
OGAG				Sg	**Sb**	**20 03 20.8**	**+2.6**
RRL	**Rocca Remolon**	**0.59**	**323**	P	**Pg**	**20 03 11.4**	**0.0**
RRL				S	**Sg**	**20 03 19.6**	**+0.1**
RRL	**Rocca Remolon**	**0.59**	**323**	P	**Pg**	**20 03 11.4**	**0.0**
RRL				S	**Sg**	**20 03 19.4**	**0.0**
SBF	**Sospel**	**0.60**	**170**	*e*Pg	**Pb**	**20 03 11.3**	**-0.2**
SBF				*e*Sg	**Sb**	**20 03 19.5**	**-0.1**
	comp=E,117nm,0.3s						
ESCA	**l'Escarene**	**0.62**	**175**	Pg	**Pb**	**20 03 11.7**	**-0.2**
ESCA				Sg	**Sb**	**20 03 20.3**	**-0.1**
RORO	**Rocca Rossa**	**0.65**	**121**	P	**Pb**	**20 03 12.3**	**-0.1**
RORO				S	**Sb**	**20 03 21.1**	**+0.1**
RORO	**Rocca Rossa**	**0.65**	**121**	⇓*i*P	**Pb**	**20 03 12.3**	**-0.1**
RORO				S	**Sb**	**20 03 20.8**	**-0.3**
RORO				AML	AML		
	comp=N,631μm,0.2s						
RORO				AML	AML		
	comp=E,640μm,0.2s						
IMI	**Imperia**	**0.69**	**141**	P	**Pb**	**20 03 12.9**	**-0.2**
IMI				S	**Sb**	**20 03 22.0**	**-0.3**
IMI	**Imperia**	**0.69**	**141**	⇑*i*P	**Pb**	**20 03 12.9**	**-0.2**
IMI				S	**Sb**	**20 03 21.9**	**-0.3**
IMI				AML	AML		
	comp=N,276μm,0.2s						
IMI				AML	AML		
	comp=N,276μm,0.2s						
IMI				AML	AML		
	comp=E,229μm,0.2s						
RSP	**Reno Superiore**	**0.70**	**358**	P	**Pg**	**20 03 12.4**	**-0.9**
RSP	**Reno Superiore**	**0.70**	**358**	⇑*i*P	**Pg**	**20 03 12.4**	**-0.9**
RSP				AML	AML		
	comp=E,215μm,1.3s						
RSP				AML	AML		
	comp=N,194μm,1.5s						
RSP				AML	AML		
	comp=E,213μm,1.3s						
RSP				AML	AML		
	comp=N,220μm,1.5s						
BNI	**Bardonecchia**	**0.75**	**324**	⇑*i*P	**Pg**	**20 03 14.1**	**-0.1**
BNI				S	**Sg**	**20 03 23.9**	**-0.2**
BNI				AML	AML		
	comp=N,92μm,1.2s						
BNI				AML	AML		
	comp=N,92μm,1.2s						
BNI				AML	AML		
	comp=E,82μm,0.6s						
CALF	**Calern**	**0.75**	**201**	Pg	**Pb**	**20 03 14.2**	**0.0**
CALF				Sg	**Sb**	**20 03 24.0**	**-0.1**
QLNO	**Quiliano**	**0.76**	**99**	⇑*i*P	**Pn**	**20 03 14.8**	**-0.7**
QLNO				AML	AML		
	comp=E,66μm,0.2s						
QLNO				AML	AML		
	comp=N,312μm,0.9s						
MONC	**Moncucco Torin**	**0.77**	**35**	AML	AML		
	comp=N,338μm,0.3s						
MONC				AML	AML		
	comp=E,308μm,0.5s						
ROTM	**Rocchetta Tana**	**0.85**	**62**	P	**Pn**	**20 03 17.6**	**+0.9**
ROTM				S	**Sn**	**20 03 28.8**	**0.0**
ROTM	**Rocchetta Tana**	**0.85**	**62**	AML	AML		
	comp=N,784μm,0.5s						
ROTM				AML	AML		
	comp=E,516μm,0.6s						
OGMO	**Fort Saint-Gob**	**0.87**	**330**	Pg	**Pg**	**20 03 16.3**	**-0.4**
OGMO				Sg	**Sg**	**20 03 28.0**	**-0.2**
PCP	**Piancastagn**	**0.90**	**84**	P	**Pn**	**20 03 17.1**	**-0.2**
PCP				S	**Sb**	**20 03 29.2**	**+0.8**
PCP	**Piancastagn**	**0.90**	**84**	⇓*i*P	**Pn**	**20 03 17.3**	**-0.1**
PCP				S	**Sb**	**20 03 29.1**	**+0.8**
PCP				AML	AML		
	comp=N,340μm,0.2s						
PCP				AML	AML		
	comp=E,222μm,1.4s						
EILF	**Villa Eilenroc**	**0.91**	**188**	Pg	**Pb**	**20 03 17.0**	**+0.2**
EILF				Sg	**Sb**	**20 03 29.0**	**+0.4**
FRF	**La Foret Royal**	**1.01**	**208**	*e*Pg	**Pb**	**20 03 18.5**	**0.0**
FRF				*e*Sg	**Sb**	**20 03 31.8**	**+0.4**
	comp=E,112nm,0.3s						
LSD	**Lago del Serru**	**1.01**	**353**	P	**Pg**	**20 03 17.8**	**-1.5**
LSD				S	**Sg**	**20 03 32.1**	**-0.6**
LSD	**Lago del Serru**	**1.01**	**353**	P	**Pg**	**20 03 17.8**	**-1.5**
LSD				AML	AML		
	comp=E,268μm,0.3s						
LSD				AML	AML		
	comp=N,162μm,0.3s						
TRAV	**Traversella**	**1.11**	**17**	AML	AML		
	comp=N,61μm,1.4s						
TRAV				AML	AML		
	comp=E,58μm,0.8s						
TRAV				AML	AML		
	comp=N,61μm,1.4s						
ORIF	**Oris-en-Rattie**	**1.11**	**295**	Pg	**Pg**	**20 03 20.9**	**-0.3**
ORIF				Sg	**Sg**	**20 03 34.5**	**-1.2**
ORIF	**Oris-en-Rattie**	**1.11**	**295**	P	**Pb**	**20 03 20.6**	**+0.3**
ORIF				S	**Sg**	**20 03 34.4**	**-1.3**
ORIF				AML	AML		
	comp=N,124μm,0.4s						
ORIF				AML	AML		
	comp=E,166μm,0.9s						
ORIF				AML	AML		
	comp=N,124μm,0.4s						
LPG	**La Plagne**	**1.12**	**340**	*e*Pg	**Pg**	**20 03 20.6**	**-0.6**
LPG				*e*Sg	**Sb**	**20 03 35.9**	**+1.0**
	comp=N,58nm,0.3s						
GDM	**Grand'Maison**	**1.13**	**312**	Pg	**Pn**	**20 03 21.3**	**+0.7**
GDM				Sg	**Sb**	**20 03 36.4**	**+1.3**
LPL	**La Plagne**	**1.14**	**340**	*e*Pg	**Pg**	**20 03 21.3**	**-0.3**
LPL				*e*Sg	**Sb**	**20 03 36.6**	**+1.1**
	comp=N,59nm,0.4s						
CIRO	**Champorcher**	**1.17**	**9**	AML	AML		
	comp=N,40μm,0.7s						
CIRO				AML	AML		
	comp=E,53μm,0.5s						
MLYF	**Mely**	**1.20**	**248**	Pg	**Pg**	**20 03 22.3**	**-0.3**
MLYF				Sg	**Sn**	**20 03 39.1**	**+1.8**
LMR	**La Mourre**	**1.25**	**207**	*e*Pg	**Pg**	**20 03 22.9**	**-0.9**
LMR				*e*Sg	**Sn**	**20 03 39.7**	**+1.1**
	comp=E,180nm,0.3s						
BSTF	**la Bastide-des**	**1.32**	**245**	Pn	**Pg**	**20 03 25.3**	**+0.3**
BSTF				Sn	**Sg**	**20 03 43.8**	**+1.6**
RSL	**Roselend**	**1.33**	**339**	Pg	**Pg**	**20 03 25.2**	**0.0**
SMRF	**Simiane la Rot**	**1.33**	**250**	*e*Pg	**Pg**	**20 03 25.3**	**+0.1**
SMRF				*e*Sg	**Sg**	**20 03 42.6**	**+0.1**
	comp=E,47nm,0.3s						
MRGE	**Morge**	**1.33**	**353**	P	**Pn**	**20 03 23.6**	**+0.1**
MRGE				AML	AML		
	comp=N,97μm,0.4s						
MRGE				AML	AML		
	comp=N,97μm,0.4s						
MRGE				AML	AML		
	comp=E,56μm,0.7s						
GRN	**Grenoble**	**1.36**	**306**	Pn	**Pg**	**20 03 25.4**	**-0.4**
GRN				Sn	**Sg**	**20 03 43.8**	**+0.3**
ARTF	**Artigues**	**1.38**	**232**	Pn	**Pb**	**20 03 25.2**	**+0.3**
ARTF				Sn	**Sg**	**20 03 43.5**	**-0.7**
REMY	**Saint-Rhmy-en**	**1.39**	**356**	P	**Pn**	**20 03 24.4**	**+0.1**
REMY				AML	AML		
	comp=E,85μm,0.5s						
REMY				AML	AML		
	comp=N,71μm,0.8s						
REMY				AML	AML		
	comp=N,71μm,0.8s						
REMY				AML	AML		
	comp=E,85μm,0.5s						
RUSF	**Rustrel**	**1.40**	**249**	Pn	**Pg**	**20 03 25.8**	**-0.8**
RUSF				Sn	**Sg**	**20 03 44.9**	**0.0**
OGSM	**Saint Maurice**	**1.62**	**316**	Pg	**Pg**	**20 03 30.3**	**-0.5**
OGSM				Sg	**Sg**	**20 03 51.8**	**0.0**
MILN	**Milano**	**1.71**	**52**	S	**Sg**	**20 03 57.0**	**+2.2**
VIVF	**Saint-Julien-l**	**1.92**	**283**	*e*Pn	**Pn**	**20 03 32.9**	**+1.5**
VIVF	**Saint-Julien-l**	**1.92**	**283**	*e*Pg	**Pg**	**20 03 36.9**	**+0.5**
VIVF				*e*Sn	**Sn**	**20 03 56.0**	**+0.9**
	comp=E,10nm,0.2s						
VIVF				*e*Sg	**Sg**	**20 04 00.6**	**-0.7**
	comp=E,14nm,0.3s						
OG35	**Corcelles**	**2.01**	**323**	Pn	**Pb**	**20 03 35.2**	**-0.4**
OG35				Sn	**Sn**	**20 03 59.5**	**+2.1**
PGF	**Pioggiola**	**2.27**	**146**	*e*Pn	**Pn**	**20 03 35.6**	**-0.6**
PGF				*e*Sn	**Sn**	**20 04 02.0**	**-1.9**
	comp=E,6.2nm,0.2s						
PGF	**Pioggiola**	**2.27**	**146**	P	**Pn**	**20 03 35.7**	**-0.6**
PGF				S	**Sn**	**20 04 03.0**	**-0.9**
CABF	**La Chapelle**	**2.32**	**339**	*e*P	**Pb**	**20 03 39.0**	**-1.1**
CABF	**La Chapelle**	**2.32**	**339**	*e*Pg	**Pg**	**20 03 43.9**	**-0.2**
CABF				*e*Sg	**Sg**	**20 04 12.7**	**-1.5**
	comp=E,6.1nm,0.5s						
LASF	**Ste Croix**	**2.50**	**263**	*e*Pn	**Pn**	**20 03 40.0**	**+0.6**
LASF	**Ste Croix**	**2.50**	**263**	*e*Pg	**Pg**	**20 03 46.2**	**-1.3**
LASF				*e*Sn	**Sn**	**20 04 09.3**	**-0.2**
	comp=E,3.6nm,0.3s						
POPM	**Popiglio**	**2.52**	**98**	S	**Sg**	**20 04 24.0**	**+3.5**
BRANT	**Les Verrieres**	**2.55**	**347**	Pn	**Pn**	**20 03 41.8**	**+1.6**
ZCCA	**Zocca**	**2.64**	**91**	S	**Sg**	**20 04 28.0**	**+3.7**
MTCR	**Monte La Croce**	**2.69**	**98**	S	**Sg**	**20 04 24.0**	**-2.1**
SMF	**Signal de Mont**	**3.27**	**313**	*e*P	**Pn**	**20 03 52.8**	**+2.8**
SMF				*e*Sn	**Sn**	**20 04 28.1**	**-0.4**
	comp=E,4.4nm,0.3s						
SMF				*e*Sg	**Sg**	**20 04 42.7**	**-2.0**
	comp=E,8.0nm,0.4s						
HINF	**Hinteralfeld**	**3.38**	**355**	*e*P	**Pn**	**20 03 52.7**	**+1.2**
HINF	**Hinteralfeld**	**3.38**	**355**	*e*Pg	**Pg**	**20 04 03.3**	**-1.0**
HINF				*e*Sn	**Sn**	**20 04 30.9**	**-0.3**
	comp=E,3.3nm,0.3s						
SLE	**Schleitheim**	**3.42**	**14**	Pn	**Pn**	**20 03 53.5**	**+1.6**
SLE	**Schleitheim**	**3.42**	**14**	Sn	**Sn**	**20 04 31.7**	**-0.4**
HAU	**Haudompre**	**3.62**	**350**	*e*Pn	**Pn**	**20 03 54.8**	**+0.1**
HAU	**Haudompre**	**3.62**	**350**	*e*P	**Pn**	**20 03 56.4**	**+1.7**
HAU				*e*Sn	**Sn**	**20 04 36.3**	**-0.7**
	comp=E,5.3nm,0.3s						
AVF	**Avril sur Loir**	**3.62**	**312**	*e*P	**Pn**	**20 03 56.9**	**+2.1**
AVF	**Avril sur Loir**	**3.62**	**312**	*e*Pg	**Pg**	**20 04 07.2**	**-1.8**
AVF				*e*Sn	**Sn**	**20 04 36.2**	**-0.9**
	comp=E,1.7nm,0.3s						
AVF				*e*Sg	**Sg**	**20 04 54.4**	**-1.5**
	comp=E,3.4nm,0.5s						
LOR	**Lormes**	**3.70**	**321**	*e*P	**Pn**	**20 03 58.1**	**+2.2**
	baz=138						
LOR	**Lormes**	**3.70**	**321**	*e*Pg	**Pg**	**20 04 08.5**	**-2.0**
LOR				*e*Sn	**Sn**	**20 04 37.9**	**-1.2**
	comp=E,2.9nm,0.3s,baz=140						
LOR				*e*Sg	**Sg**	**20 04 56.6**	**-1.8**
	comp=E,1.7nm,0.2s						
LOR	**Lormes**	**3.70**	**321**	Sn	**Sn**	**20 04 38.7**	**-0.4**
LOR	**Lormes**	**3.70**	**321**	Pn	**Pn**	**20 03 57.6**	**+1.7**
SSF	**Saint Saulge**	**3.72**	**316**	*e*P	**Pn**	**20 03 58.6**	**+2.4**
SSF				*e*Sn	**Sn**	**20 04 38.4**	**-1.2**
	comp=E,1.5nm,0.3s						
SSF				*e*Sg	**Sg**	**20 04 57.6**	**-1.5**
	comp=E,5.9nm,0.6s						
CAF	**Calviac**	**3.76**	**279**	*e*Pn	**Pn**	**20 03 55.6**	**-1.2**
CAF	**Calviac**	**3.76**	**279**	*e*P	**Pn**	**20 03 58.7**	**+1.9**
CAF				*e*Sn	**Sn**	**20 04 39.9**	**-0.7**
	comp=E,1.7nm,0.3s						
BGF	**Bois d'Agland**	**3.77**	**306**	*e*P	**Pn**	**20 03 59.1**	**+2.2**
BGF	**Bois d'Agland**	**3.77**	**306**	*e*Pg	**Pg**	**20 04 10.0**	**-1.8**
BGF				*e*Sn	**Sn**	**20 04 39.8**	**-1.0**
BGF				*e*Sg	**Sg**	**20 04 58.9**	**-1.8**
	comp=E,19nm,0.5s						
MTLF	**Montolieu**	**3.84**	**255**	*e*Pn	**Pn**	**20 03 57.3**	**-0.4**
MTLF	**Montolieu**	**3.84**	**255**	*e*P	**Pn**	**20 04 00.9**	**+3.2**
MTLF				*e*Sn	**Sn**	**20 04 41.6**	**-0.8**
	comp=E,1.2nm,0.3s						
CDF	**Champ du Feu**	**3.96**	**360**	*e*Pn	**Pn**	**20 03 59.5**	**0.0**
CDF	**Champ du Feu**	**3.96**	**360**	*e*P	**Pn**	**20 04 01.9**	**+2.4**
CDF				*e*Sn	**Sn**	**20 04 44.2**	**-1.4**
	comp=E,2.1nm,0.2s						
TCF	**Toulx Ste Croi**	**4.03**	**299**	*e*P	**Pn**	**20 04 03.0**	**+2.6**
TCF				*e*Sg	**Sg**	**20 05 06.2**	**-2.7**
	comp=E,6.1nm,0.2s						
SFTF	**Sexfontaines**	**4.07**	**338**	*e*P	**Pn**	**20 04 04.5**	**+3.6**
	baz=157						
SFTF	**Sexfontaines**	**4.07**	**338**	*e*Pg	**Pg**	**20 04 14.4**	**-3.0**
SFTF				*e*Sn	**Sn**	**20 04 46.6**	**-1.5**
	comp=E,3.7nm,0.2s						
TOLF	**Tolfa**	**4.18**	**123**	⇑P	**Pb**	**20 04 15.0**	**+2.4**
RJF	**Les Rejaudoux**	**4.20**	**284**	*e*P	**Pn**	**20 04 06.4**	**+3.7**
PAGF	**Fort de Pagny**	**4.25**	**346**	*e*P	**Pn**	**20 04 06.9**	**+3.5**
PAGF				*e*Sn	**Sn**	**20 04 50.7**	**-1.8**
	comp=E,3.4nm,0.3s						
MEZF	**Maizieres J'vi**	**4.34**	**340**	*e*P	**Pn**	**20 04 08.3**	**+3.7**
	baz=159						
MEZF				*e*Sn	**Sn**	**20 04 54.5**	**-0.2**
	comp=E,5.3nm,0.3s						
SAVF	**Savonnieres en**	**4.43**	**341**	*e*P	**Pn**	**20 04 10.6**	**+4.8**
	baz=160						
MFF	**Saint Martin d**	**5.66**	**295**	*e*P	**Pn**	**20 04 25.9**	**+3.2**
MFF				*e*Sg	**Sg**	**20 05 56.7**	**-4.3**
	comp=E,2.4nm,0.5s						
BAIF	**Baives**	**5.99**	**341**	*e*P	**Pn**	**20 04 31.1**	**+3.8**
BAIF				*e*Sn	**Sn**	**20 05 32.7**	**-2.7**
	comp=E,1.0nm,0.3s						
FLN	**La Foliniere**	**6.88**	**312**	*e*Pn	**Pn**	**20 04 38.2**	**-1.3**

IDC 16 20:04:34.4±1.7, 35.13N×26.69E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.2/52, mbtmp3.5/4, Error ellipse: s-maj=54.8km s-min=19.5km az=167.0, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.48**	**276**	Pn	Pn	20 05 01.3	-1.1
	4.0nm,0.3s,baz=118,slow=9.7,SNR=1.8						
IDI				Sn	Sn	20 05 25.1	+2.6
	25nm,0.3s,baz=272,slow=23,SNR=3.8						
IDI				LR	LR	20 05 58.7	
	comp=Z,522nm,20.4s,baz=284,slow=57						
ESDC	**Sonseca Array**	**24.70**	**290**	P	P	20 09 57.4	+0.1
	0.4nm,0.6s,baz=80,slow=9.1,SNR=5.8						
TORD	**Torodi Ar. Bea**	**31.45**	**232**	P	P	20 10 57.7	+0.1
	0.4nm,0.5s,baz=22,slow=9.3,SNR=2.9						
MKAR	**Makanchi Array**	**42.74**	**57**	P	P	20 12 33.2	-0.1
	0.2nm,0.3s,baz=269,slow=8.1,SNR=4.3						
ZALV	**Zalesovo Beam**	**44.12**	**46**	P	P	20 12 44.3	0.0
	0.6nm,0.6s,baz=254,slow=9.1,SNR=2.4						

*IDC **16** 20:04:37.0±2.2, 43.88N×105.52W, h0km, mb3.7/3, mb1 3.8/7, mb1mx3.4/66, mbtmp3.6/7, ML3.5/4, Error ellipse: s-maj=77.0km s-min=8.0km az=148.0*
*NEIC **16** 20:04:37.1±1.2, 43.79N±0.05×105.26W±0.04, h0km±1km, ML3.3/60, Error ellipse: s-maj=8.9km s-min=4.7km az=166.0*

ISC 16 20:04:36.9±0.8, 43.82N±0.06×105.25W±0.06, h0km, n59, σ0°82/58, mb3.6/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.93**	**70**	Pg	**Pg**	**20 04 55.2**	**+0.5**
K22A	**Casper**	**1.49**	**219**		**Pn**	**20 05 03.0**	**-2.0**
K22A				IAML		20 05 28.5	
	comp=E,392nm,0.3s						
K22A				IAML		20 05 28.5	
	comp=N,335nm,0.4s						
PHWY	**Pilot Hill**	**2.52**	**184**		**Pn**	**20 05 19.1**	**-0.2**
RWWY	**Rawlins**	**2.57**	**215**		**Pn**	**20 05 19.7**	**-0.3**
RWWY				IAML		20 05 56.6	
	comp=N,169nm,0.6s						
RWWY				IAML		20 05 59.1	
	comp=N,121nm,0.7s						
LAO	**LASA Array**	**2.95**	**347**		**Pn**	**20 05 25.6**	**+0.5**
RLMT	**Red Lodge**	**3.16**	**296**		**Pn**	**20 05 28.1**	**+0.1**
RLMT				IAML		20 06 25.6	
	comp=N,76nm,0.8s						
RLMT				IAML		20 06 28.4	
	comp=N,83nm,0.6s						
PD31	**Pinedale Array**	**3.31**	**253**		**Pn**	**20 05 30.1**	**-0.1**
PDAR	**Pinedale Array**	**3.31**	**253**	Pn	**Pn**	**20 05 30.1**	**-0.1**
	comp=N,4.6nm,0.3s,baz=68,slow=16,SNR=84						
PDAR				Lg	Lg	20 06 15.1	
	comp=N,17nm,0.3s,baz=67,slow=32,SNR=11						
YNE	**Yellowstone No**	**3.61**	**291**		**Pn**	**20 05 33.8**	**-0.5**
YNE				IAML		20 06 32.8	
	comp=E,59nm,0.4s						
YNE				IAML		20 06 34.0	
	comp=N,66nm,0.6s						
YMP	**Mirror Lake Pl**	**3.64**	**286**		**Pn**	**20 05 35.0**	**+0.3**
GCMT	**Greycliff**	**3.71**	**304**		**Pn**	**20 05 36.0**	**+0.4**
OGNE	**Ogallala**	**3.73**	**139**		**Pn**	**20 05 35.8**	**0.0**
OGNE				IAML		20 06 48.5	
	comp=N,79nm,0.5s						
H17A	**Grant Village**	**3.88**	**280**		**Pn**	**20 05 38.9**	**+0.9**
LOHW	**Long Hollow**	**3.88**	**269**		**Pn**	**20 05 39.1**	**+1.1**
FLWY	**Flagg Ranch**	**3.94**	**276**		**Pn**	**20 05 39.1**	**+0.3**
FLWY				IAML		20 06 46.9	
	comp=N,39nm,2.6s						
FLWY				IAML		20 06 59.9	
	comp=N,29nm,1.7s						
MOOW	**Moose Ponds**	**3.98**	**271**		**Pn**	**20 05 39.7**	**+0.4**
SNOW	**Snow King Moun**	**4.01**	**267**		**Pn**	**20 05 38.5**	**-1.2**
SNOW				IAML		20 06 48.8	
	comp=N,34nm,0.9s						
SNOW				IAML		20 06 51.1	
	comp=N,48nm,0.4s						
ISCO	**Idaho Springs**	**4.02**	**184**		**Pn**	**20 05 40.3**	**+0.3**
YPP	**Pitchstone Pla**	**4.03**	**278**		**Pn**	**20 05 40.2**	**+0.1**
REDW	**Red Top Meadow**	**4.09**	**266**		**Pn**	**20 05 41.5**	**+0.6**
REDW				IAML		20 06 53.0	
	comp=N,50nm,0.8s						
REDW				IAML		20 06 59.0	
	comp=N,40nm,1.5s						
YHH	**Holmes Hill**	**4.13**	**286**		**Pn**	**20 05 41.4**	**-0.1**
YMR	**Madison River**	**4.19**	**284**		**Pn**	**20 05 43.4**	**+1.1**
YMR				IAML		20 07 03.4	
	comp=N,37nm,1.0s						
YMR				IAML		20 07 23.6	
	comp=E,24nm,3.0s						
O20A	**White River Ci**	**4.30**	**212**	Pn	**Pn**	**20 05 43.2**	**-0.5**
O20A				IAML		20 06 57.5	
	comp=E,40nm,0.9s						
O20A				IAML		20 07 01.7	
	comp=N,32nm,0.8s						
YHL	**Hebgen Lake**	**4.38**	**286**		**Pn**	**20 05 44.8**	**-0.1**
YHL				IAML		20 06 59.6	
	comp=N,22nm,1.1s						
YHL				IAML		20 07 05.8	
	comp=E,24nm,1.2s						
AHID	**Auburn Hatcher**	**4.39**	**258**		**Pn**	**20 05 45.5**	**+0.5**
AHID				IAML		20 07 03.6	
	comp=N,39nm,0.8s						
AHID				IAML		20 07 12.2	
	comp=E,23nm,0.7s						
ECR	**Eagle Creek**	**4.52**	**262**		Pn	20 05 41.6	-5.1
QLMT	**Earthquake Lak**	**4.55**	**285**		**Pn**	**20 05 46.0**	**-1.1**
RDMU	**Red Mountain**	**4.56**	**226**		**Pn**	**20 05 45.8**	**-1.5**
RDMU				IAML		20 07 03.4	
	comp=E,25nm,0.8s						
RDMU				IAML		20 07 11.1	
	comp=N,19nm,1.0s						
SUSD	**Miller**	**4.58**	**80**	Pn	**Pn**	**20 05 47.2**	**-0.2**
DGMT	**Dagmar**	**4.71**	**9**	Pn	**Pn**	**20 05 51.1**	**+1.9**
SMCO	**Snowmass**	**4.81**	**196**		**Pb**	**20 06 03.1**	**+0.8**
SMCO				IAML		20 07 11.8	
	comp=N,18nm,0.5s						
SMCO				IAML		20 07 13.0	
	comp=N,24nm,0.5s						
BOZ	**Bozeman (W)**	**4.88**	**294**		**Pn**	**20 05 52.2**	**+0.6**
BOZ				IAML		20 07 14.1	
	comp=N,13nm,0.7s						
HWUT	**Hardware Ranch**	**5.15**	**247**	Pn	**Pn**	**20 05 53.9**	**-1.4**
HWUT	

*THE **16** 20:05:56.3,35˚.07N×26˚.72E,h0km±1km,ML3.4/5,Error ellipse: s-maj=4.9km s-min=0.8km az=157.0*
*ATH **16** 20:05:57.6,35˚.14N×26˚.69E,h13km±2km,ML3.6/6,Error ellipse: s-maj=4.0km s-min=1.0km az=159.0*
ISC 16 20:05:55.3±1.2,**34˚.99N**±0˚.05×**26˚.78E**±0˚.03,**h14**km±7km, **n75**,σ1°12/92,**mb3.6**/9,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
ZKR	**Zakros**	**0.47**	**285**	P		**Pg**	**20 06 04.9**	**+0.2**
ZKR				S		**Sg**	**20 06 11.3**	**+0.2**
ZKR				AML		AML	20 06 12.7	
	comp=E,29518µm,0.4s							
ZKR				AML		AML	20 06 13.1	
	comp=N,17243µm,0.5s							
ZKR	**Zakros**	**0.47**	**285**	P		**Pg**	**20 06 04.9**	**+0.2**
ZKR				S		**Sb**	**20 06 12.4**	**+0.1**
	comp=N,12µm,0.4s							
ZKR	**Zakros**	**0.47**	**285**	PG		**Pg**	**20 06 05.1**	**+0.4**
ZKR				SG		**Sg**	**20 06 12.2**	**+1.1**
STIA	**Sitia Lasithi**	**0.60**	**290**	P		**Pg**	**20 06 06.3**	**-0.8**
STIA				S		**Sg**	**20 06 15.4**	**+0.4**
KARP	**Karpathos**	**0.64**	**30**	P		**Pb**	**20 06 07.9**	**-0.3**
KARP				S		**Sb**	**20 06 17.4**	**-0.6**
KARP				AML		AML	20 06 18.4	
	comp=N,46157µm,0.3s							
KARP				AML		AML	20 06 19.6	
	comp=E,62956µm,0.4s							
KARP	**Karpathos**	**0.64**	**30**	P		**Pb**	**20 06 07.9**	**-0.3**
KARP				S		**Sb**	**20 06 17.3**	**+0.3**
KARP	**Karpathos**	**0.64**	**30**	PG		**Pb**	**20 06 08.1**	**-0.1**
KARP				SG		**Sb**	**20 06 17.7**	**+0.7**
FRMA	**Ierapetra Chan**	**0.86**	**272**	P		**Pg**	**20 06 09.8**	**-2.1**
FRMA				S		**Sg**	**20 06 22.1**	**-1.1**
NPS	**Neapolis**	**0.99**	**286**	P		**Pg**	**20 06 14.4**	**0.0**
NPS				S		**Sg**	**20 06 27.0**	**-0.5**
NPS				AML		AML	20 06 33.0	
	comp=N,6568µm,0.5s							
NPS				AML		AML	20 06 34.3	
	comp=E,8356µm,0.5s							
NPS	**Neapolis**	**0.99**	**286**	P		**Pg**	**20 06 14.5**	**0.0**
NPS				S		**Sb**	**20 06 28.4**	**+1.2**
	comp=E,4µm,0.5s							
KSTL	**Kastelli Herak**	**1.43**	**283**	P		**Pn**	**20 06 18.6**	**-2.2**
KSTL				S		**Sn**	**20 06 34.7**	**-4.7**
IDI	**Anoyia**	**1.57**	**281**	Pn		**Pn**	**20 06 24.4**	**+1.5**
	comp=E,25nm,0.3s,baz=99,slow=16,SNR=4.5							
IDI				Sn		**Sn**	**20 06 44.0**	**+1.0**
	comp=E,28nm,0.3s,baz=351,slow=16,SNR=2.3							
IDI	**Anoyia**	**1.57**	**281**	P		**Pb**	**20 06 25.2**	**+1.0**
IDI				AML		AML	20 06 52.8	
	comp=N,1424µm,0.9s							
IDI				AML		AML	20 06 53.7	
	comp=E,1289µm,0.6s							
IDI	**Anoyia**	**1.57**	**281**	P		**Pn**	**20 06 24.4**	**+1.5**
IDI				S		**Sb**	**20 06 44.9**	**+0.9**
	comp=E,712nm,0.4s							
IDI	**Anoyia**	**1.57**	**281**	PN		**Pn**	**20 06 24.0**	**+1.1**
SIVA	**Sivas**	**1.61**	**271**	P		**Pn**	**20 06 24.7**	**+1.3**
SIVA				S		**Sn**	**20 06 45.5**	**+1.6**
SIVA				AML		AML	20 07 01.5	
	comp=N,4372µm,0.6s							
SIVA				AML		AML	20 07 01.7	
	comp=E,5006µm,0.6s							
NIS1	**Nisyros Isl.**	**1.64**	**11**	P		**Pb**	**20 06 24.9**	**-0.4**
NIS1	**Nisyros Isl.**	**1.64**	**11**	PN		**Pb**	**20 06 24.9**	**-0.4**
ARG	**Arkhangelos**	**1.64**	**42**	P		**Pg**	**20 06 26.4**	**-0.4**
ARG				S		**Sg**	**20 06 47.6**	**-0.6**
ARG				AML		AML	20 06 56.6	
	comp=N,1566µm,0.5s							
ARG				AML		AML	20 06 57.2	
	comp=E,2634µm,0.8s							
ARG	**Arkhangelos**	**1.64**	**42**	P		**Pb**	**20 06 25.3**	**0.0**
ARG				S		**Sg**	**20 06 47.6**	**-0.6**
	comp=E,1µm,0.9s							
ARG	**Arkhangelos**	**1.64**	**42**	PN		**Pn**	**20 06 24.8**	**+1.1**
SANT	**Santorini**	**1.74**	**322**	P		**Pb**	**20 06 26.5**	**-0.6**
SANT	**Santorini**	**1.74**	**322**	P		**Pn**	**20 06 26.1**	**+0.9**
SANT	**Santorini**	**1.74**	**322**	PN		**Pb**	**20 06 26.6**	**-0.5**
KOSK	**Kos Island**	**1.76**	**5**	PN		**Pb**	**20 06 26.6**	**-0.8**
THR8	**Santorini-Mono**	**1.76**	**324**	P		**Pn**	**20 06 25.8**	**+0.6**
THR6	**Thira Island,**	**1.76**	**321**	P		**Pn**	**20 06 26.4**	**+1.0**
THR6	**Thira Island,**	**1.76**	**321**	P		**Pn**	**20 06 25.9**	**+0.5**
THR9	**Santorini-Faro**	**1.79**	**320**	P		**Pb**	**20 06 27.2**	**-0.5**
SNT1	**Gialos, Santor**	**1.79**	**323**	P		**Pn**	**20 06 26.6**	**+0.8**
SNT1	**Gialos, Santor**	**1.79**	**323**	P		**Pn**	**20 06 26.5**	**+0.7**
THR7	**Fira-Santorini**	**1.80**	**323**	P		**Pb**	**20 06 27.6**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.80**	**322**	P		**Pn**	**20 06 26.5**	**+0.5**
SNT5	**Nea Kammeni, S**	**1.80**	**322**	P		**Pn**	**20 06 26.7**	**+0.8**
THR3	**Thira Island,**	**1.80**	**322**	P		**Pn**	**20 06 26.6**	**+0.7**
THR3	**Thira Island,**	**1.80**	**322**	P		**Pn**	**20 06 26.7**	**+0.7**
THT2	**Imerovigli**	**1.81**	**323**	P		**Pn**	**20 06 26.0**	**-0.1**
THT2	**Imerovigli**	**1.81**	**323**	PN		**Pn**	**20 06 27.1**	**+1.0**
THR2	**Thira island,**	**1.81**	**323**	P		**Pn**	**20 06 26.5**	**+0.4**
THR5	**Thira Island,**	**1.83**	**321**	P		**Pn**	**20 06 27.7**	**+1.3**
SAP3	**Santorini-Thir**	**1.85**	**321**	P		**Pb**	**20 06 28.2**	**-0.7**
SAP3	**Santorini-Thir**	**1.85**	**321**	P		**Pn**	**20 06 27.6**	**+1.0**
BODT	**Bodrum**	**2.11**	**12**	P		**Pn**	**20 06 31.1**	**+0.9**
BODT	**Bodrum**	**2.11**	**12**	PN		**Pn**	**20 06 30.9**	**+0.7**
TURN	**Turunc**	**2.14**	**33**	PN		**Pn**	**20 06 32.0**	**+1.4**
VAM	**Vamos**	**2.15**	**282**	P		**Pb**	**20 06 33.8**	**-0.2**
GVDS	**Gavdos**	**2.21**	**267**	PN		**Pn**	**20 06 32.9**	**+1.3**
GVD	**Gavdhos**	**2.22**	**267**	PN		**Pn**	**20 06 32.9**	**+1.3**
APE	**Apeiranthos**	**2.30**	**334**	P		**Pn**	**20 06 33.5**	**+0.6**
APE				S		**Sn**	**20 07 01.0**	**-0.1**
	comp=E,240nm,0.6s							
APE	**Apeiranthos**	**2.30**	**334**	PN		**Pn**	**20 06 33.2**	**+0.3**
IMMV	**Iera Moni Meta**	**2.34**	**282**	P		**Pb**	**20 06 37.1**	**0.0**
IMMV	**Iera Moni Meta**	**2.34**	**282**	PN		**Pn**	**20 06 34.8**	**+1.5**
DALY	**Dalyan (Mula)**	**2.37**	**39**	PN		**Pn**	**20 06 35.0**	**+1.2**
YER	**Yerkesik**	**2.46**	**29**	PN		**Pn**	**20 06 36.3**	**+1.3**
FETY	**Fethiye**	**2.49**	**48**	PN		**Pn**	**20 06 35.5**	**+0.1**
KNDR	**Palaiochora Ch**	**2.54**	**276**	PN		**Pn**	**20 06 37.9**	**+1.8**
AKAS	**Kas**	**2.62**	**61**	PN		**Pn**	**20 06 37.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**3.06**	**117**	P		**Pn**	**20 06 45.2**	**+1.9**
ELL	**Elmali**	**3.09**	**55**	PN		**Pn**	**20 06 45.0**	**+1.3**
KTHA	**Kythira Island**	**3.28**	**294**	PN		**Pn**	**20 06 47.4**	**+1.2**
CHOS	**Chios island**	**3.44**	**350**	P		**Pn**	**20 06 49.0**	**+0.5**
MMAI	**Mount Meron Ar**	**7.43**	**103**	Pn		**Pn**	**20 07 40.9**	**-2.4**
	comp=E,1.5nm,0.3s,baz=281,slow=15,SNR=4.4							
EIL	**Elat**	**8.72**	**125**	Pn		**Pn**	**20 08 00.2**	**-0.8**
	comp=E,0.5nm,0.3s,baz=261,slow=22,SNR=1.8							
KBZ	**Khabaz**	**15.20**	**50**	Pn		**Pn**	**20 09 31.5**	**+2.1**
	comp=E,0.0nm,0.3s,baz=276,slow=15,SNR=1.1							
AKASG	**Malin Array Be**	**15.80**	**6**	Pn		**Pn**	**20 09 38.0**	**+0.8**
	comp=E,0.5nm,0.3s,baz=192,slow=12,SNR=2.3							
GERES	**GERESS Array B**	**16.88**	**329**	Pn		**Pn**	**20 09 51.0**	**-0.2**
	comp=E,0.1nm,0.3s,baz=126,slow=14,SNR=2.7							
ESDC	**Sonseca Array**	**24.82**	**290**	P		**P**	**20 11 15.8**	**-1.2**
	comp=E,0.9nm,0.5s,baz=81,slow=9.6,SNR=12							
FINES	**FINESS Array B**	**26.47**	**359**	P		**P**	**20 11 29.6**	**-2.1**
	comp=E,1.3nm,0.8s,baz=181,slow=12,SNR=1.6							
AKTO	**Aktyubinsk**	**27.40**	**46**	P		**P**	**20 11 41.0**	**+0.8**
	comp=E,0.6nm,0.7s,baz=257,slow=12,SNR=2.0							
EKA	**Eskdalemuir Ar**	**28.95**	**324**	P		**P**	**20 11 54.0**	**+0.1**
	comp=E,0.3nm,0.5s,baz=118,slow=9.1,SNR=1.9							
TORD	**Torodi Ar. Bea**	**31.42**	**232**	P		**P**	**20 12 15.9**	**-0.2**
	comp=E,0.8nm,0.5s,baz=31,slow=9.1,SNR=7.0							
ARCES	**ARCESS Array B**	**34.60**	**359**	P		**P**	**20 12 41.5**	**-1.9**
	comp=E,1.3nm,0.9s,baz=186,slow=7.3,SNR=1.3							
MKAR	**Makanchi Array**	**42.76**	**57**	P		**P**	**20 13 52.2**	**+0.1**
	comp=E,0.6nm,0.7s,baz=270,slow=6.8,SNR=5.9							
ZALV	**Zalesovo Beam**	**44.16**	**46**	P		**P**	**20 14 03.4**	**+0.1**
	comp=E,0.6nm,0.4s,baz=258,slow=9.5,SNR=2.3							
SONM	**Songino Array**	**58.56**	**51**	P		**P**	**20 15 52.9**	**+1.4**
	comp=E,0.2nm,0.5s,baz=284,slow=6.2,SNR=1.7							

*IDC **16** 20:10:19.9±3.3,5˚.32S×152˚.90E,h0km,mb3.7/6, mb1 3.8/7,mb1mx3.6/42,mbtmp3.7/7,ML1.9/1,Error ellipse: s-maj=107.1km s-min=23.2km az=117.0*
ISC 16 20:10:26.0±2.6,**5˚.3S**±0˚.3×**152˚.7E**±0˚.5,**h35**km,**n7**,σ1°17/8, **mb3.6**/6,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
PMG	**Port Moresby**	**6.88**	**233**	Pn		**Pn**	**20 12 05.6**	**+1.2**
	1.2nm,0.3s,baz=182,slow=11,SNR=2.0							
PMG				Sn		**Sn**	**20 13 20.3**	**-1.2**
	1.1nm,0.3s,baz=298,slow=21,SNR=2.3							
WRA	**Warramunga Arr**	**23.08**	**229**	P		**P**	**20 15 27.9**	**-0.9**
	1.0nm,0.9s,baz=54,slow=10,SNR=7.7							
ASAR	**Alice Springs**	**25.75**	**223**	P		**P**	**20 15 52.8**	**-0.9**
	0.6nm,0.8s,baz=45,slow=11,SNR=3.3							
FITZ	**Fitzroy Crossi**	**29.37**	**242**	P		**P**	**20 16 26.9**	**+0.9**
	2.3nm,1.0s,baz=61,slow=13,SNR=2.2							
PETK	**Petropavlovsk-**	**58.32**	**4**	P		**P**	**20 20 17.3**	**0.0**
	1.0nm,0.5s,baz=184,slow=8.7,SNR=1.8							
SONM	**Songino Array**	**66.69**	**328**	P		**P**	**20 21 14.1**	**+0.5**
	0.2nm,0.4s,baz=138,slow=6.2,SNR=2.5							
ZALV	**Zalesovo Beam**	**81.51**	**326**	P		**P**	**20 22 38.6**	**-1.1**
	0.4nm,0.4s,baz=126,slow=7.3,SNR=2.2							

*IDC **16** 20:15:22.3±1.5,35˚.34N×26˚.62E,h0km,mb3.5/7, mb1 3.6/7,mb1mx3.3/46,mbtmp3.5/7,Error ellipse: s-maj=57.0km s-min=21.0km az=159.0*
ISC 16 20:15:25.0±0.9,**35˚.1N**±0˚.2×**26˚.89E**±0˚.09,**h23**km,**n9**, σ1°24/9,**mb3.5**/7,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
IDI	**Anoyia**	**1.65**	**278**	Pn		**Pb**	**20 15 55.5**	**+0.7**
	16nm,0.3s,baz=101,slow=16,SNR=19							
MMAI	**Mount Meron Ar**	**7.36**	**104**	Pn		**Pn**	**20 17 10.3**	**-0.8**
	1.0nm,0.3s,baz=303,slow=11,SNR=7.8							
ESDC	**Sonseca Array**	**24.88**	**290**	P		**P**	**20 20 44.6**	**-1.5**
	0.6nm,0.6s,baz=81,slow=9.7,SNR=8.6							
TORD	**Torodi Ar. Bea**	**31.53**	**232**	P		**P**	**20 21 46.0**	**+0.5**
	0.5nm,0.6s,baz=31,slow=9.7,SNR=2.9							
KURBB	**Kurchatov Arra**	**40.08**	**51**	P		**P**	**20 22 59.4**	**+0.9**
	1.0nm,0.6s,baz=276,slow=8.8,SNR=13							
MKAR	**Makanchi Array**	**42.65**	**57**	P		**P**	**20 23 20.6**	**+0.9**
	0.6nm,0.6s,baz=288,slow=6.3,SNR=11							
ZALV	**Zalesovo Beam**	**44.05**	**46**	P		**P**	**20 23 30.8**	**0.0**
	1.4nm,0.5s,baz=266,slow=8.5,SNR=8.9							
SONM	**Songino Array**	**58.45**	**51**	P		**P**	**20 25 20.4**	**+1.3**
	0.1nm,0.3s,baz=88,slow=25,SNR=2.2							
YKA	**Yellowknife Ar**	**77.97**	**343**	P		**P**	**20 27 19.4**	**-1.6**
	0.1nm,0.4s,baz=106,slow=7.4,SNR=1.7							

*NIC **16** 20:15:48.5±0.0,35˚.02N×26˚.89E,h23km±1km,MI4.7/4*
*ISK **16** 20:15:48.7,35˚.03N×26˚.87E,h14km,ML4.3/23*
*DDA **16** 20:15:49.3,35˚.18N×27˚.00E,h12km±4km,MW4.3*
*NEIC **16** 20:15:50.2±1.7,35˚.13N±0˚.08×26˚.78E±0˚.07,h29km±6km, mb4.4/56,ML4.2(THE),Error ellipse: s-maj=12.2km s-min=8.3km az=180.0*
*ATH **16** 20:15:51.0,35˚.15N×26˚.79E,h26km±5km,ML4.3/7,Error ellipse: s-maj=5.9km s-min=1.2km az=157.0*
*HLW **16** 20:15:51.4,34˚.84N×27˚.02E,h16km±13km,Md4.3,MI4.4*
*THE **16** 20:15:51.6,35˚.18N×26˚.77E,h1km±1km,ML4.2/4,Error ellipse: s-maj=3.5km s-min=0.7km az=150.0*
*IDC **16** 20:15:51.4±2.7,35˚.23N×26˚.72E,h35km±21km,mb4.2/30, mb1 4.3/37,mb1mx4.2/53,mbtmp4.4/37,ML3.7/6,MS3.4/3, Ms1 3.4/3,ms1mx2.9/49,Error ellipse: s-maj=15.7km s-min=8.8km az=158.0*
*MOS **16** 20:15:51.0±1.1,35˚.14N×26˚.73E,h22km,mb4.7/14,Error ellipse: s-maj=5.2km s-min=3.0km az=105.2*
ISC 16 20:15:49.6±0.7,**35.07N**±0˚.03×**26.86E**±0.02,**h26**km±5km, **n527**,σ1°66/553,**mb4.5**/79,**16C-8D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
ZKR	**Zakros**	**0.53**	**275**	P		**Pb**	**20 15 59.8**	**-0.5**
ZKR				S		**Sb**	**20 16 07.9**	**+0.4**
ZKR				AML		AML	20 16 09.0	
ZKR				AML		AML	20 16 09.2	
	comp=N,41369µm,0.3s							
ZKR	**Zakros**	**0.53**	**275**	P		**Pb**	**20 15 59.9**	**-0.4**
ZKR				S		**Sb**	**20 16 08.2**	**+0.6**
	comp=N,52µm,0.3s							
ZKR	**Zakros**	**0.53**	**275**	PG		**Pb**	**20 15 59.9**	**-0.4**
ZKR				SG		**Sn**	**20 16 08.4**	**-1.2**
ZKR	**Zakros**	**0.53**	**275**	P		**Pb**	**20 15 59.6**	**-0.7**
ZKR				AML		AML	20 16 07.6	
	comp=N,146nm,0.6s							
ZKR				AML		AML	20 16 07.6	
	comp=N,146nm,0.6s							
ZKR				S		**Sn**	**20 16 08.3**	**-1.2**
ZKR				AML		AML	20 16 08.4	
	comp=N,34nm,0.4s							
ZKR				AML		AML	20 16 08.4	
	comp=N,34nm,0.4s							
KARP	**Karpathos**	**0.54**	**28**	P		**Pb**	**20 16 00.4**	**-0.2**
KARP				S		**Sb**	**20 16 08.6**	**+0.5**
KARP				AML		AML	20 16 10.1	
KARP				AML		AML	20 16 10.2	
KARP	**Karpathos**	**0.54**	**28**	P		**Pb**	**20 16 00.1**	**-0.5**
KARP				S		**Sb**	**20 16 09.0**	**+0.9**
	comp=N,100µm,0.3s							
KARP	**Karpathos**	**0.54**	**28**	PG		**Pb**	**20 16 00.2**	**-0.4**
KARP				SG		**Sb**	**20 16 08.9**	**+0.9**
KARP	**Karpathos**	**0.54**	**28**	Pn		**Pb**	**20 16 00.0**	**-0.5**
KARP	**Karpathos**	**0.54**	**28**	⇑P		**Pb**	**20 16 00.2**	**-0.4**
KARP				S		**Sb**	**20 16 08.8**	**+0.8**
KARP				AML		AML	20 16 09.8	
	comp=N,164nm,0.4s							
KARP				AML		AML	20 16 09.8	
	comp=N,164nm,0.4s							
KARP				AML		AML	20 16 09.8	
	comp=N,239nm,0.4s							
KARP				AML		AML	20 16 09.8	
	comp=N,239nm,0.4s							
STIA	**Sitia Lasithi**	**0.64**	**282**	P		**Pb**	**20 16 02.0**	**-0.2**
STIA				S		**Sb**	**20 16 11.0**	**+0.2**
FRMA	**Ierapetra Chan**	**0.92**	**267**	P		**Pn**	**20 16 06.4**	**-0.5**
FRMA				S		**Sb**	**20 16 18.6**	**-0.2**
	comp=N,8µm,0.5s							
NPS	**Neapolis**	**1.04**	**281**	P		**Pb**	**20 16 09.1**	**+0.2**
NPS				AML		AML	20 16 28.5	
	comp=E,40752µm,0.5s							
NPS				AML		AML	20 16 30.7	
	comp=N,33681µm,0.6s							
NPS	**Neapolis**	**1.04**	**281**	P		**Pb**	**20 16 09.3**	**+0.4**
NPS				S		**Sn**	**20 16 23.8**	**+1.6**
	comp=N,19µm,0.5s							
NPS	**Neapolis**	**1.04**	**281**	P		**Pb**	**20 16 09.3**	**+0.4**
NPS				S		**Sn**	**20 16 23.8**	**+1.6**
ARG	**Arkhangelos**	**1.54**	**42**	P		**Pb**	**20 16 18.2**	**+0.7**
ARG				AML		AML	20 16 45.9	
	comp=N,11903µm,0.6s							
ARG				AML		AML	20 16 46.2	
	comp=E,15033µm,0.4s							
ARG	**Arkhangelos**	**1.54**	**42**	P		**Pb**	**20 16 18.3**	**+0.7**
ARG	**Arkhangelos**	**1.54**	**42**	P		**Pb**	**20 16 18.3**	**+0.7**
ARG				S		**Sb**	**20 16 36.6**	**-0.1**
ARG	**Arkhangelos**	**1.54**	**42**	PN		**Pb**	**20 16 17.4**	**-0.2**
ARG				SN		**Sb**	**20 16 37.9**	**+1.2**
ARG	**Arkhangelos**	**1.54**	**42**	⇑P		**Pn**	**20 16 13.3**	**-2.2**
NIS1	**Nisyros Isl.**	**1.55**	**10**	P		**Pb**	**20 16 18.1**	**+0.3**
NIS1	**Nisyros Isl.**	**1.55**	**10**	P		**Pb**	**20 16 17.9**	**+0.2**
NIS1	**Nisyros Isl.**	**1.55**	**10**	PN		**Pb**	**20 16 17.4**	**-0.3**
NIS1				SN		**Sb**	**20 16 38.2**	**+1.2**
IDI	**Anoyia**	**1.62**	**278**	Pn		**Pn**	**20 16 17.0**	**+0.3**
	comp=E,132nm,0.3s,baz=100,slow=14,SNR=49							
IDI				Sn		**Sb**	**20 16 40.7**	**+1.7**
	comp=E,300nm,0.3s,baz=347,slow=17,SNR=13							
IDI				LR		LR	20 17 14.2	
	comp=E,4µm,18.5s,baz=72,slow=55							
IDI	**Anoyia**	**1.62**	**278**	P		**Pb**	**20 16 19.3**	**+0.3**
IDI				AML		AML	20 16 50.3	
	comp=N,9311µm,0.5s							
IDI				AML		AML	20 16 50.6	
	comp=E,6375µm,0.5s							
IDI	**Anoyia**	**1.62**	**278**	P		**Pb**	**20 16 19.6**	**+0.6**
IDI	**Anoyia**	**1.62**	**278**	⇑P		**Pb**	**20 16 19.1**	**+0.2**
IDI	**Anoyia**	**1.62**	**278**	PN		**Pb**	**20 16 18.1**	**-0.9**
IDI	**Anoyia**	**1.62**	**278**			**Pn**	**20 16 14.7**	**-2.0**
SIVA	**Sivas**	**1.68**	**269**	P		**Pb**	**20 16 20.2**	**+0.4**
SIVA	**Sivas**	**1.68**	**269**	P		**Pb**	**20 16 20.6**	**+0.8**
KOSK	**Kos Island**	**1.68**	**3**	P		**Pb**	**20 16 20.1**	**+0.2**
KOSK	**Kos Island**	**1.68**	**3**	PN		**Pb**	**20 16 18.8**	**-1.1**
TMBK	**Timbaki Herakl**	**1.71**	**271**	P		**Pb**	**20 16 21.3**	**+0.9**
SANT	**Santorini**	**1.73**	**319**	P		**Pn**	**20 16 18.8**	**+0.7**
SANT	**Santorini**	**1.73**	**319**	⇓P		**Pb**	**20 16 19.9**	**-0.8**
SANT	**Santorini**	**1.73**	**319**	PN		**Pn**	**20 16 18.8**	**+0.7**
SANT	**Santorini**	**1.73**	**319**	Pn		**Pn**	**20 16 17.2**	**-0.9**
THR8	**Santorini-Mono**	**1.74**	**320**	P		**Pb**	**20 16 19.8**	**-1.1**
THR6	**Thira Island,**	**1.75**	**318**	P		**Pb**	**20 16 20.0**	**-1.0**
THR9	**Santorini-Faro**	**1.77**	**317**	P		**Pn**	**20 16 19.9**	**+1.2**
THR9	**Santorini-Faro**	**1.77**	**317**	P		**Pn**	**20 16 19.8**	**+1.2**
SNT1	**Gialos, Santor**	**1.78**	**320**	P		**Pb**	**20 16 20.1**	**-1.5**
SNT1	**Gialos, Santor**	**1.78**	**320**	P		**Pn**	**20 16 19.6**	**+0.9**
THR7	**Fira-Santorini**	**1.78**	**320**	P		**Pb**	**20 16 20.6**	**-1.0**
SNT5	**Nea Kammeni, S**	**1.79**	**319**	P		**Pb**	**20 16 20.7**	**-1.0**
SNT5	**Nea Kammeni, S**	**1.79**	**319**	P		**Pn**	**20 16 20.1**	**+1.3**
THR3	**Thira Island,**	**1.79**	**319**	P		**Pn**	**20 16 20.1**	**+1.3**
THT2	**Imerovigli**	**1.79**	**320**	P		**Pb**	**20 16 20.9**	**-0.9**
THT2	**Imerovigli**	**1.79**	**320**	PN		**Pb**	**20 16 20.7**	**-1.1**
THR5	**Thira Island,**	**1.82**	**318**	P		**Pb**	**20 16 21.0**	**-1.3**
SAP3	**Santorini-Thir**	**1.83**	**318**	P		**Pb**	**20 16 21.2**	**-1.3**
SAP3	**Santorini-Thir**	**1.83**	**318**	P		**Pb**	**20 16 21.2**	**-1.3**
PRNS	**Prines Rethymn**	**1.95**	**279**	P		**Pb**	**20 16 25.5**	**+1.0**
BODT	**Bodrum**	**2.02**	**10**	P		**Pn**	**20 16 23.6**	**+1.5**
BODT	**Bodrum**	**2.02**	**10**	PN		**Pn**	**20 16 23.9**	**+1.8**
TURN	**Turunc**	**2.04**	**33**	*i* P		**Pb**	**20 16 25.4**	**-0.6**
TURN				*i* S		**Sb**	**20 16 49.3**	**-1.7**
TURN	**Turunc**	**2.04**	**33**	PN		**Pn**	**20 16 24.4**	**+2.0**
BDRM	**Kayabasi**	**2.05**	**13**	*i* P		**Pb**	**20 16 24.5**	**-1.7**
BDRM				*i* S		**Sn**	**20 16 45.0**	**-2.2**
YKAV	**Yalikavak-Bodr**	**2.08**	**9**	PN		**Pn**	**20 16 24.4**	**+1.5**
VAM	**Vamos**	**2.20**	**280**	P		**Pb**	**20 16 28.6**	**-0.1**
VAM				AML		AML	20 17 03.6	
	comp=E,9789µm,0.7s							
VAM				AML		AML	20 17 05.2	
	comp=N,10426µm,0.8s							
VAM	**Vamos**	**2.20**	**280**	P		**Pb**	**20 16 27.9**	**-0.8**
APE	**Apeiranthos**	**2.27**	**332**	P		**Pn**	**20 16 27.0**	**+1.4**
APE				AML		AML	20 16 56.3	
	comp=E,1990µm,0.8s							
APE				AML		AML	20 17 03.3	
	comp=N,3563µm,0.6s							
APE	**Apeiranthos**	**2.27**	**332**	P		**Pn**	**20 16 26.9**	**+1.4**
APE	**Apeiranthos**	**2.27**	**332**	PN		**Pn**	**20 16 26.5**	**+1.0**
APE	**Apeiranthos**	**2.27**	**332**	⇑P		**Pn**	**20 16 25.9**	**+0.4**
DALY	**Dalyan (Mula)**	**2.27**	**39**	*i* P		**Pn**	**20 16 27.9**	**+2.4**
DALY				*i* S		**Sn**	**20 16 52.3**	**-0.4**
DALY	**Dalyan (Mula)**	**2.27**	**39**	PN		**Pn**	**20 16 27.6**	**+2.1**
GVDS	**Gavdos**	**2.28**	**265**	P		**Pb**	**20 16 28.5**	**-1.6**
GVDS	**Gavdos**	**2.28**	**265**	PN		**Pn**	**20 16 27.6**	**+2.0**
GVD	**Gavdhos**	**2.28**	**265**	P		**Pb**	**20 16 28.3**	**-1.9**
GVD	**Gavdhos**	**2.28**	**265**	PN		**Pb**	**20 16 28.1**	**-2.1**
YER	**Yerkesik**	**2.36**	**29**	P		**Pn**	**20 16 29.1**	**+2.2**
YER	**Yerkesik**	**2.36**	**29**	P		**Pn**	**20 16 29.1**	**+2.2**
YER	**Yerkesik**	**2.36**	**29**	PN		**Pn**	**20 16 28.8**	**+1.9**
IMMV	**Iera Moni Meta**	**2.38**	**280**	P		**Pb**	**20 16 31.1**	**-0.8**
IMMV	**Iera Moni Meta**	**2.38**	**280**	P		**Pb**	**20 16 31.1**	**-0.8**
IMMV	**Iera Moni Meta**	**2.38**	**280**	PN		**Pb**	**20 16 29.5**	**-2.4**
FETY	**Fethiye**	**2.39**	**49**	PN		**Pn**	**20 16 27.6**	**+0.4**
DDIM	**Aydin, Didim**	**2.40**	**7**	*i* P		**Pb**	**20 16 30.4**	**-1.8**
KSL	**Kastellorizon**	**2.47**	**63**	P		**Pn**	**20 16 29.8**	**+1.6**
KSL	**Kastellorizon**	**2.47**	**63**	S		**Sn**	**20 16 57.4**	**-0.2**
MULA	**Mugla, Merkez-**	**2.48**	**28**	*i* P		**Pb**	**20 16 31.3**	**-2.3**
MULA				*i* S		**Sb**	**20 17 02.1**	**-1.8**
AKAS	**Kas**	**2.52**	**62**	*i* P		**Pn**	**20 16 29.5**	**+0.4**
AKAS				*i* S		**Sn**	**20 16 51.4**	**

ASGA Asgata 5.26 91 P **Pn** **20 17 05.7 -0.9**
KONT Konya--Tatoy 5.28 55 *i* P **Pn** **20 17 09.3 +2.3**
ANX Ano Chora 5.29 313 P **Pn** **20 17 09.7 +2.5**
CSS Mathiatis 5.32 89 **Pn** **20 17 06.9 -0.5**
CSS Mathiatis 5.32 89 ⇑P **Pn** **20 17 07.1 -0.3**
AGG Agios Georgios 5.35 319 P **Pn** **20 17 10.1 +2.2**
AGG Agios Georgios 5.35 319 P **Pn** **20 17 08.4 +0.5**
AGG Agios Georgios 5.35 319 Pn **Pn** **20 17 08.4 +0.5**
KKBE Karaman, Kazim 5.37 65 *i* P **Pn** **20 17 10.1 +1.8**
ULDT Uludag 5.38 19 *i* P **Pn** **20 17 10.2 +1.8**
MAKR Makrakomi, Fth 5.46 318 P **Pn** **20 17 11.4 +2.1**
PAIG Paliouri 5.47 333 P **Pn** **20 17 10.5 +1.1**
PAIG pmax pmax
comp=Z,35nm,0.8s
MVOU Mavrovouni 5.56 89 ⇑P **Pn** **20 17 10.5 -0.2**
GULN MERSIN_Gulnar 5.56 77 *i* P **Pn** **20 17 11.8 +1.0**
EVR Evrytania 5.57 315 P **Pn** **20 17 14.4 +3.4**
BORA Eskisehir 5.59 30 *i* P **Pn** **20 17 11.9 +0.6**
ALIN Konya, Altinte 5.81 55 *i* P **Pn** **20 17 16.2 +1.9**
ALN Alexandroupoli 5.85 354 P **Pn** **20 17 16.6 +1.9**
ALN Alexandroupoli 5.85 354 Pn **Pn** **20 17 16.6 +1.9**
PARAL Paralimni 5.90 89 P **Pn** **20 17 16.2 +0.9**
THL Klokotos Trika 5.92 321 P **Pn** **20 17 18.3 +2.7**
SWA2 5.93 192 P **Pn** **20 17 16.4 +0.6**
baz=194
LIT Litokhoron 6.10 327 P **Pn** **20 17 21.2 +3.0**
LIT Litokhoron 6.10 327 P **Pn** **20 17 21.2 +3.0**
LIT Litokhoron 6.10 327 **Pn** **20 17 21.2 +3.0**
HMYD Mayadein 6.23 147 P **Pn** **20 17 19.0 -0.9**
baz=146
KERG Konya-Eregli 6.32 66 *i* P **Pn** **20 17 22.9 +1.6**
MDUB Mudurnu 6.40 31 Pn **Pn** **20 17 23.4 +1.1**
SRS Serrai 6.56 338 P Pn 20 17 29.8 +5.3
SRS pmax pmax
comp=Z,30nm,1.3s
KOT Kottamia 6.63 139 S **Sn** **20 18 33.3 -6.9**
baz=139
KOT AMP 20 18 00.0
baz=139
RYAN Fayoum 6.64 153 AMP 20 18 00.0
baz=153
KIBS BOLU 6.65 35 *i* P **Pn** **20 17 28.3 +2.6**
BR231 Keskin MP Arra 6.70 43 Pn **Pn** **20 17 26.4 -0.1**
ANTO Ankara 6.73 43 P **Pn** **20 17 25.3 -1.5**
ANTO Ankara 6.73 43 Pn **Pn** **20 17 25.3 -1.5**
HSAF As Saff 6.73 143 P **Pn** **20 17 25.9 -1.0**
baz=142
IGT Igoumenitsa 6.84 313 P **Pn** **20 17 30.2 +1.8**
IGT pmax pmax
comp=Z,33nm,1.1s
VAY Valandovo 7.09 333 *i* Pn Pn 20 17 36.8 +5.0
BRTR Keskin Array B 7.12 47 Pn **Pn** **20 17 33.4 +1.0**
comp=Z,0.5nm,0.3s,baz=234,slow=15,SNR=14
BRTR Sn **Sn** **20 18 51.4 -1.1**
comp=Z,0.7nm,0.3s,baz=214,slow=12,SNR=5.4
BRTR LR LR 20 21 05.2
comp=Z,1μm,18.2s,baz=237,slow=44
BR131 Keskin Array S 7.12 47 P **Pn** **20 17 33.2 +0.9**
BR131 Keskin Array S 7.12 47 Pn **Pn** **20 17 33.2 +0.9**
FNA Florina 7.16 324 P **Pn** **20 17 34.9 +2.1**
FNA Florina 7.16 324 Pn **Pn** **20 17 34.9 +2.1**
PLD Plovdiv 7.22 347 P Pn 20 17 39.6 +6.1
PLD pmax pmax
comp=Z,64nm,0.8s
SUZ Suez 7.26 134 P **Pn** **20 17 33.7 -0.4**
baz=133
DQRL Deir Qamar 7.33 98 *e*P **Pn** **20 17 33.7 -1.5**
BHL Bhannes 7.36 97 *e*P **Pn** **20 17 39.4 +3.9**
MMAI Mount Meron Ar 7.38 104 Pn **Pn** **20 17 34.5 -1.4**
comp=Z,13nm,0.3s,baz=292,slow=11,SNR=44
MMAI Sn **Sn**
comp=Z,14nm,0.3s,baz=309,slow=22,SNR=4.3
QRWL Qaraoun 7.46 99 *e*P **Pn** **20 17 35.5 -1.4**
HWQ Hawqa 7.53 93 *e*P **Pn** **20 17 36.3 -1.6**
STIP Stip 7.56 332 *i* Pn **Pn** **20 17 41.1 +2.9**
RCY Rachaya 7.60 99 *e*P **Pn** **20 17 37.4 -1.5**
OHR Ohrid 7.69 323 *e*Pn **Pn** **20 17 42.7 +2.7**
VTS Vitosha 8.05 341 ⇑P **Pn** **20 17 48.8 +3.8**
VTS Vitosha 8.05 341 P **Pn** **20 17 47.4 +2.4**
VTS Vitosha 8.05 341 Pn **Pn** **20 17 47.4 +2.4**
ILGA Ilgaz 8.06 40 Pn **Pn** **20 17 46.4 +1.2**
SKO Skopje 8.09 330 *i* Pn Pn 20 17 52.6 +7.2
SCTE Santa Cesarea 8.32 309 **Pn** **20 17 47.8 -0.9**
PLVB Pleven 8.49 349 ⇑P **Pn** **20 17 53.6 +2.8**
GAZ Gaziantep 8.64 73 Pn **Pn** **20 17 53.6 +0.5**
EIL Elat 8.71 126 Pn **Pn** **20 17 53.4 -0.6**
comp=Z,1.9nm,0.3s,baz=291,slow=2.4,SNR=36
EIL Sn Sn 20 19 22.1 -9.2
comp=Z,2.7nm,0.3s,baz=347,slow=14,SNR=2.2
EIL LR LR 20 23 16.7
comp=Z,144nm,20.9s,baz=302,slow=50
TIP Timpagrande 9.04 300 Pn **Pn** **20 17 57.3 -1.3**
CEL Celeste 9.36 293 Pn **Pn** **20 18 01.1 -1.8**
PDG Podgorica 9.44 323 ⇓P **Pn** **20 18 06.0 +2.0**
PDG Podgorica 9.44 323 Pn **Pn** **20 18 01.8 -2.1**
TIRR Tirgusor 9.45 7 P **Pn** **20 18 05.5 +1.4**
TIRR Tirgusor 9.45 7 Pn **Pn** **20 18 05.5 +1.4**
TLBR Topalu 9.51 5 ⇑P **Pn** **20 18 08.2 +3.3**
CFR Carcaliu 10.14 5 ⇑P **Pn** **20 18 16.7 +3.1**
CFR Carcaliu 10.14 5 P **Pn** **20 18 16.6 +3.1**
RAFF Raffo Rosso 10.33 286 Pn **Pn** **20 18 15.9 -0.3**
VAE Valguarnera 10.33 287 Pn **Pn** **20 18 17.4 +1.2**
comp=Z,0.9nm,0.3s,baz=123,slow=8.2,SNR=2.7
VAE Sn **Sn** **20 20 04.5 -6.7**
baz=126,slow=20,SNR=0.7
MLR Muntele Rosu 10.43 356 Pn **Pn** **20 18 20.9 +3.2**
comp=Z,0.1nm,0.3s,baz=230,slow=9.4,SNR=4.1
MLR Muntele Rosu 10.43 356 ⇑P **Pn** **20 18 21.6 +3.9**
MLR Muntele Rosu 10.43 356 P **Pn** **20 18 18.9 +1.2**
MLR Muntele Rosu 10.43 356 **Pn** **20 18 18.9 +1.2**
VOIR 10.45 353 ⇓P **Pn** **20 18 21.9 +4.0**
VOIR 10.45 353 P **Pn** **20 18 21.8 +4.0**
DIVS Divibare 10.45 332 Pn **Pn** **20 18 17.7 -0.2**
MDVR Moldovita 10.47 339 ⇓P **Pn** **20 18 21.3 +3.2**
GZR Gura Zlata 10.77 344 ⇑P **Pn** **20 18 25.2 +3.0**
VRI Vrincioaia 10.79 360 ⇑P **Pn** **20 18 26.5 +4.1**
VRI Vrincioaia 10.79 360 P **Pn** **20 18 26.4 +4.1**
DOPR Dopca 10.94 355 ⇓P **Pn** **20 18 28.5 +4.0**
SGRT San Giovanni R 10.97 311 Pn **Pn** **20 18 22.5 -2.5**
OZUR 11.04 356 ⇓P **Pn** **20 18 29.2 +3.3**
CORL Corleone 11.27 288 Pn **Pn** **20 18 29.1 +0.1**
CLTB Caltabellotta 11.29 287 Pn **Pn** **20 18 30.2 +0.9**
PAOL Paolisi 11.37 305 Pn **Pn** **20 18 29.5 -0.9**
TESR Tescani 11.43 359 ⇓P **Pn** **20 18 34.4 +3.2**
MARD Mardin 11.47 75 **Pn** **20 18 30.4 -1.6**
KOPT Kop Dagi 11.90 61 Pn **Pn** **20 18 35.6 -2.3**
INTR Introdacqua 12.27 308 **Pn** **20 18 41.4 -1.4**
BURAR Bucovina Array 12.60 355 **Pn** **20 18 44.9 -2.3**
BUR08 Bucovina Ar. S 12.62 355 Pn **Pn** **20 18 50.7 +3.1**
AQU L'Aquila 12.77 309 P **Pn** **20 18 48.3 -1.2**
AQU L'Aquila 12.77 309 Pn **Pn** **20 18 48.3 -1.2**
NRCA Norcia 13.20 310 **Pn** **20 18 54.6 -0.8**
GEVA Gevas 13.40 71 Pn **Pn** **20 18 57.1 -1.2**
MURB Monte Urbino 13.79 311 **Pn** **20 19 02.2 -1.3**
PSZ Piszkesteto 13.85 340 P **Pn** **20 19 01.3 -3.0**
PSZ Piszkesteto 13.85 340 **Pn** **20 19 01.3 -3.0**
KEST Kesra 14.30 278 Pn **Pn** **20 19 10.4 -0.1**
comp=Z,0.1nm,0.3s,baz=27,slow=5.6,SNR=3.4
KEST Kesra 14.30 278 **Pn** **20 19 10.0 -0.5**
SOKA Soboth 14.62 326 *i* Pn **Pn** **20 19 17.2 +2.3**
comp=Z,4.7nm,0.7s,SNR=4.9
CASP Castiglione de 14.63 307 **P** **20 19 19.7 -1.3**
OSSC Osservatorio P 14.72 310 **Pn** **20 19 14.8 -1.4**
OBKA Obir 14.73 325 *e*Pn **Pn** **20 19 17.3 +1.1**
comp=Z,2.7nm,0.6s
GNI Garni 15.05 65 Pn **P** **20 19 24.4 -1.5**
comp=Z,0.5nm,0.3s,baz=333,slow=4.9,SNR=4.5
GNI Garni 15.05 65 P **Pn** **20 19 21.5 +0.8**
GNI pmax pmax
comp=Z,11nm,0.8s
GNI Garni 15.05 65 **Pn** **20 19 21.5 +0.8**
GNI IAmb IAmb 20 19 28.1
comp=Z,11nm,0.8s
KIV Kislovodsk 15.08 49 *i* P **P** **20 19 27.2 +1.1**
KIV pmax pmax
comp=Z,75nm,1.1s
KIV Kislovodsk 15.08 49 P **Pn** **20 19 23.0 +2.0**
KIV IAmb IAmb 20 19 33.0
comp=Z,20nm,0.9s
KVAR Kislovodsk Arr 15.09 49 Pn **P** **20 19 25.2 -1.0**
baz=269,slow=21,SNR=5.1
LANS Liptovska Anna 15.09 341 *e*P **P** **20 19 29.7 +3.6**
LANS Liptovska Anna 15.09 341 *e*P **P** **20 19 29.7 +3.6**

KBZ Khabaz 15.10 50 Pn **P** **20 19 25.1 -1.1**
comp=Z,0.4nm,0.3s,baz=193,slow=7.6,SNR=40
MYKA Terra Mystica 15.25 323 *e*Pn **P** **20 19 27.9 0.0**
comp=Z,1.7nm,0.5s
ZEI Tsey 15.33 55 *e*P **Pn** **20 19 25.7 +1.3**
ZEI pmax pmax
comp=Z,25nm,1.1s
JAVC Velka Javorina 15.36 337 *e*PN **P** **20 19 27.2 -1.9**
STAL STALIGIAL 15.47 321 P **Pn** **20 19 25.6 -0.4**
TEOL Teolo 15.47 316 P **Pn** **20 19 26.5 +0.4**
TEOL IAmb IAmb 20 19 37.4
comp=Z,22nm,0.7s
ZOU Zoufplan 15.53 322 Pn **Pn** **20 19 26.5 -0.6**
KBA Koelnbreinsper 15.71 324 *e*Pn **Pn** **20 19 28.8 -0.5**
comp=Z,4.4nm,0.5s
KBA Koelnbreinsper 15.71 324 P **P** **20 19 31.6 -1.5**
KBA pmax pmax
comp=Z,9.0nm,1.4s
KIEV Kiev 15.71 6 P **P** **20 19 33.0 +0.1**
AKASG Malin Array Be 15.72 6 Pn **P** **20 19 32.4 -0.6**
comp=Z,3.7nm,0.3s,baz=194,slow=11,SNR=12
AKASG Malin Array Be 15.72 6 P **Pn** **20 19 29.8 +0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 15.72 6 **Pn** **20 19 29.8 +0.6**
AKBB Malin Array Si 15.72 6 P **Pn** **20 19 29.8 +0.6**
AKBB pmax pmax
comp=Z,10.0nm,0.9s
AKBB Malin Array Si 15.72 6 **Pn** **20 19 29.8 +0.6**
MOA Molln 15.85 327 *e*Pn **P** **20 19 34.6 +0.1**
comp=Z,2.1nm,0.5s
GOF Gofitskoye 15.88 46⇑ *e*P **P** **20 19 36.1 +1.2**
GOF pmax pmax
comp=Z,46nm,1.4s
ABTA Abfaltersbach 15.90 322 *e*Pn **Pn** **20 19 31.6 -0.1**
comp=Z,5.9nm,0.6s
CTI Castel Tesino 15.90 318 P **Pn** **20 19 29.5 -2.2**
CTI pmax pmax
comp=Z,12nm,0.7s
CTI Castel Tesino 15.90 318 Pn **Pn** **20 19 29.5 -2.2**
CTI IAmb IAmb 20 19 37.4
comp=Z,12nm,0.7s
KRUC Moravsky 15.97 334 *e*PN **P** **20 19 34.1 -1.7**
KRUC Moravsky 15.97 334 P **P** **20 19 34.5 -1.3**
KRUC pmax pmax
comp=Z,8.0nm,1.1s
OJC Ojcow 15.99 343 P **Pn** **20 19 31.5 -1.3**
OJC pmax pmax
comp=Z,9.0nm,1.1s
OJC Ojcow 15.99 343 Pn **Pn** **20 19 31.4 -1.3**
VRAC Vranov 16.11 335 Pn **P** **20 19 37.3 -0.1**
baz=125,slow=9.0,SNR=8.1
VRAC Vranov 16.11 335 *e*PN **P** **20 19 36.0 -1.4**
MSSA Maissana 16.20 310 Pn **Pn** **20 19 35.2 -0.3**
MSSA IAmb IAmb 20 19 37.1
comp=Z,25nm,0.9s
MORC Moravsky Berou 16.21 338 *e*PN **Pn** **20 19 35.1 -0.4**
MORC Moravsky Berou 16.21 338 P **Pn** **20 19 34.9 -0.6**
MORC pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 16.21 338 Pn **Pn** **20 19 34.9 -0.6**
SALO Salr 16.28 315 Pn **Pn** **20 19 34.3 -2.1**
CKRC Cesky Krumlov 16.58 330 *e*P **P** **20 19 42.8 +0.2**
WTTA Wattenberg 16.69 321 *i* Pn **P** **20 19 45.0 +1.0**
comp=Z,4.8nm,0.5s
WTTA Wattenberg 16.69 321 P **P** **20 19 42.8 -1.2**
WTTA pmax pmax
comp=Z,12nm,1.3s
KRLC Kraliky 16.71 337 *e*P **P** **20 19 43.8 -0.2**
KRLC Kraliky 16.71 337 *e*P **P** **20 19 43.8 -0.2**
WATA Walderalm 16.77 322 *e*Pn **P** **20 19 45.6 +0.8**
comp=Z,5.0nm,0.5s
GROC Groznyy 16.77 55 *e*P **Pn** **20 19 43.6 +1.0**
GEC2 GERESS Array S 16.85 329 Pn **Pn** **20 19 43.3 -0.5**
GERES GERESS Array B 16.85 329 Pn **Pn** **20 19 43.2 -0.5**
comp=Z,0.4nm,0.3s,baz=142,slow=12,SNR=37
GERES GERESS Array B 16.85 329 P **Pn** **20 19 42.7 -1.0**
SQTA Sankt Quirin 16.88 321 *e*Pn **P** **20 19 47.0 +0.9**
comp=Z,7.5nm,0.5s,SNR=4.8
FETA Feichten 17.00 319 *i* Pn **P** **20 19 47.1 -0.3**
comp=Z,8.7nm,0.8s,SNR=8.3
MOTA Moosalm 17.02 321 *i* Pn **P** **20 19 46.7 -0.9**
comp=Z,4.1nm,0.7s
DPC Dobruska-Polom 17.09 337 *e*P **Pn** **20 19 47.4 +0.7**
DPC Dobruska-Polom 17.09 337 *e*P **Pn** **20 19 47.4 +0.7**
DPC *e*pP **sP** **20 19 57.8 -0.2**
KHC Kasperske Hory 17.12 329 *e*P **Pn** **20 19 47.0 -0.1**
KHC Kasperske Hory 17.12 329 *e*P **Pn** **20 19 47.0 -0.1**
KHC Kasperske Hory 17.12 329 Pn **Pn** **20 19 45.5 -1.6**
RETA Reutte 17.28 321 *i* Pn **P** **20 19 50.6 +0.2**
comp=Z,3.5nm,0.4s
OSTC Ostas 17.31 337 *e*P **P** **20 19 51.2 +0.6**
DAVOX Davos/Dischmat 17.32 318 P **P** **20 19 51.5 +0.5**
comp=Z,0.8nm,0.3s,baz=193,slow=11,SNR=7.1
CHVC Chvalec 17.39 336 *e*P P 20 20 01.0 +10
PBCC Pribram 17.39 331 *e*P **P** **20 19 51.0 -0.5**
PRU Pruhonice 17.42 333 *e*P **P** **20 19 51.4 -0.4**
PRU Pruhonice 17.42 333 *e*P **P** **20 19 51.4 -0.4**
PRU *ex* x 20 19 55.8
WET Wettzell 17.43 328 P **Pn** **20 19 50.8 -0.1**
WET pmax pmax
comp=Z,8.0nm,0.8s
TUE Stuetta 17.44 316 Pn **Pn** **20 19 50.3 -0.9**
TUE IAmb IAmb 20 19 57.9
comp=Z,21nm,1.1s
PRA Prague 17.52 333 *e*P **P** **20 19 53.0 0.0**
PRA Prague 17.52 333 *e*P **P** **20 19 53.0 0.0**
KSP Ksiaz 17.53 337 P **Pn** **20 19 52.0 -0.1**
KSP pmax pmax
comp=Z,6.0nm,1.2s
DAVA Damuels 17.62 319 *i* Pn **P** **20 19 54.1 -0.2**
comp=Z,9.3nm,0.7s,SNR=6.7
FRF La Foret Royal 17.76 305 *e*P **Pn** **20 19 54.9 -0.1**
FRF pmax pmax
comp=Z,30nm,1.2s
LMR La Mourre 17.77 304 *e*P **Pn** **20 19 54.8 -0.3**
LMR pmax pmax
comp=Z,14nm,0.9s
PVCC Panska Ves 17.85 334 P **P** **20 19 56.6 0.0**
PVCC pmax pmax
comp=Z,7.0nm,0.9s
MBDF Montbardon 18.14 308 *e*P **Pn** **20 19 57.8 -2.0**
MBDF pmax pmax
comp=Z,20nm,0.8s
BNI Bardonecchia 18.34 309 P **P** **20 19 59.1 -3.1**
BNI pmax pmax
comp=Z,10.0nm,0.9s
BNI Bardonecchia 18.34 309 P **P** **20 19 59.1 -3.1**
BRG Berggiesshubel 18.36 333 P **P** **20 20 02.1 -0.1**
BRG pmax pmax
comp=Z,10.0nm,0.9s
BRG Berggiesshubel 18.36 333 *e*P **P** **20 20 01.9 -0.3**
BRG Amp 20 20 03.2
comp=Z,6.8nm,0.9s
VSR Storozhevoye 18.43 25 *e*P **P** **20 20 02.8 -0.1**
VSR pmax pmax
comp=Z,7.0nm,0.5s
NKC Novy Kostel 18.44 330 *e*P **Pn** **20 20 03.3 0.0**
NKC Novy Kostel 18.44 330 *e*P **Pn** **20 20 03.3 0.0**
LPG La Plagne 18.49 310 *e*P **Pn** **20 20 04.2 -0.1**
LPG pmax pmax
comp=Z,19nm,0.7s
LPL La Plagne 18.51 310 *e*P **P** **20 20 03.5 -0.7**
LPL pmax pmax
comp=Z,9.0nm,0.7s
GRA1 Grafenberg Arr 18.57 327 P **P** **20 20 03.4 -1.1**
GRA1 IAmb IAmb 20 20 09.4
comp=Z,16nm,1.0s
GRF Grafenberg Arr 18.57 327 P **P** **20 20 03.4 -1.1**
GRF pmax pmax
comp=Z,16nm,1.0s
GRFO Grafenberg 18.57 327 P **P** **20 20 03.7 -0.8**
GRFO pmax pmax
comp=Z,14nm,0.9s
GRFO Grafenberg 18.57 327 P **P** **20 20 03.7 -0.8**
SENIN Lac Senin/Sane 18.57 313 P **P** **20 20 03.9 -0.9**
SENIN IAmb IAmb 20 20 08.2
comp=Z,14nm,0.7s
SLE Schleitheim 18.66 318 P **P** **20 20 04.4 -1.2**
SLE pmax pmax
comp=Z,8.0nm,0.6s
ORIF Oris-en-Rattie 18.80 308 *e*P **Pn** **20 20 07.7 0.0**
ORIF pmax pmax
comp=Z,7.0nm,0.7s

CLL Collm 19.06 333 *i* P **P** **20 20 09.6 -0.3**
comp=Z,9.0nm,0.7s
CLL *e*(pPP) 20 20 27.0
CLL Collm 19.06 333 *i* P **P** **20 20 09.6 -0.3**
CLL pmax pmax
comp=Z,9.0nm,0.7s
CLL Collm 19.06 333 P **P** **20 20 08.4 -1.5**
BFO Black Forest 19.09 320 P **P** **20 20 09.6 -0.7**
BFO pmax pmax
comp=Z,8.0nm,0.9s
BFO Black Forest 19.09 320 P **P** **20 20 09.6 -0.7**
MOX Moxa 19.10 329 P **P** **20 20 10.4 +0.1**
MOX pmax pmax
comp=Z,9.0nm,0.9s
SUW Suwalki 19.12 353 P **P** **20 20 09.3 -1.1**
SUW pmax pmax
comp=Z,50nm,1.2s
SUW Suwalki 19.12 353 P **P** **20 20 09.3 -1.1**
VRH Novokhopyorsk 19.37 29 *e*P **P** **20 20 13.5 +0.2**
VRH pmax pmax
comp=Z,40nm,0.6s
CABF La Chapelle 19.43 313 *e*P **P** **20 20 12.6 -1.4**
CABF pmax pmax
comp=Z,19nm,0.7s
LPSR Galich'ya Gora 19.52 22 *e*P **P** **20 20 14.4 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,1.6s
VIVF Saint-Julien-l 19.56 307 *e*P **P** **20 20 14.6 -0.8**
VIVF pmax pmax
comp=Z,21nm,1.0s
ECH Echery 19.66 318 P **P** **20 20 15.7 -0.7**
ECH pmax pmax
comp=Z,9.0nm,1.2s
ECH Echery 19.66 318 P **P** **20 20 15.7 -0.7**
SSB Saint Sauveur 19.81 308 P **P** **20 20 16.7 -1.5**
SSB pmax pmax
comp=Z,12nm,0.8s
SSB Saint Sauveur 19.81 308 P **P** **20 20 16.7 -1.5**
SSB IAmb IAmb 20 20 18.6
comp=Z,12nm,0.8s
RAYN Ar Rayn 19.89 120 P **P** **20 20 19.8 +0.6**
RAYN pmax pmax
comp=Z,19nm,1.4s
RAYN Ar Rayn 19.89 120 **P** **20 20 19.8 +0.6**
RAYN IAmb IAmb 20 20 33.8
comp=Z,19nm,1.4s
HAU Haudompre 19.99 317 *e*P **P** **20 20 19.6 -0.5**
HAU pmax pmax
comp=Z,10.0nm,0.8s
TNS Taunus Mts 20.23 324 P **P** **20 20 22.2 -0.5**
TNS pmax pmax
comp=Z,14nm,0.6s
WLF Walferdange 21.04 320 P **P** **20 20 30.4 -1.0**
WLF pmax pmax
comp=Z,16nm,1.1s
WLF Walferdange 21.04 320 P **P** **20 20 30.4 -1.0**
WLF IAmb IAmb 20 20 57.8
comp=Z,16nm,1.1s
OBN Obninsk 21.15 16 LR LR 20 29 17.4
comp=Z,48nm,19.9s,baz=74,slow=38
OBN Obninsk 21.15 16 *e*P **P** **20 20 28.7 -3.8**
OBN pmax pmax
comp=Z,3.0nm,0.8s
AVF Avril sur Loir 21.18 311 *e*P **P** **20 20 31.7 -1.3**
AVF pmax pmax
comp=Z,30nm,0.8s
MEM Membach 21.68 322 P **P** **20 20 38.3 0.0**
MEM pmax pmax
comp=Z,24nm,0.9s
RJF Les Rejaudoux 21.81 306 *e*P **P** **20 20 38.6 -1.1**
RJF pmax pmax
comp=Z,19nm,0.7s
GIVF Givet 21.99 320 *e*P **P** **20 20 40.6 -1.0**
GIVF pmax pmax
comp=Z,18nm,0.9s
TAM Tamanrasset 22.27 242 P **P** **20 20 45.9 +0.9**
TAM pmax pmax
comp=Z,11nm,1.0s
TAM Tamanrasset 22.27 242 P **P** **20 20 45.9 +0.9**
TAM IAmb IAmb 20 20 49.1
comp=Z,11nm,1.0s
BAIF Baives 22.30 319 *e*P **P** **20 20 43.2 -1.7**
BAIF pmax pmax
comp=Z,32nm,1.0s
BLEU Blekinge 22.54 344 *e*P **P** **20 20 44.8 -2.6**
DEL Delary 23.16 342 *i* P **P** **20 20 52.0 -1.9**
FLN La Foliniere 24.36 313 *e*P **P** **20 21 04.2 -1.2**
FLN pmax pmax
comp=Z,24nm,0.9s
GRR Gorron 24.44 311 *e*P **P** **20 21 04.3 -1.8**
GRR pmax pmax
comp=Z,18nm,0.8s
ESBB Sonseca Array 24.85 290 P **P** **20 21 09.7 -0.3**
ESBB IAmb IAmb 20 21 11.9
comp=Z,11nm,0.9s
ESDC Sonseca Array 24.85 290 P **P** **20 21 09.8 -0.2**
comp=Z,7.4nm,0.6s,baz=81,slow=9.5,SNR=88
ESDC Sonseca Array 24.85 290 P **P** **20 21 09.2 -0.9**
PAB San Pablo 25.15 290 P **P** **20 21 12.0 -0.8**
PAB pmax pmax
comp=Z,8.0nm,0.9s
PAB San Pablo 25.15 290 P **P** **20 21 12.0 -0.8**
PAB IAmb IAmb 20 21 14.9
comp=Z,7.9nm,0.8s
GEYT Alibeck 25.23 74 P **P** **20 21 14.8 +1.2**
comp=Z,6.0nm,0.6s,baz=296,slow=8.1,SNR=10
GEYT Alibeck 25.23 74 P **P** **20 21 14.6 +1.1**
GYA0B ALIBECK ARRAY 25.23 74 P **P** **20 21 14.1 +0.5**
QUIF Quistinic 25.71 309 *e*P **P** **20 21 17.7 0.0**
QUIF pmax pmax
comp=Z,21nm,0.8s
ROSF Rostrenen 25.92 310 *e*P **P** **20 21 15.9 -3.7**
ROSF pmax pmax
comp=Z,119nm,1.6s
MDT Midelt 26.14 274 P **P** **20 21 21.4 -0.5**
comp=Z,5.6nm,1.0s,baz=38,slow=4.2,SNR=6.0
FINES FINESS Array B 26.40 359 P **P** **20 21 22.1 -1.6**
comp=Z,1.6nm,0.5s,baz=161,slow=12,SNR=11
FINES FINESS Array B 26.40 359 P **P** **20 21 21.4 -2.3**
HFS Hagfors 26.50 345 P **P** **20 21 23.0 -1.7**
comp=Z,8.8nm,0.7s,baz=123,slow=11,SNR=10
HFS Hagfors 26.50 345 P **P** **20 21 23.0 -1.7**
PBRG Braganca 27.04 295 *e*P **P** **20 21 29.6 -0.2**
comp=Z,25nm,1.3s
KLMR Klimovskoe 27.06 14 *e*P **P** **20 21 27.9 -1.8**
KLMR pmax pmax
comp=Z,18nm,1.5s
KLMR Klimovskoe 27.06 14 *e* **P** **20 21 27.9 -1.8**
KLMR AMP 20 21 39.8
comp=Z,18nm,1.5s
MVO Moncorvo 27.23 293 *e*P **P** **20 21 31.5 -0.1**
comp=Z,28nm,1.8s
UOSS Minazif 27.26 104 P **P** **20 21 32.4 +0.6**
UOSS IAmb IAmb 20 21 49.5
comp=Z,7.8nm,0.8s
PBAR Barrancos 27.29 287 *e*P **P** **20 21 31.8 -0.3**
comp=Z,22nm,1.4s
AKTO Aktyubinsk 27.30 46 P **P** **20 21 32.2 +0.2**
comp=Z,6.3nm,0.7s,baz=257,slow=8.3,SNR=20
PMRV Marv??o 27.50 289 *e*P **P** **20 21 33.3 -0.7**
NORES NORESS Array B 27.51 344 P **P** **20 21 35.7 +1.9**
PCBR Castelo Branco 27.56 290 *e*P **P** **20 21 36.3 +1.9**
comp=Z,18nm,1.6s
MTE Manteigas 27.61 291 *e*P **P** **20 21 35.8 +0.8**
MTE Manteigas 27.61 291 P **P** **20 21 35.5 +0.6**
MTE IAmb IAmb 20 21 37.4
comp=Z,8.5nm,0.8s
PESTR Estremoz 27.68 288 *e*P **P** **20 21 34.9 -0.7**
comp=Z,15nm,1.2s
PESTR Estremoz 27.68 288 P **P** **20 21 34.6 -1.0**
PESTR IAmb IAmb 20 21 38.3
comp=Z,4.3nm,0.8s
PVRL Vila Real 27.75 293 *e*P **P** **20 21 36.1 -0.1**
NAO01 NORSAR Array S 27.76 343 P **P** **20 21 35.0 -1.0**
POLO Lamas de Olo 27.81 293 *e*P **P** **20 21 36.6 -0.2**
comp=Z,12nm,1.6s
NOA NORSAR Array B 27.86 344 P **P** **20 21 35.1 -1.9**
comp=Z,0.3nm,0.5s,baz=95,slow=6.6,SNR=5.3
PVIS Viseu 27.88 292 *e*P **P** **20 21 37.9 +0.6**
PVAQ Vaqueiros 27.89 285 *e*P **P** **20 21 36.9 -0.5**
comp=Z,27nm,1.1s
PVAQ Vaqueiros 27.89 285 P **P** **20 21 36.7 -0.7**
ABKAR Akbulak array 28.07 49 P **P** **20 21 39.0 +0.2**
ABKAR IAmb IAmb 20 22 01.9
comp=Z,7.6nm,1.1s

ABKAR **Akbulak array** 28.07 49 P **P** 20 21 38.8 -0.1
PBDV **Barranco-do-Ve** 28.08 285 *e*P **P** 20 21 39.0 -0.1
comp=Z,35nm,1.6s
PMTG **Montargil** 28.17 289 *e*P **P** 20 21 40.9 +1.0
MESJ **Messejana** 28.25 286 *e*P **P** 20 21 40.5 -0.1
EKA **Eskdalemuir Ar** 28.93 324 P **P** 20 21 45.3 -1.2
comp=Z,1.7nm,0.4s,baz=125,slow=11,SNR=30
ARU **Arti** 30.31 35 P **P** 20 21 58.3 -0.4
comp=Z,0.5nm,0.3s,baz=271,slow=14,SNR=4.6
TOA0 **Torodi Ar. Sit** 31.51 232 P **P** 20 22 10.1 +0.4
TORD **Torodi Ar. Bea** 31.51 232 P **P** 20 22 10.2 +0.5
comp=Z,13nm,0.9s,baz=35,slow=9.4,SNR=44
TORD **Torodi Ar. Bea** 31.51 232 P **P** 20 22 09.7 0.0
TORD IAmb IAmb 20 22 10.9
comp=Z,6.6nm,0.8s
KOWA **Kowa** 34.49 241 P **P** 20 22 35.7 0.0
comp=Z,3.0nm,0.7s,baz=33,slow=8.0,SNR=9.3
KOWA **Kowa** 34.49 241 P **P** 20 22 35.4 -0.4
KOWA IAmb IAmb 20 22 36.8
comp=Z,5.3nm,0.9s
KK31 **Karatay Array** 34.50 63 P **P** 20 22 36.6 +1.0
KK31 pmax pmax
comp=Z,11nm,0.9s
KK31 **Karatay Array** 34.50 63 P **P** 20 22 36.6 +1.0
KKAR **Karatay Array** 34.50 63 P **P** 20 22 36.9 +1.3
KKAR pmax pmax
comp=Z,11nm,0.9s
KKAR **Karatay Array** 34.50 63 P **P** 20 22 36.9 +1.3
KKAR **Karatay Array** 34.50 63 P **P** 20 22 36.2 +0.6
ARCES **ARCESS Array B** 34.53 359 P **P** 20 22 34.0 -1.5
comp=Z,1.5nm,0.6s,baz=174,slow=8.3,SNR=16
ARCES **ARCESS Array B** 34.53 359 P **P** 20 22 34.0 -1.5
ARCES **ARCESS Array B** 34.53 359 P **P** 20 22 33.9 -1.5
ARCES IAmb IAmb 20 22 51.5
comp=Z,12nm,1.5s
BRVK **Borovoye** 35.35 46 P **P** 20 22 43.9 +1.1
BRVK pmax pmax
comp=Z,10.0nm,1.3s
BRVK **Borovoye** 35.35 46 P **P** 20 22 43.9 +1.1
BRVK IAmb IAmb 20 22 44.6
comp=Z,10nm,1.2s
BVAR **Borovoye Array** 35.41 46 P **P** 20 22 43.9 +0.6
comp=Z,3.9nm,0.8s,baz=193,slow=5.8,SNR=24
EKS2 **Erkin-Say** 36.92 64 P **P** 20 22 58.4 +1.9
SNR=9.1
USP **Ospenovka** 37.41 63 P **P** 20 23 01.5 +1.0
SNR=6.3
AAK **Ala-Archa** 37.45 64 P **P** 20 23 02.9 +1.9
comp=Z,10nm,0.7s,baz=251,slow=6.4,SNR=37
AAK **Ala-Archa** 37.45 64 P **P** 20 23 02.4 +1.4
SNR=11
AAK **Ala-Archa** 37.45 64 P **P** 20 23 02.5 +1.5
CHMS **Chumysh** 37.61 63 P **P** 20 23 04.0 +1.7
SNR=8.2
KBK **Karagaybulak** 37.78 64 P **P** 20 23 06.1 +2.2
SNR=7.0
NIL **Nilore** 38.06 78 P **P** 20 23 07.5 +1.4
NIL pmax pmax
comp=Z,9.0nm,0.7s
NIL **Nilore** 38.06 78 P **P** 20 23 07.5 +1.4
KURBB **Kurchatov Arra** 40.10 51 P **P** 20 23 23.9 +1.0
comp=Z,20nm,0.6s,baz=277,slow=8.9,SNR=156
KURK **Kurchatov** 40.16 51 P **P** 20 23 23.9 +0.5
KURK **Kurchatov** 40.16 51 P **P** 20 23 23.9 +0.5
DBIC **Dimbokro** 40.61 233 P **P** 20 23 27.2 -0.2
comp=Z,3.8nm,0.7s,baz=33,slow=7.5,SNR=5.1
DBIC **Dimbokro** 40.61 233 P **P** 20 23 26.9 -0.6
DBIC IAmb IAmb 20 23 28.7
comp=Z,15nm,1.4s
MAKZ **Makanchi** 42.45 57 P **P** 20 23 43.3 +1.0
MAKZ pmax pmax
comp=Z,8.0nm,0.7s
MAKZ **Makanchi** 42.45 57 P **P** 20 23 43.3 +1.0
MAKZ IAmb IAmb 20 23 44.2
comp=Z,7.7nm,0.7s
MK31 **Makanchi Array** 42.66 57 P **P** 20 23 45.1 +1.0
MK31 pmax pmax
comp=Z,13nm,0.7s
MK31 **Makanchi Array** 42.66 57 P **P** 20 23 45.1 +1.0
MKAR **Makanchi Array** 42.66 57 P **P** 20 23 45.1 +1.1
comp=Z,15nm,0.7s,baz=281,slow=6.5,SNR=131
MKAR **Makanchi Array** 42.66 57 P **P** 20 23 44.9 +0.8
MKAR **Makanchi Array** 42.66 57 P **P** 20 23 44.9 +0.8
ZAA0 **Zalesovo Array** 44.06 46 P **P** 20 23 55.5 +0.3
ZALV **Zalesovo Beam** 44.06 46 P **P** 20 23 55.6 +0.4
comp=Z,21nm,0.5s,baz=259,slow=2,SNR=113
ZALV **Zalesovo Beam** 44.06 46 P **P** 20 23 55.2 0.0
NRIK **Noril'sk** 47.38 25 P **P** 20 24 22.2 +1.1
comp=Z,3.7nm,0.6s,baz=231,slow=6.2,SNR=4.1
NRIK **Noril'sk** 47.38 25 P **P** 20 24 21.8 +0.7
NRIK IAmb IAmb 20 24 22.7
comp=Z,4.2nm,0.7s
PYUN **Piuthan** 47.79 82 *e*P **P** 20 24 26.4 +1.2
comp=Z,30nm,0.7s
KOLN **Koldanda** 48.42 82 *e*P **P** 20 24 30.8 +0.7
comp=Z,12nm,0.7s
GKN **Gorkha** 49.17 81 *e*P **P** 20 24 36.3 +0.5
comp=Z,20nm,0.8s
SUMG **Summit** 49.56 339 *i* P **P** 20 24 37.9 -0.5
SUMG IAmb IAmb 20 24 41.0
comp=Z,3.5nm,0.7s
SUMG **Summit** 49.56 339 *i* P **P** 20 24 37.9 -0.5
SUMG pmax pmax
comp=Z,4.0nm,0.7s
KKN **Kakani** 49.77 81 *e*P **P** 20 24 40.9 +0.4
comp=Z,160nm,1.8s
PKIN **Phulchoki** 49.96 82 *e*P **P** 20 24 42.4 +0.5
comp=Z,17nm,0.9s
PKI **Pulchoki** 49.97 82 *e*P **P** 20 24 42.5 +0.4
GUN **Gumba** 50.21 81 *e*P **P** 20 24 44.4 +0.5
comp=Z,30nm,1.1s
JIRN **Jiri** 50.56 81 *e*P **P** 20 24 47.2 +0.6
comp=Z,17nm,0.9s
RAMN **Ramite** 51.19 82 *e*P **P** 20 24 51.3 +0.1
comp=Z,12nm,0.8s
DY2G **Dye2** 51.72 331 *i* P **P** 20 24 54.4 -0.2
DY2G IAmb IAmb 20 24 55.0
comp=Z,13nm,0.7s
ODAN **Odare** 51.87 81 *e*P **P** 20 24 56.9 +0.6
comp=Z,9.1nm,0.8s
TAPN **Taplejung** 51.92 81 *e*P **P** 20 24 57.1 +0.4
comp=Z,6.4nm,0.5s
LSA **Lhasa** 53.74 76 P **P** 20 25 11.0 +0.7
LSA pmax pmax
comp=Z,3.0nm,0.7s
LSA **Lhasa** 53.74 76 P **P** 20 25 11.0 +0.7
LSA IAmb IAmb 20 25 12.2
comp=Z,3.0nm,0.7s
MOY **Mondy** 54.05 48 *e*P **P** 20 25 13.6 +1.8
ZAK **Zakamensk** 55.76 49 *e*P **P** 20 25 24.9 +0.7
ZAK pmax pmax
comp=Z,5.0nm,1.0s
GTA **Gaotai** 56.78 62 *e*P **P** 20 25 32.9 +1.2
GTA pP pP 20 25 37.3 -1.7
GTA sP pwP 20 25 40.5 -1.3
GTA pmax pmax
comp=Z,4.0nm,1.0s
SONM **Songino Array** 58.47 51 P **P** 20 25 44.8 +1.4
comp=Z,2.9nm,0.6s,baz=286,slow=7.8,SNR=36
SONM **Songino Array** 58.47 51 P **P** 20 25 44.5 +1.0
SONM IAmb IAmb 20 25 45.5
comp=Z,2.6nm,0.7s
BOD **Bodaibo** 59.67 38 *e*P **P** 20 25 50.9 -0.5
BOD pmax pmax
comp=Z,7.0nm,2.3s
FRB **Frobisher Bay** 61.45 330 P **P** 20 26 03.6 +0.2
FRB pmax pmax
comp=Z,6.0nm,0.9s
BOSA **Boshof** 63.36 182 P **P** 20 26 18.0 +1.3
comp=Z,2.3nm,0.8s,baz=151,slow=19,SNR=1.5
BOSA **Boshof** 63.36 182 P **P** 20 26 17.6 +0.9
CMAR **Chiang Mai Arr** 65.20 84 P **P** 20 26 29.2 +0.1
comp=Z,2.2nm,0.7s,baz=297,slow=8.0,SNR=26
XAN **Xi'an** 65.62 65 P **P** 20 26 32.5 +0.9
XAN pmax pmax
comp=Z,8.0nm,0.9s
XAN LR LR
comp=N,200nm,19.5s
XAN LR LR
comp=E,310nm,18.4s
XAN LR LR
comp=Z,520nm,20.6s
USRK **Ussuriysk Ar.** 75.92 46 P **P** 20 27 34.3 +0.3
comp=Z,4.0nm,0.6s,baz=289,slow=5.6,SNR=21
KSRS **Korea Array** 77.23 53 P **P** 20 27 42.2 +0.7
comp=Z,1.4nm,0.6s,baz=313,slow=4.6,SNR=6.8

YKA **Yellowknife Ar** 77.95 343 P **P** 20 27 44.2 -0.9
comp=Z,1.1nm,0.6s,baz=36,slow=5.5,SNR=22
ILAR **Eielson Array** 80.37 357 P **P** 20 27 57.6 -0.7
comp=Z,0.3nm,0.6s,baz=343,slow=3.5,SNR=6.0
ILAR **Eielson Array** 80.37 357 P **P** 20 27 57.8 -0.5
ILAR **Eielson Array** 80.37 357 P **P** 20 27 57.8 -0.5
ULM **Lac du Bonnet** 81.15 327 P **P** 20 28 02.0 -0.7
comp=Z,4.3nm,0.5s,baz=37,slow=5.0,SNR=13
ULM **Lac du Bonnet** 81.15 327 P **P** 20 28 01.9 -0.8
MJAR **Matsushiro Arr** 84.34 49 P **P** 20 28 20.0 +0.4
comp=Z,1.8nm,0.7s,baz=284,slow=5.6,SNR=3.8
BDFB **Brasilia** 86.96 249 P **P** 20 28 32.8 -0.1
comp=Z,3.6nm,0.8s,baz=348,slow=4.2,SNR=4.1
PDAR **Pinedale Array** 92.90 329 P **P** 20 28 59.7 -0.9
comp=Z,0.5nm,0.7s,baz=81,slow=9.2,SNR=4.0

WEL 16 20:22:27.9,46°S±3°×16°7E±°, h53km±3km, M3.4/8, ML3.6/8, MLv3.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=46.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.08**	**32**	P	Pn	20 22 36.6	+0.6
DCZ				S	Sn	20 22 42.9	+1.2
PYZ	**Puysegur Point**	**0.69**	**204**	P	Pn	20 22 43.3	+1.6
WHZ	**Wether Hill Ro**	**0.70**	**121**	P	Pn	20 22 42.9	+1.2
WHZ				S	Sn	20 22 54.0	+2.1
MLZ	**Mavora Lakes**	**0.74**	**77**	P	Pn	20 22 42.9	+0.5
MLZ				S	Sn	20 22 53.9	+1.0
MSZ	**Milford Sound**	**1.04**	**35**	P	Pn	20 22 46.3	0.0
MSZ				S	Sn	20 22 59.8	-0.1
APZ	**The Paps**	**1.44**	**155**	P	Pn	20 22 53.2	+1.5
APZ				S	Sn	20 23 11.2	+1.7
WKZ	**Wanaka**	**1.54**	**63**	P	Pn	20 22 53.5	+0.6
WKZ				S	Sn	20 23 12.1	+0.3
EAZ	**Earnscleugh**	**1.59**	**80**	P	Pn	20 22 54.4	+0.7
EAZ				S	Sn	20 23 13.0	-0.2
SYZ	**Scrubby Hill**	**1.74**	**126**	P	Pn	20 22 56.6	+0.9
SYZ				S	Sn	20 23 18.1	+1.2
TUZ	**Tuapeka**	**1.83**	**104**	P	Pn	20 22 57.6	+0.7
TUZ				S	Sn	20 23 18.9	0.0
JCZ	**Jackson Bay**	**1.90**	**40**	P	Pn	20 22 58.0	0.0
LBZ	**Lake Benmore**	**2.48**	**63**	P	Pn	20 23 04.9	-1.0
LBZ				S	Sn	20 23 32.8	-2.1
HHSZ	**Highcliff Hill**	**2.48**	**99**	P	Pn	20 23 06.4	+0.5
HHSZ				S	Sn	20 23 33.2	-1.8
ODZ	**Otahua Downs**	**2.56**	**80**	P	Pn	20 23 06.3	-0.6
FOZ	**Fox Glacier**	**2.79**	**45**	P	Pn	20 23 08.8	-1.3
TMZ	**Timaru**	**3.01**	**69**	P	Pn	20 23 11.6	-1.5
GCSZ	**Gaunt Creek Bo**	**3.21**	**47**	P	Pn	20 23 13.9	-2.0
ARCZ	**Arundel**	**3.32**	**63**	P	Pn	20 23 15.3	-2.0
RPZ	**Rata Peaks**	**3.36**	**59**	P	Pn	20 23 16.1	-1.9
WVZ	**Waitaha Valley**	**3.59**	**48**	P	Pn	20 23 19.5	-1.6
WACZ	**Wakanui South**	**3.74**	**66**	P	Pn	20 23 21.3	-1.8
RACZ	**Rakaia**	**4.03**	**65**	P	Pn	20 23 25.0	-2.1
OXZ	**Oxford**	**4.17**	**60**	P	Pn	20 23 26.4	-2.7
MQZ	**McQueen's Vall**	**4.37**	**67**	P	Pn	20 23 29.5	-2.3
OKCZ	**Okains Bay**	**4.63**	**69**	P	Pn	20 23 34.0	-1.4
LTZ	**Lake Taylor**	**4.63**	**55**	P	Pn	20 23 33.1	-2.3
GVZ	**Greta Valley S**	**4.98**	**61**	P	Pn	20 23 37.6	-2.6
DSZ	**Denniston Nort**	**5.10**	**44**	P	Pn	20 23 38.9	-2.9
QRZ	**Quartz Range**	**6.16**	**42**	P	Pn	20 23 54.2	-2.1

*IDC **16** 20:23:04.3±1.0, 35.13N×26.76E, h0km, mb3.5/11, mb1 3.6/15, mb1mx3.5/54, mbtmp3.5/15, ML3.4/4, Error ellipse: s-maj=24.3km s-min=14.3km az=174.0*
*NIC **16** 20:23:06.6±0.0, 34.99N×26.86E, h14km±2km, Ml4.1/4*
*ISK **16** 20:23:07.4, 35.06N×26.83E, h19km, ML3.7/18*
*HLW **16** 20:23:07.9, 35.12N×26.99E, h28km±14km, Ml3.7*
*THE **16** 20:23:08.6, 35.15N×26.75E, h0km±1km, ML3.6/6, Error ellipse: s-maj=3.8km s-min=0.8km az=155.0*
*ATH **16** 20:23:09.9, 35.22N×26.73E, h25km±7km, ML3.5/8, Error ellipse: s-maj=7.5km s-min=1.2km az=154.0*
*DDA **16** 20:23:11.4, 35.54N×26.78E, h15km±3km, ML3.3*

ISC 16 20:23:08.2±0.9, 35.08N±0.04×26.81E±0.02, h29km±7km, n115, σ1.964/145, mb3.5/11, 7C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.49**	**275**	P	**Pb**	**20 23 18.0**	**-0.4**
ZKR				S	**Sb**	**20 23 25.3**	**0.0**
ZKR				AML	AML	20 23 27.9	
	comp=E,14757μm,0.3s						
ZKR				AML	AML	20 23 28.0	
	comp=N,12884μm,0.3s						
ZKR	**Zakros**	**0.49**	**275**	P	**Pb**	**20 23 17.6**	**-0.8**
ZKR				S	**Sb**	**20 23 25.5**	**+0.2**
	comp=N,7μm,0.3s						
ZKR	**Zakros**	**0.49**	**275**	PG	**Pb**	**20 23 17.7**	**-0.7**
ZKR				SG	**Sb**	**20 23 25.8**	**+0.4**
ZKR	**Zakros**	**0.49**	**275**	P	**Pb**	**20 23 17.2**	**-1.2**
ZKR				S	**Sb**	**20 23 25.6**	**+0.2**
ZKR				AML	AML	20 23 26.2	
	comp=N,13nm,0.3s						
ZKR				AML	AML	20 23 26.2	
	comp=N,13nm,0.3s						
ZKR				AML	AML	20 23 26.6	
	comp=N,12nm,0.4s						
ZKR				AML	AML	20 23 26.6	
	comp=N,12nm,0.4s						
KARP	**Karpathos**	**0.55**	**31**	P	**Pb**	**20 23 19.1**	**-0.5**
KARP				S	**Sb**	**20 23 27.4**	**+0.2**
KARP				AML	AML	20 23 29.0	
KARP				AML	AML	20 23 29.2	
	comp=E,91238μm,0.3s						
KARP	**Karpathos**	**0.55**	**31**	P	**Pb**	**20 23 18.7**	**-0.7**
KARP				S	**Sb**	**20 23 27.4**	**+0.2**
	comp=E,57μm,0.4s						
KARP	**Karpathos**	**0.55**	**31**	PG	**Pb**	**20 23 18.8**	**-0.7**
KARP				SG	**Sb**	**20 23 27.7**	**+0.5**
KARP	**Karpathos**	**0.55**	**31**	↑P	**Pb**	**20 23 18.8**	**-0.7**
KARP				S	**Sb**	**20 23 27.6**	**+0.4**
KARP				AML	AML	20 23 28.7	
	comp=E,91nm,0.3s						
KARP				AML	AML	20 23 28.7	
	comp=E,91nm,0.3s						
STIA	**Sitia Lasithi**	**0.60**	**282**	P	**Pb**	**20 23 18.5**	**-1.8**
STIA				S	**Sb**	**20 23 28.1**	**-0.4**
FRMA	**Ierapetra Chan**	**0.89**	**266**	P	**Pb**	**20 23 22.6**	**-2.4**
FRMA				S	**Sb**	**20 23 34.5**	**-2.0**
	comp=E,2μm,0.5s						
NPS	**Neapolis**	**1.00**	**281**	P	**Pn**	**20 23 27.3**	**+1.1**
NPS				S	**Sb**	**20 23 38.5**	**-1.2**
NPS				AML	AML	20 23 47.4	
	comp=E,6640μm,0.5s						
NPS				AML	AML	20 23 48.8	
	comp=N,5875μm,0.7s						
NPS	**Neapolis**	**1.00**	**281**	P	**Pb**	**20 23 27.0**	**+0.1**
NPS				S	**Sn**	**20 23 42.1**	**+2.7**
	comp=N,3μm,0.6s						
NIS1	**Nisyros Isl.**	**1.55**	**11**	P	**Pb**	**20 23 35.4**	**-0.9**
NIS1	**Nisyros Isl.**	**1.55**	**11**	P	**Pb**	**20 23 35.2**	**-1.1**
NIS1	**Nisyros Isl.**	**1.55**	**11**	PN	**Pn**	**20 23 34.9**	**+1.0**
ARG	**Arkhangelos**	**1.56**	**43**	P	**Pb**	**20 23 37.4**	**+0.9**
ARG				S	**Sb**	**20 23 55.4**	**-0.5**
ARG				AML	AML	20 24 02.4	
	comp=E,4016μm,0.4s						
ARG				AML	AML	20 24 05.0	
	comp=N,3762μm,0.6s						
ARG	**Arkhangelos**	**1.56**	**43**	P	**Pb**	**20 23 36.9**	**+0.4**
ARG				S	**Sb**	**20 23 57.7**	**+1.8**
	comp=N,2μm,0.6s						
ARG	**Arkhangelos**	**1.56**	**43**	PN	**Pn**	**20 23 35.6**	**+1.6**
ARG	**Arkhangelos**	**1.56**	**43**	↑P	**Pn**	**20 23 35.4**	**+1.3**
IDI	**Anoyia**	**1.59**	**278**	Pn	**Pn**	**20 23 35.1**	**+0.7**
	comp=N,26nm,0.3s,baz=120,slow=15,SNR=44						
IDI				Sn	**Sb**	**20 23 59.1**	**+2.5**
	comp=N,49nm,0.3s,baz=339,slow=19,SNR=8.0						
IDI	**Anoyia**	**1.59**	**278**	P	**Pb**	**20 23 37.7**	**+0.8**
IDI				AML	AML	20 24 08.8	
	comp=N,1308μm,0.6s						
IDI				AML	AML	20 24 09.6	
	comp=E,1102μm,0.5s						
IDI	**Anoyia**	**1.59**	**278**	P	**Pb**	**20 23 36.7**	**-0.2**
IDI	**Anoyia**	**1.59**	**278**	PN	**Pn**	**20 23 36.0**	**+1.6**
SIVA	**Sivas**	**1.64**	**269**	P	**Pb**	**20 23 38.7**	**+0.9**
SIVA				AML	AML	20 24 16.5	
	comp=N,3534μm,0.6s						
SIVA				AML	AML	20 24 16.6	
	comp=E,3150μm,0.6s						

KOSK **Kos Island** 1.68 5 P **Pb** **20 23 37.1 -1.3**
KOSK **Kos Island** 1.68 5 PN **Pn** **20 23 36.6 +1.0**
SANT **Santorini** 1.70 320 P **Pb** **20 23 37.4 -1.4**
SANT AML AML 20 24 04.9
comp=E,2940μm,0.8s
SANT AML AML 20 24 07.5
comp=N,800μm,0.7s
SANT **Santorini** 1.70 320 P **Pb** **20 23 37.4 -1.4**
SANT **Santorini** 1.70 320 PN **Pb** **20 23 37.3 -1.4**
THR8 **Santorini-Mono** 1.71 321 P **Pb** **20 23 37.5 -1.6**
THR6 **Thira Island,** 1.72 318 P **Pb** **20 23 37.8 -1.3**
THR6 **Thira Island,** 1.72 318 P **Pb** **20 23 37.7 -1.4**
THR9 **Santorini-Faro** 1.74 318 P **Pb** **20 23 38.8 -0.7**
THR9 **Santorini-Faro** 1.74 318 P **Pb** **20 23 38.4 -1.1**
SNT1 **Gialos, Santor** 1.75 320 P **Pb** **20 23 37.7 -1.9**
SNT1 S **Sb** **20 23 59.5 -1.6**
SNT1 **Gialos, Santor** 1.75 320 P **Pb** **20 23 37.9 -1.7**
SNT1 S **Sb** **20 23 59.2 -1.9**
comp=N,2μm,0.9s
THR7 **Fira-Santorini** 1.75 321 P **Pb** **20 23 38.3 -1.4**
SNT5 **Nea Kammeni, S** 1.75 319 P **Pb** **20 23 38.0 -1.7**
SNT5 **Nea Kammeni, S** 1.75 319 P **Pb** **20 23 38.3 -1.4**
THR3 **Thira Island,** 1.76 320 P **Pb** **20 23 38.2 -1.6**
THT2 **Imerovigli** 1.77 321 P **Pb** **20 23 39.1 -0.9**
THT2 **Imerovigli** 1.77 321 PN **Pb** **20 23 38.5 -1.4**
THR5 **Thira Island,** 1.79 319 P **Pb** **20 23 38.7 -1.6**
SAP3 **Santorini-Thir** 1.81 319 P **Pb** **20 23 38.9 -1.7**
SAP3 S **Sb** **20 24 00.3 -2.5**
BODT **Bodrum** 2.02 11 PN **Pn** **20 23 40.8 +0.4**
TURN **Turunc** 2.06 34 *i* P **Pb** **20 23 43.9 -1.0**
TURN *i* S **Sn** **20 24 06.3 +0.9**
TURN IAML 20 24 18.0
comp=N,343nm,0.5s
TURN **Turunc** 2.06 34 PN **Pn** **20 23 42.6 +1.8**
VAM **Vamos** 2.16 280 P **Pb** **20 23 47.3 +0.6**
VAM AML AML 20 24 25.4
comp=E,1078μm,0.7s
VAM AML AML 20 24 26.6
comp=N,1628μm,0.8s
APE **Apeiranthos** 2.24 333 P **Pn** **20 23 44.6 +1.2**
APE **Apeiranthos** 2.24 333 PN **Pn** **20 23 44.7 +1.3**
APE **Apeiranthos** 2.24 333 ↑P **Pn** **20 23 44.7 +1.3**
GVDS **Gavdos** 2.25 265 PN **Pn** **20 23 45.6 +2.2**
GVD **Gavdhos** 2.25 265 P **Pb** **20 23 47.0 -1.2**
GVD **Gavdhos** 2.25 265 PN **Pn** **20 23 44.8 +1.4**
DALY **Dalyan (Mula)** 2.29 40 *i* P **Pn** **20 23 46.8 +2.8**
DALY *i* S **Sn** **20 24 14.3 +3.1**
DALY IAML 20 24 27.0
comp=E,253nm,0.9s
DALY IAML 20 24 31.0
comp=N,277nm,0.4s
DALY **Dalyan (Mula)** 2.29 40 PN **Pn** **20 23 45.8 +1.8**
IMMV **Iera Moni Meta** 2.35 280 P **Pb** **20 23 48.4 -1.4**
IMMV **Iera Moni Meta** 2.35 280 PN **Pn** **20 23 46.6 +1.8**
YER **Yerkesik** 2.38 30 P **Pn** **20 23 47.7 +2.4**
YER S **Sb** **20 24 17.4 -1.9**
YER **Yerkesik** 2.38 30 PN **Pn** **20 23 46.8 +1.5**
DDIM **Aydin, Didim** 2.40 8 *i* P **Pn** **20 23 46.5 +0.9**
DDIM *i* S **Sb** **20 24 22.0 +2.1**
FETY **Fethiye** 2.42 49 PN **Pn** **20 23 46.8 +1.0**
MULA **Mugla, Merkez-** 2.50 29 *i* P **Pb** **20 23 51.9 -0.5**
MULA *i* S **Sn** **20 24 12.1 -4.4**
MULA IAML 20 24 36.0
comp=E,214nm,0.6s
KSL **Kastellorizon** 2.50 64 ↑P **Pn** **20 23 48.1 +1.2**
KSL S **Sn** **20 24 18.5 +2.1**
AKAS **Kas** 2.55 62 PN **Pn** **20 23 48.4 +0.7**
KNAR **Kalaiochora Ch** 2.56 274 PN **Pn** **20 23 50.3 +2.5**
SMG **Samos** 2.63 0 P **Pn** **20 23 49.5 +0.8**
AYDN **Tasoluk** 2.72 18 *i* P **Pn** **20 23 53.0 +3.0**
CAEL **Denizli, Camel** 2.88 44 *i* P **Pn** **20 23 55.2 +2.9**
CAEL *i* S **Sb** **20 24 32.0 -1.9**
TAVA **DENIZLI_Tavas** 2.93 35 *i* P **Pn** **20 23 55.2 +2.3**
TAVA *i* S **Sn** **20 24 28.3 +1.2**
TAVA IAML 20 24 48.0
comp=N,142nm,0.5s
TAVA IAML 20 24 55.0
comp=E,153nm,0.8s
ANKY **Antikythira Is** 2.97 286 P **Pn** **20 23 54.7 +1.4**
AYDB **Zeytinkoy-Aydi** 3.00 17 PN **Pn** **20 23 55.7 +1.9**
ELL **Elmali** 3.02 56 PN **Pn** **20 23 55.8 +1.6**
AKUM **Antalya-Kumluc** 3.13 66 *i* P **Pn** **20 23 56.5 +1.0**
AKUM *i* S **Sn** **20 24 26.1 -5.9**
ZEYE **Izmir, Urla-Ze** 3.17 356 *i* P **Pn** **20 23 56.6 +0.5**
KTHA **Kythira Island** 3.27 292 PN **Pn** **20 23 59.5 +2.0**
URLA **Izmir** 3.28 357 PN **Pn** **20 23 58.1 +0.4**
CHOS **Chios island** 3.36 350 PN **Pn** **20 23 59.6 +0.8**
KORT **Korkueli** 3.45 55 PN **Pn** **20 24 01.9 +1.8**
VLI **Veliai** 3.54 299 P **Pn** **20 24 03.4 +2.1**
MANT **Manisa** 3.69 22 *i* P **Pn** **20 24 04.9 +1.5**
MANT *i* S **Sn** **20 24 40.8 -5.2**
BRDR **BURDUR-Merkez** 3.71 44 *i* P **Pn** **20 24 06.8 +3.3**
BRDR *i* S **Sn** **20 24 46.1 -0.1**
SLUM **Salum** 3.82 201 P **Pn** **20 24 06.0 +1.1**
baz=203
SLUM AMP 20 24 00.0
baz=203
SLUM S **Sn** **20 24 48.4 -0.4**
baz=203
ZEDA **zmir-Bergama** 3.89 3 *i* P **Pn** **20 24 07.5 +1.6**
OSC1 **CSNet OBS 1** 4.02 112 P **Pn** **20 24 07.4 -0.4**
USAK **Uak-Merkez** 4.04 25 *i* P **Pn** **20 24 09.8 +1.6**
BUHA **Balikesir, Bur** 4.42 3 *i* P **Pn** **20 24 15.0 +1.6**
AKMS **Akamas** 4.53 89 P **Pn** **20 24 14.7 -0.2**
AKMS AML AML 20 25 06.8
comp=E,0.5nm,0.6s
AKMS AML AML 20 25 07.7
comp=E,0.6nm,0.4s
SEDI **Konya, Seydise** 4.65 58 *i* P **Pn** **20 24 20.8 +4.3**
SEDI IAML 20 25 21.0
comp=E,49nm,0.8s
SEDI IAML 20 25 24.0
comp=N,56nm,0.7s
NATA **Nata** 4.74 92 P **Pn** **20 24 18.0 +0.3**
ALFC **Alefka** 4.75 87 ↑P **Pn** **20 24 18.4 +0.5**
ALFC AML AML 20 25 12.7
comp=N,0.6nm,0.4s
ALFC AML AML 20 25 13.1
comp=N,1.1nm,0.3s
SZAC **Souni** 5.00 92 ↑P **Pn** **20 24 21.0 -0.3**
ASGA **Asgata** 5.30 91 P **Pn** **20 24 25.2 -0.2**
CSS **Mathiatis** 5.35 89 ↑P **Pn** **20 24 25.8 -0.3**
MVOU **Mavrovouni** 5.60 89 P **Pn** **20 24 30.2 +0.7**
RYAN **Fayoum** 6.66 153 AMP 20 26 00.0
baz=154
GLL **Jalalah** 6.87 142 P **Pn** **20 24 47.0 -0.1**
baz=142
BRTR **Keskin Array B** 7.15 47 Pn **Pn** **20 24 52.9 +2.0**
comp=N,0.1nm,0.3s,baz=231,slow=16,SNR=2.4
BRTR Sn **Sn** **20 26 13.4 +2.3**
comp=N,0.1nm,0.3s,baz=205,slow=20,SNR=2.4
MMAI **Mount Meron Ar** 7.42 104 Pn **Pn** **20 24 54.3 -0.3**
comp=N,3.7nm,0.3s,baz=333,slow=12,SNR=7.3
MMAI Sn **Sn** **20 26 16.8 -1.1**
comp=N,4.3nm,0.3s,baz=304,slow=21,SNR=4.1
HFRF **Wahat Farafira** 8.01 170 P **Pn** **20 25 03.0 +0.5**
baz=171
EIL **Elat** 8.74 126 Pn **Pn** **20 25 12.4 -0.2**
comp=N,0.5nm,0.3s,baz=309,slow=4.1,SNR=14
EIL Sn Sn 20 26 43.5 -6.7
comp=N,1.5nm,0.3s,baz=315,slow=8.3,SNR=5.7
HKAT **Jabal Katrina** 8.94 135 P Pn 20 25 14.9 -0.8
baz=135
AKASG **Malin Array Be** 15.72 6 Pn **Pn** **20 26 48.8 +1.5**
comp=N,0.6nm,0.3s,baz=195,slow=11,SNR=5.5
GERES **GERESS Array B** 16.83 329 Pn **Pn** **20 27 02.9 +1.2**
comp=N,0.1nm,0.3s,baz=122,slow=41,SNR=2.0
ESDC **Sonseca Array** 24.82 290 P **P** **20 28 27.7 -0.1**
comp=N,0.4nm,0.6s,baz=76,slow=9.5,SNR=4.3
FINES **FINESS Array B** 26.39 359 P **P** **20 28 39.8 -1.9**
comp=N,1.8nm,1.0s,baz=209,slow=15,SNR=1.3
EKA **Eskdalemuir Ar** 28.90 324 P **P** **20 29 02.9 -1.4**
comp=N,0.4nm,0.6s,baz=129,slow=10,SNR=1.9
TORD **Torodi Ar. Bea** 31.49 232 P **P** **20 29 27.4 -0.1**
comp=N,0.7nm,0.6s,baz=35,slow=9.3,SNR=4.1
BVAR **Borovoye Array** 35.43 46 P **P** **20 30 01.2 -0.4**
comp=N,0.2nm,0.4s,baz=232,slow=7.1,SNR=3.1
KURBB **Kurchatov Arra** 40.12 51 P **P** **20 30 42.3 +1.2**
comp=N,1.6nm,0.7s,baz=277,slow=8.6,SNR=15
MKAR **Makanchi Array** 42.69 57 P **P** **20 31 03.7 +1.4**
comp=N,1.0nm,0.7s,baz=278,slow=6.4,SNR=11
ZALV **Zalesovo Beam** 44.09 46 P **P** **20 31 13.9 +0.4**
comp=N,1.6nm,0.6s,baz=272,slow=8.4,SNR=7.0
SONM **Songino Array** 58.49 51 P **P** **20 33 02.2 +0.6**

comp=N,0.2nm,0.5s,baz=302,slow=8.0,SNR=2.8
CMAR Chiang Mai Arr 65.24 84 P **P 20 33 47.9 +0.6**
comp=N,0.2nm,0.6s,baz=297,slow=7.9,SNR=1.8
YKA Yellowknife Ar 77.94 343 P **P 20 35 02.0 -1.1**
comp=N,0.1nm,0.5s,baz=34,slow=5.5,SNR=3.4

IDC ***16*** *20:26:01.9±1.1, 35°.15N×26°.67E, h0km, mb3.7/14, mb1 3.7/17, mb1mx3.6/57, mbtmp3.7/17, ML3.3/3, MS4.1/2, Ms1 4.1/2, ms1mx3.0/44, Error ellipse: s-maj=24.2km s-min=16.5km az=172.0*
ISK ***16*** *20:26:05.4, 35°.03N×26°.75E, h17km, ML3.6/19*
THE ***16*** *20:26:06.9, 35°.12N×26°.66E, h1km±1km, ML3.5/8, Error ellipse: s-maj=4.0km s-min=0.8km az=158.0*
ATH ***16*** *20:26:06.5, 35°.10N×26°.69E, h31km±4km, ML3.5/8, Error ellipse: s-maj=5.3km s-min=1.5km az=162.0*
ISC 16 20:26:04.0±1.2, 34°.92N±0°.05×26°.74E±0°.02, h18km±5km, n92, σ1§15/106, mb3.6/14, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.47**	**294**	P	**Pb**	**20 26 14.5**	**+0.8**
ZKR				S	**Sb**	**20 26 21.7**	**+1.2**
ZKR				AML	AML	20 26 24.8	
	comp=E,19532μm,0.4s						
ZKR				AML	AML	20 26 31.9	
	comp=N,8830μm,0.4s						
ZKR	**Zakros**	**0.47**	**294**	P	**Pb**	**20 26 14.4**	**+0.6**
ZKR				S	**Sb**	**20 26 20.3**	**-0.2**
	comp=N,7μm,0.4s						
ZKR	**Zakros**	**0.47**	**294**	PG	**Pb**	**20 26 14.6**	**+0.8**
ZKR				SG	**Sb**	**20 26 21.7**	**+1.2**
STIA	**Sitia Lasithi**	**0.60**	**298**	P	**Pb**	**20 26 15.4**	**-0.6**
STIA				S	**Sb**	**20 26 24.7**	**+0.5**
KARP	**Karpathos**	**0.71**	**29**	P	**Pg**	**20 26 17.8**	**-0.1**
KARP				S	**Sg**	**20 26 27.2**	**-0.3**
KARP				AML	AML	20 26 28.6	
	comp=N,32428μm,0.4s						
KARP				AML	AML	20 26 29.7	
	comp=E,32221μm,0.4s						
KARP	**Karpathos**	**0.71**	**29**	P	**Pg**	**20 26 17.9**	**-0.1**
KARP				S	**Sg**	**20 26 27.2**	**-0.3**
	comp=E,16μm,0.4s						
KARP	**Karpathos**	**0.71**	**29**	PG	**Pg**	**20 26 17.9**	**-0.1**
KARP				SG	**Sg**	**20 26 27.7**	**+0.2**
FRMA	**Ierapetra Chan**	**0.83**	**277**	P	**Pg**	**20 26 19.1**	**-1.2**
FRMA				S	**Sb**	**20 26 30.2**	**-0.6**
	comp=E,1μm,0.4s						
NPS	**Neapolis**	**0.99**	**290**	P	**Pn**	**20 26 23.9**	**+0.9**
NPS				AML	AML	20 26 44.7	
	comp=E,11266μm,0.8s						
NPS				AML	AML	20 26 45.3	
	comp=N,7431μm,0.5s						
NPS	**Neapolis**	**0.99**	**290**	P	**Pn**	**20 26 23.7**	**+0.7**
NPS				S	**Sn**	**20 26 36.7**	**+0.2**
	comp=N,5μm,0.8s						
IDI	**Anoyia**	**1.56**	**284**	Pn	**Pg**	**20 26 33.2**	**-1.0**
	comp=N,44nm,0.3s,baz=99,slow=2.9,SNR=19						
IDI				Sn	**Sg**	**20 26 56.0**	**+1.5**
	comp=N,67nm,0.3s,baz=319,slow=19,SNR=6.3						
IDI	**Anoyia**	**1.56**	**284**	P	**Pg**	**20 26 34.2**	**+0.1**
IDI				AML	AML	20 27 04.9	
	comp=E,1549μm,0.5s						
IDI				AML	AML	20 27 11.9	
	comp=N,1882μm,0.5s						
IDI	**Anoyia**	**1.56**	**284**	P	**Pg**	**20 26 33.9**	**-0.2**
IDI	**Anoyia**	**1.56**	**284**	PN	**Pg**	**20 26 33.1**	**-1.0**
SIVA	**Sivas**	**1.59**	**274**	P	**Pg**	**20 26 35.1**	**+0.4**
SIVA	**Sivas**	**1.59**	**274**	P	**Pg**	**20 26 34.6**	**0.0**
NIS1	**Nisyros Isl.**	**1.71**	**12**	P	**Pn**	**20 26 33.2**	**+0.2**
NIS1	**Nisyros Isl.**	**1.71**	**12**	P	**Pn**	**20 26 33.8**	**+0.8**
NIS1	**Nisyros Isl.**	**1.71**	**12**	PN	**Pn**	**20 26 33.8**	**+0.8**
ARG	**Arkhangelos**	**1.71**	**41**	P	**Pb**	**20 26 35.7**	**+0.7**
ARG				AML	AML	20 27 03.9	
	comp=E,2711μm,0.7s						
ARG				AML	AML	20 27 09.0	
	comp=N,1531μm,0.5s						
ARG	**Arkhangelos**	**1.71**	**41**	P	**Pb**	**20 26 35.6**	**+0.6**
ARG				S	**Sb**	**20 26 57.6**	**+1.4**
	comp=N,1μm,0.6s						
ARG	**Arkhangelos**	**1.71**	**41**	PN	**Pn**	**20 26 34.7**	**+1.7**
SANT	**Santorini**	**1.78**	**324**	P	**Pn**	**20 26 35.1**	**+1.1**
SANT				AML	AML	20 27 02.7	
	comp=E,5098μm,0.4s						
SANT				AML	AML	20 27 07.7	
	comp=N,1251μm,0.7s						
SANT	**Santorini**	**1.78**	**324**	P	**Pn**	**20 26 35.1**	**+1.1**
SANT				S	**Sn**	**20 26 55.8**	**-0.4**
	comp=N,2μm,0.5s						
SANT	**Santorini**	**1.78**	**324**	PN	**Pn**	**20 26 35.1**	**+1.1**
THR6	**Thira Island,**	**1.80**	**323**	P	**Pb**	**20 26 35.8**	**-0.7**
THR8	**Santorini-Mono**	**1.80**	**326**	P	**Pb**	**20 26 35.6**	**-0.9**
THR8	**Santorini-Mono**	**1.80**	**326**	P	**Pb**	**20 26 35.5**	**-1.0**
THR9	**Santorini-Faro**	**1.82**	**322**	P	**Pn**	**20 26 35.4**	**+0.9**
SNT1	**Gialos, Santor**	**1.83**	**325**	P	**Pb**	**20 26 36.1**	**-0.9**
SNT1	**Gialos, Santor**	**1.83**	**325**	P	**Pn**	**20 26 35.7**	**+1.1**
SNT1				S	**Sn**	**20 26 57.9**	**+0.5**
	comp=N,2μm,0.7s						
KOSK	**Kos Island**	**1.83**	**6**	PN	**Pn**	**20 26 35.5**	**+0.9**
THR7	**Fira-Santorini**	**1.84**	**325**	P	**Pb**	**20 26 36.3**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.84**	**324**	P	**Pb**	**20 26 36.3**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.84**	**324**	P	**Pb**	**20 26 36.3**	**-0.8**
THR3	**Thira Island,**	**1.84**	**324**	P	**Pb**	**20 26 36.1**	**-1.0**
THR3	**Thira Island,**	**1.84**	**324**	P	**Pn**	**20 26 35.9**	**+1.2**
THT2	**Imerovigli**	**1.85**	**325**	P	**Pb**	**20 26 36.6**	**-0.7**
THT2	**Imerovigli**	**1.85**	**325**	P	**Pb**	**20 26 36.5**	**-0.9**
THT2	**Imerovigli**	**1.85**	**325**	PN	**Pb**	**20 26 36.2**	**-1.2**
THR5	**Thira Island,**	**1.87**	**323**	P	**Pb**	**20 26 36.8**	**-1.0**
VAM	**Vamos**	**2.14**	**284**	P	**Pb**	**20 26 42.6**	**+0.4**
VAM				AML	AML	20 27 20.2	
	comp=N,1821μm,0.9s						
VAM				AML	AML	20 27 27.8	
	comp=E,1162μm,0.7s						
VAM	**Vamos**	**2.14**	**284**	P	**Pb**	**20 26 42.0**	**-0.2**
GVDS	**Gavdos**	**2.18**	**269**	PN	**Pb**	**20 26 42.5**	**-0.5**
BODT	**Bodrum**	**2.18**	**12**	P	**Pn**	**20 26 39.9**	**+0.4**
BODT	**Bodrum**	**2.18**	**12**	PN	**Pn**	**20 26 40.5**	**+1.0**
GVD	**Gavdhos**	**2.18**	**269**	P	**Pb**	**20 26 43.2**	**+0.2**
GVD	**Gavdhos**	**2.18**	**269**	PN	**Pb**	**20 26 42.6**	**-0.4**
TURN	**Turunc**	**2.21**	**33**	PN	**Pn**	**20 26 41.5**	**+1.6**
IMMV	**Iera Moni Meta**	**2.32**	**284**	P	**Pb**	**20 26 45.2**	**-0.2**
IMMV	**Iera Moni Meta**	**2.32**	**284**	PN	**Pb**	**20 26 43.8**	**-1.6**
APE	**Apeiranthos**	**2.36**	**336**	P	**Pn**	**20 26 43.2**	**+1.3**
APE				AML	AML	20 27 13.8	
	comp=N,1163μm,0.5s						
APE				AML	AML	20 27 13.9	
	comp=E,1240μm,0.3s						
APE	**Apeiranthos**	**2.36**	**336**	P	**Pn**	**20 26 43.0**	**+1.2**
APE				S	**Sn**	**20 27 09.9**	**-0.5**
	comp=E,598nm,0.4s						
APE	**Apeiranthos**	**2.36**	**336**	PN	**Pn**	**20 26 43.1**	**+1.2**
DALY	**Dalyan (Mula)**	**2.45**	**39**	PN	**Pn**	**20 26 45.2**	**+2.2**
KNDR	**Palaiochora Ch**	**2.53**	**278**	PN	**Pb**	**20 26 47.4**	**-1.4**
YER	**Yerkesik**	**2.54**	**29**	PN	**Pn**	**20 26 45.7**	**+1.3**
FETY	**Fethiye**	**2.56**	**47**	PN	**Pn**	**20 26 45.0**	**+0.4**
AKAS	**Kas**	**2.67**	**60**	PN	**Pn**	**20 26 46.7**	**+0.4**
SMG	**Samos**	**2.78**	**2**	P	**Pn**	**20 26 48.2**	**+0.5**
ELL	**Elmali**	**3.15**	**54**	PN	**Pn**	**20 26 55.2**	**+2.3**
AYDB	**Zeytinkoy-Aydi**	**3.16**	**17**	PN	**Pn**	**20 26 54.4**	**+1.4**
KTHA	**Kythira Island**	**3.28**	**295**	P	**Pn**	**20 26 56.8**	**+2.2**
KTHA	**Kythira Island**	**3.28**	**295**	PN	**Pn**	**20 26 56.8**	**+2.2**
URLA	**Izmir**	**3.43**	**358**	PN	**Pn**	**20 26 56.2**	**-0.5**
CHOS	**Chios island**	**3.50**	**351**	P	**Pn**	**20 26 58.3**	**+0.7**
CHOS	**Chios island**	**3.50**	**351**	PN	**Pn**	**20 26 58.7**	**+1.1**
KORT	**Korkueli**	**3.59**	**54**	PN	**Pn**	**20 27 01.3**	**+2.4**
KULA	**Kula-Manisa**	**3.90**	**23**	PN	**Pn**	**20 27 04.1**	**+0.9**
SIGR	**SIGRI**	**4.34**	**351**	P	**Pn**	**20 27 09.9**	**+0.8**
ITM	**Ithomi**	**4.50**	**301**	PN	**Pn**	**20 27 13.5**	**+2.1**
BRTR	**Keskin Array B**	**7.29**	**47**	Pn	**Pn**	**20 27 51.3**	**+1.6**
	comp=E,0.2nm,0.3s,baz=306,slow=37,SNR=1.9						
BRTR				Sn	**Sn**	**20 29 11.3**	**-0.8**
	comp=E,0.2nm,0.3s,baz=307,slow=36,SNR=2.3						
MMAI	**Mount Meron Ar**	**7.44**	**102**	Pn	**Pn**	**20 27 51.5**	**-0.2**
	comp=E,1.4nm,0.3s,baz=293,slow=11,SNR=5.8						
MMAI				Sn	**Sn**	**20 29 13.1**	**-2.7**
	comp=E,3.3nm,0.3s,baz=304,slow=24,SNR=3.6						
EIL	**Elat**	**8.70**	**125**	Pn	**Pn**	**20 28 09.9**	**+0.9**
	comp=E,0.4nm,0.3s,baz=344,slow=18,SNR=1.0						
EIL				Sn	Sn	20 29 39.2	-7.4
	comp=E,0.5nm,0.3s,baz=7.8,slow=16,SNR=2.9						
MLR	**Muntele Rosu**	**10.57**	**357**	LR	LR	20 32 31.9	
	comp=E,310nm,18.5s,baz=20,slow=38						
AKASG	**Malin Array Be**	**15.87**	**6**	Pn	**Pn**	**20 29 48.6**	**+2.2**
	comp=E,1.0nm,0.3s,baz=195,slow=11,SNR=4.0						
GERES	**GERESS Array B**	**16.93**	**329**	Pn	**Pn**	**20 30 00.9**	**+1.0**
	baz=138,slow=13,SNR=1.8						
ESDC	**Sonseca Array**	**24.82**	**290**	P	**P**	**20 31 24.9**	**-0.2**
	comp=E,0.4nm,0.4s,baz=82,slow=9.4,SNR=7.3						
FINES	**FINESS Array B**	**26.54**	**359**	P	**P**	**20 31 38.4**	**-2.0**
	comp=E,0.4nm,0.2s,baz=172,slow=11,SNR=6.0						
HFS	**Hagfors**	**26.62**	**345**	P	**P**	**20 31 38.7**	**-2.5**
	comp=E,1.2nm,0.7s,baz=149,slow=9.9,SNR=1.7						
AKTO	**Aktyubinsk**	**27.47**	**46**	P	**P**	**20 31 46.8**	**-2.1**
	comp=E,0.6nm,0.5s,baz=264,slow=4.8,SNR=2.3						
EKA	**Eskdalemuir Ar**	**28.99**	**324**	P	**P**	**20 32 02.3**	**-0.2**
	comp=E,0.6nm,0.7s,baz=123,slow=10,SNR=2.1						
WSAR	**Wadi Sarin**	**30.08**	**104**	LR	LR	20 47 32.5	
	comp=E,1μm,21.0s,baz=263,slow=43						
TORD	**Torodi Ar. Bea**	**31.35**	**232**	P	**P**	**20 32 25.2**	**+1.5**
	comp=E,0.4nm,0.4s,baz=40,slow=8.0,SNR=4.6						
ARCES	**ARCESS Array B**	**34.67**	**359**	P	**P**	**20 32 50.1**	**-2.1**
	comp=E,0.5nm,0.3s,baz=165,slow=6.3,SNR=6.6						
BVAR	**Borovoye Array**	**35.58**	**46**	P	**P**	**20 32 59.4**	**-0.8**
	comp=E,0.2nm,0.4s,baz=238,slow=14,SNR=4.6						
KURBB	**Kurchatov Arra**	**40.26**	**51**	P	**P**	**20 33 39.8**	**+0.1**
	comp=E,0.3nm,0.3s,baz=36,slow=9.5,SNR=5.0						
MKAR	**Makanchi Array**	**42.82**	**56**	P	**P**	**20 34 02.1**	**+1.3**
	comp=E,0.8nm,0.3s,baz=269,slow=8.2,SNR=27						
ZALV	**Zalesovo Beam**	**44.23**	**46**	P	**P**	**20 34 12.3**	**+0.3**
	comp=E,2.1nm,0.4s,baz=265,slow=8.9,SNR=12						
SONM	**Songino Array**	**58.63**	**51**	P	**P**	**20 36 01.4**	**+1.3**
	comp=E,0.3nm,0.6s,baz=275,slow=8.3,SNR=5.3						
USRK	**Ussuriysk Ar.**	**76.08**	**46**	P	**P**	**20 37 50.5**	**0.0**
	comp=E,0.7nm,0.7s,baz=288,slow=3.0,SNR=4.4						
YKA	**Yellowknife Ar**	**78.07**	**343**	P	**P**	**20 37 59.8**	**-1.5**
	comp=E,0.1nm,0.4s,baz=29,slow=5.4,SNR=2.2						

IDC ***16*** *20:27:56.9±4.2, 13°.33S×167°.13E, h226km±40km, mb3.4/10, mb1 3.6/11, mb1mx3.3/45, mbtmp4.0/11, Error ellipse: s-maj=25.5km s-min=22.1km az=163.0*
NEIC ***16*** *20:27:56.1±1.4, 13°.2S±0°.1×167°.1E±0°.2, h223km±3km, mb4.5/15, Error ellipse: s-maj=22.0km s-min=17.3km az=83.0*
ISC 16 20:27:59.2±0.7, 13°.39S±0°.08×167°.1E±0°.2, h250km, n30, σ0§75/32, mb4.1/18, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.65**	**184**	P	**Pn**	**20 30 00.2**	**-0.7**
	0.4nm,0.3s,baz=116,slow=15,SNR=1.1						
DZM				S	**S**	**20 31 38.0**	**-1.1**
	0.2nm,0.3s,baz=281,slow=24,SNR=1.2						
EIDS	**Eidsvold**	**19.21**	**229**	P	**P**	**20 32 05.0**	**+0.1**
URZ	**Urewera**	**26.32**	**162**	P	**P**	**20 33 12.4**	**+0.3**
	6.8nm,0.8s,baz=301,slow=24,SNR=2.1						
BKZ	**Black Stump Fm**	**26.98**	**164**	P	**P**	**20 33 19.0**	**+0.8**
STKA	**Stephens Creek**	**29.75**	**228**	P	**P**	**20 33 43.6**	**+0.9**
	1.4nm,0.4s,baz=47,slow=7.3,SNR=5.5						
STKA				PcP	**PcP**	**20 36 40.4**	**+0.4**
	1.5nm,0.6s,baz=340,slow=4.2,SNR=4.8						
WB0	**Warramunga Arr**	**31.94**	**254**	P	**P**	**20 34 01.2**	**-0.9**
WB0				IAmb	IAmb	20 34 15.9	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**32.00**	**254**	P	**P**	**20 34 02.1**	**-0.5**
WB2				IAmb	IAmb	20 34 49.7	
	comp=Z,8.4nm,1.3s						
WRAB	**Tennant Creek**	**32.00**	**254**	P	**P**	**20 34 01.6**	**-1.0**
WRAB				IAmb	IAmb	20 35 10.6	
	comp=Z,30nm,1.8s						
WRA	**Warramunga Arr**	**32.01**	**254**	P	**P**	**20 34 01.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=86,slow=9.2,SNR=2.0						
AS31	**Alice Springs**	**33.01**	**247**	P	**P**	**20 34 10.4**	**-0.9**
ASAR	**Alice Springs**	**33.01**	**247**	P	**P**	**20 34 10.6**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=74,slow=10,SNR=9.1						
ASAR				PcP	**PcP**	**20 36 49.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=61,slow=3.2,SNR=5.0						
ASAR	**Alice Springs**	**33.01**	**247**	P	**P**	**20 34 10.5**	**-0.8**
BBOO	**Buckleboo**	**34.28**	**230**	P	**P**	**20 34 21.6**	**-0.5**
BBOO				IAmb	IAmb	20 34 27.2	
	comp=Z,35nm,1.4s						
KNRA	**Kununurra**	**37.14**	**262**	P	**P**	**20 34 46.3**	**-0.2**
KNRA				IAmb	IAmb	20 36 01.2	
	comp=Z,42nm,1.6s						
FORT	**Forrest**	**39.85**	**238**	P	**P**	**20 35 09.3**	**+0.5**
FORT				IAmb	IAmb	20 35 13.0	
	comp=Z,28nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.11**	**258**	P	**P**	**20 35 11.4**	**+0.3**
	comp=Z,2.5nm,1.1s,baz=258,slow=22,SNR=1.9						
FITZ	**Fitzroy Crossi**	**40.11**	**258**	IAmb	IAmb	20 36 15.5	
	comp=Z,13nm,1.6s						
VNDA	**Vanda**	**64.19**	**181**	P	**P**	**20 38 06.9**	**0.0**
VNDA				IAmb	IAmb	20 40 08.4	
	comp=Z,9.0nm,1.6s						
CMAR	**Chiang Mai Arr**	**74.26**	**294**	P	**P**	**20 39 10.5**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=127,slow=4.7,SNR=8.1						
CMAR	**Chiang Mai Arr**	**74.26**	**294**	P	**P**	**20 39 08.7**	**-0.8**
QSPA	**South Pole Qui**	**76.63**	**180**	P	**P**	**20 39 23.5**	**+1.2**
QSPA				IAmb	IAmb	20 39 25.2	
	comp=Z,26nm,1.7s						
SEY	**Seymchan**	**76.94**	**353**	P	**P**	**20 39 23.8**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=167,slow=8.6,SNR=6.4						
SONM	**Songino Array**	**81.33**	**324**	P	**P**	**20 39 48.8**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=144,slow=4.7,SNR=4.8						
SONM	**Songino Array**	**81.33**	**324**	P	**P**	**20 39 46.9**	**-1.1**
ILAR	**Eielson Array**	**85.31**	**18**	P	**P**	**20 40 06.7**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=238,slow=5.0,SNR=17						
ILAR				pP		20 40 58.0	-9.0
	comp=Z,1.1nm,0.8s,baz=232,slow=7.2,SNR=6.7						
MKAR	**Makanchi Array**	**96.12**	**317**	P	**P**	**20 40 58.8**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=94,slow=6.3,SNR=10						
MKAR	**Makanchi Array**	**96.12**	**317**	P	**P**	**20 40 57.6**	**-1.0**
ARCES	**ARCESS Array B**	**118.92**	**346**	PKP	**PKPdf**	**20 46 17.3**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=68,slow=2.3,SNR=23						
FINES	**FINESS Array B**	**124.42**	**339**	PKP	**PKPdf**	**20 46 28.1**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=323,slow=2.9,SNR=7.8						
ESDC	**Sonseca Array**	**152.66**	**345**	PKPbc	**PKiKP**	**20 47 26.9**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=44,slow=2.6,SNR=5.7						

BJI ***16*** *20:36:17.4±0.0, 30°.29N×143°.27E, h10km, mB5.0/29, mb4.4/48, Ms4.4/14, Ms7 4.2/15*
IDC ***16*** *20:36:21.5±0.4, 30°.48N×142°.79E, h0km, mb4.4/33, mb1 4.5/37, mb1mx4.3/59, mbtmp4.4/37, ML3.2/3, MS3.7/1, Ms1 3.7/1, ms1mx3.1/36, Error ellipse: s-maj=15.3km s-min=10.1km az=88.0*
JMA ***16*** *20:36:21.4±0.1, 30°.51N×142°.94E, h47km, M4.7*
MOS ***16*** *20:36:22.9±0.9, 30°.53N×142°.81E, h22km, mb4.7/31, Error ellipse: s-maj=10.0km s-min=4.9km az=115.8*
NEIC ***16*** *20:36:25.4±1.4, 30°.40N±0°.06×142°.8E±0°.1, h29km±4km, mb4.6/113, Error ellipse: s-maj=13.5km s-min=8.1km az=80.0*
ISC 16 20:36:25.2±1.0, 30°.46N±0°.04×142°.80E±0°.06, h27km±6km, n316, σ1§24/321, mb4.6/120, 24C-8D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.40**	**189**	*e*S	**Sn**	**20 37 53.5**	**-2.3**
JCJ	**Chichijima**	**3.40**	**189**	Pn	**Pn**	**20 37 15.2**	**-1.2**
	55nm,0.3s,baz=352,slow=22,SNR=13						
JCJ				Sn	**Sn**	**20 37 51.6**	**-4.2**
	58nm,0.3s,baz=298,slow=20,SNR=3.6						
JCJ	**Chichijima**	**3.40**	**189**	Pn	**Pn**	**20 37 14.6**	**-1.8**
JHCJ	**Hachijojimakas**	**3.65**	**316**	*e*S	**Sn**	**20 38 00.1**	**-2.0**
JHJ2	**Mitsune**	**3.67**	**317**	P	**Pn**	**20 37 18.0**	**-2.1**
JHJ2	**Mitsune**	**3.67**	**317**	Pn	**Pn**	**20 37 20.6**	**+0.4**
JHJ	**Hachijo jima 2**	**3.69**	**317**	Pn	**Pn**	**20 37 18.1**	**-2.4**
	16nm,0.3s,baz=231,slow=23,SNR=16						
JHJ				Sn	**Sn**	**20 37 58.0**	**-5.1**
	44nm,0.3s,baz=36,slow=24,SNR=5.1						
JHH2	**Haha-jima-NKT2**	**3.85**	**188**	P	**Pn**	**20 37 20.8**	**-1.9**
JHH2				*e*S	**Sn**	**20 38 05.6**	**-1.5**
BSO1	**Boso 1**	**4.46**	**340**	P	**Pn**	**20 37 28.1**	**-2.4**
JOD2	**Odawara 2**	**5.72**	**328**	P	**Pn**	**20 37 46.4**	**-2.0**
JHU	**Hanno**	**6.13**	**332**	P	**Pn**	**20 37 52.7**	**-1.3**
JYT	**Yasato**	**6.15**	**340**	P	**Pn**	**20 37 52.3**	**-2.0**
JYT	**Yasato**	**6.15**	**340**	Pn	**Pn**	**20 37 53.9**	**-0.4**
JHO	**Hitachi**	**6.41**	**344**	P	**Pn**	**20 37 54.8**	**-3.1**
JRY	**Ryogami san**	**6.43**	**331**	P	**Pn**	**20 37 56.1**	**-2.1**
JRY				*e*S	**Sn**	**20 39 07.3**	**-3.4**
JGF	**Kuroka**	**6.87**	**320**		**Pn**	**20 38 04.5**	**+0.3**
MJAR	**Matsushiro Arr**	**7.18**	**329**	Pn	**Pn**	**20 38 07.6**	**-0.7**
	0.9nm,0.3s,baz=153,slow=12,SNR=58						
MJAR				Sn	**Sn**	**20 39 24.9**	**-4.1**
	0.3nm,0.3s,baz=158,slow=19,SNR=7.2						
MAJO	**Matsushiro**	**7.18**	**329**	*c* i P	**Pn**	**20 38 07.2**	**-1.2**
MAJO	**Matsushiro**	**7.18**	**329**	Pn	**Pn**	**20 38 07.3**	**-1.1**
MAT	**Matsushiro**	**7.18**	**329**	P	**Pn**	**20 38 07.5**	**-0.9**
MAT				S	**Sn**	**20 39 24.7**	**-4.3**
MJB9	**Matsu-Tunnel**	**7.18**	**329**	Pn	**Pn**	**20 38 07.2**	**-1.2**
JMM	**Marumori**	**7.57**	**348**	Pn	**Pn**	**20 38 11.7**	**-2.1**
JWT	**Wachi**	**7.86**	**310**	Pn	**Pn**	**20 38 17.4**	**-0.4**
JSD	**Sado**	**8.44**	**335**	Pn	**Pn**	**20 38 23.9**	**-1.8**
JNU	**Nakatsue**	**10.49**	**288**	LR	LR	20 43 03.4	
	comp=Z,362nm,18.2s,baz=92,slow=38						
JMZ	**Minamidaito 2**	**11.21**	**248**	Pn	**Pn**	**20 39 00.9**	**-2.9**
ERM	**Erimo**	**11.54**	**1**	*i* P	**Pn**	**20 39 04.5**	**-3.6**
ERM	**Erimo**	**11.54**	**1**	Pn	**Pn**	**20 39 04.7**	**-3.4**
KSRS	**Korea Array**	**14.17**	**303**	Pn	**Pn**	**20 39 47.4**	**+3.3**
	0.4nm,0.3s,baz=118,slow=13,SNR=13						
USRK	**Ussuriysk Ar.**	**16.17**	**331**	Pn	**Pn**	**20 40 08.2**	**-2.2**
	baz=128,slow=12,SNR=5.8						
YSS	**Yuzh-Sakhalins**	**16.47**	**360**	*e*P	**Pn**	**20 40 10.9**	**-3.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**16.47**	**360**	P	**Pn**	**20 40 11.6**	**-2.6**
CN2	**Changchun**	**19.15**	**319**	*e*P	**P**	**20 40 45.6**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TATO	**Taipei**	**19.63**	**259**	P	**P**	**20 40 50.3**	**-1.4**
YHNB	**Yeheng**	**19.84**	**258**	P	**P**	**20 40 54.6**	**+0.5**
YHNB				IAmb	IAmb	20 41 09.5	
	comp=Z,28nm,1.0s						
NACB	**Ninganchiao**	**19.84**	**257**	P	**P**	**20 40 52.2**	**-1.8**
NACB				IAmb	IAmb	20 40 59.1	
	comp=Z,20nm,0.7s						
TYV	**Tymovskoe**	**20.38**	**360**	*e*P	Pn	20 41 01.6	-0.3
TYV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YULB	**Yu-li**	**20.41**	**255**		**P**	**20 41 00.1**	**-0.1**
YULB				IAmb	IAmb	20 41 25.7	
	comp=Z,32nm,0.9s						
NJ2	**Nanjing**	**20.53**	**281**	⇓ *i* P	**P**	**20 41 01.6**	**+0.2**
NJ2				sP	**sP**	**20 41 12.5**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
SSLB	**Suanglung**	**20.53**	**256**		**P**	**20 41 01.5**	**-0.1**
SSLB				IAmb	IAmb	20 41 14.7	
	comp=Z,31nm,0.9s						
KLR	**Kul'dur**	**20.54**	**339**	*e*P	**P**	**20 41 01.8**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=161,slow=7.0,SNR=15						
KLR	**Kul'dur**	**20.54**	**339**	*e*P	**P**	**20 41 01.5**	**+0.1**
KLR				pmax	pmax		
	comp=Z,17nm,0.9s						
TWG	**Pinlang**	**20.84**	**254**	P	**P**	**20 41 05.8**	**+0.9**
TWG				IAmb	IAmb	20 41 24.1	
	comp=Z,18nm,0.9s						
TPUB	**Ta-pu**	**21.00**	**255**	P	**P**	**20 41 07.1**	**+0.4**
TPUB				IAmb	IAmb	20 41 25.2	
	comp=Z,27nm,0.8s						
BJI	**Beijing**	**23.68**	**301**	P	**P**	**20 41 33.9**	**-0.6**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJI				LR	LR		
	comp=Z,240nm,21.1s						
BJI				LR	LR		
	comp=Z,160nm,18.9s						
SZP	**Santa**	**24.06**	**243**	P	**P**	**20 41 37.1**	**-1.2**
SZP				IAmb	IAmb	20 41 50.7	
	comp=Z,24nm

BILL pmax pmax
comp=Z,8.0nm,1.7s
BILL Bilibino 40.07 13 P **P** **20 43 58.0 +0.1**
CHTO Chiang Mai 41.28 264 P **P** **20 44 07.8 -0.7**
CHTO pmax pmax
comp=Z,3.0nm,0.7s
CHTO Chiang Mai 41.28 264 P **P** **20 44 07.8 -0.7**
CM31 Chiang Mai Arr 41.44 264 P **P** **20 44 08.9 -0.8**
CMAR Chiang Mai Arr 41.44 264 P **P** **20 44 09.7 0.0**
comp=Z,1.2nm,0.7s,baz=60,slow=5.8,SNR=15
CMAR Chiang Mai Arr 41.44 264 *i* P **P** **20 44 09.6 -0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 41.44 264 P **P** **20 44 09.2 -0.6**
TIXI Tiksi 41.94 353 P **P** **20 44 12.4 -0.7**
comp=Z,1.6nm,0.7s,baz=137,slow=5.9,SNR=5.2
TIXI Tiksi 41.94 353 *ce*P **P** **20 44 11.4 -1.7**
TIXI pmax pmax
comp=Z,29nm,1.7s
TIXI Tiksi 41.94 353 P **P** **20 44 12.9 -0.2**
GAMB Gambell 43.88 27 P **P** **20 44 29.6 +0.6**
COEN Coen 44.16 179 P **P** **20 44 33.1 +1.4**
COEN IAmb IAmb 20 44 34.2
comp=Z,11nm,0.8s
BATI Baumata 44.42 207 P **P** **20 44 33.1 -0.7**
comp=Z,13nm,0.6s,baz=306,slow=0.8,SNR=4.9
MTN Manton Dam 44.49 196 P **P** **20 44 33.9 -0.4**
WMQ Urumqi 45.12 303 *eP* **P** **20 44 41.1 +1.8**
WMQ pP sP 20 44 47.1 -0.6
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,110nm,6.3s
DGZ Jazzator, Alta 45.40 311 *d* *i* P **P** **20 44 42.5 +1.0**
DGZ pmax pmax
comp=Z,13nm,1.0s
ANM Nome 46.73 28 P **P** **20 44 52.9 +1.3**
ANM pmax pmax
comp=Z,9.0nm,1.0s
ANM Nome 46.73 28 P **P** **20 44 52.9 +1.3**
ANM IAmb IAmb 20 44 54.0
comp=Z,9.2nm,1.0s
ZSN Zaisan 47.03 308 *eP* **P** **20 44 54.9 +0.6**
comp=Z,3.2nm,1.0s,baz=308
ZSN Zaisan 47.03 308 *eP* **P** **20 44 54.8 +0.6**
ZSN pmax pmax
comp=Z,3.0nm,1.0s
ZAA0 Zalesovo Array 47.35 317 P **P** **20 44 56.3 -0.3**
ZALV Zalesovo Beam 47.35 317 P **P** **20 44 56.5 -0.1**
comp=Z,1.8nm,0.6s,baz=98,slow=7.6,SNR=7.1
ZALV PcP **PcP** **20 46 27.3 +0.2**
comp=Z,2.7nm,0.6s,baz=102,slow=2.6,SNR=9.0
ZALV Zalesovo Beam 47.35 317 *i* P **P** **20 44 57.0 +0.4**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 47.35 317 P **P** **20 44 57.0 +0.4**
ZALV PcP **PcP** **20 46 26.5 -0.5**
KNRA Kununurra 47.82 198 P **P** **20 44 59.8 -0.7**
TAPN Taplejung 47.93 281 *eP* **P** **20 45 02.2 +0.4**
ODAN Odare 48.35 280 *eP* **P** **20 45 05.6 +0.6**
MK31 Makanchi Array 48.81 307 *d* *i* P **P** **20 45 08.5 +0.5**
MK31 Makanchi Array 48.81 307 P **P** **20 45 08.2 +0.2**
MKAR Makanchi Array 48.81 307 P **P** **20 45 08.8 +0.8**
comp=Z,3.8nm,0.8s,baz=90,slow=9.1,SNR=41
MKAR PcP **PcP** **20 46 33.0 +0.5**
comp=Z,0.8nm,0.7s,baz=71,slow=4.9,SNR=1.5
MKAR Makanchi Array 48.81 307 P **P** **20 45 08.2 +0.2**
RDOG Red Dog Mine 48.94 24 P **P** **20 45 09.8 +1.1**
RDOG IAmb IAmb 20 45 10.8
comp=Z,8.9nm,1.0s
RAMN Ramite 48.99 281 *eP* **P** **20 45 10.6 +0.6**
comp=Z,9.1nm,0.6s
MAKZ Makanchi 49.03 307 P **P** **20 45 10.6 +0.9**
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
MAKZ Makanchi 49.03 307 P **P** **20 45 10.6 +0.9**
JIRN Jiri 49.12 282 *eP* **P** **20 45 11.3 +0.2**
comp=Z,12nm,0.5s
GUN Gumba 49.31 282 *eP* **P** **20 45 12.9 +0.4**
comp=Z,18nm,0.8s
NRIK Noril'sk 49.74 338 P **P** **20 45 14.9 +0.2**
comp=Z,2.4nm,0.7s,baz=106,slow=6.5,SNR=4.1
NRIK Noril'sk 49.74 338 *ce*P **P** **20 45 14.0 -0.7**
NRIK pmax pmax
comp=Z,5.0nm,1.0s
NRIK Noril'sk 49.74 338 P **P** **20 45 14.8 +0.1**
NRIK IAmb IAmb 20 45 26.3
comp=Z,5.7nm,1.1s
PSI Prapat 49.75 245 P **P** **20 45 12.9 -2.7**
PSI pmax pmax
comp=Z,8.0nm,0.9s
PKI Pulchoki 49.81 282 *eP* **P** **20 45 16.4 +0.1**
comp=Z,6.5nm,0.9s
RPSI Rantau Prapat 49.81 245 P **P** **20 45 12.9 -3.1**
RPSI IAmb IAmb 20 45 19.2
comp=Z,8.3nm,0.9s
SEM Semipalatinsk 50.04 312 *eP* **P** **20 45 16.7 -0.8**
baz=312
SEM Semipalatinsk 50.04 312 *eP* **P** **20 45 16.7 -0.8**
GKN Gorkha 50.33 283 *eP* **P** **20 45 20.5 +0.5**
WB0 Warramunga Arr 50.59 190 P **P** **20 45 21.7 +0.1**
WR0 Warramunga Arr 50.75 190 P **P** **20 45 22.9 -0.1**
WRAB Tennant Creek 50.76 190 *ce*P **P** **20 45 22.6 -0.4**
WRAB pmax pmax
comp=Z,27nm,0.7s
WRAB Tennant Creek 50.76 190 P **P** **20 45 23.1 +0.1**
WB2 Warramunga Arr 50.77 190 P **P** **20 45 23.1 +0.1**
WRA Warramunga Arr 50.77 190 P **P** **20 45 23.4 +0.4**
comp=Z,27nm,0.6s,baz=10,slow=7.9,SNR=196
WRA PcP **PcP** **20 46 41.5 +1.6**
comp=Z,3.1nm,0.8s,baz=6.1,slow=3.8,SNR=3.1
WRA Warramunga Arr 50.77 190 P **P** **20 45 22.6 -0.5**
FITZ Fitzroy Crossi 51.02 201 P **P** **20 45 25.4 +0.5**
comp=Z,5.6nm,1.0s,baz=35,slow=12,SNR=9.8
FITZ Fitzroy Crossi 51.02 201 P **P** **20 45 25.2 +0.3**
SHLS Shalkode 51.15 303 *eP* **P** **20 45 23.9 -2.1**
baz=303
SHLS Shalkode 51.15 303 *eP* **P** **20 45 23.8 -2.1**
KOLN Koldanda 51.28 283 *eP* **P** **20 45 27.5 +0.3**
UZB Uzynbulak 51.47 303 *eP* **P** **20 45 28.6 +0.2**
baz=303
UZB Uzynbulak 51.47 303 *eP* **P** **20 45 28.6 +0.2**
TDK Taldyqorghan 51.67 305 *eP* **P** **20 45 30.2 +0.5**
baz=306
TDK Taldyqorghan 51.67 305 *eP* **P** **20 45 30.2 +0.5**
KPKS Kokpek 51.67 303 *eP* **P** **20 45 30.1 +0.2**
baz=304
KPKS Kokpek 51.67 303 *eP* **P** **20 45 30.0 +0.2**
PYUN Piuthan 51.69 283 *eP* **P** **20 45 31.3 +1.0**
comp=Z,16nm,0.4s
A21K Barrow 52.11 21 P **P** **20 45 33.3 +0.8**
A21K IAmb IAmb 20 45 33.9
comp=Z,7.0nm,0.8s
SKT Skwentna 52.22 33 P **P** **20 45 33.9 +0.4**
SKT IAmb IAmb 20 45 37.3
comp=Z,10nm,1.5s
MDOK Medeo 52.90 303 *eP* **P** **20 45 40.0 +1.0**
baz=303
MDOK Medeo 52.90 303 *eP* **P** **20 45 40.0 +1.0**
MLY Manley 52.91 29 P **P** **20 45 39.4 +0.8**
TRF Thorofare Moun 52.93 31 P **P** **20 45 38.8 -0.2**
TRF IAmb IAmb 20 45 54.2
comp=Z,8.4nm,1.3s
AAA Alma-Ata 52.98 303 *eP* **P** **20 45 39.9 +0.3**
baz=304
AAA Alma-Ata 52.98 303 *eP* **P** **20 45 39.8 +0.3**
TNSS Tian-Shan 52.99 303 *eP* **P** **20 45 40.8 +0.7**
baz=303
TNSS Tian-Shan 52.99 303 *eP* **P** **20 45 40.7 +0.7**
COLD Coldfoot 53.42 27 P **P** **20 45 41.9 -0.3**
RND Reindeer 53.57 31 P **P** **20 45 42.5 -1.0**
RND pmax pmax
comp=Z,5.0nm,1.0s
RND Reindeer 53.57 31 P **P** **20 45 42.5 -1.0**
RND IAmb IAmb 20 45 43.9
comp=Z,4.9nm,1.0s
NEA2 Nenana 53.57 30 P **P** **20 45 43.4 0.0**
NEA2 IAmb IAmb 20 45 45.1
comp=Z,6.3nm,0.9s
KNK Knik Glacier 53.64 34 P **P** **20 45 43.8 -0.2**
SML Sawmill 53.72 33 P **P** **20 45 44.8 +0.2**
TOLK Toolik Lake Re 53.86 25 P **P** **20 45 46.6 +1.0**
TOLK IAmb IAmb 20 45 47.7
comp=Z,9.0nm,1.1s
MDM Murphy Dome 53.96 29 P **P** **20 45 47.1 +0.8**

AS31 Alice Springs 54.49 190 P **P** **20 45 50.6 +0.1**
ASAR Alice Springs 54.49 190 P **P** **20 45 50.9 +0.3**
comp=Z,9.8nm,0.5s,baz=5.4,slow=6.0,SNR=274
ASAR PcP **PcP** **20 46 55.8 +2.0**
comp=Z,1.7nm,0.8s,baz=5.0,slow=4.3,SNR=1.9
ASAR Alice Springs 54.49 190 P **P** **20 45 50.2 -0.4**
IL31 54.52 30 P **P** **20 45 50.1 -0.2**
IL31 IAmb IAmb 20 45 52.3
comp=Z,6.6nm,1.4s
ILAR Eielson Array 54.52 30 P **P** **20 45 50.0 -0.4**
comp=Z,2.0nm,0.8s,baz=263,slow=6.3,SNR=18
SGDS Sogindy 54.59 304 *eP* **P** **20 45 51.3 0.0**
baz=304
SGDS Sogindy 54.59 304 *eP* **P** **20 45 51.2 0.0**
BTLS Baital 54.72 306 *eP* **P** **20 45 52.5 +0.3**
comp=Z,3.3nm,0.9s,baz=306
BTLS Baital 54.72 306 *eP* **P**
BTLS pmax pmax **20 45 52.4 +0.3**
comp=Z,3.0nm,0.9s
AAK Ala-Arcba 54.84 303 *i* P **P** **20 45 54.4 +1.2**
AAK pmax pmax
comp=Z,8.0nm,0.9s
AAK Ala-Arcba 54.84 303 P **P** **20 45 55.7 +2.5**
BRZS Berezniki 54.92 312 *eP* **P** **20 45 52.9 -0.7**
baz=312
BRZS Berezniki 54.92 312 *eP* **P** **20 45 52.8 -0.7**
PRP Porcupine Dome 55.13 29 P **P** **20 45 52.6 -2.4**
FYU Fort Yukon 55.30 28 P **P** **20 45 57.4 +1.4**
DOT Dot Lake 55.73 31 P **P** **20 45 58.7 -0.4**
SCRK Sand Creek 55.76 31 P **P** **20 45 59.4 -0.1**
BRVK Borovoye 56.03 316 *ce*P **P** **20 46 00.8 -0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 56.03 316 P **P** **20 46 01.7 +0.3**
BRVK IAmb IAmb 20 46 02.7
comp=Z,3.9nm,0.7s
EGAK Eagle 56.98 30 P **P** **20 46 08.1 +0.2**
KK31 Karatay Array 57.60 304 P **P** **20 46 13.5 +0.7**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 57.60 304 P **P** **20 46 13.5 +0.7**
KK31 IAmb IAmb 20 46 18.3
comp=Z,4.7nm,0.8s
KKAR Karatay Array 57.60 304 P **P** **20 46 13.5 +0.7**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 57.60 304 P **P** **20 46 13.5 +0.7**
KKAR IAmb IAmb 20 46 18.3
comp=Z,4.7nm,0.8s
DAWY Dawson 57.78 31 P **P** **20 46 14.4 +0.7**
DAWY IAmb IAmb 20 46 15.5
comp=Z,5.3nm,1.1s
NIL Nilore 58.00 293 P **P** **20 46 17.1 +1.3**
NIL pmax pmax
comp=Z,8.0nm,0.7s
NIL Nilore 58.00 293 P **P** **20 46 17.1 +1.3**
IUG luzhnay 58.17 303 *eP* **P** **20 46 17.3 +0.4**
comp=Z,3.8nm,0.7s,baz=303
IUG luzhnay 58.17 303 *eP* **P** **20 46 17.2 +0.4**
IUG pmax pmax
comp=Z,4.0nm,0.7s
EPYK Eagle Plains 58.72 28 P **P** **20 46 21.6 +1.3**
GAR Garm 58.76 300 P **P** **20 46 22.0 +0.9**
INK Inuvik 59.76 25 P **P** **20 46 27.2 -0.1**
comp=Z,1.7nm,0.5s,baz=306,slow=7.4,SNR=7.6
INK Inuvik 59.76 25 P **P** **20 46 27.7 +0.4**
INK pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 59.76 25 P **P** **20 46 27.7 +0.4**
KBL Kabul 61.05 295 P **P** **20 46 37.4 +0.4**
KBL pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 61.05 295 P **P** **20 46 37.4 +0.4**
KBL IAmb IAmb 20 46 43.4
comp=Z,6.0nm,0.8s
STKA Stephens Creek 62.01 181 P **P** **20 46 43.0 +0.1**
comp=Z,3.0nm,0.9s,baz=17,slow=8.2,SNR=5.2
STKA Stephens Creek 62.01 181 P **P** **20 46 43.0 +0.1**
ARU Arti 62.12 321 P **P** **20 46 43.8 +0.3**
comp=Z,1.2nm,0.6s,baz=88,slow=6.5,SNR=3.1
ARU Arti 62.12 321 *d* *i* P **P** **20 46 42.5 -1.1**
ARU 20 47 20.8
ARU S **S** **20 55 10.2 +3.4**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ARU Arti 62.12 321 P **P** **20 46 43.5 0.0**
ARU IAmb IAmb 20 46 47.4
comp=Z,11nm,1.3s
FORT Forrest 62.49 194 P **P** **20 46 46.5 +0.3**
C36M Paulatuk 62.94 23 P **P** **20 46 48.7 -0.1**
XMAS Kiritimati 63.09 105 P **P** **20 46 48.6 -2.1**
ABKAR Akbulak array 63.17 313 P **P** **20 46 51.2 +0.6**
ABKAR IAmb IAmb 20 46 53.9
comp=Z,6.0nm,1.1s
ABKAR Akbulak array 63.17 313 P **P** **20 46 51.2 +0.6**
AKTO Aktyubinsk 64.03 315 P **P** **20 46 56.4 +0.1**
comp=Z,1.6nm,0.7s,baz=75,slow=14,SNR=3.5
KIRV Kirov 66.24 325 P **P** **20 47 10.9 +0.5**
comp=Z,7.5nm,0.6s,baz=67,slow=11,SNR=4.8
KIRV Kirov 66.24 325 *ce*P **P** **20 47 10.4 0.0**
HRA Herat 66.38 297 P **P** **20 47 12.1 0.0**
HRA IAmb IAmb 20 47 15.7
comp=Z,4.4nm,1.2s
EUNU Eureka 66.51 8 P **P** **20 47 12.1 +0.1**
EUNU IAmb IAmb 20 47 12.7
comp=Z,6.9nm,0.8s
PRGR Permogore 66.94 329 *eP* **P** **20 47 12.6 -2.3**
PRGR pmax pmax
comp=Z,7.0nm,1.1s
NWAO Narrogin (SRO) 67.53 203 P **P** **20 47 19.7 +0.8**
NWAO pmax pmax
comp=Z,19nm,1.0s
NWAO Narrogin (SRO) 67.53 203 P **P** **20 47 19.7 +0.8**
GEYT Alibeck 68.16 302 P **P** **20 47 23.9 +0.8**
comp=Z,1.3nm,0.6s,baz=323,slow=2.2,SNR=3.6
RES Resolute Bay 68.68 14 P **P** **20 47 25.7 +0.1**
RES pmax pmax
comp=Z,4.0nm,0.9s
RES Resolute Bay 68.68 14 P **P** **20 47 25.7 +0.1**
RES IAmb IAmb 20 47 26.7
comp=Z,3.8nm,0.8s
YKA Yellowknife Ar 68.94 29 P **P** **20 47 27.5 0.0**
comp=Z,3.0nm,0.8s,baz=292,slow=6.0,SNR=40
BELG Belogornoye 69.46 319 P **P** **20 47 31.3 +0.5**
comp=Z,16nm,0.9s,baz=347,slow=7.8,SNR=6.2
ARCES ARCESS Array B 70.56 341 P **P** **20 47 37.8 +0.4**
comp=Z,3.0nm,0.9s,baz=52,slow=7.9,SNR=5.0
LTY Liberty 72.40 45 P **P** **20 47 47.9 -1.1**
LTY IAmb IAmb 20 48 14.1
comp=Z,5.7nm,1.3s
H04A Detroit Lake 72.56 48 P **P** **20 47 50.0 0.0**
B08A Colville Reser 72.72 44 P **P** **20 47 50.8 0.0**
B08A IAmb IAmb 20 47 52.5
comp=Z,6.3nm,1.1s
E07A Sunnyside 73.21 46 P **P** **20 47 54.5 +0.8**
E07A IAmb IAmb 20 47 55.7
comp=Z,6.7nm,0.9s
VRH Novokhopyorsk 73.28 320 *eP* **P** **20 47 53.2 -0.8**
VRH pmax pmax
comp=Z,9.0nm,0.6s
NEW Newport 74.08 43 P **P** **20 47 59.3 +0.5**
NEW pmax pmax
comp=Z,5.0nm,1.0s
NEW Newport 74.08 43 P **P** **20 47 59.3 +0.5**
NEW IAmb IAmb 20 48 00.5
comp=Z,4.8nm,1.0s
OBN Obninsk 74.09 325 *eP* **P** **20 47 57.8 -0.8**
OBN *e* 20 48 14.7
OBN *e* 20 50 44.1
OBN pmax pmax
comp=Z,6.0nm,1.0s
LPSR Galich'ya Gora 74.13 322 *eP* **P** **20 47 59.5 +0.6**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
E09A Wood Farm, Sta 74.28 45 P **P** **20 48 00.9 +0.9**
E09A IAmb IAmb 20 48 01.9
comp=Z,9.4nm,1.2s
G08A Pilot Rock 74.34 47 P **P** **20 48 00.4 -0.1**
VSR Storozhevoye 74.69 321 *eP* **P** **20 48 01.7 -0.5**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VORD Divnogorie 74.74 320 *eP* **P** **20 48 02.0 -0.5**
VORD pmax pmax
comp=Z,5.0nm,0.7s
FINES FINESS Array B 75.18 334 P **P** **20 48 05.2 +0.4**

comp=Z,3.8nm,0.8s,baz=63,slow=6.6,SNR=12
FINES FINESS Array B 75.18 334 *i* P **P** **20 48 05.1 +0.3**
FINES pmax pmax
comp=Z,4.0nm,0.8s
WALA Waterton Lakes 75.56 41 P **P** **20 48 07.5 0.0**
WALA IAmb IAmb 20 48 09.8
comp=Z,4.1nm,0.9s
AFDM Forest Hills D 75.95 53 P **P** **20 48 09.7 -0.1**
AFDM IAmb IAmb 20 48 31.0
comp=Z,7.0nm,1.0s
JTMT Jette 76.00 43 P **P** **20 48 10.8 +0.8**
JTMT IAmb IAmb 20 48 12.0
comp=Z,7.2nm,1.0s
KBZ Khabaz 76.13 313 P **P** **20 48 11.8 +1.2**
comp=Z,5.7nm,0.8s,baz=78,slow=4.0,SNR=20
KBZ Khabaz 76.13 313 *ce*P **P** **20 48 12.1 +1.5**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KIV Kislovodsk 76.15 313 *eP* **P** **20 48 11.3 +0.4**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV Kislovodsk 76.15 313 P **P** **20 48 12.0 +1.1**
KIV IAmb IAmb 20 48 13.9
comp=Z,5.8nm,0.8s
SUMG Summit 77.24 0 *i* P **P** **20 48 18.2 +1.3**
SUMG IAmb IAmb 20 48 18.8
comp=Z,5.8nm,0.7s
SUMG Summit 77.24 0 *i* P **P** **20 48 18.2 +1.3**
SUMG pmax pmax
comp=Z,6.0nm,0.7s
SUMG Summit 77.24 0 P **P** **20 48 16.0 -0.9**
SUMG IAmb IAmb 20 48 19.1
comp=Z,6.9nm,0.7s
RYN Ryan 77.79 52 P **P** **20 48 20.4 +0.1**
LHV Little Huntoon 77.98 53 P **P** **20 48 21.8 +0.6**
LHV IAmb IAmb 20 48 43.0
comp=Z,9.8nm,1.0s
NVAR Mina Array Bea 78.03 52 P **P** **20 48 22.9 +1.2**
comp=Z,2.7nm,0.7s,baz=291,slow=6.4,SNR=9.3
NVAR Mina Array Bea 78.03 52 P **P** **20 48 22.4 +0.7**
LRM Limekiln Ridge 78.06 44 P **P** **20 48 21.2 -0.6**
FFC Flin Flon 78.61 32 P **P** **20 48 24.6 +0.3**
FFC pmax pmax
comp=Z,6.0nm,1.0s
FFC Flin Flon 78.61 32 P **P** **20 48 24.6 +0.3**
FFC IAmb IAmb 20 48 25.3
comp=Z,5.7nm,1.0s
BOZ Bozeman (W) 78.67 44 P **P** **20 48 24.8 -0.2**
BOZ pmax pmax
comp=Z,4.0nm,1.2s
BOZ Bozeman (W) 78.67 44 P **P** **20 48 24.8 -0.2**
QLMT Earthquake Lak 79.20 44 P **P** **20 48 28.8 +0.7**
FCC Fort Churchill 79.36 26 P **P** **20 48 27.4 -0.9**
FCC pmax pmax
comp=Z,3.0nm,0.8s
FCC Fort Churchill 79.36 26 P **P** **20 48 27.4 -0.9**
R11A Troy Canyon, C 79.92 51 P **P** **20 48 33.1 +1.0**
H17A Grant Village 79.95 44 P **P** **20 48 32.2 0.0**
H17A IAmb IAmb 20 48 36.1
comp=Z,6.7nm,1.1s
TPNV Topopah Spring 80.18 53 P **P** **20 48 33.3 -0.2**
TPNV pmax pmax
comp=Z,5.0nm,1.0s
TPNV Topopah Spring 80.18 53 P **P** **20 48 33.3 -0.2**
TPNV IAmb IAmb 20 48 35.1
comp=Z,5.3nm,1.0s
MOOW Moose Ponds 80.19 45 P **P** **20 48 32.7 -0.8**
AKASG Malin Array Be 80.23 324 P **P** **20 48 33.5 +0.2**
comp=Z,4.7nm,0.7s,baz=49,slow=5.9,SNR=15
AKBB Malin Array Si 80.23 324 *ce*P **P** **20 48 34.0 +0.8**
RLMT Red Lodge 80.33 43 P **P** **20 48 35.0 +0.9**
HFS Hagfors 80.56 337 P **P** **20 48 34.4 -0.3**
comp=Z,1.7nm,0.6s,baz=88,slow=8.0,SNR=6.1
NOA NORSAR Array B 80.69 338 P **P** **20 48 35.6 +0.1**
comp=Z,2.4nm,0.8s,baz=39,slow=5.1,SNR=9.7
PRN Pahroc Range 80.77 52 P **P** **20 48 36.8 +0.2**
PRN IAmb IAmb 20 48 38.4
comp=Z,6.1nm,1.0s
SHPR Sheep Range 81.16 53 P **P** **20 48 39.5 +0.8**
PDAR Pinedale Array 81.46 45 P **P** **20 48 40.7 +0.4**
comp=Z,0.8nm,0.7s,baz=265,slow=1.8,SNR=7.2
PDAR Pinedale Array 81.46 45 P **P** **20 48 40.3 0.0**
PFO Pinyon Flats O 81.74 56 P **P** **20 48 41.9 +0.1**
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 81.74 56 P **P** **20 48 41.9 +0.1**
PFO IAmb IAmb 20 48 43.3
comp=Z,6.4nm,0.9s
KNB Kanab 82.49 51 P **P** **20 48 46.5 +0.8**
KNB pmax pmax
comp=Z,7.0nm,0.9s
KNB Kanab 82.49 51 P **P** **20 48 46.5 +0.8**
KNB IAmb IAmb 20 48 47.9
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 84.12 313 P **P** **20 48 55.0 +1.0**
comp=Z,4.7nm,0.7s,baz=82,slow=5.1,SNR=20
BRTR Keskin Array B 84.12 313 P **P** **20 48 54.5 +0.4**
TESR Tescani 84.15 321 ⇓P **P** **20 48 54.5 +0.6**
BIZ Bicaz 84.17 322 ⇓P **P** **20 48 55.1 +1.1**
BUR08 Bucovina Ar. S 84.20 323 P **P** **20 48 54.6 +0.4**
BUR08 IAmb IAmb 20 48 55.8
comp=Z,5.0nm,0.9s
TPGR Topolog 84.20 319 ⇓P **P** **20 48 53.5 -0.6**
BURAR Bucovina Array 84.21 323 ⇑P **P** **20 48 54.3 +0.1**
BURAR Bucovina Array 84.21 323 ⇑P **P** **20 48 54.3 +0.1**
PV14 Lion Creek, Pa 84.25 49 P **P** **20 48 55.3 +0.4**
RAYN Ar Rayn 84.29 294 P **P** **20 48 55.9 +0.8**
RAYN pmax pmax
comp=Z,14nm,0.8s
RAYN Ar Rayn 84.29 294 P **P** **20 48 55.9 +0.8**
PV05 Paradox Valley 84.37 49 P **P** **20 48 55.8 +0.3**
PV05 IAmb IAmb 20 48 57.2
comp=Z,8.9nm,1.3s
PV03 Paradox Valley 84.44 49 P **P** **20 48 56.4 +0.7**
PV03 IAmb IAmb 20 48 57.3
comp=Z,6.7nm,1.2s
PV13 Radium Mtn., P 84.51 49 P **P** **20 48 56.6 +0.5**
PV13 IAmb IAmb 20 48 57.5
comp=Z,5.1nm,1.2s
VRI Vrincioaia 84.51 321 ⇑P P 20 48 48.7 -7.1
VRI Vrincioaia 84.51 321 ⇑P P 20 48 48.7 -7.0
PLOR Plostina 84.56 321 ⇑P P 20 48 50.1 -5.9
PLOR Plostina 84.56 321 ⇑P P 20 48 50.1 -5.9
OZUR 84.88 322 ⇑P **P** **20 48 59.1 +1.4**
OJC Ojcow 85.16 327 P **P** **20 48 59.8 +0.9**
OJC pmax pmax
comp=Z,22nm,1.4s
OJC Ojcow 85.16 327 P **P** **20 48 59.8 +0.9**
DOPR Dopca 85.17 322 ⇑P **P** **20 48 59.2 +0.1**
TRPA Tarpa 85.24 325 ⇑P **P** **20 49 00.2 +0.9**
ARR Arges 85.96 321 ⇓P **P** **20 49 03.9 +0.8**
CLL Collm 87.38 331 *i* P **P** **20 49 10.5 +0.7**
CLL Collm 87.38 331 *i* P **P** **20 49 12.2 +2.4**
MDVR Moldovita 87.90 322 ⇓P **P** **20 49 08.7 -3.8**
GERES GERESS Array B 88.92 329 P **P** **20 49 17.9 +0.7**
comp=Z,0.3nm,0.5s,baz=32,slow=3.9,SNR=4.3
E38A The Farm, Brul 88.94 34 P **P** **20 49 17.1 -0.2**
BFO Black Forest 91.61 332 P **P** **20 49 29.8 +0.1**
BFO pmax pmax
comp=Z,6.0nm,0.9s
BFO Black Forest 91.61 332 P **P** **20 49 29.8 +0.1**
DAVOX Davos/Dischmat 92.16 330 P **P** **20 49 32.7 +0.2**
comp=Z,4.1nm,1.0s,baz=102,slow=5.8,SNR=6.6
TX31 Lajitas Ar. Si 93.16 53 P **P** **20 49 38.4 +1.1**
TX32 Lajitas Array 93.16 53 P **P** **20 49 38.5 +1.1**
TXAR Lajitas Array 93.16 53 P **P** **20 49 38.3 +0.9**
comp=Z,2.7nm,0.8s,baz=294,slow=2.7,SNR=27
TXAR Lajitas Array 93.16 53 P **P** **20 49 37.9 +0.5**
TXAR Lajitas Array 93.16 53 P **P** **20 49 37.9 +0.5**
TORD Torodi Ar. Bea 122.73 313 PKP **PKPdf** **20 55 18.9 -0.3**
comp=Z,0.7nm,0.9s,baz=11,slow=2.9,SNR=3.0
LPAZ La Paz 148.42 70 PKPbc **PKiKP** **20 56 11.9 -0.3**
comp=Z,7.7nm,0.8s,baz=322,slow=3.2,SNR=23
LPAZ La Paz 148.42 70 **PKPdf** **20 56 08.8 +1.7**
PLCA Paso Flores 151.16 120 PKPbc **PKiKP** **20 56 17.6 +1.1**
comp=Z,5.9nm,0.8s,baz=226,slow=2.3,SNR=8.2
PLCA Paso Flores 151.16 120 PKIKP **PKiKP** **20 56 16.4 -0.1**
PLCA Paso Flores 151.16 120 **PKiKP** **20 56 16.4 -0.1**
SIV San Ignacio 153.84 62 PKPbc **PKiKP** **20 56 23.6 +1.0**
comp=Z,1.7nm,0.7s,baz=275,slow=3.3,SNR=8.6

*NEIC **16** 20:37:15.9±1.2, 19.8N±0.1×65.96W±0.06, h6km±18km,*
Error ellipse: s-maj=21.2km s-min=7.8km az=188.0

*RSPR **16** 20:37:20.6, 19.84N×65.93W, h14km±8km, MD3.0/5*
ISC 16 20:37:19.7±2.5, 19.7N±0.1×65.96W±0.07, h10km, n24, σ0s86/26, 3C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**1.28**	**205**	Pn	**Pn**	**20 37 41.9**	**-1.8**
EMPR				IAML		20 37 58.0	
	comp=E,129nm,1.9s						
GCPR	**Guaynabo City**	**1.34**	**185**	Pn	Pn	20 37 42.7	-1.8
GCPR				IAML		20 38 08.2	
	comp=E,41nm,0.8s						
GCPR				IAML		20 38 36.9	
	comp=N,38nm,1.7s						
CBYP	**Canovanas**	**1.37**	**176**	*e*P	**Pn**	**20 37 44.2**	**-0.8**
CBYP	**Canovanas**	**1.37**	**176**	*e*S	**Sn**	**20 38 04.1**	**+0.8**
CBYP	**Canovanas**	**1.37**	**176**		**Pn**	**20 37 43.7**	**-1.3**
CBYP				IAML		20 38 01.6	
	comp=N,101nm,0.2s						
CBYP				IAML		20 38 11.4	
	comp=E,108nm,0.2s						
CBYP	**Canovanas**	**1.37**	**176**		**Sn**	**20 38 04.1**	**+0.8**
CUPR	**Culebra, Puert**	**1.48**	**154**	*e*P	**Pn**	**20 37 46.2**	**-0.2**
CUPR	**Culebra, Puert**	**1.48**	**154**	*e*S	**Sn**	**20 38 06.0**	**+0.2**
CUPR	**Culebra, Puert**	**1.48**	**154**		**Pn**	**20 37 46.2**	**-0.2**
CUPR					**Sn**	**20 38 06.0**	**+0.2**
AOPR	**Arecibo Observ**	**1.50**	**210**	*e*P	**Pn**	**20 37 46.5**	**-0.2**
AOPR	**Arecibo Observ**	**1.50**	**210**	*e*S	**Sn**	**20 38 06.9**	**+0.5**
AOPR	**Arecibo Observ**	**1.50**	**210**		**Pn**	**20 37 45.1**	**-1.6**
AOPR				IAML		20 38 12.0	
	comp=N,109nm,0.6s						
AOPR	**Arecibo Observ**	**1.50**	**210**		**Sn**	**20 38 06.9**	**+0.5**
SJG	**San Juan**	**1.54**	**187**		**Pn**	**20 37 46.0**	**-1.3**
SJG				IAML		20 38 48.8	
	comp=N,61nm,0.2s						
SJG				IAML		20 38 49.0	
	comp=N,44nm,0.2s						
MTP	**Monte Pirata**	**1.59**	**166**	*e*P	**Pn**	**20 37 47.6**	**-0.3**
MTP	**Monte Pirata**	**1.59**	**166**	*e*S	**Sn**	**20 38 09.4**	**+0.8**
MTP	**Monte Pirata**	**1.59**	**166**		**Pn**	**20 37 47.6**	**-0.3**
MTP					**Sn**	**20 38 09.4**	**+0.8**
STVI	**Saint Thomas**	**1.60**	**143**	Pn	**Pn**	**20 37 47.5**	**-0.6**
STVI				IAML		20 38 21.4	
	comp=N,27nm,0.8s						
PDPR	**Patillas Dam,**	**1.62**	**182**		**Pn**	**20 37 47.5**	**-0.9**
PDPR				IAML		20 38 33.6	
	comp=E,47nm,1.9s						
CELP	**Cerrillos**	**1.67**	**201**	*e*P	**Pn**	**20 37 49.5**	**+0.4**
CELP	**Cerrillos**	**1.67**	**201**	*e*S	**Sn**	**20 38 11.5**	**+0.9**
CELP	**Cerrillos**	**1.67**	**201**		**Pn**	**20 37 49.5**	**+0.4**
CELP					**Sn**	**20 38 11.5**	**+0.9**
MLPR	**Magueyes Islan**	**1.96**	**212**	Pn	**Pn**	**20 37 52.1**	**-0.9**
MLPR				IAML		20 38 16.9	
	comp=N,31nm,2.5s						
MLPR				IAML		20 38 45.4	
	comp=E,23nm,2.2s						
SDDR	**Presa de Saban**	**5.08**	**263**	Pn	**Pn**	**20 38 36.0**	**+0.1**

*TUN **16** 20:56:05.8, 34.79N×9.66E, h18km±4km, MD3.8, Hypocentre not reviewed by the ISC*
*IDC **16** 20:56:05.7±1.3, 34.66N×9.74E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.2/52, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=22.2km s-min=12.5km az=85.0*
*LDG **16** 20:56:10.3±0.3, 34.53N×9.37E, h25km, Ml3.1/4, Error ellipse: s-maj=19.9km s-min=6.3km az=67.0*
ISC 16 20:56:08.1±1.0, 34.81N±0.07×9.45E±0.08, h10km, n22, σ2s65/24, mb3.5/4, Tunisia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEST	**Kesra**	**0.92**	**355**	Pg	**Pg**	**20 56 27.8**	**+1.9**
	135nm,0.3s,baz=95,slow=5.6,SNR=774						
KEST				Lg	Lg	20 56 42.2	
	82nm,0.3s,baz=292,slow=10,SNR=24						
THTN	**Thala**	**0.97**	**320**	*i* P		23 57 25.9	
KRIT	**Krib**	**1.56**	**349**	*i* P		23 57 42.3	
GHAT	**Ghardimaou**	**1.92**	**331**	*i* P		23 57 43.2	
BLIT	**Baltah**	**1.94**	**348**	*i* P		23 57 47.9	
VAE	**Valguarnera**	**4.82**	**55**	Pn	**Pn**	**20 57 19.4**	**-1.4**
	0.9nm,0.3s,baz=198,slow=19,SNR=6.2						
VAE				Sn	**Sn**	**20 58 13.1**	**-3.6**
	0.8nm,0.3s,baz=37,slow=11,SNR=1.2						
PGF	**Pioggiola**	**7.74**	**358**	*e*Pn	**Pn**	**20 58 04.9**	**+4.0**
LMR	**La Mourre**	**8.81**	**346**	*e*Pn	**Pn**	**20 58 16.0**	**+0.5**
LMR				*e*Sn	**Sn**	**20 59 51.9**	**-3.0**
	1.2nm,0.3s						
FRF	**La Foret Royal**	**9.00**	**347**	*e*Pn	**Pn**	**20 58 19.4**	**+1.2**
FRF				*e*Sn	**Sn**	**20 59 56.1**	**-3.5**
	0.7nm,0.3s						
SBF	**Sospel**	**9.17**	**351**	*e*Pn	**Pn**	**20 58 22.3**	**+1.7**
SMRF	**Simiane la Rot**	**9.63**	**343**	*e*Pn	**Pn**	**20 58 29.6**	**+2.8**
MBDF	**Montbardon**	**10.12**	**349**	*e*Pn	**Pn**	**20 58 37.1**	**+3.6**
MTLF	**Montolieu**	**10.20**	**329**	*e*Pn	**Pn**	**20 58 34.4**	**-0.2**
MTLF				*e*Sn	**Sn**	**21 00 24.5**	**-4.5**
	0.5nm,0.4s						
LASF	**Ste Croix**	**10.21**	**337**	*e*Pn	**Pn**	**20 58 36.6**	**+1.9**
LASF				*e*Sn	**Sn**	**21 00 25.1**	**-4.2**
	1.0nm,0.4s						
VIVF	**Saint-Julien-l**	**10.68**	**341**	*e*Pn	**Pn**	**20 58 42.5**	**+1.3**
EPF	**Esparros**	**10.84**	**322**	*e*P	Pn	20 58 49.7	+6.3
LPG	**La Plagne**	**10.87**	**350**	*e*Pn	**Pn**	**20 58 45.5**	**+1.5**
CAF	**Calviac**	**11.58**	**333**	*e*P	Pn	20 58 59.5	+6.0
ESDC	**Sonseca Array**	**11.74**	**298**	Pn	**Pn**	**20 58 58.2**	**+2.6**
	0.1nm,0.3s,baz=148,slow=31,SNR=2.9						
MDT	**Midelt**	**11.86**	**264**	Pn	**Pn**	**20 58 58.5**	**+1.0**
	0.2nm,0.3s,baz=311,slow=22,SNR=5.6						
LFF	**La Frestale**	**12.12**	**329**	*e*Pn	**Pn**	**20 59 02.0**	**+1.2**
MLR	**Muntele Rosu**	**16.48**	**45**	Pn	**Pn**	**21 00 02.6**	**+3.1**
	0.2nm,0.3s,baz=245,slow=6.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**22.68**	**200**	P	**P**	**21 01 09.4**	**-0.4**
	0.5nm,0.5s,baz=8.3,slow=9.5,SNR=5.5						
KOWA	**Kowa**	**23.59**	**214**	P	**P**	**21 01 17.8**	**-1.4**
	0.9nm,0.5s,baz=31,slow=12,SNR=2.5						
FINES	**FINESS Array B**	**28.69**	**17**	P	**P**	**21 02 04.8**	**-0.2**
	1.1nm,0.7s,baz=207,slow=8.1,SNR=3.8						
MKAR	**Makanchi Array**	**54.57**	**54**	P	P	21 05 33.6	-2.9
	0.3nm,0.8s,baz=282,slow=7.2,SNR=2.3						

IDC 16 21:03:15.5±1.8, 28.40N×104.25E, h0km, mb3.1/2, mb1 3.2/3, mb1mx3.1/37, mbtmp3.1/3, ML3.4/1, Error ellipse: s-maj=91.1km s-min=30.9km az=65.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.48**	**4**	P	P	21 07 44.0	0.0
	0.1nm,0.3s,baz=189,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**25.16**	**323**	P	P	21 08 42.4	0.0
	0.2nm,0.5s,baz=129,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**59.13**	**148**	P	P	21 13 18.0	-0.1
	0.2nm,0.6s,baz=324,slow=6.2,SNR=1.6						

*IDC **16** 21:39:09.0±2.4, 34.24S×179.34W, h0km, mb4.2/3, mb1 4.4/4, mb1mx4.0/30, mbtmp4.3/4, ML4.5/1, MS3.7/4, Ms1 3.7/4, ms1mx3.1/38, Error ellipse: s-maj=61.3km s-min=42.3km az=135.0*
*NEIC **16** 21:39:10.7±2.2, 34.4S±0.1×178.8W±0.2, h41km±14km, mb4.3/12, Error ellipse: s-maj=22.6km s-min=16.6km az=95.0*
*WEL **16** 21:39:12.5±1.1, 35°S±9'×17°9W±1°5, h33km, M4.3/16, mB5.2/1, ML4.6/16, MLv4.3/16, Mw(mB)4.5/1, Error ellipse: s-maj=0.0km s-min=0.0km az=117.8*
ISC 16 21:39:09.9±1.2, 34.50S±0.08×178.7W±0.1, h35km, n55, σ1s38/61, mb4.2/10, MS3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.92**	**218**	Pn	**Pn**	**21 40 08.1**	**+0.4**
MXZ	**Matakaoa Point**	**3.92**	**218**	P	**Pn**	**21 40 06.3**	**-1.4**
MXZ				S	**Sn**	**21 40 50.2**	**-2.2**
WMGZ	**Waiomatatini S**	**4.07**	**215**	P	**Pn**	**21 40 12.0**	**+2.2**
WMGZ				S	**Sn**	**21 40 58.2**	**+2.0**
PKGZ	**Pakihiroa**	**4.29**	**217**	P	**Pn**	**21 40 13.3**	**+0.6**
PKGZ				S	**Sn**	**21 41 01.8**	**+0.2**
HAZ	**Te Kaha**	**4.34**	**221**	P	**Pn**	**21 40 14.8**	**+1.3**
HAZ				S	**Sn**	**21 41 04.8**	**+2.0**
PUZ	**Puketiti**	**4.35**	**214**	P	**Pn**	**21 40 14.2**	**+0.6**
PUZ				S	**Sn**	**21 41 02.5**	**-0.6**
RUGZ	**Raukumara Rang**	**4.55**	**220**	P	**Pn**	**21 40 17.0**	**+0.6**
TWGZ	**Tauwhareparae**	**4.56**	**216**	P	**Pn**	**21 40 18.1**	**+1.5**
TWGZ				S	**Sn**	**21 41 08.8**	**+0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**4.71**	**212**	P	**Pn**	**21 40 18.8**	**+0.3**
TKGZ	**Te Karaka**	**4.84**	**215**	P	**Pn**	**21 40 21.8**	**+1.6**
WHRZ	**Whale Island**	**4.87**	**225**	P	**Pn**	**21 40 22.1**	**+1.4**
MWZ	**Matawai**	**4.91**	**218**	P	**Pn**	**21 40 21.4**	**+0.1**
MWZ				S	**Sn**	**21 41 16.3**	**-0.5**
URZ	**Urewera**	**5.07**	**221**	Pn	**Pn**	**21 40 23.7**	**+0.2**
	21nm,0.3s,baz=302,slow=23,SNR=66						
URZ				Sn	**Sn**	**21 41 18.3**	**-2.4**
	2.1nm,0.3s,baz=120,slow=23,SNR=1.5						
URZ	**Urewera**	**5.07**	**221**		**Pn**	**21 40 23.5**	**0.0**
URZ	**Urewera**	**5.07**	**221**	P	**Pn**	**21 40 23.2**	**-0.3**
URZ				S	**Sn**	**21 41 19.0**	**-1.8**
RAGZ	**Rawiri**	**5.09**	**217**	P	**Pn**	**21 40 24.9**	**+1.2**
RAGZ				S	**Sn**	**21 41 20.5**	**-0.9**
RIGZ	**Rimuhau**	**5.09**	**213**	P	**Pn**	**21 40 23.6**	**-0.1**
RIGZ				S	**Sn**	**21 41 21.3**	**0.0**
KUZ	**Kuaotunu**	**5.10**	**242**	P	**Pn**	**21 40 25.8**	**+2.0**
OPRZ	**Ohinepanea**	**5.11**	**228**	P	**Pn**	**21 40 24.9**	**+0.9**
GRZ	**Great Barrier**	**5.12**	**248**	P	**Pn**	**21 40 24.6**	**+0.6**
MARZ	**Manawahe**	**5.13**	**226**	P	**Pn**	**21 40 24.9**	**+0.6**
SNGZ	**Shannon Statio**	**5.35**	**216**	P	**Pn**	**21 40 26.9**	**-0.4**
SNGZ				S	**Sn**	**21 41 26.4**	**-1.3**
WIAZ	**Waiheke Island**	**5.55**	**244**	P	**Pn**	**21 40 31.5**	**+1.4**
BKZ	**Black Stump Fm**	**6.07**	**218**		**Pn**	**21 40 36.5**	**-0.7**
OUZ	**Omahuta**	**6.41**	**261**		**Pn**	**21 40 43.1**	**+1.3**
BFZ	**Birch Farm**	**7.38**	**212**	Pn	**Pn**	**21 40 53.1**	**-2.0**
CMWZ	**Cape Campbell**	**9.16**	**216**	Pn	**Pn**	**21 41 18.4**	**-1.1**
BSWZ	**Blackbirch Sta**	**9.30**	**217**	Pn	**Pn**	**21 41 23.0**	**+1.6**
QRZ	**Quartz Range**	**9.41**	**225**	Pn	**Pn**	**21 41 23.9**	**+0.8**
THZ	**Tophouse**	**9.83**	**220**	Pn	**Pn**	**21 41 30.8**	**+2.0**
KHZ	**Kahutara**	**9.99**	**215**	Pn	**Pn**	**21 41 32.1**	**+1.2**
LTZ	**Lake Taylor**	**10.89**	**218**	Pn	**Pn**	**21 41 43.1**	**-0.1**
RPZ	**Rata Peaks**	**12.18**	**218**	Pn	Pn	21 41 55.5	-5.3
	0.5nm,0.3s,baz=194,slow=1.3,SNR=1.9						
RPZ				Sn	Sn	21 44 02.8	-12
	0.7nm,0.3s,baz=250,slow=23,SNR=1.3						
ODZ	**Otahua Downs**	**13.35**	**215**	Pn	**Pn**	**21 42 14.8**	**-2.0**
MSVF	**Nonsavu**	**16.95**	**349**	LR	LR	21 47 57.7	
	comp=Z,135nm,19.1s,baz=200,slow=32						
EIDS	**Eidsvold**	**27.67**	**281**	P	**P**	**21 44 52.7**	**-1.9**
STKA	**Stephens Creek**	**33.22**	**263**	P	P	21 45 37.2	-6.4
	2.3nm,0.7s,baz=166,slow=18,SNR=7.8						
STKA				LR	LR	21 57 30.7	
	comp=Z,161nm,19.2s,baz=198,slow=34						
STKA	**Stephens Creek**	**33.22**	**263**	P	P	21 45 37.3	-6.4
TARA	**Tarawa**	**36.53**	**346**	P	**P**	**21 46 11.8**	**-0.4**
COEN	**Coen**	**40.05**	**291**	P	P	21 46 36.7	-5.2
COEN				IAmb	IAmb	21 46 40.4	
	comp=Z,5.3nm,0.9s						
AS31	**Alice Springs**	**42.50**	**272**	P	**P**	**21 47 01.8**	**-0.3**
ASAR	**Alice Springs**	**42.50**	**272**	P	**P**	**21 47 01.7**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=114,slow=7.9,SNR=38						
ASAR				LR	LR	22 03 53.5	
	comp=Z,88nm,18.3s,baz=202,slow=35						
WR0	**Warramunga Arr**	**43.69**	**277**	P	**P**	**21 47 10.8**	**-0.8**
WR0				IAmb	IAmb	21 47 19.1	
	comp=Z,5.8nm,1.4s						
WB2	**Warramunga Arr**	**43.85**	**277**	P	**P**	**21 47 12.5**	**-0.5**
WB2				IAmb	IAmb	21 47 13.4	
	comp=Z,8.0nm,1.2s						
WRAB	**Tennant Creek**	**43.85**	**277**	P	**P**	**21 47 12.6**	**-0.4**
WRAB				IAmb	IAmb	21 47 28.9	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**43.86**	**277**	P	**P**	**21 47 12.3**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=116,slow=7.5,SNR=32						
WRA	**Warramunga Arr**	**43.86**	**277**	P	**P**	**21 47 11.2**	**-1.9**
WB0	**Warramunga Arr**	**43.90**	**277**	P	**P**	**21 47 13.0**	**-0.4**
WB0				IAmb	IAmb	21 47 31.3	
	comp=Z,3.8nm,1.1s						
CASY	**Casey**	**51.28**	**209**	P	**P**	**21 48 12.9**	**+2.9**
CASY				IAmb	IAmb	21 48 17.7	
	comp=Z,4.1nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.92**	**273**	P	**P**	**21 48 15.1**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=104,slow=8.0,SNR=2.1						
FITZ	**Fitzroy Crossi**	**51.92**	**273**	P	**P**	**21 48 14.7**	**-0.7**
FAKI	**Fak Fak**	**55.34**	**293**	P	**P**	**21 48 38.7**	**-1.9**
LPIG	**La Paz**	**87.16**	**58**	LR	LR	22 23 30.9	
	comp=Z,72nm,20.9s,baz=30,slow=30						
MKAR	**Makanchi Array**	**119.93**	**308**	PKP	**PKiKP**	**21 58 00.1**	**+3.7**
	comp=Z,0.3nm,0.8s,baz=64,slow=3.4,SNR=2.2						
FINES	**FINESS Array B**	**148.75**	**337**	PKPbc	**PKPab**	**21 58 55.4**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=52,slow=5.4,SNR=5.0						

IDC 16 21:40:35.3±2.0, 1.49N×123.87E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/45, mbtmp3.3/3, Error ellipse: s-maj=214.5km s-min=28.1km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.64**	**155**	P	P	21 45 47.9	-0.7
	0.4nm,0.3s,baz=330,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.84**	**159**	P	P	21 46 18.7	+1.0
	0.3nm,0.6s,baz=350,slow=8.0,SNR=4.7						
MKAR	**Makanchi Array**	**57.83**	**327**	P	P	21 50 28.4	-0.4
	0.2nm,0.6s,baz=124,slow=8.9,SNR=2.9						

*IDC **16** 21:51:28.9±1.3, 35.95N×26.65E, h0km, mb3.4/3, mb1 3.4/4, mb1mx3.1/48, mbtmp3.3/4, ML3.1/1, Error ellipse: s-maj=48.1km s-min=12.6km az=157.0*
*ATH **16** 21:51:28.6, 34.98N×26.79E, h13km±2km, ML3.2/3, Error ellipse: s-maj=4.5km s-min=1.1km az=338.0*
*THE **16** 21:51:30.3, 35.20N×26.67E, h0km±1km, ML3.0/4, Error ellipse: s-maj=4.5km s-min=0.8km az=156.0*
ISC 16 21:51:29.6±1.6, 35.22N±0.06×26.67E±0.03, h11km±12km, n19, σ1s23/26, mb3.2/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.39**	**254**	P	**Pb**	**21 51 37.8**	**-0.6**
ZKR				S	**Sb**	**21 51 45.3**	**+0.9**
ZKR				AML	AML	21 51 46.0	
	comp=E,7427μm,0.2s						
ZKR				AML	AML	21 51 46.3	
	comp=N,3777μm,0.3s						
ZKR	**Zakros**	**0.39**	**254**	P	**Pb**	**21 51 37.9**	**-0.6**
ZKR				S	**Sb**	**21 51 44.9**	**+0.5**
	comp=N,3μm,0.3s						
KARP	**Karpathos**	**0.52**	**51**	P	**Pb**	**21 51 40.6**	**-0.1**
KARP				S	**Sb**	**21 51 49.7**	**+1.5**
KARP				AML	AML	21 51 51.1	
	comp=E,8730μm,0.4s						
KARP				AML	AML	21 51 52.0	
	comp=N,8783μm,0.6s						
KARP	**Karpathos**	**0.52**	**51**	P	**Pb**	**21 51 40.6**	**-0.1**
KARP				S	**Sb**	**21 51 49.7**	**+1.5**
	comp=N,4μm,0.4s						
NPS	**Neapolis**	**0.87**	**273**	P	**Pb**	**21 51 47.4**	**+0.8**
NPS				S	**Sn**	**21 52 00.9**	**+0.5**
NPS				AML	AML	21 52 03.5	
	comp=N,2246μm,0.5s						
NPS				AML	AML	21 52 03.8	
	comp=E,2210μm,0.5s						
NPS	**Neapolis**	**0.87**	**273**	P	**Pb**	**21 51 47.4**	**+0.8**
NPS				S	**Sn**	**21 52 00.9**	**+0.5**
	comp=E,1μm,0.5s						
IDI	**Anoyia**	**1.46**	**273**	Pg	**Pb**	**21 51 57.5**	**+0.7**
	comp=E,8.0nm,0.3s,baz=235,slow=3.4,SNR=15						
IDI				Lg	Lg	21 52 19.6	
	comp=E,20nm,0.3s,baz=346,slow=13,SNR=11						
IDI	**Anoyia**	**1.46**	**273**	P	**Pb**	**21 51 57.8**	**+1.0**
IDI	**Anoyia**	**1.46**	**273**	P	**Pn**	**21 51 56.6**	**+0.7**
IDI				S	**Sn**	**21 52 17.1**	**+2.1**
	comp=E,208nm,0.4s						
SANT	**Santorini**	**1.51**	**320**	P	**Pg**	**21 51 58.2**	**-0.4**
SANT	**Santorini**	**1.51**	**320**	P	**Pn**	**21 51 57.5**	**+0.9**
SIVA	**Sivas**	**1.54**	**263**	P	**Pg**	**21 51 58.3**	**-0.8**
ARG	**Arkhangelos**	**1.55**	**50**	P	**Pg**	**21 51 59.0**	**-0.3**
ARG	**Arkhangelos**	**1.55**	**50**	P	**Pg**	**21 51 59.0**	**-0.3**
THR9	**Santorini-Faro**	**1.56**	**317**	P	**Pn**	**21 51 58.2**	**+1.0**
MMAI	**Mount Meron Ar**	**7.57**	**104**	Pn	**Pn**	**21 53 21.6**	**+1.7**
	comp=E,0.2nm,0.3s,baz=301,slow=18,SNR=1.5						
ESDC	**Sonseca Array**	**24.66**	**290**	P	**P**	**21 56 47.9**	**-2.4**
	comp=E,0.2nm,0.5s,baz=76,slow=9.7,SNR=6.2						
MKAR	**Makanchi Array**	**42.71**	**57**	P	**P**	**21 59 24.9**	**-1.6**
	comp=E,0.2nm,0.4s,baz=265,slow=7.8,SNR=6.2						
ZALV	**Zalesovo Beam**	**44.07**	**46**	P	**P**	**21 59 35.0**	**-2.3**
	comp=E,0.6nm,0.4s,baz=290,slow=8.0,SNR=3.5						

*IDC **16** 21:52:19.8±0.7, 35.35N×26.81E, h0km, mb4.1/28, mb1 4.1/30, mb1mx4.0/47, mbtmp4.1/30, ML2.4/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/65, Error ellipse: s-maj=17.8km s-min=12.4km az=155.0*
*HLW **16** 21:52:21.4, 35.16N×27.15E, h11km±12km, Md4.3, Ml4.3*
*NIC **16** 21:52:21.8±0.0, 35.02N×27.01E, h10km±3km, Ml4.5/4*
*ISK **16** 21:52:22.2, 35.07N×26.97E, h18km, ML4.2/27*
*ATH **16** 21:52:24.5, 35.22N×26.86E, h31km±5km, ML4.2/6, Error ellipse: s-maj=6.0km s-min=1.4km az=144.0*
*THE **16** 21:52:24.1, 35.16N×26.89E, h0km±1km, ML4.2/8, Error ellipse: s-maj=3.2km s-min=0.7km az=149.0*
*DDA **16** 21:52:26.8, 35.54N×26.97E, h18km±2km, MW4.1*
ISC 16 21:52:23.6±0.9, 35.10N±0.03×26.96E±0.02, h30km±6km, n244, σ1s90/280, mb4.0/29, 12C-10D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.48**	**20**	P	**Pb**	**21 52 32.8**	**-0.9**
KARP				S	**Sb**	**21 52 40.4**	**-0.3**
KARP				AML	AML	21 52 42.9	
KARP				AML	AML	21 52 42.9	
KARP	**Karpathos**	**0.48**	**20**	P	**Pb**	**21 52 32.9**	**-0.9**
KARP				S	**Sb**	**21 52 40.5**	**-0.3**
	69μm,0.4s						
KARP	**Karpathos**	**0.48**	**20**	PG	**Pb**	**21 52 32.6**	**-1.2**
KARP				SG	**Sb**	**21 52 40.5**	**-0.3**
KARP	**Karpathos**	**0.48**	**20**	P	**Pb**	**21 52 32.9**	**-0.9**
KARP				S	**Sb**	**21 52 41.2**	**+0.4**
KARP				AML	AML	21 52 42.4	
	137nm,0.4s						
KARP				AML	AML	21 52 42.4	
	137nm,0.4s						
KARP				AML	AML	21 52 42.4	
	139nm,0.4s						
KARP				AML	AML	21 52 42.4	
	139nm,0.4s						
ZKR	**Zakros**	**0.61**	**272**	P	**Pb**	**21 52 34.4**	**-1.4**
ZKR				S	**Sb**	**21 52 43.6**	**-0.5**
ZKR				AML	AML	21 52 47.3	
	comp=E,48872μm,0.4s						
ZKR				AML	AML	21 52 48.7	
	comp=N,20270μm,0.4s						
ZKR	**Zakros**	**0.61**	**272**	P	**Pb**	**21 52 34.4**	**-1.4**
ZKR				S	**Sb**	**21 52 44.6**	**+0.5**
	comp=N,17μm,0.4s						
ZKR	**Zakros**	**0.61**	**272**	PG	**Pb**	**21 52 34.5**	**-1.4**
ZKR				SG	**Sb**	**21 52 44.3**	**+0.2**
ZKR	**Zakros**	**0.61**	**272**	P	**Pb**	**21 52 34.3**	**-1.5**
ZKR				S	**Sb**	**21 52 44.8**	**+0.7**
ZKR				AML	AML	21 52 46.1	
	comp=N,46nm,0.4s						
ZKR				AML	AML	21 52 46.1	
	comp=N,46nm,0.4s						
FRMA	**Ierapetra Chan**	**1.01**	**266**	P	**Pn**	**21 52 39.8**	**-1.8**
FRMA				S	**Sb**	**21 52 55.2**	**-0.2**
NPS	**Neapolis**	**1.11**	**279**	P	**Pn**	**21 52 44.1**	**+1.0**
NPS				AML	AML	21 53 03.4	
	comp=N,23752μm,0.5s						
NPS				AML	AML	21 53 04.7	
	comp=E,26255μm,0.6s						
NPS	**Neapolis**	**1.11**	**279**	P	**Pn**	**21 52 44.0**	**+0.9**
NPS				S	**Sn**	**21 52 59.6**	**+2.1**
	comp=E,13μm,0.6s						
ARG	**Arkhangelos**	**1.47**	**40**	P	**Pn**	**21 52 50.5**	**+2.5**
ARG				AML	AML	21 53 15.7	
	comp=E,20986μm,0.7s						
ARG				AML	AML	21 53 16.3	
	comp=N,11524μm,0.8s						
ARG	**Arkhangelos**	**1.47**	**40**	P	**Pb**	**21 52 51.2**	**+0.9**
ARG				S	**Sb**	**21 53 10.6**	**+2.0**
	comp=N,8μm,0.8s						
ARG	**Arkhangelos**	**1.47**	**40**	PN	**Pn**	**21 52 49.2**	**+1.2**
ARG				SN	**Sn**	**21 53 08.3**	**+2.1**
ARG	**Arkhangelos**	**1.47**	**40**	S	**Sn**	**21 53 09.1**	**+2.8**
NIS1	**Nisyros Isl.**	**1.51**	**7**	P	**Pn**	**21 52 49.7**	**+1.0**
NIS1				AML	AML	21 53 28.9	
	comp=E,16378μm,0.6s						
NIS1				AML	AML	21 53 31.8	
	comp=N,13272μm,0.4s						
NIS1	**Nisyros Isl.**	**1.51**	**7**	P	**Pn**	**21 52 50.4**	**+1.7**
NIS1				S	**Sn**	**21 53 09.9**	**+2.5**
	comp=N,8μm,0.5s						
NIS1	**Nisyros Isl.**	**1.51**	**7**	PN	**Pn**	**21 52 49.6**	**+1.0**
IACM	**Heraklion**	**1.56**	**278**	P	**Pb**	**21 52 52.2**	**+0.4**
KSTL	**Kastelli Herak**	**1.56**	**278**	P	**Pn**	**21 52 48.2**	**-1.0**
KSTL				S	**Sn**	**21 53 06.8**	**-1.6**
KOSK	**Kos Island**	**1.65**	**1**	P	**Pn**	**21 52 51.8**	**+1.3**
KOSK	**Kos Island**	**1.65**	**1**	PN	**Pn**	**21 52 51.5**	**+1.0**
IDI	**Anoyia**	**1.70**	**277**	Pg	**Pn**	**21 52 54.1**	**+2.8**
	comp=N,114nm,0.3s,baz=95,slow=15,SNR=33						
IDI

SMG	**Samos**	**2.61**	**358**	P		**Pn**	**21 53 04.7**	**+1.0**
AYDN	**Tasoluk**	**2.67**	**16**	*i* P		**Pn**	**21 53 06.6**	**+2.0**
AYDN				*i* S		**Sn**	**21 53 31.8**	**-4.1**
KNDR	**Palaiochora Ch**	**2.68**	**274**	P		**Pn**	**21 53 06.9**	**+2.2**
KNDR	**Palaiochora Ch**	**2.68**	**274**	PN		**Pn**	**21 53 06.5**	**+1.8**
CAEL	**Denizli, Camel**	**2.79**	**43**	*i* P		**Pn**	**21 53 08.7**	**+2.4**
CAEL				*i* S		**Sn**	**21 53 40.7**	**+1.7**
TAVA	**DENIZLI_Tavas**	**2.84**	**33**	*i* P		**Pn**	**21 53 09.1**	**+2.1**
TAVA				*i* S		**Sn**	**21 53 41.3**	**+0.9**
ELL	**Elmali**	**2.91**	**55**	PN		**Pn**	**21 53 09.2**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**2.94**	**15**	PN		**Pn**	**21 53 10.1**	**+1.7**
DGB	**zmir**	**2.95**	**359**	*i* P		**Pn**	**21 53 09.5**	**+1.1**
DGB				*i* S		**Sn**	**21 53 38.3**	**-4.4**
AKUM	**Antalya-Kumluc**	**3.02**	**65**	*i* P		**Pn**	**21 53 10.9**	**+1.6**
ANKY	**Antikythira Is**	**3.08**	**286**	P		**Pn**	**21 53 13.1**	**+2.9**
ZEYE	**Izmir, Urla-Ze**	**3.16**	**354**	*i* P		**Pn**	**21 53 11.9**	**+0.7**
ZEYE				*i* S		**Sn**	**21 53 49.5**	**+1.6**
URLA	**Izmir**	**3.27**	**355**	*i* P		**Pn**	**21 53 12.8**	**0.0**
URLA				*i* S		Sn	21 53 41.5	-9.2
URLA	**Izmir**	**3.27**	**355**	PN		**Pn**	**21 53 12.4**	**-0.4**
KORT	**Korkueli**	**3.34**	**54**	PN		**Pn**	**21 53 15.8**	**+1.9**
CHOS	**Chios island**	**3.36**	**348**	P		**Pn**	**21 53 15.3**	**+1.2**
CHOS	**Chios island**	**3.36**	**348**	PN		**Pn**	**21 53 14.9**	**+0.8**
KTHA	**Kythira Island**	**3.37**	**291**	P		**Pn**	**21 53 15.9**	**+1.7**
KTHA	**Kythira Island**	**3.37**	**291**	PN		**Pn**	**21 53 15.5**	**+1.3**
ANTB	**Antalya**	**3.50**	**58**	PN		**Pn**	**21 53 17.8**	**+1.9**
BRDR	**BURDUR-Merkez**	**3.61**	**43**	*i* P		**Pn**	**21 53 20.3**	**+2.8**
MANT	**Manisa**	**3.62**	**20**	*i* P		**Pn**	**21 53 19.5**	**+1.6**
MANT				*i* S		**Sn**	**21 53 54.0**	**-5.8**
VLI	**Veliai**	**3.64**	**298**	P		**Pn**	**21 53 18.9**	**+1.0**
KULA	**Kula-Manisa**	**3.68**	**21**	P		**Pn**	**21 53 20.3**	**+1.8**
KULA	**Kula-Manisa**	**3.68**	**21**	PN		**Pn**	**21 53 20.1**	**+1.6**
VLY	**Voula,Athens**	**3.75**	**318**	P		**Pn**	**21 53 21.3**	**+1.9**
BASM	**Basmaki-Afyon**	**3.76**	**41**	PN		**Pn**	**21 53 21.4**	**+1.8**
BCK	**Bucak**	**3.77**	**50**	PN		**Pn**	**21 53 21.2**	**+1.5**
KRND	**KRANIDI**	**3.83**	**308**	P		**Pn**	**21 53 22.2**	**+1.7**
AKHS	**Akhisar**	**3.84**	**10**	*i* P		**Pn**	**21 53 22.5**	**+1.9**
AKHS				*i* S		**Sn**	**21 54 01.1**	**-3.6**
DION	**Dionisos Attik**	**3.84**	**322**	P		**Pn**	**21 53 23.2**	**+2.5**
PTL	**Penteli**	**3.86**	**321**	P		**Pn**	**21 53 23.1**	**+2.2**
ZEDA	**zmir-Bergama**	**3.86**	**1**	*i* P		**Pn**	**21 53 22.6**	**+1.6**
ZEDA				*i* S		**Sn**	**21 54 03.9**	**-1.4**
SLUM	**Salum**	**3.88**	**203**	P		**Pn**	**21 53 22.0**	**+0.8**
	baz=205							
OSC1	**CSNet OBS 1**	**3.92**	**113**	P		**Pn**	**21 53 21.7**	**+0.1**
OSC1				S		**Sn**	**21 54 08.5**	**+1.9**
ISP	**Isparta**	**3.96**	**46**	PN		**Pn**	**21 53 23.6**	**+1.2**
DKL	**Dikili**	**3.97**	**359**	PN		**Pn**	**21 53 23.7**	**+1.3**
USAK	**Uak-Merkez**	**3.97**	**24**	*i* P		**Pn**	**21 53 24.2**	**+1.7**
KZIL	**AFYON_Kizioren**	**4.06**	**38**	*i* P		**Pn**	**21 53 24.6**	**+0.8**
EREA	**Eretria**	**4.11**	**325**	P		**Pn**	**21 53 26.8**	**+2.4**
DEMI	**Demirci**	**4.18**	**19**	*i* P		**Pn**	**21 53 27.5**	**+2.1**
SIGR	**SIGRI**	**4.20**	**348**	P		**Pn**	**21 53 26.6**	**+1.0**
SIGR	**SIGRI**	**4.20**	**348**	PN		**Pn**	**21 53 26.1**	**+0.5**
KYMI	**Kymi, Euboea I**	**4.21**	**328**	P		**Pn**	**21 53 27.7**	**+2.0**
SIMA	**Símav-Kutahya**	**4.30**	**22**	PN		**Pn**	**21 53 27.4**	**+0.4**
STEP	**BALIKESIR_Sava**	**4.32**	**8**	*i* P		**Pn**	**21 53 28.2**	**+1.0**
VLX	**Vlachokerasia**	**4.34**	**303**	P		**Pn**	**21 53 29.3**	**+1.7**
LTK	**Loutraki**	**4.34**	**313**	P		**Pn**	**21 53 29.9**	**+2.4**
BUHA	**Balikesir, Bur**	**4.40**	**1**	*i* P		**Pn**	**21 53 29.8**	**+1.5**
GEDZ	**Gediz**	**4.40**	**26**	PN		**Pn**	**21 53 29.9**	**+1.5**
AKMS	**Akamas**	**4.41**	**89**	⇑P		**Pn**	**21 53 28.0**	**-0.6**
AKMS					AML	AML	21 54 20.2	
	comp=N,1.9nm,0.3s							
AKMS					AML	AML	21 54 20.8	
	comp=N,2.9nm,0.3s							
KOCA	**Canakkale, Ayv**	**4.45**	**352**	*i* P		**Pn**	**21 53 30.4**	**+1.5**
SHUT	**Suhut-Afyon**	**4.50**	**39**	PN		**Pn**	**21 53 31.4**	**+1.6**
SEDI	**Konya, Seydise**	**4.53**	**57**	*i* P		**Pn**	**21 53 33.5**	**+3.2**
ITM	**Ithomi**	**4.57**	**299**	P		**Pn**	**21 53 32.6**	**+1.9**
NATA	**Nata**	**4.62**	**92**	⇓P		**Pn**	**21 53 31.9**	**+0.5**
ALFC	**Alefka**	**4.63**	**88**	P		**Pn**	**21 53 31.0**	**-0.4**
ALFC					AML	AML	21 54 25.0	
	comp=N,3.2nm,0.4s							
ALFC					AML	AML	21 54 25.0	
	comp=N,3.2nm,0.4s							
ALFC				S		**Sn**	**21 54 25.4**	**+1.3**
BAYC	**CANAKKALE_Bayr**	**4.65**	**356**	*i* P		**Pn**	**21 53 33.0**	**+1.2**
DURS	**Dursunbey**	**4.66**	**15**	*i* P		**Pn**	**21 53 33.7**	**+1.8**
LKR	**Lokris**	**4.76**	**319**	P		**Pn**	**21 53 35.6**	**+2.4**
ATAL	**Atalanti**	**4.78**	**320**	P		**Pn**	**21 53 35.9**	**+2.4**
DOGA	**KONYA_Doganhis**	**4.84**	**50**	*i* P		**Pn**	**21 53 37.0**	**+2.5**
OSC2	**CSNet OBS 4**	**4.85**	**113**	P		**Pn**	**21 53 35.3**	**+0.8**
KLV	**Kalavryta, Ach**	**4.86**	**309**	P		**Pn**	**21 53 36.4**	**+1.7**
LEF	**Lefka**	**4.87**	**88**	⇓P		**Pn**	**21 53 34.3**	**-0.4**
SZAC	**Souni**	**4.88**	**92**	⇓P		**Pn**	**21 53 35.2**	**+0.2**
AMT	**Artemida-Makis**	**4.88**	**301**	P		**Pn**	**21 53 36.9**	**+1.9**
ANDZ	**Kutahya, Merke**	**4.99**	**27**	*i* P		**Pn**	**21 53 38.0**	**+1.5**
AXAR	**Agios Charalam**	**5.03**	**318**	P		**Pn**	**21 53 39.6**	**+2.7**
LAKA	**Lakka**	**5.08**	**310**	P		**Pn**	**21 53 40.0**	**+2.2**
DRO	**Drossia**	**5.09**	**306**	P		**Pn**	**21 53 40.6**	**+2.7**
NEO	**Neokhori**	**5.15**	**326**	P		**Pn**	**21 53 41.2**	**+2.5**
ASGA	**Asgata**	**5.18**	**92**	⇑P		**Pn**	**21 53 39.7**	**+0.1**
XOR	**Xorichti**	**5.21**	**326**	P		**Pn**	**21 53 41.7**	**+2.2**
CSS	**Mathiatis**	**5.23**	**90**	P		**Pn**	**21 53 40.0**	**+0.2**
ANX	**Ano Chora**	**5.34**	**312**	P		**Pn**	**21 53 43.5**	**+2.2**
MVOU	**Mavrovouni**	**5.48**	**89**	P		**Pn**	**21 53 43.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**5.49**	**317**	P		**Pn**	**21 53 46.4**	**+3.0**
SWA2		**5.97**	**193**	P		**Pn**	**21 53 51.0**	**+1.1**
	baz=195							
EVGI	**Lefkada island**	**6.15**	**307**	P		**Pn**	**21 53 53.8**	**+1.4**
NYDR	**Nydri-Lefkada**	**6.18**	**308**	P		**Pn**	**21 53 53.2**	**+0.5**
LKD2	**Lefkada island**	**6.25**	**308**	P		**Pn**	**21 53 54.2**	**+0.5**
KOT	**Kottamia**	**6.59**	**140**	AMP			21 55 00.0	
	baz=141							
RYAN	**Fayoum**	**6.62**	**154**	AMP			21 55 00.0	
	baz=155							
HSAF	**As Saff**	**6.71**	**143**	P		**Pn**	**21 53 59.8**	**-0.3**
	baz=144							
GLL	**Jalalah**	**6.81**	**143**	P		**Pn**	**21 54 01.1**	**-0.5**
	baz=144							
BRTR	**Keskin Array B**	**7.04**	**47**	Pn		**Pn**	**21 54 06.2**	**+1.4**
	comp=N,0.4nm,0.3s,baz=220,slow=15,SNR=6.4							
BRTR				Sn		**Sn**	**21 55 24.8**	**+0.9**
	comp=N,1.0nm,0.3s,baz=214,slow=28,SNR=9.6							
VAY	**Valandovo**	**7.11**	**332**	*e*Pn		**Pn**	**21 54 09.5**	**+4.0**
DQRL	**Deir Qamar**	**7.25**	**99**	*e*P		**Pn**	**21 54 08.0**	**+0.3**
MMAI	**Mount Meron Ar**	**7.31**	**104**	Pn		**Pn**	**21 54 07.7**	**-0.7**
	comp=N,4.9nm,0.3s,baz=270,slow=12,SNR=36							
MMAI				Sn		**Sn**	**21 55 29.4**	**-1.0**
	comp=N,17nm,0.3s,baz=297,slow=22,SNR=13							
QRWL	**Qaraoun**	**7.38**	**100**	*e*P		**Pn**	**21 54 08.2**	**-1.2**
HWQ	**Hawqa**	**7.45**	**94**	*e*P		**Pn**	**21 54 09.5**	**-0.9**
STIP	**Stip**	**7.58**	**332**	*e*Pn		**Pn**	**21 54 14.2**	**+2.3**
HFRF	**Wahat Farafira**	**8.01**	**171**	P		**Pn**	**21 54 18.3**	**+0.4**
	baz=172							
HFRF				S		**Sn**	**21 55 44.0**	**-3.4**
	baz=172							
VTS	**Vitosha**	**8.05**	**340**	⇑P		**Pn**	**21 54 20.2**	**+1.6**
EIL	**Elat**	**8.66**	**126**	Pn		**Pn**	**21 54 26.3**	**-0.5**
	comp=N,1.0nm,0.3s,baz=357,slow=5.0,SNR=18							
EIL				Sn		**Sn**	**21 55 58.4**	**-5.1**
	comp=N,5.2nm,0.3s,baz=9.6,slow=3.4,SNR=11							
HKAT	**Jabal Katrina**	**8.87**	**136**	P		**Pn**	**21 54 28.8**	**-1.2**
	baz=136							
HKAT				AMP			21 56 00.0	
	baz=136							
HKAT				S		**Sn**	**21 56 02.4**	**-6.7**
	baz=136							
TIP	**Timpagrande**	**9.10**	**300**	⇓P		**Pn**	**21 54 32.2**	**-0.7**
PDG	**Podgorica**	**9.47**	**323**	⇓P		**Pn**	**21 54 38.4**	**+0.5**
CFR	**Carcaliu**	**10.11**	**5**	⇑P		**Pn**	**21 54 48.9**	**+2.3**
NEHR	**Nehoiu**	**10.33**	**357**	⇓P		**Pn**	**21 54 52.7**	**+3.0**
HERR	**Herculane**	**10.37**	**342**	⇓P		**Pn**	**21 54 51.8**	**+1.6**
VAE	**Valguarnera**	**10.40**	**287**	Sn		**Sn**	**21 56 41.0**	**-5.2**
	comp=N,1.2nm,0.3s,baz=99,slow=8.8,SNR=2.6							
MLR	**Muntele Rosu**	**10.41**	**356**	Pn		**Pn**	**21 54 55.2**	**+4.3**
	comp=N,0.2nm,0.3s,baz=132,slow=14,SNR=11							
MLR				LR		LR	21 59 35.6	
	comp=N,200nm,18.9s,baz=180,slow=43							
MLR	**Muntele Rosu**	**10.41**	**356**	⇑P		**Pn**	**21 54 54.1**	**+3.2**
VOIR		**10.43**	**353**	⇑P		**Pn**	**21 54 54.2**	**+3.1**
BISRR	**Bisoca**	**10.44**	**359**	⇑P		**Pn**	**21 54 53.7**	**+2.5**
PLOR	**Plostina**	**10.75**	**359**	⇑P		**Pn**	**21 54 58.4**	**+3.0**
VRI	**Vrincioaia**	**10.76**	**359**	⇑P		**Pn**	**21 54 57.6**	**+2.0**
GZR	**Gura Zlata**	**10.77**	**344**	⇑P		**Pn**	**21 54 57.9**	**+2.1**
DOPR	**Dopca**	**10.92**	**354**	⇓P		**Pn**	**21 55 00.9**	**+3.1**
OZUR		**11.02**	**356**	⇓P		**Pn**	**21 55 00.8**	**+1.6**
BIZ	**Bicaz**	**11.85**	**357**	⇑P		**Pn**	**21 55 13.5**	**+3.0**
KEST	**Kesra**	**14.38**	**278**	Pn		**Pn**	**21 55 45.6**	**+0.5**
	comp=N,0.1nm,0.3s,baz=40,slow=17,SNR=3.5							
GNI	**Garni**	**14.96**	**65**	Pn		**P**	**21 55 57.2**	**-1.1**
	comp=N,0.1nm,0.3s,baz=50,slow=16,SNR=2.2							
KVAR	**Kislovodsk Arr**	**15.01**	**49**	Pn		**P**	**21 55 58.7**	**0.0**
	baz=45,slow=20,SNR=1.6							
KBZ	**Khabaz**	**15.02**	**50**	Pn		**P**	**21 56 00.3**	**+1.6**
	comp=N,0.1nm,0.3s,baz=249,slow=12,SNR=7.6							
AKASG	**Malin Array Be**	**15.68**	**5**	Pn		**Pn**	**21 56 05.7**	**+3.4**
	comp=N,2.6nm,0.3s,baz=195,slow=11,SNR=8.8							
KBA	**Koelnbreinsper**	**15.74**	**324**	*e*Pn		**Pn**	**21 56 06.0**	**+2.8**
	comp=N,1.2nm,0.5s							
MOA	**Molln**	**15.87**	**327**	*i* Pn		**Pn**	**21 56 06.1**	**+1.4**
	comp=N,0.9nm,0.2s							
VRAC	**Vranov**	**16.12**	**335**	Pn		**P**	**21 56 11.8**	**+0.9**
	comp=N,0.1nm,0.3s,baz=130,slow=10,SNR=4.3							
CKRC	**Cesky Krumlov**	**16.59**	**330**	*e*P		**Pn**	**21 56 16.6**	**+2.7**
KRLC	**Kraliky**	**16.71**	**337**	*e*P		**Pn**	**21 56 18.5**	**+3.0**
WTTA	**Wattenberg**	**16.72**	**321**	*e*Pn		**Pn**	**21 56 17.7**	**+2.0**
	comp=N,2.0nm,0.4s							
WATA	**Walderalm**	**16.80**	**321**	*i* Pn		**Pn**	**21 56 18.9**	**+2.3**
	comp=N,1.8nm,0.3s							
GERES	**GERESS Array B**	**16.87**	**329**	Pn		**Pn**	**21 56 17.4**	**0.0**
	comp=N,0.2nm,0.3s,baz=139,slow=12,SNR=13							
SQTA	**Sankt Quirin**	**16.91**	**321**	*i* Pn		**Pn**	**21 56 20.0**	**+2.0**
	comp=N,1.3nm,0.4s							
FETA	**Feichten**	**17.04**	**319**	*i* Pn		**Pn**	**21 56 21.2**	**+1.5**
	comp=N,2.6nm,0.6s							
MOTA	**Moosalm**	**17.05**	**321**	*i* Pn		**Pn**	**21 56 21.1**	**+1.4**
	comp=N,1.6nm,0.4s							
DPC	**Dolnoslka-Polom**	**17.10**	**336**	*e*P		**Pn**	**21 56 21.4**	**+1.1**
KHC	**Kasperske Hory**	**17.14**	**329**	*e*P		**Pn**	**21 56 22.1**	**+1.3**
RETA	**Reutte**	**17.32**	**321**	*e*Pn		**Pn**	**21 56 23.8**	**+0.7**
	comp=N,1.3nm,0.4s							
DAVOX	**Davos/Dischmat**	**17.36**	**317**	P		**Pn**	**21 56 24.8**	**+1.2**
	comp=N,0.3nm,0.3s,baz=162,slow=20,SNR=2.9							
DAVA	**Damuels**	**17.66**	**319**	*e*Pn		**Pn**	**21 56 27.0**	**-0.4**
	comp=N,3.3nm,0.6s							
BRG	**Berggiesshubel**	**18.37**	**333**	*e*P		**Pn**	**21 56 39.1**	**+3.1**
BRG				Amp			21 56 40.4	
	comp=Z,3.5nm,0.9s							
OBN	**Obninsk**	**21.10**	**15**	P		**P**	**21 57 06.8**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=132,slow=15,SNR=2.1							
BELG	**Belogornoye**	**22.71**	**34**	P		**P**	**21 57 19.6**	**-3.1**
	comp=Z,3.3nm,0.3s,baz=140,slow=17,SNR=1.8							
ESDC	**Sonseca Array**	**24.92**	**290**	P		**P**	**21 57 43.4**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=80,slow=10.0,SNR=37							
GEYT	**Alibeck**	**25.15**	**74**	P		**P**	**21 57 47.4**	**+1.3**
	comp=Z,2.1nm,0.5s,baz=243,slow=9.3,SNR=4.8							
MDT	**Midelt**	**26.23**	**274**	P		**P**	**21 57 56.8**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=266,slow=19,SNR=4.5							
FINES	**FINESS Array B**	**26.37**	**359**	P		**P**	**21 57 55.1**	**-1.8**
	comp=Z,5.1nm,1.2s,baz=171,slow=11,SNR=10.0							
HFS	**Hagfors**	**26.49**	**345**	P		**P**	**21 57 55.7**	**-2.3**
	comp=Z,3.4nm,0.8s,baz=120,slow=8.7,SNR=12							
PBRG	**Braganca**	**27.11**	**294**	*e*P		**P**	**21 58 05.3**	**+1.5**
AKTO	**Aktyubinsk**	**27.22**	**46**	P		**P**	**21 58 04.4**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=209,slow=7.4,SNR=4.8							
MVO	**Moncorvo**	**27.29**	**293**	*e*P		**P**	**21 58 04.7**	**-0.8**
PBAR	**Barrancos**	**27.36**	**287**	*e*P		**P**	**21 58 07.2**	**+1.1**
PCBR	**Castelo Branco**	**27.63**	**290**	*e*P		**P**	**21 58 09.5**	**+1.1**
KIRV	**Kirov**	**27.81**	**25**	P		**P**	**21 58 07.2**	**-2.6**
	comp=Z,5.0nm,0.6s,baz=153,slow=11,SNR=2.0							
NOA	**NORSAR Array B**	**27.86**	**344**	P		**P**	**21 58 08.5**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=44,slow=20,SNR=4.7							
NOA					LR	LR	22 10 20.9	
	comp=Z,44nm,18.8s,baz=240,slow=39							
EKA	**Eskdalemuir Ar**	**28.95**	**324**	P		**P**	**21 58 18.3**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=130,slow=12,SNR=15							
ARU	**Arti**	**30.24**	**35**	P		**P**	**21 58 30.8**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=258,slow=19,SNR=3.1							
TORD	**Torodi Ar. Bea**	**31.60**	**233**	P		**P**	**21 58 44.3**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=34,slow=8.9,SNR=56							
ARCES	**ARCESS Array B**	**34.50**	**359**	P		**P**	**21 59 06.3**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=172,slow=8.0,SNR=18							
DBIC	**Dimbokro**	**40.69**	**233**	P		**P**	**22 00 02.7**	**+1.2**
	comp=Z,1.2nm,0.4s,baz=37,slow=12,SNR=2.2							
MKAR	**Makanchi Array**	**42.58**	**57**	P		**P**	**22 00 18.0**	**+1.2**
	comp=Z,3.4nm,0.5s,baz=271,slow=8.3,SNR=54							
SPITS	**Spitsbergen Ar**	**43.42**	**357**	P		**P**	**22 00 21.6**	**-1.5**
	comp=Z,13nm,1.0s,baz=152,slow=9.5,SNR=7.6							
ZALV	**Zalesovo Beam**	**43.99**	**46**	P		**P**	**22 00 28.3**	**+0.4**
	comp=Z,2.9nm,0.4s,baz=269,slow=7.7,SNR=18							
NRIK	**Noril'sk**	**47.31**	**25**	P		**P**	**22 00 51.5**	**-2.5**
	comp=Z,2.3nm,0.4s,baz=232,slow=5.5,SNR=3.9							
SONM	**Songino Array**	**58.38**	**51**	P		**P**	**22 02 17.7**	**+1.5**
	comp=Z,1.2nm,0.4s,baz=284,slow=8.1,SNR=15							
BOSA	**Boshof**	**63.39**	**182**	P		**P**	**22 02 51.9**	**+1.6**
	comp=Z,4.2nm,1.1s,baz=37,slow=5.1,SNR=2.1							
CMAR	**Chiang Mai Arr**	**65.11**	**84**	P		**P**	**22 03 01.3**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=303,slow=8.5,SNR=3.0							
USRK	**Ussuriysk Ar.**	**75.84**	**46**	P		**P**	**22 04 07.3**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=300,slow=4.4,SNR=8.7							
KSRS	**Korea Array**	**77.15**	**53**	P		**P**	**22 04 15.3**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=294,slow=5.7,SNR=2.1							
YKA	**Yellowknife Ar**	**77.95**	**343**	P		**P**	**22 04 17.6**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=36,slow=5.6,SNR=11							
ILAR	**Eielson Array**	**80.34**	**357**	P		**P**	**22 04 30.8**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=338,slow=3.4,SNR=4.4							
ULM	**Lac du Bonnet**	**81.17**	**327**	P		**P**	**22 04 35.5**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=47,slow=4.2,SNR=2.8							
PETK	**Petropavlovsk-**	**82.30**	**27**	P		**P**	**22 04 43.6**	**+1.5**
	comp=Z,2.7nm,0.9s,baz=0.0,slow=10,SNR=2.3							
MJAR	**Matsushiro Arr**	**84.27**	**49**	P		**P**	**22 04 53.6**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=297,slow=5.4,SNR=1.9							

BGR **16** *22:05:44.2±0.0,25.91N×93.26E,h33km,mb4.9*
BJI **16** *22:05:47.3±0.0,26.94N×92.84E,h7km,mB4.8/34, mb4.7/61,ML4.5/6,Ms4.1/40,Ms7 3.9/42*
NDI **16** *22:05:48.3±3.8,26.91N×92.65E,h8km±15km,ML4.8, mb4.8(NEIC)*
MOS **16** *22:05:48.6±0.9,26.87N×92.77E,h41km,mb5.0/55,Error ellipse: s-maj=6.4km s-min=3.3km az=122.4*
NEIC **16** *22:05:49.6±1.3,26.79N±0.06×92.77E±0.08,h35km±1km, mb4.8/152,Error ellipse: s-maj=12.7km s-min=10.3km az=240.0*
DMN **16** *22:05:49.1±0.8,27.27N×92.86E,h10km,Ml5.2/5,Error ellipse: s-maj=61.2km s-min=16.0km az=9.0*
IDC **16** *22:05:50.9±2.5,26.83N×92.73E,h44km±24km,mb4.3/46, mb1 4.4/47,mb1mx4.4/57,mbtmp4.5/47,ML4.4/1,MS3.7/19, Ms1 3.7/19,ms1mx3.5/42,Error ellipse: s-maj=10.1km s-min=8.1km az=41.0*

ISC 16 22:05:48.6±0.4,26.89N±0.02×92.68E±0.02,h25km±2km, h24km;pP-P,n550,σ1§39/593,mb4.8/188,MS3.8/24, 31C-13D,Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
ITAN	**ITANAGAR**	**0.96**	**75**	*e*P		**Pn**	**22 06 08.5**			**+1.9**
ITAN				*e*S		**Sn**	**22 06 21.4**			**+2.0**
ITAN					IAML		22 06 21.9			
	comp=E,77μm,0.3s									
ITAN					IAML		22 06 23.4			
	comp=N,145μm,0.4s									
GUWA	**GUWAHATI**	**1.13**	**232**	*e*P		**Pb**	**22 06 10.8**			**+1.4**
GUWA				*e*S		**Sb**	**22 06 25.7**			**+2.0**
GUWA					IAML		22 06 26.8			
	comp=E,16μm,0.2s									
GUWA					IAML		22 06 27.0			
	comp=N,16μm,0.2s									
ZIRO	**ZIRO**	**1.22**	**58**	*e*P		**Pb**	**22 06 12.1**			**+1.0**
ZIRO				*e*S		**Sb**	**22 06 28.1**			**+1.6**
ZIRO					IAML		22 06 29.9			
	comp=N,255μm,0.5s									
ZIRO					IAML		22 06 30.2			
	comp=Z,73μm,0.3s									
SHL	**Shillong**	**1.50**	**209**	P		**Pb**	**22 06 15.4**			**-0.5**
SHL	**Shillong**	**1.50**	**209**	*e*P		**Pb**	**22 06 15.3**			**-0.6**
SHL				*e*P		**Pn**	**22 06 15.6**			**+1.5**
SHL				*e*S		**Sb**	**22 06 36.5**			**+1.8**
SHL				*i* S		**Sn**	**22 06 37.5**			**+4.5**
SHL					IAML		22 06 37.9			
	comp=E,31μm,0.2s									
SHL	**Shillong**	**1.50**	**209**	Pn		**Pb**	**22 06 15.4**			**-0.5**
KOHI	**KOHIMA**	**1.73**	**132**	*e*P		**Pb**	**22 06 18.7**			**-1.1**
KOHI					IAML		22 06 41.0			
	comp=E,14μm,0.5s									
KOHI					IAML		22 06 41.4			
	comp=N,15μm,0.4s									
MOKO	**MOKOCHONG**	**1.74**	**109**	*e*P		**Pb**	**22 06 18.9**			**-1.0**
MOKO					IAML		22 06 47.3			
	comp=N,5μm,0.3s									
MOKO					IAML		22 06 47.4			
	comp=E,5μm,0.2s									
DIBR	**DIBRUGARH**	**2.07**	**73**	*e*P		**Pb**	**22 06 27.0**			**+1.6**
DIBR					IAML		22 06 55.3			
	comp=E,17μm,0.3s									
DIBR					IAML		22 06 56.2			
	comp=N,17μm,0.2s									
SILR	**SILCHAR**	**2.10**	**177**	*e*P		**Pb**	**22 06 24.7**			**-1.4**
LKP	**Lekhapani**	**2.85**	**80**	*e*P		**Pn**	**22 06 34.2**			**+1.7**
LKP					IAML		22 06 46.9			
	comp=E,1μm,0.6s									
LKP					IAML		22 06 47.6			
	comp=N,723nm,0.5s									
LSA	**Lhasa**	**3.11**	**335**	Pn		**Pb**	**22 06 41.3**			**-2.1**
LSA				Sn		**Sb**	**22 07 21.0**			**-0.1**
LSA				smax	smax					
	comp=N,2μm,0.7s									
LSA				smax	smax					
	comp=N,2μm,0.9s									
LSA	**Lhasa**	**3.11**	**335**	Pn		**Pb**	**22 06 40.7**			**-2.7**
AGT	**Agartala**	**3.26**	**204**	*e*P		**Pn**	**22 06 40.0**			**+1.8**
AGT				*e*S		**Sn**	**22 07 19.4**			**+3.2**
AGT					IAML		22 07 19.9			
	comp=N,2μm,0.3s									
GTK	**Tadong**	**3.66**	**278**	*e*P		**Pn**	**22 06 46.5**			**+2.7**
GTK				*e*S		**Sn**	**22 07 29.0**			**+2.7**
BELO	**BELONIA**	**3.80**	**197**	*e*P		**Pn**	**22 06 47.3**			**+1.7**
BELO				*e*S		**Sn**	**22 07 29.4**			**0.0**
BELO				*e*S		Sb	22 07 29.5			-11
BELO					IAML		22 07 30.6			
	comp=N,92μm,0.4s									
SAIH	**SAIHA**	**4.39**	**176**	*e*P		**Pn**	**22 06 54.9**			**+1.0**
SAIH				*e*S

CHAI Chaiyaphum 13.94 140 P **P** **22 09 16.3 +3.7**
BHPL Bhopal 14.29 259 *e*P **Pn** **22 09 06.3 -3.2**
BHPL *e*S Sn 22 11 36.7 -11
ENH Enshi 15.14 73 **Pn** **22 09 17.7 -3.2**
PBA Port Blair 15.16 180 Pn Pn 22 09 19.3 -1.8
PHET Kaeng Krachan 15.36 154 P **P** **22 09 31.6 +3.3**
comp=E,666nmcomp=E,72nm,0.7s
SRAK Srakaew 15.52 144 P **P** **22 09 31.6 +1.6**
comp=E,5μmcomp=E,628nm,0.9s
XAN Xi'an 15.70 59 P **Pn** **22 09 26.0 -2.2**
XAN pP P 22 09 32.3 +0.3
XAN sP pP 22 09 35.8 -3.1
XAN S **S** **22 12 30.8 -5.2**
XAN pmax pmax
comp=E,24nm,0.9s
XAN LR LR
comp=E,250nm,20.6s
XAN LR LR
comp=E,360nm,20.6s
XAN LR LR
comp=E,490nm,17.2s
XAN Xi'an 15.70 59 P **Pn** **22 09 26.4 -1.8**
XAN pmax pmax
comp=E,45nm,0.9s
XAN Xi'an 15.70 59 Pn **Pn** **22 09 26.4 -1.8**
XAN IAmb IAmb 22 09 37.6
comp=E,45nm,0.9s
HYB Hyderabad 16.12 237 *i* P **Pn** **22 09 31.0 -2.6**
comp=E,80nm,1.0s
HYB *e*S **Sn** **22 12 35.0 +3.2**
UBPT Khong Chiam 16.59 132 P **P** **22 09 41.0 -1.0**
UBPT Khong Chiam 16.59 132 **Pn** **22 09 39.0 -0.6**
WMQ Urumqi 17.37 348 P **P** **22 09 51.8 +1.3**
WMQ pP sP 22 10 00.1 -0.6
WMQ sP pP 22 10 03.3 +5.9
WMQ PP **PnPn** **22 10 06.1 +6.5**
WMQ S **S** **22 13 09.4 -0.6**
WMQ SS **SnSn** **22 13 24.3 +8.8**
WMQ pmax pmax
comp=E,71nm,0.9s
WMQ pmax pmax
comp=E,220nm,4.9s
WMQ LR LR
comp=E,680nm,14.7s
WMQ LR LR
comp=E,610nm,15.3s
WMQ LR LR
comp=E,720nm,20.9s
WMQ Urumqi 17.37 348 P **P** **22 09 51.7 +1.3**
WMQ pmax pmax
comp=E,37nm,0.7s
WMQ Urumqi 17.37 348 P **P** **22 09 51.7 +1.2**
WMQ IAmb IAmb 22 10 03.9
comp=E,37nm,0.7s
QIZ Qiongzhong 17.62 113 P **P** **22 09 53.8 +0.4**
QIZ S **Sn** **22 13 08.6 +0.4**
QIZ pmax pmax
comp=E,13nm,1.6s
QIZ LR LR
comp=E,140nm,15.2s
QIZ LR LR
comp=E,190nm,14.2s
QIZ LR LR
comp=E,170nm,21.6s
CHCP Chirah Chowk 18.06 297 P **Pn** **22 09 55.9 -2.0**
NIL Nilore 18.07 297 P **Pn** **22 09 56.0 -2.0**
NIL pmax pmax
comp=E,54nm,0.8s
NIL Nilore 18.07 297 P **Pn** **22 09 56.0 -2.0**
NIL IAmb IAmb 22 10 01.2
comp=E,54nm,0.8s
SARP Sargodha 18.13 291 P **Pn** **22 09 54.7 -4.1**
KSH Kashi 18.78 316 P **Pn** **22 10 08.4 +1.7**
KSH S **S** **22 13 37.5 -0.8**
KSH pmax pmax
comp=E,6.0nm,1.2s
KSH pmax pmax
comp=E,42nm,2.8s
THW Thamme Wali 19.08 293 P **P** **22 10 08.8 -0.6**
CEP Cherat 19.19 296 P **Pn** **22 10 11.6 -0.2**
WHN Wuhan 19.34 74 ⇓P **Pn** **22 10 13.3 -0.1**
WHN pP **sP** **22 10 23.3 +0.9**
WHN pmax pmax
comp=E,40nm,0.8s
WHN LR LR
comp=E,1μm,16.0s
SHLS Shalkode 19.47 330 *e*P **P** **22 10 11.7 -1.9**
baz=330
SHLS Shalkode 19.47 330 *e*P **P** **22 10 11.7 -1.9**
PDGK Podgornoye 19.59 330 *i* P **P** **22 10 15.7 +0.7**
PDGK pmax pmax
comp=E,15nm,1.0s
UZB Uzynbulak 19.66 329 *e*P **P** **22 10 15.9 +0.2**
baz=329
UZB Uzynbulak 19.66 329 *e*P **P** **22 10 15.9 +0.2**
BTO Baotou 19.82 42 *e*P **P** **22 10 17.5 0.0**
BTO S **S** **22 13 51.6 -8.0**
BTO pmax pmax
comp=E,80nm,0.6s
BTO pmax pmax
comp=E,410nm,9.1s
BTO LR LR
comp=E,1μm,12.7s
BTO LR LR
comp=E,1μm,18.6s
BTO LR LR
comp=E,2μm,16.6s
TIY Taiyuan 19.84 52 *e*P **P** **22 10 17.1 -0.6**
TIY pP **sP** **22 10 26.8 -1.0**
TIY S **Sn** **22 14 01.3 -0.4**
TIY pmax pmax
comp=E,25nm,0.8s
TIY LR LR
comp=E,230nm,14.2s
TIY LR LR
comp=E,250nm,9.2s
TIY LR LR
comp=E,530nm,16.4s
SATY Saty 19.88 328 *e*P **Pn** **22 10 19.4 -0.5**
baz=328
SATY Saty 19.88 328 *e*P **Pn** **22 10 19.3 -0.5**
KPKS Kokpek 20.06 329 *e*P **P** **22 10 20.5 +0.4**
baz=329
KPKS Kokpek 20.06 329 *e*P **P** **22 10 20.5 +0.4**
MDOK Medeo 20.62 326 *e*P **P** **22 10 26.9 +0.7**
baz=326
MDOK Medeo 20.62 326 *e*P **P** **22 10 26.9 +0.7**
HHC Hu-ho-hao-te 20.91 43 *e*P **P** **22 10 29.4 +0.1**
HHC sP sP 22 10 41.8 +2.3
HHC S Sn 22 14 25.5 -1.9
HHC pmax pmax
comp=E,15nm,1.1s
HHC pmax pmax
comp=E,76nm,4.4s
HHC LR LR
comp=E,410nm,11.5s
HHC LR LR
comp=E,410nm,12.9s
HHC LR LR
comp=E,640nm,12.3s
DLV T Lat 21.02 132 P **P** **22 10 28.9 -1.8**
TKM2 Tokmak 2 21.20 323 P **P** **22 10 34.8 +2.3**
SNR=21
TKM2 Tokmak 2 21.20 323 *i* P **P** **22 10 34.2 +1.7**
TKM2 pmax pmax
comp=E,36nm,0.8s
UCH Uchtor 21.33 320 P **P** **22 10 34.0 -0.2**
SNR=8.9
KBK Karagaybulak 21.37 322 P **P** **22 10 36.8 +2.5**
SNR=27
TDK Taldyqorghan 21.39 331 *e*P **P** **22 10 34.9 +0.5**
comp=E,22nm,1.0s,baz=331
TDK Taldyqorghan 21.39 331 *e*P **P** **22 10 34.8 +0.5**
TDK pmax pmax
comp=E,22nm,1.0s
ZSN Zaisan 21.42 345 *e*P **P** **22 10 35.2 +0.5**
baz=345
ZSN Zaisan 21.42 345 *e*P **P** **22 10 35.2 +0.5**
MK31 Makanchi Array 21.50 340*c* *i*P **P** **22 10 35.8 +0.3**
MK31 Makanchi Array 21.50 340 P **P** **22 10 36.2 +0.7**
MK31 IAmb IAmb 22 10 40.1
comp=E,31nm,0.7s
MKAR Makanchi Array 21.50 340 P **P** **22 10 36.1 +0.7**
comp=E,30nm,0.6s,baz=147,slow=13,SNR=422
MKAR S **S** **22 14 30.3 -2.4**
comp=E,1.4nm,1.0s,baz=155,slow=24,SNR=2.3
MKAR LR LR 22 20 06.5
comp=E,195nm,18.6s,baz=162,slow=40
MAKZ Makanchi 21.61 340 P **P** **22 10 37.3 +0.7**
MAKZ pmax pmax
comp=E,33nm,0.8s
MAKZ Makanchi 21.61 340 P **P** **22 10 37.3 +0.7**
MAKZ IAmb IAmb 22 10 41.1
comp=E,33nm,0.8s
AAK Ala-Archa 21.61 321 P **P** **22 10 38.8 +1.9**
comp=E,20nm,0.9s,baz=137,slow=7.2,SNR=23
AAK S **S** **22 14 36.7 +1.6**
comp=E,1.6nm,1.0s,baz=219,slow=21,SNR=1.6
AAK LR LR 22 20 10.0
comp=E,117nm,21.4s,baz=138,slow=40
AAK Ala-Archa 21.61 321 P **P** **22 10 39.2 +2.3**
SNR=18
AAK Ala-Archa 21.61 321 *i* P **P** **22 10 38.9 +2.0**
AAK pmax pmax
comp=E,68nm,1.0s
AAK Ala-Archa 21.61 321 P **P** **22 10 39.2 +2.3**
AAK IAmb IAmb 22 10 42.5
comp=E,26nm,1.0s
KBL Kabul 21.67 296 P **P** **22 10 39.0 +1.3**
KBL pmax pmax
comp=E,60nm,0.9s
KBL Kabul 21.67 296 P **P** **22 10 39.0 +1.3**
KBL IAmb IAmb 22 10 40.8
comp=E,60nm,0.9s
CHMS Chumysh 21.70 322 P **P** **22 10 39.5 +1.7**
SNR=7.5
AML Almayashu 21.74 319 P **P** **22 10 41.1 +2.5**
SNR=16
USP Ospenovka 22.02 323 P **P** **22 10 42.6 +1.4**
SNR=11
EKS2 Erkin-Say 22.03 320 P **P** **22 10 43.6 +2.2**
SNR=28
SGDS Sogindy 22.07 323 *e*P **P** **22 10 42.0 +0.2**
baz=323
SGDS Sogindy 22.07 323 *e*P **P** **22 10 41.9 +0.2**
GAR Garm 22.25 308 P **P** **22 10 44.6 +0.8**
PALK Pallekele 22.59 212 P **P** **22 10 49.0 +1.5**
comp=E,9.6nm,1.0s,baz=114,slow=11,SNR=4.4
PALK S **S** **22 14 50.2 -3.6**
comp=E,4.9nm,0.8s,baz=26,slow=16,SNR=2.7
PALK LR LR 22 20 33.9
comp=E,172nm,18.6s,baz=121,slow=39
PALK Pallekele 22.59 212 P **P** **22 10 49.0 +1.5**
PALK Pallekele 22.59 212 P **P** **22 10 47.4 -0.1**
TIA Tai'an 22.76 60 P **P** **22 10 48.8 -0.3**
TIA pmax pmax
comp=E,10.0nm,1.1s
KULM Kulim 22.79 159 P **P** **22 10 49.2 -0.3**
DGZ Jazzator, Alta 23.13 351*c* *i*P **P** **22 10 55.5 +2.6**
DGZ pmax pmax
comp=E,14nm,0.8s
NJ2 Nanjing 23.33 71 *e*P **P** **22 10 54.3 -0.6**
NJ2 pP **sP** **22 11 04.6 -0.7**
NJ2 pmax pmax
comp=E,15nm,0.6s
NJ2 pmax pmax
comp=E,220nm,6.5s
BTLS Baital 23.47 325 *e*P **P** **22 10 56.4 +0.2**
baz=325
BTLS Baital 23.47 325 *e*P **P** **22 10 56.4 +0.2**
BJT Baijiatuau 23.48 50 P **P** **22 10 56.7 +0.4**
BJT pmax pmax
comp=E,16nm,1.2s
BJT Baijiatuau 23.48 50 P **P** **22 10 56.7 +0.4**
SONM Songino Array 23.51 24 P **P** **22 10 57.0 +0.3**
comp=E,4.1nm,0.7s,baz=208,slow=11,SNR=22
SONM S **S** **22 15 12.5 +3.5**
comp=E,0.7nm,1.1s,baz=194,slow=10,SNR=1.4
SONM LR LR 22 21 08.8
comp=E,452nm,19.4s,baz=214,slow=39
SONM Songino Array 23.51 24 P **P** **22 10 52.2 -4.4**
ULN Ulaanbaatar 23.77 24*ce*P **P** **22 10 59.1 -0.2**
ULN pmax pmax
comp=E,9.0nm,0.7s
ULN Ulaanbaatar 23.77 24 P **P** **22 10 59.2 0.0**
IUG Iuzhnay 23.98 315 *e*P **P** **22 11 01.5 +0.2**
comp=E,29nm,0.8s,baz=315
IUG Iuzhnay 23.98 315 *e*P **P** **22 11 01.4 +0.2**
IUG pmax pmax
comp=E,29nm,0.8s
TAS Tashkent 24.03 313 P **P** **22 11 03.0 +1.4**
TAS pmax pmax
comp=E,78nm,1.2s
TAS Tashkent 24.03 313 P **P** **22 11 03.0 +1.4**
KK31 Karatay Array 24.21 318⇓ *e*P **P** **22 11 03.8 +0.6**
KK31 pmax pmax
comp=E,4.0nm,0.6s
KK31 Karatay Array 24.21 318 P **P** **22 11 04.5 +1.2**
KKAR Karatay Array 24.21 318 P **P** **22 11 04.4 +1.1**
KKAR pmax pmax
comp=E,6.0nm,0.9s
KKAR Karatay Array 24.21 318 P **P** **22 11 04.4 +1.1**
KKAR Karatay Array 24.21 318 P **P** **22 11 04.0 +0.8**
CHM Chimkent 24.34 315 *e*P **P** **22 11 05.3 +0.9**
baz=315
CHM Chimkent 24.34 315 *e*P **P** **22 11 05.3 +0.9**
PSI Prapat 24.69 165 P **P** **22 11 07.7 -0.2**
comp=E,7.3nm,0.8s,baz=360,slow=5.9,SNR=11
PSI LR LR 22 21 35.2
comp=E,285nm,18.4s,baz=271,slow=38
RPSI Rantau Prapat 24.79 165 P **P** **22 11 07.7 -1.0**
ZAK Zakamensk 24.82 16 *e*P **P** **22 11 09.5 +0.7**
ZAK pmax pmax
comp=E,12nm,1.1s
MOY Mondy 25.53 12 *e*P **P** **22 11 16.3 +1.1**
MOY pmax pmax
comp=E,24nm,1.7s
GSI Gunungsitoli 25.87 169 P **P** **22 11 17.2 -1.3**
GSI IAmb IAmb 22 11 27.8
comp=E,32nm,1.0s
GSI Gunungsitoli 25.87 169 P **P** **22 11 18.7 +0.2**
comp=E,33nm,1.1s
YHNB Yeheng 25.91 88 P **P** **22 11 16.9 -2.1**
YHNB IAmb IAmb 22 11 21.6
comp=E,32nm,0.9s
KURBB Kurchatov Arra 26.05 339 P **P** **22 11 20.4 +0.6**
comp=E,9.3nm,0.6s,baz=152,slow=8.9,SNR=94
TWG Pinlang 26.05 93 P **P** **22 11 19.3 -0.9**
TWG IAmb IAmb 22 11 22.5
comp=E,22nm,0.7s
KURK Kurchatov 26.10 339 P **P** **22 11 20.4 +0.2**
KURK Kurchatov 26.10 339 P **P** **22 11 20.4 +0.2**
TLY Talaya 26.11 16 P **P** **22 11 21.4 +1.1**
comp=E,2.5nm,0.6s,baz=293,slow=13,SNR=4.7
TLY LR LR 22 22 28.7
comp=E,224nm,18.7s,baz=188,slow=38
TLY Talaya 26.11 16 *e*P **P** **22 11 22.5 +2.1**
TLY *e*S **S** **22 15 55.7 +5.4**
TLY pmax pmax
comp=E,19nm,1.4s
TLY MLR MLR
comp=E,638nm,14.0s
TLY Talaya 26.11 16 P **P** **22 11 21.8 +1.4**
YULB Yu-li 26.11 91 P **P** **22 11 20.6 -0.1**
YULB IAmb IAmb 22 11 35.1
comp=E,26nm,0.9s
NACB Ninganchiao 26.21 89 P **P** **22 11 21.4 -0.1**
NACB IAmb IAmb 22 11 25.8
comp=E,50nm,1.1s
MNSI Mandailing Nat 26.78 165 P **P** **22 11 26.1 -0.6**
comp=E,30nm,0.8s
HRA Herat 27.16 293 P **P** **22 11 30.6 +0.3**
SZP Santa 27.29 104 P **P** **22 11 29.8 -1.5**
SZP IAmb IAmb 22 11 36.1
comp=E,30nm,0.8s
BKNI Bangkinang 27.61 162 P **P** **22 11 31.3 -2.8**
ZAA0 Zalesovo Array 27.65 350 P **P** **22 11 34.6 +0.5**
ZALV Zalesovo Beam 27.65 350 P **P** **22 11 34.8 +0.6**
comp=E,3.6nm,0.5s,baz=174,slow=7.7,SNR=23
ZALV LR LR 22 23 57.6
comp=E,154nm,20.2s,baz=182,slow=39
ZALV Zalesovo Beam 27.65 350 *i* P **P** **22 11 35.0 +0.9**
ZALV pmax pmax
comp=E,4.0nm,0.5s
BRZS Berezniki 27.71 332 *e*P **P** **22 11 34.9 +0.1**
baz=332
BRZS Berezniki 27.71 332 *e*P **P** **22 11 34.9 +0.1**
HIA Hailar 30.58 36 *i* P **P** **22 12 00.5 +0.2**
HIA pmax pmax
comp=E,10.0nm,0.9s
HIA Hailar 30.58 36 P **P** **22 12 00.1 -0.3**
HIA IAmb IAmb 22 12 12.9
comp=E,14nm,1.0s
WSAR Wadi Sarin 31.00 271 P **P** **22 12 04.2 -0.1**
comp=E,2.8nm,0.7s,baz=85,slow=8.2,SNR=4.6
BRVK Borovoye 31.01 333 *i* P **P** **22 12 04.5 +0.5**
BRVK pmax pmax
comp=E,4.0nm,1.4s
BRVK Borovoye 31.01 333 P **P** **22 12 04.5 +0.5**
GEYT Alibeck 31.02 299 P **P** **22 12 04.8 +0.5**
comp=E,4.7nm,0.7s,baz=133,slow=8.3,SNR=11
GEYT LR LR 22 27 43.4
comp=E,140nm,19.0s,baz=195,slow=42
GEYT Alibeck 31.02 299 P **P** **22 12 04.7 +0.4**
GYA0B ALIBECK ARRAY 31.02 299 P **P** **22 12 04.5 +0.1**
GYA0B IAmb IAmb 22 12 07.5
comp=E,9.6nm,0.8s
CN2 Changchun 31.34 49 *e*P **P** **22 12 07.8 +0.7**
CN2 pmax pmax
comp=E,10.0nm,0.7s
KSRS Korea Array 31.47 62 P **P** **22 12 07.7 -0.5**
comp=E,0.8nm,0.5s,baz=254,slow=9.7,SNR=2.0
JOW Kunigami 31.69 82 LR LR 22 25 35.6
comp=E,105nm,20.6s,baz=178,slow=37
AB31 Akbulak array 33.69 320⇑ *e*P **P** **22 12 28.7 +1.2**
AB31 pmax pmax
comp=E,6.0nm,0.3s
ABKAR Akbulak array 33.69 320 P **P** **22 12 28.9 +1.4**
ABKAR Akbulak array 33.69 320 P **P** **22 12 28.6 +1.1**
ABKAR IAmb IAmb 22 12 29.6
comp=E,22nm,0.9s
AKTO Aktyubinsk 35.35 321 P **P** **22 12 42.9 +0.9**
comp=E,8.2nm,0.6s,baz=119,slow=8.3,SNR=24
AKTO Aktyubinsk 35.35 321 *i* P **P** **22 12 42.0 +0.1**
AKTO pmax pmax
comp=E,7.0nm,0.6s
USA0B Ussuriysk Arra 35.94 51 P **P** **22 12 47.1 0.0**
USA0B pmax pmax
comp=E,8.0nm,1.0s
USA0B Ussuriysk Arra 35.94 51 P **P** **22 12 47.1 0.0**
USA0B IAmb IAmb 22 12 58.3
comp=E,8.1nm,1.0s
USRK Ussuriysk Ar. 35.94 51 P **P** **22 12 47.1 0.0**
comp=E,7.0nm,0.7s,baz=258,slow=8.8,SNR=24
USRK Ussuriysk Ar. 35.94 51 P **P** **22 12 46.8 -0.3**
DAV Davao City (W) 36.94 116 P **P** **22 12 55.8 -0.1**
comp=E,147nm,0.4s,baz=191,slow=5.2,SNR=2.4
TOLI2 Tolitoli 37.22 129 P **P** **22 12 55.9 -2.3**
TOLI2 IAmb IAmb 22 12 59.6
comp=E,7.3nm,0.8s
KLR Kul'dur 37.41 43 P **P** **22 12 59.6 +0.1**
comp=E,1.0nm,0.6s,baz=248,slow=7.6,SNR=3.6
SVE Sverdlovsk 37.63 331 *e*P **P** **22 13 02.2 +1.0**
SVE pmax pmax
comp=E,14nm,0.8s
ARU Arti 38.30 330 P **P** **22 13 07.0 +0.1**
baz=135,slow=5.7
ARU Arti 38.30 330*c* *i*P **P** **22 13 07.0 +0.1**
ARU **22 14 32.1**
ARU S **S** **22 19 01.1 +1.7**
ARU SS **SnSn** **22 21 44.1 -1.0**
ARU pmax pmax
comp=E,4.0nm,0.6s
ARU MLR MLR
comp=E,162nm,21.0s
ARU Arti 38.30 330 P **P** **22 13 07.2 +0.3**
LKRN Lenkeran, Azer 38.41 299 P **P** **22 13 09.6 +1.6**
UMR Umm Al-Rimmam 39.53 285 *e*P **22 13 18.0**
MJAR Matsushiro Arr 39.59 64 P **P** **22 13 17.4 -0.7**
comp=E,4.1nm,0.8s,baz=273,slow=11,SNR=5.6
MJAR LR LR 22 30 49.4
comp=E,53nm,19.2s,baz=330,slow=38
RDF Al-Radifah 39.75 284 *e*P **22 13 19.6**
MIB Mutribah 39.82 285 *e*P **22 13 20.5**
SEKA Sheki 39.85 303 P **P** **22 13 21.1 +0.9**
MNGR Mingechevir, A 39.89 302 P **P** **22 13 21.6 +1.2**
ZKTA Zakatala 40.33 303 P **P** **22 13 25.9 +1.8**
GANJ Ganja 40.46 302 P **P** **22 13 26.2 +1.0**
LGD Lagodekhi 40.63 304 P **P** **22 13 27.6 +1.0**
DDFL Dedoflistskaro 40.69 303 P **P** **22 13 28.6 +1.5**
GNI Garni 41.62 301 P **P** **22 13 35.9 +0.9**
comp=E,17nm,0.9s,baz=14,slow=4.9,SNR=14
GNI Garni 41.62 301*ce*P **P** **22 13 36.9 +1.9**
GNI pmax pmax
comp=E,34nm,1.3s
GNI Garni 41.62 301 P **P** **22 13 36.5 +1.5**
GNI IAmb IAmb 22 13 38.4
comp=E,28nm,1.1s
BTNK Botanikuri 41.70 303 P **P** **22 13 36.5 +1.1**
KZRT Kazreti 41.97 303 P **P** **22 13 39.4 +1.8**
GUDG Gudauri 42.01 304 P **P** **22 13 41.7 +3.6**
BELG Belogornoye 42.09 320 P **P** **22 13 38.7 +0.4**
comp=E,11nm,0.5s,baz=284,slow=0.2,SNR=9.3
BELG Belogornoye 42.09 320*c* *i*P **P** **22 13 38.6 +0.3**
BELG pmax pmax
comp=E,5.0nm,1.3s
TNTI Ternate 42.24 122 P **P** **22 13 37.3 -2.7**
TNTI IAmb IAmb 22 13 40.3
comp=E,12nm,0.5s
ZEI Tsey 42.46 305 *e*P **P** **22 13 42.7 +0.9**
ZEI pmax pmax
comp=E,27nm,1.4s
NRIK Noril'sk 42.58 357 P **P** **22 13 43.1 +1.0**
comp=E,14nm,0.6s,baz=158,slow=5.8,SNR=20
NRIK LR LR 22 32 28.5
comp=E,137nm,19.5s,baz=175,slow=38
NRIK Noril'sk 42.58 357*ce*P **P** **22 13 42.9 +0.8**
NRIK pmax pmax
comp=E,17nm,0.8s
NRIK Noril'sk 42.58 357 P **P** **22 13 42.6 +0.5**
NRIK IAmb IAmb 22 13 44.0
comp=E,16nm,0.7s
RAYN Ar Rayn 42.63 276 P **P** **22 13 43.1 -0.1**
RAYN pmax pmax
comp=E,12nm,0.8s
RAYN Ar Rayn 42.63 276 P **P** **22 13 43.1 -0.1**
RAYN IAmb IAmb 22 13 44.5
comp=E,12nm,0.8s
NCK Nalchik 42.76 306 *i* P **P** **22 13 44.7 +0.7**
NCK pmax pmax
comp=E,27nm,0.8s
ONI Oni 42.77 305 P **P** **22 13 47.1 +2.9**
YAK Yakutsk 42.86 25 P **P** **22 13 44.9 +0.4**
comp=E,5.8nm,0.5s,baz=146,slow=0.8,SNR=5.6
YAK Yakutsk 42.86 25*ce*P **P** **22 13 44.8 +0.4**
YAK pmax pmax
comp=E,8.0nm,0.6s
YAK Yakutsk 42.86 25 P **P** **22 13 44.8 +0.3**
YAK IAmb IAmb 22 13 45.7
comp=E,14nm,0.6s
GEVA Gevas 42.87 298 P **P** **22 13 46.5 +1.3**
KARS Kars 42.92 302 P **P** **22 13 48.0 +2.5**
KBZ Khabaz 43.29 306 P **P** **22 13 48.8 +0.6**
comp=E,1.9nm,0.8s,baz=143,slow=5.9,SNR=6.7
KBZ LR LR 22 37 22.9
comp=E,48nm,18.3s,baz=103,slow=44
KBZ Khabaz 43.29 306*ce*P **P** **22 13 48.9 +0.7**
KBZ pmax pmax
comp=E,3.0nm,1.0s
GOF Gofitskoye 43.34 308⇑ *e*P **P** **22 13 49.9 +1.3**
GOF pmax pmax
comp=E,35nm,0.9s
NEY Neytrino 43.37 305 *i* P **P** **22 13 49.7 +0.6**
NEY pmax pmax
comp=E,3.0nm,0.8s
ASAJ Asahikawa 43.42 53 P **P** **22 13 49.5 +0.2**
comp=E,7.2nm,0.8s,baz=192,slow=2.3,SNR=8.4
JKA Kamikawa-asahi 43.42 53 P **P** **22 13 49.1 -0.3**
JKA IAmb IAmb 22 14 03.1
comp=E,15nm,1.0s
KIV Kislovodsk 43.46 306 *e*P **P** **22 13 51.2 +1.4**
KIV pmax pmax
comp=E,33nm,1.0s
KIV Kislovodsk 43.46 306 P **P** **22 13 50.0 +0.2**
KIV IAmb IAmb 22 14 03.7
comp=E,13nm,1.1s
KIRV Kirov 43.62 329*ce*P **P** **22 13 50.6 -0.1**
YSS Yuzh-Sakhalins 43.91 49 *e*P **P** **22 13 53.6 +0.4**
YSS *e* 22 14 04.6
YSS pmax pmax
comp=E,30nm,1.1s
YSS Yuzh-Sakhalins 43.91 49 P **P** **22 13 53.3 +0.1**
MARD Mardin 44.69 297 P **P** **22 14 00.7 +1.0**
VRH Novokhopyorsk 45.28 317 *e*P **P** **22 14 03.6 -0.5**
VRH *e**PP **sP** **22 14 14.9 +0.1**
VRH pmax pmax

comp=Z,30nm,0.9s
SOC Sochi 45.58 306 *e*P **P** **22 14 05.0 -1.5**
SOC *e* 22 15 52.0
SOC *e*PPP PPP 22 16 32.1
SOC *e*S **S** **22 20 46.3 -1.1**
SOC pmax pmax
comp=Z,17nm,1.0s
MALT Malatya 46.51 298 P **P** **22 14 16.0 +1.9**
PRGR Permogore 46.70 331 *e*P **P** **22 14 14.5 -0.5**
PRGR *e**PP **sP** **22 14 25.4 -0.4**
PRGR pmax pmax
comp=Z,9.0nm,0.8s
VORD Divnogorie 46.74 316 *e*P **P** **22 14 14.6 -0.9**
VORD *e**PP **sP** **22 14 24.7 -1.6**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 46.86 316 *e*P **P** **22 14 15.6 -0.9**
VSR *e**PP **sP** **22 14 26.1 -1.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR Galich'ya Gora 47.27 318 *e*P **P** **22 14 19.8 +0.2**
LPSR *e**PP **sP** **22 14 30.4 0.0**
LPSR pmax pmax
comp=Z,30nm,0.8s
GAZ Gaziantep 47.54 297 P **P** **22 14 22.7 +0.6**
GAZ IAmb IAmb 22 14 34.1
comp=Z,11nm,0.7s
TOKA Tokat 47.95 301 P **P** **22 14 26.3 +1.0**
KVT Kavak 48.26 302 P **P** **22 14 29.5 +1.9**
TIXI Tiksi 49.08 14 P **P** **22 14 33.7 +0.3**
comp=Z,8.9nm,0.6s,baz=210,slow=4.1,SNR=52
TIXI Tiksi 49.08 14 *ce*P **P** **22 14 33.2 -0.1**
TIXI pmax pmax
comp=Z,41nm,0.6s
TIXI Tiksi 49.08 14 P **P** **22 14 33.3 0.0**
TIXI IAmb IAmb 22 14 45.2
comp=Z,13nm,0.8s
KLMR Klimovskoe 49.12 329 *e*P **P** **22 14 32.7 -1.1**
KLMR pmax pmax
comp=Z,16nm,1.0s
KLMR Klimovskoe 49.12 329 *e*P **P** **22 14 32.8 -1.1**
KLMR AMP 22 14 34.6
comp=Z,16nm,1.0s
OBN Obninsk 49.13 321 *e*P **P** **22 14 32.8 -1.2**
OBN *e* 22 14 43.0
OBN *e* 22 15 57.3
OBN *e* 22 16 28.8
OBN *e*PPP PPP 22 17 20.2
OBN pmax pmax
comp=Z,36nm,2.0s
OBN MLR MLR
comp=Z,65nm,19.0s
OBN Obninsk 49.13 321 P **P** **22 14 34.9 +0.9**
OBN IAmb IAmb 22 14 49.1
comp=Z,11nm,1.1s
ATD Arta Tunnel 49.16 262 P **P** **22 14 35.5 +0.6**
comp=Z,3.2nm,0.3s,baz=207,slow=23,SNR=6.4
ATD Arta Tunnel 49.16 262 P **P** **22 14 35.7 +0.8**
ATD IAmb IAmb 22 14 36.9
comp=Z,8.4nm,0.8s
ILGA Ilgaz 50.02 302 P **P** **22 14 42.0 +0.7**
BR131 Keskin Array S 50.16 301 P **P** **22 14 43.0 +0.7**
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BR131 Keskin Array S 50.16 301 P **P** **22 14 43.0 +0.7**
BRTR Keskin Array B 50.16 301 P **P** **22 14 42.5 +0.3**
comp=Z,3.3nm,0.8s,baz=98,slow=7.6,SNR=14
ANTO Ankara 50.80 301 P **P** **22 14 47.6 +0.6**
ANTO pmax pmax
comp=Z,8.0nm,0.9s
ANTO Ankara 50.80 301 P **P** **22 14 47.6 +0.6**
ANTO IAmb IAmb 22 15 07.1
comp=Z,8.0nm,0.8s
MA2 Magadan 51.13 34 *ce*P **P** **22 14 49.0 -0.1**
MA2 pmax pmax
comp=Z,12nm,1.0s
MA2 Magadan 51.13 34 P **P** **22 14 48.8 -0.4**
SEY Seymchan 52.69 30 P **P** **22 15 00.9 +0.3**
comp=Z,2.5nm,0.4s,baz=268,slow=7.7,SNR=16
SEY Seymchan 52.69 30 *i* P **P** **22 15 00.4 -0.2**
AKASG Malin Array Be 53.06 315 P **P** **22 15 03.2 -0.4**
comp=Z,6.2nm,0.5s,baz=81,slow=6.4,SNR=18
AKASG LR LR 22 41 21.8
comp=Z,50nm,19.4s,baz=50,slow=40
AKASG Malin Array Be 53.06 315 P **P** **22 15 03.6 0.0**
AKBB Malin Array Si 53.06 315 *ce*P **P** **22 15 02.7 -0.9**
AKBB Malin Array Si 53.06 315 IAmb IAmb 22 15 04.0
comp=Z,7.1nm,0.8s
VALR Valaam 53.30 328 *i* P **P** **22 15 05.1 -0.1**
VALR pmax pmax
comp=Z,9.0nm,1.0s
ELL Elmali 53.40 297 P **P** **22 15 06.8 +0.3**
ELL Elmali 53.40 297 P **P** **22 15 06.8 +0.3**
TIRR Tirgusor 53.72 307 P **P** **22 15 08.3 -0.3**
TIRR pmax pmax
comp=Z,11nm,0.9s
TIRR Tirgusor 53.72 307 P **P** **22 15 08.2 -0.3**
TIRR IAmb IAmb 22 15 11.7
comp=Z,11nm,0.9s
CFR Carcaliu 53.88 308 P **P** **22 15 10.2 +0.5**
CFR pmax pmax
comp=Z,9.0nm,1.0s
MNK Minsk 54.04 319 *i* P **P** **22 15 11.3 +0.6**
comp=E,4.0nm,1.4s
MNK *i* P **P** **22 15 11.3 +0.6**
comp=N,8.0nm,0.7s
MNK *i* P **P** **22 15 11.3 +0.6**
comp=Z,15nm,0.8s
MNK *i* PP **PP** **22 17 13.9 +1.9**
MNK *i* PPP PPP 22 18 24.2
MNK *i* S **S** **22 22 47.3 +2.1**
MNK *i* SS SS 22 25 56.4 -30
MNK *i* SSS SSS 22 28 36.7
MNK *i* LQ LQ 22 34 14.7
MNK *i* LR LR 22 38 48.7
MNK *i* LRM MLR 22 39 48.2
comp=Z,119nm,25.9s
MNK *i* LRM MLR 22 40 55.3
comp=E,18nm,24.3s
MNK *i* LRM MLR 22 41 29.1
comp=N,338nm,28.8s
PETK Petropavlovsk- 54.10 42 P **P** **22 15 11.3 0.0**
comp=N,2.1nm,0.7s,baz=298,slow=3.2,SNR=5.8
PETK LR LR 22 40 40.5
comp=N,129nm,18.0s,baz=277,slow=39
PETK Petropavlovsk- 54.10 42 P **P** **22 15 11.1 -0.1**
MANT Manisa 54.22 300 P **P** **22 15 12.9 +0.3**
MTN Manton Dam 54.35 132 P **P** **22 15 12.4 -1.1**
baz=54,SNR=3.1
NACGM Naroch 54.70 320 *i* P **P** **22 15 14.9 -0.6**
NACGM *i* P **P** **22 15 14.9 -0.6**
NACGM *i* P **P** **22 15 14.9 -0.6**
NACGM *i* PP **PP** **22 17 17.9 -0.1**
NACGM *i* PPP PPP 22 18 28.3
NACGM *i* S **S** **22 22 54.9 +0.8**
NACGM *i* SS SS 22 25 34.1 -63
NACGM *i* SSS SSS 22 28 54.3
NACGM *i* LQ LQ 22 34 16.6
NACGM *i* LR LR 22 39 48.4
VRI Vrincioaia 54.82 309 ⇑P **P** **22 15 17.5 +0.9**
VRI Vrincioaia 54.82 309 ⇑P **P** **22 15 17.5 +0.9**
PLOR Plostina 54.88 309 ⇑P **P** **22 15 18.5 +1.5**
PLOR Plostina 54.88 309 ⇑P **P** **22 15 18.5 +1.5**
KNRA Kununurra 54.94 136 P **P** **22 15 16.0 -1.7**
FITZ Fitzroy Crossi 54.98 141 P **P** **22 15 17.2 -0.7**
comp=N,3.5nm,0.9s,baz=335,slow=11,SNR=5.6
FITZ Fitzroy Crossi 54.98 141 P **P** **22 15 17.3 -0.7**
baz=55,SNR=4.0
IIGN Ignalina 55.04 320 *e*P **P** **22 15 18.3 +0.3**
KDU Kakadu 55.14 130 P **P** **22 15 18.1 -1.1**
baz=55,SNR=4.3
BIZ Bicaz 55.19 310 ⇓P **P** **22 15 19.8 +0.6**
MLR Muntele Rosu 55.40 308 ⇓P **P** **22 15 20.3 -0.6**
MLR Muntele Rosu 55.40 308 ⇓P **P** **22 15 20.3 -0.6**
MLR Muntele Rosu 55.40 308 IAmb IAmb 22 15 36.3
comp=Z,15nm,0.9s
OZUR 55.46 309 ⇓P **P** **22 15 20.9 -0.3**
FINES FINESS Array B 55.60 328 P **P** **22 15 22.0 +0.1**
comp=Z,2.8nm,0.7s,baz=97,slow=6.8,SNR=12
SUF Sumiainen 55.72 329 P **P** **22 15 23.5 +0.7**
SUF pmax pmax
comp=Z,16nm,1.8s
BURAR Bucovina Array 55.75 311 P **P** **22 15 23.3 0.0**
BURAR Bucovina Array 55.75 311 P **P** **22 15 23.4 0.0**
DOPR Dopca 55.75 309 ⇑P **P** **22 15 23.9 +0.6**
BUR08 Bucovina Ar. S 55.76 311 P **P** **22 15 23.6 +0.1**
VOIR 56.03 308 ⇑P **P** **22 15 24.7 -0.7**
VOIR 56.03 308 ⇑P **P** **22 15 24.7 -0.7**
PABE Paberze 56.33 320 *e*P **P** **22 15 27.6 +0.4**
SUW Suwalki 56.79 319 *e*P **P** **22 15 30.7 +0.2**
SUW Suwalki 56.79 319 P **P** **22 15 29.4 -1.1**
SUW pmax pmax
comp=Z,23nm,1.1s
SUW Suwalki 56.79 319 P **P** **22 15 29.4 -1.1**
LOT Lotru 56.92 308 ⇓P **P** **22 15 30.1 -1.7**
SANT Santorini 57.00 297 P **P** **22 15 31.6 -0.7**
ARA0 ARCESS Array S 57.11 337 *e*P **P** **22 15 33.4 +0.8**
ARCES ARCESS Array B 57.11 337 P **P** **22 15 33.1 +0.5**
comp=Z,1.9nm,0.6s,baz=106,slow=7.6,SNR=11
ARCES PcP **PcP** **22 16 27.4 +0.3**
comp=Z,2.9nm,0.8s,baz=99,slow=4.3,SNR=6.0
ARCES ARCESS Array B 57.11 337 IAmb IAmb 22 15 34.1
comp=Z,3.5nm,0.9s
TRPA Tarpa 57.50 312 ⇓P **P** **22 15 36.3 +0.6**
UZH Uzhgorod 57.62 312 *e*P P 22 15 47.2 +11
VTS Vitosha 57.66 305 ⇑P **P** **22 15 37.7 +0.6**
VTS Vitosha 57.66 305 ⇑P **P** **22 15 37.7 +0.6**
VTS Vitosha 57.66 305 IAmb IAmb 22 15 49.2
comp=Z,6.4nm,0.9s
IDI Anoyia 57.66 296 P **P** **22 15 37.6 +0.5**
KTK1 Kautokeino 57.81 337 *e*P **P** **22 15 38.0 +0.5**
HAMF Hammerfest 57.94 338 *e*P **P** **22 15 39.4 +1.1**
MDVR Moldovita 58.45 308 ⇑P **P** **22 15 43.7 +1.3**
LIT Litokhoron 58.62 302 P **P** **22 15 43.9 +0.3**
LIT pmax pmax
comp=Z,8.0nm,0.9s
LIT Litokhoron 58.62 302 P **P** **22 15 43.9 +0.3**
LIT IAmb IAmb 22 15 55.2
comp=Z,8.4nm,0.9s
NIE Niedzica 58.85 313 P **P** **22 15 46.7 +1.5**
JETT Jettan, Norway 58.88 337 *e*P **P** **22 15 45.9 +0.9**
OJC Ojcow 59.09 314 P **P** **22 15 46.6 -0.2**
OJC pmax pmax
comp=Z,4.0nm,0.9s
OJC Ojcow 59.09 314 P **P** **22 15 46.6 -0.2**
BILL Bilibino 59.22 25 *de*P **P** **22 15 48.1 +0.8**
BILL *e* 22 15 58.3
BILL *e* 22 16 35.8
BILL *e*PPP PPP 22 19 18.9
BILL pmax pmax
comp=Z,11nm,1.0s
BILL MLR MLR
comp=Z,110nm,15.0s
BILL Bilibino 59.22 25 P **P** **22 15 48.1 +0.8**
PSZ Piszkesteto 59.29 312 P **P** **22 15 48.2 -0.1**
PSZ pmax pmax
comp=Z,4.0nm,0.9s
PSZ Piszkesteto 59.29 312 P **P** **22 15 48.2 -0.1**
FNA Florina 59.33 303 P **P** **22 15 48.3 -0.3**
FNA pmax pmax
comp=Z,3.0nm,0.8s
FNA Florina 59.33 303 P **P** **22 15 48.3 -0.3**
TRO Tromso 59.41 337 *e*P **P** **22 15 49.2 +0.6**
LANS Liptovska Anna 59.42 313 *e*P P 22 15 40.1 -9.0
LANS *e* 22 15 49.8
LANS Liptovska Anna 59.42 313 *e*P **P** **22 15 49.8 +0.7**
ITM Ithomi 59.61 299 IAmb IAmb 22 16 00.5
comp=Z,12nm,0.9s
DIVS Divibare 59.77 307 IAmb IAmb 22 16 03.4
comp=Z,4.8nm,0.9s
BJO1 Bjornoya 59.95 343 *e*P **P** **22 15 52.1 -0.1**
KMBO Kilima Mbogo 60.14 252 P **P** **22 15 54.8 0.0**
comp=Z,0.6nm,0.3s,baz=46,slow=8.4,SNR=5.9
KMBO Kilima Mbogo 60.14 252 *i* P **P** **22 15 56.0 +1.2**
KMBO pmax pmax
comp=Z,1.0nm,0.3s
N2IH Innhavet 60.40 335 *e*P **P** **22 15 55.9 +0.5**
MORC Moravsky Berou 60.59 314 *e*P **P** **22 15 57.3 +0.2**
MORC Moravsky Berou 60.59 314 P **P** **22 15 57.9 +0.8**
MORC Moravsky Berou 60.59 314 IAmb IAmb 22 15 58.1
comp=Z,3.9nm,0.8s
JAVC Velka Javorina 60.63 313 *e*P **P** **22 15 58.9 +1.4**
FAUS Fauske 60.64 334 *e*P **P** **22 15 57.2 +0.1**
STEI Steigen 60.66 335 *e*P **P** **22 15 57.8 +0.6**
MOR8 Moi Rana 60.98 333 *e*P **P** **22 15 58.9 -0.6**
KRLC Kraliky 61.04 314 *e*P **P** **22 15 59.7 -0.5**
KRLC Kraliky 61.04 314 *e*P **P** **22 15 59.7 -0.5**
SPA0 Spitsbergen Ar 61.07 347 *e*P **P** **22 16 00.7 +0.9**
NBB17 Glomfjord BÝr 61.17 334 *e*P **P** **22 16 01.2 +0.6**
KSP Ksiaz 61.24 315 P **P** **22 16 02.8 +1.4**
VRAC Vranov 61.27 314 *e*P **P** **22 16 02.3 +0.6**
DPC Dobruska-Polom 61.29 315 *e*P **P** **22 16 02.3 +0.4**
DPC Dobruska-Polom 61.29 315 *e*P **P** **22 16 02.3 +0.4**
LOF Lofoten 61.30 335 *e*P **P** **22 16 01.4 -0.2**
OSTC Ostas 61.33 315 *e*P **P** **22 16 02.2 +0.1**
CHVC Chvalec 61.42 315 *e*P **P** **22 16 03.1 +0.3**
KRUC Moravsky 61.44 313 *e*P **P** **22 16 03.2 +0.4**
KONS Konsvik 61.51 333 *e*P **P** **22 16 03.3 +0.3**
N2SV S¸rvÝgen 61.51 335 *e*P **P** **22 16 03.0 0.0**
WB0 Warramunga Arr 61.53 135 P **P** **22 16 02.8 -1.0**
STOK Stokkvaagen 61.56 333 *e*P **P** **22 16 04.7 +1.4**
WRA Warramunga Arr 61.63 135 P **P** **22 16 04.0 -0.5**
comp=Z,6.5nm,0.5s,baz=324,slow=7.2,SNR=172
WRA Warramunga Arr 61.63 135 *i* P **P** **22 16 04.0 -0.5**
WRA pmax pmax
comp=Z,8.0nm,0.4s
WRA Warramunga Arr 61.63 135 P **P** **22 16 03.4 -1.0**
WRAB Tennant Creek 61.63 135 *ce*P **P** **22 16 02.8 -1.6**
WRAB pmax pmax
comp=Z,31nm,2.5s
WRAB Tennant Creek 61.63 135 P **P** **22 16 03.7 -0.7**
WB2 Warramunga Arr 61.64 135 P **P** **22 16 03.9 -0.6**
baz=62
WR0 Warramunga Arr 61.77 135 P **P** **22 16 05.0 -0.4**
WR0 IAmb IAmb 22 16 21.0
comp=Z,8.8nm,0.9s
CONA Conrad Observa 61.97 312 *e*P **P** **22 16 06.7 +0.1**
comp=Z,6.9nm,0.9s
WRKA Warakurna 62.02 143 P **P** **22 16 06.8 -0.2**
baz=62,SNR=22
NSS Namsos 62.10 331 *e*P **P** **22 16 07.4 +0.4**
NC602 NORSAR Array S 62.65 327 *e*P **P** **22 16 11.1 +0.4**
NORES NORESS Array B 62.65 327 P **P** **22 16 11.1 +0.4**
NC303 NORSAR Array S 62.68 327 P **P** **22 16 10.6 -0.3**
BRG Berggiesshubel 62.70 316 *e*P **P** **22 16 11.9 +0.6**
BRG Amp 22 16 13.6
comp=Z,5.5nm,1.2s
BRG *ex* x 22 16 22.5
BRG Amp 22 16 24.2
comp=Z,3.8nm,0.9s
NB201 NORSAR Array S 62.73 327 P **P** **22 16 11.4 +0.1**
NB2 NORSAR Subarra 62.77 327 P **P** **22 16 11.4 -0.3**
baz=83,slow=6.5
NOA NORSAR Array B 62.77 327 P **P** **22 16 11.3 -0.3**
comp=Z,9.1nm,0.8s,baz=83,slow=6.6,SNR=22
NOA LR LR 22 47 03.2
comp=Z,51nm,19.5s,baz=95,slow=39
NAO01 NORSAR Array S 62.96 327 P **P** **22 16 12.6 -0.2**
NC204 NORSAR Array S 62.96 328 P **P** **22 16 12.9 0.0**
MOA Molln 63.04 312 *e*P **P** **22 16 13.6 0.0**
comp=Z,6.5nm,1.0s
OSL Oslo 63.15 326 *e*P **P** **22 16 14.8 +0.7**
CLL Collm 63.21 316 *i* P **P** **22 16 14.5 -0.2**
comp=Z,6.0nm,1.1s
CLL Lm MLR 22 46 00.0
comp=Z,100nm,18.0s
CLL Collm 63.21 316 P **P** **22 16 13.9 -0.8**
CLL pmax pmax
comp=Z,5.0nm,1.1s
CLL Collm 63.21 316 P **P** **22 16 13.9 -0.8**
GEC2 GERESS Array S 63.22 313 P **P** **22 16 15.1 +0.1**
GEC2 IAmb IAmb 22 16 15.8
comp=Z,6.8nm,0.9s
GERES GERESS Array B 63.22 313 P **P** **22 16 15.3 +0.4**
comp=Z,3.6nm,0.7s,baz=79,slow=6.9,SNR=30
GERES LR LR 22 47 42.6
comp=Z,65nm,21.7s,baz=60,slow=40
GERES GERESS Array B 63.22 313 P **P** **22 16 15.0 +0.1**
KHC Kasperske Hory 63.25 314 *e*P **P** **22 16 15.0 0.0**
KHC Kasperske Hory 63.25 314 *e*P **P** **22 16 15.0 0.0**
KHC Kasperske Hory 63.25 314 P **P** **22 16 15.4 +0.4**
DOMB Dombas 63.67 328 *e*P **P** **22 16 17.8 +0.3**
KONO Kongsberg 63.76 326 *e*P **P** **22 16 18.4 +0.3**
PMG Port Moresby 63.96 117 P **P** **22 16 19.1 -1.0**
PMG pmax pmax
comp=Z,29nm,1.1s
PMG Port Moresby 63.96 117 P **P** **22 16 19.1 -1.0**
CEL Celeste 64.02 302 P **P** **22 16 20.1 -0.1**
AS31 Alice Springs 64.13 138 P **P** **22 16 19.6 -1.4**
ASAR Alice Springs 64.13 138 P **P** **22 16 20.8 -0.3**
comp=Z,7.7nm,0.8s,baz=322,slow=6.9,SNR=60
ASAR Alice Springs 64.13 138 P **P** **22 16 20.6 -0.5**
ZOU Zoufplan 64.17 311 P **P** **22 16 22.5 +1.2**
SKAR Skarslia 64.23 327 *e*P **P** **22 16 22.2 +0.9**
MOL Molde 64.29 329 *e*P **P** **22 16 21.4 -0.1**
PAOL Paolisi 64.32 305 P **P** **22 16 21.3 -0.9**
STAL STALIGIAL 64.41 311 IAmb IAmb 22 16 22.9
comp=Z,7.8nm,0.9s
ABTA Abtaltersbach 64.44 311 *e*P **P** **22 16 22.4 -0.5**
comp=Z,2.5nm,0.7s
INTR Introdacqua 64.56 306 P **P** **22 16 23.5 -0.3**
INTR IAmb IAmb 22 16 39.5
comp=Z,16nm,1.1s
AKN Aaknes 64.61 329 *e*P **P** **22 16 24.4 +0.8**
GRA1 Grafenberg Arr 64.64 315 P **P** **22 16 24.3 +0.2**
GRA1 IAmb IAmb 22 16 26.9
comp=Z,4.9nm,0.9s
GRF Grafenberg Arr 64.64 315 P **P** **22 16 24.3 +0.2**
GRF pmax pmax
comp=Z,5.0nm,0.9s
GRF Grafenberg Arr 64.64 315 *e*P **P** **22 16 25.0 +0.8**
comp=Z,11nm,1.3s,baz=84,slow=5.7
GRFO Grafenberg 64.64 315 P **P** **22 16 24.9 +0.8**
GRFO pmax pmax
comp=Z,5.0nm,1.0s
GRFO Grafenberg 64.64 315 P **P** **22 16 24.9 +0.8**
AQU L'Aquila 64.84 306 P **P** **22 16 28.3 +2.7**
WTTA Wattenberg 64.91 312 *e*P **P** **22 16 25.4 -0.7**
comp=Z,9.7nm,1.0s
NRCA Norcia 64.93 307 IAmb IAmb 22 16 28.2
comp=Z,12nm,1.0s
WATA Walderalm 64.93 312 *e*P **P** **22 16 25.3 -0.9**
comp=Z,4.8nm,0.8s
HYA Hoyanger 65.17 328 *e*P **P** **22 16 27.8 +0.5**
ODD1 Odda 65.19 326 *e*P **P** **22 16 28.3 +0.8**
SQTA Sankt Quirin 65.20 312 *i* P **P** **22 16 27.2 -0.7**
comp=Z,8.2nm,0.9s,SNR=4.6
SNART Snartemo 65.20 325 *e*P **P** **22 16 28.3 +0.7**
MOTA Moosalm 65.24 312 *i* P **P** **22 16 27.5 -0.8**
comp=Z,7.9nm,0.9s,SNR=8.2
BLS5 Blasjo 65.37 326 *e*P **P** **22 16 28.9 +0.1**
RETA Reutte 65.43 312 *i* P **P** **22 16 28.9 -0.5**
comp=Z,7.6nm,0.8s,SNR=5.2
MBAR Mbarara 65.46 256 *ce*P **P** **22 16 31.0 +0.9**
MBAR pmax pmax
comp=Z,4.0nm,1.3s
QIS Mount Isa 65.51 131 P **P** **22 16 29.8 -0.3**
baz=66,SNR=5.7
FETA Feichten 65.56 312 *e*P **P** **22 16 29.9 -0.5**
comp=Z,11nm,1.2s
FOO Floro 65.62 328 *e*P **P** **22 16 30.6 +0.4**
BER Bergen 65.73 327 *e*P **P** **22 16 31.4 +0.5**
LATE Laterza 65.92 307 IAmb IAmb 22 16 34.7
comp=Z,7.3nm,1.1s
KMY Karmoy 66.02 326 *e*P **P** **22 16 33.5 +0.7**
DAVA Damuels 66.06 312 *i* P **P** **22 16 33.2 -0.4**
comp=Z,4.9nm,0.6s,SNR=4.7
NOR Nord 66.33 351 *i* P **P** **22 16 33.9 -0.6**
NOR IAmb IAmb 22 16 34.8
comp=Z,2.6nm,0.5s
NOR *i* 22 16 45.3
NOR Nord 66.33 351 *i* P **P** **22 16 33.9 -0.6**
NOR *i* 22 16 45.3
NOR pmax pmax
comp=Z,3.0nm,0.5s
TUE Stuetta 66.62 312 P **P** **22 16 37.2 0.0**
TUE IAmb IAmb 22 16 41.3
comp=Z,6.9nm,0.9s
WLF Walferdange 67.84 316 *d*P **P** **22 16 45.8 +1.2**
WLF *d*x x 22 17 04.2
WLF Walferdange 67.84 316 P **P** **22 16 45.5 +0.8**
WLF pmax pmax
comp=Z,25nm,1.1s
WLF Walferdange 67.84 316 P **P** **22 16 45.5 +0.8**
HINF Hinteralfeld 67.91 313 *e*P **P** **22 16 44.6 -0.5**
HINF pmax pmax
comp=Z,16nm,1.6s
SENIN Lac Senin/Sane 68.02 312 IAmb IAmb 22 16 46.7
comp=Z,4.8nm,0.8s
BGES Gesves 68.31 316 *d*P **P** **22 16 47.3 -0.2**
BGES *d*pP **sP** **22 16 58.2 -0.4**
BMRD Maredsous 68.53 316 *d*P **P** **22 16 49.2 +0.3**
LPG La Plagne 68.63 311 *e*P **P** **22 16 49.8 -0.2**
LPG pmax pmax
comp=Z,9.0nm,0.9s
LPL La Plagne 68.64 311 *e*P **P** **22 16 49.8 -0.2**
LPL pmax pmax
comp=Z,9.0nm,0.8s
GAMB Gambell 68.64 28 P **P** **22 16 49.3 0.0**
GAMB IAmb IAmb 22 16 50.4
comp=Z,6.7nm,1.0s
GAMB Gambell 68.64 28 P 22 16 49.3
baz=287,SNR=5.1
MBDF Montbardon 68.84 310 *e*P **P** **22 16 50.2 -1.0**
MBDF pmax pmax
comp=Z,5.0nm,0.7s
ORIF Oris-en-Rattie 69.39 311 *e*P **P** **22 16 54.3 -0.2**
ORIF pmax pmax
comp=Z,11nm,1.2s
TNA Tin City 69.61 26 P **P** **22 16 55.4 +0.1**
TNA IAmb IAmb 22 17 08.1
comp=Z,4.8nm,0.8s
TNA Tin City 69.61 26 P 22 16 55.4
baz=290
KEST Kesra 69.76 301 P **P** **22 16 57.3 +0.4**
comp=Z,20nm,1.0s,baz=312,slow=4.5,SNR=14
DBG Daneborg 70.22 345 *i* P **P** **22 16 58.9 0.0**
DBG IAmb IAmb 22 16 59.8
comp=Z,1.9nm,0.7s
VIVF Saint-Julien-l 70.22 311 *e*P **P** **22 16 59.0 -0.6**
VIVF pmax pmax
comp=Z,16nm,1.2s
AVF Avril sur Loir 70.48 313 *e*P **P** **22 17 00.4 -0.6**
AVF pmax pmax
comp=Z,15nm,1.1s
ANM Nome 70.98 27 IAmb IAmb 22 17 05.5
comp=Z,9.3nm,1.0s
ANM Nome 70.98 27 P 22 17 04.2
baz=292,SNR=9.2
A21K Barrow 71.08 19 P 22 17 04.4
baz=298
CAF Calviac 71.95 312 *e*P **P** **22 17 09.9 -0.1**
CAF pmax pmax
comp=Z,11nm,0.9s
RJF Les Rejaudoux 72.19 312 *e*P **P** **22 17 11.5 +0.1**
RJF pmax pmax
comp=Z,12nm,0.8s
BBOO Buckleboo 72.30 143 P **P** **22 17 11.2 -0.9**
baz=72,SNR=6.0
MTLF Montolieu 72.40 310 *e*P **P** **22 17 13.3 +0.6**
MTLF pmax pmax
comp=Z,47nm,1.7s
GRR Gorron 72.63 316 *e*P **P** **22 17 13.3 -0.6**
GRR pmax pmax
comp=Z,8.0nm,0.6s
EUNU Eureka 73.27 360 P **P** **22 17 18.4 +1.1**
EUNU IAmb IAmb 22 17 20.2
comp=Z,7.2nm,0.8s
NEEM North Greenlan 73.65 352 ⇑*i* P **P** **22 17 20.2 +0.3**
NEEM IAmb IAmb 22 17 21.1
comp=Z,10.0nm,0.6s
NEEM *i* 22 17 31.5
SGMF Saint Gilles 73.73 316 *e*P **P** **22 17 20.2 -0.2**
SGMF pmax pmax
comp=Z,33nm,1.3s
ROSF Rostrenen 74.14 316 *e*P **P** **22 17 22.5 -0.4**
ROSF pmax pmax
comp=Z,18nm,0.8s
QUIF Quistinic 74.23 316 *e*P **P** **22 17 22.7 -0.7**
QUIF pmax pmax
comp=Z,35nm,1.4s
ETSF Etsaut 74.45 310 *e*P **P** **22 17 24.9 0.0**
ETSF pmax pmax
comp=Z,9.0nm,0.6s
TOLK Toolik Lake Re 74.56 20 IAmb IAmb 22 17 26.9
comp=Z,12nm,0.7s
TOLK Toolik Lake Re 74.56 20 P 22 17 25.8
baz=305,SNR=15
IMAR Indian Mountai 74.67 23 P **P** **22 17 25.9 +0.3**
STKA Stephens Creek 74.76 138 P **P** **22 17 24.9 -1.6**
comp=Z,3.7nm,0.8s,baz=315,slow=8.1,SNR=6.5
COLD Coldfoot 75.17 21 P **P** **22 17 28.9 +0.4**

COLD	**Coldfoot**	**75.17**	**21**	*i* P			22 17 29.2	
	baz=305							
SUMG	**Summit**	**75.40**	**346**	*i* P		**P**	**22 17 30.1**	**-0.2**
SUMG				*i*			22 17 48.5	
SUMG	**Summit**	**75.40**	**346**	*i* P		**P**	**22 17 30.0**	**-0.2**
SUMG				*i*			22 17 48.5	
SUMG	**Summit**	**75.40**	**346**	P		**P**	**22 17 29.6**	**-0.6**
SUMG				IAmb		IAmb	22 17 32.4	
	comp=Z,11nm,1.0s							
RMQ	**Roma**	**75.69**	**130**	P		**P**	**22 17 33.1**	**+1.0**
	baz=76,SNR=5.4							
MLY	**Manley**	**76.25**	**23**	P		**P**	**22 17 35.2**	**+0.5**
MLY				IAmb		IAmb	22 17 36.1	
	comp=Z,6.5nm,0.6s							
MLY	**Manley**	**76.25**	**23**	P			22 17 35.3	
	baz=305,SNR=12							
SVW2	**Sparrevohn**	**76.55**	**28**	P		**P**	**22 17 36.7**	**+0.2**
SVW2				IAmb		IAmb	22 17 39.0	
	comp=Z,12nm,1.2s							
EIDS	**Eidsvold**	**76.61**	**128**	P		**P**	**22 17 37.3**	**+0.1**
	baz=77							
I23K	**Minto, Yukon-K**	**76.66**	**23**	P		**P**	**22 17 37.3**	**+0.4**
I23K	**Minto, Yukon-K**	**76.66**	**23**	P			22 17 37.4	
	baz=306							
BPAW	**Bear Paw Mtn.**	**76.69**	**24**	P		**P**	**22 17 37.6**	**+0.3**
BPAW				IAmb		IAmb	22 17 38.8	
	comp=Z,18nm,1.2s							
BPAW	**Bear Paw Mtn.**	**76.69**	**24**	P			22 17 37.4	
	baz=305,SNR=9.0							
PPLA	**Purkeypile**	**76.93**	**25**	P		**P**	**22 17 38.8**	**0.0**
PPLA				IAmb		IAmb	22 17 40.4	
	comp=Z,16nm,1.2s							
PPLA	**Purkeypile**	**76.93**	**25**	P			22 17 39.1	
	baz=304							
CMSA	**Cobar Meteorol**	**77.02**	**136**	P		**P**	**22 17 39.4**	**0.0**
	baz=77,SNR=11							
NEA2	**Nenana**	**77.08**	**23**	IAmb		IAmb	22 17 40.9	
	comp=Z,6.5nm,0.8s							
NEA2	**Nenana**	**77.08**	**23**	P			22 17 39.5	
	baz=306,SNR=5.6							
FYU	**Fort Yukon**	**77.14**	**20**	P		**P**	**22 17 40.5**	**+0.8**
MDM	**Murphy Dome**	**77.15**	**22**	P		**P**	**22 17 40.4**	**+0.5**
MDM				IAmb		IAmb	22 17 42.2	
	comp=Z,19nm,1.0s							
POKR	**Poker Plat Res**	**77.33**	**22**	P		**P**	**22 17 41.4**	**+0.6**
POKR				IAmb		IAmb	22 17 42.5	
	comp=Z,20nm,1.1s							
POKR	**Poker Plat Res**	**77.33**	**22**	P			22 17 41.1	
	baz=307,SNR=5.8							
TCOL	**CIGO, UAF Yank**	**77.33**	**22**	P			22 17 41.1	
	baz=307							
COLA	**College**	**77.34**	**22**	P			22 17 40.9	
	baz=307							
TAM	**Tamanrasset**	**77.63**	**289**	P		**P**	**22 17 44.1**	**+0.6**
MCK	**McKinley**	**77.64**	**24**	IAmb		IAmb	22 17 43.8	
	comp=Z,7.2nm,0.6s							
MCK	**McKinley**	**77.64**	**24**	P			22 17 42.1	
	baz=306,SNR=5.1							
SKT	**Skwentna**	**77.70**	**26**	P		**P**	**22 17 42.7**	**-0.3**
SKT				IAmb		IAmb	22 17 43.9	
	comp=Z,14nm,1.0s							
SKT	**Skwentna**	**77.70**	**26**	P			22 17 42.7	
	baz=304,SNR=8.5							
PRP	**Porcupine Dome**	**77.71**	**21**	P		**P**	**22 17 43.5**	**+0.4**
PRP				IAmb		IAmb	22 17 45.0	
	comp=Z,16nm,1.2s							
PRP	**Porcupine Dome**	**77.71**	**21**	P			22 17 43.8	
	baz=309							
IL31		**77.72**	**22**	IAmb		IAmb	22 17 43.6	
	comp=Z,5.2nm,0.8s							
ILAR	**Eielson Array**	**77.72**	**22**	P		**P**	**22 17 42.6**	**-0.4**
	comp=Z,4.7nm,0.9s,baz=298,slow=4.7,SNR=30							
ILAR				PP		**PP**	**22 20 36.1**	**-1.8**
	comp=Z,0.4nm,0.7s,baz=288,slow=6.2,SNR=3.0							
ILAR	**Eielson Array**	**77.72**	**22**	P		**P**	**22 17 41.9**	**-1.1**
RND	**Reindeer**	**77.87**	**24**	P		**P**	**22 17 43.4**	**-0.5**
RND				pmax		pmax		
	comp=Z,8.0nm,1.1s							
RND	**Reindeer**	**77.87**	**24**	P		**P**	**22 17 43.4**	**-0.5**
RND				IAmb		IAmb	22 17 46.0	
	comp=Z,8.4nm,1.1s							
HDA	**Harding Lake**	**77.93**	**23**	P			22 17 44.1	
	baz=308							
HDA				P			22 17 44.1	
	baz=308							
ESBB	**Sonseca Array**	**78.09**	**308**	P		**P**	**22 17 45.6**	**0.0**
ESBB				IAmb		IAmb	22 17 46.9	
	comp=Z,7.5nm,1.1s							
ESDC	**Sonseca Array**	**78.09**	**308**	P		**P**	**22 17 45.5**	**-0.1**
	comp=Z,4.2nm,1.0s,baz=51,slow=5.9,SNR=22							
ESDC	**Sonseca Array**	**78.09**	**308**	P		**P**	**22 17 45.6**	**0.0**
ICESG	**Greenland Ices**	**78.23**	**344**	*i* P		**P**	**22 17 46.2**	**0.0**
ICESG				IAmb		IAmb	22 17 48.6	
	comp=Z,8.3nm,0.9s							
ICESG				*i*			22 18 04.7	
WAT2	**Susitna Watana**	**78.23**	**24**	P			22 17 45.4	
	baz=307							
SUA	**Susitna One**	**78.30**	**26**	P			22 17 46.0	
	baz=305							
WAT6	**Susitna Watana**	**78.77**	**24**	P			22 17 48.9	
	baz=308							
PMR	**Palmer**	**78.85**	**25**	P			22 17 49.4	
	baz=307							
RC01	**Rabbit Creek A**	**78.92**	**26**	P			22 17 49.5	
	baz=306							
SML	**Sawmill**	**79.03**	**25**	P		**P**	**22 17 50.4**	**+0.1**
SML				IAmb		IAmb	22 17 51.6	
	comp=Z,15nm,0.9s							
SML	**Sawmill**	**79.03**	**25**	P			22 17 50.3	
	baz=307							
INK	**Inuvik**	**79.17**	**16**	P		**P**	**22 17 51.5**	**+0.6**
	comp=Z,12nm,1.0s,baz=324,slow=6.3,SNR=33							
INK	**Inuvik**	**79.17**	**16**	IAmb		IAmb	22 17 52.3	
	comp=Z,11nm,0.8s							
SCRK	**Sand Creek**	**79.21**	**22**	P		**P**	**22 17 51.3**	**-0.1**
SCRK				IAmb		IAmb	22 17 52.1	
	comp=Z,7.1nm,0.8s							
SCRK	**Sand Creek**	**79.21**	**22**	P			22 17 51.5	
	baz=310,SNR=8.4							
KNK	**Knik Glacier**	**79.22**	**25**	P			22 17 51.5	
	baz=307							
MVO	**Moncorvo**	**79.56**	**311**	*e*P		**P**	**22 17 54.4**	**+0.8**
MVO				epP		**sP**	**22 18 05.0**	**+0.3**
EGAK	**Eagle**	**79.59**	**21**	P		**P**	**22 17 53.4**	**+0.2**
EGAK	**Eagle**	**79.59**	**21**	P			22 17 53.2	
	baz=313							
M24K	**Tolsona, Glenn**	**79.64**	**24**	P			22 17 54.4	
	baz=309							
KDAK	**Kodiak Island**	**79.65**	**30**	P		**P**	**22 17 53.6**	**-0.1**
	comp=Z,11nm,0.6s,baz=298,slow=3.5,SNR=26							
KDAK	**Kodiak Island**	**79.65**	**30**	P			22 17 53.6	
	baz=304							
OHAK	**Old Harbor**	**79.65**	**30**	P			22 17 53.5	
	baz=304							
EPYK	**Eagle Plains**	**79.78**	**18**	P			22 17 54.2	
	baz=316							
K27K	**Chicken**	**79.80**	**21**	P		**P**	**22 17 55.2**	**+0.8**
K27K				IAmb		IAmb	22 17 56.6	
	comp=Z,13nm,1.1s							
PVRL	**Vila Real**	**79.97**	**311**	*e*P		**P**	**22 17 56.5**	**+0.7**
KLU	**Klutina**	**80.12**	**25**	P			22 17 56.7	
	baz=309,SNR=5.7							
MTE	**Manteigas**	**80.25**	**310**	*e*P		**P**	**22 17 58.4**	**+1.0**
MTE				epP		**sP**	**22 18 09.4**	**+0.9**
C36M	**Paulatuk**	**80.40**	**12**	IAmb		IAmb	22 17 58.4	
	comp=Z,15nm,0.8s							
C36M	**Paulatuk**	**80.40**	**12**	P			22 17 57.5	
	baz=327,SNR=8.7							
PCBR	**Castelo Branco**	**80.46**	**310**	*e*P		**P**	**22 17 59.3**	**+0.9**
	comp=Z,25nm,1.3s							
PCBR				*e*pP		**sP**	**22 18 10.3**	**+0.8**
N25K	**Chitina, Valde**	**80.54**	**24**	P		**P**	**22 17 59.2**	**+0.7**
N25K				IAmb		IAmb	22 18 00.2	
	comp=Z,13nm,0.7s							
N25K	**Chitina, Valde**	**80.54**	**24**	P			22 17 58.5	
	baz=310,SNR=5.5							
BCAR	**Beaver Creek A**	**80.55**	**22**	P		**P**	**22 17 59.2**	**+0.7**
PMRV	**Marv??o**	**80.58**	**309**	*e*P		**P**	**22 17 59.5**	**+0.3**
	comp=Z,23nm,1.7s							
PMRV				*e*pP		**sP**	**22 18 10.5**	**+0.2**
EYAK	**Cordova Ski Ar**	**80.79**	**25**	P			22 17 60.0	
	baz=310							
PBAR	**Barrancos**	**80.91**	**308**	*e*P		**P**	**22 18 01.4**	**+0.5**
PBAR				*e*pP		**sP**	**22 18 12.2**	**+0.2**
BMRM	**Bremner River**	**80.95**	**25**	P		**P**	**22 18 01.0**	**+0.3**
BMRM	**Bremner River**	**80.95**	**25**	P			22 18 01.6	
	baz=310							
MCARA	**McCarthy VSAT**	**81.25**	**24**	P		**P**	**22 18 02.2**	**-0.1**
MCARA	**McCarthy VSAT**	**81.25**	**24**	P			22 18 02.9	
	baz=312							
PMTG	**Montargil**	**81.32**	**309**	*e*P		**P**	**22 18 03.3**	**+0.2**
PMTG				epP		**sP**	**22 18 14.7**	**+0.5**
EVO	**Evora**	**81.42**	**309**	*e*P		**P**	**22 18 04.6**	**+1.0**
EVO				epP		**sP**	**22 18 15.9**	**+1.2**
PBEJ	**Beja**	**81.55**	**308**	*e*P		**P**	**22 18 05.0**	**+0.7**
PVAQ	**Vaqueiros**	**81.73**	**308**	*e*P		**P**	**22 18 05.8**	**+0.5**
PVAQ				epP		**sP**	**22 18 16.8**	**+0.4**
DY2G	**Dye2**	**81.85**	**345**	*i* P		**P**	**22 18 05.6**	**0.0**
DY2G				IAmb		IAmb	22 18 06.3	
	comp=Z,9.3nm,0.8s							
MESJ	**Messejana**	**81.89**	**308**	*e*P		**P**	**22 18 07.0**	**+0.9**
MESJ				epP		**sP**	**22 18 17.6**	**+0.4**
PBDV	**Barranco-do-Ve**	**81.96**	**308**	*e*pP		pP	22 18 18.6	+3.9
CTG	**Chitna Glacier**	**82.14**	**23**	P			22 18 07.5	
	baz=313							
CTGM	**Chitina Glacie**	**82.14**	**23**	P		**P**	**22 18 07.2**	**+0.1**
CTGM				IAmb		IAmb	22 18 09.4	
	comp=Z,16nm,1.0s							
SFJD	**Kangerlussuaq**	**82.40**	**346**	*i* P		**P**	**22 18 07.6**	**-0.6**
SFJD				IAmb		IAmb	22 18 08.7	
	comp=Z,6.7nm,0.8s							
SFJD	**Kangerlussuaq**	**82.40**	**346**	*i* P		**P**	**22 18 07.5**	**-0.6**
SFJD				pmax		pmax		
	comp=Z,7.0nm,0.8s							
SFJD	**Kangerlussuaq**	**82.40**	**346**	P		**P**	**22 18 07.7**	**-0.5**
HYT	**Haines Junctio**	**83.57**	**22**	IAmb		IAmb	22 18 16.7	
	comp=Z,10nm,1.0s							
BOSA	**Boshof**	**85.00**	**235**	P		**P**	**22 18 22.1**	**-0.2**
	comp=Z,10nm,0.9s,baz=75,slow=3.9,SNR=8.0							
TORD	**Torodi Ar. Bea**	**85.03**	**282**	P		**P**	**22 18 22.9**	**+0.4**
	comp=Z,14nm,0.9s,baz=55,slow=4.7,SNR=60							
TORD				PP		**PP**	**22 21 38.5**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=55,slow=8.9,SNR=4.2							
TORD	**Torodi Ar. Bea**	**85.03**	**282**	P		**P**	**22 18 22.0**	**-0.6**
YKA	**Yellowknife Ar**	**88.28**	**12**	P		**P**	**22 18 37.2**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=334,slow=4.6,SNR=38							
YKA				LR		LR	23 03 23.4	
	comp=Z,38nm,18.3s,baz=0.0,slow=39							
KOWA	**Kowa**	**89.37**	**286**	P		**P**	**22 18 43.8**	**+0.2**
KOWA				IAmb		IAmb	22 18 44.5	
	comp=Z,5.4nm,0.9s							
DBIC	**Dimbokro**	**93.70**	**279**	P		**P**	**22 19 03.7**	**0.0**
	comp=Z,1.7nm,0.7s,baz=22,slow=5.4,SNR=1.8							
DBIC				LR		LR	23 08 58.2	
	comp=Z,32nm,18.2s,baz=42,slow=40							
MSVF	**Nonsavu**	**93.87**	**108**	P		**P**	**22 19 04.6**	**+0.2**
	comp=Z,7.2nm,0.9s,baz=90,slow=8.1,SNR=2.1							
TPNV	**Topopah Spring**	**110.91**	**25**	P			22 24 19.8	
	baz=332							
M59A	**Waymart**	**111.03**	**350**	P			22 24 19.5	
	baz=11							
P59A	**Jarrettsville**	**113.07**	**351**	P			22 24 23.8	
	baz=10							
P49A	**Miami Univ. Ec**	**113.87**	**358**	P			22 24 24.8	
	baz=2.5							
214A	**Organ Pipe Nat**	**116.64**	**24**	P			22 24 30.2	
	baz=334							
KMSC	**Kings Mountain**	**118.04**	**354**	P			22 24 33.3	
	baz=6.0							
TXAR	**Lajitas Array**	**121.94**	**17**	PKP		**PKPdf**	**22 24 40.7**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=273,slow=2.1,SNR=6.6							
ROSC	**El Rosal**	**146.04**	**336**	PKPbc		**PKPab**	**22 25 28.3**	**+0.2**
	comp=Z,23nm,0.7s,baz=186,slow=5.9,SNR=8.2							
CPUP	**Villa Florida**	**153.21**	**264**	PKPab		**PKPab**	**22 25 54.2**	**-2.4**
	comp=Z,1.3nm,0.4s,baz=88,slow=1.6,SNR=3.1							

IDC ***16*** *22:17:44.0±1.3,34°.23S×179°.17W,h0km,mb4.2/4, mb1 4.4/5,mb1mx4.1/24,mbtmp4.3/5,ML4.5/1,MS3.7/1, Ms1 3.6/1,ms1mx2.8/40,Error ellipse: s-maj=36.8km s-min=29.4km az=75.0*

NEIC ***16*** *22:17:44.8±1.8,34°.5S±0°.1×178°.8W±0°.1,h18km±8km, mb4.3/8,Error ellipse: s-maj=19.2km s-min=17.3km az=167.0*

WEL ***16*** *22:17:49.9±0.8,35°.5S±7°.×17°.9W±°,h171km±19km,M3.9/32, mB4.5/12,ML4.6/6,MLv4.3/32,Mw(mB)3.7/12,Error ellipse: s-maj=0.0km s-min=0.0km az=86.5*

ISC 16 22:17:47.8±0.9,34°.65S±0°.08×178°.67W±0°.08,h35km,n72, σ1s54/102,mb4.2/8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
MXZ	**Matakaoa Point**	**3.80**	**219**	Pn	**Pn**	**22 18 43.7**		**-0.1**
MXZ	**Matakaoa Point**	**3.80**	**219**	P	**Pn**	**22 18 43.9**		**0.0**
MXZ				S	**Sn**	**22 19 27.4**		**0.0**
WMGZ	**Waiomatatini S**	**3.94**	**216**	P	**Pn**	**22 18 48.2**		**+2.4**
WMGZ				S	**Sn**	**22 19 32.7**		**+1.9**
PKGZ	**Pakihiroa**	**4.17**	**218**	P	**Pn**	**22 18 49.3**		**+0.3**
PKGZ				S	**Sn**	**22 19 37.8**		**+1.4**
PUZ	**Puketiti**	**4.22**	**215**	P	**Pn**	**22 18 49.3**		**-0.4**
PUZ				S	**Sn**	**22 19 38.3**		**+0.6**
HAZ	**Te Kaha**	**4.22**	**222**	P	**Pn**	**22 18 50.5**		**+0.9**
HAZ				S	**Sn**	**22 19 39.3**		**+1.6**
RUGZ	**Raukumara Rang**	**4.43**	**221**	P	**Pn**	**22 18 53.4**		**+0.8**
RUGZ				S	**Sn**	**22 19 45.2**		**+2.1**
TWGZ	**Tauwhareparae**	**4.44**	**217**	P	**Pn**	**22 18 54.6**		**+1.9**
TWGZ				S	**Sn**	**22 19 44.0**		**+0.9**
CNGZ	**Carnagh Statio**	**4.58**	**212**	P	**Pn**	**22 18 54.9**		**+0.3**
CNGZ				S	**Sn**	**22 19 46.4**		**-0.1**
TKGZ	**Te Karaka**	**4.71**	**216**	P	**Pn**	**22 18 57.1**		**+0.8**
TKGZ				S	**Sn**	**22 19 49.7**		**+0.1**
WHRZ	**Whale Island**	**4.76**	**226**	P	**Pn**	**22 18 59.3**		**+2.3**
MWZ	**Matawai**	**4.79**	**219**	P	**Pn**	**22 18 57.5**		**0.0**
MWZ				S	**Sn**	**22 19 51.8**		**+0.1**
URZ	**Urewera**	**4.95**	**222**	Pn	**Pn**	**22 18 59.8**		**+0.1**
	16nm,0.3s,baz=121,slow=23,SNR=46							
URZ				Sn	**Sn**	**22 19 55.6**		**-0.1**
	6.7nm,0.3s,baz=300,slow=23,SNR=2.7							
URZ	**Urewera**	**4.95**	**222**		**Pn**	**22 18 59.5**		**-0.2**
URZ				Sn	**Sn**	**22 19 56.2**		**+0.4**
URZ	**Urewera**	**4.95**	**222**	P	**Pn**	**22 18 58.4**		**-1.3**
URZ				S	**Sn**	**22 19 55.9**		**+0.2**
RIGZ	**Rimuhau**	**4.96**	**214**	P	**Pn**	**22 19 00.2**		**+0.3**
RIGZ				S	**Sn**	**22 19 56.8**		**+0.8**
RAGZ	**Rawiri**	**4.97**	**218**	P	**Pn**	**22 19 01.1**		**+1.2**
RAGZ				S	**Sn**	**22 19 56.7**		**+0.5**
GRZ	**Great Barrier**	**5.05**	**250**	P	**Pn**	**22 19 01.0**		**0.0**
PRGZ	**Paritu Road**	**5.08**	**212**	P	**Pn**	**22 19 01.6**		**+0.1**
PRGZ				S	**Sn**	**22 19 58.1**		**-0.9**
SNGZ	**Shannon Statio**	**5.22**	**217**	P	**Pn**	**22 19 03.9**		**+0.4**
SNGZ				S	**Sn**	**22 20 02.7**		**+0.2**
MHGZ	**Mahia Peninsul**	**5.27**	**210**	P	**Pn**	**22 19 04.4**		**+0.4**
MHGZ				S	**Sn**	**22 20 05.2**		**+1.7**
RTZ	**Ruatahuna**	**5.28**	**220**	P	**Pn**	**22 19 04.4**		**+0.1**
RTZ				S	**Sn**	**22 20 03.2**		**-0.8**
OMRZ	**Omania**	**5.28**	**228**	P	**Pn**	**22 19 04.4**		**+0.2**
MUGZ	**Murupara**	**5.30**	**223**	P	**Pn**	**22 19 04.3**		**-0.1**
MUGZ				S	**Sn**	**22 20 03.8**		**-0.5**
RRRZ	**Republican Roa**	**5.35**	**225**	P	**Pn**	**22 19 06.3**		**+1.2**
RAHZ	**Arahi**	**5.45**	**217**	P	**Pn**	**22 19 07.9**		**+1.3**
RAHZ				S	**Sn**	**22 20 08.2**		**+0.1**
MTHZ	**Maungataniwha**	**5.53**	**219**	P	**Pn**	**22 19 07.9**		**+0.3**
MTHZ				S	**Sn**	**22 20 09.3**		**-0.7**
TOZ	**Tahuroa Road**	**5.63**	**235**	P	**Pn**	**22 19 09.3**		**+0.3**
ARHZ	**Aropaoanui**	**5.77**	**216**	P	**Pn**	**22 19 11.6**		**+0.7**
ARHZ				S	**Sn**	**22 20 15.3**		**-0.5**
BKZ	**Black Stump Fm**	**5.95**	**219**		**Pn**	**22 19 13.1**		**-0.3**
BKZ	**Black Stump Fm**	**5.95**	**219**	P	**Pn**	**22 19 12.6**		**-0.8**
BKZ				S	**Sn**	**22 20 19.5**		**-0.8**
MCHZ	**McNeill Hill**	**6.05**	**216**	P	**Pn**	**22 19 14.4**		**-0.4**
MCHZ				S	**Sn**	**22 20 22.8**		**0.0**
WATZ	**Wairara**	**6.05**	**226**	P	**Pn**	**22 19 14.9**		**0.0**
RATZ	**Rangitukua**	**6.13**	**225**	P	**Pn**	**22 19 16.0**		**0.0**
RITZ	**Rihia Road**	**6.13**	**224**	P	**Pn**	**22 19 16.3**		**0.0**
KAHZ	**Kahuranaki**	**6.25**	**213**	P	**Pn**	**22 19 15.2**		**-2.3**
KAHZ				S	**Sn**	**22 20 26.4**		**-1.3**
TMVZ	**Te Maari**	**6.34**	**224**	P	**Pn**	**22 19 18.2**		**-0.6**
NTVZ	**North Tongarir**	**6.34**	**224**	P	**Pn**	**22 19 18.7**		**-0.2**
ETVZ	**East Tongariro**	**6.35**	**224**	P	**Pn**	**22 19 18.4**		**-0.6**
KRHZ	**Kereru**	**6.37**	**217**	P	**Pn**	**22 19 18.3**		**-0.9**
KRHZ				S	**Sn**	**22 20 28.2**		**-2.4**
OUZ	**Omahuta**	**6.38**	**263**		**Pn**	**22 19 18.0**		**-1.2**
OTVZ	**Oturere**	**6.39**	**224**	P	**Pn**	**22 19 19.1**		**-0.5**
OTVZ				S	**Sn**	**22 20 29.0**		**-2.5**
NNVZ	**North Ngauruho**	**6.40**	**224**	P	**Pn**	**22 19 19.6**		**-0.2**
BHHZ	**Black Hill Sta**	**6.41**	**220**	P	**Pn**	**22 19 19.4**		**-0.4**
BHHZ				S	**Sn**	**22 20 29.9**		**-1.8**
NGZ	**Ngauruhoe**	**6.44**	**224**	P	**Pn**	**22 19 20.6**		**+0.3**
TWVZ	**Taurewa**	**6.46**	**225**	P	**Pn**	**22 19 20.3**		**-0.3**
MOVZ	**Moawhango**	**6.51**	**222**	P	**Pn**	**22 19 20.3**		**-0.9**
MOVZ				S	**Sn**	**22 20 29.4**		**-4.9**
BFZ	**Birch Farm**	**7.25**	**212**	Pn	**Pn**	**22 19 30.8**		**-0.4**
MSWZ	**Moikau Station**	**8.28**	**214**	Pn	**Pn**	**22 19 44.7**		**-0.7**
PLWZ	**Palliser**	**8.40**	**213**	Pn	**Pn**	**22 19 45.0**		**-2.1**
SNZO	**South Karori**	**8.46**	**216**	Pn	**Pn**	**22 19 47.9**		**+0.1**
NNZ	**Nelson**	**9.08**	**221**	Pn	**Pn**	**22 19 57.6**		**+1.3**
CTZ	**Chatham Island**	**9.21**	**171**	P	**Pn**	**22 20 00.4**		**+2.3**
CTZ				S	**Sn**	**22 21 34.5**		**-6.0**
KHZ	**Kahutara**	**9.86**	**216**	Pn	**Pn**	**22 20 07.7**		**+0.7**
RPZ	**Rata Peaks**	**12.05**	**218**	Pn	**Pn**	**22 20 33.6**		**-3.5**
	0.7nm,0.3s,baz=330,slow=20,SNR=1.4							
RPZ				Sn	Sn	22 22 38.7		-11
	0.6nm,0.3s,baz=52,slow=18,SNR=1.8							
RPZ	**Rata Peaks**	**12.05**	**218**		**Pn**	**22 20 33.7**		**-3.3**
FOZ	**Fox Glacier**	**12.59**	**222**	Pn	**Pn**	**22 20 42.3**		**-1.9**
ODZ	**Otahua Downs**	**13.22**	**215**	Pn	**Pn**	**22 20 51.2**		**-1.8**
STKA	**Stephens Creek**	**33.19**	**263**	LR	LR	22 37 09.8		
	comp=Z,111nm,18.3s,baz=201,slow=36							
AS31	**Alice Springs**	**42.50**	**272**	P	**P**	**22 25 38.3**		**-1.6**
ASAR	**Alice Springs**	**42.50**	**272**	P	**P**	**22 25 38.1**		**-1.8**
	3.0nm,0.6s,baz=115,slow=7.8,SNR=48							
ASAR				PcP	**PcP**	**22 27 31.4**		**-0.9**
	0.7nm,0.6s,baz=115,slow=4.0,SNR=5.9							
PTCN	**Pitcairn Islan**	**42.85**	**91**	P	**P**	**22 25 43.0**		**+0.4**
WR0	**Warramunga Arr**	**43.69**	**277**	P	**P**	**22 25 47.5**		**-2.1**
WR0				IAmb	IAmb	22 26 03.2		
	comp=Z,3.3nm,1.1s							
WB2	**Warramunga Arr**	**43.86**	**277**	P	**P**	**22 25 48.7**		**-2.2**
WB2				IAmb	IAmb	22 26 03.8		
	comp=Z,5.9nm,1.1s							
WRAB	**Tennant Creek**	**43.86**	**277**	P	**P**	**22 25 48.3**		**-2.7**
WRAB				IAmb	IAmb	22 25 50.5		
	comp=Z,8.6nm,1.4s							
WRA	**Warramunga Arr**	**43.87**	**277**	P	**P**	**22 25 48.6**		**-2.4**
	comp=Z,1.9nm,0.5s,baz=117,slow=7.5,SNR=34							
WB0	**Warramunga Arr**	**43.91**	**277**	P	**P**	**22 25 49.3**		**-2.0**
WB0				IAmb	IAmb	22 25 50.0		
	comp=Z,6.7nm,1.2s							
QSPA	**South Pole Qui**	**55.47**	**180**	P	P	22 27 23.7		+4.8
	comp=Z,1.5nm,0.9s,baz=44,slow=1.1,SNR=6.7							
QSPA	**South Pole Qui**	**55.47**	**180**	P	**P**	**22 27 22.4**		**+3.6**
PETK	**Petropavlovsk-**	**89.78**	**346**	P	**P**	**22 30 42.8**		**+0.7**
	comp=Z,1.5nm,0.7s,baz=125,slow=7.3,SNR=5.8							
FINES	**FINESS Array B**	**148.88**	**337**	PKPbc	**PKPbc**	**22 37 29.7**		**-1.2**
	comp=Z,1.4nm,0.6s,baz=46,slow=6.6,SNR=10.0							
TORD	**Torodi Ar. Bea**	**158.59**	**181**	PKPab	**PKPab**	**22 38 20.6**		**+3.4**
	comp=Z,0.5nm,0.8s,baz=162,slow=3.3,SNR=2.4							

IDC ***16*** *22:34:50.5±1.6,35°.50N×26°.35E,h0km,mb3.8/3, mb1 3.8/3,mb1mx3.3/44,mbtmp3.8/3,Error ellipse: s-maj=306.1km s-min=28.4km az=142.0*

HLW ***16*** *22:34:53.3,35°.04N×27°.03E,h17km±13km,Ml3.4*

ISK ***16*** *22:34:53.8,35°.06N×26°.80E,h2km,ML3.1/20*

THE ***16*** *22:34:56.1,35°.16N×26°.71E,h4km±1km,ML3.2/3,Error ellipse: s-maj=2.3km s-min=0.4km az=154.0*

ATH ***16*** *22:34:56.3,35°.24N×26°.71E,h12km±2km,ML3.2/6,Error ellipse: s-maj=3.8km s-min=0.9km az=156.0*

ISC 16 22:34:52.6±1.5,35°.06N±0°.04×26°.80E±0°.03,h10km±11km, n71,σ1s25/81,mb3.6/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
ZKR	**Zakros**	**0.48**	**277**	P	**Pb**	**22 35 04.2**		**+0.9**
ZKR				S	**Sb**	**22 35 10.5**		**0.0**
ZKR				AML	AML	22 35 12.2		
	comp=E,7204μm,0.6s							
ZKR				AML	AML	22 35 13.7		
	comp=N,4144μm,0.6s							
ZKR	**Zakros**	**0.48**	**277**	P	**Pb**	**22 35 04.1**		**+0.9**
ZKR				S

	baz=204							
SLUM				AMP			22 36 00.0	
	baz=204							
SLUM				S		Sn	**22 36 34.2**	**-1.7**
	baz=204							
ITM	**Ithomi**	**4.48**	**300**	PN		**Pn**	**22 36 02.2**	**+1.6**
SWA2		**5.91**	**192**	P		**Pn**	**22 36 20.9**	**+0.7**
	baz=194							
SWA2				AMP			22 37 00.0	
	baz=194							
SWA2				S		**Sn**	**22 37 23.9**	**-4.0**
	baz=194							
GLL	**Jalalah**	**6.86**	**141**	P		**Pn**	**22 36 31.5**	**-1.8**
	baz=142							
SUZ	**Suez**	**7.28**	**134**	P		**Pn**	**22 36 37.5**	**-1.6**
	baz=135							
HFRF	**Wahat Farafira**	**7.99**	**170**	P		**Pn**	**22 36 48.4**	**-0.4**
	baz=171							
LANS	**Liptovska Anna**	**15.09**	**341**	*e*P		**P**	**22 38 35.2**	**+4.1**
TORD	**Torodi Ar. Bea**	**31.47**	**232**	P		**P**	**22 41 13.8**	**-0.8**
	comp=N,0.4nm,0.7s,baz=34,slow=10,SNR=2.3							
MKAR	**Makanchi Array**	**42.71**	**57**	P		**P**	**22 42 49.5**	**-0.2**
	comp=N,0.7nm,0.6s,baz=264,slow=8.5,SNR=14							
ZALV	**Zalesovo Beam**	**44.10**	**46**	P		**P**	**22 42 59.8**	**-1.1**
	comp=N,1.7nm,0.5s,baz=275,slow=8.5,SNR=8.4							

*IDC **16** 22:43:49.3±0.9, 20.°09N× 122.°38E, h0km, mb3.6/14,*
mb1 3.8/16, mb1mx3.6/58, mbtmp3.6/16, ML3.6/2, MS2.9/4,
Ms1 2.9/4, ms1mx2.6/43, Error ellipse: s-maj=24.7km
s-min=18.8km az=80.0
*JMA **16** 22:43:51.4±0.5, 20.°54N× 122.°26E, h12km, M3.9*
ISC 16 22:43:52.6±0.8, 20.°41N±0.°09× 122.°4E±0.°1, h10km, n34,
σ1§52/31, mb3.6/15, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
				ID			h m s	ISC
HATJ	**Hateruma jima**	**3.86**	**19**	P		**Pn**	**22 44 51.6**	**-0.4**
HATJ				*e*S		**Sn**	**22 45 35.6**	**-1.9**
JYNG	**Yonagunijimaku**	**4.06**	**7**	P		**Pn**	**22 44 53.8**	**-1.0**
JYNG				S		**Sn**	**22 45 40.3**	**-2.0**
JKRS	**Kuro-shima**	**4.09**	**21**	P		**Pn**	**22 44 55.2**	**-0.1**
JKRS				S		**Sn**	**22 45 42.6**	**-0.6**
IRIF	**Iriomote-Funau**	**4.10**	**17**	P		**Pn**	**22 44 55.1**	**-0.2**
IRIF				*e*S		**Sn**	**22 45 41.4**	**-2.0**
JIJ	**Ishigaki jima**	**4.26**	**22**	P		**Pn**	**22 44 56.4**	**-1.1**
JIJ				*e*S		**Sn**	**22 45 45.0**	**-2.3**
JISG	**Ishigakijimahi**	**4.52**	**23**	P		**Pn**	**22 44 59.3**	**-1.8**
JISG				S		**Sn**	**22 45 51.4**	**-2.4**
JTJ	**Tarama**	**4.72**	**26**	P		**Pn**	**22 45 04.0**	**+0.1**
JTJ				*e*S		**Sn**	**22 45 58.0**	**-0.7**
JIRB	**Irabujima**	**5.09**	**30**	P		**Pn**	**22 45 08.4**	**-0.6**
LQP	**Lukban**	**6.31**	**188**	⇓*e*P		**Pn**	**22 45 24.1**	**-1.9**
JOW	**Kunigami**	**8.36**	**39**	Pn		**Pn**	**22 45 53.4**	**-0.5**
	1.2nm,0.3s,baz=247,slow=25,SNR=1.2							
JNU	**Nakatsue**	**14.75**	**29**	LR		LR	22 52 12.5	
	comp=Z,50nm,21.5s,baz=220,slow=34							
KSRS	**Korea Array**	**17.66**	**15**	P		**Pn**	**22 48 00.0**	**+1.4**
	0.4nm,0.3s,baz=203,slow=12,SNR=2.3							
KSRS				LR		LR	22 54 58.6	
	comp=Z,25nm,19.4s,baz=20,slow=37							
MJAR	**Matsushiro Arr**	**21.20**	**37**	P		**P**	**22 48 39.6**	**+1.2**
	0.7nm,0.5s,baz=220,slow=8.1,SNR=1.3							
CMAR	**Chiang Mai Arr**	**22.20**	**269**	P		**P**	**22 48 47.4**	**-1.9**
	0.7nm,0.8s,baz=82,slow=8.7,SNR=2.4							
CMAR				LR		LR	22 56 53.1	
	comp=Z,19nm,20.9s,baz=135,slow=35							
USRK	**Ussuriysk Ar.**	**25.04**	**16**	P		**P**	**22 49 18.9**	**+2.1**
	3.4nm,1.0s,baz=203,slow=12,SNR=2.6							
JAY	**Jayapura**	**29.00**	**140**	LR		LR	23 00 47.1	
	comp=Z,43nm,20.0s,baz=306,slow=35							
SONM	**Songino Array**	**30.27**	**338**	P		**P**	**22 50 02.7**	**-1.2**
	0.2nm,0.5s,baz=149,slow=5.9,SNR=2.1							
H11N1	**WAKE ISLAND Hy**	**41.70**	**83**	T		T	23 36 31.0	
	baz=283,slow=77,SNR=10.0							
H11N2	**WAKE ISLAND Hy**	**41.70**	**83**	T		T	23 36 36.1	
	baz=283,slow=77,SNR=8.0							
H11S3	**WAKE ISLAND Hy**	**41.71**	**85**	T		T	23 36 26.9	
	baz=281,slow=74,SNR=18							
H11N3	**WAKE ISLAND Hy**	**41.72**	**83**	T		T	23 36 40.5	
	baz=283,slow=77,SNR=7.2							
H11S1	**WAKE ISLAND Hy**	**41.72**	**85**	T		T	23 36 34.5	
	baz=281,slow=74,SNR=20							
H11S2	**WAKE ISLAND Hy**	**41.73**	**85**	T		T	23 36 34.4	
	baz=281,slow=74,SNR=21							
WRA	**Warramunga Arr**	**41.77**	**163**	P		P	22 51 37.5	-4.8
	1.0nm,0.8s,baz=343,slow=8.8,SNR=6.6							
MKAR	**Makanchi Array**	**41.86**	**318**	P		**P**	**22 51 43.1**	**+0.2**
	0.3nm,0.5s,baz=107,slow=9.5,SNR=8.5							
ZALV	**Zalesovo Beam**	**44.03**	**329**	P		**P**	**22 52 00.2**	**-0.1**
	1.2nm,0.7s,baz=114,slow=7.9,SNR=3.4							
ASAR	**Alice Springs**	**45.22**	**165**	P		P	22 52 06.0	-4.1
	0.2nm,0.4s,baz=345,slow=6.7,SNR=2.0							
KURBB	**Kurchatov Arra**	**45.74**	**322**	P		**P**	**22 52 12.4**	**-1.6**
	0.3nm,0.4s,baz=115,slow=7.6,SNR=2.9							
KBZ	**Khabaz**	**68.74**	**310**	P		**P**	**22 54 60.0**	**+3.3**
	3.7nm,0.9s,baz=103,slow=4.0,SNR=8.1							
ILAR	**Eielson Array**	**72.05**	**27**	P		**P**	**22 55 17.9**	**+1.3**
	0.3nm,0.9s,baz=289,slow=8.2,SNR=2.0							
ARCES	**ARCESS Array B**	**73.45**	**339**	P		**P**	**22 55 26.0**	**+1.1**
	2.7nm,1.0s,baz=46,slow=7.7,SNR=3.6							
FINES	**FINESS Array B**	**75.27**	**330**	P		**P**	**22 55 36.2**	**+0.7**
	0.8nm,0.7s,baz=75,slow=16,SNR=1.6							
AKASG	**Malin Array Be**	**76.44**	**319**	P		**P**	**22 55 43.0**	**+0.6**
	0.7nm,0.5s,baz=59,slow=5.6,SNR=2.3							
YKA	**Yellowknife Ar**	**86.00**	**23**	P		**P**	**22 56 31.8**	**-1.2**
	0.3nm,0.7s,baz=310,slow=4.2,SNR=3.8							

*KRNET **16** 22:45:54.3±0.1, 42.°06N× 77.°29E, h29km, mb2.0*
*NNC **16** 22:45:57.9±1.4, 41.°37N× 78.°16E, h0km, mb3.0, mpv2.6,*
Error ellipse: s-maj=9.8km s-min=5.3km az=174.0
ISC 16 22:45:56.0±1.6, 42.°1N±0.°1× 77.°19E±0.°03, h15km±5km, n17,
σ2§31/25, 12C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
				ID			h m s	ISC
KDJ	**Kajisay**	**0.08**	**357**	⇓*i*P		**Pg**	**22 45 59.2**	**-0.2**
	baz=12							
KDJ				⇓*i*S		**Sb**	**22 46 01.9**	**+0.3**
	baz=12							
ULHL	**Ulahol**	**0.73**	**286**	⇑*i*P		**Pg**	**22 46 09.7**	**-0.6**
	baz=84							
ULHL				⇑*i*S		**Sb**	**22 46 20.5**	**+0.1**
	baz=84							
ANVS	**Anan'yevo**	**0.82**	**26**	⇑*i*P		**Pg**	**22 46 09.3**	**-2.6**
	baz=21							
ANVS				⇑*i*S		**Sg**	**22 46 20.1**	**-2.6**
	baz=21							
PRZ	**Przheval'sk**	**1.00**	**64**	⇑*i*P		**Pb**	**22 46 11.7**	**-3.4**
	baz=61							
PRZ				⇑*i*S		**Sb**	**22 46 24.3**	**-3.8**
	baz=61							
TNSS	**Tian-Shan**	**1.01**	**350**	Pg		**Sn**	**22 46 34.0**	**+4.0**
	0.8nm,0.1s							
TNSS				Lg		Lg	22 46 59.9	
	1.4nm,0.4s							
BOOM	**Boomskoye usch**	**1.03**	**296**	⇑*i*P		**Pb**	**22 46 14.8**	**-0.7**
	baz=94							
BOOM				⇑*i*S		**Sg**	**22 46 29.8**	**+0.5**
	baz=94							
MDOK	**Medeo**	**1.12**	**355**	⇓Pg		**Sn**	**22 46 34.4**	**+1.9**
MDOK				Lg		Lg	22 47 02.0	
	4.1nm,0.5s							
MDOK	**Medeo**	**1.12**	**355**	Pg		**Sn**	**22 46 34.4**	**+1.9**
	2.2nm,0.5s							
MDOK				Lg		Lg	22 47 00.5	
	6.2nm,0.6s							
KOTS	**Kotyrbulak**	**1.19**	**357**	Pg		**Sn**	**22 46 34.4**	**+0.3**
	4.4nm,0.3s							
KOTS				Lg		Lg	22 47 00.7	
	3.1nm,0.3s							
TKM2	**Tokmak 2**	**1.47**	**307**	⇑*i*P		**Pn**	**22 46 21.9**	**-0.1**
	baz=5.0							
TKM2				⇑*i*S		**Sn**	**22 46 41.5**	**+0.5**
	baz=5.0							
TKM2	**Tokmak 2**	**1.47**	**307**	⇓Pg		**Sn**	**22 46 41.6**	**+0.5**
	1.2nm,0.5s							
TKM2				⇑Lg		Lg	22 47 14.7	
	0.4nm,0.3s							
DGS	**Degeres**	**1.59**	**319**	Pg		**Sn**	**22 46 44.6**	**+0.8**
	1.6nm,0.6s							
DGS				Lg		Lg	22 47 18.0	
	2.3nm,0.6s							
UZB	**Uzynbulak**	**1.75**	**50**	P		**Pg**	**22 46 32.3**	**+2.8**
	2.0nm,0.2s							
UZB				S		**Sg**	**22 46 57.2**	**+5.0**
	4.5nm,0.3s							
KBK	**Karagaybulak**	**1.77**	**291**	⇓*i*P		**Pn**	**22 46 26.4**	**+0.3**
	baz=90							
KBK				⇓*i*S		**Sb**	**22 46 50.1**	**-0.1**
	baz=90							
SHLS	**Shalkode**	**2.01**	**56**	Pg		**Pg**	**22 46 38.1**	**+3.5**
	2.1nm,0.3s							
SHLS				Lg		Lg	22 47 07.3	
	5.9nm,0.3s							
PDGK	**Podgornoye**	**2.13**	**52**	Pg		**Pg**	**22 46 37.6**	**+0.8**
	0.6nm,0.5s							
PDGK				Lg		Lg	22 47 06.4	
	2.4nm,0.5s							
PDGK	**Podgornoye**	**2.13**	**52**	⇑Pg		**Pg**	**22 46 37.2**	**+0.4**
	2.7nm,1.1s							
PDGK				⇓Lg		Lg	22 47 06.5	
	4.3nm,0.7s							

*HLW **16** 22:46:25.6, 35.°19N× 26.°99E, h10km± 11km, Md3.9, Ml3.9*
*NIC **16** 22:46:27.4±0.0, 35.°00N× 26.°89E, h19km± 2km, Ml3.9/4*
*ISK **16** 22:46:28.4, 35.°08N× 26.°84E, h19km, ML3.4/22*
*ATH **16** 22:46:28.8, 35.°10N× 26.°86E, h34km± 5km, ML3.6/7, Error*
ellipse: s-maj=5.4km s-min=1.4km az=132.0
*IDC **16** 22:46:30.7±2.8, 35.°26N× 26.°73E, h35km± 22km, mb3.6/17,*
mb1 3.7/19, mb1mx3.5/58, mbtmp3.7/19, ML3.9/2, Error
ellipse: s-maj=21.3km s-min=15.4km az=146.0
*THE **16** 22:46:30.6, 35.°19N× 26.°76E, h1km± 1km, ML3.5/5, Error*
ellipse: s-maj=4.0km s-min=0.8km az=154.0
ISC 16 22:46:28.8±1.1, 35.°11N±0.°03× 26.°86E±0.°02, h26km± 8km,
n112, σ1§33/135, mb3.6/17, 7C, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
				ID			h m s	ISC
KARP	**Karpathos**	**0.50**	**30**	P		**Pn**	**22 46 39.6**	**-0.8**
KARP				S		**Sn**	**22 46 47.1**	**-1.1**
KARP				AML	AML		22 46 49.1	
	comp=N,27666µm,0.3s							
KARP				AML	AML		22 46 49.3	
	comp=E,19129µm,0.4s							
KARP	**Karpathos**	**0.50**	**30**	P		**Pn**	**22 46 39.5**	**-0.8**
KARP				S		**Sn**	**22 46 48.0**	**-0.1**
	comp=E,12µm,0.3s							
KARP	**Karpathos**	**0.50**	**30**	PG		**Pn**	**22 46 39.4**	**-0.9**
KARP				SG		**Sn**	**22 46 48.2**	**0.0**
KARP	**Karpathos**	**0.50**	**30**	⇑P		**Pn**	**22 46 39.5**	**-0.8**
KARP				S		**Sn**	**22 46 48.1**	**-0.1**
KARP				AML	AML		22 46 48.7	
	comp=E,19nm,0.4s							
KARP				AML	AML		22 46 48.7	
	comp=E,19nm,0.4s							
KARP				AML	AML		22 46 48.7	
	comp=E,28nm,0.3s							
KARP				AML	AML		22 46 48.7	
	comp=E,28nm,0.3s							
ZKR	**Zakros**	**0.53**	**271**	P		**Pb**	**22 46 38.9**	**-0.6**
ZKR				S		**Sb**	**22 46 47.3**	**+0.6**
ZKR				AML	AML		22 46 47.7	
	comp=E,31685µm,0.3s							
ZKR				AML	AML		22 46 48.6	
	comp=N,14001µm,0.4s							
ZKR	**Zakros**	**0.53**	**271**	P		**Pb**	**22 46 38.9**	**-0.6**
ZKR				S		**Sb**	**22 46 47.0**	**+0.3**
	comp=N,11µm,0.4s							
ZKR	**Zakros**	**0.53**	**271**	PG		**Pb**	**22 46 38.9**	**-0.6**
ZKR				SG		**Sb**	**22 46 47.3**	**+0.6**
ZKR	**Zakros**	**0.53**	**271**	P		**Pb**	**22 46 38.8**	**-0.6**
ZKR				AML	AML		22 46 46.8	
	comp=N,32nm,0.6s							
ZKR				AML	AML		22 46 46.8	
	comp=N,32nm,0.6s							
ZKR				AML	AML		22 46 47.3	
	comp=N,12nm,0.4s							
ZKR				AML	AML		22 46 47.3	
	comp=N,12nm,0.4s							
ZKR				S		**Sb**	**22 46 47.4**	**+0.6**
NPS	**Neapolis**	**1.03**	**279**	P		**Pn**	**22 46 48.4**	**+0.8**
NPS				S		**Sn**	**22 47 02.8**	**+1.6**
NPS				AML	AML		22 47 07.4	
	comp=E,8326µm,0.5s							
NPS				AML	AML		22 47 08.8	
	comp=N,4544µm,0.5s							
NPS	**Neapolis**	**1.03**	**279**	P		**Pn**	**22 46 48.3**	**+0.7**
NPS				S		**Sn**	**22 47 02.6**	**+1.4**
	comp=N,4µm,0.6s							
KSTL	**Kastelli Herak**	**1.48**	**278**	P		**Pn**	**22 46 52.8**	**-0.9**
KSTL				S		**Sn**	**22 47 09.6**	**-2.5**
ARG	**Arkhangelos**	**1.51**	**43**	P		**Pb**	**22 46 57.3**	**+1.1**
ARG				S		**Sb**	**22 47 15.9**	**+1.0**
ARG				AML	AML		22 47 24.6	
	comp=N,1313µm,0.5s							
ARG				AML	AML		22 47 25.2	
	comp=E,1526µm,0.6s							
ARG	**Arkhangelos**	**1.51**	**43**	P		**Pb**	**22 46 58.0**	**+1.8**
ARG				S		**Sb**	**22 47 18.3**	**+3.4**
	comp=E,702nm,0.5s							
ARG	**Arkhangelos**	**1.51**	**43**	PN		**Pb**	**22 46 56.2**	**0.0**
NIS1	**Nisyros Isl.**	**1.51**	**10**	P		**Pb**	**22 46 56.9**	**+0.7**
NIS1	**Nisyros Isl.**	**1.51**	**10**	PN		**Pb**	**22 46 55.6**	**-0.6**
IDI	**Anoyia**	**1.62**	**277**	Pg		**Pb**	**22 46 59.8**	**+1.7**
	comp=E,39nm,0.3s,baz=4.3,slow=5.5,SNR=16							
IDI				Lg		Lg	22 47 20.9	
	comp=E,28nm,0.3s,baz=26,slow=17,SNR=5.6							
IDI	**Anoyia**	**1.62**	**277**	P		**Pb**	**22 46 58.5**	**+0.4**
IDI				S		**Sb**	**22 47 19.7**	**+1.5**
IDI				AML	AML		22 47 26.2	
	comp=N,1688µm,0.5s							
IDI				AML	AML		22 47 29.3	
	comp=E,1186µm,0.4s							
IDI	**Anoyia**	**1.62**	**277**	PN		**Pb**	**22 46 56.9**	**-1.2**
KOSK	**Kos Island**	**1.64**	**3**	PN		**Pb**	**22 46 58.0**	**-0.3**
SIVA	**Sivas**	**1.68**	**267**	P		**Pb**	**22 46 59.8**	**+0.7**
SIVA				AML	AML		22 47 30.9	
	comp=N,2521µm,0.7s							
SIVA				AML	AML		22 47 36.8	
	comp=E,2864µm,0.5s							
SIVA	**Sivas**	**1.68**	**267**	P		**Pb**	**22 46 59.3**	**+0.2**
SANT	**Santorini**	**1.69**	**318**	P		**Pb**	**22 46 58.8**	**-0.6**
SANT	**Santorini**	**1.69**	**318**	P		**Pb**	**22 46 58.6**	**-0.7**
SANT	**Santorini**	**1.69**	**318**	PN		**Pb**	**22 46 58.0**	**-1.3**
THR8	**Santorini-Mono**	**1.71**	**319**	P		**Pb**	**22 46 58.6**	**-1.0**
THR6	**Thira Island,**	**1.72**	**317**	P		**Pb**	**22 46 58.8**	**-0.9**
THR6	**Thira Island,**	**1.72**	**317**	P		**Pb**	**22 46 58.8**	**-0.9**
THR9	**Santorini-Faro**	**1.74**	**316**	P		**Pb**	**22 47 00.0**	**-0.1**
THR9	**Santorini-Faro**	**1.74**	**316**	P		**Pb**	**22 46 59.6**	**-0.5**
SNT1	**Gialos, Santor**	**1.75**	**319**	P		**Pb**	**22 46 59.9**	**-0.3**
SNT1				S		**Sb**	**22 47 22.5**	**+0.9**
THR7	**Fira-Santorini**	**1.75**	**319**	P		**Pb**	**22 46 59.4**	**-0.9**
SNT5	**Nea Kammeni, S**	**1.75**	**318**	P		**Pb**	**22 47 00.0**	**-0.3**
SNT5				S		**Sb**	**22 47 23.6**	**+1.7**
THR3	**Thira Island,**	**1.75**	**318**	P		**Pb**	**22 46 59.9**	**-0.4**
THR3	**Thira Island,**	**1.75**	**318**	P		**Pb**	**22 46 59.9**	**-0.4**
THT2	**Imerovigli**	**1.76**	**319**	P		**Pb**	**22 46 59.6**	**-0.9**
THT2	**Imerovigli**	**1.76**	**319**	PN		**Pb**	**22 46 58.6**	**-0.9**
THR5	**Thira Island,**	**1.79**	**317**	P		**Pb**	**22 47 00.1**	**-0.8**
THR5	**Thira Island,**	**1.79**	**317**	P		**Pb**	**22 47 00.1**	**-0.8**
SAP3	**Santorini-Thir**	**1.81**	**317**	P		**Pb**	**22 47 00.8**	**-0.4**
SAP3	**Santorini-Thir**	**1.81**	**317**	P		**Pb**	**22 47 00.7**	**-0.4**
BODT	**Bodrum**	**1.98**	**11**	P		**Pb**	**22 47 02.1**	**-2.1**
BODT	**Bodrum**	**1.98**	**11**	PN		**Pb**	**22 47 02.4**	**-1.8**
TURN	**Turunc**	**2.01**	**34**	PN		**Pb**	**22 47 02.8**	**-1.8**
VAM	**Vamos**	**2.19**	**278**	P		**Pb**	**22 47 06.6**	**-1.2**
VAM				S		**Sb**	**22 47 35.2**	**+0.6**
VAM				AML	AML		22 47 42.1	
	comp=E,1637µm,0.8s							
VAM				AML	AML		22 47 42.7	
	comp=N,1917µm,1.0s							
VAM	**Vamos**	**2.19**	**278**	P		**Pb**	**22 47 06.6**	**-1.2**
APE	**Apeiranthos**	**2.23**	**332**	P		**Pn**	**22 47 05.6**	**+1.5**
APE				S		**Sb**	**22 47 33.1**	**-2.5**
	comp=N,325nm,0.5s							
APE	**Apeiranthos**	**2.23**	**332**	PN		**Pn**	**22 47 05.6**	**+1.5**
APE	**Apeiranthos**	**2.23**	**332**	⇑P		**Pn**	**22 47 05.2**	**+1.1**
DALY	**Dalyan (Mula)**	**2.24**	**40**	PN		**Pb**	**22 47 06.2**	**-2.4**
GVDS	**Gavdos**	**2.29**	**264**	PN		**Pn**	**22 47 06.8**	**+1.9**
GVD	**Gavdhos**	**2.29**	**264**	P		**Pb**	**22 47 07.8**	**-1.7**
GVD	**Gavdhos**	**2.29**	**264**	PN		**Pn**	**22 47 06.4**	**+1.5**
YER	**Yerkesik**	**2.33**	**29**	PN		**Pb**	**22 47 07.3**	**-2.8**
FETY	**Fethiye**	**2.36**	**49**	PN		**Pn**	**22 47 06.8**	**+0.9**
IMMV	**Iera Moni Meta**	**2.38**	**279**	P		**Pb**	**22 47 09.7**	**-1.3**
IMMV	**Iera Moni Meta**	**2.38**	**279**	PN		**Pn**	**22 47 07.5**	**+1.4**
KSL	**Kastellorizon**	**2.45**	**64**	⇑P		**Pn**	**22 47 07.3**	**+0.2**
AKAS	**Kas**	**2.50**	**63**	PN		**Pn**	**22 47 08.7**	**+0.8**
SMG	**Samos**	**2.59**	**360**	P		**Pn**	**22 47 11.3**	**+2.2**
KNDR	**Palaiochora Ch**	**2.60**	**274**	P		**Pn**	**22 47 11.8**	**+2.6**
KNDR	**Palaiochora Ch**	**2.60**	**274**	PN		**Pn**	**22 47 11.8**	**+2.6**
AYDB	**Zeytinkoy-Aydi**	**2.95**	**16**	PN		**Pn**	**22 47 16.2**	**+2.1**
ELL	**Elmali**	**2.97**	**56**	PN		**Pn**	**22 47 16.7**	**+2.4**
ELL	**Elmali**	**2.97**	**56**	P		**Pn**	**22 47 15.9**	**+1.6**
URLA	**Izmir**	**3.25**	**356**	PN		**Pn**	**22 47 19.1**	**+1.0**
KTHA	**Kythira Island**	**3.29**	**291**	PN		**Pn**	**22 47 20.5**	**+1.8**
CHOS	**Chios island**	**3.33**	**349**	P		**Pn**	**22 47 21.2**	**+1.9**
CHOS	**Chios island**	**3.33**	**349**	PN		**Pn**	**22 47 21.3**	**+1.9**
KORT	**Korkueli**	**3.40**	**55**	PN		**Pn**	**22 47 22.9**	**+2.6**
ANTB	**Antalya**	**3.56**	**59**	PN		**Pn**	**22 47 24.7**	**+2.4**
VLI	**Velial**	**3.56**	**298**	P		**Pn**	**22 47 24.4**	**+2.0**
KULA	**Kula-Manisa**	**3.69**	**23**	PN		**Pn**	**22 47 26.3**	**+2.0**
SLUM	**Salum**	**3.86**	**201**	P		**Pn**	**22 47 26.3**	**-0.3**
	baz=203							
SLUM				AMP			22 48 00.0	
	baz=203							
SLUM				S		**Sn**	**22 48 10.7**	**-0.4**
	baz=203							
DKL	**Dikili**	**3.95**	**1**	PN		**Pn**	**22 47 30.0**	**+2.3**
OSC1	**CSNet OBS 1**	**4.00**	**112**	P		**Pn**	**22 47 28.5**	**+0.2**
OSC1				S		**Sn**	**22 48 14.5**	**+0.2**
ITM	**Ithomi**	**4.49**	**299**	PN		**Pn**	**22 47 37.5**	**+2.3**
AKMS	**Akamas**	**4.49**	**90**	P		**Pn**	**22 47 34.6**	**-0.7**
AKMS				S		**Sn**	**22 48 27.3**	**+0.7**
AKMS				AML	AML		22 48 29.4	
	comp=N,0.2nm,0.6s							
AKMS				AML	AML		22 48 29.4	
	comp=N,0.2nm,0.6s							
AKMS				AML	AML		22 48 29.5	
	comp=N,0.4nm,0.5s							
AKMS				AML	AML		22 48 29.5	
	comp=N,0.4nm,0.5s							
NATA	**Nata**	**4.70**	**92**	P		**Pn**	**22 47 37.9**	**-0.3**
ALFC	**Alefka**	**4.71**	**88**	⇑P		**Pn**	**22 47 37.7**	**-0.5**
ALFC				AML	AML		22 48 31.9	
	comp=N,0.4nm,0.4s							
ALFC				AML	AML		22 48 34.8	
	comp=N,0.7nm,0.4s							
SZAC	**Souni**	**4.96**	**92**	⇑P		**Pn**	**22 47 41.1**	**-0.6**
ASGA	**Asgata**	**5.26**	**92**	P		**Pn**	**22 47 45.0**	**-0.7**
CSS	**Mathiatis**	**5.31**	**90**	⇑P		**Pn**	**22 47 46.1**	**-0.4**
MVOU	**Mavrovouni**	**5.56**	**89**	⇑P		**Pn**	**22 47 50.0**	**+0.2**
SWA2		**5.97**	**192**	P		**Pn**	**22 47 55.1**	**-0.4**
	baz=193							
SWA2				AMP			22 49 00.0	
	baz=193							
SWA2				S		**Sn**	**22 49 00.8**	**-2.3**
	baz=193							
HSAF	**As Saff**	**6.76**	**143**	P		**Pn**	**22 48 05.1**	**-1.3**
	baz=144							
GLL	**Jalalah**	**6.88**	**142**	P		**Pn**	**22 48 06.2**	**-1.9**
	baz=143							
SUZ	**Suez**	**7.29**	**135**	P		**Pn**	**22 48 12.4**	**-1.2**
	baz=135							
MMAI	**Mount Meron Ar**	**7.39**	**104**	Pn		**Pn**	**22 48 15.0**	**-0.2**
	comp=N,2.2nm,0.3s,baz=297,slow=11,SNR=15							
MMAI				Sn		**Sn**	**22 49 36.3**	**-1.9**
	comp=N,2.8nm,0.3s,baz=323,slow=26,SNR=7.0							
HFRF	**Wahat Farafira**	**8.04**	**171**	P		**Pn**	**22 48 24.0**	**+0.1**
	baz=171							
EIL	**Elat**	**8.73**	**126**	Pn		**Pn**	**22 48 32.5**	**-1.0**
	comp=N,0.6nm,0.3s,baz=250,slow=2.4,SNR=9.9							
EIL				Sn		Sn	22 50 02.9	-8.2
	comp=N,1.3nm,0.3s,baz=324,slow=3.3,SNR=7.1							
VAE	**Valguarnera**	**10.32**	**287**	Sn		**Sn**	**22 50 52.5**	**+2.5**
	comp=N,0.3nm,0.3s,baz=111,slow=16,SNR=1.5							
AKASG	**Malin Array Be**	**15.68**	**6**	Pn		**Pn**	**22 50 06.3**	**-1.5**
	comp=N,0.3nm,0.3s,baz=190,slow=9.4,SNR=4.1							
GERES	**GERESS Array B**	**16.82**	**329**	Pn		**Pn**	**22 50 22.5**	**0.0**
	comp=N,0.2nm,0.3s,baz=153,slow=9.0,SNR=6.8							
DAVOX	**Davos/Dischmat**	**17.29**	**318**	P		**P**	**22 50 29.7**	**-0.1**
	comp=N,0.1nm,0.3s,baz=155,slow=19,SNR=2.5							
ESDC	**Sonseca Array**	**24.84**	**290**	P		**P**	**22 51 48.3**	**-0.8**
	comp=N,1.1nm,0.6s,baz=81,slow=9.5,SNR=14							
FINES	**FINESS Array B**	**26.36**	**359**	P		**P**	**22 52

ROSC				*e*S	**Sn**	22 55 16.3	**+0.9**
ROSC				*i*		22 55 20.3	
	comp=Z,173nm,0.5s						
HELC	**Santa Helena**	**2.48**	**255**	*e*P	**Pn**	22 54 47.5	**+0.4**
HELC				*e*S	**Sn**	22 55 18.8	**-0.2**
HELC				*i*		22 55 27.5	
	comp=Z,72nm,0.3s						
UREC	**San Jos de Ur**	**2.57**	**291**	*e*P	**Pn**	22 54 47.0	**-0.8**
UREC				*e*S	**Sn**	22 55 17.9	**-2.5**
UREC				*i*		22 55 27.8	
	comp=Z,135nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.75**	**235**	*e*P	**Pn**	22 54 51.0	**+0.6**
GUY2C				*e*S	**Sn**	22 55 28.9	**+3.9**
GUY2C				*i*		22 55 33.7	
	comp=Z,77nm,0.4s						
VILC	**Villavicencio,**	**2.76**	**192**	*e*P	**Pn**	22 54 50.3	**+0.1**
VILC				*e*S	**Sn**	22 55 25.0	**+0.2**
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*e*P	**Pn**	22 54 49.8	**-0.7**
PTGC				*e*S	**Sn**	22 55 22.9	**-2.3**
PTGC				*i*		22 55 28.0	
	comp=Z,42nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.04**	**252**	*e*P	**Pn**	22 54 54.4	**+0.6**
CBOC				*e*S	**Sn**	22 55 31.3	**+0.3**
TXAR	**Lajitas Array**	**36.47**	**312**	P	**P**	23 00 56.5	**+0.4**
	comp=Z,0.5nm,0.8s,baz=119,slow=9.4,SNR=4.1						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	23 04 17.3	**-0.2**
	comp=Z,0.1nm,0.5s,baz=136,slow=7.0,SNR=4.3						

IDC 16 22:54:11.1±2.5, 5°13S×129°55E, h194km±36km, mb3.0/1, mb1 3.6/5, mb1mx3.1/38, mbtmp4.1/5, MS3.6/1, Ms1 3.6/1, ms1mx2.6/15, Error ellipse: s-maj=61.2km s-min=15.8km az=88.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.57**	**22**	P	Pn	22 55 21.8	**+1.9**
	10nm,0.3s,baz=245,slow=22,SNR=55						
SIJI				S	Sn	22 56 13.6	-0.5
	5.0nm,0.3s,baz=239,slow=23,SNR=11						
FITZ	**Fitzroy Crossi**	**13.44**	**196**	P	Pn	22 57 13.2	-1.1
	0.3nm,0.3s,baz=25,slow=12,SNR=5.8						
FITZ				S	Sn	22 59 36.4	-7.9
	0.2nm,0.3s,baz=326,slow=7.1,SNR=1.9						
WRA	**Warramunga Arr**	**15.44**	**163**	P	Pn	22 57 37.4	-1.6
	0.8nm,0.3s,baz=343,slow=12,SNR=44						
WRA				S	S	23 00 20.6	-10
	0.0nm,0.3s,baz=329,slow=22,SNR=1.6						
ASAR	**Alice Springs**	**18.90**	**168**	P	P	22 58 17.5	+0.4
	1.4nm,0.3s,baz=349,slow=11,SNR=61						
CTA	**Charters Tower**	**22.02**	**134**	LR	LR	23 07 45.4	
	comp=Z,150nm,21.0s,baz=256,slow=37						
MKAR	**Makanchi Array**	**66.43**	**327**	P	P	23 04 39.6	+0.1
	0.2nm,0.5s,baz=117,slow=6.8,SNR=5.2						

*NEIC **16** 22:56:25.3±1.1, 20°4S×0°1×178°4W±0°2, h614km±11km, mb4.1/17, Error ellipse: s-maj=21.2km s-min=19.7km az=123.0*
*IDC **16** 22:56:27.1±1.2, 20°39S×178°65W, h610km±11km, mb3.3/14, mb1 3.4/16, mb1mx3.2/49, mbtmp4.3/16, Error ellipse: s-maj=23.8km s-min=13.1km az=150.0*
ISC 16 22:56:25.3±0.5, 20°43S±0°09×178°46W±0°08, h600km, n55, σ1°15/57, mb3.9/22, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.25**	**308**	P	**P**	22 57 53.8	**+1.0**
	3.3nm,0.3s,baz=302,slow=22,SNR=13						
MSVF				S	**S**	22 59 05.1	**+1.1**
	baz=30,slow=21,SNR=1.3						
MSVF	**Nonsavu**	**4.25**	**308**	P	**P**	22 57 54.1	**+1.4**
NIUE	**Niue**	**8.15**	**82**	P	**P**	22 58 25.9	**-0.2**
RAO	**Raoul Island**	**8.80**	**177**	P	**P**	22 58 34.5	**+2.3**
	496nm,0.3s,baz=186,slow=18,SNR=13						
RAO	**Raoul Island**	**8.80**	**177**	P	**P**	22 58 34.9	**+2.6**
DZM	**Mont Dzumac**	**14.17**	**261**	P	**P**	22 59 27.8	**+1.8**
	0.5nm,0.3s,baz=156,slow=20,SNR=1.4						
DZM	**Mont Dzumac**	**14.17**	**261**	P	**P**	22 59 27.0	**+0.9**
URZ	**Urewera**	**18.18**	**191**	P	**P**	23 00 01.9	**-0.5**
URZ				IAmb	IAmb	23 00 17.6	
	comp=Z,5.4nm,0.9s						
CTA	**Charters Tower**	**33.07**	**264**	P	**P**	23 02 13.5	**+0.2**
	comp=Z,3.3nm,0.4s,baz=84,slow=11,SNR=6.0						
CTAO	**Charters Tower**	**33.07**	**264**	P	**P**	23 02 13.1	**-0.3**
PMG	**Port Moresby**	**34.91**	**283**	P	**P**	23 02 28.3	**-0.4**
	comp=Z,12nm,0.4s,baz=32,slow=7.8,SNR=5.3						
PMG	**Port Moresby**	**34.91**	**283**	P	**P**	23 02 29.8	**+1.2**
PATS	**Pohnpei**	**35.43**	**318**	P	**P**	23 02 32.4	**-0.6**
STKA	**Stephens Creek**	**37.43**	**244**	P	**P**	23 02 49.3	**+0.1**
	comp=Z,1.9nm,0.7s,baz=315,slow=14,SNR=1.3						
STKA	**Stephens Creek**	**37.43**	**244**	P	**P**	23 02 49.0	**-0.2**
BBOO	**Buckleboo**	**42.20**	**243**	P	**P**	23 03 26.9	**-0.2**
BBOO				IAmb	IAmb	23 03 29.7	
	comp=Z,16nm,1.1s						
WR0	**Warramunga Arr**	**43.99**	**262**	P	**P**	23 03 40.4	**-0.9**
WR0				IAmb	IAmb	23 03 45.9	
	comp=Z,4.2nm,1.1s						
AS31	**Alice Springs**	**44.12**	**257**	P	**P**	23 03 42.2	**-0.1**
ASAR	**Alice Springs**	**44.12**	**257**	P	**P**	23 03 41.9	**-0.3**
	comp=Z,3.5nm,0.6s,baz=88,slow=8.3,SNR=28						
ASAR				PcP	**PcP**	23 05 13.8	**-0.1**
	comp=Z,1.0nm,0.5s,baz=103,slow=4.0,SNR=8.1						
ASAR				S	**S**	23 09 30.1	**-2.7**
	comp=Z,0.3nm,0.7s,baz=92,slow=14,SNR=2.0						
ASAR	**Alice Springs**	**44.12**	**257**	P	**P**	23 03 41.5	**-0.8**
WB0	**Warramunga Arr**	**44.16**	**262**	P	**P**	23 03 42.0	**-0.6**
WB0				IAmb	IAmb	23 03 42.0	
	comp=Z,4.9nm,0.9s						
WB2	**Warramunga Arr**	**44.17**	**262**	P	**P**	23 03 42.0	**-0.7**
WB2				IAmb	IAmb	23 03 42.4	
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	**44.19**	**262**	P	**P**	23 03 42.0	**-0.8**
	comp=Z,1.2nm,0.3s,baz=97,slow=7.8,SNR=38						
WRA	**Warramunga Arr**	**44.19**	**262**	IAmb	IAmb	23 03 43.0	
	comp=Z,0.2nm,0.8s						
FORT	**Forrest**	**48.93**	**247**	P	**P**	23 04 17.6	**-0.6**
FORT				IAmb	IAmb	23 04 35.8	
	comp=Z,24nm,1.1s						
FITZ	**Fitzroy Crossi**	**52.61**	**262**	P	**P**	23 04 44.4	**-0.7**
	comp=Z,1.8nm,0.5s,baz=82,slow=3.0,SNR=6.5						
FITZ	**Fitzroy Crossi**	**52.61**	**262**	P	**P**	23 04 44.4	**-0.7**
SIJI	**Sorong**	**52.80**	**285**	P	**P**	23 04 46.5	**0.0**
	comp=Z,8.3nm,0.5s,baz=151,slow=19,SNR=3.7						
PSA00	**Pilbara Seismi**	**57.27**	**257**	P	**P**	23 05 16.4	**-1.0**
PSA00				IAmb	IAmb	23 05 17.4	
	comp=Z,7.8nm,0.8s						
MBWA	**Marble Bar**	**57.45**	**257**	P	**P**	23 05 17.7	**-1.0**
MORW	**Morawa**	**59.46**	**248**	P	**P**	23 05 30.6	**-1.4**
MORW				IAmb	IAmb	23 05 42.6	
	comp=Z,8.0nm,1.1s						
GIRL	**Giralia**	**62.16**	**255**	P	**P**	23 05 49.2	**-0.6**
CASY	**Casey**	**63.85**	**205**	P	**P**	23 05 58.1	**-1.7**
CASY				IAmb	IAmb	23 06 04.5	
	comp=Z,8.7nm,1.1s						
JAGI	**Jajag, Banyuwa**	**65.95**	**270**	P	**P**	23 06 15.3	**+1.4**
PETK	**Petropavlovsk-**	**76.09**	**345**	P	**P**	23 07 11.9	**-0.3**
	comp=Z,2.1nm,0.8s,baz=126,slow=9.8,SNR=2.9						
USRK	**Ussuriysk Ar.**	**78.66**	**326**	P	**P**	23 07 27.5	**+1.2**
	comp=Z,1.5nm,0.8s,baz=152,slow=6.5,SNR=1.9						
NVAR	**Mina Array Bea**	**81.27**	**44**	P	**P**	23 07 41.1	**+0.8**
	comp=Z,0.4nm,0.5s,baz=230,slow=7.0,SNR=1.9						
SEY	**Seymchan**	**86.21**	**347**	P	**P**	23 08 04.3	**+0.6**
	comp=Z,1.2nm,0.6s,baz=163,slow=4.3,SNR=5.5						
TXAR	**Lajitas Array**	**87.38**	**58**	P	**P**	23 08 12.5	**+2.3**
	comp=Z,0.7nm,0.8s,baz=190,slow=6.4,SNR=6.4						
ILAR	**Eielson Array**	**88.34**	**13**	P	**P**	23 08 13.1	**-0.7**
	comp=Z,0.6nm,0.4s,baz=215,slow=5.2,SNR=7.7						
ILAR	**Eielson Array**	**88.34**	**13**	P	**P**	23 08 13.3	**-0.4**
CMAR	**Chiang Mai Arr**	**89.69**	**290**	P	**P**	23 08 22.9	**+1.9**
	comp=Z,0.8nm,0.8s,baz=138,slow=4.0,SNR=5.4						
WMOK	**Wichita Mounta**	**93.35**	**54**	P	**P**	23 08 34.5	**-3.1**
MKAR	**Makanchi Array**	**110.83**	**313**	PKiKP	**PKiKP**	23 13 50.1	**-1.0**
	comp=Z,0.2nm,0.4s,baz=110,slow=1.0,SNR=6.1						
AKTO	**Aktyubinsk**	**126.73**	**318**	PKP	**PKiKP**	23 14 21.8	**-0.3**
	comp=Z,0.6nm,0.7s,baz=30,slow=20						
ARCES	**ARCESS Array B**	**128.77**	**349**	PKP	**PKiKP**	23 14 24.6	**-1.0**
	comp=Z,1.0nm,0.6s,baz=354,slow=2.4,SNR=8.3						
FINES	**FINESS Array B**	**135.58**	**343**	PKP	**PKiKP**	23 14 38.9	**-0.6**
	comp=Z,1.2nm,0.6s,baz=158,slow=2.1,SNR=3.9						
KVAR	**Kislovodsk Arr**	**138.59**	**314**	PKP	**PKPdf**	23 14 44.1	**0.0**
	comp=Z,2.2nm,0.9s,baz=0.0,slow=3.0,SNR=1.6						
AKASG	**Malin Array Be**	**142.74**	**331**	PKhKP	PKPpre	23 14 47.9	
	comp=Z,2.5nm,0.4s,baz=43,slow=4.4,SNR=16						
BRTR	**Keskin Array B**	**146.47**	**312**	PKPbc	**PKPbc**	23 15 00.3	**-0.4**
	comp=Z,1.4nm,0.7s,baz=167,slow=1.9,SNR=3.2						
MMAI	**Mount Meron Ar**	**147.40**	**300**	PKPbc	**PKiKP**	23 15 03.7	**-1.1**
	comp=Z,2.0nm,0.4s,baz=68,slow=6.7,SNR=22						
CLL	**Collm**	**147.89**	**346**	*i* PKPbc	**PKiKP**	23 15 04.0	**-1.1**
	comp=Z,5.0nm,0.8s						
CLL				*i* PKPab	**PKPab**	23 15 08.2	**-0.4**
MLR	**Muntele Rosu**	**147.93**	**327**	PKPbc	**PKPbc**	23 15 03.6	**-0.6**
	comp=Z,1.2nm,0.5s,baz=307,slow=20,SNR=2.3						
VRAC	**Vranov**	**148.77**	**341**	PKPbc	**PKiKP**	23 15 06.0	**-1.0**
	comp=Z,1.1nm,0.4s,baz=18,slow=9.6,SNR=2.0						
GERES	**GERESS Array B**	**150.01**	**344**	PKPbc	**PKiKP**	23 15 09.3	**-0.4**
	comp=Z,0.8nm,0.6s,baz=29,slow=3.0,SNR=8.1						

JMA 16 23:11:35.1±0.3, 36°80N×143°79E, h57km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**2.42**	**278**	P	Pn	23 12 13.2	+1.0
ONAJ				*e*S	Sn	23 12 41.3	+0.6
JHO	**Hitachi**	**2.59**	**267**	P	Pn	23 12 15.7	+1.1
JHYU	**Hitachinakayam**	**2.62**	**261**	P	Pn	23 12 16.4	+1.5
JFT	**Otama**	**2.85**	**286**	P	Pn	23 12 20.2	+2.1
JFT				*e*S	Sn	23 12 53.0	+1.7
JMK	**Ichinoseki**	**2.96**	**317**	P	Pn	23 12 20.3	+0.7
JOM	**Ohasama**	**3.32**	**324**	P	Pn	23 12 25.1	+0.6
JOM				S	Sn	23 13 01.6	-1.1
JYK	**Kaneyama**	**3.44**	**309**	P	Pn	23 12 27.8	+1.6
JYK				*e*S	Sn	23 13 07.0	+1.3
JAG	**Ashikaga**	**3.51**	**265**	P	Pn	23 12 29.0	+1.9
JRY	**Ryogami san**	**4.02**	**260**	P	Pn	23 12 35.7	+1.5
JRY				*e*S	Sn	23 13 20.3	+0.3
JOD2	**Odawara 2**	**4.11**	**249**	P	Pn	23 12 35.8	+0.4
JOD2				S	Sn	23 13 22.4	+0.3
MAT	**Matsushiro**	**4.50**	**268**	P	Pn	23 12 43.8	+3.1
MAT				*e*S	Sn	23 13 31.1	-0.6
JHJ2	**Mitsune**	**4.92**	**223**	P	Pn	23 12 46.9	+0.5
JOT	**Ohata**	**5.05**	**336**	P	Pn	23 12 49.9	+1.7
JCH	**Churui**	**5.82**	**357**	P	Pn	23 12 57.1	-1.6
JCH				*e*S	Sn	23 13 57.9	-6.1

*ISK **16** 23:14:37.6, 35°02N×26°84E, h17km, ML2.8/18*
*THE **16** 23:14:38.5, 35°10N×26°78E, h0km±1km, ML2.9/4, Error ellipse: s-maj=5.9km s-min=0.9km az=152.0*
*IDC **16** 23:14:39.3±3.3, 35°04N×26°82E, h26km±26km, mb3.6/5, mb1 3.5/7, mb1mx3.2/53, mbtmp3.6/7, ML3.1/2, Error ellipse: s-maj=33.2km s-min=21.7km az=177.0*
*ATH **16** 23:14:39.8, 35°16N×26°76E, h18km±7km, ML3.1/3, Error ellipse: s-maj=7.6km s-min=1.0km az=313.0*
ISC 16 23:14:37.8±1.1, 34°99N±0°05×26°86E±0°03, h18km±3km, n65, σ1°92/79, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.54**	**284**	P	**Pg**	23 14 48.5	**-0.1**
ZKR				S	**Sg**	23 14 55.5	**-0.4**
ZKR				AML	AML	23 14 56.8	
	comp=N,7651μm,0.3s						
ZKR				AML	AML	23 14 57.2	
	comp=E,13508μm,0.3s						
ZKR	**Zakros**	**0.54**	**284**	P	**Pg**	23 14 48.2	**-0.3**
ZKR				S	**Sb**	23 14 56.4	**+0.4**
	comp=E,5μm,0.3s						
ZKR	**Zakros**	**0.54**	**284**	PG	**Pg**	23 14 48.3	**-0.3**
ZKR				SG	**Sb**	23 14 56.3	**+0.3**
KARP	**Karpathos**	**0.61**	**24**	P	**Pg**	23 14 49.6	**-0.3**
KARP				S	**Sg**	23 14 56.9	**-1.3**
KARP				AML	AML	23 14 59.8	
	comp=E,6960μm,0.3s						
KARP				AML	AML	23 15 00.9	
	comp=N,3400μm,0.3s						
KARP	**Karpathos**	**0.61**	**24**	P	**Pg**	23 14 49.5	**-0.5**
KARP				S	**Sb**	23 14 58.3	**+0.1**
	comp=N,3μm,0.3s						
KARP	**Karpathos**	**0.61**	**24**	PG	**Pg**	23 14 49.4	**-0.5**
KARP				SG	**Sb**	23 14 58.6	**+0.4**
STIA	**Sitia Lasithi**	**0.66**	**289**	P	**Pb**	23 14 49.2	**-1.5**
STIA				S	**Sg**	23 14 59.5	**-0.2**
FRMA	**Ierapetra Chan**	**0.92**	**272**	P	**Pb**	23 14 53.4	**-1.8**
FRMA				S	**Sb**	23 15 05.6	**-1.4**
NPS	**Neapolis**	**1.06**	**286**	P	**Pb**	23 14 57.2	**-0.3**
NPS				AML	AML	23 15 14.7	
	comp=E,1525μm,0.5s						
NPS				AML	AML	23 15 17.2	
	comp=N,1257μm,0.5s						
NPS	**Neapolis**	**1.06**	**286**	P	**Pb**	23 14 57.8	**+0.3**
NPS				S	**Sn**	23 15 13.2	**+1.3**
	comp=N,700nm,0.5s						
ARG	**Arkhangelos**	**1.61**	**40**	P	**Pb**	23 15 07.1	**+0.3**
ARG	**Arkhangelos**	**1.61**	**40**	P	**Pb**	23 15 07.5	**+0.7**
ARG	**Arkhangelos**	**1.61**	**40**	PN	**Pn**	23 15 06.3	**+1.1**
NIS1	**Nisyros Isl.**	**1.64**	**9**	P	**Pn**	23 15 06.2	**+0.6**
NIS1	**Nisyros Isl.**	**1.64**	**9**	PN	**Pn**	23 15 06.2	**+0.6**
IDI	**Anoyia**	**1.64**	**281**	Pg	**Pb**	23 15 08.6	**+1.1**
	comp=N,6.2nm,0.3s,baz=276,slow=8.0,SNR=32						
IDI				Lg	Lg	23 15 30.8	
	comp=N,16nm,0.3s,baz=332,slow=6.9,SNR=11						
IDI	**Anoyia**	**1.64**	**281**	P	**Pn**	23 15 07.0	**+1.3**
IDI	**Anoyia**	**1.64**	**281**	P	**Pn**	23 15 07.0	**+1.3**
IDI				S	**Sn**	23 15 27.1	**+0.8**
IDI	**Anoyia**	**1.64**	**281**	PN	**Pn**	23 15 07.1	**+1.1**
SIVA	**Sivas**	**1.68**	**272**	P	**Pb**	23 15 08.3	**+0.3**
SIVA	**Sivas**	**1.68**	**272**	P	**Pb**	23 15 08.4	**+0.3**
KOSK	**Kos Island**	**1.77**	**3**	PN	**Pn**	23 15 08.2	**+0.8**
SANT	**Santorini**	**1.79**	**321**	P	**Pn**	23 15 08.0	**+0.3**
SANT	**Santorini**	**1.79**	**321**	PN	**Pn**	23 15 07.4	**-0.4**
THR8	**Santorini-Mono**	**1.81**	**322**	P	**Pn**	23 15 08.4	**+0.5**
THR8	**Santorini-Mono**	**1.81**	**322**	P	**Pn**	23 15 08.1	**+0.2**
THR6	**Thira Island,**	**1.81**	**319**	P	**Pn**	23 15 08.5	**+0.5**
THR6	**Thira Island,**	**1.81**	**319**	P	**Pn**	23 15 08.4	**+0.4**
SNT1	**Gialos, Santor**	**1.84**	**321**	P	**Pn**	23 15 09.2	**+0.8**
SNT1	**Gialos, Santor**	**1.84**	**321**	P	**Pn**	23 15 09.0	**+0.6**
THR7	**Fira-Santorini**	**1.85**	**321**	P	**Pn**	23 15 09.1	**+0.6**
SNT5	**Nea Kammeni, S**	**1.85**	**320**	P	**Pn**	23 15 09.1	**+0.6**
THR3	**Thira Island,**	**1.85**	**321**	P	**Pn**	23 15 09.1	**+0.6**
THR3	**Thira Island,**	**1.85**	**321**	P	**Pn**	23 15 08.9	**+0.4**
THT2	**Imerovigli**	**1.86**	**322**	P	**Pn**	23 15 09.4	**+0.7**
THT2	**Imerovigli**	**1.86**	**322**	PN	**Pn**	23 15 08.7	**0.0**
THR2	**Thira Island,**	**1.86**	**322**	P	**Pn**	23 15 09.2	**+0.5**
THR5	**Thira Island,**	**1.88**	**320**	P	**Pn**	23 15 09.5	**+0.5**
SAP3	**Santorini-Thir**	**1.90**	**320**	P	**Pn**	23 15 10.2	**+1.0**
BODT	**Bodrum**	**2.10**	**10**	PN	**Pn**	23 15 12.4	**+0.3**
TURN	**Turunc**	**2.11**	**32**	PN	**Pn**	23 15 13.2	**+1.1**
VAM	**Vamos**	**2.22**	**282**	P	**Pb**	23 15 16.7	**-0.5**
GVDS	**Gavdos**	**2.28**	**267**	PN	**Pn**	23 15 16.0	**+1.6**
GVD	**Gavdhos**	**2.28**	**267**	PN	**Pn**	23 15 15.8	**+1.4**
DALY	**Dalyan (Mula)**	**2.34**	**38**	PN	**Pn**	23 15 16.5	**+1.3**
APE	**Apeiranthos**	**2.34**	**333**	P	**Pn**	23 15 15.5	**+0.2**
APE				S	**Sn**	23 15 43.2	**-0.4**
	comp=N,60nm,0.4s						
APE	**Apeiranthos**	**2.34**	**333**	PN	**Pn**	23 15 15.5	**+0.2**
IMMV	**Iera Moni Meta**	**2.40**	**282**	P	**Pb**	23 15 19.5	**-0.9**
IMMV	**Iera Moni Meta**	**2.40**	**282**	PN	**Pn**	23 15 17.3	**+1.2**
YER	**Yerkesik**	**2.44**	**28**	PN	**Pn**	23 15 17.8	**+1.1**
FETY	**Fethiye**	**2.45**	**47**	PN	**Pn**	23 15 17.2	**+0.4**
AKAS	**Kas**	**2.56**	**60**	PN	**Pn**	23 15 18.8	**+0.3**
KNDR	**Palaiochora Ch**	**2.61**	**276**	PN	**Pn**	23 15 20.9	**+1.9**
ELL	**Elmali**	**3.04**	**54**	PN	**Pn**	23 15 26.2	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**3.07**	**15**	PN	**Pn**	23 15 26.3	**+0.9**
KTHA	**Kythira Island**	**3.34**	**293**	PN	**Pn**	23 15 29.9	**+0.9**
CHOS	**Chios island**	**3.46**	**349**	PN	**Pn**	23 15 31.5	**+0.8**
KORT	**Korkueli**	**3.47**	**54**	PN	**Pn**	23 15 32.4	**+1.4**
MMAI	**Mount Meron Ar**	**7.37**	**103**	Pn	**Pn**	23 16 26.0	**+1.6**
	comp=N,0.3nm,0.3s,baz=300,slow=12,SNR=5.4						
MMAI				Sn	**Sn**	23 17 47.0	**-0.6**
	comp=N,0.5nm,0.3s,baz=301,slow=26,SNR=1.6						
EIL	**Elat**	**8.66**	**126**	Pn	**Pn**	23 16 43.5	**+1.4**
	comp=N,0.2nm,0.3s,baz=36,slow=19,SNR=1.6						
EIL				Sn	**Sn**	23 18 14.6	**-4.7**
	comp=N,0.2nm,0.3s,baz=28,slow=23,SNR=1.4						
TORD	**Torodi Ar. Bea**	**31.46**	**233**	P	**P**	23 20 59.0	**+0.7**
	comp=N,0.9nm,1.2s,baz=35,slow=9.5,SNR=2.2						
KURBB	**Kurchatov Arra**	**40.15**	**51**	P	**P**	23 22 12.8	**+0.3**
	comp=N,0.6nm,0.4s,baz=273,slow=8.5,SNR=8.5						
MKAR	**Makanchi Array**	**42.71**	**57**	P	**P**	23 22 34.3	**+0.7**
	comp=N,0.2nm,0.3s,baz=269,slow=8.5,SNR=7.5						
MKAR				PcP	**PcP**	23 24 24.2	**-0.8**
	comp=N,0.1nm,0.5s,baz=300,slow=2.8,SNR=2.5						
ZALV	**Zalesovo Beam**	**44.12**	**46**	P	**P**	23 22 44.4	**-0.4**
	comp=N,0.7nm,0.4s,baz=273,slow=8.2,SNR=4.4						
PETK	**Petropavlovsk-**	**82.44**	**27**	P	**P**	23 26 59.5	**+0.8**
	comp=N,3.1nm,1.0s,baz=289,slow=9.0,SNR=2.2						

*IDC **16** 23:17:33.2±1.0, 35°33N×27°53E, h0km, mb3.7/10, mb1 3.7/15, mb1mx3.5/59, mbtmp3.7/15, ML3.6/4, MS2.6/1, Ms1 2.7/1, ms1mx2.2/44, Error ellipse: s-maj=23.4km s-min=16.6km az=171.0*
*NIC **16** 23:17:34.8±0.0, 35°33N×27°62E, h5km±1km, ML3.6/4*
*ISK **16** 23:17:34.4, 35°28N×27°62E, h8km, ML3.5/21*
*DDA **16** 23:17:35.0, 35°40N×27°67E, h15km±9km, MW3.9*
*THE **16** 23:17:36.5, 35°37N×27°57E, h0km, ML3.4/8, Error ellipse: s-maj=2.1km s-min=0.9km az=144.0*
*ATH **16** 23:17:36.6, 35°44N×27°54E, h35km±3km, ML3.4/6, Error ellipse: s-maj=6.2km s-min=2.8km az=322.0*
ISC 16 23:17:35.2±1.1, 35°27N±0°03×27°63E±0°02, h14km±7km, n121, σ1°§44/152, mb3.6/10, 7C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.47**	**306**	P	**Pg**	23 17 43.9	**-0.6**
KARP				S	**Sg**	23 17 51.2	**+0.3**
KARP				AML	AML	23 17 52.5	
	comp=E,16294μm,0.4s						
KARP				AML	AML	23 17 52.8	
	comp=N,15966μm,0.6s						
KARP	**Karpathos**	**0.47**	**306**	P	**Pg**	23 17 44.0	**-0.6**
KARP				S	**Sg**	23 17 50.7	**-0.3**
	comp=N,8μm,0.6s						
KARP	**Karpathos**	**0.47**	**306**	PG	**Pg**	23 17 43.9	**-0.6**
KARP				SG	**Sg**	23 17 50.7	**-0.3**
KARP	**Karpathos**	**0.47**	**306**	↑P	**Pg**	23 17 44.0	**-0.6**
KARP				S	**Sg**	23 17 51.0	**+0.1**
KARP				AML	AML	23 17 52.1	
	comp=N,16nm,0.4s						
KARP				AML	AML	23 17 52.1	
	comp=N,16nm,0.4s						
KARP				AML	AML	23 17 52.4	
	comp=N,16nm,0.6s						
KARP				AML	AML	23 17 52.4	
	comp=N,16nm,0.6s						
ARG	**Arkhangelos**	**1.02**	**23**	P	**Pg**	23 17 54.0	**-0.9**
ARG				AML	AML	23 18 18.2	
	comp=E,3838μm,0.3s						
ARG				AML	AML	23 18 23.6	
	comp=N,3668μm,0.6s						
ARG	**Arkhangelos**	**1.02**	**23**	P	**Pg**	23 17 54.5	**-0.5**
ARG				S	**Sn**	23 18 10.2	**+0.9**
	comp=N,2μm,0.5s						
ARG	**Arkhangelos**	**1.02**	**23**	PG	**Pg**	23 17 54.3	**-0.7**
ARG				SG	**Sb**	23 18 08.8	**+0.8**
ARG	**Arkhangelos**	**1.02**	**23**	↑P	**Pg**	23 17 54.1	**-0.9**
ARG				S	**Sg**	23 18 08.2	**-0.1**
ZKR	**Zakros**	**1.17**	**263**	P	**Pb**	23 17 57.1	**-0.1**
ZKR				AML	AML	23 18 20.2	
	comp=N,1898μm,0.7s						
ZKR				AML	AML	23 18 20.9	
	comp=E,4228μm,0.7s						
ZKR	**Zakros**	**1.17**	**263**	P	**Pb**	23 17 57.2	**0.0**
ZKR				S	**Sn**	23 18 14.2	**+1.3**
	comp=E,2μm,0.7s						
ZKR	**Zakros**	**1.17**	**263**	PN	**Pb**	23 17 56.8	**-0.4**
ZKR	**Zakros**	**1.17**	**263**	P	**Pb**	23 17 56.9	**-0.3**
ZKR				S	**Sn**	23 18 14.4	**+1.5**
ZKR				AML	AML	23 18 19.0	
	comp=E,1.8nm,0.8s						
ZKR				AML	AML	23 18 19.0	
	comp=E,1.

APE				S		Sn	23 18 44.7	-0.4
	comp=N,178nm,0.6s							
APE	**Apeiranthos**	**2.47**	**317**	PN		Pn	23 18 15.7	+0.6
APE	**Apeiranthos**	**2.47**	**317**	⇑P		Pn	23 18 15.7	+0.6
GOLH	**Golhisar**	**2.50**	**38**	*i* P		Pn	23 18 18.2	+2.6
GOLH				*i* S		Sb	23 18 50.4	-0.4
AYDB	**Zeytinkoy-Aydi**	**2.68**	**4**	PN		Pn	23 18 19.0	+1.0
KORT	**Korkueli**	**2.79**	**51**	*i* P		Pb	23 18 23.0	-2.0
KORT	**Korkueli**	**2.79**	**51**	PN		Pn	23 18 20.9	+1.3
DGB	**zmir**	**2.84**	**348**	*i* P		Pn	23 18 21.2	+1.1
DGB				*i* S		Sn	23 18 55.0	+0.9
ANTB	**Antalya**	**2.94**	**56**	PN		Pn	23 18 23.0	+1.6
GVDS	**Gavdos**	**2.94**	**263**	PN		Pn	23 18 22.7	+1.2
GVD	**Gavdhos**	**2.94**	**263**	PN		Pn	23 18 22.7	+1.2
IMMV	**Iera Moni Meta**	**2.99**	**275**	P		Pn	23 18 24.3	+2.1
IMMV	**Iera Moni Meta**	**2.99**	**275**	PN		Pn	23 18 23.3	+1.1
BRDR	**BURDUR-Merkez**	**3.11**	**38**	*i* P		Pn	23 18 26.4	+2.5
KNDR	**Palaiochora Ch**	**3.23**	**270**	PN		Pn	23 18 27.5	+2.0
BASM	**Basmaki-Afyon**	**3.28**	**36**	PN		Pn	23 18 27.7	+1.5
MANT	**Manisa**	**3.30**	**13**	*i* P		Pn	23 18 28.3	+1.7
KULA	**Kula-Manisa**	**3.34**	**14**	PN		Pn	23 18 28.5	+1.4
OSC1	**CSNet OBS 1**	**3.49**	**119**	P		Pn	23 18 30.5	+1.5
KEPZ	**Antalya-Kepez**	**3.60**	**62**	*i* P		Pn	23 18 33.1	+2.4
USAK	**Uak-Merkez**	**3.61**	**17**	*i* P		Pn	23 18 31.9	+1.2
KTHA	**Kythira Island**	**3.84**	**286**	PN		Pn	23 18 35.1	+1.2
AKMS	**Akamas**	**3.86**	**92**	P		Pn	23 18 35.4	+1.2
AKMS				AML		AML	23 19 23.9	
	comp=N,0.3nm,0.4s							
AKMS				AML		AML	23 19 25.5	
	comp=N,0.5nm,0.5s							
GAZI	**Gazipasa**	**3.93**	**74**	*i* P		Pn	23 18 35.6	+0.5
SIMA	**Simav-Kutahya**	**3.95**	**15**	PN		Pn	23 18 35.5	0.0
SEDI	**Konya, Seydise**	**3.97**	**56**	*i* P		Pn	23 18 39.2	+3.4
SHUT	**Suhut-Afyon**	**4.02**	**35**	PN		Pn	23 18 37.7	+1.2
ALFC	**Alefka**	**4.07**	**90**	⇑P		Pn	23 18 38.0	+1.0
ALFC				AML		AML	23 19 28.5	
	comp=N,0.4nm,0.5s							
ALFC				AML		AML	23 19 28.6	
	comp=N,0.5nm,0.6s							
NATA	**Nata**	**4.08**	**96**	P		Pn	23 18 38.7	+1.5
SZAC	**Soumi**	**4.34**	**95**	⇑P		Pn	23 18 41.9	+1.2
BAYC	**CANAKKALE_Bayr**	**4.54**	**349**	*i* P		Pn	23 18 45.9	+2.4
ASGA	**Asgata**	**4.63**	**94**	*i* P		Pn	23 18 46.3	+1.6
CSS	**Mathiatis**	**4.68**	**92**	⇑P		Pn	23 18 46.8	+1.3
KKBE	**Karaman, Kazim**	**4.71**	**64**	*i* P		Pn	23 18 49.5	+3.6
MVOU	**Mavrovouni**	**4.92**	**91**	⇑P		Pn	23 18 50.1	+1.4
BRTR	**Keskin Array B**	**6.52**	**45**	Pn		Pn	23 19 13.1	+2.2
	comp=N,0.2nm,0.3s,baz=227,slow=12,SNR=6.4							
BRTR				Sn		Sn	23 20 28.3	+3.2
	comp=N,0.2nm,0.3s,baz=205,slow=29,SNR=5.2							
MMAI	**Mount Meron Ar**	**6.82**	**107**	Pn		Pn	23 19 16.1	+1.1
	comp=N,1.2nm,0.3s,baz=316,slow=13,SNR=11							
MMAI				Sn		Sn	23 20 31.3	-1.2
	comp=N,0.9nm,0.3s,baz=310,slow=24,SNR=3.0							
EIL	**Elat**	**8.33**	**130**	Pn		Pn	23 19 35.6	+0.1
	comp=N,0.4nm,0.3s,baz=285,slow=3.2,SNR=9.1							
EIL				Sn		Sn	23 21 04.7	-4.8
	comp=N,0.7nm,0.3s,baz=355,slow=20,SNR=2.1							
MLR	**Muntele Rosu**	**10.29**	**353**	Sn		Sn	23 21 49.0	-8.6
	comp=N,0.2nm,0.3s,baz=173,slow=19,SNR=1.3							
VAE	**Valguarnera**	**10.89**	**286**	Sn		Sn	23 22 08.9	-3.3
	comp=N,0.2nm,0.3s,baz=197,slow=1.7,SNR=2.0							
KBZ	**Khabaz**	**14.48**	**50**	Pn		Pn	23 21 02.9	+3.3
	baz=327,slow=12,SNR=2.1							
KEST	**Kesra**	**14.91**	**277**	Pn		P	23 21 10.1	-1.2
	comp=N,0.2nm,0.3s,baz=360,slow=3.4,SNR=4.8							
AKASG	**Malin Array Be**	**15.46**	**4**	Pn		P	23 21 15.9	-1.3
	comp=N,0.6nm,0.3s,baz=193,slow=12,SNR=3.3							
VRAC	**Vranov**	**16.20**	**333**	Pn		Pn	23 21 23.7	+1.4
	comp=N,0.2nm,0.3s,baz=17,slow=16,SNR=1.3							
GERES	**GERESS Array B**	**17.02**	**327**	Pn		P	23 21 37.6	+3.0
	comp=N,0.1nm,0.3s,baz=137,slow=10,SNR=1.7							
ESDC	**Sonseca Array**	**25.39**	**289**	P		P	23 23 01.6	-0.4
	comp=N,0.9nm,0.6s,baz=80,slow=9.3,SNR=12							
FINES	**FINESS Array B**	**26.21**	**358**	P		P	23 23 07.9	-1.3
	comp=N,2.8nm,1.0s,baz=152,slow=9.1,SNR=1.8							
HFS	**Hagfors**	**26.47**	**344**	P		P	23 23 10.7	-0.9
	comp=N,1.0nm,0.5s,baz=146,slow=16,SNR=1.4							
AKTO	**Aktyubinsk**	**26.70**	**46**	P		P	23 23 13.3	-0.6
	comp=N,1.0nm,0.6s,baz=234,slow=8.7,SNR=3.9							
NOA	**NORSAR Array B**	**27.85**	**343**	LR		LR	23 36 39.5	
	comp=N,10nm,19.0s,baz=15,slow=41							
TORD	**Torodi Ar. Bea**	**32.15**	**233**	P		P	23 24 02.2	-0.2
	comp=N,0.9nm,0.7s,baz=34,slow=9.2,SNR=7.8							
KURBB	**Kurchatov Arra**	**39.48**	**51**	P		P	23 25 05.5	+0.5
	comp=N,0.3nm,0.6s,baz=276,slow=8.8,SNR=6.0							
MKAR	**Makanchi Array**	**42.02**	**57**	P		P	23 25 27.4	+1.4
	comp=N,0.4nm,0.7s,baz=279,slow=6.6,SNR=4.8							
ZALV	**Zalesovo Beam**	**43.47**	**46**	P		P	23 25 38.3	+0.7
	comp=N,0.7nm,0.6s,baz=285,slow=7.5,SNR=3.6							
SFJD	**Kangerlussuaq**	**53.55**	**331**	P		P	23 26 53.6	-1.5
	comp=N,2.4nm,0.4s,baz=258,slow=24,SNR=2.2							
SONM	**Songino Array**	**57.84**	**51**	P		P	23 27 27.2	+0.8
	comp=N,0.2nm,0.4s,baz=274,slow=8.5,SNR=1.8							

NAO ***16*** *23:19:21.6±2.1,79.91N×2.79E, ML3.2*
IDC ***16*** *23:19:23.8±1.1,79.74N×2.78E,h0km,mb3.8/7, mb1 3.8/10,mb1mx3.5/47,mbtmp3.8/10,ML3.0/2,MS3.0/1, Ms1 3.0/1,ms1mx2.3/49, Error ellipse: s-maj=24.4km s-min=17.4km az=26.0*
BER ***16*** *23:19:23.9±2.9,79.86N×3.26E,h10km, ML2.8, ML3.4(DNK), Confirmed Earthquake*
DNK ***16*** *23:19:24.0±4.0,79.88N×3.92E,h137km±60km,ML3.4*
IEPN ***16*** *23:19:26.0,79.65N×3.67E,h10km*

ISC 16 23:19:22.0±2.9,**79.67N**±0.06×**2.94E**±0.05,**h5**km±20km, **n47,σ2°88**/66,**mb3.7**/7,**4C**,**Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.84**	**110**	*i* P	**Pn**	**23 19 54.2**	**0.0**
KBS				IAML		23 20 20.9	
	comp=Z,250nm,0.4s						
KBS	**Kingsbay**	**1.84**	**110**	Pn	**Pn**	**23 19 54.3**	**0.0**
KBS				Sn	**Sn**	**23 20 15.4**	**-2.4**
KBS	**Kingsbay**	**1.84**	**110**	⇑*i* P	**Pn**	**23 19 54.2**	**0.0**
KBS				*e*S	**Sn**	**23 20 15.6**	**-2.2**
KBS				IAML		23 20 23.8	
	comp=Z,114nm,0.3s						
KBS	**Kingsbay**	**1.84**	**110**	⇑*i* P	**Pn**	**23 19 53.8**	**-0.4**
KBS				*i* S	**Sn**	**23 20 15.0**	**-2.8**
BRBB	**Barentsburg B**	**2.70**	**120**	Pn	**Pb**	**23 20 08.8**	**-1.9**
BRBB				Sn	**Sn**	**23 20 37.1**	**-1.7**
BRBB	**Barentsburg B**	**2.70**	**120**	*e*P	**Pn**	**23 20 07.3**	**+1.4**
BRBB				*e*		23 20 08.9	
BRBB				*e*S	**Sn**	**23 20 37.0**	**-1.8**
BRBA	**Barentsburg A**	**2.72**	**121**	Pn	**Pb**	**23 20 09.3**	**-1.7**
BRBA				Sn	**Sn**	**23 20 38.4**	**-1.0**
SPA0	**Spitsbergen Ar**	**2.99**	**113**	Pn	**Pn**	**23 20 10.8**	**+0.8**
SPA0				Sn	**Sn**	**23 20 44.6**	**-1.6**
SPA0	**Spitsbergen Ar**	**2.99**	**113**	Pn	**Pn**	**23 20 10.8**	**+0.8**
SPA0				*e*		23 20 12.7	
SPA0				Sn	**Sn**	**23 20 44.6**	**-1.6**
SPA0	**Spitsbergen Ar**	**2.99**	**113**	⇑*i* P	**Pn**	**23 20 10.8**	**+0.8**
SPA0				*i* S	**Sn**	**23 20 44.0**	**-2.2**
SPITS	**Spitsbergen Ar**	**2.99**	**113**	Pn	**Pn**	**23 20 10.8**	**+0.8**
	baz=242,slow=4.6,SNR=506						
SPITS				Sn	**Sn**	**23 20 43.8**	**-2.4**
	baz=309,slow=27,SNR=8.8						
SPITS				LR	LR	23 21 31.7	
	comp=Z,252nm,19.0s,baz=20,slow=42						
HSPB	**Hornsund (broa**	**3.70**	**130**	Pn	**Pn**	**23 20 22.0**	**+2.3**
HSPB				Sn	**Sn**	**23 21 00.9**	**-2.6**
HSPB	**Hornsund (broa**	**3.70**	**130**	*e*P	**Pn**	**23 20 20.8**	**+1.1**
HSPB				*e*		23 20 21.9	
HSPB				*e*S	**Sn**	**23 21 00.7**	**-2.8**
HSPB				IAML		23 21 07.3	
	comp=Z,50nm,0.4s						
HSPB	**Hornsund (broa**	**3.70**	**130**	*e*P	**Pn**	**23 20 20.8**	**+1.1**
HSPB				*e*S	**Sn**	**23 21 01.3**	**-2.3**
NOR	**Nord**	**3.73**	**311**	*i* P	**Pn**	**23 20 18.6**	**-1.4**
NOR				*e*		23 21 00.1	
NOR				IAML		23 21 02.3	
	comp=Z,15nm,0.4s						
NOR	**Nord**	**3.73**	**311**	Pn	**Pn**	**23 20 18.2**	**-1.9**
NOR				Sn	**Sn**	**23 20 58.0**	**-6.2**
NOR	**Nord**	**3.73**	**311**	*i* P	**Pn**	**23 20 18.6**	**-1.4**
NOR				*e*		23 21 00.1	
NOR				IAML		23 21 02.3	
	comp=Z,15nm,0.4s						
HOPEN	**Hopen**	**5.53**	**114**	*e*S	**Sn**	**23 21 43.4**	**-5.1**
HOPEN				IAML		23 22 12.2	
	comp=Z,26nm,0.9s						
HOPEN	**Hopen**	**5.53**	**114**	*e*P	**Pn**	**23 20 45.6**	**+0.9**
HOPEN				*e*S	**Sn**	**23 21 44.3**	**-4.3**
BJO1	**Bjornoya**	**6.29**	**137**	*e*P	**Pn**	**23 20 55.1**	**-0.1**
BJO1				*e*S	**Sn**	**23 22 01.7**	**-5.5**
DBG	**Daneborg**	**7.43**	**236**	*i* P	**Pn**	**23 21 10.4**	**-0.5**
DBG				*i* S	Sn	23 22 26.5	-8.8
DBG				IAML		23 22 33.8	
	comp=Z,22nm,0.4s						
DBG	**Daneborg**	**7.43**	**236**	Pn	**Pn**	**23 21 10.9**	**+0.1**
DBG				Sn	Sn	23 22 28.0	-7.3
DBG	**Daneborg**	**7.43**	**236**	*i* P	**Pn**	**23 21 10.4**	**-0.5**
DBG				*i* S	Sn	23 22 26.5	-8.8
DBG				IAML		23 22 33.8	
	comp=Z,22nm,0.4s						
ZFI	**Zemlya Franca-**	**7.52**	**60**	*e*P	**Pn**	**23 21 11.4**	**-0.7**
ZFI				*e*S	**Sn**	**23 22 28.9**	**-8.6**
	comp=Z,47nm,1.0s						
JMIC	**Jan Mayen**	**9.17**	**204**	Pn	**Pn**	**23 21 36.0**	**+1.3**
	baz=22,slow=13,SNR=1.2						
JMIC				Sn	**Sn**	**23 23 12.4**	**-5.7**
	baz=163,slow=21,SNR=1.9						
NEEM	**North Greenlan**	**10.59**	**286**	*i* P	**Pn**	**23 21 50.2**	**-4.2**
NEEM				*i*		23 23 38.4	
NEEM				IAML		23 23 46.7	
	comp=Z,26nm,0.3s						
SCO	**Scoresbysund**	**11.07**	**227**	*e*P	**Pn**	**23 22 00.4**	**-0.3**
SCO				IAML		23 24 01.7	
	comp=Z,2.0nm,0.3s						
SCO	**Scoresbysund**	**11.07**	**227**	*e*P	**Pn**	**23 22 00.4**	**-0.3**
SCO				IAML		23 24 01.7	
	comp=Z,2.0nm,0.3s						
ARA0	**ARCESS Array S**	**11.66**	**138**	Pn	**Pn**	**23 22 10.3**	**+1.5**
	baz=344,slow=12						
ARA0				Sn	**Sn**	**23 24 13.7**	**-5.5**
	baz=353,slow=22						
ARA0	**ARCESS Array S**	**11.66**	**138**	Pn	**Pn**	**23 22 10.3**	**+1.5**
	baz=344,slow=12						
ARA0				Sn	**Sn**	**23 24 13.7**	**-5.5**
	baz=353,slow=22						
ARCES	**ARCESS Array B**	**11.66**	**138**	Pn	**Pn**	**23 22 09.7**	**+0.9**
	baz=349,slow=13,SNR=11						
ARCES				Sn	**Sn**	**23 24 13.8**	**-5.4**
	baz=349,slow=19,SNR=1.6						
SUMG	**Summit**	**11.86**	**256**	*i* P	**Pn**	**23 22 09.5**	**-2.2**
SUMG				IAML		23 24 23.1	
	comp=Z,3.2nm,0.3s						
SUMG	**Summit**	**11.86**	**256**	*i* P	**Pn**	**23 22 09.5**	**-2.2**
SUMG				IAML		23 24 23.1	
	comp=Z,3.2nm,0.3s						
TULEG	**Thule**	**14.20**	**295**	*i* P	**Pn**	**23 22 40.6**	**-2.7**
TULEG				*i*		23 25 06.9	
TULEG				IAML		23 25 23.2	
	comp=Z,6.0nm,0.4s						
TULEG	**Thule**	**14.20**	**295**	*i* P	**Pn**	**23 22 40.6**	**-2.7**
TULEG				*i*		23 25 06.9	
TULEG				IAML		23 25 23.2	
	comp=Z,6.0nm,0.4s						
UPNV	**Upernavik**	**14.86**	**275**	*i* P	Pn	23 22 47.3	-5.0
UPNV				*i*		23 25 17.2	
UPNV				IAML		23 25 22.8	
	comp=Z,15nm,0.4s						
UPNV	**Upernavik**	**14.86**	**275**	*i* P	Pn	23 22 47.3	-5.0
UPNV				*i*		23 25 17.2	
UPNV				IAML		23 25 22.8	
	comp=Z,15nm,0.4s						
SFJD	**Kangerlussuaq**	**18.82**	**259**	P	**P**	**23 23 39.1**	**-2.9**
	comp=Z,1.0nm,0.3s,baz=27,slow=11,SNR=5.4						
FINES	**FINESS Array B**	**19.55**	**146**	P	**Pn**	**23 23 54.1**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=332,slow=12,SNR=4.1						
RES	**Resolute Bay**	**19.66**	**309**	P	**P**	**23 23 50.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=2.3						
NRIK	**Noril'sk**	**22.25**	**69**	P	**P**	**23 24 21.8**	**+2.6**
	comp=Z,3.2nm,0.7s,baz=351,slow=6.3,SNR=1.6						
FRB	**Frobisher Bay**	**24.98**	**273**	P	**P**	**23 24 48.4**	**+2.4**
	comp=Z,1.1nm,0.6s,baz=42,slow=10.0,SNR=4.6						
KIRV	**Kirov**	**25.45**	**118**	P	**P**	**23 24 52.8**	**+2.6**
	comp=Z,9.6nm,0.7s,baz=271,slow=24,SNR=3.8						
ILAR	**Eielson Array**	**34.73**	**338**	P	**P**	**23 26 13.8**	**+1.5**
	comp=Z,0.3nm,1.0s,baz=5.7,slow=10.0,SNR=4.1						
KURBB	**Kurchatov Arra**	**38.11**	**92**	P	**P**	**23 26 44.3**	**+3.1**
	comp=Z,1.0nm,0.8s,baz=345,slow=7.6,SNR=8.0						
MKAR	**Makanchi Array**	**42.48**	**89**	P	**P**	**23 27 20.0**	**+2.5**
	comp=Z,0.7nm,0.7s,baz=343,slow=7.5,SNR=6.1						
TORD	**Torodi Ar. Bea**	**66.54**	**181**	P	**P**	**23 30 16.0**	**+3.4**
	comp=Z,0.7nm,1.1s,baz=347,slow=4.4,SNR=2.8						

IASPEI ***16*** *23:19:35.8±0.9,38.68N±0.02×26.62E±0.03,h15km±7km, Error ellipse: s-maj=4.2km s-min=2.7km az=102.2,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ISK ***16*** *23:19:35.9,38.66N×26.62E,h13km, ML2.6/21*
DDA ***16*** *23:19:36.5,38.66N×26.61E,h7km±3km,ML2.4*
THE ***16*** *23:19:37.5,38.65N×26.57E,h15km±1km,ML2.3/4, Error ellipse: s-maj=2.0km s-min=0.7km az=258.0*

ISC 16 23:19:35.7±0.9,**38.68N**±0.02×**26.65E**±0.02,**h15**km±6km, **n40,σ1°31**/63,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOCM	**Foa**	**0.07**	**60**	PG	**Pg**	**23 19 39.1**	**+0.4**
CAND	**Candarli**	**0.30**	**23**	PG	**Pg**	**23 19 42.9**	**+0.9**
CAND				SG	**Sb**	**23 19 48.0**	**+0.4**
URLA	**Izmir**	**0.32**	**188**	*i* P	**Pg**	**23 19 42.4**	**+0.1**
URLA				*i* S	**Sg**	**23 19 45.9**	**-1.0**
URLA	**Izmir**	**0.32**	**188**	PG	**Pg**	**23 19 42.4**	**+0.1**
URLA				SG	**Sb**	**23 19 47.4**	**-0.7**
DKL	**Dikili**	**0.44**	**27**	PG	**Pb**	**23 19 45.7**	**+0.5**
DKL				SG	**Sb**	**23 19 52.4**	**+0.8**
ZEDA	**zmir-Bergama**	**0.44**	**49**	*i* P	**Pb**	**23 19 46.0**	**+0.8**
ZEDA				*i* S	**Sg**	**23 19 50.6**	**0.0**
ZEYE	**Izmir, Urla-Ze**	**0.45**	**195**	*i* P	**Pb**	**23 19 45.5**	**+0.2**
ZEYE				*i* S	**Sb**	**23 19 51.9**	**0.0**
ZEYE				IAML		23 19 53.0	
	comp=E,332nm,0.4s						
CHOS	**Chios island**	**0.55**	**238**	P	**Pb**	**23 19 47.4**	**+0.3**
CHOS				S	**Sg**	**23 19 53.8**	**-0.1**
	comp=E,428nm,0.3s						
CHOS	**Chios island**	**0.55**	**238**	PG	**Pb**	**23 19 46.8**	**-0.3**
CHOS				SG	**Sb**	**23 19 54.7**	**-0.1**
AYVA	**Ayvalik**	**0.63**	**3**	*i* P	**Pb**	**23 19 49.0**	**+0.5**
AYVA				*i* S	**Sg**	**23 19 53.5**	**-0.5**
PRK	**Paraskevi**	**0.64**	**333**	P	**Pb**	**23 19 50.1**	**-0.1**
PRK				S	**Sb**	**23 19 59.0**	**+1.7**
	comp=E,325nm,0.4s						
DGB	**zmir**	**0.65**	**164**	*i* P	**Pb**	**23 19 49.4**	**+0.6**
DGB				*i* S	**Sg**	**23 19 56.0**	**-1.0**
SIGR	**SIGRI**	**0.82**	**311**	P	**Pb**	**23 19 52.3**	**+0.6**
SIGR				S	**Sn**	**23 20 04.5**	**0.0**
	comp=E,242nm,0.5s						
SIGR	**SIGRI**	**0.82**	**311**	PG	**Pb**	**23 19 52.2**	**+0.6**
BUHA	**Balikesir, Bur**	**0.89**	**22**	*i* P	**Pn**	**23 19 54.4**	**+0.7**
BUHA				*i* S	**Sg**	**23 20 03.8**	**-0.8**
BUHA				IAML		23 20 09.0	
	comp=E,208nm,0.5s						
KOCA	**Canakkale, Ayv**	**0.92**	**334**	*i* P	**Pb**	**23 19 53.8**	**+0.5**
KOCA				*i* S	**Sg**	**23 20 03.6**	**-1.9**
KOCA				IAML		23 20 09.0	
	comp=N,126nm,0.4s						
KOCA				IAML		23 20 15.0	
	comp=E,112nm,0.6s						
AKHS	**Akhisar**	**0.93**	**77**	*i* P	**Pn**	**23 19 55.4**	**+1.1**
AKHS				*i* S	**Sg**	**23 20 04.0**	**-2.0**
SMG	**Samos**	**0.98**	**171**	P	**Pn**	**23 19 55.3**	**+0.4**
SMG				S	**Sn**	**23 20 08.9**	**+0.4**
	comp=E,305nm,0.3s						
BAYC	**CANAKKALE_Bayr**	**1.07**	**356**	*i* P	**Pn**	**23 19 57.0**	**+0.9**
BAYC				*i* S	**Sb**	**23 20 06.8**	**-2.8**
BAYC				IAML		23 20 14.0	
	comp=E,93nm,0.3s						
STEP	**BALIKESIR_Sava**	**1.09**	**50**	*i* P	**Pb**	**23 19 57.1**	**+0.9**
STEP				*i* S	**Sb**	**23 20 07.9**	**-2.3**
STEP				IAML		23 20 17.0	
	comp=E,143nm,0.6s						
EZN	**Ezine**	**1.18**	**348**	P	**Pb**	**23 19 58.3**	**+0.6**
EZN				S	**Sn**	**23 20 14.3**	**+1.0**
EZN	**Ezine**	**1.18**	**348**	PN	**Pg**	**23 19 58.5**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.22**	**126**	PN	**Pg**	**23 19 59.6**	**+0.4**
BOZC	**Bozcaada**	**1.25**	**338**	*i* P	**Pb**	**23 19 59.6**	**+0.5**
BOZC				*i* S	**Sb**	**23 20 10.2**	**-4.7**
BOZC				IAML		23 20 18.0	
	comp=N,82nm,0.4s						
BOZC				IAML		23 20 19.0	
	comp=E,99nm,0.3s						
BOZC	**Bozcaada**	**1.25**	**338**	PN	**Pg**	**23 19 59.8**	**0.0**
BALB	**Balikesir**	**1.36**	**44**	PN	**Pb**	**23 20 01.9**	**+1.1**
GADA	**Gvkgeada**	**1.62**	**339**	PN	**Pb**	**23 20 05.2**	**-0.1**
DEMI	**Demirci**	**1.66**	**77**	*i* P	**Pg**	**23 20 08.1**	**+0.6**
DEMI				*i* S	**Sn**	**23 20 24.2**	**-1.1**
LIA	**Limnos Island**	**1.67**	**317**	P	**Pn**	**23 20 05.6**	**+1.2**
LIA				S	**Sn**	**23 20 26.3**	**+0.8**
DURS	**Dursunbey**	**1.69**	**56**	*i* P	**Pb**	**23 20 06.6**	**0.0**
DURS				*i* S	**Sn**	**23 20 22.4**	**-3.9**
LPK	**Lapseki**	**1.70**	**3**	PN	**Pn**	**23 20 06.2**	**+1.4**
GELI	**Tayfur-Gelibol**	**1.72**	**356**	PN	**Pb**	**23 20 06.8**	**-0.3**
KRBG	**Karabiga-Canak**	**1.79**	**16**	PN	**Pn**	**23 20 07.2**	**+1.2**
SIMA	**Simav-Kutahya**	**1.87**	**77**	PN	**Pn**	**23 20 08.8**	**+1.6**
EDC	**Edincik**	**1.91**	**29**	PN	**Pn**	**23 20 09.3**	**+1.5**
ERIK	**Erikli-Kesan**	**1.99**	**357**	PN	**Pn**	**23 20 10.2**	**+1.3**
MRMT	**Marmara Adasi**	**2.06**	**21**	PN	**Pn**	**23 20 11.7**	**+1.9**
KCTX	**Karacabey (Bur**	**2.06**	**39**	PN	**Pn**	**23 20 11.5**	**+1.6**
ENEZ	**Enez**	**2.09**	**350**	PN	**Pn**	**23 20 11.7**	**+1.5**
MAR2	**Marsite Statio**	**2.10**	**14**	PN	**Pn**	**23 20 11.9**	**+1.6**

IDC ***16*** *23:27:20.2±0.7,59.70S×27.43W,h113km±5km,mb4.3/14, mb1 4.3/15,mb1mx4.2/25,mbtmp4.6/15, Error ellipse: s-maj=16.7km s-min=11.1km az=51.0*
NEIC ***16*** *23:27:24.6±1.9,59.85S±0.1×27.6W±0.2,h153km±6km, mb4.8/68, Error ellipse: s-maj=18.5km s-min=13.4km az=51.0*

ISC 16 23:27:19.2±0.3,**59.70S**±0.07×**27.59W**±0.09,**h100**km, **n135,σ1°38**/130,**mb4.9**/40,**2D**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.56**	**152**	P	**Pn**	**23 30 27.8**	**+0.8**
VNA3	**Neumayer Olymp**	**13.67**	**155**	P	**Pn**	**23 30 27.4**	**-1.2**
VNA2	**Neumayer--Watz**	**13.96**	**152**	P	**Pn**	**23 30 33.1**	**+0.9**
	baz=312,slow=16						
SNAA	**Sanae**	**15.56**	**150**	P	**Pn**	**23 30 52.6**	**-0.1**
SNAA	**Sanae**	**15.56**	**150**	P	**Pn**	**23 30 52.2**	**-0.4**
	2.5nm,0.3s,baz=310,slow=12,SNR=48						
SNAA				S	Sn	23 33 34.5	-10
	0.3nm,0.3s,baz=214,slow=15,SNR=4.7						
SNAA	**Sanae**	**15.56**	**150**	Pn	**Pn**	**23 30 52.9**	**+0.2**
SNAA				IAmb	IAmb	23 30 57.5	
	comp=Z,35nm,0.9s						
BELA	**Belgrano 2**	**18.41**	**185**	P	**P**	**23 31 25.5**	**-0.5**
EFI	**East Falkland**	**18.82**	**282**	P	**P**	**23 31 31.5**	**+0.8**
EFI				IAmb	IAmb	23 31 37.8	
	comp=Z,63nm,0.8s						
MG02	**Cerro Sombrero**	**23.81**	**268**	P	**P**	**23 32 21.5**	**-1.0**
MG04	**Isla Riesco**	**24.96**	**266**	P	**P**	**23 32 33.8**	**+0.9**
MG05	**Puerto Natales**	**26.10**	**268**	P	**P**	**23 32 41.9**	**-1.3**
MG05				IAmb	IAmb	23 32 58.8	
	comp=Z,18nm,1.1s						
GO09	**Cerro Castillo**	**26.25**	**269**	P	**P**	**23 32 42.9**	**-1.7**
SYO	**Syowa Base**	**28.97**	**137**	‖*e*P	P	23 33 05.6	-3.0
SYO	**Syowa Base**	**28.97**	**137**	‖epP	pP	23 33 42.6	+12
QSPA	**South Pole Qui**	**30.54**	**180**	P	**P**	**23 33 23.2**	**+0.5**
	comp=Z,5.1nm,0.6s,baz=213,slow=2.2,SNR=66						
QSPA				PcP	**PcP**	**23 36 18.0**	**-0.9**
	comp=Z,5.1nm,1.1s,baz=210,slow=4.0,SNR=6.5						
QSPA	**South Pole Qui**	**30.54**	**180**	P	**P**	**23 33 23.3**	**+0.5**
QSPA				IAmb	IAmb	23 33 24.0	
	comp=Z,6.2nm,0.6s						
**LL

PB04	**IPOC Station P**	**47.82**	**302**	P	**P**	**23 35 47.0**	**+0.3**
PB09	**IPOC Station P**	**47.91**	**304**	IAmb	IAmb	23 35 49.6	
	comp=Z,20nm,0.8s						
PB07	**IPOC Station P**	**48.25**	**303**	P	**P**	**23 35 50.7**	**+0.7**
SDBA	**SAO DESIDERIO**	**48.94**	**337**	*eP*	**P**	**23 35 55.2**	**+0.1**
PATCX	**Punta Patache**	**49.16**	**303**	P	**P**	**23 35 57.4**	**+0.5**
PATCX				IAmb	IAmb	23 36 12.8	
	comp=Z,20nm,1.0s						
NBLA	**Lagarto - SE**	**49.21**	**347**	*eP*	**P**	**23 35 56.9**	**-0.3**
PB08	**IPOC Station P**	**49.35**	**305**	IAmb	IAmb	23 36 00.6	
	comp=Z,13nm,0.8s						
PTLB	**Pontes e Lacer**	**49.85**	**319**	*eP*	**P**	**23 36 01.9**	**-0.1**
PB11	**IPOC Station P**	**49.90**	**304**	IAmb	IAmb	23 36 05.1	
	comp=Z,17nm,0.9s						
SIV	**San Ignacio**	**50.01**	**316**	P	**P**	**23 36 03.3**	**+0.1**
	comp=Z,6.8nm,0.5s,baz=178,slow=8.3,SNR=44						
PSGCX	**Pisagua**	**50.24**	**304**	P	**P**	**23 36 05.5**	**+0.5**
PSGCX				IAmb	IAmb	23 36 16.1	
	comp=Z,19nm,1.1s						
LBTB	**Lobatse**	**50.35**	**71**	P	**P**	**23 36 05.9**	**0.0**
MNMC	**Minye Minye**	**50.43**	**305**	P	**P**	**23 36 07.9**	**+1.1**
CASY	**Casey**	**50.54**	**160**	P	**P**	**23 36 06.9**	**+0.3**
SNDB	**Serra Nova Dou**	**50.81**	**329**	*eP*	**P**	**23 36 10.0**	**+0.8**
NBTA	**Tacaratu-PE**	**51.09**	**347**	*eP*	**P**	**23 36 10.7**	**-0.7**
LPAZ	**La Paz**	**52.39**	**308**	P	**P**	**23 36 22.7**	**+1.0**
	comp=Z,6.3nm,0.7s,baz=115,slow=4.0,SNR=27						
LPAZ	**La Paz**	**52.39**	**308**	P	**P**	**23 36 22.8**	**+1.0**
LPAZ	**La Paz**	**52.39**	**308**	*eP*	**P**	**23 36 22.2**	**+0.5**
VILB	**Vilhena**	**52.53**	**319**	*eP*	**P**	**23 36 22.2**	**+0.1**
H10N1	**ASCENSION HYDR**	**52.69**	**16**	T	T	00 33 43.3	
	baz=190						
H10N3	**ASCENSION HYDR**	**52.69**	**16**	T	T	00 33 53.7	
	baz=190						
H10N2	**ASCENSION HYDR**	**52.71**	**16**	T	T	00 33 56.2	
	baz=190						
CLDB	**Colider**	**53.10**	**325**	*eP*	**P**	**23 36 26.1**	**-0.2**
SAML	**Samuel**	**57.28**	**317**	P	**P**	**23 36 55.8**	**-0.4**
SAML				IAmb	IAmb	23 36 56.9	
	comp=Z,10nm,0.8s						
ETMB	**Extrema**	**57.56**	**313**	*eP*	**P**	**23 36 57.9**	**-0.3**
NNA	**Nana**	**59.89**	**301**	P	**P**	**23 37 15.2**	**+0.8**
	comp=Z,6.8nm,0.6s,baz=228,slow=12,SNR=2.3						
LSZ	**Lusaka**	**59.94**	**67**	P	**P**	**23 37 14.8**	**-0.1**
LSZ				IAmb	IAmb	23 37 15.9	
	comp=Z,6.9nm,0.8s						
MALB	**Monte Alegre**	**61.28**	**329**	*eP*	**P**	**23 37 23.6**	**-0.2**
MCPB	**Macapa, AP**	**62.17**	**332**	*eP*	**P**	**23 37 30.1**	**+0.3**
PTGA	**Pitinga**	**63.96**	**323**	P	**P**	**23 37 41.1**	**-0.5**
DBIC	**Dimbokro**	**68.59**	**24**	P	**P**	**23 38 10.4**	**-0.6**
	comp=Z,3.6nm,0.7s,baz=178,slow=7.3,SNR=6.2						
DBIC	**Dimbokro**	**68.59**	**24**	P	**P**	**23 38 11.0**	**-0.1**
DBIC				IAmb	IAmb	23 38 11.2	
	comp=Z,8.8nm,1.1s						
OTAV	**Otavalo**	**71.55**	**305**	P	**P**	**23 38 29.7**	**-0.1**
OTAV				IAmb	IAmb	23 38 32.0	
	comp=Z,7.4nm,0.8s						
OTAV	**Otavalo**	**71.55**	**305**	*eP*	**P**	**23 38 30.7**	**+0.9**
TOA0	**Torodi Ar. Sit**	**76.35**	**29**	P	**P**	**23 38 57.3**	**+0.2**
TOA0				IAmb	IAmb	23 38 58.0	
	comp=Z,13nm,0.6s						
TORD	**Torodi Ar. Bea**	**76.35**	**29**	P	**P**	**23 38 57.3**	**+0.1**
	comp=Z,12nm,0.5s,baz=198,slow=6.1,SNR=124						
TORD				pP	**pP**	**23 39 23.7**	**+1.3**
	comp=Z,2.2nm,0.3s,baz=193,slow=5.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	**76.35**	**29**	P	**P**	**23 38 57.2**	**+0.1**
TORD				IAmb	IAmb	23 38 58.0	
	comp=Z,9.9nm,0.6s						
KOWA	**Kowa**	**76.37**	**23**	P	**P**	**23 38 57.8**	**+0.7**
ASAR	**Alice Springs**	**95.55**	**163**	P	**P**	**23 40 31.2**	**-1.7**
	comp=Z,0.6nm,0.5s,baz=183,slow=4.0,SNR=8.7						
ASAR				pP	**pP**	**23 40 58.4**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=189,slow=3.9,SNR=3.6						
ASAR	**Alice Springs**	**95.55**	**163**	P	**P**	**23 40 30.9**	**-2.1**
ESDC	**Sonseca Array**	**100.93**	**18**	P	**Pdif**	**23 40 56.1**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=186,slow=6.3,SNR=2.0						
PDAR	**Pinedale Array**	**122.07**	**301**	PKP	**PKPdf**	**23 45 58.8**	**-2.5**
	comp=Z,0.3nm,0.5s,baz=120,slow=5.2,SNR=4.7						
NVAR	**Mina Arraya Bea**	**122.58**	**291**	PKP	**PKPdf**	**23 46 01.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=193,slow=3.6,SNR=2.1						
ULM	**Lac du Bonnet**	**122.72**	**315**	PKP	**PKPdf**	**23 46 00.5**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=149,slow=5.9,SNR=2.5						
CMAR	**Chiang Mai Arr**	**123.90**	**113**	PKP	**PKPdf**	**23 46 04.2**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=225,slow=3.5,SNR=8.7						
FRB	**Frobisher Bay**	**127.00**	**339**	PKP	**PKPdf**	**23 46 07.5**	**-2.1**
	comp=Z,2.5nm,0.6s,baz=148,slow=3.9,SNR=14						
FINES	**FINESS Array B**	**127.70**	**29**	PKP	**PKPdf**	**23 46 09.5**	**-1.6**
	comp=Z,1.4nm,0.6s,baz=191,slow=1.9,SNR=7.4						
FINES				pPKP	**pPKPdf**	**23 46 40.6**	**+2.6**
	comp=Z,2.1nm,0.8s,baz=169,slow=1.9,SNR=2.1						
FINES	**FINESS Array B**	**127.70**	**29**	PKPdf	**PKPdf**	**23 46 09.8**	**-1.3**
ARCES	**ARCESS Array B**	**134.41**	**23**	PKhKP	PKPpre	23 46 05.8	
	comp=Z,2.4nm,1.1s,baz=232,slow=4.0,SNR=1.5						
ARCES				PKP	**PKPdf**	**23 46 22.3**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=224,slow=2.5,SNR=14						
ARCES				pPKP	pPKPdf	23 46 53.5	+2.9
	comp=Z,2.8nm,0.9s,baz=197,slow=1.3,SNR=2.5						
ARCES				SKPbc	**SKPbc**	**23 49 40.1**	**-3.8**
	comp=Z,3.8nm,0.8s,baz=235,slow=3.2,SNR=5.1						
ARCES	**ARCESS Array B**	**134.41**	**23**		**PKPdf**	**23 46 22.4**	**-1.2**
MKAR	**Makanchi Array**	**138.14**	**76**	PKhKP	PKPpre	23 46 20.7	
	comp=Z,0.2nm,0.6s,baz=230,slow=4.7,SNR=4.3						
MKAR				SKPbc	**SKPbc**	**23 49 52.5**	**-3.5**
	comp=Z,1.7nm,0.7s,baz=239,slow=1.7,SNR=20						
YKA	**Yellowknife Ar**	**138.69**	**315**	PKP	**PKPdf**	**23 46 29.8**	**-1.9**
	comp=Z,1.2nm,0.7s,baz=125,slow=2.7,SNR=14						
YKA				pP	**pP**	**23 49 20.4**	**-4.7**
	comp=Z,0.9nm,1.0s,baz=133,slow=6.8,SNR=8.0						
WMQ	**Urumqi**	**138.72**	**83**	*e*PKP	**PKPdf**	**23 46 33.8**	**+1.3**
WMQ				AMB	AMB		
	comp=Z,130nm,4.7s						
XAN	**Xi'an**	**141.79**	**113**	PKP	**PKPdf**	**23 46 37.8**	**-0.5**
ZALV	**Zalesovo Beam**	**144.05**	**69**	PKP	**PKPab**	**23 46 38.2**	**-1.2**
	comp=Z,4.1nm,0.4s,baz=244,slow=3.6,SNR=27						
ZALV				pPKP	**pPKPdf**	**23 47 05.9**	**-2.6**
	comp=Z,1.5nm,0.4s,baz=247,slow=2.7,SNR=3.6						
NJ2	**Nanjing**	**144.49**	**126**	*e*PKP	**PKPab**	**23 46 44.0**	**+2.3**
BTO	**Baotou**	**147.56**	**107**	*e*PKPbc	**PKPdf**	**23 46 49.5**	**+1.3**
BTO				AMB	AMB		
	comp=Z,380nm,15.0s						
INK	**Inuvik**	**148.42**	**317**	PKPbc	**PKPdf**	**23 46 50.1**	**+1.6**
	comp=Z,5.4nm,0.6s,baz=66,slow=2.5,SNR=44						
HHC	**Hu-ho-hao-te**	**148.49**	**108**	*e*PKPbc	**PKPdf**	**23 46 50.3**	**+0.6**
HHC				SKKS		23 57 03.4	
SONM	**Songino Array**	**150.95**	**93**	PKPbc	**PKPdf**	**23 46 57.9**	**+4.5**
	comp=Z,6.4nm,0.7s,baz=214,slow=2.8,SNR=33						
SONM				pPKPbc	**pPKPbc**	**23 47 28.5**	**+2.6**
	comp=Z,2.9nm,0.7s,baz=211,slow=2.1,SNR=5.6						
NRIK	**Noril'sk**	**151.92**	**43**	PKPbc	**PKPdf**	**23 46 59.5**	**+5.4**
	comp=Z,2.9nm,0.9s,baz=180,slow=3.0,SNR=2.6						
TLY	**Talaya**	**151.95**	**85**	PKPbc	**PKPbc**	**23 47 00.7**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=258,slow=12,SNR=3.6						
ILAR	**Eielson Array**	**152.26**	**307**	PKPbc	**PKPdf**	**23 46 59.5**	**+4.8**
	comp=Z,1.4nm,0.4s,baz=157,slow=2.2,SNR=32						

*TRN **16** 23:28:31.9, 10°.82N×62°.37W, h64km, MD3.4*
*FUNV **16** 23:28:33.2, 10°.67N×62°.29W, h30km, MW3.4*
ISC 16 23:28:30.8±1.4, 10°.72N±0°.05×62°.33W±0°.03, h83km±14km, n14, σ1°.49/27, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CRUV	**Carupano**	**0.89**	**267**	*eP*		**Pn**	**23 28 48.6**	**-0.1**
CRUV				*eS*		**Sn**	**23 29 01.0**	**-1.2**
TRN	**Trinidad (W)**	**0.92**	**94**	*eP*		**Pn**	**23 28 49.9**	**+0.8**
TRN				*eS*		**Sn**	**23 29 02.4**	**-0.3**
TRN	**Trinidad (W)**	**0.92**	**94**	*eP*		**Pn**	**23 28 49.6**	**+0.5**
TRN				*eS*		**Sn**	**23 29 01.7**	**-1.0**
TBH	**Brigand Hill**	**1.27**	**100**	*eP*		**Pn**	**23 28 55.0**	**+1.7**
TBH				*eS*		**Sn**	**23 29 11.5**	**+1.3**
GRGR	**Grenville**	**1.56**	**25**	*eP*		**Pn**	**23 28 56.7**	**-0.4**
TPR	**Prospect**	**1.60**	**73**	*eP*		**Pn**	**23 28 58.4**	**+0.9**
TPR				*eS*		**Sn**	**23 29 18.6**	**+0.8**
TOSP	**Speyside**	**1.86**	**72**	*eP*		**Pn**	**23 29 01.3**	**+0.4**
TOSP				*eS*		**Sn**	**23 29 23.0**	**-0.9**
TOSP	**Speyside**	**1.86**	**72**	*eP*		**Pn**	**23 29 02.4**	**+1.4**
TOSP				*eS*		**Sn**	**23 29 22.9**	**-0.9**
GCMP	**Grenada, Carri**	**1.97**	**27**	*eP*		**Pn**	**23 29 02.2**	**-0.3**
GCMP				*eS*		**Sn**	**23 29 24.8**	**-1.7**
PCRV	**Puerto La Cruz**	**2.33**	**257**	*eP*		**Pn**	**23 29 09.1**	**+1.8**
PCRV				*eS*		**Sn**	**23 29 34.8**	**-0.3**
RIOV	**Rio Grande**	**2.68**	**169**	*eP*		**Pn**	**23 29 12.6**	**+0.6**
RIOV				*eS*		**Sn**	**23 29 42.9**	**-0.6**
BIRV	**Birongo**	**3.88**	**267**	*eP*		**Pn**	**23 29 30.3**	**+2.1**
BIRV				*eS*		**Sn**	**23 30 12.7**	**+0.1**
LUEV	**Luepa**	**4.92**	**170**	*eP*		**Pn**	**23 29 42.9**	**+0.4**
LUEV				*eS*		**Sn**	**23 30 34.1**	**-4.1**
BAUV	**El Baul**	**5.90**	**253**	*eP*		**Pn**	**23 29 57.4**	**+1.7**
BAUV				*eS*		**Sn**	**23 30 59.4**	**-2.5**

*IDC **16** 23:28:22.9±3.8, 48°.24N×155°.50E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.3/49, mbtmp3.5/4, ML3.0/1, MS3.6/1, Ms1 3.6/1, ms1mx2.4/35, Error ellipse: s-maj=90.9km s-min=35.7km az=163.0*
*KRSC **16** 23:28:42.7±2.9, 49°.40N×156°.93E, h50km±25km, ML4.4*
ISC 16 23:28:38.9±2.1, 49°.2N±0°.1×156°.6E±0°.1, h34km, n34, σ3°.22/37, mb3.5/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**1.56**	**349**	*eP*		**Pn**	**23 29 05.7**	**+1.5**
SKR				*eS*		**Sn**	**23 29 22.3**	**-0.9**
PAU	**Pauzhetka**	**2.32**	**3**	*eP*		**Pn**	**23 29 17.2**	**+2.6**
PAU				*eS*		**Sn**	**23 29 42.4**	**+0.5**
KDTR	**Khodutka, Kamc**	**2.82**	**19**	*eP*		**Pn**	**23 29 25.0**	**+3.5**
KDTR				*eS*		**Sn**	**23 29 56.0**	**+1.8**
MTVR	**Mutnovka**	**3.48**	**16**	*eP*		**Pn**	**23 29 34.6**	**+3.9**
MTVR				*eS*		**Sn**	**23 30 12.5**	**+1.8**
RUS	**Russkaya**	**3.50**	**20**	*eP*		**Pn**	**23 29 33.8**	**+3.0**
RUS				*eS*		**Sn**	**23 30 11.6**	**+0.7**
GRL	**Gorelyy**	**3.52**	**15**	*eP*		**Pn**	**23 29 36.0**	**+4.7**
GRL				*eS*		**Sn**	**23 30 14.7**	**+2.9**
APC	**Apacha**	**3.79**	**5**	*eP*		**Pn**	**23 29 37.1**	**+2.3**
KRMR	**Karymshinskiy**	**3.80**	**14**	*eP*		**Pn**	**23 29 38.5**	**+3.5**
PETK	**Petropavlovsk-**	**4.02**	**9**	Pn		**Pn**	**23 29 40.7**	**+2.8**
	2.8nm,0.3s,baz=179,slow=11,SNR=58							
PETK				Sn		**Sb**	**23 30 32.4**	**-4.6**
	0.9nm,0.3s,baz=100,slow=41,SNR=1.5							
PET	**Petropavlovsk**	**4.08**	**18**	*eS*		**Sn**	**23 30 28.0**	**+2.6**
DALK	**Dalny**	**4.11**	**18**	*eS*		**Sn**	**23 30 27.7**	**+1.7**
UGLR	**Uglovaya**	**4.29**	**18**	*eP*		**Pn**	**23 29 45.9**	**+4.1**
AVH	**Avacha**	**4.33**	**17**	*eP*		**Pn**	**23 29 46.7**	**+4.4**
KOK	**Koryaka**	**4.33**	**16**	*eP*		**Pn**	**23 29 46.7**	**+4.3**
SMAR	**Somma**	**4.34**	**18**	*eP*		**Pn**	**23 29 46.5**	**+3.9**
KRER	**Koryakskii**	**4.37**	**17**	*eP*		**Pn**	**23 29 47.3**	**+4.4**
SDLR	**Sedlovina**	**4.37**	**18**	*eP*		**Pn**	**23 29 46.4**	**+3.5**
NLC	**Nalytchevo**	**4.38**	**22**	*eS*		**Sn**	**23 30 31.5**	**-1.0**
KRX	**Arik**	**4.40**	**16**	*eP*		**Pn**	**23 29 47.4**	**+4.1**
SPN	**Mys Shipunski**	**4.50**	**27**	*eP*		**Pn**	**23 29 48.7**	**+4.2**
SPN				*eS*		**Sn**	**23 30 36.8**	**+1.2**
GNL	**Ganaly**	**4.62**	**10**	*eP*		**Pn**	**23 29 48.8**	**+2.4**
MKZ	**Mys Kozlova**	**6.27**	**28**	*eP*		**Pn**	**23 30 11.4**	**+2.6**
MKZ				*eS*		**Sn**	**23 31 15.9**	**-3.3**
KZV	**Kizimen**	**6.38**	**19**	*eP*		**Pn**	**23 30 13.3**	**+2.7**
TUMD	**Tumrok D**	**6.49**	**20**	*eP*		**Pn**	**23 30 16.2**	**+4.3**
TUMR	**Tumrok**	**6.51**	**18**	*eP*		Pn	23 30 17.3	+5.0
KBTR	**Krutoberegovo**	**8.01**	**26**	*eP*		**Pn**	**23 30 35.0**	**+2.3**
BKI	**Bering**	**8.35**	**40**	*eS*		**Sn**	**23 32 06.6**	**-3.8**
ILAR	**Eielson Array**	**33.20**	**41**	P		**P**	**23 35 10.6**	**-1.4**
	0.2nm,0.3s,baz=272,slow=8.4,SNR=5.0							
DLBC	**Dease Lake**	**42.24**	**49**	LR		LR	23 53 04.0	
	comp=Z,85nm,21.8s,baz=34,slow=34							
YKA	**Yellowknife Ar**	**47.58**	**39**	P		**P**	**23 37 08.9**	**-1.9**
	0.3nm,0.6s,baz=299,slow=7.1,SNR=6.6							
MKAR	**Makanchi Array**	**47.93**	**297**	P		P	23 37 01.1	-13
	0.2nm,0.7s,baz=66,slow=8.2,SNR=3.8							
H03N2	**Juan Fernandez**	**136.42**	**90**	T		T	02 19 20.7	
	baz=314,slow=77,SNR=4.7							
H03N1	**Juan Fernandez**	**136.43**	**90**	T		T	02 19 21.7	
	baz=314,slow=77,SNR=4.1							
H03N3	**Juan Fernandez**	**136.43**	**90**	T		T	02 19 19.1	
	baz=314,slow=77,SNR=4.8							

IDC 16 23:30:31.6±4.7, 2°.06S×138°.33E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/34, mbtmp3.3/3, ML3.3/1, Error ellipse: s-maj=194.5km s-min=30.9km az=85.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**18.20**	**192**	P		P	23 34 47.3	+1.1
	0.1nm,0.3s,baz=16,slow=12,SNR=2.3							
ASAR	**Alice Springs**	**21.90**	**191**	P		P	23 35 26.4	-0.2
	0.7nm,0.6s,baz=19,slow=11,SNR=10							
MKAR	**Makanchi Array**	**69.04**	**322**	P		P	23 41 39.0	-0.4
	0.1nm,0.4s,baz=100,slow=7.4,SNR=2.1							

*MOS **16** 23:31:52.3±1.4, 54°.26N×127°.68E, h9km, mb4.4/1, Error ellipse: s-maj=31.2km s-min=11.5km az=89.1*
MOS Felt (II) at Zeya.
*IDC **16** 23:31:53.6±1.4, 54°.30N×127°.77E, h0km, mb3.3/4, mb1 3.6/8, mb1mx3.4/48, mbtmp3.5/8, ML3.2/2, Error ellipse: s-maj=28.5km s-min=22.7km az=70.0*
*SKHL **16** 23:31:54.5±0.6, 54°.25N×127°.39E, h12km±3km, mb4.8/4*
ISC 16 23:31:54.0±0.6, 54°.18N±0°.04×127°.58E±0°.03, h10km, n18, σ1°.67/27, mb3.2/4, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZEA	**Zeya**	**0.48**	**204**	*eP*		**Pg**	**23 32 04.1**	**+0.7**
ZEA				*e*			23 32 11.6	
ZEA				pmax		pmax		
	comp=Z,500nm,0.1s							
ZEA				pmax		pmax		
	comp=Z,710nm,0.5s							
ZEA	**Zeya**	**0.48**	**204**	*i*Pg		**Pg**	**23 32 04.0**	**+0.7**
ZEA				AMB		AMB	23 32 04.3	
	comp=Z,2μm,0.2s							
ZEA				*e*Sg		**Sg**	**23 32 10.6**	**+0.9**
ZEA				A		A	23 32 11.6	
	comp=Z,36μm,0.4s							
BMKR	**Bomnak**	**0.91**	**54**	*i* Pg		**Pg**	**23 32 12.0**	**+0.5**
BMKR				AMB		AMB	23 32 12.5	
	comp=Z,720nm,0.4s							
BMKR				*e*Sg		**Sg**	**23 32 24.5**	**+1.1**
EKMR	**Ekimchan**	**3.38**	**107**	*e*Pn		**Pn**	**23 32 48.9**	**+2.0**
EKMR				Pn		**Pb**	**23 32 55.2**	**+1.1**
EKMR				*e*Pg		**Pg**	**23 32 57.8**	**-1.0**
EKMR				AMB		AMB	23 32 59.5	
	comp=Z,84nm,0.8s							
EKMR				*e*Sg		**Sg**	**23 33 43.5**	**+0.9**
EKMR				A		A	23 33 51.5	
	comp=Z,760nm,0.9s							
TUP	**Tupik**	**4.47**	**276**	*e*Pn		**Pn**	**23 33 00.0**	**-1.9**
TUP				*e*Pg		**Pb**	**23 33 12.7**	**+0.1**
TUP				AMB		AMB	23 33 13.1	
	comp=Z,139nm,0.6s							
TUP				*e*Sn		**Sn**	**23 33 51.2**	**-2.8**
TUP				*e*Sg		**Sb**	**23 34 09.3**	**+2.7**
TUP				A		A	23 34 12.6	
	comp=Z,666nm,0.8s							
KLR	**Kul'dur**	**5.59**	**151**	Pn		**Pn**	**23 33 19.7**	**+2.5**
	comp=Z,2.8nm,0.3s,baz=335,slow=15,SNR=44							
KLR				Sn		**Sn**	**23 34 18.3**	**-3.1**
	comp=Z,5.7nm,0.3s,baz=1.4,slow=22,SNR=4.3							
KLR				Lg		Lg	23 34 48.9	
	comp=Z,11nm,0.3s,baz=54,slow=14,SNR=6.5							
KLR	**Kul'dur**	**5.59**	**151**	*e*Pn		**Pn**	**23 33 19.4**	**+2.2**
KLR				Pn		Pb	23 33 23.3	-8.3
KLR				*e*Sg		**Sg**	**23 34 51.8**	**-1.6**
CRS	**Chara**	**5.95**	**301**	*e*Pn		**Pn**	**23 33 22.2**	**+0.1**
YAK	**Yakutsk**	**7.95**	**7**	*e*P		**Pn**	**23 33 48.3**	**-1.2**
YAK				*e*			23 35 09.9	
YAK				pmax		pmax		
	comp=Z,20nm,0.3s							
YAK				smax		smax		
	comp=E,5.0nm,0.3s							
YAK				smax		smax		
	comp=N,2.0nm,0.3s							
USRK	**Ussuriysk Ar.**	**10.39**	**162**	Pn		**Pn**	**23 34 23.6**	**+0.6**
	baz=351,slow=15,SNR=1.6							
USRK				Lg		Lg	23 37 15.9	
	baz=4.8,slow=19,SNR=1.7							
SONM	**Songino Array**	**14.74**	**253**	Pn		**Pn**	**23 35 20.5**	**-2.0**
	comp=N,0.2nm,0.3s,baz=64,slow=13,SNR=3.4							
SONM				Lg		Lg	23 39 38.7	
	comp=N,0.8nm,0.3s,baz=55,slow=28,SNR=7.7							
SEY	**Seymchan**	**15.53**	**46**	Lg		Lg	23 40 00.3	
	comp=N,0.2nm,0.3s,baz=197,slow=23,SNR=7.8							
TIXI	**Tiksi**	**17.55**	**1**	P		**Pn**	**23 35 56.6**	**-1.7**
	comp=N,0.6nm,0.3s,baz=180,slow=2.6,SNR=6.5							
TIXI				Lg		Lg	23 41 06.2	
	comp=N,0.3nm,0.3s,baz=25,slow=2.0,SNR=3.2							
PETK	**Petropavlovsk-**	**17.83**	**81**	P		**Pn**	**23 36 01.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=92,slow=17,SNR=6.1							
NRIK	**Noril'sk**	**23.64**	**325**	P		**P**	**23 37 06.4**	**+1.5**
	comp=N,0.9nm,0.5s,baz=118,slow=10.0,SNR=1.9							
MKAR	**Makanchi Array**	**29.32**	**274**	P		**P**	**23 37 58.2**	**+1.7**
	comp=N,0.2nm,0.5s,baz=64,slow=9.8,SNR=1.9							
ILAR	**Eielson Array**	**41.36**	**40**	P		**P**	**23 39 39.8**	**+0.1**
	comp=N,0.4nm,0.9s,baz=283,slow=8.2,SNR=3.1							
YKA	**Yellowknife Ar**	**53.91**	**31**	P		**P**	**23 41 16.1**	**-0.9**
	comp=N,0.2nm,0.6s,baz=310,slow=6.7,SNR=3.5							

*IDC **16** 23:35:11.9±1.7, 35°.30N×26°.57E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/39, mbtmp3.8/5, Error ellipse: s-maj=52.7km s-min=28.8km az=135.0*
*ISK **16** 23:35:13.9, 34°.97N×26°.76E, h15km, ML3.1/17*
*HLW **16** 23:35:14.5, 34°.94N×26°.88E, h11km±8km, Md3.2, Ml3.4*
*ATH **16** 23:35:15.6, 35°.05N×26°.71E, h29km±4km, ML3.0/10, Error ellipse: s-maj=5.9km s-min=1.4km az=336.0*
*THE **16** 23:35:16.4, 35°.12N×26°.68E, h0km±1km, ML3.0/4, Error ellipse: s-maj=4.9km s-min=0.9km az=155.0*
ISC 16 23:35:14.9±1.1, 35°.00N±0°.04×26°.75E±0°.03, h25km±9km, n65, σ1°.18/75, mb3.8/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZKR	**Zakros**	**0.45**	**286**	P		**Pb**	**23 35 23.6**	**-0.7**
ZKR				S		**Sb**	**23 35 30.8**	**+0.2**
ZKR				AML		AML	23 35 31.6	
	comp=N,3358μm,0.4s							
ZKR				AML		AML	23 35 31.7	
	comp=E,5669μm,0.2s							
ZKR	**Zakros**	**0.45**	**286**	P		**Pb**	**23 35 23.6**	**-0.7**
ZKR				S		**Sb**	**23 35 30.7**	**0.0**
	comp=E,2μm,0.2s							
ZKR	**Zakros**	**0.45**	**286**	PG		**Pb**	**23 35 23.7**	**-0.7**
ZKR				SG		**Sb**	**23 35 30.6**	**-0.1**
KARP	**Karpathos**	**0.65**	**32**	P		**Pb**	**23 35 27.1**	**-0.6**
KARP				S		**Sb**	**23 35 37.0**	**+0.7**
KARP				AML		AML	23 35 38.0	
	comp=N,7985μm,0.3s							
KARP				AML		AML	23 35 38.2	
	comp=E,7469μm,0.4s							
KARP	**Karpathos**	**0.65**	**32**	P		**Pb**	**23 35 27.1**	**-0.6**
KARP				S		**Sn**	**23 35 37.6**	**-0.4**
	comp=E,4μm,0.3s							
KARP	**Karpathos**	**0.65**	**32**	PG		**Pb**	**23 35 27.2**	**-0.4**
KARP				SG		**Sb**	**23 35 37.3**	**+1.0**
NPS	**Neapolis**	**0.97**	**286**	P		**Pb**	**23 35 32.9**	**-0.1**
NPS				AML		AML	23 35 53.7	
	comp=N,2165μm,0.5s							
NPS				AML		AML	23 35 53.9	
	comp=E,3857μm,0.5s							
NPS	**Neapolis**	**0.97**	**286**	P		**Pb**	**23 35 32.7**	**-0.3**
NPS				S		**Sn**	**23 35 47.7**	**+1.9**
	comp=E,1μm,0.5s							
KSTL	**Kastelli Herak**	**1.41**	**283**	P		**Pn**	**23 35 37.9**	**-1.0**
KSTL				S		**Sn**	**23 35 54.0**	**-2.7**
IDI	**Anoyia**	**1.55**	**281**	P		**Pb**	**23 35 43.2**	**+0.2**
IDI				AML		AML	23 36 18.2	
	comp=N,457μm,0.5s							
IDI				AML		AML	23 36 22.6	
	comp=E,452μm,0.8s							
IDI	**Anoyia**

s-min=15.8km az=59.0
GUC ***16*** *23:36:48.7±0.3,29°.09S×72°.46W,h30km±3km,ML4.3*
NEIC ***16*** *23:36:49.5±2.0,29°.00S±0°.04×72°.76W±0°.08,h35km±1km, mb4.8/24,Mwr4.3/22,ML4.5(GUC),Error ellipse: s-maj=12.4km s-min=5.9km az=266.0*
NEIC ***16*** *23:36:49.5,29°.00S×72°.77W,h11km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.41; $M_{\theta\theta}$=0.75; $M_{\phi\phi}$ 1.16; $M_{r\theta}$=-1.81; $M_{r\phi}$=3.13; $M_{\theta\phi}$=0.36; Fault plane solution: M_o3.78000×10^{15} NP1:$\phi_1$99.92000°, δ86.90000°,λ-150.12000°. NP2:$\phi_2$8.15000°, δ60.16000°, λ-3.57000°. Principal axes: T 3.9354, Plg18.0000°, Azm230.0000°; N -0.3379, Plg60.0000°, Azm105.0000°; P -3.5976, Plg23.0000°, Azm328.0000°;*
VAO ***16*** *23:36:50.9±0.5,29°.25S×72°.44W,h10km,mb4.6*
ISC 16 23:36:47.8±1.5,29°.06S±0°.04×72°.78W±0°.06,h10km±9km, n163,σ1ϕ95/170,mb4.8/23,MS3.8/12,5C,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**1.73**	**61**	⇑*iP*		**Pn**		**23 37 15.2**	**-2.8**
AC04				*i* S		**Sn**		**23 37 35.4**	**-4.7**
AC04				IAML				23 37 36.6	
	comp=E,5μm,0.1s								
AC04	**Llanos de Chal**	**1.73**	**61**			**Pn**		**23 37 15.5**	**-2.5**
AC04				Sn		**Sn**		**23 37 35.5**	**-4.7**
LCO	**Las Campanas**	**1.82**	**89**			**Pn**		**23 37 18.3**	**-1.3**
LCO				Sn		**Sn**		**23 37 39.8**	**-3.1**
GO04	**Tololo Observa**	**2.05**	**123**	*eP*		**Pn**		**23 37 21.5**	**-1.1**
GO04				*i* S		**Sn**		**23 37 44.9**	**-3.6**
GO04				IAML				23 37 49.7	
	comp=E,11μm,0.3s								
GO04	**Tololo Observa**	**2.05**	**123**			**Pn**		**23 37 21.8**	**-0.9**
GO04				Sn		**Sn**		**23 37 44.7**	**-3.7**
AC05	**El Transito**	**2.21**	**85**			**Pn**		**23 37 23.9**	**-0.9**
CO03	**El Pedregal**	**2.54**	**135**	⇑*eP*		**Pn**		**23 37 28.5**	**-0.7**
CO03				*i* S		**Sn**		**23 37 56.6**	**-3.7**
CO03				IAML				23 37 57.9	
	comp=E,2μm,0.3s								
CO03	**El Pedregal**	**2.54**	**135**			**Pn**		**23 37 28.6**	**-0.7**
CO03				Sn		**Sn**		**23 37 56.8**	**-3.4**
CO02	**Combarbal**	**2.63**	**145**			**Pn**		**23 37 29.9**	**-0.7**
CO02				Sn		**Sn**		**23 37 58.8**	**-3.9**
GO03	**Copiap**	**2.68**	**58**	⇑*iP*		**Pn**		**23 37 30.4**	**-0.7**
GO03				*i* S		**Sn**		**23 38 01.1**	**-2.6**
GO03				IAML				23 38 03.0	
	comp=E,3μm,0.2s								
GO03	**Copiap**	**2.68**	**58**			**Pn**		**23 37 30.1**	**-1.0**
GO03				Sn		**Sn**		**23 38 01.9**	**-1.9**
AC01	**Pan de Azucar**	**3.49**	**34**	⇑*iP*		**Pn**		**23 37 39.9**	**-2.3**
AC01				*eS*		**Sn**		**23 38 17.2**	**-6.4**
AC01				IAML				23 38 21.0	
	comp=E,332nm,0.2s								
AC01	**Pan de Azucar**	**3.49**	**34**	Pn		**Pn**		**23 37 40.0**	**-2.3**
AC01				Sn		**Sn**		**23 38 19.1**	**-4.6**
AC02	**Maricunga**	**3.92**	**56**	*eP*		**Pn**		**23 37 48.8**	**+0.1**
AC02				*i* S		**Sn**		**23 38 34.6**	**-0.3**
AC02	**Maricunga**	**3.92**	**56**			**Pn**		**23 37 48.5**	**-0.1**
AC02				Sn		**Sn**		**23 38 33.9**	**-1.1**
VA01	**Torpederas**	**4.07**	**166**	*eP*		**Pn**		**23 37 51.7**	**+1.6**
VA01	**Torpederas**	**4.07**	**166**			**Pn**		**23 37 48.6**	**-1.6**
VA03	**San Esteban**	**4.16**	**153**	⇑*eP*		**Pn**		**23 37 51.3**	**-0.3**
VA03				*i* S		**Sn**		**23 38 36.7**	**-3.6**
VA03	**San Esteban**	**4.16**	**153**			**Pn**		**23 37 51.2**	**-0.3**
ROCH	**El Roble**	**4.18**	**159**	*eP*		**Pn**		**23 37 51.5**	**-0.5**
ROCH				*i* S		**Sn**		**23 38 34.7**	**-6.4**
MT02	**Curacav**	**4.42**	**162**	*eP*		**Pn**		**23 37 55.3**	**+0.3**
MT02				*i* S		Sn		23 38 36.9	-10
MT02	**Curacav**	**4.42**	**162**			**Pn**		**23 37 54.1**	**-0.8**
PEL	**Peldehue**	**4.45**	**157**			**Pn**		**23 37 55.0**	**-0.5**
MT05	**Renca**	**4.66**	**158**			**Pn**		**23 37 59.2**	**+0.8**
VA05	**Santo Domingo**	**4.69**	**168**			**Pn**		**23 37 58.6**	**-0.1**
GO02	**Mina Guanaco**	**4.81**	**37**	Pn		**Pn**		**23 37 59.4**	**-1.3**
MT03	**Universidad Ad**	**4.83**	**157**	Pn		**Pn**		**23 38 00.7**	**0.0**
PB14	**IPOC Station P**	**4.90**	**26**	Pn		**Pn**		**23 37 58.9**	**-3.0**
MT09	**Talagante**	**4.94**	**162**			**Pn**		**23 38 01.4**	**-0.9**
MT01	**Popeta**	**4.96**	**165**	Pn		**Pn**		**23 38 01.3**	**-1.2**
BO01	**Tunca**	**5.51**	**165**			**Pn**		**23 38 08.7**	**-1.2**
PB10	**IPOC Station P**	**5.88**	**20**	Pn		**Pn**		**23 38 12.6**	**-2.4**
BO02	**Sierra Bellavi**	**5.96**	**164**	Pn		**Pn**		**23 38 15.8**	**-0.4**
PB15	**IPOC Station P**	**6.55**	**28**			**Pn**		**23 38 23.1**	**-1.4**
H03N1	**Juan Fernandez**	**6.82**	**229**	Pn		**Pn**		**23 38 25.7**	**-2.1**
H03N1				Sn		Sn		23 39 36.7	-8.7
H03N1				T		T		23 45 33.7	
	baz=64								
H03N2	**Juan Fernandez**	**6.84**	**229**	Pn		**Pn**		**23 38 25.7**	**-2.2**
H03N2				Sn		Sn		23 39 36.7	-9.0
H03N2				T		T		23 45 27.4	
	baz=64								
H03N3	**Juan Fernandez**	**6.84**	**229**	Pn		Pn		23 38 25.5	-2.6
H03N3				Sn		Sn		23 39 36.5	-9.4
H03N3				T		T		23 45 23.5	
	baz=64								
PB06	**IPOC Station P**	**6.96**	**25**			**Pn**		**23 38 27.6**	**-2.5**
H03S3	**Juan Fernandez**	**7.07**	**226**	Pn		Pn		23 38 28.0	-3.1
H03S3				Sn		Sn		23 39 40.5	-11
	baz=336,slow=0.5,SNR=16								
H03S1	**Juan Fernandez**	**7.08**	**226**	Pn		Pn		23 38 27.8	-3.4
H03S1				Sn		Sn		23 39 39.8	-12
	baz=336,slow=0.5,SNR=14								
H03S2	**Juan Fernandez**	**7.08**	**226**	Pn		Pn		23 38 28.2	-3.1
H03S2				Sn		Sn		23 39 40.9	-11
	baz=336,slow=0.5,SNR=54								
PB04	**IPOC Station P**	**7.11**	**20**			**Pn**		**23 38 29.7**	**-2.5**
LVC	**Limon Verde**	**7.31**	**29**	Pn		**Pn**		**23 38 33.8**	**-1.3**
	comp=E,3.1nm,0.3s,baz=190,slow=6.9,SNR=62								
LVC				Sn		**Sn**		**23 39 53.5**	**-4.9**
	comp=E,3.0nm,0.3s,baz=293,slow=21,SNR=2.0								
LVC				LR		LR		23 41 09.8	
	comp=E,282nm,21.7s,baz=213,slow=36								
LVC	**Limon Verde**	**7.31**	**29**			**Pn**		**23 38 33.7**	**-1.4**
PATCX	**Punta Patache**	**8.55**	**17**	Pn		**Pn**		**23 38 49.8**	**-2.0**
TA01	**Diego Aracena**	**8.78**	**16**	Pn		**Pn**		**23 38 53.3**	**-1.6**
PB08	**IPOC Station P**	**9.47**	**21**	Pn		**Pn**		**23 39 02.9**	**-2.0**
PB11	**IPOC Station P**	**9.69**	**18**	Pn		**Pn**		**23 39 04.9**	**-2.6**
PSGCX	**Pisagua**	**9.73**	**15**	Pn		**Pn**		**23 39 05.3**	**-2.7**
MNMC	**Minye Minye**	**10.31**	**17**	Pn		**Pn**		**23 39 13.3**	**-2.8**
PB16	**IPOC Station P**	**11.09**	**16**	Pn		**Pn**		**23 39 24.8**	**-2.3**
PLCA	**Paso Flores**	**11.79**	**172**	Pn		**Pn**		**23 39 35.7**	**-0.4**
	comp=E,1.2nm,0.3s,baz=341,slow=10,SNR=14								
PLCA				LR		LR		23 43 28.7	
	comp=E,298nm,20.0s,baz=347,slow=34								
PLCA	**Paso Flores**	**11.79**	**172**			**Pn**		**23 39 36.1**	**0.0**
PLCA	**Paso Flores**	**11.79**	**172**	*eP*		**Pn**		**23 39 36.5**	**+0.4**
LPAZ	**La Paz**	**13.42**	**20**	Pn		**Pn**		**23 39 55.5**	**-3.4**
	comp=E,0.4nm,0.3s,baz=218,slow=7.2,SNR=5.7								
LPAZ				LR		LR		23 45 00.8	
	comp=E,61nm,20.5s,baz=173,slow=37								
LPAZ	**La Paz**	**13.42**	**20**	Pn		**Pn**		**23 39 58.2**	**-0.8**
CPUP	**Villa Florida**	**13.96**	**82**	Pn		**Pn**		**23 40 03.1**	**-2.7**
	comp=E,0.1nm,0.3s,baz=246,slow=15,SNR=3.0								
CPUP				LR		LR		23 45 43.5	
	comp=E,469nm,18.6s,baz=258,slow=39								
SIV	**San Ignacio**	**16.90**	**42**	Pn		**P**		**23 40 48.3**	**+1.6**
	comp=E,2.5nm,0.3s,baz=230,slow=10,SNR=76								
SIV				LR		LR		23 46 43.1	
	comp=E,28nm,20.8s,baz=242,slow=35								
NNA	**Nana**	**17.41**	**347**	P		**P**		**23 40 54.8**	**+2.6**
	comp=E,1.0nm,0.3s,baz=213,slow=17,SNR=2.3								
NNA				LR		LR		23 46 02.9	
	comp=E,193nm,19.5s,baz=171,slow=32								
AQDB	**Aquidauana**	**17.70**	**65**	*eP*		**P**		**23 40 56.9**	**+1.4**
PTLB	**Pontes e Lacer**	**18.50**	**46**	*eP*		**Pn**		**23 41 05.8**	**+1.4**
PTGB	**Pitanga**	**18.98**	**82**	*eP*		**Pn**		**23 41 10.3**	**0.0**
TRCB	**Terra Rica**	**19.16**	**76**	*eP*		**Pn**		**23 41 13.0**	**+0.6**
VILB	**Vilhena**	**19.84**	**39**	*eP*		**Pn**		**23 41 22.1**	**+1.4**
PP1B	**Ponte de Pedra**	**19.98**	**59**	*eP*		**Pn**		**23 41 21.9**	**-0.4**
ETMB	**Extrema**	**20.11**	**19**	*eP*		Pn		23 41 27.5	+3.7
PCMB	**Pacaembu**	**20.80**	**74**	*eP*		Pn		23 41 30.2	-1.7
FRTB	**Fartura**	**21.58**	**80**	*eP*		**P**		**23 41 39.2**	**+1.3**
SAML	**Samuel**	**21.95**	**26**	P		**P**		**23 41 43.4**	**+1.6**
ITRB	**Iturama**	**22.42**	**70**	*eP*		**P**		**23 41 47.1**	**+0.3**
ATAH	**Atahualpa**	**22.45**	**345**	LR		LR		23 48 52.6	
	comp=E,119nm,20.1s,baz=180,slow=32								
BB19B	**Bebedouro**	**23.34**	**76**	*eP*		**P**		**23 41 56.8**	**+0.3**
ARAG	**Araguaiana, MT**	**23.46**	**60**	*eP*		**P**		**23 41 58.6**	**+1.0**
RCLB	**Rio Claro- Sao**	**23.66**	**80**	*eP*		**P**		**23 42 00.7**	**+1.0**
VAO	**Valinhos**	**23.95**	**81**	*eP*		**P**		**23 42 02.2**	**-0.2**
CLDB	**Colider**	**24.07**	**45**	*eP*		**P**		**23 42 04.8**	**+1.2**
IPMB	**Ipameri, GO**	**25.03**	**69**	*eP*		**P**		**23 42 12.7**	**+0.3**
SNDB	**Serra Nova Dou**	**26.27**	**54**	*eP*		**P**		**23 42 25.1**	**+1.6**
BDFB	**Brasilia**	**26.45**	**65**	P		**P**		**23 42 26.0**	**+0.7**
	comp=E,21nm,0.9s,baz=233,slow=7.1,SNR=24								
BDFB	**Brasilia**	**26.45**	**65**	P		**P**		**23 42 24.6**	**-0.7**
BDFB				IAmb		IAmb		23 42 28.7	
	comp=E,25nm,0.9s								
NPGB	**Novo Progresso**	**27.38**	**40**	*eP*		**P**		**23 42 36.6**	**+3.1**
PEXB	**Peixe**	**28.36**	**59**	*eP*		**P**		**23 42 43.6**	**+1.2**
ITTB	**Itaituba**	**29.41**	**37**	*eP*		P		23 42 55.8	+4.2
JANB	**Januaria**	**29.74**	**68**	*eP*		**P**		**23 42 55.0**	**+0.3**
SJMB	**Sao Joao De Ma**	**30.59**	**77**	*eP*		**P**		**23 43 02.2**	**+0.1**
PTGA	**Pitinga**	**30.72**	**26**	*eP*		P		23 43 07.6	+4.4
SDBA	**SAO DESIDERIO**	**30.77**	**63**	*eP*		**P**		**23 43 04.2**	**+0.4**
BSFB	**Barra de Sao F**	**30.83**	**78**	*eP*		**P**		**23 43 05.1**	**+0.9**
SMTB	**Santa Maria do**	**31.04**	**55**	*eP*		**P**		**23 43 08.3**	**+2.2**
BOAV	**Boa Vista**	**33.42**	**23**	*eP*		**P**		**23 43 28.2**	**+1.3**
ROSC	**El Rosal**	**33.74**	**357**	LR		LR		23 58 32.6	
	comp=E,74nm,18.3s,baz=214,slow=39								
GDU01	**Guandu, BA**	**34.34**	**71**	*eP*		**P**		**23 43 35.3**	**+0.4**
NBPN	**Ponto Novo - B**	**35.41**	**66**	*eP*		**P**		**23 43 44.7**	**+0.4**
TMAB	**Tom-Au,PA,Br**	**35.45**	**46**	*eP*		**P**		**23 43 47.9**	**+3.3**
NBLA	**Lagarto - SE**	**37.27**	**68**	*eP*		**P**		**23 43 59.2**	**-1.0**
NBTA	**Tacaratu-PE**	**38.12**	**66**	*eP*		**P**		**23 44 08.1**	**+0.7**
NBPS	**Pedro II - PI**	**38.52**	**56**	*eP*		**P**		**23 44 12.4**	**+1.6**
NBMA	**Muriti-CE**	**38.62**	**63**	*eP*		**P**		**23 44 12.5**	**+0.9**
MDP	**Montagnes des**	**39.10**	**33**	LR		LR		00 01 31.7	
	comp=Z,67nm,18.2s,baz=188,slow=38								
NBPB	**Pedra_Branca-C**	**39.15**	**60**	*eP*		**P**		**23 44 17.4**	**+1.4**
RCBR	**Riachuelo**	**41.80**	**64**	LR		LR		00 01 24.5	
	comp=Z,98nm,18.2s,baz=203,slow=35								
NBPV	**Pedro Velho**	**41.93**	**65**	*eP*		**P**		**23 44 40.3**	**+1.3**
VNA3	**Neumayer Olymp**	**54.17**	**159**	P		**P**		**23 46 13.8**	**+0.7**
VNA1	**Neumayer--Stat**	**54.47**	**158**	P		**P**		**23 46 16.6**	**+1.5**
VNA2	**Neumayer--Watz**	**54.81**	**159**	P		**P**		**23 46 18.2**	**+0.6**
	baz=291,slow=8.7								
SNAA	**Sanae**	**56.40**	**159**	P		**P**		**23 46 29.7**	**+0.6**
SNAA	**Sanae**	**56.40**	**159**	P		**P**		**23 46 28.6**	**-0.5**
SNAA				IAmb		IAmb		23 46 30.4	
	comp=Z,12nm,1.2s								
QSPA	**South Pole Qui**	**61.16**	**180**	P		**P**		**23 47 03.1**	**+0.7**
Y45A	**Yeager Farm, C**	**64.57**	**345**	P		**P**		**23 47 23.1**	**-2.1**
JCT	**Junction City**	**64.57**	**334**	P		**P**		**23 47 24.1**	**-1.3**
X48A	**Hartselle**	**64.59**	**347**	P		**P**		**23 47 24.4**	**-1.0**
X48A				IAmb		IAmb		23 47 30.1	
	comp=Z,7.8nm,0.9s								
W50A	**Signal Mountai**	**65.00**	**349**	P		**P**		**23 47 25.6**	**-2.4**
TXAR	**Lajitas Array**	**65.13**	**330**	P		**P**		**23 47 31.8**	**+2.7**
	comp=Z,0.5nm,0.5s,baz=154,slow=7.7,SNR=9.2								
TXAR				LR		LR		00 11 29.5	
	comp=Z,91nm,18.4s,baz=0.0,slow=32								
TXAR	**Lajitas Array**	**65.13**	**330**	P		**P**		**23 47 26.5**	**-2.6**
TX31	**Lajitas Ar. Si**	**65.13**	**330**	P		**P**		**23 47 27.1**	**-2.0**
TX31				IAmb		IAmb		23 47 32.2	
	comp=Z,8.0nm,1.1s								
TKL	**Tuckaleechee C**	**65.20**	**350**	LR		LR		00 16 00.4	
	comp=Z,55nm,18.6s,baz=183,slow=36								
WVT	**Waverly**	**66.38**	**347**	P		**P**		**23 47 34.2**	**-2.6**
WVT				IAmb		IAmb		23 47 40.9	
	comp=Z,10nm,1.1s								
W39A	**Magazine**	**66.92**	**341**	P		**P**		**23 47 38.2**	**-2.1**
W39A				IAmb		IAmb		23 47 43.1	
	comp=Z,7.6nm,0.8s								
LCAR	**Lake Charles**	**67.05**	**344**	P		**P**		**23 47 39.8**	**-1.4**
LCAR				IAmb		IAmb		23 47 43.4	
	comp=Z,6.6nm,0.8s								
S44A	**Carbondale**	**68.18**	**346**	P		**P**		**23 47 46.6**	**-1.6**
U38A	**Gravette**	**68.25**	**341**	P		**P**		**23 47 47.3**	**-1.4**
U38A				IAmb		IAmb		23 47 53.0	
	comp=Z,9.3nm,0.9s								
VNDA	**Vanda**	**68.81**	**191**	P		**P**		**23 47 52.6**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=138,slow=3.3,SNR=4.0								
CCM	**Cathedral Cave**	**68.97**	**344**	P		**P**		**23 47 51.0**	**-2.2**
CCM				IAmb		IAmb		23 47 55.7	
	comp=Z,9.0nm,1.0s								
ANMO	**Albuquerque**	**71.16**	**331**	P		**P**		**23 48 10.1**	**+3.2**
	comp=Z,2.4nm,0.9s,baz=135,slow=13,SNR=5.1								
ANMO	**Albuquerque**	**71.16**	**331**	P		**P**		**23 48 04.4**	**-2.6**
DBIC	**Dimbokro**	**74.28**	**73**	P		**P**		**23 48 25.9**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=223,slow=8.4,SNR=7.5								
DBIC				LR		LR		00 18 09.1	
	comp=Z,38nm,21.8s,baz=216,slow=34								
DBIC	**Dimbokro**	**74.28**	**73**	P		**P**		**23 48 23.7**	**-2.0**
DBIC				IAmb		IAmb		23 48 29.9	
	comp=Z,12nm,1.0s								
PFO	**Pinyon Flats O**	**74.80**	**323**	P		**P**		**23 48 31.0**	**+2.5**
	comp=Z,3.1nm,0.8s,baz=142,slow=5.4,SNR=4.2								
PFO	**Pinyon Flats O**	**74.80**	**323**	P		**P**		**23 48 25.7**	**-2.8**
MAW	**Mawson**	**78.08**	**164**	P		**P**		**23 48 47.3**	**+0.7**
	comp=Z,6.7nm,1.0s,baz=196,slow=5.7,SNR=6.6								
MAW	**Mawson**	**78.08**	**164**	P		**P**		**23 48 45.6**	**-0.9**
PDAR	**Pinedale Array**	**79.08**	**333**	P		**P**		**23 48 52.8**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=157,slow=4.2,SNR=7.7								
PDAR				LR		LR		00 20 07.0	
	comp=Z,70nm,19.3s,baz=266,slow=33								
KOWA	**Kowa**	**79.23**	**67**	LR		LR		00 21 09.2	
	comp=Z,52nm,19.9s,baz=204,slow=34								
NVAR	**Mina Array Bea**	**79.48**	**325**	P		**P**		**23 48 56.1**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=160,slow=6.6,SNR=9.8								
HVU	**Hansel Valley**	**79.58**	**331**	P		**P**		**23 48 53.2**	**-2.0**
ELK	**Elko**	**79.83**	**329**	P		**P**		**23 48 59.0**	**+2.3**
	comp=Z,2.3nm,0.9s,baz=183,slow=5.1,SNR=7.6								
ULM	**Lac du Bonnet**	**81.58**	**345**	P		**P**		**23 49 06.2**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=158,slow=3.4,SNR=7.7								
ULM	**Lac du Bonnet**	**81.58**	**345**	P		**P**		**23 49 02.5**	**-3.0**
ULM				IAmb		IAmb		23 49 07.6	
	comp=Z,6.4nm,0.8s								
BOSA	**Boshof**	**82.96**	**119**	P		**P**		**23 49 14.4**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=234,slow=12,SNR=1.9								
BOSA				LR		LR		00 24 53.6	
	comp=Z,25nm,18.3s,baz=187,slow=35								
TOA0	**Torodi Ar. Sit**	**83.17**	**71**	P		**P**		**23 49 13.1**	**-1.6**
TOA0				IAmb		IAmb		23 49 18.8	
	comp=Z,8.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**83.17**	**71**	P		**P**		**23 49 15.5**	**+0.9**
	comp=Z,7.3nm,0.8s,baz=256,slow=4.9,SNR=25								
TORD				LR		LR		00 23 20.1	
	comp=Z,57nm,21.4s,baz=265,slow=34								
YBH	**Yreka Blue Hor**	**84.18**	**325**	P		**P**		**23 49 20.9**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=119,slow=2.4,SNR=5.1								
FCC	**Fort Churchill**	**89.28**	**349**	P		**P**		**23 49 42.4**	**-1.3**
ESDC	**Sonseca Array**	**93.62**	**46**	LR		LR		00 30 17.6	
	comp=Z,36nm,20.1s,baz=255,slow=34								
YKA	**Yellowknife Ar**	**97.19**	**340**	P		Pdif		23 50 20.9	+0.8
	comp=Z,0.7nm,0.9s,baz=144,slow=4.7,SNR=6.5								
FINES	**FINESS Array B**	**119.25**	**33**	PKP		**PKiKP**		**23 55 38.0**	**+1.4**
	comp=Z,3.6nm,1.1s,baz=256,slow=11,SNR=2.3								
AKASG	**Malin Array Be**	**119.26**	**45**	PKP		**PKiKP**		**23 55 37.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=273,slow=2.4,SNR=4.0								
AKASG	**Malin Array Be**	**119.26**	**45**			**PKPdf**		**23 55 36.6**	**-0.3**
BRTR	**Keskin Array B**	**119.90**	**59**	PKP		**PKiKP**		**23 55 39.8**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=203,slow=5.4,SNR=2.2								
ASAR	**Alice Springs**	**121.62**	**209**	PKP		**PKPdf**		**23 55 42.4**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=113,slow=1.8,SNR=5.4								
ASAR				PKKPbc		**PKKPab**		**00 05 43.0**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=343,slow=3.9,SNR=5.0								
WRA	**Warramunga Arr**	**124.69**	**211**	PKP		**PKPdf**		**23 55 48.8**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=158,slow=1.6,SNR=11								
KBZ	**Khabaz**	**127.44**	**55**	PKP		**PKiKP**		**23 55 54.4**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=290,slow=4.2,SNR=3.7								
SEY	**Seymchan**	**135.41**	**332**	PKP		**PKiKP**		**23 56 08.9**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=119,slow=4.1,SNR=9.0								
CHGR	**Chuyangaron**	**147.18**	**63**			**PKPdf**		**23 56 29.4**	**+0.1**
GAR	**Garm**	**148.04**	**62**			**PKPbc**		**23 56 33.6**	**-0.3**
ASAJ	**Asahikawa**	**148.14**	**308**	PKPbc		**PKiKP**		**23 56 35.1**	**-0.4**
	comp=Z,4.0nm,0.3s,baz=253,slow=16,SNR=2.2								
ZAA0	**Zalesovo Array**	**150.26**	**27**	PKPab		**PKiKP**		**23 56 40.5**	**+0.9**
ZALV	**Zalesovo Beam**	**150.26**	**27**	PKP		**PKPdf**		**23 56 35.4**	**+1.7**
	comp=Z,8.7nm,0.8s,baz=284,slow=1.7,SNR=24								
ZALV				PKPbc		**PKiKP**		**23 56 40.4**	**+0.8**
	comp=Z,23nm,0.8s,baz=303,slow=3.3,SNR=35								
ZALV	**Zalesovo Beam**	**150.26**	**27**			**PKPdf**		**23 56 34.8**	**+1.2**
MKAR	**Makanchi Array**	**153.72**	**41**	PKP		**PKPdf**		**23 56 39.8**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=325,slow=1.5,SNR=4.4								
MKAR				PKPbc		**PKiKP**		**23 56 48.2**	**+1.1**
	comp=Z,2.9nm,0.7s,baz=339,slow=1.8,SNR=21								
MKAR				PKPab		**PKPab**		**23 57 00.6**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=297,slow=4.3,SNR=7.1								
MKAR	**Makanchi Array**	**153.72**	**41**			**PKPdf**		**23 56 40.0**	**+0.8**
MKAR				pPKPdf		**PKiKP**		**23 56 48.4**	**+1.3**
SONM	**Songino Array**	**161.25**	**2**	PKP		**PKPdf**		**23 56 49.6**	**+0.9**
	comp=Z,0.3nm,0.9s,baz=45,slow=0.8,SNR=1.9								
SONM				PKPab		**pPKPab**		**23 57 34.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=316,slow=4.1,SNR=6.3								
CMAR	**Chiang Mai Arr**	**167.01**	**143**	PKPab		**PKPab**		**23 57 58.2**	**0.0**
	comp=Z,0.6nm,0.9s,baz=230,slow=7.1,SNR=4.6								

UCR ***17*** *00:05:33.0±1.1,9°.48N×86°.08W,h22km±6km,MW4.5*
INET ***17*** *00:05:34.7,9°.30N×85°.85W,h30km,MW3.4*
IDC ***17*** *00:05:40.2±0.9,11°.25N×84°.96W,h0km,mb3.7/7, mb1 4.0/8,mb1mx3.7/42,mbtmp3.7/8,ML3.2/1,Error ellipse: s-maj=33.4km s-min=9.3km az=83.0*
ISC 17 00:05:34.2±1.3,9°.5N±0°.1×85°.82W±0°.08,h16km,n21, σ0ϕ91/23,mb3.5/7,1C-10D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUAI	**GUAI**	**0.84**	**21**	⇓*iP*		**Pn**	**Pb**	**00 05 50.4**	**-0.1**
GUAI				*i* S		**Sn**		**00 06 03.8**	**+0.3**
JTS	**Las Juntas de**	**1.18**	**47**	Pg		**Pb**		**00 05 56.5**	**+0.3**
	188nm,0.3s,baz=275,slow=5.1,SNR=402								
JTS				LR		LR		00 06 13.1	
	comp=Z,63nm,19.2s,baz=252,slow=34								
JTS				Lg		Lg		00 06 13.8	
	222nm,0.3s,baz=132,slow=22,SNR=7.8								
COLC	**Colonia**	**1.33**	**27**	⇓*iP*		**Pn**		**00 05 58.0**	**-0.1**
COLC				*i* S		**Sg**		**00 06 17.4**	**+0.3**
LIM1	**Limonal**	**1.33**	**25**	⇓*iP*		**Pn**		**00 05 58.1**	**-0.1**
CUI	**Cuipilapa**	**1.34**	**29**	⇓*iP*		**Pn**		**00 05 57.3**	**-1.0**
GPS2	**Hotel Rincn d**	**1.35**	**20**	⇓*iP*		**Pn**		**00 05 58.

MKAR					pmax	pmax		
	comp=Z,4.0nm,0.6s							
MKAR	**Makanchi Array**	**13.61**	**37**			**Pn**	**00 16 12.9**	**-0.1**
KOLN	**Koldanda**	**14.12**	**124**	*eP*		**Pn**	**00 16 19.3**	**-0.3**
	comp=Z,16nm,0.3s							
BHPL	**Bhopal**	**14.49**	**153**	*eP*		**P**	**00 16 25.3**	**+0.2**
BHPL				*eS*		**S**	**00 18 58.1**	**-6.8**
GKN	**Gorkha**	**14.67**	**121**	*eP*		**Pn**	**00 16 26.7**	**+0.4**
	comp=Z,36nm,0.3s							
AB31	**Akbulak array**	**14.91**	**332**	⇑P		**P**	**00 16 30.6**	**+1.1**
	comp=Z,2.4nm,0.3s,baz=158,slow=12,SNR=13							
ABKAR	**Akbulak array**	**14.91**	**332**	P		**P**	**00 16 30.4**	**+0.9**
ABKAR	**Akbulak array**	**14.91**	**332**			**Pn**	**00 16 28.4**	**-0.4**
WMQ	**Urumqi**	**15.11**	**56**	*eP*		**P**	**00 16 34.8**	**+2.9**
DMN	**Daman**	**15.24**	**121**	*eP*		**P**	**00 16 33.9**	**+0.2**
	comp=Z,11nm,0.3s							
KKN	**Kakani**	**15.25**	**120**	*eP*		**P**	**00 16 34.3**	**+0.5**
	comp=Z,21nm,0.3s							
KURBB	**Kurchatov Arra**	**15.33**	**20**	P		**P**	**00 16 33.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=13							
KURK	**Kurchatov**	**15.44**	**20**	P		**Pn**	**00 16 33.6**	**-1.6**
KURK	**Kurchatov**	**15.44**	**20**	P		**Pn**	**00 16 33.5**	**-1.6**
PKIN	**Phulchoki**	**15.46**	**121**	*eP*		**P**	**00 16 37.3**	**+1.1**
PKI	**Pulchoki**	**15.48**	**121**	*eP*		**P**	**00 16 37.5**	**+1.1**
	comp=Z,53nm,0.5s							
GUN	**Gumba**	**15.60**	**119**	*eP*		**Pn**	**00 16 38.8**	**+1.0**
	comp=Z,39nm,0.5s							
JIRN	**Jiri**	**15.97**	**119**	*eP*		**Pn**	**00 16 43.1**	**+0.8**
	comp=Z,58nm,0.4s							
BVAR	**Borovoye Array**	**16.58**	**360**	P		**Pn**	**00 16 48.4**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=192,slow=14,SNR=10							
AKTO	**Aktyubinsk**	**16.60**	**331**	P		**Pn**	**00 16 48.8**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=147,slow=7.8,SNR=11							
AKTO	**Aktyubinsk**	**16.60**	**331**	⇑P		**Pn**	**00 16 49.4**	**+0.2**
	comp=Z,2.3nm,0.6s							
BRVK	**Borovoye**	**16.61**	**360**	*ceP*		**Pn**	**00 16 49.7**	**+0.4**
BRVK					pmax	pmax		
	comp=Z,7.0nm,1.7s							
BRVK	**Borovoye**	**16.61**	**360**	P		**P**	**00 16 48.1**	**-0.1**
BRVK					IAmb	IAmb	00 16 52.0	
	comp=Z,3.6nm,0.6s							
RAMN	**Ramite**	**16.69**	**120**	*eP*		**Pn**	**00 16 51.5**	**+0.7**
	comp=Z,34nm,0.5s							
UOSS	**Minazif**	**16.74**	**231**	P		**P**	**00 16 50.5**	**+0.6**
UOSS					IAmb	IAmb	00 16 54.2	
	comp=Z,3.9nm,1.0s							
TAPN	**Taplejung**	**17.24**	**117**	*eP*		**Pn**	**00 16 58.7**	**+1.4**
	comp=Z,14nm,0.4s							
ODAN	**Odare**	**17.30**	**119**	*eP*		**Pn**	**00 16 59.0**	**+1.0**
	comp=Z,28nm,0.6s							
DGZ	**Jazzator, Alta**	**18.11**	**38**	*c iP*		**Pn**	**00 17 07.2**	**+0.1**
DGZ					pmax	pmax		
	comp=Z,6.0nm,0.8s							
ZAA0	**Zalesovo Array**	**20.16**	**25**	P		**P**	**00 17 27.3**	**+0.7**
ZALV	**Zalesovo Beam**	**20.16**	**25**	P		**P**	**00 17 27.5**	**+0.9**
	comp=Z,7.5nm,0.4s,baz=216,slow=11,SNR=28							
ZALV	**Zalesovo Beam**	**20.16**	**25**	*i* P		**P**	**00 17 27.5**	**+0.9**
ZALV					pmax	pmax		
	comp=Z,7.0nm,0.4s							
ZALV	**Zalesovo Beam**	**20.16**	**25**	P		**P**	**00 17 27.3**	**+0.7**
GNI	**Garni**	**20.46**	**288**	*eP*		**P**	**00 17 29.9**	**-0.3**
GNI					pmax	pmax		
	comp=Z,6.0nm,1.4s							
ARU	**Arti**	**21.53**	**342**	P		**P**	**00 17 41.6**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=145,slow=6.6,SNR=13							
ARU	**Arti**	**21.53**	**342**	*ceP*		**P**	**00 17 40.5**	**-0.5**
ARU					pmax	pmax		
	comp=Z,13nm,2.5s							
ARU	**Arti**	**21.53**	**342**	P		**P**	**00 17 41.6**	**+0.6**
ARU					IAmb	IAmb	00 17 43.9	
	comp=Z,5.6nm,0.7s							
BELG	**Belogornoye**	**22.64**	**322**	P		**P**	**00 17 52.4**	**+0.8**
	comp=Z,4.5nm,0.5s,baz=259,slow=17,SNR=3.6							
BELG	**Belogornoye**	**22.64**	**322**	*i* P		**P**	**00 17 50.0**	**-1.6**
BELG					pmax	pmax		
	comp=Z,4.0nm,1.5s							
SONM	**Songino Array**	**28.75**	**55**	P		**P**	**00 18 48.3**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=272,slow=8.7,SNR=5.4							
OBN	**Obninsk**	**29.67**	**320**	⇓*eP*		**P**	**00 18 55.5**	**+1.0**
OBN				*e**PP		**pP**	**00 19 35.0**	**-1.1**
OBN				*e*			00 20 01.5	
OBN					pmax	pmax		
	comp=Z,5.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**32.22**	**69**	*eP*		**P**	**00 19 18.8**	**+1.6**
HHC					pmax	pmax		
	comp=Z,15nm,1.0s							
HHC					pmax	pmax		
	comp=Z,80nm,7.5s							
NRIK	**Noril'sk**	**34.27**	**11**	P		**P**	**00 19 36.0**	**+1.7**
	comp=Z,3.5nm,0.5s,baz=210,slow=5.8,SNR=10.0							
NRIK	**Noril'sk**	**34.27**	**11**	*ceP*		**P**	**00 19 36.3**	**+2.0**
NRIK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
NRIK	**Noril'sk**	**34.27**	**11**	P		**P**	**00 19 36.3**	**+2.0**
NRIK					IAmb	IAmb	00 19 37.2	
	comp=Z,5.5nm,1.1s							
FIA1	**FINESS Array S**	**37.27**	**326**	P		**P**	**00 20 00.1**	**+0.2**
FIA1					IAmb	IAmb	00 20 01.4	
	comp=Z,5.1nm,0.8s							
FINES	**FINESS Array B**	**37.27**	**326**	P		**P**	**00 20 01.1**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=115,slow=9.8,SNR=10							
ARCES	**ARCESS Array B**	**41.02**	**338**	P		**P**	**00 20 32.1**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=107,slow=7.4,SNR=23							
HFS	**Hagfors**	**42.82**	**322**	P		**P**	**00 20 46.4**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=107,slow=9.5,SNR=5.3							
NC405	**NORSAR Array S**	**43.91**	**323**	P		**P**	**00 20 54.9**	**+0.7**
NORES	**NORESS Array B**	**43.95**	**323**	P		**P**	**00 20 55.3**	**+0.7**
NC303	**NORSAR Array S**	**44.09**	**323**	P		**P**	**00 20 56.1**	**+0.5**
NC303					IAmb	IAmb	00 21 06.0	
	comp=Z,5.9nm,0.8s							
NB201	**NORSAR Array S**	**44.10**	**323**	P		**P**	**00 20 56.0**	**+0.1**
NOA	**NORSAR Array B**	**44.14**	**323**	P		**P**	**00 20 56.5**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=98,slow=8.0,SNR=6.3							
NC204	**NORSAR Array S**	**44.38**	**323**	P		**P**	**00 20 58.1**	**+0.1**
TIXI	**Tiksi**	**46.00**	**22**	*ceP*		**P**	**00 21 10.8**	**+0.3**
TIXI					pmax	pmax		
	comp=Z,7.0nm,0.5s							
TIXI	**Tiksi**	**46.00**	**22**	P		**P**	**00 21 11.9**	**+1.4**
TIXI					IAmb	IAmb	00 21 12.6	
	comp=Z,3.4nm,0.8s							
SEY	**Seymchan**	**54.72**	**34**	*i* P		**P**	**00 22 16.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**65.25**	**268**	P		**P**	**00 23 27.1**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=46,slow=5.8,SNR=8.3							
KOWA	**Kowa**	**69.10**	**273**	P		**P**	**00 23 52.5**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=71,slow=10.0,SNR=3.5							
YKA	**Yellowknife Ar**	**81.32**	**2**	P		**P**	**00 25 02.4**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=349,slow=5.3,SNR=6.6							
WRA	**Warramunga Arr**	**82.36**	**122**	P		**P**	**00 25 06.8**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=324,slow=4.7,SNR=4.9							
ASAR	**Alice Springs**	**84.61**	**125**	P		**P**	**00 25 17.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=302,slow=5.2,SNR=2.2							

IDC ***17*** *00:20:14.1±0.9, 26°.28N×92°.31E, h39km±8km, mb3.5/10, mb1 3.6/10, mb1mx3.4/41, mbtmp3.7/10, MS2.8/2, Ms1 2.8/2, ms1mx2.4/29, Error ellipse: s-maj=37.0km s-min=14.7km az=58.0*

NDI ***17*** *00:20:14.5±1.7, 26°.33N×92°.40E, h24km±7km, ML3.8*

ISC 17 00:20:14.7±0.6, **26°.32N**±0°.05×**92°.37E**±0°.04, **h47km**, **n22, σ1§14/30, mb3.8**/10, **Northeastern India**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUWA	**GUWAHATI**	**0.62**	**258**	*eP*		**Pn**		**00 20 27.9**	**+0.6**
GUWA				*eS*		**Sn**		**00 20 37.1**	**+0.7**
GUWA					IAML			00 20 37.8	
	comp=E,10μm,0.4s								
SHL	**Shillong**	**0.87**	**211**	*eP*		**Pn**		**00 20 31.6**	**+0.8**
SHL				*eS*		**Sn**		**00 20 43.2**	**+0.7**
SHL					IAML			00 20 43.9	
	comp=N,28μm,0.3s								
SHL					IAML			00 20 44.1	
	comp=Z,9μm,0.2s								
KOHI	**KOHIMA**	**1.67**	**111**	*eP*		**Pn**		**00 20 42.4**	**+0.8**
KOHI					IAML			00 21 19.8	
	comp=E,869nm,0.4s								
KOHI					IAML			00 21 20.6	
	comp=N,850nm,0.4s								
JORH	**JORHAT**	**1.73**	**76**	*eP*		**Pn**		**00 20 42.5**	**+0.2**
ZIRO	**ZIRO**	**1.78**	**47**	*eP*		**Pn**		**00 20 43.2**	**0.0**
ZIRO				*eS*		**Sn**		**00 21 06.8**	**+2.1**
ZIRO					IAML			00 21 23.7	
	comp=N,4μm,0.5s								
ZIRO					IAML			00 21 23.7	
	comp=E,5μm,0.6s								
MOKO	**MOKOCHONG**	**1.92**	**90**	*eP*		**Pn**		**00 20 45.8**	**+0.7**
MOKO					IAML			00 21 03.5	
	comp=E,652nm,0.5s								
MOKO					IAML			00 21 04.3	
	comp=N,632nm,0.4s								
LKP	**Lekhapani**	**3.26**	**71**	*eP*		**Pn**		**00 21 03.8**	**+0.5**
LKP				*eS*		**Sn**		**00 21 39.5**	**-1.4**
LKP					IAML			00 21 39.8	
	comp=N,337nm,0.3s								
LKP					IAML			00 21 40.1	
	comp=E,360nm,0.3s								
GTK	**Tadong**	**3.51**	**287**	*eP*		**Pn**		**00 21 08.0**	**+1.0**
GTK				*eS*		**Sn**		**00 21 46.8**	**-0.5**
GTK					IAML			00 21 52.5	
	comp=N,112nm,0.3s								
GTK					IAML			00 21 54.1	
	comp=E,96nm,0.4s								
SAIH	**SAIHA**	**3.86**	**172**	*eP*		**Pn**		**00 21 12.6**	**+0.9**
SAIH				*eS*		**Sn**		**00 21 55.4**	**-0.4**
SAIH					IAML			00 21 58.6	
	comp=N,132nm,0.3s								
SAIH					IAML			00 21 59.5	
	comp=E,139nm,0.4s								
BOK	**Bokaro**	**6.40**	**248**	*eP*		**Pn**		**00 21 47.8**	**+1.4**
BOK				*eS*		**Sn**		**00 22 54.5**	**-3.7**
MKAR	**Makanchi Array**	**21.94**	**341**	P		**P**		**00 25 04.1**	**-0.1**
	comp=E,1.8nm,0.7s,baz=151,slow=13,SNR=14								
MKAR					pP	**pP**		**00 25 15.3**	**-0.1**
	comp=E,2.7nm,1.0s,baz=145,slow=12,SNR=6.8								
PALK	**Pallekele**	**21.96**	**212**	LR		LR		00 34 58.7	
	comp=E,34nm,21.4s,baz=215,slow=40								
SONM	**Songino Array**	**24.14**	**24**	P		**P**		**00 25 26.9**	**+0.6**
	comp=E,0.6nm,0.7s,baz=203,slow=11,SNR=5.5								
KURBB	**Kurchatov Arra**	**26.48**	**340**	P		**P**		**00 25 47.9**	**+0.5**
	comp=E,0.7nm,0.7s,baz=160,slow=9.5,SNR=4.7								
TLY	**Talaya**	**26.73**	**16**	LR		LR		00 36 56.0	
	comp=E,18nm,20.5s,baz=159,slow=37								
ZALV	**Zalesovo Beam**	**28.16**	**351**	P		**P**		**00 26 03.1**	**+0.8**
	comp=E,0.5nm,0.4s,baz=188,slow=5.8,SNR=2.2								
AKASG	**Malin Array Be**	**53.26**	**315**	P		**P**		**00 29 27.9**	**-0.6**
	comp=E,0.3nm,0.4s,baz=84,slow=6.0,SNR=4.0								
FINES	**FINESS Array B**	**55.94**	**328**	P		**P**		**00 29 47.4**	**-0.3**
	comp=E,1.1nm,0.8s,baz=117,slow=4.8,SNR=1.4								
WRA	**Warramunga Arr**	**61.43**	**134**	P		**P**		**00 30 26.6**	**+0.2**
	comp=E,1.0nm,0.6s,baz=322,slow=7.4,SNR=17								
WRA					pP	**pP**		**00 30 38.4**	**-1.4**
	comp=E,1.1nm,0.6s,baz=322,slow=7.2,SNR=4.5								
GERES	**GERESS Array B**	**63.41**	**314**	P		**P**		**00 30 39.4**	**-0.1**
	comp=E,0.6nm,0.6s,baz=79,slow=6.9,SNR=6.5								
ASAR	**Alice Springs**	**63.90**	**137**	P		**P**		**00 30 43.5**	**+0.7**
	comp=E,0.4nm,0.7s,baz=319,slow=7.5,SNR=4.8								
ASAR					pP	**pP**		**00 30 54.6**	**-1.6**
	comp=E,0.8nm,0.6s,baz=319,slow=6.5,SNR=4.5								
TORD	**Torodi Ar. Bea**	**84.88**	**282**	P		**P**		**00 32 45.8**	**+0.7**
	comp=E,0.4nm,0.5s,baz=63,slow=4.4,SNR=8.7								

SOME ***17*** *00:52:55.6, 42°.10N×77°.28E, h15km*

NNC ***17*** *00:52:55.7±0.7, 42°.12N×77°.26E, h0km, mb3.4, mpv3.5, Error ellipse: s-maj=4.2km s-min=2.7km az=5.0*

KRNET ***17*** *00:52:56.0±0.1, 42°.11N×77°.28E, h21km, mb3.3*

ISC 17 00:52:55.7±1.0, **42°.09N**±0°.04×**77°.24E**±0°.02, **h15**km±6km, **n65, σ1§02**/116, **25C-16D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.06**	**315**	⇑*iP*		**Pg**		**00 52 59.0**	**+0.1**
	baz=87								
KDJ				⇑*iS*		**Sg**		**00 53 01.3**	**+0.3**
	baz=87								
ULHL	**Ulahol**	**0.76**	**282**	⇑*iP*		**Pg**		**00 53 10.3**	**-0.2**
	baz=80								
ULHL				⇑*iS*		**Sg**		**00 53 20.9**	**+0.3**
	baz=80								
ANVS	**Anan'yevo**	**0.77**	**24**	⇑*iP*		**Pb**		**00 53 10.2**	**-0.7**
	baz=23								
ANVS				⇑*iS*		**Sb**		**00 53 20.7**	**-0.5**
	baz=23								
PRZ	**Przheval'sk**	**0.95**	**65**	⇑*iP*		**Pg**		**00 53 13.6**	**-0.6**
	baz=64								
PRZ				⇑*iS*		**Sn**		**00 53 26.8**	**-1.3**
	baz=64								
TNSS	**Tian-Shan**	**0.97**	**347**	*eP*		**Pb**		**00 53 13.9**	**-0.6**
	baz=45								
TNSS				*eS*		**Sg**		**00 53 27.2**	**-0.3**
	baz=45								
TNSS	**Tian-Shan**	**0.97**	**347**	*eP*		**Pb**		**00 53 13.9**	**-0.6**
	69nm,0.1s								
TNSS				*eS*		**Sg**		**00 53 27.2**	**-0.3**
	33nm,0.3s								
TNSS	**Tian-Shan**	**0.97**	**347**	P		**Pb**		**00 53 13.9**	**-0.6**
	69nm,0.1s								
TNSS				S		**Sg**		**00 53 27.2**	**-0.3**
	33nm,0.3s								
BOOM	**Boomskoye usch**	**1.04**	**293**	⇓*iP*		**Pb**		**00 53 15.3**	**-0.3**
	baz=92								
BOOM				⇓*iS*		**Sb**		**00 53 29.8**	**+0.6**
	baz=92								
IZV	**Izvestkoviy**	**1.05**	**334**	*eP*		**Pb**		**00 53 15.7**	**-0.1**
	baz=32								
IZV				*eS*		**Sn**		**00 53 30.4**	**-0.3**
	baz=32								
IZV	**Izvestkoviy**	**1.05**	**334**	*eP*		**Pb**		**00 53 15.7**	**-0.1**
	38nm,0.1s								
IZV				*eS*		**Sn**		**00 53 30.4**	**-0.3**
	72nm,0.2s								
IZV	**Izvestkoviy**	**1.05**	**334**	P		**Pb**		**00 53 15.7**	**-0.1**
	38nm,0.1s								
IZV				S		**Sn**		**00 53 30.4**	**-0.3**
	72nm,0.2s								
MDOK	**Medeo**	**1.08**	**353**	*eP*		**Pb**		**00 53 15.8**	**-0.5**
	baz=51								
MDOK				*eS*		**Sg**		**00 53 30.3**	**-0.6**
	baz=51								
MDOK	**Medeo**	**1.08**	**353**	*eP*		**Pb**		**00 53 15.8**	**-0.5**
	29nm,0.1s								
MDOK				*eS*		**Sg**		**00 53 30.3**	**-0.6**
	46nm,0.5s								
MDOK	**Medeo**	**1.08**	**353**	⇓P		**Pb**		**00 53 15.5**	**-0.8**
	15nm,0.4s								
MDOK				⇑S		**Sb**		**00 53 30.1**	**-0.3**
	26nm,0.4s								
MDOK	**Medeo**	**1.08**	**353**	Pg		**Pb**		**00 53 15.8**	**-0.5**
	29nm,0.1s								
MDOK				Lg		Lg		00 53 30.3	
	46nm,0.5s								
AAA	**Alma-Ata**	**1.15**	**348**	*eP*		**Pg**		**00 53 17.4**	**-0.5**
	baz=46								
AAA				*eS*		**Sn**		**00 53 32.8**	**0.0**
	baz=46								
AAA	**Alma-Ata**	**1.15**	**348**	*eP*		**Pg**		**00 53 17.4**	**-0.5**
	95nm,0.1s								
AAA				*eS*		**Sn**		**00 53 32.8**	**0.0**
	65nm,0.1s								
AAA	**Alma-Ata**	**1.15**	**348**	P		**Pg**		**00 53 17.4**	**-0.5**
	95nm,0.1s								
AAA				S		**Sn**		**00 53 32.8**	**0.0**
	65nm,0.1s								
KNDC	**Almaty**	**1.15**	**350**	⇑P		**Pb**		**00 53 16.1**	**-1.3**
	52nm,0.5s								
KNDC				⇑S		**Sn**		**00 53 33.4**	**+0.6**
	82nm,0.4s								
KOTS	**Kotyrbulak**	**1.15**	**355**	*eP*		**Pn**		**00 53 17.2**	**-0.3**
	baz=54								
KOTS				*eS*		**Sn**		**00 53 32.5**	**-0.5**
	baz=54								
KOTS	**Kotyrbulak**	**1.15**	**355**	*eP*		**Pn**		**00 53 17.2**	**-0.3**
	147nm,0.2s								
KOTS				*eS*		**Sn**		**00 53 32.5**	**-0.5**
	42nm,0.1s								
KOTS	**Kotyrbulak**	**1.15**	**355**	P		**Pn**		**00 53 17.2**	**-0.3**
	147nm,0.2s								
KOTS				S		**Sn**		**00 53 32.5**	**-0.5**
	42nm,0.1s								
SATY	**Saty**	**1.30**	**41**	*eP*		**Pb**		**00 53 19.1**	**-0.8**
	baz=41								
SATY				*eS*		**Sn**		**00 53 36.0**	**-0.6**
	baz=41								
SATY	**Saty**	**1.30**	**41**	*eP*		**Pb**		**00 53 19.1**	**-0.8**
	23nm,0.1s								
SATY				*eS*		**Sn**		**00 53 36.0**	**-0.6**
	99nm,0.1s								
SATY	**Saty**	**1.30**	**41**	P		**Pb**		**00 53 19.1**	**-0.8**
	23nm,0.1s								
SATY				S		**Sn**		**00 53 36.0**	**-0.6**
	99nm,0.1s								
KST	**Kastek**	**1.34**	**316**	*eP*		**Pb**		**00 53 20.8**	**+0.1**
	baz=14								
KST				*eS*		**Sg**		**00 53 38.8**	**-0.3**
	baz=14								
KST	**Kastek**	**1.34**	**316**	*eP*		**Pb**		**00 53 20.8**	**+0.1**
	5.0nm,0.1s								
KST				*eS*		**Sg**		**00 53 38.8**	**-0.3**
	69nm,0.5s								
KST	**Kastek**	**1.34**	**316**	P		**Pb**		**00 53 20.8**	**+0.1**
	5.0nm,0.1s								
KST				S		**Sg**		**00 53 38.8**	**-0.3**
	69nm,0.5s								
TKM2	**Tokmak 2**	**1.47**	**305**	⇑*iP*		**Pb**		**00 53 22.9**	**0.0**
	baz=4.0								
TKM2				⇑*iP*		**Sg**		**00 53 43.1**	**-0.2**
	baz=4.0								
TKM2	**Tokmak 2**	**1.47**	**305**	⇓P		**Pb**		**00 53 22.9**	**0.0**
	1.5nm,0.3s								
TKM2				⇑S		**Sg**		**00 53 42.9**	**-0.3**
	27nm,0.3s								
DGS	**Degeres**	**1.58**	**317**	*eP*		**Pb**		**00 53 25.2**	**+0.4**
	baz=16								
DGS				*eS*		**Sg**		**00 53 46.1**	**-0.7**
	baz=16								
DGS	**Degeres**	**1.58**	**317**	*eP*		**Pb**		**00 53 25.2**	**+0.4**
	3.8nm,0.1s								
DGS				*eS*		**Sg**		**00 53 46.1**	**-0.7**
	31nm,0.3s								
DGS	**Degeres**	**1.58**	**317**	P		**Pb**		**00 53 25.2**	**+0.4**
	3.8nm,0.1s								
DGS				S		**Sg**		**00 53 46.1**	**-0.7**
	31nm,0.3s								
UZB	**Uzynbulak**	**1.69**	**51**	*eP*		**Pb**		**00 53 25.9**	**-0.7**
	baz=51								
UZB				*eS*		**Sb**		**00 53 47.5**	**-0.2**
	baz=51								
UZB	**Uzynbulak**	**1.69**	**51**	*eP*		**Pb**		**00 53 25.9**	**-0.7**
	17nm,0.4s								
UZB				*eS*		**Sb**		**00 53 47.5**	**-0.2**
	72nm,0.4s								
UZB	**Uzynbulak**	**1.69**	**51**	P		**Pb**		**00 53 25.9**	**-0.7**
	17nm,0.4s								
UZB				S		**Sb**		**00 53 47.5**	**-0.2**
	72nm,0.4s								
KPKS	**Kokpek**	**1.74**	**37**	*eP*		**Pb**		**00 53 27.2**	**-0.3**
	baz=37								
KPKS				*eS*		**Sg**		**00 53 49.6**	**-2.3**
	baz=37								
KPKS	**Kokpek**	**1.74**	**37**	*eP*		**Pb**		**00 53 27.2**	**-0.3**
	40nm,0.1s								
KPKS				*eS*		**Sg**		**00 53 49.6**	**-2.3**
	120nm,0.3s								
KBK	**Karagaybulak**	**1.79**	**289**	⇑*iP*		**Pb**		**00 53 28.8**	**+0.5**
	baz=88								
KBK				⇑*iS*		**Sg**		**00 53 53.2**	**-0.2**
	baz=88								
SHLS	**Shalkode**	**1.96**	**56**	*eP*		**Pg**		**00 53 35.8**	**+2.4**
	7.4nm,0.4s								
SHLS				*eS*		**Sg**		**00 54 04.5**	**+5.7**
	67nm,0.4s								
SHLS	**Shalkode**	**1.96**	**56**	Pg		**Pg**		**00 53 35.8**	**+2.4**
	7.4nm,0.4s								
SHLS				Lg		Lg		00 54 04.5	
	67nm,0.4s								
KRBS	**Karabastau**	**1.98**	**325**	*eP*		**Pb**		**00 53 31.5**	**0.0**
	baz=24								
KRBS				*eS*		**Sb**		**00 53 57.2**	**+1.3**
	baz=24								
KRBS	**Karabastau**	**1.98**	**325**	*eP*		**Pb**		**00 53 31.5**	**0.0**
	6.6nm,0.2s								
KRBS				*eS*		**Sb**		**00 53 57.1**	**+1.3**
	34nm,0.3s								
KRBS	**Karabastau**	**1.98**	**325**	Pg		**Pb**		**00 53 31.5**	**0.0**
	6.6nm,0.2s								
KRBS				Lg		Lg		00 53 57.1	
	34nm,0.3s								
UCH	**Uchtor**	**2.03**	**275**	⇑*eP*		**Pb**		**00 53 32.6**	**0.0**
	baz=74								
UCH				⇑*iS*		**Sb**		**00 53 59.8**	**+2.0**
	baz=74								
CHMS	**Chumysh**	**2.05**	**297**	⇓*iP*		**Pb**		**00 53 32.6**	**-0.1**
	baz=96								
CHMS				⇓*iS*		**Sb**		**00 53 59.8**	**+1.8**
	baz=96								
PDGK	**Podgornoye**	**2.07**	**52**	Pg		**Pb**		**00 53 32.6**	**-0.6**
	2.6nm,0.2s								
PDGK				Lg		Lg		00 53 59.0	
	26nm,0.4s								
PDGK	**Podgornoye**	**2.07**	**52**	⇑Pn		**Pb**		**00 53 31.9**	**-1.2**
	3.0nm,0.5s								
PDGK				⇑Sn		**Sb**		**00 53 59.2**	**+0.4**
	80nm,0.8s								
AAK	**Ala-Archa**	**2.11**	**286**	⇑*iP*		**Pb**		**00 53 33.5**	**-0.2**
	baz=85								
AAK				⇑*iS*		**Sb**		**00 54 01.2**	**+1.5**
	baz=85								
AAK	**Ala-Archa**	**2.11**	**286**	⇑Pg		**Pb**		**00 53 34.3**	**+0.6**

ASAR	**Alice Springs**	**31.26**	**165**	P	P	01 03 07.8	+0.1
	0.4nm,0.3s,baz=342,slow=6.9,SNR=7.5						
MKAR	**Makanchi Array**	**54.47**	**325**	P	P	01 06 15.1	-0.3
	0.5nm,0.4s,baz=117,slow=7.8,SNR=12						
ZALV	**Zalesovo Beam**	**57.43**	**333**	P	P	01 06 36.5	+0.2
	0.4nm,0.2s,baz=113,slow=15,SNR=2.3						

IDC ***17*** *01:03:22.1±2.5, 17.68S×178.80W, h611km±21km, mb2.9/5, mb1 3.3/6, mb1mx2.9/32, mbtmp3.8/6, Error ellipse: s-maj=113.5km s-min=19.9km az=153.0*

ISC 17 01:03:21.5±2.1, 17.6S±0.7×178.8W±0.4, h600km, n7, σ1§04/7, mb3.3/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.06**	**266**	P	**P**	**01 04 42.6**	**+1.4**
	1.0nm,0.3s,baz=104,slow=8.9,SNR=6.0						
WRA	**Warramunga Arr**	**44.38**	**259**	P	**P**	**01 10 39.2**	**-1.3**
	0.6nm,0.4s,baz=96,slow=7.8,SNR=31						
ASAR	**Alice Springs**	**44.57**	**254**	P	**P**	**01 10 41.4**	**-0.6**
	3.1nm,0.5s,baz=86,slow=8.9,SNR=43						
NVAR	**Mina Array Bea**	**79.41**	**44**	P	**P**	**01 14 26.9**	**-0.1**
	0.4nm,0.5s,baz=230,slow=8.1,SNR=3.1						
ILAR	**Eielson Array**	**85.63**	**13**	P	**P**	**01 14 57.0**	**-0.3**
	0.3nm,0.4s,baz=227,slow=4.5,SNR=5.4						
TXAR	**Lajitas Array**	**86.09**	**58**	P	**P**	**01 15 00.3**	**-0.1**
	0.5nm,0.7s,baz=226,slow=5.0,SNR=6.4						
GERES	**GERESS Array B**	**147.21**	**345**	PKPbc	**PKPbc**	**01 21 58.9**	**+0.4**
	0.4nm,0.5s,baz=22,slow=3.2,SNR=3.2						

VIE ***17*** *01:11:12.0±0.3, 50.19N×19.01E, h0km, mb2.1/3, ml2.5/3, Error ellipse: s-maj=4.8km s-min=2.4km az=176.0 7 km SSE of Katowice Suspected Mining induced.*
PRU ***17*** *01:11:12.4±0.0, 50.19N×18.96E, h0km*
IPEC ***17*** *01:11:12.4±0.1, 50.19N×19.04E, h2km±1km, ML2.4/3, Error ellipse: s-maj=2.5km s-min=0.7km az=167.0*
IDC ***17*** *01:11:13.7±2.1, 50.11N×19.03E, h0km, mb1 3.4/4, mb1mx2.9/39, mbtmp3.3/4, ML2.4/4, Error ellipse: s-maj=33.1km s-min=9.5km az=131.0*

ISC 17 01:11:10.7±0.8, 50.26N±0.04×19.10E±0.03, h0km, n29, σ1§03/49, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.45**	**95**	*e*Pg	**Pb**	**01 11 21.9**	**+0.4**
OJC				*e*Sg	**Sb**	**01 11 28.7**	**0.0**
MORC	**Moravsky Berou**	**1.12**	**245**	*e*PG	**Pg**	**01 11 32.2**	**+0.1**
MORC				*e*SG	**Sg**	**01 11 45.0**	**-1.6**
MORC	**Moravsky Berou**	**1.12**	**245**	*e*Pg	**Pg**	**01 11 32.2**	**+0.1**
	baz=66						
MORC				*e*Sg	**Sg**	**01 11 44.9**	**-1.6**
	46nm,0.4s,baz=66						
LANS	**Liptovska Anna**	**1.14**	**168**	*e*PG	**Pb**	**01 11 33.8**	**+0.6**
LANS				*e*SG	**Sb**	**01 11 48.9**	**+0.3**
LANS				*e*LG	Lg	01 11 52.5	
NIE	**Niedzica**	**1.15**	**137**	*e*Pg	**Pn**	**01 11 34.7**	**+0.7**
NIE				*e*Sg	**Sn**	**01 11 51.1**	**+0.6**
KRLC	**Kraliky**	**1.50**	**264**	*e*PG	**Pn**	**01 11 38.8**	**-0.2**
KRLC				*e*SG	**Sg**	**01 11 57.7**	**-1.3**
	comp=Z,29nm,0.5s						
JAVC	**Velka Javorina**	**1.69**	**214**	*e*PN	**Pn**	**01 11 41.8**	**+0.4**
JAVC	**Velka Javorina**	**1.69**	**214**	*e*Pn	**Pn**	**01 11 41.8**	**+0.4**
	baz=33						
VYHS	**Vyhne**	**1.78**	**186**	*e*PN	**Pn**	**01 11 42.8**	**+0.1**
VYHS				*e*SN	**Sn**	**01 12 06.2**	**+0.2**
DPC	**Dobruska-Polom**	**1.79**	**274**	*e*PG	**Pn**	**01 11 43.3**	**+0.5**
DPC				*e*SG	**Sb**	**01 12 07.4**	**+0.2**
	comp=Z,24nm,0.6s						
OSTC	**Ostas**	**1.87**	**280**	*e*PG	**Pn**	**01 11 44.8**	**+0.8**
KSP	**Ksiaz**	**1.88**	**289**	*e*Pg	**Pg**	**01 11 47.3**	**+0.5**
KSP				*e*Sg	**Sg**	**01 12 12.1**	**+0.9**
VRAC	**Vranov**	**1.89**	**241**	Pn	**Pb**	**01 11 45.3**	**-0.7**
	4.0nm,0.3s,baz=58,slow=14,SNR=31						
VRAC				Lg	Lg	01 12 09.3	
	4.2nm,0.3s,baz=142,slow=21,SNR=19						
VRAC	**Vranov**	**1.89**	**241**	*e*PN	**Pn**	**01 11 44.9**	**+0.7**
VRAC				*e*SG	**Sn**	**01 12 09.3**	**+0.7**
VRAC	**Vranov**	**1.89**	**241**	*e*Pn	**Pn**	**01 11 44.8**	**+0.6**
	baz=60						
VRAC				*e*Sg	**Sn**	**01 12 09.3**	**+0.7**
	24nm,0.5s,baz=60						
CHVC	**Chvalec**	**1.98**	**281**	*e*PG	**Pn**	**01 11 46.0**	**+0.6**
CHVC				*e*SG	**Sg**	**01 12 13.8**	**-0.4**
	comp=Z,12nm,0.5s						
KRUC	**Moravsky**	**2.13**	**237**	*e*PN	**Pn**	**01 11 48.0**	**+0.5**
KRUC				*e*SG	**Sb**	**01 12 16.8**	**-0.3**
KRUC	**Moravsky**	**2.13**	**237**	*e*Pn	**Pn**	**01 11 48.0**	**+0.5**
	baz=56						
KRUC				*e*Sg	**Sb**	**01 12 16.7**	**-0.3**
	23nm,1.0s,baz=56						
PRU	**Pruhonice**	**2.95**	**266**	*e*PG	**Pb**	**01 12 04.1**	**0.0**
PRU				*e*SG	**Sb**	**01 12 41.8**	**+1.2**
	comp=Z,8.8nm,0.6s						
CONA	**Conrad Observa**	**3.16**	**224**	*e*Pn	**Pn**	**01 12 00.9**	**-0.8**
	0.2nm,0.3s						
BRG	**Berggiesshubel**	**3.35**	**283**	Pg	**Pg**	**01 12 13.0**	**-1.8**
BRG				Sg	**Sg**	**01 12 58.6**	**+0.5**
BRG				Amp		01 13 09.0	
	comp=Z,5.4nm,0.5s						
CKRC	**Cesky Krumlov**	**3.44**	**247**	*e*PG	**Pb**	**01 12 12.3**	**-0.2**
CKRC				*e*SG	**Sb**	**01 12 57.6**	**+2.8**
	comp=Z,16nm,1.0s						
KHC	**Kasperske Hory**	**3.76**	**255**	*e*PN	**Pn**	**01 12 10.5**	**+0.5**
KHC				*e*PG	**Pb**	**01 12 16.3**	**-1.6**
KHC				*e*SG	**Sb**	**01 13 06.6**	**+2.6**
	comp=Z,11nm,0.7s						
GERES	**GERESS Array B**	**3.79**	**250**	Pn	**Pn**	**01 12 11.0**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=65,slow=14,SNR=6.0						
GERES				Pg	**Pb**	**01 12 20.6**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=65,slow=17,SNR=10						
GERES				Lg	Lg	01 13 11.0	
	comp=Z,1.6nm,0.3s,baz=64,slow=27,SNR=11						
CLL	**Collm**	**4.01**	**287**	*e*Sg	**Sg**	**01 13 19.0**	**-0.4**
	comp=Z,5.0nm,0.6s						
NKC	**Novy Kostel**	**4.27**	**272**	*e*SG	**Sg**	**01 13 26.1**	**-1.7**
	comp=Z,15nm,1.1s						
HFS	**Hagfors**	**10.36**	**345**	Pn	**Pn**	**01 13 40.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=175,slow=19,SNR=1.9						
NOA	**NORSAR Array B**	**11.67**	**341**	Pn	**Pn**	**01 13 57.0**	**-1.4**
	comp=Z,0.0nm,0.3s,baz=149,slow=13,SNR=1.6						
FINES	**FINESS Array B**	**11.86**	**16**	Pn	**Pn**	**01 13 59.6**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=9.3						

IDC 17 01:36:50.5±21.0, 30.02N×87.64E, h0km, mb3.2/3, mb1 3.2/4, mb1mx3.1/45, mbtmp3.2/4, ML3.2/1, Error ellipse: s-maj=320.7km s-min=63.5km az=13.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.26**	**348**	P	Pn	01 40 53.1	+0.2
	0.1nm,0.3s,baz=147,slow=12,SNR=4.4						
KURBB	**Kurchatov Arra**	**21.69**	**344**	P	P	01 41 42.9	+0.1
	0.1nm,0.3s,baz=157,slow=9.8,SNR=3.7						
SONM	**Songino Array**	**22.90**	**34**	P	P	01 41 56.1	+0.2
	0.7nm,0.6s,baz=218,slow=11,SNR=6.1						
ZALV	**Zalesovo Beam**	**24.00**	**356**	P	P	01 42 06.4	-0.3
	0.4nm,0.4s,baz=171,slow=9.9,SNR=2.5						

KRNET ***17*** *01:50:41.8±0.1, 41.29N×78.14E, h13km, mb2.6*
SOME ***17*** *01:50:43.9, 41.37N×78.22E, h5km*
NNC ***17*** *01:50:44.4±1.9, 41.35N×78.18E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=13.2km s-min=8.1km az=169.0*

ISC 17 01:50:43.0±2.5, 41.32N±0.10×78.19E±0.04, h1km±13km, n26, σ1§10/45, 12C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.10**	**317**	⇑*i*P	**Pg**	**01 51 02.9**	**-1.2**
	baz=20						
KDJ				⇑*i*S	**Sg**	**01 51 18.1**	**-0.4**
	baz=20						
PRZ	**Przheval'sk**	**1.17**	**8**	⇑*i*P	**Pb**	**01 51 04.9**	**-1.3**
	baz=9.0						
PRZ				⇑*i*S	**Sn**	**01 51 22.4**	**-1.1**
	baz=9.0						
ANVS	**Anan'yevo**	**1.51**	**345**	⇑*i*P	**Pb**	**01 51 11.1**	**-0.8**
	baz=47						
ANVS				⇑*i*S	**Sg**	**01 51 32.0**	**+0.5**
	baz=47						
ULHL	**Ulahol**	**1.72**	**303**	⇓*e*P	**Pn**	**01 51 14.1**	**-0.2**
	baz=4.0						
ULHL				⇓*i*S	**Sb**	**01 51 37.5**	**-0.3**
	baz=4.0						
SATY	**Saty**	**1.74**	**5**	*e*P	**Pg**	**01 51 16.6**	**+0.2**
	0.9nm,0.1s						
SATY				*e*S	**Sg**	**01 51 40.1**	**+1.0**
	5.8nm,0.1s						
SATY	**Saty**	**1.74**	**5**	P	**Pg**	**01 51 16.6**	**+0.2**
	0.9nm,0.1s						
SATY				S	**Sg**	**01 51 40.1**	**+1.0**
	5.8nm,0.1s						
UZB	**Uzunbulak**	**1.93**	**19**	*e*P	**Pb**	**01 51 18.9**	**-0.2**
	3.6nm,0.2s						
UZB				*e*S	**Sg**	**01 51 44.0**	**-0.9**
	9.9nm,0.6s						
UZB	**Uzunbulak**	**1.93**	**19**	P	**Pb**	**01 51 18.7**	**-0.3**
	3.6nm,0.2s						
UZB				S	**Sg**	**01 51 44.0**	**-0.9**
	9.9nm,0.6s						
TNSS	**Tian-Shan**	**1.95**	**332**	*e*P	**Pb**	**01 51 19.5**	**0.0**
	3.3nm,0.6s						
TNSS				*e*S	**Sg**	**01 51 45.1**	**-0.4**
	2.0nm,0.3s						
TNSS	**Tian-Shan**	**1.95**	**332**	Pg	**Pb**	**01 51 19.5**	**0.0**
	3.3nm,0.6s						
TNSS				Lg	Lg	01 51 45.1	
	2.0nm,0.3s						
MDOK	**Medeo**	**2.02**	**336**	*e*P	**Pg**	**01 51 21.8**	**+0.1**
	2.1nm,0.2s						
MDOK				*e*S	**Sg**	**01 51 49.2**	**+1.1**
	8.0nm,0.6s						
MDOK	**Medeo**	**2.02**	**336**	⇑Pg	**Pb**	**01 51 19.6**	**-1.0**
	1.2nm,0.4s						
MDOK				Lg	Lg	01 51 48.1	
	4.5nm,0.5s						
MDOK	**Medeo**	**2.02**	**336**	Pg	**Pg**	**01 51 21.8**	**+0.1**
	2.1nm,0.2s						
MDOK				Lg	Lg	01 51 49.2	
	8.0nm,0.6s						
BOOM	**Boomskoye usch**	**2.04**	**306**	⇑*i*P	**Pn**	**01 51 19.1**	**+0.4**
	baz=7.0						
BOOM				⇑*i*S	**Sb**	**01 51 46.0**	**-1.0**
	baz=7.0						
SHLS	**Shalkode**	**2.06**	**27**	*e*P	**Pg**	**01 51 23.1**	**+0.5**
	5.5nm,0.5s						
SHLS				*e*S	**Sg**	**01 51 51.5**	**+2.2**
	11nm,0.5s						
KOTS	**Kotyrbulak**	**2.07**	**338**	*e*P	**Pg**	**01 51 22.1**	**-0.6**
	4.8nm,0.5s						
KOTS				*e*S	**Sg**	**01 51 49.7**	**+0.2**
	7.6nm,0.7s						
IZV	**Izvestkoviy**	**2.07**	**326**	*e*P	**Pg**	**01 51 23.7**	**+1.0**
	1.9nm,0.5s						
IZV				*e*S	**Sg**	**01 51 52.4**	**+2.7**
	13nm,0.3s						
KPKS	**Kokpek**	**2.17**	**10**	*e*P	**Pb**	**01 51 23.4**	**+0.1**
	6.1nm,0.3s						
KPKS				*e*S	**Sg**	**01 51 51.8**	**-1.1**
	13nm,0.4s						
PDGK	**Podgornoye**	**2.23**	**25**	Pg	**Pb**	**01 51 23.9**	**-0.2**
	1.5nm,0.3s						
PDGK				Lg	Lg	01 51 52.8	
	3.7nm,0.5s						
PDGK	**Podgornoye**	**2.23**	**25**	⇓Pg	**Pb**	**01 51 23.3**	**-0.8**
	1.2nm,0.3s						
PDGK				⇑Lg	Lg	01 51 52.1	
	6.0nm,0.6s						
KST	**Kastek**	**2.38**	**317**	*e*P	**Pg**	**01 51 28.3**	**-0.4**
	3.5nm,0.3s						
KST				*e*S	**Sg**	**01 52 00.2**	**+0.6**
	3.2nm,0.7s						
TKM2	**Tokmak 2**	**2.50**	**311**	⇑Pg	**Pg**	**01 51 30.8**	**-0.2**
	0.5nm,0.4s						
TKM2				⇑Lg	Lg	01 52 01.5	
	0.7nm,0.3s						
DGS	**Degeres**	**2.62**	**318**	*e*P	**Pb**	**01 51 31.2**	**+0.3**
	1.5nm,0.5s						
DGS				*e*S	**Sb**	**01 52 05.1**	**+1.4**
	3.0nm,0.5s						
DGS	**Degeres**	**2.62**	**318**	Pg	**Pb**	**01 51 30.5**	**-0.4**
	1.5nm,0.5s						
DGS				Lg	Lg	01 52 05.1	
	3.0nm,0.5s						
UCH	**Uchtor**	**2.89**	**289**	⇓*i*P	**Pn**	**01 51 31.2**	**+0.6**
	baz=90						
UCH				⇓*i*S	**Sb**	**01 52 08.1**	**-3.6**
	baz=90						
AML	**Almayashu**	**3.46**	**285**	⇓*i*P	**Pn**	**01 51 39.0**	**+0.7**
	baz=86						
AML				⇓*i*S	**Sn**	**01 52 22.3**	**+2.2**
	baz=86						

HLW ***17*** *01:50:42.6, 35.12N×26.95E, h12km±11km, Md4.4, MI4.3*
NEIC ***17*** *01:50:43.5±2.3, 34.99N±0.05×26.83E±0.06, h13km±5km, mb4.1/27, ML4.2(THE), Error ellipse: s-maj=8.4km s-min=6.2km az=208.0*
NIC ***17*** *01:50:43.1±0.0, 35.00N×26.85E, h14km±2km, MI4.5/4*
DDA ***17*** *01:50:44.5, 35.25N×26.87E, h10km±3km, MW4.1*
ISK ***17*** *01:50:44.2, 35.13N×26.79E, h18km, ML4.1/21*
IDC ***17*** *01:50:45.9±1.9, 35.17N×26.71E, h34km±15km, mb3.9/25, mb1 3.9/31, mb1mx3.9/51, mbtmp4.1/31, ML3.8/8, MS3.0/4, Ms1 3.0/4, ms1mx2.6/48, Error ellipse: s-maj=14.3km s-min=9.9km az=161.0*
ATH ***17*** *01:50:45.1, 35.17N×26.74E, h34km±6km, ML4.2/10, Error ellipse: s-maj=7.7km s-min=1.9km az=149.0*
THE ***17*** *01:50:45.2, 35.17N×26.72E, h1km±1km, ML4.2/10, Error ellipse: s-maj=3.9km s-min=0.9km az=152.0*

ISC 17 01:50:44.0±0.8, 35.04N±0.03×26.80E±0.02, h20km±4km, n264, σ1§53/307, mb4.2/30, 18C-20D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.48**	**279**	P	**Pb**	**01 50 53.7**	**-0.2**
ZKR				S	**Sb**	**01 51 01.7**	**+1.0**
ZKR				AML	AML	01 51 05.5	
	comp=E,56715μm,0.3s						
ZKR				AML	AML	01 51 06.1	
	comp=N,38473μm,0.4s						
ZKR	**Zakros**	**0.48**	**279**	P	**Pb**	**01 50 53.6**	**-0.2**
ZKR				S	**Sb**	**01 51 01.2**	**+0.6**
	comp=N,24μm,0.3s						
ZKR	**Zakros**	**0.48**	**279**	PG	**Pg**	**01 50 53.4**	**-0.5**
ZKR				SG	**Sb**	**01 51 01.6**	**+1.0**
ZKR	**Zakros**	**0.48**	**279**		**Pb**	**01 50 53.6**	**-0.2**
ZKR					**Sb**	**01 51 01.2**	**+0.6**
ZKR	**Zakros**	**0.48**	**279**	P	**Pb**	**01 50 53.6**	**-0.3**
ZKR				S	**Sb**	**01 51 02.0**	**+1.4**
ZKR				AML	AML	01 51 02.9	
	comp=N,34nm,0.3s						
ZKR				AML	AML	01 51 02.9	
	comp=N,34nm,0.3s						
ZKR				AML	AML	01 51 04.2	
	comp=N,48nm,0.3s						
ZKR				AML	AML	01 51 04.2	
	comp=N,48nm,0.3s						
KARP	**Karpathos**	**0.58**	**30**	P	**Pg**	**01 50 54.9**	**-0.8**
KARP				S	**Sg**	**01 51 04.1**	**+0.5**
KARP				AML	AML	01 51 05.3	
KARP				AML	AML	01 51 05.7	
KARP	**Karpathos**	**0.58**	**30**	P	**Pg**	**01 50 54.6**	**-1.1**
KARP				S	**Sg**	**01 51 03.8**	**+0.2**
	comp=N,65μm,0.5s						
KARP	**Karpathos**	**0.58**	**30**	PG	**Pg**	**01 50 54.9**	**-0.8**
KARP				SG	**Sg**	**01 51 03.1**	**-0.5**
KARP	**Karpathos**	**0.58**	**30**	Pg	**Pg**	**01 50 54.9**	**-0.8**
KARP				Sg	**Sg**	**01 51 03.6**	**-0.1**
KARP	**Karpathos**	**0.58**	**30**	⇑P	**Pg**	**01 50 54.9**	**-0.8**
KARP				S	**Sg**	**01 51 04.1**	**+0.5**
KARP				AML	AML	01 51 04.7	
	comp=N,123nm,0.6s						
KARP				AML	AML	01 51 04.7	
	comp=N,123nm,0.6s						
KARP				AML	AML	01 51 05.3	
	comp=N,124nm,0.4s						
KARP				AML	AML	01 51 05.3	
	comp=N,124nm,0.4s						
STIA	**Sitia Lasithi**	**0.60**	**286**	P	**Pg**	**01 50 54.6**	**-1.5**
STIA	**Sitia Lasithi**	**0.60**	**286**		**Pg**	**01 50 54.6**	**-1.5**
FRMA	**Ierapetra Chan**	**0.88**	**269**	P	**Pb**	**01 50 58.7**	**-1.8**
FRMA				S	**Sb**	**01 51 10.1**	**-1.7**
	comp=N,7μm,0.7s						
NPS	**Neapolis**	**1.00**	**283**	P	**Pg**	**01 51 03.4**	**0.0**
NPS				AML	AML	01 51 20.5	
	comp=E,38195μm,0.5s						
NPS				AML	AML	01 51 20.7	
	comp=N,26505μm,0.8s						
NPS	**Neapolis**	**1.00**	**283**	P	**Pg**	**01 51 03.0**	**-0.5**
NPS				S	**Sg**	**01 51 16.2**	**-0.4**
	comp=N,27μm,0.6s						
KSTL	**Kastelli Herak**	**1.44**	**281**	P	**Pn**	**01 51 07.2**	**-1.8**
IDI	**Anoyia**	**1.59**	**279**	Pg	**Pb**	**01 51 12.8**	**+0.2**
	comp=N,113nm,0.3s,baz=104,slow=15,SNR=235						
IDI				Lg	Lg	01 51 35.4	
	comp=N,212nm,0.3s,baz=26,slow=12,SNR=11						
IDI	**Anoyia**	**1.59**	**279**	P	**Pg**	**01 51 13.3**	**-1.3**
IDI				AML	AML	01 51 42.2	
	comp=E,5205μm,0.4s						
IDI				AML	AML	01 51 44.7	
	comp=N,6636μm,0.5s						
IDI	**Anoyia**	**1.59**	**279**	⇑P	**Pg**	**01 51 13.3**	**-1.3**
IDI	**Anoyia**	**1.59**	**279**	PN	**Pb**	**01 51 12.1**	**-0.6**
IDI	**Anoyia**	**1.59**	**279**		**Pb**	**01 51 13.2**	**+0.5**
NIS1	**Nisyros Isl.**	**1.59**	**11**	P	**Pn**	**01 51 12.1**	**+1.1**
NIS1				AML	AML	01 51 45.0	
	comp=E,17148μm,0.5s						
NIS1				AML	AML	01 51 50.0	
	comp=N,14301μm,0.6s						
NIS1	**Nisyros Isl.**	**1.59**	**11**	P	**Pn**	**01 51 11.7**	**+0.7**
NIS1				S	**Sn**	**01 51 31.8**	**+0.8**
	comp=N,8μm,0.6s						
NIS1	**Nisyros Isl.**	**1.59**	**11**	PN	**Pn**	**01 51 11.2**	**+0.2**
ARG	**Arkhangelos**	**1.59**	**42**	P	**Pb**	**01 51 13.0**	**+0.2**
ARG	**Arkhangelos**	**1.59**	**42**	P	**Pb**	**01 51 12.8**	**0.0**
ARG				S	**Sb**	**01 51 34.2**	**+1.7**
	comp=N,4μm,0.9s						
ARG	**Arkhangelos**	**1.59**	**42**	PN	**Pn**	**01 51 11.6**	**+0.5**
ARG				SN	**Sn**	**01 51 31.5**	**+0.4**
ARG	**Arkhangelos**	**1.59**	**42**	⇑P	**Pn**	**01 51 11.9**	**+0.8**
SIVA	**Sivas**	**1.64**	**270**	P	**Pg**	**01 51 14.2**	**-1.3**
SIVA				AML	AML	01 51 48.7	
	comp=N,14612μm,0.7s						
SIVA				AML	AML	01 51 53.9	
	comp=E,17598μm,0.7s						
SIVA	**Sivas**	**1.64**	**270**	P	**Pg**	**01 51 14.5**	**-1.0**
SIVA				S	**Sb**	**01 51 33.5**	**-0.2**
	comp=E,10μm,0.6s						
KOSK	**Kos Island**	**1.71**	**5**	P	**Pn**	**01 51 13.4**	**+0.7**
KOSK	**Kos Island**	**1.71**	**5**	PN	**Pn**	**01 51 12.9**	**+0.2**
SANT	**Santorini**	**1.72**	**321**	P	**Pn**	**01 51 13.3**	**+0.4**
SANT				S	**Sn**	**01 51 34.2**	**-0.1**
	comp=E,4μm,0.7s						
SANT	**Santorini**	**1.72**	**321**	⇑P	**Pn**	**01 51 13.7**	**+0.8**
SANT	**Santorini**	**1.72**	**321**	PN	**Pn**	**01 51 13.1**	**+0.2**
SANT				SN	**Sn**	**01 51 33.9**	**-0.4**
SANT	**Santorini**	**1.72**	**321**		**Pn**	**01 51 13.4**	**+0.6**
THR9	**Santorini-Faro**	**1.76**	**319**	P	**Pn**	**01 51 14.6**	**+1.2**
SNT1	**Gialos, Santor**	**1.77**	**321**	P	**Pn**	**01 51 14.3**	**+0.8**
SNT1	**Gialos, Santor**	**1.77**	**321**	P	**Pn**	**01 51 13.8**	**+0.3**
SNT1				S	**Sn**	**01 51 35.8**	**+0.4**
	comp=E,6μm,0.9s						
SNT5	**Nea Kammeni, S**	**1.78**	**320**	P	**Pn**	**01 51 14.7**	**+1.1**
SNT5	**Nea Kammeni, S**	**1.78**	**320**	P	**Pn**	**01 51 14.5**	**+0.9**
THT2	**Imerovigli**	**1.79**	**321**	PN	**Pn**	**01 51 14.1**	**+0.3**
SAP3	**Santorini-Thir**	**1.83**	**320**	P	**Pn**	**01 51 15.1**	**+0.9**
SAP3	**Santorini-Thir**	**1.83**	**320**	P	**Pn**	**01 51 15.2**	**+0.9**
BODT	**Bodrum**	**2.06**	**11**	P	**Pn**	**01 51 16.7**	**-0.8**
BODT	**Bodrum**	**2.06**	**11**	PN	**Pn**	**01 51 17.8**	**+0.3**
BODT				SN	**Sn**	**01 51 42.2**	**-0.4**
BDRM	**Kayabasi**	**2.09**	**14**	*i*P	**Pn**	**01 51 18.9**	**+1.0**
BDRM				*i*S	**Sn**	**01 51 45.3**	**+2.0**
TURN	**Turunc**	**2.09**	**34**	PN	**Pn**	**01 51 18.6**	**+0.7**
YKAV	**Yalikavak-Bodr**	**2.12**	**10**	PN	**Pn**	**01 51 18.7**	**+0.5**
VAM	**Vamos**	**2.16**	**280**	P	**Pb**	**01 51 20.8**	**-1.6**
VAM				AML	AML	01 51 56.8	
	comp=E,7026μm,0.6s						
VAM				AML	AML	01 52 19.0	
	comp=N,7447μm,0.9s						
GVDS	**Gavdos**	**2.24**	**266**	PN	**Pb**	**01 51 21.9**	**-1.8**
GVD	**Gavdhos**	**2.24**	**266**	P	**Pb**	**01 51 22.6**	**-1.2**
GVD	**Gavdhos**	**2.24**	**266**	PN	**Pn**	**01 51 21.6**	**+1.6**
APE	**Apeiranthos**	**2.27**	**333**	P	**Pn**	**01 51 21.1**	**+0.7**
APE				AML	AML	01 51 52.1	
	comp=E,2856μm,0.5s						
APE				AML	AML	01 51 56.5	
	comp=N,7591μm,0.5s						
APE	**Apeiranthos**	**2.27**	**333**	P	**Pn**	**01 51 21.1**	**+0.7**
APE				S	**Sn**	**01 51 47.7**	**-0.2**
	comp=N,3μm,0.5s						
APE	**Apeiranthos**	**2.27**	**333**	⇑P	**Pn**	**01 51 21.2**	**+0.7**
APE	**Apeiranthos**	**2.27**	**333**	PN	**Pn**	**01 51 20.9**	**+0.4**
APE	**Apeiranthos**	**2.27**	**333**	⇑P	**Pn**	**01 51 21.0**	**+0.6**
DALY	**Dalyan (Mula)**	**2.32**	**40**	*i*P	**Pn**	**01 51 23.1**	**+2.0**
DALY				*i*S	**Sb**	**01 51 52.6**	**-0.9**
DALY	**Dalyan (Mula)**	**2.32**	**40**	PN	**Pn**	**01 51 22.3**	**+1.2**
IMMV	**Iera Moni Meta**	**2.35**	**281**	P	**Pb**	**01 51 23.8**	**-1.8**
IMMV				AML	AML	01 52 08.7	
	comp=E,5382μm,0.8s						
IMMV				AML	AML	01 52 09.0	
	comp=N,5121μm,0.5s						
IMMV	**Iera Moni Meta**	**2.35**	**281**	P	**Pb**	**01 51 23.8**	**-1.8**
IMMV	**Iera Moni Meta**	**2.35**	**281**	PN	**Pn**	**01 51 22.8**	**+1.4**
YER	**Yerkesik**	**2.41**	**29**	PN	**Pn**	**01 51 23.3**	**+0.9**
DDIM	**Aydin, Didim**	**2.44**	**8**	*i*P	**Pn**	**01 51 23.6**	**+1.0**
DDIM				*i*S	**Sn**	**01 51 53.2**	**+1.3**
FETY	**Fethiye**	**2.44**	**49**	*i*P	**Pn**	**01 51 23.8**	**+1.0**
FETY				*i*S	**Sn**	**01 51 49.7**	**-2.4**
FETY	**

STEP BALIKESIR_Sava 4.39 9 *i* P Pn 01 51 51.8 +2.2
BUHA Balikesir, Bur 4.46 3 *i* P Pn 01 51 52.7 +2.2
ITM Ithomi 4.49 300 P Pn 01 51 52.5 +1.6
ITM Ithomi 4.49 300 PN Pn 01 51 52.8 +1.9
ITM Ithomi 4.49 300 Pn Pn 01 51 53.5 +2.6
AKMS Akamas 4.54 89 P Pn 01 51 51.2 -0.4
AKMS S Sn 01 52 44.8 +0.9
AKMS AML AML 01 52 44.8
comp=N,1.0nm,0.6s
AKMS AML AML 01 52 44.8
comp=N,1.0nm,0.6s
AKMS AML AML 01 52 45.4
comp=N,1.3nm,0.4s
AKMS AML AML 01 52 45.4
comp=N,1.3nm,0.4s
GAZI Gazipasa 4.65 74 *i* P Pn 01 51 53.4 +0.3
SEDI Konya, Seydise 4.67 58 *i* P Pn 01 51 57.2 +3.7
BAYC CANAKKALE_Bayr 4.70 358 *i* P Pn 01 51 55.5 +1.7
DURS Dursunbey 4.74 16 *i* P Pn 01 51 57.0 +2.5
NATA Nata 4.75 92 P Pn 01 51 54.8 +0.3
NATA S Sn 01 52 50.0 +1.0
ALFC Alefka 4.75 87 ⇑P Pn 01 51 54.9 +0.3
ALFC AML AML 01 52 48.5
comp=N,1.4nm,0.7s
ALFC AML AML 01 52 48.6
comp=N,1.5nm,0.7s
OSC2 CSNet OBS 4 4.94 112 P Pn 01 51 58.0 +0.9
OSC2 S Sn 01 52 53.8 +0.1
DOGA KONYA_Doganhis 4.97 51 *i* P Pn 01 52 02.4 +4.8
LEF Lefka 4.99 87 ⇓P Pn 01 51 57.4 -0.4
SZAC Souni 5.00 92 ⇓P Pn 01 51 58.1 +0.1
ASGA Asgata 5.30 91 P Pn 01 52 02.1 0.0
AGG Agios Georgios 5.35 319 Pn Pn 01 52 04.2 +1.5
CSS Mathiatis 5.36 89 Pn Pn 01 52 02.4 -0.5
CSS Mathiatis 5.36 89 P Pn 01 52 02.6 -0.3
ALN Alexandroupoli 5.88 354 Pn Pn 01 52 11.8 +1.9
SWA2 5.89 192 P Pn 01 52 11.2 +1.0
baz=193
SWA2 AMP 01 53 00.0
baz=193
SWA2 S Sn 01 53 15.7 -1.5
baz=193
LIT Litokhoron 6.10 327 Pn 01 52 15.0 +1.9
HMYD Mayadein 6.23 146 P Pn 01 52 14.4 -0.4
baz=147
MDUB Mudurnu 6.44 31 Pn Pn 01 52 19.8 +2.0
KOT Kottamia 6.63 139 P Pn 01 52 19.4 -1.1
baz=140
HSAF As Saff 6.74 142 P Pn 01 52 21.3 -0.5
baz=143
BR231 Keskin MP Arra 6.75 43 Pn Pn 01 52 24.7 +2.7
HHAG Hagoal 6.76 137 P Pn 01 52 22.0 -0.2
baz=138
ANTO Ankara 6.78 43 Pn Pn 01 52 24.6 +2.2
GLL Jalalah 6.85 141 P Pn 01 52 22.6 -0.8
baz=142
VAY Valandovo 7.10 333 *i* Pn Pn 01 52 32.3 +5.6
FNA Florina 7.16 325 Pn Pn 01 52 30.4 +2.8
BRTR Keskin Array B 7.17 47 Pn Pn 01 52 30.1 +2.2
comp=N,0.3nm,0.3s,baz=223,slow=13,SNR=7.6
BRTR Sn Sn 01 53 50.4 +1.5
comp=N,0.5nm,0.3s,baz=216,slow=26,SNR=5.5
BRTR Keskin Array B 7.17 47 Pn Pn 01 52 28.9 +1.0
SUZ Suez 7.27 134 P Pn 01 52 28.9 -0.3
baz=135
MMAI Mount Meron Ar 7.42 103 Pn Pn 01 52 31.2 -0.1
comp=N,3.7nm,0.3s,baz=293,slow=11,SNR=27
MMAI Sn Sn 01 53 52.8 -2.1
comp=N,9.5nm,0.3s,baz=311,slow=22,SNR=9.9
ZAF Zafarana 7.53 138 S Sn 01 53 52.7 -4.7
baz=139
STIP Stip 7.57 333 *i* Pn Pn 01 52 36.3 +3.1
OHR Ohrid 7.69 324 *i* Pn Pn 01 52 36.5 +1.7
VTS Vitosha 8.06 341 ⇓P Pn 01 52 42.5 +2.5
VTS Vitosha 8.06 341 Pn Pn 01 52 41.5 +1.4
TIR Tirane 8.33 321 ⇓P Pn 01 52 46.1 +2.4
TIR Tirane 8.33 321 Pn Pn 01 52 45.3 +1.6
GAZ Gaziantep 8.69 73 Pn Pn 01 52 49.6 +1.0
EIL Elat 8.73 126 Pn Pn 01 52 49.1 0.0
comp=N,2.2nm,0.3s,baz=304,slow=3.8,SNR=31
EIL Sn Sn 01 54 19.8 -7.2
comp=N,5.8nm,0.3s,baz=346,slow=3.7,SNR=11
TIP Timpagrande 9.02 300 ⇓P Pn 01 52 54.1 +0.9
TIP Timpagrande 9.02 300 Pn Pn 01 52 53.3 +0.1
PDG Podgorica 9.44 324 ⇑P Pn 01 52 59.8 +1.0
PDG Podgorica 9.44 324 Pn Pn 01 53 00.6 +1.8
TIRR Tirgusor 9.49 7 Pn Pn 01 53 01.6 +2.2
CFR Carcaliu 10.18 5 ⇑P Pn 01 53 10.5 +1.6
RAFF Raffo Rosso 10.29 286 Pn Pn 01 53 11.3 +0.8
VAE Valguarnera 10.30 287 Pn Pn 01 53 13.3 +2.7
comp=N,1.5nm,0.3s,baz=121,slow=12,SNR=2.6
VAE Sn Sn 01 55 07.6 +2.1
comp=N,2.3nm,0.3s,baz=338,slow=9.7,SNR=4.3
NEHR Nehoiu 10.38 358 ⇓P Pn 01 53 14.2 +2.5
HERR Herculane 10.39 342 ⇑P Pn 01 53 13.2 +1.4
MLR Muntele Rosu 10.46 357 Pn Pn 01 53 14.7 +1.8
comp=N,0.2nm,0.3s,baz=169,slow=10,SNR=1.5
MLR LR LR 01 57 58.3
comp=N,223nm,21.2s,baz=174,slow=42
MLR Muntele Rosu 10.46 357 ⇓P Pn 01 53 14.7 +1.8
MLR Muntele Rosu 10.46 357 Pn Pn 01 53 16.5 +3.6
VOIR 10.47 353 ⇑P Pn 01 53 14.7 +1.6
MDVR Moldovita 10.48 340 ⇑P Pn 01 53 14.4 +1.3
BISRR Bisoca 10.50 360 ⇑P Pn 01 53 15.3 +1.9
GZR Gura Zlata 10.79 345 ⇑P Pn 01 53 18.3 +0.9
PLOR Plostina 10.80 359 ⇑P Pn 01 53 19.3 +1.9
VRI Vrincioaia 10.81 360 ⇑P Pn 01 53 19.2 +1.5
BZS Buzias 11.28 341 ⇓P Pn 01 53 25.4 +1.4
PAOL Paolisi 11.35 305 Pn Pn 01 53 26.3 +1.3
BIZ Bicaz 11.90 358 ⇓P Pn 01 53 34.1 +1.7
INTR Introdacqua 12.26 308 Pn 01 53 38.6 +1.1
NRCA Norcia 13.18 310 Pn 01 53 51.5 +1.4
TRPA Tarpa 13.46 348 ⇑P Pn 01 53 56.3 +2.6
KEST Kesra 14.26 278 Pn Pn 01 54 05.9 +1.0
comp=N,0.1nm,0.3s,baz=304,slow=23,SNR=2.4
KEST LR LR 02 01 18.4
comp=N,24nm,18.3s,baz=300,slow=45
SOKA Soboth 14.62 326 *e*Pn P 01 54 13.2 -2.8
comp=N,1.7nm,0.5s
KIV Kislovodsk 15.13 49 Pn Pn 01 54 17.5 +0.9
KIV IAmb IAmb 01 54 41.9
comp=Z,9.9nm,1.1s
KVAR Kislovodsk Arr 15.14 49 LR LR 02 01 49.2
comp=Z,72nm,18.9s,baz=91,slow=44
KBZ Khabaz 15.15 50 Pn P 01 54 20.3 -1.4
comp=Z,0.1nm,0.3s,baz=248,slow=9.1,SNR=5.1
ZOU Zoufplan 15.53 322 Pn Pn 01 54 22.6 +0.7
ZOU IAmb IAmb 01 55 18.3
comp=Z,12nm,1.4s
KBA Koelnbreinsper 15.71 324 *e*Pn Pn 01 54 25.9 +1.6
comp=Z,2.5nm,0.6s
AKASG Malin Array Be 15.75 6 Pn Pn 01 54 25.2 +0.6
comp=Z,1.6nm,0.3s,baz=194,slow=11,SNR=7.3
AKASG Malin Array Be 15.75 6 IAmb IAmb 01 54 34.0
comp=Z,1.7nm,0.8s
AKBB Malin Array Si 15.75 6 Pn Pn 01 54 24.8 +0.3
AKBB IAmb IAmb 01 54 39.7
comp=Z,16nm,1.4s
MOA Molln 15.85 328 *e*Pn P 01 54 28.9 -0.7
comp=Z,6.0nm,1.4s
CTI Castel Tesino 15.89 318 Pn Pn 01 54 28.0 +1.4
VRAC Vranov 16.12 335 Pn Pn 01 54 29.6 +0.3
comp=Z,0.2nm,0.3s,baz=154,slow=12,SNR=5.5
TREC Trest 16.50 333 *e*P P 01 54 36.0 -0.8
CKRC Cesky Krumlov 16.58 330 *e*P P 01 54 37.1 -0.5
WTTA Wattenberg 16.68 322 *e*Pn P 01 54 39.1 +0.1
comp=Z,2.4nm,0.5s,SNR=4.8
WATA Walderalm 16.76 322 *e*Pn P 01 54 39.8 0.0
comp=Z,2.8nm,0.5s,SNR=4.5
GEC2 GERESS Array S 16.85 329 Pn Pn 01 54 38.7 0.0
GERES GERESS Array B 16.85 329 Pn Pn 01 54 37.5 -1.3
comp=Z,0.3nm,0.3s,baz=138,slow=10,SNR=16
GERES LR LR 02 02 00.9
comp=Z,54nm,18.8s,baz=156,slow=40
GERES GERESS Array B 16.85 329 Pn 01 54 37.8 -1.0
SQTA Sankt Quirin 16.87 321 *e*Pn P 01 54 41.1 +0.1
comp=Z,4.8nm,0.6s
FETA Feichten 17.00 320 *e*Pn Pn 01 54 41.7 +1.1
comp=Z,2.0nm,0.7s
DPC Dobruska-Polom 17.10 337 *e*P Pn 01 54 41.3 -0.5
KHC Kasperske Hory 17.12 329 *e*P Pn 01 54 42.6 +0.5
KHC epP pP 01 54 48.9 +0.2
KHC Kasperske Hory 17.12 329 Pn Pn 01 54 42.8 +0.7
KHC IAmb IAmb 01 54 44.4
comp=Z,20nm,1.7s
RETA Reutte 17.28 321 *e*Pn Pn 01 54 44.7 +0.6
comp=Z,1.9nm,0.4s,SNR=5.6
DAVOX Davos/Dischmat 17.31 318 P Pn 01 54 44.4 -0.2
comp=Z,0.5nm,0.3s,baz=124,slow=5.7,SNR=5.2
CHVC Chvalec 17.39 337 *e*P P 01 54 46.6 0.0
PRU Pruhonice 17.42 333 *e*P Pn 01 54 44.9 -0.8
TUE Stuetta 17.43 316 Pn Pn 01 54 45.1 -1.0
TUE IAmb IAmb 01 54 58.7
comp=Z,19nm,1.5s
DAVA Damuels 17.62 319 *e*Pn Pn 01 54 48.5 +0.1
comp=Z,3.5nm,0.6s,SNR=6.9
BRG Berggiesshubel 18.37 333 *e*P P 01 54 57.2 -0.1
BRG Amp 01 55 04.1
comp=Z,5.1nm,0.8s
SENIN Lac Senin/Sane 18.56 313 P P 01 54 59.3 -0.5
SENIN IAmb IAmb 01 55 06.5
comp=Z,9.3nm,0.5s
GRFO Grafenberg 18.57 327 P Pn 01 55 00.0 +0.2
GRFO IAmb IAmb 01 55 08.6
comp=Z,35nm,1.6s
CLL Collm 19.07 333 *i* P P 01 55 04.2 -0.8
comp=Z,5.0nm,0.6s
CLL L L 02 04 00.0
comp=Z,100nm,20.3s
CLL Collm 19.07 333 P P 01 55 04.5 -0.5
CLL IAmb IAmb 01 55 06.1
comp=Z,5.0nm,0.7s
BFO Black Forest 19.08 320 P P 01 55 05.3 +0.1
RAYN Ar Rayn 19.91 120 P Pn 01 55 15.8 -0.4
WLF Walferdange 21.03 320 *d*PnPn PnPn 01 55 45.5 +0.1
OBN Obninsk 21.18 16 P P 01 55 28.6 +0.7
comp=Z,5.6nm,0.4s,baz=276,slow=23,SNR=3.9
BTNL Ternell 21.60 322 *d*P P 01 55 31.8 -0.7
MEM Membach 21.68 322 *d*P P 01 55 32.4 -0.9
BCLA Clavier 21.92 321 *d*P P 01 55 36.9 +1.0
BCLA *d*PnPn PnPn 01 55 56.8 -0.8
BGES Gesves 22.01 321 *d*x P 01 55 42.5 +5.6
BGES *d*PnPn PnPn 01 55 59.5 +0.7
DOU Dourbes 22.10 320 *d*P P 01 55 36.6 -1.3
DOU *d*x x 01 55 43.5
BMRD Maredsous 22.13 320 *d*P P 01 55 38.9 +0.7
BMRD *d*PnPn PnPn 01 56 00.2 -0.2
TAM Tamanrasset 22.21 242 P P 01 55 39.9 +0.4
TAM IAmb IAmb 01 55 57.3
comp=Z,7.1nm,1.3s
UCC Uccle 22.63 321 P P 01 55 44.4 +1.0
BELG Belogornoye 22.83 34 P P 01 55 46.6 +1.0
comp=Z,8.6nm,0.7s,baz=288,slow=3.3,SNR=4.6
ESDC Sonseca Array 24.82 290 P P 01 56 04.2 -0.7
comp=Z,2.0nm,0.5s,baz=82,slow=9.5,SNR=34
ESDC Sonseca Array 24.82 290 P P 01 56 03.7 -1.2
ESDC IAmb IAmb 01 56 05.2
comp=Z,4.8nm,1.6s
GEYT Alibeck 25.28 74 P P 01 56 10.0 +0.9
comp=Z,1.1nm,0.4s,baz=287,slow=6.9,SNR=3.5
GEYT Alibeck 25.28 74 P P 01 56 10.3 +1.2
GYA0B ALIBECK ARRAY 25.28 74 P P 01 56 11.6 +2.5
GYA0B IAmb IAmb 01 56 28.1
comp=Z,5.1nm,0.9s
MDT Midelt 26.10 274 P P 01 56 16.4 -0.2
comp=Z,2.0nm,0.8s,baz=19,slow=4.1,SNR=3.9
FINES FINESS Array B 26.43 359 P P 01 56 17.6 -1.5
comp=Z,2.0nm,0.7s,baz=157,slow=10,SNR=4.7
HFS Hagfors 26.52 345 P P 01 56 17.8 -2.2
comp=Z,2.0nm,0.9s,baz=182,slow=10,SNR=4.6
AKTO Aktyubinsk 27.35 46 P P 01 56 26.2 -1.4
comp=Z,1.2nm,0.7s,baz=231,slow=9.3,SNR=4.3
NOA NORSAR Array B 27.87 344 P P 01 56 29.9 -2.3
comp=Z,0.5nm,0.7s,baz=153,slow=9.9,SNR=1.8
ABKAR Akbulak array 28.12 49 P P 01 56 37.6 +3.2
EKA Eskdalemuir Ar 28.92 324 P P 01 56 39.7 -1.9
comp=Z,1.4nm,0.5s,baz=121,slow=9.3,SNR=9.7
TOA0 Torodi Ar. Sit 31.46 232 P P 01 57 04.9 +0.5
TOA0 IAmb IAmb 01 57 08.4
comp=Z,6.3nm,1.1s
TORD Torodi Ar. Bea 31.46 232 P P 01 57 04.9 +0.6
comp=Z,3.9nm,0.6s,baz=35,slow=8.7,SNR=29
TORD Torodi Ar. Bea 31.46 232 P P 01 57 04.8 +0.4
TORD IAmb IAmb 01 57 07.9
comp=Z,2.0nm,0.7s
KOWA Kowa 34.44 241 P P 01 57 30.3 -0.1
comp=Z,1.2nm,0.6s,baz=65,slow=16,SNR=4.5
KK31 Karatay Array 34.55 63 P P 01 57 33.9 +2.7
KK31 IAmb IAmb 01 57 35.8
comp=Z,3.8nm,1.1s
KKAR Karatay Array 34.55 63 P P 01 57 32.8 +1.6
ARCES ARCESS Array B 34.56 359 P P 01 57 28.5 -2.4
comp=Z,0.5nm,0.4s,baz=166,slow=7.2,SNR=9.0
BVAR Borovoye Array 35.46 46 P P 01 57 39.1 +0.2
comp=Z,0.5nm,0.6s,baz=241,slow=6.1,SNR=4.6
KURBB Kurchatov Arra 40.15 51 P P 01 58 19.2 +0.8
comp=Z,2.9nm,0.5s,baz=277,slow=8.9,SNR=42
KURK Kurchatov 40.21 51 P P 01 58 19.2 +0.2
MK31 Makanchi Array 42.72 57 P P 01 58 39.8 +0.1
MKAR Makanchi Array 42.72 57 P P 01 58 40.5 +0.9
comp=Z,2.0nm,0.4s,baz=268,slow=8.6,SNR=54
MKAR Makanchi Array 42.72 57 P P 01 58 40.0 +0.4
ZAA0 Zalesovo Array 44.12 46 P P 01 58 50.6 -0.2
ZALV Zalesovo Beam 44.12 46 P P 01 58 50.9 +0.1
comp=Z,6.0nm,0.5s,baz=268,slow=7.8,SNR=30
ZALV Zalesovo Beam 44.12 46 P P 01 58 50.6 -0.2
NRIK Noril'sk 47.42 25 P P 01 59 15.9 -0.7
comp=Z,1.0nm,0.4s,baz=293,slow=2.1,SNR=4.4
MATP Matopo 55.18 178 P P 02 00 17.1 +1.6
comp=Z,2.1nm,0.7s,baz=0.9,slow=8.3,SNR=7.3
PALK Pallekele 56.53 106 P P 02 00 25.0 -0.3
comp=Z,13nm,1.0s,baz=165,slow=5.6,SNR=5.0
SONM Songino Array 58.52 51 P P 02 00 39.3 +0.3
comp=Z,3.4nm,1.0s,baz=277,slow=6.2,SNR=6.5
CMAR Chiang Mai Arr 65.25 84 P P 02 01 24.1 -0.4
comp=Z,0.3nm,0.2s,baz=339,slow=2.2,SNR=1.5
XAN Xi'an 65.68 65 P P 02 01 27.6 +0.4
XAN pP pwP 02 01 35.3 -0.5
XAN pmax pmax
comp=Z,8.0nm,1.6s
USRK Ussuriysk Ar. 75.97 46 P P 02 02 28.6 -0.8
comp=Z,2.1nm,0.7s,baz=287,slow=4.2,SNR=9.3
YKA Yellowknife Ar 77.97 343 P P 02 02 38.6 -1.8
comp=Z,1.0nm,0.8s,baz=36,slow=5.5,SNR=19
ULM Lac du Bonnet 81.15 327 P P 02 02 56.0 -2.0
comp=Z,2.6nm,0.6s,baz=54,slow=5.4,SNR=8.7

IDC ***17*** *01:51:32.8±0.5,25.˚12N×128.˚89E, h0km, mb4.8/36, mb1 4.8/40, mb1mx4.8/52, mbtmp4.7/40, ML3.9/4, MS3.9/19, Ms1 3.9/19, ms1mx3.7/43, Error ellipse: s-maj=15.3km s-min=12.1km az=78.0*

NEIC ***17*** *01:51:33.7±1.5,25.˚04N±0.˚06×128.˚85E±0.˚06, h10km±1km, mb5.2/222, Error ellipse: s-maj=10.7km s-min=8.8km az=185.0*

BJI ***17*** *01:51:33.5±0.0,25.˚21N×128.˚76E, h3km, mB5.1/60, mb4.7/73, Ms4.7/70, Ms7 4.5/65*

MOS ***17*** *01:51:33.9±1.0,25.˚11N×128.˚89E, h22km, mb5.2/69, MS4.6/10, Error ellipse: s-maj=7.3km s-min=4.6km az=113.4*

NIED ***17*** *01:51:34.6,25.˚11N×128.˚90E, h54km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-2.72; Mθθ1.22; Mφφ1.50; Mrθ0.05; Mθφ1.62; Mφr-1.60; Fault plane solution: M₀3.27000×10¹⁶ NP1:φs23.00000°, δ59.00000°, λ-112.00000°. NP2:φs241.00000°, δ37.00000°, λ-58.00000°.*

JMA ***17*** *01:51:34.5±0.2,25.˚11N×128.˚90E, h54km, M4.9*

GCMT ***17*** *01:51:36.7±0.2,25.˚02N±0.˚01×128.˚67E±0.˚02, h12km, MW5.0/103, Moment Tensor Solution. s46,c60; s103,c167; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.60±.15; Mθθ2.29±.10; Mφφ1.31±.11; Mrθ-0.40±.28; Mθφ2.22±.07; Mφr1.59±.32; Best double couple: M₀4.19200×10¹⁶ NP1:φs71.00000°, δ44.00000°, λ-58.00000°. NP2:φs211.00000°, δ54.00000°, λ-117.00000°. Principal axes: T 4.1370, Plg5.0000°, Azm319.0000°; N 0.1090, Plg21.0000°, Azm227.0000°; P -4.2460, Plg68.0000°, Azm63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 01:51:34.6±0.6, 25.˚04N±0.˚03×128.˚90E±0.˚03, h15km±3km, n596, σ1§79/607, mb5.1/234, MS4.3/40, 43C-13D, Ryukyu Islands

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

JJT3 Tamagusuku3 1.49 318 P Pn 01 51 59.4 -1.5
JJT3 *e*S Sn 01 52 16.6 -3.5
JNTH Nagotoyohara 1.67 332 P Pn 01 52 01.2 -2.1
JNTH S Sn 01 52 20.3 -4.2
JOW Kunigami 1.87 343 Pn Pn 01 52 04.5 -1.6
1µm,0.3s,baz=146,slow=17,SNR=1155
JOW Sn Sn 01 52 23.4 -6.0
584nm,0.3s,baz=156,slow=18,SNR=7.3
JOW LR LR 01 52 57.5
comp=Z,6µm,19.4s,baz=66,slow=47
JOW Kunigami 1.87 343 P Pn 01 52 04.4 -1.6
JOW S Sn 01 52 24.5 -4.9
JOW Kunigami 1.87 343 Pn Pn 01 52 04.3 -1.7
JYRO Yoronjima 2.02 348 P Pn 01 52 06.3 -1.8
JYRO S Sn 01 52 26.9 -6.1
JAGN Aguni-jima 2.15 316 P Pn 01 52 08.4 -1.5
JAGN *e*S Sn 01 52 32.1 -4.1
JIH Iheya 2.15 337 P Pn 01 52 08.7 -1.3
JIH *e*S Sn 01 52 31.3 -5.1
JMZ Minamidaito 2 2.23 69 P Pn 01 52 09.1 -2.0
JMZ S Sn 01 52 34.0 -4.4
JMZ Minamidaito 2 2.23 69 Pn Pn 01 52 08.9 -2.2
JKE Kume jima 2 2.30 304 P Pn 01 52 10.1 -1.8
JKE S Sn 01 52 35.2 -4.8
JOKE Okinoerabujima 2.33 353 P Pn 01 52 11.0 -1.4
JOKE S Sn 01 52 35.3 -5.5
JKDJ Kitadaitoujima 2.35 67 P Pn 01 52 10.9 -1.7
JKDJ *e*S Sn 01 52 37.8 -3.3
JTK Tokunoshima 2.73 1 P Pn 01 52 16.5 -1.4
JTK *e*S Sn 01 52 45.1 -5.6
JOGS Gusukube 3.19 266 P Pn 01 52 23.4 -0.8
JOGS S Sn 01 52 58.4 -3.5
JAMN Amaminishikomi 3.20 4 P Pn 01 52 23.0 -1.3
JAMN *e*S Sn 01 52 58.5 -3.7
JMJ2 Miyako jima3 3.26 265 P Pn 01 52 24.4 -0.8
JMJ2 S Sn 01 53 00.0 -3.7
JIKM Ikemajima 3.32 269 P Pn 01 52 25.0 -1.0
JIKM S Sn 01 53 01.1 -4.0
JIRB Irabujima 3.39 267 P Pn 01 52 25.6 -1.4
JIRB S Sn 01 53 02.1 -4.9
JZK Kikaishima 3.40 16 P Pn 01 52 26.9 -0.2
JZK *e*S Sn 01 53 03.1 -4.0
JAM Amami Oshima 3.41 10 P Pn 01 52 25.9 -1.4
JAM S Sn 01 53 01.5 -6.0
JTJ Tarama 3.84 265 P Pn 01 52 31.8 -1.3
JTJ S Sn 01 53 12.7 -5.2
JTAJ Takarajima 4.10 4 P Pn 01 52 35.6 -1.2
JTAJ S Sn 01 53 19.5 -5.0
JISG Ishigakijimahi 4.20 265 P Pn 01 52 36.2 -1.9
JISG S Sn 01 53 21.6 -5.2
JIJ Ishigaki jima 4.38 262 P Pn 01 52 38.9 -1.7
JIJ *e*S Sn 01 53 25.5 -5.9
JKRS Kuro-shima 4.52 261 P Pn 01 52 41.6 -1.0
JKRS S Sn 01 53 29.5 -5.4
HATJ Hateruma jima 4.74 259 P Pn 01 52 43.9 -1.7
HATJ S Sn 01 53 33.1 -7.2
IRIF Iriomote-Funau 4.76 263 P Pn 01 52 43.9 -1.9
IRIF *e*S Sn 01 53 33.8 -6.8
YOJ Yonaguni jima 5.39 265 P Pn 01 52 55.0 +0.6
YOJ pmax pmax
comp=Z,194nm,0.9s
YOJ Yonaguni jima 5.39 265 Pn 01 52 52.5 -1.9
JSU Suzuyama 6.58 12 Pn Pn 01 53 11.1 +0.2
NACB Ninganchiao 6.71 264 Pn 01 53 09.9 -2.7
TATO Taipei 6.73 271 Pn 01 53 11.6 -1.2
TATO Taipei 6.73 271 P Pn 01 53 12.9 0.0
TATO S Sn 01 54 26.9 -2.3
YHNB Yeheng 6.85 268 Pn Pn 01 53 12.8 -1.8
YULB Yu-li 7.13 258 Pn Pn 01 53 14.8 -3.7
SSLB Suanglung 7.35 262 Pn Pn 01 53 18.2 -3.3
TWG Pinlang 7.50 254 Pn 01 53 18.8 -4.6
TPUB Ta-pu 7.75 259 Pn 01 53 24.4 -2.6
JNU Nakatsue 8.23 12 Pn Pn 01 53 32.6 -1.0
comp=Z,7.0nm,0.3s,baz=185,slow=4.8,SNR=22
JNU Sn Sn 01 55 00.1 -6.2
comp=Z,6.0nm,0.3s,baz=313,slow=12,SNR=6.6
JNU LR LR 01 57 19.8
comp=Z,1µm,18.7s,baz=214,slow=42
JNU Nakatsue 8.23 12 Pn Pn 01 53 33.8 +0.2
SSE Sheshan 9.10 313 P Pn 01 53 46.6 +1.2
SSE S Sn 01 55 32.9 +5.4
SSE pmax pmax
comp=Z,23nm,0.7s
SSE LR LR
comp=Z,720nm,11.7s
SSE LR LR
comp=Z,1µm,12.4s
QZH Quanzhou 9.35 272 ⇑*i*P Pn 01 53 49.1 +0.2
QZH S Sn 01 55 36.8 +2.9
QZH LR LR
comp=Z,990nm,10.2s
QZH LR LR
comp=Z,980nm,11.3s
QZH LR LR
comp=Z,2µm,14.4s
JMN Monobe 9.68 25 Pn Pn 01 53 53.4 0.0
CVP Callao Caves 9.84 223 *e*P Pn 01 53 53.1 -2.5
JHS Saijyo 10.57 19 Pn Pn 01 54 04.2 -1.4
NJ2 Nanjing 11.26 311 *e*P Pn 01 54 15.8 +0.9
NJ2 S Sn 01 56 25.9 +5.4
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 pmax pmax
comp=Z,280nm,5.2s
NJ2 LR LR
comp=Z,2µm,12.1s
NJ2 LR LR
comp=Z,2µm,11.8s
NJ2 LR LR
comp=Z,3µm,13.7s
JWT Wachi 11.65 27 Pn 01 54 19.8 -0.5
JCJ Chichijima 12.12 77 LR LR 01 58 18.5
comp=Z,856nm,20.0s,baz=260,slow=34
KSAR Wonju Array Be 12.39 356 P Pn 01 54 29.6 -0.8
KSAR Wonju Array Be 12.39 356 Pn 01 54 29.6 -0.8
KSRS Korea Array 12.40 356 Pn Pn 01 54 29.7 -0.9
comp=Z,0.4nm,0.3s,baz=174,slow=12,SNR=4.5
KSRS LR LR 01 59 42.2
comp=Z,1µm,18.0s,baz=175,slow=40
KS19 Wonju Array Si 12.45 356 Pn Pn 01 54 29.8 -1.5
JHJ Hachijo jima 2 12.46 47 LR LR 01 58 37.3
comp=Z,443nm,18.4s,baz=72,slow=34
JSG Sagara 12.52 38 Pn Pn 01 54 31.9 -0.4
MAJO Matsushiro 13.97 33 P Pn 01 54 50.8 -1.2
MAJO Matsushiro 13.97 33 Pn Pn 01 54 50.8 -1.2
MAT Matsushiro 13.97 33 P Pn 01 54 53.9 +1.9
MAT S Sn 01 57 25.4 -1.4
MJAR Matsushiro Arr 13.97 33 Pn Pn 01 54 53.0 +1.0
comp=Z,0.1nm,0.3s,baz=208,slow=13,SNR=7.3
MJAR Matsushiro Arr 13.97 33 P Pn 01 54 53.0 +1.0
WHN Wuhan 13.99 296 ⇑P P 01 55 05.3 +5.0
WHN S S 01 57 49.1 +0.1
WHN pmax pmax
comp=Z,180nm,1.3s
WHN LR LR
comp=N,5µm,13.5s
WHN LR LR
comp=E,5µm,16.8s
WHN LR LR
comp=Z,5µm,16.0s
JYT Yasato 14.78 38 Pn Pn 01 55 03.0 -0.1
TIA Tai'an 15.04 321 P Pn 01 55 07.0 +0.4
TIA pmax pmax
comp=Z,16nm,1.1s
TIA pmax pmax
comp=Z,400nm,4.9s
TIA LR LR
comp=Z,1µm,17.5s
TIA LR LR
comp=Z,2µm,15.3s
TIA LR LR
comp=Z,3µm,15.2s
DL2 Dalian 15.13 338 *e*P Pn 01 55 03.0 -4.8
DL2 pmax pmax
comp=Z,39nm,1.4s
DL2 pmax pmax
comp=Z,470nm,4.2s
DL2 LR LR
comp=Z,930nm,15.6s
DL2 LR LR
comp=Z,2µm,18.7s
DL2 LR LR
comp=Z,1µm,13.4s

SNY **Shenyang** 17.31 347 ⇓P **P** **01 55 37.5 +0.4**
SNY S **S** **01 58 52.6 -4.1**
SNY pmax pmax
comp=Z,30nm,0.9s
SNY pmax pmax
comp=Z,540nm,5.8s
SNY LR LR
comp=Z,490nm,13.5s
SNY LR LR
comp=Z,2µm,17.3s
SNY LR LR
comp=Z,1µm,15.5s
ENH **Enshi** 17.96 291 P **Pn** **01 55 43.4 -0.5**
DAV **Davao City (W)** 18.15 191 LR LR 02 02 08.7
comp=Z,170nm,21.5s,baz=334,slow=35
BJT **Baijiatuau** 18.36 327 P **Pn** **01 55 46.3 -2.4**
BJT pmax pmax
comp=Z,45nm,0.9s
BJT **Baijiatuau** 18.36 327 Pn **Pn** **01 55 46.3 -2.4**
QIZ **Qiongzhong** 18.65 255 P **Pn** **01 55 51.8 -0.5**
QIZ S **Sn** **01 59 17.4 -3.2**
QIZ sS **sS** **01 59 29.3 +0.7**
QIZ pmax pmax
comp=Z,350nm,5.1s
QIZ LR LR
comp=Z,390nm,16.2s
QIZ LR LR
comp=Z,500nm,13.7s
QIZ LR LR
comp=Z,510nm,17.2s
TIY **Taiyuan** 18.86 316 *e*P **Pn** **01 55 56.1 +1.2**
TIY S **Sn** **01 59 25.6 -0.2**
TIY pmax pmax
comp=Z,140nm,1.2s
TIY pmax pmax
comp=Z,990nm,4.1s
TIY LR LR
comp=Z,520nm,8.9s
TIY LR LR
comp=Z,930nm,10.8s
TIY LR LR
comp=Z,1µm,14.5s
CN2 **Changchun** 18.93 352 *e*P **Pn** **01 55 55.5 0.0**
CN2 *e*S **Sn** **01 59 28.0 +0.9**
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 pmax pmax
comp=Z,400nm,3.0s
CN2 LR LR
comp=Z,800nm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,900nm,17.0s
USA0B **Ussuriysk Arra** 19.28 7 P **P** **01 55 56.7 -2.0**
USA0B pmax pmax
comp=Z,135nm,1.1s
USA0B **Ussuriysk Arra** 19.28 7 **P** **01 55 56.7 -2.0**
USA0B IAmb IAmb 01 56 07.4
comp=Z,135nm,1.1s
USRK **Ussuriysk Ar.** 19.28 7 P **Pn** **01 55 59.6 -0.1**
baz=187,slow=9.8,SNR=42
USRK **Ussuriysk Ar.** 19.28 7 P **P** **01 55 58.9 +0.2**
XAN **Xi'an** 19.53 302 P **Pn** **01 56 02.3 -0.7**
XAN pP sP 01 56 05.5 -0.2
XAN sP pwP 01 56 07.6 -4.0
XAN S **Sn** **01 59 38.5 -3.5**
XAN pmax pmax
comp=Z,44nm,1.4s
XAN pmax pmax
comp=Z,950nm,5.3s
XAN LR LR
comp=Z,1µm,15.7s
XAN LR LR
comp=Z,2µm,15.2s
XAN LR LR
comp=Z,2µm,15.2s
XAN **Xi'an** 19.53 302 P **P** **01 56 00.9 -0.8**
XAN pmax pmax
comp=Z,142nm,1.3s
XAN **Xi'an** 19.53 302 **P** **01 56 00.9 -0.8**
XAN IAmb IAmb 01 56 06.8
comp=Z,142nm,1.3s
MDJ **Mudanjiang** 19.54 1 P **Pn** **01 56 02.8 0.0**
MDJ sP pwP 01 56 06.6 -4.7
MDJ S **Sn** **01 59 41.8 0.0**
MDJ sS sS 01 59 45.4 -0.8
MDJ pmax pmax
comp=Z,19nm,1.6s
MDJ pmax pmax
comp=Z,450nm,4.0s
MDJ LR LR
comp=Z,1µm,12.6s
MDJ LR LR
comp=Z,700nm,16.8s
MDJ LR LR
comp=Z,1µm,13.7s
MDJ **Mudanjiang** 19.54 1 P **P** **01 56 01.0 -0.6**
GYA **Guiyang** 20.08 279 ⇓P Pn 01 56 10.4 +0.8
GYA sP pwP 01 56 13.3 -4.3
GYA pmax pmax
comp=Z,17nm,1.1s
GYA pmax pmax
comp=Z,440nm,4.5s
GYA LR LR
comp=Z,1µm,12.6s
GYA LR LR
comp=Z,1µm,15.6s
GYA LR LR
comp=Z,1µm,13.3s
JEM **Erimo** 20.63 31 P Pn 01 56 26.1 +10
JEM IAmb IAmb 01 56 33.3
comp=Z,97nm,1.1s
HHC **Hu-ho-hao-te** 21.39 322 *e*P **P** **01 56 23.9 +2.1**
HHC sP pwP 01 56 29.9 -1.5
HHC S **S** **02 00 18.0 -0.8**
HHC sS pS 02 00 23.0 -2.3
HHC pmax pmax
comp=Z,29nm,0.9s
HHC pmax pmax
comp=Z,690nm,5.4s
HHC LR LR
comp=Z,1µm,10.8s
HHC LR LR
comp=Z,830nm,11.2s
HHC LR LR
comp=Z,2µm,11.8s
ASAJ **Asahikawa** 22.06 27 P **P** **01 56 28.7 -0.1**
ASAJ pmax pmax
comp=Z,55nm,0.7s
JKA **Kamikawa-asahi** 22.06 27 P **P** **01 56 28.7 -0.1**
JKA IAmb IAmb 01 56 38.9
comp=Z,55nm,0.7s
BTO **Baotou** 22.12 319 *e*P **P** **01 56 30.3 +0.6**
BTO S **S** **02 00 33.3 +0.2**
BTO pmax pmax
comp=Z,37nm,0.4s
BTO pmax pmax
comp=Z,990nm,3.9s
BTO LR LR
comp=Z,2µm,17.3s
BTO LR LR
comp=Z,4µm,19.2s
BTO LR LR
comp=Z,8µm,15.7s
MYLDM **Lahad Datu** 22.13 209 P **P** **01 56 27.8 -1.9**
MYLDM IAmb IAmb 01 56 50.2
comp=Z,98nm,1.3s
KKM **Kota Kinabalu** 22.46 215 P **P** **01 56 32.2 -1.3**
CD2 **Chengdu** 22.94 290 P **P** **01 56 39.0 +0.6**
CD2 S **S** **02 00 44.6 -3.5**
CD2 pmax pmax
comp=Z,100nm,1.2s
CD2 pmax pmax
comp=Z,400nm,6.3s
CD2 LR LR
comp=Z,2µm,13.7s
CD2 LR LR
comp=Z,2µm,14.2s
CD2 LR LR
comp=Z,2µm,13.9s
SLVN **Son La** 23.26 266 P **P** **01 56 40.8 -0.9**
DLV **T Lat** 23.29 240 P **P** **01 56 40.9 -1.4**
KMI **Kunming** 23.69 276 ⇑P **P** **01 56 48.6 +2.5**
KMI pP pwP 01 56 51.8 -4.4
KMI sP sP 01 56 53.4 +3.1
KMI PcP **PcP** **02 00 33.5 +3.1**
KMI S **S** **02 01 02.3 +1.5**
KMI sS sS 02 01 07.9 +2.4
KMI pmax pmax
comp=Z,58nm,1.1s
KMI pmax pmax
comp=Z,620nm,7.1s
KMI LR LR
comp=Z,800nm,12.2s
KMI LR LR
comp=Z,710nm,14.6s
KMI LR LR
comp=Z,950nm,15.3s
KMI **Kunming** 23.69 276 IAmb IAmb 01 56 49.2
comp=Z,56nm,1.0s
LZH **Lanzhou** 24.15 303 *e*P **P** **01 56 51.5 +1.1**
LZH sP pwP 01 56 55.8 -4.3
LZH S **S** **02 01 05.0 -3.0**
LZH sS sS 02 01 10.5 -2.3
LZH pmax pmax
comp=Z,87nm,1.2s
LZH pmax pmax
comp=Z,540nm,4.9s
LZH LR LR
comp=Z,830nm,14.2s
LZH LR LR
comp=Z,1µm,13.6s
LZH LR LR
comp=Z,1µm,15.9s
TNTI **Ternate** 24.17 184 P **P** **01 56 49.1 -1.4**
TNTI IAmb IAmb 01 57 00.8
comp=Z,97nm,1.1s
TNTI **Ternate** 24.17 184 P **P** **01 56 50.5 0.0**
comp=Z,5µmcomp=Z,59nm,1.1s
KLR **Kul'dur** 24.25 5 P **P** **01 56 50.7 -0.2**
comp=Z,16nm,1.0s,baz=190,slow=7.7,SNR=23
KLR **Kul'dur** 24.25 5 *ce*P **P** **01 56 50.4 -0.5**
KLR pmax pmax
comp=Z,65nm,1.4s
YSS **Yuzh-Sakhalins** 24.50 23 *e*P **P** **01 56 53.2 0.0**
YSS *e* 01 56 58.8
YSS *e* 02 00 34.0
YSS MLR MLR
comp=Z,400nm,13.0s
YSS **Yuzh-Sakhalins** 24.50 23 P **P** **01 56 52.2 -1.0**
NONG **Nongkai** 24.91 259 P **P** **01 56 59.3 +2.1**
comp=Z,0.4nmcomp=Z,8µmcomp=Z,29nm,1.0s
GTOI **Gorontalo** 24.92 194 P **P** **01 56 57.4 +0.1**
comp=Z,16nm,0.9s
HIA **Hailar** 25.22 346 P **P** **01 56 59.4 -0.3**
HIA pmax pmax
comp=Z,36nm,1.5s
HIA **Hailar** 25.22 346 P **P** **01 56 59.4 -0.3**
MRSI **Marisa** 25.33 196 P **P** **01 57 01.4 +0.4**
KHON **Khomkaen** 25.85 255 P **P** **01 57 09.1 +3.4**
comp=Z,0.3nmcomp=Z,3µmcomp=Z,42nm,0.8s
SIJI **Sorong** 25.86 175 LR LR 02 07 31.5
comp=Z,244nm,18.7s,baz=20,slow=37
GRNR **Gornyy** 26.33 11 ⇑*i*P **P** **01 57 11.3 +1.5**
GRNR *e*S **S** **02 01 45.5 +3.4**
GRNR pmax pmax
comp=N,8.0nm,0.9s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR smax smax
comp=N,8.0nm,0.8s
GRNR MLR MLR
comp=E,320nm,15.0s
GRNR MLR MLR
comp=Z,420nm,14.0s
APSI **Ampana** 26.74 196 P **P** **01 57 15.0 +1.3**
comp=Z,341nmcomp=Z,19nm,0.9s
CHAI **Chaiyaphum** 26.76 255 P **P** **01 57 15.1 +1.1**
comp=Z,0.2nmcomp=Z,603nmcomp=Z,59nm,1.0s
SANI **Sanana** 27.08 186 P **P** **01 57 17.5 +0.7**
comp=Z,52nm,0.8s
SRAK **Srakaew** 27.53 252 P **P** **01 57 17.0 -3.9**
comp=Z,0.6nmcomp=Z,122nm,0.9s
SBUM **Sibu** 27.63 218 P **P** **01 57 21.1 -0.7**
SBUM **Sibu** 27.63 218 P **P** **01 57 23.0 +1.3**
PHIT **Phitsanulok** 27.66 259 P **P** **01 57 24.0 +2.0**
comp=Z,0.2nmcomp=Z,78nm,1.0s
LAMP **Lampang** 27.91 262 P P 01 57 36.8 +13
comp=Z,17nm,0.9s
GTA **Gaotai** 28.32 307 P **P** **01 57 28.1 +0.1**
GTA pP sP 01 57 32.3 0.0
GTA sP pwP 01 57 35.8 -2.1
GTA S **S** **02 02 12.9 -1.2**
GTA sS sS 02 02 24.9 +6.1
GTA SS **SnSn** **02 03 34.6 +3.1**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,160nm,6.8s
GTA LR LR
comp=Z,540nm,15.5s
GTA LR LR
comp=Z,1µm,19.9s
GTA LR LR
comp=Z,780nm,18.7s
CHTO **Chiang Mai** 28.43 263 P **P** **01 57 28.3 -0.7**
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CHTO **Chiang Mai** 28.43 263 P **P** **01 57 28.3 -0.7**
CM04 **Chiang Mai Arr** 28.53 263 P P 01 57 42.1 +12
comp=Z,85nmcomp=Z,4.8nm,1.0s
CM31 **Chiang Mai Arr** 28.55 263 P **P** **01 57 30.2 +0.2**
CMAR **Chiang Mai Arr** 28.55 263 P **P** **01 57 30.5 +0.5**
comp=Z,0.5nm,0.3s,baz=60,slow=8.5,SNR=9.6
CMAR PcP **PcP** **02 00 43.1 +1.7**
comp=Z,1.9nm,1.0s,baz=146,slow=0.2,SNR=6.7
CMAR LR LR 02 09 12.5
comp=Z,174nm,20.1s,baz=108,slow=37
CMAR **Chiang Mai Arr** 28.55 263 *ce*P **P** **01 57 31.6 +1.6**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR **Chiang Mai Arr** 28.55 263 P **P** **01 57 28.4 -1.6**
ULN **Ulaanbaatar** 28.58 328 *ce*P **P** **01 57 28.5 -1.7**
ULN pmax pmax
comp=Z,11nm,1.2s
CM13 **Chiang Mai Arr** 28.59 263 P P 01 57 42.0 +12
comp=Z,3.7nm,0.9s
ZEA **Zeya** 28.69 358 *e*P P 01 57 36.0 +5.2
ZEA *e*S **S** **02 02 21.4 +2.3**
ZEA pmax pmax
comp=N,200nm,3.9s
ZEA pmax pmax
comp=Z,200nm,4.2s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,30nm,1.3s
ZEA smax smax
comp=N,200nm,9.4s
ZEA MLR MLR
comp=N,200nm,15.0s
ZEA MLR MLR
comp=Z,300nm,13.0s
SONM **Songino Array** 28.88 328 P **P** **01 57 32.1 -0.7**
comp=Z,4.2nm,0.9s,baz=137,slow=8.8,SNR=12
SONM LR LR 02 10 36.8
comp=Z,672nm,19.6s,baz=128,slow=40
SONM **Songino Array** 28.88 328 P **P** **01 57 31.2 -1.5**
UTHA **Uthaitani** 29.14 257 P P **01 57 38.7 +3.5**
comp=Z,15nm,1.3s
UMPA **Umpang Tak** 29.40 258 P P 01 57 42.4 +4.8
comp=Z,5µmcomp=Z,22nm,1.1s
NKL **Nikolayevsk** 29.44 14 *e*P **P** **01 57 35.5 -2.0**
NKL pmax pmax
comp=E,77nm,0.7s
NKL pmax pmax
comp=N,248nm,1.0s
NKL pmax pmax
comp=Z,71nm,1.3s
NKL MLR MLR
comp=E,4µm,13.0s
NKL MLR MLR
comp=Z,307nm,12.0s
KSM **Kuching** 29.52 220 P **P** **01 57 37.3 -1.3**
KSM IAmb IAmb 01 57 40.8
comp=Z,25nm,0.8s
JAY **Jayapura** 29.69 156 LR LR 02 06 51.6
comp=Z,233nm,21.7s,baz=326,slow=31
PHET **Kaeng Krachan** 30.12 252 P **P** **01 57 46.2 +2.3**
KAPI **Kappang** 31.17 198 LR LR 02 09 46.2
comp=Z,116nm,21.5s,baz=26,slow=35
BBKI **Banjar Baru** 31.45 208 P **P** **01 57 56.1 +0.4**
comp=Z,3µmcomp=Z,24nm,0.8s
TLY **Talaya** 32.84 331 *e*P **P** **01 58 10.8 +3.2**
TLY *e*S **S** **02 03 20.8 -3.5**
TLY pmax pmax
comp=Z,14nm,0.8s
TLY MLR MLR
comp=Z,2µm,15.0s
TLY **Talaya** 32.84 331 P **P** **01 58 08.9 +1.3**
SKR **Severo-Kuril's** 33.08 32 *e*P **P** **01 58 08.3 -1.3**
SKR *e*S **S** **02 03 33.0 +5.2**
SKR pmax pmax
comp=Z,31nm,1.3s
SKR pmax pmax
comp=Z,100nm,2.7s
SKR MLR MLR
comp=Z,100nm,17.0s
SHL **Shillong** 33.40 279 P **P** **01 58 12.8 -0.2**
SHL pmax pmax
comp=Z,39nm,1.1s
SHL **Shillong** 33.40 279 P **P** **01 58 12.8 -0.2**
SHL IAmb IAmb 01 58 14.7
comp=Z,39nm,1.1s
SHL **Shillong** 33.40 279 P **P** **01 58 14.0 +1.0**
SNR=14
MYKOM **Kota Tinggi** 33.45 230 P **P** **01 58 12.0 -1.2**
KULM **Kulim** 33.47 239 P **P** **01 58 14.0 +0.6**
KULM IAmb IAmb 01 58 16.0
comp=Z,42nm,1.4s
IPM **Ipoh** 33.69 237 P **P** **01 58 15.1 -0.2**
IPM IAmb IAmb 01 58 17.0
comp=Z,26nm,1.0s
LSA **Lhasa** 33.74 286 P **P** **01 58 15.7 -0.5**
LSA pmax pmax
comp=Z,20nm,0.9s
LSA **Lhasa** 33.74 286 P **P** **01 58 15.7 -0.5**
LSA IAmb IAmb 01 58 21.9
comp=Z,20nm,0.9s
SOEI **Soe** 34.88 188 P **P** **01 58 24.6 -1.1**
SOEI IAmb IAmb 01 58 40.8
comp=Z,31nm,1.0s
PLAI **Plampang** 35.37 199 P **P** **01 58 30.0 +0.2**
comp=Z,76nm,1.1s
PEA0B **Petropavlovsk-** 35.40 30 *ce*P **P** **01 58 26.8 -3.0**
PEA0B **Petropavlovsk-** 35.40 30 IAmb IAmb 01 58 34.9
comp=Z,51nm,1.2s
PETK **Petropavlovsk-** 35.40 30 P **P** **01 58 30.0 +0.2**
comp=Z,16nm,1.0s,baz=194,slow=5.4,SNR=14
PETK LR LR 02 12 43.9
comp=Z,158nm,20.9s,baz=227,slow=36
PETK **Petropavlovsk-** 35.40 30 P **P** **01 58 28.8 -1.0**
TWSI **Taliwang, Sumb** 35.56 201 P **P** **01 58 32.0 +0.6**
comp=Z,509nmcomp=Z,35nm,1.0s
PET **Petropavlovsk** 35.79 31 *e*P **P** **01 58 34.2 +1.2**
PET *e* 01 59 55.8
PET *e*S **S** **02 04 08.4 -1.3**
PET *e*SS **SnSn** **02 06 27.6 -4.6**
PET pmax pmax
comp=Z,32nm,1.2s
PET MLR MLR
comp=Z,400nm,14.0s
PET MLR MLR
comp=Z,600nm,15.0s
PET **Petropavlovsk** 35.79 31 P **P** **01 58 32.9 -0.2**
PET IAmb IAmb 01 58 46.0
comp=Z,39nm,1.2s
PSI **Prapat** 36.37 237 LR LR 02 13 39.4
comp=Z,149nm,19.2s,baz=87,slow=36
PSI **Prapat** 36.37 237 P **P** **01 58 39.1 +0.5**
PSI pmax pmax
comp=Z,33nm,1.1s
RPSI **Rantau Prapat** 36.44 237 P **P** **01 58 39.1 +0.1**
RPSI IAmb IAmb 01 58 40.8
comp=Z,33nm,1.1s
RPSI PcP **PcP** **02 01 01.9 -1.2**
BKNI **Bangkinang** 36.46 232 P **P** **01 58 40.1 +0.9**
TAPN **Taplejung** 36.92 283 *e*P **P** **01 58 44.6 +1.2**
comp=Z,131nm,1.0s
YAK **Yakutsk** 36.98 1 *e*P **P** **01 58 42.9 -0.2**
YAK *e**PP **sP** **01 58 46.6 -0.8**
YAK *e*S **S** **02 04 28.3 +0.6**
YAK *e**SS **sS** **02 04 36.8 +4.2**
YAK *e*SS **SnSn** **02 06 57.6 -3.2**
YAK pmax pmax
comp=Z,53nm,0.9s
YAK pmax pmax
comp=N,22nm,1.0s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK smax smax
comp=E,104nm,2.7s
YAK smax smax
comp=N,126nm,3.0s
YAK MLR MLR
comp=Z,226nm,16.0s
YAK MLR MLR
comp=N,150nm,15.0s
YAK MLR MLR
comp=E,143nm,14.0s
YAK **Yakutsk** 36.98 1 P **P** **01 58 42.6 -0.5**
ODAN **Odare** 37.25 282 *e*P **P** **01 58 47.2 +1.0**
comp=E,260nm,1.0s
MTN **Manton Dam** 37.72 176 P **P** **01 58 48.3 -1.5**
MTN IAmb IAmb 01 58 50.7
comp=Z,40nm,0.8s
MA2 **Magadan** 37.74 18 *ce*P **P** **01 58 49.4 -0.2**
MA2 pmax pmax
comp=Z,9.0nm,1.0s
MA2 **Magadan** 37.74 18 P **P** **01 58 48.2 -1.4**
LEM **Lembang** 37.85 216 LR LR 02 14 31.9
comp=Z,100nm,20.4s,baz=51,slow=36
RAMN **Ramite** 37.94 282 *e*P **P** **01 58 52.8 +0.7**
comp=Z,38nm,0.6s
JIRN **Jiri** 38.23 284 *e*P **P** **01 58 55.7 +1.1**
comp=Z,138nm,1.1s
WMQ **Urumqi** 38.33 310 *e*P **P** **01 58 56.5 +1.6**
WMQ pP sP 01 58 58.4 -0.9
WMQ sP pwP 01 59 01.1 -3.6
WMQ PP **PnPn** **02 00 26.8 +2.5**
WMQ pmax pmax
comp=Z,18nm,1.3s
WMQ pmax pmax
comp=Z,250nm,3.8s
WMQ LR LR
comp=Z,660nm,12.7s
WMQ LR LR
comp=Z,1µm,12.7s
WMQ LR LR
comp=Z,1µm,25.1s
GSI **Gunungsitoli** 38.36 237 IAmb IAmb 01 59 02.4
comp=Z,90nm,1.4s
GUN **Gumba** 38.47 284 *e*P **P** **01 58 57.7 +1.1**
PMG **Port Moresby** 38.59 150 LR LR 02 12 52.1
comp=Z,184nm,21.8s,baz=324,slow=33
PKI **Pulchoki** 38.92 283 *e*P **P** **01 59 01.0 +0.6**
comp=Z,53nm,0.6s
PKIN **Phulchoki** 38.94 283 *e*P **P** **01 59 01.0 +0.6**
comp=Z,45nm,0.5s
KKN **Kakani** 39.01 284 *e*P **P** **01 59 01.9 +0.9**
comp=Z,179nm,1.1s
DMN **Daman** 39.19 284 *e*P **P** **01 59 03.2 +0.7**
comp=Z,144nm,1.2s
GKN **Gorkha** 39.56 284 *e*P **P** **01 59 06.2 +0.7**
comp=Z,121nm,0.9s
DGZ **Jazzator, Alta** 40.41 318 *i* P **P** **01 59 11.9 -0.3**
DGZ pmax pmax
comp=Z,8.0nm,1.1s
KNRA **Kununurra** 40.47 180 P **P** **01 59 13.0 +0.1**
KOLN **Koldanda** 40.50 284 *e*P **P** **01 59 14.2 +0.9**
comp=Z,171nm,1.1s
PYUN **Piuthan** 40.99 285 *e*P **P** **01 59 18.5 +1.1**
comp=Z,208nm,1.1s
ZSN **Zaisan** 41.26 314 *e*P **P** **01 59 18.9 -0.3**
baz=314
ZSN **Zaisan** 41.26 314 *e*P **P** **01 59 18.8 -0.3**
MK31 **Makanchi Array** 42.78 313 *i* P **P** **01 59 32.3 +0.7**
MK31 **Makanchi Array** 42.78 313 P **P** **01 59 32.6 +1.0**
MKAR **Makanchi Array** 42.78 313 P **P** **01 59 32.0 +0.4**
comp=Z,5.4nm,0.4s,baz=94,slow=10,SNR=52
MKAR **Makanchi Array** 42.78 313 P **P** **01 59 31.8 +0.2**
MAKZ **Makanchi** 42.99 313 P **P** **01 59 33.3 0.0**
MAKZ pmax pmax
comp=Z,53nm,1.4s
MAKZ **Makanchi** 42.99 313 P **P** **01 59 33.2 0.0**
MAKZ IAmb IAmb 01 59 40.7
comp=Z,53nm,1.4s

FITZ **Fitzroy Crossi** 43.00 185 P P 01 59 32.3 -1.1
ZAA0 **Zalesovo Array** 43.56 323 P P 01 59 37.3 -0.4
ZAA0 IAmb IAmb 01 59 38.9
comp=Z,35nm,1.1s
ZALV **Zalesovo Beam** 43.56 323 P P 01 59 37.8 +0.1
comp=Z,18nm,0.7s,baz=109,slow=7.0,SNR=49
SHLS **Shalkode** 44.07 307 eP P 01 59 39.6 -2.6
comp=Z,23nm,1.5s,baz=307
SHLS **Shalkode** 44.07 307 eP P 01 59 39.6 -2.6
SHLS pmax pmax
comp=Z,23nm,1.5s
PDGK **Podgornoye** 44.07 307 P P 01 59 42.0 -0.2
UZB **Uzynbulak** 44.38 307 eP P 01 59 44.6 -0.2
comp=Z,12nm,1.2s,baz=307
UZB eS S 02 06 17.4 -1.5
baz=307
UZB **Uzynbulak** 44.38 307 eP P 01 59 44.5 -0.2
UZB eS S 02 06 17.4 -1.5
UZB pmax pmax
comp=Z,12nm,1.2s
KPKS **Kokpek** 44.67 307 eP P 01 59 47.0 +0.1
comp=Z,14nm,1.2s,baz=307
KPKS **Kokpek** 44.67 307 eP P 01 59 47.0 +0.1
KPKS pmax pmax
comp=Z,14nm,1.2s
SATY **Saty** 44.82 307 eP P 01 59 48.3 +0.1
baz=306
SATY **Saty** 44.82 307 eP P 01 59 48.3 +0.1
WB0 **Warramunga Arr** 44.86 173 IAmb IAmb 01 59 50.3
comp=Z,26nm,0.8s
WRAB **Tennant Creek** 45.02 173 ceP P 01 59 48.8 -0.9
WRAB pmax pmax
comp=Z,34nm,1.0s
WRAB **Tennant Creek** 45.02 173 P P 01 59 49.3 -0.4
WRAB IAmb IAmb 01 59 56.8
comp=Z,26nm,0.8s
WRA **Warramunga Arr** 45.03 173 P P 01 59 50.6 +0.8
comp=Z,28nm,1.0s,baz=354,slow=8.5,SNR=95
WRA LR LR 02 16 58.0
comp=Z,80nm,21.0s,baz=25,slow=34
WRA **Warramunga Arr** 45.03 173 ceP P 01 59 50.5 +0.7
WRA pmax pmax
comp=Z,29nm,1.0s
WRA **Warramunga Arr** 45.03 173 P P 01 59 49.8 0.0
WR0 **Warramunga Arr** 45.07 172 P P 01 59 49.4 -0.7
WR0 IAmb IAmb 01 59 52.1
comp=Z,28nm,0.9s
TDK **Taldyqorghan** 45.09 309 eP P 01 59 50.8 +0.7
baz=309
TDK **Taldyqorghan** 45.09 309 eP P 01 59 50.8 +0.7
HNR **Honiara** 45.71 135 LR LR 02 16 09.3
comp=Z,88nm,20.8s,baz=319,slow=32
MDOK **Medeo** 45.82 307 eP P 01 59 56.8 +0.6
baz=306
MDOK **Medeo** 45.82 307 eP P 01 59 56.7 +0.6
KURK **Kurchatov** 46.10 317 P P 01 59 58.5 +0.5
KURBB **Kurchatov Arra** 46.13 317 P P 01 59 58.5 +0.3
comp=Z,18nm,0.9s,baz=105,slow=9.3,SNR=49
KURBB **Kurchatov Arra** 46.13 317 P P 01 59 57.5 -0.8
TIXI **Tiksi** 46.64 360 ⇓iP P 02 00 01.4 -0.5
TIXI **Tiksi** 46.64 360 P P 02 00 01.4 -0.5
TKM2 **Tokmak 2** 46.86 306 P P 02 00 05.7 +1.3
SNR=13
TKM2 **Tokmak 2** 46.86 306 P P 02 00 04.6 +0.2
KBK **Karagaybulak** 47.32 306 P P 02 00 09.3 +1.3
SNR=8.2
HYB **Hyderabad** 47.32 271 iP P 02 00 14.0 +5.9
CHMS **Chumysh** 47.48 306 P P 02 00 10.1 +1.1
SNR=12
SGDS **Sogindy** 47.61 307 eP P 02 00 09.9 -0.1
comp=Z,14nm,1.8s,baz=307
SGDS **Sogindy** 47.61 307 eP P 02 00 09.9 -0.1
SGDS pmax pmax
comp=Z,14nm,1.8s
AAK **Ala-Archa** 47.65 306 ceP P 02 00 10.9 +0.4
AAK pmax pmax
comp=Z,44nm,1.7s
AAK **Ala-Archa** 47.65 306 P P 02 00 10.8 +0.3
AAK **Ala-Archa** 47.65 306 P P 02 00 11.8 +1.4
AAK P P 02 00 11.8 +1.4
USP **Ospenovka** 47.69 307 P P 02 00 11.6 +1.0
SNR=6.5
BTLS **Baital** 48.16 309 eP P 02 00 13.1 -1.1
comp=Z,18nm,1.1s,baz=309
BTLS **Baital** 48.16 309 eP P 02 00 13.9 -0.3
BTLS pmax pmax
comp=Z,18nm,1.1s
EKS2 **Erkin-Say** 48.18 306 P P 02 00 16.0 +1.5
SNR=7.8
AML **Almayashu** 48.21 305 P P 02 00 16.8 +1.6
SNR=5.5
BILL **Bilibino** 48.61 18 ciP P 02 00 17.9 +0.6
BILL e 02 02 13.8
BILL eS S 02 07 29.0 +11
BILL pmax pmax
comp=Z,23nm,1.1s
BILL MLR MLR
comp=Z,201nm,19.0s
BILL **Bilibino** 48.61 18 P P 02 00 18.0 +0.6
BILL IAmb IAmb 02 00 19.3
comp=Z,22nm,1.1s
AS31 **Alice Springs** 48.66 174 P P 02 00 17.8 -0.4
ASAR **Alice Springs** 48.66 174 P P 02 00 19.4 +1.2
comp=Z,10nm,0.8s,baz=359,slow=8.0,SNR=82
ASAR S S 02 07 21.0 +1.0
comp=Z,2.8nm,1.2s,baz=6.4,slow=20,SNR=7.9
ASAR LR LR 02 21 12.5
comp=Z,80nm,19.5s,baz=5.5,slow=36
ASAR **Alice Springs** 48.66 174 P P 02 00 18.6 +0.4
NIL **Nilore** 48.77 294 P P 02 00 18.2 -0.9
NIL pmax pmax
comp=Z,29nm,1.0s
NIL **Nilore** 48.77 294 P P 02 00 18.2 -0.9
NIL IAmb IAmb 02 00 20.7
comp=Z,29nm,0.9s
PALK **Pallekele** 49.25 257 P P 02 00 23.0 -0.1
PALK pmax pmax
comp=Z,25nm,1.2s
PALK **Pallekele** 49.25 257 P P 02 00 22.9 -0.1
PALK IAmb IAmb 02 00 25.5
comp=Z,25nm,1.1s
BRZS **Berezniki** 49.68 315 eP P 02 00 25.7 -0.2
comp=Z,18nm,1.1s,baz=315
BRZS **Berezniki** 49.68 315 eP P 02 00 25.6 -0.2
BRZS pmax pmax
comp=Z,18nm,1.1s
DZA **Taraz** 49.99 306 eP P 02 00 28.7 +0.4
baz=306
DZA **Taraz** 49.99 306 eP P 02 00 28.7 +0.4
NRIK **Noril'sk** 50.56 342 P P 02 00 31.7 -0.5
comp=Z,12nm,1.1s,baz=117,slow=7.1,SNR=7.7
NRIK **Noril'sk** 50.56 342 ceP P 02 00 31.3 -0.8
NRIK pmax pmax
comp=Z,3.0nm,0.5s
NRIK **Noril'sk** 50.56 342 P P 02 00 31.3 -0.8
NRIK IAmb IAmb 02 00 39.2
comp=Z,37nm,1.4s
KK31 **Karatay Array** 50.59 306 iP P 02 00 33.5 +0.6
KK31 **Karatay Array** 50.59 306 P P 02 00 32.8 -0.1
KK31 IAmb IAmb 02 00 40.4
comp=Z,32nm,1.1s
KKAR **Karatay Array** 50.59 306 P P 02 00 33.1 +0.2
KKAR **Karatay Array** 50.59 306 P P 02 00 33.1 +0.2
IUG **Iuzhnay** 50.94 305 eP P 02 00 35.8 +0.2
comp=Z,6.7nm,0.9s,baz=305
IUG **Iuzhnay** 50.94 305 eP P 02 00 35.8 +0.2
IUG pmax pmax
comp=Z,7.0nm,0.9s
BVAR **Borovoye Array** 51.56 319 P P 02 00 40.0 0.0
comp=Z,21nm,1.0s,baz=313,slow=55,SNR=28
BRVK **Borovoye** 51.63 319 ceP P 02 00 41.0 +0.5
BRVK pmax pmax
comp=Z,54nm,1.1s
BRVK **Borovoye** 51.63 319 P P 02 00 40.4 -0.1
BRVK **Borovoye** 51.63 319 P P 02 00 41.4 +0.9
BRVK P P 02 00 41.4 +0.9
KBL **Kabul** 52.15 295 P P 02 00 45.2 +0.3
KBL pmax pmax
comp=Z,63nm,1.3s
KBL **Kabul** 52.15 295 P P 02 00 45.2 +0.3
KBL **Kabul** 52.15 295 P P 02 00 45.8 +0.9
SNR=29
SPIA **Saint Paul Isl** 53.58 36 P 02 00 55.9
baz=260
MORW **Morawa** 55.20 194 IAmb IAmb 02 01 08.7
comp=Z,39nm,1.2s
FORT **Forrest** 55.51 181 P P 02 01 09.3 +0.3
TNA **Tin City** 56.42 26 P P 02 01 15.5 +0.3
TNA IAmb IAmb 02 01 18.1
comp=Z,29nm,1.1s
TNA **Tin City** 56.42 26 P 02 01 16.9
baz=256
ANM **Nome** 57.27 28 P P 02 01 21.8 +0.5
ANM pmax pmax
comp=Z,27nm,1.2s
ANM **Nome** 57.27 28 P P 02 01 21.8 +0.5
ANM IAmb IAmb 02 01 24.3
comp=Z,27nm,1.2s
ANM **Nome** 57.27 28 P 02 01 23.1
baz=259
SVE **Sverdlovsk** 57.57 323 eP P 02 01 24.6 +1.1
SVE pmax pmax
comp=Z,37nm,1.4s
STKA **Stephens Creek** 57.88 167 P P 02 01 26.8 +0.8
comp=Z,7.5nm,1.0s,baz=352,slow=10,SNR=7.5
STKA LR LR 02 24 23.2
comp=Z,58nm,21.9s,baz=8.2,slow=34
STKA **Stephens Creek** 57.88 167 P P 02 01 26.7 +0.8
AB31 **Akbulak array** 57.90 314 iP P 02 01 26.1 +0.1
ABKAR **Akbulak array** 57.90 314 P P 02 01 25.8 -0.2
ARU **Arti** 58.70 322 ciP P 02 01 31.2 -0.2
ARU 02 03 36.4
ARU S S 02 09 36.4 +1.0
ARU SS SS 02 13 31.0 +2.9
ARU pmax pmax
comp=Z,36nm,1.3s
ARU **Arti** 58.70 322 P P 02 01 30.9 -0.5
SDPT **Sand Point** 58.84 39 P 02 01 33.8
baz=270
RDOG **Red Dog Mine** 58.88 24 P P 02 01 33.4 +0.8
RDOG IAmb IAmb 02 01 35.3
comp=Z,29nm,1.2s
RDOG **Red Dog Mine** 58.88 24 P 02 01 34.0
baz=260
AKTO **Aktyubinsk** 59.10 315 P P 02 01 34.6 +0.3
comp=Z,8.6nm,0.9s,baz=81,slow=4.9,SNR=19
GEYT **Alibeck** 60.41 301 P P 02 01 44.3 +0.6
comp=Z,4.8nm,0.8s,baz=88,slow=6.8,SNR=11
GYA0B **ALIBECK ARRAY** 60.41 301 IAmb IAmb 02 01 51.0
comp=Z,17nm,1.1s
SVW2 **Sparrevohn** 61.44 32 IAmb IAmb 02 01 56.8
comp=Z,16nm,1.0s
A21K **Barrow** 61.53 21 P 02 01 51.9
baz=264,SNR=8.2
IMAR **Indian Mountai** 62.26 27 P P 02 01 56.4 +0.8
SII **Sitkinak Islan** 62.34 38 P 02 01 57.0
baz=274
CHUM **Lake Minchumin** 62.90 29 P 02 02 01.5
baz=272,SNR=5.1
PPLA **Purkeypile** 62.99 30 P P 02 02 01.3 +0.6
PPLA **Purkeypile** 62.99 30 P 02 02 02.3
baz=272
SPCR **Spurr Chakacha** 63.07 32 P 02 02 02.4
baz=273,SNR=6.2
KDAK **Kodiak Island** 63.12 36 P 02 02 02.1
baz=275
SKT **Skwentna** 63.34 31 IAmb IAmb 02 02 04.6
comp=Z,13nm,1.0s
SKT **Skwentna** 63.34 31 P 02 02 03.5
baz=274,SNR=6.3
WBK **Wadi Bani Khal** 63.35 284 P P 02 02 04.4 +0.8
WBK P P 02 02 04.4 +0.8
WSAR **Wadi Sarin** 63.46 285 P P 02 02 04.4 +0.1
comp=Z,7.9nm,1.1s,baz=101,slow=5.9,SNR=6.9
BPAW **Bear Paw Mtn.** 63.47 29 IAmb IAmb 02 02 24.4
comp=Z,30nm,1.3s
BPAW **Bear Paw Mtn.** 63.48 29 P 02 02 05.2
baz=273,SNR=7.8
KTH **Kantishna Hill** 63.53 30 IAmb IAmb 02 02 27.3
comp=Z,20nm,1.3s
MLY **Manley** 63.54 28 IAmb IAmb 02 02 06.9
comp=Z,16nm,1.0s
MLY **Manley** 63.54 28 P 02 02 05.6
baz=273,SNR=17
KIRV **Kirov** 63.56 325 P P 02 02 04.4 +0.1
comp=Z,16nm,0.8s,baz=108,slow=6.3,SNR=11
KIRV **Kirov** 63.56 325 ceP P 02 02 03.6 -0.7
COLD **Coldfoot** 63.66 25 P P 02 02 05.5 +0.6
COLD **Coldfoot** 63.67 25 P 02 02 06.6
baz=272
SUA **Susitna One** 63.75 32 P 02 02 06.0
baz=274,SNR=5.0
TRF **Thorofare Moun** 63.82 30 P 02 02 07.0
baz=274
TOLK **Toolik Lake Re** 63.85 24 P 02 02 07.7
baz=272,SNR=16
BRSE **Bradley Lake S** 63.90 34 P 02 02 07.9
baz=275,SNR=5.0
CUT **Chulitna** 63.91 31 P 02 02 07.0
baz=274
I23K **Minto, Yukon-K** 64.11 28 IAmb IAmb 02 02 21.4
comp=Z,14nm,1.1s
I23K **Minto, Yukon-K** 64.11 28 P 02 02 09.1
baz=274,SNR=8.8
TOO **Toolangi** 64.21 165 P P 02 02 09.6 +0.8
TOO pmax pmax
comp=Z,17nm,1.5s
TOO **Toolangi** 64.21 165 P P 02 02 09.6 +0.8
NEA2 **Nenana** 64.28 28 P 02 02 10.1
baz=274,SNR=21
MCK **McKinley** 64.41 29 P 02 02 10.4
baz=275,SNR=15
PMR **Palmer** 64.51 32 IAmb IAmb 02 02 29.8
comp=Z,26nm,1.2s
PMR **Palmer** 64.51 32 P 02 02 11.1
baz=276
HOQ **Hoqain** 64.52 285 P P 02 02 11.9 +0.7
WAT2 **Susitna Watana** 64.63 30 P 02 02 11.6
baz=276
WRH **Wood River Hil** 64.71 28 IAmb IAmb 02 02 32.1
comp=Z,11nm,1.0s
MHTO **MHTO** 64.74 282 P P 02 02 12.5 -0.2
SNR=6.1
MHTO P P 02 02 12.5 -0.2
SNR=6.1
COLA **College** 64.77 28 iP P 02 02 13.4 +1.2
COLA pmax pmax
comp=Z,10.0nm,0.9s
COLA **College** 64.77 28 P P 02 02 13.6 +1.4
COLA IAmb IAmb 02 02 19.4
comp=Z,22nm,1.1s
KNK **Knik Glacier** 64.85 32 P 02 02 13.4
baz=276
BSY **Bisya** 64.87 285 P P 02 02 14.0 +0.4
BSY P P 02 02 14.0 +0.4
SML **Sawmill** 64.87 31 P 02 02 13.4
baz=276
POKR **Poker Plat Res** 64.93 28 IAmb IAmb 02 02 15.9
comp=Z,20nm,0.9s
POKR **Poker Plat Res** 64.93 28 P 02 02 14.8
baz=276,SNR=5.3
SOHO **SOHO** 65.03 286 P P 02 02 15.2 +0.6
SOHO P P 02 02 15.2 +0.6
WAT6 **Susitna Watana** 65.06 30 P 02 02 14.8
baz=276,SNR=11
PRGR **Permogore** 65.13 328 eP P 02 02 14.0 -0.5
PRGR e 02 02 46.6
PRGR pmax pmax
comp=Z,13nm,0.8s
ILAR **Eielson Array** 65.19 28 P P 02 02 14.7 -0.3
comp=Z,3.7nm,0.9s,baz=273,slow=6.3,SNR=27
ILAR **Eielson Array** 65.19 28 P P 02 02 13.8 -1.1
HDA **Harding Lake** 65.21 28 P 02 02 15.1
baz=276,SNR=14
HDA P 02 02 15.1
baz=276,SNR=14
SCM **Sheep Creek Mo** 65.34 31 P P 02 02 16.3 +0.2
SCM pmax pmax
comp=Z,47nm,1.2s
SCM **Sheep Creek Mo** 65.34 31 P P 02 02 16.3 +0.2
BELG **Belogornoye** 65.36 318 P P 02 02 16.3 +0.1
comp=Z,42nm,0.9s,baz=15,slow=1.8,SNR=11
BELG **Belogornoye** 65.36 318 iP P 02 02 16.3 +0.1
BELG pmax pmax
comp=Z,12nm,1.2s
GLI **Glacier Island** 65.57 32 P 02 02 18.2
baz=278
PRP **Porcupine Dome** 65.68 27 P P 02 02 18.7 +0.4
PRP **Porcupine Dome** 65.68 27 P 02 02 18.8
baz=277
BMAR **Burnt Mountain** 65.82 25 P P 02 02 20.0 +1.0
M24K **Tolsona, Glenn** 65.84 31 P 02 02 20.3
baz=278
PAX **Paxson** 66.04 30 IAmb IAmb 02 02 26.3
comp=Z,11nm,0.9s
KLU **Klutina** 66.05 32 P 02 02 21.2
baz=279
Q23K **Middleton Isla** 66.16 34 P 02 02 21.8
baz=279
SCRK **Sand Creek** 66.55 29 IAmb IAmb 02 02 26.6
comp=Z,13nm,0.9s
SCRK **Sand Creek** 66.55 29 P 02 02 24.1
baz=279,SNR=12
DOT **Dot Lake** 66.57 29 IAmb IAmb 02 02 36.2
comp=Z,20nm,0.9s
BMRM **Bremner River** 66.76 32 P 02 02 25.9
baz=280,SNR=5.1
MENT **Mentasta** 66.84 30 IAmb IAmb 02 02 36.8
comp=Z,18nm,1.0s
MAK **Makhachkala** 67.33 308 eP P 02 02 26.6 -2.4
MAK e 02 04 56.2
MAK eS S 02 11 20.4 -3.5
MAK eSS SS 02 15 41.3 -2.0
MAK pmax pmax
comp=Z,73nm,1.0s
K27K **Chicken** 67.37 28 IAmb IAmb 02 02 35.2
comp=Z,12nm,1.0s
K27K **Chicken** 67.37 28 P 02 02 30.3
baz=281
CRQE **Cirque** 67.53 32 P 02 02 31.1
baz=281
EGAK **Eagle** 67.62 28 P 02 02 31.1
baz=281
BCAR **Beaver Creek A** 67.68 29 P P 02 02 31.1 +0.1
KLMR **Klimovskoe** 68.17 328 eP P 02 02 31.6 -2.4
KLMR e 02 05 00.6
KLMR pmax pmax
comp=Z,30nm,1.4s
KLMR **Klimovskoe** 68.17 328 eP P 02 02 31.6 -2.4
KLMR AMP 02 02 40.4
comp=Z,30nm,1.4s
KLMR ePP PP 02 05 00.6 -3.5
CTG **Chitna Glacier** 68.33 32 P 02 02 36.2
baz=283
CTGM **Chitina Glacie** 68.33 32 IAmb IAmb 02 02 55.4
comp=Z,25nm,1.2s
GROC **Groznyy** 68.48 309 eP P 02 02 33.7 -2.6
GROC e 02 02 59.9
GROC pmax pmax
comp=Z,35nm,1.0s
DMTO **DMTO** 68.51 280 P P 02 02 37.2 +0.3
DMTO P P 02 02 37.2 +0.3
DOK **Doka** 68.93 281 P P 02 02 40.0 +0.5
SNR=6.7
PINM **Pinnacle** 69.05 32 P 02 02 39.9
baz=284
EPYK **Eagle Plains** 69.06 25 P 02 02 40.1
baz=284
APA **Apatity** 69.18 336 ⇓iP P 02 02 39.0 -1.2
APA pmax pmax
comp=Z,16nm,1.0s
APA MLR MLR
comp=Z,2µm,15.0s
VRH **Novokhopyorsk** 69.19 318 eP P 02 02 40.3 -0.2
VRH pmax pmax
comp=Z,30nm,1.0s
POHA **Pohakuloa** 69.24 77 P P 02 02 43.2 +1.5
RBK **Rabkut** 69.25 280 P P 02 02 41.7 +0.2
SNR=10
RBK P P 02 02 41.7 +0.2
SNR=10
WHFO **Wadi Hawf** 69.49 281 P P 02 02 44.0 +0.9
SNR=6.8
WHFO P P 02 02 44.0 +0.9
SNR=6.8
INK **Inuvik** 69.74 23 IAmb IAmb 02 02 45.7
comp=Z,29nm,1.4s
ZEI **Tsey** 69.93 309 eP P 02 02 45.3 -0.3
ZEI pmax pmax
comp=Z,33nm,1.3s
GNI **Garni** 70.06 306 P P 02 02 46.9 +0.6
comp=Z,12nm,1.1s,baz=198,slow=4.6,SNR=11
GNI **Garni** 70.06 306 ceP P 02 02 47.6 +1.3
GNI pmax pmax
comp=Z,22nm,1.3s
GNI **Garni** 70.06 306 P P 02 02 47.2 +0.9
GNI IAmb IAmb 02 03 11.1
comp=Z,19nm,1.1s
ABTO **Aybut** 70.11 280 P P 02 02 46.9 0.0
SNR=11
ABTO P P 02 02 46.9 0.0
SNR=11
HYT **Haines Junctio** 70.18 31 IAmb IAmb 02 03 00.2
comp=Z,16nm,1.1s
ONI **Oni** 70.31 309 P P 02 02 49.8 +2.1
KBZ **Khabaz** 70.38 310 P P 02 02 48.9 +0.9
comp=Z,9.9nm,0.9s,baz=102,slow=3.8,SNR=24
KBZ **Khabaz** 70.38 310 ceP P 02 02 49.2 +1.2
MOS **Moscow** 70.38 323 eP P 02 02 47.0 -0.8
MOS e 02 03 05.9
MOS pmax pmax
comp=Z,35nm,1.2s
KIV **Kislovodsk** 70.46 310 eP P 02 02 48.7 0.0
KIV pmax pmax
comp=Z,60nm,1.1s
KIV **Kislovodsk** 70.46 310 P P 02 02 49.2 +0.5
LPSR **Galich'ya Gora** 70.50 320 eP P 02 02 47.6 -0.9
LPSR pmax pmax
comp=Z,40nm,1.1s
AKH **Akhalkalaki** 70.61 307 ⇑P P 02 02 51.9 +2.2
AKH **Akhalkalaki** 70.61 307 P P 02 02 51.9 +2.2
VORD **Divnogorie** 70.73 318 eP P 02 02 48.7 -1.3
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR **Storozhevoye** 70.74 318 eP P 02 02 48.5 -1.5
VSR pmax pmax
comp=Z,30nm,1.2s
OBN **Obninsk** 71.14 323 P P 02 02 52.6 +0.3
comp=Z,2.0nm,0.5s,baz=357,slow=4.4,SNR=6.8
OBN **Obninsk** 71.14 323 ceP P 02 02 52.7 +0.3
OBN e 02 03 10.9
OBN e 02 05 32.0
OBN eS S 02 12 10.8 +2.4
OBN pmax pmax
comp=Z,58nm,2.5s
OBN MLR MLR
comp=Z,664nm,18.0s
OBN **Obninsk** 71.14 323 P P 02 02 51.7 -0.6
KARS **Kars** 71.14 307 P P 02 02 56.3 +3.4
ARCES **ARCESS Array B** 71.33 339 P P 02 02 53.6 +0.3
comp=Z,7.9nm,0.9s,baz=61,slow=6.1,SNR=9.1
ARCES **ARCESS Array B** 71.33 339 P P 02 02 53.3 -0.1
ARCES pmax pmax
comp=Z,14nm,1.1s
ARCES **ARCESS Array B** 71.33 339 P P 02 02 53.3 -0.1
SOCY **Socotra** 71.39 275 P P 02 02 53.2 -1.6
SOCY **Socotra** 71.39 275 P P 02 02 54.1 -0.6
GEVA **Gevas** 71.84 304 P P 02 02 57.3 0.0
VALR **Valaam** 72.07 330 iP P 02 02 58.3 +0.4
VALR pmax pmax
comp=Z,35nm,1.0s
NOR **Nord** 72.16 355 iP P 02 02 58.2 0.0
NOR IAmb IAmb 02 02 59.4
comp=Z,6.0nm,1.0s
NOR **Nord** 72.16 355 iP P 02 02 58.1 0.0
NOR pmax pmax
comp=Z,6.0nm,1.0s
C36M **Paulatuk** 72.58 21 P 02 03 01.5
baz=295
SOC **Sochi** 72.63 310 eP P 02 03 01.0 -0.6
SOC e 02 05 40.5
SOC ePPP PPP 02 07 26.8
SOC eS S 02 12 24.9 -1.2
SOC eSS SS 02 16 58.3 -6.6
SOC pmax pmax
comp=Z,23nm,0.9s
KOPT **Kop Dagi** 73.20 307 IAmb IAmb 02 03 23.4
comp=Z,25nm,1.2s
MARD **Mardin** 73.87 304 P P 02 03 09.1 -0.2
MARD IAmb IAmb 02 03 11.1
comp=Z,28nm,1.3s
FINES **FINESS Array B** 74.19 331 P P 02 03 10.4 0.0
comp=Z,12nm,0.9s,baz=70,slow=5.0,SNR=24
FINES **FINESS Array B** 74.19 331 ceP P 02 03 10.3 -0.1
FINES pmax pmax
comp=Z,12nm,0.9s

FINES FINESS Array B 74.19 331 P **P** **02 03 09.8 -0.6**
RAYN Ar Rayn 74.77 289 P **P** **02 03 14.5 -0.1**
RAYN pmax pmax
comp=Z,33nm,1.3s
RAYN Ar Rayn 74.77 289 P **P** **02 03 14.5 -0.1**
RAYN IAmb IAmb 02 03 16.5
comp=Z,33nm,1.2s
MALT Malatya 75.29 306 P **P** **02 03 18.8 +1.4**
KVT Kavak 76.03 309 P **P** **02 03 23.1 +1.6**
MNK Minsk 76.06 324 *i* P **P** **02 03 22.5 +1.1**
comp=E,8.0nm,1.5s
MNK *i* P **P** **02 03 22.5 +1.1**
comp=N,23nm,1.6s
MNK *i* P **P** **02 03 22.5 +1.1**
comp=Z,23nm,0.8s
MNK *i* PP **PP** **02 06 14.4 +2.7**
MNK *i* PPP PPP 02 08 01.2
MNK *i* S **S** **02 13 08.5 +4.3**
MNK *i* SS **SS** **02 18 05.9 +9.3**
MNK *i* SSS SSS 02 21 18.8
MNK *i* LQ LQ 02 32 06.2
MNK *i* LR LR 02 37 56.3
MNK *i* LRM MLR 02 39 19.8
comp=E,51nm,17.2s
MNK *i* LRM MLR 02 39 19.8
comp=N,363nm,18.5s
MNK *i* LRM MLR 02 39 19.8
comp=Z,337nm,16.0s
IDID Didziasalis 76.34 325 *e*P **P** **02 03 24.1 +1.1**
MTSE Matsula 76.36 329 *e*P **P** **02 03 23.4 +0.4**
NACGM Naroch 76.49 324 *i* P **P** **02 03 24.2 +0.5**
NACGM *i* P **P** **02 03 24.2 +0.5**
NACGM *i* P **P** **02 03 24.2 +0.5**
NACGM *i* PP **PP** **02 06 16.5 +1.3**
NACGM *i* PPP PPP 02 08 03.6
NACGM *i* SS SS 02 16 48.6 -74
NACGM *i* SSS SSS 02 20 30.4
NACGM *i* LQ LQ 02 32 12.6
NACGM *i* LR LR 02 38 02.5
ISAL Salakas 76.55 325 *e*P **P** **02 03 25.3 +1.2**
GAZ Gaziantep 76.59 305 IAmb IAmb 02 03 46.1
comp=Z,17nm,1.1s
IIGN Ignalina 76.59 325 *e*P **P** **02 03 25.1 +0.8**
RES Resolute Bay 76.59 11 IAmb IAmb 02 03 25.8
comp=Z,28nm,1.0s
AKASG Malin Array Be 76.83 320 P **P** **02 03 25.6 -0.2**
comp=Z,10nm,0.9s,baz=55,slow=6.1,SNR=32
AKASG Malin Array Be 76.83 320 P **P** **02 03 25.3 -0.4**
AKASG pmax pmax
comp=Z,11nm,1.2s
AKASG Malin Array Be 76.83 320 P **P** **02 03 25.3 -0.4**
AKBB Malin Array Si 76.83 320 *ce*P **P** **02 03 24.9 -0.8**
AKBB Malin Array Si 76.83 320 P **P** **02 03 25.0 -0.8**
AKBB IAmb IAmb 02 03 26.7
comp=Z,18nm,1.1s
PABE Paberze 77.69 326 *e*P **P** **02 03 30.7 +0.2**
NEEM North Greenlan 77.74 360 *i* P **P** **02 03 30.9 +0.1**
NEEM IAmb IAmb 02 03 32.5
comp=Z,13nm,1.0s
BR131 Keskin Array S 78.24 308 IAmb IAmb 02 03 35.6
comp=Z,25nm,1.0s
BRTR Keskin Array B 78.24 308 P **P** **02 03 34.5 +0.4**
comp=Z,11nm,1.0s,baz=96,slow=5.0,SNR=33
BRTR Keskin Array B 78.24 308 P **P** **02 03 33.7 -0.4**
BRTR Keskin Array B 78.24 308 P **P** **02 03 33.7 -0.4**
SORM Soroca 78.39 318 ⇓P **P** **02 03 34.3 -0.2**
SORM Soroca 78.39 318 P **P** **02 03 34.3 -0.2**
SUW Suwalki 78.77 325 *e*P **P** **02 03 36.9 +0.4**
SUW Suwalki 78.77 325 *e*P **P** **02 03 36.4 -0.1**
SUW Suwalki 78.77 325 P **P** **02 03 36.3 -0.2**
SUW pmax pmax
comp=Z,75nm,1.1s
SUW Suwalki 78.77 325 P **P** **02 03 36.3 -0.2**
ANTO Ankara 78.78 309 P **P** **02 03 37.2 +0.2**
ANTO pmax pmax
comp=Z,17nm,1.2s
ANTO Ankara 78.78 309 P **P** **02 03 37.2 +0.2**
DBG Daneborg 78.86 352 *i* P **P** **02 03 36.6 -0.1**
DBG IAmb IAmb 02 03 37.8
comp=Z,7.4nm,0.9s
YKA Yellowknife Ar 79.34 25 P **P** **02 03 39.7 +0.2**
comp=Z,5.6nm,0.8s,baz=298,slow=4.8,SNR=43
MMAI Mount Meron Ar 79.53 301 P **P** **02 03 41.5 +0.3**
comp=Z,3.4nm,0.9s,baz=70,slow=10.0,SNR=7.0
TPGR Topolog 79.72 315 ⇑P **P** **02 03 41.7 -0.2**
CFR Carcaliu 79.76 315 ⇓P **P** **02 03 42.5 +0.3**
CFR Carcaliu 79.76 315 P **P** **02 03 42.4 +0.3**
TIRR Tirgusor 79.89 314 IAmb IAmb 02 03 44.4
comp=Z,41nm,1.3s
HARR Harsova 80.10 315 ⇑P **P** **02 03 44.9 +0.9**
HARR Harsova 80.10 315 P **P** **02 03 44.8 +0.9**
TESR Tescani 80.13 317 ⇑P **P** **02 03 44.1 0.0**
LVV L'vov 80.22 321 *e*P **P** **02 03 45.5 +1.0**
BIZ Bicaz 80.28 317 ⇓P **P** **02 03 45.8 +0.9**
VRI Vrincioaia 80.36 316 ⇑P **P** **02 03 46.4 +1.0**
VRI Vrincioaia 80.36 316 P **P** **02 03 46.4 +1.0**
PLOR Plostina 80.41 316 ⇑P **P** **02 03 47.0 +1.3**
PLOR Plostina 80.41 316 P **P** **02 03 47.0 +1.3**
BURAR Bucovina Array 80.52 318 ⇑P **P** **02 03 47.1 +0.7**
BURAR Bucovina Array 80.52 318 P **P** **02 03 47.0 +0.7**
BURAR Bucovina Array 80.52 318 P **P** **02 03 46.4 +0.1**
NB2 NORSAR Subarra 80.64 334 P **P** **02 03 46.0 -0.6**
baz=52,slow=5.9
NOA NORSAR Array B 80.64 334 P **P** **02 03 46.2 -0.4**
comp=Z,12nm,0.8s,baz=52,slow=5.2,SNR=30
NORES NORESS Array B 80.69 334 P **P** **02 03 50.2 +3.4**
OZUR 80.85 317 ⇑P **P** **02 03 49.5 +1.5**
MLR Muntele Rosu 81.02 316 P **P** **02 03 48.8 -0.3**
comp=Z,8.3nm,0.9s,baz=98,slow=5.9,SNR=8.9
MLR Muntele Rosu 81.02 316 ⇑P **P** **02 03 49.4 +0.3**
BEL Belsk 81.08 323 *e*P **P** **02 03 49.7 +0.7**
DOPR Dopca 81.15 317 ⇑P **P** **02 03 50.9 +1.3**
VOIR 81.60 316 ⇓P **P** **02 03 52.5 +0.3**
VOIR 81.60 316 P **P** **02 03 52.4 +0.3**
UZH Uzhgorod 81.78 320 *e*P **P** **02 03 50.4 -2.4**
UZH *i* 02 03 54.0
UZH *e* 02 03 59.6
TRPA Tarpa 81.87 320 ⇑P **P** **02 03 54.7 +1.4**
ARR Arges 81.90 316 ⇑P **P** **02 03 54.9 +1.3**
KONO Kongsberg 82.11 333 *ce*P **P** **02 03 54.4 0.0**
KONO pmax pmax
comp=Z,34nm,1.7s
ELL Elmali 82.13 307 P **P** **02 03 55.5 +0.4**
SUMG Summit 82.26 356 *i* P **P** **02 03 56.1 +0.7**
SUMG IAmb IAmb 02 03 57.6
comp=Z,20nm,1.0s
SUMG Summit 82.26 356 *i* P **P** **02 03 56.1 +0.7**
SUMG pmax pmax
comp=Z,20nm,1.0s
SUMG Summit 82.26 356 P **P** **02 03 55.5 +0.1**
LOT Lotru 82.40 317 ⇓P **P** **02 03 57.1 +0.7**
OJC Ojcow 82.42 322 *e*P **P** **02 03 56.5 +0.2**
OJC Ojcow 82.42 322 IAmb IAmb 02 03 58.6
comp=Z,27nm,1.1s
SCO Scoresbysund 82.52 350 *i* P **P** **02 03 56.9 +0.6**
SCO IAmb IAmb 02 03 58.2
comp=Z,11nm,1.0s
SCO Scoresbysund 82.52 350 *i* P **P** **02 03 56.9 +0.6**
SCO pmax pmax
comp=Z,11nm,1.0s
NIE Niedzica 82.54 321 *e*P **P** **02 03 57.1 +0.2**
GZR Gura Zlata 83.04 317 ⇑P **P** **02 04 00.4 +0.8**
D03D Eldon 83.13 40 P 02 04 01.6
baz=300
LANS Liptovska Anna 83.14 321 *e*P **P** **02 04 03.3 +3.2**
LANS Liptovska Anna 83.14 321 *e*P **P** **02 04 03.3 +3.2**
PLD Plovdiv 83.36 313 P **P** **02 04 02.4 +1.2**
PLD pmax pmax
comp=Z,82nm,1.4s
PUNG Punghina 83.48 316 ⇑P **P** **02 04 03.1 +1.4**
HERR Herculane 83.51 317 ⇑P **P** **02 04 02.7 +0.8**
PSZ Piszkesteto 83.53 320 P **P** **02 04 05.1 +3.0**
PSZ pmax pmax
comp=Z,8.0nm,1.3s
PSZ Piszkesteto 83.53 320 IAmb IAmb 02 04 05.3
comp=Z,16nm,1.4s
B06A Marblemount 83.57 39 P **P** **02 04 03.1 +0.9**
B06A IAmb IAmb 02 04 04.4
comp=Z,26nm,1.3s
BZS Buzias 83.64 318 ⇑P **P** **02 04 03.0 +0.4**
BZS Buzias 83.64 318 P **P** **02 04 02.8 +0.2**
BZS pmax pmax
comp=Z,10.0nm,1.4s

VYHS Vyhne 83.84 321 *e*P **P** **02 04 04.8 +1.2**
VYHS Vyhne 83.84 321 *e*P **P** **02 04 04.8 +1.2**
GOET G??ttrup 83.86 331 *i* P **P** **02 04 03.7 +0.2**
MORC Moravsky Berou 83.90 323 *e*P **P** **02 04 04.6 +0.7**
MORC Moravsky Berou 83.90 323 P **P** **02 04 03.8 -0.1**
MORC pmax pmax
comp=Z,15nm,1.1s
MORC Moravsky Berou 83.90 323 P **P** **02 04 03.8 -0.1**
MORC IAmb IAmb 02 04 06.2
comp=Z,15nm,1.1s
MDVR Moldavita 84.00 317 ⇑P **P** **02 04 04.0 -0.5**
KSP Ksiaz 84.00 324 *e*P **P** **02 04 05.5 +1.2**
VTS Vitosha 84.08 314 ⇑P **P** **02 04 06.5 +1.4**
VTS Vitosha 84.08 314 P **P** **02 04 06.1 +1.0**
VTS pmax pmax
comp=Z,33nm,1.2s
KRLC Kraliky 84.15 323 *e*P **P** **02 04 05.8 +0.6**
KRLC Kraliky 84.15 323 *e*P **P** **02 04 05.8 +0.6**
OSTC Ostas 84.20 324 *ex* x 02 04 12.8
MUD Monsted U'grnd 84.24 331 *i* P **P** **02 04 06.1 +0.7**
MUD IAmb IAmb 02 04 06.8
comp=Z,16nm,1.0s
MUD Monsted U'grnd 84.24 331 *i* P **P** **02 04 06.1 +0.7**
MUD pmax pmax
comp=Z,17nm,1.0s
DPC Dobruska-Polom 84.25 324 *e*P **P** **02 04 06.9 +1.2**
DPC MLR MLR
comp=Z,700nm,15.4s
DPC Dobruska-Polom 84.25 324 *e*P **P** **02 04 06.9 +1.2**
DPC AMS AMS 02 44 20.0
comp=Z,700nm,15.4s
CHVC Chvalec 84.27 324 *e*P **P** **02 04 06.6 +0.8**
JAVC Velka Javorina 84.31 322 *e*P **P** **02 04 07.6 +1.6**
SRS Serrai 84.56 313 P **P** **02 04 07.3 -0.1**
SRS pmax pmax
comp=Z,14nm,1.2s
VRAC Vranov 84.67 323 P **P** **02 04 08.9 +1.1**
comp=Z,26nm,1.1s,baz=63,slow=5.9,SNR=5.4
VRAC Vranov 84.67 323 ⇑P **P** **02 04 09.4 +1.6**
VRAC Vranov 84.67 323 *e*P **P** **02 04 08.9 +1.1**
B08A Colville Reser 84.88 38 IAmb IAmb 02 04 11.2
comp=Z,28nm,1.4s
KRUC Moravsky 84.91 322 *e*P **P** **02 04 09.7 +0.7**
FRGS Fruska Gora 84.98 318 ⇓P **P** **02 04 10.3 +0.8**
ZST Bratislava 84.98 321 *e*P **P** **02 04 11.1 +1.7**
ZST Bratislava 84.98 321 *e*P **P** **02 04 11.1 +1.7**
PVCC Panska Ves 85.09 324 *e*P **P** **02 04 11.5 +1.6**
PVCC Panska Ves 85.09 324 *e*P **P** **02 04 11.5 +1.6**
H04A Detroit Lake 85.11 43 P **P** **02 04 10.9 +0.8**
H04A IAmb IAmb 02 04 23.3
comp=Z,32nm,1.5s
MORH Mrgy, Hungar 85.13 319 ⇑P **P** **02 04 10.9 +0.7**
K02D Willamette Mer 85.18 45 P 02 04 10.6
baz=300
BRG Berggiesshubel 85.23 325 *i* P **P** **02 04 11.5 +1.0**
BRG Amp 02 04 13.2
comp=Z,24nm,1.3s
BRG *ex* x 02 04 22.5
BRG Amp 02 04 23.5
comp=Z,10nm,1.2s
TREC Trest 85.28 323 *e*P **P** **02 04 11.8 +0.9**
TREC MLR MLR
comp=Z,800nm,19.3s
TREC Trest 85.28 323 *e*P **P** **02 04 11.8 +0.9**
TREC AMS AMS 02 44 20.0
comp=Z,800nm,19.3s
DIVS Divibare 85.40 317 IAmb IAmb 02 04 13.1
comp=Z,15nm,1.1s
PRU Pruhonice 85.41 324 *e*P **P** **02 04 12.6 +1.1**
PRU MLR MLR
comp=Z,600nm,18.3s
PRU Pruhonice 85.41 324 *e*P **P** **02 04 12.6 +1.1**
PRU AMS AMS 02 45 00.0
comp=Z,600nm,18.3s
I04A Tendick Farm, 85.42 43 P 02 04 12.6
baz=301
CLL Collm 85.47 325 *i* P **P** **02 04 12.5 +0.8**
comp=Z,23nm,1.1s
CLL *e*PP **PP** **02 07 35.0 +5.5**
CLL Collm 85.47 325 *i* P **P** **02 04 12.5 +0.8**
CLL pmax pmax
comp=Z,23nm,1.1s
CLL Collm 85.47 325 IAmb IAmb 02 04 13.4
comp=Z,23nm,1.1s
E07A Sunnyside 85.53 40 IAmb IAmb 02 04 14.9
comp=Z,20nm,1.2s
SOP Sopron 85.57 321 P **P** **02 04 13.4 +1.1**
SOP pmax pmax
comp=Z,13nm,1.2s
LIT Litokhoron 85.78 312 IAmb IAmb 02 04 15.1
comp=Z,29nm,1.4s
I05D Terrebonne, OR 85.81 43 P 02 04 15.3
baz=301
D08A Wollman Farm, 85.81 39 P **P** **02 04 13.9 +0.4**
D08A IAmb IAmb 02 04 19.8
comp=Z,18nm,1.1s
HAWA Hanford 85.81 40 IAmb IAmb 02 04 19.9
comp=Z,19nm,1.2s
CONA Conrad Observa 85.83 322 *e*P **P** **02 04 14.6 +0.9**
comp=Z,30nm,1.1s,SNR=17
PBCC Pribram 85.87 324 *e*P **P** **02 04 14.4 +0.6**
J04D Umpqua Nationa 85.89 44 P 02 04 15.4
baz=301
NEW Newport 86.17 38 P 02 04 17.1
baz=304
CKRC Cesky Krumlov 86.19 323 *e*P **P** **02 04 15.8 +0.4**
CKRC AMS AMS 02 44 50.0
comp=Z,700nm,22.1s
L04D Klamath Falls 86.29 45 P 02 04 17.5
baz=301
NKC Novy Kostel 86.38 325 *e*P **P** **02 04 17.0 +0.7**
NKC MLR MLR
comp=Z,800nm,15.0s
NKC Novy Kostel 86.38 325 *e*P **P** **02 04 17.0 +0.7**
NKC AMS AMS 02 46 10.0
comp=Z,800nm,15.0s
ARSA Arzberg 86.39 321 *e*P **P** **02 04 16.9 +0.4**
comp=Z,14nm,1.4s
KHC Kasperske Hory 86.41 323 *e*P **P** **02 04 16.8 +0.3**
KHC *e* 02 04 23.1
KHC MLR MLR
comp=Z,700nm,16.2s
KHC Kasperske Hory 86.41 323 *e*P **P** **02 04 16.8 +0.3**
KHC *ep*P **pwP** **02 04 23.1 -3.5**
KHC AMS AMS 02 45 20.0
comp=Z,700nm,16.2s
KHC Kasperske Hory 86.41 323 IAmb IAmb 02 04 18.6
comp=Z,14nm,1.1s
J05D Fort Rock, OR 86.42 43 P 02 04 18.4
baz=301
K04D Chiloquin, OR 86.43 44 P 02 04 18.6
baz=301
GEC2 GERESS Array S 86.51 323 IAmb IAmb 02 04 18.9
comp=Z,20nm,1.1s
GERES GERESS Array B 86.51 323 P **P** **02 04 17.3 +0.2**
comp=Z,9.4nm,0.9s,baz=57,slow=4.9,SNR=55
GERES GERESS Array B 86.51 323 P **P** **02 04 17.0 -0.1**
GERES GERESS Array B 86.51 323 P **P** **02 04 16.9 -0.1**
E09A Wood Farm, Sta 86.55 40 IAmb IAmb 02 04 23.7
comp=Z,16nm,1.1s
N02D Trinity Center 86.66 46 P 02 04 19.2
baz=301
PDG Podgorica 86.72 316 P **P** **02 04 18.1 0.0**
PDG IAmb IAmb 02 04 20.3
comp=Z,27nm,1.3s
MOA Molln 86.76 322 *e*P **P** **02 04 18.6 +0.3**
comp=Z,10nm,1.1s,SNR=6.1
M04C Macdoel 86.81 45 P 02 04 19.7
baz=301
K05A Summer Lake 86.92 44 IAmb IAmb 02 04 22.2
comp=Z,25nm,1.2s
WDC Whiskeytown Da 86.97 46 IAmb IAmb 02 04 34.9
comp=Z,14nm,1.4s
SOKA Soboth 86.99 321 *e*P **P** **02 04 19.2 -0.2**
comp=Z,10nm,1.4s,SNR=6.7
O02D Mt. Diablo Mer 87.01 47 P 02 04 20.7
baz=300
I07A Izee 87.06 42 IAmb IAmb 02 04 26.6
comp=Z,16nm,1.3s
GRFO Grafenberg 87.34 325 P **P** **02 04 21.0 0.0**
GRFO pmax pmax
comp=Z,34nm,1.3s
GRFO Grafenberg 87.34 325 P **P** **02 04 21.0 0.0**
ITM Ithomi 87.61 310 IAmb IAmb 02 04 41.1
comp=Z,17nm,1.0s

MOD Modoc Plateau 87.72 44 IAmb IAmb 02 04 25.6
comp=Z,18nm,1.1s
JTMT Jette 88.03 37 IAmb IAmb 02 04 37.8
comp=Z,8.9nm,1.1s
J08A Circle Bar Ran 88.08 42 IAmb IAmb 02 04 31.4
comp=Z,17nm,1.1s
ORV Oroville 88.18 47 IAmb IAmb 02 04 30.6
comp=Z,11nm,1.2s
SFJD Kangerlussuaq 88.25 360 P **P** **02 04 23.5 -1.4**
SFJD pmax pmax
comp=Z,11nm,1.0s
SFJD Kangerlussuaq 88.25 360 P **P** **02 04 23.5 -1.4**
SFJD IAmb IAmb 02 04 25.5
comp=Z,10nm,0.9s
WVOR Wild Horse Val 88.48 43 IAmb IAmb 02 04 47.2
comp=Z,12nm,1.2s
WATA Walderalm 88.55 323 *e*P **P** **02 04 26.6 -0.4**
comp=Z,4.0nm,0.8s
WTTA Wattenberg 88.56 323 *e*P **P** **02 04 26.7 -0.4**
comp=Z,4.3nm,0.9s
MSO Missoula 88.75 38 P 02 04 28.9
baz=306
BEKR Beckworth 88.77 46 IAmb IAmb 02 04 34.0
comp=Z,11nm,1.1s
MOTA Moosalm 88.80 323 *e*P **P** **02 04 27.2 -0.9**
comp=Z,2.8nm,0.7s
AFDM Forest Hills D 88.84 47 IAmb IAmb 02 04 30.4
comp=Z,14nm,1.5s
FETA Feichten 89.20 323 *e*P **P** **02 04 29.8 -0.3**
comp=Z,6.1nm,1.1s
FCC Fort Churchill 89.23 21 IAmb IAmb 02 04 31.2
comp=Z,24nm,1.2s
DAVA Damuels 89.50 323 *e*P **P** **02 04 30.8 -0.7**
comp=Z,4.6nm,0.6s
MFID Camas Ranch 89.65 41 IAmb IAmb 02 04 34.9
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 89.81 323 P **P** **02 04 32.8 -0.1**
comp=Z,13nm,1.1s,baz=158,slow=5.4,SNR=5.7
PPT Papeete 89.93 109 LR LR 02 37 01.4
comp=Z,114nm,20.8s,baz=334,slow=30
WLF Walferdange 89.94 327 *d*PcP **P** **02 04 33.2 0.0**
BMRD Maredsous 90.19 328 *d*PcP **P** **02 04 34.3 -0.1**
EGMT Eagleton 90.27 35 IAmb IAmb 02 04 37.2
comp=Z,20nm,1.1s
EGMT Eagleton 90.27 35 P 02 04 36.0
baz=309
TUE Stuetta 90.29 323 P **P** **02 04 35.2 -0.1**
TUE IAmb IAmb 02 04 36.2
comp=Z,12nm,1.0s
AQU L'Aquila 90.39 318 P **P** **02 04 37.2 +1.6**
AQU pmax pmax
comp=Z,30nm,1.6s
HLID Hailey 90.40 41 P 02 04 37.4
baz=306
DOU Dourbes 90.41 328 *d*PcP **P** **02 04 35.5 0.0**
BCYI Bear Canyon 90.55 39 P **P** **02 04 36.0 -0.6**
BOZ Bozeman (W) 90.78 38 P 02 04 38.3
baz=308
NVAR Mina Array Bea 90.89 46 P **P** **02 04 39.4 +1.2**
comp=Z,1.3nm,0.7s,baz=271,slow=5.1,SNR=10
NVAR Mina Array Bea 90.89 46 P **P** **02 04 38.9 +0.7**
QLMT Earthquake Lak 91.36 38 P **P** **02 04 41.0 +0.8**
YHL Hebgen Lake 91.48 38 IAmb IAmb 02 04 44.0
comp=Z,12nm,1.2s
YHB Horse Butte 91.54 38 IAmb IAmb 02 04 47.9
comp=Z,16nm,1.2s
YMR Madison River 91.72 38 IAmb IAmb 02 04 48.9
comp=Z,15nm,1.2s
KIBK Kibwezi 91.75 268 P **P** **02 04 42.7 +0.2**
KMBO Kilima Mbogo 91.97 270 P **P** **02 04 44.1 +0.5**
comp=Z,1.0nm,0.8s,baz=151,slow=1.9,SNR=3.6
H17A Grant Village 92.11 38 P 02 04 45.8
baz=309
FLWY Flagg Ranch 92.23 38 P **P** **02 04 45.4 +1.0**
RLMT Red Lodge 92.37 37 IAmb IAmb 02 04 59.1
comp=Z,10nm,1.2s
RLMT Red Lodge 92.37 37 P 02 04 46.2
baz=310
HVU Hansel Valley 92.43 41 IAmb IAmb 02 04 52.0
comp=Z,10nm,1.3s
BNI Bardonecchia 92.63 323 P **P** **02 04 47.9 +1.9**
BNI Bardonecchia 92.63 323 IAmb IAmb 02 04 53.1
comp=Z,12nm,1.2s
RAFF Raffo Rosso 92.70 313 P **P** **02 04 45.8 -0.5**
DGMT Dagmar 92.77 32 P 02 04 47.1
baz=314
LRMC Laurel Mtn Rad 92.92 49 P 02 04 48.7
baz=304
FURC Furnace Creek, 92.93 47 P 02 04 48.7
baz=304
EDW2 Edwards Air Fo 93.04 49 P 02 04 49.2
baz=304
TPNV Topopah Spring 93.06 47 IAmb IAmb 02 05 01.4
comp=Z,12nm,1.1s
HWUT Hardware Ranch 93.26 41 IAmb IAmb 02 04 56.5
comp=Z,14nm,1.4s
DUG Dugway, Tooele 93.36 43 IAmb IAmb 02 04 52.2
comp=Z,12nm,1.4s
DUG Dugway, Tooele 93.36 43 P 02 04 51.2
baz=307
PRN Pahroc Range 93.59 46 IAmb IAmb 02 04 54.0
comp=Z,13nm,1.3s
BW06 Boulder Array 93.70 39 P 02 04 52.0
baz=309
PDAR Pinedale Array 93.70 39 P **P** **02 04 50.7 -0.5**
comp=Z,1.6nm,0.9s,baz=329,slow=1.7,SNR=10
PDAR Pinedale Array 93.70 39 P **P** **02 04 50.3 -0.9**
SHPR Sheep Range 94.03 47 P **P** **02 04 52.6 -0.1**
SHPR IAmb IAmb 02 04 59.2
comp=Z,11nm,1.1s
TUQ Turquoise Moun 94.14 48 P 02 04 54.5
baz=305
HEC Hector,Ludlow 94.20 49 P 02 04 54.9
baz=304
MURC Murrieta 94.30 50 P 02 04 54.9
baz=304
GMRC Granite Mounta 94.68 48 P 02 04 56.8
baz=305
PFO Pinyon Flats O 94.80 50 *i* P **P** **02 04 57.2 +1.0**
PFO pmax pmax
comp=Z,13nm,1.2s
PFO Pinyon Flats O 94.80 50 P **P** **02 04 57.0 +0.7**
PFO IAmb IAmb 02 05 02.2
comp=Z,10nm,1.1s
PFO Pinyon Flats O 94.80 50 P 02 04 57.2
baz=304
TPFO Pinon Flats 94.81 50 P 02 04 57.1
baz=304
BELC Belle Mtn. Jos 94.90 49 P 02 04 57.5
baz=305
LCMT Little Creek M 94.99 45 IAmb IAmb 02 05 03.5
comp=Z,6.0nm,0.9s
ULM Lac du Bonnet 95.20 27 P **P** **02 04 57.1 -0.4**
comp=Z,3.1nm,0.9s,baz=304,slow=3.8,SNR=6.1
ULM Lac du Bonnet 95.20 27 *i* P **P** **02 04 56.8 -0.7**
MONP2 Monument Peak 95.23 50 P 02 04 59.3
baz=304
IRM Iron Mountain 95.39 48 P 02 05 00.5
baz=305
BC3 Big Chuckawall 95.47 49 P 02 05 00.7
baz=305
SWSC Sam W. Stewart 95.63 50 P 02 05 01.5
baz=305
RSSD Black Hills 95.84 35 P 02 05 01.6
baz=313
PV17 East Wray Mesa 96.90 42 P **P** **02 05 04.6 -1.2**
PV17 IAmb IAmb 02 05 29.6
comp=Z,8.2nm,1.1s
B35A Bob, Littlefor 97.55 27 IAmb IAmb 02 05 13.4
comp=Z,10nm,1.4s
ESDC Sonseca Array 102.04 325 P **Pdif** **02 05 27.7 -0.9**
comp=Z,1.4nm,1.0s,baz=12,slow=5.0,SNR=6.8
ESDC PP **PP** **02 09 42.2 +3.0**
comp=Z,1.7nm,1.1s,baz=53,slow=9.8,SNR=5.9
TXAR Lajitas Array 106.04 46 Pdiff **Pdif** **02 05 45.2 -1.4**
comp=Z,0.1nm,0.6s,baz=222,slow=2.2,SNR=1.9
TXAR PKiKP **PKiKP** **02 09 59.4 +0.7**
comp=Z,0.2nm,0.6s,baz=134,slow=2.6,SNR=2.5
TXAR PP **PP** **02 10 12.2 +2.8**
comp=Z,1.3nm,1.1s,baz=316,slow=5.2,SNR=5.9
TORD Torodi Ar. Bea 116.05 300 PKP **PKPdf** **02 10 17.4 -0.4**
comp=Z,0.3nm,0.4s,baz=58,slow=3.6,SNR=4.7
TORD PP **PP** **02 11 27.2 +5.2**
comp=Z,1.3nm,1.0s,baz=44,slow=5.1,SNR=5.5
SNAA Sanae 126.19 197 PKIKP **PKPdf** **02 10 35.7 0.0**
SNAA Sanae 126.19 197 PKPdf **PKPdf** **02 10 35.7 0.0**
BELA Belgrano 2 126.54 184 **PKPdf** **02 10 36.1 -0.1**

VNA2	**Neumayer--Watz**	**127.82**	**197**	PKPdf	**PKiKP**	**02 10 39.7**	**+0.3**
	baz=98,slow=3.4						
VNA3	**Neumayer Olymp**	**128.19**	**196**	PKPdf	**PKPdf**	**02 10 39.7**	**+0.2**
VNA1	**Neumayer--Stat**	**128.21**	**197**	PKPdf	**PKiKP**	**02 10 40.3**	**+0.2**
ROSC	**El Rosal**	**142.69**	**40**	PKP	**PKiKP**	**02 11 11.1**	**-0.7**
	comp=Z,8.0nm,0.5s,baz=101,slow=16,SNR=3.7						
OTAV	**Otavalo**	**143.51**	**51**	PKIKP	**PKPdf**	**02 11 08.9**	**-1.3**
OTAV	**Otavalo**	**143.51**	**51**		**PKPdf**	**02 11 08.8**	**-1.3**
GO10	**Punta Arenas**	**148.16**	**157**	PKPbc	**PKPab**	**02 11 22.3**	**-0.2**
PTGA	**Pitinga**	**154.36**	**21**		**PKiKP**	**02 11 35.6**	**+0.3**
PTGA					**PKPab**	**02 11 47.3**	**-1.8**
LPAZ	**La Paz**	**161.85**	**65**	PKP	**PKPdf**	**02 11 38.4**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=295,slow=1.4,SNR=5.4						
LPAZ	**La Paz**	**161.85**	**65**	PKIKP	**PKPdf**	**02 11 37.3**	**+0.6**
LPAZ	**La Paz**	**161.85**	**65**		**PKPdf**	**02 11 37.3**	**+0.6**
BDFB	**Brasilia**	**170.21**	**342**	PKP	**PKPdf**	**02 11 42.7**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=280,slow=3.3,SNR=3.0						
CPUP	**Villa Florida**	**174.23**	**104**	PKP	**PKPdf**	**02 11 44.9**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=67,slow=6.3,SNR=3.6						

DDA ***17*** *02:05:36.2, 34°.93N×26°.69E, h6km±3km, MW5.2*

NIC ***17*** *02:05:39.8±0.0, 34°.92N×26°.87E, h9km±1km, Ml5.5/5*

NEIC ***17*** *02:05:40.3±1.7, 35°.03N±0°.04×26°.79E±0°.04, h15km±2km, mb5.3/409, Mww5.3, ML5.3(THE), Error ellipse: s-maj=6.2km s-min=4.3km az=199.0*

PDG ***17*** *02:05:40.2±0.7, 35°.05N×26°.84E, h10km±2km, ML5.3/14, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0*

HLW ***17*** *02:05:40.9, 35°.04N×27°.00E, h12km±13km, Md5.0, Ml5.2*

ISK ***17*** *02:05:41.9, 35°.10N×26°.80E, h20km, ML5.5/25*

ATH ***17*** *02:05:42.2, 35°.16N×26°.74E, h40km±4km, ML5.4/13, Error ellipse: s-maj=6.6km s-min=1.9km az=147.0*

BJI ***17*** *02:05:42.2±0.0, 34°.97N×26°.55E, h56km, mB5.5/51, mb5.2/69, Ms5.2/64, Ms7 4.9/62*

THE ***17*** *02:05:42.0, 35°.17N×26°.72E, h14km, Mw5.3, Fault plane solution: NP1:φs245.00000°, δ74.00000°, λ-21.00000°. NP2:φs341.00000°, δ70.00000°, λ-16.00000°., Stations used: VLY,KARP,SANT,APE,ARG*

MED_RC ***17*** *02:05:43.0±0.2, 35°.03N×26°.63E, h46km, MW5.5/34, Moment Tensor Solution. Body waves: s7,c7;Mantle waves: s34,c42; Duration: 1ŝ7 Moment tensor: Scale 10^17Nm; Mrr-0.37±.11; Mθθ-1.44±.06; Mφφ 1.82±.06; Mrθ 0.90±.07; Mθφ 0.87±.06; Mφr-0.12±.07; Best double couple: Mo2.08000×10^17 NP1:φs332.00000°, δ69.00000°, λ-162.00000°. NP2:φs236.00000°, δ73.00000°, λ-22.00000°. Principal axes: T 2.0400, Plg3.0000°, Azm285.0000°; N 0.0900, Plg62.0000°, Azm20.0000°; P -2.1200, Plg27.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

IDC ***17*** *02:05:43.0±1.3, 35°.23N×26°.72E, h29km±9km, mb4.8/40, mb1 4.9/50, mb1mx4.8/60, mbtmp5.0/50, ML4.5/9, MS4.9/39, Ms1 4.9/39, ms1mx4.7/48 Error ellipse: s-maj=9.3km s-min=7.4km az=155.0*

NEIC ***17*** *02:05:44.3±0.1, 35°.00N±0°.01×26°.61E±0°.01, h25km, MW5.5/145, Moment Tensor Solution. s125,c200; s145,c265; Duration: 1ŝ3 Moment tensor: Scale 10^17 Nm; Mrr-0.50±.02; Mθθ-1.09±.02; Mφφ 1.59±.02; Mrθ 1.21±.05; Mθφ 0.53±.02; Mφr 0.34±.04; Best double couple: Mo1.95300×10^17 NP1:φs332.00000°, δ51.00000°, λ-163.00000°. NP2:φs231.00000°, δ77.00000°, λ-40.00000°. Principal axes: T 1.8530, Plg16.0000°, Azm287.0000°; N 0.1990, Plg48.0000°, Azm36.0000°; P -2.0540, Plg37.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MOS ***17*** *02:05:44.5±1.1, 35°.18N×26°.73E, h21km, mb5.4/67, MS5.0/33 Error ellipse: s-maj=3.5km s-min=2.2km az=95.4*

ISC 17 02:05:41.4±0.4, 35°.12N±0°.02×26°.74E±0°.01, h18km±1km, n1288, σ1ŝ90/1354, mb5.3/358, MS5.0/71, 57C-81D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.43**	**270**	P	**Pb**	**02 05 51.2**	**+0.7**
ZKR				S	**Sn**	**02 05 59.7**	**-0.5**
ZKR				AML	AML	02 06 00.1	
ZKR				AML	AML	02 06 02.8	
ZKR	**Zakros**	**0.43**	**270**	P	**Pb**	**02 05 51.2**	**+0.7**
ZKR				S	**Sb**	**02 05 59.1**	**+2.4**
	421μm,0.5s						
ZKR	**Zakros**	**0.43**	**270**	PG	**Pb**	**02 05 51.3**	**+0.8**
ZKR				SG	**Sn**	**02 05 59.5**	**-0.6**
ZKR	**Zakros**	**0.43**	**270**	P	**Pb**	**02 05 51.2**	**+0.7**
ZKR				AML	AML	02 05 58.9	
	908nm,0.5s						
ZKR				AML	AML	02 05 58.9	
	908nm,0.5s						
ZKR				AML	AML	02 05 59.0	
	1μm,0.7s						
ZKR				AML	AML	02 05 59.0	
	1μm,0.7s						
ZKR				S	**Sn**	**02 05 59.6**	**-0.5**
STIA	**Sitia Lasithi**	**0.54**	**279**	P	**Pg**	**02 05 52.0**	**-0.2**
STIA				S	**Sn**	**02 06 02.1**	**-0.7**
KARP	**Karpathos**	**0.55**	**38**	P	**Pb**	**02 05 52.7**	**+0.2**
KARP				S	**Sb**	**02 06 02.0**	**+1.8**
KARP				AML	AML	02 06 03.1	
KARP				AML	AML	02 06 04.1	
KARP	**Karpathos**	**0.55**	**38**	P	**Pb**	**02 05 52.9**	**+0.4**
KARP				S	**Sb**	**02 06 01.7**	**+1.6**
	1454μm,0.5s						
KARP	**Karpathos**	**0.55**	**38**	PG	**Pb**	**02 05 52.9**	**+0.4**
KARP				SG	**Sb**	**02 06 01.7**	**+1.6**
KARP	**Karpathos**	**0.55**	**38**	Pg	**Pb**	**02 05 52.8**	**+0.2**
KARP				Sg	**Sb**	**02 06 01.8**	**+1.7**
KARP	**Karpathos**	**0.55**	**38**	⇑P	**Pb**	**02 05 52.8**	**+0.2**
KARP				S	**Sn**	**02 06 02.7**	**-0.4**
KARP				AML	AML	02 06 02.8	
	3μm,0.5s						
KARP				AML	AML	02 06 02.8	
	3μm,0.5s						
KARP				AML	AML	02 06 03.7	
	3μm,0.5s						
KARP				AML	AML	02 06 03.7	
	3μm,0.5s						
FRMA	**Ierapetra Chan**	**0.83**	**263**	P	**Pg**	**02 05 56.0**	**-1.7**
FRMA				S	**Sg**	**02 06 08.2**	**-0.5**
	115μm,0.5s						
NPS	**Neapolis**	**0.94**	**279**	P	**Pn**	**02 06 00.9**	**+1.2**
NPS				AML	AML	02 06 19.9	
NPS				AML	AML	02 06 23.9	
NPS	**Neapolis**	**0.94**	**279**	P	**Pn**	**02 06 00.7**	**+1.0**
NPS				S	**Sn**	**02 06 14.6**	**+1.9**
	165μm,0.8s						
NPS	**Neapolis**	**0.94**	**279**	P	**Pn**	**02 06 00.8**	**+1.2**
NPS				S	**Sn**	**02 06 14.6**	**+1.9**
IACM	**Heraklion**	**1.38**	**278**	P	**Pg**	**02 06 08.3**	**+0.3**
KSTL	**Kastelli Herak**	**1.38**	**278**	P	**Pn**	**02 06 04.5**	**-1.3**
KSTL				S	**Sn**	**02 06 20.4**	**-3.2**
IDI	**Anoyia**	**1.53**	**277**	Pg	**Pb**	**02 06 10.2**	**+1.0**
	265nm,0.3s,baz=104,slow=7.7,SNR=416						
IDI				Lg	Lg	02 06 33.5	
	1μm,0.3s,baz=305,slow=11,SNR=7.3						
IDI	**Anoyia**	**1.53**	**277**	P	**Pg**	**02 06 10.7**	**-0.1**
IDI				AML	AML	02 06 41.5	
IDI				AML	AML	02 06 45.0	
	comp=E,95048μm,0.6s						
IDI	**Anoyia**	**1.53**	**277**	P	**Pg**	**02 06 10.6**	**-0.2**
IDI				S	**Sg**	**02 06 31.4**	**+0.7**
	comp=E,61μm,0.7s						
IDI	**Anoyia**	**1.53**	**277**	⇓P	**Pg**	**02 06 11.2**	**+0.4**
IDI				⇑S	**Sg**	**02 06 30.8**	**+0.1**
IDI	**Anoyia**	**1.53**	**277**	PN	**Pb**	**02 06 10.1**	**+0.9**
IDI	**Anoyia**	**1.53**	**277**	Pn	**Pg**	**02 06 10.5**	**-0.3**
NIS1	**Nisyros Isl.**	**1.53**	**13**	P	**Pb**	**02 06 09.4**	**+0.2**
NIS1				AML	AML	02 06 48.3	
NIS1				AML	AML	02 06 50.2	
NIS1	**Nisyros Isl.**	**1.53**	**13**	P	**Pb**	**02 06 09.2**	**0.0**
NIS1				S	**Sg**	**02 06 29.7**	**-1.0**
	comp=E,145μm,0.7s						
NIS1	**Nisyros Isl.**	**1.53**	**13**	PN	**Pb**	**02 06 09.2**	**0.0**
NIS1				SN	**Sb**	**02 06 28.7**	**+0.5**
ARG	**Arkhangelos**	**1.57**	**45**	P	**Pb**	**02 06 10.6**	**+0.6**
ARG				AML	AML	02 06 38.7	
ARG				AML	AML	02 06 44.1	
ARG	**Arkhangelos**	**1.57**	**45**	P	**Pb**	**02 06 10.6**	**+0.6**
ARG				S	**Sg**	**02 06 31.0**	**-1.2**
	comp=E,112μm,1.0s						
ARG	**Arkhangelos**	**1.57**	**45**	P	**Pb**	**02 06 10.5**	**+0.6**
ARG				S	**Sg**	**02 06 31.0**	**-1.2**
ARG	**Arkhangelos**	**1.57**	**45**	PN	**Pb**	**02 06 10.2**	**+0.2**
ARG	**Arkhangelos**	**1.57**	**45**	⇑P	**Pb**	**02 06 10.3**	**+0.4**
ARG				S	**Sg**	**02 06 32.4**	**+0.2**
SIVA	**Sivas**	**1.59**	**267**	P	**Pb**	**02 06 11.5**	**+1.3**
SIVA				AML	AML	02 06 49.3	
SIVA				AML	AML	02 06 55.2	
SIVA	**Sivas**	**1.59**	**267**	P	**Pb**	**02 06 10.7**	**+0.5**
SIVA				S	**Sg**	**02 06 32.6**	**0.0**
	comp=E,165μm,0.8s						
TMBK	**Timbaki Herakl**	**1.62**	**269**	P	**Pb**	**02 06 11.6**	**+0.8**
TMBK				S	**Sg**	**02 06 33.5**	**-0.2**
	comp=E,54μm,0.9s						
SANT	**Santorini**	**1.63**	**321**	P	**Pb**	**02 06 10.8**	**-0.2**
SANT				AML	AML	02 06 41.4	
SANT				AML	AML	02 06 44.1	
	comp=N,64334μm,0.6s						
SANT	**Santorini**	**1.63**	**321**	P	**Pb**	**02 06 10.5**	**-0.5**
SANT				S	**Sg**	**02 06 32.3**	**-1.7**
	comp=N,65μm,0.9s						
SANT	**Santorini**	**1.63**	**321**	⇓P	**Pb**	**02 06 11.0**	**+0.1**
SANT				⇓S	**Sg**	**02 06 32.9**	**-1.2**
SANT	**Santorini**	**1.63**	**321**	PN	**Pb**	**02 06 11.1**	**+0.1**
SANT	**Santorini**	**1.63**	**321**	Pn	**Pb**	**02 06 10.6**	**-0.3**
KOSK	**Kos Island**	**1.65**	**7**	P	**Pb**	**02 06 10.9**	**-0.3**
KOSK				S	**Sg**	**02 06 32.9**	**-1.6**
	comp=N,79μm,0.5s						
KOSK	**Kos Island**	**1.65**	**7**	PN	**Pb**	**02 06 10.8**	**-0.4**
THR8	**Santorini-Mono**	**1.65**	**322**	P	**Pb**	**02 06 11.0**	**-0.3**
THR8	**Santorini-Mono**	**1.65**	**322**	P	**Pb**	**02 06 11.1**	**-0.1**
THR6	**Thira Island,**	**1.65**	**319**	P	**Pb**	**02 06 11.5**	**+0.2**
THR9	**Santorini-Faro**	**1.68**	**318**	P	**Pb**	**02 06 11.8**	**+0.1**
THR9	**Santorini-Faro**	**1.68**	**318**	P	**Pb**	**02 06 11.8**	**+0.1**
SNT1	**Gialos, Santor**	**1.68**	**321**	P	**Pb**	**02 06 11.4**	**-0.4**
SNT1	**Gialos, Santor**	**1.68**	**321**	P	**Pb**	**02 06 11.3**	**-0.5**
SNT1				S	**Sg**	**02 06 33.7**	**-1.9**
	comp=N,83μm,1.0s						
THR7	**Fira-Santorini**	**1.69**	**321**	P	**Pb**	**02 06 12.1**	**+0.2**
THR7	**Fira-Santorini**	**1.69**	**321**	P	**Pb**	**02 06 11.9**	**0.0**
SNT5	**Nea Kammeni, S**	**1.69**	**320**	P	**Pb**	**02 06 11.8**	**-0.2**
SNT5	**Nea Kammeni, S**	**1.69**	**320**	P	**Pb**	**02 06 11.3**	**-0.6**
THR3	**Thira Island,**	**1.69**	**320**	P	**Pb**	**02 06 11.8**	**-0.2**
THT2	**Imerovigli**	**1.70**	**321**	P	**Pb**	**02 06 12.0**	**-0.1**
THT2	**Imerovigli**	**1.70**	**321**	P	**Pb**	**02 06 12.0**	**-0.1**
THT2				S	**Sb**	**02 06 33.4**	**+0.2**
	comp=N,65μm,0.8s						
THT2	**Imerovigli**	**1.70**	**321**	PN	**Pb**	**02 06 12.1**	**0.0**
THR2	**Thira island,**	**1.70**	**322**	P	**Pb**	**02 06 12.0**	**-0.2**
THR5	**Thira Island,**	**1.72**	**319**	P	**Pb**	**02 06 12.2**	**-0.3**
SAP3	**Santorini-Thir**	**1.74**	**320**	P	**Pb**	**02 06 12.7**	**-0.1**
SAP3	**Santorini-Thir**	**1.74**	**320**	P	**Pb**	**02 06 12.1**	**-0.7**
SAP4	**Santorini-Oia**	**1.75**	**321**	P	**Pb**	**02 06 12.8**	**-0.2**
PRNS	**Prines Rethymn**	**1.85**	**278**	P	**Pb**	**02 06 15.8**	**+1.1**
BODT	**Bodrum**	**2.00**	**13**	P	**Pn**	**02 06 14.6**	**+0.3**
BODT	**Bodrum**	**2.00**	**13**	PN	**Pn**	**02 06 14.9**	**+0.6**
BDRM	**Kayabasi**	**2.03**	**16**	⇓P	**Pn**	**02 06 16.1**	**+1.4**
BDRM				*i* P	**Pb**	**02 06 16.1**	**+0.4**
BDRM				*i* S	**Sb**	**02 06 43.1**	**+0.5**
BDRM				*i* S	**Sg**	**02 06 45.8**	**-1.0**
YKAV	**Yalikavak-Bodr**	**2.05**	**12**	PN	**Pn**	**02 06 16.6**	**+1.6**
TURN	**Turunc**	**2.06**	**36**	⇓P	**Pn**	**02 06 16.6**	**+1.5**
TURN				*i* S	**Sg**	**02 06 47.8**	**+0.1**
TURN	**Turunc**	**2.06**	**36**	PN	**Pn**	**02 06 16.6**	**+1.5**
VAM	**Vamos**	**2.10**	**279**	P	**Pb**	**02 06 18.5**	**-0.4**
VAM				AML	AML	02 07 00.7	
	comp=E,79701μm,0.7s						
VAM				AML	AML	02 07 01.4	
VAM	**Vamos**	**2.10**	**279**	P	**Pb**	**02 06 18.4**	**-0.6**
VAM				S	**Sb**	**02 06 44.5**	**-0.2**
	comp=E,100μm,0.6s						
VAM	**Vamos**	**2.10**	**279**	P	**Pb**	**02 06 18.4**	**-0.6**
VAM				S	**Sb**	**02 06 44.5**	**-0.2**
APE	**Apeiranthos**	**2.18**	**334**	P	**Pn**	**02 06 18.4**	**+1.5**
APE	**Apeiranthos**	**2.18**	**334**	P	**Pn**	**02 06 18.3**	**+1.5**
APE				S	**Sb**	**02 06 45.8**	**-1.3**
	comp=E,24μm,1.0s						
APE	**Apeiranthos**	**2.18**	**334**	⇓P	**Pn**	**02 06 18.6**	**+1.8**
APE	**Apeiranthos**	**2.18**	**334**	*c* P	**Pn**	**02 06 17.8**	**+0.9**
APE	**Apeiranthos**	**2.18**	**334**	PN	**Pb**	**02 06 19.0**	**-1.4**
APE	**Apeiranthos**	**2.18**	**334**	⇑P	**Pn**	**02 06 18.4**	**+1.5**
GVDS	**Gavdos**	**2.19**	**264**	P	**Pb**	**02 06 20.2**	**-0.3**
GVDS	**Gavdos**	**2.19**	**264**	PN	**Pb**	**02 06 19.9**	**-0.6**
GVD	**Gavdhos**	**2.20**	**264**	P	**Pb**	**02 06 19.9**	**-0.7**
GVD				AML	AML	02 07 13.2	
	comp=E,67080μm,0.9s						
GVD				AML	AML	02 07 18.9	
	comp=N,57765μm,0.8s						
GVD	**Gavdhos**	**2.20**	**264**	P	**Pb**	**02 06 19.9**	**-0.7**
GVD	**Gavdhos**	**2.20**	**264**	PN	**Pn**	**02 06 19.1**	**+2.1**
IMMV	**Iera Moni Meta**	**2.29**	**279**	P	**Pb**	**02 06 21.2**	**-0.9**
IMMV				AML	AML	02 07 09.3	
	comp=N,77305μm,0.8s						
IMMV				AML	AML	02 07 11.9	
IMMV	**Iera Moni Meta**	**2.29**	**279**	P	**Pb**	**02 06 21.2**	**-0.9**
IMMV	**Iera Moni Meta**	**2.29**	**279**	PN	**Pn**	**02 06 20.7**	**+2.5**
DALY	**Dalyan (Mula)**	**2.30**	**42**	⇓P	**Pn**	**02 06 20.6**	**+2.2**
DALY				*i* S	**Sg**	**02 06 55.5**	**+0.1**
DALY	**Dalyan (Mula)**	**2.30**	**42**	PN	**Pn**	**02 06 19.8**	**+1.4**
YER	**Yerkesik**	**2.37**	**31**	P	**Pn**	**02 06 21.5**	**+2.0**
YER	**Yerkesik**	**2.37**	**31**	P	**Pn**	**02 06 20.7**	**+1.2**
YER	**Yerkesik**	**2.37**	**31**	PN	**Pn**	**02 06 20.7**	**+1.2**
DDIM	**Aydin, Didim**	**2.37**	**10**	⇓P	**Pn**	**02 06 21.1**	**+1.7**
DDIM				*i* S	**Sg**	**02 06 55.1**	**-2.6**
FETY	**Fethiye**	**2.43**	**51**	⇓P	**Pn**	**02 06 20.2**	**-0.1**
FETY				*i* S	**Sg**	**02 06 58.2**	**-1.4**
FETY	**Fethiye**	**2.43**	**51**	PN	**Pn**	**02 06 20.4**	**+0.1**
MHLO	**Agia Marina, M**	**2.46**	**310**	P	**Pb**	**02 06 23.5**	**-1.7**
MHLO				AML	AML	02 07 11.9	
MHLO				AML	AML	02 07 13.8	
MHLO	**Agia Marina, M**	**2.46**	**310**	P	**Pb**	**02 06 23.2**	**-2.0**
MHLA	**Plaka, Milos I**	**2.49**	**311**	P	**Pn**	**02 06 23.3**	**+2.2**
MHLA				AML	AML	02 07 25.0	
	comp=E,67785μm,1.1s						
MHLA				AML	AML	02 07 35.1	
	comp=N,92228μm,1.2s						
MULA	**Mugla, Merkez-**	**2.49**	**30**	⇓P	**Pn**	**02 06 23.1**	**+2.0**
MULA				*i* S	**Sb**	**02 06 57.2**	**+1.2**
KNDR	**Palaiochora Ch**	**2.51**	**274**	P	**Pn**	**02 06 24.0**	**+2.8**
KNDR	**Palaiochora Ch**	**2.51**	**274**	PN	**Pb**	**02 06 24.3**	**-1.6**
KSL	**Kastellorizon**	**2.54**	**65**	P	**Pn**	**02 06 22.6**	**+1.0**
KSL				S	**Sn**	**02 06 55.0**	**+3.0**
	comp=N,28μm,1.9s						
KSL	**Kastellorizon**	**2.54**	**65**	P	**Pn**	**02 06 21.9**	**+0.3**
KSL				S	**Sn**	**02 06 53.8**	**+1.7**
KSL				AML	AML	02 07 24.5	
	comp=N,48nm,1.5s						
KSL				AML	AML	02 07 24.5	
	comp=N,48nm,1.5s						
KSL				AML	AML	02 07 34.9	
	comp=N,64nm,2.4s						
KSL				AML	AML	02 07 34.9	
	comp=N,64nm,2.4s						
AKAS	**Kas**	**2.58**	**64**	⇑*i* P	**Pn**	**02 06 22.3**	**-0.2**
AKAS				*i* S	**Sn**	**02 06 55.2**	**+1.7**
AKAS	**Kas**	**2.58**	**64**	PN	**Pn**	**02 06 22.4**	**0.0**
AKAS	**Kas**	**2.58**	**64**	Pn	**Pn**	**02 06 22.5**	**0.0**
SMG	**Samos**	**2.59**	**2**	P	**Pn**	**02 06 23.4**	**+1.0**
AYDN	**Tasoluk**	**2.70**	**20**	⇓P	**Pn**	**02 06 23.6**	**+2.2**
AYDN				*i* S	**Sb**	**02 07 02.5**	**+0.4**
CAEL	**Denizli, Camel**	**2.89**	**45**	⇓P	**Pn**	**02 06 28.6**	**+1.9**
CAEL				*i* S	**Sg**	**02 07 17.1**	**+2.7**
ANKY	**Antikythira Is**	**2.91**	**286**	P	**Pn**	**02 06 29.0**	**+2.3**
DGB	**zmir**	**2.93**	**2**	⇓*i* P	**Pn**	**02 06 28.2**	**+1.1**
DGB				*i* S	**Sg**	**02 07 18.9**	**+3.2**
AYDB	**Zeytinkoy-Aydi**	**2.97**	**18**	PN	**Pn**	**02 06 29.8**	**+2.0**
ELL	**Elmali**	**3.04**	**57**	P	**Pn**	**02 06 29.7**	**+0.9**
ELL	**Elmali**	**3.04**	**57**	PN	**Pn**	**02 06 30.1**	**+1.3**
ELL	**Elmali**	**3.04**	**57**		**Pn**	**02 06 29.7**	**+0.9**
GOLH	**Golhisar**	**3.11**	**46**	⇓*i* P	**Pn**	**02 06 31.8**	**+2.1**
GOLH				*i* S	**Sg**	**02 07 22.4**	**+1.0**
ZEYE	**Izmir, Urla-Ze**	**3.12**	**357**	⇓*i* P	**Pn**	**02 06 30.7**	**+0.9**
ZEYE				*i* S	**Sg**	**02 07 26.3**	**+4.5**
AKUM	**Antalya-Kumluc**	**3.17**	**67**	⇓*i* P	**Pn**	**02 06 31.1**	**+0.8**
AKUM				*i* S	Sg	02 07 32.7	+9.5
KTHA	**Kythira Island**	**3.21**	**292**	P	**Pn**	**02 06 33.0**	**+2.1**
KTHA	**Kythira Island**	**3.21**	**292**	PN	**Pn**	**02 06 33.3**	**+2.4**
URLA	**Izmir**	**3.24**	**358**	⇓*i* P	**Pn**	**02 06 31.5**	**+0.1**
URLA				*i* S	**Sg**	**02 07 28.0**	**+2.5**
URLA	**Izmir**	**3.24**	**358**	PN	**Pn**	**02 06 32.5**	**+1.1**
KTHR	**Kythira**	**3.25**	**292**	P	**Pn**	**02 06 33.8**	**+2.3**
CHOS	**Chios island**	**3.31**	**351**	P	**Pn**	**02 06 33.6**	**+1.2**
CHOS	**Chios island**	**3.31**	**351**	PN	**Pn**	**02 06 34.2**	**+1.8**
KEMT	**Kemer-ANTALYA**	**3.44**	**63**	PN	**Pn**	**02 06 35.8**	**+1.8**
KARY	**Karystos**	**3.45**	**328**	P	**Pn**	**02 06 34.6**	**+2.3**
KORT	**Korkueli**	**3.48**	**56**	⇓P	**Pn**	**02 06 37.0**	**+2.2**
KORT				*i* S	**Sb**	**02 07 21.1**	**-3.3**
KORT	**Korkueli**	**3.48**	**56**	PN	**Pn**	**02 06 36.6**	**+1.9**
VLI	**Veliai**	**3.48**	**298**	P	**Pn**	**02 06 36.4**	**+1.8**
FOCM	**Foa**	**3.59**	**360**	PN	**Pn**	**02 06 38.8**	**+2.6**
VLY	**Voula,Athens**	**3.62**	**320**	P	**Pn**	**02 06 38.9**	**+2.3**
ANTB	**Antalya**	**3.64**	**60**	PN	**Pn**	**02 06 38.5**	**+1.7**
MANT	**Manisa**	**3.67**	**23**	⇓*i* P	**Pn**	**02 06 39.2**	**+1.7**
MANT				*i* S	**Sn**	**02 07 21.3**	**+0.9**
MANT	**Manisa**	**3.67**	**23**	PN	**Pn**	**02 06 38.6**	**+1.1**
KRND	**KRANIDI**	**3.68**	**309**	P	**Pn**	**02 06 39.9**	**+2.5**
GOMA	**Golmarmara-Man**	**3.71**	**14**	PN	**Pn**	**02 06 40.2**	**+2.4**
ATHU	**Athens Univers**	**3.71**	**321**	P	**Pn**	**02 06 40.5**	**+2.7**
BRDR	**BURDUR-Merkez**	**3.71**	**45**	⇓*i* P	**Pn**	**02 06 39.1**	**+1.2**
BRDR				*i* S	**Sg**	**02 07 40.7**	**0.0**
DION	**Dionisos Attik**	**3.72**	**323**	P	**Pn**	**02 06 40.7**	**+2.7**
KULA	**Kula-Manisa**	**3.73**	**24**	P	**Pn**	**02 06 39.9**	**+1.8**
KULA	**Kula-Manisa**	**3.73**	**24**	PN	**Pn**	**02 06 40.2**	**+2.1**
PTL	**Penteli**	**3.73**	**323**	P	**Pn**	**02 06 40.8**	**+2.6**
ATH	**Athens Observa**	**3.75**	**320**	P	**Pn**	**02 06 41.3**	**+3.0**
ATH	**Athens Observa**	**3.75**	**320**	P	**Pn**	**02 06 41.3**	**+3.0**
MATC	**Matruh**	**3.78**	**174**	AMP		02 07 00.0	
	baz=176						
BUCA	**Burdur, Bucak-**	**3.79**	**53**	*i* P	**Pn**	**02 06 40.4**	**+1.4**
BUCA				*i* S	**Sg**	**02 07 47.8**	**+4.5**
SLUM	**Salum**	**3.83**	**200**	P	**Pn**	**02 06 39.4**	**-0.1**
	baz=204						
SLUM				AMP		02 07 00.0	
	baz=204						
SLUM				S	**Sn**	**02 07 22.4**	**-1.8**
	baz=204						
AKHS	**Akhisar**	**3.85**	**13**	*i* P	**Pn**	**02 06 41.7**	**+1.9**
AKHS				*i* S	**Sb**	**02 07 30.7**	**-4.5**
ZEDA	**zmir-Bergama**	**3.85**	**4**	⇓*i* P	**Pn**	**02 06 41.5**	**+1.7**
ZEDA				*i* S	**Sg**	**02 07 50.8**	**+5.7**
BASM	**Basmaki-Afyon**	**3.86**	**43**	PN	**Pn**	**02 06 41.9**	**+1.9**
BCK	**Bucak**	**3.89**	**52**	P	**Pn**	**02 06 42.3**	**+1.9**
BCK	**Bucak**	**3.89**	**52**	PN	**Pn**	**02 06 42.3**	**+1.9**
DKL	**Dikili**	**3.95**	**2**	PN	**Pn**	**02 06 43.9**	**+2.8**
EREA	**Eretria**	**4.00**	**326**	P	**Pn**	**02 06 44.7**	**+2.9**
USAK	**Uak-Merkez**	**4.03**	**26**	⇓*i* P	**Pn**	**02 06 43.9**	**+1.6**
USAK				*i* S	**Sg**	**02 07 51.5**	**+0.8**
ISP	**Isparta**	**4.07**	**47**	P	**Pn**	**02 06 43.7**	**+0.8**
ISP	**Isparta**	**4.07**	**47**	PN	**Pn**	**02 06 44.9**	**+2.0**
ISP	**Isparta**	**4.07**	**47**	Pn	**Pn**	**02 06 43.7**	**+0.8**
OSC1	**CSNet OBS 1**	**4.08**	**112**	P	**Pn**	**02 06 40.5**	**-2.4**
OSC1				S	**Sn**	**02 07 27.4**	**-2.9**
KYMI	**Kymi, Euboea I**	**4.10**	**330**	P	**Pn**	**02 06 45.8**	**+2.6**
VILL	**Villia**	**4.11**	**319**	P	**Pn**	**02 06 46.1**	**+2.8**
PRK	**Paraskevi**	**4.14**	**355**	P	**Pn**	**02 06 46.2**	**+2.5**
SIGR	**SIGRI**	**4.15**	**350**	P	**Pn**	**02 06 45.4**	**+1.6**
SIGR	**SIGRI**	**4.15**	**350**	PN	**Pn**	**02 06 45.8**	**+2.0**
KZIL	**AFYON_Kizioren**	**4.16**	**40**	⇓*i* P	**Pn**	**02 06 44.7**	**+0.6**
KZIL				*i* S	**Sg**	**02 07 54.6**	**-0.3**
VLX	**Vlachokerasia**	**4.18**	**304**	P	**Pn**	**02 06 47.2**	**+2.8**
AYVA	**Ayvalik**	**4.19**	**359**	*i* P	**Pn**	**02 06 46.0**	**+1.7**
AYVA				*i* S	**Sg**	**02 07 55.8**	**0.0**
LTK	**Loutraki**	**4.20**	**315**	P	**Pn**	**02 06 47.7**	**+3.1**
DEMI	**Demir

CAVK	Edirne/Enez-Ca	5.59	356	*i*	P		Pn	02 07 06.9	+3.4
BORA	Eskisehir	5.60	31	*i*	P		Pn	02 07 05.1	+1.3
BILE	Bilecik/Merkez	5.62	25	*i*	P		Pn	02 07 06.9	+2.8
GULN	MERSIN_Gulnar	5.64	77	*i*	P		Pn	02 07 03.1	-1.2
OUR	Ouranopolis	5.65	338		P		Pn	02 07 06.9	+2.5
OUR	Ouranopolis	5.65	338		P		Pn	02 07 06.9	+2.5
MVOU	Mavrovouni	5.65	89	⇑	P		Pn	02 07 03.5	-1.0
KESN	Edirne-Kesan	5.70	360	*i*	P		Pn	02 07 08.3	+2.8
THAS	Thassos island	5.71	344		P		Pn	02 07 06.8	+1.5
AUSIV	SIVRIHISAR	5.77	40	*i*	P		Pn	02 07 07.3	+1.1
ALN	Alexandroupoli	5.80	355		P		Pn	02 07 07.7	+1.2
ALN	Alexandroupoli	5.80	355				Pn	02 07 07.7	+1.2
THL	Klokotos Trika	5.82	321		P		Pn	02 07 10.2	+3.4
PLG	Polygyros	5.86	335		P		Pn	02 07 10.8	+3.4
PLG	Polygyros	5.86	335		P		Pn	02 07 10.8	+3.4
ALIN	Konya, Altinte	5.87	55	*i*	P		Pn	02 07 08.8	+1.3
SWA2	baz=194	5.96	191		P		Pn	02 07 08.3	-0.4
EVGI	Lefkada island	6.00	307		P		Pn	02 07 11.2	+1.9
LIT	Litokhoron	6.01	327		P		Pn	02 07 13.0	+3.5
LIT	Litokhoron	6.01	327		P		Pn	02 07 12.1	+2.6
LIT	Litokhoron	6.01	327				Pn	02 07 12.1	+2.6
BUY	Buyukada	6.03	17	*i*	P		Pn	02 07 12.2	+2.6
NYDR	Nydri-Lefkada	6.03	308		P		Pn	02 07 11.3	+1.7
GEYV	SAKARYA_Geyve	6.05	27	*i*	P		Pn	02 07 13.4	+3.4
AUMIH	MIHALICIK	6.06	37	*i*	P		Pn	02 07 10.6	+0.4
LKD2	Lefkada island	6.10	309		P		Pn	02 07 12.0	+1.4
HORT	Hortiatis	6.18	333		P		Pn	02 07 14.5	+2.6
THE	Thessaloniki	6.26	333		P		Pn	02 07 16.3	+3.4
SOH	Sokhos	6.29	336		P		Pn	02 07 16.9	+3.6
SOH	Sokhos	6.29	336		P		Pn	02 07 17.3	+4.0
SOH	comp=Z,304nm,1.6s				pmax		pmax		
HMYD	Mayadein	6.32	146		P		Pn	02 07 11.9	-1.7
HNAT	baz=147 Natroun	6.37	148		P		Pn	02 07 12.8	-1.6
KKUL	baz=149 Konya-Kulu	6.38	49	*i*	P		Pn	02 07 16.2	+1.6
BTAS	Taskesti	6.40	30	*i*	P		Pn	02 07 15.4	+0.5
MDUB	Mudurnu	6.41	32				Pn	02 07 15.5	+0.6
SRS	Serrai	6.49	338		P		Pn	02 07 19.4	+3.4
SRS	comp=Z,416nm,1.2s				pmax		pmax		
KAYN	Sakarya, Kayna	6.49	25	*i*	P		Pn	02 07 18.3	+2.3
VIZE	Kirklareli, Vi	6.51	7	*i*	P		Pn	02 07 18.6	+2.3
KAND	Kocaeli-Kandir	6.56	23	*i*	P		Pn	02 07 18.7	+1.8
SAHE	Sakarya_HENDEK	6.58	28	*i*	P		Pn	02 07 17.1	-0.2
KIRK	Kırklareli	6.66	2	*i*	P		Pn	02 07 20.3	+1.9
KIBS	BOLU	6.66	36	*i*	P		Pn	02 07 18.4	-0.1
RYAN	Fayoum	6.72	153		AMP			02 08 00.0	
KOT	baz=154 Kottamia	6.72	139		P		Pn	02 07 16.6	-2.6
BR231	baz=140 Keskin MP Arra	6.73	44				Pn	02 07 20.3	+0.9
IGT	Igoumenitsa	6.75	313		P		Pn	02 07 19.9	+0.4
IGT	Igoumenitsa	6.75	313		P		Pn	02 07 21.0	+1.5
IGT	comp=Z,263nm,1.9s				pmax		pmax		
KNT	Kendrikon	6.75	335		P		Pn	02 07 22.7	+3.1
KNT	Kendrikon	6.75	335		P		Pn	02 07 23.9	+4.3
KNT	comp=Z,600nm,1.2s				pmax		pmax		
ANTO	Ankara	6.76	44		P		Pn	02 07 20.7	+1.0
ANTO	Ankara	6.76	44				Pn	02 07 20.7	+1.0
ANTO	Ankara	6.76	44		P		Pn	02 07 25.4	+5.6
ARMN	Kirklareli, Me	6.76	4	*i*	P		Pn	02 07 21.8	+2.1
GRG	Griva	6.76	331		P		Pn	02 07 23.2	+3.4
GRG	Griva	6.76	331		P		Pn	02 07 23.4	+3.6
GRG	comp=Z,833nm,1.1s				pmax		pmax		
HHAG	Hagoal	6.85	137		P		Pn	02 07 18.5	-2.5
YIGI	baz=138 Dzce	6.92	31	*i*	P		Pn	02 07 23.3	+1.4
VAY	Valandovo	7.01	333	*i*	Pn		Pn	02 07 28.6	+5.5
FNA	Florina	7.07	325		P		Pn	02 07 27.8	+3.8
FNA	Florina	7.07	325		Pn		Pn	02 07 27.8	+3.8
PLD	Plovdiv	7.16	348		P		Pn	02 07 29.2	+4.0
PLD	comp=Z,711nm,0.8s				pmax		pmax		
BR131	Keskin Array S	7.16	48	*c*	P		Pn	02 07 25.7	+0.4
BRTR	Keskin Array B	7.16	48		Pn		Pn	02 07 26.1	+0.7
BRTR	comp=Z,1.6nm,0.3s,baz=216,slow=10,SNR=28				Sn		Sn	02 08 48.5	+2.1
BRTR	comp=Z,4.6nm,0.3s,baz=220,slow=21,SNR=5.6						Pn	02 07 25.5	+0.2
DQRL	Keskin Array B Deir Qamar	7.16 7.43	48 98	*e*	P		Pn	02 07 26.6	-2.4
BHL	Bhannes	7.46	97	*e*	P		Pn	02 07 32.2	+2.9
STIP	Stip	7.48	333	*i*	Pn		Pn	02 07 33.5	+4.0
MMAI	Mount Meron Ar	7.49	104		Pn		Pn	02 07 27.1	-2.7
MMAI	comp=Z,31nm,0.3s,baz=307,slow=11,SNR=121				Sn		Sn	02 08 53.0	-1.3
MMAI	comp=Z,137nm,0.3s,baz=301,slow=26,SNR=14				LR		LR	02 11 33.6	
QRWL	comp=Z,7µm,21.9s,baz=310,slow=47 Qaraoun	7.56	99	*e*	P		Pn	02 07 28.9	-1.9
OHR	Ohrid	7.60	324	*i*	Pn		Pn	02 07 37.9	+6.6
ZAF	Zafarana	7.62	138		S		Sn	02 08 48.5	-8.8
HWQ	baz=139 Hawqa	7.63	94	*e*	P		Pn	02 07 30.9	-0.8
RCY	Rachaya	7.70	100	*e*	P		Pn	02 07 30.6	-2.1
VTS	Vitosha	7.97	341	⇑	P		Pn	02 07 39.6	+3.1
VTS	Vitosha	7.97	341		P		Pn	02 07 40.1	+3.6
VTS	comp=Z,230nm,1.0s				pmax		pmax		
SKO	Skopje	8.01	330	*i*	Pn		Pn	02 07 42.4	+5.6
TAMRE	El Minia	8.22	153		P		Pn	02 07 38.2	-1.6
TIR	baz=154 Tirane	8.24	321		P		Pn	02 07 44.6	+4.5
TIR	comp=Z,255nm,1.8s				pmax		pmax		
PLVB	Pleven	8.42	349	⇓	P		Pn	02 07 45.4	+2.9
ZIMR		8.60	353	⇓	P		Pn	02 07 49.2	+4.3
EIL	Elat	8.81	126		Pn		Pn	02 07 45.5	-2.3
EIL	comp=Z,12nm,0.3s,baz=306,slow=3.2,SNR=164				Sn		Sn	02 09 20.3	-6.4
BZK	comp=Z,43nm,0.3s,baz=295,slow=20,SNR=7.1 Bozkurt	8.89	38	⇓	P		Pn	02 07 54.1	+5.2
TIP	Timpagrande	8.94	300		Pn		Pn	02 07 48.8	-0.9
ULC	Ulcinj	9.01	322	⇓	*i* Pn		Pn	02 07 53.6	+3.0
ULC					*i* Sn		Sn	02 09 30.8	-0.8
VLAD	Vladila	9.05	349	⇓	P		Pn	02 07 54.0	+2.9
RASA	Rasa	9.09	2	⇑	P		Pn	02 07 55.4	+3.8
SGRR	Singureni	9.12	357	⇑	P		Pn	02 07 56.0	+4.0
PVY	Plav	9.15	327	⇓	*i* Pn		Pn	02 07 55.5	+2.9
PVY					*i* Sn		Sn	02 09 33.9	-1.2
DRME	Dracevica, Mon	9.21	322	*e*	Pn		Pn	02 07 52.6	-0.6
DRME	Dracevica, Mon	9.21	322	⇓	*i* Pn		Pn	02 07 56.2	+3.0
DRME					*i* Sn		Sn	02 09 35.9	-0.4
LEHL	Lehliu	9.35	0	⇑	P		Pn	02 07 59.8	+4.7
PDG	Podgorica	9.35	324	*e*	Pn		Pn	02 07 54.1	-1.1
PDG	Podgorica	9.35	324		Pn		Pn	02 07 54.1	-1.1
TTG	Podgorica	9.35	324	⇑	*i* Pn		Pn	02 07 58.3	+3.1
TTG					*i* Sn		Sn	02 09 39.3	-0.6
BOVS	Bovan	9.36	337	⇑	P		Pn	02 07 59.3	+4.0
IVA	Berane	9.40	328	⇓	*i* Pn		Pn	02 07 59.1	+3.1
IVA					*i* Sn		Sn	02 09 40.4	-0.8
TIRR	Tirgusor	9.42	7		P		Pn	02 07 57.3	+1.1
TIRR	Tirgusor	9.42	7				Pn	02 07 57.3	+1.1
BUM	Brajici-Budva	9.44	322	*e*	Pn		Pn	02 07 58.4	+1.9
BUM					*i* Sn		Sn	02 09 41.5	-0.6
KVT	Kavak	9.44	48		P		Pn	02 08 02.6	+6.0
TLBR	Topalu	9.47	6	⇓	P		Pn	02 08 00.9	+4.1
AMRR	Amara	9.49	3	⇑	P		Pn	02 08 01.6	+4.5
HUMR	Humele	9.50	352	⇓	P		Pn	02 08 01.0	+3.8
KOME	Kolasin	9.55	326	*e*	Pn		Pn	02 08 01.1	+3.0
KOME					*i* Sn		Sn	02 09 43.8	-1.2
SULR		9.56	358	⇓	P		Pn	02 08 02.5	+4.5
CEME	Cevo	9.60	323	*e*	Pn		Pn	02 07 59.5	+0.7
CEME					*i* Sn		Sn	02 09 44.8	-1.4
HARR	Harsova	9.61	5	⇑	P		Pn	02 08 03.0	+4.3
PUNG	Punghina	9.61	343	⇑	P		Pn	02 08 01.9	+3.2
HCY	Herceg Novi	9.74	321	*e*	Pn		Pn	02 08 00.9	+0.3
HCY	Herceg Novi	9.74	321	*e*	Pn		Pn	02 08 02.3	+1.7
HCY					*i* Sn		Sn	02 09 46.8	-2.8
NKME	Niksic	9.75	324	⇓	*i* Pn		Pn	02 08 04.0	+3.2
NKME					*i* Sn		Sn	02 09 48.9	-0.9
NKY	Niksic	9.77	324	*e*	Pn		Pn	02 08 03.9	+2.9
NKY					*i* Sn		Sn	02 09 49.3	-1.0
JURR	Jurilovca	9.78	9	⇑	P		Pn	02 08 05.2	+4.1
PGOR	Pogoanele	9.78	1	⇑	P		Pn	02 08 05.7	+4.6
TPGR	Topolog	9.81	7	⇑	P		Pn	02 08 05.3	+3.7
MALT	Malatya	9.91	68		P		Pn	02 08 04.1	+1.1
SRE	Strehaia	9.91	345	⇑	P		Pn	02 08 06.9	+4.0
SRE	Strehaia	9.91	345		P		Pn	02 08 06.9	+4.0
PLE	Pljevlja	9.99	327	⇑	*i* Pn		Pn	02 08 07.2	+3.1
PLE					*i* Sn		Sn	02 09 54.2	-1.5
ISR	Istrita	9.99	359	⇑	P		Pn	02 08 08.3	+4.2
ISR	Istrita	9.99	359		P		Pn	02 08 08.9	+4.8
ISR	comp=Z,409nm,1.2s				pmax		pmax		
TREB	Trebinje	10.01	322	*e*	Pn		Pn	02 08 01.8	-2.5
BRY	Bratogost	10.05	323	*e*	Pn		Pn	02 08 02.7	-2.3
BRY	Bratogost	10.05	323	*e*	Pn		Pn	02 08 06.4	+1.4
BRY					*i* Sn		Sn	02 09 55.4	-2.0
UPM	Unac-Piva	10.11	325	*e*	Pn		Pn	02 08 06.0	+0.2
UPM	Unac-Piva	10.11	325	*e*	Pn		Pn	02 08 08.7	+2.9
UPM					*i* Sn		Sn	02 09 57.5	-1.2
CFR	Carcaliu	10.11	6		P		Pn	02 08 08.8	+3.2
CFR	comp=Z,110nm,1.1s				pmax		pmax		
MTUR	Matau	10.18	353	⇑	P		Pn	02 08 11.6	+4.9
TLCR		10.18	8	⇑	P		Pn	02 08 10.8	+4.1
TLCR		10.18	8		P		Pn	02 08 10.7	+4.1
RUDO	Rudo	10.23	328	*e*	Pn		Pn	02 08 08.7	+1.5
VAE	Valguarnera	10.23	287		Pn		Pn	02 08 08.7	+1.4
VAE	comp=Z,3.6nm,0.3s,baz=74,slow=0.9,SNR=18				Sn		Sn	02 10 06.2	+4.7
HERR	comp=Z,16nm,0.3s,baz=128,slow=14,SNR=4.8 Herculane	10.30	343	⇓	P		Pn	02 08 10.6	+2.4
NEHR	Nehoiu	10.31	358	⇑	P		Pn	02 08 12.8	+4.5
ARR	Arges	10.37	352	⇓	P		Pn	02 08 12.4	+3.2
DIVS	Divibare	10.37	332	*e*	Pn		Pn	02 08 14.8	+5.5
MLR	Muntele Rosu	10.38	357		Pn		Pn	02 08 10.8	+1.4
MLR	comp=Z,1.0nm,0.3s,baz=178,slow=9.4,SNR=28				LR		LR	02 12 57.4	
MLR	comp=Z,17µm,21.3s,baz=186,slow=42 Muntele Rosu	10.38	357	⇑	P		Pn	02 08 13.4	+4.0
VOIR		10.39	353	⇓	P		Pn	02 08 12.2	+2.7
VOIR		10.39	353		P		Pn	02 08 12.7	+3.2
VOIR	comp=Z,111nm,1.3s				pmax		pmax		
MDVR	Moldovita	10.39	340	⇑	P		Pn	02 08 13.3	+3.8
SCHL	Schela	10.41	4	⇑	P		Pn	02 08 13.5	+3.9
BBLS	Lazići	10.41	329	*e*	Pn		Pn	02 08 12.9	+3.1
LOT	Lotru	10.57	349	⇑	P		Pn	02 08 15.3	+3.3
ODBI	Odobesti	10.64	1	⇓	P		Pn	02 08 18.0	+5.1
GZR	Gura Zlata	10.70	345	⇑	P		Pn	02 08 16.7	+2.9
PLOR	Plostina	10.72	360	⇓	P		Pn	02 08 19.0	+4.9
PLOR	Plostina	10.72	360		P		Pn	02 08 18.9	+4.9
VRI	Vrincioaia	10.74	360	⇓	P		Pn	02 08 19.1	+4.8
VRI	Vrincioaia	10.74	360		P		Pn	02 08 18.7	+4.4
VRI	comp=Z,424nm,1.3s				pmax		pmax		
HAPS	Han Pijesak,Bl	10.78	329	*e*	Pn		Pn	02 08 15.6	+0.7
VARL	Varlezi	10.81	4	⇓	P		Pn	02 08 18.9	+3.7
BEO	Beograd	10.81	336		P		Pn	02 08 20.2	+5.0
DOPR	Dopca	10.89	355	⇓	P		Pn	02 08 19.5	+3.2
TEKS	Tekeris	10.93	332	*e*	Pn		Pn	02 08 18.9	+2.1
GHRR		10.95	2	⇑	P		Pn	02 08 22.1	+5.0
OZUR		10.99	357	⇑	P		Pn	02 08 21.4	+3.6
DEV	Deva	11.14	346		P		Pn	02 08 23.2	+3.4
DEV	comp=Z,192nm,1.4s				pmax		pmax		
BIR	Birlad	11.16	3	⇑	P		Pn	02 08 23.4	+3.4
CLTB	Caltabellotta	11.18	287				Pn	02 08 21.2	+0.8
BZS	Buzias	11.19	341	⇓	P		Pn	02 08 22.7	+2.3
BZS	Buzias	11.19	341		P		Pn	02 08 23.4	+3.0
BZS	comp=Z,34nm,1.5s				pmax		pmax		
SIM	Simferopol'	11.33	28	*e*	P		Pn	02 08 24.0	+1.7
SIM					*e*	S	Sn	02 10 27.0	-1.3
SIM	comp=Z,94nm,0.4s				pmax		pmax		
SIM	comp=Z,3µm,14.0s				MLR		MLR		
FRGS	Fruska Gora	11.34	334	⇓	P		Pn	02 08 24.8	+2.3
FRGS	Fruska Gora	11.34	334	*e*	Pn		Pn	02 08 25.3	+2.8
MARD	Mardin	11.55	75				Pn	02 08 26.2	+0.7
BIZ	Bicaz	11.82	358	⇑	P		Pn	02 08 32.8	+3.7
MGRS	Mrkonjic Grad	11.89	324	*e*	Pn		Pn	02 08 28.9	-1.1
MILM	Milesti Mici	11.89	7	⇑	P		Pn	02 08 33.5	+3.5
KOPT	Kop Dagi	11.96	62				Pn	02 08 32.5	+1.3
KIS	Kishinev	11.97	7	⇓	*e*	P	Pn	02 08 33.0	+1.9
KIS	comp=Z,400nm,2.6s				*e*	PP	Pn	02 08 44.0	+13
KIS					*e*	S	Sn	02 10 48.0	+3.9
KIS					*e*	L	L	02 11 56.0	
KIS					*e*	LR	LR	02 12 40.0	
KIS	comp=Z,8µm,11.0s	11.97	7		*e*	P	Pn	02 08 33.0	+1.9
KIS	Kishinev				*e*	S	Sn	02 10 48.0	+3.9
KIS					pmax		pmax		
KIS	comp=Z,400nm,2.6s				MLR		MLR		
KIS	comp=N,4µm,11.0s				MLR		MLR		
KIS	comp=Z,8µm,11.0s				MLR		MLR		
DRGR		12.05	347		P		Pn	02 08 36.6	+4.3
DRGR	comp=Z,35nm,1.4s				pmax		pmax		
IAS	Iasi	12.08	3	⇓	P		Pn	02 08 37.2	+4.6
IAS	Iasi	12.08	3		P		Pn	02 08 35.5	+2.9
IAS	comp=Z,441nm,1.1s				pmax		pmax		
BLY	Banja Luka	12.09	326	*e*	Pn		Pn	02 08 31.3	-1.4
INTR	Introdacqua	12.17	308		Pn		Pn	02 08 33.5	-0.4
MRAK	Mrakovica	12.42	326	*e*	Pn		Pn	02 08 42.4	+5.1
BURAR	Bucovina Array	12.54	355	⇓	P		Pn	02 08 42.7	+3.7
BURAR	Bucovina Array	12.54	355		P		Pn	02 08 42.6	+3.7
BURAR	Bucovina Array	12.54	355				Pn	02 08 40.5	+1.5
AQU	L'Aquila	12.67	309		P		Pn	02 08 44.4	+3.7
AQU	comp=Z,192nm,1.0s				pmax		pmax		
AQU	L'Aquila	12.67	309	*e*	Pn		Pn	02 08 43.2	+2.5
MORH	Mrgy, Hungar	12.67	334	⇑	P		Pn	02 08 43.7	+3.0
MORH	Mrgy, Hungar	12.67	334	*e*	Pn		Pn	02 08 43.6	+3.0
ANN	Anapa	12.67	37	*e*	P		Pn	02 08 34.4	-6.2
ANN					*e*	S	Sn	02 10 54.4	-6.8
ANN	comp=Z,90nm,1.0s				pmax		pmax		
ANN	comp=E,2µm,12.0s				MLR		MLR		
ANN	comp=Z,3µm,14.0s				MLR		MLR		
ANN	comp=N,4µm,14.0s				MLR		MLR		
BMR	Baia Mare	12.78	350		P		Pn	02 08 46.2	+4.1
BMR	comp=Z,53nm,1.2s				pmax		pmax		
LTVH	Ltavrtes, Hu	12.78	345	⇑	P		Pn	02 08 45.6	+3.4
SOC	Sochi	13.12	46	*e*	P		Pn	02 08 45.7	-1.0
SOC					*e*			02 11 14.6	
SOC	comp=Z,11nm,1.0s				pmax		pmax		
SOC	comp=Z,3µm,12.0s				MLR		MLR		
KSV	Kosov	13.25	355		P		Pn	02 08 51.9	+3.4
BOJS	Bojanci	13.57	323	*i*	Pn		Pn	02 08 53.8	+0.9
BOJS					*e*	Sn	Sn	02 11 22.4	-0.8
BOJS					*e*			02 11 46.2	
BOJS	comp=Z,21µm,11.5s				IAML			02 15 10.3	
BEHE	Becsehely	13.61	329	*e*	Pn		Pn	02 08 51.5	-2.0
BUD	Budapest	13.64	337		P		Pn	02 08 58.0	+4.1
BUD	comp=Z,67nm,1.9s				pmax		pmax		
CRES	Cresnjev	13.70	325	*e*	Pn		Pn	02 08 53.7	-1.1
PSZ	Piszkesteto	13.77	340	⇑	P		Pn	02 08 59.8	+4.1
PSZ	Piszkesteto	13.77	340		P		Pn	02 08 59.8	+4.1
UZH	Uzhgorod	13.90	348	*e*	P		Pn	02 09 01.4	+4.0
UZH					*i*	S	Sn	02 11 36.1	+4.9
UZH	comp=N,3µm,13.0s				MLR		MLR		
UZH	comp=E,4µm,13.0s				MLR		MLR		
UZH	comp=Z,2µm,13.0s				MLR		MLR		
CEY	Cerknica	14.14	322	*e*	Pn		Pn	02 09 00.0	-0.8
KEST	Kesra	14.20	278		Pn		Pn	02 09 02.7	+1.0
KEST	comp=Z,0.5nm,0.3s,baz=37,slow=7.8,SNR=24				LR		LR	02 15 45.2	
KEST	comp=Z,687nm,19.0s,baz=25,slow=42 Kesra	14.20	278				Pn	02 09 02.1	+0.4
TRI	Trieste	14.46	321		P		Pn	02 09 05.5	+0.4
TRI	Trieste	14.46	321				Pn	02 09 05.5	+0.4
VSL	Villasalto	14.49	293				Pn	02 09 06.5	+0.9
SOKA	Soboth	14.53	326	*e*	Pn		Pn	02 09 04.2	-2.0
AKH	comp=Z,3.0nm,0.5s,SNR=27 Akhalkalaki	14.57	59		P		Pn	02 09 09.1	+2.2
VYHS	Vyhne	14.60	339	*e*	P		Pn	02 09 09.5	+2.5
VYHS	Vyhne	14.60	339	*e*	P		Pn	02 09 09.5	+2.5
OBKA	Obir	14.63	325	*e*	Pn		Pn	02 09 06.9	-0.7
ARSA	comp=Z,8.2nm,0.8s,SNR=14 Arzberg	14.76	329	*e*	Pn		Pn	02 09 09.1	-0.1
NEY	comp=Z,8.5nm,0.7s,SNR=27 Neytrino	14.80	52	*i*	P		P	02 09 14.1	-1.7
LVV	L'vov	14.83	353	*e*	P		Pn	02 09 11.3	+1.2
LVV					*e*	S	Sn	02 11 56.3	+2.5
LVV	comp=Z,18µm,11.4s				MLR		MLR		
ZST	Bratislava	14.91	334	*e*	P		Pn	02 09 11.8	+0.7
ZST	Bratislava	14.91	334	*e*	PN		Pn	02 09 11.8	+0.7
ZST	Bratislava	14.91	334	*e*	P		P	02 09 18.2	+1.5
ONI	Oni	14.99	55		P		Pn	02 09 14.6	+2.2
LANS	Liptovska Anna	15.02	341	*e*	P		P	02 09 16.3	-1.7
LANS	Liptovska Anna	15.02	341	*e*	PN		P	02 09 16.3	-1.7
LANS	Liptovska Anna	15.02	341	*e*	P		P	02 09 24.3	+6.3
NIE	Niedzica	15.06	344	*e*	P		P	02 09 18.6	+0.1
NIE					*e*	S	Sn	02 12 08.2	+8.8
NIE	Niedzica	15.06	344		P		P	02 09 18.4	0.0
NIE	comp=Z,46nm,1.1s				pmax		pmax		
GNI	Garni	15.12	65		Pn		Pn	02 09 16.1	+2.0
GNI	comp=Z,0.8nm,0.3s,baz=331,slow=4.5,SNR=12				LR		LR	02 16 28.5	
GNI	comp=Z,8µm,20.4s,baz=276,slow=43 Garni	15.12	65		P		Pn	02 09 15.5	+1.4
GNI	Garni	15.12	65	*c*	P		Pn	02 09 14.5	+0.4
GNI	Garni	15.12	65		Pn		Pn	02 09 14.0	-0.1
GNI	Garni	15.12	65		S		S	02 12 20.7	+2.5
KIV	Kislovodsk	15.12	50	*i*	P		P	02 09 18.0	-1.2
KIV	SNR=42 Kislovodsk	15.12	50	*e*	P		Pn	02 09 15.1	+1.0
KIV					*e*	S	Sn	02 12 04.7	+3.5
KIV	comp=Z,240nm,1.1s				pmax		pmax		
KIV	comp=Z,6µm,13.0s				MLR		MLR		
KIV	Kislovodsk	15.12	50		Pn		Pn	02 09 15.6	+1.5
KIV	Kislovodsk	15.12	50		P		P	02 09 19.1	-0.1
KIV					S		S	02 12 17.6	-0.6
KVAR	Kislovodsk Arr	15.13	50		LR		LR	02 16 48.0	
KBZ	comp=Z,6µm,19.6s,baz=84,slow=44 Khabaz	15.14	51		Pn		P	02 09 18.9	-0.5
KBZ	comp=Z,0.8nm,0.3s,baz=245,slow=8.5,SNR=48				LR		LR	02 17 06.1	
KBZ	comp=Z,3µm,18.5s,baz=239,slow=45 Khabaz	15.14	51	*i*	P		Pn	02 09 16.9	+2.6
KBZ	comp=Z,103nm,1.0s				pmax		pmax		
CONA	Conrad Observa	15.15	331	*e*	Pn		Pn	02 09 14.7	+0.2
MYKA	comp=Z,5.8nm,0.8s,SNR=14 Terra Mystica	15.16	323	*e*	Pn		Pn	02 09 15.2	+0.6
ZCCA	comp=Z,11nm,0.6s Zocca	15.22	312		IAmb		IAmb	02 09 45.9	
JAVC	comp=Z,142nm,1.1s Velka Javorina	15.28	337	*e*	PN		Pn	02 09 16.3	+0.1
JAVC	Velka Javorina	15.28	337	*e*	S		Sn	02 12 09.3	+4.3
TEOL	Teolo	15.38	316		IAmb		IAmb	02 09 35.9	
STAL	comp=Z,89nm,0.7s STALIGIAL	15.38	321		Pn		Pn	02 09 17.6	+0.2
ZEI	Tsey	15.38	55	*e*	P		Pn	02 09 19.4	+1.8
ZEI	comp=Z,171nm,1.1s				pmax		pmax		
ZOU	Zoufplan	15.44	322		IAmb		IAmb	02 09 33.5	
NCK	comp=Z,159nm,1.2s Nalchik	15.48	52	*i*	P		P	02 09 24.0	+0.9
NCK	comp=Z,249nm,1.2s				pmax		pmax		
NAX	Nakhchivan	15.49	69		P		Pn	02 09 20.7	+1.7
KBA	Koelnbreinsper	15.62	324	*e*	Pn		Pn	02 09 20.4	-0.3
KBA	comp=Z,40nm,0.5s,SNR=14 Koelnbreinsper	15.62	324		P		Pn	02 09 21.4	+0.7
SEAG	Tbilisi Sea	15.62	59		P		P	02 09 26.9	+2.2
GUDG	Gudauri	15.64	57		P		P	02 09 26.9	+1.8
PGF	Pioggiola	15.68	304		P		Pn

FETA	**Feichten**	**16.91**	**320**	*e*Pn		**Pn**	**02 09 36.4**	**-0.8**
	comp=Z,33nm,0.7s,SNR=39							
MOTA	**Moosalm**	**16.92**	**321**	*i* Pn		**Pn**	**02 09 36.9**	**-0.5**
	comp=Z,12nm,0.8s,SNR=31							
DFRA	**Djebel Bou Aff**	**16.98**	**281**	P		**P**	**02 09 41.6**	**+1.7**
MNGR	**Mingechevir, A**	**17.00**	**65**	P		**P**	**02 09 40.6**	**+0.7**
DPC	**Dobruska-Polom**	**17.01**	**337**	*e*P		**Pn**	**02 09 38.8**	**+0.5**
DPC				MLR	MLR			
	comp=Z,6µm,11.9s							
DPC	**Dobruska-Polom**	**17.01**	**337**	*e*P		**Pn**	**02 09 38.8**	**+0.5**
DPC				AMS	AMS		02 17 40.0	
	comp=Z,6µm,11.9s							
MQOL	**MQOL**	**17.02**	**145**	*i* P			02 09 40.1	
MQOL				*i*			02 09 55.3	
	baz=345,slow=6.9							
MQOL				*i* S			02 12 45.4	
KHC	**Kasperske Hory**	**17.04**	**329**	*e*P		**Pn**	**02 09 38.2**	**-0.4**
KHC				MLR	MLR			
	comp=Z,8µm,11.9s							
KHC	**Kasperske Hory**	**17.04**	**329**	*e*P		**Pn**	**02 09 38.2**	**-0.4**
KHC				*ex*	x		02 10 04.0	
KHC				*e*S		**S**	**02 12 55.9**	**-1.3**
KHC				AMS	AMS		02 17 00.0	
	comp=Z,8µm,11.9s							
SEKA	**Sheki**	**17.18**	**63**	P		**P**	**02 09 44.0**	**+1.9**
RETA	**Reutte**	**17.19**	**321**	*e*Pn		**Pn**	**02 09 40.3**	**-0.3**
	comp=Z,6.9nm,0.6s,SNR=29							
SAOF	**Saorge**	**17.22**	**307**	P		**Pn**	**02 09 41.7**	**+0.8**
SAOF				pmax	pmax			
	comp=Z,191nm,1.0s							
DAVOX	**Davos/Dischmat**	**17.22**	**318**	P		**Pn**	**02 09 42.2**	**+1.1**
	comp=Z,1.6nm,0.3s,baz=83,slow=1.3,SNR=32							
OSTC	**Ostas**	**17.23**	**337**	*e*P		**Pn**	**02 09 40.9**	**-0.1**
OSTC				AMS	AMS		02 19 40.0	
	comp=Z,5µm,13.8s							
UPC	**Upice**	**17.25**	**336**	AMS	AMS		02 17 30.0	
	comp=Z,6µm,12.0s							
BEL	**Belsk**	**17.25**	**347**	*e*P		**P**	**02 09 44.2**	**+1.5**
BEL				*e*S		**S**	**02 13 03.2**	**+1.8**
BEL	**Belsk**	**17.25**	**347**	P		**P**	**02 09 44.8**	**+2.1**
BEL				pmax	pmax			
	comp=Z,330nm,1.1s							
PBCC	**Pribram**	**17.30**	**331**	*e*P		**Pn**	**02 09 42.8**	**+0.9**
CHVC	**Chvalec**	**17.31**	**337**	*e*P		**Pn**	**02 09 41.5**	**-0.5**
CHVC				AMS	AMS		02 17 50.0	
	comp=Z,5µm,12.6s							
PRU	**Pruhonice**	**17.33**	**333**	*e*P		**Pn**	**02 09 41.6**	**-0.7**
PRU				MLR	MLR			
	comp=Z,8µm,12.7s							
PRU	**Pruhonice**	**17.33**	**333**	*e*P		**Pn**	**02 09 41.6**	**-0.7**
PRU				AMS	AMS		02 17 20.0	
	comp=Z,8µm,12.7s							
WET	**Wettzell**	**17.34**	**328**	P		**Pn**	**02 09 42.5**	**0.0**
WET				pmax	pmax			
	comp=Z,85nm,1.6s							
SET	**Setif**	**17.38**	**280**	P		P	02 09 54.0	+10
FUR	**Furstenfeldbru**	**17.38**	**323**	P		**Pn**	**02 09 42.7**	**-0.2**
FUR				pmax	pmax			
	comp=Z,152nm,1.3s							
PRA	**Prague**	**17.44**	**333**	*e*P		**Pn**	**02 09 44.1**	**+0.5**
PRA				MLR	MLR			
	comp=Z,8µm,12.3s							
PRA	**Prague**	**17.44**	**333**	*e*P		**Pn**	**02 09 44.1**	**+0.5**
PRA				*e*S		**S**	**02 13 05.8**	**+0.5**
PRA				AMS	AMS		02 17 20.0	
	comp=Z,8µm,12.3s							
KSP	**Ksiaz**	**17.45**	**337**	*e*P		**Pn**	**02 09 43.5**	**-0.2**
KSP				*e*S		**Sn**	**02 12 59.1**	**+1.6**
KSP	**Ksiaz**	**17.45**	**337**	P		**Pn**	**02 09 44.1**	**+0.4**
KSP				pmax	pmax			
	comp=Z,89nm,1.6s							
DAVA	**Damuels**	**17.53**	**319**	*e*Pn		**Pn**	**02 09 44.9**	**0.0**
	comp=Z,45nm,0.8s,SNR=27							
DAVA				*e*Sn		**Sn**	**02 13 00.3**	**+0.7**
	comp=Z,31nm,0.8s							
ISO	**Isola**	**17.63**	**307**	P		**P**	**02 09 47.3**	**+0.3**
ISO				pmax	pmax			
	comp=Z,80nm,1.1s							
LMR	**La Mourre**	**17.66**	**304**	*e*P		**Pn**	**02 09 47.1**	**+0.7**
LMR				pmax	pmax			
	comp=Z,88nm,1.1s							
PVCC	**Panska Ves**	**17.77**	**334**	*e*P		**Pn**	**02 09 47.2**	**-0.4**
PVCC				MLR	MLR			
	comp=Z,6µm,12.3s							
PVCC	**Panska Ves**	**17.77**	**334**	*e*P		**Pn**	**02 09 47.2**	**-0.4**
PVCC				AMS	AMS		02 18 50.0	
	comp=Z,6µm,12.3s							
MAK	**Makhachkala**	**17.90**	**58**	*e*P		**P**	**02 09 51.1**	**+1.2**
MAK				pmax	pmax			
	comp=Z,527nm,1.0s							
MAK				MLR	MLR			
	comp=Z,2µm,16.0s							
LKRN	**Lenkeran, Azer**	**17.98**	**72**	P		**P**	**02 09 51.7**	**+0.9**
MIB	**Mutribah**	**18.16**	**101**	*e*P			02 09 50.8	
BNI	**Bardonecchia**	**18.24**	**309**	P		**P**	**02 09 54.4**	**+0.6**
BNI				pmax	pmax			
	comp=Z,94nm,0.9s							
VORD	**Divnogorie**	**18.26**	**26**	*e*P		**Pn**	**02 09 53.7**	**0.0**
VORD				*e*S		**S**	**02 13 20.1**	**-1.9**
VORD				pmax	pmax			
	comp=Z,100nm,1.0s							
VORD				smax	smax			
	comp=N,80nm,3.5s							
VORD				MLR	MLR			
	comp=Z,2µm,10.0s							
BRG	**Berggiesshubel**	**18.28**	**333**	P		**Pn**	**02 09 53.3**	**-0.6**
BRG				pmax	pmax			
	comp=Z,101nm,1.0s							
BRG	**Berggiesshubel**	**18.28**	**333**	*e*P		**Pn**	**02 09 53.2**	**-0.8**
BRG				Amp			02 09 57.0	
	comp=Z,82nm,1.3s							
BRG				*ex*	x		02 09 59.3	
BRG				Amp			02 10 01.7	
	comp=Z,94nm,1.2s							
BRG				*ex*	x		02 10 03.2	
BRG				Amp			02 10 05.3	
	comp=Z,128nm,1.1s							
BRG	**Berggiesshubel**	**18.28**	**333**	S		**Sn**	**02 13 17.0**	**-0.5**
BRG				Amp			02 18 08.0	
	comp=Z,6.7nm,12.4s							
BRG				Amp			02 18 22.0	
	comp=E,4.0nm,13.9s							
BRG				Amp			02 18 31.0	
	comp=N,7.2nm,13.1s							
NKC	**Novy Kostel**	**18.35**	**330**	*e*P		**Pn**	**02 09 54.1**	**-0.8**
NKC				MLR	MLR			
	comp=Z,7µm,13.0s							
NKC	**Novy Kostel**	**18.35**	**330**	*e*P		**Pn**	**02 09 54.1**	**-0.8**
NKC				AMS	AMS		02 17 50.0	
	comp=Z,7µm,13.0s							
LPG	**La Plagne**	**18.39**	**310**	*e*P		**Pn**	**02 09 55.7**	**0.0**
LPG				pmax	pmax			
	comp=Z,60nm,0.7s							
LPL	**La Plagne**	**18.41**	**310**	*e*P		**Pn**	**02 09 55.9**	**+0.1**
LPL				pmax	pmax			
	comp=Z,40nm,0.6s							
VSR	**Storozhevoye**	**18.43**	**25**	*e*P		**P**	**02 09 55.1**	**-0.5**
VSR				*e*S		**Sn**	**02 13 18.2**	**-2.8**
VSR				pmax	pmax			
	comp=Z,170nm,1.7s							
VSR				smax	smax			
	comp=N,870nm,8.8s							
VSR				MLR	MLR			
	comp=Z,6µm,12.0s							
MAHO	**Mahon**	**18.45**	**292**	⇑*i*P		**P**	**02 09 53.9**	**-2.0**
MAHO				*e*S		**Sn**	**02 13 18.8**	**-2.8**
SENIN	**Lac Senin/Sane**	**18.48**	**313**	P		**P**	**02 09 55.6**	**-0.8**
SENIN				IAmb	IAmb		02 10 08.3	
	comp=Z,145nm,0.9s							
GRFO	**Grafenberg**	**18.48**	**327**	P		**P**	**02 09 56.1**	**-0.2**
GRFO				pmax	pmax			
	comp=Z,234nm,1.2s							
GRFO	**Grafenberg**	**18.48**	**327**	P		**P**	**02 09 56.0**	**-0.2**
GRFO				IAmb	IAmb		02 10 07.8	
	comp=Z,234nm,1.2s							
GRA1	**Grafenberg Arr**	**18.48**	**327**	P		**P**	**02 09 55.0**	**-1.3**
GRA1				IAmb	IAmb		02 10 07.8	
	comp=Z,230nm,1.2s							
GRF	**Grafenberg Arr**	**18.48**	**327**	P		**P**	**02 09 55.0**	**-1.3**
GRF				pmax	pmax			
	comp=Z,230nm,1.2s							
UMR	**Umm Al-Rimmam**	**18.56**	**102**	*e*P			02 09 55.3	
SLE	**Schleitheim**	**18.57**	**318**	P		**P**	**02 09 56.0**	**-1.3**
SLE				pmax	pmax			
	comp=Z,86nm,1.0s							
RDF	**Al-Radifah**	**18.68**	**103**	*e*P			02 09 56.9	
STU	**Stuttgart**	**18.82**	**322**	P		**P**	**02 10 00.0**	**0.0**
STU				pmax	pmax			
	comp=Z,75nm,0.7s							
STU	**Stuttgart**	**18.82**	**322**	P		**P**	**02 10 00.0**	**0.0**
VORR	**Voronezh**	**18.82**	**25**	*e*P		**P**	**02 10 00.0**	**+0.1**
VORR				pmax	pmax			
	comp=Z,500nm,1.4s							
CLL	**Collm**	**18.98**	**333**	*e*P		**P**	**02 10 02.0**	**+0.3**
	comp=Z,227nm,1.5s							
CLL				*e*S		**S**	**02 13 41.0**	**+4.6**
CLL				L	L		02 18 00.0	
	comp=Z,4µm,18.7s							
CLL	**Collm**	**18.98**	**333**	P		**P**	**02 10 01.8**	**+0.1**
CLL				pmax	pmax			
	comp=Z,61nm,0.9s							
CLL	**Collm**	**18.98**	**333**	P		**P**		
BFO	**Black Forest**	**18.99**	**320**	P		**P**	**02 10 00.0**	**-1.9**
BFO				pmax	pmax			
	comp=Z,69nm,0.9s							
BFO	**Black Forest**	**18.99**	**320**	P		**P**	**02 10 00.0**	**-1.9**
MOX	**Moxa**	**19.01**	**329**	P		**P**	**02 10 02.0**	**-0.1**
MOX				pmax	pmax			
	comp=Z,82nm,1.3s							
SUW	**Suwalki**	**19.06**	**354**	*e*P		**P**	**02 10 02.8**	**+0.3**
SUW				*e*S		**Sn**	**02 13 33.0**	**-3.2**
SUW	**Suwalki**	**19.06**	**354**	*e*P		**Pn**	**02 10 03.5**	**+0.2**
SUW	**Suwalki**	**19.06**	**354**	P		**P**	**02 10 03.0**	**+0.5**
SUW				pmax	pmax			
	comp=Z,454nm,1.0s							
SUW	**Suwalki**	**19.06**	**354**	P		**P**	**02 10 03.0**	**+0.5**
GKP	**Gorka Klasztor**	**19.36**	**343**	*e*P		**P**	**02 10 05.1**	**-0.7**
GKP				*e*S		**Sn**	**02 13 42.8**	**-0.7**
GKP	**Gorka Klasztor**	**19.36**	**343**	*e*P		**P**	**02 10 05.5**	**-0.3**
VRH	**Novokhopyorsk**	**19.38**	**29**	*e*P		**P**	**02 10 05.7**	**-0.3**
VRH				*e*S		**Sn**	**02 13 43.9**	**-0.1**
VRH				pmax	pmax			
	comp=Z,80nm,0.5s							
VRH				smax	smax			
	comp=N,1µm,6.6s							
VRH				MLR	MLR			
	comp=Z,1µm,10.0s							
MNK	**Minsk**	**19.40**	**2**	*e*P		**P**	**02 10 05.0**	**-1.3**
MNK				*e*S		**Sn**	**02 13 40.0**	**-4.5**
MNK				pmax	pmax			
	comp=Z,11µm,16.0s							
MNK				pmax	pmax			
	comp=N,10µm,12.0s							
MNK	**Minsk**	**19.40**	**2**	*i* P		**P**	**02 10 04.9**	**-1.3**
	comp=E,6.0nm,0.8s							
MNK				*i* P		**P**	**02 10 04.9**	**-1.3**
	comp=N,175nm,1.1s							
MNK				*i* P		**P**	**02 10 04.9**	**-1.3**
	comp=Z,154nm,1.0s							
MNK				*i* PP		**PnPn**	**02 10 18.6**	**-2.1**
MNK				*i* S		**Sn**	**02 13 41.5**	**-3.0**
MNK				*i* SS		**SnSn**	**02 13 57.4**	**-1.4**
MNK				*i* LQ	LQ		02 15 50.7	
MNK				*i* LR	LR		02 17 18.4	
MNK				*i* LRM	MLR		02 17 37.3	
	comp=E,409nm,13.6s							
MNK				*i* LRM	MLR		02 18 09.2	
	comp=Z,3µm,15.3s							
LPSR	**Galich'ya Gora**	**19.52**	**23**	*e*P		**P**	**02 10 08.1**	**+0.6**
LPSR				*e*S		**Sn**	**02 13 44.8**	**-2.5**
LPSR				pmax	pmax			
	comp=Z,120nm,0.9s							
LPSR				smax	smax			
	comp=E,1µm,9.2s							
LPSR				MLR	MLR			
	comp=Z,3µm,14.0s							
ECH	**Echery**	**19.56**	**318**	P		**P**	**02 10 07.0**	**-1.1**
ECH				pmax	pmax			
	comp=Z,74nm,1.0s							
ECH	**Echery**	**19.56**	**318**	P		**P**	**02 10 07.0**	**-1.1**
SSB	**Saint Sauveur**	**19.71**	**308**	P		**P**	**02 10 08.2**	**-1.6**
SSB				pmax	pmax			
	comp=Z,49nm,0.9s							
SSB	**Saint Sauveur**	**19.71**	**308**	P		**P**	**02 10 08.2**	**-1.6**
NACGM	**Naroch**	**19.79**	**0**	*i* P		**P**	**02 10 10.6**	**+0.1**
NACGM				*i* P		**P**	**02 10 10.6**	**+0.1**
NACGM				*i* P		**P**	**02 10 10.6**	**+0.1**
NACGM				*i* PP		**PnPn**	**02 10 32.4**	**+6.4**
NACGM				*i* S		**S**	**02 13 51.5**	**-1.2**
NACGM				*i* SS		**SnSn**	**02 14 06.0**	**-2.2**
NACGM				*i* SSS	SSS		02 14 24.9	
NACGM				*i* LQ	LQ		02 16 38.6	
NACGM				*i* LR	LR		02 17 55.6	
RAYN	**Ar Rayn**	**19.99**	**120**	*i* P		**P**	**02 10 13.6**	**+0.6**
	SNR=44							
RAYN	**Ar Rayn**	**19.99**	**120**	P		**P**	**02 10 13.0**	**0.0**
RAYN				pmax	pmax			
	comp=Z,106nm,1.1s							
RAYN	**Ar Rayn**	**19.99**	**120**	P		**P**	**02 10 13.0**	**0.0**
TNS	**Taunus Mts**	**20.14**	**324**	P		**P**	**02 10 13.5**	**-1.0**
TNS				pmax	pmax			
	comp=Z,132nm,1.3s							
IDID	**Didziasalis**	**20.20**	**360**	*e*P		**P**	**02 10 14.7**	**-0.2**
IIGN	**Ignalina**	**20.24**	**359**	*e*P		**P**	**02 10 15.3**	**-0.1**
ISAL	**Salakas**	**20.46**	**359**	*e*P		**P**	**02 10 19.2**	**+1.4**
PABE	**Paberze**	**20.48**	**355**	*e*P		**P**	**02 10 17.2**	**-0.8**
EBNR	**Beni Rached**	**20.50**	**281**	P		**P**	**02 10 19.0**	**+0.6**
ECHA	**Ech Chlef**	**20.64**	**280**	P		**P**	**02 10 19.5**	**-0.4**
EANR	**'Ain N'Sour**	**20.87**	**280**	P		**P**	**02 10 22.7**	**+0.2**
WLF	**Walferdange**	**20.94**	**320**	*d*P		**P**	**02 10 22.3**	**-0.8**
WLF	**Walferdange**	**20.94**	**320**	P		**P**	**02 10 22.3**	**-0.8**
WLF				pmax	pmax			
	comp=Z,113nm,1.0s							
WLF	**Walferdange**	**20.94**	**320**	P		**P**	**02 10 22.3**	**-0.8**
WLF				IAmb	IAmb		02 10 49.2	
	comp=Z,113nm,1.0s							
OBN	**Obninsk**	**21.13**	**16**	P		**P**	**02 10 24.5**	**-0.5**
	comp=Z,6.8nm,0.5s,baz=27,slow=6.1,SNR=9.7							
OBN				S		**S**	**02 14 21.4**	**+2.3**
	comp=Z,6.9nm,0.8s,baz=58,slow=23,SNR=3.3							
OBN				LR	LR		02 19 56.3	
	comp=Z,462nm,18.8s,baz=204,slow=41							
OBN	**Obninsk**	**21.13**	**16**	⇑*e*P		**P**	**02 10 23.8**	**-1.1**
OBN				*e*			02 10 45.4	
OBN				*e*S		**S**	**02 14 18.8**	**-0.3**
OBN				pmax	pmax			
	comp=Z,136nm,1.2s							
OBN				MLR	MLR			
	comp=Z,6µm,15.0s							
OBN	**Obninsk**	**21.13**	**16**	P		**P**	**02 10 23.9**	**-1.1**
OBN				IAmb	IAmb		02 10 38.9	
	comp=Z,208nm,1.1s							
PBUR	**Paburge**	**21.17**	**353**	*e*P		**P**	**02 10 28.4**	**+3.0**
BHOU	**Houvegnez**	**21.43**	**322**	*d*P		**P**	**02 10 28.5**	**+0.2**
	comp=Z,65nm,1.0s							
BTNL	**Ternell**	**21.51**	**322**	*d*P		**P**	**02 10 28.6**	**-0.7**
	comp=Z,90nm,1.1s							
MEM	**Membach**	**21.59**	**322**	*d*P		**P**	**02 10 29.4**	**-0.6**
	comp=Z,87nm,0.8s							
MEM	**Membach**	**21.59**	**322**	P		**P**	**02 10 30.0**	**0.0**
MEM				pmax	pmax			
	comp=Z,122nm,1.0s							
BSD	**Bornholm Skovb**	**21.61**	**341**	*e*P		**P**	**02 10 31.8**	**+1.6**
BSD	**Bornholm Skovb**	**21.61**	**341**	*i* P		**P**	**02 10 28.0**	**-2.2**
BSD				*i* P		**P**	**02 10 29.0**	**-1.2**
BSD				IAMs_20	IAMs_20		02 20 54.4	
	comp=Z,10µm,13.4s							
BSD	**Bornholm Skovb**	**21.61**	**341**	*i* P		**P**	**02 10 29.0**	**-1.2**
BSD				MLR	MLR			
	comp=Z,10µm,13.0s							
RJF	**Les Rejaudoux**	**21.71**	**306**	*e*P		**P**	**02 10 30.0**	**-1.4**
RJF				pmax	pmax			
	comp=Z,152nm,0.9s							
RCHB	**Rochefort**	**21.71**	**320**	*d*P		**P**	**02 10 30.4**	**-0.9**
	comp=Z,50nm,0.9s							
BSTI	**Sart Tilman**	**21.79**	**322**	*d*P		**P**	**02 10 32.0**	**-0.3**
	comp=Z,23nm,1.2s							
BCLA	**Clavier**	**21.83**	**321**	*d*P		**P**	**02 10 31.8**	**-0.8**
BCLA				*dp*P		**pP**	**02 10 35.4**	**-2.2**
BCLA				*dx*	x		02 10 38.3	
BEBN	**Eben Emael**	**21.87**	**322**	*dx*	x		02 10 42.2	
BGES	**Gesves**	**21.92**	**321**	*d*P		**P**	**02 10 32.7**	**-0.9**
	comp=Z,60nm,1.0s							
MOS	**Moscow**	**21.94**	**17**	*e*P		**P**	**02 10 31.5**	**-2.2**
MOS				*e*			02 10 53.7	
MOS				*e*S		**S**	**02 14 30.2**	**-4.9**
MOS				*e*SS		**SnSn**	**02 15 03.9**	**+2.9**
MOS				*e*			02 21 50.4	
MOS				pmax	pmax			
	comp=Z,105nm,1.3s							
MOS				pmax	pmax			
	comp=N,42nm,0.8s							
MOS				pmax	pmax			
	comp=E,42nm,0.9s							
MOS				MLR	MLR			
	comp=Z,6µm,13.0s							
MOS				MLR	MLR			
	comp=N,5µm,11.0s							
DOU	**Dourbes**	**22.01**	**320**	*d*P		**P**	**02 10 33.2**	**-1.4**
	comp=Z,44nm,1.0s							
DOU	**Dourbes**	**22.01**	**320**	P		**P**	**02 10 34.2**	**-0.4**
DOU				pmax	pmax			
	comp=Z,101nm,1.1s							
BMRD	**Maredsous**	**22.04**	**320**	*d*P		**P**	**02 10 33.8**	**-1.1**
	comp=Z,38nm,0.9s							
TAM	**Tamanrasset**	**22.21**	**242**	P		**P**	**02 10 37.1**	**0.0**
TAM				pmax	pmax			
	comp=Z,81nm,1.1s							
TAM	**Tamanrasset**	**22.21**	**242**	P		**P**	**02 10 37.1**	**0.0**
CLF	**Chambon-Foret**	**22.29**	**313**	P		**P**	**02 10 35.1**	**-2.5**
SNF	**Seneffe**	**22.41**	**320**	*d*P		**P**	**02 10 38.0**	**-0.9**
	comp=Z,96nm,0.9s							
CART	**Cartagena**	**22.45**	**284**	*e*P		**P**	**02 10 35.2**	**-4.2**
CART				*e*S		**S**	**02 14 43.0**	**-2.1**
CART	**Cartagena**	**22.45**	**284**	P		**P**	**02 10 36.8**	**-2.6**
CART				IAmb	IAmb		02 10 56.7	
	comp=Z,63nm,0.8s							
LUNU	**Lund**	**22.47**	**340**	*i* P		**P**	**02 10 36.6**	**-2.7**
BLEU	**Blekinge**	**22.47**	**344**	*e*P		**P**	**02 10 37.6**	**-1.8**
UCC	**Uccle**	**22.54**	**321**	*d*P		**P**	**02 10 39.2**	**-1.0**
	comp=Z,63nm,1.1s							
UCC	**Uccle**	**22.54**	**321**	P		**P**	**02 10 38.7**	**-1.5**
UCC				pmax	pmax			
	comp=Z,148nm,1.1s							
UCC	**Uccle**	**22.54**	**321**	P		**P**	**02 10 38.7**	**-1.5**
UCC				IAmb	IAmb		02 10 50.1	
	comp=Z,148nm,1.1s							
BELG	**Belogornoye**	**22.80**	**34**	P		**P**	**02 10 42.4**	**-0.5**
	comp=Z,96nm,0.6s,baz=226,slow=3.4,SNR=19							
BELG				S		**S**	**02 14 50.9**	**-0.1**
	comp=Z,38nm,0.8s,baz=19,slow=20,SNR=7.1							
BELG				LR	LR		02 20 29.7	
	comp=Z,979nm,21.3s,baz=227,slow=39							
BELG	**Belogornoye**	**22.80**	**34**	*c i*P		**P**	**02 10 41.8**	**-1.1**
BELG				pmax	pmax			
	comp=Z,24nm,0.9s							
DEL	**Delary**	**23.09**	**342**	*i* P		**P**	**02 10 42.4**	**-3.5**
VSU	**Vasula**	**23.36**	**360**	*e*P		**P**	**02 10 49.4**	**+0.9**
MTSE	**Matsula**	**23.69**	**356**	*e*P		**P**	**02 10 51.9**	**+0.1**
MELI	**Melilla**	**24.21**	**279**	⇑*i*P		**P**	**02 10 55.9**	**-1.1**
MELI				*e*S		**S**	**02 15 20.2**	**+5.7**
UCM	**Universidad Co**	**24.22**	**291**	*i* P		**P**	**02 10 54.0**	**-3.1**
UCM				*e*S		**S**	**02 15 12.2**	**-2.5**
FLN	**La Foliniere**	**24.26**	**313**	*e*P		**P**	**02 10 55.8**	**-1.5**
FLN				pmax	pmax			
	comp=Z,49nm,0.5s							
BORU	**Boraas**	**24.40**	**342**	*i* P		**P**	**02 10 57.6**	**-0.9**
ONAU	**Onsala**	**24.42**	**340**	*i* P		**P**	**02 10 57.9**	**-0.8**
MUD	**Monsted U'grnd**	**24.47**	**336**	*i* P		**P**	**02 10 57.9**	**-1.2**
MUD				IAmb	IAmb		02 10 59.2	
	comp=Z,13nm,0.8s							
MUD				IAMs_20	IAMs_20		02 24 05.0	
	comp=Z,4µm,12.2s							
MUD	**Monsted U'grnd**	**24.47**	**336**	*i* P		**P**	**02 10 57.9**	**-1.2**
MUD				pmax	pmax			
	comp=Z,13nm,0.8s							
MUD				MLR	MLR			
	comp=Z,4µm,12.0s							
JRN	**Qarnain Island**	**24.71**	**107**	P		**P**	**02 11 02.2**	**+0.6**
	SNR=46							
JRN				P		**P**	**02 11 02.2**	**+0.6**
	SNR=46							
ESBB	**Sonseca Array**	**24.75**	**290**	IAmb		IAmb	02 11 18.9	
	comp=Z,98nm,1.1s							
ESDC	**Sonseca Array**	**24.75**	**290**	P		**P**	**02 11 01.4**	**-0.6**
	comp=Z,18nm,0.6s,baz=81,slow=9.7,SNR=138							
ESDC				ScP		**ScP**	**02 18 15.7**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=58,slow=2.0,SNR=5.4							
ESDC	**Sonseca Array**	**24.75**	**290**	P		**P**	**02 11 01.1**	**-0.9**
PUL	**Pulkovo**	**24.78**	**4**	*i* P		**P**	**02 11 01.4**	**-0.5**
PUL				pmax	pmax			
	comp=Z,96nm,1.2s							
PAB	**San Pablo**	**25.05**	**289**	P		**P**	**02 11 03.3**	**-1.3**
PAB				pmax	pmax			
	comp=Z,73nm,1.1s							
PAB	**San Pablo**	**25.05**	**289**	P		**P**	**02 11 03.3**	**-1.3**
PAB				IAmb	IAmb		02 11 19.0	
	comp=Z,72nm,1.1s							
GEYT	**Alibeck**	**25.31**	**74**	P		**P**	**02 11 07.2**	**+0.1**
	comp=Z,30nm,0.7s,baz=283,slow=7.2,SNR=38							
GEYT	**Alibeck**	**25.31**	**74**	P		**P**	**02 11 06.5**	**-0.5**
GEYT				IAmb	IAmb		02 11 20.0	
	comp=Z,57nm,1.1s							
GYA0	**ALIBECK ARRAY**	**25.31**	**74**	P		**P**	**02 11 07.0**	**0.0**
GYA0B	**ALIBECK ARRAY**	**25.31**	**74**	IAmb		IAmb	02 11 35.7	
	comp=Z,88nm,0.9s							
PVLZ	**Peæn de**	**25.34**	**279**	⇑*i*P		**P**	**02 11 06.7**	**-0.5**
PVLZ				*e*S		**S**	**02 15 30.0**	**-2.6**
QUIF	**Quistinic**	**25.61**	**309**	*e*P		**P**	**02 11 09.2**	**-0.4**
QUIF				pmax	pmax			
	comp=Z,57nm,0.6s							
MDT	**Midelt**	**26.05**	**274**	P		**P**	**02 11 13.8**	**0.0**
	comp=Z,24nm,1.0s,baz=89,slow=9.0,SNR=23							
MDT				LR	LR		02 23 36.4	
	comp=Z,4µm,21.8s,baz=90,slow=41							
CEU	**Ceuta**	**26.10**	**281**	*e*P		**P**	**02 11 11.9**	**-2.2**
CEU				*e*S		**S**	**02 15 53.8**	**+9.2**
HOMB	**Homborsund**	**26.15**	**338**	*e*P		**P**	**02 11 13.0**	**-1.4**
IFR	**Ifrane**	**26.32**	**276**	*e*P		**P**	**02 11 10.2**	**-6.1**
IFR				*e*S		**S**	**02 15 39.4**	**-9.1**
FINES	**FINESS Array B**	**26.35**	**359**	P		**P**	**02 11 14.7**	**-1.4**
	comp=

SNR=14
KONO Kongsberg 26.98 341 P P 02 11 23.1 +1.2
KONO pmax pmax
comp=Z,52nm,1.4s
KONO Kongsberg 26.98 341 P P 02 11 23.1 +1.2
KONO Kongsberg 26.98 341 eP P 02 11 21.5 -0.4
KLMR Klimovskoe 27.04 14 eP P 02 11 20.4 -1.9
KLMR eS S 02 16 00.0 +1.1
KLMR pmax pmax
comp=Z,64nm,1.0s
KLMR MLR MLR
comp=Z,7µm,12.0s
KLMR Klimovskoe 27.04 14 eP P 02 11 20.4 -1.9
KLMR AMP 02 11 34.2
comp=Z,64nm,1.0s
KLMR eS S 02 16 00.0 +1.1
KLMR eS S 02 16 00.0 +1.1
KLMR LQ LQ 02 19 42.7
KLMR LQ LQ 02 19 42.7
KLMR LR LR 02 21 03.3
KLMR AMP 02 23 06.9
comp=Z,7µm,12.2s
MASF Masafi 27.12 103 P P 02 11 23.2 -0.3
SNR=20
MASF P P 02 11 23.2 -0.3
SNR=20
MVO Moncorvo 27.12 293 eP P 02 11 22.5 -0.9
comp=Z,145nm,1.0s
MVO eS S 02 15 58.7 -2.3
MSFE Esma-Masafi 27.13 103 i P P 02 11 23.6 0.0
SNR=16
PBAR Barrancos 27.19 286 eP P 02 11 22.8 -1.1
comp=Z,117nm,1.4s
PBAR eS S 02 15 59.0 -2.9
MDH Madha 27.27 103 i P P 02 11 25.5 +0.8
SNR=12
MDH Madha 27.27 103 P P 02 11 25.3 +0.5
SNR=15
MDH P P 02 11 25.3 +0.5
SNR=15
AKTO Aktyubinsk 27.34 46 P P 02 11 23.9 -1.2
comp=Z,26nm,0.8s,baz=250,slow=8.4,SNR=85
AKTO LR LR 02 25 13.6
comp=Z,710nm,20.5s,baz=239,slow=43
AKTO Aktyubinsk 27.34 46 P P 02 11 24.2 -0.9
HATD Hatta, Dubai 27.36 104 i P P 02 11 24.8 -0.8
SNR=49
HATD Hatta, Dubai 27.36 104 P P 02 11 25.5 -0.1
SNR=36
HATD P P 02 11 25.5 -0.1
SNR=36
UOSS Minazif 27.36 104 i P P 02 11 24.9 -0.7
SNR=10
UOSS Minazif 27.36 104 P P 02 11 24.1 -1.5
UOSS lAmb lAmb 02 11 32.3
comp=Z,88nm,0.9s
PMRV Marv??o 27.40 289 eP P 02 11 25.3 -0.6
comp=Z,74nm,1.7s
PMRV eS S 02 16 01.5 -3.8
ALNE Al Ain 27.43 106 i P P 02 11 26.1 -0.1
SNR=11
ALNE Al Ain 27.43 106 P P 02 11 26.4 +0.1
SNR=38
ALNE P P 02 11 26.4 +0.1
SNR=38
NC602 NORSAR Array S 27.44 344 lAmb lAmb 02 11 54.0
comp=Z,97nm,1.1s
NC602 NORSAR Array S 27.44 344 eP P 02 11 24.4 -1.6
NORES NORESS Array B 27.44 344 P P 02 11 24.6 -1.4
PCBR Castelo Branco 27.46 290 eP P 02 11 25.8 -0.5
comp=Z,73nm,1.4s
MTE Manteigas 27.50 291 eP P 02 11 26.6 -0.2
comp=Z,94nm,1.6s
MTE eS S 02 16 05.8 -1.1
MTE Manteigas 27.50 291 lAmb lAmb 02 11 50.4
comp=Z,46nm,1.1s
PESTR Estremoz 27.58 288 eP P 02 11 26.8 -0.7
comp=Z,97nm,1.4s
PESTR eS S 02 16 05.7 -2.4
PESTR Estremoz 27.58 288 lAmb lAmb 02 11 42.2
comp=Z,46nm,1.1s
PVRL Vila Real 27.65 293 eP P 02 11 28.5 +0.4
comp=Z,80nm,1.3s
ATD Arta Tunnel 27.67 144 P P 02 11 29.6 +1.1
comp=Z,3.5nm,0.4s,baz=310,slow=8.6,SNR=4.6
NAO01 NORSAR Array S 27.69 343 lAmb lAmb 02 11 45.7
comp=Z,54nm,1.0s
POLO Lamas de Olo 27.71 293 eP P 02 11 27.9 -0.8
comp=Z,38nm,1.5s
POLO eS S 02 16 11.5 +1.3
BLS5 Blasjo 27.72 338 eP P 02 11 26.9 -1.5
NC405 NORSAR Array S 27.74 344 lAmb lAmb 02 11 53.9
comp=Z,86nm,1.4s
PVIS Viseu 27.77 292 eP P 02 11 28.9 -0.3
comp=Z,62nm,1.6s
NB201 NORSAR Array S 27.78 344 lAmb lAmb 02 11 54.8
comp=Z,69nm,1.3s
NB2 NORSAR Subarra 27.79 344 P P 02 11 27.0 -2.1
baz=156,slow=9.3
NOA NORSAR Array B 27.79 344 P P 02 11 26.6 -2.5
comp=Z,0.8nm,0.4s,baz=59,slow=22,SNR=14
NOA LR LR 02 23 32.4
comp=Z,4µm,20.8s,baz=160,slow=39
PVAQ Vaqueiros 27.79 285 eP P 02 11 28.7 -0.6
comp=Z,105nm,1.1s
PVAQ eS S 02 16 10.4 -1.0
PVAQ Vaqueiros 27.79 285 lAmb lAmb 02 11 42.9
comp=Z,75nm,1.0s
PBEJ Beja 27.85 286 eP P 02 11 33.3 +3.4
comp=Z,30nm,1.0s
KIRV Kirov 27.87 26 P P 02 11 28.1 -1.7
comp=Z,17nm,0.6s,baz=67,slow=1.1,SNR=10
KIRV LR LR 02 23 49.5
comp=Z,1µm,18.5s,baz=232,slow=39
KIRV Kirov 27.87 26 i P P 02 11 27.7 -2.1
NBO00 NORSAR Array S 27.88 343 lAmb lAmb 02 11 46.8
comp=Z,120nm,1.5s
PCAB Cabril 27.89 294 eP P 02 11 29.2 -1.1
comp=Z,77nm,1.1s
EVO Evora 27.93 287 eP P 02 11 26.9 -3.7
EVO eS S 02 16 11.4 -2.1
EVO Evora 27.93 287 eP P 02 11 30.4 -0.2
comp=Z,55nm,1.5s
PBDV Barranco-do-Ve 27.98 285 eP P 02 11 30.4 -0.7
comp=Z,127nm,2.2s
PBDV eS S 02 16 26.0 +12
SOHO SOHO 28.02 105 i P P 02 11 30.8 -0.6
SNR=56
PCVE Castro Verde 28.02 285 eP P 02 11 32.9 +1.5
comp=Z,95nm,1.5s
PCVE eS S 02 16 26.8 +12
ODD1 Odda 28.05 338 eP P 02 11 29.7 -1.8
PMTG Montargil 28.06 289 eP P 02 11 31.1 -0.7
comp=Z,53nm,1.5s
PMTG eS S 02 16 15.6 0.0
PGAV Gavieira, Arco 28.09 295 eP P 02 11 32.8 +0.7
comp=Z,51nm,1.7s
PGAV eS S 02 16 12.3 -3.8
AB31 Akbulak array 28.11 50 i P P 02 11 31.2 -0.8
ABKAR Akbulak array 28.11 50 P P 02 11 30.1 -2.0
MESJ Messejana 28.15 286 eP P 02 11 31.8 -0.7
MESJ lAmb lAmb 02 11 43.3
comp=Z,44nm,0.7s
MESJ eS S 02 16 15.0 -1.9
MESJ Messejana 28.15 286 eP P 02 11 31.8 -0.7
MESJ eS S 02 16 15.0 -1.9
MESJ Messejana 28.15 286 eP P 02 11 32.2 -0.3
comp=Z,74nm,1.1s
COI Coimbra 28.17 291 eP P 02 11 32.3 -0.4
comp=Z,83nm,1.1s
COI eS S 02 16 20.1 +2.8
COI Coimbra 28.17 291 lAmb lAmb 02 11 44.5
comp=Z,58nm,0.8s
SKAR Skarslia 28.21 341 eP P 02 11 31.8 -1.0
AVE Averroes 28.23 276 eP P 02 11 33.3 0.0
AVE eS S 02 16 14.6 -3.7
PCAS Casmilo, Conde 28.24 291 eP P 02 11 33.2 -0.1
comp=Z,41nm,1.4s
PCAS eS S 02 16 21.4 +3.0
PNCL Nicolau / Gran 28.37 287 eP P 02 11 35.2 +0.7
comp=Z,126nm,1.4s
PNCL eS S 02 16 22.9 +2.5
ARQ Araqi 28.41 106 P P 02 11 35.5 +0.5
SNR=31
PSBE So Bento 28.48 289 eP P 02 11 33.8 -1.8
comp=Z,51nm,2.0s
PSBE eS S 02 16 24.0 +1.7
MORF Marmelete 28.54 285 eS S 02 16 21.2 -2.1
MORF Marmelete 28.54 285 eS S 02 16 20.5 -2.8
PTEO Sao Teotonio 28.57 285 eP P 02 11 36.3 0.0
comp=Z,123nm,1.3s
PFVI Vila Bisbo 28.70 285 eP P 02 11 37.8 +0.3
comp=Z,70nm,1.5s
PFVI eS S 02 16 23.4 -2.3
LIS Lisbon 28.80 288 eP P 02 11 37.8 -0.6
LIS lAmb lAmb 02 11 50.8
comp=Z,68nm,0.8s
LIS Lisbon 28.80 288 eP P 02 11 37.8 -0.6
BER Bergen 28.82 338 eP P 02 11 37.6 -0.6
EKA Eskdalemuir Ar 28.83 324 P P 02 11 36.8 -1.6
comp=Z,5.3nm,0.5s,baz=125,slow=11,SNR=41
EKA PcP PcP 02 14 48.8 +1.2
comp=Z,1.8nm,0.6s,baz=113,slow=2.5,SNR=3.5
EKA ScP ScP 02 18 27.0 -1.2
comp=Z,4.1nm,1.0s,baz=123,slow=4.6,SNR=5.4
EKA LR LR 02 24 13.2
comp=Z,1µm,18.1s,baz=190,slow=39
ESK Eskdalemuir 28.85 324 P P 02 11 37.0 -1.5
ESK pmax pmax
comp=Z,33nm,0.8s
ESK Eskdalemuir 28.85 324 P P 02 11 37.0 -1.5
ESK lAmb lAmb 02 11 59.2
comp=Z,33nm,0.8s
PMAFR Mafra 28.89 288 eS S 02 16 30.9 +2.2
HOQ Hoqain 28.91 105 P P 02 11 39.2 -0.3
SNR=26
HOQ P P 02 11 39.2 -0.3
SNR=26
ASK Askoy 28.95 338 eP P 02 11 39.0 -0.3
HRA Herat 29.09 81 P P 02 11 40.5 -0.7
HRA lAmb lAmb 02 11 55.5
comp=Z,70nm,1.2s
PRGR Permogore 29.13 19⇑ i P P 02 11 39.2 -1.7
PRGR eS S 02 16 26.5 -5.3
PRGR pmax pmax
comp=Z,41nm,0.7s
DOMB Dombas 29.17 343 eP P 02 11 40.9 -0.5
HYA Hoyanger 29.20 340 eP P 02 11 40.8 -0.8
BSY Bisya 29.25 107 P P 02 11 42.6 +0.1
SNR=45
BSY P P 02 11 42.6 +0.1
SNR=45
BSY P P 02 11 42.6 +0.1
SNR=45
DOK Doka 29.31 117 P P 02 11 43.1 +0.1
SNR=20
WHFO Wadi Hawf 29.50 119 P P 02 11 44.5 -0.2
SNR=20
WHFO P P 02 11 44.5 -0.2
SNR=20
ABTO Aybut 29.53 120 P P 02 11 45.2 +0.2
SNR=22
ABTO P P 02 11 45.2 +0.2
SNR=22
SUE Sulen 29.53 338 eP P 02 11 43.9 -0.6
BIDO Bidbid 29.58 104 P P 02 11 45.3 -0.1
SNR=7.7
BIDO P P 02 11 45.3 -0.1
SNR=7.7
SMDO Samad 29.75 105 P P 02 11 46.7 -0.3
SNR=36
SMDO P P 02 11 46.7 -0.3
SNR=36
AKN Aaknes 29.80 341 eP P 02 11 46.5 -0.5
FOO Floro 29.87 339 eP P 02 11 46.8 -0.7
MOL Molde 29.99 342 eP P 02 11 47.1 -1.4
RBK Rabkut 30.08 119 P P 02 11 50.1 +0.2
SNR=20
RBK P P 02 11 50.1 +0.2
SNR=20
WSAR Wadi Sarin 30.12 104 P P 02 11 50.1 -0.1
comp=Z,4.0nm,0.6s,baz=284,slow=13,SNR=6.2
JMDO Jabal Madar 30.16 106 P P 02 11 50.2 -0.3
SNR=17
JMDO P P 02 11 50.2 -0.3
SNR=17
ARU Arti 30.33 35 P P 02 11 50.9 -0.7
comp=Z,3.7nm,0.3s,baz=230,slow=11,SNR=20
ARU Arti 30.33 35 d i P P 02 11 50.3 -1.4
ARU 02 12 49.4
ARU 02 14 52.2
ARU S S 02 16 54.8 +3.9
ARU SS SnSn 02 18 23.9 -1.8
ARU SSS SSS 02 18 44.4
ARU 02 22 24.1
ARU pmax pmax
comp=Z,16nm,1.1s
ARU MLR MLR
comp=Z,1µm,13.0s
ARU Arti 30.33 35 P P 02 11 49.5 -2.2
DMTO DMTO 30.48 117 P P 02 11 53.1 -0.2
SNR=20
DMTO P P 02 11 53.1 -0.2
SNR=20
WBK Wadi Bani Khal 30.71 105 P P 02 11 56.4 +0.9
SNR=19
WBK P P 02 11 56.4 +0.9
SNR=19
SHAO Shalim 30.78 116 i P P 02 11 54.5 -1.5
SNR=9.2
SHAO Shalim 30.78 116 P P 02 11 56.4 +0.4
SNR=11
SHAO P P 02 11 56.4 +0.4
SNR=11
NSS Namsos 30.79 348 eP P 02 11 54.8 -0.8
MHTO MHTO 30.80 109 P P 02 11 56.8 +0.6
SNR=24
MHTO P P 02 11 56.8 +0.6
SNR=24
DQM DQM 31.07 111 P P 02 11 58.4 -0.1
SNR=45
DQM P P 02 11 58.4 -0.1
SNR=45
JLN Jalan Bani Buh 31.30 106 P P 02 12 00.8 +0.3
SNR=30
JLN P P 02 12 00.8 +0.3
SNR=30
JLN P P 02 12 00.8 +0.3
SNR=30
TOA0 Torodi Ar. Sit 31.47 232 P P 02 12 01.3 -0.8
TORD Torodi Ar. Bea 31.47 232 P P 02 12 02.2 +0.1
comp=Z,86nm,0.8s,baz=34,slow=8.6,SNR=282
TORD LR LR 02 28 06.9
comp=Z,2µm,18.3s,baz=25,slow=43
TORD Torodi Ar. Bea 31.47 232 P P 02 12 01.1 -1.0
TORD lAmb lAmb 02 12 06.2
comp=Z,44nm,0.8s
SVE Sverdlovsk 31.52 36⇓ eP P 02 12 02.0 -0.2
SVE eS S 02 17 10.7 +1.2
SVE pmax pmax
comp=Z,34nm,0.9s
SVE MLR MLR
comp=Z,2µm,13.0s
MOR8 Moi Rana 31.93 351 eP P 02 12 04.5 -1.3
STOK Stokkvaagen 32.28 350 eP P 02 12 09.0 +0.3
KONS Konsvik 32.43 350 eP P 02 12 09.5 -0.4
NBB40 Tonnes 32.45 350 eP P 02 12 09.6 -0.6
NBB29 Rokland skole 32.60 352 eP P 02 12 11.1 -0.4
NBB17 Glomfjord BΨr 32.61 351 eP P 02 12 10.2 -1.4
APA Apatity 32.73 5 i P P 02 12 10.9 -1.7
APA i S S 02 17 25.0 -3.0
APA pmax pmax
comp=Z,18nm,1.1s
NBB30 Finnes 32.79 351 eP P 02 12 12.4 -0.7
NBB05 Inndyr 32.81 351 eP P 02 12 12.5 -0.8
N2ST Straumen 32.91 352 eP P 02 12 13.4 -0.8
FAUS Fauske 32.98 352 eP P 02 12 14.4 -0.5
NBB08 Skaug oppvekst 33.06 351 eP P 02 12 14.2 -1.3
N2TV TΨrnvik 33.18 352 eP P 02 12 15.8 -0.8
N2IH Innhavet 33.47 353 eP P 02 12 18.2 -0.9
STEI Steigen 33.51 352 eP P 02 12 17.9 -1.5
N2RO RΨst 33.52 350 eP P 02 12 18.4 -1.1
SOCY Socotra 33.62 126 P P 02 12 18.2 -2.8
SOCY lAmb lAmb 02 12 32.7
comp=Z,54nm,1.0s
N2SV SΨrvΨgen 33.75 351 eP P 02 12 20.1 -1.4
LOF Lofoten 33.91 351 eP P 02 12 22.4 -0.5
KTK1 Kautokeino 34.01 358 eP P 02 12 23.1 -0.7
IUG luzhnay 34.25 65 eP P 02 12 25.9 -0.5
comp=Z,30nm,0.9s,baz=65
IUG eS S 02 17 54.3 +1.8
baz=65
IUG luzhnay 34.25 65 eP P 02 12 25.8 -0.5
IUG eS S 02 17 54.2 +1.8
IUG pmax pmax
comp=Z,30nm,0.9s
KOWA Kowa 34.43 241 P P 02 12 28.0 0.0
comp=Z,20nm,0.7s,baz=45,slow=7.7,SNR=19
KOWA Kowa 34.43 241 P P 02 12 27.4 -0.7
ARA0 ARCESS Array S 34.48 359 eP P 02 12 26.9 -1.0
ARCES ARCESS Array B 34.48 359 P P 02 12 26.8 -1.1
comp=Z,6.4nm,0.5s,baz=182,slow=8.0,SNR=36
ARCES LR LR 02 27 30.1
comp=Z,2µm,19.7s,baz=165,slow=38
ARCES ARCESS Array B 34.48 359 P P 02 12 26.4 -1.4
KBL Kabul 34.54 78 P P 02 12 28.5 -0.6
KBL pmax pmax
comp=Z,38nm,1.3s
KBL Kabul 34.54 78 P P 02 12 28.4 -0.6
KBL lAmb lAmb 02 12 47.8
comp=Z,38nm,1.3s
KBL Kabul 34.54 78 P P 02 12 28.0 -1.0
SNR=16
KK31 Karatay Array 34.57 63 i P P 02 12 28.7 -0.3
KKAR Karatay Array 34.57 63 P P 02 12 28.1 -0.9
KKAR pmax pmax
comp=Z,136nm,1.4s
KKAR Karatay Array 34.57 63 P P 02 12 28.1 -0.9
JETT Jettan, Norway 34.67 356 eP P 02 12 28.4 -1.2
GAR Garm 34.74 70 P P 02 12 30.6 -0.1
TRO Tromso 34.84 355 eP P 02 12 29.7 -1.2
DZA Taraz 35.17 64 eP P 02 12 34.2 0.0
comp=Z,33nm,0.9s,baz=64
DZA eS S 02 18 08.9 +2.4
baz=64
DZA Taraz 35.17 64 eP P 02 12 34.2 0.0
DZA eS S 02 18 08.9 +2.4
DZA pmax pmax
comp=Z,33nm,0.9s
BRVK Borovoye 35.39 46 P P 02 12 35.6 -0.3
BRVK Borovoye 35.39 46 P P 02 12 34.9 -1.0
BRVK lAmb lAmb 02 12 39.0
comp=Z,43nm,1.1s
BVAR Borovoye Array 35.44 46 P P 02 12 35.2 -1.2
comp=Z,24nm,0.9s,baz=121,slow=0.9,SNR=66
PMPST Porto Santo, M 35.53 279 eP P 02 12 37.8 +0.5
comp=Z,183nm,1.3s
PMPS Porto Santo 35.53 279 eP P 02 12 37.6 +0.2
HAMF Hammerfest 35.63 358 eP P 02 12 36.9 -0.8
MBAR Mbarara 35.73 173 P P 02 12 41.3 +1.9
comp=Z,2.5nm,0.2s,baz=321,slow=14,SNR=9.4
MBAR Mbarara 35.73 173 i P P 02 12 35.8 -3.5
MBAR pmax pmax
comp=Z,12nm,1.3s
MBAR Mbarara 35.73 173 P P 02 12 40.7 +1.4
PMAR Madeira 36.09 279 eP P 02 12 43.5 +1.1
comp=Z,134nm,1.6s
PMOZ Porto Moniz, M 36.30 279 eP P 02 12 45.4 +1.4
comp=Z,95nm,1.6s
PMOZ eS S 02 18 22.1 -2.0
EKS2 Erkin-Say 36.99 64 P P 02 12 50.9 +1.0
SNR=42
BTLS Baital 37.06 60 eP P 02 12 50.1 -0.2
comp=Z,17nm,1.0s,baz=60
BTLS Baital 37.06 60 eP P 02 12 50.1 -0.2
BTLS pmax pmax
comp=Z,17nm,1.0s
KMBO Kilima Mbogo 37.37 163 P P 02 12 55.5 +2.1
comp=Z,1.6nm,0.8s,baz=18,slow=7.9,SNR=6.3
KMBO LR LR 02 30 06.5
comp=Z,2µm,19.1s,baz=329,slow=39
USP Ospenovka 37.47 63 P P 02 12 54.0 +0.1
SNR=15
AAK Ala-Archa 37.52 64 P P 02 12 55.2 +0.8
comp=Z,44nm,0.7s,baz=235,slow=6.5,SNR=68
AAK Ala-Archa 37.52 64 P P 02 12 55.4 +1.0
SNR=37
AAK Ala-Archa 37.52 64 i P P 02 12 54.3 -0.1
SNR=44
AAK Ala-Archa 37.52 64 P P 02 12 54.0 -0.4
AAK pmax pmax
comp=Z,54nm,0.9s
AAK Ala-Archa 37.52 64 P P 02 12 54.0 -0.4
AAK lAmb lAmb 02 13 09.7
comp=Z,54nm,0.8s
SGDS Sogindy 37.55 62 eP P 02 12 53.8 -0.9
baz=62
SGDS Sogindy 37.55 62 eP P 02 12 53.7 -0.9
UCH Uchtor 37.56 64 P P 02 12 55.8 +0.6
SNR=19
CHMS Chumysh 37.67 63 P P 02 12 56.3 +0.7
SNR=27
KBK Karagaybulak 37.85 64 P P 02 12 58.3 +1.1
SNR=13
NIL Nilore 38.14 78 P P 02 12 59.3 -0.3
NIL pmax pmax
comp=Z,69nm,0.9s
NIL Nilore 38.14 78 P P 02 12 59.3 -0.3
NIL lAmb lAmb 02 13 21.6
comp=Z,69nm,0.9s
TKM2 Tokmak 2 38.30 63 P P 02 13 01.6 +0.6
SNR=29
TKM2 Tokmak 2 38.30 63 P P 02 13 01.3 +0.2
ULHL Ulahol 38.84 64 P P 02 13 05.0 -0.6
SNR=7.5
KSH Kashi 39.01 69 P P 02 13 03.8 -3.2
KSH PP PP 02 14 37.4 +1.0
KSH S S 02 18 58.5 -6.7
KSH pmax pmax
comp=Z,13nm,1.4s
KSH LR LR
comp=Z,2µm,16.6s
KSH LR LR
comp=Z,770nm,12.8s
KSH LR LR
comp=Z,890nm,11.0s
AAA Alma-Ata 39.23 63 eP P 02 13 08.7 0.0
comp=Z,46nm,1.1s,baz=63
AAA eS S 02 19 10.6 +2.2
baz=63
AAA Alma-Ata 39.23 63 eP P 02 13 08.7 0.0
AAA eS S 02 19 10.6 +2.2
AAA pmax pmax
comp=Z,46nm,1.1s
MDOK Medeo 39.34 63 eP P 02 13 09.4 -0.3
baz=63
MDOK eS S 02 19 12.2 +2.1
baz=63
MDOK Medeo 39.34 63 eP P 02 13 09.4 -0.3
MDOK eS S 02 19 12.2 +2.1
KURBB Kurchatov Arra 40.14 51 P P 02 13 16.2 +0.2
comp=Z,62nm,0.7s,baz=277,slow=8.8,SNR=481
KURBB PP PnPn 02 14 54.3 +2.4
comp=Z,14nm,1.0s,baz=274,slow=12,SNR=5.7
KURBB Kurchatov Arra 40.14 51 P P 02 13 16.0 -0.1
TDK Taldyqorghan 40.15 60 eP P 02 13 16.2 -0.2
comp=Z,41nm,0.8s,baz=60
TDK eS S 02 19 24.2 +2.1
baz=60
TDK Taldyqorghan 40.15 60 eP P 02 13 16.1 -0.2
TDK eS S 02 19 24.1 +2.1
TDK pmax pmax
comp=Z,41nm,0.8s
KURK Kurchatov 40.20 51 P P 02 13 16.3 -0.3
KURK Kurchatov 40.20 51 P P 02 13 16.2 -0.3
SATY Saty 40.34 63 eP P 02 13 17.3 -0.7
comp=Z,39nm,1.2s,baz=63
SATY eS S 02 19 26.6 +1.6
baz=63
SATY Saty 40.34 63 eP P 02 13 17.2 -0.7
SATY eS S 02 19 26.6 +1.6
SATY pmax pmax
comp=Z,39nm,1.2s
KPKS Kokpek 40.49 62 eP P 02 13 18.9 -0.3
baz=62
KPKS Kokpek 40.49 62 eP P 02 13 18.9 -0.3
DBIC Dimbokro 40.56 233 P P 02 13 19.5 -0.5
comp=Z,27nm,0.7s,baz=21,slow=9.1,SNR=15
DBIC LR LR 02 33 20.9
comp=Z,2µm,18.8s,baz=24,slow=41
DBIC Dimbokro 40.56 233 P P 02 13 18.8 -1.2
DBIC pmax pmax
comp=Z,30nm,0.8s
DBIC Dimbokro 40.56 233 P P 02 13 18.8 -1.2
UZB Uzynbulak 40.77 62 eP P 02 13 21.1 -0.6
comp=Z,7.4nm,0.8s,baz=62
UZB eS S 02 19 33.4 +1.8

baz=62
UZB Uzynbulak 40.77 62 *e*P **P 02 13 21.0 -0.6**
UZB *e*S **S 02 19 33.4 +1.8**
UZB pmax pmax
comp=Z,7.0nm,0.8s
PDGK Podgornoye 41.09 62 P **P 02 13 23.8 -0.4**
SHLS Shalkode 41.09 62 *e*P **P 02 13 26.7 +2.4**
comp=Z,14nm,0.8s,baz=62
SHLS *e*S **S 02 19 42.9 +6.6**
baz=62
SHLS Shalkode 41.09 62 *e*P **P 02 13 26.6 +2.4**
SHLS *e*S **S 02 19 42.9 +6.6**
SHLS pmax pmax
comp=Z,15nm,0.8s
SEM Semipalatinsk 41.23 51 *e*P **P 02 13 24.9 -0.5**
comp=Z,22nm,0.9s,baz=51
SEM *e*S **S 02 19 40.2 +1.8**
baz=51
SEM Semipalatinsk 41.23 51 *e*P **P 02 13 24.9 -0.5**
SEM *e*S **S 02 19 40.2 +1.8**
SEM pmax pmax
comp=Z,22nm,0.9s
BHK Bhakra 41.36 81 *ex* x 02 13 26.0
HOPEN Hopen 41.50 359 *e*P **P 02 13 26.8 -0.1**
SMLA Simla 42.06 81 *e*P **P 02 13 32.3 +0.2**
SMLA IAmb IAmb 02 13 34.4
comp=Z,63nm,0.7s
HSPB Hornsund (broa 42.29 356 *e*P **P 02 13 33.6 +0.2**
MAKZ Makanchi 42.50 57 P **P 02 13 35.1 -0.5**
MAKZ Makanchi 42.50 57 P **P 02 13 35.1 -0.5**
MAKZ IAmb IAmb 02 13 49.7
comp=Z,92nm,1.4s
MK31 Makanchi Array 42.72 57 *i*P **P 02 13 37.3 0.0**
MK31 Makanchi Array 42.72 57 P **P 02 13 36.8 -0.5**
MK31 IAmb IAmb 02 13 47.5
comp=Z,66nm,0.9s
MKAR Makanchi Array 42.72 57 P **P 02 13 37.5 +0.2**
comp=Z,46nm,0.6s,baz=280,slow=6.5,SNR=472
MKAR ScP **ScP 02 19 17.4 -1.4**
comp=Z,2.6nm,0.8s,baz=281,slow=3.7,SNR=5.3
MKAR LR LR 02 33 30.9
comp=Z,1μm,21.8s,baz=269,slow=39
MKAR Makanchi Array 42.72 57 P **P 02 13 36.6 -0.8**
MKAR Makanchi Array 42.72 57 P **P 02 13 36.6 -0.8**
SPA0 Spitsbergen Ar 43.40 357 IAmb IAmb 02 14 02.0
comp=Z,74nm,1.2s
SPA0 Spitsbergen Ar 43.40 357 *e*P **P 02 13 41.5 -0.9**
SCO Scoresbysund 43.85 339 *i*P **P 02 13 45.8 -0.3**
SCO IAMs_20 IAMs_20 02 36 09.4
comp=Z,1μm,13.9s
SCO Scoresbysund 43.85 339 *i*P **P 02 13 45.7 -0.3**
SCO MLR MLR
comp=Z,1μm,14.0s
SCO Scoresbysund 43.85 339 P **P 02 13 45.6 -0.4**
SCO IAmb IAmb 02 13 47.5
comp=Z,51nm,1.5s
ZAA0 Zalesovo Array 44.10 46 P **P 02 13 47.1 -1.2**
ZALV Zalesovo Beam 44.10 46 P **P 02 13 47.9 -0.4**
comp=Z,44nm,0.6s,baz=268,slow=8.6,SNR=172
ZALV LR LR 02 36 15.6
comp=Z,1μm,19.0s,baz=266,slow=42
ZALV Zalesovo Beam 44.10 46 P **P 02 13 47.6 -0.7**
KBS Kingsbay 44.35 356 *e*P **P 02 13 49.4 -0.6**
ZSN Zaisan 44.41 55 *e*P **P 02 13 50.6 -0.3**
comp=Z,18nm,1.0s,baz=55
ZSN *e*S **S 02 20 26.7 +1.9**
baz=55
ZSN Zaisan 44.41 55 *e*P **P 02 13 50.6 -0.3**
ZSN *e*S **S 02 20 26.6 +1.9**
ZSN pmax pmax
comp=Z,18nm,1.0s
DBG Daneborg 45.31 344 *i*P **P 02 13 57.4 -0.3**
DBG IAmb IAmb 02 13 59.8
comp=Z,3.9nm,1.0s
DBG IAMs_20 IAMs_20 02 35 02.1
comp=Z,3μm,14.7s
BHPL Bhopal 45.37 91 *e*P **P 02 13 58.0 -0.9**
BHPL IAmb IAmb 02 14 02.7
comp=Z,46nm,1.1s
DGZ Jazzator, Alta 45.89 52*d i*P **P 02 14 02.8 0.0**
DGZ pmax pmax
comp=Z,42nm,0.8s
WMQ Urumqi 46.90 60 *e*P **P 02 14 11.6 +0.8**
WMQ S **S 02 21 02.1 +1.2**
WMQ SS ScS 02 24 17.4 +13
WMQ pmax pmax
comp=Z,34nm,1.1s
WMQ pmax pmax
comp=Z,220nm,3.7s
WMQ LR LR
comp=Z,2μm,22.3s
WMQ LR LR
comp=Z,850nm,12.1s
WMQ LR LR
comp=Z,2μm,28.9s
NRIK Noril'sk 47.37 25 P **P 02 14 13.9 0.0**
comp=Z,25nm,0.6s,baz=254,slow=6.3,SNR=34
NRIK LR LR 02 37 17.1
comp=Z,2μm,18.4s,baz=248,slow=40
NRIK Noril'sk 47.37 25*d i*P **P 02 14 13.6 -0.4**
NRIK pmax pmax
comp=Z,30nm,0.9s
NRIK Noril'sk 47.37 25 P **P 02 14 13.7 -0.2**
PYUN Piuthan 47.88 82 *e*P **P 02 14 18.9 +0.2**
comp=Z,111nm,0.7s
KOLN Koldanda 48.51 82 *e*P **P 02 14 23.4 -0.2**
ISOG Isortoq, Green 48.62 330⇑*i*P **P 02 14 22.9 -0.8**
ISOG IAmb IAmb 02 14 24.5
comp=Z,71nm,0.7s
HYB Hyderabad 49.14 97 *i*P P 02 14 17.0 -11
HYB Hyderabad 49.14 97 *e*P **P 02 14 26.8 -1.6**
HYB IAmb IAmb 02 14 29.0
comp=Z,30nm,0.6s
NOR Nord 49.16 352 *i*P **P 02 14 25.5 -2.1**
NOR IAMs_20 IAMs_20 02 36 00.8
comp=Z,2μm,16.0s
NOR Nord 49.16 352 *i*P **P 02 14 25.5 -2.1**
NOR MLR MLR
comp=Z,2μm,16.0s
GKN Gorkha 49.25 81 *e*P **P 02 14 28.9 -0.4**
comp=Z,60nm,0.7s
SACV Santiago Islan 49.26 259 P **P 02 14 29.5 +0.2**
ICESG Greenland Ices 49.28 334 *i*P **P 02 14 27.5 -1.6**
ICESG IAmb IAmb 02 14 29.7
comp=Z,15nm,0.7s
ICESG IAMs_20 IAMs_20 02 38 53.5
comp=Z,1μm,17.9s
SUMG Summit 49.48 339 *i*P **P 02 14 29.1 -1.5**
SUMG IAmb IAmb 02 14 31.0
comp=Z,19nm,0.7s
SUMG IAMs_20 IAMs_20 02 37 19.8
comp=Z,1μm,21.6s
SUMG Summit 49.48 339 *i*P **P 02 14 29.1 -1.5**
SUMG pmax pmax
comp=Z,19nm,0.7s
SUMG MLR MLR
comp=Z,1μm,22.0s
SUMG Summit 49.48 339 P **P 02 14 29.2 -1.5**
SUMG IAmb IAmb 02 14 43.2
comp=Z,40nm,1.0s
DMN Daman 49.79 82 *e*P **P 02 14 33.3 -0.2**
KKN Kakani 49.86 81 *e*P **P 02 14 33.5 -0.5**
comp=Z,38nm,0.5s
PKIN Phulchoki 50.04 82 *e*P **P 02 14 34.8 -0.6**
comp=Z,152nm,0.9s
PKI Pulchoki 50.05 82 *e*P **P 02 14 34.9 -0.7**
comp=Z,169nm,1.2s
GUN Gumba 50.30 81 *e*P **P 02 14 37.0 -0.4**
comp=Z,137nm,0.9s
JIRN Jiri 50.65 81 *e*P **P 02 14 39.7 -0.4**
comp=Z,66nm,0.8s
RAMN Ramite 51.27 82 *e*P **P 02 14 43.6 -1.1**
comp=Z,41nm,0.8s
DY2G Dye2 51.64 331⇑*i*P **P 02 14 46.0 -0.8**
DY2G IAmb IAmb 02 14 47.6
comp=Z,87nm,0.7s
DY2G IAMs_20 IAMs_20 02 38 38.1
comp=Z,2μm,19.4s
ODAN Odare 51.95 81 *e*P **P 02 14 49.7 -0.1**
comp=Z,38nm,0.7s
TAPN Taplejung 52.01 81 *e*P **P 02 14 49.6 -0.6**
comp=Z,57nm,0.7s
BOK Bokaro 52.06 86 *e*P **P 02 14 49.0 -1.3**
BOK IAmb IAmb 02 14 53.7
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 53.34 331 *i*P **P 02 14 57.6 -1.4**
SFJD IAmb IAmb 02 14 59.9
comp=Z,15nm,0.5s
SFJD IAMs_20 IAMs_20 02 42 17.8
comp=Z,952nm,15.8s
SFJD Kangerlussuaq 53.34 331 P **P 02 14 57.7 -1.4**
SFJD pmax pmax
comp=Z,28nm,0.6s
SFJD Kangerlussuaq 53.34 331 P **P 02 14 57.7 -1.4**
SFJD IAmb IAmb 02 14 59.8
comp=Z,28nm,0.6s
NEEM North Greenlan 53.37 345 *e*P **P 02 14 58.8 -0.8**
NEEM IAMs_20 IAMs_20 02 39 37.8
comp=Z,2μm,14.8s
LSA Lhasa 53.82 76 P **P 02 15 03.8 0.0**
LSA pmax pmax
comp=Z,19nm,0.9s
LSA Lhasa 53.82 76 P **P 02 15 03.8 0.0**
MOY Mondy 54.08 48 *e*P **P 02 15 09.6 +4.6**
MOY pmax pmax
comp=Z,96nm,1.8s
NUUK Nuuk 54.09 328 *i*P **P 02 15 04.4 -0.2**
NUUK IAMs_20 IAMs_20 02 40 31.8
comp=Z,2μm,16.6s
UPNV Upernavik 54.77 339⇑*i*P **P 02 15 09.0 -0.4**
UPNV IAmb IAmb 02 15 09.6
comp=Z,12nm,0.8s
TLY Talaya 55.68 47 *e*P **P 02 15 17.7 +1.3**
TLY *e*S **S 02 23 07.6 +5.8**
TLY pmax pmax
comp=Z,151nm,1.3s
TLY MLR MLR
comp=Z,3μm,17.0s
TLY Talaya 55.68 47 P **P 02 15 16.2 -0.3**
TLY IAmb IAmb 02 15 27.8
comp=Z,49nm,1.1s
GUWA GUWAHATI 55.72 80 *e*P **P 02 15 15.5 -1.5**
GUWA IAmb IAmb 02 15 17.7
comp=Z,15nm,0.8s
ZAK Zakamensk 55.80 49 *e*P **P 02 15 18.0 +0.6**
ZAK pmax pmax
comp=Z,28nm,1.0s
IRK Irkutsk 55.91 46 *e*P **P 02 15 17.0 -1.1**
IRK pmax pmax
comp=Z,134nm,1.4s
SHL Shillong 56.15 81 P **P 02 15 19.0 -1.4**
SHL pmax pmax
comp=Z,21nm,0.8s
SHL Shillong 56.15 81 P **P 02 15 19.0 -1.4**
SHL IAmb IAmb 02 15 33.5
comp=Z,21nm,0.8s
SHL Shillong 56.15 81 P **P 02 15 18.9 -1.4**
SNR=12
PALK Pallekele 56.60 106 P **P 02 15 24.2 +0.7**
comp=Z,13nm,0.7s,baz=55,slow=8.6,SNR=11
PALK Pallekele 56.60 106 P **P 02 15 22.6 -0.9**
GTA Gaotai 56.84 62 P **P 02 15 25.3 +0.3**
GTA S **S 02 23 14.3 -3.4**
GTA SS **SS 02 27 06.3 +0.8**
GTA pmax pmax
comp=Z,14nm,1.0s
GTA pmax pmax
comp=Z,210nm,8.4s
GTA LR LR
comp=Z,790nm,15.5s
GTA LR LR
comp=Z,990nm,19.5s
GTA LR LR
comp=Z,1μm,18.7s
ZIRO ZIRO 56.88 78 *e*P **P 02 15 25.5 0.0**
ZIRO IAmb IAmb 02 15 27.2
comp=Z,51nm,0.8s
ABPO Ambohimpanom 57.24 157 P **P 02 15 26.9 -1.1**
ABPO pmax pmax
comp=Z,10.0nm,0.9s
ABPO Ambohimpanom 57.24 157 P **P 02 15 26.9 -1.1**
TULEG Thule 57.45 344 P **P 02 15 28.7 +0.2**
TULEG IAmb IAmb 02 15 38.8
comp=Z,31nm,1.0s
ASCN Ascension 57.76 230 P **P 02 15 32.2 +0.6**
MOKO MOKOCHONG 57.94 79 *e*P **P 02 15 32.6 -0.4**
MOKO IAmb IAmb 02 15 45.6
comp=Z,50nm,0.8s
IMP Imphal 58.15 80 *e*P **P 02 15 34.6 +0.3**
IMP IAmb IAmb 02 15 47.8
comp=Z,36nm,0.7s
SAIH SAIHA 58.45 83 *e*P **P 02 15 36.8 +0.2**
SONM Songino Array 58.51 51 P **P 02 15 37.0 +0.4**
comp=Z,13nm,0.8s,baz=282,slow=7.3,SNR=69
SONM LR LR 02 43 52.9
comp=Z,2μm,20.6s,baz=290,slow=39
SONM Songino Array 58.51 51 P **P 02 15 35.9 -0.7**
SONM IAmb IAmb 02 15 50.1
comp=Z,20nm,0.8s
ULN Ulaanbaatar 58.92 51*d i*P **P 02 15 39.4 -0.1**
ULN pmax pmax
comp=Z,25nm,0.9s
ULN Ulaanbaatar 58.92 51 P **P 02 15 39.0 -0.5**
BOD Bodaibo 59.69 38 *e*P **P 02 15 43.1 -1.4**
BOD pmax pmax
comp=Z,50nm,1.5s
LBTB Lobatse 59.81 181 P **P 02 15 46.8 +1.1**
LBTB pmax pmax
comp=Z,20nm,1.1s
LBTB Lobatse 59.81 181 P **P 02 15 46.8 +1.1**
LBTB IAmb IAmb 02 16 05.4
comp=Z,20nm,1.1s
TIXI Tiksi 60.75 21 *i*P **P 02 15 49.7 -1.8**
TIXI Tiksi 60.75 21 P **P 02 15 50.1 -1.4**
LZH Lanzhou 61.05 64 *e*P **P 02 15 54.3 -0.1**
LZH SS SS 02 28 07.1 -4.8
LZH pmax pmax
comp=Z,39nm,1.2s
LZH pmax pmax
comp=Z,120nm,4.3s
LZH LR LR
comp=Z,1μm,14.6s
LZH LR LR
comp=Z,770nm,14.1s
LZH LR LR
comp=Z,830nm,14.7s
DGPR DIGLIPUR 63.12 93 *e*P **P 02 16 07.8 -0.4**
DGPR IAmb IAmb 02 16 17.5
comp=Z,44nm,1.0s
CD2 Chengdu 63.19 70 P **P 02 16 08.9 +0.2**
CD2 S **S 02 24 38.9 -0.6**
CD2 pmax pmax
comp=Z,50nm,1.2s
CD2 pmax pmax
comp=Z,200nm,4.9s
CD2 LR LR
comp=Z,970nm,18.6s
CD2 LR LR
comp=Z,860nm,20.2s
CD2 LR LR
comp=Z,860nm,13.0s
BOSA Boshof 63.40 181 P **P 02 16 10.3 +0.4**
comp=Z,8.2nm,0.6s,baz=360,slow=6.8,SNR=26
BOSA LR LR 02 44 59.1
comp=Z,907nm,20.7s,baz=3.0,slow=37
BOSA Boshof 63.40 181 P **P 02 16 10.5 +0.6**
BTO Baotou 63.62 58 *e*P **P 02 16 10.1 -1.3**
BTO S **S 02 24 41.3 -3.4**
BTO pmax pmax
comp=Z,50nm,1.0s
BTO pmax pmax
comp=Z,1μm,7.7s
BTO LR LR
comp=Z,3μm,18.7s
BTO LR LR
comp=Z,4μm,18.2s
BTO LR LR
comp=Z,5μm,20.6s
RES Resolute Bay 64.04 345 P **P 02 16 13.6 +0.1**
RES pmax pmax
comp=Z,8.0nm,1.1s
RES Resolute Bay 64.04 345 P **P 02 16 13.6 +0.1**
HHC Hu-ho-hao-te 64.58 57 *e*P **P 02 16 18.8 +1.1**
HHC S **S 02 24 59.4 +2.8**
HHC pmax pmax
comp=Z,49nm,1.0s
HHC pmax pmax
comp=Z,410nm,5.3s
HHC LR LR
comp=Z,730nm,17.6s
HHC LR LR
comp=Z,870nm,17.1s
HHC LR LR
comp=Z,1μm,17.2s
GBN Guysborough 64.91 309 P **P 02 16 19.5 -0.1**
KMI Kunming 65.06 76⇑P **P 02 16 20.9 -0.4**
KMI PcP **PcP 02 16 53.0 -1.0**
KMI PP **PP 02 18 42.8 -1.5**
KMI pmax pmax
comp=Z,13nm,1.0s
KMI LR LR
comp=Z,540nm,26.6s
KMI LR LR
comp=Z,340nm,22.9s
KMI LR LR
comp=Z,500nm,22.5s
CHTO Chiang Mai 65.11 84 P **P 02 16 20.7 -0.6**
CHTO pmax pmax
comp=Z,28nm,1.1s
CHTO Chiang Mai 65.11 84 P **P 02 16 20.7 -0.6**
CHTO IAmb IAmb 02 16 36.4
comp=Z,28nm,1.1s
CMMT Chiang Mai 65.11 84 P **P 02 16 19.9 -1.5**
comp=Z,331nmcomp=Z,8.8nm,1.3s
CM34 Chiang Mai Arr 65.26 84 P **P 02 16 21.0 -1.3**
YAK Yakutsk 65.26 30 *e*P **P 02 16 18.8 -2.8**
YAK *e*S **S 02 24 58.9 -5.1**
YAK *e**SS sS 02 25 20.3 +8.0
YAK *e* 02 26 01.2
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.0s
YAK smax smax
comp=N,186nm,3.8s
YAK smax smax
comp=E,164nm,3.2s
YAK MLR MLR
comp=Z,1μm,17.0s
YAK MLR MLR
comp=N,739nm,18.0s
YAK MLR MLR
comp=E,654nm,16.0s
CM15 Chiang Mai Arr 65.28 84 P **P 02 16 22.0 -0.4**
comp=E,438nmcomp=E,27nm,0.6s
CM13 Chiang Mai Arr 65.28 84 P **P 02 16 21.9 -0.5**
comp=E,130nmcomp=E,15nm,0.7s
CM31 Chiang Mai Arr 65.29 84 P **P 02 16 23.1 +0.6**
comp=E,626nm,0.9s
CM31 Chiang Mai Arr 65.29 84 IAmb IAmb 02 16 26.3
comp=Z,26nm,0.9s
CMAR Chiang Mai Arr 65.29 84 P **P 02 16 21.9 -0.7**
comp=Z,10nm,0.8s,baz=298,slow=8.0,SNR=43
CMAR LR LR 02 51 48.0
comp=Z,260nm,19.0s,baz=324,slow=42
CM02 Chiang Mai Arr 65.30 84 P **P 02 16 22.0 -0.6**
comp=Z,207nmcomp=Z,27nm,0.8s
CM05 Chiang Mai Arr 65.32 84 P **P 02 16 22.2 -0.5**
comp=Z,140nmcomp=Z,19nm,1.0s
CM01 Chiang Mai Arr 65.32 84 P **P 02 16 22.5 -0.2**
comp=Z,204nmcomp=Z,23nm,0.8s
CM09 Chiang Mai Arr 65.33 84 P **P 02 16 22.6 -0.2**
comp=Z,222nmcomp=Z,22nm,0.8s
CM04 Chiang Mai Arr 65.35 84 P **P 02 16 22.0 -0.9**
comp=Z,176nmcomp=Z,20nm,0.9s
XAN Xi'an 65.69 65 P **P 02 16 24.8 -0.2**
XAN PcP **PcP 02 16 55.8 -0.5**
XAN S **S 02 25 10.0 -0.2**
XAN SS **SS 02 29 22.6 -1.5**
XAN pmax pmax
comp=Z,21nm,1.4s
XAN pmax pmax
comp=Z,290nm,3.9s
XAN LR LR
comp=Z,980nm,23.9s
XAN LR LR
comp=Z,840nm,26.0s
XAN LR LR
comp=Z,950nm,20.6s
XAN Xi'an 65.69 65 P **P 02 16 24.3 -0.6**
XAN pmax pmax
comp=Z,26nm,0.7s
XAN Xi'an 65.69 65 P **P 02 16 24.3 -0.6**
HIA Hailar 66.14 46 *i*P **P 02 16 27.7 +0.1**
HIA pmax pmax
comp=Z,24nm,1.0s
HIA Hailar 66.14 46 P **P 02 16 28.0 +0.4**
SUKH Sukhothai 66.35 85 P **P 02 16 29.0 -0.3**
UMPA Umpang Tak 66.38 86 P **P 02 16 30.0 +0.4**
comp=Z,66nm,0.8s
TIY Taiyuan 66.57 60 *e*P **P 02 16 32.8 +2.2**
TIY pP **sP 02 16 42.9 +4.9**
TIY S **S 02 25 22.8 +1.9**
TIY ScS **SKSac 02 26 21.0 -5.6**
TIY pmax pmax
comp=Z,33nm,0.7s
TIY pmax pmax
comp=Z,330nm,5.0s
TIY LR LR
comp=Z,180nm,7.2s
TIY LR LR
comp=Z,120nm,3.9s
TIY LR LR
comp=Z,560nm,26.9s
UTTA Uttaradit 66.97 84 P **P 02 16 33.0 -0.3**
UTHA Uthaitani 67.20 87 P **P 02 16 34.7 -0.1**
comp=Z,395nmcomp=Z,48nm,1.0s
GYA Guiyang 67.52 73⇑P **P 02 16 36.4 -0.5**
GYA S **S 02 25 35.9 +3.1**
GYA pmax pmax
comp=Z,19nm,1.0s
GYA LR LR
comp=Z,480nm,22.9s
GYA LR LR
comp=Z,260nm,17.5s
GYA LR LR
comp=Z,560nm,26.5s
SLVN Son La 67.86 79 IAmb IAmb 02 16 58.4
comp=Z,18nm,1.2s
ENH Enshi 67.86 68 P **P 02 16 37.5 -1.3**
BJT Baijiatuau 68.09 56 P **P 02 16 39.8 -0.3**
BJT pmax pmax
comp=Z,34nm,1.0s
BJT Baijiatuau 68.09 56 P **P 02 16 39.8 -0.3**
BJT IAmb IAmb 02 16 53.4
comp=Z,34nm,1.0s
ZEA Zeya 68.17 39 *e*P **P 02 16 42.1 +1.8**
ZEA MLR MLR
comp=N,500nm,12.0s
ZEA MLR MLR
comp=E,400nm,12.0s
ZEA MLR MLR
comp=Z,600nm,14.0s
D63A Stockholm 68.26 313 P 02 16 41.0
baz=62
PQI Presque Isle 68.38 312 P **P 02 16 41.5 -0.3**
E64A Bridgewater 68.39 312 P 02 16 41.4
baz=62
E63A Oxbow 68.75 312 P 02 16 43.8
baz=61
PHET Kaeng Krachan 68.76 89 P **P 02 16 45.0 +0.4**
G65A Princeton 68.81 311 P 02 16 44.2
baz=61
H66A Whiting 68.85 310 P 02 16 44.7
baz=61
F64A Sherman 68.97 312 P 02 16 45.7
baz=61
EMMW East Machias 68.98 310 P **P 02 16 45.0 -0.6**
H65A Eastbrook 69.48 311 P 02 16 48.7
baz=61
F63A Nahmakanta, Br 69.51 312 P 02 16 49.1
baz=60
G64A Maxfield 69.52 311 P 02 16 49.3
baz=61
PKME Peaks-Kenny Pk 69.85 312 P 02 16 51.4
baz=60
E61A Lac Etchemin 69.99 313 P 02 16 52.0
baz=60
H64A Troy 70.11 311 P 02 16 52.4
baz=60
CHGQ Chibougamau 70.45 318 P 02 16 54.4
baz=59
D59A Saint-Raymond 70.50 314 P 02 16 55.0
baz=59
F61A St Evariste 70.52 313 P 02 16 54.9
baz=60

TIA **Tai'an** **70.59 59** P **P** **02 16 55.6 0.0**
TIA pmax pmax
comp=Z,14nm,0.9s
TIA pmax pmax
comp=Z,270nm,4.1s
TIA LR LR
comp=Z,550nm,21.0s
TIA LR LR
comp=Z,530nm,25.3s
TIA LR LR
comp=Z,590nm,31.4s
E60A **Ste Agathe de** **70.59 313** P 02 16 55.6
baz=59
G62A **West of Eustis** **70.63 312** P 02 16 55.7
baz=60
LATQ **La Tuque** **70.86 315** P 02 16 56.6
baz=59
D58A **Chemin du LacG** **71.07 315** P 02 16 57.9
baz=59
F60A **Warwick** **71.10 313** P 02 16 58.7
baz=59,SNR=7.4
G61A **St-Isidore-de-** **71.20 312** P 02 16 59.7
baz=59,SNR=6.5
I63A **Otisfield** **71.25 311** P 02 16 59.4
baz=59
H62A **Milan** **71.34 312** IAmb IAmb 02 17 22.6
comp=Z,30nm,1.1s
H62A **Milan** **71.34 312** P 02 16 59.5
baz=59
WHN **Wuhan** **71.39 65** ⇓P P 02 16 50.3 -10
WHN S **S** **02 26 17.1 -0.9**
WHN pmax pmax
comp=Z,64nm,0.5s
WHN LR LR
comp=N,700nm,13.8s
WHN LR LR
comp=E,1μm,16.3s
WHN LR LR
comp=Z,2μm,17.6s
RCBR **Riachuelo** **71.52 249** *e*P **P** **02 17 01.3 -0.3**
F59A **Saint Guilaume** **71.66 313** P 02 17 01.9
baz=58
E58A **La Victoria** **71.68 314** P 02 17 01.9
baz=58,SNR=8.0
G60A **Masonville** **71.78 313** P 02 17 02.3
baz=58
I62A **Tamworth** **71.81 311** P 02 17 03.0
baz=59
H61A **Lyndonville** **71.83 312** P 02 17 03.4
baz=58
L65A **Cape Cod Natio** **71.96 309** P 02 17 04.6
baz=59
LBNH **Lisbon** **71.98 312** IAmb IAmb 02 17 28.2
comp=Z,26nm,1.0s
LBNH **Lisbon** **71.98 312** P 02 17 03.8
baz=58
SNY **Shenyang** **72.09 51** ⇓P P 02 17 10.6 +6.0
SNY pP **PcP** **02 17 23.6 +0.7**
SNY S **SKiKP** **02 26 35.4 -5.1**
SNY pmax pmax
comp=Z,20nm,2.5s
SNY pmax pmax
comp=Z,290nm,3.5s
SNY LR LR
comp=N,700nm,21.4s
SNY LR LR
comp=E,690nm,22.6s
SNY LR LR
comp=Z,1μm,17.3s
D56A **ZEC Mazanza, M** **72.18 315** P 02 17 04.9
baz=58,SNR=14
CN2 **Changchun** **72.23 49** *e*P **P** **02 17 05.1 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,300nm,6.4s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,900nm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
H60A **Morristown** **72.28 312** P 02 17 06.6
baz=58
MATQ **Matagami** **72.31 319** P 02 17 05.9
baz=56
I61A **Oroboro, Fairl** **72.32 311** P 02 17 06.6
baz=58
DL2 **Dalian** **72.32 55** *e*P **P** **02 17 09.1 +3.1**
DL2 *e*S **S** **02 26 33.1 +4.7**
DL2 pmax pmax
comp=Z,40nm,1.2s
DL2 pmax pmax
comp=Z,420nm,3.6s
DL2 LR LR
comp=Z,760nm,20.6s
DL2 LR LR
comp=Z,740nm,20.4s
DL2 LR LR
comp=Z,710nm,22.2s
LSQQ **Lebel-sur-Quev** **72.34 318** P 02 17 06.8
baz=57
VT1 **Waterbury** **72.44 312** IAmb IAmb 02 17 25.2
comp=Z,23nm,1.2s
J62A **Henniker** **72.44 311** P 02 17 07.2
baz=58
HNH **Hanover** **72.48 311** IAmb IAmb 02 17 31.2
comp=Z,22nm,0.8s
BCX **Boston College** **72.51 310** P **P** **02 17 08.0 +1.0**
BCX IAmb IAmb 02 17 25.9
comp=Z,24nm,0.9s
L64A **Middleborough** **72.51 309** P 02 17 07.4
baz=58
WES **Weston** **72.58 310** IAmb IAmb 02 17 09.3
comp=Z,24nm,0.9s
D55A **Sainte-Anne-du** **72.61 316** P 02 17 07.6
baz=57,SNR=10
E56A **St. Veronique** **72.61 315** P 02 17 07.6
baz=57
HRV **Adam Dziewonsk** **72.66 310** P 02 17 08.3
baz=58
BILL **Bilibino** **72.78 15** ⇓*e*P **P** **02 17 05.7 -2.5**
BILL *e* 02 17 25.7
BILL *e* 02 19 45.1
BILL *i* S **S** **02 26 25.3 -7.5**
BILL *e*SS **SS** **02 31 02.6 -9.0**
BILL pmax pmax
comp=Z,14nm,1.1s
BILL MLR MLR
comp=Z,663nm,20.0s
BILL **Bilibino** **72.78 15** P **P** **02 17 07.0 -1.2**
BILL IAmb IAmb 02 17 23.1
comp=Z,28nm,1.3s
G58A **Ormstown** **72.79 313** P 02 17 08.8
baz=57
H59A **Cadyville** **72.84 313** P 02 17 09.2
baz=58,SNR=6.4
J61A **Chester** **72.84 311** P 02 17 09.3
baz=58
KLR **Kul'dur** **72.95 41** P **P** **02 17 09.5 -0.1**
comp=Z,9.5nm,0.9s,baz=311,slow=6.9,SNR=18
KLR **Kul'dur** **72.95 41** *i* P **P** **02 17 08.2 -1.4**
KLR pmax pmax
comp=Z,14nm,1.0s
M64A **Tiverton** **72.95 309** P 02 17 10.2
baz=58
K62A **Royalston** **73.00 310** P 02 17 10.6
baz=58
I60A **Shoreham** **73.03 312** P 02 17 10.6
baz=58
L63A **North Scituate** **73.03 309** IAmb IAmb 02 17 15.9
comp=Z,20nm,0.9s
L63A **North Scituate** **73.04 309** P 02 17 10.1
baz=58
SEY **Seymchan** **73.10 23** *i* P **P** **02 17 08.8 -1.4**
VLDQ **Val d'Or** **73.12 317** IAmb IAmb 02 17 12.6
comp=Z,25nm,0.9s
H58A **Gabriels** **73.26 313** P 02 17 11.9
baz=57
NBLI **Livramento-PB** **73.29 248** *e*P **P** **02 17 12.8 +0.6**
G57A **Newington** **73.37 314** P 02 17 12.3
baz=57
LONY **Lake Ozonia** **73.39 313** P 02 17 12.0
baz=57,SNR=9.1
L61B **Northampton** **73.40 310** P 02 17 12.8
baz=58
I59A **Olmsteadville** **73.41 312** P 02 17 13.4
baz=57
J60A **Lant Hill Farm** **73.43 311** P 02 17 13.4
baz=57
M63A **Gales Ferry** **73.56 309** P 02 17 13.3
baz=58
K61A **Williamstown** **73.64 311** P 02 17 14.3
baz=57
QIZ **Qiongzhong** **73.81 78** P **P** **02 17 14.3 -0.9**
QIZ PcP **PcP** **02 17 28.3 -2.4**
QIZ S **SKiKP** **02 26 46.1 +2.4**
QIZ LR LR
comp=Z,280nm,24.5s
QIZ LR LR
comp=Z,480nm,25.5s
QIZ LR LR
comp=Z,310nm,23.9s
KULM **Kulim** **73.82 95** P **P** **02 17 14.6 -0.6**
KULM IAmb IAmb 02 17 30.3
comp=Z,37nm,1.1s
A21K **Barrow** **73.83 1** P 02 17 14.5
baz=357
PSI **Prapat** **73.84 98** P **P** **02 17 14.6 -0.9**
comp=Z,19nm,0.9s,baz=360,slow=3.6,SNR=10
RPSI **Rantau Prapat** **73.90 98** IAmb IAmb 02 17 31.1
comp=Z,20nm,0.8s
NJ2 **Nanjing** **73.93 62** *e*P **P** **02 17 14.6 -1.0**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
H57A **Richville** **73.96 313** P 02 17 16.0
baz=56
J59A **Piesco** **73.97 312** P 02 17 15.4
baz=57,SNR=6.6
K60A **Five Rivers En** **74.06 311** P 02 17 17.0
baz=57
M62A **Hamden** **74.07 310** P 02 17 16.5
baz=57
L61A **Hillsdale 1, H** **74.08 311** P 02 17 16.9
baz=57
I58A **Old Forge** **74.13 312** P 02 17 16.6
baz=56,SNR=5.5
NBPB **Pedra_Branca-C** **74.17 251** *e*P **P** **02 17 17.2 -0.1**
NBAN **Anadia - AL** **74.26 246** *e*P **P** **02 17 16.7 -1.1**
KSCT **Kent School, K** **74.29 310** IAmb IAmb 02 17 23.2
comp=Z,21nm,1.0s
MDJ **Mudanjiang** **74.30 46** P **P** **02 17 18.3 +0.7**
MDJ pmax pmax
comp=Z,29nm,1.8s
MDJ pmax pmax
comp=Z,710nm,4.5s
MDJ LR LR
comp=Z,1μm,16.1s
MDJ LR LR
comp=Z,980nm,12.6s
MDJ LR LR
comp=Z,1μm,14.6s
I57A **Carthage** **74.41 313** P 02 17 18.1
baz=56,SNR=5.3
K59A **Cooperstown** **74.56 312** P 02 17 19.0
baz=56,SNR=7.7
IPM **Ipoh** **74.58 95** P **P** **02 17 19.8 +0.1**
L60A **Shokan** **74.61 311** P 02 17 19.6
baz=56
PLVO **Plevna** **74.63 314** IAmb IAmb 02 17 34.7
comp=Z,56nm,1.4s
ALGO **Algonquin Park** **74.68 316** P 02 17 19.6
baz=55,SNR=13
NBMA **Muriti-CE** **74.68 249** *e*P **P** **02 17 20.7 +0.5**
J57A **Williamstown** **74.91 313** P 02 17 21.0
baz=56
PAL **Palisades** **74.95 310** P 02 17 21.2
baz=56
MA2 **Magadan** **74.96 26** *i* P **P** **02 17 20.6 -0.6**
MA2 pmax pmax
comp=Z,15nm,1.0s
MA2 **Magadan** **74.96 26** P **P** **02 17 21.1 -0.1**
MA2 IAmb IAmb 02 17 42.4
comp=Z,45nm,1.2s
L59A **Walton** **75.01 311** P 02 17 21.6
baz=56
G54A **Lake Saint Pet** **75.02 315** P 02 17 22.2
baz=55,SNR=17
K58A **Earlville** **75.06 312** IAmb IAmb 02 17 36.5
comp=Z,27nm,1.1s
K58A **Earlville** **75.06 312** P 02 17 22.0
baz=56,SNR=6.1
M60A **Port Jervis** **75.23 310** P 02 17 22.6
baz=56
DELO **Deloro Mine** **75.25 314** IAmb IAmb 02 17 37.3
comp=Z,28nm,1.2s
NBTA **Tacaratu-PE** **75.26 248** *e*P **P** **02 17 24.0 +0.5**
N61A **South Mountain** **75.34 310** P 02 17 23.2
baz=56
J56A **Wolcott** **75.50 313** IAmb IAmb 02 17 30.1
comp=Z,34nm,0.9s
J56A **Wolcott** **75.50 313** P 02 17 24.5
baz=55
BINY **Binghamton** **75.58 312** IAmb IAmb 02 17 46.6
comp=Z,26nm,0.9s
BINY **Binghamton** **75.58 312** P 02 17 24.7
baz=56,SNR=7.7
L58A **Harry Jones Me** **75.58 311** P 02 17 25.0
baz=56
K57A **Scipio Center** **75.61 312** P 02 17 25.1
baz=55
M59A **Waymart** **75.61 311** P 02 17 25.1
baz=56
N60A **Cedar Hill Far** **75.78 310** P 02 17 26.1
baz=56,SNR=7.3
H53A **Bobcaygeon** **75.78 315** P 02 17 25.6
baz=55,SNR=6.5
KSPA **Keystone Colle** **75.81 311** IAmb IAmb 02 17 31.9
comp=Z,24nm,1.0s
USA0B **Ussuriysk Arra** **75.95 46** *i* P **P** **02 17 26.4 -0.7**
USA0B **Ussuriysk Arra** **75.95 46** P **P** **02 17 26.2 -0.9**
USRK **Ussuriysk Ar.** **75.95 46** P **P** **02 17 26.3 -0.8**
comp=Z,14nm,0.5s,baz=294,slow=5.0,SNR=54
USRK LR LR 02 54 43.7
comp=Z,405nm,19.1s,baz=302,slow=39
SADO **Sadowa** **75.99 315** IAmb IAmb 02 17 41.4
comp=Z,20nm,0.9s
K56A **Middlesex** **76.11 313** P 02 17 28.5
baz=55,SNR=5.8
SSE **Sheshan** **76.13 62** P **P** **02 17 28.0 -0.3**
SSE S **S** **02 27 12.0 +0.6**
SSE pmax pmax
comp=Z,19nm,0.6s
SSE pmax pmax
comp=Z,77nm,5.4s
SSE LR LR
comp=Z,170nm,15.5s
N59A **State Game Lan** **76.17 310** IAmb IAmb 02 17 49.6
comp=Z,50nm,1.5s
N59A **State Game Lan** **76.17 310** P 02 17 28.5
baz=56
L57A **Andrews Acres** **76.22 312** P 02 17 29.1
baz=55,SNR=6.4
NBLA **Lagarto - SE** **76.25 246** *e*P **P** **02 17 29.2 0.0**
O60A **Telford** **76.28 310** P 02 17 28.9
baz=56,SNR=6.5
MMNY **Mt. Morris Dam** **76.44 313** IAmb IAmb 02 17 44.1
comp=Z,26nm,0.9s
TOLK **Toolik Lake Re** **76.52 359** IAmb IAmb 02 17 49.3
comp=Z,22nm,1.1s
MEDO **Medina** **76.52 313** IAmb IAmb 02 17 35.6
comp=Z,30nm,1.1s
TOLK **Toolik Lake Re** **76.52 359** P 02 17 30.1
baz=3.1,SNR=7.4
DLV **T Lat** **76.53 85** P **P** **02 17 30.5 -0.6**
DLV IAmb IAmb 02 17 46.9
comp=Z,28nm,1.1s
L56A **Greenwood** **76.58 312** IAmb IAmb 02 17 32.4
comp=Z,23nm,0.8s
L56A **Greenwood** **76.58 312** P 02 17 30.5
baz=55,SNR=7.6
P60A **Greenville** **76.71 309** P 02 17 30.9
baz=55
M57A **Sunshine Farm,** **76.78 311** P 02 17 32.0
baz=55,SNR=5.7
O59A **Robesonia** **76.78 310** P 02 17 31.7
baz=55
N58A **Sunbury** **76.81 311** P **P** **02 17 31.4 -0.6**
N58A **Sunbury** **76.81 311** P 02 17 32.1
baz=55,SNR=7.4
RDOG **Red Dog Mine** **76.89 4** IAmb IAmb 02 17 33.1
comp=Z,32nm,1.4s
RDOG **Red Dog Mine** **76.89 4** P 02 17 31.8
baz=352
WVNY **West Valley, N** **77.05 313** IAmb IAmb 02 17 47.6
comp=Z,24nm,0.9s
KSAR **Wonju Array Be** **77.26 53** P **P** **02 17 34.1 -0.5**
KSAR **Wonju Array Be** **77.26 53** P **P** **02 17 34.1 -0.5**
KSRS **Korea Array** **77.28 53** P **P** **02 17 34.6 -0.1**
comp=Z,12nm,0.7s,baz=300,slow=5.0,SNR=21
KSRS LR LR 02 55 13.5
comp=Z,884nm,21.9s,baz=308,slow=38
P59A **Jarrettsville** **77.33 310** P 02 17 34.7
baz=55
M56A **Emporium** **77.33 312** IAmb IAmb 02 17 49.9
comp=Z,23nm,0.9s
M56A **Emporium** **77.34 312** P 02 17 34.9
baz=54,SNR=6.5
N57A **Milroy** **77.37 311** P 02 17 35.3
baz=54
SSPA **Standing Stone** **77.65 311** P **P** **02 17 37.1 +0.4**
SSPA IAmb IAmb 02 17 42.3
comp=Z,51nm,1.4s
SSPA **Standing Stone** **77.65 311** P 02 17 36.8
baz=54
I51A **Listowel** **77.65 315** P 02 17 37.1
baz=53,SNR=7.3
N56A **West Decatur** **77.74 311** P 02 17 36.9
baz=54
O57A **Amberson** **77.74 311** P 02 17 36.6
baz=54
YKA **Yellowknife Ar** **77.88 343** P **P** **02 17 36.3 -1.3**
comp=Z,9.1nm,0.7s,baz=36,slow=5.4,SNR=100
YKA S **S** **02 27 25.3 -4.2**
comp=Z,0.7nm,1.0s,baz=28,slow=9.0,SNR=4.0
YKA LR LR 02 54 21.7
comp=Z,1μm,19.1s,baz=0.0,slow=38
Q59A **Harwood** **77.90 309** P 02 17 38.6
baz=55
E46A **Sault Ste Mari** **77.92 319** IAmb IAmb 02 17 51.6
comp=Z,34nm,0.8s
COLD **Coldfoot** **77.95 359** IAmb IAmb 02 17 55.9
comp=Z,21nm,1.0s
COLD **Coldfoot** **77.95 359** P 02 17 37.6
baz=2.6,SNR=14
EPYK **Eagle Plains** **78.04 353** IAmb IAmb 02 17 50.0
comp=Z,34nm,1.2s
EPYK **Eagle Plains** **78.04 353** P 02 17 38.1
baz=14
ERPA **Erie** **78.05 313** P 02 17 39.0
baz=53
R60A **Leonardtown, M** **78.20 309** P 02 17 40.6
baz=54
M54A **Oil Creek Stat** **78.22 313** IAmb IAmb 02 18 09.1
comp=Z,31nm,1.1s
M54A **Oil Creek Stat** **78.22 313** P 02 17 40.1
baz=53
O56A **Blue Knob Stat** **78.28 311** IAmb IAmb 02 18 06.5
comp=Z,42nm,1.4s
O56A **Blue Knob Stat** **78.28 311** P 02 17 40.3
baz=54
L53A **Girard** **78.31 313** P 02 17 40.3
baz=53
P57A **Homestead Farm** **78.40 310** IAmb IAmb 02 18 07.8
comp=Z,27nm,1.2s
P57A **Homestead Farm** **78.40 310** P 02 17 40.5
baz=54
FYU **Fort Yukon** **78.45 357** IAmb IAmb 02 17 53.8
comp=Z,45nm,1.3s
Q58A **Fox Den Farm,** **78.51 310** P 02 17 41.8
baz=54
S60A **Water View** **78.57 308** P 02 17 42.3
baz=54
R59A **King George, V** **78.58 309** P 02 17 42.1
baz=54
N54A **Moraine State** **78.74 312** P 02 17 42.7
baz=53
CBN **Corbin Frederi** **78.75 309** IAmb IAmb 02 17 59.4
comp=Z,18nm,0.6s
CBN **Corbin Frederi** **78.75 309** P 02 17 42.9
baz=54
M53A **WI Miller and** **78.87 313** P 02 17 43.7
baz=53
P56A **Dayton Farm, R** **78.91 311** P 02 17 44.0
baz=54
TNA **Tin City** **79.00 6** P 02 17 42.9
baz=348,SNR=8.1
TMAB **Tom-Au,PA,Br** **79.00 259** *e*P **P** **02 17 44.9 +0.3**
GLMI **Grayling** **79.06 318** P **P** **02 17 43.9 -0.6**
GLMI **Grayling** **79.06 318** P 02 17 44.5
baz=51,SNR=5.8
K50A **Casco** **79.20 315** IAmb IAmb 02 17 59.2
comp=Z,40nm,0.9s
R58B **Mineral** **79.21 309** P 02 17 45.5
baz=54
IMAR **Indian Mountai** **79.22 0** P **P** **02 17 44.4 -0.6**
U61A **Possum Corner** **79.24 307** P 02 17 46.0
baz=54
GDU01 **Guandu, BA** **79.33 245** *e*P **P** **02 17 46.3 0.0**
E43A **Lone Tree Farm** **79.36 320** IAmb IAmb 02 17 50.3
comp=Z,16nm,0.7s
Q56A **Snyder Ridge,** **79.40 310** IAmb IAmb 02 17 51.7
comp=Z,24nm,0.9s
Q56A **Snyder Ridge,** **79.40 310** P 02 17 46.6
baz=53,SNR=5.6
R57A **Stanardsville** **79.42 309** P 02 17 46.5
baz=54
MCWV **Mont Chateau** **79.44 311** P 02 17 46.2
baz=53
PRP **Porcupine Dome** **79.51 357** P **P** **02 17 47.1 +0.3**
PRP **Porcupine Dome** **79.51 357** P 02 17 46.4
baz=6.4
S58A **Poland Farm, P** **79.53 309** IAmb IAmb 02 18 04.0
comp=Z,28nm,0.9s
S58A **Poland Farm, P** **79.53 309** P 02 17 46.5
baz=54
U60A **Pendleton** **79.62 307** P 02 17 47.3
baz=54
M51A **Elyria** **79.83 314** P 02 17 48.6
baz=52
R56A **Bull Pasture M** **79.91 310** P 02 17 49.3
baz=53
O53A **New Philadelph** **79.92 312** IAmb IAmb 02 17 53.5
comp=Z,27nm,1.1s
O53A **New Philadelph** **79.92 312** P 02 17 48.0
baz=52
EGAK **Eagle** **79.98 355** P 02 17 49.0
baz=10
POKR **Poker Plat Res** **79.99 358** IAmb IAmb 02 18 07.2
comp=Z,17nm,0.7s
POKR **Poker Plat Res** **79.99 358** P 02 17 49.0
baz=4.8,SNR=7.7
NBIT **Itapeh - BA** **80.01 244** *e*P **P** **02 17 51.7 +1.7**
I23K **Minto, Yukon-K** **80.02 358** P 02 17 49.2
baz=3.2,SNR=6.9
YSS **Yuzh-Sakhalins** **80.16 39** *e*P **P** **02 17 50.7 +0.3**
YSS *e*S **S** **02 27 52.1 -2.2**
YSS *e*PS **PnS** **02 28 36.8 -2.8**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS **Yuzh-Sakhalins** **80.16 39** P **P** **02 17 50.4 0.0**
MLY **Manley** **80.17 359** P 02 17 49.9
baz=2.1,SNR=12
J47A **Sunmer** **80.17 316** IAmb IAmb 02 18 17.8
comp=Z,43nm,1.0s
MDM **Murphy Dome** **80.18 358** IAmb IAmb 02 18 07.8
comp=Z,20nm,0.8s
ANM **Nome** **80.19 5** IAmb IAmb 02 18 12.4
comp=Z,27nm,1.0s
ANM **Nome** **80.19 5** P 02 17 49.5
baz=350,SNR=16
N51A **Ashland** **80.20 313** IAmb IAmb 02 18 04.9
comp=Z,38nm,1.2s
COLA **College** **80.25 358** *i* P **P** **02 17 49.6 -0.9**
COLA pmax pmax
comp=Z,23nm,1.4s
COLA **College** **80.25 358** P **P** **02 17 50.5 0.0**
COLA **College** **80.25 358** P 02 17 50.5
baz=4.5
TCOL **CIGO, UAF Yank** **80.25 358** P 02 17 50.3
baz=4.5
ILAR **Eielson Array** **80.32 357** P **P** **02 17 50.4 -0.6**
comp=Z,3.0nm,0.7s,baz=335,slow=3.5,SNR=37
ILAR PKKPbc **PKKPbc** **02 36 34.9 +1.4**
comp=Z,0.4nm,0.6s,baz=199,slow=2.1,SNR=5.1
ILAR PKPPKP **P'P'df** **02 44 48.4 +4.7**
comp=Z,0.7nm,0.9s,baz=205,slow=3.9,SNR=4.5
ILAR LR LR 02 54 31.1
comp=Z,545nm,20.3s,baz=20,slow=36
ILAR **Eielson Array** **80.32 357** P **P** **02 17 50.5 -0.4**
F42A **Maple Grove Fa** **80.36 320** IAmb IAmb 02 18 18.9
comp=Z,38nm,1.2s

O52A	Adamsville	80.37	312	IAmb	IAmb	02 17 56.2		
	comp=Z,32nm,1.1s							
R55A	Marlinton	80.44	310	IAmb	IAmb	02 18 15.1		
	comp=Z,19nm,0.8s							
R55A	Marlinton	80.44	310	P		02 17 51.7		
	baz=53							
S56A	Natural Bridge	80.45	309	P		02 17 51.8		
	baz=53							
Q54A	Coxs Mills	80.45	311	IAmb	IAmb	02 18 14.1		
	comp=Z,27nm,1.1s							
P53A	Whipple	80.49	312	IAmb	IAmb	02 18 09.5		
	comp=Z,22nm,0.7s							
DAWY	Dawson	80.54	354	IAmb	IAmb	02 18 05.1		
	comp=Z,30nm,1.1s							
NEA2	Nenana	80.57	358	P		02 17 51.7		
	baz=3.5,SNR=9.0							
KSI	Kapahiang	80.57	101	P	P	02 18 00.6	+7.4	
EYMN	Ely	80.61	323	P	P	02 17 52.2	-0.6	
EYMN	Ely	80.61	323	P		02 17 52.3		
	baz=47							
COWI	Conover	80.66	321	IAmb	IAmb	02 18 20.4		
	comp=Z,31nm,0.9s							
WRH	Wood River Hil	80.66	358	IAmb	IAmb	02 18 10.8		
	comp=Z,27nm,0.8s							
HDA	Harding Lake	80.68	357	P		02 17 51.8		
	baz=5.2,SNR=12							
HDA				P		02 17 51.8		
	baz=5.2,SNR=12							
L48A	N Adams	80.77	315	IAmb	IAmb	02 17 56.0		
	comp=Z,41nm,1.3s							
K27K	Chicken	80.79	355	IAmb	IAmb	02 18 06.8		
	comp=Z,30nm,1.1s							
K27K	Chicken	80.79	355	P		02 17 53.2		
	baz=9.3							
P52A	Corning	80.85	312	IAmb	IAmb	02 17 58.5		
	comp=Z,27nm,1.1s							
P52A	Corning	80.85	312	P		02 17 53.6		
	baz=52							
Q53A	Leroy	80.96	311	P		02 17 54.7		
	baz=52							
SCRK	Sand Creek	80.97	356	IAmb	IAmb	02 18 07.2		
	comp=Z,22nm,1.0s							
SCRK	Sand Creek	80.97	356	P		02 17 54.4		
	baz=7.7							
ACSO	Alum Creek Sta	80.99	313	IAmb	IAmb	02 18 08.6		
	comp=Z,32nm,1.1s							
ACSO	Alum Creek Sta	80.99	313	P		02 17 54.3		
	baz=51,SNR=6.3							
H43A	Windswept, Lux	81.01	319	IAmb	IAmb	02 18 22.6		
	comp=Z,31nm,0.9s							
MCPB	Macapa, AP	81.04	263	*e*P	P	02 17 55.3	-0.4	
ULM	Lac du Bonnet	81.06	327	P	P	02 17 54.5	-0.7	
	comp=Z,14nm,0.5s,baz=47,slow=5.2,SNR=53							
ULM				LR	LR	02 53 05.5		
	comp=Z,992nm,22.0s,baz=41,slow=35							
ULM	Lac du Bonnet	81.06	327	IAmb	IAmb	02 18 08.6		
	comp=Z,19nm,0.8s							
BPAW	Bear Paw Mtn.	81.10	359	P		02 17 54.3		
	baz=1.9,SNR=9.9							
CDVI	St. Croix	81.20	285	P	P	02 17 56.0	-0.5	
N49A	Columbus Grove	81.27	314	IAmb	IAmb	02 18 22.8		
	comp=Z,22nm,0.9s							
CHUM	Lake Minchumin	81.33	360	P		02 17 55.4		
	baz=0.8,SNR=9.9							
Q52A	Bidwell	81.35	312	IAmb	IAmb	02 18 19.3		
	comp=Z,19nm,0.8s							
B35A	Bob, Littlefor	81.41	324	IAmb	IAmb	02 17 58.2		
	comp=Z,15nm,0.7s							
LHSI	Lahat	81.43	101	P	P	02 17 56.0	-1.7	
	comp=Z,1µmcomp=Z,65nm,0.9s							
MCK	McKinley	81.43	358	IAmb	IAmb	02 18 23.5		
	comp=Z,24nm,1.0s							
MCK	McKinley	81.43	358	P		02 17 56.2		
	baz=3.6,SNR=8.3							
P51A	Williamsport	81.51	313	IAmb	IAmb	02 18 19.6		
	comp=Z,16nm,0.7s							
R53A	Hurricane	81.55	311	IAmb	IAmb	02 18 15.0		
	comp=Z,32nm,1.1s							
KTH	Kantishna Hill	81.65	359	IAmb	IAmb	02 18 26.2		
	comp=Z,24nm,1.2s							
BCAR	Beaver Creek A	81.72	355	P	P	02 17 57.9	-0.6	
TRF	Thorofare Moun	81.74	359	P		02 17 58.2		
	baz=2.5,SNR=5.6							
G40A	Rib Lake	81.77	320	IAmb	IAmb	02 18 13.1		
	comp=Z,24nm,1.1s							
L46A	Eue Claire	81.79	316	IAmb	IAmb	02 18 12.7		
	comp=Z,28nm,0.9s							
O49A	Covington	81.82	314	IAmb	IAmb	02 18 08.9		
	comp=Z,24nm,0.8s							
HUMP	Col San Antoni	81.84	286	IAmb	IAmb	02 18 02.1		
	comp=Z,25nm,0.8s							
Q51A	Peebles	81.96	312	IAmb	IAmb	02 18 22.5		
	comp=Z,30nm,0.8s							
I42A	Draeger Farm,	82.01	319	P	P	02 17 59.7	-0.6	
I42A				IAmb	IAmb	02 18 01.2		
	comp=Z,25nm,0.9s							
PAX	Paxson	82.05	356	P		02 17 59.8		
	baz=6.4							
WAT2	Susitna Watana	82.19	358	P		02 18 00.5		
	baz=3.9							
PPLA	Purkeypile	82.32	360	IAmb	IAmb	02 18 13.8		
	comp=Z,21nm,0.7s							
PPLA	Purkeypile	82.32	360	P		02 18 01.3		
	baz=0.9,SNR=9.7							
PETK	Petropavlovsk-	82.36	27	P	P	02 18 00.1	-1.9	
	comp=Z,6.4nm,1.0s,baz=270,slow=3.0,SNR=5.5							
PETK				LR	LR	02 58 32.3		
	comp=Z,582nm,19.4s,baz=311,slow=38							
NAN01	Guarapari, ES	82.39	242	*e*P	P	02 18 02.4	-0.2	
AGMN	Agassiz Nation	82.46	325	P		02 18 02.0		
	baz=44							
P49A	Miami Univ. Ec	82.47	313	IAmb	IAmb	02 18 24.6		
	comp=Z,17nm,0.8s							
P49A	Miami Univ. Ec	82.47	313	P		02 18 02.3		
	baz=50							
K43A	Burlington	82.48	318	IAmb	IAmb	02 18 16.4		
	comp=Z,33nm,0.9s							
OBIP	Obispado Ponce	82.49	287	P	P	02 18 03.3	0.0	
WAT6	Susitna Watana	82.54	357	P		02 18 02.1		
	baz=4.6,SNR=11							
LWLI	Liwa	82.56	101	P	P	02 18 04.4	+0.7	
	comp=Z,7µmcomp=Z,87nm,0.5s							
PRPB	Parauapebas	82.63	257	*e*P	P	02 18 03.4	-0.6	
PET	Petropavlovsk	82.79	27	*e*P	P	02 18 09.5	+5.3	
PET				*e*S	S	02 28 22.6	+1.3	
PET				MLR	MLR			
	comp=Z,1µm,20.0s							
PET				MLR	MLR			
	comp=Z,900nm,16.0s							
I40A	Norwalk	82.92	320	IAmb	IAmb	02 18 05.9		
	comp=Z,16nm,0.8s							
P48A	Milroy	82.93	314	IAmb	IAmb	02 18 09.0		
	comp=Z,25nm,0.9s							
S51A	Beattyville	82.99	311	IAmb	IAmb	02 18 10.4		
	comp=Z,20nm,1.1s							
R50A	Paris	83.03	312	IAmb	IAmb	02 18 28.2		
	comp=Z,14nm,0.8s							
F36A	Milaca	83.06	323	IAmb	IAmb	02 18 06.2		
	comp=Z,20nm,0.8s							
KMSC	Kings Mountain	83.13	308	P		02 18 05.6		
	baz=52							
SPMN	Marine on St.	83.14	322	P	P	02 18 05.9	-0.3	
SPMN				IAmb	IAmb	02 18 07.6		
	comp=Z,38nm,1.2s							
SPMN	Marine on St.	83.14	322	P		02 18 05.9		
	baz=46							
KASI	Kota Agung	83.20	102	P	P	02 18 06.3	-0.7	
	comp=Z,44nm,1.1s							
SKT	Skwentna	83.24	359	IAmb	IAmb	02 18 28.2		
	comp=Z,17nm,0.6s							
SKT	Skwentna	83.24	359	P		02 18 05.2		
	baz=1.4,SNR=13							
SFIN	Lafayette	83.31	315	IAmb	IAmb	02 18 19.4		
	comp=Z,21nm,0.9s							
SFIN	Lafayette	83.32	315	P		02 18 05.9		
	baz=49,SNR=6.9							
SML	Sawmill	83.34	358	P		02 18 06.0		
	baz=4.1							
WHY	Whitehorse	83.39	351	IAmb	IAmb	02 18 19.0		
	comp=Z,27nm,1.4s							
JFWS	Jewell Farm	83.39	319	P		02 18 07.0		
	baz=47,SNR=6.8							
MCARA	McCarthy VSAT	83.48	355	P		02 18 06.4		
	baz=8.4							
HYT	Haines Junctio	83.54	352	IAmb	IAmb	02 18 10.1		
	comp=Z,34nm,1.2s							
KLU	Klutina	83.55	356	IAmb	IAmb	02 18 37.4		
	comp=Z,12nm,0.9s							
KLU	Klutina	83.55	356	P		02 18 07.1		
	baz=6.0							
PMR	Palmer	83.58	358	P		02 18 08.0		
	baz=3.4,SNR=5.6							
SKR	Severo-Kuril's	83.63	30	*e*P	P	02 17 57.8	-11	
SKR				*e*S	S	02 28 15.8	-14	
SKR				*e*SSS	SSS	02 37 21.4		
SKR				pmax	pmax			
	comp=Z,21nm,2.5s							
SKR				pmax	pmax			
	comp=Z,100nm,5.3s							
SKR				pmax	pmax			
	comp=Z,200nm,7.4s							
SKR				MLR	MLR			
	comp=Z,200nm,17.0s							
PAULI	Pauline	83.64	308	P	P	02 18 09.2	+0.3	
PAULI				IAmb	IAmb	02 18 37.6		
	comp=Z,13nm,0.9s							
KNK	Knik Glacier	83.74	358	P		02 18 08.9		
	baz=4.0							
SUA	Susitna One	83.74	359	P		02 18 08.8		
	baz=2.1,SNR=8.6							
CTG	Chitna Glacier	83.77	354	P		02 18 09.4		
	baz=9.8							
D32A	Dogwood Acres,	83.83	325	IAmb	IAmb	02 18 09.8		
	comp=Z,21nm,0.9s							
P46A	Rosedale	83.88	315	IAmb	IAmb	02 18 11.6		
	comp=Z,17nm,0.9s							
SPCR	Spurr Chakacha	84.03	359	P		02 18 10.8		
	baz=0.9							
SVW2	Sparrevohn	84.11	1	IAmb	IAmb	02 18 37.8		
	comp=Z,17nm,1.1s							
CRQE	Cirque	84.12	355	P		02 18 11.4		
	baz=8.4							
V52A	Seiverville	84.13	310	IAmb	IAmb	02 18 33.5		
	comp=Z,20nm,1.1s							
WCI	Wyandotte Cave	84.25	313	P	P	02 18 11.3	-0.7	
WCI				pmax	pmax			
	comp=Z,29nm,1.0s							
WCI	Wyandotte Cave	84.25	313	P	P	02 18 11.3	-0.7	
WCI				IAmb	IAmb	02 18 34.5		
	comp=Z,29nm,1.0s							
WCI	Wyandotte Cave	84.25	313	P		02 18 12.3		
	baz=49							
TKL	Tuckaleechee C	84.36	310	IAmb	IAmb	02 18 34.7		
	comp=Z,20nm,1.0s							
MAJO	Matsushiro	84.38	49	P	P	02 18 11.9	-0.9	
MAJO				pmax	pmax			
	comp=Z,24nm,1.0s							
MAJO	Matsushiro	84.38	49	P	P	02 18 11.9	-0.9	
MAJO				IAmb	IAmb	02 18 25.0		
	comp=Z,24nm,1.0s							
MAT	Matsushiro	84.38	49	P	P	02 18 12.2	-0.6	
MAT				S	S	02 28 39.0	+0.9	
MJAR	Matsushiro Arr	84.39	49	P	P	02 18 12.8	+0.1	
	comp=Z,13nm,1.0s,baz=305,slow=4.8,SNR=11							
MJAR				LR	LR	02 59 14.0		
	comp=Z,785nm,21.1s,baz=345,slow=38							
MJAR	Matsushiro Arr	84.39	49	P	P	02 18 12.2	-0.6	
MJAR				pmax	pmax			
	comp=Z,21nm,1.0s							
MJAR	Matsushiro Arr	84.39	49	P	P	02 18 12.2	-0.6	
MJAR				IAmb	IAmb	02 18 25.8		
	comp=Z,21nm,1.0s							
F33A	5 Mile Ranch,	84.43	324	IAmb	IAmb	02 18 14.0		
	comp=Z,37nm,1.4s							
HDIL	Hopedale	84.45	317	P		02 18 12.1		
	baz=48,SNR=6.3							
PINM	Pinnacle	84.53	353	P		02 18 13.1		
	baz=11							
DLBC	Dease Lake	84.79	348	IAmb	IAmb	02 18 42.6		
	comp=Z,16nm,1.1s							
W52A	Murphy	84.81	310	P	P	02 18 14.3	-0.6	
W52A				IAmb	IAmb	02 18 16.3		
	comp=Z,17nm,0.9s							
SBUM	Sibu	84.90	91	IAmb	IAmb	02 18 23.7		
	comp=Z,27nm,1.3s							
CPCT	Cooper Cave	84.96	310	IAmb	IAmb	02 18 17.4		
	comp=Z,24nm,0.9s							
PEXB	Peixe	84.97	252	*e*P	P	02 18 14.4	-1.5	
P43A	Skaggs, Pawnee	85.19	316	IAmb	IAmb	02 18 17.8		
	comp=Z,24nm,0.8s							
Q44A	Meyer Farm, Va	85.40	315	IAmb	IAmb	02 18 18.8		
	comp=Z,22nm,0.9s							
BRSE	Bradley Lake S	85.47	359	P		02 18 18.0		
	baz=2.1							
GOGA	Godfrey	85.59	308	P		02 18 19.2		
	baz=50							
SDDR	Presa de Saban	85.60	290	P	P	02 18 19.6	+0.4	
SDDR				IAmb	IAmb	02 18 31.0		
	comp=Z,22nm,0.8s							
CLTN	Cedars of Leba	85.66	312	IAmb	IAmb	02 18 20.9		
	comp=Z,23nm,0.9s							
SCIA	State Center	85.67	320	P		02 18 18.9		
	baz=45							
Y52A	Lilburn	85.68	309	IAmb	IAmb	02 18 46.7		
	comp=Z,37nm,1.2s							
X51A	Calhoun	85.74	310	IAmb	IAmb	02 18 29.6		
	comp=Z,31nm,1.1s							
SWET	Sewanee	85.99	311	P	P	02 18 20.0	-0.8	
SWET				IAmb	IAmb	02 18 21.7		
	comp=Z,23nm,1.2s							
DGMT	Dagmar	85.99	330	P		02 18 20.4		
	baz=38							
ECSD	EROS Data Cent	86.12	323	IAmb	IAmb	02 18 34.0		
	comp=Z,21nm,0.9s							
ECSD	EROS Data Cent	86.12	323	P		02 18 20.7		
	baz=43,SNR=23							
V48A	Smith Brothers	86.19	312	IAmb	IAmb	02 18 22.5		
	comp=Z,19nm,0.9s							
ITTB	Itaituba	86.35	262	*e*P	P	02 18 22.9	0.0	
WVT	Waverly	86.55	312	P	P	02 18 22.6	-0.9	
WVT				pmax	pmax			
	comp=Z,19nm,0.9s							
WVT	Waverly	86.55	312	P	P	02 18 22.6	-0.9	
WVT				IAmb	IAmb	02 18 23.8		
	comp=Z,19nm,0.9s							
WVT	Waverly	86.55	312	P		02 18 22.7		
	baz=48							
SUSD	Miller	86.74	324	P		02 18 23.9		
	baz=42							
Z51A	Franklin	86.74	309	IAmb	IAmb	02 18 26.1		
	comp=Z,21nm,0.8s							
BDFB	Brasilia	86.89	249	P	P	02 18 26.0	+0.4	
	comp=Z,9.2nm,0.7s,baz=42,slow=8.2,SNR=9.2							
BDFB				LR	LR	02 57 44.7		
	comp=Z,623nm,21.4s,baz=63,slow=36							
BDFB	Brasilia	86.89	249	P	P	02 18 24.7	-0.8	
BDFB				pmax	pmax			
	comp=Z,17nm,1.0s							
BDFB	Brasilia	86.89	249	P	P	02 18 24.7	-0.8	
BDFB				IAmb	IAmb	02 18 41.5		
	comp=Z,17nm,1.0s							
TIGA	Tifton	86.92	307	P		02 18 25.7		
	baz=50							
WRAK	Wrangell Islan	87.11	349	P		02 18 26.0		
	baz=17							
Y49A	Blount Mountai	87.17	310	IAmb	IAmb	02 18 27.9		
	comp=Z,25nm,0.9s							
X48A	Hartselle	87.18	311	IAmb	IAmb	02 18 43.2		
	comp=Z,11nm,0.7s							
CCM	Cathedral Cave	87.26	316	P	P	02 18 26.0	-1.0	
CCM				pmax	pmax			
	comp=Z,28nm,0.9s							
CCM	Cathedral Cave	87.26	316	P	P	02 18 26.0	-1.0	
CCM	Cathedral Cave	87.26	316	P		02 18 27.1		
	baz=46							
P38A	Dawn	87.45	318	IAmb	IAmb	02 18 28.8		
	comp=Z,19nm,0.8s							
KDAK	Kodiak Island	87.46	360	P		02 18 27.8		
	baz=0.6							
PLAL	Pickwick Lake	87.46	312	IAmb	IAmb	02 18 54.3		
	comp=Z,22nm,0.9s							
NPGB	Novo Progresso	87.59	260	*e*P	P	02 18 29.0	+0.1	
PTGA	Pitinga	87.72	268	P	P	02 18 28.9	-0.7	
PTGA				IAmb	IAmb	02 18 44.2		
	comp=Z,22nm,1.1s							
PTGA	Pitinga	87.72	268	*e*P	P	02 18 30.1	+0.5	
BSCB	Bom Sucesso	87.77	242	*e*P	P	02 18 30.3	+0.6	
LRAL	Lakeview Retre	88.08	310	P		02 18 31.3		
	baz=49							
LAO	LASA Array	88.24	330	P		02 18 32.0		
	baz=37							
MGMO	Mountain Grove	88.47	316	IAmb	IAmb	02 18 50.6		
	comp=Z,18nm,0.8s							
MYLDM	Lahad Datu	88.49	85	P	P	02 18 31.4	-1.8	
EGMT	Eagleton	88.56	332	P		02 18 33.4		
	baz=34							
LCAR	Lake Charles	88.57	314	IAmb	IAmb	02 19 00.0		
	comp=Z,12nm,0.8s							
OXF	Oxford	88.59	312	P		02 18 33.6		
	baz=47							
BGNE	Belgrade	88.59	322	P		02 18 33.0		
	baz=42,SNR=5.5							
WALA	Waterton Lakes	89.18	335	IAmb	IAmb	02 18 47.9		
	comp=Z,18nm,0.8s							
RSSD	Black Hills	89.33	327	P	P	02 18 36.1	-0.9	
RSSD				pmax	pmax			
	comp=Z,18nm,1.0s							
RSSD	Black Hills	89.33	327	P	P	02 18 36.1	-0.9	
RSSD				IAmb	IAmb	02 18 38.0		
	comp=Z,18nm,1.0s							
RSSD	Black Hills	89.33	327	P		02 18 36.9		
	baz=38							
U40A	Yellville	89.36	315	P		02 18 36.2		
	baz=45,SNR=5.3							
KSU1	Kansas State U	89.48	319	IAmb	IAmb	02 18 51.3		
	comp=Z,13nm,0.8s							
KSU1	Kansas State U	89.49	319	P		02 18 37.4		
	baz=43							
MACA	Manacapuru-AM	89.69	266	*e*P	P	02 18 39.6	+0.8	
WHAR	Wooly Hollow	89.78	314	IAmb	IAmb	02 19 01.7		
	comp=Z,29nm,1.5s							
W41B	Gary Mavity, V	89.83	314	P		02 18 38.8		
	baz=46							
ARAG	Araguaiana, MT	89.85	251	*e*P	P	02 18 40.7	+1.2	
HHAR	Hobbs	90.04	316	IAmb	IAmb	02 18 57.2		
	comp=Z,19nm,1.4s							
CLDB	Colider	90.16	257	*e*P	P	02 18 40.7	-0.2	
U38A	Gravette	90.18	316	IAmb	IAmb	02 18 41.4		
	comp=Z,15nm,0.9s							
JTMT	Jette	90.43	335	P	P	02 18 41.6	-0.3	
X40A	Basin Creek Fa	90.66	314	P		02 18 42.9		
	baz=45							
W39A	Magazine	90.72	315	P		02 18 42.2		
	baz=45							
RLMT	Red Lodge	90.75	331	IAmb	IAmb	02 18 58.4		
	comp=Z,12nm,1.1s							
RLMT	Red Lodge	90.75	331	P		02 18 42.9		
	baz=35,SNR=8.7							
SDV	Santo Domingo	90.92	281	P	P	02 18 45.4	+0.6	
SDV				IAmb	IAmb	02 18 46.0		
	comp=Z,25nm,1.2s							
NEW	Newport	90.94	337	IAmb	IAmb	02 18 45.8		
	comp=Z,17nm,1.0s							
NEW	Newport	90.94	337	P		02 18 43.2		
	baz=29,SNR=13							
MIAR	Mount Ida	91.05	315	IAmb	IAmb	02 19 02.0		
	comp=Z,15nm,1.0s							
MIAR	Mount Ida	91.05	315	P		02 18 44.5		
	baz=45,SNR=7.5							
MSO	Missoula	91.10	334	IAmb	IAmb	02 18 45.6		
	comp=Z,10nm,0.9s							
MSO	Missoula	91.10	334	P		02 18 44.2		
	baz=31,SNR=8.6							
BOZ	Bozeman (W)	91.29	332	P	P	02 18 45.9	-0.1	
BOZ				pmax	pmax			
	comp=Z,7.0nm,0.8s							
BOZ	Bozeman (W)	91.29	332	P	P	02 18 45.9	-0.1	
BOZ	Bozeman (W)	91.29	332	P		02 18 45.8		
	baz=33,SNR=14							
CBKS	Cedar Bluff	91.34	321	IAmb	IAmb	02 18 47.1		
	comp=Z,16nm,0.9s							
CBKS	Cedar Bluff	91.34	321	P		02 18 45.7		
	baz=41							
TUL1	Leonard	91.35	317	P		02 18 45.8		
	baz=44,SNR=6.7							
Z41A	Richland Creek	91.50	313	P		02 18 46.8		
	baz=45							
K22A	Casper	91.60	327	P		02 18 46.5		
	baz=37,SNR=11							
C09A	Chrisman Ranch	91.71	337	P	P	02 18 47.6	-0.1	
C09A				IAmb	IAmb	02 19 00.3		
	comp=Z,12nm,0.8s							
YMR	Madison River	91.81	331	IAmb	IAmb	02 19 15.6		
	comp=Z,22nm,1.4s							
H17A	Grant Village	91.88	331	IAmb	IAmb	02 19 17.8		
	comp=Z,19nm,1.4s							
H17A	Grant Village	91.88	331	P		02 18 50.6		
	baz=34,SNR=5.7							
OK031	S. Brethren Rd	91.90	317	IAmb	IAmb	02 18 58.1		
	comp=Z,21nm,1.1s							
X37A	Clayton	92.06	316	IAmb	IAmb	02 19 06.0		
	comp=Z,16nm,0.8s							
YPP	Pitchstone Pla	92.07	331	IAmb	IAmb	02 19 17.7		
	comp=Z,27nm,1.5s							
FLWY	Flagg Ranch	92.19	331	P	P	02 18 50.3	0.0	
FLWY				IAmb	IAmb	02 19 18.7		
	comp=Z,22nm,1.4s							
OK029	Liberty Lake	92.36	318	IAmb	IAmb	02 18 51.9		
	comp=Z,13nm,0.9s							
B05A	Bryant	92.45	340	P		02 18 49.6		
	baz=25							
KSCO	Kaye Shedlock'	92.64	323	IAmb	IAmb	02 18 53.2		
	comp=Z,12nm,0.8s							
KSCO	Kaye Shedlock'	92.65	323	P		02 18 52.1		
	baz=39							
RWWY	Rawlins	92.68	327	IAmb	IAmb	02 18 52.4		
	comp=Z,12nm,1.1s							
JAGI	Jajag, Banyuwa	92.70	98	P	P	02 19 04.7	+12	
N23A	Red Feather La	92.75	326	P		02 18 52.5		
	baz=37,SNR=7.4							
PDAR	Pinedale Array	92.81	329	P	P	02 18 51.7	-1.5	
	comp=Z,2.1nm,0.7s,baz=58,slow=4.1,SNR=24							
PDAR				LR	LR	03 03 05.3		
	comp=Z,1µm,19.1s,baz=32,slow=37							
PDAR	Pinedale Array	92.81	329	P	P	02 18 50.9	-2.3	
BW06	Boulder Array	92.81	329	P		02 18 51.6		
	baz=34							
REDW	Red Top Meadow	92.85	330	IAmb	IAmb	02 19 20.5		
	comp=Z,13nm,1.4s							
PCMB	Pacaembu	92.93	246	*e*P	P	02 18 55.4	+1.7	
D03D	Eldon	93.39	340	P		02 18 54.5		
	baz=24							
X34A	Smith Ranch, M	93.44	317	IAmb	IAmb	02 19 05.5		
	comp=Z,14nm,1.2s							
ISCO	Idaho Springs	93.46	325	P	P	02 18 55.5	-0.9	
ISCO				pmax	pmax			
	comp=Z,11nm,1.3s							
ISCO	Idaho Springs	93.46	325	P	P	02 18 55.5	-0.9	
ISCO				IAmb	IAmb	02 19 00.7		
	comp=Z,11nm,1.2s							
ISCO	Idaho Springs	93.47	325	P		02 18 55.5		
	baz=37,SNR=10							
WMOK	Wichita Mounta	93.87	318	IAmb	IAmb	02 19 02.0		
	comp=Z,8.8nm,0.9s							
WMOK	Wichita Mounta	93.87	318	P		02 18 57.7		
	baz=42,SNR=7.3							
Q24A	Divide	93.91	324	P		02 18 57.1		
	baz=38							
HLID	Hailey	94.07	333	P		02 18 58.8		
	baz=31							
E04D	Cinebar	94.13	339	P		02 18 58.7		
	baz=25							
O20A	White River Ci	94.40	327	P		02 18 59.9		
	baz=36							
F05D	White Salmon	94.41	338	P		02 19 00.1		
	baz=26							
HWUT	Hardware Ranch	94.60	330	IAmb	IAmb	02 19 02.0		
	comp=Z,10.0nm,0.8s							
MFID	Camas Ranch	94.72	334	IAmb	IAmb	02 19 02.7		
	comp=Z,9.8nm,0.8s							
VILB	Vilhena	94.87	258	*

PINE	**Pine Mountain**	**96.13**	**337**	P	**P**	02 19 08.5	**+0.2**
PINE				IAmb	IAmb	02 19 24.2	
	comp=Z,20nm,1.2s						
ROSC	**El Rosal**	**96.24**	**280**	LR	LR	03 01 19.1	
	comp=Z,150nm,20.5s,baz=62,slow=35						
DUG	**Dugway, Tooele**	**96.30**	**330**	P		02 19 08.6	
	baz=32,SNR=6.5						
J05D	**Fort Rock, OR**	**96.68**	**337**	P		02 19 10.5	
	baz=26,SNR=6.7						
J04D	**Umpgua Nationa**	**97.00**	**338**	P		02 19 11.8	
	baz=25						
ANMO	**Albuquerque**	**97.73**	**323**	*i* P	**P**	**02 19 14.1**	**-1.6**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
ANMO	**Albuquerque**	**97.73**	**323**	P		02 19 15.0	
	baz=37						
ETMB	**Extrema**	**97.97**	**264**	*e*P	**P**	**02 19 18.0**	**+1.2**
L04D	**Klamath Falls**	**97.98**	**337**	P		02 19 16.5	
	baz=25						
M04C	**Macdoel**	**98.23**	**337**	P		02 19 17.7	
	baz=26						
MNTX	**Cornudas Mount**	**99.75**	**320**	P		02 19 23.6	
	baz=38						
NVAR	**Mina Array Bea**	**99.98**	**333**	P	**Pdif**	**02 19 24.5**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=33,slow=4.0,SNR=8.8						
NVAR				PKKPbc	**PKKPbc**	**02 35 47.2**	**+2.9**
	comp=Z,0.6nm,0.7s,baz=204,slow=4.1,SNR=3.7						
NVAR				LR	LR	03 05 37.6	
	comp=Z,1μm,21.6s,baz=30,slow=36						
TXAR	**Lajitas Array**	**100.66**	**317**	P	**Pdif**	**02 19 28.4**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=62,slow=3.9,SNR=8.4						
TXAR				PP	**PP**	**02 23 39.4**	**+4.2**
	comp=Z,0.4nm,0.8s,baz=37,slow=6.9,SNR=4.4						
TXAR				PKKPbc	**PKKPdf**	**02 35 50.4**	**+4.3**
	comp=Z,0.3nm,0.8s,baz=172,slow=10.0,SNR=3.5						
PFO	**Pinyon Flats O**	**103.44**	**329**	P		02 19 39.0	
	baz=30						
TPFO	**Pinon Flats**	**103.44**	**329**	P		02 19 39.0	
	baz=30						
SYO	**Syowa Base**	**104.25**	**175**⇑	*e*X	**Pdif**	**02 19 36.3**	**-7.1**
WRA	**Warramunga Arr**	**115.30**	**97**	PKP	**PKPdf**	**02 24 20.8**	**-1.5**
	comp=Z,1.0nm,0.6s,baz=301,slow=1.5,SNR=11						
WRA				PP	**PP**	**02 25 26.2**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=307,slow=6.8,SNR=12						
ASAR	**Alice Springs**	**116.77**	**101**	PKP	**PKPdf**	**02 24 24.1**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=303,slow=1.4,SNR=18						
ASAR				PKKPbc	**PKKPab**	**02 34 54.3**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=102,slow=4.9,SNR=5.7						
QSPA	**South Pole Qui**	**124.97**	**180**		**PKPdf**	**02 24 38.5**	**-1.0**
STKA	**Stephens Creek**	**126.45**	**106**	PKP	**PKPdf**	**02 24 42.4**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=344,slow=4.8,SNR=4.6						
VNDA	**Vanda**	**133.26**	**168**	PKP	**PKPdf**	**02 24 54.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=196,slow=15,SNR=1.9						
DZM	**Mont Dzumac**	**142.55**	**81**	*e*LR	LR	03 11 46.4	
	comp=Z,536nm,24.8s						
RPZ	**Rata Peaks**	**151.30**	**118**	PKPbc	**PKPbc**	**02 25 33.6**	**0.0**
	comp=Z,5.4nm,0.5s,baz=198,slow=11,SNR=2.4						
PPT2	**Papeete2**	**162.24**	**348**	*e*LR	LR	03 20 51.3	
	comp=Z,561nm,21.8s						
TBI	**Tubuai**	**167.82**	**343**	*e*LR	LR	03 23 32.6	
	comp=Z,936nm,33.8s						

DJA 17 02:06:22.6±0.6, 3°N±5°×12°8E±°, h10km, M3.7/7, mb3.9/2, MLv3.7/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.16**	**284**	P	Sb	02 07 29.4	+0.6
TNTI	**Ternate**	**2.38**	**186**	P	Pn	02 07 02.4	+0.7
GTOI	**Gorontalo**	**5.25**	**242**	P	Pn	02 07 42.2	+1.0
	0.1nm11nm,0.6s						

IDC 17 02:09:16.4±4.4, 31°.86S×138°.47E, h0km, mb1 3.5/4, mb1mx3.4/31, mbtmp3.3/4, ML3.3/4, Error ellipse: s-maj=77.8km s-min=16.5km az=21.0
NOU 17 02:09:18.9, 31°.87S×138°.56E, h0km, MLv3.4, South Australia
AUST 17 02:09:19.5±1.4, 31°.81S×138°.57E, h12km±9km, Error ellipse: s-maj=4.3km s-min=3.5km az=79.0

ISC 17 02:09:19.8±0.7, 31°.84S±0.03×138°.52E±0.04, h27km, n17, σ2.8 47/32, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUJCS	**Jamestown Cent**	**1.35**	**177**	P	**Pb**	**02 09 45.1**	**+0.6**
	baz=1.4						
AUJCS				S	**Sb**	**02 10 05.1**	**+3.7**
	baz=1.4						
LCRK	**Leigh Creek**	**1.42**	**349**	P	**Pb**	**02 09 46.8**	**+1.2**
	baz=1.4,SNR=107						
LCRK				S	**Sb**	**02 10 05.8**	**+2.7**
	baz=1.4,SNR=6.3						
HTT	**Hallett**	**1.62**	**168**	P	**Pn**	**02 09 47.6**	**+1.0**
	baz=1.6,SNR=23						
HTT				S	**Sb**	**02 10 10.9**	**+1.8**
	baz=1.6,SNR=7.0						
BBOO	**Buckleboo**	**2.30**	**245**	P	**Pn**	**02 09 57.7**	**+1.9**
	baz=2.3,SNR=25						
BBOO				S	**Sb**	**02 10 27.5**	**-1.0**
	baz=2.3,SNR=9.6						
STKA	**Stephens Creek**	**2.62**	**92**	Pn	**Pn**	**02 10 00.5**	**+0.2**
	2.2nm,0.3s,baz=261,slow=11,SNR=12						
STKA				Pg	**Pb**	**02 10 05.4**	**-0.6**
	3.2nm,0.3s,baz=265,slow=15,SNR=23						
STKA				Sn	**Sn**	**02 10 32.8**	**+1.6**
	5.1nm,0.3s,baz=309,slow=17,SNR=3.5						
STKA				Lg	Lg	02 10 41.3	
	11nm,0.3s,baz=340,slow=21,SNR=7.8						
STKA	**Stephens Creek**	**2.62**	**92**	P	**Pn**	**02 10 01.4**	**+1.1**
	baz=2.6,SNR=11						
STKA				S	**Sn**	**02 10 33.0**	**+1.9**
	baz=2.6						
MULG	**Mulgathing**	**4.13**	**291**	P	**Pn**	**02 10 23.5**	**+2.4**
	baz=4.2,SNR=8.2						
MULG				S	**Sn**	**02 11 11.7**	**+3.1**
	baz=4.2,SNR=5.2						
INKA	**Innaminka**	**4.52**	**26**	P	**Pn**	**02 10 29.1**	**+2.6**
	baz=4.5						
INKA				S	**Sn**	**02 11 19.6**	**+1.4**
	baz=4.5						
OOD	**Oodnadatta**	**4.73**	**328**	P	**Pn**	**02 10 32.0**	**+2.7**
	baz=4.7,SNR=10.0						
OOD				S	**Sn**	**02 11 25.6**	**+2.4**
	baz=4.7						
ARPS	**Mount Arapiles**	**5.63**	**152**	P	**Pn**	**02 10 41.8**	**+0.1**
	baz=5.6						
ARPS				S	**Sn**	**02 11 42.2**	**-3.2**
	baz=5.6						
CMSA	**Cobar Meteorol**	**6.12**	**89**	P	**Pn**	**02 10 48.3**	**-0.1**
	baz=6.1						
CMSA				S	**Sn**	**02 11 54.5**	**-3.0**
	baz=6.1						
TOO	**Toolangi**	**8.10**	**137**	P	**Pn**	**02 11 16.2**	**+0.6**
	baz=8.1						
FORT	**Forrest**	**9.01**	**274**	P	**Pn**	**02 11 28.2**	**0.0**
	baz=9.0						
FORT				S	**Sn**	**02 13 04.9**	**-3.8**
	baz=9.0						
ASAR	**Alice Springs**	**9.11**	**332**	Pn	**Pn**	**02 11 30.0**	**+0.4**
	0.4nm,0.3s,baz=160,slow=11,SNR=12						
ASAR				Sn	**Sn**	**02 13 07.5**	**-3.8**
	0.6nm,0.3s,baz=154,slow=22,SNR=6.7						
WRA	**Warramunga Arr**	**12.43**	**341**	Pn	**Pn**	**02 12 13.0**	**-2.0**
	0.3nm,0.3s,baz=156,slow=12,SNR=12						
WRA				Sn	**Sn**	**02 14 26.4**	**-6.4**
	0.2nm,0.3s,baz=161,slow=23,SNR=4.7						
FITZ	**Fitzroy Crossi**	**17.97**	**317**	P	**P**	**02 13 27.9**	**-0.1**
	0.1nm,0.3s,baz=135,slow=5.7,SNR=1.1						
JAGI	**Jajag, Banyuwa**	**32.46**	**310**	S	**S**	**02 21 03.7**	**+2.4**
	baz=32,SNR=5.1						

ISK 17 02:27:38.9, 34°.91N×26°.76E, h8km, ML3.1/17
THE 17 02:27:41.1, 35°.06N×26°.68E, h0km±2km, ML3.1/4, Error ellipse: s-maj=7.2km s-min=1.0km az=157.0
HLW 17 02:27:42.5, 34°.78N×26°.92E, h16km±7km, Md3.3, Ml3.2

ISC 17 02:27:39.3±1.2, 34°.90N±0.04×26°.72E±0.03, h14km±10km, n41, σ1.9 43/54, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.46**	**298**	P	**Pb**	**02 27 49.1**	**-0.1**
ZKR				S	**Sb**	**02 27 55.9**	**-0.1**
	4μm,0.5s						
ZKR	**Zakros**	**0.46**	**298**	PG	**Pg**	**02 27 48.3**	**-0.2**
ZKR				SG	**Sb**	**02 27 55.7**	**-0.3**
STIA	**Sitia Lasithi**	**0.60**	**301**	P	**Pg**	**02 27 50.4**	**-0.6**
STIA				S	**Sb**	**02 27 59.4**	**-0.4**
KARP	**Karpathos**	**0.74**	**29**	P	**Pg**	**02 27 53.2**	**-0.5**
KARP				S	**Sg**	**02 28 03.8**	**+0.3**
	3μm,0.4s						
KARP	**Karpathos**	**0.74**	**29**	PG	**Pg**	**02 27 53.2**	**-0.5**
KARP				SG	**Sg**	**02 28 03.2**	**-0.3**
FRMA	**Ierapetra Chan**	**0.82**	**278**	P	**Pg**	**02 27 54.0**	**-1.1**
FRMA				S	**Sg**	**02 28 05.8**	**0.0**
NPS	**Neapolis**	**0.98**	**292**	P	**Pb**	**02 27 58.7**	**+0.7**
NPS				S	**Sn**	**02 28 12.8**	**+0.6**
	2μm,0.6s						
KSTL	**Kastelli Herak**	**1.41**	**287**	P	**Pn**	**02 28 03.2**	**-1.3**
KSTL				S	**Sb**	**02 28 18.1**	**-5.1**
IDI	**Anoyia**	**1.55**	**285**	P	**Pg**	**02 28 08.7**	**-0.3**
IDI				S	**Sg**	**02 28 29.8**	**+0.7**
	278nm,0.6s						
IDI	**Anoyia**	**1.55**	**285**	PN	**Pb**	**02 28 08.0**	**+0.2**
IDI				SN	**Sg**	**02 28 29.9**	**+0.8**
SIVA	**Sivas**	**1.57**	**275**	P	**Pg**	**02 28 09.6**	**+0.1**
NIS1	**Nisyros Isl.**	**1.74**	**12**	P	**Pn**	**02 28 10.2**	**+1.1**
NIS1	**Nisyros Isl.**	**1.74**	**12**	PN	**Pn**	**02 28 10.0**	**+0.9**
ARG	**Arkhangelos**	**1.75**	**41**	P	**Pb**	**02 28 10.9**	**-0.2**
ARG	**Arkhangelos**	**1.75**	**41**	PN	**Pn**	**02 28 10.1**	**+1.0**
ARG				SN	**Sb**	**02 28 33.3**	**+0.4**
SANT	**Santorini**	**1.79**	**325**	PN	**Pn**	**02 28 10.9**	**+1.1**
THR6	**Thira Island,**	**1.81**	**324**	P	**Pn**	**02 28 10.3**	**+0.3**
THR3	**Thira Island,**	**1.85**	**325**	P	**Pn**	**02 28 11.4**	**+0.8**
KOSK	**Kos Island**	**1.86**	**6**	PN	**Pn**	**02 28 11.7**	**+1.0**
THT2	**Imerovigli**	**1.86**	**326**	PN	**Pn**	**02 28 12.0**	**+1.3**
GVDS	**Gavdos**	**2.16**	**269**	PN	**Pb**	**02 28 17.4**	**-0.8**
GVD	**Gavdhos**	**2.16**	**269**	PN	**Pn**	**02 28 16.7**	**+1.8**
BODT	**Bodrum**	**2.21**	**12**	PN	**Pn**	**02 28 16.8**	**+1.2**
TURN	**Turunc**	**2.25**	**33**	PN	**Pn**	**02 28 17.2**	**+1.2**
IMMV	**Iera Moni Meta**	**2.31**	**285**	PN	**Pn**	**02 28 19.3**	**+2.4**
APE	**Apeiranthos**	**2.37**	**336**	PN	**Pn**	**02 28 18.9**	**+1.1**
DALY	**Dalyan (Mula)**	**2.48**	**39**	PN	**Pn**	**02 28 20.2**	**+1.0**
KNDR	**Palaiochora Ch**	**2.51**	**279**	PN	**Pn**	**02 28 22.1**	**+2.5**
YER	**Yerkesik**	**2.57**	**29**	PN	**Pn**	**02 28 21.9**	**+1.4**
FETY	**Fethiye**	**2.59**	**47**	PN	**Pn**	**02 28 20.7**	**-0.1**
AKAS	**Kas**	**2.71**	**60**	PN	**Pn**	**02 28 23.6**	**+1.1**
ELL	**Elmali**	**3.18**	**54**	PN	**Pn**	**02 28 30.3**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.19**	**17**	PN	**Pn**	**02 28 30.4**	**+1.3**
KTHA	**Kythira Island**	**3.27**	**296**	PN	**Pn**	**02 28 32.5**	**+2.3**
URLA	**Izmir**	**3.46**	**358**	PN	**Pn**	**02 28 35.0**	**+2.3**
CHOS	**Chios island**	**3.52**	**352**	PN	**Pn**	**02 28 35.4**	**+1.8**
KORT	**Korkueli**	**3.62**	**54**	PN	**Pn**	**02 28 36.7**	**+1.7**
SLUM	**Salum**	**3.62**	**201**	P	**Pn**	**02 28 37.0**	**+2.0**
	baz=205						
SLUM				AMP		02 29 00.0	
	baz=205						
SLUM				S	**Sn**	**02 29 16.8**	**-0.8**
	baz=205						
SWA2		**5.74**	**191**	P	**Pn**	**02 29 06.1**	**+2.1**
	baz=194						
SWA2				AMP		02 30 00.0	
	baz=194						
SWA2				S	**Sn**	**02 30 06.9**	**-2.8**
	baz=194						
GLL	**Jalalah**	**6.78**	**140**	P	**Pn**	**02 29 19.0**	**+0.5**
	baz=140						
HFRF	**Wahat Farafira**	**7.85**	**170**	P	**Pn**	**02 29 34.2**	**+1.2**
	baz=170						

SNET 17 03:01:57.2±1.3, 13°.69N×90°.61W, h24km±6km, ML3.0
GCG 17 03:01:58.0±0.3, 13°.67N×90°.65W, h1km±6km, MD3.5

ISC 17 03:01:59.1±2.1, 13°.6N±0°.1×90°.61W±0°.08, h38km, n14, σ0.9 97/16, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.82**	**0**	*e*P	**Pn**	**03 02 13.5**	**-0.9**
FUG	**Fuego 3**	**0.91**	**346**	*e*P	**Pn**	**03 02 14.5**	**-1.0**
CEVE	**Cerro Verde**	**0.99**	**74**	*e*P	**Pn**	**03 02 15.5**	**-1.2**
CEVE				*e*S	**Sn**	**03 02 30.0**	**+0.4**
CEVE				IAML		03 02 34.2	
	comp=Z,1μm,0.2s						
NBG	**Las Nubes**	**1.05**	**14**	*e*P	**Pn**	**03 02 17.5**	**-0.1**
NBG				*e*S	**Sn**	**03 02 32.6**	**+1.6**
LALI	**Alcalda de L**	**1.25**	**93**	*e*S	**Sn**	**03 02 36.9**	**+1.2**
ERG	**Entre ros, C**	**1.28**	**313**	*e*P	**Pn**	**03 02 20.2**	**-0.2**
QUEZ	**Alcaldia de Qu**	**1.33**	**78**	*e*S	**Sn**	**03 02 38.5**	**+1.0**
MTO3	**Montecristo**	**1.47**	**55**	*e*S	**Sn**	**03 02 41.4**	**+0.1**
LFRS	**El Faro**	**1.50**	**87**	*e*P	**Pn**	**03 02 23.2**	**-0.4**
PAVA	**Las Pavas**	**1.63**	**85**	IAML		03 02 51.7	
	comp=Z,80nm,0.3s						
COEG	**Centro de Oper**	**1.68**	**88**	*e*P	**Pn**	**03 02 25.4**	**-0.6**
COEG				*e*S	**Sn**	**03 02 47.9**	**+1.5**
COEG				IAML		03 02 53.8	
	comp=Z,150nm,0.3s						
LLGN	**La Laguna**	**1.72**	**70**	*e*S	**Sn**	**03 02 46.9**	**-0.5**
ALJI	**Alcalda de J**	**2.00**	**96**	*e*S	**Sn**	**03 02 54.5**	**+0.5**
COEB	**Comit de Eme**	**2.02**	**92**	*e*S	**Sn**	**03 02 55.5**	**+0.7**

GCG 17 03:05:15.5±0.3, 13°.08N×89°.19W, h15km±59km, MD4.1
UCR 17 03:05:17.5±1.1, 13°.15N×89°.29W, h50km±6km, ML4.2
INET 17 03:05:17.3, 13°.13N×89°.29W, h47km, MW3.4
SNET 17 03:05:17.2±0.9, 13°.13N×89°.29W, h50km±5km, ML4.2
IDC 17 03:05:18.8±2.4, 13°.37N×88°.97W, h77km±18km, mb3.3/7, mb1 3.7/10, mb1mx3.4/58, mbtmp3.7/10, Error ellipse: s-maj=49.2km s-min=22.1km az=50.0

ISC 17 03:05:16.7±1.0, 13°.16N±0°.07×89°.26W±0°.04, h56km±6km, n76, σ1.9 44/115, mb3.7/6, 2C-7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.33**	**349**	*e*P	**Pn**	**03 05 27.0**	**+0.2**
LALI				*e*S	**Sn**	**03 05 34.0**	**+0.1**
LALI				IAML		03 05 34.4	
	comp=Z,7μm,0.4s						
LALI	**Alcalda de L**	**0.33**	**349**	*e*P	**Pn**	**03 05 27.0**	**+0.2**
LALI				*e*S	**Sn**	**03 05 34.0**	**+0.1**
LALI				IAML		03 05 34.4	
	comp=Z,7μm,0.4s						
LFRS	**El Faro**	**0.50**	**22**⇓	*i* P	**Pn**	**03 05 28.9**	**+0.4**
LFRS	**El Faro**	**0.50**	**22**⇓	*i* P	**Pn**	**03 05 28.9**	**+0.4**
MAGS	**Ministerio de**	**0.52**	**357**	*e*P	**Pn**	**03 05 29.3**	**+0.5**
MAGS				*e*S	**Sn**	**03 05 38.6**	**+1.2**
MAGS				IAML		03 05 44.6	
	comp=Z,13μm,0.4s						
CPRS	**Casa Presidenc**	**0.53**	**2**	*e*P	**Pn**	**03 05 29.2**	**+0.5**
CPRS				*e*S	**Sn**	**03 05 38.6**	**+1.2**
SNET	**Serv Nac Est T**	**0.53**	**3**	*i* P	**Pn**	**03 05 29.3**	**+0.5**
SNET				*e*S	**Sn**	**03 05 38.6**	**+1.1**
SNET				IAML		03 05 39.6	
	comp=Z,15μm,0.3s						
SNET	**Serv Nac Est T**	**0.53**	**3**	*i* P	**Pn**	**03 05 29.3**	**+0.5**
SNET				*e*S	**Sn**	**03 05 38.6**	**+1.1**
SNET				IAML		03 05 39.6	
	comp=Z,15μm,0.3s						
UTEC	**Universidad Te**	**0.54**	**6**	*e*P	**Pn**	**03 05 29.6**	**+0.6**
UTEC				*e*S	**Sn**	**03 05 39.4**	**+1.7**
UTEC	**Universidad Te**	**0.54**	**6**	*e*P	**Pn**	**03 05 29.6**	**+0.6**
UTEC				*e*S	**Sn**	**03 05 39.4**	**+1.7**
AEIL	**Aeropuerto Ilo**	**0.55**	**14**	*e*P	**Pn**	**03 05 30.0**	**+0.9**
AEIL				*e*S	**Sn**	**03 05 40.1**	**+2.1**
AEIL				IAML		03 05 42.8	
	comp=Z,17μm,0.3s						
AEIL	**Aeropuerto Ilo**	**0.55**	**14**	*e*P	**Pn**	**03 05 30.0**	**+0.9**
AEIL				*e*S	**Sn**	**03 05 40.1**	**+2.1**
AEIL				IAML		03 05 42.8	
	comp=Z,17μm,0.3s						
UEES	**Universidad Ev**	**0.56**	**2**	*i* P	**Pn**	**03 05 29.7**	**+0.5**
UEES				*e*S	**Sn**	**03 05 39.4**	**+1.4**
UEES				IAML		03 05 41.4	
	comp=Z,15μm,0.3s						
UEES	**Universidad Ev**	**0.56**	**2**	*i* P	**Pn**	**03 05 29.7**	**+0.5**
UEES				*e*S	**Sn**	**03 05 39.4**	**+1.4**
UEES				IAML		03 05 41.4	
	comp=Z,15μm,0.3s						
UESS	**Universidad de**	**0.56**	**6**	*e*P	**Pn**	**03 05 29.9**	**+0.7**
UESS	**Universidad de**	**0.56**	**6**	*e*P	**Pn**	**03 05 29.9**	**+0.7**
UDBS	**Universidad Do**	**0.56**	**10**	*e*P	**Pn**	**03 05 29.9**	**+0.7**
UDBS	**Universidad Do**	**0.56**	**10**	*e*P	**Pn**	**03 05 29.9**	**+0.7**
COEG	**Centro de Oper**	**0.59**	**39**	*i* P	**Pn**	**03 05 29.8**	**+0.3**
COEG				*e*S	**Sn**	**03 05 39.6**	**+0.9**
COEG				IAML		03 05 46.6	
	comp=Z,8μm,0.3s						
COEG	**Centro de Oper**	**0.59**	**39**	*i* P	**Pn**	**03 05 29.8**	**+0.3**
COEG				*e*S	**Sn**	**03 05 39.6**	**+0.9**
COEG				IAML		03 05 46.6	
	comp=Z,8μm,0.3s						
LFU	**La Fuente**	**0.60**	**13**⇑	*i* P	**Pn**	**03 05 30.7**	**+1.0**
LFU	**La Fuente**	**0.60**	**13**⇑	*i* P	**Pn**	**03 05 30.7**	**+1.0**
LBRS	**Las Brisas**	**0.61**	**20**⇓	*i* P	**Pn**	**03 05 30.7**	**+0.9**
LBRS	**Las Brisas**	**0.61**	**20**⇓	*i* P	**Pn**	**03 05 30.7**	**+0.9**
PAVA	**Las Pavas**	**0.63**	**29**	*e*P	**Pn**	**03 05 30.6**	**+0.6**
PAVA				*e*S	**Sn**	**03 05 41.4**	**+1.6**
PAVA	**Las Pavas**	**0.63**	**29**	*e*P	**Pn**	**03 05 30.6**	**+0.6**
PAVA				*e*S	**Sn**	**03 05 41.4**	**+1.6**
ALJI	**Alcalda de J**	**0.69**	**76**	*e*P	**Pn**	**03 05 31.3**	**+0.6**
ALJI				*e*S	**Sn**	**03 05 42.5**	**+1.7**
ALJI				IAML		03 05 46.1	
	comp=Z,10μm,0.2s						
ALJI	**Alcalda de J**	**0.69**	**76**	*e*P	**Pn**	**03 05 31.3**	**+0.6**
ALJI				*e*S	**Sn**	**03 05 42.5**	**+1.7**
ALJI				IAML		03 05 46.1	
	comp=Z,10μm,0.2s						
CEVE	**Cerro Verde**	**0.76**	**332**	*e*P	**Pn**	**03 05 32.2**	**+0.4**
CEVE				*e*S	**Sn**	**03 05 44.4**	**+1.8**
CEVE				IAML		03 05 47.0	
	comp=Z,8μm,0.3s						
CEVE	**Cerro Verde**	**0.76**	**332**	*e*P	**Pn**	**03 05 32.2**	**+0.4**
CEVE				*e*S	**Sn**	**03 05 44.4**	**+1.8**
CEVE				IAML		03 05 47.0	
	comp=Z,8μm,0.3s						
SBLS	**San Blas**	**0.77**	**332**	*e*P	**Pn**	**03 05 32.4**	**+0.6**
SBLS	**San Blas**	**0.77**	**332**	*e*P	**Pn**	**03 05 32.4**	**+0.6**
SNJE	**San Jose**	**0.78**	**334**	*e*P	**Pn**	**03 05 32.6**	**+0.6**
SNJE	**San Jose**	**0.78**	**334**	*e*P	**Pn**	**03 05 32.6**	**+0.6**
COEB	**Comit de Eme**	**0.78**	**64**	*e*P	**Pn**	**03 05 32.5**	**+0.5**
COEB				*e*S	**Sn**	**03 05 44.5**	**+1.4**
COEB				IAML		03 05 48.7	
	comp=Z,6μm,0.3s						
COEB	**Comit de Eme**	**0.78**	**64**	*e*P	**Pn**	**03 05 32.5**	**+0.5**
COEB				*e*S	**Sn**	**03 05 44.5**	**+1.4**
COEB				IAML		03 05 48.7	
	comp=Z,6μm,0.3s						
TECA	**Tecapa**	**0.81**	**65**	*i* P	**Pn**	**03 05 32.9**	**+0.6**
TECA	**Tecapa**	**0.81**	**65**	*i* P	**Pn**	**03 05 32.9**	**+0.6**
PQSS	**Presa 15 de Se**	**0.82**	**56**	*e*P	**Pn**	**03 05 33.1**	**+0.9**
PQSS				*e*S	**Sn**	**03 05 45.5**	**+1.8**
RTR	**El Retiro**	**0.83**	**333**	*e*P	**Pn**	**03 05 33.4**	**+0.8**
RTR	**El Retiro**	**0.83**	**333**	*e*P	**Pn**	**03 05 33.4**	**+0.8**
PACA	**Pacayal**	**0.96**	**71**	*e*P	**Pn**	**03 05 35.5**	**+1.2**
PACA				*e*S	**Sn**	**03 05 49.5**	**+2.4**
PACA				IAML		03 05 53.3	
	comp=Z,5μm,0.3s						
PACA	**Pacayal**	**0.96**	**71**	*e*P	**Pn**	**03 05 35.5**	**+1.2**
PACA				*e*S	**Sn**	**03 05 49.5**	**+2.4**
PACA				IAML		03 05 53.3	
	comp=Z,5μm,0.3s						
LCY	**Lacayo**	**0.97**	**74**	*e*P	**Pn**	**03 05 35.6**	**+1.2**
LCY	**Lacayo**	**0.97**	**74**	*e*P	**Pn**	**03 05 35.6**	**+1.2**
RANC	**El Ranchito**	**0.98**	**74**	*e*P	**Pn**	**03 05 35.5**	**+1.0**
RANC				*e*S	**Sn**	**03 05 49.9**	**+2.2**
RANC				IAML		03 05 55.5	
	comp=Z,19μm,0.4s						
RANC	**El Ranchito**	**0.98**	**74**	*e*P	**Pn**	**03 05 35.5**	**+1.0**
RANC				*e*S	**Sn**	**03 05 49.9**	**+2.2**
RANC				IAML		03 05 55.5	
	comp=Z,19μm,0.4s						
VSM	**San Miguel**	**0.99**	**74**⇓	*i* P	**Pn**	**03 05 35.9**	**+1.1**
VSM	**San Miguel**	**0.99**	**74**⇓	*i* P	**Pn**	**03 05 35.9**	**+1.1**
LLGN	**La Laguna**	**1.04**	**17**	*e*P	**Pn**	**03 05 36.1**	**+0.8**
LLGN				*e*S	**Sn**	**03 05 51.1**	**+2.0**
LLGN	**La Laguna**	**1.04**	**17**	*e*P	**Pn**	**03 05 36.1**	**+0.8**
LLGN				*e*S	**Sn**	**03 05 51.1**	**+2.0**
CNRM	**Centro Naciona**	**1.10**	**73**	*e*P	**Pn**	**03 05 37.2**	**+1.2**
CNRM				*e*S	**Sn**	**03 05 53.5**	**+3.2**
CNRM	**Centro Naciona**	**1.10**	**73**	*e*P	**Pn**	**03 05 37.2**	**+1.2**
CNRM				*e*S	**Sn**	**03 05 53.5**	**+3.2**
FAGO	**Alcalda de S**	**1.24**	**64**	*e*P	**Pn**	**03 05 38.4**	**+0.5**
FAGO				*e*S	**Sn**	**03 05 55.0**	**+1.4**
FAGO	**Alcalda de S**	**1.24**	**64**	*e*P	**Pn**	**03 05 38.4**	**+0.5**
FAGO				*e*S	**Sn**	**03 05 55.0**	**+1.4**
LCND	**La Caada**	**1.34**	**83**	*e*P	**Pn**	**03 05 40.0**	**+0.9**
LCND				*e*S	**Sn**	**03 05 58.4**	**+2.4**
LCND	**La Caada**	**1.34**	**83**	*e*P	**Pn**	**03 05 40.0**	**+0.9**
LCND				*e*S	**Sn**	**03 05 58.4**	**+2.4**
ESQI	**Esquipulas**	**1.40**	**357**⇓	*i* P	**Pn**	**03 05 41.4**	**+1.3**
ESQI				*e*S	**Sn**	**03 05 59.8**	**+2.3**
ESQI				IAML		03 06 02.8	
	comp=Z,671nm

ZKR				S	Sg	03 10 54.7	+0.7	
	comp=N,1μm,0.3s							
ZKR	**Zakros**	**0.52**	**277**	PG	**Pg**	**03 10 47.7**	**+0.5**	
ZKR				SG	**Sb**	**03 10 55.2**	**-0.6**	
KARP	**Karpathos**	**0.56**	**27**	P	**Pb**	**03 10 48.9**	**0.0**	
KARP				S	**Sb**	**03 10 57.9**	**+0.9**	
KARP				AML	AML	03 10 59.4		
	comp=N,15767μm,0.4s							
KARP				AML	AML	03 11 00.1		
	comp=E,10310μm,0.3s							
KARP	**Karpathos**	**0.56**	**27**	P	**Pb**	**03 10 48.9**	**0.0**	
KARP				S	**Sb**	**03 10 58.1**	**+1.1**	
KARP	**Karpathos**	**0.56**	**27**	PG	**Pb**	**03 10 48.9**	**0.0**	
KARP				SG	**Sb**	**03 10 57.9**	**+0.9**	
STIA	**Sitia Lasithi**	**0.64**	**284**	P	**Pg**	**03 10 48.8**	**-0.6**	
STIA				S	**Sg**	**03 10 58.3**	**+0.6**	
FRMA	**Ierapetra Chan**	**0.91**	**268**	P	**Pg**	**03 10 52.9**	**-1.7**	
FRMA				S	**Sg**	**03 11 04.9**	**-1.6**	
NPS	**Neapolis**	**1.03**	**282**	P	**Pb**	**03 10 57.4**	**+0.4**	
NPS				S	**Sg**	**03 11 08.9**	**-1.4**	
NPS				AML	AML	03 11 17.2		
	comp=E,1182μm,0.4s							
NPS				AML	AML	03 11 26.0		
	comp=N,954μm,0.5s							
NPS	**Neapolis**	**1.03**	**282**	P	**Pb**	**03 10 57.3**	**+0.3**	
NPS				S	**Sb**	**03 11 11.1**	**+0.5**	
	comp=N,530nm,0.5s							
ARG	**Arkhangelos**	**1.56**	**42**	P	**Pg**	**03 11 07.2**	**+0.1**	
ARG				AML	AML	03 11 34.5		
	comp=E,731μm,1.0s							
ARG				AML	AML	03 11 35.5		
	comp=N,553μm,0.7s							
ARG	**Arkhangelos**	**1.56**	**42**	P	**Pg**	**03 11 07.0**	**0.0**	
ARG				S	**Sg**	**03 11 27.1**	**-0.2**	
	comp=N,320nm,0.8s							
ARG	**Arkhangelos**	**1.56**	**42**	PN	**Pb**	**03 11 05.9**	**-0.1**	
ARG				SN	**Sg**	**03 11 26.8**	**-0.5**	
NIS1	**Nisyros Isl.**	**1.57**	**10**	PN	**Pb**	**03 11 06.0**	**-0.2**	
NIS1				SN	**Sg**	**03 11 26.8**	**-0.8**	
IDI	**Anoyia**	**1.62**	**279**	Pg	**Pb**	**03 11 07.0**	**0.0**	
	comp=N,6.2nm,0.3s,baz=241,slow=5.7,SNR=7.9							
IDI				Lg	Lg	03 11 26.5		
	comp=N,10nm,0.3s,baz=350,slow=15,SNR=5.8							
IDI				LR	LR	03 11 58.6		
	comp=N,151nm,20.0s,baz=98,slow=50							
IDI	**Anoyia**	**1.62**	**279**	P	**Pg**	**03 11 07.9**	**-0.2**	
IDI				AML	AML	03 11 39.5		
	comp=E,244μm,0.3s							
IDI				AML	AML	03 11 39.9		
	comp=N,240μm,0.4s							
IDI	**Anoyia**	**1.62**	**279**	P	**Pb**	**03 11 07.4**	**+0.4**	
IDI				S	**Sb**	**03 11 27.9**	**+0.4**	
	comp=N,120nm,0.4s							
IDI	**Anoyia**	**1.62**	**279**	PN	**Pn**	**03 11 06.4**	**+0.7**	
IDI				SN	**Sn**	**03 11 27.3**	**+0.7**	
SIVA	**Sivas**	**1.67**	**269**	P	**Pg**	**03 11 09.3**	**+0.2**	
SIVA				AML	AML	03 11 50.6		
	comp=N,562μm,0.7s							
SIVA				AML	AML	03 12 03.4		
	comp=E,597μm,0.7s							
SANT	**Santorini**	**1.73**	**320**	P	**Pn**	**03 11 07.8**	**+0.6**	
SANT				AML	AML	03 11 37.9		
	comp=E,579μm,0.6s							
SANT				AML	AML	03 11 41.6		
	comp=N,204μm,0.6s							
SANT	**Santorini**	**1.73**	**320**	PN	**Pn**	**03 11 07.9**	**+0.6**	
THR8	**Santorini-Mono**	**1.75**	**321**	P	**Pn**	**03 11 07.9**	**+0.4**	
THR6	**Thira Island,**	**1.76**	**318**	P	**Pn**	**03 11 07.7**	**+0.2**	
THR3	**Thira Island,**	**1.79**	**320**	P	**Pn**	**03 11 08.3**	**+0.3**	
THR3	**Thira Island,**	**1.79**	**320**	P	**Pn**	**03 11 08.7**	**+0.7**	
THT2	**Imerovigli**	**1.80**	**320**	P	**Pn**	**03 11 08.3**	**+0.1**	
THT2	**Imerovigli**	**1.80**	**320**	PN	**Pn**	**03 11 08.9**	**+0.7**	
THR5	**Thira Island,**	**1.83**	**319**	P	**Pn**	**03 11 09.5**	**+1.0**	
BODT	**Bodrum**	**2.04**	**10**	PN	**Pn**	**03 11 12.3**	**+0.8**	
BODT				SN	**Sb**	**03 11 38.7**	**-1.0**	
TURN	**Turunc**	**2.06**	**33**	PN	**Pn**	**03 11 12.6**	**+0.9**	
VAM	**Vamos**	**2.19**	**280**	P	**Pn**	**03 11 15.5**	**+2.0**	
VAM				AML	AML	03 11 54.9		
	comp=N,199μm,0.5s							
VAM				AML	AML	03 12 01.7		
	comp=E,188μm,0.8s							
GVDS	**Gavdos**	**2.27**	**266**	PN	**Pn**	**03 11 15.5**	**+0.9**	
GVD	**Gavdhos**	**2.27**	**265**	PN	**Pn**	**03 11 15.3**	**+0.7**	
APE	**Apeiranthos**	**2.28**	**333**	P	**Pn**	**03 11 14.9**	**+0.2**	
APE				AML	AML	03 11 46.8		
	comp=E,200μm,0.5s							
APE				AML	AML	03 11 49.7		
	comp=N,133μm,0.4s							
APE	**Apeiranthos**	**2.28**	**333**	PN	**Pn**	**03 11 15.7**	**+1.0**	
DALY	**Dalyan (Mula)**	**2.29**	**39**	PN	**Pn**	**03 11 16.3**	**+1.4**	
IMMV	**Iera Moni Meta**	**2.38**	**281**	P	**Pn**	**03 11 18.2**	**+2.1**	
IMMV	**Iera Moni Meta**	**2.38**	**281**	PN	**Pn**	**03 11 17.1**	**+1.0**	
YER	**Yerkesik**	**2.38**	**29**	PN	**Pn**	**03 11 17.1**	**+0.9**	
FETY	**Fethiye**	**2.41**	**48**	PN	**Pn**	**03 11 17.1**	**+0.6**	
AKAS	**Kas**	**2.54**	**62**	PN	**Pn**	**03 11 19.6**	**+1.2**	
KNDR	**Palaiochora Ch**	**2.60**	**275**	PN	**Pn**	**03 11 20.4**	**+1.4**	
ELL	**Elmali**	**3.01**	**55**	PN	**Pn**	**03 11 26.4**	**+1.5**	
AYDB	**Zeytinkoy-Aydi**	**3.01**	**16**	PN	**Pn**	**03 11 26.3**	**+1.4**	
CHOS	**Chios island**	**3.39**	**349**	PN	**Pn**	**03 11 31.9**	**+1.8**	
BELG	**Belogornoye**	**22.80**	**34**	LR	LR	03 25 40.1		
	comp=N,58nm,18.2s,baz=93,slow=40							
TORD	**Torodi Ar. Bea**	**31.50**	**232**	P	**P**	**03 16 58.4**	**-0.7**	
	comp=N,0.6nm,1.0s,baz=34,slow=8.5,SNR=2.3							
MKAR	**Makanchi Array**	**42.68**	**57**	P	**P**	**03 18 32.7**	**-1.2**	
	comp=N,0.5nm,0.6s,baz=280,slow=5.4,SNR=6.5							
ZALV	**Zalesovo Beam**	**44.08**	**46**	P	**P**	**03 18 44.3**	**-0.7**	
	comp=N,0.7nm,0.5s,baz=263,slow=10.0,SNR=2.3							
SEY	**Seymchan**	**73.13**	**23**	LR	LR	03 58 46.7		
	comp=N,156nm,21.1s,baz=337,slow=40							

*SKHL **17** 03:11:01.3±0.2, 44°.10N×147°.40E, h56km±4km, mb4.4/4*
*JMA **17** 03:11:01.5±0.3, 43°.96N×147°.31E, h24km, M3.8*
ISC 17 03:10:59.9±1.9, **44°.06N**±0°.09×**147°.5E**±0°.1, **h63**km, **n18,**
σ1s06/29, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.19**	**269**	*i* P	**Pn**	**03 11 20.1**	**-0.4**
YUK				AMB	AMB	03 11 21.5	
	20nm,0.2s						
YUK				AMB	AMB	03 11 21.5	
	30nm,0.2s						
YUK				AMB	AMB	03 11 21.5	
	120nm,0.2s						
YUK				*e*S	**Sn**	**03 11 34.3**	**-1.5**
YUK				A	A	03 11 36.0	
	710nm,0.3s						
YUK				A	A	03 11 36.0	
	1μm,0.3s						
KUR	**Kuril'sk**	**1.20**	**12**	*e*P	**Pn**	**03 11 20.8**	**+0.2**
KUR				AMB	AMB	03 11 20.9	
	20nm,0.3s						
KUR				AMB	AMB	03 11 20.9	
	90nm,0.3s						
KUR				*i* S	**Sn**	**03 11 35.3**	**-0.8**
KUR				A	A	03 11 36.1	
	780nm,0.3s						
KUR				A	A	03 11 36.1	
	610nm,0.3s						
GRPR	**Tuman**	**1.25**	**267**	*e*P	**Pn**	**03 11 21.0**	**-0.4**
GRPR				AMB	AMB	03 11 22.0	
	170nm,0.3s						
GRPR				*e*S	**Sn**	**03 11 35.9**	**-1.5**
GRPR				A	A	03 11 38.0	
	1μm,0.3s						
GRPR				A	A	03 11 38.0	
	390nm,0.3s						
NEM2	**Nemuro 2**	**1.46**	**242**	P	**Pn**	**03 11 24.2**	**+0.1**
NEM2				*e*S	**Sn**	**03 11 40.4**	**-1.8**
NMR	**Nemuro--Hokkai**	**1.46**	**242**	*i* P	**Pn**	**03 11 24.4**	**+0.2**
NMR				*i* S	**Sn**	**03 11 41.5**	**-0.9**
GLVR	**Golovnino**	**1.47**	**258**	*i* P	**Pn**	**03 11 24.4**	**+0.1**
GLVR				AMB	AMB	03 11 25.0	
	110nm,0.4s						
GLVR				*i* S	**Sn**	**03 11 41.8**	**-0.8**
GLVR				A	A	03 11 45.0	
	350nm,0.4s						
GLVR				A	A	03 11 45.0	
	730nm,0.4s						
JRA	**Rausu**	**1.73**	**267**	P	**Pn**	**03 11 28.7**	**+1.0**
JNSB	**Nemuroshibetsu**	**1.83**	**262**	P	**Pn**	**03 11 30.1**	**+1.0**
JKHN	**Kushirohamanak**	**1.97**	**241**	P	**Pn**	**03 11 31.6**	**+0.7**
JKHN				*e*S	**Sn**	**03 11 53.6**	**-0.9**
JNK	**Nakash**	**2.07**	**258**	P	**Pn**	**03 11 33.2**	**+0.8**
JNK				*e*S	**Sn**	**03 11 56.5**	**-0.7**
JAK	**Akkeshi**	**2.31**	**243**	P	**Pn**	**03 11 35.9**	**+0.4**
JAK				*e*S	**Sn**	**03 12 01.6**	**-1.2**
JTKR	**Abashiri--Toko**	**2.60**	**269**	P	**Pn**	**03 11 40.6**	**+1.1**
JAR	**Ashorobuto**	**2.82**	**256**	P	**Pn**	**03 11 44.2**	**+1.7**
JOB	**Onbets**	**2.91**	**248**	P	**Pn**	**03 11 45.5**	**+1.7**
JOB				*e*S	**Sn**	**03 12 17.6**	**0.0**
JMP	**Maruseppu**	**2.99**	**270**	P	**Pn**	**03 11 46.3**	**+1.4**
JCH	**Churui**	**3.35**	**246**	P	**Pn**	**03 11 50.8**	**+1.0**
JCH				*e*S	**Sn**	**03 12 28.0**	**-0.4**
JNBK	**Urakawa-nobuka**	**3.91**	**245**	P	**Pn**	**03 11 58.6**	**+1.2**
YSS	**Yuzh-Sakhalins**	**4.42**	**313**	*e*P	**Pn**	**03 12 05.6**	**+1.2**

*IDC **17** 03:39:03.8±1.1, 9°.33N×85°.85W, h0km, mb3.7/9,*
mb1 4.0/11, mb1mx3.8/52, mbtmp3.7/11, ML3.4/2, MS2.6/1,
Ms1 2.6/1, ms1mx2.3/39, Error ellipse: s-maj=22.1km
s-min=15.0km az=148.0
*UCR **17** 03:39:05.5±1.2, 9°.45N×85°.99W, h25km±5km, MW4.3*
*UPA **17** 03:39:06.7±1.8, 9°.39N×85°.84W, h10km±49km, MW4.0*
ISC 17 03:39:06.6±1.9, **9°.48N**±0°.06×**85°.85W**±0°.06, **h14**km±11km,
n37, **σ0s97**/46, **mb3.8**/9, **11C**, **Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUAI	**GUAI**	**0.85**	**23**	*i* P	**Pg**	**03 39 22.3**	**-0.8**
GUAI				*i* S	**Sg**	**03 39 35.8**	**+1.4**
JTS	**Las Juntas de**	**1.20**	**48**	Pg	**Pn**	**03 39 28.0**	**-0.8**
	253nm,0.3s,baz=299,slow=3.9,SNR=872						
JTS				Lg	Lg	03 39 46.5	
	389nm,0.3s,baz=27,slow=17,SNR=15						
JTS	**Las Juntas de**	**1.20**	**48**	*e*P	**Pn**	**03 39 28.2**	**-0.6**
JTS				*e*S	**Sn**	**03 39 46.4**	**+1.4**
COLC	**Colonia**	**1.34**	**28**	*i* P	**Pn**	**03 39 29.9**	**-0.9**
LIM1	**Limonal**	**1.34**	**26**	*i* P	**Pn**	**03 39 30.1**	**-0.9**
CUI	**Cuipilapa**	**1.35**	**30**	*i* P	**Pn**	**03 39 29.1**	**-1.9**
CUI				*i* S	**Sn**	**03 39 48.7**	**-0.1**
GBS3	**Finca Las Img**	**1.35**	**17**	*i* P	**Pn**	**03 39 29.8**	**-1.2**
GBS3				*i* S	**Sn**	**03 39 49.3**	**+0.5**
GPS2	**Hotel Rincn d**	**1.35**	**21**	*i* P	**Pn**	**03 39 30.3**	**-0.9**
GUAB	**Guayabo de Bag**	**1.36**	**27**	*i* P	**Pn**	**03 39 30.2**	**-1.1**
BUEV	**Buena Vista**	**1.38**	**18**	*i* P	**Pn**	**03 39 30.3**	**-1.2**
ACAL	**Aguas Claras**	**1.40**	**35**	*i* P	**Pn**	**03 39 31.1**	**-0.7**
GB1A	**Borinquen Arri**	**1.40**	**18**	*i* P	**Pn**	**03 39 30.8**	**-1.0**
SRA1	**San Ramn**	**1.48**	**66**	*e*P	**Pn**	**03 39 32.6**	**-0.3**
PTEN	**Parque Tenorio**	**1.49**	**35**	*i* P	**Pn**	**03 39 32.5**	**-0.5**
HDC	**Heredia**	**1.79**	**73**	*e*P	**Pn**	**03 39 37.4**	**+0.2**
HDC				*e*S	**Sb**	**03 40 01.4**	**-0.1**
CDM	**Cerro de Muert**	**2.06**	**88**	*e*S	**Sb**	**03 40 08.2**	**-1.5**
CVTR	**Volcan Turrial**	**2.13**	**75**	*e*P	**Pn**	**03 39 42.1**	**0.0**
MRVA	**Moravia de Chi**	**2.40**	**82**	*e*S	**Sn**	**03 40 16.6**	**+1.8**
DRK0	**Durika**	**2.58**	**95**	*e*P	**Pn**	**03 39 47.6**	**-0.5**
DRK0				*e*S	**Sn**	**03 40 18.8**	**-0.6**
POTG	**Potrero Grande**	**2.73**	**99**	*e*S	**Sn**	**03 40 24.3**	**+1.4**
CDITO	**Canoas**	**3.08**	**107**	*e*P	**Pn**	**03 39 53.4**	**-1.3**
CDITO				*e*S	**Sn**	**03 40 31.2**	**-0.1**
BRU2	**Volcan**	**3.19**	**102**	*e*P	**Pn**	**03 39 57.0**	**+0.5**
BRU2				*e*S	**Sn**	**03 40 36.2**	**+1.7**
BC3P	**Paso Ancho**	**3.27**	**101**	*e*P	**Pn**	**03 39 57.8**	**+0.3**
BC3P				*e*S	**Sn**	**03 40 36.2**	**-0.2**
DVD	**David**	**3.52**	**107**	*e*P	**Pn**	**03 40 01.1**	**+0.3**
DVD				*e*S	**Sn**	**03 40 41.7**	**-0.5**
APG	**El Apazote**	**7.10**	**321**	Pn	**Pn**	**03 40 51.1**	**+0.7**
	0.8nm,0.3s,baz=127,slow=6.9,SNR=9.4						
APG				LR	LR	03 42 35.8	
	comp=Z,46nm,21.0s,baz=247,slow=29						
CMIG	**Matias Romero**	**11.59**	**312**	Pn	**Pn**	**03 41 52.9**	**+1.2**
	0.2nm,0.3s,baz=118,slow=8.0,SNR=4.8						
TXAR	**Lajitas Array**	**25.86**	**322**	P	**P**	**03 44 38.9**	**+0.9**
	2.7nm,0.8s,baz=138,slow=9.7,SNR=23						
H06E1	**SOCORRO T-PHAS**	**25.98**	**294**	T	T	04 12 14.5	
	SNR=14						
PDAR	**Pinedale Array**	**39.12**	**332**	P	**P**	**03 46 34.2**	**+0.4**
	0.1nm,0.5s,baz=169,slow=0.9,SNR=1.8						
ELK	**Elko**	**40.58**	**325**	P	**P**	**03 46 47.3**	**+1.2**
	1.5nm,0.8s,baz=119,slow=3.4,SNR=7.7						
NVAR	**Mina Array Bea**	**40.97**	**320**	P	**P**	**03 46 49.9**	**+0.7**
	1.5nm,1.1s,baz=130,slow=7.4,SNR=6.3						
PLCA	**Paso Flores**	**51.92**	**165**	P	**P**	**03 48 13.9**	**-1.1**
	3.2nm,1.0s,baz=353,slow=8.1,SNR=4.2						
YKA	**Yellowknife Ar**	**56.87**	**345**	P	**P**	**03 48 49.4**	**-1.2**
	0.3nm,0.6s,baz=140,slow=7.3,SNR=8.4						
INK	**Inuvik**	**66.49**	**343**	P	**P**	**03 49 55.8**	**+0.4**
	0.9nm,1.0s,baz=122,slow=5.6,SNR=2.9						
ILAR	**Eielson Array**	**69.35**	**336**	P	**P**	**03 50 13.8**	**+0.4**
	0.8nm,0.9s,baz=105,slow=4.4,SNR=6.2						
ESDC	**Sonseca Array**	**77.79**	**51**	P	**P**	**03 51 03.6**	**-0.1**
	0.6nm,0.8s,baz=288,slow=5.6,SNR=4.4						
WRA	**Warramunga Arr**	**139.86**	**250**	PKP	**PKPdf**	**03 58 34.4**	**-0.8**
	0.6nm,0.6s,baz=94,slow=2.3,SNR=7.0						

*ISK **17** 03:41:14.3, 35°.01N×26°.79E, h10km, ML3.5/16*
*THE **17** 03:41:16.4, 35°.13N×26°.71E, h0km±1km, ML3.4/7, Error*
ellipse: s-maj=5.1km s-min=0.8km az=155.0
*ATH **17** 03:41:16.6, 35°.16N×26°.70E, h27km±5km, ML3.4/12, Error*
ellipse: s-maj=6.2km s-min=1.3km az=157.0
*IDC **17** 03:41:16.7±2.0, 35°.06N×26°.72E, h35km±17km, mb3.7/10,*
mb1 3.6/15, mb1mx3.5/56, mbtmp3.7/15, ML3.6/4, MS2.9/1,
Ms1 2.9/1, ms1mx2.2/42, Error ellipse: s-maj=21.8km
s-min=13.3km az=179.0
*DDA **17** 03:41:18.4, 35°.28N×27°.20E, h13km±3km, ML3.1*
ISC 17 03:41:14.7±1.1, **35°.03N**±0°.04×**26°.77E**±0°.02, **h19**km±7km,
n89, **σ1s76**/125, **mb3.9**/10, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.46**	**281**	P	**Pg**	**03 41 24.7**	**+0.5**
ZKR				S	**Sb**	**03 41 31.1**	**+0.4**
ZKR				AML	AML	03 41 32.8	
	comp=N,14034μm,0.4s						
ZKR				AML	AML	03 41 33.0	
	comp=E,18653μm,0.2s						
ZKR	**Zakros**	**0.46**	**281**	P	**Pg**	**03 41 24.7**	**+0.5**
ZKR				S	**Sb**	**03 41 31.9**	**+1.2**
	comp=E,8μm,0.3s						
ZKR	**Zakros**	**0.46**	**281**	PG	**Pg**	**03 41 24.1**	**0.0**
ZKR				SG	**Sb**	**03 41 32.2**	**+1.5**
STIA	**Sitia Lasithi**	**0.58**	**287**	P	**Pg**	**03 41 25.6**	**-0.7**
STIA				S	**Sb**	**03 41 35.0**	**+1.0**
KARP	**Karpathos**	**0.61**	**32**	P	**Pg**	**03 41 26.8**	**-0.1**
KARP				S	**Sb**	**03 41 36.1**	**+1.3**
KARP				AML	AML	03 41 37.0	
	comp=E,28753μm,0.6s						
KARP				AML	AML	03 41 38.5	
	comp=N,24630μm,0.4s						
KARP	**Karpathos**	**0.61**	**32**	P	**Pg**	**03 41 26.8**	**-0.1**
KARP				S	**Sb**	**03 41 36.1**	**+1.3**
	comp=N,13μm,0.5s						
KARP	**Karpathos**	**0.61**	**32**	PG	**Pg**	**03 41 26.8**	**-0.1**
KARP				SG	**Sb**	**03 41 35.8**	**+1.0**
FRMA	**Ierapetra Chan**	**0.85**	**269**	P	**Pg**	**03 41 29.8**	**-1.5**
FRMA				S	**Sg**	**03 41 41.2**	**-1.4**
NPS	**Neapolis**	**0.97**	**284**	P	**Pb**	**03 41 34.4**	**+1.4**
NPS				S	**Sg**	**03 41 45.5**	**-1.1**
NPS				AML	AML	03 41 57.2	
	comp=E,5404μm,0.3s						
NPS				AML	AML	03 42 00.4	
	comp=N,4212μm,0.5s						
NPS	**Neapolis**	**0.97**	**284**	P	**Pb**	**03 41 34.4**	**+1.4**
NPS				S	**Sn**	**03 41 47.9**	**+1.2**
	comp=N,2μm,0.5s						
IACM	**Heraklion**	**1.42**	**282**	P	**Pb**	**03 41 41.6**	**+1.1**
KSTL	**Kastelli Herak**	**1.42**	**282**	P	**Pn**	**03 41 38.4**	**-1.0**
KSTL				S	**Sn**	**03 41 55.5**	**-2.1**
IDI	**Anoyia**	**1.56**	**280**	Pg	**Pg**	**03 41 45.1**	**+0.3**
	comp=N,33nm,0.3s,baz=90,slow=20,SNR=59						
IDI				Lg	Lg	03 42 06.9	
	comp=N,61nm,0.3s,baz=347,slow=14,SNR=6.5						
IDI				LR	LR	03 42 35.0	
	comp=N,184nm,20.3s,baz=46,slow=52						
IDI	**Anoyia**	**1.56**	**280**	P	**Pb**	**03 41 43.9**	**+0.9**
IDI				AML	AML	03 42 12.4	
	comp=E,1256μm,0.3s						
IDI				AML	AML	03 42 16.5	
	comp=N,1258μm,0.5s						
IDI	**Anoyia**	**1.56**	**280**	P	**Pb**	**03 41 44.2**	**+1.2**
IDI				S	**Sg**	**03 42 04.3**	**-0.9**
	comp=N,645nm,0.5s						
IDI	**Anoyia**	**1.56**	**280**	PN	**Pn**	**03 41 43.1**	**+1.6**
IDI				SN	**Sb**	**03 42 03.9**	**+1.5**
NIS1	**Nisyros Isl.**	**1.60**	**12**	P	**Pn**	**03 41 43.3**	**+1.3**
NIS1	**Nisyros Isl.**	**1.60**	**12**	PN	**Pn**	**03 41 43.7**	**+1.7**
NIS1				SN	**Sg**	**03 42 04.9**	**-1.6**
SIVA	**Sivas**	**1.61**	**270**	P	**Pb**	**03 41 45.4**	**+1.7**
SIVA				AML	AML	03 42 14.2	
	comp=N,2838μm,0.6s						
SIVA				AML	AML	03 42 22.6	
	comp=E,2681μm,0.7s						
SIVA	**Sivas**	**1.61**	**270**	P	**Pb**	**03 41 45.1**	**+1.3**
SIVA				S	**Sg**	**03 42 06.3**	**-0.3**
	comp=E,1μm,0.6s						
ARG	**Arkhangelos**	**1.62**	**43**	P	**Pn**	**03 41 44.9**	**+2.6**
ARG				AML	AML	03 42 11.6	
	comp=E,2224μm,0.6s						
ARG				AML	AML	03 42 20.4	
	comp=N,1508μm,1.1s						
ARG	**Arkhangelos**	**1.62**	**43**	P	**Pb**	**03 41 45.1**	**+1.1**
ARG				S	**Sb**	**03 42 06.2**	**+2.2**
	comp=N,915nm,0.8s						
ARG	**Arkhangelos**	**1.62**	**43**	PN	**Pn**	**03 41 43.7**	**+1.5**
ARG				SN	**Sb**	**03 42 05.3**	**+1.3**
SANT	**Santorini**	**1.71**	**322**	P	**Pn**	**03 41 45.1**	**+1.5**
SANT				S	**Sn**	**03 42 04.9**	**+0.1**
SANT				AML	AML	03 42 13.4	
	comp=E,2390μm,0.6s						
SANT				AML	AML	03 42 13.8	
	comp=N,962μm,0.6s						
SANT	**Santorini**	**1.71**	**322**	P	**Pn**	**03 41 45.0**	**+1.5**
SANT	**Santorini**	**1.71**	**322**	PN	**Pn**	**03 41 45.3**	**+1.8**
SANT				SN	**Sg**	**03 42 07.8**	**-2.1**
KOSK	**Kos Island**	**1.73**	**6**	P	**Pn**	**03 41 45.1**	**+1.4**
KOSK				S	**Sg**	**03 42 08.2**	**-2.2**
	comp=N,690nm,0.5s						
KOSK	**Kos Island**	**1.73**	**6**	PN	**Pn**	**03 41 45.5**	**+1.8**
KOSK				SN	**Sg**	**03 42 08.6**	**-1.8**
THR6	**Thira Island,**	**1.73**	**320**	P	**Pn**	**03 41 45.1**	**+1.3**
SNT1	**Gialos, Santor**	**1.76**	**322**	P	**Pn**	**03 41 45.5**	**+1.3**
THR3	**Thira Island,**	**1.77**	**321**	P	**Pn**	**03 41 46.0**	**+1.7**
THT2	**Imerovigli**	**1.78**	**322**	PN	**Pn**	**03 41 46.2**	**+1.8**
THT2				SN	**Sg**	**03 42 09.3**	**-2.8**
BODT	**Bodrum**	**2.07**	**12**	P	**Pn**	**03 41 49.6**	**+1.1**
BODT	**Bodrum**	**2.07**	**12**	PN	**Pn**	**03 41 50.3**	**+1.8**
BODT				SN	**Sb**	**03 42 16.7**	**-0.4**
BDRM	**Kayabasi**	**2.10**	**15**	*i* P	**Pn**	**03 41 50.8**	**+1.9**
BDRM				*i* S	**Sn**	**03 42 15.5**	**+1.0**
TURN	**Turunc**	**2.11**	**34**	*i* P	**Pn**	**03 41 51.2**	**+2.2**
TURN				*i* S	**Sn**	**03 42 14.0**	**-0.7**
TURN	**Turunc**	**2.11**	**34**	PN	**Pn**	**03 41 51.0**	**+2.0**
TURN				SN	**Sn**	**03 42 17.6**	**+2.9**
VAM	**Vamos**	**2.14**	**281**	P	**Pn**	**03 41 52.5**	**+3.2**
VAM				AML	AML	03 42 31.7	
	comp=E,850μm,0.3s						
VAM				AML	AML	03 42 34.8	
	comp=N,874μm,0.5s						
GVDS	**Gavdos**	**2.21**	**266**	PN	**Pn**	**03 41 52.7**	**+2.4**
GVD	**Gavdhos**	**2.21**	**266**	P	**Pn**	**03 41 53.8**	**+3.4**
GVD				AML	AML	03 42 40.5	
	comp=N,551μm,0.5s						
GVD				AML	AML	03 42 45.7	
	comp=E,610μm,0.4s						
GVD	**Gavdhos**	**2.21**	**266**	PN	**Pn**	**03 41 52.3**	**+1.9**
APE	**Apeiranthos**	**2.27**	**334**	P	**Pn**	**03 41 52.4**	**+1.2**
APE				AML	AML	03 42 21.3	
	comp=N,1026μm,0.5s						
APE				AML	AML	03 42 24.1	
	comp=E,660μm,0.5s						
APE	**Apeiranthos**	**2.27**	**334**	P	**Pn**	**03 41 52.4**	**+1.2**
APE	**Apeiranthos**	**2.27**	**334**	PN	**Pn**	**03 41 52.5**	**+1.2**
IMMV	**Iera Moni Meta**	**2.32**	**281**	P	**Pn**	**03 41 55.0**	**+3.2**
IMMV				AML	AML	03 42 35.4	
	comp=E,897μm,0.7s						
IMMV				AML	AML	03 42 42.2	
	comp=N,840μm,0.5s						
IMMV	**Iera Moni Meta**	**2.32**	**281**	P	**Pn**	**03 41 55.1**	**+3.2**
IMMV	**Iera Moni Meta**	**2.32**	**281**	PN	**Pn**	**03 41 54.0**	**+2.1**
DALY	**Dalyan (Mula)**	**2.35**	**40**	*i* P	**Pn**	**03 41 54.7**	**+2.4**
DALY				*i* S	**Sn**	**03 42 20.8**	**+0.3**
DALY				IAML		03 42 35.0	
	comp=E,160nm,0.6s						
DALY				IAML		03 42 38.0	
	comp=N,170nm,0.5s						
DALY	**Dalyan (Mula)**	**2.35**	**40**	PN	**Pn**	**03 41 54.4**	**+2.2**
YER	**Yerkesik**	**2.43**	**30**	P	**Pn**	**03 41 55.5**	**+2.0**
YER	**Yerkesik**	**2.43**	**30**	PN	**Pn**	**03 41 55.3**	**+1.8**
DDIM	**Aydin, Didim**	**2

comp=N,0.6nm,0.3s,baz=304,slow=7.0,SNR=1.8

USRK	**Ussuriysk Ar.**	**75.99**	**46**	P		**P**	**03 52 59.9**	**-0.6**
	comp=N,1.1nm,0.6s,baz=318,slow=3.8,SNR=6.2							
YKA	**Yellowknife Ar**	**77.97**	**343**	P		**P**	**03 53 10.2**	**-1.0**
	comp=N,0.4nm,0.8s,baz=39,slow=6.0,SNR=7.3							

NNC 17 03:41:41.0±4.8, 38°80N×69°95E, h0km, mb3.5, mpv3.1, 3C-4D, Error ellipse: s-maj=33.5km s-min=23.8km az=14.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.32**	**5**	⇓Pn	Pn	03 42 48.2	+0.2
	1.1nm,0.5s,baz=171,slow=11,SNR=6.5						
KK31				⇓Pg	Pb	03 42 58.9	+1.1
	0.8nm,0.3s,baz=182,slow=16,SNR=4.2						
KK31				⇓Sn	Sn	03 43 41.0	+1.9
	1.3nm,0.3s,baz=172,slow=21						
KK31				⇓Lg	Lg	03 43 54.8	
	2.0nm,0.3s,baz=187,slow=28,SNR=6.3						
AAK	**Ala-Archa**	**5.16**	**41**	Pn	Pn	03 42 59.5	-0.2
	2.9nm,0.5s						
AAK				Sn	Sn	03 44 03.5	+3.5
	3.1nm,0.6s						
AAK				Lg	Lg	03 44 19.6	
	4.8nm,0.8s						
TKM2	**Tokmak 2**	**5.94**	**44**	⇑Pn	Pn	03 43 09.5	-0.9
	1.5nm,0.5s						
TKM2				⇑Sn	Sn	03 44 19.6	+0.3
	3.3nm,0.7s						
TKM2				⇑Lg	Lg	03 44 44.3	
	2.7nm,0.7s						

UCR 17 04:05:32.6±1.6, 9°35N×85°89W, h24km±9km, MW3.6, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUAI	**GUAI**	**0.99**	**22**	*i* P	Pn	04 05 50.2	-0.8
GUAI				*i* S	Sn	04 06 04.1	-0.1
LIM1	**Limonal**	**1.48**	**25**	*i* P	Pn	04 05 58.0	+0.2
CUI	**Cuipilapa**	**1.48**	**29**	*i* P	Pn	04 05 57.0	-0.8
GBS3	**Finca Las Img**	**1.48**	**17**	*i* P	Pn	04 05 57.9	0.0
GPS2	**Hotel Rincn d**	**1.49**	**21**	*i* P	Pn	04 05 58.2	+0.2
GUAB	**Guayabo de Bag**	**1.50**	**26**	*i* P	Pn	04 05 58.2	+0.1
BUEV	**Buena Vista**	**1.51**	**18**	*i* P	Pn	04 05 58.3	0.0
HORNC	**Hornillas**	**1.52**	**27**	*i* P	Pn	04 05 58.5	0.0
GB1A	**Borinquen Arpt**	**1.54**	**18**	*i* P	Pn	04 05 58.7	+0.1
PTEN	**Parque Tenorio**	**1.62**	**33**	*i* P	Pn	04 05 59.8	+0.1

ISK 17 04:13:49.4, 34°91N×26°92E, h10km, ML3.2/17
THE 17 04:13:52.7, 35°12N×26°77E, h0km±2km, ML3.3/4, Error ellipse: s-maj=7.4km s-min=0.9km az=155.0
IDC 17 04:13:53.7±1.2, 36°18N×26°54E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.4/49, mbtmp3.7/6, Error ellipse: s-maj=53.8km s-min=11.8km az=148.0
ATH 17 04:13:53.4, 35°14N×26°79E, h29km±6km, ML3.1/9, Error ellipse: s-maj=6.8km s-min=1.6km az=148.0
ISC 17 04:13:50.3±1.4, 34°92N±0°06×26°90E±0°03, h12km±8km, n56, σ0°84/74, mb3.6/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.59**	**290**	P	**Pg**	**04 14 02.2**	**+0.4**
ZKR				S	**Sg**	**04 14 10.1**	**+0.5**
ZKR				AML	AML	04 14 11.0	
	comp=N,10827µm,0.4s						
ZKR				AML	AML	04 14 11.5	
	comp=E,18045µm,0.3s						
ZKR	**Zakros**	**0.59**	**290**	P	**Pg**	**04 14 02.2**	**+0.4**
ZKR				S	**Sg**	**04 14 10.2**	**+0.5**
	comp=E,7µm,0.3s						
ZKR	**Zakros**	**0.59**	**290**	PG	**Pg**	**04 14 02.2**	**+0.4**
ZKR				SG	**Sg**	**04 14 10.5**	**+0.8**
KARP	**Karpathos**	**0.66**	**19**	P	**Pg**	**04 14 03.0**	**-0.3**
KARP				S	**Sg**	**04 14 11.9**	**-0.1**
KARP				AML	AML	04 14 13.0	
	comp=N,19391µm,0.2s						
KARP				AML	AML	04 14 14.1	
	comp=E,19884µm,0.3s						
KARP	**Karpathos**	**0.66**	**19**	P	**Pg**	**04 14 03.1**	**-0.2**
KARP				S	**Sg**	**04 14 12.0**	**0.0**
	comp=E,10µm,0.3s						
KARP	**Karpathos**	**0.66**	**19**	PG	**Pg**	**04 14 02.9**	**-0.3**
KARP				SG	**Sg**	**04 14 12.2**	**+0.2**
STIA	**Sitia Lasithi**	**0.72**	**293**	P	**Pg**	**04 14 03.4**	**-0.8**
STIA				S	**Sg**	**04 14 13.3**	**-0.4**
FRMA	**Ierapetra Chan**	**0.96**	**276**	P	**Pg**	**04 14 07.3**	**-1.5**
FRMA				S	**Sg**	**04 14 19.8**	**-1.5**
NPS	**Neapolis**	**1.11**	**288**	P	**Pb**	**04 14 11.6**	**+0.2**
NPS				S	**Sb**	**04 14 25.1**	**-0.7**
NPS				AML	AML	04 14 30.3	
	comp=N,1947µm,0.4s						
NPS				AML	AML	04 14 31.8	
	comp=E,3550µm,0.6s						
NPS	**Neapolis**	**1.11**	**288**	P	**Pb**	**04 14 11.8**	**+0.4**
NPS				S	**Sb**	**04 14 26.6**	**+0.8**
	comp=E,1µm,0.5s						
KSTL	**Kastelli Herak**	**1.54**	**285**	P	**Pn**	**04 14 15.5**	**-2.2**
ARG	**Arkhangelos**	**1.64**	**37**	P	**Pg**	**04 14 20.9**	**-0.8**
ARG				AML	AML	04 14 47.3	
	comp=E,887µm,0.5s						
ARG				AML	AML	04 14 48.4	
	comp=N,816µm,0.7s						
ARG	**Arkhangelos**	**1.64**	**37**	P	**Pg**	**04 14 21.4**	**-0.4**
ARG				S	**Sb**	**04 14 41.4**	**+0.3**
	comp=N,470nm,0.7s						
ARG	**Arkhangelos**	**1.64**	**37**	PN	**Pn**	**04 14 18.8**	**-0.2**
ARG				SN	**Sn**	**04 14 40.7**	**+0.7**
IDI	**Anoyia**	**1.69**	**283**	Pg	**Pb**	**04 14 22.1**	**+0.7**
	comp=N,11nm,0.3s,baz=48,slow=5.7,SNR=8.7						
IDI				Lg	Lg	04 14 46.0	
	comp=N,23nm,0.3s,baz=187,slow=22,SNR=4.1						
IDI	**Anoyia**	**1.69**	**283**	P	**Pb**	**04 14 22.2**	**+0.9**
IDI				AML	AML	04 14 52.6	
	comp=N,502µm,0.4s						
IDI				AML	AML	04 15 04.0	
	comp=E,455µm,0.6s						
IDI	**Anoyia**	**1.69**	**283**	P	**Pb**	**04 14 21.8**	**+0.5**
IDI				S	**Sn**	**04 14 41.7**	**+0.5**
IDI	**Anoyia**	**1.69**	**283**	PN	**Pn**	**04 14 20.3**	**+0.6**
IDI				SN	**Sn**	**04 14 42.5**	**+1.3**
NIS1	**Nisyros Isl.**	**1.70**	**8**	PN	**Pn**	**04 14 19.9**	**+0.1**
SIVA	**Sivas**	**1.71**	**274**	P	**Pg**	**04 14 22.8**	**-0.5**
SIVA				AML	AML	04 14 54.2	
	comp=E,1135µm,0.8s						
SIVA				AML	AML	04 14 55.8	
	comp=N,924µm,0.5s						
KOSK	**Kos Island**	**1.83**	**2**	PN	**Pn**	**04 14 21.6**	**0.0**
KOSK				SN	**Sn**	**04 14 45.6**	**+0.9**
SANT	**Santorini**	**1.86**	**322**	P	**Pn**	**04 14 22.1**	**0.0**
SANT				S	**Sn**	**04 14 43.3**	**-2.3**
SANT				AML	AML	04 14 50.8	
	comp=N,348µm,0.5s						
SANT				AML	AML	04 14 53.0	
	comp=E,1604µm,0.4s						
SANT	**Santorini**	**1.86**	**322**	PN	**Pn**	**04 14 22.0**	**-0.1**
THR8	**Santorini-Mono**	**1.88**	**323**	P	**Pn**	**04 14 22.1**	**-0.2**
THR6	**Thira Island,**	**1.88**	**320**	P	**Pn**	**04 14 21.2**	**-1.1**
THR3	**Thira Island,**	**1.92**	**321**	P	**Pn**	**04 14 23.2**	**+0.4**
THT2	**Imerovigli**	**1.93**	**322**	P	**Pb**	**04 14 25.4**	**0.0**
THT2	**Imerovigli**	**1.93**	**322**	PN	**Pn**	**04 14 23.9**	**+0.9**
THT2				SN	**Sn**	**04 14 47.9**	**+0.7**
TURN	**Turunc**	**2.15**	**30**	PN	**Pn**	**04 14 26.4**	**+0.4**
BODT	**Bodrum**	**2.17**	**9**	P	**Pn**	**04 14 26.2**	**0.0**
BODT	**Bodrum**	**2.17**	**9**	PN	**Pn**	**04 14 26.6**	**+0.4**
BODT				SN	**Sn**	**04 14 53.8**	**+0.8**
VAM	**Vamos**	**2.26**	**283**	P	**Pb**	**04 14 31.9**	**+0.8**
VAM				AML	AML	04 15 06.0	
	comp=E,377µm,0.5s						
VAM				AML	AML	04 15 06.8	
	comp=N,452µm,0.5s						
GVDS	**Gavdos**	**2.31**	**269**	PN	**Pn**	**04 14 29.3**	**+1.1**
GVD	**Gavdhos**	**2.31**	**269**	PN	**Pn**	**04 14 28.9**	**+0.7**
DALY	**Dalyan (Mula)**	**2.37**	**36**	PN	**Pn**	**04 14 29.3**	**+0.3**
APE	**Apeiranthos**	**2.42**	**333**	P	**Pn**	**04 14 29.5**	**-0.2**
APE				AML	AML	04 15 01.7	
	comp=E,262µm,0.4s						
APE				AML	AML	04 15 02.4	
	comp=N,332µm,0.5s						
APE	**Apeiranthos**	**2.42**	**333**	PN	**Pn**	**04 14 30.2**	**+0.5**
IMMV	**Iera Moni Meta**	**2.45**	**284**	P	**Pb**	**04 14 34.4**	**+0.1**
IMMV	**Iera Moni Meta**	**2.45**	**284**	PN	**Pn**	**04 14 30.7**	**+0.6**
FETY	**Fethiye**	**2.47**	**45**	PN	**Pn**	**04 14 30.6**	**+0.2**
YER	**Yerkesik**	**2.48**	**27**	PN	**Pn**	**04 14 30.5**	**-0.1**
AKAS	**Kas**	**2.57**	**59**	PN	**Pn**	**04 14 32.1**	**+0.2**
KNDR	**Palaiochora Ch**	**2.65**	**278**	PN	**Pn**	**04 14 34.1**	**+1.2**
MHLO	**Agia Marina, M**	**2.69**	**312**	P	**Pn**	**04 14 35.4**	**+1.9**
ELL	**Elmali**	**3.05**	**52**	PN	**Pn**	**04 14 39.2**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**3.13**	**15**	PN	**Pn**	**04 14 40.2**	**+0.6**
KTHA	**Kythira Island**	**3.40**	**294**	PN	**Pn**	**04 14 44.7**	**+1.5**
KORT	**Korkueli**	**3.49**	**52**	PN	**Pn**	**04 14 44.9**	**+0.4**
CHOS	**Chios island**	**3.53**	**349**	PN	**Pn**	**04 14 46.1**	**+1.1**
KULA	**Kula-Manisa**	**3.86**	**21**	PN	**Pn**	**04 14 50.6**	**+1.0**
ESDC	**Sonseca Array**	**24.93**	**290**	P	**P**	**04 19 11.7**	**-1.8**
	comp=N,0.4nm,0.6s,baz=84,slow=9.0,SNR=4.1						
AKTO	**Aktyubinsk**	**27.38**	**46**	P	**P**	**04 19 36.4**	**+1.0**
	comp=N,0.9nm,0.7s,baz=277,slow=8.1,SNR=2.2						
KURBB	**Kurchatov Arra**	**40.17**	**51**	P	**P**	**04 21 26.8**	**+0.6**
	comp=N,1.1nm,0.4s,baz=285,slow=9.8,SNR=8.7						
MKAR	**Makanchi Array**	**42.72**	**56**	P	**P**	**04 21 47.9**	**+0.7**
	comp=N,0.8nm,0.6s,baz=280,slow=7.5,SNR=8.6						
ZALV	**Zalesovo Beam**	**44.15**	**46**	P	**P**	**04 21 58.3**	**-0.3**
	comp=N,1.7nm,0.5s,baz=268,slow=9.6,SNR=7.8						
YKA	**Yellowknife Ar**	**78.11**	**343**	P	**P**	**04 25 47.5**	**-1.4**
	comp=N,0.1nm,0.5s,baz=27,slow=5.6,SNR=3.8						

IDC 17 04:14:46.8±3.5, 6°16N×126°57E, h79km±27km, mb3.5/6, mb1 3.6/6, mb1mx3.2/51, mbtmp3.8/6, MS3.5/1, Ms1 3.5/1, ms1mx2.6/32, Error ellipse: s-maj=80.6km s-min=14.3km az=67.0
NEIC 17 04:14:46.2±0.5, 6°01N±0°09×126°2E±0°2, h68km±12km, mb4.0/5, Error ellipse: s-maj=31.1km s-min=11.9km az=78.0
MAN 17 04:14:46.8, 6°19N×126°27E, h19km, MS3.5
ISC 17 04:14:41.2±1.7, 6°00N±0°06×126°51E±0°08, h18km±7km, n25, σ1°40/25, mb3.8/8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.80**	**278**	*e*P	**Pn**	**04 14 58.6**	**+1.0**
DDMP				*e*S	**Sn**	**04 15 10.5**	**+1.5**
MATI	**Mati**	**0.98**	**345**	*e*P	**Pn**	**04 15 00.5**	**+0.5**
MATI				*e*S	**Sn**	**04 15 14.4**	**+1.0**
DAV	**Davao City (W)**	**1.41**	**319**	P	**Pg**	**04 15 08.4**	**0.0**
	78nm,0.3s,baz=45,slow=3.0,SNR=4.3						
DAV				S	**Sg**	**04 15 27.5**	**+0.7**
	105nm,0.3s,baz=259,slow=19,SNR=12						
DAV	**Davao City (W)**	**1.41**	**319**		**Pg**	**04 15 07.5**	**-0.9**
KCP	**Kidapawan**	**1.73**	**306**	*i*P	**Pb**	**04 15 12.3**	**-0.3**
KCP				*i* S	**Sn**	**04 15 31.8**	**-0.4**
SKMP	**Bagumbayan, Su**	**2.02**	**285**	*e*P	**Pn**	**04 15 15.1**	**+0.7**
SKMP				*e*S	**Sn**	**04 15 38.0**	**-1.2**
MSLP	**Maasin**	**4.42**	**338**	*e*P	**Pn**	**04 15 50.6**	**+3.1**
TOLI2	**Tolitoli**	**7.50**	**230**	Pn	**Pn**	**04 16 30.2**	**+0.5**
LUWI	**Luwuk**	**7.92**	**208**	Pn	**Pn**	**04 16 36.1**	**+0.6**
BATI	**Baumata**	**16.34**	**190**	P	**P**	**04 18 33.7**	**+1.0**
	6.2nm,0.3s,baz=130,slow=4.6,SNR=4.6						
FITZ	**Fitzroy Crossi**	**23.95**	**182**	P	**P**	**04 19 55.7**	**+1.1**
	1.3nm,0.4s,baz=6.7,slow=11,SNR=17						
FITZ	**Fitzroy Crossi**	**23.95**	**182**	IAmb	IAmb	04 20 21.7	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**26.90**	**164**	P	**P**	**04 20 22.1**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=344,slow=10,SNR=13						
WB2	**Warramunga Ar**	**26.91**	**164**	P	**P**	**04 20 21.9**	**+0.5**
WB2				IAmb	IAmb	04 20 43.0	
	comp=Z,9.3nm,1.5s						
WR0	**Warramunga Ar**	**26.98**	**163**	P	**P**	**04 20 22.3**	**+0.2**
ASAR	**Alice Springs**	**30.35**	**166**	P	**P**	**04 20 52.4**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=340,slow=7.0,SNR=17						
STKA	**Stephens Creek**	**40.32**	**160**	P	**P**	**04 22 18.0**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=346,slow=8.8,SNR=3.8						
STKA	**Stephens Creek**	**40.32**	**160**	IAmb	IAmb	04 22 24.6	
	comp=Z,0.8nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**41.08**	**69**	T	T	05 06 22.9	
	baz=258,slow=75,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**41.09**	**69**	T	T	05 06 23.8	
	baz=258,slow=75,SNR=9.1						
H11S2	**WAKE ISLAND Hy**	**41.09**	**69**	T	T	05 06 24.9	
	baz=258,slow=75,SNR=11						
MK31	**Makanchi Array**	**55.59**	**324**	P	**P**	**04 24 13.5**	**-2.3**
MK31				IAmb	IAmb	04 24 15.4	
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**55.59**	**324**	P	**P**	**04 24 13.1**	**-2.7**
	comp=Z,0.5nm,0.5s,baz=124,slow=6.6,SNR=6.7						
MKAR				LR	LR	04 50 15.4	
	comp=Z,44nm,18.1s,baz=42,slow=38						
KURK	**Kurchatov**	**59.73**	**327**	P	**P**	**04 24 42.9**	**-1.9**
KURBB	**Kurchatov Arra**	**59.73**	**327**	P	**P**	**04 24 42.9**	**-1.9**
	comp=Z,0.7nm,0.5s,baz=119,slow=6.2,SNR=6.9						

WEL 17 04:18:25.0±0.8, 32°S±11°×178°E±2°6, h431km±16km, M4.0/26, mB4.5/12, ML5.0/3, MLv4.6/26, Mw(mB)3.7/12, Error ellipse: s-maj=0.0km s-min=0.0km az=109.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.29**	**194**	P	P	04 19 48.9	-2.3
MXZ				S	S	04 21 00.7	-0.8
PUZ	**Puketiti**	**5.79**	**193**	P	P	04 19 57.3	+1.0
MARZ	**Manawahe**	**6.15**	**205**	P	P	04 19 59.8	-0.2
MWZ	**Matawai**	**6.21**	**198**	P	P	04 19 58.9	-1.8
MWZ				S	S	04 21 19.2	+0.1
URZ	**Urewera**	**6.26**	**201**	P	P	04 20 01.2	+0.2
URZ				S	S	04 21 18.9	-1.0
RAGZ	**Rawiri**	**6.39**	**198**	P	P	04 20 03.6	+1.0
RAGZ				S	S	04 21 24.8	+2.2
RIGZ	**Rimuhau**	**6.51**	**195**	P	P	04 20 04.3	+0.2
RIGZ				S	S	04 21 25.1	+0.2
MUGZ	**Murupara**	**6.56**	**202**	P	P	04 20 03.3	-1.3
MUGZ				S	S	04 21 25.2	-0.7
RTZ	**Ruatahuna**	**6.63**	**201**	P	P	04 20 05.4	+0.1
RTZ				S	S	04 21 28.9	+1.7
SNGZ	**Shannon Statio**	**6.68**	**198**	P	P	04 20 05.2	-0.6
SNGZ				S	S	04 21 28.5	+0.3
RAHZ	**Arahi**	**6.88**	**199**	P	P	04 20 08.1	+0.1
MTHZ	**Maungataniwha**	**6.89**	**201**	P	P	04 20 08.4	+0.3
MTHZ				S	S	04 21 31.2	-1.1
MHGZ	**Mahia Peninsul**	**6.91**	**193**	P	P	04 20 10.3	+2.0
MHGZ				S	S	04 21 35.8	+3.2
WHHZ	**Waihua**	**6.99**	**198**	P	P	04 20 10.4	+1.3
NMHZ	**Naumai**	**7.12**	**200**	P	P	04 20 11.3	+0.6
ARHZ	**Aropaoanui**	**7.22**	**199**	P	P	04 20 12.0	+0.3
ARHZ				S	S	04 21 39.9	+1.0
BKZ	**Black Stump Fm**	**7.28**	**202**	P	P	04 20 12.0	-0.4
HIZ	**Hauiti**	**7.35**	**213**	P	P	04 20 15.8	+2.6
MCHZ	**McNeill Hill**	**7.48**	**200**	P	P	04 20 15.1	+0.7
MCHZ				S	S	04 21 46.4	+2.4
TMVZ	**Te Maari**	**7.51**	**206**	P	P	04 20 15.0	+0.1
KWHZ	**Kaweka Forest**	**7.54**	**201**	P	P	04 20 15.3	+0.1
KWHZ				S	S	04 21 45.6	+0.3
WTVZ	**West Tongariro**	**7.55**	**207**	P	P	04 20 15.4	0.0
TWVZ	**Taurewa**	**7.57**	**208**	P	P	04 20 16.1	+0.5
NGZ	**Ngauruhoe**	**7.60**	**207**	P	P	04 20 16.4	+0.4
BHHZ	**Black Hill Sta**	**7.71**	**203**	P	P	04 20 15.8	-1.3
MOVZ	**Moawhango**	**7.75**	**205**	P	P	04 20 16.6	-0.8
KAHZ	**Kahuranaki**	**7.75**	**198**	P	P	04 20 17.4	-0.1
KAHZ				S	S	04 21 52.9	+3.2
KRHZ	**Kereru**	**7.76**	**201**	P	P	04 20 16.4	-1.1
KRHZ				S	S	04 21 48.1	-1.5
PKVZ	**Pokaka**	**7.79**	**207**	P	P	04 20 17.8	-0.1
PXZ	**Pawanui**	**7.98**	**197**	P	P	04 20 20.0	+0.1
PXZ				S	S	04 21 54.8	+0.7
PNHZ	**Pukenui**	**8.06**	**201**	P	P	04 20 19.1	-1.6
PNHZ				S	S	04 21 54.4	-1.3
PKE	**Pukeiti**	**8.30**	**214**	P	P	04 20 26.6	+3.2
ANWZ	**Angora Road**	**8.48**	**198**	P	P	04 20 25.3	0.0
BFZ	**Birch Farm**	**8.75**	**199**	P	P	04 20 28.4	+0.1
BFZ				S	S	04 22 09.4	-0.4
OGWZ	**Otaki Gorge**	**9.21**	**203**	P	P	04 20 31.2	-2.0
TMWZ	**Te Maipa**	**9.25**	**199**	P	P	04 20 34.6	+0.9
KIW	**Kapiti Island**	**9.33**	**204**	P	P	04 20 33.9	-0.8
MTW	**Mount Morrison**	**9.41**	**201**	P	P	04 20 35.3	-0.1
TRWZ	**Traveller**	**9.57**	**200**	P	P	04 20 38.1	+0.7
MSWZ	**Moikau Station**	**9.72**	**201**	P	P	04 20 39.0	+0.1
TCW	**Tory Channel**	**9.87**	**206**	P	P	04 20 39.2	-1.3
NNZ	**Nelson**	**10.22**	**209**	P	P	04 20 43.4	-1.0
THZ	**Tophouse**	**10.88**	**209**	P	P	04 20 51.3	-0.3
KHZ	**Kahutara**	**11.19**	**205**	P	P	04 20 54.9	-0.1

ISK 17 04:27:59.4, 34°95N×26°86E, h13km, ML2.9/13
THE 17 04:28:01.2, 35°08N×26°78E, h0km±3km, ML2.9/3, Error ellipse: s-maj=9.7km s-min=0.8km az=154.0
IDC 17 04:28:02.6±2.4, 35°06N×26°77E, h33km±21km, mb3.4/3, mb1 3.4/3, mb1mx3.0/37, mbtmp3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/39, Error ellipse: s-maj=34.7km s-min=15.8km az=158.0
ATH 17 04:28:03.1, 35°18N×26°74E, h12km±3km, ML2.9/3, Error ellipse: s-maj=5.8km s-min=1.3km az=155.0
ISC 17 04:28:00.1±1.5, 34°95N±0°07×26°85E±0°04, h13km±9km, n43, σ0°71/52, mb3.3/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.54**	**287**	P	**Pg**	**04 28 11.0**	**+0.3**
ZKR				S	**Sg**	**04 28 18.5**	**+0.5**
ZKR				AML	AML	04 28 19.2	
	comp=N,1514µm,0.4s						
ZKR				AML	AML	04 28 19.5	
	comp=E,2426µm,0.3s						
ZKR	**Zakros**	**0.54**	**287**	P	**Pg**	**04 28 11.0**	**+0.3**
ZKR				S	**Sb**	**04 28 18.8**	**-0.4**
	comp=E,992nm,0.4s						
ZKR	**Zakros**	**0.54**	**287**	PG	**Pg**	**04 28 11.0**	**+0.3**
ZKR				SG	**Sb**	**04 28 19.0**	**-0.2**
KARP	**Karpathos**	**0.65**	**23**	P	**Pg**	**04 28 12.5**	**-0.2**
KARP				S	**Sg**	**04 28 20.8**	**-0.4**
KARP				AML	AML	04 28 22.7	
	comp=N,9103µm,0.3s						
KARP				AML	AML	04 28 24.0	
	comp=E,8489µm,0.4s						
KARP	**Karpathos**	**0.65**	**23**	P	**Pg**	**04 28 12.5**	**-0.2**
KARP				S	**Sb**	**04 28 22.0**	**-0.2**
	comp=E,5µm,0.4s						
KARP	**Karpathos**	**0.65**	**23**	PG	**Pg**	**04 28 12.4**	**-0.2**
KARP				SG	**Sb**	**04 28 21.9**	**-0.2**
STIA	**Sitia Lasithi**	**0.67**	**292**	P	**Pg**	**04 28 12.1**	**-1.0**
STIA				S	**Sg**	**04 28 21.4**	**-0.6**
FRMA	**Ierapetra Chan**	**0.92**	**274**	P	**Pg**	**04 28 16.0**	**-1.8**
NPS	**Neapolis**	**1.06**	**287**	P	**Pb**	**04 28 20.6**	**+0.3**
NPS				S	**Sg**	**04 28 34.3**	**0.0**
NPS				AML	AML	04 28 39.6	
	comp=N,1129µm,0.6s						
NPS				AML	AML	04 28 40.0	
	comp=E,1311µm,0.6s						
NPS	**Neapolis**	**1.06**	**287**	P	**Pb**	**04 28 20.6**	**+0.3**
NPS				S	**Sn**	**04 28 34.9**	**-0.3**
	comp=E,620nm,0.6s						
ARG	**Arkhangelos**	**1.63**	**39**	P	**Pb**	**04 28 31.1**	**+1.1**
ARG	**Arkhangelos**	**1.63**	**39**	PN	**Pn**	**04 28 29.2**	**+0.7**
IDI	**Anoyia**	**1.64**	**282**	Pg	**Pb**	**04 28 31.6**	**+1.4**
	comp=E,3.3nm,0.3s,baz=351,slow=3.7,SNR=13						
IDI				Lg	Lg	04 28 52.6	
	comp=E,6.4nm,0.3s,baz=344,slow=16,SNR=3.3						
IDI	**Anoyia**	**1.64**	**282**	P	**Pb**	**04 28 31.2**	**+1.0**
IDI	**Anoyia**	**1.64**	**282**	P	**Pn**	**04 28 29.8**	**+1.2**
IDI				S	**Sn**	**04 28 50.0**	**+0.4**
IDI	**Anoyia**	**1.64**	**282**	PN	**Pn**	**04 28 29.8**	**+1.2**
NIS1	**Nisyros Isl.**	**1.67**	**9**	P	**Pn**	**04 28 29.5**	**+0.5**
NIS1	**Nisyros Isl.**	**1.67**	**9**	PN	**Pn**	**04 28 29.4**	**+0.5**
SIVA	**Sivas**	**1.68**	**273**	P	**Pb**	**04 28 32.4**	**+1.7**
KOSK	**Kos Island**	**1.80**	**3**	PN	**Pn**	**04 28 30.9**	**+0.2**
SANT	**Santorini**	**1.81**	**322**	P	**Pn**	**04 28 30.9**	**-0.1**
SANT	**Santorini**	**1.81**	**322**	PN	**Pn**	**04 28 31.3**	**+0.3**
THR8	**Santorini-Mono**	**1.83**	**323**	P	**Pn**	**04 28 31.6**	**+0.4**
THR6	**Thira Island,**	**1.83**	**320**	P	**Pn**	**04 28 32.3**	**+1.1**
SNT1	**Gialos, Santor**	**1.86**	**322**	P	**Pn**	**04 28 32.1**	**+0.5**
SNT5	**Nea Kammeni, S**	**1.87**	**321**	P	**Pn**	**04 28 32.3**	**+0.6**
THR3	**Thira Island,**	**1.87**	**321**	P	**Pn**	**04 28 32.3**	**+0.7**
BODT	**Bodrum**	**2.14**	**10**	P	**Pn**	**04 28 36.1**	**+0.7**
BODT	**Bodrum**	**2.14**	**10**	PN	**Pn**	**04 28 35.6**	**+0.2**
TURN	**Turunc**	**2.14**	**32**	PN	**Pn**	**04 28 36.2**	**+0.7**
GVDS	**Gavdos**	**2.27**	**268**	PN	**Pn**	**04 28 38.1**	**+0.9**
GVD	**Gavdhos**	**2.27**	**268**	PN	**Pn**	**04 28 37.5**	**+0.2**
APE	**Apeiranthos**	**2.37**	**334**	PN	**Pn**	**04 28 38.6**	**0.0**
DALY	**Dalyan (Mula)**	**2.37**	**38**	PN	**Pn**	**04 28 39.3**	**+0.8**
IMMV	**Iera Moni Meta**	**2.40**	**283**	P	**Pb**	**04 28 42.5**	**-0.6**
IMMV	**Iera Moni Meta**	**2.40**	**283**	PN	**Pn**	**04 28 39.6**	**+0.5**
YER	**Yerkesik**	**2.47**	**28**	PN	**Pn**	**04 28 40.6**	**+0.6**
FETY	**Fethiye**	**2.47

SANT	**Santorini**	**1.76**	**321**	P	**Pb**	**04 32 16.9**	**-1.4**
SANT				AML	AML	04 32 43.7		
	comp=N,898μm,0.4s							
SANT				AML	AML	04 32 47.0		
	comp=E,3499μm,0.3s							
SANT	**Santorini**	**1.76**	**321**	PN	**Pb**	**04 32 17.1**	**-1.2**
SANT				SN	**Sb**	**04 32 40.3**	**+0.3**
THR8	**Santorini-Mono**	**1.77**	**322**	P	**Pb**	**04 32 17.0**	**-1.5**
THR6	**Thira Island,**	**1.78**	**319**	P	**Pb**	**04 32 16.7**	**-1.9**
SNT1	**Gialos, Santor**	**1.81**	**321**	P	**Pb**	**04 32 18.1**	**-1.0**
SNT5	**Nea Kammeni, S**	**1.81**	**320**	P	**Pb**	**04 32 18.2**	**-1.0**
THR3	**Thira Island,**	**1.81**	**320**	P	**Pb**	**04 32 17.6**	**-1.7**
THT2	**Imerovigli**	**1.82**	**321**	PN	**Pb**	**04 32 17.8**	**-1.6**
THR5	**Thira Island,**	**1.85**	**319**	P	**Pb**	**04 32 18.0**	**-1.8**
BODT	**Bodrum**	**2.07**	**10**	P	**Pn**	**04 32 20.8**	**+1.6**
BODT	**Bodrum**	**2.07**	**10**	PN	**Pb**	**04 32 21.6**	**-2.1**
TURN	**Turunc**	**2.09**	**33** *i*	P	**Pn**	**04 32 21.5**	**+2.1**
TURN				*i* S	**Sn**	**04 32 45.9**	**+1.6**
TURN				IAML		04 33 02.0		
	comp=N,126nm,0.4s							
TURN	**Turunc**	**2.09**	**33**	PN	**Pb**	**04 32 21.8**	**-2.1**
BDRM	**Kayabasi**	**2.10**	**13** *i*	P	**Pb**	**04 32 21.9**	**-2.2**
BDRM				*i* S	**Sb**	**04 32 48.5**	**-1.3**
BDRM				IAML		04 33 09.0		
	comp=N,113nm,0.6s							
VAM	**Vamos**	**2.20**	**281**	P	**Pb**	**04 32 24.7**	**-1.0**
VAM				AML	AML	04 33 03.9		
	comp=N,1190μm,0.7s							
VAM				AML	AML	04 33 07.7		
	comp=E,996μm,0.8s							
GVDS	**Gavdos**	**2.27**	**266**	PN	**Pb**	**04 32 24.7**	**-2.2**
GVD	**Gavdhos**	**2.27**	**266**	P	**Pb**	**04 32 25.8**	**-1.2**
GVD	**Gavdhos**	**2.27**	**266**	PN	**Pn**	**04 32 24.3**	**+2.4**
APE	**Apeiranthos**	**2.30**	**333**	P	**Pn**	**04 32 24.6**	**+2.2**
APE				AML	AML	04 32 55.6		
	comp=E,550μm,0.4s							
APE				AML	AML	04 32 56.3		
	comp=N,920μm,0.5s							
APE	**Apeiranthos**	**2.30**	**333**	P	**Pb**	**04 32 24.9**	**-2.7**
APE				S	**Sn**	**04 32 51.7**	**+2.0**
	comp=N,392nm,0.7s							
APE	**Apeiranthos**	**2.30**	**333**	PN	**Pb**	**04 32 25.0**	**-2.7**
DALY	**Dalyan (Mula)**	**2.32**	**39** *i*	P	**Pb**	**04 32 25.7**	**-2.1**
DALY				*i* S	**Sn**	**04 32 51.1**	**+1.2**
DALY				IAML		04 33 09.0		
	comp=E,108nm,0.8s							
DALY				IAML		04 33 10.0		
	comp=N,115nm,0.7s							
DALY	**Dalyan (Mula)**	**2.32**	**39**	PN	**Pn**	**04 32 24.8**	**+2.2**
IMMV	**Iera Moni Meta**	**2.38**	**281**	P	**Pb**	**04 32 26.6**	**-2.3**
IMMV				AML	AML	04 33 16.2		
	comp=E,1106μm,0.7s							
IMMV				AML	AML	04 33 19.2		
	comp=N,870μm,0.6s							
IMMV	**Iera Moni Meta**	**2.38**	**281**	PN	**Pn**	**04 32 25.5**	**+2.1**
YER	**Yerkesik**	**2.41**	**29**	PN	**Pn**	**04 32 26.2**	**+2.3**
FETY	**Fethiye**	**2.43**	**48**	PN	**Pn**	**04 32 25.8**	**+1.6**
MULA	**Mugla, Merkez-**	**2.53**	**28** *i*	P	**Pb**	**04 32 28.9**	**-2.6**
MULA				*i* S	**Sn**	**04 32 56.1**	**+0.8**
MULA				IAML		04 33 16.0		
	comp=E,126nm,0.5s							
AKAS	**Kas**	**2.56**	**61** *i*	P	**Pn**	**04 32 27.2**	**+1.3**
AKAS				*i* S	**Sn**	**04 32 50.3**	**-5.8**
AKAS				IAML		04 33 02.0		
	comp=N,142nm,0.4s							
AKAS				IAML		04 33 02.0		
	comp=E,77nm,0.6s							
AKAS	**Kas**	**2.56**	**61**	PN	**Pn**	**04 32 27.5**	**+1.5**
MHLO	**Agia Marina, M**	**2.59**	**311**	P	**Pb**	**04 32 29.5**	**-2.9**
KNDR	**Palaiochora Ch**	**2.59**	**276**	PN	**Pb**	**04 32 29.5**	**-3.0**
MHLA	**Plaka, Milos I**	**2.61**	**312**	P	**Pb**	**04 32 29.8**	**-3.0**
AYDN	**Tasoluk**	**2.77**	**17** *i*	P	**Pn**	**04 32 31.8**	**+3.0**
AYDN				*i* S	**Sn**	**04 33 03.4**	**+2.3**
CAEL	**Denizli, Camel**	**2.90**	**43** *i*	P	**Pn**	**04 32 32.4**	**+1.6**
CAEL				*i* S	**Sb**	**04 33 09.7**	**-3.3**
CAEL				IAML		04 33 38.0		
	comp=N,199nm,1.1s							
CAEL				IAML		04 33 55.0		
	comp=E,208nm,1.6s							
TAVA	**DENIZLI_Tavas**	**2.96**	**34** *i*	P	**Pn**	**04 32 34.1**	**+2.6**
DGB	**zmir**	**3.03**	**1** *i*	P	**Pn**	**04 32 34.1**	**+1.9**
ELL	**Elmali**	**3.03**	**54**	PN	**Pn**	**04 32 34.5**	**+2.0**
AYDB	**Zeytinkoy-Aydi**	**3.04**	**16**	PN	**Pn**	**04 32 35.0**	**+2.4**
GOLH	**Golhisar**	**3.12**	**44** *i*	P	**Pn**	**04 32 37.0**	**+3.3**
GOLH				*i* S	**Sn**	**04 33 06.5**	**-3.5**
GOLH				IAML		04 33 46.0		
	comp=N,104nm,0.8s							
AKUM	**Antalya-Kumluc**	**3.13**	**64** *i*	P	**Pn**	**04 32 36.2**	**+2.4**
AKUM				IAML		04 33 15.0		
	comp=E,48nm,0.4s							
KTHA	**Kythira Island**	**3.32**	**293**	PN	**Pn**	**04 32 38.9**	**+2.6**
URLA	**Izmir**	**3.34**	**357**	PN	**Pn**	**04 32 39.8**	**+3.2**
CHOS	**Chios island**	**3.42**	**350**	P	**Pn**	**04 32 39.7**	**+1.9**
CHOS	**Chios island**	**3.42**	**350**	PN	**Pn**	**04 32 40.7**	**+2.9**
KORT	**Korkueli**	**3.46**	**54**	PN	**Pn**	**04 32 41.2**	**+2.7**
KULA	**Kula-Manisa**	**3.78**	**22**	PN	**Pn**	**04 32 45.7**	**+2.9**
USAK	**Uak-Merkez**	**4.08**	**25** *i*	P	**Pn**	**04 32 49.2**	**+2.4**
BRTR	**Keskin Array B**	**7.16**	**47**	Pn	**Pn**	**04 33 32.5**	**+3.2**
	comp=E,0.1nm,0.3s,baz=258,slow=16,SNR=1.5							
MMAI	**Mount Meron Ar**	**7.38**	**103**	Pn	**Pn**	**04 33 36.2**	**+4.0**
	comp=E,1.0nm,0.3s,baz=305,slow=10,SNR=3.0							
MMAI				Sn	**Sn**	**04 34 55.6**	**+0.6**
	comp=E,1.9nm,0.3s,baz=304,slow=26,SNR=2.8							
MMAI				LR	LR	04 38 08.0		
	comp=E,26nm,21.8s,baz=350,slow=51							
EIL	**Elat**	**8.69**	**126**	Pn	**Pn**	**04 33 52.2**	**+2.1**
	comp=E,0.3nm,0.3s,baz=296,slow=3.2,SNR=6.4							
EIL				Sn	**Sn**	**04 35 22.8**	**-4.2**
	comp=E,0.8nm,0.3s,baz=89,slow=21,SNR=2.0							
AKASG	**Malin Array Be**	**15.77**	**6**	Pn	**Pn**	**04 35 25.6**	**-0.6**
	comp=E,0.7nm,0.3s,baz=194,slow=11,SNR=3.9							
GERES	**GERESS Array B**	**16.89**	**329**	Pn	**Pn**	**04 35 40.8**	**+0.2**
	comp=E,0.3nm,0.3s,baz=143,slow=13,SNR=5.5							
ESDC	**Sonseca Array**	**24.86**	**290**	P	**P**	**04 37 06.5**	**+0.3**
	comp=E,0.6nm,0.6s,baz=82,slow=9.2,SNR=5.7							
EKA	**Eskdalemuir Ar**	**28.96**	**324**	P	**P**	**04 37 41.3**	**-1.5**
	comp=E,0.3nm,0.5s,baz=124,slow=11,SNR=2.6							
TORD	**Torodi Ar. Bea**	**31.48**	**232**	P	**P**	**04 38 07.0**	**+1.5**
	comp=E,0.9nm,0.7s,baz=33,slow=9.0,SNR=6.4							
ARCES	**ARCESS Array B**	**34.58**	**359**	P	**P**	**04 38 30.1**	**-1.9**
	comp=E,1.1nm,0.8s,baz=179,slow=9.3,SNR=6.1							
MKAR	**Makanchi Array**	**42.70**	**57**	P	**P**	**04 39 42.1**	**+1.6**
	comp=E,0.4nm,0.4s,baz=270,slow=8.4,SNR=6.3							
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**	**04 39 52.4**	**+0.8**
	comp=E,0.9nm,0.3s,baz=266,slow=9.3,SNR=4.5							
YKA	**Yellowknife Ar**	**78.00**	**343**	P	**P**	**04 43 41.5**	**+0.1**
	comp=E,0.2nm,0.5s,baz=40,slow=5.7,SNR=9.2							

IDC ***17*** *04:41:25.3±1.6,34°.87N×26°.96E,h0km,mb3.5/3, mb1 3.5/4,mb1mx3.3/41,mbtmp3.4/4,ML4.0/1,MS2.9/4, Ms1 2.9/4,ms1mx2.4/35,Error ellipse: s-maj=32.1km s-min=16.3km az=1.0*

ISK ***17*** *04:41:29.0,35°.04N×26°.78E,h16km,ML3.3/19*

THE ***17*** *04:41:30.4,35°.15N×26°.69E,h0km±1km,ML3.0/6,Error ellipse: s-maj=5.2km s-min=0.7km az=156.0*

ATH ***17*** *04:41:30.4,35°.11N×26°.72E,h33km±4km,ML3.1/10,Error ellipse: s-maj=6.0km s-min=1.3km az=156.0*

ISC 17 04:41:29.1±1.2,35°.03N±0°.06×26°.80E±0°.03,h18km±7km, n62,σ1°17/78,mb3.2/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.49**	**280**	P	**Pg**	**04 41 38.7**	**-0.1**
ZKR				S	**Sg**	**04 41 45.9**	**+0.4**
ZKR	**Zakros**	**0.49**	**280**	P	**Pg**	**04 41 38.8**	**-0.1**
ZKR				S	**Sg**	**04 41 45.9**	**+0.4**
	3μm,0.3s						
ZKR	**Zakros**	**0.49**	**280**	PG	**Pg**	**04 41 38.9**	**0.0**
ZKR				SG	**Sg**	**04 41 46.0**	**+0.5**
KARP	**Karpathos**	**0.59**	**30**	P	**Pb**	**04 41 41.2**	**+0.2**
KARP				S	**Sn**	**04 41 50.8**	**-1.2**
KARP				AML	AML	04 41 52.0	
	comp=N,8964μm,0.2s						
KARP				AML	AML	04 41 52.1	
	comp=E,14913μm,0.6s						
KARP	**Karpathos**	**0.59**	**30**	P	**Pb**	**04 41 41.3**	**+0.2**
KARP				S	**Sn**	**04 41 50.9**	**-1.1**
	comp=E,8μm,0.6s						
KARP	**Karpathos**	**0.59**	**30**	PG	**Pb**	**04 41 41.3**	**+0.2**
KARP				SG	**Sb**	**04 41 50.2**	**+1.0**
STIA	**Sitia Lasithi**	**0.61**	**287**	P	**Pg**	**04 41 39.9**	**-1.2**
STIA				S	**Sg**	**04 41 48.8**	**-0.4**
FRMA	**Ierapetra Chan**	**0.88**	**269**	P	**Pb**	**04 41 43.6**	**-2.2**
FRMA				S	**Sb**	**04 41 55.4**	**-1.8**
NPS	**Neapolis**	**1.00**	**284**	P	**Pb**	**04 41 48.3**	**+0.4**
NPS				S	**Sb**	**04 42 01.3**	**+0.5**
NPS				AML	AML	04 42 09.7	
	comp=E,3489μm,0.4s						
NPS				AML	AML	04 42 11.9	
	comp=N,1888μm,0.6s						
NPS	**Neapolis**	**1.00**	**284**	P	**Pb**	**04 41 48.4**	**+0.4**
NPS				S	**Sb**	**04 42 01.5**	**+0.7**
	comp=N,1μm,0.3s						
IDI	**Anoyia**	**1.59**	**280**	Pg	**Pn**	**04 41 58.0**	**+1.5**
	baz=101,slow=17						
IDI				Lg	Lg	04 42 20.6	
	comp=N,29nm,0.3s,baz=316,slow=17,SNR=2.9						
IDI				LR	LR	04 43 00.3	
	comp=N,118nm,20.2s,baz=103,slow=54						
IDI	**Anoyia**	**1.59**	**280**	P	**Pb**	**04 41 58.2**	**+0.2**
IDI				S	**Sn**	**04 42 17.5**	**+1.0**
IDI				AML	AML	04 42 29.1	
	comp=N,779μm,0.7s						
IDI				AML	AML	04 42 40.9	
	comp=E,440μm,0.6s						
IDI	**Anoyia**	**1.59**	**280**	P	**Pn**	**04 41 57.9**	**+1.5**
IDI				S	**Sn**	**04 42 17.3**	**+0.8**
	comp=E,302nm,0.6s						
IDI	**Anoyia**	**1.59**	**280**	PN	**Pn**	**04 41 56.9**	**+0.5**
IDI				SN	**Sb**	**04 42 18.2**	**+0.5**
NIS1	**Nisyros Isl.**	**1.60**	**11**	PN	**Pn**	**04 41 57.6**	**+1.1**
ARG	**Arkhangelos**	**1.60**	**42**	P	**Pb**	**04 41 58.4**	**+0.2**
ARG				S	**Sg**	**04 42 19.8**	**-1.0**
ARG				AML	AML	04 42 25.2	
	comp=E,1178μm,0.7s						
ARG				AML	AML	04 42 30.7	
	comp=N,820μm,0.6s						
ARG	**Arkhangelos**	**1.60**	**42**	P	**Pb**	**04 41 59.4**	**+1.2**
ARG				S	**Sg**	**04 42 20.5**	**-0.3**
	comp=N,542nm,1.3s						
ARG	**Arkhangelos**	**1.60**	**42**	PN	**Pn**	**04 41 57.3**	**+0.7**
ARG				SN	**Sb**	**04 42 18.6**	**+0.5**
SIVA	**Sivas**	**1.63**	**270**	P	**Pb**	**04 41 59.7**	**+1.0**
SIVA				S	**Sb**	**04 42 19.6**	**+0.7**
SIVA				AML	AML	04 42 30.5	
	comp=N,1263μm,0.7s						
SIVA				AML	AML	04 42 32.0	
	comp=E,1567μm,0.7s						
SIVA	**Sivas**	**1.63**	**270**	P	**Pb**	**04 41 59.1**	**+0.4**
KOSK	**Kos Island**	**1.72**	**5**	PN	**Pn**	**04 41 59.4**	**+1.2**
SANT	**Santorini**	**1.73**	**321**	P	**Pn**	**04 41 58.8**	**+0.5**
SANT				AML	AML	04 42 22.4	
	comp=N,477μm,0.5s						
SANT				AML	AML	04 42 28.0	
	comp=E,1754μm,0.5s						
SANT	**Santorini**	**1.73**	**321**	P	**Pn**	**04 41 59.1**	**+0.8**
SANT	**Santorini**	**1.73**	**321**	PN	**Pn**	**04 41 58.8**	**+0.5**
SANT				SN	**Sn**	**04 42 20.3**	**+0.3**
THR8	**Santorini-Mono**	**1.75**	**322**	P	**Pn**	**04 41 58.6**	**+0.1**
THR6	**Thira Island,**	**1.75**	**320**	P	**Pn**	**04 41 59.4**	**+0.8**
THR3	**Thira Island,**	**1.79**	**321**	P	**Pn**	**04 41 59.7**	**+0.6**
THT2	**Imerovigli**	**1.79**	**322**	PN	**Pn**	**04 41 59.9**	**+0.7**
BODT	**Bodrum**	**2.07**	**11**	P	**Pn**	**04 42 03.3**	**+0.3**
BODT	**Bodrum**	**2.07**	**11**	PN	**Pn**	**04 42 03.9**	**+0.9**
TURN	**Turunc**	**2.10**	**34**	PN	**Pn**	**04 42 04.9**	**+1.5**
VAM	**Vamos**	**2.16**	**281**	P	**Pb**	**04 42 07.4**	**-0.3**
VAM				AML	AML	04 42 46.0	
	comp=E,500μm,0.6s						
VAM				AML	AML	04 42 48.4	
	comp=N,572μm,1.0s						
GVDS	**Gavdos**	**2.23**	**266**	PN	**Pn**	**04 42 06.6**	**+1.4**
GVD	**Gavdhos**	**2.24**	**266**	P	**Pn**	**04 42 07.5**	**+2.3**
GVD				AML	AML	04 42 56.1	
	comp=E,532μm,0.6s						
GVD				AML	AML	04 43 02.1	
	comp=N,397μm,0.4s						
GVD	**Gavdhos**	**2.24**	**266**	PN	**Pn**	**04 42 06.4**	**+1.1**
APE	**Apeiranthos**	**2.28**	**334**	P	**Pn**	**04 42 06.5**	**+0.6**
APE				AML	AML	04 42 34.8	
	comp=E,313μm,0.5s						
APE				AML	AML	04 42 40.3	
	comp=N,387μm,0.6s						
APE	**Apeiranthos**	**2.28**	**334**	P	**Pn**	**04 42 06.5**	**+0.6**
APE				S	**Sn**	**04 42 33.5**	**-0.1**
	comp=N,175nm,0.8s						
APE	**Apeiranthos**	**2.28**	**334**	PN	**Pn**	**04 42 06.8**	**+0.9**
APE				SN	**Sn**	**04 42 34.5**	**+0.9**
DALY	**Dalyan (Mula)**	**2.33**	**40**	PN	**Pn**	**04 42 08.1**	**+1.5**
IMMV	**Iera Moni Meta**	**2.35**	**281**	P	**Pn**	**04 42 09.5**	**+2.7**
IMMV				AML	AML	04 42 53.6	
	comp=N,578μm,1.0s						
IMMV				AML	AML	04 43 10.2	
	comp=E,552μm,1.0s						
IMMV	**Iera Moni Meta**	**2.35**	**281**	PN	**Pn**	**04 42 08.1**	**+1.3**
YER	**Yerkesik**	**2.42**	**29**	P	**Pn**	**04 42 09.5**	**+1.6**
YER	**Yerkesik**	**2.42**	**29**	PN	**Pn**	**04 42 08.9**	**+1.0**
FETY	**Fethiye**	**2.45**	**49**	PN	**Pn**	**04 42 09.4**	**+1.1**
MHLO	**Agia Marina, M**	**2.56**	**311**	P	**Pn**	**04 42 12.2**	**+2.5**
KNDR	**Palaiochora Ch**	**2.56**	**275**	PN	**Pn**	**04 42 11.5**	**+1.8**
AKAS	**Kas**	**2.58**	**61**	PN	**Pn**	**04 42 11.5**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**3.04**	**16**	PN	**Pn**	**04 42 17.9**	**+1.4**
ELL	**Elmali**	**3.05**	**55**	PN	**Pn**	**04 42 18.1**	**+1.5**
KTHA	**Kythira Island**	**3.28**	**293**	PN	**Pn**	**04 42 21.6**	**+1.9**
URLA	**Izmir**	**3.33**	**357**	PN	**Pn**	**04 42 22.4**	**+2.1**
CHOS	**Chios island**	**3.40**	**350**	PN	**Pn**	**04 42 22.1**	**+0.7**
KORT	**Korkueli**	**3.49**	**55**	PN	**Pn**	**04 42 24.9**	**+2.3**
KULA	**Kula-Manisa**	**3.79**	**23**	PN	**Pn**	**04 42 29.1**	**+2.4**
MLR	**Muntele Rosu**	**10.47**	**357**	LR	LR	04 48 30.0	
	comp=E,31nm,20.1s,baz=60,slow=40						
AKASG	**Malin Array Be**	**15.76**	**6**	Pn	**Pn**	**04 45 10.3**	**+0.3**
	comp=E,0.5nm,0.3s,baz=189,slow=9.0,SNR=2.2						
GERES	**GERESS Array B**	**16.86**	**329**	LR	LR	04 53 51.7	
	comp=E,35nm,18.5s,baz=76,slow=44						
ESDC	**Sonseca Array**	**24.82**	**290**	P	**P**	**04 46 48.9**	**-1.4**
	comp=E,0.2nm,0.3s,baz=83,slow=9.7,SNR=4.5						
WSAR	**Wadi Sarin**	**30.06**	**104**	LR	LR	05 02 02.8	
	comp=E,27nm,18.2s,baz=275,slow=41						
TORD	**Torodi Ar. Bea**	**31.45**	**232**	P	**P**	**04 47 49.1**	**-0.6**
	comp=E,0.6nm,0.4s,baz=34,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	**42.72**	**57**	P	**P**	**04 49 23.9**	**-1.3**
	comp=E,0.2nm,0.4s,baz=268,slow=5.8,SNR=4.1						
KSRS	**Korea Array**	**77.29**	**53**	LR	LR	05 32 12.2	
	comp=E,10nm,21.1s,baz=190,slow=39						

ISK ***17*** *04:53:41.3,35°.00N×26°.88E,h14km,ML3.4/18*

DDA ***17*** *04:53:41.9,35°.12N×27°.09E,h8km±4km,MW3.7*

ATH ***17*** *04:53:42.4,35°.09N×26°.80E,h38km±4km,ML3.3/11,Error ellipse: s-maj=5.2km s-min=1.4km az=154.0*

IDC ***17*** *04:53:42.4±2.7,34°.90N×26°.84E,h30km±22km,mb3.4/5, mb1 3.4/9,mb1mx3.3/41,mbtmp3.5/9,ML3.4/4,MS2.9/3, Ms1 3.0/3,ms1mx2.4/26,Error ellipse: s-maj=26.4km s-min=17.2km az=5.0*

THE ***17*** *04:53:42.8,35°.11N×26°.78E,h0km±1km,ML3.2/6,Error ellipse: s-maj=5.3km s-min=0.8km az=154.0*

HLW ***17*** *04:53:44.1,34°.95N×27°.09E,h28km±15km,Md3.6,Ml3.6*

ISC 17 04:53:41.3±1.2,34°.98N±0°.04×26°.83E±0°.03,h18km±6km, n84,σ1°38/107,mb3.5/5,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.52**	**286**	P	**Pb**	**04 53 52.5**	**+0.6**
ZKR				S	**Sb**	**04 53 59.9**	**+0.8**
ZKR				AML	AML	04 54 01.2	
	comp=N,7498μm,0.3s						
ZKR				AML	AML	04 54 01.9	
	comp=E,11476μm,0.2s						
ZKR	**Zakros**	**0.52**	**286**	P	**Pb**	**04 53 52.5**	**+0.6**
ZKR				S	**Sb**	**04 54 00.6**	**+1.5**
	comp=E,5μm,0.2s						
ZKR	**Zakros**	**0.52**	**286**	PG	**Pb**	**04 53 52.2**	**+0.3**
ZKR				SG	**Sn**	**04 54 00.9**	**-1.3**
KARP	**Karpathos**	**0.63**	**26**	P	**Pg**	**04 53 53.5**	**-0.4**
KARP				S	**Sg**	**04 54 02.7**	**+0.4**
KARP				AML	AML	04 54 03.5	
	comp=N,48624μm,0.5s						
KARP				AML	AML	04 54 03.8	
	comp=E,48551μm,0.4s						
KARP	**Karpathos**	**0.63**	**26**	P	**Pg**	**04 53 53.4**	**-0.4**
KARP				S	**Sg**	**04 54 02.5**	**+0.2**
	comp=E,24μm,0.4s						
KARP	**Karpathos**	**0.63**	**26**	PG	**Pg**	**04 53 53.3**	**-0.5**
KARP				SG	**Sg**	**04 54 02.9**	**+0.6**
STIA	**Sitia Lasithi**	**0.65**	**291**	P	**Pg**	**04 53 53.5**	**-0.5**
STIA				S	**Sb**	**04 54 03.5**	**+0.9**
FRMA	**Ierapetra Chan**	**0.90**	**273**	P	**Pb**	**04 53 57.2**	**-1.1**
FRMA				S	**Sb**	**04 54 09.8**	**-0.2**
NPS	**Neapolis**	**1.04**	**286**	P	**Pg**	**04 54 01.9**	**+0.6**
NPS				S	**Sn**	**04 54 15.3**	**+0.3**
NPS				AML	AML	04 54 20.5	
	comp=N,3598μm,0.5s						
NPS				AML	AML	04 54 22.4	
	comp=E,4867μm,0.7s						
NPS	**Neapolis**	**1.04**	**286**	P	**Pg**	**04 54 02.0**	**+0.6**
NPS				S	**Sn**	**04 54 16.0**	**+1.0**
	comp=E,2μm,0.6s						
KSTL	**Kastelli Herak**	**1.48**	**283**	P	**Pn**	**04 54 06.2**	**-0.8**
KSTL				S	**Sn**	**04 54 22.3**	**-3.5**
IDI	**Anoyia**	**1.62**	**282**	Pg	**Pg**	**04 54 12.7**	**+0.2**
	comp=E,11nm,0.3s,baz=178,slow=5.3,SNR=27						
IDI				Lg	Lg	04 54 35.4	
	comp=E,35nm,0.3s,baz=338,slow=14,SNR=7.1						
IDI				LR	LR	04 55 05.9	
	comp=E,286nm,18.2s,baz=103,slow=51						
IDI	**Anoyia**	**1.62**	**282**	P	**Pg**	**04 54 11.6**	**-0.8**
IDI				AML	AML	04 54 42.4	
	comp=N,799μm,0.5s						
IDI				AML	AML	04 54 43.2	
	comp=E,846μm,0.8s						
IDI	**Anoyia**	**1.62**	**282**	P	**Pg**	**04 54 12.0**	**-0.4**
IDI				S	**Sg**	**04 54 32.3**	**-1.2**
	comp=E,502nm,0.8s						
IDI	**Anoyia**	**1.62**	**282**	PN	**Pb**	**04 54 11.5**	**+0.8**
ARG	**Arkhangelos**	**1.63**	**40**	P	**Pb**	**04 54 10.7**	**-0.2**
ARG				AML	AML	04 54 40.2	
	comp=N,1279μm,0.5s						
ARG				AML	AML	04 54 41.8	
	comp=E,1745μm,0.5s						
ARG	**Arkhangelos**	**1.63**	**40**	P	**Pb**	**04 54 11.2**	**+0.4**
ARG				S	**Sb**	**04 54 31.8**	**+0.8**
	comp=E,825nm,0.9s						
ARG	**Arkhangelos**	**1.63**	**40**	PN	**Pn**	**04 54 09.8**	**+0.7**
ARG				SN	**Sn**	**04 54 30.4**	**+0.8**
NIS1	**Nisyros Isl.**	**1.65**	**10**	PN	**Pn**	**04 54 10.7**	**+1.3**
SIVA	**Sivas**	**1.66**	**272**	P	**Pb**	**04 54 12.0**	**+0.7**
SIVA				AML	AML	04 54 43.8	
	comp=E,2998μm,0.6s						
SIVA				AML	AML	04 54 49.9	
	comp=N,1820μm,0.6s						
KOSK	**Kos Island**	**1.78**	**4**	P	**Pn**	**04 54 12.3**	**+1.2**
KOSK	**Kos Island**	**1.78**	**4**	PN	**Pn**	**04 54 11.9**	**+0.8**
SANT	**Santorini**	**1.78**	**322**	P	**Pn**	**04 54 12.0**	**+0.7**
SANT				AML	AML	04 54 40.4	
	comp=E,1515μm,0.5s						
SANT				AML	AML	04 54 45.5	
	comp=N,682μm,1.0s						
SANT	**Santorini**	**1.78**	**322**	P	**Pn**	**04 54 12.1**	**+0.8**
SANT	**Santorini**	**1.78**	**322**	PN	**Pn**	**04 54 12.3**	**+1.0**
THR8	**Santorini-Mono**	**1.80**	**323**	P	**Pn**	**04 54 12.7**	**+1.2**
THR6	**Thira Island,**	**1.80**	**320**	P	**Pn**	**04 54 12.5**	**+1.1**
THR6	**Thira Island,**	**1.80**	**320**	P	**Pn**	**04 54 12.6**	**+1.1**
THR3	**Thira Island,**	**1.84**	**321**	P	**Pn**	**04 54 13.0**	**+1.0**
THR3	**Thira Island,**	**1.84**	**321**	P	**Pn**	**04 54 12.9**	**+0.9**
THT2	**Imerovigli**	**1.85**	**322**	PN	**Pn**	**04 54 13.4**	**+1.2**
THR5	**Thira Island,**	**1.88**	**321**	P	**Pn**	**04 54 12.9**	**+0.4**
BODT	**Bodrum**	**2.12**	**11**	P	**Pn**	**04 54 16.1**	**+0.2**
BODT	**Bodrum**	**2.12**	**11**	PN	**Pn**	**04 54 16.2**	**+0.3**
TURN	**Turunc**	**2.13**	**32** *i*	P	**Pn**	**04 54 18.2**	**+2.2**
TURN				*i* S	**Sn**	**04 54 41.4**	**-0.7**
TURN	**Turunc**	**2.13**	**32**	PN	**Pn**	**04 54 17.4**	**+1.4**
BDRM	**Kayabasi**	**2.15**	**13** *i*	P	**Pn**	**04 54 17.5**	**+1.3**
BDRM				*i* S	**Sn**	**04 54 40.4**	**-2.0**
VAM	**Vamos**	**2.19**	**282**	P	**Pb**	**04 54 20.7**	**+0.3**
VAM				AML	AML	04 54 55.4	
	comp=E,938μm,0.9s						
VAM				AML	AML	04 54 59.3	
	comp=N,1109μm,0.6s						
GVDS	**Gavdos**	**2.25**	**267**	PN	**Pb**	**04 54 20.2**	**-1.2**
GVD	**Gavdhos**	**2.26**	**267**	P	**Pb**	**04 54 21.3**	**-0.2**
GVD				AML	AML	04 55 20.9	
	comp=N,508μm,0.8s						
GVD				AML	AML	04 55 22.3	
	comp=E,511μm,0.8s						
GVD	**Gavdhos**	**2.26**	**267**	PN	**Pb**	**04 54 20.0**	**-1.5**
APE	**Apeiranthos**	**2.34**	**334**	P	**Pn**	**04 54 19.7**	**+0.8**
APE				AML	AML	04 54 51.4	

comp=E,0.2nm,0.7s,baz=41,slow=5.5,SNR=4.0

IDC 17 05:14:26.8±8.1, 6°32S×154°48E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/30, mbtmp3.9/4, Error ellipse: s-maj=245.0km s-min=30.4km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.79**	**233**	P	P	05 19 42.7	+1.2
	3.0nm,0.6s,baz=61,slow=10,SNR=26						
ASAR	**Alice Springs**	**26.25**	**227**	P	P	05 20 03.0	-1.0
	0.6nm,0.5s,baz=58,slow=9.7,SNR=10						
SONM	**Songino Array**	**68.50**	**327**	P	P	05 25 31.5	+0.3
	0.6nm,0.3s,baz=134,slow=8.3,SNR=5.0						
MKAR	**Makanchi Array**	**82.56**	**319**	P	P	05 26 51.4	-0.4
	0.3nm,0.4s,baz=102,slow=5.1,SNR=4.7						

IDC 17 05:44:00.4±1.8, 5°36S×153°26E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/31, mbtmp3.5/3, Error ellipse: s-maj=85.9km s-min=38.0km az=144.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.43**	**230**	P	P	05 49 10.5	-1.0
	1.1nm,0.8s,baz=54,slow=9.9,SNR=5.9						
ASAR	**Alice Springs**	**26.06**	**224**	P	P	05 49 36.1	+0.3
	0.4nm,0.7s,baz=60,slow=8.7,SNR=4.3						
FITZ	**Fitzroy Crossi**	**29.80**	**243**	P	P	05 50 09.8	+0.5
	0.9nm,0.7s,baz=63,slow=6.8,SNR=2.8						
BDFB	**Brasilia**	**150.35**	**135**	PKPbc	PKPbc	06 03 54.7	-0.3
	0.8nm,0.4s,baz=194,slow=4.2,SNR=3.1						
TORD	**Torodi Ar. Bea**	**150.92**	**287**	PKPbc	PKPbc	06 03 56.0	-0.3
	1.3nm,0.8s,baz=65,slow=2.3,SNR=6.9						

*NOU **17** 05:57:31.8, 36°.99S×177°.93E, h233km, MLv4.1, Off E. Coast of N. Island, N.Z.*

WEL 17 05:57:27.9±1.0, 36°S±10°×177°8E±°, h200km±9km, M3.7/35, MLv3.7/35, Error ellipse: s-maj=0.0km s-min=0.0km az=36.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.32**	**170**	P	Pn	05 58 00.0	+0.1
MXZ				S	Sn	05 58 25.5	+0.4
HAZ	**Te Kaha**	**1.51**	**187**	P	Pn	05 58 01.5	-0.1
HAZ				S	Sn	05 58 28.1	+0.2
WMGZ	**Waiomatatini S**	**1.59**	**169**	P	Pn	05 58 02.8	+0.5
WMGZ				S	Sn	05 58 29.5	+0.2
PKGZ	**Pakihiroa**	**1.63**	**178**	P	Pn	05 58 02.9	+0.2
RUGZ	**Raukumara Rang**	**1.73**	**189**	P	Pn	05 58 02.8	-0.9
RUGZ				S	Sn	05 58 31.6	-0.2
WHRZ	**Whale Island**	**1.80**	**207**	P	Pn	05 58 05.5	+1.2
PUZ	**Puketiti**	**1.82**	**174**	P	Pn	05 58 04.5	0.0
PUZ				S	Sn	05 58 33.3	0.0
TWGZ	**Tauwhareparae**	**1.92**	**181**	P	Pn	05 58 06.2	+0.7
TWGZ				S	Sn	05 58 36.2	+1.2
OPRZ	**Ohinepanea**	**1.97**	**216**	P	Pn	05 58 07.4	+1.4
TGRZ	**Tauranga**	**2.03**	**223**	P	Pn	05 58 06.6	-0.1
GRZ	**Great Barrier**	**2.07**	**269**	P	Pn	05 58 05.9	-1.2
EDRZ	**Edgecumbe**	**2.11**	**209**	P	Pn	05 58 08.0	+0.5
MWZ	**Matawai**	**2.11**	**191**	S	Sn	05 58 38.7	+0.1
URZ	**Urewera**	**2.12**	**200**	P	Pn	05 58 07.2	-0.4
URZ				S	Sn	05 58 38.3	-0.4
TKGZ	**Te Karaka**	**2.18**	**184**	P	Pn	05 58 08.3	+0.1
TKGZ				S	Sn	05 58 39.7	-0.2
CNGZ	**Carnagh Statio**	**2.23**	**176**	P	Pn	05 58 09.2	+0.5
RAGZ	**Rawiri**	**2.28**	**192**	P	Pn	05 58 09.6	+0.2
KMRZ	**Kaimai**	**2.30**	**226**	P	Pn	05 58 09.7	+0.2
TARZ	**Mount Tarawera**	**2.31**	**211**	P	Pn	05 58 10.8	+1.1
WIAZ	**Waiheke Island**	**2.38**	**256**	P	Pn	05 58 09.8	-0.6
HLRZ	**Highlands Stat**	**2.39**	**213**	P	Pn	05 58 11.5	+0.9
RRRZ	**Republican Roa**	**2.40**	**210**	P	Pn	05 58 10.9	+0.3
MUGZ	**Murupara**	**2.43**	**204**	P	Pn	05 58 10.3	-0.6
RIGZ	**Rimuhau**	**2.45**	**185**	P	Pn	05 58 11.0	-0.2
HSRZ	**Hossack Road**	**2.49**	**214**	P	Pn	05 58 12.9	+1.3
RTZ	**Ruatahuna**	**2.49**	**199**	P	Pn	05 58 10.8	-0.9
TOZ	**Tahuroa Road**	**2.49**	**233**	P	Pn	05 58 12.0	+0.4
HRRZ	**Handcock Road**	**2.54**	**212**	P	Pn	05 58 12.8	+0.6
MBAZ	**Motutapu North**	**2.56**	**258**	P	Pn	05 58 11.9	-0.5
SNGZ	**Shannon Statio**	**2.58**	**192**	P	Pn	05 58 12.2	-0.4
GRRZ	**Galatos Road**	**2.58**	**216**	P	Pn	05 58 13.2	+0.5
PRRZ	**Plateau Road**	**2.58**	**210**	P	Pn	05 58 12.7	0.0
ALRZ	**Allen Road**	**2.66**	**210**	P	Pn	05 58 13.2	-0.3
PRGZ	**Paritu Road**	**2.66**	**182**	P	Pn	05 58 13.3	-0.2
MTHZ	**Maungataniwha**	**2.75**	**200**	P	Pn	05 58 13.7	-1.0
RAHZ	**Arahi**	**2.75**	**195**	P	Pn	05 58 14.3	-0.4
KNZ	**Kokohu**	**2.77**	**186**	P	Pn	05 58 14.2	-0.6
AWAZ	**Awhitu Peninsu**	**2.83**	**253**	P	Pn	05 58 15.2	-0.3
KUTZ	**Kaahu Road**	**2.83**	**217**	P	Pn	05 58 16.1	+0.5
TLZ	**Tolley Road**	**2.86**	**223**	P	Pn	05 58 16.4	+0.5
MRHZ	**Matea Rd**	**2.87**	**206**	P	Pn	05 58 15.1	-0.9
WHHZ	**Waihua**	**2.88**	**192**	P	Pn	05 58 15.7	-0.4
MHGZ	**Mahia Peninsul**	**2.89**	**182**	P	Pn	05 58 15.8	-0.3
NMHZ	**Naumai**	**2.99**	**198**	P	Pn	05 58 17.1	-0.3
WCZ	**Waipu Caves**	**2.99**	**275**	P	Pn	05 58 16.2	-1.2
WATZ	**Wairara**	**3.05**	**216**	P	Pn	05 58 18.2	+0.2
ARHZ	**Aropaoanui**	**3.11**	**195**	P	Pn	05 58 18.1	-0.7
BKZ	**Black Stump Fm**	**3.14**	**202**	P	Pn	05 58 17.8	-1.4
RATZ	**Rangitukua**	**3.16**	**214**	P	Pn	05 58 19.0	-0.3
MCHZ	**McNeill Hill**	**3.35**	**198**	P	Pn	05 58 20.8	-0.8
HIZ	**Hauiti**	**3.38**	**227**	P	Pn	05 58 22.7	+0.7
NTVZ	**North Tongarir**	**3.39**	**213**	P	Pn	05 58 21.8	-0.4
TMVZ	**Te Maari**	**3.39**	**212**	P	Pn	05 58 21.7	-0.6
KRVZ	**Karewarewa**	**3.40**	**213**	P	Pn	05 58 22.0	-0.4
KWHZ	**Kaweka Forest**	**3.40**	**201**	P	Pn	05 58 21.0	-1.4
ETVZ	**East Tongariro**	**3.41**	**212**	P	Pn	05 58 21.5	-0.9
WTVZ	**West Tongariro**	**3.44**	**213**	P	Pn	05 58 22.0	-0.9
NNVZ	**North Ngauruho**	**3.44**	**213**	P	Pn	05 58 22.4	-0.5
OTVZ	**Oturere**	**3.45**	**212**	P	Pn	05 58 22.2	-0.8
CKHZ	**Cape Kidnapper**	**3.48**	**192**	P	Pn	05 58 22.0	-1.2
TWVZ	**Taurewa**	**3.48**	**215**	P	Pn	05 58 22.5	-0.8
SNVZ	**South Ngauruho**	**3.48**	**212**	P	Pn	05 58 22.4	-0.9
NGZ	**Ngauruhoe**	**3.49**	**213**	P	Pn	05 58 23.0	-0.5
FWVZ	**Far West T-bar**	**3.57**	**212**	P	Pn	05 58 23.6	-1.0
BHHZ	**Black Hill Sta**	**3.58**	**205**	P	Pn	05 58 22.7	-1.8
WNVZ	**Wahianoa**	**3.61**	**211**	P	Pn	05 58 23.6	-1.4
MOVZ	**Moawhango**	**3.62**	**209**	P	Pn	05 58 23.0	-1.9
KRHZ	**Kereru**	**3.62**	**201**	P	Pn	05 58 23.1	-1.9
KAHZ	**Kahuranaki**	**3.64**	**194**	P	Pn	05 58 24.0	-1.2
PKVZ	**Pokaka**	**3.69**	**214**	P	Pn	05 58 24.7	-1.2
VRZ	**Vera Road**	**3.86**	**221**	P	Pn	05 58 27.6	-0.2
PXZ	**Pawanui**	**3.88**	**193**	P	Pn	05 58 26.2	-1.8
PNHZ	**Pukenui**	**3.92**	**201**	P	Pn	05 58 26.3	-2.4
WPHZ	**Waipukurau**	**4.00**	**198**	P	Pn	05 58 27.5	-2.1
TSZ	**Takapari Road**	**4.13**	**203**	P	Pn	05 58 28.7	-2.5
PRHZ	**Porangahau**	**4.15**	**195**	P	Pn	05 58 29.7	-1.7
WAZ	**Wanganui**	**4.23**	**214**	P	Pn	05 58 30.7	-1.8
DVHZ	**Dannevirke**	**4.29**	**199**	P	Pn	05 58 30.7	-2.6
NEZ	**North Egmont**	**4.32**	**225**	P	Pn	05 58 33.9	+0.2
PKE	**Pukeiti**	**4.34**	**226**	P	Pn	05 58 34.1	+0.3
KHEZ	**Kahui Hut**	**4.39**	**225**	P	Pn	05 58 34.6	+0.1
POWZ	**Post Office Ro**	**4.49**	**203**	P	Pn	05 58 33.2	-2.6
PRWZ	**Pori Road**	**4.58**	**200**	P	Pn	05 58 34.4	-2.4
BFZ	**Birch Farm**	**4.63**	**197**	P	Pn	05 58 34.6	-2.9
MRZ	**Mangatainoka R**	**4.79**	**203**	P	Pn	05 58 36.4	-3.2
TIWZ	**Tintock**	**4.81**	**200**	P	Pn	05 58 37.0	-2.8
CPWZ	**Castlepoint**	**4.86**	**196**	P	Pn	05 58 38.4	-2.0
HOWZ	**Holdsworth Sta**	**5.03**	**202**	P	Pn	05 58 39.0	-3.6
OGWZ	**Otaki Gorge**	**5.07**	**205**	P	Pn	05 58 39.5	-3.5
TMWZ	**Te Maipa**	**5.12**	**198**	P	Pn	05 58 40.5	-3.3
KIW	**Kapiti Island**	**5.20**	**207**	P	Pn	05 58 40.9	-3.8
MTW	**Mount Morrison**	**5.27**	**201**	P	Pn	05 58 41.9	-3.8
CAW	**Cannon Point**	**5.36**	**205**	P	Pn	05 58 42.9	-3.9
TRWZ	**Traveller**	**5.45**	**199**	P	Pn	05 58 44.4	-3.5
PAWZ	**Paruwai Farm**	**5.50**	**201**	P	Pn	05 58 44.7	-4.0
DUWZ	**D'Urville Isla**	**5.56**	**214**	P	Pn	05 58 45.2	-4.2
MSWZ	**Moikau Station**	**5.58**	**202**	P	Pn	05 58 45.5	-4.2
WEL	**Wellington**	**5.62**	**206**	P	Pn	05 58 46.2	-4.0
BHW	**Baring Head**	**5.70**	**205**	P	Pn	05 58 46.8	-4.4
PLWZ	**Palliser**	**5.72**	**201**	P	Pn	05 58 47.3	-4.2
TCW	**Tory Channel**	**5.74**	**209**	P	Pn	05 58 47.1	-4.6
TUWZ	**Tuamarina**	**6.06**	**210**	P	Pn	05 58 51.0	-4.8
QRZ	**Quartz Range**	**6.27**	**222**	P	Pn	05 58 53.8	-4.8
BSWZ	**Blackbirch Sta**	**6.33**	**209**	P	Pn	05 58 54.6	-4.7
THZ	**Tophouse**	**6.79**	**214**	P	Pn	05 59 00.8	-4.5
KHZ	**Kahutara**	**7.06**	**208**	P	Pn	05 59 03.9	-4.9
DSZ	**Denniston Nort**	**7.31**	**220**	P	Pn	05 59 07.8	-4.3
GVZ	**Greta Valley S**	**7.72**	**208**	P	Pn	05 59 12.0	-5.4
LTZ	**Lake Taylor**	**7.88**	**213**	P	Pn	05 59 14.1	-5.4
OKCZ	**Okains Bay**	**8.37**	**206**	P	Pn	05 59 20.7	-5.2
MQZ	**McQueen's Vall**	**8.50**	**207**	P	Pn	05 59 21.3	-6.2
ARCZ	**Arundel**	**9.29**	**212**	P	Pn	05 59 32.6	-5.3
TMZ	**Timaru**	**9.72**	**211**	P	Pn	05 59 37.7	-5.7
ODZ	**Otahua Downs**	**10.41**	**210**	P	Pn	05 59 47.6	-4.7

*IDC **17** 06:06:13.1±3.2, 40°.17N×77°.66E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.4/45, mbtmp3.6/5, ML2.8/2, MS3.4/1, Ms1 3.4/1, ms1mx2.4/40, Error ellipse: s-maj=85.3km s-min=24.3km az=131.0*

*SOME **17** 06:06:13.4, 40°.18N×77°.60E, h5km*

*KRNET **17** 06:06:14.6±0.1, 40°.22N×77°.80E, mb3.9*

*NNC **17** 06:06:17.4±1.0, 40°.34N×77°.69E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=7.4km s-min=5.6km az=166.0*

ISC 17 06:06:15.2±2.3, 40°26N±0°.08×77°66E±0°.04, h2km±12km, n65, σ2s21/97, mb3.7/3, 26C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.90**	**349**	⇑*i*	P	**06 06 50.8**	**+0.1**
KDJ	baz=47			⇑*i*	S	**06 07 17.9**	**+1.6**
ULHL	**Ulahol**	**2.25**	**332**	⇑*i*	P	**06 06 56.6**	**-0.1**
ULHL	baz=30			⇑*i*	S	**06 07 27.1**	**-0.5**
ULHL	**Ulahol**	**2.25**	**332**	P	P	**06 06 56.8**	**+0.1**
PRZ	SNR=11 **Przheval'sk**	**2.29**	**14**	⇑*eP*	P	**06 06 56.9**	**-0.4**
PRZ	baz=11			⇑*i*	S	**06 07 27.7**	**-1.1**
ANVS	**Anan'yevo**	**2.52**	**0**	⇓*eP*	P	**06 07 00.2**	**-1.1**
ANVS	baz=58			⇓*i*	S	**06 07 32.9**	**+0.1**
BOOM	**Boomskoye usch**	**2.58**	**330**	⇑*iP*	P	**06 07 01.5**	**-0.7**
BOOM	baz=29			⇑*i*	S	**06 07 34.8**	**+0.5**
TNSS	**Tian-Shan**	**2.83**	**349**	*eP*	P	**06 07 07.6**	**+1.1**
TNSS	98nm,0.5s			*eS*	S	**06 07 46.8**	**+0.8**
TNSS	**Tian-Shan**	**2.83**	**349**	Pg	P	**06 07 07.8**	**+1.2**
TNSS	98nm,0.5s			Lg	Lg	06 07 46.4	
SATY	**Saty**	**2.85**	**11**	*eP*	P	**06 07 08.1**	**+1.3**
SATY	68nm,0.9s			*eS*	S	**06 07 47.7**	**+0.8**
SATY	101nm,0.6s **Saty**	**2.85**	**11**	Pg	P	**06 07 08.2**	**+1.3**
SATY	68nm,0.9s			Lg	Lg	06 07 47.3	
IZV	101nm,0.6s **Izvestkoviy**	**2.88**	**345**	*eP*	P	**06 07 08.4**	**+1.1**
IZV	59nm,0.6s			*eS*	S	**06 07 48.3**	**+0.5**
IZV	189nm,0.5s **Izvestkoviy**	**2.88**	**345**	Pg	P	**06 07 08.8**	**+1.4**
IZV	59nm,0.6s			Lg	Lg	06 07 48.2	
MDOK	189nm,0.5s **Medeo**	**2.94**	**351**	*eP*	P	**06 07 09.4**	**+1.1**
MDOK	67nm,0.6s			*eS*	S	**06 07 49.8**	**+0.3**
MDOK	136nm,0.5s **Medeo**	**2.94**	**351**	⇓Pn	P	**06 07 06.1**	**-2.3**
MDOK	6.2nm,0.4s			⇓Pg	Pg	**06 07 09.3**	**-2.2**
MDOK	64nm,0.6s			⇓Lg	Lg	06 07 49.8	
MDOK	171nm,0.6s **Medeo**	**2.94**	**351**	Pg	P	**06 07 08.8**	**+0.5**
MDOK	67nm,0.6s			Lg	Lg	06 07 47.9	
AAA	136nm,0.5s **Alma-Ata**	**3.00**	**350**	*eP*	Pg	**06 07 11.5**	**-1.1**
AAA	91nm,0.3s			*eS*	Sg	**06 07 53.3**	**+1.8**
AAA	137nm,0.5s **Alma-Ata**	**3.00**	**350**	Pg	Pb	**06 07 11.2**	**+1.9**
AAA	91nm,0.3s			Lg	Lg	06 07 52.5	
KOTS	137nm,0.5s **Kotyrbulak**	**3.00**	**352**	*eP*	Pb	**06 07 10.9**	**+1.5**
KOTS	92nm,0.6s			*eS*	Sg	**06 07 52.5**	**+0.9**
KOTS	192nm,0.4s **Kotyrbulak**	**3.00**	**352**	Pg	Pb	**06 07 10.2**	**+0.8**
KOTS	92nm,0.6s			Lg	Lg	06 07 50.0	
KST	192nm,0.4s **Kastek**	**3.06**	**336**	*eP*	Pb	**06 07 11.5**	**+1.1**
KST	38nm,0.7s			*eS*	Sg	**06 07 53.3**	**-0.1**
KST	124nm,0.5s **Kastek**	**3.06**	**336**	Pg	Pb	**06 07 12.1**	**+1.8**
KST	38nm,0.7s			Lg	Lg	06 07 53.3	
UZB	124nm,0.5s **Uzynbulak**	**3.06**	**19**	*eP*	Pb	**06 07 11.4**	**+1.0**
UZB	24nm,0.5s			*eS*	Sg	**06 07 53.4**	**-0.1**
UZB	66nm,0.3s **Uzynbulak**	**3.06**	**19**	Pg	Pb	**06 07 11.5**	**+1.0**
UZB	24nm,0.5s			Lg	Lg	06 07 53.4	
TKM2	66nm,0.3s **Tokmak 2**	**3.08**	**331**	⇑*eP*	Pn	**06 07 08.1**	**+3.2**
TKM2	baz=29			⇑*i*	Sb	**06 07 47.1**	**-1.6**
TKM2	**Tokmak 2**	**3.08**	**331**	P	Pn	**06 07 08.2**	**+3.3**
TKM2	SNR=21 **Tokmak 2**	**3.08**	**331**	⇑Pn	Pn	**06 07 08.1**	**+3.2**
TKM2	11nm,0.7s			⇑Pg	Pb	**06 07 11.4**	**+0.7**
TKM2	44nm,1.1s			⇓Lg	Lg	06 07 53.7	
UCH	64nm,0.5s **Uchtor**	**3.08**	**311**	⇓*eP*	Pn	**06 07 08.4**	**+3.2**
UCH	baz=10.0			⇓*i*	Sb	**06 07 48.4**	**-0.7**
UCH	baz=10.0 **Uchtor**	**3.08**	**311**	P	Pn	**06 07 07.9**	**+2.7**
KBK	SNR=19 **Karagaybulak**	**3.14**	**321**	⇑*iP*	Pn	**06 07 08.8**	**+3.0**
KBK	baz=20			⇑*i*	Sb	**06 07 49.2**	**-1.5**
KBK	baz=20 **Karagaybulak**	**3.14**	**321**	P	Pb	**06 07 13.2**	**+1.4**
SHLS	SNR=6.0 **Shalkode**	**3.20**	**24**	*eP*	Pg	**06 07 16.9**	**+0.5**
SHLS	30nm,0.4s			*eS*	Sg	**06 08 02.7**	**+4.8**
SHLS	78nm,0.6s **Shalkode**	**3.20**	**24**	Pg	Pb	**06 07 15.8**	**-0.6**
SHLS	30nm,0.4s			Lg	Lg	06 08 00.1	
KPKS	78nm,0.6s **Kokpek**	**3.30**	**13**	*eP*	Pb	**06 07 16.1**	**+1.8**
KPKS	40nm,0.3s			*eS*	Sg	**06 08 01.5**	**+0.4**
AAK	158nm,0.5s **Ala-Archa**	**3.36**	**316**	*eP*	Pn	**06 07 12.3**	**+3.5**
AAK	baz=15			*i* S	Sb	**06 07 54.7**	**-2.2**
AAK	baz=15 **Ala-Archa**	**3.36**	**316**	P	Pn	**06 07 10.0**	**+1.2**
AAK	SNR=14 **Ala-Archa**	**3.36**	**316**	⇑Pn	Pn	**06 07 12.3**	**+3.5**
AAK	3.2nm,0.5s			⇑Pg	Pb	**06 07 15.9**	**+0.3**
AAK	22nm,0.6s			⇑Lg	Lg	06 08 02.3	
PDGK	98nm,0.6s **Podgornoye**	**3.36**	**23**	Pg	Pb	**06 07 15.8**	**+0.4**
PDGK	16nm,0.5s			Lg	Lg	06 07 59.9	
PDGK	46nm,0.6s **Podgornoye**	**3.36**	**23**	⇓Pn	Pn	**06 07 11.5**	**+2.7**
PDGK	12nm,0.5s			⇑Pg	Pb	**06 07 15.9**	**+0.4**
PDGK	18nm,0.5s			⇑Lg	Lg	06 08 01.8	
CHMS	83nm,0.6s **Chumysh**	**3.50**	**322**	P	Sb	**06 08 07.8**	**+7.1**
AML	SNR=9.1 **Almayashu**	**3.53**	**303**	⇑*eP*	Pn	**06 07 14.4**	**+3.1**
AML	baz=3.0			⇑*i*	Sb	**06 07 59.1**	**-2.8**
AML	baz=3.0 **Almayashu**	**3.53**	**303**	P	Pn	**06 07 14.8**	**+3.5**
KTBS	SNR=13 **Karatobe**	**3.53**	**348**	*eP*	Pb	**06 07 19.6**	**+1.3**
KTBS	26nm,0.7s			*eS*	Sg	**06 08 07.2**	**-1.2**
KTBS	198nm,0.4s **Karatobe**	**3.53**	**348**	Pg	Pb	**06 07 19.8**	**+1.5**
KTBS	26nm,0.7s			Lg	Lg	06 08 07.2	
KRBS	198nm,0.4s **Karabastau**	**3.74**	**337**	*eP*	Pb	**06 07 23.1**	**+1.2**
KRBS	14nm,0.4s			*eS*	Sg	**06 08 13.5**	**-1.8**
KRBS	90nm,0.6s **Karabastau**	**3.74**	**337**	Pg	Pb	**06 07 23.8**	**+1.9**
KRBS	14nm,0.4s			Lg	Lg	06 08 13.4	
KTMS	90nm,0.6s **Ketmen**	**3.77**	**31**	*eP*	Pb	**06 07 22.9**	**+0.5**
KTMS	1.3nm,0.0s			*eS*	Sg	**06 08 13.1**	**-3.1**
KTMS	29nm,0.6s **Ketmen**	**3.77**	**31**	Pg	Pb	**06 07 23.4**	**+1.0**
KTMS	1.3nm,0.0s			Lg	Lg	06 08 13.0	
EKS2	29nm,0.6s **Erkin-Say**	**3.78**	**311**	⇑*eP*	Pn	**06 07 18.2**	**+3.7**
EKS2	baz=10.0			⇑*eS*	Sb	**06 08 04.9**	**-3.9**
USP	baz=10.0 **Ospenovka**	**3.82**	**323**	⇑*iP*	Pn	**06 07 19.0**	**+4.0**
USP	baz=22			⇑*i*	Sb	**06 08 05.5**	**-4.5**
USP	baz=22 **Ospenovka**	**3.82**	**323**	P	Pb	**06 07 24.5**	**+1.2**
SGDS	SNR=28 **Sogindy**	**3.91**	**326**	Pg	Pb	**06 07 26.3**	**+1.5**
SGDS	16nm,0.9s			Lg	Lg	06 08 17.8	
ARXS	33nm,0.7s **Arharly**	**3.95**	**2**	*eP*	Pb	**06 07 27.8**	**+2.3**
ARXS	22nm,0.8s			*eS*	Sg	**06 08 21.3**	**-0.9**
ARXS	70nm,0.4s **Arharly**	**3.95**	**2**	Pg	Pb	**06 07 27.9**	**+2.3**
ARXS	22nm,0.8s			Lg	Lg	06 08 20.4	
TDK	70nm,0.4s **Taldyqorghan**	**4.77**	**6**	*eP*	Pb	**06 07 42.7**	**+3.2**
TDK	16nm,0.2s			*eS*	Sg	**06 08 46.9**	**-1.5**
TDK	63nm,0.6s **Taldyqorghan**	**4.77**	**6**	Pg	Pg	**06 07 43.5**	**-3.1**
TDK	53nm,0.2s			Lg	Lg	06 08 47.3	
BTLS	63nm,0.6s **Baital**	**5.47**	**332**	*eP*	Pb	**06 07 54.6**	**+3.2**
BTLS	5.4nm,0.6s			*eS*	Sg	**06 09 07.2**	**-3.6**
BTLS	23nm,0.7s **Baital**	**5.47**	**332**	Pg	Pb	**06 07 54.8**	**+3.5**
BTLS	5.4nm,0.6s			Lg	Lg	06 09 06.6	
KK31	23nm,0.7s **Karatay Array**	**6.06**	**300**	Pg	Pb	**06 08 05.8**	**+4.5**
KK31	4.8nm,0.8s,baz=116,slow=17,SNR=11			Lg	Lg	06 09 25.9	
MK31	7.8nm,0.8s,baz=116,slow=28,SNR=4.0 **Makanchi Array**	**7.35**	**26**	Pn	Pn	**06 08 04.5**	**+1.1**
MK31	0.5nm,0.5s,baz=0.0,slow=0.1,SNR=6.6			⇑Sn	Sn	**06 09 29.0**	**+1.7**
MK31	1.5nm,0.7s,baz=209,slow=18,SNR=3.6			⇓Lg	Lg	06 10 05.7	
MKAR	2.4nm,0.6s **Makanchi Array**	**7.35**	**26**	Pn	Pn	**06 08 04.9**	**+1.5**
MKAR	0.2nm,0.3s,baz=205,slow=13,SNR=7.3			Lg	Lg	06 10 07.0	
ZALV	0.3nm,0.3s,baz=209,slow=26,SNR=3.5 **Zalesovo Beam**	**14.53**	**17**	Pn	Pn	**06 09 42.5**	**+0.9**
ARCES	0.2nm,0.3s,baz=212,slow=11,SNR=2.9 **ARCESS Array B**	**39.85**	**334**	P	P	**06 13 48.2**	**-1.4**
KMBO	4.5nm,1.1s,baz=100,slow=9.3,SNR=3.4 **Kilima Mbogo**	**55.24**	**232**	LR	LR	06 41 56.9	
TORD	comp=Z,37nm,19.5s,baz=88,slow=39 **Torodi Ar. Bea**	**70.95**	**271**	P	P	**06 17 33.2**	**-1.1**
YKA	0.3nm,0.4s,baz=47,slow=5.3,SNR=4.1 **Yellowknife Ar**	**77.12**	**6**	P	P	**06 18 07.6**	**-2.0**
	0.2nm,0.6s,baz=349,slow=5.5,SNR=5.6						

IDC 17 06:10:20.2±2.5, 53°76N×86°96E, h0km, mb1 3.2/2, mb1mx3.0/41, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=22.8km s-min=13.0km az=73.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.28**	**279**	*i*		06 18 50.0	
ZALV	baz=99,slow=321,SNR=1.9 **Zalesovo Beam**	**1.28**	**279**	Pg	Pg	06 10 43.8	-1.0
ZALV	2.2nm,0.3s,baz=100,slow=16,SNR=23			Lg	Lg	06 11 01.0	
KURBB	3.6nm,0.3s,baz=99,slow=29,SNR=12 **Kurchatov Array**	**6.06**	**242**	Pn	Pn	06 11 51.8	+0.8
KURBB	0.1nm,0.3s,baz=58,slow=13,SNR=7.7			Lg	Lg	06 13 35.1	
MKAR	0.1nm,0.3s,baz=65,slow=31,SNR=3.6 **Makanchi Array**	**7.59**	**205**	Pn	Pn	06 12 13.3	+1.3
MKAR	0.5nm,0.3s,baz=26,slow=14,SNR=9.6			Sn	Sn	06 13 38.1	-0.5
MKAR	0.1nm,0.3s,baz=26,slow=28,SNR=4.3			Lg	Lg	06 14 22.9	
	0.1nm,0.3s,baz=22,slow=31,SNR=3.4						

*IDC **17** 06:18:09.6±2.3, 10°.52S×161°.29E, h87km±17km, mb3.6/10, mb1 3.9/12, mb1mx3.7/35, mbtmp4.0/12, MS3.4/7, Ms1 3.4/7, ms1mx3.1/31, Error ellipse: s-maj=22.5km s-min=16.2km az=96.0*

ISC 17 06:18:10.4±0.7, 10°.56S±0°.10×161°.3E±0°.1, h100km, n22, σ1s67/20, mb3.9/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.73**	**310**	P	Pn	**06 18 38.4**	**-1.3**
HNR	275nm,0.3s,baz=185,slow=9.9,SNR=60			S	Sn	**06 18 59.6**	**-2.2**
NOUC	401nm,0.3s,baz=129,slow=10,SNR=7.2 **Port Laguerre**	**12.44**	**158**	P	Pn	**06 21 02.8**	**-1.2**
DZM	**Mont Dzumac**	**12.46**	**157**	P	Pn	**06 21 02.9**	**-1.5**
DZM	5.2nm,0.3s,baz=64,slow=6.6,SNR=99			LR	LR	06 25 33.5	
DZM	comp=Z,92nm,19.0s,baz=358,slow=36 **Mont Dzumac**	**12.46**	**157**	P	Pn	**06 21 02.9**	**-

comp=Z,194nm,18.1s,baz=335,slow=42
KSRS Korea Array 57.09 329 LR LR 06 49 34.3
comp=Z,21nm,20.6s,baz=128,slow=33
USRK Ussuriysk Ar. 60.65 336 P **P** **06 28 09.2 -1.6**
0.9nm,0.7s,baz=146,slow=16,SNR=2.3
KLR Kul'dur 64.96 339 LR LR 06 54 55.5
comp=Z,17nm,18.8s,baz=115,slow=34
CMAR Chiang Mai Arr 67.92 295 P **P** **06 29 00.5 +1.5**
0.5nm,0.3s,baz=128,slow=5.9,SNR=3.5
ILAR Eielson Array 84.50 20 P **P** **06 30 32.7 +0.8**
0.5nm,0.9s,baz=224,slow=6.3,SNR=3.4
NVAR Mina Array Bea 89.09 51 P **P** **06 30 56.0 +0.9**
0.4nm,0.7s,baz=243,slow=4.0,SNR=2.9
MKAR Makanchi Array 90.19 318 P **P** **06 31 01.2 +1.4**
0.7nm,0.5s,baz=95,slow=5.8,SNR=5.7
KURBB Kurchatov Arra 93.52 321 P **P** **06 31 14.3 -0.7**
0.3nm,0.4s,baz=114,slow=2.2,SNR=5.4
YKA Yellowknife Ar 96.57 28 P **P** **06 31 30.0 +1.3**
0.3nm,0.8s,baz=254,slow=4.6,SNR=3.4

FUNV 17 06:26:46.9, 8.˚34N×72.˚08W, h5km, MW3.4
RSNC 17 06:26:46.8±2.9, 8.˚40N×72.˚18W, h0km±10km, ML2.8
ISC 17 06:26:43.7±1.4,**8.˚36N**±0.˚03×**72.˚10W**±0.˚03,**h1**km±12km,
n22,σ1**§53/40,3D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCAC	**Ocana**	**1.21**	**264**	⇓*e*P	**Pb**	**06 27 06.4**	**-1.1**
OCAC				*e*S	**Sb**	**06 27 22.9**	**-0.9**
OCAC				*i*		06 27 27.2	
	comp=Z,356nm,0.4s						
SOCV	**Socops**	**1.23**	**93**	⇓*e*P	**Pg**	**06 27 08.0**	**+0.5**
SOCV				*e*S	**Sn**	**06 27 26.7**	**+1.3**
SOCV	**Socops**	**1.23**	**93**	*e*P	**Pg**	**06 27 08.3**	**+0.8**
SOCV				*e*S	**Sn**	**06 27 26.1**	**+0.6**
MCQV	**Machiques**	**1.73**	**346**	*e*P	**Pg**	**06 27 17.0**	**0.0**
MCQV				*e*S	**Sg**	**06 27 40.2**	**+0.7**
SMLC	**San Martn de**	**2.00**	**283**	⇓*e*P	**Pn**	**06 27 18.8**	**+0.2**
SMLC				*e*S	**Sb**	**06 27 45.1**	**-1.2**
SMLC				*i*		06 27 47.8	
	comp=Z,139nm,0.3s						
BRRC	**Barranca, Sant**	**2.02**	**232**	*e*P	**Pb**	**06 27 20.8**	**-0.6**
BRRC				*i*		06 27 25.4	
	comp=Z,40nm,0.4s						
BRRC				*e*S	**Sb**	**06 27 47.2**	**+0.2**
BARC	**Barichara**	**2.06**	**211**	*e*P	**Pb**	**06 27 21.2**	**-0.9**
BARC				*i*		06 27 22.3	
	comp=Z,79nm,0.2s						
BARC				*e*S	**Sb**	**06 27 48.7**	**+0.5**
ARGC	**Ariguani, Magd**	**2.59**	**305**	*e*P	**Pn**	**06 27 27.8**	**+1.0**
ARGC				*e*S	**Sn**	**06 27 58.3**	**-0.6**
RUSC	**La Rusia**	**2.64**	**202**	*e*P	**Pb**	**06 27 31.6**	**-0.5**
RUSC				*i*		06 27 33.7	
	comp=Z,40nm,0.2s						
RUSC				*e*S	**Sb**	**06 28 03.6**	**-1.6**
RUSC	**La Rusia**	**2.64**	**202**	*e*P	**Pn**	**06 27 29.2**	**+1.3**
RUSC				*e*S	**Sn**	**06 28 00.6**	**-0.2**
CURV	**Curarigua**	**2.68**	**52**	*e*P	**Pb**	**06 27 29.9**	**-2.7**
CURV				*e*S	**Sn**	**06 28 02.3**	**+1.1**
CRJC	**Cerrejon, Guaj**	**2.75**	**344**	*e*P	**Pb**	**06 27 31.1**	**-2.8**
CRJC				*e*S	**Sb**	**06 28 09.4**	**+1.2**
CRJC				*i*		06 28 19.9	
	comp=Z,81nm,0.3s						
SANV	**Sanarito**	**2.78**	**66**	*e*P	**Pn**	**06 27 31.4**	**+1.9**
DABV	**Dabajuro**	**2.93**	**29**	*e*P	**Pg**	**06 27 40.0**	**+0.1**
DABV				*e*S	**Sb**	**06 28 13.3**	**+0.5**
DABV	**Dabajuro**	**2.93**	**29**	*e*P	**Pn**	**06 27 32.8**	**+1.4**
DABV				*e*S	**Sn**	**06 28 08.0**	**+0.7**
PTBC	**PUERTO BERRIO,**	**2.95**	**232**	*e*S	**Sb**	**06 28 10.2**	**-3.7**
PTBC				*i*		06 28 15.8	
	comp=Z,31nm,0.4s						
SIQV	**Siquisique**	**3.21**	**45**	*e*P	**Pn**	**06 27 37.1**	**+1.8**
SIQV				*e*S	**Sn**	**06 28 14.4**	**+0.2**
SJCC	**San Jacinto, C**	**3.40**	**297**	*e*P	**Pn**	**06 27 40.3**	**+2.2**
SJCC				*i*		06 27 41.1	
	comp=Z,10nm,0.3s						
SJCC				*e*S	**Sn**	**06 28 21.9**	**+2.9**
MAPV	**Macapo**	**3.88**	**68**	*e*P	**Pn**	**06 27 45.9**	**+1.3**
BAUV	**El Baul**	**4.06**	**81**	*e*P	**Pn**	**06 27 48.2**	**+1.2**
BAUV				*e*S	**Sn**	**06 28 33.4**	**-1.7**
MONV	**Montecano**	**4.14**	**30**	*e*P	**Pn**	**06 27 49.2**	**+1.1**
TACV	**Tcata**	**5.31**	**70**	*e*P	**Pn**	**06 28 05.3**	**+1.0**
TACV				*e*S	**Sn**	**06 29 03.3**	**-2.9**

IDC 17 06:30:11.0±2.7,**54.˚13N×86.˚53E,h0km,mb1 2.9/2,**
mb1mx2.8/45,mbtmp2.9/2,ML2.7/2,2C-3D,Error ellipse:
s-maj=21.3km s-min=13.3km az=59.0,Southwestern
Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**261**	*i*		06 37 35.3	
	baz=80,slow=323,SNR=2.0						
ZALV	**Zalesovo Beam**	**1.03**	**261**	Pg	Pg	06 30 28.8	-1.9
	0.7nm,0.3s,baz=77,slow=16,SNR=8.7						
ZALV				Lg	Lg	06 30 46.2	
	1.8nm,0.3s,baz=79,slow=30,SNR=12						
KURBB	**Kurchatov Arra**	**6.03**	**238**	Pn	Pn	06 31 41.9	+0.5
	0.1nm,0.3s,baz=54,slow=13,SNR=6.7						
KURBB				Lg	Lg	06 33 20.8	
	0.1nm,0.3s,baz=63,slow=29,SNR=5.5						
KURBB	**Kurchatov Arra**	**6.03**	**238**	⇑Pn	Pn	06 31 42.4	+1.1
	0.8nm,0.5s						
KURBB				⇓Sn	Sn	06 32 50.6	-0.3
	1.5nm,0.7s						
KURBB				⇓Lg	Lg	06 33 23.0	
	2.8nm,0.7s						
MK31	**Makanchi Array**	**7.82**	**202**	Pn	Pn	06 32 09.4	+3.4
	0.2nm,0.5s,baz=28,slow=14,SNR=8.2						
MK31				⇑Sn	Sn	06 33 36.0	+0.7
	0.1nm,0.4s						
MK31				⇓Lg	Lg	06 34 15.6	
	1.8nm,0.8s						
MKAR	**Makanchi Array**	**7.82**	**202**	Pn	Pn	06 32 07.6	+1.6
	0.1nm,0.3s,baz=24,slow=12,SNR=6.9						
MKAR				Lg	Lg	06 34 17.3	
	baz=23,slow=30,SNR=3.6						

JMA 17 06:35:07.2±0.2,**37.˚28N×142.˚18E,h28km**±5**km,M3.6,Off**
east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.04**	**275**	P	Pn	06 35 25.9	-0.1
JFK				*e*S	Sn	06 35 39.2	-0.5
ONAJ	**Iwakimizuishiy**	**1.12**	**261**	P	Pn	06 35 27.0	0.0
JMST	**Minamisoumatoc**	**1.12**	**294**	P	Pn	06 35 27.3	+0.3
JMST				*e*S	Sn	06 35 40.9	-0.6
JIKH	**Ishinomakikobu**	**1.17**	**331**	P	Pn	06 35 27.7	-0.1
JIKH				S	Sn	06 35 42.7	-0.1
JMM	**Marumori**	**1.25**	**298**	P	Pn	06 35 29.0	+0.2
JFT	**Otama**	**1.49**	**280**	P	Pb	06 35 33.3	-0.9
JFT				*e*S	Sb	06 35 52.0	-0.7
JOU	**Okura**	**1.62**	**313**	P	Pb	06 35 35.3	-1.1
JOU				S	Sb	06 35 55.3	-1.1
JMK	**Ichinoseki**	**1.83**	**336**	P	Pb	06 35 39.0	-1.0
JFY	**Yanaizu**	**1.98**	**274**	*e*S	Sb	06 36 05.4	-1.3
JYK	**Kaneyama**	**2.18**	**319**	P	Pn	06 35 43.3	+1.7
JYK				*e*S	Sb	06 36 10.6	-1.8
JOM	**Ohasama**	**2.30**	**343**	P	Pn	06 35 44.9	+1.7
MAT	**Matsushiro**	**3.27**	**258**	P	Pn	06 35 59.9	+3.3
MAT				*e*S	Sn	06 36 36.7	+2.2

IDC 17 06:40:39.4±3.1, 53.˚71N×91.˚04E, h0km, mb1 3.5/3,
mb1mx3.2/39, mbtmp3.5/3, ML3.1/3, Error ellipse:
s-maj=27.2km s-min=23.4km az=43.0
ISC 17 06:40:42.4±4.3,**53.˚8N**±0.˚1×**90.˚8E**±0.˚2,**h10**km,**n9,**
σ1**§30/10,3C-2D,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.57**	**275**	*i*		07 03 30.0	
	baz=90,slow=314,SNR=1.9						
ZALV	**Zalesovo Beam**	**3.57**	**275**	Pn	**Pn**	**06 41 37.8**	**+0.1**
	2.4nm,0.3s,baz=93,slow=12,SNR=36						
ZALV				Lg	Lg	06 42 34.1	
	3.3nm,0.3s,baz=94,slow=24,SNR=4.9						
TLY	**Talaya**	**8.05**	**100**	Lg	Lg	06 44 42.6	
	0.0nm,0.3s,baz=30,slow=3.2,SNR=7.9						
KURBB	**Kurchatov Arra**	**8.19**	**252**	Pn	**Pn**	**06 42 40.5**	**-0.7**
	0.3nm,0.3s,baz=65,slow=14,SNR=23						
KURBB				Sn	**Sn**	**06 44 14.9**	**+1.3**
	0.1nm,0.3s,baz=66,slow=26,SNR=12						
KURBB				Lg	Lg	06 45 00.8	
	0.1nm,0.3s,baz=64,slow=31,SNR=6.6						
KURBB	**Kurchatov Arra**	**8.19**	**252**	⇑Pn	**Pn**	**06 42 40.9**	**-0.2**
	6.6nm,0.6s						
KURBB				⇑Sn	**Sn**	**06 44 11.9**	**-1.7**
	68nm,0.8s						
KURBB				⇑Lg	Lg	06 45 03.4	
	118nm,1.1s						
MK31	**Makanchi Array**	**8.86**	**222**	Pn	**Pn**	**06 42 50.5**	**+0.1**
	2.2nm,0.7s,baz=43,slow=13,SNR=20						
MK31				⇓Sn	**Sn**	**06 44 32.4**	**+2.2**
	5.4nm,0.8s,baz=40,slow=21,SNR=4.0						
MK31				⇓Lg	Lg	06 45 17.9	
	25nm,0.8s,baz=33,slow=27,SNR=4.4						
MKAR	**Makanchi Array**	**8.86**	**222**	Pn	**Pn**	**06 42 49.8**	**-0.6**
	0.4nm,0.3s,baz=34,slow=12,SNR=18						
MKAR				Sn	**Sn**	**06 44 29.0**	**-1.2**
	0.3nm,0.3s,baz=40,slow=23,SNR=3.6						
MKAR				Lg	Lg	06 45 19.5	
	0.3nm,0.3s,baz=38,slow=28,SNR=6.9						
SONM	**Songino Array**	**11.48**	**115**	Lg	Lg	06 46 38.7	
	0.2nm,0.3s,baz=292,slow=27,SNR=8.6						
BVAR	**Borovoye Array**	**12.22**	**275**	Pn	**Pn**	**06 43 36.8**	**+0.4**
	0.1nm,0.3s,baz=46,slow=6.2,SNR=2.3						

RSNC 17 06:53:38.7±0.9, 8.˚45N×72.˚13W, h2km±7km, ML2.1
FUNV 17 06:53:39.0, 8.˚32N×72.˚10W, h3km, MW3.0
ISC 17 06:53:36.5±1.3,**8.˚38N**±0.˚03×**72.˚08W**±0.˚03,**h4**km±12km,
n17,σ1**§52/28,1D,Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**1.22**	**94**	*e*P	**Pg**	**06 54 00.8**	**+1.0**
SOCV				*e*S	**Sn**	**06 54 18.5**	**+1.3**
SOCV	**Socops**	**1.22**	**94**	*e*P	**Pg**	**06 54 00.1**	**+1.0**
SOCV				*e*S	**Sn**	**06 54 18.4**	**+1.2**
OCAC	**Ocana**	**1.23**	**264**	*e*P	**Pn**	**06 53 59.6**	**-1.0**
OCAC				*e*S	**Sg**	**06 54 16.4**	**+0.2**
OCAC				*i*		06 54 17.6	
	comp=Z,56nm,0.2s						
MCQV	**Machiques**	**1.72**	**345**	*e*P	**Pg**	**06 54 10.0**	**+0.5**
MCQV				*e*S	**Sg**	**06 54 33.0**	**+1.2**
SMLC	**San Martn de**	**2.01**	**282**	*e*P	**Pn**	**06 54 11.5**	**+0.3**
SMLC				*e*S	**Sb**	**06 54 39.3**	**+0.3**
SMLC				*i*		06 54 40.1	
	comp=Z,31nm,0.1s						
BRRC	**Barranca, Sant**	**2.05**	**232**	⇓*i*P	**Pb**	**06 54 14.2**	**0.0**
BRRC				*e*S	**Sb**	**06 54 40.1**	**+0.1**
BRRC				*i*		06 54 45.2	
	comp=Z,7.9nm,0.3s						
BARC	**Barichara**	**2.08**	**212**	*e*P	**Pb**	**06 54 14.7**	**-0.2**
BARC				*e*S	**Sb**	**06 54 41.0**	**-0.3**
BARC				*i*		06 54 46.5	
	comp=Z,13nm,0.3s						
CURV	**Curarigua**	**2.65**	**52**	*e*P	**Pb**	**06 54 22.8**	**-1.8**
RUSC	**La Rusia**	**2.66**	**202**	*e*P	**Pb**	**06 54 24.5**	**-0.5**
RUSC				*e*S	**Sg**	**06 54 59.3**	**-2.8**
RUSC				*i*		06 55 02.0	
	comp=Z,4.9nm,0.4s						
RUSC	**La Rusia**	**2.66**	**202**	*e*P	**Pn**	**06 54 21.4**	**+0.8**
RUSC				*e*S	**Sn**	**06 54 52.5**	**-1.0**
SANV	**Sanarito**	**2.75**	**66**	*e*P	**Pb**	**06 54 24.5**	**-1.8**
SANV				*e*S	**Sb**	**06 54 57.3**	**-3.2**
ZARC	**Zaragoza, Cauc**	**2.89**	**252**	*e*S	**Sb**	**06 55 04.9**	**+0.7**
ZARC				*i*		06 55 08.0	
	comp=Z,4.2nm,0.2s						
DABV	**Dabajuro**	**2.90**	**29**	*e*P	**Pb**	**06 54 26.1**	**-2.7**
PTBC	**PUERTO BERRIO,**	**2.98**	**232**	*e*S	**Sb**	**06 55 06.5**	**-0.4**
PTBC				*i*		06 55 08.5	
	comp=Z,6.0nm,0.4s						
SIQV	**Siquisique**	**3.18**	**45**	*e*P	**Pn**	**06 54 29.9**	**+2.6**
BAUV	**El Baul**	**4.04**	**82**	*e*P	**Pn**	**06 54 41.2**	**+2.1**
BAUV				*e*S	**Sn**	**06 55 26.3**	**-0.5**
MONV	**Montecano**	**4.12**	**30**	*e*P	**Pn**	**06 54 41.6**	**+1.5**

MAN 17 07:04:50.7, 10.˚58N×126.˚02E, h9km, MS3.7
MAN INTENSITY I - PILAR AND DAPA.
IDC 17 07:04:54.0±4.8, 10.˚60N×126.˚00E, h65km±45km, mb4.1/21,
mb1 4.2/21, mb1mx4.0/41, mbtmp4.4/21, MS3.3/11,
Ms1 3.3/11, ms1mx3.1/53, Error ellipse: s-maj=24.7km
s-min=10.6km az=78.0
NEIC 17 07:04:58.1±2.5, 10.˚68N±0.˚07×125.˚9E±0.˚1, h100km±6km,
mb4.5/32, Error ellipse: s-maj=14.6km s-min=10.5km
az=99.0
ISC 17 07:04:48.9±1.4,**10.˚67N**±0.˚05×**126.˚11E**±0.˚06,**h22**km±10km,
n92,σ1**§70/83,mb4.5/33,MS3.3/9,17C-6D,Fault plane**
solution: NP1:ϕ358.75458°,δ14.36581°,λ-115.80249°.
NP2:ϕ205.27736°,δ77.09265°,λ-83.63884°. **Principal**
axes: T Plg31.8061°, Azm289.9879°; N Plg6.1998°,
Azm23.8509°; P Plg57.4526°, Azm123.6506°; **Philippine**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.88**	**179**	*e*P	**Pb**	**07 05 04.3**	**-1.2**
GLSP				*e*S	**Sb**	**07 05 16.0**	**-0.8**
MSLP	**Maasin**	**1.34**	**247**	*e*P	**Pn**	**07 05 12.9**	**+0.7**
MSLP				*e*S	**Sn**	**07 05 30.8**	**+1.4**
BUTP	**Butuan**	**1.75**	**196**	*e*P	**Pb**	**07 05 19.5**	**-0.9**
BUTP				*e*S	**Sb**	**07 05 46.5**	**+4.5**
LLP	**Lapu-Lapu**	**2.14**	**261**	⇓*e*P	**Pn**	**07 05 25.5**	**+2.3**
LLP				*e*S	**Sb**	**07 05 53.6**	**+0.5**
CGP	**Cagayan de Oro**	**2.60**	**213**	⇑*e*P	Pb	07 05 40.6	+5.6
CGP				*e*S	**Sb**	**07 06 05.0**	**-1.5**
RCP	**Roxas**	**3.42**	**285**	⇑*e*P	**Pn**	**07 05 44.7**	**+3.8**
GUIM	**Jordan**	**3.46**	**270**	*e*P	**Pn**	**07 05 43.5**	**+2.0**
GUIM				*e*S	Sn	07 05 56.1	-26
CNOP	**Candoni, Negro**	**3.52**	**257**	*e*P	**Pn**	**07 05 44.0**	**+1.8**
CNOP				*e*S	**Sn**	**07 06 26.4**	**+3.2**
DAV	**Davao City (W)**	**3.61**	**188**	LR	LR	07 07 32.7	
	comp=Z,677nm,19.9s,baz=358,slow=45						
DAV	**Davao City (W)**	**3.61**	**188**	Pn	**Pb**	**07 05 54.1**	**+2.0**
MATI	**Mati**	**3.70**	**178**	*e*P	**Pb**	**07 05 52.0**	**-1.6**
MATI				*e*S	**Sn**	**07 06 31.2**	**+3.5**
PAGZ	**Pagadian**	**3.89**	**224**	*e*P	**Pn**	**07 05 48.9**	**+1.6**
PAGZ				*e*S	**Sn**	**07 06 36.3**	**+4.0**
SKMP	**Bagumbayan, Su**	**4.40**	**201**	*e*P	**Pn**	**07 05 58.9**	**+4.4**
SKMP				*e*S	**Sb**	**07 06 55.5**	**-2.8**
DDMP	**Don Marcelino,**	**4.55**	**185**	*e*P	**Pb**	**07 06 03.6**	**-4.5**
DDMP				*e*S	**Sn**	**07 06 49.4**	**+0.6**
LQP	**Lukban**	**5.63**	**308**	⇑*e*P	**Pn**	**07 06 14.5**	**+3.0**
MYLDM	**Lahad Datu**	**9.30**	**235**	Pn	Pn	07 07 08.9	+7.2
KKM	**Kota Kinabalu**	**10.81**	**246**	Pn	Pn	07 07 28.1	+5.5
LUWI	**Luwuk**	**12.10**	**196**	Pn	Pn	07 07 46.1	+6.1
TPUB	**Tu-pu**	**13.61**	**338**	Pn	**P**	**07 08 06.5**	**-3.0**
SSLB	**Suanglung**	**13.94**	**340**	P	**P**	**07 08 14.2**	**+1.0**
SOEI	**Soe**	**20.37**	**185**	P	Pn	07 09 25.9	-0.5
SOEI				IAmb	IAmb	07 09 44.4	
	comp=Z,20nm,0.7s						
BATI	**Baumata**	**20.88**	**187**	P	Pn	07 09 31.9	-0.4
	comp=Z,40nm,0.4s,baz=24,slow=2.4,SNR=4.6						
MTN	**Manton Dam**	**23.88**	**168**	P	**P**	**07 10 01.1**	**+0.1**
MTN				IAmb	IAmb	07 10 16.6	
	comp=Z,15nm,1.1s						
JWT	**Wachi**	**25.92**	**18**	P	**P**	**07 10 22.4**	**+2.8**
KNRA	**Kununurra**	**26.31**	**174**	P	**P**	**07 10 23.5**	**+0.4**
KNRA				IAmb	IAmb	07 10 27.8	
	comp=Z,12nm,0.7s						
KSRS	**Korea Array**	**26.72**	**3**	P	**P**	**07 10 27.8**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=186,slow=9.3,SNR=5.8						
KSRS				LR	LR	07 19 46.8	
	comp=Z,29nm,22.0s,baz=164,slow=33						
CMAR	**Chiang Mai Arr**	**27.38**	**290**	P	**P**	**07 10 33.1**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=99,slow=7.6,SNR=11						
FITZ	**Fitzroy Crossi**	**28.59**	**181**	P	**P**	**07 10 43.1**	**-0.4**
	comp=Z,4.7nm,0.4s,baz=9.1,slow=8.9,SNR=26						
WB0	**Warramunga Arr**	**31.32**	**165**	P	**P**	**07 11 07.1**	**-0.8**
WB0				IAmb	IAmb	07 11 10.4	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**31.48**	**165**	P	**P**	**07 11 08.1**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=326,slow=10,SNR=15						
WRA				LR	LR	07 27 39.0	
	comp=Z,43nm,18.3s,baz=35,slow=43						
WRA	**Warramunga Arr**	**31.48**	**165**	P	**P**	**07 11 08.5**	**-0.6**
WR0	**Warramunga Arr**	**31.55**	**165**	P	**P**	**07 11 09.2**	**-0.5**
PSA00	**Pilbara Seismi**	**32.62**	**191**	P	**P**	**07 11 19.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**33.80**	**8**	P	**P**	**07 11 30.9**	**+1.7**
	comp=Z,6.5nm,0.7s,baz=191,slow=8.8,SNR=18						
AS31	**Alice Springs**	**34.96**	**167**	P	**P**	**07 11 39.2**	**-0.4**
AS31				IAmb	IAmb	07 11 42.7	
	comp=Z,2.8nm,0.3s						
ASAR	**Alice Springs**	**34.96**	**167**	P	**P**	**07 11 39.2**	**-0.4**
	comp=Z,2.6nm,0.3s,baz=341,slow=7.3,SNR=39						
SHL	**Shillong**	**35.61**	**299**	P	**P**	**07 11 43.3**	**-2.1**
HNR	**Honiara**	**39.14**	**119**	LR	LR	07 26 14.9	
	comp=Z,30nm,21.8s,baz=208,slow=33						
H11S3	**WAKE ISLAND Hy**	**39.96**	**74**	T	T	07 55 07.9	
	baz=265,slow=75,SNR=116						
H11S1	**WAKE ISLAND Hy**	**39.98**	**74**	T	T	07 55 13.3	
	baz=265,slow=75,SNR=46						
H11S2	**WAKE ISLAND Hy**	**39.98**	**74**	T	T	07 55 07.9	
	baz=265,slow=75,SNR=63						
H11N1	**WAKE ISLAND Hy**	**40.28**	**72**	T	T	07 55 34.4	
	baz=264,slow=74,SNR=198						
H11N2	**WAKE ISLAND Hy**	**40.29**	**72**	T	T	07 55 35.8	
	baz=264,slow=74,SNR=127						
H11N3	**WAKE ISLAND Hy**	**40.30**	**72**	T	T	07 55 39.3	
	baz=264,slow=74,SNR=177						
SONM	**Songino Array**	**40.59**	**340**	P	**P**	**07 12 28.1**	**+1.1**
	comp=Z,2.2nm,0.6s,baz=156,slow=9.9,SNR=8.1						
FORT	**Forrest**	**41.25**	**177**	P	**P**	**07 12 32.2**	**-0.2**
BBOO	**Buckleboo**	**44.26**	**168**	P	**P**	**07 12 57.2**	**+0.3**
BBOO				IAmb	IAmb	07 13 14.3	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**44.83**	**161**	P	**P**	**07 13 01.5**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=333,slow=10,SNR=8.6						
STKA	**Stephens Creek**	**44.83**	**161**	P	**P**	**07 13 01.7**	**+0.3**
PETK	**Petropavlovsk-**	**49.34**	**25**	P	**P**	**07 13 37.4**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=180,slow=5.9,SNR=6.1						
PETK				LR	LR	07 32 55.0	
	comp=Z,25nm,21.7s,baz=168,slow=34						
PETK	**Petropavlovsk-**	**49.34**	**25**	P	**P**	**07 13 38.2**	**+1.8**
POO	**Poona**	**51.03**	**285**	*e*P	**P**	**07 13 49.0**	**-0.8**
MK31	**Makanchi Array**	**51.62**	**323**	P	**P**	**07 13 54.3**	**+0.5**
MKAR	**Makanchi Array**	**51.62**	**323**	P	**P**	**07 13 54.1**	**+0.3**
	comp=Z,7.6nm,0.6s,baz=122,slow=8.2,SNR=103						
MKAR				LR	LR	07 36 04.4	
	comp=Z,26nm,18.4s,baz=126,slow=36						
MAKZ	**Makanchi**	**51.81**	**323**	P	**P**	**07 13 55.7**	**+0.4**
ZAA0	**Zalesovo Array**	**54.20**	**331**	P	**P**	**07 14 12.4**	**-0.3**
ZAA0				IAmb	IAmb	07 14 13.3	
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**54.20**	**331**	P	**P**	**07 14 12.4**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=122,slow=7.0,SNR=12						
ZALV	**Zalesovo Beam**	**54.20**	**331**	P	**P**	**07 14 12.0**	**-0.7**
GAR	**Garm**	**56.92**	**310**	P	**P**	**07 14 32.3**	**-0.3**
KK31	**Karatay Array**	**57.86**	**314**	P	**P**	**07 14 38.4**	**-0.8**
KK31				IAmb	IAmb	07 14 39.2	
	comp=Z,6.8nm,1.3s						
KKAR	**Karatay Array**	**57.86**	**314**	P	**P**	**07 14 38.9**	**-0.3**
BRVK	**Borovoye**	**61.32**	**325**	P	**P**	**07 15 02.8**	**0.0**
BRVK				IAmb	IAmb	07 15 27.1	
	comp=Z,3.9nm,0.8s						
NRIK	**Noril'sk**	**63.59**	**346**	P	**P**	**07 15 18.5**	**+0.8**
	comp=Z,7.5nm,0.8s,baz=144,slow=5.0,SNR=10						
NRIK	**Noril'sk**	**63.59**	**346**	P	**P**	**07 15 17.4**	**-0.2**
NRIK				IAmb	IAmb	07 15 19.1	
	comp=Z,7.3nm,0.8s						
GEYT	**Ailbeck**	**66.18**	**307**	LR	LR	07 49 23.7	
	comp=Z,41nm,19.0s,baz=175,slow=40						
ABKAR	**Akbulak array**	**66.47**	**319**	P	**P**	**07 15 35.2**	**-1.6**
SOCY	**Socotra**	**70.51**	**279**	P	**P**	**07 16 01.0**	**-1.7**
SOCY				IAmb	IAmb	07 16 01.7	
	comp=Z,8.9nm,0.7s						
IMAR	**Indian Mountai**	**76.31**	**25**	P	**P**	**07 16 37.2**	**+1.4**
KDAK	**Kodiak Island**	**76.42**	**33**	P	**P**	**07 16 37.8**	**+1.2**
KDAK				IAmb	IAmb	07 16 58.4	
	comp=Z,19nm,1.3s						
GNI	**Garni**	**76.63**	**309**	LR	LR	07 53 49.0	
	comp=Z,24nm,18.5s,baz=35,slow=38						
RAYN	**Ar Rayn**	**77.28**	**292**	P	**P**	**07 16 41.0**	**-1.2**
BPAW	**Bear Paw Mtn.**	**77.38**	**27**	P	**P**	**07 16 43.6**	**+1.7**
BPAW				IAmb	IAmb	07 16 45.8	
	comp=Z,6.0nm,1.1s						
MLY	**Manley**	**77.51**	**26**	P	**P**	**07 16 43.5**	**+0.9**
MLY				IAmb	IAmb	07 17 12.5	
	comp=Z,8.2nm,1.4s						
TOLK	**Toolik Lake Re**	**78.07**	**22**	P	**P**	**07 16 47.1**	**+1.3**
I23K	**Minto, Yukon-K**	**78.10**	**25**	P	**P**	**07 16 46.1**	**+0.3**
ILAR	**Eielson Array**	**79.15**	**26**	P	**P**	**07 16 51.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=236,slow=5.6,SNR=5.5						
ILAR	**Eielson Array**	**79.15**	**26**	P	**P**	**07 16 51.1**	**-0.6**
BMAR	**Burnt Mountain**	**79.97**	**23**	P	**P**	**07 16 57.8**	**

ESDC	**Sonseca Array**	**91.74**	**50**	LR	LR	07 56 28.5		
	comp=Z,20nm,18.6s,baz=285,slow=34							
ARCES	**ARCESS Array B**	**94.67**	**16**	LR	LR	08 01 06.0		
	comp=Z,24nm,19.4s,baz=20,slow=35							
CMAR	**Chiang Mai Arr**	**145.46**	**321**	PKPbc	**PKPdf**	**07 24 52.6**	**-0.8**	
	0.5nm,0.4s,baz=2.4,slow=3.6,SNR=5.4							

*NNC **17** 07:08:27.6±0.9, 41.˚84N×78.˚37E, h0km, mpv3.3, Error ellipse: s-maj=9.7km s-min=6.2km az=49.0, Suspected Mining explosion.*
*KRNET **17** 07:08:29.0±0.1, 42.˚30N×78.˚24E, h14km, mb2.2*
ISC 17 07:08:28.4±2.2, 42.˚18N±0.˚09×78.˚28E±0.˚08, h0km, n10, σ2s33/17, 10C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.32**	**16**	⇑*i*P	**Pg**	**07 08 33.8**	**-0.7**
	baz=31						
PRZ				⇑*i*S	**Sg**	**07 08 37.2**	**-1.4**
	baz=31						
ANVS	**Anan'yevo**	**0.76**	**323**	⇓*i*P	**Pg**	**07 08 41.4**	**-1.5**
	baz=19						
ANVS				⇓*i*S	**Sg**	**07 08 50.5**	**-2.2**
	baz=19						
KDJ	**Kajisay**	**0.82**	**267**	⇓*i*P	**Pg**	**07 08 44.6**	**+0.5**
	baz=58						
KDJ				⇓*i*S	**Sg**	**07 08 54.8**	**+0.1**
	baz=58						
TNSS	**Tian-Shan**	**1.31**	**312**	P	**Pn**	**07 08 56.7**	**+2.5**
	4.0nm,0.2s						
TNSS				S	**Sn**	**07 09 18.9**	**+6.2**
	1.7nm,0.2s						
KOTS	**Kotyrbulak**	**1.36**	**321**	P	**Pn**	**07 08 58.3**	**+3.5**
	4.1nm,0.1s						
KOTS				S	Sn	07 09 21.0	+7.3
	3.8nm,0.3s						
ULHL	**Ulahol**	**1.52**	**273**	⇑*i*P	**Pn**	**07 08 56.4**	**-0.6**
	baz=69						
ULHL				⇑*i*S	**Sg**	**07 09 16.5**	**-0.6**
	baz=69						
BOOM	**Boomskoye usch**	**1.76**	**281**	⇑*i*P	**Pn**	**07 09 00.5**	**+0.2**
	baz=77						
BOOM				⇑*i*S	**Sb**	**07 09 23.4**	**-1.1**
	baz=77						
ARXS	**Arharly**	**2.06**	**351**	Pg	Pg	07 09 11.7	+3.9
	6.0nm,0.2s						
ARXS				Lg	Lg	07 09 44.3	
	3.0nm,0.4s						
TKM2	**Tokmak 2**	**2.12**	**291**	⇑*i*P	**Pb**	**07 09 06.1**	**-1.7**
	baz=89						
TKM2				⇑*i*S	**Sb**	**07 09 32.8**	**-1.9**
	baz=89						
USP	**Ospenovka**	**2.99**	**293**	⇑*i*P	**Pn**	**07 09 18.1**	**+1.0**
	baz=91						
USP				⇑*i*S	**Sn**	**07 09 54.1**	**+0.4**
	baz=91						

JMA 17 07:14:23.7±0.1, 27.˚99N×129.˚47E, h32km±3km, M2.9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMN	**Amaminishikomi**	**0.36**	**314**	P	Pb	07 14 32.1	-0.1
JAMN				S	Sn	07 14 38.7	-0.1
JAM	**Amami Oshima**	**0.44**	**16**	P	Pb	07 14 32.7	-0.6
JAM				S	Sb	07 14 39.3	-0.5
JTK	**Tokunoshima**	**0.50**	**246**	P	Pb	07 14 33.9	-0.4
JTK				S	Sb	07 14 41.2	-0.3
JZK	**Kikaishima**	**0.55**	**54**	P	Pb	07 14 35.0	0.0
JZK				*e*S	Sn	07 14 44.3	+0.9
JOKE	**Okinoerabujima**	**1.01**	**232**	P	Pn	07 14 42.1	+0.4
JTAJ	**Takarajima**	**1.18**	**349**	P	Pn	07 14 44.6	+0.6
JYRO	**Yoronjima**	**1.32**	**224**	P	Pn	07 14 46.5	+0.6
JYRO				*e*S	Sn	07 15 03.3	+0.9
JOW	**Kunigami**	**1.57**	**223**	P	Pn	07 14 50.3	+1.0
JNN	**Nakanoshima**	**1.88**	**11**	P	Pn	07 14 54.7	+1.1
JYAK	**Yakushimahirau**	**2.42**	**22**	P	Pn	07 15 01.8	+0.8
JYAK				*e*S	Sn	07 15 31.2	+1.7
JMZ	**Minamidaito 2**	**2.67**	**144**	P	Pn	07 15 01.8	-2.7

NNC 17 07:19:57.7±0.4, 50.˚01N×78.˚73E, h0km, mb3.8, mpv3.2, 13C-6D, Error ellipse: s-maj=3.5km s-min=1.9km az=61.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.59**	**347**	⇑P	Pg	07 20 09.1	+0.1
KUR07				⇓S	Sg	07 20 18.0	+1.4
KUR06	**Kurchatov Arra**	**0.61**	**347**	⇑P	Pg	07 20 09.5	+0.1
KUR06				⇑S	Sg	07 20 18.2	+1.0
KUR14	**Kurchatov Arra**	**0.61**	**352**	⇑P	Pg	07 20 09.4	0.0
KUR14				⇑S	Sg	07 20 18.1	+0.8
KUR15	**Kurchatov Arra**	**0.62**	**350**	⇓P	Pg	07 20 09.5	0.0
KUR15				⇓S	Sg	07 20 18.8	+1.3
KURBB	**Kurchatov Arra**	**0.63**	**348**	⇑P	Pg	07 20 09.9	+0.2
	27nm,0.3s						
KURBB				⇑S	Sg	07 20 18.8	+0.9
	30nm,0.3s						
KUR16	**Kurchatov Arra**	**0.64**	**347**	⇓P	Pg	07 20 10.0	+0.1
KUR16				⇑S	Sg	07 20 19.1	+0.9
KUR17	**Kurchatov Arra**	**0.64**	**345**	⇑P	Pg	07 20 10.3	+0.3
KUR17				⇓S	Sg	07 20 19.7	+1.3
KUR05	**Kurchatov Arra**	**0.65**	**349**	⇑P	Pg	07 20 10.1	+0.1
KUR05				⇑S	Sg	07 20 19.1	+0.7
SEM	**Semipalatinsk**	**1.05**	**67**	P	Pg	07 20 17.1	-0.8
	4.1nm,0.1s						
SEM				S	Sb	07 20 33.1	-0.3
	41nm,0.2s						
BRZS	**Berezniki**	**3.91**	**272**	Pg	Pg	07 21 10.0	-2.5
	7.5nm,0.3s						
MK31	**Makanchi Array**	**4.00**	**142**	⇑Pn	Pn	07 21 02.0	+1.8
	0.1nm,0.1s,baz=323,slow=10,SNR=26						
MK31				⇓Pg	Pb	07 21 10.8	+1.8
	0.7nm,0.3s,baz=320,slow=14,SNR=8.8						
MK31				⇑Lg	Lg	07 22 02.8	
	4.8nm,0.5s,baz=331,slow=27,SNR=19						
ARXS	**Arharly**	**5.83**	**186**	Pg	Pb	07 21 43.7	+3.4
	2.6nm,0.3s						
ARXS				Lg	Lg	07 23 01.4	
	6.2nm,0.5s						
BTLS	**Baital**	**5.90**	**214**	Pg	Pg	07 21 46.9	-3.8
	0.9nm,0.2s						
KTBS	**Karatobe**	**6.46**	**193**	Pg	Pb	07 21 54.4	+3.5
	1.5nm,0.5s						
KTBS				Lg	Lg	07 23 19.7	
	5.7nm,0.7s						
PDGK	**Podgornoye**	**6.70**	**175**	Pg	Pg	07 22 01.0	-5.1
	0.6nm,0.4s						
PDGK				Lg	Lg	07 23 31.0	
	1.9nm,0.6s						

*VIE **17** 07:24:53.5±0.6, 47.˚07N×9.˚50E, h5km±5km, ml1.3/1, Error ellipse: s-maj=3.3km s-min=1.5km az=73.0 5 km ENE of Sargans*
ZUR 17 07:24:53.2, 47.˚07N×9.˚50E, h7km±1km, MLh0.9/10, 4C-4D, Error ellipse: s-maj=4.2km s-min=0.7km az=151.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STRW	**Triesenberg, W**	**0.06**	**39**	⇑Pg	Pg	07 24 55.2	+0.1
	0.2nm,SNR=2.2						
STRW				⇑Pg	Pg	07 24 55.2	+0.1
STRW				Sg	Sg	07 24 56.5	+0.2
PLONS	**Plons/SG**	**0.08**	**254**	⇑Pg	Pg	07 24 55.6	+0.2
PLONS				⇑Pg	Pg	07 24 55.6	+0.2
	0.1nm,SNR=4.8						
PLONS				Sg	Sg	07 24 57.1	+0.2
SBUB	**Buchserberg Ma**	**0.09**	**329**	⇓Pg	Pg	07 24 55.6	+0.1
SBUB				⇓Pg	Pg	07 24 55.6	+0.1
	SNR=0.7						
SBUB				Sg	Sg	07 24 57.1	+0.1
SBUA2	**Buchs, Altendo**	**0.09**	**348**	Pg	Pg	07 24 55.5	+0.1
SBUA2				Pg	Pg	07 24 55.5	+0.1
	0.2nm,SNR=1.8						
SBUA2				Sg	Sg	07 24 57.1	+0.2
LIENZ	**Kamor/St.Gall**	**0.22**	**359**	Pg	Pg	07 24 58.1	+0.3
LIENZ				Pg	Pg	07 24 58.1	+0.3
	SNR=1.1						
DAVA	**Damuels**	**0.34**	**50**	*e*Pg	Pg	07 25 00.2	+0.3
	1.2nm,0.1s						
DAVA				*e*Sg	Sg	07 25 05.3	+0.9
	4.7nm,0.2s						
PANIX	**Pigniu (Panix)**	**0.36**	**227**	⇓Pg	Pg	07 25 00.4	+0.1
	SNR=0.9						
PANIX				⇓Pg	Pg	07 25 00.4	+0.1
PANIX				Sg	Sg	07 25 05.1	0.0
DAVOX	**Davos/Dischmat**	**0.39**	**138**	Sg	Sg	07 25 06.7	+0.7
LLS	**Linth-Limmern**	**0.41**	**236**	Pg	Pg	07 25 01.0	-0.2

ROM 17 07:26:14.1±0.1, 44.˚206N±0.˚006×10.˚897E±0.˚004, h11km, ML1.5/2, Error ellipse: s-maj=0.6km s-min=0.3km az=9.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.16**	**22**	P	Pg	07 26 18.4	+0.7
ZCCA				S	Sg	07 26 21.3	+1.0
ZCCA				AML	AML		
	comp=E,144μm,0.3s						
ZCCA				AML	AML		
	comp=N,212μm,0.4s						
ZCCA				AML	AML		
	comp=E,144μm,0.3s						
FNVD	**Fontana Vidola**	**0.17**	**103**	P	Pg	07 26 18.1	+0.2
FNVD				S	Sg	07 26 21.5	+0.9
POPM	**Popiglio**	**0.19**	**212**	P	Pg	07 26 18.7	+0.5
POPM				S	Sg	07 26 22.4	+1.4
POPM				AML	AML		
	comp=N,592μm,0.2s						
POPM				AML	AML		
	comp=E,615μm,0.2s						
MTCR	**Monte La Croce**	**0.19**	**158**	P	Pg	07 26 18.6	+0.3
MTCR				S	Sg	07 26 22.2	+0.9
MTCR				AML	AML		
	comp=E,370μm,0.2s						
MTCR				AML	AML		
	comp=N,234μm,0.2s						
BDI	**Bagni Di Lucca**	**0.26**	**237**	P	Pg	07 26 19.7	+0.2
BDI				S	Sb	07 26 24.2	-1.1
CARD	**Cardoso**	**0.35**	**239**	P	Pg	07 26 20.9	-0.1
CARD				S	Sg	07 26 26.6	+0.9
SARO	**Sassorosso**	**0.36**	**267**	P	Pg	07 26 21.5	+0.2
SARO				S	Sb	07 26 27.2	-0.9
SEI	**Scarperia**	**0.36**	**114**	P	Pg	07 26 21.5	+0.1
SEI				S	Sb	07 26 27.4	-0.9
VLC	**Villacollemand**	**0.37**	**263**	P	Pg	07 26 21.8	+0.3
VLC				S	Sb	07 26 27.7	-0.7
VLC				AML	AML		
	comp=N,180μm,1.1s						
VLC				AML	AML		
	comp=N,180μm,1.1s						
VLC				AML	AML		
	comp=E,242μm,0.5s						
VLC				AML	AML		
	comp=N,162μm,1.1s						
VLC				AML	AML		
	comp=E,246μm,0.5s						
MAIM	**Mastiano**	**0.41**	**225**	P	Pg	07 26 22.4	+0.2
MAIM				S	Sb	07 26 28.7	-0.9
CRMI	**Carmignano**	**0.42**	**173**	P	Pb	07 26 23.0	-0.5
CRMI				S	Sb	07 26 28.9	-0.9
EQUI	**Equi**	**0.54**	**266**	P	Pg	07 26 24.9	+0.4
EQUI				S	Sg	07 26 31.8	+0.2
RUFI	**Rufina**	**0.57**	**129**	P	Pg	07 26 25.4	+0.1
RUFI				S	Sg	07 26 33.5	+0.7
NDIM	**Novi di Modena**	**0.68**	**0**	S	Sn	07 26 43.0	+2.8

*IDC **17** 07:28:02.9±1.7, 34.˚96N×27.˚30E, h0km, mb3.4/2, mb1 3.3/3, mb1mx3.2/32, mbtmp3.3/3, ML4.1/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/30, Error ellipse: s-maj=67.6km s-min=27.2km az=134.0*
*ISK **17** 07:28:03.3, 35.˚40N×26.˚92E, h9km, ML3.1/11*
*THE **17** 07:28:04.8, 35.˚40N×26.˚94E, h1km±1km, ML3.0/6, Error ellipse: s-maj=3.6km s-min=0.7km az=149.0*
*ATH **17** 07:28:05.5, 35.˚48N×26.˚90E, h14km±3km, ML3.0/8, Error ellipse: s-maj=5.1km s-min=1.0km az=147.0*
ISC 17 07:28:04.9±0.9, 35.˚42N±0.˚05×26.˚92E±0.˚03, h13km±6km, n52, σ0s64/72, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.23**	**56**	P	Pg	**07 28 09.9**	**0.0**
KARP				S	**Sg**	**07 28 13.9**	**+0.5**
KARP				AML	AML	07 28 14.5	
	comp=E,43742μm,0.1s						
KARP				AML	AML	07 28 14.5	
	comp=N,75304μm,0.2s						
KARP	**Karpathos**	**0.23**	**56**	P	**Pg**	**07 28 09.9**	**0.0**
KARP				S	**Sg**	**07 28 13.8**	**+0.5**
	comp=N,33μm,0.2s						
KARP	**Karpathos**	**0.23**	**56**	PG	**Pg**	**07 28 09.6**	**-0.3**
ZKR	**Zakros**	**0.65**	**243**	P	**Pg**	**07 28 17.6**	**+0.1**
ZKR				S	**Sb**	**07 28 28.3**	**+1.2**
ZKR				AML	AML	07 28 30.6	
	comp=E,3434μm,0.3s						
ZKR				AML	AML	07 28 30.8	
	comp=N,2018μm,0.5s						
ZKR	**Zakros**	**0.65**	**243**	P	**Pg**	**07 28 17.7**	**+0.1**
ZKR				S	**Sb**	**07 28 28.3**	**+1.2**
	comp=N,2μm,0.7s						
STIA	**Sitia Lasithi**	**0.71**	**253**	P	**Pg**	**07 28 17.9**	**-0.9**
STIA				S	**Sb**	**07 28 29.6**	**+0.7**
FRMA	**Ierapetra Chan**	**1.05**	**248**	P	**Pg**	**07 28 23.2**	**-2.0**
FRMA				S	**Sg**	**07 28 38.6**	**-0.3**
	comp=N,532nm,0.4s						
NPS	**Neapolis**	**1.08**	**262**	P	**Pn**	**07 28 26.1**	**+0.3**
NPS				S	**Sg**	**07 28 38.9**	**-1.0**
NPS				AML	AML	07 28 44.8	
	comp=N,1874μm,0.2s						
NPS				AML	AML	07 28 44.9	
	comp=E,2791μm,0.3s						
NPS	**Neapolis**	**1.08**	**262**	P	**Pn**	**07 28 26.1**	**+0.3**
NPS				S	**Sb**	**07 28 40.4**	**+0.8**
	comp=E,1μm,0.4s						
NIS1	**Nisyros Isl.**	**1.20**	**10**	PN	**Pb**	**07 28 27.1**	**-0.4**
NIS1				SN	**Sn**	**07 28 44.3**	**+0.6**
ARG	**Arkhangelos**	**1.26**	**50**	P	**Pn**	**07 28 27.9**	**-0.3**
ARG				S	**Sb**	**07 28 44.7**	**0.0**
ARG				AML	AML	07 28 46.6	
	comp=E,1810μm,0.4s						
ARG				AML	AML	07 28 51.0	
	comp=N,1183μm,0.6s						
ARG	**Arkhangelos**	**1.26**	**50**	P	**Pn**	**07 28 28.0**	**-0.3**
ARG				S	**Sg**	**07 28 45.4**	**-0.2**
	comp=N,758nm,0.5s						
ARG	**Arkhangelos**	**1.26**	**50**	PN	**Pn**	**07 28 28.1**	**-0.2**
ARG				SN	**Sn**	**07 28 45.7**	**+0.6**
KOSK	**Kos Island**	**1.33**	**2**	PN	**Pn**	**07 28 28.8**	**-0.4**
KOSK				SN	**Sn**	**07 28 47.8**	**+1.0**
KSTL	**Kastelli Herak**	**1.52**	**266**	P	**Pn**	**07 28 30.0**	**-1.8**
SANT	**Santorini**	**1.52**	**309**	P	**Pn**	**07 28 32.2**	**+0.3**
SANT	**Santorini**	**1.52**	**309**	P	**Pn**	**07 28 32.3**	**+0.4**
THR8	**Santorini-Mono**	**1.53**	**311**	P	**Pn**	**07 28 32.3**	**+0.3**
THR8	**Santorini-Mono**	**1.53**	**311**	P	**Pn**	**07 28 32.3**	**+0.3**
THR6	**Thira Island,**	**1.55**	**308**	P	**Pn**	**07 28 32.6**	**+0.3**
THR6	**Thira Island,**	**1.55**	**308**	P	**Pn**	**07 28 32.8**	**+0.5**
THR7	**Fira-Santorini**	**1.57**	**310**	P	**Pn**	**07 28 33.0**	**+0.4**
THR9	**Santorini-Faro**	**1.58**	**307**	P	**Pn**	**07 28 33.3**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.58**	**309**	P	**Pn**	**07 28 32.9**	**+0.2**
THR3	**Thira Island,**	**1.58**	**309**	P	**Pn**	**07 28 32.9**	**+0.2**
THR3	**Thira Island,**	**1.58**	**309**	P	**Pn**	**07 28 33.4**	**+0.7**
THR2	**Thira island,**	**1.59**	**311**	P	**Pn**	**07 28 33.2**	**+0.5**
THR5	**Thira Island,**	**1.62**	**308**	P	**Pn**	**07 28 34.1**	**+0.9**
IDI	**Anoyia**	**1.67**	**266**	P	**Pn**	**07 28 34.3**	**+0.4**
IDI				S	**Sn**	**07 28 55.7**	**+0.5**
IDI				AML	AML	07 29 05.2	
	comp=E,480μm,0.4s						
IDI				AML	AML	07 29 07.6	
	comp=N,585μm,0.5s						
IDI	**Anoyia**	**1.67**	**266**	P	**Pn**	**07 28 34.5**	**+0.6**
BODT	**Bodrum**	**1.67**	**11**	P	**Pn**	**07 28 32.7**	**-1.2**
BODT	**Bodrum**	**1.67**	**11**	PN	**Pn**	**07 28 33.7**	**-0.2**
BODT				SN	**Sn**	**07 28 55.8**	**+0.5**
TURN	**Turunc**	**1.73**	**38**	PN	**Pn**	**07 28 34.7**	**+0.1**
TURN				SN	**Sn**	**07 28 57.7**	**+1.1**
SIVA	**Sivas**	**1.78**	**258**	P	**Pb**	**07 28 38.0**	**+0.7**
SIVA				AML	AML	07 29 13.0	
	comp=N,711μm,0.7s						
SIVA				AML	AML	07 29 14.3	
	comp=E,1084μm,0.7s						

DALY	**Dalyan (Mula)**	**1.98**	**45**	PN	**Pn**	**07 28 38.3**	**+0.2**
DALY				SN	**Sn**	**07 29 03.3**	**+0.5**
APE	**Apeiranthos**	**2.00**	**326**	P	**Pn**	**07 28 38.3**	**-0.1**
APE				AML	AML	07 29 04.3	
	comp=N,318μm,0.2s						
APE				AML	AML	07 29 04.9	
	comp=E,291μm,0.2s						
APE	**Apeiranthos**	**2.00**	**326**	P	**Pn**	**07 28 38.5**	**+0.1**
APE				S	**Sn**	**07 29 03.5**	**+0.2**
	comp=E,152nm,0.2s						
MLSB	**Milas**	**2.00**	**20**	PN	**Pn**	**07 28 38.4**	**0.0**
YER	**Yerkesik**	**2.04**	**32**	P	**Pn**	**07 28 39.2**	**+0.2**
YER	**Yerkesik**	**2.04**	**32**	PN	**Pn**	**07 28 38.9**	**-0.1**
YER				SN	**Sn**	**07 29 05.1**	**+0.8**
FETY	**Fethiye**	**2.13**	**55**	PN	**Pn**	**07 28 40.2**	**-0.1**
FETY				SN	**Sn**	**07 29 06.9**	**+0.3**
VAM	**Vamos**	**2.23**	**271**	P	**Pn**	**07 28 43.1**	**+1.6**
VAM				AML	AML	07 29 21.3	
	comp=N,381μm,0.2s						
VAM				AML	AML	07 29 21.4	
	comp=E,335μm,0.3s						
AKAS	**Kas**	**2.33**	**69**	PN	**Pn**	**07 28 43.1**	**+0.1**
AKAS				SN	**Sn**	**07 29 10.9**	**-0.7**
GVD	**Gavdhos**	**2.40**	**257**	P	**Pb**	**07 28 47.5**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**2.64**	**17**	PN	**Pn**	**07 28 47.4**	**0.0**
ELL	**Elmali**	**2.76**	**60**	PN	**Pn**	**07 28 49.0**	**0.0**
URLA	**Izmir**	**2.95**	**355**	PN	**Pn**	**07 28 51.5**	**0.0**
KORT	**Korkueli**	**3.19**	**59**	PN	**Pn**	**07 28 55.2**	**+0.3**
BRTR	**Keskin Array B**	**6.85**	**49**	LR	LR	07 32 42.9	
	comp=E,27nm,18.4s,baz=192,slow=40						
AKASG	**Malin Array Be**	**15.37**	**6**	Pn	**P**	**07 31 45.6**	**-0.4**
	comp=E,0.7nm,0.3s,baz=193,slow=12,SNR=5.7						
TORD	**Torodi Ar. Bea**	**31.77**	**232**	P	**P**	**07 34 28.7**	**-0.3**
	comp=E,0.2nm,0.4s,baz=33,slow=8.9,SNR=2.9						
MKAR	**Makanchi Array**	**42.43**	**57**	P	**P**	**07 35 59.1**	**-0.2**
	comp=E,0.5nm,0.7s,baz=263,slow=8.5,SNR=6.0						

*IDC **17** 07:41:49.9±1.5, 8.˚30S×117.˚88E, h0km, mb4.0/5, mb1 4.1/8, mb1mx3.7/44, mbtmp3.9/8, ML3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/48, Error ellipse: s-maj=52.2km s-min=18.1km az=63.0*
*DJA **17** 07:41:50.0±0.4, 9.˚5S±6.˚×11.˚8E±.˚, h37km±5km, M3.9/7, MLv3.9/7*
ISC 17 07:41:54.3±0.8, 8.˚42S±0.˚06×118.˚01E±0.˚06, h35km, n16, σ2s15/17, mb4.0/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.47**	**210**	P	**Pn**	**07 42 02.1**	**-2.5**
PLAI				S	**Sn**	**07 42 07.6**	**-4.1**
TWSI	**Taliwang, Sumb**	**1.16**	**254**	P	**Pn**	**07 42 12.7**	**-1.4**
TWSI				S	**Sn**	**07 42 27.1**	**-1.7**
SRBI	**Singaraja**	**2.79**	**277**	P	**Pn**	**07 42 35.9**	**-0.6**
BASI	**Baing, Sumba**	**3.10**	**126**	P	Pn	07 42 30.8	-10
BSSI	**Bau Bau, Buton**	**3.34**	**48**	P	**Pn**	**07 42 41.8**	**-2.3**
KAPI	**Kappang**	**3.79**	**27**	Pn	**Pn**	**07 42 47.8**	**-2.6**
	5.5nm,0.3s,baz=159,slow=5.6,SNR=8.4						
KAPI				Sn	**Sn**	**07 43 31.5**	**-2.3**
	6.3nm,0.3s,baz=60,slow=21,SNR=8.2						
KAPI				LR	LR	07 44 29.5	
	comp=Z,170nm,19.7s,baz=161,slow=42						
JAGI	**Jajag, Banyuwa**	**3.82**	**269**	P	**Pn**	**07 42 50.9**	**+0.2**
MMRI	**Maumere**	**4.18**	**93**	P	Pn	07 43 12.8	+17
BNSI	**Bone**	**4.50**	**28**	P	**Pn**	**07 42 58.9**	**-1.1**
FITZ	**Fitzroy Crossi**	**12.15**	**143**	Pn	**Pn**	**07 44 45.0**	**-0.1**
	0.4nm,0.3s,baz=322,slow=7.8,SNR=17						
WRA	**Warramunga Arr**	**19.52**	**128**	P	**Pn**	**07 46 20.5**	**+0.2**
	0.2nm,0.3s,baz=301,slow=13,SNR=10						
ASAR	**Alice Springs**	**21.48**	**137**	P	**P**	**07 46 41.8**	**+1.6**
	2.9nm,0.6s,baz=312,slow=9.2,SNR=24						
STKA	**Stephens Creek**	**32.02**	**140**	P	**P**	**07 48 21.1**	**+3.5**
	1.7nm,0.7s,baz=315,slow=11,SNR=4.5						
MJAR	**Matsushiro Arr**	**48.58**	**22**	P	**P**	**07 50 36.0**	**+1.5**
	1.6nm,0.2s,baz=213,slow=6.9,SNR=4.1						
SONM	**Songino Array**	**56.94**	**351**	P	**P**	**07 51 36.1**	**-0.1**
	2.6nm,0.9s,baz=160,slow=4.7,SNR=6.1						
MKAR	**Makanchi Array**	**63.50**	**333**	P	**P**	**07 52 20.3**	**-0.7**
	0.3nm,0.6s,baz=139,slow=7.7,SNR=3.2						

*IDC **17** 07:50:28.8±1.4, 35.˚18N×26.˚53E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/38, mbtmp3.5/5, ML3.9/1, Error ellipse: s-maj=46.1km s-min=22.3km az=147.0*
*DDA **17** 07:50:28.6, 34.˚88N×26.˚92E, h7km±5km, ML3.2*
*ISK **17** 07:50:30.6, 34.˚90N×26.˚70E, h30km, ML3.6/11*
*ATH **17** 07:50:32.7, 35.˚14N×26.˚69E, h30km±4km, ML3.3/9, Error ellipse: s-maj=5.8km s-min=1.3km az=157.0*
*THE **17** 07:50:32.3, 35.˚13N×26.˚70E, h0km±1km, ML3.1/6, Error ellipse: s-maj=6.3km s-min=0.9km az=156.0*
ISC 17 07:50:30.5±1.3, 34.˚99N±0.˚05×26.˚72E±0.˚02, h16km±8km, n64, σ1s22/87, mb3.5/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.43**	**287**	P	**Pn**	**07 50 40.9**	**-1.3**
ZKR				S	**Sb**	**07 50 47.7**	**+1.5**
ZKR				AML	AML	07 50 49.6	
	comp=N,5401μm,0.4s						
ZKR				AML	AML	07 50 50.9	
	comp=E,7796μm,0.4s						
ZKR	**Zakros**	**0.43**	**287**	P	**Pn**	**07 50 40.9**	**-1.3**
ZKR				S	**Sb**	**07 50 48.3**	**+2.1**
	comp=E,4μm,0.6s						
ZKR	**Zakros**	**0.43**	**287**	PG	**Pb**	**07 50 40.8**	**+1.0**
ZKR				SG	**Sb**	**07 50 48.5**	**+2.3**
STIA	**Sitia Lasithi**	**0.56**	**293**	P	**Pb**	**07 50 41.9**	**-0.1**
STIA				S	**Sn**	**07 50 51.2**	**-1.7**
KARP	**Karpathos**	**0.67**	**33**	P	**Pg**	**07 50 43.5**	**-0.1**
KARP				S	**Sg**	**07 50 52.2**	**-0.2**
KARP				AML	AML	07 50 53.3	
	comp=N,21846μm,0.4s						
KARP				AML	AML	07 50 55.3	
	comp=E,25196μm,0.4s						
KARP	**Karpathos**	**0.67**	**33**	P	**Pg**	**07 50 43.4**	**-0.2**
KARP				S	**Sg**	**07 50 52.2**	**-0.2**
	comp=E,13μm,0.5s						
KARP	**Karpathos**	**0.67**	**33**	PG	**Pg**	**07 50 43.4**	**-0.2**
FRMA	**Ierapetra Chan**	**0.81**	**272**	P	**Pb**	**07 50 45.8**	**-0.5**
FRMA				S	**Sn**	**07 50 57.7**	**-1.4**
	comp=E,945nm,0.5s						
NPS	**Neapolis**	**0.95**	**287**	P	**

VAM	**Vamos**	**2.11**	**282**	P	**Pb**	**07 51 08.9**	**+0.5**
VAM				AML	AML	07 51 51.0	
	comp=N,732μm,0.6s						
VAM				AML	AML	07 51 56.5	
	comp=E,884μm,0.8s						
BODT	**Bodrum**	**2.13**	**13**	PN	**Pn**	**07 51 06.2**	**+0.8**
BDRM	**Kayabasi**	**2.16**	**16**	*i* P	**Pb**	**07 51 09.7**	**+0.5**
GVD	**Gavdhos**	**2.17**	**267**	P	**Pb**	**07 51 09.6**	**+0.1**
TURN	**Turunc**	**2.17**	**34**	PN	**Pn**	**07 51 06.6**	**+0.6**
YKAV	**Yalikavak-Bodr**	**2.18**	**12**	PN	**Pn**	**07 51 06.9**	**+0.7**
APE	**Apeiranthos**	**2.29**	**335**	P	**Pn**	**07 51 08.7**	**+0.9**
APE				AML	AML	07 51 36.9	
	comp=E,707μm,0.7s						
APE				AML	AML	07 51 39.3	
	comp=N,556μm,0.2s						
APE	**Apeiranthos**	**2.29**	**335**	P	**Pn**	**07 51 08.7**	**+0.9**
APE				S	**Sn**	**07 51 36.0**	**+0.3**
	comp=N,318nm,0.6s						
APE	**Apeiranthos**	**2.29**	**335**	PN	**Pn**	**07 51 08.5**	**+0.7**
APE				SN	**Sn**	**07 51 35.8**	**+0.1**
IMMV	**Iera Moni Meta**	**2.29**	**283**	P	**Pb**	**07 51 11.1**	**-0.5**
IMMV				AML	AML	07 52 05.0	
	comp=N,582μm,0.6s						
IMMV				AML	AML	07 52 12.4	
	comp=E,861μm,0.8s						
IMMV	**Iera Moni Meta**	**2.29**	**283**	P	**Pb**	**07 51 10.9**	**-0.7**
DALY	**Dalyan (Mula)**	**2.41**	**40**	*i* P	**Pn**	**07 51 10.8**	**+1.6**
DALY				*i* S	**Sg**	**07 51 49.5**	**+1.6**
DALY				IAML		07 51 52.0	
	comp=E,141nm,0.6s						
DALY				IAML		07 51 59.0	
	comp=N,128nm,0.8s						
DALY	**Dalyan (Mula)**	**2.41**	**40**	PN	**Pn**	**07 51 10.2**	**+0.9**
YER	**Yerkesik**	**2.49**	**30**	P	**Pn**	**07 51 12.0**	**+1.5**
YER	**Yerkesik**	**2.49**	**30**	PN	**Pn**	**07 51 11.2**	**+0.7**
FETY	**Fethiye**	**2.53**	**49**	PN	**Pn**	**07 51 11.3**	**+0.3**
MULA	**Mugla, Merkez-**	**2.61**	**29**	*i* P	**Pn**	**07 51 14.8**	**+2.6**
MULA				*i* S	**Sb**	**07 51 47.9**	**-0.9**
MULA				IAML		07 51 49.0	
	comp=E,86nm,0.6s						
AKAS	**Kas**	**2.66**	**61**	*i* P	**Pn**	**07 51 12.9**	**0.0**
AKAS				*i* S	**Sn**	**07 51 43.8**	**-1.1**
AKAS	**Kas**	**2.66**	**61**	PN	**Pn**	**07 51 13.6**	**+0.7**
AYDN	**Tasoluk**	**2.83**	**19**	*i* P	**Pn**	**07 51 16.1**	**+1.0**
CAEL	**Denizli, Camel**	**3.00**	**44**	*i* P	**Pn**	**07 51 20.8**	**+3.3**
CAEL				IAML		07 52 14.0	
	comp=N,166nm,1.0s						
CAEL				IAML		07 52 27.0	
	comp=E,180nm,0.7s						
TAVA	**DENIZLI_Tavas**	**3.04**	**35**	*i* P	**Pn**	**07 51 18.9**	**+0.8**
TAVA				*i* S	**Sb**	**07 51 59.5**	**-1.9**
AYDB	**Zeytinkoy-Aydi**	**3.10**	**17**	PN	**Pn**	**07 51 19.9**	**+0.9**
ELL	**Elmali**	**3.13**	**55**	PN	**Pn**	**07 51 20.5**	**+1.2**
GOLH	**Golhisar**	**3.21**	**45**	*i* P	**Pn**	**07 51 21.6**	**+1.1**
GOLH				*i* S	**Sg**	**07 52 12.3**	**-1.5**
GOLH				IAML		07 52 20.0	
	comp=N,73nm,1.2s						
AKUM	**Antalya-Kumluc**	**3.24**	**65**	*i* P	**Pn**	**07 51 21.5**	**+0.9**
AKUM				*i* S	**Sn**	**07 52 00.4**	**+1.5**
URLA	**Izmir**	**3.37**	**358**	*i* P	**Pn**	**07 51 21.5**	**-1.1**
URLA				IAML		07 52 21.0	
	comp=E,37nm,1.0s						
URLA	**Izmir**	**3.37**	**358**	PN	**Pn**	**07 51 21.7**	**-0.8**
CHOS	**Chios island**	**3.44**	**351**	PN	**Pn**	**07 51 24.2**	**+0.7**
KORT	**Korkueli**	**3.56**	**55**	*i* P	**Pn**	**07 51 27.6**	**+2.3**
KORT				IAML		07 52 44.0	
	comp=E,40nm,1.7s						
KULA	**Kula-Manisa**	**3.85**	**23**	PN	**Pn**	**07 51 30.6**	**+1.4**
KEPZ	**Antalya-Kepez**	**4.40**	**63**	*i* P	**Pn**	**07 51 37.9**	**+1.2**
KEPZ				*i* S	**Sn**	**07 52 25.0**	**-2.6**
GAZI	**Gazipasa**	**4.72**	**73**	*i* P	**Pn**	**07 51 41.5**	**+0.3**
GAZI				*i* S	**Sn**	**07 52 31.8**	**-3.8**
GAZI				IAML		07 52 37.0	
	comp=E,33nm,0.3s						
GAZI				IAML		07 52 49.0	
	comp=N,34nm,0.9s						
AKASG	**Malin Array Be**	**15.81**	**6**	Pn	**Pn**	**07 54 11.1**	**-1.3**
	comp=N,0.4nm,0.3s,baz=194,slow=10,SNR=2.4						
ESDC	**Sonseca Array**	**24.78**	**290**	P	**P**	**07 55 49.5**	**-2.2**
	comp=N,0.5nm,0.7s,baz=82,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**31.38**	**232**	P	**P**	**07 56 52.0**	**+1.3**
	comp=N,0.8nm,0.4s,baz=34,slow=9.0,SNR=9.4						
KURBB	**Kurchatov Arra**	**40.23**	**51**	P	**P**	**07 58 06.4**	**0.0**
	comp=N,0.4nm,0.4s,baz=273,slow=9.0,SNR=4.8						
MKAR	**Makanchi Array**	**42.80**	**57**	P	**P**	**07 58 28.3**	**+0.8**
	comp=N,0.4nm,0.4s,baz=263,slow=9.1,SNR=7.3						

*IDC **17** 08:04:36.0±3.0,54˚.38N×86˚.84E, h0km, mb1 3.3/2, mb1mx3.0/46, mbtmp3.3/2, ML2.9/2, Error ellipse: s-maj=25.6km s-min=16.9km az=58.0*

ISC 17 08:04:33.9±4.8, 54˚.6N±0˚.2×86˚.9E±0˚.2, h10km, n6, σ2§72/8, 3C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**242**	*i*		08 12 10.0	
	baz=72,slow=310,SNR=4.5						
ZALV	**Zalesovo Beam**	**1.42**	**242**	Pg	**Pn**	**08 04 58.8**	**-1.0**
	2.1nm,0.3s,baz=70,slow=16,SNR=11						
ZALV				Lg	Lg	08 05 16.4	
	1.6nm,0.3s,baz=65,slow=21,SNR=7.6						
KURBB	**Kurchatov Arra**	**6.50**	**235**	Pn	**Pn**	**08 06 11.4**	**+1.7**
	0.2nm,0.3s,baz=54,slow=14,SNR=8.7						
KURBB				Lg	Lg	08 07 58.7	
	0.0nm,0.3s,baz=49,slow=29,SNR=5.4						
KURBB	**Kurchatov Arra**	**6.50**	**235**	⇑Pn	**Pn**	**08 06 10.7**	**+1.1**
	1.3nm,0.3s						
KURBB				⇓Sn	**Sn**	**08 07 22.5**	**-1.3**
	3.4nm,0.7s						
KURBB				⇓Lg	Lg	08 07 57.9	
	8.6nm,0.8s						
MK31	**Makanchi Array**	**8.38**	**202**	⇓Pn	**Pn**	**08 06 33.6**	**-1.8**
	0.1nm,0.3s,baz=29,slow=13,SNR=9.0						
MK31				⇑Sn	**Sn**	**08 08 14.2**	**+4.2**
	0.4nm,0.7s,baz=31,slow=27,SNR=4.0						
MK31				⇑Lg	Lg	08 08 52.9	
	2.0nm,0.8s,baz=37,slow=33,SNR=4.5						
MKAR	**Makanchi Array**	**8.38**	**202**	Pn	**Pn**	**08 06 36.1**	**+0.7**
	0.2nm,0.3s,baz=23,slow=11,SNR=6.1						
MKAR				Sn	**Sn**	**08 08 07.0**	**-3.0**
	0.1nm,0.3s,baz=24,slow=26,SNR=2.9						
MKAR				Lg	Lg	08 08 54.1	
	0.0nm,0.3s,baz=38,slow=35,SNR=5.0						

*IDC **17** 08:05:22.1±2.4, 4˚.74N×78˚.61W, h0km, mb3.7/1, mb1 3.9/2, mb1mx3.4/27, mbtmp3.8/2, ML2.3/1, Error ellipse: s-maj=72.5km s-min=32.1km az=15.0*

*RSNC **17** 08:05:26.0±1.8, 5˚.04N×78˚.34W, h18km±9km, ML2.6*

ISC 17 08:05:22.1±1.9, 5˚.02N±0˚.03×78˚.47W±0˚.04, h3km±12km, n30, σ2§24/47, 3C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIZC	**Pizarro, Choco**	**1.11**	**93**	⇑*i*P	**Pg**	**08 05 43.3**	**-0.1**
PIZC				*e*S	**Sg**	**08 05 56.6**	**-1.1**
PIZC				*i*		08 05 58.9	
	comp=Z,246nm,0.5s						
MALC	**Bahia Malaga**	**1.51**	**131**	⇑*i*P	**Pn**	**08 05 49.9**	**-0.2**
MALC				*e*S	**Sb**	**08 06 08.4**	**-1.9**
MALC				*i*		08 06 10.0	
	comp=Z,91nm,0.4s						
SOLC	**Bahia Solano**	**1.60**	**41**	*e*P	**Pn**	**08 05 50.4**	**-0.9**
SOLC				*e*S	**Sn**	**08 06 07.5**	**-5.1**
SOLC				*i*		08 06 10.2	
	comp=Z,37nm,0.1s						
PTAC	**Punta Ardita,**	**2.22**	**17**	*e*P	**Pn**	**08 05 59.3**	**-0.5**
PTAC				*e*S	**Sn**	**08 06 22.3**	**-5.5**
YOTC	**Yotoco, Valle**	**2.35**	**116**	⇑*i*P	**Pn**	**08 06 01.2**	**-0.7**
YOTC				*e*S	**Sn**	**08 06 26.4**	**-4.9**
YOTC				*i*		08 06 27.9	
	comp=Z,36nm,0.2s						
CBOC	**Ciudad Bolivar**	**2.59**	**71**	*e*P	**Pn**	**08 06 04.5**	**-0.6**
CBOC				*e*S	Sn	08 06 30.1	-7.1
CBOC				*i*		08 06 38.2	
	comp=Z,18nm,0.5s						
POPC	**Popayan, Colom**	**3.04**	**144**	*e*P	**Pn**	**08 06 11.1**	**-0.3**
GUY2C	**Guyana, Caldas**	**3.10**	**86**	*e*P	**Pn**	**08 06 13.4**	**+1.0**
GUY2C				*e*S	**Sn**	**08 06 46.1**	**-4.2**
GUY2C				*i*		08 06 50.4	
	comp=Z,17nm,0.5s						
HELC	**Santa Helena**	**3.15**	**68**	*e*P	**Pn**	**08 06 13.8**	**+0.8**
HELC				*e*S	**Sn**	**08 06 51.3**	**-0.1**
HELC				*i*		08 06 54.5	
	comp=Z,9.2nm,0.6s						
BBAC	**Balboa, Cauca**	**3.21**	**158**	*e*P	**Pn**	**08 06 13.2**	**-0.6**
AZU	**Azuero**	**3.29**	**327**	*e*P	**Pn**	**08 06 14.8**	**+0.2**
AZU				*e*S	**Sn**	**08 06 53.4**	**-0.9**
MARP	**Paez Belalcaza**	**3.31**	**131**	*e*P	**Pn**	**08 06 16.3**	**+1.2**
PCON	**Cinco Dias**	**3.38**	**142**	*e*P	**Pn**	**08 06 17.4**	**+1.1**
PCON				*e*S	**Sn**	**08 06 55.5**	**-1.7**
PCON				*i*		08 07 07.5	
	comp=Z,16nm,0.4s						
ORTC	**Ortega, Tolima**	**3.40**	**109**	*e*P	**Pn**	**08 06 17.4**	**+1.3**
ORTC				*e*S	**Sn**	**08 06 57.1**	**+0.1**
ORTC				*i*		08 06 59.2	
	comp=Z,19nm,0.6s						
SOTA	**Rioblanco**	**3.41**	**147**	*e*P	**Pn**	**08 06 17.1**	**+0.3**
SOTA				*e*S	**Sn**	**08 06 56.2**	**-1.8**
SOTA				*i*		08 07 02.7	
	comp=Z,24nm,0.5s						
NORC	**Norcasia**	**3.63**	**81**	*e*P	**Pn**	**08 06 21.3**	**+2.0**
CRUC	**La Cruz**	**3.75**	**156**	*e*P	**Pn**	**08 06 22.4**	**+1.2**
GCUF	**Volcan Galeras**	**3.93**	**163**	*e*P	**Pn**	**08 06 24.9**	**+1.0**
GCUF				*e*S	**Sn**	**08 07 07.6**	**-3.2**
GCUF				*i*		08 07 13.3	
	comp=Z,9.5nm,0.3s						
GARC	**Garzon, Huila**	**4.09**	**133**	*e*P	**Pn**	**08 06 27.8**	**+2.0**
GARC				*e*S	**Sn**	**08 07 14.4**	**0.0**
GARC				*i*		08 07 20.3	
	comp=Z,16nm,0.3s						
ROSC	**El Rosal**	**4.14**	**92**	Pn	**Pn**	**08 06 29.8**	**+3.2**
	comp=Z,3.9nm,0.3s,baz=56,slow=5.1,SNR=9.8						
ROSC				Sn	**Sn**	**08 07 18.5**	**+2.7**
	baz=54,slow=22,SNR=0.8						
PTBC	**PUERTO BERRIO,**	**4.27**	**69**	*e*P	**Pn**	**08 06 30.7**	**+2.6**
PTBC				*e*S	**Sn**	**08 07 18.9**	**+0.3**
PTBC				*i*		08 07 28.0	
	comp=Z,5.5nm,0.7s						
BCIP	**Isla Barro Col**	**4.34**	**342**	*e*P	**Pn**	**08 06 30.4**	**+1.3**
BCIP				*e*S	**Sn**	**08 07 21.2**	**+1.0**
BCIP				*i*		08 07 24.9	
	comp=Z,10nm,0.3s						
ZARC	**Zaragoza, Cauc**	**4.35**	**55**	*e*S	**Sn**	**08 07 17.5**	**-3.1**
ZARC				*i*		08 07 32.6	
	comp=Z,4.1nm,0.5s						
SPBC	**San Pablo de B**	**4.42**	**82**	*e*P	**Pn**	**08 06 32.7**	**+2.4**
SPBC				*e*S	**Sn**	**08 07 22.7**	**+0.3**
SPBC				*i*		08 07 27.8	
	comp=Z,6.1nm,0.6s						
OTAV	**Otavalo**	**4.75**	**180**	*e*P	**Pn**	**08 06 36.2**	**+1.1**
OTAV				*e*S	**Sn**	**08 07 27.7**	**-3.2**
OTAV				*i*		08 07 33.6	
	comp=Z,4.2nm,0.4s						
VILC	**Villavicencio,**	**4.84**	**100**	*e*P	**Pn**	**08 06 40.2**	**+4.1**
MACC	**Macarena, Meta**	**5.42**	**122**	*e*P	**Pn**	**08 06 45.3**	**+1.3**
YKA	**Yellowknife Ar**	**63.23**	**342**	P	**P**	**08 15 53.5**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=136,slow=6.3,SNR=27						
ASAR	**Alice Springs**	**143.72**	**236**	PKP	PKPab	08 24 57.9	+1.5
	comp=Z,0.2nm,0.4s,baz=116,slow=4.2,SNR=2.8						
WRA	**Warramunga Arr**	**144.80**	**242**	PKP	**PKPab**	**08 25 01.7**	**+1.2**
	comp=Z,0.8nm,0.9s,baz=114,slow=2.6,SNR=4.9						

IDC 17 08:14:25.7±3.3, 53˚.43N×87˚.57E, h0km, mb1 2.9/2, mb1mx2.8/37, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=32.6km s-min=15.9km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.71**	**289**	*i*		08 25 44.2	
	baz=107,slow=323,SNR=1.0						
ZALV	**Zalesovo Beam**	**1.71**	**289**	Pg	Pn	08 14 55.9	-0.8
	1.5nm,0.3s,baz=107,slow=17,SNR=8.5						
ZALV				Lg	Lg	08 15 20.5	
	1.3nm,0.3s,baz=109,slow=26,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.25**	**247**	Pn	Pn	08 15 59.5	+0.5
	0.1nm,0.3s,baz=62,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**7.46**	**209**	Pn	Pn	08 16 17.1	+1.4
	0.2nm,0.3s,baz=32,slow=14,SNR=7.6						

*IDC **17** 08:22:45.6±2.8, 52˚.71N×171˚.05E, h0km, mb3.4/4, mb1 3.7/6, mb1mx3.3/59, mbtmp3.5/6, ML2.9/2, Error ellipse: s-maj=62.1km s-min=25.0km az=7.0*

*NEIC **17** 08:22:48.1±2.1, 52˚.7N±0˚.2×170˚.99E±0˚.10, h19km±6km, mb4.2/10, Error ellipse: s-maj=24.0km s-min=8.7km az=178.0*

*KRSC **17** 08:22:49.4±2.2, 52˚.75N×170˚.46E, h40km±27km, ML3.9*

ISC 17 08:22:49.8±0.8, 52˚.8N±0˚.1×170˚.87E±0˚.05, h35km, n51, σ1§55/54, mb3.8/8, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.96**	**90**	Pn	**Pn**	**08 23 19.3**	**-1.2**
SMY				Sn	**Sn**	**08 23 42.2**	**-1.6**
BKI	**Bering**	**3.78**	**312**	*e*S	**Sn**	**08 24 29.1**	**+0.5**
MKZ	**Mys Kozlova**	**5.72**	**292**	*e*P	**Pn**	**08 24 12.5**	**+0.4**
MKZ				*e*S	**Sn**	**08 25 15.5**	**-0.9**
KBTR	**Krutoberegovo**	**5.81**	**309**	*e*P	**Pn**	**08 24 13.4**	**0.0**
KBTR				S	**Sn**	**08 25 16.8**	**-2.0**
SPN	**Mys Shipunski**	**6.57**	**277**	*e*P	**Pn**	**08 24 24.0**	**+0.2**
SPN				*e*S	**Sn**	**08 25 35.7**	**-1.7**
KZV	**Kizimen**	**6.67**	**295**	*e*P	**Pn**	**08 24 26.4**	**+1.1**
KZV				*e*S	**Sn**	**08 25 39.8**	**-0.2**
TUMR	**Tumrok**	**6.80**	**296**	*e*P	**Pn**	**08 24 29.2**	**+2.2**
KII	**Karymskiy**	**6.95**	**285**	*e*P	**Pn**	**08 24 30.0**	**+1.0**
KII				*e*S	**Sn**	**08 25 46.5**	**-0.3**
UGLR	**Uglovaya**	**7.29**	**278**	*e*P	**Pn**	**08 24 35.3**	**+1.5**
SMAR	**Somma**	**7.30**	**279**	*e*P	**Pn**	**08 24 35.6**	**+1.6**
KRER	**Koryakskii**	**7.33**	**279**	*e*P	**Pn**	**08 24 36.0**	**+1.6**
AVH	**Avacha**	**7.34**	**279**	*e*P	**Pn**	**08 24 36.1**	**+1.7**
KRX	**Arik**	**7.39**	**279**	*e*P	**Pn**	**08 24 35.4**	**+0.2**
KRX				*e*S	**Sn**	**08 25 54.5**	**-3.3**
PET	**Petropavlovsk**	**7.40**	**277**	Pn	**Pn**	**08 24 35.1**	**-0.1**
KOK	**Koryaka**	**7.40**	**279**	*e*P	**Pn**	**08 24 36.7**	**+1.4**
RUS	**Russkaya**	**7.54**	**272**	*e*P	**Pn**	**08 24 38.9**	**+1.8**
KRMR	**Karymshinskiy**	**7.73**	**275**	*e*S	**Sn**	**08 26 04.2**	**-1.6**
MTVR	**Mutnovka**	**7.73**	**273**	*e*P	**Pn**	**08 24 40.6**	**+0.7**
MTVR				*e*S	**Sn**	**08 26 03.7**	**-2.5**
GNL	**Ganaly**	**7.82**	**282**	*e*P	**Pn**	**08 24 43.6**	**+2.6**
KDTR	**Khodutka, Kamc**	**7.91**	**268**	*e*P	**Pn**	**08 24 42.2**	**+0.1**
KDTR				*e*S	**Sn**	**08 26 06.3**	**-4.0**
PEA0B	**Petropavlovsk-**	**7.97**	**278**	Pn	**Pn**	**08 24 43.6**	**+0.6**
PETK	**Petropavlovsk-**	**7.97**	**278**	Pn	**Pn**	**08 24 45.1**	**+2.1**
	0.4nm,0.3s,baz=92,slow=19,SNR=11						
PETK				Sn	**Sn**	**08 26 09.8**	**-2.0**
	0.3nm,0.3s,baz=84,slow=28,SNR=2.3						
PETK	**Petropavlovsk-**	**7.97**	**278**		**Pn**	**08 24 43.7**	**+0.7**
ATKA	**Atka Island**	**9.13**	**88**	Pn	**Pn**	**08 24 56.8**	**-2.1**
SPIA	**Saint Paul Isl**	**11.69**	**60**	Pn	**Pn**	**08 25 31.8**	**-2.1**
AKUT	**Akutan**	**13.97**	**75**	Pn	**Pn**	**08 26 03.2**	**-1.8**
SEY	**Seymchan**	**14.09**	**323**	Pn	**Pn**	**08 26 06.9**	**+0.3**
	0.1nm,0.3s,baz=17,slow=22,SNR=1.5						
FALS	**False Pass**	**15.30**	**72**	P	**P**	**08 26 27.0**	**-0.2**
OHAK	**Old Harbor**	**20.86**	**63**	P	**P**	**08 27 28.6**	**+0.2**
OHAK				IAmb	IAmb	08 27 31.4	
	comp=Z,18nm,1.2s						
KDAK	**Kodiak Island**	**21.22**	**62**	P	**P**	**08 27 32.2**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=316,slow=6.3,SNR=11						
KDAK	**Kodiak Island**	**21.22**	**62**	IAmb	IAmb	08 27 38.8	
	comp=Z,22nm,1.5s						
IMAR	**Indian Mountai**	**21.95**	**39**	P	**P**	**08 27 40.0**	**0.0**
I23K	**Minto, Yukon-K**	**23.47**	**43**	P	**P**	**08 27 57.5**	**+1.7**
WRH	**Wood River Hil**	**23.87**	**45**	P	**P**	**08 28 00.5**	**+0.9**
WRH				IAmb	IAmb	08 28 17.9	
	comp=Z,4.7nm,1.4s						
MDM	**Murphy Dome**	**23.90**	**43**	P	**P**	**08 28 01.2**	**+1.4**
MDM				IAmb	IAmb	08 28 03.2	
	comp=Z,2.1nm,0.7s						
ILAR	**Eielson Array**	**24.43**	**44**	P	**P**	**08 28 06.0**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=251,slow=7.2,SNR=18						
ILAR	**Eielson Array**	**24.43**	**44**	P	**P**	**08 28 06.0**	**+1.2**
BMAR	**Burnt Mountain**	**25.85**	**38**	P	**P**	**08 28 18.1**	**+0.4**
BCAR	**Beaver Creek A**	**26.53**	**49**	P	**P**	**08 28 25.3**	**+1.4**
EGAK	**Eagle**	**26.87**	**45**	P	**P**	**08 28 28.8**	**+2.0**
EGAK				IAmb	IAmb	08 28 41.7	
	comp=Z,7.1nm,1.4s						
JGF	**Kuroka**	**29.18**	**247**	P	**P**	**08 28 48.0**	**+0.3**
JGF				IAmb	IAmb	08 28 60.0	
	comp=Z,22nm,1.2s						
JHJ2	**Mitsune**	**29.70**	**241**	P	**P**	**08 28 54.4**	**+2.1**
H11N2	**WAKE ISLAND Hy**	**33.13**	**187**	T	T	09 04 39.3	
	baz=4.7,slow=76,SNR=95						
H11N3	**WAKE ISLAND Hy**	**33.14**	**187**	T	T	09 04 40.1	
	baz=4.7,slow=76,SNR=67						
H11N1	**WAKE ISLAND Hy**	**33.15**	**187**	T	T	09 04 40.7	
	baz=4.7,slow=76,SNR=71						
C36M	**Paulatuk**	**33.53**	**36**	P	**P**	**08 29 27.6**	**+2.0**
H11S1	**WAKE ISLAND Hy**	**34.36**	**187**	T	T	09 06 11.5	
	baz=4.6,slow=76,SNR=97						
H11S3	**WAKE ISLAND Hy**	**34.37**	**187**	T	T	09 06 12.4	
	baz=4.6,slow=76,SNR=63						
H11S2	**WAKE ISLAND Hy**	**34.38**	**187**	T	T	09 06 12.6	
	baz=4.6,slow=76,SNR=60						
YKA	**Yellowknife Ar**	**38.85**	**46**	P	**P**	**08 30 10.7**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=294,slow=8.0,SNR=6.0						
TXAR	**Lajitas Array**	**64.58**	**75**	P	**P**	**08 33 23.9**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=304,slow=3.9,SNR=2.2						

*IDC **17** 08:30:34.4±1.2, 37˚.10N×69˚.96E, h0km, mb3.4/4, mb1 3.6/9, mb1mx3.4/64, mbtmp3.5/9, ML3.3/5, MS2.2/1, Ms1 2.2/1, ms1mx1.9/46, Error ellipse: s-maj=27.6km s-min=18.8km az=115.0*

ISC 17 08:30:39.1±1.2, 37˚.3N±0˚.1×69˚.8E±0˚.1, h30km, n15, σ1§98/16, mb3.5/4, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.72**	**30**	P	**Pn**	**08 32 04.8**	**+2.4**
	SNR=12						
KK31	**Karatay Array**	**5.87**	**5**	Pn	**Pn**	**08 32 06.1**	**+2.0**
	0.9nm,0.4s,baz=183,slow=15,SNR=15						
KK31				Lg	Lg	08 33 39.3	
	4.5nm,0.4s,baz=186,slow=26,SNR=3.8						
UCH	**Uchtor**	**6.15**	**35**	P	**Pn**	**08 32 10.6**	**+2.2**
	SNR=7.7						
AAK	**Ala-Archa**	**6.47**	**32**	Pn	**Pn**	**08 32 14.6**	**+2.1**
	2.0nm,0.3s,baz=216,slow=8.8,SNR=14						
AAK				Sn	**Sn**	**08 33 24.7**	**-0.8**
	baz=355,slow=23,SNR=1.0						
AAK				Lg	Lg	08 34 03.5	
	0.2nm,0.3s,baz=94,slow=9.2,SNR=4.5						
AAK	**Ala-Archa**	**6.47**	**32**	P	**Pn**	**08 32 15.2**	**+2.7**
	SNR=7.5						
CHMS	**Chumysh**	**6.88**	**32**	P	**Pn**	**08 32 19.9**	**+1.9**
	SNR=5.0						
USP	**Ospenovka**	**7.00**	**29**	P	**Pn**	**08 32 21.3**	**+1.7**
	SNR=5.9						
MKAR	**Makanchi Array**	**13.29**	**40**	Pn	**Pn**	**08 33 45.5**	**-0.2**
	0.1nm,0.3s,baz=222,slow=14,SNR=5.6						
AKTO	**Aktyubinsk**	**15.66**	**331**	Pn	**Pn**	**08 34 15.5**	**-1.9**
	0.1nm,0.3s,baz=126,slow=12,SNR=2.5						
BVAR	**Borovoye Array**	**15.78**	**1**	Pn	**Pn**	**08 34 16.4**	**-2.7**
	0.1nm,0.3s,baz=226,slow=47,SNR=1.7						
ZALV	**Zalesovo Beam**	**19.66**	**27**	P	**P**	**08 35 03.6**	**-1.7**
	0.3nm,0.3s,baz=220,slow=8.8,SNR=3.6						
ZALV				LR	LR	08 41 55.4	
	comp=Z,7.9nm,21.2s,baz=20,slow=34						
TORD	**Torodi Ar. Bea**	**64.78**	**268**	P	**P**	**08 41 15.7**	**+0.5**
	0.3nm,0.5s,baz=38,slow=6.9,SNR=1.9						
YKA	**Yellowknife Ar**	**80.54**	**2**	P	**P**	**08 42 49.4**	**+1.4**
	0.2nm,0.6s,baz=355,slow=5.3,SNR=8.7						
WRA	**Warramunga Arr**	**83.20**	**121**	P	**P**	**08 43 01.7**	**-1.0**
	0.2nm,0.5s,baz=322,slow=4.7,SNR=1.9						
ASAR	**Alice Springs**	**85.47**	**124**	P	**P**	**08 43 13.6**	**-0.5**
	0.2nm,0.7s,baz=326,slow=4.5,SNR=4.0						

*NNC **17** 08:31:54.7±4.6, 54˚.22N×87˚.51E, h0km, mb3.8, mpv3.0, Error ellipse: s-maj=40.4km s-min=24.5km az=20.0, Suspected Mining explosion.*

*IDC **17** 08:31:58.0±2.6, 54˚.21N×87˚.16E, h0km, mb1 3.4/2, mb1mx3.0/68, mbtmp3.4/2, ML3.2/2, Error ellipse: s-maj=22.1km s-min=16.1km az=58.0*

ISC 17 08:31:44.9±2.8, 52˚.74N±0˚.07×87˚.8E±0˚.2, h0km, n7, σ1§47/11, 4C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.16**	**305**	*i*		08 41 20.7	
	baz=80,slow=317,SNR=1.2						
ZAA0	**Zalesovo Array**	**2.16**	**305**	⇑P	**Pn**	**08 32 22.6**	**+0.5**
	0.4nm,0.1s						
ZAA0				⇓S	**Sn**	**08 32 46.6**	**-3.0**
	2.3nm,0.5s						
ZALV	**Z

IDI	**Anoyia**	**1.68**	**277**		P	**Pn**	**08 32 50.7**	**+1.2**
IDI					S	**Sn**	**08 33 11.3**	**+0.2**
	comp=N,152nm,0.6s							
SIVA	**Sivas**	**1.74**	**268**		P	**Pb**	**08 32 52.6**	**+0.4**
SIVA					AML	AML	08 33 24.9	
	comp=N,507μm,0.6s							
SIVA					AML	AML	08 33 26.6	
	comp=E,578μm,0.5s							
TURN	**Turunc**	**1.98**	**32**	*i*	P	**Pn**	**08 32 51.6**	**-1.9**
TURN					IAML		08 33 30.0	
	comp=E,30nm,0.4s							
TURN					IAML		08 33 36.0	
	comp=N,30nm,0.6s							
DALY	**Dalyan (Mula)**	**2.21**	**39**	*i*	P	**Pn**	**08 32 57.0**	**+0.3**
DALY					IAML		08 33 26.0	
	comp=E,22nm,1.0s							
DALY				*i*	S	**Sg**	**08 33 35.4**	**+4.3**
DALY					IAML		08 33 43.0	
	comp=N,26nm,0.6s							
VAM	**Vamos**	**2.25**	**278**		P	**Pb**	**08 33 00.3**	**-0.6**
VAM					AML	AML	08 33 38.1	
	comp=E,234μm,0.5s							
VAM					AML	AML	08 33 42.1	
	comp=N,252μm,0.4s							
AKAS	**Kas**	**2.45**	**62**	*i*	P	**Pn**	**08 32 59.3**	**-0.9**
AKAS				*i*	S	**Sn**	**08 33 29.9**	**-0.3**
AKAS					IAML		08 33 40.0	
	comp=N,21nm,0.5s							
AKAS					IAML		08 33 42.0	
	comp=E,19nm,0.7s							
AYDN	**Tasoluk**	**2.66**	**16**	*i*	P	**Pn**	**08 33 03.8**	**+0.7**
GOLH	**Golhisar**	**3.01**	**44**	*i*	P	**Pn**	**08 33 06.7**	**-1.1**
GOLH					IAML		08 34 03.0	
	comp=N,20nm,0.7s							
KEPZ	**Antalya-Kepez**	**4.19**	**63**	*i*	P	**Pn**	**08 33 25.1**	**+1.0**
KEPZ				*i*	S	**Sn**	**08 34 11.2**	**-1.8**
KEPZ					IAML		08 34 15.0	
	comp=N,4.1nm,1.1s							
KEPZ					IAML		08 34 23.0	
	comp=E,5.5nm,0.7s							

IDC ***17*** *08:35:43.6±1.0,35°.02N×26°.88E,h0km,mb3.8/7, mb1 3.8/10,mb1mx3.5/61,mbtmp3.7/10,ML3.8/2,MS2.8/2, Ms1 2.8/2,ms1mx2.2/57,Error ellipse: s-maj=27.7km s-min=10.9km az=1.0*

DDA ***17*** *08:35:44.2,34°.92N×27°.03E,h7km±5km,ML3.3*

ISK ***17*** *08:35:45.9,35°.01N×26°.78E,h15km,ML3.6/15*

THE ***17*** *08:35:46.8,35°.08N×26°.71E,h0km±1km,ML3.2/7,Error ellipse: s-maj=5.8km s-min=0.9km az=158.0*

ATH ***17*** *08:35:47.1,35°.09N×26°.71E,h34km±3km,ML3.5/10,Error ellipse: s-maj=5.5km s-min=1.4km az=155.0*

ISC 17 08:35:45.1±1.2,34°.93N±0°.05×26°.79E±0°.02,h13km±8km, n83,σ1°30/111,mb3.7/7,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**292**	P	**Pg**	**08 35 55.5**	**+0.5**
ZKR				S	**Sb**	**08 36 03.1**	**0.0**
ZKR				AML	AML	08 36 03.1	
	comp=E,16494μm,0.4s						
ZKR				AML	AML	08 36 03.8	
	comp=N,11102μm,0.2s						
ZKR	**Zakros**	**0.50**	**292**	P	**Pg**	**08 35 55.5**	**+0.5**
ZKR				S	**Sb**	**08 36 02.9**	**-0.2**
	comp=N,7μm,0.3s						
ZKR	**Zakros**	**0.50**	**292**	PG	**Pg**	**08 35 55.4**	**+0.5**
ZKR				SG	**Sb**	**08 36 02.6**	**-0.5**
STIA	**Sitia Lasithi**	**0.63**	**296**	P	**Pg**	**08 35 56.5**	**-0.9**
STIA				S	**Sg**	**08 36 06.0**	**+0.2**
KARP	**Karpathos**	**0.69**	**26**	P	**Pg**	**08 35 58.1**	**-0.4**
KARP				S	**Sb**	**08 36 08.3**	**-0.2**
KARP				AML	AML	08 36 09.2	
	comp=E,31739μm,0.4s						
KARP				AML	AML	08 36 10.7	
	comp=N,42367μm,0.6s						
KARP	**Karpathos**	**0.69**	**26**	P	**Pg**	**08 35 58.3**	**-0.2**
KARP				S	**Sb**	**08 36 08.4**	**0.0**
	comp=N,19μm,0.5s						
KARP	**Karpathos**	**0.69**	**26**	PG	**Pg**	**08 35 58.2**	**-0.2**
KARP				SG	**Sb**	**08 36 07.6**	**-0.8**
FRMA	**Ierapetra Chan**	**0.87**	**276**	P	**Pg**	**08 36 00.3**	**-1.6**
FRMA				S	**Sg**	**08 36 12.3**	**-1.0**
	comp=N,1μm,0.4s						
NPS	**Neapolis**	**1.02**	**289**	P	**Pg**	**08 36 04.9**	**+0.2**
NPS				S	**Sg**	**08 36 16.4**	**-1.7**
NPS				AML	AML	08 36 23.9	
	comp=N,5446μm,0.4s						
NPS				AML	AML	08 36 25.6	
	comp=E,8296μm,0.6s						
NPS	**Neapolis**	**1.02**	**289**	P	**Pg**	**08 36 04.9**	**+0.2**
NPS				S	**Sb**	**08 36 19.0**	**+1.1**
	comp=E,3μm,0.4s						
KSTL	**Kastelli Herak**	**1.46**	**285**	P	**Pn**	**08 36 09.2**	**-1.9**
IDI	**Anoyia**	**1.59**	**283**	Pg	**Pb**	**08 36 15.3**	**+0.8**
	comp=E,34nm,0.3s,baz=98,slow=15,SNR=50						
IDI				Lg	Lg	08 36 37.6	
	comp=E,61nm,0.3s,baz=341,slow=16,SNR=7.6						
IDI	**Anoyia**	**1.59**	**283**	P	**Pb**	**08 36 15.1**	**+0.6**
IDI				AML	AML	08 36 45.2	
	comp=N,1056μm,0.6s						
IDI				AML	AML	08 36 55.7	
	comp=E,1156μm,0.5s						
IDI	**Anoyia**	**1.59**	**283**	P	**Pb**	**08 36 14.9**	**+0.4**
IDI				S	**Sg**	**08 36 36.0**	**-0.5**
	comp=E,528nm,0.5s						
IDI	**Anoyia**	**1.59**	**283**	PN	**Pn**	**08 36 14.1**	**+1.0**
IDI				SN	**Sn**	**08 36 34.9**	**+1.3**
SIVA	**Sivas**	**1.62**	**274**	P	**Pb**	**08 36 16.1**	**+1.1**
SIVA				AML	AML	08 36 52.2	
	comp=E,3419μm,0.7s						
SIVA				AML	AML	08 36 54.5	
	comp=N,2406μm,0.6s						
ARG	**Arkhangelos**	**1.68**	**40**	P	**Pb**	**08 36 16.5**	**+0.5**
ARG				AML	AML	08 36 48.6	
	comp=E,2211μm,0.6s						
ARG				AML	AML	08 36 49.1	
	comp=N,1212μm,0.5s						
ARG	**Arkhangelos**	**1.68**	**40**	P	**Pb**	**08 36 16.2**	**+0.2**
ARG				S	**Sg**	**08 36 37.5**	**-1.8**
	comp=N,925nm,0.6s						
ARG	**Arkhangelos**	**1.68**	**40**	PN	**Pn**	**08 36 14.9**	**+0.6**
ARG				SN	**Sn**	**08 36 35.9**	**+0.2**
NIS1	**Nisyros Isl.**	**1.70**	**11**	P	**Pn**	**08 36 15.2**	**+0.7**
NIS1				AML	AML	08 36 47.9	
	comp=N,3335μm,0.5s						
NIS1				AML	AML	08 36 50.1	
	comp=E,5208μm,0.6s						
NIS1	**Nisyros Isl.**	**1.70**	**11**	PN	**Pn**	**08 36 14.9**	**+0.4**
SANT	**Santorini**	**1.80**	**323**	P	**Pn**	**08 36 15.9**	**+0.1**
SANT				AML	AML	08 36 47.6	
	comp=E,2524μm,0.4s						
SANT				AML	AML	08 36 48.6	
	comp=N,672μm,0.5s						
SANT	**Santorini**	**1.80**	**323**	P	**Pn**	**08 36 16.2**	**+0.3**
SANT	**Santorini**	**1.80**	**323**	PN	**Pn**	**08 36 16.4**	**+0.5**
SANT				SN	**Sn**	**08 36 38.8**	**+0.2**
THR6	**Thira Island,**	**1.82**	**322**	P	**Pn**	**08 36 16.3**	**+0.3**
THR8	**Santorini-Mono**	**1.82**	**325**	P	**Pn**	**08 36 16.4**	**+0.4**
THR8	**Santorini-Mono**	**1.82**	**325**	P	**Pn**	**08 36 16.3**	**+0.2**
KOSK	**Kos Island**	**1.82**	**5**	PN	**Pn**	**08 36 16.7**	**+0.5**
SNT1	**Gialos, Santor**	**1.85**	**324**	P	**Pn**	**08 36 16.8**	**+0.3**
THR3	**Thira Island,**	**1.86**	**323**	P	**Pn**	**08 36 17.0**	**+0.4**
THT2	**Imerovigli**	**1.87**	**324**	P	**Pn**	**08 36 17.0**	**+0.2**
THT2	**Imerovigli**	**1.87**	**324**	PN	**Pn**	**08 36 17.5**	**+0.7**
BODT	**Bodrum**	**2.17**	**11**	P	**Pn**	**08 36 21.8**	**+0.8**
BODT	**Bodrum**	**2.17**	**11**	PN	**Pn**	**08 36 21.6**	**+0.6**
VAM	**Vamos**	**2.17**	**283**	P	**Pb**	**08 36 23.8**	**-0.5**
VAM				AML	AML	08 37 07.0	
	comp=N,1276μm,0.5s						
VAM				AML	AML	08 37 10.3	
	comp=E,753μm,0.8s						
TURN	**Turunc**	**2.19**	**32**	*i* P	**Pn**	**08 36 22.5**	**+1.3**
TURN				*i* S	**Sb**	**08 36 51.3**	**-0.3**
TURN				IAML		08 36 59.0	
	comp=E,188nm,0.4s						
TURN	**Turunc**	**2.19**	**32**	PN	**Pn**	**08 36 21.9**	**+0.7**
BDRM	**Kayabasi**	**2.19**	**14**	*i* P	**Pn**	**08 36 21.9**	**+0.5**
BDRM				*i* S	**Sg**	**08 36 53.6**	**-2.1**
GVD	**Gavdhos**	**2.22**	**268**	P	**Pn**	**08 36 24.5**	**+2.9**
YKAV	**Yalikavak-Bodr**	**2.23**	**10**	PN	**Pn**	**08 36 22.4**	**+0.7**
IMMV	**Iera Moni Meta**	**2.36**	**284**	P	**Pn**	**08 36 26.3**	**+2.7**
APE	**Apeiranthos**	**2.36**	**335**	P	**Pn**	**08 36 23.8**	**+0.1**
APE				AML	AML	08 37 03.7	
	comp=E,549μm,0.6s						
APE				AML	AML	08 37 05.4	
	comp=N,540μm,0.8s						
APE	**Apeiranthos**	**2.36**	**335**	P	**Pn**	**08 36 23.8**	**+0.1**
APE				S	**Sn**	**08 36 51.7**	**-0.9**
	comp=N,275nm,0.7s						
APE	**Apeiranthos**	**2.36**	**335**	PN	**Pn**	**08 36 24.1**	**+0.4**
DALY	**Dalyan (Mula)**	**2.42**	**38**	*i* P	**Pn**	**08 36 26.2**	**+1.9**
DALY				*i* S	**Sg**	**08 37 03.4**	**+0.6**
DALY	**Dalyan (Mula)**	**2.42**	**38**	PN	**Pn**	**08 36 25.3**	**+1.0**
YER	**Yerkesik**	**2.51**	**28**	P	**Pn**	**08 36 27.1**	**+1.4**
YER	**Yerkesik**	**2.51**	**28**	PN	**Pn**	**08 36 26.7**	**+1.0**
FETY	**Fethiye**	**2.53**	**47**	PN	**Pn**	**08 36 25.9**	**0.0**
DDIM	**Aydin, Didim**	**2.55**	**8**	*i* P	**Pg**	**08 36 33.1**	**-0.8**
DDIM				IAML		08 37 16.0	
	comp=E,134nm,1.4s						
DDIM				IAML		08 37 21.0	
	comp=N,128nm,1.1s						
MHLO	**Agia Marina, M**	**2.62**	**313**	P	**Pn**	**08 36 29.1**	**+2.1**
MULA	**Mugla, Merkez-**	**2.63**	**28**	*i* P	**Pn**	**08 36 29.4**	**+2.0**
MULA				*i* S	**Sb**	**08 37 02.5**	**-1.9**
AKAS	**Kas**	**2.64**	**60**	*i* P	**Pn**	**08 36 27.5**	**0.0**
AKAS				*i* S	**Sn**	**08 36 58.8**	**-0.7**
AKAS	**Kas**	**2.64**	**60**	PN	**Pn**	**08 36 28.5**	**+1.0**
AYDN	**Tasoluk**	**2.86**	**18**	*i* P	**Pn**	**08 36 32.0**	**+1.4**
CAEL	**Denizli, Camel**	**3.00**	**42**	*i* P	**Pn**	**08 36 32.6**	**+0.1**
CAEL				*i* S	**Sg**	**08 37 25.5**	**+4.0**
CAEL				IAML		08 37 39.0	
	comp=E,234nm,1.1s						
CAEL				IAML		08 37 44.0	
	comp=N,249nm,1.0s						
ELL	**Elmali**	**3.12**	**54**	PN	**Pn**	**08 36 35.5**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**3.14**	**16**	PN	**Pn**	**08 36 35.5**	**+1.1**
AKUM	**Antalya-Kumluc**	**3.21**	**63**	*i* P	**Pn**	**08 36 36.3**	**+1.0**
AKUM				*i* S	**Sn**	**08 37 15.2**	**+1.8**
GOLH	**Golhisar**	**3.22**	**44**	*i* P	**Pn**	**08 36 37.2**	**+1.8**
GOLH				*i* S	**Sg**	**08 37 28.0**	**-0.5**
GOLH				IAML		08 37 45.0	
	comp=N,91nm,1.2s						
URLA	**Izmir**	**3.43**	**357**	PN	**Pn**	**08 36 39.5**	**+1.2**
CHOS	**Chios island**	**3.50**	**351**	PN	**Pn**	**08 36 39.5**	**+0.2**
KORT	**Korkueli**	**3.55**	**53**	*i* P	**Pn**	**08 36 42.4**	**+2.3**
KORT				*i* S	**Sn**	**08 37 26.1**	**+4.1**
KORT				IAML		08 37 59.0	
	comp=E,56nm,0.7s						
KORT	**Korkueli**	**3.55**	**53**	PN	**Pn**	**08 36 41.7**	**+1.6**
MANT	**Manisa**	**3.83**	**21**	*i* P	**Pn**	**08 36 44.5**	**+0.6**
KULA	**Kula-Manisa**	**3.88**	**22**	PN	**Pn**	**08 36 45.9**	**+1.3**
USAK	**Uak-Merkez**	**4.18**	**25**	*i* P	**Pn**	**08 36 49.4**	**+0.7**
SIGR	**SIGRI**	**4.34**	**350**	PN	**Pn**	**08 36 51.2**	**+0.5**
KEPZ	**Antalya-Kepez**	**4.38**	**62**	*i* P	**Pn**	**08 36 51.9**	**+0.6**
KEPZ				*i* S	**Sn**	**08 37 41.0**	**-1.2**
GAZI	**Gazipasa**	**4.69**	**72**	*i* P	**Pn**	**08 36 56.3**	**+0.7**
GAZI				*i* S	**Sn**	**08 37 47.1**	**-2.8**
GAZI				IAML		08 37 57.0	
	comp=E,52nm,0.7s						
GAZI				IAML		08 38 08.0	
	comp=N,39nm,0.6s						
MMAI	**Mount Meron Ar**	**7.41**	**103**	Pn	**Pn**	**08 37 33.2**	**+0.1**
	baz=286,slow=10,SNR=1.7						
MMAI				Sn	**Sn**	**08 38 56.4**	**-0.5**
	comp=N,4.8nm,0.3s,baz=310,slow=19,SNR=4.3						
EIL	**Elat**	**8.67**	**125**	Pn	**Pn**	**08 37 51.0**	**+0.7**
	comp=N,0.7nm,0.3s,baz=300,slow=2.5,SNR=19						
EIL				Sn	**Sn**	**08 39 22.7**	**-5.3**
	comp=N,1.5nm,0.3s,baz=275,slow=13,SNR=3.3						
GNI	**Garni**	**15.16**	**65**	LR	LR	08 46 33.5	
	comp=N,29nm,21.3s,baz=231,slow=43						
KBZ	**Khabaz**	**15.23**	**50**	Pn	**P**	**08 39 26.5**	**+1.7**
	comp=N,0.1nm,0.3s,baz=254,slow=15,SNR=2.5						
AKASG	**Malin Array Be**	**15.86**	**6**	Pn	**Pn**	**08 39 29.1**	**+1.1**
	comp=N,0.2nm,0.3s,baz=194,slow=10,SNR=2.1						
GERES	**GERESS Array B**	**16.94**	**329**	Pn	**Pn**	**08 39 41.5**	**-0.4**
	comp=N,0.2nm,0.3s,baz=152,slow=11,SNR=2.0						
ESDC	**Sonseca Array**	**24.85**	**290**	P	**P**	**08 41 06.5**	**-0.8**
	comp=N,0.7nm,0.4s,baz=85,slow=9.7,SNR=5.1						
AKTO	**Aktyubinsk**	**27.44**	**46**	P	**P**	**08 41 30.0**	**-0.5**
	comp=N,0.5nm,0.4s,baz=3.8,slow=16,SNR=2.2						
TORD	**Torodi Ar. Bea**	**31.39**	**232**	P	**P**	**08 42 06.7**	**+0.9**
	comp=N,0.6nm,0.5s,baz=29,slow=9.0,SNR=6.1						
TORD				LR	LR	08 57 58.6	
	comp=N,26nm,18.1s,baz=165,slow=42						
KURBB	**Kurchatov Arra**	**40.23**	**51**	P	**P**	**08 43 21.6**	**+0.3**
	comp=N,1.3nm,0.7s,baz=277,slow=8.8,SNR=11						
MKAR	**Makanchi Array**	**42.79**	**56**	P	**P**	**08 43 43.0**	**+0.6**
	comp=N,0.6nm,0.4s,baz=276,slow=7.0,SNR=7.9						
ZALV	**Zalesovo Beam**	**44.20**	**46**	P	**P**	**08 43 53.1**	**-0.5**
	comp=N,1.3nm,0.5s,baz=266,slow=7.9,SNR=4.9						
YKA	**Yellowknife Ar**	**78.07**	**343**	P	**P**	**08 47 41.6**	**-1.6**
	comp=N,0.1nm,0.4s,baz=43,slow=6.2,SNR=7.1						

ANF ***17*** *08:37:10.2±0.3,35°.95N×97°.29W,h5km,ML4.7/18,Error ellipse: s-maj=3.9km s-min=2.8km az=9.0,Hypocentre not reviewed by the ISC*

IDC ***17*** *08:37:10.7±1.0,35°.95N×97°.33W,h0km,mb3.2/2, mb1 3.7/7,mb1mx3.4/57,mbtmp3.3/7,ML3.2/5,MS2.8/3, Ms1 2.8/3,ms1mx2.5/24,Error ellipse: s-maj=14.2km s-min=12.0km az=143.0*

NEIC ***17*** *08:37:11.2±0.8,35°.94N±0°.01×97°.33W±0°.02,h5km±8km, Error ellipse: s-maj=2.7km s-min=1.9km az=80.0*

NEIC ***17*** *08:37:11.2,35°.92N×97°.33W,h6km,Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr=0.14; Mθθ=2.53; Mϕϕ=-2.39; Mrθ=0.58; Mθϕ=1.15; Mϕr=0.91; Fault plane solution: M0=2.93000×10^14 NP1:ϕs=214.05000°, δ=70.78000°,λ=-171.17000°. NP2:ϕs=121.12000°, δ=81.66000°,λ=-19.44000°. Principal axes: T 2.8368, Plg7.0000°, Azm169.0000°; N 0.1741, Plg69.0000°, Azm279.0000°; P -3.0109, Plg20.0000°, Azm76.0000°;*

TUL ***17*** *08:37:11.2±1.1,35°.92N±0°.01×97°.33W±0°.02,h4km±7km, ML3.7,mb_Lg3.8/142(NEIC),Mwr3.6/42(NEIC) Error ellipse: s-maj=2.7km s-min=1.8km az=84.0*

ISC 17 08:37:11.1±1.1,35°.95N±0°.02×97°.33W±0°.02,h4km±8km, n153,σ0s65/141,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.18**	**213**		**Pg**	**08 37 14.7**	**0.0**
OK029				Sg	**Sg**	**08 37 17.1**	**+0.1**
OK005	**Luther M Schoo**	**0.32**	**159**		**Pg**	**08 37 17.4**	**+0.2**
OK025	**Westminster Rd**	**0.37**	**181**		**Pg**	**08 37 18.1**	**0.0**
OK025				Sg	**Sg**	**08 37 23.2**	**+0.2**
BCOK	**Bluff Creek, N**	**0.37**	**218**	Pg	**Pg**	**08 37 18.1**	**-0.1**
BCOK				Sg	**Sg**	**08 37 23.3**	**+0.3**
OK009	**Oakdale Elemen**	**0.37**	**191**		**Pg**	**08 37 18.6**	**+0.2**
OK001	**Jones High Sch**	**0.39**	**175**	Pg	**Pg**	**08 37 18.6**	**-0.1**
OK001				Sg	**Sg**	**08 37 24.0**	**+0.3**
OK031	**S. Brethren Rd**	**0.40**	**89**		**Pg**	**08 37 19.2**	**+0.4**
OK031				Sg	**Sg**	**08 37 24.9**	**+0.9**
OK030	**Cody Creek RV**	**0.45**	**93**		**Pg**	**08 37 20.1**	**+0.4**
OK030				Sg	**Sg**	**08 37 26.5**	**+1.0**
OKCFA	**Oklahoma City**	**0.54**	**190**		**Pg**	**08 37 21.3**	**-0.2**
OKCFA				Sg	**Sg**	**08 37 28.8**	**+0.2**
OKCFA	**Oklahoma City**	**0.54**	**190**	P	**Pg**	**08 37 21.4**	**-0.2**
	baz=11,SNR=87						
OKCFA				S	**Sg**	**08 37 28.8**	**+0.2**
	baz=11						
OKCFA	**Oklahoma City**	**0.54**	**190**	P		08 37 21.4	
	baz=11,SNR=87						
OKCFA				S		08 37 28.8	
	baz=11						
OKCSW	**OKLAHOMA CITY**	**0.55**	**189**		**Pg**	**08 37 21.5**	**-0.2**
OKCSW				Sg	**Sg**	**08 37 28.9**	**+0.1**
QUOK	**Quay**	**0.55**	**66**	Pg	**Pg**	**08 37 22.2**	**+0.5**
FNO	**Franklin**	**0.69**	**185**		**Pg**	**08 37 24.7**	**+0.3**
FNO				Sg	**Sg**	**08 37 34.0**	**+0.6**
CROK	**Carrier**	**0.76**	**317**		**Pg**	**08 37 26.2**	**+0.4**
CROK				Sg	**Sg**	**08 37 36.9**	**+1.1**
GC02	**Grant County #**	**1.00**	**335**		**Pg**	**08 37 30.4**	**+0.2**
KAN13	**South Haven SW**	**1.07**	**354**		**Pg**	**08 37 31.8**	**+0.2**
KAN13				Sg	**Sb**	**08 37 46.5**	**0.0**
OK032	**Salt Plains WL**	**1.11**	**321**		**Pg**	**08 37 32.4**	**0.0**
KAN14	**Manchester OK**	**1.13**	**333**		**Pg**	**08 37 32.8**	**0.0**
T35A	**Sooner Cattle**	**1.17**	**34**		**Pg**	**08 37 33.4**	**-0.2**
T35A				Sg	**Sg**	**08 37 49.1**	**+0.4**
T35B	**Sooner Cattle**	**1.17**	**34**	P	**Pg**	**08 37 33.5**	**-0.1**
	baz=214,SNR=284						
T35B				S	**Sg**	**08 37 49.3**	**+0.5**
	baz=214						
T35B	**Sooner Cattle**	**1.17**	**34**	P		08 37 33.5	
	baz=214,SNR=284						
T35B				S		08 37 49.3	
	baz=214						
KAN09	**Caldwell North**	**1.21**	**349**		**Pg**	**08 37 34.2**	**0.0**
KAN05	**Bluff City Nor**	**1.24**	**340**		**Pg**	**08 37 34.8**	**0.0**
KAN05				Sg	**Sn**	**08 37 52.1**	**-0.3**
TUL1	**Leonard**	**1.25**	**91**	P	**Pg**	**08 37 33.8**	**-1.3**
	baz=271,SNR=130						
TUL1				S	**Sg**	**08 37 51.2**	**-0.2**
	baz=271						
TUL1	**Leonard**	**1.25**	**91**	P		08 37 34.0	
	baz=271,SNR=114						
TUL1				S		08 37 51.0	
	baz=271						
TUL1	**Leonard**	**1.25**	**91**	P		08 37 33.8	
	baz=271,SNR=130						
TUL1				S		08 37 51.2	
	baz=271						
KS20	**Mayfield South**	**1.29**	**352**		**Pg**	**08 37 35.8**	**-0.1**
KAN10	**Anthony SW Sta**	**1.32**	**333**		**Pn**	**08 37 36.0**	**-0.4**
KS21	**Milan North St**	**1.36**	**349**	IAmb_Lg		08 37 57.7	
	comp=Z,385nm,0.9s						
KAN08	**Anthony NE Sta**	**1.38**	**338**		**Pn**	**08 37 37.2**	**+0.1**
X34A	**Smith Ranch, M**	**1.41**	**197**	Pn	**Pn**	**08 37 37.2**	**-0.3**
U32A	**Winter Ranch,**	**1.42**	**288**		**Pn**	**08 37 37.5**	**-0.3**
U32A	**Winter Ranch,**	**1.42**	**288**	P	**Pn**	**08 37 37.4**	**-0.3**
	baz=108,SNR=52						
U32A				S	**Sn**	**08 37 57.3**	**+0.5**
	baz=108						
U32A	**Winter Ranch,**	**1.42**	**288**	P		08 37 37.4	
	baz=108,SNR=52						
U32A				S		08 37 57.3	
	baz=108						
KAN12	**Harper NE Stat**	**1.45**	**338**		**Pn**	**08 37 38.5**	**+0.4**
WMOK	**Wichita Mounta**	**1.69**	**225**		**Pn**	**08 37 41.5**	**+0.1**
WMOK				IAmb_Lg		08 38 04.4	
	comp=Z,399nm,0.7s						
WMOK	**Wichita Mounta**	**1.69**	**225**	P	**Pn**	**08 37 41.3**	**-0.2**
	baz=45,SNR=282						
WMOK				S	**Sn**	**08 38 03.7**	**+0.1**
	baz=45						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		08 37 41.4	
	baz=45,SNR=680						
WMOK				S		08 38 03.8	
	baz=45						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		08 37 41.3	
	baz=45,SNR=282						
WMOK				S		08 38 03.7	
	baz=45						
X37A	**Clayton**	**2.10**	**130**		**Pn**	**08 37 46.9**	**-0.1**
X37A	**Clayton**	**2.10**	**130**	P	**Pn**	**08 37 47.0**	**-0.1**
	baz=310,SNR=94						
X37A				S	**Sn**	**08 38 14.7**	**+1.1**
	baz=310						
X37A	**Clayton**	**2.10**	**130**	P		08 37 47.0	
	baz=310,SNR=94						
X37A				S		08 38 14.7	
	baz=310						
U38A	**Gravette**	**2.43**	**78**		**Pn**	**08 37 51.5**	**-0.1**
U38A	**Gravette**	**2.43**	**78**	P	**Pn**	**08 37 52.3**	**+0.6**
	baz=259,SNR=194						
U38A	**Gravette**	**2.43**	**78**	P		08 37 52.3	
	baz=259,SNR=194						
Z35A	**Perchaven, San**	**2.61**	**179**		**Pn**	**08 37 54.5**	**+0.3**
Z35A				IAmb_Lg		08 38 34.6	
	comp=Z,226nm,1.0s						
Z35A	**Perchaven, San**	**2.61**	**179**	P	**Pn**	**08 37 54.2**	**+0.1**
	baz=359						
Z35A				S	**Sn**	**08 38 27.1**	**+0.8**
	baz=359						
Z35A	**Perchaven, San**	**2.61**	**179**	P		08 37 54.2	
	baz=359						
Z35A				S		08 38 27.1	
	baz=359						
R32A	**Long Quarter,**	**2.70**	**336**		**Pn**	**08 37 55.9**	**+0.5**
R32A				IAmb_Lg		08 38 43.9	
	comp=Z,189nm,0.8s						
R32A	**Long Quarter,**	**2.70**	**336**	S	**Sn**	**08 38 29.6**	**+1.1**
	baz=156						
R32A	**Long Quarter,**	**2.70**	**336**	S		08 38 29.6	
	baz=156						
HHAR	**Hobbs**	**2.77**	**82**		**Pn**	**08 37 56.0**	**-0.3**
HHAR	**Hobbs**	**2.77**	**82**	P	**Pn**	**08 37 56.6**	**+0.4**
	baz=264,SNR=48						
HHAR	**Hobbs**	**2.77**	**82**	P		08 37 56.6	
	baz=264,SNR=48						
W39A	**Magazine**	**2.99**	**104**		**Pn**	**08 37 59.1**	**-0.1**
W39A				IAmb_Lg		08 38 49.1	
	comp=Z,300nm,0.7s						
W39A	**Magazine**	**2.99**	**104**	P	**Pn**	**08 37 59.4**	**+0.2**
	baz=285,SNR=27						
W39A				S	**Sn**	**08 38 36.2**	**+0.7**
	baz=285						
W39A	**Magazine**	**2.99**	**104**	P		08 37 59.4	
	baz=285,SNR=16						
W39A	**Magazine**	**2.99**	**104**	P		08 37 59.4	
	baz=285,SNR=27						
W39A				S		08 38 36.2	
	baz=285						
KSU1	**Kansas State U**	**3.20**	**10**	Pn	**Pn**	**08 38 02.5**	**+0.4**
KSU1	**Kansas State U**	**3.20**	**10**	S	**Sn**	**08 38 41.6**	**+0.9**
	baz=190						
KSU1	**Kansas State U**	**3.20**	**10**	P		08 38 02.0	
	baz=190,SNR=14						
KSU1	**Kansas State U**	**3.20**	**10**	S		08 38 41.6	
	baz=190						
Z38A	**Mt. Pleasant**	**3.31**	**144**		**Pn**	**08 38 04.1**	**+0.5**
Z38A				IAmb_Lg		08 39 02.1	
	comp=Z,239

baz=72,SNR=20
ABTX Abilene, Hawle 3.83 211 IAmb_Lg 08 39 13.1
comp=Z,142nm,0.8s
ABTX Abilene, Hawle 3.83 211 P 08 38 11.2
baz=30
ABTX S 08 38 55.4
baz=30
WHTX Lake Whitney, 3.95 182 Pn **08 38 12.1 -0.4**
WHTX Lake Whitney, 3.95 182 P Pn **08 38 11.9 -0.6**
baz=1.5,SNR=23
WHTX S Sb **08 39 10.8 +1.4**
baz=1.5
WHTX Lake Whitney, 3.95 182 P 08 38 12.1
baz=1.5,SNR=21
WHTX S 08 38 58.7
baz=1.5
WHTX Lake Whitney, 3.95 182 P 08 38 11.9
baz=1.5,SNR=23
WHTX S 08 39 10.8
baz=1.5
X40A Basin Creek Fa 3.96 110 P 08 38 13.0
baz=293,SNR=11
237A Washetta, Mont 4.14 162 Pn **08 38 14.5 -0.6**
237A Washetta, Mont 4.14 162 P Pn **08 38 14.3 -0.8**
baz=343,SNR=8.8
237A S Sb **08 39 17.6 +2.8**
baz=343
237A Washetta, Mont 4.14 162 P 08 38 14.3
baz=343,SNR=8.8
237A S 08 39 17.6
baz=343
WHAR Wooly Hollow 4.16 98 Pn **08 38 16.0 +0.6**
WHAR IAmb_Lg 08 39 26.9
comp=Z,195nm,0.7s
W41B Gary Mavity, V 4.22 99 P Pn **08 38 16.2 0.0**
baz=282,SNR=20
W41B Gary Mavity, V 4.22 99 P 08 38 16.1
baz=282,SNR=8.2
W41B S 08 39 04.4
baz=282
W41B Gary Mavity, V 4.22 99 P 08 38 16.2
baz=282,SNR=20
FCAR Ozark Folk Cen 4.23 89 Pn **08 38 15.7 -0.6**
FCAR IAmb_Lg 08 39 27.4
comp=Z,171nm,0.9s
MGMO Mountain Grove 4.25 72 Pn **08 38 17.2 +0.5**
MGMO IAmb_Lg 08 39 26.1
comp=Z,153nm,0.7s
Z41A Richland Creek 4.60 124 P Pn **08 38 21.0 -0.4**
baz=307
Z41A Richland Creek 4.60 124 P 08 38 20.7
baz=307
Z41A S 08 39 12.9
baz=307
Z41A Richland Creek 4.60 124 P 08 38 21.0
baz=307
Z41A P 08 38 21.0
baz=307
R40A Maddies Statio 4.67 58 Pn **08 38 22.7 +0.3**
R40A IAmb_Lg 08 39 49.5
comp=Z,158nm,0.7s
R40A Maddies Statio 4.67 58 P Pn **08 38 22.4 0.0**
baz=241,SNR=43
R40A Maddies Statio 4.67 58 P 08 38 22.4
baz=241,SNR=43
NATX Nacogdoches 4.73 151 S 08 39 17.0
baz=333
P38A Dawn 4.75 38 Pn **08 38 24.0 +0.6**
P38A IAmb_Lg 08 39 53.0
comp=Z,164nm,0.8s
MSTX Muleshoe 4.88 248 Pn **08 38 25.4 -0.1**
MSTX Muleshoe 4.88 248 P Pn **08 38 25.3 -0.1**
baz=65,SNR=5.6
MSTX Muleshoe 4.88 248 P 08 38 25.2
baz=65,SNR=15
MSTX S 08 39 21.4
baz=65
MSTX Muleshoe 4.88 248 P 08 38 25.3
baz=65,SNR=5.6
CCAR Cane Creek 5.00 112 IAmb_Lg 08 39 57.4
comp=Z,227nm,1.0s
CCAR Cane Creek 5.00 112 P Pn **08 38 26.8 0.0**
baz=295
CCAR Cane Creek 5.00 112 P 08 38 26.8
baz=295
LCAR Lake Charles 5.01 87 Pn **08 38 26.6 -0.5**
LCAR IAmb_Lg 08 39 53.7
comp=Z,154nm,0.7s
N35A Tabor 5.08 15 Pn **08 38 28.6 +0.6**
N35A Tabor 5.08 15 P Pn **08 38 28.1 +0.1**
baz=196
N35A Tabor 5.08 15 P 08 38 28.1
baz=196
435B Jarrell 5.16 182 IAmb_Lg 08 39 56.6
comp=Z,148nm,0.7s
435B Jarrell 5.16 182 S 08 39 26.6
baz=2.3
KSCO Kaye Shedlock' 5.20 308 IAmb_Lg 08 40 11.0
comp=Z,187nm,0.7s
KSCO Kaye Shedlock' 5.20 308 S 08 39 28.7
baz=125
CCM Cathedral Cave 5.31 65 Pn **08 38 31.4 +0.2**
CCM Cathedral Cave 5.31 65 P Pn **08 38 31.0 -0.1**
baz=248
CCM Cathedral Cave 5.31 65 P 08 38 30.6
baz=248
CCM S 08 39 30.3
baz=248
CCM Cathedral Cave 5.31 65 P 08 38 31.0
baz=248
BGNE Belgrade 5.49 354 Pn **08 38 33.6 0.0**
BGNE Belgrade 5.49 354 P 08 38 33.0
baz=173
BGNE S 08 39 34.6
baz=173
P40A Paris 5.50 48 Pn **08 38 33.3 -0.6**
P40A IAmb_Lg 08 40 10.5
comp=Z,188nm,0.8s
P40A Paris 5.50 48 P Pn **08 38 33.6 -0.3**
baz=231,SNR=6.4
P40A Paris 5.50 48 P 08 38 33.6
baz=231,SNR=6.4
N38A Joes South For 5.81 32 Pn **08 38 38.0 -0.1**
T25A Trinidad 5.82 284 Pn Pn **08 38 38.7 +0.3**
T25A Trinidad 5.82 284 P 08 38 38.1
baz=100,SNR=8.8
T25A S 08 39 43.5
baz=100
JCT Junction City 5.83 201 P 08 38 38.6
baz=20
JCT S 08 39 44.5
baz=20
143A Socs Landing, 5.88 122 IAmb_Lg 08 40 28.6
comp=Z,137nm,0.8s
FVM French Village 5.89 68 IAmb_Lg 08 40 17.6
comp=Z,133nm,1.0s
FVM French Village 5.89 68 P Pn **08 38 39.3 +0.1**
baz=252,SNR=6.2
FVM French Village 5.89 68 P 08 38 39.3
baz=252,SNR=6.2
MET Memphis--Engin 6.09 96 IAmb_Lg 08 40 34.5
comp=Z,201nm,0.7s
PVMO Portageville 6.19 83 IAmb_Lg 08 40 29.9
comp=Z,179nm,0.8s
OGNE Ogallala 6.20 325 Pn Pn **08 38 44.4 +0.8**
OGNE IAmb_Lg 08 40 33.7
comp=Z,194nm,0.7s
OGNE Ogallala 6.20 325 S 08 39 52.4
baz=142
PENMO Penman 6.25 83 IAmb_Lg 08 40 44.7
comp=Z,175nm,0.8s
SLM Saint Louis 6.26 63 IAmb_Lg 08 40 28.4
comp=Z,132nm,0.7s
GLAT Glass 6.52 85 IAmb_Lg 08 40 42.3
comp=Z,183nm,0.8s
OXF Oxford 6.64 100 Pn **08 38 48.2 -1.2**
OXF IAmb_Lg 08 40 51.1
comp=Z,152nm,1.1s
OXF Oxford 6.64 100 P 08 38 48.2
baz=285
OXF S 08 40 02.1
baz=285
W45A Hickory Valley 6.69 94 IAmb_Lg 08 41 02.6
comp=Z,144nm,0.8s
S44A Carbondale 6.71 73 Pn **08 38 50.2 -0.2**
S44A IAmb_Lg 08 40 52.1
comp=Z,175nm,1.0s
Y45A Yeager Farm, C 6.73 106 IAmb_Lg 08 40 58.0
comp=Z,98nm,0.7s
SIUC Southern Illin 6.74 72 Pn **08 38 50.2 -0.6**
SIUC IAmb_Lg 08 40 51.9
comp=Z,166nm,0.8s
K31A O'Neill 6.75 351 Pn **08 38 50.9 -0.1**
SCIA State Center 6.76 27 P 08 38 49.9
baz=210
SCIA S 08 40 05.1
baz=210
VBMS Vicksburg 6.77 121 S 08 40 06.3
baz=305
SDCO Great Sand Dun 6.79 288 S 08 40 08.1
baz=103
Q24A Divide 6.91 298 S 08 40 10.2
baz=114
N41A Harden Midland 6.96 45 Pn **08 38 54.0 +0.1**
735A Kenedy 7.08 183 IAmb_Lg 08 41 13.1
comp=Z,96nm,1.1s
P43A Skaggs, Pawnee 7.20 57 Pn **08 38 57.1 0.0**
Q44A Meyer Farm, Va 7.24 64 Pn Pn **08 38 57.7 0.0**
Q44A IAmb_Lg 08 41 10.6
comp=Z,157nm,1.0s
ANMO Albuquerque 7.51 265 Pn Pn **08 39 01.9 +0.3**
ANMO Pg Pg 08 39 28.9 -6.1
comp=Z,1.0nm,0.3s,baz=79,slow=13,SNR=28
ANMO Lg Lg 08 41 02.7
comp=Z,1.8nm,0.3s,baz=87,slow=18,SNR=2.4
ANMO LR LR 08 42 04.6
comp=Z,80nm,19.2s,baz=313,slow=39
ANMO Albuquerque 7.51 265 IAmb_Lg 08 41 22.7
comp=Z,29nm,1.1s
ISCO Idaho Springs 7.59 303 Pn **08 39 03.3 +0.5**
ISCO Idaho Springs 7.59 303 P Pn **08 39 02.8 0.0**
baz=118,SNR=7.9
ISCO Idaho Springs 7.59 303 P 08 39 02.5
baz=118,SNR=9.9
ISCO Idaho Springs 7.59 303 P 08 39 02.8
baz=118,SNR=7.9
WVT Waverly 7.70 86 IAmb_Lg 08 41 19.9
comp=Z,74nm,1.1s
L40A Anamosa 7.74 36 Pn **08 39 04.5 0.0**
L40A IAmb_Lg 08 41 21.7
comp=Z,150nm,1.0s
ECSD EROS Data Cent 7.79 4 P 08 39 04.1
baz=184
ECSD EROS Data Cent 7.79 4 Pn **08 39 04.3 -1.0**
ECSD IAmb_Lg 08 41 24.0
comp=Z,56nm,0.8s
HDIL Hopedale 7.82 52 Pn **08 39 04.9 -0.7**
HDIL Hopedale 7.82 52 P Pn **08 39 04.7 -0.9**
baz=236,SNR=6.0
HDIL Hopedale 7.82 52 P 08 39 04.6
baz=236,SNR=7.0
HDIL Hopedale 7.82 52 P 08 39 04.7
baz=236,SNR=6.0
OLIL Olney 7.86 67 IAmb_Lg 08 41 35.8
comp=Z,114nm,1.0s
MNTX Cornudas Mount 7.92 240 Pn Pn **08 39 07.3 +0.2**
MNTX Cornudas Mount 7.92 240 P 08 39 06.5
baz=56
USIN University of 8.00 73 IAmb_Lg 08 41 29.9
comp=Z,86nm,1.0s
Y22D IRIS PASSCAL I 8.09 259 IAmb_Lg 08 41 41.5
comp=Z,85nm,0.9s
O44A Mansfield 8.15 56 IAmb_Lg 08 41 32.0
comp=Z,127nm,0.8s
PHWY Pilot Hill 8.30 312 Pn **08 39 12.8 +0.2**
PHWY IAmb_Lg 08 41 50.8
comp=Z,50nm,0.9s
T47A Sharon Grove 8.30 80 Pn **08 39 11.4 -0.8**
T47A IAmb_Lg 08 41 38.2
comp=Z,84nm,0.8s
N23A Red Feather La 8.37 309 P 08 39 13.7
baz=124,SNR=17
TXAR Lajitas Array 8.48 221 Pn Pn **08 39 13.5 -1.4**
comp=Z,0.2nm,0.3s,baz=44,slow=12,SNR=10
TXAR Lg Lg 08 41 34.8
comp=Z,4.0nm,0.3s,baz=43,slow=28,SNR=11
TX31 Lajitas Ar. Si 8.49 221 Pn **08 39 15.1 +0.2**
TX32 Lajitas Array 8.49 221 Pn **08 39 15.1 +0.2**
L42A Oliver, Polo 8.49 42 Pn Pn **08 39 14.5 -0.3**
L42A IAmb_Lg 08 41 51.6
comp=Z,118nm,0.8s
V48A Smith Brothers 8.54 88 IAmb_Lg 08 41 45.5
comp=Z,49nm,0.8s
SUSD Miller 8.57 352 IAmb_Lg 08 41 59.0
comp=Z,71nm,0.8s
I37A Lemond, Waseca 8.60 19 IAmb_Lg 08 41 54.1
comp=Z,120nm,0.9s
P46A Rosedale 8.81 62 IAmb_Lg 08 41 55.5
comp=Z,99nm,0.8s
JFWS Jewell Farm 8.85 36 Pn Pn **08 39 19.9 +0.1**
JFWS IAmb_Lg 08 41 60.0
comp=Z,114nm,0.8s
JFWS Jewell Farm 8.85 36 P 08 39 18.7
baz=220
LRAL Lakeview Retre 9.01 106 IAmb_Lg 08 42 13.7
comp=Z,44nm,1.1s
WCI Wyandotte Cave 9.11 72 IAmb_Lg 08 41 58.0
comp=Z,46nm,0.8s
BLO Bloomington 9.17 66 Pn **08 39 24.4 +0.4**
BLO IAmb_Lg 08 42 13.9
comp=Z,105nm,0.8s
SFIN Lafayette 9.19 58 IAmb_Lg 08 42 02.9
comp=Z,91nm,0.7s
Y49A Blount Mountai 9.21 100 IAmb_Lg 08 42 08.8
comp=Z,42nm,0.9s
SWET Sewanee 9.32 91 IAmb_Lg 08 42 13.1
comp=Z,73nm,1.1s
I40A Norwalk 9.46 31 IAmb_Lg 08 42 12.4
comp=Z,86nm,0.9s
RWWY Rawlins 9.60 310 IAmb_Lg 08 42 42.0
comp=Z,55nm,1.1s
RSSD Black Hills 9.64 330 Pn **08 39 30.9 0.0**
FPAL Fort Paine 9.69 95 IAmb_Lg 08 42 25.5
comp=Z,48nm,0.8s
K22A Casper 9.77 316 Pn **08 39 32.5 0.0**
W50A Signal Mountai 9.82 91 IAmb_Lg 08 42 29.1
comp=Z,85nm,1.2s
SPMN Marine on St. 9.88 19 IAmb_Lg 08 42 39.2
comp=Z,43nm,0.7s
F33A 5 Mile Ranch, 9.91 4 IAmb_Lg 08 42 32.1
comp=Z,58nm,0.9s
RDMU Red Mountain 10.67 299 Pn **08 39 44.1 -0.8**
TKL Tuckaleechee C 11.02 88 Pn Pn **08 39 48.1 -1.4**
comp=Z,0.1nm,0.3s,baz=274,slow=13,SNR=2.2
TKL Lg Lg 08 42 51.5
comp=Z,1.4nm,0.3s,baz=354,slow=22,SNR=5.6
TKL LR LR 08 44 08.3
comp=Z,66nm,21.7s,baz=320,slow=38
PDAR Pinedale Array 11.65 309 Pn Pn **08 39 58.0 -0.3**
comp=Z,0.2nm,0.3s,baz=118,slow=13,SNR=8.8
PDAR Lg Lg 08 43 13.7
comp=Z,0.4nm,0.3s,baz=114,slow=30,SNR=3.2
ULM Lac du Bonnet 14.33 4 Pn Pn **08 40 30.8 -3.9**
comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=4.1
ULM Lg Lg 08 44 35.6
comp=Z,0.6nm,0.3s,baz=106,slow=18,SNR=5.8
SADO Sadowa 16.40 52 Lg Lg 08 45 42.6
comp=Z,0.2nm,0.3s,baz=335,slow=13,SNR=4.8
TEIG Tepich 17.57 151 LR LR 08 50 09.8
comp=Z,29nm,19.4s,baz=244,slow=44
YKA Yellowknife Ar 28.67 343 P P **08 43 08.9 +0.2**
comp=Z,0.2nm,0.8s,baz=148,slow=8.9,SNR=3.0
ILAR Eielson Array 41.09 330 P P **08 44 56.6 +1.0**
comp=Z,0.5nm,0.9s,baz=116,slow=8.1,SNR=3.2

IDC 17 08:50:29.1±1.6, 54°.66N×83°.74E, h0km, mb1 2.8/3, mb1mx2.8/47, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=15.9km s-min=10.2km az=11.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.95**	**138**	*i*		08 56 05.0	
	baz=317,slow=336,SNR=7.1						
ZALV	**Zalesovo Beam**	**0.95**	**138**	Pg	Pg	08 50 47.3	-0.1
	2.2nm,0.3s,baz=323,slow=18,SNR=12						
ZALV				Lg	Lg	08 51 01.1	
	5.4nm,0.3s,baz=319,slow=29,SNR=22						
KURBB	**Kurchatov Arra**	**5.14**	**220**	Pn	Pn	08 51 47.8	+0.6
	0.1nm,0.3s,baz=40,slow=14,SNR=4.5						
KURBB				Lg	Lg	08 53 18.6	
	0.1nm,0.3s,baz=40,slow=30,SNR=10						
MKAR Makanchi Array 7.93 187 Pn Pn 08 52 25.1 -0.5
0.1nm,0.3s,baz=12,slow=14,SNR=4.6
MKAR Lg Lg 08 54 46.3
0.1nm,0.3s,baz=344,slow=19,SNR=2.9
BVAR Borovoye Array 8.06 264 Pn Pn 08 52 26.5 -1.0
0.5nm,0.3s,baz=107,slow=9.6,SNR=4.4

IDC 17 08:55:13.9±3.6, 54°.22N×87°.50E, h0km, mb1 2.5/2, mb1mx2.5/57, mbtmp2.5/2, ML2.3/2, Error ellipse: s-maj=32.8km s-min=18.8km az=39.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.60**	**261**	*i*		09 05 10.0	
	baz=81,slow=316,SNR=2.5						
ZALV	**Zalesovo Beam**	**1.60**	**261**	Pg	Pn	08 55 41.8	-1.7
	1.8nm,0.3s,baz=81,slow=16,SNR=14						
ZALV				Lg	Lg	08 56 05.5	
	2.9nm,0.3s,baz=78,slow=21,SNR=13						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	08 56 52.1	+0.5
	0.1nm,0.3s,baz=58,slow=15,SNR=3.3						
MKAR	**Makanchi Array**	**8.14**	**206**	Pn	Pn	08 57 14.7	+1.4
	0.0nm,0.3s,baz=23,slow=14,SNR=7.7						

SFS 17 08:58:27.0, 38°.66N×5°.21W, h7km, ML2.9, ALCOY (ALICANTE)
INMG 17 08:58:27.9±1.6, 38°.65N×0°.50W, h12km±4km, ML2.9, Error ellipse: s-maj=3.0km s-min=1.9km az=120.0
MDD 17 08:58:27.5±0.2, 38°.66N×0°.52W, h7km±3km, mbLg3.0/29, Error ellipse: s-maj=3.3km s-min=2.0km az=158.0, PRXIMO
MDD EMS: IV INTENSIDAD MAXIMA.
ISC 17 08:58:25.9±1.0, 38°.67N±0°.02×0°.52W±0°.02, h6km±7km, n79, σ1s70/129, 6C-2D, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFON	**Font Roja**	**0.02**	**261**	⇑Pg	**Pg**	**08 58 27.0**	**-0.1**
	4μm,0.0s,SNR=18						
AFON				Lg	Lg	08 58 27.2	
	27μm,0.0s,SNR=7.9						
EBEN2	**Beniarda presa**	**0.26**	**88**	⇑Pg	**Pg**	**08 58 32.3**	**+1.5**
	85nm,0.2s,SNR=18						
EBEN2				Lg	Lg	08 58 36.7	
	4μm,0.4s,SNR=7.9						
ETRV	**Los Montesinos**	**0.68**	**197**	Pg	**Pg**	**08 58 40.0**	**+1.2**
	57nm,0.1s,SNR=7.9						
ETRV				Lg	Lg	08 58 49.5	
	827nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**0.81**	**269**	⇑Pg	**Pg**	**08 58 42.4**	**+1.0**
	81nm,0.3s,SNR=18						
ETOB				Lg	Lg	08 58 54.5	
	313nm,0.3s,SNR=15						
ECHE	**Chera**	**0.99**	**339**	⇓Pg	**Pg**	**08 58 46.2**	**+1.4**
	19nm,0.2s,SNR=18						
ECHE				Lg	Lg	08 59 00.2	
	271nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**1.00**	**215**	⇓Pg	**Pg**	**08 58 45.5**	**+0.4**
	4.4nm,0.2s,SNR=18						
EMUR				Lg	Lg	08 58 59.2	
	204nm,0.4s,SNR=16						
CART	**Cartagena**	**1.15**	**200**	Pg	**Pg**	**08 58 49.0**	**+1.1**
CART				Lg	Lg	08 59 02.6	
CART	**Cartagena**	**1.15**	**200**	*e*P	**Pg**	**08 58 49.0**	**+1.1**
CART				*e*S	**Sg**	**08 59 02.6**	**-0.1**
EIBI	**Ibiza**	**1.50**	**76**	Pn	**Pn**	**08 58 52.7**	**-0.6**
	0.6nm,0.1s,SNR=7.9						
EIBI				Pg	**Pb**	**08 58 53.8**	**-0.3**
	27nm,0.3s,SNR=52						
EIBI				Sn	**Sn**	**08 59 11.0**	**-2.2**
	16nm,0.3s						
EIBI				Lg	Lg	08 59 14.0	
	64nm,0.2s,SNR=5.0						
EMOS	**Mosqueruela**	**1.69**	**1**	Pn	**Pn**	**08 58 56.8**	**+0.6**
	1.0nm,0.1s,SNR=24						
EMOS				Sn	**Sn**	**08 59 16.2**	**-2.2**
	11nm,0.3s,SNR=7.9						
EMOS				Lg	Lg	08 59 19.5	
	53nm,0.5s						
ENIJ	**Nijar**	**2.16**	**219**	Pn	**Pn**	**08 59 01.9**	**-0.6**
	2.1nm,0.2s,SNR=7.9						
ENIJ				Sn	**Sn**	**08 59 28.1**	**-1.4**
	3.5nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.19**	**248**	⇑Pn	**Pn**	**08 59 04.1**	**+1.1**
	16nm,0.4s,SNR=18						
EQES				Sn	**Sn**	**08 59 29.9**	**-0.6**
	24nm,0.4s,SNR=7.9						
EQES				Lg	Lg	08 59 36.5	
	55nm,0.2s,SNR=7.5						
ERTA	**Horta de San J**	**2.38**	**16**	Pn	**Pn**	**08 59 05.7**	**+0.2**
	2.5nm,0.2s,SNR=12						
ERTA				Sn	**Sn**	**08 59 33.4**	**-1.6**
	7.1nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	08 59 41.6	
	36nm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.45**	**332**	Pn	**Pn**	**08 59 07.0**	**+0.4**
	1.8nm,0.2s,SNR=7.9						
ETOR				Pg	**Pb**	**08 59 12.9**	**+2.4**
	20nm,0.2s,SNR=32						
ETOR				Lg	Lg	08 59 44.8	
	112nm,0.3s,SNR=7.3						
EBER	**Berja**	**2.58**	**228**	Pn	**Pn**	**08 59 08.7**	**+0.3**
	0.8nm,0.2s,SNR=10						
EBER				Sn	**Sn**	**08 59 38.0**	**-2.2**
	16nm,0.4s,SNR=7.9						
UCM	**Universidad Co**	**2.67**	**309**	Pg	**Pg**	**08 59 17.3**	**+0.2**
UCM				Lg	Lg	08 59 50.1	
UCM	**Universidad Co**	**2.67**	**309**	*e*P	**Pg**	**08 59 17.3**	**+0.2**
UCM				*e*S	**Sb**	**08 59 50.1**	**+2.9**
EQUE	**Quentar**	**2.73**	**239**	Pn	**Pn**	**08 59 12.2**	**+1.7**
	1.2nm,0.1s,SNR=7.2						
EQUE				Sn	**Sn**	**08 59 41.5**	**-2.4**
	2.1nm,0.1s,SNR=7.9						
EQUE				Lg	Lg	08 59 51.7	
	48nm,0.6s,SNR=6.5						
ETOS	**Mallorca**	**2.81**	**66**	Pn	**Pn**	**08 59 12.2**	**+0.8**
	6.6nm,0.3s,SNR=40						
ETOS				Sn	**Sn**	**08 59 44.0**	**-1.7**
	1.2nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**2.86**	**292**	⇑Pn	**Pn**	**08 59 12.2**	**+0.1**
	16nm,0.2s,baz=107,slow=14,SNR=18						
ESDC				Pg	**Pb**	**08 59 19.0**	**+1.6**
	13nm,0.3s,baz=108,slow=18,SNR=16						
ESDC				Sn	**Sn**	**08 59 45.5**	**-1.4**
	11nm,0.3s,baz=107,slow=24,SNR=5.4						
ESDC				Lg	Lg	08 59 57.1	
	9.9nm,0.3s,baz=106,slow=30,SNR=17						
EPOB	**Poblet**	**2.95**	**24**	Pn	**Pn**	**08 59 13.4**	**+0.1**
	2.1nm,0.2s,SNR=12						
EPOB				Sn	**Sn**	**08 59 47.2**	**-1.9**
	1.8nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	08 59 59.7	
	5.1nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**3.05**	**235**	Pn	**Pn**	**08 59 16.6**	**+1.9**
	1.3nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	09 00 02.4	
	26nm,0.4s,SNR=7.9						
PAB	**San Pablo**	**3.11**	**288**	⇑Pn	**Pn**	**08 59 15.6**	**0.0**
	5.4nm,0.1s,SNR=18						
PAB				Sn	**Sn**	**08 59 51.0**	**-2.0**
	3.5nm,0.2s,SNR=7.9						
PAB				Lg	Lg	09 00 04.5	
	31nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**3.23**	**262**	Pn	**Pn**	**08 59 16.7**	**-0.5**
	3.3nm,0.1s,SNR=20						
EADA				Pg	**Pb**	**08 59 24.9**	**+1.3**
	9.3nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**08 59 54.2**	**-1.8**
	3.3nm,0.2s,SNR=7.9						
EADA				Lg	Lg	09 00 07.4	
	34nm,0.5s,SNR=7.9						
EGOR	**Sierra Gorda,**	**3.24**	**242**	Pn	**Pn**	**08 59 18.9**	**+1.4**
	9.4nm,0.3s,SNR=7.9						
EGOR				Sn	**Sn**	**08 59 55.1**	**-1.3**
	5.3nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	09 00 11.1	
	24nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.43**	**306**	Pn	**Pn**	**08 59 21.2**	**+1.1**
	0.0nm,0.1s,SNR=7.9						
GUD				Pg	**Pb**	**08 59 29.1**	**+1.9**
	0.9nm,0.2s,SNR=7.9						
GUD				Lg	Lg	09 00 14.9	
	36nm,0.8s,SNR=7.9						
EMIR	**Miracle**	**3.60**	**25**	Pn	**Pn**	**08 59 22.6**	**+0.3**

0.1nm,0.1s,SNR=7.9
EMIR Sn **Sn** **09 00 03.4 -1.8**
5.3nm,0.3s,SNR=7.9
CFON Fontmartina 3.83 35 Pn **Pn** **08 59 25.7 +0.3**
1.2nm,0.2s,SNR=9.0
CFON Sn **Sn** **09 00 09.5 -1.4**
1.4nm,0.2s,SNR=7.9
ECAB El Cabril 3.90 263 Pn **Pn** **08 59 26.5 +0.1**
1.2nm,0.1s,SNR=11
ECAB Sn **Sn** **09 00 10.3 -2.2**
1.1nm,0.1s,SNR=7.9
ECAB Lg Lg 09 00 28.7
36nm,0.4s,SNR=7.9
CSOR Sort 3.91 18 Pn **Pn** **08 59 27.4 +0.8**
5.2nm,0.4s,SNR=14
CSOR Lg Lg 09 00 28.8
6.7nm,0.3s,SNR=7.9
EMIJ Mijas 3.98 239 Pn **Pn** **08 59 28.6 +1.1**
5.3nm,0.3s,SNR=7.9
EMIJ Sn **Sn** **09 00 12.3 -2.1**
1.1nm,0.2s,SNR=7.9
EMIJ Lg Lg 09 00 30.1
14nm,0.7s,SNR=7.9
ECHI Chisagues Biel 4.03 7 Pn **Pn** **08 59 29.1 +0.8**
0.1nm,0.2s,SNR=7.9
ECHI Sn **Sn** **09 00 13.1 -2.8**
0.1nm,0.0s,SNR=7.9
ECHI Lg Lg 09 00 35.1
7.4nm,0.6s,SNR=7.9
CLLI Llivia 4.25 26 Pn **Pn** **08 59 32.1 +0.8**
0.4nm,0.2s,SNR=7.9
CLLI Sn Sn 09 00 12.5 -8.8
0.1nm,0.1s,SNR=7.9
EORO Oroz-Betelu 4.26 352 Pn **Pn** **08 59 32.3 +0.9**
0.6nm,0.2s,SNR=7.9
EORO Sn **Sn** **09 00 19.2 -2.4**
1.0nm,0.1s,SNR=7.9
EORO Lg Lg 09 00 40.3
25nm,0.5s,SNR=7.9
ATE Arette 4.42 358 Pn **Pn** **08 59 35.2 +1.8**
0.8nm,0.2s,SNR=7.9
ATE Sn **Sn** **09 00 24.3 -0.9**
1.3nm,0.1s,SNR=7.9
ATE Lg Lg 09 00 46.5
3.3nm,0.3s,SNR=7.9
EPLA Plasencia 4.53 290 Pn **Pn** **08 59 35.5 +0.4**
1.3nm,0.1s,SNR=7.0
EPLA Sn **Sn** **09 00 26.4 -1.8**
3.5nm,0.2s,SNR=6.6
EPLA Lg Lg 09 00 48.7
21nm,0.4s,SNR=8.6
ESPR Espera 4.60 249 Pn **Pn** **08 59 36.5 +0.5**
0.2nm,0.1s,SNR=7.9
SJAF Saint Jean de 4.61 33 Pn **Pn** **08 59 36.7 +0.6**
1.9nm,0.2s,SNR=7.9
EMIN Mina Concepcio 4.93 261 Pn **Pn** **08 59 39.9 -0.6**
0.3nm,0.1s,SNR=7.9
EMIN Sn **Sn** **09 00 34.7 -3.2**
0.3nm,0.1s,SNR=7.9
EMIN Lg Lg 09 01 00.5
10nm,0.4s,SNR=7.9
ELAN Lanestosa 5.07 335 Pn **Pn** **08 59 43.6 +1.2**
0.8nm,0.3s,SNR=5.4
ELAN Sn **Sn** **09 00 37.1 -4.2**
1.1nm,0.1s,SNR=7.9
PBAR Barrancos 5.15 267 Pn **Pn** **08 59 44.3 +0.8**
PBAR Sn **Sn** **09 00 41.7 -1.5**
PBAR Lg Lg 09 01 10.5
12nm,0.5s
PBAR Barrancos 5.15 267 *e*Pn **Pn** **08 59 44.3 +0.8**
PBAR *e*Sn **Sn** **09 00 41.7 -1.5**
PBAR *e*Sg **Sg** **09 01 10.5 -0.6**
PBAR A A 09 01 23.3
12nm,0.5s
PMRV Marv??o 5.41 280 Pn **Pn** **08 59 49.1 +2.0**
PMRV Sn **Sn** **09 00 48.6 -1.0**
PMRV Lg Lg 09 01 18.3
15nm,0.5s
PMRV Marv??o 5.41 280 *e*Pn **Pn** **08 59 49.1 +2.0**
PMRV *e*Sn **Sn** **09 00 48.6 -1.0**
PMRV *e*Sg **Sg** **09 01 18.3 -1.2**
PMRV A A 09 01 34.9
15nm,0.5s
PCBR Castelo Branco 5.53 284 Pn **Pn** **08 59 48.9 +0.2**
PCBR Sn **Sn** **09 00 51.6 -1.0**
PCBR Lg Lg 09 01 23.9
5.2nm,0.7s
PCBR Castelo Branco 5.53 284 *e*Pn **Pn** **08 59 48.9 +0.2**
PCBR *e*Sn **Sn** **09 00 51.6 -1.0**
PCBR *e*Sg **Sg** **09 01 23.9 +0.5**
PCBR A A 09 01 47.3
10nm,0.7s
PESTR Estremoz 5.53 274 *e*Pn **Pn** **08 59 48.5 -0.3**
MVO Moncorvo 5.59 299 Pn **Pn** **08 59 49.8 +0.1**
1.6nm,0.1s,SNR=7.9
MVO Sn **Sn** **09 00 50.1 -4.2**
0.7nm,0.2s,SNR=7.9
MVO Lg Lg 09 01 20.8
15nm,0.5s,SNR=7.9
MVO Moncorvo 5.59 299 *e*Pn **Pn** **08 59 50.3 +0.6**
MVO *e*Sg **Sg** **09 01 25.4 0.0**
MVO A A 09 01 34.2
19nm,0.5s
EGRO El Granado 5.61 261 Pn **Pn** **08 59 48.2 -1.7**
0.2nm,0.1s,SNR=7.9
EGRO Sn **Sn** **09 00 50.1 -4.5**
0.8nm,0.2s,SNR=7.9
EGRO Lg Lg 09 01 20.9
4.0nm,0.3s,SNR=7.9
PBRG Braganca 5.70 305 Lg Lg 09 01 28.3
PBRG Braganca 5.70 305 *e*Sg **Sg** **09 01 28.3 -0.6**
MTE Manteigas 5.70 290 Lg Lg 09 01 26.4
8.2nm,0.7s
MTE Manteigas 5.70 290 *e*Sg **Sg** **09 01 26.4 -2.5**
MTE A A 09 01 37.5
16nm,0.7s
ECAL Calabor 5.77 306 Pn **Pn** **08 59 52.4 +0.3**
2.9nm,0.2s,SNR=11
ECAL Lg Lg 09 01 26.8
13nm,0.3s,SNR=7.9
PBEJ Beja 5.81 266 Lg Lg 09 01 31.5
PBEJ Beja 5.81 266 *e*Sg **Sg** **09 01 31.5 -1.0**
PVAQ Vaqueiros 5.82 260 Pn **Pn** **08 59 52.3 -0.5**
PVAQ Sn **Sn** **09 00 58.4 -1.5**
PVAQ Lg Lg 09 01 30.0
7.5nm,0.9s
PVAQ Vaqueiros 5.82 260 *e*Pn **Pn** **08 59 52.3 -0.5**
PVAQ *e*Sn **Sn** **09 00 58.4 -1.5**
PVAQ *e*Sg **Sg** **09 01 30.0 -2.8**
PVAQ A A 09 01 43.1
7.5nm,0.9s
EARI Arriondas 5.83 324 Pn **Pn** **08 59 53.7 +0.7**
0.1nm,0.1s,SNR=7.9
EARI Sn **Sn** **09 00 55.9 -4.3**
1.7nm,0.4s,SNR=7.9
EARI Lg Lg 09 01 27.2
0.4nm,0.3s,SNR=7.9
EVO Evora 5.87 271 Lg Lg 09 01 33.1
EVO Evora 5.87 271 *e*Sg **Sg** **09 01 33.1 -1.4**
PCVE Castro Verde 6.02 262 Lg Lg 09 01 33.3
7.3nm,0.6s
PCVE Castro Verde 6.02 262 *e*Sg **Sg** **09 01 33.3 -5.8**
PCVE A A 09 01 49.1
7.3nm,0.6s
PBDV Barranco-do-Ve 6.03 259 Pn **Pn** **08 59 55.5 -0.2**
PBDV Barranco-do-Ve 6.03 259 *e*Pn **Pn** **08 59 55.5 -0.2**
PMTG Montargil 6.03 276 Pn **Pn** **08 59 57.3 +1.7**
PMTG Sn **Sn** **09 01 05.8 +0.8**
8.9nm,0.5s
PMTG Montargil 6.03 276 *e*Pn **Pn** **08 59 57.3 +1.7**
PMTG *e*Sn **Sn** **09 01 05.8 +0.8**
PMTG A A 09 01 43.2
8.9nm,0.5s
PVIS Viseu 6.05 292 Pn **Pn** **08 59 56.2 +0.3**
PVIS Lg Lg 09 01 39.5
4.0nm,0.5s
PVIS Viseu 6.05 292 *e*Pn **Pn** **08 59 56.2 +0.3**
PVIS *e*Sg **Sg** **09 01 39.5 -0.5**
PVIS A A 09 02 00.0
7.9nm,0.5s
POLO Lamas de Olo 6.21 298 Pn **Pn** **08 59 58.5 +0.4**
POLO Sn **Sn** **09 01 08.2 -1.2**
4.1nm,0.4s
POLO Lamas de Olo 6.21 298 *e*Pn **Pn** **08 59 58.5 +0.4**
POLO *e*Sn **Sn** **09 01 08.2 -1.2**
POLO A A 09 01 50.3
4.1nm,0.4s
PCAS Casmilo, Conde 6.34 285 Pn **Pn** **09 00 00.2 +0.3**
PCAS Sn **Sn** **09 01 10.8 -1.8**
PCAS Lg Lg 09 01 48.2
13nm,0.8s
PCAS Casmilo, Conde 6.34 285 *e*Pn **Pn** **09 00 00.2 +0.3**
PCAS *e*Sn **Sn** **09 01 10.8 -1.8**
PCAS *e*Sg **Sg** **09 01 48.2 -1.2**
PCAS A A 09 01 56.1
13nm,0.8s
PCAB Cabril 6.50 300 Lg Lg 09 01 50.9
4.8nm,0.5s
PCAB Cabril 6.50 300 *e*Sg **Sg** **09 01 50.9 -3.7**
PCAB A A 09 02 06.9
9.7nm,0.5s
ELOB Lobios 6.59 301 Pn **Pn** **09 00 03.8 +0.3**
1.3nm,0.1s,SNR=5.0
ELOB Sn **Sn** **09 01 13.4 -5.6**
0.1nm,0.2s,SNR=7.9
ELOB Lg Lg 09 01 51.8
14nm,0.5s,SNR=7.9
PGAV Gavieira, Arco 6.78 302 Pn **Pn** **09 00 06.9 +0.9**
PGAV Lg Lg 09 02 03.7
6.8nm,0.5s
PGAV Gavieira, Arco 6.78 302 *e*Pn **Pn** **09 00 06.9 +0.9**
PGAV *e*Sg **Sg** **09 02 03.7 +0.2**
PGAV A A 09 02 18.1
6.8nm,0.5s

IDC 17 08:59:39.0±1.9, 52°.46N×35°.17E, h0km, mb3.0/1, mb1 3.6/3, mb1mx3.1/65, mbtmp3.5/3, ML2.5/3, Error ellipse: s-maj=23.7km s-min=10.7km az=125.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OBN	**Obninsk**	**2.78**	**17**	Pn	Pn		09 00 26.9	+2.2
	1.1nm,0.3s,baz=339,slow=23,SNR=2.0							
OBN				Lg	Lg		09 01 06.0	
	2.0nm,0.3s,baz=115,slow=24,SNR=9.9							
AKASG	**Malin Array Be**	**4.11**	**247**	Pn	Pn		09 00 39.8	-3.2
	1.1nm,0.3s,baz=62,slow=15,SNR=2.5							
AKASG				Pg	Pb		09 00 53.3	+1.2
	1.9nm,0.3s,baz=59,slow=15,SNR=7.7							
AKASG				Sn	Sn		09 01 31.8	+0.2
	3.2nm,0.3s,baz=61,slow=21,SNR=4.8							
AKASG				Lg	Lg		09 01 49.2	
	4.6nm,0.3s,baz=67,slow=30,SNR=6.6							
I43RU	**DUBNA INFRASON**	**4.43**	**15**	*i*			09 27 40.0	
	baz=194,slow=327,SNR=1.5							
FINES	**FINESS Array B**	**10.27**	**335**	Pn	Pn		09 02 01.6	-5.8
	0.1nm,0.3s,baz=143,slow=14,SNR=1.5							
FINES				Sn	Sn		09 03 53.4	-10
	0.1nm,0.3s,baz=145,slow=25,SNR=2.3							
FINES				Lg	Lg		09 05 01.7	
	0.2nm,0.3s,baz=148,slow=26,SNR=2.2							
ARCES	**ARCESS Array B**	**17.72**	**349**	Pn	Pn		09 03 39.7	-7.1
	baz=159,slow=10,SNR=1.5							
YKA	**Yellowknife Ar**	**62.93**	**345**	P	P		09 10 06.6	+0.1
	0.0nm,0.3s,baz=24,slow=6.7,SNR=4.2							

*IDC **17** 09:05:33.3±1.1, 32°.64S×71°.72W, h0km, mb4.0/3, mb1 4.0/8, mb1mx3.8/50, mbtmp3.8/8, ML3.8/5, MS3.0/5, Ms1 3.0/5, ms1mx2.9/26, Error ellipse: s-maj=42.0km s-min=25.8km az=97.0*
*SJA **17** 09:05:33.1±0.6, 32°.69S×72°.08W, h13km, ML4.0, MW4.0*
*NEIC **17** 09:05:37.3±1.6, 32°.69S±0°.02×71°.86W±0°.06, h30km±5km, Error ellipse: s-maj=7.8km s-min=3.1km az=92.0*
*NEIC **17** 09:05:37, 32°.69S×71°.81W, h25km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}4.60; $M_{\theta\theta}$-1.56; $M_{\phi\phi}$-3.05; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.01; $M_{\phi r}$-6.29; Fault plane solution: M_o7.49000×10^{14} NP1:ϕ_s181.35000°, δ74.36000°, λ90.18000°. NP2:ϕ_s0.68000°, δ15.64000°, λ89.35000°. Principal axes: T 8.1444, Plg61.0000°, Azm92.0000°; N -1.5572, Plg0.0000°, Azm1.0000°; P -6.5873, Plg29.0000°, Azm271.0000°;*
*GUC **17** 09:05:37.5±0.8, 32°.69S×71°.81W, h33km±7km, ML4.0*
ISC 17 09:05:36.5±1.1, 32°.70S±0°.03×71°.88W±0°.05, h27km±8km, n97, σ1s71/113, mb4.4/5, 4C-8D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.38**	**148**	⇓*i*P		Pb	09 05 45.5	+0.6
VA01				*i* S		Sb	09 05 50.9	+0.4
VA01				IAML			09 05 51.5	
	comp=N,15μm,0.1s							
VA01	**Torpederas**	**0.38**	**148**			Pb	09 05 45.5	+0.6
VA01				Sg		Sb	09 05 51.0	+0.4
ROC1	**El Roble**	**0.78**	**111**	*e*P		Pn	09 05 51.5	-0.5
ROC1				*e*S		Sn	09 06 01.2	-1.7
ROCH	**El Roble**	**0.78**	**110**	⇓*i*P		Pn	09 05 51.5	-0.5
ROCH				*i* S		Sn	09 06 01.6	-1.3
ROCH				IAML			09 06 04.0	
	comp=E,12μm,0.4s							
MT02	**Curacav**	**0.84**	**132**	⇓*i*P		Pn	09 05 52.2	-0.3
MT02				*i* S		Sn	09 06 02.6	-1.4
MT02				IAML			09 06 06.3	
	comp=E,5μm,0.7s							
MT02	**Curacav**	**0.84**	**132**			Pn	09 05 52.2	-0.3
MT02				Sn		Sn	09 06 02.8	-1.2
VA05	**Santo Domingo**	**0.98**	**167**	⇑*i*P		Pn	09 05 55.3	+0.8
VA05				*i* S		Sn	09 06 07.8	+0.3
VA05				IAML			09 06 11.1	
	comp=N,8μm,0.3s							
VA05	**Santo Domingo**	**0.98**	**167**			Pn	09 05 55.3	+0.8
VA05				Sn		Sn	09 06 07.5	0.0
PEL	**Peldehue**	**1.10**	**114**	⇑*i*P		Pn	09 05 56.4	+0.2
PEL				*i* S		Sb	09 06 10.8	-0.1
PEL				IAML			09 06 13.7	
	comp=E,11μm,0.5s							
PEL	**Peldehue**	**1.10**	**114**			Pn	09 05 56.5	+0.3
PEL				Sn		Sb	09 06 10.8	-0.1
PEL	**Peldehue**	**1.10**	**114**	*e*P		Pb	09 05 56.6	-0.3
PEL				*e*S		Sb	09 06 11.7	+0.8
VA03	**San Esteban**	**1.12**	**94**	⇓*i*P		Pn	09 05 56.4	-0.2
VA03				*i* S		Sb	09 06 10.6	-1.1
VA03				IAML			09 06 11.7	
	comp=N,8μm,0.1s							
VA03	**San Esteban**	**1.12**	**94**			Pn	09 05 56.4	-0.2
VA03				Sn		Sb	09 06 10.8	-0.9
MT05	**Renca**	**1.18**	**126**	⇓*i*P		Pn	09 05 57.9	+0.6
MT05				*i* S		Sb	09 06 12.9	-0.3
MT05				IAML			09 06 20.0	
	comp=N,8μm,0.6s							
MT05	**Renca**	**1.18**	**126**			Pn	09 05 58.0	+0.6
MT05				Sn		Sb	09 06 13.0	-0.3
MT01	**Popeta**	**1.28**	**156**	⇓*i*P		Pn	09 05 59.4	+0.8
MT01				*i* S		Sb	09 06 15.9	+0.1
MT01				IAML			09 06 19.8	
	comp=E,3μm,0.5s							
MT01	**Popeta**	**1.28**	**156**	Pn		Pn	09 05 59.4	+0.8
MT09	**Talagante**	**1.31**	**145**	⇓*i*P		Pn	09 06 00.1	+1.0
MT09				*i* S		Sb	09 06 16.8	-0.2
MT09				IAML			09 06 18.5	
	comp=N,5μm,0.3s							
MT09	**Talagante**	**1.31**	**145**			Pn	09 06 00.2	+1.0
MT03	**Universidad Ad**	**1.40**	**125**	⇓*i*P		Pb	09 06 01.4	-0.7
MT03				*i* S		Sb	09 06 18.8	-0.7
MT03				IAML			09 06 24.1	
	comp=N,10μm,0.3s							
MT03	**Universidad Ad**	**1.40**	**125**			Pb	09 06 01.3	-0.7
MT03	**Universidad Ad**	**1.40**	**125**	*e*P		Pb	09 06 01.4	-0.7
MT03				*e*S		Sb	09 06 22.7	+3.2
MT03				IAML			09 06 24.9	
	comp=Z,3μm,0.3s							
CO02	**Combarbal**	**1.67**	**27**			Pn	09 06 05.0	+0.9
BO01	**Tunca**	**1.81**	**159**			Pn	09 06 07.0	+1.0
LMEL	**Las Melosas**	**1.81**	**130**	⇑*i*P		Pb	09 06 08.2	-1.0
LMEL				*i* S		Sb	09 06 31.2	-0.3
LMEL				IAML			09 06 35.0	
	comp=N,4μm,0.4s							
CO03	**El Pedregal**	**2.12**	**29**	⇑*i*P		Pn	09 06 11.4	+1.2
CO03	**El Pedregal**	**2.12**	**29**			Pn	09 06 11.5	+1.2
AUSP	**Uspallata**	**2.16**	**78**	*e*P		Pb	09 06 14.3	-0.9
BO02	**Sierra Bellavi**	**2.28**	**157**			Pn	09 06 14.1	+1.6
BO02	**Sierra Bellavi**	**2.28**	**157**	*e*P		Pn	09 06 14.1	+1.6
BO02				*e*S		Sb	09 06 47.1	+2.3
BO02				IAML			09 06 54.7	
	comp=Z,1μm,0.8s							
RTLS	**Leoncito**	**2.37**	**68**	*e*P		Pb	09 06 17.0	-1.6
RTLS				IAML			09 06 56.6	
	comp=Z,536nm,0.9s							
ARCO	**CERRO ARCO**	**2.49**	**94**	*e*P		Pb	09 06 20.0	-0.6
ARCO				IAML			09 07 01.9	
	comp=Z,422nm,0.5s							
AAGR	**Agrelo**	**2.60**	**99**	*e*P		Pb	09 06 21.2	-1.3
AAGR				IAML			09 07 08.9	
	comp=Z,397nm,1.0s							
GO04	**Tololo Observa**	**2.69**	**20**			Pn	09 06 19.0	+0.9
GO04	**Tololo Observa**	**2.69**	**20**	*e*P		Pn	09 06 19.3	+1.1
GO04				*e*S		Sn	09 06 52.5	+2.6
AVIZ	**Vizcaceras**	**2.93**	**106**	*e*P		Pb	09 06 27.7	-0.4
RTCV	**Cerro Valdivia**	**2.95**	**74**	*e*P		Pb	09 06 25.1	-3.4
RTCV				IAML			09 07 14.1	
	comp=Z,278nm,1.7s							
ZON	**Zonda**	**2.95**	**68**	*e*P		Pb	09 06 26.0	-2.5
ZON				*e*S		Sb	09 07 07.1	+3.0
ZON				IAML			09 07 15.3	
	comp=Z,330nm,0.7s							
COIS	**El Sosneado**	**3.06**	**142**	*e*P		Pn	09 06 25.8	+2.6
ML02	**Panimavida**	**3.08**	**173**			Pn	09 06 24.6	+1.2
LAMA	**Las Malvinas**	**3.15**	**136**	*e*P		Pb	09 06 28.5	-3.3
RTLL	**Cerro Villicun**	**3.20**	**66**	*e*P		Pb	09 06 28.9	-3.8
RTLL				*e*S		Sb	09 07 12.4	+1.1
RTLL				IAML			09 07 17.8	
	comp=Z,549nm,0.4s							
PUMA	**Malargue**	**3.44**	**145**	*e*P		Pn	09 06 32.8	+4.4
ACDV	**Cuesta del Vie**	**3.46**	**44**	*e*P		Pn	09 06 32.4	+3.7
ACDV				*e*S		Sb	09 07 25.3	+6.6
ACDV				IAML			09 07 26.1	
	comp=Z,232nm,0.6s							
RFA	**San Rafael**	**3.52**	**127**	*e*P		Pn	09 06 33.0	+3.6
RFA				*e*S		Sb	09 07 29.2	+8.8
RFA				IAML			09 07 34.3	
	comp=Z,138nm,0.9s							
LCO	**Las Campanas**	**3.81**	**16**			Pn	09 06 34.3	+0.6
BI02	**San Fabin de**	**3.99**	**173**			Pn	09 06 37.2	+1.3
BI02	**San Fabin de**	**3.99**	**173**	*e*P		Pn	09 06 37.4	+1.5
AC05	**El Transito**	**4.09**	**20**			Pn	09 06 38.8	+1.4
AVFE	**Valle Fertil**	**4.29**	**63**	*e*P		Pn	09 06 43.3	+3.2
AVFE				IAML			09 07 44.0	
	comp=Z,230nm,0.9s							
AGUA	**GUANDACOL**	**4.33**	**43**	*e*P		Pn	09 06 44.2	+3.6
AGUA				IAML			09 08 01.7	
	comp=Z,274nm,0.7s							
AC04	**Llanos de Chal**	**4.54**	**9**	Pn		Pn	09 06 43.2	-0.2
ACHE	**Chepes**	**4.70**	**72**	*e*P		Pn	09 06 48.8	+3.0
APLL	**PUNTA DE LOS L**	**5.12**	**65**	*e*P		Pn	09 06 52.2	+0.7
GO03	**Copiap**	**5.29**	**16**			Pn	09 06 53.7	-0.1
GO03	**Copiap**	**5.29**	**16**	*e*P		Pn	09 06 54.5	+0.8
H03N1	**Juan Fernandez**	**5.95**	**261**	Pn		Pn	09 07 04.3	+1.8
	baz=196,slow=75,SNR=5.4							
H03N1				T		T	09 13 44.9	
	baz=88,slow=73,SNR=788							
H03N3	**Juan Fernandez**	**5.96**	**261**	Pn		Pn	09 07 04.7	+2.0
	baz=196,slow=75,SNR=4.0							
H03N3				T		T	09 13 32.7	
	baz=88,slow=73,SNR=1031							
H03N2	**Juan Fernandez**	**5.96**	**261**	Pn		Pn	09 07 04.4	+1.7
	baz=196,slow=75,SNR=3.8							
H03N2				T		T	09 13 33.9	
	baz=88,slow=73,SNR=957							
H03S1	**Juan Fernandez**	**5.99**	**257**	T		T	09 13 23.0	
	baz=82,slow=75,SNR=73							
H03S3	**Juan Fernandez**	**5.99**	**257**	T		T	09 13 24.4	
	baz=82,slow=75,SNR=64							
H03S2	**Juan Fernandez**	**6.01**	**257**	T		T	09 13 22.0	
	baz=82,slow=75,SNR=167							
AC02	**Maricunga**	**6.32**	**23**			Pn	09 07 09.2	+0.9
AC01	**Pan de Azucar**	**6.62**	**10**	Pn		Pn	09 07 10.2	-1.9
CYA	**Choya**	**6.75**	**53**	*e*P		Pn	09 07 16.7	+2.9
CYA				*e*S		Sb	09 08 41.8	-11
CYA				IAML			09 09 05.4	
	comp=Z,68nm,0.9s							
GO02	**Mina Guanaco**	**7.77**	**16**	Pn		Pn	09 07 26.2	-1.9
PLCA	**Paso Flores**	**8.09**	**173**	Pn		Pn	09 07 34.0	+1.8
	comp=Z,1.0nm,0.3s,baz=335,slow=11,SNR=42							
PLCA					Sn	Sn	09 09 16.6	+14
	comp=Z,0.1nm,0.3s,baz=317,slow=6.9,SNR=1.3							
PLCA					LR	LR	09 10 23.7	
	comp=Z,57nm,20.1s,baz=348,slow=36							
PLCA	**Paso Flores**	**8.09**	**173**	*e*P		Pn	09 07 34.0	+1.8
PLCA				IAML			09 09 13.7	
	comp=Z,10nm,4.2s							
PB14	**IPOC Station P**	**8.15**	**10**	Pn		Pn	09 07 31.5	-1.9
LL04	**Puerto Octay**	**8.21**	**183**	Pn		Pn	09 07 33.9	+0.1
FSA	**Cafayete**	**8.34**	**40**	*e*P		Pn	09 07 37.5	+1.6
LVC	**Limon Verde**	**10.39**	**15**	Pn		Pn	09 08 02.1	-1.9
	comp=Z,0.2nm,0.3s,baz=294,slow=17,SNR=1.1							
LVC					LR	LR	09 12 26.5	
	comp=Z,96nm,20.5s,baz=214,slow=40							
CPUP	**Villa Florida**	**14.17**	**67**	Pn		Pn	09 08 53.2	-2.2
	comp=Z,0.1nm,0.3s,baz=177,slow=20,SNR=1.2							
CPUP					LR	LR	09 14 37.5	
	comp=Z,70nm,21.8s,baz=242,slow=39							
LPAZ	**La Paz**	**16.69**	**13**	Pn		Pn	09 09 29.0	-0.1
	comp=Z,0.2nm,0.3s,baz=198,slow=6.9,SNR=5.1							
SIV	**San Ignacio**	**19.31**	**33**	P		P	09 09 58.8	-0.8
	comp=Z,0.1nm,0.3s,baz=201,slow=14,SNR=3.8							
SIV					LR	LR	09 19 02.3	
	comp=Z,72nm,18.1s,baz=250,slow=42							
NNA	**Nana**	**21.11**	**346**	LR		LR	09 16 59.7	
	comp=Z,47nm,20.4s,baz=192,slow=33							
QSPA	**South Pole Qui**	**57.53**	**180**	P		P	09 15 25.0	+1.7
QSPA				IAmb		IAmb	09 15 35.0	
	comp=Z,6.2nm,1.4s							
TX31	**Lajitas Ar. Si**	**68.67**	**330**	P		P	09 16 35.6	-1.9
TX32	**Lajitas Array**	**68.67**	**330**	P		P	09 16 36.1	-1.4
TX32				IAmb		IAmb	09 17 01.0	
	comp=Z,8.7nm,1.3s							
BOSA	**Boshof**	**80.56**	**118**	P		P	09 17 47.3	+0.5
	comp=Z,1.8nm,0.7s,baz=239,slow=5.9,SNR=1.7							
BOSA	**Boshof**	**80.56**	**118**	IAmb		IAmb	09 18 13.4	
	comp=Z,5.5nm,1.1s							
NVAR	**Mina Array Bea**	**82.89**	**325**	P		P	09 18 00.6	+1.7
	comp=Z,0.4nm,0.8s,baz=139,slow=5.6,SNR=3.2							
TORD	**Torodi Ar. Bea**	**83.65**	**70**	P		P	09 18 03.5	+0.5
	comp=Z,1.6nm,0.7s,baz=254,slow=3.8,SNR=7.2							
WRA	**Warramunga Arr**	**121.96**	**209**	PKP		**PKPdf**	09 24 29.2	+0.2
	comp=Z,0.4nm,0.9s,baz=157,slow=1.7,SNR=1.6							
WRA	**Warramunga Arr**	**121.96**	**209**	PKPdf		**PKiKP**	09 24 29.6	+0.5
H11S2	**WAKE ISLAND Hyl**	**25.91**	**270**	T		T	11 43 36.5	
	baz=118,slow=75,SNR=42							
H11S1	**WAKE ISLAND Hyl**	**25.92**	**270**	T		T	11 43 37.5	
	baz=118,slow=75,SNR=60							
H11S3	**WAKE ISLAND Hyl**	**25.93**	**270**	T		T	11 43 37.9	
	baz=118,slow=75,SNR=52							
H11N3	**WAKE ISLAND Hyl**	**26.29**	**271**	T		T	11 44 06.1	
	baz=111							
H11N1	**WAKE ISLAND Hyl**	**26.31**	**271**	T		T	11 44 01.4	
	baz=111							
H11N2	**WAKE ISLAND Hyl**	**26.31**	**271**	T		T	11 44 04.5	
	baz=111							
BVAR	**Borovoye Array**	**146.24**	**42**	PKPbc		**PKPbc**	09 25 14.1	+0.2
	comp=Z,1.2nm,0.7s,baz=248,slow=6.1,SNR=5.3							
AAK	**Ala-Archa**	**151.76**	**60**	PKPbc		**PKiKP**	09 25 29.9	+0.9
	comp=Z,4.3nm,0.7s,baz=204,slow=3.7,SNR=5.7							
ZALV	**Zalesovo Beam**	**153.06**	**31**	PKPbc		**PKiKP**	09 25 31.9	+0.8
	comp=Z,3nm,0.5s,baz=295,slow=2.6,SNR=10							
ZALV	**Zalesovo Beam**	**153.06**	**31**	PKPdf		**PKPdf**	09 25 21.9	-1.6
ZALV						**PKiKP**	09 25 31.8	+0.7
MKAR	**Makanchi Array**	**155.80**	**47**	PKPab		**PKPab**	09 25 54.3	-0.2
	comp=Z,0.5nm,0.5s,baz=297,slow=4.5,SNR=5.1							
MKAR	**Makanchi Array**	**155.80**	**47**	PKPdf		**PKPdf**	09 25 27.4	-0.3
MKAR						**PKPab**	09 25 54.8	+0.3

*IDC **17** 09:07:02.9±0.6, 8°.49N×39°.52W, h0km, mb4.2/16, mb1 4.3/16, mb1mx4.0/68, mbtmp4.2/16, MS3.4/12, Ms1 3.4/12, ms1mx3.2/28,

MDP	**Montagnes des**	**13.46**	**257**	LR	LR	09 14 23.1		
	comp=Z,217nm,21.9s,baz=76,slow=33							
TMAB	**Tom-Au,PA,Br**	**13.74**	**219**	*eP*	**Pn**	**09 10 17.1**	**-2.1**	
NBPB	**Pedra_Branca-C**	**13.89**	**180**	*eP*	**Pn**	**09 10 21.0**	**-0.4**	
RCBR	**Riachuelo**	**14.62**	**166**	LR	LR	09 14 43.3		
	comp=Z,115nm,20.8s,baz=318,slow=31							
RCBR	**Riachuelo**	**14.62**	**166**	Pn	**Pn**	**09 10 31.8**	**+0.4**	
MCPB	**Macapa, AP**	**15.26**	**236**	*eP*	**Pn**	**09 10 40.6**	**+0.6**	
NBMA	**Muriti-CE**	**15.72**	**177**	*eP*	**Pn**	**09 10 44.4**	**-1.5**	
NBLI	**Livramento-PB**	**15.90**	**171**	*eP*	**Pn**	**09 10 47.7**	**-0.7**	
SACV	**Santiago Islan**	**16.86**	**66**	Pn	**Pn**	**09 10 57.5**	**-3.0**	
SACV				IAmb	IAmb	09 10 59.5		
	comp=Z,69nm,1.2s							
NBTA	**Tacaratu-PE**	**17.50**	**175**	*eP*	**Pn**	**09 11 08.7**	**+0.1**	
PRPB	**Parauapebas**	**17.79**	**216**	*eP*	**Pn**	**09 11 11.3**	**-0.9**	
MALB	**Monte Alegre**	**17.92**	**236**	*eP*	**Pn**	**09 11 14.1**	**+0.3**	
NBAN	**Anadia - AL**	**18.27**	**170**	*eP*	**P**	**09 11 18.2**	**0.0**	
SMTB	**Santa Maria do**	**18.98**	**205**	*eP*	**P**	**09 11 25.1**	**-0.9**	
NBPN	**Ponto Novo - B**	**19.17**	**182**	*eP*	**P**	**09 11 27.5**	**-0.6**	
NBLA	**Lagarto - SE**	**19.38**	**175**	*eP*	**P**	**09 11 28.6**	**-1.8**	
ITTB	**Itaituba**	**20.59**	**232**	*eP*	**P**	**09 11 43.2**	**-0.4**	
SDBA	**SAO DESIDERIO**	**21.39**	**195**	*eP*	**P**	**09 11 52.1**	**-0.2**	
MCLT	**Moule a Chique**	**21.67**	**286**		**P**	**09 11 50.0**	**-5.3**	
H05S1	**Guadeloupe/Mar**	**21.73**	**288**	T	T	09 34 00.7		
	SNR=12							
GDU01	**Guandu, BA**	**22.02**	**180**	*eP*	**P**	**09 11 58.9**	**0.0**	
NPGB	**Novo Progresso**	**22.05**	**226**	*eP*	**P**	**09 11 59.4**	**0.0**	
PEXB	**Peixe**	**22.20**	**203**	*eP*	**P**	**09 12 00.7**	**-0.2**	
PTGA	**Pitinga**	**22.34**	**247**	P	**P**	**09 12 02.3**	**-0.1**	
	comp=Z,2.0nm,0.3s,baz=82,slow=13,SNR=6.1							
PTGA				LR	LR	09 19 53.3		
	comp=Z,110nm,21.6s,baz=73,slow=34							
PTGA	**Pitinga**	**22.34**	**247**	P	**P**	**09 12 02.3**	**-0.1**	
PTGA	**Pitinga**	**22.34**	**247**	*eP*	**P**	**09 12 03.0**	**+0.6**	
NBIT	**Itapeh - BA**	**23.22**	**180**	*eP*	**P**	**09 12 11.5**	**0.0**	
SNDB	**Serra Nova Dou**	**23.42**	**210**	*eP*	**P**	**09 12 14.2**	**+0.5**	
ANWB	**Willy Bob**	**23.54**	**295**	P	**P**	**09 12 13.5**	**-1.3**	
JANB	**Januaria**	**23.83**	**192**	*eP*	**P**	**09 12 18.3**	**+0.7**	
BDFB	**Brasilia**	**25.37**	**199**	P	**P**	**09 12 32.1**	**+0.3**	
	comp=Z,5.8nm,0.9s,baz=32,slow=7.5,SNR=6.3							
BDFB	**Brasilia**	**25.37**	**199**	P	**P**	**09 12 32.9**	**+1.1**	
BDFB				IAmb	IAmb	09 12 33.9		
	comp=Z,12nm,1.1s							
NAN01	**Guarapari, ES**	**26.12**	**181**	*eP*	**P**	**09 12 39.4**	**+0.9**	
ARAG	**Araguaiana, MT**	**26.91**	**207**	*eP*	**P**	**09 12 47.0**	**+1.3**	
SJMB	**Sao Joao De Ma**	**27.02**	**184**	*eP*	**P**	**09 12 47.1**	**+0.5**	
SJG	**San Juan**	**27.62**	**293**	LR	LR	09 21 39.0		
	comp=Z,147nm,20.8s,baz=97,slow=32							
H10N3	**ASCENSION HYDR**	**29.71**	**122**	T	T	09 44 18.1		
	baz=302,slow=75,SNR=88							
H10N2	**ASCENSION HYDR**	**29.71**	**122**	T	T	09 44 18.5		
	baz=302,slow=75,SNR=82							
H10N1	**ASCENSION HYDR**	**29.73**	**122**	T	T	09 44 19.7		
	baz=302,slow=75,SNR=94							
SIV	**San Ignacio**	**32.33**	**221**	P	**P**	**09 13 34.5**	**+0.7**	
	comp=Z,3.2nm,0.8s,baz=71,slow=7.2,SNR=12							
SDDR	**Presa de Saban**	**32.55**	**292**	P	**P**	**09 13 34.9**	**-0.9**	
SDDR				IAmb	IAmb	09 13 38.2		
	comp=Z,13nm,1.0s							
DBIC	**Dimbokro**	**34.38**	**91**	P	**P**	**09 13 51.8**	**+0.1**	
	comp=Z,6.5nm,0.8s,baz=260,slow=8.6,SNR=11							
DBIC				LR	LR	09 25 27.9		
	comp=Z,73nm,20.8s,baz=244,slow=32							
DBIC	**Dimbokro**	**34.38**	**91**	P	**P**	**09 13 51.5**	**-0.2**	
DBIC				IAmb	IAmb	09 13 59.3		
	comp=Z,6.6nm,0.8s							
KOWA	**Kowa**	**35.27**	**77**	P	**P**	**09 14 00.4**	**+1.1**	
	comp=Z,3.5nm,0.8s,baz=248,slow=4.9,SNR=8.0							
KOWA	**Kowa**	**35.27**	**77**	IAmb	IAmb	09 14 02.0		
	comp=Z,4.5nm,0.8s							
LPAZ	**La Paz**	**37.50**	**229**	P	**P**	**09 14 20.0**	**+0.9**	
	comp=Z,2.4nm,0.9s,baz=56,slow=3.5,SNR=6.8							
LPAZ				LR	LR	09 30 07.8		
	comp=Z,28nm,18.5s,baz=62,slow=37							
LPAZ	**La Paz**	**37.50**	**229**	*eP*	**P**	**09 14 20.1**	**+1.0**	
CPUP	**Villa Florida**	**38.66**	**206**	LR	LR	09 30 43.2		
	comp=Z,51nm,19.4s,baz=124,slow=37							
OTAV	**Otavalo**	**39.65**	**260**	*eP*	**P**	**09 14 41.5**	**+4.5**	
TOA0	**Torodi Ar. Sit**	**40.70**	**80**	P	**P**	**09 14 45.6**	**+0.3**	
TORD	**Torodi Ar. Bea**	**40.70**	**80**	P	**P**	**09 14 44.9**	**-0.4**	
	comp=Z,2.7nm,0.8s,baz=275,slow=8.9,SNR=13							
TORD				LR	LR	09 29 34.1		
	comp=Z,125nm,20.6s,baz=220,slow=33							
BRYW	**Bryant College**	**43.70**	**325**	P	**P**	**09 15 09.9**	**+0.5**	
BRYW				IAmb	IAmb	09 15 14.6		
	comp=Z,9.4nm,0.9s							
ESDC	**Sonseca Array**	**44.44**	**40**	LR	LR	09 31 30.4		
	comp=Z,31nm,18.6s,baz=270,slow=33							
Y57A	**Sumter**	**45.38**	**310**	P	**P**	**09 15 19.8**	**-3.1**	
W57A	**Gilead**	**45.56**	**312**		**P**	**09 15 24.0**	**-0.4**	
KEST	**Kesra**	**52.09**	**51**	LR	LR	09 38 10.5		
	comp=Z,38nm,19.2s,baz=220,slow=36							
FRB	**Frobisher Bay**	**58.99**	**345**	P	**P**	**09 17 03.4**	**-0.2**	
	comp=Z,2.9nm,0.9s,baz=155,slow=6.8,SNR=8.5							
ICESG	**Greenland Ices**	**60.58**	**360**	*i* P	**P**	**09 17 14.8**	**-0.1**	
ICESG				IAmb	IAmb	09 17 16.7		
	comp=Z,5.1nm,0.9s							
TXAR	**Lajitas Array**	**63.41**	**298**	P	**P**	**09 17 34.7**	**+0.2**	
	comp=Z,0.6nm,0.6s,baz=98,slow=10,SNR=2.4							
SUMG	**Summit**	**64.09**	**0**	*i* P	**P**	**09 17 38.8**	**+0.4**	
SUMG				IAmb	IAmb	09 17 40.1		
	comp=Z,6.7nm,0.8s							
SUMG	**Summit**	**64.09**	**0**	P	**P**	**09 17 39.3**	**+0.9**	
NOA	**NORSAR Array B**	**64.39**	**25**	LR	LR	09 41 24.2		
	comp=Z,8.0nm,20.5s,baz=275,slow=32							
DBG	**Daneborg**	**66.77**	**6**	*i* P	**P**	**09 17 56.7**	**+1.4**	
DBG				IAmb	IAmb	09 17 57.5		
	comp=Z,1.7nm,0.9s							
MLR	**Muntele Rosu**	**66.87**	**44**	P	**P**	**09 17 57.4**	**+0.7**	
NEEM	**North Greenlan**	**69.25**	**357**	*i* P	**P**	**09 18 11.6**	**+0.4**	
YMR	**Madison River**	**70.94**	**314**	P	**P**	**09 18 22.5**	**+0.4**	
YMR				IAmb	IAmb	09 18 24.1		
	comp=Z,6.3nm,0.9s							
HWUT	**Hardware Ranch**	**71.04**	**311**	P	**P**	**09 18 22.8**	**+0.1**	
HWUT				IAmb	IAmb	09 18 24.7		
	comp=Z,5.3nm,0.9s							
BRTR	**Keskin Array B**	**71.70**	**51**	P	**P**	**09 18 27.1**	**+0.4**	
	comp=Z,2.2nm,0.6s,baz=251,slow=6.4,SNR=4.3							
BGU	**Big Grassy Mou**	**72.08**	**310**	P	**P**	**09 18 29.8**	**+0.9**	
BGU				IAmb	IAmb	09 18 30.3		
	comp=Z,6.3nm,0.9s							
BOSA	**Boshof**	**72.45**	**123**	LR	LR	09 45 24.4		
	comp=Z,31nm,18.6s,baz=351,slow=32							
ELK	**Elko**	**73.74**	**310**	P	**P**	**09 18 39.7**	**+0.8**	
	comp=Z,1.0nm,0.7s,baz=50,slow=2.4,SNR=4.5							
ELK	**Elko**	**73.74**	**310**	P	**P**	**09 18 39.3**	**+0.4**	
TPH	**Tonopah**	**75.19**	**307**	P	**P**	**09 18 47.7**	**+0.3**	
TPH				IAmb	IAmb	09 18 49.0		
	comp=Z,9.7nm,0.9s							
NEW	**Newport**	**75.51**	**318**	P	**P**	**09 18 48.5**	**-0.3**	
YKA	**Yellowknife Ar**	**75.69**	**332**	P	**P**	**09 18 48.6**	**-0.8**	
	comp=Z,1.5nm,0.7s,baz=101,slow=5.9,SNR=23							
LHV	**Little Huntoon**	**76.20**	**307**	P	**P**	**09 18 53.3**	**+0.5**	
LHV				IAmb	IAmb	09 18 54.9		
	comp=Z,6.3nm,1.1s							
MOD	**Modoc Plateau**	**77.58**	**311**	P	**P**	**09 19 01.8**	**+1.0**	
MOD				IAmb	IAmb	09 19 02.8		
	comp=Z,5.0nm,0.8s							
INK	**Inuvik**	**83.71**	**338**	P	**P**	**09 19 33.9**	**+1.1**	
	comp=Z,5.2nm,1.1s,baz=71,slow=5.3,SNR=7.8							
INK	**Inuvik**	**83.71**	**338**	P	**P**	**09 19 33.6**	**+0.8**	
INK				IAmb	IAmb	09 19 36.3		
	comp=Z,6.0nm,1.1s							
ARU	**Arti**	**87.47**	**33**	P	**P**	**09 19 52.4**	**+0.6**	
	comp=Z,1.5nm,0.2s,baz=348,slow=23,SNR=4.3							
ARU	**Arti**	**87.47**	**33**	P	**P**	**09 19 52.8**	**+1.0**	
ARU				IAmb	IAmb	09 19 53.9		
	comp=Z,5.9nm,1.0s							
AKTO	**Aktyubinsk**	**88.32**	**39**	P	**P**	**09 19 57.1**	**+1.1**	
	comp=Z,1.7nm,0.7s,baz=314,slow=6.1,SNR=8.1							
ILAR	**Eielson Array**	**89.71**	**336**	P	**P**	**09 20 02.3**	**+0.1**	
	comp=Z,0.6nm,0.8s,baz=88,slow=2.0,SNR=5.5							
ABKAR	**Akbulak array**	**89.78**	**40**	P	**P**	**09 20 03.2**	**+0.3**	
ABKAR				IAmb	IAmb	09 20 05.9		
	comp=Z,3.3nm,1.0s							
SYO	**Syowa Base**	**93.93**	**159**	*eX*	**P**	**09 20 19.4**	**-2.2**	
SYO	**Syowa Base**	**93.93**	**159**	*ePcP*	**PcP**	**09 20 23.3**	**+1.3**	

*IDC **17** 09:08:05.5±1.0,35°.96N×97°.37W,h0km,mb3.2/2, mb1 3.7/7,mb1mx3.5/75,mbtmp3.4/7,ML3.0/4,MS3.2/4, Ms1 3.2/4,ms1mx2.8/22,Error ellipse: s-maj=14.9km s-min=11.2km az=129.0*

*TUL **17** 09:08:05.8±1.9,35°.92N±0°.01×97°.33W±0°.04,h3km±7km, ML3.8,mb3.9/2(NEIC),mb_Lg3.9/145(NEIC), Mwr3.8/71(NEIC),Error ellipse: s-maj=4.7km s-min=1.7km az=85.0*

*NEIC **17** 09:08:05.7±1.7,35°.94N±0°.01×97°.33W±0°.02,h4km±6km, Error ellipse: s-maj=2.2km s-min=1.8km az=93.0*

*NEIC **17** 09:08:05.9,35°.94N×97°.34W,h6km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.42; $M_{\theta\theta}$2.79; $M_{\phi\phi}$-4.21; $M_{r\theta}$0.02; $M_{r\phi}$4.19; $M_{\theta\phi}$-0.20; Fault plane solution: $M_0$5.60000×10^{14} NP1:ϕ_s289.92000°, δ88.18000°,λ-0.16000°. NP2:ϕ_s19.93000°,δ89.84000°, λ-178.18000°. Principal axes: T 4.7561, Plg1.0000°, Azm155.0000°; N 1.4188, Plg88.0000°, Azm25.0000°; P -6.1748, Plg1.0000°, Azm245.0000°;*

*ANF **17** 09:08:06.2±0.3,35°.97N×97°.32W,h7km,ML4.7/26 Error ellipse: s-maj=3.9km s-min=3.3km az=137.0*

ISC 17 09:08:05.7±1.0,35°.95N±0°.02×97°.33W±0°.02,h7km±8km, n222,σ1§03/219,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.18**	**214**		**Pg**	**09 08 09.3**	**0.0**
OK029				Sg	**Sg**	**09 08 11.9**	**+0.2**
OK005	**Luther M Schoo**	**0.31**	**159**	Pg	**Pg**	**09 08 12.0**	**+0.2**
OK025	**Westminster Rd**	**0.37**	**181**		**Pg**	**09 08 12.8**	**0.0**
OK025				Sg	**Sg**	**09 08 17.9**	**+0.3**
BCOK	**Bluff Creek, N**	**0.37**	**218**	Pg	**Pg**	**09 08 12.8**	**0.0**
BCOK				Sg	**Sg**	**09 08 18.1**	**+0.4**
OK009	**Oakdale Elemen**	**0.37**	**191**		**Pg**	**09 08 13.0**	**+0.1**
OK009				Sg	**Sg**	**09 08 18.1**	**+0.3**
OK001	**Jones High Sch**	**0.39**	**175**	Pg	**Pg**	**09 08 13.2**	**0.0**
OK001				Sg	**Sg**	**09 08 18.5**	**+0.3**
OK031	**S. Brethren Rd**	**0.40**	**89**		**Pg**	**09 08 13.9**	**+0.5**
OK031				Sg	**Sg**	**09 08 19.6**	**+0.9**
OK030	**Cody Creek RV**	**0.45**	**92**		**Pg**	**09 08 14.7**	**+0.4**
OK030				Sg	**Sg**	**09 08 21.1**	**+0.9**
OKCFA	**Oklahoma City**	**0.54**	**190**		**Pg**	**09 08 16.0**	**-0.1**
OKCFA				Sg	**Sg**	**09 08 23.4**	**+0.3**
OKCFA	**Oklahoma City**	**0.54**	**190**	P	**Pg**	**09 08 16.0**	**-0.1**
	baz=9.8,SNR=126						
OKCFA				S	**Sg**	**09 08 23.4**	**+0.3**
	baz=9.8						
OKCFA	**Oklahoma City**	**0.54**	**190**	P		09 08 16.0	
	baz=9.8,SNR=126						
OKCFA				S		09 08 23.4	
	baz=9.8						
OKCSW	**OKLAHOMA CITY**	**0.55**	**189**		**Pg**	**09 08 16.1**	**-0.1**
OKCSW				Sg	**Sg**	**09 08 23.5**	**+0.2**
QUOK	**Quay**	**0.55**	**66**	Pg	**Pg**	**09 08 16.9**	**+0.6**
QUOK				Sg	**Sg**	**09 08 24.6**	**+1.0**
FNO	**Franklin**	**0.69**	**185**		**Pg**	**09 08 19.4**	**+0.4**
CROK	**Carrier**	**0.77**	**317**		**Pg**	**09 08 20.9**	**+0.6**
CROK				Sg	**Sb**	**09 08 31.7**	**-0.3**
GC02	**Grant County #**	**1.00**	**335**		**Pb**	**09 08 25.2**	**-0.1**
KAN13	**South Haven SW**	**1.07**	**354**		**Pb**	**09 08 26.6**	**0.0**
KAN13				Sg	**Sb**	**09 08 41.3**	**+0.6**
OK032	**Salt Plains WL**	**1.11**	**321**		**Pg**	**09 08 27.1**	**+0.1**
KAN14	**Manchester OK**	**1.13**	**333**		**Pg**	**09 08 27.4**	**+0.1**
T35A	**Sooner Cattle**	**1.17**	**34**		**Pg**	**09 08 28.1**	**-0.1**
T35B	**Sooner Cattle**	**1.17**	**34**	P	**Pg**	**09 08 28.1**	**-0.1**
	baz=214,SNR=556						
T35B				S	**Sb**	**09 08 44.3**	**+0.6**
	baz=214						
T35B	**Sooner Cattle**	**1.17**	**34**	P		09 08 28.1	
	baz=214,SNR=556						
T35B				S		09 08 44.3	
	baz=214						
KAN09	**Caldwell North**	**1.21**	**349**		**Pb**	**09 08 29.0**	**+0.1**
KAN05	**Bluff City Nor**	**1.24**	**340**		**Pb**	**09 08 29.6**	**+0.2**
TUL1	**Leonard**	**1.25**	**91**	P	**Pg**	**09 08 28.5**	**-1.2**
	baz=272,SNR=867						
TUL1				S	**Sg**	**09 08 45.8**	**-0.1**
	baz=272						
TUL1	**Leonard**	**1.25**	**91**	P		09 08 28.5	
	baz=272,SNR=284						
TUL1				S		09 08 45.7	
	baz=272						
TUL1	**Leonard**	**1.25**	**91**	P		09 08 28.5	
	baz=272,SNR=867						
TUL1				S		09 08 45.8	
	baz=272						
KS20	**Mayfield South**	**1.29**	**352**		**Pb**	**09 08 30.5**	**+0.2**
KAN10	**Anthony SW Sta**	**1.32**	**333**		**Pg**	**09 08 30.8**	**-0.3**
KAN08	**Anthony NE Sta**	**1.38**	**338**		**Pn**	**09 08 31.8**	**+0.5**
X34A	**Smith Ranch, M**	**1.40**	**197**	Pn	**Pn**	**09 08 31.8**	**+0.1**
U32A	**Winter Ranch,**	**1.42**	**288**		**Pn**	**09 08 32.0**	**+0.1**
U32A	**Winter Ranch,**	**1.42**	**288**	P	**Pn**	**09 08 32.0**	**+0.1**
	baz=108						
U32A				S	**Sn**	**09 08 52.1**	**+1.2**
	baz=108						
U32A	**Winter Ranch,**	**1.42**	**288**	P		09 08 32.0	
	baz=108						
U32A				S		09 08 52.1	
	baz=108						
KAN12	**Harper NE Stat**	**1.45**	**339**		**Pb**	**09 08 33.1**	**+0.1**
WMOK	**Wichita Mounta**	**1.69**	**225**		**Pn**	**09 08 36.0**	**+0.3**
WMOK				IAmb_Lg		09 09 02.9	
	comp=Z,707nm,0.8s						
WMOK	**Wichita Mounta**	**1.69**	**225**	P	**Pn**	**09 08 35.9**	**+0.3**
	baz=44,SNR=1000						
WMOK				S	**Sn**	**09 08 58.2**	**+0.7**
	baz=44						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		09 08 35.9	
	baz=44,SNR=634						
WMOK				S		09 08 58.6	
	baz=44						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		09 08 35.9	
	baz=44,SNR=1000						
WMOK				S		09 08 58.2	
	baz=44						
X37A	**Clayton**	**2.10**	**130**		**Pn**	**09 08 42.0**	**+0.7**
X37A				IAmb_Lg		09 09 17.4	
	comp=Z,856nm,0.7s						
X37A	**Clayton**	**2.10**	**130**	P	**Pn**	**09 08 41.9**	**+0.7**
	baz=311,SNR=474						
X37A				S	**Sn**	**09 09 09.6**	**+2.0**
	baz=311						
X37A	**Clayton**	**2.10**	**130**	P		09 08 41.9	
	baz=311,SNR=474						
X37A				S		09 09 09.6	
	baz=311						
U38A	**Gravette**	**2.43**	**77**		**Pn**	**09 08 46.6**	**+0.7**
U38A	**Gravette**	**2.43**	**77**	P	**Pn**	**09 08 46.6**	**+0.7**
	baz=259,SNR=266						
U38A	**Gravette**	**2.43**	**77**	P		09 08 46.6	
	baz=259,SNR=266						
Z35A	**Perchaven, San**	**2.61**	**179**		**Pn**	**09 08 48.8**	**+0.5**
Z35A				IAmb_Lg		09 09 27.3	
	comp=Z,264nm,0.9s						
Z35A	**Perchaven, San**	**2.61**	**179**	P	**Pn**	**09 08 48.9**	**+0.5**
	baz=358,SNR=90						
Z35A	**Perchaven, San**	**2.61**	**179**	P		09 08 48.9	
	baz=358,SNR=90						
R32A	**Long Quarter,**	**2.71**	**336**		**Pn**	**09 08 50.5**	**+0.9**
R32A				IAmb_Lg		09 09 35.2	
	comp=Z,274nm,1.1s						
R32A	**Long Quarter,**	**2.71**	**336**	P	**Pn**	**09 08 50.5**	**+0.9**
	baz=156						
R32A	**Long Quarter,**	**2.71**	**336**	P		09 08 50.5	
	baz=156						
HHAR	**Hobbs**	**2.77**	**82**		**Pn**	**09 08 50.9**	**+0.4**
HHAR	**Hobbs**	**2.77**	**82**	P	**Pn**	**09 08 51.1**	**+0.7**
	baz=264,SNR=108						
HHAR	**Hobbs**	**2.77**	**82**	P		09 08 51.1	
	baz=264,SNR=108						
W39A	**Magazine**	**2.99**	**104**		**Pn**	**09 08 54.1**	**+0.6**
W39A	**Magazine**	**2.99**	**104**	P	**Pn**	**09 08 54.0**	**+0.6**
	baz=285,SNR=86						
W39A				S	**Sn**	**09 09 31.0**	**+1.5**
	baz=285						
W39A	**Magazine**	**2.99**	**104**	P		09 08 54.0	
	baz=285,SNR=20						
W39A				S		09 09 30.3	
	baz=285						
W39A	**Magazine**	**2.99**	**104**	P		09 08 54.0	
	baz=285,SNR=86						
W39A				S		09 09 31.0	
	baz=285						
KSU1	**Kansas State U**	**3.20**	**10**	Pn	**Pn**	**09 08 58.0**	**+1.6**
KSU1				IAmb_Lg		09 09 52.7	
	comp=Z,393nm,0.8s						
KSU1	**Kansas State U**	**3.20**	**10**	P	**Pn**	**09 08 57.6**	**+1.2**
	baz=191,SNR=8.5						
KSU1	**Kansas State U**	**3.20**	**10**	P		09 08 57.7	
	baz=191,SNR=11						
KSU1				Sb		09 09 45.8	
	baz=191						
KSU1	**Kansas State U**	**3.20**	**10**	P		09 08 57.6	
	baz=191,SNR=8.5						
Z38A	**Mt. Pleasant**	**3.31**	**143**		**Pn**	**09 08 58.3**	**+0.5**
Z38A				IAmb_Lg		09 09 58.3	
	comp=Z,451nm,1.0s						
Z38A	**Mt. Pleasant**	**3.31**	**143**	P	**Pn**	**09 08 58.5**	**+0.7**
	baz=325,SNR=31						
Z38A	**Mt. Pleasant**	**3.31**	**143**	P		09 08 58.5	
	baz=325,SNR=31						
MIAR	**Mount Ida**	**3.38**	**113**	Pn	**Pn**	**09 08 59.8**	**+0.9**
MIAR				IAmb_Lg		09 10 01.3	
	comp=Z,353nm,0.9s						
MIAR	**Mount Ida**	**3.38**	**113**	P	**Pn**	**09 09 00.1**	**+1.3**
	baz=296,SNR=213						
MIAR	**Mount Ida**	**3.38**	**113**	P		09 08 59.3	
	baz=296,SNR=15						
MIAR				S		09 09 39.5	
	baz=296						
MIAR	**Mount Ida**	**3.38**	**113**	P		09 09 00.1	
	baz=296,SNR=213						
CBKS	**Cedar Bluff**	**3.44**	**327**	P		09 09 01.4	
	baz=146						
CBKS				S		09 09 42.7	
	baz=146						
U40A	**Yellville**	**3.65**	**82**		**Pn**	**09 09 02.5**	**0.0**
U40A				IAmb_Lg		09 10 03.6	
	comp=Z,457nm,0.9s						
U40A	**Yellville**	**3.65**	**82**	P	**Pn**	**09 09 02.6**	**0.0**
	baz=265,SNR=104						
U40A				S	**Sn**	**09 09 46.9**	**+1.1**
	baz=265						
U40A				S	**Sn**	**09 09 46.9**	**+1.1**
	baz=265						
U40A	**Yellville**	**3.65**	**82**	P		09 09 02.5	
	baz=265,SNR=36						
U40A				S		09 09 46.9	
	baz=265						
U40A	**Yellville**	**3.65**	**82**	P		09 09 02.6	
	baz=265,SNR=104						
U40A				P		09 09 02.6	
	baz=265,SNR=104						
U40A				S		09 09 46.9	
	baz=265						
U40A				S		09 09 46.9	
	baz=265						
S39A	**Bolivar**	**3.66**	**60**		**Pn**	**09 09 03.2**	**+0.5**
S39A				IAmb_Lg		09 10 03.9	
	comp=Z,390nm,1.0s						
S39A	**Bolivar**	**3.66**	**60**	P	**Pn**	**09 09 03.6**	**+0.9**
	baz=243,SNR=75						
S39A	**Bolivar**	**3.66**	**60**	P		09 09 03.6	
	baz=243,SNR=75						
AMTX	**Amarillo**	**3.71**	**255**	Pn	**Pn**	**09 09 04.6**	**+1.2**
AMTX				IAmb_Lg		09 10 12.3	
	comp=Z,340nm,1.0s						
AMTX	**Amarillo**	**3.71**	**255**	P	**Pn**	**09 09 05.0**	**+1.5**
	baz=72,SNR=15						
AMTX	**Amarillo**	**3.71**	**255**	P		09 09 04.5	
	baz=72						
AMTX				S		09 09 48.3	
	baz=72						
AMTX	**Amarillo**	**3.71**	**255**	P		09 09 05.0	
	baz=72,SNR=15						
ABTX	**Abilene, Hawle**	**3.83**	**211**	Pn	**Pn**	**09 09 05.4**	**+0.4**
ABTX				IAmb_Lg		09 10 07.9	
	comp=Z,193nm,0.9s						
ABTX	**Abilene, Hawle**	**3.83**	**211**	P		09 09 05.2	
	baz=29,SNR=10						
ABTX				S		09 09 50.6	
	baz=29						
WHTX	**Lake Whitney,**	**3.95**	**182**	Pn	**Pn**	**09 09 06.8**	**+0.1**
WHTX	**Lake Whitney,**	**3.95**	**182**	P	**Pn**	**09 09 06.9**	**+0.2**
	baz=1.4						
WHTX				S	**Sb**	**09 10 05.7**	**+2.1**
	baz=1.4						
WHTX	**Lake Whitney,**	**3.95**	**182**	P		09 09 06.8	
	baz=1.4,SNR=13						
WHTX				S		09 09 53.4	
	baz=1.4						
WHTX	**Lake Whitney,**	**3.95**	**182**	P		09 09 06.9	
	baz=1.4						
WHTX				S		09 10 05.7	
	baz=1.4						
X40A	**Basin Creek Fa**	**3.96**	**110**		**Pn**	**09 09 07.5**	**+0.6**
X40A	**Basin Creek Fa**	**3.96**	**110**	P	**Pn**	**09 09 07.5**	**+0.6**
	baz=293,SNR=21						
X40A	**Basin Creek Fa**	**3.96**	**110**	P		09 09 07.4	
	baz=293,SNR=9.9						
X40A				S		09 09 53.9	
	baz=293						
X40A	**Basin Creek Fa**	**3.96**	**110**	P		09 09 07.5	
	baz=293,SNR=21						
X40A				P		09 09 07.5	
	baz=293,SNR=21						
237A	**Washetta, Mont**	**4.13**	**162**		**Pn**	**09 09 08.9**	**-0.3**
237A				IAmb_Lg		09 10 25.4	
	comp=Z,178nm,1.1s						
237A	**Washetta, Mont**	**4.

	comp=Z,342nm,1.0s								
CCAR	**Cane Creek**	**5.00**	**112**	P		**Pn**	**09 09 21.4**	**+0.3**	
	baz=296,SNR=8.9								
CCAR	**Cane Creek**	**5.00**	**112**	P			09 09 21.4		
	baz=296,SNR=8.9								
LCAR	**Lake Charles**	**5.01**	**87**			**Pn**	**09 09 20.6**	**-0.6**	
LCAR				lAmb_Lg			09 10 49.1		
	comp=Z,233nm,0.8s								
N35A	**Tabor**	**5.08**	**15**			**Pn**	**09 09 23.2**	**+0.9**	
N35A	**Tabor**	**5.08**	**15**	P		**Pn**	**09 09 22.9**	**+0.6**	
	baz=196,SNR=18								
N35A	**Tabor**	**5.08**	**15**	P			09 09 22.9		
	baz=196,SNR=18								
435B	**Jarrell**	**5.16**	**182**	Pn		**Pn**	**09 09 23.1**	**-0.2**	
435B				lAmb_Lg			09 10 51.7		
	comp=Z,238nm,0.8s								
KSCO	**Kaye Shedlock'**	**5.20**	**308**	Pn		**Pn**	**09 09 24.0**	**0.0**	
KSCO				lAmb_Lg			09 10 59.1		
	comp=Z,201nm,0.9s								
KSCO	**Kaye Shedlock'**	**5.20**	**308**	S			09 10 24.6		
	baz=125								
CCM	**Cathedral Cave**	**5.31**	**65**	Pn		**Pn**	**09 09 26.5**	**+1.2**	
CCM				lAmb_Lg			09 10 59.2		
	comp=Z,140nm,1.0s								
CCM	**Cathedral Cave**	**5.31**	**65**	P		**Pn**	**09 09 25.7**	**+0.3**	
	baz=248,SNR=15								
CCM	**Cathedral Cave**	**5.31**	**65**	P			09 09 25.6		
	baz=248								
CCM				S			09 10 27.1		
	baz=248								
CCM	**Cathedral Cave**	**5.31**	**65**	P			09 09 25.7		
	baz=248,SNR=15								
HBAR	**Harrisburg**	**5.44**	**92**	Pn		**Pn**	**09 09 28.0**	**+0.8**	
BGNE	**Belgrade**	**5.49**	**354**	Pn		**Pn**	**09 09 28.1**	**+0.2**	
BGNE	**Belgrade**	**5.49**	**354**	P		**Pn**	**09 09 28.3**	**+0.4**	
	baz=173,SNR=12								
BGNE	**Belgrade**	**5.49**	**354**	P			09 09 28.1		
	baz=173								
BGNE	**Belgrade**	**5.49**	**354**	P			09 09 28.3		
	baz=173,SNR=12								
P40A	**Paris**	**5.51**	**48**			**Pn**	**09 09 28.7**	**+0.6**	
P40A				lAmb_Lg			09 11 07.1		
	comp=Z,300nm,1.0s								
P40A	**Paris**	**5.51**	**48**	P		**Pn**	**09 09 28.3**	**+0.3**	
	baz=231,SNR=18								
P40A	**Paris**	**5.51**	**48**	P			09 09 28.3		
	baz=231,SNR=18								
LPAR	**Lepanto**	**5.73**	**91**	Pn		**Pn**	**09 09 33.3**	**+2.2**	
N38A	**Joes South For**	**5.81**	**32**			**Pn**	**09 09 33.7**	**+1.4**	
N38A	**Joes South For**	**5.81**	**32**	P		**Pn**	**09 09 32.1**	**-0.1**	
	baz=215,SNR=10								
N38A	**Joes South For**	**5.81**	**32**	P			09 09 32.1		
	baz=215,SNR=10								
T25A	**Trinidad**	**5.82**	**284**	Pn		**Pn**	**09 09 33.2**	**+0.6**	
T25A				lAmb_Lg			09 11 12.7		
	comp=Z,244nm,1.0s								
T25A	**Trinidad**	**5.82**	**284**	P			09 09 33.0		
	baz=100,SNR=8.1								
JCT	**Junction City**	**5.83**	**201**	P			09 09 31.8		
	baz=20								
JCT	**Junction City**	**5.83**	**201**			**Pn**	**09 09 32.0**	**-0.6**	
143A	**Socs Landing,**	**5.88**	**122**	Pn		**Pn**	**09 09 32.9**	**-0.3**	
143A				lAmb_Lg			09 11 23.2		
	comp=Z,231nm,0.9s								
143A	**Socs Landing,**	**5.88**	**122**	P		**Pn**	**09 09 33.2**	**+0.1**	
	baz=305,SNR=6.9								
143A	**Socs Landing,**	**5.88**	**122**	P			09 09 33.2		
	baz=305,SNR=6.9								
FVM	**French Village**	**5.89**	**68**			**Pn**	**09 09 33.4**	**0.0**	
FVM				lAmb_Lg			09 11 13.7		
	comp=Z,122nm,0.9s								
L34A	**Svendsen Farm,**	**6.06**	**7**	Pn		**Pn**	**09 09 34.8**	**-0.9**	
MET	**Memphis--Engin**	**6.09**	**96**	lAmb_Lg			09 11 35.5		
	comp=Z,274nm,0.8s								
342A	**Flagon Creek P**	**6.18**	**136**	Pn		**Pn**	**09 09 37.2**	**-0.1**	
PVMO	**Portageville**	**6.19**	**83**	lAmb_Lg			09 11 34.4		
	comp=Z,265nm,0.7s								
OGNE	**Ogallala**	**6.20**	**325**	Pn		**Pn**	**09 09 38.7**	**+0.9**	
OGNE				lAmb_Lg			09 11 28.5		
	comp=Z,138nm,0.8s								
OGNE	**Ogallala**	**6.20**	**325**	P			09 09 39.0		
	baz=142								
SLM	**Saint Louis**	**6.26**	**63**	lAmb_Lg			09 11 32.5		
	comp=Z,132nm,0.8s								
OXF	**Oxford**	**6.64**	**100**			**Pn**	**09 09 44.2**	**+0.5**	
OXF				lAmb_Lg			09 11 43.6		
	comp=Z,173nm,0.7s								
OXF	**Oxford**	**6.64**	**100**	P			09 09 42.9		
	baz=285								
W45A	**Hickory Valley**	**6.69**	**94**	lAmb_Lg			09 11 51.8		
	comp=Z,219nm,0.9s								
S44A	**Carbondale**	**6.71**	**73**			**Pn**	**09 09 44.7**	**+0.1**	
S44A				lAmb_Lg			09 11 46.2		
	comp=Z,234nm,0.9s								
S44A	**Carbondale**	**6.71**	**73**	P		**Pn**	**09 09 44.5**	**-0.1**	
	baz=257,SNR=8.9								
S44A	**Carbondale**	**6.71**	**73**	P			09 09 44.5		
	baz=257,SNR=8.9								
Y45A	**Yeager Farm, C**	**6.73**	**106**			**Pn**	**09 09 45.9**	**+1.0**	
Y45A				lAmb_Lg			09 11 52.6		
	comp=Z,137nm,0.8s								
Y45A	**Yeager Farm, C**	**6.73**	**106**	P		**Pn**	**09 09 44.9**	**+0.1**	
	baz=290,SNR=8.6								
Y45A	**Yeager Farm, C**	**6.73**	**106**	P			09 09 44.9		
	baz=290,SNR=8.6								
K31A	**O'Neill**	**6.76**	**351**			**Pn**	**09 09 44.8**	**-0.5**	
SCIA	**State Center**	**6.76**	**27**			**Pn**	**09 09 45.9**	**+0.6**	
SCIA				lAmb_Lg			09 11 48.3		
	comp=Z,243nm,0.8s								
SCIA	**State Center**	**6.76**	**27**	P		**Pn**	**09 09 45.8**	**+0.6**	
	baz=210,SNR=12								
SCIA	**State Center**	**6.76**	**27**	P			09 09 45.9		
	baz=210								
SCIA	**State Center**	**6.76**	**27**	P			09 09 45.8		
	baz=210,SNR=12								
VBMS	**Vicksburg**	**6.77**	**121**	P			09 09 45.3		
	baz=305								
Q24A	**Divide**	**6.91**	**298**	P			09 09 47.6		
	baz=114								
N41A	**Harden Midland**	**6.96**	**45**	Pn		**Pn**	**09 09 48.4**	**+0.3**	
N41A	**Harden Midland**	**6.96**	**45**	P		**Pn**	**09 09 48.4**	**+0.3**	
	baz=229,SNR=13								
N41A	**Harden Midland**	**6.96**	**45**	P			09 09 48.4		
	baz=229,SNR=13								
735A	**Kenedy**	**7.08**	**183**	lAmb_Lg			09 12 05.9		
	comp=Z,99nm,0.9s								
P43A	**Skaggs, Pawnee**	**7.20**	**57**			**Pn**	**09 09 50.2**	**-1.1**	
P43A	**Skaggs, Pawnee**	**7.20**	**57**	P		**Pn**	**09 09 51.3**	**0.0**	
	baz=242,SNR=15								
P43A	**Skaggs, Pawnee**	**7.20**	**57**	P			09 09 51.3		
	baz=242,SNR=15								
ANMO	**Albuquerque**	**7.51**	**265**	Pn		**Pn**	**09 09 56.5**	**+0.7**	
	comp=Z,0.1nm,0.3s,baz=56,slow=10,SNR=2.2								
ANMO					Pg	Pg	09 10 23.7	-5.8	
	comp=Z,1.1nm,0.3s,baz=78,slow=14,SNR=28								
ANMO					Lg	Lg	09 11 56.8		
	comp=Z,1.1nm,0.3s,baz=67,slow=13,SNR=1.6								
ANMO					LR	LR	09 13 09.5		
	comp=Z,146nm,19.1s,baz=77,slow=41								
K38A	**Parkersburg**	**7.57**	**26**			**Pn**	**09 09 55.6**	**-0.7**	
ISCO	**Idaho Springs**	**7.59**	**303**	Pn		**Pn**	**09 09 58.9**	**+1.8**	
ISCO	**Idaho Springs**	**7.59**	**303**	P		**Pn**	**09 09 57.9**	**+0.8**	
	baz=118,SNR=13								
ISCO	**Idaho Springs**	**7.59**	**303**	P			09 09 57.5		
	baz=118,SNR=15								
ISCO	**Idaho Springs**	**7.59**	**303**	P			09 09 57.9		
	baz=118,SNR=13								
146A	**Union**	**7.60**	**113**	Pn		**Pn**	**09 09 55.6**	**-1.2**	
PLAL	**Pickwick Lake**	**7.62**	**95**	Pn		**Pn**	**09 09 56.3**	**-0.7**	
PLAL				lAmb_Lg			09 12 13.3		
	comp=Z,88nm,0.8s								
WVT	**Waverly**	**7.70**	**86**	Pn		**Pn**	**09 09 58.1**	**-0.1**	
WVT				lAmb_Lg			09 12 20.1		
	comp=Z,91nm,1.0s								
WVT	**Waverly**	**7.70**	**86**	P			09 09 57.7		
	baz=271								
L40A	**Anamosa**	**7.74**	**36**			**Pn**	**09 09 58.5**	**-0.2**	
L40A				lAmb_Lg			09 12 17.3		
	comp=Z,162nm,0.8s								
ECSD	**EROS Data Cent**	**7.80**	**4**	Pn		**Pn**	**09 09 59.1**	**-0.5**	
ECSD				lAmb_Lg			09 12 18.7		
	comp=Z,93nm,0.9s								
ECSD	**EROS Data Cent**	**7.80**	**4**	P			09 09 58.8		
	baz=184,SNR=8.3								
HDIL	**Hopedale**	**7.82**	**52**			**Pn**	**09 09 59.8**	**0.0**	
HDIL	**Hopedale**	**7.82**	**52**	P		**Pn**	**09 09 59.3**	**-0.5**	
	baz=236,SNR=31								
HDIL	**Hopedale**	**7.82**	**52**	P			09 09 59.3		
	baz=236,SNR=15								
HDIL	**Hopedale**	**7.82**	**52**	P			09 09 59.3		
	baz=236,SNR=31								
BNM	**Barren Site**	**7.83**	**259**	Pn		**Pn**	**09 09 60.0**	**-0.3**	
MNTX	**Cornudas Mount**	**7.92**	**240**	Pn		**Pn**	**09 10 01.3**	**0.0**	
MNTX				lAmb_Lg			09 12 27.0		
	comp=Z,93nm,1.1s								
MNTX	**Cornudas Mount**	**7.92**	**240**	P		**Pn**	**09 10 01.3**	**0.0**	
	baz=55,SNR=13								
MNTX	**Cornudas Mount**	**7.92**	**240**	P			09 10 01.1		
	baz=55								
MNTX	**Cornudas Mount**	**7.92**	**240**	P			09 10 01.3		
	baz=55,SNR=13								
346A	**Big Creek Wild**	**7.98**	**123**	Pn		**Pn**	**09 10 00.8**	**-1.3**	
USIN	**University of**	**8.00**	**73**	lAmb_Lg			09 12 21.1		
	comp=Z,177nm,1.2s								
Y22D	**IRIS PASSCAL I**	**8.09**	**259**	lAmb_Lg			09 12 36.8		
	comp=Z,151nm,1.1s								
Z47A	**Carrollton**	**8.12**	**107**	Pn		**Pn**	**09 10 03.2**	**-0.7**	
Z47A				lAmb_Lg			09 12 45.1		
	comp=Z,81nm,1.0s								
O44A	**Mansfield**	**8.15**	**56**	Pn		**Pn**	**09 10 04.4**	**-0.1**	
PHWY	**Pilot Hill**	**8.30**	**313**			**Pn**	**09 10 06.7**	**-0.1**	
PHWY				lAmb_Lg			09 12 45.5		
	comp=Z,76nm,1.0s								
T47A	**Sharon Grove**	**8.30**	**80**			**Pn**	**09 10 06.3**	**-0.2**	
T47A				lAmb_Lg			09 12 35.6		
	comp=Z,141nm,0.9s								
SMCO	**Snowmass**	**8.31**	**296**	Pn		**Pn**	**09 10 09.7**	**+2.8**	
N23A	**Red Feather La**	**8.37**	**309**	P			09 10 09.0		
	baz=124,SNR=24								
TX31	**Lajitas Ar. Si**	**8.48**	**221**			**Pn**	**09 10 08.6**	**-0.5**	
TX32	**Lajitas Array**	**8.48**	**221**			**Pn**	**09 10 08.6**	**-0.5**	
TXAR	**Lajitas Array**	**8.48**	**221**	Pn		**Pn**	**09 10 07.8**	**-1.2**	
	comp=Z,0.3nm,0.3s,baz=43,slow=11,SNR=24								
TXAR					Lg	Lg	09 12 29.6		
	comp=Z,3.4nm,0.3s,baz=45,slow=26,SNR=12								
TXAR	**Lajitas Array**	**8.48**	**221**	Pn		**Pn**	**09 10 08.3**	**-0.8**	
L42A	**Oliver, Polo**	**8.49**	**42**	Pn		**Pn**	**09 10 09.1**	**0.0**	
L42A				lAmb_Lg			09 12 43.0		
	comp=Z,152nm,0.8s								
V48A	**Smith Brothers**	**8.54**	**88**	lAmb_Lg			09 12 39.7		
	comp=Z,75nm,0.9s								
X48A	**Hartselle**	**8.55**	**97**	lAmb_Lg			09 12 47.1		
	comp=Z,75nm,0.9s								
SUSD	**Miller**	**8.58**	**352**	lAmb_Lg			09 12 48.5		
	comp=Z,80nm,0.8s								
I37A	**Lemond, Waseca**	**8.60**	**19**	Pn		**Pn**	**09 10 11.1**	**+0.5**	
P46A	**Rosedale**	**8.81**	**62**	Pn		**Pn**	**09 10 14.9**	**+1.5**	
JFWS	**Jewell Farm**	**8.85**	**36**	Pn		**Pn**	**09 10 13.9**	**-0.1**	
JFWS				lAmb_Lg			09 12 58.9		
	comp=Z,170nm,0.7s								
JFWS	**Jewell Farm**	**8.85**	**36**	P			09 10 13.9		
	baz=220,SNR=7.1								
LRAL	**Lakeview Retre**	**9.01**	**106**	Pn		**Pn**	**09 10 16.4**	**+0.2**	
LRAL	**Lakeview Retre**	**9.01**	**106**	P			09 10 15.4		
	baz=292								
M44A	**Midewin, Midew**	**9.07**	**50**			**Pn**	**09 10 16.8**	**-0.1**	
WCI	**Wyandotte Cave**	**9.11**	**72**	Pn		**Pn**	**09 10 18.0**	**+0.5**	
WCI				lAmb_Lg			09 13 00.9		
	comp=Z,70nm,0.7s								
BLO	**Bloomington**	**9.17**	**66**			**Pn**	**09 10 19.9**	**+1.6**	
BLO				lAmb_Lg			09 12 54.8		
	comp=Z,156nm,0.9s								
SFIN	**Lafayette**	**9.19**	**58**	lAmb_Lg			09 12 58.8		
	comp=Z,106nm,0.7s								
Y49A	**Blount Mountai**	**9.21**	**100**	Pn		**Pn**	**09 10 20.5**	**+1.6**	
Y49A				lAmb_Lg			09 13 09.6		
	comp=Z,80nm,1.1s								
SWET	**Sewanee**	**9.32**	**91**	lAmb_Lg			09 12 56.9		
	comp=Z,92nm,1.0s								
U49A	**Red Boiling Sp**	**9.35**	**83**	Pn		**Pn**	**09 10 22.7**	**+1.8**	
U49A				lAmb_Lg			09 13 18.7		
	comp=Z,75nm,1.2s								
PV02	**Paradox Valley**	**9.39**	**287**	lAmb_Lg			09 13 15.0		
	comp=Z,58nm,1.1s								
PV13	**Radium Mtn., P**	**9.45**	**287**	lAmb_Lg			09 13 13.6		
	comp=Z,56nm,1.1s								
I40A	**Norwalk**	**9.46**	**31**	lAmb_Lg			09 13 14.4		
	comp=Z,76nm,0.7s								
PV12	**Saucer Basin,**	**9.46**	**288**	lAmb_Lg			09 13 26.3		
	comp=Z,67nm,1.1s								
PV11	**David Mesa, Pa**	**9.51**	**288**	lAmb_Lg			09 13 16.0		
	comp=Z,59nm,1.0s								
PV04	**Paradox Valley**	**9.55**	**288**	lAmb_Lg			09 13 27.7		
	comp=Z,81nm,1.2s								
PV19	**Morning Glory**	**9.60**	**288**	lAmb_Lg			09 13 23.6		
	comp=Z,62nm,1.2s								
RWWY	**Rawlins**	**9.60**	**310**	Pn		**Pn**	**09 10 27.6**	**+3.1**	
RWWY				lAmb_Lg			09 13 25.1		
	comp=Z,64nm,1.0s								
L44A	**Lake County Fo**	**9.61**	**47**	P			09 10 24.1		
	baz=233								
RSSD	**Black Hills**	**9.64**	**330**	Pn		**Pn**	**09 10 26.0**	**+0.9**	
PV10	**Paradox Valley**	**9.65**	**288**	lAmb_Lg			09 13 23.8		
	comp=Z,74nm,1.2s								
FPAL	**Fort Paine**	**9.69**	**95**	lAmb_Lg			09 13 10.4		
	comp=Z,68nm,0.9s								
K43A	**Burlington**	**9.70**	**43**			**Pn**	**09 10 25.5**	**-0.1**	
K22A	**Casper**	**9.77**	**316**			**Pn**	**09 10 27.3**	**+0.5**	
K22A				lAmb_Lg			09 13 36.1		
	comp=Z,118nm,1.1s								
W50A	**Signal Mountai**	**9.82**	**91**	lAmb_Lg			09 13 22.6		
	comp=Z,95nm,1.0s								
SPMN	**Marine on St.**	**9.88**	**19**			**Pn**	**09 10 27.2**	**-0.9**	
SPMN				lAmb_Lg			09 13 33.1		
	comp=Z,64nm,0.9s								
F33A	**5 Mile Ranch,**	**9.91**	**4**			**Pn**	**09 10 29.2**	**+0.7**	
R49A	**Shelbyville**	**9.99**	**73**	lAmb_Lg			09 13 29.2		
	comp=Z,55nm,1.2s								
P48A	**Milroy**	**10.06**	**66**	Pn		**Pn**	**09 10 30.9**	**+0.3**	
I42A	**Draeger Farm,**	**10.23**	**37**	Pn		**Pn**	**09 10 33.5**	**+0.6**	
F36A	**Milaca**	**10.31**	**15**	Pn		**Pn**	**09 10 34.0**	**0.0**	
N47A	**Urbana**	**10.37**	**58**	Pn		**Pn**	**09 10 33.1**	**-1.7**	
L46A	**Eue Claire**	**10.51**	**51**			**Pn**	**09 10 35.7**	**-1.0**	
V51A	**Loudon**	**10.54**	**87**	Pn		**Pn**	**09 10 37.9**	**+0.8**	
P49A	**Miami Univ. Ec**	**10.61**	**67**	Pn		**Pn**	**09 10 37.0**	**-1.2**	
G40A	**Rib Lake**	**10.77**	**28**			**Pn**	**09 10 39.6**	**-0.6**	
TKL	**Tuckaleechee C**	**11.02**	**88**	Pn		**Pn**	**09 10 43.5**	**-0.2**	
	comp=Z,0.2nm,0.3s,baz=136,slow=22,SNR=2.1								
TKL					Lg	Lg	09 13 47.4		
	comp=Z,1.3nm,0.3s,baz=354,slow=23,SNR=5.9								
TKL					LR	LR	09 15 11.5		
	comp=Z,75nm,19.1s,baz=326,slow=39								
O49A	**Covington**	**11.08**	**64**	Pn		**Pn**	**09 10 43.6**	**-0.9**	
V52A	**Sevierville**	**11.14**	**87**	Pn		**Pn**	**09 10 43.1**	**-2.4**	
S51A	**Beattyville**	**11.15**	**77**			**Pn**	**09 10 45.7**	**+0.2**	
S51A	**Beattyville**	**11.15**	**77**	P		**Pn**	**09 10 45.3**	**-0.2**	
	baz=265,SNR=7.0								
S51A	**Beattyville**	**11.15**	**77**	P			09 10 45.3		
	baz=265,SNR=7.0								
S51A				P			09 10 45.3		
	baz=265,SNR=7.0								
H43A	**Windswept, Lux**	**11.21**	**38**			**Pn**	**09 10 45.0**	**-1.4**	
Q51A	**Peebles**	**11.53**	**70**	Pn		**Pn**	**09 10 50.3**	**-0.4**	
BW06	**Boulder Array**	**11.65**	**309**	Pn		**Pn**	**09 10 53.8**	**+1.2**	
PD31	**Pinedale Array**	**11.65**	**309**			**Pn**	**09 10 53.7**	**+1.2**	
PDAR	**Pinedale Array**	**11.65**	**309**	Pn		**Pn**	**09 10 53.1**	**+0.6**	
	comp=Z,0.4nm,0.3s,baz=122,slow=13,SNR=12								
PDAR					Lg	Lg	09 14 09.7		
	comp=Z,0.3nm,0.3s,baz=113,slow=26,SNR=2.7								
L48A	**N Adams**	**11.69**	**55**	Pn		**Pn**	**09 10 51.9**	**-0.9**	
GOGA	**Godfrey**	**11.69**	**98**	Pn		**Pn**	**09 10 51.8**	**-1.1**	
COWI	**Conover**	**11.87**	**29**			**Pn**	**09 10 53.8**	**-1.6**	
Q52A	**Bidwell**	**12.35**	**71**	Pn		**Pn**	**09 11 02.2**	**+0.4**	
P52A	**Corning**	**12.57**	**68**	Pn		**Pn**	**09 11 03.6**	**-1.4**	
LAO	**LASA Array**	**12.63**	**331**	Pn		**Pn**	**09 11 06.7**	**+0.9**	
B35A	**Bob, Littlefor**	**12.69**	**11**	Pn		**Pn**	**09 11 04.3**	**-2.2**	
G45A	**Suttons Bay**	**12.69**	**41**	Pn		**Pn**	**09 11 05.3**	**-1.3**	
N51A	**Ashland**	**12.73**	**63**	Pn		**Pn**	**09 11 06.8**	**-0.3**	
LOHW	**Long Hollow**	**12.75**	**311**	Pn		**Pn**	**09 11 09.2**	**+1.7**	
D41A	**Chassel**	**12.89**	**28**			**Pn**	**09 11 05.8**	**-3.4**	
E43A	**Lone Tree Farm**	**12.99**	**34**	Pn		**Pn**	**09 11 07.8**	**-2.9**	
KMSC	**Kings Mountain**	**13.06**	**89**	Pn		**Pn**	**09 11 10.1**	**-1.5**	
V55A	**Taylorsville**	**13.07**	**86**	Pn		**Pn**	**09 11 10.0**	**-1.8**	
DGMT	**Dagmar**	**13.50**	**340**	Pn		**Pn**	**09 11 16.7**	**-0.8**	
GCMT	**Greycliff**	**13.54**	**320**	Pn		**Pn**	**09 11 14.2**	**-4.1**	
E46A	**Sault Ste Mari**	**14.28**	**39**	Pn		**Pn**	**09 11 25.0**	**-3.3**	
ULM	**Lac du Bonnet**	**14.34**	**4**	Pn		**Pn**	**09 11 25.6**	**-3.4**	
	comp=Z,0.4nm,0.3s,baz=189,slow=10,SNR=4.7								
ULM					Sn	Sn	09 13 56.9	-11	
	comp=Z,0.4nm,0.3s,baz=92,slow=18,SNR=2.0								
ULM					Lg	Lg	09 15 31.4		
	baz=111,slow=20,SNR=6.3								
N54A	**Moraine State**	**14.48**	**65**	Pn		**Pn**	**09 11 27.5**	**-3.5**	
T57A	**Hurt**	**14.59**	**81**	Pn		**Pn**	**09 11 30.3**	**-2.2**	
DLMT	**Dillon**	**14.90**	**314**			**Pn**	**09 11 36.1**	**-0.8**	
EGMT	**Eagleton**	**15.17**	**327**	Pn		**Pn**	**09 11 41.3**	**+0.9**	
EGMT				lAmb	lAmb		09 12 05.4		
	comp=Z,4.2nm,1.0s								
PFO	**Pinyon Flats O**	**15.89**	**267**	LR	LR		09 17 37.9		
	comp=Z,104nm,20.3s,baz=280,slow=36								
M56A	**Emporium**	**15.93**	**64**	Pn		**Pn**	**09 11 48.8**	**-1.5**	
M56A				lAmb	lAmb		09 12 05.4		
	comp=Z,19nm,1.5s								
SADO	**Sadowa**	**16.40**	**52**	Lg	Lg		09 16 35.3		
	comp=Z,0.3nm,0.3s,baz=232,slow=8.9,SNR=4.1								
SADO				LR	LR		09 18 25.3		
	comp=Z,86nm,19.8s,baz=238,slow=38								
YKA	**Yellowknife Ar**	**28.67**	**343**	P		**P**	**09 14 02.5**	**-0.3**	
	comp=Z,0.2nm,0.7s,baz=143,slow=8.5,SNR=5.5								
ILAR	**Eielson Array**	**41.09**	**330**	P		**P**	**09 15 51.1**	**+1.3**	
	comp=Z,0.4nm,0.9s,baz=101,slow=7.4,SNR=2.7								

IDC ***17*** *09:19:31.6±1.1, 15°.75S×178°.94W, h0km, mb4.3/9, mb1 4.6/9, mb1mx4.1/41, mbtmp4.3/9, ML5.1/1, MS4.3/26, Ms1 4.3/26, ms1mx4.3/32, Error ellipse: s-maj=74.1km s-min=16.1km az=146.0*

NEIC ***17*** *09:19:31.8±1.9, 15°.97S±0°.06×178°.85W±0°.05, h10km±1km, mb4.7/43, Error ellipse: s-maj=11.8km s-min=7.8km az=210.0*

GCMT ***17*** *09:19:35.8±0.2, 15°.93S±0°.01×178°.52W±0°.01, h16km±1km, MW5.1/125, Moment Tensor Solution. s51,c74; s125,c187; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; Mrr-0.03±.11; Mθθ0.53±.12; Mϕϕ-0.49±.10; Mrθ0.59±.30; Mθϕ4.93±.10; Mϕr-1.25±.30; Best double couple: Mo5.14100×10*^{16} *NP1:ϕs272.00000°, δ77.00000°, λ-7.00000°. NP2:ϕs4.00000°, δ83.00000°, λ-167.00000°. Principal axes: T 5.0060, Plg5.0000°, Azm137.0000°; N 0.2700, Plg75.0000°, Azm30.0000°; P -5.2760, Plg14.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 09:19:34.1±0.5, 15°.9S±0°.1×178°.87W±0°.09, h22km, n93, σ1°12/74, mb4.7/34, MS4.3/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.47**	**238**	Pn	**Pn**	**09 20 28.0**	**+1.1**
	6.7nm,0.3s,baz=291,slow=21,SNR=24						
MSVF				Sn	**Sn**	**09 21 08.9**	**+1.4**
	24nm,0.3s,baz=129,slow=22,SNR=6.4						
MSVF				LR	LR	09 21 56.5	
	comp=Z,13μm,18.2s,baz=126,slow=41						
MSVF	**Nonsavu**	**3.47**	**238**	Pn	**Pn**	**09 20 25.0**	**-2.0**
AFI	**Afiamalu**	**7.13**	**75**	LR	LR	09 23 25.8	
	comp=Z,3μm,20.6s,baz=244,slow=33						
AFI	**Afiamalu**	**7.13**	**75**	Pn	**Pn**	**09 21 15.7**	**-1.6**
FUNA	**Funafuti**	**7.56**	**345**	Pn	**Pn**	**09 21 21.9**	**-1.1**
DZM	**Mont Dzumac**	**15.19**	**244**	eLR	LR	09 26 31.8	
	comp=Z,3μm,25.4s						
DZM	**Mont Dzumac**	**15.19**	**244**	LR	LR	09 28 13.8	
	comp=Z,2μm,19.0s,baz=74,slow=34						
URZ	**Urewera**	**22.56**	**188**	LR	LR	09 32 35.5	
	comp=Z,1μm,18.4s,baz=31,slow=34						
PPT2	**Papeete2**	**28.09**	**98**	eLQ	LQ	09 31 20.1	
	1μm,30.0s						
PPT2				eLR	LR	09 32 23.2	
	comp=Z,553nm,24.5s						
PPT	**Papeete**	**28.09**	**98**	LR	LR	09 33 36.9	
	comp=Z,248nm,21.2s,baz=303,slow=30						
TBI	**Tubuai**	**28.64**	**110**	eLQ	LQ	09 31 26.0	
	917nm,30.0s						
TBI				eLR	LR	09 32 43.0	
	comp=Z,1μm,29.5s						
TBI	**Tubuai**	**28.64**	**110**	eT	T	09 54 51.7	
	3.6nm,0.2s						
RPZ	**Rata Peaks**	**29.03**	**195**	LR	LR	09 35 43.6	
	comp=Z,428nm,21.5s,baz=0.0,slow=33						
PMG	**Port Moresby**	**33.73**	**277**	LR	LR	09 36 48.9	
	comp=Z,505nm,19.9s,baz=74,slow=31						
TAOE	**Nuku Hiva Isla**	**38.41**	**84**	eS	**S**	**09 32 51.

TNA	**Tin City**	**81.62**	**5**	P	**P**	**09 31 50.0**	**+0.1**
TNA				IAmb	IAmb	09 32 02.6	
	comp=Z,7.4nm,1.1s						
HLID	**Hailey**	**83.41**	**41**	P	**P**	**09 31 59.9**	**-0.2**
HLID				IAmb	IAmb	09 32 06.0	
	comp=Z,7.6nm,1.2s						
MLY	**Manley**	**83.46**	**12**	P	**P**	**09 32 00.1**	**+0.5**
MLY				IAmb	IAmb	09 32 06.0	
	comp=Z,9.0nm,1.4s						
WRH	**Wood River Hil**	**83.51**	**13**	P	**P**	**09 31 59.4**	**-0.4**
TMUT	**Trail Mountain**	**83.56**	**46**	P	**P**	**09 32 00.9**	**-0.2**
TMUT				IAmb	IAmb	09 32 07.1	
	comp=Z,9.4nm,1.1s						
CCB	**Clear Creek Bu**	**83.72**	**13**	P	**P**	**09 32 01.4**	**+0.6**
CCB				IAmb	IAmb	09 32 06.2	
	comp=Z,9.9nm,1.1s						
IMAR	**Indian Mountai**	**83.78**	**10**	P	**P**	**09 32 01.9**	**+0.8**
BCAR	**Beaver Creek A**	**83.84**	**16**	P	**P**	**09 32 01.6**	**0.0**
I23K	**Minto, Yukon-K**	**83.84**	**12**	P	**P**	**09 32 01.9**	**+0.5**
MDM	**Murphy Dome**	**83.91**	**13**	P	**P**	**09 32 00.8**	**-1.1**
TCOL	**CIGO, UAF Yank**	**83.91**	**13**	P	**P**	**09 32 02.3**	**+0.4**
COLA	**College**	**83.91**	**13**	P	**P**	**09 32 02.1**	**+0.3**
SRU	**San Rafael Swe**	**83.95**	**47**	P	**P**	**09 32 00.9**	**-2.1**
SRU				IAmb	IAmb	09 32 08.4	
	comp=Z,6.4nm,1.0s						
IL31		**84.03**	**13**	P	**P**	**09 32 01.4**	**-1.0**
ILAR	**Eielson Array**	**84.03**	**13**	P	**P**	**09 32 02.2**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=225,slow=4.6,SNR=12						
ILAR				LR	LR	10 06 25.3	
	comp=Z,64nm,18.6s,baz=214,slow=34						
ILAR	**Eielson Array**	**84.03**	**13**	P	**P**	**09 32 01.2**	**-1.2**
PV14	**Lion Creek, Pa**	**84.70**	**48**	P	**P**	**09 32 08.6**	**+1.8**
PV14				IAmb	IAmb	09 32 13.2	
	comp=Z,7.9nm,1.0s						
MNTX	**Cornudas Mount**	**84.79**	**55**	P	**P**	**09 32 06.1**	**-1.1**
MNTX				IAmb	IAmb	09 32 33.2	
	comp=Z,5.9nm,1.4s						
MCMT	**McKenzie Canyo**	**85.00**	**41**	P	**P**	**09 32 07.3**	**-0.9**
DAWY	**Dawson**	**85.28**	**16**	P	**P**	**09 32 09.8**	**+0.9**
DAWY				IAmb	IAmb	09 32 14.7	
	comp=Z,6.2nm,1.1s						
TX31	**Lajitas Ar. Si**	**85.30**	**58**	P	**P**	**09 32 09.7**	**-0.1**
TXAR	**Lajitas Array**	**85.30**	**58**	P	**P**	**09 32 12.0**	**+2.2**
	comp=Z,1.8nm,1.0s,baz=235,slow=3.2,SNR=9.8						
TXAR				LR	LR	10 02 57.8	
	comp=Z,359nm,19.4s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**85.30**	**58**	P	**P**	**09 32 07.9**	**-1.9**
HHC	**Hu-ho-hao-te**	**85.55**	**315**	*e*P	**P**	**09 32 09.8**	**-1.0**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.1s						
MAW	**Mawson**	**85.60**	**200**	LR	LR	10 08 47.3	
	comp=Z,188nm,18.1s,baz=66,slow=34						
REDW	**Red Top Meadow**	**85.61**	**43**	P	**P**	**09 32 10.7**	**-0.5**
REDW				IAmb	IAmb	09 32 17.1	
	comp=Z,7.6nm,1.2s						
SNOW	**Snow King Moun**	**85.72**	**43**	P	**P**	**09 32 12.6**	**+0.8**
SNOW				IAmb	IAmb	09 32 17.8	
	comp=Z,7.1nm,1.1s						
MOOW	**Moose Ponds**	**85.85**	**42**	P	**P**	**09 32 12.2**	**-0.2**
YHL	**Hebgen Lake**	**86.06**	**41**	P	**P**	**09 32 15.2**	**+1.6**
YHL				IAmb	IAmb	09 32 20.0	
	comp=Z,9.6nm,1.1s						
PDAR	**Pinedale Array**	**86.20**	**44**	P	**P**	**09 32 14.1**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=180,slow=2.5,SNR=6.6						
PDAR				LR	LR	10 03 31.4	
	comp=Z,226nm,20.4s,baz=246,slow=31						
PDAR	**Pinedale Array**	**86.20**	**44**	P	**P**	**09 32 13.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**87.79**	**290**	P	**P**	**09 32 24.5**	**+2.3**
	comp=Z,0.8nm,0.4s,baz=123,slow=3.3,SNR=1.4						
CMAR				LR	LR	10 09 05.5	
	comp=Z,79nm,19.4s,baz=154,slow=34						
SONM	**Songino Array**	**91.74**	**319**	LR	LR	10 09 34.0	
	comp=Z,107nm,21.6s,baz=122,slow=33						
YKA	**Yellowknife Ar**	**92.69**	**25**	P	**P**	**09 32 46.3**	**+2.3**
	comp=Z,0.8nm,1.0s,baz=246,slow=4.7,SNR=5.2						
YKA				LR	LR	10 10 16.3	
	comp=Z,360nm,18.6s,baz=0.0,slow=33						
PLCA	**Paso Flores**	**93.04**	**134**	LR	LR	10 04 34.3	
	comp=Z,106nm,21.6s,baz=209,slow=29						
ULM	**Lac du Bonnet**	**97.66**	**40**	LR	LR	10 09 52.1	
	comp=Z,303nm,21.2s,baz=280,slow=31						
VYHS	**Vyhne**	**144.38**	**340**	*e*PKP	**PKiKP**	**09 39 10.8**	**-1.5**
KHC	**Kasperske Hory**	**145.32**	**346**	*e*PKP	**PKiKP**	**09 39 14.8**	**+0.6**
CKRC	**Cesky Krumlov**	**145.43**	**345**	*e*PKP	**PKiKP**	**09 39 15.2**	**+0.8**
GERES	**GERESS Array B**	**145.56**	**345**	PKPbc	**PKPab**	**09 39 10.7**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=29,slow=4.5,SNR=1.9						
TORD	**Torodi Ar. Bea**	**177.22**	**191**	PKP	**PKPdf**	**09 39 44.0**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=270,slow=5.0,SNR=4.2						

*ANF **17** 09:36:59.1±3.1,35°.88N×97°.77W, h6km, ML3.6/14, Error ellipse: s-maj=34.2km s-min=29.1km az=33.0*
*NEIC **17** 09:37:02.8±0.7,35°.94N±0°.02×97°.34W±0°.02, h6km±7km, Error ellipse: s-maj=2.7km s-min=1.8km az=135.0*
*TUL **17** 09:37:02.6±1.8,35°.92N±0°.02×97°.33W±0°.02, h5km±7km, ML3.3, mb_Lg3.1/80(NEIC), Error ellipse: s-maj=2.7km s-min=1.7km az=140.0*

ISC 17 09:37:02.8±1.0,35°.93N±0°.02×97°.32W±0°.02, h7km±10km, n84, σ0°69/63, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.17**	**218**		**Pg**	**09 37 06.1**	**-0.2**
OK029				Sg	**Sg**	**09 37 08.8**	**+0.1**
OK025	**Westminster Rd**	**0.35**	**182**		**Pg**	**09 37 09.6**	**0.0**
OK025				Sg	**Sg**	**09 37 14.6**	**+0.4**
BCOK	**Bluff Creek, N**	**0.36**	**220**	Pg	**Pg**	**09 37 09.7**	**-0.1**
BCOK				Sg	**Sg**	**09 37 14.8**	**+0.2**
OK031	**S. Brethren Rd**	**0.39**	**87**		**Pg**	**09 37 10.7**	**+0.3**
OK031				Sg	**Sg**	**09 37 16.5**	**+0.9**
OK030	**Cody Creek RV**	**0.44**	**91**		**Pg**	**09 37 11.5**	**+0.3**
OK030				Sg	**Sg**	**09 37 17.8**	**+0.8**
OKCFA	**Oklahoma City**	**0.53**	**192**		**Pg**	**09 37 12.8**	**-0.1**
OKCFA	**Oklahoma City**	**0.53**	**192**	P	**Pg**	**09 37 12.8**	**-0.1**
	baz=11,SNR=31						
OKCFA				S	**Sg**	**09 37 20.2**	**+0.3**
	baz=11						
OKCFA	**Oklahoma City**	**0.53**	**192**	P		09 37 12.8	
	baz=11,SNR=31						
OKCFA				S		09 37 20.2	
	baz=11						
OKCSW	**OKLAHOMA CITY**	**0.54**	**190**		**Pg**	**09 37 12.9**	**-0.1**
QUOK	**Quay**	**0.55**	**64**	Pg	**Pg**	**09 37 13.6**	**+0.2**
FNO	**Franklin**	**0.68**	**185**		**Pb**	**09 37 16.1**	**-0.9**
CROK	**Carrier**	**0.78**	**317**		**Pg**	**09 37 17.8**	**-0.1**
GC02	**Grant County #**	**1.01**	**335**		**Pg**	**09 37 22.0**	**-0.3**
KAN13	**South Haven SW**	**1.08**	**353**		**Pg**	**09 37 23.4**	**-0.2**
OK032	**Salt Plains WL**	**1.13**	**321**		**Pg**	**09 37 23.9**	**-0.5**
KAN14	**Manchester OK**	**1.15**	**333**		**Pg**	**09 37 24.3**	**-0.4**
T35A	**Sooner Cattle**	**1.18**	**33**		**Pg**	**09 37 24.9**	**-0.5**
T35B	**Sooner Cattle**	**1.18**	**33**	P	**Pg**	**09 37 24.9**	**-0.5**
	baz=214,SNR=96						
T35B				S	**Sg**	**09 37 40.8**	**+0.1**
	baz=214						
T35B	**Sooner Cattle**	**1.18**	**33**	P		09 37 24.9	
	baz=214,SNR=96						
T35B				S		09 37 40.8	
	baz=214						
KAN09	**Caldwell North**	**1.22**	**349**		**Pg**	**09 37 25.8**	**-0.4**
TUL1	**Leonard**	**1.24**	**91**	P	**Pg**	**09 37 25.2**	**-1.3**
	baz=272						
TUL1				S	**Sg**	**09 37 42.4**	**-0.3**
	baz=272						
TUL1	**Leonard**	**1.24**	**91**	P		09 37 25.2	
	baz=272						
TUL1				S		09 37 42.4	
	baz=272						
KAN05	**Bluff City Nor**	**1.25**	**339**		**Pg**	**09 37 26.3**	**-0.5**
KS20	**Mayfield South**	**1.31**	**352**		**Pn**	**09 37 27.3**	**-0.2**
KAN10	**Anthony SW Sta**	**1.34**	**333**		**Pn**	**09 37 27.7**	**-0.2**
KAN08	**Anthony NE Sta**	**1.39**	**338**		**Pn**	**09 37 28.6**	**0.0**
X34A	**Smith Ranch, M**	**1.39**	**198**	Pn	**Pn**	**09 37 28.6**	**-0.1**
U32A	**Winter Ranch,**	**1.43**	**289**		**Pn**	**09 37 28.7**	**-0.5**
U32A	**Winter Ranch,**	**1.43**	**289**	P	**Pn**	**09 37 28.9**	**-0.3**
	baz=108						
U32A				S	**Sg**	**09 37 49.0**	**+0.3**
	baz=108						
U32A	**Winter Ranch,**	**1.43**	**289**	P		09 37 28.9	
	baz=108						
U32A				S		09 37 49.0	
	baz=108						
WMOK	**Wichita Mounta**	**1.69**	**225**		**Pn**	**09 37 32.8**	**+0.1**
WMOK				IAmb_Lg		09 37 55.8	
	comp=Z,71nm,0.7s						
WMOK	**Wichita Mounta**	**1.69**	**225**	P	**Pn**	**09 37 32.9**	**+0.1**
	baz=44						
WMOK				S	**Sb**	**09 37 55.2**	**-0.4**
	baz=44						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		09 37 32.9	
	baz=44						
WMOK				S		09 37 55.2	
	baz=44						
X37A	**Clayton**	**2.08**	**129**		**Pn**	**09 37 38.6**	**+0.4**
X37A				IAmb_Lg		09 38 10.8	
	comp=Z,95nm,0.8s						
X37A	**Clayton**	**2.08**	**129**	P	**Pn**	**09 37 38.6**	**+0.4**
	baz=311,SNR=35						
X37A				S	**Sb**	**09 38 06.4**	**-0.7**
	baz=311						
X37A	**Clayton**	**2.08**	**129**	P		09 37 38.6	
	baz=311,SNR=35						
X37A				S		09 38 06.4	
	baz=311						
U38A	**Gravette**	**2.43**	**77**		**Pn**	**09 37 43.9**	**+1.0**
Z35A	**Perchaven, San**	**2.60**	**179**		**Pn**	**09 37 46.1**	**+0.9**
Z35A	**Perchaven, San**	**2.60**	**179**	P	**Pn**	**09 37 45.5**	**+0.3**
	baz=359						
Z35A	**Perchaven, San**	**2.60**	**179**	P		09 37 45.5	
	baz=359						
R32A	**Long Quarter,**	**2.72**	**336**		**Pn**	**09 37 49.2**	**+2.2**
R32A	**Long Quarter,**	**2.72**	**336**	P	**Pn**	**09 37 48.4**	**+1.4**
	baz=156						
R32A				S	**Sn**	**09 38 21.4**	**+1.3**
	baz=156						
R32A	**Long Quarter,**	**2.72**	**336**	P		09 37 48.4	
	baz=156						
R32A				S		09 38 21.4	
	baz=156						
HHAR	**Hobbs**	**2.76**	**82**		**Pn**	**09 37 48.0**	**+0.5**
W39A	**Magazine**	**2.98**	**103**		**Pn**	**09 37 51.0**	**+0.6**
W39A	**Magazine**	**2.98**	**103**	P	**Pn**	**09 37 51.0**	**+0.6**
	baz=286,SNR=5.6						
W39A	**Magazine**	**2.98**	**103**	P		09 37 51.0	
	baz=286,SNR=5.6						
KSU1	**Kansas State U**	**3.21**	**10**	IAmb_Lg		09 38 49.4	
	comp=Z,75nm,0.7s						
Z38A	**Mt. Pleasant**	**3.29**	**143**		**Pn**	**09 37 54.9**	**+0.2**
Z38A				IAmb_Lg		09 38 54.5	
	comp=Z,77nm,1.1s						
Z38A	**Mt. Pleasant**	**3.29**	**143**	P	**Pn**	**09 37 55.3**	**+0.6**
	baz=325						
Z38A	**Mt. Pleasant**	**3.29**	**143**	P		09 37 55.3	
	baz=325						
MIAR	**Mount Ida**	**3.36**	**113**	Pn	**Pn**	**09 37 56.8**	**+1.1**
MIAR	**Mount Ida**	**3.36**	**113**	P	**Pn**	**09 37 56.9**	**+1.1**
	baz=296,SNR=28						
MIAR	**Mount Ida**	**3.36**	**113**	P		09 37 56.9	
	baz=296,SNR=28						
U40A	**Yellville**	**3.64**	**82**		**Pn**	**09 37 59.0**	**-0.6**
U40A				IAmb_Lg		09 38 57.4	
	comp=Z,35nm,1.0s						
S39A	**Bolivar**	**3.66**	**60**	Pn	**Pn**	**09 37 59.9**	**+0.1**
S39A				IAmb_Lg		09 39 02.2	
	comp=Z,36nm,0.8s						
S39A	**Bolivar**	**3.66**	**60**	P	**Pn**	**09 38 00.2**	**+0.4**
	baz=243,SNR=11						
S39A	**Bolivar**	**3.66**	**60**	P		09 38 00.2	
	baz=243,SNR=11						
AMTX	**Amarillo**	**3.71**	**255**	Pn	**Pn**	**09 38 01.9**	**+1.3**
AMTX				IAmb_Lg		09 39 01.4	
	comp=Z,53nm,1.0s						
ABTX	**Abilene, Hawle**	**3.82**	**211**	Pn	**Pn**	**09 38 03.5**	**+1.4**
237A	**Washetta, Mont**	**4.12**	**162**	Pn	**Pn**	**09 38 05.3**	**-0.9**
237A	**Washetta, Mont**	**4.12**	**162**	P	**Pn**	**09 38 05.8**	**-0.3**
	baz=343						
237A	**Washetta, Mont**	**4.12**	**162**	P		09 38 05.8	
	baz=343						
WHAR	**Wooly Hollow**	**4.15**	**97**	IAmb_Lg		09 39 19.4	
	comp=Z,28nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.22**	**89**	IAmb_Lg		09 39 21.7	
	comp=Z,26nm,0.7s						
R40A	**Maddies Statio**	**4.67**	**58**		**Pn**	**09 38 12.7**	**-1.1**
R40A				IAmb_Lg		09 39 34.8	
	comp=Z,23nm,0.7s						
R40A	**Maddies Statio**	**4.67**	**58**	P	**Pn**	**09 38 14.0**	**+0.2**
	baz=241,SNR=12						
R40A	**Maddies Statio**	**4.67**	**58**	P		09 38 14.0	
	baz=241,SNR=12						
P38A	**Dawn**	**4.75**	**38**	IAmb_Lg		09 39 33.7	
	comp=Z,25nm,0.8s						
N33A	**J Bar K, Exete**	**4.80**	**359**	IAmb_Lg		09 39 48.5	
	comp=Z,30nm,0.8s						
LCAR	**Lake Charles**	**5.00**	**87**	IAmb_Lg		09 39 46.1	
	comp=Z,24nm,0.7s						
435B	**Jarrell**	**5.14**	**183**	IAmb_Lg		09 39 51.3	
	comp=Z,23nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.22**	**308**	IAmb_Lg		09 40 02.5	
	comp=Z,33nm,0.8s						
BGNE	**Belgrade**	**5.50**	**353**	IAmb_Lg		09 40 07.0	
	comp=Z,42nm,0.8s						
P40A	**Paris**	**5.51**	**48**	IAmb_Lg		09 40 03.8	
	comp=Z,30nm,0.8s						
LPAR	**Lepanto**	**5.72**	**91**	IAmb_Lg		09 40 18.3	
	comp=Z,38nm,0.8s						
JCT	**Junction City**	**5.82**	**202**	IAmb_Lg		09 40 18.1	
	comp=Z,36nm,0.9s						
143A	**Socs Landing,**	**5.86**	**122**	IAmb_Lg		09 40 21.3	
	comp=Z,20nm,0.8s						
OGNE	**Ogallala**	**6.22**	**325**	IAmb_Lg		09 40 24.7	
	comp=Z,28nm,0.7s						
W45A	**Hickory Valley**	**6.68**	**94**	IAmb_Lg		09 40 38.9	
	comp=Z,24nm,0.8s						
S44A	**Carbondale**	**6.71**	**72**	IAmb_Lg		09 40 43.4	
	comp=Z,24nm,0.9s						
Y45A	**Yeager Farm, C**	**6.72**	**106**	IAmb_Lg		09 40 49.5	
	comp=Z,18nm,0.8s						
SIUC	**Southern Illin**	**6.74**	**72**	IAmb_Lg		09 40 36.9	
	comp=Z,25nm,0.8s						
P43A	**Skaggs, Pawnee**	**7.20**	**57**	IAmb_Lg		09 40 59.9	
	comp=Z,29nm,0.9s						
L40A	**Anamosa**	**7.75**	**36**	IAmb_Lg		09 41 06.7	
	comp=Z,16nm,0.9s						
O44A	**Mansfield**	**8.16**	**56**	IAmb_Lg		09 41 22.9	
	comp=Z,21nm,0.8s						
L42A	**Oliver, Polo**	**8.50**	**42**	IAmb_Lg		09 41 35.5	
	comp=Z,18nm,0.8s						
SUSD	**Miller**	**8.59**	**352**	IAmb_Lg		09 41 50.8	
	comp=Z,14nm,0.8s						
I37A	**Lemond, Waseca**	**8.61**	**19**	IAmb_Lg		09 41 42.3	
	comp=Z,22nm,1.0s						
P46A	**Rosedale**	**8.81**	**62**	IAmb_Lg		09 41 47.2	
	comp=Z,17nm,0.8s						
JFWS	**Jewell Farm**	**8.86**	**36**	IAmb_Lg		09 41 55.6	
	comp=Z,20nm,0.7s						
M44A	**Midewin, Midew**	**9.07**	**50**	IAmb_Lg		09 41 46.9	
	comp=Z,18nm,1.0s						
BLO	**Bloomington**	**9.16**	**66**	IAmb_Lg		09 41 51.4	
	comp=Z,15nm,0.8s						
SFIN	**Lafayette**	**9.19**	**58**	IAmb_Lg		09 42 02.3	
	comp=Z,14nm,0.7s						
I40A	**Norwalk**	**9.47**	**31**	IAmb_Lg		09 42 10.7	
	comp=Z,11nm,0.8s						
FPAL	**Fort Paine**	**9.68**	**95**	IAmb_Lg		09 42 21.8	
	comp=Z,15nm,1.2s						
K43A	**Burlington**	**9.70**	**43**	IAmb_Lg		09 42 12.2	
	comp=Z,17nm,0.8s						
K22A	**Casper**	**9.79**	**316**	IAmb_Lg		09 42 28.1	
	comp=Z,14nm,1.1s						

WEL 17 09:38:20.4,45°S±3°×16°7E±°, h16km±5km, M3.5/13, ML3.5/13, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=61.2, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.49**	**133**	P	Pn	09 38 31.7	-1.0
DCZ				S	Sb	09 38 38.9	+1.4
MSZ	**Milford Sound**	**1.02**	**64**	P	Pb	09 38 39.0	-0.7
PYZ	**Puysegur Point**	**1.03**	**179**	P	Pb	09 38 39.9	0.0
PYZ				S	Sb	09 38 53.0	-0.2
MLZ	**Mavora Lakes**	**1.07**	**103**	P	Pn	09 38 40.7	0.0
MLZ				S	Sg	09 38 55.0	0.0
WHZ	**Wether Hill Ro**	**1.19**	**130**	P	Pb	09 38 42.6	0.0
WHZ				S	Sg	09 38 59.2	+0.3
WKZ	**Wanaka**	**1.71**	**81**	P	Pb	09 38 51.3	-0.1
JCZ	**Jackson Bay**	**1.86**	**56**	P	Pn	09 38 50.3	-1.4
EAZ	**Earnscleugh**	**1.89**	**94**	P	Pb	09 38 53.7	-0.8
EAZ				S	Sn	09 39 15.5	+0.1
APZ	**The Paps**	**1.94**	**152**	P	Pb	09 38 54.2	-1.2
APZ				S	Sn	09 39 17.7	+0.9
SYZ	**Scrubby Hill**	**2.24**	**130**	P	Pn	09 38 57.8	+1.1
FOZ	**Fox Glacier**	**2.78**	**56**	P	Pn	09 39 02.4	-1.8
ODZ	**Otahua Downs**	**2.84**	**90**	P	Pn	09 39 05.5	+0.5
TMZ	**Timaru**	**3.20**	**78**	P	Pn	09 39 09.6	-0.4
WVZ	**Waitaha Valley**	**3.60**	**57**	P	Pn	09 39 13.5	-2.0
INZ	**Inchbonnie**	**4.22**	**57**	P	Pn	09 39 22.2	-1.9
DSZ	**Denniston Nort**	**5.06**	**50**	P	Pn	09 39 33.8	-1.8
QRZ	**Quartz Range**	**6.10**	**47**	P	Pn	09 39 48.1	-1.7

*NEIC **17** 10:11:21.9±1.3,5°.52S±0°.08×154°.14E±0°.08, h10km±2km, mb4.1/8, Error ellipse: s-maj=13.9km s-min=12.3km az=56.0*
*IDC **17** 10:11:22.5±1.0,5°.57S×153°.91E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.8/51, mbtmp4.0/10, ML2.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/31, Error ellipse: s-maj=34.1km s-min=21.7km az=116.0*

ISC 17 10:11:22.5±0.7,5°.58S±0°.08×154°.03E±0°.09, h10km, n28, σ1°36/30, mb4.1/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.31**	**306**	Pn	**Pn**	**10 12 00.9**	**+0.1**
HNR	**Honiara**	**7.00**	**123**	Pn	**Pn**	**10 13 04.2**	**-1.1**
MANU	**Manus Island**	**7.52**	**298**	Pn	**Pn**	**10 13 13.2**	**+0.8**
PMG	**Port Moresby**	**7.80**	**240**	Pn	**Pn**	**10 13 16.7**	**+0.5**
	4.4nm,0.3s,baz=26,slow=7.0,SNR=9.6						
PMG				Sn	**Sn**	**10 14 40.7**	**-3.9**
	0.9nm,0.3s,baz=80,slow=16,SNR=2.2						
PMG				LR	LR	10 16 02.2	
	comp=Z,144nm,19.8s,baz=82,slow=36						
PMG	**Port Moresby**	**7.80**	**240**		**Pn**	**10 13 17.9**	**+1.7**
PATS	**Pohnpei**	**13.05**	**19**	Pn	**Pn**	**10 14 26.5**	**-1.7**
DZM	**Mont Dzumac**	**20.32**	**145**	P	Pn	10 16 02.3	+1.2
	3.8nm,0.5s,baz=118,slow=18,SNR=1.3						
WR0	**Warramunga Arr**	**23.74**	**231**	P	**P**	**10 16 35.3**	**+0.1**
WR0				IAmb	IAmb	10 16 43.7	
	comp=Z,7.4nm,1.1s						
WB0	**Warramunga Arr**	**23.75**	**232**	P	**P**	**10 16 35.8**	**+0.5**
WB0				IAmb	IAmb	10 16 45.3	
	comp=Z,7.6nm,1.2s						
WRAB	**Tennant Creek**	**23.87**	**232**	P	**P**	**10 16 35.3**	**-1.2**
WRAB				IAmb	IAmb	10 16 52.1	
	comp=Z,8.9nm,1.5s						
WB2	**Warramunga Arr**	**23.88**	**232**	P	**P**	**10 16 37.0**	**+0.5**
WB2				IAmb	IAmb	10 16 53.7	
	comp=Z,6.6nm,1.2s						
WRA	**Warramunga Arr**	**23.89**	**232**	P	**P**	**10 16 37.5**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=58,slow=9.8,SNR=8.7						
WRA				PcP	**PcP**	**10 20 21.9**	**+2.2**
	comp=Z,2.3nm,1.4s,baz=39,slow=2.3,SNR=2.2						
WRA				LR	LR	10 25 01.5	
	comp=Z,36nm,19.2s,baz=140,slow=34						
WRA	**Warramunga Arr**	**23.89**	**232**	P	**P**	**10 16 36.7**	**+0.1**
AS31	**Alice Springs**	**26.43**	**225**	P	**P**	**10 17 00.9**	**+1.0**
ASAR	**Alice Springs**	**26.44**	**225**	P	**P**	**10 17 00.4**	**+0.6**
	comp=Z,2.0nm,0.9s,baz=57,slow=9.2,SNR=15						
ASAR				PcP	**PcP**	**10 20 25.8**	**+0.5**
	comp=Z,0.5nm,1.0s,baz=78,slow=2.6,SNR=2.3						
ASAR	**Alice Springs**	**26.44**	**225**	P	**P**	**10 16 59.8**	**-0.1**
KNRA	**Kununurra**	**26.75**	**246**	P	**P**	**10 17 02.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**30.38**	**243**	P	**P**	**10 17 34.7**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=52,slow=8.8,SNR=10						
FITZ	**Fitzroy Crossi**	**30.38**	**243**	P	**P**	**10 17 35.1**	**+0.1**
MKAR	**Makanchi Array**	**81.71**	**319**	P	**P**	**10 23 43.9**	**+2.4**
	comp=Z,1.0nm,0.6s,baz=97,slow=6.8,SNR=13						
MKAR	**Makanchi Array**	**81.71**	**319**	P	**P**	**10 23 41.6**	**+0.1**
ILAR	**Eielson Array**	**82.42**	**22**	P	**P**	**10 23 45.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=240,slow=5.7,SNR=2.0						
ZALV	**Zalesovo Beam**	**82.48**	**326**	P	**P**	**10 23 46.8**	**+1.5**
	comp=Z,0.9nm,0.4s,baz=91,slow=7.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**82.48**	**326**	P	**P**	**10 23 43.1**	**-2.1**
KURK	**Kurchatov**	**85.13**	**322**	P	**P**	**10 24 00.3**	**+1.4**
KURBB	**Kurchatov Arra**	**85.16**	**322**	P	**P**	**10 24 00.3**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=123,slow=3.5,SNR=5.9						
BVAR	**Borovoye Array**	**90.59**	**323**	P	**P**	**10 24 25.9**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=120,slow=5.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	**151.71**	**287**	PKPbc	**PKPbc**	**10 31 18.8**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=69,slow=3.1,SNR=1.7						

*DDA **17** 10:20:43.1,34°.63N×27°.16E, h7km±4km, ML3.5*
*IDC **17** 10:20:45.5±1.2,35°.10N×26°.92E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.5/45, mbtmp3.6/9, ML3.5/3, Error ellipse: s-maj=29.0km s-min=12.0km az=176.0*
*THE **17** 10:20:49.9,35°.11N×26°.70E, h0km±1km, ML3.5/4, Error ellipse: s-maj=5.7km s-min=0.9km az=159.0*
*ISK **17** 10:20:49.9,35°.13N×26°.72E, h10km, ML3.4/11*
*ATH **17** 10:20:50.1,35°.13N×26°.71E, h30km±3km, ML3.5/12, Error ellipse: s-maj=5.6km s-min=1.

NIS1	Nisyros Isl.	1.65	11	P		Pb	10 21 17.1	-0.2
NIS1	Nisyros Isl.	1.65	11	PN		Pg	10 21 17.9	-0.7
NIS1				SN		Sb	10 21 38.1	-0.1
SANT	Santorini	1.76	322	P		Pb	10 21 18.7	-0.6
SANT				AML	AML		10 21 49.1	
	comp=E,2205μm,0.6s							
SANT				AML	AML		10 21 52.0	
	comp=N,438μm,0.3s							
SANT	Santorini	1.76	322	P		Pb	10 21 18.7	-0.6
SANT	Santorini	1.76	322	PN		Pb	10 21 19.2	0.0
SANT				SN		Sn	10 21 40.4	+0.6
KOSK	Kos Island	1.78	5	PN		Pg	10 21 19.9	-1.1
THR6	Thira Island,	1.78	321	P		Pb	10 21 19.0	-0.6
THR3	Thira Island,	1.82	322	P		Pb	10 21 19.2	-1.0
THT2	Imerovigli	1.83	323	P		Pn	10 21 19.4	+1.1
THT2	Imerovigli	1.83	323	PN		Pb	10 21 20.2	-0.2
THR2	Thira island,	1.83	323	P		Pb	10 21 19.8	-0.6
THR5	Thira Island,	1.85	321	P		Pn	10 21 19.4	+0.8
BODT	Bodrum	2.12	11	PN		Pb	10 21 24.5	-0.9
TURN	Turunc	2.15	33	*i* P		Pb	10 21 25.3	-0.5
TURN				*i* S		Sg	10 21 55.1	-0.8
TURN				IAML			10 22 01.0	
	comp=E,220nm,0.6s							
TURN	Turunc	2.15	33	PN		Pb	10 21 25.5	-0.3
VAM	Vamos	2.16	282	P		Pb	10 21 26.3	+0.3
VAM				AML	AML		10 22 04.0	
	comp=N,1238μm,0.5s							
VAM				AML	AML		10 22 04.3	
	comp=E,952μm,0.3s							
GVD	Gavdhos	2.23	267	P		Pb	10 21 27.6	+0.5
GVD				AML	AML		10 22 16.2	
	comp=E,809μm,0.5s							
GVD				AML	AML		10 22 18.3	
	comp=N,644μm,0.5s							
GVD	Gavdhos	2.23	267	PN		Pb	10 21 27.3	+0.2
APE	Apeiranthos	2.32	334	P		Pn	10 21 26.1	+1.0
APE				AML	AML		10 21 56.0	
	comp=N,412μm,0.3s							
APE				AML	AML		10 22 02.8	
	comp=E,529μm,0.5s							
APE	Apeiranthos	2.32	334	P		Pn	10 21 26.2	+1.1
APE				S		Sn	10 21 53.3	-0.4
	comp=E,225nm,0.3s							
APE	Apeiranthos	2.32	334	PN		Pn	10 21 26.6	+1.5
IMMV	Iera Moni Meta	2.35	283	P		Pb	10 21 28.6	-0.6
IMMV				AML	AML		10 22 16.6	
	comp=N,1028μm,0.5s							
IMMV				AML	AML		10 22 19.8	
	comp=E,901μm,1.0s							
IMMV	Iera Moni Meta	2.35	283	PN		Pb	10 21 28.7	-0.6
DALY	Dalyan (Mula)	2.38	39	*i* P		Pn	10 21 26.8	+1.1
DALY				*i* S		Sg	10 22 08.1	+4.8
DALY	Dalyan (Mula)	2.38	39	PN		Pb	10 21 28.6	-1.1
MLSB	Milas	2.45	19	PN		Pb	10 21 29.6	-1.3
YER	Yerkesik	2.47	29	PN		Pb	10 21 29.6	-1.7
MULA	Mugla, Merkez-	2.59	28	*i* P		Pn	10 21 30.6	+1.9
MULA				*i* S		Sg	10 22 09.6	-0.4
AKAS	Kas	2.61	61	*i* P		Pn	10 21 27.6	-1.6
AKAS				*i* S		Sn	10 22 01.2	+0.3
CAEL	Denizli, Camel	2.96	43	*i* P		Pn	10 21 32.2	-1.8
CAEL				*i* S		Sg	10 22 22.6	+0.5
CAEL				IAML			10 22 25.0	
	comp=N,220nm,0.6s							
CAEL				IAML			10 22 30.0	
	comp=E,239nm,0.8s							
ANKY	Antikythira Is	2.98	288	P		Pn	10 21 36.1	+2.0
TAVA	DENIZLI_Tavas	3.02	34	*i* P		Pn	10 21 35.2	+0.5
TAVA				*i* S		Sb	10 22 15.0	-2.6
GOLH	Golhisar	3.18	44	*i* P		Pn	10 21 38.3	+1.4
GOLH				*i* S		Sn	10 22 18.8	+3.9
GOLH				IAML			10 22 38.0	
	comp=N,134nm,1.3s							
AKUM	Antalya-Kumluc	3.19	64	*i* P		Pn	10 21 33.0	-4.0
CHOS	Chios island	3.45	350	P		Pn	10 21 41.9	+1.2
KORT	Korkueli	3.52	54	*i* P		Pn	10 21 41.4	-0.3
KORT				*i* S		Sn	10 22 28.0	+4.6
KORT				IAML			10 22 29.0	
	comp=E,100nm,0.6s							
VLI	Veliai	3.58	300	P		Pn	10 21 43.9	+1.6
KEPZ	Antalya-Kepez	4.35	62	*i* P		Pn	10 21 48.2	-4.7
BRTR	Keskin Array B	7.22	47	Pn		Pn	10 22 34.3	+1.8
	comp=E,0.2nm,0.3s,baz=240,slow=12,SNR=1.6							
EIL	Elat	8.70	125	Pn		Pn	10 22 52.6	0.0
	comp=E,0.7nm,0.3s,baz=287,slow=1.7,SNR=9.6							
GERES	GERESS Array B	16.90	329	Pn		Pn	10 24 43.4	0.0
	comp=E,0.1nm,0.3s,baz=158,slow=8.1,SNR=2.7							
ESDC	Sonseca Array	24.83	290	P		P	10 26 08.6	-0.6
	comp=E,0.6nm,0.4s,baz=88,slow=11,SNR=3.3							
TORD	Torodi Ar. Bea	31.42	232	P		P	10 27 09.0	+0.8
	comp=E,0.4nm,0.6s,baz=35,slow=8.5,SNR=2.8							
ARCES	ARCESS Array B	34.62	359	P		P	10 27 33.3	-2.3
	comp=E,3.7nm,1.1s,baz=153,slow=4.1,SNR=4.3							
KURBB	Kurchatov Arra	40.20	51	P		P	10 28 22.3	-0.8
	comp=E,1.1nm,0.2s,baz=277,slow=9.0,SNR=5.8							
MKAR	Makanchi Array	42.76	57	P		P	10 28 45.1	+0.9
	comp=E,0.5nm,0.5s,baz=288,slow=6.3,SNR=6.2							
YKA	Yellowknife Ar	78.02	343	P		P	10 32 43.9	-1.1
	comp=E,0.1nm,0.7s,baz=44,slow=6.3,SNR=5.6							

DDA ***17*** *10:23:37.3,34.67N,26.89E,h7km±5km,MW4.2*
MED_RC ***17*** *10:23:43.0±0.6,34.89N±.76E,h30km±3km, MW4.5/6, Moment Tensor Solution.Mantle waves: s6,c7; Duration: 1!0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.78±3.40; $M_{\theta\theta}$-3.46±1.94; $M_{\phi\phi}$6.24±1.71; $M_{r\theta}$-2.20±1.63; $M_{r\phi}$3.20±1.19; $M_{\theta\phi}$-0.39±1.30; Best double couple: M6.54000×10^{15} NP1ϕ_s156.00000°,δ62.00000°, λ-158.00000°. NP2ϕ_s56.00000°,δ71.00000°, λ-30.00000°. Principal axes: T 7.3000, Plg6.0000°, Azm108.0000°; N -1.5200, Plg55.0000°, Azm206.0000°; P -5.7800, Plg34.0000°, Azm14.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC ***17*** *10:23:43.8±2.3,35.05N±.05,26.64E±.06,h10km±1km Error ellipse: s-maj=10.2km s-min=5.7km az=138.0*
NIC ***17*** *10:23:43.5±0.0,34.95N±.79E,h12km±4km, Ml4.7/4*
HLW ***17*** *10:23:43.0,35.21N±.90E,h31km±23km, Md4.4, Ml4.4*
ISK ***17*** *10:23:43.5,34.98N±.81E,h9km, ML4.3/15*
IDC ***17*** *10:23:45.8±1.8,35.12N±.68E,h34km±14km,mb4.0/26, mb1 4.1/34,mb1mx4.0/54,mbtmp4.2/34,ML4.0/8,MS3.5/4, Ms1 3.5/4,ms1mx2.9/53,Error ellipse: s-maj=15.2km s-min=9.4km az=167.0*
THE ***17*** *10:23:45.6,35.10N±.70E,h0km±1km,ML4.2/8,Error ellipse: s-maj=3.6km s-min=0.7km az=155.0*
MOS ***17*** *10:23:46.9±1.2,35.08N±.63E,h28km,mb4.5/25,Error ellipse: s-maj=5.2km s-min=3.0km az=104.8*
ATH ***17*** *10:23:46.7,35.20N±.67E,h15km±2km,ML4.5/3,Error ellipse: s-maj=4.2km s-min=1.1km az=151.0*

ISC 17 10:23:44.9±0.8,35.04N±0.03,-26.72E±0.02,h25km±6km, n390,σ1≥83/442,mb4.3/49,MS3.5/6,37C-23D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h	m	s	Res ISC
ZKR	Zakros	0.42	281	P		Pb	10 23 53.9			+0.1
ZKR				S		Sb	10 24 00.6			+0.7
ZKR				AML	AML		10 24 01.6			
ZKR				AML	AML		10 24 01.8			
ZKR	Zakros	0.42	281	P		Pb	10 23 53.9			+0.1
ZKR				S		Sn	10 24 01.2			-1.1
	89μm,0.3s									
ZKR	Zakros	0.42	281	PG		Pb	10 23 53.9			+0.1
ZKR				SG		Sn	10 24 01.2			-1.1
ZKR	Zakros	0.42	281	P		Pb	10 23 53.6			-0.2
ZKR				AML	AML		10 24 00.3			
	170nm,0.4s									
ZKR				AML	AML		10 24 00.3			
	170nm,0.4s									
ZKR				AML	AML		10 24 00.6			
	150nm,0.3s									
ZKR				AML	AML		10 24 00.6			
	150nm,0.3s									
ZKR				S		Sn	10 24 01.2			-1.1
STIA	Sitia Lasithi	0.54	288	P		Pb	10 23 55.1			-0.7
STIA				S		Sb	10 24 03.9			+0.7
KARP	Karpathos	0.63	35	P		Pb	10 23 56.7			-0.6
KARP				S		Sb	10 24 05.4			-0.4
KARP				AML	AML		10 24 08.0			
KARP				AML	AML		10 24 08.2			
KARP	Karpathos	0.63	35	P		Pb	10 23 56.7			-0.6
KARP				S		Sn	10 24 06.5			-1.0
	86μm,0.4s									
KARP	Karpathos	0.63	35	PG		Pb	10 23 56.2			-1.1
KARP				SG		Sb	10 24 05.5			-0.2
KARP	Karpathos	0.63	35	Pg		Pb	10 23 56.6			-0.7
KARP				Sg		Sn	10 24 06.5			-1.0
KARP	Karpathos	0.63	35	P		Pb	10 23 56.6			-0.7
KARP				S		Sn	10 24 06.8			-0.7
KARP				AML	AML		10 24 07.6			
	154nm,0.7s									
KARP				AML	AML		10 24 07.6			
	154nm,0.7s									
KARP				AML	AML		10 24 07.6			
	203nm,0.4s									
KARP				AML	AML		10 24 07.6			
	203nm,0.4s									
FRMA	Ierapetra Chan	0.81	269	P		Pb	10 23 58.7			-1.6
FRMA				S		Sb	10 24 10.7			-0.1
	9μm,0.5s									
NPS	Neapolis	0.93	284	P		Pn	10 24 03.4			+0.9
NPS				S		Sn	10 24 15.0			-0.1
NPS				AML	AML		10 24 21.0			
	comp=N,36111μm,0.7s									
NPS				AML	AML		10 24 23.0			
	comp=E,48383μm,0.5s									
NPS	Neapolis	0.93	284	P		Pn	10 24 03.4			+0.9
NPS				S		Sn	10 24 17.4			+2.3
	comp=E,21μm,0.6s									
NPS	Neapolis	0.93	284	P		Pn	10 24 03.4			+0.9
NPS				S		Sn	10 24 17.4			+2.3
HRKL	Herakleio	1.35	282	P		Pb	10 24 10.9			+1.3
HRKL	Herakleio	1.35	282	PN		Pb	10 24 10.6			+1.0
HRKL				SN		Sb	10 24 30.3			+3.9
IACM	Heraklion	1.38	282	P		Pb	10 24 11.3			+1.3
KSTL	Kastelli Herak	1.38	282	P		Pn	10 24 07.2			-1.3
IDI	Anoyia	1.52	280	Pg		Pb	10 24 13.4			+1.0
	comp=E,214nm,0.3s,baz=103,slow=16,SNR=76									
IDI				LR		LR	10 24 28.9			
	comp=E,225nm,18.1s,baz=82,slow=29									
IDI				Lg		Lg	10 24 35.3			
	comp=E,377nm,0.3s,baz=287,slow=14,SNR=8.7									
IDI	Anoyia	1.52	280	P		Pb	10 24 13.5			+1.0
IDI	Anoyia	1.52	280	P		Pb	10 24 13.4			+1.0
IDI				S		Sb	10 24 32.8			+1.5
	comp=E,4μm,0.5s									
IDI	Anoyia	1.52	280	↑P		Pb	10 24 13.0			+0.6
IDI				↑S		Sb	10 24 30.8			+0.5
IDI	Anoyia	1.52	280	PN		Pb	10 24 12.9			+0.4
IDI				SN		Sb	10 24 34.3			+3.0
IDI	Anoyia	1.52	280	Pn		Pb	10 24 12.8			+0.3
SIVA	Sivas	1.57	270	P		Pb	10 24 14.1			+0.9
SIVA	Sivas	1.57	270	P		Pb	10 24 13.9			+0.7
TMBK	Timbaki Herakl	1.60	272	P		Pb	10 24 15.1			+1.3
NIS1	Nisyros Isl.	1.61	13	P		Pb	10 24 13.2			-0.8
NIS1	Nisyros Isl.	1.61	13	P		Pb	10 24 13.3			-0.7
NIS1	Nisyros Isl.	1.61	13	PN		Pb	10 24 13.4			-0.6
ARG	Arkhangelos	1.64	44	P		Pb	10 24 14.9			+0.4
ARG	Arkhangelos	1.64	44	P		Pb	10 24 15.0			+0.4
ARG				S		Sb	10 24 36.0			+1.1
	comp=E,5μm,0.5s									
ARG	Arkhangelos	1.64	44	P		Pb	10 24 15.0			+0.4
ARG				S		Sb	10 24 36.0			+1.1
ARG	Arkhangelos	1.64	44	PN		Pb	10 24 15.3			-1.3
ARG				SN		Sb	10 24 35.1			+0.2
ARG	Arkhangelos	1.64	44	↑P		Pn	10 24 12.4			+0.2
SANT	Santorini	1.68	323	P		Pb	10 24 14.0			-1.2
SANT	Santorini	1.68	323	P		Pb	10 24 14.3			-0.9
SANT	Santorini	1.68	323	↓P		Pb	10 24 14.5			-0.7
SANT				↑S		Sb	10 24 35.8			-0.2
SANT	Santorini	1.68	323	PN		Pb	10 24 14.7			-0.5
SANT				SN		Sb	10 24 37.7			+1.8
SANT	Santorini	1.68	323	Pn		Pn	10 24 13.4			+0.6
SANT				Sn		Sn	10 24 33.0			-0.6
THR8	Santorini-Mono	1.70	324	P		Pb	10 24 14.2			-1.3
THR6	Thira Island,	1.70	321	P		Pb	10 24 14.7			-0.8
THR6	Thira Island,	1.70	321	P		Pb	10 24 14.8			-0.7
THR9	Santorini-Faro	1.72	320	P		Pb	10 24 14.9			-0.9
KOSK	Kos Island	1.73	7	P		Pb	10 24 14.6			-1.3
KOSK				S		Sb	10 24 37.8			+0.6
	comp=E,7μm,0.6s									
KOSK	Kos Island	1.73	7	PN		Pb	10 24 15.2			-0.7
KOSK				SN		Sb	10 24 38.4			+1.2
SNT1	Gialos, Santor	1.73	323	P		Pb	10 24 15.0			-1.1
SNT1	Gialos, Santor	1.73	323	P		Pb	10 24 14.9			-1.1
THR7	Fira-Santorini	1.74	323	P		Pb	10 24 15.5			-0.6
THR7	Fira-Santorini	1.74	323	P		Pb	10 24 15.5			-0.6
SNT5	Nea Kammeni, S	1.74	322	P		Pb	10 24 14.9			-1.2
SNT5	Nea Kammeni, S	1.74	322	P		Pb	10 24 15.2			-1.0
THR3	Thira Island,	1.74	322	P		Pb	10 24 15.1			-1.1
THR3	Thira Island,	1.74	322	P		Pb	10 24 15.1			-1.1
THT2	Imerovigli	1.75	323	P		Pb	10 24 15.7			-0.7
THT2	Imerovigli	1.75	323	P		Pb	10 24 15.7			-0.7
THT2	Imerovigli	1.75	323	PN		Pb	10 24 15.9			-0.5
THR5	Thira Island,	1.77	321	P		Pb	10 24 15.8			-1.0
THR5	Thira Island,	1.77	321	P		Pb	10 24 15.7			-1.0
SAP3	Santorini-Thir	1.79	322	P		Pb	10 24 15.8			-1.3
SAP3	Santorini-Thir	1.79	322	P		Pb	10 24 15.5			-1.5
SAP4	Santorini-Oia	1.80	323	P		Pb	10 24 16.5			-0.8
PRNS	Prines Rethymn	1.84	281	P		Pb	10 24 18.8			+0.8
BODT	Bodrum	2.08	13	P		Pn	10 24 18.9			+0.7
BODT	Bodrum	2.08	13	PN		Pb	10 24 19.9			-2.1
BODT				SN		Sb	10 24 46.5			-0.9
VAM	Vamos	2.09	281	P		Pb	10 24 21.8			-0.5
VAM	Vamos	2.09	281	P		Pb	10 24 21.7			-0.5
VAM	Vamos	2.09	281	P		Pb	10 24 21.7			-0.5
BDRM	Kayabasi	2.11	16	*i* P		Pn	10 24 19.6			+0.9
BDRM				*i* S		Sb	10 24 53.0			+4.8
TURN	Turunc	2.13	35	PN		Pb	10 24 20.6			-2.3
TURN				SN		Sb	10 24 47.2			-1.7
YKAV	Yalikavak-Bodr	2.13	12	PN		Pb	10 24 20.6			-2.3
GVD	Gavdhos	2.17	266	P		Pb	10 24 23.1			-0.5
GVD	Gavdhos	2.17	266	P		Pb	10 24 22.7			-0.8
GVD	Gavdhos	2.17	266	PN		Pb	10 24 22.0			-1.5
APE	Apeiranthos	2.25	335	P		Pn	10 24 22.4			+1.8
APE	Apeiranthos	2.25	335	P		Pn	10 24 22.1			+1.5
APE				S		Sb	10 24 50.2			-2.0
	comp=E,2μm,0.6s									
APE	Apeiranthos	2.25	335	↑P		Pb	10 24 22.5			-2.3
APE				↓S		Sn	10 24 48.6			+1.1
APE	Apeiranthos	2.25	335	*e* P		Pn	10 24 21.8			+1.2
APE	Apeiranthos	2.25	335	PN		Pb	10 24 22.5			-2.3
IMMV	Iera Moni Meta	2.28	281	P		Pb	10 24 24.6			-0.8
IMMV	Iera Moni Meta	2.28	281	P		Pb	10 24 24.1			-1.3
IMMV	Iera Moni Meta	2.28	281	PN		Pb	10 24 23.7			-1.7
DALY	Dalyan (Mula)	2.37	41	*i* P		Pn	10 24 23.8			+1.6
DALY				*i* S		Sb	10 24 59.7			+3.9
DALY	Dalyan (Mula)	2.37	41	PN		Pb	10 24 24.2			-2.8
YER	Yerkesik	2.45	31	P		Pn	10 24 25.2			+1.8
YER	Yerkesik	2.45	31	PN		Pn	10 24 25.2			+1.8
DDIM	Aydin, Didim	2.45	10	*i* P		Pn	10 24 21.4			-1.9
DDIM				*i* S		Sb	10 25 01.2			+3.0
KNDR	Palaiochora Ch	2.49	275	PN		Pb	10 24 27.3			-1.7
FETY	Fethiye	2.50	50	PN		Pn	10 24 24.1			+0.1
MHLO	Agia Marina, M	2.50	312	P		Pb	10 24 27.2			-2.0
MHLO	Agia Marina, M	2.50	312	P		Pn	10 24 26.4			+2.4
MHLA	Plaka, Milos I	2.53	313	P		Pb	10 24 27.5			-2.1
MULA	Mugla, Merkez-	2.57	30	*i* P		Pn	10 24 26.2			+1.2
MULA				*i* S		Sb	10 25 06.6			+5.1
KSL	Kastellorizon	2.59	64	↑P		Pn	10 24 25.7			+0.6
AKAS	Kas	2.64	62	*i* P		Pn	10 24 25.3			-0.7
AKAS	Kas	2.64	62	PN		Pn	10 24 26.2			+0.2
SMG	Samos	2.67	2	P		Pn	10 24 27.2			+0.9
AYDN	Tasoluk	2.78	19	*i* P		Pn	10 24 29.8			+1.9
ANKY	Antikythira Is	2.91	288	P		Pn	10 24 31.9			+2.3
CAEL	Denizli, Camel	2.96	45	*i* P		Pn	10 24 29.2			-1.3
CAEL				*i* S		Sb	10 25 25.3			+12
TAVA	DENIZLI_Tavas	3.00	36	*i* P		Pn	10 24 31.9			+0.9
TAVA				*i* S		Sb	10 25 16.8			+2.7
AYDB	Zeytinkoy-Aydi	3.06	18	PN		Pn	10 24 33.9			+2.1
ELL	Elmali	3.10	56	P		Pn	10 24 34.4			+2.0
ELL	Elmali	3.10	56	PN		Pn	10 24 34.1			+1.7
ELL	Elmali	3.10	56			Pn	10 24 34.4			+2.0
KTHA	Kythira Island	3.22	293	P		Pn	10 24 35.8			+1.9
KTHA	Kythira Island	3.22	293	PN		Pn	10 24 37.0			+3.1
AKUM	Antalya-Kumluc	3.22	65	*i* P		Pn	10 24 34.0			+0.2
AKUM				*i* S		Sn	10 25 12.6			+1.2
URLA	Izmir	3.32	358	PN		Pn	10 24 38.0			+2.7
CHOS	Chios island	3.39	351	P		Pn	10 24 37.5			+1.2
VLI	Veliai	3.50	300	P		Pn	10 24 39.5			+1.8
KORT	Korkueli	3.54	55	*i* P		Pn	10 24 39.8			+1.4
MATC	Matruh	3.71	173	P		Pn	10 24 40.7			+0.1
	baz=175									
KRND	KRANIDI	3.71	310	P		Pn	10 24 43.0			+2.3
SLUM	Salum	3.75	200	P		Pn	10 24 42.0			+0.7
	baz=202									
SLUM				AMP			10 25 00.0			
	baz=202									
SLUM				S		Sn	10 25 24.3			-0.4
	baz=202									
ATHU	Athens Univers	3.76	322	P		Pn	10 24 44.2			+2.9
DION	Dionisos Attik	3.77	324	P		Pn	10 24 44.4			+2.9
BRDR	BURDUR-Merkez	3.79	44	*i* P		Pn	10 24 40.1			-1.7
BRDR				*i* S		Sb	10 25 51.8			+15
ATH	Athens Observa	3.80	321	P		Pn	10 24 44.9			+3.1
ATH	Athens Observa	3.80	321	P		Pn	10 24 44.9			+3.1
KULA	Kula-Manisa	3.81	24	P		Pn	10 24 43.5			+1.5
OSC1	CSNet OBS 1	4.07	111	P		Pn	10 24 45.4			-0.2
OSC1				S		Sn	10 25 32.7			+0.2
ISP	Isparta	4.14	47	P		Pn	10 24 47.5			+0.8
ISP	Isparta	4.14	47	Pn		Pn	10 24 47.5			+0.8
KYMI	Kymi, Euboea I	4.16	330	P		Pn	10 24 49.2			+2.4
LTK	Loutraki	4.24	316	P		Pn	10 24 50.8			+2.8
ITM	Ithomi	4.43	300	P		Pn	10 24 53.1			+2.5
ITM	Ithomi	4.43	300	Pn		Pn	10 24 53.1			+2.5
AKMS	Akamas	4.61	89	P		Pn	10 24 52.3			-0.7
AKMS				AML	AML		10 25 47.1			
	comp=E,2.0nm,0.7s									
AKMS				AML	AML		10 25 47.9			
	comp=E,1.8nm,0.4s									
SEDI	Konya, Seydise	4.73	58	*i* P		Pn	10 24 54.5			-0.3
SEDI				*i* S		Sn	10 25 50.3			+1.3
KLV	Kalavryta, Ach	4.75	311	P		Pn	10 24 57.3			+2.4
NATA	Nata	4.82	91	P		Pn	10 24 56.0			+0.1
ALFC	Alefka	4.82	87	↑P		Pn	10 24 55.4			-0.6
ALFC				AML	AML		10 25 50.5			
	comp=E,4.8nm,1.1s									
ALFC				AML	AML		10 25 51.5			
	comp=E,2.8nm,0.6s									
LAKA	Lakka	4.97	311	P		Pn	10 25 00.7			+2.7
OSC2	CSNet OBS 4	5.00	111	P		Pn	10 24 58.0			-0.4
DOGA	KONYA_Doganhis	5.03	51	*i* P		Pn	10 24 56.9			-1.9
DOGA				*i* S		Sn	10 25 56.6			+0.4
LEF	Lefka	5.06	87	↓P		Pn	10 25 04.7			+5.5
LEF				↓S		Sn	10 25 56.7			-0.2
SZAC	Souni	5.07	91	↑P		Pn	10 24 58.9			-0.6
ANX	Ano Chora	5.24	314	P		Pn	10 25 04.3			+2.6
AGG	Agios Georgios	5.30	320	P		Pn	10 25 05.6			+3.0
AGG	Agios Georgios	5.30	320	P		Pn	10 25 05.0			+2.4
AGG	Agios Georgios	5.30	320	Pn		Pn	10 25 05.0			+2.4
ASGA	Asgata	5.37	91	P		Pn	10 25 02.8			-0.7
CSS	Mathiatis	5.43	89	↑P		Pn	10 25 03.7			-0.6
PAIG	Paliouri	5.45	335	P		Pn	10 25 07.5			+3.0
PAIG				pmax	pmax					
	comp=Z,48nm,0.8s									
MVOU	Mavrovouni	5.67	88	↑P		Pn	10 25 08.1			+0.5
SWA2		5.87	191	P		Pn	10 25 11.0			+0.6
	baz=192									
ALN	Alexandroupoli	5.88	355	P		Pn	10 25 11.3			+1.0
ALN	Alexandroupoli	5.88	355	Pn		Pn	10 25 11.3			+1.0
LIT	Litokhoron	6.07	328	P		Pn	10 25 13.2			+0.1
LIT	Litokhoron	6.07	328			Pn	10 25 13.2			+0.1
HMYD	Mayadein	6.26	145	P		Pn	10 25 14.8			-0.9
	baz=147									
THE	Thessaloniki	6.33	333	P		Pn	10 25 21.1			+4.5
THE				pmax	pmax					
	comp=Z,30nm,0.9s									
SOH	Sokhos	6.36	336	P		Pn	10 25 20.9			+3.8
SOH				pmax	pmax					
	comp=Z,16nm,0.9s									
MDUB	Mudurnu	6.48	32	Pn		Pn	10 25 18.3			-0.5
SRS	Serrai	6.55	339	P		Pn	10 25 23.5			+3.8
SRS				pmax	pmax					
	comp=Z,33nm,1.1s									
KOT	Kottamia	6.68	138	P		Pn	10

ANN pmax pmax
comp=Z,16nm,0.6s
NRCA Norcia 13.13 310 Pn 10 26 50.5 +0.7
PSZ Piszkesteto 13.84 340 P **Pn 10 26 58.2 -1.3**
PSZ Piszkesteto 13.84 340 Pn **Pn 10 26 58.1 -1.3**
KEST Kesra 14.19 278 Pn **Pn 10 27 04.0 -0.3**
comp=Z,0.2nm,0.3s,baz=18,slow=18,SNR=3.8
KEST Sn **Sn 10 29 33.9 -7.2**
comp=Z,0.3nm,0.3s,baz=20,slow=16,SNR=1.5
KEST Kesra 14.19 278 Pn **Pn 10 27 04.7 +0.3**
SOKA Soboth 14.59 326 *e*Pn **P 10 27 15.3 -0.6**
comp=Z,2.5nm,0.5s
VYHS Vyhne 14.66 339 *e*P **P 10 27 15.0 -1.7**
VYHS Vyhne 14.66 339 *e*P **P 10 27 15.0 -1.7**
MODS Modra-Piesok 15.06 335 *e*P **P 10 27 24.8 +3.7**
MODS Modra-Piesok 15.06 335 *e*P **P 10 27 24.8 +3.7**
KIV Kislovodsk 15.19 49 *e*P **P 10 27 23.7 +1.1**
KIV pmax pmax
comp=Z,46nm,1.1s
KBZ Khabaz 15.21 50 Pn **P 10 27 21.8 -1.0**
comp=Z,0.3nm,0.3s,baz=252,slow=7.0,SNR=19
KBZ Khabaz 15.21 50*c i*P **P 10 27 24.6 +1.9**
KBZ pmax pmax
comp=Z,18nm,1.1s
ZEI Tsey 15.44 55 *e*P **P 10 27 23.7 -1.8**
ZEI pmax pmax
comp=Z,12nm,1.0s
NCK Nalchik 15.54 52‖ *e*P **P 10 27 25.4 -1.1**
NCK pmax pmax
comp=Z,21nm,0.3s
KBA Koelnbreinsper 15.67 324 *e*Pn **Pn 10 27 25.8 +1.6**
comp=Z,3.9nm,0.5s
AKASG Malin Array Be 15.76 6 Pn **Pn 10 27 24.8 -0.3**
comp=Z,2.5nm,0.3s,baz=193,slow=11,SNR=4.9
AKASG Malin Array Be 15.76 6 *i* P **P 10 27 27.1 -1.7**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 15.76 6 Pn 10 27 26.3 +1.2
AKBB Malin Array Si 15.76 6 P **Pn 10 27 26.0 +0.9**
AKBB pmax pmax
comp=Z,8.0nm,0.8s
AKBB Malin Array Si 15.76 6 Pn **Pn 10 27 25.9 +0.9**
AKBB IAmb IAmb 10 27 37.2
comp=Z,8.3nm,0.8s
ABTA Abfaltersbach 15.85 322 *e*Pn **Pn 10 27 26.4 0.0**
comp=Z,3.5nm,0.5s
KRUC Moravsky 15.95 335 P **P 10 27 30.5 -0.5**
KRUC pmax pmax
comp=Z,4.0nm,1.6s
OJC Ojcow 15.99 344 P **Pn 10 27 29.4 +1.3**
OJC pmax pmax
comp=Z,6.0nm,0.8s
OJC Ojcow 15.99 344 Pn **Pn 10 27 29.4 +1.3**
VRAC Vranov 16.09 335 P **P 10 27 32.3 -0.2**
VRAC pmax pmax
comp=Z,8.0nm,1.4s
CKRC Cesky Krumlov 16.55 330 *e*P **P 10 27 37.8 +0.2**
WTTA Wattenberg 16.64 322 *e*Pn **P 10 27 38.4 -0.5**
comp=Z,3.6nm,0.5s
WTTA Wattenberg 16.64 322 P **P 10 27 42.6 +3.8**
WTTA pmax pmax
comp=Z,14nm,1.0s
WATA Walderalm 16.72 322 *e*Pn **Pn 10 27 37.4 -0.1**
comp=Z,3.8nm,0.5s
GEC2 GERESS Array S 16.82 329 Pn **Pn 10 27 39.0 +0.2**
GERES GERESS Array B 16.82 329 Pn **Pn 10 27 38.6 -0.2**
comp=Z,0.6nm,0.3s,baz=144,slow=12,SNR=15
GERES GERESS Array B 16.82 329 Pn 10 27 38.4 -0.3
SQTA Sankt Quirin 16.83 321 *e*Pn **P 10 27 41.0 +0.1**
comp=Z,2.8nm,0.4s
FETA Feichten 16.96 320 *e*Pn **P 10 27 41.7 -0.6**
comp=Z,2.8nm,0.5s
MOTA Moosalm 16.97 321 *e*Pn **Pn 10 27 41.4 +0.7**
comp=Z,1.6nm,0.4s
DPC Dobruska-Polom 17.08 337 *e*P **Pn 10 27 42.1 +0.2**
DPC Dobruska-Polom 17.08 337 *e*P **Pn 10 27 42.1 +0.2**
KHC Kasperske Hory 17.09 329‖ *e*P **P 10 27 43.2 -0.5**
KHC pmax pmax
comp=Z,10.0nm,0.7s
KHC Kasperske Hory 17.09 329 *e*P **Pn 10 27 41.6 -0.5**
KHC *e*p**P** **pP 10 27 47.5 -2.8**
KHC Kasperske Hory 17.09 329 Pn **Pn 10 27 42.2 +0.1**
KHC **P 10 27 42.8 -0.9**
DAVOX Davos/Dischmat 17.27 318 P **P 10 27 46.1 +0.3**
comp=Z,0.7nm,0.3s,baz=357,slow=6.1,SNR=6.6
SBF Sospel 17.27 306 *e*P **Pn 10 27 45.1 +0.7**
SBF pmax pmax
comp=Z,58nm,0.7s
TUE Stuetta 17.38 316 Pn **P 10 27 47.1 +0.1**
TUE IAmb IAmb 10 28 11.0
comp=Z,9.9nm,0.8s
PRU Pruhonice 17.39 333 P **P 10 27 47.0 +0.1**
PRU pmax pmax
comp=Z,4.0nm,0.8s
DAVA Damuels 17.57 319 *e*Pn **Pn 10 27 47.3 -0.9**
comp=Z,4.1nm,0.4s
FRF La Foret Royal 17.68 305 *e*P **Pn 10 27 48.7 -0.7**
FRF pmax pmax
comp=Z,6.0nm,0.5s
LMR La Mourre 17.69 304 *e*P **Pn 10 27 49.3 -0.2**
LMR pmax pmax
comp=Z,17nm,1.0s
MBDF Montbardon 18.07 308 *e*P **Pn 10 27 53.3 -1.0**
MBDF pmax pmax
comp=Z,7.0nm,0.6s
BNI Bardonecchia 18.27 309 P **P 10 27 57.4 +0.6**
BNI pmax pmax
comp=Z,10.0nm,0.8s
BNI Bardonecchia 18.27 309 Pn 10 27 56.4 -0.4
BNI IAmb IAmb 10 28 18.5
comp=Z,11nm,1.0s
BRG Berggiesshubel 18.34 334 P **P 10 27 56.7 -0.6**
BRG pmax pmax
comp=Z,8.0nm,0.9s
BRG Berggiesshubel 18.34 334 *e*P **P 10 27 56.5 -0.8**
BRG Amp 10 27 58.4
comp=Z,5.4nm,0.8s
LPG La Plagne 18.43 311 *e*P **P 10 27 58.4 -0.3**
LPG pmax pmax
comp=Z,13nm,0.7s
LPL La Plagne 18.45 311 *e*P **P 10 27 58.7 -0.1**
LPL pmax pmax
comp=Z,6.0nm,0.4s
SENIN Lac Senin/Sane 18.52 314 P **P 10 27 58.9 -0.6**
SENIN IAmb IAmb 10 28 02.8
comp=Z,15nm,0.6s
ORIF Oris-en-Rattie 18.73 308 *e*P **Pn 10 28 02.3 0.0**
ORIF pmax pmax
comp=Z,6.0nm,0.8s
CLL Collm 19.04 333 P **Pn 10 28 05.5 -0.4**
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 19.04 333 P **Pn 10 28 05.5 -0.4**
BFO Black Forest 19.04 320 P **P 10 28 04.7 -0.4**
BFO pmax pmax
comp=Z,14nm,1.5s
BFO Black Forest 19.04 320 P **P 10 28 04.7 -0.4**
BFO IAmb IAmb 10 28 34.0
comp=Z,14nm,1.5s
CABF La Chapelle 19.36 313 *e*P **P 10 28 07.0 -1.7**
CABF pmax pmax
comp=Z,10.0nm,0.6s
MNK Minsk 19.48 2 *i* P **Pn 10 28 11.3 +0.2**
comp=E,2.0nm,0.7s
MNK *i* P **Pn 10 28 11.3 +0.2**
comp=N,14nm,1.2s
MNK *i* P **Pn 10 28 11.3 +0.2**
comp=Z,6.0nm,0.6s
MNK *i* PP **PnPn 10 28 26.2 +1.6**
MNK *i* PPP PPP 10 28 34.0
MNK *i* S **Sn 10 31 53.4 +4.5**
MNK *i* SS **SnSn 10 32 09.7 +6.5**
MNK *i* SSS SSS 10 32 22.6
MNK *i* LQ LQ 10 34 06.1
MNK *i* LR LR 10 35 35.8
MNK *i* LRM MLR 10 37 15.3
comp=Z,84nm,15.6s
MNK *i* LRM MLR 10 37 40.1
comp=N,190nm,18.4s
MNK *i* LRM MLR 10 37 50.9
comp=E,23nm,22.9s
VIVF Saint-Julien-l 19.49 307 *e*P **P 10 28 09.4 -0.6**
VIVF pmax pmax
comp=Z,20nm,1.2s
HINF Hinteralfeld 19.55 317 *e*P **P 10 28 10.0 -0.7**
HINF pmax pmax
comp=Z,4.0nm,0.6s
ECH Echery 19.60 318 P **P 10 28 11.5 +0.2**
ECH pmax pmax
comp=Z,6.0nm,1.1s
ECH Echery 19.60 318 P **P 10 28 11.5 +0.2**
CDF Champ du Feu 19.65 319 *e*P **P 10 28 11.3 -0.6**
CDF pmax pmax
comp=Z,7.0nm,0.8s
SSB Saint Sauveur 19.74 308 P **P 10 28 13.0 +0.2**
SSB pmax pmax
comp=Z,9.0nm,0.9s
SSB Saint Sauveur 19.74 308 P **P 10 28 12.2 -0.6**
SSB IAmb IAmb 10 28 21.5
comp=Z,6.2nm,0.7s
NACGM Naroch 19.87 0 *i* P **Pn 10 28 17.1 +1.4**
NACGM *i* P **Pn 10 28 17.1 +1.4**
NACGM *i* P **Pn 10 28 17.1 +1.4**
NACGM *i* PP **PnPn 10 28 37.5 +7.6**
NACGM *i* S Sn 10 32 11.5 +13
NACGM *i* SS SnSn 10 32 36.0 +23
NACGM *i* SSS SSS 10 33 03.8
NACGM *i* LQ LQ 10 34 29.4
NACGM *i* LR LR 10 36 28.3
HAU Haudompre 19.94 317 *e*P **P 10 28 14.9 0.0**
HAU pmax pmax
comp=Z,4.0nm,0.5s
RAYN Ar Rayn 19.97 120 P **Pn 10 28 19.8 +2.6**
RAYN pmax pmax
comp=Z,11nm,1.4s
RAYN Ar Rayn 19.97 120 Pn 10 28 19.8 +2.6
RAYN IAmb IAmb 10 28 29.0
comp=Z,11nm,1.4s
MTLF Montolieu 20.67 301 *e*P **P 10 28 21.3 -1.6**
MTLF pmax pmax
comp=Z,11nm,1.0s
LOR Lormes 21.02 312 *e*P **P 10 28 26.0 -0.6**
LOR pmax pmax
comp=Z,21nm,0.8s
AVF Avril sur Loir 21.12 311 *e*P **P 10 28 26.3 -1.4**
AVF pmax pmax
comp=Z,23nm,0.8s
OBN Obninsk 21.21 16‖ *e*P **P 10 28 31.5 +3.0**
OBN *e* 10 28 56.4
OBN *e*S S 10 32 07.4 -15
OBN pmax pmax
comp=Z,75nm,3.9s
OBN MLR MLR
comp=Z,111nm,16.0s
CAF Calviac 21.25 305 *e*P **P 10 28 29.5 +0.4**
CAF pmax pmax
comp=Z,5.0nm,0.9s
BGF Bois d'Agland 21.34 310 *e*P **P 10 28 28.8 -1.2**
BGF pmax pmax
comp=Z,7.0nm,0.5s
RJF Les Rejaudoux 21.74 306 *e*P **P 10 28 32.5 -1.8**
RJF pmax pmax
comp=Z,12nm,0.7s
EPF Esparros 21.93 299 *e*P **P 10 28 37.4 +1.0**
EPF pmax pmax
comp=Z,20nm,1.4s
TAM Tamanrasset 22.15 242 P **P 10 28 40.8 +1.7**
TAM pmax pmax
comp=Z,8.0nm,1.2s
TAM Tamanrasset 22.15 242 P **P 10 28 40.8 +1.7**
TAM IAmb IAmb 10 28 44.5
comp=Z,8.3nm,1.2s
BELG Belogornoye 22.87 34 P **P 10 28 45.1 -1.2**
comp=Z,16nm,0.7s,baz=250,slow=13,SNR=3.8
BELG Belogornoye 22.87 34‖ *e*P **P 10 28 50.0 +3.7**
BELG pmax pmax
comp=Z,4.0nm,1.0s
GRR Gorron 24.37 312 *e*P **P 10 28 59.1 -1.8**
GRR pmax pmax
comp=Z,9.0nm,0.5s
ESBB Sonseca Array 24.76 290 P **P 10 29 04.9 +0.3**
ESDC Sonseca Array 24.76 290 P **P 10 29 04.6 0.0**
comp=Z,6.7nm,0.5s,baz=82,slow=9.5,SNR=41
ESDC Sonseca Array 24.76 290 P **P 10 29 04.5 -0.1**
PAB San Pablo 25.05 290 P **P 10 29 07.6 +0.3**
PAB pmax pmax
comp=Z,6.0nm,1.0s
PAB San Pablo 25.05 290 P **P 10 29 07.6 +0.3**
PAB IAmb IAmb 10 29 35.9
comp=Z,5.9nm,0.9s
GEYT Alibeck 25.35 74 P **P 10 29 09.4 -0.5**
comp=Z,1.7nm,0.4s,baz=294,slow=11,SNR=2.4
SGMF Saint Gilles 25.38 310 *e*P **P 10 29 10.8 +0.8**
SGMF pmax pmax
comp=Z,86nm,1.9s
QUIF Quistinic 25.65 309 *e*P **P 10 29 10.9 -1.5**
QUIF pmax pmax
comp=Z,16nm,0.8s
ROSF Rostrenen 25.85 310 *e*P **P 10 29 12.4 -2.0**
ROSF pmax pmax
comp=Z,9.0nm,0.6s
MDT Midelt 26.04 274 P **P 10 29 14.7 -1.5**
comp=Z,3.4nm,0.8s,baz=87,slow=9.3,SNR=7.6
FINES FINESS Array B 26.43 359 P **P 10 29 17.7 -1.7**
comp=Z,3.4nm,0.9s,baz=162,slow=10,SNR=6.3
FINES FINESS Array B 26.43 359 P **P 10 29 18.6 -0.8**
FINES FINESS Array B 26.43 359 P **P 10 29 18.6 -0.8**
HFS Hagfors 26.50 345 P **P 10 29 18.0 -2.1**
comp=Z,1.6nm,0.6s,baz=138,slow=13,SNR=5.6
PBRG Braganca 26.95 295 *e*P **P 10 29 24.1 -0.3**
KLMR Klimovskoe 27.12 14 P **P 10 29 26.6 +1.0**
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 27.12 14 P **P 10 29 26.6 +1.0**
KLMR AMP 10 29 40.1
comp=Z,12nm,1.2s
MVO Moncorvo 27.14 293 *e*P **P 10 29 26.1 0.0**
MVO eLR LR 10 36 27.1
comp=Z,181nm,18.0s
PBAR Barrancos 27.19 287 *e*P **P 10 29 26.4 -0.1**
UOSS Minazif 27.36 104 P **P 10 29 33.1 +4.9**
UOSS IAmb IAmb 10 29 39.3
comp=Z,5.9nm,0.9s
AKTO Aktyubinsk 27.41 46 P **P 10 28 28.0 -0.3**
comp=Z,2.7nm,0.4s,baz=252,slow=9.1,SNR=19
PMRV Marv??o 27.41 289 *e*P **P 10 29 28.0 -0.5**
PMRV eLR LR 10 38 37.8
comp=Z,126nm,18.0s
MTE Manteigas 27.52 291 *e*P **P 10 29 28.4 -1.1**
MTE eLR LR 10 39 07.1
comp=Z,126nm,18.0s
POLO Lamas de Olo 27.72 294 *e*P **P 10 29 32.1 +0.7**
PVAQ Vaqueiros 27.79 285 *e*P **P 10 29 31.6 -0.3**
PVAQ eLR LR 10 37 42.2
comp=Z,275nm,20.0s
NOA NORSAR Array B 27.86 344 P **P 10 29 29.7 -2.6**
comp=Z,0.3nm,0.5s,baz=150,slow=9.5,SNR=1.5
PBDV Barranco-do-Ve 27.98 285 *e*P **P 10 29 33.9 +0.3**
PMTG Montargil 28.07 289 *e*P **P 10 29 34.0 -0.4**
PGAV Gavieira, Arco 28.10 295 eLR LR 10 37 52.9
comp=Z,198nm,20.0s
ABKAR Akbulak array 28.18 49 P **P 10 29 36.1 +0.9**
ABKAR IAmb IAmb 10 30 03.5
comp=Z,4.4nm,0.9s
PNCL Nicolau / Gran 28.37 287 *e*P **P 10 29 35.7 -1.4**
EKA Eskdalemuir Ar 28.89 324 P **P 10 29 40.2 -1.2**
comp=Z,1.7nm,0.5s,baz=124,slow=11,SNR=9.0
ARU Arti 30.41 35*c i*P P 10 30 00.6 +5.7
ARU 10 30 59.2
ARU SS SS 10 36 39.2 -25
ARU pmax pmax
comp=Z,7.0nm,1.7s
TOA0 Torodi Ar. Sit 31.41 232 P **P 10 30 04.9 +0.8**
TORD Torodi Ar. Bea 31.41 232 P **P 10 30 04.9 +0.7**
comp=Z,2.8nm,0.4s,baz=32,slow=8.8,SNR=29
TORD Torodi Ar. Bea 31.41 232 P **P 10 30 04.8 +0.7**
TORD IAmb IAmb 10 30 08.7
comp=Z,2.8nm,0.7s
ARCES ARCESS Array B 34.56 359 P **P 10 30 29.1 -2.0**
comp=Z,1.1nm,0.5s,baz=172,slow=9.8,SNR=13
ARCES ARCESS Array B 34.56 359 P **P 10 30 31.1 0.0**
ARCES pmax pmax
comp=Z,13nm,1.3s
ARCES ARCESS Array B 34.56 359 P **P 10 30 31.1 0.0**
KK31 Karatay Array 34.62 63 P **P 10 30 32.5 +0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KK31 Karatay Array 34.62 63 P **P 10 30 32.5 +0.5**
KK31 IAmb IAmb 10 30 34.2
comp=Z,4.3nm,0.8s
KKAR Karatay Array 34.62 63 P **P 10 30 32.2 +0.2**
KKAR Karatay Array 34.62 63 P **P 10 30 32.2 +0.2**
KKAR Karatay Array 34.62 63 P **P 10 30 33.0 +1.0**
GAR Garm 34.79 70 P **P 10 30 35.4 +1.7**
BRVK Borovoye 35.46 46‖ *e*P **P 10 30 39.6 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,1.1s
BRVK Borovoye 35.46 46 P **P 10 30 39.7 +0.7**
BVAR Borovoye Array 35.51 46 P **P 10 30 39.0 -0.6**
comp=Z,2.0nm,0.6s,baz=178,slow=4.5,SNR=13
BVAR Borovoye Array 35.51 46 P **P 10 30 39.0 -0.6**
AAK Ala-Archa 37.57 64 P **P 10 30 57.8 +0.4**
comp=Z,2.9nm,0.5s,baz=249,slow=6.5,SNR=9.6
AAK Ala-Archa 37.57 64*c i*P **P 10 30 59.2 +1.8**
AAK pmax pmax
comp=Z,13nm,0.7s
AAK Ala-Archa 37.57 64 P **P 10 30 58.3 +0.9**
AAK IAmb IAmb 10 31 04.3
comp=Z,4.6nm,0.8s
KURBB Kurchatov Arra 40.21 51 P **P 10 31 19.4 +0.2**
comp=Z,7.7nm,0.5s,baz=277,slow=8.8,SNR=40
KURK Kurchatov 40.27 51 P **P 10 31 19.4 -0.3**
DBIC Dimbokro 40.50 233 P **P 10 31 20.9 -1.0**
comp=Z,1.8nm,0.5s,baz=36,slow=10,SNR=3.9
DBIC Dimbokro 40.50 233 P **P 10 31 23.5 +1.6**
DBIC pmax pmax
comp=Z,6.0nm,1.1s
DBIC Dimbokro 40.50 233 P **P 10 31 23.5 +1.6**
DBIC IAmb IAmb 10 31 28.7
comp=Z,6.0nm,1.1s
MAKZ Makanchi 42.56 57 P **P 10 31 39.8 +1.2**
MAKZ pmax pmax
comp=Z,4.0nm,0.5s
MAKZ Makanchi 42.56 57 P **P 10 31 39.8 +1.2**
MAKZ IAmb IAmb 10 31 40.3
comp=Z,4.0nm,0.5s
MK31 Makanchi Array 42.78 57*c i*P **P 10 31 41.4 +1.0**
MK31 Makanchi Array 42.78 57 P **P 10 31 41.3 +1.0**
MK31 IAmb IAmb 10 31 50.2
comp=Z,5.4nm,0.8s
MKAR Makanchi Array 42.78 57 P **P 10 31 41.2 +0.8**
comp=Z,3.2nm,0.3s,baz=267,slow=8.4,SNR=55
MKAR LR LR 10 50 51.6
comp=Z,44nm,18.4s,baz=258,slow=38
MKAR Makanchi Array 42.78 57 P **P 10 31 41.3 +1.0**
MKAR Makanchi Array 42.78 57 P **P 10 31 41.3 +1.0**
SPITS Spitsbergen Ar 43.47 357 P **P 10 31 44.0 -1.6**
comp=Z,3.1nm,0.7s,baz=160,slow=17,SNR=1.0
ZAA0 Zalesovo Array 44.17 46 P **P 10 31 51.6 +0.2**
ZALV Zalesovo Beam 44.17 46 P **P 10 31 51.5 +0.1**
comp=Z,5.1nm,0.4s,baz=269,slow=8.8,SNR=20
DGZ Jazzator, Alta 45.95 52‖ *e*P **P 10 32 06.8 +1.0**
DGZ pmax pmax
comp=Z,4.0nm,0.8s
NRIK Noril'sk 47.45 25 P **P 10 32 16.0 -1.1**
comp=Z,1.4nm,0.4s,baz=312,slow=7.0,SNR=2.2
NRIK Noril'sk 47.45 25‖ *e*P **P 10 32 18.3 +1.2**
NRIK pmax pmax
comp=Z,2.0nm,0.6s
ZAK Zakamensk 55.87 49 *e*P **P 10 33 18.8 -1.6**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
SONM Songino Array 58.57 51 P **P 10 33 38.3 -1.3**
comp=Z,1.3nm,0.8s,baz=276,slow=8.3,SNR=4.5
ULN Ulaanbaatar 58.98 51‖ *e*P **P 10 33 44.1 +1.6**
ULN pmax pmax
comp=Z,1.0nm,0.4s
TIXI Tiksi 60.83 21 LR LR 11 04 49.5
comp=Z,35nm,18.1s,baz=250,slow=40
TIXI Tiksi 60.83 21‖ *e*P **P 10 33 57.5 +3.0**
CMAR Chiang Mai Arr 65.31 84 P **P 10 34 24.9 -0.3**
comp=Z,0.8nm,0.3s,baz=298,slow=7.7,SNR=5.9
BILL Bilibino 72.86 15‖ *e*P **P 10 35 11.0 -0.2**
BILL pmax pmax
comp=Z,13nm,3.8s
BILL MLR MLR
comp=Z,23nm,13.0s
USRK Ussuriysk Ar. 76.02 46 P **P 10 35 29.8 -0.2**
comp=Z,0.9nm,0.5s,baz=292,slow=4.2,SNR=7.6
KSRS Korea Array 77.34 53 P **P 10 35 36.5 -1.1**
comp=Z,1.1nm,0.7s,baz=316,slow=4.9,SNR=3.6
KSRS LR LR 11 16 01.7
comp=Z,25nm,18.5s,baz=175,slow=41
YKA Yellowknife Ar 77.95 343 P **P 10 35 39.6 -0.9**
comp=Z,0.9nm,0.5s,baz=39,slow=5.7,SNR=31
ILAR Eielson Array 80.39 357 P **P 10 35 53.1 -0.7**
comp=Z,0.3nm,0.7s,baz=339,slow=3.0,SNR=4.1
ILAR LR LR 11 12 15.6
comp=Z,31nm,18.1s,baz=277,slow=36
ILAR Eielson Array 80.39 357 P **P 10 35 53.9 +0.1**
ILAR Eielson Array 80.39 357 P **P 10 35 53.9 +0.1**
ULM Lac du Bonnet 81.12 327 P **P 10 35 56.3 -1.7**
comp=Z,1.8nm,0.6s,baz=56,slow=5.8,SNR=6.2
ASAR Alice Springs 116.77 101 PKP **PKPdf 10 42 26.7 -0.8**
comp=Z,0.1nm,0.4s,baz=303,slow=1.5,SNR=2.1
QSPA South Pole Qui 124.89 180 PKP **PKPdf 10 42 41.8 0.0**
comp=Z,1.9nm,1.1s,baz=155,slow=8.8,SNR=1.6

*IDC **17** 10:31:54.8±1.0,51°52S×28°33E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.7/41, mbtmp3.7/9, ML3.1/1, MS3.4/5, Ms1 3.4/5, ms1mx3.2/20, Error ellipse: s-maj=43.2km s-min=19.0km az=78.0*

ISC 17 10:31:56.2±0.8, 51°5S±0.1×28°7E±0.3, h10km, n11, σ2s 21/10, mb3.7/8, MS3.2/5, South of Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.00**	**340**	P	**P**		**P**	**10 36 28.2**	**-0.8**
	0.1nm,0.3s,baz=323,slow=17,SNR=1.3								
SUR				S	S		10 40 02.4		-11
	0.2nm,0.3s,baz=328,slow=20,SNR=1.3								
BOSA	**Boshof**	**23.04**	**352**	LR	LR		10 44 10.8		
	comp=Z,96nm,21.0s,baz=186,slow=32								
MAW	**Mawson**	**23.17**	**147**	P	**P**		**10 37 04.1**		**+1.6**
	3.3nm,0.9s,baz=294,slow=12,SNR=1.5								
MAW				S	**S**		**10 41 08.7**		**-5.1**
	1.0nm,0.4s,baz=34,slow=17,SNR=1.9								
MAW				LR	LR		10 44 23.6		
	comp=Z,53nm,19.1s,baz=267,slow=32								
SNAA	**Sanae**	**24.58**	**203**	P	**P**		**10 37 15.8**		**-0.3**
	1.2nm,0.7s,baz=31,slow=22,SNR=2.7								
SNAA				LR	LR		10 44 06.6		
	comp=Z,52nm,20.8s,baz=320,slow=30								
MATP	**Matopo**	**31.05**	**360**	P	**P**		**10 38 14.0**		**-0.4**
	0.7nm,0.4s,baz=186,slow=4.1,SNR=4.1								
QSPA	**South Pole Qui**	**38.68**	**180**	P	**P**		**10 39 19.7**		**-0.2**
	1.0nm,0.7s,baz=219,slow=0.7,SNR=10								
VNDA	**Vanda**	**47.98**	**168**	P	**P**		**10 40 35.6**		**+1.1**
	0.7nm,1.0s,baz=231,slow=6.5,SNR=2.3								
VNDA				LR	LR		11 00 19.3		
	comp=Z,38nm,19.3s,baz=295,slow=36								
TORD	**Torodi Ar. Bea**	**68.55**	**332**	P	**P**		**10 42 58.7**		**-0.3**
	0.2nm,0.6s,baz=165,slow=6.0,SNR=1.9								
LEM	**Lembang**	**77.82**	**86**	LR	LR		11 11 48.7		
	comp=Z,69nm,18.2s,baz=215,slow=31								
ASAR	**Alice Springs**	**80.72**	**116**	P	**P**		**10 44 10.2**		**+0.5**
	0.3nm,0.8s,baz=212,slow=4.6,SNR=4.4								
WRA	**Warramunga Arr**	**83.91**	**114**	P	**P**		**10 44 28.3**		**+1.8**
	0.8nm,1.1s,baz=220,slow=3.5,SNR=2.0								

*DDA **17** 10:33:53.2, 35°07N×26°57E, h10km±5km, ML2.5*
*ATH **17** 10:33:58.9, 35°05N×26°85E, h14km±3km, ML2.7/4, Error ellipse: s-maj=5.6km s-min=1.2km az=334.0*
*THE **17** 10:33:59.8, 35°20N×26°76E, h1km±3km, ML2.6/4, Error ellipse: s-maj=10.4km s-min=1.0km az=152.0*

ISC 17 10:33:57.9±1.6, 35.03N±0.08×26.82E±0.04, h11km±10km, n20, σ1s 34/37, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**279**	P	**Pb**		**10 34 08.8**		**+0.1**
ZKR				S	**Sb**		**10 34 16.2**		**+0.3**
ZKR				AML	AML		10 34 17.1		
	comp=E,2811μm,0.5s								
ZKR				AML	AML		10 34 22.3		
	comp=N,1136μm,0.6s								
ZKR	**Zakros**	**0.50**	**279**	P	**Pb**		**10 34 08.8**		**+0.1**
ZKR				S	**Sb**		**10 34 16.1**		**+0.1**
	comp=N,958nm,0.4s								
KARP	**Karpathos**	**0.58**	**29**	P	**Pg**		**10 34 09.1**		**-0.1**
KARP				S	**Sg**		**10 34 17.8**		**+0.9**
KARP				AML	AML		10 34 19.2		
	comp=E,4388μm,0.4s								

KARP					AML	AML	10 34 21.8		
	comp=N,3604µm,0.4s								
KARP	**Karpathos**	**0.58**	**29**	P		**Pg**	**10 34 09.2**	**-0.1**	
KARP				S		**Sg**	**10 34 17.4**	**+0.4**	
	comp=N,2µm,0.4s								
STIA	**Sitia Lasithi**	**0.62**	**286**	P		**Pb**	**10 34 10.6**	**-0.1**	
STIA				S		**Sb**	**10 34 19.4**	**0.0**	
NPS	**Neapolis**	**1.01**	**283**	P		**Pn**	**10 34 18.4**	**+0.3**	
NPS				S		**Sn**	**10 34 31.5**	**-0.8**	
NPS				AML	AML	10 34 39.4			
	comp=N,939µm,0.7s								
NPS				AML	AML	10 34 39.7			
	comp=E,1220µm,0.4s								
NPS	**Neapolis**	**1.01**	**283**	P		**Pn**	**10 34 18.6**	**+0.6**	
NPS				S		**Sn**	**10 34 32.4**	**+0.1**	
	comp=E,542nm,0.5s								
IDI	**Anoyia**	**1.60**	**280**	P		**Pb**	**10 34 28.0**	**+0.5**	
IDI				S		**Sg**	**10 34 48.8**	**-0.6**	
IDI				AML	AML	10 34 59.6			
	comp=N,201µm,0.7s								
IDI				AML	AML	10 35 01.8			
	comp=E,215µm,0.4s								
IDI	**Anoyia**	**1.60**	**280**	P		**Pg**	**10 34 28.2**	**-0.4**	
IDI				S		**Sb**	**10 34 47.8**	**+0.1**	
	comp=E,105nm,0.5s								
SIVA	**Sivas**	**1.65**	**270**	P		**Pg**	**10 34 29.2**	**-0.3**	
TURN	**Turunc**	**2.09**	**33**	*i* P		**Pn**	**10 34 34.3**	**+1.5**	
TURN				*i* S		**Sg**	**10 35 05.1**	**+0.1**	
TURN				IAML			10 35 13.0		
	comp=N,31nm,0.5s								
BDRM	**Kayabasi**	**2.09**	**14**	*i* P		**Pn**	**10 34 30.6**	**-2.2**	
BDRM				*i* S		**Sb**	**10 35 00.8**	**-1.0**	
APE	**Apeiranthos**	**2.28**	**333**	P		**Pn**	**10 34 36.1**	**+0.6**	
APE				S		**Sn**	**10 35 03.2**	**-0.4**	
DALY	**Dalyan (Mula)**	**2.32**	**39**	*i* P		**Pn**	**10 34 37.7**	**+1.7**	
DALY				*i* S		**Sg**	**10 35 12.2**	**-0.3**	
DALY				IAML			10 35 22.0		
	comp=E,40nm,0.4s								
DALY				IAML			10 35 24.0		
	comp=N,36nm,0.6s								
AKAS	**Kas**	**2.56**	**61**	*i* P		**Pn**	**10 34 36.5**	**-3.0**	
AKAS				*i* S		**Sn**	**10 35 08.2**	**-2.6**	
AKAS				IAML			10 35 17.0		
	comp=N,31nm,0.6s								
AYDN	**Tasoluk**	**2.76**	**18**	*i* P		**Pn**	**10 34 40.5**	**-1.6**	
AYDN				*i* S		**Sn**	**10 35 16.8**	**+1.4**	
CAEL	**Denizli, Camel**	**2.91**	**43**	*i* P		**Pn**	**10 34 47.5**	**+3.4**	
CAEL				*i* S		**Sb**	**10 35 24.2**	**-1.2**	
TAVA	**DENIZLI_Tavas**	**2.96**	**34**	*i* P		**Pn**	**10 34 44.1**	**-0.7**	
TAVA				*i* S		**Sb**	**10 35 26.6**	**-0.2**	
TAVA				IAML			10 35 42.0		
	comp=E,16nm,0.5s								
GOLH	**Golhisar**	**3.12**	**44**	*i* P		**Pn**	**10 34 48.5**	**+1.3**	
GOLH				IAML			10 35 57.0		
	comp=N,15nm,0.6s								
KEPZ	**Antalya-Kepez**	**4.30**	**63**	*i* P		Pn	10 34 59.5	-3.8	
KEPZ				*i* S		**Sn**	**10 35 56.5**	**+3.0**	

*IDC **17** 10:34:54.3±1.2,8°.28S×159°.52E,h0km,mb3.7/6, mb1 3.9/7,mb1mx3.7/31,mbtmp3.7/7,ML3.9/1,Error ellipse: s-maj=31.0km s-min=18.4km az=71.0*

ISC 17 10:34:55.8±1.0,8°.3S±0°.1×159°.5E±0°.2,h10km,n11, σ1°.05/9,mb3.6/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.21**	**157**	Pn	**Pg**	**10 35 19.1**	**-0.1**
	178nm,0.3s,baz=258,slow=4.9,SNR=126						
HNR				Sn	**Sn**	**10 35 34.9**	**-0.5**
	800nm,0.3s,baz=174,slow=23,SNR=15						
DZM	**Mont Dzumac**	**15.24**	**155**	Pn	**Pn**	**10 38 32.1**	**+0.7**
	0.6nm,0.3s,baz=152,slow=3.7,SNR=2.1						
WRA	**Warramunga Arr**	**26.93**	**242**	P	**P**	**10 40 39.0**	**+1.3**
	0.9nm,0.4s,baz=70,slow=9.3,SNR=15						
H11S2	**WAKE ISLAND Hy**	**27.57**	**15**	T	T	11 09 10.1	
	baz=194,slow=76,SNR=962						
H11S3	**WAKE ISLAND Hy**	**27.57**	**15**	T	T	11 09 10.1	
	baz=194,slow=76,SNR=939						
H11S1	**WAKE ISLAND Hy**	**27.58**	**15**	T	T	11 09 11.3	
	baz=194,slow=76,SNR=892						
STKA	**Stephens Creek**	**28.75**	**213**	P	**P**	**10 40 53.5**	**-0.2**
	0.5nm,0.3s,baz=62,slow=15,SNR=3.0						
ASAR	**Alice Springs**	**28.86**	**235**	P	**P**	**10 40 55.0**	**+0.2**
	0.3nm,0.4s,baz=67,slow=10,SNR=9.3						
SONM	**Songino Array**	**72.87**	**326**	P	**P**	**10 46 25.8**	**+0.6**
	0.4nm,0.7s,baz=145,slow=5.3,SNR=2.0						
ILAR	**Eielson Array**	**83.00**	**20**	P	**P**	**10 47 21.6**	**+0.6**
	0.3nm,0.7s,baz=225,slow=6.0,SNR=1.6						
MKAR	**Makanchi Array**	**87.33**	**318**	P	**P**	**10 47 41.3**	**-1.8**
	0.2nm,0.6s,baz=101,slow=5.0,SNR=2.1						

*IDC **17** 10:36:08.6±1.7,34°.67N×26°.97E,h0km,mb3.5/3, mb1 3.5/3,mb1mx3.2/44,mbtmp3.5/3,Error ellipse: s-maj=39.4km s-min=14.9km az=7.0*
*DDA **17** 10:36:08.7,34°.98N×27°.00E,h7km±5km,ML2.5*
*THE **17** 10:36:14.6,35°.12N×26°.75E,h0km±2km,ML3.0/4,Error ellipse: s-maj=9.7km s-min=0.9km az=155.0*
*ATH **17** 10:36:14.5,35°.05N×26°.82E,h15km±2km,ML3.1/6,Error ellipse: s-maj=5.2km s-min=1.2km az=335.0*

ISC 17 10:36:12.2±1.5,35°.03N±0°.09×26°.91E±0°.04,h14km±9km, n23,σ1°.19/37,mb3.2/3,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.55**	**22**	P	**Pn**	**10 36 25.3**	**-0.5**
KARP				S	**Sn**	**10 36 33.5**	**-1.3**
KARP				AML	AML	10 36 35.1	
	comp=N,7998µm,0.5s						
KARP				AML	AML	10 36 35.3	
	comp=E,6186µm,0.4s						
KARP	**Karpathos**	**0.55**	**22**	P	**Pn**	**10 36 25.4**	**-0.4**
KARP				S	**Sn**	**10 36 34.6**	**-0.2**
	comp=E,4µm,0.5s						
ZKR	**Zakros**	**0.57**	**278**	P	**Pg**	**10 36 23.7**	**+0.1**
ZKR				S	**Sg**	**10 36 31.3**	**+0.1**
ZKR				AML	AML	10 36 32.0	
	comp=E,6638µm,0.6s						
ZKR				AML	AML	10 36 33.5	
	comp=N,3338µm,0.4s						
ZKR	**Zakros**	**0.57**	**278**	P	**Pg**	**10 36 23.6**	**+0.1**
ZKR				S	**Sg**	**10 36 31.5**	**+0.3**
	comp=N,2µm,0.5s						
STIA	**Sitia Lasithi**	**0.69**	**284**	P	**Pg**	**10 36 24.8**	**-1.0**
STIA				S	**Sg**	**10 36 34.1**	**-0.8**
NPS	**Neapolis**	**1.09**	**282**	P	**Pg**	**10 36 33.1**	**-0.2**
NPS				S	**Sg**	**10 36 46.6**	**-0.9**
NPS				AML	AML	10 36 49.8	
	comp=E,3218µm,0.4s						
NPS				AML	AML	10 36 52.3	
	comp=N,2440µm,0.5s						
NPS	**Neapolis**	**1.09**	**282**	P	**Pg**	**10 36 33.1**	**-0.2**
NPS				S	**Sg**	**10 36 47.0**	**-0.5**
	comp=N,1µm,0.5s						
IDI	**Anoyia**	**1.68**	**279**	Pg	**Pb**	**10 36 43.8**	**+0.9**
	comp=N,15nm,0.3s,baz=247,slow=10,SNR=16						
IDI				Lg	Lg	10 37 04.7	
	comp=N,26nm,0.3s,baz=328,slow=14,SNR=8.0						
IDI	**Anoyia**	**1.68**	**279**	P	**Pn**	**10 36 42.8**	**+1.6**
IDI				AML	AML	10 37 12.2	
	comp=N,364µm,0.7s						
IDI				AML	AML	10 37 12.6	
	comp=E,349µm,0.5s						
IDI	**Anoyia**	**1.68**	**279**	P	**Pn**	**10 36 42.5**	**+1.3**
IDI				S	**Sn**	**10 37 02.2**	**-0.3**
	comp=E,195nm,0.6s						
SIVA	**Sivas**	**1.73**	**270**	P	**Pb**	**10 36 44.3**	**+0.6**
SIVA				AML	AML	10 37 16.7	
	comp=N,803µm,0.5s						
SIVA				AML	AML	10 37 19.5	
	comp=E,889µm,0.7s						
TURN	**Turunc**	**2.05**	**32**	*i* P	**Pn**	**10 36 45.8**	**-0.5**
TURN				*i* S	**Sg**	**10 37 19.6**	**+1.6**
VAM	**Vamos**	**2.25**	**280**	P	**Pb**	**10 36 52.9**	**+0.2**
VAM				AML	AML	10 37 31.3	
	comp=N,435µm,0.5s						
VAM				AML	AML	10 37 37.7	
	comp=E,298µm,0.7s						
DALY	**Dalyan (Mula)**	**2.27**	**38**	*i* P	**Pn**	**10 36 49.8**	**+0.4**
DALY				*i* S	**Sg**	**10 37 25.8**	**+0.5**
DALY				IAML		10 37 41.0	
	comp=N,29nm,0.6s						
DALY				IAML		10 37 53.0	
	comp=E,36nm,0.2s						
APE	**Apeiranthos**	**2.32**	**332**	P	**Pn**	**10 36 51.0**	**+0.9**
APE				S	**Sn**	**10 37 18.7**	**+0.3**
IMMV	**Iera Moni Meta**	**2.44**	**281**	P	**Pb**	**10 36 55.9**	**0.0**
AKAS	**Kas**	**2.50**	**61**	*i* P	**Pn**	**10 36 51.9**	**-0.7**
AKAS				*i* S	**Sn**	**10 37 23.4**	**+0.4**
AKAS				IAML		10 38 10.0	
	comp=N,25nm,1.0s						
AYDN	**Tasoluk**	**2.74**	**16**	*i* P	**Pn**	**10 36 55.6**	**-0.2**
AYDN				*i* S	**Sn**	**10 37 31.4**	**+2.6**
TAVA	**DENIZLI_Tavas**	**2.92**	**33**	*i* P	**Pn**	**10 36 58.7**	**+0.4**
TAVA				*i* S	**Sg**	**10 37 48.3**	**+2.3**
TAVA				IAML		10 37 59.0	
	comp=N,20nm,0.7s						
GOLH	**Golhisar**	**3.07**	**44**	*i* P	**Pn**	**10 37 03.1**	**+2.6**
GOLH				*i* S	**Sb**	**10 37 40.6**	**-3.5**
GOLH				IAML		10 38 01.0	
	comp=N,22nm,1.2s						
TORD	**Torodi Ar. Bea**	**31.53**	**233**	P	P	10 42 30.7	-3.4
	comp=N,0.1nm,0.4s,baz=34,slow=8.2,SNR=1.6						
MKAR	**Makanchi Array**	**42.65**	**57**	P	**P**	**10 44 08.0**	**-0.3**
	comp=N,0.2nm,0.4s,baz=272,slow=8.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**44.06**	**46**	P	**P**	**10 44 19.3**	**-0.1**
	comp=N,0.7nm,0.3s,baz=274,slow=6.6,SNR=2.3						

*ANF **17** 10:42:23.8±0.4,35°.95N×97°.42W,h5km,ML3.5/12,Error ellipse: s-maj=3.4km s-min=3.3km az=92.0*
*TUL **17** 10:42:24.1±1.1,35°.92N±0°.01×97°.41W±0°.02,h6km±7km, ML3.1,mb_Lg3.1/71(NEIC),Error ellipse: s-maj=2.4km s-min=1.8km az=86.0*
*NEIC **17** 10:42:24.3±1.0,35°.93N±0°.01×97°.42W±0°.02,h8km±7km, Error ellipse: s-maj=2.5km s-min=1.8km az=78.0*

ISC 17 10:42:24.1±1.0,35°.94N±0°.02×97°.42W±0°.02,h5km±9km, n91,σ0°.83/85,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.14**	**193**		**Pg**	**10 42 26.9**	**-0.1**
OK029				Sg	**Sg**	**10 42 28.9**	**-0.1**
BCOK	**Bluff Creek, N**	**0.32**	**209**	Pg	**Pg**	**10 42 30.3**	**+0.1**
BCOK				Sg	**Sg**	**10 42 34.8**	**+0.2**
OK005	**Luther M Schoo**	**0.34**	**147**	Pg	**Pg**	**10 42 30.7**	**+0.1**
OK005				Sg	**Sg**	**10 42 35.4**	**+0.4**
OK009	**Oakdale Elemen**	**0.35**	**181**		**Pg**	**10 42 30.9**	**-0.1**
OK025	**Westminster Rd**	**0.36**	**170**		**Pg**	**10 42 31.0**	**-0.1**
OK025				Sg	**Sg**	**10 42 36.1**	**+0.2**
OK001	**Jones High Sch**	**0.39**	**165**	Pg	**Pg**	**10 42 31.5**	**-0.1**
OK001				Sg	**Sg**	**10 42 36.9**	**+0.2**
OK031	**S. Brethren Rd**	**0.47**	**88**		**Pg**	**10 42 33.3**	**+0.1**
OK031				Sg	**Sg**	**10 42 40.1**	**+0.8**
OK030	**Cody Creek RV**	**0.51**	**91**		**Pg**	**10 42 34.1**	**+0.1**
OK030				Sg	**Sg**	**10 42 41.1**	**+0.5**
OKCFA	**Oklahoma City**	**0.52**	**183**		**Pg**	**10 42 33.9**	**-0.3**
OKCFA				Sg	**Sg**	**10 42 41.2**	**+0.2**
OKCFA	**Oklahoma City**	**0.52**	**183**	P	**Pg**	**10 42 33.9**	**-0.3**
	baz=3.3						
OKCFA				S	**Sg**	**10 42 41.1**	**+0.2**
	baz=3.3						
OKCFA	**Oklahoma City**	**0.52**	**183**	P		10 42 33.9	
	baz=3.3						
OKCFA				S		10 42 41.1	
	baz=3.3						
OKCSW	**OKLAHOMA CITY**	**0.53**	**182**		**Pg**	**10 42 34.1**	**-0.2**
OKCSW				Sg	**Sg**	**10 42 41.8**	**+0.6**
QUOK	**Quay**	**0.62**	**68**		**Pg**	**10 42 36.2**	**+0.2**
QUOK				Sg	**Sg**	**10 42 44.7**	**+0.6**
FNO	**Franklin**	**0.68**	**179**		**Pg**	**10 42 37.4**	**+0.2**
FNO				Sg	**Sg**	**10 42 46.7**	**+0.1**
CROK	**Carrier**	**0.73**	**321**		**Pg**	**10 42 38.5**	**+0.3**
CROK				Sg	**Sb**	**10 42 48.9**	**-0.8**
GC02	**Grant County #**	**0.98**	**339**		**Pg**	**10 42 42.9**	**-0.1**
GC02				Sg	**Sb**	**10 42 56.5**	**-0.4**
KAN13	**South Haven SW**	**1.07**	**357**		**Pg**	**10 42 44.0**	**-0.7**
OK032	**Salt Plains WL**	**1.08**	**324**		**Pg**	**10 42 44.8**	**0.0**
KAN14	**Manchester OK**	**1.11**	**337**	Pg	**Pg**	**10 42 45.2**	**-0.2**
KAN09	**Caldwell North**	**1.21**	**352**		**Pg**	**10 42 47.1**	**-0.2**
T35A	**Sooner Cattle**	**1.22**	**36**		**Pg**	**10 42 47.0**	**-0.5**
T35B	**Sooner Cattle**	**1.22**	**36**	P	**Pg**	**10 42 47.0**	**-0.6**
	baz=217,SNR=116						
T35B				S	**Sb**	**10 43 03.5**	**-0.2**
	baz=217						
T35B	**Sooner Cattle**	**1.22**	**36**	P		10 42 47.0	
	baz=217,SNR=116						
T35B				S		10 43 03.5	
	baz=217						
KAN05	**Bluff City Nor**	**1.23**	**343**		**Pg**	**10 42 47.4**	**-0.3**
KS20	**Mayfield South**	**1.29**	**355**		**Pn**	**10 42 48.7**	**-0.2**
KAN10	**Anthony SW Sta**	**1.30**	**335**		**Pb**	**10 42 48.9**	**-0.2**
TUL1	**Leonard**	**1.32**	**91**	P	**Pn**	**10 42 47.6**	**-1.6**
	baz=272						
TUL1				S	**Sb**	**10 43 05.6**	**-0.9**
	baz=272						
TUL1	**Leonard**	**1.32**	**91**	P		10 42 47.6	
	baz=272						
TUL1				S		10 43 05.6	
	baz=272						
U32A	**Winter Ranch,**	**1.36**	**289**		**Pn**	**10 42 49.1**	**-0.6**
U32A	**Winter Ranch,**	**1.36**	**289**	P	**Pn**	**10 42 49.1**	**-0.6**
	baz=108						
U32A				S	**Sn**	**10 43 08.5**	**+0.3**
	baz=108						
U32A	**Winter Ranch,**	**1.36**	**289**	P		10 42 49.1	
	baz=108						
U32A				S		10 43 08.5	
	baz=108						
KAN08	**Anthony NE Sta**	**1.36**	**341**		**Pn**	**10 42 49.7**	**-0.1**
X34A	**Smith Ranch, M**	**1.38**	**194**		**Pn**	**10 42 49.6**	**-0.4**
WMOK	**Wichita Mounta**	**1.64**	**223**		**Pn**	**10 42 53.4**	**-0.2**
WMOK	**Wichita Mounta**	**1.64**	**223**	P	**Pn**	**10 42 53.5**	**-0.2**
	baz=42,SNR=90						
WMOK				S	**Sb**	**10 43 15.1**	**-0.6**
	baz=42						
WMOK	**Wichita Mounta**	**1.64**	**223**	P		10 42 53.5	
	baz=42,SNR=90						
WMOK				S		10 43 15.1	
	baz=42						
X37A	**Clayton**	**2.15**	**128**		**Pn**	**10 43 00.6**	**0.0**
X37A				IAmb_Lg		10 43 34.0	
	comp=Z,103nm,0.7s						
X37A	**Clayton**	**2.15**	**128**	P	**Pn**	**10 43 00.6**	**0.0**
	baz=310,SNR=32						
X37A				S	**Sb**	**10 43 31.3**	**+0.9**
	baz=310						
X37A	**Clayton**	**2.15**	**128**	P		10 43 00.6	
	baz=310,SNR=32						
X37A				S		10 43 31.3	
	baz=310						
U38A	**Gravette**	**2.50**	**78**		**Pn**	**10 43 05.6**	**+0.1**
Z35A	**Perchaven, San**	**2.60**	**177**		**Pn**	**10 43 07.3**	**+0.5**
Z35A	**Perchaven, San**	**2.60**	**177**	P	**Pn**	**10 43 07.2**	**+0.3**
	baz=357						
Z35A	**Perchaven, San**	**2.60**	**177**	P		10 43 07.2	
	baz=357						
R32A	**Long Quarter,**	**2.69**	**338**	Pn	**Pn**	**10 43 09.9**	**+1.8**
R32A	**Long Quarter,**	**2.69**	**338**	S	**Sn**	**10 43 42.4**	**+1.4**
	baz=157						
R32A	**Long Quarter,**	**2.69**	**338**	S		10 43 42.4	
	baz=157						
HHAR	**Hobbs**	**2.83**	**82**		**Pn**	**10 43 09.8**	**-0.3**
W39A	**Magazine**	**3.05**	**103**		**Pn**	**10 43 13.0**	**0.0**
W39A				IAmb_Lg		10 44 05.8	
	comp=Z,35nm,0.7s						
W39A	**Magazine**	**3.05**	**103**	P	**Pn**	**10 43 13.0**	**0.0**
	baz=285,SNR=19						
W39A				S	**Sn**	**10 43 51.4**	**+1.5**
	baz=285						
W39A	**Magazine**	**3.05**	**103**	P		10 43 13.0	
	baz=285,SNR=19						
W39A				S		10 43 51.4	
	baz=285						
KSU1	**Kansas State U**	**3.22**	**11**	Pn	**Pn**	**10 43 16.0**	**+0.7**
KSU1				IAmb_Lg		10 44 14.9	
	comp=Z,38nm,0.9s						
CBKS	**Cedar Bluff**	**3.42**	**328**	Pn	**Pn**	**10 43 19.2**	**+1.1**
CBKS	**Cedar Bluff**	**3.42**	**328**	S	**Sn**	**10 43 59.5**	**+0.5**
	baz=146						
CBKS	**Cedar Bluff**	**3.42**	**328**	S		10 43 59.5	
	baz=146						
MIAR	**Mount Ida**	**3.44**	**113**		**Pn**	**10 43 18.5**	**+0.2**
MIAR	**Mount Ida**	**3.44**	**113**	P	**Pn**	**10 43 18.8**	**+0.5**
	baz=295,SNR=35						
MIAR	**Mount Ida**	**3.44**	**113**	P		10 43 18.8	
	baz=295,SNR=35						
AMTX	**Amarillo**	**3.64**	**254**	Pn	**Pn**	**10 43 22.8**	**+1.6**
AMTX				IAmb_Lg		10 44 21.0	
	comp=Z,48nm,1.0s						
U40A	**Yellville**	**3.72**	**82**	Pn	**Pn**	**10 43 21.9**	**-0.2**
U40A				IAmb_Lg		10 44 27.6	
	comp=Z,38nm,0.7s						
S39A	**Bolivar**	**3.72**	**61**	Pn	**Pn**	**10 43 22.7**	**+0.4**
S39A				IAmb_Lg		10 44 28.4	
	comp=Z,31nm,0.8s						
ABTX	**Abilene, Hawle**	**3.79**	**210**	Pn	**Pn**	**10 43 22.7**	**-0.5**
WHTX	**Lake Whitney,**	**3.94**	**181**	Pn	**Pn**	**10 43 25.0**	**-0.2**
X40A	**Basin Creek Fa**	**4.02**	**110**	Pn	**Pn**	**10 43 26.4**	**+0.1**
237A	**Washetta, Mont**	**4.15**	**161**	Pn	**Pn**	**10 43 26.5**	**-1.6**
237A	**Washetta, Mont**	**4.15**	**161**	S	**Sn**	**10 44 15.7**	**-1.2**
	baz=342						
237A	**Washetta, Mont**	**4.15**	**161**	S		10 44 15.7	
	baz=342						
WHAR	**Wooly Hollow**	**4.23**	**97**	Pn	**Pn**	**10 43 29.3**	**+0.1**
W41B	**Gary Mavity, V**	**4.28**	**99**	P	**Pn**	**10 43 29.9**	**0.0**
	baz=282,SNR=16						
W41B	**Gary Mavity, V**	**4.28**	**99**	P		10 43 29.9	
	baz=282,SNR=16						
FCAR	**Ozark Folk Cen**	**4.29**	**89**	Pn	**Pn**	**10 43 30.3**	**+0.2**
MGMO	**Mountain Grove**	**4.32**	**72**	IAmb_Lg		10 44 51.9	
	comp=Z,57nm,1.0s						
R40A	**Maddies Statio**	**4.74**	**59**	Pn	**Pn**	**10 43 34.9**	**-1.3**
R40A				IAmb_Lg		10 45 04.6	
	comp=Z,32nm,0.9s						
N33A	**J Bar K, Exete**	**4.79**	**360**	IAmb_Lg		10 45 09.2	
	comp=Z,32nm,0.9s						
P38A	**Dawn**	**4.80**	**39**	Pn	**Pn**	**10 43 38.4**	**+1.4**
CCAR	**Cane Creek**	**5.05**	**112**	Pn	**Pn**	**10 43 39.9**	**-0.6**
LCAR	**Lake Charles**	**5.08**	**87**	Pn	**Pn**	**10 43 40.0**	**-0.8**
LCAR				IAmb_Lg		10 45 05.3	
	comp=Z,23nm,0.7s						
N35A	**Tabor**	**5.11**	**15**	Pn	**Pn**	**10 43 38.5**	**-2.9**
N35A				IAmb_Lg		10 45 17.5	
	comp=Z,33nm,0.7s						
435B	**Jarrell**	**5.14**	**182**	Pn	**Pn**	**10 43 41.6**	**-0.2**
435B				IAmb_Lg		10 45 05.5	
	comp=Z,33nm,1.1s						
KSCO	**Kaye Shedlock'**	**5.16**	**308**	Pn	**Pn**	**10 43 38.3**	**-3.8**
CCM	**Cathedral Cave**	**5.37**	**65**	IAmb_Lg		10 45 22.2	
	comp=Z,28nm,0.8s						
BGNE	**Belgrade**	**5.49**	**354**	IAmb_Lg		10 45 33.1	
	comp=Z,35nm,0.8s						
P40A	**Paris**	**5.56**	**48**	IAmb_Lg		10 45 33.4	
	comp=Z,29nm,0.9s						
LPAR	**Lepanto**	**5.79**	**91**	IAmb_Lg		10 45 32.5	
	comp=Z,35nm,0.8s						
JCT	**Junction City**	**5.80**	**201**	IAmb_Lg		10 45 37.2	
	comp=Z,26nm,0.8s						
N38A	**Joes South For**	**5.86**	**33**	Pn	**Pn**	**10 43 51.7**	**+0.1**
N38A				IAmb_Lg		10 45 36.3	
	comp=Z,43nm,0.8s						
FVM	**French Village**	**5.96**	**68**	IAmb_Lg		10 45 39.1	
	comp=Z,35nm,1.1s						
L34A	**Svendsen Farm,**	**6.08**	**7**	IAmb_Lg		10 45 43.1	
	comp=Z,43nm,1.0s						
OGNE	**Ogallala**	**6.17**	**325**	IAmb_Lg		10 45 43.7	
	comp=Z,40nm,0.7s						
HICK	**Hickman**	**6.64**	**82**	IAmb_Lg		10 46 08.5	
	comp=Z,46nm,0.8s						
SCIA	**State Center**	**6.80**	**27**	IAmb_Lg		10 46 13.0	
	comp=Z,23nm,0.8s						
N41A	**Harden Midland**	**7.02**	**45**	IAmb_Lg		10 46 11.5	
	comp=Z,29nm,0.8s						
K38A	**Parkersburg**	**7.61**	**27**	IAmb_Lg		10 46 29.3	
	comp=Z,15nm,0.8s						
ECSD	**EROS Data Cent**	**7.81**	**4**	IAmb_Lg		10 46 35.0	
	comp=Z,17nm,1.2s						
Y22D	**IRIS PASSCAL I**	**8.02**	**259**	IAmb_Lg		10 47 01.4	
	comp=Z,25nm,1.1s						
O44A	**Mansfield**	**8.22**	**57**	IAmb_Lg		10 47 06.4	
	comp=Z,32nm,0.7s						
PHWY	**Pilot Hill**	**8.26**	**313**	IAmb_Lg		10 46 52.1	
	comp=Z,13nm,1.0s						
T47A	**Sharon Grove**	**8.37**	**80**	IAmb_Lg		10 47 05.0	
	comp=Z,26nm,1.1s						
JFWS	**Jewell Farm**	**8.90**	**36**	IAmb_Lg		10 47 04.3	
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**9.18**	**72**	IAmb_Lg		10 47 15.7	
	comp=Z,19nm,0.9s						
BLO	**Bloomington**	**9.23**	**66**	IAmb_Lg		10 47 27.3	
	comp=Z,25nm,0.8s						
SFIN	**Lafayette**	**9.26**	**58**	IAmb_Lg		10 47 27.8	
	comp=Z,20nm,0.8s						
HQIL	**Hanson Quary C**	**9.48**	**49**	IAmb_Lg		10 47 28.6	
	comp=Z,20nm,0.7s						
K22A	**Casper**	**9.73**	**316**	IAmb_Lg		10 47 47.5	
	comp=Z,14nm,0.9s						
K43A	**Burlington**	**9.75**	**43**	IAmb_Lg		10 47 51.3	
	comp=Z,22nm,1.1s						

IDC 17 10:48:32.7±2.9,54°.19N×86°.45E,h0km,mb1 2.8/2, mb1mx2.8/54,mbtmp2.8/2,ML2.0/2,Error ellipse: s-maj=22.3km s-min=13.4km az=58.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**256**	*i*		10 55 30.4	
	baz=76,slow=316,SNR=2.0						
ZALV	**Zalesovo Beam**	**0.99**	**256**	Pg	Pg	10 48 51.0	-0.6
	1.1nm,0.3s,baz=78,slow=17,SNR=12						
ZALV				Lg	Lg	10 49 05.4	
	1.5nm,0.3s,baz=72,slow=29,SNR=17						
KURBB	**Kurchatov Arra**	**6.02**	**237**	Pn	Pn	10 50 04.0	+1.1
	0.0nm,0.3s,baz=55,slow=14,SNR=4.9						
MKAR	**Makanchi Array**	**7.87**	**201**	Pn	Pn	10 50 29.2	+1.0
	0.1nm,0.3s,baz=20,slow=12,SNR=4.3						
MKAR			

FUSS	**Fushou**	**0.47**	**316**	⇓	*i*	P	**Pb**	**11 19 13.3**	**+0.2**	**WGK**	**Gukeng**	**0.97**	**257**		*e*	S	**Sb**	**11 19 33.9**	**+0.2**	SCZT					*e*	S	**Sn**	**11 19 54.0**	**+1.1**
FUSS	baz=323					S	**Sb**	**11 19 20.1**	**+0.1**	**WDJ**	baz=256 **Dajia District**	**0.98**	**297**		*e*	P	**Pb**	**11 19 21.0**	**-0.3**	**SLIU**	baz=211 **Shizi**	**1.84**	**204**		*e*	P	**Pn**	**11 19 33.2**	**+0.9**
TWT	**Tachien**	**0.52**	**312**			P	**Pn**	**11 19 14.1**	**-0.2**	WDJ	baz=297				*e*	S	**Sb**	**11 19 35.0**	**+1.1**	SLIU	baz=194				*e*	S	**Sn**	**11 19 55.5**	**+1.0**
TWT	baz=311				*i*	S	**Sb**	**11 19 21.1**	**-0.2**	**WDLH**	**Douliu**	**0.99**	**258**		*e*	P	**Pb**	**11 19 21.6**	**0.0**	**WDGT**	**Dungji**	**1.89**	**250**		*e*	P	**Pn**	**11 19 33.7**	**+0.7**
TDCB	**Techi**	**0.53**	**311**	⇓	*i*	P	**Pb**	**11 19 14.1**	**+0.2**	WDLH	baz=256				*e*	S	**Sb**	**11 19 34.6**	**+0.3**	WDGT	baz=248				*e*	S	**Sn**	**11 19 56.4**	**+0.6**
TDCB	baz=312					S	**Sb**	**11 19 21.2**	**-0.3**	**HSN1**	**Hsinchu**	**1.01**	**329**		*e*	P	**Pn**	**11 19 20.9**	**0.0**	**PHUB**	**P'eng-hu**	**1.90**	**258**		*e*	P	**Pn**	**11 19 33.5**	**+0.4**
NNSB	**Datong**	**0.55**	**339**			P	**Pb**	**11 19 14.2**	**-0.2**	HSN1	baz=329				*e*	S	**Sb**	**11 19 34.5**	**-0.5**	PHUB	baz=256				*e*	S	**Sn**	**11 19 56.7**	**+0.8**
NNSB	baz=347					S	**Sb**	**11 19 21.5**	**-0.7**	**STYH**	**Taoyuan**	**1.05**	**226**		*e*	P	**Pn**	**11 19 22.1**	**+0.6**	**PNG**	**Penghu**	**1.90**	**260**		*e*	P	**Pn**	**11 19 33.7**	**+0.5**
NNSH	**Datong**	**0.55**	**339**		*e*	P	**Pb**	**11 19 14.4**	**+0.1**	STYH	baz=220				*e*	S	**Sb**	**11 19 35.6**	**-0.4**	PNG	baz=258				*e*	S	**Sn**	**11 19 56.3**	**+0.2**
NNSH	baz=346				*e*	S	**Sb**	**11 19 21.6**	**-0.7**	**NHDH**	**Xindian Distri**	**1.05**	**356**		*e*	P	**Pn**	**11 19 22.2**	**+0.7**	**IRIF**	**Iriomote-Funau**	**2.00**	**77**		*e*	S	**Sn**	**11 19 59.0**	**+0.6**
EWUT	**Wuta**	**0.56**	**17**		*e*	P	**Pb**	**11 19 14.4**	**0.0**	NHDH	baz=357				*e*	S	**Sn**	**11 19 35.4**	**+0.3**	**TWK1**	**Hengchun**	**2.09**	**201**		*e*	P	**Pn**	**11 19 35.8**	**0.0**
EWUT	baz=10.0				*e*	S	**Sn**	**11 19 23.4**	**+0.4**	**TWA**	**Mucha**	**1.07**	**359**		*e*	P	**Pn**	**11 19 22.3**	**+0.5**	TWK1	baz=189				*e*	S	**Sn**	**11 20 01.7**	**+1.1**
NNS	**Nan Shan**	**0.57**	**339**		*e*	P	**Pb**	**11 19 14.6**	**0.0**	TWA	baz=9.0				*e*	S	**Sb**	**11 19 36.1**	**-0.4**	**TWKBT**	**Hengchun**	**2.09**	**200**		*e*	S	**Sn**	**11 20 01.8**	**+1.1**
NNS	baz=347				*e*	S	**Sb**	**11 19 22.6**	**0.0**	**STYT**	baz=9.0 **Tauyuan**	**1.07**	**226**		*e*	P	**Pn**	**11 19 22.4**	**+0.7**	**JKRS**	baz=190 **Kuro-shima**	**2.23**	**81**		P		**Pn**	**11 19 39.1**	**+1.4**
YULB	**Yu-li**	**0.58**	**208**			P	**Pb**	**11 19 13.4**	**-1.3**	STYT	baz=220				*e*	S	**Sb**	**11 19 36.3**	**-0.3**	JKRS					*e*	S	**Sn**	**11 20 05.8**	**+1.6**
WPL	baz=206 **Puli Township**	**0.59**	**280**			P	**Pb**	**11 19 14.9**	**0.0**	**TPUB**	**Ta-pu**	**1.07**	**236**		*e*	P	**Pb**	**11 19 22.9**	**0.0**	**VWUC**	**VWUC**	**2.23**	**299**		*e*	P	**Pn**	**11 19 37.7**	**0.0**
WPL	baz=277				*e*	S	**Sn**	**11 19 23.5**	**-0.3**	TPUB	baz=228				*e*	S	**Sb**	**11 19 37.5**	**+0.8**	VWUC	baz=298				*e*	S	**Sn**	**11 20 02.6**	**-1.7**
SSLB	**Suanglung**	**0.60**	**259**		*e*	P	**Pb**	**11 19 15.1**	**0.0**	**CHN4**	**Tsaushan**	**1.07**	**239**		*e*	P	**Pb**	**11 19 23.4**	**+0.4**	**JIJ**	**Ishigaki jima**	**2.37**	**78**		P		**Pn**	**11 19 39.5**	**-0.1**
SSLB	baz=260				*e*	S	**Sb**	**11 19 23.4**	**0.0**	CHN4	baz=230				*e*	S	**Sb**	**11 19 38.1**	**+1.5**	JIJ					*e*	S	**Sn**	**11 20 06.4**	**-1.2**
EYUL	**Yuli**	**0.61**	**205**		*e*	P	**Pn**	**11 19 15.7**	**+0.2**	**TIPB**	**Shuangxi**	**1.08**	**11**		*e*	P	**Pn**	**11 19 22.6**	**+0.7**	**PTMZ**	**Houxiangcun**	**2.52**	**297**		*e*	P	**Pn**	**11 19 42.6**	**+0.9**
EYUL	baz=213				*e*	S	**Sb**	**11 19 24.0**	**+0.3**	TIPB	baz=2.0				*e*	S	**Sb**	**11 19 37.0**	**+0.1**	PTMZ	baz=296				*e*	S	**Sn**	**11 20 11.0**	**-0.4**
TWF1	**Yuli**	**0.62**	**206**			P	**Pb**	**11 19 13.9**	**-1.4**	**LONT**	**Longtian**	**1.08**	**203**		*e*	P	**Pn**	**11 19 22.1**	**+0.1**	**JISG**	**Ishigakijimahi**	**2.57**	**74**		P		**Pn**	**11 19 42.7**	**+0.4**
TWF1	baz=212				*e*	S	**Sn**	**11 19 24.5**	**+0.1**	LONT	baz=192				*e*	S	**Sb**	**11 19 36.8**	**-0.2**	**JTJ**	**Tarama**	**2.93**	**75**		P		**Pn**	**11 19 48.4**	**+1.1**
DPDB	**Guoxing**	**0.63**	**282**		*e*	P	**Pb**	**11 19 15.4**	**0.0**	**WRL**	**Guolierlin Hig**	**1.12**	**270**		*e*	P	**Pb**	**11 19 23.2**	**-0.5**	JTJ					S		**Sn**	**11 20 23.0**	**+1.6**
DPDB	baz=279				*e*	S	**Sn**	**11 19 25.2**	**+0.5**	WRL	baz=281				*e*	S	**Sn**	**11 19 36.6**	**0.0**										
SMLT	**Sun Moon Lake**	**0.64**	**268**		*i*	P	**Pb**	**11 19 15.8**	**0.0**	**WTP**	**Ta-pu**	**1.12**	**234**		*e*	P	**Pb**	**11 19 23.7**	**0.0**										
SMLT	baz=267				*e*	S	**Sn**	**11 19 25.2**	**+0.1**	WTP	baz=233				*e*	S	**Sb**	**11 19 38.8**	**+0.9**										
TYC	**Yuchr**	**0.68**	**270**			P	**Pb**	**11 19 16.1**	**-0.2**	**CHY**	**Chiayi**	**1.15**	**249**		*e*	P	**Pn**	**11 19 23.4**	**+0.6**										
TYC	baz=269					S	**Sb**	**11 19 25.2**	**-0.2**	CHY	baz=248				*e*	S	**Sn**	**11 19 37.7**	**+0.2**										
NDT	**Datong Townshi**	**0.70**	**354**		*e*	P	**Pn**	**11 19 16.3**	**-0.4**	**TWB1**	**Santiao Chiao**	**1.15**	**18**		*e*	P	**Pn**	**11 19 23.1**	**+0.3**										
NDT	baz=359				*e*	S	**Sb**	**11 19 25.6**	**-0.4**	TWB1	baz=7.0				*e*	S	**Sb**	**11 19 38.8**	**-0.1**										
WHP	**Taichung City**	**0.70**	**302**		*e*	P	**Pb**	**11 19 17.4**	**+0.7**	**NWF**	**Wu-fen Shan**	**1.17**	**8**		*e*	P	**Pn**	**11 19 23.8**	**+0.6**										
WHP	baz=309				*e*	S	**Sn**	**11 19 26.7**	**+0.2**	NWF	baz=8.0				*e*	S	**Sb**	**11 19 39.4**	**-0.1**										
WHYT	**Xinyi Township**	**0.71**	**253**		*e*	P	**Pb**	**11 19 18.3**	**+1.3**	**WFSB**	baz=8.0 **Wu-fen Shan**	**1.17**	**8**		*e*	P	**Pn**	**11 19 23.8**	**+0.7**										
WHYT	baz=252				*e*	S	**Sn**	**11 19 27.0**	**+0.2**	WFSB	baz=8.0				*e*	S	**Sb**	**11 19 39.7**	**+0.3**										
YUS	**Yu-Shan**	**0.72**	**235**			P	**Pb**	**11 19 17.3**	**-0.1**	**TWGBT**	**Beinan**	**1.18**	**204**		*e*	P	**Pn**	**11 19 21.4**	**-2.0**										
YUS	baz=225				*e*	S	**Sb**	**11 19 26.6**	**-0.6**	TWGBT	baz=193				*e*	S	**Sn**	**11 19 39.2**	**+0.8**										
ENTT	**Nioudou**	**0.73**	**358**		*e*	P	**Pn**	**11 19 16.8**	**-0.3**	**TWG**	**Pinlang**	**1.19**	**204**		*e*	P	**Pn**	**11 19 21.2**	**-2.1**										
ENTT	baz=360				*e*	S	**Sn**	**11 19 27.4**	**+0.2**	**TWS1**	baz=190 **Kuangyinshan**	**1.20**	**352**		*e*	P	**Pb**	**11 19 24.7**	**-0.4**										
NDS	**Dongshan**	**0.73**	**9**		*e*	P	**Pn**	**11 19 16.9**	**-0.2**	TWS1	baz=2.0				*e*	S	**Sb**	**11 19 39.8**	**-0.5**										
NDS					*e*	S	**Sn**	**11 19 27.8**	**+0.6**		baz=2.0																				
TWC	**Suao**	**0.73**	**18**		*e*	P	**Pn**	**11 19 17.1**	**0.0**	**TWK**	**Hsinying**	**1.20**	**238**		*e*	P	**Pb**	**11 19 24.9**	**-0.2**										
TWC	baz=12				*e*	S	**Sn**	**11 19 28.3**	**+1.0**	TWK	baz=237				*e*	S	**Sb**	**11 19 39.8**	**-0.5**										
FULB	**Fuli**	**0.76**	**202**		*e*	P	**Pn**	**11 19 17.2**	**-0.3**	**CHN1**	**Nanshi**	**1.22**	**234**		*e*	P	**Pb**	**11 19 25.1**	**-0.2**										
FULB	baz=210				*e*	S	**Sn**	**11 19 30.6**	**+2.7**	CHN1	baz=233				*e*	S	**Sb**	**11 19 40.5**	**-0.2**										
YHNB	**Yeheng**	**0.79**	**345**			P	**Pn**	**11 19 17.7**	**-0.2**	**SNST**	**Tainan City**	**1.22**	**236**		*e*	P	**Pn**	**11 19 23.9**	**+0.1**										
YHNB	baz=355					S	**Sb**	**11 19 27.6**	**-1.0**	SNST	baz=235				*e*	S	**Sb**	**11 19 40.7**	**-0.1**										
NSK	**Sanguang**	**0.80**	**344**			P	**Pn**	**11 19 17.9**	**-0.1**	**YM01**	**YM01**	**1.23**	**359**		*e*	P	**Pn**	**11 19 24.4**	**+0.3**										
NSK	baz=354					S	**Sn**	**11 19 27.9**	**-1.0**	YM01	baz=359				*e*	S	**Sn**	**11 19 40.2**	**+0.6**										
WJS	**Zhushan**	**0.80**	**264**		*e*	P	**Pb**	**11 19 19.3**	**+1.0**	**SGST**	**Jiashian**	**1.24**	**229**		*e*	P	**Pn**	**11 19 24.5**	**+0.4**										
WJS	baz=263				*e*	S	**Sb**	**11 19 29.7**	**+0.8**	SGST	baz=216				*e*	S	**Sb**	**11 19 40.7**	**-0.7**										
TWE	**Neicheng**	**0.81**	**5**		*e*	P	**Pn**	**11 19 17.7**	**-0.5**	**YM04**	**YM04**	**1.24**	**357**		*e*	P	**Pb**	**11 19 25.4**	**-0.4**										
TWE	baz=6.0				*e*	S	**Sb**	**11 19 29.5**	**+0.3**	YM04	baz=358				*e*	S	**Sn**	**11 19 40.4**	**+0.5**										
ALS	**Alishan**	**0.83**	**242**		*e*	P	**Pn**	**11 19 18.8**	**+0.2**	**YM10**	**YM10**	**1.24**	**359**		*e*	P	**Pn**	**11 19 24.2**	**0.0**										
ALS	baz=231					S	**Sn**	**11 19 29.7**	**-0.3**	YM10	baz=358				*e*	S	**Sn**	**11 19 40.2**	**+0.3**										
CHKT	**Chengkung**	**0.83**	**195**		*e*	P	**Pn**	**11 19 18.1**	**-0.4**	**YM05**	**YM05**	**1.25**	**359**		*e*	P	**Pn**	**11 19 24.1**	**-0.2**										
CHKT	baz=203				*e*	S	**Sn**	**11 19 29.6**	**0.0**	YM05	baz=359				*e*	S	**Sn**	**11 19 40.0**	**-0.2**										
WWF	**Wufeng**	**0.83**	**279**		*e*	P	**Pb**	**11 19 19.3**	**+0.4**	**YM11**	**YM11**	**1.25**	**359**		*e*	P	**Pn**	**11 19 24.0**	**-0.3**										
WWF	baz=279				*e*	S	**Sb**	**11 19 30.9**	**+1.1**	YM11	baz=359				*e*	S	**Sb**	**11 19 41.2**	**-0.6**										
WNT	**Mingjian**	**0.84**	**268**		*e*	P	**Pb**	**11 19 19.4**	**+0.5**	**SLGT**	**Liugui**	**1.26**	**224**		*e*	P	**Pb**	**11 19 25.6**	**-0.5**										
WNT	baz=267				*e*	S	**Sb**	**11 19 31.1**	**+1.3**	SLGT	baz=223				*e*	S	**Sb**	**11 19 41.8**	**-0.2**										
WNT1	**Nantou City**	**0.84**	**270**		*e*	P	**Pn**	**11 19 18.2**	**-0.3**	**YM08**	**YM08**	**1.27**	**360**		*e*	P	**Pn**	**11 19 25.6**	**+1.0**										
WNT1	baz=269				*e*	S	**Sb**	**11 19 31.4**	**+1.5**	YM08	baz=360				*e*	S	**Sn**	**11 19 41.4**	**+0.7**										
NWLT	**Wulai**	**0.87**	**354**		*e*	P	**Pb**	**11 19 19.5**	**-0.1**	**WSF**	**Szhu**	**1.29**	**258**		*e*	P	**Pn**	**11 19 25.1**	**+0.4**										
NWLT	baz=355				*e*	S	**Sn**	**11 19 30.1**	**-0.6**	WSF	baz=257				*e*	S	**Sb**	**11 19 42.0**	**-0.8**										
TWQ1	**Liyutan**	**0.87**	**300**		*e*	P	**Pb**	**11 19 20.3**	**+0.7**	**JYNG**	**Yonagunijimaku**	**1.34**	**66**		P		**Pn**	**11 19 26.1**	**+0.6**										
TWQ1	baz=300				*e*	S	**Sb**	**11 19 32.2**	**+1.3**	JYNG					S		**Sn**	**11 19 42.8**	**+0.5**										
TCU	**Taichung**	**0.88**	**286**		*e*	P	**Pb**	**11 19 20.0**	**+0.4**	**CHN8**	**Yiju**	**1.39**	**247**		*e*	P	**Pn**	**11 19 26.4**	**+0.3**										
TCU	baz=285				*e*	S	**Sb**	**11 19 33.5**	**+2.5**	**YOJ**	baz=244 **Yonaguni jima**	**1.40**	**67**		P		**Pn**	**11 19 26.9**	**+0.5**										
ELDTW	**Lidau**	**0.89**	**217**		*e*	P	**Pn**	**11 19 18.3**	**-1.1**	YOJ					*e*	S	**Sn**	**11 19 44.2**	**+0.4**										
ELDTW	baz=215				*e*	S	**Sn**	**11 19 31.1**	**-0.2**	**YOJ**	**Yonaguni jima**	**1.40**	**67**		*e*	P	**Pn**	**11 19 26.8**	**+0.5**										
CHN5	**Tsauling**	**0.90**	**250**		*e*	P	**Pb**	**11 19 20.3**	**+0.2**	YOJ	baz=66				*e*	S	**Sn**	**11 19 43.5**	**-0.3**										
CHN5	baz=249				*e*	S	**Sb**	**11 19 33.9**	**+2.2**	**ECL**	baz=66 **Taimali**	**1.43**	**204**		*e*	P	**Pb**	**11 19 28.2**	**-0.8**										
NSTT	**Nanjuang**	**0.90**	**323**		*e*	P	**Pb**	**11 19 20.7**	**+0.6**	ECL	baz=194				*e*	S	**Sn**	**11 19 45.2**	**+0.7**										
NSTT	baz=330				*e*	S	**Sb**	**11 19 32.2**	**+0.4**	**SCST**	**Cishan**	**1.44**	**225**		*e*	P	**Pn**	**11 19 28.0**	**+1.2**										
LIOB	**Emei**	**0.91**	**324**		*e*	P	**Pb**	**11 19 20.9**	**+0.7**	SCST	baz=224				*e*	S	**Sb**	**11 19 46.1**	**-0.9**										
LIOB	baz=331				*e*	S	**Sb**	**11 19 32.0**	**+0.1**	**SSD**	**Sandimen**	**1.46**	**218**		*e*	P	**Pn**	**11 19 27.7**	**+0.7**										
NSY	**Sanyi**	**0.92**	**304**		*e*	P	**Pn**	**11 19 19.9**	**+0.3**	SSD	baz=217				*e*	S	**Sn**	**11 19 46.3**	**+1.2**										
NSY	baz=304				*e*	S	**Sb**	**11 19 31.9**	**-0.3**	**TSMG**	**Majia**	**1.48**	**216**		*e*	P	**Pn**	**11 19 28.5**	**+1.1**										
WCHH	**Zhanghua**	**0.96**	**280**		*e*	P	**Pb**	**11 19 21.3**	**+0.2**	TSMG	baz=216				*e*	S	**Sn**	**11 19 47.0**	**+1.3**										
WCHH	baz=279				*e*	S	**Sb**	**11 19 33.5**	**0.0**	**MASBT**	**Mashibuluo**	**1.56**	**215**		*e*	P	**Pn**	**11 19 28.3**	**-0.3**										
NTC	**Toucheng**	**0.97**	**13**		*e*	P	**Pn**	**11 19 20.5**	**+0.2**	MASBT	baz=214				*e*	S	**Sn**	**11 19 48.8**	**+1.0**										
NTC	baz=2.0				*e*	S	**Sn**	**11 19 33.0**	**0.0**	**SSPT**	**Xinbi**	**1.70**	**214**		*e*	P	**Pn**	**11 19 31.9**	**+1.4**										
EDH	**Donghe**	**0.97**	**196**		*e*	P	**Pn**	**11 19 19.3**	**-1.1**	SSPT	baz=199				*e*	S	**Sn**	**11 19 52.9**	**+1.7**										
EDH	baz=195				*e*	S	**Sn**	**11 19 33.4**	**+0.4**	**PCYT**	**Pengchaiyu**	**1.77**	**14**		*e*	P	**Pn**	**11 19 32.3**	**+0.9**										
	baz=195									PCYT	baz=359				*e*	S	**Sn**	**11 19 53.7**	**+0.9**										
										SCZT	baz=359 **Fangliau**	**1.77**	**211**		*e*	P	**Pn**	**11 19 31.4**	**-0.1**										
											baz=211																				

ROM 17 11:29:01.6±0.1,**44.198N**±0.004×**10.916E**±0.004,
h18km,**ML1.6**/3,**2C-1D**,**Error ellipse: s-maj=0.4km s-min=0.2km az=186.0**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.15**	**101**	P	Pg	11 29 05.7	-0.2
FNVD				S	Sb	11 29 09.3	+0.3
FNVD				AML	AML		
	comp=E,149μm,0.2s						
FNVD				AML	AML		
	comp=N,211μm,0.2s						
ZCCA	**Zocca**	**0.16**	**16**	P	Pb	11 29 06.2	0.0
ZCCA				S	Sb	11 29 09.5	+0.3
ZCCA				AML	AML		
	comp=E,142μm,1.6s						
ZCCA				AML	AML		
	comp=N,214μm,0.4s						
ZCCA				AML	AML		
	comp=N,215μm,0.4s						
MTCR	**Monte La Croce**	**0.18**	**161**	⇑P	Pb	11 29 06.7	+0.2
MTCR				S	Sb	11 29 09.9	+0.1
POPM	**Popiglio**	**0.19**	**217**	⇑P	Pb	11 29 06.8	+0.1
POPM				S	Sb	11 29 10.3	+0.3
POPM				AML	AML		
	comp=E,537μm,0.1s						
POPM				AML	AML		
	comp=N,560μm,0.2s						
BDI	**Bagni Di Lucca**	**0.27**	**240**	P	Pg	11 29 07.7	+0.1
BDI				S	Sb	11 29 12.3	0.0
BDI				AML	AML		
	comp=N,248μm,0.4s						
BDI				AML	AML		
	comp=E,184μm,1.1s						
BDI				AML	AML		
	comp=E,186μm,1.2s						
BDI				AML	AML		
	comp=N,268μm,0.4s						
SEI	**Scarperia**	**0.35**	**114**	P	Pg	11 29 09.0	0.0
SEI				S	Sb	11 29 14.6	0.0
SEI				AML	AML		
	comp=E,222μm,0.4s						
SEI				AML	AML		
	comp=N,181μm,0.3s						
SEI				AML	AML		
	comp=N,182μm,0.3s						
SARO	**Sassorosso**	**0.37**	**268**	P	Pg	11 29 09.6	+0.2
SARO				S	Sg	11 29 14.9	+0.3
SARO				AML	AML		
	comp=E,58μm,0.2s						
SARO				AML	AML		
	comp=N,115μm,0.5s						
VLC	**Villacollemand**	**0.38**	**264**	P	Pb	11 29 09.8	-0.1
VLC				S	Sb	11 29 15.3	-0.2
VLC				AML	AML		
	comp=N,131μm,1.1s						
VLC				AML	AML		
	comp=E,206μm,0.4s						
VLC				AML	AML		
	comp=N,132μm,1.1s						
VLC				AML	AML		
	comp=N,132μm,1.1s						
VLC				AML	AML		
	comp=E,204μm,0.4s						
CRMI	**Carmignano**	**0.41**	**174**	P	Pg	11 29 10.0	-0.1
MAIM	**Mastiano**	**0.42**	**227**	P	Pg	11 29 10.2	+0.1
MNTV	**Mantova**	**0.95**	**355**	P	Pb	11 29 19.6	0.0
EUCT	**Pavia**	**1.62**	**309**	S	Sg	11 29 53.0	-0.8
PP3	**Marolino**	**2.12**	**112**	⇓P	Pg	11 29 44.6	+2.4
RSP	**Reno Superiore**	**2.77**	**291**	S	Sg	11 30 32.0	+1.3
LSD	**Lago del Serru**	**2.97**	**296**	S	Sn	11 30 26.0	+2.5
MRB1	**Monte Rocchett**	**4.29**	**134**	S	Sn	11 30 60.0	+4.4
SPS2	**Spezzano della**	**6.36**	**139**	P	Pn	11 30 38.1	+3.6
SPS2				P	Pg	11 30 57.6	-5.8

GEN ***17*** *11:30:08.6,45.16N×8.30E,h63km±12km,Ml1.6*
ROM 17 11:30:08.1±0.2,**45.127N**±0.009×**8.28E**±0.02,**h60**km±2km,
Md1.9/5,**Error ellipse: s-maj=1.1km s-min=0.6km az=269.0**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MONC	**Moncucco Torin**	**0.26**	**258**	S	Pn	11 30 21.0	+3.0
MONC	**Moncucco Torin**	**0.26**	**258**	P	Pn	11 30 19.1	+1.1
MONC				AML	AML		
	comp=N,100μm,0.2s						
MONC				AML	AML		
	comp=E,99μm,1.6s						
MONC				END			
TRAV	**Traversella**	**0.54**	**316**	P	Pn	11 30 21.0	+0.3
TRAV				S	Sn	11 30 30.1	+0.3
TRAV	**Traversella**	**0.54**	**316**	S	Pn	11 30 21.0	+0.3
TRAV	**Traversella**	**0.54**	**316**	P	Pn	11 30 21.0	+0.3
TRAV				S	Sn	11 30 30.0	+0.3
PCP	**Piancastagn**	**0.61**	**162**	P	Pn	11 30 22.2	+0.7
PCP				S	Sn	11 30 31.8	+0.6
PCP	**Piancastagn**	**0.61**	**162**	P	Pn	11 30 22.4	+1.0
PCP				S	Sn	11 30 31.7	+0.5
PCP				END			
CIRO	**Champorcher**	**0.69**	**314**	P	Pn	11 30 22.7	+0.1
CIRO				S	Sn	11 30 33.0	-0.1
CIRO	**Champorcher**	**0.69**	**314**	S	Pn	11 30 23.0	+0.4
CIRO	**Champorcher**	**0.69**	**314**	P	Pn	11 30 22.7	+0.1
CIRO				S	Sn	11 30 32.9	-0.3
RSP	**Reno Superiore**	**0.72**	**272**	P	Pn	11 30 22.7	0.0
RSP	**Reno Superiore**	**0.72**	**272**	P	Pn	11 30 22.7	-0.1
RSP				S	Sn	11 30 33.4	0.0
RSP	**Reno Superiore**	**0.72**	**272**	S	Pn	11 30 23.0	+0.2
BHB	**Bricherasio**	**0.78**	**249**	P	Pn	11 30 23.6	+0.3
BHB	**Bricherasio**	**0.78**	**249**	S	Pn	11 30 24.0	+0.6
BHB	**Bricherasio**	**0.78**	**249**	P	Pn	11 30 23.6	+0.3
QLNO	**Quiliano**	**0.80**	**177**	P	Pn	11 30 24.9	+1.2
QLNO				S	Sn	11 30 36.3	+1.1
QLNO				END			
VARE	**Varese**	**0.82**	**25**	P	Pn	11 30 24.0	+0.1
VARE				S	Sn	11 30 35.1	-0.5
LSD	**Lago del Serru**	**0.87**	**293**	P	Pn	11 30 25.3	+0.5
LSD				S	Sn	11 30 37.4	+0.3
LSD	**Lago del Serru**	**0.87**	**293**	P	Pn	11 30 25.2	+0.4
LSD				S	Sn	11 30 37.3	+0.2
MUGIO	**Muggio**	**0.96**	**34**	P	Pn	11 30 25.4	-0.3

MUGIO				END				
RORO	**Rocca Rossa**	**1.03**	**189**	P	Pn	11 30 26.8	+0.3	
PZZ	**Stroppo**	**1.03**	**234**	P	Pn	11 30 27.0	+0.3	
PZZ				S	Sn	11 30 40.1	-0.4	
REMY	**Saint-Rhmy-en**	**1.06**	**312**	P	Pn	11 30 28.6	+1.3	
REMY	**Saint-Rhmy-en**	**1.06**	**312**	S	Pn	11 30 29.0	+1.7	
REMY	**Saint-Rhmy-en**	**1.06**	**312**	P	Pn	11 30 27.8	+0.6	
MRGE	**Morge**	**1.07**	**307**	P	Pn	11 30 28.1	+0.9	
ENR	**Entracque**	**1.09**	**215**	S	Pn	11 30 28.0	+0.6	
ENR	**Entracque**	**1.09**	**215**	P	Pn	11 30 27.6	+0.2	
ENR				S	Sn	11 30 41.4	-0.3	
ENR				END				
STV	**Sant Anna di V**	**1.11**	**218**	S	Pn	11 30 28.0	+0.2	
STV	**Sant Anna di V**	**1.11**	**218**	P	Pn	11 30 27.7	-0.1	
STV				S	Sn	11 30 41.6	-0.7	
DIX	**Grande Dixence**	**1.13**	**328**	P	Pn	11 30 28.9	+0.7	
DIX				S	Sn	11 30 43.9	+0.8	
IMI	**Imperia**	**1.25**	**193**	P	Pn	11 30 29.9	+0.4	
BURY	**Giardini Botan**	**1.44**	**201**	P	Pn	11 30 31.2	-0.8	

NIC ***17*** *11:30:35.0±0.0,35°.02N×26°.87E,h2km±1km,Ml4.5/3*

NEIC ***17*** *11:30:35.8±3.3,35°.02N±0°.06×26°.78E±0°.06,h10km±1km, Error ellipse: s-maj=10.0km s-min=7.0km az=330.0*

DDA ***17*** *11:30:36.0,34°.99N×26°.58E,h18km±136km,MW4.4*

MED_RC ***17*** *11:30:36.0±0.9,35°.03N×26°.72E,h30km±1km,MW4.6/17, Moment Tensor Solution.Mantle waves: s17,c21; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr-0.73±.12; Mθθ-0.18±.06; Mϕϕ0.91±.06; Mrθ0.12±.04; Mθϕ-0.47±.06; Mϕr0.17±.05; Best double couple: M0 0.95000×10^16 NP1:ϕs319.00000°,δ45.00000°, λ-120.00000°. NP2:ϕs179.00000°,δ52.00000°, λ-63.00000°. Principal axes: T 1.0900, Plg4.0000°, Azm250.0000°; N -0.2900, Plg21.0000°, Azm342.0000°; P -0.8100, Plg69.0000°, Azm151.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

HLW ***17*** *11:30:36.6,35°.05N×27°.03E,h10km±20km,Md4.4,Ml4.5*

ISK ***17*** *11:30:37.6,35°.21N×26°.76E,h8km,ML4.2/26*

ATH ***17*** *11:30:37.0,35°.05N×26°.84E,h13km±2km,ML4.2/11,Error ellipse: s-maj=5.4km s-min=1.2km az=333.0*

THE ***17*** *11:30:38.6,35°.18N×26°.78E,h0km±1km,ML4.4/7,Error ellipse: s-maj=3.4km s-min=0.8km az=155.0*

IDC ***17*** *11:30:39.3±1.7,35°.19N×26°.76E,h35km±14km,mb3.9/25, mb1 4.0/33,mb1mx3.9/54,mbtmp4.1/33,ML3.9/8,MS3.6/19, Ms1 3.6/19,ms1mx3.3/47,Error ellipse: s-maj=13.9km s-min=9.5km az=161.0*

MOS ***17*** *11:30:39.3±1.2,35°.06N×26°.72E,h21km,mb4.5/23,Error ellipse: s-maj=5.7km s-min=3.3km az=103.6*

ISC 17 11:30:36.7±1.0,35°.03N±0°.03×26°.85E±0.02,h16km±6km, n376,σ1§62/432,mb4.3/48,MS3.5/15,42C-16D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.52**	**280**	P	**Pg**	**11 30 46.8**	**-0.3**
ZKR				S	**Sb**	**11 30 54.5**	**-0.4**
ZKR				AML	AML	11 30 56.9	
	comp=N,29969µm,0.7s						
ZKR				AML	AML	11 30 59.3	
	comp=E,39942µm,0.4s						
ZKR	**Zakros**	**0.52**	**280**	P	**Pg**	**11 30 46.7**	**-0.3**
ZKR				S	**Sb**	**11 30 55.3**	**+0.4**
	comp=E,19µm,0.5s						
ZKR	**Zakros**	**0.52**	**280**	PG	**Pg**	**11 30 46.8**	**-0.3**
ZKR				SG	**Sg**	**11 30 53.6**	**-0.5**
ZKR	**Zakros**	**0.52**	**280**	P	**Pg**	**11 30 46.7**	**-0.3**
ZKR				S	**Sb**	**11 30 55.2**	**+0.4**
KARP	**Karpathos**	**0.58**	**26**	P	**Pg**	**11 30 47.2**	**-1.0**
KARP				S	**Sg**	**11 30 56.0**	**0.0**
KARP				AML	AML	11 30 57.4	
KARP				AML	AML	11 30 58.6	
KARP	**Karpathos**	**0.58**	**26**	P	**Pg**	**11 30 47.2**	**-1.0**
KARP				S	**Sg**	**11 30 56.3**	**+0.3**
	comp=E,69µm,0.5s						
KARP	**Karpathos**	**0.58**	**26**	PG	**Pg**	**11 30 47.2**	**-1.0**
KARP				SG	**Sg**	**11 30 54.2**	**-1.8**
KARP	**Karpathos**	**0.58**	**26**		**Pg**	**11 30 47.1**	**-1.0**
KARP				Sg	**Sg**	**11 30 56.0**	**0.0**
KARP	**Karpathos**	**0.58**	**26**	⇑P	**Pg**	**11 30 47.1**	**-1.0**
KARP				S	**Sg**	**11 30 56.2**	**+0.3**
KARP				AML	AML	11 30 57.0	
	comp=E,162nm,0.4s						
KARP				AML	AML	11 30 57.0	
	comp=E,162nm,0.4s						
KARP				AML	AML	11 30 58.3	
	comp=E,132nm,0.3s						
KARP				AML	AML	11 30 58.3	
	comp=E,132nm,0.3s						
STIA	**Sitia Lasithi**	**0.64**	**286**	P	**Pg**	**11 30 47.8**	**-1.5**
FRMA	**Ierapetra Chan**	**0.91**	**270**	P	**Pb**	**11 30 51.9**	**-2.2**
NPS	**Neapolis**	**1.04**	**284**	P	**Pn**	**11 30 56.6**	**-0.1**
NPS				S	**Sn**	**11 31 10.7**	**-0.1**
NPS				AML	AML	11 31 14.6	
	comp=E,28655µm,0.6s						
NPS				AML	AML	11 31 18.2	
	comp=N,28177µm,0.6s						
NPS	**Neapolis**	**1.04**	**284**	P	**Pg**	**11 30 56.4**	**-0.4**
NPS	**Neapolis**	**1.04**	**284**	P	**Pg**	**11 30 56.3**	**-0.5**
HRKL	**Herakleio**	**1.46**	**282**	P	**Pg**	**11 31 05.7**	**+1.0**
HRKL	**Herakleio**	**1.46**	**282**	PN	**Pb**	**11 31 03.3**	**-0.1**
HRKL				SN	**Sg**	**11 31 22.3**	**-1.4**
KSTL	**Kastelli Herak**	**1.48**	**281**	P	**Pn**	**11 31 01.2**	**-1.5**
ARG	**Arkhangelos**	**1.58**	**41**	P	**Pb**	**11 31 05.6**	**0.0**
ARG				S	**Sb**	**11 31 26.3**	**+0.9**
ARG				AML	AML	11 31 31.7	
	comp=N,19735µm,0.6s						
ARG				AML	AML	11 31 34.0	
	comp=E,26540µm,0.7s						
ARG	**Arkhangelos**	**1.58**	**41**	P	**Pb**	**11 31 05.9**	**+0.3**
ARG				S	**Sb**	**11 31 26.2**	**+0.9**
	comp=E,12µm,0.8s						
ARG	**Arkhangelos**	**1.58**	**41**	P	**Pb**	**11 31 05.6**	**0.0**
ARG	**Arkhangelos**	**1.58**	**41**	PN	**Pb**	**11 31 05.5**	**0.0**
ARG				SN	**Sb**	**11 31 25.7**	**+0.4**
ARG	**Arkhangelos**	**1.58**	**41**	⇑P	**Pb**	**11 31 05.3**	**-0.2**
ARG				S	**Sb**	**11 31 26.8**	**+1.5**
NIS1	**Nisyros Isl.**	**1.60**	**10**	P	**Pn**	**11 31 04.8**	**+0.5**
NIS1				AML	AML	11 31 34.4	
	comp=E,20495µm,0.8s						
NIS1				AML	AML	11 31 39.8	
	comp=N,20022µm,0.9s						
NIS1	**Nisyros Isl.**	**1.60**	**10**	P	**Pn**	**11 31 04.8**	**+0.5**
NIS1				S	**Sb**	**11 31 25.7**	**-0.1**
	comp=N,10µm,0.7s						
NIS1	**Nisyros Isl.**	**1.60**	**10**	PN	**Pn**	**11 31 04.4**	**+0.1**
NIS1				SN	**Sn**	**11 31 23.9**	**-0.7**
IDI	**Anoyia**	**1.62**	**280**	Pg	**Pg**	**11 31 07.2**	**-0.7**
	comp=N,172nm,0.3s,baz=91,slow=16,SNR=515						
IDI				Lg	Lg	11 31 30.1	
	comp=N,225nm,0.3s,baz=332,slow=7.8,SNR=7.4						
IDI	**Anoyia**	**1.62**	**280**	P	**Pb**	**11 31 06.6**	**+0.3**
IDI				S	**Sb**	**11 31 26.4**	**-0.2**
IDI				AML	AML	11 31 35.9	
	comp=N,5770µm,0.6s						
IDI				AML	AML	11 31 45.5	
	comp=E,7110µm,0.5s						
IDI	**Anoyia**	**1.62**	**280**	P	**Pb**	**11 31 06.7**	**+0.4**
IDI	**Anoyia**	**1.62**	**280**	⇓P	**Pg**	**11 31 07.1**	**-0.8**
IDI				⇑S	**Sg**	**11 31 33.7**	**+4.7**
IDI	**Anoyia**	**1.62**	**280**	PN	**Pb**	**11 31 06.3**	**0.0**
IDI				SN	**Sb**	**11 31 26.6**	**0.0**
IDI	**Anoyia**	**1.62**	**280**	Pn	**Pb**	**11 31 06.2**	**0.0**
SIVA	**Sivas**	**1.67**	**270**	P	**Pb**	**11 31 07.1**	**0.0**
SIVA				AML	AML	11 31 41.8	
	comp=N,19197µm,0.6s						
SIVA				AML	AML	11 31 47.2	
	comp=E,16194µm,0.6s						
SIVA	**Sivas**	**1.67**	**270**	P	**Pg**	**11 31 08.3**	**-0.5**
TMBK	**Timbaki Herakl**	**1.71**	**272**	P	**Pg**	**11 31 09.1**	**-0.4**
KOSK	**Kos Island**	**1.73**	**4**	P	**Pn**	**11 31 06.2**	**+0.2**
KOSK	**Kos Island**	**1.73**	**4**	PN	**Pn**	**11 31 05.9**	**-0.1**
KOSK				SN	**Sn**	**11 31 27.1**	**-0.7**
SANT	**Santorini**	**1.75**	**320**	P	**Pb**	**11 31 07.4**	**-1.1**
SANT				AML	AML	11 31 36.2	
	comp=N,5963µm,1.0s						
SANT				AML	AML	11 31 37.6	
	comp=E,14896µm,0.5s						
SANT	**Santorini**	**1.75**	**320**	P	**Pn**	**11 31 07.0**	**+0.5**
SANT				S	**Sn**	**11 31 28.1**	**-0.4**
	comp=E,5µm,0.7s						
SANT	**Santorini**	**1.75**	**320**	⇑P	**Pn**	**11 31 07.2**	**+0.7**
SANT				⇑S	**Sn**	**11 31 29.1**	**+0.6**
SANT	**Santorini**	**1.75**	**320**	PN	**Pn**	**11 31 06.3**	**-0.2**
SANT				SN	**Sn**	**11 31 27.2**	**-1.3**
SANT	**Santorini**	**1.75**	**320**		**Pn**	**11 31 06.5**	**0.0**
SNT1	**Gialos, Santor**	**1.81**	**321**	P	**Pn**	**11 31 07.7**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.81**	**320**	P	**Pn**	**11 31 07.8**	**+0.6**
THT2	**Imerovigli**	**1.82**	**321**	PN	**Pn**	**11 31 07.2**	**-0.2**
THT2				SN	**Sn**	**11 31 28.9**	**-1.3**
SAP3	**Santorini-Thir**	**1.86**	**319**	P	**Pn**	**11 31 09.0**	**+1.1**
SAP3				S	**Sn**	**11 31 31.3**	**+0.1**
	comp=E,21µm,1.0s						
PRNS	**Prines Rethymn**	**1.95**	**281**	P	**Pb**	**11 31 12.2**	**+0.4**
BODT	**Bodrum**	**2.07**	**10**	P	**Pn**	**11 31 10.2**	**-0.6**
BODT	**Bodrum**	**2.07**	**10**	PN	**Pn**	**11 31 10.5**	**-0.3**
BODT				SN	**Sn**	**11 31 35.4**	**-0.8**
TURN	**Turunc**	**2.08**	**33**	*i* P	**Pn**	**11 31 12.1**	**+1.2**
TURN				*i* S	**Sb**	**11 31 39.2**	**-0.5**
TURN	**Turunc**	**2.08**	**33**	PN	**Pn**	**11 31 12.6**	**+1.6**
TURN				SN	**Sn**	**11 31 37.4**	**+0.8**
BDRM	**Kayabasi**	**2.09**	**13**	*i* P	**Pn**	**11 31 10.9**	**-0.3**
BDRM				*i* S	**Sn**	**11 31 35.5**	**-1.4**
YKAV	**Yalikavak-Bodr**	**2.12**	**9**	PN	**Pn**	**11 31 11.8**	**+0.3**
VAM	**Vamos**	**2.20**	**281**	P	**Pb**	**11 31 15.6**	**-0.5**
VAM				AML	AML	11 31 56.4	
	comp=N,6609µm,0.9s						
VAM				AML	AML	11 31 57.2	
	comp=E,5877µm,0.7s						
VAM	**Vamos**	**2.20**	**281**	P	**Pb**	**11 31 14.5**	**-1.6**
VAM	**Vamos**	**2.20**	**281**	P	**Pb**	**11 31 14.7**	**-1.4**
GVDS	**Gavdos**	**2.27**	**266**	P	**Pb**	**11 31 16.6**	**-0.7**
GVD	**Gavdhos**	**2.27**	**266**	P	**Pb**	**11 31 16.6**	**-0.8**
GVD				AML	AML	11 32 10.1	
	comp=E,3760µm,0.7s						
GVD				AML	AML	11 32 10.5	
	comp=N,3915µm,0.6s						
GVD	**Gavdhos**	**2.27**	**266**	P	**Pb**	**11 31 16.4**	**-1.0**
APE	**Apeiranthos**	**2.30**	**333**	P	**Pn**	**11 31 14.1**	**0.0**
APE				S	**Sn**	**11 31 41.8**	**-0.3**
	comp=N,4µm,0.5s						
APE	**Apeiranthos**	**2.30**	**333**	⇑P	**Pn**	**11 31 14.2**	**+0.2**
APE				⇓S	**Sn**	**11 31 41.2**	**-0.8**
APE	**Apeiranthos**	**2.30**	**333**	*d* P	**Pn**	**11 31 14.0**	**0.0**
APE	**Apeiranthos**	**2.30**	**333**	PN	**Pn**	**11 31 14.1**	**0.0**
APE				SN	**Sn**	**11 31 40.9**	**-1.2**
APE	**Apeiranthos**	**2.30**	**333**	⇑P	**Pn**	**11 31 13.8**	**-0.2**
DALY	**Dalyan (Mula)**	**2.31**	**39**	*i* P	**Pb**	**11 31 16.4**	**-1.6**
DALY				*i* S	**Sb**	**11 31 46.4**	**0.0**
DALY	**Dalyan (Mula)**	**2.31**	**39**	PN	**Pn**	**11 31 15.5**	**+1.4**
DALY				SN	**Sn**	**11 31 43.6**	**+1.4**
IMMV	**Iera Moni Meta**	**2.38**	**281**	P	**Pb**	**11 31 18.3**	**-1.0**
IMMV				AML	AML	11 31 59.8	
	comp=N,4184µm,0.8s						
IMMV				AML	AML	11 32 04.3	
	comp=E,4715µm,0.6s						
IMMV	**Iera Moni Meta**	**2.38**	**281**	P	**Pb**	**11 31 17.4**	**-1.8**
YER	**Yerkesik**	**2.41**	**29**	P	**Pn**	**11 31 16.8**	**+1.3**
YER	**Yerkesik**	**2.41**	**29**	P	**Pn**	**11 31 16.7**	**+1.3**
YER	**Yerkesik**	**2.41**	**29**	PN	**Pn**	**11 31 16.7**	**+1.3**
FETY	**Fethiye**	**2.43**	**48**	P	**Pn**	**11 31 16.3**	**+0.6**
FETY	**Fethiye**	**2.43**	**48**	*i* P	**Pn**	**11 31 16.2**	**+0.5**
FETY				*i* S	**Sg**	**11 31 53.0**	**-1.7**
FETY	**Fethiye**	**2.43**	**48**	PN	**Pn**	**11 31 17.7**	**+2.0**
DDIM	**Aydin, Didim**	**2.45**	**7**	*i* P	**Pn**	**11 31 17.3**	**+1.3**
DDIM				*i* S	**Sn**	**11 31 47.0**	**+1.4**
KSL	**Kastellorizon**	**2.50**	**63**	⇑P	**Pn**	**11 31 17.5**	**+0.9**
MULA	**Mugla, Merkez-**	**2.53**	**28**	*i* P	**Pn**	**11 31 19.4**	**+2.3**
MULA				*i* S	**Sn**	**11 31 49.2**	**+1.5**
AKAS	**Kas**	**2.55**	**61**	*i* P	**Pn**	**11 31 17.9**	**+0.4**
AKAS				*i* S	**Sn**	**11 31 47.2**	**+1.2**
AKAS	**Kas**	**2.55**	**61**	PN	**Pn**	**11 31 19.7**	**+2.2**
AKAS	**Kas**	**2.55**	**61**	Pn	**Pn**	**11 31 17.9**	**+0.4**
SMG	**Samos**	**2.68**	**360**	P	**Pn**	**11 31 19.0**	**-0.2**
AYDN	**Tasoluk**	**2.76**	**17**	*i* P	**Pn**	**11 31 21.7**	**+1.4**
AYDN				*i* S	**Sn**	**11 31 55.0**	**+1.6**
CAEL	**Denizli, Camel**	**2.90**	**43**	*i* P	**Pn**	**11 31 24.5**	**+2.2**
CAEL				*i* S	**Sb**	**11 32 01.8**	**-1.5**
TAVA	**DENIZLI_Tavas**	**2.95**	**34**	*i* P	**Pn**	**11 31 25.1**	**+2.0**
TAVA				*i* S	**Sn**	**11 32 01.7**	**+3.5**
ANKY	**Antikythira Is**	**3.01**	**287**	P	**Pn**	**11 31 25.8**	**+2.0**
ELL	**Elmali**	**3.02**	**54**	P	**Pn**	**11 31 26.5**	**+2.5**
ELL	**Elmali**	**3.02**	**54**	PN	**Pn**	**11 31 26.5**	**+2.5**
ELL	**Elmali**	**3.02**	**54**		**Pn**	**11 31 26.5**	**+2.5**
AYDB	**Zeytinkoy-Aydi**	**3.04**	**16**	PN	**Pn**	**11 31 25.5**	**+1.3**
GOLH	**Golhisar**	**3.12**	**44**	*i* P	**Pn**	**11 31 27.5**	**+2.2**
GOLH				*i* S	**Sn**	**11 32 03.4**	**+1.2**
AKUM	**Antalya-Kumluc**	**3.13**	**65**	*i* P	**Pn**	**11 31 27.1**	**+1.8**
AKUM				*i* S	**Sn**	**11 32 02.1**	**-0.2**
KTHA	**Kythira Island**	**3.32**	**293**	P	**Pn**	**11 31 29.2**	**+1.2**
URLA	**Izmir**	**3.33**	**357**	PN	**Pn**	**11 31 29.2**	**+1.0**
KEMT	**Kemer-ANTALYA**	**3.40**	**61**	PN	**Pn**	**11 31 32.3**	**+3.2**
CHOS	**Chios island**	**3.42**	**350**	P	**Pn**	**11 31 29.4**	**0.0**
CHOS	**Chios island**	**3.42**	**350**	PN	**Pn**	**11 31 30.1**	**+0.7**
KORT	**Korkueli**	**3.46**	**54**	*i* P	**Pn**	**11 31 33.1**	**+3.1**
KORT				*i* S	**Sn**	**11 32 10.5**	**-0.2**
KORT	**Korkueli**	**3.46**	**54**	PN	**Pn**	**11 31 32.8**	**+2.8**
KARY	**Karystos**	**3.57**	**328**	P	**Pn**	**11 31 32.6**	**+1.1**
VLI	**Velíai**	**3.60**	**299**	P	**Pn**	**11 31 33.4**	**+1.6**
ANTB	**Antalya**	**3.61**	**58**	PN	**Pn**	**11 31 35.1**	**+3.1**
BRDR	**BURDUR-Merkez**	**3.72**	**43**	*i* P	**Pn**	**11 31 37.1**	**+3.5**
BRDR				*i* S	**Sb**	**11 32 28.9**	**+1.9**
MANT	**Manisa**	**3.72**	**21**	*i* P	**Pn**	**11 31 34.6**	**+0.8**
MANT				*i* S	**Sn**	**11 32 18.6**	**+1.2**
MANT	**Manisa**	**3.72**	**21**	Pn	**Pn**	**11 31 35.6**	**+1.9**
VLY	**Voula,Athens**	**3.74**	**320**	P	**Pn**	**11 31 35.3**	**+1.5**
KULA	**Kula-Manisa**	**3.77**	**22**	P	**Pn**	**11 31 36.0**	**+1.7**
KULA	**Kula-Manisa**	**3.77**	**22**	PN	**Pn**	**11 31 35.8**	**+1.5**
SLUM	**Salum**	**3.78**	**202**	P	**Pn**	**11 31 35.9**	**+1.5**
	baz=204						
BUCA	**Burdur, Bucak-**	**3.78**	**52**	*i* P	**Pn**	**11 31 36.9**	**+2.5**
BUCA				*i* S	**Sn**	**11 32 19.2**	**+0.6**
KRND	**KRANIDI**	**3.80**	**309**	P	**Pn**	**11 31 37.0**	**+2.4**
DION	**Dionisos Attik**	**3.84**	**323**	P	**Pn**	**11 31 37.0**	**+1.8**
ATH	**Athens Observa**	**3.87**	**320**	P	**Pn**	**11 31 38.3**	**+2.7**
BASM	**Basmaki-Afyon**	**3.87**	**41**	PN	**Pn**	**11 31 37.8**	**+2.1**
BCK	**Bucak**	**3.88**	**50**	P	**Pn**	**11 31 38.3**	**+2.5**
BCK	**Bucak**	**3.88**	**50**	PN	**Pn**	**11 31 38.3**	**+2.5**
OSC1	**CSNet OBS 1**	**3.97**	**111**	P	**Pn**	**11 31 36.5**	**-0.4**
OSC1				S	**Sn**	**11 32 25.6**	**+2.4**
DKL	**Dikili**	**4.04**	**1**	PN	**Pn**	**11 31 39.0**	**+1.2**
ISP	**Isparta**	**4.07**	**46**	P	**Pn**	**11 31 40.0**	**+1.6**
ISP	**Isparta**	**4.07**	**46**	PN	**Pn**	**11 31 40.9**	**+2.5**
ISP	**Isparta**	**4.07**	**46**	Pn	**Pn**	**11 31 40.0**	**+1.6**
USAK	**Uak-Merkez**	**4.07**	**25**	*i* P	**Pn**	**11 31 39.8**	**+1.4**
EREA	**Eretria**	**4.12**	**326**	P	**Pn**	**11 31 40.8**	**+1.8**
VILL	**Villia**	**4.23**	**319**	P	**Pn**	**11 31 42.3**	**+1.8**
PRK	**Paraskevi**	**4.24**	**354**	P	**Pn**	**11 31 41.7**	**+1.1**
SIGR	**SIGRI**	**4.25**	**350**	P	**Pn**	**11 31 40.7**	**-0.1**
SIGR	**SIGRI**	**4.25**	**350**	PN	**Pn**	**11 31 40.9**	**+0.1**
KEPZ	**Antalya-Kepez**	**4.29**	**63**	*i* P	**Pn**	**11 31 43.0**	**+1.6**
KEPZ				*i* S	**Sn**	**11 32 31.6**	**+0.5**
VLX	**Vlachokerasia**	**4.30**	**304**	P	**Pn**	**11 31 43.7**	**+2.1**
SIMA	**Simav-Kutahya**	**4.40**	**22**	PN	**Pn**	**11 31 44.6**	**+1.7**
AKMS	**Akamas**	**4.50**	**89**	P	**Pn**	**11 31 44.6**	**+0.3**
AKMS				AML	AML	11 32 37.4	
	comp=E,3.9nm,0.4s						
AKMS				AML	AML	11 32 37.5	
	comp=E,3.1nm,0.5s						
GEDZ	**Gediz**	**4.51**	**26**	PN	**Pn**	**11 31 46.4**	**+2.0**
GAZI	**Gazipasa**	**4.62**	**73**	*i* P	**Pn**	**11 31 46.5**	**+0.7**
GAZI				*i* S	**Sn**	**11 32 36.4**	**-2.7**
SEDI	**Konya, Seydise**	**4.65**	**57**	*i* P	**Pn**	**11 31 50.0**	**+3.6**
SEDI				*i* S	**Sn**	**11 32 42.1**	**+2.0**
BALB	**Balikesir**	**4.68**	**10**	PN	**Pn**	**11 31 48.4**	**+1.7**
NATA	**Nata**	**4.71**	**91**	P	**Pn**	**11 31 48.1**	**+1.0**
ALFC	**Alefka**	**4.72**	**87**	⇑P	**Pn**	**11 31 47.6**	**+0.4**
OSC2	**CSNet OBS 4**	**4.90**	**112**	P	**Pn**	**11 31 49.8**	**+0.1**
LEF	**Lefka**	**4.96**	**87**	⇓P	**Pn**	**11 31 52.9**	**+2.4**
LEF				⇑S	**Sn**	**11 32 44.8**	**-2.7**
SZAC	**Souni**	**4.97**	**91**	⇑P	**Pn**	**11 31 51.7**	**+1.0**
AXAR	**Agios Charalam**	**5.02**	**319**	P	**Pn**	**11 31 54.4**	**+3.0**
XOR	**Xorichti**	**5.22**	**327**	P	**Pn**	**11 31 55.7**	**+1.5**
ASGA	**Asgata**	**5.27**	**91**	P	**Pn**	**11 31 55.2**	**+0.4**
ANX	**Ano Chora**	**5.32**	**313**	P	**Pn**	**11 31 58.8**	**+3.3**
CSS	**Mathiatis**	**5.32**	**89**		**Pn**	**11 31 56.5**	**+0.9**
CSS	**Mathiatis**	**5.32**	**89**	⇑P	**Pn**	**11 31 56.5**	**+0.9**
CSS				AML	AML	11 33 03.5	
	comp=E,0.7nm,1.1s						
CSS				AML	AML	11 33 06.5	
	comp=E,0.4nm,0.6s						
AGG	**Agios Georgios**	**5.38**	**319**	P	**Pn**	**11 31 58.8**	**+2.5**
AGG	**Agios Georgios**	**5.38**	**319**	P	**Pn**	**11 31 57.1**	**+0.8**
AGG	**Agios Georgios**	**5.38**	**319**	Pn	**Pn**	**11 31 57.1**	**+0.8**
PAIG	**Paliouri**	**5.50**	**334**	P	**Pn**	**11 32 01.4**	**+3.4**
MVOU	**Mavrovouni**	**5.57**	**88**	⇑P	**Pn**	**11 31 59.7**	**+0.8**
SWA2		**5.88**	**192**	P	**Pn**	**11 32 04.6**	**+1.4**
	baz=194						
SWA2				AMP		11 33 00.0	
	baz=194						
SWA2				S	**Sn**	**11 33 08.8**	**-1.6**
	baz=194						
ALN	**Alexandroupoli**	**5.90**	**354**	P	**Pn**	**11 32 03.7**	**+0.3**
ALN	**Alexandroupoli**	**5.90**	**354**	Pn	**Pn**	**11 32 03.7**	**+0.3**
THL	**Klokotos Trika**	**5.95**	**321**	P	**Pn**	**11 32 06.9**	**+2.9**
LIT	**Litokhoron**	**6.13**	**327**	P	**Pn**	**11 32 08.5**	**+1.8**
LIT	**Litokhoron**	**6.13**	**327**	P	**Pn**	**11 32 08.9**	**+2.2**
LIT	**Litokhoron**	**6.13**	**327**		**Pn**	**11 32 08.9**	**+2.2**
THE	**Thessaloniki**	**6.38**	**332**	P	**Pn**	**11 32 13.6**	**+3.5**
MDUB	**Mudurnu**	**6.44**	**31**		**Pn**	**11 32 12.4**	**+1.5**
KOT	**Kottamia**	**6.60**	**139**	P	**Pn**	**11 32 12.8**	**-0.4**
	baz=140						
SRS	**Serrai**	**6.60**	**338**	P	**Pn**	**11 32 17.4**	**+4.3**
SRS				pmax	pmax		
	comp=Z,28nm,1.3s						
HSAF	**As Saff**	**6.70**	**142**	P	**Pn**	**11 32 14.6**	**+0.1**
	baz=143						
HHAG	**Hagoal**	**6.73**	**137**	P	**Pn**	**11 32 14.5**	**-0.4**
	baz=138						
HHAG				AMP		11 33 00.0	
	baz=138						
HHAG				S	**Sn**	**11 33 26.1**	**-5.1**
	baz=138						
ANTO	**Ankara**	**6.76**	**43**	P	**Pn**	**11 32 16.8**	**+1.4**
ANTO	**Ankara**	**6.76**	**43**	Pn	**Pn**	**11 32 16.8**	**+1.4**
GLL	**Jalalah**	**6.81**	**142**	P	**Pn**	**11 32 15.6**	**-0.4**
	baz=142						
IGT	**Igoumenitsa**	**6.87**	**313**	P	**Pn**	**11 32 21.5**	**+4.8**
IGT				pmax	pmax		
	comp=Z,49nm,1.0s						
BR131	**Keskin Array S**	**7.16**	**47**	⇓*e*P	**Pn**	**11 32 24.3**	**+3.5**
BR131	**Keskin Array S**	**7.16**	**47**	Pn	**Pn**	**11 32 21.4**	**+0.6**
BRTR	**Keskin Array B**	**7.16**	**47**	Pn	**Pn**	**11 32 23.6**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=221,slow=13,SNR=8.0						
BRTR				Sn	**Sn**	**11 33 41.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=222,slow=17,SNR=1.6						
BRTR	**Keskin Array B**	**7.16**	**47**	*i* P	Pn	11 32 25.8	+5.0
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	**Keskin Array B**	**7.16**	**47**		**Pn**	**11 32 22.5**	**+1.6**
FNA	**Florina**	**7.19**	**325**	P	**Pn**	**11 32 22.7**	**+1.5**
FNA	**Florina**	**7.19**	**325**	Pn	**Pn**	**11 32 22.7**	**+1.5**
MMAI	**Meron Meron Ar**	**7.38**	**103**	Pn	**Pn**	**11 32 24.3**	**+0.4**
	comp=Z,8.9nm,0.3s,baz=306,slow=12,SNR=11						
MMAI				Sn	**Sn**	**11 33 44.7**	**-2.6**
	comp=Z,19nm,0.3s,baz=294,slow=24,SNR=13						
STIP	**Stip**	**7.60**	**333**	*i* Pn	**Pn**	**11 32 29.7**	**+3.0**
ZNM	**Zenema**	**7.60**	**136**	P	**Pn**	**11 32 27.3**	**+0.4**
	baz=137						
VTS	**Vitosha**	**8.09**	**341**	⇑P	**Pn**	**11 32 35.8**	**+2.2**
VTS	**Vitosha**	**8.09**	**341**	⇑P	**Pn**	**11 32 35.8**	**+2.2**
VTS	**Vitosha**	**8.09**	**341**	Pn	**Pn**	**11 32 34.6**	**+1.0**
EIL	**Elat**	**8.69**	**126**	Pn	**Pn**	**11 32 42.5**	**+0.7**
	comp=Z,3.7n

comp=Z,2.9nm,0.5s
WTTA Wattenberg 16.72 322 P **P** **11 34 31.9 -0.7**
WTTA pmax pmax
comp=Z,14nm,1.0s
WATA Walderalm 16.80 322 *eP* **Pn** **11 34 31.2 0.0**
comp=Z,1.2nm,0.3s
GEC2 GERESS Array S 16.89 329 **P** **11 34 33.9 -0.4**
GEC2 IAmb IAmb 11 34 42.4
comp=Z,18nm,1.5s
GERES GERESS Array B 16.89 329 Pn **Pn** **11 34 31.8 -0.5**
comp=Z,0.5nm,0.3s,baz=139,slow=12,SNR=18
GERES LR LR 11 42 24.6
comp=Z,164nm,21.3s,baz=136,slow=42
GERES GERESS Array B 16.89 329 P **Pn** **11 34 31.2 -1.1**
FETA Feichten 17.03 320 P **Pn** **11 34 35.1 +0.8**
comp=Z,5.2nm,0.7s
MOTA Moosalm 17.04 321 *eP* **Pn** **11 34 34.0 -0.4**
comp=Z,2.1nm,0.5s
DPC Dobruska-Polom 17.13 337 *eP* **Pn** **11 34 35.8 +0.4**
DPC Dobruska-Polom 17.13 337 *eP* **Pn** **11 34 35.8 +0.4**
KHC Kasperske Hory 17.16 329 *deP* **P** **11 34 36.6 -0.7**
KHC pmax pmax
comp=Z,23nm,1.4s
KHC Kasperske Hory 17.16 329 *eP* **P** **11 34 36.9 -0.4**
KHC Kasperske Hory 17.16 329 **Pn** **11 34 36.4 +0.7**
RETA Reutte 17.31 321 *eP* **Pn** **11 34 37.2 -0.4**
comp=Z,0.9nm,0.3s
DAVOX Davos/Dischmat 17.35 318 P **Pn** **11 34 38.3 +0.1**
comp=Z,0.4nm,0.3s,baz=163,slow=17,SNR=1.9
DAVOX LR LR 11 43 34.1
comp=Z,122nm,18.8s,baz=240,slow=45
SBF Sospel 17.37 306 *eP* **Pn** **11 34 38.9 +0.5**
SBF pmax pmax
comp=Z,22nm,0.6s
PRU Pruhonice 17.45 333 *eP* **Pn** **11 34 38.7 -0.6**
PRU Pruhonice 17.45 333 *eP* **Pn** **11 34 38.7 -0.6**
TUE Stuetta 17.46 316 **P** **11 34 42.2 +1.3**
TUE IAmb IAmb 11 34 45.3
comp=Z,10nm,0.8s
WET Wettzell 17.46 328 P **Pn** **11 34 38.7 -0.8**
WET pmax pmax
comp=Z,5.0nm,1.1s
DAVA Damuels 17.65 319 P **Pn** **11 34 41.2 -0.8**
comp=Z,2.7nm,0.5s
PVCC Panska Ves 17.89 334 P **Pn** **11 34 44.6 -0.1**
PVCC pmax pmax
comp=Z,4.0nm,1.5s
BNI Bardonecchia 18.36 309 P **P** **11 34 51.8 +1.1**
BNI pmax pmax
comp=Z,11nm,1.0s
BNI Bardonecchia 18.36 309 P **P** **11 34 51.8 +1.1**
BNI IAmb IAmb 11 35 14.7
comp=Z,11nm,1.0s
BRG Berggiesshubel 18.40 333 *eP* **P** **11 34 49.4 -1.5**
BRG Amp 11 34 58.2
comp=Z,8.2nm,1.2s
LPG La Plagne 18.52 310 *eP* **P** **11 34 51.8 -0.8**
LPG pmax pmax
comp=Z,10.0nm,0.6s
LPL La Plagne 18.54 310 *eP* **P** **11 34 51.9 -0.8**
LPL pmax pmax
comp=Z,10.0nm,0.7s
SENIN Lac Senin/Sane 18.60 313 P **P** **11 34 51.8 -1.6**
SENIN IAmb IAmb 11 35 18.7
comp=Z,8.1nm,0.7s
ORIF Oris-en-Rattie 18.82 308 *eP* **Pn** **11 34 56.0 -0.2**
ORIF pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.10 333 P **P** **11 34 54.9 -3.7**
CLL pmax pmax
comp=Z,5.0nm,0.6s
CLL Collm 19.10 333 P **P** **11 34 54.9 -3.7**
CABF La Chapelle 19.45 313 *eP* **P** **11 35 00.6 -2.0**
CABF pmax pmax
comp=Z,9.0nm,0.6s
MNK Minsk 19.49 2 *i* P **P** **11 34 59.9 -2.9**
comp=E,4.0nm,0.8s
MNK *i* P **P** **11 34 59.9 -2.9**
comp=N,20nm,0.8s
MNK *i* P **P** **11 34 59.9 -2.9**
comp=Z,13nm,1.0s
MNK *i* PP **PnPn** **11 35 14.4 -3.0**
MNK *i* PPP PPP 11 35 22.2
MNK *i* S **Sn** **11 38 40.0 -2.3**
MNK *i* SS **SnSn** **11 38 56.7 +0.1**
MNK *i* SSS SSS 11 39 09.6
MNK *i* LQ LQ 11 40 52.3
MNK *i* LR LR 11 42 21.4
MNK *i* LRM MLR 11 43 53.5
comp=E,18nm,13.5s
MNK *i* LRM MLR 11 44 08.7
comp=Z,151nm,13.7s
MNK *i* LRM MLR 11 44 19.9
comp=N,252nm,14.6s
VIVF Saint-Julien-l 19.58 307 *eP* **P** **11 35 03.0 -1.0**
VIVF pmax pmax
comp=Z,36nm,1.4s
SSB Saint Sauveur 19.83 308 P **P** **11 35 05.8 -0.9**
SSB pmax pmax
comp=Z,13nm,1.1s
SSB Saint Sauveur 19.83 308 P **P** **11 35 05.8 -0.9**
SSB IAmb IAmb 11 35 10.0
comp=Z,13nm,1.1s
RAYN Ar Rayn 19.87 120 P **Pn** **11 35 09.2 +0.3**
RAYN pmax pmax
comp=Z,8.0nm,1.0s
RAYN Ar Rayn 19.87 120 P **Pn** **11 35 09.2 +0.3**
NACGM Naroch 19.88 360 *i* P **Pn** **11 35 09.7 +1.0**
NACGM *i* P **Pn** **11 35 09.7 +1.0**
NACGM *i* P **Pn** **11 35 09.7 +1.0**
NACGM *i* PP **PnPn** **11 35 25.4 +2.6**
NACGM *i* PPP PPP 11 35 33.1
NACGM *i* S **Sn** **11 38 52.1 +0.4**
NACGM *i* SS **SnSn** **11 39 11.9 +5.8**
NACGM *i* SSS SSS 11 39 25.7
NACGM *i* LQ LQ 11 41 12.8
NACGM *i* LR LR 11 42 41.8
HAU Haudompre 20.02 317 *eP* **P** **11 35 07.7 -1.0**
HAU pmax pmax
comp=Z,7.0nm,0.7s
TNS Taunus Mts 20.26 324 P **P** **11 35 09.5 -1.9**
TNS pmax pmax
comp=Z,10.0nm,0.8s
MTLF Montolieu 20.77 301 *eP* **P** **11 35 15.1 -1.7**
MTLF pmax pmax
comp=Z,16nm,1.2s
SMF Signal de Mont 20.84 311 *eP* **P** **11 35 15.4 -2.2**
SMF pmax pmax
comp=Z,6.0nm,0.3s
LOR Lormes 21.11 312 P **P** **11 35 18.9 -1.6**
LOR pmax pmax
comp=Z,11nm,0.8s
OBN Obninsk 21.19 16 *deP* **P** **11 35 22.4 +1.2**
OBN *e* 11 35 45.6
OBN *eS* Sn 11 39 27.1 +3.9
OBN pmax pmax
comp=Z,11nm,0.5s
OBN MLR MLR
comp=Z,186nm,15.0s
AVF Avril sur Loir 21.21 311 *eP* **P** **11 35 20.0 -1.5**
AVF pmax pmax
comp=Z,13nm,0.8s
CAF Calviac 21.34 305 *eP* **P** **11 35 24.3 +1.3**
CAF pmax pmax
comp=Z,6.0nm,1.0s
RJF Les Rejaudoux 21.83 306 *eP* **P** **11 35 27.0 -1.3**
RJF pmax pmax
comp=Z,20nm,1.1s
TAM Tamanrasset 22.24 242 P **P** **11 35 35.7 +2.7**
TAM pmax pmax
comp=Z,7.0nm,1.6s
BELG Belogornoye 22.82 34 P **P** **11 35 39.6 +0.9**
comp=Z,7.1nm,0.4s,baz=267,slow=2.2,SNR=4.1
BELG Belogornoye 22.82 34 *eP* **P** **11 35 40.7 +2.0**
BELG pmax pmax
comp=Z,3.0nm,0.8s
MFF Saint Martin d 23.36 308 *eP* **P** **11 35 44.0 -0.3**
MFF pmax pmax
comp=Z,10.0nm,0.8s
VSU Vasula 23.45 360 *eP* **P** **11 35 48.5 +3.5**
VSU pmax pmax
comp=Z,109nm,1.6s
FLN La Foliniere 24.38 313 *eP* **P** **11 35 53.0 -1.0**
FLN pmax pmax
comp=Z,28nm,1.2s

ESBB Sonseca Array 24.86 290 P **P** **11 35 58.0 -0.5**
ESDC Sonseca Array 24.86 290 P **P** **11 35 57.8 -0.8**
comp=Z,3.7nm,0.7s,baz=81,slow=9.4,SNR=21
ESDC Sonseca Array 24.86 290 P **P** **11 35 57.8 -0.8**
PAB San Pablo 25.16 290 P **P** **11 36 04.2 +2.9**
PAB pmax pmax
comp=Z,11nm,1.4s
PAB San Pablo 25.16 290 P **P** **11 36 04.2 +2.9**
PAB IAmb IAmb 11 36 19.3
comp=Z,11nm,1.4s
GEYT Alibeck 25.25 74 P **P** **11 36 01.4 -0.7**
comp=Z,2.1nm,0.4s,baz=266,slow=13,SNR=2.5
QUIF Quistinic 25.73 309 *eP* **P** **11 36 05.3 -1.0**
QUIF pmax pmax
comp=Z,37nm,1.3s
MDT Midelt 26.14 274 P **P** **11 36 09.9 -0.3**
comp=Z,1.4nm,0.5s,baz=129,slow=19,SNR=4.5
MDT LR LR 11 49 14.4
comp=Z,79nm,20.5s,baz=95,slow=43
FINES FINESS Array B 26.44 359 P **P** **11 36 10.1 -2.4**
comp=Z,1.0nm,0.5s,baz=159,slow=11,SNR=7.6
FINES LR LR 11 46 32.7
comp=Z,80nm,20.5s,baz=246,slow=36
FINES FINESS Array B 26.44 359 *i* P **P** **11 36 11.3 -1.2**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FIA1 FINESS Array S 26.44 359 P **P** **11 36 11.2 -1.3**
HFS Hagfors 26.54 345 P **P** **11 36 10.9 -2.6**
comp=Z,0.8nm,0.4s,baz=134,slow=8.6,SNR=8.5
HFS LR LR 11 48 16.7
comp=Z,320nm,18.1s,baz=164,slow=40
PBRG Braganca 27.05 295 *eP* **P** **11 36 18.6 +0.2**
KLMR Klimovskoe 27.10 14 *eP* **P** **11 36 19.4 +0.9**
KLMR pmax pmax
comp=Z,10.0nm,1.1s
KLMR Klimovskoe 27.10 14 *eP* **P** **11 36 19.4 +0.9**
KLMR AMP 11 36 33.1
comp=Z,10.0nm,1.1s
MVO Moncorvo 27.24 293 *eP* **P** **11 36 19.9 -0.2**
PBAR Barrancos 27.30 287 *eP* **P** **11 36 20.5 0.0**
AKTO Aktyubinsk 27.34 46 P **P** **11 36 20.7 -0.1**
comp=Z,1.3nm,0.5s,baz=261,slow=10,SNR=9.6
PMRV Marv??o 27.51 289 *eP* **P** **11 36 21.9 -0.6**
PCBR Castelo Branco 27.57 290 *eP* **P** **11 36 23.4 +0.5**
POLO Lamas de Olo 27.82 294 *eP* **P** **11 36 24.7 -0.6**
PVIS Viseu 27.89 292 *eP* **P** **11 36 26.2 +0.4**
NOA NORSAR Array B 27.90 344 P **P** **11 36 24.5 -1.2**
comp=Z,0.2nm,0.4s,baz=146,slow=9.6,SNR=3.2
NOA LR LR 11 48 35.6
comp=Z,128nm,19.7s,baz=155,slow=39
KIRV Kirov 27.91 25 LR LR 11 48 21.9
comp=Z,57nm,18.8s,baz=233,slow=38
ABKAR Akbulak array 28.10 49 P **P** **11 36 27.3 -0.3**
ABKAR IAmb IAmb 11 36 46.2
comp=Z,3.8nm,1.1s
PCVE Castro Verde 28.13 286 *eP* **P** **11 36 30.4 +2.4**
PMTG Montargil 28.17 289 *eP* **P** **11 36 30.0 +1.7**
EKA Eskdalemuir Ar 28.96 324 P **P** **11 36 33.9 -1.3**
comp=Z,0.6nm,0.4s,baz=118,slow=11,SNR=5.7
WSAR Wadi Sarin 30.02 104 LR LR 11 53 47.4
comp=Z,67nm,18.4s,baz=330,slow=46
ARU Arti 30.35 35 *eP* **P** **11 36 49.8 +2.3**
ARU pmax pmax
comp=Z,4.0nm,0.9s
TOA0 Torodi Ar. Sit 31.48 232 P **P** **11 36 58.5 +0.7**
TOA0 IAmb IAmb 11 37 05.3
comp=Z,4.3nm,0.9s
TORD Torodi Ar. Bea 31.48 232 P **P** **11 36 58.6 +0.8**
comp=Z,3.7nm,0.6s,baz=34,slow=8.8,SNR=21
TORD LR LR 11 52 52.6
comp=Z,107nm,18.2s,baz=35,slow=42
TORD Torodi Ar. Bea 31.48 232 P **P** **11 36 58.4 +0.6**
TORD IAmb IAmb 11 37 05.3
comp=Z,2.0nm,0.8s
KOWA Kowa 34.47 241 P **P** **11 37 24.6 +0.7**
comp=Z,1.7nm,0.6s,baz=42,slow=19,SNR=5.8
KOWA Kowa 34.47 241 IAmb IAmb 11 37 46.9
comp=Z,2.9nm,1.0s
KK31 Karatay Array 34.53 63 P **P** **11 37 25.7 +1.4**
KK31 pmax pmax
comp=Z,5.0nm,1.2s
KK31 Karatay Array 34.53 63 P **P** **11 37 25.7 +1.4**
KK31 IAmb IAmb 11 37 45.6
comp=Z,4.9nm,1.1s
KKAR Karatay Array 34.53 63 P **P** **11 37 23.3 -1.0**
KKAR Karatay Array 34.53 63 P **P** **11 37 23.3 -1.0**
ARCES ARCESS Array B 34.57 359 P **P** **11 37 21.8 -2.5**
comp=Z,0.4nm,0.3s,baz=168,slow=8.4,SNR=13
ARCES LR LR 11 52 24.7
comp=Z,58nm,19.5s,baz=0.0,slow=38
ARCES ARCESS Array B 34.57 359 P **P** **11 37 23.4 -0.9**
ARCES pmax pmax
comp=Z,12nm,1.3s
ARCES ARCESS Array B 34.57 359 P **P** **11 37 23.4 -0.9**
AAK Ala-Archa 37.48 64 *c i* P **P** **11 37 51.4 +1.7**
AAK Ala-Archa 37.48 64 P **P** **11 37 51.1 +1.4**
AAK IAmb IAmb 11 38 01.6
comp=Z,3.9nm,0.7s
DBIC Dimbokro 40.58 233 P **P** **11 38 15.2 -0.4**
comp=Z,2.1nm,0.8s,baz=293,slow=20,SNR=2.2
MAKZ Makanchi 42.48 57 P **P** **11 38 32.0 +1.0**
MAKZ pmax pmax
comp=Z,3.0nm,0.9s
MAKZ Makanchi 42.48 57 P **P** **11 38 32.0 +1.0**
MAKZ IAmb IAmb 11 38 40.6
comp=Z,3.4nm,0.9s
MK31 Makanchi Array 42.70 57 *c i* P **P** **11 38 33.8 +1.0**
MK31 Makanchi Array 42.70 57 P **P** **11 38 33.0 +0.3**
MK31 IAmb IAmb 11 38 42.3
comp=Z,5.3nm,0.9s
MKAR Makanchi Array 42.70 57 P **P** **11 38 33.7 +1.0**
comp=Z,6.8nm,0.7s,baz=278,slow=6.9,SNR=20
MKAR LR LR 11 58 35.2
comp=Z,46nm,19.7s,baz=270,slow=39
MKAR Makanchi Array 42.70 57 P **P** **11 38 32.9 +0.1**
ZAA0 Zalesovo Array 44.10 46 P **P** **11 38 43.9 0.0**
ZALV Zalesovo Beam 44.10 46 P **P** **11 38 43.8 -0.2**
comp=Z,4.2nm,0.4s,baz=265,slow=9.8,SNR=20
ZALV LR LR 11 58 46.2
comp=Z,35nm,19.9s,baz=260,slow=38
ZALV Zalesovo Beam 44.10 46 P **P** **11 38 43.5 -0.5**
DGZ Jazzator, Alta 45.87 52 *d i* P **P** **11 38 59.7 +1.4**
DGZ pmax pmax
comp=Z,4.0nm,0.6s
NRIK Noril'sk 47.42 25 P **P** **11 39 09.2 -0.7**
comp=Z,2.6nm,0.5s,baz=140,slow=2.9,SNR=5.9
NRIK Noril'sk 47.42 25 *eP* **P** **11 39 10.6 +0.7**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
NRIK Noril'sk 47.42 25 P **P** **11 39 10.1 +0.2**
TLY Talaya 55.68 47 LR LR 12 09 15.1
comp=Z,34nm,18.3s,baz=300,slow=42
SONM Songino Array 58.50 51 P **P** **11 40 33.5 +1.3**
comp=Z,1.8nm,0.6s,baz=283,slow=7.4,SNR=3.5
ULN Ulaanbaatar 58.91 51 *eP* **P** **11 40 37.4 +2.3**
ULN pmax pmax
comp=Z,5.0nm,1.2s
TIXI Tiksi 60.80 21 *eP* **P** **11 40 50.1 +2.6**
BOSA Boshof 63.31 182 P **P** **11 41 06.6 +1.7**
comp=Z,3.9nm,0.9s,baz=355,slow=9.6,SNR=2.9
BOSA LR LR 12 07 51.4
comp=Z,165nm,20.4s,baz=348,slow=35
CMAR Chiang Mai Arr 65.21 84 P **P** **11 41 17.6 0.0**
comp=Z,0.8nm,0.4s,baz=295,slow=7.1,SNR=8.8
CMAR Chiang Mai Arr 65.21 84 *i* P **P** **11 41 17.8 +0.2**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
XAN Xi'an 65.65 65 P P 11 41 29.1 +8.8
XAN sP PcP 11 41 40.8 -11
XAN pmax pmax
comp=Z,7.0nm,1.4s
MA2 Magadan 75.01 26 *eP* **P** **11 42 18.2 +1.2**
MA2 pmax pmax
comp=Z,8.0nm,2.4s
INK Inuvik 75.94 353 P **P** **11 42 21.6 -0.6**
comp=Z,0.7nm,0.5s,baz=180,slow=32,SNR=5.8
USRK Ussuriysk Ar. 75.95 46 P **P** **11 42 22.1 -0.7**
comp=Z,1.5nm,0.5s,baz=299,slow=3.9,SNR=8.8
KSRS Korea Array 77.26 53 P **P** **11 42 29.4 -0.8**
comp=Z,1.7nm,0.9s,baz=294,slow=4.6,SNR=3.6
KSRS LR LR 12 20 06.4
comp=Z,29nm,19.5s,baz=230,slow=38
YKA Yellowknife Ar 77.99 343 P **P** **11 42 31.7 -2.2**
comp=Z,0.2nm,0.4s,baz=37,slow=5.6,SNR=11
YKA Yellowknife Ar 77.99 343 *i* P **P** **11 42 31.1 -2.8**
ILAR Eielson Array 80.41 357 P **P** **11 42 45.8 -1.3**
comp=Z,0.4nm,0.5s,baz=340,slow=4.4,SNR=7.0
ULM Lac du Bonnet 81.18 327 P **P** **11 42 49.9 -1.6**
comp=Z,1.6nm,0.6s,baz=33,slow=3.7,SNR=4.9
ULM Lac du Bonnet 81.18 327 IAmb IAmb 11 42 56.0
comp=Z,2.5nm,0.9s
ROSC El Rosal 96.34 280 LR LR 12 25 31.5
comp=Z,125nm,19.4s,baz=96,slow=34
WRA Warramunga Arr 115.20 97 PKP **PKPdf** **11 49 16.6 -1.2**
comp=Z,0.9nm,1.1s,baz=324,slow=2.2,SNR=2.8
ASAR Alice Springs 116.67 101 PKP **PKPdf** **11 49 18.7 -1.8**
comp=Z,0.2nm,0.8s,baz=313,slow=1.8,SNR=1.4

*IDC **17** 11:48:43.2±2.5, 33°.43N×27°.54E, h0km, mb3.7/5, mb1 3.8/11, mb1mx3.5/55, mbtmp3.7/11, ML3.6/6, Error ellipse: s-maj=48.8km s-min=20.4km az=28.0*
ISC 17 11:48:47.4±1.2, 33°.3N±0°.1×27°.60E±0°.08, h35km, n11, σ1s52/14, mb3.9/5, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**2.97**	**312**	Pn		**Pn**		**11 49 32.4**	**+0.3**
	4.6nm,0.3s,baz=81,slow=15,SNR=3.7								
IDI				Sn		**Sn**		**11 50 06.0**	**-0.5**
	7.9nm,0.3s,baz=278,slow=16,SNR=7.6								
MMAI	**Mount Meron Ar**	**6.55**	**91**	Pn		**Pn**		**11 50 21.9**	**+0.6**
	1.4nm,0.3s,baz=277,slow=13,SNR=5.2								
MMAI				Sn		**Sn**		**11 51 33.3**	**-1.6**
	6.7nm,0.3s,baz=309,slow=21,SNR=8.6								
EIL	**Elat**	**7.26**	**118**	Pn		**Pn**		**11 50 33.1**	**+2.1**
	0.2nm,0.3s,baz=36,slow=11,SNR=1.7								
EIL				Sn		**Sn**		**11 51 49.2**	**-3.1**
	1.1nm,0.3s,baz=322,slow=3.0,SNR=8.3								
BRTR	**Keskin Array B**	**8.02**	**36**	Pn		**Pn**		**11 50 42.5**	**+1.0**
	0.4nm,0.3s,baz=206,slow=14,SNR=7.4								
AKASG	**Malin Array Be**	**17.39**	**3**	Pn		**Pn**		**11 52 46.5**	**-0.6**
	1.1nm,0.3s,baz=194,slow=11,SNR=4.7								
GERES	**GERESS Array B**	**18.65**	**330**	P		**Pn**		**11 53 02.4**	**-0.3**
	0.1nm,0.3s,baz=143,slow=13,SNR=5.3								
FINES	**FINESS Array B**	**28.14**	**358**	P		**P**		**11 54 36.3**	**+0.5**
	2.3nm,0.8s,baz=165,slow=11,SNR=2.3								
ARCES	**ARCESS Array B**	**36.27**	**359**	P		**P**		**11 55 46.8**	**-0.1**
	3.2nm,1.0s,baz=173,slow=7.7,SNR=1.9								
MKAR	**Makanchi Array**	**43.12**	**55**	P		**P**		**11 56 46.4**	**+2.1**
	0.3nm,0.6s,baz=276,slow=7.5,SNR=3.9								
ZALV	**Zalesovo Beam**	**44.84**	**45**	P		**P**		**11 56 56.6**	**-1.3**
	0.8nm,0.5s,baz=270,slow=6.8,SNR=3.5								
YKA	**Yellowknife Ar**	**79.79**	**343**	P		**P**		**12 00 51.0**	**-0.6**
	0.2nm,0.6s,baz=34,slow=5.4,SNR=4.9								

*DDA **17** 11:49:56.8, 37°.53N×38°.81E, h11km±2km, MW4.0*
*ISK **17** 11:49:57.8, 37°.59N×38°.62E, h5km, ML3.9/32*
ISC 17 11:49:57.0±1.1, 37°.56N±0°.02×38°.81E±0°.02, h4km±10km, n61, σ1s15/91, 9C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SANL	**SANLIURFA_Merk**	**0.41**	**159**	↓*iP*		**Pg**		**11 50 05.2**	**+0.2**
SANL				*i* S		**Sg**		**11 50 10.4**	**0.0**
ATAB	**Bozova**	**0.42**	**258**	↑*iP*		**Pg**		**11 50 05.5**	**+0.5**
ATAB				*i* S		**Sg**		**11 50 11.6**	**+1.1**
SURC	**SANLIURFA_SURC**	**0.70**	**193**	↓*iP*		**Pg**		**11 50 10.5**	**+0.1**
SURC				*i* S		**Sg**		**11 50 19.9**	**+0.4**
MALT	**Malatya**	**0.81**	**338**	PG		**Pg**		**11 50 12.7**	**+0.2**
ELZG	**Elazig**	**0.95**	**9**	↓*iP*		**Pg**		**11 50 15.3**	**+0.1**
ELZG				*i* S		**Sn**		**11 50 30.8**	**-0.5**
GZT	**Gaziantep**	**1.01**	**259**	↑*iP*		**Pg**		**11 50 16.4**	**0.0**
GZT				*i* S		**Sb**		**11 50 31.8**	**+1.0**
AKCD	**Akcadag**	**1.01**	**317**	↓*iP*		**Pg**		**11 50 16.6**	**+0.1**
AKCD				*i* S		**Sn**		**11 50 31.4**	**-1.5**
DIYA	**Diyarbakir**	**1.10**	**70**	↑*iP*		**Pg**		**11 50 17.8**	**-0.4**
DIYA				*i* S		**Sb**		**11 50 34.7**	**+1.2**
KHMN	**Narli-Kahraman**	**1.32**	**263**	PN		**Pn**		**11 50 21.4**	**-0.9**
KHMN				SN		**Sb**		**11 50 38.8**	**-0.9**
GAZ	**Gaziantep**	**1.33**	**254**	PN		**Pn**		**11 50 21.8**	**-0.6**
GAZ				SN		**Sb**		**11 50 39.4**	**-0.5**
KOVA	**Elazig, Kovanc**	**1.39**	**34**	↓*iP*		**Pn**		**11 50 23.2**	**-0.1**
KOVA				*i* S		**Sn**		**11 50 42.5**	**+0.3**
KAHM	**Kahramanmaras,**	**1.45**	**269**	↑*iP*		**Pn**		**11 50 22.7**	**-1.3**
KAHM				*i* S		**Sb**		**11 50 41.5**	**-1.8**
DARE	**Darende-Malaty**	**1.45**	**314**	PN		**Pb**		**11 50 24.5**	**-0.2**
DARE				SN		**Sg**		**11 50 43.5**	**-0.2**
KMRS	**Kahramanmaras**	**1.52**	**268**	PN		**Pn**		**11 50 24.8**	**-0.1**
KMRS				SN		**Sn**		**11 50 44.9**	**-0.2**
HANI	**Diyarbakir_Han**	**1.52**	**55**	↑*iP*		**Pn**		**11 50 24.4**	**-0.6**
HANI				*i* S		**Sn**		**11 50 45.4**	**+0.1**
HCB	**Kahramanmara**	**1.52**	**262**	*i* P		**Pn**		**11 50 23.9**	**-1.1**
HCB				*i* S		**Sg**		**11 50 46.6**	**+0.6**
ARPR	**Arapgir-MALATY**	**1.57**	**347**	PN		**Pg**		**11 50 27.3**	**+0.1**
ARPR				SN		**Sg**		**11 50 48.7**	**+1.1**
KUZU	**Kuzuini**	**1.59**	**241**	↑*iP*		**Pn**		**11 50 25.0**	**-0.9**
KUZU				*i* S		**Sn**		**11 50 47.9**	**+0.9**
MARD	**Mardin**	**1.59**	**98**	↑*iP*		**Pn**		**11 50 24.6**	**-1.4**
MARD				*i* S		**Sn**		**11 50 47.6**	**+0.5**
TNCL	**Tunceli-Merkez**	**1.66**	**20**	*i* P		**Pn**		**11 50 26.7**	**-0.2**
TNCL				*i* S		**Sg**		**11 50 51.5**	**+1.2**
CUGUR	**Gurin_SVAS**	**1.68**	**314**	*i* P		**Pg**		**11 50 29.1**	**0.0**
CUGUR				*i* S		**Sg**		**11 50 51.6**	**+0.7**
KEMA	**Kemaliye**	**1.72**	**352**	↓*iP*		**Pn**		**11 50 27.9**	**+0.1**
KEMA				*i* S		**Sg**		**11 50 52.9**	**+0.5**
KAMA	**Osmaniye**	**1.74**	**258**	*i* P		**Pn**		**11 50 27.0**	**-1.2**
KAMA				*i* S		**Sb**		**11 50 52.7**	**+0.8**
ILIC	**ilic-Erzincan**	**1.90**	**354**	PN		**Pb**		**11 50 31.8**	**-0.5**
ILIC				SN		**Sg**		**11 50 56.9**	**-1.1**
ANDN	**Andirin**	**1.96**	**271**	↑*iP*		**Pn**		**11 50 29.9**	**-1.1**
ANDN				*i* S		**Sn**		**11 50 55.6**	**-0.5**
BTMN	**Batman**	**1.98**	**80**	↑*iP*		**Pn**		**11 50 30.6**	**-0.8**
BTMN				*i* S		**Sb**		**11 51 00.4**	**+1.4**
CUKAN	**kangal_SIVAS**	**2.04**	**329**	*i* P		**Pn**		**11 50 32.8**	**+0.5**
CUKAN				*i* S		**Sb**		**11 50 59.5**	**-1.1**
BNGB	**Bingl**	**2.05**	**45**	PN		**Pb**		**11 50 35.9**	**+1.0**
SARI	**SarD1z-Kayseri**	**2.07**	**295**	PN		**Pn**		**11 50 32.8**	**+0.1**
SARI				SN		**Sn**		**11 50 58.5**	**-0.4**
MIDY	**Mardin/Midyat-**	**2.07**	**93**	*i* P		**Pn**		**11 50 32.2**	**-0.4**
MIDY				*i* S		**Sn**		**11 51 01.4**	**+2.5**
ERZN	**Erzincan**	**2.15**	**19**	PN		**Pb**		**11 50 36.5**	**0.0**
SLHN	**Bingol, Solhan**	**2.23**	**51**	*i* P		**Pn**		**11 50 35.1**	**+0.2**
SLHN				*i* S		**Sn**		**11 51 03.2**	**+0.1**
YEDI	**Yedisu-Bingol**	**2.32**	**36**	PN		**Pb**		**11 50 39.6**	**+0.1**
KOZT	**Kozan**	**2.37**	**269**	PN		**Pn**		**11 50 37.2**	**+0.5**
TAHT	**Tahtakopru-Hat**	**2.41**	**241**	PN		**Pn**		**11 50 38.2**	**+1.0**
MUSM	**Mu-Merkez**	**2.43**	**61**	*i* P		**Pn**		**11 50 37.0**	**-0.6**
MUSM				*i* S		**Sn**		**11 51 09.2**	**+1.4**
KARO	**Karliova-Bingo**	**2.48**	**45**	PN		**Pb**		**11 50 41.9**	**-0.3**
CEYT	**Ceyhan**	**2.50**	**258**	PN		**Pn**		**11 50 38.2**	**-0.2**
SRTM	**Siirt_Merkez**	**2.51**	**79**	*eP*		**Pn**		**11 50 37.8**	**-0.8**
SRTM				*i* S		**Sb**		**11 51 15.9**	**+2.0**
VRTB	**Varto-Mus**	**2.62**	**52**	PN		**Pb**		**11 50 44.1**	**-0.6**
BNN	**Bunyan**	**2.66**	**300**	PN		**Pn**		**11 50 41.4**	**+0.6**
GURO	**Guroymak-BITLI**	**2.73**	**68**	PN		**Pb**		**11 50 46.6**	**+0.1**
SVSK	**Karacayir**	**2.75**	**330**	PN		**Pn**		**11 50 43.3**	**+1.5**
KRTD	**Karatas-Adana**	**2.88**	**251**	PN		**Pn**		**11 50 44.7**	**+1.1**
SIRT	**Sirnak**	**2.89**	**90**	PN		**Pb**		**11 50 48.6**	**-0.6**
KRTS	**Karatas**	**2.92**	**251**	PN		**Pn**		**11 50 45.3**	**+1.2**
KARA	**Karaisali**	**3.00**	**265**	PN		**Pn**		**11 50 46.3**	**+1.0**
CMRD	**Camardi-Nigde**	**3.03**	**273**	PN		**Pn**		**11 50 46.7**	**+0.8**
RSDY	**Resadiye-TOKAT**	**3.06**	**338**	PN		**Pn**		**11 50 48.0**	**+1.9**
TOKT	**Tokat**	**3.27**	**328**	PN		**Pn**		**11 50 50.2**	**+1.1**
AKDM	**Akdamar-Van**	**3.39**	**76**	PN		**Pb**		**11 50 55.7**	**-2.0**
KOPR	**Koprukoy-ERZUR**	**3.40**	**44**	PN		**Pb**		**11 50 55.2**	**-2.7**
MERS	**Mersin**	**3.49**	**260**	PN		**Pn**		**11 50 53.2**	**+1.1**
KTUT	**Trabzon**	**3.50**	**12**	PN		**Pb**		**11 50 55.8**	**-3.7**
KOZK	**Kozakli-Nevseh**	**3.50**	**299**	PN		**Pn**		**11 50 53.8**	**+1.4**
GULA	**Gulagac**	**3.70**	**284**	PN		**Pn**		**11 50 56.3**	**+1.3**
VANB	**Van**	**3.76**	**73**	PN		**Pb**		**11 51 01.4**	**-2.6**
CUKT	**Cukurca**	**3.84**	**93**	PN		Pn		11 51 02.2	+5.3
AGRB	**Hanur-Agry**	**3.85**	**57**	PN		**Pb**		**11 51 02.2**	**-3.4**
KIZK	**Mersin**	**3.88**	**255**	PN		**Pn**		**11 50 59.1**	**+1.7**
YESY	**Yesilyurt**	**4.02**	**275**	PN		**Pn**		**11 51 01.1**	**+1.6**

*IDC **17** 12:05:49.2±1.1, 19°.93S×169°.27E, h0km, mb3.9/6, mb1 4.2/8, mb1mx3.9/25, mbtmp4.0/8, ML3.7/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19, Error ellipse: s-maj=36.0km s-min=23.5km az=140.0*
*NEIC **17** 12:05:50.4±2.2, 19°.9S±0°.1×169°.29E±0°.07, h10km±1km, mb4.5/7, Error

ISC 17 12:05:54.6±0.7, 19°93S±0°07×169°18E±0°10, h35km, n34, σ1§18/34, mb4.0/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**1.88**	**215**	P	**Pn**	**12 06 25.5**	**+1.3**
LIFNC	**LIFOU**	**2.00**	**245**	P	**Pn**	**12 06 25.0**	**-0.9**
DVP	**Devils Point**	**2.38**	**337**	P	**Pn**	**12 06 33.2**	**+2.0**
YATNC	**Mamie plateau,**	**3.01**	**225**	P	**Pn**	**12 06 39.6**	**-0.2**
PINNC	**Pines Island,**	**3.12**	**211**	P	**Pn**	**12 06 43.2**	**+1.9**
OUENC	**Ouen Island, N**	**3.30**	**221**	P	**Pn**	**12 06 45.6**	**+1.9**
DZM	**Mont Dzumac** 95nm,0.2s	**3.32**	**230**	*e*Pn	**Pn**	**12 06 45.0**	**+0.8**
DZM				*e*Sn	**Sn**	**12 07 22.4**	**-0.1**
	124nm,0.2s						
DZM				*e*LR	LR	12 07 40.0	
	comp=Z,393nm,23.9s						
DZM	**Mont Dzumac** 17nm,0.3s,baz=98,slow=8.9,SNR=575	**3.32**	**230**	Pn	**Pn**	**12 06 44.7**	**+0.5**
DZM				Sn	**Sn**	**12 07 21.7**	**-0.9**
	37nm,0.3s,baz=233,slow=20,SNR=6.1						
DZM				LR	LR	12 07 57.4	
	comp=Z,172nm,21.5s,baz=40,slow=38						
DZM	**Mont Dzumac**	**3.32**	**230**	Pn	**Pn**	**12 06 44.9**	**+0.8**
DZM	**Mont Dzumac**	**3.32**	**230**	P	**Pn**	**12 06 45.0**	**+0.8**
NOUC	**Port Laguerre**	**3.44**	**231**	P	**Pn**	**12 06 46.9**	**+1.1**
ONTNC	**Ouen Toro**	**3.47**	**227**	P	**Pn**	**12 06 47.6**	**+1.5**
KOUNC	**Koumac, New Ca**	**4.63**	**262**	P	**Pn**	**12 07 02.2**	**+0.1**
HNR	**Honiara**	**13.73**	**318**	LR	LR	12 13 30.8	
	comp=Z,70nm,19.2s,baz=216,slow=34						
URZ	**Urewera**	**19.52**	**161**	P	**P**	**12 10 18.1**	**-0.8**
	0.1nm,0.3s,baz=124,slow=24,SNR=2.5						
URZ	**Urewera**	**19.52**	**161**	IAmb	IAmb	12 10 49.1	
	comp=Z,51nm,1.5s						
CTA	**Charters Tower**	**21.54**	**266**	P	**P**	**12 10 41.8**	**+0.9**
	comp=Z,5.6nm,1.0s,baz=87,slow=10,SNR=2.2						
CTAO	**Charters Tower**	**21.54**	**266**	P	**P**	**12 10 42.2**	**+1.3**
CTAO				IAmb	IAmb	12 10 58.8	
	comp=Z,21nm,1.2s						
WR0	**Warramunga Arr**	**32.52**	**264**	P	**P**	**12 12 22.5**	**0.0**
WR0				IAmb	IAmb	12 13 02.4	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**32.68**	**264**	P	**P**	**12 12 23.7**	**-0.1**
WB0				IAmb	IAmb	12 12 33.8	
	comp=Z,13nm,1.3s						
WRA	**Warramunga Arr**	**32.71**	**264**	P	**P**	**12 12 23.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=92,slow=8.5,SNR=8.0						
WRA				PcP	**PcP**	**12 15 08.5**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=92,slow=3.4,SNR=1.2						
WRA	**Warramunga Arr**	**32.71**	**264**	IAmb	IAmb	12 12 24.9	
	comp=Z,0.2nm,1.1s						
AS31	**Alice Springs**	**32.91**	**257**	P	**P**	**12 12 26.3**	**+0.5**
AS31				IAmb	IAmb	12 12 36.3	
	comp=Z,1.3nm,0.7s						
ASAR	**Alice Springs**	**32.91**	**257**	P	**P**	**12 12 26.2**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=84,slow=8.7,SNR=20						
ASAR				LR	LR	12 25 21.7	
	comp=Z,63nm,19.3s,baz=128,slow=36						
QSPA	**South Pole Qui**	**70.13**	**180**	P	**P**	**12 17 04.8**	**+1.5**
PETK	**Petropavlovsk-**	**73.41**	**353**	P	**P**	**12 17 23.5**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=139,slow=4.0,SNR=5.9						
CMAR	**Chiang Mai Arr**	**78.73**	**294**	P	**P**	**12 17 55.3**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=133,slow=3.8,SNR=2.1						
NVAR	**Mina Array Bea**	**89.30**	**49**	P	**P**	**12 18 45.1**	**-2.5**
ILAR	**Eielson Array**	**90.91**	**17**	P	**P**	**12 18 53.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=235,slow=4.6,SNR=1.5						
ILAR				LR	LR	12 52 46.4	
	comp=Z,36nm,20.6s,baz=190,slow=31						
YKA	**Yellowknife Ar**	**101.31**	**27**	P	**Pdif**	**12 19 40.4**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=252,slow=4.1,SNR=2.0						
ARCES	**ARCESS Array B**	**125.72**	**345**	PKP	**PKiKP**	**12 24 52.2**	**0.0**
	comp=Z,5.8nm,1.1s,baz=354,slow=3.7,SNR=4.2						
ARCES	**ARCESS Array B**	**125.72**	**345**		**PKiKP**	**12 24 52.5**	**+0.3**
GERES	**GERESS Array B**	**145.07**	**331**	PKPbc	**PKPdf**	**12 25 28.0**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=55,slow=3.7,SNR=2.1						
GERES	**GERESS Array B**	**145.07**	**331**		**PKPbc**	**12 25 25.4**	**-2.4**

*SOME **17** 12:20:13.0, 44°72N×82°32E, h15km*
*NNC **17** 12:20:16.5±1.0, 44°74N×81°98E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=12.7km s-min=3.8km az=120.0*

ISC 17 12:20:14.9±1.1, 44°75N±0°05×82°04E±0°06, h10km, n28, σ1§60/42, 7C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.78**	**224**	⇑*e*P	**Pg**	**12 20 48.0**	**-1.1**
	11nm,0.2s						
KTMS				*e*S	**Sg**	**12 21 13.6**	**+1.4**
	81nm,0.5s						
KTMS	**Ketmen**	**1.78**	**224**	Pg	**Pg**	**12 20 48.0**	**-1.1**
	11nm,0.2s						
KTMS				Lg	Lg	12 21 13.7	
	81nm,0.5s						
MK31	**Makanchi Array**	**2.06**	**5**	⇑Pn	**Pg**	**12 20 52.8**	**-1.5**
	7.5nm,0.2s,baz=182,slow=14,SNR=602						
MK31				⇑Sn	**Sg**	**12 21 20.1**	**-0.8**
	6.6nm,0.2s,baz=186,slow=28,SNR=23						
MAKZ	**Makanchi**	**2.06**	**359**	⇑Pn	**Pb**	**12 20 52.4**	**-0.1**
	2.6nm,0.2s						
MAKZ				⇓Sn	**Sg**	**12 21 20.4**	**-0.8**
	12nm,0.3s						
PDGK	**Podgornoye**	**2.32**	**233**	Pg	**Pb**	**12 20 56.8**	**-0.2**
	3.3nm,0.2s						
PDGK				Lg	Lg	12 21 28.6	
	31nm,0.7s						
PDGK	**Podgornoye**	**2.32**	**233**	⇑Pn	**Pb**	**12 20 56.9**	**-0.1**
	3.2nm,0.3s						
PDGK				⇑Sn	**Sg**	**12 21 28.0**	**-1.6**
	28nm,0.6s						
SHLS	**Shalkode**	**2.45**	**230**	*e*P	**Pn**	**12 20 55.6**	**+0.5**
	18nm,0.2s						
SHLS				*e*S	**Sn**	**12 21 26.3**	**+1.1**
	51nm,0.5s						
SHLS	**Shalkode**	**2.45**	**230**	Pg	**Pn**	**12 20 55.3**	**+0.2**
	18nm,0.2s						
SHLS				Lg	Lg	12 21 26.0	
	51nm,0.5s						
TDK	**Taldyqorghan**	**2.60**	**277**	*e*P	**Pb**	**12 21 02.8**	**+1.2**
	45nm,0.3s						
TDK				*e*S	**Sg**	**12 21 38.8**	**+0.5**
	90nm,0.4s						
TDK	**Taldyqorghan**	**2.60**	**277**	Pg	**Pb**	**12 21 02.4**	**+0.8**
	45nm,0.3s						
TDK				Lg	Lg	12 21 37.8	
	90nm,0.4s						
UZB	**Uzynbulak**	**2.71**	**235**	*e*P	**Pb**	**12 21 03.2**	**-0.3**
	8.5nm,0.3s						
UZB				*e*S	**Sb**	**12 21 39.4**	**+2.6**
	12nm,0.3s						
UZB	**Uzynbulak**	**2.71**	**235**	Pg	**Pb**	**12 21 03.2**	**-0.3**
	8.5nm,0.3s						
UZB				Lg	Lg	12 21 39.2	
	12nm,0.3s						
KPKS	**Kokpek**	**2.74**	**243**	*e*P	**Pb**	**12 21 04.2**	**+0.1**
	24nm,0.1s						
KPKS				*e*S	**Sg**	**12 21 41.0**	**-1.9**
	71nm,0.4s						
ARXS	**Arharly**	**3.06**	**261**	*e*P	**Pb**	**12 21 11.0**	**+1.5**
	7.8nm,0.3s						
ARXS				*e*S	**Sg**	**12 21 52.5**	**-0.8**
	28nm,0.3s						
ARXS	**Arharly**	**3.06**	**261**	Pg	**Pb**	**12 21 11.0**	**+1.5**
	7.8nm,0.3s						
ARXS				Lg	Lg	12 21 53.3	
	28nm,0.3s						
SATY	**Saty**	**3.12**	**239**	*e*P	**Pb**	**12 21 10.7**	**+0.1**
	5.1nm,0.2s						
SATY				*e*S	**Sg**	**12 21 52.5**	**-2.7**
	30nm,0.3s						
SATY	**Saty**	**3.12**	**239**	Pg	**Pb**	**12 21 10.7**	**+0.1**
	5.1nm,0.2s						
SATY				Lg	Lg	12 21 52.5	
	30nm,0.3s						
ZSN	**Zaisan**	**3.34**	**35**	*e*P	**Pn**	**12 21 08.0**	**+0.8**
	3.7nm,0.1s						
ZSN				*e*S	**Sn**	**12 21 47.9**	**+0.9**
MDOK	**Medeo**	**3.94**	**248**	*e*P	**Pg**	**12 21 28.7**	**-1.6**
	4.4nm,0.4s						
MDOK				*e*S	**Sg**	**12 22 23.0**	**+1.6**
	6.8nm,0.4s						
MDOK	**Medeo**	**3.94**	**248**	⇑Pg	**Pg**	**12 21 28.4**	**-1.9**
	3.4nm,0.5s						
MDOK				⇓Lg	Lg	12 22 20.7	
	1.8nm,0.4s						
MDOK	**Medeo**	**3.94**	**248**	Pg	**Pg**	**12 21 28.9**	**-1.5**
	4.4nm,0.4s						
MDOK				Lg	Lg	12 22 23.3	
	6.8nm,0.4s						
KTBS	**Karatobe**	**3.99**	**257**	*e*P	**Pb**	**12 21 27.8**	**+2.5**
	2.1nm,0.3s						
KTBS				*e*S	**Sg**	**12 22 21.9**	**-1.1**
	7.6nm,0.7s						
KTBS	**Karatobe**	**3.99**	**257**	Pg	**Pb**	**12 21 28.0**	**+2.6**
	2.1nm,0.3s						
KTBS				Lg	Lg	12 22 22.2	
	7.6nm,0.7s						
TNSS	**Tian-Shan**	**4.06**	**247**	*e*P	**Pg**	**12 21 30.0**	**-2.7**
	1.7nm,0.3s						
TNSS				*e*S	**Sg**	**12 22 25.2**	**-0.1**
	1.5nm,0.3s						
TNSS	**Tian-Shan**	**4.06**	**247**	Pg	**Pg**	**12 21 30.0**	**-2.7**
	1.7nm,0.3s						
TNSS				Lg	Lg	12 22 25.4	
	1.5nm,0.3s						
KRBS	**Karabastau**	**4.70**	**259**	*e*P	**Pg**	**12 21 41.8**	**-3.0**
	0.3nm,0.2s						
KRBS				*e*S	**Sg**	**12 22 45.3**	**-0.4**
	5.1nm,0.4s						
KRBS	**Karabastau**	**4.70**	**259**	Pg	**Pg**	**12 21 41.5**	**-3.3**
	0.3nm,0.2s						
KRBS				Lg	Lg	12 22 45.3	
	5.1nm,0.4s						
KURBB	**Kurchatov Arra**	**6.34**	**339**	⇓Lg	Lg	12 23 36.7	
	7.5nm,0.7s						

*IDC **17** 12:40:10.4±1.5, 46°31N×85°00E, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.1/45, mbtmp3.4/2, Error ellipse: s-maj=42.1km s-min=13.3km az=21.0*

ISC 17 12:40:08.8±4.5, 47°N±1°×85°1E±0°1, h10km, n5, σ0§22/7, 2C-2D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**1.98**	**257**	⇑Pn	**Pb**	**12 40 45.1**	**+0.1**
	0.2nm,0.3s,baz=105,slow=16,SNR=5.7						
MK31				⇓Sn	**Sg**	**12 41 12.6**	**+0.1**
	0.4nm,0.4s,baz=104,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**1.98**	**257**	Pg	**Pb**	**12 40 45.0**	**0.0**
	0.2nm,0.3s,baz=103,slow=17,SNR=5.4						
MKAR				Lg	Lg	12 41 12.4	
	0.3nm,0.3s,baz=102,slow=28,SNR=9.0						
MAKZ	**Makanchi**	**2.19**	**258**	⇑Pn	**Pb**	**12 40 48.5**	**0.0**
	0.5nm,0.3s						
MAKZ				⇓Sn	**Sg**	**12 41 19.0**	**-0.2**
	0.2nm,0.3s						
WRA	**Warramunga Arr**	**80.22**	**134**	P	**P**	**12 52 19.8**	**+0.2**
	0.3nm,0.7s,baz=328,slow=6.5,SNR=1.4						
ASAR	**Alice Springs**	**83.18**	**136**	P	**P**	**12 52 34.8**	**-0.3**
	0.2nm,0.5s,baz=321,slow=6.1,SNR=6.8						

*IDC **17** 13:12:25.8±0.9, 15°86S×178°77W, h0km, mb3.8/8, mb1 4.1/9, mb1mx3.9/36, mbtmp3.8/9, ML5.0/1, MS4.1/22, Ms1 4.1/22, ms1mx3.9/32, Error ellipse: s-maj=50.3km s-min=19.0km az=144.0*
*GCMT **17** 13:12:32.7±0.2, 15°89S±0°01×178°53W±0°01, h19km±1km, MW5.0/109, Moment Tensor Solution. s46,c57; s109,c165; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.21±.10; Mθθ=0.51±.09; Mϕϕ=-0.30±.08; Mrθ=0.76±.21; Mθϕ=3.21±.08; Mϕr=0.53±.18; Best double couple: M=3.37000×10¹⁶ NP1=ϕs=5.00000°, δ=76.00000°, λ=-171.00000°. NP2=ϕs=273.00000°, δ=81.00000°, λ=-14.00000°. Principal axes: T 3.3530, Plg4.0000°, Azm319.0000°; N 0.0350, Plg74.0000°, Azm61.0000°; P -3.3880, Plg16.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **17** 13:12:35.6±1.9, 16°3S±0°2×179°1W±0°1, h89km±9km, mb4.2/4 Error ellipse: s-maj=28.2km s-min=14.3km az=168.0*

ISC 17 13:12:29.9±0.6, 15°8S±0°1×178°99W±0°08, h22km, n40, σ2§25/23, mb3.8/10, MS4.1/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.43**	**236**	Pn	**Pn**	**13 13 22.9**	**+0.8**
	5.3nm,0.3s,baz=235,slow=17,SNR=17						
MSVF				Sn	**Sn**	**13 14 03.4**	**+1.3**
	10.0nm,0.3s,baz=136,slow=22,SNR=7.4						
MSVF				LR	LR	13 14 54.0	
	comp=Z,5μm,19.3s,baz=144,slow=41						
MSVF	**Nonsavu**	**3.43**	**236**		**Pn**	**13 13 23.4**	**+1.3**
AFI	**Afiamalu**	**7.22**	**76**	LR	LR	13 16 23.4	
	comp=Z,2μm,21.7s,baz=248,slow=34						
NIUE	**Niue**	**9.24**	**112**	Pn	**Pn**	**13 14 43.9**	**+2.0**
RAO	**Raoul Island**	**13.42**	**176**	LR	LR	13 20 03.1	
	comp=Z,1μm,19.3s,baz=340,slow=34						
DZM	**Mont Dzumac** 70nm,1.1s	**15.12**	**243**	*e*P	**P**	**13 16 13.3**	**+5.9**
DZM				*e*LR	LR	13 19 39.7	
	comp=Z,2μm,26.0s						
DZM	**Mont Dzumac**	**15.12**	**243**	Pn	**P**	**13 16 08.3**	**+0.9**
	0.2nm,0.3s,baz=76,slow=23,SNR=1.6						
DZM				LR	LR	13 21 01.7	
	comp=Z,1μm,21.6s,baz=68,slow=34						
DZM	**Mont Dzumac**	**15.12**	**243**	Pn	**Pn**	**13 16 01.5**	**-0.9**
RAR	**Rarotonga**	**18.99**	**109**	LR	LR	13 22 12.1	
	comp=Z,184nm,21.4s,baz=272,slow=31						
RAR	**Rarotonga**	**18.99**	**109**	P	**P**	**13 16 49.1**	**-1.0**
HNR	**Honiara**	**21.50**	**285**	LR	LR	13 24 27.4	
	comp=Z,1μm,19.8s,baz=121,slow=33						
PPT2	**Papeete2**	**28.21**	**98**	*e*LR	LR	13 25 20.9	
	comp=Z,211nm,23.8s						
PPT	**Papeete**	**28.21**	**98**	LR	LR	13 26 23.4	
	comp=Z,106nm,21.0s,baz=310,slow=30						
TBI	**Tubuai** 93nm,25.8s	**28.77**	**110**	*e*S	**S**	**13 23 15.7**	**+0.9**
TBI				*e*LQ	LQ	13 24 23.2	
	893nm,30.2s						
TBI				*e*LR	LR	13 25 41.4	
	comp=Z,740nm,29.5s,baz=290						
TAOE	**Nuku Hiva Isla**	**38.52**	**84**	*e*LR	LR	13 30 18.0	
	comp=Z,276nm,25.0s						
STKA	**Stephens Creek**	**39.20**	**239**	P	**P**	**13 19 57.0**	**+0.4**
	5.6nm,0.9s,baz=85,slow=4.7,SNR=7.4						
STKA				LR	LR	13 34 15.4	
	comp=Z,349nm,21.6s,baz=62,slow=33						
STKA	**Stephens Creek**	**39.20**	**239**	P	**P**	**13 19 52.8**	**-3.8**
RSD	**Rainshed**	**42.10**	**34**	P	**P**	**13 20 24.3**	**+3.6**
WB0	**Warramunga Arr**	**44.46**	**258**	P	P	13 20 35.5	-4.3
WB0				IAmb	IAmb	13 20 49.7	
	comp=Z,3.1nm,0.9s						
WRA	**Warramunga Arr**	**44.51**	**258**	P	**P**	**13 20 40.7**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=90,slow=8.4,SNR=3.4						
WRA				LR	LR	13 39 58.2	
	comp=Z,213nm,18.1s,baz=90,slow=37						
ASAR	**Alice Springs**	**44.87**	**252**	P	**P**	**13 20 43.8**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=85,slow=8.3,SNR=27						
ASAR	**Alice Springs**	**44.87**	**252**	P	**P**	**13 20 39.1**	**-3.9**
VNDA	**Vanda**	**62.48**	**185**	P	**P**	**13 22 50.3**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=304,slow=15,SNR=1.3						
VNDA				LR	LR	13 44 54.1	
	comp=Z,86nm,20.6s,baz=16,slow=31						
JHJ	**Hachijo jima 2**	**62.59**	**321**	LR	LR	13 45 04.6	
	comp=Z,83nm,20.2s,baz=100,slow=31						
RPN	**Rapa Nui**	**65.10**	**113**	LR	LR	13 43 55.3	
	comp=Z,91nm,21.9s,baz=286,slow=29						
PETK	**Petropavlovsk-**	**71.52**	**345**	LR	LR	13 49 29.7	
	comp=Z,214nm,21.1s,baz=148,slow=31						
KSRS	**Korea Array**	**72.77**	**318**	LR	LR	13 53 30.9	
	comp=Z,74nm,18.2s,baz=124,slow=34						
QSPA	**South Pole Qui**	**74.24**	**180**	P	**P**	**13 24 02.9**	**-2.2**
QSPA				IAmb	IAmb	13 24 11.4	
	comp=Z,4.6nm,0.9s						
USRK	**Ussuriysk Ar.**	**74.58**	**326**	LR	LR	13 52 03.9	
	comp=Z,70nm,21.5s,baz=128,slow=32						
PFO	**Pinyon Flats O**	**77.20**	**49**	LR	LR	13 49 48.4	
	comp=Z,162nm,20.5s,baz=253,slow=29						
YBH	**Yreka Blue Hor**	**77.26**	**40**	LR	LR	13 50 12.1	
	comp=Z,186nm,20.1s,baz=238,slow=29						
NVAR	**Mina Array Bea**	**78.31**	**44**	P	**P**	**13 24 28.1**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=230,slow=9.9,SNR=6.6						
ILAR	**Eielson Array**	**83.97**	**13**	P	**P**	**13 24 57.2**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=229,slow=6.3,SNR=2.0						
TXAR	**Lajitas Array**	**85.35**	**58**	P	**P**	**13 25 04.7**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=227,slow=6.1,SNR=2.5						
TXAR				LR	LR	13 56 23.6	
	comp=Z,143nm,19.0s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**85.35**	**58**	P	**P**	**13 25 04.9**	**-1.0**
PDAR	**Pinedale Array**	**86.22**	**44**	P	**P**	**13 25 08.5**	**-1.5**
	comp=Z,0.1nm,0.6s,baz=235,slow=3.2,SNR=1.6						
PDAR				LR	LR	13 57 11.0	
	comp=Z,77nm,19.3s,baz=233,slow=31						
CMAR	**Chiang Mai Arr**	**87.66**	**290**	LR	LR	14 01 02.2	
	comp=Z,46nm,20.4s,baz=160,slow=33						
YKA	**Yellowknife Ar**	**92.66**	**25**	LR	LR	14 03 22.4	
	comp=Z,83nm,18.6s,baz=0.0,slow=33						
PLCA	**Paso Flores**	**93.18**	**134**	LR	LR	13 57 31.6	
	comp=Z,67nm,21.0s,baz=181,slow=29						
GERES	**GERESS Array B**	**145.45**	**345**	PKPbc	**PKPbc**	**13 32 06.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=36,slow=2.5,SNR=3.8						

IDC 17 13:14:42.3±1.2, 2°70S×139°00E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/41, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=27.1km s-min=21.9km az=160.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.71**	**84**	Pg	Pn	13 15 14.1	+0.5
	11nm,0.3s,baz=246,slow=20,SNR=42						
JAY				Lg	Lg	13 15 32.5	
	12nm,0.3s,baz=82,slow=8.2,SNR=5.3						
JAY				LR	LR	13 16 07.1	
	comp=Z,106nm,19.2s,baz=0.5,slow=50						
WRA	**Warramunga Arr**	**17.73**	**195**	P	Pn	13 18 50.6	-0.3
	0.2nm,0.3s,baz=16,slow=13,SNR=14						
ASAR	**Alice Springs**	**21.42**	**193**	P	P	13 19 32.1	+0.1
	1.9nm,0.9s,baz=18,slow=11,SNR=16						
MKAR	**Makanchi Array**	**69.96**	**322**	P	P	13 25 56.3	+0.6
	0.7nm,0.6s,baz=106,slow=6.9,SNR=10						
ILAR	**Eielson Array**	**85.70**	**24**	P	P	13 27 21.8	-1.2
	0.5nm,0.7s,baz=250,slow=4.8,SNR=4.9						

DDA 17 13:20:46.4, 37°05N×34°88E, h7km±1km, ML1.3, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DED	**Mersin**	**0.11**	**215**	*i* P	Pg	13 20 49.5	+0.6
DED				IAML		13 20 52.0	
	comp=E,90nm,0.1s						
DED				IAML		13 20 53.0	
	comp=N,126nm,0.6s						
KERG	**Konya-Eregli**	**0.70**	**301**	*i* P	Pg	13 21 00.1	+0.1
KERG				IAML		13 21 13.0	
	comp=E,10nm,0.5s						
KERG				IAML		13 21 17.0	
	comp=N,8.3nm,0.3s						
KIZK	**Mersin**	**0.82**	**226**	*i* P	Pb	13 21 02.6	-0.4
KIZK				*i* S	Sb	13 21 13.8	-0.4
KIZK				IAML		13 21 14.0	
	comp=E,17nm,1.2s						
KIZK				IAML		13 21 21.0	
	comp=N,18nm,0.9s						

*IDC **17** 13:22:44.4±1.4, 34°42N×27°14E, h0km, mb3.4/5, mb1 3.5/9, mb1mx3.3/51, mbtmp3.3/9, ML3.4/4, MS2.3/3, Ms1 2.3/3, ms1mx2.1/32, Error ellipse: s-maj=32.3km s-min=20.7km az=177.0*
*ATH **17** 13:22:47.9, 35°07N×26°86E, h12km±3km, ML3.3/6, Error ellipse: s-maj=6.0km s-min=1.3km az=340.0*
*ISK **17** 13:22:48.7, 35°29N×26°70E, h5km, ML3.2/12*

ISC 17 13:22:47.8±1.6, 35°05N±0°07×26°87E±0°04, h4km±11km, n50, σ1§68/51, mb3.4/5, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.54**	**278**	P	**Pg**	**13 22 57.5**	**-0.6**
ZKR				S	**Sg**	**13 23 05.8**	**+0.6**
ZKR				AML	AML	13 23 13.5	
	comp=E,5276μm,0.5s						
ZKR				AML	AML	13 23 14.5	
	comp=N,3772μm,0.6s						
ZKR	**Zakros**	**0.54**	**278**	S	**Sg**	**13 23 05.6**	**+0.4**
ZKR	**Zakros**	**0.54**	**278**	PG	**Pg**	**13 22 57.5**	**-0.6**
ZKR	**Zakros**	**0.54**	**278**	P	**Pg**	**13 22 57.6**	**-0.6**
KARP	**Karpathos**	**0.56**	**25**	P	**Pg**	**13 22 58.1**	**-0.4**
KARP				S	**Sg**	**13 23 05.2**	**-0.5**
KARP				AML	AML	13 23 16.0	
	comp=N,15928μm,0.2s						
KARP				AML	AML	13 23 16.1	
	comp=E,16580μm,0.4s						
KARP	**Karpathos**	**0.56**	**25**	P	**Pg**	**13 22 57.7**	**-0.7**
KARP				S	**Sg**	**13 23 05.9**	**+0.2**
KARP	**Karpathos**	**0.56**	**25**	PG	**Pg**	**13 22 57.8**	**-0.7**
STIA	**Sitia Lasithi**	**0.66**	**284**	P	**Pg**	**13 22 58.5**	**-1.9**
NPS	**Neapolis**	**1.05**	**282**	P	**Pg**	**13 23 07.3**	**-0.7**
NPS				S	**Sg**	**13 23 21.3**	**-0.4**
NPS				AML	AML	13 23 31.8	
	comp=N,2590μm,0.6s						
NPS				AML	AML	13 23 38.2	
	comp=E,3394μm,0.5s						
NPS	**Neapolis**	**1.05**	**282**	P	**Pg**	**13 23 07.1**	**-0.9**
HRKL	**Herakleio**	**1.47**	**281**	PN	**Pn**	**13 23 14.7**	**-0.4**
ARG	**Arkhangelos**	**1.55**	**41**	P	**Pn**	**13 23 15.9**	**-0.2**
ARG				AML	AML	13 23 50.5	
	comp=N,1077μm,0.4s						
ARG				AML	AML	13 23 51.6	
	comp=E,1827μm,0.6s						
ARG	**Arkhangelos**	**1.55**	**41**	P	**Pb**	**13 23 17.1**	**0.0**
ARG	**Arkhangelos**	**1.55**	**41**	PN	**Pg**	**13 23 17.8**	**+0.2**
NIS1	**Nisyros Isl.**	**1.57**	**9**	PN	**Pn**	**13 23 16.2**	**-0.3**
IDI	**Anoyia**	**1.64**	**279**	Pn	**Pb**	**13 23 18.6**	**-0.1**
	comp=E,7.2nm,0.3s,baz=108,slow=19,SNR=13						
IDI				Sn	**Sg**	**13 23 44.4**	**+3.8**
	comp=E,19nm,0.3s,baz=308,slow=20,SNR=7.6						
IDI	**Anoyia**	**1.64**	**279**	P	**Pn**	**13 23 17.3**	**-0.1**
IDI				AML	AML	13 23 57.5	
	comp=N,791μm,0.6s						
IDI				AML	AML	13 24 02.1	
	comp=E,552μm,0.5s						
IDI	**Anoyia**	**1.64**	**279**	P	**Pb**	**13 23 18.4**	**-0.2**
IDI	**Anoyia**	**1.64**	**279**	PN	**Pn**	**13 23 17.7**	**+0.3**
SIVA	**Sivas**	**1.69**	**270**	P	**Pn**	**13 23 18.4**	**+0.3**
SIVA				AML	AML	13 24 02.5	

ZALV Zalesovo Beam 44.07 46 P **P** **13 30 55.2 -1.4**
comp=E,0.6nm,0.5s,baz=270,slow=7.3,SNR=2.0
SONM Songino Array 58.47 51 LR LR 14 01 25.1
comp=E,99nm,21.5s,baz=233,slow=40

NOU ***17*** *13:28:13.2, 34°.55S × 177°.75W, h101km, mb4.5, South of Kermadec Islands*
IDC ***17*** *13:28:21.3±1.0, 34°.69S × 179°.26W, h0km, mb4.6/4, mb1 4.7/6, mb1mx4.1/32, mbtmp4.5/6, ML4.2/2, MS3.8/10, Ms1 3.8/10, ms1mx3.5/27, Error ellipse: s-maj=32.7km s-min=23.7km az=110.0*
WEL ***17*** *13:28:25.6±1.2, 35°.S±19°×17°.9W±2°.2, h33km, M4.6/12, ML4.8/12, MLv4.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=130.9*
NEIC ***17*** *13:28:27.1±1.5, 34°.8S±0°.1×179°.2W±0°.1, h43km±8km, mb4.6/12, Error ellipse: s-maj=17.5km s-min=15.5km az=45.0*
ISC 17 13:28:26.2±0.8, 34°.94S±0°.08×178°.9W±0°.1, h42km, n107, σ1§51/109, mb4.5/9, MS3.8/11, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.48**	**220**		**Pn**	**13 29 16.8**	**-1.1**
MXZ	**Matakaoa Point**	**3.48**	**220**	P	**Pn**	**13 29 16.4**	**-1.5**
MXZ				S	**Sn**	**13 29 55.8**	**-2.1**
WMGZ	**Waiomatatini S**	**3.63**	**217**	P	**Pn**	**13 29 20.6**	**+0.8**
WMGZ				S	**Sn**	**13 30 02.7**	**+1.4**
PKGZ	**Pakihiroa**	**3.85**	**219**	P	**Pn**	**13 29 23.0**	**0.0**
PKGZ				S	**Sn**	**13 30 06.4**	**-0.6**
PUZ	**Puketiti**	**3.90**	**216**	P	**Pn**	**13 29 23.4**	**-0.3**
PUZ				S	**Sn**	**13 30 07.9**	**-0.3**
HAZ	**Te Kaha**	**3.91**	**223**	P	**Pn**	**13 29 21.3**	**-2.5**
HAZ				S	**Sn**	**13 30 11.1**	**+2.7**
RUGZ	**Raukumara Rang**	**4.12**	**222**	P	**Pn**	**13 29 26.8**	**+0.1**
RUGZ				S	**Sn**	**13 30 14.9**	**+1.2**
TWGZ	**Tauwhareparae**	**4.12**	**217**	P	**Pn**	**13 29 26.4**	**-0.2**
TWGZ				S	**Sn**	**13 30 15.4**	**+1.8**
CNGZ	**Carnagh Statio**	**4.26**	**213**	P	**Pn**	**13 29 28.6**	**+0.1**
CNGZ				S	**Sn**	**13 30 19.4**	**+2.5**
TKGZ	**Te Karaka**	**4.39**	**216**	P	**Pn**	**13 29 30.7**	**+0.4**
TKGZ				S	**Sn**	**13 30 20.4**	**+0.2**
WHRZ	**Whale Island**	**4.45**	**228**	P	**Pn**	**13 29 33.4**	**+2.1**
WHRZ				S	**Sn**	**13 30 24.2**	**+2.4**
MWZ	**Matawai**	**4.47**	**220**	P	**Pn**	**13 29 31.2**	**-0.3**
MWZ				S	**Sn**	**13 30 21.8**	**-0.4**
RIGZ	**Rimuhau**	**4.64**	**215**	P	**Pn**	**13 29 33.4**	**-0.4**
URZ	**Urewera**	**4.64**	**223**	Pn	**Pn**	**13 29 33.4**	**-0.4**
	11nm,0.3s,baz=300,slow=24,SNR=72						
URZ				Sn	**Sn**	**13 30 26.3**	**-0.1**
	23nm,0.3s,baz=156,slow=21,SNR=6.8						
URZ	**Urewera**	**4.64**	**223**	P	**Pn**	**13 29 33.5**	**-0.3**
RAGZ	**Rawiri**	**4.65**	**219**	P	**Pn**	**13 29 33.5**	**-0.5**
PRGZ	**Paritu Road**	**4.76**	**212**	P	**Pn**	**13 29 34.4**	**-1.0**
MHGZ	**Mahia Peninsul**	**4.94**	**211**	P	**Pn**	**13 29 38.0**	**+0.1**
RTZ	**Ruatahuna**	**4.97**	**221**	P	**Pn**	**13 29 37.9**	**-0.4**
TARZ	**Mount Tarawera**	**4.98**	**227**	P	**Pn**	**13 29 40.1**	**+1.5**
OMRZ	**Omania**	**4.98**	**229**	P	**Pn**	**13 29 38.4**	**-0.1**
MUGZ	**Murupara**	**4.99**	**224**	P	**Pn**	**13 29 37.6**	**-1.0**
RRRZ	**Republican Roa**	**5.04**	**226**	P	**Pn**	**13 29 39.6**	**+0.3**
HLRZ	**Highlands Stat**	**5.08**	**228**	P	**Pn**	**13 29 40.6**	**+0.7**
RAHZ	**Arahi**	**5.13**	**218**	P	**Pn**	**13 29 41.4**	**+0.8**
HSRZ	**Hossack Road**	**5.19**	**228**	P	**Pn**	**13 29 43.5**	**+2.2**
HRRZ	**Handcock Road**	**5.21**	**227**	P	**Pn**	**13 29 41.9**	**+0.2**
MTHZ	**Maungataniwha**	**5.21**	**220**	P	**Pn**	**13 29 42.0**	**+0.3**
ALRZ	**Allen Road**	**5.29**	**225**	P	**Pn**	**13 29 42.6**	**-0.1**
TOZ	**Tahuroa Road**	**5.34**	**237**	P	**Pn**	**13 29 43.2**	**-0.2**
MBAZ	**Motutapu North**	**5.40**	**248**	P	Pn	13 29 50.9	+6.8
NMHZ	**Naumai**	**5.41**	**219**	P	**Pn**	**13 29 45.4**	**+1.0**
MRHZ	**Matea Rd**	**5.43**	**223**	P	**Pn**	**13 29 44.1**	**-0.6**
ARHZ	**Aropaoanui**	**5.45**	**216**	P	**Pn**	**13 29 45.2**	**+0.4**
KUTZ	**Kaahu Road**	**5.56**	**229**	P	**Pn**	**13 29 46.1**	**-0.3**
BKZ	**Black Stump Fm**	**5.63**	**220**		**Pn**	**13 29 45.6**	**-1.8**
BKZ	**Black Stump Fm**	**5.63**	**220**	P	**Pn**	**13 29 46.8**	**-0.6**
MCHZ	**McNeill Hill**	**5.73**	**217**	P	**Pn**	**13 29 47.8**	**-1.0**
RATZ	**Rangitukua**	**5.83**	**226**	P	**Pn**	**13 29 49.6**	**-0.5**
RITZ	**Rihia Road**	**5.85**	**225**	P	**Pn**	**13 29 51.0**	**+0.6**
KWHZ	**Kaweka Forest**	**5.86**	**219**	P	**Pn**	**13 29 49.5**	**-1.0**
KAHZ	**Kahuranaki**	**5.92**	**214**	P	**Pn**	**13 29 48.8**	**-2.6**
TMVZ	**Te Maari**	**6.03**	**225**	P	**Pn**	**13 29 52.5**	**-0.5**
NTVZ	**North Tongarir**	**6.04**	**225**	P	**Pn**	**13 29 52.5**	**-0.5**
ETVZ	**East Tongariro**	**6.04**	**224**	P	**Pn**	**13 29 52.6**	**-0.6**
KRHZ	**Kereru**	**6.05**	**218**	P	**Pn**	**13 29 52.0**	**-1.2**
KRVZ	**Karewarewa**	**6.05**	**225**	P	**Pn**	**13 29 53.3**	**0.0**
OTVZ	**Oturere**	**6.08**	**225**	P	**Pn**	**13 29 53.1**	**-0.7**
BHHZ	**Black Hill Sta**	**6.09**	**220**	P	**Pn**	**13 29 52.8**	**-0.9**
NNVZ	**North Ngauruho**	**6.09**	**225**	P	**Pn**	**13 29 54.6**	**+0.7**
WTVZ	**West Tongariro**	**6.10**	**225**	P	**Pn**	**13 29 54.4**	**+0.5**
SNVZ	**South Ngauruho**	**6.12**	**224**	P	**Pn**	**13 29 53.6**	**-0.6**
HIZ	**Hauiti**	**6.19**	**233**	P	**Pn**	**13 29 54.9**	**-0.1**
OUZ	**Omahuta**	**6.20**	**265**	Pn	**Pn**	**13 29 55.1**	**+0.2**
MOVZ	**Moawhango**	**6.20**	**222**	P	**Pn**	**13 29 54.2**	**-1.1**
PNHZ	**Pukenui**	**6.34**	**217**	P	**Pn**	**13 29 55.7**	**-1.5**
WPHZ	**Waipukarau**	**6.34**	**215**	P	**Pn**	**13 29 56.8**	**-0.4**
PRHZ	**Porangahau**	**6.41**	**213**	P	**Pn**	**13 29 55.9**	**-2.2**
VRZ	**Vera Road**	**6.60**	**229**	P	**Pn**	**13 30 00.2**	**-0.5**
DVHZ	**Dannevirke**	**6.65**	**215**	P	**Pn**	**13 30 00.1**	**-1.3**
WAZ	**Wanganui**	**6.87**	**224**	P	**Pn**	**13 30 04.6**	**+0.2**
POWZ	**Post Office Ro**	**6.92**	**217**	P	**Pn**	**13 30 04.8**	**-0.3**
BFZ	**Birch Farm**	**6.92**	**213**	Pn	**Pn**	**13 30 02.0**	**-3.1**
NEZ	**North Egmont**	**7.10**	**230**	P	**Pn**	**13 30 10.0**	**+2.3**
PKE	**Pukeiti**	**7.13**	**231**	P	**Pn**	**13 30 10.8**	**+2.8**
MRZ	**Mangatainoka R**	**7.22**	**216**	P	**Pn**	**13 30 07.0**	**-2.1**
HOWZ	**Holdsworth Sta**	**7.43**	**215**	P	**Pn**	**13 30 10.5**	**-1.6**
MTW	**Mount Morrison**	**7.64**	**214**	P	**Pn**	**13 30 12.9**	**-2.1**
MSWZ	**Moikau Station**	**7.96**	**214**	P	**Pn**	**13 30 16.8**	**-2.6**
KHZ	**Kahutara**	**9.54**	**216**	P	**Pn**	**13 30 39.1**	**-1.9**
INZ	**Inchbonnie**	**10.85**	**221**	P	**Pn**	**13 30 56.1**	**-2.7**
OXZ	**Oxford**	**10.96**	**217**	Pn	**Pn**	**13 30 59.7**	**-0.7**
RPZ	**Rata Peaks**	**11.74**	**219**	Pn	**Pn**	**13 31 08.2**	**-2.8**
	1.7nm,0.3s,baz=48,slow=4.7,SNR=7.5						
RPZ				Sn	Sn	13 33 08.6	-12
	1.7nm,0.3s,baz=351,slow=18,SNR=8.2						
DZM	**Mont Dzumac**	**18.18**	**311**	*e*Pn	Pn	13 32 44.3	+8.8
	11nm,0.7s						
DZM				*e*LR	LR	13 36 35.0	
	comp=Z,676nm,23.6s						
DZM	**Mont Dzumac**	**18.18**	**311**	LR	LR	13 38 01.6	
	comp=Z,489nm,18.8s,baz=118,slow=33						
RAR	**Rarotonga**	**21.63**	**56**	LR	LR	13 42 34.0	
	comp=Z,129nm,18.6s,baz=252,slow=39						
TBI	**Tubuai**	**28.04**	**74**	*e*LR	LR	13 41 21.0	
	comp=Z,160nm,29.5s						
PPT2	**Papeete2**	**31.26**	**64**	*e*LR	LR	13 42 48.0	
	comp=Z,143nm,23.2s						
PPT	**Papeete**	**31.27**	**64**	LR	LR	13 47 58.9	
	comp=Z,78nm,18.7s,baz=130,slow=37						
STKA	**Stephens Creek**	**33.02**	**264**	LR	LR	13 47 13.8	
	comp=Z,218nm,19.4s,baz=77,slow=35						
PMG	**Port Moresby**	**40.12**	**301**	LR	LR	13 50 06.8	
	comp=Z,298nm,19.8s,baz=114,slow=33						
AS31	**Alice Springs**	**42.36**	**272**		**P**	**13 36 15.1**	**-1.4**
ASAR	**Alice Springs**	**42.36**	**272**	P	**P**	**13 36 14.7**	**-1.8**
	5.7nm,0.6s,baz=116,slow=7.5,SNR=127						
ASAR				PcP	**PcP**	**13 38 08.8**	**-0.6**
	0.7nm,0.8s,baz=125,slow=4.6,SNR=2.5						
ASAR				LR	LR	13 54 25.4	
	comp=Z,215nm,18.5s,baz=129,slow=37						
ASAR	**Alice Springs**	**42.36**	**272**	P	**P**	**13 36 14.2**	**-2.3**
WR0	**Warramunga Arr**	**43.58**	**277**	P	**P**	**13 36 23.9**	**-2.5**
WB2	**Warramunga Arr**	**43.75**	**277**	P	**P**	**13 36 26.2**	**-1.5**
WB2				IAmb	IAmb	13 36 26.9	
	comp=Z,8.9nm,0.6s						
WRAB	**Tennant Creek**	**43.75**	**277**	P	**P**	**13 36 26.0**	**-1.7**
WRAB				IAmb	IAmb	13 36 26.8	
	comp=Z,7.4nm,0.6s						
WRA	**Warramunga Arr**	**43.76**	**277**	P	**P**	**13 36 26.0**	**-1.8**
	comp=Z,6.4nm,0.6s,baz=119,slow=7.5,SNR=95						
WRA				PcP	**PcP**	**13 38 13.5**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=127,slow=3.7,SNR=2.2						
WRA				LR	LR	13 55 14.4	
	comp=Z,180nm,18.9s,baz=135,slow=37						
WRA	**Warramunga Arr**	**43.76**	**277**	P	**P**	**13 36 26.1**	**-1.7**
WB0	**Warramunga Arr**	**43.80**	**278**	P	**P**	**13 36 26.3**	**-1.8**
WB0				IAmb	IAmb	13 36 27.3	
	comp=Z,8.2nm,0.6s						
FORT	**Forrest**	**44.36**	**260**		**P**	**13 36 30.6**	**-1.9**
KNRA	**Kununurra**	**50.50**	**279**	P	**P**	**13 37 18.9**	**-1.4**
CASY	**Casey**	**50.83**	**209**	P	**P**	**13 37 24.7**	**+2.6**
CASY				IAmb	IAmb	13 37 35.4	
	comp=Z,5.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.79**	**274**	P	**P**	**13 37 27.9**	**-2.2**
FITZ				IAmb	IAmb	13 37 40.5	
	comp=Z,4.3nm,0.9s						
MORW	**Morawa**	**54.67**	**257**	P	**P**	**13 37 48.4**	**-2.8**
QSPA	**South Pole Qui**	**55.19**	**180**	P	**P**	**13 37 58.1**	**+3.7**
	comp=Z,4.0nm,1.0s,baz=355,slow=0.9,SNR=6.1						
QSPA	**South Pole Qui**	**55.19**	**180**	P	**P**	**13 37 58.3**	**+3.9**
QSPA				IAmb	IAmb	13 38 26.9	
	comp=Z,6.7nm,1.1s						
PETK	**Petropavlovsk-**	**90.03**	**346**	P	**P**	**13 41 20.3**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=136,slow=6.9,SNR=10						
CMAR	**Chiang Mai Arr**	**94.22**	**289**	LR	LR	14 27 13.3	
	comp=Z,12nm,18.9s,baz=185,slow=38						
MA2	**Magadan**	**97.47**	**345**	LR	LR	14 23 32.8	
	comp=Z,26nm,18.2s,baz=136,slow=34						
SEY	**Seymchan**	**100.22**	**347**	LR	LR	14 21 55.6	
	comp=Z,102nm,20.5s,baz=32,slow=32						
MKAR	**Makanchi Array**	**120.08**	**308**	PKP	**PKPdf**	**13 47 11.7**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=116,slow=3.4,SNR=2.1						
KBZ	**Khabaz**	**146.83**	**298**	PKPbc	**PKPbc**	**13 48 03.3**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=31,slow=5.9,SNR=2.4						
FINES	**FINESS Array B**	**149.09**	**337**	PKPbc	**PKPbc**	**13 48 09.3**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=29,slow=4.4,SNR=9.2						
NOA	**NORSAR Array B**	**153.09**	**349**	PKPbc	**PKiKP**	**13 48 21.5**	**+2.8**
	comp=Z,0.5nm,0.6s,baz=18,slow=4.1,SNR=2.4						
AKASG	**Malin Array Be**	**154.28**	**316**	PKPbc	**PKiKP**	**13 48 21.7**	**+0.4**
	comp=Z,2nm,0.3s,baz=59,slow=2.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**158.30**	**181**	PKPab	**PKPab**	**13 48 54.3**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=178,slow=2.9,SNR=3.8						

IDC ***17*** *13:30:10.3±0.8, 55°.51N × 163°.09E, h0km, mb3.7/12, mb1 3.9/13, mb1mx3.7/51, mbtmp3.7/13, ML3.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/40, Error ellipse: s-maj=22.0km s-min=14.7km az=161.0*
KRSC ***17*** *13:30:11.9±0.9, 55°.39N × 163°.20E, h21km±22km, ML4.2*
ISC 17 13:30:11.0±1.2, 55°.44N±0°.03×163°.24E±0°.04, h5km±8km, n58, σ1§52/72, mb3.7/12, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.81**	**343**	*e*P	**Pg**	**13 30 27.4**	**+0.9**
KBTR				*e*S	**Sg**	**13 30 38.7**	**+1.8**
KBG	**Krutoberegovo**	**0.87**	**340**	*e*P	**Pg**	**13 30 28.5**	**+0.8**
KBG				*e*S	**Sg**	**13 30 40.7**	**+1.7**
MKZ	**Mys Kozlova**	**1.24**	**225**	*e*P	**Pg**	**13 30 34.1**	**-0.8**
MKZ				*e*S	**Sg**	**13 30 50.2**	**-0.8**
SMKR	**Semkarok**	**1.52**	**320**	*e*P	**Pn**	**13 30 39.2**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**1.53**	**290**	*e*P	**Pn**	**13 30 39.3**	**+0.2**
BKI	**Bering**	**1.58**	**98**	*e*P	**Pg**	**13 30 40.6**	**-0.6**
BKI				*e*S	**Sg**	**13 31 01.7**	**+0.1**
BDR	**Baidarnaya**	**1.61**	**315**	*e*P	**Pn**	**13 30 39.6**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.64**	**290**	*e*P	**Pn**	**13 30 40.3**	**-0.4**
TUMD	**Tumrok D**	**1.64**	**263**	*e*P	**Pn**	**13 30 40.8**	**+0.2**
TUMD				*e*S	**Sn**	**13 31 02.0**	**-0.2**
SRKR	**Sorokina**	**1.68**	**317**	*e*P	**Pn**	**13 30 42.4**	**+1.2**
SRKR				*e*S	**Sn**	**13 31 05.0**	**+1.8**
KRSR	**Krestovskiy**	**1.70**	**298**	*e*P	**Pn**	**13 30 41.3**	**-0.2**
KLY	**Klyuchi**	**1.70**	**302**	*e*P	**Pn**	**13 30 39.9**	**-1.5**
KLY				*e*S	**Sn**	**13 31 00.5**	**-3.0**
KZV	**Kizimen**	**1.72**	**260**	*e*P	**Pn**	**13 30 41.7**	**-0.1**
KZV				*e*S	**Sn**	**13 31 03.8**	**-0.4**
KIRR	**Kirishev**	**1.72**	**289**	*e*P	**Pn**	**13 30 41.9**	**+0.1**
KIRR				*e*S	**Sn**	**13 31 04.1**	**-0.2**
KMNR	**Kamenistaya**	**1.73**	**282**	*e*P	**Pn**	**13 30 42.3**	**+0.3**
KMNR				*e*S	**Sn**	**13 31 04.6**	**+0.1**
TUMR	**Tumrok**	**1.78**	**266**	*e*P	**Pn**	**13 30 42.8**	**+0.3**
TUMR				*e*S	**Sn**	**13 31 05.4**	**-0.2**
KPT	**Kopyto**	**1.79**	**288**	*e*P	**Pn**	**13 30 43.5**	**+0.8**
KPT				*e*S	**Sn**	**13 31 06.6**	**+0.7**
SRDR	**Sredinnyy**	**2.17**	**295**	*e*P	**Pn**	**13 30 49.0**	**+1.1**
SRDR				*e*S	**Sn**	**13 31 15.6**	**+0.3**
KII	**Karymskiy**	**2.61**	**239**	*e*P	**Pn**	**13 30 55.0**	**+1.0**
ESO	**Esso**	**2.62**	**283**	*e*P	**Pn**	**13 30 55.6**	**+1.6**
SPN	**Mys Shipunski**	**3.01**	**220**	*e*P	**Pn**	**13 30 59.9**	**+0.5**
SPN				*e*S	**Sn**	**13 31 33.7**	**-2.2**
NLC	**Nalytchevo**	**3.22**	**227**	P	**Pn**	**13 31 03.0**	**+0.7**
NLC				*e*S	**Sn**	**13 31 41.0**	**0.0**
SDLR	**Sedlovina**	**3.35**	**231**	*e*P	**Pn**	**13 31 05.4**	**+1.3**
KRER	**Koryakskii**	**3.39**	**233**	*e*P	**Pn**	**13 31 07.0**	**+2.2**
SMAR	**Somma**	**3.40**	**232**	*e*P	**Pn**	**13 31 06.1**	**+1.2**
KRX	**Arik**	**3.40**	**234**	*e*P	**Pn**	**13 31 06.2**	**+1.3**
UGLR	**Uglovaya**	**3.42**	**231**	*e*P	**Pn**	**13 31 06.6**	**+1.5**
AVH	**Avacha**	**3.42**	**232**	*e*P	**Pn**	**13 31 06.5**	**+1.4**
KOK	**Koryaka**	**3.45**	**233**	*e*P	**Pn**	**13 31 07.2**	**+1.7**
GNL	**Ganaly**	**3.55**	**243**	*e*P	**Pn**	**13 31 08.0**	**+1.1**
DALK	**Dalny**	**3.57**	**229**	*e*P	**Pn**	**13 31 08.8**	**+1.7**
DALK				*e*S	**Sn**	**13 31 48.9**	**-0.8**
PET	**Petropavlovsk**	**3.62**	**230**	*e*P	**Pn**	**13 31 09.5**	**+1.7**
OSSR	**Ossora**	**3.82**	**359**	*e*P	**Pn**	**13 31 11.3**	**+0.8**
KRMR	**Karymshinskiy**	**3.99**	**231**	*e*P	**Pn**	**13 31 15.3**	**+2.5**
PETK	**Petropavlovsk-**	**4.00**	**237**	Pn	**Pn**	**13 31 14.1**	**+1.0**
	0.5nm,0.3s,baz=67,slow=17,SNR=18						
PETK				Sn	**Sn**	**13 32 04.6**	**+4.3**
	0.8nm,0.3s,baz=15,slow=12,SNR=4.5						
PALN	**Palana**	**4.07**	**335**	P	**Pb**	**13 31 20.4**	**-2.7**
RUS	**Russkaya**	**4.11**	**225**	*e*P	**Pn**	**13 31 15.5**	**+1.0**
GRL	**Gorelyy**	**4.21**	**229**	P	**Pn**	**13 31 19.2**	**+3.3**
MTVR	**Mutnovka**	**4.21**	**227**	P	**Pn**	**13 31 17.5**	**+1.5**
APC	**Apacha**	**4.37**	**237**	P	**Pn**	**13 31 20.6**	**+2.5**
KDTR	**Khodutka, Kamc**	**4.76**	**222**	P	**Pn**	**13 31 27.1**	**+3.7**
MIPR	**Malaya Ipel'ka**	**4.98**	**233**	P	**Pn**	**13 31 30.7**	**+4.3**
MA2	**Magadan**	**7.89**	**307**	Pn	**Pn**	**13 32 07.2**	**+0.9**
	0.1nm,0.3s,baz=120,slow=24,SNR=1.2						
MA2				LR	LR	13 35 23.6	
	comp=Z,104nm,19.6s,baz=132,slow=40						
TIXI	**Tiksi**	**21.81**	**331**	P	**P**	**13 35 02.4**	**-1.2**
	0.8nm,0.4s,baz=121,slow=9.4,SNR=6.4						
MJAR	**Matsushiro Arr**	**25.45**	**232**	P	**P**	**13 35 39.3**	**-0.5**
	1.5nm,0.7s,baz=20,slow=8.7,SNR=3.6						
ILAR	**Eielson Array**	**25.86**	**49**	P	**P**	**13 35 42.0**	**-1.1**
	0.9nm,0.9s,baz=275,slow=8.5,SNR=5.7						
INK	**Inuvik**	**30.88**	**40**	P	**P**	**13 36 28.3**	**+0.5**
	0.9nm,0.6s,baz=287,slow=4.2,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**35.76**	**174**	T	T	14 16 10.2	
	baz=357,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**35.77**	**174**	T	T	14 16 20.8	
	baz=357,slow=76,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**35.78**	**174**	T	T	14 16 23.0	
	baz=357,slow=76,SNR=17						
YKA	**Yellowknife Ar**	**40.19**	**45**	P	**P**	**13 37 48.0**	**+0.3**
	1.0nm,0.8s,baz=297,slow=7.0,SNR=5.2						
MKAR	**Makanchi Array**	**48.80**	**296**	P	**P**	**13 38 55.7**	**-1.1**
	0.3nm,0.8s,baz=45,slow=6.1,SNR=3.1						
NVAR	**Mina Array Bea**	**53.26**	**74**	P	**P**	**13 39 31.6**	**+0.9**
	1.0nm,0.9s,baz=296,slow=6.2,SNR=7.2						
PDAR	**Pinedale Array**	**54.80**	**64**	P	**P**	**13 39 41.6**	**-0.3**
	0.8nm,0.8s,baz=323,slow=2.2,SNR=6.1						
ULM	**Lac du Bonnet**	**55.88**	**50**	P	**P**	**13 39 50.0**	**+0.7**
	1.6nm,0.7s,baz=263,slow=9.3,SNR=3.5						
TXAR	**Lajitas Array**	**68.06**	**70**	P	**P**	**13 41 12.4**	**+0.8**
	0.8nm,0.7s,baz=302,slow=5.1,SNR=8.2						
WRA	**Warramunga Arr**	**79.01**	**208**	P	**P**	**13 42 15.2**	**-0.6**
	0.4nm,0.8s,baz=15,slow=6.0,SNR=2.4						
ASAR	**Alice Springs**	**82.68**	**207**	P	**P**	**13 42 35.5**	**+0.2**
	0.4nm,0.8s,baz=15,slow=7.5,SNR=4.8						

JMA ***17*** *14:19:00.7±0.1, 38°.97N × 142°.48E, h28km±2km, M2.9*
IDC ***17*** *14:19:20.3±20.0, 38°.34N × 140°.80E, h168km±119km, mb2.8/3, mb1 2.9/4, mb1mx2.7/49, mbtmp3.2/4, Error ellipse: s-maj=317.7km s-min=29.6km az=64.0*
ISC 17 14:18:59.9±2.4, 38°.99N±0°.06×142°.5E±0°.1, h25km±15km, n19, σ1§08/25, mb3.2/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.67**	**278**	P	**Pb**	**14 19 13.4**	**+0.4**
OFUJ				S	**Sb**	**14 19 22.1**	**+0.2**
MIYJ	**Miyakonagasawa**	**0.80**	**318**	P	**Pb**	**14 19 15.2**	**-0.1**
MIYJ				S	**Sb**	**14 19 25.7**	**0.0**
JKMT	**Kesennumamotoy**	**0.84**	**258**	P	**Pb**	**14 19 15.6**	**-0.2**
JKMT				S	**Sb**	**14 19 26.0**	**-0.6**
JMK	**Ichinoseki**	**1.02**	**269**	P	**Pn**	**14 19 18.5**	**-0.1**
JMK				S	**Sb**	**14 19 31.3**	**-0.5**
JIO	**Ouri**	**1.06**	**240**	P	**Pn**	**14 19 18.5**	**-0.7**
JIO				*e*S	**Sb**	**14 19 31.7**	**-1.3**
JOM	**Ohasama**	**1.07**	**297**	P	**Pb**	**14 19 19.8**	**0.0**
JOM				S	**Sb**	**14 19 33.1**	**-0.3**
JTH	**Tanohata**	**1.08**	**332**	P	**Pb**	**14 19 20.4**	**+0.4**
JKZ	**Kuzumaki**	**1.36**	**318**	P	**Pb**	**14 19 24.4**	**-0.3**
JKZ				*e*S	**Sn**	**14 19 41.3**	**+0.7**
JRG	**Rokugo**	**1.52**	**286**	P	**Pb**	**14 19 27.2**	**-0.3**
JRG				S	**Sb**	**14 19 46.4**	**0.0**
JOU	**Okura**	**1.58**	**248**	P	**Pn**	**14 19 27.5**	**+1.1**
JANG	**Nango**	**1.59**	**331**	P	**Pb**	**14 19 28.4**	**-0.2**
JANG				*e*S	**Sb**	**14 19 48.0**	**-0.3**
MJAR	**Matsushiro Arr**	**4.20**	**236**	P	**Pn**	**14 20 05.2**	**+2.8**
	0.2nm,0.3s,baz=47,slow=11,SNR=16						
MAT	**Matsushiro**	**4.20**	**236**	P	**Pn**	**14 20 05.5**	**+3.1**
H11N2	**WAKE ISLAND Hy**	**28.48**	**125**	T	T	14 55 30.3	
	baz=317						
H11N1	**WAKE ISLAND Hy**	**28.49**	**125**	T	T	14 55 24.3	
	baz=317						
H11N3	**WAKE ISLAND Hy**	**28.50**	**125**	T	T	14 55 29.7	
	baz=317						
MKAR	**Makanchi Array**	**43.85**	**301**	P	**P**	**14 27 03.1**	**-0.9**
	0.1nm,0.4s,baz=70,slow=9.0,SNR=1.7						
KURBB	**Kurchatov Arra**	**45.52**	**307**	P	**P**	**14 27 16.9**	**-0.2**
	0.2nm,0.7s,baz=82,slow=8.3,SNR=4.3						
WRA	**Warramunga Arr**	**59.12**	**189**	P	**P**	**14 28 57.4**	**-0.9**
	0.2nm,0.6s,baz=5.6,slow=7.1,SNR=1.5						

UCR ***17*** *14:19:27.8±0.8, 7°.34N × 81°.92W, h14km±9km, MW3.8*
UPA ***17*** *14:19:29.3±2.3, 7°.72N × 81°.85W, h8km±7km, MW4.0*
ISC 17 14:19:28.1±1.3, 7°.68N±0°.05×81°.87W±0°.03, h5km±10km, n49, σ0§94/69, 3C-12D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REME3	**Remedios, Chir**	**0.55**	**4**	⇓*i*P	**Pb**	**14 19 39.8**	**-0.4**
REME3				*i* S	**Sb**	**14 19 48.6**	**+0.2**
NANC3	**Nancito, Chiri**	**0.58**	**14**	⇑*i*P	**Pg**	**14 19 39.8**	**+0.6**
NANC3				*i* S	**Sb**	**14 19 47.7**	**-1.6**
GMAL	**Guarumal, Vera**	**0.64**	**82**	⇓*i*P	**Pg**	**14 19 40.5**	**+0.1**
GMAL				*i* S	**Sg**	**14 19 49.1**	**+0.5**
GMAL	**Guarumal, Vera**	**0.64**	**82**	*e*P	**Pg**	**14 19 40.4**	**+0.1**
RSUS3	**Rio de Jesus,**	**0.77**	**66**	*i* P	**Pb**	**14 19 44.1**	**+0.1**
MESA3	**La Mesa, Verag**	**0.83**	**55**	*i* P	**Pg**	**14 19 44.5**	**+0.5**
MESA3				*i* S	**Sb**	**14 19 55.4**	**-1.0**
CHIR3	**Chiriqui UPA,**

SIVA				AML	AML	14 21 22.3	
	comp=E,910μm,0.8s						
THR6	**Thira Island,**	**1.69**	**317**	P	**Pn**	**14 20 37.7**	**+0.4**
THR3	**Thira Island,**	**1.72**	**318**	P	**Pn**	**14 20 37.3**	**-0.5**
BDRM	**Kayabasi**	**1.99**	**14**	*i* P	**Pn**	**14 20 41.5**	**0.0**
BDRM				IAML		14 21 13.0	
	comp=E,28nm,0.8s						
BDRM				IAML		14 21 14.0	
	comp=N,45nm,0.4s						
TURN	**Turunc**	**2.00**	**35**	*i* P	**Pn**	**14 20 41.7**	**0.0**
TURN				*i* S	**Sn**	**14 21 05.8**	**-0.9**
TURN				IAML		14 21 18.0	
	comp=N,64nm,0.3s						
TURN				IAML		14 21 21.0	
	comp=E,70nm,0.4s						
APE	**Apeiranthos**	**2.20**	**332**	P	**Pn**	**14 20 43.9**	**-0.5**
DALY	**Dalyan (Mula)**	**2.24**	**41**	*i* P	**Pn**	**14 20 45.9**	**+1.0**
DALY				*i* S	**Sb**	**14 21 17.3**	**+1.2**
DALY				IAML		14 21 32.0	
	comp=N,69nm,0.7s						
YER	**Yerkesik**	**2.32**	**30**	P	**Pn**	**14 20 46.7**	**+0.6**
AKAS	**Kas**	**2.51**	**63**	*i* P	**Pn**	**14 20 47.7**	**-1.1**
AYDN	**Tasoluk**	**2.66**	**18**	*i* P	**Pn**	**14 20 51.2**	**+0.4**
AYDN				IAML		14 21 38.0	
	comp=N,16nm,0.7s						
AYDN				IAML		14 21 42.0	
	comp=E,13nm,0.7s						
GOLH	**Golhisar**	**3.05**	**46**	*i* P	**Pn**	**14 20 57.7**	**+1.5**
GOLH				IAML		14 21 49.0	
	comp=N,43nm,0.9s						
GOLH				IAML		14 21 57.0	
	comp=E,9.9nm,0.9s						
AKASG	**Malin Array Be**	**15.66**	**6**	P	**Pn**	**14 23 50.6**	**+2.3**
	comp=E,0.6nm,0.3s,baz=195,slow=11,SNR=2.8						
KURBB	**Kurchatov Arra**	**40.08**	**51**	P	**P**	**14 27 41.7**	**-1.4**
	comp=E,0.5nm,0.7s,baz=274,slow=9.1,SNR=4.8						
MKAR	**Makanchi Array**	**42.65**	**57**	P	**P**	**14 28 03.1**	**-1.2**
	comp=E,0.6nm,0.6s,baz=274,slow=6.8,SNR=9.3						
ZALV	**Zalesovo Beam**	**44.04**	**46**	P	**P**	**14 28 13.6**	**-1.8**
	comp=E,0.4nm,0.3s,baz=266,slow=6.8,SNR=2.4						

WEL 17 14:22:24.3±1.0, 35°S±7°×17°9W±°, h33km, M3.9/14, ML4.1/14, MLv3.9/14, Error ellipse: s-maj=0.0km s-min=0.0km az=144.4, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.40**	**223**	P	Pn	14 23 15.0	0.0
MXZ				S	Sn	14 23 55.0	+0.9
WMGZ	**Waiomatatini S**	**3.53**	**220**	P	Pn	14 23 17.8	+1.1
WMGZ				S	Sn	14 24 00.4	+3.1
PUZ	**Puketiti**	**3.80**	**218**	P	Pn	14 23 20.6	+0.1
PUZ				S	Sn	14 24 05.4	+1.3
HAZ	**Te Kaha**	**3.83**	**226**	P	Pn	14 23 21.5	+0.6
HAZ				S	Sn	14 24 06.6	+1.8
TWGZ	**Tauwhareparae**	**4.02**	**220**	P	Pn	14 23 24.2	+0.6
TWGZ				S	Sn	14 24 12.9	+3.4
RUGZ	**Raukumara Rang**	**4.04**	**224**	P	Pn	14 23 24.0	+0.2
RUGZ				S	Sn	14 24 11.5	+1.5
CNGZ	**Carnagh Statio**	**4.14**	**215**	P	Pn	14 23 25.9	+0.7
MWZ	**Matawai**	**4.38**	**222**	P	Pn	14 23 28.9	+0.5
MWZ				S	Sn	14 24 18.6	+0.2
RIGZ	**Rimuhau**	**4.53**	**217**	P	Pn	14 23 31.3	+0.7
RIGZ				S	Sn	14 24 24.1	+2.0
URZ	**Urewera**	**4.56**	**226**	P	Pn	14 23 30.3	-0.7
URZ				S	Sn	14 24 23.3	+0.5
OPRZ	**Ohinepanea**	**4.65**	**233**	P	Pn	14 23 31.2	-1.0
SNGZ	**Shannon Statio**	**4.81**	**219**	P	Pn	14 23 34.5	+0.2
SNGZ				S	Sn	14 24 29.7	+0.8
RTZ	**Ruatahuna**	**4.88**	**223**	P	Pn	14 23 34.9	-0.5
RTZ				S	Sn	14 24 30.3	-0.5
MTHZ	**Maungataniwha**	**5.12**	**222**	P	Pn	14 23 38.9	+0.2
MTHZ				S	Sn	14 24 36.7	-0.1
TOZ	**Tahuroa Road**	**5.31**	**239**	P	Pn	14 23 40.4	-0.9
BKZ	**Black Stump Fm**	**5.54**	**222**	P	Pn	14 23 43.7	-0.7
BKZ				S	Sn	14 24 45.1	-1.8
RATZ	**Rangitukua**	**5.76**	**228**	P	Pn	14 23 46.6	-0.8
KWHZ	**Kaweka Forest**	**5.76**	**220**	P	Pn	14 23 46.5	-1.0
KWHZ				S	Sn	14 24 50.7	-1.7
CTZ	**Chatham Island**	**8.75**	**170**	P	Pn	14 24 30.6	+2.1
CTZ				S	Sn	14 26 04.9	-1.0

*IDC **17** 14:34:44.2±2.0, 2°.54N×128°.16E, h158km±18km, mb3.4/5, mb1 3.5/6, mb1mx3.1/40, mbtmp3.9/6, MS3.0/1, Ms1 3.0/1, ms1mx2.3/32, Error ellipse: s-maj=48.0km s-min=13.2km az=65.0*

*DJA **17** 14:34:46.6±0.5, 3°N±4°×12°8E±°, h135km±10km, M4.2/15, mb4.2/7, mB4.6/4, MLv4.2/15, Mw(mB)3.8/4*

ISC 17 14:34:43.7±0.9, 2°.61N±0°.10×128°.2E±0°.1, h150km, n29, σ1°44/30, mb4.2/12, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.02**	**205**	P	**Pn**	**14 35 20.1**	**+1.0**
SGSI	**Sangihe**	**2.90**	**292**	P	**Pn**	**14 35 31.4**	**+1.6**
SWI	**Sorong**	**4.59**	**139**	P	**Pn**	**14 35 54.2**	**+2.5**
SIJI	**Sorong**	**4.60**	**139**	P	**Pn**	**14 35 53.7**	**+1.9**
	2.9nm,0.3s,baz=326,slow=17,SNR=9.8						
SIJI				S	**Sn**	**14 36 46.2**	**+1.3**
	0.8nm,0.3s,baz=228,slow=21,SNR=1.9						
KMSI	**Cibinong**	**4.71**	**245**	P	**Pn**	**14 35 54.3**	**+1.0**
SANI	**Sanana**	**5.14**	**206**	P	**Pn**	**14 35 58.6**	**-0.5**
	0.1nm647nm11nm,0.5s						
GTOI	**Gorontalo**	**5.58**	**249**	P	**Pn**	**14 36 06.6**	**+1.8**
	0.1nm334nm20nm,0.9s						
NLAI	**Namlea**	**5.92**	**191**	P	**Pn**	**14 36 11.0**	**+1.6**
	0.1nm9.2nm,0.9s						
LUWI	**Luwuk**	**6.56**	**236**	P	**Pn**	**14 36 19.4**	**+1.6**
MRSI	**Marisa**	**6.64**	**251**	P	**Pn**	**14 36 20.3**	**+1.4**
	0.2nm612nm55nm,0.6s						
FAKI	**Fak Fak**	**6.80**	**144**	P	**Pn**	**14 36 23.0**	**+1.8**
	0.2nm52nm,1.1s						
APSI	**Ampana**	**7.46**	**242**	P	**Pn**	**14 36 31.1**	**+1.3**
FITZ	**Fitzroy Crossi**	**20.74**	**187**	P	**P**	**14 39 10.7**	**-1.9**
	1.3nm,0.9s,baz=194,slow=19,SNR=1.4						
WRA	**Warramunga Arr**	**23.20**	**165**	P	**P**	**14 39 36.2**	**-1.2**
	2.8nm,0.6s,baz=345,slow=10,SNR=38						
WRA				PcP	**PcP**	**14 43 20.0**	**-1.2**
	0.2nm,0.6s,baz=358,slow=1.7,SNR=1.5						
WRA				S	**S**	**14 43 38.9**	**+0.9**
	0.5nm,0.8s,baz=349,slow=18,SNR=4.6						
ASAR	**Alice Springs**	**26.70**	**168**	P	**P**	**14 40 08.0**	**-1.0**
	0.4nm,0.5s,baz=350,slow=7.6,SNR=14						
ASAR				PcP	**PcP**	**14 43 28.1**	**-0.9**
	0.6nm,0.4s,baz=352,slow=2.1,SNR=15						
ASAR				ScP	**ScP**	**14 46 51.9**	**-3.2**
	0.2nm,0.7s,baz=347,slow=2.9,SNR=2.3						
STKA	**Stephens Creek**	**36.57**	**161**	P	**P**	**14 41 34.5**	**-0.7**
	1.8nm,0.5s,baz=344,slow=8.7,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**41.40**	**63**	T	T	15 26 55.5	
	baz=249						
H11N2	**WAKE ISLAND Hy**	**41.41**	**63**	T	T	15 27 01.6	
	baz=249						
H11N3	**WAKE ISLAND Hy**	**41.42**	**63**	T	T	15 27 08.7	
	baz=249						
TAPN	**Taplejung**	**45.88**	**306**	*e*P	**P**	**14 42 52.3**	**+0.6**
	5.6nm,0.8s						
RAMN	**Ramite**	**46.62**	**305**	*e*P	**P**	**14 42 58.6**	**+1.2**
	7.4nm,0.5s						
JIRN	**Jiri**	**47.24**	**306**	*e*P	**P**	**14 43 02.9**	**+0.6**
	9.1nm,0.5s						
GUN	**Gumba**	**47.59**	**306**	*e*P	**P**	**14 43 05.7**	**+0.7**
	9.2nm,0.5s						
PKI	**Pulchoki**	**47.84**	**306**	*e*P	**P**	**14 43 07.1**	**+0.2**
	1.8nm,0.3s						
PKIN	**Phulchoki**	**47.85**	**306**	*e*P	**P**	**14 43 07.6**	**+0.7**
	4.2nm,0.4s						
KOLN	**Koldanda**	**49.39**	**305**	*e*P	**P**	**14 43 19.5**	**+0.9**
	14nm,0.7s						
PYUN	**Piuthan**	**50.02**	**305**	*e*P	**P**	**14 43 24.3**	**+0.9**
	6.5nm,0.4s						
YAK	**Yakutsk**	**59.29**	**1**	LR	LR	15 08 44.2	
	comp=Z,13nm,19.1s,baz=215,slow=34						
MKAR	**Makanchi Array**	**59.33**	**325**	P	**P**	**14 44 29.9**	**0.0**
	1.5nm,0.5s,baz=114,slow=8.3,SNR=28						

*TAP **17** 14:44:08.8, 24°.80N×121°.90E, h9km, ML2.8, C*

*JMA **17** 14:44:09.6±0.1, 24°.78N×121°.81E, h31km, M2.5*

ISC 17 14:44:08.7±0.8, 24°.80N±0°.01×121°.93E±0°.02, h18km±1km, n86, σ0°88/156, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.11**	**302**	*i* P	**Pg**	**14 44 11.6**	**-0.9**
	baz=320						
NTC				S	**Sg**	**14 44 13.6**	**-1.4**
	baz=320						
ILA	**Ilan**	**0.17**	**259**	*i* P	**Pg**	**14 44 12.7**	**-0.5**
	baz=255						
ILA				*i* S	**Sg**	**14 44 15.4**	**-0.9**
	baz=255						
TIPB	**Shuangxi**	**0.20**	**331**	*i* P	**Pb**	**14 44 13.2**	**-0.1**
	baz=338						
TIPB				*i* S	**Sb**	**14 44 16.0**	**-0.2**
	baz=338						
TWC	**Suao**	**0.20**	**201**	*i* P	**Pb**	**14 44 13.3**	**-0.1**
	baz=185						
TWC				*i* S	**Sb**	**14 44 15.9**	**-0.5**
	baz=185						
TWB1	**Santiao Chiao**	**0.22**	**14**	*i* P	**Pb**	**14 44 13.6**	**-0.2**
	baz=13						
TWB1				*i* S	**Sb**	**14 44 16.5**	**-0.5**
	baz=13						
TWE	**Neicheng**	**0.25**	**252**	*i* P	**Pb**	**14 44 13.9**	**-0.6**
	baz=248						
TWE				S	**Sb**	**14 44 17.2**	**-1.2**
	baz=248						
NDS	**Dongshan**	**0.25**	**230**	P	**Pg**	**14 44 14.0**	**-0.5**
	baz=226						
NDS				*e*S	**Sb**	**14 44 17.6**	**-0.9**
	baz=226						
NWF	**Wu-fen Shan**	**0.30**	**334**	P	**Pb**	**14 44 15.4**	**-0.2**
	baz=329						
NWF				S	**Sg**	**14 44 19.5**	**-0.5**
	baz=329						
WFSB	**Wu-fen Shan**	**0.30**	**334**	*i* P	**Pb**	**14 44 15.4**	**-0.2**
	baz=329						
WFSB				S	**Sg**	**14 44 19.6**	**-0.3**
	baz=329						
TWA	**Mucha**	**0.36**	**300**	P	**Pg**	**14 44 16.3**	**-0.1**
	baz=302						
TWA				S	**Sg**	**14 44 21.0**	**-0.5**
	baz=302						
ENTT	**Nioudou**	**0.37**	**245**	P	**Pg**	**14 44 16.0**	**-0.5**
	baz=242						
ENTT				S	**Sg**	**14 44 20.3**	**-1.4**
	baz=242						
EWUT	**Wuta**	**0.38**	**201**	P	**Pg**	**14 44 16.3**	**-0.3**
	baz=205						
EWUT				S	**Sg**	**14 44 20.9**	**-1.1**
	baz=205						
TNOU	**National Taiwa**	**0.38**	**338**	*i* P	**Pb**	**14 44 16.8**	**-0.1**
	baz=334						
TNOU				*e*S	**Sg**	**14 44 21.5**	**-0.5**
	baz=334						
NWLT	**Wulai**	**0.39**	**267**	*i* P	**Pg**	**14 44 16.3**	**-0.5**
	baz=266						
NWLT				*i* S	**Sg**	**14 44 20.9**	**-1.4**
	baz=266						
NHDH	**Xindian Distri**	**0.40**	**294**	P	**Pb**	**14 44 17.2**	**-0.2**
	baz=295						
NHDH				S	**Sg**	**14 44 22.4**	**-0.3**
	baz=295						
NDT	**Datong Townshi**	**0.43**	**243**	P	**Pg**	**14 44 17.1**	**-0.4**
	baz=241						
NDT				S	**Sg**	**14 44 22.0**	**-1.4**
	baz=241						
TATO	**Taipei**	**0.44**	**294**	*i* P	**Pb**	**14 44 17.7**	**-0.2**
	baz=282						
TATO				S	**Sg**	**14 44 23.4**	**-0.3**
	baz=282						
NWRT	**Kuosheng**	**0.47**	**329**	*e*P	**Pb**	**14 44 18.8**	**+0.3**
	baz=331						
YM01	**YM01**	**0.48**	**317**	*i* P	**Pb**	**14 44 18.9**	**+0.3**
	baz=319						
YM01				S	**Sb**	**14 44 25.8**	**+0.5**
	baz=319						
BACT	**New Taipei Cit**	**0.48**	**294**	*e*P	**Pb**	**14 44 19.0**	**+0.3**
	baz=283						
BACT				*e*S	**Sb**	**14 44 25.8**	**+0.3**
	baz=283						
YM10	**YM10**	**0.49**	**317**	*i* P	**Pb**	**14 44 19.1**	**+0.3**
	baz=319						
YM10				*e*S	**Sb**	**14 44 26.4**	**+0.8**
	baz=319						
YM11	**YM11**	**0.49**	**319**	*i* P	**Pb**	**14 44 19.2**	**+0.4**
	baz=321						
YM11				*e*S	**Sb**	**14 44 26.1**	**+0.5**
	baz=321						
YM05	**YM05**	**0.49**	**318**	*i* P	**Pb**	**14 44 19.1**	**+0.3**
	baz=320						
YM05				*e*S	**Sb**	**14 44 27.0**	**+1.2**
	baz=320						
YM08	**YM08**	**0.50**	**322**	*i* P	**Pb**	**14 44 18.9**	**0.0**
	baz=312						
YM08				*e*S	**Sn**	**14 44 27.3**	**-1.7**
	baz=312						
YM04	**YM04**	**0.50**	**315**	P	**Pb**	**14 44 19.2**	**+0.2**
	baz=317						
YM04				*e*S	**Sb**	**14 44 26.9**	**+0.9**
	baz=317						
YHNB	**Yeheng**	**0.52**	**256**	*i* P	**Pg**	**14 44 18.6**	**-0.6**
	baz=255						
YHNB				S	**Sg**	**14 44 24.6**	**-1.7**
	baz=255						
ANP	**Anpu**	**0.54**	**316**	*e*P	**Pb**	**14 44 19.6**	**0.0**
	baz=318						
TWS1	**Kuangyinshan**	**0.55**	**303**	P	**Pn**	**14 44 20.6**	**-1.1**
	baz=304						
TWS1				*e*S	**Sb**	**14 44 27.7**	**+0.3**
	baz=304						
TWY	**Chenhua**	**0.56**	**328**	P	**Pg**	**14 44 20.5**	**+0.5**
	baz=320						
TWY				*e*S	**Sb**	**14 44 27.9**	**+0.3**
	baz=320						
NTY	**Taoyuan**	**0.61**	**289**	*e*P	**Pn**	**14 44 21.9**	**-0.6**
	baz=280						
NTY				S	**Sn**	**14 44 30.3**	**-1.4**
	baz=280						
NNSB	**Datong**	**0.62**	**234**	P	**Pb**	**14 44 20.7**	**-0.2**
	baz=224						
NNSB				S	**Sb**	**14 44 27.8**	**-1.6**
	baz=224						
NNSH	**Datong**	**0.62**	**234**	P	**Pb**	**14 44 20.6**	**-0.4**
	baz=233						
NNSH				S	**Sb**	**14 44 27.6**	**-1.7**
	baz=233						
NNS	**Nan Shan**	**0.62**	**235**	P	**Pb**	**14 44 20.6**	**-0.4**
	baz=233						
NNS				*e*S	**Sb**	**14 44 28.2**	**-1.1**
	baz=233						
NACB	**Ninganchiao**	**0.69**	**206**	P	**Pb**	**14 44 22.2**	**0.0**
	baz=213						
NACB				S	**Sb**	**14 44 30.8**	**-0.6**
	baz=213						
NCU	**National Centr**	**0.70**	**284**	*e*S	**Sn**	**14 44 33.5**	**-0.4**
	baz=284						
NCUH	**Zhongli**	**0.70**	**284**	*e*P	**Pn**	**14 44 23.5**	**-0.2**
	baz=284						
NCUH				*e*S	**Sn**	**14 44 35.3**	**+1.3**
	baz=284						
ETLH	**Xiulin Townshi**	**0.72**	**215**	P	**Pb**	**14 44 22.4**	**-0.3**
	baz=213						
ETLH				S	**Sg**	**14 44 32.4**	**0.0**
	baz=213						
TWD	**Chiawan**	**0.78**	**203**	P	**Pb**	**14 44 23.8**	**+0.1**
	baz=201						
TWD				*e*S	**Sb**	**14 44 33.5**	**-0.4**
	baz=201						
HSN1	**Hsinchu**	**0.83**	**269**	*e*P	**Pn**	**14 44 26.5**	**+1.1**
	baz=261						
HSN1				*e*S	**Sn**	**14 44 39.1**	**+1.9**
	baz=261						
FUSS	**Fushou**	**0.83**	**229**	P	**Pb**	**14 44 24.8**	**+0.1**
	baz=222						
FUSS				*e*S	**Sb**	**14 44 34.7**	**-0.9**
	baz=222						
PCYT	**Pengchaiyu**	**0.84**	**9**	P	**Pn**	**14 44 25.3**	**-0.3**
	baz=11						
PCYT				*e*S	**Sn**	**14 44 37.2**	**-0.2**
	baz=11						
LIOB	**Emei**	**0.84**	**260**	P	**Pg**	**14 44 25.2**	**0.0**
	baz=259						
LIOB				*e*S	**Sn**	**14 44 37.4**	**-0.2**
	baz=259						
SBCB	**Hsinchu**	**0.86**	**270**	*e*P	**Pn**	**14 44 26.9**	**+1.1**
	baz=288						
SBCB				S	**Sn**	**14 44 38.6**	**+0.7**
	baz=288						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NSTT	**Nanjuang**	**0.86**	**259**	*e*P	**Pn**	**14 44 26.6**	**+0.7**
	baz=258						
NSTT				*e*S	**Sn**	**14 44 38.9**	**+0.9**
	baz=258						
HWA	**Hwalien**	**0.87**	**200**	*e*S	**Sg**	**14 44 37.6**	**+0.5**
	baz=198						
TDCB	**Techi**	**0.89**	**232**	*e*P	**Pn**	**14 44 26.3**	**-0.1**
	baz=239						
TDCB				*e*S	**Sb**	**14 44 36.2**	**-1.0**
	baz=239						
WHF	**Hehuan Shan**	**0.89**	**223**	*e*P	**Pg**	**14 44 26.1**	**0.0**
	baz=213						
WHF				*e*S	**Sg**	**14 44 37.9**	**0.0**
	baz=213						
JYNG	**Yonagunijimaku**	**0.99**	**110**	P	**Pg**	**14 44 28.1**	**+0.2**
JYNG				S	**Sn**	**14 44 41.2**	**+0.1**
CHGB	**Renai**	**1.01**	**223**	*e*P	**Pg**	**14 44 28.5**	**+0.2**
	baz=214						
CHGB				*e*S	**Sn**	**14 44 42.4**	**+0.5**
	baz=214						
WHP	**Taichung City**	**1.03**	**240**	*e*P	**Pg**	**14 44 28.8**	**0.0**
	baz=239						
WHP				*e*S	**Sg**	**14 44 44.9**	**+2.4**
	baz=239						
YOJ	**Yonaguni jima**	**1.04**	**109**	P	**Pg**	**14 44 29.3**	**+0.4**
YOJ				*e*S	**Sg**	**14 44 42.9**	**+0.3**
YOJ	**Yonaguni jima**	**1.04**	**109**	*e*P	**Pn**	**14 44 28.5**	**+0.1**
	baz=109						
YOJ				*e*S	**Sg**	**14 44 43.2**	**+0.6**
	baz=109						
ESL	**Shilin**	**1.08**	**205**	*e*P	**Pn**	**14 44 29.2**	**+0.3**
	baz=203						
ESL				*e*S	**Sb**	**14 44 42.8**	**+0.2**
	baz=203						
OWD	**Renai**	**1.08**	**219**	*e*P	**Pg**	**14 44 29.7**	**-0.1**
	baz=219						
OWD				*e*S	**Sg**	**14 44 44.1**	**0.0**
	baz=219						
NSY	**Sanyi**	**1.13**	**251**	*e*P	**Pg**	**14 44 31.7**	**+1.1**
	baz=250						
NSY				*e*S	**Sg**	**14 44 48.0**	**+2.6**
	baz=250						
TWQ1	**Liyutan**	**1.14**	**247**	*e*P	**Pg**	**14 44 31.7**	**+0.8**
	baz=246						
TWQ1				*e*S	**Sg**	**14 44 48.6**	**+2.7**
	baz=246						
WPL	**Puli Township**	**1.18**	**229**	*e*P	**Pg**	**14 44 31.4**	**-0.2**
	baz=237						
WPL				*e*S	**Sg**	**14 44 47.4**	**+0.3**
	baz=237						
EGFH	**Guangfu**	**1.21**	**202**	*e*P	**Pg**	**14 44 31.9**	**-0.4**
	baz=208						
EGFH				*e*S	**Sg**	**14 44 47.7**	**-0.4**
	baz=208						
VWDT	**VWDT**	**1.27**	**215**	*e*P	**Pg**	**14 44 32.8**	**-0.4**
	baz=214						
VWDT				*e*S	**Sg**	**14 44 49.9**	**+0.1**
	baz=214						
SMLT	**Sun Moon Lake**	**1.31**	**226**	*e*P	**Pg**	**14 44 34.6**	**+0.6**
	baz=225						
SMLT				*e*S	**Sg**	**14 44 51.5**	**+0.3**
	baz=225						
TYC	**Yuchr**	**1.32**	**228**	*e*P	**Pg**	**14 44 35.8**	**+1.5**
	baz=235						
TYC				*e*S	**Sb**	**14 44 50.4**	**+0.8**
	baz=235						
SSLB	**Suanglung**	**1.34**	**222**	*e*P	**Pg**	**14 44 34.2**	**-0.5**
	baz=210						
SSLB				*e*S	**Sg**	**14 44 52.0**	**-0.2**
	baz=210						
HGSD	**Ruisui**	**1.38**	**200**	*e*P	**Pg**	**14 44 35.3**	**0.0**
	baz=184						
HGSD				*e*S	**Sg**	**14 44 55.1**	**+1.7**
	baz=184						
WJS	**Zhushan**	**1.47**	**229**	*e*P	**Pg**	**14 44 37.8**	**+0.9**
	baz=214						
WJS				*e*S	**Sg**	**14 44 57.5**	**+1.4**
	baz=214						
WHYT	**Xinyi Township**	**1.47**	**222**	*e*P	**Pg**	**14 44 38.4**	**+1.2**
	baz=216						
WHYT				*e*S	**Sg**	**14 44 58.1**	**+1.7**
	baz=216						
YULB	**Yu-li**	**1.51**	**203**	*e*P	**Pb**	**14 44 36.5**	**+0.3**
	baz=202						
YULB				*e*S	**Sg**	**14 44 56.8**	**-0.9**
	baz=202						
EYUL	**Yuli**	**1.55**	**201**	*e*S	**Sg**	**14 44 58.0**	**-0.8**
	baz=211						
ALS	**Alishan**	**1.64**	**219**	*e*S	**Sg**	**14 45 03.4**	**+1.6**
	baz=211						
CHN5	**Tsauling**	**1.65**	**224**	*e*P	**Pg**	**14 44 40.8**	**+0.2**
	baz=223						
CHN5				*e*S	**Sg**	**14 45 03.1**	**+1.0**
	baz=223						
IRIF	**Iriomote-Funau**	**1.70**	**105**	P	**Pn**	**14 44 37.3**	**-0.2**
IRIF				*e*S	**Sb**	**14 45 00.9**	**+0.4**
EDH	**Donghe**	**1.91**	**198**	*e*S	**Sb**	**14 45 06.9**	**+0.5**
	baz=181						
TPUB	**Ta-pu**	**1.91**	**219**	*e*P	**Pg**	**14 44 44.2**	**-1.2**
	baz=203						
TPUB				*e*S	**Sg**	**14 45 10.3**	**+0.1**
	baz=203						
STYH	**Taoyuan**	**1.93**	**213**	*e*P	**Pb**	**14 44 44.3**	**+0.9**
	baz=198						
STYH				*e*S	**Sg**	**14 45 10.1**	**-0.9**
	baz=198						
STYT	**Tauyuan**	**1.95**	**214**	*e*S	**Sg**	**14 45 09.9**	**-1.7**
	baz=199						
WTP	**Ta-pu**	**1.96**	**218**	*e*S	**Sg**	**14 45 10.0**	**-1.8**
	baz=200						
JKRS	**Kuro-shima**	**1.98**	**106**	P	**Pn**	**14 44 42.1**	**+0.9**
JKRS				*e*S	**Sn**	**14 45 05.6**	**+0.1**
TWK	**Hsinying**	**2.02**	**221**	*e*S	**Sg**	**14 45 12.2**	**-1.4**
	baz=220						
CHN1	**Nanshi**	**2.06**	**219**	*e*S	**Sg**	**14 45 15.2**	**+0.3**
	baz=218						
JIJ	**Ishigaki jima**	**2.06**	**102**	P	**Pn**	**14 44 43.0**	**+0.6**
JIJ				*e*S	**Sn**	**14 45 07.1**	**-0.5**
JISG	**Ishigakijimahi**	**2.18**	**95**	P	**Pb**	**14 44 46.1**	**-1.4**
MATB	**Ma-tsu**	**2.24**	**307**	*e*S	**Sb**	**14 45 14.4**	**-1.7**
	baz=303						
VWUC	**VWUC**	**2.26**	**275**	*e*P	**Pn**	**14 44 45.4**	**+0.2**
	baz=275						
VWUC				*e*S	**Sn**	**14 45 12.5**	**-0.1**
	baz=275						
PHUB	**P'eng-hu**	**2.50**	**240**	*e*S	**Sn**	**14 45 20.1**	**+1.5**
	baz=240						
PTMZ	**Houxiangcun**	**2.56**	**276**	*e*S	**Sn**	**14 45 20.0**	**+0.1**
	baz=275						
XPSS	**Dashiqiu**	**2.64**	**324**	*e*S	**Sn**	**14 45 24.2**	**+2.3**
	baz=319						
AXDP	**Jialang**	**3.60**	**272**	*e*P	**Pn**	**14 45 04.0**	**+0.4**
	baz=273						
AXDP				*e*S	**Sn**	**14 45 44.5**	**-1.1**
	baz=273						

*IDC **17** 14:49:26.2±2.6, 36°.72N×66°.98E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/48, mbtmp3.3/4, MS3.7/2, Ms1 3.7/2, ms1mx2.6/39, Error ellipse: s-maj=184.9km s-min=35.2km az=106.0*

ISC 17 14:49:28.2±2.6, 36°.9N±0°.1×67°.1E±0°.3, h10km, n8, σ0°88/6, mb3.4/3, 1C, Hindu Kush region

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

4C-1D, Error ellipse: s-maj=39.5km s-min=24.5km az=165.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.23**	**4**	Pn	Pn	14 53 26.9	+1.4
	0.7nm,0.2s,baz=190,slow=12,SNR=16						
KK31				⇑Lg	Lg	14 54 33.2	
	3.9nm,0.5s,baz=185,slow=30,SNR=5.2						
AAK	**Ala-Archa**	**5.00**	**40**	⇑Pn	Pn	14 53 35.8	-0.5
	1.7nm,0.5s						
AAK				⇑Sn	Sn	14 54 36.2	+1.3
	4.7nm,0.6s						
TKM2	**Tokmak 2**	**5.78**	**44**	⇓Pn	Pn	14 53 46.4	-0.6
	1.7nm,0.6s						
TKM2				⇑Sn	Sn	14 54 55.0	+0.9
	4.5nm,0.6s						

SOME ***17*** *15:02:52.3, 39.00N× 70.43E, h5km*
IDC ***17*** *15:02:54.4±2.7, 38.80N× 70.67E, h0km, mb3.7/3, mb1 3.7/9, mb1mx3.3/71, mbtmp3.6/9, ML3.2/6, Error ellipse: s-maj=45.7km s-min=15.7km az=157.0*
NNC ***17*** *15:02:57.0±4.3, 39.00N× 70.21E, h0km, mb4.1, mpv3.6, Error ellipse: s-maj=41.9km s-min=24.4km az=172.0*

ISC 17 15:02:57.5±1.5, 38.9N±0.1× 70.2E±0.0, h10km, n19, σ1s51/23, mb3.6/3, 1C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**3.21**	**357**	*eP*	**Pn**	**15 03 50.5**	**+2.5**
	16nm,0.3s						
IUG				*e*S	**Sb**	**15 04 33.6**	**-0.1**
	84nm,0.4s						
AML	**Almayashu**	**4.12**	**38**	P	**Pn**	**15 04 00.3**	**-0.5**
	SNR=20						
KK31	**Karatay Array**	**4.16**	**2**	⇓Pn	**Pn**	**15 04 02.1**	**+1.0**
	2.8nm,0.3s,baz=182,slow=12,SNR=78						
KK31				⇓Lg	Lg	15 05 06.4	
	10.0nm,0.4s,baz=182,slow=28,SNR=5.6						
EKS2	**Erkin-Say**	**4.57**	**34**	P	**Pn**	**15 04 07.0**	**+0.3**
	SNR=13						
UCH	**Uchtor**	**4.60**	**43**	P	**Pn**	**15 04 08.5**	**+1.0**
	SNR=8.2						
AAK	**Ala-Archa**	**4.89**	**40**	Pn	**Pn**	**15 04 10.8**	**-0.3**
	2.7nm,0.3s,baz=222,slow=6.9,SNR=34						
AAK				Sn	**Sn**	**15 05 08.0**	**+0.1**
	0.8nm,0.3s,baz=225,slow=17,SNR=1.3						
KBK	**Karagaybulak**	**5.13**	**42**	P	**Pn**	**15 04 14.4**	**-0.1**
	SNR=44						
USP	**Ospenovka**	**5.37**	**35**	P	**Pn**	**15 04 17.5**	**-0.2**
	SNR=17						
TKM2	**Tokmak 2**	**5.66**	**44**	P	**Pn**	**15 04 22.4**	**+0.6**
	SNR=18						
TKM2	**Tokmak 2**	**5.66**	**44**	⇑Pn	**Pn**	**15 04 21.9**	**+0.1**
	8.7nm,0.7s						
TKM2				⇓Sn	**Sn**	**15 05 29.5**	**+2.5**
	31nm,0.9s						
GEYT	**Alibeck**	**9.59**	**268**	Pn	**Pn**	**15 05 17.4**	**+1.8**
	0.6nm,0.3s,baz=99,slow=16,SNR=2.5						
GEYT				Sn	**Sn**	**15 07 01.8**	**-1.7**
	0.5nm,0.3s,baz=94,slow=11,SNR=1.9						
MKAR	**Makanchi Array**	**11.79**	**44**	Pn	**Pn**	**15 05 43.5**	**-2.2**
	0.1nm,0.3s,baz=230,slow=14,SNR=10						
AB31	**Akbulak array**	**12.69**	**328**	Pn	**Pn**	**15 05 55.6**	**-2.3**
	1.7nm,0.5s,baz=151,slow=10,SNR=69						
KURBB	**Kurchatov Arra**	**13.06**	**24**	Pn	**Pn**	**15 05 59.9**	**-3.0**
	0.0nm,0.3s,baz=211,slow=13,SNR=3.9						
AKTO	**Aktyubinsk**	**14.40**	**327**	Pn	**Pn**	**15 06 21.6**	**+0.3**
	0.3nm,0.3s,baz=145,slow=14,SNR=4.5						
ZALV	**Zalesovo Beam**	**17.99**	**29**	P	**Pn**	**15 07 05.6**	**-1.9**
	0.1nm,0.3s,baz=222,slow=12,SNR=5.6						
FINES	**FINESS Array B**	**35.15**	**324**	P	**P**	**15 09 50.2**	**-0.8**
	1.8nm,0.9s,baz=99,slow=8.9,SNR=1.9						
HFS	**Hagfors**	**40.81**	**320**	P	**P**	**15 10 39.3**	**+0.6**
	0.9nm,0.6s,baz=95,slow=12,SNR=1.0						
YKA	**Yellowknife Ar**	**78.83**	**2**	P	**P**	**15 15 00.5**	**+0.3**
	0.1nm,0.4s,baz=358,slow=5.2,SNR=4.6						

IDC ***17*** *15:04:32.4±6.2, 36.26N× 71.53E, h162km±55km, mb3.4/5, mb1 3.3/10, mb1mx2.9/70, mbtmp3.8/10, MS3.1/3, Ms1 3.1/3, ms1mx2.4/41, Error ellipse: s-maj=64.4km s-min=45.1km az=141.0*

ISC 17 15:04:33.0±1.0, 36.51N±0.09× 71.4E±0.1, h150km, n14, σ1s71/14, mb3.8/5, 1C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.42**	**137**	*eP*	**Pn**	**15 05 51.0**	**-1.0**
AAK	**Ala-Archa**	**6.58**	**21**	P	**Pn**	**15 06 09.4**	**+1.9**
	3.3nm,0.3s,baz=190,slow=12,SNR=7.1						
AAK				S	**Sn**	**15 07 20.2**	**-1.3**
	0.5nm,0.3s,baz=116,slow=23,SNR=2.0						
KK31	**Karatay Array**	**6.62**	**355**	⇓P	**Pn**	**15 06 09.3**	**+1.5**
	2.7nm,0.2s,baz=179,slow=12,SNR=14						
KK31				⇑S	**Sn**	**15 07 17.9**	**-4.4**
	5.3nm,0.4s,baz=183,slow=23,SNR=8.3						
MKAR	**Makanchi Array**	**13.11**	**35**	P	**Pn**	**15 07 34.1**	**+0.7**
	0.1nm,0.3s,baz=226,slow=14,SNR=4.5						
MKAR					LR	15 12 20.2	
	comp=Z,28nm,18.3s,baz=315,slow=35						
KURBB	**Kurchatov Arra**	**15.02**	**18**	P	**P**	**15 07 59.6**	**+0.3**
	0.1nm,0.3s,baz=205,slow=11,SNR=5.9						
AKTO	**Aktyubinsk**	**16.92**	**330**	P	**Pn**	**15 08 22.0**	**+1.3**
	0.3nm,0.3s,baz=145,slow=8.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**19.79**	**24**	P	**P**	**15 08 51.7**	**+0.3**
	0.3nm,0.3s,baz=219,slow=11,SNR=3.8						
TLY	**Talaya**	**27.42**	**46**	LR	LR	15 22 09.7	
	comp=Z,23nm,21.6s,baz=272,slow=38						
FINES	**FINESS Array B**	**37.64**	**326**	P	**P**	**15 11 33.7**	**+0.7**
	2.4nm,0.9s,baz=116,slow=9.4,SNR=4.2						
ARCES	**ARCESS Array B**	**41.25**	**337**	P	**P**	**15 12 03.5**	**+0.6**
	3.8nm,1.0s,baz=117,slow=9.3,SNR=2.1						
HFS	**Hagfors**	**43.24**	**322**	P	**P**	**15 12 19.4**	**+0.3**
	0.9nm,0.4s,baz=104,slow=9.6,SNR=8.1						
NOA	**NORSAR Array B**	**44.55**	**323**	P	**P**	**15 12 29.7**	**+0.1**
	0.2nm,0.5s,baz=101,slow=7.7,SNR=4.1						
PETK	**Petropavlovsk-**	**59.76**	**44**	LR	LR	15 44 04.9	
	comp=Z,92nm,19.3s,baz=149,slow=40						
TORD	**Torodi Ar. Bea**	**66.01**	**269**	P	**P**	**15 15 02.8**	**-0.9**
	0.2nm,0.4s,baz=45,slow=6.3,SNR=1.8						

IDC ***17*** *15:05:25.3±1.1, 35.06N× 26.92E, h0km, mb3.6/7, mb1 3.6/12, mb1mx3.4/57, mbtmp3.5/12, ML3.5/5, MS2.7/2, Ms1 2.8/2, ms1mx2.2/44, Error ellipse: s-maj=26.5km s-min=14.1km az=176.0*
ATH ***17*** *15:05:28.0, 35.09N× 26.84E, h8km±3km, ML3.4/8, Error ellipse: s-maj=7.4km s-min=1.1km az=332.0*
THE ***17*** *15:05:28.0, 35.11N× 26.80E, h0km±1km, ML3.4/5, Error ellipse: s-maj=5.6km s-min=1.0km az=156.0*
ISK ***17*** *15:05:29.0, 35.25N× 26.76E, h7km, ML3.4/12*
DDA ***17*** *15:05:31.2, 35.56N× 26.71E, h7km±2km, MW3.6*

ISC 17 15:05:27.5±1.1, 35.07N±0.05× 26.82E±0.02, h16km±7km, n92, σ1s68/120, mb3.5/7, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.50**	**276**	P	**Pg**	**15 05 37.3**	**-0.2**
ZKR				S	**Sb**	**15 05 45.1**	**+0.1**
ZKR				AML	AML	15 05 45.8	
	comp=E,9253μm,0.5s						
ZKR				AML	AML	15 05 46.9	
	comp=N,4760μm,0.5s						
ZKR	**Zakros**	**0.50**	**276**	P	**Pg**	**15 05 37.4**	**-0.2**
ZKR				S	**Sb**	**15 05 45.5**	**+0.5**
	comp=N,4μm,0.5s						
ZKR	**Zakros**	**0.50**	**276**	PG	**Pg**	**15 05 37.7**	**+0.2**
KARP	**Karpathos**	**0.55**	**30**	P	**Pg**	**15 05 37.8**	**-0.7**
KARP				S	**Sg**	**15 05 45.6**	**-0.3**
KARP				AML	AML	15 05 47.2	
	comp=E,21744μm,0.5s						
KARP				AML	AML	15 05 47.4	
	comp=N,18896μm,0.4s						
KARP	**Karpathos**	**0.55**	**30**	P	**Pg**	**15 05 37.7**	**-0.8**
KARP				S	**Sb**	**15 05 47.0**	**+0.4**
	comp=N,10μm,0.5s						
KARP	**Karpathos**	**0.55**	**30**	PG	**Pg**	**15 05 38.2**	**-0.3**
KARP				SG	**Sg**	**15 05 45.4**	**-0.5**
STIA	**Sitia Lasithi**	**0.61**	**283**	P	**Pg**	**15 05 38.3**	**-1.4**
STIA				S	**Sb**	**15 05 49.8**	**+1.5**
FRMA	**Ierapetra Chan**	**0.90**	**267**	P	**Pg**	**15 05 42.9**	**-2.0**
NPS	**Neapolis**	**1.01**	**281**	P	**Pb**	**15 05 47.2**	**+0.5**
NPS				S	**Sb**	**15 06 00.6**	**+0.8**
NPS				AML	AML	15 06 05.0	
	comp=N,3636μm,0.8s						
NPS				AML	AML	15 06 08.5	
	comp=E,3737μm,0.4s						
NPS	**Neapolis**	**1.01**	**281**	P	**Pb**	**15 05 47.2**	**+0.5**
NPS				S	**Sn**	**15 06 01.8**	**+0.8**
	comp=E,2μm,0.6s						
HRKL	**Herakleio**	**1.43**	**280**	PN	**Pg**	**15 05 55.2**	**+0.1**
HRKL				SN	**Sg**	**15 06 13.9**	**+0.2**
NIS1	**Nisyros Isl.**	**1.56**	**11**	P	**Pn**	**15 05 55.4**	**+0.8**
NIS1				AML	AML	15 06 24.6	
	comp=E,2582μm,0.8s						
NIS1				AML	AML	15 06 30.0	
	comp=N,3388μm,0.6s						
NIS1	**Nisyros Isl.**	**1.56**	**11**	P	**Pn**	**15 05 55.0**	**+0.4**
NIS1	**Nisyros Isl.**	**1.56**	**11**	PN	**Pn**	**15 05 55.3**	**+0.7**
ARG	**Arkhangelos**	**1.56**	**42**	P	**Pn**	**15 05 56.3**	**+1.7**
ARG				AML	AML	15 06 21.9	
	comp=N,2356μm,0.8s						
ARG				AML	AML	15 06 24.1	
	comp=E,3497μm,0.5s						
ARG	**Arkhangelos**	**1.56**	**42**	P	**Pn**	**15 05 56.4**	**+1.7**
ARG				S	**Sb**	**15 06 17.1**	**+1.5**
	comp=E,1μm,0.7s						
ARG	**Arkhangelos**	**1.56**	**42**	PN	**Pb**	**15 05 56.6**	**+0.5**
ARG				SN	**Sn**	**15 06 16.5**	**+2.0**
IDI	**Anoyia**	**1.60**	**278**	Pn	**Pg**	**15 05 58.1**	**-0.2**
	comp=E,20nm,0.3s,baz=86,slow=16,SNR=48						
IDI				Sn	**Sg**	**15 06 19.9**	**+0.8**
	comp=E,24nm,0.3s,baz=316,slow=17,SNR=5.1						
IDI	**Anoyia**	**1.60**	**278**	P	**Pb**	**15 05 57.2**	**+0.5**
IDI				AML	AML	15 06 28.3	
	comp=N,784μm,0.7s						
IDI				AML	AML	15 06 34.5	
	comp=E,879μm,0.7s						
IDI	**Anoyia**	**1.60**	**278**	P	**Pg**	**15 05 58.1**	**-0.2**
IDI	**Anoyia**	**1.60**	**278**	PN	**Pb**	**15 05 57.6**	**+0.9**
SIVA	**Sivas**	**1.65**	**269**	P	**Pb**	**15 05 58.2**	**+0.6**
SIVA				AML	AML	15 06 31.8	
	comp=N,1866μm,0.7s						
SIVA				AML	AML	15 06 32.6	
	comp=E,2395μm,0.5s						
SIVA	**Sivas**	**1.65**	**269**	P	**Pb**	**15 05 58.7**	**+1.1**
KOSK	**Kos Island**	**1.69**	**4**	PN	**Pn**	**15 05 57.2**	**+0.9**
KOSK				SN	**Sn**	**15 06 17.9**	**+0.3**
SANT	**Santorini**	**1.71**	**320**	*i* P	**Pn**	**15 05 56.5**	**-0.2**
SANT				*i* S	**Sn**	**15 06 14.8**	**-3.5**
SANT	**Santorini**	**1.71**	**320**	PN	**Pn**	**15 05 57.6**	**+0.9**
THR8	**Santorini-Mono**	**1.73**	**321**	P	**Pn**	**15 05 57.8**	**+0.9**
THR6	**Thira Island,**	**1.73**	**318**	P	**Pn**	**15 05 58.1**	**+1.1**
SNT1	**Gialos, Santor**	**1.76**	**320**	P	**Pn**	**15 05 58.3**	**+1.0**
THR3	**Thira Island,**	**1.77**	**320**	P	**Pn**	**15 05 58.6**	**+1.1**
THT2	**Imerovigli**	**1.78**	**321**	PN	**Pn**	**15 05 58.6**	**+1.0**
THT2				SN	**Sn**	**15 06 20.5**	**+0.6**
PRNS	**Prines Rethymn**	**1.92**	**280**	P	**Pb**	**15 06 03.5**	**+1.3**
BODT	**Bodrum**	**2.03**	**11**	P	**Pn**	**15 06 00.9**	**-0.2**
BODT	**Bodrum**	**2.03**	**11**	PN	**Pn**	**15 06 02.2**	**+1.1**
BODT				SN	**Sn**	**15 06 26.4**	**+0.3**
BDRM	**Kayabasi**	**2.06**	**14**	*i* P	**Pn**	**15 06 01.5**	**0.0**
BDRM				*i* S	**Sn**	**15 06 22.7**	**-4.0**
BDRM				IAML		15 06 32.0	
	comp=E,33nm,0.7s						
BDRM				IAML		15 06 33.0	
	comp=N,106nm,0.6s						
TURN	**Turunc**	**2.06**	**34**	*i* P	**Pn**	**15 06 03.8**	**+2.4**
TURN				*i* S	**Sn**	**15 06 29.6**	**+2.8**
TURN				IAML		15 06 38.0	
	comp=N,119nm,0.4s						
TURN				IAML		15 06 45.0	
	comp=E,175nm,0.5s						
TURN	**Turunc**	**2.06**	**34**	PN	**Pn**	**15 06 03.2**	**+1.8**
TURN				SN	**Sb**	**15 06 29.9**	**+0.1**
VAM	**Vamos**	**2.17**	**280**	P	**Pb**	**15 06 07.4**	**+0.9**
VAM				AML	AML	15 06 46.5	
	comp=N,1033μm,1.1s						
VAM				AML	AML	15 06 55.7	
	comp=E,724μm,0.9s						
VAM	**Vamos**	**2.17**	**280**	P	**Pb**	**15 06 07.8**	**+1.3**
APE	**Apeiranthos**	**2.25**	**333**	P	**Pn**	**15 06 04.6**	**+0.4**
APE				S	**Sn**	**15 06 32.7**	**+1.0**
	comp=E,400nm,0.8s						
APE	**Apeiranthos**	**2.25**	**333**	*i* P	**Pn**	**15 06 03.8**	**-0.4**
APE				*i* S	**Sn**	**15 06 27.1**	**-4.6**
APE	**Apeiranthos**	**2.25**	**333**	PN	**Pn**	**15 06 04.9**	**+0.7**
APE				SN	**Sn**	**15 06 31.1**	**-0.6**
GVDS	**Gavdos**	**2.26**	**265**	PN	**Pb**	**15 06 07.9**	**0.0**
GVD	**Gavdhos**	**2.26**	**265**	PN	**Pb**	**15 06 07.5**	**-0.4**
DALY	**Dalyan (Mula)**	**2.29**	**40**	*i* P	**Pb**	**15 06 09.1**	**+0.6**
DALY				*i* S	**Sn**	**15 06 35.3**	**+2.8**
DALY				IAML		15 06 45.0	
	comp=N,158nm,0.7s						
DALY				IAML		15 06 51.0	
	comp=E,120nm,0.8s						
DALY	**Dalyan (Mula)**	**2.29**	**40**	PN	**Pn**	**15 06 06.9**	**+2.3**
IMMV	**Iera Moni Meta**	**2.36**	**280**	P	**Pn**	**15 06 08.0**	**+2.4**
IMMV	**Iera Moni Meta**	**2.36**	**280**	PN	**Pn**	**15 06 08.2**	**+2.6**
YER	**Yerkesik**	**2.38**	**29**	P	**Pn**	**15 06 07.5**	**+1.6**
YER	**Yerkesik**	**2.38**	**29**	PN	**Pn**	**15 06 07.8**	**+1.9**
DDIM	**Aydin, Didim**	**2.41**	**8**	*i* P	**Pn**	**15 06 07.4**	**+1.1**
DDIM				*i* S	**Sn**	**15 06 35.7**	**+0.3**
FETY	**Fethiye**	**2.41**	**49**	P	**Pn**	**15 06 07.1**	**+0.7**
MULA	**Mugla, Merkez-**	**2.50**	**29**	*i* P	**Pn**	**15 06 10.8**	**+3.2**
MULA				*i* S	**Sn**	**15 06 38.9**	**+1.1**
MULA				IAML		15 06 53.0	
	comp=N,54nm,0.6s						
MULA				IAML		15 06 56.0	
	comp=E,114nm,1.0s						
AKAS	**Kas**	**2.55**	**62**	*i* P	**Pn**	**15 06 07.8**	**-0.5**
AKAS				*i* S	**Sn**	**15 06 37.2**	**-1.9**
KNDR	**Palaiochora Ch**	**2.58**	**275**	PN	**Pb**	**15 06 12.4**	**-0.9**
AYDN	**Tasoluk**	**2.73**	**18**	*i* P	**Pn**	**15 06 10.6**	**0.0**
AYDN				IAML		15 06 57.0	
	comp=E,20nm,0.5s						
AYDN				IAML		15 06 58.0	
	comp=N,24nm,0.5s						
CAEL	**Denizli, Camel**	**2.88**	**44**	*i* P	**Pn**	**15 06 16.9**	**+4.0**
CAEL				*i* S	**Sn**	**15 06 51.8**	**+4.5**
CAEL				IAML		15 07 09.0	
	comp=E,216nm,0.7s						
TAVA	**DENIZLI_Tavas**	**2.93**	**35**	*i* P	**Pn**	**15 06 16.2**	**+2.7**
TAVA				*i* S	**Sn**	**15 06 49.0**	**+0.6**
TAVA				IAML		15 07 01.0	
	comp=N,118nm,0.8s						
TAVA				IAML		15 07 03.0	
	comp=E,55nm,0.4s						
DGB	**zmir**	**2.98**	**1**	*i* P	Pn	15 06 04.3	-10
AYDB	**Zeytinkoy-Aydi**	**3.00**	**16**	PN	**Pn**	**15 06 16.2**	**+1.7**
GOLH	**Golhisar**	**3.10**	**45**	*i* P	**Pn**	**15 06 18.2**	**+2.4**
GOLH				*i* S	**Sn**	**15 06 57.0**	**+4.4**
GOLH				IAML		15 07 13.0	
	comp=N,89nm,1.0s						
GOLH				IAML		15 07 18.0	
	comp=E,32nm,0.7s						
AKUM	**Antalya-Kumluc**	**3.13**	**65**	*i* P	**Pn**	**15 06 16.1**	**0.0**
AKUM				*i* S	**Sn**	**15 06 53.4**	**+0.3**
URLA	**Izmir**	**3.29**	**357**	*i* P	**Pn**	**15 06 17.5**	**-0.9**
URLA				IAML		15 07 19.0	
	comp=E,32nm,0.8s						
URLA				IAML		15 07 20.0	
	comp=N,48nm,0.8s						
URLA	**Izmir**	**3.29**	**357**	PN	**Pn**	**15 06 19.9**	**+1.5**
CHOS	**Chios island**	**3.37**	**350**	PN	**Pn**	**15 06 20.9**	**+1.3**
KORT	**Korkueli**	**3.45**	**55**	*i* P	**Pn**	**15 06 25.5**	**+4.8**
VLI	**Veliai**	**3.56**	**299**	P	**Pn**	**15 06 23.9**	**+1.8**
MANT	**Manisa**	**3.69**	**22**	*i* P	**Pn**	**15 06 25.8**	**+1.7**
KRND	**KRANIDI**	**3.76**	**309**	P	**Pn**	**15 06 27.0**	**+2.1**
BUCA	**Burdur, Bucak-**	**3.77**	**52**	*i* P	Pn	15 06 30.6	+5.5
USAK	**Uak-Merkez**	**4.04**	**25**	*i* P	**Pn**	**15 06 29.6**	**+0.8**
KEPZ	**Antalya-Kepez**	**4.29**	**63**	*i* P	**Pn**	**15 06 32.9**	**+0.7**
KEPZ				*i* S	**Sn**	**15 07 18.6**	**-3.3**
STEP	**BALIKESIR_Sava**	**4.36**	**9**	*i* P	**Pn**	**15 06 34.6**	**+1.5**
BUHA	**Balikesir, Bur**	**4.43**	**3**	*i* P	Pn	15 06 28.8	-5.3
SEDI	**Konya, Seydise**	**4.64**	**58**	*i* P	**Pn**	**15 06 39.2**	**+2.2**
SEDI				*i* S	**Sn**	**15 07 27.5**	**-3.2**
BAYC	**CANAKKALE_Bayr**	**4.67**	**357**	*i* P	**Pn**	**15 06 37.1**	**-0.3**
DURS	**Dursunbey**	**4.71**	**16**	*i* P	**Pn**	**15 06 38.3**	**+0.2**
AGG	**Agios Georgios**	**5.34**	**319**	*i* P	**Pn**	**15 06 50.8**	**+4.2**
BRTR	**Keskin Array B**	**7.14**	**47**	Pn	**Pn**	**15 07 13.1**	**+1.7**
	comp=N,0.1nm,0.3s,baz=228,slow=15,SNR=1.4						
MMAI	**Mount Meron Ar**	**7.41**	**104**	Pn	**Pn**	**15 07 14.7**	**-0.4**
	comp=N,0.6nm,0.3s,baz=294,slow=12,SNR=2.5						
MMAI				Sn	**Sn**	**15 08 37.8**	**-1.1**
	comp=N,1.8nm,0.3s,baz=296,slow=27,SNR=3.0						
EIL	**Elat**	**8.73**	**126**	Pn	**Pn**	**15 07 32.5**	**-0.6**
	comp=N,0.2nm,0.3s,baz=328,slow=15,SNR=1.7						
EIL				Sn	Sn	15 09 05.2	-5.9
	comp=N,0.6nm,0.3s,baz=336,slow=11,SNR=2.6						
AKASG	**Malin Array Be**	**15.72**	**6**	Pn	**Pn**	**15 09 06.3**	**-1.9**
	comp=N,0.6nm,0.3s,baz=196,slow=11,SNR=3.0						
GERES	**GERESS Array B**	**16.84**	**329**	Pn	**Pn**	**15 09 23.3**	**+0.7**
	comp=N,0.2nm,0.3s,baz=140,slow=12,SNR=4.6						
DAVOX	**Davos/Dischmat**	**17.30**	**318**	LR	LR	15 18 31.7	
	comp=N,50nm,18.0s,baz=261,slow=45						
ESDC	**Sonseca Array**	**24.83**	**290**	P	**P**	**15 10 49.1**	**0.0**
	comp=N,0.8nm,0.8s,baz=80,slow=9.9,SNR=4.7						
NOA	**NORSAR Array B**	**27.85**	**344**	LR	LR	15 24 05.2	
	comp=N,7.6nm,19.0s,baz=195,slow=40						
TORD	**Torodi Ar. Bea**	**31.49**	**232**	P	**P**	**15 11 48.2**	**-0.5**
	comp=N,0.5nm,0.6s,baz=32,slow=9.2,SNR=3.1						
BVAR	**Borovoye Array**	**35.43**	**46**	P	**P**	**15 12 21.4**	**-1.2**
	comp=N,0.4nm,0.5s,baz=278,slow=13,SNR=1.8						
AAK	**Ala-Archa**	**37.48**	**64**	P	**P**	**15 12 39.9**	**-0.6**
	comp=N,0.3nm,0.3s,baz=202,slow=23,SNR=1.4						
KURBB	**Kurchatov Arra**	**40.12**	**51**	P	**P**	**15 13 02.5**	**+0.1**
	comp=N,0.8nm,0.7s,baz=276,slow=8.7,SNR=5.7						
MKAR	**Makanchi Array**	**42.69**	**57**	P	**P**	**15 13 23.9**	**+0.4**
	comp=N,0.4nm,0.5s,baz=272,slow=7.2,SNR=7.7						
ZALV	**Zalesovo Beam**	**44.08**	**46**	P	**P**	**15 13 34.2**	**-0.4**
	comp=N,0.8nm,0.4s,baz=263,slow=9.9,SNR=4.6						

IDC ***17*** *15:08:05.4±0.8, 15.83S× 178.57W, h0km, mb3.9/11, mb1 4.1/12, mb1mx3.9/40, mbtmp3.9/12, ML4.8/1, MS3.8/11, Ms1 3.8/11, ms1mx3.6/39, Error ellipse: s-maj=39.4km s-min=18.3km az=141.0*
GCMT ***17*** *15:08:15.0±0.4, 15.85S±0.03× 178.53W±0.02, h14km±2km, MW4.8/62, Moment Tensor Solution. s23,c25; s62,c88; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.03±.10; Mθθ=0.04±.10; Mφφ=-0.01±.08; Mrθ=0.64±.26; Mθφ=1.80±.09; Mφr=0.32±.28; Best double couple: Mo=1.92800×10^16 NP1:φs=359.00000°, δ72.00000°, λ172.00000°. NP2: φs=91.00000°, δ83.00000°, λ19.00000°. Principal axes: T 2.0400, Plg18.0000°, Azm317.0000°; N -0.2250, Plg70.0000°, Azm112.0000°; P -1.8150, Plg8.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 17 15:08:07.8±0.7, 16.0S±0.2× 178.5W±0.2, h10km, n38, σ3s19/28, mb4.2/10, MS3.7/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.69**	**242**	Pn	**Pn**	**15 09 04.6**	**-0.4**
	3.0nm,0.3s,baz=219,slow=18,SNR=10						
MSVF				Sn	**Sn**	**15 09 45.2**	**-3.3**
	10nm,0.3s,baz=275,slow=22,SNR=6.4						
MSVF				LR	LR	15 10 34.6	
	comp=Z,3μm,19.1s,baz=119,slow=40						
AFI	**Afiamalu**	**6.86**	**73**	LR	LR	15 12 03.0	
	comp=Z,937nm,21.0s,baz=238,slow=35						
RAO	**Raoul Island**	**13.19**	**178**	LR	LR	15 15 44.0	
	comp=Z,600nm,18.4s,baz=310,slow=34						
DZM	**Mont Dzumac**	**15.42**	**245**	*e*Pn	**P**	**15 11 55.2**	**+4.9**
	67nm,1.4s						
DZM				*e*LR	LR	15 15 34.2	
	comp=Z,976nm,25.4s						
DZM	**Mont Dzumac**	**15.42**	**245**	LR	LR	15 16 51.8	
	comp=Z,632nm,19.1s,baz=63,slow=34						
RAR	**Rarotonga**	**18.52**	**109**	LR	LR	15 18 38.4	
	comp=Z,103nm,18.9s,baz=276,slow=34						
URZ	**Urewera**	**22.49**	**189**	LR	LR	15 20 41.1	
	comp=Z,390nm,20.1s,baz=31,slow=33						
PPT2	**Papeete2**	**27.76**	**97**	*e*LR	LR	15 20 48.0	
	comp=Z,162nm,24.0s						
PPT	**Papeete**	**27.76**	**97**	LR	LR	15 23 51.7	
	comp=Z,69nm,18.0s,baz=314,slow=34						
TBI	**Tubuai**	**28.30**	**110**	*e*LQ	LQ	15 19 57.4	
	366nm,26.8s						
TBI				*e*LR	LR	15 21 10.2	
	comp=Z,407nm,29.8s						
TAOE	**Nuku Hiva Isla**	**38.11**	**84**	*e*LQ	LQ	15 23 46.5	
	199nm,26.5s						
TAOE				*e*LR	LR	15 25 26.1	
	comp=Z,151nm,24.6s						
STKA	**Stephens Creek**	**39.46**	**239**	P	**P**	**15 15 39.0**	**+0.5**
	7.5nm,1.0s,baz=83,slow=9.8,SNR=9.4						
STKA				LR	LR	15 30 26.8	
	comp=Z,194nm,19.5s,baz=41,slow=34						
JAY	**Jayapura**	**42.29**	**284**	LR	LR	15 32 09.7	
	comp=Z,

baz=293,slow=75,SNR=39
H11S3 WAKE ISLAND Hy 25.04 106 T T 15 53 11.9
baz=296,slow=75,SNR=45
H11S1 WAKE ISLAND Hy 25.05 106 T T 15 53 11.7
baz=296,slow=75,SNR=35
H11S2 WAKE ISLAND Hy 25.06 106 T T 15 53 12.4
baz=296,slow=75,SNR=44
WB0 Warramunga Arr 47.50 189 P **P** **15 31 00.2 -0.7**
WB0 IAmb IAmb 15 31 01.0
comp=Z,7.1nm,1.2s
WRAB Tennant Creek 47.67 189 P **P** **15 31 01.1 -1.1**
WB2 Warramunga Arr 47.68 189 P **P** **15 31 01.6 -0.7**
WB2 IAmb IAmb 15 31 21.8
comp=Z,3.9nm,0.9s
WRA Warramunga Arr 47.68 189 P **P** **15 31 01.4 -1.0**
comp=Z,1.8nm,0.8s,baz=8.7,slow=7.9,SNR=13
WRA Warramunga Arr 47.68 189 IAmb IAmb 15 31 02.5
comp=Z,0.2nm,0.9s
FITZ Fitzroy Crossi 47.83 200 P **P** **15 31 01.4 -2.0**
AS31 Alice Springs 51.41 189 P **P** **15 31 29.7 -1.0**
AS31 IAmb IAmb 15 31 51.6
comp=Z,0.8nm,1.2s
ASAR Alice Springs 51.41 189 P **P** **15 31 29.8 -0.9**
comp=Z,0.2nm,0.8s,baz=17,slow=6.8,SNR=1.9
ASAR Alice Springs 51.41 189 P **P** **15 31 30.9 +0.2**
YKA Yellowknife Ar 72.14 28 P **P** **15 33 51.6 +1.9**
comp=Z,0.8nm,1.0s,baz=298,slow=5.5,SNR=5.0
ARCES ARCESS Array B 72.84 341 P **P** **15 33 53.8 -0.1**
comp=Z,4.2nm,1.1s,baz=270,slow=3.3,SNR=4.9
FINES FINESS Array B 77.18 334 P **P** **15 34 20.6 +1.6**
comp=Z,2.0nm,0.9s,baz=119,slow=2.4,SNR=4.0
NVAR Mina Array Bea 80.89 51 P **P** **15 34 42.0 +1.9**
comp=Z,0.3nm,0.5s,baz=274,slow=6.1,SNR=3.7
PDAR Pinedale Array 84.47 44 P **P** **15 34 59.6 +1.0**
comp=Z,0.2nm,0.6s,baz=261,slow=3.6,SNR=2.2
TXAR Lajitas Array 95.99 53 P **P** **15 35 54.8 +1.7**
comp=Z,0.5nm,1.0s,baz=336,slow=4.2,SNR=3.5

IDC 17 15:31:19.4±30.0,11°34N×141°66E,h361km±321km, mb2.9/6,mb1 3.2/6,mb1mx2.8/37,mbtmp3.6/6,MS3.1/1, Ms1 3.1/1,ms1mx2.7/14,Error ellipse: s-maj=112.3km s-min=26.5km az=51.0,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**21.32**	**165**	LR		LR	15 43 32.2	
	comp=Z,52nm,19.6s,baz=308,slow=34							
WRA	**Warramunga Arr**	**31.91**	**193**	P		P	15 37 11.8	-1.1
	0.8nm,0.8s,baz=9.8,slow=9.5,SNR=6.0							
ASAR	**Alice Springs**	**35.61**	**192**	P		P	15 37 44.8	+0.3
	0.3nm,0.5s,baz=26,slow=10,SNR=13							
CMAR	**Chiang Mai Arr**	**41.80**	**285**	P		P	15 38 36.0	+0.5
	0.2nm,0.3s,baz=86,slow=7.0,SNR=2.1							
MKAR	**Makanchi Array**	**60.97**	**317**	P		P	15 40 55.1	-0.5
	0.2nm,0.5s,baz=98,slow=9.1,SNR=4.1							
NVAR	**Mina Array Bea**	**90.77**	**51**	P		P	15 43 43.2	+0.3
	0.4nm,0.6s,baz=255,slow=5.8,SNR=4.2							
FINES	**FINESS Array B**	**91.84**	**334**	P		P	15 43 46.8	-0.3
	0.5nm,0.4s,baz=46,slow=4.0,SNR=8.7							

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*IDC **17** 15:36:44.9±0.7,8.86S×74.45W,h144km±5km,mb3.9/12, mb1 4.0/18,mb1mx3.9/33,mbtmp4.3/18,Error ellipse: s-maj=18.3km s-min=13.2km az=30.0*
*NEIC **17** 15:36:44.6±2.5,8.91S±0.05×74.4W±0.1,h148km±11km, mb4.3/14,Error ellipse: s-maj=16.6km s-min=6.5km az=85.0*
*VAO **17** 15:36:45.2±0.7,8.90S×74.53W,h149km,mb4.5*
ISC 17 15:36:44.3±0.5,8.92S±0.05×74.49W±0.05,h145km±4km, h145km:pP-P,n80,σ1§63/95,mb4.2/16,Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CZSB	**Cruzeiro do Su**	**2.12**	**56**	*eP*		**Pn**	**15 37 22.6**	**+2.1**
NNA	**Nana**	**3.83**	**217**	P		**Pn**	**15 37 43.3**	**+1.1**
	33nm,0.3s,baz=24,slow=4.3,SNR=47							
NNA				S		**Sn**	**15 38 25.5**	**-1.7**
	140nm,0.3s,baz=162,slow=18,SNR=11							
NNA	**Nana**	**3.83**	**217**			**Pn**	**15 37 43.1**	**+0.9**
ATAH	**Atahualpa**	**4.26**	**294**	P		**Pn**	**15 37 49.1**	**+0.9**
	20nm,0.3s,baz=88,slow=4.5,SNR=138							
ATAH				S		**Sn**	**15 38 32.5**	**-5.3**
	11nm,0.3s,baz=127,slow=19,SNR=5.8							
ETMB	**Extrema**	**8.21**	**97**	*eP*		**Pn**	**15 38 39.9**	**-0.7**
LPAZ	**La Paz**	**9.59**	**140**	P		**Pn**	**15 39 01.2**	**+1.6**
	0.1nm,0.3s,baz=310,slow=16,SNR=3.2							
LPAZ				S		**Sn**	**15 40 43.9**	**-2.3**
	0.5nm,0.3s,baz=298,slow=13,SNR=1.8							
LPAZ	**La Paz**	**9.59**	**140**			**Pn**	**15 39 01.1**	**+1.5**
SAML	**Samuel**	**11.17**	**91**			**Pn**	**15 39 18.5**	**-1.4**
MNMC	**Minye Minye**	**11.20**	**155**	Pn		**Pn**	**15 39 21.6**	**+1.0**
ORTC	**Ortega, Tolima**	**12.77**	**357**	*eP*		**Pn**	**15 39 40.5**	**-0.3**
PB07	**IPOC Station P**	**13.48**	**161**	Pn		**Pn**	**15 39 49.9**	**-0.2**
PB09	**IPOC Station P**	**13.76**	**159**	Pn		**Pn**	**15 39 53.1**	**-0.5**
GUY2C	**Guyana, Caldas**	**14.08**	**356**	*eP*		**P**	**15 40 00.1**	**-1.1**
NORC	**Norcasia**	**14.39**	**358**	*eP*		**P**	**15 40 05.2**	**+0.9**
VILB	**Vilhena**	**14.59**	**107**	*eP*		**P**	**15 40 05.8**	**-0.6**
LVC	**Limon Verde**	**14.63**	**159**	P		**P**	**15 40 07.0**	**-0.2**
	0.7nm,0.3s,baz=182,slow=9.2,SNR=8.4							
LVC	**Limon Verde**	**14.63**	**159**	Pn		**Pn**	**15 40 00.9**	**-3.8**
CBOC	**Ciudad Bolivar**	**14.77**	**354**	*eP*		**P**	**15 40 09.6**	**+1.1**
RUSC	**La Rusia**	**14.78**	**5**	*eP*		**P**	**15 40 11.4**	**+2.4**
SIV	**San Ignacio**	**14.86**	**120**	P		**P**	**15 40 09.2**	**-0.2**
	1.1nm,0.3s,baz=296,slow=12,SNR=16							
SIV				S		**Sn**	**15 42 48.1**	**-4.2**
	0.5nm,0.3s,baz=298,slow=20,SNR=2.3							
MACA	**Manacapuru-AM**	**14.86**	**68**	*eP*		**P**	**15 40 09.2**	**-0.3**
PTBC	**PUERTO BERRIO,**	**15.36**	**0**	*eP*		**P**	**15 40 14.4**	**-0.5**
BARC	**Barichara**	**15.46**	**5**	*eP*		**P**	**15 40 17.6**	**+1.3**
DBBC	**Dabeiba**	**15.93**	**354**	*eP*		**P**	**15 40 22.1**	**+0.8**
PAMC	**Pamplona, Colo**	**16.25**	**6**	*eP*		**P**	**15 40 27.6**	**+2.3**
ZARC	**Zaragoza, Cauc**	**16.31**	**359**	*eP*		**P**	**15 40 27.0**	**+1.6**
PTLB	**Pontes e Lacer**	**16.34**	**115**	*eS*		**Sn**	**15 43 30.3**	**+2.5**
PTGA	**Pitinga**	**16.59**	**61**	P		**Pn**	**15 40 28.6**	**+0.1**
	6.8nm,0.3s,baz=237,slow=14,SNR=33							
PTGA				S		**S**	**15 43 25.8**	**-7.6**
	0.4nm,0.3s,baz=347,slow=21,SNR=5.7							
PTGA	**Pitinga**	**16.59**	**61**	P		**Pn**	**15 40 29.3**	**+0.7**
PTGA				IAmb		IAmb	15 40 32.0	
	comp=Z,30nm,1.1s							
PTGA	**Pitinga**	**16.59**	**61**	*eP*		**Pn**	**15 40 28.9**	**+0.3**
UREC	**San Jos de Ur**	**16.59**	**356**	*eP*		**Pn**	**15 40 29.4**	**+0.8**
SMLC	**San Martn de**	**17.61**	**1**	*eP*		**P**	**15 40 40.2**	**+0.5**
MOTC	**Monteria, Cord**	**17.62**	**356**	*eP*		**P**	**15 40 39.6**	**-0.3**
BOAV	**Boa Vista**	**17.89**	**52**	*eP*		**Pn**	**15 40 43.6**	**-0.6**
BOAV				*eS*		**S**	**15 44 02.3**	**+1.2**
SDV	**Santo Domingo**	**18.10**	**12**	P		**Pn**	**15 40 46.2**	**-0.7**
SDV				IAmb		IAmb	15 40 54.0	
	comp=Z,11nm,0.7s							
CLDB	**Colider**	**18.51**	**98**	*eP*		**Pn**	**15 40 50.9**	**-0.7**
AC02	**Maricunga**	**18.53**	**165**	Pn		**Pn**	**15 40 52.8**	**+0.6**
NPGB	**Novo Progresso**	**19.03**	**86**	*eP*		**P**	**15 40 56.1**	**+0.7**
ITTB	**Itaituba**	**19.16**	**78**	*eP*		**Pn**	**15 40 58.4**	**-0.8**
CRJC	**Cerrejon, Guaj**	**19.87**	**5**	*eP*		**P**	**15 41 03.2**	**-1.2**
SMRC	**Santa Marta, M**	**19.95**	**1**	*eP*		**P**	**15 41 04.7**	**-0.5**
AC05	**El Transito**	**20.20**	**169**	P		**P**	**15 41 06.6**	**-1.4**
AC05				IAmb		IAmb	15 41 24.5	
	comp=Z,9.7nm,0.8s							
PCRV	**Puerto La Cruz**	**21.35**	**28**	P		**P**	**15 41 21.2**	**+0.9**
	comp=Z,6.2nm,0.4s,baz=207,slow=7.6,SNR=3.4							
AQDB	**Aquidauana**	**21.47**	**124**	*eP*		**P**	**15 41 23.6**	**+2.1**
SNDB	**Serra Nova Dou**	**23.00**	**100**	*eP*		**P**	**15 41 37.4**	**+0.7**
SNDB				*epP*		**pP**	**15 42 04.8**	**+0.6**
CPUP	**Villa Florida**	**23.76**	**139**	P		**P**	**15 41 43.2**	**-0.3**
MCPB	**Macapa, AP**	**23.90**	**70**	*eP*		**P**	**15 41 45.4**	**+0.5**
GRGR	**Grenville**	**24.50**	**32**	P		**P**	**15 41 47.5**	**-2.8**
MDP	**Montagnes des**	**25.85**	**58**	P		**P**	**15 42 02.6**	**0.0**
	comp=Z,30nm,1.1s,baz=122,slow=9.9,SNR=1.6							
PTGB	**Pitanga**	**26.53**	**129**	*eP*		**P**	**15 42 07.6**	**-1.1**
PTGB				*epP*		**pP**	**15 42 41.3**	**+2.1**
PDPR	**Patillas Dam,**	**28.04**	**17**	P		**P**	**15 42 18.1**	**-4.0**
SJG	**San Juan**	**28.09**	**17**	P		**P**	**15 42 22.4**	**-0.1**
	comp=Z,14nm,0.4s,baz=134,slow=14,SNR=3.9							
SDBA	**SAO DESIDERIO**	**29.27**	**99**	*eP*		**P**	**15 42 34.8**	**+1.6**
JANB	**Januaria**	**30.12**	**105**	*eP*		**P**	**15 42 40.9**	**+0.2**
JANB				*epP*		**pP**	**15 43 13.0**	**+1.5**
NBPS	**Pedro II - PI**	**33.11**	**84**	*eP*		**P**	**15 43 07.6**	**+0.7**
NBIT	**Itapeh - BA**	**34.78**	**103**	*eP*		**P**	**15 43 22.1**	**+0.8**
NBLA	**Lagarto - SE**	**36.19**	**96**	*eP*		**P**	**15 43 35.3**	**+2.0**
TX31	**Lajitas Ar. Si**	**47.30**	**325**	P		**P**	**15 45 02.2**	**-1.3**
TX31				IAmb		IAmb	15 45 05.8	
	comp=Z,4.4nm,0.9s							
TX32	**Lajitas Array**	**47.30**	**325**	P		**P**	**15 45 04.2**	**+0.7**
TXAR	**Lajitas Array**	**47.30**	**325**	P		**P**	**15 45 04.2**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=152,slow=9.2,SNR=12							
TXAR				*pP*		**pP**	**15 45 35.6**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=150,slow=8.0,SNR=1.6							
TXAR	**Lajitas Array**	**47.30**	**325**	P		**P**	**15 45 03.0**	**-0.5**
BINY	**Binghamton**	**50.89**	**359**	P		**P**	**15 45 31.1**	**+0.7**
PDAR	**Pinedale Array**	**60.58**	**331**	P		**P**	**15 46 40.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=88,slow=7.6,SNR=3.6							
ULM	**Lac du Bonnet**	**61.80**	**345**	P		**P**	**15 46 47.1**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=173,slow=8.6,SNR=3.5							
ULM				*pP*		**pP**	**15 47 22.2**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=157,slow=7.7,SNR=3.5							
NVAR	**Mina Array Bea**	**62.32**	**322**	P		**P**	**15 46 53.0**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=142,slow=6.4,SNR=3.1							
YHL	**Hebgen Lake**	**62.92**	**331**	P		**P**	**15 46 57.1**	**+1.6**
YHL				IAmb		IAmb	15 46 58.6	
	comp=Z,3.4nm,0.8s							
DBIC	**Dimbokro**	**71.10**	**80**	P		**P**	**15 47 47.5**	**0.0**
	comp=Z,9.6nm,0.6s,baz=243,slow=6.4,SNR=16							
DBIC	**Dimbokro**	**71.10**	**80**	P		**P**	**15 47 47.0**	**-0.6**
DBIC				IAmb		IAmb	15 47 48.6	
	comp=Z,12nm,0.8s							
YKA	**Yellowknife Ar**	**77.62**	**342**	P		**P**	**15 48 24.6**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=139,slow=6.4,SNR=17							
YKA				*pP*		**pP**	**15 49 01.1**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=138,slow=6.3,SNR=6.4							
TOA0	**Torodi Ar. Sit**	**78.75**	**75**	P		**P**	**15 48 31.4**	**-0.1**
TOA0				IAmb		IAmb	15 48 32.6	
	comp=Z,4.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.75**	**75**	P		**P**	**15 48 31.8**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=253,slow=4.1,SNR=21							
TORD				*pP*		**pP**	**15 49 06.8**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=283,slow=5.5,SNR=3.8							
TORD	**Torodi Ar. Bea**	**78.75**	**75**	P		**P**	**15 48 31.4**	**0.0**
TORD				IAmb		IAmb	15 48 32.6	
	comp=Z,3.9nm,0.8s							
ESDC	**Sonseca Array**	**81.01**	**47**	P		**P**	**15 48 44.2**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=245,slow=5.4,SNR=8.3							
ESDC				*pP*		**pP**	**15 49 20.4**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=312,slow=17,SNR=2.4							
ILAR	**Eielson Array**	**90.64**	**336**	*pP*		*pP*	15 50 06.7	-0.1
	comp=Z,0.9nm,0.8s,baz=108,slow=2.9,SNR=6.5							
NOA	**NORSAR Array B**	**95.65**	**29**	P		**P**	**15 49 53.7**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=258,slow=4.2,SNR=3.3							
ZALV	**Zalesovo Beam**	**132.11**	**16**	PKP		**PKiKP**	**15 55 42.0**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=316,slow=4.0,SNR=2.9							
ZALV				*pPKP*		**pPKPdf**	**15 56 19.1**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=325,slow=3.9,SNR=5.7							
ASAR	**Alice Springs**	**137.35**	**220**	PKP		**PKPdf**	**15 55 52.2**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=125,slow=1.9,SNR=9.3							
MKAR	**Makanchi Array**	**137.37**	**24**	PKP		**PKPdf**	**15 55 51.4**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=296,slow=2.9,SNR=3.5							
MKAR				*pPKP*		**pPKPdf**	**15 56 28.3**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=350,slow=2.3,SNR=4.4							
WRA	**Warramunga Arr**	**139.65**	**224**	PKhKP	PKPpre		15 55 48.9	
	comp=Z,0.4nm,0.4s,baz=123,slow=2.7,SNR=5.5							
WRA				PKP		**PKPdf**	**15 55 56.5**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=120,slow=2.1,SNR=27							
JNU	**Nakatsue**	**146.41**	**319**	PKPbc		**PKPdf**	**15 56 07.4**	**0.0**
	comp=Z,5.9nm,0.7s,baz=47,slow=7.8,SNR=2.2							

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*IDC **17** 15:40:59.9±1.3,26.85N×103.18E,h0km,mb3.4/5, mb1 3.6/6,mb1mx3.4/45,mbtmp3.4/6,ML3.8/1,MS3.1/1, Ms1 3.1/1,ms1mx2.4/56,Error ellipse: s-maj=36.4km s-min=23.1km az=80.0*
ISC 17 15:41:04.4±1.1,26°8N±0.1×103°1E±0.2,h35km,n7, σ1§05/6,mb3.5/5,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CMAR	**Chiang Mai Arr**	**9.17**	**206**	Pn		**Pn**	**15 43 13.7**	**-0.7**
	0.3nm,0.3s,baz=18,slow=12,SNR=2.5							
CMAR				Lg		Lg	15 45 57.2	
	0.2nm,0.3s,baz=26,slow=29,SNR=2.2							
SONM	**Songino Array**	**21.13**	**6**	P		**P**	**15 45 45.7**	**-0.5**
	1.1nm,0.5s,baz=185,slow=10,SNR=2.6							
KSRS	**Korea Array**	**23.47**	**57**	P		**P**	**15 46 10.0**	**-0.7**
	1.1nm,0.6s,baz=240,slow=9.6,SNR=6.0							
MKAR	**Makanchi Array**	**25.84**	**326**	P		**P**	**15 46 33.3**	**+0.8**
	0.5nm,0.8s,baz=134,slow=10,SNR=5.0							
AAK	**Ala-Archa**	**28.14**	**311**	LR		LR	15 59 28.5	
	comp=Z,36nm,20.1s,baz=102,slow=39							
WRA	**Warramunga Arr**	**55.48**	**144**	P		**P**	**15 50 36.3**	**+0.3**
	0.5nm,0.6s,baz=332,slow=7.9,SNR=6.2							
ASAR	**Alice Springs**	**58.36**	**147**	P		**P**	**15 50 57.5**	**+1.1**
	0.2nm,0.8s,baz=325,slow=6.8,SNR=1.8							

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*IDC **17** 15:52:50.2±0.3,16.00S×178.52W,h0km,mb5.0/35, mb1 5.1/40,mb1mx5.1/42,mbtmp5.0/40,ML5.3/3,MS6.4/39, Ms1 6.4/39,ms1mx6.2/46,Error ellipse: s-maj=12.0km s-min=10.3km az=145.0*
*NEIC **17** 15:52:51.5,15.88S×178.62W,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.34; Mθθ=0.17; Mφφ=0.17; Mrθ=-0.05; Mrφ=4.17; Mθφ=-0.80; Fault plane solution: M0=4.26000×10¹⁸ NP1:φs=0.11000°, δ=89.35000°,λ=-169.03000°. NP2:φs=269.98000°, δ=79.03000°,λ=-0.66000°. Principal axes: T 4.4226, Plg7.0000°, Azm135.0000°; N -0.3447, Plg79.0000°, Azm3.0000°; P -4.0780, Plg8.0000°, Azm226.0000°;*
*MOS **17** 15:52:51.5±1.8,16.10S×178.54W,h10km,mb5.9/59, MS6.4/44 Error ellipse: s-maj=6.8km s-min=6.7km az=165.1*
*NEIC **17** 15:52:51.5±2.2,15.88S±0.05×178.60W±0.06,h10km±1km, mb6.1/186,Ms_20 6.6/949,Mwb6.4/55,Mww6.5, Mwc6.5(GCMT),Error ellipse: s-maj=12.3km s-min=3.6km az=133.0*
*BJI **17** 15:52:54.4±0.0,15.95S×178.50W,h20km,mB6.2/78, mb5.2/48,Ms6.4/87,Ms7 6.4/80*
*NOU **17** 15:52:54.7,15.98S×178.50W,h13km,ML6.1,Fiji Islands Region*
*GCMT **17** 15:52:59.5±0.0,15.90S×178.51W,h16km,MW6.5/170, Moment Tensor Solution. s170,c413; s166,c725; Duration: 4s2 Moment tensor: Scale 10¹⁸Nm; Mrr=0.07±.02; Mθθ=0.67±.02; Mφφ=0.59±.02; Mrθ=0.12±.06; Mθφ=0.29±.02; Mrr-1.27±.06; Best double couple: M0=6.44900×10¹⁸ NP1:φs=267.00000°,δ=79.00000°, λ=0.00000°. NP2:φs=357.00000°,δ=90.00000°,λ=-169.00000°. Principal axes: T 6.4050, Plg8.0000°, Azm132.0000°; N 0.0880, Plg79.0000°, Azm359.0000°; P -6.4930, Plg8.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **17** 15:52:59,15.90S×178.47W,h15km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.08; Mθθ-0.64; Mφφ0.72; Mrθ-0.20; Mrφ6.46; Mθφ-0.80; Fault plane solution: M0=6.55000×10¹⁸ NP1:φs=267.00000°, δ=83.00000°,λ=2.00000°. NP2:φs=177.00000°,δ=88.00000°, λ=173.00000°. Principal axes: T 6.6139, Plg6.0000°, Azm132.0000°; N -0.1331, Plg83.0000°, Azm341.0000°; P -6.4808, Plg4.0000°, Azm222.0000°;*
*NEIC **17** 15:53:01,15.91S×178.69W,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.29; Mθθ-0.78; Mφφ0.49; Mrθ2.55; Mφφ6.31; Mθr0.31; Fault plane solution: M0=6.85000×10¹⁸ NP1:φs=357.00000°, δ=68.00000°,λ=177.00000°. NP2:φs=88.00000°,δ=88.00000°, λ=22.00000°. Principal axes: T 6.7977, Plg17.0000°, Azm314.0000°; N 0.1023, Plg68.0000°, Azm93.0000°; P -6.9000, Plg14.0000°, Azm220.0000°;*
ISC 17 15:52:53.3±0.5,16°05S±0.04×178°44W±0.03,h13km±2km, h13km:pP-P,n1471,σ2§29/985,mb5.9/219,MS6.6/557, 65C-82D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**3.75**	**243**	Pn		**Pn**	**15 53 48.1**	**-3.0**
	26nm,0.3s,baz=181,slow=22,SNR=47							
MSVF				Sn		**Sn**	**15 54 31.0**	**-4.3**
	148nm,0.3s,baz=214,slow=22,SNR=8.4							
MSVF				LR		LR	15 55 20.4	
	comp=Z,1066µm,19.0s,baz=125,slow=40							
MSVF	**Nonsavu**	**3.75**	**243**	*dP*		**Pn**	**15 53 48.3**	**-2.8**
MSVF	**Nonsavu**	**3.75**	**243**	Pn		**Pn**	**15 53 47.3**	**-3.8**
MSVF	**Nonsavu**	**3.75**	**243**	P		**Pn**	**15 53 50.7**	**-0.4**
AFI	**Afiamalu**	**6.78**	**73**	Pn		**Pn**	**15 54 31.4**	**-1.3**
	15nm,0.3s,baz=56,slow=1.1,SNR=15							
AFI				LR		LR	15 56 48.7	
	comp=Z,286µm,20.9s,baz=247,slow=35							
AFI	**Afiamalu**	**6.78**	**73**	P		**Pn**	**15 54 32.9**	**+0.2**
FUNA	**Funafuti**	**7.83**	**343**	Pn		Pn	15 54 40.8	-6.1
NIUE	**Niue**	**8.66**	**112**	P		**Pn**	**15 55 01.3**	**+2.9**
	baz=8.8,SNR=3.9							
NIUE	**Niue**	**8.66**	**112**	Pn		**Pn**	**15 54 59.4**	**+1.0**
NIUE	**Niue**	**8.66**	**112**	P		**Pn**	**15 55 02.7**	**+4.3**
RAO	**Raoul Island**	**13.15**	**178**	Pn		**Pn**	**15 55 58.9**	**-0.9**
	12nm,0.3s,baz=92,slow=23,SNR=1.2							
RAO				LR		LR	16 00 22.1	
	comp=Z,124µm,19.7s,baz=350,slow=34							
RAO	**Raoul Island**	**13.15**	**178**	Pn		**Pn**	**15 55 58.6**	**-1.2**
RAO	**Raoul Island**	**13.15**	**178**	P		**Pn**	**15 56 00.9**	**+1.0**
MARNC	**Mare, Loyalty**	**13.90**	**245**	P		**Pn**	**15 56 11.5**	**+1.3**
KNTN	**Kanton**	**14.76**	**27**	Pn		**Pn**	**15 56 17.8**	**-4.1**
KNTN	**Kanton**	**14.76**	**27**	P		**Pn**	**15 56 20.7**	**-1.2**
PINNC	**Pines Island,**	**14.83**	**242**	P		**Pn**	**15 56 24.2**	**+1.4**
YATNC	**Mamie plateau,**	**15.10**	**244**	P		**Pn**	**15 56 27.8**	**+1.3**
OUENC	**Ouen Island, N**	**15.27**	**243**	P		**Pn**	**15 56 30.0**	**+1.3**
DZM	**Mont Dzumac**	**15.49**	**245**	*e*Pn		**Pn**	**15 56 26.9**	**-4.8**
	2µm,1.6s							
DZM				*e*LR		LR	15 59 58.8	
	comp=Z,308µm,26.0s							
DZM	**Mont Dzumac**	**15.49**	**245**	Pn		**Pn**	**15 56 30.2**	**-1.6**
	0.4nm,0.3s,baz=58,slow=15,SNR=14							
DZM				LR		LR	16 01 28.5	
	comp=Z,226µm,20.8s,baz=74,slow=34							
DZM	**Mont Dzumac**	**15.49**	**245**	P		**Pn**	**15 56 33.0**	**+1.3**
ONTNC	**Ouen Toro**	**15.56**	**244**	P		**Pn**	**15 56 33.9**	**+1.3**
NOUC	**Port Laguerre**	**15.62**	**245**	P		**P**	**15 56 34.8**	**-2.7**
KOUNC	**Koumac, New Ca**	**17.00**	**252**	P		**P**	**15 56 52.6**	**-0.2**
NFK	**Norfolk Island**	**18.02**	**222**	P		**P**	**15 57 05.4**	**+1.3**
	baz=18,SNR=7.3							
NFK	**Norfolk Island**	**18.02**	**222**	P		**P**	**15 57 07.5**	**+3.5**
RAR	**Rarotonga**	**18.42**	**109**	P		**P**	**15 57 07.1**	**-1.3**
	2.7nm,0.3s,baz=87,slow=19,SNR=4.6							
RAR	**Rarotonga**	**18.42**	**109**	P		**Pn**	**15 57 12.3**	**+3.8**
HAZ	**Te Kaha**	**21.88**	**188**	P		**P**	**15 57 47.5**	**+1.5**
HNR	**Honiara**	**22.07**	**285**	P		**P**	**15 57 47.0**	**-1.3**
	26nm,0.4s,baz=251,slow=7.0,SNR=2.5							
HNR				LR		LR	16 04 53.0	
	comp=Z,323µm,20.6s,baz=118,slow=33							
HNR	**Honiara**	**22.07**	**285**	P		**P**	**15 57 47.0**	**-1.3**
HNR	**Honiara**	**22.07**	**285**	IAMs_20	IAMs_20		16 04 41.7	
	comp=Z,302µm,19.0s							
HNR	**Honiara**	**22.07**	**285**	P		**P**	**15 57 49.6**	**+1.3**
RUGZ	**Raukumara Rang**	**22.10**	**188**	P		**P**	**15 57 50.5**	**+2.0**
PUZ	**Puketiti**	**22.13**	**187**	P		**P**	**15 57 50.7**	**+2.0**
URZ	**Urewera**	**22.47**	**189**	P		**P**	**15 57 51.0**	**-1.3**
	comp=Z,105nm,0.7s,baz=298,slow=23,SNR=28							
URZ				LR		LR	16 05 51.0	
	comp=Z,145µm,20.3s,baz=34,slow=35							
URZ	**Urewera**	**22.47**	**189**	P		**P**	**15 57 48.6**	**-3.7**
URZ				IAMs_20	IAMs_20		16 05 40.3	
	comp=Z,159µm,19.0s							
URZ	**Urewera**	**22.47**	**189**	P		**P**	**15 57 51.6**	**-0.7**
NGRZ	**Ngongotaha**	**22.47**	**191**	P		**P**	**15 57 52.0**	**-0.5**
MWZ	**Matawai**	**22.48**	**188**	P		**P**	**15 57 52.6**	**+0.1**
CNGZ	**Carnagh Statio**	**22.54**	**187**	P		**P**	**15 57 53.9**	**+0.8**
MUGZ	**Murupara**	**22.74**	**190**	P		**P**	**15 57 55.4**	**+0.2**
RIGZ	**Rimuhau**	**22.82**	**188**	P		**P**	**15 57 56.9**	**+0.9**
SNGZ	**Shannon Statio**	**22.95**	**188**	P		**P**	**15 57 57.5**	**+0.1**
RAHZ	**Arahi**	**23.12**	**189**	P		**P**	**15 57 59.6**	**+0.5**
RATZ	**Rangitukua**	**23.29**	**191**	P		**P**	**15 58 02.1**	**+1.1**

comp=Z,92µm,20.0s
ARMA Armidale 30.88 237 P **P** **15 59 10.4 +0.6**
baz=31,SNR=9.9
ARMA Armidale 30.88 237 IAMs_20 IAMs_20 16 08 57.2
comp=Z,106µm,22.0s
RABL Rabaul 31.19 289 IAMs_20 IAMs_20 16 09 48.3
comp=Z,187µm,22.0s
RABL Rabaul 31.19 289 P **P** **15 59 13.2 +0.6**
MLZ Mavora Lakes 31.34 198 IAMs_20 IAMs_20 16 12 33.2
comp=Z,98µm,18.0s
DCZ Deep Cove 31.73 199 IAmb IAmb 15 59 26.2
comp=Z,176nm,1.0s
RMQ Roma 32.20 246 P **P** **15 59 20.9 -0.4**
baz=32,SNR=20
PATS Pohnpei 32.35 313 IAMs_20 IAMs_20 16 09 16.5
comp=Z,126µm,20.0s
MGCD Mangrove Creek 32.36 233 P **P** **15 59 23.0 +0.3**
baz=32,SNR=8.7
RIV Riverview 32.59 231 P **P** **15 59 27.3 +2.7**
baz=32,SNR=3.4
RIV Riverview 32.59 231 P **P** **15 59 28.7 +4.1**
RIV pmax pmax
comp=Z,254nm,1.8s
CTA Charters Tower 33.77 258 P **P** **15 59 33.0 -2.1**
comp=Z,20nm,0.8s,baz=82,slow=10,SNR=16
CTA LR LR 16 11 46.2
comp=Z,39µm,18.2s,baz=84,slow=34
CTA Charters Tower 33.77 258 P **P** **15 59 33.0 -2.1**
CTAO Charters Tower 33.77 258 P **P** **15 59 33.8 -1.3**
CTAO pmax pmax
comp=Z,906nm,1.9s
CTAO Charters Tower 33.77 258 P **P** **15 59 33.8 -1.3**
PMG Port Moresby 34.16 277 P **P** **15 59 37.7 -0.9**
comp=Z,33nm,1.0s,baz=94,slow=8.0,SNR=6.3
PMG LR LR 16 10 12.6
comp=Z,62µm,20.7s,baz=100,slow=31
PMG Port Moresby 34.16 277*c i*P **P** **15 59 39.2 +0.6**
PMG pmax pmax
comp=Z,63nm,1.2s
PMG MLR MLR
comp=Z,34µm,17.0s
PMG Port Moresby 34.16 277 P P 15 59 33.0 -5.6
PMG Port Moresby 34.16 277 IAMs_20 IAMs_20 16 09 50.8
comp=Z,65µm,19.0s
PMG Port Moresby 34.16 277 P **P** **15 59 40.8 +2.2**
CNB Canberra Magne 34.56 230 P **P** **15 59 41.8 -0.1**
baz=34,SNR=16
CAN Canberra 34.83 230 P **P** **15 59 42.9 -1.4**
CAN pmax pmax
comp=Z,511nm,1.5s
CAN MLR MLR
comp=Z,37µm,18.0s
CAN Canberra 34.83 230 P **P** **15 59 42.9 -1.4**
CAN IAmb IAmb 15 59 55.4
comp=Z,511nm,1.5s
YNG Young 34.87 232 P **P** **15 59 44.6 0.0**
baz=35,SNR=12
MTSU Mount Surprise 35.62 261 P **P** **15 59 50.3 -0.9**
baz=36,SNR=18
CMSA Cobar Meteorol 36.07 238 P **P** **15 59 54.1 -0.8**
baz=36,SNR=86
QLP Quilpie 36.20 247 P **P** **15 59 54.6 -1.4**
baz=36,SNR=18
H11S2 WAKE ISLAND Hy 37.31 336 T T 16 40 05.4
baz=154
H11S3 WAKE ISLAND Hy 37.32 336 T T 16 40 05.8
baz=154
H11S1 WAKE ISLAND Hy 37.33 336 T T 16 40 12.2
baz=154
TAOE Nuku Hiva Isla 38.02 84 *e*P **P** **16 00 13.0 +1.3**
comp=Z,514nm,1.6s
TAOE Nuku Hiva Isla 38.02 84 *e*T T 16 40 25.7
comp=Z,27nm,0.2s
TAOE Nuku Hiva Isla 38.02 84 P **P** **16 00 08.9 -2.9**
TAOE IAmb IAmb 16 00 19.7
comp=Z,563nm,1.8s
TAOE Nuku Hiva Isla 38.02 84 P **P** **16 00 13.7 +2.0**
WAKE Wake Island 38.05 337 IAMs_20 IAMs_20 16 12 01.9
comp=Z,77µm,21.0s
TOO Toolangi 38.34 229 P **P** **16 00 13.7 -0.4**
baz=38,SNR=16
TOO Toolangi 38.34 229 P **P** **16 00 13.1 -1.0**
TOO pmax pmax
comp=Z,1µm,1.4s
TOO Toolangi 38.34 229 P **P** **16 00 13.1 -1.0**
H11N3 WAKE ISLAND Hy 38.35 337 T T 16 41 02.4
baz=154,slow=76,SNR=3.1
H11N1 WAKE ISLAND Hy 38.35 337 T T 16 41 09.0
baz=154,slow=76,SNR=4.7
H11N2 WAKE ISLAND Hy 38.37 337 T T 16 41 03.8
baz=154,slow=76,SNR=3.9
STKA Stephens Creek 39.52 239 P **P** **16 00 23.2 -1.0**
comp=Z,106nm,1.2s,baz=71,slow=8.3,SNR=47
STKA LR LR 16 14 41.8
comp=Z,83µm,21.9s,baz=73,slow=33
STKA Stephens Creek 39.52 239 P **P** **16 00 23.4 -0.7**
baz=39,SNR=77
STKA Stephens Creek 39.52 239 P **P** **16 00 23.1 -1.0**
TAU Tasmania Unive 39.61 220 P **P** **16 00 23.0 -1.6**
TAU pmax pmax
comp=Z,630nm,1.9s
TAU Tasmania Unive 39.61 220 P **P** **16 00 23.0 -1.6**
TAU IAmb IAmb 16 00 34.9
comp=Z,630nm,1.9s
TAU Tasmania Unive 39.61 220 IAMs_20 IAMs_20 16 13 55.8
comp=Z,67µm,19.0s
QIS Mount Isa 40.01 257 P **P** **16 00 26.3 -1.9**
baz=40,SNR=14
ARPS Mount Arapiles 40.75 232 P **P** **16 00 33.6 -0.5**
baz=41,SNR=26
RKT Rikitea 41.43 107 *e*S **S** **16 06 58.5 +3.4**
comp=Z,20µm,27.2s
RKT *e*LQ LQ 16 10 24.2
comp=Z,86µm,31.2s
RKT *e*LR LR 16 12 06.2
comp=Z,131µm,29.0s
AIN Ainahou 41.83 34 IAMs_20 IAMs_20 16 14 00.1
comp=Z,51µm,20.0s
HLP Hilina Pali 41.85 34 IAMs_20 IAMs_20 16 14 09.6
comp=Z,47µm,19.0s
HUH Hualalai 41.89 33 IAMs_20 IAMs_20 16 13 19.6
comp=Z,56µm,22.0s
MLOA Mauna Loa Obse 41.90 33 IAMs_20 IAMs_20 16 13 40.0
comp=Z,52µm,19.0s
SDHHI Sand Hill 41.93 34 IAMs_20 IAMs_20 16 14 02.9
comp=Z,49µm,18.0s
NPH North Pit 41.96 34 IAMs_20 IAMs_20 16 14 03.5
comp=Z,45µm,18.0s
UWE Uwekahuna 41.96 34 IAMs_20 IAMs_20 16 14 02.6
comp=Z,44µm,18.0s
PUH Pauahi 41.96 34 IAMs_20 IAMs_20 16 14 03.6
comp=Z,46µm,19.0s
JCUZ Jacuzzi 42.03 34 IAMs_20 IAMs_20 16 14 06.5
comp=Z,48µm,20.0s
HTT Hallett 42.08 238 P **P** **16 00 44.4 -0.8**
baz=42,SNR=30
POHA Pohakuloa 42.11 33 IAMs_20 IAMs_20 16 13 56.5
comp=Z,51µm,20.0s
HON Honolulu 42.21 29 P **P** **16 00 42.5 -3.7**
HON pmax pmax
comp=Z,237nm,1.1s
HON Honolulu 42.21 29 P **P** **16 00 42.5 -3.7**
HON IAMs_20 IAMs_20 16 14 42.2
comp=Z,70µm,20.0s
KIP Kipapa 42.29 29 IAMs_20 IAMs_20 16 13 50.3
comp=Z,73µm,21.0s
JAY Jayapura 42.39 284 P **P** **16 00 46.6 -1.3**
comp=Z,31nm,1.1s,baz=81,slow=8.4,SNR=7.8
JAY LR LR 16 16 35.7
comp=Z,31µm,19.9s,baz=91,slow=34
JAY Jayapura 42.39 284 P **P** **16 00 48.9 +0.9**
comp=Z,3µmcomp=Z,49nm,1.3s
GENI Genyem 42.87 284 P P 16 00 56.7 +4.9
comp=Z,18µmcomp=Z,11µmcomp=Z,137nm,2.1s
BBOO Buckleboo 44.30 239 P **P** **16 01 01.9 -1.2**
baz=44,SNR=23
BBOO Buckleboo 44.30 239 P **P** **16 01 01.9 -1.2**
BBOO IAMs_20 IAMs_20 16 17 16.3
comp=Z,96µm,21.0s
WR0 Warramunga Arr 44.78 258 P **P** **16 01 04.5 -2.6**
WR0 IAmb IAmb 16 01 16.0
comp=Z,306nm,1.4s
WR0 IAMs_20 IAMs_20 16 20 16.3
comp=Z,57µm,18.0s
WR9 Warramunga Arr 44.80 258 IAMs_20 IAMs_20 16 20 17.9
comp=Z,57µm,18.0s
WR8 Warramunga Arr 44.81 258 IAMs_20 IAMs_20 16 20 17.3
comp=Z,58µm,18.0s
WR7 Warramunga Arr 44.84 258 IAMs_20 IAMs_20 16 20 18.9
comp=Z,59µm,18.0s
WR6 Warramunga Arr 44.86 258 IAMs_20 IAMs_20 16 20 19.5
comp=Z,58µm,18.0s
WR4 Warramunga Arr 44.90 258 IAMs_20 IAMs_20 16 20 20.6
comp=Z,57µm,18.0s
WR3 Warramunga Arr 44.92 258 IAMs_20 IAMs_20 16 20 22.1
comp=Z,58µm,18.0s
WB0 Warramunga Arr 44.93 258 P **P** **16 01 06.1 -2.2**
WB0 IAMs_20 IAMs_20 16 20 12.2
comp=Z,41µm,18.0s
WB9 Warramunga Arr 44.93 258 IAMs_20 IAMs_20 16 20 21.4
comp=Z,56µm,18.0s
WB7 Warramunga Arr 44.94 258 IAMs_20 IAMs_20 16 20 21.9
comp=Z,49µm,18.0s
WB8 Warramunga Arr 44.94 258 IAMs_20 IAMs_20 16 20 21.5
comp=Z,56µm,18.0s
WC3 Warramunga Arr 44.94 258 IAMs_20 IAMs_20 16 20 21.5
comp=Z,58µm,18.0s
WC2 Warramunga Arr 44.94 258 IAMs_20 IAMs_20 16 20 13.7
comp=Z,50µm,18.0s
WB5 Warramunga Arr 44.95 258 IAMs_20 IAMs_20 16 20 13.7
comp=Z,40µm,18.0s
WR2 Warramunga Arr 44.95 258 IAMs_20 IAMs_20 16 20 13.7
comp=Z,46µm,18.0s
WB6 Warramunga Arr 44.95 258 IAMs_20 IAMs_20 16 20 38.7
comp=Z,42µm,18.0s
WB4 Warramunga Arr 44.95 258 IAMs_20 IAMs_20 16 20 21.9
comp=Z,59µm,18.0s
WB3 Warramunga Arr 44.95 258 IAMs_20 IAMs_20 16 20 30.9
comp=Z,55µm,18.0s
WB2 Warramunga Arr 44.96 258 P **P** **16 01 06.2 -2.4**
WB2 IAmb IAmb 16 01 17.5
comp=Z,466nm,1.4s
WB2 IAMs_20 IAMs_20 16 20 31.0
comp=Z,56µm,18.0s
WRAB Tennant Creek 44.96 258*de*P **P** **16 01 05.8 -2.8**
WRAB pmax pmax
comp=Z,113nm,1.4s
WRAB MLR MLR
comp=Z,51µm,17.0s
WRAB Tennant Creek 44.96 258 P **P** **16 01 06.2 -2.4**
WRAB IAmb IAmb 16 01 17.4
comp=Z,451nm,1.4s
WRAB Tennant Creek 44.96 258 IAMs_20 IAMs_20 16 20 13.8
comp=Z,51µm,19.0s
WB1 Warramunga Ar. 44.96 258 IAMs_20 IAMs_20 16 20 22.1
comp=Z,59µm,18.0s
WC4 Warramunga Arr 44.97 258 IAMs_20 IAMs_20 16 20 22.3
comp=Z,62µm,18.0s
WR1 Warramunga Arr 44.97 258 IAMs_20 IAMs_20 16 20 22.3
comp=Z,50µm,18.0s
WRA Warramunga Ar 44.97 258 P **P** **16 01 06.2 -2.5**
comp=Z,61nm,1.3s,baz=91,slow=8.3,SNR=43
WRA PcP **PcP** **16 02 47.6 -2.3**
comp=Z,4.9nm,0.8s,baz=91,slow=3.4,SNR=1.8
WRA LR LR 16 20 25.0
comp=Z,43µm,18.1s,baz=95,slow=37
WRA Warramunga Ar 44.97 258 P **P** **16 01 05.5 -3.2**
WC1 Warramunga Arr 44.97 258 IAMs_20 IAMs_20 16 20 22.4
comp=Z,57µm,18.0s
AS31 Alice Springs 45.29 252 P **P** **16 01 09.1 -2.1**
ASAR Alice Springs 45.29 252 P **P** **16 01 09.2 -2.0**
comp=Z,35nm,0.8s,baz=85,slow=8.2,SNR=210
ASAR LR LR 16 19 09.1
comp=Z,40µm,18.9s,baz=89,slow=35
SRPI Serui, Papua 46.79 283 P P 16 01 28.6 +5.5
comp=Z,9µmcomp=Z,6µmcomp=Z,96nm,1.0s
KDU Kakadu 47.59 267 P **P** **16 01 29.3 0.0**
baz=48,SNR=11
MTN Manton Dam 48.84 267 P **P** **16 01 39.3 +0.3**
baz=49,SNR=9.5
MTN Manton Dam 48.84 267 P **P** **16 01 36.9 -2.1**
FAKI Fak Fak 50.21 280 IAMs_20 IAMs_20 16 22 41.1
comp=Z,34µm,19.0s
FAKI Fak Fak 50.21 280 P P 16 01 54.2 +4.7
comp=Z,8µmcomp=Z,6µmcomp=Z,95nm,1.8s
WRKA Warakurna 50.41 251 P **P** **16 01 48.9 -2.0**
baz=50,SNR=68
KNRA Kununurra 50.67 263 P **P** **16 01 49.8 -3.1**
FORT Forrest 50.79 243 P **P** **16 01 52.5 -1.1**
baz=51,SNR=10
FORT Forrest 50.79 243 P **P** **16 01 51.6 -2.1**
FORT IAmb IAmb 16 02 02.6
comp=Z,369nm,1.1s
FORT IAMs_20 IAMs_20 16 21 49.6
comp=Z,44µm,20.0s
SIJI Sorong 51.80 282 P **P** **16 02 00.2 -1.2**
comp=Z,37nm,0.8s,baz=66,slow=7.1,SNR=17
SIJI LR LR 16 23 02.9
comp=Z,26µm,20.7s,baz=110,slow=35
SWI Sorong 51.81 282 P **P** **16 02 00.5 -1.0**
SWI pmax pmax
comp=Z,132nm,1.3s
SWI Sorong 51.81 282 P **P** **16 02 02.0 +0.5**
comp=Z,8µmcomp=Z,6µmcomp=Z,132nm,1.3s
BNDI Bandanaira 51.96 277 P P 16 02 14.8 +12
FITZ Fitzroy Crossi 53.32 259 P **P** **16 02 11.5 -1.2**
comp=Z,7.3nm,0.7s,baz=140,slow=6.1,SNR=17
FITZ LR LR 16 24 34.5
comp=Z,31µm,18.4s,baz=93,slow=36
FITZ Fitzroy Crossi 53.32 259 P **P** **16 02 12.0 -0.7**
baz=53,SNR=11
FITZ Fitzroy Crossi 53.32 259 P **P** **16 02 10.6 -2.1**
FITZ IAmb IAmb 16 02 23.8
comp=Z,400nm,2.0s
NLAI Namlea 55.01 277 P **P** **16 02 27.5 +2.5**
comp=Z,6µmcomp=Z,95nm,2.2s
TNTI Ternate 56.03 282 P P 16 02 38.1 +5.8
comp=Z,6µmcomp=Z,7µmcomp=Z,220nm,1.9s
SOEI Soe 56.05 269 P **P** **16 02 30.7 -2.0**
SOEI Soe 56.05 269 P **P** **16 02 34.6 +1.9**
comp=Z,9µmcomp=Z,15µmcomp=Z,418nm,1.2s
KMBL Kambalda 56.11 243 P **P** **16 02 32.5 -0.3**
baz=56,SNR=6.8
SANI Sanana 56.42 278 P **P** **16 02 35.2 0.0**
comp=Z,10µmcomp=Z,8µmcomp=Z,53nm,0.8s
BATI Baumata 56.54 268 P **P** **16 02 33.7 -2.3**
comp=Z,9.5nm,0.6s,baz=255,slow=23,SNR=2.1
BATI Baumata 56.54 268 P **P** **16 02 39.8 +3.8**
comp=Z,6µmcomp=Z,8µmcomp=Z,157nm,1.6s
JCJ Chichijima 57.44 318 IAMs_20 IAMs_20 16 23 19.3
comp=Z,7µm,20.0s
PSAD2 Pilbara Seismi 58.25 254 IAMs_20 IAMs_20 16 26 55.6
comp=Z,37µm,20.0s
PSAC2 Pilbara Seismi 58.31 254 IAMs_20 IAMs_20 16 27 15.3
comp=Z,39µm,18.0s
PSAB2 Pilbara Seismi 58.35 254 IAMs_20 IAMs_20 16 28 52.3
comp=Z,43µm,18.0s
PSAB3 Pilbara Seismi 58.35 254 IAMs_20 IAMs_20 16 27 17.3
comp=Z,36µm,18.0s
PSAA3 Pilbara Seismi 58.35 254 IAMs_20 IAMs_20 16 27 08.3
comp=Z,37µm,18.0s
PSA00 Pilbara Seismi 58.36 254 P **P** **16 02 46.0 -2.9**
PSA00 Pilbara Seismi 58.36 254 IAMs_20 IAMs_20 16 27 08.6
comp=Z,35µm,18.0s
PSAA1 Pilbara Seismi 58.37 254 IAMs_20 IAMs_20 16 28 53.8
comp=Z,42µm,18.0s
PSAC3 Pilbara Seismi 58.37 254 IAMs_20 IAMs_20 16 28 43.9
comp=Z,34µm,19.0s
PSAB1 Pilbara Seismi 58.38 254 IAMs_20 IAMs_20 16 27 10.2
comp=Z,35µm,18.0s
PSAD1 Pilbara Seismi 58.39 254 IAMs_20 IAMs_20 16 29 03.3
comp=Z,46µm,18.0s
PSAC1 Pilbara Seismi 58.40 254 IAMs_20 IAMs_20 16 27 09.6
comp=Z,38µm,18.0s
PSAD3 Pilbara Seismi 58.42 254 IAMs_20 IAMs_20 16 24 20.0
comp=Z,36µm,22.0s
MBWA Marble Bar 58.51 255 IAMs_20 IAMs_20 16 29 08.5
comp=Z,41µm,18.0s
KMSI Cibinong 59.15 281 P P 16 02 59.8 +5.4
comp=Z,3µmcomp=Z,224nm,1.1s
KLBR Kellerberrin 59.64 243 P **P** **16 02 56.1 -1.4**
baz=60,SNR=11
LUWI Luwuk 59.79 278 P P 16 03 04.4 +5.6
comp=Z,9µmcomp=Z,8µmcomp=Z,271nm,1.2s
DAV Davao City (W) 59.98 288 LR LR 16 26 39.1
comp=Z,15µm,20.3s,baz=100,slow=34
NWAO Narrogin (SRO) 60.07 241 P **P** **16 02 58.3 -2.1**
comp=Z,28nm,1.1s,baz=110,slow=9.9,SNR=2.9
NWAO LR LR 16 26 48.9
comp=Z,59µm,21.5s,baz=98,slow=34
NWAO Narrogin (SRO) 60.07 241 P **P** **16 03 00.4 -0.1**
baz=60,SNR=6.3
NWAO Narrogin (SRO) 60.07 241 P **P** **16 02 58.9 -1.6**
NWAO pmax pmax
comp=Z,391nm,1.7s
NWAO MLR MLR
comp=Z,56µm,20.0s
NWAO Narrogin (SRO) 60.07 241 P **P** **16 02 58.9 -1.6**
NWAO IAmb IAmb 16 03 09.6
comp=Z,391nm,1.6s
NWAO Narrogin (SRO) 60.07 241 P **P** **16 02 58.8 -1.6**
NWAO IAmb IAmb 16 03 09.6
comp=Z,290nm,1.6s
NWAO Narrogin (SRO) 60.07 241 IAMs_20 IAMs_20 16 26 47.5
comp=Z,56µm,20.0s
BLDU Ballidu 60.56 244 P **P** **16 03 03.6 -0.3**
baz=60,SNR=6.2
APSI Ampana 60.90 278 P **P** **16 03 08.1 +1.7**
comp=Z,4µmcomp=Z,4µmcomp=Z,186nm,1.8s
MUN Mundaring 60.95 242 P **P** **16 03 07.9 +1.4**
baz=61,SNR=8.2
MRSI Marisa 61.05 280 P **P** **16 03 10.0 +2.6**
comp=Z,7µmcomp=Z,5µmcomp=Z,84nm,1.5s
MORW Morawa 61.21 245 P **P** **16 03 09.4 +1.0**
baz=61,SNR=6.3
BNSI Bone 61.37 274 P **P** **16 03 10.3 +0.7**
comp=Z,5µmcomp=Z,66nm,1.9s
KAPI Kappang 61.55 273 P **P** **16 03 09.9 -0.9**
comp=Z,14nm,0.6s,baz=120,slow=6.0,SNR=11
SPSI Sidrap Palu 61.82 274 P **P** **16 03 14.3 +1.7**
comp=Z,4µmcomp=Z,4µmcomp=Z,58nm,1.1s
TTSI Tana Toraja 62.02 275 P P 16 03 25.9 +12
SBA Scott Base 62.26 184 P **P** **16 03 15.8 +1.3**
SBA pmax pmax
comp=Z,219nm,1.3s
SBA MLR MLR
comp=Z,16µm,20.0s
SBA Scott Base 62.26 184 P **P** **16 03 15.8 +1.3**
SBA IAmb IAmb 16 03 27.7
comp=Z,219nm,1.3s
VNDA Vanda 62.28 185 P **P** **16 03 15.2 +0.5**
comp=Z,9.6nm,0.6s,baz=350,slow=7.3,SNR=36
VNDA Vanda 62.28 185 P **P** **16 03 15.3 +0.6**
VNDA pmax pmax
comp=Z,93nm,1.2s
VNDA Vanda 62.28 185 P **P** **16 03 15.3 +0.6**
PLAI Plampang 62.50 268 P **P** **16 03 17.4 +0.2**
comp=Z,7µmcomp=Z,8µmcomp=Z,202nm,1.3s
TWSI Taliwang, Sumb 63.38 268 P **P** **16 03 22.9 -0.2**
comp=Z,4µmcomp=Z,4µmcomp=Z,160nm,1.0s
GIRL Giralia 63.41 252 P **P** **16 03 24.7 +1.6**
baz=63,SNR=5.8
JYT Yasato 65.05 324 IAMs_20 IAMs_20 16 29 45.9
comp=Z,38µm,20.0s
SRBI Singaraja 65.14 268 P P 16 03 39.6 +5.0
comp=Z,7µmcomp=Z,7µmcomp=Z,160nm,1.1s
KBKI Kotabaru 65.45 274 P **P** **16 03 39.5 +2.9**
comp=Z,1µmcomp=Z,70nm,1.3s
JMM Marumori 65.89 326 IAMs_20 IAMs_20 16 27 49.2
comp=Z,30µm,20.0s
JAGI Jajag, Banyuwa 66.07 268 P **P** **16 03 38.4 -2.3**
JAGI IAmb IAmb 16 03 49.1
comp=Z,102nm,0.9s
JAGI Jajag, Banyuwa 66.07 268 P **P** **16 03 42.2 +1.6**
comp=Z,4µmcomp=Z,4µmcomp=Z,125nm,1.1s
ABJI Asem Bagus 66.15 268 P **P** **16 03 42.8 +1.7**
comp=Z,10µmcomp=Z,9µmcomp=Z,199nm,1.3s
MJAR Matsushiro Arr 66.41 323 P **P** **16 03 40.1 -2.2**
comp=Z,12nm,1.1s,baz=155,slow=6.7,SNR=11
MJAR LR LR 16 27 31.2
comp=Z,25µm,21.8s,baz=145,slow=31
MJAR Matsushiro Arr 66.41 323 P **P** **16 03 37.9 -4.4**
MAJO Matsushiro 66.41 323*ce*P **P** **16 03 42.0 -0.3**
MAJO pmax pmax
comp=Z,154nm,2.4s
MAJO MLR MLR
comp=Z,8µm,17.0s
MAJO Matsushiro 66.41 323 P **P** **16 03 41.0 -1.3**
MAJO Matsushiro 66.41 323 IAMs_20 IAMs_20 16 27 31.9
comp=Z,27µm,21.0s
MAT Matsushiro 66.41 323 P **P** **16 03 40.1 -2.2**
MAT S **S** **16 12 28.6 -3.8**
MJB9 Matsu-Tunnel 66.42 323 IAMs_20 IAMs_20 16 27 31.9
comp=Z,26µm,20.0s
KMMI Kalianget 66.59 269 P **P** **16 03 47.4 +3.4**
comp=Z,6µmcomp=Z,6µmcomp=Z,65nm,0.8s
BBKI Banjar Baru 66.68 273 P **P** **16 03 45.6 +1.0**
comp=Z,5µmcomp=Z,6µmcomp=Z,189nm,2.6s
JOW Kunigami 67.03 309 IAMs_20 IAMs_20 16 25 49.4
comp=Z,28µm,22.0s
JMN Monobe 67.19 318 P **P** **16 03 44.6 -2.8**
JMN IAmb IAmb 16 03 59.1
comp=Z,284nm,1.5s
JWT Wachi 67.24 320 P **P** **16 03 45.4 -2.2**
JWT IAmb IAmb 16 04 01.8
comp=Z,161nm,1.5s
JWT IAMs_20 IAMs_20 16 27 26.8
comp=Z,25µm,22.0s
MTKI Muara Teweh, K 67.34 276 P P 16 03 53.7 +5.0
comp=Z,3µmcomp=Z,4µmcomp=Z,58nm,1.2s
JSD Sado 67.42 324 IAMs_20 IAMs_20 16 28 01.6
comp=Z,25µm,21.0s
ERM Erimo 67.77 330*de*P **P** **16 03 51.6 +0.8**
ERM pmax pmax
comp=Z,72nm,1.7s
ERM MLR MLR
comp=Z,14µm,18.0s
ERM Erimo 67.77 330 P **P** **16 03 46.6 -4.1**
JEM Erimo 67.77 330 IAMs_20 IAMs_20 16 31 43.4
comp=Z,20µm,19.0s
CASY Casey 67.81 204 P **P** **16 03 50.1 -0.7**
JTM Tenmabayashi 67.89 328 IAMs_20 IAMs_20 16 29 15.2
comp=Z,37µm,20.0s
ATKA Atka Island 68.06 3 P **P** **16 03 48.6 -3.8**
ATKA IAmb IAmb 16 04 02.6
comp=Z,251nm,1.4s
YUK Yuzh-Kuril'sk 68.11 333*c i*P **P** **16 03 51.0 -1.9**
YUK *e*PPP PPP 16 08 06.6
YUK *i* S **S** **16 12 52.3 -0.1**
YUK *e* 16 13 53.8
YUK pmax pmax
comp=N,106nm,1.1s
YUK pmax pmax
comp=Z,223nm,1.1s
YUK pmax pmax
comp=E,144nm,0.7s
YUK pmax pmax
comp=Z,489nm,2.9s
KUR Kuril'sk 68.23 335 *e*P **P** **16 03 56.0 +2.4**
KUR *e* 16 06 28.0
KUR PPP PPP 16 08 06.4
KUR *i* S **S** **16 12 59.4 +5.6**
KUR pmax pmax
comp=Z,3µm,5.1s
SZP Santa 68.84 296 IAMs_20 IAMs_20 16 29 20.9
comp=Z,35µm,21.0s
NIKH Nikolski High 69.23 6 P 16 03 58.2
baz=190
JKA Kamikawa-asahi 69.64 331 IAMs_20 IAMs_20 16 28 01.4
comp=Z,35µm,22.0s
ASAJ Asahikawa 69.64 331 P **P** **16 04 01.2 -1.2**
comp=Z,14nm,1.0s,baz=176,slow=16,SNR=2.1
ASAJ LR LR 16 29 07.1
comp=Z,32µm,21.3s,baz=166,slow=31
YOJ Yonaguni jima 69.88 304 P **P** **16 03 59.7 -4.6**
YOJ pmax pmax
comp=Z,173nm,1.2s
YOJ MLR MLR
comp=Z,19µm,21.0s
YOJ Yonaguni jima 69.88 304 P **P** **16 03 59.7 -4.6**
YOJ IAmb IAmb 16 04 18.8
comp=Z,173nm,1.2s
PBKI Pangkalan Bun 69.93 273 P P 16 04 11.5 +6.6
SMRI Semarang 69.98 268 P P 16 04 11.6 +6.3
SKR Severo-Kuril's 70.10 343 *e*P **P** **16 04 02.7 -2.4**
SKR *e* 16 04 32.9
SKR *e*S **S** **16 13 20.6 +4.9**
SKR *e*PS **PnS** **16 13 50.6 +7.9**
SKR *e*SSS SSS 16 20 46.2
SKR pmax pmax
comp=Z,900nm,4.8s
SKR pmax pmax
comp=Z,400nm,4.2s
SKR pmax pmax
comp=Z,53nm,1.1s
SKR pmax pmax
comp=Z,500nm,5.7s
SKR pmax pmax
comp=Z,700nm,4.9s
SKR smax smax
comp=N,2µm,13.4s

SKR smax smax
comp=E,4µm,13.8s
SKR smax smax
comp=N,2µm,12.7s
SKR smax smax
comp=E,6µm,14.5s
SKR MLR MLR
comp=Z,9µm,17.0s
YULB Yu-li 70.75 302 P P 16 04 04.3 -5.4
YULB IAmb IAmb 16 04 24.1
comp=Z,254nm,1.7s
SSLB Suanglung 71.21 303 IAMs_20 IAMs_20 16 29 45.3
comp=Z,23µm,22.0s
TPUB Ta-pu 71.25 302 P **P** **16 04 12.5 -0.3**
TPUB IAmb IAmb 16 04 23.4
comp=Z,191nm,1.2s
YHNB Yeheng 71.28 304 IAMs_20 IAMs_20 16 31 08.2
comp=Z,21µm,21.0s
TATO Taipei 71.34 304 IAMs_20 IAMs_20 16 29 31.4
comp=Z,23µm,22.0s
PET Petropavlovsk 71.58 346 *d iP* **P** **16 04 15.1 +1.1**
PET *eS* **S** **16 13 30.2 -2.5**
PET *e*PS **PnS** **16 14 02.8 +0.6**
PET *e*PPS PPS 16 14 13.5
PET *e*SS **SS** **16 18 11.6 +3.1**
PET pmax pmax
comp=E,2µm,12.3s
PET pmax pmax
comp=E,2µm,12.4s
PET pmax pmax
comp=Z,77nm,1.8s
PET Petropavlovsk 71.58 346 P **P** **16 04 12.7 -1.3**
PET IAmb IAmb 16 04 24.5
comp=Z,181nm,1.7s
PET IAMs_20 IAMs_20 16 28 40.9
comp=Z,26µm,21.0s
YSS Yuzh-Sakhalins 71.75 333 *eP* **P** **16 04 17.7 +2.5**
YSS *e* 16 04 33.9
YSS *e* 16 06 58.9
YSS *e*S **S** **16 13 39.2 +4.1**
YSS *e*PS 16 14 03.5
YSS *e*SS **SS** **16 18 15.3 +3.8**
YSS pmax pmax
comp=E,80nm,1.1s
YSS pmax pmax
comp=E,2µm,4.1s
PEA0B Petropavlovsk- 71.88 345⇓ *eP* **P** **16 04 14.7 -1.2**
PEA0B Petropavlovsk- 71.88 345 P **P** **16 04 14.6 -1.4**
PEA0B IAMs_20 IAMs_20 16 29 45.0
comp=E,35µm,21.0s
PETK Petropavlovsk- 71.88 345 P **P** **16 04 14.9 -1.0**
comp=Z,10nm,0.8s,baz=132,slow=8.8,SNR=26
PETK LR LR 16 29 56.2
comp=Z,32µm,21.0s,baz=159,slow=31
JCJI Jatiwangi 72.21 268 P **P** **16 04 21.9 +3.2**
comp=Z,10µmcomp=Z,204nm,1.7s
KSM Kuching 72.43 277 P P 16 04 26.0 +5.9
SDPT Sand Point 72.73 11 P 16 04 19.9
baz=198
SDPT S 16 13 46.9
baz=198
LEM Lembang 72.75 268 P **P** **16 04 22.5 +0.3**
LEM pmax pmax
comp=Z,159nm,0.9s
TJN Taejon 73.04 317 *c iP* **P** **16 04 24.5 +1.3**
TEY Ternei 73.22 328⇓ *eP* **P** **16 04 26.2 +2.2**
TEY pmax pmax
comp=N,20nm,2.3s
TEY pmax pmax
comp=Z,20nm,3.2s
TEY pmax pmax
comp=E,400nm,16.1s
TEY pmax pmax
comp=N,400nm,12.1s
SPIA Saint Paul Isl 73.27 5 P 16 04 23.1
baz=188
KSRS Korea Array 73.30 318 P **P** **16 04 23.5 -1.2**
comp=N,4.8nm,1.1s,baz=134,slow=5.7,SNR=6.3
KSRS LR LR 16 30 37.3
comp=N,16µm,21.7s,baz=121,slow=31
CBJI Citeko 73.59 268 P **P** **16 04 29.0 +2.1**
comp=N,7µmcomp=N,9µmcomp=N,244nm,2.1s
QZH Quanzhou 73.65 303⇑ *iP* **P** **16 04 26.8 -0.2**
QZH S **S** **16 14 03.8 +6.2**
QZH pmax pmax
comp=N,56nm,2.1s
QZH pmax pmax
comp=N,3µm,6.7s
QZH LR LR
comp=N,5µm,21.8s
QZH LR LR
comp=N,8µm,19.6s
QZH LR LR
comp=N,12µm,20.8s
DBJI Dramaga 73.65 268 P **P** **16 04 28.4 +1.1**
comp=N,8µmcomp=N,97nm,2.0s
XMIS Christmas Isla 73.75 264 IAMs_20 IAMs_20 16 39 45.6
comp=Z,19µm,19.0s
TPI Tanjungpandan 73.78 272 P P 16 04 39.0 +11
QSPA South Pole Qui 74.00 180 P **P** **16 04 28.3 -0.3**
comp=Z,112nm,1.0s,baz=30,slow=1.3,SNR=87
QSPA South Pole Qui 74.00 180 P **P** **16 04 28.3 -0.3**
QSPA IAmb IAmb 16 04 43.3
comp=Z,168nm,1.1s
QSPA South Pole Qui 74.00 180 IAMs_20 IAMs_20 16 30 44.3
comp=Z,23µm,22.0s
CHIR Chirikof Islan 74.14 13 P 16 04 29.4
baz=203
MSHR Mys Shultsa 74.49 324⇓ *eP* **P** **16 04 30.1 -1.4**
MSHR pmax pmax
comp=Z,112nm,2.1s
MSHR MLR MLR
comp=Z,7µm,18.0s
SNCC San Nicolas Is 74.57 48 P 16 04 32.3
baz=239
SNCC San Nicolas Is 74.57 48 IAMs_20 IAMs_20 16 30 23.8
comp=Z,23µm,20.0s
TYV Tymovskoe 74.83 336 *eP* **P** **16 04 35.4 +2.1**
TYV *eS* **S** **16 14 14.7 +4.9**
TYV pmax pmax
comp=Z,1µm,8.4s
TYV pmax pmax
comp=Z,32nm,1.2s
TYV smax smax
comp=N,4µm,9.9s
H06S1 SOCORRO T 74.86 65 P **P** **16 04 37.1 +3.0**
SNR=14
H06S1 T T 17 26 24.5
SNR=7.0
SCZ2 Santa Cruz Isl 74.88 47 P 16 04 33.8
baz=238
SCZ2 S 16 14 17.2
baz=238
H06N1 SOCORRO T-PHAS 74.88 65 P **P** **16 04 38.6 +4.3**
H06E1 SOCORRO T-PHAS 74.90 65 P P 16 04 39.3 +4.8
SNR=14
H06E1 T T 17 26 31.6
SNR=5.2
MCCM Marconi Confer 74.94 42 IAMs_20 IAMs_20 16 29 60.0
comp=Z,40µm,20.0s
SBC Santa Barbara 75.06 47 P 16 04 35.4
baz=238
SBC S 16 14 20.5
baz=238
USA0B Ussuriysk Arra 75.07 325⇑ *eP* **P** **16 04 37.6 +2.7**
USRK Ussuriysk Ar. 75.07 325 P **P** **16 04 33.7 -1.2**
comp=Z,2.7nm,0.9s,baz=127,slow=6.2,SNR=5.3
USRK LR LR 16 32 40.5
comp=Z,13µm,21.7s,baz=124,slow=32
USRK Ussuriysk Ar. 75.07 325 P **P** **16 04 32.9 -2.0**
SAO San Andreas Ge 75.11 44 P **P** **16 04 35.5 +0.2**
SAO pmax pmax
comp=Z,93nm,1.0s
SAO MLR MLR
comp=Z,24µm,19.0s
SAO San Andreas Ge 75.11 44 P **P** **16 04 35.5 +0.2**
SAO IAMs_20 IAMs_20 16 33 15.7
comp=Z,24µm,19.0s
SII Sitkinak Islan 75.13 14 P 16 04 35.6
baz=204
SII S 16 14 14.8
baz=204
SCI2 San Clemente I 75.13 49 P 16 04 35.4
baz=240
SCI2 S 16 14 18.7
baz=240
PKM Mcpherson Peak 75.22 47 P 16 04 36.2
baz=238,SNR=14
PKM S 16 14 19.8
baz=238
PMPB Monarch Peak 75.25 45 IAMs_20 IAMs_20 16 29 44.5
comp=Z,25µm,21.0s
HOPS Hopland Field 75.31 42 P **P** **16 04 36.1 -0.3**
HOPS IAmb IAmb 16 04 48.7
comp=Z,204nm,1.2s
SMMC Simmler 75.32 46 P 16 04 36.9
baz=238
SMMC S 16 14 23.1
baz=238
PAGB Antelope Grade 75.37 46 IAMs_20 IAMs_20 16 30 47.6
comp=Z,20µm,20.0s
KCPM Cahto Peak 75.39 41 P **P** **16 04 35.3 -1.7**
PPBI Pangkal Pinang 75.40 272 P P 16 04 43.2 +5.7
comp=Z,5µmcomp=Z,48nm,1.3s
BLSI Bandar Lampung 75.40 269 P P 16 04 42.4 +4.9
comp=Z,4µmcomp=Z,150nm,0.8s
CIS Catalina Islan 75.44 48 P 16 04 36.9
baz=240
CIS S 16 14 23.2
baz=240
JCC Jacoby Creek, 75.77 40 IAMs_20 IAMs_20 16 30 14.4
comp=Z,40µm,20.0s
OSI Osito Audit: C 75.84 47 P 16 04 40.1
baz=239
OSI S 16 14 27.2
baz=239
OSI Osito Audit: C 75.84 47 IAMs_20 IAMs_20 16 31 49.5
comp=Z,33µm,20.0s
DECC Green Verdugo 75.94 48 P 16 04 39.7
baz=239
DECC S 16 14 24.4
baz=239
OHAK Old Harbor 75.94 14 P 16 04 39.0
baz=205
OHAK S 16 14 24.9
baz=205
CCX Cicese 75.96 51 IAMs_20 IAMs_20 16 30 44.1
comp=Z,25µm,20.0s
TJX Tijuana 75.99 50 IAMs_20 IAMs_20 16 30 44.7
comp=Z,33µm,20.0s
PASC Pasadena Art C 76.00 48 P **P** **16 04 39.5 -1.0**
PASC Pasadena Art C 76.00 48 IAMs_20 IAMs_20 16 32 39.7
comp=Z,23µm,19.0s
ARVC Arvin 76.03 47 P 16 04 40.6
baz=239
ARVC S 16 14 28.3
baz=239
KASI Kota Agung 76.08 268 P **P** **16 04 41.9 +0.5**
comp=Z,5µmcomp=Z,184nm,1.4s
MWC Mount Wilson 76.12 48 IAMs_20 IAMs_20 16 31 20.8
comp=Z,23µm,20.0s
109C Camp Elliot, M 76.14 50 P 16 04 40.7
baz=240
109C S 16 14 32.1
baz=240
109C Camp Elliot, M 76.14 50 IAMs_20 IAMs_20 16 29 59.6
comp=Z,37µm,21.0s
O02D Mt. Diablo Mer 76.17 41 P 16 04 41.8
baz=235,SNR=16
O02D S 16 14 31.8
baz=235
HKC Hong Kong Obse 76.19 298⇑ P **P** **16 04 44.0 +2.3**
VES Vestal, Richgr 76.23 46 P 16 04 41.7
baz=238,SNR=5.3
VES S 16 14 31.0
baz=238
KRMB Red Mountain 76.26 39 IAMs_20 IAMs_20 16 31 49.3
comp=Z,32µm,20.0s
VOG Valley Oaks Go 76.28 45 P 16 04 40.8
baz=238
VOG S 16 14 29.6
baz=238
TKX Tecate 76.35 50 IAMs_20 IAMs_20 16 31 25.1
comp=Z,32µm,20.0s
BAR Barrett 76.35 50 IAMs_20 IAMs_20 16 31 35.3
comp=Z,34µm,20.0s
BFSC Mount Baldy Ra 76.41 48 P 16 04 42.6
baz=240,SNR=6.7
BFSC S 16 14 33.7
baz=240
MURC Murrieta 76.42 49 P 16 04 43.3
baz=240
MURC S 16 14 34.3
baz=240
SPX San Pedro Mart 76.46 52 IAMs_20 IAMs_20 16 29 38.6
comp=Z,41µm,22.0s
KBO Bosley Butte 76.48 38 IAMs_20 IAMs_20 16 32 23.0
comp=Z,35µm,19.0s
EDW2 Edwards Air Fo 76.50 47 P 16 04 43.6
baz=239,SNR=17
EDW2 S 16 14 34.7
baz=239
CMB Columbia Colle 76.52 44 P **P** **16 04 43.0 -0.4**
CMB pmax pmax
comp=Z,148nm,1.4s
CMB MLR MLR
comp=Z,26µm,22.0s
CMB Columbia Colle 76.52 44 P **P** **16 04 43.0 -0.4**
CMB IAMs_20 IAMs_20 16 30 15.7
comp=Z,26µm,22.0s
WDC Whiskeytown Da 76.55 40 P **P** **16 04 43.4 -0.1**
WDC pmax pmax
comp=Z,218nm,1.4s
WDC MLR MLR
comp=Z,58µm,22.0s
WDC Whiskeytown Da 76.55 40 P **P** **16 04 43.4 -0.1**
WDC IAmb IAmb 16 04 55.8
comp=Z,218nm,1.4s
ISA Isabella, Lake 76.56 46 P 16 04 43.9
baz=239,SNR=20
ISA S 16 14 32.9
baz=239
ISA Isabella, Lake 76.56 46 P **P** **16 04 43.4 -0.3**
ISA pmax pmax
comp=Z,120nm,1.4s
ISA MLR MLR
comp=Z,26µm,22.0s
ISA Isabella, Lake 76.56 46 P **P** **16 04 43.4 -0.3**
ISA IAMs_20 IAMs_20 16 29 32.3
comp=Z,26µm,22.0s
KDAK Kodiak Island 76.61 14 P 16 04 42.3
baz=206
KDAK S 16 14 30.9
baz=206
KDAK Kodiak Island 76.61 14 P **P** **16 04 42.5 -0.9**
KDAK pmax pmax
comp=Z,87nm,1.0s
KDAK Kodiak Island 76.61 14 P **P** **16 04 42.5 -0.9**
ORV Oroville 76.63 42 P **P** **16 04 43.5 -0.4**
ORV pmax pmax
comp=Z,91nm,1.3s
ORV MLR MLR
comp=Z,33µm,20.0s
ORV Oroville 76.63 42 P **P** **16 04 43.5 -0.4**
ORV IAMs_20 IAMs_20 16 31 23.5
comp=Z,33µm,20.0s
AFDM Forest Hills D 76.63 43 IAMs_20 IAMs_20 16 31 11.7
comp=Z,31µm,20.0s
LWLI Liwa 76.63 269 P **P** **16 04 48.6 +3.9**
comp=Z,4µmcomp=Z,91nm,0.8s
MONP2 Monument Peak 76.64 50 P 16 04 44.6
baz=241,SNR=20
MONP2 S 16 14 34.4
baz=241
MDJ Mudanjiang 76.66 325 P **P** **16 04 42.4 -1.5**
MDJ S **S** **16 14 31.6 +1.3**
MDJ sS sS 16 14 38.6 +2.6
MDJ pmax pmax
comp=Z,3µm,9.8s
MDJ LR LR
comp=Z,11µm,19.4s
MDJ LR LR
comp=Z,17µm,20.6s
MDJ LR LR
comp=Z,24µm,22.9s
MDJ Mudanjiang 76.66 325 IAMs_20 IAMs_20 16 32 53.0
comp=Z,20µm,22.0s
N02D Trinity Center 76.68 40 P 16 04 44.7
baz=235,SNR=17
N02D S 16 14 37.4
baz=235
NJ2 Nanjing 76.74 309⇑ *iP* **P** **16 04 44.3 -0.4**
NJ2 S **S** **16 14 28.6 -3.2**
NJ2 ScS **SKKSac** **16 14 57.4 +0.1**
NJ2 SS **SS** **16 19 32.6 +4.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 pmax pmax
comp=Z,2µm,6.3s
NJ2 LR LR
comp=Z,12µm,18.9s
NJ2 LR LR
comp=Z,10µm,18.0s
NJ2 LR LR
comp=Z,15µm,17.0s
IKP In-Ko-Pah, Jac 76.75 50 P 16 04 44.0
baz=241,SNR=14
IKP S 16 14 37.8
baz=241
KEBM Edson Butte 76.81 38 IAMs_20 IAMs_20 16 32 14.7
comp=Z,29µm,20.0s
L02E Cave Junction 76.82 39 P 16 04 43.5
baz=234
L02E S 16 14 39.3
baz=234
M02C Callahan 76.83 40 P 16 04 45.9
baz=235,SNR=29
M02C S 16 14 42.1
baz=235
O03E Paynes Creek 76.85 41 P 16 04 45.5
baz=236,SNR=24
O03E S 16 14 39.5
baz=236
SFX San Felipe 76.93 52 IAMs_20 IAMs_20 16 30 02.9
comp=Z,30µm,20.0s
BBRC Big Bear Solar 76.95 48 P 16 04 45.9
baz=240
BBRC S 16 14 42.2
baz=240
PFO Pinyon Flats O 76.96 49 IAMs_20 IAMs_20 16 31 14.5
comp=Z,40µm,20.0s
PFO Pinyon Flats O 76.96 49 P 16 04 43.7
baz=241
PFO S 16 14 40.7
baz=241
TPFO Pinon Flats 76.96 49 P 16 04 43.7
baz=241
TPFO S 16 14 40.1
baz=241
LRMC Laurel Mtn Rad 77.02 47 P 16 04 45.5
baz=240,SNR=13
LRMC S 16 14 41.0
baz=240
K02D Willamette Mer 77.10 38 P 16 04 45.4
baz=234
K02D S 16 14 43.1
baz=234
YBH Yreka Blue Hor 77.11 39 IAMs_20 IAMs_20 16 30 25.9
comp=Z,43µm,22.0s
SWSC Sam W. Stewart 77.12 50 P 16 04 46.3
baz=241,SNR=5.1
SWSC S 16 14 40.5
baz=241
RRX Edison Barstow 77.20 48 P 16 04 46.0
baz=240
RRX S 16 14 41.5
baz=240
GZH Guangzhou 77.20 299 P **P** **16 04 45.4 -2.1**
GZH S **S** **16 14 30.0 -7.1**
GZH LR LR
comp=Z,8µm,22.1s
GZH LR LR
comp=Z,7µm,19.8s
J01E Myrtle Point 77.22 38 P 16 04 42.5
baz=234
J01E S 16 14 41.0
baz=234
RUBR Rubicon Trail 77.22 43 IAMs_20 IAMs_20 16 31 10.3
comp=Z,40µm,20.0s
CWC Cottonwood Cre 77.23 46 P 16 04 46.2
baz=239
CWC S 16 14 42.7
baz=239
CPBX Cerro Prieto 77.24 51 IAMs_20 IAMs_20 16 31 23.9
comp=Z,21µm,20.0s
UABX UABC, Campus M 77.24 50 IAMs_20 IAMs_20 16 32 01.8
comp=Z,29µm,20.0s
SRIG Santa Rosalia 77.30 57 IAMs_20 IAMs_20 16 30 03.4
comp=Z,36µm,22.0s
MLAC Mammoth, Mammo 77.34 45 P 16 04 45.4
baz=238
MLAC S 16 14 43.9
baz=238
NKL Nikolayevsk 77.38 336 *eP* **P** **16 04 47.7 0.0**
NKL *e* 16 07 38.6
NKL *e*S **S** **16 14 39.6 +1.9**
NKL *e*SS **SS** **16 19 34.9 -1.9**
NKL pmax pmax
comp=E,50nm,0.6s
NKL pmax pmax
comp=Z,54nm,1.2s
NKL smax smax
comp=E,127nm,2.9s
NKL smax smax
comp=N,1.0nm,1.5s
GRNR Gornyy 77.38 333⇓ *iP* **P** **16 04 51.0 +3.1**
GRNR *e*S S 16 14 47.2 +9.2
GRNR pmax pmax
comp=E,3.0nm,1.2s
GRNR pmax pmax
comp=N,4.0nm,0.7s
GRNR pmax pmax
comp=Z,5.0nm,1.3s
GRNR smax smax
comp=N,3.0nm,1.0s
WAKR Walker 77.40 44 IAMs_20 IAMs_20 16 30 10.1
comp=Z,36µm,22.0s
TIN Tinemaha, Big 77.45 45 P 16 04 48.7
baz=239
TIN S 16 14 45.0
baz=239
HUMO Hull Mountain 77.47 39 IAMs_20 IAMs_20 16 31 48.3
comp=Z,28µm,20.0s
BELC Belle Mtn. Jos 77.49 49 P 16 04 48.9
baz=241
BELC S 16 14 48.6
baz=241
BEKR Beckworth 77.53 42 IAMs_20 IAMs_20 16 31 00.5
comp=Z,37µm,21.0s
L04D Klamath Falls 77.64 39 P 16 04 48.7
baz=235,SNR=12
L04D S 16 14 46.1
baz=235
HEC Hector,Ludlow 77.65 48 P 16 04 49.9
baz=240,SNR=6.7
HEC S 16 14 45.6
baz=240
M04C Macdoel 77.67 40 P 16 04 50.2
baz=235,SNR=16
M04C S 16 14 49.1
baz=235
SLBS Sierra La Lagu 77.68 61 IAMs_20 IAMs_20 16 30 47.0
comp=Z,20µm,20.0s
VCNR Virginia City 77.68 43 IAMs_20 IAMs_20 16 31 25.5
comp=Z,38µm,21.0s
BC3 Big Chuckawall 77.72 50 P 16 04 50.8
baz=241,SNR=6.4
BC3 S 16 14 52.6
baz=241
YERR Yerington 77.79 43 IAMs_20 IAMs_20 16 32 37.3
comp=Z,36µm,20.0s
I02D Swisshome 77.83 37 P 16 04 48.2
baz=233
I02D S 16 14 49.9
baz=233
I03D Drain, OR 77.88 37 P 16 04 50.4
baz=234
I03D S 16 14 50.7
baz=234
LHV Little Huntoon 77.89 44 IAMs_20 IAMs_20 16 30 59.1
comp=Z,21µm,21.0s
GLA Glamis 77.89 50 IAMs_20 IAMs_20 16 31 24.1
comp=Z,33µm,20.0s
GLA Glamis 77.89 50 P 16 04 51.7
baz=242,SNR=5.3
GLA S 16 14 54.7
baz=242
GRAC Grapevine Rang 78.01 46 P 16 04 52.5
baz=239,SNR=23
GRAC S 16 14 54.2
baz=239
RYN Ryan 78.07 44 IAMs_20 IAMs_20 16 30 23.0

	comp=Z,24µm,22.0s								
PAHR	**Pah Rah Range**	**78.08**	**43**	IAMs_20	IAMs_20	16 32 19.0			
	comp=Z,36µm,20.0s								
FURC	**Furnace Creek,**	**78.09**	**46**	P		16 04 52.7			
	baz=240,SNR=8.9								
FURC				S		16 14 51.4			
	baz=240								
GMRC	**Granite Mounta**	**78.11**	**48**	P		16 04 52.5			
	baz=241,SNR=18								
GMRC				S		16 14 50.9			
	baz=241								
NVAR	**Mina Array Bea**	**78.11**	**44**	P	**P**	**16 04 52.5**	**0.0**		
	comp=Z,25nm,1.1s,baz=228,slow=9.1,SNR=35								
NVAR				PP	**PP**	**16 07 48.4**	**-0.9**		
	comp=Z,0.5nm,0.8s,baz=236,slow=6.1,SNR=1.1								
NVAR				LR	LR	16 31 21.8			
	comp=Z,21µm,21.1s,baz=250,slow=30								
NVAR	**Mina Array Bea**	**78.11**	**44**	P	**P**	**16 04 50.5**	**-2.0**		
IRM	**Iron Mountain**	**78.18**	**49**	P		16 04 53.1			
	baz=241,SNR=36								
IRM				S		16 14 52.4			
	baz=241								
K04D	**Chiloquin, OR**	**78.21**	**39**	P		16 04 52.2			
	baz=235								
K04D				S		16 14 53.7			
	baz=235								
NV11	**Mina Array Sit**	**78.22**	**44**	P	**P**	**16 04 50.9**	**-2.1**		
NV11				IAmb	IAmb	16 05 10.6			
	comp=Z,330nm,1.6s								
NV11				IAMs_20	IAMs_20	16 30 59.8			
	comp=Z,22µm,21.0s								
SHOC	**Shoshone, Teco**	**78.22**	**47**	P		16 04 51.3			
	baz=240								
SHOC				S		16 14 53.2			
	baz=240								
DL2	**Dalian**	**78.23**	**316**	P	**P**	**16 04 50.6**	**-2.2**		
DL2				S	**S**	**16 14 48.4**	**+0.8**		
DL2				SS	**SS**	**16 19 46.3**	**-4.0**		
DL2				pmax	pmax				
	comp=Z,49nm,1.5s								
DL2				pmax	pmax				
	comp=Z,2µm,8.0s								
DL2				LR	LR				
	comp=Z,5µm,20.4s								
DL2				LR	LR				
	comp=Z,11µm,21.7s								
DL2				LR	LR				
	comp=Z,17µm,20.3s								
TUQ	**Turquoise Moun**	**78.24**	**48**	P		16 04 53.1			
	baz=241,SNR=16								
TUQ				S		16 14 53.8			
	baz=241								
J04D	**Umpqua Nationa**	**78.34**	**38**	P		16 04 54.1			
	baz=235,SNR=19								
J04D				S		16 14 54.4			
	baz=235								
COR	**Corvallis**	**78.43**	**37**	P	**P**	**16 04 55.8**	**+2.0**		
COR				pmax	pmax				
	comp=Z,101nm,1.5s								
COR	**Corvallis**	**78.43**	**37**	IAMs_20	IAMs_20	16 31 57.4			
	comp=Z,32µm,20.0s								
I04A	**Tendick Farm,**	**78.49**	**38**	P		16 04 54.1			
	baz=235								
CNPM	**China Poot**	**78.49**	**14**	P	**P**	**16 04 51.3**	**-2.6**		
CNPM				IAmb	IAmb	16 05 04.9			
	comp=Z,121nm,1.0s								
KLR	**Kul'dur**	**78.50**	**329**	P	**P**	**16 04 52.6**	**-1.5**		
	comp=Z,1.2nm,0.8s,baz=129,slow=2.5,SNR=2.6								
KLR	**Kul'dur**	**78.50**	**329**	*c iP*	**P**	**16 04 54.8**	**+0.6**		
KLR				pmax	pmax				
	comp=Z,59nm,2.0s								
KLR				MLR	MLR				
	comp=Z,9µm,18.0s								
HOM	**Homer**	**78.52**	**14**	P		16 04 52.8			
	baz=206								
HOM				S		16 14 53.0			
	baz=206								
CN2	**Changchun**	**78.54**	**322**	*e*P	**P**	**16 04 58.0**	**+3.5**		
CN2				PP	**PP**	**16 07 58.1**	**+5.6**		
CN2				*e*S	**S**	**16 14 51.4**	**+0.6**		
CN2				pmax	pmax				
	comp=Z,20nm,1.4s								
CN2				pmax	pmax				
	comp=Z,1µm,6.0s								
CN2				LR	LR				
	comp=Z,8µm,18.0s								
CN2				LR	LR				
	comp=Z,7µm,18.0s								
CN2				LR	LR				
	comp=Z,12µm,18.0s								
SNY	**Shenyang**	**78.55**	**320**	⇑P	**P**	**16 04 53.8**	**-0.8**		
SNY				pmax	pmax				
	comp=Z,32nm,1.4s								
SNY				pmax	pmax				
	comp=Z,1µm,6.7s								
SNY				LR	LR				
	comp=Z,6µm,18.8s								
SNY				LR	LR				
	comp=Z,7µm,16.9s								
SNY				LR	LR				
	comp=Z,12µm,17.1s								
KVN	**Kaiserville**	**78.57**	**44**	IAMs_20	IAMs_20	16 31 43.2			
	comp=Z,27µm,21.0s								
QIZ	**Qiongzhong**	**78.68**	**294**	P	**P**	**16 04 56.8**	**+1.0**		
QIZ				PP	**PP**	**16 07 54.5**	**+0.4**		
QIZ				S	**S**	**16 14 55.1**	**+1.9**		
QIZ				SS	**SS**	**16 20 00.8**	**+3.0**		
QIZ				pmax	pmax				
	comp=Z,1µm,11.6s								
QIZ				LR	LR				
	comp=Z,6µm,18.6s								
QIZ				LR	LR				
	comp=Z,9µm,18.1s								
QIZ				LR	LR				
	comp=Z,19µm,25.0s								
H04D	**Lebanon**	**78.72**	**37**	P		16 04 55.1			
	baz=234								
H04D				S		16 14 56.5			
	baz=234								
TPNV	**Topopah Spring**	**78.76**	**46**	IAMs_20	IAMs_20	16 33 36.5			
	comp=Z,29µm,20.0s								
TPNV	**Topopah Spring**	**78.76**	**46**	P		16 04 55.9			
	baz=240,SNR=41								
TPNV				S		16 14 59.4			
	baz=240								
BRLK	**Bradley Lake**	**78.79**	**14**	P	**P**	**16 04 53.7**	**-1.8**		
BRLK				IAmb	IAmb	16 05 06.5			
	comp=Z,159nm,1.2s								
K05A	**Summer Lake**	**78.79**	**39**	P	**P**	**16 04 56.2**	**+0.1**		
K05A				IAmb	IAmb	16 05 08.6			
	comp=Z,322nm,1.5s								
K05A				IAMs_20	IAMs_20	16 32 46.2			
	comp=Z,34µm,20.0s								
BRSE	**Bradley Lake S**	**78.80**	**14**	P		16 04 53.1			
	baz=207								
BRSE				S		16 14 55.1			
	baz=207								
G03D	**McMinnville, O**	**78.83**	**36**	P		16 04 55.0			
	baz=234								
G03D				S		16 14 58.2			
	baz=234								
NEE2	**Needles Airpor**	**78.86**	**49**	P		16 04 56.5			
	baz=242								
NEE2				S		16 14 59.4			
	baz=242								
J05D	**Fort Rock, OR**	**78.89**	**39**	P		16 04 57.0			
	baz=236,SNR=60								
J05D				S		16 15 00.2			
	baz=236								
214A	**Organ Pipe Nat**	**78.90**	**52**	P		16 04 57.3			
	baz=243,SNR=7.5								
214A				S		16 15 01.8			
	baz=243								
214A	**Organ Pipe Nat**	**78.90**	**52**	IAMs_20	IAMs_20	16 31 45.0			
	comp=Z,34µm,20.0s								
PDMCI	**Parker Dam,Lak**	**78.98**	**49**	P		16 04 57.4			
	baz=242,SNR=22								
PDMCI				S		16 15 01.8			
	baz=242								
RSO	**Redoubt South**	**79.01**	**13**	P	**P**	**16 04 55.4**	**-1.6**		
HSIG		**79.06**	**55**	IAMs_20	IAMs_20	16 31 08.8			
	comp=Z,37µm,22.0s								
H04A	**Detroit Lake**	**79.14**	**37**	IAMs_20	IAMs_20	16 32 41.1			
	comp=Z,29µm,20.0s								
SHPR	**Sheep Range**	**79.30**	**47**	IAMs_20	IAMs_20	16 35 13.1			
	comp=Z,23µm,19.0s								
PINE	**Pine Mountain**	**79.36**	**38**	IAMs_20	IAMs_20	16 33 41.2			
	comp=Z,27µm,20.0s								
MA2	**Magadan**	**79.41**	**345**	P	**P**	**16 04 56.4**	**-2.5**		
	comp=Z,1.8nm,0.2s,baz=159,slow=4.8,SNR=9.4								
MA2	**Magadan**	**79.41**	**345**	*de*P	**P**	**16 04 57.7**	**-1.2**		
MA2				pmax	pmax				
	comp=Z,66nm,1.4s								
MA2				MLR	MLR				
	comp=Z,5µm,19.0s								
MA2	**Magadan**	**79.41**	**345**	IAMs_20	IAMs_20	16 34 51.9			
	comp=Z,32µm,20.0s								
I05D	**Terrebonne, OR**	**79.43**	**38**	P		16 04 58.8			
	baz=235,SNR=9.4								
I05D				S		16 15 07.5			
	baz=235								
E03A	**Lebam**	**79.45**	**35**	IAMs_20	IAMs_20	16 32 23.3			
	comp=Z,28µm,20.0s								
DIB	**Dawson Inlet,**	**79.48**	**26**	IAMs_20	IAMs_20	16 32 43.6			
	comp=Z,33µm,20.0s								
H02S1	**DAWSON INLET T**	**79.48**	**26**	P	P	16 04 49.9	-9.4		
F04D	**Rainier, OR**	**79.48**	**36**	P		16 04 58.2			
	baz=234								
F04D				S		16 15 05.0			
	baz=234								
WHN	**Wuhan**	**79.49**	**306**	⇓P	**P**	**16 05 02.3**	**+2.3**		
WHN				S	**S**	**16 15 05.3**	**+3.9**		
WHN				pmax	pmax				
	comp=Z,2µm,6.4s								
WHN				LR	LR				
	comp=Z,33µm,20.5s								
WHN				LR	LR				
	comp=Z,24µm,20.3s								
WHN				LR	LR				
	comp=Z,42µm,21.4s								
RGRI	**Rengat**	**79.55**	**273**	P	P	16 05 08.2	+7.5		
Q23K	**Middleton Isla**	**79.62**	**16**	P		16 04 59.2			
	baz=211								
Q23K				S		16 15 04.6			
	baz=211								
CAPN	**Captain Cook N**	**79.62**	**13**	P		16 04 58.2			
	baz=207								
CAPN				S		16 15 04.6			
	baz=207								
O22K	**Cooper Landing**	**79.69**	**14**	P		16 04 57.6			
	baz=208								
O22K				S		16 15 03.9			
	baz=208								
GAMB	**Gambell**	**79.74**	**3**	P		16 04 59.7			
	baz=187,SNR=22								
GAMB				S		16 15 05.7			
	baz=187								
GAMB	**Gambell**	**79.74**	**3**	P	**P**	**16 04 59.1**	**-1.4**		
GAMB				IAmb	IAmb	16 05 12.1			
	comp=Z,757nm,2.8s								
SPCR	**Spurr Chakacha**	**79.79**	**13**	P		16 04 59.7			
	baz=206,SNR=5.8								
SPCR				S		16 15 04.9			
	baz=206								
NLWA	**Neilton Lookou**	**79.80**	**34**	IAMs_20	IAMs_20	16 33 55.2			
	comp=Z,26µm,20.0s								
PRN	**Pahroc Range**	**79.82**	**46**	IAMs_20	IAMs_20	16 35 23.5			
	comp=Z,29µm,19.0s								
R11A	**Troy Canyon, C**	**79.91**	**45**	P		16 05 01.7			
	baz=240,SNR=24								
R11A				S		16 15 06.8			
	baz=240								
R11A	**Troy Canyon, C**	**79.91**	**45**	IAMs_20	IAMs_20	16 31 29.9			
	comp=Z,19µm,22.0s								
G05D	**Wamic, OR**	**79.96**	**37**	P		16 05 00.1			
	baz=235								
G05D				S		16 15 10.4			
	baz=235								
TIA	**Tai'an**	**79.98**	**312**	P	**P**	**16 05 02.6**	**0.0**		
TIA				S	**S**	**16 15 13.3**	**+6.9**		
TIA				pmax	pmax				
	comp=Z,11nm,1.4s								
TIA				pmax	pmax				
	comp=Z,2µm,11.0s								
TIA				LR	LR				
	comp=Z,7µm,22.1s								
TIA				LR	LR				
	comp=Z,7µm,24.5s								
TIA				LR	LR				
	comp=Z,13µm,25.1s								
E04D	**Cinebar**	**80.01**	**35**	P		16 05 01.0			
	baz=234,SNR=8.3								
E04D				S		16 15 10.7			
	baz=234								
WVOR	**Wild Horse Val**	**80.02**	**41**	P	**P**	**16 05 03.7**	**+0.9**		
WVOR				pmax	pmax				
	comp=Z,95nm,2.3s								
RC01	**Rabbit Creek A**	**80.23**	**14**	P		16 05 01.8			
	baz=208								
RC01				S		16 15 10.0			
	baz=208								
F05D	**White Salmon**	**80.25**	**36**	P		16 05 02.3			
	baz=235								
F05D				S		16 15 14.7			
	baz=235								
D04E	**Lakebay**	**80.27**	**35**	P		16 05 01.8			
	baz=234								
D04E				S		16 15 16.4			
	baz=234								
D03D	**Eldon**	**80.31**	**34**	P		16 05 04.0			
	baz=234,SNR=9.1								
D03D				S		16 15 13.9			
	baz=234								
SUA	**Susitna One**	**80.34**	**13**	P		16 05 01.7			
	baz=207,SNR=11								
SUA				S		16 15 11.7			
	baz=207								
SUA	**Susitna One**	**80.34**	**13**	P	**P**	**16 05 01.4**	**-2.7**		
SUA				IAmb	IAmb	16 05 16.1			
	comp=Z,367nm,1.8s								
I07A	**Izee**	**80.38**	**39**	IAMs_20	IAMs_20	16 33 15.3			
	comp=Z,26µm,20.0s								
LON	**Longmire**	**80.55**	**36**	IAMs_20	IAMs_20	16 33 29.4			
	comp=Z,17µm,20.0s								
TUC	**Tucson**	**80.60**	**53**	P	**P**	**16 05 06.6**	**+0.5**		
TUC				pmax	pmax				
	comp=Z,189nm,1.6s								
TUC				MLR	MLR				
	comp=Z,36µm,20.0s								
TUC	**Tucson**	**80.60**	**53**	P	**P**	**16 05 06.6**	**+0.5**		
TUC	**Tucson**	**80.60**	**53**	IAMs_20	IAMs_20	16 33 07.0			
	comp=Z,36µm,20.0s								
TUC	**Tucson**	**80.60**	**53**	P		16 05 06.2			
	baz=244								
TUC				S		16 15 18.7			
	baz=244								
JRMM	**Jerantut**	**80.61**	**277**	P	P	16 05 12.0	+5.6		
J08A	**Circle Bar Ran**	**80.62**	**40**	P	**P**	**16 05 03.8**	**-2.2**		
J08A				IAmb	IAmb	16 05 18.0			
	comp=Z,196nm,1.4s								
J08A				IAMs_20	IAMs_20	16 32 19.7			
	comp=Z,33µm,22.0s								
SKT	**Skwentna**	**80.63**	**13**	P		16 05 04.3			
	baz=206								
SKT				S		16 15 12.7			
	baz=206								
GLI	**Glacier Island**	**80.67**	**15**	P		16 05 03.2			
	baz=211								
GLI				S		16 15 15.7			
	baz=211								
GLI	**Glacier Island**	**80.67**	**15**	P	**P**	**16 05 04.9**	**-0.9**		
D05A	**Enumclaw**	**80.71**	**35**	IAMs_20	IAMs_20	16 33 14.4			
	comp=Z,20µm,20.0s								
BBB	**Bella Bella**	**80.71**	**29**	LR	LR	16 33 11.2			
	comp=Z,36µm,20.7s,baz=243,slow=30								
BBB	**Bella Bella**	**80.71**	**29**	IAMs_20	IAMs_20	16 32 59.6			
	comp=Z,35µm,20.0s								
EYAK	**Cordova Ski Ar**	**80.73**	**16**	P		16 05 03.2			
	baz=212								
EYAK				S		16 15 14.9			
	baz=212								
KNK	**Knik Glacier**	**80.81**	**14**	P		16 05 05.2			
	baz=209								
KNK				S		16 15 15.9			
	baz=209								
PMR	**Palmer**	**80.81**	**14**	P		16 05 06.2			
	baz=209								
PMR				S		16 15 15.9			
	baz=209								
PMR	**Palmer**	**80.81**	**14**	P	**P**	**16 05 04.0**	**-2.4**		
PMR				pmax	pmax				
	comp=Z,122nm,1.2s								
PMR	**Palmer**	**80.81**	**14**	P	**P**	**16 05 04.0**	**-2.4**		
CRAG	**Craig**	**80.84**	**24**	S		16 15 22.2			
	baz=224								
CRAG	**Craig**	**80.84**	**24**	IAMs_20	IAMs_20	16 34 52.4			
	comp=Z,32µm,20.0s								
RAGM	**Ragged Mountai**	**80.88**	**16**	IAMs_20	IAMs_20	16 41 27.4			
	comp=Z,21µm,18.0s								
LCMT	**Little Creek M**	**80.90**	**47**	P	**P**	**16 05 06.1**	**-1.5**		
LCMT				IAmb	IAmb	16 05 20.0			
	comp=Z,361nm,2.5s								
HMT	**Hamilton**	**80.95**	**16**	IAMs_20	IAMs_20	16 40 44.2			
	comp=Z,18µm,18.0s								
BKNI	**Bangkinang**	**80.98**	**273**	P	P	16 05 20.4	+12		
ANM	**Nome**	**80.98**	**6**	P		16 05 06.5			
	baz=193,SNR=13								
ANM				S		16 15 18.9			
	baz=193								
ANM	**Nome**	**80.99**	**6**	IAmb	IAmb	16 05 19.5			
	comp=Z,810nm,3.0s								
F07A	**Phinny Hill Vi**	**81.14**	**37**	IAMs_20	IAMs_20	16 34 05.0			
	comp=Z,35µm,20.0s								
SIT	**Sitka**	**81.18**	**22**	P		16 05 08.2			
	baz=222								
SIT				S		16 15 21.2			
	baz=222								
SIT	**Sitka**	**81.18**	**22**	IAMs_20	IAMs_20	16 42 18.0			
	comp=Z,19µm,18.0s								
SML	**Sawmill**	**81.18**	**14**	P		16 05 08.5			
	baz=209,SNR=5.8								
SML				S		16 15 19.5			
	baz=209								
PSUT	**Pine Spring**	**81.19**	**46**	P	**P**	**16 05 07.6**	**-1.7**		
A04D	**Lummi Island**	**81.22**	**34**	P		16 05 07.0			
	baz=234,SNR=11								
A04D				S		16 15 22.6			
	baz=234								
B05A	**Bryant**	**81.28**	**34**	P		16 05 08.1			
	baz=234,SNR=11								
B05A				S		16 15 24.0			
	baz=234								
CUT	**Chulitna**	**81.28**	**13**	P		16 05 06.6			
	baz=208,SNR=7.1								
CUT				S		16 15 16.7			
	baz=208								
PPLA	**Purkeypile**	**81.33**	**12**	P		16 05 06.3			
	baz=206								
PPLA				S		16 15 19.2			
	baz=206								
ELK	**Elko**	**81.33**	**43**	LR	LR	16 33 52.8			
	comp=Z,29µm,20.8s,baz=236,slow=30								
ELK	**Elko**	**81.33**	**43**	IAMs_20	IAMs_20	16 33 41.1			
	comp=Z,28µm,21.0s								
G08A	**Pilot Rock**	**81.37**	**38**	IAMs_20	IAMs_20	16 33 53.3			
	comp=Z,22µm,20.0s								
BMRM	**Bremner River**	**81.39**	**16**	P		16 05 08.3			
	baz=213								
BMRM				S		16 15 19.5			
	baz=213								
BMRM	**Bremner River**	**81.39**	**16**	P	**P**	**16 05 07.9**	**-1.7**		
BMRM				IAmb	IAmb	16 05 22.7			
	comp=Z,217nm,1.3s								
KLU	**Klutina**	**81.49**	**15**	P		16 05 07.2			
	baz=212								
KLU				S		16 15 25.0			
	baz=212								
E07A	**Sunnyside**	**81.55**	**37**	IAMs_20	IAMs_20	16 33 56.9			
	comp=Z,28µm,21.0s								
WUAZ	**Wupatki**	**81.56**	**49**	P		16 05 08.0			
	baz=244								
WUAZ				S		16 15 29.4			
	baz=244								
WUAZ	**Wupatki**	**81.56**	**49**	IAMs_20	IAMs_20	16 34 30.2			
	comp=Z,28µm,20.0s								
CRQE	**Cirque**	**81.61**	**17**	P		16 05 10.2			
	baz=214								
CRQE				S		16 15 21.8			
	baz=214								
HAWA	**Hanford**	**81.64**	**37**	IAMs_20	IAMs_20	16 34 09.4			
	comp=Z,34µm,20.0s								
TGL	**Tana Glacier**	**81.69**	**17**	P	**P**	**16 05 08.4**	**-2.9**		
TGL				IAmb	IAmb	16 05 22.3			
	comp=Z,189nm,1.4s								
A05A	**Maple Falls**	**81.72**	**34**	P	**P**	**16 05 08.8**	**-2.7**		
A05A				IAmb	IAmb	16 05 38.2			
	comp=Z,203nm,1.7s								
C06D	**Leavenworth**	**81.73**	**35**	P		16 05 10.9			
	baz=235								
TNA	**Tin City**	**81.75**	**4**	P		16 05 09.7			
	baz=190,SNR=13								
TNA				S		16 15 28.5			
	baz=190								
B06A	**Marblemount**	**81.76**	**34**	IAMs_20	IAMs_20	16 35 28.1			
	comp=Z,24µm,19.0s								
WRAK	**Wrangell Islan**	**81.83**	**24**	P		16 05 10.7			
	baz=224								
WRAK				S		16 15 30.2			
	baz=224								
WRAK	**Wrangell Islan**	**81.83**	**24**	IAMs_20	IAMs_20	16 37 23.5			
	comp=Z,35µm,19.0s								
PINM	**Pinnacle**	**81.90**	**18**	P		16 05 10.3			
	baz=217								
PINM				S		16 15 27.7			
	baz=217								
PCA	**Pinnacle**	**81.90**	**18**	P	**P**	**16 05 10.3**	**-2.0**		
PCA				IAMs_20	IAMs_20	16 33 47.6			
	comp=Z,17µm,21.0s								
VRDI	**Verde Repeater**	**81.91**	**16**	P	**P**	**16 05 10.4**	**-2.2**		
N25K	**Chitina, Valde**	**81.93**	**16**	P		16 05 09.9			
	baz=213,SNR=12								
N25K				S		16 15 27.9			
	baz=213								
M24K	**Tolsona, Glenn**	**81.96**	**15**	P		16 05 09.9			
	baz=211								
M24K				S		16 15 29.1			
	baz=211								
M24K	**Tolsona, Glenn**	**81.96**	**15**	IAmb	IAmb	16 05 35.7			
	comp=Z,219nm,1.2s								
E08A	**Dider Farm, El**	**81.97**	**37**	IAmb	IAmb	16 05 30.1			
	comp=Z,308nm,1.7s								
E08A				IAMs_20	IAMs_20	16 34 41.0			
	comp=Z,32µm,20.0s								
SEY	**Seymchan**	**81.97**	**347**	P	**P**	**16 05 10.7**	**-1.8**		
	comp=Z.9.1nm,0.8s,baz=148,slow=5.8,SNR=45								
SEY	**Seymchan**	**81.97**	**347**	⇓*i*P	**P**	**16 05 11.1**	**-1.4**		
GRNC	**Granite Creek**	**81.97**	**17**	IAmb	IAmb	16 05 36.8			
	comp=Z,225nm,1.6s								
WAT6	**Susitna Watana**	**82.00**	**14**	P		16 05 11.4			
	baz=210,SNR=20								
WAT6				S		16 15 28.2			
	baz=210								
MTPU	**Mount Pierson**	**82.12**	**47**	IAmb	IAmb	16 05 28.7			
	comp=Z,246nm,1.7s								
WAT2	**Susitna Watana**	**82.14**	**13**	P		16 05 11.6			
	baz=209								
WAT2				S		16 15 28.4			
	baz=209								
MCARA	**McCarthy VSAT**	**82.16**	**16**	P		16 05 10.3			
	baz=214								
MCARA				S		16 15 31.3			
	baz=214								
MCARA	**McCarthy VSAT**	**82.16**	**16**	P	**P**	**16 05 11.4**	**-2.2**		
IPM	**Ipoh**	**82.16**	**277**	P	**P**	**16 05 18.0**	**+3.3**		
CHUM	**Lake Minchumin**	**82.20**	**11**	P		16 05 11.6			
	baz=205,SNR=17								
CHUM				S		16 15 29.2			
	baz=205								
TRF	**Thorofare Moun**	**82.21**	**12**	P		16 05 11.7			
	baz=207,SNR=11								
TRF				S		16 15 28.7			
	baz=207								
LOGN	**Logan Glacier**	**82.27**	**17**	IAmb	IAmb	16 05 37.1			
	comp=Z,274nm,1.7s								
CTG	**Chitna Glacier**	**82.28**	**17**	P		16 05 13.0			
	baz=216								
CTG				S		16 15 30.8			
	baz=216								
MFID	**Camas Ranch**	**82.29**	**41**	IAMs_20	IAMs_20	16 33 34.2			
	comp=Z,40µm,22.0s								
D08A	**Wollman Farm,**	**82.36**	**36**	IAMs_20	IAMs_20	16 34 52.3			
	comp=Z,27µm,20.0s								
HPIG		**82.51**	**59**	IAMs_20	IAMs_20	16 32 54.7			
	comp=Z,29µm,22.0s								
E09A	**Wood Farm, Sta**	**82.51**	**37**	IAMs_20	IAMs_20	16 34 56.4			
	comp=Z,26µm,20.0s								
MNSI	**Mandailing Nat**	**82.51**	**273**	P	P	16 05 25.1	+8.6		
W18A	**Petrified Fore**	**82.59**	**50**	P	**P**	**16 05 16.8**	**+0.1**		
W18A				IAmb	IAmb	16 05 30.4			
	comp=Z,360nm,2.2s								
W18A				IAMs_20	IAMs_20	16 35 57.6			
	comp=Z,32µm,19.0s								
W18A	**Petrified Fore**	**82.59**	**50**	P		16 05 16.0			

baz=245
W18A S 16 15 36.4
baz=245
BPAW Bear Paw Mtn. 82.65 12 P 16 05 13.5
baz=207
BPAW S 16 15 33.2
baz=207
DUG Dugway, Tooele 82.69 45 P 16 05 15.0
baz=242,SNR=12
DUG S 16 15 35.8
baz=242
DUG Dugway, Tooele 82.69 45 P **P** **16 05 17.7 +0.7**
DUG pmax pmax
comp=Z,82nm,2.1s
MCK McKinley 82.74 13 P 16 05 14.8
baz=209,SNR=16
MCK S 16 15 33.7
baz=209
MCK McKinley 82.74 13 IAmb IAmb 16 05 29.4
comp=Z,131nm,1.1s
KULM Kulim 82.75 278 P P 16 05 23.0 +5.2
F10A Beach Ranch, E 82.76 38 IAmb IAmb 16 05 51.4
comp=Z,350nm,1.8s
F10A IAMs_20 IAMs_20 16 34 58.2
comp=Z,18µm,20.0s
PAX Paxson 82.87 15 P 16 05 15.9
baz=212,SNR=5.6
PAX S 16 15 36.0
baz=212
SKAG Skagway 82.98 21 P 16 05 16.9
baz=222
121A Cookes Peak, D 82.99 53 IAMs_20 IAMs_20 16 33 43.6
comp=Z,33µm,21.0s
121A Cookes Peak, D 82.99 53 P 16 05 17.3
baz=246,SNR=11
121A S 16 15 42.9
baz=246
BWN Browne 83.02 12 IAMs_20 IAMs_20 16 34 39.5
comp=Z,17µm,21.0s
C09A Chrisman Ranch 83.13 36 IAMs_20 IAMs_20 16 35 14.7
comp=Z,18µm,20.0s
ENH Enshi 83.21 304 P **P** **16 05 15.4 -4.4**
ENH IAmb IAmb 16 05 38.1
comp=Z,194nm,1.4s
HLID Hailey 83.25 41 P 16 05 19.4
baz=241,SNR=34
HLID S 16 15 42.6
baz=241
HLID Hailey 83.26 41 IAMs_20 IAMs_20 16 35 38.7
comp=Z,27µm,20.0s
MENT Mentasta 83.27 15 IAmb IAmb 16 05 32.0
comp=Z,358nm,2.1s
SPUT South Promonto 83.45 44 P **P** **16 05 19.7 -1.3**
NEA2 Nenana 83.47 12 P 16 05 18.4
baz=208
NEA2 S 16 15 40.2
baz=208
NEA2 Nenana 83.48 12 IAMs_20 IAMs_20 16 43 38.6
comp=Z,15µm,19.0s
MLY Manley 83.53 11 P 16 05 18.7
baz=207,SNR=36
MLY S 16 15 38.9
baz=207
ZEA Zeya 83.56 331 *e*P **P** **16 05 22.4 +1.4**
ZEA *e*S **S** **16 15 46.5 +3.9**
ZEA *e* 16 16 37.5
ZEA *e*SS **SS** **16 21 14.9 +5.6**
ZEA pmax pmax
comp=E,10.0nm,1.7s
ZEA pmax pmax
comp=Z,20nm,1.8s
ZEA pmax pmax
comp=N,400nm,5.7s
ZEA pmax pmax
comp=Z,900nm,5.8s
ZEA pmax pmax
comp=E,400nm,4.9s
ZEA smax smax
comp=N,2µm,11.5s
WRH Wood River Hil 83.57 13 IAmb IAmb 16 05 34.3
comp=Z,251nm,1.4s
ZAIG Zacatecas 83.63 64 IAMs_20 IAMs_20 16 33 58.1
comp=Z,26µm,20.0s
EPT El Paso 83.69 55 IAMs_20 IAMs_20 16 34 46.0
comp=Z,32µm,20.0s
HDA Harding Lake 83.76 13 P 16 05 20.4
baz=210,SNR=30
HDA P 16 05 20.4
baz=210,SNR=30
HDA S 16 15 42.8
baz=210
HDA S 16 15 42.8
baz=210
P17A Butcher Ranch, 83.78 46 IAmb IAmb 16 05 35.1
comp=Z,396nm,2.1s
DOT Dot Lake 83.78 15 IAmb IAmb 16 05 35.0
comp=Z,118nm,1.3s
CCB Clear Creek Bu 83.79 13 IAmb IAmb 16 05 32.3
comp=Z,214nm,1.4s
I23K Minto, Yukon-K 83.91 12 P 16 05 21.0
baz=208,SNR=22
I23K S 16 15 44.6
baz=208
I23K Minto, Yukon-K 83.91 12 IAmb IAmb 16 05 35.9
comp=Z,290nm,1.8s
TCOL CIGO, UAF Yank 83.97 13 P 16 05 21.4
baz=210,SNR=8.4
TCOL S 16 15 44.4
baz=210
TCOL CIGO, UAF Yank 83.97 13 IAmb IAmb 16 05 33.2
comp=Z,225nm,1.3s
COLA College 83.97 13 P 16 05 21.9
baz=210
COLA S 16 15 45.5
baz=210
COLA College 83.98 13*d i*P **P** **16 05 22.4 -0.4**
COLA pmax pmax
comp=Z,196nm,1.4s
COLA MLR MLR
comp=Z,10µm,18.0s
COLA College 83.98 13 P **P** **16 05 21.5 -1.3**
COLA IAmb IAmb 16 05 33.2
comp=Z,223nm,1.3s
TIY Taiyuan 84.01 312 *e*P **P** **16 05 27.0 +3.2**
TIY pmax pmax
comp=Z,2µm,7.2s
TIY LR LR
comp=Z,4µm,15.4s
TIY LR LR
comp=Z,9µm,17.8s
TIY LR LR
comp=Z,11µm,19.7s
WHY Whitehorse 84.03 20 P **P** **16 05 22.6 -0.8**
WHY IAmb IAmb 16 05 34.9
comp=Z,144nm,1.4s
WHY IAMs_20 IAMs_20 16 36 14.1
comp=Z,18µm,20.0s
NEW Newport 84.03 36 P 16 05 23.1
baz=238
NEW S 16 15 49.8
baz=238
NEW Newport 84.03 36 LR LR 16 35 02.3
comp=Z,18µm,21.5s,baz=226,slow=30
NEW Newport 84.03 36 P **P** **16 05 22.0 -1.6**
NEW pmax pmax
comp=Z,80nm,1.6s
NEW MLR MLR
comp=Z,18µm,20.0s
NEW Newport 84.03 36 P **P** **16 05 22.0 -1.6**
NEW Newport 84.03 36 IAMs_20 IAMs_20 16 35 32.6
comp=Z,18µm,20.0s
SCRK Sand Creek 84.08 15 P 16 05 22.9
baz=213,SNR=22
SCRK S 16 15 47.7
baz=213
IL31 84.09 13 IAmb IAmb 16 05 42.4
comp=Z,128nm,1.2s
ILAR Eielson Array 84.09 13 P **P** **16 05 21.9 -1.6**
comp=Z,69nm,1.3s,baz=226,slow=5.6,SNR=43
ILAR LR LR 16 39 38.8
comp=Z,7µm,19.4s,baz=222,slow=33
ILAR Eielson Array 84.09 13 P **P** **16 05 21.4 -2.1**
GYA Guiyang 84.10 300 ⇑P **P** **16 05 25.3 +0.7**
GYA S **S** **16 15 53.9 +4.5**
GYA SS **SS** **16 21 22.3 +3.6**
GYA pmax pmax
comp=Z,760nm,7.4s
GYA LR LR
comp=Z,3µm,23.1s
GYA LR LR
comp=Z,6µm,21.2s
GYA LR LR
comp=Z,10µm,20.3s
DLBC Dease Lake 84.14 23 LR LR 16 38 40.5
comp=Z,27µm,18.3s,baz=215,slow=33
DLBC Dease Lake 84.14 23 IAMs_20 IAMs_20 16 38 19.6
comp=Z,30µm,19.0s
HWUT Hardware Ranch 84.18 44 IAmb IAmb 16 05 58.2
comp=Z,173nm,1.6s
HWUT IAMs_20 IAMs_20 16 35 32.6
comp=Z,28µm,20.0s
Y22D IRIS PASSCAL I 84.27 52 IAMs_20 IAMs_20 16 36 04.4
comp=Z,29µm,20.0s
Y22D IRIS PASSCAL I 84.27 52 P 16 05 24.6
baz=246
POKR Poker Plat Res 84.28 13 P 16 05 23.3
baz=210,SNR=14
POKR S 16 15 49.8
baz=210
POKR Poker Plat Res 84.28 13 P **P** **16 05 22.4 -2.0**
POKR IAmb IAmb 16 05 37.7
comp=Z,229nm,1.4s
PV05 Paradox Valley 84.32 48 IAmb IAmb 16 05 38.1
comp=Z,148nm,1.3s
MVCO Mesa Verde 84.38 49 P 16 05 23.5
baz=245
MVCO S 16 15 53.3
baz=245
MVCO Mesa Verde 84.39 49 IAMs_20 IAMs_20 16 35 11.8
comp=Z,31µm,20.0s
TRTT Trang 84.40 280 P **P** **16 05 27.6 +1.4**
comp=Z,5µmcomp=Z,49nm,1.8s
PV10 Paradox Valley 84.49 48 IAmb IAmb 16 05 39.3
comp=Z,88nm,1.0s
PV14 Lion Creek, Pa 84.50 48 IAMs_20 IAMs_20 16 37 41.7
comp=Z,29µm,19.0s
PV19 Morning Glory 84.50 48 IAmb IAmb 16 05 38.4
comp=Z,142nm,1.4s
PV19 IAMs_20 IAMs_20 16 37 41.7
comp=Z,24µm,19.0s
PV17 East Wray Mesa 84.51 48 IAmb IAmb 16 05 38.5
comp=Z,134nm,1.3s
PV17 IAMs_20 IAMs_20 16 37 41.8
comp=Z,28µm,19.0s
PV20 West Nyswonger 84.53 48 IAmb IAmb 16 05 38.5
comp=Z,129nm,1.1s
PV18 Skein Mesa, Pa 84.53 48 IAmb IAmb 16 05 38.5
comp=Z,144nm,1.5s
PV18 IAMs_20 IAMs_20 16 37 42.4
comp=Z,23µm,19.0s
MNTX Cornudas Mount 84.54 55 IAMs_20 IAMs_20 16 35 33.8
comp=Z,29µm,20.0s
MNTX Cornudas Mount 84.54 55 P 16 05 26.0
baz=248
MNTX S 16 15 53.5
baz=248
PV16 Nyswonger Mesa 84.55 48 IAmb IAmb 16 05 38.8
comp=Z,210nm,1.6s
PV13 Radium Mtn., P 84.55 48 IAmb IAmb 16 05 38.8
comp=Z,133nm,1.4s
PV03 Paradox Valley 84.57 48 IAMs_20 IAMs_20 16 35 29.7
comp=Z,23µm,21.0s
GSI Gunungsitoli 84.58 273 P P 16 05 37.2 +10
PV11 David Mesa, Pa 84.58 48 IAmb IAmb 16 05 39.0
comp=Z,194nm,1.3s
PV11 IAMs_20 IAMs_20 16 37 52.7
comp=Z,28µm,19.0s
BILL Bilibino 84.59 354⇑*e*P **P** **16 05 24.3 -1.6**
BILL *e* 16 08 37.6
BILL *i*S **S** **16 15 57.6 +5.2**
BILL pmax pmax
comp=Z,88nm,1.7s
BILL Bilibino 84.59 354 P **P** **16 05 24.6 -1.3**
BILL IAmb IAmb 16 05 36.5
comp=Z,447nm,2.4s
K27K Chicken 84.59 15 IAmb IAmb 16 05 40.5
comp=Z,131nm,1.4s
PV04 Paradox Valley 84.59 48 IAMs_20 IAMs_20 16 37 45.1
comp=Z,28µm,19.0s
RDOG Red Dog Mine 84.63 6 P 16 05 24.5
baz=195
RDOG S 16 15 54.8
baz=195
RDOG Red Dog Mine 84.63 6 P **P** **16 05 24.5 -1.6**
PV12 Saucer Basin, 84.63 48 IAMs_20 IAMs_20 16 35 32.2
comp=Z,30µm,21.0s
PV01 Paradox Valley 84.72 48 IAmb IAmb 16 05 39.5
comp=Z,226nm,1.8s
PV22 Blue Mesa, Par 84.74 48 IAmb IAmb 16 05 39.8
comp=Z,300nm,1.9s
PV07 Paradox Valley 84.80 48 IAMs_20 IAMs_20 16 35 36.6
comp=Z,23µm,21.0s
PV15 Paradox Valley 84.87 48 IAmb IAmb 16 05 40.2
comp=Z,102nm,1.2s
PV15 IAMs_20 IAMs_20 16 35 38.6
comp=Z,25µm,22.0s
ANMO Albuquerque 84.97 52 P 16 05 27.5
baz=247
ANMO S 16 15 59.0
baz=247
ANMO Albuquerque 84.97 52 LR LR 16 36 49.6
comp=Z,34µm,19.2s,baz=242,slow=31
ANMO Albuquerque 84.97 52*d i*P **P** **16 05 29.8 +0.9**
ANMO pmax pmax
comp=Z,91nm,1.5s
ANMO MLR MLR
comp=Z,3µm,16.0s
AHID Auburn Hatcher 85.01 43 IAMs_20 IAMs_20 16 36 08.6
comp=Z,21µm,21.0s
PRP Porcupine Dome 85.03 13 P 16 05 26.3
baz=212
PRP S 16 15 58.5
baz=212
TXAR Lajitas Array 85.03 58 P **P** **16 05 29.6 +0.4**
comp=Z,3.9nm,0.8s,baz=220,slow=6.6,SNR=21
TXAR PKKP **PKKPdf** **16 23 31.5 +1.4**
comp=Z,0.3nm,0.9s,baz=128,slow=1.5,SNR=2.1
TXAR PKPPKP **P'P'df** **16 31 43.7 +1.9**
comp=Z,0.2nm,0.5s,baz=86,slow=2.8,SNR=1.7
TXAR LR LR 16 36 20.5
comp=Z,33µm,19.5s,baz=0.0,slow=31
TXAR Lajitas Array 85.03 58 P **P** **16 05 29.4 +0.2**
XAN Xi'an 85.11 307 P **P** **16 05 33.1 +3.7**
XAN pP pwP 16 05 40.3 +4.5
XAN sP sP 16 05 45.0 +11
XAN S **S** **16 15 53.9 -5.2**
XAN sS ScS 16 16 13.9 +4.2
XAN pmax pmax
comp=Z,42nm,2.0s
XAN pmax pmax
comp=Z,3µm,7.5s
XAN LR LR
comp=Z,9µm,19.6s
XAN LR LR
comp=Z,8µm,23.0s
XAN LR LR
comp=Z,14µm,20.6s
MSO Missoula 85.15 38 P 16 05 28.8
baz=241,SNR=9.2
MSO S 16 16 01.0
baz=241
DAWY Dawson 85.32 16 P **P** **16 05 28.6 -1.2**
DAWY IAmb IAmb 16 05 40.9
comp=Z,102nm,1.2s
JTMT Jette 85.41 38 IAMs_20 IAMs_20 16 38 50.1
comp=Z,17µm,19.0s
EGAK Eagle 85.44 15 P 16 05 29.4
baz=216,SNR=31
EGAK S 16 16 01.7
baz=216
EGAK Eagle 85.44 15 IAmb IAmb 16 05 49.6
comp=Z,125nm,1.1s
REDW Red Top Meadow 85.45 43 IAMs_20 IAMs_20 16 36 14.9
comp=Z,19µm,21.0s
TLIG Tlapa 85.48 70 IAMs_20 IAMs_20 16 33 40.7
comp=Z,19µm,22.0s
UNM Universidad Na 85.48 69 IAMs_20 IAMs_20 16 34 40.6
comp=Z,34µm,21.0s
SNOW Snow King Moun 85.56 43 IAMs_20 IAMs_20 16 36 27.8
comp=Z,19µm,20.0s
MAW Mawson 85.59 200 P **P** **16 05 29.9 -1.2**
comp=Z,7.8nm,0.6s,baz=152,slow=7.1,SNR=17
MAW LR LR 16 42 10.5
comp=Z,16µm,18.0s,baz=112,slow=35
MAW Mawson 85.59 200 P **P** **16 05 30.1 -1.1**
baz=85,SNR=23
COLD Coldfoot 85.60 11 P 16 05 30.9
baz=207,SNR=32
COLD S 16 16 06.3
baz=207
MOOW Moose Ponds 85.69 42 IAmb IAmb 16 05 44.4
comp=Z,491nm,2.6s
MOOW IAMs_20 IAMs_20 16 36 44.4
comp=Z,21µm,20.0s
LOHW Long Hollow 85.72 42 IAmb IAmb 16 06 06.3
comp=Z,243nm,1.7s
LOHW IAMs_20 IAMs_20 16 36 34.2
comp=Z,19µm,20.0s
O20A White River Ci 85.80 46 P 16 05 31.9
baz=245
O20A S 16 16 05.8
baz=245
O20A White River Ci 85.80 46 IAMs_20 IAMs_20 16 39 27.8
comp=Z,29µm,19.0s
S22A 4UR Ranch, Cre 85.81 49 P 16 05 32.8
baz=246,SNR=17
S22A S 16 16 07.6
baz=246
FLWY Flagg Ranch 85.87 42 IAmb IAmb 16 05 50.3
comp=Z,182nm,1.4s
FLWY IAMs_20 IAMs_20 16 35 48.1
comp=Z,18µm,21.0s
YPP Pitchstone Pla 85.89 42 IAmb IAmb 16 06 11.0
comp=Z,228nm,1.8s
PHET Kaeng Krachan 85.95 285 P **P** **16 05 36.0 +2.1**
comp=Z,874nmcomp=Z,96nm,1.1s
HHC Hu-ho-hao-te 85.96 314 *e*P **P** **16 05 35.3 +1.7**
HHC sP pwP 16 05 45.1 +5.2
HHC S **S** **16 16 08.8 +1.5**
HHC SS **SS** **16 21 46.6 +1.1**
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,2µm,6.3s
HHC LR LR
comp=Z,4µm,14.7s
HHC LR LR
comp=Z,10µm,20.6s
HHC LR LR
comp=Z,17µm,20.2s
BOZ Bozeman (W) 85.97 40 IAmb IAmb 16 05 47.0
comp=Z,226nm,1.7s
BOZ Bozeman (W) 85.97 40 P 16 05 33.3
baz=242,SNR=21
BOZ S 16 16 05.0
baz=242
BW06 Boulder Array 86.03 44 P 16 05 33.1
baz=244,SNR=27
BW06 S 16 16 07.5
baz=244
BW06 Boulder Array 86.03 44 IAmb IAmb 16 05 45.5
comp=Z,487nm,2.5s
BW06 IAMs_20 IAMs_20 16 36 43.5
comp=Z,27µm,21.0s
PDAR Pinedale Array 86.03 44 P **P** **16 05 32.7 -1.4**
comp=Z,6.4nm,1.0s,baz=210,slow=3.2,SNR=21
PDAR PP PP 16 08 46.1 -8.4
comp=Z,2.7nm,1.1s,baz=220,slow=6.8,SNR=4.0
PDAR LR LR 16 36 44.0
comp=Z,22µm,21.3s,baz=245,slow=31
H17A Grant Village 86.09 42 P 16 05 34.7
baz=243,SNR=15
H17A S 16 16 08.4
baz=243
H17A Grant Village 86.09 42 IAMs_20 IAMs_20 16 35 24.9
comp=Z,28µm,22.0s
WALA Waterton Lakes 86.27 37 P **P** **16 05 33.1 -1.9**
WALA IAmb IAmb 16 06 08.5
comp=Z,197nm,1.7s
WALA IAMs_20 IAMs_20 16 35 48.8
comp=Z,26µm,22.0s
LKWY Lake 86.28 42 IAMs_20 IAMs_20 16 39 56.9
comp=Z,26µm,19.0s
SMCO Snowmass 86.29 48 IAMs_20 IAMs_20 16 41 37.1
comp=Z,20µm,18.0s
UTTA Uttaradit 86.56 289 P **P** **16 05 40.5 +3.6**
YNE Yellowstone No 86.73 41 IAmb IAmb 16 06 11.7
comp=Z,179nm,1.5s
SDCO Great Sand Dun 86.78 49 S 16 16 15.6
baz=247
BMAR Burnt Mountain 86.86 12 P **P** **16 05 35.6 -1.7**
UTHA Uthaitani 86.91 287 P P 16 05 46.2 +7.6
BTO Baotou 86.92 314 *e*P **P** **16 05 38.5 +0.2**
BTO S **S** **16 16 10.3 -6.4**
BTO pmax pmax
comp=Z,58nm,2.4s
BTO pmax pmax
comp=Z,4µm,7.0s
BTO LR LR
comp=Z,18µm,16.7s
BTO LR LR
comp=Z,30µm,20.5s
BTO LR LR
comp=Z,22µm,15.7s
KMI Kunming 86.96 297 ⇑P **P** **16 05 41.4 +2.4**
KMI pP pwP 16 05 46.0 +0.6
KMI sP sP 16 05 47.9 +4.2
KMI S **S** **16 16 16.4 -1.6**
KMI pmax pmax
comp=Z,16nm,0.9s
KMI pmax pmax
comp=Z,730nm,7.0s
KMI LR LR
comp=Z,13µm,21.6s
KMI LR LR
comp=Z,19µm,22.7s
KMI LR LR
comp=Z,32µm,21.5s
TOLK Toolik Lake Re 86.97 10 P 16 05 36.8
baz=208,SNR=11
RWWY Rawlins 87.15 45 P **P** **16 05 36.5 -3.1**
RWWY IAmb IAmb 16 05 51.5
comp=Z,394nm,2.2s
RWWY IAMs_20 IAMs_20 16 36 19.5
comp=Z,27µm,22.0s
RLMT Red Lodge 87.25 41 P 16 05 39.7
baz=244,SNR=49
RLMT S 16 16 20.0
baz=244
RLMT Red Lodge 87.25 41 IAmb IAmb 16 05 52.3
comp=Z,127nm,1.4s
SUKH Sukhothai 87.32 289 P **P** **16 05 43.2 +2.7**
GO10 Punta Arenas 87.35 145 IAMs_20 IAMs_20 16 34 17.3
comp=Z,19µm,22.0s
T25A Trinidad 87.35 50 P 16 05 40.9
baz=248,SNR=5.7
T25A S 16 16 20.6
baz=248
T25A Trinidad 87.35 50 IAMs_20 IAMs_20 16 36 16.5
comp=Z,20µm,22.0s
MSTX Muleshoe 87.42 54 P 16 05 40.1
baz=249
MSTX S 16 16 22.6
baz=249
ISCO Idaho Springs 87.50 47 IAMs_20 IAMs_20 16 39 42.1
comp=Z,17µm,19.0s
Q24A Divide 87.51 48 P 16 05 41.2
baz=247
Q24A S 16 16 25.7
baz=247
UMPA Umpang Tak 87.64 287 P P 16 05 53.2 +11
N23A Red Feather La 87.70 46 P 16 05 42.5
baz=247
N23A S 16 16 28.3
baz=247
EPYK Eagle Plains 87.83 16 P 16 05 40.9
baz=220
EPYK S 16 16 27.6
baz=220
YAK Yakutsk 87.85 338 P **P** **16 05 40.6 -1.5**
comp=Z,1.1nm,0.3s,baz=0.1,slow=2.2,SNR=1.5
YAK Yakutsk 87.85 338 *e*P **P** **16 05 44.7 +2.6**
YAK *e* 16 09 13.5
YAK *e*S **SKSac** **16 16 12.2 +2.4**
YAK *e*SS **SS** **16 22 10.5 -1.5**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK pmax pmax

comp=Z,963nm,4.6s
YAK pmax pmax
comp=N,115nm,3.0s
YAK pmax pmax
comp=E,255nm,4.3s
YAK smax smax
comp=N,2μm,6.9s
YAK smax smax
comp=E,632nm,6.4s
YAK Yakutsk 87.85 338 P **P** **16 05 39.4 -2.7**
YAK IAmb IAmb 16 05 50.1
comp=Z,166nm,2.2s
K22A Casper 88.01 45 IAMs_20 IAMs_20 16 37 27.1
comp=Z,17μm,21.0s
K22A Casper 88.01 45 P 16 05 41.9
baz=246
K22A S 16 16 31.4
baz=246
CD2 Chengdu 88.04 303 P **P** **16 05 45.5 +1.6**
CD2 PP **PP** **16 09 14.3 +3.6**
CD2 S **S** **16 16 22.5 -5.2**
CD2 SS **SS** **16 22 16.5 +0.2**
CD2 pmax pmax
comp=Z,50nm,1.6s
CD2 pmax pmax
comp=Z,1μm,5.9s
CD2 LR LR
comp=Z,14μm,20.6s
CD2 LR LR
comp=Z,12μm,19.0s
CD2 LR LR
comp=Z,14μm,20.3s
CM35 Chiang Mai Arr 88.11 290 P **P** **16 05 45.0 +0.6**
CM36 Chiang Mai Arr 88.11 290 P **P** **16 05 46.0 +1.6**
CM34 Chiang Mai Arr 88.16 290 P **P** **16 05 45.0 +0.4**
CM04 Chiang Mai Arr 88.18 290 P **P** **16 05 46.0 +1.3**
comp=Z,254nmcomp=Z,24nm,1.0s
CM09 Chiang Mai Arr 88.19 290 P **P** **16 05 46.0 +1.2**
comp=Z,240nmcomp=Z,21nm,0.9s
833A Chaparral WMA, 88.20 60 P 16 05 43.8
baz=251
833A S 16 16 30.7
baz=251
PHWY Pilot Hill 88.20 46 IAMs_20 IAMs_20 16 40 29.4
comp=Z,20μm,19.0s
CM01 Chiang Mai Arr 88.21 290 P **P** **16 05 47.5 +2.6**
comp=Z,217nmcomp=Z,18nm,1.1s
CM05 Chiang Mai Arr 88.22 290 P **P** **16 05 46.0 +1.1**
comp=Z,61nmcomp=Z,171nmcomp=Z,14nm,1.1s
CM02 Chiang Mai Arr 88.22 290 P **P** **16 05 47.0 +2.1**
comp=Z,200nmcomp=Z,19nm,1.0s
EGMT Eagleton 88.22 39 P 16 05 43.9
baz=244
EGMT S 16 16 32.4
baz=244
EGMT Eagleton 88.22 39 P **P** **16 05 41.9 -2.5**
EGMT IAMs_20 IAMs_20 16 37 09.8
comp=Z,20μm,22.0s
CM31 Chiang Mai Arr 88.23 290 P **P** **16 05 49.3 +4.3**
comp=Z,6μmcomp=Z,405nm,1.0s
CMAR Chiang Mai Arr 88.23 290 P **P** **16 05 44.3 -0.7**
comp=Z,2.5nm,0.8s,baz=111,slow=3.3,SNR=15
CMAR PKKPbc **PKKPbc** **16 23 27.8 -1.1**
comp=Z,0.7nm,0.8s,baz=297,slow=4.0,SNR=3.1
CMAR LR LR 16 42 48.4
comp=Z,9μm,19.7s,baz=141,slow=34
CMAR Chiang Mai Arr 88.23 290 *i* P **P** **16 05 45.0 0.0**
CMAR pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 88.23 290 P **P** **16 05 42.6 -2.4**
CM15 Chiang Mai Arr 88.25 290 P **P** **16 05 47.0 +2.0**
comp=Z,164nmcomp=Z,16nm,1.0s
CM13 Chiang Mai Arr 88.26 290 P **P** **16 05 47.0 +1.9**
comp=Z,181nmcomp=Z,16nm,1.0s
CMMT Chiang Mai 88.33 290 P **P** **16 05 46.0 +0.6**
comp=Z,1μmcomp=Z,16nm,2.3s
CM33 Chiang Mai Arr 88.34 290 P **P** **16 05 47.0 +1.5**
CHTO Chiang Mai 88.34 290 P **P** **16 05 41.6 -3.9**
CHTO pmax pmax
comp=Z,308nm,2.5s
CHTO MLR MLR
comp=Z,12μm,21.0s
CHTO Chiang Mai 88.34 290 P **P** **16 05 41.6 -3.9**
CHTO IAmb IAmb 16 05 57.6
comp=Z,308nm,2.5s
CM32 Chiang Mai Arr 88.38 290 P P 16 05 53.0 +7.3
A21K Barrow 88.42 7 P 16 05 45.6
baz=201
A21K S 16 16 31.4
baz=201
JCT Junction City 88.58 58 IAMs_20 IAMs_20 16 38 51.1
comp=Z,21μm,20.0s
JCT Junction City 88.58 58 P 16 05 45.9
baz=251
JCT S 16 16 34.1
baz=251
AMTX Amarillo 88.59 53 P 16 05 46.0
baz=250
AMTX S 16 16 31.4
baz=250
AMTX Amarillo 88.59 53 IAMs_20 IAMs_20 16 37 55.7
comp=Z,26μm,20.0s
H03S2 Juan Fernandez 88.85 125 T T 17 44 11.0
baz=250,slow=75,SNR=9.7
H03S1 Juan Fernandez 88.87 125 T T 17 44 14.1
baz=250,slow=75,SNR=9.1
H03S3 Juan Fernandez 88.87 125 T T 17 44 11.3
baz=250,slow=75,SNR=10
H03N2 Juan Fernandez 88.97 124 T T 17 44 18.6
baz=256,slow=72,SNR=5.7
H03N3 Juan Fernandez 88.98 124 T T 17 44 14.8
baz=256,slow=72,SNR=11
H03N1 Juan Fernandez 88.99 124 T T 17 44 15.3
baz=256,slow=72,SNR=11
MHMT Maesarieng 89.07 289 P P 16 05 59.0 +10
KSCO Kaye Shedlock' 89.35 49 P 16 05 49.2
baz=249
KSCO S 16 16 41.5
baz=249
ABTX Abilene, Hawle 89.41 56 P 16 05 49.9
baz=251
ABTX S 16 16 43.0
baz=251
CIT Chita 89.63 325 *e*P **P** **16 05 51.4 +0.6**
CIT pmax pmax
comp=Z,212nm,4.0s
CMBY CAMPBELL BAY 89.65 277 *i* x **P** **16 05 54.8 +3.1**
735A Kenedy 89.69 60 IAMs_20 IAMs_20 16 37 42.9
comp=Z,22μm,21.0s
LZH Lanzhou 89.74 308 *e*P **P** **16 05 53.3 +1.4**
LZH pP pwP 16 05 58.8 +0.5
LZH sP sP 16 06 02.0 +5.4
LZH pmax pmax
comp=Z,27nm,1.2s
LZH pmax pmax
comp=Z,640nm,6.0s
LZH LR LR
comp=Z,5μm,17.9s
LZH LR LR
comp=Z,5μm,15.7s
LZH LR LR
comp=Z,7μm,19.0s
LL07 Hotel Espejo d 89.80 135 IAMs_20 IAMs_20 16 36 09.9
comp=Z,27μm,22.0s
LAO LASA Array 89.83 41 IAMs_20 IAMs_20 16 38 17.8
comp=Z,29μm,21.0s
LAO LASA Array 89.83 41 P 16 05 52.4
baz=246
LAO S 16 16 47.1
baz=246
INK Inuvik 90.11 15 PP PP 16 09 25.1 -1.1
comp=Z,4.4nm,1.2s,baz=227,slow=9.4,SNR=2.7
INK LR LR 16 45 29.4
comp=Z,4μm,18.1s,baz=214,slow=35
RSSD Black Hills 90.25 44 P **P** **16 05 52.7 -1.5**
RSSD pmax pmax
comp=Z,267nm,2.0s
RSSD MLR MLR
comp=Z,20μm,18.0s
RSSD Black Hills 90.25 44 P **P** **16 05 52.7 -1.5**
RSSD IAmb IAmb 16 06 06.6
comp=Z,267nm,1.9s
RSSD Black Hills 90.25 44 IAMs_20 IAMs_20 16 43 39.4
comp=Z,20μm,18.0s
RSSD Black Hills 90.25 44 P 16 05 52.4
baz=248
RSSD S 16 16 49.6
baz=248
LL05 Los Muermos 90.33 133 IAMs_20 IAMs_20 16 36 47.1
comp=Z,24μm,21.0s
OGNE Ogallala 90.47 47 P 16 05 55.1
baz=249
OGNE S 16 16 52.8
baz=249
435B Jarrell 90.48 58 IAMs_20 IAMs_20 16 39 50.6
comp=Z,21μm,20.0s
435B Jarrell 90.48 58 P 16 05 54.5
baz=252
435B S 16 16 52.9
baz=252
LL01 San Ignacio de 90.70 135 P **P** **16 05 55.1 -1.0**
LL02 Futaleuf 90.77 135 P **P** **16 05 55.4 -1.0**
SYO Syowa Base 90.95 193 *i*P **P** **16 05 55.5 -1.2**
SYO Syowa Base 90.95 193 *i*pP pP 16 05 58.8 -1.4
WHTX Lake Whitney, 90.96 57 P 16 05 56.7
baz=252
WHTX S 16 16 55.1
baz=252
CCIG Comitan 90.97 73 IAMs_20 IAMs_20 16 36 11.7
comp=Z,22μm,22.0s
U32A Winter Ranch, 91.15 53 IAMs_20 IAMs_20 16 39 07.3
comp=Z,30μm,21.0s
LL03 Petrohue 91.18 133 IAMs_20 IAMs_20 16 37 12.7
comp=Z,21μm,21.0s
PAF Port-aux-Franc 91.20 218 IAMs_20 IAMs_20 16 37 43.0
comp=Z,21μm,22.0s
CBKS Cedar Bluff 91.39 50 P 16 05 57.7
baz=251
CBKS S 16 17 06.5
baz=251
CBKS Cedar Bluff 91.40 50 IAMs_20 IAMs_20 16 39 38.5
comp=Z,21μm,20.0s
HKT Hockley 91.67 59 *e*P **P** **16 06 03.5 +2.8**
HKT pmax pmax
comp=Z,115nm,1.9s
HKT MLR MLR
comp=Z,10μm,16.0s
HKT Hockley 91.67 59 IAMs_20 IAMs_20 16 39 40.1
comp=Z,27μm,20.0s
ULN Ulaanbaatar 91.73 320 *e*P **P** **16 06 01.3 +0.4**
ULN pmax pmax
comp=Z,29nm,1.3s
ULN MLR MLR
comp=Z,7μm,18.0s
DGMT Dagmar 91.79 40 P 16 06 01.5
baz=248
DGMT S 16 17 06.6
baz=248
DGMT Dagmar 91.80 40 P **P** **16 05 58.7 -2.2**
DGMT IAmb IAmb 16 06 14.9
comp=Z,160nm,1.3s
OK032 Salt Plains WL 91.89 52 IAMs_20 IAMs_20 16 40 00.9
comp=Z,29μm,20.0s
OKCFA Oklahoma City 92.03 54 IAMs_20 IAMs_20 16 40 21.0
comp=Z,27μm,20.0s
BOD Bodaibo 92.04 330 *e*P **P** **16 05 59.7 -2.1**
BOD pmax pmax
comp=Z,31nm,2.2s
SONM Songino Array 92.13 319 P **P** **16 06 01.5 -1.2**
comp=Z,0.8nm,0.7s,baz=116,slow=3.4,SNR=5.0
SONM PP **PP** **16 09 43.5 +0.5**
comp=Z,1.7nm,1.0s,baz=126,slow=7.5,SNR=3.7
SONM LR LR 16 42 56.5
comp=Z,10μm,22.0s,baz=109,slow=33
OK025 Westminster Rd 92.17 54 IAMs_20 IAMs_20 16 40 08.7
comp=Z,30μm,20.0s
DGPR DIGLIPUR 92.28 283 *e*P **P** **16 06 06.3 +2.4**
SNAA Sanae 92.45 179 P **P** **16 06 02.4 -1.4**
SNAA Sanae 92.45 179 pP **P** **16 06 03.8 +0.1**
SNAA Sanae 92.45 179 *i*P **P** **16 06 02.1 -1.6**
SNAA pmax pmax
comp=Z,136nm,1.5s
SNAA MLR MLR
comp=Z,8μm,17.0s
SNAA Sanae 92.45 179 P **P** **16 06 02.3 -1.5**
SNAA IAMs_20 IAMs_20 16 46 56.0
comp=Z,24μm,18.0s
KS21 Milan North St 92.45 52 IAMs_20 IAMs_20 16 41 06.8
comp=Z,18μm,20.0s
KS20 Mayfield South 92.52 52 IAMs_20 IAMs_20 16 42 23.6
comp=Z,21μm,19.0s
VNA3 Neumayer Olymp 92.59 176 P **P** **16 06 03.2 -1.1**
PLCA Paso Flores 92.63 134 P **P** **16 06 05.0 -0.2**
comp=Z,8.4nm,0.8s,baz=221,slow=4.7,SNR=9.4
PLCA LR LR 16 38 20.9
comp=Z,14μm,21.8s,baz=223,slow=30
YKA Yellowknife Ar 92.66 25 P **P** **16 06 03.8 -0.8**
comp=Z,2.2nm,1.0s,baz=237,slow=4.1,SNR=19
YKA PP **PP** **16 09 46.0 -0.6**
comp=Z,2.3nm,1.3s,baz=209,slow=5.6,SNR=3.9
YKA PKKP **PKKPdf** **16 23 15.4 -2.4**
comp=Z,0.1nm,0.5s,baz=47,slow=2.6,SNR=2.2
YKA LR LR 16 43 48.3
comp=Z,39μm,18.5s,baz=0.0,slow=33
SNET Serv Nac Est T 92.96 77 IAMs_20 IAMs_20 16 38 34.7
comp=Z,14μm,20.0s
VNA2 Neumayer--Watz 93.03 177 pP pP 16 06 09.0 -0.9
VNA2 Neumayer--Watz 93.03 177 P **P** **16 06 05.6 -0.8**
NATX Nacogdoches 93.16 58 IAMs_20 IAMs_20 16 39 23.5
comp=Z,28μm,22.0s
NATX Nacogdoches 93.16 58 P 16 06 02.5
baz=253
NATX S 16 17 20.1
baz=253
PETF Flores 93.24 73 IAMs_20 IAMs_20 16 37 46.7
comp=Z,17μm,22.0s
VNA1 Neumayer--Stat 93.25 177 P **P** **16 06 07.3 -0.1**
C36M Paulatuk 93.33 17 P 16 06 06.0
baz=232
C36M S 16 17 14.0
baz=232
E28A Huff 93.33 42 IAMs_20 IAMs_20 16 40 14.5
comp=Z,17μm,22.0s
C36M Paulatuk 93.33 17 P **P** **16 06 06.3 -1.2**
K31A O'Neill 93.34 47 P **P** **16 06 07.5 -0.8**
K31A IAmb IAmb 16 06 20.7
comp=Z,157nm,1.4s
K31A IAMs_20 IAMs_20 16 43 35.5
comp=Z,14μm,19.0s
BGNE Belgrade 93.39 48 P 16 06 07.2
baz=252
X37A Clayton 93.41 55 IAMs_20 IAMs_20 16 40 17.7
comp=Z,28μm,21.0s
TUL1 Leonard 93.47 54 P 16 06 08.6
baz=253
LKP Lekhapani 93.53 297 *e*P **P** **16 06 12.2 +2.8**
LKP IAmb IAmb 16 06 19.8
comp=Z,51nm,1.2s
BI02 San Fabin de 93.72 130 IAMs_20 IAMs_20 16 40 14.2
comp=Z,13μm,20.0s
SUSD Miller 93.78 45 P 16 06 08.7
baz=252
SUSD S 16 17 19.6
baz=252
SUSD Miller 93.79 45 IAMs_20 IAMs_20 16 40 43.9
comp=Z,22μm,22.0s
KSU1 Kansas State U 93.80 51 P 16 06 10.1
baz=253
KSU1 S 16 17 21.9
baz=253
GTA Gaotai 93.83 310 *e*P **P** **16 06 12.8 +2.1**
GTA pP pwP 16 06 17.4 +0.3
GTA sP sP 16 06 19.9 +4.5
GTA SKS **SKSac** **16 16 45.4 -0.1**
GTA S **S** **16 17 17.8 -2.7**
GTA SS **SS** **16 23 41.3 +1.5**
GTA pmax pmax
comp=Z,500nm,10.8s
GTA LR LR
comp=Z,5μm,24.3s
GTA LR LR
comp=Z,11μm,24.3s
GTA LR LR
comp=Z,12μm,24.7s
ML02 Panimavida 93.96 129 IAMs_20 IAMs_20 16 38 48.7
comp=Z,18μm,21.0s
441A DeRidder 94.08 59 IAMs_20 IAMs_20 16 41 16.2
comp=Z,16μm,20.0s
TIXI Tiksi 94.36 345 P **P** **16 06 11.6 -0.6**
comp=Z,0.5nm,0.3s,baz=122,slow=8.6,SNR=6.4
TIXI PP **PP** **16 09 58.5 -1.2**
comp=Z,7.5nm,1.2s,baz=118,slow=9.1,SNR=5.8
TIXI Tiksi 94.36 345 *e*P **P** **16 06 12.1 -0.1**
TIXI pmax pmax
comp=Z,94nm,2.5s
TIXI Tiksi 94.36 345 IAMs_20 IAMs_20 16 44 40.8
comp=Z,22μm,20.0s
MOKO MOKOCHONG 94.40 296 *i* x **P** **16 06 13.2 -0.5**
MOKO IAmb IAmb 16 06 25.3
comp=Z,469nm,2.4s
MDND Maddock 94.45 42 P 16 06 12.7
baz=251
MDND S 16 17 27.6
baz=251
MDND Maddock 94.46 42 IAMs_20 IAMs_20 16 41 05.1
comp=Z,21μm,22.0s
KOHI KOHIMA 94.59 295 *e*P **P** **16 06 15.1 +0.5**
KOHI IAmb IAmb 16 06 25.6
comp=Z,84nm,1.8s
SAIH SAIHA 94.72 292 *e*P **P** **16 06 15.1 -0.1**
SAIH IAmb IAmb 16 06 24.9
comp=Z,18nm,1.1s
JORH JORHAT 94.74 296 *e*P P 16 06 19.9 +4.9
JORH IAmb IAmb 16 06 29.7
comp=Z,150nm,0.4s
BO01 Tunca 94.74 128 IAMs_20 IAMs_20 16 38 51.5
comp=Z,26μm,22.0s
BO02 Sierra Bellavi 94.82 128 IAMs_20 IAMs_20 16 39 15.5
comp=Z,27μm,21.0s
MIAR Mount Ida 94.82 56 IAMs_20 IAMs_20 16 41 02.1
comp=Z,29μm,21.0s
MIAR Mount Ida 94.82 56 P 16 06 15.1
baz=254
MIAR S 16 17 31.0
baz=254
L34A Svendsen Farm, 94.82 48 IAMs_20 IAMs_20 16 42 48.8
comp=Z,25μm,20.0s
MT01 Popeta 94.82 127 P **P** **16 06 14.0 -1.4**
MT01 IAmb IAmb 16 06 24.5
comp=Z,91nm,1.4s
MT01 IAMs_20 IAMs_20 16 38 53.6
comp=Z,14μm,22.0s
W39A Magazine 94.84 55 P **P** **16 06 10.8 -4.4**
W39A IAMs_20 IAMs_20 16 41 55.4
comp=Z,21μm,20.0s
W39A Magazine 94.84 55 P 16 06 14.8
baz=254
W39A S 16 17 32.2
baz=254
ZAK Zakamensk 94.93 321 *e*P P 16 06 23.4 +7.9
ZAK pmax pmax
comp=Z,9.0nm,1.6s
IRK Irkutsk 94.97 323 *e*P P 16 06 20.5 +5.0
IRK *e* 16 10 05.4
IRK pmax pmax
comp=Z,38nm,2.9s
HHAR Hobbs 95.02 54 IAMs_20 IAMs_20 16 40 53.9
comp=Z,22μm,21.0s
MT09 Talagante 95.06 127 IAMs_20 IAMs_20 16 38 59.9
comp=Z,15μm,22.0s
Z41A Richland Creek 95.09 57 P 16 06 15.0
baz=254
MT02 Curacav 95.14 127 IAMs_20 IAMs_20 16 39 52.2
comp=Z,14μm,21.0s
TLY Talaya 95.14 322 PP **PP** **16 10 05.0 -1.3**
comp=Z,0.8nm,0.2s,baz=112,slow=5.3,SNR=4.3
TLY Talaya 95.14 322 *e*P P 16 06 21.7 +5.4
TLY pmax pmax
comp=Z,31nm,2.5s
TLY Talaya 95.14 322 IAMs_20 IAMs_20 16 44 51.0
comp=Z,13μm,20.0s
ECSD EROS Data Cent 95.17 46 P 16 06 15.0
baz=253
ECSD S 16 17 33.1
baz=253
ECSD EROS Data Cent 95.17 46 IAMs_20 IAMs_20 16 41 05.8
comp=Z,26μm,22.0s
FFC Flin Flon 95.35 35 IAMs_20 IAMs_20 16 41 51.5
comp=Z,24μm,21.0s
X40A Basin Creek Fa 95.39 56 IAMs_20 IAMs_20 16 41 39.3
comp=Z,23μm,21.0s
X40A Basin Creek Fa 95.39 56 P 16 06 16.0
baz=254
X40A S 16 17 36.3
baz=254
MT05 Renca 95.40 127 IAMs_20 IAMs_20 16 40 09.0
comp=Z,13μm,20.0s
SILR SILCHAR 95.48 294 *e*P **P** **16 06 21.2 +2.7**
PEL Peldehue 95.54 127 IAMs_20 IAMs_20 16 40 13.8
comp=Z,13μm,21.0s
U40A Yellville 95.88 54 IAMs_20 IAMs_20 16 43 58.8
comp=Z,22μm,20.0s
U40A Yellville 95.88 54 P 16 06 19.9
baz=255
U40A S 16 17 38.5
baz=255
D32A Dogwood Acres, 95.90 43 IAMs_20 IAMs_20 16 44 59.6
comp=Z,21μm,19.0s
BOAB BOAOC BROADBAN 95.99 79 IAMs_20 IAMs_20 16 39 22.1
comp=Z,13μm,20.0s
W41B Gary Mavity, V 96.04 55 P 16 06 18.9
baz=255
143A Socs Landing, 96.08 58 IAMs_20 IAMs_20 16 41 15.6
comp=Z,29μm,22.0s
JTS Las Juntas de 96.10 81 IAMs_20 IAMs_20 16 39 50.3
comp=Z,13μm,20.0s
545A Edgard 96.14 61 IAMs_20 IAMs_20 16 46 33.9
comp=Z,24μm,20.0s
P38A Dawn 96.23 51 P P 16 06 16.5 -5.1
P38A IAmb IAmb 16 06 33.7
comp=Z,130nm,1.8s
P38A IAMs_20 IAMs_20 16 44 57.7
comp=Z,25μm,19.0s
FCAR Ozark Folk Cen 96.33 55 IAMs_20 IAMs_20 16 41 37.8
comp=Z,16μm,22.0s
CO03 El Pedregal 96.43 124 IAMs_20 IAMs_20 16 39 31.3
comp=Z,20μm,21.0s
SHL Shillong 96.49 295 *e*P **P** **16 06 26.2 +3.0**
SHL IAmb IAmb 16 06 34.4
comp=Z,57nm,1.4s
SHL *i* x x 16 09 40.1
GO04 Tololo Observa 96.60 124 IAMs_20 IAMs_20 16 39 34.0
comp=Z,26μm,22.0s
AGT Agartala 96.62 293 IAmb IAmb 16 06 31.8
comp=Z,65nm,0.7s
VBMS Vicksburg 96.67 59 P 16 06 20.8
baz=256
VBMS Vicksburg 96.67 59 IAMs_20 IAMs_20 16 43 46.6
comp=Z,20μm,21.0s
N38A Joes South For 96.76 50 IAMs_20 IAMs_20 16 42 24.5
comp=Z,30μm,22.0s
GUWA GUWAHATI 96.81 295 *i* PP **PP** **16 10 18.9 -1.0**
X43A Marvell 96.96 56 P 16 06 22.1
baz=256
AGMN Agassiz Nation 96.98 42 IAMs_20 IAMs_20 16 43 16.0
comp=Z,19μm,21.0s
RIOS Rincon, Osa 97.06 83 IAMs_20 IAMs_20 16 42 07.9
comp=Z,12μm,19.0s
SCIA State Center 97.07 49 P 16 06 22.9
baz=255
LCO Las Campanas 97.12 123 IAMs_20 IAMs_20 16 40 18.9
comp=Z,25μm,21.0s
AC04 Llanos de Chal 97.13 122 IAMs_20 IAMs_20 16 40 18.1
comp=Z,14μm,21.0s
LCAR Lake Charles 97.13 55 IAMs_20 IAMs_20 16 42 01.1
comp=Z,21μm,22.0s
P40A Paris 97.32 51 IAMs_20 IAMs_20 16 45 12.4
comp=Z,21μm,20.0s
ULM Lac du Bonnet 97.52 40 P **P** **16 06 26.2 -0.8**
comp=Z,1.8nm,0.8s,baz=246,slow=3.9,SNR=2.3
ULM PP **PP** **16 10 22.9 -1.7**
comp=Z,1.8nm,0.8s,baz=274,slow=8.8,SNR=3.4
ULM LR LR 16 43 25.9
comp=Z,29μm,21.9s,baz=254,slow=31
ULM Lac du Bonnet 97.52 40 P **P** **16 06 25.9 -1.2**
ULM IAMs_20 IAMs_20 16 43 56.7
comp=Z,27μm,20.0s
AC05 El Transito 97.54 123 IAMs_20 IAMs_20 16 40 20.9
comp=Z,25μm,21.0s
CCM Cathedral Cave 97.56 53 P 16 06 24.1
baz=256
K38A Parkersburg 97.58 48 IAMs_20 IAMs_20 16 43 45.8
comp=Z,26μm,21.0s
F36A Milaca 97.87 45 IAMs_20 IAMs_20 16 46 41.0
comp=Z,24μm,19.0s
146A Union 97.97 58 IAMs_20 IAMs_20 16 45 06.0
comp=Z,16μm,20.0s
GNAR Gosnell 98.00 55 IAMs_20 IAMs_20 16 42 26.1
comp=Z,26μm,22.0s
GO03 Copiap 98.05 122 IAMs_20 IAMs_20 16 41 33.5
comp=Z,13μm,20.0s
OXF Oxford 98.14 57 IAMs_20 IAMs_20 16 44 42.0

	comp=Z,25µm,20.0s								
PEBM	**Pemiscott Bayo**	**98.16**	**55**	IAMs_20	IAMs_20	16 42 54.3			
	comp=Z,22µm,21.0s								
SPMN	**Marine on St.**	**98.20**	**45**	IAMs_20	IAMs_20	16 44 09.9			
	comp=Z,24µm,21.0s								
PVMO	**Portageville**	**98.36**	**55**	IAMs_20	IAMs_20	16 42 49.5			
	comp=Z,25µm,22.0s								
B35A	**Bob, Littlefor**	**98.37**	**42**	IAMs_20	IAMs_20	16 47 15.8			
	comp=Z,22µm,19.0s								
PARMO	**Parma**	**98.38**	**54**	IAMs_20	IAMs_20	16 43 22.9			
	comp=Z,21µm,22.0s								
PENMO	**Penman**	**98.42**	**55**	IAMs_20	IAMs_20	16 42 39.2			
	comp=Z,23µm,22.0s								
LNXT	**Lenox**	**98.45**	**55**	IAMs_20	IAMs_20	16 42 51.0			
	comp=Z,27µm,22.0s								
HALT	**Halls**	**98.52**	**55**	IAMs_20	IAMs_20	16 44 55.0			
	comp=Z,23µm,20.0s								
HENM	**Henderson Moun**	**98.61**	**54**	IAMs_20	IAMs_20	16 43 30.1			
	comp=Z,22µm,22.0s								
GLAT	**Glass**	**98.65**	**55**	IAMs_20	IAMs_20	16 42 57.2			
	comp=Z,27µm,22.0s								
HICK	**Hickman**	**98.75**	**55**	IAMs_20	IAMs_20	16 42 50.1			
	comp=Z,24µm,22.0s								
Z47A	**Carrollton**	**98.91**	**58**	IAMs_20	IAMs_20	16 43 16.8			
	comp=Z,25µm,22.0s								
P43A	**Skaggs, Pawnee**	**99.24**	**51**	IAMs_20	IAMs_20	16 45 09.4			
	comp=Z,22µm,20.0s								
AC02	**Maricunga**	**99.25**	**121**	IAMs_20	IAMs_20	16 41 08.3			
	comp=Z,13µm,21.0s								
PLAL	**Pickwick Lake**	**99.31**	**56**	IAMs_20	IAMs_20	16 45 49.1			
	comp=Z,24µm,20.0s								
T45A	**Paducah**	**99.32**	**54**	IAMs_20	IAMs_20	16 44 12.9			
	comp=Z,20µm,21.0s								
PB10	**IPOC Station P**	**99.33**	**118**	IAMs_20	IAMs_20	16 40 41.6			
	comp=Z,21µm,22.0s								
E38A	**The Farm, Brul**	**99.38**	**44**	IAMs_20	IAMs_20	16 47 48.8			
	comp=Z,13µm,19.0s								
I40A	**Norwalk**	**99.40**	**47**	IAMs_20	IAMs_20	16 47 43.0			
	comp=Z,15µm,19.0s								
JFWS	**Jewell Farm**	**99.44**	**48**	P		16 06 36.4			
	baz=257								
GO02	**Mina Guanaco**	**99.52**	**120**	IAMs_20	IAMs_20	16 41 57.5			
	comp=Z,13µm,20.0s								
HDIL	**Hopedale**	**99.61**	**51**	P		16 06 36.5			
	baz=257								
L42A	**Oliver, Polo**	**99.66**	**49**	IAMs_20	IAMs_20	16 45 56.1			
	comp=Z,26µm,20.0s								
EYMN	**Ely**	**99.73**	**43**	IAMs_20	IAMs_20	16 47 40.7			
	comp=Z,23µm,19.0s								
EYMN	**Ely**	**99.73**	**43**	P		16 06 33.9			
	baz=257								
LRAL	**Lakeview Retre**	**99.75**	**58**	IAMs_20	IAMs_20	16 44 08.1			
	comp=Z,19µm,22.0s								
GTK	**Tadong**	**99.76**	**296**	*e*P	**Pdif**	**16 06 41.7**	**+3.8**		
GTK				IAmb	IAmb	16 06 48.5			
	comp=Z,13nm,1.0s								
WVT	**Waverly**	**99.76**	**55**	IAMs_20	IAMs_20	16 43 29.8			
	comp=Z,26µm,22.0s								
X48A	**Hartselle**	**100.02**	**57**	IAMs_20	IAMs_20	16 46 37.1			
	comp=Z,21µm,20.0s								
PB04	**IPOC Station P**	**100.11**	**117**	IAMs_20	IAMs_20	16 40 27.4			
	comp=Z,15µm,22.0s								
250A	**Grady**	**100.12**	**60**	IAMs_20	IAMs_20	16 46 30.1			
	comp=Z,14µm,20.0s								
O44A	**Mansfield**	**100.14**	**51**	IAMs_20	IAMs_20	16 46 44.2			
	comp=Z,19µm,20.0s								
USIN	**University of**	**100.29**	**53**	IAMs_20	IAMs_20	16 45 48.4			
	comp=Z,18µm,20.0s								
PB15	**IPOC Station P**	**100.36**	**118**	IAMs_20	IAMs_20	16 40 47.0			
	comp=Z,22µm,22.0s								
PB06	**IPOC Station P**	**100.47**	**117**	IAMs_20	IAMs_20	16 40 48.8			
	comp=Z,18µm,22.0s								
T47A	**Sharon Grove**	**100.52**	**55**	IAMs_20	IAMs_20	16 45 08.7			
	comp=Z,22µm,20.0s								
I42A	**Draeger Farm,**	**100.61**	**47**	IAMs_20	IAMs_20	16 46 02.8			
	comp=Z,16µm,20.0s								
M44A	**Midewin, Midew**	**100.72**	**50**	IAMs_20	IAMs_20	16 51 04.2			
	comp=Z,18µm,18.0s								
COWI	**Conover**	**100.91**	**45**	IAMs_20	IAMs_20	16 48 35.3			
	comp=Z,17µm,19.0s								
CLTN	**Cedars of Leba**	**100.94**	**56**	IAMs_20	IAMs_20	16 46 29.1			
	comp=Z,26µm,20.0s								
HQIL	**Hanson Quary C**	**100.94**	**50**	IAMs_20	IAMs_20	16 46 25.1			
	comp=Z,17µm,21.0s								
L44A	**Lake County Fo**	**100.97**	**49**	IAMs_20	IAMs_20	16 44 55.9			
	comp=Z,27µm,22.0s								
LVC	**Limon Verde**	**101.07**	**117**	IAMs_20	IAMs_20	16 41 08.7			
	comp=Z,21µm,22.0s								
SWET	**Sewanee**	**101.08**	**56**	IAMs_20	IAMs_20	16 45 04.9			
	comp=Z,24µm,20.0s								
PB09	**IPOC Station P**	**101.09**	**117**	IAMs_20	IAMs_20	16 40 56.4			
	comp=Z,13µm,20.0s								
FPAL	**Fort Paine**	**101.20**	**57**	IAMs_20	IAMs_20	16 46 37.2			
	comp=Z,21µm,20.0s								
SFIN	**Lafayette**	**101.22**	**51**	P		16 06 43.6			
	baz=259								
SFIN	**Lafayette**	**101.22**	**51**	IAMs_20	IAMs_20	16 48 02.6			
	comp=Z,22µm,19.0s								
Z51A	**Franklin**	**101.31**	**58**	IAMs_20	IAMs_20	16 45 58.3			
	comp=Z,24µm,20.0s								
AP01	**Chacalluta**	**101.40**	**113**	IAMs_20	IAMs_20	16 41 06.6			
	comp=Z,23µm,22.0s								
D41A	**Chassel**	**101.48**	**44**	IAMs_20	IAMs_20	16 47 58.4			
	comp=Z,24µm,19.0s								
152A	**Waverly Hall**	**101.55**	**59**	IAMs_20	IAMs_20	16 46 26.8			
	comp=Z,18µm,21.0s								
MNMC	**Minye Minye**	**101.78**	**114**	IAMs_20	IAMs_20	16 41 30.7			
	comp=Z,16µm,21.0s								
X51A	**Calhoun**	**101.81**	**57**	IAMs_20	IAMs_20	16 45 28.5			
	comp=Z,20µm,21.0s								
L46A	**Eue Claire**	**102.12**	**50**	IAMs_20	IAMs_20	16 47 29.4			
	comp=Z,15µm,20.0s								
PB16	**IPOC Station P**	**102.15**	**113**	IAMs_20	IAMs_20	16 41 41.5			
	comp=Z,14µm,20.0s								
PCON	**Cinco Dias**	**102.21**	**91**	*e*P	**PP**	**16 11 02.0**	**+0.1**		
TIGA	**Tifton**	**102.25**	**61**	IAMs_20	IAMs_20	16 47 53.5			
	comp=Z,12µm,20.0s								
R49A	**Shelbyville**	**102.28**	**54**	IAMs_20	IAMs_20	16 45 10.2			
	comp=Z,18µm,22.0s								
PALK	**Pallekele**	**102.37**	**274**	IAMs_20	IAMs_20	16 54 22.7			
	comp=Z,13µm,20.0s								
E43A	**Lone Tree Farm**	**102.42**	**45**	IAMs_20	IAMs_20	16 51 58.3			
	comp=Z,18µm,18.0s								
YOTC	**Yotoco, Valle**	**102.71**	**89**	*e*P	**PP**	**16 11 00.0**	**-5.0**		
GOGA	**Godfrey**	**102.73**	**59**	IAMs_20	IAMs_20	16 46 10.9			
	comp=Z,26µm,21.0s								
GOGA	**Godfrey**	**102.73**	**59**	P		16 06 46.0			
	baz=259								
HOPE	**Hope Point**	**102.79**	**158**	IAMs_20	IAMs_20	16 44 27.5			
	comp=Z,14µm,22.0s								
P49A	**Miami Univ. Ec**	**102.85**	**52**	P		16 06 48.5			
	baz=260								
154A	**Montrose**	**102.87**	**60**	IAMs_20	IAMs_20	16 47 17.9			
	comp=Z,19µm,21.0s								
R50A	**Paris**	**102.93**	**54**	IAMs_20	IAMs_20	16 45 19.4			
	comp=Z,20µm,22.0s								
GARC	**Garzon, Huila**	**103.04**	**91**	*e*P	**PP**	**16 11 07.9**	**+0.2**		
PTLC	**Puerto Leguiza**	**103.16**	**94**	*e*P	**PP**	**16 11 10.5**	**+2.2**		
BETC	**Betania**	**103.23**	**91**	*e*P	**PKiKP**	**16 11 14.1**	**+0.9**		
255A	**Hazlehurst**	**103.27**	**60**	IAMs_20	IAMs_20	16 47 39.6			
	comp=Z,20µm,21.0s								
BG3	**Lake Jocassee**	**103.45**	**57**	IAMs_20	IAMs_20	16 46 29.8			
	comp=Z,22µm,22.0s								
L48A	**N Adams**	**103.48**	**50**	IAMs_20	IAMs_20	16 50 21.3			
	comp=Z,22µm,19.0s								
N49A	**Columbus Grove**	**103.50**	**51**	IAMs_20	IAMs_20	16 48 24.9			
	comp=Z,17µm,20.0s								
CBOC	**Ciudad Bolivar**	**103.52**	**88**	*e*P	**PKiKP**	**16 11 12.4**	**-1.4**		
WMQ	**Urumqi**	**103.68**	**312**	IAMs_20	IAMs_20	16 51 30.2			
	comp=Z,15µm,21.0s								
ORTC	**Ortega, Tolima**	**103.74**	**90**	*e*P	**PKiKP**	**16 11 12.3**	**-1.8**		
Q51A	**Peebles**	**103.82**	**53**	IAMs_20	IAMs_20	16 46 50.8			
	comp=Z,25µm,22.0s								
HODGE	**Hodges**	**103.86**	**58**	IAMs_20	IAMs_20	16 47 32.9			
	comp=Z,21µm,20.0s								
AAM	**Ann Arbor**	**104.11**	**50**	IAMs_20	IAMs_20	16 52 57.8			
	comp=Z,20µm,18.0s								
LPAZ	**La Paz**	**104.12**	**112**	Pdiff	**Pdif**	**16 06 58.2**	**+0.1**		
	comp=Z,0.4nm,0.4s,baz=338,slow=3.4,SNR=1.6								
LPAZ				PKiKP	**PKiKP**	**16 11 14.2**	**-1.2**		
	comp=Z,0.8nm,0.6s,baz=254,slow=7.7,SNR=2.0								
LPA	**La Plata**	**104.16**	**133**	PKiKP	**PKiKP**	**16 11 09.2**	**-5.0**		
LPA				PPP	PPP	16 13 26.6			
LPA				SKIKP		16 14 46.6			
LPA				SKS	**SKSac**	**16 17 36.1**	**-1.3**		
LPA				SKIKS		16 18 19.6			
LPA				SDIFF	**Sdif**	**16 18 51.9**	**+3.7**		
LPA				PS	PS	16 20 20.1	-6.7		
LPA				PSP	PSP	16 21 21.8			
LPA				SS	**SS**	**16 26 03.4**	**+0.2**		
LPA				SSS	SSS	16 30 18.8			
LPA				PPP	PPP	16 30 48.1			
060A	**Indiantown**	**104.17**	**66**	IAMs_20	IAMs_20	16 46 28.1			
	comp=Z,11µm,21.0s								
PAULI	**Pauline**	**104.33**	**58**	IAMs_20	IAMs_20	16 47 18.1			
	comp=Z,25µm,21.0s								
UREC	**San Jos de Ur**	**104.46**	**86**	*e*P	**PKiKP**	**16 11 17.5**	**+2.2**		
257A	**Skidaway Islan**	**104.49**	**61**	IAMs_20	IAMs_20	16 48 24.9			
	comp=Z,17µm,20.0s								
NORC	**Norcasia**	**104.54**	**88**	*e*P	**PKiKP**	**16 11 13.8**	**-1.7**		
MOTC	**Monteria, Cord**	**104.58**	**85**	*e*P	**PKiKP**	**16 11 13.8**	**-1.7**		
MACC	**Macarena, Meta**	**104.61**	**92**	*e*P	PKiKP	16 11 02.0	-14		
Q52A	**Bidwell**	**104.64**	**53**	IAMs_20	IAMs_20	16 47 26.5			
	comp=Z,24µm,22.0s								
JSC	**Jenkinsville**	**104.69**	**58**	IAMs_20	IAMs_20	16 49 43.7			
	comp=Z,12µm,19.0s								
P52A	**Corning**	**104.84**	**53**	P		16 06 59.0			
	baz=262								
K50A	**Casco**	**104.93**	**49**	IAMs_20	IAMs_20	16 47 18.6			
	comp=Z,16µm,21.0s								
PTBC	**PUERTO BERRIO**	**105.19**	**87**	*e*P	**PP**	**16 11 24.3**	**+0.8**		
SPBC	**San Pablo de B**	**105.33**	**88**	*e*P	**PP**	**16 11 23.5**	**-1.1**		
Y57A	**Sumter**	**105.36**	**59**	IAMs_20	IAMs_20	16 50 42.5			
	comp=Z,23µm,20.0s								
NHSC	**New Hope**	**105.39**	**59**	IAMs_20	IAMs_20	16 48 37.5			
	comp=Z,21µm,21.0s								
BIRD	**Birdtown, Kers**	**105.40**	**58**	IAMs_20	IAMs_20	16 47 29.5			
	comp=Z,23µm,22.0s								
M52A	**Chesterland**	**105.69**	**51**	IAMs_20	IAMs_20	16 51 14.1			
	comp=Z,25µm,20.0s								
Q54A	**Coxs Mills**	**105.74**	**53**	IAMs_20	IAMs_20	16 48 22.8			
	comp=Z,20µm,21.0s								
Y58A	**Scranton**	**105.93**	**59**	IAMs_20	IAMs_20	16 49 45.8			
	comp=Z,23µm,20.0s								
DGAR	**Diego Garcia**	**106.08**	**257**	IAMs_20	IAMs_20	16 50 06.8			
	comp=Z,16µm,22.0s								
SMLC	**San Martn de**	**106.12**	**85**	*e*P	**PP**	**16 11 31.7**	**+1.4**		
ZSN	**Zaisan**	**106.13**	**315**	*e*PP	**PP**	**16 11 27.6**	**-2.1**		
	baz=316								
M53A	**Wi Miller and**	**106.19**	**51**	IAMs_20	IAMs_20	16 48 17.2			
	comp=Z,19µm,22.0s								
X58A	**Rowland**	**106.30**	**58**	IAMs_20	IAMs_20	16 48 06.4			
	comp=Z,20µm,22.0s								
NRIK	**Noril'sk**	**106.30**	**338**	PKiKP	**PKiKP**	**16 11 15.2**	**-1.9**		
	comp=Z,0.5nm,0.3s,baz=26,slow=4.5,SNR=1.7								
NRIK				PP	**PP**	**16 11 29.5**	**-0.7**		
	comp=Z,1.0nm,0.5s,baz=75,slow=4.8,SNR=3.8								
NRIK	**Noril'sk**	**106.30**	**338**	IAMs_20	IAMs_20	16 53 24.5			
	comp=Z,16µm,20.0s								
RUSC	**La Rusia**	**106.34**	**88**	*e*P	**PP**	**16 11 32.8**	**+0.3**		
SMRC	**Santa Marta, M**	**106.53**	**83**	*e*P	**PP**	**16 11 26.8**	**-6.6**		
MCWV	**Mont Chateau**	**106.59**	**53**	IAMs_20	IAMs_20	16 49 27.2			
	comp=Z,14µm,20.0s								
Y59A	**Loris**	**106.60**	**59**	IAMs_20	IAMs_20	16 50 15.4			
	comp=Z,20µm,20.0s								
ALLY	**Alegheny Colle**	**106.61**	**51**	IAMs_20	IAMs_20	16 48 52.3			
	comp=Z,21µm,22.0s								
T57A	**Hurt**	**106.71**	**56**	IAMs_20	IAMs_20	16 48 21.8			
	comp=Z,24µm,21.0s								
ZAA0	**Zalesovo Array**	**106.76**	**322**	IAMs_20	IAMs_20	16 54 43.1			
	comp=Z,11µm,20.0s								
ZALV	**Zalesovo Beam**	**106.76**	**322**	PKiKP	**PKiKP**	**16 11 16.4**	**-1.9**		
	comp=Z,0.4nm,0.4s,baz=112,slow=1.6,SNR=2.9								
ZALV				PP	**PP**	**16 11 32.6**	**-1.4**		
	comp=Z,1.7nm,0.9s,baz=96,slow=4.5,SNR=5.4								
HYB	**Hyderabad**	**106.76**	**284**	IAmb	IAmb	16 11 47.0			
	comp=Z,113nm,2.4s								
ERPA	**Erie**	**106.78**	**50**	IAMs_20	IAMs_20	16 53 39.7			
	comp=Z,19µm,18.0s								
M54A	**Oil Creek Stat**	**106.95**	**51**	IAMs_20	IAMs_20	16 48 40.4			
	comp=Z,23µm,22.0s								
Q56A	**Snyder Ridge,**	**107.02**	**53**	IAMs_20	IAMs_20	16 49 12.7			
	comp=Z,24µm,21.0s								
Y60A	**Bolivia**	**107.14**	**59**	IAMs_20	IAMs_20	16 50 50.8			
	comp=Z,20µm,20.0s								
SADO	**Sadowa**	**107.67**	**48**	IAMs_20	IAMs_20	16 50 54.7			
	comp=Z,17µm,20.0s								
MKAR	**Makanchi Array**	**107.82**	**315**	Pdiff	**Pdif**	**16 07 07.3**	**-5.8**		
	comp=Z,0.2nm,0.7s,baz=90,slow=3.9,SNR=2.3								
MKAR				PKiKP	**PKiKP**	**16 11 18.4**	**-2.2**		
	comp=Z,1.4nm,0.9s,baz=96,slow=1.4,SNR=8.0								
MKAR				PP	**PP**	**16 11 41.4**	**-0.7**		
	comp=Z,1.1nm,0.9s,baz=106,slow=7.7,SNR=2.4								
MKAR				PKKPbc	**PKKPbc**	**16 22 33.5**	**-1.8**		
	comp=Z,1.0nm,0.9s,baz=263,slow=5.3,SNR=6.8								
WVNY	**West Valley, N**	**107.83**	**50**	IAMs_20	IAMs_20	16 52 10.6			
	comp=Z,14µm,20.0s								
P57A	**Homestead Farm**	**107.98**	**53**	IAMs_20	IAMs_20	16 50 32.0			
	comp=Z,21µm,20.0s								
MEDO	**Medina**	**108.02**	**49**	IAMs_20	IAMs_20	16 49 11.2			
	comp=Z,22µm,22.0s								
MMNY	**Mt. Morris Dam**	**108.38**	**50**	IAMs_20	IAMs_20	16 54 38.9			
	comp=Z,14µm,18.0s								
J55A	**Hilton**	**108.49**	**49**	IAMs_20	IAMs_20	16 49 24.7			
	comp=Z,23µm,22.0s								
L56A	**Greenwood**	**108.58**	**50**	IAMs_20	IAMs_20	16 50 45.4			
	comp=Z,19µm,21.0s								
BHPL	**Bhopal**	**108.89**	**289**	*i* x	**PP**	**16 11 53.7**	**+3.1**		
PLVO	**Plevna**	**109.15**	**47**	IAMs_20	IAMs_20	16 50 01.0			
	comp=Z,22µm,21.0s								
J56A	**Wolcott**	**109.19**	**49**	IAMs_20	IAMs_20	16 49 56.2			
	comp=Z,18µm,22.0s								
SEM	**Semipalatinsk**	**109.38**	**318**	*e*PP	**PP**	**16 11 50.6**	**-3.0**		
	baz=318								
SEM				*e*SP	SP	16 21 17.1	-1.6		
	baz=318								
SEM				LR	LR	16 53 28.0			
	comp=Z,5µm,18.3s,baz=318								
SHLS	**Shalkode**	**109.56**	**311**	*e*PKiKP	**PKiKP**	**16 11 21.7**	**-2.4**		
	baz=311								
SHLS				*e*PP	**PP**	**16 11 49.4**	**-5.6**		
	baz=311								
BINY	**Binghamton**	**109.75**	**50**	IAMs_20	IAMs_20	16 50 09.4			
	comp=Z,24µm,22.0s								
J57A	**Williamstown**	**109.82**	**49**	IAMs_20	IAMs_20	16 51 28.0			
	comp=Z,19µm,20.0s								
WUPA	**West Chester U**	**109.87**	**53**	IAMs_20	IAMs_20	16 52 45.0			
	comp=Z,12µm,20.0s								
UZB	**Uzynbulak**	**109.88**	**311**	*e*PP	**PP**	**16 11 54.2**	**-3.1**		
	baz=311								
UZB				*e*SP	SP	16 21 21.3	-2.8		
	baz=311								
K58A	**Earlville**	**110.04**	**50**	IAMs_20	IAMs_20	16 50 48.9			
	comp=Z,20µm,22.0s								
KPKS	**Kokpek**	**110.14**	**311**	*e*PKiKP	**PKiKP**	**16 11 24.3**	**-0.9**		
	baz=311								
KPKS				*e*PP	**PP**	**16 11 55.8**	**-3.3**		
	baz=311								
KPKS				*e*SKS	**SKSdf**	**16 18 37.3**	**+0.1**		
	baz=311								
KPKS				*e*SP	**SP**	**16 21 25.0**	**-1.6**		
	baz=311								
SMLA	**Simla**	**110.26**	**298**	*i* x	**PKiKP**	**16 11 31.0**	**+5.4**		
SATY	**Saty**	**110.32**	**310**	*e*PKiKP	**PKiKP**	**16 11 23.5**	**-2.1**		
	baz=310								
SATY				*e*PP	**PP**	**16 11 57.3**	**-3.2**		
	baz=310								
SATY				*e*SP	SP	16 21 25.5	-2.9		
	baz=310								
TDK	**Taldyqorghan**	**110.42**	**313**	*e*PP	**PP**	**16 11 57.9**	**-3.1**		
	baz=312								
TDK				*e*SKS	**SKSdf**	**16 18 36.2**	**-1.2**		
	baz=312								
TDK				*e*SP	**SP**	**16 21 26.6**	**-2.4**		
	baz=312								
TDK				LR	LR	16 54 47.3			
	comp=Z,11µm,19.6s,baz=312								
L59A	**Walton**	**110.45**	**50**	IAMs_20	IAMs_20	16 50 38.9			
	comp=Z,21µm,22.0s								
P61A	**Hammonton**	**110.48**	**53**	IAMs_20	IAMs_20	16 49 54.1			
	comp=Z,23µm,22.0s								
SIV	**San Ignacio**	**110.48**	**114**	PP	**PP**	**16 12 01.3**	**-0.5**		
	comp=Z,1.2nm,1.0s,baz=246,slow=11,SNR=2.1								
GOA	**Goa**	**110.81**	**281**	*i* x	**PP**	**16 12 11.5**	**+7.0**		
J59A	**Piesco**	**110.91**	**49**	IAMs_20	IAMs_20	16 51 09.9			
	comp=Z,18µm,22.0s								
SDDR	**Presa de Saban**	**110.93**	**75**	IAMs_20	IAMs_20	16 49 50.6			
	comp=Z,17µm,20.0s								
MDOK	**Medeo**	**111.32**	**311**	*e*PP	**PP**	**16 12 04.6**	**-3.2**		
	baz=310								
MDOK				*e*SP	SP	16 21 34.6	-2.9		
	baz=310								
MDOK				LR	LR	16 57 12.4			
	comp=Z,4µm,18.9s,baz=310								
TNSS	**Tian-Shan**	**111.39**	**310**	*e*PKiKP	**PKiKP**	**16 11 26.1**	**-1.9**		
	baz=310								
TNSS				*e*PP	**PP**	**16 12 05.2**	**-3.3**		
	baz=310								
TNSS	**Tian-Shan**	**111.39**	**310**	*i* PKIKP	**PKiKP**	**16 11 26.0**	**-1.9**		
TNSS				*e*		16 12 05.1			
AAA	**Alma-Ata**	**111.42**	**311**	*e*PP	**PP**	**16 12 05.1**	**-3.2**		
	baz=311								
AAA				*e*SP	SP	16 21 35.6	-2.7		
	baz=311								
AAA				LR	LR	16 57 19.2			
	comp=Z,4µm,17.3s,baz=311								
ACCN	**Adirondack Com**	**111.52**	**49**	IAMs_20	IAMs_20	16 51 49.9			
	comp=Z,19µm,21.0s								
KSH	**Kashi**	**111.96**	**307**	PKP	**PKiKP**	**16 11 30.1**	**+1.3**		
KSH				PP	**PP**	**16 12 14.4**	**+2.0**		
KSH				SKKS		16 19 08.3			
KSH				SS	**SS**	**16 27 51.9**	**+1.9**		
KSH				AMB	AMB				
	comp=Z,2µm,10.7s								
KSH				LR	LR				
	comp=Z,8µm,22.0s								
KSH				LR	LR				
	comp=Z,6µm,17.1s								
KSH				LR	LR				
	comp=Z,2µm,14.9s								
FFD	**Franklin Falls**	**112.99**	**49**	IAMs_20	IAMs_20	16 53 22.8			
	comp=Z,16µm,20.0s								
SGDS	**Sogindy**	**113.09**	**311**	*e*PP	**PP**	**16 12 17.3**	**-2.9**		
	baz=311								
AAK	**Ala-Archa**	**113.18**	**310**	*i* PKIKP	**PKiKP**	**16 11 32.5**	**+1.4**		
AAK				MLR	MLR				
	comp=Z,15µm,18.0s								
BTLS	**Baital**	**113.51**	**312**	*e*PP	**PP**	**16 12 18.8**	**-4.3**		
	baz=312								
BRZS	**Berezniki**	**114.25**	**318**	*e*PKP	PKPdf	16 11 31.2	-1.4		
	baz=318								
BRZS				*e*PP	**PP**	**16 12 25.3**	**-2.9**		
	baz=318								
BRZS	**Berezniki**	**114.25**	**318**	*e*PKIKP	PKPdf	16 11 31.2	-1.5		
BRZS				*e*		16 12 25.2			
RER	**Riviere de l'E**	**115.25**	**237**	IAMs_20	IAMs_20	16 52 58.2			
	comp=Z,10µm,21.0s								
BVAR	**Borovoye Array**	**115.39**	**321**	PKP	**PKiKP**	**16 11 32.1**	**-2.6**		
	comp=Z,1.3nm,0.6s,baz=212,slow=8.1,SNR=10								
BRVK	**Borovoye**	**115.44**	**321**	*i* PKIKP	**PKiKP**	**16 11 33.2**	**-1.6**		
BRVK				MLR	MLR				
	comp=Z,13µm,21.0s								
BRVK	**Borovoye**	**115.44**	**321**	IAMs_20	IAMs_20	16 57 54.0			
	comp=Z,13µm,22.0s								
KKAR	**Karatay Array**	**116.10**	**310**	PKIKP	**PKPdf**	**16 11 34.7**	**-1.8**		
KKAR	**Karatay Array**	**116.10**	**310**		**PKPdf**	**16 11 34.7**	**-1.8**		
GAR	**Garm**	**116.34**	**306**	IAMs_20	IAMs_20	17 03 40.0			
	comp=Z,17µm,21.0s								
IUG	**Iuzhnay**	**116.49**	**309**	*e*PP	PP	16 12 40.4	-3.9		
	baz=309								
BRLS	**Borolday**	**116.60**	**310**	*e*PP	PP	16 12 44.5	-0.5		
	baz=310								
CHM	**Chimkent**	**116.80**	**310**	*e*PP	PP	16 12 44.8	-1.6		
	baz=310								
KBL	**Kabul**	**117.32**	**301**	IAMs_20	IAMs_20	17 00 18.6			
	comp=Z,10µm,21.0s								
SUMG	**Summit**	**118.94**	**13**	*i* P	**PKiKP**	**16 11 47.9**	**+6.2**		
SUMG				IAmb	IAmb	16

KLMR eSS SS 16 31 09.6 0.0
KLMR eSSS SSS 16 35 51.4
KLMR eSSS SSS 16 35 51.4
KLMR LQ LQ 16 51 19.1
KLMR LQ LQ 16 51 19.1
KLMR LR LR 16 57 10.2
KLMR AMP 17 09 24.9
comp=Z,10µm,20.5s
ARQ Araqi 128.00 287 P **PKiKP 16 12 04.3 +3.8**
SNR=17
SOHO SOHO 128.02 288 *i* PKiKP **PKPdf 16 11 58.5 -1.4**
SNR=10
SOHO SOHO 128.02 288 P **PKiKP 16 12 00.7 +0.3**
MDH Madha 128.26 290 *i* PKiKP **PKiKP 16 12 02.0 +1.1**
SNR=7.1
MDH Madha 128.26 290 P **PKiKP 16 12 04.1 +3.2**
BANOM Banah 128.27 291 P **PKiKP 16 12 07.5 +6.5**
UOSS Minazif 128.34 289 *i* PKiKP **PKiKP 16 12 00.9 -0.2**
SNR=10
UOSS Minazif 128.34 289 P **PKPdf 16 12 00.2 -0.3**
MASF Masafi 128.39 290 P **PKiKP 16 12 05.4 +4.2**
SNR=9.9
MSFE Esma-Masafi 128.39 290 *i* PKiKP **PKiKP 16 12 03.5 +2.2**
SNR=13
HATD Hatta, Dubai 128.40 289 *i* PKiKP **PKiKP 16 12 00.8 -0.4**
SNR=14
HATD Hatta, Dubai 128.40 289 P **PKiKP 16 12 05.0 +3.7**
SNR=11
SHME Shamm 128.41 291 *i* PKiKP **PKiKP 16 12 03.0 +1.8**
SNR=7.4
SHME Shamm 128.41 291 P **PKiKP 16 12 05.0 +3.8**
SHAO Shalim 128.42 280 P **PKiKP 16 12 00.9 -0.5**
SUR Sutherland 128.44 201 PKP **PKPdf 16 12 00.1 -0.7**
comp=Z,10nm,1.1s,baz=238,slow=6.6,SNR=1.9
SUR Sutherland 128.44 201 IAMs_20 IAMs_20 16 57 42.6
comp=Z,10µm,22.0s
ALNE Al Ain 128.73 288 *i* PKiKP **PKPdf 16 12 01.2 -0.1**
SNR=11
ALNE Al Ain 128.73 288 P **PKiKP 16 12 04.0 +2.1**
SNR=19
BELG Belogornoye 128.75 326 PKP **PKPdf 16 11 59.0 -1.3**
comp=Z,8.5nm,0.8s,baz=31,slow=6.1,SNR=2.9
BELG Belogornoye 128.75 326 ⇓ *i* PKIKP **PKPdf 16 11 59.4 -0.9**
BELG MLR MLR
comp=Z,2µm,21.0s
NAZ Nazwa, Dubai 128.83 289 *i* PKiKP **PKPdf 16 12 00.8 -0.5**
SNR=12
NAZ Nazwa, Dubai 128.83 289 P **PKiKP 16 12 05.1 +3.1**
SNR=13
FAQ Al Faqa, Dubai 128.89 289 *i* PKiKP **PKiKP 16 12 02.5 +0.3**
SNR=12
FAQ Al Faqa, Dubai 128.89 289 P **PKiKP 16 12 06.2 +4.0**
SNR=14
DMTO DMTO 129.03 280 P **PKiKP 16 12 03.9 +1.3**
SNR=7.5
SOCY Socotra 129.12 273 IAMs_20 IAMs_20 17 10 09.2
comp=Z,9µm,19.0s
SOCY Socotra 129.12 273 P **PKiKP 16 12 02.8 -0.2**
SNR=6.2
ASUD Al Ashush, Dub 129.13 289 *i* PKiKP **PKiKP 16 12 03.6 +0.9**
SNR=7.8
ASUD Al Ashush, Dub 129.13 289 P **PKiKP 16 12 04.9 +2.3**
SNR=6.7
AJN Ajban 129.44 289 *i* PKiKP **PKiKP 16 12 04.9 +1.7**
SNR=6.9
RBK Rabkut 129.71 280 P **PKiKP 16 12 05.5 +1.5**
SNR=20
DOK Doka 129.90 281 P **PKPdf 16 12 01.8 -1.7**
SNR=18
BOSA Boshof 130.03 207 PKP **PKPdf 16 12 02.1 -1.7**
comp=Z,8.8nm,1.2s,baz=164,slow=9.4,SNR=3.8
VALR Valaam 130.14 342 *e*PKiKP **PKPdf 16 12 02.4 -0.3**
WHFO Wadi Hawf 130.16 280 P **PKPdf 16 12 03.8 -0.3**
SNR=13
ABTO Aybut 130.55 279 P **PKiKP 16 12 06.6 +0.8**
SNR=16
FINES FINESS Array B 131.40 345 PKP **PKPdf 16 12 04.0 -1.1**
comp=Z,3.0nm,0.8s,baz=132,slow=2.8,SNR=5.6
FINES FINESS Array B 131.40 345 PKiKP **PKPdf 16 12 04.0 -1.1**
MOS Moscow 131.77 333 *i* PKiKP **PKiKP 16 12 10.0 +3.0**
MOS eSS SS 16 32 03.1 +2.5
MOS eSSS SSS 16 36 53.9
MOS pmax pmax
comp=Z,108nm,2.1s
SLWR Sila 132.44 288 P **PKiKP 16 12 11.6 +2.3**
VRH Novokhopyorsk 132.52 327 *i* PKiKP **PKiKP 16 12 12.6 +3.9**
VRH pmax pmax
comp=Z,60nm,1.9s
OBN Obninsk 132.64 333 ⇑ *e*PKiKP **PKiKP 16 12 08.4 -0.3**
OBN *e* 16 14 31.4
OBN pmax pmax
comp=Z,49nm,1.4s
OBN Obninsk 132.64 333 IAMs_20 IAMs_20 17 14 32.9
comp=Z,11µm,19.0s
MAK Makhachkala 132.64 314 *e*P **Pdif 16 09 00.2 -3.3**
MAK *i* 16 12 04.0
MAK *e* 16 14 27.9
MAK pmax pmax
comp=Z,195nm,1.3s
LBTB Lobatse 132.94 210 PKP **PKPdf 16 12 08.2 -1.2**
comp=Z,2.3nm,0.8s,baz=112,slow=5.4,SNR=1.3
LPSR Galich'ya Gora 133.14 330 *i* PKiKP **PKiKP 16 12 12.1 +2.2**
LPSR pmax pmax
comp=Z,50nm,1.9s
LPSR MLR MLR
comp=Z,19µm,25.0s
DVE Vedeno 133.59 315 *e*PKiKP **PKiKP 16 12 14.8 +3.6**
VSU Vasula 133.72 342 ⇑ *i* PKiKP **PKiKP 16 12 11.4 +0.6**
GROC Groznyy 133.72 315 *i* PKiKP **PKiKP 16 12 10.7 -0.7**
GROC *e* 16 14 42.5
GROC pmax pmax
comp=Z,23nm,0.4s
VSR Storozhevoye 133.84 328 *i* PKiKP **PKiKP 16 12 11.5 +0.2**
VSR pmax pmax
comp=Z,60nm,1.8s
VORD Divnogorie 133.92 328 *e*PKiKP **PKiKP 16 12 11.6 +0.1**
VORD pmax pmax
comp=Z,20nm,1.1s
KMGR Komgaron 134.41 315 *e*PKHKP PKPpre 16 11 58.0
BTKR Batakoyurt 134.50 316 *e*PKHKP PKPpre 16 11 56.3
NB2 NORSAR Subarra 134.53 353 PKP **PKPdf 16 12 09.7 -1.4**
baz=15,slow=2.6
NOA NORSAR Array B 134.53 353 PKP **PKPdf 16 12 10.1 -1.1**
comp=Z,1.4nm,0.8s,baz=13,slow=4.0,SNR=7.8
VLKR Vladikavkaz 134.54 315 ⇓ *i* PKHKP PKPpre 16 11 55.9
GOF Gofitskoye 134.78 319 ⇑ *e*PKiKP **PKiKP 16 12 19.0 +5.5**
GOF pmax pmax
comp=Z,20nm,0.9s
STDR Stavd-Durt 134.82 316 *e*PKHKP PKPpre 16 11 58.9
LACR Lac 134.88 315 *e*PKHKP PKPpre 16 11 58.6
KORR Kora 134.93 316 *e*PKHKP PKPpre 16 11 57.3
KBTC Kuba-Taba 135.07 317 *e*PKiKP **PKPdf 16 12 11.2 -1.5**
HFS Hagfors 135.10 351 PKhKP PKPpre 16 12 06.9
comp=Z,3.8nm,0.9s,baz=147,slow=2.9,SNR=2.8
MATP Matopo 135.12 217 PKP **PKPdf 16 12 12.4 -1.2**
comp=Z,3.3nm,0.9s,baz=244,slow=4.0,SNR=4.2
ZEI Tsey 135.16 315 *e*PKHKP PKPpre 16 12 02.5
ZEI eS **PKPdf 16 12 11.1 -2.0**
DIGR Digorskoe uzhe 135.34 316 ⇓ PKHKP PKPpre 16 12 05.0
DIGR eS **PKPdf 16 12 15.0 +1.6**
KBZ Khabaz 135.45 317 *de*PKiKP **PKiKP 16 12 14.7 -0.1**
KBZ MLR MLR
comp=Z,13µm,21.0s
KIV Kislovodsk 135.49 317 PKiKP **PKiKP 16 12 19.5 +4.4**
KIV Kislovodsk 135.49 317 *i* PKiKP **PKiKP 16 12 14.6 -0.5**
KIV *e* 16 14 49.3
KIV *e*PS PS 16 25 11.3 -2.5
KIV eSS SS 16 32 46.3 -0.5
KIV eSSS SSS 16 37 46.2
KIV pmax pmax
comp=Z,39nm,1.1s
KIV Kislovodsk 135.49 317 IAMs_20 IAMs_20 17 14 41.6
comp=Z,13µm,20.0s
GNI Garni 135.55 311 PKP **PKPdf 16 12 12.8 -1.1**
comp=Z,2.0nm,0.4s,baz=1.5,slow=19,SNR=1.1
GNI Garni 135.55 311 ⇑ *i* PKiKP **PKiKP 16 12 16.0 +0.6**
GNI MLR MLR
comp=Z,6µm,22.0s
SHA1 Shidzhatmaz 135.60 317 *e*PKiKP **PKiKP 16 12 18.1 +2.6**
NEY Neytrino 135.77 316 ⇑ *e*PKiKP **PKPdf 16 12 14.6 +0.4**
AKH Akhalkalaki 135.98 314 ⇑ P **PKiKP 16 12 15.9 -0.4**
KONO Kongsberg 136.07 354 IAMs_20 IAMs_20 17 14 35.6
comp=Z,8µm,20.0s
MNK Minsk 136.54 338 *e*PKiKP **PKiKP 16 12 17.0 +0.3**
MNK *e* 16 15 00.0
MNK *e*PPP PPP 16 17 54.0
MNK *e*PS **PS 16 25 14.0 -7.8**
MNK Minsk 136.54 338 *i* PKP **PKiKP 16 12 16.2 -0.5**
comp=E,2.0nm,0.8s
MNK *i* PKP **PKiKP 16 12 16.2 -0.5**
comp=N,13nm,0.8s
MNK *i* PKP **PKiKP 16 12 16.2 -0.5**
comp=Z,14nm,0.9s
MNK *i* PP **PP 16 14 57.6 +1.6**
MNK *i* PKS 16 15 52.4
MNK *i* PPP PPP 16 17 55.3
MNK *i* SKS **SKSdf 16 19 27.1 +1.5**
MNK *i* PS **PS 16 25 21.9 +0.1**
MNK *i* SKKS **SKKSdf 16 29 06.5 -0.8**
MNK *i* SS **SS 16 32 59.0 +1.2**
MNK *i* SSS SSS 16 38 04.7
MNK *i* LQ LQ 17 05 08.5
MNK *i* LR LR 17 11 22.6
MNK *i* LRM MLR 17 14 37.9
comp=N,7µm,20.4s
MNK *i* LRM MLR 17 14 43.6
comp=Z,8µm,17.8s
MNK *i* LRM MLR 17 14 49.4
comp=E,571nm,19.7s
NACGM Naroch 136.61 339 *i* PKP **PKiKP 16 12 21.6 +4.8**
NACGM *i* PKP **PKiKP 16 12 21.6 +4.8**
NACGM *i* PKP **PKiKP 16 12 21.6 +4.8**
NACGM *i* PP PP 16 14 34.4 -22
NACGM *i* PPP PPP 16 17 56.7
NACGM *i* SKS SKSdf 16 19 42.3 +17
NACGM *i* SKKS SKKSac 16 21 12.6 -39
NACGM *i* PS PS 16 25 40.7 +18
NACGM *i* SS SS 16 33 11.2 +13
NACGM *i* SSS SSS 16 37 28.6
NACGM *i* LQ LQ 16 54 59.3
NACGM *i* LR LR 17 06 33.1
KIMO Ikongo 136.75 234 *i* P PKPpre 16 12 06.1
KIMO IVMs_BB IVMs_BB 17 07 36.7
comp=Z,4µm,19.7s
KURU Muhukuru 136.89 233 *i* P **PKiKP 16 12 24.3 +5.6**
KURU IVMs_BB IVMs_BB 17 00 26.2
comp=Z,4µm,25.6s
RCBR Riachuelo 137.02 117 IAMs_20 IAMs_20 17 04 51.3
comp=Z,11µm,22.0s
NGEA Songea 137.04 234 *i* P **PKiKP 16 12 22.9 +3.7**
NGEA IVMs_BB IVMs_BB 17 02 48.9
comp=Z,4µm,22.6s
LIGA Liganga 137.37 234 *i* P **PKPdf 16 12 17.9 0.0**
LIGA IVMs_BB IVMs_BB 17 02 46.4
comp=Z,5µm,21.1s
MBAM Mbamba Bay 137.37 233 *i* P **PKiKP 16 12 22.7 +3.0**
MBAM IVMs_BB IVMs_BB 17 00 39.9
comp=Z,4µm,24.8s
BANG Mbangamawe 137.40 235 *i* P **PKPdf 16 12 17.1 -0.9**
BANG IAmb IAmb 16 12 40.2
comp=Z,23nm,1.0s
ZINI Mgazini 137.43 234 *i* P **PKPdf 16 12 15.0 -3.0**
ZINI IVMs_BB IVMs_BB 17 02 47.5
comp=Z,5µm,22.1s
SOC Sochi 137.57 318 *i* PKiKP **PKiKP 16 12 19.2 0.0**
SOC *e* 16 15 04.6
SOC *e*PPP PPP 16 18 01.4
SOC *e*PS **PS 16 25 27.5 -3.7**
SOC pmax pmax
comp=Z,3.0nm,0.3s
SOC MLR MLR
comp=Z,9µm,19.0s
TIRI Matiri 137.60 233 *i* P **PKPdf 16 12 17.0 -1.4**
TIRI IAmb IAmb 16 12 31.3
comp=Z,39nm,1.5s
TIRI IVMs_BB IVMs_BB 17 05 57.7
comp=Z,4µm,17.9s
MKIL Mkili 137.69 233 *i* P **PKiKP 16 12 19.1 -1.2**
MKIL IAmb IAmb 16 13 07.9
comp=Z,41nm,1.2s
MKIL IVMs_BB IVMs_BB 17 00 49.3
comp=Z,4µm,25.9s
WINO Wino 137.89 235 *i* P **PKiKP 16 12 20.0 -0.9**
WINO IVMs_BB IVMs_BB 17 08 39.8
comp=Z,4µm,20.0s
BUMI Ibumi 137.95 234 *i* P **PKiKP 16 12 23.5 +2.5**
BUMI IAmb IAmb 16 12 29.2
comp=Z,15nm,1.2s
RAYN Ar Rayn 138.12 287 PKiKP **PKPdf 16 12 17.1 -1.9**
RAYN Ar Rayn 138.12 287 IAMs_20 IAMs_20 17 15 04.7
comp=Z,7µm,20.0s
MFRI Mfriga 138.16 235 *i* P PKPpre 16 12 12.9
MFRI IVMs_BB IVMs_BB 17 04 39.6
comp=Z,4µm,21.3s
NIND Nindi 138.22 234 *i* P **PKiKP 16 12 23.4 +1.8**
NIND IVMs_BB IVMs_BB 17 03 10.7
comp=Z,4µm,20.8s
ANN Anapa 138.38 321 *i* P **Pdif 16 09 26.5 -2.5**
ANN *i* 16 12 18.3
ANN *e* 16 12 22.6
ANN *e* 16 15 05.3
ANN *e* 16 19 30.9
ANN pmax pmax
comp=Z,119nm,1.3s
ANN pmax pmax
comp=Z,63nm,0.9s
KIDE Kidegembe 138.40 235 *i* P **PKiKP 16 12 22.3 +0.2**
KIDE IAmb IAmb 16 12 37.2
comp=Z,18nm,0.6s
KIDE IVMs_BB IVMs_BB 17 09 21.1
comp=Z,4µm,18.2s
UNDA Madunda 138.48 234 *i* P **PKiKP 16 12 23.6 +1.4**
UNDA IAmb IAmb 16 12 27.6
comp=Z,64nm,0.3s
UNDA IVMs_BB IVMs_BB 17 08 00.8
comp=Z,4µm,19.8s
SUW Suwalki 138.53 341 *e*PKP **PKiKP 16 12 25.6 +4.9**
SUW Suwalki 138.53 341 IAMs_20 IAMs_20 17 14 15.6
comp=Z,16µm,21.0s
TOLA Matola 138.55 234 IVMs_BB IVMs_BB 17 08 41.0
comp=Z,5µm,19.4s
KTUT Trabzon 138.72 315 ⇓ P **PKiKP 16 12 26.2 +4.6**
BAKO Makambako 138.83 235 *i* P **PKPdf 16 12 15.6 -5.2**
BAKO IAmb IAmb 16 13 23.8
comp=Z,36nm,0.5s
BAKO IVMs_BB IVMs_BB 17 05 10.5
comp=Z,4µm,20.6s
KIPE Kipengere 138.85 235 *i* P **PKiKP 16 12 26.4 +3.4**
KIPE IVMs_BB IVMs_BB 17 09 08.0
comp=Z,4µm,20.2s
AKASG Malin Array Be 138.90 333 PKP **PKPdf 16 12 18.1 -1.3**
comp=Z,3.9nm,0.9s,baz=39,slow=2.2,SNR=12
AKBB Malin Array Si 138.90 333 ⇓ *e*PKiKP **PKPdf 16 12 19.5 0.0**
UKWA Ukwama 138.92 234 *i* P **PKiKP 16 12 24.4 +1.2**
UKWA IVMs_BB IVMs_BB 17 09 01.9
comp=Z,5µm,19.0s
MAKE Makete 139.13 234 IVMs_BB IVMs_BB 17 09 17.8
comp=Z,5µm,19.5s
GAWA Igawa 139.21 235 *i* P **PKiKP 16 12 28.2 +4.6**
LSZ Lusaka 139.25 222 PKhKP PKPpre 16 12 16.0
comp=Z,0.9nm,0.4s,baz=236,slow=13,SNR=2.2
LSZ PP **PP 16 15 15.2 +1.5**
comp=Z,4.0nm,1.0s,baz=156,slow=7.7,SNR=4.6
LSZ Lusaka 139.25 222 IAMs_20 IAMs_20 17 11 37.1
comp=Z,10µm,20.0s
NKAL Nkalisi 139.43 234 IVMs_BB IVMs_BB 17 09 26.2
comp=Z,4µm,16.6s
CHML Chimala 139.45 235 *i* P PKiKP 16 12 34.6 +11
DODT Dodoma, Tanzan 139.58 240 *i* P **PKPdf 16 12 18.1 -3.9**
MZUN Kiwira 139.65 234 IVMs_BB IVMs_BB 17 10 37.1
comp=Z,5µm,18.6s
ATD Arta Tunnel 139.70 269 IAMs_20 IAMs_20 17 07 48.4
comp=Z,9µm,21.0s
ATD Arta Tunnel 139.70 269 *i* P **PKiKP 16 12 28.4 +3.9**
ATD IAmb IAmb 16 12 35.7
comp=Z,73nm,1.5s
ATD IVMs_BB IVMs_BB 17 07 34.8
comp=Z,3µm,20.0s
ILOM Ilombo 139.71 234 IVMs_BB IVMs_BB 17 08 49.1
comp=Z,6µm,18.4s
ITUM Tunduma 139.75 233 IVMs_BB IVMs_BB 17 08 40.2
comp=Z,5µm,20.8s
JILO Lwanjilo 139.87 234 *i* P **PKiKP 16 12 30.1 +5.0**
JILO IAmb IAmb 16 12 33.0
comp=Z,273nm,2.8s
JILO IVMs_BB IVMs_BB 17 09 48.5
comp=Z,4µm,19.4s
PDHT Panda Hill 139.97 234 *i* P **PKiKP 16 12 31.3 +6.1**
PDHT IAmb IAmb 16 12 32.3
comp=Z,24nm,1.0s
PDHT IVMs_BB IVMs_BB 17 09 24.7
comp=Z,5µm,19.5s
EDI Edinburgh 140.04 4 *e*P **PKiKP 16 12 26.8 +3.0**
LOSI Makongolosi 140.39 234 *i* P **PKiKP 16 12 29.8 +3.8**
LOSI IVMs_BB IVMs_BB 17 07 10.8
comp=Z,3µm,19.8s
EKA Eskdalemuir Ar 140.63 4 PKhKP PKPpre 16 12 17.6
comp=Z,0.4nm,0.5s,baz=4.3,slow=2.8,SNR=2.7
ESK Eskdalemuir 140.64 4 *e*P **PKiKP 16 12 27.2 +2.1**
ESK Eskdalemuir 140.64 4 IAMs_20 IAMs_20 17 12 30.2
comp=Z,9µm,20.0s
KMBO Kilima Mbogo 140.84 247 PKP **PKPdf 16 12 23.3 -1.2**
comp=Z,1.0nm,0.4s,baz=141,slow=5.2,SNR=5.3
GKP Gorka Klasztor 140.87 345 *e*PKP **PKiKP 16 12 29.9 +4.3**
BEL Belsk 141.15 341 *e*PKP **PKiKP 16 12 30.4 +4.2**
SORM Soroca 141.16 331 ⇑ P **PKPdf 16 12 19.7 -3.9**
SORM Soroca 141.16 331 ⇑ PKiKP **PKPdf 16 12 19.7 -3.9**
EDMD Edmundbyers 141.20 3 *e*P **PKiKP 16 12 26.4 +0.2**
DIKM Dikmen 141.39 318 ⇑ P **PKiKP 16 12 29.3 +2.3**
IOMK Kirk Michael 141.57 6 *e*P **PKiKP 16 12 29.2 +2.2**
TSUM Tsumeb 141.59 205 IVMs_BB IVMs_BB 17 17 41.0
comp=Z,5µm,18.8s
LVV L'vov 141.71 336 *i* PKiKP **PKiKP 16 12 32.7 +5.2**
LVV *e* 16 15 37.4
LVV MLR MLR
comp=Z,14µm,20.0s
KIS Kishinev 141.75 330 *e*PKHKP PKPpre 16 12 20.0
KIS Kishinev 141.75 330 *i* PKiKP **PKiKP 16 12 26.0 -1.6**
KIS Kishinev 141.75 330 PKPM 16 12 34.0
comp=Z,300nm,5.2s
KIS Kishinev 141.75 330 *e*PP PP 16 15 28.0 -0.5
KIS *e*SKP 16 15 58.0
KIS Kishinev 141.75 330 LRM MLR 17 11 05.0
comp=Z,7µm,24.0s
KIS Kishinev 141.75 330 *i* PKiKP **PKPdf 16 12 20.0 -4.8**
KIS *i* 16 12 26.0
KIS *e* 16 15 28.0
KIS *e*PPS PPS 16 27 52.0
KIS pmax pmax
comp=Z,300nm,5.2s
KIS Kishinev 141.75 330 *e*PPS PPS 16 27 52.0
KIS Kishinev 141.75 330 *e*LQ LQ 16 59 16.0
comp=Z,6µm,27.0s
BZK Bozkurt 142.02 319 ⇑ P **PKiKP 16 12 33.0 +4.7**
HPK Haverah Park 142.09 3 *e*P **PKiKP 16 12 29.4 +1.3**
GAZ Gaziantep 142.13 311 IAMs_20 IAMs_20 17 19 50.2
comp=Z,9µm,21.0s
DSB Dublin 142.36 8 IAMs_20 IAMs_20 17 10 56.2
comp=Z,11µm,21.0s
WLF1 Llynfaes 142.55 6 *e*P **PKiKP 16 12 32.1 +3.1**
PRAR RÁSCA 142.70 332 ⇓ P **PKiKP 16 12 32.4 +2.8**
OJC Ojcow 142.86 341 *e*PKP **PKiKP 16 12 32.5 +2.7**
BURAR Bucovina Array 142.96 333 ⇑ P **PKiKP 16 12 33.4 +3.2**
BURAR Bucovina Array 142.96 333 ⇑ PKiKP **PKiKP 16 12 33.4 +3.2**
FOEL Foel Wylfa 143.05 5 *e*P **PKiKP 16 12 31.2 +1.1**
BIZ Bicaz 143.07 332 ⇓ P **PKiKP 16 12 31.1 +0.7**
GHRR 143.10 330 ⇓ P **PKiKP 16 12 35.2 +4.7**
FURI Furi 143.11 263 IAMs_20 IAMs_20 17 15 43.1
comp=Z,11µm,19.0s
FURI Furi 143.11 263 *i* P **PKiKP 16 12 35.7 +3.9**
TESR Tescani 143.14 331 ⇓ P **PKiKP 16 12 29.8 -0.7**
H07S1 FLORES T-PHASE 143.16 44 *e*PKP **PKPdf 16 12 27.0 -0.5**
CWF Charnwood Fore 143.32 3 *e*P **PKiKP 16 12 32.0 +1.4**
KSP Ksiaz 143.32 344 *e*PKP **PKiKP 16 12 34.0 +3.3**
UZH Uzhgorod 143.34 337 *e*PKiKP PKPbc 16 12 25.2 +0.7
UZH *e* 16 12 32.6
UZH *i* 16 15 36.2
UZH *e*PPP PPP 16 18 54.7
UZH *i* 16 19 40.4
CFR Carcaliu 143.36 328 ⇓ P **PKPdf 16 12 26.1 -1.5**
CFR Carcaliu 143.36 328 ⇓ PKiKP **PKPdf 16 12 26.1 -1.5**
NIE Niedzica 143.39 339 *e*PKP **PKiKP 16 12 33.0 +2.0**
WACR West Acre 143.40 1 *e*P **PKiKP 16 12 31.8 +1.0**
CRVS Cervenica-Dubn 143.42 338 *e*PKiKP **PKiKP 16 12 29.6 -1.4**
CRVS eSS SS 16 34 13.5 -5.1
CRVS MLR MLR
comp=Z,18µm,23.9s
CRVS Cervenica-Dubn 143.42 338 *e*PKP **PKiKP 16 12 29.6 -1.4**
CRVS eSS SS 16 34 13.5 -5.1
CRVS *e*L L 17 13 22.4
BRTR Keskin Array B 143.44 317 PKP **PKPdf 16 12 26.9 -1.3**
comp=Z,9.2nm,1.0s,baz=91,slow=2.2,SNR=5.4
TPGR Topolog 143.44 327 ⇓ P PKPbc 16 12 24.7 -0.3
VRI Vrincioaia 143.57 330 ⇓ P **PKiKP 16 12 29.7 -1.7**
VRI Vrincioaia 143.57 330 ⇓ PKiKP **PKiKP 16 12 29.7 -1.7**
OSTC Ostas 143.61 344 eSS SS 16 34 26.3 +5.8
OSTC AMS AMS 17 17 40.0
comp=Z,12µm,21.1s
CHVC Chvalec 143.62 344 *e*PKP **PKiKP 16 12 33.1 +1.7**
CHVC *ex* x 16 12 37.6
CHVC AMS AMS 17 17 20.0
comp=Z,12µm,20.6s
PLOR Plostina 143.62 330 ⇓ P **PKPdf 16 12 29.5 +1.3**
PLOR Plostina 143.62 330 ⇓ PKiKP **PKPdf 16 12 29.5 +1.3**
CLL Collm 143.65 348 *e*PKPdf **PKPdf 16 12 27.0 -1.0**
CLL *i* 16 12 37.3
comp=Z,35nm,1.2s
CLL *e* 16 14 52.0
CLL *e*PKSdf PP 16 16 02.0 +23
CLL *e*SKSac SKSac 16 19 30.0 -15
CLL *e*PPS PPS 16 28 12.0
CLL *e* 16 29 18.0
CLL eSS **SS 16 34 20.0 -0.8**
CLL eSSS SSS 16 39 42.0
CLL LmV 17 18 00.0
comp=Z,12µm,21.6s
CLL Collm 143.65 348 *e*PKiKP **PKiKP 16 12 30.0 -1.4**
CLL pmax pmax
comp=Z,207nm,2.4s
CLL Collm 143.65 348 IAMs_20 IAMs_20 17 18 36.9
comp=Z,12µm,22.0s
TRPA Tarpa 143.65 336 ⇑ P **PKPdf 16 12 27.5 -0.6**
UPC Upice 143.70 344 AMS AMS 17 17 30.0
comp=Z,12µm,20.7s
OKC Ostrava-Krasne 143.71 342 AMS AMS 17 15 50.0
comp=Z,9µm,22.2s
ARCR ARCALIA 143.74 333 ⇑ P **PKiKP 16 12 32.1 +0.3**
DPC Dobruska-Polom 143.77 344 *e*PKiKP PKPbc 16 12 25.7 -0.1
DPC *e* 16 12 32.1
DPC eSS SS 16 34 25.6 +3.2
DPC MLR MLR
comp=Z,12µm,21.0s
DPC Dobruska-Polom 143.77 344 *e*PKP PKPbc 16 12 25.7 -0.1
DPC *ep*PKP pPKPdf 16 12 32.1 +0.2
DPC eSS SS 16 34 25.6 +3.2
DPC AMS AMS 17 18 00.0
comp=Z,12µm,21.0s
BISRR Bisoca 143.81 330 ⇑ P **PKiKP 16 12 34.8 +2.8**
BRG Berggiesshubel 143.86 347 *e*PKP **PKiKP 16 12 30.4 -1.4**
BRG Amp 16 12 33.8
comp=Z,57nm,1.9s
BRG *ex* x 16 12 34.6
BRG Amp 16 12 43.0
comp=Z,235nm,2.0s
KRLC Kraliky 143.89 343 *e*PKiKP PKPbc 16 12 26.1 -0.1
KRLC *e* 16 12 31.3
KRLC eSS SS 16 34 30.9 +7.1
KRLC MLR MLR
comp=Z,9µm,21.7s
KRLC Kraliky 143.89 343 *e*PKP PKPbc 16 12 26.1 -0.1
KRLC *ep*PKP **PKiKP 16 12 31.3 -0.7**
KRLC eSS SS 16 34 30.9 +7.1
KRLC AMS AMS 17 18 40.0
comp=Z,9µm,21.7s
ANTO Ankara 143.92 317 ⇑ P **PKiKP 16 12 37.2 +4.8**
ANTO Ankara 143.92 317 ⇑ PKiKP **PKiKP 16 12 37.2 +4.8**
ANTO Ankara 143.92 317 IAMs_20 IAMs_20 17 22 35.8
comp=Z,6µm,20.0s
MORC Moravsky Berou 143.94 342 *e*PKP PKPbc 16 12 26.3 -0.1
MORC Moravsky Berou 143.94 342 IAMs_20 IAMs_20 17 25 21.7
comp=Z,7µm,20.0s
PVCC Panska Ves 144.04 346 AMS AMS 17 17 00.0
comp=Z,8µm,20.5s
KECS Kecovo 144.12 338 *e*PKiKP **PKiKP 16 12 31.2 -1.3**
KECS Kecovo 144.12 338 *e*PKP **PKiKP 16 12 31.2 -1.3**
DOPR Dopca 144.13 331 ⇓ P **PKiKP 16 12 33.5 +0.9**
AMRR Amara 144.17 328 ⇑ P **PKiKP 16 12 31.4 -1.2**
AMRR Amara 144.17 328 ⇑ PKiKP **PKiKP 16 12 31.4 -1.2**
ISR Istrita 144.20 329 ⇑ P **PKiKP 16 12 34.1 +1.3**
ISR Istrita 144.20 329 ⇑ PKiKP **PKiKP 16 12 34.1 +1.3**
MLR Muntele Rosu 144.22 330 PKP PKPbc 16 12 27.7 +0.2
comp=Z,2.6nm,0.6s,baz=180,slow=2.0,SNR=1.4
CJR Cluj-Napoca 144.35 334 ⇑ P **PKiKP 16 12 33.8 +0.7**

CJR	Cluj-Napoca	144.35	334	⇑PKIKP	PKiKP	16 12 33.8	+0.7	
SECR		144.50	330	⇓P	PKiKP	16 12 32.8	-0.5	
PRA	Prague	144.50	346	AMS	AMS	17 17 00.0		
	comp=Z,11µm,19.6s							
LTVH	Ltavrtes, Hu	144.51	336	⇑P	PKiKP	16 12 34.2	+0.9	
LEHL	Lehliu	144.53	328	⇑P	PKiKP	16 12 34.6	+1.2	
PRU	Pruhonice	144.55	346	*e*PKIKP	PKPdf	16 12 30.3	+0.7	
PRU				*e*		16 12 36.5		
PRU				*e*SS	SS	16 34 34.7	+3.5	
PRU				MLR	MLR			
	comp=Z,13µm,22.8s							
PRU	Pruhonice	144.55	346	*e*PKP	PKPdf	16 12 30.3	+0.7	
PRU				*ex*	x	16 12 36.5		
PRU				*e*SS	SS	16 34 34.7	+3.5	
PRU				AMS	AMS	17 15 10.0		
	comp=Z,13µm,22.8s							
VRAC	Vranov	144.64	343	PKP	PKPab	16 12 27.6	-0.8	
	comp=Z,1.4nm,0.3s,baz=14,slow=2.6,SNR=5.8							
VRAC	Vranov	144.64	343	⇓P	PKPdf	16 12 31.3	+1.5	
VRAC	Vranov	144.64	343	*e*PKP	PKPab	16 12 27.5	-0.9	
SULR		144.66	329	⇑P	PKiKP	16 12 34.0	+0.4	
DRGR		144.66	335	⇑P	PKiKP	16 12 31.7	-2.0	
DRGR		144.66	335	⇑PKIKP	PKiKP	16 12 31.7	-2.0	
VYHS	Vyhne	144.68	340	*e*PKIKP	PKPbc	16 12 29.0	+0.3	
VYHS	Vyhne	144.68	340	*e*PKP	PKPbc	16 12 29.0	+0.3	
VYHS				*e*SS	SS	16 34 50.1	+17	
VOIR		144.69	331	⇑P	PKiKP	16 12 31.7	-2.1	
VOIR		144.69	331	⇑PKIKP	PKiKP	16 12 31.7	-2.1	
JAVC	Velka Javorina	144.72	341	*e*PKP	PKPbc	16 12 28.7	-0.2	
KOLL	Kolacno	144.74	341	*e*PKP	PKPdf	16 12 30.0	0.0	
NKC	Novy Kostel	144.78	348	*e*PKIKP	PKiKP	16 12 37.2	+3.4	
NKC				*e*SS	SS	16 34 35.2	+1.4	
NKC				MLR	MLR			
	comp=Z,10µm,21.2s							
NKC	Novy Kostel	144.78	348	*e*PKP	PKiKP	16 12 37.2	+3.4	
NKC				*e*SS	SS	16 34 35.2	+1.4	
NKC				AMS	AMS	17 15 50.0		
	comp=Z,10µm,21.2s							
PSZ	Piszkesteto	144.81	338	⇑P	PKPdf	16 12 29.7	-0.5	
PSZ	Piszkesteto	144.81	338	⇑PKIKP	PKPdf	16 12 29.7	-0.5	
PSZ	Piszkesteto	144.81	338	IAMs_20	IAMs_20	17 15 51.7		
	comp=Z,14µm,22.0s							
KRUC	Moravsky	144.92	343	*e*PKP	PKPab	16 12 27.7	-1.7	
ARR	Arges	144.93	331	⇑P	PKPdf	16 12 31.2	+0.7	
TREC	Trest	144.95	344	AMS	AMS	17 16 30.0		
	comp=Z,10µm,20.9s							
PBCC	Pribram	144.96	346	*e*PKP	PKPdf	16 12 30.8	+0.4	
ELSH	Elham, Standar	144.99	0	*e*P	PKiKP	16 12 35.2	+1.1	
MMAI	Mount Meron Ar	145.08	305	PKP	PKPbc	16 12 30.1	-0.5	
	comp=Z,38nm,0.6s,baz=62,slow=4.0,SNR=38							
SMOL	Smolenice	145.10	341	*e*PKIKP	PKPbc	16 12 29.6	-0.5	
SMOL	Smolenice	145.10	341	*e*PKP	PKPbc	16 12 29.6	-0.5	
BEBN	Eben Emael	145.18	355	*dp*PKiKP	PKiKP	16 12 35.7	+1.2	
BSZH	Besenyszg	145.20	338	⇑P	PKiKP	16 12 37.3	+2.6	
PCED	Cedros	145.22	44	*e*PKP	PKPbc	16 12 29.8	-0.9	
HMNX	Herstmonceux	145.25	1	*e*P	PKiKP	16 12 35.7	+1.0	
LOT	Lotru	145.26	332	⇓P	PKiKP	16 12 37.0	+1.9	
UCC	Uccle	145.26	357	*dx*	x	16 12 35.7		
UCC	Uccle	145.26	357	IAMs_20	IAMs_20	17 20 31.9		
	comp=Z,12µm,20.0s							
MODS	Modra-Piesok	145.27	342	*e*PKP2	PKPbc	16 12 29.2	-1.4	
MODS				*e*SS	SS	16 34 42.1	+2.4	
MODS	Modra-Piesok	145.27	342	*e*PKP	PKPbc	16 12 29.2	-1.4	
MODS				*e*SS	SS	16 34 42.1	+2.4	
MODS				*e*L	L	17 07 22.1		
DEV	Deva	145.30	333	⇑P	PKiKP	16 12 32.8	-2.1	
DEV	Deva	145.30	333	⇑PKIKP	PKiKP	16 12 32.8	-2.1	
MEM	Membach	145.34	355	*d*PKP	PKPbc	16 12 29.5	-1.3	
MEM				*dx*	x	16 12 40.2		
MEM				*dx*	x	16 12 47.5		
BTNL	Ternell	145.35	355	*d*PKP	PKPbc	16 12 29.5	-1.3	
BTNL				*dx*	x	16 12 40.2		
HUMR	Humele	145.39	330	⇑P	PKiKP	16 12 36.5	+1.3	
BSTI	Sart Tilman	145.40	356	*d*PKP	PKPbc	16 12 29.9	-1.0	
BSTI				*dx*	x	16 12 40.7		
DYA	Yadsworthy	145.41	6	*e*P	PKiKP	16 12 37.1	+2.1	
SRBC	Serra Branca	145.43	43	*e*PKP	PKPab	16 12 32.2	+0.6	
ZST	Bratislava	145.49	342	*e*PKIKP	PKiKP	16 12 33.8	-1.5	
ZST				*e*SS	SS	16 34 49.6	+7.6	
ZST	Bratislava	145.49	342	*e*PKP	PKiKP	16 12 33.8	-1.5	
ZST				*e*SS	SS	16 34 49.6	+7.6	
CCA1	Carnmenellis	145.51	8	*e*P	PKiKP	16 12 36.3	+1.0	
GRA1	Grafenberg Arr	145.54	349	IAMs_20	IAMs_20	17 15 51.8		
	comp=Z,14µm,21.0s							
GRFO	Grafenberg	145.54	349	IAMs_20	IAMs_20	17 15 28.8		
	comp=Z,15µm,22.0s							
ISK	Istanbul-Kandi	145.56	322	P	PKPab	16 12 33.0	+1.0	
SNF	Seneffe	145.56	357	*d*PKP	PKPdf	16 12 28.7	-2.6	
SNF				*dx*	x	16 12 39.8		
KHC	Kasperske Hory	145.58	346	*e*PKIKP	PKPdf	16 12 30.8	-0.7	
KHC				*e*		16 12 37.6		
KHC				*e*SS	SS	16 34 46.4	+3.4	
KHC				MLR	MLR			
	comp=Z,14µm,21.0s							
KHC	Kasperske Hory	145.58	346	*e*PKP	PKPdf	16 12 30.8	-0.7	
KHC				*ex*	x	16 12 37.6		
KHC				*ex*	x	16 13 11.5		
KHC				*e*SS	SS	16 34 46.4	+3.4	
KHC				AMS	AMS	17 17 30.0		
	comp=Z,14µm,21.0s							
KHC	Kasperske Hory	145.58	346	IAMs_20	IAMs_20	17 17 54.8		
	comp=Z,13µm,21.0s							
BCLA	Clavier	145.58	356	*d*PKP	PKPdf	16 12 28.6	-2.7	
BCLA				*dx*	x	16 12 39.8		
BCLA				*dx*	x	16 12 43.5		
BHOU	Houvegnez	145.59	355	*dp*PKP	PKPdf	16 12 31.1	-0.3	
BHOU				*dx*	x	16 12 40.1		
BHOU				*dx*	x	16 12 44.1		
BGES	Gesves	145.63	356	*dp*PKP	PKPbc	16 12 31.5	-0.2	
BGES				*dx*	x	16 12 42.9		
BGES				*dx*	x	16 12 42.9		
CKRC	Cesky Krumlov	145.69	345	*e*PKP	PKPdf	16 12 30.9	-0.8	
CKRC				*ex*	x	16 12 37.5		
CKRC				*e*SS	SS	16 34 48.2	+3.9	
CKRC				AMS	AMS	17 11 40.0		
	comp=Z,10µm,23.9s							
PID	Ribeirinha	145.70	44	*e*PKP	PKPab	16 12 34.0	+1.3	
BMRD	Maredsous	145.74	356	*d*PKP	PKPdf	16 12 30.5	-1.1	
BMRD				*dx*	x	16 12 41.2		
GZR	Gura Zlata	145.75	333	⇓P	PKPab	16 12 33.0	+0.3	
GZR	Gura Zlata	145.75	333	⇓PKP2	PKPab	16 12 33.0	+0.3	
GEC2	GERESS Array S	145.81	346	IAMs_20	IAMs_20	17 17 19.1		
	comp=Z,12µm,21.0s							
GERES	GERESS Array B	145.81	346	PKPbc	PKPdf	16 12 31.2	-0.7	
	comp=Z,4.4nm,0.6s,baz=27,slow=3.3,SNR=20							
GERES	GERESS Array B	145.81	346	PKPdf	PKPdf	16 12 31.1	-0.9	
AMBH	Ambrzfalva	145.82	336	⇑P	PKPab	16 12 33.0	+0.3	
RCHB	Rochefort	145.85	356	*dx*	x	16 12 41.8		
CSS	Mathiatis	145.91	310	IAMs_20	IAMs_20	17 20 24.3		
	comp=Z,9µm,21.0s							
DOU	Dourbes	145.95	357	*dp*PKP	PKPdf	16 12 32.0	0.0	
DOU				*dx*	x	16 12 42.0		
MQOL	MQOL	146.05	283	*i* P		16 12 39.5		
MQOL				*i*		16 12 51.4		
	baz=320,slow=8.6							
MQOL				*i* S		16 19 56.0		
BZS	Buzias	146.06	334	⇑P	PKPab	16 12 33.9	+0.2	
BZS	Buzias	146.06	334	⇑PKP2	PKPab	16 12 33.9	+0.2	
CONA	Conrad Observa	146.09	343	*e*P	PKPdf	16 12 32.4	-0.1	
	comp=Z,204nm,1.8s,SNR=12							
PAGU	Agualva, Azore	146.14	42	*e*PKP	PKPab	16 12 34.2	-0.1	
LEF	Lefka	146.16	310	⇓P	PKiKP	16 12 35.5	-1.6	
PSCM	Serra do Cume	146.22	42	*e*PKP	PKPdf	16 12 32.2	-0.7	
WLF	Walferdange	146.26	355	*dp*PKP	PKPdf	16 12 32.7	+0.1	
WLF				*dx*	x	16 12 40.4		
WLF	Walferdange	146.26	355	IAMs_20	IAMs_20	17 19 20.2		
	comp=Z,9µm,20.0s							
HERR	Herculane	146.31	333	⇑P	PKiKP	16 12 39.9	+2.8	
EDRB	Edirne	146.38	325	P	PKPab	16 12 35.4	+0.3	
PLVB	Pleven	146.41	329	⇓P	PKPbc	16 12 33.8	-0.5	
DJES	Djerdap	146.43	333	⇑P	PKiKP	16 12 50.3	+13	
BANR	Banloc	146.45	335	⇓P	PKiKP	16 12 36.2	-1.1	
ISP	Isparta	146.51	316	IAMs_20	IAMs_20	17 25 59.4		
	comp=Z,7µm,20.0s							
EIL	Elat	146.51	300	PKPbc	PKPdf	16 12 32.6	-1.0	
	comp=Z,14nm,1.0s,baz=20,slow=6.5,SNR=7.9							
BAIL	Bailesti	146.55	331	⇓P	PKiKP	16 12 41.5	+4.0	
MOA	Molln	146.60	344	*e*P	PKPdf	16 12 33.5	+0.2	
	comp=Z,82nm,1.1s							
MOA				*e*P	sPKPab	16 12 43.6	+3.1	
	comp=Z,107nm,1.2s							
MDVR	Moldovita	146.69	333	⇑P	PKPbc	16 12 34.2	-1.0	
MORH	Mrgy, Hungar	146.71	338	⇓P	PKPdf	16 12 33.5	+0.1	
MORH	Mrgy, Hungar	146.71	338	*e*P	PKPdf	16 12 33.3	-0.1	
STU	Stuttgart	146.77	351	IAMs_20	IAMs_20	17 19 38.5		
	comp=Z,10µm,20.0s							
MBAR	Mbarara	146.78	243	PKPbc	PKPdf	16 12 35.1	+0.3	
	comp=Z,4.8nm,0.2s,baz=70,slow=4.1,SNR=13							
MBAR	Mbarara	146.78	243	IAMs_20	IAMs_20	17 13 11.9		
	comp=Z,9µm,20.0s							
MBAR	Mbarara	146.78	243	*i* P	PKPab	16 12 37.1	-0.6	
MBAR				IAmb	IAmb	16 12 56.4		
	comp=Z,276nm,1.9s							
ARSA	Arzberg	146.80	343	*e*P	PKPbc	16 12 34.4	-1.0	
	comp=Z,63nm,1.2s							
ARSA				*e*P	sPKPab	16 12 44.1	+2.8	
	comp=Z,74nm,1.4s							
JSA	Saint Aubin	146.81	4	*e*P	PKiKP	16 12 38.2	+0.3	
BEHE	Becsehely	147.12	340	*e*P	PKiKP	16 12 47.9	+9.2	
FRGS	Fruska Gora	147.17	336	⇓P	PKiKP	16 12 45.3	+6.5	
FRGS	Fruska Gora	147.17	336	*e*P	PKPdf	16 12 35.0	+0.7	
KOGS	Kog	147.31	341	*e*PKPdf	PKPab	16 12 38.4	-0.1	
KOGS				*i*		16 12 44.9		
KOGS				*e*SS	SS	16 35 04.8	+2.1	
KOGS				*e*		16 40 32.9		
BFO	Black Forest	147.33	352	PKP2	PKPbc	16 12 36.2	-0.6	
BFO				MLR	MLR			
	comp=Z,14µm,20.0s							
BFO	Black Forest	147.33	352		PKPbc	16 12 36.2	-0.6	
SHEL	Horse Pasture	147.39	167	IAMs_20	IAMs_20	17 18 56.9		
	comp=Z,6µm,20.0s							
ALN	Alexandroupoli	147.41	324	P	PKiKP	16 12 40.5	+1.1	
ENEZ	Enez	147.45	324	P	PKPbc	16 12 36.4	-0.9	
SOKA	Soboth	147.47	343	*e*P	PKPbc	16 12 36.4	-0.9	
	comp=Z,83nm,1.4s,SNR=16							
SOKA				*e*P	sPKPab	16 12 45.6	+1.7	
	comp=Z,98nm,1.4s							
RDO	Rodhopi	147.52	325	P	PKPab	16 12 38.9	-0.6	
KBA	Koelnbreinsper	147.55	345	*e*P	PKPdf	16 12 35.2	+0.1	
	comp=Z,62nm,1.1s							
KBA				*e*P	sPKPab	16 12 45.7	+1.3	
	comp=Z,34nm,1.1s							
ECH	Echery	147.59	353	IAMs_20	IAMs_20	17 18 08.3		
	comp=Z,12µm,22.0s							
BOVS	Bovan	147.60	332	⇑P	PKPab	16 12 39.5	-0.3	
PSET	Sete Cidades	147.62	43	*e*PKP	PKPdf	16 12 34.2	-1.1	
PSET	Sete Cidades	147.62	43	*e*LQ	LQ	16 53 49.0		
VTS	Vitosha	147.66	329	⇓P	PKPbc	16 12 38.2	+0.1	
VTS	Vitosha	147.66	329	⇓PKP2	PKPbc	16 12 38.2	+0.1	
WATA	Walderalm	147.72	347	*e*P	PKPbc	16 12 36.8	-1.3	
	comp=Z,82nm,1.1s,SNR=14							
WATA				*e*P	sPKPab	16 12 46.4	+1.4	
	comp=Z,82nm,1.1s							
RETA	Reutte	147.74	348	*e*P	PKPbc	16 12 36.8	-1.2	
	comp=Z,67nm,1.1s							
RETA				*e*P	sPKPab	16 12 46.7	+1.6	
	comp=Z,67nm,1.1s							
OBKA	Obir	147.76	343	*e*P	PKPbc	16 12 36.8	-1.4	
	comp=Z,42nm,1.6s							
OBKA				*i* P	sPKPab	16 12 46.1	+1.0	
	comp=Z,29nm,1.1s							
WTTA	Wattenberg	147.77	347	*e*P	PKPbc	16 12 37.0	-1.3	
	comp=Z,72nm,0.9s,SNR=9.6							
WTTA				*e*P	sPKPab	16 12 46.7	+1.4	
	comp=Z,61nm,0.8s							
CMLA	Cha da Macela	147.78	43	*e*PKP	PKPdf	16 12 34.2	-1.3	
CMLA	Cha da Macela	147.78	43	*e*LQ	LQ	16 56 23.6		
CMLA	Cha da Macela	147.78	43	IAMs_20	IAMs_20	17 14 31.1		
	comp=Z,9µm,20.0s							
TEKS	Tekeris	147.78	336	*e*P	PKPab	16 12 40.1	-0.4	
PCALD	Caldeiras da R	147.79	43	*e*PKP	PKPdf	16 12 34.4	-1.1	
MOTA	Moosalm	147.81	348	*e*P	PKPbc	16 12 36.9	-1.4	
	comp=Z,88nm,1.0s,SNR=8.6							
MOTA				*e*P	sPKPab	16 12 46.7	+1.3	
	comp=Z,88nm,1.0s							
MYKA	Terra Mystica	147.89	344	*e*P	PKPdf	16 12 36.5	+1.0	
	comp=Z,45nm,0.9s,SNR=7.7							
MYKA				*i* P	sPKPab	16 12 46.4	+0.8	
	comp=Z,58nm,1.1s							
SQTA	Sankt Quirin	147.90	348	*e*P	PKPbc	16 12 37.3	-1.3	
	comp=Z,69nm,1.1s,SNR=7.5							
SQTA				*e*P	sPKPab	16 12 46.9	+1.2	
	comp=Z,53nm,0.9s							
EZN	Ezine	147.96	323	P	PKPab	16 12 42.8	+1.5	
DIVS	Divibare	147.97	335	*e*P	PKPdf	16 12 36.4	+0.7	
DIVS	Divibare	147.97	335	IAMs_20	IAMs_20	17 16 57.4		
	comp=Z,10µm,22.0s							
AKAS	Kas	147.97	314		PKPdf	16 12 36.2	+0.2	
SMTH	Samothraki Isl	147.98	324	P	PKPab	16 12 47.3	+5.9	
BART	Pico Bartolome	148.00	42	*e*PKP	PKPdf	16 12 34.7	-1.3	
ABTA	Abfaltersbach	148.06	346	*e*P	PKPdf	16 12 36.7	+0.9	
	comp=Z,91nm,1.1s							
ABTA				*i* P	sPKPab	16 12 46.8	+0.5	
	comp=Z,91nm,1.1s							
DAVA	Damuels	148.10	349	*e*P	PKPbc	16 12 37.6	-1.5	
	comp=Z,74nm,1.0s							
DAVA				*e*P	sPKPab	16 12 47.7	+1.1	
	comp=Z,69nm,1.1s							
CRES	Cresnjev	148.11	341	*e*P	PKPbc	16 12 37.3	-1.7	
FETY	Fethiye	148.12	315	P	PKPbc	16 12 37.7	-1.6	
KAVA	Kavala	148.18	326	P	PKPab	16 12 42.8	+0.6	
LJU	Ljubljana	148.19	343	*e*PKPdf	PKPbc	16 12 38.3	-0.9	
FETA	Feichten	148.19	348	*e*P	PKPdf	16 12 36.4	+0.3	
	comp=Z,56nm,1.1s							
NVR	Nevrokopi	148.28	327	P	PKPbc	16 12 37.7	-1.9	
THAS	Thassos island	148.34	325	P	PKPab	16 12 43.7	+0.9	
PRK	Paraskevi	148.36	322	P	PKPab	16 12 43.9	+1.0	
MRAK	Mrakovica	148.36	339	*e*P	PKPab	16 12 47.8	+4.9	
YER	Yerkesik	148.37	317	P	PKPab	16 12 43.3	+0.1	
HAPS	Han Pijesak,BI	148.40	336	*e*P	PKPdf	16 12 35.7	-0.8	
BBLS	Lazići	148.40	335	*e*P	PKiKP	16 12 41.0	-0.5	
STAL	STALIGIAL	148.47	345	IAMs_20	IAMs_20	17 20 57.4		
	comp=Z,10µm,21.0s							
BLY	Banja Luka	148.49	338	*e*P	PKPbc	16 12 38.9	-1.1	
CEY	Cerknica	148.49	343	*e*P	PKiKP	16 12 40.6	-1.0	
PSMN	Pico do Norte,	148.51	43	*e*PKP	PKPdf	16 12 37.5	+0.8	
LIA	Limnos Island	148.57	324	P	PKPab	16 12 44.1	+0.4	
SRS	Serrai	148.58	327	P	PKPbc	16 12 40.2	-0.2	
DAVOX	Davos/Dischmat	148.59	349	PKPbc	PKPbc	16 12 38.6	-1.8	
	comp=Z,18nm,0.8s,baz=346,slow=2.7,SNR=12							
SIGR	SIGRI	148.63	322	P	PKPab	16 12 44.6	+0.6	
TRI	Trieste	148.71	343	IAMs_20	IAMs_20	17 26 54.7		
	comp=Z,8µm,19.0s							
MGRS	Mrkonjic Grad	148.82	338	*e*P	PKiKP	16 12 42.6	+0.3	
PLE	Plitvija	148.85	334	*e*PKP	PKPab	16 12 44.4	-0.5	
KNT	Kendrikon	148.91	328	P	PKPbc	16 12 41.2	0.0	
SOH	Sokhos	148.92	327	P	PKPab	16 12 45.2	0.0	
OUR	Ouranopolis	148.93	326	P	PKPab	16 12 45.4	+0.2	
VAY	Valandovo	148.96	328	*e*P	PKiKP	16 12 42.0	-0.7	
SMG	Samos	148.97	319	P	PKPab	16 12 45.7	+0.2	
ARG	Arkhangelos	148.99	315	P	PKPab	16 12 45.9	+0.3	
IVA	Berane	149.01	333	*e*PKP	PKPab	16 12 46.2	+0.6	
CHOS	Chios island	149.04	321	P	PKiKP	16 12 44.1	+1.1	
BODT	Bodrum	149.05	317	P	PKPdf	16 12 39.2	+1.6	
KOME	Kolasin	149.19	334	*e*PKP	PKPab	16 12 45.1	-1.2	
PLG	Polygyros	149.19	326	P	PKPbc	16 12 42.3	+0.3	
HORT	Hortiatis	149.22	327	P	PKiKP	16 12 44.1	+0.8	
THE	Thessaloniki	149.26	327	P	PKPab	16 12 45.5	-1.0	
GRG	Griva	149.31	328	P	PKPab	16 12 45.4	-1.4	
PAIG	Paliouri	149.38	325	P	PKPab	16 12 45.6	-1.5	
NIS1	Nisyros Isl.	149.41	317	P	PKPab	16 12 45.5	-1.8	
NKY	Niksic	149.44	334	*e*PKP	PKPab	16 12 45.6	-1.7	
BRY	Bratogost	149.55	335	*e*P	PKPbc	16 12 40.7	-2.2	
BRY	Bratogost	149.55	335	*e*PKP	PKiKP	16 12 45.4	+1.4	
TEOL	Teolo	149.57	346	IAMs_20	IAMs_20	17 20 34.3		
	comp=Z,12µm,20.0s							
PDG	Podgorica	149.64	334	⇑P	PKPbc	16 12 43.0	+0.1	
PDG	Podgorica	149.64	334	*e*P	PKPbc	16 12 41.2	-1.7	
TTG	Podgorica	149.64	334	*e*PKP	PKPab	16 12 46.3	-1.7	
CEME	Cevo	149.69	334	*e*PKP	PKPab	16 12 46.0	-2.3	
PHP	Peshkopia	149.71	331	P	PKPbc	16 12 40.7	-2.5	
DRME	Dracevica, Mon	149.87	333	*e*P	PKPbc	16 12 42.4	-1.1	
DRME	Dracevica, Mon	149.87	333	*e*PKP	PKPab	16 12 46.5	-2.5	
LIT	Litokhoron	149.90	327	P	PKPdf	16 12 41.0	+2.1	
LIT	Litokhoron	149.90	327	PKHKP	PKPpre	16 12 42.0		
LIT	Litokhoron	149.90	327		PKPbc	16 12 42.0	-1.7	
BUM	Brajici-Budva	149.90	334	*e*PKP	PKiKP	16 12 46.5	+1.9	
FNA	Florina	149.96	329	P	PKPbc	16 12 41.5	-2.4	
OHR	Ohrid	149.99	330	*e*P	PKiKP	16 12 45.2	+0.4	
KARP	Karpathos	150.01	315	P	PKPbc	16 12 43.6	-0.6	
KARP	Karpathos	150.01	315	IAMs_20	IAMs_20	17 34 45.3		
	comp=Z,8µm,22.0s							
KYMI	Kymi, Euboea I	150.04	323	P	PKPdf	16 12 40.8	+1.7	
KZN	Kozani	150.12	328	P	PKPbc	16 12 43.1	-1.2	
APE	Apeiranthos	150.19	319	P	PKPab	16 12 48.2	-2.3	
APE	Apeiranthos	150.19	319	⇑P	PKPab	16 12 49.2	-1.3	
APE	Apeiranthos	150.19	319	⇑PKIKP	PKPab	16 12 49.2	-1.3	
TIR	Tirane	150.24	332	P	PKPab	16 12 50.4	-0.1	
TIR	Tirane	150.24	332	⇓P	PKiKP	16 12 45.8	+0.5	
TIR	Tirane	150.24	332	⇓PKIKP	PKiKP	16 12 45.8	+0.5	
EREA	Eretria	150.28	323	P	PKPbc	16 12 43.3	-1.4	
KBN	Korca	150.37	330	P	PKPbc	16 12 44.3	-0.6	
PRMA	PARMA	150.44	347	IAMs_20	IAMs_20	17 28 22.4		
	comp=Z,9µm,19.0s							
DION	Dionisos Attik	150.51	322	P	PKPbc	16 12 43.3	-1.9	
THL	Klokotos Trika	150.54	327	P	PKPdf	16 12 42.0	+2.2	
PTL	Penteli	150.57	322	P	PKPbc	16 12 43.3	-2.1	
KPRO	Kipourio	150.59	328	P	PKPdf	16 12 42.0	+2.0	
ATAL	Atalanti	150.61	324	P	PKPdf	16 12 41.5	+1.5	
SNT1	Gialos, Santor	150.65	318	P	PKPab	16 12 49.9	-2.5	
LKR	Lokris	150.65	324	P	PKPbc	16 12 44.3	-1.2	
SANT	Santorini	150.66	318	⇓P	PKiKP	16 12 47.5	+1.1	
SANT	Santorini	150.66	318	PKPab	PKPab	16 12 49.8	-2.7	
SANT				IAMs_20	IAMs_20	17 28 50.1		
	comp=Z,7µm,21.0s							
ATHU	Athens Univers	150.67	322	P	PKPbc	16 12 45.4	-0.2	
ATH	Athens Observa	150.71	322	P	PKPab	16 12 49.5	-3.0	
VLY	Voula,Athens	150.74	322	P	PKPbc	16 12 44.6	-1.2	
SSB	Saint Sauveur	150.75	356	IAMs_20	IAMs_20	17 16 36.0		
	comp=Z,14µm,22.0s							
AGG	Agios Georgios	150.76	326	P	PKPbc	16 12 42.8	-3.0	
AGG	Agios Georgios	150.76	326	PKIKP	PKPbc	16 12 43.8	-2.0	
AGG	Agios Georgios	150.76	326		PKPbc	16 12 43.8	-2.0	
AXAR	Agios Charalam	150.76	325	P	PKPbc	16 12 45.4	-0.4	
MAKR	Makrakomi, Fth	150.88	326	P	PKPbc	16 12 45.6	-0.5	
ZKR	Zakros	150.89	315	P	PKPab	16 12 50.5	-3.0	
VLC	Villacollemand	151.00	347	IAMs_20	IAMs_20	17 19 54.2		
	comp=Z,10µm,22.0s							
EVR	Evrytania	151.12	326	P	PKPbc	16 12 44.3	-2.5	
NPS	Neapolis	151.22	316	P	PKiKP	16 12 48.2	+0.7	
ANX	Ano Chora	151.29	325	P	PKPdf	16 12 43.8	+2.6	
MURB	Monte Urbino	151.31	343	IAMs_20	IAMs_20	17 22 16.4		
	comp=Z,13µm,20.0s							
KALE	Kalithea	151.31	325	P	PKPdf	16 12 36.1	-5.1	
SRN	Sarande	151.33	330	P	PKiKP	16 12 47.2	-0.3	
TRIZ	Trizonia	151.37	325	P	PKiKP	16 12 49.3	+1.6	
OSSC	Osservatorio P	151.40	345	IAMs_20	IAMs_20	17 24 15.9		
	comp=Z,11µm,20.0s							
IGT	Igoumenitsa	151.43	329	P	PKPbc	16 12 45.4	-1.9	
ASCN	Ascension	151.43	145	IAMs_20	IAMs_20	17 32 54.9		
	comp=

CEU	**Ceuta**	**159.29**	**16**	PKP	**PKPdf**	**16 12 56.1**	**+4.2**
MELI	**Melilla**	**160.42**	**11**	PKP	**PKPdf**	**16 12 52.6**	**-0.6**
AVE	**Averroes**	**161.01**	**24**	PKP	**PKPdf**	**16 12 59.2**	**+5.2**
AVE				SS	SS	16 37 53.0	+21
IFR	**Ifrane**	**161.59**	**18**	PKP	**PKPdf**	**16 12 53.0**	**-1.8**
IFR				SS	SS	16 37 42.0	+3.7
MDT	**Midelt**	**162.40**	**17**	PKP	**PKPdf**	**16 12 54.4**	**-1.2**
	comp=Z,2.4nm,0.9s,baz=356,slow=6.9,SNR=3.8						
MDT				PKPab	**PKPab**	**16 13 41.3**	**-1.6**
	comp=Z,4.9nm,0.9s,baz=76,slow=2.9,SNR=2.5						
MDT				PP	**PP**	**16 17 25.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=256,slow=4.2,SNR=1.6						
DBIC	**Dimbokro**	**168.76**	**145**	PKP	**PKPdf**	**16 12 59.2**	**-1.9**
	comp=Z,3.6nm,0.9s,baz=29,slow=5.5,SNR=3.1						
KOWA	**Kowa**	**174.40**	**105**	PKP	**PKPdf**	**16 13 02.3**	**-1.5**
	comp=Z,1.7nm,0.7s,baz=160,slow=2.6,SNR=4.4						
KOWA				PKPab	**PKPab**	**16 14 36.1**	**-0.4**
	comp=Z,31nm,1.2s,baz=193,slow=5.1,SNR=3.0						
KOWA				PP	**PP**	**16 18 30.5**	**+1.5**
	comp=Z,15nm,1.1s,baz=217,slow=3.8,SNR=7.1						
TORD	**Torodi Ar. Bea**	**177.11**	**183**	PKP	**PKPdf**	**16 13 02.0**	**-2.5**
	comp=Z,2.3nm,0.8s,baz=347,slow=1.1,SNR=9.7						
TORD				PKPab	PKPab	16 14 47.1	-0.9
	comp=Z,0.9nm,0.6s,baz=188,slow=2.4,SNR=1.5						
TORD				PP	**PP**	**16 18 43.2**	**+3.7**
	comp=Z,13nm,1.2s,baz=174,slow=2.4,SNR=7.7						

IDC ***17*** *16:07:48.7±0.8,51°.44N×16°.01E,h0km,mb1 3.3/5, mb1mx3.1/65,mbtmp3.2/5,ML2.7/5,Error ellipse: s-maj=14.4km s-min=7.7km az=104.0*
VIE ***17*** *16:07:49.9±0.6,51°.34N×15°.96E,h0km,mb2.3/3,ml2.7/5, Error ellipse: s-maj=6.3km s-min=3.3km az=41.0 78 km WNW of Wroclaw Suspected Mining induced.*
PRU ***17*** *16:07:49.1±0.0,51°.44N×16°.07E,h0km*
ISC 17 16:07:46.9±0.7,**51°.54N**±0°.03×**16°.11E**±0°.03,**h0**km,**n36,** σ1**s15/66,1C,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**170**	*i* Pg	**Pg**	**16 08 00.6**	**+0.2**
KSP				*e*Sg	**Sg**	**16 08 09.0**	**-0.4**
CHVC	**Chvalec**	**0.95**	**182**	*e*PG	**Pg**	**16 08 05.3**	**+0.2**
CHVC				*e*SG	**Sg**	**16 08 16.7**	**-0.7**
	comp=Z,33nm,0.4s						
OSTC	**Ostas**	**0.98**	**176**	*e*PG	**Pg**	**16 08 06.0**	**+0.3**
OSTC				*e*SG	**Sg**	**16 08 17.7**	**-0.7**
	comp=Z,35nm,0.3s						
DPC	**Dobruska-Polom**	**1.20**	**173**	*e*PG	**Pg**	**16 08 09.3**	**-0.5**
DPC				*e*SG	**Sg**	**16 08 23.8**	**-1.4**
	comp=Z,34nm,0.6s						
PVCC	**Panska Ves**	**1.40**	**224**	*e*PG	**Pn**	**16 08 13.8**	**+0.1**
PVCC				*e*SG	**Sg**	**16 08 32.3**	**+0.5**
	comp=Z,106nm,0.3s						
BRG	**Berggiesshubel**	**1.52**	**245**	Pg	**Pg**	**16 08 16.2**	**+0.3**
BRG				Sg	**Sb**	**16 08 36.5**	**+0.9**
BRG				Amp		16 08 37.5	
	comp=Z,41nm,0.4s						
KRLC	**Kraliky**	**1.52**	**163**	*e*PG	**Pn**	**16 08 15.0**	**-0.4**
KRLC				*e*SG	**Sg**	**16 08 34.3**	**-1.5**
	comp=Z,35nm,0.4s						
PRU	**Pruhonice**	**1.84**	**213**	*e*PG	**Pb**	**16 08 20.7**	**-0.7**
PRU				*e*SG	**Sb**	**16 08 45.0**	**0.0**
	comp=Z,26nm,0.5s						
CLL	**Collm**	**1.96**	**264**	*i* Pn	**Pn**	**16 08 21.4**	**+0.1**
	comp=Z,3.0nm,0.3s						
CLL				*i* Pg	**Pg**	**16 08 24.1**	**-0.2**
CLL				*e*		16 08 27.0	
CLL				*i* Sg	**Sg**	**16 08 51.3**	**+1.6**
	comp=Z,17nm,0.7s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*PN	**Pn**	**16 08 20.8**	**-0.9**
MORC				*e*SG	**Sn**	**16 08 48.1**	**+0.8**
VRAC	**Vranov**	**2.25**	**172**	Pn	**Pn**	**16 08 25.4**	**0.0**
	comp=Z,1.6nm,0.3s,baz=347,slow=14,SNR=8.4						
VRAC				Lg	Lg	16 08 57.2	
	comp=Z,3.2nm,0.3s,baz=284,slow=23,SNR=7.2						
VRAC	**Vranov**	**2.25**	**172**	*e*PN	**Pn**	**16 08 25.5**	**+0.1**
VRAC				*e*SG	**Sb**	**16 08 56.8**	**0.0**
PBCC	**Pribram**	**2.29**	**217**	*e*SG	**Sb**	**16 08 58.3**	**+0.4**
KRUC	**Moravsky**	**2.49**	**176**	*e*PN	**Pn**	**16 08 28.3**	**-0.2**
KRUC				*e*SG	**Sb**	**16 09 03.9**	**+0.4**
NKC	**Novy Kostel**	**2.66**	**242**	*e*PG	**Pg**	**16 08 37.6**	**-0.2**
NKC				*e*SG	**Sg**	**16 09 12.0**	**-0.3**
	comp=Z,23nm,0.3s						
OJC	**Ojcow**	**2.68**	**118**	*e*Pn	**Pn**	**16 08 31.4**	**+0.1**
OJC				*e*Pg	**Pg**	**16 08 39.3**	**+1.0**
OJC				*e*Sg	**Sg**	**16 09 14.4**	**+1.3**
JAVC	**Velka Javorina**	**2.86**	**159**	*e*PN	**Pn**	**16 08 34.6**	**+0.8**
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN	**Pn**	**16 08 34.7**	**+0.4**
KHC				*e*PG	**Pb**	**16 08 40.5**	**+1.0**
KHC				*e*SN	**Sn**	**16 09 08.9**	**-1.1**
KHC				*e*SG	**Sg**	**16 09 18.7**	**-1.4**
	comp=Z,14nm,0.7s						
CKRC	**Cesky Krumlov**	**2.96**	**204**	*e*PN	**Pn**	**16 08 35.1**	**+0.1**
CKRC				*e*SG	**Sb**	**16 09 18.4**	**+1.4**
	comp=Z,10nm,0.6s						
GERES	**GERESS Array B**	**3.11**	**211**	Pn	**Pn**	**16 08 36.8**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=30,slow=13,SNR=16						
GERES				Pg	**Pb**	**16 08 44.0**	**+1.0**
	comp=Z,2.5nm,0.3s,baz=31,slow=17,SNR=38						
GERES				Lg	Lg	16 09 22.0	
	comp=Z,1.4nm,0.3s,baz=33,slow=31,SNR=5.6						
SMOL	**Smolenice**	**3.15**	**164**	*e*PG	**Pg**	**16 08 47.3**	**+0.2**
SMOL				*e*SG	**Sg**	**16 09 27.5**	**-0.3**
LANS	**Liptovska Anna**	**3.22**	**137**	*e*PG	**Pg**	**16 08 47.1**	**-1.3**
LANS				*e*SG	**Sg**	**16 09 30.0**	**-0.1**
MODS	**Modra-Piesok**	**3.26**	**166**	*e*PG	**Pg**	**16 08 48.6**	**-0.6**
MODS				*e*SG	**Sg**	**16 09 29.2**	**-2.2**
VYHS	**Vyhne**	**3.52**	**149**	*e*PG	**Pb**	**16 09 50.9**	**+0.9**
VYHS				*e*SG	**Sg**	**16 09 36.9**	**-2.9**
CONA	**Conrad Observa**	**3.62**	**183**	*i* Pn	**Pn**	**16 08 44.7**	**+0.5**
	comp=Z,1.2nm,0.3s						
CONA				Sg	**Sg**	**16 09 41.8**	**-1.1**
	comp=Z,13nm,0.4s						
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**16 08 45.2**	**+0.7**
BSD				*i* S	**Sn**	**16 09 26.9**	**-1.5**
BSD				IAML		16 09 34.0	
	comp=Z,1.6nm,0.3s						
MOA	**Molln**	**3.88**	**199**	*i* Pn	**Pn**	**16 08 48.2**	**+0.4**
	comp=Z,0.6nm,0.2s						
MOA				*e*Sg	**Sg**	**16 09 50.9**	**-0.6**
	comp=Z,5.8nm,0.3s						
ARSA	**Arzberg**	**4.31**	**185**	Sg	**Sg**	**16 10 04.5**	**-0.6**
	comp=Z,5.5nm,0.5s						
LUNU	**Lund**	**4.40**	**340**	*i* P	**Pn**	**16 08 53.0**	**-1.8**
BLEU	**Blekinge**	**4.78**	**358**	*i* P	**Pn**	**16 09 01.6**	**+1.6**
BLEU				*i* S	**Sn**	**16 09 54.0**	**-2.1**
BJUU	**Bjuv**	**4.90**	**339**	*i* P	**Pn**	**16 09 01.3**	**-0.4**
DEL	**Delary**	**5.12**	**346**	*e*	**Pn**	**16 09 04.1**	**-0.5**
	baz=189,slow=14						
DEL				*i* P	Pb	16 09 05.2	-12
DEL				IAML		16 10 05.0	
	comp=Z,0.8nm,0.4s						
AKASG	**Malin Array Be**	**8.30**	**91**	Pn	**Pn**	**16 09 47.4**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=275,slow=12,SNR=3.0						
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**16 09 54.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=167,slow=13,SNR=2.8						
HFS				Sn	**Sn**	**16 11 29.1**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=173,slow=26,SNR=1.6						
FINES	**FINESS Array B**	**11.34**	**25**	Pn	**Pn**	**16 10 29.4**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=210,slow=10,SNR=5.9						
KIV	**Kislovodsk**	**19.34**	**103**	⇑P	**Pn**	**16 12 18.0**	**+3.4**

IDC ***17*** *16:16:52.9±0.6,67°.59N×142°.64E,h0km,mb3.7/17, mb1 3.9/22,mb1mx3.7/60,mbtmp3.7/22,ML3.5/3,MS4.5/1, Ms1 4.5/1,ms1mx3.7/64,Error ellipse: s-maj=13.7km s-min=13.2km az=161.0*
MOS ***17*** *16:16:52.6±1.7,67°.62N×142°.41E,h8km,mb4.3/5,Error ellipse: s-maj=22.4km s-min=8.9km az=95.1*
NERS ***17*** *16:16:53.6±0.0,67°.98N×146°.19E,h0km*
YARS ***17*** *16:16:53.0±0.0,67°.63N×142°.59E,h29km*
NEIC ***17*** *16:16:54.7±1.2,67°.4N±0°.1×142°.7E±0°.2,h15km±6km, mb4.2/4,Error ellipse: s-maj=15.5km s-min=9.7km az=175.0*
ISC 17 16:16:54.1±0.4,**67°.59N**±0°.03×**142°.49E**±0°.04,**h10**km,**n59,** σ2**s17/82,mb3.8/21,2C-5D,Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.16**	**165**	*i* Pg	**Pb**	**16 17 15.5**	**-0.6**
MOMR				*i* Pg	**Pb**	**16 17 15.5**	**-0.6**
MOMR				*e*Pg	**Pb**	**16 17 15.5**	**-0.6**
MOMR				*e*Sg	**Sb**	**16 17 31.5**	**+0.3**
	2μm,0.2s						
YBGR	**Belaya Gora**	**1.69**	**54**	*i* Pg	**Pn**	**16 17 22.7**	**-0.9**
	158nm,0.4s						
YBGR				*e*Sg	**Sn**	**16 17 44.5**	**-0.6**
	2μm,0.4s						
BTGS	**Batagay**	**3.00**	**275**	*e*Pn	**Pn**	**16 17 40.2**	**-1.5**
BTGS				*e*Pg	**Pb**	**16 17 48.1**	**+0.5**
	170nm,1.1s						
BTGS				*e*Sn	**Sn**	**16 18 15.5**	**-2.1**
BTGS				*e*Sn	**Sn**	**16 18 15.5**	**-2.1**
BTGS				*e*Sg	**Sg**	**16 18 28.6**	**-1.8**
	922nm,1.1s						
UNR	**Ust'-Nera**	**3.04**	**174**	*e*Pn	**Pn**	**16 17 40.1**	**-2.1**
UNR				*e*Pg	**Pb**	**16 17 48.4**	**+0.1**
	121nm,0.6s						
UNR				*e*Sn	**Sn**	**16 18 16.5**	**-2.2**
UNR				*e*Sn	**Sn**	**16 18 16.5**	**-2.2**
UNR				*e*Sg	**Sg**	**16 18 29.8**	**-1.9**
	736nm,0.5s						
SUUS	**Susuman**	**5.38**	**151**	*e*P	**Pn**	**16 18 16.1**	**+1.7**
SUUS				*e*Pg	**Pb**	**16 18 31.2**	**+3.1**
SUUS				*e*Sg	**Sg**	**16 19 41.6**	**-5.1**
SUUS				Sgmax		16 19 54.5	
	200nm,0.8s						
SEY	**Seymchan**	**6.24**	**134**	Pn	**Pn**	**16 18 26.5**	**+0.4**
	0.5nm,0.3s,baz=312,slow=12,SNR=19						
SEY				Lg	Lg	16 20 10.4	
	2.4nm,0.3s,baz=345,slow=19,SNR=5.2						
SEY	**Seymchan**	**6.24**	**134**	*e*P	Pn	16 18 19.3	-6.8
SEY				*e*		16 18 28.6	
SEY				*e*Sg	**Sb**	**16 19 52.7**	**-4.7**
SEY				Sgmax		16 19 58.0	
	200nm,0.4s						
SEY	**Seymchan**	**6.24**	**134**	‖*i*P	**Pn**	**16 18 26.1**	**0.0**
TIXI	**Tiksi**	**6.26**	**317**	Pn	**Pn**	**16 18 27.7**	**+1.5**
	0.9nm,0.3s,baz=125,slow=15,SNR=52						
TIXI				Sn	**Sn**	**16 19 37.7**	**0.0**
	1.4nm,0.3s,baz=306,slow=15,SNR=8.1						
TIXI				Lg	Lg	16 20 07.3	
	1.9nm,0.3s,baz=31,slow=13,SNR=6.2						
TIXI	**Tiksi**	**6.26**	**317**	*e*Pn	**Pn**	**16 18 25.0**	**-1.2**
TIXI				*e*Pg	**Pb**	**16 18 46.1**	**+3.2**
	17nm,0.5s						
TIXI				*e*Sn	**Sn**	**16 19 34.6**	**-3.1**
TIXI				*e*Sn	**Sn**	**16 19 34.6**	**-3.1**
TIXI				*e*Sg	**Sg**	**16 20 08.7**	**-5.9**
	118nm,0.8s						
TIXI	**Tiksi**	**6.26**	**317**		**Pn**	**16 18 28.6**	**+2.3**
OCHR	**Omchak**	**6.38**	**156**	*e*P	**Pn**	**16 18 30.2**	**+2.2**
OCHR				*e*Sg	**Sg**	**16 20 15.5**	**-3.0**
OCHR				Sgmax		16 20 21.3	
	50nm,0.7s						
TLAR	**Talaya**	**7.76**	**142**	*e*P	**Pn**	**16 18 48.6**	**+1.6**
TLAR				*e*		16 18 57.3	
TLAR				*e*Sg	**Sb**	**16 20 48.6**	**+7.5**
TLAR				Sgmax		16 21 17.0	
	60nm,0.5s						
YAK	**Yakutsk**	**7.79**	**230**	Pn	**Pn**	**16 18 48.4**	**+1.1**
	0.1nm,0.3s,baz=217,slow=0.9,SNR=2.2						
YAK				Sn	**Sn**	**16 20 13.3**	**-2.2**
	0.2nm,0.3s,baz=104,slow=20,SNR=14						
YAK				Lg	Lg	16 21 00.9	
	baz=159,slow=20,SNR=2.1						
YAK				LR	LR	16 22 19.9	
	comp=Z,4μm,21.4s,baz=166,slow=42						
YAK	**Yakutsk**	**7.79**	**230**	‖*e*P	**Pn**	**16 18 50.0**	**+2.7**
YAK	**Yakutsk**	**7.79**	**230**		**Pn**	**16 18 46.7**	**-0.7**
MA2	**Magadan**	**8.84**	**152**	Pn	**Pn**	**16 19 04.2**	**+2.6**
	0.2nm,0.3s,baz=357,slow=12,SNR=4.8						
MA2				Lg	Lg	16 21 33.4	
	0.6nm,0.3s,baz=44,slow=21,SNR=8.9						
MA2	**Magadan**	**8.84**	**152**	*e*	**Pn**	**16 19 06.4**	**+4.7**
MA2				*e*Sg	**Sg**	**16 21 34.4**	**-2.9**
MA2				Sgmax		16 21 46.5	
	20nm,0.7s						
MA2	**Magadan**	**8.84**	**152**	‖*e*P	**Pn**	**16 19 03.2**	**+1.5**
BILL	**Bilibino**	**8.99**	**76**	‖*e*P	**Pn**	**16 19 06.7**	**+3.0**
BILL				pmax	pmax		
	comp=Z,11nm,2.9s						
BILL				MLR	MLR		
	comp=Z,1μm,16.0s						
EVEN	**Evensk**	**9.12**	**121**	*e*P	**Pn**	**16 19 04.8**	**-0.6**
EVEN				*e*		16 19 21.0	
EVEN				*e*S	Sn	16 21 40.7	+53
EVEN				Sgmax		16 22 06.5	
	comp=Z,40nm,0.5s						
PEA0B	**Petropavlovsk-**	**16.27**	**146**	‖*e*P	**P**	**16 20 45.4**	**-0.1**
PETK	**Petropavlovsk-**	**16.27**	**146**	Pn	**Pn**	**16 20 43.6**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=251,slow=4.5,SNR=4.4						
PETK	**Petropavlovsk-**	**16.27**	**146**	P	**P**	**16 20 46.5**	**+1.0**
KLR	**Kul'dur**	**19.19**	**202**	P	**P**	**16 21 16.9**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=8.3,slow=13,SNR=1.6						
USRK	**Ussuriysk Ar.**	**24.10**	**199**	P	**P**	**16 22 09.5**	**0.0**
	comp=Z,2.0nm,0.8s,baz=8.6,slow=8.9,SNR=7.3						
USRK	**Ussuriysk Ar.**	**24.10**	**199**	*e*P	**P**	**16 22 10.3**	**+0.8**
USRK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TOLK	**Toolik Lake Re**	**24.20**	**56**	P	**P**	**16 22 09.6**	**-0.7**
TOLK				IAmb	IAmb	16 22 32.0	
	comp=Z,8.3nm,1.4s						
IMAR	**Indian Mountai**	**24.21**	**64**	P	**P**	**16 22 09.9**	**-0.5**
COLD	**Coldfoot**	**24.73**	**59**	P	**P**	**16 22 15.5**	**+0.4**
COLD				IAmb	IAmb	16 22 19.8	
	comp=Z,4.3nm,1.0s						
BMAR	**Burnt Mountain**	**26.44**	**56**	P	**P**	**16 22 31.1**	**+0.5**
ILAR	**Eielson Array**	**27.26**	**62**	P	**P**	**16 22 37.9**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=299,slow=7.7,SNR=14						
ILAR	**Eielson Array**	**27.26**	**62**	*e*P	**P**	**16 22 41.2**	**+3.3**
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKUT	**Akutan**	**27.57**	**93**	P	**P**	**16 22 37.6**	**-3.2**
SUA	**Susitna One**	**28.02**	**70**	P	**P**	**16 22 44.9**	**-0.1**
SUA				IAmb	IAmb	16 22 49.6	
	comp=Z,12nm,1.2s						
INK	**Inuvik**	**29.27**	**49**	P	**P**	**16 22 55.3**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=314,slow=3.3,SNR=1.8						
ZALV	**Zalesovo Beam**	**29.99**	**272**	P	**P**	**16 23 00.5**	**-1.8**
ZALV	**Zalesovo Beam**	**29.99**	**272**	P	**P**	**16 23 00.5**	**-1.8**
MK31	**Makanchi Array**	**36.68**	**266**	‖*e*P	**P**	**16 24 01.4**	**+0.8**
MKAR	**Makanchi Array**	**36.68**	**266**	P	**P**	**16 24 02.1**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=49,slow=7.0,SNR=7.5						
MKAR	**Makanchi Array**	**36.68**	**266**	*e*P	**P**	**16 24 02.2**	**+1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**36.68**	**266**	P	**P**	**16 24 00.8**	**+0.1**
YKA	**Yellowknife Ar**	**38.90**	**46**	P	**P**	**16 24 19.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=322,slow=8.2,SNR=4.2						
AAK	**Ala-Archa**	**43.17**	**270**	‖*e*P	**P**	**16 24 58.0**	**+3.3**
AAK				pmax	pmax		
	comp=Z,22nm,2.0s						
FINES	**FINESS Array B**	**43.28**	**321**	P	**P**	**16 24 56.5**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=26,slow=11,SNR=9.1						
FINES	**FINESS Array B**	**43.28**	**321**	P	**P**	**16 24 55.9**	**+0.7**
NOA	**NORSAR Array B**	**46.87**	**330**	P	**P**	**16 25 23.6**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=24,slow=7.7,SNR=3.6						
AKASG	**Malin Array Be**	**51.95**	**312**	P	**P**	**16 26 01.3**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=25,slow=7.6,SNR=2.2						
KBZ	**Khabaz**	**53.86**	**298**	P	**P**	**16 26 18.4**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=74,slow=7.4,SNR=2.7						
EKA	**Eskdalemuir Ar**	**54.76**	**337**	P	**P**	**16 26 24.8**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=35,slow=8.7,SNR=4.1						
PDAR	**Pinedale Array**	**57.47**	**56**	P	**P**	**16 26 43.0**	**0.0**
	comp=Z,0.3nm,0.4s,baz=4.0,slow=6.5,SNR=2.5						
GERES	**GERESS Array B**	**57.68**	**322**	P	**P**	**16 26 43.7**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=34,slow=5.2,SNR=3.9						
NVAR	**Mina Array Bea**	**58.43**	**65**	P	**P**	**16 26 50.0**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=169,slow=38,SNR=2.1						
PFO	**Pinyon Flats O**	**63.42**	**66**	*i* P	**P**	**16 27 26.2**	**+2.6**
ESDC	**Sonseca Array**	**70.09**	**333**	P	**P**	**16 28 06.3**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=32,slow=39,SNR=2.2						
TXAR	**Lajitas Array**	**71.65**	**57**	P	**P**	**16 28 14.4**	**-1.3**
	comp=Z,0.2nm,0.7s,baz=322,slow=5.7,SNR=1.7						
WRA	**Warramunga Arr**	**87.48**	**188**	P	**P**	**16 29 41.5**	**0.0**
	comp=Z,0.5nm,0.8s,baz=0.7,slow=5.6,SNR=2.4						
ASAR	**Alice Springs**	**91.20**	**188**	P	**P**	**16 29 58.9**	**0.0**
	comp=Z,0.1nm,0.6s,baz=356,slow=5.6,SNR=1.7						
MAW	**Mawson**	**145.75**	**222**	PKPbc	**PKPdf**	**16 36 32.1**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=291,slow=19,SNR=2.2						

BUC 17 16:27:17.6±0.5,**45°.61N**×**26°.49E,h21**km±4km,**ml0.9/4, 12C-8D,Error ellipse: s-maj=3.0km s-min=1.0km az=131.0,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.17**	**113**	‖P	**Pb**	**16 27 22.2**	**-1.3**
BISRR				‖S	Sb	**16 27 26.1**	**-1.6**
BISRR	**Bisoca**	**0.17**	**113**	‖P	**Pb**	**16 27 22.2**	**-1.3**
BISRR				‖S	Sb	**16 27 26.1**	**-1.6**
NEHR	**Nehoiu**	**0.23**	**217**	⇑P	**Pb**	**16 27 23.6**	**0.0**
NEHR				⇑S	Sb	**16 27 27.5**	**-0.3**
NEHR	**Nehoiu**	**0.23**	**217**	⇑P	**Pb**	**16 27 23.6**	**0.0**
NEHR				⇑S	Sb	**16 27 27.5**	**-0.3**
PLOR	**Plostina**	**0.26**	**25**	⇑P	**Pb**	**16 27 23.8**	**-0.1**
PLOR				⇑S	Sb	**16 27 28.2**	**0.0**
PLOR	**Plostina**	**0.26**	**25**	⇑P	**Pb**	**16 27 23.8**	**-0.1**
PLOR				⇑S	Sb	**16 27 28.2**	**0.0**
VRI	**Vrincioaia**	**0.30**	**33**	⇑P	**Pb**	**16 27 24.7**	**+0.4**
VRI				⇑S	Sb	**16 27 29.3**	**+0.3**
VRI	**Vrincioaia**	**0.30**	**33**	⇑P	**Pb**	**16 27 24.7**	**+0.4**
VRI				⇑S	Sb	**16 27 29.3**	**+0.3**
MLR	**Muntele Rosu**	**0.40**	**252**	‖P	**Pb**	**16 27 25.9**	**0.0**
MLR				‖S	Sb	**16 27 32.5**	**+0.8**
MLR	**Muntele Rosu**	**0.40**	**252**	‖P	**Pb**	**16 27 25.9**	**0.0**
MLR				‖S	Sb	**16 27 32.5**	**+0.8**

ISK ***17*** *16:34:10.9,35°.11N×26°.87E,h18km,ML3.6/16*
ATH ***17*** *16:34:11.0,35°.05N×26°.91E,h13km±2km,ML3.6/9,Error ellipse: s-maj=6.9km s-min=1.2km az=330.0*
DDA ***17*** *16:34:12.0,35°.19N×26°.78E,h12km±4km,ML3.4*
IDC ***17*** *16:34:12.9±1.1,34°.88N×26°.92E,h46km±14km,mb3.8/6, mb1 3.7/12,mb1mx3.4/56,mbtmp3.8/12,ML3.7/6,Error ellipse: s-maj=19.3km s-min=8.4km az=11.0*
THE ***17*** *16:34:12.1,35°.18N×26°.82E,h0km±1km,ML3.5/5,Error ellipse: s-maj=4.6km s-min=0.9km az=151.0*
ISC 17 16:34:10.7±1.2,**35°.02N**±0°.05×**26°.90E**±0°.03,**h24**km±10km,**n88,** σ1**s49/118,mb4.0/6,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.57**	**280**	P	**Pb**	**16 34 21.6**	**-0.4**
ZKR				S	**Sb**	**16 34 30.3**	**+0.6**
ZKR				AML	AML	16 34 31.2	
	comp=N,8844μm,0.8s						
ZKR				AML	AML	16 34 34.6	
	comp=E,14559μm,0.4s						
ZKR	**Zakros**	**0.57**	**280**	P	**Pb**	**16 34 21.5**	**-0.4**
ZKR				S	**Sb**	**16 34 31.0**	**+1.3**
	comp=E,6μm,0.5s						
ZKR	**Zakros**	**0.57**	**280**	PG	**Pb**	**16 34 21.8**	**-0.2**
ZKR				SG	**Sb**	**16 34 30.1**	**+0.4**
KARP	**Karpathos**	**0.57**	**22**	P	**Pb**	**16 34 21.2**	**-1.0**
KARP				S	**Sb**	**16 34 29.1**	**-0.8**
KARP				AML	AML	16 34 30.2	
	comp=E,83188μm,0.4s						
KARP				AML	AML	16 34 30.4	
KARP	**Karpathos**	**0.57**	**22**	P	**Pb**	**16 34 21.3**	**-0.8**
KARP				S	**Sb**	**16 34 29.3**	**-0.7**
	comp=E,53μm,0.3s						
KARP	**Karpathos**	**0.57**	**22**	PG	**Pb**	**16 34 21.4**	**-0.7**
KARP				SG	**Sb**	**16 34 29.2**	**-0.7**
STIA	**Sitia Lasithi**	**0.69**	**286**	P	**Pb**	**16 34 22.4**	**-1.6**
STIA				S	**Sb**	**16 34 33.0**	**-0.1**
FRMA	**Ierapetra Chan**	**0.95**	**270**	P	**Pb**	**16 34 26.6**	**-1.9**
FRMA				S	**Sb**	**16 34 41.1**	**+0.3**
	comp=E,2μm,0.4s						
NPS	**Neapolis**	**1.08**	**284**	P	**Pb**	**16 34 31.1**	**+0.3**
NPS				S	**Sn**	**16 34 46.3**	**+1.7**
NPS				AML	AML	16 34 51.5	
	comp=E,7045μm,0.5s						
NPS				AML	AML	16 34 52.7	
	comp=N,6472μm,0.5s						
NPS	**Neapolis**	**1.08**	**284**	P	**Pb**	**16 34 31.2**	**+0.5**
HRKL	**Herakleio**	**1.50**	**282**	P	**Pb**	**16 34 38.3**	**+0.5**
IACM	**Heraklion**	**1.52**	**281**	P	**Pb**	**16 34 40.3**	**+2.1**
KSTL	**Kastelli Herak**	**1.52**	**281**	P	**Pn**	**16 34 35.4**	**-1.0**
ARG	**Arkhangelos**	**1.56**	**40**	P	**Pb**	**16 34

MULA					IAML			16 35 36.0	
	comp=E,202nm,0.5s								
AKAS	**Kas**	**2.52**	**60**	*i* P		**Pn**	**16 34 50.3**	**+0.1**	
AKAS				*i* S		**Sn**	**16 35 17.4**	**-2.8**	
AKAS	**Kas**	**2.52**	**60**	PN		**Pn**	**16 34 50.9**	**+0.7**	
AYDN	**Tasoluk**	**2.76**	**16**	*i* P		**Pn**	**16 34 55.1**	**+1.7**	
CAEL	**Denizli, Camel**	**2.88**	**42**	*i* P		**Pn**	**16 34 56.4**	**+1.3**	
CAEL				*i* S		**Sb**	**16 35 43.2**	**+7.0**	
CAEL					IAML		16 35 57.0		
	comp=E,386nm,1.0s								
CAEL					IAML		16 36 18.0		
	comp=N,237nm,0.9s								
TAVA	**DENIZLI_Tavas**	**2.94**	**33**	*i* P		**Pn**	**16 34 55.4**	**-0.6**	
TAVA				*i* S		**Sn**	**16 35 33.8**	**+3.2**	
ELL	**Elmali**	**2.99**	**54**	PN		**Pn**	**16 34 58.7**	**+1.9**	
DGB	**zmir**	**3.03**	**360**	*i* P		**Pn**	**16 34 57.4**	**+0.3**	
AYDB	**Zeytinkoy-Aydi**	**3.03**	**15**	PN		**Pn**	**16 34 58.5**	**+1.2**	
GOLH	**Golhisar**	**3.09**	**43**	*i* P		**Pn**	**16 34 60.0**	**+1.9**	
GOLH				*i* S		**Sb**	**16 35 40.4**	**-2.0**	
GOLH					IAML		16 36 04.0		
	comp=N,125nm,1.7s								
URLA	**Izmir**	**3.35**	**356**	*i* P		**Pn**	**16 34 59.9**	**-1.7**	
URLA				*i* S		**Sn**	**16 35 41.8**	**+1.3**	
URLA	**Izmir**	**3.35**	**356**	PN		**Pn**	**16 35 02.9**	**+1.4**	
KTHA	**Kythira Island**	**3.36**	**293**	PN		**Pn**	**16 35 03.7**	**+2.0**	
KORT	**Korkueli**	**3.43**	**54**	PN		**Pn**	**16 35 05.0**	**+2.2**	
VLI	**Veliai**	**3.64**	**299**	P		**Pn**	**16 35 06.3**	**+0.8**	
MANT	**Manisa**	**3.72**	**21**	*i* P		**Pn**	**16 35 06.6**	**-0.1**	
KULA	**Kula-Manisa**	**3.77**	**22**	PN		**Pn**	**16 35 08.9**	**+1.5**	
ZEDA	**zmir-Bergama**	**3.95**	**2**	*i* P		**Pn**	**16 35 09.8**	**+0.1**	
USAK	**Uak-Merkez**	**4.06**	**24**	*i* P		**Pn**	**16 35 12.0**	**+0.6**	
SIGR	**SIGRI**	**4.27**	**349**	PN		**Pn**	**16 35 15.9**	**+1.7**	
BUHA	**Balikesir, Bur**	**4.48**	**2**	*i* P		**Pn**	**16 35 17.9**	**+0.8**	
ITM	**Ithomi**	**4.57**	**300**	PN		**Pn**	**16 35 20.4**	**+2.1**	
BAYC	**CANAKKALE_Bayr**	**4.72**	**357**	*i* P		**Pn**	**16 35 19.4**	**-1.1**	
AGG	**Agios Georgios**	**5.42**	**319**	*i* P		**Pn**	**16 35 31.4**	**+1.4**	
BRTR	**Keskin Array B**	**7.13**	**47**	P		**Pn**	**16 35 56.7**	**+3.0**	
	comp=N,0.2nm,0.3s,baz=146,slow=39,SNR=2.9								
MMAI	**Mount Meron Ar**	**7.34**	**103**	P		**Pn**	**16 35 56.9**	**+0.5**	
	comp=N,1.9nm,0.3s,baz=312,slow=11,SNR=9.6								
MMAI					S	**Sn**	**16 37 19.5**	**+0.5**	
	comp=N,3.3nm,0.3s,baz=309,slow=26,SNR=7.1								
EIL	**Elat**	**8.65**	**126**	P		**Pn**	**16 36 14.4**	**+0.1**	
	comp=N,0.5nm,0.3s,baz=355,slow=2.9,SNR=8.7								
EIL					S	**Sn**	**16 37 46.4**	**-4.8**	
	comp=N,1.9nm,0.3s,baz=351,slow=9.1,SNR=8.4								
MLR	**Muntele Rosu**	**10.49**	**356**	P		**Pn**	**16 36 43.0**	**+3.4**	
	comp=N,0.2nm,0.3s,baz=305,slow=18,SNR=5.0								
AKASG	**Malin Array Be**	**15.77**	**5**	P		**P**	**16 37 53.1**	**-1.6**	
	comp=N,0.6nm,0.3s,baz=196,slow=11,SNR=3.8								
GERES	**GERESS Array B**	**16.91**	**329**	P		**Pn**	**16 38 06.9**	**+1.1**	
	comp=N,0.2nm,0.3s,baz=133,slow=11,SNR=2.7								
ESDC	**Sonseca Array**	**24.90**	**290**	P		**P**	**16 39 30.6**	**-1.2**	
	comp=N,0.9nm,0.6s,baz=80,slow=10.0,SNR=7.1								
FINES	**FINESS Array B**	**26.45**	**359**	P		**P**	**16 39 45.8**	**+0.3**	
	comp=N,1.4nm,0.8s,baz=171,slow=12,SNR=1.6								
TORD	**Torodi Ar. Bea**	**31.51**	**233**	P		**P**	**16 40 31.0**	**+0.1**	
	comp=N,1.3nm,0.5s,baz=33,slow=8.7,SNR=14								
KURBB	**Kurchatov Arra**	**40.11**	**51**	P		**P**	**16 41 44.6**	**+0.4**	
	comp=N,1.7nm,0.6s,baz=275,slow=8.6,SNR=5.1								
MKAR	**Makanchi Array**	**42.66**	**57**	P		**P**	**16 42 06.3**	**+1.0**	
	comp=N,1.9nm,0.6s,baz=279,slow=6.6,SNR=31								
ZALV	**Zalesovo Beam**	**44.08**	**46**	P		**P**	**16 42 16.1**	**-0.5**	
	comp=N,2.1nm,0.6s,baz=271,slow=7.7,SNR=9.6								

HLW ***17*** *16:39:39.0,35˙12N×26˙82E,h12km±16km,Md4.5,Ml4.7*
NIC ***17*** *16:39:40.5±0.0,34˙93N×26˙75E,h13km,Ml4.7/4*
ATH ***17*** *16:39:41.8,34˙96N×26˙74E,h11km±2km,ML4.6/11,Error ellipse: s-maj=4.9km s-min=1.0km az=338.0*
DDA ***17*** *16:39:42.5,35˙10N×26˙76E,h7km±4km,MW4.6*
THE ***17*** *16:39:43.5,35˙12N×26˙68E,h0km±1km,ML4.6/6,Error ellipse: s-maj=3.2km s-min=0.7km az=157.0*
NEIC ***17*** *16:39:43.2±2.7,34˙97N±0˙10×26˙70E±0˙07,h36km±9km, Error ellipse: s-maj=14.0km s-min=8.1km az=179.0*
ISK ***17*** *16:39:44.8,35˙18N×26˙68E,h75km,ML4.4/12*
MOS ***17*** *16:39:44.7±1.3,35˙04N×26˙59E,h21km,mb4.6/28,Error ellipse: s-maj=4.4km s-min=2.6km az=97.8*
IDC ***17*** *16:39:47.0±1.4,35˙14N×26˙59E,h69km±12km,mb4.0/29, mb1 4.1/37,mb1mx4.0/53,mbtmp4.3/37,Error ellipse: s-maj=14.3km s-min=9.6km az=152.0*

ISC 17 16:39:42.5±0.8,34˚99N±0˙03×26˚74E±0˙02,h27km±6km, n525,σ1ˢ88/569,mb4.4/67,61C-22D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
ZKR	**Zakros**	**0.45**	**286**	P	**Pb**	**16 39 50.8**	**-1.1**
ZKR				S	**Sb**	**16 39 56.7**	**-1.7**
ZKR				AML	AML	16 39 58.2	
ZKR				AML	AML	16 39 58.6	
ZKR	**Zakros**	**0.45**	**286**	P	**Pb**	**16 39 50.8**	**-1.1**
ZKR				S	**Sb**	**16 39 57.9**	**-0.5**
	195µm,0.3s						
ZKR	**Zakros**	**0.45**	**286**	P	**Pb**	**16 39 50.9**	**-1.1**
ZKR				AML	AML	16 39 57.0	
	272nm,0.5s						
ZKR				AML	AML	16 39 57.0	
	272nm,0.5s						
ZKR				AML	AML	16 39 57.1	
	405nm,0.4s						
ZKR				AML	AML	16 39 57.1	
	405nm,0.4s						
ZKR				S	**Sb**	**16 39 57.7**	**-0.7**
KARP	**Karpathos**	**0.65**	**32**	P	**Pb**	**16 39 54.6**	**-0.9**
KARP				S	**Sb**	**16 40 04.5**	**+0.2**
KARP				AML	AML	16 40 05.5	
KARP				AML	AML	16 40 05.7	
KARP	**Karpathos**	**0.65**	**32**	P	**Pb**	**16 39 54.6**	**-0.9**
KARP				S	**Sb**	**16 40 04.6**	**+0.4**
	198µm,0.4s						
KARP	**Karpathos**	**0.65**	**32**	Pg	**Pb**	**16 39 54.0**	**-1.4**
KARP	**Karpathos**	**0.65**	**32**	⇑P	**Pb**	**16 39 53.9**	**-1.6**
KARP				S	**Sn**	**16 40 04.9**	**-0.7**
KARP				AML	AML	16 40 05.1	
	371nm,0.4s						
KARP				AML	AML	16 40 05.1	
	371nm,0.4s						
KARP				AML	AML	16 40 05.3	
	405nm,0.5s						
KARP				AML	AML	16 40 05.3	
	405nm,0.5s						
NPS	**Neapolis**	**0.96**	**287**	P	**Pn**	**16 40 00.0**	**-0.2**
NPS				S	**Sn**	**16 40 13.4**	**+0.3**
NPS				AML	AML	16 40 20.1	
	comp=N,89179µm,0.6s						
NPS				AML	AML	16 40 20.9	
NPS	**Neapolis**	**0.96**	**287**	P	**Pn**	**16 40 00.1**	**-0.2**
NPS				S	**Sn**	**16 40 14.2**	**+1.0**
	comp=N,55µm,0.5s						
NPS	**Neapolis**	**0.96**	**287**	P	**Pn**	**16 40 00.1**	**-0.2**
NPS				S	**Sn**	**16 40 14.2**	**+1.0**
HRKL	**Herakleio**	**1.38**	**284**	PN	**Pb**	**16 40 08.5**	**+0.8**
HRKL				SN	**Sb**	**16 40 25.2**	**+0.3**
IACM	**Heraklion**	**1.40**	**283**	P	**Pb**	**16 40 09.0**	**+0.9**
IDI	**Anoyia**	**1.54**	**282**	P	**Pb**	**16 40 10.1**	**-0.4**
	comp=N,241nm,0.3s,baz=104,slow=17,SNR=18						
IDI				S	**Sn**	**16 40 28.5**	**+0.9**
	comp=N,328nm,0.3s,baz=358,slow=14,SNR=6.6						
IDI	**Anoyia**	**1.54**	**282**	P	**Pb**	**16 40 10.4**	**-0.1**
IDI				S	**Sb**	**16 40 30.5**	**+0.8**
IDI				AML	AML	16 40 37.1	
	comp=N,13944µm,0.5s						
IDI				AML	AML	16 40 41.5	
	comp=E,14213µm,0.5s						
IDI	**Anoyia**	**1.54**	**282**	P	**Pb**	**16 40 10.2**	**-0.3**
IDI				S	**Sb**	**16 40 30.6**	**+0.9**
	comp=E,6µm,0.4s						
IDI	**Anoyia**	**1.54**	**282**	⇑P	**Pb**	**16 40 10.5**	**0.0**
IDI				⇑S	**Sb**	**16 40 32.8**	**+3.1**
IDI	**Anoyia**	**1.54**	**282**	PN	**Pb**	**16 40 10.8**	**+0.3**
IDI				SN	**Sb**	**16 40 29.7**	**0.0**
IDI	**Anoyia**	**1.54**	**282**	Pn	**Pb**	**16 40 10.4**	**-0.1**
SIVA	**Sivas**	**1.58**	**272**	P	**Pb**	**16 40 10.9**	**-0.3**
SIVA				AML	AML	16 40 41.0	
	comp=E,46685µm,0.5s						
SIVA				AML	AML	16 40 52.0	
	comp=N,29354µm,0.7s						
SIVA	**Sivas**	**1.58**	**272**	P	**Pb**	**16 40 11.0**	**-0.1**
TMBK	**Timbaki Herakl**	**1.62**	**273**	P	**Pb**	**16 40 12.2**	**+0.4**
NIS1	**Nisyros Isl.**	**1.65**	**12**	P	**Pb**	**16 40 11.7**	**-0.5**
NIS1				AML	AML	16 40 46.8	
	comp=N,33030µm,0.6s						
NIS1					AML	AML	16 40 48.4	
	comp=E,27795µm,0.6s						
NIS1	**Nisyros Isl.**	**1.65**	**12**	P	**Pn**	**16 40 10.7**	**+1.0**
NIS1				S	**Sb**	**16 40 33.1**	**+0.5**
	comp=E,15µm,0.5s						
NIS1	**Nisyros Isl.**	**1.65**	**12**	PN	**Pb**	**16 40 10.9**	**-1.4**
ARG	**Arkhangelos**	**1.67**	**42**	P	**Pb**	**16 40 11.9**	**-0.6**
ARG				S	**Sb**	**16 40 34.3**	**+1.2**
ARG				AML	AML	16 40 40.0	
	comp=E,15345µm,1.2s						
ARG				AML	AML	16 40 51.1	
	comp=N,13061µm,0.9s						
ARG	**Arkhangelos**	**1.67**	**42**	P	**Pb**	**16 40 12.5**	**0.0**
ARG				S	**Sb**	**16 40 33.4**	**+0.3**
	comp=N,7µm,0.9s						
ARG	**Arkhangelos**	**1.67**	**42**	P	**Pb**	**16 40 11.7**	**-0.8**
ARG				S	**Sb**	**16 40 33.4**	**+0.3**
ARG	**Arkhangelos**	**1.67**	**42**	PN	**Pb**	**16 40 11.7**	**-0.8**
ARG	**Arkhangelos**	**1.67**	**42**	⇑P	**Pb**	**16 40 11.4**	**-1.2**
SANT	**Santorini**	**1.73**	**323**	P	**Pn**	**16 40 12.0**	**+1.1**
SANT				AML	AML	16 40 39.5	
	comp=E,27874µm,0.4s						
SANT				AML	AML	16 40 42.0	
	comp=N,7546µm,0.6s						
SANT	**Santorini**	**1.73**	**323**	P	**Pn**	**16 40 11.7**	**+0.8**
SANT	**Santorini**	**1.73**	**323**	⇑P	**Pn**	**16 40 11.7**	**+0.8**
SANT				⇑S	**Sb**	**16 40 34.9**	**0.0**
SANT	**Santorini**	**1.73**	**323**	*i* P	**Pn**	**16 40 11.4**	**+0.5**
SANT				*i* S	**Sn**	**16 40 28.7**	**-3.4**
SANT	**Santorini**	**1.73**	**323**	PN	**Pn**	**16 40 11.4**	**+0.5**
SANT	**Santorini**	**1.73**	**323**	Pn	**Pn**	**16 40 11.4**	**+0.5**
THR6	**Thira Island,**	**1.75**	**322**	P	**Pn**	**16 40 11.7**	**+0.6**
THR8	**Santorini-Mono**	**1.75**	**324**	P	**Pn**	**16 40 11.8**	**+0.7**
KOSK	**Kos Island**	**1.77**	**6**	P	**Pn**	**16 40 12.6**	**+1.2**
KOSK	**Kos Island**	**1.77**	**6**	PN	**Pn**	**16 40 12.4**	**+1.0**
SNT1	**Gialos, Santor**	**1.78**	**323**	P	**Pn**	**16 40 12.1**	**+0.6**
SFIR	**Foira Santorin**	**1.78**	**324**	P	**Pn**	**16 40 12.5**	**+0.9**
THR7	**Fira-Santorini**	**1.78**	**324**	P	**Pn**	**16 40 12.3**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.79**	**323**	P	**Pn**	**16 40 12.3**	**+0.7**
THR3	**Thira Island,**	**1.79**	**323**	P	**Pn**	**16 40 12.1**	**+0.5**
THT2	**Imerovigli**	**1.80**	**324**	P	**Pn**	**16 40 12.6**	**+0.8**
THT2	**Imerovigli**	**1.80**	**324**	PN	**Pn**	**16 40 12.4**	**+0.6**
THR5	**Thira Island,**	**1.82**	**322**	P	**Pn**	**16 40 12.8**	**+0.7**
SAP3	**Santorini-Thir**	**1.84**	**322**	P	**Pn**	**16 40 13.0**	**+0.7**
BODT	**Bodrum**	**2.12**	**12**	P	**Pn**	**16 40 15.9**	**-0.3**
BODT	**Bodrum**	**2.12**	**12**	PN	**Pn**	**16 40 16.9**	**+0.7**
VAM	**Vamos**	**2.12**	**282**	P	**Pb**	**16 40 19.7**	**-0.6**
VAM				AML	AML	16 40 56.7	
	comp=N,20019µm,0.7s						
VAM				AML	AML	16 40 57.7	
	comp=E,14080µm,0.6s						
BDRM	**Kayabasi**	**2.15**	**15**	*i* P	**Pn**	**16 40 18.2**	**+1.6**
BDRM				*i* S	**Sn**	**16 40 40.3**	**-2.1**
TURN	**Turunc**	**2.16**	**34**	*i* P	**Pn**	**16 40 17.4**	**+0.6**
TURN				*i* S	**Sn**	**16 40 42.8**	**+0.2**
TURN	**Turunc**	**2.16**	**34**	PN	**Pn**	**16 40 18.1**	**+1.4**
YKAV	**Yalikavak-Bodr**	**2.17**	**11**	PN	**Pn**	**16 40 17.9**	**+1.0**
GVDS	**Gavdos**	**2.18**	**267**	PN	**Pb**	**16 40 19.6**	**-1.7**
GVD	**Gavdhos**	**2.19**	**267**	P	**Pb**	**16 40 19.8**	**-1.6**
GVD				AML	AML	16 41 03.0	
	comp=N,8972µm,0.4s						
GVD				AML	AML	16 41 20.6	
	comp=E,13554µm,0.7s						
GVD	**Gavdhos**	**2.19**	**267**	PN	**Pb**	**16 40 19.8**	**-1.6**
APE	**Apeiranthos**	**2.29**	**335**	P	**Pn**	**16 40 19.2**	**+0.6**
APE	**Apeiranthos**	**2.29**	**335**	⇑P	**Pn**	**16 40 19.3**	**+0.6**
APE				⇑S	**Sn**	**16 40 46.1**	**+0.1**
APE	**Apeiranthos**	**2.29**	**335**	*i* P	**Pn**	**16 40 18.6**	**0.0**
APE				*i* S	**Sn**	**16 40 39.5**	**-6.6**
APE	**Apeiranthos**	**2.29**	**335**	*d* P	**Pn**	**16 40 19.2**	**+0.6**
APE	**Apeiranthos**	**2.29**	**335**	PN	**Pn**	**16 40 19.0**	**+0.3**
APE	**Apeiranthos**	**2.29**	**335**	⇑P	**Pn**	**16 40 19.2**	**+0.6**
APE				S	**Sb**	**16 40 48.8**	**-2.4**
IMMV	**Iera Moni Meta**	**2.31**	**283**	P	**Pb**	**16 40 22.1**	**-1.4**
IMMV				AML	AML	16 41 06.5	
	comp=E,11547µm,0.9s						
IMMV				AML	AML	16 41 13.0	
	comp=N,11683µm,0.8s						
IMMV	**Iera Moni Meta**	**2.31**	**283**	PN	**Pb**	**16 40 21.6**	**-1.9**
YER	**Yerkesik**	**2.48**	**30**	P	**Pn**	**16 40 22.8**	**+1.6**
YER	**Yerkesik**	**2.48**	**30**	P	**Pn**	**16 40 22.8**	**+1.6**
YER	**Yerkesik**	**2.48**	**30**	PN	**Pn**	**16 40 22.6**	**+1.4**
DDIM	**Aydin, Didim**	**2.50**	**9**	*i* P	**Pn**	**16 40 22.6**	**+1.3**
DDIM				*i* S	**Sb**	**16 40 57.6**	**+0.6**
FETY	**Fethiye**	**2.52**	**49**	P	**Pn**	**16 40 21.4**	**-0.3**
KSL	**Kastellorizon**	**2.59**	**63**	⇑P	**Pn**	**16 40 23.3**	**+0.6**
MULA	**Mugla, Merkez-**	**2.60**	**29**	*i* P	**Pn**	**16 40 25.0**	**+2.1**
MULA				*i* S	**Sn**	**16 40 55.0**	**+1.3**
AKAS	**Kas**	**2.64**	**61**	*i* P	**Pn**	**16 40 23.4**	**-0.2**
AKAS	**Kas**	**2.64**	**61**	Pn	**Pn**	**16 40 23.6**	**0.0**
SMG	**Samos**	**2.71**	**2**	P	**Pn**	**16 40 24.9**	**+0.5**
GCAM	**G?zelcaml?**	**2.73**	**8**	*i* P	**Pn**	**16 40 27.0**	**+2.3**
AYDN	**Tasoluk**	**2.82**	**19**	*i* P	**Pn**	**16 40 27.5**	**+1.6**
AYDN				*i* S	**Sn**	**16 40 56.4**	**-2.7**
CAEL	**Denizli, Camel**	**2.98**	**44**	*i* P	**Pn**	**16 40 29.9**	**+1.7**
TAVA	**DENIZLI_Tavas**	**3.03**	**35**	*i* P	**Pn**	**16 40 30.3**	**+1.5**
TAVA				*i* S	**Sn**	**16 41 01.2**	**-3.1**
DGB	**zmir**	**3.06**	**2**	*i* P	**Pn**	**16 40 29.5**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**3.09**	**17**	PN	**Pn**	**16 40 31.1**	**+1.4**
ELL	**Elmali**	**3.11**	**55**	P	**Pn**	**16 40 31.8**	**+1.8**
ELL	**Elmali**	**3.11**	**55**		**Pn**	**16 40 31.8**	**+1.8**
GOLH	**Golhisar**	**3.20**	**45**	*i* P	**Pn**	**16 40 32.6**	**+1.4**
GOLH				*i* S	**Sn**	**16 41 11.5**	**+3.0**
AKUM	**Antalya-Kumluc**	**3.22**	**65**	*i* P	**Pn**	**16 40 31.3**	**0.0**
AKUM				*i* S	**Sn**	**16 41 00.9**	**-7.9**
KTHA	**Kythira Island**	**3.25**	**294**	P	**Pn**	**16 40 33.4**	**+1.6**
KTHA	**Kythira Island**	**3.25**	**294**	PN	**Pn**	**16 40 33.8**	**+2.0**
KTHR	**Kythira**	**3.30**	**294**	P	**Pn**	**16 40 34.6**	**+2.2**
URLA	**Izmir**	**3.37**	**358**	*i* P	**Pn**	**16 40 32.7**	**-0.6**
URLA	**Izmir**	**3.37**	**358**	PN	**Pn**	**16 40 33.0**	**-0.4**
CHOS	**Chios island**	**3.44**	**351**	P	**Pn**	**16 40 34.8**	**+0.4**
CHOS	**Chios island**	**3.44**	**351**	PN	**Pn**	**16 40 35.2**	**+0.8**
VLI	**Veliai**	**3.54**	**300**	P	**Pn**	**16 40 36.7**	**+1.0**
KORT	**Korkueli**	**3.55**	**55**	*i* P	**Pn**	**16 40 38.3**	**+2.3**
MATC	**Matruh**	**3.66**	**173**	AMP		16 41 00.0	
	baz=174						
SLUM	**Salum**	**3.72**	**201**	P	**Pn**	**16 40 38.6**	**+0.4**
	baz=201						
SLUM				AMP		16 41 00.0	
	baz=201						
SLUM				S	**Sn**	**16 41 20.8**	**-0.3**
	baz=201						
VLY	**Voula,Athens**	**3.72**	**321**	P	**Pn**	**16 40 39.5**	**+1.4**
KRND	**KRANIDI**	**3.76**	**310**	P	**Pn**	**16 40 40.5**	**+1.8**
MANT	**Manisa**	**3.79**	**22**	*i* P	**Pn**	**16 40 39.6**	**+0.2**
MANT				*i* S	**Sn**	**16 41 18.3**	**-4.8**
MANT	**Manisa**	**3.79**	**22**	Pn	**Pn**	**16 40 40.8**	**+1.4**
BRDR	**BURDUR-Merkez**	**3.81**	**44**	*i* P	**Pn**	**16 40 40.4**	**+1.0**
BRDR				*i* S	**Sn**	**16 41 24.5**	**+1.1**
PTL	**Penteli**	**3.83**	**324**	P	**Pn**	**16 40 41.8**	**+2.0**
ATH	**Athens Observa**	**3.85**	**322**	P	**Pn**	**16 40 42.1**	**+2.2**
ATH	**Athens Observa**	**3.85**	**322**	P	**Pn**	**16 40 42.1**	**+2.2**
BUCA	**Burdur, Bucak-**	**3.87**	**52**	*i* P	**Pn**	**16 40 41.1**	**+0.8**
AKHS	**Akhisar**	**3.98**	**12**	*i* P	**Pn**	**16 40 42.4**	**+0.6**
ZEDA	**zmir-Bergama**	**3.98**	**4**	*i* P	**Pn**	**16 40 43.5**	**+1.8**
OSC1	**CSNet OBS 1**	**4.04**	**110**	P	**Pn**	**16 40 41.9**	**-0.7**
OSC1				S	**Sn**	**16 41 30.2**	**+1.2**
DKL	**Dikili**	**4.08**	**2**	PN	**Pn**	**16 40 44.4**	**+1.3**
USAK	**Uak-Merkez**	**4.14**	**26**	*i* P	**Pn**	**16 40 45.5**	**+1.4**
ISP	**Isparta**	**4.16**	**46**	P	**Pn**	**16 40 45.0**	**+0.7**
ISP	**Isparta**	**4.16**	**46**		**Pn**	**16 40 45.0**	**+0.7**
VILL	**Villia**	**4.20**	**320**	P	**Pn**	**16 40 47.1**	**+2.2**
KYMI	**Kymi, Euboea I**	**4.21**	**331**	P	**Pn**	**16 40 46.7**	**+1.8**
VLX	**Vlachokerasia**	**4.25**	**305**	P	**Pn**	**16 40 47.9**	**+2.3**
KZIL	**AFYON_Kizioren**	**4.26**	**39**	*i* P	**Pn**	**16 40 45.1**	**-0.6**
KZIL				*i* S	**Sn**	**16 41 39.2**	**+4.7**
PRK	**Paraskevi**	**4.26**	**355**	P	**Pn**	**16 40 47.4**	**+1.7**
PRK	**Paraskevi**	**4.26**	**355**	P	**Pn**	**16 40 47.4**	**+1.7**
SIGR	**SIGRI**	**4.27**	**351**	PN	**Pn**	**16 40 46.6**	**+0.8**
AYVA	**Ayvalik**	**4.31**	**359**	*i* P	**Pn**	**16 40 47.6**	**+1.3**
KEPZ	**Antalya-Kepez**	**4.38**	**63**	*i* P	**Pn**	**16 40 48.4**	**+1.0**
KEPZ				*i* S	**Sn**	**16 41 33.4**	**-4.2**
STEP	**BALIKESIR_Sava**	**4.45**	**10**	*i* P	**Pn**	**16 40 51.8**	**+3.6**
STEP				*i* S	**Sn**	**16 41 44.7**	**+5.6**
ITM	**Ithomi**	**4.47**	**301**	Pn	**Pn**	**16 40 50.2**	**+1.7**
BUHA	**Balikesir, Bur**	**4.51**	**3**	*i* P	**Pn**	**16 40 45.3**	**-3.8**
KOCA	**Canakkale, Ayv**	**4.53**	**354**	*i* P	**Pn**	**16 40 49.6**	**+0.2**
AKMS	**Akamas**	**4.59**	**88**	P	**Pn**	**16 40 50.5**	**+0.2**
AKMS				AML	AML	16 41 42.0	
	comp=N,3.0nm,1.0s						
AKMS				AML	AML	16 41 42.0	
	comp=N,3.0nm,1.0s						
AKMS				AML	AML	16 41 42.3	
	comp=N,2.5nm,0.5s						
AKMS				AML	AML	16 41 42.3	
	comp=N,2.5nm,0.5s						
AKMS				S	**Sn**	**16 41 44.6**	**+1.9**
GDZ	**Gediz**	**4.64**	**27**	*i* P	**Pn**	**16 40 50.3**	**-0.7**
GAZI	**Gazipasa**	**4.71**	**73**	*i* P	**Pn**	**16 40 49.6**	**-2.3**
GAZI				*i* S	**Sn**	**16 41 36.3**	**-9.3**
LKR	**Lokris**	**4.73**	**322**	P	**Pn**	**16 40 54.3**	**+2.3**
SEDI	**Konya, Seydise**	**4.74**	**57**	*i* P	**Pn**	**16 40 54.6**	**+2.3**
SEDI				*i* S	**Sn**	**16 41 46.1**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**4.75**	**358**	*i* P	**Pn**	**16 40 51.9**	**-0.4**
BAYC				*i* S	Sn	16 41 37.1	-9.3
ATAL	**Atalanti**	**4.75**	**322**	P	**Pn**	**16 40 54.6**	**+2.3**
KLV	**Kalavryta, Ach**	**4.79**	**311**	P	**Pn**	**16 40 54.7**	**+1.7**
BALY	**Balya**	**4.79**	**8**	*i* P	**Pn**	**16 40 53.0**	**0.0**
NATA	**Nata**	**4.80**	**91**	P	**Pn**	**16 40 52.8**	**-0.2**
DURS	**Dursunbey**	**4.81**	**16**	*i* P	**Pn**	**16 40 53.0**	**-0.2**
DURS				*i* S	**Sn**	**16 41 46.9**	**-1.2**
ALFC	**Alefka**	**4.81**	**86**	⇑P	**Pn**	**16 40 52.5**	**-0.7**
EZN	**Ezine**	**4.84**	**356**	P	**Pn**	**16 40 54.4**	**+0.9**
BOZC	**Bozcaada**	**4.87**	**354**	*i* P	**Pn**	**16 40 53.8**	**-0.2**
BOZC				*i* S	**Sn**	**16 41 43.2**	**-6.3**
YVAC	**Isparta, Yalva**	**4.88**	**47**	*i* P	**Pn**	**16 40 54.1**	**-0.1**
DRO	**Drossia**	**5.02**	**308**	P	**Pn**	**16 40 58.8**	**+2.8**
LAKA	**Lakka**	**5.02**	**312**	P	**Pn**	**16 40 58.0**	**+1.9**
DOGA	**KONYA_Doganhis**	**5.04**	**50**	*i* P	**Pn**	**16 40 58.5**	**+2.0**
DOGA				*i* S	**Sn**	**16 41 48.9**	**-5.0**
LEF	**Lefka**	**5.05**	**87**	⇑P	**Pn**	**16 41 00.4**	**+4.0**
SZAC	**Souni**	**5.05**	**91**	⇑P	**Pn**	**16 40 56.4**	**-0.1**
ECEA	**Canakkale, Ece**	**5.07**	**355**	*i* P	**Pn**	**16 40 57.6**	**+1.0**
ANDZ	**Kutahya, Merke**	**5.17**	**28**	*i* P	**Pn**	**16 40 58.3**	**+0.1**
GOKA	**anakkale-Gk**	**5.23**	**353**	*i* P	**Pn**	**16 40 59.9**	**+0.9**
AGG	**Agios Georgios**	**5.35**	**320**	P	**Pn**	**16 41 02.9**	**+2.2**
AGG	**Agios Georgios**	**5.35**	**320**	*i* P	**Pn**	**16 41 02.7**	**+2.0**
AGG				*i* S	**Sn**	**16 41 58.0**	**-3.5**
AGG	**Agios Georgios**	**5.35**	**320**	P	**Pn**	**16 41 03.2**	**+2.5**
AGG	**Agios Georgios**	**5.35**	**320**	PN	**Pn**	**16 41 02.9**	**+2.2**
AGG	**Agios Georgios**	**5.35**	**320**	Pn	**Pn**	**16 41 03.2**	**+2.5**
ASGA	**Asgata**	**5.35**	**90**	P	**Pn**	**16 41 00.5**	**-0.1**
CSS	**Mathiatis**	**5.41**	**88**	Pn	**Pn**	**16 41 00.9**	**-0.6**
CSS	**Mathiatis**	**5.41**	**88**	⇑P	**Pn**	**16 41 01.6**	**+0.2**
CSS				AML	AML	16 42 03.7	
	comp=N,0.5nm,0.9s						

MLR	Muntele Rosu	10.51	357	⇑P		Pn		16 42 13.5	+2.1
MLR	Muntele Rosu	10.51	357	⇑P		Pn		16 42 13.5	+2.1
MDVR	Moldovita	10.51	340	⇑P		Pn		16 42 13.1	+1.7
VOIR		10.52	353	⇑P		Pn		16 42 13.5	+2.0
VOIR		10.52	353	⇑P		Pn		16 42 13.5	+2.0
GZR	Gura Zlata	10.82	345	⇑P		Pn		16 42 17.3	+1.6
GZR	Gura Zlata	10.82	345	⇑P		Pn		16 42 17.3	+1.6
PLOR	Plostina	10.85	360	⇑P		Pn		16 42 21.7	+5.7
PLOR	Plostina	10.85	360	⇑P		Pn		16 42 21.7	+5.7
VRI	Vrincioaia	10.87	360	⇑P		Pn		16 42 21.2	+5.0
VRI	Vrincioaia	10.87	360	⇑P		Pn		16 42 21.2	+5.0
SGRT	San Giovanni R	10.95	311	Pn		Pn		16 42 15.2	-2.3
DOPR	Dopca	11.01	355	⇑P		Pn		16 42 20.7	+2.5
CORL	Corleone	11.20	289	Pn		Pn		16 42 21.7	+0.8
BZS	Buzias	11.31	341	⇑P		Pn		16 42 24.0	+1.7
BZS	Buzias	11.31	341	⇑P		Pn		16 42 24.0	+1.7
FRGS	Fruska Gora	11.45	335	⇑P		Pn		16 42 28.2	+3.9
DRGR		12.18	347	⇑P		Pn		16 42 36.9	+2.7
DRGR		12.18	347	⇑P		Pn		16 42 36.9	+2.7
INTR	Introdacqua	12.25	309	Pn		Pn		16 42 34.0	-1.2
BURAR	Bucovina Array	12.66	355	⇑P		Pn		16 42 44.8	+3.9
BURAR	Bucovina Array	12.66	355	⇑P		Pn		16 42 44.8	+3.9
BURAR	Bucovina Array	12.66	355			Pn		16 42 42.7	+1.8
MORH	Mrgy, Hungar	12.78	334	⇑P		Pn		16 42 47.4	+5.1
NRCA	Norcia	13.18	311	Pn		Pn		16 42 47.7	-0.2
SORM	Soroca	13.19	5	⇑P		Pn		16 42 51.8	+3.9
SORM	Soroca	13.19	5	⇑P		Pn		16 42 51.8	+3.9
PSZ	Piszkesteto	13.89	340	P		Pn		16 43 01.1	+3.5
PSZ				pmax	pmax				
	comp=Z,11nm,0.9s								
UZH	Uzhgorod	14.02	348	*e*P		P		16 43 05.5	-1.4
CHVG	Ch'k'valeri	14.22	53	⇑P		P		16 43 15.1	+6.0
CHVG	Ch'k'valeri	14.22	53	⇑P		P		16 43 15.1	+6.0
KEST	Kesra	14.22	278	P		Pn		16 43 02.5	+0.3
	comp=Z,0.2nm,0.3s,baz=340,slow=6.9,SNR=4.5								
CRVS	Cervenica-Dubn	14.44	346	*e*P		P		16 43 12.0	+0.4
CRVS	Cervenica-Dubn	14.44	346	*e*P		P		16 43 12.0	+0.4
CASP	Castiglione de	14.60	307	Pn		Pn		16 43 08.2	+1.0
SOKA	Soboth	14.64	326	*e*Pn		Pn		16 43 10.2	+2.4
	comp=Z,7.1nm,0.8s								
AKH	Akhalkalaki	14.64	59	P		P		16 43 19.1	+5.1
VYHS	Vyhne	14.71	339	*e*P		P		16 43 16.0	+1.4
VYHS	Vyhne	14.71	339	*e*P		P		16 43 16.0	+1.4
ARSA	Arzberg	14.86	329	*e*Pn		Pn		16 43 13.5	+2.7
	comp=Z,3.1nm,0.7s								
ONI	Oni	15.07	55	P		P		16 43 18.3	-0.3
LANS	Liptovska Anna	15.13	341	*e*P		P		16 43 23.5	+4.2
LANS	Liptovska Anna	15.13	341	*e*P		P		16 43 23.5	+4.2
GNI	Garni	15.17	65	P		P		16 43 21.0	+1.1
	comp=Z,0.9nm,0.3s,baz=15,slow=3.9,SNR=4.8								
GNI	Garni	15.17	65	P		P		16 43 21.0	+1.1
GNI				pmax	pmax				
	comp=Z,10.0nm,0.8s								
GNI	Garni	15.17	65	IAmb		IAmb		16 43 32.3	
	comp=Z,9.6nm,0.8s								
NIE	Niedzica	15.18	344	*e*P		P		16 43 20.8	+1.0
KIV	Kislovodsk	15.20	49	*e*P		Pn		16 43 17.6	+2.2
KIV				pmax	pmax				
	comp=Z,61nm,1.0s								
KBZ	Khabaz	15.22	50	P		P		16 43 19.4	-0.9
	comp=Z,0.3nm,0.3s,baz=244,slow=8.3,SNR=20								
KBZ	Khabaz	15.22	50	*de*P		P		16 43 20.7	+0.5
KBZ				pmax	pmax				
	comp=Z,11nm,0.9s								
CONA	Conrad Observa	15.26	331	*e*Pn		Pn		16 43 18.4	+2.3
	comp=Z,3.6nm,0.9s								
ZEI	Tsey	15.45	55	*e*P		Pn		16 43 20.7	+2.0
ZEI				pmax	pmax				
	comp=Z,9.0nm,0.7s								
STAL	STALIGIAL	15.47	321	Pn		Pn		16 43 16.6	-2.3
NAX	Nakhchivan	15.54	69	P		P		16 43 22.1	-1.8
NCK	Nalchik	15.56	52	⇑*e*P		P		16 43 24.5	+0.5
NCK				pmax	pmax				
	comp=Z,19nm,0.7s								
BTNK	Botanikuri	15.65	59	P		P		16 43 24.8	-0.3
KBA	Koelnbreinsper	15.72	324	*e*Pn		Pn		16 43 23.4	+1.2
	comp=Z,5.2nm,0.6s								
KBA	Koelnbreinsper	15.72	324	P		P		16 43 25.0	-1.0
KBA				pmax	pmax				
	comp=Z,9.0nm,0.6s								
AKASG	Malin Array Be	15.81	6	P		Pn		16 43 23.9	+0.8
	comp=Z,5.7nm,0.3s,baz=194,slow=11,SNR=17								
AKASG	Malin Array Be	15.81	6	*ce*P		P		16 43 25.2	-1.5
AKASG				pmax	pmax				
	comp=Z,4.0nm,0.4s								
AKASG	Malin Array Be	15.81	6			Pn		16 43 23.6	+0.5
AKBB	Malin Array Si	15.81	6	⇓*e*P		P		16 43 25.5	-1.2
AKBB				pmax	pmax				
	comp=Z,9.0nm,0.6s								
MOA	Molln	15.87	328	*e*Pn		Pn		16 43 25.4	+1.4
	comp=Z,2.6nm,0.5s								
CTI	Castel Tesino	15.90	319	P		P		16 43 27.1	-0.8
CTI				pmax	pmax				
	comp=Z,8.0nm,0.7s								
CTI	Castel Tesino	15.90	319			P		16 43 27.1	-0.8
ABTA	Abfaltersbach	15.90	322	*e*Pn		Pn		16 43 25.0	+0.6
	comp=Z,7.1nm,0.9s								
PRMA	PARMA	15.92	313	P		P		16 43 26.4	-1.6
PRMA				IAmb		IAmb		16 43 43.4	
	comp=Z,27nm,0.7s								
GOF	Gofitskoye	16.00	46	⇑*e*P		P		16 43 32.1	+3.1
OJC	Ojcow	16.04	344	*e*P		Pn		16 43 25.3	-0.8
OJC	Ojcow	16.04	344	P		Pn		16 43 26.8	+0.7
OJC				pmax	pmax				
	comp=Z,12nm,0.6s								
OJC	Ojcow	16.04	344			Pn		16 43 26.8	+0.7
OJC				IAmb		IAmb		16 43 36.0	
	comp=Z,12nm,0.6s								
VRAC	Vranov	16.14	335	P		Pn		16 43 28.4	+1.0
	comp=Z,0.2nm,0.3s,baz=131,slow=7.1,SNR=3.5								
VRAC	Vranov	16.14	335	⇓P		P		16 43 30.0	-0.5
MSSA	Maissana	16.18	310	Pn		Pn		16 43 27.1	-0.9
MSSA				IAmb		IAmb		16 43 31.2	
	comp=Z,69nm,1.5s								
MORC	Moravsky Berou	16.24	338	P		P		16 43 34.4	+2.8
MORC				pmax	pmax				
	comp=Z,11nm,1.3s								
SALO	Salr	16.27	316	Pn		Pn		16 43 27.5	-1.6
GANJ	Ganja	16.46	64	P		P		16 43 34.5	+0.4
DDFL	Dedoflistskaro	16.52	61	P		P		16 43 35.6	+0.8
CKRC	Cesky Krumlov	16.60	330	*e*P		P		16 43 35.0	-0.5
WTTA	Wattenberg	16.69	322	*e*Pn		P		16 43 36.0	-0.7
	comp=Z,4.3nm,0.5s								
WTTA	Wattenberg	16.69	322	P		P		16 43 41.0	+4.3
WTTA				pmax	pmax				
	comp=Z,13nm,1.1s								
LGD	Lagodekhi	16.73	60	P		P		16 43 38.3	+1.3
WATA	Walderalm	16.77	322	*e*Pn		P		16 43 36.6	-1.0
	comp=Z,2.2nm,0.3s								
GERES	GERESS Array B	16.87	329	P		Pn		16 43 35.5	-1.3
	comp=Z,0.5nm,0.3s,baz=142,slow=12,SNR=14								
GERES	GERESS Array B	16.87	329			Pn		16 43 35.2	-1.5
SQTA	Sankt Quirin	16.88	321	*i* Pn		P		16 43 38.4	-0.4
	comp=Z,4.7nm,0.4s								
ZKTA	Zakatala	16.94	61	P		P		16 43 40.9	+1.5
FETA	Feichten	17.00	320	*e*Pn		P		16 43 39.5	-0.7
	comp=Z,12nm,0.8s								
MOTA	Moosalm	17.02	321	*e*Pn		P		16 43 40.6	+0.3
	comp=Z,3.5nm,0.4s								
MNGR	Mingechevir, A	17.05	64	P		P		16 43 41.9	+1.3
DPC	Dobruska-Polom	17.13	337	*e*P		P		16 43 40.7	-0.7
DPC	Dobruska-Polom	17.13	337	*e*P		P		16 43 40.7	-0.7
KHC	Kasperske Hory	17.14	330	⇓*e*P		P		16 43 41.6	0.0
KHC				pmax	pmax				
	comp=Z,11nm,0.8s								
KHC	Kasperske Hory	17.14	330	*e*P		P		16 43 41.4	-0.2
SEKA	Sheki	17.24	63	P		P		16 43 45.3	+2.5
DAVOX	Davos/Dischmat	17.32	318	P		P		16 43 43.6	0.0
	comp=Z,0.7nm,0.3s,baz=285,slow=2.7,SNR=6.9								
SBF	Sospel	17.32	307	*e*P		Pn		16 43 42.5	+0.2
SBF				pmax	pmax				
	comp=Z,20nm,0.6s								
PBCC	Pribram	17.41	331	*e*P		Pn		16 43 43.8	+0.4
PRU	Pruhonice	17.45	333	P		P		16 43 45.7	+0.9
PRU				pmax	pmax				
	comp=Z,5.0nm,0.9s								
PRU	Pruhonice	17.45	333	*e*P		Pn		16 43 43.6	-0.2
WET	Wettzell	17.45	328	P		Pn		16 43 44.3	+0.4
WET				pmax	pmax				
	comp=Z,12nm,2.1s								
KSP	Ksiaz	17.57	338	*e*P		Pn		16 43 43.4	-1.9
KSP	Ksiaz	17.57	338	P		P		16 43 50.0	+3.8
KSP				pmax	pmax				
	comp=Z,8.0nm,1.1s								
DAVA	Damuels	17.62	319	*e*Pn		Pn		16 43 46.3	+0.1
	comp=Z,3.7nm,0.3s								
FRF	La Foret Royal	17.72	305	*e*P		Pn		16 43 46.8	-0.5
FRF				pmax	pmax				
	comp=Z,8.0nm,0.8s								
PVCC	Panska Ves	17.88	334	P		P		16 43 49.7	+0.1
PVCC				pmax	pmax				
	comp=Z,9.0nm,0.7s								
LKRN	Lenkeran, Azer	18.02	72	P		P		16 43 52.8	+1.6
VORD	Divnogorie	18.38	26	*e*P		Pn		16 43 58.3	+3.1
VORD				pmax	pmax				
	comp=Z,5.0nm,0.4s								
BRG	Berggiesshubel	18.39	334	P		P		16 43 54.2	-1.1
BRG				pmax	pmax				
	comp=Z,7.0nm,0.8s								
BRG	Berggiesshubel	18.39	334	*e*P		P		16 43 53.6	-1.6
BRG				Amp				16 43 56.7	
	comp=Z,8.4nm,1.0s								
NKC	Novy Kostel	18.46	330	P		Pn		16 43 58.8	+2.5
NKC				pmax	pmax				
	comp=Z,4.0nm,0.7s								
LPG	La Plagne	18.47	311	*e*P		P		16 43 55.8	-0.7
LPG				pmax	pmax				
	comp=Z,9.0nm,0.6s								
LPL	La Plagne	18.49	311	*e*P		P		16 43 56.1	-0.6
LPL				pmax	pmax				
	comp=Z,6.0nm,0.4s								
VSR	Storozhevoye	18.54	25	*e*P		Pn		16 43 59.7	+2.5
VSR				pmax	pmax				
	comp=Z,20nm,1.1s								
SENIN	Lac Senin/Sane	18.56	314	P		P		16 43 56.5	-0.9
SENIN				IAmb		IAmb		16 44 04.1	
	comp=Z,17nm,0.6s								
ORIF	Oris-en-Rattie	18.77	308	*e*P		Pn		16 44 01.5	+1.3
ORIF				pmax	pmax				
	comp=Z,4.0nm,0.6s								
BFO	Black Forest	19.09	320	P		P		16 44 00.4	-2.6
BFO				pmax	pmax				
	comp=Z,13nm,1.3s								
BFO	Black Forest	19.09	320	P		P		16 44 00.4	-2.6
CLL	Collm	19.09	333	*e*P		P		16 44 03.0	+0.1
	comp=Z,5.0nm,0.9s								
CLL				*e*				16 44 14.0	
CLL	Collm	19.09	333	P		P		16 44 00.8	-2.1
CLL				pmax	pmax				
	comp=Z,8.0nm,0.8s								
CLL	Collm	19.09	333	P		P		16 44 00.8	-2.1
MOX	Moxa	19.12	330	P		P		16 44 01.8	-1.5
MOX				pmax	pmax				
	comp=Z,6.0nm,0.7s								
SUW	Suwalki	19.18	354	*e*P		P		16 44 02.3	-1.6
CABF	La Chapelle	19.41	313	*e*P		P		16 44 04.6	-2.0
CABF				pmax	pmax				
	comp=Z,11nm,0.6s								
GKP	Gorka Klasztor	19.48	343	P		Pn		16 44 12.3	+3.9
VRH	Novokhopyorsk	19.49	29	*e*P		P		16 44 07.8	+0.5
VRH				pmax	pmax				
	comp=Z,10.0nm,0.5s								
MNK	Minsk	19.53	2	*i* P		P		16 44 06.9	-0.7
	comp=E,3.0nm,1.5s								
MNK				*i* P		P		16 44 06.9	-0.7
	comp=N,30nm,1.0s								
MNK				*i* P		P		16 44 06.9	-0.7
	comp=Z,11nm,0.9s								
MNK				*i* PP		PnPn		16 44 22.6	0.0
MNK				*i* S		Sn		16 47 48.0	+0.7
MNK				*i* SS		SnSn		16 48 05.7	+4.0
MNK				*i* LQ		LQ		16 50 06.8	
MNK				*i* LR		LR		16 51 36.9	
MNK				*i* LRM		MLR		16 53 35.1	
	comp=Z,534nm,14.9s								
MNK				*i* LRM		MLR		16 53 41.8	
	comp=N,559nm,16.2s								
MNK				*i* LRM		MLR		16 53 54.8	
	comp=E,82nm,16.5s								
VIVF	Saint-Julien-l	19.53	307	*e*P		P		16 44 06.9	-1.0
VIVF				pmax	pmax				
	comp=Z,10.0nm,0.7s								
HINF	Hinteralfeld	19.59	317	*e*P		P		16 44 06.7	-1.9
HINF				pmax	pmax				
	comp=Z,2.0nm,0.4s								
LPSR	Galich'ya Gora	19.63	23	*e*P		Pn		16 44 13.1	+2.8
LPSR				pmax	pmax				
	comp=Z,20nm,1.6s								
ECH	Echery	19.65	318	P		Pn		16 44 14.2	+3.5
ECH				pmax	pmax				
	comp=Z,11nm,1.2s								
CDF	Champ du Feu	19.70	319	*e*P		P		16 44 08.7	-1.1
CDF				pmax	pmax				
	comp=Z,8.0nm,0.8s								
SSB	Saint Sauveur	19.78	308	P		P		16 44 09.2	-1.4
SSB				pmax	pmax				
	comp=Z,9.0nm,0.9s								
SSB	Saint Sauveur	19.78	308			P		16 44 09.2	-1.4
NACGM	Naroch	19.91	0	*i* P		Pn		16 44 18.6	+4.9
NACGM				*i* P		Pn		16 44 18.6	+4.9
NACGM				*i* P		Pn		16 44 18.6	+4.9
NACGM				*i* PP		PnPn		16 44 39.1	+11
NACGM				*i* S		Sn		16 48 15.1	+18
NACGM				*i* SSS		SSS		16 48 39.5	
NACGM				*i* SS		SnSn		16 48 40.3	+29
NACGM				*i* LQ		LQ		16 50 31.2	
NACGM				*i* LR		LR		16 52 31.2	
HAU	Haudompre	19.98	317	*e*P		P		16 44 12.1	-0.7
HAU				pmax	pmax				
	comp=Z,4.0nm,0.5s								
TNS	Taunus Mts	20.24	324	P		Pn		16 44 19.2	+1.6
TNS				pmax	pmax				
	comp=Z,16nm,0.7s								
IDID	Didziasalis	20.32	360	*e*P		P		16 44 14.7	-1.7
IIGN	Ignalina	20.36	359	*e*P		P		16 44 17.1	+0.4
ISAL	Salakas	20.59	359	*e*P		P		16 44 18.0	-1.2
PABE	Paberze	20.61	356	*e*P		P		16 44 17.1	-2.3
MTLF	Montolieu	20.71	301	*e*P		P		16 44 19.6	-1.1
MTLF				pmax	pmax				
	comp=Z,4.0nm,0.8s								
SMF	Signal de Mont	20.80	311	*e*P		P		16 44 19.8	-1.8
SMF				pmax	pmax				
	comp=Z,15nm,0.5s								
WLF	Walferdange	21.04	320	*d*P		P		16 44 23.0	-1.1
WLF	Walferdange	21.04	320	P		P		16 44 23.0	-1.1
WLF				pmax	pmax				
	comp=Z,10.0nm,0.9s								
WLF	Walferdange	21.04	320	P		P		16 44 23.0	-1.1
LOR	Lormes	21.07	313	P		P		16 44 23.5	-1.0
LOR				pmax	pmax				
	comp=Z,26nm,1.1s								
AVF	Avril sur Loir	21.16	311	*e*P		P		16 44 23.8	-1.7
AVF				pmax	pmax				
	comp=Z,17nm,1.0s								
OBN	Obninsk	21.25	16	⇑*e*P		P		16 44 33.0	+6.7
OBN				*e*				16 44 48.4	
OBN				pmax	pmax				
	comp=Z,12nm,0.9s								
OBN				MLR		MLR			
	comp=Z,2μm,19.0s								
CAF	Calviac	21.29	305	*e*P		P		16 44 26.3	-0.6
CAF				pmax	pmax				
	comp=Z,10.0nm,1.1s								
BGF	Bois d'Agland	21.38	310	*e*P		P		16 44 29.3	+1.4
BGF				pmax	pmax				
	comp=Z,9.0nm,0.5s								
BTNL	Ternell	21.61	322	*d*P		P		16 44 29.2	-1.1
TCF	Toulx Ste Croi	21.68	309	*e*P		P		16 44 32.4	+1.3
TCF				pmax	pmax				
	comp=Z,4.0nm,0.7s								
MEM	Membach	21.68	322	*d*P		P		16 44 29.9	-1.2
MEM				*d*pP		pP		16 44 38.0	-0.1
MEM	Membach	21.68	322	P		P		16 44 30.4	-0.7
MEM				pmax	pmax				
	comp=Z,28nm,0.9s								
BSD	Bornholm Skovb	21.73	341	*e*P		P		16 44 28.0	-3.5
BSD	Bornholm Skovb	21.73	341	*i* P		P		16 44 29.9	-1.6
BSD	Bornholm Skovb	21.73	341	*i* P		P		16 44 29.9	-1.6
RJF	Les Rejaudoux	21.78	306	*e*P		P		16 44 30.7	-1.4
RJF				pmax	pmax				
	comp=Z,10.0nm,0.7s								
BGES	Gesves	22.02	321	*d*P		P		16 44 32.9	-1.7
MOS	Moscow	22.06	17	*e*P		P		16 44 50.2	+15
MOS				*e*				16 45 10.6	
DOU	Dourbes	22.11	320	*d*P		P		16 44 34.1	-1.6
TAM	Tamanrasset	22.15	242	P		P		16 44 37.9	+1.5
TAM				pmax	pmax				
	comp=Z,12nm,1.3s								
CLF	Chambon-Foret	22.37	313	P		P		16 44 37.6	-0.9
BLEU	Blekinge	22.59	344	*i* P		P		16 44 36.2	-4.5
BELG	Belogornoye	22.90	34	P		P		16 44 44.1	+0.2
	comp=Z,11nm,0.3s,baz=40,slow=21,SNR=7.0								
BELG	Belogornoye	22.90	34	⇓*e*P		P		16 44 44.4	+0.4
BELG				pmax	pmax				
	comp=Z,6.0nm,1.0s								
DEL	Delary	23.21	342	*i* P		P		16 44 43.7	-3.4
FLN	La Foliniere	24.34	313	*e*P		P		16 44 55.8	-2.2
FLN				pmax	pmax				
	comp=Z,11nm,0.5s								
GRR	Gorron	24.42	312	*e*P		P		16 44 56.6	-2.1
GRR				pmax	pmax				
	comp=Z,8.0nm,0.4s								
ESBB	Sonseca Array	24.79	290	P		P		16 45 00.5	-1.8
ESBB				IAmb		IAmb		16 45 14.8	
	comp=Z,4.7nm,0.7s								
ESDC	Sonseca Array	24.79	290	P		P		16 45 00.5	-1.8
	comp=Z,2.0nm,0.4s,baz=82,slow=9.4,SNR=20								
PAB	San Pablo	25.09	290	P		P		16 45 04.0	-0.9
PAB				pmax	pmax				
	comp=Z,5.0nm,0.9s								
PAB	San Pablo	25.09	290	P		P		16 45 04.0	-0.9
PAB				IAmb		IAmb		16 45 17.7	
	comp=Z,5.0nm,0.8s								
GEYT	Alibeck	25.35	74	P		P		16 45 07.2	-0.1
	comp=Z,4.2nm,0.6s,baz=268,slow=12,SNR=3.4								
GEYT	Alibeck	25.35	74	IAmb		IAmb		16 45 21.8	
	comp=Z,3.9nm,0.7s								
QUIF	Quistinic	25.69	309	*e*P		P		16 45 08.6	-1.6
QUIF				pmax	pmax				
	comp=Z,108nm,1.7s								
MDT	Midelt	26.06	274	P		P		16 45 13.4	-0.4
	comp=Z,1.8nm,0.6s,baz=228,slow=11,SNR=4.4								
FINES	FINESS Array B	26.48	359	P		P		16 45 15.4	-1.7
	comp=Z,1.1nm,0.3s,baz=171,slow=10,SNR=33								
FIA1	FINESS Array S	26.48	359	P		P		16 45 15.4	-1.7
FIA1				IAmb		IAmb		16 45 19.3	
	comp=Z,22nm,1.4s								
HFS	Hagfors	26.55	345	P		P		16 45 15.7	-2.2
	comp=Z,1.8nm,0.4s,baz=134,slow=11,SNR=15								
PBRG	Braganca	26.99	295	*e*P		P		16 45 22.0	-0.1
OSL	Oslo	27.06	342	*e*P		P		16 45 21.6	-0.8
KLMR	Klimovskoe	27.16	14	*e*P		P		16 45 21.6	-1.7
KLMR				pmax	pmax				
	comp=Z,11nm,1.1s								
KLMR	Klimovskoe	27.16	14	*e*P		P		16 45 21.6	-1.7
KLMR				AMP				16 45 38.2	
	comp=Z,11nm,1.1s								
MVO	Moncorvo	27.17	293	*e*P		P		16 45 25.1	+1.3
PBAR	Barrancos	27.23	287	*e*P		P		16 45 23.1	-1.1
AKTO	Aktyubinsk	27.42	46	P		P		16 45 25.2	-0.6
	comp=Z,2.1nm,0.3s,baz=252,slow=11,SNR=14								
PMRV	Marv??o	27.44	289	*e*P		P		16 45 27.7	+1.6
NC602	NORSAR Array S	27.56	344	*e*P		P		16 45 26.2	-0.8
NORES	NORESS Array B	27.56	344	P		P		16 45 26.3	-0.7
NB2	NORSAR Subarra	27.91	344	P		P		16 45 27.4	-2.7
	baz=156,slow=9.3								
NOA	NORSAR Array B	27.91	344	P		P		16 45 27.8	-2.3
	comp=Z,0.3nm,0.5s,baz=99,slow=8.1,SNR=9.4								
KIRV	Kirov	27.98	25	⇑*e*P		P		16 45 33.1	+2.4
NBO00	NORSAR Array S	28.00	343	P		P		16 45 29.3	-1.6
PBDV	Barranco-do-Ve	28.01	285	*e*P		P		16 45 31.8	+0.6
ABKAR	Akbulak array	28.19	49	P		P		16 45 33.3	+0.6
ABKAR	Akbulak array	28.19	49	P		P		16 45 33.2	+0.6
NC204	NORSAR Array S	28.22	344	P		P		16 45 31.6	-1.3
SKAR	Skarslia	28.32	341	*e*P		P		16 45 33.5	-0.3
EKA	Eskdalemuir Ar	28.93	324	P		P		16 45 37.4	-1.8
	comp=Z,1.3nm,0.4s,baz=126,slow=10,SNR=16								
DOMB	Dombas	29.29	343	*e*P		P		16 45 41.9	-0.5
ARU	Arti	30.43	35	⇓*e*P		P		16 45 53.7	+1.2
ARU				pmax	pmax				
	comp=Z,1.0nm,0.5s								
ARU	Arti	30.43	35	P		P		16 45 52.3	-0.1
ARU				IAmb		IAmb		16 46 01.7	
	comp=Z,3.6nm,0.9s								
NSS	Namsos	30.91	348	*e*P		P		16 45 55.5	-1.0
TOA0	Torodi Ar. Sit	31.39	232	P		P		16 46 01.6	+0.3
TOA0				IAmb		IAmb		16 46 09.9	
	comp=Z,6.5nm,0.8s								
TORD	Torodi Ar. Bea	31.39	232	P		P		16 46 01.2	-0.2
	comp=Z,8.3nm,1.0s,baz=32,slow=8.7,SNR=27								
MOR8	Moi Rana	32.06	351	*e*P		P		16 46 04.8	-1.8
STOK	Stokkvaagen	32.41	350	*e*P		P		16 46 09.0	-0.7
KONS	Konsvik	32.55	350	*e*P		P		16 46 10.0	-0.9
FAUS	Fauske	33.10	352	*e*P		P		16 46 13.8	-2.0
STEI	Steigen	33.64	352	*e*P		P		16 46 18.8	-1.6

NRIK	**Noril'sk**	**47.48**	**25**	⇓	*i* P		**P**	**16 48 15.4**	**+0.7**
NRIK					pmax		pmax		
	comp=Z,5.0nm,1.0s								
NRIK	**Noril'sk**	**47.48**	**25**		P		**P**	**16 48 15.6**	**+0.9**
NRIK					IAmb		IAmb	16 48 29.1	
	comp=Z,4.4nm,0.8s								
PYUN	**Piuthan**	**47.90**	**82**		*e*P		**P**	**16 48 20.6**	**+1.9**
KOLN	**Koldanda**	**48.52**	**82**		*e*P		**P**	**16 48 24.8**	**+1.2**
GKN	**Gorkha**	**49.27**	**81**		*e*P		**P**	**16 48 30.1**	**+0.8**
SUMG	**Summit**	**49.60**	**339**		P		**P**	**16 48 30.4**	**-1.0**
SUMG					pmax		pmax		
	comp=Z,6.0nm,1.0s								
SUMG	**Summit**	**49.60**	**339**		P		**P**	**16 48 30.4**	**-1.0**
SUMG					IAmb		IAmb	16 48 40.3	
	comp=Z,5.6nm,1.0s								
DMN	**Daman**	**49.81**	**82**		*e*P		**P**	**16 48 34.7**	**+1.2**
KKN	**Kakani**	**49.88**	**81**		*e*P		**P**	**16 48 35.0**	**+1.0**
PKIN	**Phulchoki**	**50.06**	**81**		*e*P		**P**	**16 48 35.9**	**+0.5**
	comp=Z,11nm,0.7s								
PKI	**Pulchoki**	**50.07**	**81**		*e*P		**P**	**16 48 36.1**	**+0.5**
GUN	**Gumba**	**50.32**	**81**		*e*P		**P**	**16 48 37.9**	**+0.5**
JIRN	**Jiri**	**50.67**	**81**		*e*P		**P**	**16 48 40.7**	**+0.6**
	comp=Z,14nm,0.8s								
RAMN	**Ramite**	**51.29**	**82**		*e*P		**P**	**16 48 45.1**	**+0.4**
TAPN	**Taplejung**	**52.03**	**81**		*e*P		**P**	**16 48 50.2**	**0.0**
	comp=Z,4.3nm,0.4s								
SFJD	**Kangerlussuaq**	**53.45**	**331**		P		**P**	**16 48 58.7**	**-1.1**
	comp=Z,3.4nm,0.5s,baz=76,slow=9.2,SNR=6.0								
SFJD	**Kangerlussuaq**	**53.45**	**331**		P		**P**	**16 48 58.7**	**-1.1**
TLY	**Talaya**	**55.77**	**47**	⇓	*e*P		**P**	**16 49 18.6**	**+1.7**
TLY					pmax		pmax		
	comp=Z,10.0nm,2.8s								
ZAK	**Zakamensk**	**55.88**	**49**		*e*P		**P**	**16 49 18.5**	**+0.7**
ZAK					pmax		pmax		
	comp=Z,5.0nm,1.1s								
GTA	**Gaotai**	**56.90**	**62**		*e*P		**P**	**16 49 26.6**	**+1.3**
GTA					pP		pP	16 49 30.6	-2.2
GTA					sP		sP	16 49 33.8	-1.9
GTA					pmax		pmax		
	comp=Z,2.0nm,0.9s								
TULEG	**Thule**	**57.57**	**344**		*i* P		**P**	**16 49 32.0**	**+2.8**
TULEG					*e*		P	16 49 34.6	+5.4
	baz=208,slow=8.6								
TULEG					*i* P		P	16 49 34.8	+5.6
TULEG					*e*S		P	16 49 36.5	+7.3
TULEG					IAML			16 49 37.1	
	comp=Z,8.9nm,0.3s								
SONM	**Songino Array**	**58.59**	**51**		P		**P**	**16 49 38.0**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=276,slow=8.0,SNR=3.1								
SONM	**Songino Array**	**58.59**	**51**		P		**P**	**16 49 38.0**	**+1.0**
ULN	**Ulaanbaatar**	**59.00**	**51**	⇓	*e*P		**P**	**16 49 42.7**	**+2.8**
ULN					pmax		pmax		
	comp=Z,4.0nm,1.1s								
EUNU	**Eureka**	**59.60**	**349**		P		**P**	**16 49 41.7**	**-1.8**
EUNU					IAmb		IAmb	16 50 00.2	
	comp=Z,5.6nm,1.4s								
TIXI	**Tiksi**	**60.87**	**21**	⇓	*e*P		**P**	**16 49 52.3**	**+0.2**
TIXI					pmax		pmax		
	comp=Z,35nm,2.5s								
TIXI	**Tiksi**	**60.87**	**21**		P		**P**	**16 49 51.3**	**-0.8**
DRLN	**Deer Lake**	**60.98**	**312**		P		**P**	**16 49 52.9**	**-0.4**
BOSA	**Boshof**	**63.28**	**181**		P		**P**	**16 50 09.8**	**+0.9**
	comp=Z,5.8nm,1.2s,baz=279,slow=20,SNR=2.5								
HHC	**Hu-ho-hao-te**	**64.65**	**57**		*e*P		**P**	**16 50 20.3**	**+2.3**
HHC					pmax		pmax		
	comp=Z,10.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**65.30**	**84**		P		**P**	**16 50 22.1**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=293,slow=7.5,SNR=15								
CMAR	**Chiang Mai Arr**	**65.30**	**84**		*i* P		**P**	**16 50 23.6**	**+1.2**
CMAR					pmax		pmax		
	comp=Z,2.0nm,0.8s								
BATG	**Bathurst New B**	**67.00**	**312**				**P**	**16 50 33.4**	**+0.5**
BILL	**Bilibino**	**72.90**	**15**	⇑	*e*P		**P**	**16 51 08.5**	**-0.3**
BILL					*e*S		**S**	**17 00 30.9**	**-2.2**
BILL					pmax		pmax		
	comp=Z,8.0nm,2.7s								
BILL					MLR		MLR		
	comp=Z,944nm,16.0s								
KLR	**Kul'dur**	**73.04**	**41**	⇑	*e*P		**P**	**16 51 09.9**	**0.0**
KLR					pmax		pmax		
	comp=Z,22nm,2.3s								
SEY	**Seymchan**	**73.22**	**23**	⇓	*e*P		**P**	**16 51 11.0**	**+0.3**
NJ2	**Nanjing**	**73.99**	**62**		*e*P		**P**	**16 51 16.1**	**+0.3**
NJ2					pmax		pmax		
	comp=Z,5.0nm,0.5s								
INK	**Inuvik**	**75.96**	**353**		P		**P**	**16 51 26.2**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=25,slow=13,SNR=5.0								
USRK	**Ussuriysk Ar.**	**76.04**	**46**		P		**P**	**16 51 27.4**	**0.0**
	comp=Z,2.5nm,0.6s,baz=294,slow=4.4,SNR=17								
KSRS	**Korea Array**	**77.35**	**53**		P		**P**	**16 51 35.3**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=305,slow=4.7,SNR=4.7								
YKA	**Yellowknife Ar**	**78.00**	**343**		P		**P**	**16 51 37.2**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=36,slow=5.4,SNR=26								
ILAR	**Eielson Array**	**80.44**	**357**		P		**P**	**16 51 50.5**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=334,slow=3.7,SNR=6.3								
EFI	**East Falkland**	**113.60**	**223**		pmax		pmax		
	comp=Z,167nm,1.5s								
ASAR	**Alice Springs**	**116.74**	**101**		PKP		**PKPdf**	**16 58 23.4**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=311,slow=1.7,SNR=13								

ISK ***17*** *16:45:15.2,35°.93N×31°.45E,h6km,ML2.7/7*
DDA ***17*** *16:45:16.0,36°.22N×31°.33E,h19km±2km,ML2.2*
ISC 17 16:45:12.5±1.3,36°.10N±0°.04×31°.21E±0°.03,h10km±10km, n28,σ1°57/47,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.74**	**288**	*i* P	**Pn**	**16 45 30.5**	**+1.6**
AKUM				*i* S	**Sn**	**16 45 43.1**	**+2.9**
AKUM				IAML		16 45 48.0	
	comp=N,243nm,0.5s						
KEPZ	**Antalya-Kepez**	**0.86**	**21**	*i* P	**Pg**	**16 45 29.4**	**+0.3**
KEPZ				*i* S	**Sg**	**16 45 39.0**	**-1.4**
GAZI	**Gazipasa**	**0.91**	**81**	*i* P	**Pg**	**16 45 30.6**	**+0.7**
GAZI				*i* S	**Sg**	**16 45 40.3**	**-1.4**
GAZI				IAML		16 45 43.0	
	comp=E,247nm,0.4s						
GAZI				IAML		16 45 43.0	
	comp=N,254nm,0.4s						
GAZI	**Gazipasa**	**0.91**	**81**	PG	**Pg**	**16 45 30.4**	**+0.5**
GAZI				SG	**Sg**	**16 45 41.3**	**-0.4**
KORT	**Korkueli**	**1.14**	**323**	*i* P	**Pb**	**16 45 34.0**	**-0.3**
KORT				IAML		16 45 55.0	
	comp=N,47nm,0.6s						
KORT				IAML		16 45 59.0	
	comp=E,82nm,1.1s						
AKAS	**Kas**	**1.31**	**276**	*i* P	**Pn**	**16 45 36.4**	**-0.5**
AKAS				*i* S	**Sb**	**16 45 51.4**	**-2.6**
AKAS				IAML		16 45 56.0	
	comp=E,29nm,0.6s						
AKAS				IAML		16 46 00.0	
	comp=N,39nm,0.7s						
SEDI	**Konya, Seydise**	**1.42**	**18**	*i* P	**Pn**	**16 45 39.0**	**+0.5**
SEDI				*i* S	**Sn**	**16 45 54.0**	**-3.2**
BERE	**Bereket-Mersin**	**1.65**	**81**	PN	**Pb**	**16 45 43.3**	**+0.3**
BERE				SN	**Sn**	**16 46 03.6**	**+0.8**
LEF	**Lefka**	**1.68**	**125**	*i* P	**Pn**	**16 45 40.7**	**-1.2**
LEF				*i* S	Sn	16 45 55.0	-8.5
LEF				IAML		16 46 01.0	
	comp=E,64nm,0.6s						
LEF				IAML		16 46 05.0	
	comp=N,65nm,0.6s						
LEF	**Lefka**	**1.68**	**125**	PN	**Pn**	**16 45 41.6**	**-0.3**
LEF				SN	**Sn**	**16 46 01.6**	**-1.9**
GOLH	**Golhisar**	**1.75**	**311**	*i* P	**Pb**	**16 45 45.7**	**+1.1**
GOLH				*i* S	**Sb**	**16 46 08.1**	**+1.4**
KKBE	**Karaman, Kazim**	**1.79**	**51**	*i* P	**Pb**	**16 45 45.2**	**-0.1**
KKBE				*i* S	**Sn**	**16 46 05.8**	**-0.5**
KKBE				IAML		16 46 11.0	
	comp=N,30nm,0.3s						
KKBE				IAML		16 46 15.0	
	comp=E,33nm,0.5s						
CAEL	**Denizli, Camel**	**1.83**	**304**	*i* P	**Pn**	**16 45 45.2**	**+1.1**
TEVE	**Tevekalti-Mers**	**1.84**	**79**	PN	**Pb**	**16 45 45.9**	**-0.3**
TEVE				SN	**Sn**	**16 46 08.2**	**+0.8**
GULN	**MERSIN_Gulnar**	**1.89**	**87**	*i* P	**Pn**	**16 45 45.9**	**+1.1**
GULN				*i* S	**Sn**	**16 46 07.8**	**-0.8**
GULN				IAML		16 46 14.0	
	comp=N,28nm,0.4s						
GULN				IAML		16 46 16.0	
	comp=E,23nm,0.5s						
AKKU	**Akkuyu-Mersin**	**1.90**	**88**	PN	**Pn**	**16 45 46.4**	**+1.6**
AKKU				SN	**Sn**	**16 46 09.6**	**+0.8**
BAGO	**Egridir - ISPA**	**1.92**	**350**	*i* P	**Pn**	**16 45 45.3**	**0.0**
BAGO				*i* S	**Sn**	**16 46 05.6**	**-3.9**
IKL	**Isikli**	**2.01**	**85**	PN	**Pb**	**16 45 48.4**	**-0.6**
IKL				SN	**Sn**	**16 46 12.4**	**+0.9**
DOGA	**KONYA_Doganhis**	**2.04**	**10**	*i* P	**Pn**	**16 45 47.9**	**+1.0**
DOGA				*i* S	**Sn**	**16 46 10.2**	**-2.3**
DOGA				IAML		16 46 19.0	
	comp=N,18nm,0.8s						
KONT	**Konya--Tatoy**	**2.06**	**26**	*i* P	**Pn**	**16 45 48.7**	**+1.6**
CSS	**Mathiatis**	**2.07**	**123**	PN	**Pn**	**16 45 46.8**	**-0.4**
YVAC	**Isparta, Yalva**	**2.17**	**1**	*i* P	**Pn**	**16 45 49.6**	**+0.9**
YVAC				*i* S	**Sn**	**16 46 13.4**	**-2.3**
YVAC				IAML		16 46 19.0	
	comp=E,16nm,0.3s						
TAVA	**DENIZLI_Tavas**	**2.29**	**307**	*i* P	**Pn**	**16 45 51.8**	**+1.4**
TAVA				*i* S	**Sn**	**16 46 18.9**	**+0.1**
TAVA				IAML		16 46 26.0	
	comp=N,27nm,0.7s						
KZIL	**AFYON_Kizioren**	**2.32**	**339**	*i* P	**Pn**	**16 45 52.0**	**+1.2**
KZIL				IAML		16 46 23.0	
	comp=N,11nm,0.4s						
KZIL				IAML		16 46 26.0	
	comp=E,14nm,0.9s						
KIZK	**Mersin**	**2.40**	**80**	*i* P	**Pn**	**16 45 54.3**	**+2.5**
KIZK	**Mersin**	**2.40**	**80**	PN	**Pn**	**16 45 54.2**	**+2.5**
KIZK				SN	**Sn**	**16 46 21.9**	**+0.7**
ALIN	**Konya, Altinte**	**2.57**	**31**	*i* P	**Pn**	**16 45 55.7**	**+1.5**
KERG	**Konya-Eregli**	**2.68**	**60**	*i* P	**Pn**	**16 45 58.5**	**+2.7**
KERG				IAML		16 46 34.0	
	comp=E,15nm,0.2s						
KERG				IAML		16 46 35.0	
	comp=N,10nm,0.5s						

TUL ***17*** *16:48:16.3±1.4,35°.92N±0°.02×97°.33W±0°.02,h5km±7km, ML3.4,mb_Lg3.2/15(NEIC),Error ellipse: s-maj=2.8km s-min=1.2km az=137.0*
NEIC ***17*** *16:48:16.5±0.6,35°.942N±0°.008×97°.35W±0°.02,h8km±7km, Error ellipse: s-maj=2.1km s-min=1.1km az=75.0*
ANF ***17*** *16:48:16.4±0.2,35°.95N×97°.34W,h8km,ML3.7/16, Error ellipse: s-maj=2.7km s-min=2.0km az=148.0*
ISC 17 16:48:16.4±1.0,35°.95N±0°.02×97°.34W±0°.02,h7km±10km, n60,σ0°44/66,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.18**	**212**		**Pg**	**16 48 19.9**	**-0.1**
BCOK	**Bluff Creek, N**	**0.36**	**217**	Pg	**Pg**	**16 48 23.3**	**-0.2**
BCOK				Sg	**Sg**	**16 48 28.5**	**+0.2**
OK025	**Westminster Rd**	**0.36**	**180**		**Pg**	**16 48 23.3**	**-0.2**
OK025				Sg	**Sg**	**16 48 28.4**	**0.0**
OK001	**Jones High Sch**	**0.39**	**174**	Pg	**Pg**	**16 48 23.7**	**-0.3**
OK031	**S. Brethren Rd**	**0.41**	**89**		**Pg**	**16 48 24.4**	**+0.1**
OK031				Sg	**Sg**	**16 48 30.2**	**+0.5**
OK030	**Cody Creek RV**	**0.45**	**92**		**Pg**	**16 48 25.2**	**0.0**
OK030				Sg	**Sg**	**16 48 31.5**	**+0.5**
OKCFA	**Oklahoma City**	**0.54**	**190**		**Pg**	**16 48 26.5**	**-0.3**
OKCFA	**Oklahoma City**	**0.54**	**190**	P	**Pg**	**16 48 26.5**	**-0.3**
	baz=9.4,SNR=26						
OKCFA				S	**Sg**	**16 48 33.9**	**+0.1**
	baz=9.4						
OKCFA	**Oklahoma City**	**0.54**	**190**	P		16 48 26.5	
	baz=9.4,SNR=26						
OKCFA				S		16 48 33.9	
	baz=9.4						
OKCSW	**OKLAHOMA CITY**	**0.55**	**188**		**Pg**	**16 48 26.6**	**-0.3**
QUOK	**Quay**	**0.56**	**66**		**Pg**	**16 48 27.4**	**+0.2**
FNO	**Franklin**	**0.69**	**184**		**Pg**	**16 48 29.8**	**+0.1**
FNO				Sg	**Sg**	**16 48 39.2**	**+0.5**
CROK	**Carrier**	**0.76**	**317**		**Pg**	**16 48 31.4**	**+0.3**
GC02	**Grant County #**	**1.00**	**335**		**Pg**	**16 48 35.7**	**+0.1**
KAN13	**South Haven SW**	**1.07**	**354**		**Pg**	**16 48 37.0**	**0.0**
OK032	**Salt Plains WL**	**1.11**	**321**		**Pg**	**16 48 37.5**	**-0.2**
KAN14	**Manchester OK**	**1.13**	**334**		**Pg**	**16 48 38.0**	**-0.1**
T35A	**Sooner Cattle**	**1.18**	**34**		**Pg**	**16 48 38.6**	**-0.4**
T35B	**Sooner Cattle**	**1.18**	**34**	P	**Pg**	**16 48 38.5**	**-0.6**
	baz=215,SNR=195						
T35B				S	**Sb**	**16 48 54.5**	**-0.1**
	baz=215						
T35B	**Sooner Cattle**	**1.18**	**34**	P		16 48 38.5	
	baz=215,SNR=195						
T35B				S		16 48 54.5	
	baz=215						
KAN09	**Caldwell North**	**1.21**	**349**	Pg	**Pb**	**16 48 39.5**	**-0.2**
KAN05	**Bluff City Nor**	**1.24**	**340**		**Pn**	**16 48 40.0**	**-0.2**
TUL1	**Leonard**	**1.26**	**91**	P	**Pn**	**16 48 38.9**	**-1.5**
	baz=272,SNR=40						
TUL1				S	**Sb**	**16 48 56.2**	**-0.7**
	baz=272						
TUL1	**Leonard**	**1.26**	**91**	P		16 48 38.9	
	baz=272,SNR=40						
TUL1				S		16 48 56.2	
	baz=272						
KS20	**Mayfield South**	**1.29**	**352**		**Pn**	**16 48 41.0**	**0.0**
KAN10	**Anthony SW Sta**	**1.32**	**333**		**Pn**	**16 48 41.3**	**-0.1**
KAN08	**Anthony NE Sta**	**1.38**	**338**		**Pb**	**16 48 42.3**	**-0.2**
KAN16	**Harper SW Stat**	**1.40**	**336**	Pn	**Pn**	**16 48 42.6**	**+0.1**
U32A	**Winter Ranch,**	**1.41**	**288**		**Pn**	**16 48 42.6**	**0.0**
U32A	**Winter Ranch,**	**1.41**	**288**	P	**Pn**	**16 48 42.6**	**0.0**
	baz=108						
U32A				S	**Sg**	**16 49 01.9**	**0.0**
	baz=108						
U32A	**Winter Ranch,**	**1.41**	**288**	P		16 48 42.6	
	baz=108						
U32A				S		16 49 01.9	
	baz=108						
KAN12	**Harper NE Stat**	**1.45**	**339**		**Pb**	**16 48 43.6**	**-0.2**
WMOK	**Wichita Mounta**	**1.69**	**225**		**Pn**	**16 48 46.6**	**+0.2**
WMOK	**Wichita Mounta**	**1.69**	**225**	P	**Pn**	**16 48 46.5**	**+0.2**
	baz=44,SNR=88						
WMOK				S	**Sb**	**16 49 09.1**	**-0.2**
	baz=44						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		16 48 46.5	
	baz=44,SNR=88						
WMOK				S		16 49 09.1	
	baz=44						
X37A	**Clayton**	**2.10**	**129**		**Pn**	**16 48 52.5**	**+0.5**
X37A				IAmb_Lg		16 49 24.4	
	comp=Z,116nm,0.8s						
X37A	**Clayton**	**2.10**	**129**	P	**Pn**	**16 48 52.3**	**+0.2**
	baz=311,SNR=15						
X37A				S	**Sb**	**16 49 20.0**	**-1.2**
	baz=311						
X37A	**Clayton**	**2.10**	**129**	P		16 48 52.3	
	baz=311,SNR=15						
X37A				S		16 49 20.0	
	baz=311						
U38A	**Gravette**	**2.44**	**77**		**Pn**	**16 48 57.3**	**+0.6**
U38A	**Gravette**	**2.44**	**77**	P	**Pn**	**16 48 57.3**	**+0.6**
	baz=259						
U38A	**Gravette**	**2.44**	**77**	P		16 48 57.3	
	baz=259						
Z35A	**Perchaven, San**	**2.61**	**178**		**Pn**	**16 48 59.4**	**+0.3**
Z35A				IAmb_Lg		16 49 38.5	
	comp=Z,40nm,0.7s						
Z35A	**Perchaven, San**	**2.61**	**178**	P	**Pn**	**16 48 59.4**	**+0.3**
	baz=358,SNR=8.7						
Z35A	**Perchaven, San**	**2.61**	**178**	P		16 48 59.4	
	baz=358,SNR=8.7						
W39A	**Magazine**	**2.99**	**103**		**Pn**	**16 49 04.6**	**+0.3**
W39A	**Magazine**	**2.99**	**103**	P	**Pn**	**16 49 04.7**	**+0.3**
	baz=286,SNR=12						
W39A				S	**Sn**	**16 49 41.3**	**+0.8**
	baz=286						
W39A	**Magazine**	**2.99**	**103**	P		16 49 04.7	
	baz=286,SNR=12						
W39A				S		16 49 41.3	
	baz=286						
Z38A	**Mt. Pleasant**	**3.31**	**143**	P	**Pn**	**16 49 09.0**	**+0.3**
	baz=325						
Z38A	**Mt. Pleasant**	**3.31**	**143**	P		16 49 09.0	
	baz=325						
MIAR	**Mount Ida**	**3.38**	**113**		**Pn**	**16 49 10.7**	**+1.0**
MIAR	**Mount Ida**	**3.38**	**113**	P	**Pn**	**16 49 10.2**	**+0.6**
	baz=296,SNR=13						
MIAR				S	**Sn**	**16 49 50.3**	**+0.2**
	baz=296						
MIAR	**Mount Ida**	**3.38**	**113**	P		16 49 10.2	
	baz=296,SNR=13						
MIAR				S		16 49 50.3	
	baz=296						
U40A	**Yellville**	**3.65**	**82**		**Pn**	**16 49 13.1**	**-0.3**
U40A	**Yellville**	**3.65**	**82**	P	**Pn**	**16 49 13.5**	**+0.1**
	baz=265,SNR=19						
U40A				P		16 49 13.5	
	baz=265,SNR=19						
S39A	**Bolivar**	**3.66**	**60**		**Pn**	**16 49 13.9**	**+0.4**
S39A	**Bolivar**	**3.66**	**60**	P	**Pn**	**16 49 14.0**	**+0.4**
	baz=243,SNR=11						
S39A	**Bolivar**	**3.66**	**60**	P		16 49 14.0	
	baz=243,SNR=11						
AMTX	**Amarillo**	**3.70**	**255**		**Pn**	**16 49 15.3**	**+1.1**
AMTX	**Amarillo**	**3.70**	**255**	P	**Pn**	**16 49 13.8**	**-0.3**
	baz=72,SNR=21						
AMTX	**Amarillo**	**3.70**	**255**	P		16 49 13.8	
	baz=72,SNR=21						
WHTX	**Lake Whitney,**	**3.95**	**181**	P	**Pn**	**16 49 17.3**	**-0.2**
	baz=1.3						
WHTX	**Lake Whitney,**	**3.95**	**181**	P		16 49 17.3	
	baz=1.3						
WHAR	**Wooly Hollow**	**4.17**	**98**		**Pn**	**16 49 20.4**	**0.0**
W41B	**Gary Mavity, V**	**4.22**	**99**	P	**Pn**	**16 49 21.5**	**+0.3**
	baz=282,SNR=10						
W41B	**Gary Mavity, V**	**4.22**	**99**	P		16 49 21.5	
	baz=282,SNR=10						
MGMO	**Mountain Grove**	**4.26**	**72**		**Pn**	**16 49 22.1**	**+0.3**
R40A	**Maddies Statio**	**4.68**	**58**		**Pn**	**16 49 27.6**	**0.0**
R40A	**Maddies Statio**	**4.68**	**58**	P	**Pn**	**16 49 27.5**	**0.0**
	baz=241,SNR=15						
R40A	**Maddies Statio**	**4.68**	**58**	P		16 49 27.5	
	baz=241,SNR=15						
N33A	**J Bar K, Exete**	**4.79**	**359**	IAmb_Lg		16 51 00.2	
	comp=Z,36nm,1.0s						
BGNE	**Belgrade**	**5.49**	**354**	IAmb_Lg		16 51 20.9	
	comp=Z,52nm,0.7s						
P40A	**Paris**	**5.51**	**48**	IAmb_Lg		16 51 17.6	
	comp=Z,33nm,0.8s						
N38A	**Joes South For**	**5.81**	**32**	IAmb_Lg		16 51 30.1	
	comp=Z,54nm,0.8s						
HICK	**Hickman**	**6.58**	**82**	IAmb_Lg		16 51 45.9	
	comp=Z,56nm,0.8s						
W45A	**Hickory Valley**	**6.69**	**94**	IAmb_Lg		16 51 55.7	
	comp=Z,28nm,0.8s						
I40A	**Norwalk**	**9.46**	**31**	IAmb_Lg		16 53 15.0	
	comp=Z,13nm,0.7s						

IDC ***17*** *16:53:30.2±0.5,61°.18S×23°.50W,h0km,mb4.6/13, mb1 4.7/13,mb1mx4.6/18,mbtmp4.6/13,ML5.4/1, Error ellipse: s-maj=21.0km s-min=15.8km az=34.0*
NEIC ***17*** *16:53:36.0±1.8,61°.06S±0°.10×23°.3W±0°.2,h35km±1km, mb4.9/32,Error ellipse: s-maj=18.8km s-min=13.7km az=219.0*
ISC 17 16:53:32.7±0.3,61°.07S±0°.07×23°.25W±0°.08,h10km±10km,n127, σ1°45/118,mb4.8/22,3D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**9.81**	**308**	Pn	**Pn**	**16 55 55.1**	**+1.5**
VNA1	**Neumayer--Stat**	**11.35**	**154**	P	**Pn**	**16 56 13.9**	**-0.7**
VNA1				S	Sn	16 58 10.0	-11
VNA3	**Neumayer Olymp**	**11.55**	**158**	P	**Pn**	**16 56 15.8**	**-1.5**
VNA3				S	Sn	16 58 11.8	-14
VNA2	**Neumayer--Watz**	**11.75**	**154**	P	**Pn**	**16 56 18.5**	**-1.6**
	baz=310,slow=15						
VNA2				S	Sn	16 58 17.1	-14
SNAA	**Sanae**	**13.31**	**151**	P	**Pn**	**16 56 40.0**	**-1.5**
SNAA				S	Sn	16 58 53.4	-16
SNAA	**Sanae**	**13.31**	**151**	Pn	**Pn**	**16 56 39.7**	**-1.8**
	19nm,0.3s,baz=322,slow=13,SNR=557						
SNAA				Sn	Sn	16 58 55.3	-14
	4.7nm,0.3s,baz=205,slow=17,SNR=3.3						
BELA	**Belgrano 2**	**17.28**	**188**		**Pn**	**16 57 34.2**	**+0.6**
PMSA	**Palmer Station**	**18.69**	**241**	P	**P**	**16 57 48.9**	**-1.7**
PMSA				IAmb	IAmb	16 57 49.8	
	comp=Z,88nm,1.1s						
EFI	**East Falkland**	**21.20**	**281**	P	**P**	**16 58 18.1**	**+0.1**
EFI	**East Falkland**	**21.20**	**281**	*de*PKIKP	**P**	**16 58 18.0**	**+0.1**
SYO	**Syowa Base**	**26.48**	**134**	⇓ *e*P	**P**	**16 59 05.4**	**-4.0**
SYO	**Syowa Base**	**26.48**	**134**	⇓ *e*P	**P**	**16 59 09.8**	**+0.4**
QSPA	**South Pole Qui**	**29.16**	**180**	P	**P**	**16 59 35.9**	**+2.1**
QSPA				IAmb	IAmb	16 59 44.4	
	comp=Z,28nm,1.3s						
MAW	**Mawson**	**34.94**	**138**	P	**P**	**17 00 24.4**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=228,slow=9.6,SNR=4.6						
MAW	**Mawson**	**34.94**	**138**	P	**P**	**17 00 24.1**	**0.0**
PLCA	**Paso Flores**	**35.06**	**284**	P	**P**	**17 00 24.0**	**-1.5**
	comp=Z,2.9nm,0.6s,baz=165,slow=9.6,SNR=7.7						
PLCA	**Paso Flores**	**35.06**	**284**	P	**P**	**17 00 25.6**	**+0.1**
PLCA				IAmb	IAmb	17 00 38.0	
	comp=Z,7.0nm,0.8s						
PLCA	**Paso Flores**	**35.06**	**284**	*e*P	**P**	**17 00 23.8**	**-1.7**
PLTB	**Pedras Altas**	**35.40**	**312**	*e*P	**P**	**17 00 27.7**	**-0.7**
BI02	**San Fabin de**	**38.65**	**287**	P	**P**	17 00 52.8	-3.2
SUR	**Sutherland**	**40.42**	**65**	P	**P**	**17 01 11.1**	**+0.1**
	comp=Z,6.3nm,0.7s,baz=221,slow=7.9,SNR=9.4						
SUR	**Sutherland**	**40.42**	**65**	P	**P**	**17 01 10.0**	**-1.0**
SUR				IAmb	IAmb	17 01 26.4	
	comp=Z,17nm,1.1s						
MT09	**Talagante**	**40.90**	**290**	P	**P**	**17 01 13.7**	**-1.1**
MT09				IAmb	IAmb	17 01 21.9	
	comp=Z,33nm,1.2s						
MT01	**Popeta**	**40.94**	**289**	P	**P**	**17 01

LPAZ	**La Paz**	**54.94**	**304**	P	**P**	**17 03 03.3**	**-1.0**
LPAZ				IAmb	IAmb	17 03 11.8	
	comp=Z,18nm,1.4s						
LPAZ	**La Paz**	**54.94**	**304**	*e*P	**P**	**17 03 04.4**	**+0.1**
VILB	**Vilhena**	**55.01**	**314**	*e*P	**P**	**17 03 03.3**	**-0.9**
SMTB	**Santa Maria do**	**55.15**	**330**	*e*P	**P**	**17 03 06.1**	**+1.0**
PRPB	**Parauapebas**	**58.28**	**328**	*e*P	**P**	**17 03 27.5**	**+0.1**
LSZ	**Lusaka**	**58.58**	**62**	P	**P**	**17 03 28.1**	**-1.5**
NPGB	**Novo Progresso**	**58.99**	**322**	*e*P	**P**	**17 03 31.9**	**-0.4**
SAML	**Samuel**	**59.78**	**313**	P	**P**	**17 03 35.3**	**-2.4**
SAML				IAmb	IAmb	17 03 42.5	
	comp=Z,20nm,1.4s						
ETMB	**Extrema**	**60.09**	**309**	*e*P	**P**	**17 03 39.2**	**-0.7**
DBIC	**Dimbokro**	**69.06**	**20**	P	**P**	**17 04 37.9**	**-0.5**
	comp=Z,4.4nm,0.5s,baz=175,slow=6.2,SNR=8.1						
DBIC	**Dimbokro**	**69.06**	**20**	P	**P**	**17 04 37.5**	**-0.8**
DBIC				IAmb	IAmb	17 04 39.3	
	comp=Z,14nm,1.0s						
OTAV	**Otavalo**	**74.11**	**301**	*e*P	**P**	**17 05 08.1**	**-1.3**
KMBO	**Kilima Mbogo**	**75.14**	**64**	P	**P**	**17 05 17.1**	**+1.8**
	comp=Z,2.7nm,0.9s,baz=187,slow=4.3,SNR=8.6						
TOA0	**Torodi Ar. Sit**	**76.59**	**25**	P	**P**	**17 05 23.5**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.59**	**25**	P	**P**	**17 05 23.1**	**+0.1**
	comp=Z,14nm,0.5s,baz=196,slow=6.0,SNR=77						
TORD				PKPPKP	**P'P'df**	**17 32 36.0**	**+4.8**
	comp=Z,0.2nm,0.3s,baz=302,slow=2.8,SNR=3.6						
TORD	**Torodi Ar. Bea**	**76.59**	**25**	P	**P**	**17 05 23.3**	**+0.3**
STKA	**Stephens Creek**	**86.56**	**167**	P	**P**	**17 06 14.9**	**-0.8**
	comp=Z,4.1nm,0.8s,baz=148,slow=10.0,SNR=7.5						
STKA	**Stephens Creek**	**86.56**	**167**	P	**P**	**17 06 14.1**	**-1.6**
ASAR	**Alice Springs**	**93.55**	**159**	P	**P**	**17 06 47.1**	**-1.6**
	comp=Z,2.7nm,0.8s,baz=184,slow=4.1,SNR=31						
ASAR				PKKP	**PKKPbc**	**17 23 51.8**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=17,slow=2.1,SNR=6.4						
ASAR	**Alice Springs**	**93.55**	**159**	P	**P**	**17 06 48.0**	**-0.7**
AS31	**Alice Springs**	**93.56**	**159**	P	**P**	**17 06 47.9**	**-0.8**
WRA	**Warramunga Arr**	**97.27**	**159**	P	**P**	**17 07 03.6**	**-2.1**
	comp=Z,0.7nm,0.8s,baz=194,slow=4.1,SNR=4.8						
BSD	**Bornholm Skovb**	**119.71**	**24**	IAMs_20	IAMs_20	17 12 17.2	
	comp=Z,14μm,21.2s						
CMAR	**Chiang Mai Arr**	**121.39**	**110**	PKP	**PKPdf**	**17 12 24.1**	**-1.7**
	comp=Z,2.3nm,0.8s,baz=236,slow=3.5,SNR=14						
CMAR	**Chiang Mai Arr**	**121.39**	**110**		**PKPdf**	**17 12 25.7**	**-0.1**
NB2	**NORSAR Subarra**	**124.63**	**20**	PKPdf	**PKPdf**	**17 12 29.4**	**-1.3**
	baz=202,slow=1.9						
NOA	**NORSAR Array B**	**124.63**	**20**	PKP	**PKPdf**	**17 12 28.8**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=180,slow=1.5,SNR=4.9						
NVAR	**Mina Array Bea**	**125.07**	**287**	PKP	**PKPdf**	**17 12 32.2**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=145,slow=3.6,SNR=6.7						
NVAR	**Mina Array Bea**	**125.07**	**287**		**PKPdf**	**17 12 33.6**	**+1.1**
ULM	**Lac du Bonnet**	**125.23**	**311**	PKP	**PKPdf**	**17 12 30.6**	**-1.5**
	comp=Z,3.0nm,0.6s,baz=139,slow=2.5,SNR=5.8						
ULM	**Lac du Bonnet**	**125.23**	**311**		**PKPdf**	**17 12 30.9**	**-1.3**
FINES	**FINESS Array B**	**127.89**	**28**	PKP	**PKPdf**	**17 12 35.7**	**-1.2**
	comp=Z,5.9nm,0.7s,baz=139,slow=2.2,SNR=21						
FINES	**FINESS Array B**	**127.89**	**28**		**PKPdf**	**17 12 36.1**	**-0.7**
ABKAR	**Akbulak array**	**128.49**	**56**		**PKPdf**	**17 12 38.1**	**-0.3**
AKTO	**Aktyubinsk**	**128.65**	**54**	PKP	**PKPdf**	**17 12 37.9**	**-0.8**
	comp=Z,5.9nm,1.1s,baz=196,slow=4.3,SNR=9.7						
AAK	**Ala-Archa**	**129.65**	**72**	PKP	**PKPdf**	**17 12 40.8**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=222,slow=5.5,SNR=5.2						
AAK	**Ala-Archa**	**129.65**	**72**		**PKPdf**	**17 12 41.8**	**+0.8**
ARCES	**ARCESS Array B**	**134.85**	**22**	PKP	**PKPdf**	**17 12 48.7**	**-1.2**
	comp=Z,4.2nm,0.9s,baz=210,slow=1.0,SNR=13						
BVAR	**Borovoye Array**	**135.65**	**60**	PKP	**PKPdf**	**17 12 50.6**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=142,slow=7.5,SNR=6.3						
MKAR	**Makanchi Array**	**136.42**	**74**	PKhKP	PKPpre	17 12 45.7	
	comp=Z,0.3nm,0.7s,baz=257,slow=5.2,SNR=3.2						
WMQ	**Urumqi**	**136.78**	**81**	*e*PKP	**PKPdf**	**17 12 55.0**	**+0.7**
KURBB	**Kurchatov Arra**	**137.47**	**67**	PKP	**PKPdf**	**17 12 53.7**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=232,slow=2.5,SNR=7.5						
KURK	**Kurchatov**	**137.57**	**67**		**PKPdf**	**17 12 53.7**	**-1.7**
GTA	**Gaotai**	**139.29**	**95**	*e*P	PKPdf	17 12 51.1	-8.1
GTA				pP	pPKPdf	17 12 55.4	-5.4
GTA				sP	PKiKP	17 12 58.4	-3.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	**Yellowknife Ar**	**141.20**	**312**	PKhKP	PKPpre	17 12 56.1	
	comp=Z,2.3nm,0.8s,baz=147,slow=1.7,SNR=4.8						
NJ2	**Nanjing**	**141.93**	**122**	*e*PKP	**PKPdf**	**17 13 04.1**	**+0.1**
ZALV	**Zalesovo Beam**	**142.56**	**68**	PKhKP	PKPpre	17 12 57.7	
	comp=Z,1.0nm,0.5s,baz=234,slow=3.4,SNR=5.4						
TIA	**Tai'an**	**144.77**	**117**	PKP	**PKPab**	**17 13 07.8**	**0.0**
BTO	**Baotou**	**145.11**	**104**	*e*PKPbc	**PKPbc**	**17 13 09.4**	**+0.4**
BTO				SS	SS	17 35 18.4	-0.4
EUNU	**Eureka**	**145.33**	**344**		**PKPdf**	**17 13 08.3**	**-0.4**
HHC	**Hu-ho-hao-te**	**146.03**	**106**	*e*PKPbc	**PKPdf**	**17 13 11.8**	**+0.8**
HHC				AMB	AMB		
	comp=Z,260nm,6.5s						
BJI	**Beijing**	**147.51**	**112**	PKPbc	**PKPdf**	**17 13 15.8**	**+2.4**
SONM	**Songino Array**	**148.73**	**92**	PKPbc	**PKPdf**	**17 13 18.6**	**+3.2**
	comp=Z,20nm,0.9s,baz=224,slow=2.6,SNR=32						
TLY	**Talaya**	**149.94**	**84**	PKPbc	**PKPdf**	**17 13 20.7**	**+3.7**
	comp=Z,2.6nm,0.4s,baz=189,slow=3.6,SNR=7.7						
KSAR	**Wonju Array Be**	**150.22**	**129**		**PKPbc**	**17 13 23.1**	**+0.1**
KSRS	**Korea Array**	**150.24**	**129**	PKPbc	**PKPbc**	**17 13 22.2**	**-0.8**
	comp=Z,10nm,0.9s,baz=201,slow=2.6,SNR=31						
NRIK	**Noril'sk**	**151.43**	**44**	PKPbc	**PKPdf**	**17 13 23.4**	**+4.7**
	comp=Z,6.0nm,1.0s,baz=55,slow=0.9,SNR=14						
MAT	**Matsushiro**	**152.78**	**146**	PKP	**PKPbc**	**17 13 28.8**	**-0.2**
MJAR	**Matsushiro Arr**	**152.78**	**146**	PKPbc	**PKPbc**	**17 13 27.5**	**-1.4**
	comp=Z,6.5nm,0.9s,baz=192,slow=3.3,SNR=10						
MENT	**Mentasta**	**152.85**	**300**		**PKPbc**	**17 13 28.5**	**+0.2**
DOT	**Dot Lake**	**153.27**	**302**		**PKPbc**	**17 13 29.5**	**+0.3**
ILAR	**Eielson Array**	**154.82**	**303**	PKPbc	**PKPbc**	**17 13 31.7**	**-0.7**
	comp=Z,5.2nm,1.1s,baz=161,slow=1.4,SNR=17						
PETK	**Petropavlovsk-**	**172.00**	**184**	PKP	**PKPdf**	**17 13 37.1**	**-3.1**
	comp=Z,2.6nm,1.0s,baz=194,slow=5.6,SNR=3.6						

*IDC **17** 16:56:24.1±3.3,4°.91S×129°.89E,h122km±45km,mb3.0/1, mb1 3.3/5,mb1mx3.0/37,mbtmp3.6/5,Error ellipse: s-maj=81.2km s-min=20.8km az=85.0*

ISC 17 16:56:22.1±1.0,5°.03S±0°.07×130°.1E±0°.2,h100km,n5, σ2.5°76/8,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.30**	**16**	P	**Pn**	**16 57 27.2**	**+1.7**
	3.8nm,0.3s,baz=43,slow=15,SNR=82						
SIJI				S	**Sn**	**16 58 12.7**	**-1.9**
	6.8nm,0.3s,baz=238,slow=23,SNR=17						
FITZ	**Fitzroy Crossi**	**13.69**	**198**	P	**Pn**	**16 59 33.0**	**+0.8**
	0.1nm,0.3s,baz=186,slow=22,SNR=2.3						
WRA	**Warramunga Arr**	**15.40**	**165**	P	**Pn**	**16 59 55.8**	**+1.7**
	0.2nm,0.3s,baz=350,slow=13,SNR=3.6						
WRA				S	**Sn**	**17 02 40.8**	**-3.5**
	0.1nm,0.3s,baz=145,slow=20,SNR=4.8						
ASAR	**Alice Springs**	**18.90**	**169**	P	**P**	**17 00 37.8**	**+2.8**
	0.3nm,0.3s,baz=347,slow=11,SNR=44						
ASAR				S	**S**	**17 04 02.7**	**-2.0**
	0.0nm,0.3s,baz=350,slow=15,SNR=2.2						
MKAR	**Makanchi Array**	**66.62**	**326**	P	**P**	**17 07 00.1**	**-1.8**
	0.2nm,0.4s,baz=116,slow=8.0,SNR=4.1						

IDC 17 17:17:00.0±1.6,2°.61S×139°.07E,h0km,mb3.1/2, mb1 3.3/3,mb1mx3.2/23,mbtmp3.1/3,ML3.1/1,Error ellipse: s-maj=32.1km s-min=23.2km az=159.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.64**	**87**	Pn	Pb	17 17 30.9	-0.2
	3.2nm,0.3s,baz=253,slow=7.8,SNR=31						
JAY				Sn	Sn	17 17 50.9	-1.1
	6.8nm,0.3s,baz=126,slow=20,SNR=11						
WRA	**Warramunga Arr**	**17.83**	**195**	P	Pn	17 21 09.0	-0.8
	0.1nm,0.3s,baz=17,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**21.52**	**193**	P	P	17 21 51.2	+0.4
	0.5nm,0.7s,baz=19,slow=9.3,SNR=14						
MKAR	**Makanchi Array**	**69.93**	**322**	P	P	17 28 13.0	-0.2
	0.2nm,0.6s,baz=120,slow=8.5,SNR=2.4						

*TAP **17** 17:30:43.9,24°.83N×121°.97E,h7km,ML3.3,B*
*JMA **17** 17:30:45.1,24°.81N×121°.89E,h31km,M2.4*

ISC 17 17:30:44.2±0.9,24°.82N±0°.02×121°.97E±0°.02,h15km±6km, n68,σ0°88/96,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NTC	**Toucheng**	**0.13**	**286**	P	**Pg**	**17 30 47.6**	**-0.2**
	baz=282						
NTC				S	**Sg**	**17 30 50.2**	**-0.1**
	baz=282						
TWB1	**Santiao Chiao**	**0.19**	**5**	*i* P	**Pb**	**17 30 48.5**	**-1.0**
	baz=8.0						
TWB1				*i* S	**Sb**	**17 30 51.0**	**-1.9**
	baz=8.0						
TIPB	**Shuangxi**	**0.20**	**319**	*i* P	**Pb**	**17 30 48.8**	**-0.9**
	baz=318						
TIPB				*i* S	**Sb**	**17 30 51.6**	**-1.7**
	baz=318						
ILA	**Ilan**	**0.21**	**255**	S	**Sg**	**17 30 52.8**	**+0.6**
	baz=251						
TWC	**Suao**	**0.23**	**208**	P	**Pb**	**17 30 49.5**	**-0.7**
	baz=204						
TWE	**Neicheng**	**0.29**	**251**	P	**Pg**	**17 30 50.4**	**0.0**
	baz=247						
TWE				S	**Sg**	**17 30 54.5**	**-0.1**
	baz=247						
NDS	**Dongshan**	**0.29**	**231**	P	**Pb**	**17 30 50.5**	**-0.7**
	baz=229						
NWF	**Wu-fen Shan**	**0.30**	**326**	P	**Pb**	**17 30 51.0**	**-0.5**
	baz=325						
NWF				S	**Sb**	**17 30 55.3**	**-1.0**
	baz=325						
WFSB	**Wu-fen Shan**	**0.30**	**326**	*i* P	**Pb**	**17 30 51.0**	**-0.4**
	baz=325						
WFSB				S	**Sb**	**17 30 55.0**	**-1.2**
	baz=325						
TNOU	**National Taiwa**	**0.38**	**332**	P	**Pb**	**17 30 52.3**	**-0.3**
	baz=330						
TWA	**Mucha**	**0.39**	**295**	P	**Pb**	**17 30 52.3**	**-0.5**
	baz=293						
TWA				*e*S	**Sb**	**17 30 58.0**	**-0.5**
	baz=293						
ENTT	**Nioudou**	**0.41**	**244**	*e*P	**Pb**	**17 30 52.9**	**-0.3**
	baz=242						
EWUT	**Wuta**	**0.41**	**205**	P	**Pg**	**17 30 52.7**	**+0.2**
	baz=204						
NWLT	**Wulai**	**0.43**	**265**	*e*P	**Pb**	**17 30 53.0**	**-0.5**
	baz=263						
NHDH	**Xindian Distri**	**0.43**	**290**	P	**Pb**	**17 30 53.4**	**-0.1**
	baz=288						
NHDH				*e*S	**Sb**	**17 30 58.9**	**-0.8**
	baz=288						
ENA	**Nanau**	**0.44**	**208**	*e*P	**Pg**	**17 30 53.3**	**+0.2**
	baz=206						
TATO	**Taipei**	**0.46**	**290**	*e*P	**Pb**	**17 30 54.0**	**-0.1**
	baz=288						
TATO				*e*S	**Sb**	**17 30 59.6**	**-1.2**
	baz=288						
NDT	**Datong Townshi**	**0.47**	**243**	*e*P	**Pb**	**17 30 53.8**	**-0.3**
	baz=241						
NWRT	**Kuosheng**	**0.47**	**324**	P	**Pb**	**17 30 54.2**	**-0.1**
	baz=323						
YM01	**YM01**	**0.49**	**312**	P	**Pb**	**17 30 54.7**	**+0.1**
	baz=311						
YM01				*e*S	**Sb**	**17 31 00.8**	**-0.8**
	baz=311						
YM11	**YM11**	**0.50**	**314**	P	**Pb**	**17 30 55.1**	**+0.3**
	baz=313						
YM11				*e*S	**Sb**	**17 31 02.3**	**+0.4**
	baz=313						
YM10	**YM10**	**0.50**	**312**	P	**Pb**	**17 30 54.9**	**+0.2**
	baz=311						
YM10				*e*S	**Sb**	**17 31 00.9**	**-1.0**
	baz=311						
YM05	**YM05**	**0.50**	**313**	P	**Pb**	**17 30 55.0**	**+0.1**
	baz=312						
YM08	**YM08**	**0.50**	**317**	P	**Pb**	**17 30 54.7**	**-0.1**
	baz=316						
BACT	**New Taipei Cit**	**0.51**	**291**	*e*S	**Sn**	**17 31 02.5**	**-3.0**
	baz=289						
YM04	**YM04**	**0.52**	**310**	P	**Pb**	**17 30 55.2**	**+0.2**
	baz=309						
YM04				*e*S	**Sn**	**17 31 04.8**	**-0.8**
	baz=309						
ANP	**Anpu**	**0.55**	**312**	*e*P	**Pg**	**17 30 55.9**	**+0.8**
	baz=311						
YHNB	**Yeheng**	**0.56**	**255**	*e*P	**Pg**	**17 30 55.2**	**-0.1**
	baz=253						
TWY	**Chenhua**	**0.57**	**324**	P	**Pg**	**17 30 56.1**	**+0.7**
	baz=323						
NSK	**Sanguang**	**0.57**	**256**	*e*P	**Pg**	**17 30 55.4**	**-0.2**
	baz=254						
TWS1	**Kuangyinshan**	**0.57**	**299**	*e*P	**Pn**	**17 30 56.8**	**-1.1**
	baz=298						
NTST	**Danshui**	**0.58**	**306**	*e*P	**Pn**	**17 30 56.9**	**-1.1**
	baz=305						
NTY	**Taoyuan**	**0.64**	**287**	*e*P	**Pn**	**17 30 58.4**	**-0.4**
	baz=285						
NNSB	**Datong**	**0.66**	**234**	*e*P	**Pb**	**17 30 56.9**	**-0.6**
	baz=233						
NNSH	**Datong**	**0.66**	**234**	*e*P	**Pg**	**17 30 57.1**	**-0.1**
	baz=233						
NNS	**Nan Shan**	**0.66**	**235**	*e*P	**Pn**	**17 30 56.9**	**-0.6**
	baz=233						
NACB	**Ninganchiao**	**0.73**	**208**	*e*P	**Pn**	**17 30 59.0**	**-1.0**
	baz=207						
NACB				*e*S	**Sg**	**17 31 08.2**	**+0.2**
	baz=207						
NCUH	**Zhongli**	**0.73**	**282**	*e*P	**Pn**	**17 31 00.1**	**+0.1**
	baz=281						
NCUH				*e*S	**Sn**	**17 31 10.1**	**-0.7**
	baz=281						
ETLH	**Xiulin Townshi**	**0.75**	**216**	*e*P	**Pg**	**17 30 59.1**	**+0.2**
	baz=215						
TWD	**Chiawan**	**0.81**	**205**	*e*P	**Pn**	**17 31 00.4**	**-0.7**
	baz=203						
TWD				*e*S	**Sg**	**17 31 11.0**	**+0.4**
	baz=203						
PCYT	**Pengchaiyu**	**0.81**	**6**	*e*P	**Pg**	**17 31 00.7**	**+0.7**
	baz=7.0						
NHW	**Xinwu Township**	**0.86**	**283**	*e*P	**Pn**	**17 31 02.4**	**+0.6**
	baz=282						
NHW				*e*S	**Sn**	**17 31 15.2**	**+1.1**
	baz=282						
HSN1	**Hsinchu**	**0.87**	**268**	*e*P	**Pn**	**17 31 02.9**	**+1.0**
	baz=266						
HSN1				*e*S	**Sn**	**17 31 16.1**	**+1.8**
	baz=266						
LIOB	**Emei**	**0.88**	**259**	*e*P	**Pn**	**17 31 03.4**	**+1.3**
	baz=258						
SBCB	**Hsinchu**	**0.90**	**269**	*e*P	**Pn**	**17 31 03.9**	**+1.6**
	baz=267						
SBCB				*e*S	**Sn**	**17 31 16.2**	**+1.3**
	baz=267						
NSTT	**Nanjuang**	**0.90**	**258**	*e*P	**Pn**	**17 31 02.8**	**+0.4**
	baz=257						
NSTT				*e*S	**Sn**	**17 31 16.8**	**+1.7**
	baz=257						
HSN	**Hsinchu**	**0.91**	**269**	*e*S	**Sn**	**17 31 15.8**	**+0.5**
	baz=270						
TWT	**Tachien**	**0.92**	**232**	*e*P	**Pn**	**17 31 03.1**	**+0.4**
	baz=231						
WHF	**Hehuan Shan**	**0.93**	**224**	*e*P	**Pg**	**17 31 02.0**	**-0.3**
	baz=222						
WHF				*e*S	**Sg**	**17 31 14.0**	**-0.5**
	baz=222						
TDCB	**Techi**	**0.93**	**233**	*e*P	**Pn**	**17 31 02.5**	**-0.3**
	baz=232						
JYNG	**Yonagunijimaku**	**0.96**	**112**	P	**Pn**	**17 31 03.5**	**+0.3**
JYNG				*e*S	**Sn**	**17 31 16.5**	**-0.1**
YOJ	**Yonaguni jima**	**1.01**	**110**	P	**Pn**	**17 31 04.3**	**+0.4**
YOJ				*e*S	**Sn**	**17 31 17.8**	**-0.1**
YOJ	**Yonaguni jima**	**1.01**	**110**	*e*P	**Pb**	**17 31 03.7**	**+0.3**
	baz=110						
YOJ				*e*S	**Sn**	**17 31 17.7**	**-0.1**
	baz=110						
CHGB	**Renai**	**1.05**	**224**	*e*P	**Pn**	**17 31 04.0**	**-0.6**
	baz=223						
CHGB				*e*S	**Sg**	**17 31 20.6**	**+2.4**
	baz=223						
WHP	**Taichung City**	**1.08**	**240**	*e*P	**Pg**	**17 31 05.5**	**+0.5**
	baz=239						
ESL	**Shilin**	**1.11**	**206**	*e*P	**Pg**	**17 31 05.4**	**-0.3**
	baz=205						
OWD	**Renai**	**1.12**	**220**	*e*P	**Pg**	**17 31 06.2**	**+0.2**
	baz=219						
TWQ1	**Liyutan**	**1.19**	**247**	*e*P	**Pg**	**17 31 08.0**	**+0.9**
	baz=246						
TWQ1				*e*S	**Sg**	**17 31 25.8**	**+3.3**
	baz=246						
WPL	**Puli Township**	**1.22**	**229**	*e*P	**Pg**	**17 31 07.8**	**0.0**
	baz=228						
EGFH	**Guangfu**	**1.25**	**203**	*e*P	**Pg**	**17 31 08.2**	**-0.1**
	baz=203						
EGFH				*e*S	**Sg**	**17 31 25.3**	**+0.8**
	baz=203						
VWDT	**VWDT**	**1.30**	**216**	*e*P	**Pg**	**17 31 09.5**	**+0.2**
	baz=215						
SMLT	**Sun Moon Lake**	**1.35**	**227**	*e*P	**Pg**	**17 31 10.3**	**+0.1**
	baz=225						
SSLB	**Suanglung**	**1.38**	**222**	*e*P	**Pg**	**17 31 10.2**	**-0.7**
	baz=221						
HGSD	**Ruisui**	**1.41**	**201**	*e*P	**Pg**	**17 31 11.6**	**+0.3**
	baz=200						
YULB	**Yu-li**	**1.55**	**204**	*e*P	**Pg**	**17 31 13.4**	**-0.5**
	baz=203						
IRIF	**Iriomote-Funau**	**1.67**	**106**	P	**Pn**	**17 31 13.2**	**+0.2**
JKRS	**Kuro-shima**	**1.95**	**107**	P	**Pn**	**17 31 17.4**	**+0.7**
JIJ	**Ishigaki jima**	**2.03**	**102**	P	**Pn**	**17 31 18.8**	**+0.9**
JIJ				*e*S	**Sn**	**17 31 43.0**	**0.0**

*ISK **17** 17:34:39.9,35°.09N×26°.69E,h3km,ML3.3/3*
*ATH **17** 17:34:39.4,34°.96N×26°.75E,h16km±3km,ML3.6/9,Error ellipse: s-maj=4.3km s-min=1.2km az=338.0*
*THE **17** 17:34:40.5,35°.10N×26°.66E,h0km±2km,ML3.5/5,Error ellipse: s-maj=5.4km s-min=0.9km az=156.0*
*DDA **17** 17:34:41.8,35°.19N×26°.73E,h15km±3km,ML3.1*
*IDC **17** 17:34:41.2±2.3,35°.04N×26°.75E,h38km±24km,mb3.7/6, mb1 3.6/11,mb1mx3.4/42,mbtmp3.7/11,ML3.6/5,Error ellipse: s-maj=22.7km s-min=15.8km az=169.0*

ISC 17 17:34:38.9±1.2,34°.98N±0°.04×26°.76E±0°.02,h24km±9km, n74,σ1°48/101,mb3.7/6,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.47**	**287**	P	**Pb**	**17 34 48.3**	**-0.4**
ZKR				S	**Sb**	**17 34 55.3**	**+0.1**
ZKR				AML	AML	17 34 55.8	
	comp=N,18004μm,0.3s						
ZKR				AML	AML	17 34 55.9	
	comp=E,33275μm,0.3s						
ZKR	**Zakros**	**0.47**	**287**	P	**Pb**	**17 34 48.2**	**-0.4**
ZKR				S	**Sb**	**17 34 55.3**	**+0.1**
	comp=E,13μm,0.3s						
ZKR	**Zakros**	**0.47**	**287**	PG	**Pb**	**17 34 48.3**	**-0.4**
ZKR				SG	**Sb**	**17 34 54.5**	**-0.7**
STIA	**Sitia Lasithi**	**0.60**	**292**	P	**Pb**	**17 34 49.2**	**-1.5**
STIA				S	**Sb**	**17 34 58.0**	**-0.8**
KARP	**Karpathos**	**0.66**	**30**	P	**Pb**	**17 34 52.2**	**+0.4**
KARP				S	**Sn**	**17 35 02.3**	**-0.1**
KARP				AML	AML	17 35 02.9	
	comp=N,39117μm,0.4s						
KARP				AML	AML	17 35 03.1	
	comp=E,34989μm,0.3s						
KARP	**Karpathos**	**0.66**	**30**	P	**Pb**	**17 34 51.6**	**-0.2**
KARP				S	**Sn**	**17 35 02.3**	**-0.1**
	comp=E,19μm,0.3s						
KARP	**Karpathos**	**0.66**	**30**	PG	**Pb**	**17 34 52.2**	**+0.4**
KARP				SG	**Sb**	**17 35 01.4**	**+0.8**
FRMA	**Ierapetra Chan**	**0.85**	**273**	P	**Pb**	**17 34 52.8**	**-2.2**
FRMA				S	**Sb**	**17 35 04.5**	**-1.4**
	comp=E,1μm,0.4s						
NPS	**Neapolis**	**0.99**	**287**	P	**Pn**	**17 34 57.5**	**+0.2**
NPS				S	**Sn**	**17 35 10.7**	**+0.2**
NPS				AML	AML	17 35 18.2	
	comp=E,9741μm,0.4s						
NPS				AML	AML	17 35 18.4	
	comp=N,6821μm,0.4s						
NPS	**Neapolis**	**0.99**	**287**	P	**Pn**	**17 34 57.5**	**+0.2**
NPS				S	**Sn**	**17 35 11.0**	**+0.5**
	comp=N,4μm,0.4s						
HRKL	**Herakleio**	**1.40**	**284**	PN	**Pb**	**17 35 05.8**	**+1.4**
IDI	**Anoyia**	**1.57**	**282**	Pn	**Pb**	**17 35 07.6**	**+0.3**
	comp=N,38nm,0.3s,baz=107,slow=16,SNR=134						
IDI				Sn	**Sb**	**17 35 28.7**	**+2.0**
	comp=N,42nm,0.3s,baz=92,slow=20,SNR=4.6						
IDI	**Anoyia**	**1.57**	**282**	P	**Pb**	**17 35 07.4**	**+0.1**
IDI				AML	AML	17 35 40.6	
	comp=N,1358μm,0.5s						
IDI				AML	AML	17 35 43.6	
	comp=E,1312μm,0.6s						
IDI	**Anoyia**	**1.57**	**282**	P	**Pb**	**17 35 07.4**	**+0.1**
IDI	**Anoyia**	**1.57**	**282**	PN	**Pb**	**17 35 08.3**	**+1.0**
IDI				SN	**Sb**	**17 35 29.3**	**+2.6**
SIVA	**Sivas**	**1.60**	**272**	P	**Pb**	**17 35 08.0**	**+0.1**
SIVA				AML	AML	17 35 48.8	
	comp=E,4469μm,0.8s						
SIVA				AML	AML	17 36 02.8	
	comp=N,2585μm,0.7s						
SIVA	**Sivas**	**1.60**	**272**	P	**Pb**	**17 35 08.0**	**+0.1**
NIS1	**Nisyros Isl.**	**1.66**	**12**	P	**Pb**	**17 35 08.4**	**-0.4**
NIS1				AML	AML	17 35 45.5	
	comp=E,3638μm,0.8s						
NIS1				AML	AML	17 35 48.5	
	comp=N,2594μm,0.5s						
NIS1	**Nisyros Isl.**	**1.66**	**12**	P	**Pb**	**17 35 08.4**	**-0.4**
NIS1	**Nisyros Isl.**	**1.66**	**12**	PN	**Pb**	**17 35 09.3**	**+0.5**
ARG	**Arkhangelos**	**1.66**	**42**	P	**Pb**	**17 35 09.6**	**+0.7**
ARG				AML	AML	17 35 41.2	
	comp=N,1474μm,0.6s						

	comp=E,29nm,0.3s								
USAK	**Uak-Merkez**	**4.15**	**25**	*i* P		**Pn**	**17 35 42.3**	**+1.5**
KZIL	**AFYON_Kizioren**	**4.25**	**39**	*i* P		**Pn**	**17 35 43.9**	**+1.5**
STEP	**BALIKESIR_Sava**	**4.46**	**10**	*i* P		**Pn**	**17 35 46.7**	**+1.6**
KOCA	**Canakkale, Ayv**	**4.55**	**354**	*i* P		**Pn**	**17 35 47.0**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**4.76**	**358**	*i* P		**Pn**	**17 35 50.2**	**+1.0**
DOGA	**KONYA_Doganbis**	**5.03**	**50**	*i* P		**Pn**	**17 35 53.5**	**+0.4**
DOGA				*i* S		Sn	17 36 38.6	-12
DOGA					IAML		17 36 56.0	
	comp=E,26nm,0.4s							
DOGA					IAML		17 37 16.0	
	comp=N,14nm,0.7s							
AGG	**Agios Georgios**	**5.38**	**320**	*i* P		**Pn**	**17 35 59.6**	**+1.9**
AGG				*i* S		**Sn**	**17 36 55.5**	**-3.3**
CSS	**Mathiatis**	**5.39**	**88**	*i* P		**Pn**	**17 35 58.4**	**+0.5**
CSS				*i* S		Sn	17 36 51.7	-7.5
KKBE	**Karaman, Kazim**	**5.48**	**64**	*i* P		**Pn**	**17 36 01.9**	**+2.7**
KKBE				*i* S		**Sn**	**17 36 55.4**	**-6.1**
GULN	**MERSIN_Gulnar**	**5.66**	**76**	*i* P		**Pn**	**17 36 00.7**	**-0.8**
GULN				*i* S		**Sn**	**17 37 03.0**	**-2.7**
GULN					IAML		17 37 10.0	
	comp=N,28nm,0.5s							
GULN					IAML		17 37 11.0	
	comp=E,14nm,0.5s							
ALIN	**Konya, Altinte**	**5.93**	**54**	*i* P		**Pn**	**17 36 03.6**	**-1.7**
ALIN					IAML		17 37 19.0	
	comp=E,21nm,0.3s							
BRTR	**Keskin Array B**	**7.24**	**47**	Pn		**Pn**	**17 36 24.6**	**+1.2**
	comp=E,0.2nm,0.3s,baz=235,slow=10.0,SNR=1.5							
MMAI	**Mount Meron Ar**	**7.44**	**103**	Pn		**Pn**	**17 36 26.1**	**0.0**
	comp=E,2.0nm,0.3s,baz=289,slow=11,SNR=15							
MMAI					Sn	**Sn**	**17 37 48.6**	**-1.1**
	comp=E,4.6nm,0.3s,baz=305,slow=20,SNR=6.8							
EIL	**Elat**	**8.71**	**125**	Pn		**Pn**	**17 36 44.2**	**+0.7**
	comp=E,0.7nm,0.3s,baz=340,slow=1.7,SNR=10.0							
EIL					Sn	Sn	17 38 15.3	-5.7
	comp=E,2.0nm,0.3s,baz=312,slow=1.5,SNR=7.5							
AKASG	**Malin Array Be**	**15.82**	**6**	Pn		**Pn**	**17 38 20.9**	**+0.9**
	comp=E,0.8nm,0.3s,baz=194,slow=12,SNR=5.0							
GERES	**GERESS Array B**	**16.89**	**329**	Pn		**Pn**	**17 38 34.5**	**+0.7**
	comp=E,0.1nm,0.3s,baz=158,slow=11,SNR=4.2							
ESDC	**Sonseca Array**	**24.81**	**290**	P		**P**	**17 39 58.9**	**-0.4**
	comp=E,0.4nm,0.5s,baz=81,slow=9.3,SNR=5.4							
FINES	**FINESS Array B**	**26.49**	**359**	P		**P**	**17 40 12.5**	**-1.6**
	comp=E,1.1nm,0.8s,baz=146,slow=11,SNR=3.7							
TORD	**Torodi Ar. Bea**	**31.40**	**232**	P		**P**	**17 40 58.7**	**+0.5**
	comp=E,0.5nm,0.4s,baz=29,slow=8.3,SNR=8.3							
ARCES	**ARCESS Array B**	**34.62**	**359**	P		**P**	**17 41 24.1**	**-1.7**
	comp=E,5.6nm,1.1s,baz=168,slow=6.2,SNR=7.2							
MKAR	**Makanchi Array**	**42.78**	**57**	P		**P**	**17 42 36.1**	**+1.5**
	comp=E,0.4nm,0.3s,baz=270,slow=8.3,SNR=24							
ZALV	**Zalesovo Beam**	**44.18**	**46**	P		**P**	**17 42 46.4**	**+0.7**
	comp=E,1.5nm,0.3s,baz=265,slow=9.1,SNR=9.7							

SKO 17 17:59:31.3, 40°.94N×20°.60E, *h*5km, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.23**	**41**	*i* Pg	Pg	17 59 34.9	-0.9
OHR				*i* Sg	Sg	17 59 39.7	+0.9
OHR				*e*Lg	Lg	17 59 39.8	
	comp=N,56nm,0.7s						
OHR				*e*Lg	Lg	17 59 41.3	
	comp=E,66nm,0.4s						
FNA	**Florina**	**0.61**	**105**	*i* Pg	Pg	17 59 41.9	-1.1
FNA				*i* Sg	Sg	17 59 51.5	+0.6
PRZK	**Prizren**	**1.27**	**5**	*i* Pn	Pn	17 59 56.2	+0.3
STIP	**Stip**	**1.41**	**57**	*i* Pn	Pg	18 00 00.3	+1.9

*LDG **17** 18:01:30.0±0.2, 44°.15N×10°.90E, *h*9km, Ml2.3/18, Error ellipse: s-maj=3.5km s-min=3.1km az=66.0*

ROM 17 18:01:28.9±0.1, 44°.189N±0°.006×10°.893E±0°.009, *h*10km, ML2.3/7, 3C-1D, Error ellipse: s-maj=0.7km s-min=0.6km az=4.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.17**	**97**	P	Pg	18 01 32.6	0.0
FNVD				S	Sg	18 01 35.6	+0.4
ZCCA	**Zocca**	**0.17**	**20**	⇑P	Pg	18 01 32.9	+0.2
ZCCA				S	Sg	18 01 37.4	+2.0
ZCCA				AML	AML		
	comp=E,2860μm,1.1s						
ZCCA				AML	AML		
	comp=N,5460μm,0.4s						
ZCCA				AML	AML		
	comp=N,5695μm,0.4s						
ZCCA				AML	AML		
	comp=E,2855μm,1.1s						
ZCCA				AML	AML		
	comp=N,5465μm,0.4s						
ZCCA				AML	AML		
	comp=E,3055μm,0.8s						
ZCCA				AML	AML		
	comp=N,5690μm,0.4s						
POPM	**Popiglio**	**0.17**	**214**	P	Pg	18 01 33.3	+0.6
POPM				S	Sg	18 01 37.3	+2.0
POPM	**Popiglio**	**0.17**	**214**	P	Pg	18 01 33.3	+0.6
POPM				S	Sg	18 01 37.1	+1.8
POPM				AML	AML		
	comp=E,12100μm,0.2s						
POPM				AML	AML		
	comp=N,6450μm,0.4s						
MTCR	**Monte La Croce**	**0.18**	**155**	P	Pg	18 01 33.2	+0.3
MTCR				S	Sg	18 01 37.0	+1.4
MTCR				AML	AML		
	comp=N,1920μm,0.8s						
MTCR				AML	AML		
	comp=E,2955μm,0.3s						
MTCR				AML	AML		
	comp=N,1915μm,0.8s						
BDI	**Bagni Di Lucca**	**0.25**	**240**	P	Pg	18 01 34.5	+0.5
BDI				S	Sg	18 01 39.1	+1.6
CARD	**Cardoso**	**0.34**	**241**	P	Pg	18 01 35.9	+0.2
CARD				S	Sb	18 01 41.6	-0.9
SARO	**Sassorosso**	**0.35**	**269**	P	Pg	18 01 25.8	-10
SARO				S	Sb	18 01 42.0	-1.0
SARO	**Sassorosso**	**0.35**	**269**	P	Pg	18 01 36.2	+0.2
SARO				S	Sb	18 01 42.0	-1.0
SARO				AML	AML		
	comp=N,1120μm,0.4s						
SARO				AML	AML		
	comp=E,394μm,0.5s						
SEI	**Scarperia**	**0.36**	**112**	P	Pb	18 01 36.9	-0.6
SEI				S	Sb	18 01 42.8	-0.3
SEI				AML	AML		
	comp=E,1585μm,0.3s						
SEI				AML	AML		
	comp=N,1375μm,0.5s						
VLC	**Villacollemand**	**0.37**	**266**	⇑P	Pg	18 01 36.6	+0.4
VLC				S	Sb	18 01 42.4	-0.9
VLC				AML	AML		
	comp=E,2350μm,0.4s						
VLC				AML	AML		
	comp=E,2300μm,0.4s						
VLC				AML	AML		
	comp=N,1216μm,1.1s						
VLC				AML	AML		
	comp=N,1202μm,1.1s						
MAIM	**Mastiano**	**0.40**	**227**	P	Pb	18 01 38.0	0.0
MAIM				S	Sg	18 01 42.9	+0.8
CRMI	**Carmignano**	**0.40**	**172**	P	Pg	18 01 37.3	+0.4
CRMI				AML	AML		
	comp=E,111μm,1.3s						
CRMI				AML	AML		
	comp=N,136μm,0.4s						
ERBM	**Eremo**	**0.41**	**304**	P	Pg	18 01 37.2	+0.1
ERBM				S	Sb	18 01 43.8	-0.9
ERBM				AML	AML		
	comp=E,552μm,0.8s						
ERBM				AML	AML		
	comp=N,355μm,0.8s						
MTRZ	**Monterenzio**	**0.45**	**65**	AML	AML		
	comp=N,1235μm,1.6s						
MTRZ				AML	AML		
	comp=E,1410μm,0.6s						
GRAM	**Graiana**	**0.67**	**297**	P	Pg	18 01 42.1	+0.2
GRAM				S	Sb	18 01 52.1	+0.1
CRE	**Caprese Michel**	**0.95**	**126**	⇓P	Pg	18 01 46.8	-0.5
CRE				AML	AML		
	comp=N,158μm,0.3s						
CRE				AML	AML		
	comp=E,88μm,0.6s						
CAFI	**Castiglion Fio**	**1.16**	**137**	⇑P	Pb	18 01 50.1	-0.9
CAFI				AML	AML		
	comp=E,45μm,0.5s						
CAFI				AML	AML		
	comp=N,43μm,1.5s						
PGF	**Pioggiola**	**2.14**	**221**	*e*Pn	Pn	18 02 03.9	-0.9
PGF				*e*Sn	Sn	18 02 28.9	-2.6
	comp=N,2.5nm,0.5s						
SBF	**Sospel**	**2.52**	**264**	*e*Pn	Pn	18 02 09.0	-0.9
SBF				*e*Sn	Sn	18 02 38.0	-2.6
	comp=N,3.5nm,0.3s						
ABTA	**Abfaltersbach**	**2.80**	**23**	*e*Pn	Pn	18 02 14.6	+0.8
	comp=N,0.6nm,0.2s						
ABTA				*e*Sn	Sn	18 02 47.1	-0.5
	comp=N,0.5nm,0.2s						
FETA	**Feichten**	**2.83**	**358**	*i* Pn	Pn	18 02 15.6	+1.2
	comp=N,0.2nm,0.1s						
MBDF	**Montbardon**	**3.00**	**282**	*e*P	Pn	18 02 18.8	+2.2
MBDF				*e*Sn	Sn	18 02 49.9	-2.8
	comp=N,1.0nm,0.4s						
SQTA	**Sankt Quirin**	**3.04**	**4**	*i* Pn	Pn	18 02 19.3	+2.1
	comp=N,1.7nm,0.1s						
SQTA				*i* Sn	Sn	18 02 54.3	+0.6
	comp=N,3.9nm,0.3s						
MYKA	**Terra Mystica**	**3.12**	**37**	*i* Sn	Sn	18 02 54.4	-1.0
	comp=N,0.9nm,0.2s						
WTTA	**Wattenberg**	**3.12**	**9**	*i* Pn	Pn	18 02 20.6	+2.3
	comp=N,1.3nm,0.2s						
WTTA				*i* Sn	Sn	18 02 56.9	+1.2
	comp=N,2.4nm,0.3s						
FRF	**La Foret Royal**	**3.13**	**260**	*e*Pn	Pn	18 02 16.6	-1.7
FRF	**La Foret Royal**	**3.13**	**260**	*e*P	Pn	18 02 20.4	+2.1
FRF				*e*Sn	Sn	18 02 53.8	-2.0
	comp=N,1.3nm,0.2s						
LPG	**La Plagne**	**3.22**	**295**	*e*Pn	Pn	18 02 20.1	+0.3
LPG				*e*Sn	Sn	18 02 55.4	-3.0
	comp=N,1.2nm,0.4s						
LPL	**La Plagne**	**3.24**	**296**	*e*Pn	Pn	18 02 21.0	+1.0
LPL				*e*Sn	Sn	18 02 56.9	-1.9
	comp=N,1.9nm,0.4s						
LMR	**La Mourre**	**3.29**	**256**	*e*P	Pn	18 02 22.3	+1.9
LMR				*e*Sn	Sn	18 02 54.7	-4.9
	comp=N,3.4nm,0.4s						
KBA	**Koelnbreinsper**	**3.36**	**30**	*e*Sn	Sn	18 03 00.4	-1.3
	comp=N,1.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.66**	**283**	*e*Pn	Pn	18 02 25.3	-0.3
ORIF	**Oris-en-Rattie**	**3.66**	**283**	*e*P	Pn	18 02 28.7	+3.1
ORIF				*e*Sn	Sn	18 03 06.9	-1.9
	comp=N,3.7nm,0.7s						
SMRF	**Simiane la Rot**	**3.84**	**269**	*e*Pn	Pn	18 02 27.1	-0.9
SMRF	**Simiane la Rot**	**3.84**	**269**	*e*P	Pn	18 02 31.2	+3.2
SMRF				*e*Sn	Sn	18 03 09.6	-3.6
	comp=N,1.3nm,0.3s						
CABF	**La Chapelle**	**4.16**	**307**	*e*Pn	Pn	18 02 33.1	+0.6
CABF				*e*Sn	Sn	18 03 19.8	-1.4
	comp=N,1.1nm,0.4s						
VIVF	**Saint-Julien-l**	**4.50**	**281**	*e*P	Pn	18 02 40.1	+3.0
VIVF				*e*Sn	Sn	18 03 26.3	-3.1
	comp=N,0.8nm,0.3s						
HINF	**Hinteralfeld**	**4.59**	**324**	*e*Pn	Pn	18 02 38.0	-0.4
HINF	**Hinteralfeld**	**4.59**	**324**	*e*P	Pn	18 02 42.1	+3.7
HINF				*e*Sn	Sn	18 03 29.9	-1.9
	comp=N,2.1nm,0.4s						
CDF	**Champ du Feu**	**4.91**	**331**	*e*Pn	Pn	18 02 42.4	-0.4
CDF	**Champ du Feu**	**4.91**	**331**	*e*P	Pn	18 02 46.8	+4.0
CDF				*e*Sn	Sn	18 03 37.9	-1.8
	comp=N,1.3nm,0.4s						
HAU	**Haudompre**	**4.96**	**322**	*e*Pn	Pn	18 02 43.4	0.0
HAU	**Haudompre**	**4.96**	**322**	*e*P	Pn	18 02 46.7	+3.3
HAU				*e*Sn	Sn	18 03 38.2	-2.5
	comp=N,2.5nm,0.3s						
LASF	**Ste Croix**	**5.07**	**271**	*e*P	Pn	18 02 47.7	+2.8
LASF				*e*Sn	Sn	18 03 38.7	-4.7
	comp=N,0.9nm,0.4s						
PAGF	**Fort de Pagny**	**5.64**	**323**	*e*Pn	Pn	18 02 53.1	+0.3
	baz=140						
PAGF				*e*Sn	Sn	18 03 54.6	-3.0
	comp=N,2.8nm,0.4s						

*IDC **17** 18:08:26.5±1.1, 60°.68S×26°.02W, *h*0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/20, mbtmp4.1/3, Error ellipse: s-maj=64.1km s-min=31.0km az=47.0*

*NEIC **17** 18:08:29.9±1.4, 60°.9S±0°.1×26°.1W±0°.4, *h*28km±5km, mb4.5/7, Error ellipse: s-maj=28.8km s-min=13.8km az=61.0*

*NEIC **17** 18:08:31.0±4.8, 61°.0S±0°.2×3°.3W±°, *h*10km±6km, Error ellipse: s-maj=0.0km s-min=0.0km az=163.0*

ISC 17 18:08:27.2±0.7, 60°.9S±0°.1×25°.9W±0°.2, *h*10km, n23, σ1≤64/22, mb4.3/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.14**	**151**	P	**Pn**	**18 11 17.9**	**-2.0**
VNA3	**Neumayer Olymp**	**12.27**	**155**	P	**Pn**	**18 11 19.1**	**-2.5**
VNA2	**Neumayer--Watz**	**12.54**	**151**	P	**Pn**	**18 11 22.7**	**-2.6**
	baz=315,slow=15						
SNAA	**Sanae**	**14.14**	**149**	P	**Pn**	**18 11 44.8**	**-2.4**
SNAA	**Sanae**	**14.14**	**149**		**Pn**	**18 11 44.6**	**-2.6**
BELA	**Belgrano 2**	**17.32**	**186**		**P**	**18 12 29.9**	**-0.1**
MG04	**Isla Riesco**	**25.71**	**267**	P	**P**	**18 13 56.6**	**-0.6**
QSPA	**South Pole Qui**	**29.36**	**180**	P	**P**	**18 14 32.7**	**+2.7**
QSPA				IAmb	IAmb	18 14 52.4	
	comp=Z,12nm,1.6s						
MAW	**Mawson**	**35.96**	**139**	P	**P**	**18 15 29.5**	**+2.2**
	comp=Z,2.8nm,0.9s,baz=260,slow=6.1,SNR=2.2						
CPUP	**Villa Florida**	**40.57**	**314**	P	**P**	**18 16 05.6**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=164,slow=6.7,SNR=4.5						
CPUP	**Villa Florida**	**40.57**	**314**	P	**P**	**18 16 05.6**	**-1.0**
CPUP				IAmb	IAmb	18 16 36.9	
	comp=Z,8.2nm,1.3s						
AC04	**Llanos de Chal**	**44.38**	**297**	P	**P**	**18 16 37.0**	**-0.6**
AC04				IAmb	IAmb	18 16 38.4	
	comp=Z,31nm,0.8s						
TOA0	**Torodi Ar. Sit**	**76.99**	**28**	P	**P**	**18 20 19.6**	**-0.3**
TOA0				IAmb	IAmb	18 20 24.8	
	comp=Z,10nm,1.6s						
TORD	**Torodi Ar. Bea**	**76.99**	**28**	P	**P**	**18 20 20.1**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=193,slow=6.2,SNR=5.7						
TORD	**Torodi Ar. Bea**	**76.99**	**28**	IAmb	IAmb	18 20 21.0	
	comp=Z,1.0nm,0.8s						
FINES	**FINESS Array B**	**128.33**	**29**	PKP	**PKPdf**	**18 27 32.5**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=152,slow=6.3,SNR=3.3						
ABKAR	**Akbulak array**	**129.48**	**58**		**PKPdf**	**18 27 33.5**	**-1.3**
YKA	**Yellowknife Ar**	**140.10**	**314**	PKP	**PKPdf**	**18 27 54.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=118,slow=2.8,SNR=3.7						
EUNU	**Eureka**	**144.78**	**345**		**PKPdf**	**18 28 02.5**	**+0.2**
INK	**Inuvik**	**149.84**	**315**	PKPbc	**PKiKP**	**18 28 16.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=87,slow=2.9,SNR=3.6						
INK	**Inuvik**	**149.84**	**315**		**PKPdf**	**18 28 12.4**	**+1.7**
SONM	**Songino Array**	**150.05**	**94**	PKPbc	**PKPbc**	**18 28 17.2**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=209,slow=2.6,SNR=4.7						
ILAR	**Eielson Array**	**153.61**	**304**	PKPbc	**PKiKP**	**18 28 25.6**	**+1.1**
	comp=Z,0.6nm,1.0s,baz=156,slow=4.7,SNR=3.6						

*NEIC **17** 18:11:31.2±2.0, 6°.28S±0°.07×128°.67E±0°.08, h286km±10km, mb4.2/8, Error ellipse: s-maj=11.5km s-min=10.0km az=58.0*

*IDC **17** 18:11:31.2±1.5, 6°.25S×128°.62E, h284km±16km, mb3.2/4, mb1 3.5/8, mb1mx3.2/30, mbtmp4.1/8, Error ellipse: s-maj=28.9km s-min=13.9km az=82.0*

ISC 17 18:11:31.1±0.6, 6°.25S±0°.05×128°.67E±0°.06, h300km, n28, σ2≤04/38, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.12**	**124**	Pn	**Pn**	**18 12 29.0**	**+0.9**
SAUI				S	**S**	**18 13 12.6**	**-1.1**
FAKI	**Fak Fak**	**4.86**	**47**		**Pn**	**18 12 46.6**	**-0.5**
FAKI				S	**S**	**18 13 44.1**	**-4.1**
SOEI	**Soe**	**5.58**	**231**		**Pn**	**18 12 55.1**	**-0.6**
SOEI				S	**S**	**18 13 58.8**	**-4.9**
SIJI	**Sorong**	**5.94**	**26**	P	**Pn**	**18 12 58.8**	**-1.0**
	22nm,0.3s,baz=250,slow=14,SNR=138						
SIJI				S	**S**	**18 14 05.8**	**-5.4**
	3.3nm,0.3s,baz=245,slow=22,SNR=19						
BATI	**Baumata**	**6.33**	**231**	P	**Pn**	**18 13 03.9**	**-0.5**
	112nm,0.3s,baz=80,slow=2.5,SNR=196						
BATI				S	**S**	**18 14 15.3**	**-4.4**
	7.7nm,0.3s,baz=5.3,slow=18,SNR=6.8						
MMRI	**Maumere**	**6.81**	**249**	Pn	**Pn**	**18 13 11.5**	**+1.3**
MTN	**Manton Dam**	**6.99**	**160**		**Pn**	**18 13 11.9**	**-0.5**
TNTI	**Ternate**	**7.10**	**349**	Pn	**Pn**	**18 13 15.9**	**+2.1**
LUWI	**Luwuk**	**7.84**	**311**	Pn	**Pn**	**18 13 24.6**	**+1.8**
KNRA	**Kununurra**	**9.37**	**179**		**Pn**	**18 13 41.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**12.14**	**194**	P	**Pn**	**18 14 13.9**	**-1.5**
	1.7nm,0.3s,baz=23,slow=9.2,SNR=51						
FITZ				S	**S**	**18 16 28.8**	**-1.7**
	0.3nm,0.3s,baz=345,slow=17,SNR=1.8						
WB0	**Warramunga Arr**	**14.54**	**158**		**Pn**	**18 14 44.0**	**-0.2**
WRA	**Warramunga Ar**	**14.68**	**159**	P	**Pn**	**18 14 45.4**	**-0.5**
	0.7nm,0.3s,baz=340,slow=11,SNR=42						
WRA				S	**S**	**18 17 22.4**	**-3.2**
	0.3nm,0.3s,baz=338,slow=20,SNR=7.0						
WRA	**Warramunga Arr**	**14.68**	**159**	P	**P**	**18 14 44.8**	**+0.1**
WB2	**Warramunga Ar**	**14.69**	**158**	P	**Pn**	**18 14 45.8**	**-0.1**
WR0	**Warramunga Ar**	**14.77**	**158**	P	**Pn**	**18 14 47.0**	**0.0**
COEN	**Coen**	**16.19**	**119**	P	**Pn**	**18 15 03.2**	**-0.4**
COEN				IAmb	IAmb	18 15 04.3	
	comp=Z,8.2nm,0.7s						
PSA00	**Pilbara Seismi**	**17.46**	**208**	P	**P**	**18 15 15.4**	**+0.3**
PSA00				IAmb	IAmb	18 15 16.4	
	comp=Z,15nm,0.9s						
AS31	**Alice Springs**	**18.03**	**164**	P	**P**	**18 15 22.8**	**+1.6**
AS31				IAmb	IAmb	18 15 28.7	
	comp=Z,3.2nm,0.3s						
AS31					**S**	**18 18 32.4**	**+0.1**
ASAR	**Alice Springs**	**18.03**	**164**	P	**P**	**18 15 23.1**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=345,slow=12,SNR=85						
ASAR				S	**S**	**18 18 31.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=347,slow=20,SNR=12						
ASAR				ScP	**ScP**	**18 22 49.1**	**+1.6**
	comp=Z,0.0nm,0.3s,baz=351,slow=2.2,SNR=1.7						
STKA	**Stephens Creek**	**28.21**	**156**	P	**P**	**18 16 58.5**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=331,slow=7.8,SNR=4.6						
HNR	**Honiara**	**31.14**	**98**	P	**P**	**18 17 21.8**	**-1.0**
KSRS	**Korea Array**	**43.48**	**359**	P	**P**	**18 19 07.5**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=177,slow=10,SNR=4.4						
MK31	**Makanchi Array**	**66.88**	**327**	P	**P**	**18 21 53.1**	**+1.6**
MK31				IAmb	IAmb	18 21 54.2	
	comp=Z,2.4nm,1.5s						
MKAR	**Makanchi Array**	**66.88**	**327**	P	**P**	**18 21 53.0**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=120,slow=8.2,SNR=28						
MAKZ	**Makanchi**	**67.06**	**327**	P	**P**	**18 21 54.2**	**+1.6**
ZALV	**Zalesovo Beam**	**70.34**	**334**	P	**P**	**18 22 13.4**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=106,slow=6.5,SNR=2.9						
QSPA	**South Pole Qui**	**83.72**	**180**	P	**P**	**18 23 27.4**	**+0.8**

*SOME **17** 18:20:30.0, 41°.68N×73°.87E, *h*0km*

*KRNET **17** 18:20:30.8±0.1, 41°.70N×73°.88E, h13km, mb3.0*

*NNC **17** 18:20:31.1±1.3, 41°.68N×73°.85E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=13.0km s-min=6.3km az=167.0*

ISC 17 18:20:30.9±1.1, 41°.69N±0°.03×73°.84E±0°.02, *h*3km±10km, n63, σ1≤57/98, 34C-16D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.40**	**64**	⇑*i* P	Pg	**18 20 38.3**	**-0.3**
	baz=65						
ARLS				⇑*i* S	Sg	**18 20 43.7**	**-0.1**
	baz=65						
AML	**Almayashu**	**0.46**	**346**	⇑*i* P	Pg	**18 20 39.8**	**+0.1**
	baz=42						
AML				⇑*i* S	Sg	**18 20 46.6**	**+0.9**
	baz=42						
AML	**Almayashu**	**0.46**	**346**	P	Pg	**18 20 39.9**	**+0.2**
	SNR=95						
UCH	**Uchtor**	**0.73**	**43**	⇑*i* P	Pg	**18 20 44.5**	**-0.5**
	baz=41						
UCH				⇑*i* S	Sg	**18 20 54.5**	**-0.1**
	baz=41						
UCH	**Uchtor**	**0.73**	**43**	P	Pg	**18 20 44.8**	**-0.3**
	SNR=51						
ARSB	**Arslanbob**	**0.74**	**241**	⇑*i* P	Pg	**18 20 45.7**	**+0.5**
	baz=41						
ARSB				⇑*i* S	Sb	**18 20 56.7**	**-0.6**
	baz=41						
EKS2	**Erkin-Say**	**0.97**	**357**	⇑*i* P	Pg	**18 20 49.1**	**-0.5**
	baz=55						
EKS2				⇑*i* S	Sb	**18 21 03.1**	**-0.8**
	baz=55						
EKS2	**Erkin-Say**	**0.97**	**357**	P	Pg	**18 20 49.3**	**-0.3**
	SNR=16						
AAK	**Ala-Archa**	**1.06**	**27**	⇓*i* P	Pg	**18 20 50.8**	**-0.5**
	baz=26						
AAK				⇓*i* S	Sg	**18 21 05.4**	**+0.3**
	baz=26						
AAK	**Ala-Archa**	**1.06**	**27**	P	Pg	**18 20 50.7**	**-0.7**
	SNR=17						
AAK	**Ala-Archa**	**1.06**	**27**	⇓P	Pg	**18 20 50.3**	**-1.0**
AAK				⇓S	Sb	**18 21 06.6**	**+0.1**
	22nm,0.7s						
FRU1	**Bishkek**	**1.26**	**27**	⇑*i* P	Pn	**18 20 55.0**	**-0.6**
	baz=25						
FRU1				⇑*i* S	Sn	**18 21 12.5**	**-0.7**
	baz=25						
KBK	**Karagaybulak**	**1.27**	**40**	⇑*i* P	Pn	**18 20 54.4**	**-1.4**
	baz=39						
KBK				⇑*i* S	Sg	**18 21 11.9**	**+0.2**
	baz=39						
KBK	**Karagaybulak**	**1.27**	**40**	P	Pn	**18 20 54.6**	**-1.2**
	SNR=10						
MNAS	**Manas**	**1.28**	**309**	⇓*e*P	Pn	**18 20 55.2**	**-0.7**
	baz=8.0						
MNAS				⇓*i* S	Sn	**18 21 13.3**	**-0.3**
	baz=8.0						
OHH	**Osh**	**1.41**	**215**	⇑*i* P	Pb	**18 20 58.2**	**+0.2**
	baz=16						
OHH				⇑*i* S	Sg	**18 21 18.0**	**+1.7**
	baz=16						
CHMS	**Chumysh**	**1.47**	**27**	P	Pb	**18 20 58.4**	**-0.6**
	SNR=6.1						
USP	**

KDJ				⇑*i*S		**Sb**	**18 21 47.9**	**-0.8**
	baz=79								
TNSS	**Tian-Shan**	**2.66**	**59**	*e*P		**Pb**	**18 21 19.9**	**+0.3**
	29nm,0.3s								
TNSS				*e*S		**Sg**	**18 21 55.7**	**-0.8**
	29nm,0.8s								
TNSS	**Tian-Shan**	**2.66**	**59**	Pg		**Pb**	**18 21 19.9**	**+0.3**
	29nm,0.3s								
TNSS				Lg		Lg	18 21 55.7		
	29nm,0.8s								
DRK	**Karamyk**	**2.70**	**216**	⇑*i*P		**Pb**	**18 21 18.0**	**-2.1**
	baz=16								
DRK				⇑*i*S		**Sb**	**18 21 52.8**	**-1.0**
	baz=16								
MDOK	**Medeo**	**2.79**	**57**	*e*P		**Pb**	**18 21 21.7**	**+0.2**
	19nm,0.6s								
MDOK				*e*S		**Sg**	**18 21 58.4**	**-2.2**
	31nm,0.8s								
MDOK	**Medeo**	**2.79**	**57**	⇑Pg		**Pb**	**18 21 21.4**	**-0.2**
	23nm,0.6s								
MDOK				⇑Lg		Lg	18 21 59.1		
	44nm,0.9s								
MDOK	**Medeo**	**2.79**	**57**	Pg		**Pb**	**18 21 21.7**	**+0.2**
	19nm,0.6s								
MDOK				Lg		Lg	18 21 58.4		
	31nm,0.8s								
BTK	**Batken**	**2.81**	**236**	⇓*i*P		**Pb**	**18 21 19.5**	**-2.4**
	baz=36								
BTK				⇓*i*S		**Sb**	**18 21 55.0**	**-1.8**
	baz=36								
KK31	**Karatay Array**	**2.84**	**301**	Pg		**Pb**	**18 21 23.0**	**+0.6**
	3.6nm,0.5s,baz=125,slow=17,SNR=68								
KK31				⇓Lg		Lg	18 22 02.2		
	10.0nm,0.5s,baz=121,slow=28,SNR=9.9								
KOTS	**Kotyrbulak**	**2.87**	**56**	*e*P		**Pb**	**18 21 23.4**	**+0.5**
	68nm,0.6s								
KOTS				*e*S		**Sg**	**18 22 01.4**	**-1.6**
	38nm,0.6s								
IUG	**luzhnay**	**2.88**	**280**	*e*P		**Pb**	**18 21 25.3**	**-0.9**
	14nm,0.2s								
IUG				*e*S		**Sg**	**18 22 04.6**	**+1.1**
	52nm,0.4s								
IUG	**luzhnay**	**2.88**	**280**	Pg		**Pg**	**18 21 25.3**	**-0.9**
	14nm,0.2s								
KTBS	**Karatobe**	**2.91**	**45**	*e*P		**Pb**	**18 21 24.0**	**+0.5**
	5.7nm,0.3s								
KTBS				*e*S		**Sg**	**18 22 02.3**	**-2.1**
	50nm,1.0s								
KTBS	**Karatobe**	**2.91**	**45**	Pg		**Pb**	**18 21 24.0**	**+0.5**
	5.7nm,0.3s								
KTBS				Lg		Lg	18 22 02.3		
	50nm,1.0s								
ANVS	**Anan'yevo**	**3.04**	**68**	⇑*i*P		**Pn**	**18 21 22.4**	**+2.2**
	baz=68								
ANVS				⇑*i*S		**Sb**	**18 21 59.5**	**-4.0**
	baz=68								
BRLS	**Borolday**	**3.26**	**296**	*e*P		**Pg**	**18 21 33.6**	**+0.3**
	4.8nm,0.2s								
BRLS				*e*S		**Sg**	**18 22 19.1**	**+3.5**
	20nm,0.6s								
BRLS	**Borolday**	**3.26**	**296**	Pg		**Pg**	**18 21 33.6**	**+0.3**
	4.8nm,0.2s								
BTLS	**Baital**	**3.35**	**2**	*e*P		**Pb**	**18 21 32.7**	**+1.7**
	1.4nm,0.5s								
BTLS				*e*S		**Sg**	**18 22 16.8**	**-1.8**
	2.0nm,0.4s								
PRZ	**Przheval'sk**	**3.48**	**75**	⇓*i*P		**Pn**	**18 21 28.5**	**+2.3**
	baz=75								
PRZ				⇓*i*S		**Sn**	**18 22 10.7**	**+2.6**
	baz=75								
SATY	**Saty**	**3.65**	**66**	*e*P		**Pb**	**18 21 38.1**	**+1.9**
	2.8nm,0.5s								
SATY				*e*S		**Sg**	**18 22 26.0**	**-2.0**
	16nm,1.0s								
SATY	**Saty**	**3.65**	**66**	Pg		**Pb**	**18 21 38.1**	**+1.9**
	2.8nm,0.5s								
SATY				Lg		Lg	18 22 26.0		
	16nm,1.0s								
ARXS	**Arharly**	**3.86**	**48**	*e*P		**Pb**	**18 21 42.1**	**+2.4**
	26nm,0.6s								
ARXS				*e*S		**Sg**	**18 22 34.1**	**-0.8**
	23nm,0.7s								
ARXS	**Arharly**	**3.86**	**48**	Pg		**Pb**	**18 21 42.1**	**+2.4**
	26nm,0.6s								
ARXS				Lg		Lg	18 22 34.1		
	23nm,0.7s								
KPKS	**Kokpek**	**3.99**	**62**	*e*P		**Pb**	**18 21 43.4**	**+1.4**
	9.2nm,0.4s								
KPKS				*e*S		**Sg**	**18 22 35.9**	**-3.2**
	23nm,0.5s								
UZB	**Uzynbulak**	**4.10**	**67**	*e*P		**Pg**	**18 21 47.4**	**-2.1**
	3.6nm,0.3s								
UZB				*e*S		**Sg**	**18 22 42.3**	**-0.4**
	11nm,0.8s								
UZB	**Uzynbulak**	**4.10**	**67**	Pg		**Pg**	**18 21 47.4**	**-2.1**
	3.6nm,0.3s								
UZB				Lg		Lg	18 22 42.3		
	11nm,0.8s								
SHLS	**Shalkode**	**4.41**	**69**	*e*P		**Pg**	**18 21 57.3**	**+1.9**
	5.0nm,0.5s								
SHLS				*e*S		**Sg**	**18 22 59.9**	**+7.3**
	18nm,0.8s								
SHLS	**Shalkode**	**4.41**	**69**	Pg		**Pg**	**18 21 58.9**	**+3.4**
	5.0nm,0.5s								
SHLS				Lg		Lg	18 23 01.9		
	18nm,0.8s								
PDGK	**Podgornoye**	**4.48**	**67**	Pg		**Pb**	**18 21 53.0**	**+2.6**
	1.3nm,0.6s								
PDGK				Lg		Lg	18 22 51.9		
	3.5nm,0.8s								
PDGK	**Podgornoye**	**4.48**	**67**	⇑Pg		**Pb**	**18 21 51.7**	**+1.3**
	2.9nm,0.6s								
PDGK				⇓Lg		Lg	18 22 50.6		
	11nm,0.8s								
MK31	**Makanchi Array**	**7.92**	**47**	⇓Lg		Lg	18 24 35.4		
	1.4nm,0.8s,baz=230,slow=22,SNR=3.5								

*IDC **17** 18:25:33.4±3.0,24.˚79N×63.˚00E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.4/61, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=67.7km s-min=23.8km az=149.0*
*OMAN **17** 18:25:45.0,24.˚66N×62.˚41E, h95km, mb4.4/7, ml3.5/8*
ISC 17 18:25:39.3±1.1, 24°82N±0.˚08×62.˚75E±0.˚09, h35km, n25, σ1s69/34, mb3.6/7, Off coast of Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JLN	**Jalan Bani Buh**	**4.05**	**230**	P	**Pn**	**18 26 39.9**	**+1.1**
	SNR=18						
JLN				S	**Sn**	**18 27 24.8**	**-0.3**
	SNR=11						
WSAR	**Wadi Sarin**	**4.08**	**248**	Pn	**Pn**	**18 26 40.0**	**+0.8**
	2.2nm,0.3s,baz=108,slow=9.1,SNR=51						
WSAR				Sn	**Sn**	**18 27 23.4**	**-2.3**
	4.3nm,0.3s,baz=198,slow=21,SNR=13						
WSAR				T	T	18 30 51.2	
	1.0nm,0.3s,baz=134,slow=10,SNR=4.4						
WBK	**Wadi Bani Khal**	**4.10**	**238**	P	**Pn**	**18 26 40.6**	**+1.1**
	SNR=426						
WBK				S	**Sn**	**18 27 24.5**	**-1.8**
	SNR=9.2						
BIDO	**Bidbid**	**4.41**	**254**	S	**Sn**	**18 27 30.9**	**-3.1**
SMDO	**Samad**	**4.64**	**249**	P	**Pn**	**18 26 48.6**	**+1.6**
	SNR=23						
SMDO				S	**Sn**	**18 27 39.2**	**-0.5**
JMDO	**Jabal Madar**	**4.91**	**241**	P	**Pn**	**18 26 52.1**	**+1.5**
	SNR=27						
JMDO				S	**Sn**	**18 27 45.7**	**-0.4**
	SNR=8.1						
HOQ	**Hoqain**	**5.11**	**257**	P	**Pn**	**18 26 54.2**	**+0.7**
	SNR=22						
HOQ				S	**Sn**	**18 27 49.1**	**-2.1**
	SNR=12						
BSY	**Bisya**	**5.48**	**249**	P	**Pn**	**18 27 01.2**	**+2.6**
	SNR=7.9						
SOHO	**SOHO**	**5.70**	**264**	P	**Pn**	**18 27 01.8**	**+0.3**
SOHO				S	**Sn**	**18 28 03.6**	**-2.2**
MHTO	**MHTO**	**5.82**	**230**	P	**Pn**	**18 27 05.0**	**+1.8**
	SNR=19						
MHTO				S	**Sn**	**18 28 07.8**	**-1.0**
	SNR=7.1						
BANOM	**Banah**	**5.94**	**282**	P	**Pn**	**18 27 06.4**	**+1.6**
UOSS	**Minazif**	**5.94**	**273**	P	**Pn**	**18 27 04.8**	**0.0**
HATD	**Hatta, Dubai**	**6.01**	**271**	P	**Pn**	**18 27 06.2**	**+0.4**
SHME	**Shamm**	**6.10**	**283**	P	**Pn**	**18 27 09.3**	**+2.4**
FAQ	**Al Faqa, Dubai**	**6.50**	**271**	P	**Pn**	**18 27 15.5**	**+2.9**
	SNR=11						
FAQ				S	**Sn**	**18 28 25.3**	**-0.2**
ASUD	**Al Ashush, Dub**	**6.75**	**270**	P	**Pn**	**18 27 17.3**	**+1.4**
	SNR=6.2						
DQM	**DQM**	**6.84**	**226**	P	**Pn**	**18 27 18.5**	**+1.3**
	SNR=7.3						
DQM				S	**Sn**	**18 28 31.7**	**-2.3**
THW	**Thamme Wali**	**11.20**	**43**	P	Pn	18 28 11.4	-5.5
KBZ	**Khabaz**	**24.89**	**324**	P	**P**	**18 31 00.8**	**+2.1**
	1.4nm,0.8s,baz=138,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**26.92**	**31**	P	**P**	**18 31 15.9**	**-1.2**
	0.4nm,0.6s,baz=212,slow=8.6,SNR=7.1						
KURBB	**Kurchatov Arra**	**28.51**	**21**	P	**P**	**18 31 28.9**	**-2.3**
	0.1nm,0.4s,baz=208,slow=9.5,SNR=1.7						
ZALV	**Zalesovo Beam**	**33.44**	**24**	P	**P**	**18 32 13.3**	**-1.4**
	0.5nm,0.3s,baz=224,slow=10,SNR=3.8						
AKASG	**Malin Array Be**	**36.50**	**324**	P	**P**	**18 32 40.7**	**-0.4**
	0.7nm,0.4s,baz=126,slow=8.2,SNR=5.1						
GERES	**GERESS Array B**	**45.02**	**315**	P	**P**	**18 33 51.6**	**+0.1**
	0.2nm,0.4s,baz=111,slow=7.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**58.48**	**271**	P	**P**	**18 35 33.4**	**+1.1**
	0.4nm,0.7s,baz=64,slow=8.3,SNR=2.3						

*NEIC **17** 18:28:54.1±2.2,5.˚40S±0.˚05×131.˚03E±0.˚06, h103km±8km, mb4.1/11, Error ellipse: s-maj=9.5km s-min=7.2km az=69.0*
*IDC **17** 18:28:54.7±2.1,5.˚43S×131.˚00E, h102km±19km, mb3.5/6, mb1 3.7/9, mb1mx3.4/35, mbtmp4.0/9, Error ellipse: s-maj=32.7km s-min=16.6km az=70.0*
ISC 17 18:28:53.6±0.5, 5°45S±0.˚05×131.˚03E±0.˚07, h100km, n35, σ2s17/37, mb3.8/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.53**	**174**	Pn	**Pn**	**18 29 36.1**	**+3.0**
SAUI				Sn	**Sn**	**18 30 04.6**	**+1.1**
FAKI	**Fak Fak**	**2.79**	**26**		**Pn**	**18 29 37.4**	**+0.8**
FAKI				Sn	**Sn**	**18 30 07.3**	**-2.4**
SIJI	**Sorong**	**4.55**	**3**	P	**Pn**	**18 30 00.4**	**+0.1**
	20nm,0.3s,baz=206,slow=18,SNR=64						
SIJI				S	**Sn**	**18 30 48.2**	**-4.0**
	16nm,0.3s,baz=276,slow=23,SNR=16						
MTN	**Manton Dam**	**7.35**	**179**		**Pn**	**18 30 38.8**	**+0.5**
SOEI	**Soe**	**7.95**	**237**	Pn	**Pn**	**18 30 48.5**	**+1.9**
BATI	**Baumata**	**8.69**	**237**	P	**Pn**	**18 30 56.9**	**+0.3**
	1.3nm,0.3s,baz=37,slow=20,SNR=2.4						
BATI				S	**Sn**	**18 32 30.9**	**-2.1**
	3.5nm,0.3s,baz=91,slow=20,SNR=4.3						
KNRA	**Kununurra**	**10.41**	**192**		**Pn**	**18 31 18.1**	**-1.8**
FITZ	**Fitzroy Crossi**	**13.63**	**202**	P	Pn	18 31 58.9	-4.0
	0.6nm,0.3s,baz=25,slow=11,SNR=12						
FITZ				S	Sn	18 34 18.1	-15
	0.6nm,0.3s,baz=119,slow=22,SNR=11						
FITZ	**Fitzroy Crossi**	**13.63**	**202**		Pn	18 31 59.0	-3.8
WB0	**Warramunga Arr**	**14.61**	**167**		**Pn**	**18 32 12.0**	**-3.4**
COEN	**Coen**	**14.65**	**126**	Pn	**Pn**	**18 32 16.6**	**+0.6**
WRA	**Warramunga Arr**	**14.76**	**168**	P	Pn	18 32 13.4	-4.0
	0.6nm,0.3s,baz=349,slow=14,SNR=20						
WRA				S	Sn	18 34 49.4	-11
	1.0nm,0.3s,baz=340,slow=23,SNR=7.9						
WRA	**Warramunga Arr**	**14.76**	**168**		Pn	18 32 12.2	-5.2
WB2	**Warramunga Arr**	**14.77**	**168**	Pn	**Pn**	**18 32 13.9**	**-3.6**
WR0	**Warramunga Arr**	**14.82**	**167**	Pn	**Pn**	**18 32 15.8**	**-2.4**
AS31	**Alice Springs**	**18.32**	**172**	P	**P**	**18 33 00.9**	**+0.8**
AS31				IAmb	IAmb	18 33 03.0	
	comp=Z,4.8nm,0.3s						
ASAR	**Alice Springs**	**18.32**	**172**	P	**P**	**18 33 01.8**	**+1.6**
	comp=Z,1.7nm,0.3s,baz=349,slow=9.5,SNR=166						
ASAR				S	**S**	**18 36 16.7**	**-7.8**
	comp=Z,0.2nm,0.3s,baz=343,slow=18,SNR=5.1						
ASAR				ScP	**ScP**	**18 40 53.2**	**-1.2**
	baz=357,slow=1.6,SNR=4.3						
ASAR	**Alice Springs**	**18.32**	**172**	P	**P**	**18 33 01.0**	**+0.9**
KKM	**Kota Kinabalu**	**18.68**	**307**	P	**P**	**18 33 03.9**	**-0.3**
KKM				IAmb	IAmb	18 33 31.2	
	comp=Z,14nm,1.1s						
PSA00	**Pilbara Seismi**	**19.35**	**213**	P	**P**	**18 33 12.0**	**+0.6**
PSA00				IAmb	IAmb	18 33 13.9	
	comp=Z,32nm,1.6s						
SBUM	**Sibu**	**20.36**	**292**	P	**P**	**18 33 22.5**	**+0.1**
CTA	**Charters Tower**	**20.76**	**136**	P	**P**	**18 33 28.1**	**+1.5**
	comp=Z,4.1nm,0.9s,baz=315,slow=8.6,SNR=1.5						
BBOO	**Buckleboo**	**27.62**	**171**	P	**P**	**18 34 32.1**	**+0.3**
BBOO				IAmb	IAmb	18 34 46.1	
	comp=Z,17nm,1.3s						
STKA	**Stephens Creek**	**28.09**	**161**	P	**P**	**18 34 36.6**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=0.0,slow=10,SNR=1.5						
STKA	**Stephens Creek**	**28.09**	**161**	P	**P**	**18 34 36.6**	**+0.7**
JNU	**Nakatsue**	**38.36**	**360**	P	**P**	**18 36 07.9**	**+2.9**
CMAR	**Chiang Mai Arr**	**39.56**	**308**	P	**P**	**18 36 15.7**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=136,slow=7.2,SNR=5.1						
RAO	**Raoul Island**	**53.65**	**122**	P	**P**	**18 38 03.9**	**-1.2**
MK31	**Makanchi Array**	**67.51**	**326**	P	**P**	**18 39 40.1**	**+1.1**
MK31				IAmb	IAmb	18 39 40.8	
	comp=Z,0.9nm,0.7s						
MKAR	**Makanchi Array**	**67.51**	**326**	P	**P**	**18 39 40.1**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=119,slow=8.0,SNR=25						
MKAR	**Makanchi Array**	**67.51**	**326**	P	**P**	**18 39 39.9**	**+0.9**
MKAR					**pwP**	**18 40 11.1**	**0.0**
MAKZ	**Makanchi**	**67.69**	**326**	P	**P**	**18 39 41.2**	**+1.1**
MAKZ				IAmb	IAmb	18 39 41.8	
	comp=Z,1.2nm,0.7s						
ZALV	**Zalesovo Beam**	**70.66**	**333**	P	**P**	**18 39 58.6**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=112,slow=7.2,SNR=2.4						
TIXI	**Tiksi**	**76.96**	**359**	P	**P**	**18 40 35.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=165,slow=3.5,SNR=3.9						
TIXI	**Tiksi**	**76.96**	**359**	IAmb	IAmb	18 40 49.7	
	comp=Z,3.4nm,1.5s						

*NOU **17** 18:33:59.8, 32.˚64S×179.˚73W, h343km, mb3.9, South of Kermadec Islands*
WEL 17 18:34:11.6±0.8, 34°S±8.˚×17°9E±1.˚6, h350km±11km, M3.9/24, mB4.3/7, ML4.5/6, MLv4.4/24, Mw(mB)3.4/7, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.10**	**192**	P	Pn	18 35 18.7	-2.8
MXZ				S	S	18 36 15.9	-2.0
HAZ	**Te Kaha**	**4.40**	**197**	P	Pn	18 35 25.7	+1.2
PKGZ	**Pakihiroa**	**4.46**	**194**	P	Pn	18 35 24.1	-1.2
PKGZ				S	S	18 36 25.0	+0.1
PUZ	**Puketiti**	**4.60**	**191**	S	S	18 36 27.9	+0.2
RUGZ	**Raukumara Rang**	**4.62**	**197**	P	Pn	18 35 27.1	0.0
MWZ	**Matawai**	**5.01**	**197**	P	Pn	18 35 28.5	-2.7
URZ	**Urewera**	**5.05**	**201**	P	Pn	18 35 30.0	-1.6
URZ				S	S	18 36 33.5	-2.9
OUZ	**Omahuta**	**5.08**	**249**	P	Pn	18 35 31.8	-0.1
MUGZ	**Murupara**	**5.36**	**203**	P	Pn	18 35 35.5	+0.5
SNGZ	**Shannon Statio**	**5.48**	**197**	P	Pn	18 35 37.4	+1.0
SNGZ				S	S	18 36 47.3	+2.2
MTHZ	**Maungataniwha**	**5.68**	**201**	P	Pn	18 35 39.2	+0.6
MTHZ				S	S	18 36 55.2	+6.0
NMHZ	**Naumai**	**5.92**	**200**	P	Pn	18 35 42.4	+1.0
NMHZ				S	S	18 36 56.9	+2.6
ARHZ	**Aropaoanui**	**6.02**	**198**	P	Pn	18 35 43.4	+0.9
ARHZ				S	S	18 36 58.3	+2.0
BKZ	**Black Stump Fm**	**6.07**	**202**	P	Pn	18 35 44.3	+1.1
BKZ				S	S	18 37 00.3	+2.8
KWHZ	**Kaweka Forest**	**6.33**	**201**	P	Pn	18 35 43.9	-2.3
KWHZ				S	S	18 37 05.3	+2.4
BHHZ	**Black Hill Sta**	**6.50**	**203**	P	Pn	18 35 48.7	+0.6
BHHZ				S	S	18 37 07.8	+1.2
KRHZ	**Kereru**	**6.55**	**201**	P	Pn	18 35 48.4	-0.2
KRHZ				S	S	18 37 08.6	+1.1
KAHZ	**Kahuranaki**	**6.55**	**197**	P	P	18 35 50.5	+0.5
PXZ	**Pawanui**	**6.78**	**197**	P	P	18 35 52.5	-0.1
PXZ				S	S	18 37 12.6	+0.4
PNHZ	**Pukenui**	**6.85**	**201**	P	Pn	18 35 52.7	+0.6
PNHZ				S	S	18 37 13.3	-0.5
TSZ	**Takapari Road**	**7.05**	**202**	P	Pn	18 35 54.7	+0.2
TSZ				S	S	18 37 16.1	-2.1
PRHZ	**Porangahau**	**7.06**	**197**	S	S	18 37 21.1	+2.9
BFZ	**Birch Farm**	**7.55**	**199**	P	Pn	18 36 00.6	+0.4
BFZ				S	S	18 37 30.1	+1.4
MRZ	**Mangatainoka R**	**7.72**	**202**	P	Pn	18 36 02.2	-0.1
MRZ				S	S	18 37 31.5	-1.0
TIWZ	**Tintock**	**7.74**	**200**	P	Pn	18 36 03.1	+0.6
TIWZ				S	S	18 37 32.1	-0.7
HOWZ	**Holdsworth Sta**	**7.96**	**202**	P	Pn	18 36 05.0	-0.1
HOWZ				S	S	18 37 34.5	-3.2
OGWZ	**Otaki Gorge**	**8.00**	**204**	P	Pn	18 36 05.1	-0.4
OGWZ				S	S	18 37 38.8	+0.3
TMWZ	**Te Maipa**	**8.04**	**199**	P	Pn	18 36 06.9	+0.8
TMWZ				S	S	18 37 39.2	-0.3
KIW	**Kapiti Island**	**8.12**	**205**	P	Pn	18 36 07.4	+0.3
MTW	**Mount Morrison**	**8.20**	**201**	P	Pn	18 36 08.8	+0.9
MTW				S	S	18 37 41.8	-1.1
CAW	**Cannon Point**	**8.29**	**203**	P	Pn	18 36 08.9	-0.1
CAW				S	S	18 37 45.8	+0.9
PLWZ	**Palliser**	**8.65**	**201**	P	Pn	18 36 13.6	+0.3
PLWZ				S	S	18 37 52.5	-0.3

*STR **17** 18:43:15.6±0.6, 44.˚N±1.˚×±.˚, h0km±4km, MLv2.2/8, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*ROM **17** 18:43:15.5±0.1, 44.˚335N±0.˚006×7.˚20E±0.˚01, h7km, ML2.2/16, Error ellipse: s-maj=1.1km s-min=0.1km az=234.0*
*GEN **17** 18:43:16.0, 44.˚34N×7.˚19E, h6km±2km, Ml2.1*
*LDG **17** 18:43:16.2±0.1, 44.˚34N×7.˚20E, h8km, Md2.5/2, Ml2.5/32, Error ellipse: s-maj=2.2km s-min=1.6km az=65.0*
ISC 17 18:43:16.0±0.8, 44°35N±0.˚01×7.˚21E±0.˚01, h13km±5km, n80, σ1s47/150, 6C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STV	**Sant Anna di V**	**0.14**	**140**	P	**Pg**	**18 43 18.9**	**-0.6**
STV				S	**Sg**	**18 43 20.8**	**-1.2**
STV	**Sant Anna di V**	**0.14**	**140**	P	**Pg**	**18 43 18.8**	**-0.6**
STV				S	**Sg**	**18 43 20.8**	**-1.2**
STV				AML	AML		
	comp=E,2655μm,0.2s						
STV				AML	AML		
	comp=N,2720μm,0.6s						
PZZ	**Stroppo**	**0.17**	**338**	P	**Pg**	**18 43 19.9**	**-0.2**
PZZ				S	**Sg**	**18 43 22.7**	**-0.3**
PZZ	**Stroppo**	**0.17**	**338**	⇓P	**Pg**	**18 43 19.9**	**-0.2**
PZZ				S	**Sg**	**18 43 22.6**	**-0.3**
PZZ				AML	AML		
	comp=N,2355μm,0.1s						
PZZ				AML	AML		
	comp=E,2630μm,0.2s						
ENR	**Entracque**	**0.20**	**128**	P	**Pg**	**18 43 20.1**	**-0.4**
ENR				S	**Sg**	**18 43 22.7**	**-0.8**
ENR	**Entracque**	**0.20**	**128**	P	**Pg**	**18 43 20.1**	**-0.4**
ENR				S	**Sg**	**18 43 22.9**	**-0.6**
ENR				AML	AML		
	comp=E,3685μm,0.3s						
ENR				AML	AML		
	comp=N,2775μm,0.2s						
ISO	**Isola**	**0.20**	**214**	Pg	**Pg**	**18 43 19.7**	**-0.8**
ISO				Sg	**Sg**	**18 43 22.0**	**-1.6**
SURF	**Saint Ours**	**0.31**	**295**	Pg	**Pg**	**18 43 22.0**	**-0.4**
SURF				Sg	**Sg**	**18 43 27.1**	**+0.3**
TURF	**col de Turini**	**0.40**	**160**	Pg	**Pg**	**18 43 23.7**	**-0.3**
TURF				Sg	**Sg**	**18 43 29.1**	**-0.3**
SAOF	**Saorge**	**0.44**	**145**	Pg	**Pg**	**18 43 24.6**	**-0.2**
SAOF				Sg	**Sg**	**18 43 30.3**	**-0.4**
SAOF	**Saorge**	**0.44**	**145**	⇓P	**Pg**	**18 43 24.6**	**-0.2**
SAOF	**Saorge**	**0.44**	**145**	AML	AML		
	comp=E,406μm,0.6s						
SAOF				AML	AML		
	comp=N,381μm,0.8s						
GBOS	**Grotte di Boss**	**0.47**	**103**	P	**Pg**	**18 43 25.1**	**-0.2**
OGAG	**Argentiere**	**0.49**	**283**	Pg	**Pb**	**18 43 28.2**	**+1.6**
OGAG				Sg	**Sb**	**18 43 37.9**	**+4.2**
MBDF	**Montbardon**	**0.49**	**321**	*e*Pg	**Pg**	**18 43 25.2**	**-0.5**
MBDF				*e*Sg	**Sg**	**18 43 32.3**	**+0.1**
	comp=N,159nm,0.3s						
BHB	**Bricherasio**	**0.49**	**5**	P	**Pg**	**18 43 25.7**	**-0.1**
BHB				S	**Sg**	**18 43 32.2**	**-0.1**
BHB	**Bricherasio**	**0.49**	**5**	⇑P	**Pg**	**18 43 25.7**	**-0.1**
BHB				AML	AML		
	comp=E,608μm,0.4s						
BHB				AML	AML		
	comp=N,431μm,0.5s						
SBF	**Sospel**	**0.51**	**161**	*e*Pg	**Pg**	**18 43 25.7**	**-0.4**
SBF				*e*Sg	**Sb**	**18 43 33.8**	**-0.6**
	comp=N,96nm,0.2s						
ESCA	**l'Escarene**	**0.53**	**167**	Pg	**Pg**	**18 43 26.2**	**-0.3**
ESCA				Sg	**Sg**	**18 43 33.5**	**-0.1**
BURY	**Giardini Botan**	**0.62**	**156**	P	**Pg**	**18 43 27.9**	**-0.2**
BURY	**Giardini Botan**	**0.62**	**156**	P	**Pg**	**18 43 28.0**	**-0.2**
BURY				S	**Sb**	**18 43 37.0**	**-0.4**
BURY				AML	AML		
	comp=N,229μm,0.3s						
BURY				AML	AML		
	comp=N,230μm,0.3s						
BURY				AML	AML		
	comp=E,164μm,0.5s						
RRL	**Rocca Remolon**	**0.64**	**333**	P	**Pg**	**18 43 28.2**	**-0.4**
RRL				S	**Sg**	**18 43 37.9**	**+0.7**
RRL	**Rocca Remolon**	**0.64**	**333**	P	**Pg**	**18 43 28.2**	**-0.4**
RRL				S	**Sb**	**18 43 38.2**	**-0.1**
RRL				AML	AML		
	comp=N,134μm,0.6s						
RRL				AML	AML		
	comp=E,148μm,0.3s						
IMI	**Imperia**	**0.66**	**131**	P	**Pg**	**18 43 28.6**	**-0.3**
IMI				S	**Sg**	**18 43 37.4**	**-0.2**
IMI	**Imperia**	**0.66**	**131**	P	**Pg**	**18 43 28.7**	**-0.3**
IMI				S	**Sg**	**18 43 37.9**	**+0.3**
IMI				AML	AML		
	comp=N,654μm,0

LSD				AML	AML		
	comp=E,182μm,0.3s						
LSD				AML	AML		
	comp=N,118μm,0.3s						
LMR	**La Mourre**	**1.13**	**207**	*e*Pg	**Pg**	**18 43 37.3**	**-0.5**
LMR				*e*Sg	**Sg**	**18 43 51.0**	**-1.6**
	comp=N,105nm,0.2s						
GDM	**Grand'Maison**	**1.15**	**318**	Pg	**Pg**	**18 43 38.2**	**-0.1**
GDM				Sg	**Sg**	**18 43 52.7**	**-0.6**
LPG	**La Plagne**	**1.19**	**344**	*e*Pg	**Pg**	**18 43 38.5**	**-0.5**
LPG				*e*Sg	**Sg**	**18 43 54.3**	**-0.3**
	comp=N,36nm,0.3s						
LPL	**La Plagne**	**1.21**	**344**	*e*Pg	**Pg**	**18 43 38.7**	**-0.7**
LPL				*e*Sg	**Sg**	**18 43 52.7**	**-2.6**
	comp=N,34nm,0.5s						
BSTF	**la Bastide-des**	**1.22**	**248**	Pg	**Pn**	**18 43 40.0**	**+1.2**
BSTF				Pn	**Pb**	**18 43 40.6**	**+1.6**
BSTF				Sg	**Sn**	**18 43 57.1**	**+1.8**
SMRF	**Simiane la Rot**	**1.23**	**253**	*e*Pg	**Pn**	**18 43 39.9**	**+0.8**
SMRF				*e*Sg	**Sn**	**18 43 56.2**	**+0.6**
	comp=N,70nm,0.5s						
ARTF	**Artigues**	**1.27**	**233**	Pg	**Pn**	**18 43 39.8**	**+0.2**
ARTF				Pn	**Pg**	**18 43 40.4**	**+0.1**
ARTF				Sg	**Sn**	**18 43 57.3**	**+0.9**
CIRO	**Champorcher**	**1.28**	**12**	P	**Pn**	**18 43 39.7**	**-0.2**
CIRO				AML	AML		
	comp=E,26μm,0.6s						
CIRO				AML	AML		
	comp=N,20μm,1.3s						
GRN	**Grenoble**	**1.37**	**311**	Pn	**Pg**	**18 43 42.8**	**+0.4**
GRN				Pg	**Pb**	**18 43 45.1**	**+3.5**
GRN				Sn	**Sg**	**18 44 01.1**	**+0.9**
MRGE	**Morge**	**1.42**	**356**	P	**Pn**	**18 43 42.8**	**+0.9**
MRGE				AML	AML		
	comp=N,54μm,0.6s						
MRGE				AML	AML		
	comp=E,57μm,0.7s						
REMY	**Saint-Rhmy-en**	**1.49**	**359**	P	**Pn**	**18 43 43.4**	**+0.6**
REMY				AML	AML		
	comp=E,44μm,0.8s						
REMY				AML	AML		
	comp=N,51μm,0.9s						
OGSM	**Saint Maurice**	**1.65**	**320**	Pg	**Pg**	**18 43 47.6**	**-0.1**
OGSM				Sg	**Sg**	**18 44 11.9**	**+2.7**
VIVF	**Saint-Julien-l**	**1.88**	**287**	*e*P	**Pn**	**18 43 48.9**	**+1.0**
VIVF				*e*Sn	**Sn**	**18 44 10.4**	**-1.2**
VIVF				*e*Sg	**Sg**	**18 44 15.7**	**-0.7**
	comp=N,12nm,0.3s						
PGF	**Pioggiola**	**2.23**	**143**	*e*Pn	**Pn**	**18 43 52.2**	**-0.5**
PGF				*e*Sn	**Sn**	**18 44 18.4**	**-1.8**
	comp=N,11nm,0.3s						
PGF	**Pioggiola**	**2.23**	**143**	Pn	**Pn**	**18 43 52.2**	**-0.5**
PGF				Sn	**Sn**	**18 44 18.6**	**-1.6**
PGF	**Pioggiola**	**2.23**	**143**	P	**Pn**	**18 43 52.3**	**-0.5**
CABF	**La Chapelle**	**2.39**	**341**	*e*P	**Pn**	**18 43 57.2**	**+2.1**
CABF	**La Chapelle**	**2.39**	**341**	*e*Pg	**Pg**	**18 44 01.0**	**-0.9**
CABF				*e*Sn	**Sn**	**18 44 22.6**	**-1.8**
CABF				*e*Sg	**Sg**	**18 44 31.6**	**-1.4**
	comp=N,4.3nm,0.5s						
LASF	**Ste Croix**	**2.42**	**265**	*e*Pn	**Pn**	**18 43 55.4**	**0.0**
LASF	**Ste Croix**	**2.42**	**265**	*e*Pg	**Pb**	**18 44 00.8**	**+1.3**
LASF				*e*Sn	**Sn**	**18 44 23.8**	**-1.2**
	comp=N,2.4nm,0.3s						
NDIM	**Novi di Modena**	**2.69**	**77**	P	**Pg**	**18 44 09.2**	**+1.6**
OSSC	**Osservatorio P**	**3.03**	**104**	⇑P	**Pg**	**18 44 13.7**	**-0.5**
SMF	**Signal de Mont**	**3.30**	**315**	*e*P	**Pn**	**18 44 09.6**	**+2.2**
SMF				*e*Sn	**Sn**	**18 44 44.4**	**-2.1**
SMF				*e*Sg	**Sg**	**18 44 59.5**	**-2.4**
	comp=N,4.6nm,0.5s						
SFI	**Santa Sofia**	**3.37**	**96**	P	**Pn**	**18 44 07.8**	**-0.6**
HINF	**Hinteralfeld**	**3.48**	**356**	*e*Pn	**Pn**	**18 44 09.5**	**-0.4**
HINF				*e*Sn	**Sn**	**18 44 48.9**	**-2.1**
	comp=N,1.3nm,0.2s						
HINF				*e*Sg	**Sg**	**18 45 05.7**	**-2.0**
	comp=N,0.6nm,0.2s						
AVF	**Avril sur Loir**	**3.64**	**313**	*e*P	**Pn**	**18 44 14.1**	**+1.9**
AVF				*e*Sg	**Sg**	**18 45 10.4**	**-2.6**
	comp=N,1.1nm,0.4s						
HAU	**Haudompre**	**3.71**	**351**	*e*P	**Pn**	**18 44 15.1**	**+2.1**
HAU				*e*Sn	**Sn**	**18 44 54.5**	**-2.1**
	comp=N,5.8nm,0.5s						
CAF	**Calviac**	**3.71**	**281**	*e*P	**Pn**	**18 44 14.7**	**+1.5**
CAF				*e*Sn	**Sn**	**18 44 53.8**	**-3.0**
	comp=N,0.9nm,0.3s						
LOR	**Lormes**	**3.74**	**322**	*e*P	**Pn**	**18 44 15.8**	**+2.3**
	baz=143						
LOR				*e*Sn	**Sn**	**18 44 54.8**	**-2.7**
	comp=N,2.3nm,0.5s						
LOR				*e*Sg	**Sg**	**18 45 13.8**	**-2.3**
	comp=N,1.4nm,0.4s						
MTLF	**Montolieu**	**3.75**	**256**	*e*Pn	**Pn**	**18 44 13.8**	**+0.2**
MTLF				*e*Sn	**Sn**	**18 44 54.4**	**-3.2**
	comp=N,1.3nm,0.3s						
MTLF				*e*Sg	**Sg**	**18 45 13.8**	**-2.5**
	comp=N,1.5nm,0.3s						
SSF	**Saint Saulge**	**3.75**	**318**	*e*P	**Pn**	**18 44 15.5**	**+1.9**
SSF				*e*Sn	**Sn**	**18 44 55.5**	**-2.2**
SSF				*e*Sg	**Sg**	**18 45 13.5**	**-2.9**
	comp=N,1.8nm,0.3s						
BGF	**Bois d'Agland**	**3.78**	**307**	*e*P	**Pn**	**18 44 16.2**	**+2.2**
BGF				*e*Sn	**Sn**	**18 44 56.3**	**-2.1**
BGF				*e*Sg	**Sg**	**18 45 14.1**	**-3.2**
	comp=N,9.3nm,0.6s						
TCF	**Toulx Ste Croi**	**4.02**	**301**	*e*P	**Pn**	**18 44 20.4**	**+3.0**
TCF				*e*Sn	**Sn**	**18 45 01.6**	**-2.8**
	comp=N,0.7nm,0.4s						
CDF	**Champ du Feu**	**4.06**	**1**	*e*Sn	**Sn**	**18 45 02.8**	**-2.7**
	comp=N,1.6nm,0.3s						
SFTF	**Sexfontaines**	**4.14**	**339**	*e*Pn	**Pn**	**18 44 19.5**	**+0.5**
SFTF				*e*Sn	**Sn**	**18 45 04.7**	**-2.5**
	comp=N,2.0nm,0.2s						
MMUR	**Monte Murano**	**4.28**	**100**	⇑P	**Pb**	**18 44 33.4**	**+2.1**
PAGF	**Fort de Pagny**	**4.33**	**347**	*e*P	**Pn**	**18 44 24.6**	**+3.0**
PAGF				*e*Sn	**Sn**	**18 45 09.4**	**-2.5**
	comp=N,1.1nm,0.3s						
SAVF	**Savonnieres en**	**4.50**	**342**	*e*Pn	**Pn**	**18 44 23.3**	**-0.7**
SAVF				*e*Sg	**Sg**	**18 45 36.2**	**-4.3**
	comp=N,2.2nm,0.2s						
PP3	**Marolino**	**4.73**	**100**	⇑P	**Pb**	**18 44 41.8**	**+3.0**

IDC ***17*** *18:55:24.8±7.3, 16°.03S×173°.60W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/39, mbtmp3.6/4, ML3.4/1, MS4.5/1, Ms1 4.5/1, ms1mx3.5/30, Error ellipse: s-maj=343.9km s-min=25.5km az=141.0*

NEIC ***17*** *18:55:26.7±0.8, 16°.37S±0°.08×173°.1W±0°.2, h35km±2km, mb4.4/5, Error ellipse: s-maj=27.2km s-min=14.0km az=87.0*

ISC 17 18:55:27.0±0.9, 16°.33S±0°.06×172°.9W±0°.1, h32km, n18, σ2s31/14, mb4.1/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**2.65**	**25**	Pn		**Pn**	**18 56 08.9**	**+1.4**
	5.9nm,0.3s,baz=263,slow=1.5,SNR=7.9							
AFI				Sn		**Sn**	**18 56 36.2**	**-2.4**
	16nm,0.3s,baz=286,slow=19,SNR=4.3							
AFI	**Afiamalu**	**2.65**	**25**			**Pn**	**18 56 08.2**	**+0.6**
AFI				Sn		**Sn**	**18 56 36.0**	**-2.6**
NIUE	**Niue**	**3.94**	**134**	Pn		**Pn**	**18 56 25.9**	**+0.6**
NIUE				Sn		**Sn**	**18 57 07.8**	**-2.7**
DZM	**Mont Dzumac**	**20.31**	**250**	LR		LR	19 06 32.8	
	comp=Z,1μm,18.9s,baz=287,slow=34							
H11S2	**WAKE ISLAND Hy**	**40.00**	**329**	T		T	19 45 38.4	
	baz=149							
H11S3	**WAKE ISLAND Hy**	**40.01**	**329**	T		T	19 45 40.5	
	baz=149							
H11S1	**WAKE ISLAND Hy**	**40.02**	**329**	T		T	19 45 40.4	
	baz=149							
H11N3	**WAKE ISLAND Hy**	**40.95**	**330**	T		T	19 46 47.6	
	baz=153							
H11N1	**WAKE ISLAND Hy**	**40.95**	**330**	T		T	19 46 42.8	
	baz=153							
H11N2	**WAKE ISLAND Hy**	**40.97**	**330**	T		T	19 46 39.0	
	baz=153							
WB0	**Warramunga Arr**	**50.06**	**258**	P		**P**	**19 04 17.1**	**-2.1**
WB0				IAmb		IAmb	19 04 55.0	
	comp=Z,8.4nm,1.4s							
WB2	**Warramunga Arr**	**50.09**	**257**	P		**P**	**19 04 17.6**	**-1.8**
WB2				IAmb		IAmb	19 04 24.0	
	comp=Z,7.4nm,1.2s							
WRA	**Warramunga Arr**	**50.10**	**257**	P		**P**	**19 04 17.6**	**-1.9**
	comp=Z,0.6nm,0.9s,baz=91,slow=8.3,SNR=6.1							
AS31	**Alice Springs**	**50.28**	**253**	P		**P**	**19 04 18.2**	**-2.6**
AS31				IAmb		IAmb	19 04 51.2	
	comp=Z,2.6nm,1.6s							
ASAR	**Alice Springs**	**50.28**	**253**	P		**P**	**19 04 18.6**	**-2.2**
	comp=Z,2.4nm,0.8s,baz=89,slow=8.1,SNR=30							
QSPA	**South Pole Qui**	**73.72**	**180**	P		**P**	**19 07 00.3**	**+2.6**
ILAR	**Eielson Array**	**83.27**	**11**	P		**P**	**19 07 52.5**	**+2.5**
	comp=Z,0.1nm,0.6s,baz=230,slow=6.8,SNR=5.9							
BRTR	**Keskin Array B**	**147.17**	**321**	PKPbc		**PKPab**	**19 15 08.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=135,slow=5.2,SNR=2.2							

DNK ***17*** *19:01:43.9±2.1, 51°.43N×16°.52E, h25km±77km, ML2.2*

IDC ***17*** *19:01:46.5±1.1, 51°.43N×16°.11E, h0km, mb1 3.5/5, mb1mx3.1/47, mbtmp3.3/5, ML2.9/5, Error ellipse: s-maj=15.6km s-min=8.7km az=130.0*

PRU ***17*** *19:01:46.0±0.0, 51°.49N×16°.13E, h0km*

VIE ***17*** *19:01:46.7±0.6, 51°.37N×16°.15E, h0km, mb2.5/8, ml2.6/10, Error ellipse: s-maj=4.9km s-min=4.1km az=28.0 67 km WNW of Wroclaw Suspected Mining induced.*

ISC 17 19:01:43.8±0.8, 51°.57N±0°.03×16°.18E±0°.02, h0km, n41, σ1s10/86, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.73**	**175**	*i* Pg		**Pg**	**19 01 58.4**	**+0.6**
KSP				*e*Sg		**Sg**	**19 02 07.5**	**+0.2**
KSP				*e*Sg		**Sb**	**19 02 07.9**	**-2.1**
CHVC	**Chvalec**	**0.99**	**185**	*e*PG		**Pg**	**19 02 03.3**	**+0.6**
CHVC				*e*SG		**Sg**	**19 02 15.6**	**+0.1**
OSTC	**Ostas**	**1.02**	**179**	*e*PG		**Pb**	**19 02 03.9**	**-0.4**
OSTC				*e*SG		**Sg**	**19 02 16.6**	**+0.2**
UPC	**Upice**	**1.07**	**186**	*e*PG		**Pg**	**19 02 04.6**	**+0.3**
DPC	**Dobruska-Polom**	**1.23**	**176**	*e*PG		**Pg**	**19 02 07.2**	**-0.1**
DPC				*e*SG		**Sg**	**19 02 22.1**	**-1.0**
	comp=Z,37nm,0.3s							
PVCC	**Panska Ves**	**1.46**	**225**	*e*PG		**Pn**	**19 02 11.5**	**+0.1**
PVCC				*e*SG		**Sg**	**19 02 30.1**	**-0.5**
KRLC	**Kraliky**	**1.55**	**166**	*e*PG		**Pn**	**19 02 12.6**	**0.0**
KRLC				*e*SG		**Sn**	**19 02 32.1**	**-1.3**
	comp=Z,63nm,0.6s							
BRG	**Berggiesshubel**	**1.57**	**244**	Pn		**Pn**	**19 02 12.6**	**-0.3**
BRG				Pg		**Pg**	**19 02 14.3**	**+0.4**
BRG				Sg		**Sg**	**19 02 34.6**	**+0.3**
BRG				Amp			19 02 37.9	
	comp=N,47nm,0.6s							
PRU	**Pruhonice**	**1.90**	**214**	*e*PN		**Pn**	**19 02 17.1**	**-0.3**
PRU				*e*PG		**Pb**	**19 02 19.1**	**-0.2**
PRU				*e*SG		**Sb**	**19 02 43.5**	**0.0**
	comp=N,35nm,0.4s							
MORC	**Moravsky Berou**	**1.99**	**154**	*e*PN		**Pn**	**19 02 18.7**	**-0.1**
MORC				*e*SG		**Sb**	**19 02 46.2**	**-0.1**
CLL	**Collm**	**2.01**	**264**	*i* Pn		**Pn**	**19 02 18.8**	**-0.1**
	comp=Z,6.0nm,0.7s							
CLL				*i* Pg		**Pg**	**19 02 22.3**	**0.0**
CLL				*e*			19 02 26.0	
CLL				*i* Sg		**Sg**	**19 02 48.5**	**+0.2**
	comp=Z,50nm,0.7s							
VRAC	**Vranov**	**2.28**	**173**	Pn		**Pb**	**19 02 24.4**	**-1.4**
	comp=Z,3.3nm,0.3s,baz=350,slow=17,SNR=16							
VRAC				Lg		Lg	19 02 53.6	
	comp=Z,2.9nm,0.3s,baz=244,slow=20,SNR=11							
VRAC	**Vranov**	**2.28**	**173**	*e*PN		**Pn**	**19 02 23.0**	**+0.3**
VRAC				*e*SG		**Sb**	**19 02 54.4**	**-0.2**
KRUC	**Moravsky**	**2.52**	**177**	*e*PN		**Pn**	**19 02 26.0**	**+0.1**
KRUC				*e*SG		**Sb**	**19 03 02.3**	**+1.0**
OJC	**Ojcow**	**2.66**	**119**	*e*Pg		**Pg**	**19 02 35.2**	**+0.5**
OJC				*e*Sg		**Sg**	**19 03 10.3**	**+1.1**
NKC	**Novy Kostel**	**2.72**	**242**	*e*PN		**Pn**	**19 02 29.4**	**+0.7**
NKC				*e*PG		**Pg**	**19 02 35.9**	**0.0**
NKC				*e*SG		**Sg**	**19 03 11.7**	**+0.6**
	comp=Z,59nm,0.6s							
JAVC	**Velka Javorina**	**2.88**	**160**	*e*PN		**Pn**	**19 02 31.7**	**+0.7**
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN		**Pn**	**19 02 32.0**	**0.0**
KHC				*e*PG		**Pb**	**19 02 38.2**	**+0.8**
KHC				*e*SN		**Sn**	**19 03 07.1**	**-1.2**
KHC				*e*SG		**Sg**	**19 03 17.5**	**-1.3**
	comp=Z,12nm,0.7s							
CKRC	**Cesky Krumlov**	**3.01**	**204**	*e*PN		**Pn**	**19 02 33.6**	**+0.9**
CKRC				*e*SG		**Sb**	**19 03 17.4**	**+2.0**
	comp=Z,27nm,0.6s							
GERES	**GERESS Array B**	**3.16**	**211**	Pn		**Pn**	**19 02 34.9**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=34,slow=13,SNR=26							
GERES				Pg		**Pb**	**19 02 42.2**	**+1.3**
	comp=Z,2.8nm,0.3s,baz=30,slow=17,SNR=30							
GERES				Sn		**Sn**	**19 03 10.5**	**-2.8**
	comp=Z,1.4nm,0.3s,baz=29,slow=27,SNR=5.7							
GERES				Lg		Lg	19 03 22.2	
	comp=Z,2.6nm,0.3s,baz=34,slow=27,SNR=7.0							
LANS	**Liptovska Anna**	**3.21**	**138**	*e*PN		**Pn**	**19 02 36.7**	**+1.2**
LANS				*e*PG		**Pg**	**19 02 47.5**	**+2.2**
LANS				*e*SG		**Sg**	**19 02 57.9**	**+1.1**
LANS				*e*LG		Lg	19 03 38.4	
LANS				*e*			19 25 57.5	
MODS	**Modra-Piesok**	**3.28**	**167**	*e*PN		**Pn**	**19 02 36.4**	**0.0**
MODS				*e*PG		**Pg**	**19 02 45.4**	**-1.2**
MODS				*e*SG		**Sb**	**19 03 25.5**	**+2.2**
MODS				*e*LG		Lg	19 03 33.9	
NIE	**Niedzica**	**3.40**	**128**	*e*P		**Pg**	**19 02 49.3**	**+0.4**
NIE				*e*S		**Sg**	**19 03 34.0**	**+1.0**
VYHS	**Vyhne**	**3.52**	**150**	*e*PN		**Pn**	**19 02 39.9**	**+0.1**
VYHS				*e*PG		**Pg**	**19 02 52.8**	**+1.5**
VYHS				*e*SG		**Sg**	**19 03 34.2**	**-2.7**
BSD	**Bornholm Skovb**	**3.63**	**348**	*i* P		**Pn**	**19 02 41.9**	**+0.7**
BSD				*i* S		**Sn**	**19 03 22.6**	**-2.1**
BSD				IAML			19 03 51.1	
	comp=Z,2.4nm,0.4s							
CONA	**Conrad Observa**	**3.65**	**183**	*i* Pn		**Pn**	**19 02 42.5**	**+0.9**
	comp=Z,1.0nm,0.2s,SNR=4.5							
CONA				*e*Sg		**Sg**	**19 03 40.5**	**-0.6**
	comp=Z,9.6nm,0.3s							
MOA	**Molln**	**3.93**	**199**	*e*Pn		**Pn**	**19 02 46.0**	**+0.6**
	comp=Z,1.4nm,0.2s,SNR=6.9							
MOA				Sg		**Sg**	**19 03 49.0**	**-0.9**
	comp=Z,4.3nm,0.3s							
ARSA	**Arzberg**	**4.35**	**186**	*i* Pn		**Pn**	**19 02 50.6**	**-0.5**
	comp=Z,1.4nm,0.2s							
ARSA				Sg		**Sg**	**19 04 02.3**	**-1.1**
	comp=Z,19nm,0.8s							
LUNU	**Lund**	**4.38**	**339**	*i* P		**Pn**	**19 02 52.1**	**+0.5**
LUNU				*i* S		**Sn**	**19 03 43.4**	**+0.2**
BLEU	**Blekinge**	**4.75**	**358**	*i* P		**Pn**	**19 02 57.2**	**+0.6**
BLEU				*i* S		**Sn**	**19 03 49.8**	**-2.4**
KBA	**Koelnbreinsper**	**4.87**	**204**	*e*Pn		**Pn**	**19 02 59.3**	**+0.9**
	comp=Z,3.0nm,0.5s,SNR=5.2							
KBA				Sg		**Sg**	**19 04 21.4**	**+1.4**
	comp=Z,17nm,0.8s							
BJUU	**Bjuv**	**4.88**	**339**	*i* P		**Pn**	**19 02 58.4**	**0.0**
BJUU				*i* S		**Sn**	**19 03 53.1**	**-2.5**
DEL	**Delary**	**5.09**	**345**	*e*		**Pn**	**19 03 01.4**	**+0.2**
	baz=157,slow=14							
DEL				*i* P		**Pn**	**19 03 02.0**	**+0.8**
DEL				*i* S		**Sn**	**19 03 60.0**	**-0.8**
DEL				IAML			19 04 02.4	
	comp=Z,1.1nm,0.4s							
OBKA	**Obir**	**5.18**	**193**	Sg		**Sg**	**19 04 30.9**	**+0.8**
	comp=Z,6.8nm,0.7s							
WATA	**Walderalm**	**5.20**	**217**	*i* Pn		**Pn**	**19 03 03.9**	**+1.1**
	comp=Z,1.5nm,0.2s,SNR=5.5							
WATA				Sg		**Sg**	**19 04 33.2**	**+2.6**
	comp=Z,3.8nm,0.4s							
WTTA	**Wattenberg**	**5.23**	**216**	*i* Pn		**Pn**	**19 03 04.6**	**+1.2**
	comp=Z,1.4nm,0.2s,SNR=4.6							
WTTA				Sg		**Sg**	**19 04 32.9**	**+1.1**
	comp=Z,8.9nm,0.7s							
MOTA	**Moosalm**	**5.37**	**220**	*i* Pn		**Pn**	**19 03 05.6**	**+0.2**
	comp=Z,0.4nm,0.2s							
MOTA				Sg		**Sg**	**19 04 37.9**	**+1.6**
	comp=Z,4.2nm,0.6s							
SQTA	**Sankt Quirin**	**5.43**	**219**	*i* Pn		**Pn**	**19 03 07.8**	**+1.7**
	comp=Z,1.2nm,0.2s							
DAVOX	**Davos/Dischmat**	**6.33**	**223**	Pn		**Pn**	**19 03 18.8**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=17,slow=16,SNR=2.2							
DAVOX				Lg		Lg	19 05 03.1	
	comp=Z,0.1nm,0.3s,baz=215,slow=20,SNR=2.4							
AKASG	**Malin Array Be**	**8.25**	**91**	Pn		**Pn**	**19 03 44.1**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=280,slow=12,SNR=6.8							
FINES	**FINESS Array B**	**11.29**	**25**	Pn		**Pn**	**19 04 25.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=206,slow=9.3,SNR=5.2							

IDC ***17*** *19:05:20.1±5.3, 5°.20S×152°.16E, h77km±45km, mb3.6/6, mb1 3.8/7, mb1mx3.3/39, mbtmp3.9/7, ML1.8/1, MS3.9/2, Ms1 3.9/2, ms1mx3.3/36, Error ellipse: s-maj=48.3km s-min=24.7km az=121.0*

ISC 17 19:05:17.6±1.8, 5°.2S±0°.2×152°.3E±0°.3, h55km, n8, σ0s93/8, mb3.8/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**6.62**	**230**	P		**Pn**	**19 06 53.7**	**+1.4**
	1.2nm,0.3s,baz=17,slow=19,SNR=2.1							
PMG				S		**Sn**	**19 08 05.7**	**-0.7**
	1.7nm,0.3s,baz=178,slow=23,SNR=1.8							
SIJI	**Sorong**	**21.43**	**281**	P		**P**	**19 10 01.6**	**+0.2**
	4.4nm,0.9s,baz=90,slow=16,SNR=1.7							
SIJI				LR		LR	19 18 14.3	
	comp=Z,302nm,21.5s,baz=62,slow=36							
WRA	**Warramunga Arr**	**22.83**	**228**	P		**P**	**19 10 15.4**	**-0.9**
	3.3nm,0.7s,baz=53,slow=10,SNR=26							
ASAR	**Alice Springs**	**25.55**	**222**	P		**P**	**19 10 41.2**	**-0.2**
	1.9nm,0.4s,baz=56,slow=9.2,SNR=62							
FITZ	**Fitzroy Crossi**	**29.05**	**242**	P		**P**	**19 11 11.9**	**-1.0**
	1.0nm,0.4s,baz=65,slow=7.3,SNR=14							
SONM	**Songino Array**	**66.37**	**328**	P		**P**	**19 16 00.9**	**0.0**
	0.7nm,0.7s,baz=145,slow=5.3,SNR=2.5							
MKAR	**Makanchi Array**	**80.28**	**319**	LR		LR	19 54 50.7	
	comp=Z,67nm,19.2s,baz=38,slow=37							
ILAR	**Eielson Array**	**82.68**	**22**	P		**P**	**19 17 35.0**	**0.0**
	0.5nm,0.7s,baz=244,slow=5.9,SNR=5.4							

IDC 17 19:08:05.5±2.0, 1°.39N×124°.58E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/44, mbtmp3.2/3, Error ellipse: s-maj=198.9km s-min=28.2km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.26**	**156**	P		P	19 13 13.9	-0.9
	0.5nm,0.5s,baz=334,slow=11,SNR=5.9							
ASAR	**Alice Springs**	**26.50**	**161**	P		P	19 13 45.8	+0.9
	0.2nm,0.5s,baz=336,slow=7.4,SNR=5.7							
MKAR	**Makanchi Array**	**58.30**	**327**	P		P	19 18 02.0	-0.2
	0.1nm,0.5s,baz=121,slow=8.8,SNR=2.3							

IDC ***17*** *19:20:52.6±0.8, 34°.63N×24°.83E, h0km, mb3.8/14, mb1 4.0/22, mb1mx3.8/54, mbtmp3.9/22, ML4.2/7, MS3.1/1, Ms1 3.1/1, ms1mx2.4/63, Error ellipse: s-maj=15.9km s-min=9.8km az=94.0*

MOS ***17*** *19:20:54.7±1.1, 34°.74N×24°.69E, h12km, mb4.2/5, Error ellipse: s-maj=7.2km s-min=4.4km az=78.8*

NIC ***17*** *19:20:54.6±0.0, 34°.19N×25°.08E, h0km±7km, Ml4.4/4*

NEIC ***17*** *19:20:57.4±2.6, 34°.76N±0°.06×24°.75E±0°.07, h23km±6km, mb4.0/31, ML4.1(THE), Error ellipse: s-maj=8.3km s-min=8.0km az=196.0*

ATH ***17*** *19:20:58.0, 34°.82N×24°.78E, h20km±3km, ML3.9/12, Error ellipse: s-maj=4.0km s-min=1.1km az=357.0*

ISK ***17*** *19:20:57.2, 34°.78N×24°.79E, h9km, ML3.9/10*

THE ***17*** *19:20:57.9, 34°.80N×24°.80E, h14km±1km, ML4.1/10, Error ellipse: s-maj=2.2km s-min=0.8km az=349.0*

HLW ***17*** *19:20:58.8, 34°.57N×25°.20E, h10km±19km, Md4.3, Ml4.3*

DDA ***17*** *19:20:59.3, 34°.83N×24°.85E, h20km±4km, MW4.2*

ISC 17 19:20:57.1±0.9, 34°.76N±0°.03×24°.79E±0°.02, h23km±6km, n243, σ1s70/284, mb4.0/27, 10C-5D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIVA	**Sivas**	**0.26**	**4**	P		**Pb**	**19 21 03.3**	**0.0**
SIVA				S		**Sb**	**19 21 06.6**	**-1.0**
SIVA	**Sivas**	**0.26**	**4**	P		**Pb**	**19 21 03.3**	**0.0**
SIVA				S		**Sb**	**19 21 06.8**	**-0.8**
	418μm,0.3s							
TMBK	**Timbaki Herakl**	**0.31**	**357**	P		**Pb**	**19 21 04.3**	**+0.1**
TMBK				S		**Sb**	**19 21 09.0**	**+0.1**
	38μm,0.2s							
IDI	**Anoyia**	**0.53**	**9**	Pg		**Pb**	**19 21 07.0**	**-0.9**
	406nm,0.3s,baz=186,slow=18,SNR=1346							
IDI				Lg		Lg	19 21 14.5	
	4μm,0.3s,baz=288,slow=22,SNR=68							
IDI	**Anoyia**	**0.53**	**9**	P		**Pb**	**19 21 07.0**	**-0.9**
IDI				S		**Sb**	**19 21 14.3**	**-0.9**
IDI				AML		AML	19 21 17.7	
	comp=E,72720μm,0.3s							
IDI				AML		AML	19 21 18.0	
	comp=N,58771μm,0.3s							
IDI	**Anoyia**	**0.53**	**9**	P		**Pb**	**19 21 07.0**	**-0.9**
IDI				S		**Sb**	**19 21 14.5**	**-0.7**
	comp=N,33μm,0.3s							

comp=N,10nm,0.5s
ZKR AML AML 19 21 42.7
comp=N,10nm,0.5s
ZKR AML AML 19 21 44.4
comp=N,4.6nm,0.5s
ZKR AML AML 19 21 44.4
comp=N,4.6nm,0.5s
ANKY Antikythira Is 1.64 313 P **Pb 19 21 27.1 +0.4**
ANKY AML AML 19 21 55.8
comp=E,4090µm,0.7s
ANKY AML AML 19 22 05.8
comp=N,3942µm,0.6s
SANT Santorini 1.70 19 P **Pb 19 21 26.9 -0.8**
SANT AML AML 19 21 52.7
comp=E,9361µm,0.3s
SANT AML AML 19 21 54.3
comp=N,3277µm,0.3s
SANT Santorini 1.70 19 *i* P **Pb 19 21 26.6 -1.0**
SANT *i* S **Sn 19 21 47.3 +0.9**
SANT Santorini 1.70 19 PN **Pb 19 21 27.3 -0.4**
SANT SN **Sb 19 21 49.9 +1.3**
SANT Santorini 1.70 19 Pn **Pn 19 21 26.4 +1.0**
THT2 Imerovigli 1.75 17 PN **Pb 19 21 28.0 -0.5**
THT2 SN **Sb 19 21 51.0 +0.9**
KTHA Kythira Island 2.05 317 P **Pb 19 21 32.6 -1.2**
KTHA AML AML 19 22 07.3
comp=E,3843µm,0.8s
KTHA AML AML 19 22 08.2
comp=N,2425µm,0.6s
KTHA Kythira Island 2.05 317 PN **Pb 19 21 32.7 -1.0**
KARP Karpathos 2.10 67 P **Pb 19 21 34.1 -0.4**
KARP AML AML 19 22 17.4
comp=E,3476µm,0.8s
KARP AML AML 19 22 17.9
comp=N,5296µm,0.8s
KARP Karpathos 2.10 67 PN **Pb 19 21 33.9 -0.6**
KARP Karpathos 2.10 67 Pn **Pb 19 21 33.5 -1.0**
KARP Karpathos 2.10 67 ⇑P **Pb 19 21 33.1 -1.3**
KARP AML AML 19 22 16.6
comp=N,3.5nm,0.8s
KARP AML AML 19 22 17.6
comp=N,5.3nm,0.8s
APE Apeiranthos 2.38 14 *i* P **Pn 19 21 35.8 +1.0**
APE *i* S **Sn 19 22 04.3 +1.0**
APE Apeiranthos 2.38 14 *d* P **Pn 19 21 35.6 +0.8**
APE Apeiranthos 2.38 14 PN **Pn 19 21 36.9 +2.1**
APE SN **Sn 19 22 05.8 +2.5**
VLI Veliai 2.47 323 P **Pb 19 21 40.0 -0.8**
VLI AML AML 19 22 25.1
comp=N,1025µm,0.6s
VLI AML AML 19 22 26.0
comp=E,1109µm,0.9s
KOSK Kos Island 2.67 41 PN **Pn 19 21 41.3 +2.6**
NIS1 Nisyros Isl. 2.68 46 PN **Pb 19 21 41.7 -2.6**
BODT Bodrum 3.08 41 PN **Pn 19 21 47.1 +2.8**
ARG Arkhangelos 3.09 61 P **Pn 19 21 47.7 +3.3**
ARG Arkhangelos 3.09 61 PN **Pn 19 21 47.1 +2.7**
ARG Arkhangelos 3.09 61 ⇑P **Pn 19 21 46.4 +1.9**
BDRM Kayabasi 3.15 42 *i* P **Pn 19 21 46.9 +1.5**
VLX Vlachokerasia 3.25 324 P **Pb 19 21 53.3 -0.9**
VLX AML AML 19 22 39.7
comp=N,640µm,0.5s
VLX AML AML 19 22 46.6
comp=E,850µm,0.9s
SLUM Salum 3.28 174 P **Pn 19 21 47.5 +0.4**
baz=179
SLUM S **Sn 19 22 22.0 -3.4**
baz=179
DDIM Aydin, Didim 3.34 36 *i* P **Pn 19 21 49.1 +1.1**
ITM Ithomi 3.35 317 Pn **Pn 19 21 49.1 +1.0**
TURN Turunc 3.46 53 *i* P **Pn 19 21 50.5 +1.1**
TURN *i* S **Sn 19 22 24.0 -5.7**
TURN Turunc 3.46 53 PN **Pn 19 21 52.6 +3.1**
GCAM G?zelcaml? 3.54 33 *i* P **Pn 19 21 51.7 +1.1**
DGB zmir 3.69 27 *i* P **Pn 19 21 55.5 +2.8**
YER Yerkesik 3.69 49 P **Pn 19 21 55.3 +2.4**
YER Yerkesik 3.69 49 PN **Pn 19 21 55.7 +2.8**
DALY Dalyan (Mula) 3.75 56 *i* P **Pn 19 21 55.4 +1.8**
DALY *i* S **Sn 19 22 34.4 -2.6**
DALY Dalyan (Mula) 3.75 56 PN **Pn 19 21 56.1 +2.5**
MULA Mugla, Merkez- 3.79 48 *i* P **Pn 19 21 56.7 +2.4**
AYDN Tasoluk 3.82 40 *i* P **Pn 19 21 57.0 +2.4**
URLA Izmir 3.88 22 *i* P **Pn 19 21 54.9 -0.4**
KSL Kastellorizon 4.15 69 P **Pn 19 22 00.7 +1.6**
AKAS Kas 4.20 68 *i* P **Pn 19 21 58.2 -1.6**
AKAS *i* S **Sn 19 22 42.4 -5.8**
AKAS Kas 4.20 68 **Pn 19 21 59.6 -0.2**
TAVA DENIZLI_Tavas 4.29 50 *i* P **Pn 19 22 04.0 +2.9**
CAEL Denizli, Camel 4.37 56 *i* P **Pn 19 22 04.3 +2.2**
CAEL *i* S Sn 19 22 43.2 -9.3
ZEDA zmir-Bergama 4.58 23 *i* P **Pn 19 22 07.4 +2.4**
GOLH Golhisar 4.59 56 *i* P **Pn 19 22 07.1 +1.9**
GOLH *i* S **Sn 19 22 57.2 -0.7**
ELL Elmali 4.61 63 P **Pn 19 22 07.2 +1.7**
ELL Elmali 4.61 63 **Pn 19 22 07.2 +1.7**
ELL Elmali 4.61 63 P **Pn 19 22 07.3 +1.8**
AGG Agios Georgios 4.69 336 *i* P **Pn 19 22 09.0 +2.5**
AGG Agios Georgios 4.69 336 P **Pn 19 22 07.2 +0.7**
AGG Agios Georgios 4.69 336 Pn **Pn 19 22 07.2 +0.7**
AKHS Akhisar 4.77 30 *i* P **Pn 19 22 08.7 +1.0**
AUM Antalya-Kumluc 4.79 69 *i* P **Pn 19 22 08.4 +0.6**
AKUM *i* S **Sn 19 22 58.1 -4.5**
MANT Manisa 4.80 38 Pn **Pn 19 22 09.8 +1.6**
KOCA Canakkale, Ayv 4.85 12 *i* P **Pn 19 22 06.2 -2.5**
KORT Korkueli 5.04 62 *i* P **Pn 19 22 12.9 +1.5**
KORT *i* S **Sn 19 23 07.6 -1.3**
BUHA Balikesir, Bur 5.07 20 *i* P **Pn 19 22 13.6 +1.8**
BAYC CANAKKALE_Bayr 5.17 15 *i* P **Pn 19 22 14.5 +1.5**
BRDR BURDUR-Merkez 5.17 54 *i* P **Pn 19 22 13.1 -0.1**
BUCA Burdur, Bucak- 5.33 60 *i* P **Pn 19 22 16.9 +1.6**
BUCA *i* S **Sn 19 23 10.8 -5.3**
OSC1 CSNet OBS 1 5.53 101 P **Pn 19 22 15.3 -2.6**
OSC1 S **Sn 19 23 16.9 -3.9**
SWA2 5.53 174 P **Pn 19 22 17.6 -0.4**
baz=177
SWA2 AMP 19 23 00.0
baz=177
SWA2 S **Sn 19 23 16.1 -4.8**
baz=177
KZIL AFYON_Kizioren 5.54 49 *i* P **Pn 19 22 19.4 +1.0**
ISP Isparta 5.55 55 P **Pn 19 22 20.0 +1.6**
ISP Isparta 5.55 55 Pn **Pn 19 22 20.0 +1.6**
LIT Litokhoron 5.63 342 P **Pn 19 22 20.9 +1.4**
LIT Litokhoron 5.63 342 **Pn 19 22 20.9 +1.4**
KEPZ Antalya-Kepez 5.93 67 *i* P **Pn 19 22 24.5 +0.9**
KEPZ *i* S Sn 19 23 17.6 -13
ALN Alexandroupoli 6.21 9 P **Pn 19 22 28.6 +1.3**
ALN Alexandroupoli 6.21 9 Pn **Pn 19 22 28.6 +1.3**
AKMS Akamas 6.21 85 P **Pn 19 22 26.0 -1.3**
AKMS AML AML 19 23 39.7
comp=E,1.1nm,0.5s
AKMS AML AML 19 23 44.9
comp=E,0.7nm,0.4s
SEDI Konya, Seydise 6.25 63 *i* P **Pn 19 22 28.5 +0.5**
SEDI *i* S **Sn 19 23 33.2 -5.5**
YVAC Isparta, Yalva 6.26 54 *i* P **Pn 19 22 28.5 +0.3**
GAZI Gazipasa 6.31 74 *i* P **Pn 19 22 27.8 -1.0**
GAZI *i* S Sn 19 23 27.8 -12
NATA Nata 6.40 88 P **Pn 19 22 28.5 -1.5**
ALFC Alefka 6.42 84 P **Pn 19 22 28.8 -1.6**
ALFC AML AML 19 23 39.5
comp=E,1.0nm,0.5s
ALFC AML AML 19 23 39.7
comp=E,0.6nm,0.5s
OSC2 CSNet OBS 4 6.44 103 P **Pn 19 22 27.9 -2.6**
DOGA KONYA_Doganhis 6.47 57 *i* P **Pn 19 22 32.5 +1.4**
DOGA *i* S Sn 19 23 29.7 -15
KNT Kendrikon 6.56 347 P Pn 19 22 38.1 +5.9
KNT pmax pmax
comp=Z,24nm,0.8s
FNA Florina 6.59 337 P **Pn 19 22 32.5 -0.2**
FNA Florina 6.59 337 **Pn 19 22 32.5 -0.2**
SZAC Souni 6.66 88 P **Pn 19 22 32.0 -1.6**
ASGA Asgata 6.96 87 P **Pn 19 22 36.4 -1.3**
CSS Mathiatis 7.03 86 Pn **Pn 19 22 37.6 -1.0**
CSS Mathiatis 7.03 86 ⇑P **Pn 19 22 37.7 -0.9**
MVOU Mavrovouni 7.27 85 ⇑P **Pn 19 22 41.3 -0.6**
SCTE Santa Cesarea 7.31 318 Pn **Pn 19 22 42.8 +0.4**
PLD Plovdiv 7.33 359 P Pn 19 22 48.1 +5.3
PLD pmax pmax
comp=Z,1.0nm,1.0s
RYAN Fayoum 7.33 139 P **Pn 19 22 41.7 -1.2**
baz=140
KOT Kottamia 7.66 127 P **Pn 19 22 45.8 -1.5**
baz=127
KOT AMP 19 24 00.0
baz=127
TIP Timpagrande 7.79 307 Pn **Pn 19 22 48.2 -1.0**
GLL Jalalah 7.82 129 P **Pn 19 22 47.6 -1.9**
baz=130
VTS Vitosha 7.94 352 P **Pn 19 22 51.4 +0.2**
VTS Vitosha 7.94 352 **Pn 19 22 51.4 +0.2**
BR231 Keskin MP Arra 8.14 49 Pn **Pn 19 22 55.8 +1.9**
ANTO Ankara 8.16 49 P **Pn 19 22 56.0 +1.8**
ANTO Ankara 8.16 49 **Pn 19 22 56.0 +1.8**
NBNS Bani Suef 8.25 136 P **Pn 19 22 53.7 -1.8**
baz=137
BRTR Keskin Array B 8.62 52 Pn **Pn 19 23 03.1 +2.5**
comp=Z,0.4nm,0.3s,baz=233,slow=12,SNR=6.3
BRTR LR LR 19 26 34.5
comp=Z,125nm,18.3s,baz=255,slow=39
BRTR Keskin Array B 8.62 52 P **Pn 19 23 01.9 +1.2**
BR131 Keskin Array S 8.62 52 P **Pn 19 23 01.8 +1.2**
BR131 Keskin Array S 8.62 52 Pn **Pn 19 23 01.8 +1.2**
TAMRE El Minia 8.79 142 P **Pn 19 23 01.5 -1.3**
baz=143
PDG Podgorica 8.79 332 Pn **Pn 19 23 02.4 -0.4**
RAFF Raffo Rosso 8.80 289 Pn **Pn 19 23 01.6 -1.3**
VAE Valguarnera 8.82 291 Sn **Sn 19 24 42.4 +0.3**
comp=Z,1.4nm,0.3s,baz=284,slow=19,SNR=3.9
MMAI Mount Meron Ar 8.99 98 Pn **Pn 19 23 03.4 -2.3**
comp=Z,3.4nm,0.3s,baz=280,slow=11,SNR=30
MMAI Sn **Sn 19 24 40.0 -6.3**
comp=Z,9.4nm,0.3s,baz=282,slow=29,SNR=11
CORL Corleone 9.78 292 Pn **Pn 19 23 15.7 -0.7**
SGRT San Giovanni R 9.96 317 Pn **Pn 19 23 17.2 -1.7**
EIL Elat 9.99 118 Pn **Pn 19 23 17.3 -1.9**
comp=Z,2.6nm,0.3s,baz=338,slow=17,SNR=41
EIL Sn **Sn 19 25 02.4 -8.3**
comp=Z,3.0nm,0.3s,baz=41,slow=15,SNR=4.8
MLR Muntele Rosu 10.75 4 Pn **Pn 19 23 30.4 +0.6**
comp=Z,0.3nm,0.3s,baz=119,slow=22,SNR=1.9
MLR Muntele Rosu 10.75 4 Pn **Pn 19 23 29.5 -0.3**
INTR Introdacqua 11.19 314 Pn **Pn 19 23 35.8 +0.1**
AQU L'Aquila 11.69 314 P **Pn 19 23 42.6 +0.1**
AQU L'Aquila 11.69 314 Pn **Pn 19 23 42.6 +0.1**
NRCA Norcia 12.15 315 Pn **Pn 19 23 49.3 +0.4**
MURB Monte Urbino 12.76 315 Pn **Pn 19 23 58.9 +1.8**
BURAR Bucovina Array 12.85 1 Pn **Pn 19 24 00.9 +2.6**
STAL STALIGIAL 14.69 325 Pn **Pn 19 24 24.9 +1.5**
ZOU Zoufplan 14.79 326 Pn **Pn 19 24 26.4 +1.5**
CTI Castel Tesino 15.05 322 P **Pn 19 24 28.9 +0.5**
CTI pmax pmax
comp=Z,5.0nm,0.6s
CTI Castel Tesino 15.05 322 Pn **Pn 19 24 28.9 +0.5**
CTI IAmb IAmb 19 24 34.8
comp=Z,4.8nm,0.6s
GEVA Gevas 15.11 71 **Pn 19 24 30.8 +1.5**
GEVA IAmb IAmb 19 25 05.9
comp=Z,4.9nm,0.8s
MOA Molln 15.26 332 *e*P **P 19 24 36.1 +0.3**
comp=Z,3.7nm,0.8s
SALO Salr 15.35 319 Pn **Pn 19 24 34.5 +2.2**
WTTA Wattenberg 15.93 326 P **P 19 24 44.5 +1.2**
WTTA pmax pmax
comp=Z,8.0nm,1.1s
WATA Walderalm 16.01 326 *e*P **P 19 24 45.2 +1.0**
comp=Z,7.4nm,0.6s
CKRC Cesky Krumlov 16.05 334 *e*P **P 19 24 44.8 +0.3**
SQTA Sankt Quirin 16.09 325 *e*P **P 19 24 46.3 +1.2**
comp=Z,3.5nm,0.7s
FETA Feichten 16.19 323 *i* P **P 19 24 48.1 +1.9**
comp=Z,6.7nm,1.3s
AKASG Malin Array Be 16.26 10 Pn **Pn 19 24 44.4 +0.6**
comp=Z,2.6nm,0.3s,baz=201,slow=11,SNR=12
AKBB Malin Array Si 16.26 10 *de*P **Pn 19 24 45.0 +1.2**
AKBB Malin Array Si 16.26 10 **Pn 19 24 44.2 +0.3**
AKBB IAmb IAmb 19 24 58.9
comp=Z,9.4nm,0.8s
GEC2 GERESS Array S 16.29 333 P **P 19 24 47.0 -0.3**
GERES GERESS Array B 16.29 333 Pn **P 19 24 46.8 -0.5**
comp=Z,0.9nm,0.3s,baz=145,slow=12,SNR=38
TUE Stuetta 16.53 320 **Pn 19 24 48.3 +0.7**
KHC Kasperske Hory 16.58 333 ⇑*e*P **P 19 24 49.9 -0.5**
KHC pmax pmax
comp=Z,32nm,3.9s
KHC Kasperske Hory 16.58 333 *e*P **P 19 24 50.8 +0.4**
KHC Kasperske Hory 16.58 333 P **P 19 24 49.8 -0.6**
KIV Kislovodsk 16.58 51 *e*P **P 19 24 50.2 -0.3**
KIV pmax pmax
comp=Z,31nm,1.1s
KIV Kislovodsk 16.58 51 P **P 19 24 50.0 -0.5**
KIV IAmb IAmb 19 25 15.5
comp=Z,8.6nm,1.0s
KBZ Khabaz 16.61 52 Pn **P 19 24 51.2 +0.5**
comp=Z,0.4nm,0.3s,baz=244,slow=8.8,SNR=31
KBZ Khabaz 16.61 52 *c i*P **P 19 24 52.2 +1.5**
KBZ pmax pmax
comp=Z,20nm,0.9s
GNI Garni 16.72 65 Pn **P 19 24 52.3 +0.1**
comp=Z,0.6nm,0.3s,baz=276,slow=15,SNR=4.3
GNI Garni 16.72 65 P **P 19 24 52.0 -0.2**
GNI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 16.72 65 **P 19 24 52.0 -0.2**
WET Wettzell 16.85 332 P **P 19 24 53.5 +0.1**
WET pmax pmax
comp=Z,5.0nm,1.1s
ZEI Tsey 16.90 56 *e*P **P 19 24 55.1 +0.9**
ZEI pmax pmax
comp=Z,6.0nm,1.2s
NCK Nalchik 16.97 53 ⇑*e*P **P 19 24 54.4 -0.4**
NCK pmax pmax
comp=Z,5.0nm,0.3s
SENIN Lac Senin/Sane 17.59 316 **Pn 19 25 01.0 +0.2**
GRFO Grafenberg 17.94 330 P **P 19 25 05.6 +0.2**
GRFO pmax pmax
comp=Z,8.0nm,0.9s
GRFO Grafenberg 17.94 330 P **P 19 25 05.6 +0.2**
GRFO IAmb IAmb 19 25 18.6
comp=Z,7.8nm,0.9s
GRA1 Grafenberg Arr 17.94 330 **Pn 19 25 05.1 +0.1**
GRA1 IAmb IAmb 19 25 21.9
comp=Z,19nm,1.3s
GRF Grafenberg Arr 17.94 330 P **Pn 19 25 05.1 +0.1**
GRF pmax pmax
comp=Z,19nm,1.3s
VSR Storozhevoye 19.46 28 *e*P **Pn 19 25 26.5 +3.2**
VSR pmax pmax
comp=Z,10.0nm,1.4s
NACGM Naroch 20.19 3 *i* P Pn 19 25 32.9 +1.0
NACGM *i* P Pn 19 25 32.9 +1.0
NACGM *i* P Pn 19 25 32.9 +1.0
NACGM *i* PP **PnPn 19 25 47.0 +0.3**
NACGM *i* S **S 19 29 09.4 -6.0**
NACGM *i* SS Sn 19 29 23.8 +5.4
NACGM *i* LQ LQ 19 31 20.7
NACGM *i* LR LR 19 32 22.5
VRH Novokhopyorsk 20.50 32 *e*P Pn 19 25 34.8 -0.8
VRH pmax pmax
comp=Z,6.0nm,0.8s
TAM Tamanrasset 20.63 240 P Pn 19 25 38.0 +0.5
TAM pmax pmax
comp=Z,2.0nm,1.0s
MEM Membach 20.92 325 *d*P **P 19 25 38.3 +0.4**
RAYN Ar Rayn 21.23 116 P **P 19 25 43.2 +1.6**
RAYN pmax pmax
comp=Z,5.0nm,0.7s
RAYN Ar Rayn 21.23 116 P **P 19 25 43.2 +1.6**
RAYN IAmb IAmb 19 25 44.1
comp=Z,5.4nm,0.7s
DOU Dourbes 21.28 322 *d*P **P 19 25 41.8 0.0**
BSD Bornholm Skovb 21.48 344 *i* P **P 19 25 45.6 +1.8**
BSD Bornholm Skovb 21.48 344 *i* P **P 19 25 45.6 +1.8**
ESDC Sonseca Array 23.36 291 P **P 19 26 03.4 -0.6**
comp=Z,1.0nm,0.8s,baz=85,slow=9.4,SNR=6.1
BELG Belogornoye 24.00 36 P **P 19 26 08.6 -1.3**
comp=Z,4.2nm,0.5s,baz=163,slow=14,SNR=2.7
PVAQ Vaqueiros 26.33 285 P **P 19 26 32.3 +1.0**
HFS Hagfors 26.40 347 P **P 19 26 30.6 -0.9**
comp=Z,1.0nm,0.4s,baz=158,slow=9.6,SNR=9.9
FINES FINESS Array B 26.71 1 P **P 19 26 32.5 -1.9**
comp=Z,0.6nm,0.4s,baz=155,slow=12,SNR=10
FIA1 FINESS Array S 26.71 1 P **P 19 26 33.0 -1.4**
FIA1 IAmb IAmb 19 27 20.9
comp=Z,14nm,1.2s
NC602 NORSAR Array S 27.36 346 P **P 19 26 40.4 +0.1**
NAO01 NORSAR Array S 27.60 345 P **P 19 26 43.0 +0.6**
NOA NORSAR Array B 27.71 346 P **P 19 26 42.3 -1.1**
comp=Z,0.3nm,0.6s,baz=151,slow=8.6,SNR=4.0
EKA Eskdalemuir Ar 28.19 325 P **P 19 26 47.1 -0.7**
comp=Z,0.3nm,0.4s,baz=116,slow=9.4,SNR=2.6
AKTO Aktyubinsk 28.74 47 P **P 19 26 51.1 -1.7**
comp=Z,0.7nm,0.5s,baz=270,slow=7.1,SNR=1.7
ABKAR Akbulak array 29.56 50 P **P 19 27 01.1 +1.1**
TOAO Torodi Ar. Sit 30.00 230 **P 19 27 03.7 -0.4**
TOA0 IAmb IAmb 19 27 36.0
comp=Z,2.1nm,0.8s
TORD Torodi Ar. Bea 30.00 230 P **P 19 27 04.5 +0.4**
comp=Z,0.8nm,0.4s,baz=34,slow=8.6,SNR=20
TORD Torodi Ar. Bea 30.00 230 P **P 19 27 04.2 0.0**
TORD IAmb IAmb 19 27 18.4
comp=Z,1.3nm,0.7s
ARCES ARCESS Array B 34.83 0 P **P 19 27 44.2 -1.7**
comp=Z,0.6nm,0.5s,baz=171,slow=8.6,SNR=6.8
DBIC Dimbokro 39.08 231 P **P 19 28 23.5 +0.9**
DBIC pmax pmax
comp=Z,7.0nm,1.2s
DBIC Dimbokro 39.08 231 P **P 19 28 23.5 +0.9**
DBIC IAmb IAmb 19 28 34.8
comp=Z,7.1nm,1.2s
AAK Ala-Archa 39.11 63 ⇑*e*P **P 19 28 23.6 +0.8**
AAK pmax pmax
comp=Z,18nm,3.2s
AAK Ala-Archa 39.11 63 P **P 19 28 22.0 -0.8**
SCO Scoresbysund 43.60 339 P **P 19 28 59.8 +0.7**
SCO pmax pmax
comp=Z,7.0nm,1.1s
SCO Scoresbysund 43.60 339 P **P 19 28 59.8 +0.7**
SCO IAmb IAmb 19 29 46.4
comp=Z,6.5nm,1.1s
SPA0 Spitsbergen Ar 43.67 357 P **P 19 29 00.1 +0.4**
MAKZ Makanchi 44.03 56 P **P 19 29 03.2 +0.3**
MAKZ pmax pmax
comp=Z,1.0nm,0.6s
MAKZ Makanchi 44.03 56 P **P 19 29 03.2 +0.3**
MAKZ IAmb IAmb 19 29 11.2
comp=Z,1.2nm,0.6s
MK31 Makanchi Array 44.25 56 *de*P **P 19 29 03.0 -1.7**
MK31 Makanchi Array 44.25 56 P **P 19 29 04.2 -0.5**
MK31 IAmb IAmb 19 29 12.6
comp=Z,1.6nm,0.7s
MKAR Makanchi Array 44.25 56 P **P 19 29 04.2 -0.4**
comp=Z,1.4nm,0.5s,baz=268,slow=7.9,SNR=30
MKAR Makanchi Array 44.25 56 P **P 19 29 04.4 -0.3**
ZAA0 Zalesovo Array 45.50 46 P **P 19 29 14.6 +0.1**
ZAA0 IAmb IAmb 19 29 36.9
comp=Z,2.1nm,0.7s
ZALV Zalesovo Beam 45.50 46 P **P 19 29 12.8 -1.7**
comp=Z,1.2nm,0.4s,baz=267,slow=8.2,SNR=8.0
ZALV Zalesovo Beam 45.50 46 *i* P **P 19 29 14.8 +0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 45.50 46 P **P 19 29 14.0 -0.5**
DGZ Jazzator, Alta 47.37 52 ⇑*e*P **P 19 29 30.4 +1.0**
DGZ pmax pmax
comp=Z,3.0nm,2.5s
WMQ Urumqi 48.47 59 *e*P **P 19 29 40.6 +2.7**
LBTB Lobatse 59.45 179 P **P 19 30 59.4 +1.2**
LBTB pmax pmax
comp=Z,27nm,1.6s
LBTB Lobatse 59.45 179 P **P 19 30 59.4 +1.2**
EUNU Eureka 59.53 349 P **P 19 30 58.5 +0.4**
EUNU IAmb IAmb 19 31 39.1
comp=Z,3.7nm,1.4s
DRLN Deer Lake 59.93 311 P **P 19 31 01.6 +0.4**
TIXI Tiksi 61.65 20 ⇑*e*P **P 19 31 13.4 +0.9**
HHC Hu-ho-hao-te 66.11 56 *e*P **P 19 31 45.3 +2.7**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,130nm,5.2s
XAN Xi'an 67.29 64 P P 19 31 36.9 -13
XAN pP pP 19 31 46.9 -10
XAN sP sP 19 31 52.1 -7.2
XAN pmax pmax
comp=Z,8.0nm,0.8s
USRK Ussuriysk Ar. 77.34 45 P **P 19 32 49.9 0.0**
comp=Z,0.8nm,0.7s,baz=317,slow=3.1,SNR=2.7
YKA Yellowknife Ar 77.73 342 P **P 19 32 51.6 -0.1**
comp=Z,0.3nm,0.6s,baz=36,slow=5.6,SNR=5.7
YKA Yellowknife Ar 77.73 342 *i* P **P 19 32 51.5 -0.3**
ILAR Eielson Array 80.58 356 P **P 19 33 07.8 +0.4**
comp=Z,0.2nm,0.6s,baz=280,slow=10.0,SNR=2.0

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*DNK **17** 19:24:57.8±1.6,51°.13N×15°.74E, h38km±59km, ML2.0*
*PRU **17** 19:25:01.3±0.0,51°.46N×16°.11E, h0km*
*VIE **17** 19:25:01.3±0.8,51°.41N×16°.07E, h0km, mb1.9/2, ml2.5/5,*
Error ellipse: s-maj=7.8km s-min=4.4km az=59.0 74 km
WNW of Wroclaw Suspected Mining induced.

ISC 17 19:24:58.9±0.8, 51°.56N±0°.03×16°.16E±0°.03, h0km, n27, σ0s97/51, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**173**	*e*Pg		**Pg**		**19 25 13.3**	**+0.6**
KSP				*e*Sg		**Sg**		**19 25 22.4**	**+0.2**
CHVC	**Chvalec**	**0.98**	**184**	*e*PG		**Pb**		**19 25 18.3**	**-0.4**
CHVC				*e*SG		**Sg**		**19 25 30.0**	**-0.2**
comp=Z,31nm,0.5s									
OSTC	**Ostas**	**1.01**	**178**	*e*PG		**Pb**		**19 25 19.0**	**-0.2**
OSTC				*e*SG		**Sg**		**19 25 31.0**	**-0.2**
comp=Z,32nm,0.4s									
UPC	**Upice**	**1.06**	**185**	*e*PG		**Pg**		**19 25 19.3**	**+0.1**
DPC	**Dobruska-Polom**	**1.22**	**175**	*e*PG		**Pg**		**19 25 22.1**	**-0.1**
DPC				*e*SG		**Sg**		**19 25 37.1**	**-0.9**
comp=Z,22nm,0.4s									
PVCC	**Panska Ves**	**1.44**	**225**	*e*PG		**Pb**		**19 25 26.9**	**+0.3**
PVCC				*e*SG		**Sg**		**19 25 45.1**	**0.0**
comp=Z,93nm,0.5s									
KRLC	**Kraliky**	**1.54**	**165**	*e*PG		**Pn**		**19 25 27.9**	**+0.2**
KRLC				*e*SG		**Sg**		**19 25 47.3**	**-1.0**
comp=Z,26nm,0.3s									
BRG	**Berggiesshubel**	**1.55**	**245**	Pg		**Pb**		**19 25 28.4**	**-0.1**
BRG				Sg		**Sg**		**19 25 49.8**	**+1.0**
BRG				Amp				19 25 50.9	
comp=Z,26nm,0.7s									
PRU	**Pruhonice**	**1.88**	**214**	*e*PG		**Pb**		**19 25 34.0**	**-0.1**
PRU				*e*SG		**Sb**		**19 25 57.6**	**-0.5**
comp=Z,23nm,0.5s									
CLL	**Collm**	**1.99**	**264**	*i* Pn		**Pn**		**19 25 33.7**	**-0.1**
comp=Z,3.0nm,0.8s									
CLL				*i* Pg		**Pg**		**19 25 37.0**	**-0.1**
CLL				*i*				19 25 41.0	
CLL				*i* Sg		**Sg**		**19 26 05.0**	**+2.2**
comp=Z,11nm,0.6s									
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PN		**Pn**		**19 25 33.7**	**-0.2**
MORC				*e*SG		**Sb**		**19 26 01.1**	**-0.3**
VRAC	**Vranov**	**2.27**	**173**	*e*PN		**Pn**		**19 25 37.6**	**-0.1**
VRAC				*e*SG		**Sb**		**19 26 09.6**	**+0.2**
KRUC	**Moravsky**	**2.51**	**176**	*e*PN		**Pn**		**19 25 42.0**	**+1.1**
KRUC				*e*SG		**Sb**		**19 26 17.6**	**+1.4**
OJC	**Ojcow**	**2.67**	**119**	*e*Pg		**Pg**		**19 25 51.2**	**+1.1**
OJC				*e*Sg		**Sg**		**19 26 25.6**	**+1.0**
NKC	**Novy Kostel**	**2.70**	**242**	*e*PN		**Pn**		**19 25 44.3**	**+0.7**
NKC				*e*PG		**Pg**		**19 25 50.9**	**+0.3**
NKC				*e*SG		**Sg**		**19 26 25.9**	**+0.3**
comp=Z,20nm,0.6s									
KHC	**Kasperske Hory**	**2.94**	**215**	*e*PN		**Pn**		**19 25 46.6**	**-0.3**
KHC				*e*PG		**Pb**		**19 25 53.1**	**+0.9**
KHC				*e*SN		**Sn**		**19 26 21.1**	**-1.8**
KHC				*e*SG		**Sg**		**19 26 31.4**	**-1.9**
comp=Z,9.7nm,0.6s									
CKRC	**Cesky Krumlov**	**2.99**	**204**	*e*SG		**Sb**		**19 26 32.2**	**+2.1**
comp=Z,9.3nm,0.5s									
LANS	**Liptovska Anna**	**3.21**	**137**	*e*SG		**Sg**		**19 26 42.8**	**+0.7**
MODS	**Modra-Piesok**	**3.27**	**167**	*e*SG		**Sg**		**19 26 42.3**	**-1.7**
BSD	**Bornholm Skovb**	**3.64**	**349**	IAML				19 27 04.5	
comp=Z,1.8nm,0.4s									
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* S		**Sn**		**19 26 39.8**	**-0.2**
CONA	**Conrad Observa**	**3.64**	**183**	*e*Pn		**Pn**		**19 25 57.1**	**+0.5**
comp=Z,0.3nm,0.2s									
CONA				*e*Sg		**Sg**		**19 26 54.7**	**-1.1**
comp=Z,8.8nm,0.5s									
MOA	**Molln**	**3.91**	**199**	*i* Pn		**Pn**		**19 26 00.9**	**+0.6**
comp=Z,0.4nm,0.1s									
MOA				Sg		**Sg**		**19 27 05.0**	**+0.4**
comp=Z,5.8nm,0.5s									
ARSA	**Arzberg**	**4.33**	**186**	Sg		**Sg**		**19 27 18.7**	**+0.6**
comp=Z,4.5nm,0.5s									

LUNU	**Lund**	**4.39**	**339**	*i* P	**Pn**	**19 26 06.8**	**+0.1**
LUNU				*i* S	**Sn**	**19 26 58.0**	**-0.4**
BJUU	**Bjuv**	**4.89**	**339**	*i* P	**Pn**	**19 26 13.1**	**-0.5**
BJUU				*e*S	**Sn**	**19 27 07.7**	**-3.1**
DEL	**Delary**	**5.10**	**346**	*e*	**Pn**	**19 26 15.8**	**-0.7**
	baz=169,slow=14						
DEL				*i* P	**Pn**	**19 26 16.9**	**+0.4**
DEL				*e*S	**Sn**	**19 27 15.1**	**-0.9**
DEL				IAML		19 27 16.3	
	comp=Z,0.6nm,0.4s						

NEIC ***17*** *19:28:59.4±1.1, 8°.47S±0°.08×75°.00W±0°.10, h124*$^{km}_{\pm 7}$*, mb4.4/11, Error ellipse: s-maj=14.7km s-min=10.2km az=58.0*

IDC ***17*** *19:29:03.8±1.5, 8°.64S×75°.49W, h158*$^{km}_{\pm 15}$*, mb3.7/10, mb1 3.9/12, mb1mx3.7/35, mbtmp4.2/12, Error ellipse: s-maj=22.2km s-min=9.6km az=60.0*

VAO ***17*** *19:29:05.8±0.9, 8°.55S×74°.56W, h135*$^{km}_{\pm 5}$*, mb4.3*

ISC 17 19:29:00.1±0.5, **8°.54S**±0°.05×**75°.03W**±0°.05, **h136**km, **n61**, **σ2°11/66, mb4.3**/15, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
CZSB	**Cruzeiro do Su**	**2.43**	**71**	*e*P		**Pn**	**19 29 40.0**	**+0.3**
CZSB				*e*S		**Sn**	**19 30 10.8**	**+0.6**
ATAH	**Atahualpa**	**3.62**	**292**	P		**Pn**	**19 29 54.4**	**-0.9**
	22nm,0.3s,baz=128,slow=2.5,SNR=251							
ATAH				S		**Sn**	**19 30 36.1**	**-1.9**
	46nm,0.3s,baz=354,slow=14,SNR=17							
NNA	**Nana**	**3.87**	**207**	P		**Pn**	**19 29 58.4**	**+0.2**
	11nm,0.3s,baz=76,slow=8.3,SNR=12							
NNA				S		**Sn**	**19 30 41.8**	**-1.6**
	61nm,0.3s,baz=155,slow=22,SNR=27							
NNA	**Nana**	**3.87**	**207**			**Pn**	**19 29 58.3**	**0.0**
NNA					Sn	**Sn**	**19 30 41.5**	**-1.9**
ETMB	**Extrema**	**8.79**	**99**	*e*P		**Pn**	**19 31 02.0**	**-2.2**
ETMB				*e*S		**Sn**	**19 32 35.5**	**-6.3**
LPAZ	**La Paz**	**10.23**	**140**	P		**Pn**	**19 31 25.3**	**+1.3**
	0.2nm,0.3s,baz=332,slow=16,SNR=6.4							
LPAZ	**La Paz**	**10.23**	**140**	*e*P		**Pn**	**19 31 24.5**	**+0.5**
PB16	**IPOC Station P**	**11.12**	**152**	Pn		**Pn**	**19 31 35.2**	**-0.6**
SAML	**Samuel**	**11.71**	**93**			**Pn**	**19 31 39.8**	**-3.2**
SAML	**Samuel**	**11.71**	**93**	*e*P		**Pn**	**19 31 39.9**	**-3.2**
SAML				*e*S		**Sn**	**19 33 44.0**	**-8.4**
MNMC	**Minye Minye**	**11.78**	**154**	Pn		**Pn**	**19 31 44.1**	**0.0**
PB11	**IPOC Station P**	**12.31**	**156**	Pn		**Pn**	**19 31 49.8**	**-1.2**
PB07	**IPOC Station P**	**14.02**	**160**	P		**P**	**19 32 18.9**	**+2.3**
PB09	**IPOC Station P**	**14.31**	**158**			**P**	**19 32 21.8**	**+1.9**
VILB	**Vilhena**	**15.21**	**108**	*e*P		**P**	**19 32 28.4**	**-1.3**
VILB				*e*S		**Sn**	**19 35 16.4**	**-0.4**
MACA	**Manacapuru-AM**	**15.23**	**70**	*e*P		**P**	**19 32 30.5**	**+0.6**
SIV	**San Ignacio**	**15.51**	**120**	P		**P**	**19 32 32.7**	**-0.3**
	0.7nm,0.3s,baz=311,slow=13,SNR=20							
PTGA	**Pitinga**	**16.88**	**63**	P		**Pn**	**19 32 48.8**	**+0.3**
	2.1nm,0.3s,baz=238,slow=14,SNR=12							
PTGA	**Pitinga**	**16.88**	**63**	P		**Pn**	**19 32 48.0**	**-0.5**
PTGA				IAmb		IAmb	19 32 51.7	
	comp=Z,8.1nm,0.6s							
PTGA	**Pitinga**	**16.88**	**63**	*e*P		**Pn**	**19 32 48.7**	**+0.3**
PTLB	**Pontes e Lacer**	**16.99**	**115**	*e*P		**Pn**	**19 32 50.0**	**+0.4**
BOAV	**Boa Vista**	**18.08**	**54**	*e*P		**Pn**	**19 33 02.3**	**-0.5**
CLDB	**Colider**	**19.10**	**99**	*e*P		**P**	**19 33 12.1**	**-0.4**
NPGB	**Novo Progresso**	**19.54**	**87**	*e*P		**P**	**19 33 16.6**	**-0.7**
ITTB	**Itaituba**	**19.61**	**79**	*e*P		**Pn**	**19 33 18.2**	**-2.5**
AC04	**Llanos de Chal**	**19.92**	**170**	P		**Pn**	**19 33 24.3**	**+0.1**
SNDB	**Serra Nova Dou**	**23.60**	**100**	*e*P		**P**	**19 33 58.9**	**+0.1**
ARAG	**Araguaiana, MT**	**23.77**	**110**	*e*P		**P**	**19 34 01.8**	**+1.4**
MCPB	**Macapa, AP**	**24.28**	**72**	*e*P		**P**	**19 34 06.5**	**+1.6**
BDFB	**Brasília**	**27.32**	**108**	P		**P**	**19 34 36.0**	**+3.5**
	comp=Z,5.3nm,0.5s,baz=287,slow=10.0,SNR=8.2							
BDFB	**Brasília**	**27.32**	**108**	P		**P**	**19 34 35.8**	**+3.3**
BDFB				IAmb		IAmb	19 34 36.6	
	comp=Z,8.1nm,0.8s							
TMAB	**Tom-Au,PA,Br**	**27.49**	**79**	*e*P		**P**	**19 34 37.2**	**+3.4**
IPMB	**Ipameri, GO**	**27.70**	**113**	*e*P		**P**	**19 34 38.5**	**+2.7**
SDBA	**SAO DESIDERIO**	**29.86**	**100**	*e*P		**P**	**19 34 57.8**	**+2.8**
JANB	**Januaria**	**30.73**	**105**	*e*P		**P**	**19 35 05.5**	**+2.8**
GDU01	**Guandu, BA**	**35.14**	**102**	*e*P		**P**	**19 35 44.2**	**+3.3**
NBIT	**Itapeh - BA**	**35.39**	**104**	*e*P		**P**	**19 35 46.3**	**+3.2**
NBLA	**Lagarto - SE**	**36.76**	**97**	*e*P		**P**	**19 35 57.0**	**+2.2**
NBAN	**Anadia - AL**	**38.27**	**95**	*e*P		**P**	**19 36 10.5**	**+3.0**
T57A	**Hurt**	**45.47**	**355**	P		**P**	**19 37 05.9**	**+0.3**
T57A				IAmb		IAmb	19 37 25.5	
	comp=Z,15nm,1.2s							
WHAR	**Wooly Hollow**	**46.54**	**340**	P		**P**	**19 37 13.0**	**-1.0**
WHAR				IAmb		IAmb	19 37 14.0	
	comp=Z,6.1nm,0.9s							
TXAR	**Lajitas Array**	**46.68**	**325**	P		**P**	**19 37 15.8**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=151,slow=8.4,SNR=11							
TX31	**Lajitas Ar. Si**	**46.68**	**325**	P		**P**	**19 37 15.9**	**+0.6**
TX31				IAmb		IAmb	19 37 33.5	
	comp=Z,12nm,1.4s							
TX32	**Lajitas Array**	**46.68**	**325**	P		**P**	**19 37 15.9**	**+0.6**
W39A	**Magazine**	**46.97**	**339**	P		**P**	**19 37 17.6**	**+0.2**
W39A				IAmb		IAmb	19 37 18.3	
	comp=Z,13nm,1.4s							
TCUT	**Toone Canyon**	**59.67**	**329**	P		**P**	**19 38 50.4**	**0.0**
PDAR	**Pinedale Array**	**59.98**	**331**	P		**P**	**19 38 51.2**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=122,slow=7.9,SNR=2.4							
HWUT	**Hardware Ranch**	**60.11**	**329**	P		**P**	**19 38 53.3**	**0.0**
HWUT				IAmb		IAmb	19 38 54.0	
	comp=Z,2.7nm,0.7s							
ULM	**Lac du Bonnet**	**61.29**	**345**	P		**P**	**19 39 00.2**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=104,slow=4.2,SNR=3.7							
NVAR	**Mina Array Bea**	**61.69**	**322**	P		**P**	**19 39 05.1**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=139,slow=8.4,SNR=3.2							
DBIC	**Dimbokro**	**71.56**	**80**	P		P	19 40 12.1	+5.1
	comp=Z,4.3nm,0.3s,baz=246,slow=5.1,SNR=17							
YKA	**Yellowknife Ar**	**77.09**	**342**	P		**P**	**19 40 37.9**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=140,slow=6.4,SNR=28							
TORD	**Torodi Ar. Bea**	**79.17**	**75**	P		P	19 40 56.3	+5.8
	comp=Z,1.4nm,0.3s,baz=262,slow=5.2,SNR=23							
INK	**Inuvik**	**86.83**	**341**	P		**P**	**19 41 29.2**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=98,slow=9.5,SNR=4.9							
BCAR	**Beaver Creek A**	**87.34**	**335**	P		**P**	**19 41 32.1**	**+0.7**
ILAR	**Eielson Array**	**90.07**	**336**	P		**P**	**19 41 44.5**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=111,slow=2.2,SNR=4.6							
ILAR	**Eielson Array**	**90.07**	**336**	P		**P**	**19 41 43.5**	**-0.7**
MKAR	**Makanchi Array**	**137.23**	**23**	PKP		**PKiKP**	**19 48 08.0**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=347,slow=2.8,SNR=2.6							
ASAR	**Alice Springs**	**137.29**	**221**	PKP		**PKiKP**	**19 48 08.9**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=122,slow=1.9,SNR=7.8							
WRA	**Warramunga Arr**	**139.55**	**225**	PKP		**PKiKP**	**19 48 13.1**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=122,slow=2.1,SNR=13							
FITZ	**Fitzroy Crossi**	**146.58**	**218**	PKPbc		**PKPab**	**19 48 27.6**	**-0.2**
	comp=Z,3.5nm,1.0s,baz=173,slow=1.9,SNR=8.7							

NEIC ***17*** *20:08:03.7±1.4, 55°.85N±0°.04×158°.06W±0°.06, h43*$^{km}_{\pm 24}$*, ML3.4/16, ML3.5/33(AEIC), Error ellipse: s-maj=7.4km s-min=3.1km az=141.0*

AEIC 17 20:08:04±1.5, **55°.85N**±0°.06×**158°.08W**±0°.06, **h41**km±9km, **Error ellipse: s-maj=8.6km s-min=4.9km az=177.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
VNSG	**Veniaminof 6**	**0.63**	**296**			Pn	20 08 16.6	+0.1
VNSG						Sn	20 08 26.1	+0.7
VNHG	**Veniaminof 1**	**0.71**	**302**			Pn	20 08 17.8	+0.2
VNHG						Sn	20 08 27.7	+0.2
CHIR	**Chirikof Islan**	**1.39**	**90**			Pn	20 08 27.4	+0.5
CHIR						Sn	20 08 44.3	+0.4
CHIR	**Chirikof Islan**	**1.39**	**90**	IAML			20 08 52.9	
	comp=N,347nm,0.5s							
CHIR				IAML			20 08 54.4	
	comp=E,489nm,0.5s							
SDPT	**Sand Point**	**1.45**	**251**			Pn	20 08 28.2	+0.6
SDPT						Sn	20 08 46.9	+1.5
SDPT	**Sand Point**	**1.45**	**251**	IAML			20 08 52.4	
	comp=N,317nm,0.6s							
PLK3	**Peulik 3**	**2.10**	**28**			Pn	20 08 37.0	+0.5
PLK3						Sn	20 09 02.7	+1.3
PLK5	**Peulik 5**	**2.25**	**17**			Pn	20 08 38.1	-0.6
BLHA	**Black Hill**	**2.25**	**268**			Pn	20 08 38.9	+0.1
SII	**Sitkinak Islan**	**2.29**	**70**	Pn		Pn	20 08 37.6	-1.7
SII				IAML			20 09 23.7	
	comp=N,287nm,0.9s							
SII				IAML			20 09 34.9	
	comp=E,314nm,1.8s							
CAHL	**Cahill**	**2.68**	**33**			Pn	20 08 44.7	+0.1
KABR	**Katmai Barrier**	**2.85**	**35**			Pn	20 08 47.0	0.0
KELA	**Mount Kelaz**	**2.89**	**25**			Pn	20 08 47.2	-0.4
OHAK	**Old Harbor**	**2.99**	**61**			Pn	20 08 48.2	-0.6
OHAK	**Old Harbor**	**2.99**	**61**	IAML			20 09 43.6	
	comp=N,77nm,1.9s							
KDAK	**Kodiak Island**	**3.59**	**55**			Pn	20 08 56.5	-0.5
AKUT	**Akutan**	**4.75**	**252**	Pn		Pn	20 09 12.6	-0.3
HOM	**Homer**	**5.14**	**39**	Pn		Pn	20 09 16.4	-1.9
CNPM	**China Poot**	**5.20**	**42**			Pn	20 09 19.1	-0.1
CNPM				IAML			20 10 46.0	
	comp=E,31nm,2.1s							
CNPM				IAML			20 12 11.9	
	comp=N,31nm,2.7s							
MSW	**Makushin Switc**	**5.38**	**252**			Pn	20 09 22.1	+0.4
RSO	**Redoubt South**	**5.41**	**29**	Pn		Pn	20 09 22.6	+0.3
SVW2	**Sparrevohn**	**5.42**	**13**	Pn		Pn	20 09 20.6	-1.6
MGOD	**Makushin Gods**	**5.48**	**252**			Pn	20 09 23.8	+0.7
BRLK	**Bradley Lake**	**5.49**	**41**	Pn		Pn	20 09 22.1	-1.1
BRSE	**Bradley Lake S**	**5.53**	**42**			Pn	20 09 22.6	-1.1
DFR	**Drift River**	**5.54**	**29**			Pn	20 09 23.9	0.0
SLKM	**Skilak Lake**	**6.25**	**38**			Pn	20 09 33.6	+0.1
SUA	**Susitna One**	**6.80**	**31**			Pn	20 09 41.1	-0.1
RC01	**Rabbit Creek A**	**6.83**	**36**	Pn		Pn	20 09 41.7	+0.2
SPIA	**Saint Paul Isl**	**6.86**	**286**	Pn		Pn	20 09 41.6	-0.4
SKT	**Skwentna**	**7.02**	**26**	Pn		Pn	20 09 43.1	-0.9
TT01	**Tatalina**	**7.15**	**8**			Pn	20 09 45.2	-0.7
PWL	**Port Wells**	**7.17**	**42**			Pn	20 09 45.1	-1.1
KNIK	**Knik Glacier**	**7.50**	**38**			Pn	20 09 50.6	0.0
GHO	**Glory Hole Cre**	**7.60**	**35**			Pn	20 09 51.6	-0.5
HIN	**Hinchinbrook I**	**7.63**	**49**			Pn	20 09 52.2	-0.3
GLI	**Glacier Island**	**7.66**	**44**	Pn		Pn	20 09 53.4	+0.5
PPLA	**Purkeypile**	**7.68**	**21**	Pn		Pn	20 09 54.5	+1.3
SML	**Sawmill**	**7.82**	**36**			Pn	20 09 54.6	-0.5
FID	**Port Fidalgo**	**7.83**	**46**			Pn	20 09 54.2	-1.1
SCM	**Sheep Creek Mo**	**8.18**	**38**			Pn	20 09 59.9	-0.2
KAIM	**Kayak Island**	**8.34**	**55**	Pn		Pn	20 10 02.1	-0.1
RAGM	**Ragged Mountai**	**8.42**	**52**	Pn		Pn	20 10 03.3	-0.1
KLU	**Klutina**	**8.48**	**43**			Pn	20 10 02.8	-1.4
KTH	**Kantishna Hill**	**8.52**	**22**	Pn		Pn	20 10 04.2	-0.6
BMRM	**Bremner River**	**8.73**	**49**	Pn		Pn	20 10 07.2	-0.4
M24K	**Tolsona, Glenn**	**8.77**	**40**	Pn		Pn	20 10 06.4	-1.7
BPAW	**Bear Paw Mtn.**	**9.00**	**20**	Pn		Pn	20 10 10.5	-0.7
N25K	**Chitina, Valde**	**9.07**	**45**	Pn		Pn	20 10 10.4	-1.9
CRQM	**Cirque**	**9.27**	**52**	Pn		Pn	20 10 14.7	-0.3
GLB	**Gilahina Butte**	**9.30**	**47**	Pn		Pn	20 10 15.4	0.0
VRDI	**Verde Repeater**	**9.35**	**49**	Pn		Pn	20 10 15.7	-0.4
TGL	**Tana Glacier**	**9.40**	**52**	Pn		Pn	20 10 15.5	-1.3
ANM	**Nome**	**9.46**	**341**	Pn		Pn	20 10 17.1	-0.3
YAH	**Yahtse**	**9.75**	**56**	Pn		Pn	20 10 21.6	-0.1
NEA2	**Nenana**	**9.84**	**23**	Pn		Pn	20 10 19.9	-2.8
GRNC	**Granite Creek**	**9.88**	**54**	Pn		Pn	20 10 20.5	-2.9
MLY	**Manley**	**9.89**	**18**	Pn		Pn	20 10 23.1	-0.3
WRH	**Wood River Hil**	**9.96**	**26**	Pn		Pn	20 10 21.4	-2.9
BARN	**Barnard Glacie**	**10.05**	**52**	Pn		Pn	20 10 25.1	-0.7
CCB	**Clear Creek Bu**	**10.18**	**26**	Pn		Pn	20 10 25.3	-2.0
LOGN	**Logan Glacier**	**10.25**	**54**	Pn		Pn	20 10 28.6	0.0
I23K	**Minto, Yukon-K**	**10.26**	**21**	Pn		Pn	20 10 26.6	-1.7
MDM	**Murphy Dome**	**10.34**	**24**	Pn		Pn	20 10 28.3	-1.2
PCA	**Pinnacle**	**10.37**	**58**	Pn		Pn	20 10 28.6	-1.3
IMAR	**Indian Mountai**	**10.38**	**10**	Pn		Pn	20 10 29.4	-0.6
IL31		**10.51**	**27**	Pn		Pn	20 10 30.1	-1.7
ILAR	**Eielson Array**	**10.51**	**27**	Pn		Pn	20 10 31.5	-0.3
SCRK	**Sand Creek**	**10.76**	**35**	Pn		Pn	20 10 33.4	-2.1

IDC 17 20:18:28.8±3.3, **0°.67S×134°.21E, h0**km, **mb3.3**/2, **mb1 3.5**/3, **mb1mx3.2**/38, **mbtmp3.3**/3, **ML3.1**/1, **Error ellipse: s-maj=158.7km s-min=29.7km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**19.15**	**180**	P		P	20 22 53.6	-0.2
	0.1nm,0.3s,baz=359,slow=11,SNR=5.3							
ASAR	**Alice Springs**	**22.86**	**181**	P		P	20 23 34.2	+0.3
	1.0nm,0.8s,baz=6.9,slow=12,SNR=9.7							
MKAR	**Makanchi Array**	**65.47**	**324**	P		P	20 29 13.6	-0.1
	0.3nm,0.8s,baz=107,slow=5.0,SNR=2.3							

IDC ***17*** *20:28:25.1±3.3, 40°.02N×21°.89E, h0*km*, mb3.4/4, mb1 3.4/4, mb1mx3.1/44, mbtmp3.4/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/29, Error ellipse: s-maj=360.2km s-min=26.9km az=137.0*

DDA ***17*** *20:28:30.2, 35°.07N×26°.96E, h9*$^{km}_{\pm 4}$*m, ML2.6*

ISK ***17*** *20:28:32.1, 35°.03N×26°.98E, h11*km*, ML2.9/9*

ATH ***17*** *20:28:32.9, 35°.01N×26°.97E, h8*$^{km}_{\pm 5}$*m, ML2.8/4, Error ellipse: s-maj=7.8km s-min=1.4km az=331.0*

THE ***17*** *20:28:34.8, 35°.21N×26°.81E, h0*$^{km}_{\pm 1}$*m, ML2.8/5, Error ellipse: s-maj=6.6km s-min=0.9km az=152.0*

ISC 17 20:28:32.4±1.3, **35°.08N**±0°.06×**26°.93E**±0°.03, **h12**km±9km, **n43**, **σ1°02/60, mb3.3**/4, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
KARP	**Karpathos**	**0.50**	**22**	P		**Pb**	**20 28 43.3**	**+0.1**
KARP				S		**Sb**	**20 28 51.2**	**+0.7**
KARP				AML		AML	20 28 51.9	
	comp=N,6574µm,0.2s							
KARP				AML		AML	20 28 52.5	
	comp=E,6477µm,0.3s							
KARP	**Karpathos**	**0.50**	**22**	P		**Pb**	**20 28 43.3**	**+0.1**
KARP				S		**Sb**	**20 28 51.0**	**+0.5**
	comp=E,3µm,0.2s							
KARP	**Karpathos**	**0.50**	**22**	PG		**Pb**	**20 28 43.2**	**0.0**
KARP				SG		**Sb**	**20 28 51.0**	**+0.5**
ZKR	**Zakros**	**0.59**	**273**	P		**Pb**	**20 28 44.7**	**0.0**
ZKR				S		**Sb**	**20 28 53.6**	**+0.7**
ZKR				AML		AML	20 28 57.6	
	comp=E,2033µm,0.3s							
ZKR				AML		AML	20 28 57.9	
	comp=N,1238µm,0.4s							
ZKR	**Zakros**	**0.59**	**273**	P		**Pb**	**20 28 44.7**	**0.0**
ZKR				S		**Sb**	**20 28 53.6**	**+0.7**
	comp=N,805nm,0.3s							
ZKR	**Zakros**	**0.59**	**273**	PG		**Pb**	**20 28 44.6**	**0.0**
ZKR				SG		**Sb**	**20 28 54.1**	**+1.2**
STIA	**Sitia Lasithi**	**0.70**	**280**	P		**Pg**	**20 28 45.6**	**-0.4**
STIA				S		**Sg**	**20 28 56.0**	**+0.9**
FRMA	**Ierapetra Chan**	**0.98**	**266**	P		**Pg**	**20 28 49.9**	**-1.5**
FRMA				S		**Sg**	**20 29 03.7**	**-0.5**
NPS	**Neapolis**	**1.09**	**280**	P		**Pn**	**20 28 53.9**	**+0.3**
NPS				AML		AML	20 29 14.8	
	comp=E,1379µm,0.5s							
NPS				AML		AML	20 29 15.2	
	comp=N,714µm,0.4s							
NPS	**Neapolis**	**1.09**	**280**	P		**Pn**	**20 28 53.9**	**+0.3**
NPS				S		**Sn**	**20 29 09.2**	**+0.5**
	comp=N,925nm,0.6s							
ARG	**Arkhangelos**	**1.49**	**40**	P		**Pg**	**20 29 01.6**	**+0.5**
ARG	**Arkhangelos**	**1.49**	**40**	P		**Pg**	**20 29 01.6**	**+0.5**
ARG				S		**Sg**	**20 29 21.3**	**+0.8**
	comp=N,328nm,0.6s							
ARG	**Arkhangelos**	**1.49**	**40**	PN		**Pb**	**20 28 59.9**	**-0.2**
ARG				SN		**Sg**	**20 29 20.2**	**-0.3**
HRKL	**Herakleio**	**1.52**	**279**	PN		**Pb**	**20 29 00.5**	**0.0**
NIS1	**Nisyros Isl.**	**1.53**	**7**	P		**Pb**	**20 29 00.5**	**-0.2**
NIS1	**Nisyros Isl.**	**1.53**	**7**	PN		**Pb**	**20 29 00.6**	**-0.2**
KOSK	**Kos Island**	**1.67**	**1**	PN		**Pb**	**20 29 02.6**	**-0.5**
KOSK				SN		**Sb**	**20 29 24.8**	**+0.8**
IDI	**Anoyia**	**1.68**	**278**	P		**Pb**	**20 29 04.2**	**+0.8**
IDI				AML		AML	20 29 33.3	
	comp=N,274µm,0.7s							
IDI				AML		AML	20 29 38.4	
	comp=E,216µm,0.6s							
IDI	**Anoyia**	**1.68**	**278**	P		**Pb**	**20 29 03.5**	**+0.1**
IDI				S		**Sn**	**20 29 24.7**	**+1.4**
	comp=E,122nm,0.6s							
SIVA	**Sivas**	**1.74**	**268**	P		**Pb**	**20 29 05.0**	**+0.7**
SIVA	**Sivas**	**1.74**	**268**	P		**Pb**	**20 29 05.0**	**+0.7**
SANT	**Santorini**	**1.76**	**317**	*i* P		**Pn**	**20 29 03.7**	**+0.9**
TURN	**Turunc**	**2.00**	**32**	*i* P		**Pb**	**20 29 07.5**	**-1.2**
TURN				*i* S		**Sb**	**20 29 33.6**	**0.0**
TURN	**Turunc**	**2.00**	**32**	PN		**Pn**	**20 29 07.3**	**+1.3**
BODT	**Bodrum**	**2.00**	**9**	PN		**Pn**	**20 29 07.1**	**+1.0**
BDRM	**Kayabasi**	**2.02**	**12**	*i* P		**Pb**	**20 29 08.1**	**-1.1**
DALY	**Dalyan (Mula)**	**2.23**	**38**	PN		**Pn**	**20 29 10.4**	**+1.3**
APE	**Apeiranthos**	**2.28**	**331**	P		**Pn**	**20 29 10.6**	**+0.6**
APE				S		**Sn**	**20 29 37.8**	**-0.3**
APE	**Apeiranthos**	**2.28**	**331**	*i* P		**Pn**	**20 29 10.6**	**+0.6**
APE				*i* S		**Sn**	**20 29 34.9**	**-3.3**
APE	**Apeiranthos**	**2.28**	**331**	PN		**Pn**	**20 29 12.1**	**+2.1**
FETY	**Fethiye**	**2.34**	**48**	PN		**Pn**	**20 29 11.3**	**+0.6**
AKAS	**Kas**	**2.46**	**61**	*i* P		**Pn**	**20 29 12.3**	**-0.2**
AKAS				IAML			20 29 54.0	
	comp=N,27nm,0.6s							
AKAS	**Kas**	**2.46**	**61**	PN		**Pn**	**20 29 12.9**	**+0.3**
AYDN	**Tasoluk**	**2.69**	**16**	*i* P		**Pn**	**20 29 17.1**	**+1.5**
AYDN				*i* S		**Sn**	**20 29 47.3**	**-0.8**
CAEL	**Denizli, Camel**	**2.81**	**43**	*i* P		**Pn**	**20 29 19.1**	**+1.8**
CAEL				IAML			20 30 18.0	
	comp=N,52nm,0.7s							
CAEL				IAML			20 30 19.0	
	comp=E,83nm,1.1s							
TAVA	**DENIZLI_Tavas**	**2.87**	**33**	*i* P		**Pn**	**20 29 19.2**	**+1.1**
TAVA				*i* S		**Sb**	**20 29 57.9**	**-0.8**
TAVA				IAML			20 30 06.0	
	comp=E,18nm,0.5s							
TAVA				IAML			20 30 09.0	
	comp=N,25nm,0.6s							
GOLH	**Golhisar**	**3.03**	**44**	*i* P		**Pn**	**20 29 19.8**	**-0.5**
GOLH				*i* S		**Sn**	**20 29 59.7**	**+3.2**
GOLH				IAML			20 30 17.0	
	comp=N,26nm,1.2s							
USAK	**Uak-Merkez**	**3.99**	**24**	*i* P		**Pn**	**20 29 33.3**	**-0.2**
KEST	**Kesra**	**14.36**	**278**	LR		LR	20 35 55.7	
	comp=N,145nm,20.3s,baz=187,slow=4.2							
TORD	**Torodi Ar. Bea**	**31.57**	**232**	P		**P**	**20 34 54.3**	**-0.7**
	comp=N,0.3nm,0.4s,baz=22,slow=8.4,SNR=4.6							
KURBB	**Kurchatov Arra**	**40.04**	**51**	P		**P**	**20 36 05.5**	**-1.8**
	comp=N,0.1nm,0.4s,baz=288,slow=10,SNR=2.6							
MKAR	**Makanchi Array**	**42.61**	**57**	P		**P**	**20 36 28.6**	**+0.2**
	comp=N,0.2nm,0.5s,baz=275,slow=7.5,SNR=4.7							
ZALV	**Zalesovo Beam**	**44.01**	**46**	P		P	20 36 30.5	-9.1
	comp=N,0.3nm,0.3s,baz=287,slow=6.8,SNR=1.5							

IDC ***17*** *20:42:53.8±1.3, 15°.07N×119°.97E, h0*km*, mb3.4/5, mb1 3.6/5, mb1mx3.2/51, mbtmp3.4/5, Error ellipse: s-maj=58.1km s-min=21.5km az=61.0*

MAN ***17*** *20:42:53.8, 13°.89N×120°.49E, h64*km*, MS2.7*

ISC 17 20:42:53.5±0.8, **13°.89N**±0°.07×**120°.48E**±0°.06, **h90**km±7km, **n20**, **σ1°69/25, mb4.4**/12, **1C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
LUBP	**Lubang**	**0.27**	**236**	*e*P		**Pn**	**20 43 06.0**	**-0.8**
LUBP				*e*S		**Sn**	**20 43 15.6**	**-1.0**
MACP	**Maragondon, Ca**	**0.44**	**32**	*e*P		**Pn**	**20 43 06.7**	**-1.1**
MACP				*e*S		**Sn**	**20 43 17.1**	**-1.3**
TGY	**Tagaytay City**	**0.49**	**64**	*e*P		**Pn**	**20 43 09.5**	**+1.2**
TGY				*i* S		**Sn**	**20 43 21.4**	**+2.2**
PGP	**Puerto Galera**	**0.60**	**130**	*e*P		**Pn**	**20 43 09.0**	**-0.1**
PGP				*e*S		**Sn**	**20 43 20.7**

IDI	**Anoya**	**1.07**	**335**	LR	LR	21 00 11.5			
	comp=N,46nm,21.4s,baz=178,slow=17								
IDI				Pg	**Pn**	**21 00 14.2**	**+0.9**		
	comp=N,123nm,0.3s,baz=162,slow=12,SNR=61								
IDI				Lg	Lg	21 00 28.6			
	comp=N,184nm,0.3s,baz=83,slow=23,SNR=12								
IDI	**Anoya**	**1.07**	**335**	P	**Pn**	**21 00 13.1**	**-0.2**		
IDI				S	**Sn**	**21 00 26.8**	**-0.1**		
IDI				AML	AML	21 00 31.1			
	comp=E,5007μm,0.7s								
IDI				AML	AML	21 00 33.5			
	comp=N,3490μm,0.8s								
IDI	**Anoya**	**1.07**	**335**	P	**Pn**	**21 00 13.7**	**+0.5**		
IDI				S	**Sn**	**21 00 26.8**	**-0.1**		
	comp=N,2μm,0.7s								
IDI	**Anoya**	**1.07**	**335**	PG	**Pn**	**21 00 13.8**	**+0.5**		
IDI				SG	**Sn**	**21 00 27.9**	**+1.0**		
GVD	**Gavdhos**	**1.23**	**296**	P	**Pn**	**21 00 16.4**	**+1.0**		
GVD				S	**Sn**	**21 00 30.8**	**+0.1**		
GVD				AML	AML	21 00 42.9			
	comp=E,6475μm,0.4s								
GVD				AML	AML	21 00 48.5			
	comp=N,5380μm,0.6s								
GVD	**Gavdhos**	**1.23**	**296**	P	**Pn**	**21 00 16.2**	**+0.8**		
GVD				S	**Sn**	**21 00 30.8**	**+0.1**		
	comp=N,3μm,0.5s								
GVD	**Gavdhos**	**1.23**	**296**	PN	**Pn**	**21 00 16.5**	**+1.1**		
GVDS	**Gavdos**	**1.23**	**296**	P	**Pn**	**21 00 16.6**	**+1.2**		
GVDS	**Gavdos**	**1.23**	**296**	PN	**Pn**	**21 00 16.7**	**+1.3**		
PRNS	**Prines Rethymn**	**1.30**	**324**	P	**Pn**	**21 00 17.9**	**+1.6**		
VAM	**Vamos**	**1.49**	**317**	P	**Pn**	**21 00 20.2**	**+1.2**		
VAM				AML	AML	21 00 52.2			
	comp=E,3604μm,0.5s								
VAM				AML	AML	21 00 52.7			
	comp=N,3075μm,0.8s								
VAM	**Vamos**	**1.49**	**317**	P	**Pn**	**21 00 19.9**	**+0.9**		
IMMV	**Iera Moni Meta**	**1.65**	**314**	P	**Pn**	**21 00 22.2**	**+1.0**		
IMMV				AML	AML	21 00 55.5			
	comp=E,5188μm,0.8s								
IMMV				AML	AML	21 01 01.6			
	comp=N,3220μm,0.6s								
IMMV	**Iera Moni Meta**	**1.65**	**314**	P	**Pn**	**21 00 22.2**	**+1.0**		
IMMV	**Iera Moni Meta**	**1.65**	**314**	PN	**Pn**	**21 00 22.5**	**+1.3**		
KNDR	**Palaiochora Ch**	**1.71**	**303**	PN	**Pn**	**21 00 23.6**	**+1.7**		
KARP	**Karpathos**	**1.88**	**49**	PN	**Pn**	**21 00 26.7**	**+2.4**		
SANT	**Santorini**	**2.05**	**1**	*i* P	Pn	21 00 32.7	+5.9		
SANT	**Santorini**	**2.05**	**1**	PN	**Pn**	**21 00 28.7**	**+2.0**		
THT2	**Imerovigli**	**2.12**	**360**	PN	**Pn**	**21 00 29.7**	**+2.1**		
ANKY	**Antikythira Is**	**2.34**	**312**	P	**Pn**	**21 00 32.4**	**+1.8**		
NIS1	**Nisyros Isl.**	**2.69**	**31**	PN	**Pn**	**21 00 37.3**	**+1.8**		
KOSK	**Kos Island**	**2.74**	**27**	PN	**Pn**	**21 00 38.7**	**+2.6**		
KTHA	**Kythira Island**	**2.74**	**316**	P	**Pn**	**21 00 36.7**	**+0.5**		
KTHA	**Kythira Island**	**2.74**	**316**	PN	**Pn**	**21 00 38.0**	**+1.8**		
APE	**Apeiranthos**	**2.75**	**2**	*i* P	**Pn**	**21 00 36.6**	**+0.2**		
APE				*i* S	**Sn**	**21 01 00.5**	**-7.9**		
APE	**Apeiranthos**	**2.75**	**2**	PN	**Pn**	**21 00 38.0**	**+1.7**		
KTHR	**Kythira**	**2.78**	**315**	P	**Pn**	**21 00 37.8**	**+1.1**		
SLUM	**Salum**	**2.82**	**184**	P	**Pn**	**21 00 39.3**	**+2.0**		
	baz=189								
SLUM				AMP		21 01 00.0			
	baz=189								
SLUM				S	**Sn**	**21 01 11.5**	**+1.5**		
	baz=189								
ARG	**Arkhangelos**	**2.91**	**48**	P	**Pn**	**21 00 41.2**	**+2.8**		
ARG	**Arkhangelos**	**2.91**	**48**	PN	**Pn**	**21 00 41.1**	**+2.7**		
ARG	**Arkhangelos**	**2.91**	**48**	⇑P	**Pn**	**21 00 40.7**	**+2.3**		
BODT	**Bodrum**	**3.14**	**29**	PN	**Pn**	**21 00 44.5**	**+2.9**		
VLI	**Veliai**	**3.15**	**320**	P	**Pn**	**21 00 41.5**	**-0.2**		
BDRM	**Kayabasi**	**3.20**	**30**	*i* P	**Pn**	**21 00 43.0**	**+0.6**		
MATC	**Matruh**	**3.32**	**152**	AMP		21 01 00.0			
	baz=155								
TURN	**Turunc**	**3.36**	**42**	*i* P	**Pn**	**21 00 46.0**	**+1.4**		
TURN				*i* S	**Sn**	**21 01 20.6**	**-2.6**		
TURN	**Turunc**	**3.36**	**42**	PN	**Pn**	**21 00 46.5**	**+1.9**		
DDIM	**Aydin, Didim**	**3.46**	**25**	*i* P	Pn	21 00 52.9	+6.8		
MLSB	**Milas**	**3.53**	**32**	PN	**Pn**	**21 00 49.9**	**+2.8**		
DALY	**Dalyan (Mula)**	**3.62**	**45**	PN	**Pn**	**21 00 50.8**	**+2.6**		
YER	**Yerkesik**	**3.65**	**39**	PN	**Pn**	**21 00 50.9**	**+2.2**		
MULA	**Mugla, Merkez-**	**3.76**	**38**	*i* P	**Pn**	**21 00 49.8**	**-0.4**		
MULA				*i* S	**Sn**	**21 01 30.3**	**-2.9**		
FETY	**Fethiye**	**3.77**	**51**	PN	**Pn**	**21 00 51.4**	**+1.0**		
KSL	**Kastellorizon**	**3.86**	**60**	S	**Sn**	**21 01 37.1**	**+1.5**		
AYDN	**Tasoluk**	**3.88**	**30**	*i* P	**Pn**	**21 00 54.0**	**+2.0**		
AYDN				*i* S	**Sn**	**21 01 32.5**	**-3.8**		
AKAS	**Kas**	**3.91**	**60**	*i* P	**Pn**	**21 00 52.6**	**+0.3**		
AKAS				*i* S	**Sn**	**21 01 35.9**	**-1.3**		
AKAS	**Kas**	**3.91**	**60**	PN	**Pn**	**21 00 55.6**	**+3.2**		
ITM	**Ithomi**	**4.04**	**316**	P	**Pn**	**21 00 53.6**	**-0.4**		
ITM	**Ithomi**	**4.04**	**316**	PN	**Pn**	**21 00 57.1**	**+3.1**		
AYDB	**Zeytinkoy-Aydi**	**4.13**	**28**	PN	**Pn**	**21 00 57.5**	**+2.1**		
URLA	**Izmir**	**4.15**	**13**	*i* P	**Pn**	**21 01 00.1**	**+4.6**		
URLA	**Izmir**	**4.15**	**13**	PN	**Pn**	**21 00 58.9**	**+3.4**		
CAEL	**Denizli, Camel**	**4.22**	**47**	*i* P	**Pn**	**21 00 58.4**	**+1.7**		
TAVA	**DENIZLI_Tavas**	**4.23**	**41**	*i* P	**Pn**	**21 00 57.3**	**+0.6**		
TAVA				*i* S	**Sn**	**21 01 42.2**	**-2.6**		
ELL	**Elmali**	**4.38**	**55**	PN	**Pn**	**21 01 02.1**	**+3.3**		
ELL	**Elmali**	**4.38**	**55**	P	**Pn**	**21 01 01.0**	**+2.1**		
GOLH	**Golhisar**	**4.45**	**48**	*i* P	**Pn**	**21 01 01.7**	**+2.0**		
GOLH				*i* S	**Sn**	**21 01 46.6**	**-3.6**		
AKUM	**Antalya-Kumluc**	**4.49**	**62**	*i* P	**Pn**	**21 01 01.1**	**+0.9**		
AKUM				*i* S	**Sn**	**21 01 47.9**	**-3.2**		
KORT	**Korkueli**	**4.82**	**55**	*i* P	**Pn**	**21 01 04.7**	**-0.1**		
KORT				*i* S	**Sn**	**21 01 56.8**	**-2.6**		
KORT	**Korkueli**	**4.82**	**55**	PN	**Pn**	**21 01 08.2**	**+3.4**		
MANT	**Manisa**	**4.87**	**30**	*i* P	**Pn**	**21 01 06.8**	**+1.1**		
OSC1	**CSNet OBS 1**	**4.93**	**98**	P	**Pn**	**21 01 06.2**	**0.0**		
OSC1				S	**Sn**	**21 02 00.4**	**-1.5**		
ANTB	**Antalya**	**4.97**	**57**	PN	**Pn**	**21 01 10.4**	**+3.6**		
BRDR	**BURDUR-Merkez**	**5.05**	**47**	*i* P	**Pn**	**21 01 08.0**	**+0.1**		
SWA2		**5.05**	**180**	P	**Pn**	**21 01 10.0**	**+2.1**		
	baz=183								
SWA2				S	**Sn**	**21 02 04.2**	**-0.9**		
	baz=183								
BUCA	**Burdur, Bucak-**	**5.14**	**53**	*i* P	**Pn**	**21 01 10.7**	**+1.6**		
BUCA				*i* S	**Sn**	**21 02 01.1**	**-6.1**		
USAK	**Uak-Merkez**	**5.25**	**32**	*i* P	**Pn**	**21 01 12.0**	**+1.2**		
AGG	**Agios Georgios**	**5.32**	**333**	*i* P	**Pn**	**21 01 08.8**	**-2.8**		
AGG				*i* S	**Sn**	**21 02 06.6**	**-5.1**		
AGG	**Agios Georgios**	**5.32**	**333**	PN	**Pn**	**21 01 15.1**	**+3.5**		
KZL	**AFYON_Kizioren**	**5.47**	**43**	*i* P	**Pn**	**21 01 14.0**	**+0.6**		
AKMS	**Akamas**	**5.73**	**81**	P	**Pn**	**21 01 17.6**	**+0.3**		
AKMS				AML	AML	21 02 19.8			
	comp=N,0.9nm,0.3s								
AKMS				AML	AML	21 02 22.9			
	comp=N,0.7nm,0.4s								
GDZ	**Gediz**	**5.77**	**33**	*i* P	**Pn**	**21 01 16.8**	**-1.1**		
OSC2	**CSNet OBS 4**	**5.83**	**100**	P	**Pn**	**21 01 18.6**	**+0.1**		
OSC2				S	**Sn**	**21 02 22.6**	**-1.5**		
NATA	**Nata**	**5.91**	**83**	P	**Pn**	**21 01 20.2**	**+0.5**		
GAZI	**Gazipasa**	**5.95**	**69**	PN	**Pn**	**21 01 24.1**	**+3.9**		
ALFC	**Alefka**	**5.96**	**80**	P	**Pn**	**21 01 20.9**	**+0.5**		
SZAC	**Souni**	**6.16**	**84**	P	**Pn**	**21 01 23.5**	**+0.3**		
LEF	**Lefka**	**6.19**	**80**	PN	**Pn**	**21 01 27.7**	**+4.1**		
ASGA	**Asgata**	**6.46**	**84**	P	**Pn**	**21 01 28.4**	**+1.1**		
CSS	**Mathiatis**	**6.54**	**82**	PN	**Pn**	**21 01 32.0**	**+3.6**		
CSS	**Mathiatis**	**6.54**	**82**	P	**Pn**	**21 01 28.7**	**+0.3**		
CSS				AML	AML	21 02 40.4			
	comp=N,0.2nm,0.7s								
CSS				AML	AML	21 02 42.9			
	comp=N,0.2nm,0.6s								
BERE	**Bereket-Mersin**	**6.68**	**70**	PN	**Pn**	**21 01 34.9**	**+4.5**		
LFK	**Lefkose**	**6.73**	**79**	PN	**Pn**	**21 01 34.9**	**+3.9**		
MVOU	**Mavrovouni**	**6.79**	**82**	⇓P	**Pn**	**21 01 32.1**	**+0.3**		
TEVE	**Tevekalti-Mers**	**6.88**	**70**	PN	**Pn**	**21 01 37.4**	**+4.4**		
AKKU	**Akkuyu-Mersin**	**6.89**	**72**	PN	**Pn**	**21 01 36.8**	**+3.6**		
KRMN	**Karaman**	**6.98**	**64**	PN	**Pn**	**21 01 38.4**	**+4.0**		
HSAF	**As Saff**	**7.00**	**130**	P	**Pn**	**21 01 35.5**	**+0.8**		
	baz=131								
IKL	**Isikli**	**7.02**	**72**	PN	**Pn**	**21 01 38.8**	**+3.9**		
KEBE	**Keben-Mersin**	**7.09**	**70**	PN	**Pn**	**21 01 40.3**	**+4.3**		
GLL	**Jalalah**	**7.12**	**130**	P	**Pn**	**21 01 37.2**	**+0.9**		
	baz=130								
EREN	**Erenkoy**	**7.28**	**78**	PN	**Pn**	**21 01 42.1**	**+3.6**		
KIZK	**Mersin**	**7.43**	**71**	PN	**Pn**	**21 01 44.6**	**+4.0**		
NBNS	**Bani Suef**	**7.56**	**137**	P	**Pn**	**21 01 43.9**	**+1.4**		
	baz=137								
MERS	**Mersin**	**7.83**	**68**	PN	**Pn**	**21 01 49.4**	**+3.3**		
TAMRE	**El Minia**	**8.11**	**143**	P	**Pn**	**21 01 51.5**	**+1.6**		
	baz=144								
MMAI	**Mount Meron Ar**	**8.41**	**96**	Pn	**Pn**	**21 01 54.9**	**+0.8**		
	comp=N,2.8nm,0.3s,baz=279,slow=11,SNR=19								
MMAI				Sn	**Sn**	**21 03 25.9**	**-1.9**		
	comp=N,11nm,0.3s,baz=266,slow=23,SNR=16								
BRTR	**Keskin Array B**	**8.50**	**48**	Pn	**Pn**	**21 01 56.2**	**+0.8**		
	comp=N,0.2nm,0.3s,baz=249,slow=12,SNR=1.7								
EIL	**Elat**	**9.31**	**117**	Pn	**Pn**	**21 02 07.0**	**+0.6**		
	comp=N,1.0nm,0.3s,baz=309,slow=13,SNR=31								
EIL				Sn	**Sn**	**21 03 46.7**	**-3.2**		
	comp=N,3.7nm,0.3s,baz=5.1,slow=13,SNR=8.2								
HKAT	**Jabal Katrina**	**9.31**	**126**	P	**Pn**	**21 02 07.1**	**+0.4**		
	baz=126								
VAE	**Valguarnera**	**9.48**	**293**	Pn	**Pn**	**21 02 08.6**	**-0.2**		
	comp=N,0.5nm,0.3s,baz=36,slow=8.1,SNR=1.7								
VAE				Sn	**Sn**	**21 03 48.0**	**-6.0**		
	comp=N,1.0nm,0.3s,baz=180,slow=17,SNR=1.7								
VYHS	**Vyhne**	**15.00**	**343**	*eP*	**P**	**21 03 27.9**	**-0.9**		
KBZ	**Khabaz**	**16.48**	**50**	Pn	**Pn**	**21 03 44.9**	**+2.0**		
	comp=N,0.1nm,0.3s,baz=256,slow=8.6,SNR=15								
AKASG	**Malin Array Be**	**16.61**	**8**	Pn	**Pn**	**21 03 45.4**	**+0.8**		
	comp=N,2.3nm,0.3s,baz=199,slow=10,SNR=14								
GERES	**GERESS Array B**	**16.93**	**333**	Pn	**Pn**	**21 03 49.6**	**+0.9**		
	comp=N,0.2nm,0.3s,baz=134,slow=11,SNR=7.7								
ESDC	**Sonseca Array**	**24.02**	**291**	P	**P**	**21 05 06.0**	**-0.1**		
	comp=N,0.7nm,0.6s,baz=83,slow=9.4,SNR=9.7								
BELG	**Belogornoye**	**24.06**	**35**	P	**P**	**21 05 06.0**	**-0.2**		
	comp=N,6.5nm,0.6s,baz=82,slow=7.1,SNR=7.1								
FINES	**FINESS Array B**	**27.15**	**1**	P	**P**	**21 05 33.2**	**-0.8**		
	comp=N,1.4nm,0.8s,baz=159,slow=8.3,SNR=2.0								
FINES				LR	LR	21 17 09.5			
	comp=N,31nm,18.1s,baz=194,slow=38								
EKA	**Eskdalemuir Ar**	**28.86**	**325**	P	**P**	**21 05 48.2**	**-1.2**		
	comp=N,0.1nm,0.3s,baz=127,slow=9.0,SNR=2.1								
TORD	**Torodi Ar. Bea**	**30.13**	**231**	P	**P**	**21 06 02.5**	**+1.5**		
	comp=N,1.2nm,0.4s,baz=33,slow=8.2,SNR=16								
TORD				LR	LR	21 18 31.8			
	comp=N,44nm,20.2s,baz=305,slow=37								
ARU	**Arti**	**31.61**	**35**	P	**P**	**21 06 14.0**	**+0.3**		
	comp=N,0.3nm,0.3s,baz=270,slow=11,SNR=3.2								
KURBB	**Kurchatov Arra**	**41.48**	**50**	P	**P**	**21 07 39.0**	**+1.2**		
	comp=N,0.6nm,0.5s,baz=276,slow=8.8,SNR=8.4								
MKAR	**Makanchi Array**	**44.06**	**56**	P	**P**	**21 07 60.0**	**+1.2**		
	comp=N,0.7nm,0.6s,baz=275,slow=7.5,SNR=13								
ZALV	**Zalesovo Beam**	**45.43**	**46**	P	**P**	**21 08 10.0**	**+0.4**		
	comp=N,1.0nm,0.5s,baz=276,slow=8.3,SNR=5.6								
SONM	**Songino Array**	**59.85**	**50**	P	**P**	**21 09 55.0**	**-1.5**		
	comp=N,0.4nm,0.6s,baz=280,slow=7.2,SNR=2.0								

IDC ***17*** *21:36:13.3±2.3, 10°.92S×74°.48W, h57km±25km, mb3.1/4, mb1 3.5/8, mb1mx3.4/29, mbtmp3.5/8, ML3.5/4, MS2.7/2, Ms1 2.7/2, ms1mx2.4/12, Error ellipse: s-maj=19.0km s-min=18.0km az=8.0*

ISC 17 21:36:12.3±0.8, **10°.88S**±0°.09×**74°.43W**±0°.08, **h38**km, **n9,** σ1§**46**/10, **mb3.5/4, Central Peru**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.61**	**245**	P	**Pn**		**21 36 51.8**	**-0.2**
	18nm,0.3s,baz=68,slow=13,SNR=20							
NNA				S	**Sn**		**21 37 22.8**	**+0.3**
	20nm,0.3s,baz=70,slow=17,SNR=7.5							
ATAH	**Atahualpa**	**5.40**	**313**	P	**Pn**		**21 37 31.9**	**+1.2**
	2.5nm,0.3s,baz=156,slow=11,SNR=19							
ATAH				S	**Sn**		**21 38 33.7**	**+1.8**
	baz=342,slow=9.2,SNR=1.0							
ATAH				LR	LR		21 39 34.6	
	comp=Z,42nm,19.1s,baz=117,slow=37							
LPAZ	**La Paz**	**8.15**	**132**	P	**Pn**		**21 38 11.0**	**+2.3**
	0.1nm,0.3s,baz=323,slow=10,SNR=1.5							
PTGA	**Pitinga**	**17.55**	**56**	P	**Pn**		**21 40 13.4**	**-0.8**
	0.4nm,0.3s,baz=254,slow=8.2,SNR=4.2							
JTS	**Las Juntas de**	**23.49**	**333**	LR	LR		21 51 04.6	
	comp=Z,29nm,18.3s,baz=326,slow=38							
TXAR	**Lajitas Array**	**48.92**	**326**	P	**P**		**21 44 54.7**	**-0.2**
	0.2nm,0.5s,baz=159,slow=7.7,SNR=2.6							
PDAR	**Pinedale Array**	**62.30**	**331**	P	**P**		**21 46 29.4**	**-1.6**
	0.2nm,0.5s,baz=140,slow=7.1,SNR=2.0							
TORD	**Torodi Ar. Bea**	**79.22**	**74**	P	**P**		**21 48 13.2**	**-1.0**
	0.5nm,0.8s,baz=274,slow=3.9,SNR=3.0							
YKA	**Yellowknife Ar**	**79.49**	**342**	P	**P**		**21 48 13.9**	**-0.6**
	0.2nm,0.5s,baz=136,slow=6.0,SNR=4.7							

NOU ***17*** *21:52:37.2, 24°.75S×173°.22W, h100km, mb4.9, South of Tonga Islands*

IDC ***17*** *21:52:49.1±0.4, 25°.20S×176°.47W, h0km, mb4.7/19, mb1 4.9/20, mb1mx4.8/29, mbtmp4.7/20, ML5.3/1, MS4.4/23, Ms1 4.4/23, ms1mx4.3/36, Error ellipse: s-maj=16.2km s-min=14.3km az=104.0*

BJI ***17*** *21:52:50.2±0.0, 25°.23S×175°.87W, h26km, mB5.5/17, mb5.3/42, Ms4.9/9, Ms7 4.6/11*

NEIC ***17*** *21:52:53.4±2.2, 25°.26S±0°.07×176°.28W±0°.09, h35km±1km, mb4.9/57, Error ellipse: s-maj=14.7km s-min=10.6km az=108.0*

GCMT ***17*** *21:52:55.4±0.2, 25°.33S±0°.02×175°.97W±0°.01, h30km, MW5.2/109, Moment Tensor Solution. s74,c101; s109,c162; Duration: 1§0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.55±.02; Mθθ0.15±.02; Mφφ-0.69±.01; Mrθ-0.17±.03; Mθφ-0.01±.01; Mφr0.43±.02; Best double couple: M₀0.78000×10¹⁷ NP1:φs200.00000°, δ30.00000°, λ120.00000°. NP2:φs346.00000°, δ64.00000°, λ74.00000°. Principal axes: T 0.7280, Plg67.0000°, Azm226.0000°; N 0.1040, Plg15.0000°, Azm353.0000°; P -0.8320, Plg18.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 21:52:52.0±0.5, **25°.31S**±0°.05×**176°.16W**±0°.05, **h21**km±5km, **h22**km:**pP-P, n278,** σ1§**98**/268, **mb5.0**/56, **MS4.6**/31, **37C-5D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.22**	**201**	Pn	**Pn**		**21 53 55.9**	**+0.8**
	180nm,0.3s,baz=72,slow=11,SNR=7.9							
RAO				LR	LR		21 54 41.3	
	comp=Z,1μm,20.4s,baz=38,slow=26							
RAO				Sn	**Sn**		**21 54 44.8**	**+1.0**
	347nm,0.3s,baz=10,slow=23,SNR=5.7							
RAO	**Raoul Island**	**4.22**	**201**		**Pn**		**21 53 55.8**	**+0.7**
RAO				Sn	**Sn**		**21 54 44.7**	**+0.9**
NIUE	**Niue**	**8.47**	**44**		**Pn**		**21 54 49.3**	**-4.2**
MSVF	**Nonsavu**	**9.26**	**323**	Pn	**Pn**		**21 55 09.2**	**+4.7**
	3.0nm,0.3s,baz=167,slow=14,SNR=10							
MSVF				LR	LR		21 58 16.3	
	comp=Z,4μm,19.8s,baz=140,slow=36							
MSVF	**Nonsavu**	**9.26**	**323**	Pn	**Pn**		**21 55 04.6**	**+0.1**
MSVF	**Nonsavu**	**9.26**	**323**	P	**Pn**		**21 55 08.6**	**+4.1**
AFI	**Afiamalu**	**12.07**	**21**	Pn	**Pn**		**21 55 38.7**	**-4.2**
	11nm,0.3s,baz=234,slow=14,SNR=7.0							
AFI				Sn	Sn		21 57 41.6	-15
	12nm,0.3s,baz=28,slow=19,SNR=2.3							
AFI	**Afiamalu**	**12.07**	**21**	Pn	**Pn**		**21 55 39.9**	**-3.0**
MXZ	**Matakaoa Point**	**13.09**	**200**	Pn	**Pn**		**21 55 55.4**	**-1.3**
URZ	**Urewera**	**14.11**	**202**	Pn	**P**		**21 56 15.5**	**-2.6**
	3.4nm,0.3s,baz=301,slow=23,SNR=18							
URZ				Sn	Sn		21 58 35.9	-11
	2.9nm,0.3s,baz=315,slow=22,SNR=5.3							
URZ	**Urewera**	**14.11**	**202**		**Pn**		**21 56 11.4**	**+0.8**
SNGZ	**Shannon Statio**	**14.51**	**201**	P	**P**		**21 56 23.0**	**+0.4**
RAHZ	**Arahi**	**14.71**	**201**	P	**P**		**21 56 25.0**	**+0.1**
MTHZ	**Maungataniwha**	**14.74**	**202**	P	**Pn**		**21 56 21.9**	**+2.7**
BKZ	**Black Stump Fm**	**15.14**	**202**	Pn	**Pn**		**21 56 24.1**	**-0.5**
BKZ	**Black Stump Fm**	**15.14**	**202**	P	**Pn**		**21 56 26.1**	**+1.5**
HIZ	**Hauiti**	**15.20**	**208**	Pn	**Pn**		**21 56 24.5**	**-0.9**
HIZ				IAmb	IAmb		21 56 30.3	
	comp=Z,34nm,1.1s							
HIZ	**Hauiti**	**15.20**	**208**	P	**P**		**21 56 30.5**	**+0.2**
MCHZ	**McNeill Hill**	**15.32**	**201**	P	**Pn**		**21 56 28.2**	**+1.3**
TMVZ	**Te Maari**	**15.38**	**205**	P	**Pn**		**21 56 27.2**	**-0.6**
OTVZ	**Oturere**	**15.44**	**205**	P	**Pn**		**21 56 27.1**	**-1.5**
BHHZ	**Black Hill Sta**	**15.58**	**203**	P	**Pn**		**21 56 28.9**	**-1.5**
RAR	**Rarotonga**	**15.60**	**78**	Pn	**Pn**		**21 56 25.4**	**-5.3**
	comp=Z,4.2nm,0.3s,baz=266,slow=11,SNR=6.3							
RAR				Sn	Sn		21 59 05.8	-17
	comp=Z,4.7nm,0.3s,baz=84,slow=22,SNR=2.5							
RAR				LR	LR		22 01 27.1	
	comp=Z,2μm,18.7s,baz=269,slow=33							
RAR	**Rarotonga**	**15.60**	**78**	Pn	**Pn**		**21 56 26.5**	**-4.2**
RAR				IAmb	IAmb		21 56 41.3	
	comp=Z,55nm,0.9s							
KRHZ	**Kereru**	**15.61**	**202**	P	**Pn**		**21 56 30.2**	**-0.6**
MOVZ	**Moawhango**	**15.62**	**204**	P	**Pn**		**21 56 31.0**	**+0.1**
PXZ	**Pawanui**	**15.80**	**200**	P	**Pn**		**21 56 32.1**	**-1.0**
YATNC	**Mamie plateau,**	**15.86**	**278**	P	**P**		21 56 44.8	+7.2
PNHZ	**Pukenui**	**15.91**	**202**	P	**Pn**		**21 56 32.0**	**-2.6**
DZM	**Mont Dzumac**	**16.25**	**278**	*e*Pn	**P**		**21 56 43.4**	**+1.2**
	comp=Z,183nm,1.2s							
DZM				*e*LR	LR		22 00 27.3	
	comp=Z,4μm,25.4s							
DZM	**Mont Dzumac**	**16.25**	**278**	LR	LR		22 00 36.1	
	comp=Z,351nm,21.2s,baz=102,slow=29							
DZM	**Mont Dzumac**	**16.25**	**278**		**Pn**		**21 56 39.2**	**0.0**
DZM				IAmb	IAmb		21 56 58.6	
	comp=Z,82nm,1.1s							
DZM	**Mont Dzumac**	**16.25**	**278**	P	**P**		**21 56 48.8**	**+6.6**
	comp=Z,82nm,1.4s							
DVHZ	**Dannevirke**	**16.27**	**201**	P	**Pn**		**21 56 38.4**	**-0.8**
ANWZ	**Angora Road**	**16.31**	**200**	P	**P**		**21 56 42.3**	**-0.3**
NOUC	**Port Laguerre**	**16.37**	**278**	P	**P**		21 56 50.8	+7.4
	comp=Z,91nm,1.6s							
PRWZ	**Pori Road**	**16.56**	**201**	P	**Pn**		**21 56 42.9**	**0.0**
BFZ	**Birch Farm**	**16.59**	**201**	Pn	**Pn**		**21 56 42.2**	**-1.0**
BFZ				IAmb	IAmb		21 56 47.6	
	comp=Z,51nm,0.9s							
BFZ	**Birch Farm**	**16.59**	**201**	P	**Pn**		**21 56 37.0**	**-6.3**
MRZ	**Mangatainoka R**	**16.79**	**202**	P	**Pn**		**21 56 42.0**	**-3.8**
HOWZ	**Holdsworth Sta**	**17.02**	**202**	P	**Pn**		**21 56 46.3**	**-2.4**
TMWZ	**Te Maipa**	**17.09**	**201**	P	**Pn**		**21 56 46.7**	**-2.8**
KIW	**Kapiti Island**	**17.20**	**203**	P	**Pn**		**21 56 45.5**	**-5.5**
MTW	**Mount Morrison**	**17.26**	**202**	P	**Pn**		**21 56 48.1**	**-3.6**
TRWZ	**Traveller**	**17.41**	**201**	P	**Pn**		**21 56 51.2**	**-2.4**
PAWZ	**Paruwai Farm**	**17.48**	**201**	P	**Pn**		**21 56 51.6**	**-2.9**
MSWZ	**Moikau Station**	**17.57**	**202**	Pn	**Pn**		**21 56 52.1**	**-3.5**
SNZO	**South Karori**	**17.67**	**203**	Pn	**Pn**		**21 56 55.5**	**-1.2**
SNZO				IAmb	IAmb		21 57 03.9	
	comp=Z,95nm,1.1s							
BHW	**Baring Head**	**17.70**	**203**		**Pn**		**21 56 56.3**	**-0.8**
PLWZ	**Palliser**	**17.71**	**202**	Pn	**Pn**		**21 56 55.0**	**-2.3**
PLWZ	**Palliser**	**17.71**	**202**	P	**P**		**21 56 54.5**	**-2.9**
TCW	**Tory Channel**	**17.74**	**204**	P	**Pn**		**21 56 52.0**	**-5.6**
TUWZ	**Tuamarina**	**18.05**	**205**	P	Pn		21 56 54.1	-7.4
NNZ	**Nelson**	**18.09**	**206**	Pn	**Pn**		**21 56 57.6**	**-4.4**
QRZ	**Quartz Range**	**18.12**	**209**	Pn	**Pn**		**21 57 00.1**	**-2.2**
BSWZ	**Blackbirch Sta**	**

comp=Z,4.4nm,0.8s,baz=104,slow=3.4,SNR=9.1
WRA LR LR 22 19 25.2
comp=Z,816nm,19.4s,baz=100,slow=35
WRA Warramunga Arr 45.80 266 P P 22 01 11.0 -1.6
JAY Jayapura 47.28 292 P P 22 01 21.0 -3.2
comp=Z,16nm,0.9s,baz=113,slow=7.7,SNR=5.4
FORT Forrest 49.11 250 P P 22 01 36.1 -2.1
WRKA Warakurna 49.95 258 P P 22 01 41.6 -3.1
baz=50,SNR=36
KNRA Kununurra 52.17 269 P P 22 02 00.2 -1.2
KNRA IAmb IAmb 22 02 00.4
comp=Z,18nm,0.7s
SBA Scott Base 53.22 184 P P 22 02 11.2 +2.9
VNDA Vanda 53.30 186 P P 22 02 10.5 +1.5
comp=Z,5.6nm,1.0s,baz=0.7,slow=7.0,SNR=17
VNDA LR LR 22 25 02.6
comp=Z,101nm,18.3s,baz=12,slow=36
FITZ Fitzroy Crossi 54.20 265 P P 22 02 14.7 -1.7
baz=55,SNR=4.7
FITZ Fitzroy Crossi 54.20 265 P P 22 02 15.5 -0.9
FITZ IAmb IAmb 22 02 33.9
comp=Z,6.8nm,1.1s
FAKI Fak Fak 54.33 286 P P 22 02 14.3 -3.1
SWI Sorong 56.20 287 P P 22 02 29.2 -1.6
comp=Z,44nm,0.7s
PSA00 Pilbara Seismi 58.34 259 P P 22 02 44.2 -1.7
PSA00 IAmb IAmb 22 02 46.3
comp=Z,6.7nm,1.0s
SOEI Soe 58.44 274 P P 22 02 46.2 -0.6
SOEI Soe 58.44 274 P P 22 03 00.2 +13
BLDU Ballidu 58.75 248 P P 22 02 46.2 -2.4
baz=59,SNR=4.9
MORW Morawa 59.67 250 P P 22 02 52.7 -2.3
baz=60,SNR=6.9
MORW Morawa 59.67 250 P P 22 02 53.2 -1.8
MORW IAmb IAmb 22 03 02.2
comp=Z,15nm,1.1s
SANI Sanana 60.23 283 P P 22 02 56.4 -2.7
comp=Z,23nm,0.8s
CASY Casey 60.39 206 P P 22 02 59.0 -0.4
GIRL Giralia 62.99 256 P P 22 03 16.1 -1.4
GTOI Gorontalo 64.12 284 P P 22 03 23.9 -1.2
comp=Z,20nm,0.8s
BNSI Bone 64.42 278 P P 22 03 26.9 -0.2
comp=Z,19nm,1.4s
QSPA South Pole Qui 64.78 180 P P 22 03 30.2 +1.3
comp=Z,30nm,1.0s,baz=45,slow=3.6,SNR=77
QSPA South Pole Qui 64.78 180 P P 22 03 30.2 +1.3
TOLI2 Tolitoli 66.31 283 P P 22 03 36.6 -2.8
BBKI Banjar Baru 69.55 276 P P 22 04 03.4 +3.6
MJAR Matsushiro Arr 75.07 323 P P 22 04 31.0 -1.2
comp=Z,2.2nm,0.7s,baz=146,slow=6.3,SNR=7.2
MJAR LR LR 22 32 30.8
comp=Z,170nm,22.0s,baz=140,slow=32
JTM Tenmabayashi 76.83 328 P P 22 04 41.8 -0.3
MAW Mawson 77.63 200 P P 22 04 47.2 +0.9
comp=Z,18nm,0.9s,baz=126,slow=6.1,SNR=17
MAW LR LR 22 38 28.8
comp=Z,288nm,19.2s,baz=84,slow=35
MAW Mawson 77.63 200 P P 22 04 47.2 +0.9
MAW IAmb IAmb 22 04 48.5
comp=Z,6.3nm,1.0s
PETK Petropavlovsk- 81.33 344 P P 22 05 06.7 +0.1
comp=Z,4.1nm,0.8s,baz=137,slow=8.9,SNR=8.8
PETK LR LR 22 35 14.5
comp=Z,207nm,21.2s,baz=157,slow=31
KSRS Korea Array 81.59 318 P P 22 05 08.7 +0.5
comp=Z,4.8nm,0.9s,baz=131,slow=6.1,SNR=6.5
KSRS LR LR 22 36 29.6
comp=Z,119nm,19.7s,baz=126,slow=32
H03S2 Juan Fernandez 81.91 123 T T 23 35 35.8
baz=243,slow=74,SNR=104
H03S1 Juan Fernandez 81.92 123 T T 23 35 36.9
baz=243,slow=74,SNR=113
H03S3 Juan Fernandez 81.92 123 T T 23 35 35.7
baz=243,slow=74,SNR=102
SYO Syowa Base 82.42 192⇑*eP* **P 22 05 08.9 -3.3**
SYO Syowa Base 82.42 192⇑*ePcP* **P 22 05 14.0 +1.8**
SNAA Sanae 83.17 178 P P 22 05 16.4 +0.2
SNAA Sanae 83.17 178 P P 22 05 16.4 +0.2
SNAA IAmb IAmb 22 05 17.6
comp=Z,22nm,1.0s
VNA3 Neumayer Olymp 83.25 176 P P 22 05 16.5 0.0
NVAR Mina Array Bea 83.40 42 P P 22 05 20.1 +2.1
comp=Z,2.3nm,0.9s,baz=230,slow=8.9,SNR=8.8
NVAR LR LR 22 35 32.5
comp=Z,281nm,21.3s,baz=252,slow=31
VNA2 Neumayer--Watz 83.70 176 P P 22 05 19.2 +0.4
baz=187,slow=4.9
VNA2 Neumayer--Watz 83.70 176 pP pP 22 05 27.1 +2.1
USA0B Ussuriysk Arra 83.87 325 P P 22 05 19.9 0.0
USRK Ussuriysk Ar. 83.87 325 P P 22 05 20.8 +0.8
comp=Z,14nm,0.9s,baz=124,slow=3.4,SNR=22
USRK Ussuriysk Ar. 83.87 325 P P 22 05 19.8 -0.1
VNA1 Neumayer--Stat 83.92 176 P P 22 05 20.5 +0.6
NJ2 Nanjing 84.23 309 *eP* **P 22 05 22.3 +0.2**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
PLCA Paso Flores 84.76 133 P P 22 05 26.8 +1.8
comp=Z,3.7nm,0.9s,baz=224,slow=4.4,SNR=5.0
PLCA LR LR 22 34 17.4
comp=Z,194nm,21.1s,baz=252,slow=29
PLCA Paso Flores 84.76 133 IAmb IAmb 22 05 27.6
comp=Z,7.4nm,1.1s
MDJ Mudanjiang 85.41 324 P P 22 05 28.3 +0.6
MDJ sP sP 22 05 43.3 +6.8
MDJ pmax pmax
comp=Z,20nm,0.9s
MDJ pmax pmax
comp=Z,98nm,3.6s
WHN Wuhan 86.64 306 ⇓P **P 22 05 34.3 +0.2**
WHN pmax pmax
comp=Z,38nm,1.2s
CN2 Changchun 87.12 322 *eP* **P 22 05 36.4 +0.2**
CN2 pmax pmax
comp=Z,20nm,1.1s
TIA Tai'an 87.75 312 P P 22 05 39.5 +0.1
TIA pmax pmax
comp=Z,30nm,1.0s
TXAR Lajitas Array 88.25 56 P P 22 05 43.6 +1.6
comp=Z,2.9nm,1.0s,baz=216,slow=6.2,SNR=18
TXAR LR LR 22 36 56.8
comp=Z,306nm,21.1s,baz=0.0,slow=30
TXAR Lajitas Array 88.25 56 P P 22 05 42.1 +0.1
ANMO Albuquerque 89.11 50 LR LR 22 38 17.2
comp=Z,503nm,20.8s,baz=238,slow=31
BMRM Bremner River 89.71 15 P P 22 05 47.7 -0.4
N25K Chitina, Valde 90.28 14 P P 22 05 50.0 -0.7
N25K IAmb IAmb 22 05 52.6
comp=Z,11nm,0.8s
GYA Guiyang 90.47 299 P P 22 05 53.8 +1.2
GYA pmax pmax
comp=Z,8.0nm,1.0s
BARN Barnard Glacie 90.50 16 P P 22 05 50.1 -1.9
PDAR Pinedale Array 91.32 43 P P 22 05 57.5 +1.2
comp=Z,2.4nm,0.9s,baz=211,slow=2.6,SNR=13
PDAR LR LR 22 39 06.3
comp=Z,112nm,21.6s,baz=234,slow=30
TIY Taiyuan 91.72 311 *eP* **P 22 05 59.3 +1.2**
WRH Wood River Hil 92.13 12 P P 22 05 57.9 -1.3
WRH IAmb IAmb 22 06 16.5
comp=Z,12nm,1.2s
DOT Dot Lake 92.20 14 P P 22 05 58.0 -1.5
DOT IAmb IAmb 22 06 01.1
comp=Z,5.6nm,0.9s
XAN Xi'an 92.37 307 P P 22 06 01.4 +0.3
XAN pmax pmax
comp=Z,20nm,1.2s
XAN Xi'an 92.37 307 P P 22 06 00.3 -0.8
APG El Apazote 92.51 75 LR LR 22 37 35.2
comp=Z,146nm,21.9s,baz=250,slow=29
ILAR Eielson Array 92.62 12 P P 22 06 01.4 -0.1
comp=Z,0.9nm,0.8s,baz=213,slow=4.9,SNR=8.5
ILAR LR LR 22 43 06.8
comp=Z,62nm,18.6s,baz=215,slow=33
ILAR Eielson Array 92.62 12 P P 22 06 00.9 -0.5
LAMP Lampang 92.73 289 P P 22 06 04.7 +1.6
KMI Kunming 93.01 296 ⇑P **P 22 06 04.8 +0.3**
KMI pP sP 22 06 15.3 +1.5
KMI sP pwP 22 06 19.8 +6.6
KMI pmax pmax
comp=Z,18nm,1.2s
CM04 Chiang Mai Arr 93.23 289 P P 22 06 07.0 +1.6
CM09 Chiang Mai Arr 93.24 289 P P 22 06 07.2 +1.7
CM01 Chiang Mai Arr 93.26 289 P P 22 06 07.2 +1.6
CM05 Chiang Mai Arr 93.26 289 P P 22 06 07.0 +1.5
CM02 Chiang Mai Arr 93.28 289 P P 22 06 07.0 +1.4
CM34 Chiang Mai Arr 93.28 289 P P 22 06 06.0 +0.4
CMAR Chiang Mai Arr 93.29 289 P P 22 06 06.7 +1.0
comp=Z,5.0nm,0.7s,baz=134,slow=3.3,SNR=31
CM13 Chiang Mai Arr 93.30 289 P P 22 06 07.2 +1.5
CMMT Chiang Mai 93.44 289 P P 22 06 06.0 -0.3
CHTO Chiang Mai 93.44 289 P P 22 06 05.9 -0.5
CM32 Chiang Mai Arr 93.45 289 P P 22 06 07.0 +0.6
HHC Hu-ho-hao-te 93.90 314 *eP* **P 22 06 08.9 +0.8**
HHC S S **22 17 17.0 0.0**
HHC SS SS **22 23 39.3 +2.3**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,85nm,6.6s
HHC LR LR
comp=Z,240nm,19.9s
HHC LR LR
comp=Z,210nm,19.9s
HHC LR LR
comp=Z,120nm,17.1s
CD2 Chengdu 94.78 302 *eP* **P 22 06 12.3 0.0**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 LR LR
comp=Z,230nm,14.4s
CD2 LR LR
comp=Z,240nm,20.6s
CD2 LR LR
comp=Z,390nm,23.3s
LZH Lanzhou 97.00 307 *eP* **P 22 06 23.1 +0.6**
LZH pP sP 22 06 37.4 +6.2
LZH pmax pmax
comp=Z,15nm,1.2s
LPAZ La Paz 98.66 113 LR LR 22 44 07.5
comp=Z,115nm,18.4s,baz=238,slow=31
YKA Yellowknife Ar 100.16 25 P Pdif 22 06 36.3 +0.6
comp=Z,0.4nm,0.8s,baz=229,slow=4.5,SNR=8.1
GTA Gaotai 101.29 308 *eP* **Pdif 22 06 41.1 -0.4**
GTA pmax pmax
comp=Z,2.0nm,1.1s
WMQ Urumqi 111.31 309 *e*PKP **PKiKP 22 11 22.3 -2.1**
ZALV Zalesovo Beam 115.27 320 PKP **PKPdf 22 11 30.1 -1.3**
comp=Z,0.7nm,0.7s,baz=64,slow=3.4,SNR=3.8
MKAR Makanchi Array 115.69 312 PKP **PKPdf 22 11 31.4 -1.2**
comp=Z,0.9nm,0.7s,baz=73,slow=3.2,SNR=12
KURK Kurchatov 118.64 316 PKPdf 22 11 36.9 -1.2
KURBB Kurchatov Arra 118.68 316 PKP **PKPdf 22 11 36.9 -1.3**
comp=Z,1.3nm,0.8s,baz=100,slow=2.2,SNR=15
BVAR Borovoye Array 123.81 318 PKP **PKPdf 22 11 46.9 -1.1**
comp=Z,1.8nm,0.8s,baz=148,slow=11,SNR=14
ARU Arti 130.09 324 PKP **PKPdf 22 11 59.1 -0.7**
comp=Z,0.8nm,0.5s,baz=180,slow=7.0,SNR=6.9
AKTO Aktyubinsk 131.73 316 PKP **PKPdf 22 12 02.8 -0.4**
comp=Z,1.2nm,0.8s,baz=34,slow=3.6,SNR=4.7
ARCES ARCESS Array B 133.94 350 PKP **PKPdf 22 12 06.4 -0.4**
comp=Z,2.6nm,0.9s,baz=349,slow=2.9,SNR=2.1
KMBO Kilima Mbogo 138.34 236 PKP **PKPdf 22 12 16.4 -0.6**
comp=Z,0.8nm,0.7s,baz=51,slow=6.5,SNR=3.5
FINES FINESS Array B 140.84 343 PKP **PKPdf 22 12 19.6 -0.1**
comp=Z,1.3nm,0.8s,baz=72,slow=4.5,SNR=3.9
OBN Obninsk 141.76 330 ⇑P PKiKP 22 12 38.2 +14
MBAR Mbarara 143.39 229 PKhKP PKPpre 22 12 23.6
comp=Z,2.7nm,0.4s,baz=248,slow=5.4,SNR=6.7
KVAR Kislovodsk Arr 143.43 310 PKP PKPbc 22 12 23.1 +0.8
comp=Z,2.2nm,0.7s,baz=342,slow=3.2,SNR=2.4
AKH Akhalkalaki 143.55 306 ⇑P PKPbc 22 12 23.0 +0.2
NOA NORSAR Array B 143.93 354 PKhKP PKPpre 22 12 22.7
comp=Z,4.0nm,0.9s,baz=13,slow=2.3,SNR=14
IDID Didziasalis 145.64 337 *eP* **PKPdf 22 12 27.7 -0.6**
ISAL Salakas 145.65 338 *eP* **PKPdf 22 12 27.4 -0.9**
IGN Ignalina 145.79 337 *eP* **PKPdf 22 12 28.1 -0.5**
NACGM Naroch 145.94 336 *i* PKP **PKPdf 22 12 28.9 0.0**
NACGM *i* PKP **PKPdf 22 12 28.9 0.0**
NACGM *i* PKP **PKPdf 22 12 28.9 0.0**
NACGM *i* PP **PP 22 15 53.6 +2.9**
NACGM *i* PPP PPP 22 19 06.4
NACGM *i* SKS **SKSdf 22 19 35.5 -1.0**
NACGM *i* SKKS **SKKSac 22 22 44.4 +2.7**
NACGM *i* SS SS 22 34 59.5 +16
NACGM *i* SSS SSS 22 40 22.3
NACGM *i* LQ LQ 23 00 59.2
NACGM *i* LR LR 23 13 58.0
KTUT Trabzon 146.37 307 ⇑P **PKPdf 22 12 30.5 +0.5**
PABE Paberze 146.42 339 *eP* **PKPdf 22 12 30.1 +0.5**
PBUR Paburge 146.60 342 *eP* **PKPdf 22 12 30.1 +0.2**
AKASG Malin Array Be 148.01 329 PKPbc **PKPbc 22 12 34.5 -1.1**
comp=Z,2.2nm,0.5s,baz=38,slow=3.6,SNR=16
MUD Monsted U'grnd 148.64 354 *eP* **PKPbc 22 12 37.3 +0.3**
BZK Bozkurt 150.10 311 ⇑P **PKPab 22 12 50.6 +3.5**
SORM Soroca 150.15 326 ⇑P **PKPbc 22 12 40.2 -0.8**
MILM Milestii Mici 150.69 324 ⇑P **PKPdf 22 12 39.4 +2.6**
BRTR Keskin Array B 151.21 307 PKPbc **PKPbc 22 12 43.6 -0.4**
comp=Z,2.6nm,0.7s,baz=76,slow=5.5,SNR=8.7
BRTR PKPab **pPKPbc 22 12 50.6 -0.2**
comp=Z,5.4nm,0.7s,baz=112,slow=3.5,SNR=9.8
MMAI Mount Meron Ar 151.46 293 PKPbc **PKiKP 22 12 45.3 +0.1**
comp=Z,8.8nm,0.8s,baz=82,slow=6.0,SNR=16
MMAI PKPab **pPKPbc 22 12 52.4 +0.8**
comp=Z,12nm,0.5s,baz=81,slow=7.7,SNR=87
TLCR 151.74 321 ⇑P **PKPbc 22 12 42.3 -2.6**
BURAR Bucovina Array 152.05 328 ⇑P **PKiKP 22 12 46.3 +0.3**
BIZ Bicaz 152.08 326 ⇑P **PKiKP 22 12 46.0 0.0**
TESR Tescani 152.09 325 ⇑P **PKPdf 22 12 40.5 +1.5**
EIL Elat 152.11 286 PKPab **PKPab 22 12 53.5 -2.3**
comp=Z,24nm,1.0s,baz=5.0,slow=2.6,SNR=7.4
CFR Carcaliu 152.13 321 ⇑P **PKPbc 22 12 45.3 -0.5**
TPGR Topolog 152.16 321 ⇑P **PKPbc 22 12 44.7 -1.2**
VRI Vrincioaia 152.47 324 ⇑P **PKPdf 22 12 38.0 -1.7**
PLOR Plostina 152.53 324 ⇑P **PKPab 22 12 54.2 -2.9**
HARR Harsova 152.54 321 ⇑P **PKiKP 22 12 47.3 +0.3**
CRVS Cervenica-Dubn 152.71 334 *e*PKP **PKiKP 22 12 47.7 +0.5**
OZUR 152.81 325 ⇑P **PKPab 22 12 56.6 -1.7**
ARCR ARCALIA 152.84 328 ⇑P **PKPab 22 12 59.6 +1.3**
TRPA Tarpa 152.87 332 ⇓P **PKPbc 22 12 46.1 -1.2**
OSTC Ostas 153.04 342⇑*e*PKP **PKiKP 22 12 48.1 +0.2**
OSTC *e*PKPAB **sPKPbc 22 12 58.0 +1.1**
ISR Istrita 153.05 323 ⇑P **PKPdf 22 12 43.4 +2.8**
CHVC Chvalec 153.06 343 *e*PKPAB **PKPab 22 12 54.4 -4.7**
DOPR Dopca 153.11 326 ⇑P **PKiKP 22 12 48.2 +0.1**
CLL Collm 153.11 347 *e*PKPdf **PKPdf 22 12 41.0 +0.6**
CLL *i* PKPbc **PKPbc 22 12 47.4 -0.3**
comp=Z,7.0nm,0.9s
CLL *i* PKPab **sPKPbc 22 12 58.2 +1.2**
comp=Z,29nm,1.5s
CLL L L 23 16 00.0
comp=Z,100nm,21.9s
MLR Muntele Rosu 153.13 324 PKPbc **PKiKP 22 12 49.7 +1.4**
comp=Z,2.5nm,0.7s,baz=148,slow=5.3,SNR=4.7
MLR PKPab **sPKPbc 22 12 58.6 +1.2**
comp=Z,4.8nm,0.9s,baz=68,slow=2.4,SNR=4.5
MLR Muntele Rosu 153.13 324 ⇑P **PKPbc 22 12 46.9 -1.3**
LEF Lefka 153.14 298 ⇑P **PKiKP 22 12 54.0 +5.4**
DPC Dobruska-Polom 153.20 342⇑*e*PKP **PKiKP 22 12 48.6 +0.4**
DPC *e*PKPAB **sPKPbc 22 12 57.7 +0.4**
KRLC Kraliky 153.32 341⇑*e*PKP **PKPbc 22 12 48.3 0.0**
KRLC *e*PKPAB **sPKPbc 22 12 58.1 +0.6**
BRG Berggiesshubel 153.32 346 *e*PKP **PKPbc 22 12 48.0 -0.3**
BRG Amp 22 12 49.4
comp=Z,6.7nm,1.1s
BRG *ex* x 22 12 58.7
BRG Amp 22 12 59.4
comp=Z,28nm,1.6s
BRG *ex* x 22 13 04.2
BRG Amp 22 13 05.8
comp=Z,16nm,1.3s
PVCC Panska Ves 153.50 345 *e*PKPAB **PKPab 22 12 59.3 -1.6**
VOIR 153.64 325 ⇑P **PKPbc 22 12 48.3 -0.9**
DRGR 153.82 330 ⇑P **PKPbc 22 12 49.2 -0.4**
ARR Arges 153.90 325 ⇑P **PKiKP 22 12 50.2 +0.3**
PRU Pruhonice 154.00 344 AMS AMS 23 30 30.0
comp=Z,200nm,20.8s
VRAC Vranov 154.06 341 PKPab **PKPab 22 13 03.2 -0.2**
comp=Z,3.3nm,0.8s,baz=7.1,slow=8.1,SNR=4.0
VRAC Vranov 154.06 341 ⇑P **PKPab 22 13 01.8 -1.6**
PSZ Piszkesteto 154.12 335 ⇑P **PKPab 22 13 03.0 -0.8**
NKC Novy Kostel 154.24 347 AMS AMS 23 23 20.0
comp=Z,200nm,21.8s
HUMR Humele 154.28 324 ⇑P **PKiKP 22 12 56.9 +6.4**
TREC Trest 154.39 342 AMS AMS 23 26 20.0
comp=Z,200nm,22.4s
BTNL Ternell 154.70 357 *d*PKP **PKPdf 22 12 42.2 -0.5**
BTNL dpPKPdf **sPKPdf 22 12 52.4 +1.3**
KHC Kasperske Hory 155.03 345⇑*e*PKP PKPdf 22 12 55.1 +12
KHC *e*PKPAB **PKPab 22 13 08.2 +0.6**
KHC AMS AMS 23 27 40.0
comp=Z,200nm,19.8s
CKRC Cesky Krumlov 155.14 343⇑*e*PKP PKPdf 22 12 52.3 +8.9
CKRC *e*PKPAB sPKPbc 22 13 02.5 +1.1
CKRC AMS AMS 23 22 50.0
comp=Z,200nm,18.6s
BZS Buzias 155.20 329 ⇓P PKPdf 22 12 52.1 +8.6
GERES GERESS Array B 155.27 344 PKPbc PKPdf 22 12 52.2 +8.6
comp=Z,0.2nm,0.3s,baz=296,slow=3.2,SNR=4.1
MDVR Moldovita 155.78 328 ⇑P PKPdf 22 12 53.3 +8.9
MOA Molln 156.04 343 *eP* **PKPab 22 13 12.8 +0.9**
comp=Z,11nm,1.3s
VTS Vitosha 156.50 322 ⇑P **PKPab 22 13 10.7 -3.6**
SOKA Soboth 156.88 340 *eP* **PKPab 22 13 16.1 +0.4**
comp=Z,5.8nm,1.0s
WTTA Wattenberg 157.23 346 *eP* **PKPab 22 13 17.7 +0.5**
comp=Z,8.1nm,1.3s
MOTA Moosalm 157.26 347 *eP* **PKPab 22 13 17.7 +0.4**
comp=Z,6.4nm,1.0s
ABTA Abfaltersbach 157.51 344 P **PKPab 22 13 18.2 -0.1**
comp=Z,4.2nm,0.9s
ESDC Sonseca Array 164.25 23 PKPab **PKPab 22 13 48.4 +0.5**
comp=Z,0.5nm,0.7s,baz=346,slow=4.4,SNR=2.2
TORD Torodi Ar. Bea 167.73 170 PKP **PKPdf 22 12 57.0 -0.4**
comp=Z,0.5nm,0.8s,baz=206,slow=0.9,SNR=3.6
TORD PKPab **PKPab 22 14 04.3 +0.7**
comp=Z,6.8nm,0.9s,baz=189,slow=3.8,SNR=20

ISK **17** *22:12:02.4,34.°93N×26.°75E,h5km,ML2.9/7*
DDA **17** *22:12:02.5,34.°83N×26.°81E,h8km±3km,ML2.7*
IDC **17** *22:12:02.4±1.3,34.°89N×26.°92E,h0km,mb3.4/3,*
mb1 3.3/5,mb1mx3.1/71,mbtmp3.3/5,ML3.1/2,Error
ellipse: s-maj=35.4km s-min=12.8km az=7.0
NIC **17** *22:12:03.0±0.0,34.°91N×26.°75E,h9km±5km,Ml3.5/3*
ATH **17** *22:12:04.1,34.°94N×26.°75E,h11km±2km,ML3.4/3, Error*
ellipse: s-maj=5.9km s-min=1.4km az=343.0
THE **17** *22:12:05.2,35.°11N×26.°66E,h0km±2km,ML3.1/4, Error*
ellipse: s-maj=7.4km s-min=1.1km az=159.0
ISC 17 22:12:02.4±1.3,34.°88N±0.°05×26.°77E±0.°03,h10km±9km,
n61,σ1°28/87,mb3.4/3,5C,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.51**	**297**	P	**Pg**	**22 12 12.8**	**+0.4**
ZKR				S	**Sb**	**22 12 19.7**	**-1.2**
ZKR				AML	AML	22 12 20.5	
	comp=N,7038μm,0.4s						
ZKR				AML	AML	22 12 20.6	
	comp=E,14527μm,0.4s						
ZKR	**Zakros**	**0.51**	**297**	P	**Pg**	**22 12 12.8**	**+0.4**
ZKR				S	**Sb**	**22 12 19.7**	**-1.2**
	comp=E,5μm,0.4s						
ZKR	**Zakros**	**0.51**	**297**	PG	**Pg**	**22 12 12.9**	**+0.5**
ZKR				SG	**Sb**	**22 12 20.2**	**-0.7**
ZKR	**Zakros**	**0.51**	**297**	P	**Pg**	**22 12 12.7**	**+0.4**
ZKR				AML	AML	22 12 19.1	
	comp=E,6.4nm,0.4s						
ZKR				AML	AML	22 12 19.1	
	comp=E,6.4nm,0.4s						
ZKR				AML	AML	22 12 19.2	
	comp=E,11nm,0.4s						
ZKR				AML	AML	22 12 19.2	
	comp=E,11nm,0.4s						
ZKR				S	**Sb**	**22 12 19.9**	**-1.0**
STIA	**Sitia Lasithi**	**0.64**	**300**	P	**Pg**	**22 12 14.0**	**-0.9**
STIA				S	**Sg**	**22 12 22.8**	**-0.5**
KARP	**Karpathos**	**0.74**	**26**	P	**Pg**	**22 12 16.7**	**0.0**
KARP				S	**Sb**	**22 12 26.9**	**-0.6**
KARP				AML	AML	22 12 27.8	
	comp=N,8898μm,0.3s						
KARP				AML	AML	22 12 28.0	
	comp=E,8525μm,0.5s						
KARP	**Karpathos**	**0.74**	**26**	P	**Pg**	**22 12 16.7**	**0.0**
KARP				S	**Sb**	**22 12 26.9**	**-0.6**
	comp=E,4μm,0.4s						
KARP	**Karpathos**	**0.74**	**26**	PG	**Pg**	**22 12 16.9**	**+0.2**
KARP				SG	**Sb**	**22 12 27.8**	**+0.3**
KARP	**Karpathos**	**0.74**	**26**	⇑P	**Pg**	**22 12 16.9**	**+0.2**
KARP				S	**Sb**	**22 12 27.3**	**-0.3**
KARP				AML	AML	22 12 27.4	
	comp=E,8.9nm,0.3s						
KARP				AML	AML	22 12 27.4	
	comp=E,8.9nm,0.3s						
KARP				AML	AML	22 12 27.6	
	comp=E,8.5nm,0.5s						
KARP				AML	AML	22 12 27.6	
	comp=E,8.5nm,0.5s						
FRMA	**Ierapetra Chan**	**0.86**	**279**	P	**Pg**	**22 12 17.5**	**-1.5**
FRMA				S	**Sg**	**22 12 28.9**	**-1.4**
NPS	**Neapolis**	**1.02**	**292**	P	**Pb**	**22 12 22.3**	**+0.1**
NPS				S	**Sb**	**22 12 35.7**	**0.0**
NPS				AML	AML	22 12 36.9	
	comp=E,2949μm,0.4s						
NPS				AML	AML	22 12 42.5	
	comp=N,2934μm,0.7s						
NPS	**Neapolis**	**1.02**	**292**	P	**Pg**	**22 12 22.2**	**+0.1**
NPS				S	**Sb**	**22 12 35.7**	**0.0**
	comp=N,1μm,0.4s						
IDI	**Anoyia**	**1.59**	**285**	Pn	**Pg**	**22 12 33.2**	**+0.2**
	comp=N,9.4nm,0.3s,baz=94,slow=15,SNR=39						
IDI				Lg	Lg	22 12 57.3	
	comp=N,19nm,0.3s,baz=345,slow=20,SNR=9.2						
IDI				LR	LR	22 13 28.9	
	comp=N,41nm,21.4s,baz=76,slow=51						
IDI	**Anoyia**	**1.59**	**285**	P	**Pg**	**22 12 32.8**	**-0.2**
IDI	**Anoyia**	**1.59**	**285**	P	**Pg**	**22 12 32.8**	**-0.2**
IDI	**Anoyia**	**1.59**	**285**	PN	**Pb**	**22 12 32.6**	**+0.6**
IDI				SN	**Sg**	**22 12 54.9**	**+1.2**
SIVA	**Sivas**	**1.62**	**275**	P	**Pg**	**22 12 33.7**	**+0.3**
SIVA	**Sivas**	**1.62**	**275**	P	**Pg**	**22 12 33.3**	**-0.1**
ARG	**Arkhangelos**	**1.73**	**39**	P	**Pb**	**22 12 34.8**	**+0.5**
ARG	**Arkhangelos**	**1.73**	**39**	P	**Pb**	**22 12 34.8**	**+0.5**
ARG				S	**Sb**	**22 12 56.3**	**+0.2**
	comp=N,202nm,0.5s						
ARG	**Arkhangelos**	**1.73**	**39**	PN	**Pb**	**22 12 34.3**	**0.0**
ARG				SN	**Sg**	**22 12 58.2**	**+0.1**
ARG	**Arkhangelos**	**1.73**	**39**	⇑P	**Pn**	**22 12 33.5**	**+1.0**
NIS1	**Nisyros Isl.**	**1.75**	**11**	PN	**Pb**	**22 12 34.4**	**-0.2**
NIS1				SN	**Sg**	**22 12 57.9**	**-0.8**
SANT	**Santorini**	**1.83**	**325**	PN	**Pb**	**22 12 35.4**	**-0.6**
KSK	**Kos Island**	**1.88**	**5**	PN	**Pb**	**22 12 36.2**	**-0.5**
THT2	**Imerovigli**	**1.90**	**325**	PN	**Pb**	**22 12 36.8**	**-0.4**
VAM	**Vamos**	**2.17**	**285**	P	**Pb**	**22 12 42.0**	**+0.2**
VAM	**Vamos**	**2.17**	**285**	P	**Pb**	**22 12 42.0**	**+0.2**
BODT	**Bodrum**	**2.22**	**11**	PN	**Pb**	**22 12 41.1**	**-1.5**
TURN	**Turunc**	**2.24**	**32**	*i* P	**Pn**	**22 12 40.9**	**+1.4**
TURN				*i* S	**Sn**	**22 13 07.3**	**+0.1**
TURN				IAML		22 13 19.0	
	comp=E,48nm,0.3s						
TURN				IAML		22 13 22.0	
	comp=N,38nm,0.4s						
TURN	**Turunc**	**2.24**	**32**	PN	**Pn**	**22 12 41.4**	**+1.9**
BDRM	**Kayabasi**	**2.25**	**14**	*i* P	**Pn**	**22 12 39.8**	**+0.1**
IMMV	**Iera Moni Meta**	**2.36**	**285**	P	**Pb**	**22 12 44.8**	**-0.1**
IMMV	**Iera Moni Meta**	**2.36**	**285**	P	**Pb**	**22 12 44.5**	**-0.4**
APE	**Apeiranthos**	**2.40**	**336**	⇑P	**Pb**	**22 12 46.8**	**+1.0**
APE	**Apeiranthos**	**2.40**	**336**	PN	**Pn**	**22 12 42.7**	**+0.9**
APE	**Apeiranthos**	**2.40**	**336**	⇑P	**Pn**	**22 12 41.8**	**0.0**
DALY	**Dalyan (Mula)**	**2.46**	**38**	*i* P	**Pn**	**22 12 43.8**	**+1.2**
DALY				*i* S	**Sb**	**22 13 15.8**	**-1.4**
DALY				IAML		22 13 31.0	
	comp=N,43nm,0.6s						
DALY	**Dalyan (Mula)**	**2.46**	**38**	PN	**Pn**	**22 12 44.3**	**+1.7**
KNDR	**Palaiochora Ch**	**2.56**	**279**	PN	**Pb**	**22 12 46.9**	**-1.4**
YER	**Yerkesik**	**2.56**	**28**	P	**Pn**	**22 12 45.1**	**+1.1**
YER	**Yerkesik**	**2.56**	**28**	PN	**Pn**	**22 12 46.1**	**+2.1**
FETY	**Fethiye**	**2.57**	**46**	P	**Pn**	**22 12 44.0**	**-0.1**
FETY	**Fethiye**	**2.57**	**46**	*i* P	**Pn**	**22 12 43.8**	**-0.3**
FETY				*i* S	**Sn**	**22 13 10.7**	**-4.7**
KSL	**Kastellorizon**	**2.62**	**60**	P	**Pn**	**22 12 45.9**	**+1.1**
AKAS	**Kas**	**2.68**	**59**	*i* P	**Pn**	**22 12 45.5**	**-0.2**
AKAS				*i* S	**Sn**	**22 13 12.4**	**-5.7**
AKAS				IAML		22 13 24.0	
	comp=N,40nm,0.5s						
GCAM	**G?zelcaml?**	**2.84**	**7**	*i* P	**Pb**	**22 12 53.1**	**0.0**
AYDN	**Tasoluk**	**2.92**	**18**	*i* P	**Pn**	**22 12 49.3**	**+0.4**
CAEL	**Denizli, Camel**	**3.05**	**42**	*i* P	**Pn**	**22 12 51.7**	**+0.9**
CAEL				IAML		22 13 44.0	
	comp=E,53nm,1.1s						
CAEL				IAML		22 13 51.0	
	comp=N,56nm,0.8s						

TAVA	**DENIZLI_Tavas**	**3.11**	**33**	*i* P	**Pn**	**22 12 52.7**	**+1.1**
TAVA				*i* S	**Sn**	**22 13 29.5**	**+0.7**
TAVA				IAML		22 13 46.0	
	comp=N,18nm,0.9s						
ELL	**Elmali**	**3.16**	**53**	P	**Pn**	**22 12 53.2**	**+0.9**
AKUM	**Antalya-Kumluc**	**3.25**	**63**	*i* P	**Pn**	**22 12 53.4**	**0.0**
AKUM				*i* S	**Sn**	**22 13 30.1**	**-2.0**
AKUM				IAML		22 13 42.0	
	comp=E,29nm,1.5s						
GOLH	**Golhisar**	**3.26**	**43**	*i* P	**Pn**	**22 12 54.9**	**+1.2**
GOLH				*i* S	**Sn**	**22 13 33.6**	**+1.0**
GOLH				IAML		22 13 35.0	
	comp=E,18nm,0.4s						
GOLH				IAML		22 13 39.0	
	comp=N,19nm,0.5s						
KORT	**Korkueli**	**3.59**	**53**	*i* P	**Pn**	**22 12 55.9**	**-2.3**
KORT				*i* S	**Sn**	**22 13 41.0**	**+0.2**
AKMS	**Akamas**	**4.57**	**87**	P	**Pn**	**22 13 12.6**	**+1.0**
AKMS				AML	AML	22 14 07.4	
	comp=N,0.2nm,0.3s						
AKMS				AML	AML	22 14 09.2	
	comp=N,0.2nm,0.3s						
ALFC	**Alefka**	**4.79**	**85**	⇑P	**Pn**	**22 13 15.6**	**+1.0**
MMAI	**Mount Meron Ar**	**7.41**	**102**	Pn	**Pn**	**22 13 50.5**	**-0.2**
	comp=N,0.4nm,0.3s,baz=292,slow=12,SNR=7.6						
MMAI				Sn	**Sn**	**22 15 15.1**	**+0.3**
	comp=N,1.2nm,0.3s,baz=288,slow=24,SNR=5.4						
EIL	**Elat**	**8.66**	**125**	Pn	**Pn**	**22 14 08.7**	**+1.0**
	comp=N,0.2nm,0.3s,baz=292,slow=3.7,SNR=10						
EIL				Sn	**Sn**	**22 15 41.3**	**-4.1**
	comp=N,1.0nm,0.3s,baz=195,slow=0.5,SNR=8.2						
TORD	**Torodi Ar. Bea**	**31.34**	**233**	P	**P**	**22 18 25.1**	**+1.9**
	comp=N,0.4nm,0.8s,baz=34,slow=8.8,SNR=1.4						
MKAR	**Makanchi Array**	**42.83**	**56**	P	**P**	**22 20 01.0**	**+0.6**
	comp=N,0.2nm,0.4s,baz=268,slow=7.8,SNR=5.7						
ZALV	**Zalesovo Beam**	**44.24**	**46**	P	**P**	**22 20 12.4**	**+0.7**
	comp=N,0.4nm,0.3s,baz=253,slow=8.4,SNR=2.1						

LDG ***17*** *22:16:19.9±0.1,50°.29N×18°.94E,h1km,Ml3.9/15,Error ellipse: s-maj=3.4km s-min=2.0km az=9.0,Suspected Mining induced.*

MOS ***17*** *22:16:20.6±0.9,50°.26N×18°.89E,h7km,mb4.6/12,Error ellipse: s-maj=4.0km s-min=3.7km az=99.7*

IDC ***17*** *22:16:21.9±0.4,50°.08N×18°.86E,h0km,mb4.0/15, mb1 4.0/28,mb1mx3.8/77,mbtmp4.0/28,ML3.4/12,Error ellipse: s-maj=7.9km s-min=5.1km az=160.0*

IPEC ***17*** *22:16:21.6±0.1,50°.23N×18°.88E,h4km±1km,ML3.9/3, Error ellipse: s-maj=2.2km s-min=0.6km az=167.0*

VIE ***17*** *22:16:21.3±0.4,50°.27N×18°.89E,h0km,mb3.1/12,ml3.4/8, ms4.2/4,Error ellipse: s-maj=6.3km s-min=2.8km az=161.0 7 km WNW of Katowice Suspected Mining induced.*

BGR ***17*** *22:16:22.7±0.3,50°.18N×18°.89E,h1km,ML4.2/13,Error ellipse: s-maj=6.7km s-min=3.3km az=1.0*

NEIC ***17*** *22:16:22.2±1.6,50°.25N±0°.05×18°.89E±0°.08,h5km±1km, mb4.3/21,Error ellipse: s-maj=9.1km s-min=8.3km az=262.0*

ISC 17 22:16:20.9±0.3,50°.28N±0°.02×18°.87E±0°.02,h0km,n377, σ1s81/471,mb4.3/28,40C-16D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.48**	**246**	*e*P		**Pb**	**22 16 31.9**	**-0.3**
RAC				*e*			22 16 39.6	
OJC	**Ojcow**	**0.60**	**95**	*i* Pg		**Pg**	**22 16 32.9**	**+0.6**
OJC				*e*Sg		**Sg**	**22 16 41.5**	**+1.5**
OJC	**Ojcow**	**0.60**	**95**	*e*Pg		**Pg**	**22 16 33.1**	**+0.7**
OJC				*e*Sg		**Sb**	**22 16 43.9**	**+0.6**
OJC	**Ojcow**	**0.60**	**95**	P		**Pg**	**22 16 33.0**	**+0.7**
OJC							22 16 41.5	
OJC	**Ojcow**	**0.60**	**95**	Pg		**Pg**	**22 16 33.0**	**+0.6**
OJC				Sg		**Sg**	**22 16 41.5**	**+1.5**
OJC	**Ojcow**	**0.60**	**95**	*e*Pg		**Pg**	**22 16 33.1**	**+0.7**
OJC				*e*Sg		**Sb**	**22 16 41.8**	**-1.5**
OKC	**Ostrava-Krasne**	**0.64**	**227**	*e*P		**Pg**	**22 16 33.8**	**+0.6**
OKC	**Ostrava-Krasne**	**0.64**	**227**	*e*PG		**Pg**	**22 16 33.8**	**+0.6**
OKC	**Ostrava-Krasne**	**0.64**	**227**	*e*Pg		**Pb**	**22 16 34.3**	**-0.7**
MORC	**Moravsky Berou**	**0.99**	**240**	*e*PG		**Pg**	**22 16 40.1**	**+0.1**
MORC				*e*SG		**Sg**	**22 16 52.2**	**-0.7**
MORC	**Moravsky Berou**	**0.99**	**240**	P		**Pg**	**22 16 40.2**	**+0.2**
MORC							22 16 54.1	
MORC	**Moravsky Berou**	**0.99**	**240**	Pg		**Pg**	**22 16 40.2**	**+0.2**
MORC				Sg		**Sb**	**22 16 54.1**	**-0.6**
MORC	**Moravsky Berou**	**0.99**	**240**	*e*Pg		**Pg**	**22 16 40.1**	**+0.1**
	baz=62							
MORC				*e*Sg		**Sg**	**22 16 52.2**	**-0.7**
	2μm,1.2s,baz=62							
MORC	**Moravsky Berou**	**0.99**	**240**	*e*Pg		**Pg**	**22 16 40.2**	**+0.2**
MORC				*e*Sg		**Sb**	**22 16 54.2**	**-0.6**
LANS	**Liptovska Anna**	**1.19**	**161**	*e*P		**Pg**	**22 16 44.1**	**+0.3**
LANS				*e*			22 16 59.6	
LANS				pmax		pmax		
	comp=N,945nm,0.7s							
LANS	**Liptovska Anna**	**1.19**	**161**	*e*PG		**Pg**	**22 16 44.1**	**+0.3**
LANS				*e*SG		**Sg**	**22 16 59.6**	**+0.4**
LANS				*e*LG		Lg	22 17 04.3	
NIE	**Niedzica**	**1.26**	**132**	*e*Pg		**Pg**	**22 16 44.9**	**-0.2**
NIE				*e*Sg		**Sg**	**22 17 03.8**	**+0.3**
NIE	**Niedzica**	**1.26**	**132**	*e*Pn		**Pg**	**22 16 45.1**	**0.0**
NIE				*e*Pg		**Pn**	**22 16 46.3**	**+0.4**
NIE				*e*Sg		**Sn**	**22 17 03.9**	**+0.4**
NIE	**Niedzica**	**1.26**	**132**	P		**Pg**	**22 16 45.1**	**0.0**
KRLC	**Kraliky**	**1.36**	**262**	*e*P		**Pg**	**22 16 46.5**	**-0.5**
KRLC				*e*			22 17 04.9	
KRLC				smax		smax		
	comp=N,1μm,1.0s							
KRLC	**Kraliky**	**1.36**	**262**	*e*PG		**Pg**	**22 16 46.5**	**-0.5**
KRLC				*e*SG		**Sg**	**22 17 04.9**	**+0.3**
	comp=N,1μm,1.0s							
JAVC	**Velka Javorina**	**1.62**	**209**	*e*PN		**Pn**	**22 16 50.5**	**-0.3**
JAVC	**Velka Javorina**	**1.62**	**209**	*e*Pn		**Pn**	**22 16 50.5**	**-0.3**
	baz=29							
DPC	**Dobruska-Polom**	**1.64**	**273**	*e*P		**Pn**	**22 16 51.3**	**+0.3**
DPC				*e*			22 17 14.2	
DPC				smax		smax		
	comp=N,554nm,0.7s							
DPC	**Dobruska-Polom**	**1.64**	**273**	*e*PG		**Pn**	**22 16 51.3**	**+0.3**
DPC				*e*SG		**Sg**	**22 17 14.2**	**+0.7**
	comp=N,554nm,0.7s							
DPC	**Dobruska-Polom**	**1.64**	**273**	*e*Pn		**Pn**	**22 16 51.2**	**+0.1**
DPC				*e*Sg		**Sg**	**22 17 14.4**	**+0.9**
OSTC	**Ostas**	**1.72**	**280**	*e*PG		**Pn**	**22 16 52.5**	**+0.3**
OSTC				*e*SG		**Sg**	**22 17 17.6**	**+1.4**
	comp=N,472nm,0.9s							
KSP	**Ksiaz**	**1.74**	**290**	*e*Pn		**Pn**	**22 16 52.4**	**+0.1**
KSP				*i* Pg		**Pg**	**22 16 55.5**	**+1.3**
KSP				*i* Sg		**Sg**	**22 17 18.5**	**+1.8**
KSP	**Ksiaz**	**1.74**	**290**	*e*Pn		**Pn**	**22 16 52.5**	**+0.1**
KSP				*e*Pg		**Pg**	**22 16 55.8**	**+1.5**
KSP				*e*Pg		**Sg**	**22 17 18.6**	**+1.8**
KSP	**Ksiaz**	**1.74**	**290**	P		**Pn**	**22 16 52.5**	**+0.1**
KSP	**Ksiaz**	**1.74**	**290**	*e*Pn		**Pn**	**22 16 52.8**	**+0.4**
KSP				*e*Pg		**Pg**	**22 16 55.5**	**+1.3**
KSP				*e*Sg		**Sg**	**22 17 18.7**	**+2.0**
STHS	**Stebnicka Huta**	**1.76**	**118**	*e*P		**Pg**	**22 16 54.5**	**-0.2**
STHS	**Stebnicka Huta**	**1.76**	**118**	*e*PN		**Pg**	**22 16 54.5**	**-0.2**
VRAC	**Vranov**	**1.77**	**238**	Pg		**Pn**	**22 16 52.9**	**+0.1**
	comp=N,12nm,0.3s,baz=60,slow=16,SNR=204							
VRAC				LR		LR	22 17 03.9	
	comp=N,14nm,21.7s,baz=9.0,slow=25							
VRAC				Lg		Lg	22 17 15.0	
	comp=N,14nm,0.3s,baz=148,slow=18,SNR=4.8							
VRAC	**Vranov**	**1.77**	**238**	⇓P		**Pn**	**22 16 53.2**	**+0.4**
VRAC				⇓S		**Sb**	**22 17 16.5**	**-0.4**
VRAC	**Vranov**	**1.77**	**238**	*e*PN		**Pn**	**22 16 52.9**	**+0.1**
VRAC				*e*SG		**Sn**	**22 17 16.2**	**+0.2**
VRAC	**Vranov**	**1.77**	**238**	*e*Pn		**Pn**	**22 16 52.8**	**0.0**
	baz=57							
VRAC				*e*Sg		**Sn**	**22 17 16.2**	**+0.2**
	comp=N,1μm,1.5s,baz=57							
VYHS	**Vyhne**	**1.79**	**181**	*e*P		**Pn**	**22 16 52.7**	**-0.4**
VYHS				*e*			22 17 16.8	
VYHS	**Vyhne**	**1.79**	**181**	*e*PN		**Pn**	**22 16 52.7**	**-0.4**
VYHS				*e*SN		**Sn**	**22 17 16.8**	**+0.3**
CHVC	**Chvalec**	**1.83**	**281**	*e*PG		**Pn**	**22 16 54.1**	**+0.5**
CHVC				*e*SG		**Sg**	**22 17 20.7**	**+1.1**
	comp=N,734nm,0.8s							
UPC	**Upice**	**1.84**	**278**	*e*P		**Pn**	**22 16 54.1**	**+0.2**
UPC	**Upice**	**1.84**	**278**	*e*PG		**Pn**	**22 16 54.1**	**+0.2**
BEL	**Belsk**	**1.97**	**37**	*e*Pn		**Pb**	**22 16 57.8**	**+0.2**
BEL				*e*Sn		Sn	22 17 04.9	-16
BEL	**Belsk**	**1.97**	**37**	P		**Pb**	**22 16 58.2**	**+0.5**
SMOL	**Smolenice**	**2.00**	**209**	*e*P		**Pn**	**22 16 55.5**	**-0.5**
SMOL	**Smolenice**	**2.00**	**209**	*e*PN		**Pn**	**22 16 55.5**	**-0.5**
KRUC	**Moravsky**	**2.02**	**234**	*e*PN		**Pn**	**22 16 55.9**	**-0.3**
KRUC				*e*SG		**Sb**	**22 17 23.9**	**-0.2**
KRUC	**Moravsky**	**2.02**	**234**	*e*Pn		**Pn**	**22 16 55.8**	**-0.4**
	baz=53							
KRUC				*e*Sg		**Sb**	**22 17 23.8**	**-0.3**
	comp=N,978nm,2.2s,baz=53							
KECS	**Kecovo**	**2.08**	**149**	*e*P		**Pn**	**22 16 56.7**	**-0.4**
KECS	**Kecovo**	**2.08**	**149**	*e*PN		**Pn**	**22 16 56.7**	**-0.4**
MODS	**Modra-Piesok**	**2.17**	**209**	*e*P		**Pn**	**22 16 57.3**	**-1.1**
MODS	**Modra-Piesok**	**2.17**	**209**	*e*PN		**Pn**	**22 16 57.3**	**-1.1**
CRVS	**Cervenica-Dubn**	**2.18**	**128**	*e*P		**Pn**	**22 16 58.3**	**-0.1**
CRVS	**Cervenica-Dubn**	**2.18**	**128**	*e*PN		**Pn**	**22 16 58.3**	**-0.1**
ZST	**Bratislava**	**2.39**	**210**	*e*P		**Pn**	**22 17 02.0**	**+0.7**
ZST	**Bratislava**	**2.39**	**210**	*e*PN		**Pn**	**22 17 02.0**	**+0.7**
TREC	**Trest**	**2.41**	**247**	*e*P		**Pb**	**22 17 05.2**	**+0.1**
TREC				*e*			22 17 36.0	
TREC				smax		smax		
	comp=N,337nm,0.8s							
TREC				MLR		MLR		
	comp=Z,2μm,4.4s							
TREC	**Trest**	**2.41**	**247**	*e*PG		**Pb**	**22 17 05.2**	**+0.1**
TREC				*e*SG		**Sb**	**22 17 36.0**	**+0.7**
	comp=Z,337nm,0.8s							
TREC				AMS		AMS	22 18 00.0	
	comp=Z,2μm,4.4s							
PSZ	**Piszkesteto**	**2.46**	**164**	⇑P		**Pn**	**22 17 02.3**	**+0.1**
PSZ				⇑S		**Sn**	**22 17 31.3**	**-1.8**
PSZ	**Piszkesteto**	**2.46**	**164**	P		**Pn**	**22 17 02.4**	**+0.1**
PSZ	**Piszkesteto**	**2.46**	**164**	Pn		**Pn**	**22 17 02.4**	**+0.1**
SRO	**Srobarova**	**2.50**	**189**	*e*P		**Pg**	**22 17 09.4**	**+0.7**
SRO	**Srobarova**	**2.50**	**189**	*e*PG		**Pg**	**22 17 09.4**	**+0.7**
SRO2	**Moca**	**2.54**	**187**	*e*P		**Pg**	**22 17 09.8**	**+0.2**
SRO2	**Moca**	**2.54**	**187**	*e*PG		**Pg**	**22 17 09.8**	**+0.2**
PVCC	**Panska Ves**	**2.77**	**277**	*e*P		**Pn**	**22 17 06.8**	**+0.3**
PVCC				*e*			22 17 50.0	
PVCC				smax		smax		
	comp=N,2μm,1.6s							
PVCC				MLR		MLR		
	comp=Z,800nm,4.6s							
PVCC	**Panska Ves**	**2.77**	**277**	*e*PN		**Pn**	**22 17 06.8**	**+0.3**
PVCC				*e*PG		**Pb**	**22 17 12.4**	**+1.2**
PVCC				*e*SG		**Sg**	**22 17 50.0**	**+0.3**
	comp=Z,2μm,1.6s							
PVCC				AMS		AMS	22 18 20.0	
	comp=Z,800nm,4.6s							
UZH	**Uzhgorod**	**2.77**	**125**	*e*P		**Pn**	**22 17 04.8**	**-1.8**
UZH				*e*S		**Sn**	**22 17 38.6**	**-2.2**
UZH				MLR		MLR		
	comp=Z,160nm,1.2s							
BUD	**Budapest**	**2.80**	**178**	P		**Pn**	**22 17 09.0**	**+2.1**
PRU	**Pruhonice**	**2.80**	**266**	*e*P		**Pn**	**22 17 06.1**	**-0.9**
PRU				*e*			22 17 50.7	
PRU				smax		smax		
	comp=N,331nm,1.2s							
PRU	**Pruhonice**	**2.80**	**266**	*e*PN		**Pn**	**22 17 06.1**	**-0.9**
PRU				*e*PG		**Pb**	**22 17 11.9**	**+0.1**
PRU				*e*SG		**Sg**	**22 17 50.7**	**-0.2**
	comp=N,331nm,1.2s							
PRA	**Prague**	**2.86**	**268**	*e*P		**Pn**	**22 17 07.7**	**-0.1**
PRA	**Prague**	**2.86**	**268**	*e*PN		**Pn**	**22 17 07.7**	**-0.1**
PRA				*e*PG		**Pb**	**22 17 13.5**	**+0.7**
SOP	**Sopron**	**3.01**	**211**	P		**Pn**	**22 17 10.0**	**+0.1**
CONA	**Conrad Observa**	**3.07**	**221**	*i* Pn		**Pn**	**22 17 10.3**	**-0.6**
	comp=N,8.2nm,0.4s,SNR=16							
CONA				*e*Sg		**Sg**	**22 18 01.9**	**+2.3**
	comp=N,52nm,0.5s							
CONA	**Conrad Observa**	**3.07**	**221**			**Pn**	**22 17 10.2**	**-0.6**
CONA						Lg	22 18 01.9	
BSZH	**Besenyszg**	**3.12**	**162**	⇑P		**Pn**	**22 17 10.6**	**-0.8**
GKP	**Gorka Klasztor**	**3.16**	**342**	*e*P		**Pn**	**22 17 14.4**	**+2.5**
GKP				*e*S		Sn	22 17 29.3	-21
GKP	**Gorka Klasztor**	**3.16**	**342**	P		**Pn**	**22 17 14.4**	**+2.5**
BRG	**Berggiesshubel**	**3.20**	**283**	P		**Pn**	**22 17 13.8**	**+1.4**
BRG	**Berggiesshubel**	**3.20**	**283**	Pn		**Pn**	**22 17 13.7**	**+1.2**
BRG				Pg		**Pg**	**22 17 20.7**	**-1.5**
BRG				Sg		**Sg**	**22 18 05.2**	**+1.6**
BRG				Amp			22 18 11.0	
	comp=Z,294nm,1.1s							
BRG	**Berggiesshubel**	**3.20**	**283**	*e*Pn		**Pn**	**22 17 14.0**	**+1.5**
BRG				*e*Pg		**Pg**	**22 17 23.0**	**+0.8**
BRG				*e*Sg		**Sg**	**22 18 05.6**	**+1.9**
PBCC	**Pribram**	**3.20**	**261**	*e*PN		**Pn**	**22 17 12.1**	**-0.4**
PBCC				*e*PG		**Pb**	**22 17 19.8**	**+1.1**
TRPA	**Tarpa**	**3.23**	**130**	⇓P		**Pn**	**22 17 12.3**	**-0.4**
CKRC	**Cesky Krumlov**	**3.31**	**246**	*e*PN		**Pn**	**22 17 14.3**	**+0.3**
CKRC				*e*PG		**Pb**	**22 17 21.5**	**+1.0**
CKRC				*e*SG		**Sg**	**22 18 05.5**	**-1.8**
	comp=Z,544nm,1.0s							
LVV	**L'vov**	**3.36**	**96**	*e*P		**Pn**	**22 17 12.4**	**-2.2**
LVV				*e*S		**Sn**	**22 17 51.6**	**-3.5**
LVV				pmax		pmax		
	comp=Z,400nm,1.2s							
LVV				MLR		MLR		
	comp=N,400nm,1.7s							
LVV				MLR		MLR		
	comp=E,600nm,1.7s							
LVV				MLR		MLR		
	comp=Z,500nm,1.7s							
LTVH	**Ltavrtes, Hu**	**3.52**	**144**	⇑P		**Pn**	**22 17 16.8**	**0.0**
FBE	**Freiberg**	**3.57**	**282**	*e*Pn		**Pn**	**22 17 18.8**	**+1.2**
FBE				*e*Pg		**Pg**	**22 17 29.2**	**-0.2**
FBE				*e*Sg		**Sg**	**22 18 17.9**	**+2.2**
KHC	**Kasperske Hory**	**3.62**	**254**	*d* iP		**Pn**	**22 17 18.4**	**+0.1**
KHC	**Kasperske Hory**	**3.62**	**254**	*e*PN		**Pn**	**22 17 18.0**	**-0.3**
KHC				*e*PG		**Pb**	**22 17 25.2**	**-0.7**
KHC				*e*SG		**Sg**	**22 18 15.5**	**-1.8**
	comp=Z,354nm,1.0s							
KHC				AMS		AMS	22 18 40.0	
	comp=Z,900nm,4.9s							
KHC	**Kasperske Hory**	**3.62**	**254**	Pn		**Pn**	**22 17 18.4**	**+0.1**
GEC2	**GERESS Array S**	**3.66**	**249**	Pn		**Pn**	**22 17 19.5**	**+0.6**
GEC2	**GERESS Array S**	**3.66**	**249**	*e*Pn		**Pn**	**22 17 19.5**	**+0.6**
GEC2				*e*Pg		**Pg**	**22 17 29.7**	**-1.4**
GEC2				*e*Sg		**Sg**	**22 18 16.6**	**-1.9**
GERES	**GERESS Array B**	**3.66**	**249**	Pn		**Pn**	**22 17 19.3**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=72,slow=13,SNR=31							
GERES				Pg		**Pb**	**22 17 26.7**	**+0.2**
	comp=Z,5.8nm,0.3s,baz=58,slow=15,SNR=31							
GERES				Lg		Lg	22 18 16.2	
	comp=Z,17nm,0.3s,baz=66,slow=29,SNR=8.9							
ARSA	**Arzberg**	**3.75**	**217**	*i* Pn		**Pn**	**22 17 20.6**	**+0.5**
	comp=Z,17nm,0.8s							
ARSA				*e*Sn		**Sn**	**22 18 07.9**	**+2.9**
	comp=Z,52nm,0.9s							
ARSA	**Arzberg**	**3.75**	**217**			**Pn**	**22 17 20.6**	**+0.5**
ARSA						**Sn**	**22 18 07.9**	**+2.9**
CLL	**Collm**	**3.86**	**288**	*e*Pn		**Pb**	**22 17 31.0**	**+1.1**
	comp=Z,15nm,1.1s							
CLL				*i* Pg		**Pg**	**22 17 35.2**	**+0.2**
CLL				*e*			22 17 41.0	
CLL				*i* Sg		**Sg**	**22 18 25.8**	**+0.8**
	comp=Z,355nm,1.2s							
CLL	**Collm**	**3.86**	**288**	P		**Pn**	**22 17 22.4**	**+0.9**
CLL	**Collm**	**3.86**	**288**	Pn		**Pn**	**22 17 22.4**	**+0.9**
CLL	**Collm**	**3.86**	**288**	*e*Pn		**Pn**	**22 17 21.6**	**0.0**
CLL				*e*Pg		**Pg**	**22 17 35.4**	**+0.4**
CLL				*e*Sg		**Sg**	**22 18 26.0**	**+1.0**
MOA	**Molln**	**3.88**	**233**	*i* Pn		**Pn**	**22 17 21.6**	**-0.3**
	comp=Z,3.0nm,0.3s,SNR=11							
MOA				*e*Sn		**Sn**	**22 18 11.0**	**+2.8**
	comp=Z,117nm,0.6s							
MOA	**Molln**	**3.88**	**233**			**Pn**	**22 17 21.6**	**-0.3**
MOA						**Sn**	**22 18 11.0**	**+2.8**
BMR	**Baia Mare**	**4.01**	**129**	⇑P		**Pn**	**22 17 23.1**	**-0.5**
BMR				⇑S		**Sn**	**22 18 10.7**	**-0.5**
BMR	**Baia Mare**	**4.01**	**129**	P		**Pn**	**22 17 23.3**	**-0.3**
BMR				S		**Sn**	**22 18 10.7**	**-0.5**
WET	**Wettzell**	**4.05**	**256**	P		**Pn**	**22 17 24.5**	**+0.3**
WET	**Wettzell**	**4.05**	**256**	*e*Pn		**Pn**	**22 17 24.6**	**+0.3**
WET				*e*Sg		**Sg**	**22 18 29.8**	**-1.2**
MORH	**Mrgy, Hungar**	**4.07**	**182**	⇑P		**Pn**	**22 17 24.0**	**-0.4**
TANN	**Tannenbergstha**	**4.11**	**274**	*e*Pn		**Pn**	**22 17 25.8**	**+0.8**
TANN				*e*Pg		**Pg**	**22 17 39.5**	**-0.1**
TANN				*e*Sg		**Sg**	**22 18 33.8**	**+0.9**
NKC	**Novy Kostel**	**4.12**	**272**	*e*P		**Pn**	**22 17 26.0**	**+0.8**
NKC	**Novy Kostel**	**4.12**	**272**	*e*PN		**Pn**	**22 17 26.0**	**+0.8**
NKC				*e*PG		**Pb**	**22 17 36.4**	**+2.0**
NKC				*e*SG		**Sg**	**22 18 33.2**	**-0.1**
	comp=Z,365nm,1.2s							
WERD	**Werda**	**4.21**	**275**	*e*Pn		**Pn**	**22 17 27.7**	**+1.4**
WERD				*e*Pg		**Pg**	**22 17 41.0**	**-0.6**
WERD				*e*Sg		**Sg**	**22 18 36.1**	**+0.1**
DRGR		**4.32**	**142**	⇑P		**Pn**	**22 17 27.9**	**-0.1**
DRGR				⇓S		**Sn**	**22 18 17.1**	**-1.9**
DRGR		**4.32**	**142**	P		**Pn**	**22 17 28.3**	**+0.4**
DRGR				S		**Sn**	**22 18 17.1**	**-1.9**
SUW	**Suwalki**	**4.58**	**34**	*e*P		**Pn**	**22 17 32.4**	**+1.0**
SUW				*e*S		Sn	22 17 51.3	-34
SUW				*e*L		L	22 18 49.2	
SUW	**Suwalki**	**4.58**	**34**	P		**Pn**	**22 17 32.6**	**+1.2**
SUW	**Suwalki**	**4.58**	**34**			**Pn**	**22 17 32.6**	**+1.2**
MOX	**Moxa**	**4.65**	**277**	P		**Pn**	**22 17 33.3**	**+0.8**
MOX	**Moxa**	**4.65**	**277**	*e*Pn		**Pn**	**22 17 33.2**	**+0.8**
MOX				*e*Pg		**Pg**	**22 17 51.0**	**+1.0**
MOX				*e*Sg		**Sg**	**22 18 51.7**	**+1.4**
CJR	**Cluj-Napoca**	**4.75**	**137**	⇑P		**Pn**	**22 17 34.1**	**+0.3**
GRB1	**Grafenberg Arr**	**4.76**	**262**	P		**Pn**	**22 17 35.2**	**+1.3**
KBA	**Koelnbreinsper**	**4.87**	**231**	*e*Pn		**Pn**	**22 17 36.6**	**+1.1**
	comp=Z,3.8nm,0.4s							
KBA				Sn		**Sn**	**22 18 35.3**	**+2.7**
	comp=Z,35nm,0.8s							
KBA	**Koelnbreinsper**	**4.87**	**231**	P		**Pn**	**22 17 36.6**	**+1.1**
KBA							22 18 35.3	
KBA	**Koelnbreinsper**	**4.87**	**231**			**Pn**	**22 17 36.5**	**+1.1**
KBA						**Sn**	**22 18 35.3**	**+2.7**
BUR08	**Bucovina Ar. S**	**4.93**	**120**	Pn		**Pn**	**22 17 36.9**	**+0.5**
BURAR	**Bucovina Array**	**4.96**	**120**	⇑P		**Pn**	**22 17 37.1**	**+0.3**
BURAR	**Bucovina Array**	**4.96**	**120**	P		**Pn**	**22 17 37.0**	**+0.3**
BURAR	**Bucovina Array**	**4.96**	**120**	Pn		**Pn**	**22 17 37.2**	**+0.5**
GRA1	**Grafenberg Arr**	**4.97**	**266**			**Pn**	**22 17 37.5**	**+0.7**
GRF	**Grafenberg Arr**	**4.97**	**266**	P		**Pn**	**22 17 37.5**	**+0.7**
GRF	**Grafenberg Arr**	**4.97**	**266**	*e*Pn		**Pn**	**22 17 37.4**	**+0.7**
GRF				*e*Sg		**Sg**	**22 19 01.2**	**+0.6**
GRFO	**Grafenberg**	**4.97**	**266**	P		**Pn**	**22 17 37.7**	**+0.9**
GRFO	**Grafenberg**	**4.97**	**266**			**Pn**	**22 17 37.7**	**+0.9**
BZS	**Buzias**	**5.02**	**157**	⇑P		**Pn**	**22 17 37.4**	**0.0**
MYKA	**Terra Mystica**	**5.04**	**226**	*i* Pn		**Pn**	**22 17 38.9**	**+1.0**
	comp=Z,1.3nm,0.3s							
MYKA	**Terra Mystica**	**5.04**	**226**			**Pn**	**22 17 38.9**	**+1.0**
DEV	**Deva**	**5.16**	**147**	P		**Pn**	**22 17 39.4**	**0.0**
DEV				pmax		pmax		
	comp=Z,54nm,1.1s							
FRGS	**Fruska Gora**	**5.16**	**173**	⇑P		**Pn**	**22 17 39.5**	**0.0**
BSD	**Bornholm Skovb**	**5.41**	**335**	*e*P		**Pn**	**22 17 42.8**	**+0.1**
BSD	**Bornholm Skovb**	**5.41**	**335**	⇑*i*P		**Pn**	**22 17 43.4**	**+0.7**
BSD				*i* S		**Sn**	**22 18 41.9**	**-3.8**
BSD				IAML			22 19 29.8	
	comp=Z,4.9nm,0.4s							
BSD	**Bornholm Skovb**	**5.41**	**335**	⇑*i*P		**Pn**	**22 17 43.4**	**+0.7**
BSD				*i* S		**Sn**	**22 18 41.8**	**-3.8**
FUR	**Furstenfeldbru**	**5.41**	**250**	P		**Pn**	**22 17 43.9**	**+1.1**
FUR				pmax		pmax		
	comp=Z,63nm,1.0s							
ZOU	**Zoufplan**	**5.41**	**229**	Pn		**Pn**	**22 17 43.4**	**+0.4**
RGN	**Rugen**	**5.46**	**324**	Pn		**Pn**	**22 17 43.6**	**+0.2**
ABTA	**Abfaltersbach**	**5.

DAVOX	**Davos/Dischmat**	**6.92**	**243**	Pn		**Pn**	**22 18 03.5**	**-0.3**	
	comp=Z,1.6nm,0.3s,baz=54,slow=9.7,SNR=18								
DAVOX				Sn		**Sn**	**22 19 21.4**	**-1.9**	
	comp=Z,0.1nm,0.3s,baz=0.0,slow=20,SNR=1.4								
DAVOX				Lg		Lg	22 19 58.2		
	comp=Z,0.6nm,0.3s,baz=357,slow=19,SNR=4.6								
IDID	**Didziasalis**	**6.94**	**40**	*eP*		**Pn**	**22 18 05.0**	**+1.2**	
MNK	**Minsk**	**6.95**	**49**	*eP*		**Pn**	**22 18 03.0**	**-0.9**	
MNK				*eS*		**Sn**	**22 19 25.0**	**+1.5**	
MNK	**Minsk**	**6.95**	**49**	*i* P		**Pn**	**22 18 03.2**	**-0.6**	
	comp=E,2.0nm,1.3s								
MNK				*i* P		**Pn**	**22 18 03.2**	**-0.6**	
	comp=N,5.0nm,0.8s								
MNK				*i* P		**Pn**	**22 18 03.2**	**-0.6**	
	comp=Z,11nm,0.9s								
MNK				*i* PP		**PnPn**	**22 18 10.8**	**-0.4**	
MNK				*i* S		**Sn**	**22 19 24.2**	**+0.7**	
MNK				*i* SS		**SnSn**	**22 19 37.0**	**+2.4**	
MNK				*i* LQ		LQ	22 19 58.7		
MNK				*i* LR		LR	22 20 31.3		
MNK				*i* LRM		MLR	22 20 46.6		
	comp=E,6.0nm,10.6s								
MNK				*i* LRM		MLR	22 20 48.2		
	comp=Z,79nm,12.2s								
MNK				*i* LRM		MLR	22 20 55.9		
	comp=N,41nm,12.8s								
BFO	**Black Forest**	**7.17**	**258**	P		**Pn**	**22 18 07.8**	**+0.8**	
BFO	**Black Forest**	**7.17**	**258**	Pn		**Pn**	**22 18 07.8**	**+0.8**	
SALO	**Salr**	**7.29**	**233**	Pn		**Pn**	**22 18 09.2**	**+0.5**	
TUE	**Stuetta**	**7.40**	**243**	Pn		**Pn**	**22 18 11.5**	**+1.2**	
SLIT	**Slitere, Latvi**	**7.63**	**14**	*eP*		**Pn**	**22 18 14.1**	**+0.8**	
CDF	**Champ du Feu**	**7.80**	**261**	*eP*		**Pn**	**22 18 18.7**	**+3.0**	
CDF	**Champ du Feu**	**7.80**	**261**	*e*Pg		Pg	22 18 45.5	-4.8	
CDF				*e*Sg		**Sg**	**22 20 25.7**	**-5.7**	
	comp=N,4.9nm,0.4s								
CFR	**Carcaliu**	**8.06**	**126**	⇑P		**Pn**	**22 18 19.4**	**+0.2**	
CFR	**Carcaliu**	**8.06**	**126**	P		**Pn**	**22 18 19.8**	**+0.6**	
CFR				pmax		pmax			
	comp=Z,10.0nm,1.1s								
HINF	**Hinteralfeld**	**8.27**	**257**	*e*Sg		**Sg**	**22 20 40.3**	**-6.1**	
	comp=Z,7.4nm,0.5s								
HAU	**Haudompre**	**8.52**	**259**	*e*Sg		**Sg**	**22 20 46.9**	**-7.5**	
	comp=Z,50nm,1.0s								
PAGF	**Fort de Pagny**	**8.75**	**264**	*e*Sg		**Sg**	**22 20 54.4**	**-7.2**	
	comp=Z,2.1nm,0.3s								
GIVF	**Givet**	**9.02**	**274**	*e*Sg		Sn	22 21 04.8	+50	
SAVF	**Savonnieres en**	**9.11**	**265**	*e*Pn		**Pn**	**22 18 30.9**	**-2.7**	
SAVF	**Savonnieres en**	**9.11**	**265**	*e*Pg		Pn	22 19 09.4	+36	
	baz=85								
SAVF				*e*Sg		Sn	22 21 07.2	+50	
MEZF	**Maizieres J'vi**	**9.19**	**264**	*e*Sg		Sn	22 21 09.7	+51	
	comp=Z,1.4nm,0.5s								
CABF	**La Chapelle**	**9.26**	**252**	*e*Sg		Sn	22 21 11.9	+51	
	comp=Z,40nm,1.0s								
VSU	**Vasula**	**9.39**	**26**	*e*P		**Pn**	**22 18 38.4**	**+1.1**	
VSU	**Vasula**	**9.39**	**26**	*e*P		**Pn**	**22 18 38.4**	**+1.1**	
BAIF	**Baives**	**9.42**	**274**	*e*Sg		Sn	22 21 16.9	+53	
	comp=Z,65nm,1.2s								
LPG	**La Plagne**	**9.44**	**244**	*e*P		**Pn**	**22 18 39.7**	**+1.3**	
LPG				*e*Sg		Sn	22 21 16.5	+51	
	comp=Z,1.9nm,0.5s								
LPL	**La Plagne**	**9.44**	**244**	*e*P		**Pn**	**22 18 41.2**	**+2.9**	
LPL				*e*Sg		Sn	22 21 17.3	+52	
	comp=Z,3.6nm,0.6s								
MBDF	**Montbardon**	**9.89**	**240**	*e*P		**Pn**	**22 18 46.7**	**+2.3**	
ORIF	**Oris-en-Rattie**	**10.28**	**244**	*e*Pn		**Pn**	**22 18 46.9**	**-2.8**	
ORIF				*e*Sg		Sn	22 21 41.2	+56	
	comp=Z,0.5nm,0.3s								
ORIF	**Oris-en-Rattie**	**10.28**	**244**	P		**Pn**	**22 18 50.0**	**+0.3**	
ORIF				pmax		pmax			
	comp=Z,6.0nm,1.9s								
HFS	**Hagfors**	**10.31**	**345**	Pn		**Pn**	**22 18 48.6**	**-1.3**	
	comp=Z,0.4nm,0.3s,baz=133,slow=11,SNR=12								
HFS				Sn		**Sn**	**22 20 41.1**	**-4.9**	
	comp=Z,0.2nm,0.3s,baz=154,slow=24,SNR=2.6								
LOR	**Lormes**	**10.36**	**259**	*e*Sg		Sn	22 21 42.8	+55	
	comp=Z,49nm,1.1s								
SMF	**Signal de Mont**	**10.62**	**256**	*e*Sg			22 21 56.4		
SSF	**Saint Saulge**	**10.66**	**258**	*e*Sg		Sn	22 21 54.4	+60	
	comp=Z,59nm,1.3s								
KONO	**Kongsberg**	**10.78**	**334**	⇓*e*P		**Pn**	**22 18 56.6**	**+0.2**	
KONO				pmax		pmax			
	comp=Z,14nm,1.7s								
KONO	**Kongsberg**	**10.78**	**334**	*e*P		**Pn**	**22 18 56.4**	**0.0**	
AVF	**Avril sur Loir**	**10.87**	**257**	*e*Sg			22 22 01.6		
	comp=Z,47nm,1.2s								
LMR	**La Mourre**	**10.95**	**235**	*e*Pg		Pn	22 19 41.5	+43	
VIVF	**Saint-Julien-l**	**11.02**	**246**	*e*P		**Pn**	**22 19 01.6**	**+1.9**	
SMRF	**Simiane la Rot**	**11.03**	**240**	*e*Pn		**Pn**	**22 18 56.9**	**-3.0**	
HYF	**Humbligny**	**11.13**	**261**	*e*Sg			22 22 10.1		
NC602	**NORSAR Array S**	**11.26**	**341**	Pn		**Pn**	**22 19 02.7**	**-0.3**	
NC602	**NORSAR Array S**	**11.26**	**341**	*e*P		**Pn**	**22 19 00.2**	**-2.8**	
NORES	**NORESS Array B**	**11.26**	**341**	P		**Pn**	**22 19 05.5**	**+2.5**	
BGF	**Bois d'Agland**	**11.28**	**257**	*e*Sg			22 22 15.0		
	comp=Z,78nm,1.3s								
NAO01	**NORSAR Array S**	**11.50**	**340**			**Pn**	**22 19 04.9**	**-1.3**	
NC405	**NORSAR Array S**	**11.57**	**342**	Pn		**Pn**	**22 19 07.1**	**-0.1**	
NB201	**NORSAR Array S**	**11.60**	**341**	Pn		**Pn**	**22 19 06.8**	**-0.8**	
BLS5	**Blasjo**	**11.60**	**327**	*e*P		**Pn**	**22 19 07.2**	**-0.5**	
NB2	**NORSAR Subarra**	**11.61**	**341**	Pn		**Pn**	**22 19 04.9**	**-2.9**	
	baz=155,slow=14								
NOA	**NORSAR Array B**	**11.61**	**341**			**Pn**	**22 19 04.8**	**-2.9**	
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=17								
NOA				Sn		**Sn**	**22 21 12.1**	**-5.9**	
	comp=Z,0.0nm,0.3s,baz=49,slow=16,SNR=2.5								
NOA				Lg		Lg	22 22 35.3		
	comp=Z,0.0nm,0.3s,baz=221,slow=22,SNR=3.5								
NBO00	**NORSAR Array S**	**11.69**	**340**	Pn		**Pn**	**22 19 07.5**	**-1.4**	
NC303	**NORSAR Array S**	**11.75**	**342**	Pn		**Pn**	**22 19 08.6**	**-1.0**	
OBN	**Obninsk**	**11.77**	**59**	Pn		**Pn**	**22 19 05.4**	**-4.4**	
	comp=Z,0.6nm,0.3s,baz=244,slow=18,SNR=5.6								
OBN				Sn		**Sn**	**22 21 12.9**	**-8.9**	
	comp=Z,0.5nm,0.3s,baz=0.0,slow=20,SNR=1.6								
OBN				Lg		Lg	22 22 25.6		
	comp=Z,0.2nm,0.3s,baz=180,slow=20,SNR=1.2								
OBN	**Obninsk**	**11.77**	**59**	⇑*e*P		**Pn**	**22 19 07.1**	**-2.7**	
OBN				*e*S		**Sn**	**22 21 19.2**	**-2.5**	
OBN				pmax		pmax			
	comp=Z,14nm,0.8s								
OBN				MLR		MLR			
	comp=Z,52nm,8.0s								
OBN	**Obninsk**	**11.77**	**59**	Pn		**Pn**	**22 19 07.4**	**-2.4**	
TCF	**Toulx Ste Croi**	**11.79**	**257**	*e*Sg			22 22 31.3		
	comp=Z,69nm,1.5s								
FINES	**FINESS Array B**	**11.89**	**17**	Pn		**Pn**	**22 19 09.4**	**-2.1**	
	comp=Z,1.4nm,0.3s,baz=196,slow=11,SNR=72								
FINES				Sn		Sn	22 21 15.1	-10	
	comp=Z,0.4nm,0.3s,baz=196,slow=20,SNR=2.4								
FINES	**FINESS Array B**	**11.89**	**17**			**Pn**	**22 19 08.9**	**-2.6**	
FIA1	**FINESS Array S**	**11.89**	**17**	Pn		**Pn**	**22 19 09.4**	**-2.1**	
ODD1	**Odda**	**11.91**	**329**	*e*P		**Pn**	**22 19 11.6**	**-0.2**	
NC204	**NORSAR Array S**	**11.92**	**341**	Pn		**Pn**	**22 19 11.7**	**-0.3**	
LASF	**Ste Croix**	**11.94**	**244**	*e*Pn		**Pn**	**22 19 09.1**	**-3.3**	
LASF	**Ste Croix**	**11.94**	**244**	*e*P		**Pn**	**22 19 14.7**	**+2.3**	
SKAR	**Skarslia**	**12.00**	**334**	*e*P		**Pn**	**22 19 11.4**	**-1.8**	
MOS	**Moscow**	**12.53**	**57**	*e*P		**Pn**	**22 19 16.6**	**-3.7**	
LPSR	**Galich'ya Gora**	**12.72**	**72**	*e*P		**Pn**	**22 19 19.1**	**-3.8**	
LPSR				pmax		pmax			
	comp=Z,40nm,0.8s								
VORR	**Voronezh**	**12.89**	**76**	P		**Pn**	**22 19 26.0**	**+0.8**	
VORR				pmax		pmax			
	comp=Z,250nm,1.0s								
DOMB	**Dombas**	**12.97**	**339**	*e*P		**Pn**	**22 19 25.1**	**-1.3**	
SUF	**Sumiainen**	**13.09**	**15**	P		**Pn**	**22 19 25.5**	**-2.4**	
SUF				pmax		pmax			
	comp=Z,22nm,1.1s								
AKN	**Aaknes**	**13.60**	**336**	*e*P		**Pn**	**22 19 34.5**	**-0.4**	
ANN	**Anapa**	**13.67**	**107**	*e*P		**Pn**	**22 19 32.3**	**-3.6**	
ANN				*e*S		**Sn**	**22 22 04.1**	**-4.3**	
ANN				pmax		pmax			
	comp=Z,48nm,1.5s								
APE	**Apeiranthos**	**14.05**	**158**	⇓*e*P		**Pn**	**22 19 40.0**	**-1.2**	
EKA	**Eskdalemuir Ar**	**14.23**	**299**	Pn		**Pn**	**22 19 43.9**	**+0.4**	
	baz=105,slow=16,SNR=6.7								
VRH	**Novokhopyorsk**	**14.49**	**78**	*e*P		Pn	22 19 41.5	-5.5	
VRH				pmax		pmax			
	comp=Z,10.0nm,0.8s								
BR131	**Keskin Array S**	**14.82**	**130**	⇓*e*P		**P**	**22 19 58.9**	**+1.0**	
BRTR	**Keskin Array B**	**14.82**	**130**	Pn		**Pn**	**22 19 53.3**	**+1.6**	
	comp=Z,0.1nm,0.3s,baz=325,slow=7.2,SNR=1.7								
KLMR	**Klimovskoe**	**15.68**	**40**	*e*P		**Pn**	**22 19 57.3**	**-5.7**	
KLMR				pmax		pmax			
	comp=Z,43nm,1.3s								
KLMR	**Klimovskoe**	**15.68**	**40**	*e*Pn		**Pn**	**22 19 57.3**	**-5.7**	
KLMR				AMP			22 19 59.2		
	comp=Z,43nm,1.3s								
KLMR				*e*Sn		**Sn**	**22 22 47.1**	**-10**	
KLMR				*e*Sn		**Sn**	**22 22 47.1**	**-10**	
AKAS	**Kas**	**16.04**	**147**	Pn		**Pn**	**22 20 08.5**	**+0.6**	
AKAS				IAmb		IAmb	22 20 13.4		
	comp=Z,14nm,0.8s								
NBB40	**Tonnes**	**16.55**	**352**	*e*P		**P**	**22 20 17.8**	**+1.0**	
GOF	**Gofitskoye**	**17.06**	**99**	⇑*e*P		**Pn**	**22 20 17.2**	**-3.5**	
KIV	**Kislovodsk**	**17.36**	**102**	*e*P		**Pn**	**22 20 23.9**	**-0.6**	
KIV				pmax		pmax			
	comp=Z,19nm,1.1s								
KIV				MLR		MLR			
	comp=Z,42nm,14.0s								
KVAR	**Kislovodsk Arr**	**17.36**	**102**	Lg		Lg	22 25 27.1		
	baz=315,slow=7.7,SNR=2.1								
KBZ	**Khabaz**	**17.60**	**103**	P		**Pn**	**22 20 27.2**	**-0.3**	
	comp=Z,0.1nm,0.3s,baz=333,slow=7.5,SNR=6.1								
KBZ				Lg		Lg	22 25 39.1		
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=2.2								
KBZ	**Khabaz**	**17.60**	**103**	⇑*e*P		**P**	**22 20 28.4**	**-0.1**	
KBZ				pmax		pmax			
	comp=Z,6.0nm,1.1s								
N2RO	**R_st**	**17.62**	**351**	*e*P		**P**	**22 20 29.3**	**+0.7**	
N2IH	**Innhavet**	**17.80**	**356**	*e*P		**P**	**22 20 31.0**	**+0.4**	
BELG	**Belogornoye**	**18.04**	**72**	P		**P**	**22 20 33.6**	**+0.3**	
	comp=Z,0.6nm,0.3s,baz=272,slow=2.8,SNR=7.7								
BELG				Lg		Lg	22 25 58.2		
	comp=Z,0.4nm,0.3s,baz=7.7,slow=16,SNR=2.8								
BELG	**Belogornoye**	**18.04**	**72**	⇓*e*P		**Pn**	**22 20 26.8**	**-6.0**	
BELG				pmax		pmax			
	comp=Z,6.0nm,1.2s								
NCK	**Nalchik**	**18.16**	**102**	⇓*e*P		**Pn**	**22 20 32.9**	**-1.5**	
NCK				pmax		pmax			
	comp=Z,12nm,1.1s								
PRGR	**Permogore**	**18.64**	**42**	*e*P		**P**	**22 20 35.5**	**-4.4**	
PRGR				*e*			22 24 03.0		
PRGR				pmax		pmax			
	comp=Z,21nm,0.8s								
ZEI	**Tsey**	**18.72**	**104**	*e*P		**P**	**22 20 40.1**	**-1.0**	
ZEI				pmax		pmax			
	comp=Z,13nm,1.6s								
AKH	**Akhalkalaki**	**19.24**	**108**	P		**Pn**	**22 20 48.7**	**+1.1**	
ESDC	**Sonseca Array**	**19.25**	**245**	P		**Pn**	**22 20 47.3**	**-0.4**	
	baz=51,slow=12,SNR=9.2								
JETT	**Jettan, Norway**	**19.35**	**2**	*e*P		**P**	**22 20 48.1**	**+0.4**	
BGD	**Bogdanovka**	**19.39**	**108**	P		**Pn**	**22 20 52.8**	**+3.3**	
TRO	**Tromso**	**19.42**	**0**	*e*P		**Pn**	**22 20 49.2**	**-0.1**	
KIRV	**Kirov**	**19.47**	**53**	P		**P**	**22 20 44.6**	**-4.3**	
	comp=Z,0.8nm,0.3s,baz=248,slow=8.5,SNR=4.7								
ARCES	**ARCESS Array B**	**19.58**	**7**	P		**P**	**22 20 48.3**	**-1.8**	
	baz=191,slow=14,SNR=15								
ARCES	**ARCESS Array B**	**19.58**	**7**	P		**P**	**22 20 50.2**	**+0.1**	
ARCES				pmax		pmax			
	comp=Z,7.0nm,0.9s								
ARCES	**ARCESS Array B**	**19.58**	**7**	P		**P**	**22 20 50.2**	**+0.1**	
BTNK	**Botanikuri**	**19.88**	**106**	P		**Pn**	**22 20 54.8**	**-0.4**	
KEV	**Kevo**	**19.92**	**8**	P		**P**	**22 20 54.2**	**+0.4**	
KEV				pmax		pmax			
	comp=Z,29nm,1.4s								
KEV	**Kevo**	**19.92**	**8**	P		**P**	**22 20 54.1**	**+0.4**	
KEV				IAmb		IAmb	22 21 06.1		
	comp=Z,29nm,1.4s								
LGD	**Lagodekhi**	**20.69**	**104**	P		**P**	**22 21 03.5**	**+1.0**	
GNI	**Garni**	**20.75**	**109**	P		**P**	**22 21 04.1**	**+0.9**	
	comp=Z,4.0nm,0.9s,baz=321,slow=4.7,SNR=4.9								
GNI	**Garni**	**20.75**	**109**	⇓*i*P		Pn	22 21 05.0	-0.6	
GNI				pmax		pmax			
	comp=Z,23nm,1.7s								
GNI	**Garni**	**20.75**	**109**			**P**	**22 21 04.0**	**+0.7**	
GNI				IAmb		IAmb	22 21 10.9		
	comp=Z,13nm,1.0s								
DDFL	**Dedoflistskaro**	**20.83**	**105**	P		**P**	**22 21 05.0**	**+1.0**	
ZKTA	**Zakatala**	**21.04**	**104**	P		**P**	**22 21 08.3**	**+2.1**	
MMAI	**Mount Meron Ar**	**21.13**	**138**	P		**P**	**22 21 07.1**	**-0.3**	
	comp=Z,2.0nm,0.6s,baz=1.6,slow=10,SNR=6.1								
GANJ	**Ganja**	**21.42**	**106**	P		**P**	**22 21 12.5**	**+2.2**	
SEKA	**Sheki**	**21.64**	**104**	P		**P**	**22 21 14.3**	**+1.6**	
NAX	**Nakhchivan**	**21.81**	**110**	P		**P**	**22 21 16.0**	**+1.4**	
MNGR	**Mingechevir, A**	**21.82**	**105**	P		**P**	**22 21 15.7**	**+1.2**	
LKRN	**Lenkeran, Azer**	**24.10**	**107**	P		**P**	**22 21 39.2**	**+1.2**	
ARU	**Arti**	**24.21**	**60**	P		**P**	**22 21 39.2**	**+0.3**	
	comp=Z,0.5nm,0.4s,baz=256,slow=12,SNR=7.5								
ARU	**Arti**	**24.21**	**60**	*d* *i*P		**P**	**22 21 38.4**	**-0.5**	
ARU				PPP		PPP	22 22 12.2		
ARU				S		**S**	**22 25 58.9**	**+1.0**	
ARU				SS		**SnSn**	**22 26 39.5**	**+0.7**	
ARU				pmax		pmax			
	comp=Z,12nm,1.4s								
ARU	**Arti**	**24.21**	**60**	P		**P**	**22 21 39.4**	**+0.5**	
ARU				IAmb		IAmb	22 21 44.2		
	comp=Z,8.5nm,1.1s								
AKTO	**Aktyubinsk**	**24.78**	**74**	P		**P**	**22 21 44.9**	**+0.7**	
	comp=Z,6.2nm,0.9s,baz=287,slow=9.5,SNR=20								
SVE	**Sverdlovsk**	**25.33**	**59**	*e*P		P	22 21 58.2	+9.1	
SVE				pmax		pmax			
	comp=Z,14nm,1.4s								
ABKAR	**Akbulak array**	**26.31**	**76**	P		**P**	**22 21 59.6**	**+1.5**	
ABKAR				IAmb		IAmb	22 22 01.7		
	comp=Z,9.1nm,1.1s								
ABKAR	**Akbulak array**	**26.31**	**76**	P		**P**	**22 21 59.9**	**+1.9**	
SCO	**Scoresbysund**	**27.67**	**332**	P		**P**	**22 22 11.5**	**+1.5**	
SCO				pmax		pmax			
	comp=Z,36nm,1.5s								
SCO	**Scoresbysund**	**27.67**	**332**	P		**P**	**22 22 11.5**	**+1.5**	
BRVK	**Borovoye**	**31.45**	**65**	⇑*i*P		**P**	**22 22 45.5**	**+1.8**	
BRVK				pmax		pmax			
	comp=Z,5.0nm,1.0s								
BRVK	**Borovoye**	**31.45**	**65**	P		**P**	**22 22 44.7**	**+1.0**	
BRVK				IAmb		IAmb	22 22 46.1		
	comp=Z,6.0nm,0.9s								
BVAR	**Borovoye Array**	**31.52**	**65**	P		**P**	**22 22 45.5**	**+1.2**	
	comp=Z,1.8nm,0.7s,baz=190,slow=7.2,SNR=18								
PMOZ	**Porto Moniz, M**	**31.74**	**250**	P		**P**	**22 22 47.2**	**+0.6**	
KKAR	**Karatay Array**	**35.52**	**81**	P		**P**	**22 23 19.6**	**+0.2**	
KKAR	**Karatay Array**	**35.52**	**81**	P		**P**	**22 23 19.6**	**+0.2**	
NRIK	**Noril'sk**	**36.88**	**33**	P		**P**	**22 23 33.0**	**+2.4**	
	comp=Z,1.9nm,0.4s,baz=274,slow=2.9,SNR=9.3								
NRIK	**Noril'sk**	**36.88**	**33**	⇑*e*P		**P**	**22 23 33.3**	**+2.7**	
NRIK				pmax		pmax			
	comp=Z,12nm,1.1s								
NRIK	**Noril'sk**	**36.88**	**33**	P		**P**	**22 23 32.9**	**+2.4**	
NRIK				IAmb		IAmb	22 23 34.7		
	comp=Z,11nm,1.1s								
KURBB	**Kurchatov Arra**	**37.08**	**66**	P		**P**	**22 23 33.6**	**+1.1**	
	comp=Z,2.6nm,1.0s,baz=296,slow=8.8,SNR=10								
KURK	**Kurchatov**	**37.10**	**66**	P		**P**	**22 23 33.6**	**+0.9**	
KURK	**Kurchatov**	**37.10**	**66**	P		**P**	**22 23 33.6**	**+0.9**	
GAR	**Garm**	**37.59**	**87**	P		**P**	**22 23 38.0**	**+0.8**	
AAK	**Ala-Archa**	**38.28**	**79**	P		**P**	**22 23 44.5**	**+1.5**	
	comp=Z,0.4nm,0.3s,baz=272,slow=9.0,SNR=5.9								
AAK	**Ala-Archa**	**38.28**	**79**	⇑*i*P		**P**	**22 23 45.1**	**+2.1**	
AAK				pmax		pmax			
	comp=Z,16nm,1.7s								
AAK	**Ala-Archa**	**38.28**	**79**	P		**P**	**22 23 44.1**	**+1.2**	
AAK				IAmb		IAmb	22 23 47.4		
	comp=Z,5.8nm,1.5s								
ZAA0	**Zalesovo Array**	**39.35**	**58**	P		**P**	**22 23 52.1**	**+0.5**	
ZALV	**Zalesovo Beam**	**39.35**	**58**	P		**P**	**22 23 53.2**	**+1.6**	
	comp=Z,1.4nm,0.8s,baz=290,slow=9.3,SNR=7.4								
ZALV	**Zalesovo Beam**	**39.35**	**58**	*i* P		**P**	**22 23 53.3**	**+1.7**	
ZALV				pmax		pmax			
	comp=Z,1.0nm,0.8s								
ZALV	**Zalesovo Beam**	**39.35**	**58**	P		**P**	**22 23 52.3**	**+0.7**	
TOA0	**Torodi Ar. Sit**	**39.60**	**207**	P		**P**	**22 23 54.1**	**0.0**	
TORD	**Torodi Ar. Bea**	**39.60**	**207**	P		**P**	**22 23 54.0**	**0.0**	
	comp=Z,3.2nm,1.0s,baz=14,slow=8.2,SNR=11								
TORD	**Torodi Ar. Bea**	**39.60**	**207**	P		**P**	**22 23 53.8**	**-0.3**	
MAKZ	**Makanchi**	**40.81**	**70**	P		**P**	**22 24 04.1**	**+0.2**	
MAKZ				pmax		pmax			
	comp=Z,3.0nm,1.0s								
MAKZ	**Makanchi**	**40.81**	**70**	P		**P**	**22 24 04.1**	**+0.2**	
MK31	**Makanchi Array**	**41.01**	**69**	⇓*e*P		**P**	**22 24 07.2**	**+1.7**	
MK31	**Makanchi Array**	**41.01**	**69**	P		**P**	**22 24 06.5**	**+1.0**	
MK31				IAmb		IAmb	22 24 08.3		
	comp=Z,4.1nm,1.4s								
MKAR	**Makanchi Array**	**41.01**	**69**	P		**P**	**22 24 07.0**	**+1.5**	
	comp=Z,1.1nm,0.8s,baz=294,slow=3.9,SNR=13								
MKAR	**Makanchi Array**	**41.01**	**69**	*i* P		**P**	**22 24 05.4**	**-0.1**	
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.9s								
MKAR	**Makanchi Array**	**41.01**	**69**	P		**P**	**22 24 06.6**	**+1.1**	
TULEG	**Thule**	**41.26**	**339**	P		**P**	**22 24 08.2**	**+1.0**	
DGZ	**Jazzator, Alta**	**42.64**	**63**	⇓*e*P		**P**	**22 24 20.6**	**+1.6**	
DGZ				pmax		pmax			
	comp=Z,9.0nm,1.3s								
WMQ	**Urumqi**	**45.81**	**70**	*e*P		**P**	**22 24 46.5**	**+2.2**	
TLY	**Talaya**	**50.46**	**54**	⇓*i*P		**P**	**22 25 23.5**	**+3.4**	
TLY				pmax		pmax			
	comp=Z,12nm,1.2s								
TLY	**Talaya**	**50.46**	**54**	P		**P**	**22 25 21.2**	**+1.1**	
SONM	**Songino Array**	**54.16**	**56**	P		**P**	**22 25 49.9**	**+2.1**	
	comp=Z,5.6nm,0.9s,baz=293,slow=9.1,SNR=27								
SONM	**Songino Array**	**54.16**	**56**	P		**P**	**22 25 49.3**	**+1.5**	
SONM				pmax		pmax			
	comp=Z,6.0nm,1.0s								
SONM	**Songino Array**	**54.16**	**56**	P		**P**	**22 25 49.3**	**+1.5**	
ULN	**Ulaanbaatar**	**54.49**	**56**	⇓*e*P		**P**	**22 25 51.7**	**+1.5**	
ULN				pmax		pmax			
	comp=Z,4.0nm,1.3s								
ULN	**Ulaanbaatar**	**54.49**	**56**	P		**P**	**22 25 50.6**	**+0.4**	
ULN				IAmb		IAmb	22 25 53.6		
	comp=Z,3.9nm,1.2s								
YAK	**Yakutsk**	**55.32**	**32**	⇑*e*P		**P**	**22 25 57.6**	**+1.8**	
YAK				pmax		pmax			
	comp=Z,7.0nm,0.7s								
LSA	**Lhasa**	**56.77**	**82**	P		**P**	**22 26 07.7**	**+0.5**	
LSA				pmax		pmax			
	comp=Z,6.0nm,1.2s								
LSA	**Lhasa**	**56.77**	**82**	P		**P**	**22 26 07.7**	**+0.5**	
LSA				IAmb		IAmb	22 26 09.8		
	comp=Z,6.0nm,1.2s								
HHC	**Hu-ho-hao-te**	**61.52**	**60**	*e*P		**P**	**22 26 42.9**	**+3.4**	
HHC				pmax		pmax			
	comp=Z,17nm,0.8s								
HHC				pmax		pmax			
	comp=Z,130nm,5.4s								
YKA	**Yellowknife Ar**	**61.68**	**337**	P		**P**	**22 26 41.8**	**+1.7**	
	comp=Z,1.9nm,0.9s,baz=28,slow=6.6,SNR=21								
YKA	**Yellowknife Ar**	**61.68**	**337**	*i* P		**P**	**22 26 41.5**	**+1.4**	
YKA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
BMAR	**Burnt Mountain**	**61.95**	**353**	P		**P**	**22 26 43.3**	**+1.3**	
XAN	**Xi'an**	**64.73**	**67**	P		**P**	**22 27 01.0**	**+0.1**	
XAN				pmax		pmax			
	comp=Z,4.0nm,1.9s								
KLR	**Kul'dur**	**65.43**	**42**	⇑*e*P		**P**	**22 27 06.3**	**+1.1**	
KLR				pmax		pmax			
	comp=Z,2.0nm,0.7s								
CMAR	**Chiang Mai Arr**	**69.73**	**85**	P		**P**	**22 27 33.9**	**+1.1**	
	comp=Z,0.3nm,0.3s,baz=305,slow=8.7,SNR=5.8								
PDAR	**

NEIC ***17*** *23:23:32.7±0.9, 13.9°S±0.2°×173.9°W±0.05, h10km±2km, mb4.6/10, Error ellipse: s-maj=27.4km s-min=8.5km az=355.0*

ISC 17 23:23:33.1±1.0, 13.9°S±0.2°×173.9°W±0.1, h10km, n16, σ1§42/16, mb4.6/9, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.05**	**90**	Pn	**Pn**	**23 24 07.6**	**-0.1**
MSVF	**Nonsavu**	**8.64**	**243**	Pn	**Pn**	**23 25 37.9**	**-0.5**
FOZ	**Fox Glacier**	**32.67**	**202**	P	**P**	**23 30 05.5**	**+0.1**
FOZ				IAmb	IAmb	23 30 14.3	
	comp=Z,34nm,1.2s						
EIDS	**Eidsvold**	**34.80**	**245**	P	**P**	**23 30 23.8**	**-0.5**
EIDS				IAmb	IAmb	23 30 24.3	
	comp=Z,9.7nm,1.1s						
MLZ	**Mavora Lakes**	**34.87**	**202**	P	**P**	**23 30 26.1**	**+1.5**
MLZ				IAmb	IAmb	23 30 27.8	
	comp=Z,10nm,1.1s						
ARMA	**Armidale**	**35.73**	**237**	P	**P**	**23 30 31.2**	**-1.2**
ARMA				IAmb	IAmb	23 30 32.1	
	comp=Z,3.0nm,0.7s						
TOO	**Toolangi**	**43.06**	**229**	P	**P**	**23 31 32.7**	**-0.7**
STKA	**Stephens Creek**	**44.39**	**239**	P	**P**	**23 31 43.9**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=90,slow=13,SNR=6.3						
STKA	**Stephens Creek**	**44.39**	**239**	P	**P**	**23 31 43.8**	**-0.3**
MCQ	**Macquarie Isla**	**45.73**	**202**	P	**P**	**23 31 54.3**	**0.0**
BBOO	**Buckleboo**	**49.17**	**239**	P	**P**	**23 32 19.2**	**-2.4**
BBOO				IAmb	IAmb	23 32 21.7	
	comp=Z,8.6nm,0.9s						
WRA	**Warramunga Arr**	**49.74**	**256**	P	**P**	**23 32 28.9**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=92,slow=7.4,SNR=8.6						
AS31	**Alice Springs**	**50.14**	**251**	P	**P**	**23 32 30.9**	**+1.8**
AS31				IAmb	IAmb	23 32 31.7	
	comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**50.14**	**251**	P	**P**	**23 32 31.1**	**+2.0**
	comp=Z,6.1nm,0.5s,baz=89,slow=8.1,SNR=71						
ASAR	**Alice Springs**	**50.14**	**251**	P	**P**	**23 32 30.4**	**+1.3**
BWN	**Browne**	**80.06**	**11**	P	**P**	**23 35 42.4**	**-0.3**

IDC 17 23:28:55.0±1.8, 4.13°S×128.63E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.5/37, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=53.6km s-min=28.2km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.17**	**39**	Pn	Pn	23 30 00.3	+0.4
	4.0nm,0.3s,baz=228,slow=16,SNR=8.9						
SIJI				Sn	Sn	23 30 45.9	-3.6
	4.0nm,0.3s,baz=210,slow=23,SNR=9.4						
WRA	**Warramunga Arr**	**16.68**	**161**	Pn	Pn	23 32 48.2	-2.1
	0.1nm,0.3s,baz=344,slow=12,SNR=2.7						
ASAR	**Alice Springs**	**20.09**	**166**	P	P	23 33 31.1	+0.9
	2.8nm,0.6s,baz=348,slow=10,SNR=28						
MKAR	**Makanchi Array**	**65.09**	**327**	P	P	23 39 37.3	-0.2
	0.6nm,0.7s,baz=117,slow=7.5,SNR=2.5						

IDC ***17*** *23:29:55.9±1.7, 11.48°N×126.12°E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.5/40, mbtmp3.9/5, Error ellipse: s-maj=137.6km s-min=21.2km az=69.0*
MAN ***17*** *23:29:57.8, 11.47°N×126.20°E, h1km, MS3.4*
NEIC ***17*** *23:29:59.4±1.0, 11.84°N±0.09°×126.7°E±0.1, h44km±10km, mb4.1/9, Error ellipse: s-maj=19.6km s-min=11.4km az=116.0*

ISC 17 23:30:00.2±0.8, 11.67°N±0.06°×126.17°E±0.08, h35km, n27, σ2§35/29, mb4.0/10, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**1.87**	**181**	*e*P	**Pn**	**23 30 27.9**	**-2.0**
GLSP				*e*S	**Sn**	**23 30 58.5**	**+6.3**
MSLP	**Maasin**	**1.99**	**220**	*e*P	**Pn**	**23 30 30.7**	**-0.7**
MSLP				*e*S	**Sn**	**23 30 56.4**	**+1.2**
LLP	**Lapu-Lapu**	**2.54**	**238**	*e*P	**Pn**	**23 30 40.7**	**+1.6**
LLP				*e*S	**Sn**	**23 31 08.9**	**+0.1**
BUTP	**Butuan**	**2.74**	**191**	*e*P	**Pn**	**23 30 41.2**	**-0.5**
BUTP				*e*S	**Sn**	**23 31 17.2**	**+3.6**
RCP	**Roxas**	**3.35**	**268**	*e*P	**Pn**	**23 30 52.6**	**+2.4**
CNOP	**Candoni, Negro**	**3.92**	**242**	*e*P	**Pn**	**23 30 55.9**	**-2.0**
CNOP				*e*S	**Sn**	**23 31 36.9**	**-5.8**
YULB	**Yu-li**	**12.55**	**339**	Pn	**Pn**	**23 32 55.8**	**-0.5**
NACB	**Ninganchiao**	**13.17**	**341**	Pn	**Pn**	**23 33 04.3**	**-0.6**
SBUM	**Sibu**	**16.58**	**238**	P	**P**	**23 33 54.9**	**+2.5**
FITZ	**Fitzroy Crossi**	**29.58**	**181**	P	**P**	**23 36 01.5**	**-0.6**
	3.4nm,1.1s,baz=336,slow=10.0,SNR=2.1						
FITZ	**Fitzroy Crossi**	**29.58**	**181**	P	**P**	**23 36 02.5**	**+0.5**
WB0	**Warramunga Arr**	**32.27**	**165**	P	**P**	**23 36 24.3**	**-1.5**
WB0				IAmb	IAmb	23 36 37.0	
	comp=Z,4.1nm,1.1s						
WRA	**Warramunga Arr**	**32.43**	**166**	P	**P**	**23 36 25.9**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=344,slow=9.1,SNR=5.9						
WB2	**Warramunga Arr**	**32.43**	**166**	P	**P**	**23 36 25.8**	**-1.4**
WR0	**Warramunga Arr**	**32.49**	**165**	P	**P**	**23 36 26.4**	**-1.3**
WR0				IAmb	IAmb	23 36 46.1	
	comp=Z,2.7nm,1.0s						
JEM	**Erimo**	**33.68**	**23**	P	P	23 36 47.2	+9.3
ASAR	**Alice Springs**	**35.92**	**168**	P	**P**	**23 36 56.9**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=351,slow=6.9,SNR=5.6						
ASAR				PcP	**PcP**	**23 39 24.2**	**+0.1**
	comp=Z,0.7nm,1.0s,baz=348,slow=4.1,SNR=4.7						
H11N1	**WAKE ISLAND Hy**	**39.93**	**73**	T	T	00 21 03.8	
	baz=265,slow=75,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**39.94**	**73**	T	T	00 21 04.6	
	baz=265,slow=75,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**39.95**	**73**	T	T	00 21 05.7	
	baz=265,slow=75,SNR=3.4						
ARMA	**Armidale**	**48.49**	**150**	P	**P**	**23 38 36.4**	**-3.5**
MK31	**Makanchi Array**	**50.86**	**322**	P	**P**	**23 38 57.8**	**+0.1**
MK31				IAmb	IAmb	23 39 01.3	
	comp=Z,1.8nm,1.1s						
MKAR	**Makanchi Array**	**50.86**	**322**	P	**P**	**23 38 59.6**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=123,slow=6.8,SNR=16						
MKAR	**Makanchi Array**	**50.86**	**322**	P	**P**	**23 38 58.5**	**+0.9**
MAKZ	**Makanchi**	**51.06**	**322**	P	**P**	**23 38 57.6**	**-1.5**
MAKZ				IAmb	IAmb	23 39 02.3	
	comp=Z,1.3nm,0.8s						
GAR	**Garm**	**56.33**	**309**	P	**P**	**23 39 39.1**	**+1.1**
GAR				IAmb	IAmb	23 39 50.6	
	comp=Z,5.1nm,1.2s						
FINES	**FINESS Array B**	**84.62**	**332**	P	**P**	**23 42 31.7**	**+1.7**
	comp=Z,3.0nm,0.9s,baz=79,slow=7.2,SNR=7.3						

IDC ***17*** *23:32:23.2±3.2, 39.47°N×143.83E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/37, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=71.6km s-min=42.3km az=64.0*
JMA ***17*** *23:32:26.4±0.2, 39.38°N×143.43E, h17km±3km, M3.9*
NIED ***17*** *23:32:26.5, 39.38°N×143.43E, h17km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.30; Mθθ0.14; Mθφ-2.44; Mrθ-0.92; Mθφ-0.27; Mφr-0.29; Fault plane solution: M₀2.57000×10¹⁴ NP1: φs205.00000°, δ53.00000°, λ115.00000°. NP2: φs347.00000°, δ44.00000°, λ61.00000°.*

ISC 17 23:32:27.0±1.5, 39.41°N±0.07°×143.4E±0.1, h11km, n23, σ0§87/21, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.19**	**279**	P	**Pn**	**23 32 49.1**	**-0.5**
MIYJ				*e*S	**Sn**	**23 33 05.6**	**-0.2**
JTH	**Tanohata**	**1.26**	**295**	P	**Pn**	**23 32 50.2**	**-0.3**
JTH				*e*S	**Sn**	**23 33 07.4**	**-0.1**
OFUJ	**Ofunato**	**1.34**	**256**	P	**Pn**	**23 32 51.4**	**-0.3**
JOM	**Ohasama**	**1.59**	**273**	P	**Pn**	**23 32 55.3**	**+0.2**
JANG	**Nango**	**1.71**	**305**	P	**Pn**	**23 32 56.7**	**0.0**
JMK	**Ichinoseki**	**1.71**	**255**	P	**Pn**	**23 32 57.1**	**+0.4**
JMK				*e*S	**Sn**	**23 33 19.2**	**+0.6**
JIO	**Ouri**	**1.83**	**239**	P	**Pn**	**23 32 58.0**	**-0.3**
JIO				*e*S	**Sn**	**23 33 20.5**	**-0.9**
JRG	**Rokugo**	**2.10**	**271**	P	**Pn**	**23 33 02.9**	**+0.8**
JTM	**Tenmabayashi**	**2.23**	**309**	P	**Pn**	**23 33 04.5**	**+0.7**
JAH	**Hinai**	**2.23**	**291**	P	**Pn**	**23 33 04.8**	**+1.0**
JOU	**Okura**	**2.34**	**244**	P	**Pn**	**23 33 05.8**	**+0.4**
JYK	**Kaneyama**	**2.37**	**259**	P	**Pn**	**23 33 06.7**	**+0.9**
JNBK	**Urakawa-nobuka**	**2.90**	**351**	P	**Pn**	**23 33 13.9**	**+0.8**
MJAR	**Matsushiro Arr**	**4.97**	**236**	Pn	**Pn**	**23 33 43.6**	**+2.1**
	0.4nm,0.3s,baz=36,slow=13,SNR=12						
MAT	**Matsushiro**	**4.97**	**236**	P	**Pn**	**23 33 43.1**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**28.21**	**127**	T	T	00 07 55.5	
	baz=319,slow=75,SNR=26						
H11N1	**WAKE ISLAND Hy**	**28.22**	**127**	T	T	00 07 55.5	
	baz=319,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**28.23**	**127**	T	T	00 07 53.7	
	baz=319,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**29.02**	**129**	T	T	00 08 54.5	
	baz=321						
H11S3	**WAKE ISLAND Hy**	**29.02**	**129**	T	T	00 08 56.9	
	baz=321						
H11S2	**WAKE ISLAND Hy**	**29.04**	**129**	T	T	00 08 55.7	
	baz=321						
MKAR	**Makanchi Array**	**44.19**	**300**	P	**P**	**23 40 36.0**	**+0.1**
	0.4nm,0.7s,baz=86,slow=7.4,SNR=2.7						
WRA	**Warramunga Arr**	**59.64**	**190**	P	**P**	**23 42 30.0**	**-1.1**
	0.4nm,0.6s,baz=8.7,slow=7.1,SNR=5.7						

IDC 17 23:42:56.1±1.5, 4.09°S×128.72E, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.5/43, mbtmp3.8/5, ML3.5/3, Error ellipse: s-maj=41.9km s-min=23.2km az=93.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.08**	**39**	Pn	Pn	23 44 01.0	+1.1
	4.7nm,0.3s,baz=232,slow=17,SNR=18						
SIJI				Sn	Sn	23 44 48.0	-0.5
	5.4nm,0.3s,baz=270,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**14.25**	**192**	Pn	Pn	23 46 19.2	-0.1
	0.1nm,0.3s,baz=26,slow=10,SNR=1.9						
WRA	**Warramunga Arr**	**16.68**	**161**	Pn	Pn	23 46 49.4	-2.2
	0.2nm,0.3s,baz=345,slow=12,SNR=12						
ASAR	**Alice Springs**	**20.10**	**166**	P	Pn	23 47 32.5	-0.8
	3.8nm,0.6s,baz=348,slow=9.8,SNR=37						
MKAR	**Makanchi Array**	**65.11**	**327**	P	P	23 53 38.6	-0.2
	0.3nm,0.5s,baz=124,slow=7.3,SNR=6.2						

IDC ***18*** *00:10:49.2±1.5, 36.00°N×25.85E, h0km, mb3.7/4, mb1 3.7/4, mb1mx3.3/49, mbtmp3.7/4, Error ellipse: s-maj=319.6km s-min=25.9km az=141.0*
DDA ***18*** *00:10:50.1, 34.91°N×26.83E, h5km±4km, ML2.8*
THE ***18*** *00:10:53.1, 35.11°N×26.82E, h0km±1km, ML2.9/7, Error ellipse: s-maj=3.8km s-min=0.7km az=152.0*
ISK ***18*** *00:10:53.2, 35.16°N×26.82E, h17km, ML2.9/9*
ATH ***18*** *00:10:55.0, 35.28°N×26.77E, h12km±4km, ML2.9/4, Error ellipse: s-maj=6.6km s-min=1.6km az=152.0*

ISC 18 00:10:51.4±1.3, 35.01°N±0.05°×26.90E±0.03, h11km±9km, n67, σ1§26/88, mb3.6/4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.57**	**280**	P	**Pg**	**00 11 03.2**	**+0.8**
ZKR				S	**Sb**	**00 11 11.9**	**+0.5**
ZKR				AML	AML	00 11 12.3	
	comp=N,4899μm,0.3s						
ZKR				AML	AML	00 11 12.8	
	comp=E,4092μm,0.4s						
ZKR	**Zakros**	**0.57**	**280**	P	**Pg**	**00 11 03.2**	**+0.8**
ZKR				S	**Sb**	**00 11 12.1**	**+0.7**
	comp=E,2μm,0.4s						
ZKR	**Zakros**	**0.57**	**280**	PG	**Pb**	**00 11 03.6**	**+0.3**
ZKR				SG	**Sb**	**00 11 11.2**	**-0.2**
KARP	**Karpathos**	**0.57**	**22**	P	**Pg**	**00 11 02.9**	**+0.3**
KARP				S	**Sb**	**00 11 10.9**	**-0.7**
KARP				AML	AML	00 11 13.5	
	comp=E,7320μm,0.2s						
KARP				AML	AML	00 11 13.7	
	comp=N,7158μm,0.1s						
KARP	**Karpathos**	**0.57**	**22**	P	**Pg**	**00 11 03.0**	**+0.4**
KARP				S	**Sb**	**00 11 12.0**	**+0.3**
	comp=N,4μm,0.2s						
KARP	**Karpathos**	**0.57**	**22**	PG	**Pg**	**00 11 03.0**	**+0.4**
KARP				SG	**Sb**	**00 11 10.7**	**-1.0**
FRMA	**Ierapetra Chan**	**0.96**	**270**	P	**Pg**	**00 11 08.2**	**-1.6**
FRMA				S	**Sg**	**00 11 21.3**	**-0.9**
	comp=N,245nm,0.4s						
NPS	**Neapolis**	**1.08**	**284**	P	**Pb**	**00 11 12.9**	**+0.8**
NPS				AML	AML	00 11 33.8	
	comp=E,1015μm,0.4s						
NPS				AML	AML	00 11 36.3	
	comp=N,1143μm,0.4s						
NPS	**Neapolis**	**1.08**	**284**	P	**Pb**	**00 11 12.9**	**+0.8**
NPS				S	**Sn**	**00 11 28.1**	**+0.6**
	comp=N,535nm,0.4s						
HRKL	**Herakleio**	**1.50**	**282**	PN	**Pn**	**00 11 18.9**	**+0.7**
HRKL				SN	**Sb**	**00 11 37.6**	**-0.7**
ARG	**Arkhangelos**	**1.56**	**39**	P	**Pn**	**00 11 20.8**	**+1.8**
ARG				AML	AML	00 11 46.8	
	comp=N,521μm,0.6s						
ARG				AML	AML	00 11 48.9	
	comp=E,919μm,0.3s						
ARG	**Arkhangelos**	**1.56**	**39**	P	**Pn**	**00 11 20.6**	**+1.5**
ARG				S	**Sg**	**00 11 42.3**	**+0.7**
	comp=E,352nm,0.5s						
ARG	**Arkhangelos**	**1.56**	**39**	PN	**Pn**	**00 11 20.2**	**+1.1**
NIS1	**Nisyros Isl.**	**1.60**	**8**	P	**Pb**	**00 11 20.7**	**-0.3**
NIS1	**Nisyros Isl.**	**1.60**	**8**	P	**Pn**	**00 11 20.4**	**+0.8**
NIS1	**Nisyros Isl.**	**1.60**	**8**	PN	**Pn**	**00 11 19.7**	**+0.1**
IDI	**Anoyia**	**1.67**	**280**	P	**Pb**	**00 11 23.1**	**+1.0**
SIVA	**Sivas**	**1.71**	**271**	P	**Pg**	**00 11 24.7**	**+0.5**
KOSK	**Kos Island**	**1.73**	**2**	P	**Pn**	**00 11 22.5**	**+1.1**
KOSK				S	**Sg**	**00 11 44.2**	**-3.0**
	comp=E,382nm,0.5s						
KOSK	**Kos Island**	**1.73**	**2**	PN	**Pn**	**00 11 21.7**	**+0.3**
SANT	**Santorini**	**1.79**	**320**	PN	**Pn**	**00 11 21.9**	**-0.3**
THR6	**Thira Island,**	**1.81**	**318**	P	**Pn**	**00 11 23.1**	**+0.6**
SNT1	**Gialos, Santor**	**1.84**	**320**	P	**Pn**	**00 11 23.6**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.85**	**319**	P	**Pn**	**00 11 23.1**	**+0.1**
SNT5	**Nea Kammeni, S**	**1.85**	**319**	P	**Pn**	**00 11 22.9**	**-0.1**
THR3	**Thira Island,**	**1.85**	**319**	P	**Pn**	**00 11 23.5**	**+0.5**
THR3	**Thira Island,**	**1.85**	**319**	P	**Pn**	**00 11 23.9**	**+0.9**
THT2	**Imerovigli**	**1.86**	**320**	P	**Pn**	**00 11 23.9**	**+0.8**
THT2	**Imerovigli**	**1.86**	**320**	PN	**Pn**	**00 11 22.9**	**-0.2**
TURN	**Turunc**	**2.07**	**31**	*i* P	**Pn**	**00 11 27.1**	**+1.1**
TURN				*i* S	**Sb**	**00 11 54.3**	**-0.4**
TURN				IAML		00 12 02.0	
	comp=E,42nm,0.3s						
TURN				IAML		00 12 02.0	
	comp=N,42nm,0.5s						
TURN	**Turunc**	**2.07**	**31**	PN	**Pn**	**00 11 27.1**	**+1.1**
BODT	**Bodrum**	**2.07**	**9**	PN	**Pn**	**00 11 26.3**	**+0.2**
BDRM	**Kayabasi**	**2.09**	**12**	*i* P	**Pn**	**00 11 27.4**	**+1.0**
VAM	**Vamos**	**2.24**	**281**	P	**Pb**	**00 11 32.5**	**+0.6**
DALY	**Dalyan (Mula)**	**2.29**	**38**	*i* P	**Pn**	**00 11 30.5**	**+1.4**
DALY				*i* S	**Sb**	**00 12 01.0**	**-0.1**
DALY				IAML		00 12 11.0	
	comp=N,52nm,0.4s						
APE	**Apeiranthos**	**2.33**	**332**	P	**Pn**	**00 11 30.0**	**+0.3**
APE	**Apeiranthos**	**2.33**	**332**	P	**Pn**	**00 11 29.9**	**+0.2**
APE				S	**Sn**	**00 11 57.7**	**-0.6**
	comp=N,78nm,0.2s						
APE	**Apeiranthos**	**2.33**	**332**	PN	**Pn**	**00 11 29.8**	**+0.1**
YER	**Yerkesik**	**2.40**	**28**	P	**Pn**	**00 11 31.9**	**+1.3**
YER	**Yerkesik**	**2.40**	**28**	PN	**Pn**	**00 11 31.6**	**+1.0**
IMMV	**Iera Moni Meta**	**2.43**	**281**	P	**Pb**	**00 11 34.9**	**-0.1**
DDIM	**Aydin, Didim**	**2.45**	**6**	*i* P	**Pn**	**00 11 32.8**	**+1.5**
DDIM				IAML		00 12 20.0	
	comp=E,48nm,0.8s						
DDIM				IAML		00 12 25.0	
	comp=N,55nm,1.5s						
KSL	**Kastellorizon**	**2.46**	**62**	P	**Pn**	**00 11 32.6**	**+1.1**
MULA	**Mugla, Merkez-**	**2.52**	**27**	*i* P	**Pn**	**00 11 34.3**	**+2.0**
MULA				*i* S	**Sn**	**00 12 05.2**	**+2.2**
AKAS	**Kas**	**2.52**	**60**	*i* P	**Pn**	**00 11 32.6**	**+0.3**
AKAS				*i* S	**Sn**	**00 11 58.8**	**-4.3**
AKAS				IAML		00 12 05.0	
	comp=N,34nm,0.5s						
SMG	**Samos**	**2.69**	**359**	P	**Pn**	**00 11 36.9**	**+2.3**
SMG	**Samos**	**2.69**	**359**	P	**Pn**	**00 11 35.3**	**+0.7**
GCAM	**G?zelcaml?**	**2.69**	**6**	*i* P	**Pn**	**00 11 34.8**	**+0.1**
GCAM				IAML		00 12 28.0	
	comp=E,51nm,0.3s						
GCAM				IAML		00 12 32.0	
	comp=N,88nm,0.6s						
AYDN	**Tasoluk**	**2.76**	**16**	*i* P	**Pn**	**00 11 35.8**	**+0.2**
CAEL	**Denizli, Camel**	**2.88**	**42**	*i* P	**Pn**	**00 11 38.5**	**+1.2**
CAEL				*i* S	**Sn**	**00 12 13.5**	**+1.5**
CAEL				IAML		00 12 25.0	
	comp=E,66nm,0.8s						
CAEL				IAML		00 12 28.0	
	comp=N,31nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.94**	**33**	*i* P	**Pn**	**00 11 39.3**	**+1.2**
TAVA				*i* S	**Sn**	**00 12 16.2**	**+2.8**
ANKY	**Antikythira Is**	**3.06**	**287**	P	**Pn**	**00 11 41.0**	**+1.4**
GOLH	**Golhisar**	**3.09**	**43**	*i* P	**Pn**	**00 11 41.1**	**+0.9**
GOLH				IAML		00 12 43.0	
	comp=N,29nm,0.4s						
AKUM	**Antalya-Kumluc**	**3.09**	**64**	*i* P	**Pn**	**00 11 40.0**	**-0.1**
AKUM				*i* S	**Sn**	**00 12 13.3**	**-3.8**
AKUM				IAML		00 12 21.0	
	comp=E,23nm,1.1s						
KORT	**Korkueli**	**3.43**	**54**	*i* P	**Pn**	**00 11 46.4**	**+1.6**
KORT				*i* S	**Sn**	**00 12 26.5**	**+0.9**
KORT				IAML		00 12 31.0	
	comp=E,21nm,0.6s						
KORT				IAML		00 12 33.0	
	comp=N,21nm,0.6s						
BRDR	**BURDUR-Merkez**	**3.70**	**43**	*i* P	**Pn**	**00 11 49.0**	**+0.5**
MANT	**Manisa**	**3.72**	**21**	*i* P	**Pn**	**00 11 49.0**	**+0.1**
USAK	**Uak-Merkez**	**4.07**	**24**	*i* P	**Pn**	**00 11 54.2**	**+0.7**
USAK				IAML		00 12 37.0	
	comp=N,14nm,0.2s						
KEPZ	**Antalya-Kepez**	**4.26**	**62**	*i* P	**Pn**	**00 11 57.4**	**+1.2**
KEPZ				*i* S	**Sn**	**00 12 44.5**	**-1.4**
KEPZ				IAML		00 12 50.0	
	comp=N,11nm,0.7s						
BUHA	**Balikesir, Bur**	**4.48**	**2**	*i* P	**Pn**	**00 11 59.6**	**+0.4**
DURS	**Dursunbey**	**4.75**	**15**	*i* P	**Pn**	**00 12 03.2**	**+0.3**
YVAC	**Isparta, Yalva**	**4.77**	**46**	*i* P	**Pn**	**00 12 06.6**	**+3.3**
DOGA	**KÖNYA_Doganhis**	**4.93**	**50**	*i* P	**Pn**	**00 12 07.6**	**+2.2**
DOGA				*i* S	Sn	00 12 54.7	-7.8
DOGA				IAML		00 13 09.0	
	comp=E,5.9nm,0.9s						
DOGA				IAML		00 13 10.0	
	comp=N,5.5nm,0.6s						
TORD	**Torodi Ar. Bea**	**31.51**	**233**	P	**P**	**00 17 12.6**	**-0.9**
	comp=N,0.3nm,0.4s,baz=37,slow=9.8,SNR=4.4						
KURBB	**Kurchatov Arra**	**40.11**	**51**	P	**P**	**00 18 26.9**	**+0.1**
	comp=N,0.9nm,0.6s,baz=277,slow=8.5,SNR=9.6						
MKAR	**Makanchi Array**	**42.66**	**57**	P	**P**	**00 18 48.7**	**+0.7**
	comp=N,0.7nm,0.6s,baz=280,slow=6.5,SNR=9.9						
ZALV	**Zalesovo Beam**	**44.08**	**46**	P	**P**	**00 18 58.2**	**-1.0**
	comp=N,0.7nm,0.5s,baz=275,slow=11,SNR=4.9						

IDC ***18*** *00:32:22.5±1.6, 12.18°S×165.83E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/29, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=42.8km s-min=28.2km az=104.0*

ISC 18 00:32:27.3±1.3, 12.1°S±0.1°×165.8E±0.3, h30km, n6, σ1§74/7, mb3.7/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.92**	**176**	Pn	**Pn**	**00 34 47.0**	**-1.0**
	0.6nm,0.3s,baz=342,slow=20,SNR=4.8						
DZM				Sn	**Sn**	**00 36 40.3**	**+1.8**
	0.7nm,0.3s,baz=142,slow=19,SNR=4.0						
WRA	**Warramunga Arr**	**31.16**	**251**	P	**P**	**00 38 43.5**	**-0.5**
	0.3nm,0.9s,baz=89,slow=9.2,SNR=4.1						
ASAR	**Alice Springs**	**32.36**	**245**	P	**P**	**00 38 52.6**	**-1.8**
	0.5nm,0.8s,baz=78,slow=9.2,SNR=4.7						
CMAR	**Chiang Mai Arr**	**72.57**	**294**	P	**P**	**00 43 54.2**	**+2.0**
	0.7nm,0.6s,baz=125,slow=3.2,SNR=5.0						
ILAR	**Eielson Array**	**84.51**	**18**	P	**P**	**00 44 56.5**	**-0.6**
	0.3nm,0.6s,baz=239,slow=4.2,SNR=4.5						
MKAR	**Makanchi Array**	**94.32**	**317**	P	**P**	**00 45 44.3**	**+0.2**
	0.5nm,0.7s,baz=104,slow=6.1,SNR=6.5						

IDC ***18*** *00:40:53.5±1.0, 35.34N×26.62E, h0km, mb3.4/3, mb1 3.4/3, mb1mx3.2/26, mbtmp3.4/3, Error ellipse: s-maj=214.6km s-min=17.7km az=142.0*
ISK ***18*** *00:40:55.9, 35.12N×26.83E, h8km, ML2.8/10*
ATH ***18*** *00:40:56.7, 35.12N×26.82E, h7km±2km, ML2.7/4, Error ellipse: s-maj=5.9km s-min=0.9km az=333.0*
THE ***18*** *00:40:56.6, 35.17N×26.73E, h0km±1km, ML2.5/3, Error ellipse: s-maj=6.3km s-min=1.0km az=152.0*
DDA ***18*** *00:40:59.3, 35.25N×27.20E, h18km±3km, ML2.3*

ISC 18 00:40:55.8±1.2, 35.09N±0.06°×26.83E±0.03, h12km±8km, n42, σ1§05/62, mb3.3/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.50**	**273**	P	**Pg**	**00 41 05.6**	**-0.2**
ZKR				S	**Sg**	**00 41 13.2**	**+0.7**
ZKR				AML	AML	00 41 14.6	
	comp=N,1127μm,0.3s						
ZKR				AML	AML	00 41 16.4	
	comp=E,2533μm,0.3s						
ZKR	**Zakros**	**0.50**	**273**	P	**Pg**	**00 41 05.4**	**-0.3**
ZKR				S	**Sg**	**00 41 13.0**	**+0.6**
	comp=E,930nm,0.3s						
ZKR	**Zakros**	**0.50**	**273**	PG	**Pg**	**00 41 06.2**	**+0.5**
ZKR				SG	**Sg

CAEL				*i* S		**Sb**	**00 42 23.0**	**+1.2**
CAEL				IAML			00 42 37.0	
	comp=N,32nm,0.6s							
CAEL				IAML			00 42 38.0	
	comp=E,36nm,0.5s							
TAVA	**DENIZLI_Tavas**	**2.91**	**35**	*i* P		**Pn**	**00 41 43.7**	**+1.7**
TAVA				*i* S		**Sn**	**00 42 18.7**	**+1.8**
TAVA				IAML			00 42 31.0	
	comp=E,11nm,0.9s							
TAVA				IAML			00 42 32.0	
	comp=N,14nm,1.1s							
AYDB	**Zeytinkoy-Aydi**	**2.98**	**16**	PN		**Pn**	**00 41 44.6**	**+1.7**
GOLH	**Golhisar**	**3.08**	**45**	*i* P		**Pn**	**00 41 46.0**	**+1.6**
GOLH				*i* S		**Sn**	**00 42 21.2**	**+0.1**
GOLH				IAML			00 42 38.0	
	comp=N,19nm,1.3s							
TORD	**Torodi Ar. Bea**	**31.51**	**232**	P		**P**	**00 47 17.5**	**-0.3**
	comp=N,0.2nm,0.4s,baz=26,slow=8.7,SNR=2.5							
MKAR	**Makanchi Array**	**42.67**	**57**	P		**P**	**00 48 51.8**	**-0.4**
	comp=N,0.2nm,0.5s,baz=280,slow=6.8,SNR=4.9							
ZALV	**Zalesovo Beam**	**44.06**	**46**	P		**P**	**00 49 02.6**	**-0.8**
	comp=N,0.6nm,0.7s,baz=268,slow=6.5,SNR=1.7							

IDC ***18*** *00:43:23.9±1.7, 35°.76N×26°.07E, h0km, mb3.3/3, mb1 3.3/3, mb1mx3.1/29, mbtmp3.3/3, MS2.3/1, Ms1 2.4/1, ms1mx2.0/19, Error ellipse: s-maj=364.0km s-min=29.8km az=141.0*
THE ***18*** *00:43:26.0, 35°.15N×26°.77E, h0km±1km, ML2.6/3, Error ellipse: s-maj=5.3km s-min=0.8km az=151.0*
ATH ***18*** *00:43:27.4, 35°.16N×26°.77E, h8km±4km, ML2.8/3, Error ellipse: s-maj=7.0km s-min=1.1km az=335.0*
DDA ***18*** *00:43:28.6, 35°.34N×27°.04E, h6km±3km, ML2.2*

ISC 18 00:43:23.7±1.4, 35°.06N±0°.06×26°.92E±0°.04, h4km±10km, n26, σ1§35/40, mb3.3/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.53**	**22**	P	**Pb**	**00 43 36.5**	**+0.9**
KARP				S	**Sb**	**00 43 44.4**	**+0.8**
KARP				AML	AML	00 43 47.6	
	comp=N,4526μm,0.2s						
KARP				AML	AML	00 43 48.1	
	comp=E,3053μm,0.3s						
KARP	**Karpathos**	**0.53**	**22**	P	**Pb**	**00 43 36.4**	**+0.9**
KARP				S	**Sn**	**00 43 45.1**	**-2.4**
	comp=E,2μm,0.2s						
ZKR	**Zakros**	**0.57**	**276**	P	**Pg**	**00 43 35.8**	**+1.0**
ZKR				S	**Sg**	**00 43 42.9**	**+0.6**
ZKR				AML	AML	00 43 45.1	
	comp=E,2329μm,0.3s						
ZKR				AML	AML	00 43 45.7	
	comp=N,1128μm,0.5s						
ZKR	**Zakros**	**0.57**	**276**	P	**Pg**	**00 43 35.7**	**+1.0**
ZKR				S	**Sb**	**00 43 44.0**	**-0.9**
	comp=N,878nm,0.4s						
STIA	**Sitia Lasithi**	**0.69**	**282**	P	**Pg**	**00 43 37.6**	**+0.6**
STIA				S	**Sg**	**00 43 46.0**	**+0.1**
FRMA	**Ierapetra Chan**	**0.97**	**268**	P	**Pg**	**00 43 41.2**	**-1.1**
FRMA				S	**Sg**	**00 43 52.9**	**-2.0**
	comp=N,250nm,0.4s						
NPS	**Neapolis**	**1.09**	**281**	P	**Pn**	**00 43 45.8**	**+0.1**
NPS				S	**Sg**	**00 43 58.2**	**-0.4**
NPS				AML	AML	00 44 03.5	
	comp=E,1310μm,0.7s						
NPS				AML	AML	00 44 03.8	
	comp=N,787μm,0.5s						
ARG	**Arkhangelos**	**1.52**	**40**	P	**Pg**	**00 43 55.6**	**+2.7**
NIS1	**Nisyros Isl.**	**1.56**	**8**	P	**Pg**	**00 43 53.9**	**+0.3**
IDI	**Anoyia**	**1.67**	**278**	P	**Pg**	**00 43 55.9**	**+0.1**
SIVA	**Sivas**	**1.73**	**269**	P	**Pb**	**00 43 56.7**	**+0.7**
TURN	**Turunc**	**2.02**	**32**	*i* P	**Pb**	**00 44 00.5**	**-0.6**
TURN				*i* S	**Sb**	**00 44 26.6**	**-0.1**
TURN				IAML		00 44 37.0	
	comp=E,37nm,0.6s						
TURN				IAML		00 44 37.0	
	comp=N,28nm,0.3s						
BDRM	**Kayabasi**	**2.05**	**12**	*i* P	**Pb**	**00 44 01.0**	**-0.5**
BDRM				*i* S	**Sn**	**00 44 25.1**	**+0.2**
BDRM				IAML		00 44 33.0	
	comp=N,26nm,0.8s						
DALY	**Dalyan (Mula)**	**2.25**	**38**	*i* P	**Pg**	**00 44 06.0**	**-0.9**
DALY				*i* S	**Sg**	**00 44 37.5**	**+1.5**
DALY				IAML		00 44 45.0	
	comp=E,21nm,0.4s						
DALY				IAML		00 44 46.0	
	comp=N,28nm,0.7s						
APE	**Apeiranthos**	**2.30**	**331**	P	**Pn**	**00 44 03.0**	**+0.6**
APE				S	**Sn**	**00 44 30.2**	**-1.0**
MULA	**Mugla, Merkez-**	**2.47**	**27**	*i* P	**Pb**	**00 44 08.8**	**+0.1**
MULA				*i* S	**Sn**	**00 44 36.6**	**+1.0**
MULA				IAML		00 44 47.0	
	comp=E,18nm,0.6s						
AKAS	**Kas**	**2.48**	**61**	*i* P	**Pb**	**00 44 07.9**	**-1.1**
AKAS				IAML		00 44 42.0	
	comp=N,15nm,0.7s						
GCAM	**G?zelcaml?**	**2.65**	**5**	*i* P	**Pb**	**00 44 10.7**	**-1.0**
AYDN	**Tasoluk**	**2.71**	**16**	*i* P	**Pb**	**00 44 12.4**	**-0.4**
AYDN				*i* S	**Sb**	**00 44 43.7**	**-2.7**
CAEL	**Denizli, Camel**	**2.83**	**43**	*i* P	**Pb**	**00 44 14.6**	**-0.4**
CAEL				*i* S	**Sg**	**00 44 52.9**	**-1.9**
CAEL				IAML		00 45 03.0	
	comp=E,40nm,0.9s						
CAEL				IAML		00 45 07.0	
	comp=N,24nm,0.7s						
TAVA	**DENIZLI_Tavas**	**2.90**	**33**	*i* P	**Pb**	**00 44 13.7**	**-2.3**
GOLH	**Golhisar**	**3.05**	**44**	*i* P	**Pb**	**00 44 15.9**	**-2.8**
GOLH				*i* S	**Sb**	**00 44 54.7**	**-1.6**
GOLH				IAML		00 45 16.0	
	comp=N,19nm,1.0s						
NOA	**NORSAR Array B**	**27.88**	**344**	LR	LR	01 02 05.0	
	comp=N,6.3nm,18.3s,baz=320,slow=42						
TORD	**Torodi Ar. Bea**	**31.55**	**232**	P	**P**	**00 49 47.1**	**-0.2**
	comp=N,0.3nm,0.8s,baz=31,slow=9.3,SNR=1.5						
MKAR	**Makanchi Array**	**42.63**	**57**	P	**P**	**00 51 23.3**	**+2.2**
	comp=N,0.1nm,0.3s,baz=278,slow=6.6,SNR=4.4						
ZALV	**Zalesovo Beam**	**44.04**	**46**	P	**P**	**00 51 33.3**	**+1.0**
	comp=N,0.3nm,0.4s,baz=285,slow=7.3,SNR=2.1						

IDC ***18*** *00:46:25.1±0.7, 34°.86N×26°.93E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.3/27, mbtmp3.6/3, Error ellipse: s-maj=205.4km s-min=12.3km az=143.0*
ISK ***18*** *00:46:26.5, 35°.03N×26°.85E, h9km, ML3.0/11*
ATH ***18*** *00:46:27.8, 35°.10N×26°.83E, h7km±2km, ML2.9/4, Error ellipse: s-maj=6.0km s-min=0.9km az=332.0*
THE ***18*** *00:46:28.4, 35°.17N×26°.73E, h0km±1km, ML2.8/6, Error ellipse: s-maj=5.6km s-min=1.0km az=155.0*
DDA ***18*** *00:46:30.4, 35°.42N×26°.92E, h16km±4km, ML2.7*

ISC 18 00:46:27.9±1.1, 35°.12N±0°.06×26°.80E±0°.03, h16km±7km, n52, σ1§46/73, mb3.5/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.48**	**270**	P	**Pg**	**00 46 36.8**	**-0.7**
ZKR				S	**Sg**	**00 46 44.1**	**0.0**
ZKR				AML	AML	00 46 46.6	
	comp=E,2961μm,0.5s						
ZKR				AML	AML	00 46 51.0	
	comp=N,1723μm,0.4s						
ZKR	**Zakros**	**0.48**	**270**	P	**Pg**	**00 46 36.8**	**-0.7**
ZKR				S	**Sg**	**00 46 44.8**	**+0.7**
	comp=N,1μm,0.5s						
ZKR	**Zakros**	**0.48**	**270**	PG	**Pg**	**00 46 37.1**	**-0.5**
ZKR				SG	**Sg**	**00 46 44.9**	**+0.8**
KARP	**Karpathos**	**0.52**	**34**	P	**Pg**	**00 46 37.7**	**-0.5**
KARP				S	**Sg**	**00 46 45.2**	**0.0**
KARP				AML	AML	00 46 48.3	
	comp=N,4580μm,0.2s						
KARP				AML	AML	00 46 49.5	
	comp=E,4988μm,0.2s						
KARP	**Karpathos**	**0.52**	**34**	P	**Pg**	**00 46 37.6**	**-0.6**
KARP				S	**Sb**	**00 46 47.0**	**+1.0**
	comp=E,2μm,0.2s						
KARP	**Karpathos**	**0.52**	**34**	PG	**Pg**	**00 46 38.1**	**-0.1**
KARP				SG	**Sb**	**00 46 46.8**	**+0.8**
STIA	**Sitia Lasithi**	**0.59**	**278**	P	**Pg**	**00 46 38.0**	**-1.6**
STIA				S	**Sg**	**00 46 47.5**	**0.0**
FRMA	**Ierapetra Chan**	**0.89**	**264**	P	**Pg**	**00 46 42.2**	**-2.9**
FRMA				S	**Sg**	**00 46 55.4**	**-1.3**
	comp=E,302nm,0.5s						
NPS	**Neapolis**	**0.99**	**279**	P	**Pg**	**00 46 46.9**	**-0.1**
NPS				S	**Sg**	**00 47 00.6**	**+0.6**
NPS				AML	AML	00 47 08.5	
	comp=N,1133μm,0.6s						
NPS				AML	AML	00 47 08.8	
	comp=E,1094μm,0.8s						
NPS	**Neapolis**	**0.99**	**279**	P	**Pg**	**00 46 46.7**	**-0.3**
NPS				S	**Sg**	**00 47 00.9**	**+0.9**
	comp=E,542nm,0.5s						
HRKL	**Herakleio**	**1.41**	**278**	PN	**Pn**	**00 46 53.6**	**+0.7**
HRKL				SN	**Sn**	**00 47 13.4**	**+2.3**
NIS1	**Nisyros Isl.**	**1.51**	**11**	P	**Pn**	**00 46 55.4**	**+1.0**
NIS1	**Nisyros Isl.**	**1.51**	**11**	P	**Pn**	**00 46 55.3**	**+1.0**
NIS1	**Nisyros Isl.**	**1.51**	**11**	PN	**Pn**	**00 46 55.6**	**+1.2**
ARG	**Arkhangelos**	**1.54**	**44**	P	**Pb**	**00 46 56.1**	**+0.1**
ARG				S	**Sb**	**00 47 16.3**	**+1.1**
ARG				AML	AML	00 47 23.6	
	comp=N,596μm,0.5s						
ARG				AML	AML	00 47 26.9	
	comp=E,664μm,0.8s						
ARG	**Arkhangelos**	**1.54**	**44**	P	**Pb**	**00 46 56.5**	**+0.5**
ARG				S	**Sg**	**00 47 17.5**	**+0.1**
	comp=E,315nm,0.7s						
ARG	**Arkhangelos**	**1.54**	**44**	PN	**Pn**	**00 46 55.5**	**+0.8**
IDI	**Anoyia**	**1.58**	**277**	P	**Pn**	**00 46 57.1**	**+1.8**
KOSK	**Kos Island**	**1.64**	**5**	PN	**Pn**	**00 46 57.4**	**+1.4**
SIVA	**Sivas**	**1.64**	**267**	P	**Pn**	**00 46 57.8**	**+1.7**
THR6	**Thira Island,**	**1.68**	**318**	P	**Pn**	**00 46 57.6**	**+0.9**
THR3	**Thira Island,**	**1.72**	**319**	P	**Pn**	**00 46 56.3**	**-0.9**
BODT	**Bodrum**	**1.98**	**12**	PN	**Pn**	**00 47 02.2**	**+1.4**
BDRM	**Kayabasi**	**2.01**	**15**	*i* P	**Pn**	**00 47 01.0**	**-0.2**
BDRM				*i* S	**Sn**	**00 47 24.4**	**-1.6**
BDRM				IAML		00 47 35.0	
	comp=N,56nm,0.6s						
TURN	**Turunc**	**2.02**	**35**	*i* P	**Pn**	**00 47 02.7**	**+1.3**
TURN				*i* S	**Sn**	**00 47 27.1**	**+0.7**
TURN				IAML		00 47 39.0	
	comp=E,68nm,0.6s						
TURN	**Turunc**	**2.02**	**35**	PN	**Pn**	**00 47 02.7**	**+1.3**
APE	**Apeiranthos**	**2.20**	**332**	P	**Pn**	**00 47 04.5**	**+0.6**
APE				S	**Sn**	**00 47 30.9**	**+0.1**
	comp=E,128nm,0.5s						
APE	**Apeiranthos**	**2.20**	**332**	PN	**Pn**	**00 47 05.1**	**+1.2**
DALY	**Dalyan (Mula)**	**2.26**	**41**	*i* P	**Pn**	**00 47 06.1**	**+1.4**
DALY				*i* S	**Sb**	**00 47 36.3**	**+0.2**
DALY				IAML		00 47 46.0	
	comp=N,45nm,0.7s						
DALY				IAML		00 47 48.0	
	comp=E,69nm,1.0s						
DALY	**Dalyan (Mula)**	**2.26**	**41**	PN	**Pn**	**00 47 05.9**	**+1.2**
YER	**Yerkesik**	**2.34**	**30**	P	**Pn**	**00 47 07.6**	**+1.8**
YER	**Yerkesik**	**2.34**	**30**	PN	**Pn**	**00 47 06.9**	**+1.1**
DDIM	**Aydin, Didim**	**2.36**	**8**	*i* P	**Pn**	**00 47 02.5**	**-3.5**
DDIM				*i* S	**Sn**	**00 47 31.6**	**-3.0**
FETY	**Fethiye**	**2.39**	**50**	PN	**Pn**	**00 47 07.4**	**+0.9**
MULA	**Mugla, Merkez-**	**2.46**	**29**	*i* P	**Pn**	**00 47 09.2**	**+1.8**
MULA				*i* S	**Sb**	**00 47 41.1**	**-0.8**
AKAS	**Kas**	**2.54**	**63**	*i* P	**Pn**	**00 47 07.4**	**-1.1**
AKAS				*i* S	**Sn**	**00 47 38.1**	**-1.1**
AKAS	**Kas**	**2.54**	**63**	PN	**Pn**	**00 47 09.0**	**+0.4**
GCAM	**G?zelcaml?**	**2.60**	**8**	*i* P	**Pn**	**00 47 10.6**	**+1.3**
GCAM				IAML		00 47 46.0	
	comp=E,49nm,0.8s						
GCAM				IAML		00 47 49.0	
	comp=N,63nm,0.8s						
AYDN	**Tasoluk**	**2.68**	**19**	*i* P	**Pn**	**00 47 12.5**	**+2.1**
CAEL	**Denizli, Camel**	**2.85**	**45**	*i* P	**Pn**	**00 47 15.2**	**+2.3**
CAEL				IAML		00 48 08.0	
	comp=N,62nm,0.6s						
CAEL				IAML		00 48 10.0	
	comp=E,64nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**2.95**	**17**	PN	**Pn**	**00 47 16.3**	**+2.0**
GOLH	**Golhisar**	**3.07**	**46**	*i* P	**Pn**	**00 47 17.5**	**+1.6**
GOLH				IAML		00 48 10.0	
	comp=N,27nm,1.1s						
AKUM	**Antalya-Kumluc**	**3.12**	**66**	*i* P	**Pn**	**00 47 18.0**	**+1.6**
AKUM				IAML		00 47 57.0	
	comp=E,22nm,0.7s						
AKUM				IAML		00 48 04.0	
	comp=N,27nm,2.1s						
KORT	**Korkueli**	**3.43**	**56**	*i* P	**Pn**	**00 47 22.6**	**+1.7**
KORT				*i* S	**Sn**	**00 47 57.8**	**-3.5**
KORT				IAML		00 48 10.0	
	comp=E,27nm,1.3s						
MANT	**Manisa**	**3.65**	**22**	*i* P	**Pn**	**00 47 23.8**	**-0.2**
BRDR	**BURDUR-Merkez**	**3.68**	**45**	*i* P	**Pn**	**00 47 28.6**	**+4.4**
ZEDA	**zmir-Bergama**	**3.85**	**3**	*i* P	**Pn**	**00 47 28.2**	**+1.8**
ZEDA				IAML		00 48 24.0	
	comp=E,16nm,1.4s						
USAK	**Uak-Merkez**	**4.00**	**26**	*i* P	**Pn**	**00 47 29.6**	**+0.9**
USAK				IAML		00 48 17.0	
	comp=E,40nm,1.4s						
DURS	**Dursunbey**	**4.67**	**16**	*i* P	**Pn**	**00 47 37.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**31.51**	**232**	P	**P**	**00 52 48.2**	**-1.1**
	comp=E,0.4nm,0.5s,baz=30,slow=8.7,SNR=6.7						
MKAR	**Makanchi Array**	**42.67**	**57**	P	**P**	**00 54 23.8**	**0.0**
	comp=E,0.4nm,0.8s,baz=275,slow=7.7,SNR=6.1						
ZALV	**Zalesovo Beam**	**44.06**	**46**	P	**P**	**00 54 35.4**	**+0.5**
	comp=E,0.6nm,0.5s,baz=275,slow=7.4,SNR=2.7						

IDC ***18*** *00:52:22.3±52.0, 16°.83S×176°.17W, h574km±66km, mb3.1/3, mb1 3.2/4, mb1mx2.8/27, mbtmp4.0/4, Error ellipse: s-maj=859.2km s-min=117.4km az=78.0*
NEIC ***18*** *00:52:24.9±2.0, 17°.3S±0°.2×176°.7W±0°.1, h555km±8km, mb4.1/15, Error ellipse: s-maj=26.2km s-min=12.3km az=143.0*

ISC 18 00:52:24.9±0.8, 17°.3S±0°.1×176°.7W±0°.1, h550km, n26, σ1§49/25, mb4.1/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.08**	**264**	P	**P**	**00 53 58.7**	**+3.2**
	1.2nm,0.3s,baz=73,slow=5.0,SNR=5.7						
MSVF	**Nonsavu**	**5.08**	**264**	P	**P**	**00 53 56.1**	**+0.6**
AFI	**Afiamalu**	**5.75**	**55**	P	**P**	**00 54 01.0**	**-0.4**
NIUE	**Niue**	**6.64**	**107**	P	**P**	**00 54 10.3**	**+0.9**
RAO	**Raoul Island**	**12.00**	**185**		**P**	**00 55 02.1**	**-1.2**
BSWZ	**Blackbirch Sta**	**25.70**	**197**	P	**P**	**00 57 11.5**	**-0.2**
PPTF	**Pamatai, Papee**	**25.84**	**95**	P	**P**	**00 57 12.8**	**-0.5**
THZ	**Tophouse**	**26.02**	**198**	P	**P**	**00 57 14.4**	**-0.1**
THZ				IAmb	IAmb	00 57 31.6	
	comp=Z,34nm,1.2s						
DCZ	**Deep Cove**	**31.22**	**202**	P	**P**	**00 58 01.3**	**+1.7**
DCZ				IAmb	IAmb	00 58 02.7	
	comp=Z,3.5nm,1.0s						
ARMA	**Armidale**	**31.72**	**240**	P	**P**	**00 58 02.7**	**-1.5**
ARMA				IAmb	IAmb	00 58 12.7	
	comp=Z,7.3nm,1.1s						
CAN	**Canberra**	**35.44**	**233**	P	**P**	**00 58 32.8**	**-2.5**
CAN				IAmb	IAmb	00 58 38.3	
	comp=Z,8.4nm,1.1s						
TOO	**Toolangi**	**38.89**	**231**	P	**P**	**00 59 04.7**	**+1.2**
TOO				IAmb	IAmb	00 59 19.2	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**40.42**	**241**	P	**P**	**00 59 16.5**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=90,slow=10,SNR=2.5						
BBOO	**Buckleboo**	**45.19**	**241**	P	**P**	**00 59 53.2**	**+0.1**
BBOO				IAmb	IAmb	01 00 02.3	
	comp=Z,15nm,1.1s						
WR0	**Warramunga Arr**	**46.21**	**259**	P	**P**	**01 00 00.5**	**-0.7**
WR0				IAmb	IAmb	01 00 06.9	
	comp=Z,2.5nm,1.1s						
WB0	**Warramunga Arr**	**46.37**	**259**	P	**P**	**01 00 01.6**	**-0.7**
WB0				IAmb	IAmb	01 00 10.9	
	comp=Z,3.0nm,1.1s						
WB2	**Warramunga Arr**	**46.39**	**259**	P	**P**	**01 00 00.9**	**-1.6**
WRAB	**Tennant Creek**	**46.40**	**259**	P	**P**	**00 59 58.9**	**-3.6**
WRA	**Warramunga Arr**	**46.41**	**259**	P	**P**	**01 00 02.1**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.0,SNR=10						
WRA	**Warramunga Arr**	**46.41**	**259**	IAmb	IAmb	01 00 02.3	
	comp=Z,0.1nm,1.1s						
AS31	**Alice Springs**	**46.59**	**254**	P	**P**	**01 00 02.5**	**-1.5**
ASAR	**Alice Springs**	**46.59**	**254**	P	**P**	**01 00 03.9**	**-0.1**
	comp=Z,4.2nm,0.6s,baz=87,slow=8.1,SNR=74						
ASAR	**Alice Springs**	**46.59**	**254**	P	**P**	**01 00 02.8**	**-1.1**
KNRA	**Kununurra**	**52.23**	**263**	P	**P**	**01 00 45.2**	**-0.3**
KNRA				IAmb	IAmb	01 00 47.4	
	comp=Z,4.6nm,0.9s						
SZCU	**Shurtz Canyon**	**80.86**	**46**	P	**P**	**01 03 43.2**	**+1.0**
SDCO	**Great Sand Dun**	**86.27**	**49**	P	**P**	**01 04 08.4**	**-0.7**

WEL 18 01:03:42.7±1.3, 35°S±9°×17°9W±°, h33km, M3.9/9, ML4.1/9,
MLv3.9/9, Error ellipse: s-maj=0.0km s-min=0.0km az=154.8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.72**	**222**	P	Pn	01 04 37.1	-0.7
MXZ				S	Sn	01 05 19.6	-0.7
WMGZ	**Waiomatatini S**	**3.85**	**218**	P	Pn	01 04 40.3	+0.7
WMGZ				S	Sn	01 05 25.5	+1.9
PKGZ	**Pakihiroa**	**4.08**	**221**	P	Pn	01 04 41.9	-0.9
PKGZ				S	Sn	01 05 29.9	+0.6
PUZ	**Puketiti**	**4.12**	**217**	P	Pn	01 04 43.4	0.0
PUZ				S	Sn	01 05 31.0	+0.6
HAZ	**Te Kaha**	**4.15**	**224**	P	Pn	01 04 43.4	-0.2
HAZ				S	Sn	01 05 34.0	+3.0
TWGZ	**Tauwhareparae**	**4.34**	**219**	P	Pn	01 04 46.8	+0.4
TWGZ				S	Sn	01 05 37.1	+1.2
RUGZ	**Raukumara Rang**	**4.35**	**223**	P	Pn	01 04 45.7	-0.9
RUGZ				S	Sn	01 05 36.8	+0.6
CNGZ	**Carnagh Statio**	**4.47**	**214**	P	Pn	01 04 49.0	+0.9
RIGZ	**Rimuhau**	**4.86**	**216**	P	Pn	01 04 53.1	-0.4
RIGZ				S	Sn	01 05 49.9	+1.3
RAGZ	**Rawiri**	**4.88**	**220**	P	Pn	01 04 52.5	-1.3
URZ	**Urewera**	**4.88**	**224**	P	Pn	01 04 52.3	-1.4
URZ				S	Sn	01 05 49.2	+0.2
CTZ	**Chatham Island**	**9.02**	**171**	P	Pn	01 05 54.6	+4.1
CTZ				S	Sn	01 07 29.4	-1.5

ISK ***18*** *01:04:34.7, 35°.18N×29°.19E, h88km, ML3.0/14*
NIC ***18*** *01:04:34.2±0.0, 34°.89N×29°.25E, h23km±2km, Ml3.5/3*
DDA ***18*** *01:04:36.1, 35°.31N×29°.12E, h30km±2km, ML2.5*

ISC 18 01:04:32.8±1.6, 35°.00N±0°.05×29°.14E±0°.04, h26km±15km, n41, σ1§39/59, 1C-1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**1.21**	**17**	⇓P	**Pb**	**01 04 55.6**	**+0.6**
AKAS	**Kas**	**1.29**	**17**	*i* P	**Pn**	**01 04 55.5**	**+0.1**
AKAS				*i* S	**Sn**	**01 05 09.1**	**-2.9**
AKAS				IAML		01 05 14.0	
	comp=N,111nm,0.9s						
AKAS	**Kas**	**1.29**	**17**	PN	**Pb**	**01 04 56.3**	**-0.2**
AKAS				SN	**Sn**	**01 05 12.0**	**+0.1**
ARG	**Arkhangelos**	**1.47**	**326**	PN	**Pb**	**01 04 59.3**	**-0.2**
ARG				SN	**Sb**	**01 05 17.5**	**-0.3**
FETY	**Fethiye**	**1.64**	**358**	PN	**Pn**	**01 05 00.3**	**+0.3**
FETY				SN	**Sn**	**01 05 19.9**	**-0.4**
AKUM	**Antalya-Kumluc**	**1.65**	**36**	*i* P	**Pn**	**01 05 01.0**	**+0.9**
AKUM				*i* S	**Sn**	**01 05 18.0**	**-2.4**
AKUM				IAML		01 05 23.0	
	comp=E,52nm,0.2s						
ELL	**Elmali**	**1.86**	**19**	PN	**Pn**	**01 05 03.6**	**+0.5**
ELL	**Elmali**	**1.86**	**19**	P	**Pb**	**01 05 05.4**	**-0.8**
ELL				S	**Sb**	**01 05 30.3**	**+1.3**
DALY	**Dalyan (Mula)**	**1.86**	**348**	*i* P	**Pn**	**01 05 04.3**	**+1.3**
DALY	**Dalyan (Mula)**	**1.86**	**348**	PN	**Pn**	**01 05 03.9**	**+0.9**
TURN	**Turunc**	**1.92**	**338**	*i* P	**Pn**	**01 05 05.0**	**+1.3**
TURN				*i* S	**Sn**	**01 05 27.4**	**+0.3**
TURN				IAML		01 05 31.0	
	comp=N,48nm,0.3s						
TURN				IAML		01 05 34.0	
	comp=E,52nm,0.4s						
TURN	**Turunc**	**1.92**	**338**	PN	**Pn**	**01 05 05.1**	**+1.3**
CAEL	**Denizli, Camel**	**2.13**	**4**	*i* P	**Pn**	**01 05 08.0**	**+1.1**
CAEL				*i* S	**Sn**	**01 05 32.5**	**-0.1**
CAEL				IAML		01 05 37.0	
	comp=E,66nm,0.8s						
CAEL				IAML		01 05 38.0	
	comp=N,56nm,0.3s						
KORT	**Korkueli**	**2.23**	**26**	*i* P	**Pn**	**01 05 08.7**	**+0.5**
KORT				*i* S	**Sn**	**01 05 35.5**	**+0.5**
KORT				IAML		01 05 45.0	
	comp=E,31nm,0.6s						
KORT				IAML		01 05 45.0	
	comp=N,32nm,0.4s						
KORT	**Korkueli**	**2.23**	**26**	PN	**Pn**	**01 05 09.5**	**+1.3**
NIS1	**Nisyros Isl.**	**2.26**	**316**	PN	**Pn**	**01 05 10.5**	**+2.0**
GOLH	**Golhisar**	**2.26**	**9**	*i* P	**Pb**	**01 05 11.0**	**-2.0**
GOLH				*i* S	**Sn**	**01 05 37.6**	**+1.8**
GOLH				IAML		01 05 40.0	
	comp=N,68nm,0.4s						
OSC1	**CSNet OBS 1**	**2.32**	**129**	P	**Pn**	**01 05 09.2**	**-0.1**
OSC1				S	**Sn**	**01 05 36.8**	**-0.1**
MULA	**Mugla, Merkez-**	**2.35**	**344**	*i* P	**Pb**	**01 05 12.5**	**-2.1**
MULA				*i* S	**Sn**	**01 05 37.2**	**-0.8**
MULA				IAML		01 05 42.0	
	comp=N,50nm,0.4s						
MULA				IAML		01 05 44.0	
	comp=E,66nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.47**	**356**	*i* P	**Pn**	**01 05 13.2**	**+1.6**
TAVA				IAML		01 05 43.0	
	comp=N,65nm,0.2s						
TAVA				IAML		01 05 44.0	
	comp=E,45nm,0.4s						
BDRM	**Kayabasi**	**2.48**	**327**	*i* P	**Pn**	**01 05 12.7**	**+1.1**
BDRM				*i* S	**Sn**	**01 05 38.0**	**-3.0**
BDRM				IAML		01 05 42.0	
	comp=N,28nm,0.4s						
BUCA	**Burdur, Bucak-**	**2.60**	**26**	*i* P	**Pn**	**01 05 15.8**	**+2.6**
BUCA				*i* S	**Sn**	**01 05 41.7**	**-2.3**
AKMS	**Akamas**	**2.62**	**89**

ZKR	Zakros	0.48	272	P	Pb	01 24 01.7	-0.8	
ZKR				S	Sb	01 24 09.1	-0.6	
ZKR				AML	AML	01 24 11.7		
	comp=N,1570µm,0.3s							
ZKR				AML	AML	01 24 12.6		
	comp=E,2759µm,0.3s							
ZKR	Zakros	0.48	272	P	Pb	01 24 01.7	-0.8	
ZKR				S	Sb	01 24 09.9	+0.2	
	comp=E,1µm,0.3s							
ZKR	Zakros	0.48	272	PG	Pb	01 24 02.1	-0.4	
ZKR				SG	Sb	01 24 09.5	-0.2	
KARP	Karpathos	0.53	33	P	Pg	01 24 02.7	+0.5	
KARP				S	Sb	01 24 10.3	-1.0	
KARP				AML	AML	01 24 12.8		
	comp=N,4150µm,0.2s							
KARP				AML	AML	01 24 15.2		
	comp=E,3316µm,0.2s							
KARP	Karpathos	0.53	33	P	Pg	01 24 02.4	+0.3	
KARP				S	Sb	01 24 11.1	-0.2	
	comp=E,2µm,0.2s							
KARP	Karpathos	0.53	33	PG	Pg	01 24 02.5	+0.3	
KARP				SG	Sg	01 24 10.2	+1.1	
STIA	Sitia Lasithi	0.59	280	P	Pg	01 24 03.1	-0.1	
STIA				S	Sb	01 24 11.9	-1.0	
FRMA	Ierapetra Chan	0.88	265	P	Pg	01 24 07.2	-1.5	
FRMA				S	Sg	01 24 19.2	-0.9	
	comp=E,222nm,0.5s							
NPS	Neapolis	0.99	280	P	Pn	01 24 11.8	-0.1	
NPS				S	Sn	01 24 25.1	-1.0	
NPS				AML	AML	01 24 31.2		
	comp=E,923µm,0.3s							
NPS				AML	AML	01 24 31.5		
	comp=N,532µm,0.6s							
NPS	Neapolis	0.99	280	P	Pn	01 24 11.8	-0.1	
NPS				S	Sn	01 24 25.7	-0.4	
	comp=N,435nm,0.5s							
HRKL	Herakleio	1.41	279	PN	Pg	01 24 18.8	0.0	
HRKL				SN	Sn	01 24 38.3	+1.8	
NIS1	Nisyros Isl.	1.53	11	P	Pb	01 24 20.2	-0.2	
NIS1	Nisyros Isl.	1.53	11	P	Pn	01 24 19.1	-0.3	
NIS1	Nisyros Isl.	1.53	11	PN	Pb	01 24 20.1	-0.3	
NIS1				SN	Sg	01 24 40.5	-0.5	
ARG	Arkhangelos	1.55	44	P	Pb	01 24 21.3	+0.6	
ARG				S	Sb	01 24 41.0	+0.5	
ARG				AML	AML	01 24 48.4		
	comp=N,482µm,0.6s							
ARG				AML	AML	01 24 49.3		
	comp=E,568µm,0.6s							
ARG	Arkhangelos	1.55	44	P	Pn	01 24 20.3	+0.6	
ARG				S	Sg	01 24 42.0	+0.4	
	comp=E,268nm,0.6s							
ARG	Arkhangelos	1.55	44	PN	Pn	01 24 20.5	+0.8	
IDI	Anoyia	1.58	277	P	Pg	01 24 22.0	0.0	
SIVA	Sivas	1.64	268	P	Pg	01 24 23.2	0.0	
KOSK	Kos Island	1.65	5	PN	Pb	01 24 21.8	-0.7	
THR6	Thira Island,	1.69	318	P	Pn	01 24 21.9	+0.2	
THR3	Thira Island,	1.73	319	P	Pb	01 24 22.7	-1.1	
BODT	Bodrum	2.00	12	PN	Pn	01 24 26.9	+1.0	
BDRM	Kayabasi	2.03	15	*i* P	Pn	01 24 27.1	+0.8	
BDRM				*i* S	Sb	01 24 53.7	-0.6	
TURN	Turunc	2.04	35	*i* P	Pn	01 24 27.3	+0.9	
TURN				*i* S	Sb	01 24 55.4	+0.7	
TURN				IAML		01 25 02.0		
	comp=N,36nm,0.7s							
TURN				IAML		01 25 04.0		
	comp=E,53nm,0.5s							
TURN	Turunc	2.04	35	PN	Pn	01 24 27.6	+1.2	
VAM	Vamos	2.15	279	P	Pb	01 24 31.2	+0.3	
APE	Apeiranthos	2.22	333	P	Pn	01 24 29.3	+0.4	
APE	Apeiranthos	2.22	333	PN	Pn	01 24 29.8	+0.9	
DALY	Dalyan (Mula)	2.28	41	*i* P	Pn	01 24 29.7	0.0	
DALY				*i* S	Sb	01 25 01.9	+0.5	
DALY				IAML		01 25 13.0		
	comp=N,35nm,0.6s							
DALY				IAML		01 25 15.0		
	comp=E,30nm,0.5s							
DALY	Dalyan (Mula)	2.28	41	PN	Pn	01 24 30.8	+1.1	
YER	Yerkesik	2.36	30	P	Pn	01 24 32.1	+1.2	
YER	Yerkesik	2.36	30	PN	Pn	01 24 31.9	+1.0	
MULA	Mugla, Merkez-	2.48	29	*i* P	Pb	01 24 35.2	-1.4	
MULA				*i* S	Sb	01 25 05.2	-2.1	
AKAS	Kas	2.55	63	*i* P	Pn	01 24 33.7	+0.1	
AKAS				*i* S	Sn	01 24 58.6	-6.2	
AKAS				IAML		01 25 13.0		
	comp=N,20nm,0.8s							
AYDN	Tasoluk	2.70	18	*i* P	Pn	01 24 36.5	+0.9	
CAEL	Denizli, Camel	2.87	45	*i* P	Pb	01 24 41.2	-2.1	
CAEL				*i* S	Sb	01 25 20.2	+1.6	
CAEL				IAML		01 25 29.0		
	comp=E,44nm,0.9s							
CAEL				IAML		01 25 33.0		
	comp=N,46nm,0.7s							
TAVA	DENIZLI_Tavas	2.91	35	*i* P	Pn	01 24 40.2	+1.6	
TAVA				*i* S	Sb	01 25 17.3	-2.5	
TAVA				IAML		01 25 29.0		
	comp=N,14nm,0.9s							
TAVA				IAML		01 25 30.0		
	comp=E,14nm,0.7s							
GOLH	Golhisar	3.09	46	*i* P	Pn	01 24 41.2	+0.3	
GOLH				*i* S	Sn	01 25 17.9	-0.2	
GOLH				IAML		01 25 36.0		
	comp=N,19nm,1.1s							
TORD	Torodi Ar. Bea	31.50	232	P	P	01 30 17.4	+3.2	
	comp=N,0.1nm,0.4s,baz=46,slow=8.3,SNR=1.6							
MKAR	Makanchi Array	42.68	57	P	P	01 31 49.0	-0.1	
	comp=N,0.2nm,0.4s,baz=280,slow=7.6,SNR=4.6							
ZALV	Zalesovo Beam	44.07	46	P	P	01 31 59.0	-1.0	
	comp=N,0.4nm,0.5s,baz=280,slow=8.6,SNR=2.3							

NOU ***18*** *01:32:23.7, 39˚.14S × 173˚.58E, h0km, MLv3.6, Off W. Coast of N. Island, N.Z.*

WEL 18 01:32:25.1, 39˚S ± 2˚ × 17˚4E ± ˚, h14km ± 2km, M3.4/34, ML3.6/33, MLv3.4/34, Error ellipse: s-maj=0.0km s-min=0.0km az=83.0, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBEZ	Newall Road No	0.09	170	P	Pg	01 32 28.9	+0.7
NBEZ				S	Sg	01 32 31.9	+1.6
PKE	Pukeiti	0.11	98	P	Pb	01 32 28.2	+0.2
KHEZ	Kahui Hut	0.17	132	P	Pb	01 32 29.9	-0.3
KHEZ				S	Sb	01 32 33.3	-0.2
NEZ	North Egmont	0.21	115	P	Pg	01 32 30.1	+0.1
NMEZ	Namu Road	0.23	174	P	Pg	01 32 30.7	+0.4
DREZ	Durham Road	0.27	92	P	Pb	01 32 31.6	-0.3
PREZ	Palmer Road	0.29	124	P	Pg	01 32 31.7	+0.4
MHEZ	Mangahewa	0.38	75	P	Pb	01 32 33.7	0.0
LREZ	Lake Rotokare	0.51	123	P	Pb	01 32 35.6	-0.3
VRZ	Vera Road	0.71	86	P	Pg	01 32 38.8	-0.2
HIZ	Hauiti	1.03	50	P	Pb	01 32 43.9	-0.9
WAZ	Wanganui	1.05	123	P	Pb	01 32 44.5	-0.6
PKVZ	Pokaka	1.17	96	P	Pn	01 32 46.2	-0.9
TWVZ	Taurewa	1.24	85	P	Pn	01 32 47.3	-0.8
MTVZ	Mangateitei	1.28	100	P	Pn	01 32 48.3	-0.3
FWVZ	Far West T-bar	1.33	94	P	Pn	01 32 49.2	-0.2
WTVZ	West Tongariro	1.36	88	P	Pn	01 32 49.3	-0.4
NGZ	Ngauruhoe	1.36	90	P	Pn	01 32 49.4	-0.4
WNVZ	Wahianoa	1.37	97	P	Pn	01 32 49.6	-0.3
NNVZ	North Ngauruho	1.38	89	P	Pn	01 32 49.6	-0.4
SNVZ	South Ngauruho	1.39	91	P	Pn	01 32 49.9	-0.4
KRVZ	Karewarewa	1.40	87	P	Pn	01 32 49.8	-0.4
TUVZ	Tukino	1.41	94	P	Pn	01 32 50.3	-0.1
OTVZ	Oturere	1.41	90	P	Pn	01 32 50.1	-0.5
NTVZ	North Tongarir	1.42	87	P	Pn	01 32 50.2	-0.5
TMVZ	Te Maari	1.45	88	P	Pn	01 32 50.6	-0.4
ETVZ	East Tongariro	1.45	89	P	Pn	01 32 50.7	-0.3
KATZ	Kakaramea	1.45	82	P	Pn	01 32 50.7	-0.4
MOVZ	Moawhango	1.50	99	P	Pn	01 32 51.8	+0.2
OHWZ	Ohakea	1.53	133	P	Pb	01 32 52.6	-0.6
RATZ	Rangitukua	1.53	79	P	Pn	01 32 52.6	+0.6
WATZ	Wairara	1.54	73	P	Pn	01 32 52.8	+0.6
TLZ	Tolley Road	1.57	58	P	Pn	01 32 52.0	-0.6
RITZ	Rihia Road	1.58	83	P	Pb	01 32 53.7	-0.4
DUWZ	D'Urville Isla	1.62	178	P	Pn	01 32 52.9	-0.4
KUTZ	Kaahu Road	1.69	67	P	Pn	01 32 54.5	+0.3
BHHZ	Black Hill Sta	1.75	101	P	Pb	01 32 56.5	-0.5
TSZ	Takapari Road	1.85	119	P	Pb	01 32 58.5	-0.3
KIW	Kapiti Island	1.87	154	P	Pn	01 32 57.1	+0.4
POWZ	Post Office Ro	1.91	130	P	Pb	01 32 59.2	-0.6
OGWZ	Otaki Gorge	1.93	149	P	Pn	01 32 58.4	+1.0
QRZ	Quartz Range	1.93	211	P	Pn	01 32 56.0	-1.5
TOZ	Tahuroa Road	1.94	42	P	Pn	01 32 57.3	-0.4
PNHZ	Pukenui	1.96	113	P	Pb	01 33 00.3	-0.3
MRZ	Mangatainoka R	1.99	139	P	Pb	01 32 60.0	-1.1
KRHZ	Kereru	2.01	104	P	Pb	01 33 01.4	-0.1
KWHZ	Kaweka Forest	2.01	98	P	Pb	01 33 00.5	-1.1
MRHZ	Matea Rd	2.03	81	P	Pn	01 33 00.1	+1.1
BKZ	Black Stump Fm	2.06	90	P	Pn	01 33 00.5	+1.2
TCW	Tory Channel	2.06	171	P	Pn	01 32 59.3	+0.1
HRRZ	Handcock Road	2.06	68	P	Pb	01 33 02.9	+0.6
HSRZ	Hossack Road	2.06	66	P	Pb	01 33 02.9	+0.5
NNZ	Nelson	2.07	190	P	Pn	01 32 59.1	-0.3
DVHZ	Dannevirke	2.11	123	P	Pb	01 33 03.2	+0.1
NGRZ	Ngongotaha	2.12	60	P	Pn	01 33 01.3	+1.1
PRWZ	Peri Road	2.13	131	P	Pb	01 33 02.9	-0.7
CAW	Cannon Point	2.14	155	P	Pn	01 33 01.4	+1.0
HOWZ	Holdsworth Sta	2.14	144	P	Pb	01 33 02.3	-1.3
WPHZ	Waipukurau	2.19	115	P	Pb	01 33 05.4	+0.9
MCHZ	McNeill Hill	2.23	98	P	Pb	01 33 06.4	+1.3
TIWZ	Tintock	2.23	136	P	Pb	01 33 04.9	-0.4
TUWZ	Tuamarina	2.25	178	P	Pn	01 33 01.9	+0.1
NMHZ	Naumai	2.30	89	P	Pb	01 33 07.3	+0.8
WTAZ	Waiatarua	2.31	15	P	Pn	01 33 03.0	+0.2
MTW	Mount Morrison	2.35	148	P	Pb	01 33 05.9	-1.3
MTHZ	Maungataniwha	2.35	83	P	Pb	01 33 06.0	-1.3
BHW	Baring Head	2.36	161	P	Pb	01 33 06.8	-0.5
BFZ	Birch Farm	2.38	130	P	Pb	01 33 06.3	-1.4
MUGZ	Murupara	2.39	74	P	Pb	01 33 08.3	+0.4
ANWZ	Angora Road	2.39	123	P	Pg	01 33 09.8	-1.2
MSWZ	Moikau Station	2.48	155	P	Pb	01 33 08.5	-0.9
PXZ	Pawanui	2.48	111	P	Pg	01 33 12.2	-0.5
TMWZ	Te Maipa	2.48	142	P	Pb	01 33 08.3	-1.2
RTZ	Ruatahuna	2.51	78	P	Pb	01 33 07.1	+1.6
PAWZ	Paruwai Farm	2.51	152	P	Pb	01 33 09.3	-0.6
BSWZ	Blackbirch Sta	2.53	180	P	Pn	01 33 07.4	+1.6
RAHZ	Arahi	2.54	85	P	Pb	01 33 09.7	-0.7
PLWZ	Palliser	2.62	156	P	Pb	01 33 11.0	-0.9
TRWZ	Traveller	2.62	148	P	Pb	01 33 12.4	+0.5
THZ	Tophouse	2.68	195	P	Pn	01 33 08.1	+0.2
URZ	Urewera	2.71	71	P	Pb	01 33 11.4	-2.0
KUZ	Kuaotunu	2.84	32	P	Pn	01 33 09.5	-0.6
KNZ	Kokohu	2.98	88	P	Pn	01 33 11.8	-0.1
DSZ	Denniston Nort	3.00	211	P	Pn	01 33 11.7	-0.5
RUGZ	Raukumara Rang	3.24	69	P	Pb	01 33 19.9	-2.6
KHZ	Kahutara	3.24	184	P	Pn	01 33 16.5	+1.0
WCZ	Waipu Caves	3.26	7	P	Pn	01 33 16.0	+0.2
LTZ	Lake Taylor	3.79	198	P	Pn	01 33 23.9	+0.8
OUZ	Omahuta	3.96	357	P	Pn	01 33 25.9	+0.5
INZ	Inchbonnie	3.98	206	P	Pn	01 33 25.9	+0.2
OXZ	Oxford	4.36	198	P	Pn	01 33 30.6	-0.3
GCSZ	Gaunt Creek Bo	4.91	212	P	Pn	01 33 38.3	-0.2
FOZ	Fox Glacier	5.30	214	P	Pn	01 33 42.7	-1.2
TMZ	Timaru	5.62	201	P	Pn	01 33 47.3	-0.9
JCZ	Jackson Bay	6.19	216	P	Pn	01 33 55.1	-1.0

UCR ***18*** *02:34:17.5±1.1, 6˚.91N × 81˚.98W, h20km, MW3.9*
UPA ***18*** *02:34:19.8±1.3, 7˚.45N × 81˚.85W, h1km ± 7km, MW4.2*

ISC 18 02:34:18.4±1.8, 7˚.38N ± 0˚.08 × 81˚.83W ± 0˚.03, h3km ± 11km, n35, σ1§02/50, 3D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMAL	Guarumal, Vera	0.70	57	*e*P	Pn	02 34 34.6	-0.7
GMAL				*e*S	Sb	02 34 44.1	+0.8
REME3	Remedios, Chir	0.84	360	*e*P	Pb	02 34 35.5	-0.1
NANC3	Nancito, Chiri	0.86	6	*e*P	Pg	02 34 34.9	0.0
NANC3				*e*S	Sn	02 34 50.7	+0.2
MARI3	Mariato, Verag	0.87	72	*e*P	Pn	02 34 37.8	+0.2
MARI3				*e*S	Sn	02 34 50.6	-0.2
CACAO	El Cacao, Vera	0.96	92	‖ *i*P	Pn	02 34 39.1	+0.3
CACAO				*e*S	Sn	02 34 53.7	+0.8
STIA3	Santiago, Vera	1.11	50	*e*P	Pn	02 34 42.2	+1.3
CHIR3	Chiriqui UPA,	1.12	334	‖ *i*P	Pg	02 34 39.8	-0.2
CHIR3				*e*S	Sn	02 34 56.8	-0.2
DVD	David	1.22	330	*e*S	Sg	02 34 58.5	+1.0
GUAL3	Gualaca, Chiri	1.23	338	*e*P	Pn	02 34 41.5	-1.1
GUAL3				*e*S	Sn	02 35 00.1	+0.3
PSOM3	Paja de Sombre	1.39	339	*e*P	Pn	02 34 44.1	-0.6
BCO2	Palmira	1.50	333	*e*P	Pn	02 34 46.3	0.0
BCO2				*e*S	Sb	02 35 06.8	+0.3
CDITO	Canoas	1.57	319	*e*P	Pb	02 34 47.7	-0.5
AZU	Azuero	1.59	75	‖ *i*P	Pg	02 34 48.9	-0.2
AZU				*e*S	Sg	02 35 11.6	+1.8
AZU	Azuero	1.59	75	*e*P	Pg	02 34 48.7	-0.4
BRU2	Volcan	1.64	329	*e*P	Pb	02 34 48.7	-0.7
BRU2				*e*S	Sn	02 35 09.7	-0.3
BRU2	Volcan	1.64	329	*e*P	Pb	02 34 49.7	+0.3
PNME	Penonome	1.85	53	*e*P	Pb	02 34 51.6	-1.3
PNME				*e*S	Sg	02 35 17.4	-0.5
LPLA	Las Palmas La	2.01	325	*e*P	Pn	02 34 54.1	+0.8
VTON	El Valle, Cocl	2.09	54	*e*P	Pb	02 34 57.4	+0.3
VTON				*e*S	Sg	02 35 26.4	+0.6
POTG	Potrero Grande	2.10	323	*e*P	Pb	02 34 56.0	-1.0
RIOS	Rincon, Osa	2.12	308	*e*P	Pn	02 34 54.3	-0.5
DRK0	Durika	2.34	323	*e*P	Pn	02 34 57.4	-0.5
DRK0				*e*S	Sn	02 35 27.0	-0.2
DRK0	Durika	2.34	323	*e*P	Pb	02 34 58.8	+0.9
ZANG	Zanguenga, Cho	2.50	51	*e*P	Pb	02 35 03.4	-0.5
ZANG				*e*S	Sb	02 35 36.5	+1.5
ZANG	Zanguenga, Cho	2.50	51	*e*P	Pb	02 35 02.9	-1.0
BCIP	Isla Barro Col	2.65	48	*e*P	Pb	02 35 05.1	-1.5
BCIP				*e*S	Sb	02 35 38.2	-1.3
BCIP	Isla Barro Col	2.65	48	*e*P	Pb	02 35 05.0	-1.6
PEZE	Perez Zeledon,	2.70	318	*e*P	Pn	02 35 03.5	+0.6
UPA	Univ. de Panam	2.77	55	*e*P	Pb	02 35 06.8	-1.8
UPA				*e*S	Sb	02 35 42.7	-0.4
CDM	Cerro de Muert	2.88	319	*e*P	Pn	02 35 07.1	+1.4
RIMA	Rio Macho	3.11	320	*e*P	Pn	02 35 10.1	+1.6
LCR2	La Lucha 2	3.18	318	*e*P	Pn	02 35 10.8	+1.3
CVTR	Volcan Turrial	3.24	324	*e*P	Pn	02 35 13.2	+2.6
VTUC	Crater, Volcan	3.25	324	*e*P	Pb	02 35 14.7	-2.2
PLVR	Palo Verde	4.56	311	*e*P	Pn	02 35 28.6	+0.1

BJI ***18*** *02:41:01.3±0.0, 30˚.24S × 178˚.66W, h128km, mB5.3/7, mb5.0/14*
NOU ***18*** *02:41:01.0, 30˚.29S × 177˚.34W, h161km, mb5.0, Kermadec Islands, New Zealand*
IDC ***18*** *02:41:04.8±0.6, 29˚.97S × 178˚.41W, h141km ± 5km, mb4.3/14, mb1 4.4/15, mb1mx4.2/39, mbtmp4.7/15, MS3.5/4, Ms1 3.5/4, ms1mx3.1/30, Error ellipse: s-maj=16.7km s-min=13.4km az=91.0*
NEIC ***18*** *02:41:04.4±2.2, 30˚.12S ± 0˚.07 × 178˚.5W ± 0˚.1, h144km ± 4km, mb4.9/36, Error ellipse: s-maj=17.5km s-min=9.7km az=97.0*
GCMT ***18*** *02:41:05.4±0.3, 30˚.17S ± 0˚.03 × 178˚.03W ± 0˚.02, h159km ± 3km, MW4.9/90, Moment Tensor Solution. s32,c35; s90,c103; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.55±.11; Mθθ -0.96±.17; Mϕϕ -0.59±. 16; Mrθ 0.66±.11; Mrϕ 1.24±.17; Mθϕ 2.56±.10; Best double couple: Mo 3.10500 × 10^16 NP1: ϕs 109.00000°, δ 31.00000°, λ 30.00000°. NP2: ϕs 353.00000°, δ 75.00000°, λ 118.00000°. Principal axes: T 3.5940, Plg52.0000°, Azm295.0000°; N -0.9810, Plg27.0000°, Azm165.0000°; P -2.6150, Plg25.0000°, Azm62.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 02:41:04.7±0.4, 30˚.28S ± 0˚.05 × 178˚.37W ± 0˚.07, h150km, n194, σ2§10/196, mb4.8/37, 2D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	1.08	21	P	Pn	02 41 27.9	-2.3
GLKZ				S	Sn	02 41 45.6	-4.1
RAO	Raoul Island	1.09	21	P	Pn	02 41 28.2	-2.1
	893nm,0.3s,baz=98,slow=9.5,SNR=90						
RAO				LR	LR	02 41 38.5	
	comp=Z,288nm,18.8s,baz=230,slow=40						
RAO				S	Sn	02 41 45.1	-4.7
	5µm,0.3s,baz=107,slow=20,SNR=48						
RAO	Raoul Island	1.09	21	P	Pn	02 41 28.2	-2.1
RIZ	Raoul Island	1.10	21	P	Pn	02 41 28.3	-2.1
RIZ				S	Sn	02 41 46.4	-3.4
MXZ	Matakaoa Point	7.77	200	Pn	Pn	02 42 52.0	-2.9
MXZ	Matakaoa Point	7.77	200	P	Pn	02 42 51.3	-3.7
MXZ				S	Sn	02 44 19.6	-2.1
WMGZ	Waiomatatini S	7.98	199	S	Sn	02 44 23.4	-3.3
HAZ	Te Kaha	8.11	202	P	Pn	02 42 56.5	-3.0
HAZ				S	Sn	02 44 28.2	-1.6
PKGZ	Pakihiroa	8.14	200	P	Pn	02 42 56.1	-3.9
PKGZ				S	Sn	02 44 24.8	-5.9
RUGZ	Raukumara Rang	8.34	202	P	Pn	02 42 59.3	-3.4
RUGZ				S	Sn	02 44 33.2	-2.2
TWGZ	Tauwhareparae	8.44	200	P	Pn	02 43 00.9	-3.0
TWGZ				S	Sn	02 44 35.7	-2.0
CNGZ	Carnagh Statio	8.66	198	P	Pn	02 43 04.2	-2.6
MWZ	Matawai	8.72	202	P	Pn	02 43 03.4	-4.3
MWZ				S	Sn	02 44 40.7	-3.8
URZ	Urewera	8.80	204	P	Pn	02 43 04.6	-4.0
	0.9nm,0.3s,baz=301,slow=24,SNR=14						
URZ				S	Sn	02 44 43.6	-2.6
	20nm,0.3s,baz=15,slow=23,SNR=7.6						
URZ	Urewera	8.80	204	Pn	Pn	02 43 05.9	-2.7
URZ	Urewera	8.80	204	P	Pn	02 43 05.2	-3.4
URZ				S	Sn	02 44 42.1	-4.1
RIGZ	Rimuhau	8.99	200	P	Pn	02 43 06.5	-4.7
MUGZ	Murupara	9.11	205	P	Pn	02 43 10.2	-2.6
MUGZ				S	Sn	02 44 49.8	-4.0
PRGZ	Paritu Road	9.16	199	P	Pn	02 43 09.7	-3.8
PRGZ				S	Sn	02 44 51.4	-3.7
RTZ	Ruatahuna	9.16	204	P	Pn	02 43 07.8	-5.7
RTZ				S	Sn	02 44 52.2	-2.9
SNGZ	Shannon Statio	9.19	201	P	Pn	02 43 09.6	-4.3
SNGZ				S	Sn	02 44 51.9	-3.9
RAHZ	Arahi	9.40	202	P	Pn	02 43 13.5	-3.1
RAHZ				S	Sn	02 44 57.6	-3.1
MTHZ	Maungataniwha	9.42	203	P	Pn	02 43 13.3	-3.7
MTHZ				S	Sn	02 44 57.9	-3.5
ARHZ	Aropaoanui	9.74	202	P	Pn	02 43 17.6	-3.5
ARHZ				S	Sn	02 45 04.3	-4.7
BKZ	Black Stump Fm	9.82	204	P	Pn	02 43 18.4	-3.9
BKZ				S	Sn	02 45 05.7	-5.4
MCHZ	McNeill Hill	10.00	203	P	Pn	02 43 20.8	-3.8
MCHZ				S	Sn	02 45 08.8	-6.5
TMVZ	Te Maari	10.07	207	P	Pn	02 43 25.0	-0.7
KWHZ	Kaweka Forest	10.08	204	P	Pn	02 43 20.1	-5.5
KWHZ				S	Sn	02 45 12.5	-4.7
OTVZ	Oturere	10.13	207	P	Pn	02 43 25.1	-1.4
SNVZ	South Ngauruho	10.16	207	P	Pn	02 43 24.3	-2.6
KRHZ	Kereru	10.29	203	P	Pn	02 43 24.1	-4.4
PXZ	Pawanui	10.48	201	P	Pn	02 43 26.9	-4.1
BFZ	Birch Farm	11.27	201	P	Pn	02 43 36.3	-5.0
NFK	Norfolk Island	11.97	272	P	P	02 43 58.8	+1.6
MSVF	Nonsavu	12.91	345	P	Pn	02 44 00.5	-2.3
	2.9nm,0.3s,baz=144,slow=13,SNR=15						
MSVF				LR	LR	02 47 46.3	
	comp=Z,183nm,21.3s,baz=189,slow=32						
MSVF	Nonsavu	12.91	345	Pn	Pn	02 44 00.6	-2.2
MSVF	Nonsavu	12.91	345	P	Pn	02 44 03.4	+0.6
PINNC	Pines Island,	14.81	298	P	P	02 44 32.2	+3.4
OXZ	Oxford	15.11	208	P	Pn	02 44 31.6	+1.4
MQZ	McQueen's Vall	15.19	206	P	Pn	02 44 32.2	+0.9
OUENC	Ouen Island, N	15.38	297	P	P	02 44 39.3	+4.1
YATNC	Mamie plateau,	15.55	298	P	P	02 44 41.7	+4.7
ONTNC	Ouen Toro	15.74	297	P	P	02 44 43.8	+4.7
RPZ	Rata Peaks	15.83	209	P	Pn	02 44 38.9	-0.4
	1.6nm,0.3s,baz=233,slow=2.2,SNR=7.0						
RPZ				S	Sn	02 47 21.0	-15
	1.1nm,0.3s,baz=323,slow=23,SNR=7.3						
DZM	Mont Dzumac	15.88	297	*e*P	P	02 44 43.5	+2.7
	67nm,0.8s						
DZM				*e*LR	LR	02 48 28.0	
	comp=Z,275nm,26.9s						
DZM	Mont Dzumac	15.88	297	P	P	02 44 43.5	+2.7
	2.4nm,0.3s,baz=143,slow=20,SNR=18						
DZM				LR	LR	02 49 11.6	
	comp=Z,220nm,19.2s,baz=208,slow=31						
DZM	Mont Dzumac	15.88	297		Pn	02 44 39.0	-1.1
DZM				IAmb	IAmb	02 44 50.3	
	comp=Z,55nm,0.9s						
DZM	Mont Dzumac	15.88	297	P	P	02 44 43.9	+3.1
NOUC	Port Laguerre	15.97	297	P	P	02 44 44.7	+3.0
KOUNC	Koumac, New Ca	18.40	298	P	Pn	02 45 11.9	+1.7
LHI	Lord Howe Isla	19.40	261	P	P	02 45 18.0	-1.1
	baz=19,SNR=17						
LHI	Lord Howe Isla	19.40	261	P	Pn	02 45 21.4	-0.5
L

CASY	**Casey**	**55.10**	**208**	P	**P**	**02 50 20.7**	**0.0**
MORW	**Morawa**	**56.26**	**253**	P	**P**	**02 50 29.5**	**-0.2**
	baz=56,SNR=3.4						
MMRI	**Maumere**	**59.31**	**278**	P	**P**	**02 50 50.7**	**-0.4**
QSPA	**South Pole Qui**	**59.83**	**180**	P	**P**	**02 50 57.8**	**+3.8**
	comp=Z,44nm,0.7s,baz=48,slow=1.6,SNR=15						
QSPA	**South Pole Qui**	**59.83**	**180**	P	**P**	**02 50 56.2**	**+2.2**
MAW	**Mawson**	**72.31**	**201**	P	**P**	**02 52 14.2**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=126,slow=7.4,SNR=4.3						
MAW	**Mawson**	**72.31**	**201**	IAmb	IAmb	02 52 17.2	
	comp=Z,4.0nm,1.4s						
KSM	**Kuching**	**74.68**	**281**	P	**P**	**02 52 27.3**	**-0.9**
KSM				IAmb	IAmb	02 52 29.2	
	comp=Z,18nm,1.0s						
SYO	**Syowa Base**	**77.16**	**193**	*e*X	**P**	**02 52 38.7**	**-2.6**
SYO	**Syowa Base**	**77.16**	**193**	*e*PcP	**PcP**	**02 52 51.8**	**+0.4**
MJAR	**Matsushiro Arr**	**77.96**	**326**	P	**P**	**02 52 44.5**	**-1.6**
	comp=Z,1.3nm,0.5s,baz=182,slow=4.7,SNR=4.2						
MAJO	**Matsushiro**	**77.96**	**326**	P	**P**	**02 52 44.8**	**-1.4**
MAJO				IAmb	IAmb	02 52 50.5	
	comp=Z,22nm,1.4s						
SNAA	**Sanae**	**78.29**	**179**	P	**P**	**02 52 49.1**	**+1.5**
SNAA	**Sanae**	**78.29**	**179**	P	**P**	**02 52 49.1**	**+1.5**
VNA3	**Neumayer Olymp**	**78.45**	**176**	P	**P**	**02 52 50.2**	**+1.8**
VNA2	**Neumayer--Watz**	**78.88**	**177**	P	**P**	**02 52 53.6**	**+2.8**
	baz=194,slow=4.7						
VNA1	**Neumayer--Stat**	**79.11**	**177**	P	**P**	**02 52 54.4**	**+2.4**
H03S2	**Juan Fernandez**	**80.80**	**124**	T	T	04 22 35.1	
	baz=238,slow=74,SNR=7.7						
H03S1	**Juan Fernandez**	**80.81**	**124**	T	T	04 22 39.3	
	baz=238,slow=74,SNR=6.7						
H03S3	**Juan Fernandez**	**80.82**	**124**	T	T	04 22 46.0	
	baz=238,slow=74,SNR=7.9						
H03N3	**Juan Fernandez**	**80.99**	**123**	T	T	04 22 46.0	
	baz=241,slow=72,SNR=7.9						
H03N2	**Juan Fernandez**	**81.00**	**123**	T	T	04 22 45.4	
	baz=241,slow=72,SNR=9.1						
H03N1	**Juan Fernandez**	**81.01**	**123**	T	T	04 22 41.2	
	baz=241,slow=72,SNR=14						
DLV	**T Lat**	**81.82**	**289**	P	**P**	**02 53 07.7**	**+0.1**
PLCA	**Paso Flores**	**82.83**	**133**	P	**P**	**02 53 14.4**	**+2.0**
	comp=Z,6.1nm,1.0s,baz=238,slow=4.7,SNR=5.8						
PLCA	**Paso Flores**	**82.83**	**133**	IAmb	IAmb	02 53 23.7	
	comp=Z,4.1nm,1.1s						
KSRS	**Korea Array**	**84.05**	**320**	P	**P**	**02 53 18.9**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=154,slow=6.0,SNR=8.1						
KSAR	**Wonju Array Be**	**84.06**	**320**	P	**P**	**02 53 17.9**	**-0.4**
IPM	**Ipoh**	**84.15**	**279**	P	**P**	**02 53 18.4**	**-1.1**
IPM				IAmb	IAmb	02 53 20.2	
	comp=Z,21nm,0.9s						
BI02	**San Fabin de**	**84.62**	**129**	P	**P**	**02 53 22.1**	**+0.5**
BI02				IAmb	IAmb	02 53 24.2	
	comp=Z,8.1nm,0.9s						
KULM	**Kulim**	**84.89**	**279**	P	**P**	**02 53 22.1**	**-1.1**
KULM				IAmb	IAmb	02 53 24.1	
	comp=Z,13nm,0.8s						
RPSI	**Rantau Prapat**	**85.05**	**276**	P	**P**	**02 53 22.6**	**-1.3**
RPSI				IAmb	IAmb	02 53 24.1	
	comp=Z,21nm,1.2s						
PETK	**Petropavlovsk-**	**85.61**	**346**	P	**P**	**02 53 25.9**	**+0.2**
	comp=Z,4.0nm,0.8s,baz=134,slow=8.4,SNR=8.7						
PETK	**Petropavlovsk-**	**85.61**	**346**	P	**P**	**02 53 25.0**	**-0.8**
NJ2	**Nanjing**	**85.92**	**311**	*e*P	**P**	**02 53 28.9**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
UBPT	**Khong Chiam**	**86.08**	**290**	P	**P**	**02 53 29.3**	**+0.3**
UBPT				IAmb	IAmb	02 53 31.1	
	comp=Z,19nm,1.0s						
MT01	**Popeta**	**86.20**	**127**	P	**P**	**02 53 30.4**	**+1.1**
MT01				IAmb	IAmb	02 53 31.8	
	comp=Z,15nm,0.9s						
ISA	**Isabella, Lake**	**86.44**	**45**	P	**P**	**02 53 31.3**	**+1.0**
USRK	**Ussuriysk Ar.**	**86.88**	**327**	P	**P**	**02 53 32.1**	**0.0**
	comp=Z,3.9nm,1.0s,baz=138,slow=4.0,SNR=6.9						
NVAR	**Mina Array Bea**	**88.37**	**43**	P	**P**	**02 53 41.2**	**+1.5**
	comp=Z,1.8nm,0.9s,baz=220,slow=7.9,SNR=8.3						
NVAR	**Mina Array Bea**	**88.37**	**43**	P	**P**	**02 53 39.5**	**-0.2**
W13A	**Hualapai Mount**	**88.95**	**48**	P	**P**	**02 53 43.8**	**+1.3**
TUC	**Tucson**	**89.28**	**52**	P	**P**	**02 53 45.2**	**+1.2**
CN2	**Changchun**	**89.85**	**323**	*e*P	**P**	**02 53 46.0**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**90.77**	**330**	P	**P**	**02 53 51.1**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=112,slow=1.0,SNR=9.3						
GO02	**Mina Guanaco**	**92.31**	**121**	P	**P**	**02 53 58.1**	**-0.5**
GO02				IAmb	IAmb	02 54 07.8	
	comp=Z,14nm,1.2s						
TX31	**Lajitas Ar. Si**	**92.59**	**57**	P	**P**	**02 54 00.0**	**+0.6**
TX31				IAmb	IAmb	02 54 19.1	
	comp=Z,11nm,1.2s						
CMAR	**Chiang Mai Arr**	**93.06**	**289**	P	**P**	**02 54 04.1**	**+2.4**
	comp=Z,1.7nm,0.7s,baz=152,slow=3.5,SNR=7.1						
KMI	**Kunming**	**93.48**	**297**	*e*P	**P**	**02 54 03.4**	**-0.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN	**Xi'an**	**93.78**	**307**	P	**P**	**02 54 05.8**	**+1.1**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**95.92**	**314**	*e*P	**P**	**02 54 13.0**	**-1.4**
HHC				PP	**PP**	**02 58 06.8**	**-2.3**
HHC				S	**S**	**03 05 18.6**	**-1.1**
HHC				SS	**SS**	**03 11 52.6**	**-1.9**
HHC				pmax	pmax		
	comp=Z,17nm,1.4s						
HHC				pmax	pmax		
	comp=Z,68nm,7.4s						
LZH	**Lanzhou**	**98.39**	**307**	*e*P	**P**	**02 54 21.4**	**-4.4**
LZH				pP	pP	02 54 59.4	-4.0
LZH				sP	sP	02 55 17.4	-1.5
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
YKA	**Yellowknife Ar**	**105.47**	**26**	PKiKP	**PKiKP**	**02 59 08.3**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=255,slow=1.3,SNR=5.3						
WMQ	**Urumqi**	**112.90**	**308**	*e*PKP	**PKiKP**	**02 59 24.0**	**+0.3**
WMQ				LR	LR		
	comp=Z,350nm,20.9s						
WMQ				LR	LR		
	comp=Z,340nm,22.7s						
WMQ				LR	LR		
	comp=Z,950nm,17.5s						
MKAR	**Makanchi Array**	**117.45**	**310**	PKP	**PKPdf**	**02 59 31.1**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=188,slow=0.7,SNR=12						
ZALV	**Zalesovo Beam**	**117.73**	**318**	PKP	**PKPdf**	**02 59 31.3**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=90,slow=0.4,SNR=4.7						
ZALV	**Zalesovo Beam**	**117.73**	**318**		**PKPdf**	**02 59 31.7**	**-0.8**
AAK	**Ala-Archa**	**121.78**	**304**	PKP	**PKiKP**	**02 59 41.1**	**0.0**
	comp=Z,1.9nm,0.7s,baz=145,slow=3.7,SNR=6.6						
ARU	**Arti**	**132.79**	**321**	PKPdf	**PKiKP**	**03 00 02.4**	**0.0**
GEYT	**Alibeck**	**133.22**	**295**	PKP	**PKiKP**	**03 00 03.9**	**0.0**
	comp=Z,1.8nm,0.5s,baz=190,slow=6.8,SNR=5.2						
GEYT				SKPbc	**SKPab**	**03 03 19.6**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=67,slow=3.7,SNR=5.6						
HAMF	**Hammerfest**	**137.75**	**349**	*e*PKPdf	**PKiKP**	**03 00 11.2**	**-0.9**
ARCES	**ARCESS Array B**	**138.40**	**348**	PKhKP	PKPpre	03 00 01.2	
	comp=Z,6.9nm,1.1s,baz=349,slow=1.9,SNR=6.4						
KLMR	**Klimovskoe**	**140.50**	**332**	*e*PKPdf	**PKPdf**	**03 00 11.4**	**-3.9**
KLMR				AMP		03 00 18.4	
	comp=Z,20nm,1.5s						
N2IH	**Innhavet**	**141.34**	**351**	*e*PKPdf	**PKPdf**	**03 00 17.7**	**+1.1**
GNI	**Garni**	**143.73**	**298**	PKPdf	PKPbc	03 00 20.9	+0.8
KBZ	**Khabaz**	**144.78**	**304**	PKP	**PKPdf**	**03 00 23.0**	**-0.4**
	comp=Z,8.4nm,0.9s,baz=171,slow=3.7,SNR=20						
OBN	**Obninsk**	**144.89**	**325**		PKPbc	03 00 22.2	-0.6
KIV	**Kislovodsk**	**144.89**	**304**		**PKPdf**	**03 00 23.5**	**-0.3**
FIA1	**FINESS Array S**	**144.92**	**340**		PKPbc	03 00 21.2	-1.5
FINES	**FINESS Array B**	**144.92**	**340**	PKP	PKPbc	03 00 22.0	-0.7
	comp=Z,32nm,0.5s,baz=59,slow=3.4,SNR=356						
GEVA	**Gevas**	**145.08**	**295**		**PKPbc**	**03 00 24.1**	**-0.1**
TBLU	**Trondheim**	**146.55**	**353**	*e*PKPbc	**PKPbc**	**03 00 27.4**	**-0.2**
MARD	**Mardin**	**146.89**	**293**	PKPbc	**PKPbc**	**03 00 30.0**	**+0.4**
DOMB	**Dombas**	**147.85**	**353**	*e*PKPbc	**PKPbc**	**03 00 31.1**	**-0.2**
NB2	**NORSAR Subarra**	**148.58**	**351**	PKPab	**PKPbc**	**03 00 32.6**	**-0.6**
	baz=13,slow=2.8						
NOA	**NORSAR Array B**	**148.58**	**351**	PKPbc	**PKPbc**	**03 00 32.9**	**-0.4**
	comp=Z,7.7nm,0.8s,baz=17,slow=4.2,SNR=33						
NC602	**NORSAR Array S**	**148.83**	**351**	PKPbc	**PKPbc**	**03 00 33.5**	**-0.2**
NC602	**NORSAR Array S**	**148.83**	**351**	*e*PKPdf	**PKPdf**	**03 00 29.4**	**-0.4**
NC602				*e*PKPbc	**PKPbc**	**03 00 33.6**	**-0.2**
SKAR	**Skarslia**	**149.27**	**354**	*e*PKPdf	**PKPdf**	**03 00 30.8**	**+0.2**
SKAR				*e*PKPbc	**PKiKP**	**03 00 35.6**	**-0.5**
NACGM	**Naroch**	**149.51**	**331**	*i* PKP	**PKiKP**	**03 00 36.1**	**-0.6**
NACGM				*i* PKP	**PKiKP**	**03 00 36.1**	**-0.6**
NACGM				*i* PKP	**PKiKP**	**03 00 36.1**	**-0.6**
NACGM				*i* pPKP	**sPKPab**	**03 01 34.0**	**-0.6**
NACGM				*i* SKP		03 01 42.4	
NACGM				*i* PPP	PPP	03 03 09.8	
NACGM				*i* PPP	PPP	03 06 48.9	
NACGM				*i* SKKS		03 10 28.5	
NACGM				*i* PS		03 16 57.4	
NACGM				*i* SS	SS	03 23 50.1	+39
NACGM				*i* SSS	SSS	03 28 09.4	
OSL	**Oslo**	**149.71**	**351**	*e*PKPbc	**PKiKP**	**03 00 36.5**	**-0.4**
OSL				*e*PKPab	**PKPab**	**03 00 42.0**	**+0.3**
GAZ	**Gaziantep**	**149.74**	**293**	PKPbc	**PKiKP**	**03 00 37.4**	**-0.5**
TOKA	**Tokat**	**150.01**	**299**	PKPbc	**PKPbc**	**03 00 37.5**	**0.0**
KONO	**Kongsberg**	**150.14**	**352**	*e*PKPbc	**PKiKP**	**03 00 37.5**	**-0.3**
AKASG	**Malin Array Be**	**151.01**	**323**	PKPbc	**PKPbc**	**03 00 39.2**	**-0.2**
	comp=Z,27nm,0.8s,baz=48,slow=2.7,SNR=64						
AKASG	**Malin Array Be**	**151.01**	**323**		**PKPbc**	**03 00 38.6**	**-0.7**
BRTR	**Keskin Array B**	**152.26**	**299**	PKPbc	**PKPbc**	**03 00 42.4**	**-0.5**
	comp=Z,4.1nm,0.9s,baz=127,slow=3.3,SNR=8.6						
CLL	**Collm**	**157.35**	**341**	*i* PKPab	**PKPab**	**03 01 13.9**	**-0.4**
	comp=Z,7.0nm,0.9s						
VYHS	**Vyhne**	**157.56**	**329**	*e*PKP	**PKPdf**	**03 00 45.4**	**+2.7**
VYHS				*e*		03 01 14.0	
GERES	**GERESS Array B**	**159.30**	**337**	PKPab	**PKPab**	**03 01 22.3**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=35,slow=4.9,SNR=7.8						
GERES	**GERESS Array B**	**159.30**	**337**		**PKPab**	**03 01 22.6**	**-0.5**
OBKA	**Obir**	**160.93**	**332**	*e*P	**PKPab**	**03 01 29.6**	**-0.7**
	comp=Z,6.5nm,1.8s						
MYKA	**Terra Mystica**	**161.19**	**334**	*e*P	**PKPab**	**03 01 30.6**	**-0.7**
	comp=Z,2.1nm,0.5s						
WATA	**Walderalm**	**161.31**	**338**	*i* P	**PKPab**	**03 01 32.1**	**+0.2**
	comp=Z,3.1nm,0.9s						
WTTA	**Wattenberg**	**161.36**	**338**	*i* P	**PKPab**	**03 01 32.5**	**+0.3**
	comp=Z,4.6nm,0.8s						
RETA	**Reutte**	**161.43**	**340**	*i* P	**PKPab**	**03 01 32.7**	**+0.3**
	comp=Z,2.9nm,0.6s						
MOTA	**Moosalm**	**161.45**	**339**	*e*P	**PKPab**	**03 01 32.8**	**+0.3**
	comp=Z,4.4nm,1.0s						
ABTA	**Abfaltersbach**	**161.51**	**336**	*e*P	**PKPab**	**03 01 32.2**	**-0.6**
	comp=Z,3.6nm,1.0s						
SQTA	**Sankt Quirin**	**161.53**	**339**	*i* P	**PKPab**	**03 01 32.3**	**-0.5**
	comp=Z,4.3nm,1.1s						
FETA	**Feichten**	**161.85**	**340**	*i* P	**PKPab**	**03 01 32.7**	**-1.6**
	comp=Z,4.0nm,1.0s						
TORD	**Torodi Ar. Bea**	**162.95**	**180**	PKP	**PKPdf**	**03 00 50.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=325,slow=2.3,SNR=3.9						
TORD				PKPab	**PKPab**	**03 01 41.2**	**+1.6**
	comp=Z,3.7nm,0.8s,baz=169,slow=3.9,SNR=12						
ESDC	**Sonseca Array**	**169.56**	**25**	PKP	**PKPdf**	**03 00 54.6**	**+0.4**
	comp=Z,0.8nm,1.0s,baz=269,slow=6.4,SNR=4.0						
ESDC				PKPab	**PKPab**	**03 02 08.0**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=327,slow=4.3,SNR=4.9						

NOU ***18*** *02:52:23.8, 13.40S×171.63W, h0km, MLv2.9, Samoa Islands*
IDC 18 02:51:56.7±6.4, 16.88S×174.19W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/37, mbtmp3.8/3, MS3.5/2, Ms1 3.5/2, ms1mx2.8/37, Error ellipse: s-maj=481.7km s-min=32.4km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.75**	**39**	P	Pn	02 52 34.0	-22
DZM	**Mont Dzumac**	**18.97**	**251**	LR	LR	03 02 36.8	
	comp=Z,133nm,18.3s,baz=81,slow=34						
HNR	**Honiara**	**26.23**	**283**	LR	LR	03 06 42.6	
	comp=Z,118nm,18.8s,baz=334,slow=34						
WRA	**Warramunga Arr**	**48.79**	**258**	P	P	03 00 44.0	0.0
	0.2nm,0.3s,baz=84,slow=7.6,SNR=7.5						
ASAR	**Alice Springs**	**48.95**	**253**	P	P	03 00 45.0	-0.2
	3.0nm,0.8s,baz=88,slow=8.2,SNR=25						
NVAR	**Mina Array Bea**	**75.92**	**42**	P	P	03 03 45.8	+0.1
	0.3nm,0.6s,baz=225,slow=8.9,SNR=3.7						

IDC ***18*** *02:54:57.4±4.8, 1.10N×98.85E, h75km±35km, mb3.5/7, mb1 3.6/8, mb1mx3.3/43, mbtmp3.8/8, Error ellipse: s-maj=70.0km s-min=16.6km az=59.0*
ISC 18 02:54:59.0±1.4, 1.3N±0.2×99.0E±0.3, h86km, n12, σ1s11/12, mb3.8/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.55**	**357**	P	**Pn**	**02 55 24.9**	**-0.4**
	22nm,0.3s,baz=180,slow=9.2,SNR=44						
PSI				S	**Sn**	**02 55 43.7**	**-1.5**
	35nm,0.3s,baz=360,slow=8.8,SNR=12						
CMAR	**Chiang Mai Arr**	**17.10**	**360**	P	**P**	**02 58 55.1**	**+1.9**
	0.7nm,0.3s,baz=191,slow=11,SNR=5.3						
H08S2	**Diego Garcia H**	**27.88**	**251**	T	T	03 28 17.1	
	baz=70,slow=74,SNR=5.3						
H08S3	**Diego Garcia H**	**27.89**	**251**	T	T	03 28 17.1	
	baz=70,slow=74,SNR=4.8						
H08S1	**Diego Carcia H**	**27.90**	**251**	T	T	03 28 17.1	
	baz=70,slow=74,SNR=3.7						
WRA	**Warramunga Arr**	**40.54**	**123**	P	**P**	**03 02 29.4**	**-0.8**
	0.7nm,0.5s,baz=303,slow=9.0,SNR=8.3						
ASAR	**Alice Springs**	**41.99**	**128**	P	**P**	**03 02 41.9**	**-0.2**
	0.3nm,0.5s,baz=300,slow=7.7,SNR=2.8						
SONM	**Songino Array**	**46.85**	**7**	P	**P**	**03 03 22.1**	**+1.6**
	0.3nm,0.5s,baz=185,slow=13,SNR=2.2						
MKAR	**Makanchi Array**	**47.66**	**344**	P	**P**	**03 03 26.8**	**+0.1**
	0.4nm,0.4s,baz=159,slow=8.0,SNR=7.9						
MKAR				pP	**pP**	**03 03 47.1**	**-0.6**
	0.4nm,0.5s,baz=156,slow=9.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**53.82**	**350**	P	**P**	**03 04 12.9**	**+0.1**
	0.9nm,0.4s,baz=170,slow=6.7,SNR=3.2						
ZALV				pP	**pP**	**03 04 33.4**	**-0.9**
	0.5nm,0.3s,baz=189,slow=7.2,SNR=3.6						
FINES	**FINESS Array B**	**80.80**	**332**	P	**P**	**03 07 02.6**	**-0.4**
	1.2nm,0.9s,baz=144,slow=5.2,SNR=4.3						
ARCES	**ARCESS Array B**	**83.10**	**340**	P	**P**	**03 07 14.7**	**-0.3**
	2.1nm,1.0s,baz=72,slow=5.8,SNR=3.8						

IDC ***18*** *03:08:39.4±0.9, 35.68N×26.24E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.3/38, mbtmp3.6/3, MS3.3/2, Ms1 3.3/2, ms1mx2.4/40, Error ellipse: s-maj=221.2km s-min=15.3km az=142.0*
ATH ***18*** *03:08:42.2, 35.09N×26.83E, h10km±2km, ML3.2/6, Error ellipse: s-maj=3.7km s-min=0.8km az=334.0*
THE ***18*** *03:08:42.7, 35.11N×26.77E, h2km±2km, ML3.1/8, Error ellipse: s-maj=5.0km s-min=0.8km az=155.0*
ISK ***18*** *03:08:43.9, 35.07N×26.91E, h29km, ML3.2/8*
DDA ***18*** *03:08:44.6, 35.20N×26.94E, h7km±5km, ML2.8*
ISC 18 03:08:41.3±1.2, 35.04N±0.05×26.86E±0.03, h12km±8km, n60, σ1s46/84, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.53**	**278**	P	**Pg**	**03 08 51.5**	**-0.2**
ZKR				S	**Sg**	**03 08 58.7**	**0.0**
ZKR				AML	AML	03 09 01.9	
	comp=N,2488μm,0.3s						
ZKR				AML	AML	03 09 06.0	
	comp=E,3803μm,0.4s						
ZKR	**Zakros**	**0.53**	**278**	P	**Pg**	**03 08 51.4**	**-0.3**
ZKR				S	**Sg**	**03 08 58.9**	**+0.1**
	comp=E,2μm,0.5s						
KARP	**Karpathos**	**0.56**	**26**	P	**Pg**	**03 08 52.3**	**+0.1**
KARP				S	**Sg**	**03 08 59.5**	**-0.3**
KARP				AML	AML	03 09 02.7	
	comp=N,16204μm,0.4s						
KARP				AML	AML	03 09 02.9	
	comp=E,18113μm,0.3s						
KARP	**Karpathos**	**0.56**	**26**	P	**Pg**	**03 08 52.1**	**-0.2**
KARP				S	**Sb**	**03 09 01.1**	**-0.1**
	comp=E,9μm,0.4s						
FRMA	**Ierapetra Chan**	**0.92**	**269**	P	**Pg**	**03 08 57.2**	**-1.9**
FRMA				S	**Sg**	**03 09 09.7**	**-1.5**
	comp=E,732nm,0.5s						
NPS	**Neapolis**	**1.04**	**282**	P	**Pg**	**03 09 01.3**	**-0.1**
NPS				S	**Sg**	**03 09 15.3**	**+0.3**
NPS				AML	AML	03 09 20.9	
	comp=E,2394μm,0.8s						
NPS				AML	AML	03 09 22.0	
	comp=N,1512μm,0.5s						
NPS	**Neapolis**	**1.04**	**282**	P	**Pg**	**03 09 01.2**	**-0.2**
NPS				S	**Sg**	**03 09 14.7**	**-0.4**
	comp=N,1μm,0.8s						
HRKL	**Herakleio**	**1.47**	**281**	PN	**Pb**	**03 09 09.6**	**+1.1**
HRKL				SN	**Sn**	**03 09 28.1**	**+1.4**
KSTL	**Kastelli Herak**	**1.49**	**281**	P	Pn	03 09 03.7	-4.2
KSTL				S	**Sn**	**03 09 21.1**	**-6.2**
ARG	**Arkhangelos**	**1.56**	**41**	P	**Pn**	**03 09 10.4**	**+1.5**
ARG				S	**Sn**	**03 09 30.2**	**+1.1**
ARG				AML	AML	03 09 38.0	
	comp=N,1155μm,0.8s						
ARG				AML	AML	03 09 38.9	
	comp=E,1523μm,0.7s						
ARG	**Arkhangelos**	**1.56**	**41**	P	**Pn**	**03 09 10.3**	**+1.4**
ARG				S	**Sg**	**03 09 31.3**	**-0.3**
	comp=E,680nm,0.7s						
ARG	**Arkhangelos**	**1.56**	**41**	PN	**Pn**	**03 09 09.7**	**+0.8**
ARG				SN	**Sn**	**03 09 28.3**	**-0.8**
NIS1	**Nisyros Isl.**	**1.58**	**9**	P	**Pn**	**03 09 09.8**	**+0.6**
NIS1				S	**Sb**	**03 09 30.8**	**+0.3**
NIS1				AML	AML	03 09 42.3	
	comp=E,1670μm,0.5s						
NIS1				AML	AML	03 09 44.6	
	comp=N,2192μm,0.5s						
NIS1	**Nisyros Isl.**	**1.58**	**9**	P	**Pn**	**03 09 09.8**	**+0.6**
NIS1				S	**Sn**	**03 09 30.3**	**+0.7**
	comp=N,1μm,0.6s						
NIS1	**Nisyros Isl.**	**1.58**	**9**	PN	**Pn**	**03 09 10.1**	**+0.9**
NIS1				SN	**Sn**	**03 09 29.1**	**-0.5**
IDI	**Anoyia**	**1.63**	**279**	P	**Pn**	**03 09 11.3**	**+1.3**
IDI				S	**Sn**	**03 09 32.2**	**+1.2**
IDI				AML	AML	03 09 42.4	
	comp=N,841μm,0.6s						
IDI				AML	AML	03 09 42.6	
	comp=E,753μm,0.5s						
IDI	**Anoyia**	**1.63**	**279**	PN	**Pn**	**03 09 11.9**	**+1.9**
SIVA	**Sivas**	**1.68**	**270**	P	**Pn**	**03 09 12.3**	**+1.7**
KOSK	**Kos Island**	**1.71**	**3**	PN	**Pn**	**03 09 12.0**	**+1.1**
SANT	**Santorini**	**1.75**	**320**	PN	**Pn**	**03 09 13.1**	**+1.5**
THR8	**Santorini-Mono**	**1.77**	**321**	P	**Pn**	**03 09 12.0**	**+0.3**
THR6	**Thira Island,**	**1.77**	**318**	P	**Pn**	**03 09 12.4**	**+0.6**
SNT1	**Gialos, Santor**	**1.80**	**320**	P	**Pn**	**03 09 12.7**	**+0.5**
SNT1				S	**Sn**	**03 09 34.4**	**-0.6**
	comp=E,650nm,0.7s						
SNT5	**Nea Kammeni, S**	**1.81**	**319**	P	**Pn**	**03 09 12.7**	**+0.4**
THR3	**Thira Island,**	**1.81**	**319**	P	**Pn**	**03 09 12.9**	**+0.6**
THT2	**Imerovigli**	**1.82**	**320**	PN	**Pn**	**03 09 14.2**	**+1.7**
BODT	**Bodrum**	**2.05**	**10**	P	**Pn**	**03 09 15.6**	**-0.1**
BODT	**Bodrum**	**2.05**	**10**	PN	**Pn**	**03 09 16.3**	**+0.6**
TURN	**Turunc**	**2.06**	**33**	*i* P	**Pn**	**03 09 16.1**	**+0.3**
TURN				*i* S	**Sn**	**03 09 41.0**	**-0.4**
TURN				IAML		03 09 50.0	
	comp=N,116nm,0.4s						
TURN				IAML		03 09 51.0	
	comp=E,66nm,0.4s						
TURN	**Turunc**	**2.06**	**33**	PN	**Pn**	**03 09 16.7**	**+0.9**
BDRM	**Kayabasi**	**2.07**	**13**	*i* P	**Pn**	**03 09 17.2**	**+1.2**
BDRM				*i* S	**Sn**	**03 09 40.6**	**-1.2**
BDRM				IAML		03 09 49.0	
	comp=N,69nm,0.6s						
VAM	**Vamos**	**2.21**	**280**	P	**Pn**	**03 09 20.7**	**+2.9**
APE	**Apeiranthos**	**2.29**	**332**	P	**Pn**	**03 09 18.9**	**-0.1**
APE				S	**Sn**	**03 09 46.0**	**-1.2**
	comp=N,162nm,0.5s						
DALY	**Dalyan (Mula)**	**2.29**	**39**	*i* P	**Pn**	**03 09 21.4**	**+2.4**
DALY				*i* S	**Sn**	**03 09 48.4**	**+1.3**
DALY				IAML		03 10 03.0	
	comp=N,89nm,0.6s						
DALY	**Dalyan (Mula)**	**2.29**	**39**	PN	**Pn**	**03 09 20.2**	**+1.2**
YER	**Yerkesik**	**2.38**	**28**	PN	**Pn**	**03 09 21.4**	**+1.1**
IMMV	**Iera Moni Meta**	**2.39**	**281**	P	**Pn**	**03 09 22.5**	**+2.2**
FETY	**Fethiye**	**2.41**	**48**	P	**Pn**	**03 09 21.1**	**+0.5**
FETY	**Fethiye**	**2.41**	**48**	PN	**Pn**	**03 09 21.5**	**+0.9**
DDIM	**Aydin, Didim**	**2.43**	**7**	*i* P	**Pn**	**03 09 23.1**	**+2.2**
DDIM				*i* S	**Sn**	**03 09 50.3**	**-0.2**
DDIM				IAML		03 10 03.0	
	comp=E,50nm,0.7s						
DDIM				IAML		03 10 03.0	
	comp=N,52nm,0.6s						
MULA	**Mugla, Merkez-**	**2.51**	**28**	*i* P	**Pn**	**03 09 24.9**	**+2.9**
MULA				*i*

	1.0nm,0.8s,baz=208,slow=9.5,SNR=4.8								
SONM	**Songino Array**	**27.69**	**299**	P		**P**	**03 22 03.7**	**-0.9**	
	0.9nm,0.8s,baz=98,slow=8.1,SNR=4.8								
TLY	**Talaya**	**29.84**	**307**	LR		LR	03 34 03.9		
	comp=Z,18nm,18.1s,baz=121,slow=36								
ZALV	**Zalesovo Beam**	**41.30**	**310**	P		**P**	**03 24 01.2**	**-0.4**	
	0.9nm,0.5s,baz=90,slow=6.1,SNR=5.0								
ZALV				LR		LR	03 41 00.0		
	comp=Z,14nm,18.2s,baz=84,slow=36								
MKAR	**Makanchi Array**	**44.05**	**300**	P		**P**	**03 24 24.1**	**0.0**	
	0.9nm,0.7s,baz=88,slow=7.8,SNR=8.5								
ILAR	**Eielson Array**	**46.41**	**34**	P		**P**	**03 24 43.2**	**+0.7**	
	0.5nm,0.8s,baz=238,slow=6.7,SNR=4.2								
WRA	**Warramunga Arr**	**59.95**	**190**	P		**P**	**03 26 20.7**	**-1.8**	
	0.4nm,0.8s,baz=5.4,slow=6.2,SNR=5.2								
ASAR	**Alice Springs**	**63.67**	**190**	P		**P**	**03 26 46.4**	**-1.2**	
	0.3nm,0.7s,baz=12,slow=6.0,SNR=3.3								
NOA	**NORSAR Array B**	**72.30**	**338**	P		**P**	**03 27 41.7**	**+0.2**	
	0.8nm,0.7s,baz=38,slow=6.1,SNR=5.3								
NOA				LR		LR	04 02 33.9		
	comp=Z,10nm,21.8s,baz=315,slow=38								

IDC 18 03:31:43.9±1.3, 30.45N×142.95E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/37, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=51.5km s-min=23.9km az=92.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.41**	**191**	Pn	Pn	03 32 39.5	+1.2
	4.2nm,0.3s,baz=263,slow=23,SNR=6.4						
JCJ				Sn	Sn	03 33 15.2	-4.3
	6.0nm,0.3s,baz=288,slow=20,SNR=4.0						
MKAR	**Makanchi Array**	**48.92**	**307**	P	P	03 40 31.7	+0.1
	0.2nm,0.5s,baz=79,slow=7.5,SNR=3.3						
WRA	**Warramunga Arr**	**50.78**	**190**	P	P	03 40 45.5	-0.6
	0.5nm,0.4s,baz=10,slow=7.9,SNR=9.4						
ASAR	**Alice Springs**	**54.51**	**190**	P	P	03 41 13.4	-0.1
	0.5nm,0.6s,baz=12,slow=7.2,SNR=7.1						
YKA	**Yellowknife Ar**	**68.89**	**29**	P	P	03 42 50.1	0.0
	0.2nm,0.7s,baz=279,slow=6.1,SNR=4.0						

VAO 18 03:33:57.1±0.4, 15.53S×72.18W, h113km, mb4.6
NEIC 18 03:33:58.2±1.8, 15.76S±0.02×72.25W±0.09, h127km±7km, mb4.4/24, Error ellipse: s-maj=12.0km s-min=3.2km az=87.0
IDC 18 03:34:01.4±0.8, 15.42S×72.00W, h146km±6km, mb4.0/8, mb1 4.1/12, mb1mx3.8/31, mbtmp4.4/12, MS3.5/1, Ms1 3.5/1, ms1mx2.5/25, Error ellipse: s-maj=18.2km s-min=13.3km az=48.0

ISC 18 03:33:58.1±0.4, 15.70S±0.05×72.17W±0.06, h132km, n109, σ1s85/122, mb4.4/14, 8C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**3.18**	**147**	⇑*i* P	**Pn**	**03 34 48.3**	**+1.2**
AP01				*i* S	**Sn**	**03 35 23.8**	**-1.3**
AP01				IAML		03 35 27.1	
	comp=E,5μm,0.2s						
AP01	**Chacalluta**	**3.18**	**147**		**Pn**	**03 34 48.0**	**+0.8**
PB16	**IPOC Station P**	**3.66**	**136**	⇑*i* P	**Pn**	**03 34 55.9**	**+1.9**
PB16				*i* S	**Sn**	**03 35 37.3**	**+0.3**
PB16	**IPOC Station P**	**3.66**	**136**		**Pn**	**03 34 55.8**	**+1.9**
LPAZ	**La Paz**	**3.93**	**99**	P	**Pn**	**03 34 59.4**	**+1.8**
	comp=E,14nm,0.3s,baz=313,slow=8.0,SNR=326						
LPAZ				S	**Sn**	**03 35 38.8**	**-4.8**
	comp=E,3.2nm,0.3s,baz=314,slow=19,SNR=3.8						
LPAZ	**La Paz**	**3.93**	**99**	⇑*i* P	**Pn**	**03 34 59.8**	**+2.2**
LPAZ				*i* S	**Sn**	**03 35 45.6**	**+2.0**
LPAZ	**La Paz**	**3.93**	**99**	Pn	**Pn**	**03 35 00.1**	**+2.6**
MNMC	**Minye Minye**	**4.21**	**145**	⇑*i* P	**Pn**	**03 35 01.2**	**+0.3**
MNMC				*i* S	**Sn**	**03 35 46.0**	**-3.7**
MNMC				IAML		03 35 53.6	
	comp=E,1μm,0.1s						
MNMC	**Minye Minye**	**4.21**	**145**	Pn	**Pn**	**03 35 01.0**	**+0.1**
PSGC	**Pisagua**	**4.34**	**154**	⇑*i* P	**Pn**	**03 35 02.0**	**-0.5**
PSGC				*i* S	**Sn**	**03 35 48.5**	**-4.1**
PSGCX	**Pisagua**	**4.34**	**154**	Pn	**Pn**	**03 35 01.7**	**-0.8**
PB11	**IPOC Station P**	**4.70**	**150**	⇑*i* P	**Pn**	**03 35 06.6**	**-0.7**
PB11				*i* S	**Sn**	**03 35 57.3**	**-3.9**
PB11				IAML		03 35 58.9	
	comp=E,692nm,0.4s						
PB11	**IPOC Station P**	**4.70**	**150**		**Pn**	**03 35 06.8**	**-0.6**
TA02	**Huaiquique**	**4.94**	**157**	*eP*	**Pn**	**03 35 10.7**	**+0.2**
TA02				*i* S	**Sn**	**03 36 03.5**	**-3.4**
TA02	**Huaiquique**	**4.94**	**157**		**Pn**	**03 35 10.1**	**-0.4**
TA01	**Diego Aracena**	**5.20**	**159**	⇑*i* P	**Pn**	**03 35 13.1**	**-0.8**
TA01				*i* S	**Sn**	**03 36 08.7**	**-4.3**
TA01				IAML		03 36 11.6	
	comp=N,613nm,0.2s						
TA01	**Diego Aracena**	**5.20**	**159**	Pn	**Pn**	**03 35 13.4**	**-0.5**
PB08	**IPOC Station P**	**5.27**	**147**	⇑*i* P	**Pn**	**03 35 15.0**	**-0.2**
PB08				*i* S	**Sn**	**03 36 12.2**	**-3.0**
PB08				IAML		03 36 14.6	
	comp=N,463nm,0.2s						
PB08	**IPOC Station P**	**5.27**	**147**		**Pn**	**03 35 15.0**	**-0.2**
NNA	**Nana**	**5.85**	**309**	P	**Pn**	**03 35 22.3**	**-0.4**
	comp=N,44nm,0.3s,baz=130,slow=10,SNR=75						
NNA				S	**Sn**	**03 36 24.5**	**-4.2**
	comp=N,28nm,0.3s,baz=35,slow=22,SNR=8.3						
NNA	**Nana**	**5.85**	**309**	Pn	**Pn**	**03 35 21.6**	**-1.1**
PB01	**IPOC Station P**	**5.89**	**155**		**Pn**	**03 35 22.4**	**-0.9**
PB07	**IPOC Station P**	**6.37**	**161**		**Pn**	**03 35 29.3**	**-0.6**
PB09	**IPOC Station P**	**6.67**	**156**		**Pn**	**03 35 32.9**	**-0.9**
PB04	**IPOC Station P**	**6.87**	**164**		**Pn**	**03 35 35.2**	**-1.3**
PB06	**IPOC Station P**	**7.39**	**161**		**Pn**	**03 35 41.8**	**-1.7**
LVC	**Limon Verde**	**7.53**	**156**	P	**Pn**	**03 35 45.9**	**+0.3**
	comp=N,3.5nm,0.3s,baz=330,slow=8.1,SNR=29						
LVC				S	**Sn**	**03 37 06.5**	**-3.3**
	comp=N,19nm,0.3s,baz=250,slow=23,SNR=22						
LVC	**Limon Verde**	**7.53**	**156**		**Pn**	**03 35 45.4**	**-0.2**
LVC	**Limon Verde**	**7.53**	**156**	*eP*	**Pn**	**03 35 46.2**	**+0.6**
PB15	**IPOC Station P**	**7.89**	**162**		**Pn**	**03 35 48.9**	**-1.4**
CZSB	**Cruzeiro do Su**	**7.94**	**356**	*eP*	**Pn**	**03 35 47.2**	**-3.6**
ETMB	**Extrema**	**8.24**	**46**	*eP*	**Pn**	**03 35 52.9**	**-2.0**
PB14	**IPOC Station P**	**9.04**	**170**	Pn	Pn	03 36 03.6	-2.2
GO02	**Mina Guanaco**	**9.72**	**166**	Pn	**Pn**	**03 36 13.5**	**-1.5**
ATAH	**Atahualpa**	**10.47**	**324**	P	**Pn**	**03 36 26.2**	**+1.0**
	comp=N,0.6nm,0.3s,baz=23,slow=3.9,SNR=6.5						
ATAH				S	**Sn**	**03 38 21.9**	**+0.9**
	comp=N,1.0nm,0.3s,baz=47,slow=16,SNR=5.7						
SIV	**San Ignacio**	**10.68**	**93**	P	**Pn**	**03 36 25.7**	**-2.0**
	comp=N,1.7nm,0.3s,baz=296,slow=9.3,SNR=64						
SIV				S	**Sn**	**03 38 19.4**	**-6.3**
	comp=N,0.5nm,0.3s,baz=229,slow=6.6,SNR=4.4						
SAML	**Samuel**	**11.05**	**54**		**Pn**	**03 36 29.0**	**-3.5**
AC02	**Maricunga**	**11.44**	**166**		**Pn**	**03 36 37.9**	**-0.1**
VILB	**Vilhena**	**11.92**	**78**	*eP*	**Pn**	**03 36 42.7**	**-1.3**
CO03	**El Pedregal**	**15.13**	**175**		**Pn**	**03 37 25.6**	**+0.5**
CO03				IAmb	IAmb	03 37 31.4	
	comp=Z,30nm,1.0s						
ZON	**Zonda**	**16.09**	**169**		**Pn**	**03 37 37.6**	**+0.6**
AQDB	**Aquidauana**	**16.36**	**109**	*eP*	**Pn**	**03 37 40.3**	**+0.1**
CLDB	**Colider**	**16.64**	**75**	*eP*	**Pn**	**03 37 43.3**	**-0.4**
PP1B	**Ponte de Pedra**	**16.68**	**99**	*eP*	**Pn**	**03 37 44.7**	**+0.5**
MACA	**Manacapuru-AM**	**16.82**	**43**	*eP*	**Pn**	**03 37 43.6**	**-2.4**
OTAV	**Otavalo**	**17.01**	**338**		**Pn**	**03 37 49.2**	**+0.6**
OTAV	**Otavalo**	**17.01**	**338**	*eP*	**P**	**03 37 44.4**	**-4.0**
CPUP	**Villa Florida**	**17.41**	**130**	P	**P**	**03 37 53.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=312,slow=11,SNR=16						
CPUP	**Villa Florida**	**17.41**	**130**	Pn	**P**	**03 37 54.3**	**+2.0**
NPGB	**Novo Progresso**	**18.58**	**64**	*eP*	**P**	**03 38 04.6**	**-0.5**
BO01	**Tunca**	**18.64**	**177**	P	**P**	**03 38 05.2**	**-0.5**
BO02	**Sierra Bellavi**	**19.05**	**176**	P	**P**	**03 38 08.5**	**-1.8**
BO02				IAmb	IAmb	03 38 15.9	
	comp=Z,16nm,1.0s						
PTGA	**Pitinga**	**19.14**	**40**	P	**P**	**03 38 09.8**	**-1.5**
	comp=Z,3.9nm,0.3s,baz=320,slow=22,SNR=41						
PTGA	**Pitinga**	**19.14**	**40**	P	**P**	**03 38 10.5**	**-0.7**
PTGA	**Pitinga**	**19.14**	**40**	*eP*	**P**	**03 38 10.1**	**-1.2**
ARAG	**Araguaiana, MT**	**19.60**	**93**	*eP*	**P**	**03 38 17.3**	**+1.0**
ITTB	**Itaituba**	**19.69**	**57**	*eP*	**P**	**03 38 17.1**	**-0.2**
TRCB	**Terra Rica**	**19.74**	**114**	*eP*	**P**	**03 38 18.9**	**+1.1**
ML02	**Panimavida**	**19.99**	**178**	P	**P**	**03 38 19.3**	**-1.0**
PCMB	**Pacaembu**	**20.65**	**110**	*eP*	**P**	**03 38 29.0**	**+1.5**
PTGB	**Pitanga**	**20.87**	**119**	*eP*	**P**	**03 38 30.7**	**+0.8**
BI02	**San Fabin de**	**20.90**	**178**	P	**P**	**03 38 29.6**	**-0.5**
BI02				IAmb	IAmb	03 38 37.3	
	comp=Z,12nm,0.8s						
ITRB	**Iturama**	**21.15**	**104**	*eP*	**P**	**03 38 34.0**	**+1.1**
BOAV	**Boa Vista**	**21.35**	**34**	*eP*	**P**	**03 38 38.8**	**+3.7**
ITAB	**Concordia**	**21.86**	**125**	*eP*	**P**	**03 38 42.6**	**+2.2**
MALB	**Monte Alegre**	**22.38**	**54**	*eP*	**P**	**03 38 45.2**	**-0.5**
CPSB	**Cacapava Do Su**	**22.56**	**134**	*eP*	**P**	**03 38 49.5**	**+2.1**
FRTB	**Fartura**	**22.60**	**113**	*eP*	**P**	**03 38 48.9**	**+1.0**
IPMB	**Ipameri, GO**	**23.04**	**99**	*eP*	**P**	**03 38 52.3**	**+0.2**
BB19B	**Bebedouro**	**23.05**	**107**	*eP*	**P**	**03 38 53.3**	**+1.1**
BDFB	**Brasilia**	**23.26**	**93**	P	**P**	**03 38 54.9**	**+0.7**
	comp=Z,9.2nm,0.5s,baz=265,slow=11,SNR=27						
BDFB	**Brasilia**	**23.26**	**93**	P	**P**	**03 38 54.0**	**-0.2**
BDFB				IAmb	IAmb	03 38 55.6	
	comp=Z,9.4nm,0.5s						
PLTB	**Pedras Altas**	**23.28**	**137**	*eP*	**P**	**03 38 55.5**	**+1.4**
PEXB	**Peixe**	**23.44**	**84**	*eP*	**P**	**03 38 55.9**	**+0.1**
PRPB	**Parauapebas**	**23.88**	**69**	*eP*	**P**	**03 39 00.1**	**+0.3**
RCLB	**Rio Claro- Sao**	**24.21**	**110**	*eP*	**P**	**03 39 04.5**	**+1.8**
PLCA	**Paso Flores**	**24.98**	**177**	P	**P**	**03 39 13.6**	**+4.0**
	comp=Z,7.8nm,0.8s,baz=349,slow=11,SNR=16						
PLCA	**Paso Flores**	**24.98**	**177**	P	**P**	**03 39 09.9**	**+0.3**
PLCA				IAmb	IAmb	03 39 15.6	
	comp=Z,15nm,1.0s						
PLCA	**Paso Flores**	**24.98**	**177**	*eP*	**P**	**03 39 13.0**	**+3.4**
MCPB	**Macapa, AP**	**25.03**	**54**	*eP*	**P**	**03 39 10.8**	**+0.6**
JANB	**Januaria**	**26.86**	**92**	*eP*	**P**	**03 39 26.5**	**-0.3**
JTS	**Las Juntas de**	**28.76**	**333**	P	**P**	**03 39 43.0**	**-0.5**
	comp=Z,1.8nm,0.3s,baz=177,slow=24,SNR=7.4						
JTS	**Las Juntas de**	**28.76**	**333**	IAmb	IAmb	03 39 55.2	
	comp=Z,10nm,1.4s						
NBIT	**Itapeh - BA**	**31.57**	**93**	*eP*	**P**	**03 40 09.6**	**+1.2**
GDU01	**Guandu, BA**	**31.57**	**91**	*eP*	**P**	**03 40 08.9**	**+0.5**
NBLA	**Lagarto - SE**	**33.75**	**86**	*eP*	**P**	**03 40 26.5**	**-0.9**
RCBR	**Riachuelo**	**36.90**	**79**	LR	LR	03 57 22.8	
	comp=Z,62nm,18.8s,baz=298,slow=38						
MIAR	**Mount Ida**	**53.95**	**338**	P	**P**	**03 43 09.0**	**+0.7**
TXAR	**Lajitas Array**	**54.12**	**326**	P	**P**	**03 43 09.5**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=156,slow=4.7,SNR=2.4						
TXAR				pP	**pP**	**03 43 44.2**	**+2.0**
	comp=Z,0.4nm,0.8s,baz=144,slow=8.7,SNR=3.2						
DELO	**Deloro Mine**	**60.13**	**356**	P	**P**	**03 43 50.5**	**-1.0**
DELO				IAmb	IAmb	03 43 51.2	
	comp=Z,7.1nm,1.2s						
PKME	**Peaks-Kenny Pk**	**60.73**	**2**	P	**P**	**03 43 56.0**	**+0.4**
BATG	**Bathurst New B**	**62.92**	**5**	P	**P**	**03 44 11.9**	**+1.6**
SNAA	**Sanae**	**68.74**	**161**	P	**P**	**03 44 49.2**	**+1.8**
SNAA				IAmb	IAmb	03 44 52.3	
	comp=Z,8.1nm,1.3s						
DBIC	**Dimbokro**	**70.25**	**77**	P	**P**	**03 44 57.5**	**0.0**
	comp=Z,8.0nm,0.6s,baz=238,slow=6.1,SNR=17						
DBIC	**Dimbokro**	**70.25**	**77**	IAmb	IAmb	03 44 58.1	
	comp=Z,7.8nm,0.7s						
KOWA	**Kowa**	**73.72**	**69**	P	**P**	**03 45 18.3**	**+0.1**
KOWA				IAmb	IAmb	03 45 19.1	
	comp=Z,5.8nm,0.7s						
QSPA	**South Pole Qui**	**74.46**	**180**	P	**P**	**03 45 24.5**	**+2.7**
QSPA				IAmb	IAmb	03 45 26.7	
	comp=Z,9.8nm,1.3s						
TOA0	**Torodi Ar. Sit**	**78.46**	**73**	P	**P**	**03 45 44.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**78.46**	**73**	P	**P**	**03 45 45.6**	**+0.5**
	comp=Z,11nm,0.7s,baz=261,slow=5.4,SNR=54						
TORD	**Torodi Ar. Bea**	**78.46**	**73**	P	**P**	**03 45 45.1**	**0.0**
TORD				IAmb	IAmb	03 45 46.5	
	comp=Z,8.7nm,0.8s						
SBA	**Scott Base**	**80.94**	**191**	P	**P**	**03 45 57.1**	**-0.3**
VNDA	**Vanda**	**81.99**	**190**	P	**P**	**03 46 06.7**	**+3.8**
	comp=Z,1.3nm,0.8s,baz=140,slow=4.9,SNR=7.0						
ESDC	**Sonseca Array**	**83.97**	**46**	P	**P**	**03 46 14.8**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=262,slow=4.7,SNR=6.6						
ESDC	**Sonseca Array**	**83.97**	**46**	P	**P**	**03 46 14.2**	**+0.5**
YKA	**Yellowknife Ar**	**84.73**	**342**	P	**P**	**03 46 18.2**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=132,slow=5.7,SNR=9.7						
YKA				pP	**pP**	**03 46 53.9**	**+1.9**
	comp=Z,1.1nm,0.9s,baz=136,slow=5.4,SNR=7.5						
BOSA	**Boshof**	**88.93**	**119**	P	**P**	**03 46 36.9**	**-1.5**
BOSA				IAmb	IAmb	03 46 44.8	
	comp=Z,3.2nm,1.1s						
ASAR	**Alice Springs**	**133.31**	**214**	PKP	**PKiKP**	**03 53 01.4**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=118,slow=1.6,SNR=7.4						
WRA	**Warramunga Arr**	**136.03**	**217**	PKP	**PKiKP**	**03 53 06.3**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=159,slow=2.0,SNR=5.6						
SONM	**Songino Array**	**147.93**	**2**	PKPbc	**PKiKP**	**03 53 29.8**	**-0.1**
SONM				pPKPbc	**pPKPab**	**03 54 07.6**	**+0.7**
	comp=Z,7.0nm,0.7s,baz=356,slow=4.1,SNR=2.4						
	comp=Z,1.9nm,0.9s,baz=316,slow=3.2,SNR=6.0						

IDC 18 03:55:26.0±1.1, 35.21N×26.90E, h0km, mb4.0/4, mb1 3.8/6, mb1mx3.4/60, mbtmp3.8/6, ML3.4/2, MS2.8/1, Ms1 2.8/1, ms1mx2.1/41, Error ellipse: s-maj=30.8km s-min=11.7km az=175.0
ISK 18 03:55:25.7, 35.07N×26.86E, h6km, ML3.1/9
THE 18 03:55:27.5, 35.16N×26.74E, h0km±1km, ML3.0/5, Error ellipse: s-maj=6.1km s-min=0.9km az=154.0
ATH 18 03:55:28.2, 35.21N×26.76E, h10km±2km, ML3.1/8, Error ellipse: s-maj=5.4km s-min=1.2km az=154.0
DDA 18 03:55:28.1, 35.41N×26.95E, h5km±3km, ML2.7

ISC 18 03:55:26.0±1.3, 35.09N±0.05×26.87E±0.03, h9km±9km, n60, σ1s38/77, mb3.8/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.52**	**27**	P	**Pb**	**03 55 36.7**	**-0.7**
KARP				S	**Sb**	**03 55 44.3**	**-0.7**
KARP				AML	AML	03 55 48.0	
	comp=N,10063μm,0.4s						
KARP				AML	AML	03 55 48.2	
	comp=E,8616μm,0.3s						
KARP	**Karpathos**	**0.52**	**27**	P	**Pb**	**03 55 37.2**	**-0.2**
KARP				S	**Sb**	**03 55 46.1**	**+1.1**
	comp=E,5μm,0.3s						
KARP	**Karpathos**	**0.52**	**27**	PG	**Pb**	**03 55 36.7**	**-0.7**
KARP				SG	**Sb**	**03 55 44.7**	**-0.3**
ZKR	**Zakros**	**0.54**	**273**	P	**Pg**	**03 55 36.2**	**-0.2**
ZKR				S	**Sg**	**03 55 42.9**	**-0.5**
ZKR				AML	AML	03 55 45.8	
	comp=E,6034μm,0.4s						
ZKR				AML	AML	03 55 46.0	
	comp=N,2902μm,0.3s						
ZKR	**Zakros**	**0.54**	**273**	P	**Pg**	**03 55 36.2**	**-0.2**
ZKR				S	**Sg**	**03 55 43.9**	**+0.4**
	comp=N,2μm,0.3s						
ZKR	**Zakros**	**0.54**	**273**	PG	**Pg**	**03 55 36.4**	**0.0**
ZKR				SG	**Sg**	**03 55 44.2**	**+0.7**
FRMA	**Ierapetra Chan**	**0.94**	**266**	P	**Pg**	**03 55 41.4**	**-2.6**
FRMA				S	**Sg**	**03 55 54.7**	**-1.5**
	comp=N,495nm,0.5s						
NPS	**Neapolis**	**1.04**	**280**	P	**Pg**	**03 55 45.9**	**-0.1**
NPS				S	**Sg**	**03 55 58.5**	**-1.2**
NPS				AML	AML	03 56 04.5	
	comp=N,2105μm,0.8s						
NPS				AML	AML	03 56 06.7	
	comp=E,2461μm,0.5s						
NPS	**Neapolis**	**1.04**	**280**	P	**Pg**	**03 55 46.0**	**-0.1**
NPS				S	**Sg**	**03 55 59.2**	**-0.5**
	comp=E,1μm,0.5s						
HRKL	**Herakleio**	**1.47**	**279**	PN	**Pn**	**03 55 52.9**	**+0.2**
HRKL				SN	**Sb**	**03 56 13.2**	**+1.0**
ARG	**Arkhangelos**	**1.52**	**42**	P	**Pg**	**03 55 55.3**	**+0.1**
ARG				AML	AML	03 56 24.4	
	comp=E,1375μm,0.8s						
ARG				AML	AML	03 56 27.8	
	comp=N,851μm,0.6s						
ARG	**Arkhangelos**	**1.52**	**42**	P	**Pg**	**03 55 55.3**	**+0.1**
ARG				S	**Sg**	**03 56 16.5**	**+1.5**
	comp=N,542nm,0.9s						
ARG	**Arkhangelos**	**1.52**	**42**	PN	**Pn**	**03 55 54.5**	**+1.0**
NIS1	**Nisyros Isl.**	**1.53**	**9**	P	**Pg**	**03 55 54.6**	**-0.8**
NIS1	**Nisyros Isl.**	**1.53**	**9**	P	**Pg**	**03 55 54.7**	**-0.8**
NIS1	**Nisyros Isl.**	**1.53**	**9**	PN	**Pg**	**03 55 54.7**	**-0.8**
IDI	**Anoyia**	**1.64**	**278**	Pg	**Pb**	**03 55 57.3**	**+0.9**
	comp=N,8.1nm,0.3s,baz=99,slow=14,SNR=45						
IDI				Lg	Lg	03 56 16.2	
	comp=N,10nm,0.3s,baz=259,slow=20,SNR=6.6						
IDI	**Anoyia**	**1.64**	**278**	P	**Pn**	**03 55 56.8**	**+1.7**
IDI				S	**Sn**	**03 56 16.2**	**-0.1**
IDI				AML	AML	03 56 24.4	
	comp=E,458μm,0.4s						
IDI				AML	AML	03 56 33.4	
	comp=N,493μm,0.4s						
IDI	**Anoyia**	**1.64**	**278**	PN	**Pn**	**03 55 55.6**	**+0.5**
KOSK	**Kos Island**	**1.67**	**3**	PN	**Pb**	**03 55 56.4**	**-0.5**
SIVA	**Sivas**	**1.69**	**268**	P	**Pn**	**03 55 57.8**	**+2.1**
SIVA				AML	AML	03 56 33.5	
	comp=E,1272μm,0.5s						
SIVA				AML	AML	03 56 34.8	
	comp=N,1258μm,0.7s						
SANT	**Santorini**	**1.72**	**319**	P	**Pn**	**03 55 56.4**	**+0.2**
SANT	**Santorini**	**1.72**	**319**	PN	**Pn**	**03 55 57.1**	**+0.9**
THR6	**Thira Island,**	**1.75**	**317**	P	**Pn**	**03 55 57.0**	**+0.5**
SNT1	**Gialos, Santor**	**1.77**	**319**	P	**Pn**	**03 55 57.5**	**+0.6**
SNT5	**Nea Kammeni, S**	**1.78**	**318**	P	**Pn**	**03 55 56.6**	**-0.4**
THR3	**Thira Island,**	**1.78**	**318**	P	**Pn**	**03 55 56.7**	**-0.3**
THR3	**Thira Island,**	**1.78**	**318**	P	**Pn**	**03 55 56.0**	**-1.0**
BODT	**Bodrum**	**2.00**	**10**	PN	**Pn**	**03 56 01.0**	**+0.9**
TURN	**Turunc**	**2.02**	**33**	PN	**Pn**	**03 56 01.6**	**+1.3**
BDRM	**Kayabasi**	**2.03**	**13**	*i* P	**Pn**	**03 56 00.3**	**-0.2**
BDRM				*i* S	**Sn**	**03 56 22.9**	**-3.1**
VAM	**Vamos**	**2.21**	**279**	P	**Pn**	**03 56 04.5**	**+1.6**
DALY	**Dalyan (Mula)**	**2.25**	**39**	*i* P	**Pn**	**03 56 05.3**	**+1.9**
DALY				IAML		03 56 53.0	
	comp=N,73nm,0.7s						
DALY	**Dalyan (Mula)**	**2.25**	**39**	PN	**Pn**	**03 56 04.9**	**+1.4**
APE	**Apeiranthos**	**2.26**	**332**	P	**Pn**	**03 56 03.8**	**+0.3**
APE				AML	AML	03 56 37.9	
	comp=N,280μm,0.5s						
APE				AML	AML	03 56 38.6	
	comp=E,252μm,0.4s						
APE	**Apeiranthos**	**2.26**	**332**	P	**Pn**	**03 56 03.7**	**+0.1**
APE	**Apeiranthos**	**2.26**	**332**	PN	**Pn**	**03 56 03.9**	**+0.3**
YER	**Yerkesik**	**2.34**	**29**	P	**Pn**	**03 56 06.7**	**+1.9**
FETY	**Fethiye**	**2.37**	**49**	PN	**Pn**	**03 56 06.1**	**+0.9**
DDIM	**Aydin, Didim**	**2.39**	**7**	*i* P	**Pg**	**03 56 10.4**	**-1.3**
IMMV	**Iera Moni Meta**	**2.39**	**280**	P	**Pn**	**03 56 08.0**	**+2.6**
IMMV				AML	AML	03 57 03.6	
	comp=N,481μm,0.8s						
IMMV				AML	AML	03 57 12.8	
	comp=E,583μm,0.8s						
KSL	**Kastellorizon**	**2.45**	**64**	P	**Pn**	**03 56 07.7**	**+1.5**
MULA	**Mugla, Merkez-**	**2.46**	**28**	*i* P	**Pb**	**03 56 10.1**	**-0.4**
AKAS	**Kas**	**2.50**	**62**	*i* P	**Pn**	**03 56 07.5**	**+0.4**
AKAS				*i* S	**Sn**	**03 56 35.7**	**-2.1**
AKAS	**Kas**	**2.50**	**62**	PN	**Pn**	**03 56 08.6**	**+1.5**
GCAM	**G?zelcaml?**	**2.63**	**6**	*i* P	**Pn**	**03 56 08.8**	**+0.2**
AYDN	**Tasoluk**	**2.70**	**17**	*i* P	**Pn**	**03 56 11.7**	**+2.1**
CAEL	**Denizli, Camel**	**2.84**	**44**	*i* P	**Pn**	**03 56 12.6**	**+0.9**
CAEL				IAML		03 57 04.0	
	comp=E,90nm,0.8s						
TAVA	**DENIZLI_Tavas**	**2.89**	**34**	*i* P	**Pn**	**03 56 14.0**	**+1.6**
TAVA				*i* S	**Sn**	**03 56 47.6**	**+0.3**
TAVA				IAML		03 57 04.0	
	comp=E,34nm,1.1s						
TAVA				IAML		03 57 09.0	
	comp=N,41nm,1.1s						
GOLH	**Golhisar**	**3.06**	**45**	*i* P	**Pn**	**03 56 15.3**	**+0.7**
GOLH				*i* S	**Sn**	**03 56 52.5**	**+1.1**
GOLH				IAML		03 57 20.0	
	comp=E,83nm,0.7s						
GOLH				IAML		03 57 20.0	
	comp=N,52nm,1.1s						
AKUM	**Antalya-Kumluc**	**3.08**	**65**	*i* P	**Pn**	**03 56 15.5**	**+0.6**
AKUM				IAML		03 56 57.0	
	comp=E,28nm,1.2s						
KORT	**Korkueli**	**3.41**	**55**	*i* P	**Pn**	**03 56 21.4**	**+1.9**
KORT				IAML		03 57 12.0	
	comp=E

NIS1	Nisyros Isl.	1.54	11	P		Pg	03 59 59.8	-0.8
NIS1				S		Sg	04 00 19.6	-0.9
	comp=N,4μm,0.6s							
NIS1	Nisyros Isl.	1.54	11	PN		Pg	04 00 00.5	-0.1
NIS1				SN		Sg	04 00 21.6	+1.1
ARG	Arkhangelos	1.54	43	P		Pg	04 00 01.7	+1.1
ARG				S		Sg	04 00 21.6	+0.9
ARG				AML	AML		04 00 30.2	
	comp=E,6573μm,0.8s							
ARG				AML	AML		04 00 40.3	
	comp=N,4382μm,1.1s							
ARG	Arkhangelos	1.54	43	P		Pg	04 00 01.1	+0.4
ARG				S		Sg	04 00 21.7	+1.0
	comp=N,3μm,0.9s							
ARG	Arkhangelos	1.54	43	PN		Pg	04 00 00.8	+0.1
ARG	Arkhangelos	1.54	43	⇑P		Pn	03 59 59.3	+0.6
IDI	Anoyia	1.60	278	Pg		Pg	04 00 02.6	+0.9
	comp=N,42nm,0.3s,baz=101,slow=17,SNR=44							
IDI				Lg		Lg	04 00 23.6	
	comp=N,54nm,0.3s,baz=298,slow=15,SNR=6.2							
IDI	Anoyia	1.60	278	P		Pg	04 00 02.2	+0.5
IDI				AML	AML		04 00 31.7	
	comp=N,2005μm,0.8s							
IDI				AML	AML		04 00 39.2	
	comp=E,1597μm,0.6s							
IDI	Anoyia	1.60	278	PN		Pg	04 00 02.0	+0.3
IDI	Anoyia	1.60	278	Pn		Pg	04 00 02.2	+0.5
SIVA	Sivas	1.66	268	P		Pb	04 00 01.2	-0.5
SIVA				AML	AML		04 00 41.6	
	comp=E,6016μm,0.9s							
SIVA				AML	AML		04 00 49.3	
	comp=N,4844μm,0.8s							
KOSK	Kos Island	1.66	4	P		Pg	04 00 02.2	-0.7
KOSK				S		Sb	04 00 22.7	-0.1
	comp=N,1μm,0.5s							
KOSK	Kos Island	1.66	4	PN		Pg	04 00 02.3	-0.7
SANT	Santorini	1.70	319	P		Pb	04 00 01.9	-0.5
SANT				AML	AML		04 00 32.9	
	comp=E,3975μm,0.4s							
SANT				AML	AML		04 00 33.2	
	comp=N,1466μm,0.7s							
SANT	Santorini	1.70	319	P		Pb	04 00 02.3	-0.1
SANT	Santorini	1.70	319	*i* P		Pb	04 00 02.0	-0.5
SANT				*i* S		Sn	04 00 22.4	-0.3
SANT	Santorini	1.70	319	PN		Pg	04 00 02.9	-0.7
SANT	Santorini	1.70	319	Pn		Pb	04 00 02.1	-0.3
THR8	Santorini-Mono	1.71	321	P		Pb	04 00 02.3	-0.4
THR8	Santorini-Mono	1.71	321	P		Pb	04 00 02.3	-0.4
THR6	Thira Island,	1.72	318	P		Pb	04 00 02.4	-0.3
THR6	Thira Island,	1.72	318	P		Pb	04 00 02.5	-0.3
THR9	Santorini-Faro	1.74	317	P		Pb	04 00 02.6	-0.5
SNT1	Gialos, Santor	1.75	320	P		Pb	04 00 02.6	-0.6
THR7	Fira-Santorini	1.75	320	P		Pb	04 00 03.3	0.0
SNT5	Nea Kammeni, S	1.75	319	P		Pb	04 00 02.9	-0.5
THR3	Thira Island,	1.76	319	P		Pb	04 00 02.7	-0.7
THR3	Thira Island,	1.76	319	P		Pb	04 00 03.0	-0.4
THT2	Imerovigli	1.76	320	PN		Pb	04 00 03.9	+0.4
THR5	Thira Island,	1.79	318	P		Pn	04 00 02.5	+0.5
THR5	Thira Island,	1.79	318	P		Pn	04 00 02.5	+0.5
SAP3	Santorini-Thir	1.81	319	P		Pb	04 00 03.6	-0.6
BODT	Bodrum	2.01	11	P		Pn	04 00 05.9	+0.8
BODT	Bodrum	2.01	11	PN		Pb	04 00 07.3	-0.4
BDRM	Kayabasi	2.04	14	*i* P		Pb	04 00 07.0	-1.2
BDRM				*i* S		Sn	04 00 31.6	+0.6
TURN	Turunc	2.04	34	*i* P		Pb	04 00 07.5	-0.7
TURN				*i* S		Sb	04 00 32.9	-0.8
TURN	Turunc	2.04	34	PN		Pb	04 00 07.7	-0.5
VAM	Vamos	2.17	279	P		Pb	04 00 10.6	+0.1
VAM				AML	AML		04 00 48.0	
	comp=N,2957μm,0.6s							
VAM				AML	AML		04 00 54.7	
	comp=E,1719μm,1.0s							
APE	Apeiranthos	2.24	332	P		Pn	04 00 09.5	+1.2
APE				S		Sn	04 00 36.6	+0.7
APE				AML	AML		04 00 43.0	
	comp=N,1402μm,0.6s							
APE				AML	AML		04 00 44.4	
	comp=E,1199μm,0.5s							
APE	Apeiranthos	2.24	332	P		Pn	04 00 09.4	+1.2
APE				S		Sn	04 00 36.7	+0.7
	comp=E,670nm,0.5s							
APE	Apeiranthos	2.24	332	*i* P		Pn	04 00 08.9	+0.6
APE				*i* S		Sn	04 00 34.4	-1.6
APE	Apeiranthos	2.24	332	⇑P		Pn	04 00 09.4	+1.2
APE				S		Sn	04 00 36.7	+0.7
GVD	Gavdhos	2.26	264	P		Pb	04 00 12.1	0.0
GVD				AML	AML		04 01 07.5	
	comp=N,1440μm,0.6s							
GVD				AML	AML		04 01 09.0	
	comp=E,1451μm,0.7s							
DALY	Dalyan (Mula)	2.27	40	PN		Pb	04 00 11.3	-0.9
YER	Yerkesik	2.36	30	P		Pb	04 00 12.6	-1.1
YER	Yerkesik	2.36	30	PN		Pb	04 00 12.4	-1.3
IMMV	Iera Moni Meta	2.36	280	P		Pb	04 00 12.5	-1.1
IMMV				AML	AML		04 01 01.4	
	comp=E,1969μm,0.7s							
IMMV				AML	AML		04 01 03.1	
	comp=N,2399μm,0.8s							
DDIM	Aydin, Didim	2.39	8	*i* P		Pb	04 00 12.7	-1.5
DDIM				*i* S		Sb	04 00 42.6	-1.1
FETY	Fethiye	2.40	49	PN		Pb	04 00 12.9	-1.4
MULA	Mugla, Merkez-	2.48	29	*i* P		Pb	04 00 14.2	-1.5
MULA				*i* S		Sb	04 00 44.7	-1.7
KSL	Kastellorizon	2.48	64	P		Pn	04 00 13.4	+1.8
KSL	Kastellorizon	2.48	64	⇑P		Pn	04 00 12.5	+1.0
KSL				S		Sn	04 00 44.1	+2.1
AKAS	Kas	2.53	62	*i* P		Pn	04 00 13.3	+0.9
AKAS	Kas	2.53	62	Pn		Pn	04 00 13.6	+1.2
MHLA	Plaka, Milos I	2.56	311	P		Pb	04 00 16.2	-0.9
GCAM	G?zelcaml?	2.63	7	*i* P		Pb	04 00 16.6	-1.6
GCAM				*i* S		Sn	04 00 40.9	-4.6
AYDN	Tasoluk	2.70	18	*i* P		Pn	04 00 16.8	+2.1
AYDN				*i* S		Sn	04 00 47.6	+0.1
CAEL	Denizli, Camel	2.86	44	*i* P		Pn	04 00 19.3	+2.4
TAVA	DENIZLI_Tavas	2.91	35	*i* P		Pn	04 00 20.4	+2.8
TAVA				*i* S		Sn	04 00 55.9	+3.2
DGB	zmir	2.96	1	*i* P		Pn	04 00 18.0	-0.1
ANKY	Antikythira Is	2.98	286	P		Pn	04 00 20.2	+1.8
ELL	Elmali	3.00	56			Pn	04 00 20.6	+1.8
GOLH	Golhisar	3.08	45	*i* P		Pn	04 00 23.0	+3.1
AKUM	Antalya-Kumluc	3.12	66	*i* P		Pn	04 00 21.3	+1.0
URLA	Izmir	3.27	357	*i* P		Pn	04 00 21.4	-1.1
KTHA	Kythira Island	3.28	292	P		Pn	04 00 24.4	+1.8
CHOS	Chios island	3.35	350	P		Pn	04 00 24.6	+1.0
KORT	Korkueli	3.43	55	*i* P		Pb	04 00 29.0	-3.1
KORT				*i* S		Sn	04 01 07.9	+2.2
VLI	Veliai	3.55	298	P		Pn	04 00 28.6	+2.3
MANT	Manisa	3.67	22	*i* P		Pn	04 00 29.7	+1.6
MANT				*i* S		Sn	04 01 07.2	-4.4
MANT	Manisa	3.67	22			Pn	04 00 29.9	+1.8
BRDR	BURDUR-Merkez	3.69	44	*i* P		Pn	04 00 30.3	+2.1
VLY	Voula,Athens	3.69	319	P		Pn	04 00 30.3	+2.2
MATC	Matruh	3.75	175	AMP			04 01 00.0	
	baz=177							
BUCA	Burdur, Bucak-	3.75	52	*i* P		Pn	04 00 32.0	+2.8
ATHU	Athens Univers	3.77	320	P		Pn	04 00 31.4	+2.0
DION	Dionisos Attik	3.79	323	P		Pn	04 00 31.6	+2.1
SLUM	Salum	3.83	201	P		Pn	04 00 31.9	+1.7
	baz=204							
SLUM				AMP			04 01 00.0	
	baz=204							
SLUM				S		Sn	04 01 14.5	-0.7
	baz=204							
AKHS	Akhisar	3.87	11	*i* P		Pn	04 00 29.1	-1.5
OSC1	CSNet OBS 1	4.01	112	S		Sn	04 01 21.2	+1.6
KZIL	AFYON_Kizioren	4.13	39	*i* P		Pn	04 00 35.9	+1.5
KYMI	Kymi, Euboea I	4.16	329	P		Pn	04 00 36.7	+2.1
AYVA	Ayvalik	4.21	359	*i* P		Pb	04 00 42.7	-2.6
STEP	BALIKESIR_Sava	4.34	9	*i* P		Pn	04 00 40.3	+3.2
BUHA	Balikesir, Bur	4.41	3	*i* P		Pn	04 00 38.9	+0.9
ITM	Ithomi	4.48	299	Pn		Pn	04 00 41.8	+2.7
AKMS	Akamas	4.52	89	P		Pn	04 00 39.4	-0.1
AKMS				AML	AML		04 01 33.6	
	comp=N,0.8nm,0.4s							
AKMS				AML	AML		04 01 35.0	
	comp=N,0.9nm,0.5s							
GDZ	Gediz	4.52	27	*i* P		Pn	04 00 40.3	+0.6
GAZI	Gazipasa	4.61	74	*i* P		Pn	04 00 41.0	+0.1
BAYC	CANAKKALE_Bayr	4.65	357	*i* P		Pn	04 00 41.7	+0.3
DURS	Dursunbey	4.69	16	*i* P		Pn	04 00 42.5	+0.5
ALFC	Alefka	4.73	88	P		Pn	04 00 42.2	-0.3
ALFC				AML	AML		04 01 38.3	
	comp=N,1.4nm,0.4s							
ALFC				AML	AML		04 01 38.5	
	comp=N,1.3nm,0.7s							
SZAC	Souni	4.99	92	⇑P		Pn	04 00 45.8	-0.2
ASGA	Asgata	5.28	91	P		Pn	04 00 50.0	0.0
AGG	Agios Georgios	5.32	319	*i* P		Pn	04 00 55.7	+5.0
AGG	Agios Georgios	5.32	319	Pn		Pn	04 00 53.6	+2.9
CSS	Mathiatis	5.34	89	*i* P		Pn	04 00 50.3	-0.6
CSS				*i* S		Sn	04 01 48.6	-3.9
CSS	Mathiatis	5.34	89	Pn		Pn	04 00 51.5	+0.7
CSS	Mathiatis	5.34	89	P		Pn	04 00 51.1	+0.3
GULN	MERSIN_Gulnar	5.58	77	*i* P		Pn	04 00 54.6	+0.4
GULN				*i* S		Sn	04 01 55.6	-2.7
SWA2		5.94	192	P		Pn	04 00 59.9	+0.7
	baz=194							
SWA2				AMP			04 02 00.0	
	baz=194							
SWA2				S		Sn	04 02 04.6	-2.7
	baz=194							
VIZE	Kirklareli, Vi	6.53	7	*i* P		Pn	04 01 07.4	+0.3
RYAN	Fayoum	6.67	153	P		Pn	04 01 09.5	+0.4
	baz=154							
BR231	Keskin MP Arra	6.70	43	Pn		Pn	04 01 11.7	+2.1
ANTO	Ankara	6.73	43			Pn	04 01 12.4	+2.5
GLL	Jalalah	6.87	142	P		Pn	04 01 11.8	-0.2
	baz=143							
BRTR	Keskin Array B	7.13	48	Pn		Pn	04 01 19.6	+4.1
	comp=N,0.3nm,0.3s,baz=236,slow=14,SNR=3.7							
BRTR				Sn		Sn	04 02 41.2	+4.6
	comp=N,0.2nm,0.3s,baz=270,slow=37,SNR=3.2							
BRTR				LR		LR	04 04 57.1	
	comp=N,310nm,19.7s,baz=242,slow=45							
BRTR	Keskin Array B	7.13	48	Pn		Pn	04 01 16.2	+0.6
FNA	Florina	7.13	324	Pn		Pn	04 01 19.1	+3.6
MMAI	Mount Meron Ar	7.41	104	Pn		Pn	04 01 19.2	-0.1
	comp=N,2.0nm,0.3s,baz=297,slow=11,SNR=9.6							
MMAI				Sn		Sn	04 02 43.1	-0.5
	comp=N,4.6nm,0.3s,baz=309,slow=19,SNR=6.9							
HFRF	Wahat Farafira	8.02	170	P		Pn	04 01 28.2	+0.6
	baz=171							
VTS	Vitosha	8.02	341	Pn		Pn	04 01 29.4	+1.6
EIL	Elat	8.74	126	Pn		Pn	04 01 36.9	-0.6
	comp=N,0.6nm,0.3s,baz=288,slow=2.2,SNR=14							
EIL				Sn		Sn	04 03 11.6	-4.5
	comp=N,2.0nm,0.3s,baz=253,slow=13,SNR=7.1							
EIL				LR		LR	04 06 36.0	
	comp=N,30nm,19.1s,baz=285,slow=48							
HKAT	Jabal Katrina	8.94	135	P		Pn	04 01 39.7	-0.9
	baz=136							
TIRR	Tirgusor	9.44	7			Pn	04 01 47.6	+0.6
MLR	Muntele Rosu	10.41	357	LR		LR	04 06 47.6	
	comp=N,170nm,19.7s,baz=184,slow=41							
MLR	Muntele Rosu	10.41	357	Pn		Pn	04 02 01.8	+1.2
MODS	Modra-Piesok	15.05	335	*e*Pn		Pn	04 02 56.6	-7.1
KIV	Kislovodsk	15.09	49	Pn		Pn	04 03 03.9	-0.4
KIV				IAmb	IAmb		04 03 13.5	
	comp=Z,6.8nm,1.1s							
KVAR	Kislovodsk Arr	15.09	49	LR		LR	04 09 35.4	
	comp=Z,59nm,21.5s,baz=62,slow=40							
KBZ	Khabaz	15.11	50	Pn		P	04 03 10.2	+0.4
	comp=Z,0.1nm,0.3s,baz=260,slow=5.2,SNR=12							
AKASG	Malin Array Be	15.70	6	Pn		P	04 03 14.9	-1.4
	comp=N,1.1nm,0.3s,baz=194,slow=11,SNR=8.5							
AKASG	Malin Array Be	15.70	6			Pn	04 03 12.2	0.0
AKBB	Malin Array Si	15.70	6	Pn		Pn	04 03 11.7	-0.5
AKBB				IAmb	IAmb		04 03 22.5	
	comp=Z,4.4nm,0.9s							
VRAC	Vranov	16.08	335	LR		LR	04 09 16.0	
	comp=Z,46nm,18.7s,baz=150,slow=36							
MORC	Moravsky Berou	16.18	338	Pn		Pn	04 03 18.4	-0.1
GERES	GERESS Array B	16.82	329	Pn		P	04 03 29.2	+0.4
	comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=5.7							
KHC	Kasperske Hory	17.09	329	*e*P		P	04 03 32.8	+1.0
DAVOX	Davos/Dischmat	17.29	318	LR		LR	04 10 47.4	
	comp=Z,45nm,20.3s,baz=124,slow=39							
BELG	Belogornoye	22.78	34	P		P	04 04 34.4	+0.9
	comp=Z,13nm,0.9s,baz=35,slow=5.2,SNR=4.1							
ESDC	Sonseca Array	24.82	290	P		P	04 04 53.1	-0.4
	comp=Z,0.2nm,0.4s,baz=77,slow=9.2,SNR=5.2							
ESDC				LR		LR	04 15 40.0	
	comp=Z,30nm,18.0s,baz=305,slow=39							
GEYT	Alibeck	25.25	74	P		P	04 04 56.7	-0.6
FINES	FINESS Array B	26.38	359	P		P	04 05 06.5	-0.8
	comp=Z,27nm,1.0s,baz=154,slow=14,SNR=3.6							
FINES				LR		LR	04 18 02.2	
	comp=Z,36nm,18.1s,baz=166,slow=42							
AKTO	Aktyubinsk	27.30	46	P		P	04 05 16.1	+0.4
	comp=Z,2.3nm,0.9s,baz=255,slow=16,SNR=5.1							
NOA	NORSAR Array B	27.83	344	LR		LR	04 17 21.9	
	comp=Z,32nm,21.1s,baz=160,slow=38							
EKA	Eskdalemuir Ar	28.90	324	P		P	04 05 31.8	+1.9
	comp=Z,0.3nm,0.4s,baz=119,slow=9.9,SNR=3.7							
TORD	Toro?l Ar. Bea	31.51	232	P		P	04 05 53.4	0.0
	comp=Z,1.1nm,0.8s,baz=30,slow=9.0,SNR=6.0							
KK31	Karatay Array	34.52	63	P		P	04 06 20.0	+0.6
KK31				IAmb	IAmb		04 06 22.0	
	comp=Z,3.3nm,0.9s							
KKAR	Karatay Array	34.52	63	P		P	04 06 20.3	+0.9
KKAR	Karatay Array	34.52	63	P		P	04 06 20.5	+1.1
KKAR				IAmb	IAmb		04 06 22.0	
	comp=Z,3.3nm,0.9s							
BRVK	Borovoye	35.36	46	P		P	04 06 27.7	+1.1
BRVK				IAmb	IAmb		04 06 28.8	
	comp=Z,4.6nm,1.2s							
BVAR	Borovoye Array	35.41	46	P		P	04 06 28.1	+1.0
	comp=Z,0.6nm,0.5s,baz=126,slow=2.0,SNR=6.3							
AAK	Ala-Archa	37.46	64	P		P	04 06 45.5	+0.6
	comp=Z,2.1nm,0.5s,baz=216,slow=5.0,SNR=8.0							
AAK	Ala-Archa	37.46	64	P		P	04 06 45.3	+0.4
AAK				IAmb	IAmb		04 06 47.5	
	comp=Z,4.4nm,1.0s							
KURBB	Kurchatov Arra	40.10	51	P		P	04 07 07.9	+1.2
	comp=Z,6.9nm,0.7s,baz=277,slow=8.7,SNR=18							
KURK	Kurchatov	40.16	51	P		P	04 07 07.9	+0.7
MK31	Makanchi Array	42.67	57	P		P	04 07 28.3	+0.4
MKAR	Makanchi Array	42.67	57	P		P	04 07 29.0	+1.1
	comp=Z,4.0nm,0.6s,baz=278,slow=6.9,SNR=42							
MKAR	Makanchi Array	42.67	57	P		P	04 07 28.7	+0.8
ZAA0	Zalesovo Array	44.07	46	P		P	04 07 39.3	+0.3
ZALV	Zalesovo Beam	44.07	46	P		P	04 07 38.9	-0.1
	comp=Z,4.3nm,0.5s,baz=268,slow=8.1,SNR=18							
ZALV	Zalesovo Beam	44.07	46	P		P	04 07 39.3	+0.3
NRIK	Noril'sk	47.37	25	P		P	04 08 05.8	+0.9
	comp=Z,4.2nm,0.5s,baz=64,slow=8.6,SNR=3.9							
NRIK	Noril'sk	47.37	25	IAmb		IAmb	04 08 07.6	
	comp=Z,2.8nm,0.6s							
SONM	Songino Array	58.47	51	P		P	04 09 28.5	+1.2
	comp=Z,1.5nm,0.9s,baz=280,slow=8.0,SNR=6.4							
SONM	Songino Array	58.47	51	IAmb		IAmb	04 09 29.2	
	comp=Z,1.3nm,0.9s							
BOSA	Boshof	63.38	182	LR		LR	04 39 54.4	
	comp=Z,44nm,20.8s,baz=203,slow=38							
KSRS	Korea Array	77.24	53	P		P	04 11 23.7	-1.8
	comp=Z,0.7nm,0.4s,baz=301,slow=5.3,SNR=3.5							
YKA	Yellowknife Ar	77.33	343	P		P	04 11 28.4	-0.6
	comp=Z,0.4nm,0.9s,baz=41,slow=6.0,SNR=7.2							
ILAR	Eielson Array	80.35	357	P		P	04 11 42.1	0.0
	comp=Z,0.5nm,1.0s,baz=346,slow=6.5,SNR=3.5							

IDC ***18*** *04:01:59.8±1.7,0.°30N×121.°98E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.3/41,mbtmpb3.6/3,MS3.1/2,Ms1 3.1/2, ms1mx2.6/28,Error ellipse: s-maj=193.8km s-min=26.5km az=61.0*

DJA ***18*** *04:02:23.1±0.9,0.°N±5.°×12.°2E±.°,h154km±7km,M3.3/6, MLv3.3/6*

ISC 18 04:02:24.9±1.2,0.°19N±0.°09×122.°16E±0.°08,h150km,n13, σ1°14/10,mb3.4/3,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MRSI	Marisa	0.36	323	P		Pn	04 02 45.0	-0.7
MRSI				S		Sn	04 03 01.3	-0.2
GTOI	Gorontalo	0.96	63	P		Pn	04 02 48.1	-1.3
GTOI				S		Sn	04 03 08.3	+0.3
APSI	Ampana	1.21	205	P		Pn	04 02 50.4	-1.2
LUWI	Luwuk	1.37	153	P		Pn	04 02 52.2	-1.0
LUWI				S		Sn	04 03 15.6	+0.8
KMSI	Cibinong	1.86	78	P		Pn	04 02 57.7	-0.8
KMSI				S		Sn	04 03 25.4	+1.2
STKI	Sintang	10.68	269	P		Pn	04 05 02.6	+8.6
PPBI	Pangkal Pinang	16.18	262	P		P	04 06 05.8	+1.4
TNG	Tangerang	16.72	248	P		Pn	04 06 27.8	+17
JAY	Jayapura	18.74	98	LR		LR	04 14 34.5	
	comp=Z,52nm,18.8s,baz=4.5,slow=40							
WRA	Warramunga Arr	23.30	150	P		P	04 07 10.8	-8.8
	1.7nm,0.5s,baz=326,slow=11,SNR=20							
ASAR	Alice Springs	26.32	155	P		P	04 07 39.5	-7.4
	0.3nm,0.5s,baz=343,slow=14,SNR=10							
MKAR	Makanchi Array	58.01	329	P		P	04 11 53.1	-8.9
	0.2nm,0.4s,baz=112,slow=8.1,SNR=3.7							
KBZ	Khabaz	82.10	314	LR		LR	04 57 49.9	
	comp=Z,11nm,18.2s,baz=22,slow=41							

IDC 18 04:06:20.9±2.4,4.°66S×128.°90E,h0km,mb3.2/1, mb1 3.5/3,mb1mx3.3/28,mbtmpb3.3/3,ML3.2/2,Error ellipse: s-maj=169.6km s-min=31.3km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	16.09	161	Pn		Pn	04 10 10.1	+1.4
	0.1nm,0.3s,baz=343,slow=13,SNR=4.6							
ASAR	Alice Springs	19.50	166	P		P	04 10 49.4	-0.5
	0.2nm,0.3s,baz=350,slow=11,SNR=17							
MKAR	Makanchi Array	65.68	327	P		P	04 17 07.3	0.0
	0.1nm,0.4s,baz=130,slow=6.1,SNR=1.7							

DJA ***18*** *04:13:16.9±0.7,4.°N±6.°×12.°7E±.°,h10km,M4.2/11,mb4.3/7, mB4.7/1,MLv4.1/11,Mw(mB)3.9/1*

IDC ***18*** *04:13:18.6±4.9,3.°72N×127.°12E,h51km±51km,mb3.7/7, mb1 3.9/8,mb1mx3.5/42,mbtmp4.0/8,ML3.9/1,MS2.6/1, Ms1 2.6/1,ms1mx2.2/33,Error ellipse: s-maj=59.3km s-min=17.5km az=67.0*

NEIC ***18*** *04:13:20.4±2.5,3.°57N±0.°09×127.°1E±0.°1,h67km±10km, mb4.2/15,Error ellipse: s-maj=16.7km s-min=11.7km az=64.0*

ISC 18 04:13:17.2±0.8,3.°80N±0.°09×127.°23E±0.°08,h36km,n35, σ1°44/33,mb4.1/11,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SGSI	Sangihe	1.71	266	P		Pn	04 13 44.1	-0.3
SGSI				S		Sn	04 14 06.2	+1.2
TNTI	Ternate	3.01	177	Pn		Pn	04 14 01.2	-1.1
GTOI	Gorontalo	5.26	233	P		Pn	04 14 35.2	+1.9
	0.1nm9.5nm,0.5s							
SANI	Sanana	5.94	192	P		Pn	04 14 45.0	+2.3
	0.1nm550nm20nm,0.6s							
SWI	Sorong	6.13	139	P		Pn	04 14 48.1	+2.7
	0.1nm14nm,0.4s							
SIJI	Sorong	6.14	139	P		Pn	04 14 46.6	+1.1
	2.8nm,0.3s,baz=344,slow=9.3,SNR=6.3							
MRSI	Marisa	6.23	238	P		Pn	04 14 48.1	+1.4
	0.2nm34nm,0.5s							
TOLI2	Tolitoli	6.98	248			Pn	04 14 56.4	-0.5
NLAI	Namlea	6.99	181	P		Pn	04 15 00.7	+3.6
	0.1nm15nm,0.6s							
APSI	Ampana	7.28	230	P		Pn	04 15 02.8	+1.7
FAKI	Fak Fak	8.35	143	Pn		Pn	04 15 16.7	+1.0
MTN	Manton Dam	16.98	167	Pn		Pn	04 17 11.3	-0.8
MTN				IAmb	IAmb		04 17 31.6	
	comp=Z,26nm,1.6s							
KSM	Kuching	17.06	263	Pn		Pn	04 17 11.2	-1.9
KNRA	Kununurra	19.41	176	P		P	04 17 39.8	-0.6
KNRA				IAmb	IAmb		04 17 52.7	
	comp=Z,12nm,0.8s							
FITZ	Fitzroy Crossi	21.82	184	P		P	04 18 06.0	-0.4
	comp=Z,3.6nm,0.8s,baz=12,slow=7.9,SNR=13							
FITZ	Fitzroy Crossi	21.82	184	IAmb	IAmb		04 18 43.8	
	comp=Z,9.6nm,1.4s							
MYKOM	Kota Tinggi	23.44	266	P		P	04 18 23.7	+0.2
WB0	Warramunga Ar	24.45	164	P		P	04 18 32.4	-0.5
WB0				IAmb	IAmb		04 18 39.4	
	comp=Z,4.6nm,0.8s							
WRA	Warramunga Arr	24.60	164	P		P	04 18 33.4	-0.9
	comp=Z,2.3nm,0.7s,baz=344,slow=10,SNR=17							
WB2	Warramunga Ar	24.61	164	P		P	04 18 33.8	-0.5
WR0	Warramunga Ar	24.68	163	P		P	04 18 34.5	-0.5
WR0				IAmb	IAmb		04 19 20.9	
	comp=Z,27nm,2.0s							
ASAR	Alice Springs	28.06	167	P		P	04 19 05.1	-0.4
	comp=Z,0.4nm,0.6s,baz=343,slow=6.1,SNR=6.6							
CMAR	Chiang Mai Arr	31.27	300	P	

ASGA				S	**Sn**	**04 19 56.6**	**+0.6**
ASGA				AML	AML	04 19 59.9	
	comp=N,0.6nm,0.3s						
ASGA				AML	AML	04 19 59.9	
	comp=N,0.6nm,0.3s						
ASGA				AML	AML	04 20 00.8	
	comp=N,0.4nm,0.5s						
ASGA				AML	AML	04 20 00.8	
	comp=N,0.4nm,0.5s						
CSS	**Mathiatis**	**1.27**	**104**	PN	**Pg**	**04 19 38.9**	**-0.2**
CSS				SN	**Sn**	**04 19 56.8**	**+0.6**
CSS	**Mathiatis**	**1.27**	**104**	P	**Pg**	**04 19 39.1**	**0.0**
CSS				S	**Sn**	**04 19 58.2**	**+2.0**
CSS				AML	AML	04 20 03.4	
	comp=N,0.1nm,0.5s						
CSS				AML	AML	04 20 03.4	
	comp=N,0.1nm,0.5s						
MVOU	**Mavrovouni**	**1.50**	**100**	P	**Pg**	**04 19 43.0**	**-0.5**
BERE	**Bereket-Mersin**	**1.55**	**46**	PN	**Pb**	**04 19 43.9**	**0.0**
BERE				SN	**Sg**	**04 20 05.4**	**+0.7**
KEPZ	**Antalya-Kepez**	**1.63**	**353**	*i* P	**Pb**	**04 19 44.8**	**-0.3**
KEPZ				*i* S	**Sg**	**04 20 07.3**	**+0.2**
GULN	**MERSIN_Gulnar**	**1.66**	**57**	*i* P	**Pg**	**04 19 46.4**	**-0.2**
GULN				*i* S	**Sg**	**04 20 07.5**	**-0.6**
GULN				IAML		04 20 15.0	
	comp=E,19nm,0.6s						
TEVE	**Tevekalti-Mers**	**1.74**	**48**	PN	**Pb**	**04 19 46.9**	**-0.2**
KORT	**Korkueli**	**2.10**	**325**	PN	**Pb**	**04 19 51.8**	**-1.4**
KKBE	**Karaman, Kazim**	**2.13**	**24**	*i* P	**Pb**	**04 19 53.9**	**+0.1**
KKBE				IAML		04 20 31.0	
	comp=E,16nm,0.4s						
SEDI	**Konya, Seydise**	**2.17**	**358**	*i* P	**Pg**	**04 19 56.3**	**0.0**
SEDI				*i* S	**Sg**	**04 20 29.2**	**+4.7**
SEDI				IAML		04 20 34.0	
	comp=E,27nm,0.8s						
SEDI				IAML		04 20 35.0	
	comp=N,27nm,0.7s						
KIZK	**Mersin**	**2.23**	**57**	*i* P	**Pb**	**04 19 55.5**	**+0.2**
KIZK				*i* S	**Sb**	**04 20 23.7**	**+0.7**
KERG	**Konya-Eregli**	**2.82**	**40**	*i* P	**Pb**	**04 20 03.7**	**-1.8**
KERG				*i* S	**Sb**	**04 20 39.0**	**-1.3**
KERG				IAML		04 20 46.0	
	comp=N,11nm,0.4s						
KERG				IAML		04 20 47.0	
	comp=E,16nm,1.0s						

IDC ***18*** *04:42:16.2±1.0, 7°.26S×128°.24E, h0km, mb4.2/4, mb1 4.1/9, mb1mx3.9/32, mbtmp4.0/9, ML3.8/5, MS3.0/2, Ms1 3.0/2, ms1mx2.5/34, Error ellipse: s-maj=37.4km s-min=18.0km az=79.0*

NEIC ***18*** *04:42:19.8±1.3, 7°.35S±0°.08×128°.30E±0°.09, h31km±8km, mb4.2/7, Error ellipse: s-maj=13.4km s-min=11.7km az=79.0*

ISC 18 04:42:20.3±0.7, 7°.36S±0°.06×128°.30E±0°.08, h35km, n29, σ1§30/31, mb4.2/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SOEI	**Soe**	**4.64**	**239**	Pn		**Pn**	**04 43 29.2**	**+1.1**
BATI	**Baumata**	**5.38**	**238**	Pn		**Pn**	**04 43 39.4**	**+1.1**
	7.0nm,0.3s,baz=55,slow=1.2,SNR=3.0							
BATI				Sn		**Sn**	**04 44 40.4**	**+1.3**
	3.2nm,0.3s,baz=72,slow=17,SNR=1.8							
MTN	**Manton Dam**	**6.12**	**153**	Pn		**Pn**	**04 43 49.3**	**+0.9**
MMRI	**Maumere**	**6.13**	**258**			**Pn**	**04 43 48.1**	**-0.4**
SIJI	**Sorong**	**7.10**	**25**	Pn		**Pn**	**04 44 01.4**	**-0.4**
	1.6nm,0.3s,baz=246,slow=14,SNR=4.9							
KNRA	**Kununurra**	**8.28**	**177**			**Pn**	**04 44 16.7**	**-1.3**
KAPI	**Kappang**	**8.81**	**285**	LR		LR	04 47 42.8	
	comp=Z,37nm,18.4s,baz=134,slow=37							
KAPI	**Kappang**	**8.81**	**285**	Pn		**Pn**	**04 44 23.8**	**-1.5**
FITZ	**Fitzroy Crossi**	**10.98**	**193**	Pn		**Pn**	**04 44 55.2**	**+0.2**
	0.4nm,0.3s,baz=36,slow=13,SNR=7.8							
FITZ				Sn		**Sn**	**04 46 53.7**	**-3.0**
	0.5nm,0.3s,baz=151,slow=19,SNR=4.2							
WB0	**Warramunga Arr**	**13.68**	**155**			**Pn**	**04 45 32.2**	**+0.2**
WRAB	**Tennant Creek**	**13.81**	**155**	Pn		**Pn**	**04 45 33.8**	**+0.1**
WRA	**Warramunga Arr**	**13.81**	**155**	Pn		**Pn**	**04 45 33.6**	**-0.1**
	0.5nm,0.3s,baz=328,slow=14,SNR=15							
WRA				Sn		**Sn**	**04 48 02.2**	**-3.8**
	0.9nm,0.3s,baz=333,slow=22,SNR=7.3							
WB2	**Warramunga Arr**	**13.82**	**155**			**Pn**	**04 45 33.8**	**0.0**
WR0	**Warramunga Arr**	**13.91**	**155**			**Pn**	**04 45 35.7**	**+0.6**
AS31	**Alice Springs**	**17.08**	**162**	P		**Pn**	**04 46 16.6**	**0.0**
ASAR	**Alice Springs**	**17.08**	**162**	P		**Pn**	**04 46 17.1**	**+0.5**
	0.2nm,0.3s,baz=341,slow=9.5,SNR=9.3							
ASAR				S		**Sn**	**04 49 27.2**	**+1.6**
	0.3nm,0.3s,baz=320,slow=23,SNR=5.6							
STKA	**Stephens Creek**	**27.36**	**155**	P		**P**	**04 48 05.1**	**+2.8**
	2.9nm,0.8s,baz=355,slow=11,SNR=2.3							
RPSI	**Rantau Prapat**	**30.97**	**288**	P		**P**	**04 48 33.5**	**-1.1**
RPSI				IAmb		IAmb	04 48 43.3	
	comp=Z,7.9nm,1.0s							
SONM	**Songino Array**	**58.27**	**343**	P		**P**	**04 52 12.4**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=163,slow=8.1,SNR=6.4							
SONM	**Songino Array**	**58.27**	**343**	IAmb		IAmb	04 52 13.7	
	comp=Z,1.3nm,1.0s							
MK31	**Makanchi Array**	**67.61**	**328**	P		**P**	**04 53 12.9**	**-0.7**
MK31				IAmb		IAmb	04 53 14.9	
	comp=Z,1.4nm,0.8s							
MKAR	**Makanchi Array**	**67.61**	**328**	P		**P**	**04 53 13.9**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=122,slow=7.6,SNR=16							
MKAR	**Makanchi Array**	**67.61**	**328**	P		**P**	**04 53 13.8**	**+0.2**
AAK	**Ala-Archa**	**69.74**	**321**	P		**P**	**04 53 27.2**	**+0.1**
AAK				IAmb		IAmb	04 53 28.6	
	comp=Z,2.5nm,1.0s							
ZAA0	**Zalesovo Array**	**71.17**	**335**	P		**P**	**04 53 34.8**	**-0.5**
ZALV	**Zalesovo Beam**	**71.17**	**335**	P		**P**	**04 53 35.5**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=123,slow=5.0,SNR=14							
ZALV				LR		LR	05 27 01.9	
	comp=Z,19nm,19.0s,baz=54,slow=38							
ZALV	**Zalesovo Beam**	**71.17**	**335**	P		**P**	**04 53 34.8**	**-0.5**
BRVK	**Borovoye**	**77.55**	**328**	P		**P**	**04 54 12.8**	**+0.2**
BRVK				IAmb		IAmb	04 54 13.8	
	comp=Z,3.4nm,1.0s							
ABKAR	**Akbulak array**	**81.75**	**322**	P		**P**	**04 54 35.4**	**-0.1**

SKHL ***18*** *05:01:10.8±0.3, 43°.30N×147°.50E, h60km±3km, mb4.8/11*

MOS ***18*** *05:01:10.5±1.0, 43°.32N×147°.42E, h54km, mb4.6/17, Error ellipse: s-maj=8.6km s-min=6.3km az=120.5*

NIED ***18*** *05:01:11.4, 43°.28N×147°.35E, h33km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.84; Mθθ-0.42; Mφφ-1.43; Mrθ0.86; Mθφ-0.72; Mφr0.08; Fault plane solution: M₀2.00000×10¹⁵ NP1:φs46.00000°, δ55.00000°, λ112.00000°. NP2:φs191.00000°, δ40.00000°, λ62.00000°.*

JMA ***18*** *05:01:11.4±0.2, 43°.28N×147°.35E, h33km, M4.6*

IDC ***18*** *05:01:13.6±2.2, 43°.38N×147°.35E, h64km±19km, mb4.0/21, mb1 4.1/28, mb1mx4.0/45, mbtmp4.2/28, MS3.0/9, Ms1 3.1/9, ms1mx2.8/41, Error ellipse: s-maj=15.9km s-min=12.2km az=137.0*

NEIC ***18*** *05:01:13.2±1.4, 43°.34N±0°.09×147°.3E±0°.1, h60km±6km, mb4.5/26, Error ellipse: s-maj=13.9km s-min=10.9km az=137.0*

ISC 18 05:01:12.5±1.0, 43°.36N±0°.06×147°.41E±0°.05, h55km±8km, n185, σ1§15/201, mb4.3/48, MS3.4/5, 5C-12D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NEM2	**Nemuro 2**	**1.22**	**271**	P		**Pn**	**05 01 32.1**	**-1.1**
NEM2				*e*S		**Sn**	**05 01 47.2**	**-1.5**
NMR	**Nemuro--Hokkai**	**1.23**	**271**	*i*PN		**Pn**	**05 01 32.1**	**-1.2**
NMR				*i* S		**Sn**	**05 01 48.1**	**-0.8**
NMR	**Nemuro--Hokkai**	**1.23**	**271**	*i* P		**Pn**	**05 01 32.1**	**-1.2**
NMR				*i* S		**Sn**	**05 01 48.1**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**1.31**	**301**	*d* iPN		**Pn**	**05 01 33.5**	**-1.0**
YUK				*i* S		**Sn**	**05 01 50.3**	**-0.6**
YUK				pmax	pmax			
	comp=N,1μm,0.2s							
YUK				pmax	pmax			
	comp=E,650nm,0.2s							
YUK				pmax	pmax			
	comp=Z,5μm,0.2s							
YUK				smax	smax			
	comp=E,2μm,0.1s							
YUK				smax	smax			
	comp=N,4μm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.31**	**301**	*i* P		**Pn**	**05 01 33.5**	**-1.0**
YUK				AMB		AMB	05 01 35.0	
	comp=N,120nm,0.3s							
YUK				AMB		AMB	05 01 35.0	
	comp=N,70nm,0.3s							
YUK				AMB		AMB	05 01 35.0	
	comp=N,530nm,0.3s							
YUK				*i* S		**Sn**	**05 01 50.3**	**-0.6**
YUK				A		A	05 01 53.0	
	comp=N,4μm,0.4s							
YUK				A		A	05 01 53.0	
	comp=N,2μm,0.4s							
GRPR	**Tuman**	**1.35**	**298**	*i*PN		**Pn**	**05 01 34.2**	**-0.8**
GRPR				*i* S		**Sn**	**05 01 51.0**	**-0.8**
GRPR				pmax	pmax			
	comp=Z,5μm,0.3s							
GRPR				pmax	pmax			
	comp=N,3μm,0.2s							
GRPR				pmax	pmax			
	comp=E,3μm,0.2s							
GRPR				smax	smax			
	comp=N,6μm,0.4s							
GRPR				smax	smax			
	comp=E,3μm,0.4s							
GRPR	**Tuman**	**1.35**	**298**	*i* P		**Pn**	**05 01 34.2**	**-0.8**
GRPR				AMB		AMB	05 01 35.0	
	comp=E,320nm,0.3s							
GRPR				AMB		AMB	05 01 35.0	
	comp=E,280nm,0.3s							
GRPR				AMB		AMB	05 01 35.0	
	comp=E,520nm,0.3s							
GRPR				*i* S		**Sn**	**05 01 51.0**	**-0.8**
GRPR				A		A	05 01 53.0	
	comp=E,6μm,0.4s							
GRPR				A		A	05 01 53.0	
	comp=E,3μm,0.4s							
GLVR	**Golovnino**	**1.43**	**286**	*i*PN		**Pn**	**05 01 35.3**	**-0.7**
GLVR				*i* S		**Sn**	**05 01 54.9**	**+1.2**
GLVR				pmax	pmax			
	comp=E,74nm,0.2s							
GLVR				pmax	pmax			
	comp=Z,2μm,0.2s							
GLVR				smax	smax			
	comp=N,5μm,0.3s							
GLVR				smax	smax			
	comp=E,5μm,0.3s							
GLVR	**Golovnino**	**1.43**	**286**	*i* P		**Pn**	**05 01 35.3**	**-0.7**
GLVR				AMB		AMB	05 01 35.8	
	comp=E,800nm,0.4s							
GLVR				*i* S		**Sn**	**05 01 54.0**	**+0.3**
GLVR				A		A	05 01 57.0	
	comp=E,5μm,0.5s							
GLVR				A		A	05 01 57.0	
	comp=E,5μm,0.5s							
JKHN	**Kushirohamanak**	**1.67**	**261**	P		**Pn**	**05 01 38.8**	**-0.5**
JKHN				*e*S		**Sn**	**05 01 59.0**	**-0.6**
RUSJ	**Misakicho**	**1.74**	**296**	*i*PN		**Pn**	**05 01 40.2**	**0.0**
RUSJ				*i* S		**Sn**	**05 02 03.1**	**+1.9**
JRA	**Rausu**	**1.76**	**290**	P		**Pn**	**05 01 40.3**	**-0.2**
JRA				*e*S		**Sn**	**05 02 01.7**	**-0.1**
JNSB	**Nemuroshibetsu**	**1.80**	**284**	P		**Pn**	**05 01 40.7**	**-0.4**
KUR	**Kuril'sk**	**1.90**	**10**	*c* iPN		**Pn**	**05 01 41.8**	**-0.6**
KUR				*i* S		**Sn**	**05 02 03.9**	**-1.3**
KUR				pmax	pmax			
	comp=N,25nm,0.3s							
KUR				pmax	pmax			
	comp=Z,90nm,0.3s							
KUR				pmax	pmax			
	comp=E,20nm,0.2s							
KUR				smax	smax			
	comp=N,958nm,0.4s							
KUR				smax	smax			
	comp=E,452nm,0.2s							
KUR	**Kuril'sk**	**1.90**	**10**	*i* P		**Pn**	**05 01 41.2**	**-1.2**
KUR				AMB		AMB	05 01 44.8	
	comp=E,30nm,0.2s							
KUR				AMB		AMB	05 01 44.8	
	comp=E,20nm,0.2s							
KUR				AMB		AMB	05 01 44.8	
	comp=E,90nm,0.2s							
KUR				*i* S		**Sn**	**05 02 03.9**	**-1.3**
KUR				A		A	05 02 06.0	
	comp=E,960nm,0.3s							
KUR				A		A	05 02 06.0	
	comp=E,450nm,0.3s							
JNK	**Nakash**	**1.97**	**277**	P		**Pn**	**05 01 42.7**	**-0.8**
JNK				*e*S		**Sn**	**05 02 06.1**	**-1.0**
JAK	**Akkeshi**	**2.02**	**261**	P		**Pn**	**05 01 43.2**	**-0.9**
JAK				*e*S		**Sn**	**05 02 06.9**	**-1.3**
JTKR	**Abashiri--Toko**	**2.62**	**285**	P		**Pn**	**05 01 52.9**	**+0.7**
JOB	**Onbets**	**2.66**	**261**	P		**Pn**	**05 01 52.3**	**-0.5**
JOB				*e*S		**Sn**	**05 02 22.8**	**-1.0**
JAR	**Ashorobuto**	**2.66**	**270**	P		**Pn**	**05 01 52.7**	**-0.1**
JAR				*e*S		**Sn**	**05 02 23.5**	**-0.4**
JMP	**Maruseppu**	**3.01**	**284**	P		**Pn**	**05 01 58.6**	**+0.9**
JCH	**Churui**	**3.06**	**257**	P		**Pn**	**05 01 57.5**	**-0.9**
JCH				*e*S		**Sn**	**05 02 31.4**	**-2.4**
JEM	**Erimo**	**3.41**	**248**			**Pn**	**05 02 04.4**	**+1.3**
ERM	**Erimo**	**3.41**	**248**	*de*PN		**Pn**	**05 02 04.3**	**+1.1**
ERM	**Erimo**	**3.41**	**248**			**Pn**	**05 02 04.2**	**+1.1**
ERM				Sn		**Sn**	**05 02 41.5**	**-0.8**
JKK2	**Kamakawa 2**	**3.43**	**280**	P		**Pn**	**05 02 04.5**	**+1.2**
JFR	**Furan**	**3.53**	**268**	P		**Pn**	**05 02 05.2**	**+0.5**
JFR				*e*S		**Sn**	**05 02 44.8**	**-0.4**
JKA	**Kamikawa-asahi**	**3.57**	**284**			**Pn**	**05 02 05.9**	**+0.6**
ASAJ	**Asahikawa**	**3.57**	**284**	P		**Pn**	**05 02 06.7**	**+1.4**
	comp=E,14nm,0.3s,baz=92,slow=8.3,SNR=96							
ASAJ				S		**Sn**	**05 02 52.7**	**+6.5**
	baz=197,slow=19,SNR=0.7							
ASAJ				LR		LR	05 03 40.8	
	comp=E,260nm,20.3s,baz=275,slow=42							
ASAJ	**Asahikawa**	**3.57**	**284**	P		**Pn**	**05 02 06.7**	**+1.4**
JNBK	**Urakawa-nobuka**	**3.59**	**254**	P		**Pn**	**05 02 05.0**	**-0.6**
JSE	**Soyaes**	**3.82**	**296**	P		**Pn**	**05 02 09.6**	**+0.9**
JEW	**Eniwo**	**4.40**	**265**			**Pn**	**05 02 16.5**	**-0.1**
YSS	**Yuzh-Sakhalins**	**4.87**	**319**	*e*PN		**Pn**	**05 02 24.0**	**+0.9**
YSS				pmax	pmax			
	comp=Z,30nm,0.4s							
YSS				MLR	MLR			
	comp=Z,300nm,14.0s							
YSS	**Yuzh-Sakhalins**	**4.87**	**319**	Pn		**Pn**	**05 02 23.3**	**+0.2**
YSS	**Yuzh-Sakhalins**	**4.87**	**319**	*e*P		**Pn**	**05 02 24.0**	**+0.9**
YSS				AMB		AMB	05 02 26.0	
	comp=Z,30nm,0.4s							
JTM	**Tenmabayashi**	**5.38**	**244**	Pn		**Pn**	**05 02 31.9**	**+1.9**
TYV	**Tymovskoe**	**8.17**	**338**	*e*PN		**Pn**	**05 03 07.7**	**-0.6**
TYV				pmax	pmax			
	comp=Z,100nm,2.8s							
TYV				pmax	pmax			
	comp=Z,6.0nm,1.4s							
TYV	**Tymovskoe**	**8.17**	**338**	*e*P		**Pn**	**05 03 09.8**	**+1.5**
TYV				AMB		AMB	05 03 11.9	
	comp=Z,20nm,0.6s							
SKR	**Severo-Kuril's**	**9.43**	**36**	*e*PN		Pn	05 03 19.3	-6.1
SKR				pmax	pmax			
	comp=Z,62nm,0.7s							
SKR				MLR	MLR			
	comp=Z,700nm,13.0s							
SKR	**Severo-Kuril's**	**9.43**	**36**	*e*P		**Pn**	**05 03 25.0**	**-0.4**
SKR				AMB		AMB	05 03 27.8	
	comp=Z,60nm,0.6s							
MJAR	**Matsushiro Arr**	**9.81**	**229**	P		**Pn**	**05 03 30.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=27,slow=15,SNR=1.7							
MJAR				LR		LR	05 07 19.3	
	comp=Z,49nm,21.7s,baz=65,slow=37							
JGF	**Kuroka**	**10.97**	**228**	Pn		**Pn**	**05 03 44.4**	**-2.2**
USA0B	**Ussuriysk Arra**	**11.19**	**280**	*e*PN		**Pn**	**05 03 48.7**	**-0.8**
USA0B	**Ussuriysk Arra**	**11.19**	**280**	Pn		**Pn**	**05 03 49.8**	**+0.2**
USRK	**Ussuriysk Ar.**	**11.19**	**280**	P		**Pn**	**05 03 49.9**	**+0.4**
	baz=88,slow=12,SNR=6.8							
USRK				LR		LR	05 08 04.3	
	comp=Z,82nm,18.7s,baz=81,slow=37							
PETK	**Petropavlovsk-**	**11.91**	**31**	P		**Pn**	**05 04 02.0**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=235,slow=10.0,SNR=2.5							
PETK				LR		LR	05 09 04.3	
	comp=Z,59nm,18.5s,baz=212,slow=40							
PETK	**Petropavlovsk-**	**11.91**	**31**	Pn		**Pn**	**05 04 01.9**	**+2.6**
KLR	**Kul'dur**	**12.31**	**304**	P		**Pn**	**05 04 06.3**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=110,slow=20,SNR=7.9							
KLR				LR		LR	05 09 06.1	
	comp=Z,82nm,18.3s,baz=128,slow=38							
KLR	**Kul'dur**	**12.31**	**304**	*e*PN		**Pn**	**05 04 06.7**	**+1.9**
KLR				pmax	pmax			
	comp=Z,10.0nm,1.8s							
KLR	**Kul'dur**	**12.31**	**304**	*e*P		**Pn**	**05 04 05.2**	**+0.4**
EKMR	**Ekimchan**	**13.66**	**320**	*e*P		**Pn**	**05 04 22.0**	**-1.2**
EKMR				AMB		AMB	05 04 25.3	
	comp=Z,10.0nm,0.6s							
KSRS	**Korea Array**	**15.96**	**255**	P		**Pn**	**05 04 52.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=55,slow=12,SNR=2.3							
KSRS				LR		LR	05 11 11.1	
	comp=Z,39nm,20.8s,baz=35,slow=38							
MA2	**Magadan**	**16.37**	**6**	*e*P		**Pn**	**05 04 55.5**	**-2.8**
MA2				pmax	pmax			
	comp=Z,5.0nm,1.4s							
BMKR	**Bomnak**	**16.59**	**320**	*e*P		**Pn**	**05 04 59.0**	**-2.1**
KROS	**Kirovskiy**	**17.35**	**317**	*e*P		**Pn**	**05 05 08.7**	**-1.8**
SEY	**Seymchan**	**19.82**	**7**	P		**P**	**05 05 37.2**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=181,slow=9.6,SNR=11							
SEY	**Seymchan**	**19.82**	**7**	*e*P		**P**	**05 05 37.9**	**-0.3**
ULN	**Ulaanbaatar**	**28.36**	**293**	*e*P		**P**	**05 07 02.4**	**+1.2**
ULN				pmax	pmax			
	comp=Z,10.0nm,1.6s							
ULN	**Ulaanbaatar**	**28.36**	**293**	P		**P**	**05 07 00.6**	**-0.7**
ULN	**Ulaanbaatar**	**28.36**	**293**	*i* P		**P**	**05 07 02.4**	**+1.2**
H11N2	**WAKE ISLAND Hy**	**28.68**	**139**	T		T	05 37 49.4	
	baz=330,slow=76,SNR=320							
H11N1	**WAKE ISLAND Hy**	**28.69**	**139**	T		T	05 37 55.7	
	baz=330,slow=76,SNR=272							
H11N3	**WAKE ISLAND Hy**	**28.70**	**139**	T		T	05 37 51.6	
	baz=330,slow=76,SNR=217							
SONM	**Songino Array**	**28.80**	**293**	P		**P**	**05 07 04.7**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=89,slow=9.0,SNR=13							
SONM	**Songino Array**	**28.80**	**293**	*e*P		**P**	**05 07 06.2**	**+1.1**
SONM				pmax	pmax			
	comp=Z,3.0nm,0.5s							
SONM	**Songino Array**	**28.80**	**293**	P		**P**	**05 07 05.1**	**-0.1**
H11S1	**WAKE ISLAND Hy**	**29.64**	**141**	T		T	05 39 07.5	
	baz=331,slow=76,SNR=412							
H11S3	**WAKE ISLAND Hy**	**29.65**	**141**	T		T	05 39 01.0	
	baz=331,slow=76,SNR=404							
H11S2	**WAKE ISLAND Hy**	**29.66**	**141**	T		T	05 39 12.1	
	baz=331,slow=76,SNR=349							
TNA	**Tin City**	**33.08**	**32**	P		**P**	**05 07 43.3**	**+0.9**
TNA				IAmb		IAmb	05 07 44.4	
	comp=Z,15nm,1.1s							
ANM	**Nome**	**33.80**	**35**	P		**P**	**05 07 50.0**	**+1.3**
ANM				pmax	pmax			
	comp=Z,10.0nm,1.1s							
ANM	**Nome**	**33.80**	**35**	P		**P**	**05 07 50.0**	**+1.3**
ANM				IAmb		IAmb	05 07 51.0	
	comp=Z,10.0nm,1.1s							
A21K	**Barrow**	**38.81**	**25**	P		**P**	**05 08 31.1**	**-0.2**
A21K				IAmb		IAmb	05 08 32.1	
	comp=Z,14nm,1.1s							
IMAR	**Indian Mountai**	**38.86**	**34**	P		**P**	**05 08 31.6**	**-0.3**
TOLK	**Toolik Lake Re**	**40.73**	**30**	P		**P**	**05 08 48.4**	**+1.0**
TOLK				IAmb		IAmb	05 08 49.0	
	comp=Z,5.4nm,0.8s							
DGZ	**Jazzator, Alta**	**40.78**	**301**	*e*P		**P**	**05 08 49.0**	**+0.8**
DGZ				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**41.39**	**307**	P		**P**	**05 08 52.1**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=82,slow=3.3,SNR=3.7							
ZALV				PcP		**PcP**	**05 10 51.8**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=72,slow=4.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**41.39**	**307**	*e*P		**P**	**05 08 53.7**	**+0.8**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s							
IL31		**41.69**	**36**	P		**P**	**05 08 55.7**	**+0.5**
ILAR	**Eielson Array**	**41.69**	**36**	P		**P**	**05 08 55.5**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=273,slow=8.4,SNR=19							
ILAR	**Eielson Array**	**41.69**	**36**	P		**P**	**05 08 56.4**	**+1.1**
M24K	**Tolsona, Glenn**	**42.18**	**40**	P		**P**	**05 09 00.3**	**+1.0**
PRP	**Porcupine Dome**	**42.24**	**35**	P		**P**	**05 09 00.5**	**+0.6**
PRP				IAmb		IAmb	05 09 01.7	
	comp=Z,5.1nm,0.8s							
FYU	**Fort Yukon**	**42.32**	**33**	P		**P**	**05 09 02.3**	**+1.9**
FYU				IAmb		IAmb	05 09 03.7	
	comp=Z,1.1nm,0.7s							
BMAR	**Burnt Mountain**	**42.56**	**32**	P		**P**	**05 09 04.0**	**+1.7**
K27K	**Chicken**	**43.83**	**37**	P		**P**	**05 09 13.5**	**+1.0**
BCAR	**Beaver Creek A**	**44.08**	**38**	P		**P**	**05 09 15.9**	**+1.2**
EGAK	**Eagle**	**44.13**	**36**	P		**P**	**05 09 15.0**	**0.0**
MK31	**Makanchi Array**	**44.94**	**298**	*d* iP		**P**	**05 09 22.6**	**+0.9**
MKAR	**Makanchi Array**	**44.94**	**298**	P		**P**	**05 09 22.7**	**+1.0**
	comp=Z,2.7nm,0.5s,baz=81,slow=8.6,SNR=4.1							
HYT	**Haines Junctio**	**46.50**	**41**	P		**P**	**05 09 35.2**	**+1.3**
INK	**Inuvik**	**46.64**	**30**	P		**P**	**05 09 36.0**	**+1.2**
	comp=Z,1.7nm,0.4s,baz=284,slow=5.0,SNR=15							
INK	**Inuvik**	**46.64**	**30**	P		**P**	**05 09 36.0**	**+1.2**
INK	**Inuvik**	**46.64**	**30**	P		**P**	**05 09 35.9**	**+1.2**
INK				IAmb		IAmb	05 09 36.8	
	comp=Z,3.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**47.60**	**254**	LR		LR	05 28 59.0	
	comp=Z,20nm,18.6s,baz=184,slow=35							
C36M	**Paulatuk**	**49.73**	**28**	P		**P**	**05 09 59.4**	**+0.9**
BRVK	**Borovoye**	**49.95**	**310**	*e*P		**P**	**05 10 01.4**	**+1.0**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BRVK	**Borovoye**	**49.95**	**310**	*e*P		**P**	**05 10 01.4**	**+1.0**
AAK	**Ala-Archa**	**51.70**	**296**	*e*P		**P**	**05 10 14.3**	**+0

ICESG				IAmb	IAmb	05 12 05.0	
	comp=Z,4.1nm,0.5s						
ASAR	**Alice Springs**	**67.84**	**193**	P	**P**	**05 12 05.5**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=8.7,slow=6.1,SNR=10						
FRB	**Frobisher Bay**	**69.50**	**16**	P	**P**	**05 12 13.1**	**-1.4**
	comp=Z,1.5nm,0.4s,baz=339,slow=6.4,SNR=15						
MOL	**Molde**	**69.63**	**341**	*eP*	**P**	**05 12 15.3**	**0.0**
DOMB	**Dombas**	**69.72**	**340**	*eP*	**P**	**05 12 16.5**	**+0.4**
MNK	**Minsk**	**69.75**	**327**	*i* P	**P**	**05 12 14.1**	**-2.2**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**P**	**05 12 14.1**	**-2.2**
	comp=N,20nm,1.0s						
MNK				*i* P	**P**	**05 12 14.1**	**-2.2**
	comp=Z,14nm,0.8s						
MNK				*i* PcP	**PcP**	**05 12 36.7**	**-2.0**
MNK				*i* PP	**PP**	**05 14 48.2**	**-2.3**
MNK				*i* PPP	PPP	05 16 29.6	
MNK				*i* S	**S**	**05 21 18.9**	**-1.9**
MNK				*i* ScS	**SKSac**	**05 22 11.1**	**-0.9**
MNK				*i* SS	**SS**	**05 25 48.3**	**-0.7**
MNK				*i* SSS	SSS	05 29 06.1	
MNK				*i* LQ	LQ	05 38 00.5	
MNK				*i* LR	LR	05 43 18.3	
MNK				*i* LRM	MLR	05 45 53.7	
	comp=E,4.0nm,19.5s						
MNK				*i* LRM	MLR	05 45 55.1	
	comp=N,149nm,26.1s						
MNK				*i* LRM	MLR	05 46 29.9	
	comp=Z,64nm,23.2s						
NC204	**NORSAR Array S**	**69.95**	**339**	P	**P**	**05 12 18.0**	**+0.5**
DY2G	**Dye2**	**69.99**	**6**	*i* P	**P**	**05 12 16.7**	**-1.2**
DY2G				IAmb	IAmb	05 12 17.8	
	comp=Z,2.9nm,0.8s						
PDAR	**Pinedale Array**	**70.01**	**50**	P	**P**	**05 12 18.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=112,slow=0.1,SNR=12						
PDAR	**Pinedale Array**	**70.01**	**50**	P	**P**	**05 12 18.9**	**+0.5**
NB2	**NORSAR Subarra**	**70.03**	**339**	P	**P**	**05 12 17.7**	**-0.3**
	baz=31,slow=6.5						
NOA	**NORSAR Array B**	**70.03**	**339**	P	**P**	**05 12 17.1**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=37,slow=5.8,SNR=49						
NOA	**NORSAR Array B**	**70.03**	**339**	*eP*	**P**	**05 12 18.1**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKN	**Aaknes**	**70.09**	**341**	*eP*	**P**	**05 12 19.1**	**+0.8**
KIV	**Kislovodsk**	**70.17**	**312**	*eP*	**P**	**05 12 20.3**	**+1.1**
KIV				pmax	pmax		
	comp=Z,47nm,1.0s						
KIV				MLR	MLR		
	comp=Z,69nm,17.0s						
KIV	**Kislovodsk**	**70.17**	**312**	*eP*	**P**	**05 12 20.3**	**+1.1**
KBZ	**Khabaz**	**70.20**	**312**	P	**P**	**05 12 19.6**	**+0.4**
	comp=Z,7.0nm,0.8s,baz=44,slow=4.4,SNR=12						
KBZ	**Khabaz**	**70.20**	**312**	*eP*	**P**	**05 12 20.8**	**+1.6**
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	**70.20**	**312**	*eP*	**P**	**05 12 20.8**	**+1.6**
NC602	**NORSAR Array S**	**70.20**	**339**	*eP*	**P**	**05 12 18.6**	**-0.4**
NORES	**NORESS Array B**	**70.20**	**339**	P	**P**	**05 12 18.4**	**-0.6**
ZEI	**Tsey**	**70.27**	**310**	*eP*	**P**	**05 12 19.2**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SKAR	**Skarslia**	**71.08**	**340**	*eP*	**P**	**05 12 24.6**	**+0.1**
OSL	**Oslo**	**71.10**	**339**	*eP*	**P**	**05 12 24.8**	**+0.4**
HYA	**Hoyanger**	**71.17**	**341**	*eP*	**P**	**05 12 25.6**	**+0.8**
KONO	**Kongsberg**	**71.64**	**339**	*eP*	**P**	**05 12 28.2**	**+0.5**
ULM	**Lac du Bonnet**	**71.69**	**37**	P	**P**	**05 12 27.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=339,slow=8.5,SNR=3.8						
ULM	**Lac du Bonnet**	**71.69**	**37**	P	**P**	**05 12 28.0**	**-0.2**
ULM	**Lac du Bonnet**	**71.69**	**37**	IAmb	IAmb	05 12 43.7	
	comp=Z,5.5nm,1.4s						
AKASG	**Malin Array Be**	**72.01**	**324**	P	**P**	**05 12 30.1**	**+0.1**
	comp=Z,3.9nm,0.5s,baz=39,slow=6.1,SNR=17						
BUR08	**Bucovina Ar. S**	**76.05**	**324**	P	**P**	**05 12 54.7**	**+0.9**
BUR08				IAmb	IAmb	05 12 54.9	
	comp=Z,6.0nm,1.3s						
BURAR	**Bucovina Array**	**76.06**	**324**	P	**P**	**05 12 54.9**	**+1.0**
BURAR				IAmb	IAmb	05 12 55.7	
	comp=Z,2.4nm,0.8s						
CRVS	**Cervenica-Dubn**	**76.61**	**327**	*eP*	**P**	**05 12 59.6**	**+2.7**
CRVS	**Cervenica-Dubn**	**76.61**	**327**	*eP*	**P**	**05 12 59.6**	**+2.7**
CLL	**Collm**	**77.75**	**333**	*i* P	**P**	**05 13 03.5**	**+0.3**
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**77.75**	**333**	*i* P	**P**	**05 13 03.5**	**+0.3**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**78.55**	**343**	P	**P**	**05 13 08.0**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=25,slow=5.4,SNR=12						
GERES	**GERESS Array B**	**79.59**	**331**	P	**P**	**05 13 13.3**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=36,slow=7.0,SNR=4.2						
DAVOX	**Davos/Dischmat**	**82.69**	**332**	LR	LR	05 52 18.0	
	comp=Z,15nm,18.2s,baz=360,slow=37						
TX31	**Lajitas Ar. Si**	**82.70**	**56**	P	**P**	**05 13 30.8**	**+0.5**
TX31				IAmb	IAmb	05 13 31.4	
	comp=Z,6.3nm,0.7s						
TX32	**Lajitas Array**	**82.70**	**56**	P	**P**	**05 13 31.1**	**+0.8**
TX32				IAmb	IAmb	05 13 31.4	
	comp=Z,2.1nm,0.7s						
TXAR	**Lajitas Array**	**82.71**	**56**	P	**P**	**05 13 31.1**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=293,slow=4.1,SNR=17						
TXAR	**Lajitas Array**	**82.71**	**56**	P	**P**	**05 13 31.0**	**+0.6**
IDI	**Anoyia**	**85.83**	**316**	LR	LR	05 57 43.1	
	comp=Z,9.6nm,18.3s,baz=99,slow=40						
TORD	**Torodi Ar. Bea**	**115.62**	**323**	PKP	**PKiKP**	**05 19 48.3**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=21,slow=1.3,SNR=6.7						
SNAA	**Sanae**	**148.14**	**197**	PKPbc	**PKPbc**	**05 20 50.7**	**0.0**
	comp=Z,1.4nm,1.1s,baz=24,slow=19,SNR=3.7						
BDFB	**Brasilia**	**149.39**	**30**	PKPbc	**PKPbc**	**05 20 55.7**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=356,slow=3.6,SNR=5.9						

DDA ***18*** *05:58:30.1,35˚.09N×27˚.14E,h5km±2km, MW3.4*
ISK ***18*** *05:58:31.1,34˚.98N×26˚.96E,h11km, ML3.0/16*
THE ***18*** *05:58:33.5,35˚.16N×26˚.78E,h0km±1km, ML2.9/4, Error ellipse: s-maj=6.4km s-min=0.9km az=156.0*
IDC ***18*** *05:58:34.0±4.9,35˚.12N×26˚.79E,h35km±40km, mb3.5/4, mb1 3.5/4, mb1mx3.2/30, mbtmp3.6/4, Error ellipse: s-maj=55.6km s-min=22.5km az=153.0*
ATH ***18*** *05:58:34.4,35˚.21N×26˚.80E,h14km±2km, ML2.9/7, Error ellipse: s-maj=6.8km s-min=1.3km az=153.0*

ISC 18 05:58:31.1±1.4,34˚97N±0˚.06×26˚.94E±0˚.03,h14km±8km, n60,σ0s96/74,mb3.6/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.61**	**17**	P	**Pg**	**05 58 43.2**	**+0.2**
KARP				S	**Sg**	**05 58 50.6**	**-0.5**
KARP				AML	AML	05 58 52.3	
	comp=E,8650μm,0.2s						
KARP				AML	AML	05 58 52.5	
	comp=N,12151μm,0.2s						
KARP	**Karpathos**	**0.61**	**17**	P	**Pg**	**05 58 43.1**	**+0.1**
KARP				S	**Sg**	**05 58 51.7**	**+0.7**
	comp=N,5μm,0.2s						
KARP	**Karpathos**	**0.61**	**17**	PG	**Pg**	**05 58 43.1**	**+0.1**
KARP				SG	**Sg**	**05 58 51.8**	**+0.7**
ZKR	**Zakros**	**0.61**	**284**	P	**Pg**	**05 58 42.8**	**-0.3**
ZKR				S	**Sg**	**05 58 50.8**	**-0.4**
ZKR				AML	AML	05 58 52.8	
	comp=E,5018μm,0.2s						
ZKR				AML	AML	05 58 52.9	
	comp=N,3115μm,0.3s						
ZKR	**Zakros**	**0.61**	**284**	P	**Pg**	**05 58 42.8**	**-0.3**
ZKR				S	**Sg**	**05 58 50.7**	**-0.5**
	comp=N,2μm,0.2s						
ZKR	**Zakros**	**0.61**	**284**	PG	**Pg**	**05 58 43.5**	**+0.4**
ZKR				SG	**Sg**	**05 58 52.6**	**+1.4**
STIA	**Sitia Lasithi**	**0.74**	**289**	P	**Pg**	**05 58 44.2**	**-1.2**
STIA				S	**Sg**	**05 58 54.1**	**-1.0**
NPS	**Neapolis**	**1.13**	**286**	P	**Pn**	**05 58 52.5**	**+0.1**
NPS				S	**Sb**	**05 59 06.6**	**-0.3**
NPS				AML	AML	05 59 10.5	
	comp=E,1503μm,0.6s						
NPS				AML	AML	05 59 14.2	
	comp=N,1086μm,0.5s						
NPS	**Neapolis**	**1.13**	**286**	P	**Pn**	**05 58 52.5**	**+0.1**
NPS				S	**Sb**	**05 59 07.6**	**+0.7**
	comp=N,682nm,0.6s						
HRKL	**Herakleio**	**1.55**	**283**	PN	**Pb**	**05 58 59.4**	**-0.1**
ARG	**Arkhangelos**	**1.58**	**37**	P	**Pg**	**05 59 01.2**	**-0.2**
ARG				S	**Sb**	**05 59 19.7**	**-0.1**
ARG				AML	AML	05 59 28.1	
	comp=N,481μm,0.9s						
ARG				AML	AML	05 59 28.2	
	comp=E,590μm,0.6s						

ARG	**Arkhangelos**	**1.58**	**37**	P	**Pg**	**05 59 01.3**	**-0.1**
ARG				S	**Sg**	**05 59 21.3**	**-0.6**
	comp=E,245nm,0.7s						
ARG	**Arkhangelos**	**1.58**	**37**	PN	**Pb**	**05 58 59.6**	**-0.4**
NIS1	**Nisyros Isl.**	**1.64**	**7**	P	**Pn**	**05 59 00.4**	**+0.8**
NIS1	**Nisyros Isl.**	**1.64**	**7**	PN	**Pn**	**05 59 00.3**	**+0.8**
IDI	**Anoyia**	**1.71**	**281**	Pg	**Pb**	**05 59 03.6**	**+1.2**
	comp=E,7.3nm,0.3s,baz=110,slow=5.1,SNR=21						
IDI				Lg	Lg	05 59 25.1	
	comp=E,16nm,0.3s,baz=340,slow=21,SNR=8.3						
IDI	**Anoyia**	**1.71**	**281**	P	**Pb**	**05 59 02.4**	**0.0**
IDI				AML	AML	05 59 29.3	
	comp=N,289μm,0.3s						
IDI				AML	AML	05 59 35.8	
	comp=E,297μm,0.6s						
IDI	**Anoyia**	**1.71**	**281**	P	**Pb**	**05 59 01.8**	**-0.5**
IDI	**Anoyia**	**1.71**	**281**	PN	**Pb**	**05 59 01.9**	**-0.4**
SIVA	**Sivas**	**1.75**	**272**	P	**Pg**	**05 59 04.7**	**0.0**
SIVA				AML	AML	05 59 37.7	
	comp=N,555μm,0.6s						
SIVA				AML	AML	05 59 41.2	
	comp=E,839μm,0.9s						
KOSK	**Kos Island**	**1.78**	**1**	PN	**Pn**	**05 59 02.4**	**+1.0**
SANT	**Santorini**	**1.85**	**320**	PN	**Pn**	**05 59 03.4**	**+1.0**
THR6	**Thira Island,**	**1.87**	**318**	P	**Pn**	**05 59 02.8**	**+0.1**
THR6	**Thira Island,**	**1.87**	**318**	P	**Pn**	**05 59 02.9**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.91**	**319**	P	**Pn**	**05 59 03.7**	**+0.5**
THR3	**Thira Island,**	**1.91**	**319**	P	**Pn**	**05 59 03.4**	**+0.2**
THR3	**Thira Island,**	**1.91**	**319**	P	**Pn**	**05 59 03.2**	**0.0**
THT2	**Imerovigli**	**1.92**	**320**	PN	**Pn**	**05 59 04.6**	**+1.3**
TURN	**Turunc**	**2.09**	**30**	*i* P	**Pn**	**05 59 06.0**	**+0.3**
TURN				*i* S	**Sn**	**05 59 32.4**	**+0.9**
TURN				IAML		05 59 44.0	
	comp=E,48nm,0.4s						
TURN	**Turunc**	**2.09**	**30**	PN	**Pn**	**05 59 06.9**	**+1.2**
BODT	**Bodrum**	**2.11**	**8**	PN	**Pn**	**05 59 07.1**	**+1.1**
BDRM	**Kayabasi**	**2.13**	**11**	*i* P	**Pn**	**05 59 06.3**	**+0.1**
BDRM				*i* S	**Sn**	**05 59 31.9**	**-0.7**
BDRM				IAML		05 59 49.0	
	comp=N,25nm,0.5s						
VAM	**Vamos**	**2.29**	**282**	P	**Pb**	**05 59 12.9**	**+0.8**
VAM				AML	AML	05 59 45.8	
	comp=N,244μm,0.3s						
VAM				AML	AML	05 59 46.5	
	comp=E,324μm,0.5s						
DALY	**Dalyan (Mula)**	**2.31**	**36**	PN	**Pn**	**05 59 10.0**	**+1.3**
GVDS	**Gavdos**	**2.35**	**268**	PN	**Pb**	**05 59 11.8**	**-1.3**
GVD	**Gavdhos**	**2.35**	**268**	PN	**Pn**	**05 59 11.1**	**+1.9**
APE	**Apeiranthos**	**2.39**	**332**	P	**Pn**	**05 59 09.6**	**-0.2**
APE	**Apeiranthos**	**2.39**	**332**	PN	**Pn**	**05 59 11.2**	**+1.4**
FETY	**Fethiye**	**2.41**	**46**	PN	**Pn**	**05 59 10.7**	**+0.6**
YER	**Yerkesik**	**2.42**	**26**	P	**Pn**	**05 59 11.4**	**+1.2**
YER	**Yerkesik**	**2.42**	**26**	PN	**Pn**	**05 59 11.5**	**+1.2**
IMMV	**Iera Moni Meta**	**2.47**	**282**	P	**Pn**	**05 59 12.9**	**+2.0**
IMMV	**Iera Moni Meta**	**2.47**	**282**	PN	**Pn**	**05 59 12.6**	**+1.7**
AKAS	**Kas**	**2.51**	**59**	*i* P	**Pn**	**05 59 11.8**	**+0.2**
AKAS	**Kas**	**2.51**	**59**	PN	**Pn**	**05 59 12.3**	**+0.7**
AYDN	**Tasoluk**	**2.79**	**15**	*i* P	**Pn**	**05 59 16.0**	**+0.6**
CAEL	**Denizli, Camel**	**2.89**	**41**	*i* P	**Pn**	**05 59 16.4**	**-0.4**
TAVA	**DENIZLI_Tavas**	**2.96**	**32**	*i* P	**Pn**	**05 59 18.5**	**+0.7**
TAVA				*i* S	**Sn**	**05 59 53.7**	**+0.6**
TAVA				IAML		06 00 05.0	
	comp=E,15nm,0.5s						
TAVA				IAML		06 00 08.0	
	comp=N,19nm,0.7s						
ELL	**Elmali**	**3.00**	**53**	PN	**Pn**	**05 59 19.9**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**3.07**	**14**	PN	**Pn**	**05 59 20.3**	**+1.0**
GOLH	**Golhisar**	**3.10**	**42**	*i* P	**Pn**	**05 59 20.3**	**+0.6**
KTHA	**Kythira Island**	**3.41**	**293**	PN	**Pn**	**05 59 26.2**	**+2.3**
KORT	**Korkueli**	**3.43**	**53**	*i* P	**Pn**	**05 59 26.2**	**+1.9**
KORT	**Korkueli**	**3.43**	**53**	PN	**Pn**	**05 59 26.1**	**+1.9**
USAK	**Uak-Merkez**	**4.09**	**23**	*i* P	**Pn**	**05 59 33.1**	**-0.1**
KEPZ	**Antalya-Kepez**	**4.25**	**62**	*i* P	**Pn**	**05 59 34.6**	**-0.7**
ESDC	**Sonseca Array**	**24.95**	**290**	P	**P**	**06 03 51.8**	**-2.2**
	comp=N,0.3nm,0.7s,baz=72,slow=9.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**31.51**	**239**	P	**P**	**06 04 52.7**	**0.0**
	comp=N,0.6nm,0.3s,baz=32,slow=9.4,SNR=9.5						
MKAR	**Makanchi Array**	**42.66**	**57**	P	**P**	**06 06 27.8**	**+0.6**
	comp=N,0.5nm,0.6s,baz=277,slow=7.0,SNR=7.4						
ZALV	**Zalesovo Beam**	**44.09**	**46**	P	**P**	**06 06 37.9**	**-0.6**
	comp=N,1.1nm,0.6s,baz=277,slow=8.6,SNR=5.0						

IDC ***18*** *06:32:28.6±3.8,52˚.66N×162˚.91W,h0km,mb3.7/8, mb1 3.8/10,mb1mx3.6/51,mbtmp3.7/10,ML3.2/2,MS3.8/2, Ms1 3.8/2,ms1mx2.6/42, Error ellipse: s-maj=90.5km s-min=21.5km az=161.0*
NEIC ***18*** *06:32:31.6±0.7,52˚.90N±0˚.09×162˚.94W±0˚.09,h17km±8km, Error ellipse: s-maj=13.9km s-min=6.9km az=160.0*
AEIC ***18*** *06:32:33±0.8,52˚.88N±0˚.09×162˚.9W±0˚.1,h37km±8km, ML3.4, Error ellipse: s-maj=14.3km s-min=7.8km az=158.0*

ISC 18 06:32:34.5±1.2,52˚91N±0˚.10×162˚.97W±0˚.06,h35km,n50, σ1s06/50,mb3.7/7,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESP	**Westdahl Peak**	**1.90**	**327**		**Pn**	**06 33 03.4**	**-1.1**
WESP					**Sn**	**06 33 27.1**	**-0.1**
SSLS	**Shishaldin Sou**	**1.91**	**342**		**Pn**	**06 33 03.9**	**-0.8**
SSLS					**Sn**	**06 33 28.1**	**+0.6**
WECS	**Westdahl Cape**	**1.95**	**327**		**Pn**	**06 33 04.3**	**-0.9**
FALS	**False Pass**	**1.97**	**352**		**Pn**	**06 33 04.3**	**-1.1**
FALS	**False Pass**	**1.97**	**352**		**Sn**	**06 33 29.2**	**+0.3**
SSLW	**Shishaldin Wes**	**1.99**	**340**		**Pn**	**06 33 04.9**	**-0.8**
SSBA	**Shishaldin**	**1.99**	**340**		**Pn**	**06 33 04.8**	**-1.0**
SSBA					**Sn**	**06 33 30.0**	**+0.5**
SSLN	**Shishaldin Nor**	**2.00**	**343**		**Pn**	**06 33 05.7**	**-0.3**
AKSA	**Akutan Strait**	**2.04**	**308**		**Pn**	**06 33 05.6**	**-0.8**
AKSA					**Sn**	**06 33 30.3**	**-0.3**
AKSA	**Akutan Strait**	**2.04**	**308**		**Pn**	**06 33 05.4**	**-1.0**
AKSA					**Sn**	**06 33 30.3**	**-0.3**
AKUT	**Akutan**	**2.08**	**307**		**Sn**	**06 33 31.1**	**-0.3**
AKUT	**Akutan**	**2.08**	**307**	Pn	**Pn**	**06 33 06.1**	**-0.7**
AKMO	**Akutan Morgan**	**2.17**	**304**		**Pn**	**06 33 07.5**	**-0.7**
AKMO					**Sn**	**06 33 33.3**	**-0.5**
AKLV	**Akutan Long Va**	**2.18**	**306**		**Pn**	**06 33 07.4**	**-0.9**
AKLV					**Sn**	**06 33 34.1**	**-0.1**
MNAT	**Makushin Natee**	**2.43**	**295**		**Pn**	**06 33 11.1**	**-0.6**
MSW	**Makushin Switc**	**2.50**	**295**		**Pn**	**06 33 11.9**	**-0.7**
MSW					**Sn**	**06 33 42.3**	**+0.4**
MGOD	**Makushin Gods**	**2.50**	**292**		**Pn**	**06 33 11.7**	**-1.1**
MGOD					**Sn**	**06 33 41.5**	**-0.6**
MAPS	**Pakushin South**	**2.55**	**292**		**Pn**	**06 33 12.2**	**-1.1**
BLHA	**Black Hill**	**2.85**	**10**		**Pn**	**06 33 16.5**	**-1.0**
SDPT	**Sand Point**	**2.85**	**30**		**Pn**	**06 33 16.6**	**-1.0**
SDPT	**Sand Point**	**2.85**	**30**		**Sn**	**06 33 49.5**	**-1.1**
OKFG	**Magazine Ridge**	**3.02**	**282**		**Pn**	**06 33 18.9**	**-0.9**
NIKH	**Nikolski High**	**3.56**	**273**		**Pn**	**06 33 26.3**	**-1.0**
VNHG	**Veniaminof 1**	**3.99**	**32**		**Pn**	**06 33 32.5**	**-0.8**
OHAK	**Old Harbor**	**7.04**	**48**		**Pn**	**06 34 12.8**	**-2.2**
KDAK	**Kodiak Island**	**7.67**	**46**	Pn	**Pn**	**06 34 21.3**	**-2.4**
	0.5nm,0.3s,baz=232,slow=3.6,SNR=6.2						
ADK	**Adak**	**8.45**	**269**		**Pn**	**06 34 32.4**	**-1.9**
SUA	**Susitna One**	**10.82**	**33**	Pn	**Pn**	**06 35 05.9**	**-1.0**
PWL	**Port Wells**	**11.27**	**39**	Pn	**Pn**	**06 35 11.3**	**-1.6**
PPLA	**Purkeypile**	**11.52**	**25**	Pn	**Pn**	**06 35 15.3**	**-1.1**
M24K	**Tolsona, Glenn**	**12.86**	**38**	Pn	**Pn**	**06 35 33.3**	**-1.4**
N25K	**Chitina, Valde**	**13.18**	**41**	Pn	**Pn**	**06 35 40.8**	**+1.8**
ILAR	**Eielson Array**	**14.46**	**28**	Pn	**Pn**	**06 35 56.0**	**-0.4**
	0.1nm,0.3s,baz=224,slow=16,SNR=1.7						
INK	**Inuvik**	**20.81**	**31**	P	Pn	06 37 13.3	-1.7
	1.3nm,0.7s,baz=224,slow=13,SNR=5.5						
PETK	**Petropavlovsk-**	**23.47**	**286**	P	**P**	**06 37 40.0**	**-0.6**
	1.8nm,0.5s,baz=84,slow=13,SNR=9.7						
YKA	**Yellowknife Ar**	**26.93**	**50**	P	**P**	**06 38 12.7**	**+0.6**
	0.4nm,0.6s,baz=268,slow=8.9,SNR=18						
NVAR	**Mina Array Bea**	**33.81**	**97**	LR	LR	06 50 12.7	
	comp=Z,67nm,18.4s,baz=184,slow=32						
H11N2	**WAKE ISLAND Hy**	**40.49**	**227**	T	T	07 24 51.2	
	baz=26,slow=75,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**40.50**	**227**	T	T	07 24 53.9	
	baz=26,slow=75,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**40.51**	**227**	T	T	07 24 50.7	
	baz=26,slow=75,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**41.66**	**226**	T	T	07 26 21.6	
	baz=25,slow=76,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**41.67**	**226**	T	T	07 26 27.0	
	baz=25,slow=76,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**41.67**	**226**	T	T	07 26 25.3	
	baz=25,slow=76,SNR=6.4						
ZALV	**Zalesovo Beam**	**59.57**	**321**	P	**P**	**06 42 35.4**	**+1.3**
	0.3nm,0.4s,baz=66,slow=11,SNR=2.0						
KURK	**Kurchatov**	**64.47**	**322**	P	**P**	**06 43 08.9**	**+1.9**
KURBB	**Kurchatov Arra**	**64.58**	**322**	P	**P**	**06 43 08.9**	**+1.2**
	0.3nm,0.6s,baz=26,slow=5.5,SNR=3.2						
FINES	**FINESS Array B**	**65.77**	**355**	P	**P**	**06 43 15.9**	**+0.6**
	2.8nm,1.1s,baz=1.4,slow=8.0,SNR=4.4						
MKAR	**Makanchi Array**	**66.17**	**317**	P	**P**	**06 43 19.1**	**+0.9**
	0.2nm,0.4s,baz=35,slow=6.7,SNR=4.4						
AKASG	**Malin Array Be**	**76.26**	**352**	P	**P**	**06 44 19.3**	**+0.3**
	0.5nm,0.4s,baz=18,slow=6.2,SNR=3.2						
STKA	**Stephens Creek**	**97.23**	**225**	LR	LR	07 25 57.4	
	comp=Z,84nm,20.9s,baz=210,slow=33						

IDC ***18*** *06:40:56.9±0.7,9˚.55S×106˚.91E,h0km,mb4.2/15, mb1 4.3/16,mb1mx4.0/57,mbtmp4.2/16,ML4.1/1,MS3.5/2, Ms1 3.5/2,ms1mx2.9/27, Error ellipse: s-maj=27.3km s-min=14.6km az=54.0*
NEIC ***18*** *06:40:58.1±2.9,6˚.65S±0˚.06×106˚.85E±0˚.06,h10km±1km, mb4.5/28, Error ellipse: s-maj=11.5km s-min=9.0km az=316.0*
DJA ***18*** *06:40:59.1±0.4,10˚S±3˚×10˚7E±˚,h85km±12km, M4.8/12, mb4.8/8,mB5.4/3,MLv4.8/12,Mw(mB)4.9/3*

ISC 18 06:40:59.8±0.5,9˚.64S±0˚.05×106˚.91E±0˚.07,h22km,n104, σ1s72/105,mb4.5/48,MS4.1/4,1C,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XMIS	**Christmas Isla**	**1.50**	**236**		**Pn**	**06 41 24.4**	**-1.0**
LEM	**Lembang**	**2.88**	**14**	Pn	**Pn**	**06 41 44.9**	**+0.3**
	31nm,0.3s,baz=122,slow=20,SNR=21						
LEM				Sn	**Sn**	**06 42 19.0**	**+0.2**
	113nm,0.3s,baz=128,slow=23,SNR=21						
LEM				LR	LR	06 43 25.2	
	comp=Z,610nm,18.1s,baz=216,slow=53						
LEM	**Lembang**	**2.88**	**14**	P	**Pn**	**06 41 45.7**	**+1.0**
LEM				S	**Sn**	**06 42 19.7**	**+0.9**
DBJI	**Dramaga**	**3.07**	**357**	P	**Pn**	**06 41 46.7**	**-0.4**
UGM	**Wanagama**	**3.96**	**65**		**Pn**	**06 41 59.2**	**-0.1**
UGM	**Wanagama**	**3.96**	**65**	P	**Pn**	**06 41 59.6**	**+0.2**
SMRI	**Semarang**	**4.34**	**54**	Pn	**Pn**	**06 42 04.6**	**0.0**
SMRI	**Semarang**	**4.34**	**54**	P	**Pn**	**06 42 05.5**	**+1.0**
KASI	**Kota Agung**	**4.74**	**329**	P	**Pn**	**06 42 08.9**	**-1.2**
LWLI	**Liwa**	**5.40**	**328**	P	**Pn**	**06 42 17.9**	**-1.3**
	2.0nm157nm,0.6s						
MNAI	**Manna**	**6.55**	**323**		**Pn**	**06 42 32.9**	**-2.2**
LHSI	**Lahat**	**6.69**	**330**	P	**Pn**	**06 42 40.5**	**+3.7**
TPI	**Tanjungpandan**	**6.88**	**6**	P	**Pn**	**06 42 38.7**	**-0.8**
JAGI	**Jajag, Banyuwa**	**7.24**	**81**		**Pn**	**06 42 44.6**	**+0.1**
JAGI	**Jajag, Banyuwa**	**7.24**	**81**	P	**Pn**	**06 42 43.8**	**-0.7**
	0.5nm2μm103nm,0.7s						
KSI	**Kapahiang**	**7.34**	**324**	P	**Pn**	**06 42 43.3**	**-2.5**
ABJI	**Asem Bagus**	**7.47**	**76**	P	**Pn**	**06 42 46.9**	**-0.6**
	0.3nm44nm,0.5s						
SRBI	**Singaraja**	**8.35**	**80**	P	**Pn**	**06 42 59.5**	**-0.1**
	31nm,0.8s						
TWSI	**Taliwang, Sumb**	**9.88**	**86**	P	**Pn**	**06 43 19.5**	**-1.2**
GIRL	**Giralia**	**14.71**	**152**	Pn	**Pn**	**06 44 23.0**	**-3.7**
PSA00	**Pilbara Seismi**	**17.18**	**135**	Pn	**Pn**	**06 44 56.6**	**-2.1**
PSA00				IAmb	IAmb	06 45 10.6	
	comp=Z,44nm,1.5s						
FITZ	**Fitzroy Crossi**	**20.01**	**117**	P	Pn	06 45 32.2	-0.9
	com

HHC					pmax	pmax		
	comp=Z,98nm,5.9s							
HHC					LR	LR		
	comp=N,100nm,16.3s							
HHC					LR	LR		
	comp=E,100nm,15.4s							
HHC					LR	LR		
	comp=Z,99nm,16.0s							
NIL	**Nilore**	**53.64**	**325**		P	**P**	**06 50 19.2**	**-0.7**
WMQ	**Urumqi**	**56.01**	**343**	*eP*	P		06 50 41.5	+4.7
WMQ					pP	sP	06 50 42.9	-0.7
WMQ					PP	**PP**	**06 52 38.6**	**-3.4**
WMQ					LR	LR		
	comp=N,200nm,25.7s							
WMQ					LR	LR		
	comp=E,260nm,19.9s							
WMQ					LR	LR		
	comp=Z,190nm,29.1s							
WMQ	**Urumqi**	**56.01**	**343**		P	**P**	**06 50 38.1**	**+1.2**
SONM	**Songino Array**	**57.23**	**360**		P	**P**	**06 50 45.5**	**0.0**
	comp=Z,2.1nm,0.9s,baz=177,slow=7.8,SNR=8.7							
SONM	**Songino Array**	**57.23**	**360**		P	**P**	**06 50 45.8**	**+0.2**
SONM					IAmb	IAmb	06 50 47.3	
	comp=Z,3.8nm,1.2s							
ULN	**Ulaanbaatar**	**57.25**	**0**		P	**P**	**06 50 46.0**	**+0.2**
ULN					IAmb	IAmb	06 50 47.2	
	comp=Z,3.9nm,1.1s							
GAR	**Garm**	**59.17**	**327**		P	**P**	**06 50 58.2**	**-1.1**
MK31	**Makanchi Array**	**60.33**	**341**		P	**P**	**06 51 06.5**	**-0.5**
MK31					IAmb	IAmb	06 51 13.3	
	comp=Z,2.7nm,0.8s							
MKAR	**Makanchi Array**	**60.33**	**341**		P	**P**	**06 51 07.2**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=143,slow=8.2,SNR=33							
MAKZ	**Makanchi**	**60.45**	**341**		P	**P**	**06 51 08.0**	**+0.2**
MAKZ					IAmb	IAmb	06 51 33.4	
	comp=Z,3.4nm,1.1s							
TLY	**Talaya**	**61.14**	**358**		P	**P**	**06 51 13.1**	**+0.6**
TLY					IAmb	IAmb	06 51 33.7	
	comp=Z,3.5nm,1.0s							
KK31	**Karatay Array**	**62.10**	**331**		P	**P**	**06 51 18.0**	**-1.1**
KKAR	**Karatay Array**	**62.10**	**331**		P	**P**	**06 51 18.0**	**-1.1**
KURBB	**Kurchatov Arra**	**64.89**	**340**		P	**P**	**06 51 37.8**	**+0.4**
	comp=Z,3.1nm,0.7s,baz=155,slow=5.6,SNR=22							
KURK	**Kurchatov**	**64.94**	**341**		P	**P**	**06 51 37.8**	**+0.1**
ZAA0	**Zalesovo Array**	**66.06**	**346**		P	**P**	**06 51 44.5**	**-0.3**
ZAA0					IAmb	IAmb	06 51 48.3	
	comp=Z,3.0nm,0.9s							
ZALV	**Zalesovo Beam**	**66.06**	**346**		P	**P**	**06 51 44.5**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=157,slow=4.8,SNR=5.0							
ZALV	**Zalesovo Beam**	**66.06**	**346**		P	**P**	**06 51 44.0**	**-0.8**
BVAR	**Borovoye Array**	**69.76**	**337**		P	**P**	**06 52 07.8**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=144,slow=16,SNR=12							
BRVK	**Borovoye**	**69.82**	**337**		P	**P**	**06 52 08.8**	**+0.3**
BRVK					IAmb	IAmb	06 52 36.4	
	comp=Z,3.6nm,1.1s							
ABKAR	**Akbulak array**	**71.63**	**330**		P	**P**	**06 52 20.0**	**+0.4**
ABKAR	**Akbulak array**	**71.63**	**330**		P	**P**	**06 52 19.6**	**-0.1**
AKTO	**Aktyubinsk**	**73.34**	**330**		P	**P**	**06 52 29.8**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=103,slow=16,SNR=5.0							
VNDA	**Vanda**	**73.40**	**169**		P	**P**	**06 52 31.3**	**+1.5**
MATP	**Matopo**	**75.91**	**251**		P	**P**	**06 52 47.2**	**+1.7**
	comp=Z,1.8nm,0.6s,baz=51,slow=7.9,SNR=3.8							
PEA0B	**Petropavlovsk-**	**75.93**	**29**		P	**P**	**06 52 44.4**	**-0.4**
PETK	**Petropavlovsk-**	**75.93**	**29**		P	**P**	**06 52 44.7**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=208,slow=5.9,SNR=5.2							
PETK	**Petropavlovsk-**	**75.93**	**29**		P	**P**	**06 52 44.4**	**-0.4**
ARU	**Arti**	**76.96**	**335**		P	**P**	**06 52 50.0**	**-0.5**
	comp=Z,1.4nm,0.2s,baz=116,slow=3.2,SNR=7.3							
ARU	**Arti**	**76.96**	**335**		P	**P**	**06 52 50.6**	**+0.1**
MA2	**Magadan**	**77.37**	**21**		P	**P**	**06 52 53.0**	**+0.2**
MA2					IAmb	IAmb	06 52 54.7	
	comp=Z,4.4nm,1.0s							
KBZ	**Khabaz**	**78.55**	**318**		P	**P**	**06 52 59.9**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=151,slow=9.2,SNR=4.1							
QSPA	**South Pole Qui**	**80.36**	**180**		P	**P**	**06 53 10.4**	**+1.0**
TIXI	**Tiksi**	**82.42**	**7**		P	**P**	**06 53 18.3**	**-1.6**
TIXI					IAmb	IAmb	06 53 20.1	
	comp=Z,3.6nm,0.7s							
YKA	**Yellowknife Ar**	**119.35**	**21**		PKP	**PKiKP**	**06 59 47.5**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=302,slow=1.0,SNR=8.0							
BDFB	**Brasilia**	**144.68**	**225**		PKP	**PKPdf**	**07 00 36.5**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=170,slow=7.1,SNR=5.4							
TXAR	**Lajitas Array**	**145.32**	**51**		PKPbc	**PKPab**	**07 00 36.8**	**0.0**
	comp=Z,2.8nm,1.0s,baz=283,slow=2.5,SNR=15							
TXAR	**Lajitas Array**	**145.32**	**51**			**PKPab**	**07 00 37.2**	**+0.4**

IDC ***18*** *06:46:19.5±0.7,5°.26S×68°.85E, h0km, mb4.3/17, mb1 4.3/18, mb1mx4.0/57, mbtmp4.2/18, ML4.1/1, MS3.6/23, Ms1 3.6/23, ms1mx3.5/40, Error ellipse: s-maj=21.5km s-min=15.5km az=38.0*

NEIC ***18*** *06:46:20.4±1.6,5°.3S±0°.1×68°.9E±0°.1, h10km±1km, mb4.5/22, Error ellipse: s-maj=21.1km s-min=17.9km az=208.0*

GCMT ***18*** *06:46:21.4±0.4,5°.47S±0°.02×68°.49E±0°.02, h23km±2km, MW4.8/82, Moment Tensor Solution. s6,c7; s82,c100; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.35±.18; Mθθ-1.94±.12; Mϕϕ2.28±.14; Mrθ-0.33±.19; Mθϕ-0.50±.12; Mϕr-0.23±.17; Best double couple: Mo2.21300×10^16 NP1:ϑs129.0000°, δ79.00000°, λ-174.00000°. NP2: ϕs38.00000°, δ85.00000°, λ-11.00000°. Principal axes: T 2.3520, Plg4.0000°, Azm84.0000°; N -0.2870, Plg78.0000°, Azm192.0000°; P -2.0740, Plg12.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 06:46:20.7±0.7,5°.3S±0°.1×68°.9E±0°.1, h10km, n72, σ1s00/54, mb4.5/27, MS3.7/23, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.12**	**122**	Pn	**Pn**	**06 47 23.7**	**0.0**
H08S3	**Diego Garcia H**	**4.26**	**124**	Pn	**Pn**	**06 47 24.7**	**-0.8**
	baz=322,slow=19						
H08S3				T	T	06 52 04.1	
	baz=311,slow=75,SNR=7.4						
H08S1	**Diego Carcia H**	**4.26**	**124**	Pn	**Pn**	**06 47 24.8**	**-0.7**
	baz=322,slow=19,SNR=4405						
H08S1				T	T	06 52 10.8	
	baz=311,slow=75,SNR=8.6						
H08S2	**Diego Garcia H**	**4.28**	**124**	Pn	**Pn**	**06 47 25.1**	**-0.6**
	baz=322,slow=19						
H08S2				T	T	06 52 06.6	
	baz=311,slow=75,SNR=24						
PALK	**Pallekele**	**17.12**	**43**	P	**P**	**06 50 21.9**	**-0.2**
	0.7nm,0.3s,baz=309,slow=13,SNR=2.3						
WSAR	**Wadi Sarin**	**30.05**	**341**	LR	LR	07 01 32.2	
	comp=Z,183nm,20.7s,baz=175,slow=30						
ATD	**Arta Tunnel**	**30.83**	**303**	LR	LR	07 02 19.6	
	comp=Z,140nm,21.2s,baz=306,slow=31						
CM31	**Chiang Mai Arr**	**37.84**	**51**	P	**P**	**06 53 40.0**	**+2.1**
CM31				IAmb	IAmb	06 53 41.3	
	comp=Z,14nm,1.3s						
CMAR	**Chiang Mai Arr**	**37.84**	**51**	P	**P**	**06 53 39.4**	**+1.5**
	comp=Z,3.3nm,0.7s,baz=242,slow=9.7,SNR=14						
CMAR				LR	LR	07 08 25.1	
	comp=Z,89nm,18.3s,baz=250,slow=35						
CMAR	**Chiang Mai Arr**	**37.84**	**51**	P	**P**	**06 53 40.1**	**+2.2**
CHTO	**Chiang Mai**	**38.05**	**50**	P	**P**	**06 53 41.5**	**+1.9**
CHTO				IAmb	IAmb	06 53 42.9	
	comp=Z,8.1nm,0.8s						
LEM	**Lembang**	**38.51**	**94**	P	**P**	**06 53 45.9**	**+2.0**
	comp=Z,15nm,0.5s,baz=140,slow=9.6,SNR=6.1						
KSM	**Kuching**	**41.88**	**82**	P	**P**	**06 54 10.6**	**-1.1**
KSM				IAmb	IAmb	06 54 14.3	
	comp=Z,7.4nm,0.8s						
GAR	**Garm**	**44.05**	**2**	P	**P**	**06 54 29.6**	**+0.6**
GEYT	**Alibeck**	**44.12**	**348**	LR	LR	07 11 44.2	
	comp=Z,102nm,21.1s,baz=150,slow=35						
BOSA	**Boshof**	**47.41**	**236**	P	**P**	**06 54 57.5**	**+1.7**
	comp=Z,2.6nm,0.9s,baz=54,slow=3.8,SNR=4.9						
BOSA				LR	LR	07 12 47.9	
	comp=Z,94nm,19.4s,baz=22,slow=34						
AAK	**Ala-Archa**	**47.93**	**6**	P	**P**	**06 55 01.3**	**+1.7**
	comp=Z,2.0nm,0.9s,baz=192,slow=4.5,SNR=4.7						
AAK	**Ala-Archa**	**47.93**	**6**	P	**P**	**06 55 00.7**	**+1.1**
AAK				IAmb	IAmb	06 55 11.8	
	comp=Z,5.4nm,1.1s						
KK31	**Karatay Array**	**48.15**	**2**	P	**P**	**06 55 02.6**	**+1.5**
KKAR	**Karatay Array**	**48.15**	**2**	P	**P**	**06 55 01.6**	**+0.6**
MMAI	**Mount Meron Ar**	**49.59**	**322**	LR	LR	07 14 57.9	
	comp=Z,67nm,18.4s,baz=150,slow=35						

GNI	**Garni**	**50.36**	**336**		LR	LR	07 17 16.9	
	comp=Z,41nm,20.2s,baz=147,slow=37							
MAKZ	**Makanchi**	**53.11**	**11**		P	**P**	**06 55 37.7**	**-0.8**
MAKZ					IAmb	IAmb	06 55 47.2	
	comp=Z,3.8nm,0.6s							
MK31	**Makanchi Array**	**53.16**	**11**		P	**P**	**06 55 38.8**	**-0.1**
MK31					IAmb	IAmb	06 55 43.8	
	comp=Z,4.0nm,0.5s							
MKAR	**Makanchi Array**	**53.16**	**11**		P	**P**	**06 55 38.2**	**-0.7**
KBZ	**Khabaz**	**54.12**	**337**		LR	LR	07 19 27.8	
	comp=Z,39nm,21.7s,baz=158,slow=37							
XAN	**Xi'an**	**54.36**	**41**		P	**P**	**06 55 47.7**	**-0.2**
XAN					IAmb	IAmb	06 55 49.6	
	comp=Z,6.8nm,1.0s							
ABKAR	**Akbulak array**	**54.85**	**353**		P	**P**	**06 55 50.5**	**-0.6**
BRTR	**Keskin Array B**	**55.31**	**327**		LR	LR	07 17 12.2	
	comp=Z,63nm,19.9s,baz=142,slow=34							
AKTO	**Aktyubinsk**	**56.26**	**352**		P	**P**	**06 56 01.1**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=162,slow=9.1,SNR=5.2							
AKTO					LR	LR	07 20 41.2	
	comp=Z,36nm,18.2s,baz=153,slow=37							
KURBB	**Kurchatov Arra**	**56.27**	**7**		P	**P**	**06 56 01.1**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=205,slow=7.3,SNR=6.5							
BVAR	**Borovoye Array**	**58.07**	**1**		P	**P**	**06 56 14.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=144,slow=12,SNR=2.1							
BRVK	**Borovoye**	**58.10**	**1**		P	**P**	**06 56 14.3**	**+0.1**
BRVK					IAmb	IAmb	06 56 24.1	
	comp=Z,3.0nm,0.9s							
BELG	**Belogornoye**	**60.22**	**345**		LR	LR	07 22 58.0	
	comp=Z,57nm,20.1s,baz=136,slow=36							
ZAA0	**Zalesovo Array**	**60.48**	**11**		P	**P**	**06 56 29.8**	**-0.8**
ZAA0					IAmb	IAmb	06 56 30.9	
	comp=Z,3.5nm,0.8s							
ZALV	**Zalesovo Beam**	**60.48**	**11**		P	**P**	**06 56 30.3**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=197,slow=6.3,SNR=12							
ZALV	**Zalesovo Beam**	**60.48**	**11**		P	**P**	**06 56 29.8**	**-0.8**
ARU	**Arti**	**62.06**	**354**		P	**P**	**06 56 41.6**	**+0.3**
	comp=Z,2.0nm,0.2s,baz=180,slow=6.3,SNR=5.6							
ARU	**Arti**	**62.06**	**354**		P	**P**	**06 56 40.8**	**-0.4**
SONM	**Songino Array**	**62.28**	**28**		P	**P**	**06 56 43.8**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=217,slow=8.6,SNR=11							
SONM	**Songino Array**	**62.28**	**28**		P	**P**	**06 56 43.1**	**0.0**
SONM					IAmb	IAmb	06 56 45.5	
	comp=Z,3.0nm,1.0s							
MAW	**Mawson**	**62.39**	**183**		LR	LR	07 16 42.2	
	comp=Z,79nm,19.4s,baz=20,slow=29							
ULN	**Ulaanbaatar**	**62.60**	**28**		P	**P**	**06 56 45.0**	**-0.3**
ULN					IAmb	IAmb	06 56 46.6	
	comp=Z,5.5nm,1.4s							
ASAR	**Alice Springs**	**65.02**	**114**		P	**P**	**06 57 01.7**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=280,slow=6.3,SNR=35							
ASAR	**Alice Springs**	**65.02**	**114**		P	**P**	**06 57 00.3**	**-1.3**
AS31	**Alice Springs**	**65.02**	**114**		P	**P**	**06 57 00.6**	**-1.1**
WRA	**Warramunga Arr**	**65.14**	**109**		P	**P**	**06 57 03.0**	**+0.5**
	comp=Z,8.2nm,0.8s,baz=284,slow=6.3,SNR=43							
WRA	**Warramunga Arr**	**65.14**	**109**		P	**P**	**06 57 01.3**	**-1.1**
WB2	**Warramunga Arr**	**65.15**	**109**		P	**P**	**06 57 01.8**	**-0.7**
AKASG	**Malin Array Be**	**65.35**	**333**		P	**P**	**06 57 02.0**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=120,slow=5.6,SNR=4.3							
KIRV	**Kirov**	**65.53**	**349**		LR	LR	07 24 45.4	
	comp=Z,25nm,21.8s,baz=178,slow=35							
TORD	**Torodi Ar. Bea**	**69.20**	**286**		P	**P**	**06 57 27.7**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=113,slow=3.4,SNR=3.9							
TORD					LR	LR	07 27 38.1	
	comp=Z,39nm,18.2s,baz=100,slow=36							
KSRS	**Korea Array**	**69.33**	**47**		LR	LR	07 29 29.9	
	comp=Z,63nm,18.1s,baz=240,slow=37							
ZCCA	**Zocca**	**71.59**	**320**		P	**P**	**06 57 41.8**	**-0.6**
DAVOX	**Davos/Dischmat**	**73.38**	**322**		P	**P**	**06 57 53.1**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=146,slow=14,SNR=5.5							
FINES	**FINESS Array B**	**74.27**	**340**		P	**P**	**06 57 57.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=225,slow=5.1,SNR=4.0							
FINES					LR	LR	07 32 49.5	
	comp=Z,29nm,19.0s,baz=54,slow=38							
DBIC	**Dimbokro**	**74.58**	**278**		LR	LR	07 29 42.6	
	comp=Z,25nm,18.1s,baz=74,slow=35							
NRIK	**Noril'sk**	**75.53**	**7**		LR	LR	07 32 06.9	
	comp=Z,34nm,18.1s,baz=76,slow=36							
MJAR	**Matsushiro Arr**	**76.72**	**51**		LR	LR	07 33 45.0	
	comp=Z,29nm,18.3s,baz=215,slow=37							
HFS	**Hagfors**	**78.14**	**335**		P	**P**	**06 58 21.8**	**+1.9**
	comp=Z,3.9nm,0.8s,baz=126,slow=7.5,SNR=5.8							
NOA	**NORSAR Array B**	**79.66**	**335**		LR	LR	07 35 22.6	
	comp=Z,22nm,18.8s,baz=135,slow=37							
ESDC	**Sonseca Array**	**80.30**	**312**		LR	LR	07 33 14.7	
	comp=Z,26nm,19.1s,baz=345,slow=35							
ASAJ	**Asahikawa**	**82.04**	**4**		LR	LR	07 36 54.3	
	comp=Z,33nm,18.6s,baz=116,slow=37							
TIXI	**Tiksi**	**85.89**	**16**		P	**P**	**06 58 59.3**	**-1.0**
TIXI					IAmb	IAmb	06 59 00.8	
	comp=Z,4.2nm,0.9s							
YKA	**Yellowknife Ar**	**122.82**	**2**		PKP	**PKPdf**	**07 05 15.0**	**-1.8**
	comp=Z,0.5nm,0.9s,baz=2.6,slow=2.3,SNR=6.9							
DUG	**Dugway, Tooele**	**145.18**	**2**		PKPbc	**PKPab**	**07 05 58.7**	**-0.1**
O20A	**White River Ci**	**145.18**	**356**		PKPbc	**PKPbc**	**07 05 58.5**	**-0.3**
SMCO	**Snowmass**	**146.03**	**354**		PKPdf	**PKPdf**	**07 06 01.2**	**+0.1**
NVAR	**Mina Array Bea**	**146.33**	**10**		PKPbc	**PKPab**	**07 06 03.0**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=353,slow=2.6,SNR=16							
NVAR	**Mina Array Bea**	**146.33**	**10**		**PKPbc**	**PKPab**	**07 06 01.8**	**-0.7**
TXAR	**Lajitas Array**	**155.04**	**345**		PKPab	**PKPab**	**07 06 39.4**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=41,slow=4.0,SNR=5.2							

IDC 18 06:47:20.7±4.4,53°.58N×90°.72E, h0km, mb1 2.6/3, mb1mx2.5/55, mbtmp2.6/3, ML2.0/3, Error ellipse: s-maj=44.0km s-min=27.7km az=33.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.52**	**278**	*i*		07 12 00.0	
	baz=90,slow=316,SNR=1.6						
ZALV	**Zalesovo Beam**	**3.52**	**278**	Pn	Pn	06 48 18.2	+1.6
	0.2nm,0.3s,baz=96,slow=14,SNR=2.3						
ZALV				Lg	Lg	06 49 12.5	
	0.4nm,0.3s,baz=94,slow=24,SNR=9.1						
KURBB	**Kurchatov Arra**	**8.07**	**253**	Pn	Pn	06 49 18.6	-0.3
	0.0nm,0.3s,baz=60,slow=13,SNR=3.7						
KURBB				Sn	Sn	06 50 48.8	-2.0
	0.0nm,0.3s,baz=68,slow=24,SNR=3.3						
MKAR	**Makanchi Array**	**8.68**	**222**	Pn	Pn	06 49 28.1	+0.7
	0.0nm,0.3s,baz=37,slow=16,SNR=3.0						

ISK ***18*** *06:54:10.9, 39°.99N×39°.71E, h5km, ML3.6/18*

DDA ***18*** *06:54:11.0, 40°.00N×39°.66E, h11km±3km, MW3.5*

IDC ***18*** *06:54:12.9±1.4, 40°.17N×39°.47E, h0km, mb3.3/2, mb1 3.4/7, mb1mx3.2/48, mbtmp3.4/7, ML3.0/3, MS2.6/2, Ms1 2.6/2, ms1mx2.1/34, Error ellipse: s-maj=25.4km s-min=12.0km az=167.0*

CFUSG ***18*** *06:54:15.7, 40°.02N×39°.76E, h35km, MD3.2/1, North Eastern Turkey Magtype MSH 2.9 from 2 stations*

ISC 18 06:54:10.8±1.1, 39.98N±0°.02×39.68E±0°.02, h2km±10km, n53, σ1s60/72, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	**Uzumlu**	**0.27**	**177**	*i* P	**Pb**	**06 54 17.6**	**-0.9**
EUZM				*i* S	**Sb**	**06 54 21.8**	**-1.7**
EUZM				IAML		06 54 22.0	
	comp=E,2μm,0.4s						
EUZM				IAML		06 54 22.0	
	comp=N,2μm,0.3s						
ERZN	**Erzincan**	**0.39**	**175**	PG	**Pg**	**06 54 18.7**	**+0.4**
ERZN				SG	**Sg**	**06 54 25.3**	**+1.9**
GUMT	**Gumushane**	**0.51**	**342**	PG	**Pb**	**06 54 21.5**	**-1.0**
GUMT				SG	**Sb**	**06 54 28.5**	**-1.9**
BAYB	**BAYBURT**	**0.52**	**57**	*i* P	**Pb**	**06 54 21.3**	**-1.5**
BAYB				*i* S	**Sg**	**06 54 28.4**	**+0.7**
BAYB				IAML		06 54 29.0	
	comp=Z,923nm,0.3s						
BAYB				IAML		06 54 29.0	
	comp=E,5μm,0.4s						
BAYB				IAML		06 54 30.0	
	comp=N,4μm,0.5s						
KOPT	**Kop Dagi**	**0.63**	**86**	*i* P	**Pb**	**06 54 23.9**	**-0.7**
KOPT				*i* S	**Sn**	**06 54 34.3**	**-3.4**
KOPT				IAML		06 54 38.0	
	comp=N,2μm,0.7s						
KOPT				IAML		06 54 38.0	
	comp=E,1μm,0.3s						
ALUC	**Giresun/Alucra**	**0.79**	**298**	*i* P	**Pg**	**06 54 26.6**	**+0.7**
ALUC				*i* S	**Sg**	**06 54 36.5**	**+0.3**
ALUC				IAML		06 54 43.0	
	comp=N,2μm,0.7s						
ALUC				IAML		06 54 45.0	
	comp=E,2μm,0.4s						
YEDI	**Yedisu-Bingol**	**0.86**	**129**	PG	**Pb**	**06 54 27.6**	**-0.9**
YEDI				SG	**Sb**	**06 54 40.3**	**-0.2**
TNCL	**Tunceli-Merkez**	**0.87**	**187**	*i* P	**Pn**	**06 54 29.6**	**-0.5**
TNCL				*i* S	**Sb**	**06 54 41.3**	**+0.5**
TNCL				IAML		06 54 44.0	
	comp=E,902nm,0.7s						
TNCL				IAML		06 54 46.0	
	comp=N,1μm,0.8s						
REFA	**Refahiye_ERZN**	**0.92**	**231**	*i* P	**Pg**	**06 54 25.1**	**-3.3**
REFA				*i* S	**Sg**	**06 54 34.9**	**-5.2**
REFA				IAML		06 54 36.0	
	comp=E,764nm,0.4s						
REFA				IAML		06 54 43.0	
	comp=N,568nm,0.6s						
ILIC	**ilic-Erzincan**	**1.01**	**239**	PG	**Pb**	**06 54 31.2**	**+0.2**
KTUT	**Trabzon**	**1.01**	**4**	PG	**Pn**	**06 54 30.6**	**-1.4**
KRIK	**Erzurum-spir**	**1.02**	**69**	*i* P	**Pb**	**06 54 30.7**	**-0.6**
KRIK				*i* S	**Sn**	**06 54 44.8**	**-2.5**
KRIK				IAML		06 54 50.0	
	comp=N,367nm,0.9s						
KRIK				IAML		06 54 50.0	
	comp=E,288nm,0.4s						
SUSE	**Susehri**	**1.16**	**282**	*i* P	**Pb**	**06 54 31.8**	**-1.8**
SUSE				*i* S	**Sb**	**06 54 45.9**	**-3.3**
SUSE				IAML		06 54 52.0	
	comp=N,1μm,0.6s						
KEMA	**Kemaliye**	**1.16**	**233**	*i* P	**Pb**	**06 54 32.8**	**-0.8**
KARO	**Karliova-Bingo**	**1.25**	**122**	PN	**Pg**	**06 54 34.9**	**+0.1**
BNGB	**Bingl**	**1.25**	**142**	PN	**Pg**	**06 54 35.1**	**+0.3**
KOVA	**Elazig, Kovanc**	**1.27**	**175**	*i* P	**Pg**	**06 54 35.5**	**+0.3**
KOVA				*i* S	**Sn**	**06 54 53.7**	**+0.3**
KOVA				IAML		06 54 54.0	
	comp=E,522nm,0.4s						
KOVA				IAML		06 54 57.0	
	comp=N,224nm,0.3s						
CHAY	**Cayeli-Rize**	**1.36**	**35**	PN	**Pg**	**06 54 36.8**	**-0.1**
ARPR	**Arapgir-MALATY**	**1.36**	**230**	PN	**Pg**	**06 54 37.6**	**+0.6**
CHOM	**Cayeli-Rize**	**1.39**	**36**	PN	**Pg**	**06 54 37.2**	**-0.2**
CUZAR	**Zara_SIVAS**	**1.47**	**267**	*i* P	**Pb**	**06 54 38.5**	**-0.5**
VRTB	**Varto-Mus**	**1.60**	**120**	*i* P	**Pg**	**06 54 41.4**	**0.0**
VRTB	**Varto-Mus**	**1.60**	**120**	PN	**Pb**	**06 54 40.3**	**-0.8**
HANI	**Diyarbakir_Han**	**1.66**	**160**	*i* P	**Pb**	**06 54 41.4**	**-0.6**
KOPR	**Koprukoy-ERZUR**	**1.67**	**89**	PN	**Pb**	**06 54 41.5**	**-0.8**
ORDU	**Ordu-Boztepe**	**1.72**	**307**	*i* P	**Pb**	**06 54 42.9**	**-0.2**
CUKAN	**kangal_SIVAS**	**1.83**	**250**	*i* P	**Pg**	**06 54 45.9**	**0.0**
RSDY	**Resadiye-TOKAT**	**1.85**	**284**	PN	**Pb**	**06 54 44.4**	**-0.9**
DBAD	**Bademkaya**	**1.85**	**55**	*i* P	**Pb**	**06 54 44.8**	**-0.7**
DBAD				*i* S	**Sb**	**06 55 08.6**	**-0.5**
DBAD				IAML		06 55 15.0	
	comp=E,242nm,0.6s						
DBAD				IAML		06 55 16.0	
	comp=N,366nm,0.6s						
MALT	**Malatya**	**1.93**	**211**	PN	**Pb**	**06 54 45.5**	**-1.2**
HOPA	**Hopa-Artvin**	**1.94**	**43**	PN	**Pb**	**06 54 45.2**	**-1.7**
DBOC	**Borcka**	**2.04**	**47**	*i* P	**Pb**	**06 54 47.0**	**-1.6**
DBOC				*i* S	**Sb**	**06 55 12.8**	**-1.5**
DBOC				IAML		06 55 17.0	
	comp=E,264nm,0.5s						
SVSK	**Karacayir**	**2.06**	**269**	PN	**Pb**	**06 54 47.5**	**-1.4**
SENK	**Senkaya-Erzuru**	**2.12**	**73**	PN	**Pn**	**06 54 47.6**	**+0.1**
AKCD	**Akcadag**	**2.17**	**220**	*i* P	**Pb**	**06 54 50.9**	**+0.1**
AKCD				*i* S	**Sg**	**06 55 21.1**	**+0.7**
AKCD				IAML		06 55 28.0	
	comp=E,160nm,0.5s						
DARE	**Darende-Malaty**	**2.21**	**231**	PN	**Pn**	**06 54 49.6**	**+1.1**
TOKT	**Tokat**	**2.43**	**279**	PN	**Pn**	**06 54 52.6**	**+1.1**
BLIS	**Bitlis-Merkez**	**2.45**	**129**	*i* P	**Pb**	**06 54 56.2**	**+0.5**
SRTM	**Siirt_Merkez**	**2.64**	**138**	*i* P	**Pg**	**06 55 00.6**	**-0.9**
CUSAR	**Sarkisla-SIVAS**	**2.71**	**259**	*i* P	**Pb**	**06 54 59.0**	**-1.0**
CUSAR				*i* S	**Sg**	**06 55 42.0**	**+4.1**
CUSAR				IAML		06 55 45.0	
	comp=E,84nm,0.7s				

SAP3					S	Sg	07 07 13.1	-0.6
	123µm,0.4s							
THR3	**Thira Island,**	**0.12**	**198**		P	**Pg**	**07 07 10.8**	**-0.4**
SNT5	**Nea Kammeni, S**	**0.13**	**199**		P	**Pg**	**07 07 11.0**	**-0.4**
SNT5	**Nea Kammeni, S**	**0.13**	**199**		P	**Pg**	**07 07 10.9**	**-0.4**
THR5	**Thira Island,**	**0.14**	**216**		P	**Pg**	**07 07 11.1**	**-0.3**
THT1	**Athinios (Pele**	**0.14**	**186**		P	**Pg**	**07 07 10.6**	**-0.8**
THT1					S	**Sg**	**07 07 13.5**	**-0.6**
THT1	**Athinios (Pele**	**0.14**	**186**		P	**Pg**	**07 07 10.5**	**-0.9**
THT1					S	**Sg**	**07 07 13.5**	**-0.6**
SANT	**Santorini**	**0.16**	**177**		P	**Pg**	**07 07 11.0**	**-0.7**
SANT					S	**Sg**	**07 07 13.8**	**-0.7**
SANT					AML	AML	07 07 14.4	
	comp=N,22250µm,0.4s							
SANT					AML	AML	07 07 14.6	
	comp=E,68824µm,0.2s							
SANT	**Santorini**	**0.16**	**177**		P	**Pg**	**07 07 11.0**	**-0.7**
SANT					S	**Sg**	**07 07 13.4**	**-1.1**
	comp=E,23µm,0.3s							
SANT	**Santorini**	**0.16**	**177**	*i*	P	**Pg**	**07 07 11.0**	**-0.7**
SANT				*i*	S	**Sg**	**07 07 13.5**	**-1.0**
SANT	**Santorini**	**0.16**	**177**		PG	**Pg**	**07 07 11.0**	**-0.7**
SANT					SG	**Sb**	**07 07 14.6**	**-0.4**
THR6	**Thira Island,**	**0.18**	**194**		P	**Pg**	**07 07 11.1**	**-0.8**
THR9	**Santorini-Faro**	**0.19**	**204**		P	**Pg**	**07 07 10.9**	**-1.1**
APE	**Apeiranthos**	**0.54**	**7**		P	**Pg**	**07 07 17.2**	**-1.2**
APE					S	**Sg**	**07 07 24.9**	**-0.7**
APE					AML	AML	07 07 28.4	
	comp=E,26669µm,0.3s							
APE					AML	AML	07 07 28.8	
	comp=N,28082µm,0.4s							
APE	**Apeiranthos**	**0.54**	**7**		P	**Pg**	**07 07 17.1**	**-1.2**
APE					S	**Sg**	**07 07 24.9**	**-0.7**
	comp=N,14µm,0.3s							
APE	**Apeiranthos**	**0.54**	**7**	*i*	P	**Pg**	**07 07 17.1**	**-1.2**
APE				*i*	S	**Sg**	**07 07 24.8**	**-0.7**
APE	**Apeiranthos**	**0.54**	**7**		PG	**Pg**	**07 07 17.6**	**-0.7**
APE					SG	**Sb**	**07 07 26.8**	**+0.6**
MHLA	**Plaka, Milos I**	**0.85**	**285**		P	**Pg**	**07 07 24.0**	**-0.1**
MHLO	**Agia Marina, M**	**0.86**	**281**		P	**Pn**	**07 07 24.5**	**-0.3**
MHLO					AML	AML	07 07 40.5	
	comp=N,17408µm,0.5s							
MHLO					AML	AML	07 07 41.1	
	comp=E,13775µm,0.5s							
MHLO	**Agia Marina, M**	**0.86**	**281**		P	**Pn**	**07 07 24.8**	**0.0**
MHLO					S	**Sn**	**07 07 36.3**	**-0.6**
	comp=E,8µm,0.5s							
TNSA	**Tinos**	**1.03**	**347**		P	**Pb**	**07 07 26.3**	**-0.6**
TNSA					S	**Sb**	**07 07 39.1**	**-1.2**
TNSA					AML	AML	07 07 42.4	
	comp=E,14783µm,0.2s							
TNSA					AML	AML	07 07 44.2	
	comp=N,13207µm,0.3s							
KOSK	**Kos Island**	**1.25**	**79**		P	**Pn**	**07 07 29.7**	**-0.5**
KOSK					S	**Sb**	**07 07 45.8**	**-0.6**
	comp=N,2µm,0.5s							
KOSK	**Kos Island**	**1.25**	**79**		PN	**Pg**	**07 07 30.7**	**-0.9**
KOSK					SN	**Sg**	**07 07 49.1**	**+1.2**
NPS	**Neapolis**	**1.27**	**174**		P	**Pn**	**07 07 30.1**	**-0.4**
NPS					S	**Sb**	**07 07 46.5**	**-0.5**
NPS					AML	AML	07 07 51.0	
	comp=N,5213µm,0.6s							
NPS					AML	AML	07 07 51.3	
	comp=E,4819µm,0.5s							
NPS	**Neapolis**	**1.27**	**174**		P	**Pn**	**07 07 29.6**	**-0.9**
NPS					S	**Sg**	**07 07 48.1**	**-0.4**
	comp=E,2µm,0.5s							
IDI	**Anoyia**	**1.32**	**200**		Pg	**Pn**	**07 07 31.2**	**0.0**
	comp=E,90nm,0.3s,baz=37,slow=14,SNR=399							
IDI					LR	LR	07 07 39.9	
	comp=E,16nm,21.0s,baz=23,slow=25							
IDI					Lg	Lg	07 07 50.0	
	comp=E,105nm,0.3s,baz=283,slow=21,SNR=16							
IDI	**Anoyia**	**1.32**	**200**		P	**Pn**	**07 07 30.9**	**-0.3**
IDI					S	**Sb**	**07 07 48.2**	**-0.2**
IDI					AML	AML	07 07 53.9	
	comp=N,1884µm,0.6s							
IDI					AML	AML	07 07 57.0	
	comp=E,2502µm,0.5s							
IDI	**Anoyia**	**1.32**	**200**		P	**Pn**	**07 07 30.7**	**-0.5**
IDI					S	**Sg**	**07 07 49.4**	**-0.7**
	comp=E,970nm,0.5s							
PRNS	**Prines Rethymn**	**1.39**	**214**		P	**Pb**	**07 07 33.2**	**+0.2**
NIS1	**Nisyros Isl.**	**1.39**	**86**		P	**Pb**	**07 07 32.6**	**-0.5**
NIS1					AML	AML	07 08 03.0	
	comp=E,5943µm,0.6s							
NIS1					AML	AML	07 08 05.7	
	comp=N,5260µm,0.9s							
NIS1	**Nisyros Isl.**	**1.39**	**86**		PN	**Pb**	**07 07 33.1**	**0.0**
NIS1					SN	**Sg**	**07 07 52.4**	**-0.1**
STIA	**Sitia Lasithi**	**1.42**	**158**		P	**Pn**	**07 07 31.6**	**-0.9**
VAM	**Vamos**	**1.51**	**223**		P	**Pn**	**07 07 33.7**	**-0.1**
VAM					AML	AML	07 07 58.5	
	comp=E,2023µm,0.4s							
VAM					AML	AML	07 08 06.4	
	comp=N,2214µm,0.8s							
ZKR	**Zakros**	**1.54**	**156**		P	**Pn**	**07 07 34.1**	**-0.1**
ZKR					AML	AML	07 07 59.6	
	comp=E,2107µm,0.8s							
ZKR					AML	AML	07 08 04.4	
	comp=N,946µm,0.8s							
ZKR	**Zakros**	**1.54**	**156**		P	**Pn**	**07 07 34.4**	**+0.2**
ZKR	**Zakros**	**1.54**	**156**		PN	**Pn**	**07 07 33.9**	**-0.3**
ZKR					SN	**Sn**	**07 07 53.7**	**-0.1**
YKAV	**Yalikavak-Bodr**	**1.58**	**67**		PN	**Pb**	**07 07 35.5**	**-0.8**
BODT	**Bodrum**	**1.59**	**70**		PN	**Pb**	**07 07 35.3**	**-1.1**
BODT					SN	**Sg**	**07 07 57.4**	**-1.2**
SIVA	**Sivas**	**1.59**	**199**		P	**Pb**	**07 07 35.7**	**-0.8**
SIVA					AML	AML	07 08 00.7	
	comp=E,5171µm,0.5s							
SIVA					AML	AML	07 08 02.7	
	comp=N,4585µm,0.5s							
IMMV	**Iera Moni Meta**	**1.60**	**229**		P	**Pn**	**07 07 35.3**	**+0.3**
IMMV					AML	AML	07 08 10.2	
	comp=N,2121µm,0.5s							
IMMV					AML	AML	07 08 13.3	
	comp=E,2680µm,0.9s							
IMMV	**Iera Moni Meta**	**1.60**	**229**		P	**Pn**	**07 07 35.2**	**+0.3**
SMG	**Samos**	**1.62**	**43**		P	**Pn**	**07 07 34.0**	**-1.3**
SMG					AML	AML	07 08 05.7	
	comp=E,4505µm,0.5s							
SMG					AML	AML	07 08 13.1	
	comp=N,3361µm,0.5s							
SMG	**Samos**	**1.62**	**43**		P	**Pn**	**07 07 33.9**	**-1.3**
BDRM	**Kayabasi**	**1.69**	**71**	*i*	P	**Pg**	**07 07 39.0**	**-1.0**
BDRM				*i*	S	**Sb**	**07 07 59.1**	**0.0**
BDRM					IAML		07 08 06.0	
	comp=N,408nm,0.7s							
KARP	**Karpathos**	**1.70**	**125**		P	**Pn**	**07 07 36.0**	**-0.4**
KARP					AML	AML	07 08 14.4	
	comp=N,1461µm,0.6s							
KARP					AML	AML	07 08 14.6	
	comp=E,1888µm,0.9s							
KARP	**Karpathos**	**1.70**	**125**		P	**Pn**	**07 07 35.9**	**-0.4**
KARP	**Karpathos**	**1.70**	**125**		PN	**Pn**	**07 07 36.5**	**+0.1**
KARY	**Karystos**	**1.70**	**332**		P	**Pn**	**07 07 36.0**	**-0.4**
KARY					AML	AML	07 08 03.7	
	comp=N,4669µm,0.5s							
KARY					AML	AML	07 08 03.7	
	comp=E,5029µm,0.3s							
KARY	**Karystos**	**1.70**	**332**		P	**Pn**	**07 07 36.2**	**-0.2**
DDIM	**Aydin, Didim**	**1.71**	**57**	*i*	P	**Pb**	**07 07 38.4**	**0.0**
DDIM				*i*	S	**Sb**	**07 07 59.1**	**-0.6**
DDIM					IAML		07 08 05.0	
	comp=N,666nm,0.6s							
DDIM					IAML		07 08 06.0	
	comp=E,886nm,0.6s							
GCAM	**G?zelcaml?**	**1.84**	**50**	*i*	P	**Pb**	**07 07 40.8**	**0.0**
GCAM				*i*	S	**Sg**	**07 08 07.3**	**+0.4**
GCAM					IAML		07 08 11.0	
	comp=E,485nm,0.5s							
GCAM					IAML		07 08 16.0	
	comp=N,379nm,0.5s							
GCAM	**G?zelcaml?**	**1.84**	**50**		PN	**Pb**	**07 07 39.1**	**-1.6**
ANKY	**Antikythira Is**	**1.86**	**250**		P	**Pn**	**07 07 39.2**	**+0.6**
ANKY					AML	AML	07 08 09.1	
	comp=N,1200µm,0.9s							
ANKY					AML	AML	07 08 11.3	
	comp=E,1626µm,0.5s							
ANKY	**Antikythira Is**	**1.86**	**250**		P	**Pn**	**07 07 38.9**	**+0.4**
VLY	**Voula,Athens**	**1.87**	**316**		P	**Pn**	**07 07 38.8**	**+0.1**
DGB	**zmir**	**1.90**	**37**	*i*	P	**Pb**	**07 07 40.7**	**-1.0**
DGB				*i*	S	**Sg**	**07 08 08.1**	**-0.6**
DGB					IAML		07 08 11.0	
	comp=E,194nm,0.3s							
DGB					IAML		07 08 11.0	
	comp=N,274nm,0.7s							
CHOS	**Chios island**	**1.92**	**14**		P	**Pn**	**07 07 38.6**	**-0.8**
CHOS	**Chios island**	**1.92**	**14**		P	**Pn**	**07 07 38.6**	**-0.8**
CHOS	**Chios island**	**1.92**	**14**		PN	**Pn**	**07 07 38.7**	**-0.8**
KTHA	**Kythira Island**	**1.94**	**263**		P	**Pn**	**07 07 40.4**	**+0.7**
KTHA					AML	AML	07 08 14.2	
	comp=N,1252µm,0.9s							
KTHA					AML	AML	07 08 15.1	
	comp=E,1271µm,0.4s							
KTHA	**Kythira Island**	**1.94**	**263**		P	**Pn**	**07 07 40.4**	**+0.7**
ATHU	**Athens Univers**	**1.96**	**318**		P	**Pn**	**07 07 40.1**	**+0.2**
ATHU					S	**Sb**	**07 08 05.4**	**-1.4**
	comp=E,945nm,0.5s							
DION	**Dionisos Attik**	**1.96**	**322**		P	**Pn**	**07 07 40.1**	**+0.1**
DION	**Dionisos Attik**	**1.96**	**322**		P	**Pn**	**07 07 40.1**	**+0.1**
PTL	**Penteli**	**1.98**	**321**		P	**Pn**	**07 07 40.3**	**+0.1**
PTL	**Penteli**	**1.98**	**321**		P	**Pn**	**07 07 40.1**	**-0.1**
KTHR	**Kythira**	**1.99**	**263**		P	**Pb**	**07 07 41.6**	**-1.6**
KTHR					S	**Sb**	**07 08 07.2**	**-0.5**
	comp=E,408nm,0.3s							
ATH	**Athens Observa**	**2.00**	**317**		P	**Pn**	**07 07 40.8**	**+0.4**
ATH					AML	AML	07 08 13.0	
	comp=E,4301µm,0.3s							
ATH					AML	AML	07 08 13.3	
	comp=N,4434µm,0.6s							
ATH	**Athens Observa**	**2.00**	**317**		P	**Pn**	**07 07 40.7**	**+0.3**
GVD	**Gavdhos**	**2.02**	**214**		P	**Pb**	**07 07 42.6**	**-1.0**
MLSB	**Milas**	**2.02**	**67**		PN	**Pn**	**07 07 41.6**	**+0.8**
KRND	**KRANIDI**	**2.03**	**296**		P	**Pn**	**07 07 41.5**	**+0.6**
KRND					AML	AML	07 08 20.8	
	comp=E,1121µm,0.5s							
KRND					AML	AML	07 08 22.9	
	comp=N,743µm,0.4s							
VLI	**Velíai**	**2.03**	**276**		P	**Pn**	**07 07 41.5**	**+0.6**
VLI	**Velíai**	**2.03**	**276**		P	**Pn**	**07 07 41.2**	**+0.3**
URLA	**Izmir**	**2.04**	**26**	*i*	P	**Pb**	**07 07 43.8**	**-0.3**
URLA				*i*	S	**Sb**	**07 08 08.7**	**-0.6**
URLA					IAML		07 08 16.0	
	comp=E,329nm,0.5s							
URLA					IAML		07 08 21.0	
	comp=N,278nm,0.6s							
URLA	**Izmir**	**2.04**	**26**		PN	**Pn**	**07 07 40.4**	**-0.7**
ARG	**Arkhangelos**	**2.18**	**97**		P	**Pn**	**07 07 43.0**	**0.0**
ARG					AML	AML	07 08 23.2	
	comp=E,913µm,0.7s							
ARG					AML	AML	07 08 27.9	
	comp=N,378µm,0.6s							
ARG	**Arkhangelos**	**2.18**	**97**		PN	**Pn**	**07 07 43.8**	**+0.8**
EREA	**Eretria**	**2.24**	**328**		P	**Pn**	**07 07 44.2**	**+0.4**
AYDN	**Tasoluk**	**2.25**	**59**	*i*	P	**Pb**	**07 07 47.7**	**+0.1**
AYDN				*i*	S	**Sg**	**07 08 17.9**	**-1.9**
AYDN					IAML		07 08 26.0	
	comp=Z,96nm,0.7s							
AYDN					IAML		07 08 26.0	
	comp=E,91nm,0.5s							
AYDN					IAML		07 08 32.0	
	comp=N,99nm,0.6s							
TURN	**Turunc**	**2.26**	**83**	*i*	P	**Pg**	**07 07 49.3**	**-1.6**
TURN	**Turunc**	**2.26**	**83**		PN	**Pn**	**07 07 45.1**	**+1.0**
YER	**Yerkesik**	**2.35**	**74**		PN	**Pn**	**07 07 46.4**	**+1.0**
KYMI	**Kymi, Euboea I**	**2.36**	**333**		P	**Pn**	**07 07 45.4**	**0.0**
VILL	**Villia**	**2.36**	**314**		P	**Pn**	**07 07 46.0**	**+0.5**
FOCM	**Foa**	**2.41**	**25**		PN	**Pn**	**07 07 46.0**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**2.41**	**53**		PN	**Pn**	**07 07 46.9**	**+0.7**
VIL2	**Platees**	**2.42**	**315**		P	**Pn**	**07 07 46.0**	**-0.2**
VIL2					AML	AML	07 08 28.5	
	comp=E,1987µm,0.6s							
VIL2					AML	AML	07 08 29.2	
	comp=N,1529µm,0.7s							
LTK	**Loutraki**	**2.48**	**308**		P	**Pn**	**07 07 47.9**	**+0.8**
DALY	**Dalyan (Mula)**	**2.59**	**83**		PN	**Pn**	**07 07 49.8**	**+1.2**
VLX	**Vlachokerasia**	**2.60**	**290**		P	**Pn**	**07 07 49.8**	**+0.9**
CAND	**Candarli**	**2.65**	**23**		PN	**Pn**	**07 07 49.5**	**+0.1**
SIGR	**SIGRI**	**2.70**	**7**		P	**Pn**	**07 07 49.1**	**-1.0**
ZEDA	**zmir-Bergama**	**2.75**	**27**	*i*	P	**Pb**	**07 07 57.2**	**+0.9**
ZEDA				*i*	S	**Sg**	**07 08 37.2**	**+1.2**
ZEDA					IAML		07 08 40.0	
	comp=E,102nm,0.6s							
ZEDA					IAML		07 08 45.0	
	comp=N,119nm,0.6s							
DKL	**Dikili**	**2.79**	**24**		PN	**Pn**	**07 07 51.5**	**+0.2**
PRK	**Paraskevi**	**2.79**	**13**		P	**Pn**	**07 07 51.6**	**+0.3**
LKR	**Lokris**	**2.88**	**318**		P	**Pn**	**07 07 53.0**	**+0.5**
ATAL	**Atalanti**	**2.90**	**319**		P	**Pn**	**07 07 53.2**	**+0.4**
ITM	**Ithomi**	**2.90**	**284**		P	**Pb**	**07 07 55.8**	**-2.9**
FETY	**Fethiye**	**2.93**	**87**		PN	**Pn**	**07 07 54.5**	**+1.2**
GOMA	**Golmarmara-Man**	**2.93**	**41**		PN	**Pn**	**07 07 53.9**	**+0.7**
PYL	**PYLOS**	**3.00**	**278**		P	**Pn**	**07 07 56.9**	**+2.7**
KOCA	**Canakkale, Ayv**	**3.02**	**10**	*i*	P	**Pn**	**07 07 53.7**	**-0.8**
KLV	**Kalavryta, Ach**	**3.03**	**301**		P	**Pn**	**07 07 55.9**	**+1.2**
MANT	**Manisa**	**3.15**	**51**	*i*	P	**Pg**	**07 08 05.2**	**-2.7**
AMT	**Artemida-Makis**	**3.16**	**290**		P	**Pb**	**07 07 59.6**	**-3.5**
KULA	**Kula-Manisa**	**3.23**	**51**		PN	**Pn**	**07 07 58.7**	**+1.2**
BUHA	**Balikesir, Bur**	**3.23**	**23**	*i*	P	**Pn**	**07 07 55.8**	**-1.7**
BUHA				*i*	S	**Sg**	**07 08 51.7**	**+0.4**
BUHA					IAML		07 09 04.0	
	comp=N,98nm,0.8s							
LAKA	**Lakka**	**3.25**	**303**		P	**Pn**	**07 07 58.8**	**+1.1**
DRO	**Drossia**	**3.30**	**297**		P	**Pn**	**07 07 60.0**	**+1.5**
BAYC	**CANAKKALE_Bayr**	**3.32**	**15**	*i*	P	**Pn**	**07 07 57.1**	**-1.5**
BOZC	**Bozcaada**	**3.34**	**8**	*i*	P	**Pn**	**07 07 54.4**	**-4.6**
AKAS	**Kas**	**3.37**	**94**	*i*	P	**Pn**	**07 07 59.6**	**+0.2**
AKAS	**Kas**	**3.37**	**94**		PN	**Pn**	**07 08 00.8**	**+1.4**
ANX	**Ano Chora**	**3.48**	**307**		P	**Pn**	**07 08 02.6**	**+1.7**
AGG	**Agios Georgios**	**3.51**	**316**		P	**Pn**	**07 08 02.0**	**+0.8**
AGG	**Agios Georgios**	**3.51**	**316**	*i*	P	**Pn**	**07 08 02.0**	**+0.8**
USAK	**Uak-Merkez**	**3.58**	**51**	*i*	P	**Pn**	**07 08 01.6**	**-0.6**
BALY	**Balya**	**3.63**	**27**	*i*	P	**Pn**	**07 08 00.8**	**-2.2**
BRTR	**Keskin Array B**	**7.20**	**61**		Pn	**Pn**	**07 08 53.4**	**+1.3**
	comp=N,0.5nm,0.3s,baz=239,slow=15,SNR=7.7							
MMAI	**Mount Meron Ar**	**8.91**	**110**		Pn	**Pn**	**07 09 14.3**	**-1.1**
	comp=N,1.4nm,0.3s,baz=316,slow=12,SNR=5.0							
EIL	**Elat**	**10.50**	**128**		Pn	**Pn**	**07 09 34.8**	**-2.4**
	comp=N,0.3nm,0.3s,baz=0.8,slow=9.8,SNR=2.8							
AKASG	**Malin Array Be**	**14.43**	**10**		Pn	**Pn**	**07 10 33.2**	**+2.4**
	baz=201,slow=10,SNR=1.4							
GERES	**GERESS Array B**	**15.01**	**329**		Pn	**P**	**07 10 42.1**	**-2.1**
	comp=N,0.1nm,0.3s,baz=142,slow=12,SNR=15							
KBZ	**Khabaz**	**15.15**	**56**		Pn	**P**	**07 10 45.9**	**+0.3**
	comp=N,0.1nm,0.3s,baz=264,slow=7.2,SNR=9.5							
NACGM	**Naroch**	**18.40**	**2**	*i*	P	**Pn**	**07 11 27.0**	**+5.4**
NACGM				*i*	P	**Pn**	**07 11 27.0**	**+5.4**
NACGM				*i*	P	**Pn**	**07 11 27.0**	**+5.4**
NACGM				*i*	PP	**PnPn**	**07 11 38.5**	**+5.3**
NACGM				*i*	S	**S**	**07 14 50.5**	**-0.5**
NACGM				*i*	LQ	LQ	07 16 49.6	
NACGM				*i*	LR	LR	07 18 19.1	
BELG	**Belogornoye**	**22.27**	**38**		P	**P**	**07 12 04.5**	**+0.9**
	comp=N,10nm,0.8s,baz=224,slow=9.1,SNR=4.2							
ESDC	**Sonseca Array**	**23.31**	**287**		P	**P**	**07 12 14.6**	**0.0**
	comp=N,1.1nm,0.7s,baz=79,slow=9.7,SNR=7.7							
FINES	**FINESS Array B**	**24.94**	**1**		P	**P**	**07 12 29.9**	**+0.3**
	comp=N,2.0nm,0.8s,baz=98,slow=5.8,SNR=4.2							
EKA	**Eskdalemuir Ar**	**27.07**	**323**		P	**P**	**07 12 50.5**	**+1.6**
	comp=N,0.4nm,0.4s,baz=121,slow=8.3,SNR=3.8							
TORD	**Torodi Ar. Bea**	**31.56**	**229**		P	**P**	**07 13 28.6**	**-0.6**
	comp=N,0.3nm,0.5s,baz=27,slow=8.6,SNR=4.0							
ARCES	**ARCESS Array B**	**33.06**	**0**		P	**P**	**07 13 40.9**	**-0.9**
	comp=N,3.1nm,1.0s,baz=158,slow=7.5,SNR=4.0							
MKAR	**Makanchi Array**	**42.84**	**58**		P	**P**	**07 15 04.1**	**-0.5**
	comp=N,0.6nm,0.5s,baz=295,slow=6.0,SNR=3.8							
ZALV	**Zalesovo Beam**	**43.90**	**47**		P	**P**	**07 15 13.3**	**+0.4**
	comp=N,0.4nm,0.3s,baz=285,slow=11,SNR=2.0							
YKA	**Yellowknife Ar**	**76.22**	**342**		P	**P**	**07 18 53.2**	**-1.4**
	comp=N,0.1nm,0.7s,baz=28,slow=5.6,SNR=2.0							
ILAR	**Eielson Array**	**78.85**	**357**		LR	LR	07 58 34.7	
	comp=N,27nm,18.2s,baz=326,slow=39							

*NEIC **18** 07:26:27.0±2.1,24°.26S±0°.07×67°.2W±0°.1,h190km±9km, Error ellipse: s-maj=13.7km s-min=9.7km az=97.0*
*IDC **18** 07:26:27.4±1.7,24°.13S×66°.97W,h173km±11km,mb3.2/6, mb1 3.5/11,mb1mx3.4/29,mbtmp3.7/11, Error ellipse: s-maj=28.3km s-min=14.7km az=15.0*
*VAO **18** 07:26:27.6±0.8,24°.34S×67°.48W,h227km±7km, mb3.9*
*GUC **18** 07:26:28.6±0.6,24°.27S×67°.65W,h210km±10km,ML4.0*
ISC 18 07:26:26.8±0.7,24°.26S±0°.04×67°.17W±0°.06,h179km±8km, n86,σ1§16/102,mb3.6/8,8C-1D,Chile-Argentina border region

*IDC **18** 08:02:36.2±10.0, 37°.60N×72°.14E,h189km±71km,mb2.9/2, mb1 3.0/4,mb1mx2.8/42,mbtmp3.5/4, Error ellipse: s-maj=323.4km s-min=37.6km az=138.0*
ISC 18 08:02:38.0±1.7,37°.7N±0°.1×72°.2E±0°.1,h200km,n6, σ1§13/8,1C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.29**	**315**	P		**Pn**		**07 27 09.0**	**+1.4**
	52nm,0.3s,baz=136,slow=6.2,SNR=442								
LVC				S		**Sn**		**07 27 39.8**	**+0.7**
	52nm,0.3s,baz=308,slow=22,SNR=20								
LVC	**Limon Verde**	**2.29**	**315**	*eP*		**Pn**		**07 27 08.9**	**+1.4**
LVC				*eS*		**Sn**		**07 27 39.8**	**+0.7**
LVC	**Limon Verde**	**2.29**	**315**			**Pn**		**07 27 09.2**	**+1.7**
LVC				Sn		**Sn**		**07 27 40.2**	**+1.1**
LVC	**Limon Verde**	**2.29**	**315**	*eP*		**Pn**		**07 27 09.2**	**+1.7**
PB15	**IPOC Station P**	**2.36**	**296**	⇑*iP*		**Pn**		**07 27 09.6**	**+1.5**
PB15				*eS*		**Sn**		**07 27 40.4**	**+0.3**
PB15	**IPOC Station P**	**2.36**	**296**			**Pn**		**07 27 09.7**	**+1.6**
GO02	**Mina Guanaco**	**2.38**	**247**	⇑*iP*		**Pn**		**07 27 09.4**	**+1.0**
GO02				*i* S		**Sn**		**07 27 40.8**	**+0.1**
GO02				IAML				07 27 42.1	
	comp=E,1µm,0.4s								
GO02	**Mina Guanaco**	**2.38**	**247**			**Pn**		**07 27 09.6**	**+1.2**
GO02				Sn		**Sn**		**07 27 41.4**	**+0.7**
PB06	**IPOC Station P**	**2.70**	**305**	⇑*iP*		**Pn**		**07 27 13.2**	**+1.2**
PB06				*i* S		**Sn**		**07 27 46.7**	**-0.4**
PB06				IAML				07 27 49.0	
	comp=E,552nm,0.2s								
PB06	**IPOC Station P**	**2.70**	**305**			**Pn**		**07 27 12.9**	**+0.9**
PB06				Sn		**Sn**		**07 27 46.7**	**-0.4**
PB14	**IPOC Station P**	**2.97**	**262**	⇑*iP*		**Pn**		**07 27 15.7**	**+0.3**
PB14				*i* S		**Sn**		**07 27 51.3**	**-1.9**
PB14	**IPOC Station P**	**2.97**	**262**	Pn		**Pn**		**07 27 15.5**	**+0.1**
PB09	**IPOC Station P**	**3.11**	**322**			**Pn**		**07 27 17.8**	**+0.8**
AC02	**Maricunga**	**3.12**	**214**	⇓*iP*		**Pn**		**07 27 18.3**	**+1.0**
AC02				*eS*		**Sn**		**07 27 59.1**	**+2.4**
AC02	**Maricunga**	**3.12**	**214**	Pn		**Pn**		**07 27 17.5**	**+0.2**
PB05	**IPOC Station P**	**3.12**	**296**	⇑*iP*		**Pn**		**07 27 17.6**	**+0.5**
PB05				*i* S		**Sn**		**07 27 54.1**	**-2.0**
PB05				IAML				07 27 56.6	
	comp=E,181nm,0.1s								
PB10	**IPOC Station P**	**3.19**	**283**	*eP*		**Pn**		**07 27 18.0**	**+0.2**
PB10				*i* S		**Sn**		**07 27 55.4**	**-2.0**
PB10				IAML				07 28 04.9	
	comp=N,142nm,0.3s								
PB10	**IPOC Station P**	**3.19**	**283**	Pn		**Pn**		**07 27 18.9**	**+1.1**
PB03	**IPOC Station P**	**3.24**	**312**	⇑*iP*		**Pn**		**07 27 19.3**	**+0.7**
PB03				*i* S		**Sn**		**07 27 57.4**	**-1.6**
PB03				IAML				07 27 59.9	
	comp=N,300nm,0.2s								
PB04	**IPOC Station P**	**3.35**	**304**	⇑*iP*		**Pn**		**07 27 20.3**	**+0.4**
PB04				*i* S		**Sn**		**07 27 59.6**	**-1.7**
PB04				IAML				07 28 02.2	
	comp=E,214nm,0.2s								
PB04	**IPOC Station P**	**3.35**	**304**			**Pn**		**07 27 20.9**	**+1.0**
PB07	**IPOC Station P**	**3.56**	**315**			**Pn**		**07 27 23.4**	**+0.8**
AC01	**Pan de Azucar**	**3.63**	**238**			**Pn**		**07 27 23.0**	**-0.3**
PB01	**IPOC Station P**	**3.85**	**326**	⇑*iP*		**Pn**		**07 27 26.3**	**+0.1**
PB01				*i* S		**Sn**		**07 28 10.6**	**-2.0**
PB01	**IPOC Station P**	**3.85**	**326**			**Pn**		**07 27 26.7**	**+0.5**
GO03	**Copiap**	**4.32**	**219**	*eP*		**Pn**		**07 27 30.9**	**-1.1**
GO03				*i* S		**Sn**		**07 28 20.1**	**-3.0**
GO03	**Copiap**	**4.32**	**219**			**Pn**		**07 27 31.2**	**-0.8**
PB08	**IPOC Station P**	**4.50**	**335**			**Pn**		**07 27 35.6**	**+0.9**
TA01	**Diego Aracena**	**4.62**	**322**	Pn		**Pn**		**07 27

YKA	**Yellowknife Ar**	**79.96**	**3**	P		**P**	**08 14 24.4**	**+0.1**	
	0.1nm,0.6s,baz=10,slow=4.9,SNR=1.9								

*BYKL **18** 08:10:20.2±0.1,53˚30N×107˚94E,h16km±2km*
*IDC **18** 08:10:25.2±1.9,53˚09N×107˚43E,h0km,mb3.4/2, mb1 3.2/6,mb1mx3.1/48,mbtmp3.1/6,ML2.6/4,MS3.3/2, Ms1 3.3/2,ms1mx2.4/37, Error ellipse: s-maj=23.4km s-min=18.3km az=168.0*

ISC 18 08:10:19.5±1.1,53˚25N±0˚02×108˚00E±0˚02,h1km±9km, n40,σ2s21/92,2C,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.45**	**88**	*e*Pg		**Pg**	**08 10 28.9**	**+0.9**
MXMB				*e*Sg		**Sb**	**08 10 35.9**	**-1.4**
OGRR	**Ongureny**	**0.46**	**328**	i*e*Pg		**Pg**	**08 10 29.1**	**+0.8**
OGRR				*e*			08 10 33.4	
OGRR				*e*Sg		**Sg**	**08 10 34.3**	**0.0**
OGRR				Pmax				
	290nm,0.3s							
OGRR				Smax				
	4μm,0.2s							
KELR	**Kotokel**	**0.49**	**174**	*e*Pg		**Pb**	**08 10 30.2**	**-0.7**
KELR				*e*Sg		**Sb**	**08 10 37.4**	**-1.2**
ZRHB	**Zarechye**	**0.87**	**217**	*e*Pg		**Pb**	**08 10 37.0**	**-0.3**
ZRHB				*e*Pb		**Pn**	**08 10 38.7**	**-0.1**
ZRHB				*e*Sg		**Sb**	**08 10 48.7**	**-0.7**
ZRHB				*e*			08 10 50.8	
ZRHB				*e*Sb		**Sn**	**08 10 52.9**	**+0.9**
ZRHB				*e*			08 10 54.7	
ZRHB				max				
	153nm,0.4s							
ZRHB				max				
	2μm,0.9s							
TRG	**Tyrgan**	**1.11**	**244**	i*e*Pg		**Pb**	**08 10 39.5**	**-2.0**
TRG				*e*Sg		**Sb**	**08 10 54.1**	**-2.4**
TRG				Pmax				
	69nm,0.2s							
TRG				Smax				
	886nm,0.3s							
SYVR	**Suvo**	**1.26**	**70**	*e*Pg		**Pn**	**08 10 43.1**	**-1.1**
SYVR				*e*Sg		**Sb**	**08 11 00.5**	**-0.2**
SYVR				Pmax				
	77nm,0.3s							
SYVR				Smax				
	419nm,0.3s							
UUDB	**Ulan-Yde**	**1.40**	**189**	*e*Pg		**Pg**	**08 10 46.4**	**+0.1**
UUDB				*e*Sg		**Sg**	**08 11 05.7**	**+1.3**
UUDB				Pmax				
	126nm,0.5s							
UUDB				Smax				
	353nm,0.5s							
FFNB	**Fofonovo**	**1.42**	**213**	*e*Pg		**Pn**	**08 10 46.1**	**-0.3**
FFNB				*e*Sg		**Sg**	**08 11 06.0**	**+0.9**
KAB	**Kabansk**	**1.46**	**215**	*e*Sg		**Sg**	**08 11 07.3**	**+1.1**
KAB				Smax				
	1μm,0.8s							
STDB	**Stepnoy Dvoret**	**1.47**	**223**	*e*Pg		**Pb**	**08 10 47.7**	**+0.1**
STDB				*e*Sg		**Sg**	**08 11 07.2**	**+0.5**
STDB				*e*Sb		**Sb**	**08 11 09.1**	**+2.4**
HRMR	**Khuramsha**	**1.75**	**202**	*e*Pn		**Pn**	**08 10 51.0**	**+0.1**
HRMR				*e*Pg		**Pb**	**08 10 52.0**	**-0.3**
HRMR				*e*			08 10 59.6	
HRMR				*e*Sg		**Sg**	**08 11 15.6**	**+0.1**
HRMR				Pmax				
	226nm,0.4s							
HRMR				Smax				
	2μm,0.6s							
BGT	**Bolshoye Golou**	**1.99**	**234**	*e*Pn		**Pn**	**08 10 54.5**	**+0.3**
BGT				*e*Pg		**Pb**	**08 10 56.7**	**+0.3**
BGT				*e*Sn		**Sn**	**08 11 18.4**	**-1.3**
BGT				*e*Sg		**Sb**	**08 11 21.7**	**+0.1**
BGT				Smax				
	134nm,0.6s							
LSTR	**Listvyanka**	**2.38**	**236**	*e*Pn		**Pn**	**08 10 59.2**	**-0.3**
LSTR				*e*Pg		**Pb**	**08 11 02.9**	**-0.1**
LSTR				*e*Sn		**Sn**	**08 11 28.1**	**-1.2**
LSTR				*e*Sg		**Sb**	**08 11 33.8**	**+0.9**
LSTR				Pmax				
	16nm,0.6s							
LSTR				Smax				
	67nm,0.7s							
YLYR	**Ulyunkhan**	**2.47**	**48**	*e*Pn		**Pn**	**08 11 00.5**	**-0.4**
YLYR				*e*Pg		**Pb**	**08 11 04.3**	**-0.4**
YLYR				*e*Sn		**Sn**	**08 11 30.6**	**-1.1**
YLYR				*e*Sg		**Sb**	**08 11 36.9**	**+1.3**
YLYR				Pmax				
	16nm,0.3s							
YLYR				Smax				
	173nm,0.5s							
IRK	**Irkutsk**	**2.48**	**247**	*e*Sg		**Sb**	**08 11 35.7**	**-0.1**
IRK				*e*SgSg		**SnSn**	**08 11 43.9**	**+1.4**
IRK				max				
	496nm,1.0s							
IVK	**Ivanovka**	**2.63**	**238**	*e*Pn		**Pn**	**08 11 02.8**	**-0.2**
IVK				*e*Pg		**Pb**	**08 11 07.5**	**+0.2**
IVK				*e*			08 11 12.8	
IVK				*e*Sn		**Sn**	**08 11 33.7**	**-1.8**
IVK				*e*Sg		**Sb**	**08 11 40.5**	**+0.4**
IVK				*e*			08 11 42.3	
IVK				Pmax				
	14nm,0.2s							
IVK				max				
	88nm,0.5s							
NIZ	**Nizh Angarsk**	**2.68**	**19**	*e*Pn		**Pn**	**08 11 03.7**	**0.0**
NIZ				*e*			08 11 07.0	
NIZ				*e*Pg		**Pb**	**08 11 08.6**	**+0.4**
NIZ				*e*Sn		**Sn**	**08 11 35.0**	**-1.8**
NIZ				*e*Sg		**Sb**	**08 11 42.9**	**+1.3**
NIZ				Pmax				
	26nm,0.3s							
NIZ				Smax				
	114nm,0.3s							
TLY	**Talaya**	**3.10**	**241**	Pn		**Pn**	**08 11 09.1**	**-0.3**
	0.0nm,0.3s,baz=62,slow=11,SNR=4.0							
TLY				Pg		**Pb**	**08 11 14.6**	**-0.6**
	0.1nm,0.3s,baz=52,slow=8.9,SNR=20							
TLY				Sn		**Sn**	**08 11 47.6**	**+0.6**
	0.0nm,0.3s,baz=60,slow=21,SNR=6.0							
TLY				Lg		Lg	08 11 53.7	
	0.1nm,0.3s,baz=186,slow=21,SNR=4.6							
TLY				LR		LR	08 12 16.0	
	comp=Z,18nm,21.4s,baz=70,slow=41							
TLY	**Talaya**	**3.10**	**241**	*e*Pn		**Pn**	**08 11 09.1**	**-0.3**
TLY				*e*			08 11 13.8	
TLY				*e*Pg		**Pb**	**08 11 15.1**	**-0.1**
TLY				*e*			08 11 20.4	
TLY				*e*Sn		**Sn**	**08 11 45.2**	**-1.8**
TLY				*e*			08 11 53.5	
TLY				*e*Sg		**Sb**	**08 11 55.5**	**+2.0**
TLY				Pmax				
	16nm,0.4s							
TLY				Smax				
	61nm,0.7s							
KMO	**Kumora**	**3.23**	**34**	*e*Pn		**Pn**	**08 11 10.6**	**-0.7**
KMO				*e*Pg		**Pb**	**08 11 17.4**	**-0.2**
KMO				*e*Sg		**Sb**	**08 12 00.0**	**+2.6**
KMO				Pmax				
	28nm,0.4s							
KMO				Smax				
	145nm,0.9s							
CIT	**Chita**	**3.60**	**108**	*e*Sg		**Sg**	**08 12 13.3**	**-1.7**
CIT				Smax				
	258nm,0.4s							
ARS	**Arshan**	**3.65**	**251**	*e*Pn		**Pn**	**08 11 16.6**	**-0.5**
ARS				*e*			08 11 20.4	
ARS				*e*Pg		**Pb**	**08 11 25.4**	**+0.6**
ARS				*e*			08 11 33.8	
ARS				*e*Sn		**Sn**	**08 11 58.5**	**-2.3**
ARS				*e*			08 12 09.1	
ARS				*e*Sg		**Sb**	**08 12 13.0**	**+3.4**
ARS				Pmax				
	39nm,0.6s							
ARS				Smax				
	439nm,0.8s							
UKT	**Uakit**	**3.98**	**53**	*e*Pn		**Pn**	**08 11 22.0**	**+0.4**
UKT				*e*Pg		**Pb**	**08 11 30.8**	**+0.4**
UKT				*e*Sn		**Sn**	**08 12 06.3**	**-2.6**
UKT				*e*Sg		**Sb**	**08 12 23.3**	**+4.3**
UKT				Pmax				
	15nm,1.2s							
UKT				Smax				
	54nm,1.0s							
ZAK	**Zakamensk**	**4.10**	**227**	*e*Pn		**Pn**	**08 11 23.4**	**+0.1**
ZAK				*e*Pg		**Pb**	**08 11 34.4**	**+1.9**
ZAK				*e*Sn		**Sn**	**08 12 09.6**	**-2.3**
ZAK				*e*Sg		**Sg**	**08 12 27.3**	**-3.9**
ZAK				Pmax				
	13nm,0.6s							
ZAK				Smax				
	37nm,1.0s							
KPC	**Khapcheranga**	**4.48**	**141**	*e*Pn		**Pn**	**08 11 27.4**	**-1.1**
KPC				*e*			08 11 35.6	
KPC				*e*Pg		**Pb**	**08 11 41.5**	**+2.6**
KPC				*e*Sn		**Sn**	**08 12 19.0**	**-2.3**
KPC				*e*Sg		**Sg**	**08 12 40.0**	**-3.4**
KPC				Pmax				
	20nm,0.9s							
KPC				Smax				
	116nm,1.1s							
MOY	**Mondy**	**4.57**	**252**	*e*Pn		**Pn**	**08 11 29.5**	**-0.2**
MOY				*e*			08 11 38.5	
MOY				*e*Pg		**Pb**	**08 11 41.7**	**+1.3**
MOY				*e*			08 12 23.2	
MOY				*e*			08 12 36.6	
MOY				*e*Sg		**Sb**	**08 12 40.1**	**+4.1**
MOY				Pmax				
	26nm,1.6s							
MOY				Smax				
	91nm,1.1s							
ORL	**Orlik**	**5.01**	**265**	*e*Pn		**Pn**	**08 11 35.8**	**0.0**
ORL				*e*Pg		**Pb**	**08 11 50.2**	**+2.2**
ORL				*e*Sn		**Sn**	**08 12 31.0**	**-3.4**
ORL				*e*			08 12 51.6	
ORL				*e*Sg		**Sb**	**08 12 54.3**	**+5.6**
ORL				Pmax				
	24nm,0.9s							
ORL				Smax				
	46nm,0.9s							
SONM	**Songino Array**	**5.52**	**191**	Pn		**Pn**	**08 11 43.7**	**+0.9**
	0.2nm,0.3s,baz=1.0,slow=14,SNR=2.2							
SONM				Pg		Pg	08 12 00.9	-4.2
	1.3nm,0.3s,baz=3.8,slow=18,SNR=10							
SONM				Lg		Lg	08 13 13.8	
	3.0nm,0.3s,baz=6.8,slow=32,SNR=8.1							
BOD	**Bodaibo**	**5.71**	**34**	*e*Pn		**Pn**	**08 11 44.6**	**-0.6**
BOD				*e*Pg		**Pb**	**08 12 02.8**	**+3.1**
BOD				*e*Sn		**Sn**	**08 12 46.7**	**-4.5**
BOD				*e*			08 13 01.1	
BOD				*e*Sg		**Sb**	**08 13 15.7**	**+7.2**
BOD				Pmax				
	2.0nm,0.2s							
BOD				Smax				
	24nm,1.0s							
CRS	**Chara**	**6.94**	**54**	*e*Sn		**Sn**	**08 13 17.7**	**-3.9**
CRS				*e*Sg		Sg	08 13 54.0	-8.0
CRS				Smax				
	60nm,1.7s							
KNGR	**Kungurtug, Tuv**	**7.00**	**252**	*e*Sg		**Sg**	**08 13 56.9**	**-7.3**
TUP	**Tupik**	**7.17**	**76**	*e*Pg		Pb	08 12 29.8	+5.1
TUP				*e*Sg		**Sg**	**08 14 02.7**	**-6.9**
TUP				Pmax				
	3.0nm,0.8s							
TUP				Smax				
	83nm,1.0s							
YKLR	**Yuktali**	**8.54**	**61**	*e*Sg		Sg	08 14 44.7	-8.8
ARDR	**Aradan**	**8.84**	**271**	*e*Pg		Pg	08 12 59.6	-8.9
ARDR				*e*Sg		Sg	08 14 52.6	-10
MKAR	**Makanchi Array**	**17.68**	**259**	P		**P**	**08 14 28.5**	**+0.7**
	0.1nm,0.3s,baz=60,slow=12,SNR=2.1							
KURBB	**Kurchatov Arra**	**18.30**	**274**	P		**P**	**08 14 35.2**	**+0.7**
	0.0nm,0.3s,baz=66,slow=12,SNR=4.6							
BVAR	**Borovoye Array**	**22.40**	**285**	P		**P**	**08 15 21.9**	**+2.8**
	0.9nm,0.5s,baz=78,slow=8.2,SNR=6.7							
ARU	**Arti**	**28.15**	**297**	LR		LR	08 29 46.0	
	comp=Z,60nm,18.4s,baz=176,slow=42							
PALK	**Pallekele**	**50.93**	**216**	LR		LR	08 44 10.9	
	comp=Z,30nm,18.5s,baz=224,slow=40							
ASAR	**Alice Springs**	**79.83**	**156**	P		P	08 22 36.1	+6.9
	0.4nm,0.9s,baz=340,slow=3.9,SNR=4.4							

*IDC **18** 08:43:06.6±0.8,0˚58S×135˚80E,h0km,mb3.8/10, mb1 4.0/14,mb1mx3.8/48,mbtmp3.9/14,ML3.9/3,MS3.3/9, Ms1 3.3/9,ms1mx3.1/35,Error ellipse: s-maj=26.7km s-min=13.2km az=73.0*
*NEIC **18** 08:43:09.6±2.0,0˚59S±0˚09×135˚80E±0˚06,h19km±4km, mb4.0/16,Error ellipse: s-maj=14.4km s-min=6.8km az=210.0*
*DJA **18** 08:43:11.8±0.8,1˚S±6˚×13˚6E±˚,h10km,M4.6/6,mb4.5/4, mB6.2/1,MLv4.7/6,Mw(mB)5.9/1*

ISC 18 08:43:11.1±0.7,0˚69S±0˚06×135˚79E±0˚05,h29km,n55, σ2s25/48,mb3.9/12,MS3.2/5,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.25**	**159**	P		**Pb**	**08 43 34.4**	**+0.3**
SRPI				S		**Sb**	**08 43 52.5**	**+2.6**
FAKI	**Fak Fak**	**4.18**	**238**	Pn		**Pn**	**08 44 13.7**	**+0.8**
FAKI				Sn		**Sn**	**08 44 59.8**	**-1.0**
FAKI	**Fak Fak**	**4.18**	**238**	P		**Pn**	**08 44 13.9**	**+1.0**
FAKI				S		**Sn**	**08 45 01.0**	**+0.2**
SIJI	**Sorong**	**4.53**	**268**	Pn		**Pn**	**08 44 16.1**	**-1.7**
	7.8nm,0.3s,baz=90,slow=7.1,SNR=2.1							
SIJI				Sn		**Sn**	**08 45 07.2**	**-2.4**
	6.6nm,0.3s,baz=90,slow=20,SNR=7.7							
SIJI				LR		LR	08 45 56.0	
	comp=Z,362nm,20.7s,baz=24,slow=37							
SWI	**Sorong**	**4.54**	**268**	P		**Pn**	**08 44 19.2**	**+1.4**
JAY	**Jayapura**	**5.23**	**110**	Pn		**Pn**	**08 44 26.1**	**-1.4**
	1.1nm,0.3s,baz=230,slow=15,SNR=1.4							
JAY				Sn		**Sn**	**08 45 24.1**	**-2.8**
	0.6nm,0.3s,baz=315,slow=20,SNR=3.0							
BNDI	**Bandanaira**	**7.01**	**237**	P		**Pn**	**08 44 51.3**	**-0.5**
	0.9nm17μm88nm,0.9s							
MTN	**Manton Dam**	**12.93**	**201**			**Pn**	**08 46 13.8**	**+0.9**
PMG	**Port Moresby**	**14.24**	**128**	LR		LR	08 52 39.8	
	comp=Z,151nm,20.8s,baz=131,slow=40							
SOEI	**Soe**	**14.58**	**231**	Pn		**Pn**	**08 46 35.3**	**-0.4**
BNSI	**Bone**	**16.10**	**256**	P		**P**	**08 47 02.5**	**+4.0**
TTSI	**Tana Toraja**	**16.14**	**261**	P		**P**	**08 47 02.7**	**+3.7**
KNRA	**Kununurra**	**16.43**	**205**			**Pn**	**08 46 59.7**	**0.0**
KAPI	**Kappang**	**16.58**	**255**	Pn		**Pn**	**08 47 01.5**	**-0.1**
	baz=86,slow=15,SNR=4.3							
KAPI				LR		LR	08 53 57.0	
	comp=Z,72nm,19.8s,baz=39,slow=39							
KAPI	**Kappang**	**16.58**	**255**			**Pn**	**08 47 01.2**	**-0.5**
KAPI				IAmb		IAmb	08 47 28.9	
	comp=Z,20nm,1.2s							
WB0	**Warramunga Arr**	**19.01**	**184**	P		**Pn**	**08 47 31.2**	**-0.4**
WB0				IAmb		IAmb	08 47 50.2	
	comp=Z,9.6nm,1.1s							
WRA	**Warramunga Arr**	**19.19**	**184**	P		**Pn**	**08 47 33.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=4.7,slow=11,SNR=29							
WRA				S		**Sn**	**08 51 02.3**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=8.4,slow=21,SNR=2.9							
WRA				LR		LR	08 56 01.7	
	comp=Z,144nm,21.4s,baz=165,slow=40							
WRA	**Warramunga Arr**	**19.19**	**184**	P		**Pn**	**08 47 33.0**	**-0.7**
WR0	**Warramunga Arr**	**19.19**	**184**	P		**Pn**	**08 47 34.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.97**	**209**	P		**P**	**08 47 41.5**	**+0.3**
	comp=Z,3.2nm,0.9s,baz=6.3,slow=10,SNR=3.8							
FITZ				S		**S**	**08 51 15.4**	**-9.0**
	comp=Z,3.6nm,1.1s,baz=338,slow=2.4,SNR=2.5							
FITZ	**Fitzroy Crossi**	**19.97**	**209**	P		Pn	08 47 42.1	-0.9
FITZ				IAmb		IAmb	08 47 55.6	
	comp=Z,14nm,1.3s							
CTA	**Charters Tower**	**21.83**	**153**	P		**P**	**08 48 01.9**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=331,slow=13,SNR=2.3							
AS31	**Alice Springs**	**22.91**	**184**	P		**P**	**08 48 12.7**	**-0.2**
ASAR	**Alice Springs**	**22.91**	**184**	P		**P**	**08 48 13.2**	**+0.3**
	comp=Z,4.2nm,0.6s,baz=13,slow=10,SNR=40							
ASAR				S		**S**	**08 52 27.1**	**+6.0**
	comp=Z,0.5nm,0.8s,baz=10.0,slow=22,SNR=2.8							
ASAR	**Alice Springs**	**22.91**	**184**	P		**P**	**08 48 13.7**	**+0.9**
SBUM	**Sibu**	**23.77**	**278**	P		**P**	**08 48 21.5**	**+0.1**
SBUM				IAmb		IAmb	08 48 23.5	
	comp=Z,8.4nm,1.2s							
KSM	**Kuching**	**25.57**	**275**	P		**P**	**08 48 37.9**	**0.0**
JCJ	**Chichijima**	**28.30**	**12**	LR		LR	08 58 15.6	
	comp=Z,61nm,19.0s,baz=154,slow=32							
STKA	**Stephens Creek**	**31.50**	**171**	P		**P**	**08 49 31.2**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=334,slow=12,SNR=7.7							
STKA	**Stephens Creek**	**31.50**	**171**	IAmb		IAmb	08 49 59.1	
	comp=Z,2.8nm,1.4s							
JNU	**Nakatsue**	**33.95**	**353**	LR		LR	09 00 23.7	
	comp=Z,113nm,20.3s,baz=62,slow=31							
H11S3	**WAKE ISLAND Hy**	**35.85**	**56**	T		T	09 28 14.2	
	baz=240,slow=76,SNR=6.9							
H11S2	**WAKE ISLAND Hy**	**35.87**	**56**	T		T	09 28 09.9	
	baz=240,slow=76,SNR=6.0							
H11S1	**WAKE ISLAND Hy**	**35.87**	**56**	T		T	09 28 15.3	
	baz=240,slow=76,SNR=6.7							
H11N1	**WAKE ISLAND Hy**	**36.62**	**55**	T		T	09 29 17.0	
	baz=243,slow=75,SNR=12							
H11N2	**WAKE ISLAND Hy**	**36.63**	**55**	T		T	09 29 28.1	
	baz=243,slow=75,SNR=7.8							
H11N3	**WAKE ISLAND Hy**	**36.63**	**55**	T		T	09 29 23.2	
	baz=243,slow=75,SNR=8.1							
MJAR	**Matsushiro Arr**	**37.11**	**3**	LR		LR	09 02 43.6	
	comp=Z,50nm,19.8s,baz=165,slow=32							
KSRS	**Korea Array**	**38.65**	**350**	LR		LR	09 03 35.7	
	comp=Z,18nm,21.7s,baz=165,slow=32							
CMAR	**Chiang Mai Arr**	**40.91**	**300**	P		**P**	**08 50 50.0**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=119,slow=5.0,SNR=4.8							
CHTO	**Chiang Mai**	**41.05**	**300**	P		**P**	**08 50 51.0**	**-1.3**
CHTO				IAmb		IAmb	08 50 52.6	
	comp=Z,3.3nm,1.1s							
SONM	**Songino Array**	**54.68**	**336**	P		**P**	**08 52 37.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=92,slow=10,SNR=1.9							
PETK	**Petropavlovsk-**	**56.65**	**16**	LR		LR	09 14 43.9	
	comp=Z,20nm,21.8s,baz=307,slow=34							
MK31	**Makanchi Array**	**66.43**	**323**	P		**P**	**08 53 57.9**	**+0.2**
MK31				IAmb		IAmb	08 54 06.8	
	comp=Z,2.3nm,1.1s							
MKAR	**Makanchi Array**	**66.43**	**323**	P		**P**	**08 53 57.9**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=113,slow=8.5,SNR=5.2							
MKAR	**Makanchi Array**	**66.43**	**323**	P		**P**	**08 53 58.5**	**+0.8**
MAKZ	**Makanchi**	**66.62**	**323**	P		**P**	**08 53 58.2**	**-0.7**
ZALV	**Zalesovo Beam**	**68.75**	**330**	P		**P**	**08 54 11.5**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=147,slow=8.2,SNR=1.3							
KURK	**Kurchatov**	**70.41**	**325**	P		**P**	**08 54 22.0**	**-0.4**
KURBB	**Kurchatov Arra**	**70.42**	**325**	P		**P**	**08 54 22.0**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=114,slow=5.7,SNR=6.9							
VNDA	**Vanda**	**78.05**	**174**	P		**P**	**08 55 08.1**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=316,slow=7.1,SNR=2.0							
VNDA	**Vanda**	**78.05**	**174**	IAmb		IAmb	08 55 33.7	
	comp=Z,1.3nm,1.1s							
QSPA	**South Pole Qui**	**89.24**	**180**	P		**P**	**08 56 05.6**	**+1.4**
TORD	**Torodi Ar. Bea**	**132.89**	**287**	PKP		**PKiKP**	**09 02 24.4**	**-1.4**
	comp=Z,0.6nm,0.9s,baz=163,slow=1.5,SNR=2.4							
LPAZ	**La Paz**	**150.98**	**127**	PKPbc		**PKiKP**	**09 03 02.2**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=196,slow=7.4,SNR=1.9							

*IDC **18** 08:56:04.5±6.4,5˚37S×152˚75E,h79km±51km,mb3.4/7, mb1 3.5/8,mb1mx3.4/34,mbtmp3.8/8,ML1.9/1,MS3.1/1, Ms1 3.1/1,ms1mx2.6/18,Error ellipse: s-maj=57.6km s-min=24.7km az=104.0*

ISC 18 08:55:59.4±1.3,5˚3S±0˚2×153˚0E±0˚2,h37km,n10, σ1s21/10,mb3.7/7,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.10**	**235**	P		**Pn**	**08 57 42.7**	**+1.9**
	1.3nm,0.3s,baz=38,slow=8.8,SNR=4.1							
PMG				S		**Sn**	**08 58 59.3**	**-0.9**
	3.6nm,0.3s,baz=8.8,slow=19,SNR=8.6							
HNR	**Honiara**	**7.98**	**121**	LR		LR	09 00 49.7	
	comp=Z,106nm,18.0s,baz=57,slow=35							
WRA	**Warramunga Arr**	**23.28**	**230**	P		**P**	**09 01 02.3**	**-1.7**
	1.3nm,0.8s,baz=56,slow=10,SNR=4.5							
ASAR	**Alice Springs**	**25.93**	**223**	P		**P**	**09 01 27.7**	**-0.7**
	1.1nm,1.0s,baz=62,slow=9.4,SNR=4.0							
PETK	**Petropavlovsk-**	**58.34**	**3**	P		**P**	**09 05 51.1**	**+0.5**
	1.2nm,0.6s,baz=162,slow=6.3,SNR=5.3							
SONM	**Songino Array**	**66.89**	**328**	P		**P**	**09 06 48.2**	**+0.3**
	0.5nm,0.6s,baz=142,slow=5.1,SNR=3.5							
MKAR	**Makanchi Array**	**80.87**	**319**	P		**P**	**09 08 09.4**	**-0.3**
	0.2nm,0.4s,baz=117,slow=5.2,SNR=1.8							
ZALV	**Zalesovo Beam**	**81.71**	**326**	P		**P**	**09 08 13.8**	**-0.2**
	0.8nm,0.5s,baz=116,slow=6.8,SNR=4.0							
QSPA	**South Pole Qui**	**84.64**	**180**	P		**P**	**09 08 29.4**	**+0.4**
	1.8nm,1.1s,baz=94,slow=8.5,SNR=2.4							
TORD	**Torodi Ar. Bea**	**150.69**	**287**	PKPbc		**PKPbc**	**09 15 47.3**	**-1.4**
	0.8nm,0.8s,baz=101,slow=1.6,SNR=6.0							

KRSC 18 09:00:50.1±2.0,48˚11N×156˚28E,h20km±33km,ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**3.38**	**6**	*e*S		Sn	09 02 25.0	+3.9
KDTR	**Khodutka, Kamc**	**3.88**	**17**	*e*P		Pn	09 01 52.2	+3.7
KDTR				*e*S		Sb	09 02 39.0	-5.2
MIPR	**Malaya Ipel'ka**	**4.18**	**4**	*e*P		Pn	09 01 55.4	+2.7
ASAK	**Asacha**	**4.40**	**13**	*e*P		Pn	09 01 59.8	+4.0
MTVR	**Mutnovka**	**4.54**	**15**	*e*P		Pn	09 02 02.5	+4.7
RUS	**Russkaya**	**4.56**	**17**	*e*P		Pn	09 02 01.0	+3.1
GRL	**Gorelyy**	**4.59**	**14**	*e*P		Pn	09 02 02.4	+3.9
GRL				*e*S		Sn	09 02 55.9	+4.6
UGLR	**Uglovaya**	**5.35**	**17**	*e*P		Pn	09 02 14.3	+5.4
AVH	**Avacha**	**5.39**	**16**	*e*P		Pn	09 02 15.0	+5.6
KOK	**Koryaka**	**5.40**	**15**	*e*P		Pn	09 02 15.3	+5.8
SMAR	**Somma**	**5.40**	**16**	*e*P		Pn	09 02 15.0	+5.3
SDLR	**Sedlovina**	**5.43**	**17**	*e*P		Pn	09 02 13.6	+3.6
KRX	**Arik**	**5.46**	**15**	*e*P		Pn	09 02 16.6	+6.1
SPN	**Mys Shipunskoi**	**5.53**	**24**	*e*S		Sn	09 03 20.3	+6.1
MKZ	**Mys Kozlova**	**7.30**	**26**	*e*P		Pn	09 02 40.5	+5.0
KBTR	**Krutoberegovo**	**9.04**	**24**	*e*P		Pn	09 03 04.3	+4.9

MALB Monte Alegre 19.05 240 eP Pn 09 13 05.4 0.0
SMTB Santa Maria do 19.37 210 eP Pn 09 13 09.6 +0.3
SDBA SAO DESIDERIO 21.48 199 eP P 09 13 31.1 0.0
MBO M'Bour 21.49 71 P P 09 13 26.9 -4.2
MBO IAmb IAmb 09 13 42.4
comp=Z,81nm,1.3s
ITTB Itaituba 21.64 236 eP P 09 13 32.8 0.0
GDU01 Guandu, BA 21.70 184 eP P 09 13 36.0 +2.8
TOSP Speyside 22.53 280 P P 09 13 41.5 -0.8
PEXB Peixe 22.53 207 eP P 09 13 44.1 +1.8
NBIT Itapeh - BA 22.89 184 eP P 09 13 48.4 +2.4
NPGB Novo Progresso 22.97 230 eP P 09 13 47.4 +0.4
BOAV Boa Vista 23.20 257 eP P 09 13 50.1 +0.8
SVB Belmont 23.51 285 P P 09 13 48.4 -3.9
PTGA Pitinga 23.66 249 P P 09 13 53.1 -0.7
comp=Z,1.6nm,0.3s,baz=83,slow=12,SNR=4.7
PTGA LR LR 09 22 33.3
comp=Z,706nm,21.3s,baz=62,slow=35
PTGA Pitinga 23.66 249 P P 09 13 54.4 +0.5
PTGA Pitinga 23.66 249 eP P 09 13 55.1 +1.3
FDF Fort de France 23.71 288 P P 09 13 53.8 -0.6
JANB Januaria 23.82 195 eP P 09 13 56.1 +0.7
SNDB Serra Nova Dou 23.94 214 eP P 09 13 56.7 +0.3
MACA Manacapuru-AM 25.30 245 eP P 09 14 09.7 +0.8
BDFB Brasilia 25.58 203 P P 09 14 10.6 -1.0
comp=Z,6.7nm,0.7s,baz=32,slow=9.6,SNR=8.0
BDFB Brasilia 25.58 203 P P 09 14 08.7 -2.8
NAN01 Guarapari, ES 25.82 185 eP P 09 14 16.6 +3.0
CLDB Colider 25.89 224 eP P 09 14 15.8 +1.6
SJMB Sao Joao De Ma 26.78 187 eP P 09 14 25.0 +2.7
ARAG Araguaiana, MT 27.33 210 eP P 09 14 29.1 +1.8
IPMB Ipameri, GO 27.80 201 eP P 09 14 33.7 +2.2
H10N3 ASCENSION HYDR 28.18 124 T T 09 43 59.5
baz=303,slow=75,SNR=264
H10N2 ASCENSION HYDR 28.18 123 T T 09 43 59.8
baz=303,slow=75,SNR=286
H10N1 ASCENSION HYDR 28.20 124 T T 09 44 01.0
baz=303,slow=75,SNR=253
ASCN Ascension 28.34 124 P P 09 14 36.2 -0.1
H10S3 ASCENSION HYDR 28.67 126 T T 09 44 49.0
baz=300,slow=74,SNR=113
H10S2 ASCENSION HYDR 28.69 126 T T 09 44 50.4
baz=280,slow=74,SNR=43
SJG San Juan 29.22 293 LR LR 09 23 52.1
comp=Z,764nm,21.9s,baz=96,slow=31
ICMP Isla Caja de M 29.51 292 P P 09 14 45.0 -1.7
AGPR Aguadilla, PR 30.20 293 P P 09 14 52.2 -0.6
SAML Samuel 30.32 237 P P 09 14 53.1 -0.8
SAML Samuel 30.32 237 eP P 09 14 53.9 0.0
VILB Vilhena 30.43 227 eP P 09 14 56.2 +1.3
PP1B Ponte de Pedra 30.51 213 eP P 09 14 57.8 +2.3
PTLB Pontes e Lacer 31.43 222 eP P 09 15 03.4 -0.2
ROSA Rosais 31.75 14 P P 09 15 04.7 -1.6
SPB Sao Paulo 32.80 196 eP P 09 15 17.7 +2.1
DBIC Dimbokro 32.81 90 P P 09 15 14.9 -0.9
comp=Z,2.8nm,0.5s,baz=269,slow=8.7,SNR=8.5
DBIC LR LR 09 26 13.2
comp=Z,475nm,19.3s,baz=252,slow=32
DBIC Dimbokro 32.81 90 P P 09 15 15.7 -0.2
SIV San Ignacio 33.12 224 P P 09 15 18.2 -0.4
comp=Z,2.1nm,0.7s,baz=67,slow=10.0,SNR=10
ETMB Extrema 33.31 238 eP P 09 15 20.2 0.0
AQDB Aquidauana 33.31 211 eP P 09 15 22.4 +2.3
KOWA Kowa 33.82 76 P P 09 15 24.6 0.0
comp=Z,3.9nm,0.6s,baz=266,slow=7.0,SNR=9.4
KOWA Kowa 33.82 76 P P 09 15 24.7 0.0
KOWA IAmb IAmb 09 15 26.3
comp=Z,22nm,1.5s
SDDR Presa de Saban 34.16 292 P P 09 15 27.6 0.0
SDDR IAmb IAmb 09 15 29.4
comp=Z,24nm,1.3s
ROSC El Rosal 36.31 267 P P 09 15 47.0 +0.3
comp=Z,4.1nm,0.4s,baz=100,slow=11,SNR=4.0
ROSC LR LR 09 30 14.6
comp=Z,600nm,21.7s,baz=74,slow=36
ROSC El Rosal 36.31 267 P P 09 15 46.2 -0.4
ROSC IAmb IAmb 09 15 59.5
comp=Z,19nm,1.2s
CZSB Cruzeiro do Su 38.06 247 eP P 09 16 03.4 +2.3
LPAZ La Paz 38.47 231 P P 09 16 05.7 +0.6
comp=Z,6.2nm,0.8s,baz=66,slow=7.1,SNR=18
LPAZ LR LR 09 31 25.3
comp=Z,230nm,19.6s,baz=55,slow=36
LPAZ La Paz 38.47 231 P P 09 16 04.5 -0.6
LPAZ La Paz 38.47 231 eP P 09 16 05.6 +0.5
CPUP Villa Florida 39.04 208 LR LR 09 32 28.3
comp=Z,392nm,18.5s,baz=27,slow=36
TOA0 Torodi Ar. Sit 39.23 79 P P 09 16 09.8 -1.0
TORD Torodi Ar. Bea 39.23 79 P P 09 16 10.6 -0.3
comp=Z,4.8nm,0.7s,baz=275,slow=9.4,SNR=41
TORD LR LR 09 30 41.1
comp=Z,914nm,19.6s,baz=260,slow=34
TORD Torodi Ar. Bea 39.23 79 P P 09 16 10.3 -0.5
MDT Midelt 39.47 47 P P 09 16 14.3 +1.6
comp=Z,1.5nm,0.8s,baz=296,slow=1.5,SNR=3.6
PNCL Nicolau / Gran 39.99 37 eP P 09 16 20.4 +3.5
PMST Lisbon--Monsan 40.02 36 eP P 09 16 21.1 +4.0
PVAQ Vaqueiros 40.02 39 eLR LR 09 27 02.7
comp=Z,300nm,22.0s
EVO Evora 40.57 37 eP P 09 16 25.3 +3.6
comp=Z,38nm,1.6s
PMTG Montargil 40.79 36 eP P 09 16 27.0 +3.5
PBAR Barrancos 40.93 38 eP P 09 16 28.3 +3.7
comp=Z,30nm,1.5s
OTAV Otavalo 41.14 261 P P 09 16 25.4 -1.9
OTAV Otavalo 41.14 261 eP P 09 16 28.4 +1.1
PMRV Marv??o 41.52 36 eP P 09 16 33.2 +3.7
comp=Z,35nm,1.5s
PMRV Marv??o 41.52 36 eLR LR 09 27 56.4
comp=Z,209nm,20.0s
MTE Manteigas 42.07 35 eP P 09 16 35.7 +1.6
MTE Manteigas 42.07 35 eLR LR 09 28 17.2
comp=Z,245nm,22.0s
PGAV Gavieira, Arco 42.73 33 eLR LR 09 28 30.1
comp=Z,134nm,22.0s
MVO Moncorvo 42.87 35 eLR LR 09 28 38.7
comp=Z,206nm,18.0s
LVC Limon Verde 43.02 224 P P 09 16 44.3 +2.0
comp=Z,3.2nm,0.8s,baz=56,slow=15,SNR=2.6
PBRG Braganca 43.45 34 eP P 09 16 48.3 +3.0
ESDC Sonseca Array 43.74 39 P P 09 16 48.1 +0.5
comp=Z,0.2nm,0.4s,baz=260,slow=5.1,SNR=2.7
ESDC LR LR 09 31 44.0
comp=Z,251nm,20.2s,baz=225,slow=32
ESBB Sonseca Array 43.74 39 P P 09 16 47.3 -0.3
TAM Tamanrasset 44.17 66 P P 09 16 49.2 -2.3
V62A Hyde County Ai 44.24 314 P 09 16 50.4
baz=119
M64A Tiverton 44.50 324 P P 09 16 54.0 +0.4
M64A Tiverton 44.50 324 P 09 16 53.5
baz=129
L64A Middleborough 44.53 325 P 09 16 53.3
baz=130
GGN Saint George 44.61 331 P P 09 16 54.3 -0.1
GGN IAmb IAmb 09 16 55.6
comp=Z,30nm,1.2s
H65A Eastbrook 45.00 329 P 09 16 58.7
baz=135
S60A Water View 45.78 316 P 09 17 02.7
baz=120
F64A Sherman 45.88 330 P 09 17 04.4
baz=136
M61A Granite Spring 45.88 322 P 09 17 02.3
baz=126
J62A Henniker 45.91 325 P 09 17 06.3
baz=130
PKME Peaks-Kenny Pk 45.93 329 P P 09 17 05.1 +0.3
PKME IAmb IAmb 09 17 16.8
comp=Z,24nm,1.4s
U59A Littleton 45.93 314 P P 09 17 05.3 +0.3
U59A IAmb IAmb 09 17 10.4
comp=Z,20nm,1.4s
TRNY Table Rock, Ra 46.06 322 P P 09 17 06.5 +0.5
P60A Greenville 46.20 319 P 09 17 08.1
baz=123
S59A Mechanicsville 46.25 316 P 09 17 08.0
baz=120
WUPA West Chester U 46.25 319 P P 09 17 06.9 -0.6
L61A Hillsdale 1, H 46.28 323 P 09 17 09.6
baz=127
NHSC New Hope 46.31 309 P 09 17 09.7
baz=113
E63A Oxbow 46.32 331 P 09 17 07.9
baz=136
O60A Telford 46.33 320 P 09 17 08.3
baz=124
Q59A Harwood 46.37 318 P 09 17 10.7
baz=121
K61A Williamstown 46.40 324 P 09 17 10.9
baz=128
M60A Port Jervis 46.41 322 P 09 17 07.7
baz=125
H62A Milan 46.43 327 P 09 17 10.8
baz=132
N60A Cedar Hill Far 46.45 321 P 09 17 10.1
baz=124
CBN Corbin Frederi 46.52 316 P P 09 17 10.4 +0.7
V58A Windy Hill, Pi 46.63 313 P P 09 17 09.8 -0.7
V58A IAmb IAmb 09 17 12.5
comp=Z,15nm,1.1s
S58A Poland Farm, P 46.70 315 P P 09 17 11.1 0.0
S58A IAmb IAmb 09 17 19.5
comp=Z,22nm,1.5s
S58A Poland Farm, P 46.70 315 P 09 17 12.0
baz=119
R58B Mineral 46.75 316 P P 09 17 11.5 0.0
R58B IAmb IAmb 09 17 13.5
comp=Z,12nm,1.1s
R58B Mineral 46.75 316 P 09 17 12.4
baz=119
H61A Lyndonville 46.82 327 P 09 17 13.4
baz=131
O59A Robesonia 46.83 319 P 09 17 12.6
baz=123
ORTG Ortega, Santa 46.96 277 P P 09 17 13.2 -0.4
W57A Gilead 47.00 311 P P 09 17 13.7 +0.2
W57A IAmb IAmb 09 17 21.9
comp=Z,15nm,1.2s
M59A Waymart 47.03 321 P 09 17 15.1
baz=124
D62A Allapoint, All 47.09 331 P 09 17 13.1
baz=136
I60A Shoreham 47.14 325 P 09 17 15.5
baz=128
BIRD Birdtown, Kers 47.14 310 P P 09 17 14.8 +0.2
BIRD IAmb IAmb 09 17 16.6
comp=Z,15nm,1.0s
O58A Lewisberry 47.21 319 P 09 17 14.3
baz=122
H60A Morristown 47.26 326 P 09 17 15.6
baz=130
F61A St Evariste 47.28 329 P 09 17 18.3
baz=133
E61A Lac Etchemin 47.34 330 P 09 17 17.9
baz=134
R57A Stanardsville 47.36 316 P 09 17 17.1
baz=119
K59A Cooperstown 47.40 323 P 09 17 17.1
baz=126
S57A Dark Hollow, R 47.40 315 P P 09 17 17.0 +0.4
S57A Dark Hollow, R 47.40 315 P 09 17 17.4
baz=118,SNR=5.7
G60A Masonville 47.41 327 P 09 17 18.0
baz=130
I59A Olmsteadville 47.44 325 P 09 17 18.2
baz=128
J59A Piesco 47.60 324 P P 09 17 18.1 +0.1
J59A Piesco 47.60 324 P 09 17 19.1
baz=127
JSC Jenkinsville 47.60 310 P P 09 17 18.5 +0.4
Q57A Strasburg 47.64 317 P 09 17 20.1
baz=120
O57A Amberson 47.72 319 P 09 17 19.5
baz=121
BINY Binghamton 47.75 322 P 09 17 19.4
baz=124
S56A Natural Bridge 47.80 315 P 09 17 20.5
baz=117
H59A Cadyville 47.86 326 P 09 17 21.1
baz=129
K58A Earlville 47.86 323 P 09 17 21.9
baz=125
M57A Sunshine Farm, 47.99 320 P 09 17 21.2
baz=123
H58A Gabriels 47.99 325 P 09 17 20.5
baz=128
KMSC Kings Mountain 47.99 311 P 09 17 21.6
baz=114
R56A Bull Pasture M 48.02 316 P 09 17 21.0
baz=118
SSPA Standing Stone 48.10 319 P 09 17 21.7
baz=121
P56A Dayton Farm, R 48.16 317 P 09 17 23.3
baz=120
L57A Andrews Acres 48.17 321 P 09 17 23.0
baz=123
Q56A Snyder Ridge, 48.17 316 P 09 17 24.2
baz=119
BLA Blacksburg 48.19 314 P P 09 17 23.1 +0.3
BLA Blacksburg 48.19 314 P 09 17 23.6
baz=116,SNR=6.1
V55A Taylorsville 48.20 312 P P 09 17 23.1 +0.3
HODGE Hodges 48.34 309 P P 09 17 24.3 +0.4
HODGE IAmb IAmb 09 17 26.0
comp=Z,12nm,1.2s
LONY Lake Ozonia 48.34 325 P 09 17 24.8
baz=128
O56A Blue Knob Stat 48.36 318 P 09 17 24.9
baz=120
K57A Scipio Center 48.37 322 P 09 17 23.8
baz=124
G58A Ormstown 48.38 326 P 09 17 25.1
baz=129
154A Montrose 48.42 307 P P 09 17 24.8 +0.2
J57A Williamstown 48.45 323 P 09 17 24.8
baz=125
R55A Marlinton 48.46 315 P 09 17 25.6
baz=117
L56A Greenwood 48.69 321 P 09 17 27.4
baz=123
H57A Richville 48.71 325 P 09 17 28.4
baz=127
E58A La Victoria 48.73 328 P 09 17 27.8
baz=130
M56A Emporium 48.73 320 P 09 17 28.6
baz=122
K56A Middlesex 48.85 322 P 09 17 27.8
baz=123
J56A Wolcott 48.89 322 P 09 17 29.8
baz=124
GOGA Godfrey 48.98 308 P P 09 17 29.3 +0.4
GOGA IAmb IAmb 09 17 33.4
comp=Z,18nm,1.4s
D58A Chemin du LacG 49.00 329 P 09 17 29.9
baz=131
R54A Victor 49.03 315 P 09 17 30.4
baz=116
S54A Dingess, Beckl 49.09 314 P 09 17 30.4
baz=116
S54A Dingess, Beckl 49.09 314 P P 09 17 30.3 +0.6
S54A IAmb IAmb 09 17 33.3
comp=Z,21nm,1.2s
BG3 Lake Jocassee 49.15 310 P P 09 17 31.4 +1.3
BG3 IAmb IAmb 09 17 34.2
comp=Z,15nm,1.2s
ZON Zonda 49.16 215 P P 09 17 30.5 +0.2
ZON IAmb IAmb 09 17 34.1
comp=Z,29nm,1.5s
Q54A Coxs Mills 49.28 316 P P 09 17 31.5 +0.4
Q54A IAmb IAmb 09 17 33.2
comp=Z,11nm,1.1s
V53A Saluda 49.31 311 P P 09 17 31.5 0.0
PECO Prince Edward 49.34 323 P P 09 17 31.1 -0.3
PECO IAmb IAmb 09 17 35.1
comp=Z,14nm,1.1s
J55A Hilton 49.46 322 P P 09 17 32.2 -0.1
N54A Moraine State 49.64 318 P 09 17 34.3
baz=120
N54A Moraine State 49.65 318 P P 09 17 34.4 +0.6
N54A IAmb IAmb 09 17 35.8
comp=Z,12nm,1.0s
M54A Oil Creek Stat 49.70 319 P 09 17 35.1
baz=120,SNR=5.6
M54A Oil Creek Stat 49.70 319 P P 09 17 35.3 +1.0
M54A IAmb IAmb 09 17 37.1
comp=Z,11nm,0.8s
Q53A Leroy 49.70 315 P 09 17 35.1
baz=116
E56A St. Veronique 49.78 327 P 09 17 35.4
baz=128
CO03 El Pedregal 49.82 218 P P 09 17 35.5 +0.1
CO03 IAmb IAmb 09 17 44.9
comp=Z,11nm,0.7s
P53A Whipple 49.89 316 P P 09 17 35.1 -0.6
P53A IAmb IAmb 09 17 37.7
comp=Z,19nm,1.1s
D56A ZEC Mazanza, M 49.95 328 P 09 17 37.1
baz=129
TKL Tuckaleechee C 50.03 310 P P 09 17 36.9 0.0
comp=Z,5.0nm,1.0s,baz=154,slow=11,SNR=5.6
DELO Deloro Mine 50.04 323 P P 09 17 36.3 -0.5
DELO IAmb IAmb 09 17 40.1
comp=Z,16nm,1.3s
ALLY Alegheny Colle 50.09 319 P P 09 17 37.1 -0.1
ALLY IAmb IAmb 09 17 39.0
comp=Z,26nm,1.2s
O53A New Philadelph 50.12 317 P 09 17 38.3
baz=118
ERPA Erie 50.22 320 P 09 17 38.2
baz=120
ERPA Erie 50.22 320 P P 09 17 37.7 -0.5
ERPA IAmb IAmb 09 17 40.1
comp=Z,13nm,1.0s
Q52A Bidwell 50.27 315 P P 09 17 39.0 +0.4
Q52A IAmb IAmb 09 17 41.8
comp=Z,19nm,1.2s
L53A Girard 50.31 319 P 09 17 39.8
baz=120
D55A Sainte-Anne-du 50.31 327 P 09 17 39.8
baz=128
M53A Wi Miller and 50.33 318 P 09 17 39.9
baz=119
P52A Corning 50.47 316 P 09 17 40.3
baz=116,SNR=7.2
P52A Corning 50.47 316 P P 09 17 40.4 +0.3
O52A Adamsville 50.48 316 P P 09 17 41.1 +0.8
O52A IAmb IAmb 09 17 42.2
comp=Z,18nm,1.0s
V51A Loudon 50.52 310 P P 09 17 41.6 +1.1
V51A IAmb IAmb 09 17 49.6
comp=Z,15nm,1.4s
H53A Bobcaygeon 50.64 323 P 09 17 41.1
baz=123
G54A Lake Saint Pet 50.81 324 P 09 17 42.4
baz=124
W50A Signal Mountai 51.04 309 P P 09 17 44.3 -0.2
FPAL Fort Paine 51.05 308 P P 09 17 43.8 -0.8
FPAL IAmb IAmb 09 17 48.3
comp=Z,22nm,1.6s
P51A Williamsport 51.05 315 P P 09 17 44.5 0.0
P51A IAmb IAmb 09 17 46.8
comp=Z,19nm,1.1s
Q51A Peebles 51.06 314 P P 09 17 45.1 +0.5
Q51A IAmb IAmb 09 17 47.0
comp=Z,16nm,0.9s
ALGO Algonquin Park 51.11 325 P 09 17 45.0
baz=125
KEST Kesra 51.12 50 P P 09 17 47.0 +1.9
comp=Z,4.0nm,0.6s,baz=242,slow=7.7,SNR=6.1
KEST LR LR 09 39 43.4
comp=Z,324nm,19.1s,baz=198,slow=36
M51A Elyria 51.28 318 P 09 17 47.0
baz=118
ACSO Alum Creek Sta 51.32 316 P P 09 17 46.3 -0.3
ACSO IAmb IAmb 09 17 48.9
comp=Z,11nm,0.8s
ACSO Alum Creek Sta 51.32 316 P 09 17 47.3
baz=116
T50A Nancy 51.34 312 P P 09 17 47.4 +0.7
T50A IAmb IAmb 09 17 50.3
comp=Z,21nm,1.4s
R50A Paris 51.45 313 P P 09 17 47.3 -0.3
SWET Sewanee 51.52 309 P P 09 17 48.2 0.0
SWET IAmb IAmb 09 17 49.6
comp=Z,21nm,1.5s
CHGQ Chibougamau 51.61 331 P 09 17 48.7
baz=131
LRAL Lakeview Retre 51.66 306 P P 09 17 50.1 +0.9
LRAL Lakeview Retre 51.66 306 P 09 17 49.4
baz=107
I51A Listowel 51.73 321 P 09 17 49.6
baz=120
U49A Red Boiling Sp 51.86 311 P P 09 17 50.4 -0.2
U49A IAmb IAmb 09 17 51.9
comp=Z,22nm,1.6s
M50A Fremont 51.88 317 P P 09 17 50.9 +0.2
M50A IAmb IAmb 09 17 52.5
comp=Z,19nm,1.2s
VLDQ Val d'Or 52.04 327 P P 09 17 53.7 +2.0
R49A Shelbyville 52.07 313 P P 09 17 52.0 -0.1
R49A IAmb IAmb 09 17 53.5
comp=Z,16nm,1.2s
MT09 Talagante 52.11 215 P P 09 17 51.7 -0.9
X48A Hartselle 52.13 308 P P 09 17 52.6 -0.1
P49A Miami Univ. Ec 52.23 315 P P 09 17 53.4 0.0
P49A IAmb IAmb 09 17 55.0
comp=Z,13nm,1.0s
P49A Miami Univ. Ec 52.23 315 P 09 17 54.1
baz=114
K50A Casco 52.24 319 P P 09 17 54.4 +1.0
K50A IAmb IAmb 09 18 03.1
comp=Z,12nm,0.6s
MT01 Popeta 52.32 215 P P 09 17 53.0 -1.0
LSQQ Lebel-sur-Quev 52.37 328 P 09 17 54.4
baz=128
V48A Smith Brothers 52.38 309 P P 09 17 54.9 +0.4
V48A IAmb IAmb 09 18 04.5
comp=Z,20nm,1.4s
AAM Ann Arbor 52.70 318 P P 09 17 56.7 -0.1
AAM IAmb IAmb 09 17 58.7
comp=Z,23nm,1.1s
P48A Milroy 52.71 314 P P 09 17 56.7 -0.1
BO02 Sierra Bellavi 52.74 214 P P 09 17 57.3 +0.2
BO02 IAmb IAmb 09 18 04.9
comp=Z,13nm,0.9s
WCI Wyandotte Cave 52.86 312 P P 09 17 58.1 +0.1
WCI Wyandotte Cave 52.86 312 P 09 17 58.3
baz=112
HUEH Huehuetenango 52.87 283 P P 09 17 54.4 -4.3
T47A Sharon Grove 53.02 311 P P 09 17 59.6 +0.4
T47A IAmb IAmb 09 18 01.1
comp=Z,23nm,1.2s
RTAL Retalhuleu 53.04 282 P P 09 17 59.9 +0.2
L48A N Adams 53.06 317 P P 09 17 59.4 0.0
L48A IAmb IAmb 09 18 02.5
comp=Z,23nm,1.2s
PLAL Pickwick Lake 53.11 308 P P 09 18 00.2 +0.4
MATQ Matagami 53.14 329 P 09 18 00.1
baz=128
WVT Waverly 53.28 309 P 09 18 01.0
baz=109
WVT Waverly 53.28 309 P P 09 18 00.6 -0.6
N47A Urbana 53.47 316 P P 09 18 01.6 -0.8
CCIG Comitan 53.51 284 P P 09 18 03.1 -0.2
USIN University of 53.78 312 P P 09 18 05.2 +0.4
ML02 Panimavida 53.80 214 P P 09 18 04.2 -0.7
OXF Oxford 54.02 307 P P 09 18 04.8 -1.7
OXF IAmb IAmb 09 18 07.2
comp=Z,19nm,1.1s
OXF Oxford 54.02 307 P 09 18 06.3
baz=107
W45A Hickory Valley 54.03 308 P P 09 18 06.7 +0.1
P46A Rosedale 54.04 314 P P 09 18 06.8 +0.1
P46A IAmb IAmb 09 18 08.6
comp=Z,16nm,0.9s
T45A Paducah 54.19 310 P P 09 18 08.3 +0.5
SFIN Lafayette 54.25 315 P P 09 18 08.6 +0.4
SFIN IAmb IAmb 09 18 09.8
comp=Z,17nm,1.1s
SFIN Lafayette 54.25 315 P 09 18 08.9
baz=113
VBMS Vicksburg 54.30 304 P P 09 18 08.6 -0.1
VBMS IAmb IAmb 09 18 26.2
comp=Z,20nm,1.2s
OLIL Olney 54.37 312 P P 09 18 09.2 +0.1
BI02 San Fabin de 54.39 213 P P 09 18 09.0 -0.2
BI02 IAmb IAmb 09 18 16.9
comp=Z,16nm,0.9s
GLAT Glass 54.44 309 P P 09 18 09.9 +0.2
LNXT Lenox 54.55 309 P P 09 18 10.4 0.0
SIUC Southern Illin 54.85 311 P P 09 18 12.7 +0.1
SIUC IAmb IAmb 09 18 14.2
comp=Z,14nm,1.0s
S44A Carbondale 54.87 311 P P 09 18 11.7 -1.0
S44A IAmb IAmb 09 18 15.6
comp=Z,11nm,1.0s
E46A Sault Ste Mari 55.02 322 P P 09 18 13.7 +0.1

E46A IAmb IAmb 09 18 17.0
comp=Z,13nm,1.3s
Q44A Meyer Farm, Va 55.10 312 P **P** **09 18 14.7 +0.4**
O44A Mansfield 55.14 314 P **P** **09 18 14.6 0.0**
O44A IAmb IAmb 09 18 15.9
comp=Z,13nm,1.0s
143A Socs Landing, 55.14 304 P **P** **09 18 14.8 +0.1**
X43A Marvell 55.18 307 P 09 18 14.8
baz=106
M44A Midewin, Midew 55.30 315 P **P** **09 18 16.1 +0.3**
HQIL Hanson Quary C 55.33 316 P **P** **09 18 16.0 0.0**
HQIL IAmb IAmb 09 18 20.5
comp=Z,14nm,0.9s
OSSC Osservatorio P 55.49 42 P **P** **09 18 17.8 +0.7**
OSSC IAmb IAmb 09 18 20.9
comp=Z,13nm,1.1s
L44A Lake County Fo 55.51 316 P **P** **09 18 16.9 -0.4**
L44A IAmb IAmb 09 18 18.7
comp=Z,15nm,1.1s
L44A Lake County Fo 55.51 316 P 09 18 17.2
baz=113
LCAR Lake Charles 55.83 308 P **P** **09 18 18.2 -1.4**
FVM French Village 55.84 311 P **P** **09 18 19.6 -0.2**
HDIL Hopedale 55.87 314 P **P** **09 18 20.2 +0.3**
HDIL IAmb IAmb 09 18 20.9
comp=Z,12nm,0.9s
HDIL Hopedale 55.87 314 P 09 18 20.2
baz=111
K43A Burlington 56.00 317 P **P** **09 18 20.7 -0.1**
K43A IAmb IAmb 09 18 22.1
comp=Z,22nm,1.2s
H43A Windswept, Lux 56.34 319 P **P** **09 18 22.8 -0.3**
H43A IAmb IAmb 09 18 25.4
comp=Z,15nm,0.9s
W41B Gary Mavity, V 56.44 307 P 09 18 23.8
baz=105
CCM Cathedral Cave 56.48 311 P 09 18 23.3
baz=108
X40A Basin Creek Fa 56.73 306 P 09 18 25.5
baz=104
I42A Draeger Farm, 56.86 318 P **P** **09 18 26.7 -0.2**
I42A IAmb IAmb 09 18 28.4
comp=Z,10.0nm,1.0s
MGMO Mountain Grove 56.99 309 P **P** **09 18 27.9 -0.1**
N41A Harden Midland 57.04 314 P **P** **09 18 27.9 -0.3**
N41A IAmb IAmb 09 18 29.2
comp=Z,17nm,1.0s
PLCA Paso Flores 57.10 209 LR LR 09 43 55.0
comp=Z,170nm,18.1s,baz=20,slow=37
U40A Yellville 57.23 308 P **P** **09 18 29.0 -0.6**
U40A Yellville 57.23 308 P 09 18 30.6
baz=105
R40A Maddies Statio 57.32 311 P **P** **09 18 29.5 -0.7**
MIAR Mount Ida 57.34 306 P 09 18 29.8
baz=104
JFWS Jewell Farm 57.39 316 P **P** **09 18 30.8 +0.2**
JFWS IAmb IAmb 09 18 31.7
comp=Z,9.7nm,0.8s
JFWS Jewell Farm 57.39 316 P 09 18 30.4
baz=112,SNR=5.3
P40A Paris 57.53 312 P **P** **09 18 31.7 0.0**
P40A IAmb IAmb 09 18 32.4
comp=Z,12nm,0.9s
NATX Nacogdoches 57.63 302 P **P** **09 18 32.7 +0.1**
NATX Nacogdoches 57.63 302 P 09 18 33.4
baz=101
W39A Magazine 57.66 307 P **P** **09 18 31.8 -0.9**
W39A IAmb IAmb 09 18 36.7
comp=Z,14nm,1.4s
W39A Magazine 57.66 307 P 09 18 33.3
baz=104
L40A Anamosa 57.76 315 P **P** **09 18 33.4 +0.1**
L40A IAmb IAmb 09 18 33.9
comp=Z,9.4nm,0.9s
S39A Bolivar 57.95 310 P **P** **09 18 34.1 -0.6**
I40A Norwalk 58.00 317 P **P** **09 18 35.1 +0.2**
I40A IAmb IAmb 09 18 36.0
comp=Z,13nm,1.1s
P38A Dawn 58.65 312 P **P** **09 18 38.7 -0.8**
N38A Joes South For 58.78 313 P **P** **09 18 39.6 -0.8**
N38A IAmb IAmb 09 18 41.0
comp=Z,14nm,1.0s
K38A Parkersburg 59.04 315 P **P** **09 18 41.4 -0.8**
K38A IAmb IAmb 09 18 43.9
comp=Z,15nm,1.2s
SCIA State Center 59.11 314 P **P** **09 18 42.5 -0.3**
SCIA IAmb IAmb 09 18 43.5
comp=Z,14nm,1.1s
GERES GERESS Array B 59.29 37 P **P** **09 18 44.4 +0.5**
comp=Z,0.6nm,0.5s,baz=242,slow=2.9,SNR=4.2
GERES LR LR 09 40 54.8
comp=Z,67nm,21.8s,baz=260,slow=33
KHC Kasperske Hory 59.34 37 *e*P **P** **09 18 45.1 +0.9**
TUL1 Leonard 59.42 307 P 09 18 45.1
baz=103
I37A Lemond, Waseca 59.92 317 P **P** **09 18 47.6 -0.7**
I37A IAmb IAmb 09 18 48.8
comp=Z,8.7nm,0.8s
SPMN Marine on St. 59.94 318 P **P** **09 18 47.7 -0.6**
SPMN IAmb IAmb 09 18 49.1
comp=Z,13nm,0.9s
SPMN Marine on St. 59.94 318 P 09 18 47.9
baz=111,SNR=6.0
CLL Collm 59.98 34 *i* P **P** **09 18 51.8 +3.3**
CLL comp=Z,21nm,1.9s
Lm MLR 09 40 00.0
comp=Z,100nm,21.0s
WHTX Lake Whitney, 60.01 302 P **P** **09 18 48.7 -0.4**
WHTX IAmb IAmb 09 19 06.2
comp=Z,9.6nm,1.1s
Z35A Perchaven, San 60.08 304 P **P** **09 18 49.5 0.0**
Z35A IAmb IAmb 09 18 57.0
comp=Z,11nm,0.8s
QUOK Quay 60.20 307 P **P** **09 18 50.1 -0.2**
QUOK IAmb IAmb 09 18 50.9
comp=Z,11nm,0.8s
OK030 Cody Creek RV 60.21 307 P **P** **09 18 49.8 -0.6**
OK030 IAmb IAmb 09 18 51.1
comp=Z,18nm,1.3s
T35A Sooner Cattle 60.22 308 P **P** **09 18 50.1 -0.4**
T35A IAmb IAmb 09 18 51.0
comp=Z,13nm,1.1s
OK031 S. Brethren Rd 60.26 307 P **P** **09 18 50.5 -0.2**
OK031 IAmb IAmb 09 18 51.4
comp=Z,10.0nm,1.0s
N35A Tabor 60.55 313 P **P** **09 18 52.2 -0.4**
OK025 Westminster Rd 60.58 306 P **P** **09 18 52.3 -0.7**
OK025 IAmb IAmb 09 19 01.9
comp=Z,15nm,1.2s
F36A Milaca 60.63 319 P **P** **09 18 52.2 -0.9**
OK029 Liberty Lake 60.72 307 P **P** **09 18 53.6 -0.3**
KSU1 Kansas State U 60.81 310 P **P** **09 18 53.6 -0.9**
KSU1 IAmb IAmb 09 18 54.3
comp=Z,12nm,1.1s
ICESG Greenland Ices 60.97 359 *i* P **P** **09 18 55.4 0.0**
833A Chaparral WMA, 61.15 298 P 09 18 56.5
baz=97
MODS Modra-Piesok 61.27 39 *e*P **P** **09 18 58.8 +1.4**
KAN14 Manchester OK 61.36 308 P **P** **09 18 57.5 -0.8**
L34A Svendsen Farm, 61.38 314 P **P** **09 18 57.7 -0.6**
WMOK Wichita Mounta 61.58 305 P **P** **09 18 58.7 -1.1**
WMOK Wichita Mounta 61.58 305 P 09 18 59.8
baz=100
B35A Bob, Littlefor 61.66 321 P **P** **09 18 58.9 -1.1**
JCT Junction City 61.77 300 P **P** **09 19 00.5 -0.7**
JCT IAmb IAmb 09 19 02.2
comp=Z,6.2nm,0.8s
JCT Junction City 61.77 300 P 09 19 01.1
baz=98
ABTX Abilene, Hawle 61.94 303 P **P** **09 19 01.7 -0.6**
ABTX IAmb IAmb 09 19 02.6
comp=Z,8.0nm,0.9s
ABTX Abilene, Hawle 61.94 303 P 09 19 02.6
baz=99
ECSD EROS Data Cent 62.05 315 P **P** **09 19 02.4 -0.3**
ECSD IAmb IAmb 09 19 03.2
comp=Z,12nm,1.2s
ECSD EROS Data Cent 62.05 315 P 09 19 01.3
baz=107,SNR=7.7
R32A Long Quarter, 62.25 309 P **P** **09 19 04.2 0.0**
BGNE Belgrade 62.52 313 P **P** **09 19 05.3 -0.6**
BGNE Belgrade 62.52 313 P 09 19 05.7
baz=104
AGMN Agassiz Nation 62.97 321 P **P** **09 19 08.1 -0.7**
AGMN IAmb IAmb 09 19 09.0
comp=Z,18nm,1.4s
AGMN Agassiz Nation 62.97 321 P 09 19 07.5
baz=110
CBKS Cedar Bluff 63.12 309 P **P** **09 19 09.8 -0.3**
CBKS Cedar Bluff 63.12 309 P 09 19 10.1
baz=102
K31A O'Neill 63.26 314 P **P** **09 19 10.6 -0.3**
D32A Dogwood Acres, 63.33 319 P **P** **09 19 10.9 -0.3**
ULM Lac du Bonnet 63.65 323 P **P** **09 19 11.8 -1.5**
comp=Z,8.0nm,0.9s,baz=126,slow=5.5,SNR=16
ULM LR LR 09 43 05.3
comp=Z,121nm,19.9s,baz=138,slow=32
ULM Lac du Bonnet 63.65 323 P **P** **09 19 12.2 -1.0**
ULM IAmb IAmb 09 19 13.1
comp=Z,12nm,1.1s
SUSD Miller 63.86 316 P **P** **09 19 14.2 -0.7**
SUSD Miller 63.86 316 P 09 19 15.4
baz=105
AMTX Amarillo 63.96 305 P **P** **09 19 14.6 -1.1**
AMTX IAmb IAmb 09 19 22.7
comp=Z,17nm,1.6s
AMTX Amarillo 63.96 305 P 09 19 16.0
baz=99
NOA NORSAR Array B 64.09 24 P **P** **09 19 16.0 0.0**
comp=Z,3.1nm,0.9s,baz=236,slow=6.9,SNR=5.9
NOA LR LR 09 42 18.0
comp=Z,65nm,21.7s,baz=235,slow=32
SUMG Summit 64.47 360 *i* P **P** **09 19 19.4 +0.7**
SUMG IAmb IAmb 09 19 22.5
comp=Z,3.6nm,0.8s
SUMG Summit 64.47 360 P **P** **09 19 19.8 +1.1**
SUMG IAmb IAmb 09 19 29.6
comp=Z,13nm,1.0s
MSTX Muleshoe 64.72 304 P **P** **09 19 20.3 -0.5**
MSTX Muleshoe 64.72 304 P 09 19 20.6
baz=98
TX31 Lajitas Ar. Si 64.98 299 P **P** **09 19 22.0 -0.5**
TX32 Lajitas Array 64.98 299 P **P** **09 19 21.9 -0.7**
TX32 IAmb IAmb 09 19 30.2
comp=Z,10nm,1.6s
TXAR Lajitas Array 64.98 299 P **P** **09 19 21.9 -0.7**
comp=Z,0.9nm,0.6s,baz=103,slow=7.1,SNR=13
TXAR LR LR 09 46 22.8
comp=Z,91nm,22.0s,baz=0.0,slow=35
TXAR Lajitas Array 64.98 299 P **P** **09 19 21.8 -0.8**
MDND Maddock 65.22 319 P **P** **09 19 23.2 -0.5**
MDND Maddock 65.22 319 P 09 19 23.0
baz=106
OGNE Ogallala 65.28 311 P **P** **09 19 23.7 -0.6**
OGNE IAmb IAmb 09 19 31.8
comp=Z,9.8nm,0.8s
KSCO Kaye Shedlock' 65.37 309 P **P** **09 19 24.8 -0.1**
E28A Huff 65.59 318 P **P** **09 19 25.9 -0.2**
GDL2 Guadalupe Moun 65.84 302 P **P** **09 19 27.5 -0.6**
FCC Fort Churchill 66.04 332 P **P** **09 19 27.9 -0.7**
FCC IAmb IAmb 09 19 29.4
comp=Z,14nm,1.2s
T25A Trinidad 66.47 307 P **P** **09 19 32.7 +0.6**
T25A IAmb IAmb 09 19 34.1
comp=Z,9.6nm,1.1s
T25A Trinidad 66.47 307 P 09 19 31.7
baz=98,SNR=7.5
MNTX Cornudas Mount 66.66 301 P **P** **09 19 32.8 -0.4**
MNTX Cornudas Mount 66.66 301 P 09 19 33.1
baz=95
Q24A Divide 67.30 309 P 09 19 38.0
baz=98
RSSD Black Hills 67.34 314 P 09 19 38.3
baz=101
ISCO Idaho Springs 67.78 310 P **P** **09 19 39.9 -0.6**
ISCO IAmb IAmb 09 19 42.5
comp=Z,8.4nm,1.2s
ISCO Idaho Springs 67.78 310 P 09 19 40.0
baz=98,SNR=8.7
ANMO Albuquerque 67.86 304 P **P** **09 19 39.6 -1.4**
ANMO Albuquerque 67.86 304 P 09 19 41.9
baz=96
PHWY Pilot Hill 67.89 311 P **P** **09 19 40.8 -0.4**
PHWY IAmb IAmb 09 19 50.7
comp=Z,11nm,1.6s
N23A Red Feather La 68.19 311 P 09 19 44.0
baz=98
DGMT Dagmar 68.35 319 P **P** **09 19 43.4 -0.2**
S22A 4UR Ranch, Cre 68.46 307 P 09 19 44.9
baz=97
FFC Flin Flon 68.62 326 P **P** **09 19 43.9 -1.3**
121A Cookes Peak, D 68.76 302 P **P** **09 19 46.1 -0.6**
121A IAmb IAmb 09 19 50.4
comp=Z,12nm,1.4s
121A Cookes Peak, D 68.76 302 P 09 19 47.6
baz=94
K22A Casper 68.88 313 P 09 19 47.5
baz=99
LAO LASA Array 69.34 317 P 09 19 50.4
baz=100,SNR=9.0
AKASG Malin Array Be 69.39 39 P **P** **09 19 50.5 +0.6**
comp=Z,0.3nm,0.3s,baz=265,slow=5.5,SNR=8.3
AKASG LR LR 09 47 39.0
comp=Z,97nm,21.4s,baz=260,slow=34
MNK Minsk 69.52 35 *i* P **P** **09 19 50.6 -0.1**
comp=E,2.0nm,0.8s
MNK *i* P **P** **09 19 50.6 -0.1**
comp=N,14nm,0.7s
MNK *i* P **P** **09 19 50.6 -0.1**
comp=Z,5.0nm,0.6s
MNK *i* PcP **PcP** **09 20 13.2 -0.6**
MNK *i* PP **PP** **09 22 24.5 +0.1**
MNK *i* PPP PPP 09 24 05.7
MNK *i* S **S** **09 28 59.9 +2.1**
MNK *i* SS **SS** **09 33 29.2 +3.9**
MNK *i* SSS SSS 09 36 46.9
MNK *i* LQ LQ 09 45 34.9
MNK *i* LR LR 09 50 53.3
MNK *i* LRM MLR 09 53 08.8
comp=N,598nm,23.6s
MNK *i* LRM MLR 09 53 11.4
comp=E,9.0nm,26.2s
MNK *i* LRM MLR 09 53 12.7
comp=Z,114nm,23.6s
NEEM North Greenlan 69.71 357 *i* P **P** **09 19 52.5 +0.6**
NEEM IAmb IAmb 09 19 53.4
comp=Z,3.5nm,0.9s
MVCO Mesa Verde 69.72 307 P 09 19 53.1
baz=95
O20A White River Ci 69.82 310 P **P** **09 19 53.1 -0.1**
O20A IAmb IAmb 09 20 10.4
comp=Z,11nm,1.1s
O20A White River Ci 69.82 310 P 09 19 53.3
baz=96,SNR=5.5
PV01 Paradox Valley 69.87 308 P **P** **09 19 52.8 -0.7**
W18A Petrified Fore 70.55 304 P **P** **09 19 57.4 -0.3**
W18A IAmb IAmb 09 20 01.5
comp=Z,11nm,1.1s
W18A Petrified Fore 70.55 304 P 09 19 57.7
baz=94,SNR=6.9
FINES FINESS Array B 70.69 27 P **P** **09 19 58.6 +1.0**
comp=Z,1.4nm,0.7s,baz=262,slow=3.0,SNR=6.6
FINES LR LR 09 47 32.9
comp=Z,72nm,21.1s,baz=218,slow=33
BRTR Keskin Array B 70.71 51 P **P** **09 19 58.7 +0.1**
comp=Z,1.3nm,0.6s,baz=260,slow=8.6,SNR=2.1
BRTR LR LR 09 51 15.9
comp=Z,96nm,21.1s,baz=290,slow=36
BOSA Boshof 70.93 124 P **P** **09 19 59.2 -0.8**
comp=Z,2.2nm,1.0s,baz=135,slow=7.8,SNR=1.6
BOSA LR LR 09 44 58.6
comp=Z,268nm,21.1s,baz=290,slow=31
BW06 Boulder Array 71.11 312 P **P** **09 20 00.5 -0.5**
BW06 Boulder Array 71.11 312 P 09 20 00.7
baz=96
PD31 Pinedale Array 71.11 312 P **P** **09 20 00.7 -0.3**
PDAR Pinedale Array 71.11 312 P **P** **09 19 59.2 -1.8**
comp=Z,1.0nm,0.9s,baz=100,slow=6.2,SNR=7.0
PDAR LR LR 09 47 14.9
comp=Z,298nm,21.7s,baz=122,slow=33
PDAR Pinedale Array 71.11 312 P **P** **09 19 59.4 -1.6**
RLMT Red Lodge 71.19 315 P **P** **09 20 01.3 -0.1**
RLMT IAmb IAmb 09 20 03.1
comp=Z,8.3nm,1.1s
RLMT Red Lodge 71.19 315 P 09 20 01.5
baz=98,SNR=7.7
TUC Tucson 71.28 301 P **P** **09 20 02.4 +0.3**
TUC Tucson 71.28 301 P 09 20 02.2
baz=92
SRU San Rafael Swe 71.48 308 P **P** **09 20 02.8 -0.5**
SRU IAmb IAmb 09 20 12.2
comp=Z,22nm,1.7s
P17A Butcher Ranch, 71.67 309 P **P** **09 20 04.1 -0.3**
YNE Yellowstone No 71.70 315 P **P** **09 20 04.4 -0.2**
YNE IAmb IAmb 09 20 06.0
comp=Z,9.4nm,1.2s
YMP Mirror Lake Pl 71.77 314 P **P** **09 20 05.9 +0.9**
YMP IAmb IAmb 09 20 20.7
comp=Z,18nm,1.3s
WUAZ Wupatki 71.92 305 P **P** **09 20 06.8 +0.8**
WUAZ Wupatki 71.92 305 P 09 20 06.3
baz=93,SNR=7.2
X16A Lo Mia Camp, P 71.92 303 P **P** **09 20 06.5 +0.5**
LKWY Lake 71.92 314 P **P** **09 20 07.1 +1.2**
LKWY IAmb IAmb 09 20 16.6
comp=Z,14nm,1.3s
LOHW Long Hollow 71.96 313 P **P** **09 20 06.1 0.0**
LOHW IAmb IAmb 09 20 14.9
comp=Z,25nm,1.6s
H17A Grant Village 72.03 314 P **P** **09 20 07.7 +1.2**
H17A IAmb IAmb 09 20 22.6
comp=Z,15nm,1.4s
H17A Grant Village 72.03 314 P 09 20 08.7
baz=96
SNOW Snow King Moun 72.06 313 P **P** **09 20 07.0 +0.3**
SNOW IAmb IAmb 09 20 15.6
comp=Z,25nm,1.6s
MOOW Moose Ponds 72.08 313 P **P** **09 20 05.4 -1.4**
MOOW IAmb IAmb 09 20 15.5
comp=Z,13nm,1.4s
FLWY Flagg Ranch 72.08 314 P **P** **09 20 06.5 -0.3**
REDW Red Top Meadow 72.12 313 P **P** **09 20 07.2 +0.1**
REDW IAmb IAmb 09 20 24.2
comp=Z,18nm,1.4s
YPP Pitchstone Pla 72.18 314 P **P** **09 20 07.9 +0.4**
YPP IAmb IAmb 09 20 19.1
comp=Z,16nm,1.5s
AHID Auburn Hatcher 72.24 312 P **P** **09 20 05.3 -2.5**
YHH Holmes Hill 72.27 314 P **P** **09 20 07.5 -0.5**
JLU Jordanelle 72.31 310 P **P** **09 20 08.0 -0.2**
JLU IAmb IAmb 09 20 19.6
comp=Z,11nm,1.2s
TCUT Toone Canyon 72.32 311 P **P** **09 20 07.3 -1.1**
YMR Madison River 72.33 314 P **P** **09 20 08.6 +0.3**
HWUT Hardware Ranch 72.48 311 P **P** **09 20 08.2 -1.0**
YHB Horse Butte 72.51 314 P **P** **09 20 09.1 -0.3**
YHL Hebgen Lake 72.51 314 P **P** **09 20 09.6 +0.2**
QLMT Earthquake Lak 72.68 314 P **P** **09 20 11.1 +0.7**
MTPU Mount Pierson 72.70 307 P **P** **09 20 11.2 +0.4**
MSU Marysvale 72.72 308 P **P** **09 20 11.9 +1.1**
NLU North Lily Min 72.74 309 P **P** **09 20 11.6 +0.7**
BOZ Bozeman (W) 72.90 315 P **P** **09 20 11.0 -0.6**
BOZ IAmb IAmb 09 20 14.6
comp=Z,11nm,1.2s
BOZ Bozeman (W) 72.90 315 P 09 20 11.0
baz=96,SNR=9.0
214A Organ Pipe Nat 72.99 301 P **P** **09 20 11.9 -0.3**
214A IAmb IAmb 09 20 16.0
comp=Z,23nm,1.6s
214A Organ Pipe Nat 72.99 301 P 09 20 12.0
baz=91
SPUT South Promonto 73.12 311 P **P** **09 20 12.6 -0.4**
SPUT IAmb IAmb 09 20 14.6
comp=Z,16nm,1.2s
KNB Kanab 73.16 306 P **P** **09 20 13.1 -0.2**
HRY Holter Researc 73.16 316 P **P** **09 20 13.1 0.0**
Y14A Wickenburg 73.19 303 P **P** **09 20 13.7 +0.3**
DUG Dugway, Tooele 73.32 309 P **P** **09 20 14.6 +0.4**
DUG IAmb IAmb 09 20 36.2
comp=Z,11nm,1.2s
DUG Dugway, Tooele 73.32 309 P 09 20 15.1
baz=94
ARCES ARCESS Array B 73.37 19 P **P** **09 20 12.8 -0.9**
comp=Z,2.2nm,0.8s,baz=264,slow=2.4,SNR=9.0
SZCU Shurtz Canyon 73.39 307 P **P** **09 20 14.2 -0.5**
HVU Hansel Valley 73.39 311 P **P** **09 20 13.9 -0.7**
LRM Limekiln Ridge 73.50 315 P **P** **09 20 15.6 +0.4**
BGU Big Grassy Mou 73.53 310 P **P** **09 20 15.3 -0.1**
BGU IAmb IAmb 09 20 17.2
comp=Z,16nm,1.1s
DLMT Dillon 73.56 315 P **P** **09 20 15.7 +0.3**
DLMT IAmb IAmb 09 20 17.7
comp=Z,20nm,1.2s
RES Resolute Bay 73.89 347 P **P** **09 20 16.7 +0.1**
RES IAmb IAmb 09 20 20.0
comp=Z,13nm,1.4s
PSUT Pine Spring 74.04 308 P **P** **09 20 18.0 -0.5**
BCYI Bear Canyon 74.04 314 P **P** **09 20 18.5 +0.1**
NOR Nord 74.13 3 *i* P **P** **09 20 17.5 -0.4**
NOR IAmb IAmb 09 20 20.2
comp=Z,1.7nm,1.1s
MSO Missoula 74.61 316 P 09 20 21.0
baz=95
HLID Hailey 74.72 313 P **P** **09 20 23.0 +0.7**
HLID Hailey 74.72 313 P 09 20 22.6
baz=93,SNR=10.0
WALA Waterton Lakes 74.79 319 P **P** **09 20 22.8 +0.2**
WALA IAmb IAmb 09 20 23.7
comp=Z,16nm,1.2s
JTMT Jette 74.92 317 P **P** **09 20 23.0 -0.4**
PRN Pahroc Range 74.95 306 P **P** **09 20 23.3 -0.5**
IRM Iron Mountain 74.97 303 P 09 20 25.2
baz=90
ELK Elko 75.19 310 P **P** **09 20 25.7 +0.5**
BC3 Big Chuckawall 75.23 303 P 09 20 25.9
baz=90
R11A Troy Canyon, C 75.39 307 P 09 20 27.6
baz=91
GMRC Granite Mounta 75.40 304 P 09 20 27.7
baz=90
EUNU Eureka 75.46 352 P **P** **09 20 25.9 +0.2**
SWSC Sam W. Stewart 75.52 302 P 09 20 27.6
baz=90
IKP In-Ko-Pah, Jac 75.78 302 P 09 20 30.3
baz=89
TPNV Topopah Spring 75.90 306 P 09 20 30.5
baz=90
MONP2 Monument Peak 76.05 302 P 09 20 30.1
baz=89
FURC Furnace Creek, 76.39 306 P 09 20 34.1
baz=90
TPH Tonopah 76.68 307 P **P** **09 20 34.4 +0.7**
MURC Murrieta 76.68 303 P 09 20 35.8
baz=89
YKA Yellowknife Ar 76.76 332 P **P** **09 20 32.0 -1.3**
comp=Z,5.0nm,1.1s,baz=99,slow=5.7,SNR=30
YKA LR LR 09 53 06.4
comp=Z,104nm,18.0s,baz=0.0,slow=35
BMO Blue Mountains 76.85 314 P **P** **09 20 33.3 -1.1**
BMO IAmb IAmb 09 20 43.2
comp=Z,16nm,1.6s
NEW Newport 76.86 318 P **P** **09 20 33.6 -0.7**
NEW Newport 76.86 318 P 09 20 34.2
baz=93
KLMR Klimovskoe 76.89 29 *e*P **P** **09 20 36.7 +2.6**
KLMR AMP 09 20 44.6
comp=Z,27nm,1.5s
BFSC Mount Baldy Ra 77.06 303 P 09 20 37.1
baz=89
LRMC Laurel Mtn Rad 77.06 304 P 09 20 37.1
baz=89
EDW2 Edwards Air Fo 77.32 304 P 09 20 37.7
baz=89
KVN Kaiserville 77.37 308 P **P** **09 20 37.3 -0.2**
CWC Cottonwood Cre 77.37 305 P 09 20 38.0
baz=89
E09A Wood Farm, Sta 77.49 316 P **P** **09 20 37.6 -0.2**
E09A IAmb IAmb 09 20 46.1
comp=Z,22nm,1.5s
NVAR Mina Array Bea 77.53 308 P **P** **09 20 38.8 +0.3**
comp=Z,3.9nm,1.1s,baz=101,slow=5.6,SNR=10
NVAR LR LR 09 54 37.4
comp=Z,95nm,18.0s,baz=116,slow=36
NVAR Mina Array Bea 77.53 308 P **P** **09 20 38.5 0.0**
J08A Circle Bar Ran 77.66 313 P **P** **09 20 39.2 +0.2**
J08A IAmb IAmb 09 20 56.0
comp=Z,16nm,1.6s
LHV Little Huntoon 77.69 307 P **P** **09 20 38.4 -0.6**
LHV IAmb IAmb 09 20 48.2
comp=Z,13nm,1.1s
RYN Ryan 77.70 308 P **P** **09 20 38.6 -0.7**
ISA Isabella, Lake 77.70 305 P **P** **09 20 39.0 -0.3**
ISA Isabella, Lake 77.70 305 P 09 20 41.1
baz=89
WVOR Wild Horse Val 77.78 312 P **P** **09 20 39.2 -0.5**
WVOR IAmb IAmb 09 20 46.5

	comp=Z,12nm,1.3s							
SCI2	**San Clemente I**	**77.83**	**302**	P			09 20 41.0	
	baz=88							
KBZ	**Khabaz**	**77.85**	**47**	P		**P**	**09 20 41.5**	**+1.7**
	comp=Z,2.1nm,0.9s,baz=244,slow=4.2,SNR=4.1							
G08A	**Pilot Rock**	**78.03**	**315**	P		**P**	**09 20 39.9**	**-1.1**
E08A	**Dider Farm, El**	**78.12**	**316**	P		**P**	**09 20 40.7**	**-0.6**
E08A				IAmb		IAmb	09 20 42.4	
	comp=Z,11nm,1.0s							
PNTR	**Pine Nut**	**78.53**	**308**	P		**P**	**09 20 42.6**	**-1.5**
PNTR				IAmb		IAmb	09 20 46.5	
	comp=Z,20nm,1.5s							
PKM	**Mcpherson Peak**	**78.82**	**304**	P			09 20 46.8	
	baz=88							
MOD	**Modoc Plateau**	**79.02**	**311**	P		**P**	**09 20 47.0**	**+0.4**
BEKR	**Beckworth**	**79.10**	**309**	P		**P**	**09 20 47.2**	**+0.1**
CMB	**Columbia Colle**	**79.18**	**307**	P		**P**	**09 20 47.0**	**-0.3**
I05D	**Terrebonne, OR**	**79.73**	**314**	P			09 20 51.7	
	baz=89							
F05D	**White Salmon**	**79.79**	**315**	P			09 20 52.0	
	baz=89							
K04D	**Chiloquin, OR**	**80.08**	**312**	P			09 20 53.2	
	baz=88							
M04C	**Macdoel**	**80.17**	**311**	P			09 20 54.9	
	baz=88							
O03E	**Paynes Creek**	**80.20**	**309**	P			09 20 54.7	
	baz=88							
J04D	**Umpqua Nationa**	**80.32**	**312**	P			09 20 54.9	
	baz=88							
L04D	**Klamath Falls**	**80.50**	**311**	P			09 20 55.5	
	baz=88							
VNA3	**Neumayer Olymp**	**81.34**	**171**	P		**P**	**09 20 59.5**	**+1.3**
VNA2	**Neumayer--Watz**	**81.43**	**170**	P		**P**	**09 21 00.7**	**+2.1**
SNAA	**Sanae**	**82.85**	**169**	P		**P**	**09 21 08.4**	**+2.2**
SNAA	**Sanae**	**82.85**	**169**	P		**P**	**09 21 08.1**	**+1.9**
	comp=Z,1.9nm,0.7s,baz=343,slow=8.2,SNR=9.7							
SNAA	**Sanae**	**82.85**	**169**	P		**P**	**09 21 06.4**	**+0.2**
SNAA				IAmb		IAmb	09 21 15.5	
	comp=Z,7.5nm,1.0s							
DLBC	**Dease Lake**	**84.31**	**328**	P		**P**	**09 21 14.4**	**+0.4**
INK	**Inuvik**	**84.65**	**338**	P		**P**	**09 21 14.3**	**-1.1**
EPYK	**Eagle Plains**	**86.20**	**336**	P		**P**	**09 21 23.2**	**-0.2**
EPYK				IAmb		IAmb	09 21 25.3	
	comp=Z,10nm,1.3s							
EPYK	**Eagle Plains**	**86.20**	**336**	P			09 21 24.5	
	baz=79							
ABKAR	**Akbulak array**	**89.06**	**40**	P		**P**	**09 21 37.5**	**+0.2**
ABKAR	**Akbulak array**	**89.06**	**40**	P		**P**	**09 21 37.6**	**+0.3**
BCAR	**Beaver Creek A**	**89.10**	**334**	P		**P**	**09 21 36.5**	**-0.8**
TOLK	**Toolik Lake Re**	**90.25**	**340**	P			09 21 42.8	
	baz=67							
ILAR	**Eielson Array**	**90.70**	**336**	P		**P**	**09 21 44.6**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=64,slow=6.2,SNR=5.3							
ILAR				LR		LR	10 00 04.0	
	comp=Z,73nm,20.3s,baz=112,slow=34							
EYAK	**Cordova Ski Ar**	**91.66**	**332**	P			09 21 46.9	
	baz=70							
TAOE	**Nuku Hiva Isla**	**103.22**	**263**	*e*LR		LR	09 56 36.5	
	comp=Z,160nm,26.6s							
TBI	**Tubuai**	**112.90**	**248**	*e*LR		LR	10 01 05.2	
	comp=Z,132nm,39.0s							
PPT2	**Papeete2**	**112.99**	**254**	*e*LR		LR	10 01 10.7	
	comp=Z,128nm,27.0s							
HHC	**Hu-ho-hao-te**	**123.81**	**28**	*e*PKP		**PKiKP**	**09 27 41.0**	**+0.1**
HHC				LR		LR		
	comp=Z,180nm,18.8s							
HHC				LR		LR		
	comp=Z,160nm,21.2s							
XAN	**Xi'an**	**127.65**	**35**	PKP		**PKPdf**	**09 27 45.5**	**-2.6**
XAN				LR		LR		
	comp=Z,160nm,17.3s							
NJ2	**Nanjing**	**134.36**	**28**	*e*PKP		**PKPdf**	**09 27 59.4**	**-1.4**
ASAR	**Alice Springs**	**162.60**	**154**	PKPab		**PKPab**	**09 29 35.4**	**+2.4**
	comp=Z,0.5nm,0.6s,baz=204,slow=4.5,SNR=6.8							
WRA	**Warramunga Arr**	**166.00**	**148**	PKPab		**PKPab**	**09 29 49.1**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=221,slow=3.7,SNR=4.9							

TRN ***18*** *09:15:21.6, 10.˚39N×62.˚30W, h1km, MD3.2*
FUNV ***18*** *09:15:23.4, 10.˚54N×62.˚19W, h9km, MW3.1*

ISC 18 09:15:22.8±1.1, 10.˚40N±0.˚09×62.˚28W±0.˚04, h10km, n8, σ0s85/13, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.90**	**74**	*e*P	**Pg**	**09 15 39.7**	**-0.5**
TRN				*e*S	**Sb**	**09 15 52.7**	**+0.2**
CRUV	**Carupano**	**0.98**	**286**	*e*P	**Pg**	**09 15 41.1**	**-0.5**
CRUV				*e*S	**Sg**	**09 15 55.1**	**+0.8**
GRGR	**Grenville**	**1.83**	**20**	*e*P	**Pn**	**09 15 55.0**	**+0.7**
GRGR				*e*S	**Sb**	**09 16 19.0**	**-0.3**
TOSP	**Speyside**	**1.93**	**62**	*e*P	**Pn**	**09 15 56.4**	**+0.6**
BIRV	**Birongo**	**3.92**	**271**	*e*P	**Pn**	**09 16 24.1**	**+1.0**
BIRV				*e*S	**Sn**	**09 17 08.2**	**-1.1**
MERV	**Las Mercedes**	**4.12**	**254**	*e*P	**Pn**	**09 16 26.9**	**+1.0**
MERV				*e*S	**Sn**	**09 17 13.8**	**-0.3**
BAUV	**El Baul**	**5.86**	**256**	*e*P	**Pn**	**09 16 50.1**	**+0.3**
BAUV	**El Baul**	**5.86**	**256**	*e*S	**Sn**	**09 17 55.8**	**-1.3**

MEX ***18*** *09:17:45.3±0.3, 15.˚15N×91.˚96W, h8km±11km, MD2.9*

GCG 18 09:17:45.2±0.8, 15.˚14N×92.˚36W, h62km±46km, MD3.5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**1.03**	**132**	*e*P	Pn	09 18 03.6	-0.1
ERG				*e*S	Sn	09 18 18.3	+0.9
FUG	**Fuego 3**	**1.62**	**115**	*e*P	Pn	09 18 11.9	+0.2
FUG				*e*S	Sn	09 18 33.0	+1.4
PCG	**Pacaya**	**1.85**	**113**	*e*P	Pn	09 18 14.4	-0.5
PCG				*e*S	Sn	09 18 41.2	+3.9
NBG	**Las Nubes**	**2.02**	**105**	*e*P	Pn	09 18 18.2	+1.0
NBG				*e*S	Sn	09 18 44.1	+2.6
MRL	**Marmol**	**2.58**	**91**	*e*P	Pn	09 18 26.0	+1.2
MRL				*e*S	Sn	09 18 56.9	+1.7

NIED ***18*** *09:34:53.8, 32.˚02N×132.˚14E, h18km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}0.36; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$0.15; $M_{r\theta}$0.20; $M_{\theta\phi}$-0.79; $M_{r\phi}$0.97; Fault plane solution: $M_0$1.34000×10^{16} NP1:ϕ_s18.00000°, δ80.00000°, λ.51.00000°. NP2:ϕ_s276.00000°, δ40.00000°, λ164.00000°.*

JMA ***18*** *09:34:53.8±0.1, 32.˚02N×132.˚14E, h18km±2km, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s232.00000°, δ18.00000°, λ109.00000°. NP2: ϕ_s32.00000°, δ73.00000°, λ84.00000°. Principal axes: T Plg61.0000°, Azm294.0000°; N Plg6.0000°, Azm34.0000°; P Plg28.0000°, Azm127.0000°;*

JMA Felt II J1.

NEIC ***18*** *09:34:54.3±1.5, 31.˚91N±0.˚05×132.˚02E±0.˚05, h35km±1km, mb4.5/44 Error ellipse: s-maj=8.9km s-min=6.9km az=147.0*

IDC ***18*** *09:34:59.3±1.5, 31.˚97N×131.˚83E, h75km±11km, mb3.8/23, mb1 3.9/27, mb1mx3.8/45, mbtmp4.1/27, MS4.0/22, Ms1 4.0/22, ms1mx3.8/44, Error ellipse: s-maj=15.7km s-min=11.5km az=88.0*

ISC 18 09:34:51.7±1.2, 31.˚96N±0.˚04×132.˚12E±0.˚03, h14km±7km, n138, σ1s87/149, mb4.4/46, MS4.2/21, 8C-3D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.60**	**299**	⇓P	**Pn**	**09 35 04.8**	**-1.0**
JTSN				S	**Sb**	**09 35 12.9**	**+0.7**
JHHC	**Hyugahichiya**	**0.64**	**320**	⇓P	**Pn**	**09 35 05.5**	**-0.8**
JHHC				*e*S	**Sb**	**09 35 14.0**	**+0.7**
JNKG	**Nichinankitago**	**0.70**	**245**	⇑P	**Pn**	**09 35 08.0**	**+0.8**
JNKG				*e*S	**Sn**	**09 35 18.6**	**+0.8**
JNAR	**Kushima--Naru**	**0.84**	**240**	⇑P	**Pn**	**09 35 10.4**	**+1.3**
JNAR				*e*S	**Sn**	**09 35 23.1**	**+1.8**
JSKE	**Saikikamae**	**0.86**	**347**	⇑P	**Pn**	**09 35 09.3**	**0.0**
JSKE				*e*S	**Sb**	**09 35 19.8**	**+0.1**
JTZ	**Takazaki**	**0.88**	**267**	⇑P	**Pn**	**09 35 10.2**	**+0.5**
JTZ				*e*S	**Sn**	**09 35 24.3**	**+2.0**
JTO	**Tosashimizu**	**1.07**	**32**	⇑P	**Pg**	**09 35 12.0**	**-0.3**
JTO				*e*S	**Sb**	**09 35 25.1**	**-0.6**
JUS	**Usuki**	**1.15**	**344**	⇑P	**Pg**	**09 35 14.3**	**+0.4**
JIU3	**Izumi3**	**1.26**	**298**	⇑P	**Pg**	**09 35 16.3**	**+0.4**
JIU3				*e*S	**Sg**	**09 35 32.1**	**-0.2**
UWA2	**Uwa jima 2**	**1.32**	**19**	⇑P	**Pb**	**09 35 16.2**	**-0.1**
UWA2				*e*S	**Sb**	**09 35 31.8**	**-1.3**
JSU	**Suzuyama**	**1.49**	**253**		**Pb**	**09 35 19.3**	**+0.1**
JNU	**Nakatsue**	**1.57**	**318**	P	**Pg**	**09 35 21.0**	**-0.8**
	176nm,0.3s,baz=70,slow=6.0,SNR=1213						
JNU				S	**Sg**	**09 35 41.8**	**-0.4**
	221nm,0.3s,baz=202,slow=19,SNR=10						
JNU	**Nakatsue**	**1.57**	**318**		**Pg**	**09 35 21.1**	**-0.7**
JNU				Sn	**Sg**	**09 35 42.9**	**+0.7**
JMN	**Monobe**	**2.30**	**39**	Pn	**Pb**	**09 35 32.6**	**-0.4**
JHS	**Saijyo**	**3.14**	**15**		**Pn**	**09 35 43.2**	**+2.4**
JTU	**Tsushima**	**3.43**	**319**	Pn	**Pn**	**09 35 46.4**	**+1.7**
JWT	**Wachi**	**4.30**	**39**	Pn	**Pn**	**09 35 59.4**	**+2.8**
JGF	**Kuroka**	**5.67**	**49**		**Pn**	**09 36 18.7**	**+3.1**
JOW	**Kunigami**	**6.11**	**214**	P	**Pn**	**09 36 25.2**	**+3.6**
	3.3nm,0.3s,baz=60,slow=16,SNR=2.3						
KSRS	**Korea Array**	**6.48**	**329**	P	**Pn**	**09 36 28.4**	**+1.7**
	1.5nm,0.3s,baz=149,slow=14,SNR=14						
KSRS				S	**Sn**	**09 37 42.3**	**+2.0**
	0.3nm,0.3s,baz=152,slow=26,SNR=4.5						
KSAR	**Wonju Array Be**	**6.49**	**329**		**Pn**	**09 36 27.2**	**+0.5**
KS19	**Wonju Array Si**	**6.55**	**329**	Pn	**Pn**	**09 36 27.5**	**-0.1**
JHJ	**Hachijo jima 2**	**6.57**	**78**	LR	LR	09 39 09.9	
	comp=Z,739nm,19.6s,baz=306,slow=37						
JHJ2	**Mitsune**	**6.60**	**78**	Pn	**Pn**	**09 36 29.9**	**+1.7**
MAJO	**Matsushiro**	**6.80**	**46**	Pn	**Pn**	**09 36 34.1**	**+3.1**
MAT	**Matsushiro**	**6.80**	**46**	P	**Pn**	**09 36 34.6**	**+3.5**
MAT				S	**Sn**	**09 37 47.1**	**-1.2**
MJAR	**Matsushiro Arr**	**6.80**	**46**	P	**Pn**	**09 36 34.3**	**+3.2**
	0.2nm,0.3s,baz=244,slow=14,SNR=16						
MJAR				LR	LR	09 39 31.3	
	comp=Z,769nm,19.8s,baz=245,slow=39						
JCJ	**Chichijima**	**10.01**	**116**	LR	LR	09 40 38.2	
	comp=Z,308nm,20.2s,baz=320,slow=33						
JCJ	**Chichijima**	**10.01**	**116**	Pn	**Pn**	**09 37 16.6**	**+1.5**
NJ2	**Nanjing**	**11.27**	**274**	*e*P	**Pn**	**09 37 31.0**	**-1.3**
NJ2				pP		09 37 36.5	
NJ2				sP		09 37 46.9	
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=N,1μm,10.0s						
NJ2				LR	LR		
	comp=E,2μm,12.6s						
NJ2				LR	LR		
	comp=Z,3μm,13.9s						
SNY	**Shenyang**	**11.98**	**328**	⇓P	Pn	09 37 48.1	+6.1
SNY				S	Sn	09 40 33.4	+38
SNY				pmax	pmax		
	comp=Z,32nm,1.1s						
SNY				pmax	pmax		
	comp=Z,220nm,6.8s						
SNY				LR	LR		
	comp=N,2μm,14.8s						
SNY				LR	LR		
	comp=E,2μm,14.0s						
SNY				LR	LR		
	comp=Z,3μm,15.2s						
USRK	**Ussuriysk Ar.**	**12.22**	**360**	P	**Pn**	**09 37 48.2**	**+2.9**
	baz=180,slow=13,SNR=1.8						
USRK				LR	LR	09 42 13.8	
	comp=Z,594nm,18.9s,baz=170,slow=36						
USRK	**Ussuriysk Ar.**	**12.22**	**360**		**Pn**	**09 37 45.7**	**+0.4**
CN2	**Changchun**	**12.94**	**338**	*e*P	**P**	**09 38 04.3**	**-1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ERM	**Erimo**	**13.35**	**38**	Pn	**Pn**	**09 38 00.8**	**+0.2**
JKA	**Kamikawa-asahi**	**14.66**	**31**	Pn	**Pn**	**09 38 19.1**	**+0.5**
BJT	**Baijiatuan**	**15.20**	**306**	Pn	**Pn**	**09 38 26.5**	**+0.7**
KLR	**Kul'dur**	**17.26**	**359**	P	**P**	**09 38 54.7**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=173,slow=6.8,SNR=52						
KLR				LR	LR	09 45 21.8	
	comp=Z,304nm,18.1s,baz=175,slow=36						
HHC	**Hu-ho-hao-te**	**18.75**	**304**	*e*P	**Pn**	**09 39 12.3**	**+1.7**
HHC				S	**Sn**	**09 42 33.6**	**-6.5**
HHC				SS	**SnSn**	**09 43 03.3**	**+9.3**
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,4.7s						
HHC				LR	LR		
	comp=N,490nm,13.2s						
HHC				LR	LR		
	comp=E,1μm,12.3s						
HHC				LR	LR		
	comp=Z,1μm,11.9s						
ENH	**Enshi**	**19.45**	**271**	P	**P**	**09 39 17.0**	**-1.0**
ENH				IAmb	IAmb	09 39 40.1	
	comp=Z,42nm,1.2s						
XAN	**Xi'an**	**19.57**	**282**	P	**P**	**09 39 19.1**	**-0.1**
XAN				pP	sP	09 39 27.8	+3.2
XAN				sP	pP	09 39 32.4	+10
XAN				SS	Sn	09 43 19.4	+19
XAN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
XAN				pmax	pmax		
	comp=Z,200nm,5.1s						
XAN				LR	LR		
	comp=N,540nm,12.3s						
XAN				LR	LR		
	comp=E,1μm,15.7s						
XAN				LR	LR		
	comp=Z,2μm,16.2s						
XAN	**Xi'an**	**19.57**	**282**	P	**P**	**09 39 19.6**	**+0.4**
HIA	**Hailar**	**19.63**	**335**	P	**Pn**	**09 39 20.5**	**-0.6**
HIA				IAmb	IAmb	09 39 25.0	
	comp=Z,44nm,1.4s						
BTO	**Baotou**	**19.76**	**302**	*e*P	**Pn**	**09 39 24.1**	**+1.3**
LZH	**Lanzhou**	**23.76**	**288**	*e*P	**P**	**09 40 04.3**	**+0.5**
LZH				pP	sP	09 40 10.4	+0.9
LZH				*e*S	**S**	**09 44 19.9**	**+1.0**
LZH				sS	Sn	09 44 34.8	-5.9
LZH				SS	**SnSn**	**09 45 05.5**	**+8.4**
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,84nm,4.9s						
LZH				LR	LR		
	comp=N,420nm,10.6s						
LZH				LR	LR		
	comp=E,1μm,12.2s						
LZH				LR	LR		
	comp=Z,1μm,12.7s						
QIZ	**Qiongzhong**	**23.82**	**243**	P	**P**	**09 40 03.8**	**-0.5**
QIZ				S	**S**	**09 44 17.8**	**-2.0**
QIZ				sS	Sn	09 44 35.5	-6.6
QIZ				LR	LR		
	comp=N,510nm,11.8s						
QIZ				LR	LR		
	comp=E,610nm,14.7s						
QIZ				LR	LR		
	comp=Z,480nm,10.3s						
CD2	**Chengdu**	**24.20**	**275**	P	**P**	**09 40 06.6**	**-1.3**
CD2				S	**S**	**09 44 24.3**	**-1.5**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				pmax	pmax		
	comp=Z,80nm,4.7s						
CD2				LR	LR		
	comp=N,2μm,12.6s						
CD2				LR	LR		
	comp=E,4μm,12.7s						
CD2				LR	LR		
	comp=Z,5μm,13.5s						
ULN	**Ulaanbaatar**	**24.79**	**317**	P	**P**	**09 40 12.7**	**-0.5**
ULN				IAmb	IAmb	09 40 14.7	
	comp=Z,24nm,1.3s						
SONM	**Songino Array**	**25.16**	**317**	P	**P**	**09 40 15.5**	**-1.0**
	comp=Z,9.3nm,1.0s,baz=130,slow=8.8,SNR=35						
SONM				PcP	**PcP**	**09 43 50.6**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=146,slow=0.5,SNR=2.2						
SONM	**Songino Array**	**25.16**	**317**	P	**P**	**09 40 15.8**	**-0.7**
SONM				IAmb	IAmb	09 40 18.3	
	comp=Z,10nm,1.1s						
PETK	**Petropavlovsk-**	**28.05**	**34**	P	**P**	**09 40 43.8**	**+1.4**
	comp=Z,2.1nm,0.9s,baz=240,slow=8.4,SNR=4.0						
PETK				LR	LR	09 52 03.7	
	comp=Z,154nm,19.4s,baz=212,slow=36						
PETK	**Petropavlovsk-**	**28.05**	**34**	P	**P**	**09 40 42.6**	**+0.2**
TLY	**Talaya**	**28.67**	**322**	LR	LR	09 52 32.9	
	comp=Z,183nm,20.8s,baz=124,slow=37						
YAK	**Yakutsk**	**30.13**	**358**	LR	LR	09 53 06.5	
	comp=Z,287nm,18.1s,baz=115,slow=36						
MA2	**Magadan**	**30.31**	**19**	P	**P**	**09 41 04.0**	**+1.7**
	comp=Z,1.4nm,0.2s,baz=237,slow=4.0,SNR=4.3						
MA2	**Magadan**	**30.31**	**19**	P	**P**	**09 41 03.5**	**+1.2**
CHTO	**Chiang Mai**	**32.57**	**254**	P	**P**	**09 41 20.8**	**-1.9**
CMAR	**Chiang Mai Arr**	**32.75**	**254**	P	**P**	**09 41 23.5**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=70,slow=5.2,SNR=1.0						
CMAR				LR	LR	09 56 09.4	
	comp=Z,320nm,19.2s,baz=60,slow=39						
H11N2	**WAKE ISLAND Hy**	**33.44**	**103**	T	T	10 17 02.5	
	baz=298,slow=75						
H11N1	**WAKE ISLAND Hy**	**33.44**	**103**	T	T	10 16 58.6	
	baz=298,slow=75						
H11N3	**WAKE ISLAND Hy**	**33.45**	**103**	T	T	10 17 02.9	
	baz=298,slow=75						
SEY	**Seymchan**	**33.57**	**17**	P	**P**	**09 41 33.1**	**+2.2**
	comp=Z,1.0nm,0.7s,baz=198,slow=7.7,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**33.86**	**105**	T	T	10 17 52.7	
	baz=304,slow=76						
H11S1	**WAKE ISLAND Hy**	**33.87**	**105**	T	T	10 17 53.1	
	baz=304,slow=76						
H11S2	**WAKE ISLAND Hy**	**33.88**	**105**	T	T	10 17 58.1	
	baz=304,slow=76						
JAY	**Jayapura**	**35.24**	**165**	LR	LR	09 54 24.4	
	comp=Z,76nm,20.3s,baz=320,slow=33						
WMQ	**Urumqi**	**36.60**	**302**	*e*P	**P**	**09 41 59.4**	**+2.0**
WMQ				PP	**PP**	**09 43 22.3**	**+1.7**
WMQ				PcP	**PcP**	**09 44 22.8**	**+2.4**
WMQ				S	**S**	**09 47 42.8**	**+3.1**
WMQ	**Urumqi**	**36.60**	**302**	ScS	ScS	09 52 14.5	+1.3
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.6s						
WMQ				LR	LR		
	comp=N,370nm,15.7s						
WMQ				LR	LR		
	comp=E,1μm,19.5s						
WMQ				LR	LR		
	comp=Z,1μm,20.9s						
IPM	**Ipoh**	**39.96**	**233**	P	**P**	**09 42 25.1**	**-0.7**
IPM				IAmb	IAmb	09 42 27.1	
	comp=Z,14nm,1.0s						
ZALV	**Zalesovo Beam**	**40.04**	**318**	P	**P**	**09 42 24.2**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=148,slow=8.5,SNR=1.6						
ZALV				PcP	**PcP**	**09 44 30.8**	**0.0**
	comp=Z,2.5nm,0.9s,baz=93,slow=3.0,SNR=7.3						
ZALV				LR	LR	09 59 58.2	
	comp=Z,270nm,20.4s,baz=96,slow=38						
MK31	**Makanchi Array**	**40.59**	**306**	P	**P**	**09 42 29.4**	**-1.4**
MKAR	**Makanchi Array**	**40.59**	**306**	P	**P**	**09 42 29.1**	**-1.7**
	comp=Z,0.9nm,0.7s,baz=92,slow=9.8,SNR=8.4						
MKAR				PcP	**PcP**	**09 44 32.4**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=83,slow=6.0,SNR=3.8						
MKAR				LR	LR	10 00 49.1	
	comp=Z,351nm,18.1s,baz=81,slow=38						
MKAR	**Makanchi Array**	**40.59**	**306**	P	**P**	**09 42 29.4**	**-1.4**
RABL	**Rabaul**	**40.69**	**148**	P	**P**	**09 42 31.6**	**-0.3**
MAKZ	**Makanchi**	**40.80**	**306**	P	**P**	**09 42 31.4**	**-1.1**
BILL	**Bilibino**	**41.18**	**19**	P	**P**	**09 42 36.5**	**+1.2**
BILL				IAmb	IAmb	09 42 38.9	
	comp=Z,9.2nm,0.9s						
KURBB	**Kurchatov Arra**	**43.33**	**312**	PcP	**PcP**	**09 44 41.3**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=92,slow=3.8,SNR=9.0						
NRIK	**Noril'sk**	**44.98**	**339**	LR	LR	10 03 12.8	
	comp=Z,275nm,18.9s,baz=138,slow=38						
NRIK	**Noril'sk**	**44.98**	**339**	P	**P**	**09 43 04.9**	**-1.2**
NRIK				IAmb	IAmb	09 43 06.1	
	comp=Z,3.8nm,0.8s						
AAK	**Ala-Archa**	**46.27**	**300**	P	**P**	**09 43 15.8**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=139,slow=11						
AAK	**Ala-Archa**	**46.27**	**300**	P	**P**	**09 43 15.9**	**-0.9**
KNRA	**Kununurra**	**47.47**	**184**	P	**P**	**09 43 27.1**	**+1.0**
BRVK	**Borovoye**	**48.54**	**315**	P	**P**	**09 43 32.9**	**-1.3**
BRVK				IAmb	IAmb	09 43 56.3	
	comp=Z,2.9nm,0.8s						
NIL	**Nilore**	**48.92**	**289**	P	**P**	**09 43 36.6**	**-0.9**
NIL				IAmb	IAmb	09 43 38.3	
	comp=Z,9.2nm,1.2s						
KK31	**Karatay Array**	**49.11**	**302**	P	**P**	**09 43 38.2**	**-0.5**
KK31				IAmb	IAmb	09 44 04.1	
	comp=Z,4.9nm,1.1s						
KKAR	**Karatay Array**	**49.11**	**302**	P	**P**	**09 43 38.3**	**-0.4**
KKAR				IAmb	IAmb	09 44 04.1	
	comp=Z,4.9nm,1.1s						
KKAR	**Karatay Array**	**49.11**	**302**	P	**P**	**09 43 36.8**	**-1.9**
GAR	**Garm**	**49.98**	**296**	P	**P**	**09 43 44.7**	**-0.9**
GAR				IAmb	IAmb	09 43 45.7	
	comp=Z,8.9nm,0.9s						
WRA	**Warramunga Arr**	**51.65**	**177**	P	**P**	**09 43 58.9**	**+0.9**
	comp=Z,4.5nm,1.0s,baz=348,slow=7.9,SNR=13						
WRA	**Warramunga Arr**	**51.65**	**177**	P	**P**	**09 43 57.7**	**-0.4**
ARU	**Arti**	**55.14**	**320**	P	**P**	**09 44 22.0**	**-1.3**
ASAR	**Alice Springs**	**55.34**	**178**	P	**P**	**09 44 25.3**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=11,slow=12,SNR=12						
ASAR	**Alice Springs**	**55.34**	**178**	P	**P**	**09 44 22.5**	**-2.6**
ABKAR	**Akbulak array**	**55.36**	**311**	P	**P**	**09 44 24.0**	**-1.1**
ABKAR	**Akbulak array**	**55.36**	**311**	P	**P**	**09 44 23.9**	**-1.1**
ABKAR				IAmb	IAmb	09 44 47.7	
	comp=Z,4.6nm,1.3s						
MDM	**Murphy Dome**	**57.20**	**30**	P	**P**	**09 44 38.7**	**+0.7**
ILAR	**Eielson Array**	**57.79**	**30**	P	**P**	**09 44 43.3**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=268,slow=5.4,SNR=3.8						
GEYT	**Alibeck**	**59.49**	**298**	LR	LR	10 13 07.6	
	comp=Z,128nm,19.2s,baz=165,slow=39						
EPYK	**Eagle Plains**	**61.63**	**27**	P	**P**	**09 45 08.3**	**-0.2**
INK	**Inuvik**	**62.29**	**25**	P	**P**	**09 45 13.6**	**+0.8**
	comp=Z,3.0nm,1.0s,baz=278,slow=8.1,SNR=7.5						
INK	**Inuvik**	**62.29**	**25**	P	**P**	**09 45 13.8**	**+1.0**
INK				IAmb	IAmb	09 45 27.2	
	comp=Z,8.8nm,1.2s						
STKA	**Stephens Creek**	**64.12**	**171**	P	**P**	**09 45 26.0**	**+0.7**
	comp=Z,3

SUMG IAmb IAmb 09 46 38.0
comp=Z,15nm,1.0s
SUMG Summit 75.54 357 P P 09 46 35.9 +0.1
NOA NORSAR Array B 75.66 334 P P 09 46 34.4 -1.7
NOA LR LR 10 23 01.1
comp=Z,1.2nm,0.9s,baz=50,slow=5.7,SNR=4.2
comp=Z,177nm,19.6s,baz=5.0,slow=38
NC204 NORSAR Array S 75.67 335 P P 09 46 35.9 -0.4
BRTR Keskin Array B 76.20 308 P P 09 46 38.1 -1.6
BRTR LR LR 10 24 54.2
comp=Z,2.1nm,0.8s,baz=96,slow=2.5,SNR=4.4
comp=Z,111nm,19.4s,baz=108,slow=39
BRTR Keskin Array B 76.20 308 P P 09 46 38.7 -1.0
BUR08 Bucovina Ar. S 77.25 318 P P 09 46 44.7 -0.8
BUR08 IAmb IAmb 09 46 48.8
comp=Z,4.9nm,1.2s
BURAR Bucovina Array 77.25 318 P P 09 46 44.6 -0.9
OJC Ojcow 78.68 323 P P 09 46 52.4 -0.9
OJC IAmb IAmb 09 46 54.4
comp=Z,10nm,1.1s
ICESG Greenland Ices 79.07 357 *i* P **P 09 46 56.0 +0.6**
ICESG IAmb IAmb 09 46 57.5
comp=Z,8.8nm,1.1s
CLL Collm 81.35 326 *i* P **P 09 47 07.6 -0.1**
comp=Z,12nm,1.4s
CLL Collm 81.35 326 P **P 09 47 07.0 -0.6**
CLL IAmb IAmb 09 47 08.5
comp=Z,4.6nm,1.0s
NVAR Mina Array Bea 84.12 48 P **P 09 47 23.5 +0.8**
comp=Z,1.3nm,1.0s,baz=273,slow=3.1,SNR=6.7
NVAR Mina Array Bea 84.12 48 P **P 09 47 22.5 -0.2**
PDAR Pinedale Array 86.59 40 P **P 09 47 36.0 +1.1**
comp=Z,0.7nm,1.0s,baz=304,slow=1.1,SNR=4.4
ULM Lac du Bonnet 87.78 29 P **P 09 47 39.7 -0.5**
comp=Z,2.2nm,0.8s,baz=322,slow=6.7,SNR=4.2
ULM Lac du Bonnet 87.78 29 P **P 09 47 40.2 0.0**
ULM IAmb IAmb 09 47 42.6
comp=Z,5.9nm,1.1s
ESDC Sonseca Array 97.91 327 LR LR 10 38 50.4
comp=Z,255nm,18.3s,baz=75,slow=39

IDC ***18*** *10:04:55.5±0.7, 0.79N×103.24W, h0km, mb4.3/12, mb1 4.5/14, mb1mx4.3/30, mbtmp4.2/14, ML3.5/2, MS3.6/11, Ms1 3.6/11, ms1mx3.4/27, Error ellipse: s-maj=28.4km s-min=14.1km az=54.0*

NEIC ***18*** *10:04:59.2±1.6, 1.17N±0.09×102.73W±0.07, h10km±1km, mb4.5/149, Error ellipse: s-maj=16.0km s-min=12.6km az=183.0*

ISC 18 10:04:58.2±0.5, 1.08N±0.07×102.79W±0.09, h10km, n196, σ1§22/182, mb4.5/86, MS3.5/10, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**16.90**	**14**		**Pn**	**10 08 55.7**	**+0.6**
CMIG	**Matias Romero**	**17.71**	**26**	P	**P**	**10 09 10.6**	**+4.6**
	0.1nm,0.3s,baz=187,slow=8.2,SNR=2.0						
CMIG				LR	LR	10 14 24.0	
	comp=Z,248nm,19.8s,baz=207,slow=31						
SNET	**Serv Nac Est T**	**18.36**	**46**	Pn	**Pn**	**10 09 11.0**	**-2.2**
CCIG	**Comitan**	**18.40**	**34**	Pn	**Pn**	**10 09 11.9**	**-1.9**
APG	**El Apazote**	**18.43**	**41**	P	**P**	**10 09 19.5**	**+5.3**
	0.1nm,0.3s,baz=218,slow=13,SNR=2.3						
APG				LR	LR	10 14 43.8	
	comp=Z,263nm,20.4s,baz=246,slow=31						
ESQI	**Esquipulas**	**18.87**	**44**	P	**P**	**10 09 17.6**	**-1.3**
ESQI				IAmb	IAmb	10 09 34.1	
	comp=Z,37nm,1.3s						
CAO2	**Cobano, Puntar**	**19.56**	**63**	P	**P**	**10 09 23.8**	**-2.6**
JTS	**Las Juntas de**	**19.96**	**62**	LR	LR	10 15 07.7	
	comp=Z,327nm,21.1s,baz=328,slow=30						
JTS	**Las Juntas de**	**19.96**	**62**	P	**P**	**10 09 30.2**	**-0.6**
PETF	**Flores**	**20.24**	**38**	P	**P**	**10 09 34.5**	**+0.7**
ESPN	**Las Esperanzas**	**21.41**	**58**	P	**P**	**10 09 45.1**	**-1.4**
ESPN				IAmb	IAmb	10 09 47.6	
	comp=Z,29nm,1.4s						
ZAIG	**Zacatecas**	**21.56**	**1**	P	**P**	**10 09 49.1**	**+0.8**
SLBS	**Sierra La Lagu**	**23.52**	**343**	P	**P**	**10 10 09.4**	**+0.7**
SLBS				IAmb	IAmb	10 10 19.9	
	comp=Z,20nm,1.4s						
TEIG	**Tepich**	**23.74**	**36**	LR	LR	10 18 17.1	
	comp=Z,186nm,19.8s,baz=226,slow=33						
TEIG	**Tepich**	**23.74**	**36**	P	**P**	**10 10 12.2**	**+1.4**
BCIP	**Isla Barro Col**	**24.22**	**70**	P	**P**	**10 10 16.2**	**+0.9**
OTAV	**Otavalo**	**24.36**	**92**	P	**P**	**10 10 17.5**	**+0.3**
OTAV				IAmb	IAmb	10 10 23.7	
	comp=Z,17nm,1.5s						
ATAH	**Atahualpa**	**25.68**	**109**	P	**P**	**10 10 31.6**	**+2.5**
	comp=Z,7.8nm,0.9s,baz=278,slow=9.9,SNR=4.0						
ATAH				LR	LR	10 18 10.8	
	comp=Z,175nm,22.0s,baz=294,slow=31						
HPIG		**25.86**	**354**	P	**P**	**10 10 29.1**	**-1.3**
HPIG				IAmb	IAmb	10 10 33.7	
	comp=Z,14nm,1.2s						
KVTX	**Kingsville**	**26.73**	**10**	P	**P**	**10 10 37.9**	**-0.1**
833A	**Chaparral WMA,**	**27.29**	**7**	P		10 10 45.6	
	baz=187						
SRIG	**Santa Rosalia**	**27.62**	**342**	P	**P**	**10 10 47.0**	**+1.0**
TX31	**Lajitas Ar. Si**	**28.11**	**358**	P	**P**	**10 10 51.6**	**+1.1**
TX31				IAmb	IAmb	10 10 58.0	
	comp=Z,11nm,1.1s						
TX32	**Lajitas Array**	**28.11**	**358**	P	**P**	**10 10 51.3**	**+0.8**
TXAR	**Lajitas Array**	**28.11**	**358**	P	**P**	**10 10 51.9**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=170,slow=10,SNR=6.6						
TXAR				PcP	**PcP**	**10 14 04.8**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=193,slow=3.3,SNR=5.5						
TXAR				LR	LR	10 21 07.5	
	comp=Z,82nm,19.3s,baz=0.0,slow=34						
ROSC	**El Rosal**	**28.68**	**82**	LR	LR	10 20 40.2	
	comp=Z,130nm,19.3s,baz=255,slow=32						
RPN	**Rapa Nui**	**28.74**	**192**	LR	LR	10 19 35.8	
	comp=Z,61nm,19.9s,baz=14,slow=31						
RPN	**Rapa Nui**	**28.74**	**192**	P	**P**	**10 10 57.6**	**+1.7**
NNA	**Nana**	**28.86**	**117**	LR	LR	10 19 44.6	
	comp=Z,52nm,21.9s,baz=289,slow=30						
NNA	**Nana**	**28.86**	**117**	P	**P**	**10 10 57.3**	**0.0**
JCT	**Junction City**	**29.38**	**5**	P		10 11 04.1	
	baz=186						
JCT	**Junction City**	**29.38**	**5**	P	**P**	**10 11 01.7**	**0.0**
JCT				IAmb	IAmb	10 11 04.2	
	comp=Z,12nm,1.4s						
HKT	**Hockley**	**29.47**	**12**	P	**P**	**10 11 02.9**	**+0.6**
435B	**Jarrell**	**29.95**	**9**	P		10 11 07.5	
	baz=190						
435B	**Jarrell**	**29.95**	**9**	P	**P**	**10 11 08.0**	**+1.3**
435B				IAmb	IAmb	10 11 11.6	
	comp=Z,5.4nm,0.8s						
MNTX	**Cornudas Mount**	**30.55**	**356**	P		10 11 12.9	
	baz=175,SNR=5.8						
MNTX	**Cornudas Mount**	**30.55**	**356**	P	**P**	**10 11 12.8**	**+0.7**
319A	**Douglas**	**30.75**	**349**	P	**P**	**10 11 13.5**	**-0.5**
319A				IAmb	IAmb	10 11 16.6	
	comp=Z,11nm,1.3s						
WHTX	**Lake Whitney,**	**31.16**	**9**	P		10 11 18.8	
	baz=190						
NATX	**Nacogdoches**	**31.47**	**13**	P		10 11 21.4	
	baz=196						
NATX	**Nacogdoches**	**31.47**	**13**	P	**P**	**10 11 20.0**	**-0.1**
ABTX	**Abilene, Hawle**	**31.52**	**5**	P		10 11 21.8	
	baz=186,SNR=5.5						
ABTX	**Abilene, Hawle**	**31.52**	**5**	P	**P**	**10 11 20.8**	**+0.2**
ABTX				IAmb	IAmb	10 11 23.3	
	comp=Z,11nm,1.1s						
121A	**Cookes Peak, D**	**31.64**	**352**	P	**P**	**10 11 21.6**	**-0.2**
121A				IAmb	IAmb	10 11 25.5	
	comp=Z,5.7nm,0.8s						
121A	**Cookes Peak, D**	**31.64**	**352**	P		10 11 23.1	
	baz=170						
TUC	**Tucson**	**31.96**	**347**	P		10 11 26.1	
	baz=165						
TUC	**Tucson**	**31.97**	**347**	P	**P**	**10 11 25.6**	**+1.0**
214A	**Organ Pipe Nat**	**32.13**	**344**	P		10 11 27.5	
	baz=161						
214A	**Organ Pipe Nat**	**32.14**	**344**	P	**P**	**10 11 27.4**	**+1.3**
344A	**Westbrook Farm**	**32.29**	**20**	P	**P**	**10 11 26.4**	**-1.0**
MSTX	**Muleshoe**	**32.72**	**0**	P		10 11 32.7	
	baz=180						
MSTX	**Muleshoe**	**32.72**	**0**	P	**P**	**10 11 30.5**	**-0.7**
MSTX				IAmb	IAmb	10 11 35.9	
	comp=Z,9.4nm,1.3s						
BNM	**Barren Site**	**33.10**	**354**	P	**P**	**10 11 36.1**	**+1.5**
LENM	**Lemitar**	**33.15**	**354**	P	**P**	**10 11 35.8**	**+0.7**
113A	**Mohawk Valley,**	**33.17**	**343**	P	**P**	**10 11 37.0**	**+2.0**
113A				IAmb	IAmb	10 11 38.4	
	comp=Z,7.5nm,1.0s						
143A	**Socs Landing,**	**33.23**	**18**	P	**P**	**10 11 35.9**	**+0.3**
143A				IAmb	IAmb	10 11 48.2	
	comp=Z,7.9nm,1.0s						
AMTX	**Amarillo**	**33.65**	**2**	P		10 11 40.7	
	baz=182						
AMTX	**Amarillo**	**33.65**	**2**	P	**P**	**10 11 39.8**	**+0.5**
AMTX				IAmb	IAmb	10 11 58.1	
	comp=Z,4.4nm,0.8s						
GLA	**Glamis**	**33.76**	**342**	P		10 11 42.8	
	baz=158						
GLA	**Glamis**	**33.76**	**342**	P	**P**	**10 11 40.9**	**+0.7**
IKP	**In-Ko-Pah, Jac**	**33.81**	**340**	P		10 11 42.3	
	baz=155						
ANMO	**Albuquerque**	**33.87**	**355**	P		10 11 43.1	
	baz=173						
ANMO	**Albuquerque**	**33.87**	**355**	P	**P**	**10 11 42.4**	**+1.0**
SWSC	**Sam W. Stewart**	**33.98**	**340**	P		10 11 44.0	
	baz=156						
X37A	**Clayton**	**34.05**	**11**	P	**P**	**10 11 42.7**	**0.0**
X37A				IAmb	IAmb	10 11 46.2	
	comp=Z,17nm,1.4s						
Y14A	**Wickenburg**	**34.06**	**345**	P	**P**	**10 11 42.8**	**-0.1**
Y14A				IAmb	IAmb	10 11 46.0	
	comp=Z,8.2nm,1.4s						
MIAR	**Mount Ida**	**34.39**	**14**	P		10 11 46.8	
	baz=196,SNR=8.4						
MIAR	**Mount Ida**	**34.39**	**14**	P	**P**	**10 11 47.0**	**+1.4**
MIAR				IAmb	IAmb	10 11 48.9	
	comp=Z,12nm,1.0s						
W18A	**Petrified Fore**	**34.48**	**350**	P		10 11 48.0	
	baz=168						
BC3	**Big Chuckawall**	**34.51**	**341**	P		10 11 48.5	
	baz=157,SNR=5.8						
PDMCI	**Parker Dam,Lak**	**34.72**	**343**	P		10 11 50.5	
	baz=160						
TPFO	**Pinon Flats**	**34.80**	**340**	P		10 11 51.2	
	baz=155						
PFO	**Pinyon Flats O**	**34.81**	**340**	P		10 11 51.3	
	baz=155						
PFO	**Pinyon Flats O**	**34.81**	**340**	P	**P**	**10 11 50.0**	**+0.5**
PFO				IAmb	IAmb	10 11 52.8	
	comp=Z,8.5nm,1.1s						
IRM	**Iron Mountain**	**34.88**	**342**	P		10 11 51.7	
	baz=158						
W39A	**Magazine**	**34.97**	**13**	P		10 11 52.0	
	baz=196						
BELC	**Belle Mtn. Jos**	**35.01**	**341**	P		10 11 53.1	
	baz=156						
MURC	**Murrieta**	**35.06**	**339**	P		10 11 53.7	
	baz=154						
LRAL	**Lakeview Retre**	**35.09**	**23**	P		10 11 53.2	
	baz=208						
OK031	**S. Brethren Rd**	**35.14**	**8**	P	**P**	**10 11 51.7**	**-0.4**
OK031				IAmb	IAmb	10 11 54.6	
	comp=Z,7.1nm,0.9s						
WUAZ	**Wupatki**	**35.18**	**348**	P		10 11 54.8	
	baz=165						
WUAZ	**Wupatki**	**35.18**	**348**	P	**P**	**10 11 52.5**	**-0.2**
WUAZ				IAmb	IAmb	10 11 55.8	
	comp=Z,8.5nm,1.1s						
TIGA	**Tifton**	**35.24**	**29**	P		10 11 54.7	
	baz=214						
TUL1	**Leonard**	**35.26**	**10**	P		10 11 55.0	
	baz=192						
CIS	**Catalina Islan**	**35.34**	**337**	P		10 11 56.2	
	baz=152						
W13A	**Hualapai Mount**	**35.39**	**344**	P	**P**	**10 11 55.1**	**+0.6**
W13A				IAmb	IAmb	10 11 57.6	
	comp=Z,7.9nm,1.4s						
GMRC	**Granite Mounta**	**35.62**	**342**	P		10 11 58.1	
	baz=157						
BFSC	**Mount Baldy Ra**	**35.80**	**339**	P		10 12 00.3	
	baz=154						
HEC	**Hector,Ludlow**	**35.88**	**341**	P		10 12 00.9	
	baz=156						
T25A	**Trinidad**	**35.91**	**358**	P		10 12 01.0	
	baz=177						
T25A	**Trinidad**	**35.91**	**358**	P	**P**	**10 12 00.4**	**+1.4**
T25A				IAmb	IAmb	10 12 01.8	
	comp=Z,9.6nm,1.4s						
MWC	**Mount Wilson**	**35.93**	**338**	P	**P**	**10 11 58.9**	**-0.2**
MWC				IAmb	IAmb	10 12 03.0	
	comp=Z,13nm,1.3s						
PASC	**Pasadena Art C**	**35.94**	**338**	P	**P**	**10 11 58.7**	**-0.3**
PASC				IAmb	IAmb	10 12 07.9	
	comp=Z,15nm,1.4s						
U40A	**Yellville**	**36.29**	**14**	P	**P**	**10 12 03.0**	**+1.0**
U40A				IAmb	IAmb	10 12 04.4	
	comp=Z,11nm,1.1s						
U40A	**Yellville**	**36.29**	**14**	P		10 12 03.4	
	baz=197,SNR=6.3						
TUQ	**Turquoise Moun**	**36.30**	**342**	P		10 12 04.8	
	baz=157,SNR=5.9						
MVCO	**Mesa Verde**	**36.34**	**352**	P		10 12 04.9	
	baz=170						
MVCO	**Mesa Verde**	**36.34**	**352**	P	**P**	**10 12 01.4**	**-1.3**
MVCO				IAmb	IAmb	10 12 05.7	
	comp=Z,12nm,1.3s						
PLAL	**Pickwick Lake**	**36.42**	**21**	P	**P**	**10 12 02.9**	**-0.1**
PLAL				IAmb	IAmb	10 12 05.4	
	comp=Z,17nm,1.4s						
154A	**Montrose**	**36.44**	**29**	P	**P**	**10 12 04.5**	**+1.2**
EDW2	**Edwards Air Fo**	**36.50**	**339**	P		10 12 06.2	
	baz=154						
S22A	**4UR Ranch, Cre**	**36.68**	**355**	P		10 12 07.6	
	baz=173,SNR=7.3						
SBC	**Santa Barbara**	**36.77**	**336**	P		10 12 09.2	
	baz=151						
SHOC	**Shoshone, Teco**	**36.84**	**342**	P		10 12 09.5	
	baz=157						
LRMC	**Laurel Mtn Rad**	**36.92**	**340**	P		10 12 09.6	
	baz=155						
GOGA	**Godfrey**	**36.93**	**27**	P		10 12 09.1	
	baz=213						
KNB	**Kanab**	**36.94**	**347**	P	**P**	**10 12 08.1**	**+0.4**
KNB				IAmb	IAmb	10 12 15.4	
	comp=Z,19nm,1.7s						
ARVC	**Arvin**	**37.02**	**338**	P		10 12 10.3	
	baz=153						
LCMT	**Little Creek M**	**37.04**	**346**	P	**P**	**10 12 10.0**	**+1.5**
SHPR	**Sheep Range**	**37.06**	**343**	P	**P**	**10 12 09.7**	**+1.0**
PTCN	**Pitcairn Islan**	**37.08**	**224**	P	**P**	**10 12 10.4**	**+1.5**
MGMO	**Mountain Grove**	**37.19**	**14**	P	**P**	**10 12 10.7**	**+1.0**
MGMO				IAmb	IAmb	10 12 12.3	
	comp=Z,12nm,1.6s						
PKM	**Mcpherson Peak**	**37.20**	**337**	P		10 12 11.1	
	baz=151						
PV01	**Paradox Valley**	**37.26**	**352**	P	**P**	**10 12 10.7**	**+0.2**
PV05	**Paradox Valley**	**37.27**	**352**	P	**P**	**10 12 12.1**	**+1.5**
PV13	**Radium Mtn., P**	**37.31**	**352**	P	**P**	**10 12 12.0**	**+1.1**
PV13				IAmb	IAmb	10 12 13.3	
	comp=Z,15nm,1.4s						
PV02	**Paradox Valley**	**37.35**	**352**	P	**P**	**10 12 10.1**	**-1.1**
PV02				IAmb	IAmb	10 12 13.7	
	comp=Z,14nm,1.4s						
R32A	**Long Quarter,**	**37.35**	**5**	P	**P**	**10 12 11.1**	**0.0**
R32A				IAmb	IAmb	10 12 13.6	
	comp=Z,6.0nm,0.8s						
ISA	**Isabella, Lake**	**37.37**	**339**	P		10 12 13.1	
	baz=154						
ISA	**Isabella, Lake**	**37.37**	**339**	P	**P**	**10 12 12.7**	**+1.4**
PV03	**Paradox Valley**	**37.41**	**352**	P	**P**	**10 12 12.3**	**+0.5**
PV03				IAmb	IAmb	10 12 14.1	
	comp=Z,15nm,1.5s						
PV15	**Paradox Valley**	**37.45**	**353**	P	**P**	**10 12 11.9**	**-0.2**
PV15				IAmb	IAmb	10 12 14.8	
	comp=Z,15nm,1.5s						
PV12	**Saucer Basin,**	**37.47**	**352**	P	**P**	**10 12 13.7**	**+1.5**
PV12				IAmb	IAmb	10 12 15.3	
	comp=Z,9.8nm,1.1s						
PV16	**Nyswonger Mesa**	**37.48**	**352**	P	**P**	**10 12 13.2**	**+0.9**
WVT	**Waverly**	**37.54**	**20**	P		10 12 14.6	
	baz=205						
WVT	**Waverly**	**37.54**	**20**	P	**P**	**10 12 13.2**	**+0.6**
WVT				IAmb	IAmb	10 12 15.3	
	comp=Z,7.7nm,0.8s						
V48A	**Smith Brothers**	**37.55**	**22**	P	**P**	**10 12 14.1**	**+1.4**
V48A				IAmb	IAmb	10 12 15.9	
	comp=Z,9.3nm,1.1s						
FURC	**Furnace Creek,**	**37.55**	**341**	P		10 12 14.8	
	baz=156						
PV04	**Paradox Valley**	**37.56**	**352**	P	**P**	**10 12 13.1**	**+0.1**
PV04				IAmb	IAmb	10 12 16.0	
	comp=Z,14nm,1.4s						
PV07	**Paradox Valley**	**37.57**	**352**	P	**P**	**10 12 13.8**	**+0.7**
PV07				IAmb	IAmb	10 12 15.6	
	comp=Z,9.7nm,1.2s						
SMMC	**Simmler**	**37.64**	**337**	P		10 12 15.8	
	baz=151						
CBKS	**Cedar Bluff**	**37.66**	**4**	P		10 12 15.7	
	baz=185						
PV22	**Blue Mesa, Par**	**37.68**	**352**	P	**P**	**10 12 15.7**	**+1.6**
KSCO	**Kaye Shedlock'**	**37.75**	**0**	P		10 12 16.5	
	baz=180						
VES	**Vestal, Richgr**	**37.75**	**338**	P		10 12 16.4	
	baz=153						
MTPU	**Mount Pierson**	**37.78**	**348**	P	**P**	**10 12 14.7**	**-0.4**
TPNV	**Topopah Spring**	**37.80**	**342**	P		10 12 17.4	
	baz=158						
TPNV	**Topopah Spring**	**37.80**	**342**	P	**P**	**10 12 14.8**	**-0.2**
TPNV				IAmb	IAmb	10 12 18.4	
	comp=Z,11nm,1.5s						
PRN	**Pahroc Range**	**37.88**	**344**	P	**P**	**10 12 17.3**	**+1.7**
CWC	**Cottonwood Cre**	**37.93**	**340**	P		10 12 18.0	
	baz=154						
W52A	**Murphy**	**38.14**	**25**	P	**P**	**10 12 17.9**	**+0.2**
W52A				IAmb	IAmb	10 12 39.8	
	comp=Z,18nm,1.4s						
HODGE	**Hodges**	**38.17**	**28**	P	**P**	**10 12 18.1**	**+0.2**
HODGE				IAmb	IAmb	10 12 45.0	
	comp=Z,16nm,1.5s						
GRAC	**Grapevine Rang**	**38.19**	**341**	P		10 12 20.5	
	baz=156						
KSU1	**Kansas State U**	**38.26**	**8**	P		10 12 20.8	
	baz=190						
R40A	**Maddies Statio**	**38.27**	**13**	P	**P**	**10 12 19.3**	**+0.5**
R40A				IAmb	IAmb	10 12 21.8	
	comp=Z,12nm,1.2s						
NHSC	**New Hope**	**38.30**	**31**	P		10 12 20.6	
	baz=218						
CCM	**Cathedral Cave**	**38.30**	**15**	P	**P**	**10 12 19.7**	**+0.7**
CCM	**Cathedral Cave**	**38.30**	**15**	P		10 12 20.9	
	baz=199						
LPAZ	**La Paz**	**38.32**	**118**	P	**P**	**10 12 22.2**	**+2.0**
	comp=Z,5.2nm,0.6s,baz=284,slow=6.5,SNR=23						
LPAZ				PcP	**PcP**	**10 14 34.9**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=14,slow=5.1,SNR=4.1						
LPAZ				LR	LR	10 25 40.4	
	comp=Z,57nm,20.6s,baz=318,slow=32						
LPAZ	**La Paz**	**38.32**	**118**	P	**P**	**10 12 20.5**	**+0.3**
LPAZ				IAmb	IAmb	10 12 23.3	
	comp=Z,5.4nm,0.7s						
TA02	**Huaiquique**	**38.39**	**125**	P	**P**	**10 12 21.2**	**+1.2**
FVM	**French Village**	**38.45**	**16**	P	**P**	**10 12 21.0**	**+0.7**
FVM				IAmb	IAmb	10 12 23.1	
	comp=Z,7.8nm,0.9s						
PB11	**IPOC Station P**	**38.53**	**124**	P	**P**	**10 12 22.5**	**+1.1**
T47A	**Sharon Grove**	**38.56**	**20**	P	**P**	**10 12 22.7**	**+1.4**
T47A				IAmb	IAmb	10 12 24.3	
	comp=Z,11nm,1.1s						
U49A	**Red Boiling Sp**	**38.62**	**22**	P	**P**	**10 12 23.4**	**+1.7**
ISCO	**Idaho Springs**	**38.62**	**357**	P		10 12 24.2	
	baz=175						
TMUT	**Trail Mountain**	**38.81**	**350**	P	**P**	**10 12 25.5**	**+1.9**
TMUT				IAmb	IAmb	10 12 26.7	
	comp=Z,10nm,1.3s						
R11A	**Troy Canyon, C**	**38.91**	**344**	P	**P**	**10 12 24.5**	**+0.1**
R11A	**Troy Canyon, C**	**38.91**	**344**	P		10 12 26.0	
	baz=159						
V52A	**Sevierville**	**38.91**	**25**	P	**P**	**10 12 24.2**	**0.0**
V52A				IAmb	IAmb	10 12 27.1	
	comp=Z,12nm,1.3s						
O20A	**White River Ci**	**39.19**	**353**	P		10 12 28.8	
	baz=171,SNR=6.7						
O20A	**White River Ci**	**39.19**	**353**	P	**P**	**10 12 26.8**	**+0.1**
O20A				IAmb	IAmb	10 12 30.2	
	comp=Z,8.9nm,1.1s						
MLAC	**Mammoth, Mammo**	**39.26**	**340**	P		10 12 29.2	
	baz=154						
KMSC	**Kings Mountain**	**39.35**	**28**	P		10 12 29.8	
	baz=215						
RKT	**Rikitea**	**39.49**	**230**	*e*T	T	10 53 55.3	
	comp=Z,4.0nm,0.3s						
P40A	**Paris**	**39.51**	**13**	P	**P**	**10 12 28.8**	**-0.3**
P40A				IAmb	IAmb	10 12 31.7	
	comp=Z,9.3nm,0.8s						
OGNE	**Ogallala**	**39.69**	**1**	P	**P**	**10 12 30.9**	**+0.2**
OGNE				IAmb	IAmb	10 12 35.0	
	comp=Z,14nm,1.1s						
OGNE	**Ogallala**	**39.69**	**1**	P		10 12 32.7	
	baz=181						
Q44A	**Meyer Farm, Va**	**39.70**	**17**	P	**P**	**10 12 32.3**	**+1.6**
Q44A				IAmb	IAmb	10 12 34.4	
	comp=Z,16nm,1.0s						
LHV	**Little Huntoon**	**39.71**	**341**	P	**P**	**10 12 30.7**	**0.0**
N23A	**Red Feather La**	**39.73**	**356**	P		10 12 33.4	
	baz=175,SNR=5.4						
NVAR	**Mina Array Bea**	**39.80**	**341**	P	**P**	**10 12 33.6**	**+1.8**
	comp=Z,1.6nm,1.0s,baz=167,slow=8.2,SNR=9.4						
NVAR				PcP	**PcP**	**10 14 39.1**	**+1.0**
	comp=Z,2.0nm,1.1s,baz=160,slow=4.7,SNR=7.5						
NVAR	**Mina Array Bea**	**39.80**	**341**	P	**P**	**10 12 32.3**	**+0.5**
WCI	**Wyandotte Cave**	**39.96**	**20**	P		10 12 35.2	
	baz=206						
V55A	**Taylorsville**	**39.98**	**28**	P	**P**	**10 12 34.4**	**+1.3**
V55A				IAmb	IAmb	10 12 36.7	
	comp=Z,10nm,0.8s						
DUG	**Dugway, Tooele**	**39.99**	**348**	P		10 12 35.4	
	baz=164						
DUG	**Dugway, Tooele**	**39.99**	**348**	P	**P**	**10 12 32.7**	**-0.6**
Y60A	**Bolivia**	**40.03**	**32**	P	**P**	**10 12 33.2**	**-0.3**
R49A	**Shelbyville**	**40.41**	**22**	P	**P**	**10 12 37.0**	**+0.3**
R49A				IAmb	IAmb	10 12 38.9	
	comp=Z,15nm,1.3s						
LVC	**Limon Verde**	**40.55**	**128**	P	**P**	**10 12 39.4**	**+1.0**
	comp=Z,2.3nm,0.6s,baz=318,slow=12,SNR=2.0						
SAML	**Samuel**	**40.70**	**105**	P	**P**	**10 12 39.4**	**0.0**
SAML				IAmb	IAmb	10 12 41.9	
	comp=Z,11nm,1.1s						
H03N2	**Juan Fernandez**	**41.04**	**149**	T	T	10 56 32.1	
	baz=323,slow=78,SNR=8.3						
H03N1	**Juan Fernandez**	**41.05**	**149**	T	T	10 56 30.6	
	baz=323,slow=78,SNR=13						
H03N3	**Juan Fernandez**	**41.05**	**149**	T	T	10 56 34.0	
	baz=323,slow=78,SNR=7.7						
HWUT	**Hardware Ranch**	**41.12**	**350**	P	**P**	**10 12 43.6**	**+1.0**
HDIL	**Hopedale**	**41.16**	**16**	P		10 12 44.6	
	baz=201						
HDIL	**Hopedale**	**41.16**	**16**	P	**P**	**10 12 41.0**	**-1.8**
HDIL				IAmb	IAmb	10 12 45.2	
	comp=Z,11nm,0.8s						
S54A	**Dingess, Beckl**	**41.55**	**26**	P		10 12 47.5	
	baz=213						
SCIA	**State Center**	**41.55**	**11**	P	**P**	**10 12 45.4**	**-0.6**
ORV	**Oroville

comp=Z,17nm,1.3s
RSSD Black Hills 42.87 359 P P 10 12 58.5
baz=178
R56A Bull Pasture M 42.90 27 P 10 12 58.9
baz=216
LOHW Long Hollow 42.92 352 P **P** **10 12 57.7 +0.3**
P53A Whipple 42.93 24 P **P** **10 12 56.9 -0.4**
P53A IAmb IAmb 10 13 00.4
comp=Z,13nm,0.9s
ACSO Alum Creek Sta 42.93 22 P 10 12 58.8
baz=210
JFWS Jewell Farm 43.14 13 P 10 13 00.1
baz=198
Q56A Snyder Ridge, 43.52 27 P 10 13 03.1
baz=215
HLID Hailey 43.55 348 P P 10 13 04.5
baz=163
HLID Hailey 43.55 348 P **P** **10 13 02.9 +0.4**
I37A Lemond, Waseca 43.56 10 P **P** **10 13 01.8 -0.5**
I37A IAmb IAmb 10 13 04.6
comp=Z,9.0nm,0.9s
O53A New Philadelph 43.64 24 P 10 13 04.0
baz=212,SNR=5.6
MFID Camas Ranch 43.73 346 P **P** **10 13 03.9 +0.1**
M50A Fremont 43.93 21 P **P** **10 13 04.1 -1.1**
M50A IAmb IAmb 10 13 07.0
comp=Z,8.4nm,0.9s
I40A Norwalk 43.99 13 P **P** **10 13 05.9 +0.1**
I40A IAmb IAmb 10 13 07.1
comp=Z,15nm,1.2s
M04C Macdoel 44.01 339 P 10 13 08.2
baz=152
M02C Callahan 44.03 338 P 10 13 08.2
baz=150
BCYI Bear Canyon 44.07 349 P **P** **10 13 07.0 +0.3**
M51A Elyria 44.19 22 P 10 13 08.7
baz=210
YNE Yellowstone No 44.21 353 P **P** **10 13 07.9 +0.1**
QLMT Earthquake Lak 44.23 351 P **P** **10 13 08.8 +0.9**
N53A Lisbon 44.27 24 P **P** **10 13 07.8 -0.2**
YBH Yreka Blue Hor 44.27 339 P **P** **10 13 08.8 +0.6**
YBH IAmb IAmb 10 13 09.6
comp=Z,9.0nm,1.3s
MCMT McKenzie Canyo 44.47 350 P **P** **10 13 10.9 +1.0**
AAM Ann Arbor 44.50 20 P **P** **10 13 10.6 +0.7**
AAM IAmb IAmb 10 13 12.4
comp=Z,7.2nm,0.9s
L04D Klamath Falls 44.55 339 P 10 13 12.0
baz=152
N54A Moraine State 44.75 25 P 10 13 13.1
baz=213,SNR=5.5
N54A Moraine State 44.75 25 P **P** **10 13 12.5 +0.6**
SPMN Marine on St. 44.84 10 P **P** **10 13 12.4 -0.1**
SPMN IAmb IAmb 10 13 14.8
comp=Z,6.4nm,0.9s
SPMN Marine on St. 44.84 10 P 10 13 13.3
baz=194
M53A WI Miller and 44.87 24 P 10 13 14.2
baz=212
DLMT Dillon 44.94 350 P **P** **10 13 14.6 +1.1**
J05D Fort Rock, OR 45.14 341 P 10 13 17.4
baz=153
O57A Amberson 45.16 27 P 10 13 17.0
baz=217
ALLY Alegheny Colle 45.26 24 P **P** **10 13 16.4 +0.5**
I07A Izee 45.33 343 P **P** **10 13 16.5 0.0**
M54A Oil Creek Stat 45.34 25 P 10 13 17.8
baz=213
E28A Huff 45.35 2 P **P** **10 13 16.6 0.0**
J04D Umpqua Nationa 45.39 340 P 10 13 19.2
baz=152
SSPA Standing Stone 45.39 27 P 10 13 18.5
baz=216
K02D Willamette Mer 45.46 338 P 10 13 20.1
baz=150
L53A Girard 45.47 24 P 10 13 19.0
baz=212
O59A Robesonia 45.92 28 P 10 13 22.3
baz=218
M56A Emporium 45.95 26 P 10 13 22.9
baz=215
I05D Terrebonne, OR 46.12 342 P 10 13 24.7
baz=154
I03D Drain, OR 46.22 339 P 10 13 26.0
baz=151
M57A Sunshine Farm, 46.30 27 P 10 13 25.9
baz=217
WVNY West Valley, N 46.52 25 P **P** **10 13 27.4 +1.4**
N59A State Game Lan 46.59 28 P 10 13 28.1
baz=218
H04A Detroit Lake 46.70 341 P **P** **10 13 28.2 +0.9**
H04D Lebanon 46.73 340 P 10 13 29.1
baz=152
L56A Greenwood 46.75 26 P 10 13 29.0
baz=216
I51A Listowel 46.75 22 P 10 13 28.6
baz=210
I02D Swisshome 46.75 339 P 10 13 29.2
baz=150
N60A Cedar Hill Far 46.88 29 P 10 13 29.9
baz=219
L57A Andrews Acres 46.95 27 P 10 13 31.1
baz=217
AGMN Agassiz Nation 47.41 6 P 10 13 34.5
baz=189
AGMN Agassiz Nation 47.42 6 P **P** **10 13 33.0 +0.3**
AGMN IAmb IAmb 10 13 34.5
comp=Z,10nm,1.4s
BINY Binghamton 47.50 27 P 10 13 35.4
baz=218
BI02 San Fabin de 47.61 145 P **P** **10 13 35.3 +0.8**
K57A Scipio Center 47.69 26 P 10 13 36.5
baz=217
EYMN Ely 47.70 10 P 10 13 36.4
baz=195
EYMN Ely 47.70 10 P **P** **10 13 35.5 +0.5**
B35A Bob, Littlefor 47.75 8 IAmb IAmb 10 13 37.5
comp=Z,12nm,1.4s
M61A Granite Spring 47.86 30 P 10 13 37.3
baz=221
J56A Wolcott 47.98 25 P 10 13 38.4
baz=216
K58A Earlville 48.10 27 P 10 13 39.0
baz=218
L60A Shokan 48.16 29 P 10 13 40.0
baz=220
SADO Sadowa 48.28 23 IAmb IAmb 10 13 41.3
comp=Z,6.9nm,0.9s
H53A Bobcaygeon 48.33 23 P 10 13 41.5
baz=213
K59A Cooperstown 48.47 27 P 10 13 42.6
baz=219
E04D Cinebar 48.49 342 P 10 13 43.0
baz=153
M63A Gales Ferry 48.80 31 P 10 13 45.3
baz=223
I57A Carthage 49.02 26 P 10 13 46.7
baz=217
I58A Old Forge 49.13 27 P 10 13 47.2
baz=218
K61A Williamstown 49.13 29 P 10 13 47.4
baz=220
J59A Piesco 49.17 27 P 10 13 47.4
baz=219
G54A Lake Saint Pet 49.21 23 P 10 13 48.1
baz=213
ULM Lac du Bonnet 49.34 6 P **P** **10 13 47.0 -0.6**
comp=Z,8.8nm,1.1s,baz=195,slow=8.3,SNR=10
ULM Lac du Bonnet 49.34 6 P **P** **10 13 47.7 +0.1**
ULM IAmb IAmb 10 13 48.9
comp=Z,7.8nm,1.0s
PPT Papeete 49.65 246 LR LR 10 28 05.1
comp=Z,67nm,19.8s,baz=63,slow=28
PPT2 Papeete2 49.65 246 *e*LR LR 10 27 48.6
comp=Z,182nm,26.0s
ALGO Algonquin Park 49.69 23 P 10 13 51.9
baz=213
L64A Middleborough 49.80 31 P 10 13 53.1
baz=224
I60A Shoreham 50.02 28 P 10 13 54.0
baz=220
G57A Newington 50.24 25 P 10 13 55.6
baz=217
G58A Ormstown 50.69 26 P 10 13 58.8
baz=218
H60A Morristown 50.84 28 P 10 14 00.0
baz=220

TRQ Mont Tremblant 51.32 25 P **P** **10 14 03.0 +0.3**
E56A St. Veronique 51.38 24 P 10 14 04.6
baz=216
TBI Tubuai 51.45 239 *e*LR LR 10 28 48.5
comp=Z,155nm,26.8s
D55A Sainte-Anne-du 51.58 24 P 10 14 06.0
baz=216
CPUP Villa Florida 51.61 125 P **P** **10 14 04.6 -0.5**
comp=Z,2.6nm,0.7s,baz=295,slow=7.4,SNR=6.5
LSQQ Lebel-sur-Quev 52.69 21 P 10 14 13.3
baz=213
D58A Chemin du LacG 52.72 25 P 10 14 14.5
baz=219
MATQ Matagami 53.05 20 P 10 14 16.8
baz=212
FFC Flin Flon 53.48 1 P P **10 14 19.0 +0.5**
F64A Sherman 53.88 29 P 10 14 22.0
baz=224
CHGQ Chibougamau 54.35 22 P 10 14 26.0
baz=216
D62A Allapoint, All 54.42 28 P 10 14 26.5
baz=223
BDFB Brasilia 56.60 109 P P **10 14 41.9 -0.1**
comp=Z,3.8nm,0.5s,baz=274,slow=9.6,SNR=7.3
FCC Fort Churchill 57.93 5 P **P** **10 14 50.6 +0.3**
FCC IAmb IAmb 10 14 52.1
comp=Z,7.0nm,0.9s
DLBC Dease Lake 61.09 344 P **P** **10 15 13.0 +0.7**
SIT Sitka 61.56 340 P 10 15 16.7
baz=142
YKA Yellowknife Ar 61.90 354 P **P** **10 15 16.9 -0.7**
comp=Z,3.3nm,1.0s,baz=163,slow=6.7,SNR=25
CRQE Cirque 67.00 340 P 10 15 52.4
baz=135
BMRM Bremner River 67.68 339 P 10 15 57.1
baz=134
N25K Chitina, Valde 68.12 340 P 10 16 00.5
baz=134
BCAR Beaver Creek A 68.25 342 P **P** **10 15 59.8 +0.8**
DAWY Dawson 68.30 344 P **P** **10 16 00.1 +0.8**
M24K Tolsona, Glenn 69.01 340 P 10 16 05.1
baz=133
K27K Chicken 69.05 343 P **P** **10 16 05.2 +1.3**
K27K Chicken 69.05 343 P 10 16 05.0
baz=137
EGAK Eagle 69.34 343 P **P** **10 16 06.7 +1.0**
EGAK Eagle 69.34 343 P 10 16 07.1
baz=138
EPYK Eagle Plains 69.42 346 P 10 16 07.0
baz=143
SML Sawmill 69.57 339 P 10 16 08.0
baz=130
WAT6 Susitna Watana 69.87 340 P 10 16 10.2
baz=131
WAT2 Susitna Watana 70.41 340 P 10 16 13.1
baz=130
HDA Harding Lake 70.83 341 P 10 16 15.2
baz=132
HDA P 10 16 15.2
baz=132
MCK McKinley 71.03 340 P 10 16 16.3
baz=130
ILAR Eielson Array 71.06 342 P P **10 16 15.9 -0.3**
comp=Z,3.9nm,0.8s,baz=155,slow=5.4,SNR=30
ILAR Eielson Array 71.06 342 P **P** **10 16 15.7 -0.5**
PRP Porcupine Dome 71.15 343 P 10 16 17.1
baz=134
SDPT Sand Point 71.30 329 P 10 16 17.4
baz=117
NEA2 Nenana 71.64 341 P **P** **10 16 19.8 +0.1**
NEA2 Nenana 71.64 341 P 10 16 20.0
baz=130
PPLA Purkeypile 71.66 339 P 10 16 20.1
baz=127
I23K Minto, Yukon-K 72.09 341 P 10 16 22.7
baz=130
CHUM Lake Minchumin 72.30 339 P 10 16 23.5
baz=127
MLY Manley 72.47 341 P **P** **10 16 24.1 -0.6**
MLY Manley 72.47 341 P 10 16 25.0
baz=129
FALS False Pass 72.61 328 P 10 16 26.2
baz=114
RES Resolute Bay 73.67 2 P **P** **10 16 31.7 +0.1**
RES IAmb IAmb 10 16 33.0
comp=Z,4.7nm,0.9s
COLD Coldfoot 73.70 343 P 10 16 33.2
baz=130,SNR=6.8
COLD Coldfoot 73.70 343 P **P** **10 16 33.2 +1.2**
TOLK Toolik Lake Re 74.44 344 P 10 16 36.3
baz=131,SNR=5.2
ANM Nome 77.54 337 P 10 16 54.5
baz=114
RDOG Red Dog Mine 78.19 341 P 10 16 58.9
baz=118
TNA Tin City 78.93 337 P 10 17 02.9
baz=112
ICESG Greenland Ices 79.65 19 *i* P **P** **10 17 07.0 +1.0**
ICESG IAmb IAmb 10 17 08.8
comp=Z,12nm,0.9s
NEEM North Greenlan 81.16 10 *i* P **P** **10 17 14.1 +0.2**
NEEM IAmb IAmb 10 17 14.8
comp=Z,1.8nm,0.7s
SUMG Summit 81.47 16 *i* P **P** **10 17 16.0 +0.2**
SUMG IAmb IAmb 10 17 18.7
comp=Z,5.2nm,0.8s
H11N3 WAKE ISLAND Hy 89.92 290 T T 11 57 12.8
baz=91,slow=76,SNR=14
H11N2 WAKE ISLAND Hy 89.93 290 T T 11 57 11.0
baz=91,slow=76,SNR=8.7
H11N1 WAKE ISLAND Hy 89.94 290 T T 11 57 11.7
baz=91,slow=76,SNR=7.2
H11S2 WAKE ISLAND Hy 90.14 288 T T 11 57 16.6
baz=96,slow=13,SNR=7.5
H11S1 WAKE ISLAND Hy 90.14 288 T T 11 57 18.3
baz=96,slow=13,SNR=6.4
H11S3 WAKE ISLAND Hy 90.15 288 T T 11 57 18.9
baz=96,slow=13,SNR=4.6
PETK Petropavlovsk- 94.86 323 P **P** **10 18 19.9 -0.6**
comp=Z,3.3nm,1.0s,baz=102,slow=6.6,SNR=5.0
ASAR Alice Springs 120.72 243 PKP **PKPdf** **10 23 47.7 -3.8**
comp=Z,0.4nm,0.8s,baz=180,slow=3.1,SNR=2.3
WRA Warramunga Arr 121.12 247 PKP **PKPdf** **10 23 49.0 -3.3**
comp=Z,0.7nm,0.7s,baz=97,slow=1.9,SNR=9.7
BRTR Keskin Array B 123.15 39 PKP **PKPdf** **10 23 54.5 -1.3**
comp=Z,0.9nm,0.6s,baz=256,slow=1.6,SNR=4.0
ZALV Zalesovo Beam 124.80 355 PKP **PKPdf** **10 23 56.7 -1.7**
comp=Z,0.6nm,0.5s,baz=46,slow=2.7,SNR=3.6
SONM Songino Array 125.05 336 PKP **PKPdf** **10 23 58.5 -0.7**
comp=Z,0.6nm,0.9s,baz=2.7,slow=3.0,SNR=3.1
MKAR Makanchi Array 132.12 355 PKP **PKPdf** **10 24 12.1 -0.5**
comp=Z,0.8nm,0.6s,baz=30,slow=2.0,SNR=9.0
MKAR Makanchi Array 132.12 355 PKPdf **PKPdf** **10 24 12.6 0.0**
LZH Lanzhou 135.47 329 PKP **PKPdf** **10 24 14.3 -5.1**
CMAR Chiang Mai Arr 151.12 313 PKP **PKPdf** **10 24 43.9 -3.0**
comp=Z,0.6nm,0.3s,baz=337,slow=1.7,SNR=5.2
CMAR PKPbc **PKPbc** **10 24 52.7 0.0**
comp=Z,1.3nm,0.7s,baz=357,slow=1.2,SNR=9.6
CMAR PKPab **sPKPbc** **10 24 58.4 +2.6**
comp=Z,1.3nm,0.6s,baz=29,slow=2.9,SNR=5.8

*IDC **18** 10:07:14.4±2.3,6°.25S×130°.37E,h100km±24km, mb3.5/5, mb1 3.8/10,mb1mx3.5/32,mbtmp4.1/10,MS2.8/1, Ms1 2.8/1,ms1mx2.3/24,Error ellipse: s-maj=22.7km s-min=16.2km az=73.0*

*DJA **18** 10:07:15.8±0.4,6°.5S±2°×13°.0E±°,h143km±7km,M4.4/10, mb4.3/5,mB5.0/5,MLv4.5/10,Mw(mB)4.4/5*

ISC 18 10:07:15.5±0.7,6°.19S±0°.05×130°.37E±0°.07,h124km,n19, σ2s72/22,mb3.7/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.72**	**344**	P	**Pn**	**10 07 47.7**	**+1.9**
BNDI				S	**Sn**	**10 08 11.6**	**+2.7**
SAUI	**Saumlaki**	**2.00**	**153**	P	**Pn**	**10 07 52.2**	**+3.0**
SAUI				S	**Sn**	**10 08 16.8**	**+1.8**
FAKI	**Fak Fak**	**3.75**	**30**	P	**Pn**	**10 08 11.2**	**-0.6**
SIJI	**Sorong**	**5.36**	**10**	P	**Pn**	**10 08 32.5**	**-0.9**
	12nm,0.3s,baz=204,slow=23,SNR=44						
SIJI				S	**Sn**	**10 09 29.1**	**-5.0**
	16nm,0.3s,baz=242,slow=23,SNR=18						
SWI	**Sorong**	**5.37**	**10**	P	**Pn**	**10 08 32.8**	**-0.6**
SANI	**Sanana**	**6.00**	**313**	P	**Pn**	**10 08 43.2**	**+1.2**
	0.1nm17nm,0.7s						
SOEI	**Soe**	**7.01**	**239**	P	**Pn**	**10 08 58.0**	**+2.3**
	0.3nm85nm,1.0s						
BATI	**Baumata**	**7.75**	**239**	P	**Pn**	**10 09 05.8**	**+0.2**
	10nm,0.3s,baz=185,slow=1.4,SNR=9.8						
BATI				S	**Sn**	**10 10 30.5**	**-1.4**
	8.2nm,0.3s,baz=59,slow=7.4,SNR=2.5						
BATI	**Baumata**	**7.75**	**239**	P	**Pn**	**10 09 06.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**12.71**	**201**	P	**Pn**	**10 10 09.4**	**-2.4**
	1.8nm,0.3s,baz=18,slow=9.3,SNR=20						
FITZ				S	Sn	10 12 21.4	-11
	3.5nm,0.3s,baz=98,slow=17,SNR=11						
WRA	**Warramunga Arr**	**14.20**	**165**	P	**Pn**	**10 10 29.3**	**-1.8**
	1.2nm,0.3s,baz=341,slow=14,SNR=21						
WRA				S	Sn	10 12 58.3	-10
	3.3nm,0.3s,baz=350,slow=18,SNR=9.9						
JAGI	**Jajag, Banyuwa**	**16.25**	**261**	P	Pn	10 10 46.0	-11
ASAR	**Alice Springs**	**17.70**	**169**	P	**Pn**	**10 11 15.2**	**+0.8**
	0.9nm,0.3s,baz=347,slow=9.8,SNR=29						
ASAR				S	**S**	**10 14 23.6**	**-7.7**
	0.8nm,0.3s,baz=350,slow=25,SNR=12						
CTA	**Charters Tower**	**20.71**	**133**	P	**P**	**10 11 46.8**	**+0.7**
	2.1nm,0.6s,baz=283,slow=18,SNR=1.8						
STKA	**Stephens Creek**	**27.62**	**159**	P	**P**	**10 12 51.4**	**-0.1**
	0.8nm,0.5s,baz=106,slow=24,SNR=1.3						
JCJ	**Chichijima**	**35.01**	**19**	LR	LR	10 28 47.5	
	comp=Z,12nm,18.0s,baz=322,slow=37						
CMAR	**Chiang Mai Arr**	**39.51**	**309**	P	**P**	**10 14 34.2**	**-0.1**
	0.8nm,0.4s,baz=131,slow=6.0,SNR=5.3						
SONM	**Songino Array**	**57.80**	**341**	P	**P**	**10 16 56.6**	**+2.7**
	0.4nm,0.8s,baz=146,slow=7.2,SNR=1.9						
MKAR	**Makanchi Array**	**67.76**	**326**	P	**P**	**10 18 02.1**	**+2.3**
	1.0nm,0.6s,baz=124,slow=8.0,SNR=11						

IDC 18 10:18:07.5±1.5,15°.88N×144°.73E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/35,mbtmp3.4/4,Error ellipse: s-maj=68.7km s-min=27.8km az=97.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**21.14**	**80**	T	T	10 43 25.0	
	baz=274						
H11S1	**WAKE ISLAND Hy**	**21.15**	**80**	T	T	10 43 23.8	
	baz=274						
H11S2	**WAKE ISLAND Hy**	**21.16**	**80**	T	T	10 43 27.2	
	baz=274						
H11N1	**WAKE ISLAND Hy**	**21.44**	**76**	T	T	10 43 40.6	
	baz=272						
H11N2	**WAKE ISLAND Hy**	**21.45**	**76**	T	T	10 43 41.2	
	baz=272						
H11N3	**WAKE ISLAND Hy**	**21.46**	**76**	T	T	10 43 32.8	
	baz=272						
WRA	**Warramunga Arr**	**37.03**	**196**	P	P	10 25 19.3	0.0
	0.9nm,0.7s,baz=22,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**40.70**	**195**	P	P	10 25 49.9	-0.2
	0.2nm,0.7s,baz=14,slow=9.8,SNR=5.7						
MKAR	**Makanchi Array**	**59.77**	**315**	P	P	10 28 14.0	-0.4
	0.2nm,0.5s,baz=100,slow=7.9,SNR=1.9						
YKA	**Yellowknife Ar**	**80.90**	**28**	P	P	10 30 23.6	+0.2
	0.2nm,0.9s,baz=288,slow=5.0,SNR=3.9						

*WEL **18** 11:16:00,35°.68S×179°.00W,h36km,ML5.9,Mw5.2, Moment Tensor Solution. s4 Moment tensor: Scale 10^16 Nm; Mrr2.37; Mθθ-1.96; Mϕϕ-0.41; Mrθ-2.78; Mθϕ-4.37; Mϕr3.31; Fault plane solution: M06.40000×10^16 NP1: ϕ±13.00000°,δ62.00000°,λ33.00000°. NP2:ϕ±267.00000°, δ62.00000°,λ147.00000°. Principal axes: T 7164.3600, Plg41.0000°, Azm230.0000°; N -5627.7100, Plg49.0000°, Azm50.0000°; P -1536.6400, Plg0.0000°, Azm140.0000°;*

*WEL **18** 11:16:01.3±0.7,35°.5S±8°×18°.0W±1°.8,h162km±20km, M5.5/25,mB5.7/13,ML6.4/6,MLv6.0/25,Mw(mB)5.3/13 Error ellipse: s-maj=0.0km s-min=0.0km az=113.1*

*MOS **18** 11:16:04.7±0.8,34°.85S×179°.73E,h48km,mb5.5/32,Error ellipse: s-maj=11.3km s-min=8.6km az=101.7*

*NEIC **18** 11:16:05.3±1.6,34°.87S±0°.09×179°.76E±0°.07,h45km±3km, mb5.4/93,Error ellipse: s-maj=12.4km s-min=8.0km az=184.0*

*BJI **18** 11:16:05.0±0.0,35°.10S×180°.00E,h58km,mB5.6/13, mb5.2/24,Ms5.0/15,Ms7 4.7/15*

*GCMT **18** 11:16:05.3±0.1,35°.02S±0°.01×179°.78W±0°.01,h42km, MW5.2/127,Moment Tensor Solution. s96,c152; s127,c196; Duration: 1ᵗ0 Moment tensor: Scale 10^17 Nm; Mrr0.53±.02; Mθθ-0.06±.01; Mϕϕ-0.46±.01; Mrθ0.06±.01; Mθϕ-0.27±.01; Mϕr0.68±.02; Best double couple: M0.89100×10^17 NP1:ϕ±224.00000°,δ23.00000°, λ122.00000°. NP2:ϕ±10.00000°,δ71.00000°,λ77.00000°. Principal axes: T 0.8830, Plg62.0000°, Azm260.0000°; N 0.0160, Plg12.0000°, Azm14.0000°; P -0.8990, Plg25.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **18** 11:16:06.5±1.1,34°.86S×179°.87E,h53km±8km,mb4.6/21, mb1 4.7/22,mb1mx4.6/37,mbtmp4.9/22,MS4.6/22, Ms1 4.6/22,ms1mx4.5/27 Error ellipse: s-maj=11.2km s-min=9.7km az=128.0*

ISC 18 11:16:05.3±0.5,34°.91S±0°.04×179°.91E±0°.05,h46km±3km, h46km:pP-P,n568,σ1s79/641,mb5.3/93,MS4.7/33,8C-7D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.95**	**206**	Pn	**Pn**	**11 16 49.3**	**-0.4**
MXZ	**Matakaoa Point**	**2.95**	**206**	P	**Pn**	**11 16 49.2**	**-0.4**
WMGZ	**Waiomatatini S**	**3.15**	**202**	P	**Pn**	**11 16 52.8**	**+0.4**
HAZ	**Te Kaha**	**3.32**	**210**	P	**Pn**	**11 16 56.2**	**+1.5**
HAZ				S	**Sn**	**11 17 37.8**	**+4.9**
PKGZ	**Pakihiroa**	**3.32**	**206**	P	**Pn**	**11 16 55.2**	**+0.4**
PUZ	**Puketiti**	**3.43**	**202**	P	**Pn**	**11 16 56.6**	**+0.4**
RUGZ	**Raukumara Rang**	**3.54**	**210**	P	**Pn**	**11 17 00.0**	**+2.1**
TWGZ	**Tauwhareparae**	**3.61**	**205**	P	**Pn**	**11 16 59.8**	**+1.0**
CNGZ	**Carnagh Statio**	**3.82**	**200**	P	**Pn**	**11 17 01.7**	**+0.1**
KUZ	**Kuaotunu**	**3.87**	**240**	P	**Pn**	**11 17 05.6**	**+3.4**
TKGZ	**Te Karaka**	**3.90**	**205**	P	**Pn**	**11 17 02.7**	**+0.1**
MWZ	**Matawai**	**3.92**	**209**	P	**Pn**	**11 17 03.6**	**+0.7**
URZ	**Urewera**	**4.03**	**213**	P	**Pn**	**11 17 05.2**	**+0.7**
	185nm,0.3s,baz=27,slow=8.1,SNR=408						
URZ				S	**Sn**	**11 17 51.6**	**+1.2**
	281nm,0.3s,baz=223,slow=23,SNR=11						
URZ	**Urewera**	**4.03**	**213**	Pn	**Pn**	**11 17 05.7**	**+1.2**
URZ	**Urewera**	**4.03**	**213**	P	**Pn**	**11 17 06.3**	**+1.8**
MUGZ	**Murupara**	**4.37**	**214**	P	**Pn**	**11 17 10.2**	**+1.1**
SNGZ	**Shannon Statio**	**4.38**	**207**	P	**Pn**	**11 17 10.9**	**+1.6**
KNZ	**Kokohu**	**4.48**	**203**	P	**Pn**	**11 17 10.2**	**-0.4**
TOZ	**Tahuroa Road**	**4.54**	**230**	P	**Pn**	**11 17 14.0**	**+2.6**
BKZ	**Black Stump Fm**	**5.05**	**212**	P	**Pn**	**11 17 19.4**	**+0.8**
CKHZ	**Cape Kidnapper**	**5.25**	**205**	P	**Pn**	**11 17 18.2**	**-3.1**
BHHZ	**Black Hill Sta**	**5.51**	**213**	P	**Pn**	**11 17 25.2**	**+0.4**
BHHZ				S	**Sn**	**11 18 26.2**	**-0.6**
GLKZ	**Green Lake**	**5.92**	**19**	P	Pn	11 17 25.2	-5.3
GLKZ				S	**Sn**	**11 18 29.9**	**-7.0**
RAO	**Raoul Island**	**5.93**	**19**	P	**Pn**	**11 17 30.8**	**+0.2**
	81nm,0.3s,baz=59,slow=13,SNR=6.5						
RAO				S	**Sn**	**11 18 35.0**	**-2.2**
	171nm,0.3s,baz=103,slow=21,SNR=4.2						
PRHZ	**Porangahau**	**5.95**	**205**	P	**Pn**	**11 17 28.1**	**-2.7**
PRHZ				S	**Sn**	**11 18 32.9**	**-4.6**
DVHZ	**Dannevirke**	**6.15**	**208**	P	**Pn**	**11 17 31.8**	**-1.7**
DVHZ				S	**Sn**	**11 18 39.7**	**-2.8**
POWZ	**Post Office Ro**	**6.38**	**210**	P	**Pn**	**11 17 35.2**	**-1.5**
POWZ				S	**Sn**	**11 18 46.9**	**-1.4**
PRWZ	**Pori Road**	**6.44**	**208**	P	**Pn**	**11 17 35.8**	**-1.8**
PRWZ				S	**Sn**	**11 18 47.2**	**-2.6**
BFZ	**Birch Farm**	**6.45**	**206**	P	**Pn**	**11 17 34.9**	**-2.8**
BFZ				S	**Sn**	**11 18 47.2**	**-2.8**
TIWZ	**Tintock**	**6.67**	**207**	P	**Pn**	**11 17 38.7**	**-2.0**
TIWZ				S	**Sn**	**11 18 52.0**	**-3.3**
CPWZ	**Castlepoint**	**6.67**	**205**	P	**Pn**	**11 17 37.5**	**-3.1**
CPWZ				S	**Sn**	**11 18 51.7**	**-3.6**
MRZ	**Mangatainoka R**	**6.69**	**210**	P	**Pn**	**11 17 39.2**	**-1.7**
MRZ				S	**Sn**	**11 18 50.3**	**-5.5**
HOWZ	**Holdsworth Sta**	**6.92**	**209**	P	**Pn**	**11 17 41.9**	**-2.1**
TMWZ	**Te Maipa**	**6.95**	**206**	P	**Pn**	**11 17 40.6**	**-4.0**
TMWZ				S	**Sn**	**11 18 58.3**	**-4.1**
MTW	**Mount Morrison**	**7.14**	**208**	P	**Pn**	**11 17 43.3**	**-3.8**
RPZ	**Rata Peaks**	**11.15**	**215**	P	Pn	11 18 36.5	-5.5
	2.6nm,0.3s,baz=10,slow=0.8,SNR=14						
RPZ				S	Sn	11 20 34.4	-11
	24nm,0.3s,baz=10,slow=20,SNR=13						
NFK	**Norfolk Island**	**11.72**	**297**	P	**Pn**	**11 18 52.7**	**+2.9**

baz=12,SNR=4.8
MSVF Nonsavu 17.18 354 P **P** **11 20 03.1 -0.1**
2.9nm,0.3s,baz=302,slow=23,SNR=10
MSVF LR LR 11 25 12.9
comp=Z,2µm,19.9s,baz=175,slow=32
MSVF Nonsavu 17.18 354 *i* P **P** **11 20 02.6 -0.6**
MSVF pmax pmax
comp=Z,20nm,0.6s
MSVF Nonsavu 17.18 354 P **P** **11 20 03.8 +0.5**
DZM Mont Dzumac 17.40 314 *e*Pn **P** **11 20 09.6 +3.9**
comp=Z,196nm,1.0s
DZM *e*LQ LQ 11 23 32.8
comp=Z,4µm,30.4s
DZM *e*LR LR 11 24 16.7
comp=Z,9µm,24.7s
DZM Mont Dzumac 17.40 314 P **P** **11 20 09.2 +3.6**
comp=Z,1.3nm,0.3s,baz=126,slow=18,SNR=18
DZM S **Sn** **11 23 08.7 -8.9**
comp=Z,1.4nm,0.3s,baz=21,slow=5.7,SNR=20
DZM LR LR 11 25 45.8
comp=Z,6µm,18.3s,baz=136,slow=33
DZM Mont Dzumac 17.40 314 P **P** **11 20 09.5 +3.9**
RAR Rarotonga 22.47 58 P **P** **11 21 04.9 +4.2**
comp=Z,62nm,1.0s,baz=208,slow=6.0,SNR=4.9
RAR LR LR 11 27 47.8
comp=Z,1µm,21.8s,baz=206,slow=31
MGCD Mangrove Creek 23.89 266 P **P** **11 21 21.6 +6.9**
baz=24,SNR=15
ARMA Armidale 24.18 273 P **P** **11 21 23.2 +5.7**
baz=24,SNR=16
ARMA Armidale 24.18 273 P **P** **11 21 21.4 +3.9**
CNB Canberra Magne 24.95 260 P **P** **11 21 28.7 +4.3**
baz=25,SNR=30
CAN Canberra 25.24 260 P **P** **11 21 31.9 +4.9**
CAN pmax pmax
comp=Z,78nm,1.0s
CAN Canberra 25.24 260 P **P** **11 21 31.9 +4.9**
CAN IAmb IAmb 11 21 36.8
comp=Z,78nm,1.0s
YNG Young 25.89 262 P **P** **11 21 36.9 +4.0**
baz=26,SNR=5.6
TAU Tasmania Unive 26.46 243 P **P** **11 21 39.6 +1.7**
TAU pmax pmax
comp=Z,107nm,1.4s
TAU Tasmania Unive 26.46 243 P **P** **11 21 39.6 +1.7**
TAU IAmb IAmb 11 22 00.1
comp=Z,107nm,1.4s
EIDS Eidsvold 26.60 283 P **P** **11 21 43.3 +4.0**
baz=27,SNR=7.8
EIDS Eidsvold 26.60 283 P **P** **11 21 43.4 +4.0**
EIDS IAmb IAmb 11 21 56.7
comp=Z,90nm,1.4s
TOO Toolangi 27.80 254 P **P** **11 21 52.7 +2.7**
baz=28,SNR=12
TOO Toolangi 27.80 254 P **P** **11 21 53.6 +3.6**
TOO pmax pmax
comp=Z,34nm,0.7s
TOO Toolangi 27.80 254 P **P** **11 21 53.6 +3.6**
RMQ Roma 27.98 279 P **P** **11 21 53.8 +2.0**
baz=28,SNR=17
CMSA Cobar Meteorol 28.74 267 P **P** **11 22 01.5 +3.1**
baz=29,SNR=40
TBI Tubuai 29.02 75 *e*S S 11 26 59.7 +11
comp=Z,258nm,27.2s
TBI *e*LR LR 11 29 27.0
comp=Z,4µm,27.2s,baz=237
TBI Tubuai 29.02 75 *e*T T 11 51 59.0
comp=Z,28nm,0.3s
ARPS Mount Arapiles 30.79 255 P **P** **11 22 18.9 +2.5**
baz=31,SNR=38
HNR Honiara 31.25 320 P **P** **11 22 21.1 +0.5**
comp=Z,142nm,0.9s,baz=225,slow=3.6,SNR=5.7
QLP Quilpie 31.63 275 P **P** **11 22 27.4 +3.4**
baz=32,SNR=15
STKA Stephens Creek 32.00 264 P **P** **11 22 29.4 +2.1**
comp=Z,28nm,0.9s,baz=87,slow=9.4,SNR=17
STKA PcP **PcP** **11 25 15.4 -0.9**
comp=Z,4.1nm,0.6s,baz=117,slow=9.1,SNR=3.1
STKA LR LR 11 34 29.0
comp=Z,2µm,19.0s,baz=100,slow=34
STKA Stephens Creek 32.00 264 P **P** **11 22 30.0 +2.8**
baz=32,SNR=10
STKA Stephens Creek 32.00 264 *i* P **P** **11 22 26.4 -0.8**
STKA Stephens Creek 32.00 264 P **P** **11 22 30.3 +3.0**
PAE Paea 32.13 66 *e*T T 11 56 05.7
comp=Z,9.4nm,0.2s
PPT2 Papeete2 32.17 65 *e*S S 11 27 50.2 +11
comp=Z,176nm,26.8s
PPT2 *e*LR LR 11 30 50.7
comp=Z,5µm,26.2s,baz=233
PPT2 Papeete2 32.17 65 *e*T T 11 56 09.0
comp=Z,10nm,0.3s
PPT Papeete 32.19 65 LR LR 11 32 17.7
comp=Z,1µm,21.2s,baz=244,slow=30
KNTN Kanton 32.91 16 P **P** **11 22 36.4 +1.2**
KNTN IAmb IAmb 11 22 41.3
comp=Z,41nm,0.9s
CTA Charters Tower 33.12 288 P **P** **11 22 40.9 +3.7**
comp=Z,60nm,0.9s,baz=112,slow=11,SNR=35
CTA LR LR 11 35 17.2
comp=Z,708nm,20.5s,baz=105,slow=35
CTAO Charters Tower 33.12 288 P **P** **11 22 40.6 +3.5**
CTAO pmax pmax
comp=Z,80nm,1.0s
CTAO Charters Tower 33.12 288 P **P** **11 22 40.6 +3.5**
CTAO IAmb IAmb 11 22 43.0
comp=Z,80nm,0.9s
HTT Hallett 33.78 261 P **P** **11 22 45.0 +2.1**
baz=34,SNR=7.4
MTSU Mount Surprise 35.73 289 P **P** **11 23 03.0 +3.2**
baz=36,SNR=24
BBOO Buckleboo 36.26 261 P **P** **11 23 06.1 +2.0**
baz=36,SNR=21
BBOO Buckleboo 36.26 261 P **P** **11 23 05.2 +1.1**
BBOO IAmb IAmb 11 23 07.6
comp=Z,42nm,0.9s
QIS Mount Isa 38.16 281 P **P** **11 23 22.7 +2.3**
baz=38,SNR=37
COEN Coen 39.10 293 P **P** **11 23 30.5 +2.2**
baz=39
COEN Coen 39.10 293 P **P** **11 23 31.0 +2.7**
COEN IAmb IAmb 11 23 33.8
comp=Z,66nm,0.9s
PMG Port Moresby 39.23 302 P **P** **11 23 31.2 +1.9**
comp=Z,11nm,0.8s,baz=160,slow=3.3,SNR=4.7
PMG LR LR 11 36 59.3
comp=Z,2µm,20.9s,baz=155,slow=32
PMG Port Moresby 39.23 302 P **P** **11 23 28.1 -1.2**
RABL Rabaul 39.93 314 P **P** **11 23 33.5 -1.7**
RKT Rikitea 40.86 86 *e*S **S** **11 29 59.8 +8.8**
comp=Z,256nm,23.7s
RKT *e*LR LR 11 34 50.3
comp=Z,3µm,27.8s
RKT Rikitea 40.86 86 *e*T T 12 06 47.3
comp=Z,1.9nm,0.3s
AS31 Alice Springs 41.34 273 P **P** **11 23 48.5 +1.7**
ASAR Alice Springs 41.34 273 P **P** **11 23 48.1 +1.3**
comp=Z,32nm,0.6s,baz=115,slow=7.1,SNR=186
ASAR ScP **ScP** **11 29 26.4 -4.3**
comp=Z,2.8nm,0.9s,baz=121,slow=3.5,SNR=4.1
ASAR S **S** **11 29 59.1 +0.9**
comp=Z,3.0nm,0.9s,baz=116,slow=15,SNR=6.9
ASAR LR LR 11 40 43.0
comp=Z,3µm,19.7s,baz=122,slow=36
ASAR Alice Springs 41.34 273 P **P** **11 23 46.6 -0.2**
WR0 Warramunga Arr 42.57 278 P **P** **11 23 57.3 +0.5**
WR0 IAmb IAmb 11 23 59.9
comp=Z,50nm,0.8s
WC3 Warramunga Arr 42.70 278 P **P** **11 23 59.5 +1.6**
baz=43
WB2 Warramunga Arr 42.73 278 P **P** **11 23 58.4 +0.2**
WB2 IAmb IAmb 11 24 00.2
comp=Z,66nm,0.7s
WRAB Tennant Creek 42.74 278 *d* iP **P** **11 23 59.6 +1.4**
WRAB pmax pmax
comp=Z,55nm,0.9s
WRAB Tennant Creek 42.74 278 P **P** **11 23 58.0 -0.2**
WRAB IAmb IAmb 11 24 00.6
comp=Z,60nm,0.7s
WRA Warramunga Arr 42.74 278 P **P** **11 23 57.8 -0.4**
comp=Z,58nm,0.7s,baz=120,slow=7.4,SNR=223
WRA PP **PcP** **11 25 52.3 +3.1**
comp=Z,3.1nm,0.8s,baz=117,slow=9.3,SNR=4.7
WRA S **S** **11 30 18.6 -0.4**
comp=Z,3.4nm,1.1s,baz=120,slow=14,SNR=6.2
WRA Warramunga Arr 42.74 278 P **P** **11 23 57.9 -0.4**
WRA pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 42.74 278 P **P** **11 23 57.9 -0.4**
WB0 Warramunga Arr 42.78 278 P **P** **11 23 57.8 -0.8**
WB0 IAmb IAmb 11 24 01.1
comp=Z,72nm,0.9s
FORT Forrest 43.36 260 P **P** **11 24 03.5 +0.4**
baz=43,SNR=30
FORT Forrest 43.36 260 P **P** **11 24 02.9 -0.2**
SBA Scott Base 43.43 184 P **P** **11 24 07.3 +4.3**
VNDA Vanda 43.45 186 P **P** **11 24 05.1 +1.9**
comp=Z,1.2nm,0.5s,baz=17,slow=11,SNR=5.8
VNDA LR LR 11 39 47.9
comp=Z,312nm,18.6s,baz=20,slow=33
VNDA Vanda 43.45 186 P **P** **11 24 02.4 -0.8**
TAOE Nuku Hiva Isla 44.78 64 *e*S S 11 31 00.2 +11
comp=Z,364nm,24.9s
TAOE *e*LR LR 11 36 41.0
comp=Z,2µm,26.8s,baz=232
WRKA Warakurna 45.35 268 P **P** **11 24 18.8 -0.3**
baz=45,SNR=70
KMBL Kambalda 48.14 257 P **P** **11 24 41.1 +0.2**
baz=48,SNR=8.8
KDU Kakadu 48.17 285 P **P** **11 24 42.1 +0.9**
baz=48,SNR=16
MTN Manton Dam 49.15 284 P **P** **11 24 49.6 +0.8**
baz=49,SNR=19
MTN Manton Dam 49.15 284 P **P** **11 24 48.7 0.0**
MTN IAmb IAmb 11 24 51.0
comp=Z,48nm,1.0s
KNRA Kununurra 49.48 279 P **P** **11 24 51.5 +0.3**
KNRA IAmb IAmb 11 24 53.3
comp=Z,40nm,0.8s
CASY Casey 50.35 209 P **P** **11 24 57.1 -0.1**
CASY IAmb IAmb 11 25 18.1
comp=Z,57nm,1.2s
FITZ Fitzroy Crossi 50.77 275 P **P** **11 25 01.9 +0.8**
baz=51,SNR=42
FITZ Fitzroy Crossi 50.77 275 P **P** **11 25 01.9 +0.8**
FITZ IAmb IAmb 11 25 03.0
comp=Z,43nm,0.8s
NWAO Narrogin (SRO) 51.28 253 LR LR 11 43 06.3
comp=Z,694nm,21.0s,baz=108,slow=32
NWAO Narrogin (SRO) 51.28 253 P **P** **11 25 04.3 -0.4**
baz=51,SNR=29
NWAO Narrogin (SRO) 51.28 253 P **P** **11 25 03.7 -1.0**
NWAO pmax pmax
comp=Z,45nm,0.7s
NWAO Narrogin (SRO) 51.28 253 P **P** **11 25 03.6 -1.0**
NWAO Narrogin (SRO) 51.28 253 P **P** **11 25 03.7 -1.0**
NWAO IAmb IAmb 11 25 06.2
comp=Z,36nm,0.8s
KLBR Kellerberrin 51.35 255 P **P** **11 25 04.7 -0.5**
baz=51,SNR=42
MUN Mundaring 52.43 254 P **P** **11 25 13.2 -0.1**
baz=52,SNR=20
BLDU Ballidu 52.54 256 P **P** **11 25 13.5 -0.6**
baz=52,SNR=11
MORW Morawa 53.68 257 P **P** **11 25 22.0 -0.5**
baz=54,SNR=15
MORW Morawa 53.68 257 P **P** **11 25 21.5 -1.1**
MORW IAmb IAmb 11 25 23.0
comp=Z,40nm,0.8s
PSA00 Pilbara Seismi 53.84 267 P **P** **11 25 22.5 -1.3**
PSA00 Pilbara Seismi 53.84 267 P **P** **11 25 23.0 -0.8**
PSA00 IAmb IAmb 11 25 24.9
comp=Z,112nm,0.8s
FAKI Fak Fak 54.43 295 P **P** **11 25 26.9 -1.2**
QSPA South Pole Qui 55.22 180 P **P** **11 25 35.2 +1.9**
comp=Z,36nm,0.7s,baz=237,slow=0.4,SNR=153
QSPA LR LR 11 46 52.0
comp=Z,579nm,18.3s,baz=44,slow=33
QSPA South Pole Qui 55.22 180 P **P** **11 25 35.6 +2.3**
QSPA IAmb IAmb 11 25 40.4
comp=Z,40nm,0.8s
SOEI Soe 56.42 282 P **P** **11 25 44.0 +1.5**
BATI Baumata 56.64 282 P **P** **11 25 45.5 +1.5**
comp=Z,84nm,0.8s,baz=94,slow=0.6
GIRL Giralia 57.94 263 P **P** **11 25 53.4 +0.3**
baz=58,SNR=5.2
GIRL Giralia 57.94 263 P **P** **11 25 54.0 +0.9**
MMRI Maumere 58.69 282 P **P** **11 25 59.6 +1.1**
KIP Kipapa 59.82 24 *i* P **P** **11 26 05.6 -0.3**
KIP pmax pmax
comp=Z,70nm,1.2s
RPN Rapa Nui 60.02 104 LR LR 11 46 55.2
comp=Z,692nm,18.3s,baz=268,slow=31
KAPI Kappang 62.81 284 P **P** **11 26 27.6 +1.2**
KAPI pmax pmax
comp=Z,36nm,0.8s
KAPI Kappang 62.81 284 P **P** **11 26 27.6 +1.2**
LUWI Luwuk 62.86 289 P **P** **11 26 27.5 +0.8**
JAGI Jajag, Banyuwa 65.34 277 P **P** **11 26 43.3 +0.2**
BELA Belgrano 2 65.57 172 P **P** **11 26 43.8 +0.2**
BELA IAmb IAmb 11 26 53.7
comp=Z,20nm,0.9s
MAW Mawson 67.48 202 P **P** **11 26 56.6 +0.8**
comp=Z,28nm,0.9s,baz=134,slow=8.6,SNR=26
MAW LR LR 11 56 12.0
comp=Z,405nm,19.3s,baz=101,slow=36
MAW Mawson 67.48 202 P **P** **11 26 56.7 +0.8**
baz=67,SNR=23
MAW Mawson 67.48 202 P **P** **11 26 57.2 +1.3**
MAW pmax pmax
comp=Z,14nm,1.1s
MAW Mawson 67.48 202 P **P** **11 26 57.2 +1.3**
MYLDM Lahad Datu 70.08 292 P **P** **11 27 14.5 +1.6**
JCJ Chichijima 71.25 325 P **P** **11 27 17.6 -2.1**
comp=Z,29nm,0.6s,baz=265,slow=10,SNR=3.9
SYO Syowa Base 72.33 194 ‖ *e*P **P** **11 27 23.6 -2.1**
SYO Syowa Base 72.33 194 ‖ *e*pP pP 11 27 38.3 +0.2
SYO Syowa Base 72.33 194 ‖ *e*PcP **PcP** **11 27 44.0 +0.5**
KKM Kota Kinabalu 72.38 291 P **P** **11 27 26.1 -0.9**
KKM IAmb IAmb 11 27 27.7
comp=Z,36nm,0.9s
MG05 Puerto Natales 73.08 142 P **P** **11 27 31.6 +1.2**
MG05 IAmb IAmb 11 27 45.4
comp=Z,33nm,0.9s
SBUM Sibu 73.29 285 P **P** **11 27 31.9 -0.3**
SBUM IAmb IAmb 11 27 33.4
comp=Z,28nm,1.0s
SBUM Sibu 73.29 285 P **P** **11 27 33.0 +0.8**
GO09 Cerro Castillo 73.40 141 P **P** **11 27 33.7 +1.4**
GO09 IAmb IAmb 11 27 34.4
comp=Z,102nm,1.5s
SNAA Sanae 73.70 179 P **P** **11 27 35.5 +1.7**
SNAA Sanae 73.70 179 PcP **PcP** **11 27 48.3 -1.1**
SNAA Sanae 73.70 179 *i* P **P** **11 27 34.4 +0.5**
SNAA pmax pmax
comp=Z,30nm,1.1s
SNAA Sanae 73.70 179 P **P** **11 27 34.2 +0.3**
SNAA IAmb IAmb 11 27 53.5
comp=Z,30nm,1.0s
VNA3 Neumayer Olymp 73.93 177 P **P** **11 27 36.7 +1.6**
VNA3 Neumayer Olymp 73.93 177 PcP **PcP** **11 27 49.4 -0.9**
TGY Tagaytay City 74.15 300 P **P** **11 27 35.6 -1.7**
comp=Z,135nm,0.4s,baz=72,slow=4.2,SNR=1.7
KSM Kuching 74.22 283 P **P** **11 27 37.7 0.0**
KSM IAmb IAmb 11 27 38.2
comp=Z,24nm,0.8s
KSM Kuching 74.22 283 P **P** **11 27 38.0 +0.3**
NVL N'lazarevskaya 74.28 184 *e*P **P** **11 27 38.4 +1.3**
NVL pmax pmax
comp=Z,43nm,1.2s
VNA2 Neumayer--Watz 74.34 178 P **P** **11 27 38.8 +1.3**
baz=172,slow=6.1
VNA2 Neumayer--Watz 74.34 178 PcP **PcP** **11 27 52.2 +0.1**
VNA1 Neumayer--Stat 74.58 177 P **P** **11 27 41.0 +2.1**
VNA1 Neumayer--Stat 74.58 177 PcP **PcP** **11 27 53.6 +0.6**
LL02 Futaleuf 78.45 135 P **P** **11 28 02.7 +1.4**
H03S2 Juan Fernandez 79.44 124 T T 12 56 21.3
baz=232,slow=74,SNR=36
H03S1 Juan Fernandez 79.45 124 T T 12 56 22.2
baz=232,slow=74,SNR=25
H03S3 Juan Fernandez 79.46 124 T T 12 56 21.1
baz=232,slow=74,SNR=29
MYKOM Kota Tinggi 79.61 280 P **P** **11 28 07.6 -0.5**
MYKOM Kota Tinggi 79.61 280 P **P** **11 28 08.0 -0.1**
H03N3 Juan Fernandez 79.66 124 T T 12 56 25.2
baz=237,slow=72,SNR=264
H03N2 Juan Fernandez 79.66 124 T T 12 56 35.0
baz=237,slow=72,SNR=229
H03N1 Juan Fernandez 79.68 124 T T 12 56 35.5
baz=237,slow=72,SNR=205
TPUB Ta-pu 80.68 307 P **P** **11 28 12.7 -0.9**
TPUB IAmb IAmb 11 28 16.9
comp=Z,61nm,1.5s
PLCA Paso Flores 80.72 133 P **P** **11 28 14.3 +0.5**
comp=Z,15nm,1.1s,baz=231,slow=4.5,SNR=14
PLCA LR LR 11 55 54.6
comp=Z,251nm,21.2s,baz=240,slow=30
PLCA Paso Flores 80.72 133 P **P** **11 28 15.5 +1.7**
PLCA pmax pmax
comp=Z,32nm,1.2s
PLCA Paso Flores 80.72 133 P **P** **11 28 15.4 +1.7**
SSLB Suanglung 80.80 307 P **P** **11 28 12.4 -1.8**
SSLB IAmb IAmb 11 28 14.2
comp=Z,46nm,1.3s
MJAR Matsushiro Arr 81.00 327 P **P** **11 28 13.1 -1.8**
comp=Z,3.7nm,0.9s,baz=170,slow=5.0,SNR=6.0
MJAR LR LR 12 03 52.7
comp=Z,81nm,18.7s,baz=125,slow=35
MAT Matsushiro 81.00 327 P **P** **11 28 13.7 -1.2**
MAT *e*S **S** **11 38 16.0 -4.5**
JRMM Jerantut 81.95 280 P **P** **11 28 20.0 -0.5**
DLV T Lat 82.00 290 P **P** **11 28 21.1 +0.1**
BI02 San Fabin de 82.79 130 P **P** **11 28 25.8 +1.0**
BI02 IAmb IAmb 11 28 40.9
comp=Z,39nm,1.2s
ML02 Panimavida 83.26 129 P **P** **11 28 28.8 +1.7**
ML02 IAmb IAmb 11 28 42.9
comp=Z,46nm,1.1s
IPM Ipoh 83.46 280 P **P** **11 28 27.8 -0.7**
IPM IAmb IAmb 11 28 28.9
comp=Z,36nm,1.1s
IPM Ipoh 83.46 280 P **P** **11 28 27.0 -1.4**
PSI Prapat 84.20 277 P **P** **11 28 30.3 -2.0**
KULM Kulim 84.24 280 P **P** **11 28 32.0 -0.3**
BO02 Sierra Bellavi 84.27 129 P **P** **11 28 33.2 +0.8**
BO02 IAmb IAmb 11 28 35.0
comp=Z,57nm,1.2s
BO01 Tunca 84.32 128 P **P** **11 28 33.3 +0.7**
GSI Gunungsitoli 84.45 275 P **P** **11 28 33.6 +0.2**
MT01 Popeta 84.54 128 P **P** **11 28 34.3 +0.6**
MT09 Talagante 84.77 128 P **P** **11 28 35.4 +0.4**
MT09 IAmb IAmb 11 28 51.2
comp=Z,44nm,1.2s
MT05 Renca 85.17 128 P **P** **11 28 38.8 +1.9**
PEL Peldehue 85.36 127 P **P** **11 28 37.5 -0.4**
PEL pmax pmax
comp=Z,90nm,1.4s
PEL Peldehue 85.36 127 P **P** **11 28 37.5 -0.4**
QIZ Qiongzhong 85.38 297 P **P** **11 28 38.0 +0.1**
QIZ S **S** **11 39 05.0 -0.6**
QIZ pmax pmax
comp=Z,16nm,2.5s
QIZ LR LR
comp=Z,180nm,19.6s
QIZ LR LR
comp=Z,240nm,27.5s
ASAJ Asahikawa 85.66 334 P **P** **11 28 40.0 +1.3**
comp=Z,7.0nm,0.8s,baz=73,slow=1.3,SNR=6.2
ASAJ Asahikawa 85.66 334 P **P** **11 28 40.0 +1.3**
UBPT Khong Chiam 86.35 291 P **P** **11 28 43.1 +0.3**
UBPT IAmb IAmb 11 28 44.4
comp=Z,14nm,0.8s
KSRS Korea Array 86.68 321 P **P** **11 28 44.6 +0.7**
comp=Z,5.7nm,0.8s,baz=143,slow=5.9,SNR=21
KSRS PP **PP** **11 32 06.7 -0.3**
comp=Z,0.4nm,0.4s,baz=144,slow=8.7,SNR=4.3
KSRS LR LR 12 04 30.6
comp=Z,92nm,18.7s,baz=138,slow=34
KSAR Wonju Array Be 86.69 321 P **P** **11 28 43.6 -0.3**
KSAR Wonju Array Be 86.69 321 P **P** **11 28 43.6 -0.3**
KS19 Wonju Array Si 86.75 321 P **P** **11 28 45.0 +0.7**
KS19 IAmb IAmb 11 28 45.9
comp=Z,32nm,1.5s
CO03 El Pedregal 86.81 126 P **P** **11 28 46.1 +1.0**
CO03 IAmb IAmb 11 28 47.5
comp=Z,45nm,1.4s
ZON Zonda 87.69 127 P **P** **11 28 50.9 +1.6**
ZON pmax pmax
comp=Z,42nm,1.3s
ZON Zonda 87.69 127 P **P** **11 28 50.9 +1.6**
ZON IAmb IAmb 11 28 52.2
comp=Z,42nm,1.3s
NJ2 Nanjing 87.88 312 *e*P **P** **11 28 53.0 +3.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
YSS Yuzh-Sakhalins 88.06 336 *e*P **P** **11 28 51.3 +1.0**
YSS pmax pmax
comp=Z,20nm,1.2s
SLBS Sierra La Lagu 88.38 60 P **P** **11 28 55.5 +3.0**
SCZ2 Santa Cruz Isl 88.87 46 P **P** **11 28 57.6**
baz=226
MSHR Mys Shultsa 89.07 326 *i* P **P** **11 28 55.3 +0.1**
MSHR pmax pmax
comp=Z,24nm,1.0s
CIS Catalina Islan 89.19 47 P 11 28 58.9
baz=226
PKM Mcpherson Peak 89.39 46 P 11 28 59.7
baz=226
PET Petropavlovsk 89.50 347 *e*P **P** **11 28 56.6 -0.3**
PET *e**PP **pP** **11 29 10.7 +1.0**
PET *e*S **S** **11 39 39.4 -4.1**
PET pmax pmax
comp=Z,42nm,0.8s
PET Petropavlovsk 89.50 347 P **P** **11 28 57.1 +0.3**
SMMC Simmler 89.58 45 P 11 29 00.0
baz=225
PEA0B Petropavlovsk- 89.75 347 P **P** **11 28 58.9 +0.8**
PEA0B pmax pmax
comp=Z,174nm,1.5s
PEA0B Petropavlovsk- 89.75 347 P **P** **11 28 58.9 +0.8**
PETK Petropavlovsk- 89.75 347 P **P** **11 28 58.2 0.0**
comp=Z,26nm,0.7s,baz=132,slow=6.8,SNR=76
PETK PKiKP **PKiKP** **11 33 54.5 -0.3**
comp=Z,1.6nm,0.7s,baz=99,slow=2.9,SNR=4.4
PETK LR LR 12 06 48.9
comp=Z,140nm,18.9s,baz=164,slow=34
PETK Petropavlovsk- 89.75 347 P **P** **11 28 58.7 +0.5**
PETK Petropavlovsk- 89.75 347 P **P** **11 28 58.7 +0.5**
NONG Nongkai 89.80 292 P **P** **11 28 59.5 +0.3**
USA0B Ussuriysk Arra 89.98 328 *i* P **P** **11 28 59.6 +0.2**
USRK Ussuriysk Ar. 89.98 328 P **P** **11 29 00.4 +1.1**
comp=Z,5.2nm,0.9s,baz=140,slow=3.6,SNR=10
MONP2 Monument Peak 90.07 49 P 11 29 01.9
baz=227
MURC Murrieta 90.07 48 P 11 29 02.3
baz=227
IKP In-Ko-Pah, Jac 90.10 49 P 11 29 02.8
baz=228
ARVC Arvin 90.14 46 P 11 29 02.8
baz=226
BFSC Mount Baldy Ra 90.22 47 P 11 29 02.9
baz=227
AC02 Maricunga 90.40 123 P **P** **11 29 03.3 +0.6**
AC02 IAmb IAmb 11 29 06.6
comp=Z,20nm,1.4s
EDW2 Edwards Air Fo 90.46 47 P 11 29 03.9
baz=226
VES Vestal, Richgr 90.48 45 P 11 29 04.1
baz=226
SWSC Sam W. Stewart 90.49 49 P 11 29 03.7
baz=228
TPFO Pinon Flats 90.53 48 P 11 29 04.0
baz=227
PFO Pinyon Flats O 90.53 48 P 11 29 04.4
baz=227
PFO Pinyon Flats O 90.53 48 P **P** **11 29 04.1 +1.7**
comp=Z,2.7nm,0.9s,baz=225,slow=7.0,SNR=4.2
PFO Pinyon Flats O 90.53 48 *ce*P **P** **11 29 04.8 +2.4**
PFO pmax pmax
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 90.53 48 P **P** **11 29 04.3 +1.9**
BBRC Big Bear Solar 90.69 48 P 11 29 05.4
baz=227
ISA Isabella, Lake 90.72 46 P 11 29 05.4
baz=226
ISA Isabella, Lake 90.72 46 P **P** **11 29 04.6 +1.4**
ISA pmax pmax
comp=Z,15nm,1.0s
ISA Isabella, Lake 90.72 46 P **P** **11 29 04.6 +1.4**
ISA IAmb IAmb 11 29 20.1
comp=Z,15nm,0.9s
LRMC Laurel Mtn Rad 91.06 46 P 11 29 06.9
baz=227
BELC Belle Mtn. Jos 91.08 48 P 11 29 06.0
baz=228
GLA Glamis 91.17 50 P 11 29 07.1
baz=228
GLA Glamis 91.17 50 P **P** **11 29 07.8 +2.5**

GLA pmax pmax
comp=Z,31nm,1.1s
GLA Glamis 91.17 50 P **P** **11 29 07.8 +2.5**
BC3 Big Chuckawall 91.18 49 P 11 29 06.7
baz=228,SNR=7.0
CMB Columbia Colle 91.27 43 P **P** **11 29 07.0 +1.4**
CMB pmax pmax
comp=Z,12nm,1.2s
CMB Columbia Colle 91.27 43 P **P** **11 29 07.0 +1.4**
CMB lAmb lAmb 11 29 22.0
comp=Z,12nm,1.1s
MDJ Mudanjiang 91.37 327 P **P** **11 29 06.8 +0.9**
MDJ pmax pmax
comp=Z,12nm,1.3s
PHIT Phitsanulok 91.38 290 P **P** **11 29 08.8 +2.3**
CWC Cottonwood Cre 91.48 45 P 11 29 08.7
baz=226
O02D Mt. Diablo Mer 91.48 40 P 11 29 08.9
baz=224
TYV Tymovskoe 91.49 337 *e*P **P** **11 29 03.2 -3.0**
TYV pmax pmax
comp=Z,100nm,2.9s
TYV pmax pmax
comp=Z,8.0nm,1.6s
113A Mohawk Valley, 91.65 51 P **P** **11 29 09.5 +2.0**
113A lAmb lAmb 11 29 24.9
comp=Z,23nm,1.2s
IRM Iron Mountain 91.70 49 P 11 29 10.1
baz=228,SNR=7.0
ORV Oroville 91.73 41 P **P** **11 29 11.2 +3.5**
ORV pmax pmax
comp=Z,10.0nm,1.3s
214A Organ Pipe Nat 91.73 52 P 11 29 09.6
baz=229
214A Organ Pipe Nat 91.73 52 P **P** **11 29 08.2 +0.2**
214A lAmb lAmb 11 29 25.4
comp=Z,26nm,1.2s
GMRC Granite Mounta 91.81 48 P 11 29 10.5
baz=228
TUQ Turquoise Moun 92.08 47 P 11 29 11.7
baz=228
O03E Paynes Creek 92.09 41 P 11 29 11.6
baz=224
N02D Trinity Center 92.10 40 P 11 29 12.3
baz=224
SUKH Sukhothai 92.15 290 P **P** **11 29 11.3 +1.1**
SHOC Shoshone, Teco 92.18 47 P 11 29 12.5
baz=228
FURC Furnace Creek, 92.22 46 P 11 29 12.7
baz=227
GRAC Grapevine Rang 92.28 45 P 11 29 13.1
baz=227
PNTR Pine Nut 92.45 43 P **P** **11 29 11.7 +0.4**
YERR Yerington 92.58 43 P **P** **11 29 11.7 -0.1**
YERR lAmb lAmb 11 29 19.2
comp=Z,6.5nm,0.7s
ENH Enshi 92.72 305 P **P** **11 29 11.5 -1.1**
ENH lAmb lAmb 11 29 13.9
comp=Z,26nm,1.2s
NVAR Mina Array Bea 92.72 44 P **P** **11 29 13.6 +1.0**
comp=Z,4.2nm,0.7s,baz=230,slow=8.2,SNR=11
NVAR PKKPbc **PKKPbc** **11 46 26.1 +1.4**
comp=Z,0.3nm,0.6s,baz=69,slow=5.1,SNR=4.4
NVAR LR LR 12 04 15.5
comp=Z,334nm,20.3s,baz=202,slow=31
NVAR Mina Array Bea 92.72 44 P **P** **11 29 15.7 +3.1**
K02D Willamette Mer 92.85 38 P 11 29 16.2
baz=223
TPNV Topopah Spring 92.91 46 P 11 29 16.2
baz=228
TPNV Topopah Spring 92.91 46 P **P** **11 29 14.9 +1.5**
TPNV pmax pmax
comp=Z,5.0nm,0.8s
TPNV Topopah Spring 92.91 46 P **P** **11 29 14.9 +1.5**
TPH Tonopah 93.10 45 P **P** **11 29 14.2 -0.1**
TPH pmax pmax
comp=Z,27nm,0.8s
TPH Tonopah 93.10 45 P **P** **11 29 14.2 -0.1**
CM04 Chiang Mai Arr 93.19 290 P **P** **11 29 16.2 +1.3**
L04D Klamath Falls 93.20 39 P 11 29 17.4
baz=224
CM05 Chiang Mai Arr 93.22 290 P **P** **11 29 16.2 +1.2**
CM01 Chiang Mai Arr 93.22 290 P **P** **11 29 16.0 +0.9**
CM02 Chiang Mai Arr 93.24 290 P **P** **11 29 16.4 +1.3**
LVC Limon Verde 93.25 120 P **P** **11 29 15.8 0.0**
LVC pmax pmax
comp=Z,22nm,1.4s
LVC Limon Verde 93.25 120 P **P** **11 29 15.8 0.0**
LVC lAmb lAmb 11 29 39.1
comp=Z,22nm,1.4s
CM31 Chiang Mai Arr 93.25 290 P **P** **11 29 18.3 +3.0**
CMAR Chiang Mai Arr 93.25 290 P **P** **11 29 16.1 +0.9**
comp=Z,4.0nm,0.7s,baz=148,slow=3.6,SNR=24
CMAR PP **PP** **11 32 57.5 -2.1**
comp=Z,2.2nm,0.7s,baz=142,slow=6.8,SNR=7.3
CMAR LR LR 12 15 19.4
comp=Z,164nm,18.8s,baz=200,slow=38
CMAR Chiang Mai Arr 93.25 290 *i* P **P** **11 29 16.1 +0.9**
CMAR pmax pmax
comp=Z,5.0nm,0.8s
CMAR Chiang Mai Arr 93.25 290 P **P** **11 29 14.7 -0.5**
CM13 Chiang Mai Arr 93.26 290 P **P** **11 29 16.0 +0.7**
CM15 Chiang Mai Arr 93.26 290 P **P** **11 29 16.0 +0.7**
TUC Tucson 93.27 53 P 11 29 17.3
baz=230
TUC Tucson 93.27 53 P **P** **11 29 15.6 +0.5**
TUC pmax pmax
comp=Z,12nm,1.1s
TUC Tucson 93.27 53 P **P** **11 29 15.6 +0.5**
TUC lAmb lAmb 11 29 32.1
comp=Z,12nm,1.1s
CM34 Chiang Mai Arr 93.32 291 P **P** **11 29 17.0 +1.5**
CMMT Chiang Mai 93.45 290 P **P** **11 29 16.5 +0.3**
CHTO Chiang Mai 93.46 290 P **P** **11 29 14.6 -1.6**
CHTO pmax pmax
comp=Z,7.0nm,1.1s
CHTO Chiang Mai 93.46 290 P **P** **11 29 14.6 -1.6**
CM33 Chiang Mai Arr 93.46 290 P **P** **11 29 17.0 +0.8**
NNA Nana 93.83 107 *i* P **P** **11 29 19.1 +1.0**
NNA pmax pmax
comp=Z,25nm,1.1s
PRN Pahroc Range 93.92 46 P **P** **11 29 18.1 0.0**
KLR Kul'dur 94.06 331 *i* P **P** **11 29 18.0 -0.2**
KLR pmax pmax
comp=Z,2.0nm,2.3s
X16A Lo Mia Camp, P 94.20 51 P **P** **11 29 20.0 +0.6**
R11A Troy Canyon, C 94.23 45 P 11 29 21.9
baz=228
I04A Tendick Farm, 94.28 38 P 11 29 22.4
baz=224
K05A Summer Lake 94.30 39 P **P** **11 29 19.8 0.0**
K05A lAmb lAmb 11 29 36.2
comp=Z,23nm,1.2s
KMI Kunming 94.30 298 ⇓P **P** **11 29 24.6 +4.4**
KMI pP sP 11 29 38.1 +0.3
KMI sP pwP 11 29 44.0 +7.3
KMI pmax pmax
comp=Z,10.0nm,0.8s
KMI LR LR
comp=Z,150nm,17.0s
KMI LR LR
comp=Z,140nm,30.1s
KMI LR LR
comp=Z,250nm,31.9s
J05D Fort Rock, OR 94.52 39 P 11 29 23.2
baz=225
WUAZ Wupatki 94.94 50 P 11 29 25.3
baz=230
PINE Pine Mountain 95.03 39 lAmb lAmb 11 29 39.5
comp=Z,8.4nm,0.8s
XAN Xi'an 95.45 308 P **P** **11 29 21.8 -3.2**
XAN pmax pmax
comp=Z,5.0nm,1.6s
XAN LR LR
comp=Z,190nm,15.2s
XAN LR LR
comp=Z,140nm,17.3s
ELK Elko 96.03 44 P **P** **11 29 29.5 +1.7**
comp=Z,1.5nm,0.7s,baz=1.9,slow=22,SNR=2.1
ELK Elko 96.03 44 lAmb lAmb 11 29 36.9
comp=Z,2.9nm,1.1s
TXAR Lajitas Array 96.27 59 P **P** **11 29 29.9 +1.0**
comp=Z,0.4nm,0.9s,baz=204,slow=5.5,SNR=4.6
TXAR PKKPbc **PKKPdf** **11 46 16.1 -0.2**
comp=Z,0.3nm,0.6s,baz=83,slow=4.7,SNR=3.9
TXAR LR LR 12 03 47.1
comp=Z,247nm,21.7s,baz=0.0,slow=30
TXAR Lajitas Array 96.27 59 P **P** **11 29 30.0 +1.0**
MNTX Cornudas Mount 96.50 56 P 11 29 31.7
baz=233
CD2 Chengdu 97.01 303 *e*P Pdif 11 29 32.6 +0.3
CD2 S **S** **11 40 50.9 -0.6**
CD2 SS **SS** **11 47 29.3 -0.1**
CD2 pmax pmax
comp=Z,110nm,4.7s
CD2 LR LR
comp=Z,150nm,14.9s
CD2 LR LR
comp=Z,210nm,11.2s
CD2 LR LR
comp=Z,250nm,10.8s
MA2 Magadan 97.18 346 *i* P Pdif 11 29 32.7 +0.5
MA2 pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 97.73 53 P **P** **11 29 35.3 -0.3**
comp=Z,0.2nm,0.3s,baz=176,slow=3.5,SNR=3.6
ANMO Albuquerque 97.73 53 *i* P **P** **11 29 35.4 -0.2**
ANMO pmax pmax
comp=Z,1.0nm,1.1s
ANMO Albuquerque 97.73 53 P 11 29 37.3
baz=233
LPAZ La Paz 97.84 116 LR LR 12 03 46.2
comp=Z,132nm,21.8s,baz=195,slow=29
HHC Hu-ho-hao-te 98.11 315 *e*P Pdif 11 29 38.9 +1.9
HHC S **S** **11 41 05.3 +4.8**
HHC SS **SS** **11 47 46.5 +1.8**
HHC pmax pmax
comp=Z,9.0nm,1.4s
HHC pmax pmax
comp=Z,99nm,7.6s
HHC LR LR
comp=Z,130nm,18.1s
HHC LR LR
comp=Z,180nm,19.8s
HHC LR LR
comp=Z,220nm,18.4s
CPUP Villa Florida 98.50 130 LR LR 12 06 06.8
comp=Z,637nm,21.8s,baz=232,slow=30
RC01 Rabbit Creek A 98.81 14 P 11 29 42.5
baz=205
SIT Sitka 99.11 23 P 11 29 43.0
baz=216
SML Sawmill 99.75 15 P 11 29 46.4
baz=206
SEY Seymchan 99.97 348 P **Pdif** **11 29 43.7 -0.9**
comp=Z,0.3nm,0.4s,baz=1.4,slow=23,SNR=1.8
SEY Seymchan 99.97 348 *i* P **Pdif** **11 29 45.0 +0.5**
MCARA McCarthy VSAT 100.58 17 P 11 29 49.6
baz=210
PDAR Pinedale Array 100.59 45 P **Pdif** **11 29 49.8 +1.7**
comp=Z,0.2nm,0.6s,baz=134,slow=2.6,SNR=2.6
PDAR PP **PP** **11 34 03.0 +6.9**
comp=Z,0.1nm,0.4s,baz=199,slow=36,SNR=1.5
PDAR PKKPbc **PKKPbc** **11 46 02.8 -0.4**
comp=Z,0.5nm,0.7s,baz=65,slow=7.0,SNR=4.9
TNA Tin City 100.59 5 P 11 29 49.5
baz=190
ILAR Eielson Array 102.71 14 P **Pdif** **11 29 57.1 +0.4**
comp=Z,0.3nm,0.8s,baz=223,slow=6.1,SNR=2.1
ILAR PKiKP **PKiKP** **11 34 18.2 +1.0**
comp=Z,1.4nm,0.6s,baz=308,slow=3.2,SNR=22
ILAR PKKPbc **PKKPbc** **11 45 55.5 -2.1**
comp=Z,0.4nm,0.6s,baz=331,slow=4.1,SNR=5.5
ILAR Eielson Array 102.71 14 **PKiKP** **11 34 17.8 +0.7**
POKR Poker Plat Res 102.91 14 P 11 30 00.8
baz=207
K27K Chicken 103.08 16 P 11 30 01.8
baz=211
PRP Porcupine Dome 103.64 14 P 11 30 04.1
baz=209
SONM Songino Array 105.29 318 PKiKP **PKiKP** **11 34 22.6 0.0**
comp=Z,0.4nm,0.6s,baz=115,slow=4.1,SNR=4.4
SONM PKKPbc **PKKPdf** **11 45 56.0 -4.3**
comp=Z,0.5nm,0.7s,baz=242,slow=3.2,SNR=4.8
INK Inuvik 108.59 17 PKiKP **PKiKP** **11 34 28.4 +0.6**
comp=Z,1.2nm,0.6s,baz=348,slow=1.1,SNR=11
INK PKKPbc **PKKPbc** **11 45 37.0 -2.3**
comp=Z,0.9nm,0.6s,baz=3.5,slow=2.5,SNR=4.6
YKA Yellowknife Ar 110.25 27 Pdiff **Pdif** **11 30 31.0 +0.7**
comp=Z,0.1nm,0.6s,baz=227,slow=4.5,SNR=2.2
YKA PKiKP **PKiKP** **11 34 31.4 +0.2**
comp=Z,1.1nm,0.6s,baz=257,slow=1.4,SNR=52
YKA SKP 11 38 03.0
comp=Z,1.1nm,1.0s,baz=224,slow=2.1,SNR=4.8
YKA PKKPbc **PKKPbc** **11 45 30.1 -3.7**
comp=Z,1.1nm,0.6s,baz=46,slow=3.5,SNR=27
LRAL Lakeview Retre 110.26 63 P 11 34 33.4
baz=241
C36M Paulatuk 111.69 18 P 11 34 35.2
baz=227
TIXI Tiksi 112.12 345 PKiKP **PKiKP** **11 34 33.5 -1.0**
comp=Z,5.6nm,0.6s,baz=38,slow=1.4,SNR=16
TIXI Tiksi 112.12 345 *i* PKiKP **PKiKP** **11 34 33.1 -1.4**
TIXI pmax pmax
comp=Z,23nm,0.6s
BOSA Boshof 112.44 204 PKiKP **PKiKP** **11 34 36.8 0.0**
comp=Z,2.1nm,0.7s,baz=177,slow=16,SNR=1.9
ULM Lac du Bonnet 112.56 44 PKiKP **PKiKP** **11 34 35.6 -0.3**
comp=Z,1.4nm,0.6s,baz=212,slow=3.7,SNR=4.9
ULM PKKPbc **PKKPbc** **11 45 23.6 -2.1**
comp=Z,1.3nm,0.7s,baz=20,slow=3.7,SNR=2.6
GOGA Godfrey 113.05 65 P 11 34 38.5
baz=242
WCI Wyandotte Cave 113.20 59 P 11 34 38.8
baz=243
EYMN Ely 114.09 47 P 11 34 40.5
baz=244
WMQ Urumqi 114.58 307 *e*PKP **PKiKP** **11 34 40.4 +0.3**
WMQ LR LR
comp=Z,210nm,29.1s
WMQ LR LR
comp=Z,440nm,29.0s
WMQ LR LR
comp=Z,220nm,29.1s
KMSC Kings Mountain 115.40 64 P 11 34 42.9
baz=244
ACSO Alum Creek Sta 116.38 58 P 11 34 45.0
baz=246
P52A Corning 116.73 59 P 11 34 45.6
baz=246
Q53A Leroy 116.84 60 P 11 34 46.9
baz=246
R54A Victor 116.94 61 P 11 34 46.7
baz=246
BLA Blacksburg 116.95 62 P 11 34 46.0
baz=245
FCC Fort Churchill 117.15 36 PKiKP **PKPdf** **11 34 43.9 -0.5**
FCC Fort Churchill 117.15 36 PKPdf **PKPdf** **11 34 43.9 -0.5**
R55A Marlinton 117.61 61 P 11 34 48.5
baz=246
O53A New Philadelph 117.63 59 P 11 34 48.7
baz=246
S56A Natural Bridge 117.77 62 P 11 34 48.9
baz=246
ZSN Zaisan 117.86 310 *e*PKP **PKPdf** **11 34 44.7 -1.6**
baz=310
ZSN Zaisan 117.86 310 *e*PKiKP **PKPdf** **11 34 44.7 -1.6**
R56A Bull Pasture M 118.18 61 P 11 34 49.2
baz=246
S57A Dark Hollow, R 118.24 62 P 11 34 49.8
baz=246
M53A WI Miller and 118.47 58 P 11 34 50.1
baz=247
Q56A Snyder Ridge, 118.58 61 P 11 34 50.6
baz=247
MATP Matopo 118.63 211 PKP **PKPdf** **11 34 47.9 -0.9**
comp=Z,3.0nm,0.6s,baz=203,slow=1.5,SNR=16
N54A Moraine State 118.76 58 P 11 34 48.8
baz=247
S58A Poland Farm, P 118.84 62 P 11 34 49.4
baz=246
L53A Girard 118.95 57 P 11 34 49.6
baz=248
P56A Dayton Farm, R 119.01 60 P 11 34 49.5
baz=247
R58B Mineral 119.10 62 P 11 34 49.5
baz=247
I51A Listowel 119.12 55 P 11 34 49.8
baz=248
M54A Oil Creek Stat 119.20 58 P 11 34 50.2
baz=248
ERPA Erie 119.20 57 P 11 34 50.0
baz=248
MK31 Makanchi Array 119.26 309 *i* PKiKP **PKPdf** **11 34 47.3 -1.7**
MK31 Makanchi Array 119.26 309 PKPdf **PKPdf** **11 34 47.6 -1.4**
MKAR Makanchi Array 119.26 309 PKP **PKPdf** **11 34 47.5 -1.5**
comp=Z,7.6nm,0.9s,baz=82,slow=1.8,SNR=34
MKAR PKKPbc **PKKPbc** **11 45 02.5 +0.2**
comp=Z,0.4nm,0.5s,baz=288,slow=3.9,SNR=5.2
MKAR SKKPbc SKKPbc 11 48 48.6 +1.0
comp=Z,0.2nm,0.7s,baz=270,slow=6.5,SNR=2.2
MKAR Makanchi Array 119.26 309 **PKPdf** **11 34 47.2 -1.8**
S59A Mechanicsville 119.45 63 P 11 34 50.5
baz=247
MAKZ Makanchi 119.46 309 PKiKP **PKPdf** **11 34 47.8 -1.6**
MAKZ Makanchi 119.46 309 PKPdf **PKPdf** **11 34 47.8 -1.6**
O56A Blue Knob Stat 119.50 59 P 11 34 50.6
baz=248
P57A Homestead Farm 119.59 60 P 11 34 50.6
baz=248
T60A Surry 119.62 63 P 11 34 50.8
baz=247
N56A West Decatur 119.93 59 P 11 34 51.5
baz=248
UZB Uzynbulak 120.12 304 *e*PKP **PKPdf** **11 34 49.3 -1.7**
baz=304
UZB Uzynbulak 120.12 304 *e*PKiKP **PKPdf** **11 34 49.2 -1.7**
SSPA Standing Stone 120.12 59 P 11 34 51.7
baz=248
O57A Amberson 120.14 60 P 11 34 51.7
baz=248
ZAA0 Zalesovo Array 120.17 317 PKPdf **PKPdf** **11 34 48.9 -1.5**
ZALV Zalesovo Beam 120.17 317 PKP **PKPdf** **11 34 48.9 -1.6**
comp=Z,5.5nm,0.8s,baz=143,slow=1.6,SNR=22
ZALV Zalesovo Beam 120.17 317 **PKPdf** **11 34 48.4 -2.0**
M56A Emporium 120.22 58 P 11 34 52.7
baz=248
N57A Milroy 120.40 59 P 11 34 52.6
baz=248
KPKS Kokpek 120.46 304 *e*PKP **PKPdf** **11 34 49.7 -1.8**
baz=304
KPKS *i* PP **PP** **11 36 16.6 -2.6**
baz=304
KPKS Kokpek 120.46 304 *e*PKiKP **PKPdf** **11 34 49.7 -1.8**
KPKS *i* 11 36 16.6
SATY Saty 120.51 304 *e*PKP **PKPdf** **11 34 49.7 -2.0**
baz=304
SATY Saty 120.51 304 *e*PKiKP **PKPdf** **11 34 49.6 -2.1**
O58A Lewisberry 120.61 60 P 11 34 53.0
baz=248
SADO Sadowa 120.73 54 PKKPbc PKKPbc 11 44 56.8 +0.2
comp=Z,1.3nm,0.4s,baz=18,slow=4.7,SNR=3.3
SADO Sadowa 120.73 54 PKPdf **PKPdf** **11 34 51.8 -0.1**
L56A Greenwood 120.89 58 P 11 34 53.6
baz=249
M57A Sunshine Farm, 120.91 59 P 11 34 53.3
baz=249
M57A Sunshine Farm, 120.91 59 PKPdf **PKiKP** **11 34 53.6 +1.2**
N58A Sunbury 121.02 59 **PKiKP** **11 34 52.8 +0.1**
N58A Sunbury 121.02 59 P 11 34 53.4
baz=249
H53A Bobcaygeon 121.04 55 P 11 34 53.5
baz=250
TDK Taldyqorghan 121.18 306 *e*PKP **PKPdf** **11 34 51.2 -1.5**
baz=306
TDK Taldyqorghan 121.18 306 *e*PKiKP **PKPdf** **11 34 51.2 -1.5**
O59A Robesonia 121.21 60 P 11 34 54.0
baz=249
K56A Middlesex 121.25 57 P 11 34 54.7
baz=250
Q61A Milford 121.31 62 P 11 34 54.6
baz=248
L57A Andrews Acres 121.34 58 P 11 34 54.3
baz=250
M58A Price's Panora 121.39 59 P 11 34 54.7
baz=249
P60A Greenville 121.42 61 P 11 34 55.2
baz=249
TNSS Tian-Shan 121.50 303 *e*PKP **PKPdf** **11 34 52.4 -1.6**
baz=303
TNSS Tian-Shan 121.50 303 *e*PKiKP **PKPdf** **11 34 52.3 -1.6**
AAA Alma-Ata 121.58 303 *e*PKP **PKPdf** **11 34 52.5 -1.2**
baz=303
AAA Alma-Ata 121.58 303 *e*PKiKP **PKPdf** **11 34 52.4 -1.2**
G54A Lake Saint Pet 121.65 54 P 11 34 55.5
baz=251
N59A State Game Lan 121.72 60 P 11 34 54.7
baz=249
O60A Telford 121.77 60 P 11 34 54.9
baz=249
J56A Wolcott 121.77 57 P 11 34 54.5
baz=250
K57A Scipio Center 121.82 57 P 11 34 54.6
baz=250
ALGO Algonquin Park 121.85 53 P 11 34 55.4
baz=251
BINY Binghamton 122.01 58 P 11 34 55.1
baz=250
L58A Harry Jones Me 122.05 58 P 11 34 54.3
baz=250,SNR=5.0
RES Resolute Bay 122.06 18 PKP **PKiKP** **11 34 54.1 +0.5**
comp=Z,5.7nm,0.6s,baz=248,slow=2.5,SNR=18
RES PKKPbc **PKKPbc** **11 44 51.5 -0.7**
comp=Z,2.1nm,0.7s,baz=46,slow=6.2,SNR=11
RES Resolute Bay 122.06 18 PKPdf **PKiKP** **11 34 53.7 +0.1**
RES **PKKPbc** **11 44 51.7 -0.5**
M59A Waymart 122.17 59 P 11 34 55.6
baz=250,SNR=5.6
N60A Cedar Hill Far 122.18 60 P 11 34 55.4
baz=250
TKM2 Tokmak 2 122.39 303 P **PKPdf** **11 34 54.1 -1.3**
SNR=8.1
J57A Williamstown 122.41 57 P 11 34 56.0
baz=251
J57A Williamstown 122.41 57 PKPdf **PKPdf** **11 34 54.9 -0.2**
K58A Earlville 122.44 58 P 11 34 56.0
baz=250
L59A Walton 122.67 58 P 11 34 56.6
baz=250
M60A Port Jervis 122.67 60 P 11 34 56.6
baz=250
KBK Karagaybulak 122.76 302 P **PKPdf** **11 34 55.3 -0.7**
SNR=8.5
I57A Carthage 122.81 56 P 11 34 56.6
baz=251
KURBB Kurchatov Arra 122.85 312 PKiKP **PKPdf** **11 34 53.6 -2.1**
VLDQ Val d'Or 122.91 51 PKPdf **PKPdf** **11 34 55.8 -0.1**
UCH Uchtor 122.92 301 P **PKPdf** **11 34 56.4 -0.3**
SNR=19
K59A Cooperstown 122.99 58 P 11 34 57.1
baz=251
NRIK Noril'sk 122.99 335 PKP **PKPdf** **11 34 54.8 -0.6**
comp=Z,14nm,0.6s,baz=92,slow=2.9,SNR=14
NRIK Noril'sk 122.99 335 *i* PKiKP **PKPdf** **11 34 54.7 -0.7**
NRIK Noril'sk 122.99 335 PKPdf **PKPdf** **11 34 55.2 -0.2**
CHMS Chumysh 123.01 302 P **PKPdf** **11 34 55.5 -0.9**
SNR=8.1
AAK Ala-Archa 123.07 302 *i* PKiKP **PKPdf** **11 34 56.0 -0.6**
AAK Ala-Archa 123.07 302 PKPdf **PKPdf** **11 34 55.8 -0.8**
PAL Palisades 123.07 60 P 11 34 57.3
baz=250
H57A Richville 123.16 56 P 11 34 57.6
baz=252
L60A Shokan 123.18 59 P 11 34 57.3
baz=251
I58A Old Forge 123.20 57 P 11 34 57.2
baz=252
SGDS Sogindy 123.24 303 *e*PKP **PKPdf** **11 34 55.1 -1.8**
baz=303
SGDS Sogindy 123.24 303 *e*PKiKP **PKPdf** **11 34 55.0 -1.8**
USP Ospenovka 123.27 303 P **PKPdf** **11 34 56.0 -0.9**
SNR=8.3
MATQ Matagami 123.27 49 P 11 34 57.0
baz=254
M61A Granite Spring 123.28 60 P 11 34 57.5
baz=251
E55A Montcerf-Lytto 123.32 53 P 11 34 57.2
baz=253
LSZ Lusaka 123.32 213 PKP **PKPdf** **11 34 56.9 -1.0**
comp=Z,4.2nm,0.7s,baz=151,slow=1.3,SNR=8.0
LSZ SKP 11 38 28.6
comp=Z,0.9nm,0.3s,baz=17,slow=3.1,SNR=3.5
LSZ Lusaka 123.32 213 PKiKP **PKPdf** **11 34 58.0 +0.1**
LSZ Lusaka 123.32 213 **PKPdf** **11 34 58.0 +0.1**
J59A Piesco 123.45 57 P 11 34 57.7
baz=252
AML Almayashu 123.46 301 P **PKPdf** **11 34 56.9 -0.9**
SNR=24
LSQQ Lebel-sur-Quev 123.48 50 P 11 34 57.8
baz=254
EKS2 Erkin-Say 123.58 302 P **PKPdf** **11 34 57.0 -0.5**

SNR=6.7
G57A Newington 123.63 55 P 11 34 58.5
baz=252
L61A Hillsdale 1, H 123.71 59 P 11 34 58.7
baz=251
LONY Lake Ozonia 123.76 56 P 11 34 58.1
baz=252,SNR=5.5
NCB Newcomb 123.81 57 PKiKP 11 34 59.2 +1.1
D55A Sainte-Anne-du 123.87 53 P 11 34 58.2
baz=253,SNR=14
M62A Hamden 123.94 60 P 11 34 58.6
baz=251
H58A Gabriels 123.97 56 P 11 34 58.8
baz=252
I59A Olmsteadville 123.99 57 P 11 34 58.7
baz=252
E56A St. Veronique 124.03 54 P 11 34 58.1
baz=253,SNR=6.7
BTLS Baital 124.12 305 *e*PKP **PKPdf 11 34 56.7 -1.6**
baz=305
BTLS Baital 124.12 305 *e*PKIKP **PKPdf 11 34 56.7 -1.6**
J60A Lant Hill Farm 124.14 58 P 11 34 58.7
baz=252
KBL Kabul 124.27 291 PKIKP **PKPdf 11 34 58.1 -1.2**
KBL Kabul 124.27 291 PKPdf **PKPdf 11 34 58.1 -1.2**
G58A Ormstown 124.28 55 P 11 34 58.5
baz=253,SNR=6.3
D56A ZEC Mazanza, M 124.35 53 P 11 34 59.2
baz=254,SNR=11
I60A Shoreham 124.41 57 P 11 34 59.5
baz=252
L61B Northampton 124.41 59 P 11 34 59.3
baz=252,SNR=5.7
FRNY Flat Rock 124.50 56 PKPdf **PKiKP 11 35 00.1 +0.8**
EUNU Eureka 124.76 12 PKiKP 11 34 59.0 0.0
J61A Chester 124.77 58 P 11 35 01.0
baz=252
K62A Royalston 124.79 59 P 11 35 01.0
baz=252
GAR Garm 124.87 297 PKPdf **PKPdf 11 34 59.1 -1.1**
VT1 Waterbury 124.92 57 PKiKP 11 35 00.4 +0.1
L63A North Scituate 124.98 60 P 11 35 01.2
baz=252
H60A Morristown 125.03 56 P 11 35 01.5
baz=253
E58A La Victoria 125.14 54 P 11 35 01.7
baz=254
M64A Tiverton 125.17 60 P 11 35 01.8
baz=252
I61A Oroboro, Fairl 125.18 57 P 11 35 01.7
baz=253
J62A Henniker 125.25 58 P 11 35 01.6
baz=253
K63A Dunstable 125.29 59 P 11 35 01.8
baz=253
F59A Saint Guilaume 125.33 55 P 11 35 01.7
baz=254
CHGQ Chibougamau 125.35 50 P 11 35 01.3
baz=256
DZA Taraz 125.36 301 *e*PKP **PKPdf 11 35 00.1 -0.8**
baz=301
DZA Taraz 125.36 301 *e*PKIKP **PKPdf 11 35 00.0 -0.8**
G60A Masonville 125.43 56 P 11 35 01.6
baz=254
LBNH Lisbon 125.47 57 P 11 35 01.6
baz=254
H61A Lyndonville 125.55 57 P 11 35 01.8
baz=254
L64A Middleborough 125.56 60 P 11 35 02.0
baz=252
D58A Chemin du LacG 125.60 53 P 11 35 01.4
baz=255,SNR=7.5
CHGR Chuyangaron 125.61 296 PKiKP 11 35 01.7 -0.2
LATQ La Tuque 125.74 53 P 11 35 02.5
baz=255
I62A Tamworth 125.77 58 P 11 35 02.9
baz=254
J63A Strafford 125.78 58 P 11 35 02.5
baz=253
M66A Nantucket 125.86 61 P 11 35 02.7
baz=252
F60A Warwick 125.92 55 P 11 35 01.7
baz=255,SNR=6.3
KK31 Karatay Array 126.00 301 PKIKP **PKPdf 11 35 01.1 -0.9**
KK31 Karatay Array 126.00 301 PKPdf **PKPdf 11 35 01.1 -0.9**
KKAR Karatay Array 126.00 301 PKIKP **PKPdf 11 35 01.1 -0.9**
KKAR Karatay Array 126.00 301 PKPdf **PKPdf 11 35 01.1 -0.9**
G61A St-Isidore-de- 126.03 56 P 11 35 02.8
baz=254
IUG luzhnay 126.06 300 *e*PKP **PKPdf 11 35 01.1 -1.2**
baz=300
IUG luzhnay 126.06 300 *e*PKIKP **PKPdf 11 35 01.1 -1.2**
H62A Milan 126.09 57 P 11 35 02.8
baz=254
SOCY Socotra 126.22 259 PKPdf **PKPdf 11 35 02.8 -0.6**
D59A Saint-Raymond 126.27 54 P 11 35 03.2
baz=256
BRZS Berezniki 126.31 310 *e*PKP **PKPdf 11 35 00.3 -2.1**
baz=310
BRZS Berezniki 126.31 310 *e*PKIKP **PKPdf 11 35 00.3 -2.1**
I63A Otisfield 126.34 58 P 11 35 03.6
baz=254
E60A Ste Agathe de 126.37 55 P 11 35 03.2
baz=255
F61A St Evariste 126.57 55 P 11 35 03.7
baz=255
G62A West of Eustis 126.69 56 P 11 35 03.8
baz=255
G62A West of Eustis 126.69 56 PKPdf **PKPdf 11 35 02.8 -0.5**
D60A Saint Jean D'O 126.85 54 P 11 35 04.6
baz=256
I64A Boothbay 126.97 58 P 11 35 04.7
baz=254
E61A Lac Etchemin 127.02 55 P 11 35 04.7
baz=256
D61A St Aubert, Com 127.41 54 P 11 35 05.4
baz=257
H64A Troy 127.44 57 P 11 35 05.6
baz=255
PKME Peaks-Kenny Pk 127.55 56 P 11 35 05.5
baz=256
F63A Nahmakanta, Br 127.78 56 P 11 35 06.5
baz=256
G64A Maxfield 127.91 57 P 11 35 06.4
baz=256
D62A Allapoint, All 128.14 54 P 11 35 06.5
baz=257
F64A Sherman 128.33 56 P 11 35 07.2
baz=257
BRVK Borovoye 128.37 314 *i* PKIKP **PKPdf 11 35 05.6 -0.6**
BRVK Borovoye 128.37 314 PKPdf **PKPdf 11 35 05.4 -0.8**
TULEG Thule 128.58 16 *i* P **PKiKP 11 35 07.2 +0.6**
G65A Princeton 128.72 57 P 11 35 07.8
baz=257
D63A Stockholm 128.76 54 P 11 35 08.1
baz=258
KMBO Kilima Mbogo 129.95 232 PKP **PKPdf 11 35 09.7 -1.1**
comp=Z,1.8nm,0.8s,baz=162,slow=2.9,SNR=3.9
KMBO SKPbc SKPab 11 38 27.6 -1.7
comp=Z,5.2nm,1.1s,baz=75,slow=3.9,SNR=7.0
NEEM North Greenlan 132.00 13 *i* P **PKiKP 11 35 14.1 +0.3**
NOR Nord 132.79 3 *e*P **PKPdf 11 35 14.1 +0.2**
NOR Nord 132.79 3 *e*PKIKP **PKiKP 11 35 14.1 +0.2**
UPNV Upernavik 132.88 20 *i* P **PKiKP 11 35 15.5 +0.2**
GEYT Alibeck 133.72 292 PKP **PKPdf 11 35 17.2 +0.3**
comp=Z,11nm,0.9s,baz=301,slow=0.9,SNR=9.5
GEYT SKPbc **SKPbc 11 38 39.7 -2.2**
comp=Z,13nm,1.0s,baz=199,slow=4.1,SNR=8.7
GEYT Alibeck 133.72 292 PKPdf 11 35 17.1 +0.2
GYA0B ALIBECK ARRAY 133.72 292 PKPdf **PKPdf 11 35 16.0 -0.9**
AB31 Akbulak array 134.37 307 *i* PKIKP **PKPdf 11 35 16.5 -1.2**
ABKAR Akbulak array 134.37 307 PKPdf 11 35 17.4 -0.2
ABKAR Akbulak array 134.37 307 PKPdf **PKPdf 11 35 17.6 -0.1**
MBAR Mbarara 134.41 226 SKPbc **SKPbc 11 38 39.9 -5.2**
comp=Z,3.2nm,0.2s,baz=109,slow=6.2,SNR=3.9
ATD Arta Tunnel 134.65 250 PKP **PKiKP 11 35 20.3 -0.5**
comp=Z,60nm,0.3s,baz=60,slow=2.3,SNR=41
ATD Arta Tunnel 134.65 250 PKPdf 11 35 19.8 +0.4
ARU Arti 135.33 318 PKhKP PKPpre 11 35 15.7
comp=Z,4.5nm,0.6s,baz=196,slow=2.1,SNR=16
ARU SKPbc **SKPbc 11 38 44.4 -1.9**
comp=Z,1.2nm,0.5s,baz=100,slow=1.1,SNR=4.7
ARU Arti 135.33 318 *i* PKIKP **PKPdf 11 35 18.7 -0.5**
ARU Arti 135.33 318 PKPdf **PKPdf 11 35 18.3 -0.9**
KBS Kingsbay 135.59 357 *i* P **PKPdf 11 35 19.7 +0.5**
AKTO Aktyubinsk 135.69 309 PKhKP PKPpre 11 35 09.5
comp=Z,1.1nm,0.5s,baz=63,slow=6.4,SNR=5.2
AKTO PKP **PKPdf 11 35 19.5 -0.7**
comp=Z,6.2nm,0.9s,baz=113,slow=1.2,SNR=15
AKTO SKPbc **SKPbc 11 38 45.5 -2.3**
comp=Z,0.9nm,0.4s,baz=63,slow=2.3,SNR=2.8
SPA0 Spitsbergen Ar 136.05 355 *e*PKPdf **PKPdf 11 35 20.0 0.0**
SPITS Spitsbergen Ar 136.05 355 PKP **PKPdf 11 35 20.1 0.0**
comp=Z,16nm,0.7s,baz=151,slow=10,SNR=17
SFJD Kangerlussuaq 136.81 26 PKP **PKPdf 11 35 21.5 -0.2**
comp=Z,7.0nm,0.6s,baz=248,slow=4.1,SNR=6.5
SFJD SKPbc **SKPbc 11 38 49.2 -1.4**
comp=Z,7.6nm,0.8s,baz=334,slow=1.4,SNR=3.9
SUMG Summit 137.50 16 *i* P **PKPdf 11 35 18.8 -4.6**
SUMG Summit 137.50 16 *i* PKIKP **PKPdf 11 35 18.7 -4.6**
DY2G Dye2 138.61 26 *e*P **PKPdf 11 35 23.7 -1.7**
RAYN Ar Rayn 138.93 267 PKIKP **PKPdf 11 35 26.9 -0.1**
RAYN Ar Rayn 138.93 267 PKPdf **PKPdf 11 35 26.9 -0.1**
DBG Daneborg 139.30 8 *e*P **PKPdf 11 35 22.3 -3.8**
ICESG Greenland Ices 139.39 21 *e*P **PKPdf 11 35 22.6 -4.3**
KIRV Kirov 139.89 322 PKhKP PKPpre 11 35 24.4
comp=Z,14nm,0.8s,baz=151,slow=1.4,SNR=3.2
PRGR Permogore 140.76 327 *e*PKIKP **PKPdf 11 35 28.6 -0.4**
PRGR pmax pmax
comp=Z,10.0nm,0.7s
HAMF Hammerfest 141.98 347 *e* **PKPdf 11 35 28.6 -2.4**
HAMF *e*PKPdf **PKiKP 11 35 32.1 -1.8**
BELG Belogornoye 142.09 312 PKhKP PKPpre 11 35 26.1
comp=Z,54nm,0.9s,baz=324,slow=2.8,SNR=12
ARA0 ARCESS Array S 142.56 346 *e* **PKPdf 11 35 28.5 -3.6**
ARA0 *e*PKPdf **PKiKP 11 35 34.0 -1.2**
ARCES ARCESS Array B 142.56 346 PKhKP PKPpre 11 35 28.4
comp=Z,12nm,0.6s,baz=34,slow=3.4,SNR=16
ARCES PKP **PKPdf 11 35 31.9 -0.2**
comp=Z,17nm,0.6s,baz=48,slow=1.5,SNR=20
ARCES SKPbc **SKPbc 11 39 05.6 -0.5**
comp=Z,1.9nm,0.7s,baz=48,slow=1.3,SNR=2.0
KTK1 Kautokeino 143.44 346 *e* PKPab 11 35 30.2 +0.3
KTK1 *e*PKPdf **PKiKP 11 35 36.1 -1.0**
JETT Jettan, Norway 143.50 348 *e*PKPdf **PKiKP 11 35 35.5 -1.7**
TRO Tromso 143.67 349 *e* PKPab 11 35 30.8 0.0
TRO *e*PKPdf **PKPdf 11 35 35.0 +1.0**
KLMR Klimovskoe 143.77 328 *e*PKIKP PKPbc 11 35 32.7 +0.5
KLMR pmax pmax
comp=Z,42nm,1.5s
KLMR Klimovskoe 143.77 328 *e*PKPdf PKPbc 11 35 32.7 +0.5
KLMR AMP 11 35 49.8
comp=Z,42nm,1.5s
KLMR *e*SKPbc **SKPbc 11 39 06.5 -2.8**
GNI Garni 144.35 292 PKP PKPbc 11 35 35.1 +0.2
comp=Z,7.4nm,0.3s,baz=115,slow=3.3,SNR=6.1
GNI Garni 144.35 292*c* *i* PKIKP PKPbc 11 35 35.4 +0.5
GNI pmax pmax
comp=Z,19nm,1.0s
GNI Garni 144.35 292 PKPab 11 35 33.8 -0.8
ZEI Tsey 145.17 296 *i* PKP2 **PKPbc 11 35 35.1 -2.3**
ZEI pmax pmax
comp=Z,21nm,0.6s
GEVA Gevas 145.42 289 PKPdf 11 35 37.3 -1.0
N2IH Innhavet 145.65 349 *e*PKPdf **PKPbc 11 35 37.7 -0.1**
GOF Gofitskoye 145.78 300 ⇑ *e*PKIKP **PKPdf 11 35 37.6 -0.9**
GOF pmax pmax
comp=Z,85nm,1.0s
STEI Steigen 145.79 350 *e*PKPdf **PKPdf 11 35 37.7 0.0**
LOF Lofoten 145.83 351 *e*PKPdf **PKPdf 11 35 37.6 -0.2**
VRH Novokhopyorsk 145.91 312 *e*PKIKP **PKPdf 11 35 37.0 -1.4**
VRH pmax pmax
comp=Z,70nm,0.7s
KBZ Khabaz 145.91 298 PKPbc **PKPdf 11 35 38.4 -0.3**
comp=Z,27nm,0.9s,baz=137,slow=2.8,SNR=43
KBZ Khabaz 145.91 298*c* *i* PKIKP **PKPdf 11 35 37.8 -0.9**
KIV Kislovodsk 146.06 299 *i* PKIKP **PKPdf 11 35 38.4 -0.7**
KIV pmax pmax
comp=Z,68nm,1.0s
KIV MLR MLR
comp=Z,433nm,25.0s
KIV Kislovodsk 146.06 299 PKPdf **PKPdf 11 35 38.6 -0.5**
N2SV S rvΨgen 146.13 351 *e*PKPdf **PKPdf 11 35 38.4 +0.1**
N2TV TΨrnvik 146.14 350 *e*PKPdf **PKPbc 11 35 39.0 -0.4**
N2ST Straumen 146.27 349 *e*PKPdf **PKPbc 11 35 39.3 -0.5**
FAUS Fauske 146.29 349 *e*PKPdf **PKPbc 11 35 39.2 -0.6**
N2VA Vr,y 146.38 351 *e*PKPdf **PKPbc 11 35 39.5 -0.6**
CHVG Ch¼k'valeri 146.50 296 ⇑ P **PKPbc 11 35 40.8 -0.4**
NBB28 Valnes 146.59 350 *e*PKPdf **PKPbc 11 35 40.2 -0.5**
N2RO R¸st 146.59 352 *e*PKPdf **PKPbc 11 35 40.3 -0.4**
NBB05 Inndyr 146.79 350 *e*PKPdf **PKPbc 11 35 40.9 -0.4**
MOS Moscow 146.88 321 *e*PKIKP **PKPdf 11 35 38.3 -1.6**
MOS *e* 11 35 53.2
NBB30 Finnes 146.89 350 *e*PKPdf **PKPbc 11 35 40.9 -0.7**
NBB17 Glomfjord BΨr 147.01 350 *e*PKPdf **PKPbc 11 35 41.6 -0.3**
MARD Mardin 147.07 286 PKPdf 11 35 40.9 -0.2
LPSR Galich'ya Gora 147.23 315 *e*PKIKP **PKPdf 11 35 40.1 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
KONS Konsvik 147.43 350 *e*PKPdf **PKPbc 11 35 42.6 -0.5**
NBB40 Tonnes 147.43 350 *e*PKPdf **PKPbc 11 35 42.9 -0.2**
VORD Divnogorie 147.46 312 *e*PKIKP **PKPdf 11 35 40.1 -0.9**
VORD pmax pmax
comp=Z,20nm,0.9s
VSR Storozhevoye 147.47 312 *e*PKIKP **PKPdf 11 35 40.8 -0.3**
VSR pmax pmax
comp=Z,30nm,0.6s
MOR8 Moi Rana 147.54 349 *e*PKPdf **PKPdf 11 35 42.0 +1.3**
KOPT Kop Dagi 147.58 291 PKPdf 11 35 42.0 0.0
KOPT PKPbc **PKPbc 11 35 45.0 +0.2**
STOK Stokkvaagen 147.60 350 *e*PKPdf **PKPbc 11 35 43.2 -0.4**
OBN Obninsk 147.68 320 PKPbc **PKPbc 11 35 42.8 -1.3**
comp=Z,6.3nm,0.5s,baz=43,slow=3.9,SNR=6.8
OBN Obninsk 147.68 320 ⇑ *i* PKIKP **PKPdf 11 35 41.4 +0.2**
OBN *i* 11 35 45.5
OBN *e* 11 35 54.3
OBN 11 36 01.0
OBN 11 42 35.0
OBN SS SS 11 58 15.0 +3.0
OBN pmax pmax
comp=Z,25nm,1.5s
OBN pmax pmax
comp=Z,39nm,1.8s
OBN MLR MLR
comp=Z,228nm,21.0s
OBN Obninsk 147.68 320 PKPdf **PKPdf 11 35 40.7 -0.5**
FIA1 FINESS Array S 148.65 336 PKP **PKPdf 11 35 42.6 0.0**
FIA1 PKPbc **PKPbc 11 35 45.9 -0.5**
FINES FINESS Array B 148.65 336 PKP **PKPdf 11 35 42.8 +0.2**
comp=Z,26nm,0.6s,baz=82,slow=4.0,SNR=91
FINES PKPbc **PKPbc 11 35 45.8 -0.6**
comp=Z,26nm,0.6s,baz=46,slow=3.5,SNR=40
FINES FINESS Array B 148.65 336 PKPdf 11 35 42.5 -0.2
FINES PKPbc **PKPbc 11 35 45.9 -0.6**
NSS Namsos 149.45 350 *e*PKPbc **PKPbc 11 35 47.7 -0.6**
GAZ Gaziantep 149.87 285 PKPdf **PKPdf 11 35 46.2 +0.7**
GAZ **PKPbc 11 35 49.7 -0.8**
EIL Elat 150.02 270 PKPbc **PKPbc 11 35 50.4 -0.5**
comp=Z,32nm,0.7s,baz=126,slow=6.2,SNR=26
VSU Vasula 150.47 331 *e*P **PKPbc 11 35 50.8 -0.2**
MMAI Mount Meron Ar 150.59 277 PKPbc **PKPbc 11 35 52.1 -0.1**
comp=Z,30nm,0.5s,baz=78,slow=5.2,SNR=70
TBLU Trondheim 150.91 350 *e*PKPbc **PKPbc 11 35 50.4 -1.5**
AAL Aland 151.54 339 *e*P **PKPbc 11 35 51.9 -1.6**
DBIC Dimbokro 151.56 170 PKP **PKPdf 11 35 50.8 +2.0**
comp=Z,28nm,1.0s,baz=172,slow=2.4,SNR=6.6
DBIC PKPbc **PKiKP 11 35 55.3 -0.1**
comp=Z,30nm,0.7s,baz=162,slow=2.2,SNR=38
DBIC PKPab **sPKPdf 11 36 06.1 -0.6**
comp=Z,48nm,0.8s,baz=167,slow=7.2,SNR=5.2
DBIC Dimbokro 151.56 170 PKPdf **PKPdf 11 35 48.6 -0.2**
DBIC PKPbc **PKiKP 11 35 56.0 +0.5**
DIKM Dikmen 151.59 294 ⇑ P **PKPbc 11 35 52.7 -1.6**
MOL Molde 151.90 352 *e*PKPbc **PKPbc 11 35 53.1 -1.1**
DOMB Dombas 152.23 351 *e*PKPbc **PKPbc 11 35 54.9 -0.2**
AKN Aaknes 152.34 353 *e*PKPbc **PKiKP 11 35 55.8 +0.2**
MNK Minsk 152.38 324 *e*PKIKP **PKPab 11 36 04.0 -1.8**
MNK Minsk 152.38 324 *i* PKP **PKPbc 11 35 55.4 -0.1**
MNK comp=E,2.0nm,0.7s
i PKP **PKPbc 11 35 55.4 -0.1**
MNK comp=N,15nm,0.8s
i PKP **PKPbc 11 35 55.4 -0.1**
MNK comp=Z,62nm,0.8s
i pPKP **sPKPbc 11 36 13.1 -0.3**
MNK *i* PP PP 11 39 47.1 +8.6
MNK *i* SKS **SKSdf 11 42 57.4 +5.5**
MNK *i* PPP PPP 11 43 13.5
MNK *i* SS **SS 11 59 14.4 +10**
MNK *i* SSS SSS 12 04 55.3
MNK *i* LQ LQ 12 37 03.5
MNK *i* LR LR 12 39 00.7
MNK *i* LRM MLR 12 43 52.4
comp=N,405nm,24.6s
MNK *i* LRM MLR 12 43 52.4
comp=Z,180nm,24.6s
MNK *i* LRM MLR 12 44 24.9
comp=E,24nm,19.5s
IDID Didziasalis 152.45 326 *e*P **PKPbc 11 35 55.7 0.0**
UPP Uppsala 152.48 341 *e*P **PKPbc 11 35 53.9 -1.7**
ISAL Salakas 152.58 327 *e*P **PKPbc 11 35 55.1 -0.8**
NC303 NORSAR Array S 152.66 348 PKPdf 11 35 49.2 +0.2
NC303 **PKPbc 11 35 55.6 -0.4**
CSS Mathiatis 152.67 280 PKPdf **PKPdf 11 35 49.1 -0.7**
CSS **PKPbc 11 35 55.7 -1.2**
IIGN Ignalina 152.67 327 *e*P **PKPbc 11 35 55.7 -0.5**
NACGM Naroch 152.68 325 *i* PKP **PKPbc 11 35 56.0 -0.3**
NACGM *i* PKP **PKPbc 11 35 56.0 -0.3**
NACGM *i* PKP **PKPbc 11 35 56.0 -0.3**
NACGM *i* PP PP 11 40 52.4 +72
NACGM *i* PPP PPP 11 43 03.8
NACGM *i* SKKS 11 45 07.2
NACGM *i* PS 11 48 44.7
NACGM *i* SS SS 11 57 56.5 -71
NACGM *i* SSS SSS 12 04 04.3
NACGM *i* LQ LQ 12 27 04.5
NACGM *i* LR LR 12 37 58.5
NC405 NORSAR Array S 152.70 347 PKPdf 11 35 55.9 -0.2
NC204 NORSAR Array S 152.71 349 PKPdf **PKPdf 11 35 49.4 +0.3**
NC204 **PKPbc 11 35 56.0 -0.2**
SLIT Slitere, Latvi 152.75 333 *e*P **PKPbc 11 35 54.7 -1.6**
ILGA Ilgaz 152.77 293 PKPdf **PKPdf 11 35 50.0 0.0**
ILGA **PKPbc 11 35 56.7 -0.5**
NB201 NORSAR Array S 152.83 348 PKPbc 11 35 56.0 -0.4
BR131 Keskin Array S 152.84 290 PKIKP **PKPdf 11 35 49.3 -0.8**
BR131 Keskin Array S 152.84 290 PKPdf **PKPdf 11 35 49.3 -0.8**
BR131 **PKPbc 11 35 56.5 -0.8**
BRTR Keskin Array B 152.84 290 PKP **PKPdf 11 35 48.6 -1.5**
comp=E,4.0nm,1.0s,baz=188,slow=3.7,SNR=5.4
BRTR PKPbc **PKPbc 11 35 56.0 -1.3**
comp=E,27nm,0.8s,baz=135,slow=3.6,SNR=34
BRTR PKPab **sPKPdf 11 36 07.2 -0.8**
comp=E,9.5nm,0.8s,baz=134,slow=5.3,SNR=5.8
BRTR Keskin Array B 152.84 290 PKIKP **PKPdf 11 35 48.9 -1.2**
BRTR Keskin Array B 152.84 290 PKPdf 11 35 48.9 -1.2
BRTR PKPbc **PKPbc 11 35 56.3 -1.1**
NB2 NORSAR Subarra 152.86 348 PKP **PKPbc 11 35 55.8 -0.7**
baz=17,slow=2.6
NOA NORSAR Array B 152.86 348 PKP **PKPdf 11 35 48.7 -0.6**
comp=E,5.7nm,1.0s,baz=7.5,slow=18,SNR=17
NOA PKPbc **PKPbc 11 35 55.9 -0.6**
comp=E,22nm,0.6s,baz=20,slow=4.0,SNR=112
NBO00 NORSAR Array S 152.94 348 PKPdf **PKPdf 11 35 49.2 -0.2**
NBO00 **PKPbc 11 35 56.6 -0.1**
LEF Lefka 153.05 280 ⇓ P **PKPbc 11 35 57.1 -0.6**
NC602 NORSAR Array S 153.08 347 PKPdf 11 35 49.0 -0.6
NC602 PKPbc **PKPbc 11 35 56.6 -0.3**
FOO Floro 153.09 355 *e*PKPbc **PKiKP 11 35 57.0 -0.1**
NAO01 NORSAR Array S 153.10 348 PKPdf **PKPdf 11 35 49.5 -0.1**
NAO01 **PKPbc 11 35 56.6 -0.3**
HYA Hoyanger 153.41 353 *e*PKPdf **PKPdf 11 35 50.3 +0.3**
HYA *e*PKPbc **PKiKP 11 35 57.7 -0.1**
ANTO Ankara 153.50 291 PKIKP **PKPdf 11 35 49.1 -1.8**
ANTO 11 35 58.0
ANTO Ankara 153.50 291 PKPdf **PKPdf 11 35 49.1 -1.8**
ANTO **PKPbc 11 35 58.0 -0.6**
AKASG Malin Array Be 153.55 316 PKP **PKPdf 11 35 48.9 -1.6**
comp=E,3.6nm,0.7s,baz=58,slow=1.5,SNR=11
AKASG PKPbc **PKPbc 11 35 57.1 -1.1**
comp=E,13nm,0.6s,baz=56,slow=2.2,SNR=9.2
PABE Paberze 153.56 329 *e*P **PKPbc 11 35 56.3 -1.8**
SKAR Skarslia 153.64 351 *e*PKPbc **PKiKP 11 35 58.6 +0.3**
SUE Sulen 153.65 355 *e*PKPbc **PKiKP 11 35 58.6 +0.4**
OSL Oslo 153.98 348 *e*PKPbc **PKiKP 11 35 59.0 +0.1**
ASK Askoy 154.18 354 *e*PKPbc **PKiKP 11 36 00.9 +1.5**
KONO Kongsberg 154.44 349 PKIKP **PKPbc 11 35 59.7 -0.2**
KONO 11 36 14.0
KONO Kongsberg 154.44 349 PKPbc 11 35 59.7 -0.2
KONO PKPab **PKPab 11 36 14.0 -0.3**
KONO Kongsberg 154.44 349 *e*PKPbc **PKPbc 11 35 59.6 -0.2**
ODD1 Odda 154.60 352 *e*PKPbc **PKiKP 11 36 00.5 +0.2**
MDUB Mudurnu 154.70 292 PKPbc 11 35 59.5 -1.8
MDUB PKPab **PKPab 11 36 16.3 -0.1**
BLS5 Blasjo 155.09 352 *e*PKPdf **PKPdf 11 35 53.6 +1.2**
BLS5 *e*PKPbc **pPKPdf 11 36 02.9 -2.8**
TESR Tescani 156.76 308 ⇑ P **PKPab 11 36 24.0 -0.8**
BURAR Bucovina Array 157.24 312 PKPdf **PKPdf 11 35 55.2 -0.6**
BURAR PKPab **PKPab 11 36 28.0 +1.1**
KARP Karpathos 157.75 280 PKPdf **PKPdf 11 35 56.2 -0.5**
KARP PKPab **PKPab 11 36 29.3 -0.2**
TOA0 Torodi Ar. Sit 158.28 185 PKPdf **PKPdf 11 35 57.7 -0.2**
TOA0 PKPab **PKPab 11 36 32.2 +0.3**
TORD Torodi Ar. Bea 158.28 185 PKP **PKPdf 11 35 58.2 +0.3**
comp=E,4.2nm,0.9s,baz=304,slow=1.1,SNR=19
TORD PKPab **PKPab 11 36 31.4 -0.6**
comp=E,22nm,0.9s,baz=164,slow=3.8,SNR=17
TORD Torodi Ar. Bea 158.28 185 PKPdf 11 35 57.7 -0.2
TORD PKPab **PKPab 11 36 31.9 0.0**
CRVS Cervenica-Dubn 158.82 318 *e*PKP2 **PKPab 11 36 34.3 +0.7**
CRVS Cervenica-Dubn 158.82 318 *e*PKP **PKPab 11 36 34.3 +0.7**
DRGR 159.14 312 ⇓ P **PKPab 11 36 35.0 -0.2**
KOWA Kowa 159.37 169 PKP **PKPdf 11 35 59.3 +0.1**
comp=E,5.6nm,0.9s,baz=234,slow=2.8,SNR=10.0
KOWA PKPab **PKPab 11 36 38.9 +2.2**
comp=E,3.7nm,0.7s,baz=165,slow=5.7,SNR=4.6
KOWA Kowa 159.37 169 PKPdf 11 35 59.7 +0.5
EKA Eskdalemuir Ar 159.46 5 PKP **PKPdf 11 35 58.3 +0.3**
comp=E,1.3nm,0.7s,baz=341,slow=1.6,SNR=6.0
EKA PKPab **PKPab 11 36 34.5 -1.5**
comp=E,3.3nm,0.8s,baz=341,slow=2.6,SNR=7.0
IDI Anoyia 159.56 278 PKPab **PKPab 11 36 36.7 -0.8**
comp=E,12nm,0.6s,baz=45,slow=6.3,SNR=8.1
IDI Anoyia 159.56 278 PKPab 11 36 37.4 -0.1
MORC Moravsky Berou 160.31 324 *e*PKP **PKPdf 11 35 59.2 -0.1**
MORC Moravsky Berou 160.31 324 PKIKP **PKPdf 11 35 59.0 -0.3**
MORC Moravsky Berou 160.31 324 PKPdf 11 35 59.0 -0.3
OSTC Ostas 160.37 328 *e*PKPDF **PKPdf 11 35 59.1 -0.2**
OSTC *ex* x 11 36 09.5
KRLC Kraliky 160.46 326 *e*PKIKP **PKPdf 11 35 59.1 -0.3**
KRLC Kraliky 160.46 326 *e*PKPDF **PKPdf 11 35 59.1 -0.3**
DPC Dobruska-Polom 160.47 327 *e*PKIKP **PKPdf 11 35 59.0 -0.4**
DPC *e* 11 36 40.8
DPC Dobruska-Polom 160.47 327 *e*PKPDF **PKPdf 11 35 59.0 -0.4**
DPC *e*PKPab **PKPab 11 36 40.8 0.0**
VYHS Vyhne 160.47 320 *e*PKIKP **PKPdf 11 36 03.8 +4.3**
VYHS *e* 11 36 41.0
VYHS Vyhne 160.47 320 *e* **PKPab 11 36 41.0 +0.2**
VYHS Vyhne 160.47 320 *e*PKP **PKPdf 11 36 03.8 +4.3**
JAVC Velka Javorina 160.85 322 *e* **PKPab 11 36 44.0 +1.5**
BRG Berggiesshubel 161.07 332 *e*PKP **PKPdf 11 35 59.6 -0.3**
BRG Amp 11 36 01.4
comp=Z,5.2nm,0.9s
BRG *ex* x 11 36 13.9
BRG Amp 11 36 18.7
comp=E,8.1nm,1.2s
CLL Collm 161.07 334 *i* PKPdf **PKPdf 11 36 00.0 0.0**
comp=Z,8.0nm,1.3s
CLL *i* PKPab **PKPab 11 36 42.3 -1.0**
comp=Z,6.0nm,1.0s
CLL *e*PP **PP 11 40 24.0 -2.2**
CLL *e*PPP PPP 11 44 00.0
CLL *e*SS SS 12 00 30.0 -6.9
CLL *e*SSS SSS 12 06 30.0
CLL L L 12 50 00.0
comp=Z,200nm,21.8s
CLL Collm 161.07 334 *i* PKIKP **PKPdf 11 36 00.0 0.0**
CLL *i* 11 36 42.3
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL pmax pmax
comp=Z,6.0nm,1.0s
VRAC Vranov 161.08 325 PKP **PKPdf 11 35 58.4 -1.7**
comp=Z,1.2nm,0.4s,baz=317,slow=1.6,SNR=3.8
VRAC PKPab **PKPab 11 36 42.4 -1.0**
comp=Z,3.7nm,0.6s,baz=106,slow=3.4,SNR=4.4
VRAC Vranov 161.08 325 *e* **PKPab 11 36 43.9 +0.5**
VRAC Vranov 161.08 325 *e*PKP **PKPdf 11 35 59.5 -0.6**
KRUC Moravsky 161.34 324 *e* **PKPab 11 36 44.9 +0.3**
KRUC Moravsky 161.34 324 *e*PKP **PKPdf 11 35 59.7 -0.6**
CKRC Cesky Krumlov 162.48 327 *e*PKPAB **PKPab 11 36 49.5 -0.1**
KHC Kasperske Hory 162.57 329 *e*PKIKP **PKPdf 11 36 01.1 -0.6**
KHC *e* 11 36 50.0
KHC Kasperske Hory 162.57 329 *e*PKPDF **PKPdf 11 36 01.1 -0.6**

KHC				*ex*		x		11 36 43.5	
KHC				*e*PKPAB		**PKPab**		**11 36 50.0**	**0.0**
KHC	**Kasperske Hory**	**162.57**	**329**	PKPdf		**PKPdf**		**11 36 01.2**	**-0.4**
KHC				PKPab		**PKPab**		**11 36 49.5**	**-0.4**
GERES	**GERESS Array B**	**162.73**	**328**	PKP		**PKPdf**		**11 35 59.9**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=214,slow=1.0,SNR=4.2								
GERES				PKPab		**PKPab**		**11 36 50.1**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=52,slow=7.1,SNR=6.2								
GERES	**GERESS Array B**	**162.73**	**328**	PKPab		**PKPab**		**11 36 50.2**	**-0.6**
BFO	**Black Forest**	**165.20**	**338**	PKP2		**PKPab**		**11 37 01.1**	**-0.4**
BFO	**Black Forest**	**165.20**	**338**			**PKPab**		**11 37 01.1**	**-0.4**
DAVOX	**Davos/Dischmat**	**165.96**	**331**	PKP		**PKPdf**		**11 36 03.9**	**-1.1**
	comp=Z,3.3nm,0.9s,baz=310,slow=2.0,SNR=5.0								
DAVOX				PKPab		**PKPab**		**11 37 04.9**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=63,slow=0.7,SNR=4.3								
TUE	**Stuetta**	**166.42**	**331**			**PKPdf**		**11 36 05.0**	**-0.3**
TUE				PKPab		**PKPab**		**11 37 06.8**	**-0.4**
BNI	**Bardonecchia**	**168.62**	**335**	PKIKP		**PKPdf**		**11 36 06.1**	**-0.8**
BNI	**Bardonecchia**	**168.62**	**335**			**PKPdf**		**11 36 06.1**	**-0.8**
KEST	**Kesra**	**172.24**	**279**	PKP		**PKPdf**		**11 36 09.1**	**0.0**
	comp=Z,2.9nm,0.7s,baz=52,slow=3.1,SNR=4.0								
KEST				PKPab		**PKPab**		**11 37 33.6**	**+0.3**
	comp=Z,12nm,0.9s,baz=299,slow=1.2,SNR=9.3								
KEST	**Kesra**	**172.24**	**279**	PKPdf		**PKPdf**		**11 36 09.2**	**+0.1**
KEST						**PKPab**		**11 37 33.4**	**0.0**
ESDC	**Sonseca Array**	**174.33**	**32**	PKP		**PKPdf**		**11 36 10.9**	**+1.2**
	comp=Z,3.1nm,1.1s,baz=336,slow=2.7,SNR=9.9								
ESDC				PKPab		**PKPab**		**11 37 42.6**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=329,slow=5.3,SNR=2.6								
ESDC	**Sonseca Array**	**174.33**	**32**			**PKPdf**		**11 36 09.9**	**+0.1**
ESDC				PKPab		**PKPab**		**11 37 43.1**	**+0.9**
MDT	**Midelt**	**175.70**	**118**	PKP		**PKPdf**		**11 36 11.2**	**+0.8**
	comp=Z,4.8nm,1.0s,baz=147,slow=2.4,SNR=6.2								

*KOLA **18** 11:30:36.9, 67.74N×34.16E, h0km, ML2.1, Khibiny Massif*
*HEL **18** 11:30:37.1±0.1, 67.69N×34.11E, h0km, ML1.9, Explosion*
*NAO **18** 11:30:38.1±1.3, 67.72N×34.01E, ML2.5*
*IDC **18** 11:30:42.2±2.8, 67.63N×33.21E, h0km, mb1 3.0/3, mb1mx2.8/77, mbtmp2.8/3, ML2.1/3, Error ellipse: s-maj=30.2km s-min=9.8km az=76.0*

ISC 18 11:30:36.5±1.0, 67.68N±0.04×34.16E±0.04, h0km, n31, σ1s46/60, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
LVZ	**Lovozero**	**0.29**	**40**	*e*P		**Pg**		**11 30 42.3**	**+0.4**
LVZ				*e*S		**Sg**		**11 30 46.2**	**+0.6**
APA	**Apatity**	**0.31**	**249**	P		**Pg**		**11 30 43.3**	**+0.9**
APA				S		**Sg**		**11 30 47.7**	**+1.2**
APZ9	**Apatity**	**0.31**	**249**	Pg		**Pg**		**11 30 43.3**	**+0.9**
APZ9				Lg		Lg		11 30 47.7	
APZ9				Rg		Rg		11 30 48.6	
APZ9	**Apatity**	**0.31**	**249**	Pg		**Pg**		**11 30 43.3**	**+0.9**
APZ9				Sg		**Sg**		**11 30 47.7**	**+1.3**
APA0	**Apatity Array**	**0.45**	**261**	Pg		**Pg**		**11 30 45.6**	**+0.4**
	baz=91,slow=16								
APA0				Lg		Lg		11 30 51.5	
	baz=89,slow=28								
APA0				Rg		Rg		11 30 52.9	
	baz=101,slow=37								
APA0	**Apatity Array**	**0.45**	**261**	Pg		**Pg**		**11 30 45.6**	**+0.4**
	baz=91,slow=16								
APA0				Sg		**Sg**		**11 30 51.5**	**+0.5**
	baz=89,slow=28								
APA0	**Apatity Array**	**0.45**	**261**	P		**Pg**		**11 30 45.6**	**+0.4**
APA0				S		**Sg**		**11 30 51.7**	**+0.7**
VRF	**Varrio**	**1.74**	**274**	*e*P		**Pn**		**11 31 08.1**	**+0.2**
VRF				*e*SN		**Sn**		**11 31 31.0**	**+0.3**
VRF				MSG				11 31 33.7	
	comp=Z,16nm,0.2s								
OLKF	**Oulanka, Finla**	**2.32**	**236**	*e*PB		**Pn**		**11 31 17.2**	**+1.3**
OLKF				*e*SG		**Sb**		**11 31 48.6**	**+0.5**
KU6	**Riekki**	**2.37**	**227**	*e*P		**Pn**		**11 31 17.5**	**+0.9**
KU6				*e*SG		**Sb**		**11 31 49.5**	**-0.2**
KU6				MSG				11 31 51.9	
	comp=Z,4.0nm,0.1s								
MSF	**Maaselka**	**2.70**	**231**	*e*PB		**Pn**		**11 31 23.4**	**+2.3**
MSF				*e*SG		**Sb**		**11 31 60.0**	**+0.8**
SGF	**Sodankyl**	**2.94**	**269**	*e*P		**Pn**		**11 31 24.4**	**0.0**
SGF				*e*SG		**Sb**		**11 32 06.5**	**+0.4**
SGF				MSG				11 32 08.7	
	comp=Z,3.7nm,0.2s								
KEV	**Kevo**	**3.34**	**312**	Pn		**Pn**		**11 31 31.0**	**+1.2**
KEV				Sn		**Sn**		**11 32 11.1**	**+1.0**
KEV				Lg		Lg		11 32 20.4	
KEV	**Kevo**	**3.34**	**312**	*e*P		**Pn**		**11 31 31.0**	**+1.2**
KEV				*e*S		**Sn**		**11 32 07.9**	**-2.2**
KEV	**Kevo**	**3.34**	**312**	*e*P		**Pn**		**11 31 30.6**	**+0.8**
RNF	**Rovaniemi**	**3.36**	**255**	*e*P		**Pn**		**11 31 30.3**	**+0.2**
ARA0	**ARCESS Array S**	**3.68**	**304**	Pn		**Pn**		**11 31 35.0**	**+0.5**
	baz=123,slow=16								
ARA0				Pg		**Pb**		**11 31 43.5**	**+1.3**
	baz=118,slow=16								
ARA0				Sn		**Sn**		**11 32 18.0**	**-0.5**
	baz=117,slow=28								
ARA0				Lg		Lg		11 32 31.0	
	baz=117,slow=37								
ARA0	**ARCESS Array S**	**3.68**	**304**	Pn		**Pn**		**11 31 35.0**	**+0.5**
	baz=123,slow=16								
ARA0				Pg		**Pb**		**11 31 43.5**	**+1.3**
	baz=118,slow=16								
ARA0				Sn		**Sn**		**11 32 18.0**	**-0.5**
	baz=117,slow=28								
ARA0				Sg		**Sg**		**11 32 31.0**	**-3.5**
	baz=117,slow=37								
ARA0				IAML				11 32 33.1	
	comp=Z,8.9nm,0.4s								
ARA0	**ARCESS Array S**	**3.68**	**304**	*e*P		**Pn**		**11 31 35.0**	**+0.5**
ARA0				*e*S		**Sn**		**11 32 17.2**	**-1.3**
ARCES	**ARCESS Array B**	**3.68**	**304**	Pn		**Pn**		**11 31 35.3**	**+0.8**
	baz=120,slow=14,SNR=63								
ARCES				Pg		**Pb**		**11 31 44.2**	**+2.0**
	baz=112,slow=16,SNR=2.9								
ARCES				Sn		**Sn**		**11 32 17.9**	**-0.6**
	baz=124,slow=28,SNR=11								
ARCES				Lg		Lg		11 32 28.4	
	baz=112,slow=29,SNR=15								
HEF	**Hetta**	**4.01**	**285**	*e*P		**Pn**		**11 31 39.6**	**+0.5**
HEF				*e*S		**Sn**		**11 32 25.6**	**-1.1**
HEF	**Hetta**	**4.01**	**285**	*e*P		**Pn**		**11 31 39.1**	**0.0**
HEF				*e*S		**Sn**		**11 32 26.1**	**-0.6**
KTK1	**Kautokeino**	**4.26**	**293**	Pn		**Pn**		**11 31 43.6**	**+1.1**
KTK1				Pg		**Pb**		**11 31 52.5**	**+0.3**
KTK1				Sn		**Sn**		**11 32 32.8**	**-0.1**
KTK1				Lg		Lg		11 32 47.3	
KTK1	**Kautokeino**	**4.26**	**293**	*e*P		**Pn**		**11 31 43.3**	**+0.8**
KTK1				*e*S		**Sn**		**11 32 30.9**	**-2.0**
KTK1				IAML				11 32 49.7	
	comp=Z,9.2nm,0.4s								
KIF	**Kilpisjarvi**	**5.12**	**291**	Pn		**Pn**		**11 31 54.0**	**-0.3**
KIF				Sn		**Sn**		**11 32 51.7**	**-2.3**
KIF				Lg		Lg		11 33 12.9	
KIF	**Kilpisjarvi**	**5.12**	**291**	*e*P		**Pn**		**11 31 54.8**	**+0.5**
KIF				*e*S		**Sn**		**11 32 49.5**	**-4.6**
I37NO	**I37NO**	**5.92**	**291**	*i*				12 05 18.1	
	baz=101,slow=329,SNR=6.5								
FIA0	**FINESS Array S**	**7.16**	**213**	Pn		**Pn**		**11 32 21.7**	**-0.6**
FIA0				Sn		**Sn**		**11 33 41.4**	**-2.8**
	baz=37,slow=22								
FIA0				Lg		Lg		11 34 18.1	
	baz=34,slow=28								
FIA0	**FINESS Array S**	**7.16**	**213**	Pn		**Pn**		**11 32 21.7**	**-0.6**
FIA0				Sn		**Sn**		**11 33 41.4**	**-2.8**
	baz=37,slow=22								
FIA0				Sg		Sg		11 34 18.1	-8.0
	baz=34,slow=28								
FINES	**FINESS Array B**	**7.16**	**213**	Pn		**Pn**		**11 32 22.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=24,slow=15,SNR=3.4								
FINES				Sn		**Sn**		**11 33 41.0**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=31,slow=24,SNR=1.5								
FINES				Lg		Lg		11 34 17.9	
	comp=Z,0.3nm,0.3s,baz=23,slow=25,SNR=3.2								
NOA	**NORSAR Array B**	**11.90**	**247**	Pn		**Pn**		**11 33 23.7**	**-3.5**
	comp=Z,0.0nm,0.3s,baz=38,slow=19,SNR=1.5								

*IDC **18** 11:30:42.2±0.8, 9.98S×124.64E, h0km, mb4.0/9, mb1 4.1/12, mb1mx3.9/57, mbtmp4.0/12, ML4.2/3, MS4.2/1, Ms1 4.2/1, ms1mx2.9/31, Error ellipse: s-maj=22.7km s-min=18.7km az=87.0*
*NEIC **18** 11:30:43.6±1.0, 9.94S±0.09×124.80E±0.07, h12km±4km, mb4.1/5, Error ellipse: s-maj=15.3km s-min=5.8km az=212.0*
*DJA **18** 11:30:45.2±0.3, 10.5S±4.1×12.5E±1.1, h10km, M4.5/9, mb4.7/8, mB5.0/4, MLv4.4/9, Mw(mB)4.4/4*

ISC 18 11:30:43.2±0.5, 10.08S±0.05×124.76E±0.05, h10km, n39, σ1s91/42, mb4.1/9, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SOEI	**Soe**	**0.59**	**304**			**Pg**		**11 30 54.4**	**-0.3**
SOEI	**Soe**	**0.59**	**304**	P		**Pg**		**11 30 54.1**	**-0.5**
BATI	**Baumata**	**1.09**	**263**	Pn		**Pb**		**11 31 04.0**	**-0.2**
	227nm,0.3s,baz=79,slow=4.0,SNR=107								
BATI				Sn		**Sn**		**11 31 22.9**	**+3.2**
	290nm,0.3s,baz=72,slow=20,SNR=5.2								
BATI				LR		LR		11 31 35.6	
	comp=Z,243nm,19.9s,baz=341,slow=54								
BATI	**Baumata**	**1.09**	**263**	P		**Pb**		**11 31 04.0**	**-0.2**
BATI				S		**Sg**		**11 31 14.5**	**-3.9**
MMRI	**Maumere**	**2.88**	**300**			**Pn**		**11 31 29.6**	**+0.4**
MMRI	**Maumere**	**2.88**	**300**	P		**Pn**		**11 31 29.6**	**+0.4**
BASI	**Baing, Sumba**	**4.12**	**268**	P		**Pn**		**11 31 45.8**	**-0.5**
KNRA	**Kununurra**	**6.79**	**145**			**Pn**		**11 32 24.6**	**+1.7**
MTN	**Manton Dam**	**6.82**	**114**	Pn		**Pn**		**11 32 23.1**	**-0.2**
PLAI	**Plampang**	**7.00**	**280**	P		**Pn**		**11 32 25.8**	**-0.1**
	0.4nm1µm83nm,0.6s								
KAPI	**Kappang**	**7.07**	**315**	Pn		**Pn**		**11 32 30.0**	**+3.2**
	1.0nm,0.3s,baz=133,slow=14,SNR=4.5								
KAPI	**Kappang**	**7.07**	**315**			**Pn**		**11 32 25.3**	**-1.6**
BNSI	**Bone**	**7.29**	**320**	P		**Pn**		**11 32 30.0**	**+0.1**
	0.1nm22nm,0.7s								
TWSI	**Taliwang, Sumb**	**7.89**	**279**	P		**Pn**		**11 32 37.5**	**-0.6**
	0.1nm16nm,0.7s								
FITZ	**Fitzroy Crossi**	**8.01**	**174**	Pn		**Pn**		**11 32 41.2**	**+1.4**
	3.5nm,0.3s,baz=4.1,slow=9.8,SNR=65								
FITZ				Sn		**Sn**		**11 34 08.0**	**-2.5**
	9.7nm,0.3s,baz=152,slow=9.5,SNR=14								
FITZ	**Fitzroy Crossi**	**8.01**	**174**	Pn		**Pn**		**11 32 41.6**	**+1.9**
SANI	**Sanana**	**8.07**	**9**	P		**Pn**		**11 32 41.8**	**+1.2**
	402nm21nm,0.6s								
JAGI	**Jajag, Banyuwa**	**10.60**	**278**	Pn		**Pn**		**11 33 15.6**	**+0.4**
PSA00	**Pilbara Seismi**	**12.36**	**202**	Pn		**Pn**		**11 33 41.6**	**+2.2**
WRA	**Warramunga Arr**	**13.47**	**138**	Pn		**Pn**		**11 33 56.3**	**+1.8**
	0.7nm,0.3s,baz=323,slow=13,SNR=16								
WRA				Sn		**Sn**		**11 36 19.4**	**-5.0**
	1.6nm,0.3s,baz=303,slow=22,SNR=8.8								
WR0	**Warramunga Arr**	**13.62**	**137**	Pn		**Pn**		**11 33 57.7**	**+1.2**
AS31	**Alice Springs**	**16.08**	**148**	Pn		**Pn**		**11 34 30.6**	**+1.0**
ASAR	**Alice Springs**	**16.08**	**148**	Pn		**Pn**		**11 34 30.3**	**+0.7**
	1.4nm,0.3s,baz=320,slow=12,SNR=56								
ASAR				Sn		**Sn**		**11 37 22.8**	**-5.3**
	0.5nm,0.3s,baz=312,slow=21,SNR=7.8								
ASAR	**Alice Springs**	**16.08**	**148**			**Pn**		**11 34 31.2**	**+1.7**
KKM	**Kota Kinabalu**	**18.14**	**332**	P		**Pn**		**11 34 54.9**	**-0.7**
KKM				IAmb		IAmb		11 35 15.9	
	comp=Z,20nm,1.2s								
MORW	**Morawa**	**20.58**	**202**	P		**P**		**11 35 23.4**	**+1.0**
MORW				IAmb		IAmb		11 35 38.0	
	comp=Z,24nm,1.4s								
FORT	**Forrest**	**20.82**	**172**	P		**P**		**11 35 27.0**	**+2.0**
CMAR	**Chiang Mai Arr**	**38.12**	**318**	P		**P**		**11 38 01.5**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=149,slow=7.2,SNR=2.3								
USRK	**Ussuriysk Ar.**	**54.42**	**6**	P		**P**		**11 40 09.8**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=176,slow=6.8,SNR=4.5								
SONM	**Songino Array**	**59.92**	**346**	P		**P**		**11 40 48.3**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=160,slow=5.6,SNR=3.1								
SONM	**Songino Array**	**59.92**	**346**	IAmb		IAmb		11 40 51.5	
	comp=Z,0.6nm,0.8s								
MKAR	**Makanchi Array**	**68.12**	**330**	P		**P**		**11 41 43.1**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=137,slow=7.5,SNR=7.8								
PETK	**Petropavlovsk-**	**68.93**	**21**	P		**P**		**11 41 49.7**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=210,slow=2.3,SNR=5.2								
ZALV	**Zalesovo Beam**	**72.18**	**337**	P		**P**		**11 42 06.8**	**-1.3**
	comp=Z,1.8nm,0.4s,baz=107,slow=5.0,SNR=2.9								
SEY	**Seymchan**	**75.85**	**13**	P		**P**		**11 42 30.2**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=211,slow=5.3,SNR=9.9								
QSPA	**South Pole Qui**	**79.92**	**180**	P		**P**		**11 42 52.4**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=242,slow=6.7,SNR=1.5								
NRIK	**Noril'sk**	**83.35**	**348**	LR		LR		12 23 50.6	
	comp=Z,136nm,20.6s,baz=97,slow=38								
AKTO	**Aktyubinsk**	**83.40**	**324**	P		**P**		**11 43 09.9**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=72,slow=8.1,SNR=2.7								
LPAZ	**La Paz**	**150.86**	**154**	PKPbc		**PKiKP**		**11 50 40.8**	**+2.4**
	comp=Z,1.6nm,0.7s,baz=180,slow=1.0,SNR=3.3								

ATH 18 11:32:58.2, 38.17N×20.64E, h16km±2km, ML1.4/1, Error ellipse: s-maj=2.8km s-min=1.1km az=247.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
VLS	**Valsamata**	**0.04**	**283**	P		Pg		11 33 00.9	-0.2
VLS				S		Sg		11 33 02.8	-0.2
VLS				AML		AML		11 33 03.4	
	comp=E,830µm,0.1s								
VLS				AML		AML		11 33 03.5	
	comp=N,310µm,0.1s								
PSDA	**Pessada-Kefalo**	**0.07**	**222**	P		Pg		11 33 01.3	0.0
PSDA				S		Sg		11 33 03.3	+0.1
KEF5	**Kardakata, Kep**	**0.18**	**309**	P		Pg		11 33 02.3	-0.3
KEF5				S		Sg		11 33 05.6	+0.1
KEF4	**Livadi, Kephal**	**0.20**	**298**	P		Pg		11 33 03.0	+0.2
KEF4				S		Sg		11 33 06.4	+0.4
DMLN	**Damoulianata-K**	**0.23**	**289**	P		Pg		11 33 03.3	0.0
DMLN				S		Sg		11 33 07.0	+0.2
KEF3	**Kipouria, Keph**	**0.24**	**279**	P		Pg		11 33 03.2	-0.3
KEF3				S		Sg		11 33 07.0	-0.1
VLMS	**Volimes, Zakyn**	**0.29**	**177**	P		Pg		11 33 04.4	0.0
FSK	**Fiskardo**	**0.30**	**348**	P		Pg		11 33 04.2	-0.3
FSK				S		Sg		11 33 08.8	0.0
EVGI	**Lefkada island**	**0.45**	**1**	P		Pg		11 33 07.1	-0.2
EVGI				S		Sb		11 33 14.1	-0.4
DRAG	**Dragano-Lefkad**	**0.52**	**354**	P		Pg		11 33 07.9	-0.7
LKD2	**Lefkada island**	**0.62**	**1**	P		Pg		11 33 10.4	-0.1

*NEIC **18** 11:33:33.4±2.0, 35.1S±0.1×179.4W±0.2, h35km±2km, mb4.5/11, Error ellipse: s-maj=21.0km s-min=19.1km az=97.0*
*WEL **18** 11:33:33.9±0.5, 35.2S±4.1×17.9W±1.1, h33km, M4.7/65, mB5.3/35, ML5.2/61, MLv5.0/65, Mw(mB)4.7/35, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7*
*IDC **18** 11:33:37.6±5.8, 35.04S×179.80W, h55km±48km, mb4.1/7, mb1 4.3/9, mb1mx3.9/41, mbtmp4.4/9, ML4.2/2, MS3.9/5, Ms1 3.9/5, ms1mx3.4/28, Error ellipse: s-maj=38.2km s-min=23.4km az=40.0*

ISC 18 11:33:34.3±0.6, 35.02S±0.06×179.37W±0.07, h43km, n140, σ1s51/139, mb4.5/11, MS3.8/6, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
MXZ	**Matakaoa Point**	**3.15**	**216**			**Pn**		**11 34 21.9**	**+0.5**
CNGZ	**Carnagh Statio**	**3.96**	**209**	P		**Pn**		**11 34 33.7**	**+1.2**
CNGZ				S		**Sn**		**11 35 21.2**	**+3.5**
TKGZ	**Te Karaka**	**4.08**	**212**	P		**Pn**		**11 34 34.7**	**+0.6**
TKGZ				S		**Sn**		**11 35 18.3**	**-2.2**
WHRZ	**Whale Island**	**4.08**	**225**	P		**Pn**		**11 34 36.4**	**+2.2**
WHRZ				S		**Sn**		**11 35 21.3**	**+0.6**
MWZ	**Matawai**	**4.14**	**216**	P		**Pn**		**11 34 35.2**	**+0.2**
MWZ				S		**Sn**		**11 35 23.6**	**+1.5**
URZ	**Urewera**	**4.29**	**220**	P		**Pn**		**11 34 37.2**	**+0.2**
	18nm,0.3s,baz=59,slow=8.6,SNR=112								
URZ				S		**Sn**		**11 35 24.1**	**-1.8**
	62nm,0.3s,baz=123,slow=19,SNR=7.8								
URZ	**Urewera**	**4.29**	**220**			**Pn**		**11 34 37.5**	**+0.5**
URZ	**Urewera**	**4.29**	**220**	P		**Pn**		**11 34 37.2**	**+0.2**
URZ				S		**Sn**		**11 35 24.3**	**-1.6**
RAGZ	**Rawiri**	**4.32**	**216**	P		**Pn**		**11 34 38.1**	**+0.6**
RAGZ				S		**Sn**		**11 35 26.0**	**-0.6**
OPRZ	**Ohinepanea**	**4.33**	**228**	P		**Pn**		**11 34 37.9**	**+0.3**
OPRZ				S		**Sn**		**11 35 24.9**	**-1.7**
RIGZ	**Rimuhau**	**4.33**	**211**	P		**Pn**		**11 34 37.5**	**-0.1**
RIGZ				S		**Sn**		**11 35 28.5**	**+1.5**
MARZ	**Manawahe**	**4.34**	**226**	P		**Pn**		**11 34 40.0**	**+2.1**
MARZ				S		**Sn**		**11 35 25.7**	**-1.5**
EDRZ	**Edgecumbe**	**4.39**	**224**	P		**Pn**		**11 34 40.9**	**+2.4**
EDRZ				S		**Sn**		**11 35 33.6**	**+5.2**
PRGZ	**Paritu Road**	**4.47**	**209**	P		**Pn**		**11 34 39.7**	**+0.1**
PRGZ				S		**Sn**		**11 35 30.6**	**+0.3**
LIRZ	**Lichensteins R**	**4.53**	**228**	P		**Pn**		**11 34 44.3**	**+3.9**
SNGZ	**Shannon Statio**	**4.58**	**214**	P		**Pn**		**11 34 41.3**	**+0.2**
SNGZ				S		**Sn**		**11 35 34.0**	**+0.9**
OMRZ	**Omania**	**4.61**	**227**	P		**Pn**		**11 34 41.2**	**-0.2**
TARZ	**Mount Tarawera**	**4.61**	**225**	P		**Pn**		**11 34 43.0**	**+1.5**

KARZ	**Kaharoa**	**4.63**	**228**	P		**Pn**		**11 34 42.7**	**+1.0**
RTZ	**Ruatahuna**	**4.63**	**218**	P		**Pn**		**11 34 42.1**	**+0.4**
RTZ				S		**Sn**		**11 35 32.7**	**-1.6**
MUGZ	**Murupara**	**4.63**	**221**	P		**Pn**		**11 34 41.2**	**-0.5**
MUGZ				S		**Sn**		**11 35 32.2**	**-2.1**
KNZ	**Kokohu**	**4.64**	**210**	P		**Pn**		**11 34 41.8**	**0.0**
KNZ				S		**Sn**		**11 35 35.3**	**+1.0**
MHGZ	**Mahia Peninsul**	**4.66**	**207**	P		**Pn**		**11 34 42.2**	**+0.1**
RRRZ	**Republican Roa**	**4.68**	**224**	P		**Pn**		**11 34 43.2**	**+0.8**
HLRZ	**Highlands Stat**	**4.71**	**226**	P		**Pn**		**11 34 43.9**	**+1.0**
KMRZ	**Kaimai**	**4.71**	**232**	P		**Pn**		**11 34 43.4**	**+0.5**
NGRZ	**Ngongotaha**	**4.71**	**228**	P		Pn		11 34 46.3	+3.5
RAHZ	**Arahi**	**4.81**	**215**	P		**Pn**		**11 34 44.8**	**+0.6**
RAHZ				S		**Sn**		**11 35 36.6**	**-2.0**
HSRZ	**Hossack Road**	**4.81**	**226**	P		Pn		11 34 54.0	+10
HRRZ	**Handcock Road**	**4.84**	**225**	P		**Pn**		**11 34 46.1**	**+1.4**
PRRZ	**Plateau Road**	**4.86**	**223**	P		**Pn**		**11 34 45.2**	**+0.4**
WHHZ	**Waihua**	**4.87**	**213**	S		**Sn**		**11 35 37.9**	**-2.3**
MTHZ	**Maungataniwha**	**4.88**	**217**	P		**Pn**		**11 34 44.8**	**-0.4**
MTHZ				S		**Sn**		**11 35 38.3**	**-2.1**
GRRZ	**Galatos Road**	**4.92**	**226**	P		Pn		11 34 51.8	+6.0
ALRZ	**Allen Road**	**4.93**	**223**	P		**Pn**		**11 34 46.1**	**+0.2**
WPRZ	**Whakapapatarin**	**5.00**	**224**	P		Pn		11 34 54.3	+7.5
MRHZ	**Matea Rd**	**5.08**	**220**	P		**Pn**		**11 34 48.0**	**0.0**
NMHZ	**Naumai**	**5.09**	**216**	P		**Pn**		**11 34 48.2**	**+0.2**
ARHZ	**Aropaoanui**	**5.13**	**213**	P		**Pn**		**11 34 48.4**	**-0.1**
KUTZ	**Kaahu Road**	**5.18**	**227**	P		**Pn**		**11 34 50.2**	**+0.9**
WHTZ	**Whakaora**	**5.22**	**224**	P		**Pn**		**11 34 52.4**	**+2.5**
TLZ	**Tolley Road**	**5.26**	**230**	P		**Pn**		**11 34 51.4**	**+1.0**
BKZ	**Black Stump Fm**	**5.29**	**217**			**Pn**		**11 34 50.2**	**-0.6**
BKZ	**Black Stump Fm**	**5.29**	**217**	P		**Pn**		**11 34 49.5**	**-1.4**
HATZ	**Hinemaiaia**	**5.30**	**222**	P		**Pn**		**11 34 55.5**	**+4.6**
WATZ	**Wairara**	**5.38**	**225**	P		**Pn**		**11 34 52.3**	**+0.3**
MCHZ	**McNeill Hill**	**5.41**	**214**	P		**Pn**		**11 34 51.9**	**-0.6**
CKHZ	**Cape Kidnapper**	**5.42**	**210**	P		**Pn**		**11 34 51.4**	**-1.1**
RATZ	**Rangitukua**	**5.46**	**224**	P		**Pn**		**11 34 53.0**	**-0.2**
RITZ	**Rihia Road**	**5.49**	**223**	P		**Pn**		**11 34 53.6**	**+0.1**
KWHZ	**Kaweka Forest**	**5.53**	**216**	P		**Pn**		**11 34 53.4**	**-0.6**
KATZ	**Kakaramea**	**5.58**	**224**	P		**Pn**		**11 34 55.5**	**+0.6**
KAHZ	**Kahuranaki**	**5.62**	**211**	P		**Pn**		**11 34 54.1**	**-1.3**
TMVZ	**Te Maari**	**5.67**	**222**	P		**Pn**		**11 34 55.4**	**-0.8**
NTVZ	**North Tongarir**	**5.68**	**223**	P		**Pn**		**11 34 55.4**	**-0.8**
ETVZ	**East Tongariro**	**5.68**	**222**	P		**Pn**		**11 34 55.6**	**-0.6**
KRVZ	**Karewarewa**	**5.69**	**223**	P		**Pn**		**11 34 56.1**	**-0.3**
KRHZ	**Kereru**	**5.72**	**215**	P		**Pn**		**11 34 55.6**	**-1.1**
OTVZ	**Oturere**	**5.73**	**222**

FINES	**FINESS Array B**	**149.00**	**336**			**PKiKP**	**11 53 18.0**	**0.0**
DBIC	**Dimbokro**	**151.34**	**169**	PKPbc		**PKiKP**	**11 53 26.8**	**+2.5**
	comp=Z,2.0nm,0.6s,baz=146,slow=3.3,SNR=3.5							
NOA	**NORSAR Array B**	**153.09**	**349**	PKPbc		**PKiKP**	**11 53 27.4**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=16,slow=4.2,SNR=4.1							
AKASG	**Malin Array Be**	**154.05**	**316**	PKPbc		**PKiKP**	**11 53 28.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=48,slow=1.4,SNR=1.6							
TORD	**Torodi Ar. Bea**	**158.20**	**183**	PKPab		**PKPab**	**11 54 02.0**	**+1.1**
	comp=Z,1.2nm,0.9s,baz=176,slow=5.1,SNR=5.4							

PDG ***18*** *11:34:03.1±0.3, 41.89N×20.12E, h10km, ML2.7/13, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
BEO ***18*** *11:34:03.3±0.3, 41.83N×20.23E, h4km±3km, ML2.3/9*
SKO ***18*** *11:34:03.1, 41.81N×20.19E, h7km*

ISC 18 11:34:02.1±1.1, 41.82N±0.03×20.17E±0.02, h7km±9km, n47, σ0.99/76, 7C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.53**	**206**	⇑P		Pn		11 34 21.7	+5.7
PRZK	**Prizren**	**0.59**	**48**	*i* Pg		**Pg**		**11 34 13.1**	**-0.4**
PRZK				*i* Sg		**Sg**		**11 34 22.2**	**+1.0**
ULC	**Ulcinj**	**0.70**	**282**	*i* Pg		**Pg**		**11 34 15.2**	**-0.5**
ULC	**Ulcinj**	**0.70**	**282**	*e*Pg		**Pg**		**11 34 15.1**	**-0.6**
ULC				*e*Sg		**Sg**		**11 34 25.7**	**+0.9**
PVY	**Plav**	**0.79**	**349**	*e*Pg		**Pg**		**11 34 16.4**	**-0.9**
PVY				*e*Sg		**Sg**		**11 34 27.6**	**0.0**
DRME	**Dracevica, Mon**	**0.82**	**297**	*e*Pg		**Pg**		**11 34 17.0**	**-0.9**
DRME				*e*Sg		**Sb**		**11 34 29.5**	**-0.4**
OHR	**Ohrid**	**0.85**	**146**	*i* Pg		**Pg**		**11 34 17.8**	**-0.7**
OHR				*i* Sg		**Sb**		**11 34 30.7**	**-0.3**
OHR				*e*Lg		Lg		11 34 30.9	
	comp=N,122nm,0.5s								
OHR				*e*Lg		Lg		11 34 31.0	
	comp=E,159nm,1.0s								
PDG	**Podgorica**	**0.91**	**312**	*e*Pg		**Pg**		**11 34 19.0**	**-0.6**
PDG				*e*Sg		**Sb**		**11 34 33.4**	**+0.9**
PDG	**Podgorica**	**0.91**	**312**	⇑S		**Sn**		**11 34 33.5**	**-1.2**
PDG	**Podgorica**	**0.91**	**312**	*i* Pg		**Pg**		**11 34 18.8**	**-0.9**
PDG	**Podgorica**	**0.91**	**312**	⇑P		**Pg**		**11 34 17.6**	**-2.0**
TTG	**Podgorica**	**0.91**	**312**	*e*Pg		**Pg**		**11 34 18.6**	**-1.0**
TTG				*e*Sg		**Sb**		**11 34 32.2**	**-0.3**
SKO	**Skopje**	**0.96**	**81**	*e*Sg		**Pg**		**11 34 19.2**	**-1.4**
SKO	**Skopje**	**0.96**	**81**	*e*Pg		**Sg**		**11 34 32.5**	**-0.6**
SKO	**Skopje**	**0.96**	**81**	*i* Pg		**Pb**		**11 34 21.2**	**+0.1**
SKO				*i* Sg		**Sg**		**11 34 33.5**	**+0.4**
BUM	**Brajici-Budva**	**1.06**	**297**	*e*Pg		**Pg**		**11 34 21.7**	**-0.8**
BUM				*e*Sg		**Sb**		**11 34 37.2**	**+0.2**
IVA	**Berane**	**1.07**	**349**	*e*Pg		**Pg**		**11 34 21.7**	**-1.0**
IVA				*e*Sg		**Sb**		**11 34 37.8**	**+0.6**
KOME	**Kolasin**	**1.14**	**335**	*e*Pg		**Pg**		**11 34 23.0**	**-1.0**
KOME				*e*Sg		**Sn**		**11 34 39.8**	**-0.6**
GJIK	**Gjilan**	**1.14**	**55**	*i* Pg		**Pg**		**11 34 23.6**	**-0.4**
GJIK				*i* Sg		**Sb**		**11 34 39.6**	**+0.4**
CEME	**Cevo**	**1.18**	**308**	*e*Pg		**Pg**		**11 34 23.1**	**-1.6**
CEME				*e*Sg		**Sn**		**11 34 41.2**	**-0.2**
NKME	**Niksic**	**1.30**	**317**	*e*Pg		**Pn**		**11 34 25.5**	**-1.3**
NKME				*e*Sg		**Sn**		**11 34 45.4**	**+0.9**
NKY	**Niksic**	**1.32**	**319**	*e*Pg		**Pn**		**11 34 26.5**	**-0.6**
NKY				*e*Sg		**Sn**		**11 34 45.7**	**+0.8**
FNA	**Florina**	**1.38**	**138**	*i* Pg		**Pn**		**11 34 26.9**	**-0.9**
FNA				*i* Sg		**Sg**		**11 34 46.8**	**+0.3**
HCY	**Herceg Novi**	**1.39**	**297**	*e*Pg		**Pn**		**11 34 27.2**	**-0.8**
HCY				*e*Sg		**Sg**		**11 34 48.6**	**+1.7**
STIP	**Stip**	**1.52**	**94**	*i* Pg		**Pg**		**11 34 32.8**	**+1.6**
STIP				*i* Sg		**Sg**		**11 34 53.5**	**+2.7**
SELS	**Selova**	**1.56**	**26**	*e*Pn		**Pb**		**11 34 30.9**	**-0.5**
BARS	**Barje**	**1.58**	**50**	*e*Pg		**Pn**		**11 34 29.9**	**-0.6**
BARS				*e*Sg		**Sg**		**11 34 53.2**	**+0.4**
PRVS	**Prvonek**	**1.58**	**64**	*e*Pg		**Pn**		**11 34 30.2**	**-0.3**
PRVS				*e*Sg		**Sb**		**11 34 51.9**	**+0.2**
PLE	**Pljevlja**	**1.61**	**339**	*e*Pg		**Pb**		**11 34 31.8**	**-0.5**
PLE				*e*Sg		**Sg**		**11 34 54.9**	**+0.9**
TREB	**Trebinje**	**1.62**	**304**	*e*Pg		**Pg**		**11 34 32.8**	**-0.4**
TREB				*e*Sg		**Sg**		**11 34 56.8**	**+2.6**
BRY	**Bratogost**	**1.62**	**312**	⇓*i*Pg		**Pb**		**11 34 31.9**	**-0.5**
BRY				*i* Sg		**Sg**		**11 34 54.7**	**+0.5**
UPM	**Unac-Piva**	**1.67**	**326**	*e*Pn		**Pn**		**11 34 32.5**	**+0.6**
UPM				*e*Sn		**Sg**		**11 34 56.1**	**+0.4**
IVAS	**Ivanjica**	**1.75**	**360**	*e*Pg		**Pb**		**11 34 33.8**	**-0.9**
IVAS				*e*Sg		**Sg**		**11 34 58.9**	**+0.4**
BOSS	**Bosilegrad**	**1.85**	**68**	*e*Pg		**Pb**		**11 34 35.7**	**-0.5**
BOSS				*e*Sg		**Sb**		**11 34 59.7**	**+0.2**
VAY	**Valandovo**	**1.87**	**105**	*e*Pg		**Pb**		**11 34 35.9**	**-0.7**
VAY				*e*Sg		**Sg**		**11 35 01.6**	**-0.7**
GRG	**Griva**	**1.89**	**116**	*i* Pn		**Pb**		**11 34 37.2**	**+0.2**
GRUS	**Gruza**	**2.10**	**11**	*e*Pn		**Pn**		**11 34 38.8**	**+1.0**
STON	**Ston**	**2.11**	**301**	*e*Pn		**Pn**		**11 34 38.7**	**+1.0**
STON				*e*Sg		**Sg**		**11 35 11.9**	**+2.0**
BBLS	**Lazići**	**2.12**	**345**	*e*Pn		**Pb**		**11 34 39.6**	**-1.3**
BBLS				*e*Sn		**Sb**		**11 35 06.5**	**-0.9**
DIVS	**Divibare**	**2.28**	**357**	*e*Sn		**Sn**		**11 35 09.1**	**+0.5**
ZAPS	**Zavoj**	**2.33**	**51**	*e*Pn		**Pn**		**11 34 42.2**	**+1.3**
VTS	**Vitosha**	**2.41**	**70**	⇓P		**Pb**		**11 34 45.8**	**-0.2**
VTS				⇑S		**Sn**		**11 35 11.6**	**-0.4**
MAKA	**Makarska**	**2.75**	**303**	*e*Pg		**Pb**		**11 34 51.7**	**+0.1**
RICI	**Ricice**	**2.79**	**308**	*e*Pn		**Pn**		**11 34 48.8**	**+1.5**
FRGS	**Fruska Gora**	**3.34**	**356**	*e*Pn		**Pn**		**11 34 56.5**	**+1.7**
BZS	**Buzias**	**3.94**	**15**	⇑P		**Pn**		**11 35 03.9**	**+1.0**
BZS				⇓S		**Sn**		**11 35 48.1**	**-1.2**
BURAR	**Bucovina Array**	**6.82**	**30**	⇑P		Pg		11 36 19.7	+7.0

NEIC ***18*** *11:55:28.1±0.6, 5.8S±0.1×146.8E±0.1, h93km±9km, mb4.0/11, Error ellipse: s-maj=21.3km s-min=17.5km az=83.0*
IDC ***18*** *11:55:29.6±1.9, 6.04S×146.92E, h99km±17km, mb3.7/4, mb1 3.8/7, mb1mx3.4/31, mbtmp4.0/7, Error ellipse: s-maj=25.1km s-min=13.7km az=107.0*

ISC 18 11:55:29.3±0.9, 6.01S±0.08×146.9E±0.1, h100km, n26, σ1.9, 33/30, mb3.8/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.39**	**175**	P		**Pn**		**11 56 21.1**	**+0.8**
	23nm,0.3s,baz=24,slow=5.4,SNR=82								
PMG				S		**Sn**		**11 56 59.2**	**-0.5**
	9.5nm,0.3s,baz=349,slow=3.3,SNR=3.7								
PMG	**Port Moresby**	**3.39**	**175**			**Pn**		**11 56 21.0**	**+0.6**
JAY	**Jayapura**	**7.04**	**299**	P		**Pn**		**11 57 10.8**	**+0.9**
	1.2nm,0.3s,baz=77,slow=6.7,SNR=5.2								
COEN	**Coen**	**8.69**	**204**			**Pn**		**11 57 33.5**	**+1.2**
COEN				Sn		**Sn**		**11 59 05.7**	**-2.9**
CTA	**Charters Tower**	**14.01**	**182**	P		**P**		**11 58 46.0**	**-2.2**
	0.7nm,0.3s,baz=359,slow=16,SNR=10.0								
CTAO	**Charters Tower**	**14.01**	**182**			**P**		**11 58 48.2**	**+0.1**
FAKI	**Fak Fak**	**14.88**	**281**			**Pn**		**11 58 56.3**	**+1.6**
MTN	**Manton Dam**	**16.92**	**245**			**Pn**		**11 59 18.5**	**-1.6**
MTN				IAmb		IAmb		11 59 42.2	
	comp=Z,9.8nm,1.1s								
WB0	**Warramunga Arr**	**18.27**	**220**	P		**P**		**11 59 36.1**	**+0.8**
WB0				IAmb		IAmb		12 00 02.0	
	comp=Z,6.0nm,1.1s								
WR0	**Warramunga Arr**	**18.32**	**220**	P		**P**		**11 59 36.4**	**+0.6**
WR0				IAmb		IAmb		11 59 55.1	
	comp=Z,14nm,1.4s								
WB2	**Warramunga Arr**	**18.43**	**220**	P		**P**		**11 59 37.5**	**+0.5**
WB2				IAmb		IAmb		11 59 39.2	
	comp=Z,18nm,1.4s								
WRA	**Warramunga Arr**	**18.43**	**220**	P		**Pn**		**11 59 38.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=43,slow=12,SNR=20								
WRA				S		**S**		**12 03 02.6**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=33,slow=20,SNR=2.3								
EIDS	**Eidsvold**	**19.68**	**169**	P		**Pn**		**11 59 52.9**	**0.0**
EIDS				IAmb		IAmb		12 00 08.9	
	comp=Z,22nm,1.4s								
KNRA	**Kununurra**	**20.18**	**240**	P		**P**		**11 59 56.4**	**+0.3**
KNRA				IAmb		IAmb		12 00 01.2	
	comp=Z,4.5nm,0.7s								
AS31	**Alice Springs**	**21.53**	**214**	P		**P**		**12 00 11.5**	**+0.9**
ASAR	**Alice Springs**	**21.53**	**214**	P		**P**		**12 00 11.4**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=51,slow=8.8,SNR=29								
ASAR				S		**S**		**12 04 05.2**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=27,slow=21,SNR=4.4								
ASAR	**Alice Springs**	**21.53**	**214**	P		**P**		**12 00 11.2**	**+0.6**
FITZ	**Fitzroy Crossi**	**23.94**	**238**	P		**P**		**12 00 35.4**	**+1.0**
	comp=Z,13nm,0.9s,baz=58,slow=7.9,SNR=30								
FITZ	**Fitzroy Crossi**	**23.94**	**238**	P		**P**		**12 00 34.6**	**+0.2**
LUWI	**Luwuk**	**24.53**	**281**	P		**P**		**12 00 36.2**	**-3.5**
STKA	**Stephens Creek**	**26.20**	**190**	P		**P**		**12 00 55.7**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=24,slow=11,SNR=2.8								

QSPA	**South Pole Qui**	**83.96**	**180**	P		**P**	**12 07 48.9**	**+0.6**
QSPA				IAmb		IAmb	12 08 06.2	
	comp=Z,4.1nm,1.5s							
ILAR	**Eielson Array**	**85.54**	**23**	P		**P**	**12 07 54.9**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=245,slow=4.8,SNR=7.2							
ILAR	**Eielson Array**	**85.54**	**23**	P		**P**	**12 07 54.7**	**-1.4**
TORD	**Torodi Ar. Bea**	**144.95**	**284**	PKPbc		**PKPab**	**12 14 56.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=94,slow=3.5,SNR=2.4							
DBIC	**Dimbokro**	**151.88**	**273**	PKPbc		**PKiKP**	**12 15 15.3**	**+1.3**
	comp=Z,4.3nm,1.0s,baz=45,slow=5.7,SNR=3.2							

ASRS ***18*** *12:16:45.6±0.2, 51.3N×0.9×89.9E±0.9, h10km, MLh3.7/17, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
SOME ***18*** *12:16:54.8, 50.97N×89.55E, h20km*
NNC ***18*** *12:16:57.4±5.1, 51.32N×89.13E, h17km±20km, mb3.7, mpv3.3, Error ellipse: s-maj=45.1km s-min=12.9km az=92.0*

ISC 18 12:16:46.8±1.1, 51.26N±0.02×89.88E±0.02, h1km±11km, n31, σ1.35/58, 5C-6D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEL	**Teeli**	**0.31**	**139**	Pg		**Pb**		**12 16 53.9**	**-1.3**
TEL				Sg		**Sg**		**12 16 57.6**	**+0.7**
ULGR	**Ulagan, Altay**	**1.37**	**243**	Pg		**Pg**		**12 17 13.8**	**+0.7**
ULGR				Sg		**Sn**		**12 17 31.1**	**-0.8**
CUR	**Chagan-Uzun**	**1.51**	**221**	Pg		**Pb**		**12 17 15.7**	**0.0**
CUR				Sg		**Sb**		**12 17 35.1**	**-0.4**
ARTR	**Artybash**	**1.71**	**289**	Pg		**Pg**		**12 17 20.6**	**+1.0**
ARTR				Sg		**Sg**		**12 17 42.6**	**+0.9**
DJO	**Djoy, Khakassi**	**1.74**	**28**	Pg		**Pg**		**12 17 20.7**	**+0.6**
DJO				Sg		**Sg**		**12 17 43.6**	**+1.1**
TBTR	**Tabat**	**1.75**	**17**	Pg		**Pn**		**12 17 17.0**	**-1.3**
TBTR				Sg		**Sn**		**12 17 39.7**	**-1.6**
CHBI	**Chibit, Altay**	**1.78**	**239**	Pg		**Pg**		**12 17 21.0**	**+0.1**
CHBI				Sg		**Sg**		**12 17 43.5**	**-0.4**
DJOS	**Djoyskaya Sosn**	**1.80**	**31**	Pg		**Pg**		**12 17 22.0**	**+0.7**
DJOS				Sg		**Sg**		**12 17 45.1**	**+0.4**
CERR	**Cheremushki**	**1.86**	**30**	Pg		**Pg**		**12 17 23.2**	**+0.8**
CERR				Sg		**Sg**		**12 17 46.6**	**+0.1**
TASR	**Tashtagol**	**1.94**	**321**	Pg		**Pg**		**12 17 24.7**	**+0.7**
TASR				Sg		**Sg**		**12 17 50.7**	**+1.4**
DGZ	**Jazzator, Alta**	**2.21**	**226**	Pg		**Pg**		**12 17 28.4**	**-0.6**
DGZ				Sg		**Sg**		**12 17 56.9**	**-0.8**
BLRR	**Bol'shaya Rech**	**2.38**	**40**	Pg		**Pb**		**12 17 30.0**	**-0.4**
BLRR				Sg		**Sg**		**12 18 04.0**	**+0.9**
LUZB	**Luzhba, Kemero**	**2.48**	**346**	Pg		**Pg**		**12 17 33.8**	**-0.5**
LUZB				Sg		**Sg**		**12 18 05.7**	**-0.7**
ARDR	**Aradan**	**2.57**	**58**	Pg		**Pg**		**12 17 34.9**	**-1.1**
ARDR				Sg		**Sg**		**12 18 07.9**	**-1.4**
ABNR	**Abakan**	**2.65**	**20**	Pg		**Pg**		**12 17 37.4**	**-0.1**
ABNR				Sg		**Sg**		**12 18 12.5**	**+0.6**
KZLR	**Kyzyl**	**2.90**	**79**	Pg		**Pb**		**12 17 40.2**	**+1.0**
KZLR				Sg		**Sg**		**12 18 17.7**	**-2.1**
ELT	**Eltsovka**	**3.00**	**313**	Pg		**Pg**		**12 17 43.2**	**-1.2**
ELT				Sg		**Sg**		**12 18 22.5**	**-0.7**
UKR	**Ust'-Kan**	**3.23**	**266**	Pn		**Pb**		**12 17 42.6**	**-2.4**
UKR				Pg		**Pg**		**12 17 47.9**	**-0.8**
UKR				Sg		**Sg**		**12 18 30.6**	**0.0**
SHRR	**Shira**	**3.24**	**3**	Pg		**Pg**		**12 17 48.3**	**-0.7**
SHRR				Sg		**Sg**		**12 18 30.2**	**-0.7**
BJR3	**Bachatsky-3 (S**	**3.73**	**324**	Pg		**Pb**		**12 17 55.3**	**+1.8**
BJR3				Sg		**Sg**		**12 18 48.0**	**+1.4**
BJR4	**Bachatsky-4, K**	**3.75**	**326**	Sg		**Sg**		**12 18 48.0**	**+0.8**
POMOR	**Pomortsevo, Ku**	**3.75**	**329**	Sg		**Sg**		**12 18 48.0**	**+0.8**
BJR1	**Bachatsky 1, K**	**3.79**	**324**	Pg		**Pg**		**12 17 58.4**	**-0.9**
BJR1				Sg		**Sg**		**12 18 49.2**	**+0.9**
BJR2	**Bachatsky-2, K**	**3.79**	**325**	Sg		**Sg**		**12 18 49.3**	**+0.9**
SALR	**Pechorkino, Sa**	**4.05**	**323**	Sg		**Sb**		**12 18 48.9**	**+0.6**
ZAA0	**Zalesovo Array**	**4.09**	**313**	⇓Pn		**Pb**		**12 17 54.9**	**-4.7**
	0.3nm,0.4s								
ZAA0				⇓Pg		**Pg**		**12 18 04.3**	**-0.9**
	1.6nm,0.8s								
ZAA0				⇑Lg		Lg		12 18 54.0	
	12nm,0.8s								
ZSN	**Zaisan**	**5.02**	**223**	*e*P		**Pg**		**12 18 22.2**	**-0.8**
	14nm,0.6s								
ZSN				*e*S		**Sg**		**12 19 26.6**	**-1.5**
	32nm,0.7s								
SEM	**Semipalatinsk**	**6.16**	**266**	*e*P		**Pg**		**12 18 44.8**	**0.0**
	4.8nm,0.1s								
SEM				*e*S		**Sg**		**12 20 04.6**	**+0.1**
	10nm,0.1s								
MK31	**Makanchi Array**	**6.70**	**231**	⇓Pn		**Pn**		**12 18 29.2**	**+3.0**
	4.4nm,0.6s,baz=61,slow=13,SNR=45								
MK31				⇓Pg		**Pg**		**12 18 55.7**	**+0.7**
	5.9nm,0.6s,baz=54,slow=16,SNR=8.9								
MK31				⇑Lg		Lg		12 20 20.6	
	13nm,0.7s,baz=49,slow=30,SNR=5.7								
MAKZ	**Makanchi**	**6.84**	**232**	⇑Pn		**Pn**		**12 18 31.7**	**+3.6**
	2.5nm,0.6s								
MAKZ				⇑Pg		**Pg**		**12 18 58.2**	**+0.4**
	4.4nm,0.7s								
MAKZ				⇓Lg		Lg		12 20 21.9	
	21nm,1.4s								
KURBB	**Kurchatov Arra**	**7.20**	**269**	⇑Pn		**Pn**		**12 18 35.2**	**+2.1**
	1.4nm,0.6s								
KURBB				⇓Lg		Lg		12 20 34.4	
	38nm,0.7s								

IDC ***18*** *12:48:20.3±1.1, 28.32N×103.19E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/38, mbtmp3.6/8, ML3.5/1, Error ellipse: s-maj=32.8km s-min=20.2km az=82.0*

ISC 18 12:48:21.9±1.0, 28.4N±0.1×103.2E±0.2, h10km, n8, σ0.47/8, mb3.8/6, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.61**	**203**	Pn		**Pn**		**12 50 54.4**	**+0.3**
	0.1nm,0.3s,baz=21,slow=7.7,SNR=1.7								
SONM	**Songino Array**	**19.60**	**6**	P		**Pn**		**12 52 52.0**	**+0.3**
	baz=181,slow=11,SNR=5.3								
KSRS	**Korea Array**	**22.58**	**60**	P		**P**		**12 53 22.6**	**+0.2**
	0.5nm,0.6s,baz=247,slow=9.6,SNR=2.8								
MKAR	**Makanchi Array**	**24.65**	**324**	P		**P**		**12 53 42.5**	**-0.2**
	0.5nm,0.5s,baz=122,slow=11,SNR=9.3								
USRK	**Ussuriysk Ar.**	**27.87**	**48**	P		**P**		**12 54 12.4**	**+0.6**
	2.0nm,0.7s,baz=242,slow=12,SNR=4.8								
WRA	**Warramunga Arr**	**56.66**	**144**	P		**P**		**12 58 05.0**	**-0.6**
	0.7nm,0.5s,baz=320,slow=6.1,SNR=17								
ASAR	**Alice Springs**	**59.58**	**147**	P		**P**		**12 58 26.1**	**+0.1**
	0.5nm,0.3s,baz=319,slow=6.7,SNR=6.8								
YKA	**Yellowknife Ar**	**84.53**	**17**	P		**P**		**13 00 54.5**	**-0.4**
	0.3nm,0.7s,baz=330,slow=4.1,SNR=5.4								

GUC ***18*** *12:50:51.9±0.6, 21.63S×67.02W, h249km±25km, ML3.8*
SCB ***18*** *12:50:54.1±1.6, 21.62S×66.81W, h200km±10km, ML3.7/4, Error ellipse: s-maj=5.0km s-min=4.5km az=0.0*

ISC 18 12:50:51.3±2.2, 21.63S±0.06×66.78W±0.06, h212km±17km, n32, σ0.99/43, 3D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.13**	**71**	P		**Pn**		**12 51 24.1**	**+0.4**
MOCB				S		**S**		**12 51 47.8**	**-0.9**
MOCB				IAML				12 51 49.0	
	706nm,0.6s								
YJA	**Yavi**	**1.30**	**115**	P		**Pn**		**12 51 25.4**	**+0.5**
YJA				S		**S**		**12 51 49.8**	**-1.0**
LVC	**Limon Verde**	**2.20**	**243**	P		**Pn**		**12 51 34.5**	**+1.4**
PB09	**IPOC Station P**	**2.29**	**265**	*e*P		**Pn**		**12 51 35.0**	**+1.2**
PB09				IAML				12 52 12.2	
	comp=E,84nm,0.3s								
PB09	**IPOC Station P**	**2.29**	**265**	P		**Pn**		**12 51 35.3**	**+1.4**
PB01	**IPOC Station P**	**2.59**	**282**	*e*P		**Pn**		**12 51 37.0**	**0.0**
PB01				*e*S		**S**		**12 52 12.6**	**+0.3**
PB01				IAML				12 52 13.6	
	comp=N,240nm,0.2s								
PB01	**IPOC Station P**	**2.59**	**282**	P		**Pn**		**12 51 37.6**	**+0.6**
PB01				S		**S**		**12 52 11.7**	**-0.5**
PB01				IAML				12 52 13.7	
	comp=N,214nm,0.2s								
PB08	**IPOC Station P**	**2.66**	**303**	⇓*i*P		**Pn**		**12 51 39.0**	**+0.9**
PB08				IAML				12 52 20.6	
	comp=E,44nm,0.3s								
PB08	**IPOC Station P**	**2.66**	**303**	P		**Pn**		**12 51 39.5**	**+1.4**
PB03	**IPOC Station P**	**2.79**	**261**	*e*P		**Pn**		**12 51 39.7**	**+0.4**
PB03				*e*S		**S**		**12 52 15.7**	**-0.7**
PB03				IAML				12 52 16.6	
	comp=E,228nm,0.2s								
PB03	**IPOC Station P**	**2.79**	**261**	P		**Pn**		**12 51 40.4**	**+1.1**
PB06	**IPOC Station P**	**2.80**	**247**	⇓*e*P		**Pn**		**12 51 41.0**	**+1.7**
PB06				IAML				12 52 18.5	
	comp=E,223nm,0.3s								
PB06	**IPOC Station P**	**2.80**	**247**	P		**Pn**		**12 51 40.5**	**+1.1**
PB07	**IPOC Station P**	**2.89**	**267**	*e*P		**Pn**		**12 51 41.0**	**+0.5**
PB07				*e*S		**S**		**12 52 17.5**	**-1.0**
PB07				IAML				12 52 18.8	
	comp=N,283nm,0.3s								
PB07	**IPOC Station P**	**2.89**	**267**	P		**Pn**		**12 51 41.2**	**+0.8**
PB07				S		**S**		**12 52 17.1**	**-1.3**
PB07				IAML				12 52 18.4	
	comp=N,143nm,0.4s								
PB15	**IPOC Station P**	**2.94**	**237**	*e*P		**Pn**		**12 51 42.5**	**+1.4**
PB15				*e*S		**S**		**12 52 20.2**	**+0.5**
PB15	**IPOC Station P**	**2.94**	**237**	P		**Pn**		**12 51 42.2**	**+1.1**
PB04	**IPOC Station P**	**3.20**	**257**	*e*P		**Pn**		**12 51 44.2**	**+0.2**
PB04	**IPOC Station P**	**3.20**	**257**	P		**Pn**		**12 51 44.8**	**+0.7**
PB11	**IPOC Station P**	**3.27**	**304**	⇓*i*P		**Pn**		**12 51 44.8**	**-0.1**
PB11	**IPOC Station P**	**3.27**	**304**	P		**Pn**		**12 51 45.0**	**+0.1**
PB05	**IPOC Station P**	**3.40**	**248**	*e*P		**Pn**		**12 51 46.7**	**+0.4**
PB05				*e*S		**S**		**12 52 27.1**	**-1.9**
PB05	**IPOC Station P**	**3.40**	**248**	P		**Pn**		**12 51 46.6**	**+0.4**
PB05				S		**S**		**12 52 26.9**	**-2.1**
PB05				IAML				12 52 28.0	
	comp=N,88nm,0.3s								
MNMC	**Minye Minye**	**3.62**	**313**	*e*P		**Pn**		**12 51 49.6**	**+0.4**
MNMC				*e*S		**S**		**12 52 34.5**	**+0.2**
MNMC	**Minye Minye**	**3.62**	**313**	P		**Pn**		**12 51 49.9**	**+0.7**
PSGC	**Pisagua**	**3.72**	**302**	*e*P		**Pn**		**12 51 49.1**	**-1.1**
PSGC	**Pisagua**	**3.72**	**302**	P		**Pn**		**12 51 50.2**	**-0.1**
PB10	**IPOC Station P**	**3.96**	**241**	P		**Pn**		**12 51 54.2**	**+1.2**
PB14	**IPOC Station P**	**4.47**	**227**	P		**Pn**		**12 51 59.7**	**0.0**
BBOE	**La Paz, Chanca**	**4.92**	**346**	P		**Pn**		**12 52 06.6**	**+1.0**
LPAZ	**La Paz**	**5.46**	**346**	P		**Pn**		**12 52 13.2**	**+0.7**
BBOB	**La Paz, Bander**	**5.60**	**347**	P		**Pn**		**12 52 14.7**	**+0.5**

KRSC 18 12:53:42.6±1.9, 48.87N×156.01E, h31km±26km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.82**	**2**	*e*P		Pn		12 54 13.2	+1.4
SKR				*e*S		Sb		12 54 36.1	-1.5
ALID	**Alaid**	**2.02**	**352**	*e*P		Pn		12 54 15.1	+0.3
ALID

LAKA AML AML 13 37 09.7
LAKA Lakka 0.56 49 P **Pb** **13 36 59.0 -1.4**
LAKA S **Sb** **13 37 07.6 -0.6**
comp=E,104µm,0.7s
KLV Kalavryta, Ach 0.59 73 P **Pb** **13 36 59.4 -1.4**
KLV S **Sn** **13 37 09.5 -0.6**
comp=E,11µm,0.5s
VLMS Volimes, Zakyn 0.61 271 P **Pb** **13 37 00.0 -1.2**
VLMS S **Sb** **13 37 09.1 -0.4**
VLMS AML AML 13 37 15.3
comp=E,64117µm,0.3s
VLMS AML AML 13 37 17.4
comp=N,86202µm,0.3s
VLMS Volimes, Zakyn 0.61 271 S **Sn** **13 37 10.2 -0.5**
comp=N,38µm,0.3s
ALIK Aliki, Aigiali 0.66 54 P **Pb** **13 37 00.8 -1.1**
TRIZ Trizonia 0.70 45 P **Pb** **13 37 01.5 -1.2**
TRIZ S **Sn** **13 37 12.8 0.0**
TRIZ Trizonia 0.70 45 P **Pb** **13 37 01.3 -1.4**
PSDA Pessada-Kefalo 0.72 290 P **Pb** **13 37 01.5 -1.4**
PSDA S **Sb** **13 37 12.8 +0.4**
comp=N,2µm,0.2s
AST1 Astakos 0.72 338 P **Pb** **13 37 02.3 -0.7**
AST1 S **Sn** **13 37 13.8 +0.5**
comp=N,26µm,0.4s
VLS Valsamata 0.74 295 P **Pb** **13 37 01.7 -1.5**
VLS S **Sn** **13 37 13.6 -0.1**
comp=N,15µm,0.5s
PVO Paravola 0.75 5 P **Pb** **13 37 02.6 -0.9**
PVO AML AML 13 37 22.0
comp=E,19677µm,0.3s
PVO AML AML 13 37 22.4
comp=N,20156µm,0.5s
PVO Paravola 0.75 5 P **Pb** **13 37 02.5 -0.9**
KALE Kalithea 0.76 47 P **Pb** **13 37 02.4 -1.2**
KALE S **Sn** **13 37 14.0 -0.3**
KALE AML AML 13 37 15.2
comp=N,41276µm,0.5s
KALE AML AML 13 37 16.0
comp=E,42025µm,0.5s
KALE Kalithea 0.76 47 P **Pb** **13 37 02.4 -1.2**
KALE S **Sb** **13 37 13.5 -0.2**
comp=E,21µm,0.5s
ITM Ithomi 0.79 151 P **Pb** **13 37 03.4 -0.8**
ITM Ithomi 0.79 151 P **Pb** **13 37 03.3 -0.8**
ARG2 Argostoli 0.81 292 P **Pn** **13 37 03.3 -1.1**
ARG2 S **Sn** **13 37 16.0 +0.5**
comp=E,48µm,0.4s
ANX Ano Chora 0.81 28 P **Pn** **13 37 03.3 -1.3**
ANX S **Sb** **13 37 15.3 0.0**
comp=E,32µm,0.5s
ARGA Argostoli. Kep 0.82 292 P **Pn** **13 37 03.5 -1.0**
KEF5 Kardakata, Kep 0.87 298 P **Pn** **13 37 04.0 -1.2**
KEF5 S **Sn** **13 37 18.0 +1.1**
comp=E,94µm,0.5s
KEF4 Livadi, Kephal 0.89 296 P **Pn** **13 37 04.5 -1.0**
VLX Vlachokerasia 0.90 124 P **Pb** **13 37 05.9 -0.1**
FSK Fiskardo 0.91 311 P **Pn** **13 37 04.9 -0.9**
FSK S **Sn** **13 37 18.1 +0.2**
FSK AML AML 13 37 19.6
comp=N,27334µm,0.3s
FSK AML AML 13 37 20.6
comp=E,83989µm,0.2s
FSK Fiskardo 0.91 311 P **Pn** **13 37 04.9 -0.9**
FSK S **Sn** **13 37 18.8 +0.9**
comp=E,28µm,0.3s
DMLN Damoulianata-K 0.92 294 P **Pn** **13 37 05.0 -0.9**
KEF3 Kipouria, Keph 0.92 291 P **Pn** **13 37 04.8 -1.2**
KEF3 S **Sn** **13 37 19.4 +1.1**
comp=E,57µm,0.4s
EVGI Lefkada island 0.97 321 P **Pn** **13 37 05.8 -0.8**
EVGI S **Sb** **13 37 20.7 +1.1**
comp=E,9µm,0.3s
THAL Thalero 0.98 80 P **Pn** **13 37 06.5 -0.3**
THAL Thalero 0.98 80 P **Pn** **13 37 06.1 -0.7**
PYL PYLOS 1.00 166 P **Pn** **13 37 07.3 +0.2**
PYL AML AML 13 37 27.6
comp=E,21985µm,0.6s
PYL AML AML 13 37 28.0
comp=N,11408µm,0.4s
PYL PYLOS 1.00 166 P **Pn** **13 37 07.1 0.0**
NYDR Nydri-Lefkada 1.02 326 P **Pn** **13 37 06.5 -0.8**
NYDR S **Sb** **13 37 22.4 +1.3**
comp=N,13µm,0.6s
DLFA Delphi 1.03 54 P **Pn** **13 37 06.9 -0.6**
DLFA AML AML 13 37 26.5
comp=N,12809µm,0.7s
DLFA AML AML 13 37 28.6
comp=E,14702µm,0.6s
DRAG Dragano-Lefkad 1.06 320 P **Pn** **13 37 07.4 -0.5**
EVR Evrytania 1.08 15 P **Pn** **13 37 08.1 -0.2**
EVR AML AML 13 37 31.8
comp=E,16126µm,0.7s
EVR AML AML 13 37 35.2
comp=N,18072µm,0.7s
EVR Evrytania 1.08 15 P **Pn** **13 37 07.9 -0.4**
EVR S **Sb** **13 37 23.6 +0.6**
comp=N,8µm,0.6s
LKD2 Lefkada island 1.10 326 P **Pn** **13 37 08.4 -0.1**
LKD2 S **Sb** **13 37 23.7 +0.3**
comp=N,36µm,0.3s
TSLK Tsoukalades, L 1.13 327 P **Pn** **13 37 08.9 0.0**
LTK Loutraki 1.22 82 P **Pn** **13 37 10.2 +0.1**
LOUT Loutraki 1.22 84 P **Pn** **13 37 10.6 +0.5**
LOUT Loutraki 1.22 84 P **Pn** **13 37 10.3 +0.2**
DSL Palaion Diasel 1.29 348 P **Pb** **13 37 11.9 -0.6**
AXAR Agios Charalam 1.31 47 P **Pn** **13 37 11.7 +0.4**
AXAR Agios Charalam 1.31 47 P **Pn** **13 37 11.8 +0.4**
AGG Agios Georgios 1.34 31 P **Pn** **13 37 12.5 +0.7**
AGG Agios Georgios 1.34 31 Pn **Pn** **13 37 12.5 +0.7**
LKR Lokris 1.45 57 P **Pn** **13 37 14.2 +0.9**
VIL2 Platees 1.48 76 P **Pb** **13 37 15.3 -0.6**
ATAL Atalanti 1.49 56 P **Pb** **13 37 15.2 -0.8**
ATAL Atalanti 1.49 56 P **Pn** **13 37 14.6 +0.8**
VILL Villia 1.51 78 P **Pn** **13 37 14.9 +0.8**
ATH Athens Observa 1.81 86 P **Pb** **13 37 21.7 +0.4**
ATHU Athens Univers 1.86 86 P **Pn** **13 37 20.3 +1.4**
IGT Igoumenitsa 1.87 333 P **Pb** **13 37 21.2 -1.2**
XOR Xorichti 2.03 42 P **Pn** **13 37 22.4 +1.2**
EREA Eretria 2.04 74 P **Pb** **13 37 24.0 -1.4**
KYMI Kymi, Euboea I 2.23 69 P **Pn** **13 37 24.7 +0.7**
LIT Litokhoron 2.37 20 P **Pn** **13 37 28.4 +2.5**
LIT Litokhoron 2.37 20 **13 37 28.4 +2.5**
KZN Kozani 2.44 6 P **Pb** **13 37 31.0 -1.3**
PAIG Paliouri 2.70 40 P **Pb** **13 37 34.1 -2.4**
KBN Korca 2.79 350 P **Pb** **13 37 36.8 -1.4**
FNA Florina 2.91 359 P **Pn** **13 37 35.6 +2.3**
FNA Florina 2.91 359 **Pn** **13 37 35.6 +2.3**
THE Thessaloniki 3.00 23 P **Pb** **13 37 38.1 -3.6**
GRG Griva 3.17 13 P **Pn** **13 37 39.2 +2.3**
SCTE Santa Cesarea 3.19 314 **Pn** **13 37 38.4 +1.2**
OHR Ohrid 3.27 352 P **Pb** **13 37 43.5 -2.8**
SOH Sokhos 3.30 26 P **Pn** **13 37 42.5 +3.8**
APE Apeiranthos 3.35 103 ⇑P **Pn** **13 37 39.0 -0.5**
APE Apeiranthos 3.35 103 *i* P **Pn** **13 37 42.5 +3.0**
KNT Kendrikon 3.47 19 P **Pn** **13 37 44.0 +2.9**
SANT Santorini 3.55 114 ⇑P **Pn** **13 37 41.7 -0.4**
SANT Santorini 3.55 114 Pn **Pn** **13 37 45.7 +3.6**
VAY Valandovo 3.55 14 P **Pb** **13 37 46.6 -4.5**
VAY Valandovo 3.55 14 *i* Pn **Pn** **13 37 45.3 +3.2**
SRS Serrai 3.64 27 P **Pn** **13 37 46.0 +2.6**
TIR Tirane 3.68 341 P **Pn** **13 37 45.1 +1.2**
TIR Tirane 3.68 341 Pn **Pn** **13 37 45.1 +1.2**
IDI Anoyia 3.79 132 Pn **Pn** **13 37 46.9 +1.4**
comp=N,1.9nm,0.3s,baz=304,slow=18,SNR=5.1
IDI Sn **Sb** **13 38 35.0 -5.7**
comp=N,20nm,0.3s,baz=306,slow=22,SNR=5.9
IDI LR LR 13 39 17.8
comp=N,353nm,20.4s,baz=290,slow=39
IDI Anoyia 3.79 132 ⇑P **Pn** **13 37 44.1 -1.4**
IDI Anoyia 3.79 132 Pn **Pn** **13 37 47.5 +2.0**
STIP Stip 3.86 8 *i* Pn **Pn** **13 37 49.9 +3.5**
TIP Timpagrande 3.90 291 ⇓P **Pn** **13 37 47.5 +0.6**
TIP Timpagrande 3.90 291 Pn **Pn** **13 37 48.7 +1.7**
SKO Skopje 4.09 0 P **Pn** **13 37 52.8 +3.2**
SKO Skopje 4.09 0 *i* Pn **Pn** **13 37 51.9 +2.3**
CEL Celeste 4.39 277 Pn **Pn** **13 37 54.2 +0.5**
ULC Ulcinj 4.42 338 P **Pn** **13 37 55.7 +1.6**
ULC Ulcinj 4.42 338 ⇓*i* Pn **Pn** **13 37 55.0 +0.9**
ULC *i* Sn **Sn** **13 38 44.1 -0.5**
MATE Matera 4.60 309 ⇑P **Pn** **13 37 57.9 +1.3**
DRME Dracevica, Mon 4.64 339 ⇑*i* Pn **Pn** **13 37 58.0 +0.8**
DRME Dracevica, Mon 4.64 339 *e*Pn **Pn** **13 37 57.9 +0.8**
DRME *i* Sn **Sn** **13 38 49.5 -0.6**
ALN Alexandroupoli 4.68 48 P **Pn** **13 37 58.4 +0.8**
ALN Alexandroupoli 4.68 48 Pn **Pn** **13 37 58.4 +0.8**
BUM Brajici-Budva 4.83 337 *e*Pn **Pn** **13 38 00.4 +0.6**
BUM *i* Sn **Sn** **13 38 54.0 -0.9**
PDG Podgorica 4.85 341 ⇓P **Pn** **13 38 00.9 +0.9**
PDG Podgorica 4.85 341 ⇓*i* Pn **Pn** **13 38 00.8 +0.8**
PDG Podgorica 4.85 341 Pn **Pn** **13 38 01.6 +1.6**
TTG Podgorica 4.85 341 ⇓*i* Pn **Pn** **13 38 00.6 +0.6**
TTG *i* Sn **Sn** **13 38 54.3 -0.8**
PVY Plav 4.85 347 ⇑*i* Pn **Pn** **13 38 01.5 +1.4**
PVY *i* Sn **Sn** **13 38 54.5 -0.9**
PLD Plovdiv 4.92 30 P Pn 13 38 05.8 +4.9
PLD pmax pmax
comp=Z,3.0nm,0.8s
VTS Vitosha 4.94 16 ⇑P **Pn** **13 38 03.0 +1.7**
VTS Vitosha 4.94 16 P **Pn** **13 38 04.1 +2.8**
VTS Vitosha 4.94 16 Pn **Pn** **13 38 04.1 +2.8**
CEME Cevo 5.05 338 *e*Pn **Pn** **13 38 03.2 +0.4**
CEME *i* Sn **Sn** **13 38 59.2 -1.0**
HCY Herceg Novi 5.10 335 P **Pn** **13 38 04.0 +0.6**
HCY Herceg Novi 5.10 335 ⇑*i* Pn **Pn** **13 38 02.9 -0.5**
HCY Herceg Novi 5.10 335 *e*Pn **Pn** **13 38 03.5 +0.1**
HCY *i* Sn **Sn** **13 39 00.2 -1.0**
IVA Berane 5.13 347 ⇑*i* Pn **Pn** **13 38 05.3 +1.4**
IVA *i* Sn **Sn** **13 39 01.2 -1.0**
KOME Kolasin 5.18 344 ⇓*i* Pn **Pn** **13 38 06.1 +1.4**
KOME *i* Sn **Sn** **13 39 02.5 -1.1**
NKME Niksic 5.25 340 *e*Pn **Pn** **13 38 06.2 +0.7**
NKME *i* Sn **Sn** **13 39 03.9 -1.1**
NKY Niksic 5.28 340 P **Pn** **13 38 07.7 +1.8**
NKY Niksic 5.28 340 *e*Pn **Pn** **13 38 06.8 +0.9**
NKY *i* Sn **Sn** **13 39 04.7 -1.1**
TREB Trebinje 5.38 335 *e*Pn **Pn** **13 38 07.1 -0.2**
BRY Bratogost 5.49 337 P **Pn** **13 38 09.5 +0.6**
BRY Bratogost 5.49 337 ⇓*i* Pn **Pn** **13 38 08.9 0.0**
BRY Bratogost 5.49 337 *e*Pn **Pn** **13 38 09.1 +0.2**
BRY *i* Sn **Sn** **13 39 09.7 -1.4**
VAE Valguarnera 5.59 268 Pn **Pn** **13 38 11.5 +1.3**
comp=Z,1.3nm,0.3s,baz=73,slow=2.3,SNR=3.5
VAE Sn **Sn** **13 39 17.5 +4.1**
comp=Z,2.3nm,0.3s,baz=86,slow=18,SNR=1.4
RAFF Raffo Rosso 5.66 266 Pn **Pn** **13 38 11.2 0.0**
UPM Unac-Piva 5.66 341 *e*Pn **Pn** **13 38 12.7 +1.4**
UPM Unac-Piva 5.66 341 ⇓Pn **Pn** **13 38 12.7 +1.4**
UPM *i* Sn **Sn** **13 39 14.0 -1.5**
PLE Pljevlja 5.67 345 ⇑*i* Pn **Pn** **13 38 12.7 +1.3**
PLE *i* Sn **Sn** **13 39 14.1 -1.4**
BOVS Bovan 5.76 2 ⇑P **Pn** **13 38 14.0 +1.5**
SGRT San Giovanni R 5.85 313 **Pn** **13 38 14.5 +0.7**
PAOL Paolisi 6.18 303 **Pn** **13 38 21.3 +3.0**
BBLS Lazići 6.18 346 *e*Pn **Pn** **13 38 18.5 +0.2**
DIVS Divibare 6.32 350 ⇑*i* Pn **Pn** **13 38 20.2 0.0**
DIVS Divibare 6.32 350 Pn **Pn** **13 38 20.9 +0.8**
CORL Corleone 6.43 273 **Pn** **13 38 24.0 +2.2**
HAPS Han Pijesak,BI 6.49 344 *e*Pn **Pn** **13 38 22.4 -0.2**
AKAS Kas 6.73 102 Pn **Pn** **13 38 29.7 +3.7**
TEKS Tekeris 6.82 348 *e*Pn **Pn** **13 38 24.8 -2.3**
MDVR Moldovita 6.91 2 ⇓P **Pn** **13 38 29.6 +1.3**
HERR Herculane 7.04 6 ⇑P **Pn** **13 38 31.2 +1.1**
SLUM Salum 7.08 153 P **Pn** **13 38 31.6 +1.0**
baz=156
SLUM AMP 13 39 00.0
baz=156
SLUM S **Sn** **13 39 42.5 -7.7**
baz=156
INTR Introdacqua 7.11 308 **Pn** **13 38 34.4 +3.2**
MGRS Mrkonjic Grad 7.32 335 *e*Pn **Pn** **13 38 34.5 +0.6**
FRGS Fruska Gora 7.38 351 ⇑P **Pn** **13 38 34.6 -0.1**
FRGS Fruska Gora 7.38 351 ⇑*i* Pn **Pn** **13 38 34.1 -0.6**
BLY Banja Luka 7.58 336 *e*Pn **Pn** **13 38 37.2 -0.2**
AQU L'Aquila 7.61 309 *e*Pn **Pn** **13 38 41.3 +3.4**
VOIR 8.03 19 ⇓P **Pn** **13 38 44.9 +1.2**
NRCA Norcia 8.06 311 Pn **Pn** **13 38 47.1 +3.1**
MLR Muntele Rosu 8.32 22 Pn Pn 13 38 55.0 +7.2
comp=Z,1.7nm,0.3s,baz=325,slow=4.9,SNR=12
MLR LR LR 13 42 34.6
comp=Z,372nm,18.0s,baz=208,slow=42
MLR Muntele Rosu 8.32 22 ⇓P **Pn** **13 38 48.5 +0.7**
MORH Mrgy, Hungar 8.59 347 *e*Pn **Pn** **13 38 49.7 -1.6**
PLOR Plostina 8.87 24 ⇑P **Pn** **13 38 55.7 +0.5**
PLOR Plostina 8.87 24 P **Pn** **13 38 55.6 +0.5**
VRI Vrincioaia 8.91 25 ⇑P **Pn** **13 38 55.9 +0.2**
VRI Vrincioaia 8.91 25 P **Pn** **13 38 55.8 +0.2**
BOJS Bojanci 8.92 331 *i* Pn **Pn** **13 38 55.8 0.0**
CRES Cresnjev 9.11 333 *e*Pn **Pn** **13 38 58.1 -0.4**
CRES *e*Sn **Sn** **13 40 34.8 -5.2**
CRES Cresnjev 9.11 333 ⇑*i* Pn **Pn** **13 38 57.6 -0.9**
GBRS Gornja Briga 9.11 329 *e*Pn **Pn** **13 38 59.1 +0.6**
SWA2 9.23 158 P **Pn** **13 38 59.6 -0.5**
baz=160
SWA2 AMP 13 40 00.0
baz=160
SWA2 S **Sn** **13 40 34.5 -8.6**
baz=160
CEY Cerknica 9.44 329 *e*Pn **Pn** **13 39 02.6 -0.4**
VSL Villasalto 9.57 283 Pn **Pn** **13 39 03.6 -1.2**
TRI Trieste 9.70 326 P **Pn** **13 39 06.0 -0.5**
TRI Trieste 9.70 326 Pn **Pn** **13 39 06.0 -0.5**
BR131 Keskin Array S 9.70 75 *i* P Pn 13 39 11.5 +4.8
BRTR Keskin Array B 9.70 75 Pn Pn 13 39 11.8 +5.0
comp=Z,0.6nm,0.3s,baz=257,slow=12,SNR=7.6
KEST Kesra 9.93 261 Pn **Pn** **13 39 10.5 +0.7**
comp=Z,0.5nm,0.3s,baz=176,slow=6.8,SNR=7.4
KEST LR LR 13 44 05.5
comp=Z,101nm,18.6s,baz=281,slow=44
SOKA Soboth 9.99 334 *i* Pn **Pn** **13 39 10.8 +0.1**
comp=Z,3.9nm,0.3s
OBKA Obir 10.03 332 Pn **Pn** **13 39 11.1 +0.1**
comp=Z,10nm,0.6s,SNR=6.0
OBKA *e*Sn **Sn** **13 40 56.4 -6.1**
comp=Z,14nm,0.7s
PSZ Piszkesteto 10.11 354 ⇑P **Pn** **13 39 13.7 +1.6**
PSZ Piszkesteto 10.11 354 P **Pn** **13 39 13.2 +1.1**
PSZ pmax pmax
comp=Z,18nm,0.8s
BURAR Bucovina Array 10.12 15 ⇑P **Pn** **13 39 14.8 +2.3**
BURAR Bucovina Array 10.12 15 P **Pn** **13 39 14.7 +2.3**
ARSA Arzberg 10.33 337 *e*Pn **Pn** **13 39 14.5 -0.7**
comp=Z,4.0nm,0.4s
TEOL Teolo 10.46 319 Pn **Pn** **13 39 17.4 +0.5**
MYKA Terra Mystica 10.48 329 *i* Pn **Pn** **13 39 17.2 0.0**
comp=Z,5.5nm,0.8s
MYKA *i* Sn **Sn** **13 41 08.7 -5.0**
comp=Z,6.3nm,0.7s
STAL STALIGIAL 10.59 325 Pn **Pn** **13 39 19.1 +0.3**
ZOU Zoufplan 10.70 327 **Pn** **13 39 20.7 +0.3**
VYHS Vyhne 10.79 351 *e*P **Pn** **13 39 20.9 -0.5**
VYHS *e* 13 41 21.1
VYHS Vyhne 10.79 351 *e*PN **Pn** **13 39 20.8 -0.6**
VYHS *e*SN Sn 13 41 05.1 -16
VYHS *e* 13 41 21.1
CONA Conrad Observa 10.85 340 *e*Pn **Pn** **13 39 22.1 -0.2**
comp=Z,0.7nm,0.3s
MODS Modra-Piesok 10.93 345 *e*P **Pn** **13 39 24.9 +1.6**
MODS Modra-Piesok 10.93 345 *e*PN **Pn** **13 39 24.8 +1.5**
CTI Castel Tesino 10.94 321 P **Pn** **13 39 24.2 +0.6**
CTI Castel Tesino 10.94 321 **Pn** **13 39 24.2 +0.6**
KBA Koelnbreinsper 10.96 330 *e*Pn **Pn** **13 39 23.9 0.0**
comp=Z,4.8nm,0.8s
KBA *e*Sn **Sn** **13 41 20.9 -4.8**
comp=Z,5.9nm,0.8s
ABTA Abfaltersbach 11.05 326 *e*Pn **Pn** **13 39 25.2 +0.1**
comp=Z,3.3nm,0.4s
ABTA *e*Sn **Sn** **13 41 23.5 -4.2**
comp=Z,18nm,0.7s
SALO Salr 11.23 317 Pn **Pn** **13 39 27.2 -0.3**
MOA Molln 11.27 335 *e*Pn **Pn** **13 39 28.1 +0.1**
comp=Z,3.0nm,0.3s,SNR=6.2
MOA *e*Sn **Sn** **13 41 29.3 -3.7**
comp=Z,7.2nm,0.7s
RYAN Fayoum 11.45 137 P **Pn** **13 39 30.3 -0.3**
baz=139
RYAN AMP 13 41 00.0
baz=139
WTTA Wattenberg 11.84 326 Pn **Pn** **13 39 37.3 +1.4**
comp=Z,3.5nm,0.5s,SNR=4.6
WTTA *e*Sn **Sn** **13 41 42.4 -4.6**
comp=Z,14nm,0.6s
WTTA Wattenberg 11.84 326 P **Pn** **13 39 38.1 +2.2**
WTTA pmax pmax
comp=Z,12nm,0.7s
GLL Jalalah 11.89 131 P **Pn** **13 39 35.1 -1.5**
baz=133
WATA Walderalm 11.92 326 *e*Pn **Pn** **13 39 38.1 +1.1**
comp=Z,4.7nm,0.5s,SNR=4.2
WATA *e*Sn **Sn** **13 41 44.7 -4.2**
comp=Z,24nm,1.0s
VRAC Vranov 11.96 345 LR LR 13 45 40.5
comp=Z,230nm,18.0s,baz=164,slow=45
FETA Feichten 12.08 323 Pn **Pn** **13 39 39.6 +0.5**
comp=Z,4.0nm,0.7s
FETA *e*Sn **Sn** **13 41 48.2 -4.7**
comp=Z,4.6nm,0.6s
CKRC Cesky Krumlov 12.10 337 AMS AMS 13 45 00.0
comp=Z,300nm,13.3s
MOTA Moosalm 12.14 325 *e*Pn **Pn** **13 39 40.1 +0.2**
comp=Z,6.6nm,0.6s,SNR=6.1
MOTA *e*Sn **Sn** **13 41 50.6 -3.8**
comp=Z,14nm,0.8s
HFRF Wahat Farafira 12.16 150 P **Pn** **13 39 39.4 -0.9**
baz=152
TREC Trest 12.20 341 P **Pn** **13 39 39.5 -1.2**
TREC pmax pmax
comp=Z,29nm,0.8s
GERES GERESS Array B 12.32 335 Pn **Pn** **13 39 41.3 -1.1**
comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=3.4
GERES Sn **Sn** **13 41 54.2 -4.5**
comp=Z,0.4nm,0.3s,baz=146,slow=25,SNR=3.3
GERES LR LR 13 45 48.0
comp=Z,112nm,18.6s,baz=156,slow=44
GERES GERESS Array B 12.32 335 *e*P **Pn** **13 39 45.4 +3.0**
DAVOX Davos/Dischmat 12.33 320 Pn **Pn** **13 39 44.7 +2.0**
comp=Z,0.4nm,0.3s,baz=178,slow=24,SNR=3.2
DAVOX Sn **Sn** **13 42 00.7 +1.5**
comp=Z,0.8nm,0.3s,baz=276,slow=21,SNR=7.5
DAVOX LR LR 13 45 33.0
comp=Z,137nm,20.6s,baz=79,slow=43
MMAI Mount Meron Ar 12.37 109 Pn **Pn** **13 39 41.9 -1.3**
comp=Z,1.0nm,0.3s,baz=325,slow=12,SNR=2.9
TUE Stuetta 12.41 318 **Pn** **13 39 46.0 +2.2**
KHC Kasperske Hory 12.61 336 *i* P **Pn** **13 39 46.5 +0.2**
KHC Kasperske Hory 12.61 336 *e*P **Pn** **13 39 46.6 +0.2**
KHC *ex* x 13 39 56.0
KHC *e*S **Sn** **13 42 01.0 -4.7**
KHC AMS AMS 13 45 10.0
comp=Z,300nm,12.4s
DAVA Damuels 12.68 322 *i* Sn **Sn** **13 42 03.8 -3.7**
comp=Z,30nm,0.9s
WET Wettzell 12.86 334 P **Pn** **13 39 50.8 +1.1**
WET pmax pmax
comp=Z,8.0nm,0.8s
DPC Dobruska-Polom 13.00 345 AMS AMS 13 45 40.0
comp=Z,300nm,14.6s
PRU Pruhonice 13.08 340 AMS AMS 13 45 40.0
comp=Z,300nm,15.8s
PRA Prague 13.19 340 AMS AMS 13 45 50.0
comp=Z,200nm,17.2s
OSTC Ostas 13.22 345 AMS AMS 13 45 50.0
comp=Z,300nm,12.7s
SENIN Lac Senin/Sane 13.48 313 **Pn** **13 39 59.0 +0.7**
PVCC Panska Ves 13.57 341 AMS AMS 13 45 50.0
comp=Z,300nm,16.2s
EIL Elat 13.89 122 Pn **Pn** **13 40 02.6 -1.2**
comp=Z,0.3nm,0.3s,baz=342,slow=16,SNR=2.1
EIL Sn Sn 13 42 26.6 -11
comp=Z,0.6nm,0.3s,baz=172,slow=6.3,SNR=3.2
GRFO Grafenberg 13.91 331 P **P** **13 40 14.8 +2.9**
GRFO Grafenberg 13.91 331 P **P** **13 40 14.8 +2.9**
NKC Novy Kostel 13.93 335 AMS AMS 13 46 10.0
comp=Z,300nm,12.4s
AKASG Malin Array Be 13.97 21 Pn **Pn** **13 40 01.7 -3.1**
comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=1.9
HKAT Jabal Katrina 14.04 128 P **Pn** **13 40 05.2 -0.9**
baz=129
ECH Echery 14.67 319 P **Pn** **13 40 15.3 +0.9**
ECH Echery 14.67 319 Pn **Pn** **13 40 15.3 +0.9**
CLL Collm 14.70 339 *i* PP **P** **13 40 22.4 +1.8**
comp=Z,15nm,1.6s
CLL Collm 14.70 339 *i* P **P** **13 40 22.4 +1.8**
CLL pmax pmax
comp=Z,15nm,1.6s
SUW Suwalki 16.19 4 P **P** **13 40 37.8 +0.7**
SUW pmax pmax
comp=Z,22nm,0.9s
MNK Minsk 17.21 13 *i* P **Pn** **13 40 43.5 -3.6**
comp=E,2.0nm,0.8s
MNK *i* P **Pn** **13 40 43.5 -3.6**
comp=N,14nm,0.7s
MNK *i* P **Pn** **13 40 43.5 -3.6**
comp=Z,16nm,0.9s
MNK *i* pP **pP** **13 40 53.2 -2.8**
MNK *i* S **Sn** **13 43 50.5 -7.0**
MNK *i* SS **S** **13 44 07.4 +1.4**
MNK *i* PcP **PcP** **13 45 26.5 -3.0**
MNK *i* LQ LQ 13 45 36.1
MNK *i* LR LR 13 47 07.5
MNK *i* LRM MLR 13 48 19.5
comp=E,8.0nm,18.1s
MNK *i* LRM MLR 13 48 19.5
comp=Z,77nm,19.0s
MNK *i* LRM MLR 13 48 37.0
comp=N,101nm,15.4s
KBZ Khabaz 17.25 63 P **P** **13 40 50.0 +1.1**
comp=N,0.1nm,0.3s,baz=240,slow=15,SNR=3.0
KBZ LR LR 13 48 56.4
comp=N,55nm,20.1s,baz=236,slow=42
NACGM Naroch 17.42 10 *i* P **Pn** **13 40 48.6 -1.1**
NACGM *i* P **Pn** **13 40 48.6 -1.1**
NACGM *i* P **Pn** **13 40 48.6 -1.1**
NACGM *i* PP **pP** **13 40 58.1 -0.3**
NACGM *i* PPP PPP 13 41 05.8
NACGM *i* S **Sn** **13 43 57.9 -4.7**
NACGM *i* SS **SnSn** **13 44 14.0 -2.1**
NACGM *i* SSS SSS 13 44 21.4
NACGM *i* LQ LQ 13 47 03.0
NACGM *i* LR LR 13 47 05.7
PABE Paberze 17.72 5 *e*P **Pn** **13 40 52.9 -0.4**
ZEI Tsey 17.80 67 *e*P **P** **13 40 57.5 +2.2**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
VORD Divnogorie 18.21 38 *e*P **Pn** **13 40 59.4 0.0**
VORD pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 18.24 76 P **P** **13 41 03.9 +3.8**
comp=Z,2.3nm,0.3s,baz=210,slow=8.4,SNR=6.5
GNI LR LR 13 48 48.2
comp=Z,113nm,20.3s,baz=275,slow=40
GNI Garni 18.24 76 P **P** **13 41 03.9 +3.8**
GNI pmax pmax
comp=Z,15nm,1.1s
GNI Garni 18.24 76 IAmb IAmb 13 41 08.4
comp=Z,15nm,1.1s
VSR Storozhevoye 18.31 38 *e*P **Pn** **13 41 01.6 +1.0**
VSR pmax pmax
comp=Z,6.0nm,0.5s
LPSR Galich'ya Gora 19.12 34 *e*P **P** **13 41 09.7 +0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
LGD Lagodekhi 19.43 70 P **Pn** **13 41 18.7 +4.4**
VRH Novokhopyorsk 19.58 41 *e*P **P** **13 41 14.9 +0.5**
VRH pmax pmax
comp=Z,10.0nm,0.6s
ESDC Sonseca Array 19.87 283 P **Pn** **13 41 19.1 -0.5**
comp=Z,0.1nm,0.3s,baz=79,slow=11,SNR=41
OBN Obninsk 20.07 26 ⇑*e*P **P** **13 41 20.6 +0.8**
OBN *e* 13 41 44.8
OBN S **S** **13 45 05.0 +1.4**
OBN *e*SS **SnSn** **13 45 21.9 +0.9**
OBN pmax pmax
comp=Z,5.0nm,1.0s
OBN MLR MLR
comp=Z,119nm,16.0s
PAB San Pablo 20.18 283 P Pn 13 41 23.1 -0.1
PAB pmax pmax
comp=Z,5.0nm,0.9s
PAB San Pablo 20.18 283 P Pn 13 41 23.1 -0.1
VSU Vasula 20.89 8 *e*P **P** **13 41 29.3 +0.6**
MDT Midelt 21.81 264 P **P** **13 41 40.6 +1.8**
comp=Z,4.0nm,0.8s,baz=61,slow=8.7,SNR=6.1
PBRG Braganca 21.95 289 *e*P **P** **13 41 41.3 +1.1**
PBRG *e*pP **pP** **13 41 46.0 -2.0**
UPP Uppsala 22.14 355 *e*P **P** **13 41 42.6 +0.6**
MVO Moncorvo 22.16 287 *e*P **P** **13 41 44.0 +1.4**
MVO *e*pP **pP** **13 41 48.3 -2.1**
AAL Aland 22.34 358 *e*P **P** **13 41 44.2 0.0**
PBAR Barrancos 22.40 280 *e*P **P** **13 41 42.2 -2.9**
PBAR *e*pP **pP** **13 41 51.7 -1.2**

PMRV	**Marv??o**	**22.53**	**283**	*e*P	**P**	**13 41 46.4**	**-0.1**
PMRV				*e*pP	**pP**	**13 41 52.9**	**-1.4**
MTE	**Manteigas**	**22.58**	**285**	*e*pP	pP	13 41 53.7	-1.1
MTE	**Manteigas**	**22.58**	**285**	P	**P**	**13 41 45.5**	**-1.5**
MTE				IAmb	IAmb	13 41 54.2	
	comp=Z,10nm,0.9s						
PVRL	**Vila Real**	**22.68**	**288**	*e*pP	pP	13 41 54.9	-0.9
POLO	**Lamas de Olo**	**22.74**	**288**	*e*P	**P**	**13 41 48.1**	**-0.6**
POLO				*e*pP	**pP**	**13 41 55.6**	**-0.9**
PESTR	**Estremoz**	**22.74**	**282**	P	**P**	**13 41 47.2**	**-1.5**
HFS	**Hagfors**	**22.82**	**350**	P	**P**	**13 41 49.2**	**-0.1**
	comp=Z,6.0nm,0.4s,baz=155,slow=11,SNR=60						
HFS				LR	LR	13 51 36.7	
	comp=Z,72nm,18.7s,baz=167,slow=39						
PVAQ	**Vaqueiros**	**23.06**	**278**	*e*pP	pP	13 42 02.0	+2.2
PVAQ	**Vaqueiros**	**23.06**	**278**	P	**P**	**13 41 50.0**	**-2.0**
PVAQ				IAmb	IAmb	13 41 58.2	
	comp=Z,25nm,1.3s						
KONO	**Kongsberg**	**23.08**	**345**	P	**P**	**13 41 51.1**	**-0.8**
KONO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KONO	**Kongsberg**	**23.08**	**345**	P	**P**	**13 41 51.1**	**-0.8**
KONO	**Kongsberg**	**23.08**	**345**	*e*P	**P**	**13 41 52.9**	**+1.0**
OSL	**Oslo**	**23.12**	**346**	*e*P	**P**	**13 41 52.4**	**+0.1**
PMTG	**Montargil**	**23.21**	**282**	*e*P	**P**	**13 41 53.3**	**-0.2**
NC602	**NORSAR Array S**	**23.72**	**348**	P	**P**	**13 41 58.2**	**0.0**
NC602				IAmb	IAmb	13 41 59.3	
	comp=Z,34nm,1.0s						
NC602	**NORSAR Array S**	**23.72**	**348**	*e*P	**P**	**13 41 58.5**	**+0.2**
NORES	**NORESS Array B**	**23.72**	**348**	P	**P**	**13 41 58.5**	**+0.2**
FINES	**FINESS Array B**	**23.77**	**6**	P	**P**	**13 41 58.5**	**-0.2**
	comp=Z,6.1nm,0.6s,baz=175,slow=9.9,SNR=46						
FINES				LR	LR	13 52 06.4	
	comp=Z,91nm,21.4s,baz=193,slow=39						
FINES	**FINESS Array B**	**23.77**	**6**	P	**P**	**13 41 57.3**	**-1.5**
FIA1	**FINESS Array S**	**23.77**	**6**	P	**P**	**13 41 58.8**	**+0.1**
FIA1				IAmb	IAmb	13 42 06.1	
	comp=Z,14nm,1.1s						
NAO01	**NORSAR Array S**	**23.94**	**347**	P	**P**	**13 41 59.7**	**-0.6**
NAO01				IAmb	IAmb	13 42 01.5	
	comp=Z,16nm,0.8s						
NC405	**NORSAR Array S**	**24.05**	**348**	P	**P**	**13 42 01.3**	**-0.1**
NC405				IAmb	IAmb	13 42 10.2	
	comp=Z,29nm,1.0s						
NB201	**NORSAR Array S**	**24.06**	**348**	P	**P**	**13 42 01.3**	**-0.2**
NB2	**NORSAR Subarra**	**24.07**	**348**	P	**P**	**13 42 01.6**	**+0.1**
	baz=160,slow=9.3						
NOA	**NORSAR Array B**	**24.07**	**348**	P	**P**	**13 42 01.1**	**-0.4**
	comp=Z,6.1nm,1.0s,baz=164,slow=10,SNR=15						
NOA				LR	LR	13 53 16.0	
	comp=Z,81nm,19.9s,baz=165,slow=41						
NOA	**NORSAR Array B**	**24.07**	**348**	*e*P	**P**	**13 41 59.9**	**-1.6**
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**24.10**	**324**	P	**P**	**13 42 02.6**	**+0.8**
	comp=Z,4.2nm,0.5s,baz=129,slow=10,SNR=40						
NBO00	**NORSAR Array S**	**24.13**	**347**	P	**P**	**13 42 02.4**	**+0.2**
NC303	**NORSAR Array S**	**24.21**	**348**	P	**P**	**13 42 02.3**	**-0.5**
SKAR	**Skarslia**	**24.29**	**344**	*e*P	**P**	**13 42 04.8**	**+1.2**
NC204	**NORSAR Array S**	**24.36**	**347**	P	**P**	**13 42 04.0**	**-0.3**
DOMB	**Dombas**	**25.38**	**346**	*e*P	**P**	**13 42 14.8**	**+1.3**
KLMR	**Klimovskoe**	**25.66**	**21**	*e*P	**P**	**13 42 14.7**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,12nm,0.6s						
KLMR	**Klimovskoe**	**25.66**	**21**	*e*P	**P**	**13 42 14.8**	**-1.2**
KLMR				AMP		13 42 18.3	
	comp=Z,12nm,0.6s						
NSS	**Namsos**	**27.28**	**351**	*e*P	**P**	**13 42 31.1**	**+0.6**
KIRV	**Kirov**	**27.52**	**32**	LR	LR	13 54 02.1	
	comp=Z,71nm,20.2s,baz=235,slow=38						
PRGR	**Permogore**	**28.13**	**25**	*e*P	**P**	**13 42 42.1**	**+3.9**
PRGR				*e**PP	**sP**	**13 42 54.0**	**+3.9**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MOR8	**Moi Rana**	**28.63**	**354**	*e*P	**P**	**13 42 44.5**	**+1.9**
AKTO	**Aktyubinsk**	**28.79**	**52**	P	**P**	**13 42 45.0**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=268,slow=1.9,SNR=4.5						
AKTO				LR	LR	13 55 33.7	
	comp=Z,28nm,19.1s,baz=260,slow=39						
STOK	**Stokkvaagen**	**28.92**	**353**	*e*P	**P**	**13 42 45.9**	**+0.8**
KONS	**Konsvik**	**29.07**	**353**	*e*P	**P**	**13 42 47.9**	**+1.4**
NBB28	**Valnes**	**29.63**	**355**	*e*P	**P**	**13 42 52.8**	**+1.4**
FAUS	**Fauske**	**29.76**	**355**	*e*P	**P**	**13 42 53.3**	**+0.7**
N2TV	**TΨrnvik**	**29.96**	**355**	*e*P	**P**	**13 42 55.9**	**+1.7**
TOA0	**Torodi Ar. Sit**	**30.26**	**221**	P	**P**	**13 42 57.1**	**-0.4**
TOA0				IAmb	IAmb	13 43 08.4	
	comp=Z,2.6nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.26**	**221**	P	**P**	**13 42 57.9**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=32,slow=8.9,SNR=7.9						
N2IH	**Innhavet**	**30.30**	**356**	*e*P	**P**	**13 42 58.9**	**+1.5**
STEI	**Steigen**	**30.31**	**355**	*e*P	**P**	**13 42 58.1**	**+0.7**
HEF	**Hetta**	**30.61**	**2**	*e*P	**P**	**13 43 00.6**	**+0.4**
KTK1	**Kautokeino**	**31.21**	**1**	*e*P	**P**	**13 43 06.5**	**+1.1**
JETT	**Jettan, Norway**	**31.75**	**359**	*e*P	**P**	**13 43 10.8**	**+0.6**
ARA0	**ARCESS Array S**	**31.80**	**3**	*e*P	**P**	**13 43 10.8**	**+0.3**
ARCES	**ARCESS Array B**	**31.80**	**3**	P	**P**	**13 43 10.5**	**-0.1**
	comp=Z,3.8nm,0.6s,baz=187,slow=9.1,SNR=31						
ARCES	**ARCESS Array B**	**31.80**	**3**	IAmb	IAmb	13 43 11.7	
	comp=Z,7.2nm,0.9s						
TRO	**Tromso**	**31.85**	**358**	*e*P	**P**	**13 43 11.5**	**+0.5**
KEV	**Kevo**	**32.09**	**4**	P	**P**	**13 43 12.2**	**-0.8**
KEV				pmax	pmax		
	comp=Z,43nm,1.5s						
KEV	**Kevo**	**32.09**	**4**	P	**P**	**13 43 12.2**	**-0.8**
HAMF	**Hammerfest**	**32.86**	**1**	*e*P	**P**	**13 43 20.9**	**+1.1**
DBIC	**Dimbokro**	**39.17**	**224**	P	**P**	**13 44 16.0**	**+1.7**
	comp=Z,2.0nm,0.7s,baz=11,slow=9.6,SNR=2.6						
MAKZ	**Makanchi**	**44.63**	**58**	P	**P**	**13 44 58.2**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**44.63**	**58**	P	**P**	**13 44 58.2**	**-0.5**
MK31	**Makanchi Array**	**44.84**	**58**	P	**P**	**13 45 00.8**	**+0.4**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MK31	**Makanchi Array**	**44.84**	**58**	P	**P**	**13 45 00.8**	**+0.4**
MK31				IAmb	IAmb	13 45 01.3	
	comp=Z,5.2nm,0.5s						
MKAR	**Makanchi Array**	**44.84**	**58**	P	**P**	**13 45 00.7**	**+0.3**
	comp=Z,5.8nm,0.5s,baz=272,slow=7.5,SNR=107						
MKAR	**Makanchi Array**	**44.84**	**58**	P	**P**	**13 45 00.6**	**+0.2**
ZAA0	**Zalesovo Array**	**45.36**	**48**	P	**P**	**13 45 03.6**	**-0.7**
ZAA0				IAmb	IAmb	13 45 13.1	
	comp=Z,5.7nm,0.7s						
ZALV	**Zalesovo Beam**	**45.36**	**48**	P	**P**	**13 45 04.6**	**+0.2**
	comp=Z,2.7nm,0.4s,baz=278,slow=8.7,SNR=12						
WMQ	**Urumqi**	**49.27**	**61**	*e*P	**P**	**13 45 35.8**	**+0.7**
WMQ				pP	sP	13 45 48.9	+1.6
WMQ				sP	pP	13 45 56.3	+12
WMQ				LR	LR		
	comp=N,1μm,29.0s						
WMQ				LR	LR		
	comp=E,3μm,28.8s						
WMQ				LR	LR		
	comp=Z,140nm,29.2s						
FRB	**Frobisher Bay**	**56.80**	**328**	LR	LR	14 12 27.2	
	comp=Z,67nm,18.6s,baz=322,slow=38						
GTA	**Gaotai**	**59.33**	**62**	*e*P	**P**	**13 46 48.8**	**+0.4**
GTA				pP	pP	13 46 53.1	-4.3
GTA				sP	sP	13 46 56.5	-4.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,12nm,7.2s						
GTA				LR	LR		
	comp=N,140nm,8.8s						
GTA				LR	LR		
	comp=E,210nm,11.2s						
GTA				LR	LR		
	comp=Z,94nm,10.0s						
SONM	**Songino Array**	**60.09**	**51**	P	**P**	**13 46 54.5**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=297,slow=7.7,SNR=3.4						
BOSA	**Boshof**	**66.23**	**176**	LR	LR	14 17 28.7	
	comp=Z,58nm,18.4s,baz=72,slow=37						
HHC	**Hu-ho-hao-te**	**66.61**	**56**	*e*P	**P**	**13 47 37.5**	**+0.7**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				LR	LR		
	comp=N,140nm,16.5s						
HHC				LR	LR		
	comp=E,160nm,17.1s						
HHC				LR	LR		
	comp=Z,110nm,16.7s						
CMAR	**Chiang Mai Arr**	**69.21**	**82**	P	**P**	**13 47 53.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=298,slow=7.5,SNR=5.3						
YKA	**Yellowknife Ar**	**73.92**	**340**	P	**P**	**13 48 21.8**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=35,slow=5.3,SNR=11						
NJ2	**Nanjing**	**76.34**	**60**	*e*P	**P**	**13 48 33.8**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
ULM	**Lac du Bonnet**	**76.37**	**324**	P	**P**	**13 48 35.5**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=10.0,slow=9.0,SNR=4.6						
ILAR	**Eielson Array**	**77.28**	**355**	P	**P**	**13 48 41.6**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=16,slow=4.7,SNR=2.7						
KSRS	**Korea Array**	**78.96**	**51**	P	**P**	**13 48 50.5**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=310,slow=4.8,SNR=6.8						
KSRS	**Korea Array**	**78.96**	**51**	*e*P	**P**	**13 48 51.8**	**+1.9**
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ASAR	**Alice Springs**	**121.42**	**97**	PKP	**PKiKP**	**13 55 41.7**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=3.8,slow=2.8,SNR=1.7						

NNC 18 13:39:30.4±2.9, 37.90N×69.97E, h0km, mb 3.7, mpv 3.3, 3C-1D, Error ellipse: s-maj=27.2km s-min=25.6km az=95.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.21**	**4**	⇑Pn	Pn	13 40 48.9	-0.7
	0.9nm,0.4s,baz=178,slow=8.8,SNR=5.3						
KK31				⇓Pg	Pb	13 41 06.3	+3.9
	6.3nm,0.8s,baz=195,slow=16,SNR=11						
KK31				Lg	Lg	13 42 15.6	
	8.8nm,0.7s,baz=178,slow=28,SNR=4.2						
AAK	**Ala-Archa**	**5.86**	**35**	Pn	Pn	13 40 59.0	+0.4
	1.8nm,0.6s						
AAK				Lg	Lg	13 42 37.9	
	8.7nm,0.8s						
TKM2	**Tokmak 2**	**6.60**	**39**	⇑Pn	Pn	13 41 08.9	0.0
	1.7nm,0.6s						
TKM2				⇑Lg	Lg	13 42 58.1	
	6.4nm,1.1s						

*ISK **18** 13:42:10.8, 34.96N×26.86E, h9km, ML 3.8/14*
*DDA **18** 13:42:10.4, 35.14N×26.78E, h4km±3km, MW 3.9*
*IDC **18** 13:42:10.2±0.9, 34.91N×26.98E, h0km, mb 3.9/9, mb1 3.9/15, mb1mx3.7/44, mbtmp3.8/15, ML 3.5/6, Error ellipse: s-maj=24.7km s-min=13.6km az=179.0*
*ATH **18** 13:42:13.6, 35.20N×26.72E, h1 1km±3km, ML 3.8/4, Error ellipse: s-maj=4.8km s-min=1.0km az=158.0*
*THE **18** 13:42:13.5, 35.16N×26.74E, h1km±2km, ML 3.6/6, Error ellipse: s-maj=4.7km s-min=0.9km az=153.0*
*HLW **18** 13:42:14.7, 34.93N×27.10E, h13km±13km, Md 3.8, Ml 4.0*

ISC 18 13:42:11.8±1.1, 35.01N±0.04×26.83E±0.02, h16km±7km, n102, σ1°§62/131, mb 3.9/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.51**	**283**	P	**Pg**	**13 42 21.7**	**-0.3**
ZKR				S	**Sg**	**13 42 28.3**	**-0.6**
ZKR				AML	AML	13 42 31.8	
	comp=E,22434μm,0.3s						
ZKR				AML	AML	13 42 32.9	
	comp=N,11093μm,0.5s						
ZKR	**Zakros**	**0.51**	**283**	P	**Pg**	**13 42 21.7**	**-0.3**
ZKR				S	**Sg**	**13 42 28.8**	**-0.1**
	comp=N,8μm,0.4s						
ZKR	**Zakros**	**0.51**	**283**	PG	**Pg**	**13 42 21.8**	**-0.3**
ZKR				SG	**Sb**	**13 42 30.1**	**+0.4**
KARP	**Karpathos**	**0.61**	**27**	P	**Pg**	**13 42 22.7**	**-1.1**
KARP				S	**Sg**	**13 42 30.7**	**-1.2**
KARP				AML	AML	13 42 32.3	
	comp=N,50257μm,0.2s						
KARP				AML	AML	13 42 32.8	
	comp=E,58815μm,0.2s						
KARP	**Karpathos**	**0.61**	**27**	P	**Pg**	**13 42 22.7**	**-1.1**
KARP				S	**Sg**	**13 42 31.4**	**-0.5**
	comp=E,27μm,0.2s						
KARP	**Karpathos**	**0.61**	**27**	PG	**Pg**	**13 42 23.3**	**-0.5**
KARP				SG	**Sg**	**13 42 32.0**	**+0.1**
FRMA	**Ierapetra Chan**	**0.90**	**271**	P	**Pb**	**13 42 27.2**	**-1.8**
FRMA				S	**Sb**	**13 42 39.8**	**-1.0**
	comp=E,2μm,0.7s						
NPS	**Neapolis**	**1.03**	**285**	P	**Pb**	**13 42 31.1**	**-0.2**
NPS				S	**Sb**	**13 42 44.0**	**-0.6**
NPS				AML	AML	13 42 51.2	
	comp=E,11101μm,0.7s						
NPS				AML	AML	13 42 51.5	
	comp=N,9242μm,0.7s						
NPS	**Neapolis**	**1.03**	**285**	P	**Pb**	**13 42 30.9**	**-0.4**
NPS				S	**Sb**	**13 42 44.8**	**+0.2**
	comp=N,5μm,0.7s						
KSTL	**Kastelli Herak**	**1.47**	**282**	P	**Pn**	**13 42 35.8**	**-1.9**
ARG	**Arkhangelos**	**1.61**	**41**	P	**Pb**	**13 42 41.4**	**+0.2**
ARG				S	**Sb**	**13 43 01.7**	**+0.5**
ARG				AML	AML	13 43 07.2	
	comp=N,3846μm,0.8s						
ARG				AML	AML	13 43 08.6	
	comp=E,5518μm,0.5s						
ARG	**Arkhangelos**	**1.61**	**41**	P	**Pb**	**13 42 41.4**	**+0.2**
ARG				S	**Sb**	**13 43 02.5**	**+1.3**
	comp=E,2μm,0.7s						
ARG	**Arkhangelos**	**1.61**	**41**	PN	**Pn**	**13 42 40.1**	**+0.5**
ARG				SN	**Sb**	**13 43 01.4**	**+0.2**
IDI	**Anoyia**	**1.61**	**281**	Pn	**Pg**	**13 42 42.5**	**-0.4**
	comp=E,45nm,0.3s,baz=122,slow=18,SNR=18						
IDI				Sn	**Sg**	**13 43 07.7**	**+3.9**
	comp=E,82nm,0.3s,baz=345,slow=15,SNR=7.8						
IDI	**Anoyia**	**1.61**	**281**	P	**Pb**	**13 42 41.5**	**+0.2**
NIS1	**Nisyros Isl.**	**1.62**	**10**	P	**Pn**	**13 42 39.9**	**+0.1**
NIS1	**Nisyros Isl.**	**1.62**	**10**	P	**Pn**	**13 42 40.0**	**+0.2**
NIS1	**Nisyros Isl.**	**1.62**	**10**	PN	**Pn**	**13 42 40.5**	**+0.7**
KOSK	**Kos Island**	**1.75**	**4**	PN	**Pn**	**13 42 42.4**	**+0.9**
SANT	**Santorini**	**1.76**	**321**	P	**Pn**	**13 42 42.1**	**+0.4**
SANT	**Santorini**	**1.76**	**321**	P	**Pn**	**13 42 42.1**	**+0.4**
SANT	**Santorini**	**1.76**	**321**	*i* P	**Pn**	**13 42 41.5**	**-0.2**
SANT				*i* S	**Sn**	**13 43 04.3**	**+0.4**
SANT	**Santorini**	**1.76**	**321**	PN	**Pn**	**13 42 42.8**	**+1.1**
THR8	**Santorini-Mono**	**1.78**	**322**	P	**Pn**	**13 42 42.0**	**+0.1**
SNT1	**Gialos, Santor**	**1.81**	**321**	P	**Pn**	**13 42 41.9**	**-0.5**
SNT1	**Gialos, Santor**	**1.81**	**321**	P	**Pn**	**13 42 41.9**	**-0.5**
SNT5	**Nea Kammeni, S**	**1.82**	**321**	P	**Pn**	**13 42 42.8**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.82**	**321**	P	**Pn**	**13 42 42.9**	**+0.4**
THR3	**Thira Island,**	**1.82**	**321**	P	**Pn**	**13 42 42.5**	**0.0**
THT2	**Imerovigli**	**1.83**	**322**	PN	**Pn**	**13 42 43.9**	**+1.2**
THR5	**Thira Island,**	**1.85**	**320**	P	**Pn**	**13 42 43.5**	**+0.5**
BODT	**Bodrum**	**2.09**	**11**	P	**Pn**	**13 42 45.8**	**-0.5**
BODT	**Bodrum**	**2.09**	**11**	PN	**Pn**	**13 42 46.5**	**+0.2**
TURN	**Turunc**	**2.11**	**33**	*i* P	**Pb**	**13 42 48.7**	**-1.0**
TURN				*i* S	**Sb**	**13 43 15.8**	**+0.2**
TURN				IAML		13 43 20.0	
	comp=E,210nm,0.7s						
TURN				IAML		13 43 24.0	
	comp=N,248nm,0.5s						
TURN	**Turunc**	**2.11**	**33**	PN	**Pn**	**13 42 47.3**	**+0.8**
BDRM	**Kayabasi**	**2.12**	**13**	*i* P	**Pn**	**13 42 47.6**	**+0.9**
YKAV	**Yalikavak-Bodr**	**2.15**	**10**	PN	**Pn**	**13 42 48.0**	**+1.0**
VAM	**Vamos**	**2.19**	**281**	P	**Pb**	**13 42 51.9**	**+0.9**
GVD	**Gavdhos**	**2.26**	**267**	P	**Pn**	**13 42 50.4**	**+1.9**
APE	**Apeiranthos**	**2.31**	**333**	P	**Pn**	**13 42 49.3**	**0.0**
APE	**Apeiranthos**	**2.31**	**333**	P	**Pn**	**13 42 49.3**	**0.0**
APE				S	**Sn**	**13 43 16.1**	**-1.4**
	comp=N,560nm,0.7s						
APE	**Apeiranthos**	**2.31**	**333**	*i* P	**Pn**	**13 42 49.6**	**+0.3**
APE				*i* S	**Sn**	**13 43 12.9**	**-4.6**
APE	**Apeiranthos**	**2.31**	**333**	PN	**Pn**	**13 42 50.5**	**+1.2**
DALY	**Dalyan (Mula)**	**2.34**	**39**	PN	**Pn**	**13 42 50.6**	**+1.0**
IMMV	**Iera Moni Meta**	**2.37**	**282**	P	**Pn**	**13 42 52.2**	**+2.0**
IMMV	**Iera Moni Meta**	**2.37**	**282**	P	**Pn**	**13 42 50.8**	**+0.7**
YER	**Yerkesik**	**2.43**	**29**	P	**Pn**	**13 42 52.4**	**+1.4**
YER	**Yerkesik**	**2.43**	**29**	PN	**Pn**	**13 42 51.8**	**+0.8**
FETY	**Fethiye**	**2.45**	**48**	PN	**Pn**	**13 42 52.0**	**+0.8**
DDIM	**Aydin, Didim**	**2.47**	**8**	*i* P	**Pn**	**13 42 52.7**	**+1.2**
DDIM				*i* S	**Sn**	**13 43 20.5**	**-0.8**
DDIM				IAML		13 43 51.0	
	comp=E,291nm,1.0s						
MULA	**Mugla, Merkez-**	**2.55**	**28**	*i* P	**Pn**	**13 42 54.5**	**+1.8**
AKAS	**Kas**	**2.57**	**61**	*i* P	**Pn**	**13 42 52.2**	**-0.9**
AKAS	**Kas**	**2.57**	**61**	PN	**Pn**	**13 42 53.7**	**+0.7**
SMG	**Samos**	**2.70**	**0**	P	**Pn**	**13 42 54.0**	**-0.6**
GCAM	**G?zelcaml?**	**2.71**	**7**	PN	**Pn**	**13 42 56.3**	**+1.6**
AYDN	**Tasoluk**	**2.78**	**17**	*i* P	**Pn**	**13 42 56.4**	**+0.5**
CAEL	**Denizli, Camel**	**2.92**	**43**	*i* P	**Pn**	**13 42 58.8**	**+0.9**
TAVA	**DENIZLI_Tavas**	**2.98**	**34**	*i* P	**Pn**	**13 43 00.1**	**+1.6**
TAVA				*i* S	**Sn**	**13 43 37.0**	**+3.0**
TAVA				IAML		13 43 46.0	
	comp=N,159nm,0.8s						
TAVA				IAML		13 43 47.0	
	comp=E,185nm,0.9s						
ELL	**Elmali**	**3.05**	**54**	PN	**Pn**	**13 43 00.5**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**3.06**	**16**	PN	**Pn**	**13 43 00.9**	**+1.2**
GOLH	**Golhisar**	**3.14**	**44**	*i* P	**Pn**	**13 43 01.8**	**+1.1**
AKUM	**Antalya-Kumluc**	**3.15**	**64**	*i* P	**Pn**	**13 43 02.5**	**+1.8**
AKUM				*i* S	**Sn**	**13 43 37.8**	**-0.3**
AKUM				IAML		13 43 54.0	
	comp=N,51nm,0.6s						
URLA	**Izmir**	**3.35**	**357**	PN	**Pn**	**13 43 05.3**	**+1.7**
CHOS	**Chios island**	**3.43**	**350**	PN	**Pn**	**13 43 06.5**	**+1.7**
KORT	**Korkueli**	**3.48**	**54**	*i* P	**Pn**	**13 43 08.3**	**+2.8**
KORT				*i* S	**Sn**	**13 43 48.9**	**+2.4**
KORT				IAML		13 43 54.0	
	comp=N,145nm,0.6s						
KORT				IAML		13 44 03.0	
	comp=E,124nm,0.7s						
VLI	**Veliai**	**3.59**	**300**	P	**Pn**	**13 43 08.4**	**+1.5**
BRDR	**BURDUR-Merkez**	**3.75**	**43**	*i* P	**Pn**	**13 43 13.3**	**+4.2**
MANT	**Manisa**	**3.75**	**21**	*i* P	**Pn**	**13 43 10.6**	**+1.3**
SLUM	**Salum**	**3.76**	**202**	P	**Pn**	**13 43 12.6**	**+3.5**
	baz=206						
SLUM				S	**Sn**	**13 43 54.3**	**+1.3**
	baz=206						
SLUM				AMP		13 44 00.0	
	baz=206						
GOMA	**Golmarmara-Man**	**3.80**	**13**	PN	**Pn**	**13 43 11.5**	**+1.8**
KULA	**Kula-Manisa**	**3.80**	**22**	PN	**Pn**	**13 43 11.5**	**+1.7**
USAK	**Uak-Merkez**	**4.10**	**25**	*i* P	**Pn**	**13 43 14.4**	**+0.5**
KEPZ	**Antalya-Kepez**	**4.31**	**63**	*i* P	**Pn**	**13 43 20.7**	**+3.8**
KEPZ				*i* S	**Sn**	**13 44 05.5**	**-1.4**
KEPZ				IAML		13 44 12.0	
	comp=E,71nm,0.6s						
KEPZ				IAML		13 44 20.0	
	comp=N,52nm,0.7s						
GAZI	**Gazipasa**	**4.64**	**73**	*i* P	**Pn**	**13 43 20.5**	**-0.8**
GAZI				*i* S	**Sn**	**13 44 07.5**	**-7.3**
SEDI	**Konya, Seydise**	**4.67**	**57**	*i* P	**Pn**	**13 43 25.0**	**+3.2**
SEDI				*i* S	**Sn**	**13 44 17.6**	**+1.8**
SEDI				IAML		13 44 21.0	
	comp=N,91nm,0.9s						
SEDI				IAML		13 44 22.0	
	comp=E,93nm,0.6s						
DURS	**Dursunbey**	**4.77**	**15**	*i* P	**Pn**	**13 43 24.5**	**+1.3**
KKBE	**Karaman, Kazim**	**5.42**	**64**	*i* P	**Pn**	**13 43 34.1**	**+2.0**
KKBE				*i* S	**Sn**	**13 44 31.7**	**-2.5**
KKBE				IAML		13 44 36.0	
	comp=E,25nm,0.8s						
SWA2		**5.86**	**192**	P	**Pn**	**13 43 40.4**	**+2.4**
	baz=195						
SWA2				S	**Sn**	**13 44 43.9**	**-1.1**
	baz=195						
SWA2				AMP		13 45 00.0	
	baz=195						
HMYD	**Mayadein**	**6.19**	**146**	P	**Pn**	**13 43 43.5**	**+1.0**
	baz=147						
HNAT	**Natroun**	**6.24**	**148**	P	**Pn**	**13 43 44.6**	**+1.2**
	baz=149						
RYAN	**Fayoum**	**6.59**	**153**	P	**Pn**	**13 43 48.7**	**+0.6**
	baz=154						
RYAN				AMP		13 45 00.0	
	baz=154						
HSAF	**As Saff**	**6.70**	**142**	P	**Pn**	**13 43 50.3**	**+0.7**
	baz=143						
GLL	**Jalalah**	**6.81**	**141**	P	**Pn**	**13 43 51.5**	**+0.3**
	baz=142						
BRTR	**Keskin Array B**	**7.18**	**47**	Pn	**Pn**	**13 43 58.4**	**+2.0**
	comp=E,0.2nm,0.3s,baz=248,slow=13,SNR=1.3						
SUZ	**Suez**	**7.23**	**134**	P	**Pn**	**13 43 57.7**	**+0.8**
	baz=134						
MMAI	**Mount Meron Ar**	**7.39**	**103**	Pn	**Pn**	**13 43 59.3**	**+0.1**
	comp=E,1.6nm,0.3s,baz=296,slow=10,SNR=3.7						
MMAI				Sn	**Sn**	**13 45 25.1**	**+2.3**
	comp=E,4.7nm,0.3s,baz=305,slow=24,SNR=7.4						
EIL	**Elat**	**8.69**	**125**	Pn	**Pn**	**13 44 17.1**	**+0.1**
	comp=E,0.6nm,0.3s,baz=304,slow=4.3,SNR=1.8						
EIL				Sn	**Sn**	**13 45 50.2**	**-4.4**
	comp=E,2.3nm,0.3s,baz=338,slow=12,SNR=6.9						
HKAT	**Jabal Katrina**	**8.88**	**135**	P	**Pn**	**13 44 20.2**	**+0.4**
	baz=135						
KEST	**Kesra**	**14.29**	**278**	Pn	**P**	**13 45 37.5**	**-3.2**
	comp=E,0.1nm,0

GNBR				*e*Sg	**Sn**	**13 48 42.0**	**-2.1**
DBC	**Dubki**	**1.00**	**290**	*e*Pg	**Pg**	**13 48 30.5**	**-0.3**
DBC				*e*Sg	**Sn**	**13 48 44.9**	**-1.6**
DLMR	**Dylym**	**1.16**	**290**	*e*Pg	**Pg**	**13 48 33.6**	**-0.1**
DLMR				*e*Sg	**Sn**	**13 48 50.0**	**-0.3**
AKT	**Akhty**	**1.25**	**194**	*e*Pg	**Pg**	**13 48 34.7**	**-0.6**
AKT				*e*Sg	**Sb**	**13 48 51.4**	**-0.3**
DVE	**Vedeno**	**1.49**	**281**	*e*Pg	**Pb**	**13 48 39.5**	**0.0**
DVE				*e*Sg	**Sg**	**13 48 59.7**	**+0.4**
GROC	**Groznyy**	**1.78**	**287**	*e*Pg	**Pn**	**13 48 43.4**	**+0.7**
GROC				*e*Sg	**Sb**	**13 49 06.5**	**-0.5**
LACR	**Lac**	**2.82**	**274**	*e*Pn	**Pn**	**13 48 58.3**	**+1.2**
LACR				*e*Sn	**Sn**	**13 49 31.3**	**0.0**
ARNR	**Ardon**	**2.86**	**281**	*e*Pn	**Pn**	**13 48 59.2**	**+1.6**
ARNR				*e*Sn	**Sn**	**13 49 32.4**	**+0.2**
STDR	**Stavd-Durt**	**3.05**	**284**	*e*Pn	**Pn**	**13 49 00.4**	**+0.2**
STDR				*e*Sn	**Sn**	**13 49 35.9**	**-1.0**
ZEI	**Tsey**	**3.11**	**273**	*e*Pn	**Pn**	**13 48 59.3**	**-1.9**
ZEI				*e*Sn	**Sn**	**13 49 36.9**	**-1.7**
DIGR	**Digorskoe uzhe**	**3.35**	**275**	*e*Pn	**Pn**	**13 49 03.5**	**-0.9**
DIGR				*e*Sn	**Sn**	**13 49 45.2**	**+0.7**
ONI	**Oni**	**3.44**	**270**	*e*Pn	**Pn**	**13 49 06.3**	**+0.7**
ONI				*e*Sn	**Sn**	**13 49 46.0**	**-0.7**
GNI	**Garni**	**3.59**	**226**	Pg	**Pb**	**13 49 16.7**	**+1.3**
	2.2nm,0.3s,baz=14,slow=8.3,SNR=3.0						
GNI				Lg	Lg	13 50 00.8	
	2.2nm,0.3s,baz=41,slow=18,SNR=3.8						
GNI	**Garni**	**3.59**	**226**	*e*Pn	**Pn**	**13 49 09.9**	**+2.1**
GNI				*e*Sn	**Sn**	**13 49 53.0**	**+2.5**
KBZ	**Khabaz**	**3.96**	**287**	Pn	**Pn**	**13 49 12.2**	**-0.3**
	0.5nm,0.3s,baz=106,slow=4.6,SNR=10						
KBZ				Sn	**Sn**	**13 49 57.8**	**-1.4**
	0.9nm,0.3s,baz=191,slow=9.9,SNR=3.5						
KBZ				Lg	Lg	13 50 15.0	
	1.4nm,0.3s,baz=13,slow=14,SNR=4.5						
KBZ	**Khabaz**	**3.96**	**287**	*e*Pn	**Pn**	**13 49 13.3**	**+0.8**
KBZ				*e*Sn	**Sn**	**13 49 57.8**	**-1.4**
NEY	**Neytrino**	**4.00**	**280**	*e*Pn	**Pn**	**13 49 13.6**	**+0.2**
NEY				*e*Sn	**Sn**	**13 50 00.1**	**-0.5**
SHA1	**Shidzhatmaz**	**4.13**	**287**	*e*Pn	**Pn**	**13 49 15.7**	**+0.6**
SHA1				*e*Sn	**Sn**	**13 50 01.7**	**-2.1**
KVAR	**Kislovodsk Arr**	**4.16**	**290**	Sn	**Sn**	**13 50 03.9**	**-0.5**
	baz=75,slow=23,SNR=2.7						
KVAR				Lg	Lg	13 50 24.1	
	baz=284,slow=17,SNR=2.6						
KIV	**Kislovodsk**	**4.16**	**290**	*e*Pn	**Pn**	**13 49 14.1**	**-1.4**
KIV				*e*Sn	**Sn**	**13 50 02.8**	**-1.7**
GEYT	**Alibeck**	**8.99**	**119**	LR	LR	13 55 24.7	
	comp=Z,41nm,18.0s,baz=35,slow=48						
AKTO	**Aktyubinsk**	**10.31**	**38**	Pn	**Pn**	**13 50 38.1**	**-1.6**
	0.2nm,0.3s,baz=214,slow=11,SNR=2.4						
AKTO	**Aktyubinsk**	**10.31**	**38**	⇑Pn	**Pn**	**13 50 38.3**	**-1.4**
	1.0nm,0.6s						
AKTO				⇑Sn	Sn	13 52 28.6	-6.9
	1.5nm,0.8s						
AB31	**Akbulak array**	**10.52**	**47**	⇓Pn	**Pn**	**13 50 41.5**	**-1.1**
	0.4nm,0.5s,baz=237,slow=12,SNR=13						
AB31				⇑Sn	Sn	13 52 33.8	-6.9
	0.7nm,0.5s,baz=242,slow=22,SNR=4.5						
MNK	**Minsk**	**17.78**	**319**	*i* P	**Pn**	**13 52 19.4**	**+0.2**
	comp=E,1.0nm,0.6s						
MNK				*i* P	**Pn**	**13 52 19.4**	**+0.2**
	comp=N,18nm,0.8s						
MNK				*i* P	**Pn**	**13 52 19.4**	**+0.2**
	comp=Z,10.0nm,1.0s						
MNK				*i* PP	**PnPn**	**13 52 30.0**	**+0.3**
MNK				*i* PPP	PPP	13 52 37.7	
MNK				*i* S	**Sn**	**13 55 39.1**	**+1.7**
MNK				*i* SS	**SnSn**	**13 55 54.1**	**+3.3**
MNK				*i* SSS	SSS	13 56 06.8	
MNK				*i* PcP	**PcP**	**13 56 56.3**	**-0.1**
MNK				*i* LR	LR	13 58 48.5	
MNK				*i* LRM	MLR	14 00 15.6	
	comp=E,4.0nm,11.4s						
MNK				*i* LRM	MLR	14 00 15.6	
MNK				*i* LRM	MLR	14 00 15.6	
	comp=Z,20nm,12.5s						
FINES	**FINESS Array B**	**22.95**	**332**	P	**P**	**13 53 15.9**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=153,slow=9.4,SNR=2.5						
MKAR	**Makanchi Array**	**24.50**	**69**	P	**P**	**13 53 32.2**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=282,slow=7.2,SNR=1.9						
MKAR				LR	LR	14 05 15.0	
	comp=Z,35nm,20.1s,baz=288,slow=42						

SEA ***18*** *13:49:52.0±1.1,42°.57N±0°.02×124°.45W±0°.05,h19km±3km, ML2.7/12,ML2.5/18(NEIC),Error ellipse: s-maj=5.3km s-min=2.2km az=82.0*
ANF ***18*** *13:49:52.4±0.9,42°.59N×124°.37W,h20km±4km,ML2.6/8, Error ellipse: s-maj=6.9km s-min=2.7km az=73.0, Hypocentre not reviewed by the ISC*
NEIC 18 13:49:51.7±0.9, 42°.55N±0°.02×124°.43W±0°.06, h21km±7km, Error ellipse: s-maj=6.9km s-min=1.7km az=77.0, Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**0.33**	**13**		Pb	13 49 58.5	-0.4
KEBM					Sb	13 50 04.4	+0.7
KEBM	**Edson Butte**	**0.33**	**13**	IAML		13 50 07.4	
	comp=E,1μm,0.6s						
KEBM				IAML		13 50 07.7	
	comp=N,805nm,0.6s						
KBO	**Bosley Butte**	**0.37**	**156**		Pb	13 50 00.1	+0.5
KBO					Sb	13 50 05.7	+0.7
KBO	**Bosley Butte**	**0.37**	**156**	IAML		13 50 10.9	
	comp=E,431nm,0.7s						
KBO				IAML		13 50 10.9	
	comp=N,352nm,0.4s						
K02D	**Willamette Mer**	**0.58**	**76**		Pb	13 50 02.8	-0.6
K02D					Sb	13 50 12.5	+1.2
K02D	**Willamette Mer**	**0.58**	**76**	P		13 50 02.8	
	baz=258,SNR=322						
K02D				S		13 50 11.8	
	baz=258						
J01E	**Myrtle Point**	**0.71**	**31**	P		13 50 05.2	
	baz=213,SNR=72						
J01E				Sn		13 50 17.2	
	baz=213						
L02E	**Cave Junction**	**0.73**	**123**		Pb	13 50 05.9	+0.2
L02E					Sn	13 50 17.2	-0.2
L02E	**Cave Junction**	**0.73**	**123**	P		13 50 05.9	
	baz=304,SNR=194						
L02E				S		13 50 16.8	
	baz=304						
KSXB	**Camp Six Broad**	**0.83**	**150**		Pn	13 50 08.4	0.0
KTRM	**Thompson Ridge**	**1.01**	**129**		Pn	13 50 11.0	+0.1
DBO	**Dodson Butte**	**1.04**	**57**		Pb	13 50 11.1	0.0
HUMO	**Hull Mountain**	**1.09**	**87**		Pn	13 50 11.4	-0.5
HUMO	**Hull Mountain**	**1.09**	**87**		Pn	13 50 11.6	-0.2
HUMO				IAML		13 50 47.5	
	comp=E,56nm,0.5s						
KRMB	**Red Mountain**	**1.10**	**159**	Pn	Pn	13 50 12.1	0.0
I03D	**Drain, OR**	**1.39**	**34**		Pn	13 50 16.3	+0.4
I03D	**Drain, OR**	**1.39**	**34**	P		13 50 16.2	
	baz=216,SNR=5.3						
I03D				S		13 50 33.8	
	baz=216						
YBH	**Yreka Blue Hor**	**1.52**	**122**		Pn	13 50 17.8	0.0
I02D	**Swisshome**	**1.61**	**15**	P		13 50 19.2	
	baz=196,SNR=46						
I02D				S		13 50 38.8	
	baz=196						
L04D	**Klamath Falls**	**1.61**	**101**	Pb		13 50 20.8	
	baz=283,SNR=69						
L04D				S		13 50 39.7	
	baz=283						
M02C	**Callahan**	**1.65**	**134**		Pb	13 50 21.2	-0.3
M02C	**Callahan**	**1.65**	**134**	P		13 50 20.9	
	baz=315,SNR=17						
M02C				S		13 50 41.2	
	baz=315						
K04D	**Chiloquin, OR**	**1.98**	**87**		Pb	13 50 27.7	+0.6
K04D	**Chiloquin, OR**	**1.98**	**87**	Pb		13 50 27.1	
	baz=269						
J05D	**Fort Rock, OR**	**2.46**	**72**	Pb		13 50 35.4	
	baz=254,SNR=5.2						
K05A	**Summer Lake**	**2.62**	**85**		Pn	13 50 32.3	-0.7
K05A				IAML		13 51 50.0	
	comp=E,22nm,4.9s						
K05A				IAML		13 52 14.0	
	comp=N,24nm,4.8s						
H04A	**Detroit Lake**	**2.68**	**37**		Pn	13 50 31.9	-1.8
PINE	**Pine Mountain**	**2.84**	**63**	Pn	Pn	13 50 36.2	+0.2
PINE					IAML	13 51 06.9	
	comp=E,15nm,3.4s						
PINE					IAML	13 51 58.4	
	comp=N,20nm,4.2s						
I07A	**Izee**	**3.91**	**65**	Pn	Pn	13 50 52.5	+1.9

SEA ***18*** *13:50:09.2±2.4,42°.57N±0°.02×124°.48W±0°.07,h21km±8km, ML2.7/14,ML2.5/18(NEIC),Error ellipse: s-maj=7.2km s-min=3.1km az=78.0*
NEIC 18 13:50:08.7±1.8, 42°.564N±0°.010×124°.48W±0°.06, h18km±5km, Error ellipse: s-maj=6.3km s-min=1.4km az=84.0, Near coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**0.33**	**19**		Pb	13 50 16.1	0.0
KEBM					Sb	13 50 22.0	+1.1
KEBM	**Edson Butte**	**0.33**	**19**	IAML		13 50 22.8	
	comp=N,2μm,0.6s						
KEBM				IAML		13 50 25.0	
	comp=E,2μm,0.6s						
KBO	**Bosley Butte**	**0.40**	**152**		Pb	13 50 17.5	+0.2
KBO				IAML		13 50 28.5	
	comp=E,818nm,0.7s						
KBO				IAML		13 50 28.7	
	comp=N,601nm,0.5s						
KBO	**Bosley Butte**	**0.40**	**152**		Sb	13 50 24.0	+0.9
K02D	**Willamette Mer**	**0.61**	**77**		Pg	13 50 20.9	0.0
K02D					Sg	13 50 30.0	+0.8
L02E	**Cave Junction**	**0.77**	**122**		Pg	13 50 23.7	0.0
L02E					Sn	13 50 34.8	-0.8
KSXB	**Camp Six Broad**	**0.86**	**148**		Sn	13 50 38.9	+0.9
HUMO	**Hull Mountain**	**1.12**	**87**		Pn	13 50 27.7	-1.9
HUMO				IAML		13 50 48.3	
	comp=N,90nm,0.8s						
KRMB	**Red Mountain**	**1.12**	**158**		Pb	13 50 29.6	0.0
KRMB				IAML		13 50 52.6	
	comp=E,72nm,1.1s						
YBH	**Yreka Blue Hor**	**1.56**	**122**	Pn	Pn	13 50 35.1	-0.4
KHMM	**Horse Mountain**	**1.78**	**161**	Pn	Pn	13 50 39.1	+0.4
KHMM				IAML		13 51 16.9	
	comp=N,53nm,2.8s						
KHMM				IAML		13 51 20.3	
	comp=E,70nm,2.1s						
H04A	**Detroit Lake**	**2.69**	**37**		Pn	13 50 49.2	-2.0
H04A				IAML		13 51 38.5	
	comp=N,31nm,0.5s						
MOD	**Modoc Plateau**	**3.17**	**101**		Pn	13 50 54.9	-2.9
MOD				IAML		13 52 00.9	
	comp=E,9.1nm,2.0s						
MOD				IAML		13 52 24.4	
	comp=N,8.9nm,4.5s						
I07A	**Izee**	**3.93**	**66**	Pn	Pn	13 51 05.6	-2.7
I07A				IAML		13 52 51.7	
	comp=N,6.5nm,4.5s						
I07A				IAML		13 52 53.3	
	comp=E,7.2nm,4.6s						

MOS ***18*** *14:04:49.9±0.9,55°.99N×113°.96E,h7km,mb4.1/6,Error ellipse: s-maj=8.7km s-min=6.0km az=70.1*
IDC ***18*** *14:04:50.4±0.9,56°.19N×113°.89E,h0km,mb3.8/9, mb1 3.9/14,mb1mx3.6/57,mbtmp3.8/14,ML3.3/4,MS3.3/8, Ms1 3.3/8,ms1mx2.9/47,Error ellipse: s-maj=22.9km s-min=14.6km az=161.0*
BYKL ***18*** *14:04:51.3±0.1,56°.06N×113°.91E,h7km±2km*
ISC 18 14:04:49.6±1.0, 55°.98N±0°.02×113°.81E±0°.02, h1km±7km, n104,σ2°34/173, mb3.9/15, MS3.3/9, 10C-3D, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.20**	**315**	*i*Pg	**Pg**	**14 04 55.3**	**+1.9**
SVKR				Pmax		14 04 55.4	
	16μm,0.3s						
SVKR				*i* Sg	**Sg**	**14 04 58.6**	**+2.7**
SVKR				Smax		14 04 58.9	
	78μm,0.4s						
SVKR	**Severomuysk**	**0.20**	**315**	⇑*i*PG	**Pg**	**14 04 55.2**	**+1.9**
SVKR				*e*S	**Sg**	**14 04 58.1**	**+2.2**
UKT	**Uakit**	**0.50**	**192**	⇑*i*Pg	**Pb**	**14 05 01.7**	**+0.4**
UKT				Pmax		14 05 06.9	
	506nm,0.6s						
UKT				*e*Sg	**Sb**	**14 05 09.5**	**+0.3**
UKT				Smax		14 05 11.7	
	5μm,0.6s						
UKT	**Uakit**	**0.50**	**192**	⇑*i*PG	**Pb**	**14 05 01.7**	**+0.4**
UKT				*e*		14 05 09.6	
UKT				pmax	pmax		
	comp=Z,415nm,0.3s						
UKT				smax	smax		
	comp=E,5μm,0.5s						
NLYR	**Nelyaty**	**1.18**	**63**	⇑*i*Pg	**Pb**	**14 05 11.3**	**-1.4**
NLYR				*e*Pb	**Pn**	**14 05 13.4**	**+0.2**
NLYR				max		14 05 13.6	
	comp=E,2μm,0.4s						
NLYR				*e*Sg	**Sb**	**14 05 26.0**	**-2.5**
NLYR				*e*Sb	**Sn**	**14 05 30.0**	**+0.1**
NLYR				max		14 05 34.0	
	comp=E,4μm,0.9s						
NLYR	**Nelyaty**	**1.18**	**63**	⇑*i*PG	**Pb**	**14 05 11.1**	**-1.6**
NLYR				*e*		14 05 25.9	
NLYR				pmax	pmax		
	comp=Z,2μm,0.6s						
NLYR				smax	smax		
	comp=N,4μm,0.9s						
YOA	**Uoyan**	**1.18**	**278**	*e*Pg	**Pg**	**14 05 13.6**	**+1.4**
YOA				Pmax		14 05 18.4	
	comp=N,2μm,0.4s						
YOA				*e*Sg	**Sn**	**14 05 29.9**	**0.0**
YOA				Smax		14 05 49.6	
	comp=N,12μm,0.6s						
YOA	**Uoyan**	**1.18**	**278**	*e*PG	**Pg**	**14 05 13.6**	**+1.4**
YOA				*e*		14 05 30.2	
YOA				pmax	pmax		
	comp=Z,494nm,0.2s						
YOA				smax	smax		
	comp=N,12μm,0.5s						
KMO	**Kumora**	**1.47**	**267**	⇓*i*Pg	**Pg**	**14 05 18.6**	**+0.8**
KMO				*e*		14 05 20.1	
KMO				max		14 05 21.4	
	comp=N,2μm,0.5s						
KMO				*e*Sg	**Sg**	**14 05 38.4**	**+1.6**
KMO				*e*		14 05 41.6	
KMO				max		14 05 42.3	
	comp=N,6μm,1.2s						
KMO	**Kumora**	**1.47**	**267**	⇓*i*PG	**Pg**	**14 05 18.5**	**+0.8**
KMO				*e*		14 05 38.3	
KMO				pmax	pmax		
	comp=Z,804nm,0.4s						
KMO				smax	smax		
	comp=N,6μm,1.0s						
BOD	**Bodaibo**	**1.85**	**3**	⇑*i*Pg	**Pb**	**14 05 22.9**	**-1.2**
BOD				Pmax		14 05 23.4	
	comp=N,649nm,0.5s						
BOD				*e*		14 05 25.5	
BOD				*e*		14 05 30.8	
BOD				*e*Sg	**Sn**	**14 05 45.7**	**-0.6**
BOD				Smax		14 05 48.3	
	comp=N,3μm,0.8s						
BOD	**Bodaibo**	**1.85**	**3**	⇑*i*PN	**Pb**	**14 05 22.9**	**-1.2**
BOD				*e*		14 05 46.7	
BOD				pmax	pmax		
	comp=Z,652nm,0.3s						
BOD				smax	smax		
	comp=E,3μm,1.2s						
YLYR	**Ulyunkhan**	**1.87**	**235**	*i*Pn	**Pb**	**14 05 25.7**	**+1.1**
YLYR				*e*Pg	**Pg**	**14 05 26.2**	**+0.8**
YLYR				Pmax		14 05 28.9	
	comp=E,372nm,0.5s						
YLYR				*e*Sg	**Sg**	**14 05 52.6**	**+2.9**
YLYR				Smax		14 05 54.7	
	comp=E,2μm,0.4s						
YLYR	**Ulyunkhan**	**1.87**	**235**	*e*PN	**Pg**	**14 05 25.9**	**+0.5**
YLYR				*e*		14 05 27.5	
YLYR				*e*S	**Sg**	**14 05 51.0**	**+1.3**
YLYR				*e*		14 05 52.7	
YLYR				pmax	pmax		
	comp=Z,7μm,0.2s						
YLYR				smax	smax		
	comp=N,26μm,0.1s						
NIZ	**Nizh Angarsk**	**2.41**	**267**	⇑*i*Pn	**Pb**	**14 05 32.6**	**-1.2**
NIZ				*e*Pg	**Pg**	**14 05 35.7**	**-0.1**
NIZ				Pmax		14 05 38.7	
	comp=N,181nm,0.9s						
NIZ				*e*Sn	**Sb**	**14 06 02.4**	**-1.6**
NIZ				*e*Sg	**Sg**	**14 06 08.5**	**+1.4**
NIZ				Smax		14 06 09.7	
	comp=N,2μm,0.8s						
NIZ	**Nizh Angarsk**	**2.41**	**267**	*e*PN	**Pb**	**14 05 32.6**	**-1.2**
NIZ				*e*		14 05 36.1	
NIZ				*e*S	**Sb**	**14 06 03.2**	**-0.8**
NIZ				*i*		14 06 08.5	
NIZ				pmax	pmax		
	comp=Z,128nm,0.5s						
NIZ				smax	smax		
	comp=N,2μm,0.9s						
CRS	**Chara**	**2.64**	**68**	*e*Pn	**Pn**	**14 05 33.9**	**+0.5**
CRS				*e*Pg	**Pb**	**14 05 38.2**	**+0.5**
CRS				Pmax		14 05 38.7	
	comp=N,2μm,1.0s						
CRS				*e*Sg	**Sb**	**14 06 11.6**	**+0.9**
CRS				Smax		14 06 15.4	
	comp=N,1μm,1.3s						
CRS	**Chara**	**2.64**	**68**	*e*PN	**Pn**	**14 05 34.1**	**+0.7**
CRS				*e*		14 05 37.9	
CRS				*e*		14 06 11.2	
CRS				pmax	pmax		
	comp=Z,1μm,0.5s						
CRS				smax	smax		
	comp=E,1μm,1.0s						
SYVR	**Suvo**	**3.21**	**225**	*e*Pn	**Pn**	**14 05 43.8**	**+2.7**
SYVR				*e*Pg	**Pg**	**14 05 50.6**	**-0.4**
SYVR				Pmax		14 05 54.7	
	comp=E,184nm,0.9s						
SYVR				*e*		14 06 16.6	
SYVR				*e*Sg	**Sg**	**14 06 33.3**	**+0.8**
SYVR				*e*		14 06 42.6	
SYVR				max		14 06 45.0	
	comp=E,956nm,1.7s						
SYVR	**Suvo**	**3.21**	**225**	*e*PN	**Pb**	**14 05 47.3**	**0.0**
SYVR				*e*		14 06 33.2	
SYVR				pmax	pmax		
	comp=Z,187nm,0.7s						
SYVR				smax	smax		
	comp=N,1μm,0.8s						
KHNR	**Khani**	**3.55**	**72**	*e*Pn	**Pn**	**14 05 45.9**	**0.0**
KHNR				*e*Pg	**Pb**	**14 05 53.2**	**0.0**
KHNR				*e*PgPg	**PbPb**	**14 05 55.2**	**-1.2**
KHNR				*e*Sn	**Sn**	**14 06 26.6**	**-1.9**
KHNR				*e*Sg	**Sb**	**14 06 38.3**	**+1.5**
TUP	**Tupik**	**3.85**	**111**	⇓*i*Pn	**Pn**	**14 05 50.8**	**+0.8**
TUP				*e*		14 05 52.4	
TUP				*e*Pg	**Pb**	**14 06 00.2**	**+1.9**
TUP				Pmax		14 06 03.7	
	comp=N,125nm,0.6s						
TUP				*e*		14 06 24.7	
TUP				*e*Sn	**Sn**	**14 06 34.6**	**-1.3**
TUP				*e*Sg	**Sg**	**14 06 49.9**	**-3.4**
TUP				*e*		14 06 55.2	
TUP				max		14 06 55.8	
	comp=N,1μm,0.7s						
TUP	**Tupik**	**3.85**	**111**	*e*PN	**Pn**	**14 05 50.8**	**+0.8**
TUP				*e*		14 06 00.2	
TUP				*e*S	**Sn**	**14 06 35.7**	**-0.2**
TUP				*e*		14 06 49.8	
TUP				pmax	pmax		
	comp=Z,117nm,0.6s						
TUP				smax	smax		
	comp=E,1μm,0.8s						
CIT	**Chita**	**3.97**	**182**	*e*Pg	**Pg**	**14 06 04.5**	**-1.2**
CIT				Pmax		14 06 05.2	
	comp=E,112nm,0.3s						
CIT				*e*Sg	**Sg**	**14 06 56.9**	**-0.2**
CIT				Smax		14 06 59.8	
	comp=E,719nm,0.8s						
CIT	**Chita**	**3.97**	**182**	*e*PN	**Pn**	**14 05 54.5**	**+2.9**
CIT				*e*		14 06 03.5	
CIT				*e*S	**Sn**	**14 06 41.4**	**+2.6**
CIT				*e*		14 06 55.9	
CIT				pmax	pmax		
	comp=Z,80nm,1.0s						
CIT				smax	smax		
	comp=E,579nm,1.4s						
MXMB	**Maximikha**	**4.01**	**229**	*e*Pn	**Pn**	**14 05 54.7**	**+2.6**
MXMB				*e*		14 06 02.5	
MXMB				*e*Pg	**Pg**	**14 06 05.5**	**-0.9**
MXMB				*e*		14 06 35.4	
MXMB				*e*Sg	**Sg**	**14 06 58.3**	**0.0**
OGRR	**Ongureny**	**4.29**	**239**	*e*Pn	**Pn**	**14 05 59.4**	**+3.4**
OGRR				*e*Pg	**Pg**	**14 06 10.3**	**-1.5**
OGRR				Pmax		14 06 14.0	
	comp=E,71nm,0.6s						
OGRR				*e*		14 06 34.9	
OGRR				*e*Sg	**Sg**	**14 07 06.5**	**-0.8**
OGRR				Smax		14 07 38.9	
	comp=E,273nm,1.0s						
OGRR	**Ongureny**	**4.29**	**239**	*e*PN	**Pn**	**14 05 58.8**	**+2.8**
OGRR				*e*		14 06 10.3	
OGRR				*e*		14 07 06.5	
OGRR				pmax	pmax		
	comp=Z,82nm,1.5s						
OGRR				smax	smax		
	comp=N,273nm,1.0s						
YKLR	**Yuktali**	**4.42**	**79**	*e*Pn	**Pn**	**14 05 58.0**	**+0.3**
YKLR				*e*		14 06 06.6	
YKLR				*e*Pg	**Pb**	**14 06 08.7**	**+0.8**
YKLR				*e*		14 06 33.0	
YKLR				*e*Sg	**Sb**	**14 07 05.8**	**+4.2**
KELR	**Kotokel**	**4.65**	**228**	*e*Pg	**Pg**	**14 06 16.5**	**-2.2**
KELR				*e*Sg	**Sg**	**14 07 18.0**	**-0.9**
ZRHB	**Zarechye**	**5.20**	**231**	*e*Pn	**Pn**	**14 06 11.6**	**+3.2**
ZRHB				*e*Pg	**Pg**	**14 06 26.1**	**-3.0**
ZRHB				Pmax		14 06 36.6	
	comp=N,87nm,0.9s						
ZRHB				*e*		14 06 58.8	
ZRHB				*e*Sg	**Sg**	**14 07 35.8**	**-0.6**
ZRHB				Smax		14 08 34.0	
	comp=N,913nm,1.4s						
TRG	**Tyrgan**	**5.42**	**237**	*e*Pn	**Pn**	**14 06 14.5**	**+2.9**
TRG				*e*		14 06 22.5	
TRG				*e*Pg	**Pg**	**14 06 30.8**	**-2.7**
TRG				*e*		14 06 34.5	
TRG				max		14 06 37.6	
	comp=N,31nm,1.3s						
TRG				*e*Sn	**Sn**	**14 07 14.8**	**+0.2**
TRG				*e*		14 07 37.2	
TRG				*e*Sg	**Sg**	**14 07 42.3**	**-1.4**
TRG				Smax		14 07 44.4	
	comp=N,156nm,0.9s						
TRG	**Tyrgan**	**5.42**	**237**	*e*PN	**Pn**	**14 06 11.9**	**+0.3**
TRG				*e*		14 06 27.3	
TRG				*e*S	**Sn**	**14 07 12.2**	**-2.4**
UUDB	**Ulan-Yde**	**5.49**	**224**	*e*Pn	**Pn**	**14 06 15.8**	**+3.3**
UUDB				*e*Pg	**Pg**	**14 06 32.2**	**-2.6**
UUDB				*e*		14 06 34.9	
UUDB				max		14 06 39.1	
	comp=N,60nm,0.9s						
UUDB				*e*Sg	**Sg**	**14 07 44.3**	**-1.6**
UUDB				Smax		14 07 50.0	
	comp=N,783nm,1.5s						
FFNB	**Fofonovo**	**5.72**	**229**	*e*Pg	**Pg**	**14 06 35.9**	**-3.3**
FFNB				*e*Sn	**Sn**	**14 07 23.7**	**+1.7**
FFNB				*e*Sg	**Sg**	**14 07 51.7**	**-1.6**
KAB	**Kabansk**	**5.77**	**230**	*e*Sg	**Sg**	**14 07 52.9**	**-1.9**
KAB				Smax		14 08 15.8	
	comp=N,998nm,1.1s						
STDB	**Stepnoy Dvoret**	**5.81**	**232**	*e*Pn	**Pn**	**14 06 20.6**	**+3.7**
STDB				*e*		14 06 32.4	
STDB				*e*Pg	**Pg**	**14 06 37.8**	**-3.1**
STDB				*e*Sg	**Sg**	**14 07 54.4**	**-1.7**
HRMR	**Khuramsha**	**5.96**	**226**	*e

CLNS	**Chul'man**	**6.21**	**77**	*e*Pn		**Pn**	**14 06 22.5**	**+0.1**
CLNS				*e*			14 06 31.1	
CLNS				*e*Pg		**Pb**	**14 06 42.3**	**+3.7**
CLNS				*e*Sn		**Sn**	**14 07 31.0**	**-3.0**
CLNS				*e*			14 07 46.8	
CLNS				*e*Sg		**Sg**	**14 08 01.7**	**-7.3**
BGT	**Bolshoye Golou**	**6.33**	**235**	*e*Pg		Pg	14 06 46.8	-4.0
BGT				*e*Sn		**Sn**	**14 07 37.6**	**+0.8**
BGT				*e*Sg		**Sg**	**14 08 10.4**	**-2.3**
BGT				Smax			14 08 21.6	
	comp=N,133nm,1.2s							
KPC	**Khapcheranga**	**6.35**	**188**	*e*Pn		**Pn**	**14 06 25.7**	**+1.4**
KPC				*e*Pg		Pg	14 06 47.0	-4.2
KPC				Pmax			14 06 50.2	
	comp=N,18nm,0.8s							
KPC				*e*Sn		**Sn**	**14 07 38.0**	**+0.6**
KPC				*e*Sg		**Sg**	**14 08 10.5**	**-2.8**
KPC				Smax			14 08 20.3	
	comp=N,395nm,1.8s							
KPC	**Khapcheranga**	**6.35**	**188**	*e*PN		**Pn**	**14 06 25.5**	**+1.2**
KPC				*e*			14 06 45.2	
KPC				*e*			14 08 09.4	
KPC				pmax	pmax			
	comp=Z,18nm,0.5s							
KPC				smax	smax			
	comp=E,394nm,1.8s							
LSTR	**Listvyanka**	**6.71**	**236**	*e*Pn		**Pn**	**14 06 32.0**	**+2.8**
LSTR				*e*Pg		Pg	14 06 54.0	-4.1
LSTR				Pmax			14 07 03.8	
	comp=E,14nm,1.2s							
LSTR				*e*Sn		**Sn**	**14 07 46.7**	**+0.5**
LSTR				*e*			14 08 05.9	
LSTR				*e*Sg		**Sg**	**14 08 21.8**	**-3.2**
LSTR				Smax			14 08 29.3	
	comp=E,192nm,1.6s							
IRK	**Irkutsk**	**6.74**	**240**	*e*Sg		**Sg**	**14 08 23.2**	**-2.7**
IRK				Smax			14 08 25.9	
	comp=E,434nm,1.0s							
IRK	**Irkutsk**	**6.74**	**240**	*e*PG		Pb	14 06 53.2	+5.7
IRK				*e*			14 08 21.6	
IRK				pmax	pmax			
	comp=Z,62nm,0.2s							
IRK				smax	smax			
	comp=E,434nm,1.0s							
IVK	**Ivanovka**	**6.95**	**237**	*e*Pn		**Pn**	**14 06 35.7**	**+3.2**
IVK				*e*Pg		Pg	14 06 58.3	-4.4
IVK				Pmax			14 07 23.5	
	comp=E,20nm,1.2s							
IVK				*e*Sn		**Sn**	**14 07 51.4**	**-0.8**
IVK				*e*Sg		**Sg**	**14 08 28.6**	**-4.1**
IVK				Smax			14 08 47.1	
	comp=E,111nm,1.2s							
TLY	**Talaya**	**7.39**	**239**	Pn		**Pn**	**14 06 41.2**	**+2.6**
	comp=E,0.0nm,0.3s,baz=75,slow=16,SNR=2.0							
TLY				Lg	Lg		14 08 42.2	
	comp=E,0.1nm,0.3s,baz=279,slow=22,SNR=11							
TLY				LR	LR		14 09 29.4	
	comp=E,116nm,18.5s,baz=304,slow=37							
TLY	**Talaya**	**7.39**	**239**	*e*Pn		**Pn**	**14 06 41.8**	**+3.2**
TLY				*e*			14 06 53.0	
TLY				*e*Pg		Pb	14 07 05.6	+7.0
TLY				Pmax			14 07 08.0	
	comp=E,11nm,0.8s							
TLY				*e*Sn		**Sn**	**14 08 03.0**	**-0.1**
TLY				*e*			14 08 22.5	
TLY				*e*Sg		**Sg**	**14 08 42.0**	**-4.9**
TLY				Smax			14 08 56.9	
	comp=E,67nm,1.1s							
TLY	**Talaya**	**7.39**	**239**	*i* PN		**Pn**	**14 06 41.1**	**+2.5**
HIA	**Hailar**	**7.63**	**149**	*i* PN		**Pn**	**14 06 44.4**	**+2.5**
ARS	**Arshan**	**7.85**	**244**	*e*Pn		**Pn**	**14 06 48.0**	**+3.1**
ARS				*e*			14 06 58.5	
ARS				*e*Pg		Pb	14 07 13.4	+7.0
ARS				Pmax			14 07 17.3	
	comp=E,25nm,0.9s							
ARS				*e*Sn		**Sn**	**14 08 13.8**	**-0.5**
ARS				*e*Sg		**Sg**	**14 08 56.6**	**-4.9**
ARS				Smax			14 09 04.7	
	comp=E,444nm,0.9s							
ZEA	**Zeya**	**8.08**	**101**	*e*PN		**Pn**	**14 06 49.5**	**+1.6**
ZEA				*e*			14 08 13.6	
ZEA				pmax	pmax			
	comp=Z,10.0nm,0.8s							
ZEA				smax	smax			
	comp=N,10.0nm,0.5s							
ZEA				smax	smax			
	comp=E,20nm,0.6s							
ZEA				smax	smax			
	comp=Z,10.0nm,0.6s							
ZEA				MLR	MLR			
	comp=E,300nm,5.0s							
ZEA				MLR	MLR			
	comp=Z,200nm,6.0s							
ZAK	**Zakamensk**	**8.45**	**233**	*e*Sn		**Sn**	**14 08 29.2**	**+0.2**
ZAK				*e*Sg		**Sg**	**14 09 16.0**	**-4.6**
ZAK				Smax			14 09 26.5	
	comp=Z,100nm,1.5s							
ZAK	**Zakamensk**	**8.45**	**233**	*e*PN		Pn	14 06 59.5	+6.4
ZAK				*e*			14 07 26.4	
ZAK				*e*			14 09 14.0	
ZAK				pmax	pmax			
	comp=Z,9.0nm,0.4s							
ZAK				smax	smax			
	comp=N,100nm,1.2s							
MOY	**Mondy**	**8.72**	**246**	*e*Pn		**Pn**	**14 07 00.1**	**+3.2**
MOY				*e*			14 07 10.1	
MOY				*e*			14 07 20.3	
MOY				*e*Pg		Pg	14 07 30.2	-6.3
MOY				Pmax			14 07 47.7	
	comp=N,23nm,1.4s							
MOY				*e*Sn		**Sn**	**14 08 35.1**	**-0.7**
MOY				*e*			14 08 55.2	
MOY				*e*Sg		**Sg**	**14 09 24.1**	**-5.3**
MOY				Smax			14 09 28.3	
	comp=N,211nm,1.3s							
MOY	**Mondy**	**8.72**	**246**	*e*PN		**Pn**	**14 07 00.0**	**+3.2**
MOY				*e*			14 07 30.4	
MOY				*e*			14 09 20.4	
MOY				pmax	pmax			
	comp=Z,9.0nm,0.8s							
MOY				smax	smax			
	comp=N,85nm,1.1s							
ORL	**Orlik**	**8.89**	**253**	*e*Pn		**Pn**	**14 07 01.5**	**+2.3**
ORL				*e*			14 07 11.1	
ORL				max			14 07 37.0	
	comp=N,20nm,1.6s							
ORL				*e*Sn		**Sn**	**14 08 38.7**	**-1.2**
ORL				*e*Sg		**Sg**	**14 09 28.8**	**-5.9**
ORL				Smax			14 09 34.5	
	comp=N,124nm,1.4s							
ORL	**Orlik**	**8.89**	**253**	*e*PN		**Pn**	**14 07 01.1**	**+1.9**
ORL				*e*			14 07 33.3	
ORL				*e*S		**Sn**	**14 08 40.9**	**+1.0**
ORL				*e*			14 09 28.2	
ORL				pmax	pmax			
	comp=Z,29nm,1.2s							
ORL				smax	smax			
	comp=N,124nm,1.7s							
ULN	**Ulaanbaatar**	**9.13**	**210**	*i* P		**Pn**	**14 07 04.8**	**+2.2**
SONM	**Songino Array**	**9.35**	**212**	Pn		**Pn**	**14 07 08.3**	**+2.8**
	comp=N,0.4nm,0.3s,baz=23,slow=13,SNR=9.3							
SONM				Sn		**Sn**	**14 08 53.9**	**+2.6**
	comp=N,0.5nm,0.3s,baz=18,slow=20,SNR=3.5							
SONM				Lg	Lg		14 09 46.2	
	comp=N,3.2nm,0.3s,baz=19,slow=24,SNR=15							
YAK	**Yakutsk**	**10.17**	**47**	Lg	Lg		14 10 01.2	
	comp=N,0.0nm,0.3s,baz=316,slow=21,SNR=12							
YAK	**Yakutsk**	**10.17**	**47**	*i* P		**Pn**	**14 07 16.5**	**0.0**
YAK				pmax	pmax			
	comp=Z,8.0nm,0.4s							
KLR	**Kul'dur**	**12.81**	**114**	Pn		**Pn**	**14 07 53.8**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=314,slow=15,SNR=12							
KLR				Sn		**Sn**	**14 10 11.1**	**-4.7**
	comp=Z,0.3nm,0.3s,baz=334,slow=7.6,SNR=4.3							
KLR				Lg	Lg		14 11 31.4	
	comp=Z,0.6nm,0.3s,baz=34,slow=22,SNR=7.1							
KLR	**Kul'dur**	**12.81**	**114**	*i* P		**Pn**	**14 07 53.4**	**+0.7**
KLR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
USRK	**Ussuriysk Ar.**	**16.52**	**128**	Lg	Lg		14 13 28.5	
	baz=337,slow=29,SNR=5.7							
ZALV	**Zalesovo Beam**	**16.71**	**275**	Pn		**Pn**	**14 08 44.2**	**-0.6**
	baz=46,slow=10,SNR=1.7							
ZALV				Lg	Lg		14 13 40.2	
	comp=Z,0.1nm,0.3s,baz=27,slow=27,SNR=1.6							
ZALV	**Zalesovo Beam**	**16.71**	**275**	*i* P		**P**	**14 08 50.2**	**+3.0**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s							
TIXI	**Tiksi**	**16.98**	**16**	Pn		**Pn**	**14 08 42.8**	**-5.2**
	comp=Z,1.0nm,0.3s,baz=196,slow=9.7,SNR=7.5							
TIXI				Sn		Sn	14 11 42.0	-15
	comp=Z,0.6nm,0.3s,baz=297,slow=4.4,SNR=3.8							
TIXI				Lg		Lg	14 13 42.2	
	comp=Z,0.3nm,0.3s,baz=321,slow=22,SNR=1.8							
TIXI	**Tiksi**	**16.98**	**16**	*i* P		**Pn**	**14 08 45.2**	**-2.7**
DGZ	**Jazzator, Alta**	**17.06**	**259**	*i* P		**P**	**14 08 52.3**	**+1.1**
DGZ				pmax	pmax			
	comp=Z,7.0nm,1.9s							
NRIK	**Noril'sk**	**17.79**	**329**	P		**Pn**	**14 08 55.4**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=140,slow=12,SNR=2.3							
NRIK				S		Sn	14 12 03.1	-14
	comp=Z,0.4nm,0.3s,baz=12,slow=21,SNR=6.8							
NRIK	**Noril'sk**	**17.79**	**329**	*i* P		**P**	**14 08 59.7**	**+0.7**
NRIK				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MA2	**Magadan**	**19.86**	**64**	*i* P		**Pn**	**14 09 22.4**	**-0.9**
MA2				pmax	pmax			
	comp=Z,2.0nm,1.1s							
SEY	**Seymchan**	**20.53**	**54**	P		**P**	**14 09 28.8**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=274,slow=8.9,SNR=9.8							
SEY				Lg		Lg	14 15 27.3	
	comp=Z,3.2nm,1.1s,baz=292,slow=8.4,SNR=6.3							
SEY	**Seymchan**	**20.53**	**54**	*i* P		Pn	14 09 29.8	-1.3
KURK	**Kurchatov**	**21.49**	**271**	P		**P**	**14 09 42.9**	**+3.5**
MK31	**Makanchi Array**	**21.54**	**258**	*i* P		**P**	**14 09 42.5**	**+2.5**
MKAR	**Makanchi Array**	**21.54**	**258**	P		**P**	**14 09 42.2**	**+2.2**
	comp=Z,2.4nm,0.6s,baz=57,slow=9.4,SNR=20							
MKAR				LR		LR	14 18 21.0	
	comp=Z,54nm,18.3s,baz=16,slow=38							
MKAR	**Makanchi Array**	**21.54**	**258**	*i* P		**P**	**14 09 44.5**	**+4.5**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KURBB	**Kurchatov Arra**	**21.59**	**270**	P		**P**	**14 09 42.9**	**+2.4**
	comp=Z,3.7nm,0.7s,baz=63,slow=12,SNR=16							
BVAR	**Borovoye Array**	**25.07**	**282**	P		**P**	**14 10 16.9**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=115,slow=14,SNR=9.8							
BRVK	**Borovoye**	**25.12**	**282**	*i* P		**P**	**14 10 18.6**	**+2.9**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
PETK	**Petropavlovsk-**	**25.30**	**78**	P		**P**	**14 10 18.0**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=325,slow=2.3,SNR=4.2							
PETK	**Petropavlovsk-**	**25.30**	**78**	P		**P**	**14 10 18.0**	**+0.7**
JNU	**Nakatsue**	**25.75**	**145**	LR		LR	14 20 16.3	
	comp=Z,293nm,19.6s,baz=218,slow=36							
BILL	**Bilibino**	**26.47**	**42**	*i* P		**P**	**14 10 29.2**	**+1.4**
BILL				pmax	pmax			
	comp=Z,2.0nm,1.3s							
AAK	**Ala-Archa**	**28.47**	**259**	LR		LR	14 22 02.3	
	comp=Z,41nm,18.7s,baz=350,slow=36							
ARU	**Arti**	**30.03**	**294**	LR		LR	14 25 04.5	
	comp=Z,32nm,18.9s,baz=276,slow=40							
ARU	**Arti**	**30.03**	**294**	*i* P		**P**	**14 11 02.7**	**+3.0**
ARU				pmax	pmax			
	comp=Z,2.0nm,1.2s							
JCJ	**Chichijima**	**35.36**	**133**	LR		LR	14 24 37.4	
	comp=Z,29nm,21.9s,baz=215,slow=34							
OBN	**Obninsk**	**41.56**	**302**	*i* P		**P**	**14 12 40.4**	**+2.2**
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
FINES	**FINESS Array B**	**42.60**	**315**	P		**P**	**14 12 46.8**	**0.0**
	comp=Z,1.1nm,0.7s,baz=54,slow=7.8,SNR=6.6							
FINES	**FINESS Array B**	**42.60**	**315**	*i* P		**P**	**14 12 50.2**	**+3.5**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.9s							
ILAR	**Eielson Array**	**44.90**	**37**	P		**P**	**14 13 03.9**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=302,slow=4.4,SNR=4.5							
KIV	**Kislovodsk**	**45.30**	**286**	*e*P		**P**	**14 13 11.2**	**+2.5**
KIV				pmax	pmax			
	comp=Z,17nm,1.0s							
KIV				MLR	MLR			
	comp=Z,72nm,16.0s							
MNK	**Minsk**	**45.96**	**306**	*i* P		**P**	**14 13 14.8**	**+1.1**
	comp=E,2.0nm,0.7s							
MNK				*i* P		**P**	**14 13 14.8**	**+1.1**
	comp=N,13nm,0.8s							
MNK				*i* P		**P**	**14 13 14.8**	**+1.1**
	comp=Z,7.0nm,0.7s							
MNK				*i* PP		**PcP**	**14 14 44.1**	**-6.3**
MNK				*i* PPP		PPP	14 15 36.6	
MNK				*i* PcS		PcS	14 18 34.8	-10
MNK				*i* S		**S**	**14 20 00.2**	**+1.2**
MNK				*i* SS		**SS**	**14 23 21.1**	**-2.0**
MNK				*i* SSS		SSS	14 24 09.9	
MNK				*i* LR		LR	14 29 50.0	
MNK				*i* LRM		MLR	14 35 22.5	
	comp=N,255nm,24.4s							
MNK				*i* LRM		MLR	14 35 26.1	
	comp=Z,91nm,20.8s							
MNK				*i* LRM		MLR	14 35 29.7	
	comp=E,3.0nm,12.7s							
DAV	**Davao City (W)**	**49.67**	**165**	LR		LR	14 36 25.1	
	comp=E,27nm,18.5s,baz=262,slow=38							
BRTR	**Keskin Array B**	**53.09**	**288**	LR		LR	14 40 54.5	
	comp=E,34nm,19.4s,baz=88,slow=41							
YKA	**Yellowknife Ar**	**55.99**	**25**	P		**P**	**14 14 25.6**	**-3.4**
	comp=E,0.2nm,0.7s,baz=334,slow=6.7,SNR=5.4							
YKA	**Yellowknife Ar**	**55.99**	**25**	*i* P		**P**	**14 14 29.5**	**+0.5**
ESDC	**Sonseca Array**	**71.11**	**314**	P		**P**	**14 16 09.3**	**0.0**
	comp=E,0.8nm,0.8s,baz=23,slow=5.7,SNR=6.0							
WRA	**Warramunga Arr**	**77.60**	**160**	P		**P**	**14 16 49.0**	**+1.8**
	comp=E,1.0nm,0.7s,baz=353,slow=6.7,SNR=2.6							
WRA	**Warramunga Arr**	**77.60**	**160**	P		**P**	**14 16 49.0**	**+1.8**

*IDC **18** 14:05:36.1±2.5,29.59N×130.72E,h38km±8km,mb3.5/4, mb1 3.5/8,mb1mx3.2/53,mbtmp3.5/8,ML3.1/4,MS2.9/3, Ms1 3.0/3,ms1mx2.6/34,Error ellipse: s-maj=48.9km s-min=21.5km az=116.0*

*JMA **18** 14:05:36.3±0.1,29.66N×130.82E,h45km±1km,M3.4*

ISC 18 14:05:36.1±1.0,29.63N±0.05×130.81E±0.08,h38km,n25, σ0s95/36,mb4.0/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JYAK	**Yakushimahirau**	**0.66**	**337**	P		**Pn**	**14 05 48.9**	**-0.1**
JYAK				*e*S		**Sn**	**14 05 57.9**	**-0.2**
JMTN	**Minamitane**	**0.77**	**6**	P		**Pn**	**14 05 50.4**	**0.0**
JMTN				*e*S		**Sn**	**14 06 00.5**	**-0.2**
JNN	**Nakanoshima**	**0.84**	**285**	P		**Pn**	**14 05 52.0**	**+0.6**
JNN				*e*S		**Sn**	**14 06 03.2**	**+0.6**
JKC	**Kuchinoerabu**	**0.98**	**327**	P		**Pn**	**14 05 54.1**	**+0.8**
JKC				*e*S		**Sn**	**14 06 06.1**	**+0.1**
JTN	**Tanegashima 3**	**1.03**	**8**	P		**Pn**	**14 05 54.1**	**+0.1**
JTN				*e*S		**Sn**	**14 06 06.8**	**-0.4**
JTAJ	**Takarajima**	**1.48**	**252**	P		**Pn**	**14 06 01.2**	**+1.0**
JTAJ				*e*S		**Sn**	**14 06 19.3**	**+1.0**
JZK	**Kikaishima**	**1.50**	**209**	*e*S		**Sn**	**14 06 20.5**	**+1.6**
JTSR	**Tashiro 2**	**1.53**	**4**	P		**Pn**	**14 06 01.6**	**+0.7**
JTSR				*e*S		**Sn**	**14 06 20.1**	**+0.5**
JAM	**Amami Oshima**	**1.61**	**221**	P		**Pn**	**14 06 02.8**	**+0.8**
JAM				*e*S		**Sn**	**14 06 22.6**	**+1.1**
JSU	**Suzuyama**	**1.89**	**351**	P		**Pn**	**14 06 06.0**	**+0.1**
JSU				*e*S		**Sn**	**14 06 29.1**	**+0.6**
JNAR	**Kushima--Naru**	**1.93**	**12**	P		**Pn**	**14 06 07.3**	**+0.9**
JNAR				*e*S		**Sn**	**14 06 30.1**	**+0.7**
JNKG	**Nichinankitago**	**2.08**	**13**	P		**Pn**	**14 06 09.4**	**+1.0**
JNKG				*e*S		**Sn**	**14 06 33.4**	**+0.3**
JNU	**Nakatsue**	**3.48**	**1**	Pn		**Pn**	**14 06 29.0**	**+1.3**
	3.4nm,0.3s,baz=192,slow=9.8,SNR=31							
JNU				Sn		**Sn**	**14 07 09.2**	**+1.5**
	2.4nm,0.3s,baz=37,slow=18,SNR=2.8							
JOW	**Kunigami**	**3.58**	**219**	Pn		**Pn**	**14 06 29.0**	**0.0**
	4.6nm,0.3s,baz=125,slow=21,SNR=34							
JOW				Sn		**Sn**	**14 07 08.2**	**-1.8**
	8.3nm,0.3s,baz=37,slow=29,SNR=7.0							
KSRS	**Korea Array**	**8.16**	**344**	Pn		**Pn**	**14 07 34.2**	**+2.2**
	0.1nm,0.3s,baz=160,slow=14,SNR=2.0							
KSRS				Lg		LR	14 11 02.0	
	comp=Z,93nm,18.3s,baz=176,slow=40							
MJAR	**Matsushiro Arr**	**9.27**	**40**	Pn		**Pn**	**14 07 49.0**	**+1.8**
	0.1nm,0.3s,baz=245,slow=14,SNR=6.0							
USRK	**Ussuriysk Ar.**	**14.57**	**3**	LR		LR	14 15 20.9	
	comp=Z,67nm,18.2s,baz=160,slow=40							
CMAR	**Chiang Mai Arr**	**31.06**	**256**	LR		LR	14 27 05.9	
	comp=Z,12nm,18.6s,baz=275,slow=42							
H11N2	**WAKE ISLAND Hy**	**34.12**	**98**	T		T	14 48 52.9	
	baz=286							
H11N1	**WAKE ISLAND Hy**	**34.12**	**98**	T		T	14 48 51.5	
	baz=286							
H11N3	**WAKE ISLAND Hy**	**34.14**	**98**	T		T	14 48 55.2	
	baz=286							
MKAR	**Makanchi Array**	**41.09**	**308**	P		**P**	**14 13 15.7**	**-0.4**
	0.2nm,0.4s,baz=81,slow=8.9,SNR=1.8							
MKAR				pP		**pP**	**14 13 26.8**	**-0.1**
	0.6nm,0.4s,baz=89,slow=11,SNR=4.7							
KURBB	**Kurchatov Arra**	**44.07**	**314**	P		**P**	**14 13 40.3**	**+0.1**
	0.5nm,0.4s,baz=93,slow=8.7,SNR=6.7							
KURBB				pP		**pP**	**14 13 50.5**	**-0.5**
	0.9nm,0.4s,baz=91,slow=8.4,SNR=6.0							
BVAR	**Borovoye Array**	**49.33**	**316**	P		**P**	**14 14 21.0**	**-0.4**
	0.8nm,0.5s,baz=170,slow=10,SNR=6.4							
BVAR				pP		**pP**	**14 14 31.9**	**-0.4**
	1.3nm,0.5s,baz=152,slow=6.7,SNR=5.7							
FINES	**FINESS Array B**	**71.03**	**331**	P		**P**	**14 16 48.6**	**-1.2**
	1.3nm,0.8s,baz=46,slow=5.5,SNR=3.8							

*DJA **18** 14:08:46.9±0.4,9.7°S±5.°×12.2°E±.°,h161km±5km,M4.0/7, mb4.0/5,mB4.6/1,MLv4.1/7,Mw(mB)3.8/1*

*IDC **18** 14:08:46.9±1.0,8.78S×122.59E,h171km±10km,mb3.4/4, mb1 3.5/8,mb1mx3.2/43,mbtmp3.9/8, Error ellipse: s-maj=90.4km s-min=14.2km az=56.0*

ISC 18 14:08:47.1±0.9,9.02S±0.07×122.43E±0.06,h200km,n17, σ2s82/25,mb3.5/4,Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.42**	**333**	P		**Pn**	**14 09 09.5**	**-4.5**
BATI	**Baumata**	**1.70**	**134**	P		**Pn**	**14 09 20.9**	**-1.7**
	248nm,0.3s,baz=324,slow=1.8,SNR=173							
BATI				S		**Sn**	**14 09 47.3**	**-3.0**
	284nm,0.3s,baz=277,slow=18,SNR=9.9							
BATI	**Baumata**	**1.70**	**134**	P		**Pn**	**14 09 20.7**	**-1.9**
BATI				S		**Sn**	**14 09 44.4**	**-5.9**
SOEI	**Soe**	**1.96**	**112**	P		**Pn**	**14 09 22.7**	**-2.6**
BASI	**Baing, Sumba**	**2.18**	**237**	P		**Pn**	**14 09 26.9**	**-0.6**
BASI				S		**Sn**	**14 09 56.4**	**-2.6**
WBSI	**Waikabubak, Su**	**3.06**	**258**	P		**Pn**	**14 09 37.0**	**-0.5**
WBSI				S		**Sn**	**14 10 13.1**	**-3.8**
PLAI	**Plampang**	**4.60**	**272**	P		**Pn**	**14 09 55.6**	**-0.9**
PLAI				S		**Sn**	**14 10 47.0**	**-4.0**
KAPI	**Kappang**	**4.78**	**326**	P		**Pn**	**14 09 57.7**	**-1.1**
	2.5nm,0.3s,baz=147,slow=9.4,SNR=36							
BNSI	**Bone**	**5.13**	**333**	P		**Pn**	**14 10 02.2**	**-1.0**
	0.1nm12nm,0.8s							
TWSI	**Taliwang, Sumb**	**5.49**	**272**	P		**Pn**	**14 10 06.4**	**-1.4**
	0.3nm769nm13nm,0.6s							
FITZ	**Fitzroy Crossi**	**9.55**	**161**	P		**Pn**	**14 11 02.2**	**+1.7**
	1.1nm,0.3s,baz=11,slow=9.1,SNR=7.1							
FITZ				S		**Sn**	**14 12 44.4**	**-3.1**
	1.6nm,0.3s,baz=106,slow=13,SNR=9.8							
WRA	**Warramunga Arr**	**15.83**	**135**	P		**Pn**	**14 12 20.1**	**+0.7**
	1.3nm,0.3s,baz=300,slow=14,SNR=20							
WRA				S		**S**	**14 15 12.8**	**-2.3**
	0.5nm,0.3s,baz=313,slow=22,SNR=4.7							
ASAR	**Alice Springs**	**18.24**	**144**	P		**Pn**	**14 12 49.8**	**+1.7**
	0.6nm,0.3s,baz=331,slow=14,SNR=19							
ASAR				S		**S**	**14 16 06.5**	**+2.6**
	0.1nm,0.3s,baz=317,slow=25,SNR=4.1							
STKA	**Stephens Creek**	**28.88**	**145**	P		**P**	**14 14 31.3**	**+4.1**
	1.7nm,0.4s,baz=301,slow=9.3,SNR=4.6							
MKAR	**Makanchi Array**	**66.06**	**331**	P		**P**	**14 19 15.1**	**+2.6**
	0.3nm,0.4s,baz=140,slow=8.2,SNR=5.9							
ZALV	**Zalesovo Beam**	**70.31**	**337**	P		**P**	**14 19 39.6**	**+0.9**
	0.8nm,0.5s,baz=114,slow=5.1,SNR=3.8							
KURBB	**Kurchatov Arra**	**70.53**	**332**	P		**P**	**14 19 41.8**	**+1.8**
	0.3nm,0.4s,baz=132,slow=5.6,SNR=4.1							

*JMA **18** 14:18:41.3±0.1,32.03N×132.13E,h24km±2km,M3.9*

JMA Felt I J1.

*NIED **18** 14:18:41.3,32.03N×132.13E,h24km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.70; Mθθ0.23; Mφφ -0.93; Mrθ0.61; Mrφ -0.23; Mθφ0.53; Fault plane solution: M0 1.19000×10^15^ NP1:φs37.00000°, δ69.00000°,λ116.00000°. NP2:φs163.00000°,δ33.00000°, λ41.00000°.*

*IDC **18** 14:18:45.0±2.3,32.10N×132.10E,h62km±21km,mb3.3/6, mb1 3.4/9,mb1mx3.2/48,mbtmp3.5/9,MS3.0/5,Ms1 3.0/5, ms1mx2.7/24 Error ellipse: s-maj=34.4km s-min=19.1km az=58.0*

ISC 18 14:18:41.3±1.3,32.01N±0.04×132.13E±0.05,h26km±10km, n27,σ1s21/29,mb3.5/6,MS3.0/3,6C-2D,Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.58**	**295**	↓P		**Pb**	**14 18 52.0**	**-0.9**
JTSN				*e*S		**Sb**	**14 19 00.1**	**-0.7**
JHHC	**Hyugahichiya**	**0.60**	**317**	↓P		**Pb**	**14 18 52.7**	**-0.6**
JHHC				*e*S		**Sb**	**14 19 01.0**	**-0.4**
JNKG	**Nichinankitago**	**0.72**	**242**	↑P		**Pb**	**14 18 55.3**	**0.0**
JNKG				*e*S		**Sb**	**14 19 05.4**	**+0.5**
JSKE	**Saikikamae**	**0.81**	**346**	↑P		**Pb**	**14 18 56.4**	**-0.4**
JSKE				*e*S		**Sb**	**14 19 06.8**	**-0.6**
JNAR	**Kushima--Naru**	**0.87**	**237**	↑P		**Pb**

	522nm,0.3s,baz=75,slow=23,SNR=7.5						
URZ	**Urewera**	**8.93**	**208**	Pn	**Pn**	**14 30 08.5**	**-1.9**
	0.2nm,0.3s,baz=302,slow=23,SNR=2.0						
URZ				Sn	**Sn**	**14 31 49.7**	**-0.1**
	1.9nm,0.3s,baz=124,slow=23,SNR=5.8						
DZM	**Mont Dzumac**	**16.60**	**296**	LR	LR	14 36 41.5	
	comp=Z,127nm,19.2s,baz=226,slow=31						
STKA	**Stephens Creek**	**34.84**	**257**	P	P	14 34 56.4	+4.6
	5.0nm,0.8s,baz=78,slow=10,SNR=6.4						
ASAR	**Alice Springs**	**43.49**	**267**	P	**P**	**14 36 06.2**	**+2.0**
	1.1nm,0.8s,baz=106,slow=7.3,SNR=11						
WRA	**Warramunga Arr**	**44.48**	**272**	P	**P**	**14 36 13.6**	**+1.4**
	1.2nm,0.7s,baz=111,slow=8.0,SNR=11						
PETK	**Petropavlovsk-**	**85.98**	**345**	LR	LR	15 15 16.0	
	comp=Z,23nm,19.3s,baz=123,slow=33						
FINES	**FINESS Array B**	**145.34**	**340**	PKPbc	**PKPdf**	**14 47 38.5**	**+1.1**
	2.6nm,0.8s,baz=53,slow=4.0,SNR=11						
AKASG	**Malin Array Be**	**151.59**	**323**	PKPbc	**PKiKP**	**14 47 54.9**	**+0.3**
	0.3nm,0.4s,baz=56,slow=2.4,SNR=1.5						

TIR ***18*** *14:33:29.5, 43˚.28N× 18˚.82E, h17km± 1km, Md3.3, Ml3.6*
PDG ***18*** *14:33:32.6± 0.2, 43˚.03N× 18˚.78E, h6km, MD3.3/12, ML3.2/13, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
LDG ***18*** *14:33:32.5± 0.1, 42˚.99N× 18˚.79E, h2km, Ml3.3/14, Error ellipse: s-maj=3.6km s-min=2.9km az=8.0*
KRSZO ***18*** *14:33:32.1± 0.7, 43˚.05N× 18˚.71E, h1km± 2km, ML3.7/16, Error ellipse: s-maj=2.7km s-min=2.2km az=106.0*
RHSSO ***18*** *14:33:32.8± 0.2, 43˚.03N× 18˚.79E, h2km± 1km, ML3.3/13*
BEO ***18*** *14:33:33.0± 0.3, 42˚.98N× 18˚.71E, h14km± 2km, ML3.1/15*
PRU ***18*** *14:33:35.5± 0.0, 43˚.17N× 19˚.00E, h0km*

ISC 18 14:33:32.8±0.9, **43˚.04N**±0˚.01× **18˚.74E**±0˚.01, **h7**km±7km, **n130**, σ**2**§**17**/240, **20C-19D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.20**	**37**	⇑*i* Pg		**Pg**	**14 33 36.1**	**-0.8**
UPM				*e*Sg		**Sg**	**14 33 39.5**	**-0.1**
UPM	**Unac-Piva**	**0.20**	**37**	⇓*i* Pg		**Pg**	**14 33 36.4**	**-0.5**
UPM				*i* Sg		**Sg**	**14 33 39.5**	**-0.1**
BRY	**Bratogost**	**0.20**	**227**	⇓*i* Pg		**Pg**	**14 33 36.6**	**-0.3**
BRY				*e*Sg		**Sg**	**14 33 40.0**	**+0.3**
BRY	**Bratogost**	**0.20**	**227**	⇓*i* Pg		**Pg**	**14 33 36.6**	**-0.3**
BRY				*i* Sg		**Sg**	**14 33 40.3**	**+0.6**
NKY	**Niksic**	**0.29**	**141**	⇑*i* Pg		**Pg**	**14 33 37.7**	**-0.9**
NKY				*i* Sg		**Sg**	**14 33 42.2**	**-0.3**
NKME	**Niksic**	**0.32**	**151**	⇑*i* Pg		**Pg**	**14 33 38.2**	**-0.8**
NKME				*i* Sg		**Sg**	**14 33 43.0**	**-0.2**
TREB	**Trebinje**	**0.43**	**222**	*e*Pg		**Pg**	**14 33 41.0**	**-0.2**
TREB				*e*Sg		**Sb**	**14 33 48.2**	**-1.4**
TREB	**Trebinje**	**0.43**	**222**	⇓*i* Pg		**Pg**	**14 33 40.3**	**-0.9**
TREB				*e*Sg		**Sg**	**14 33 47.6**	**+0.7**
CEME	**Cevo**	**0.51**	**165**	⇑*i* Pg		**Pg**	**14 33 41.6**	**-1.1**
CEME				*i* Sg		**Sg**	**14 33 49.6**	**+0.2**
PLE	**Pljevlja**	**0.55**	**59**	⇑*i* Pg		**Pg**	**14 33 42.6**	**-0.9**
PLE				*i* Sg		**Pg**	**14 33 51.1**	**+0.4**
KOME	**Kolasin**	**0.60**	**108**	⇓*i* Pg		**Pg**	**14 33 43.1**	**-1.2**
KOME				*i* Sg		**Sg**	**14 33 52.2**	**0.0**
HCY	**Herceg Novi**	**0.62**	**197**	⇓*i* Pg		**Pg**	**14 33 44.0**	**-0.8**
HCY				*e*Sg		**Sg**	**14 33 53.2**	**+0.3**
HCY	**Herceg Novi**	**0.62**	**197**	*e*Pg		**Pg**	**14 33 44.0**	**-0.8**
HCY				*i* Sg		**Sg**	**14 33 53.7**	**+0.8**
PDG	**Podgorica**	**0.72**	**148**	*e*Pg		**Pg**	**14 33 45.1**	**-1.6**
PDG				*e*Sg		**Sg**	**14 33 55.5**	**-0.5**
PDG	**Podgorica**	**0.72**	**148**	⇓P		**Pg**	**14 33 45.1**	**-1.6**
PDG				⇓S		**Sg**	**14 33 55.8**	**-0.2**
PDG	**Podgorica**	**0.72**	**148**	⇑*i* Pg		**Pg**	**14 33 44.9**	**-1.7**
PDG				*e*Sg		**Sg**	**14 33 55.4**	**-0.5**
TTG	**Podgorica**	**0.72**	**148**	⇓*i* Pg		**Pg**	**14 33 45.0**	**-1.6**
TTG				*i* Sg		**Sg**	**14 33 56.2**	**+0.2**
RUDO	**Rudo**	**0.73**	**38**	⇑*i* Pg		**Pg**	**14 33 45.4**	**-1.5**
RUDO				*e*Sg		**Sg**	**14 33 56.8**	**+0.3**
BUM	**Brajici-Budva**	**0.75**	**171**	⇓*i* Pg		**Pg**	**14 33 46.1**	**-1.1**
BUM				*i* Sg		**Sb**	**14 33 57.7**	**-1.0**
STON	**Ston**	**0.78**	**258**	*e*Pg		**Pg**	**14 33 47.4**	**-0.4**
STON				Sg		**Sb**	**14 33 58.9**	**-0.7**
IVA	**Berane**	**0.86**	**101**	⇑*i* Pg		**Pg**	**14 33 48.1**	**-1.2**
IVA				*i* Sg		**Sg**	**14 34 01.1**	**+0.6**
DRME	**Dracevica, Mon**	**0.92**	**159**	⇑*i* Pg		**Pg**	**14 33 48.9**	**-1.5**
DRME				*e*Sg		**Sg**	**14 34 00.9**	**-1.3**
DRME	**Dracevica, Mon**	**0.92**	**159**	⇑*i* Pg		**Pg**	**14 33 49.1**	**-1.3**
DRME				*i* Sg		**Sb**	**14 34 03.1**	**-0.3**
BBLS	**Lazići**	**0.95**	**30**	*e*Pg		**Pb**	**14 33 51.6**	**-0.1**
BBLS				*e*Sg		**Sb**	**14 34 05.0**	**+0.4**
BBLS	**Lazići**	**0.95**	**30**	*e*Pg		**Pg**	**14 33 50.2**	**-0.9**
BBLS				*e*Sg		**Sg**	**14 34 03.5**	**0.0**
BBLS	**Lazići**	**0.95**	**30**	Pg		**Pg**	**14 33 50.2**	**-0.9**
BBLS				Pn		**Pb**	**14 33 51.1**	**-0.6**
	comp=Z,5.5nm,SNR=22							
BBLS				Pb		**Pb**	**14 33 51.6**	**-0.1**
BBLS				Lg		Lg	14 34 03.5	
BBLS				Sb		**Sb**	**14 34 04.2**	**-0.4**
BBLS				Sg		**Sb**	**14 34 05.0**	**+0.4**
PVY	**Plav**	**1.00**	**116**	⇓*i* Pg		**Pg**	**14 33 50.6**	**-1.4**
PVY				*i* Sg		**Sb**	**14 34 05.8**	**-0.2**
HAPS	**Han Pijesak,BI**	**1.05**	**8**	⇑*i* Pg		**Pg**	**14 33 51.0**	**-2.0**
HAPS				*e*Sg		**Sg**	**14 34 06.1**	**-0.6**
ULC	**Ulcinj**	**1.14**	**161**	⇑*i* Pg		**Pg**	**14 33 53.3**	**-1.4**
ULC				*i* Sg		**Sn**	**14 34 10.7**	**-0.4**
IVAS	**Ivanjica**	**1.16**	**62**	*e*Pg		**Pg**	**14 33 53.7**	**-1.3**
IVAS				*e*Sg		**Sb**	**14 34 10.8**	**+0.3**
BCI	**Bajram Curri**	**1.19**	**124**	P		**Pg**	**14 33 54.5**	**-1.1**
	baz=134							
BCI				S		**Sn**	**14 34 12.7**	**+0.4**
	baz=134							
BCI				AMP				
	comp=E,4.2nm,0.8s,baz=134							
RICI	**Ricice**	**1.26**	**292**	*i* Pg		**Pg**	**14 33 57.9**	**+1.0**
RICI				Sg		**Sn**	**14 34 15.3**	**+1.2**
MAKA	**Makarska**	**1.28**	**282**	*e*Pg		**Pg**	**14 33 57.9**	**+0.5**
MAKA				Sg		**Sn**	**14 34 15.9**	**+1.3**
PUK	**Puka**	**1.31**	**139**	P		**Pn**	**14 33 57.0**	**-0.7**
	baz=146							
PUK				S		**Sn**	**14 34 17.8**	**+2.4**
	baz=146							
PUK				AMP				
	comp=N,3.1nm,0.5s,baz=146							
DIVS	**Divibare**	**1.39**	**40**	*e*Pg		**Pn**	**14 33 58.5**	**-0.3**
DIVS				*e*Sg		**Sg**	**14 34 20.5**	**+3.0**
DIVS	**Divibare**	**1.39**	**40**	⇓*i* Pg		**Pn**	**14 33 58.3**	**-0.5**
DIVS				*e*Sg		**Sb**	**14 34 16.7**	**-0.5**
DIVS	**Divibare**	**1.39**	**40**	Pg		**Pn**	**14 33 58.3**	**-0.5**
DIVS				Pb		**Pn**	**14 33 58.5**	**-0.3**
DIVS				Pn		**Pg**	**14 33 58.6**	**-0.9**
	comp=Z,0.9nm,SNR=19							
DIVS				Sn		**Sb**	**14 34 16.7**	**-0.5**
DIVS				Lg		Lg	14 34 18.9	
DIVS				Sg		**Sg**	**14 34 20.5**	**+3.0**
TEKS	**Tekeris**	**1.61**	**20**	*e*Pg		**Pg**	**14 34 03.3**	**-0.4**
TEKS				*e*Sg		**Sg**	**14 34 26.0**	**+1.5**
TEKS	**Tekeris**	**1.61**	**20**	*e*Pn		**Pb**	**14 34 02.6**	**-0.3**
TEKS				*e*Sn		**Sb**	**14 34 23.2**	**-0.2**
GRUS	**Gruza**	**1.67**	**59**	*e*Pg		**Pb**	**14 34 03.9**	**+0.1**
GRUS				*e*Sg		**Sg**	**14 34 29.3**	**+3.0**
HVAR	**Hvar**	**1.69**	**275**	*e*Pn		**Pb**	**14 34 04.3**	**+0.2**
HVAR				Sn		**Sg**	**14 34 28.2**	**+1.3**
TRUS	**Trudelj**	**1.69**	**45**	*e*Pn		**Pn**	**14 34 03.4**	**+0.6**
SELS	**Selova**	**1.75**	**83**	*e*Pn		**Pn**	**14 34 03.2**	**-0.4**
MGRS	**Mrkonjic Grad**	**1.82**	**319**	*e*Pn		**Pb**	**14 34 05.6**	**-0.9**
MGRS				*e*Sn		**Sb**	**14 34 29.8**	**+0.2**
PHP	**Peshkopia**	**1.85**	**137**	P		**Pn**	**14 34 05.9**	**+0.8**
	baz=142							
PHP				S		**Sg**	**14 34 33.0**	**+0.7**
	baz=142							
PHP				AMP				
	comp=N,3.7nm,1.3s,baz=142							
TIR	**Tirane**	**1.89**	**153**	⇓P		**Pn**	**14 34 06.1**	**+0.6**
TIR				⇓S		**Sn**	**14 34 29.2**	**-0.3**
TIR	**Tirane**	**1.89**	**153**	P		**Pb**	**14 34 08.1**	**+0.5**
	baz=157							
TIR				S		**Sg**	**14 34 35.8**	**+2.3**
	baz=157							
TIR	**Tirane**	**1.89**	**153**	Pn		**Pn**	**14 34 06.1**	**+0.6**
TIR				Pg		**Pb**	**14 34 08.0**	**+0.5**
	comp=Z,1.6nm,SNR=7.1							
TIR				Sn		**Sn**	**14 34 29.2**	**-0.3**
TIR				Lg		Lg	14 34 36.7	
TIR				Pb		**Sg**	**14 34 37.6**	**+4.1**
KIJV	**Kijevo**	**1.95**	**300**	*e*Pg		**Pg**	**14 34 09.9**	**-0.3**
KIJV				Sn		**Sg**	**14 34 36.4**	**+0.9**
BLY	**Banja Luka**	**2.04**	**327**	*e*Pn		**Pn**	**14 34 08.9**	**+1.3**
BLY				*e*Sn		**Sb**	**14 34 35.0**	**-0.9**
BLY	**Banja Luka**	**2.04**	**327**	Pn		**Pn**	**14 34 08.9**	**+1.3**
BLY				Pb		**Pb**	**14 34 09.6**	**-0.6**
	comp=Z,0.9nm,SNR=15							
BLY				Pg		**Pg**	**14 34 10.2**	**-1.7**
BLY				Sn		**Sb**	**14 34 35.0**	**-0.9**
BLY				Lg		Lg	14 34 36.2	
BOVS	**Bovan**	**2.24**	**74**	*e*Pn		**Pn**	**14 34 10.3**	**0.0**
BOVS	**Bovan**	**2.24**	**74**	⇓P		**Pn**	**14 34 10.4**	**0.0**
BOVS				⇓S		**Sn**	**14 34 38.0**	**-0.3**
FRGS	**Fruska Gora**	**2.25**	**20**	*e*Pn		**Pn**	**14 34 10.2**	**-0.3**
FRGS	**Fruska Gora**	**2.25**	**20**	⇑P		**Pn**	**14 34 10.0**	**-0.5**
FRGS	**Fruska Gora**	**2.25**	**20**	*e*Pn		**Pn**	**14 34 10.7**	**+0.2**
FRGS				*e*Sn		**Sn**	**14 34 38.4**	**-0.1**
SKO	**Skopje**	**2.26**	**117**	*i* Pn		**Pb**	**14 34 13.2**	**-0.8**
BARS	**Barje**	**2.27**	**95**	*e*Pn		**Pn**	**14 34 09.2**	**-1.5**
ZIRJ	**Zirje**	**2.34**	**286**	*e*Pg		**Pg**	**14 34 17.0**	**-0.7**
ZIRJ				Sn		**Sb**	**14 34 45.8**	**+1.4**
MORI	**Morici**	**2.36**	**291**	*e*Pg		**Pg**	**14 34 18.2**	**+0.2**
MORI				Sn		**Sb**	**14 34 45.0**	**+0.1**
OHR	**Ohrid**	**2.46**	**141**	*i* Pn		**Pg**	**14 34 19.6**	**-0.4**
PRVS	**Prvonek**	**2.51**	**101**	*e*Pn		**Pn**	**14 34 14.1**	**0.0**
UDBI	**Udbina**	**2.62**	**306**	*e*Pg		**Pg**	**14 34 21.9**	**-1.0**
ZAGS	**Zajecar**	**2.66**	**72**	*e*Pn		**Pn**	**14 34 16.9**	**+0.9**
MDVR	**Moldovita**	**2.76**	**50**	⇑P		**Pn**	**14 34 17.8**	**+0.2**
BOSS	**Bosilegrad**	**2.81**	**100**	*e*Pn		**Pn**	**14 34 18.0**	**-0.1**
MATE	**Matera**	**2.83**	**213**	⇑P		**Pn**	**14 34 19.0**	**+0.5**
MATE	**Matera**	**2.83**	**213**	Pn		**Pn**	**14 34 19.0**	**+0.5**
MATE				Pg		**Pn**	**14 34 19.4**	**+0.9**
	comp=Z,0.4nm,SNR=6.0							
MATE				Sn		**Sn**	**14 34 52.6**	**-0.3**
DUGI	**Dugi Otok**	**2.84**	**291**	*e*Pg		**Pb**	**14 34 25.0**	**+1.2**
DUGI				Sn		**Sb**	**14 34 57.0**	**-1.9**
ZAPS	**Zavoj**	**2.86**	**84**	*e*Pn		**Pn**	**14 34 19.7**	**+0.9**
STIP	**Stip**	**2.89**	**117**	*i* Pn		**Pn**	**14 34 21.7**	**+2.5**
MOSL	**Moslavina**	**2.94**	**332**	*e*Pn		**Pn**	**14 34 22.1**	**+2.1**
MORH	**Mrgy, Hungar**	**3.17**	**359**	⇑P		**Pn**	**14 34 22.9**	**-0.2**
MORH	**Mrgy, Hungar**	**3.17**	**359**	*e*Pn		**Pn**	**14 34 23.9**	**+0.8**
MORH				*e*Sn		**Sn**	**14 35 02.3**	**+1.1**
MORH	**Mrgy, Hungar**	**3.17**	**359**	Pb		**Pn**	**14 34 22.3**	**-0.8**
	comp=Z,0.1nm,SNR=4.8							
MORH				Pn		**Pn**	**14 34 22.9**	**-0.2**
MORH				Pg		**Pn**	**14 34 23.9**	**+0.8**
MORH				Sn		**Sn**	**14 35 02.3**	**+1.1**
HERR	**Herculane**	**3.23**	**54**	⇑P		**Pn**	**14 34 23.9**	**0.0**
BZS	**Buzias**	**3.30**	**38**	⇑P		**Pn**	**14 34 25.2**	**+0.3**
BZS	**Buzias**	**3.30**	**38**	Pg		**Pn**	**14 34 25.1**	**+0.2**
	comp=Z,0.1nm,SNR=6.5							
BZS				Pn		**Pn**	**14 34 25.2**	**+0.3**
VTS	**Vitosha**	**3.33**	**96**	⇓P		**Pn**	**14 34 25.5**	**0.0**
VTS	**Vitosha**	**3.33**	**96**	Pg		**Pn**	**14 34 25.5**	**0.0**
VTS				Pn		**Pn**	**14 34 27.0**	**+1.5**
	comp=Z,0.1nm,SNR=4.5							
VTS				Sn		**Sn**	**14 35 06.4**	**+1.1**
CRES	**Cresnjev**	**3.64**	**321**	*i* Pn		**Pn**	**14 34 31.1**	**+1.5**
CRES	**Cresnjev**	**3.64**	**321**	*e*Pn		**Pn**	**14 34 30.8**	**+1.2**
CRES				*e*Sn		**Sn**	**14 35 13.9**	**+1.0**
CRES	**Cresnjev**	**3.64**	**321**	Pg		**Pn**	**14 34 30.8**	**+1.2**
CRES				Pb		**Pn**	**14 34 31.1**	**+1.5**
CRES				Sn		**Sn**	**14 35 13.9**	**+1.0**
BEHE	**Becsehely**	**3.70**	**338**	Pn		**Pb**	**14 34 36.1**	**-2.4**
	comp=Z,0.4nm,SNR=5.1							
GZR	**Gura Zlata**	**3.73**	**50**	⇑P		**Pn**	**14 34 31.6**	**+0.7**
GZR				⇓S		**Sn**	**14 35 15.9**	**+0.8**
GZR	**Gura Zlata**	**3.73**	**50**	Pn		**Pn**	**14 34 31.0**	**+0.1**
	comp=Z,0.1nm,SNR=5.8							
GZR				Pg		**Pn**	**14 34 31.6**	**+0.7**
GZR				Sn		**Sn**	**14 35 14.6**	**-0.5**
GZR				Lg		Lg	14 35 15.9	
KOGS	**Kog**	**3.84**	**333**	Pn		**Pn**	**14 34 32.5**	**+0.2**
	comp=Z,0.4nm,SNR=5.8							
AQU	**L'Aquila**	**4.00**	**262**	*e*Pn		**Pn**	**14 34 35.0**	**+0.5**
AQU				*e*Sn		**Sn**	**14 35 21.2**	**-0.4**
AQU	**L'Aquila**	**4.00**	**262**	Pn		**Pn**	**14 34 35.0**	**+0.5**
AQU				Pg		**Pn**	**14 34 35.4**	**+0.9**
	comp=Z,0.3nm,SNR=5.1							
AQU				Sn		**Sn**	**14 35 21.2**	**-0.4**
AQU				Lg		Lg	14 35 27.6	
CEY	**Cerknica**	**4.10**	**313**	*e*Pn		**Pn**	**14 34 37.0**	**+1.1**
CEY				*e*Sn		**Sn**	**14 35 24.7**	**+0.5**
GROS	**Grobnik**	**4.12**	**327**	*e*Pn		**Pn**	**14 34 37.0**	**+0.7**
TIP	**Timpagrande**	**4.14**	**202**	⇑P		**Pn**	**14 34 36.9**	**+0.4**
MPLH	**Magyarpolny**	**4.21**	**349**	Pn		**Pn**	**14 34 38.3**	**+0.9**
	comp=Z,0.2nm,SNR=8.4							
MPLH				Sn		**Sn**	**14 35 25.4**	**-1.5**
CSKK	**Cskako**	**4.33**	**356**	Pn		Pn	14 34 44.8	+5.7
	comp=Z,0.1nm,SNR=6.5							
SOKA	**Soboth**	**4.49**	**325**	*i* Pn		**Pn**	**14 34 43.7**	**+2.4**
	comp=Z,3.5nm,0.3s							
OBKA	**Obir**	**4.57**	**321**	*e*Pn		**Pn**	**14 34 43.3**	**+0.8**
OBKA				*e*Sn		**Sn**	**14 35 35.8**	**-0.1**
ARSA	**Arzberg**	**4.78**	**333**	*e*Pn		**Pn**	**14 34 46.5**	**+1.2**
	comp=Z,21nm,0.6s							
ARSA				*e*Sn		**Sn**	**14 35 40.2**	**-0.8**
	comp=Z,7.6nm,0.6s							
ARSA	**Arzberg**	**4.78**	**333**	*e*Pn		**Pn**	**14 34 46.3**	**+1.0**
ARSA				*e*Sn		**Sn**	**14 35 40.3**	**-0.7**
ARSA	**Arzberg**	**4.78**	**333**	Pn		**Pn**	**14 34 46.2**	**+0.9**
	comp=Z,0.1nm,SNR=4.9							
ARSA				Pg		**Pn**	**14 34 46.3**	**+1.0**
ARSA				Pb		**Pn**	**14 34 46.5**	**+1.2**
	comp=Z,21nm,0.6s							
ARSA				Sn		**Sn**	**14 35 39.5**	**-1.5**
ARSA				Lg		Lg	14 35 40.2	
	comp=Z,7.6nm,0.6s							
ARSA				Sg		Sb	14 35 40.3	-14
VOIR		**5.12**	**60**	⇓P		**Pn**	**14 34 50.8**	**+0.8**
ZST	**Bratislava**	**5.28**	**348**	*e*SN		**Sn**	**14 35 50.7**	**-2.5**
CONA	**Conrad Observa**	**5.29**	**338**	*e*Pn		**Pn**	**14 34 54.5**	**+2.2**
	comp=Z,2.0nm,0.3s							
CONA				*i* Sn		**Sn**	**14 35 54.5**	**+1.0**
	comp=Z,2.7nm,0.4s							
MODS	**Modra-Piesok**	**5.43**	**350**	*e*PN		**Pn**	**14 34 55.0**	**+0.8**
MODS				*e*SN		**Sn**	**14 35 54.2**	**-2.7**
VYHS	**Vyhne**	**5.45**	**1**	*e*PN		**Pn**	**14 34 55.3**	**+0.8**
VYHS				*e*SN		**Sn**	**14 35 56.1**	**-1.3**
KBA	**Koelnbreinsper**	**5.56**	**318**	*e*Pn		**Pn**	**14 34 58.5**	**+2.4**
	comp=Z,3.3nm,0.4s							
KBA				*i* Sn		**Sn**	**14 36 02.7**	**+2.4**
	comp=Z,5.6nm,0.5s							
MOA	**Molln**	**5.75**	**328**	*e*Pn		**Pn**	**14 35 01.4**	**+2.9**
	comp=Z,1.3nm,0.3s,SNR=5.4							
MOA				*i* Sn		**Sn**	**14 36 05.0**	**+0.3**
	comp=Z,7.5nm,0.5s							
ABTA	**Abfaltersbach**	**5.77**	**312**	*i* Pn		**Pn**	**14 35 01.1**	**+2.2**
	comp=Z,6.9nm,0.6s,SNR=6.1							
ABTA				*i* Sn		**Sn**	**14 36 09.6**	**+4.2**
	comp=Z,10nm,0.7s							
WTTA	**Wattenberg**	**6.56**	**312**	*i* Pn		**Pn**	**14 35 13.7**	**+3.8**
	comp=Z,9.4nm,0.7s							
WTTA				*i* Sn		**Sn**	**14 36 30.1**	**+5.1**
	comp=Z,8.0nm,0.5s							
WATA	**Walderalm**	**6.64**	**313**	*i* Pn		**Pn**	**14 35 13.9**	**+3.1**
	comp=Z,9.7nm,0.7s,SNR=5.3							
WATA				*e*Sn		**Sn**	**14 36 32.3**	**+5.5**
	comp=Z,8.7nm,0.6s							
SQTA	**Sankt Quirin**	**6.77**	**311**	*i* Pn		**Pn**	**14 35 15.7**	**+3.0**
	comp=Z,6.8nm,0.5s,SNR=6.5							
SQTA				*i* Sn		**Sn**	**14 36 35.0**	**+5.0**
	comp=Z,12nm,0.5s							
MOTA	**Moosalm**	**6.90**	**311**	*e*Pn		**Pn**	**14 35 18.0**	**+3.5**
	comp=Z,10nm,0.7s,SNR=9.9							
MOTA				*i* Sn		**Sn**	**14 36 37.5**	**+4.2**
	comp=Z,15nm,1.0s							
FETA	**Feichten**	**6.93**	**308**	*e*Pn		**Pn**	**14 35 17.3**	**+2.4**
	comp=Z,2.1nm,0.5s							
FETA				*e*Sn		**Sn**	**14 36 37.5**	**+3.5**
	comp=Z,4.5nm,0.6s							
KHC	**Kasperske Hory**	**7.07**	**331**	*e*PN		**Pn**	**14 35 19.4**	**+2.8**
KHC				*e*SN		**Sn**	**14 36 36.1**	**-1.1**
PGF	**Pioggiola**	**7.18**	**269**	*e*Pn		**Pn**	**14 35 17.6**	**-0.7**
PGF				*e*Sn		**Sn**	**14 36 35.3**	**-4.9**
	comp=Z,1.3nm,0.3s							
SBF	**Sospel**	**8.27**	**280**	*e*P		**Pn**	**14 35 35.2**	**+2.0**
SBF				*e*Sn		**Sn**	**14 37 00.7**	**-6.1**
	comp=Z,2.2nm,0.3s							
MBDF	**Montbardon**	**8.81**	**285**	*e*Pn		**Pn**	**14 35 39.7**	**-1.0**
MBDF				*e*Sn		**Sn**	**14 37 13.4**	**-6.8**
	comp=Z,2.1nm,0.4s							
FRF	**La Foret Royal**	**8.84**	**277**	*e*Pn		**Pn**	**14 35 38.8**	**-2.1**
FRF	**La Foret Royal**	**8.84**	**277**	*e*P		**Pn**	**14 35 45.1**	**+4.2**
FRF				*e*Sn		**Sn**	**14 37 14.4**	**-6.3**
	comp=Z,3.4nm,0.6s							
LMR	**La Mourre**	**8.94**	**276**	*e*Sn		**Sn**	**14 37 16.4**	**-6.9**
	comp=Z,1.3nm,0.4s							
ORIF	**Oris-en-Rattie**	**9.46**	**286**	*e*P		**Pn**	**14 35 52.9**	**+3.3**
ORIF				*e*Sn		**Sn**	**14 37 30.0**	**-6.2**
	comp=Z,1.9nm,0.3s							
SMRF	**Simiane la Rot**	**9.62**	**280**	*e*Sn		**Sn**	**14 37 32.7**	**-7.2**
	comp=Z,0.8nm,0.4s							
HINF	**Hinteralfeld**	**9.62**	**304**	*e*Pn		**Pn**	**14 35 50.6**	**-1.1**
HINF				*e*Sn		**Sn**	**14 37 32.8**	**-7.2**
	comp=Z,1.6nm,0.4s							
CDF	**Champ du Feu**	**9.64**	**308**	*e*Pn		**Pn**	**14 35 51.0**	**-1.1**
CABF	**La Chapelle**	**9.67**	**296**	*e*Pn		**Pn**	**14 35 52.0**	**-0.4**
CABF				*e*Sn		**Sn**	**14 37 34.4**	**-6.9**
	comp=Z,3.8nm,0.6s							
HAU	**Haudompre**	**10.01**	**304**	*e*Pn		**Pn**	**14 35 56.5**	**-0.5**
HAU				*e*Sn		**Sn**	**14 37 41.8**	**-7.7**
	comp=Z,1.2nm,0.3s							
VIVF	**Saint-Julien-l**	**10.31**	**285**	*e*Pn		**Pn**	**14 35 58.4**	**-2.7**
VIVF				*e*Sn		**Sn**	**14 37 48.0**	**-8.9**
	comp=Z,1.4nm,0.5s							
SFTF	**Sexfontaines**	**10.89**	**303**	*e*P		**Pn**	**14 36 12.7**	**+3.7**
	baz=123							
MEZF	**Maizieres J'vi**	**11.01**	**304**	*e*P		**Pn**	**14 36 14.7**	**+4.1**
	baz=127							
LOR	**Lormes**	**11.32**	**297**	*e*Sn		**Sn**	**14 38 14.4**	**-7.3**
	comp=Z,3.7nm,0.6s							
MTLF	**Montolieu**	**12.07**	**277**	*e*P		**Pn**	**14 36 29.2**	**+4.0**

ISK ***18*** *15:31:13.9, 35˚.06N× 26˚.82E, h6km, ML3.8/9*
NIC ***18*** *15:31:14.2± 0.0, 35˚.15N× 26˚.75E, h30km, Ml4.0/4*
HLW ***18*** *15:31:15.1, 35˚.12N× 26˚.89E, h30km± 21km, Md4.1, Ml4.0*
THE ***18*** *15:31:15.9, 35˚.18N× 26˚.74E, h1km± 2km, ML3.7/6, Error ellipse: s-maj=5.2km s-min=1.1km az=154.0*
IDC ***18*** *15:31:16.5± 3.4, 34˚.98N× 26˚.88E, h33km± 28km, mb3.6/11, mb1 3.7/16, mb1mx3.5/41, mbtmp3.7/16, ML3.7/5, MS3.3/6, Ms1 3.3/6, ms1mx2.8/36, Error ellipse: s-maj=20.7km s-min=13.6km az=0.0*
DDA ***18*** *15:31:16.6, 35˚.33N× 26˚.74E, h22km± 3km, MW3.9*
ATH ***18*** *15:31:16.1, 35˚.23N× 26˚.72E, h7km± 3km, ML3.6/5, Error ellipse: s-maj=5.2km s-min=0.9km az=156.0*

ISC 18 15:31:13.6±1.1, **35˚.00N**±0˚.04× **26˚.85E**±0˚.02, **h15**km±7km, **n95**, σ**1

DGB	**zmir**	**3.04**	**0**	*i* P		**Pn**	**15 32 03.8**	**+2.5**
DGB				*i* S		**Sn**	**15 32 39.2**	**+1.9**
DGB				IAML			15 32 54.0	
	comp=E,83nm,1.4s							
AYDB	**Zeytinkoy-Aydi**	**3.06**	**16**	PN		**Pn**	**15 32 02.9**	**+1.4**
GOLH	**Golhisar**	**3.13**	**44**	*i* P		**Pn**	**15 32 03.8**	**+1.3**
AKUM	**Antalya-Kumluc**	**3.13**	**64**	*i* P		**Pn**	**15 32 03.2**	**+0.7**
AKUM				*i* S		**Sn**	**15 32 40.5**	**+1.0**
URLA	**Izmir**	**3.36**	**357**	*i* P		**Pb**	**15 32 11.1**	**-1.8**
VLI	**Veliai**	**3.61**	**299**	P		**Pn**	**15 32 10.2**	**+1.2**
MANT	**Manisa**	**3.74**	**21**	*i* P		**Pn**	**15 32 11.6**	**+0.6**
MANT				*i* S		**Sn**	**15 32 53.5**	**-1.5**
SLUM	**Salum**	**3.76**	**202**	P		**Pn**	**15 32 12.6**	**+1.5**
	baz=202							
SLUM				S		**Sn**	**15 32 54.3**	**-0.9**
	baz=202							
SLUM				AMP			15 33 00.0	
	baz=202							
OSC1	**CSNet OBS 1**	**3.96**	**111**	S		**Sn**	**15 33 02.6**	**+2.6**
USAK	**Uak-Merkez**	**4.09**	**24**	*i* P		**Pn**	**15 32 16.7**	**+1.0**
AKMS	**Akamas**	**4.50**	**88**	P		**Pn**	**15 32 22.0**	**+0.8**
AKMS				S		**Sn**	**15 33 14.0**	**+0.6**
AKMS				AML	AML		15 33 14.3	
	comp=E,0.6nm,0.4s							
AKMS				AML	AML		15 33 14.3	
	comp=E,0.6nm,0.4s							
AKMS				AML	AML		15 33 14.9	
	comp=E,0.8nm,0.4s							
AKMS				AML	AML		15 33 14.9	
	comp=E,0.8nm,0.4s							
ALFC	**Alefka**	**4.71**	**87**	⇑P		**Pn**	**15 32 25.3**	**+1.0**
ALFC				AML	AML		15 33 19.2	
	comp=E,1.2nm,1.0s							
ALFC				AML	AML		15 33 19.3	
	comp=E,1.0nm,0.7s							
BAYC	**CANAKKALE_Bayr**	**4.74**	**357**	*i* P		**Pn**	**15 32 22.9**	**-1.6**
DURS	**Dursunbey**	**4.77**	**15**	*i* P		**Pn**	**15 32 26.2**	**+1.2**
SZAC	**Souni**	**4.96**	**91**	⇑P		**Pn**	**15 32 28.8**	**+1.2**
ASGA	**Asgata**	**5.26**	**91**	P		**Pn**	**15 32 33.3**	**+1.6**
ASGA				S		**Sn**	**15 33 33.9**	**+1.8**
CSS	**Mathiatis**	**5.32**	**89**	P		**Pn**	**15 32 33.6**	**+1.0**
CSS				AML	AML		15 33 38.6	
	comp=E,0.1nm,0.9s							
CSS				AML	AML		15 33 40.5	
	comp=E,0.1nm,1.0s							
AGG	**Agios Georgios**	**5.40**	**319**	*i* P		**Pn**	**15 32 34.7**	**+1.0**
SWA2		**5.86**	**192**	P		**Pn**	**15 32 42.4**	**+2.4**
	baz=193							
SWA2				AMP			15 34 00.0	
	baz=193							
HMYD	**Mayadein**	**6.17**	**146**	P		**Pn**	**15 32 45.3**	**+1.1**
	baz=147							
RYAN	**Fayoum**	**6.58**	**153**	P		**Pn**	**15 32 51.1**	**+1.2**
	baz=153							
RYAN				AMP			15 34 00.0	
	baz=153							
RYAN				S		**Sn**	**15 34 02.0**	**-2.7**
	baz=153							
HSAF	**As Saff**	**6.68**	**142**	P		**Pn**	**15 32 53.0**	**+1.8**
	baz=143							
GLL	**Jalalah**	**6.79**	**141**	P		**Pn**	**15 32 53.8**	**+1.0**
	baz=142							
BRTR	**Keskin Array B**	**7.17**	**47**	Pn		**Pn**	**15 32 59.7**	**+1.7**
	comp=E,0.2nm,0.3s,baz=228,slow=15,SNR=4.4							
BRTR				Sn		**Sn**	**15 34 16.4**	**-3.0**
	baz=313,slow=38,SNR=1.1							
BRTR				LR	LR		15 36 41.5	
	comp=E,219nm,21.1s,baz=242,slow=45							
MMAI	**Mount Meron Ar**	**7.37**	**103**	Pn		**Pn**	**15 33 01.5**	**+0.7**
	comp=E,1.1nm,0.3s,baz=307,slow=11,SNR=6.9							
MMAI				Sn		**Sn**	**15 34 20.4**	**-3.8**
	comp=E,1.0nm,0.3s,baz=265,slow=10.0,SNR=2.2							
EIL	**Elat**	**8.67**	**126**	Pn		**Pn**	**15 33 19.0**	**+0.4**
	comp=E,0.6nm,0.3s,baz=296,slow=2.6,SNR=9.1							
EIL				Sn		**Sn**	**15 34 49.4**	**-6.7**
	comp=E,1.7nm,0.3s,baz=342,slow=2.7,SNR=8.0							
MLR	**Muntele Rosu**	**10.50**	**356**	Pn		**Pn**	**15 33 46.4**	**+2.8**
	comp=E,0.3nm,0.3s,baz=107,slow=11,SNR=1.7							
KBZ	**Khabaz**	**15.14**	**50**	Pn		**P**	**15 34 55.0**	**+3.0**
	comp=E,0.1nm,0.3s,baz=258,slow=12,SNR=7.2							
AKASG	**Malin Array Be**	**15.79**	**6**	Pn		**P**	**15 34 57.9**	**-1.1**
	comp=E,0.7nm,0.3s,baz=195,slow=11,SNR=5.7							
GERES	**GERESS Array B**	**16.91**	**329**	Pn		**P**	**15 35 11.5**	**-0.2**
	comp=E,0.1nm,0.3s,baz=153,slow=12,SNR=8.4							
GERES				LR	LR		15 43 10.1	
	comp=E,54nm,18.7s,baz=118,slow=42							
ESDC	**Sonseca Array**	**24.87**	**290**	P		**P**	**15 36 35.2**	**-0.6**
	comp=E,0.4nm,0.6s,baz=85,slow=11,SNR=3.1							
FINES	**FINESS Array B**	**26.46**	**359**	P		**P**	**15 36 50.4**	**+0.6**
	comp=E,2.2nm,1.0s,baz=172,slow=15,SNR=1.5							
AKTO	**Aktyubinsk**	**27.35**	**46**	P		**P**	**15 36 57.6**	**-0.4**
	comp=E,1.0nm,0.7s,baz=249,slow=11,SNR=3.6							
NOA	**NORSAR Array B**	**27.92**	**344**	LR	LR		15 49 13.8	
	comp=E,20nm,18.4s,baz=285,slow=38							
EKA	**Eskdalemuir Ar**	**28.98**	**324**	P		**P**	**15 37 14.8**	**+2.4**
	comp=E,1.1nm,0.7s,baz=116,slow=9.9,SNR=4.0							
TORD	**Torodi Ar. Bea**	**31.47**	**232**	P		**P**	**15 37 35.4**	**+0.6**
	comp=E,1.0nm,0.5s,baz=33,slow=8.7,SNR=8.8							
TORD				LR	LR		15 50 36.4	
	comp=E,43nm,18.1s,baz=350,slow=37							
ARCES	**ARCESS Array B**	**34.59**	**359**	P		**P**	**15 38 02.9**	**+1.3**
	comp=E,2.3nm,1.0s,baz=172,slow=6.9,SNR=4.2							
MKAR	**Makanchi Array**	**42.70**	**57**	P		**P**	**15 39 11.1**	**+1.2**
	comp=E,1.4nm,0.5s,baz=277,slow=6.9,SNR=21							
ZALV	**Zalesovo Beam**	**44.11**	**46**	P		**P**	**15 39 21.5**	**+0.3**
	comp=E,2.3nm,0.5s,baz=271,slow=8.4,SNR=11							
SONM	**Songino Array**	**58.51**	**51**	P		**P**	**15 41 09.0**	**-0.4**
	comp=E,1.1nm,0.8s,baz=295,slow=6.8,SNR=3.5							
RES	**Resolute Bay**	**64.17**	**345**	LR	LR		16 11 41.2	
	comp=E,40nm,18.7s,baz=18,slow=38							
CMAR	**Chiang Mai Arr**	**65.21**	**84**	P		**P**	**15 41 55.1**	**+0.4**
	comp=E,0.8nm,0.9s,baz=299,slow=8.0,SNR=6.6							
YKA	**Yellowknife Ar**	**78.02**	**343**	P		**P**	**15 43 09.7**	**-1.4**
	comp=E,0.2nm,0.9s,baz=43,slow=5.0,SNR=5.3							
PETK	**Petropavlovsk-**	**82.42**	**27**	LR	LR		16 25 46.4	
	comp=E,31nm,19.9s,baz=157,slow=40							

NOU 18 15:36:05.3, 15.90S×167.27E, h0km, mb4.3, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**2.02**	**154**	P	Pn	15 36 40.5	-0.1
LIFNC	**LIFOU**	**4.85**	**180**	P	Pn	15 37 19.2	-0.4
KOUNC	**Koumac, New Ca**	**5.42**	**211**	P	Pn	15 37 27.4	-0.1
YATNC	**Mamie plateau,**	**6.14**	**183**	P	Pn	15 37 37.2	-0.1
DZM	**Mont Dzumac**	**6.19**	**187**	P	Pn	15 37 37.6	-0.5
NOUC	**Port Laguerre**	**6.24**	**188**	P	Pn	15 37 38.8	+0.2
ONTNC	**Ouen Toro**	**6.42**	**187**	P	Pn	15 37 41.2	0.0
OUENC	**Ouen Island, N**	**6.50**	**184**	P	Pn	15 37 42.3	+0.1
PINNC	**Pines Island,**	**6.68**	**179**	P	Pn	15 37 44.7	0.0

*IDC **18** 15:57:51.2±4.6,31.62N×131.75E,h0km,mb3.2/1, mb1 3.3/4,mb1mx3.1/47,mbtmp3.3/4,ML2.8/3,MS2.8/2, Ms1 2.8/2,ms1mx2.4/20,Error ellipse: s-maj=60.5km s-min=40.9km az=16.0*

*JMA **18** 15:57:55.3±0.1,32.02N×132.13E,h18km±3km,M3.3*

ISC 18 15:57:55.2±1.8, 32.00N±0.06×132.15E±0.05, h20km±7km, n15,σ0s80/23, 5C-3D, Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.60**	**295**	⇓P	**Pb**	**15 58 06.1**	**-0.9**
JTSN				S	**Sb**	**15 58 13.9**	**-1.1**
JHHC	**Hyugahichiya**	**0.62**	**316**	⇓P	**Pb**	**15 58 06.8**	**-0.5**
JHHC				S	**Sb**	**15 58 14.8**	**-0.8**
JNKG	**Nichinankitago**	**0.74**	**243**	⇓P	**Pb**	**15 58 09.4**	**0.0**
JNKG				*e*S	**Sg**	**15 58 19.3**	**-0.3**
JSKE	**Saikikamae**	**0.82**	**345**	⇑P	**Pb**	**15 58 10.8**	**-0.1**
JSKE				S	**Sb**	**15 58 22.5**	**+0.9**
JNAR	**Kushima--Naru**	**0.88**	**238**	⇑P	**Pb**	**15 58 11.8**	**0.0**
JNAR				S	**Sg**	**15 58 24.3**	**+0.2**
JTZ	**Takazaki**	**0.91**	**264**	⇑P	**Pb**	**15 58 11.7**	**-0.6**
JTZ				*e*S	**Sg**	**15 58 24.8**	**-0.1**
JTO	**Tosashimizu**	**1.02**	**33**	P	**Pb**	**15 58 13.6**	**-0.7**
JTO				*e*S	**Sb**	**15 58 26.7**	**-0.6**
JUS	**Usuki**	**1.12**	**343**	⇑P	**Pn**	**15 58 15.9**	**+0.1**
JUS				*e*S	**Sn**	**15 58 30.8**	**+0.2**
JIU3	**Izumi3**	**1.26**	**296**	⇑P	**Pn**	**15 58 17.7**	**0.0**
UWA2	**Uwa jima 2**	**1.28**	**18**	P	**Pn**	**15 58 17.7**	**-0.3**
JNU	**Nakatsue**	**1.55**	**317**	Pn	**Pb**	**15 58 22.9**	**-0.4**
	44nm,0.3s,baz=169,slow=4.2,SNR=266						
JNU				Sn	**Sb**	**15 58 43.6**	**+1.1**
	32nm,0.3s,baz=215,slow=22,SNR=12						
KSRS	**Korea Array**	**6.46**	**329**	Pn	**Pn**	**15 59 30.0**	**+0.8**
	0.1nm,0.3s,baz=146,slow=14,SNR=4.2						
KSRS				LR	LR	16 02 09.2	
	comp=Z,35nm,20.8s,baz=180,slow=39						
MJAR	**Matsushiro Arr**	**6.76**	**46**	Pn	Pn	15 59 38.6	+5.3
	0.0nm,0.3s,baz=237,slow=14,SNR=1.6						
KLR	**Kul'dur**	**17.22**	**359**	P	**P**	**16 01 57.7**	**+1.8**
	0.2nm,0.3s,baz=185,slow=11,SNR=10.0						
SONM	**Songino Array**	**25.14**	**316**	P	**P**	**16 03 17.7**	**-1.3**
	0.4nm,0.8s,baz=117,slow=8.3,SNR=3.7						
SONM				LR	LR	16 14 14.9	
	comp=Z,41nm,18.0s,baz=173,slow=39						

*IDC **18** 16:19:56.6±11.0,21.66S×178.41W,h563km±86km, mb3.2/4,mb1 3.3/6,mb1mx2.9/29,mbtmp4.2/6,Error ellipse: s-maj=130.0km s-min=44.8km az=50.0*

ISC 18 16:20:00.6±4.5, 22.0S±0.4×178.6W±0.5, h600km, n6, σ0s95/7, mb3.9/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.87**	**267**	P	**P**	**16 22 58.5**	**+0.1**
	0.2nm,0.3s,baz=342,slow=11,SNR=1.7						
URZ	**Urewera**	**16.64**	**192**	P	**P**	**16 23 23.0**	**-0.6**
	0.7nm,0.3s,baz=121,slow=24,SNR=9.8						
CTA	**Charters Tower**	**32.82**	**267**	P	**P**	**16 25 45.7**	**-0.8**
	2.3nm,0.4s,baz=76,slow=8.3,SNR=2.2						
STKA	**Stephens Creek**	**36.66**	**246**	P	**P**	**16 26 19.4**	**+1.2**
	3.7nm,1.0s,baz=72,slow=9.6,SNR=3.6						
ASAR	**Alice Springs**	**43.65**	**258**	P	**P**	**16 27 14.0**	**+0.1**
	1.9nm,0.5s,baz=88,slow=8.0,SNR=59						
ASAR				PcP	**PcP**	**16 28 48.2**	**+0.7**
	0.4nm,0.7s,baz=118,slow=3.9,SNR=4.1						
WRA	**Warramunga Arr**	**43.86**	**264**	P	**P**	**16 27 14.7**	**-0.8**
	1.4nm,0.5s,baz=96,slow=8.4,SNR=32						

IDC 18 16:24:59.4±3.3, 6.86S×131.94E, h0km, mb3.6/1, mb1 3.4/3, mb1mx3.2/22, mbtmp3.3/3, ML3.2/2, Error ellipse: s-maj=211.2km s-min=33.2km az=73.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.21**	**170**	Pn	Pn	16 28 07.9	-0.5
	0.1nm,0.3s,baz=351,slow=13,SNR=1.4						
WRA				Sn	Sn	16 30 26.9	-9.2
	0.4nm,0.3s,baz=337,slow=22,SNR=2.3						
ASAR	**Alice Springs**	**16.81**	**174**	Pn	Pn	16 28 56.9	+0.5
	0.1nm,0.3s,baz=359,slow=14,SNR=4.3						
ASAR				Sn	Sn	16 31 53.5	-10
	0.1nm,0.3s,baz=358,slow=28,SNR=4.9						
MKAR	**Makanchi Array**	**69.18**	**326**	P	P	16 36 07.9	0.0
	0.3nm,0.5s,baz=112,slow=7.6,SNR=7.1						

*ISN **18** 16:34:14.1±1.5,31.67N×48.37E,h21km±67km,ML2.8*
*TEH **18** 16:34:14.4,31.80N×48.31E,h11km,ML3.0*

ISC 18 16:34:15.4±1.0, 31.75N±0.04×48.30E±0.04, h10km, n28, σ0s88/32, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AHWZ	**Ahwaz**	**0.51**	**145**	*e*Pg	**Pg**	**16 34 25.1**	**-0.3**
AHWZ				*e*Sg	**Sb**	**16 34 33.6**	**-0.4**
SHGR	**Shooshtar-Gavs**	**0.55**	**50**	*e*Pg	**Pg**	**16 34 24.7**	**-1.4**
DHL1	**Dehloran**	**1.27**	**317**	*e*Pg	**Pn**	**16 34 38.5**	**-0.6**
IKFM	**Kafar-mosalman**	**1.81**	**348**	*e*Pg	**Pn**	**16 34 48.0**	**+1.5**
NSR	**Nassriya**	**1.99**	**249**	*e*Pg	**Pn**	**16 34 49.0**	**-0.1**
NSR				*e*Sg	**Sn**	**16 35 13.0**	**-1.0**
NSR				AML	AML	16 35 22.4	
	comp=E,352nm,0.2s						
IDOB	**Doab**	**2.03**	**357**	*e*Pn	**Pn**	**16 34 50.6**	**+0.7**
IPIR	**Pirpir**	**2.38**	**66**	*e*Pn	**Pn**	**16 34 56.0**	**+1.2**
IPIR				*e*		16 34 58.5	
	comp=Z,708nm,0.3s						
IBDR	**Badra**	**2.42**	**305**	*e*Pn	**Pn**	**16 34 55.0**	**+0.1**
IBDR				Sn	**Sn**	**16 35 26.0**	**+1.4**
IBDR				AML	AML	16 35 32.3	
	comp=E,36nm,0.3s						
IBDR				AML	AML	16 35 38.1	
	comp=N,41nm,0.3s						
KHMZ	**Khomeyn**	**2.42**	**35**	*e*Pn	**Pn**	**16 34 55.2**	**-0.1**
HSAM	**Samen**	**2.46**	**6**	*e*Pn	**Pn**	**16 34 55.8**	**-0.1**
KLNJ	**Kolanjah**	**2.91**	**104**	*e*Pn	**Pn**	**16 35 02.9**	**+0.8**
IALM	**Almabolaq**	**3.10**	**358**	*e*Pn	**Pn**	**16 35 05.6**	**+1.0**
ASAO	**Ashtian**	**3.14**	**27**	*e*Pn	**Pn**	**16 35 05.2**	**+0.1**
HAGD	**Aghdareh**	**3.14**	**13**	*e*Pn	**Pn**	**16 35 06.0**	**+0.9**
IKLH	**Kolahrood**	**3.18**	**60**	*e*		16 35 08.2	
	comp=Z,568nm,0.2s						
IKLH				*e*Pn	**Pn**	**16 35 06.6**	**+0.9**
IGAR	**Gharneh**	**3.24**	**77**	*e*		16 35 57.5	
	comp=Z,454nm,0.2s						
IGAR				*e*Pn	**Pn**	**16 35 06.7**	**+0.2**
QAM	**Ghamsar**	**3.32**	**52**	*e*Pn	**Pn**	**16 35 08.5**	**+1.0**
IDHR	**Dehrash**	**3.35**	**332**	*e*Pn	**Pn**	**16 35 08.1**	**+0.2**
SNGE	**Sanandaj**	**3.42**	**347**	*e*Pn	**Pn**	**16 35 08.7**	**-0.3**
IRAM	**Ramesheh**	**3.48**	**88**	*e*Pn	**Pn**	**16 35 10.5**	**+0.8**
IRAM				*e*		16 36 00.2	
	comp=Z,133nm,0.2s						
IZEF	**Zefreh**	**3.60**	**70**	*e*Pn	**Pn**	**16 35 11.3**	**-0.1**
IZEF				*e*		16 35 27.4	
	comp=Z,153nm,0.3s						
BHD	**Baghdad**	**3.64**	**296**	*e*Pn	**Pn**	**16 35 13.0**	**+1.2**
BHD				Sn	**Sn**	**16 35 56.0**	**+1.2**
BHD				AML	AML	16 36 07.9	
	comp=E,25nm,0.6s						
IQOM	**Qom**	**3.86**	**36**	*e*Pn	**Pn**	**16 35 15.7**	**+0.7**
IRAZ	**Razeghan**	**3.89**	**20**	*e*Pn	**Pn**	**16 35 16.9**	**+1.5**
KRSH	**Karshahi**	**3.91**	**55**	*e*Pn	**Pn**	**16 35 16.2**	**+0.5**
QABG	**Abgarm-Qazvin**	**4.09**	**15**	*e*Pn	**Pn**	**16 35 17.0**	**-1.1**
ISFB	**Sefidab**	**4.20**	**51**	*e*Pn	**Pn**	**16 35 19.2**	**-0.4**
ANAR	**Anarak**	**4.81**	**71**	*e*Pn	**Pn**	**16 35 28.2**	**+0.3**

*UPA **18** 16:40:07.1±0.8, 7.27N×78.42W, h8km±5km, MW4.1*
*RSNC **18** 16:40:07.9±1.0, 7.23N×78.38W, h22km±5km, ML2.9, Mw3.5*

ISC 18 16:40:06.4±1.6, 7.24N±0.04×78.44W±0.03, h12km±11km, n26, σ1s06/44, Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.63**	**98**	*e*P	**Pg**	**16 40 18.6**	**-0.1**
PTAC				*e*S	**Sg**	**16 40 26.9**	**-0.1**
UPD2	**Meteti**	**1.37**	**18**	*e*P	**Pn**	**16 40 30.8**	**-0.6**
UPD2				*e*S	**Sn**	**16 40 48.8**	**-0.7**
UPD2	**Meteti**	**1.37**	**18**	*e*P	**Pn**	**16 40 30.7**	**-0.7**
UPD2				*e*S	**Sn**	**16 40 48.5**	**-0.9**
UPD2				*i*		16 40 55.3	
	comp=Z,574nm,0.6s						
SOLC	**Bahia Solano**	**1.43**	**134**	*e*P	**Pn**	**16 40 31.3**	**-1.0**
SOLC				*e*S	**Sn**	**16 40 48.2**	**-2.9**
SOLC				*i*		16 41 06.1	
	comp=Z,100nm,0.3s						
CAPC	**Capurgana**	**1.76**	**38**	*e*P	**Pn**	**16 40 35.2**	**-1.5**
CAPC				*e*S	**Sn**	**16 40 57.2**	**-1.9**
CAPC				*i*		16 40 59.3	
	comp=Z,133nm,0.2s						
CAP2	**Capurgana**	**1.76**	**37**	*e*P	**Pn**	**16 40 36.2**	**-0.6**
CAP2				*e*S	**Sn**	**16 40 58.4**	**-0.9**
AZU	**Azuero**	**1.90**	**287**	*e*P	**Pn**	**16 40 38.6**	**-0.1**
AZU				*e*S	**Sn**	**16 41 03.3**	**+0.7**
AZU	**Azuero**	**1.90**	**287**	*e*P	**Pn**	**16 40 38.3**	**-0.4**
AZU				*e*S	**Sn**	**16 41 00.6**	**-2.0**
AZU				*i*		16 41 11.6	
	comp=Z,185nm,0.3s						
TABO3	**Taboga, Panama**	**1.90**	**325**	*e*P	**Pn**	**16 40 38.9**	**+0.2**
TABO3				*e*S	**Sn**	**16 41 03.2**	**+0.6**
CNTA3	**Canitas, Panam**	**2.02**	**347**	*e*S	**Sn**	**16 41 05.3**	**-0.3**
CHPO	**Chepo, Panama**	**2.03**	**341**	*e*S	**Sn**	**16 41 06.1**	**+0.2**
UPA	**Univ. de Panam**	**2.04**	**328**	*e*P	**Pn**	**16 40 41.0**	**+0.3**
UPA				*e*S	**Sn**	**16 41 06.5**	**+0.4**
UPA	**Univ. de Panam**	**2.04**	**328**	*e*S	**Sn**	**16 41 05.2**	**-1.0**
DBBC	**Dabeiba**	**2.22**	**95**	*e*P	**Pn**	**16 40 43.0**	**-0.2**
DBBC				*e*S	**Sb**	**16 41 14.6**	**+0.5**
BCIP	**Isla Barro Col**	**2.37**	**324**	*e*P	**Pn**	**16 40 45.7**	**+0.7**
BCIP				*e*S	**Sn**	**16 41 15.0**	**+0.9**
BCIP	**Isla Barro Col**	**2.37**	**324**	*e*P	**Pn**	**16 40 45.1**	**0.0**
BCIP				*e*S	**Sn**	**16 41 14.8**	**+0.7**
BCIP				*i*		16 41 23.4	
	comp=Z,57nm,0.7s						
LCBC	**Los crdobas,**	**2.61**	**52**	*e*S	**Sb**	**16 41 24.8**	**-0.3**
LCBC				*i*		16 41 33.8	
	comp=Z,38nm,0.5s						
CBOC	**Ciudad Bolivar**	**2.77**	**119**	*e*P	**Pn**	**16 40 50.4**	**-0.4**
UREC	**San Jos de Ur**	**2.93**	**80**	*e*P	**Pn**	**16 40 53.0**	**+0.2**
HELC	**Santa Helena**	**3.07**	**110**	*e*P	**Pn**	**16 40 56.5**	**+1.4**
HELC				*e*S	**Sn**	**16 41 32.6**	**+0.6**
HELC	**Santa Helena**	**3.07**	**110**	*e*P	**Pn**	**16 40 55.8**	**+0.7**
MOTC	**Monteria, Cord**	**3.15**	**61**	*e*P	**Pn**	**16 40 56.3**	**+0.5**
MOTC				*e*S	**Sn**	**16 41 35.9**	**+2.6**
MOTC				*i*		16 41 40.9	
	comp=Z,20nm,0.6s						
ZARC	**Zaragoza, Cauc**	**3.56**	**86**	*e*P	**Pn**	**16 41 02.3**	**+0.7**
ZARC				*e*S	**Sn**	**16 41 42.5**	**-1.1**
ZARC				*i*		16 41 51.2	
	comp=Z,22nm,0.6s						
GUY2C	**Guyana, Caldas**	**3.65**	**123**	*e*P	**Pn**	**16 41 04.5**	**+1.3**
GUY2C				*e*S	**Sb**	**16 41 56.1**	**+0.4**
GUY2C				*i*		16 42 03.3	
	comp=Z,16nm,0.7s						
PTBC	**PUERTO BERRIO,**	**4.01**	**100**	*e*P	**Pn**	**16 41 09.8**	**+2.0**
SJCC	**San Jacinto, C**	**4.17**	**50**	*e*P	**Pn**	**16 41 09.9**	**0.0**
SJCC				*e*S	**Sn**	**16 41 59.1**	**+0.4**

*BJI **18** 16:46:47.4±0.0, 36.67N×22.74E, h36km, mB4.9/29, mb4.8/43,Ms4.7/17,Ms7 4.3/11*

*PDG **18** 16:46:49.8±0.7, 36.53N×23.14E, h23km±1km, ML4.7/12, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*

*MED_RC **18** 16:46:49.0±0.5, 36.27N×23.10E, h26km±1km, MW4.8/27, Moment Tensor Solution. Body waves: s3,c3;Mantle waves: s27,c36; Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}0.50±.12; $M_{\theta\theta}$-1.45±.09; $M_{\phi\phi}$0.95±.08; $M_{r\theta}$-0.69±.17; $M_{r\phi}$ 1.82±.08; $M_{\theta f}$-0.41±.14; Best double couple: $M_0$2.35000×10^{16} NP1:ϕ_s162.00000°,δ68.00000°, λ170.00000°. NP2:ϕ_s255.00000°,δ80.00000°,λ22.00000°. Principal axes: T 2.2100, Plg22.0000°, Azm120.0000°; N 0.2800, Plg66.0000°, Azm278.0000°; P -2.4900, Plg8.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*HLW **18** 16:46:49.3, 36.66N×23.49E, h30km±44km, Md4.9, Ml5.2*

*ISK **18** 16:46:49.1, 36.52N×23.20E, h14km, ML4.7/16*

*ATH **18** 16:46:50.4, 36.48N×23.15E, h19km±4km, ML4.7/14, Error ellipse: s-maj=4.5km s-min=1.0km az=255.0*

*THE **18** 16:46:50.0, 36.49N×23.20E, h21km, Mw4.7, Fault plane solution: NP1:ϕ_s327.00000°, δ89.00000°, λ-17.00000°. NP2:ϕ_s237.00000°, δ88.00000°, λ-1.00000°., Stations used: VLI,VLX,ITM,IMMV,VAM*

*NEIC **18** 16:46:50.2±2.8, 36.50N±0.06×23.16E±0.06, h26km±4km, Error ellipse: s-maj=9.1km s-min=6.6km az=204.0*

*IDC **18** 16:46:50.1±2.1, 36.60N×23.15E, h27km±14km, mb4.4/41, mb1 4.4/50,mb1mx4.4/65,mbtmp4.5/50,ML3.9/8,MS3.9/21, Ms1 3.9/21,ms1mx3.7/42,Error ellipse: s-maj=9.5km s-min=8.1km az=102.0*

*NEIC **18** 16:46:51.8, 36.45N×23.15E, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.05; $M_{\theta\theta}$-1.28; $M_{\phi\phi}$ 1.23; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.88; $M_{\theta f}$-0.32; Fault plane solution: $M_0$1.57000×10^{16} NP1:ϕ_s151.81000°, δ80.50000°,λ171.63000°. NP2:ϕ_s243.20000°,δ81.75000°, λ9.61000°. Principal axes: T 1.5790, Plg13.0000°, Azm108.0000°; N -0.0245, Plg77.0000°, Azm283.0000°; P -1.5545, Plg1.0000°, Azm17.0000°;*

*MOS **18** 16:46:51.5±1.0, 36.60N×23.22E, h22km, mb4.9/37 Error ellipse: s-maj=4.3km s-min=2.3km az=89.7*

*GCMT **18** 16:46:51.3±0.3, 36.35N±0.02×23.06E±0.02, h18km±1km, MW4.9/88,Moment Tensor Solution. s19,c24; s88,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.94±.12; $M_{\theta\theta}$-1.47±.09; $M_{\phi\phi}$0.53±.09; $M_{r\theta}$-1.10±.24; $M_{\theta\phi}$ 1.88±.08; $M_{\theta f}$-0.12±.21; Best double couple: $M_0$2.46100×10^{16} NP1:ϕ_s163.00000°, δ56.00000°,λ164.00000°. NP2: ϕ_s262.00000°, δ77.00000°,λ35.00000°. Principal axes: T 2.1100, Plg34.0000°, Azm128.0000°; N 0.7000, Plg53.0000°, Azm280.0000°; P -2.8110, Plg14.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DDA **18** 16:46:52.0, 36.57N×23.23E, h48km±120km, MW4.6*

PYL S Sb 16 47 27.7 +0.6
PYL PYLOS 1.21 290 P Pb 16 47 11.8 -0.1
PYL S Sb 16 47 30.4 +3.2
comp=E,23µm,0.7s
IMMV Iera Moni Meta 1.23 147 P Pb 16 47 11.9 -0.3
IMMV S Sb 16 47 27.7 +0.2
IMMV AML AML 16 47 35.0
comp=E,91615µm,0.5s
IMMV AML AML 16 47 35.7
IMMV Iera Moni Meta 1.23 147 P Pn 16 47 11.5 +0.5
IMMV S Sb 16 47 27.4 -0.1
comp=E,74µm,0.5s
IMMV Iera Moni Meta 1.23 147 PN Pb 16 47 11.8 -0.3
IMMV SN Sb 16 47 29.5 +2.0
KNDR Palaiochora Ch 1.33 161 P Pn 16 47 12.2 -0.2
KNDR S Sn 16 47 29.8 +0.6
comp=E,40µm,0.4s
KNDR Palaiochora Ch 1.33 161 PN Pb 16 47 13.7 -0.1
KNDR SN Sb 16 47 31.8 +1.4
VAM Vamos 1.37 142 P Pb 16 47 14.1 -0.6
VAM AML AML 16 47 38.0
comp=E,91770µm,0.7s
VAM AML AML 16 47 38.1
comp=N,89699µm,0.3s
VAM Vamos 1.37 142 P Pn 16 47 13.8 +0.7
VAM Vamos 1.37 142 P Pn 16 47 13.8 +0.7
VLY Voula,Athens 1.45 20 P Pn 16 47 14.7 +0.6
VLY S Sb 16 47 35.8 +1.9
comp=N,17µm,0.5s
LOUT Loutraki 1.50 354 P Pb 16 47 16.0 -0.8
LTK Loutraki 1.53 354 P Pb 16 47 17.3 -0.1
LTK Loutraki 1.53 354 P Pb 16 47 16.7 -0.7
ATH Athens Observa 1.54 16 P Pb 16 47 16.7 -0.8
ATH AML AML 16 47 46.1
comp=E,20433µm,0.5s
ATH AML AML 16 47 46.3
comp=N,22690µm,0.5s
ATH Athens Observa 1.54 16 P Pb 16 47 16.5 -1.0
ATH Athens Observa 1.54 16 P Pb 16 47 16.5 -1.0
ATHU Athens Univers 1.55 18 P Pb 16 47 16.7 -0.9
ATHU AML AML 16 47 41.9
comp=N,7344µm,0.9s
ATHU AML AML 16 47 45.1
comp=E,5863µm,0.6s
ATHU Athens Univers 1.55 18 P Pn 16 47 16.5 +1.0
AMT Artemida-Makis 1.56 312 P Pb 16 47 18.5 +0.7
AMT S Sb 16 47 38.5 +1.3
comp=E,40µm,1.0s
PRNS Prines Rethymn 1.56 136 P Pn 16 47 15.8 +0.1
THAL Thalero 1.59 346 P Pn 16 47 17.1 +1.0
PTL Penteli 1.65 20 P Pb 16 47 18.1 -1.3
VILL Villia 1.67 4 P Pn 16 47 18.2 +1.0
DION Dionisos Attik 1.69 21 P Pn 16 47 18.8 +1.3
VIL2 Platees 1.72 3 P Pn 16 47 18.4 +0.6
VIL2 AML AML 16 47 49.8
comp=N,20418µm,0.7s
VIL2 AML AML 16 47 52.8
comp=E,35445µm,0.8s
KLV Kalavryta, Ach 1.75 333 P Pb 16 47 21.4 +0.3
KLV AML AML 16 47 56.1
comp=E,29946µm,0.8s
KLV AML AML 16 47 57.3
comp=N,32539µm,0.9s
KLV Kalavryta, Ach 1.75 333 P Pn 16 47 19.5 +1.2
KLV S Sb 16 47 42.6 0.0
comp=N,16µm,0.9s
SAP3 Santorini-Thir 1.76 91 P Pb 16 47 19.9 -1.3
SNT5 Nea Kammeni, S 1.80 92 P Pb 16 47 20.5 -1.4
GVDS Gavdos 1.81 155 P Pb 16 47 21.9 -0.2
GVDS Gavdos 1.81 155 PN Pb 16 47 21.2 -0.9
GVD Gavdhos 1.81 155 P Pb 16 47 22.0 -0.2
GVD Gavdhos 1.81 155 PN Pb 16 47 21.2 -1.0
THT2 Imerovigli 1.82 91 PN Pn 16 47 20.6 +1.4
SNT1 Gialos, Santor 1.83 92 P Pn 16 47 20.8 +1.5
KARY Karystos 1.84 33 P Pn 16 47 20.4 +0.9
KARY S Sb 16 47 43.7 -1.5
comp=N,6µm,0.8s
IDI Anoyia 1.85 130 Pn Pn 16 47 19.8 +0.2
comp=N,201nm,0.3s,baz=278,slow=11,SNR=239
IDI Sn Sn 16 47 42.9 +0.7
comp=N,684nm,0.3s,baz=266,slow=19,SNR=5.9
IDI Anoyia 1.85 130 P Pn 16 47 19.8 +0.2
IDI Anoyia 1.85 130 ⇑P Pn 16 47 19.8 +0.2
IDI Anoyia 1.85 130 PN Pn 16 47 21.2 +1.6
IDI Anoyia 1.85 130 Pn Pn 16 47 19.7 0.0
SANT Santorini 1.85 93 P Pn 16 47 21.2 +1.5
SANT Santorini 1.85 93 ⇑P Pn 16 47 21.2 +1.5
SANT ⇑S Sn 16 47 43.8 +1.5
SANT Santorini 1.85 93 *i* P Pn 16 47 20.9 +1.2
SANT Santorini 1.85 93 PN Pn 16 47 21.2 +1.5
SANT Santorini 1.85 93 Pn Pn 16 47 21.2 +1.5
DRO Drossia 1.86 322 P Pb 16 47 22.7 -0.3
DRO S Sb 16 47 46.5 +0.6
comp=N,42µm,1.0s
HRKL Herakleio 1.97 126 P Pn 16 47 22.0 +0.8
HRKL Herakleio 1.97 126 PN Pn 16 47 22.6 +1.4
LAKA Lakka 1.98 332 P Pn 16 47 22.9 +1.4
APE Apeiranthos 1.98 72 P Pn 16 47 22.7 +1.2
APE S Sn 16 47 46.9 +1.4
comp=N,6µm,0.7s
APE Apeiranthos 1.98 72 ⇑P Pn 16 47 22.7 +1.2
APE Apeiranthos 1.98 72 *i* P Pn 16 47 22.6 +1.0
APE *i* S Sn 16 47 46.3 +0.8
APE Apeiranthos 1.98 72 *c i* P Pn 16 47 22.5 +1.0
APE Apeiranthos 1.98 72 PN Pn 16 47 22.9 +1.4
SIVA Sivas 1.99 137 P Pn 16 47 22.8 +1.3
EREA Eretria 2.02 17 P Pn 16 47 23.4 +1.4
EREA S Sb 16 47 48.6 -1.7
comp=N,5µm,0.8s
TRIZ Trizonia 2.06 335 P Pn 16 47 23.7 +1.2
KALE Kalithea 2.06 337 P Pn 16 47 23.7 +1.1
LKR Lokris 2.16 357 P Pn 16 47 24.9 +1.1
ATAL Atalanti 2.20 357 P Pn 16 47 25.5 +1.1
LTHK Lithakia 2.22 304 P Pb 16 47 27.1 -2.0
KYMI Kymi, Euboea I 2.26 19 P Pn 16 47 26.6 +1.3
AXAR Agios Charalam 2.30 350 P Pn 16 47 27.2 +1.3
ANX Ano Chora 2.32 335 P Pn 16 47 27.7 +1.5
NPS Neapolis 2.34 121 P Pn 16 47 27.0 +0.7
NPS Neapolis 2.34 121 P Pn 16 47 27.0 +0.7
VLMS Volimes, Zakyn 2.43 305 P Pb 16 47 30.1 -2.5
FRMA Ierapetra Chan 2.56 125 P Pb 16 47 32.4 -2.4
AGG Agios Georgios 2.61 346 P Pn 16 47 31.6 +1.5
AGG Agios Georgios 2.61 346 *i* P Pn 16 47 31.9 +1.7
AGG Agios Georgios 2.61 346 P Pn 16 47 31.8 +1.7
AGG Agios Georgios 2.61 346 PN Pn 16 47 31.8 +1.7
AGG Agios Georgios 2.61 346 Pn Pn 16 47 31.8 +1.7
SKY Skiros Island 2.62 24 P Pn 16 47 31.5 +1.3
MAKR Makrakomi, Fth 2.65 342 P Pn 16 47 32.5 +1.9
EVR Evrytania 2.65 336 P Pn 16 47 32.2 +1.5
VLS Valsamata 2.65 310 P Pn 16 47 33.1 +2.4
STIA Sitia Lasithi 2.70 118 P Pn 16 47 31.7 +0.3
KEF5 Kardakata, Kep 2.79 310 P Pb 16 47 35.7 -3.1
NEO Neokhori 2.81 1 P Pn 16 47 34.1 +1.3
KEF3 Kipouria, Keph 2.82 308 P Pn 16 47 35.7 +2.8
ZKR Zakros 2.84 118 P Pn 16 47 34.8 +1.6
ZKR Zakros 2.84 118 PN Pn 16 47 35.1 +1.9
FSK Fiskardo 2.85 314 P Pn 16 47 36.3 +2.9
XOR Xorichti 2.87 0 P Pn 16 47 34.8 +1.1
CHOS Chios island 2.98 50 P Pn 16 47 36.5 +1.3
CHOS Chios island 2.98 50 PN Pn 16 47 36.4 +1.3
LKD2 Lefkada island 3.04 320 P Pb 16 47 39.8 -3.2
LKD2 Lefkada island 3.04 320 P Pb 16 47 40.5 -2.5
baz=313
LKD2 S Sn 16 48 11.1 -0.4
baz=313
KOSK Kos Island 3.08 84 PN Pn 16 47 38.7 +2.2
SMG Samos 3.18 66 P Pn 16 47 39.0 +1.1
THL Klokotos Trika 3.20 344 P Pn 16 47 39.3 +1.2
NIS1 Nisyros Isl. 3.23 87 PN Pn 16 47 40.9 +2.2
URLA Izmir 3.31 55 *i* P Pn 16 47 40.1 +0.5
URLA IAML 16 47 57.0
comp=E,2.1nm,0.0s
URLA *i* S Sn 16 48 17.6 -0.5
URLA IAML 16 48 19.0
comp=N,794nm,0.5s
URLA Izmir 3.31 55 PN Pn 16 47 40.3 +0.6
DGB zmir 3.35 61 *i* P Pn 16 47 41.3 +1.1
DGB IAML 16 48 14.0
comp=E,0.5nm,0.1s
DGB *i* S Sn 16 48 18.1 -1.0
DGB IAML 16 48 19.0
comp=N,844nm,0.9s

KARP Karpathos 3.37 105 PN Pn 16 47 42.6 +2.0
KARP Karpathos 3.37 105 Pn Pn 16 47 42.4 +1.8
BODT Bodrum 3.38 79 P Pn 16 47 41.8 +1.2
BODT Bodrum 3.38 79 PN Pn 16 47 42.5 +1.9
DDIM Aydin, Didim 3.40 72 *i* P Pb 16 47 51.6 +2.4
SIGR SIGRI 3.45 37 P Pn 16 47 42.6 +1.0
SIGR SIGRI 3.45 37 PN Pn 16 47 42.9 +1.3
PAIG Paliouri 3.45 7 P Pn 16 47 42.6 +1.0
PAIG Paliouri 3.45 7 P Pn 16 47 42.6 +1.0
GCAM G?zelcaml? 3.47 68 *i* P Pb 16 47 57.6 +7.3
BDRM Kayabasi 3.48 79 *i* P Pn 16 47 44.0 +1.9
BDRM *i* P Pn 16 47 44.4 +2.3
BDRM *i* S Sn 16 48 22.0 -0.4
BDRM IAML 16 48 25.0
comp=N,505nm,0.7s
LIT Litokhoron 3.64 352 P Pn 16 47 45.6 +1.3
LIT Litokhoron 3.64 352 *i* P Pn 16 47 45.1 +0.9
LIT Litokhoron 3.64 352 P Pn 16 47 45.5 +1.3
LIT Litokhoron 3.64 352 Pn Pn 16 47 45.5 +1.2
PRK Paraskevi 3.69 41 P Pn 16 47 47.0 +2.1
LIA Limnos Island 3.75 24 P Pn 16 47 46.4 +0.6
IGT Igoumenitsa 3.77 324 P Pn 16 47 49.5 +3.5
IGT S Sn 16 48 29.4 -0.1
IGT Igoumenitsa 3.77 324 P Pn 16 47 49.6 +3.5
baz=320
IGT S Sn 16 48 29.4 -0.1
baz=320
KOCA Canakkale, Ayv 3.81 37 *i* P Pn 16 47 47.3 +0.7
PLG Polygyros 3.88 3 P Pn 16 47 48.6 +1.0
PLG Polygyros 3.88 3 P Pn 16 47 48.6 +1.0
OUR Ouranopolis 3.89 9 P Pn 16 47 48.9 +1.3
OUR Ouranopolis 3.89 9 P Pn 16 47 48.9 +1.3
DKL Dikili 3.92 48 PN Pn 16 47 50.5 +2.4
AYDN Tasoluk 3.94 71 *i* P Pn 16 47 50.5 +2.0
AYVA Ayvalik 3.96 44 *i* P Pn 16 47 49.4 +0.8
ZEDA zmir-Bergama 3.96 50 *i* P Pn 16 47 50.2 +1.5
ZEDA *i* S Sn 16 48 35.8 +1.5
ZEDA IAML 16 49 14.0
comp=E,140nm,0.7s
ARG Arkhangelos 4.01 92 P Pn 16 47 52.4 +3.0
ARG Arkhangelos 4.01 92 PN Pn 16 47 52.3 +2.9
BOZC Bozcaada 4.04 33 *i* P Pn 16 47 50.7 +0.9
TURN Turunc 4.09 85 *i* P Pn 16 47 53.3 +2.9
TURN Turunc 4.09 85 PN Pn 16 47 53.3 +2.9
THE Thessaloniki 4.13 358 P Pn 16 47 53.1 +2.1
EZN Ezine 4.16 36 P Pn 16 47 52.1 +0.8
YER Yerkesik 4.16 80 P Pn 16 47 55.0 +3.6
YER Yerkesik 4.16 80 PN Pn 16 47 53.9 +2.5
KEK Kerkira 4.17 321 P Pn 16 47 54.2 +2.7
LSK Leskovik 4.17 332 P Pn 16 47 56.5 +4.8
baz=329
LSK S Sb 16 48 50.2 -2.1
baz=329
LSK AMP
comp=E,12nm,1.3s,baz=329
BAYC CANAKKALE_Bayr 4.20 38 *i* P Pn 16 47 51.0 -0.9
SRN Sarande 4.20 325 P Pn 16 47 55.1 +3.2
baz=321
SRN S Sn 16 48 37.7 -2.4
baz=321
SRN AMP
comp=N,3.4nm,1.6s,baz=321
MULA Mugla, Merkez- 4.20 78 *i* P Pn 16 47 55.3 +3.2
ECEA Canakkale, Ece 4.26 33 *i* P Pn 16 47 53.8 +1.0
GOKA anakkale-Gk 4.27 29 *i* P Pn 16 47 53.2 +0.3
BUHA Balikesir, Bur 4.31 45 *i* P Pn 16 47 54.7 +1.3
SOH Sokhos 4.32 2 P Pn 16 47 55.4 +1.7
SOH Sokhos 4.32 2 P Pn 16 47 55.4 +1.7
AKHS Akhisar 4.39 56 *i* P Pn 16 47 54.9 +0.3
GRG Griva 4.50 353 P Pn 16 47 57.6 +1.6
FNA Florina 4.51 342 P Pn 16 47 58.5 +2.3
FNA Florina 4.51 342 P Pn 16 47 58.5 +2.3
baz=341
KBN Korca 4.53 336 P Pn 16 48 00.9 +4.4
KBN Korca 4.53 336 P Pn 16 48 00.9 +4.4
baz=334
KBN S Sn 16 48 45.5 -2.7
baz=334
STEP BALIKESIR_Sava 4.61 50 *i* P Pn 16 47 58.2 +0.6
KAVA Kavala 4.62 13 P Pn 16 47 58.4 +0.7
SRS Serrai 4.63 4 P Pn 16 47 58.7 +0.9
SRS Serrai 4.63 4 P Pn 16 47 58.7 +0.9
KNT Kendrikon 4.67 358 P Pn 16 48 00.4 +2.1
TAVA DENIZLI_Tavas 4.70 76 *i* P Pn 16 48 03.5 +4.6
BALY Balya 4.78 46 *i* P Pn 16 47 59.5 -0.5
CAVK Edirne/Enez-Ca 4.81 28 *i* P Pn 16 48 00.9 +0.6
VAY Valandovo 4.84 355 P Pn 16 48 02.7 +2.0
VAY Valandovo 4.84 355 *i* Pn Pn 16 48 02.9 +2.1
BALB Balikesir 4.87 48 PN Pn 16 48 03.8 +2.7
NVR Nevrokopi 4.88 6 P Pn 16 48 02.4 +1.1
VLO Vlora 4.90 325 P Pn 16 48 05.4 +3.8
baz=322
ALN Alexandroupoli 4.94 26 *i* P Pn 16 48 01.5 -0.6
ALN Alexandroupoli 4.94 26 P Pn 16 48 02.5 +0.4
ALN pmax pmax
comp=Z,314nm,1.0s
OHR Ohrid 4.97 339 *i* Pn Pn 16 48 07.6 +5.0
CAEL Denizli, Camel 4.98 81 *i* P Pn 16 48 08.6 +5.8
MMB Musomiste 5.11 5 P Pn 16 48 04.9 +0.5
KESN Edirne-Kesan 5.12 31 *i* P Pn 16 48 05.3 +0.4
SCTE Santa Cesarea 5.14 315 Pn Pn 16 48 07.0 +2.1
SCTE Santa Cesarea 5.14 315 P Pn 16 48 08.0 +3.1
baz=311
SCTE S Sn 16 49 03.8 +0.5
baz=311
USAK Uak-Merkez 5.15 63 *i* P Pn 16 48 07.0 +2.0
GOLH Golhisar 5.18 80 *i* P Pn 16 48 11.2 +5.6
AKAS Kas 5.20 91 *i* P Pn 16 48 08.2 +2.3
AKAS Kas 5.20 91 Pn Pn 16 48 08.1 +2.2
DURS Dursunbey 5.21 52 *i* P Pn 16 48 07.7 +1.7
DURS *i* S Sn 16 49 04.6 -0.7
DURS IAML 16 49 05.0
comp=N,120nm,0.4s
DURS IAML 16 49 09.0
comp=E,146nm,0.5s
SLUM Salum 5.27 161 P Pn 16 48 07.8 +1.1
baz=164
SLUM AMP 16 49 00.0
baz=164
SLUM S Sn 16 49 03.8 -2.7
baz=164
RZN Rozhen 5.33 13 P Pn 16 48 08.5 +0.9
EDC Edincik 5.33 42 P Pn 16 48 08.5 +1.1
KKB Krupnik 5.37 359 P Pn 16 48 09.7 +1.7
ELL Elmali 5.43 85 P Pn 16 48 14.0 +5.0
KDZ Kurdzhali 5.44 18 P Pn 16 48 10.1 +1.1
TIR Tirane 5.49 333 ⇑P Pn 16 48 10.7 +1.0
TIR Tirane 5.49 333 P Pn 16 48 10.6 +1.0
TIR Tirane 5.49 333 P Pn 16 48 12.9 +3.3
baz=331
PHP Peshkopia 5.60 339 P Pn 16 48 15.0 +3.8
baz=337
SKO Skopje 5.63 347 P Pn 16 48 18.3 +6.7
SKO pmax pmax
comp=Z,64nm,1.1s
SKO Skopje 5.63 347 *e* Pn Pn 16 48 17.8 +6.2
PLD Plovdiv 5.73 12 P Pn 16 48 15.5 +2.6
PLD pmax pmax
comp=Z,24nm,1.3s
TIP Timpagrande 5.74 300 ⇑P Pn 16 48 14.6 +1.5
TIP Timpagrande 5.74 300 Pn Pn 16 48 14.6 +1.5
AKUM Antalya-Kumluc 5.79 90 *i* P Pn 16 48 15.8 +2.0
AKUM *i* S Sn 16 48 16.9 -2.4
AKUM IAML 16 49 36.0
comp=E,189nm,0.6s
KORT Korkueli 5.79 83 *i* P Pn 16 48 19.2 +5.2
DIM Dimitrovgrad 5.84 18 P Pn 16 48 15.6 +1.1
BUCA Burdur, Bucak- 5.98 80 *i* P Pn 16 48 21.8 +5.2
ISP Isparta 6.02 75 P Pn 16 48 19.4 +2.3
ISP Isparta 6.02 75 Pn 16 48 19.4 +2.3
CEL Celeste 6.05 289 Pn Pn 16 48 18.4 +1.0
PUK Puka 6.09 336 P Pn 16 48 20.6 +2.6
baz=335
PUK S Sn 16 49 27.8 +0.9
baz=335
PUK AMP
comp=N,1.6nm,0.6s,baz=335
PGB Panagyurishte 6.10 7 P Pn 16 48 19.4 +1.3
VTS Vitosha 6.12 0 ⇓P Pn 16 48 20.4 +1.9
VTS Vitosha 6.12 0 P Pn 16 48 20.3 +1.9
VTS Vitosha 6.12 0 Pn 16 48 20.3 +1.9
MATC Matruh 6.15 145 P Pn 16 48 19.9 +1.2
baz=148
MATC AMP 16 49 00.0
baz=148
VIZE Kirklareli, Vi 6.25 34 *i* P Pn 16 48 20.2 +0.2
ULC Ulcinj 6.25 332 P Pn 16 48 22.7 +2.6
ULC S Sn 16 49 31.0 +0.3
ULC Ulcinj 6.25 332 *e* Pn Pn 16 48 21.8 +1.7
ULC *i* Sn Sn 16 49 28.2 -2.5
BAGO Egridir - ISPA 6.26 74 *i* P Pn 16 48 20.2 -0.1
ARMN Kirklareli, Me 6.30 30 *i* P Pn 16 48 20.8 -0.1
BCI Bajram Curri 6.33 339 P Pn 16 48 23.6 +2.3
baz=338
BILE Bilecik/Merkez 6.42 53 *i* P Pn 16 48 24.6 +2.1
DRME Dracevica, Mon 6.47 333 *e* Pn Pn 16 48 23.8 +0.7
DRME Dracevica, Mon 6.47 333 ⇓ *i* Pn Pn 16 48 24.7 +1.6
DRME *i* Sn Sn 16 49 33.3 -2.7
MATE Matera 6.54 311 ⇓P Pn 16 48 25.8 +1.7
PVY Plav 6.58 339 *e* Pn Pn 16 48 26.2 +1.5
PVY *i* Sn Sn 16 49 35.9 -3.0
PDG Podgorica 6.65 334 ⇑P Pn 16 48 27.1 +1.5
PDG Podgorica 6.65 334 *e* Pn Pn 16 48 27.2 +1.6
PDG Podgorica 6.65 334 Pn 16 48 27.6 +2.0
TTG Podgorica 6.65 334 P Pn 16 48 27.6 +2.0
TTG S Sn 16 49 40.0 -0.6
TTG Podgorica 6.65 334 *e* Pn Pn 16 48 27.3 +1.6
TTG *i* Sn Sn 16 49 37.8 -2.8
YVAC Isparta, Yalva 6.67 72 *i* P Pn 16 48 29.0 +3.0
KEPZ Antalya-Kepez 6.79 84 *i* P Pn 16 48 31.2 +3.6
KEPZ *i* S Sn 16 49 48.3 +4.2
KEPZ IAML 16 49 58.0
comp=E,135nm,1.2s
IVA Berane 6.85 339 ⇓ *i* Pn Pn 16 48 29.9 +1.5
IVA *i* Sn Sn 16 49 42.5 -3.0
CEME Cevo 6.88 333 ⇑ *i* Pn Pn 16 48 30.3 +1.5
CEME *i* Sn Sn 16 49 43.1 -3.1
SEDI Konya, Seydise 6.94 80 *i* P Pn 16 48 34.0 +4.2
KOME Kolasin 6.94 337 ⇑ *i* Pn Pn 16 48 31.2 +1.5
KOME *i* Sn Sn 16 49 44.7 -3.1
HCY Herceg Novi 6.96 330 P Pn 16 48 31.4 +1.6
HCY S Sn 16 49 48.0 0.0
HCY Herceg Novi 6.96 330 *e* Pn Pn 16 48 30.9 +1.1
HCY Herceg Novi 6.96 330 ⇑ *i* Pn Pn 16 48 31.4 +1.6
HCY *i* Sn Sn 16 49 45.1 -2.9
DOGA KONYA_Doganhis 6.97 74 *i* P Pn 16 48 34.0 +3.9
PLVB Pleven 6.97 9 ⇑P Pn 16 48 32.1 +2.1
NKME Niksic 7.06 334 ⇑ *i* Pn Pn 16 48 32.8 +1.6
NKME *i* Sn Sn 16 49 47.4 -3.2
VAE Valguarnera 7.08 281 Pn Pn 16 48 31.1 -0.3
comp=E,4.1nm,0.3s,baz=190,slow=3.2,SNR=14
VAE Sn Sn 16 49 50.0 -1.1
comp=E,14nm,0.3s,baz=188,slow=17,SNR=1.8
RAFF Raffo Rosso 7.09 278 Pn 16 48 32.0 +0.2
BOVS Bovan 7.22 352 ⇓P Pn 16 48 35.3 +1.9
TREB Trebinje 7.24 331 *e* Pn Pn 16 48 33.8 +0.1
BRY Bratogost 7.33 332 P Pn 16 48 36.9 +2.0
BRY S Sn 16 49 56.0 -1.3
BRY Bratogost 7.33 332 *e* Pn Pn 16 48 37.0 +2.0
BRY Bratogost 7.33 332 ⇓ *i* Pn Pn 16 48 36.4 +1.4
BRY *i* Sn Sn 16 49 53.9 -3.4
GAZI Gazipasa 7.39 89 *i* P Pn 16 48 37.3 +1.5
PLE Pljevlja 7.42 338 P Pn 16 48 38.0 +1.8
PLE S Sn 16 49 58.0 -1.5
PLE Pljevlja 7.42 338 ⇓ *i* Pn Pn 16 48 37.6 +1.4
PLE *i* Sn Sn 16 49 56.0 -3.5
PRD Provadia 7.45 25 P Pn 16 48 37.2 +0.7
UPM Unac-Piva 7.46 335 *e* Pn Pn 16 48 39.1 +2.3
UPM Unac-Piva 7.46 335 ⇓ *i* Pn Pn 16 48 38.2 +1.4
UPM *i* Sn Sn 16 49 57.0 -3.6
AVR AVREN 7.47 26 P Pn 16 48 40.4 +3.6
SWA2 7.48 164 P Pn 16 48 37.6 +0.5
baz=166
SWA2 AMP 16 50 00.0
baz=166
SGRT San Giovanni R 7.80 315 Pn Pn 16 48 42.8 +1.3
BBLS Lazići 7.91 340 *e* Pn Pn 16 48 43.8 +0.9
DIVS Divibare 7.97 343 *e* Pn Pn 16 48 44.4 +0.6
DIVS Divibare 7.97 343 Pn 16 48 44.6 +0.8
LEF Lefka 8.02 97 ⇓P Pn 16 48 44.5 +0.1
CLTB Caltabellotta 8.03 281 Pn 16 48 46.3 +1.6
PAOL Paolisi 8.10 307 Pn 16 48 47.9 +2.3
HUMR Humele 8.14 9 ⇑P Pn 16 48 47.8 +1.7
HAPS Han Pijesak,Bl 8.24 338 *e* Pn Pn 16 48 47.3 -0.2
ANTO Ankara 8.30 63 P Pn 16 48 51.9 +3.6
ANTO Ankara 8.30 63 Pn 16 48 51.9 +3.6
MDVR Moldovita 8.35 353 ⇑P Pn 16 48 51.1 +2.1
HERR Herculane 8.40 356 ⇑P Pn 16 48 50.8 +1.2
CSS Mathiatis 8.41 97 Pn 16 48 50.8 +1.1
SULR 8.51 15 ⇓P Pn 16 48 52.0 +1.0
TEKS Tekeris 8.51 342 *e* Pn Pn 16 48 51.9 +0.8
BR131 Keskin Array S 8.86 66 *i* P Pn 16 49 00.3 +4.2
BRTR Keskin Array B 8.86 66 Pn Pn 16 48 59.5 +3.4
comp=E,1.0nm,0.3s,baz=257,slow=11,SNR=21
BRTR LR LR 16 52 58.3
comp=E,681nm,18.5s,baz=260,slow=42
GZR Gura Zlata 8.89 358 ⇑P Pn 16 48 57.9 +1.5
TIRR Tirgusor 8.90 25 P Pn 16 48 57.6 +1.2
TIRR Tirgusor 8.90 25 Pn 16 48 57.6 +1.2
ARR Arges 8.93 7 ⇑P Pn 16 48 58.5 +1.6
LOT Lotru 8.96 3 ⇑P Pn 16 48 58.7 +1.4
ISR Istrita 8.99 15 ⇑P Pn 16 48 59.7 +2.0
ISR Istrita 8.99 15 P Pn 16 49 00.7 +3.0
ISR pmax pmax
comp=Z,136nm,1.1s
FRGS Fruska Gora 9.02 345 *e* Pn Pn 16 48 58.9 +0.8
VOIR 9.05 8 ⇑P Pn 16 49 00.4 +1.8
VOIR 9.05 8 P Pn 16 49 00.5 +2.0
VOIR pmax pmax
comp=Z,71nm,1.1s
INTR Introdacqua 9.05 310 Pn Pn 16 49 01.2 +2.6
MGRS Mrkonjic Grad 9.17 332 *e* Pn Pn 16 49 01.9 +1.8
BZS Buzias 9.19 353 ⇑P Pn 16 49 02.1 +1.7
BZS Buzias 9.19 353 P Pn 16 49 02.8 +2.4
BZS pmax pmax
comp=Z,39nm,0.9s
MLR Muntele Rosu 9.23 12 Pn Pn 16 48 59.4 -1.6
comp=Z,0.8nm,0.3s,baz=181,slow=10,SNR=34
MLR LR LR 16 53 20.0
comp=Z,700nm,21.1s,baz=198,slow=43
MLR Muntele Rosu 9.23 12 ⇑P Pn 16 49 02.7 +1.6
MLR Muntele Rosu 9.23 12 P Pn 16 49 03.8 +2.7
MLR Muntele Rosu 9.23 12 Pn 16 49 03.8 +2.7
HMYD Mayadein 9.25 134 P Pn 16 49 00.7 -0.6
baz=136
TPGR Topolog 9.26 24 ⇑P Pn 16 49 01.8 +0.5
HNAT Natroun 9.27 135 P Pn 16 49 01.0 -0.5
baz=137
HNAT S Sn 16 50 37.5 -7.4
baz=137
HNAT AMP 16 51 00.0
baz=137
DEV Deva 9.38 359 P Pn 16 49 07.4 +4.4
DEV pmax pmax
comp=Z,58nm,1.1s
BLY Banja Luka 9.41 333 *e* Pn Pn 16 49 02.7 -0.8
CFR Carcaliu 9.46 22 ⇑P Pn 16 49 05.2 +1.2
CFR Carcaliu 9.46 22 P Pn 16 49 05.9 +1.9
CFR pmax pmax
comp=Z,26nm,0.8s
RYAN Fayoum 9.51 139 P Pn 16 49 03.6 -1.3
baz=141
RYAN AMP 16 51 00.0
baz=141
AQU L'Aquila 9.55 311 P Pn 16 49 08.3 +2.9
AQU L'Aquila 9.55 311 *e* Pn Pn 16 49 09.1 +3.7
AQU L'Aquila 9.55 311 Pn 16 49 08.3 +2.9
DOPR Dopca 9.61 9 ⇓P Pn 16 49 07.8 +1.6
TLCR 9.68 24 ⇑P Pn 16 49 08.0 +1.0
TLCR 9.68 24 P Pn 16 49 08.0 +1.0
PLOR Plostina 9.71 15 ⇑P Pn 16 49 09.1 +1.5
PLOR Plostina 9.71 15 P Pn 16 49 09.1 +1.5
VRI Vrincioaia 9.74 15 ⇓P Pn 16 49 09.2 +1.3
VRI Vrincioaia 9.74 15 P Pn 16 49 10.9 +2.9
VRI pmax pmax
comp=Z,60nm,1.0s
KOT Kottamia 9.77 130 P Pn 16 49 07.4 -1.1
baz=131
HSAF As Saff 9.82 132 P Pn 16 49 08.4 -0.8
baz=133
HHAG Hagoal 9.92 129 P Pn 16 49 10.5 0.0
baz=130
GLL Jalalah 9.95 131 P Pn 16 49 09.8 -1.1
baz=133
NRCA Norcia 10.00 312 Pn 16 49 15.3 +3.7

MORH Mrgy, Hungar 10.29 342 ⇑P **Pn 16 49 15.1 -0.3**
MORH Mrgy, Hungar 10.29 342 *e*Pn **Pn 16 49 14.7 -0.7**
DRGR 10.29 358 ⇑P **Pn 16 49 17.8 +2.2**
DRGR 10.29 358 P **Pn 16 49 18.2 +2.6**
DRGR pmax pmax
comp=Z,11nm,1.1s
TESR Tescani 10.34 14 ⇑P **Pn 16 49 17.3 +1.1**
NBNS Bani Suef 10.42 137 P **Pn 16 49 17.5 +0.2**
baz=138
DQRL Deir Qamar 10.54 102 *e*P **Pn 16 49 18.0 -1.0**
MURB Monte Urbino 10.60 313 **Pn 16 49 22.5 +2.7**
MMAI Mount Meron Ar 10.65 105 Pn **Pn 16 49 18.5 -2.0**
comp=Z,16nm,0.3s,baz=311,slow=12,SNR=82
MMAI Sn **Sn 16 51 11.7 -7.2**
comp=Z,14nm,0.3s,baz=276,slow=12,SNR=7.0
BIZ Bicaz 10.66 11 ⇑P **Pn 16 49 22.2 +1.6**
HWQ Hawqa 10.67 98 *e*P **Pn 16 49 20.5 -0.3**
QRWL Qaraoun 10.68 102 *e*P **Pn 16 49 19.2 -1.7**
LATE Laterza 10.69 308 Pn **Pn 16 49 23.9 +3.0**
RCY Rachaya 10.81 102 *e*P **Pn 16 49 21.2 -1.6**
CRES Cresnjev 10.98 330 *e*Pn **Pn 16 49 25.2 +0.3**
KEST Kesra 11.21 270 Pn **Pn 16 49 26.8 -1.4**
comp=Z,0.2nm,0.3s,baz=21,slow=2.8,SNR=7.6
KEST LR LR 16 54 42.9
comp=Z,243nm,20.1s,baz=358,slow=42
KEST Kesra 11.21 270 Pn **Pn 16 49 28.7 +0.5**
BURAR Bucovina Array 11.22 7 ⇑P **Pn 16 49 30.5 +2.2**
BURAR Bucovina Array 11.22 7 P **Pn 16 49 30.4 +2.2**
BURAR Bucovina Array 11.22 7 **Pn 16 49 31.0 +2.8**
MILM Milestii Mici 11.23 20 ⇑P **Pn 16 49 29.9 +1.5**
MILM Milestii Mici 11.23 20 P **Pn 16 49 29.9 +1.5**
BUR08 Bucovina Ar. S 11.24 7 **Pn 16 49 31.4 +2.7**
VSL Villasalto 11.29 290 **Pn 16 49 29.3 +0.2**
KIS Kishinev 11.31 20 *e*P **Pn 16 49 31.0 +1.6**
comp=Z,130nm,3.3s
KIS *e*LR LR 16 53 34.0
comp=Z,350nm,12.0s
KIS Kishinev 11.31 20 *e*P **Pn 16 49 31.0 +1.6**
KIS pmax pmax
comp=Z,130nm,3.3s
KIS MLR MLR
comp=Z,350nm,12.0s
CEY Cerknica 11.34 327 *e*Pn **Pn 16 49 29.9 0.0**
CASP Castiglione de 11.37 307 Pn **Pn 16 49 32.9 +2.6**
PSZ Piszkesteto 11.67 349 ⇑P **Pn 16 49 34.0 -0.4**
PSZ Piszkesteto 11.67 349 P **Pn 16 49 38.1 +3.7**
PSZ pmax pmax
comp=Z,21nm,0.8s
SOKA Soboth 11.85 332 *i* Pn **Pn 16 49 38.8 +1.9**
comp=Z,1.9nm,0.2s
SOKA *e*Sn **Sn 16 51 45.4 -2.9**
comp=Z,12nm,0.6s
OBKA Obir 11.90 330 *i* Pn **Pn 16 49 40.1 +2.5**
comp=Z,5.5nm,0.4s
OBKA *e*Sn **Sn 16 51 47.3 -2.2**
comp=Z,31nm,0.7s
EIL Elat 11.99 121 Pn **Pn 16 49 37.2 -1.7**
comp=Z,3.4nm,0.3s,baz=269,slow=2.5,SNR=50
EIL Sn Sn 16 51 41.1 -11
comp=Z,4.5nm,0.3s,baz=99,slow=21,SNR=2.6
UZH Uzhgorod 12.15 357 *e*P **Pn 16 49 44.0 +3.2**
UZH *e*S **Sn 16 51 57.0 +1.7**
UZH MLR MLR
comp=Z,1μm,12.0s
ARSA Arzberg 12.15 335 *e*Pn **Pn 16 49 43.9 +2.9**
comp=Z,6.9nm,0.6s
SORM Soroca 12.24 17 ⇑P **Pn 16 49 43.1 +0.9**
SORM Soroca 12.24 17 P **Pn 16 49 43.0 +0.9**
MALT Malatya 12.27 77 P **Pn 16 49 42.7 -0.1**
KMPD K-Podol'skiy 12.30 10 P **Pn 16 49 45.0 +2.0**
MYKA Terra Mystica 12.38 328 *i* Pn **Pn 16 49 45.6 +1.5**
comp=Z,2.4nm,0.3s
VYHS Vyhne 12.41 346 *e*P Pn 16 49 50.1 +5.7
VYHS *e* 16 52 05.0
VYHS Vyhne 12.41 346 *e*PN Pn 16 49 50.1 +5.7
VYHS Vyhne 12.41 346 *e*SN **Sn 16 52 05.0 +3.3**
CRVS Cervenica-Dubn 12.46 355 *e*P Pn 16 49 50.1 +4.9
CRVS Cervenica-Dubn 12.46 355 *e*PN Pn 16 49 50.1 +4.9
PGF Pioggiola 12.49 303 P **Pn 16 49 48.0 +2.3**
PGF pmax pmax
comp=Z,76nm,1.2s
ZOU Zoufplan 12.61 326 **Pn 16 49 49.7 +2.2**
CONA Conrad Observa 12.63 337 *e*Pn **Pn 16 49 51.4 +3.8**
comp=Z,2.5nm,0.4s
MODS Modra-Piesok 12.64 342 *e*P **P 16 49 55.5 -3.2**
MODS Modra-Piesok 12.64 342 *e*PN **P 16 49 55.5 -3.2**
KBA Koelnbreinsper 12.85 328 *e*Pn **Pn 16 49 53.5 +2.8**
comp=Z,6.9nm,0.4s
KBA *e*Sn **Sn 16 52 10.2 -2.7**
comp=Z,9.1nm,0.6s
CTI Castel Tesino 12.88 321 P **Pn 16 49 50.9 0.0**
CTI Castel Tesino 12.88 321 **Pn 16 49 50.9 0.0**
ABTA Abfaltersbach 12.96 325 *e*Pn **Pn 16 49 52.6 +0.5**
comp=Z,12nm,0.6s
ABTA *e*Sn **Sn 16 52 11.8 -3.7**
comp=Z,34nm,0.9s
JAVC Velka Javorina 13.00 344 *e*PN **Pn 16 49 55.4 +2.9**
NIE Niedzica 13.09 352 *e*P **Pn 16 49 58.3 +4.6**
MOA Molln 13.12 333 *i* Pn **Pn 16 49 55.7 +1.6**
comp=Z,4.7nm,0.4s
MOA *e*Sn **Sn 16 52 18.2 -0.8**
comp=Z,9.5nm,0.7s
SALO Salr 13.18 318 Pn **Pn 16 49 55.5 +0.4**
LVV L'vov 13.33 2 *e*P **Pn 16 49 59.0 +1.9**
LVV *e*S **Sn 16 52 27.0 +2.7**
LVV MLR MLR
comp=Z,420nm,10.0s
KRUC Moravsky 13.50 341 *e*PN **Pn 16 50 02.6 +3.3**
ANN Anapa 13.63 48 *e*P Pn 16 49 54.4 -6.7
ANN *e*S **Sn 16 52 25.0 -6.6**
ANN pmax pmax
comp=Z,86nm,1.0s
ANN MLR MLR
comp=Z,406nm,18.0s
VRAC Vranov 13.67 342 Pn **Pn 16 50 01.3 -0.5**
comp=Z,0.1nm,0.3s,baz=111,slow=17,SNR=1.5
VRAC Vranov 13.67 342 ⇑P **Pn 16 50 04.1 +2.4**
VRAC Vranov 13.67 342 *e*PN **Pn 16 50 03.7 +2.0**
WTTA Wattenberg 13.75 325 *i* Pn **Pn 16 50 05.5 +2.6**
comp=Z,8.9nm,0.4s,SNR=6.4
WTTA *e*Sn **Sn 16 52 30.8 -4.0**
comp=Z,23nm,0.6s
WTTA Wattenberg 13.75 325 P **Pn 16 50 06.9 +4.0**
WTTA pmax pmax
comp=Z,46nm,1.0s
OKC Ostrava-Krasne 13.82 346 AMS AMS 16 57 50.0
comp=Z,600nm,13.7s
WATA Walderalm 13.83 325 *e*Pn **Pn 16 50 05.7 +1.7**
comp=Z,22nm,0.6s,SNR=13
WATA *e*Sn **Sn 16 52 32.1 -4.6**
comp=Z,26nm,0.9s
SQTA Sankt Quirin 13.92 324 *e*Pn **Pn 16 50 07.2 +2.0**
comp=Z,16nm,0.6s
SQTA *e*Sn **Sn 16 52 35.0 -3.9**
comp=Z,15nm,0.5s
CKRC Cesky Krumlov 13.92 335 *e*P **Pn 16 50 06.8 +1.7**
CKRC AMS AMS 16 56 40.0
comp=Z,900nm,13.2s
FETA Feichten 14.01 323 *i* Pn **Pn 16 50 09.2 +2.8**
comp=Z,18nm,0.8s
FETA *e*Sn **Sn 16 52 40.0 -1.0**
comp=Z,12nm,0.8s
MOTA Moosalm 14.06 324 *i* Pn **Pn 16 50 08.3 +1.2**
comp=Z,6.8nm,0.4s,SNR=9.8
MOTA *e*Sn **Sn 16 52 37.9 -4.3**
comp=Z,27nm,1.0s
GEC2 GERESS Array S 14.15 334 Pn **Pn 16 50 10.8 +2.4**
GERES GERESS Array B 14.15 334 Pn **Pn 16 50 09.3 +0.9**
comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=6.8
GERES Sn **Sn 16 52 41.3 -3.2**
comp=Z,0.3nm,0.3s,baz=163,slow=20,SNR=2.4
GERES LR LR 16 57 21.1
comp=Z,504nm,18.2s,baz=151,slow=45
GERES ScP **ScP 16 58 57.0 -1.1**
comp=Z,0.1nm,0.3s,baz=182,slow=2.9,SNR=4.1
DAVOX Davos/Dischmat 14.27 320 Pn **Pn 16 50 12.3 +2.2**
comp=Z,0.3nm,0.3s,baz=166,slow=15,SNR=4.7
DAVOX Sn **Sn 16 52 43.7 -3.8**
comp=Z,1.2nm,0.3s,baz=322,slow=14,SNR=6.1
RETA Reutte 14.32 324 *e*Pn **P 16 50 14.6 -2.9**
comp=Z,1.9nm,0.3s,SNR=6.8
RETA *e*Sn **Sn 16 52 44.4 -4.1**
comp=Z,12nm,0.7s
TUE Stuetta 14.35 318 Pn **Pn 16 50 12.7 +1.5**
KHC Kasperske Hory 14.44 334 *i* P **Pn 16 50 13.2 +1.0**
KHC Kasperske Hory 14.44 334 *e*P **Pn 16 50 14.1 +1.9**
KHC *e*pP P 16 50 25.5 +6.7
KHC AMS AMS 16 56 40.0
comp=Z,1μm,10.4s
ISO Isola 14.48 307 P **P 16 50 17.5 -1.7**
ISO pmax pmax
comp=Z,19nm,1.6s
LMR La Mourre 14.48 303 *e*P **P 16 50 16.5 -2.7**
LMR pmax pmax
comp=Z,39nm,1.2s
SOC Sochi 14.51 56 *e*P **Pn 16 50 15.9 +2.8**
SOC *e* 16 53 00.7
SOC pmax pmax
comp=Z,12nm,0.6s
SOC MLR MLR
comp=Z,333nm,14.0s
DAVA Damuels 14.61 322 *e*Pn **Pn 16 50 17.6 +3.0**
comp=Z,19nm,0.6s
DAVA *e*Sn **Sn 16 52 52.4 -3.4**
comp=Z,19nm,0.8s
DPC Dobruska-Polom 14.71 342 *e*P **P 16 50 19.2 -2.5**
DPC Dobruska-Polom 14.71 342 *e*P **P 16 50 19.2 -2.5**
WET Wettzell 14.71 332 P **P 16 50 22.8 +1.1**
WET pmax pmax
comp=Z,55nm,1.1s
PBCC Pribram 14.77 336 *e*P **P 16 50 20.4 -2.0**
AKASG Malin Array Be 14.86 15 Pn **Pn 16 50 16.9 -0.9**
comp=Z,1.2nm,0.3s,baz=202,slow=12,SNR=66
AKASG ScP **ScP 16 58 57.3 -1.8**
comp=Z,0.1nm,0.3s,baz=229,slow=1.7,SNR=4.5
AKASG Malin Array Be 14.86 15*c*e**P** **Pn 16 50 16.8 -1.0**
AKASG pmax pmax
comp=Z,39nm,0.9s
AKASG Malin Array Be 14.86 15 **Pn 16 50 20.2 +2.4**
AKBB Malin Array Si 14.86 15*d*e**P** **Pn 16 50 16.8 -1.0**
AKBB Malin Array Si 14.86 15 Pn **Pn 16 50 18.0 +0.3**
PRU Pruhonice 14.86 338 *e*P **P 16 50 22.4 -1.0**
PRU MLR MLR
comp=Z,600nm,13.7s
PRU Pruhonice 14.86 338 *e*P **P 16 50 22.4 -1.0**
PRU AMS AMS 16 57 00.0
comp=Z,600nm,13.7s
MBDF Montbardon 14.90 309 *e*P **P 16 50 21.7 -2.3**
MBDF pmax pmax
comp=Z,58nm,1.0s
OSTC Ostas 14.92 343 *e*P **P 16 50 25.2 +1.1**
OSTC AMS AMS 16 57 50.0
comp=Z,400nm,8.8s
UPC Upice 14.93 342 AMS AMS 16 57 20.0
comp=Z,500nm,13.8s
PRA Prague 14.97 338 *e*P **P 16 50 25.8 +1.2**
PRA Prague 14.97 338 *e*P **P 16 50 25.8 +1.2**
CHVC Chvalec 14.99 342 *e*P **P 16 50 25.9 +1.1**
BNI Bardonecchia 15.12 310 P **P 16 50 24.2 -2.2**
BNI pmax pmax
comp=Z,24nm,1.0s
KSP Ksiaz 15.17 343 *e*P **P 16 50 27.9 +1.1**
KSP Ksiaz 15.17 343 P **P 16 50 28.0 +1.2**
KSP pmax pmax
comp=Z,21nm,0.9s
LPG La Plagne 15.29 311 *e*P **P 16 50 27.9 -0.6**
LPG pmax pmax
comp=Z,14nm,0.8s
PVCC Panska Ves 15.34 339 *e*P **P 16 50 29.8 +1.2**
PVCC MLR MLR
comp=Z,600nm,13.4s
PVCC Panska Ves 15.34 339 *e*P **P 16 50 29.8 +1.2**
PVCC AMS AMS 16 57 20.0
comp=Z,600nm,13.4s
SENIN Lac Senin/Sane 15.43 315 **P 16 50 28.1 -1.8**
NKC Novy Kostel 15.77 334 P **P 16 50 35.2 +1.8**
NKC pmax pmax
comp=Z,14nm,1.0s
NKC Novy Kostel 15.77 334 AMS AMS 16 57 40.0
comp=Z,1μm,11.0s
BRG Berggiesshubel 15.83 338 P **P 16 50 34.9 +0.8**
BRG pmax pmax
comp=Z,59nm,1.0s
BRG Berggiesshubel 15.83 338⇑ *i*P **P 16 50 35.4 +1.3**
BRG Amp 16 50 36.3
comp=Z,31nm,0.9s
BRG *ex* x 16 50 39.0
BRG Amp 16 50 41.9
comp=Z,53nm,0.9s
BRG Amp 16 57 20.0
comp=N,0.7nm,12.7s
BRG Amp 16 57 21.0
comp=E,1.1nm,14.2s
BRG Amp 16 57 49.0
comp=Z,0.6nm,12.2s
STU Stuttgart 15.97 325 P **P 16 50 39.1 +3.4**
STU pmax pmax
comp=Z,50nm,0.8s
BFO Black Forest 16.09 322 P **Pn 16 50 33.3 -0.6**
BFO pmax pmax
comp=Z,26nm,1.0s
BFO Black Forest 16.09 322 **Pn 16 50 33.3 -0.6**
MOX Moxa 16.41 333 P **P 16 50 42.0 +1.5**
MOX pmax pmax
comp=Z,37nm,1.1s
CLL Collm 16.50 337 *i* P **P 16 50 43.3 +1.8**
comp=Z,100nm,1.0s
CLL *i* pP **pP 16 50 46.6 -2.1**
CLL *e*PP **sP 16 50 53.0 +1.1**
CLL Collm 16.50 337 *i* P **P 16 50 43.3 +1.8**
CLL pmax pmax
comp=Z,100nm,1.0s
CLL MLR MLR
comp=Z,400nm,23.9s
HINF Hinteralfeld 16.52 318 *e*P **Pn 16 50 40.2 +0.7**
HINF pmax pmax
comp=Z,151nm,1.7s
AKH Akhalkalaki 16.55 67 P **P 16 50 45.5 +3.2**
SHA1 Shidzhatmaz 16.55 58*d* i**P** **P 16 50 44.6 +2.2**
KIV Kislovodsk 16.64 57 *e*P **Pn 16 50 41.3 +0.2**
KIV *e*S **Sn 16 53 46.5 +1.4**
KIV pmax pmax
comp=Z,73nm,1.1s
KIV MLR MLR
comp=Z,342nm,13.0s
KIV Kislovodsk 16.64 57 **Pn 16 50 41.6 +0.5**
KVAR Kislovodsk Arr 16.65 57 Pn **P 16 50 44.6 +1.2**
baz=270,slow=20,SNR=2.4
CDF Champ du Feu 16.67 321 *e*P **P 16 50 44.5 +0.9**
CDF pmax pmax
comp=Z,21nm,1.0s
KBZ Khabaz 16.71 58 Pn **P 16 50 46.6 +2.7**
comp=Z,0.8nm,0.3s,baz=260,slow=9.9,SNR=34
KBZ Khabaz 16.71 58*c*e**P** **P 16 50 46.1 +2.2**
ONI Oni 16.77 63 P **P 16 50 50.5 +5.8**
HAU Haudompre 16.91 318 *e*P **P 16 50 45.3 -0.8**
HAU pmax pmax
comp=Z,129nm,1.5s
ZEI Tsey 17.14 62 *e*P **P 16 50 50.7 +1.7**
ZEI pmax pmax
comp=Z,27nm,1.0s
GOF Gofitskoye 17.28 54⇑ *e*P **P 16 50 52.1 +1.8**
GOF pmax pmax
comp=Z,14nm,0.6s
GNI Garni 17.31 71 P **P 16 50 50.5 -0.3**
comp=Z,0.5nm,0.3s,baz=309,slow=16,SNR=2.6
GNI Garni 17.31 71*c*e**P** **Pn 16 50 49.0 -0.6**
GNI pmax pmax
comp=Z,13nm,1.0s
GNI Garni 17.31 71 **Pn 16 50 49.2 -0.3**
GNI Garni 17.31 71 P **P 16 50 52.1 +1.3**
TNS Taunus Mts 17.36 327 P **P 16 50 53.4 +2.3**
TNS pmax pmax
comp=Z,46nm,1.1s
SUW Suwalki 17.52 0 *e*P **P 16 50 53.6 +0.8**
SUW Suwalki 17.52 0 *e*P **P 16 50 53.5 +0.7**
SUW Suwalki 17.52 0 P **Pn 16 50 51.6 -0.2**
SUW pmax pmax
comp=Z,149nm,1.3s
SUW Suwalki 17.52 0 **Pn 16 50 51.6 -0.2**
SUW IAmb IAmb 16 51 06.9
comp=Z,149nm,1.3s
LOR Lormes 17.91 313 *e*P **P 16 50 57.3 +0.1**
LOR pmax pmax
comp=Z,23nm,1.3s
AVF Avril sur Loir 17.98 311 *e*P **P 16 50 59.9 +1.9**
AVF pmax pmax
comp=Z,20nm,1.2s
CAF Calviac 18.04 304 *e*P **P 16 50 58.8 +0.1**
CAF pmax pmax
comp=Z,22nm,1.2s
WLF Walferdange 18.05 322 *d*Pn **Pn 16 50 58.2 -0.2**
BGF Bois d'Agland 18.19 310 *e*P **P 16 51 00.8 +0.6**
BGF pmax pmax
comp=Z,19nm,0.8s
MNK Minsk 18.30 9 *i* P **P 16 50 59.1 -2.3**
comp=E,3.0nm,0.9s
MNK *i* P **P 16 50 59.1 -2.3**
comp=N,89nm,1.3s
MNK *i* P **P 16 50 59.1 -2.3**
comp=Z,49nm,1.1s
MNK *i* PP **sP 16 51 10.7 -1.1**
MNK *i* S **Sn 16 54 22.6 -2.3**
MNK *i* SS **S 16 54 36.9 +7.7**
MNK *i* PcP **PcP 16 55 31.0 -1.3**
MNK *i* LQ LQ 16 56 26.9
MNK *i* LR LR 16 57 49.9
MNK *i* LRM MLR 16 59 09.7
comp=E,30nm,18.9s
MNK *i* LRM MLR 16 59 09.7
comp=N,207nm,18.9s
MNK *i* LRM MLR 16 59 09.7
comp=Z,256nm,16.3s
VORD Divnogorie 18.52 34 *e*P **Pn 16 51 04.4 +0.3**
VORD pmax pmax
comp=Z,90nm,1.0s
NACGM Naroch 18.58 7 *i* P **Pn 16 51 06.1 +1.3**
NACGM *i* P **Pn 16 51 06.1 +1.3**
NACGM *i* P **P 16 51 06.2 +1.8**
NACGM *i* PP **PnPn 16 51 20.8 +4.0**
NACGM *i* S **S 16 54 45.4 +11**
NACGM *i* SS SnSn 16 55 28.2 +43
NACGM *i* LQ LQ 16 56 58.5
NACGM *i* LR LR 16 58 27.6
GROC Groznyy 18.59 62 *e*P **Pn 16 51 07.9 +2.8**
GROC pmax pmax
comp=Z,56nm,1.1s
VSR Storozhevoye 18.64 33 *e*P **P 16 51 05.3 +0.2**
VSR *e*S **Sn 16 54 29.4 -3.7**
VSR pmax pmax
comp=Z,20nm,0.6s
VSR smax smax
comp=N,10.0nm,1.0s
VSR MLR MLR
comp=Z,520nm,12.0s
LGD Lagodekhi 18.65 66 P **Pn 16 51 10.3 +4.5**
BTNL Ternell 18.67 324 *d*x x 16 51 09.6
MEM Membach 18.74 324 *d*Pn **Pn 16 51 08.5 +1.7**
comp=Z,29nm,0.8s
MEM *d*P **pP 16 51 13.8 +0.3**
MEM Membach 18.74 324 P **Pn 16 51 10.3 +3.5**
MEM pmax pmax
comp=Z,45nm,0.8s
BUG Bochum--Univer 18.76 328 P **Pn 16 51 10.2 +3.2**
BUG pmax pmax
comp=Z,44nm,0.9s
IIGN Ignalina 18.98 5 *e*P **P 16 51 08.3 -0.5**
IDID Didziasalis 18.98 6 *e*P **P 16 51 08.3 -0.6**
PABE Paberze 19.02 1 *e*P **Pn 16 51 09.7 -0.4**
DOU Dourbes 19.10 321 *d*Pn **Pn 16 51 11.3 +0.2**
comp=Z,36nm,0.8s
DOU Dourbes 19.10 321 P **Pn 16 51 11.8 +0.7**
DOU pmax pmax
comp=Z,67nm,1.0s
BMRD Maredsous 19.14 322 *d*Pn **Pn 16 51 13.3 +1.6**
ISAL Salakas 19.19 5 *e*P **P 16 51 07.6 -3.5**
BAIF Baives 19.27 321 *e*P **Pn 16 51 14.4 +1.2**
BAIF pmax pmax
comp=Z,49nm,1.0s
ETSF Etsaut 19.31 297 *e*P **Pn 16 51 14.7 +0.8**
ETSF pmax pmax
comp=Z,18nm,0.9s
BSD Bornholm Skovb 19.46 346 *e*P **P 16 51 13.2 -0.9**
BSD Bornholm Skovb 19.46 346 *i* P **P 16 51 13.2 -0.9**
BSD IAmb IAmb 16 51 14.2
comp=Z,12nm,0.6s
BSD Bornholm Skovb 19.46 346 *i* P **P 16 51 13.2 -0.9**
BSD pmax pmax
comp=Z,12nm,0.6s
SNF Seneffe 19.51 322 *d*Pn **Pn 16 51 17.5 +1.4**
LPSR Galich'ya Gora 19.56 30 *e*P **P 16 51 15.2 0.0**
LPSR *e*S **S 16 54 51.0 -3.5**
LPSR pmax pmax
comp=Z,130nm,0.8s
LPSR smax smax
comp=N,50nm,1.1s
LPSR MLR MLR
comp=Z,320nm,11.0s
BSEG Bad Segeberg 19.59 337 P **Pn 16 51 16.3 -0.7**
BSEG pmax pmax
comp=Z,57nm,1.1s
MAK Makhachkala 19.77 63 *e*P **P 16 51 15.4 -2.1**
MAK *e*S **S 16 54 55.7 -3.1**
MAK pmax pmax
comp=Z,116nm,1.2s
MAK MLR MLR
comp=Z,305nm,16.0s
VRH Novokhopyorsk 19.80 36 *e*P **P 16 51 18.4 +0.6**
VRH *e*S **S 16 54 55.5 -3.8**
VRH pmax pmax
comp=Z,70nm,0.6s
VRH smax smax
comp=N,140nm,0.8s
VRH MLR MLR
comp=Z,160nm,13.0s
LUNU Lund 20.26 344 *i* P **P 16 51 22.1 -0.7**
LLD Lille Linde 20.28 342 *i* P **P 16 51 23.4 +0.4**
LLD Lille Linde 20.28 342 *i* P **P 16 51 23.3 +0.4**
BLEU Blekinge 20.43 348 *i* P **P 16 51 22.3 -2.3**
TAM Tamanrasset 20.49 233 P Pn 16 51 28.8 +0.9
TAM pmax pmax
comp=Z,11nm,1.1s
COP Copenhagen 20.54 343 *e*P **P 16 51 26.2 +0.4**
COP IAmb IAmb 16 51 28.1
comp=Z,27nm,0.8s
COP Copenhagen 20.54 343 *e*P **P 16 51 26.2 +0.4**
COP pmax pmax
comp=Z,27nm,0.8s
OBN Obninsk 20.77 22 P **P 16 51 27.0 -1.2**
comp=Z,13nm,0.7s,baz=172,slow=3.1,SNR=14
OBN Obninsk 20.77 22*d* i**P** **P 16 51 27.6 -0.7**
OBN *e* 16 51 43.9
OBN *e* 16 51 58.7
OBN *e*S **S 16 55 17.6 -1.0**
OBN pmax pmax
comp=Z,81nm,1.3s
OBN MLR MLR
comp=Z,325nm,15.0s
LDF La Druitiere 20.90 313 *e*P **P 16 51 29.8 0.0**
LDF pmax pmax
comp=Z,32nm,1.0s
DEL Delary 20.95 345 *i* P **P 16 51 29.6 -0.6**
FLN La Foliniere 21.18 313 *e*P **P 16 51 33.0 +0.1**
FLN pmax pmax
comp=Z,59nm,1.1s
GRR Gorron 21.25 312 *e*P **P 16 51 36.2 +2.7**
GRR pmax pmax
comp=Z,41nm,1.0s
ESBB Sonseca Array 21.56 287 P **P 16 51 39.0 +2.0**
ESDC Sonseca Array 21.56 287 P **P 16 51 37.9 +0.8**
comp=Z,14nm,1.0s,baz=82,slow=8.9,SNR=34
ESDC Sonseca Array 21.56 287 P **P 16 51 38.1 +1.1**
ESDC IAmb IAmb 16 51 49.3
comp=Z,35nm,1.1s
MOS Moscow 21.62 23 *e*P **P 16 51 33.8 -3.6**
MOS *e* 16 51 54.8
MOS *e*S **S 16 55 28.0 -7.4**
MOS pmax pmax
comp=Z,102nm,0.8s
MOS pmax pmax
comp=Z,100nm,0.9s
MOS MLR MLR
comp=Z,600nm,18.0s
FABU Falkenberg 21.68 344 *i* P **P 16 51 37.6 -0.4**
PAB San Pablo 21.86 286 P **P 16 51 40.5 +0.2**
PAB pmax pmax
comp=Z,31nm,1.2s
PAB San Pablo 21.86 286 P **P 16 51 40.5 +0.2**
MUD Monsted U'grnd 22.09 339 *e*P **P 16 51 42.5 +0.1**
MUD IAmb IAmb 16 51 51.0
comp=Z,49nm,0.6s
MUD Monsted U'grnd 22.09 339 *e*P **P 16 51 42.5 +0.1**
MUD pmax pmax
comp=Z,49nm,0.6s

VSU	**Vasula**	**22.11**	**5**	*eP*	**P**		**16 51 41.3**	**-1.3**
VSU	**Vasula**	**22.11**	**5**	*i* P	**P**		**16 51 41.1**	**-1.5**
VSU				pmax	pmax			
	comp=Z,78nm,0.8s							
ONAU	**Onsala**	**22.22**	**344**	*i* P	**P**		**16 51 42.8**	**-1.0**
ONAU				*i* P	**pP**		**16 51 43.3**	**-7.7**
MTSE	**Matsula**	**22.24**	**1**	*eP*	**P**		**16 51 42.7**	**-1.3**
BORU	**Boraas**	**22.25**	**345**	*i* P	**P**		**16 51 43.3**	**-0.9**
QUIF	**Quistinic**	**22.48**	**309**	*eP*	**P**		**16 51 46.8**	**0.0**
QUIF				pmax	pmax			
	comp=Z,177nm,1.7s							
GOET	**G??ttrup**	**22.57**	**340**	*i* P	**P**		**16 51 47.5**	**-0.1**
TJOU	**Tjoern**	**22.86**	**344**	*i* P	**P**		**16 51 49.3**	**-1.4**
MDT	**Midelt**	**23.11**	**269**	P	**P**		**16 51 52.7**	**-0.9**
	comp=Z,14nm,0.5s,baz=154,slow=4.3,SNR=14							
RAYN	**Ar Rayn**	**23.20**	**118**	P	**P**		**16 51 56.4**	**+1.9**
RAYN				pmax	pmax			
	comp=Z,24nm,1.1s							
RAYN	**Ar Rayn**	**23.20**	**118**	P	**P**		**16 51 56.4**	**+1.9**
RAYN				IAmb	IAmb		16 52 06.1	
	comp=Z,24nm,1.1s							
BELG	**Belogornoye**	**23.45**	**40**	P	**P**		**16 51 55.5**	**-1.1**
	comp=Z,44nm,0.8s,baz=218,slow=1.7,SNR=19							
BELG	**Belogornoye**	**23.45**	**40**	*i* P	**P**		**16 51 56.1**	**-0.5**
BELG				pmax	pmax			
	comp=Z,13nm,1.1s							
UPP	**Uppsala**	**23.65**	**353**	*eP*	**P**		**16 51 56.9**	**-1.7**
PBRG	**Braganca**	**23.72**	**292**	*eP*	**P**		**16 52 00.1**	**+0.6**
	comp=Z,50nm,1.4s							
AAL	**Aland**	**23.79**	**356**	*eP*	**P**		**16 51 58.0**	**-1.8**
STRU	**Stroemstad**	**23.87**	**345**	*i* P	**P**		**16 51 58.4**	**-2.3**
MVO	**Moncorvo**	**23.91**	**290**	*eP*	**P**		**16 52 01.1**	**-0.3**
	comp=Z,42nm,1.1s							
MVO	**Moncorvo**	**23.91**	**290**	*e*LR	LR		17 02 27.5	
	comp=Z,149nm,16.0s							
PBAR	**Barrancos**	**24.03**	**283**	*eP*	**P**		**16 52 03.2**	**+0.8**
	comp=Z,32nm,2.0s							
PMRV	**Marv??o**	**24.21**	**286**	*eP*	**P**		**16 52 04.2**	**+0.1**
	comp=Z,35nm,1.2s							
PMRV				*e*pP	**pP**		**16 52 10.7**	**-1.2**
PMRV	**Marv??o**	**24.21**	**286**	*e*LR	LR		17 03 18.1	
	comp=Z,125nm,20.0s							
SNART	**Snartemo**	**24.25**	**339**	*i* P	**P**		**16 52 03.3**	**-0.9**
SNART	**Snartemo**	**24.25**	**339**	*eP*	**P**		**16 52 05.0**	**+0.8**
PCBR	**Castelo Branco**	**24.26**	**287**	*eP*	**P**		**16 52 03.3**	**-1.2**
	comp=Z,40nm,1.4s							
MTE	**Manteigas**	**24.30**	**289**	*eP*	**P**		**16 52 08.2**	**+3.2**
MTE				*e*pP	**pP**		**16 52 13.4**	**+0.6**
MTE				*e*LR	LR		17 01 52.1	
	comp=Z,142nm,18.0s							
MTE	**Manteigas**	**24.30**	**289**	P	**P**		**16 52 05.3**	**+0.3**
MTE				IAmb	IAmb		16 52 13.6	
	comp=Z,16nm,0.8s							
HFS	**Hagfors**	**24.43**	**349**	P	**P**		**16 52 04.8**	**-1.0**
	comp=Z,19nm,0.6s,baz=162,slow=11,SNR=58							
PVRL	**Vila Real**	**24.44**	**291**	*eP*	**P**		**16 52 03.6**	**-2.5**
	comp=Z,49nm,1.8s							
POLO	**Lamas de Olo**	**24.50**	**291**	*eP*	**P**		**16 52 07.7**	**+0.9**
	comp=Z,34nm,2.2s							
POLO				*e*pP	**pP**		**16 52 13.7**	**-0.9**
PVIS	**Viseu**	**24.57**	**289**	*eP*	**P**		**16 52 09.3**	**+2.0**
	comp=Z,39nm,1.6s							
PVAQ	**Vaqueiros**	**24.65**	**281**	*eP*	**P**		**16 52 10.1**	**+2.1**
	comp=Z,56nm,1.5s							
PVAQ	**Vaqueiros**	**24.65**	**281**	*e*LR	LR		17 04 39.1	
	comp=Z,101nm,20.0s							
PVAQ	**Vaqueiros**	**24.65**	**281**	P	**P**		**16 52 06.8**	**-1.2**
PVAQ				IAmb	IAmb		16 52 17.1	
	comp=Z,28nm,0.9s							
PCAB	**Cabril**	**24.68**	**292**	*eP*	**P**		**16 52 07.9**	**-0.4**
	comp=Z,56nm,1.9s							
PBEJ	**Beja**	**24.69**	**283**	*eP*	**P**		**16 52 09.7**	**+1.3**
	comp=Z,12nm,1.9s							
EVO	**Evora**	**24.76**	**284**	*eP*	**P**		**16 52 10.7**	**+1.7**
	comp=Z,29nm,1.6s							
KONO	**Kongsberg**	**24.78**	**343**	*ce*P	**P**		**16 52 08.7**	**-0.3**
KONO				pmax	pmax			
	comp=Z,12nm,0.7s							
KONO	**Kongsberg**	**24.78**	**343**	P	**P**		**16 52 07.5**	**-1.5**
KONO				IAmb	IAmb		16 52 16.1	
	comp=Z,28nm,1.0s							
KONO	**Kongsberg**	**24.78**	**343**	*eP*	**P**		**16 52 08.9**	**-0.1**
OSL	**Oslo**	**24.80**	**345**	*eP*	**P**		**16 52 08.6**	**-0.5**
PBDV	**Barranco-do-Ve**	**24.84**	**281**	*eP*	**P**		**16 52 12.8**	**+3.0**
	comp=Z,73nm,1.7s							
PGAV	**Gavieira, Arco**	**24.87**	**292**	*e*LR	LR		17 03 13.8	
	comp=Z,198nm,20.0s							
PMTG	**Montargil**	**24.88**	**285**	*eP*	**P**		**16 52 11.4**	**+1.3**
	comp=Z,36nm,1.8s							
COI	**Coimbra**	**24.97**	**288**	*eP*	**P**		**16 52 12.6**	**+1.7**
FINES	**FINESS Array B**	**25.04**	**3**	P	**P**		**16 52 09.8**	**-1.5**
	comp=Z,11nm,0.7s,baz=161,slow=10,SNR=35							
FINES				LR	LR		17 03 21.7	
	comp=Z,612nm,18.1s,baz=186,slow=40							
FINES	**FINESS Array B**	**25.04**	**3**	*i* P	**P**		**16 52 10.3**	**-1.0**
FINES				pmax	pmax			
	comp=Z,11nm,0.7s							
FINES	**FINESS Array B**	**25.04**	**3**	P	**P**		**16 52 10.3**	**-1.0**
FIA1	**FINESS Array S**	**25.04**	**3**	P	**P**		**16 52 09.5**	**-1.8**
FIA1				IAmb	IAmb		16 52 24.0	
	comp=Z,27nm,1.1s							
PCAS	**Casmilo, Conde**	**25.04**	**288**	*eP*	**P**		**16 52 12.3**	**+0.7**
PTO	**Porto**	**25.10**	**290**	*eP*	**P**		**16 52 14.5**	**+2.4**
VALR	**Valaam**	**25.36**	**9**	*i* P	**P**		**16 52 14.0**	**-0.2**
VALR				pmax	pmax			
	comp=Z,27nm,0.8s							
NC602	**NORSAR Array S**	**25.37**	**347**	P	**P**		**16 52 13.8**	**-0.5**
NC602	**NORSAR Array S**	**25.37**	**347**	*eP*	**P**		**16 52 14.3**	**0.0**
NORES	**NORESS Array B**	**25.37**	**347**	P	**P**		**16 52 14.0**	**-0.3**
BLS5	**Blasjo**	**25.38**	**340**	*eP*	**P**		**16 52 15.7**	**+1.2**
PTEO	**Sao Teotonio**	**25.42**	**282**	*eP*	**P**		**16 52 21.9**	**+6.9**
	comp=Z,66nm,1.5s							
KMY	**Karmoy**	**25.55**	**338**	*eP*	**P**		**16 52 17.0**	**+1.1**
NAO01	**NORSAR Array S**	**25.59**	**346**	IAmb	IAmb		16 52 17.5	
	comp=Z,26nm,0.8s							
NC405	**NORSAR Array S**	**25.69**	**347**	IAmb	IAmb		16 52 30.4	
	comp=Z,36nm,1.1s							
NB2	**NORSAR Subarra**	**25.71**	**347**	P	**P**		**16 52 16.7**	**-0.8**
	baz=159,slow=9.3							
NOA	**NORSAR Array B**	**25.71**	**347**	P	**P**		**16 52 15.4**	**-2.1**
	comp=Z,1.0nm,0.4s,baz=98,slow=5.8,SNR=59							
NOA				LR	LR		17 03 43.9	
	comp=Z,227nm,19.9s,baz=165,slow=40							
ODD1	**Odda**	**25.75**	**341**	*eP*	**P**		**16 52 19.9**	**+2.1**
NBO00	**NORSAR Array S**	**25.79**	**346**	P	**P**		**16 52 17.8**	**-0.3**
NC303	**NORSAR Array S**	**25.86**	**347**	P	**P**		**16 52 18.3**	**-0.5**
SKAR	**Skarslia**	**26.00**	**343**	*eP*	**P**		**16 52 22.4**	**+2.4**
NC204	**NORSAR Array S**	**26.02**	**346**	P	**P**		**16 52 19.4**	**-0.9**
EKA	**Eskdalemuir Ar**	**26.02**	**325**	P	**P**		**16 52 20.2**	**0.0**
	comp=Z,20nm,0.6s,baz=125,slow=9.5,SNR=79							
ESK	**Eskdalemuir**	**26.03**	**325**	P	**P**		**16 52 21.4**	**+1.0**
ESK				pmax	pmax			
	comp=Z,57nm,0.9s							
ESK	**Eskdalemuir**	**26.03**	**325**	P	**P**		**16 52 21.4**	**+1.0**
BER	**Bergen**	**26.50**	**340**	*eP*	**P**		**16 52 26.4**	**+1.9**
KLMR	**Klimovskoe**	**26.51**	**18**	*eP*	**P**		**16 52 22.9**	**-1.7**
KLMR				pmax	pmax			
	comp=Z,36nm,1.1s							
KLMR	**Klimovskoe**	**26.51**	**18**	*eP*	**P**		**16 52 22.9**	**-1.7**
KLMR				AMP			16 52 40.4	
	comp=Z,36nm,1.1s							
KLMR				LQ	LQ		17 01 35.0	
KLMR				LQ	LQ		17 01 35.0	
KLMR				LR	LR		17 02 49.8	
HYA	**Hoyanger**	**26.93**	**342**	*eP*	**P**		**16 52 28.6**	**+0.2**
DOMB	**Dombas**	**27.05**	**345**	*eP*	**P**		**16 52 30.0**	**+0.5**
FOO	**Floro**	**27.59**	**341**	*eP*	**P**		**16 52 36.7**	**+2.4**
AKN	**Aaknes**	**27.62**	**344**	*eP*	**P**		**16 52 36.8**	**+2.1**
GEYT	**Alibeck**	**27.78**	**76**	P	**P**		**16 52 37.5**	**+1.1**
	comp=Z,13nm,0.9s,baz=280,slow=9.8,SNR=13							
KIRV	**Kirov**	**28.00**	**30**	P	**P**		**16 52 36.6**	**-1.3**
	comp=Z,13nm,0.5s,baz=260,slow=5.3,SNR=6.6							
KIRV	**Kirov**	**28.00**	**30**	*ce*P	**P**		**16 52 35.6**	**-2.4**
AKTO	**Aktyubinsk**	**28.58**	**50**	P	**P**		**16 52 42.6**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=263,slow=9.4,SNR=13							
AKTO	**Aktyubinsk**	**28.58**	**50**	*i* P	**P**		**16 52 42.5**	**-0.8**
AKTO				pmax	pmax			
	comp=Z,5.0nm,0.9s							
PRGR	**Permogore**	**28.85**	**22**	*eP*	**P**		**16 52 43.8**	**-1.7**
PRGR				*e*S	**S**		**16 57 27.6**	**-6.1**
PRGR				pmax	pmax			
	comp=Z,23nm,0.8s							
AB31	**Akbulak array**	**29.51**	**53**	*i* P	**P**		**16 52 51.0**	**-0.6**
ABKAR	**Akbulak array**	**29.51**	**53**	P	**P**		**16 52 49.8**	**-1.8**
FAQ	**Al Faqa, Dubai**	**30.12**	**104**	P	**P**		**16 52 58.0**	**+0.8**

TOA0	**Torodi Ar. Sit**	**30.19**	**225**	P	**P**		**16 52 58.5**	**+0.7**
TOA0				IAmb	IAmb		16 52 60.0		
	comp=Z,10nm,0.8s								
TORD	**Torodi Ar. Bea**	**30.19**	**225**	P	**P**		**16 52 59.0**	**+1.1**	
	comp=Z,12nm,0.8s,baz=34,slow=9.3,SNR=66								
TORD				LR	LR		17 06 46.6		
	comp=Z,187nm,21.3s,baz=5.0,slow=40								
TORD	**Torodi Ar. Bea**	**30.19**	**225**	P	**P**		**16 52 58.9**	**+1.0**	
UOSS	**Minazif**	**30.50**	**103**	P	**P**		**16 53 01.1**	**+0.5**	
UOSS				P	**P**		**16 53 01.1**	**+0.5**	
HATD	**Hatta, Dubai**	**30.51**	**103**	P	**P**		**16 53 02.0**	**+1.4**	
HATD				P	**P**		**16 53 02.0**	**+1.4**	
UMZA	**Um Al Zommool**	**30.86**	**108**	P	**P**		**16 53 04.7**	**+0.9**	
ARU	**Arti**	**30.98**	**39**	*ce*P	**P**		**16 53 03.7**	**-0.8**	
ARU				pmax	pmax				
	comp=Z,17nm,1.3s								
SOHO	**SOHO**	**31.17**	**104**	P	**P**		**16 53 07.2**	**+0.7**	
SOHO				P	**P**		**16 53 07.2**	**+0.7**	
ARQ	**Araqi**	**31.58**	**105**	P	**P**		**16 53 11.0**	**+0.9**	
ARQ				P	**P**		**16 53 11.0**	**+0.9**	
N2VA	**Yr_y**	**31.78**	**352**	*eP*	**P**		**16 53 13.0**	**+1.6**	
HOQ	**Hoqain**	**32.07**	**104**	P	**P**		**16 53 14.6**	**+0.2**	
HOQ				P	**P**		**16 53 14.6**	**+0.2**	
SVE	**Sverdlovsk**	**32.20**	**39**	⇓*eP*	**P**		**16 53 15.3**	**+0.1**	
SVE				pmax	pmax				
	comp=Z,30nm,1.0s								
SVE				MLR	MLR				
	comp=Z,337nm,13.0s								
BSY	**Bisya**	**32.42**	**105**	P	**P**		**16 53 18.4**	**+0.8**	
BSY				P	**P**		**16 53 18.4**	**+0.8**	
DOK	**Doka**	**32.52**	**115**	P	**P**		**16 53 19.7**	**+1.3**	
KOWA	**Kowa**	**32.69**	**235**	P	**P**		**16 53 20.6**	**+0.7**	
	comp=Z,2.6nm,0.6s,baz=48,slow=7.3,SNR=8.0								
ABTO	**Aybut**	**32.74**	**118**	P	**P**		**16 53 21.6**	**+1.2**	
SMDO	**Samad**	**32.92**	**104**	P	**P**		**16 53 22.3**	**+0.3**	
	SNR=11								
SMDO				P	**P**		**16 53 22.3**	**+0.3**	
	SNR=11								
ARCES	**ARCESS Array B**	**33.12**	**2**	P	**P**		**16 53 22.1**	**-1.0**	
	comp=Z,5.4nm,0.9s,baz=186,slow=9.6,SNR=16								
ARCES				LR	LR		17 08 28.5		
	comp=Z,286nm,19.3s,baz=190,slow=39								
WSAR	**Wadi Sarin**	**33.28**	**103**	P	**P**		**16 53 25.0**	**0.0**	
	comp=Z,3.0nm,0.6s,baz=273,slow=6.8,SNR=4.2								
RBK	**Rabkut**	**33.29**	**116**	P	**P**		**16 53 26.3**	**+1.1**	
JMDO	**Jabal Madar**	**33.33**	**105**	P	**P**		**16 53 26.0**	**+0.6**	
JMDO				P	**P**		**16 53 26.0**	**+0.6**	
DMTO	**DMTO**	**33.69**	**115**	P	**P**		**16 53 29.1**	**+0.4**	
	SNR=9.7								
WBK	**Wadi Bani Khal**	**33.87**	**104**	P	**P**		**16 53 31.5**	**+1.3**	
WBK				P	**P**		**16 53 31.5**	**+1.3**	
DQM	**DQM**	**34.27**	**109**	P	**P**		**16 53 34.4**	**+0.8**	
JLN	**Jalan Bani Buh**	**34.46**	**104**	P	**P**		**16 53 36.3**	**+0.9**	
BRVK	**Borovoye**	**36.57**	**48**	*ce*P	**P**		**16 53 53.5**	**+0.4**	
BRVK				pmax	pmax				
	comp=Z,9.0nm,0.7s								
BRVK	**Borovoye**	**36.57**	**48**	P	**P**		**16 53 53.5**	**+0.4**	
BRVK				IAmb	IAmb		16 53 54.2		
	comp=Z,9.2nm,0.8s								
BRVK	**Borovoye**	**36.57**	**48**	P	**P**		**16 53 53.5**	**+0.4**	
KK31	**Karatay Array**	**36.58**	**65**	*i* P	**P**		**16 53 53.7**	**+0.4**	
KK31	**Karatay Array**	**36.58**	**65**	IAmb	IAmb		16 53 56.2		
	comp=Z,8.5nm,0.7s								
KKAR	**Karatay Array**	**36.58**	**65**	P	**P**		**16 53 53.7**	**+0.4**	
KKAR	**Karatay Array**	**36.58**	**65**	P	**P**		**16 53 53.7**	**+0.4**	
KKAR	**Karatay Array**	**36.58**	**65**	IAmb	IAmb		16 53 56.2		
	comp=Z,8.5nm,0.7s								
SOCY	**Socotra**	**36.79**	**123**	P	**P**		**16 53 53.1**	**-2.3**	
SOCY				IAmb	IAmb		16 54 04.0		
	comp=Z,16nm,1.0s								
SOCY	**Socotra**	**36.79**	**123**	P	**P**		**16 53 54.9**	**-0.5**	
	SNR=11								
KBL	**Kabul**	**37.12**	**79**	P	**P**		**16 53 58.9**	**+0.6**	
MBAR	**Mbarara**	**37.57**	**168**	P	**P**		**16 54 01.5**	**-0.6**	
	comp=Z,2.6nm,0.2s,baz=336,slow=20,SNR=3.9								
DBIC	**Dimbokro**	**39.20**	**228**	P	**P**		**16 54 16.3**	**+0.6**	
	comp=Z,12nm,0.8s,baz=18,slow=8.9,SNR=14								
DBIC				LR	LR		17 11 56.4		
	comp=Z,137nm,20.2s,baz=14,slow=38								
DBIC	**Dimbokro**	**39.20**	**228**	P	**P**		**16 54 15.0**	**-0.6**	
DBIC				pmax	pmax				
	comp=Z,14nm,1.0s								
DBIC	**Dimbokro**	**39.20**	**228**	P	**P**		**16 54 15.0**	**-0.6**	
AAK	**Ala-Archa**	**39.54**	**65**	*i* P	**P**		**16 54 17.5**	**-0.9**	
AAK				pmax	pmax				
	comp=Z,7.0nm,0.9s								
AAK	**Ala-Archa**	**39.54**	**65**	P	**P**		**16 54 19.2**	**+0.8**	
AAK	**Ala-Archa**	**39.54**	**65**	P	**P**		**16 54 19.0**	**+0.5**	
AAK				P	**P**		**16 54 19.0**	**+0.5**	
KMBO	**Kilima Mbogo**	**39.66**	**158**	P	**P**		**16 54 22.1**	**+2.5**	
	comp=Z,0.9nm,0.5s,baz=355,slow=12,SNR=2.2								
NIL	**Nilore**	**40.72**	**79**	P	**P**		**16 54 29.4**	**+1.2**	
NIL				pmax	pmax				
	comp=Z,45nm,1.3s								
NIL	**Nilore**	**40.72**	**79**	P	**P**		**16 54 29.4**	**+1.2**	
NIL	**Nilore**	**40.72**	**79**	P	**P**		**16 54 29.8**	**+1.6**	
SCO	**Scoresbysund**	**41.51**	**339**	*i* P	**P**		**16 54 36.0**	**+1.9**	
SCO				IAmb	IAmb		16 54 37.1		
	comp=Z,12nm,1.0s								
SCO	**Scoresbysund**	**41.51**	**339**	*i* P	**P**		**16 54 36.0**	**+1.9**	
SCO				pmax	pmax				
	comp=Z,12nm,1.0s								
KURBB	**Kurchatov Arra**	**41.56**	**52**	P	**P**		**16 54 34.1**	**-0.7**	
SPITS	**Spitsbergen Ar**	**41.89**	**358**	P	**P**		**16 54 36.9**	**-0.3**	
	comp=Z,12nm,1.0s,baz=161,slow=21,SNR=2.2								
DBG	**Daneborg**	**43.18**	**344**	*i* P	**P**		**16 54 48.6**	**+0.9**	
DBG				IAmb	IAmb		16 54 50.2		
	comp=Z,3.0nm,1.3s								
MAKZ	**Makanchi**	**44.19**	**57**	P	**P**		**16 54 56.1**	**-0.1**	
MAKZ				pmax	pmax				
	comp=Z,11nm,0.8s								
MAKZ	**Makanchi**	**44.19**	**57**	P	**P**		**16 54 56.1**	**-0.1**	
MAKZ				IAmb	IAmb		16 54 57.1		
	comp=Z,10nm,0.8s								
MK31	**Makanchi Array**	**44.41**	**57**	P	**P**		**16 54 57.8**	**-0.2**	
MK31				pmax	pmax				
	comp=Z,18nm,0.7s								
MK31	**Makanchi Array**	**44.41**	**57**	P	**P**		**16 54 57.8**	**-0.2**	
MKAR	**Makanchi Array**	**44.41**	**57**	P	**P**		**16 54 58.2**	**+0.2**	
	comp=Z,23nm,0.7s,baz=284,slow=6.5,SNR=292								
MKAR				PcP	**PP**		**16 56 43.3**	**+1.7**	
	comp=Z,3.2nm,0.8s,baz=279,slow=5.9,SNR=1.5								
MKAR				ScP	**ScP**		**17 00 30.6**	**-1.1**	
	comp=Z,0.3nm,0.5s,baz=274,slow=4.2,SNR=2.3								
MKAR				LR	LR		17 16 41.9		
	comp=Z,103nm,20.3s,baz=269,slow=40								
MKAR	**Makanchi Array**	**44.41**	**57**	*i* P	**P**		**16 54 57.9**	**-0.1**	
MKAR				pmax	pmax				
	comp=Z,23nm,0.7s								
MKAR	**Makanchi Array**	**44.41**	**57**	P	**P**		**16 54 57.9**	**-0.1**	
ZAA0	**Zalesovo Array**	**45.27**	**47**	P	**P**		**16 55 03.9**	**-0.8**	
ZALV	**Zalesovo Beam**	**45.27**	**47**	P	**P**		**16 55 04.2**	**-0.5**	
	comp=Z,16nm,0.5s,baz=271,slow=8.6,SNR=72								
ZALV				LR	LR		17 16 06.7		
	comp=Z,93nm,19.8s,baz=285,slow=39								
ZALV	**Zalesovo Beam**	**45.27**	**47**	*i* P	**P**		**16 55 04.1**	**-0.6**	
ZALV				pmax	pmax				
	comp=Z,16nm,0.5s								
ICESG	**Greenland Ices**	**46.78**	**334**	*i* P	**P**		**16 55 16.9**	**+0.2**	
ICESG				IAmb	IAmb		16 55 23.7		
	comp=Z,8.7nm,1.0s								
SUMG	**Summit**	**47.15**	**339**	*i* P	**P**		**16 55 20.9**	**+1.2**	
SUMG				IAmb	IAmb		16 55 22.5		
	comp=Z,8.3nm,0.9s								
SUMG	**Summit**	**47.15**	**339**	*i* P	**P**		**16 55 20.9**	**+1.2**	
SUMG				pmax	pmax				
	comp=Z,8.0nm,0.9s								
SUMG	**Summit**	**47.15**	**339**	P	**P**		**16 55 19.9**	**+0.1**	
DGZ	**Jazzator, Alta**	**47.35**	**53**	*d* P	**P**		**16 55 20.7**	**-0.6**	
DGZ				pmax	pmax				
	comp=Z,12nm,1.3s								
NRIK	**Noril'sk**	**47.37**	**26**	P	**P**		**16 55 21.4**	**+0.4**	
	comp=Z,7.6nm,0.8s,baz=247,slow=5.5,SNR=24								
NRIK				LR	LR		17 17 19.1		
	comp=Z,119nm,20.4s,baz=255,slow=39								
NRIK	**Noril'sk**	**47.37**	**26**	*ce*P	**P**		**16 55 21.1**	**+0.1**	
NRIK				pmax	pmax				
	comp=Z,12nm,0.9s								
NRIK	**Noril'sk**	**47.37**	**26**	P	**P**		**16 55 20.9**	**-0.1**	
NRIK				IAmb	IAmb		16 55 22.4		
	comp=Z,11nm,0.9s								
NOR	**Nord**	**47.41**	**353**	*i* P	**P**		**16 55 20.7**	**-0.5**	
NOR				IAmb	IAmb		16 55 21.9		
	comp=Z,7.0nm,0.8s								
NOR	**Nord**	**47.41**	**353**	*i* P	**P**		**16 55 20.6**	**-0.5**	

NOR				pmax	pmax				
	comp=Z,7.0nm,0.8s								
WMQ	**Urumqi**	**48.74**	**60**	*e*P	**P**		**16 55 33.1**	**+1.0**	
WMQ				pP	sP		16 55 44.9	+1.7	
WMQ				sP	pP		16 55 49.1	+9.2	
WMQ				PP	**PP**		**16 57 25.8**	**+0.7**	
WMQ				ScP	**ScP**		**17 00 43.1**	**-6.8**	
WMQ				pmax	pmax				
	comp=Z,26nm,1.3s								
WMQ				pmax	pmax				
	comp=Z,61nm,3.7s								
WMQ				LR	LR				
	comp=Z,1μm,29.3s								
DY2G	**Dye2**	**49.00**	**330**	*i* P	**P**		**16 55 34.8**	**+0.9**	
DY2G				IAmb	IAmb		16 55 36.3		
	comp=Z,12nm,0.8s								
PYUN	**Piuthan**	**50.56**	**81**	*e*P	**P**		**16 55 46.2**	**-0.1**	
KOLN	**Koldanda**	**51.19**	**82**	*e*P	**P**		**16 55 51.1**	**+0.1**	
	comp=Z,23nm,0.6s								
KOLN	**Koldanda**	**51.19**	**82**	*e*P	**S**		**17 03 05.4**	**-2.5**	
	comp=Z,31nm,0.9s								
LSZ	**Lusaka**	**51.71**	**174**	P	**P**		**16 55 56.0**	**+1.3**	
	comp=Z,1.2nm,0.6s,baz=26,slow=9.9,SNR=3.7								
LSZ	**Lusaka**	**51.71**	**174**	P	**P**		**16 55 56.0**	**+1.3**	
GKN	**Gorkha**	**51.91**	**81**	*e*P	**P**		**16 55 56.1**	**-0.2**	
	comp=Z,36nm,0.5s								
GKN	**Gorkha**	**51.91**	**81**	*e*P	**S**		**17 03 14.3**	**-3.5**	
	comp=Z,11nm,0.8s								
DMN	**Daman**	**52.46**	**81**	*e*P	**P**		**16 56 00.6**	**+0.1**	
DMN	**Daman**	**52.46**	**81**	*e*P	**S**		**17 03 22.5**	**-3.0**	
	comp=Z,22nm,0.8s								
KKN	**Kakani**	**52.52**	**81**	*e*P	**P**		**16 56 00.7**	**-0.2**	
	comp=Z,35nm,0.7s								
KKN	**Kakani**	**52.52**	**81**	*e*P	**S**		**17 03 23.0**	**-3.2**	
PKIN	**Phulchoki**	**52.70**	**81**	*e*P	**P**		**16 56 02.1**	**-0.3**	
	comp=Z,29nm,0.8s								
PKIN	**Phulchoki**	**52.70**	**81**	*e*P	**S**		**17 03 26.0**	**-2.9**	
	comp=Z,11nm,0.8s								
PKI	**Pulchoki**	**52.72**	**81**	*e*P	**P**		**16 56 02.2**	**-0.3**	
	comp=Z,45nm,0.9s								
PKI	**Pulchoki**	**52.72**	**81**	*e*P	**S**		**17 03 26.1**	**-3.1**	
	comp=Z,16nm,0.8s								
GUN	**Gumba**	**52.94**	**80**	*e*P	**P**		**16 56 04.1**	**-0.1**	
	comp=Z,16nm,0.4s								
GUN	**Gumba**	**52.94**	**80**	*e*P	**S**		**17 03 28.1**	**-4.2**	
	comp=Z,12nm,0.7s								
JIRN	**Jiri**	**53.30**	**80**	*e*P	**P**		**16 56 06.8**	**-0.1**	
	comp=Z,26nm,0.6s								
JIRN	**Jiri**	**53.30**	**80**	*e*P	**S**		**17 03 33.6**	**-3.6**	
RAMN	**Ramite**	**53.94**	**81**	*e*P	**P**		**16 56 10.9**	**-0.5**	
	comp=Z,40nm,0.7s								
RAMN	**Ramite**	**53.94**	**81**	*e*P	**S**		**17 03 42.9**	**-2.8**	
	comp=Z,17nm,0.9s								
ODAN	**Odare**	**54.61**	**81**	*e*P	**P**		**16 56 16.0**	**-0.3**	
TAPN	**Taplejung**	**54.64**	**80**	*e*P	**P**		**16 56 16.2**	**-0.4**	
	comp=Z,66nm,1.1s								
TAPN	**Taplejung**	**54.64**	**80**	*e*P	**S**		**17 03 51.5**	**-3.7**	
MOY	**Mondy**	**55.31**	**48**	*e*P	**P**		**16 56 21.6**	**

CMAR	**Chiang Mai Arr**	**68.02**	**83**	P		**P**		**16 57 46.6**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=305,slow=7.5,SNR=20								
CMAR				LR		LR		17 33 49.4	
	comp=Z,26nm,19.9s,baz=173,slow=41								
CMAR	**Chiang Mai Arr**	**68.02**	**83**	*i* P		**P**		**16 57 47.0**	**+0.1**
CMAR				pmax		pmax			
	comp=Z,3.0nm,0.8s								
CM02	**Chiang Mai Arr**	**68.04**	**83**	P		**P**		**16 57 48.0**	**+1.0**
CM01	**Chiang Mai Arr**	**68.05**	**83**	P		**P**		**16 57 48.0**	**+0.9**
CM05	**Chiang Mai Arr**	**68.05**	**83**	P		**P**		**16 57 49.0**	**+1.8**
CM35	**Chiang Mai Arr**	**68.07**	**83**	P		**P**		**16 57 49.0**	**+1.8**
CM04	**Chiang Mai Arr**	**68.08**	**83**	P		**P**		**16 57 48.0**	**+0.7**
CM36	**Chiang Mai Arr**	**68.11**	**83**	P		**P**		**16 57 49.0**	**+1.5**
LAMP	**Lampang**	**68.54**	**82**	P		**P**		**16 57 52.2**	**+2.0**
SUR	**Sutherland**	**68.55**	**182**	P		**P**		**16 57 51.3**	**+1.3**
	comp=Z,6.3nm,1.0s,baz=90,slow=17,SNR=2.1								
SUKH	**Sukhothai**	**69.10**	**83**	P		**P**		**16 57 55.0**	**+1.4**
PHIT	**Phitsanulok**	**69.88**	**83**	P		P		16 58 04.1	+5.6
C36M	**Paulatuk**	**71.75**	**348**	P		**P**		**16 58 09.3**	**+0.4**
C36M				IAmb		IAmb		16 58 10.3	
	comp=Z,16nm,1.3s								
BILL	**Bilibino**	**72.17**	**14**	*i* P		**P**		**16 58 10.9**	**-0.6**
BILL				pmax		pmax			
	comp=Z,8.0nm,1.4s								
SEY	**Seymchan**	**72.93**	**22**	*i* P		**P**		**16 58 16.3**	**+0.1**
CN2	**Changchun**	**73.48**	**48**	*e*P		P		16 58 13.3	-6.5
KLR	**Kul'dur**	**73.81**	**40**	*ce*P		**P**		**16 58 21.9**	**+0.3**
KLR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
INK	**Inuvik**	**74.06**	**351**	IAmb		IAmb		16 58 38.9	
	comp=Z,10nm,1.2s								
MA2	**Magadan**	**74.96**	**25**	*ce*P		**P**		**16 58 28.6**	**+0.5**
MA2				pmax		pmax			
	comp=Z,5.0nm,0.8s								
YKA	**Yellowknife Ar**	**75.67**	**341**	P		**P**		**16 58 32.4**	**+0.3**
	comp=Z,3.8nm,0.7s,baz=36,slow=5.4,SNR=96								
NJ2	**Nanjing**	**75.82**	**61**	*e*P		**P**		**16 58 33.1**	**-0.4**
NJ2				pmax		pmax			
	comp=Z,6.0nm,0.6s								
BMAR	**Burnt Mountain**	**75.98**	**355**	P		**P**		**16 58 35.2**	**+1.4**
COLD	**Coldfoot**	**76.48**	**357**	P		**P**		**16 58 37.0**	**+0.4**
COLD				IAmb		IAmb		16 58 38.7	
	comp=Z,8.6nm,1.0s								
USA0B	**Ussuriysk Arra**	**77.03**	**44**	*i* P		**P**		**16 58 39.9**	**-0.3**
USRK	**Ussuriysk Ar.**	**77.03**	**44**	P		**P**		**16 58 39.5**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=280,slow=4.4,SNR=16								
USRK	**Ussuriysk Ar.**	**77.03**	**44**	P		**P**		**16 58 40.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**77.03**	**44**	P		**P**		**16 58 40.4**	**+0.2**
IMAR	**Indian Mountai**	**77.82**	**359**	P		**P**		**16 58 45.4**	**+1.2**
ULM	**Lac du Bonnet**	**78.29**	**325**	P		**P**		**16 58 47.2**	**+0.1**
	comp=Z,5.0nm,0.7s,baz=42,slow=4.9,SNR=11								
ULM	**Lac du Bonnet**	**78.29**	**325**	IAmb		IAmb		16 58 48.7	
	comp=Z,11nm,1.0s								
KSAR	**Wonju Array Be**	**78.72**	**52**	P		**P**		**16 58 49.5**	**-0.2**
KSAR	**Wonju Array Be**	**78.72**	**52**	P		P		**16 58 49.5**	**-0.2**
KSRS	**Korea Array**	**78.74**	**52**	P		**P**		**16 58 49.7**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=310,slow=4.6,SNR=17								
KSRS				LR		LR		17 36 59.3	
	comp=Z,61nm,19.4s,baz=290,slow=38								
ILAR	**Eielson Array**	**78.76**	**356**	P		**P**		**16 58 49.1**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=359,slow=4.5,SNR=10								
ILAR	**Eielson Array**	**78.76**	**356**	P		**P**		**16 58 49.6**	**+0.1**
K27K	**Chicken**	**79.13**	**353**	IAmb		IAmb		16 59 00.2	
	comp=Z,15nm,1.1s								
BCAR	**Beaver Creek A**	**80.05**	**353**	P		**P**		**16 58 57.6**	**+1.1**
YSS	**Yuzh-Sakhalins**	**80.86**	**37**	*i* P		**P**		**16 59 00.9**	**-0.2**
YSS				pmax		pmax			
	comp=Z,11nm,1.0s								
PETK	**Petropavlovsk-**	**82.43**	**26**	P		**P**		**16 59 07.9**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=225,slow=12,SNR=1.7								
PETK				LR		LR		17 40 35.1	
	comp=Z,80nm,18.0s,baz=334,slow=39								
BDFB	**Brasilia**	**84.73**	**246**	P		**P**		**16 59 23.4**	**+1.7**
	comp=Z,6.7nm,1.0s,baz=234,slow=1.1,SNR=5.2								
MAT	**Matsushiro**	**85.62**	**47**	P		**P**		**16 59 25.4**	**-0.5**
MJAR	**Matsushiro Arr**	**85.62**	**47**	P		**P**		**16 59 25.9**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=317,slow=4.8,SNR=11								
MJAR	**Matsushiro Arr**	**85.62**	**47**	P		**P**		**16 59 26.0**	**+0.1**
MJAR	**Matsushiro Arr**	**85.62**	**47**	P		**P**		**16 59 26.9**	**+1.0**
PDAR	**Pinedale Array**	**90.11**	**327**	P		**P**		**16 59 47.9**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=86,slow=4.6,SNR=7.7								
PDAR				PP		**PP**		**17 03 20.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=60,slow=7.4,SNR=2.8								
PDAR				LR		LR		17 42 39.9	
	comp=Z,117nm,19.3s,baz=26,slow=37								
ROSC	**El Rosal**	**93.15**	**278**	LR		LR		17 41 04.8	
	comp=Z,41nm,19.4s,baz=36,slow=35								
NVAR	**Mina Array Bea**	**97.39**	**330**	P		Pdif		17 00 21.3	+0.2
	comp=Z,0.2nm,0.5s,baz=24,slow=4.9,SNR=2.1								
NVAR				LR		LR		17 46 51.9	
	comp=Z,132nm,19.3s,baz=16,slow=37								
TXAR	**Lajitas Array**	**97.65**	**315**	P		Pdif		17 00 22.4	+0.1
	comp=Z,0.5nm,0.9s,baz=14,slow=4.0,SNR=3.4								
TXAR				LR		LR		17 47 13.3	
	comp=Z,72nm,18.6s,baz=0.0,slow=37								
WRA	**Warramunga Arr**	**118.33**	**95**	PKP		**PKPdf**		**17 05 34.5**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=318,slow=1.2,SNR=5.1								
ASAR	**Alice Springs**	**119.87**	**99**	PKP		**PKiKP**		**17 05 38.2**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=315,slow=1.8,SNR=9.0								
DZM	**Mont Dzumac**	**145.12**	**76**	PKPbc		**PKPdf**		**17 06 26.2**	**+1.1**
	comp=Z,6.7nm,0.7s,baz=207,slow=9.6,SNR=5.2								

*NDI **18** 17:22:19.3±1.4, 10°.13N×92°.39E, h100km, ML4.0, mb4.2(NEIC)*
*NEIC **18** 17:22:29.0±1.3, 10°.7N±0°.1×93°.3E±0°.1, h101km±4km, mb4.2/21, Error ellipse: s-maj=20.5km s-min=11.8km az=58.0*
*IDC **18** 17:22:31.3±3.3, 10°.68N×93°.43E, h124km±30km, mb3.7/11, mb1 3.8/13, mb1mx3.5/36, mbtmp4.0/13, MS3.4/1, Ms1 3.4/1, ms1mx2.6/43, Error ellipse: s-maj=30.1km s-min=12.2km az=57.0*

ISC 18 17:22:29.2±0.6, 10°.74N±0°.08×93°.35E±0°.10, h100km, n65, σ1°.07/64, mb4.1/20, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
DGPR	**DIGLIPUR**	**2.46**	**350**	*eP*		**Pn**	**17 23 06.9**	**-0.9**
DGPR				*eS*		**Sn**	**17 23 39.8**	**+2.4**
DGPR				IAML			17 23 47.9	
	comp=N,818nm,0.4s							
DGPR				IAML			17 23 49.4	
	comp=E,932nm,0.4s							
SRIT	**Nakonsritamara**	**6.52**	**109**	Pn		**Pn**	**17 24 01.1**	**-1.5**
LHMI	**Lhok Sumawe**	**6.53**	**147**	Pn		**Pn**	**17 24 02.3**	**-0.5**
KULM	**Kulim**	**9.03**	**126**	Pn		**Pn**	**17 24 36.1**	**-0.6**
CM31	**Chiang Mai Arr**	**9.38**	**35**	P		**Pn**	**17 24 42.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**9.38**	**35**	P		**Pn**	**17 24 43.8**	**+2.1**
	comp=E,1.3nm,0.3s,baz=226,slow=15,SNR=21							
PSI	**Prapat**	**9.63**	**145**	P		**Pn**	**17 24 47.1**	**+2.0**
	comp=E,0.6nm,0.3s,baz=360,slow=16,SNR=4.5							
CHTO	**Chiang Mai**	**9.67**	**33**	Pn		**Pn**	**17 24 47.6**	**+2.1**
RPSI	**Rantau Prapat**	**9.72**	**145**			**Pn**	**17 24 47.1**	**+0.9**
RPSI	**Rantau Prapat**	**9.72**	**145**	Pn		**Pn**	**17 24 46.9**	**+0.7**
IPM	**Ipoh**	**9.82**	**129**	Pn		**Pn**	**17 24 47.3**	**-0.3**
MYKOM	**Kota Tinggi**	**13.70**	**130**	Pn		**Pn**	**17 25 41.4**	**+2.0**
SHL	**Shillong**	**14.81**	**355**			**Pn**	**17 25 54.9**	**+1.1**
KOHI	**KOHIMA**	**14.92**	**3**	*eP*		**Pn**	**17 25 52.6**	**-2.4**
KOHI				*eS*		Sn	17 28 31.3	-8.5
MOKO	**MOKOCHONG**	**15.54**	**4**	*eP*		**Pn**	**17 26 03.1**	**+0.3**
ZIRO	**ZIRO**	**16.70**	**2**	*eP*		**Pn**	**17 26 14.7**	**-2.8**
ZIRO				*eS*		Sn	17 29 11.9	-11
ZIRO				IAML			17 29 27.2	
	comp=E,39nm,0.5s							
ZIRO				IAML			17 29 31.1	
	comp=N,32nm,0.7s							
ODAN	**Odare**	**16.99**	**341**	*eP*		**P**	**17 26 21.5**	**+0.2**
RAMN	**Ramite**	**17.34**	**339**	*eP*		**Pn**	**17 26 26.0**	**+0.8**
	comp=N,7.1nm,0.3s							
TAPN	**Taplejung**	**17.36**	**343**	*eP*		**Pn**	**17 26 25.4**	**-0.1**
	comp=N,12nm,0.7s							
JIRN	**Jiri**	**18.13**	**339**	*eP*		**Pn**	**17 26 34.3**	**-0.6**
PKI	**Pulchoki**	**18.33**	**337**	*eP*		**Pn**	**17 26 36.4**	**-0.9**
PKIN	**Phulchoki**	**18.34**	**337**	*eP*		**Pn**	**17 26 36.9**	**-0.5**
GUN	**Gumba**	**18.47**	**339**	*eP*		**Pn**	**17 26 38.5**	**-0.4**
	comp=N,8.2nm,0.4s							
LSA	**Lhasa**	**18.98**	**354**	P		**P**	**17 26 43.2**	**0.0**
GKN	**Gorkha**	**19.02**	**336**	*eP*		**P**	**17 26 43.2**	**-0.3**
	comp=N,5.8nm,0.3s							
KOLN	**Koldanda**	**19.26**	**333**	*eP*		**P**	**17 26 46.2**	**0.0**
	comp=N,9.4nm,0.5s							
MYLDM	**Lahad Datu**	**25.50**	**101**	P		**P**	**17 27 49.6**	**+1.1**
MYLDM				IAmb		IAmb	17 28 06.6	
	comp=Z,12nm,1.3s							

H08S3	**Diego Garcia H**	**27.65**	**230**	T		T		17 56 16.2	
	baz=48,slow=75,SNR=20								
H08S2	**Diego Garcia H**	**27.65**	**230**	T		T		17 56 17.8	
	baz=48,slow=75,SNR=17								
H08S1	**Diego Garcia H**	**27.67**	**230**	T		T		17 56 17.8	
	baz=48,slow=75,SNR=6.0								
GAR	**Garm**	**34.84**	**328**	P		**P**		**17 29 11.0**	**+0.2**
AAK	**Ala-Archa**	**35.79**	**336**	P		**P**		**17 29 20.1**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=152,slow=6.5,SNR=6.0								
AAK	**Ala-Archa**	**35.79**	**336**	IAmb		IAmb		17 29 20.6	
	comp=Z,1.7nm,0.8s								
MK31	**Makanchi Array**	**37.14**	**347**	P		**P**		**17 29 29.2**	**-1.0**
MKAR	**Makanchi Array**	**37.14**	**347**	P		**P**		**17 29 29.6**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=171,slow=8.1,SNR=26								
MKAR	**Makanchi Array**	**37.14**	**347**	P		**P**		**17 29 29.1**	**-1.1**
MAKZ	**Makanchi**	**37.22**	**347**	P		**P**		**17 29 30.0**	**-0.9**
MAKZ				IAmb		IAmb		17 29 30.5	
	comp=Z,2.0nm,0.6s								
KK31	**Karatay Array**	**37.87**	**332**	P		**P**		**17 29 35.7**	**-0.8**
KK31				IAmb		IAmb		17 29 37.4	
	comp=Z,2.0nm,0.8s								
KKAR	**Karatay Array**	**37.87**	**332**	P		**P**		**17 29 36.1**	**-0.4**
KKAR	**Karatay Array**	**37.87**	**332**	P		**P**		**17 29 36.4**	**-0.1**
KKAR				IAmb		IAmb		17 29 37.4	
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**38.57**	**14**	P		**P**		**17 29 42.5**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=203,slow=10.0,SNR=4.4								
SONM				PcP		**PcP**		**17 31 53.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=217,slow=2.5,SNR=2.7								
SONM	**Songino Array**	**38.57**	**14**	IAmb		IAmb		17 29 45.6	
	comp=Z,0.8nm,1.0s								
KSRS	**Korea Array**	**40.88**	**44**	P		**P**		**17 30 01.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=242,slow=8.9,SNR=6.1								
GEYT	**Alibeck**	**41.58**	**317**	P		**P**		**17 30 08.7**	**+1.4**
	comp=Z,6.8nm,0.7s,baz=152,slow=10.0,SNR=11								
GEYT	**Alibeck**	**41.58**	**317**	P		**P**		**17 30 08.7**	**+1.4**
GEYT				IAmb		IAmb		17 30 09.5	
	comp=Z,4.7nm,0.8s								
GYA0B	**ALIBECK ARRAY**	**41.58**	**317**	P		**P**		**17 30 08.7**	**+1.4**
FITZ	**Fitzroy Crossi**	**42.86**	**132**	P		**P**		**17 30 17.5**	**-0.3**
FITZ				IAmb		IAmb		17 30 40.6	
	comp=Z,16nm,1.6s								
ZAA0	**Zalesovo Array**	**43.63**	**353**	P		**P**		**17 30 23.5**	**-0.1**
ZALV	**Zalesovo Beam**	**43.63**	**353**	P		**P**		**17 30 23.2**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=168,slow=8.3,SNR=8.3								
KNRA	**Kununurra**	**43.80**	**126**	P		**P**		**17 30 26.9**	**+1.5**
KNRA				IAmb		IAmb		17 30 27.9	
	comp=Z,12nm,1.2s								
RAYN	**Ar Rayn**	**47.25**	**292**	P		**P**		**17 30 52.0**	**-0.7**
RAYN				IAmb		IAmb		17 30 54.6	
	comp=Z,1.7nm,0.7s								
ABKAR	**Akbulak array**	**47.36**	**331**	P		**P**		**17 30 52.9**	**-0.2**
ABKAR				IAmb		IAmb		17 30 54.1	
	comp=Z,3.6nm,1.2s								
ABKAR	**Akbulak array**	**47.36**	**331**	P		**P**		**17 30 53.1**	**+0.1**
ABKAR				PcP		**PcP**		**17 32 22.1**	**-0.3**
WB0	**Warramunga Arr**	**50.52**	**127**	P		**P**		**17 31 17.7**	**+0.1**
WRA	**Warramunga Arr**	**50.57**	**127**	P		**P**		**17 31 16.6**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=308,slow=8.4,SNR=40								
WRA				PcP		**PcP**		**17 32 33.9**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=314,slow=2.8,SNR=1.4								
WRA	**Warramunga Arr**	**50.57**	**127**	P		**P**		**17 31 17.6**	**-0.5**
WB2	**Warramunga Arr**	**50.58**	**127**	P		**P**		**17 31 17.8**	**-0.3**
WR0	**Warramunga Arr**	**50.74**	**127**	P		**P**		**17 31 19.0**	**-0.3**
AS31	**Alice Springs**	**52.36**	**131**	P		**P**		**17 31 31.2**	**-0.1**
AS31				IAmb		IAmb		17 31 41.5	
	comp=Z,2.7nm,1.4s								
ASAR	**Alice Springs**	**52.36**	**131**	P		**P**		**17 31 29.6**	**-1.7**
	comp=Z,0.8nm,0.4s,baz=305,slow=7.4,SNR=39								
ASAR				PcP		**PcP**		**17 32 40.2**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=323,slow=3.8,SNR=2.3								
ASAR	**Alice Springs**	**52.36**	**131**	P		**P**		**17 31 31.2**	**-0.1**
ARU	**Arti**	**52.96**	**337**	LR		LR		17 55 49.5	
	comp=Z,32nm,20.1s,baz=217,slow=38								
FINES	**FINESS Array B**	**69.83**	**332**	P		**P**		**17 33 27.9**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=113,slow=5.0,SNR=7.4								
ARCES	**ARCESS Array B**	**72.32**	**340**	P		**P**		**17 33 43.5**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=101,slow=7.3,SNR=7.9								
GERES	**GERESS Array B**	**75.19**	**318**	P		**P**		**17 34 00.6**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=100,slow=6.9,SNR=5.9								

*NNC **18** 17:38:30.5±5.0, 36°.96N×70°.60E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=38.7km s-min=34.3km az=163.0*

ISC 18 17:38:29.9±4.8, 36°.8N±0°.3×70°.5E±0°.2, h10km, n10, σ0°.76/13, 2C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
AML	**Almayashu**	**5.85**	**24**	P		**Pn**	**17 39 57.6**	**+0.6**
	SNR=133							
UCH	**Uchtor**	**6.23**	**29**	P		**Pn**	**17 40 02.6**	**+0.3**
	SNR=59							
KK31	**Karatay Array**	**6.27**	**0**	⇑P		**Pn**	**17 40 02.6**	**+0.1**
	1.0nm,0.3s,baz=176,slow=12,SNR=53							
KK31				⇓S		**Sn**	**17 41 13.6**	**-0.6**
	3.2nm,0.7s,baz=178,slow=20,SNR=3.8							
EKS2	**Erkin-Say**	**6.36**	**22**	P		**Pn**	**17 40 04.2**	**+0.4**
	SNR=8.6							
AAK	**Ala-Archa**	**6.58**	**27**	P		**Pn**	**17 40 07.1**	**+0.3**
	SNR=17							
AAK	**Ala-Archa**	**6.58**	**27**	⇓P		**Pn**	**17 40 06.5**	**-0.2**
	6.7nm,0.6s							
AAK				⇑S		**Sn**	**17 41 23.3**	**+1.5**
	8.4nm,0.5s							
KBK	**Karagaybulak**	**6.76**	**29**	P		**Pn**	**17 40 09.7**	**+0.4**
	SNR=7.7							
CHMS	**Chumysh**	**6.98**	**27**	P		**Pn**	**17 40 12.1**	**-0.1**
	SNR=6.7							
TKM2	**Tokmak 2**	**7.25**	**31**	P		**Pn**	**17 40 15.8**	**-0.2**
	SNR=14							
TKM2	**Tokmak 2**	**7.25**	**31**	⇓P		**Pn**	**17 40 15.0**	**-1.0**
	12nm,0.5s							
TKM2				⇓S		**Sn**	**17 41 37.3**	**-1.1**
	5.3nm,0.9s							

*NEIC **18** 17:58:55.7±1.9, 24°.73S±0°.04×175°.4W±0°.1, h10km±1km, mb4.6/11, Error ellipse: s-maj=21.7km s-min=7.3km az=91.0*
*IDC **18** 17:59:08.7±5.1, 24°.28S×175°.65W, h119km±40km, mb3.6/5, mb1 3.9/7, mb1mx3.5/41, mbtmp4.0/7, Error ellipse: s-maj=46.8km s-min=28.8km az=139.0*

ISC 18 17:58:57.4±0.9, 24°.67S±0°.09×175°.4W±0°.1, h19km, n22, σ1°.96/21, mb4.4/9, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**9.22**	**317**	P		**Pn**	**18 01 13.0**	**+3.5**
	1.8nm,0.3s,baz=109,slow=14,SNR=7.6							
MSVF	**Nonsavu**	**9.22**	**317**			**Pn**	**18 01 11.1**	**+1.6**
AFI	**Afiamalu**	**11.24**	**18**			**Pn**	**18 01 37.4**	**+0.2**
URZ	**Urewera**	**14.97**	**203**	P		**P**	**18 02 36.0**	**+2.7**
	0.4nm,0.3s,baz=307,slow=20,SNR=1.5							
BKZ	**Black Stump Fm**	**15.99**	**203**	Pn		**Pn**	**18 02 40.1**	**-1.2**
MSWZ	**Moikau Station**	**18.43**	**203**	P		**Pn**	**18 03 09.4**	**-2.3**
THZ	**Tophouse**	**19.62**	**207**	P		**Pn**	**18 03 24.1**	**-2.1**
THZ				IAmb		IAmb	18 03 44.0	
	comp=Z,54nm,1.6s							
TOO	**Toolangi**	**35.62**	**239**	P		**P**	**18 05 54.1**	**+0.1**
CTA	**Charters Tower**	**35.67**	**270**	P		**P**	**18 05 53.0**	**-1.7**
	comp=Z,3.3nm,0.8s,baz=104,slow=11,SNR=1.8							
CTAO	**Charters Tower**	**35.67**	**270**	P		**P**	**18 05 54.8**	**+0.1**
CTAO				IAmb		IAmb	18 06 04.7	
	comp=Z,16nm,1.2s							
ASAR	**Alice Springs**	**46.05**	**260**	P		**P**	**18 07 19.8**	**-0.4**
	comp=Z,2.7nm,1.1s,baz=84,slow=6.8,SNR=13							
WR0	**Warramunga Arr**	**46.35**	**265**	P		**P**	**18 07 22.3**	**-0.3**
WR0				IAmb		IAmb	18 07 50.6	
	comp=Z,7.5nm,1.4s							
WB2	**Warramunga Arr**	**46.53**	**265**	P		**P**	**18 07 23.1**	**-0.9**
WB0	**Warramunga Arr**	**46.54**	**266**	P		**P**	**18 07 23.7**	**-0.4**
WB0				IAmb		IAmb	18 07 25.5	
	comp=Z,3.4nm,0.8s							
WRA	**Warramunga Arr**	**46.54**	**265**	P		**P**	**18 07 23.3**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=103,slow=7.9,SNR=19							
WRA	**Warramunga Arr**	**46.54**	**265**	IAmb		IAmb	18 07 24.8	
	comp=Z,0.2nm,0.8s							
MTN	**Manton Dam**	**51.70**	**273**	P		**P**	**18 08 00.3**	**-3.3**
MTN				IAmb		IAmb	18 08 02.3	
	comp=Z,11nm,1.2s							
FITZ	**Fitzroy Crossi**	**54.95**	**265**	P		**P**	**18 08 28.1**	**+0.5**
FITZ				IAmb		IAmb	18 08 47.6	
	comp=Z,9.8nm,1.5s							
QSPA	**South Pole Qui**	**65.42**	**180**	P		**P**	**18 09 41.7**	**+3.0**

NVAR	**Mina Array Bea**	**82.46**	**42**	P		**P**		**18 11 17.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=225,slow=8.9,SNR=1.5								
CMAR	**Chiang Mai Arr**	**93.74**	**288**	P		**P**		**18 12 10.6**	**-2.9**
	comp=Z,0.4nm,0.7s,baz=122,slow=3.7,SNR=2.4								
AKASG	**Malin Array Be**	**147.81**	**330**	PKPbc		**PKPdf**		**18 18 36.8**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=43,slow=4.1,SNR=1.4								

*NIED **18** 18:01:57.8, 32°.03N×132°.12E, h21km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr 2.07; Mθθ 0.95; Mϕϕ -3.02; Mrθ 1.94; Mrϕ -0.80; Mθϕ 1.81; Fault plane solution: M0 3.84000×10^14 NP1: ϕs 38.00000°, δ 71.00000°, λ 118.00000°. NP2: ϕs 161.00000°, δ 33.00000°, λ 37.00000°.*

JMA 18 18:01:57.8±0.1, 32°.03N×132°.12E, h21km±2km, M3.5, 5C-4D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
JTSN	**Tsuno**	**0.56**	**293**	⇓P		Pb	18 02 08.4	-0.7
JTSN				*eS*		Sb	18 02 16.1	-0.7
JHHC	**Hyugahichiya**	**0.58**	**315**	⇓P		Pb	18 02 09.0	-0.4
JHHC				*eS*		Sb	18 02 17.2	0.0
JNKG	**Nichinankitago**	**0.73**	**240**	⇓P		Pb	18 02 11.7	-0.1
JNKG				*eS*		Sb	18 02 22.0	+0.6
JSKE	**Saikikamae**	**0.79**	**346**	⇑P		Pb	18 02 13.0	+0.2
JSKE				*eS*		Sn	18 02 24.4	-0.4
JNAR	**Kushima--Naru**	**0.88**	**235**	⇑P		Pb	18 02 14.1	-0.2
JNAR				*eS*		Sb	18 02 26.1	+0.4
JTZ	**Takazaki**	**0.89**	**262**	⇑P		Pb	18 02 13.9	-0.6
JTZ				*eS*		Sb	18 02 25.7	-0.2
JTO	**Tosashimizu**	**1.01**	**35**	⇓P		Pb	18 02 15.9	-0.7
JTO				*eS*		Sb	18 02 29.0	-0.4
JUS	**Usuki**	**1.08**	**343**	⇑P		Pb	18 02 18.0	+0.2
JIU3	**Izumi3**	**1.22**	**295**	⇑P		Pn	18 02 19.9	+0.2
JIU3				*eS*		Sb	18 02 35.4	-0.1

*KRSC **18** 18:11:33.1±0.7, 54°.84N×161°.98E, h70km±10km, ML4.7*
*MOS **18** 18:11:34.7±0.9, 54°.87N×161°.88E, h68km, mb4.4/6, Error ellipse: s-maj=7.3km s-min=3.6km az=79.4*
*IDC **18** 18:11:37.1±2.5, 55°.05N×161°.54E, h70km±23km, mb3.6/19, mb1 3.8/23, mb1mx3.7/43, mbtmp3.9/23, MS3.1/4, Ms1 3.1/4, ms1mx2.7/54, Error ellipse: s-maj=16.4km s-min=13.5km az=149.0*
*NEIC **18** 18:11:37.0±1.7, 54°.95N±0°.09×161°.5E±0°.2, h73km±3km, mb4.4/48, Error ellipse: s-maj=15.7km s-min=12.1km az=129.0*

ISC 18 18:11:35.7±0.8, 54°.86N±0°.03×161°.89E±0°.03, h63km±7km, n217, σ1°39/263, mb4.3/49, 5C-2D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
MKZ	**Mys Kozlova**	**0.32**	**197**	PN		Pn	18 11 44.6	-1.7
MKZ	**Mys Kozlova**	**0.32**	**197**	*

PET				*e*S	**Sn**	**18 12 48.1 +1.0**		
PET				pmax	pmax			
	comp=Z,327nm,0.5s							
PET				smax	smax			
	comp=E,3μm,0.5s							
PET				smax	smax			
	comp=E,2μm,0.4s							
PET				smax	smax			
	comp=N,1μm,0.5s							
PET				smax	smax			
	comp=N,2μm,0.4s							
PET	**Petropavlovsk**	**2.66**	**227**	*e*P	**Pn**	**18 12 16.6 +0.5**		
PET				*e*S	**Sn**	**18 12 48.3 +1.2**		
PET	**Petropavlovsk**	**2.66**	**227**		**Pn**	**18 12 15.9 -0.2**		
KRMR	**Karymshinskiy**	**3.02**	**229**	PN	**Pn**	**18 12 22.8 +1.8**		
KRMR				S	**Sn**	**18 12 58.8 +2.8**		
KRMR	**Karymshinskiy**	**3.02**	**229**	*e*P	**Pn**	**18 12 22.8 +1.8**		
KRMR				*e*S	**Sn**	**18 12 58.8 +2.8**		
PEA0B	**Petropavlovsk-**	**3.04**	**236**	*ce*PN	**Pn**	**18 12 22.0 +0.7**		
PEA0B	**Petropavlovsk-**	**3.04**	**236**	Pn	**Pn**	**18 12 21.8 +0.5**		
PETK	**Petropavlovsk-**	**3.04**	**236**	P	**Pn**	**18 12 21.8 +0.5**		
	comp=N,24nm,0.3s,baz=71,slow=18,SNR=79							
PETK				S	**Sn**	**18 13 02.0 +5.5**		
	comp=N,15nm,0.3s,baz=313,slow=14,SNR=7.6							
PETK				LR	LR	18 13 53.5		
	comp=N,137nm,18.4s,baz=64,slow=46							
PETK	**Petropavlovsk-**	**3.04**	**236**	PN	**Pn**	**18 12 21.6 +0.3**		
PETK	**Petropavlovsk-**	**3.04**	**236**	Pn	**Pn**	**18 12 21.6 +0.3**		
RUS	**Russkaya**	**3.16**	**221**	PN	**Pn**	**18 12 22.8 -0.1**		
RUS				S	**Sn**	**18 12 59.2 -0.2**		
RUS	**Russkaya**	**3.16**	**221**	*e*P	**Pn**	**18 12 22.8 -0.1**		
RUS				*e*S	**Sn**	**18 12 59.2 -0.2**		
GRL	**Gorelyy**	**3.24**	**226**	PN	**Pn**	**18 12 25.6 +1.4**		
GRL				S	**Sn**	**18 13 04.1 +2.5**		
GRL	**Gorelyy**	**3.24**	**226**	*e*P	**Pn**	**18 12 25.6 +1.4**		
GRL				*e*S	**Sn**	**18 13 04.1 +2.5**		
MTVR	**Mutnovka**	**3.25**	**224**	PN	**Pn**	**18 12 25.3 +1.0**		
MTVR				S	**Sn**	**18 13 03.5 +1.7**		
MTVR	**Mutnovka**	**3.25**	**224**	*e*P	**Pn**	**18 12 25.3 +1.0**		
MTVR				*e*S	**Sn**	**18 13 03.5 +1.7**		
APC	**Apacha**	**3.41**	**237**	PN	**Pn**	**18 12 27.9 +1.6**		
APC	**Apacha**	**3.41**	**237**	*e*P	**Pn**	**18 12 27.9 +1.6**		
KDTR	**Khodutka, Kamc**	**3.82**	**218**	PN	**Pn**	**18 12 31.9 -0.1**		
KDTR				S	**Sn**	**18 13 15.0 -0.6**		
KDTR	**Khodutka, Kamc**	**3.82**	**218**	*i* P	**Pn**	**18 12 31.9 -0.1**		
KDTR				*e*S	**Sn**	**18 13 15.0 -0.6**		
MIPR	**Malaya Ipel'ka**	**4.01**	**232**	PN	**Pn**	**18 12 36.2 +1.6**		
MIPR	**Malaya Ipel'ka**	**4.01**	**232**	*e*P	**Pn**	**18 12 36.2 +1.6**		
PALN	**Palana**	**4.37**	**347**	PN	**Pn**	**18 12 41.6 +2.2**		
PALN	**Palana**	**4.37**	**347**	*e*P	**Pn**	**18 12 41.6 +2.2**		
OSSR	**Ossora**	**4.45**	**8**	PN	**Pn**	**18 12 40.3 -0.2**		
OSSR				S	**Sn**	**18 13 29.5 -1.4**		
OSSR	**Ossora**	**4.45**	**8**	*e*P	**Pn**	**18 12 40.3 -0.2**		
OSSR				*e*S	**Sn**	**18 13 29.5 -1.4**		
PAU	**Pauzhetka**	**4.57**	**224**	PN	**Pn**	**18 12 43.4 +1.1**		
PAU	**Pauzhetka**	**4.57**	**224**	*e*P	**Pn**	**18 12 43.4 +1.1**		
SKR	**Severo-Kuril's**	**5.46**	**222**	*e*PN	**Pn**	**18 12 55.0 +0.6**		
SKR				*e*S	**Sn**	**18 13 56.3 +0.5**		
SKR				pmax	pmax			
	comp=Z,400nm,2.3s							
SKR				pmax	pmax			
	comp=Z,202nm,0.7s							
SKR				smax	smax			
	comp=N,270nm,0.6s							
SKR				smax	smax			
	comp=E,317nm,0.5s							
SKR				MLR	MLR			
	comp=Z,1μm,16.0s							
SKR	**Severo-Kuril's**	**5.46**	**222**	*e*P	**Pn**	**18 12 54.7 +0.3**		
SKR				*e*S	**Sn**	**18 13 55.5 -0.3**		
ALID	**Alaid**	**5.54**	**226**	PN	**Pn**	**18 12 56.9 +1.2**		
ALID	**Alaid**	**5.54**	**226**	*e*P	**Pn**	**18 12 56.9 +1.2**		
TILK	**Tilichiki**	**6.04**	**20**	PN	**Pn**	**18 13 02.8 +0.4**		
TILK				S	**Sn**	**18 14 09.0 -1.0**		
TILK	**Tilichiki**	**6.04**	**20**	*e*P	**Pn**	**18 13 02.8 +0.4**		
TILK				*e*S	**Sn**	**18 14 09.0 -1.0**		
MA2	**Magadan**	**7.66**	**313**	P	**Pn**	**18 13 22.3 -2.2**		
	comp=Z,0.3nm,0.3s,baz=132,slow=13,SNR=1.6							
MA2	**Magadan**	**7.66**	**313**	*ce*PN	**Pn**	**18 13 26.0 +1.5**		
MA2				pmax	pmax			
	comp=Z,3.0nm,0.8s							
MA2	**Magadan**	**7.66**	**313**	Pn	**Pn**	**18 13 24.1 -0.4**		
KMSK	**Kamenskaya**	**7.95**	**15**	PN	**Pn**	**18 13 29.7 +1.3**		
KMSK	**Kamenskaya**	**7.95**	**15**	*e*P	**Pn**	**18 13 29.7 +1.3**		
KMSK				*e*S	**Sn**	**18 14 56.5 -0.2**		
BILL	**Bilibino**	**13.38**	**7**	*e*PN	**Pn**	**18 14 44.0 +1.6**		
BILL				pmax	pmax			
	comp=Z,4.0nm,0.9s							
BILL				MLR	MLR			
	comp=Z,82nm,16.0s							
BILL	**Bilibino**	**13.38**	**7**	Pn	**P**	**18 14 46.9 -2.9**		
YSS	**Yuzh-Sakhalins**	**14.40**	**245**	*i* P	**Pn**	**18 14 54.6 -1.5**		
YSS				pmax	pmax			
	comp=Z,15nm,1.2s							
SPIA	**Saint Paul Isl**	**15.70**	**70**	P	**P**	**18 15 18.9 +3.3**		
JKA	**Kamikawa-asahi**	**16.45**	**237**		**P**	**18 15 23.5 -0.5**		
ASAJ	**Asahikawa**	**16.46**	**237**	P	**P**	**18 15 23.2 -0.8**		
	comp=Z,0.5nm,0.3s,baz=52,slow=17,SNR=6.7							
ERM	**Erimo**	**17.81**	**232**	*i* P	**P**	**18 15 36.8 -2.1**		
ERM	**Erimo**	**17.81**	**232**	P	**P**	**18 15 37.3 -1.6**		
ERM				IAmb	IAmb	18 15 48.7		
	comp=Z,42nm,0.9s							
YAK	**Yakutsk**	**18.16**	**306**	P	**Pn**	**18 15 41.2 -1.9**		
	comp=Z,0.1nm,0.3s,baz=109,slow=2.2,SNR=4.0							
YAK	**Yakutsk**	**18.16**	**306**	*ce*P	**Pn**	**18 15 41.8 -1.3**		
YAK				pmax	pmax			
	comp=Z,5.0nm,0.6s							
YAK	**Yakutsk**	**18.16**	**306**		**Pn**	**18 15 41.2 -1.9**		
KLR	**Kul'dur**	**19.28**	**265**	LR	LR	18 24 12.6		
	comp=Z,36nm,19.8s,baz=172,slow=40							
TIXI	**Tiksi**	**21.96**	**333**	P	**P**	**18 16 22.5 -1.2**		
	comp=Z,0.9nm,0.3s,baz=122,slow=8.9,SNR=5.4							
TIXI	**Tiksi**	**21.96**	**333**	*i* P	**P**	**18 16 22.9 -0.8**		
TIXI	**Tiksi**	**21.96**	**333**	P	**P**	**18 16 22.5 -1.2**		
JMM	**Marumori**	**22.24**	**229**	P	**P**	**18 16 28.1 +1.1**		
MAJO	**Matsushiro**	**24.48**	**231**	P	**P**	**18 16 49.7 +1.0**		
MAJO				pmax	pmax			
	comp=Z,10.0nm,1.2s							
MAJO	**Matsushiro**	**24.48**	**231**	P	**P**	**18 16 49.7 +1.0**		
MAT	**Matsushiro**	**24.48**	**231**	P	**P**	**18 16 48.3 -0.4**		
MJAR	**Matsushiro Arr**	**24.48**	**231**	P	**P**	**18 16 49.0 +0.3**		
	comp=Z,2.2nm,0.8s,baz=28,slow=10,SNR=4.9							
MJAR	**Matsushiro Arr**	**24.48**	**231**	P	**P**	**18 16 49.0 +0.3**		
KDAK	**Kodiak Island**	**25.05**	**65**	LR	LR	18 26 02.1		
	comp=Z,93nm,18.3s,baz=186,slow=34							
BPAW	**Bear Paw Mtn.**	**25.07**	**49**	P	**P**	**18 16 53.8 0.0**		
BPAW				IAmb	IAmb	18 17 29.0		
	comp=Z,16nm,1.5s							
KTH	**Kantishna Hill**	**25.11**	**51**	P	**P**	**18 16 53.2 -1.0**		
KTH				IAmb	IAmb	18 17 14.6		
	comp=Z,21nm,1.3s							
SUA	**Susitna One**	**25.34**	**56**	P	**P**	**18 16 56.6 +0.2**		
I23K	**Minto, Yukon-K**	**25.76**	**47**	P	**P**	**18 17 00.5 +0.5**		
I23K				IAmb	IAmb	18 17 19.2		
	comp=Z,21nm,1.6s							
HIA	**Hailar**	**26.20**	**275**	*i* P	**P**	**18 17 05.6 +1.4**		
HIA				pmax	pmax			
	comp=Z,3.0nm,0.3s							
WRH	**Wood River Hil**	**26.32**	**48**	P	**P**	**18 17 05.7 +0.6**		
CCB	**Clear Creek Bu**	**26.43**	**48**	P	**P**	**18 17 06.9 +0.8**		
ILAR	**Eielson Array**	**26.82**	**48**	P	**P**	**18 17 09.5 -0.1**		
	comp=Z,0.8nm,0.6s,baz=251,slow=6.2,SNR=9.2							
SCM	**Sheep Creek Mo**	**26.91**	**54**	P	**P**	**18 17 09.7 -0.9**		
SCM				pmax	pmax			
	comp=Z,50nm,1.6s							
SCM	**Sheep Creek Mo**	**26.91**	**54**	P	**P**	**18 17 09.7 -0.9**		
BMAR	**Burnt Mountain**	**27.70**	**42**	P	**P**	**18 17 17.8 +0.2**		
K27K	**Chicken**	**28.98**	**49**	P	**P**	**18 17 29.0 +0.2**		
K27K				IAmb	IAmb	18 18 04.0		
	comp=Z,12nm,1.4s							
BARN	**Barnard Glacie**	**29.73**	**55**	P	**P**	**18 17 37.3 +1.5**		
SONM	**Songino Array**	**34.55**	**282**	PcP	**PcP**	**18 20 51.6 +0.3**		
	comp=Z,0.8nm,0.7s,baz=99,slow=2.7,SNR=4.1							
C36M	**Paulatuk**	**34.99**	**37**	P	**P**	**18 18 21.9 +0.5**		
C36M				IAmb	IAmb	18 18 22.4		
	comp=Z,2.5nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**35.28**	**172**	T	T	18 55 40.3		
	baz=355,slow=76,SNR=361							
H11N3	**WAKE ISLAND Hy**	**35.29**	**172**	T	T	18 55 41.9		
	baz=355,slow=76,SNR=428							
H11N1	**WAKE ISLAND Hy**	**35.30**	**172**	T	T	18 55 42.4		
	baz=355,slow=76,SNR=452							
HHC	**Hu-ho-hao-te**	**35.75**	**268**	*e*P	**P**	**18 18 28.9 +0.6**		
HHC				pmax	pmax			
	comp=Z,156nm,0.9s							
HHC				pmax	pmax			
	comp=Z,82nm,5.1s							
DLBC	**Dease Lake**	**36.15**	**56**	P	**P**	**18 18 34.5 +3.0**		
DLBC				IAmb	IAmb	18 18 59.8		
	comp=Z,15nm,1.6s							
H11S1	**WAKE ISLAND Hy**	**36.47**	**172**	T	T	18 57 10.3		
	baz=352,slow=76							
H11S3	**WAKE ISLAND Hy**	**36.49**	**172**	T	T	18 57 13.6		
	baz=352,slow=76							
H11S2	**WAKE ISLAND Hy**	**36.49**	**172**	T	T	18 57 10.5		
	baz=352,slow=76							
EUNU	**Eureka**	**39.97**	**15**	P	**P**	**18 19 03.9 +0.5**		
EUNU				IAmb	IAmb	18 19 04.6		
	comp=Z,4.3nm,0.8s							
YKA	**Yellowknife Ar**	**41.15**	**45**	P	**P**	**18 19 14.2 +1.0**		
	comp=Z,0.8nm,0.7s,baz=301,slow=7.6,SNR=14							
YKA				PcP	**PcP**	**18 21 11.9 +0.7**		
	comp=Z,0.4nm,0.7s,baz=302,slow=3.2,SNR=7.0							
RES	**Resolute Bay**	**41.28**	**23**	P	**P**	**18 19 14.1 -0.1**		
	comp=Z,1.3nm,0.7s,baz=290,slow=8.7,SNR=5.4							
RES	**Resolute Bay**	**41.28**	**23**	P	**P**	**18 19 15.0 +0.9**		
DGZ	**Jazzator, Alta**	**43.85**	**295**	*i* P	**P**	**18 19 35.7 +0.2**		
DGZ				pmax	pmax			
	comp=Z,10.0nm,3.9s							
NLWA	**Neilton Lookou**	**45.14**	**67**	P	**P**	**18 19 47.9 +2.2**		
SPA0	**Spitsbergen Ar**	**45.56**	**351**	P	**P**	**18 19 47.8 -0.8**		
WMQ	**Urumqi**	**47.40**	**289**	*e*P	**P**	**18 20 03.8 +0.4**		
WMQ				pmax	pmax			
	comp=Z,16nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,180nm,5.5s							
WMQ				LR	LR			
	comp=N,2μm,29.3s							
WMQ				LR	LR			
	comp=E,3μm,29.1s							
WMQ				LR	LR			
	comp=Z,170nm,29.3s							
MK31	**Makanchi Array**	**48.35**	**295**	P	**P**	**18 20 08.8 -1.9**		
MK31				pmax	pmax			
	comp=Z,2.0nm,1.5s							
MK31	**Makanchi Array**	**48.35**	**295**	P	**P**	**18 20 08.8 -1.9**		
MKAR	**Makanchi Array**	**48.35**	**295**	P	**P**	**18 20 08.1 -2.6**		
	comp=Z,0.4nm,0.6s,baz=60,slow=7.3,SNR=7.8							
MKAR	**Makanchi Array**	**48.35**	**295**	P	**P**	**18 20 08.8 -1.9**		
MKAR	**Makanchi Array**	**48.35**	**295**	P	**P**	**18 20 08.8 -1.9**		
MAKZ	**Makanchi**	**48.51**	**295**	P	**P**	**18 20 09.3 -2.6**		
MAKZ				pmax	pmax			
	comp=Z,4.0nm,1.6s							
MAKZ	**Makanchi**	**48.51**	**295**	P	**P**	**18 20 09.3 -2.6**		
JTMT	**Jette**	**49.90**	**61**	P	**P**	**18 20 23.7 +1.0**		
JTMT				IAmb	IAmb	18 20 25.1		
	comp=Z,5.8nm,0.8s							
BRVK	**Borovoye**	**50.15**	**308**	*i* P	**P**	**18 20 22.9 -1.4**		
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BRVK	**Borovoye**	**50.15**	**308**	P	**P**	**18 20 23.1 -1.2**		
BMO	**Blue Mountains**	**50.26**	**66**	P	**P**	**18 20 26.6 +1.2**		
BMO				pmax	pmax			
	comp=Z,1.0nm,0.6s							
BMO	**Blue Mountains**	**50.26**	**66**	P	**P**	**18 20 26.6 +1.2**		
MOD	**Modoc Plateau**	**50.65**	**71**	P	**P**	**18 20 29.8 +1.3**		
MOD				IAmb	IAmb	18 20 32.5		
	comp=Z,5.7nm,1.2s							
FCC	**Fort Churchill**	**51.44**	**40**	P	**P**	**18 20 34.6 +0.8**		
FCC				pmax	pmax			
	comp=Z,6.0nm,1.5s							
FCC	**Fort Churchill**	**51.44**	**40**	P	**P**	**18 20 34.6 +0.8**		
FCC				IAmb	IAmb	18 21 11.9		
	comp=Z,5.5nm,1.4s							
ARCES	**ARCESS Array B**	**51.93**	**342**	P	**P**	**18 20 36.9 -0.5**		
	comp=Z,2.7nm,0.9s,baz=29,slow=11,SNR=6.6							
ARCES	**ARCESS Array B**	**51.93**	**342**	IAmb	IAmb	18 20 37.3		
	comp=Z,29nm,1.6s							
ARU	**Arti**	**52.82**	**317**	*d* *i* P	**P**	**18 20 43.3 -0.8**		
ARU						18 21 50.0		
ARU						18 22 41.7		
ARU				S	**S**	**18 28 07.5 0.0**		
ARU				SS	**SKiKP**	**18 31 47.9 -9.2**		
ARU				pmax	pmax			
	comp=Z,14nm,3.4s							
PNTR	**Pine Nut**	**52.98**	**73**	P	**P**	**18 20 48.0 +2.1**		
PNTR				IAmb	IAmb	18 20 49.2		
	comp=Z,5.0nm,0.8s							
YHL	**Hebgen Lake**	**53.45**	**62**	P	**P**	**18 20 51.4 +2.1**		
YHL				IAmb	IAmb	18 20 52.5		
	comp=Z,2.7nm,0.8s							
WAKR	**Walker**	**53.49**	**73**	P	**P**	**18 20 52.4 +2.8**		
WAKR				IAmb	IAmb	18 20 53.0		
	comp=Z,3.3nm,0.8s							
YHB	**Horse Butte**	**53.51**	**62**	P	**P**	**18 20 52.9 +3.2**		
YHB				IAmb	IAmb	18 20 59.1		
	comp=Z,3.2nm,0.9s							
YHH	**Holmes Hill**	**53.66**	**62**	P	**P**	**18 20 53.3 +2.4**		
YHH				IAmb	IAmb	18 20 54.0		
	comp=Z,4.1nm,1.2s							
YNR	**Norris Junctio**	**53.80**	**62**	P	**P**	**18 20 53.2 +1.4**		
YNR				IAmb	IAmb	18 20 55.6		
	comp=Z,3.0nm,1.0s							
KVN	**Kaiserville**	**53.84**	**72**	P	**P**	**18 20 54.1 +2.0**		
KVN				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KVN	**Kaiserville**	**53.84**	**72**	P	**P**	**18 20 54.1 +2.0**		
KVN				IAmb	IAmb	18 20 55.9		
	comp=Z,2.3nm,0.9s							
RYN	**Ryan**	**53.90**	**72**	P	**P**	**18 20 54.9 +2.3**		
RYN				IAmb	IAmb	18 20 55.8		
	comp=Z,2.5nm,0.8s							
NVAR	**Mina Array Bea**	**54.16**	**72**	P	**P**	**18 20 56.4 +1.8**		
	comp=Z,1.9nm,0.8s,baz=295,slow=7.8,SNR=16							
NVAR	**Mina Array Bea**	**54.16**	**72**	P	**P**	**18 20 56.7 +2.2**		
ELK	**Elko**	**54.19**	**68**	LR	LR	18 40 46.7		
	comp=Z,36nm,21.9s,baz=253,slow=32							
NV11	**Mina Array Sit**	**54.24**	**72**	P	**P**	**18 20 57.2 +2.1**		
NV11				IAmb	IAmb	18 20 58.5		
	comp=Z,2.3nm,0.8s							
TPH	**Tonopah**	**55.01**	**72**	P	**P**	**18 21 02.9 +2.2**		
TPH				pmax	pmax			
	comp=Z,15nm,0.9s							
TPH	**Tonopah**	**55.01**	**72**	P	**P**	**18 21 02.9 +2.2**		
PDAR	**Pinedale Array**	**55.75**	**63**	P	**P**	**18 21 07.0 +1.0**		
	comp=Z,0.7nm,0.7s,baz=270,slow=1.8,SNR=6.7							
ULM	**Lac du Bonnet**	**56.84**	**49**	P	**P**	**18 21 13.1 -0.2**		
	comp=Z,0.7nm,0.3s,baz=304,slow=11,SNR=1.9							
KKAR	**Karatay Array**	**56.95**	**299**	P	**P**	**18 21 11.8 -2.4**		
KKAR	**Karatay Array**	**56.95**	**299**	P	**P**	**18 21 11.8 -2.4**		
ABKAR	**Akbulak array**	**57.45**	**310**	P	**P**	**18 21 15.4 -2.2**		
ABKAR				IAmb	IAmb	18 21 17.8		
	comp=Z,1.2nm,0.6s							
FIA1	**FINESS Array S**	**58.91**	**337**	P	**P**	**18 21 27.1 -0.4**		
FINES	**FINESS Array B**	**58.91**	**337**	P	**P**	**18 21 26.0 -1.6**		
	comp=Z,2.5nm,0.5s,baz=36,slow=8.4,SNR=46							
FINES	**FINESS Array B**	**58.91**	**337**	*ce*P	**P**	**18 21 26.2 -1.4**		
FINES				pmax	pmax			
	comp=Z,3.0nm,0.4s							
NC204	**NORSAR Array S**	**61.98**	**345**	P	**P**	**18 21 47.6 -1.0**		
NC405	**NORSAR Array S**	**61.98**	**344**	P	**P**	**18 21 47.7 -0.8**		
NOA	**NORSAR Array B**	**62.13**	**344**	P	**P**	**18 21 47.9 -1.7**		
	comp=Z,0.5nm,0.4s,baz=14,slow=5.7,SNR=8.0							
AKASG	**Malin Array Be**	**67.63**	**330**	P	**P**	**18 22 23.9 -1.5**		
	comp=Z,0.3nm,0.2s,baz=26,slow=6.6,SNR=5.6							
TX31	**Lajitas Ar. Si**	**68.98**	**69**	P	**P**	**18 22 35.9 +1.6**		
TX31				IAmb	IAmb	18 22 36.7		
	comp=Z,3.1nm,0.6s							
TX32	**Lajitas Array**	**68.98**	**69**	P	**P**	**18 22 35.8 +1.5**		
TXAR	**Lajitas Array**	**68.98**	**69**	P	**P**	**18 22 35.7 +1.4**		
	comp=Z,1.0nm,0.5s,baz=300,slow=4.8,SNR=16							
CRVS	**Cervenica-Dubn**	**71.40**	**334**	*e*P	**P**	**18 22 50.0 +1.3**		
CRVS	**Cervenica-Dubn**	**71.40**	**334**	*e*P	**P**	**18 22 50.0 +1.3**		
GERES	**GERESS Array B**	**73.26**	**339**	P	**P**	**18 22 59.4 -0.5**		
	comp=Z,0.5nm,0.5s,baz=32,slow=5.8,SNR=5.3							
BRTR	**Keskin Array B**	**75.92**	**321**	P	**P**	**18 23 14.7 -0.8**		
	comp=Z,0.7nm,0.5s,baz=317,slow=38,SNR=2.1							
WRA	**Warramunga Arr**	**78.14**	**206**	P	**P**	**18 23 28.4 +0.6**		
	comp=Z,0.7nm,0.8s,baz=20,slow=6.0,SNR=2.8							
ASAR	**Alice Springs**	**81.81**	**206**	P	**P**	**18 23 48.9 +1.3**		
	comp=Z,1.0nm,0.7s,baz=19,slow=5.5,SNR=15							
ESDC	**Sonseca Array**	**85.06**	**349**	P	**P**	**18 24 04.2 -0.1**		
	comp=Z,1.6nm,0.7s,baz=3.2,slow=4.9,SNR=13							
CMLA	**Cha da Macela**	**87.52**	**6**	*i* P	**P**	**18 24 17.7 +1.3**		

NEIC ***18*** *18:27:33.2±1.1,55.69°N±0.03°×156.4°W±0.1,h38km±52km, Error ellipse: s-maj=9.9km s-min=2.9km az=111.0*

AEIC 18 18:27:34±1.2,55.7°N±0.1°×156.4°W±0.1,h66km±9km, ML2.8/14,ML3.5/9(NEIC),Error ellipse: s-maj=18.7km s-min=5.5km az=153.0,South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNSG	**Veniaminof 6**	**1.54**	**286**		Pn	18 27 58.9	-0.5
VNSG					Sn	18 28 17.4	-1.1
VNHG	**Veniaminof 1**	**1.61**	**289**		Pn	18 28 00.1	-0.3
PLK3	**Peulik 3**	**1.97**	**3**		Pn	18 28 05.3	+0.3
PLK3					Sn	18 28 30.0	+1.3
OHAK	**Old Harbor**	**2.30**	**48**		Pn	18 28 08.4	-1.2
OHAK	**Old Harbor**	**2.30**	**48**		Sn	18 28 34.6	-2.2
OHAK	**Old Harbor**	**2.30**	**48**	IAML		18 28 31.4	
	comp=N,100nm,4.0s						
SDPT	**Sand Point**	**2.33**	**262**		Sn	18 28 36.6	-0.8
SDPT	**Sand Point**	**2.33**	**262**		Pn	18 28 09.7	-0.2
SDPT	**Sand Point**	**2.33**	**262**	IAML		18 29 02.6	
	comp=N,118nm,3.4s						
KABR	**Katmai Barrier**	**2.54**	**18**		Pn	18 28 12.5	-0.4
KABR					Sn	18 28 41.6	-1.1
KELA	**Mount Kelaz**	**2.75**	**8**		Pn	18 28 15.2	-0.5
KDAK	**Kodiak Island**	**2.96**	**44**		Pn	18 28 17.0	-1.5
KDAK					Sn	18 28 50.5	-2.3
KDAK	**Kodiak Island**	**2.96**	**44**	IAML		18 28 52.4	
	comp=N,114nm,3.0s						
KDAK				IAML		18 29 33.0	
	comp=N,78nm,2.5s						
CNPM	**China Poot**	**4.72**	**34**	Pn	Pn	18 28 43.0	+0.4
CNPM				IAML		18 31 47.5	
	comp=N,110nm,3.9s						
BRLK	**Bradley Lake**	**5.02**	**34**	Pn	Pn	18 28 45.8	-0.9
BRLK				IAML		18 31 22.4	
	comp=N,85nm,3.0s						
RSO	**Redoubt South**	**5.13**	**21**	Pn	Pn	18 28 46.4	-2.0
RC01	**Rabbit Creek A**	**6.42**	**30**	Pn	Pn	18 29 04.8	-1.0
SUA	**Susitna One**	**6.47**	**25**	Pn	Pn	18 29 05.7	-0.9

IDC ***18*** *18:34:04.4±0.9,37.02°N×97.81W,h0km,mb3.4/2, mb1 3.7/7,mb1mx3.4/67,mbtmp3.4/7,ML3.2/5,Error ellipse: s-maj=13.6km s-min=11.3km az=132.0*

TUL ***18*** *18:34:04.8±1.2,36.95°N±0.02°×97.63W±0.04,h5km±6km, ML3.3,mb_Lg3.5/132(NEIC),Mwr3.4/18(NEIC), Error ellipse: s-maj=5.0km s-min=1.8km az=51.0*

NEIC ***18*** *18:34:05.1±1.3,36.91N±0.03°×97.64W±0.03,h5km±7km, Error ellipse: s-maj=5.8km s-min=1.2km az=219.0*

ANF ***18*** *18:34:05.3±0.3,36.91N×97.64W,h5km,ML4.4/18,Error ellipse: s-maj=3.3km s-min=2.8km az=13.0*

NEIC ***18*** *18:34:05.2,36.91N×97.64W,h5km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.17; $M_{\theta\theta}$1.52; $M_{\phi\phi}$-1.35; $M_{r\theta}$0.58; $M_{r\phi}$-0.33; $M_{\theta\phi}$-0.46; Fault plane solution: $M_0$1.66000×10^{14} NP1:ϕ_s140.84000°, δ89.63000°,λ26.16000°. NP2:ϕ_s50.66000°,δ63.84000°, λ179.59000°. Principal axes: T 1.7730, Plg18.0000°, Azm9.0000°; N -0.2535, Plg64.0000°, Azm142.0000°; P -1.5196, Plg18.0000°, Azm273.0000°;*

ISC 18 18:34:04.8±0.8,36.93N±0.02°×97.62W±0.02°,h11km±6km, n139,σ1§29/119,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAN13	**South Haven SW**	**0.14**	**55**		**Pg**	**18 34 08.1**	**0.0**
KAN13				Sg	**Sg**	**18 34 10.3**	**-0.2**
KAN09	**Caldwell North**	**0.20**	**1**		**Pg**	**18 34 09.2**	**0.0**
KAN09				Sg	**Sg**	**18 34 11.8**	**-0.4**
GC02	**Grant County #**	**0.21**	**247**		**Pg**	**18 34 09.2**	**-0.1**
GC02				Sg	**Sg**	**18 34 12.1**	**-0.2**
KAN01	**Argonia South**	**0.25**	**333**		**Pg**	**18 34 09.9**	**-0.1**
KAN01				Sg	**Sg**	**18 34 13.4**	**0.0**
KAN05	**Bluff City Nor**	**0.27**	**311**		**Pg**	**18 34 10.3**	**0.0**
KAN05				Sg	**Sg**	**18 34 14.0**	**0.0**
KAN14	**Manchester OK**	**0.28**	**275**	Pg	**Pg**	**18 34 10.4**	**-0.1**
KAN14				Sg	**Sg**	**18 34 14.2**	**-0.1**
KS20	**Mayfield South**	**

WMOK	**Wichita Mounta**	**2.38**	**204**	P			18 34 45.0	
	baz=23,SNR=65							
CBKS	**Cedar Bluff**	**2.52**	**319**			**Pn**	**18 34 47.5**	**+1.9**
CBKS	**Cedar Bluff**	**2.52**	**319**	S		**Sb**	**18 35 22.7**	**+1.7**
	baz=138							
CBKS	**Cedar Bluff**	**2.52**	**319**	P			18 34 46.5	
	baz=138,SNR=25							
CBKS				Sb			18 35 23.0	
	baz=138							
CBKS	**Cedar Bluff**	**2.52**	**319**	S			18 35 22.7	
	baz=138							
U38A	**Gravette**	**2.65**	**100**			**Pn**	**18 34 49.6**	**+2.2**
U38A				IAmb_Lg			18 35 29.1	
	comp=Z,146nm,0.8s							
U38A	**Gravette**	**2.65**	**100**	P		**Pn**	**18 34 49.9**	**+2.5**
	baz=282,SNR=54							
U38A	**Gravette**	**2.65**	**100**	P			18 34 49.9	
	baz=282,SNR=54							
X37A	**Clayton**	**2.97**	**141**	Pn		**Pn**	**18 34 54.0**	**+2.2**
X37A				IAmb_Lg			18 35 45.1	
	comp=Z,172nm,0.8s							
HHAR	**Hobbs**	**3.03**	**101**			**Pn**	**18 34 54.4**	**+1.7**
HHAR	**Hobbs**	**3.03**	**101**	P		**Pn**	**18 34 55.1**	**+2.4**
	baz=284							
HHAR	**Hobbs**	**3.03**	**101**	P			18 34 55.1	
	baz=284							
S39A	**Bolivar**	**3.51**	**76**			**Pn**	**18 35 01.1**	**+1.9**
S39A				IAmb_Lg			18 36 02.9	
	comp=Z,116nm,0.7s							
S39A	**Bolivar**	**3.51**	**76**	P		**Pn**	**18 35 01.2**	**+1.9**
	baz=259,SNR=26							
S39A	**Bolivar**	**3.51**	**76**	P			18 35 01.2	
	baz=259,SNR=26							
W39A	**Magazine**	**3.56**	**118**			**Pn**	**18 35 01.8**	**+1.9**
W39A				IAmb_Lg			18 36 03.0	
	comp=Z,186nm,0.9s							
W39A	**Magazine**	**3.56**	**118**	P		**Pn**	**18 35 01.8**	**+1.9**
	baz=300							
W39A	**Magazine**	**3.56**	**118**	P			18 35 01.1	
	baz=300,SNR=12							
W39A	**Magazine**	**3.56**	**118**	P			18 35 01.8	
	baz=300							
Z35A	**Perchaven, San**	**3.61**	**175**			**Pn**	**18 35 02.2**	**+1.6**
Z35A				IAmb_Lg			18 36 08.6	
	comp=Z,74nm,0.9s							
N33B	**J Bar K, Exete**	**3.80**	**2**	P		**Pn**	**18 35 04.6**	**+1.3**
	baz=182,SNR=13							
N33B	**J Bar K, Exete**	**3.80**	**2**	P			18 35 04.6	
	baz=182,SNR=13							
N33A	**J Bar K, Exete**	**3.80**	**2**			**Pn**	**18 35 04.7**	**+1.4**
U40A	**Yellville**	**3.88**	**97**	Pn		**Pn**	**18 35 06.1**	**+1.8**
U40A				IAmb_Lg			18 36 12.4	
	comp=Z,89nm,0.7s							
U40A	**Yellville**	**3.88**	**97**	P		**Pn**	**18 35 05.9**	**+1.6**
	baz=280,SNR=28							
U40A	**Yellville**	**3.88**	**97**	P			18 35 05.7	
	baz=280,SNR=34							
U40A				S			18 35 51.6	
	baz=280							
U40A	**Yellville**	**3.88**	**97**	P			18 35 05.9	
	baz=280,SNR=28							
U40A				P			18 35 05.9	
	baz=280,SNR=28							
AMTX	**Amarillo**	**3.88**	**239**	Pn		**Pn**	**18 35 06.2**	**+1.8**
MIAR	**Mount Ida**	**4.06**	**125**	Pn		**Pn**	**18 35 08.4**	**+1.6**
MIAR				IAmb_Lg			18 36 16.9	
	comp=Z,140nm,0.9s							
MIAR	**Mount Ida**	**4.06**	**125**	P			18 35 07.9	
	baz=307,SNR=42							
MIAR				S			18 35 56.7	
	baz=307							
P38A	**Dawn**	**4.19**	**49**			**Pn**	**18 35 10.2**	**+1.6**
P38A	**Dawn**	**4.19**	**49**	P		**Pn**	**18 35 09.9**	**+1.3**
	baz=232,SNR=20							
P38A	**Dawn**	**4.19**	**49**	P			18 35 09.9	
	baz=232,SNR=20							
N35A	**Tabor**	**4.21**	**21**			**Pn**	**18 35 10.7**	**+1.7**
Z38A	**Mt. Pleasant**	**4.25**	**149**	Pn		**Pn**	**18 35 09.6**	**+0.1**
MGMO	**Mountain Grove**	**4.29**	**85**	Pn		**Pn**	**18 35 11.3**	**+1.3**
MGMO				IAmb_Lg			18 36 22.7	
	comp=Z,96nm,0.8s							
R40A	**Maddies Statio**	**4.46**	**71**			**Pn**	**18 35 14.2**	**+1.9**
R40A				IAmb_Lg			18 36 31.1	
	comp=Z,116nm,0.8s							
R40A	**Maddies Statio**	**4.46**	**71**	P		**Pn**	**18 35 14.3**	**+1.9**
	baz=254,SNR=32							
R40A	**Maddies Statio**	**4.46**	**71**	P			18 35 14.3	
	baz=254,SNR=32							
KSCO	**Kaye Shedlock'**	**4.47**	**299**			**Pn**	**18 35 13.4**	**+0.8**
KSCO				IAmb_Lg			18 36 28.0	
	comp=Z,80nm,0.9s							
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P		**Pn**	**18 35 13.9**	**+1.3**
	baz=116,SNR=9.9							
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P			18 35 13.2	
	baz=116,SNR=9.9							
KSCO	**Kaye Shedlock'**	**4.47**	**299**	P			18 35 13.9	
	baz=116,SNR=9.9							
BGNE	**Belgrade**	**4.49**	**355**			**Pn**	**18 35 14.0**	**+1.3**
BGNE				IAmb_Lg			18 36 33.3	
	comp=Z,169nm,0.8s							
BGNE	**Belgrade**	**4.49**	**355**	P		**Pn**	**18 35 14.2**	**+1.5**
	baz=175,SNR=57							
BGNE	**Belgrade**	**4.49**	**355**	P			18 35 14.0	
	baz=175,SNR=6.0							
BGNE				S			18 36 06.0	
	baz=175							
BGNE	**Belgrade**	**4.49**	**355**	P			18 35 14.2	
	baz=175,SNR=57							
FCAR	**Ozark Folk Cen**	**4.55**	**102**			**Pn**	**18 35 14.7**	**+1.1**
FCAR				IAmb_Lg			18 36 29.4	
	comp=Z,105nm,1.0s							
X40A	**Basin Creek Fa**	**4.60**	**121**			**Pn**	**18 35 16.6**	**+2.4**
X40A				IAmb_Lg			18 36 35.8	
	comp=Z,87nm,0.8s							
X40A	**Basin Creek Fa**	**4.60**	**121**	P			18 35 15.6	
	baz=304,SNR=5.6							
X40A				S			18 36 10.1	
	baz=304							
ABTX	**Abilene, Hawle**	**4.61**	**202**			**Pn**	**18 35 15.5**	**+1.1**
ABTX	**Abilene, Hawle**	**4.61**	**202**	P			18 35 15.6	
	baz=20,SNR=7.1							
WHAR	**Wooly Hollow**	**4.62**	**109**	Pn		**Pn**	**18 35 15.8**	**+1.4**
W41B	**Gary Mavity, V**	**4.69**	**110**	P		**Pn**	**18 35 17.2**	**+1.7**
	baz=294,SNR=9.6							
W41B	**Gary Mavity, V**	**4.69**	**110**	P			18 35 16.8	
	baz=294,SNR=10							
W41B	**Gary Mavity, V**	**4.69**	**110**	P			18 35 17.2	
	baz=294,SNR=9.6							
WHTX	**Lake Whitney,**	**4.93**	**178**			**Pn**	**18 35 19.3**	**+0.6**
WHTX	**Lake Whitney,**	**4.93**	**178**	P		**Pn**	**18 35 19.9**	**+1.1**
	baz=358,SNR=21							
WHTX	**Lake Whitney,**	**4.93**	**178**	P			18 35 20.1	
	baz=358							
WHTX				S			18 36 16.7	
	baz=358							
WHTX	**Lake Whitney,**	**4.93**	**178**	P			18 35 19.9	
	baz=358,SNR=21							
P40A	**Paris**	**5.10**	**58**	Pn		**Pn**	**18 35 22.2**	**+1.1**
P40A				IAmb_Lg			18 36 52.9	
	comp=Z,150nm,0.9s							
L34A	**Svendsen Farm,**	**5.12**	**10**	Pn		**Pn**	**18 35 22.1**	**+0.8**
MSTX	**Muleshoe**	**5.14**	**236**	Pn		**Pn**	**18 35 22.4**	**+0.6**
MSTX	**Muleshoe**	**5.14**	**236**	S			18 36 21.7	
	baz=53							
237A	**Washetta, Mont**	**5.14**	**163**			**Pn**	**18 35 22.2**	**+0.5**
237A				IAmb_Lg			18 36 47.9	
	comp=Z,47nm,0.8s							
N38A	**Joes South For**	**5.16**	**40**			**Pn**	**18 35 22.5**	**+0.6**
CCM	**Cathedral Cave**	**5.19**	**76**	Pn		**Pn**	**18 35 23.1**	**+0.7**
CCM				IAmb_Lg			18 36 54.1	
	comp=Z,82nm,0.7s							
CCM	**Cathedral Cave**	**5.19**	**76**	P			18 35 23.9	
	baz=260							
CCM				S			18 36 23.7	
	baz=260							
LCAR	**Lake Charles**	**5.28**	**97**			**Pn**	**18 35 24.9**	**+1.4**
LCAR				IAmb_Lg			18 37 05.8	
	comp=Z,46nm,0.8s							
OGNE	**Ogallala**	**5.28**	**321**			**Pn**	**18 35 26.4**	**+2.7**
OGNE				IAmb_Lg			18 36 52.4	
	comp=Z,98nm,0.8s							
OGNE	**Ogallala**	**5.28**	**321**	P			18 35 25.3	
	baz=138							
Z41A	**Richland Creek**	**5.39**	**131**	S			18 36 27.9	
	baz=314							
T25A	**Trinidad**	**5.44**	**274**			**Pn**	**18 35 26.7**	**+0.8**
T25A				IAmb_Lg			18 37 02.0	
	comp=Z,51nm,0.7s							
T25A	**Trinidad**	**5.44**	**274**	P			18 35 26.9	
	baz=90							
CCAR	**Cane Creek**	**5.64**	**120**	IAmb_Lg			18 37 13.1	
	comp=Z,70nm,0.9s							
NATX	**Nacogdoches**	**5.71**	**154**			**Pn**	**18 35 29.1**	**-0.4**
NATX				IAmb_Lg			18 37 18.3	
	comp=Z,49nm,0.8s							
HBAR	**Harrisburg**	**5.79**	**102**	Pn		**Pn**	**18 35 30.2**	**-0.4**
HBAR				IAmb_Lg			18 37 16.5	
	comp=Z,85nm,0.8s							
FVM	**French Village**	**5.82**	**77**	IAmb_Lg			18 37 15.7	
	comp=Z,90nm,0.7s							
SCIA	**State Center**	**6.03**	**33**	Pn		**Pn**	**18 35 34.9**	**+1.1**
SCIA	**State Center**	**6.03**	**33**	S			18 36 42.5	
	baz=216							
LPAR	**Lepanto**	**6.06**	**100**	IAmb_Lg			18 37 27.3	
	comp=Z,75nm,0.7s							
SLM	**Saint Louis**	**6.09**	**72**	Pn		**Pn**	**18 35 33.6**	**-1.0**
SLM				IAmb_Lg			18 37 17.1	
	comp=Z,92nm,1.0s							
435B	**Jarrell**	**6.13**	**180**			**Pn**	**18 35 35.2**	**-0.1**
435B				IAmb_Lg			18 37 28.7	
	comp=Z,100nm,0.9s							
435B	**Jarrell**	**6.13**	**180**	P			18 35 35.5	
	baz=360							
435B				S			18 36 45.5	
	baz=360							
GNAR	**Gosnell**	**6.20**	**97**	IAmb_Lg			18 37 28.0	
	comp=Z,91nm,0.8s							
Q24A	**Divide**	**6.29**	**291**	P			18 35 38.3	
	baz=106							
PARMO	**Parma**	**6.32**	**90**	IAmb_Lg			18 37 32.7	
	comp=Z,111nm,0.8s							
143A	**Socs Landing,**	**6.63**	**128**	IAmb_Lg			18 37 52.2	
	comp=Z,57nm,0.8s							
JCT	**Junction City**	**6.69**	**196**			**Pn**	**18 35 43.3**	**+0.3**
JCT				IAmb_Lg			18 37 52.5	
	comp=Z,88nm,1.1s							
JCT	**Junction City**	**6.69**	**196**	P			18 35 43.4	
	baz=15							
S44A	**Carbondale**	**6.71**	**81**			**Pn**	**18 35 44.4**	**+1.2**
SIUC	**Southern Illin**	**6.74**	**81**			**Pn**	**18 35 45.2**	**+1.6**
HALT	**Halls**	**6.75**	**96**	IAmb_Lg			18 37 40.8	
	comp=Z,78nm,1.0s							
ECSD	**EROS Data Cent**	**6.84**	**6**	Pn		**Pn**	**18 35 44.8**	**-0.2**
ECSD				IAmb_Lg			18 37 56.3	
	comp=Z,39nm,1.1s							
ECSD	**EROS Data Cent**	**6.84**	**6**	P		**Pn**	**18 35 45.6**	**+0.7**
	baz=187,SNR=12							
ECSD	**EROS Data Cent**	**6.84**	**6**	P			18 35 45.5	
	baz=187,SNR=10							
ECSD	**EROS Data Cent**	**6.84**	**6**	P			18 35 45.6	
	baz=187,SNR=12							
ISCO	**Idaho Springs**	**6.90**	**297**	Pn		**Pn**	**18 35 47.1**	**+1.0**
ISCO				IAmb_Lg			18 37 49.4	
	comp=Z,52nm,0.8s							
ISCO	**Idaho Springs**	**6.90**	**297**	P			18 35 47.1	
	baz=112							
W45A	**Hickory Valley**	**7.06**	**102**	IAmb_Lg			18 38 02.6	
	comp=Z,44nm,0.7s							
UTMT	**University of**	**7.07**	**92**			**Pn**	**18 35 48.2**	**+0.1**
342A	**Flagon Creek P**	**7.07**	**140**	IAmb_Lg			18 38 06.8	
	comp=Z,34nm,1.0s							
OXF	**Oxford**	**7.10**	**107**	Pn		**Pn**	**18 35 49.5**	**+1.0**
OXF				IAmb_Lg			18 37 58.5	
	comp=Z,78nm,1.0s							
OXF	**Oxford**	**7.10**	**107**	P			18 35 49.8	
	baz=292,SNR=7.6							
Y45A	**Yeager Farm, C**	**7.27**	**113**	IAmb_Lg			18 38 12.7	
	comp=Z,39nm,0.8s							
ANMO	**Albuquerque**	**7.44**	**257**	Pn		**Pn**	**18 35 53.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=63,slow=14,SNR=1.9							
ANMO				Pg		Pg	18 36 22.3	-4.8
	comp=Z,0.6nm,0.3s,baz=80,slow=17,SNR=14							
ANMO				Lg		Lg	18 37 56.8	
	comp=Z,1.6nm,0.3s,baz=331,slow=24,SNR=14							
PHWY	**Pilot Hill**	**7.49**	**308**	IAmb_Lg			18 38 18.2	
	comp=Z,46nm,0.8s							
SUSD	**Miller**	**7.57**	**353**	IAmb_Lg			18 38 05.2	
	comp=Z,77nm,1.0s							
N23A	**Red Feather La**	**7.60**	**304**	P			18 35 56.5	
	baz=119,SNR=5.2							
OLIL	**Olney**	**7.75**	**74**	IAmb_Lg			18 38 22.4	
	comp=Z,84nm,0.9s							
I37A	**Lemond, Waseca**	**7.77**	**23**	IAmb_Lg			18 38 22.2	
	comp=Z,44nm,0.7s							
O44A	**Mansfield**	**7.86**	**63**	IAmb_Lg			18 38 20.4	
	comp=Z,78nm,0.8s							
WVT	**Waverly**	**7.92**	**93**	Pn		**Pn**	**18 35 59.7**	**-0.2**
Y22D	**IRIS PASSCAL I**	**8.10**	**252**	IAmb_Lg			18 38 40.9	
	comp=Z,76nm,0.8s							
JFWS	**Jewell Farm**	**8.23**	**41**	IAmb_Lg			18 38 30.4	
	comp=Z,79nm,0.8s							
JFWS	**Jewell Farm**	**8.23**	**41**	P			18 36 04.6	
	baz=226							
146A	**Union**	**8.24**	**119**	IAmb_Lg			18 38 50.3	
	comp=Z,26nm,0.9s							
T47A	**Sharon Grove**	**8.42**	**86**	IAmb_Lg			18 38 40.1	
	comp=Z,41nm,0.8s							
RSSD	**Black Hills**	**8.68**	**328**	IAmb_Lg			18 38 52.4	
	comp=Z,33nm,0.8s							
I40A	**Norwalk**	**8.76**	**35**	IAmb_Lg			18 38 45.4	
	comp=Z,53nm,0.9s							
V48A	**Smith Brothers**	**8.80**	**95**	IAmb_Lg			18 38 46.7	
	comp=Z,24nm,0.9s							
RWWY	**Rawlins**	**8.82**	**306**	IAmb_Lg			18 39 02.5	
	comp=Z,53nm,0.9s							
K22A	**Casper**	**8.92**	**313**	IAmb_Lg			18 38 53.6	
	comp=Z,54nm,0.8s							
SFIN	**Lafayette**	**8.92**	**64**	IAmb_Lg			18 38 55.6	
	comp=Z,62nm,0.8s							
F33A	**5 Mile Ranch,**	**8.96**	**6**	IAmb_Lg			18 39 01.2	
	comp=Z,40nm,1.2s							
PV11	**David Mesa, Pa**	**9.03**	**282**	IAmb_Lg			18 39 01.3	
	comp=Z,35nm,1.2s							
BLO	**Bloomington**	**9.04**	**72**	IAmb_Lg			18 39 03.6	
	comp=Z,58nm,0.9s							
SPMN	**Marine on St.**	**9.04**	**22**	IAmb_Lg			18 38 56.3	
	comp=Z,24nm,0.8s							
WCI	**Wyandotte Cave**	**9.09**	**78**	IAmb_Lg			18 38 54.3	
	comp=Z,42nm,0.9s							
TXAR	**Lajitas Array**	**9.11**	**215**	Pn		**Pn**	**18 36 15.2**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=34,slow=9.9,SNR=9.7							
TXAR				Pg			18 36 51.0	
	comp=Z,0.6nm,0.3s,baz=31,slow=14,SNR=8.1							
TXAR				Lg		Lg	18 38 48.0	
	comp=Z,0.6nm,0.3s,baz=36,slow=28,SNR=5.9							
CLTN	**Cedars of Leba**	**9.13**	**92**	IAmb_Lg			18 38 57.1	
	comp=Z,27nm,0.8s							
121A	**Cookes Peak, D**	**9.45**	**245**	IAmb_Lg			18 39 17.2	
	comp=Z,22nm,0.9s							
U49A	**Red Boiling Sp**	**9.52**	**89**	IAmb_Lg			18 39 07.2	
	comp=Z,37nm,1.1s							
I42A	**Draeger Farm,**	**9.61**	**41**	IAmb_Lg			18 39 17.0	
	comp=Z,36nm,0.8s							
E28A	**Huff**	**9.90**	**348**	IAmb_Lg			18 39 31.4	
	comp=Z,50nm,0.9s							
P48A	**Milroy**	**9.93**	**72**	IAmb_Lg			18 39 25.7	
	comp=Z,55nm,0.7s							
R49A	**Shelbyville**	**9.97**	**78**	IAmb_Lg			18 39 23.4	
	comp=Z,32nm,0.9s							
W18A	**Petrified Fore**	**9.98**	**263**	IAmb_Lg			18 39 25.3	
	comp=Z,24nm,1.3s							
PDAR	**Pinedale Array**	**10.87**	**306**	Pn		**Pn**	**18 36 38.4**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=6.9							
PDAR				Pg			18 37 25.1	
	comp=Z,0.3nm,0.3s,baz=112,slow=22,SNR=6.1							
PDAR				Sn		Sn	18 38 25.8	-16
	comp=Z,1.5nm,0.3s,baz=60,slow=34,SNR=6.9							
PDAR				Lg		Lg	18 39 41.0	
	comp=Z,0.2nm,0.3s,baz=99,slow=34,SNR=1.8							
TKL	**Tuckaleechee C**	**11.25**	**92**	Pn		**Pn**	**18 36 47.0**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=262,slow=15,SNR=5.0							
TKL				Sn		**Sn**	**18 38 47.4**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=216,slow=19,SNR=1.3							
TKL				Lg		Lg	18 39 56.0	
	comp=Z,0.7nm,0.3s,baz=193,slow=23,SNR=10.0							
ULM	**Lac du Bonnet**	**13.37**	**5**	Pn		**Pn**	**18 37 11.2**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=190,slow=13,SNR=2.5							
ULM				Sn		Sn	18 39 30.1	-13
	comp=Z,0.2nm,0.3s,baz=90,slow=19,SNR=2.4							
ULM				Lg		Lg	18 40 59.5	
	baz=113,slow=18,SNR=2.6							
SADO	**Sadowa**	**16.00**	**55**	Lg		Lg	18 42 23.6	
	comp=Z,0.2nm,0.3s,baz=167,slow=16,SNR=4.4							
YKA	**Yellowknife Ar**	**27.66**	**343**	P		**P**	**18 39 53.3**	**+1.0**
	comp=Z,0.3nm,0.9s,baz=144,slow=9.4,SNR=4.9							
ILAR	**Eielson Array**	**40.12**	**330**	P		**P**	**18 41 41.9**	**+1.7**
	comp=Z,0.8nm,0.9s,baz=116,slow=8.0,SNR=4.4							

*NNC **18** 18:58:07.8±5.7,37°.46N×71°.28E,h214km±92km,mb2.6, mpv3.9,Error ellipse: s-maj=58.9km s-min=34.4km az=21.0*

ISC 18 18:58:08.8±3.3,37°.5N±0°.2×71°.2E±0°.1,h200km,n11, σ1§53/15,5C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AML	**Almayashu**	**4.99**	**22**	P		**Pn**	**18 59 22.4**	**-1.0**
	SNR=33							
UCH	**Uchtor**	**5.35**	**27**	P		**Pn**	**18 59 26.7**	**-1.2**
	SNR=9.9							
EKS2	**Erkin-Say**	**5.50**	**20**	P		**Pn**	**18 59 29.6**	**0.0**
	SNR=14							
KK31	**Karatay Array**	**5.61**	**355**	⇑P		**Pn**	**18 59 31.5**	**+0.6**
	4.1nm,0.3s,baz=178,slow=13,SNR=94							
KK31				⇑S		**Sn**	**19 00 37.6**	**+1.6**
	3.3nm,0.5s,baz=168,slow=22,SNR=5.1							
AAK	**Ala-Archa**	**5.70**	**25**	P		**Pn**	**18 59 31.8**	**-0.5**
	SNR=7.1							
AAK	**Ala-Archa**	**5.70**	**25**	⇓P		**Pn**	**18 59 31.0**	**-1.2**
	9.8nm,0.6s							
AAK				⇓S		**Sn**	**19 00 38.3**	**0.0**
	8.2nm,0.9s							
CHMS	**Chumysh**	**6.11**	**25**	P		**Pn**	**18 59 37.1**	**-0.3**
	SNR=5.0							
USP	**Ospenovka**	**6.27**	**22**	P		**Pn**	**18 59 38.9**	**-0.6**
	SNR=9.5							
TKM2	**Tokmak 2**	**6.35**	**30**	P		**Pn**	**18 59 40.0**	**-0.7**
	SNR=9.4							
TKM2	**Tokmak 2**	**6.35**	**30**	⇑P		**Pn**	**18 59 39.3**	**-1.4**
	5.4nm,0.6s							
TKM2				⇓S		**Sn**	**19 00 55.9**	**+2.3**
	2.7nm,0.9s							
AB31	**Akbulak array**	**14.30**	**329**	⇑P		**P**	**19 01 25.0**	**+1.3**
	0.2nm,0.5s,baz=24,slow=21,SNR=8.3							
AB31				⇑S		**S**	**19 03 57.9**	**-3.3**
	0.5nm,0.6s,baz=154,slow=22,SNR=4.4							

*IDC **18** 19:24:01.1±0.9,21°.22S×67°.60W,h154km±12km,mb3.4/2, mb1 3.4/4,mb1mx3.1/25,mbtmp3.8/4,MS2.5/1,Ms1 2.5/1, ms1mx2.1/10,Error ellipse: s-maj=26.3km s-min=10.8km az=114.0*

*GUC **18** 19:24:02.8±0.6,21°.16S×68°.03W,h174km±5km,ML3.6*

ISC 18 19:24:01.8±0.9,21°.12S±0°.05×67°.94W±0°.09, h163km±10km,n21,σ1§52/38,7C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**1.39**	**241**	⇑*e*P		**Pn**	**19 24 32.3**	**+0.9**
PB09				*e*S		**Sn**	**19 24 55.6**	**+1.2**
PB01	**IPOC Station P**	**1.45**	**273**	⇑*e*P		**Pn**	**19 24 32.2**	**+0.2**
PB01				*e*S		**Sn**	**19 24 55.1**	**-0.1**
PB01				IAML			19 24 58.0	
	comp=N,572nm,0.2s							
PB08	**IPOC Station P**	**1.50**	**310**	⇑*e*P		**Pn**	**19 24 34.0**	**+1.2**
PB08				*e*S		**Sn**	**19 24 57.8**	**+1.2**
PB08				IAML			19 24 58.5	
	comp=N,402nm,0.3s							
LVC	**Limon Verde**	**1.74**	**211**	P		**Pn**	**19 24 35.5**	**+0.3**
	comp=N,21nm,0.3s,baz=32,slow=8.3,SNR=242							
LVC				S		**Sn**	**19 25 01.1**	**+0.1**
	comp=N,15nm,0.3s,baz=305,slow=23,SNR=30							
PB07	**IPOC Station P**	**1.92**	**251**	⇑*e*P		**Pn**	**19 24 37.2**	**+0.2**
PB07				*e*S		**Sn**	**19 25 03.1**	**-0.9**
PB07				IAML			19 25 05.5	
	comp=N,441nm,0.2s							
PB03	**IPOC Station P**	**1.93**	**241**	⇑*e*P		**Pn**	**19 24 37.3**	**+0.2**
PB03				*e*S		**Sn**	**19 25 03.6**	**-0.7**
PB03				IAML			19 25 05.3	
	comp=E,387nm,0.3s							
PB11	**IPOC Station P**	**2.10**	**310**	*e*P		**Pn**	**19 24 39.5**	**+0.4**
PB11				*i* S		**Sn**	**19 25 07.8**	**0.0**
PB11				IAML			19 25 09.8	
	comp=E,636nm,0.5s							
TA01	**Diego Aracena**	**2.17**	**284**	*e*P		**Pn**	**19 24 39.4**	**-0.2**
TA01				*e*S		**Sn**	**19 25 07.7**	**-1.2**
TA01				IAML			19 25 08.4	
	comp=E,330nm,0.2s							
PB06	**IPOC Station P**	**2.19**	**224**	*e*P		**Pn**	**19 24 40.3**	**+0.2**
PB06				*e*S		**Sn**	**19 25 09.0**	**-0.7**
PB06				IAML			19 25 10.9	
	comp=E,257nm,0.2s							
TA02	**Huaiquique**	**2.22**	**292**	*e*S		**Sn**	**19 25 09.2**	**-0.8**
PB04	**IPOC Station P**	**2.39**	**239**	*e*P		**Pn**	**19 24 42.3**	**-0.1**
PB04				*e*S		**Sn**	**19 25 11.9**	**-1.8**
PB04				IAML			19 25 19.3	
	comp=N,195nm,0.5s							
MNMC	**Minye Minye**	**2.52**	**321**	*e*P		**Pn**	**19 24 45.2**	**+1.1**
MNMC				*i* S		**Sn**	**19 25 17.3**	**+0.5**
MNMC				IAML			19 25 20.1	
	comp=N,598nm,0.5s							
PB15	**IPOC Station P**	**2.52**	**214**	⇑*e*P		**Pn**	**19 24 44.1**	**+0.1**
PB15				*e*S		**Sn**	**19 25 16.1**	**-0.6**
PSGC	**Pisagua**	**2.55**	**306**	*e*P		**Pn**	**19 24 43.8**	**-0.5**
PSGC				*e*S		**Sn**	**19 25 15.8**	**-1.4**
PSGC				IAML			19 25 20.2	
	comp=N,200nm,0.4s							
PB05	**IPOC Station P**	**2.72**	**230**	*e*P		**Pn**	**19 24 46.2**	**-0.1**
PB05				*e*S		**Sn**	**19 25 19.3**	**-1.6**
PB05				IAML			19 25 23.3	
	comp=E,100nm,0.4s							
PB16	**IPOC Station P**	**3.14**	**332**	⇑*e*P		**Pn**	**19 24 53.5**	**+1.5**
PB16				*e*S		**Sn**	**19 25 32.3**	**+1.3**
PB16				IAML			19 25 34.1	
	comp=E,53nm,0.5s							
LPAZ	**La Paz**	**4.81**	**358**	P		**Pn**	**19

TNSS				S	Sg	19 45 42.4	+0.1
	8.6nm,0.1s							
KOTS	**Kotyrbulak**	**0.38**	**324**	*eP*	**Pg**	**19 45 37.4**	**-0.1**
	baz=24							
KOTS				*eS*	**Sg**	**19 45 42.7**	**0.0**
	baz=24							
KOTS	**Kotyrbulak**	**0.38**	**324**	*eP*	**Pg**	**19 45 37.4**	**-0.1**
	13nm,0.2s							
KOTS				*eS*	**Sg**	**19 45 42.7**	**0.0**
	9.8nm,0.2s							
KOTS	**Kotyrbulak**	**0.38**	**324**	P	**Pg**	**19 45 37.4**	**-0.1**
	13nm,0.2s							
KOTS				S	**Sg**	**19 45 42.7**	**0.0**
	9.8nm,0.2s							
IZV	**Izvestkoviy**	**0.60**	**281**	*eP*	**Pg**	**19 45 41.6**	**+0.1**
	baz=80							
IZV				*eS*	**Sg**	**19 45 50.1**	**+0.6**
	baz=80							
IZV	**Izvestkoviy**	**0.60**	**281**	*eP*	**Pg**	**19 45 41.6**	**+0.1**
	0.8nm,0.1s							
IZV				*eS*	**Sg**	**19 45 50.1**	**+0.6**
	10nm,0.1s							
IZV	**Izvestkoviy**	**0.60**	**281**	P	**Pg**	**19 45 41.6**	**+0.1**
	0.8nm,0.1s							
IZV				S	**Sg**	**19 45 50.2**	**+0.6**
	10nm,0.1s							
SATY	**Saty**	**0.74**	**80**	*eP*	**Pg**	**19 45 44.0**	**-0.2**
	baz=80							
SATY				*eS*	**Sg**	**19 45 54.0**	**0.0**
	baz=80							
SATY	**Saty**	**0.74**	**80**	*eP*	**Pg**	**19 45 44.0**	**-0.2**
	1.3nm,0.1s							
SATY				*eS*	**Sg**	**19 45 54.0**	**0.0**
	8.6nm,0.1s							
SATY	**Saty**	**0.74**	**80**	P	**Pg**	**19 45 44.0**	**-0.2**
	1.3nm,0.1s							
SATY				S	**Sg**	**19 45 54.0**	**0.0**
	8.6nm,0.1s							
KDJ	**Kajisay**	**0.82**	**192**	⇑*iP*	**Pg**	**19 45 45.4**	**-0.3**
	baz=91							
KDJ				⇑*iS*	**Sg**	**19 45 56.4**	**0.0**
	baz=91							
KST	**Kastek**	**1.07**	**277**	*eP*	**Pg**	**19 45 50.1**	**-0.4**
	baz=76							
KST				*eS*	**Sg**	**19 46 04.4**	**0.0**
	baz=76							
KST	**Kastek**	**1.07**	**277**	*eP*	**Pg**	**19 45 50.1**	**-0.4**
	1.4nm,0.2s							
KST				*eS*	**Sg**	**19 46 04.4**	**0.0**
	1.1nm,0.3s							
KST	**Kastek**	**1.07**	**277**	P	**Pg**	**19 45 50.1**	**-0.4**
	1.4nm,0.2s							
KST				S	**Sg**	**19 46 04.4**	**0.0**
	1.1nm,0.3s							
ULHL	**Ulahol**	**1.10**	**232**	⇓*iP*	**Pg**	**19 45 50.6**	**-0.5**
	baz=32							
ULHL				⇓*iS*	**Sg**	**19 46 05.6**	**+0.1**
	baz=32							
BOOM	**Boomskoye usch**	**1.17**	**248**	⇑*iP*	**Pb**	**19 45 51.5**	**-0.4**
	baz=48							
BOOM				⇑*iS*	**Sb**	**19 46 07.1**	**0.0**
	baz=48							
ARXS	**Arharly**	**1.32**	**13**	*eP*	**Pn**	**19 45 54.0**	**0.0**
	1.1nm,0.2s							
ARXS				*eS*	**Sb**	**19 46 11.1**	**-0.1**
	2.4nm,0.1s							
ARXS	**Arharly**	**1.32**	**13**	P	**Pn**	**19 45 54.0**	**0.0**
	1.1nm,0.2s							
ARXS				S	**Sb**	**19 46 11.1**	**-0.1**
	2.4nm,0.1s							
TKM2	**Tokmak 2**	**1.33**	**270**	⇑*iP*	**Pn**	**19 45 54.4**	**+0.1**
	baz=70							
TKM2				⇑*iS*	**Sn**	**19 46 12.6**	**+0.7**
	baz=70							
PDGK	**Podgornoye**	**1.57**	**75**	P	**Pb**	**19 45 58.6**	**-0.2**
	0.3nm,0.3s							
PDGK				S	**Sb**	**19 46 19.0**	**+0.4**
	0.4nm,0.3s							

IDC 18 19:47:30.6±3.2, 5°49S×153°40E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.4/40, mbtmp3.9/3, ML1.9/1, Error ellipse: s-maj=131.3km s-min=47.0km az=129.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.31**	**237**	Pn	Pn	19 49 20.1	+1.4
	1.1nm,0.3s,baz=48,slow=10,SNR=5.9						
PMG				Sn	Sn	19 50 38.1	-4.3
	1.9nm,0.3s,baz=38,slow=7.6,SNR=4.4						
WRA	**Warramunga Arr**	**23.45**	**231**	P	P	19 52 40.8	-1.1
	2.2nm,0.8s,baz=55,slow=9.7,SNR=11						
ASAR	**Alice Springs**	**26.06**	**224**	P	P	19 53 06.1	+0.1
	1.9nm,0.7s,baz=58,slow=8.6,SNR=18						
TORD	**Torodi Ar. Bea**	**151.09**	**287**	PKPbc	PKPbc	20 07 27.0	+0.2
	0.6nm,0.7s,baz=67,slow=1.3,SNR=3.0						

ISK 18 19:58:52.1, 34.96N×26.75E, h12km, ML3.0/7
THE 18 19:58:52.4, 35.02N×26.69E, h0km±2km, MS3.1/4, Error ellipse: s-maj=6.4km s-min=0.9km az=158.0
ATH 18 19:58:53.2, 34.97N×26.74E, h15km±2km, ML3.1/7, Error ellipse: s-maj=5.2km s-min=1.2km az=341.0
HLW 18 19:58:57.9, 34.67N×26.90E, h26km±14km, Md3.5, Ml3.3
DDA 18 19:58:58.4, 35.58N×26.71E, h9km±5km, MW3.6

ISC 18 19:58:51.8±1.2, 34°91N±0.04×26°76E±0.03, h14km±10km, n44, σ1°25/57, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.49**	**295**	P	**Pg**	**19 59 01.6**	**+0.2**
ZKR				S	**Sg**	**19 59 08.6**	**+0.4**
ZKR				AML	AML	19 59 09.5	
	comp=N,6108μm,0.4s						
ZKR				AML	AML	19 59 09.6	
	comp=E,8008μm,0.3s						
ZKR	**Zakros**	**0.49**	**295**	P	**Pg**	**19 59 01.5**	**0.0**
ZKR				S	**Sg**	**19 59 08.3**	**+0.2**
	comp=E,4μm,0.3s						
ZKR	**Zakros**	**0.49**	**295**	PG	**Pg**	**19 59 01.7**	**+0.2**
ZKR				SG	**Sg**	**19 59 08.5**	**+0.4**
STIA	**Sitia Lasithi**	**0.62**	**299**	P	**Pg**	**19 59 02.5**	**-1.5**
STIA				S	**Sg**	**19 59 11.3**	**-1.0**
KARP	**Karpathos**	**0.72**	**27**	P	**Pg**	**19 59 05.6**	**-0.2**
KARP				S	**Sb**	**19 59 15.8**	**-0.1**
KARP				AML	AML	19 59 16.5	
	comp=N,3434μm,0.2s						
KARP				AML	AML	19 59 18.1	
	comp=E,5537μm,0.5s						
KARP	**Karpathos**	**0.72**	**27**	P	**Pg**	**19 59 05.2**	**-0.6**
KARP				S	**Sb**	**19 59 16.2**	**+0.3**
	comp=E,3μm,0.5s						
KARP	**Karpathos**	**0.72**	**27**	PG	**Pg**	**19 59 05.7**	**-0.1**
KARP				SG	**Sg**	**19 59 15.7**	**+0.3**
FRMA	**Ierapetra Chan**	**0.85**	**278**	P	**Pg**	**19 59 06.2**	**-2.0**
FRMA				S	**Sg**	**19 59 17.2**	**-2.2**
	comp=E,610nm,0.4s						
NPS	**Neapolis**	**1.01**	**291**	P	**Pg**	**19 59 10.8**	**-0.4**
NPS				S	**Sg**	**19 59 24.1**	**-0.3**
NPS				AML	AML	19 59 31.9	
	comp=N,2627μm,0.5s						
NPS				AML	AML	19 59 33.6	
	comp=E,2325μm,0.4s						
NPS	**Neapolis**	**1.01**	**291**	P	**Pg**	**19 59 10.8**	**-0.4**
NPS				S	**Sg**	**19 59 24.1**	**-0.3**
	comp=E,1μm,0.5s						
IDI	**Anoyia**	**1.58**	**285**	P	**Pb**	**19 59 21.3**	**+0.5**
IDI				AML	AML	19 59 49.0	
	comp=E,534μm,0.6s						
IDI				AML	AML	19 59 50.4	
	comp=N,515μm,0.5s						
IDI	**Anoyia**	**1.58**	**285**	PN	**Pn**	**19 59 20.3**	**+0.9**
SIVA	**Sivas**	**1.60**	**275**	P	**Pn**	**19 59 21.6**	**+1.9**
SIVA				AML	AML	19 59 59.5	
	comp=E,2063μm,0.7s						
SIVA				AML	AML	20 00 01.1	
	comp=N,833μm,0.6s						
ARG	**Arkhangelos**	**1.72**	**40**	P	**Pb**	**19 59 23.5**	**+0.4**
ARG				AML	AML	19 59 57.3	
	comp=N,588μm,0.8s						
ARG				AML	AML	20 00 01.2	
	comp=E,550μm,0.5s						
ARG	**Arkhangelos**	**1.72**	**40**	PN	**Pn**	**19 59 22.1**	**+0.9**
NIS1	**Nisyros Isl.**	**1.73**	**11**	P	**Pn**	**19 59 22.5**	**+1.1**
NIS1	**Nisyros Isl.**	**1.73**	**11**	PN	**Pn**	**19 59 21.9**	**+0.5**
SANT	**Santorini**	**1.81**	**324**	*i* P	**Pn**	**19 59 24.1**	**+1.6**
SANT	**Santorini**	**1.81**	**324**	PN	**Pn**	**19 59 23.1**	**+0.6**
VAM	**Vamos**	**2.16**	**284**	P	**Pb**	**19 59 30.7**	**+0.1**
VAM				AML	AML	20 00 03.0	
	comp=N,492μm,0.7s						
VAM				AML	AML	20 00 19.0	
	comp=E,320μm,0.4s						
BODT	**Bodrum**	**2.20**	**12**	PN	**Pn**	**19 59 28.9**	**+1.0**
TURN	**Turunc**	**2.22**	**32**	*i* P	**Pb**	**19 59 30.9**	**-0.8**
TURN				*i* S	**Sg**	**20 00 04.2**	**+0.9**
TURN				IAML		20 00 06.0	
	comp=N,52nm,0.6s						
TURN	**Turunc**	**2.22**	**32**	PN	**Pn**	**19 59 29.2**	**+1.0**
BDRM	**Kayabasi**	**2.23**	**14**	*i* P	**Pb**	**19 59 31.7**	**-0.1**
APE	**Apeiranthos**	**2.38**	**336**	P	**Pn**	**19 59 30.4**	**0.0**
APE	**Apeiranthos**	**2.38**	**336**	*i* P	**Pn**	**19 59 30.3**	**-0.1**
APE				*i* S	**Sn**	**19 59 56.9**	**-2.5**
APE	**Apeiranthos**	**2.38**	**336**	PN	**Pn**	**19 59 31.2**	**+0.8**
DALY	**Dalyan (Mula)**	**2.45**	**38**	PN	**Pn**	**19 59 32.5**	**+1.2**
YER	**Yerkesik**	**2.54**	**29**	P	**Pn**	**19 59 33.7**	**+1.0**
YER	**Yerkesik**	**2.54**	**29**	PN	**Pn**	**19 59 33.9**	**+1.2**
AKAS	**Kas**	**2.67**	**59**	*i* P	**Pn**	**19 59 34.2**	**-0.3**
AYDN	**Tasoluk**	**2.90**	**18**	*i* P	**Pb**	**19 59 45.1**	**+1.9**
CAEL	**Denizli, Camel**	**3.04**	**42**	*i* P	**Pb**	**19 59 44.0**	**-1.7**
GOLH	**Golhisar**	**3.25**	**43**	*i* P	**Pn**	**19 59 43.4**	**+1.0**
KORT	**Korkueli**	**3.59**	**53**	*i* P	**Pb**	**19 59 53.8**	**-1.3**
SLUM	**Salum**	**3.64**	**201**	P	**Pn**	**19 59 49.8**	**+2.1**
	baz=205						
SLUM				AMP		20 00 00.0	
	baz=205						
SLUM				S	**Sn**	**20 00 28.1**	**-2.3**
	baz=205						
ZEDA	**zmir-Bergama**	**4.06**	**4**	*i* P	**Pn**	**19 59 53.8**	**+0.3**
USAK	**Uak-Merkez**	**4.21**	**25**	*i* P	**Pn**	**19 59 56.0**	**+0.4**
KEPZ	**Antalya-Kepez**	**4.41**	**62**	*i* P	**Pn**	**19 59 59.2**	**+1.0**
AGG	**Agios Georgios**	**5.43**	**321**	*i* P	**Pn**	**20 00 15.0**	**+2.7**
SWA2		**5.75**	**191**	P	**Pn**	**20 00 19.4**	**+2.7**
	baz=194						
SWA2				AMP		20 01 00.0	
	baz=194						
RYAN	**Fayoum**	**6.53**	**152**	P	**Pn**	**20 00 29.3**	**+1.9**
	baz=151						
GLL	**Jalalah**	**6.77**	**140**	P	**Pn**	**20 00 32.1**	**+1.4**
	baz=139						
HFRF	**Wahat Farafira**	**7.84**	**170**	P	**Pn**	**20 00 47.4**	**+2.0**
	baz=170						

NEIC 18 19:59:52.8±1.1, 5°29S±0.07×152°83E±0.09, h35km±1km, mb4.2/23, Error ellipse: s-maj=15.4km s-min=10.8km az=60.0
IDC 18 19:59:56.0±2.9, 5°29S×152°76E, h66km±27km, mb3.8/17, mb1 3.9/19, mb1mx3.8/38, mbtmp4.1/19, ML2.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/28, Error ellipse: s-maj=19.6km s-min=16.3km az=146.0

ISC 18 19:59:53.9±0.5, 5°23S±0.06×152°79E±0.08, h43km, n56, σ0°86/58, mb4.2/27, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.21**	**329**		**Pn**	**20 00 15.9**	**+1.5**
PMG	**Port Moresby**	**6.96**	**233**	P	**Pn**	**20 01 34.7**	**+1.4**
	1.6nm,0.3s,baz=54,slow=6.7,SNR=9.0						
PMG				S	**Sn**	**20 02 51.7**	**+0.5**
	3.7nm,0.3s,baz=73,slow=19,SNR=9.0						
PMG	**Port Moresby**	**6.96**	**233**		**Pn**	**20 01 34.3**	**+1.0**
HNR	**Honiara**	**8.23**	**121**	P	**Pn**	**20 01 52.0**	**+1.2**
	12nm,0.3s,baz=291,slow=1.2,SNR=2.0						
HNR	**Honiara**	**8.23**	**121**		**Pn**	**20 01 50.9**	**0.0**
DZM	**Mont Dzumac**	**21.33**	**143**	P	**P**	**20 04 38.8**	**+1.3**
	5.1nm,0.7s,baz=230,slow=7.9,SNR=7.4						
DZM	**Mont Dzumac**	**21.33**	**143**	P	**P**	**20 04 37.8**	**+0.3**
DZM				IAmb	IAmb	20 04 43.2	
	comp=Z,19nm,1.2s						
SIJI	**Sorong**	**21.92**	**281**	P	**P**	**20 04 45.0**	**+1.1**
	comp=Z,5.2nm,0.5s,baz=64,slow=13,SNR=9.5						
MTN	**Manton Dam**	**22.67**	**249**	P	**P**	**20 04 52.1**	**+0.2**
MTN				IAmb	IAmb	20 05 01.1	
	comp=Z,21nm,1.4s						
WB0	**Warramunga Arr**	**23.01**	**230**	P	**P**	**20 04 54.5**	**-0.8**
WB0				IAmb	IAmb	20 04 56.5	
	comp=Z,6.1nm,0.9s						
WB2	**Warramunga Arr**	**23.15**	**229**	P	**P**	**20 04 55.9**	**-0.8**
WB2				IAmb	IAmb	20 05 00.2	
	comp=Z,4.1nm,0.9s						
WRA	**Warramunga Arr**	**23.16**	**229**	P	**P**	**20 04 55.8**	**-1.0**
	comp=Z,2.4nm,0.4s,baz=54,slow=9.9,SNR=28						
WRA	**Warramunga Arr**	**23.16**	**229**	P	**P**	**20 04 55.6**	**-1.2**
ARMA	**Armidale**	**25.08**	**182**	P	**P**	**20 05 16.8**	**+2.2**
ARMA				IAmb	IAmb	20 05 21.1	
	comp=Z,18nm,1.3s						
KNRA	**Kununurra**	**25.78**	**244**	P	**P**	**20 05 21.2**	**+0.2**
KNRA				IAmb	IAmb	20 05 34.2	
	comp=Z,14nm,1.1s						
AS31	**Alice Springs**	**25.83**	**223**	P	**P**	**20 05 20.4**	**-1.0**
ASAR	**Alice Springs**	**25.83**	**223**	P	**P**	**20 05 20.2**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=58,slow=9.3,SNR=18						
ASAR				PcP	**PcP**	**20 08 49.2**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=72,slow=3.0,SNR=4.6						
ASAR	**Alice Springs**	**25.83**	**223**	P	**P**	**20 05 20.0**	**-1.4**
STKA	**Stephens Creek**	**28.51**	**200**	P	**P**	**20 05 45.9**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=6.9,slow=9.9,SNR=4.1						
STKA	**Stephens Creek**	**28.51**	**200**	P	**P**	**20 05 45.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**29.45**	**242**	P	**P**	**20 05 53.0**	**-0.9**
	comp=Z,3.4nm,0.6s,baz=70,slow=7.7,SNR=19						
FITZ	**Fitzroy Crossi**	**29.45**	**242**	P	**P**	**20 05 53.4**	**-0.5**
FITZ				IAmb	IAmb	20 05 53.9	
	comp=Z,4.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**58.05**	**295**	P	**P**	**20 09 43.6**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=120,slow=5.6,SNR=6.6						
CMAR	**Chiang Mai Arr**	**58.05**	**295**	P	**P**	**20 09 42.9**	**-0.3**
PEA0B	**Petropavlovsk-**	**58.27**	**3**	P	**P**	**20 09 43.9**	**-0.1**
PETK	**Petropavlovsk-**	**58.27**	**3**	P	**P**	**20 09 44.0**	**0.0**
	comp=Z,2.3nm,0.6s,baz=172,slow=6.2,SNR=12						
PETK				LR	LR	20 32 41.2	
	comp=Z,23nm,19.6s,baz=122,slow=34						
PETK	**Petropavlovsk-**	**58.27**	**3**	P	**P**	**20 09 44.0**	**0.0**
MA2	**Magadan**	**64.62**	**359**	P	**P**	**20 10 26.6**	**-0.2**
SONM	**Songino Array**	**66.68**	**328**	P	**P**	**20 10 41.2**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=142,slow=5.2,SNR=8.3						
SONM	**Songino Array**	**66.68**	**328**	P	**P**	**20 10 40.9**	**+0.4**
SONM				IAmb	IAmb	20 10 42.7	
	comp=Z,0.7nm,0.6s						
BILL	**Bilibino**	**73.72**	**5**	P	**P**	**20 11 23.1**	**+0.1**
BILL				IAmb	IAmb	20 11 24.7	
	comp=Z,3.9nm,0.8s						
TIXI	**Tiksi**	**78.32**	**352**	P	**P**	**20 11 48.3**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=5.4,slow=23,SNR=3.7						
RDOG	**Red Dog Mine**	**79.40**	**15**	P	**P**	**20 11 56.6**	**+1.5**
RDOG				IAmb	IAmb	20 12 12.0	
	comp=Z,2.7nm,0.9s						
MK31	**Makanchi Array**	**80.64**	**319**	P	**P**	**20 12 02.5**	**+0.1**
MKAR	**Makanchi Array**	**80.64**	**319**	P	**P**	**20 12 02.0**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=93,slow=7.6,SNR=6.3						
MKAR	**Makanchi Array**	**80.64**	**319**	P	**P**	**20 12 02.8**	**+0.4**
IMAR	**Indian Mountai**	**80.79**	**19**	P	**P**	**20 12 03.0**	**+0.3**
MAKZ	**Makanchi**	**80.85**	**319**	P	**P**	**20 12 03.9**	**+0.5**
ZAA0	**Zalesovo Array**	**81.50**	**326**	P	**P**	**20 12 06.0**	**-0.7**
ZAA0				IAmb	IAmb	20 12 07.2	
	comp=Z,2.1nm,0.8s						
ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**20 12 06.1**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=114,slow=5.5,SNR=10						
ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**20 12 06.3**	**-0.4**
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**20 12 10.8**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=230,slow=5.6,SNR=3.6						
KURK	**Kurchatov**	**84.10**	**322**	P	**P**	**20 12 20.2**	**0.0**
KURBB	**Kurchatov Arra**	**84.13**	**322**	P	**P**	**20 12 20.2**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=104,slow=4.3,SNR=5.6						
NIL	**Nilore**	**84.21**	**304**	P	**P**	**20 12 21.3**	**+0.1**
QSPA	**South Pole Qui**	**84.73**	**180**	P	**P**	**20 12 22.6**	**-0.8**
AAK	**Ala-Archa**	**84.95**	**313**	P	**P**	**20 12 25.6**	**+0.7**
AAK				IAmb	IAmb	20 12 26.9	
	comp=Z,1.4nm,0.7s						
MAW	**Mawson**	**85.17**	**203**	P	**P**	**20 12 24.6**	**-0.7**
MAW				IAmb	IAmb	20 12 37.0	
	comp=Z,1.5nm,1.5s						
NRIK	**Noril'sk**	**86.37**	**341**	P	**P**	**20 12 31.4**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=90,slow=6.1,SNR=2.0						
NRIK	**Noril'sk**	**86.37**	**341**	P	**P**	**20 12 31.3**	**+0.2**
KKAR	**Karatay Array**	**87.92**	**313**	P	**P**	**20 12 39.5**	**+0.1**
BVAR	**Borovoye Array**	**89.58**	**323**	P	**P**	**20 12 45.6**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=225,slow=4.0,SNR=9.7						
YKA	**Yellowknife Ar**	**95.81**	**28**	P	**P**	**20 13 15.4**	**0.0**
	comp=Z,0.3nm,0.8s,baz=268,slow=4.3,SNR=2.1						
PDAR	**Pinedale Array**	**99.14**	**48**	LR	LR	20 54 39.0	
	comp=Z,33nm,18.2s,baz=320,slow=33						
TORD	**Torodi Ar. Bea**	**150.43**	**287**	PKPbc	**PKPbc**	**20 19 41.0**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=74,slow=2.4,SNR=14						
TORD				PKPab	**PKPab**	**20 19 46.4**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=83,slow=2.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**150.43**	**287**		**PKPbc**	**20 19 41.4**	**-0.5**

DJA 18 20:16:31.5±1.6, 8°S±3°×11°9E±°, h23km±15km, M3.6/10, MLv3.6/10
IDC 18 20:16:40.4±5.8, 8.76S×118.88E, h52km±56km, mb3.4/3, mb1 3.5/5, mb1mx3.2/27, mbtmp3.5/5, ML3.2/3, Error ellipse: s-maj=51.2km s-min=31.1km az=55.0

ISC 18 20:16:33.5±1.0, 7°88S±0.05×119°05E±0.05, h34km, n17, σ1°28/18, mb3.9/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.58**	**233**	P	**Pn**	**20 16 58.6**	**-0.5**
WBSI	**Waikabubak, Su**	**1.79**	**169**	P	**Pn**	**20 17 02.1**	**+0.1**
WBSI				S	**Sn**	**20 17 25.1**	**+1.5**
TWSI	**Taliwang, Sumb**	**2.31**	**248**	P	**Pn**	**20 17 08.2**	**-1.0**
BASI	**Baing, Sumba**	**2.77**	**147**	P	**Pn**	**20 17 13.7**	**-1.9**
MMRI	**Maumere**	**3.24**	**104**	P	**Pn**	**20 17 21.3**	**-0.7**
MMRI				S	**Sn**	**20 17 58.9**	**-0.6**
BNSI	**Bone**	**3.61**	**17**	P	**Pn**	**20 17 26.9**	**-0.1**
SRBI	**Singaraja**	**3.81**	**267**	P	**Pn**	**20 17 28.1**	**-1.7**
SPSI	**Sidrap Palu**	**3.95**	**10**	P	**Pn**	**20 17 30.5**	**-1.3**
TTSI	**Tana Toraja**	**4.86**	**9**	P	**Pn**	**20 17 43.6**	**-0.7**
JAGI	**Jajag, Banyuwa**	**4.89**	**263**	P	**Pn**	**20 17 43.9**	**-0.8**
BATI	**Baumata**	**5.11**	**117**	P	Pn	20 17 51.6	+3.8
	0.9nm,0.3s,baz=280,slow=17,SNR=1.6						
BATI				S	**Sn**	**20 18 47.6**	**+2.0**
	0.3nm,0.3s,baz=87,slow=18,SNR=1.5						
STKI	**Sintang**	**10.92**	**316**	P	**Pn**	**20 19 09.7**	**+2.2**
FITZ	**Fitzroy Crossi**	**12.02**	**148**	P	**Pn**	**20 19 21.6**	**-0.9**
	0.1nm,0.3s,baz=332,slow=16,SNR=1.4						
WRA	**Warramunga Arr**	**19.06**	**131**	P	**Pn**	**20 20 53.2**	**-0.9**
	0.1nm,0.3s,baz=296,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**21.20**	**139**	P	**P**	**20 21 16.8**	**+0.4**
	1.8nm,0.3s,baz=314,slow=8.9,SNR=29						
STKA	**Stephens Creek**	**31.79**	**142**	P	**P**	**20 22 55.5**	**+0.5**
	1.0nm,0.5s,baz=334,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**63.49**	**333**	P	P	20 27 09.5	+9.2
	0.2nm,0.5s,baz=149,slow=5.9,SNR=2.0						

DJA 18 20:27:14.6±0.3, 8°S±3°×12°9E±°, h216km±10km, M4.3/9, mb4.2/8, mB4.7/6, MLv4.6/9, Mw(mB)4.0/6
IDC 18 20:27:15.5±2.0, 7.41S×128.54E, h167km±20km, mb3.6/8, mb1 3.7/11, mb1mx3.5/29, mbtmp4.2/11, MS3.3/1, Ms1 3.3/1, ms1mx2.5/26, Error ellipse: s-maj=19.7km s-min=13.5km az=84.0
NEIC 18 20:27:15.7±1.1, 7°39S±0.08×128°54E±0.08, h168km±8km, mb4.3/14, Error ellipse: s-maj=12.0km s-min=11.2km az=146.0

ISC 18 20:27:13.8±0.5, 7°48S±0.05×128°49E±0.06, h151km, n53, σ2°44/57, mb4.2/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.83**	**100**	Pn	**Pn**	**20 28 01.9**	**+2.8**
SAUI	**Saumlaki**	**2.83**	**100**	P	**Pn**	**20 28 02.3**	**+3.2**
SAUI				S	**Sn**	**20 28 38.5**	**+4.5**
BNDI	**Bandanaira**	**3.26**	**26**	P	**Pn**	**20 28 07.7**	**+3.2**
SOEI	**Soe**	**4.75**	**241**		**Pn**	**20 28 27.4**	**+3.4**
SOEI	**Soe**	**4.75**	**241**	P	**Pn**	**20 28 27.2**	**+3.2**
BATI	**Baumata**	**5.48**	**240**	P	**Pn**	**20 28 36.8**	**+3.1**
	34nm,0.3s,baz=56,slow=2.2,SNR=80						
BATI				S	**Sn**	**20 29 36.9**	**+0.8**
	109nm,0.3s,baz=153,slow=22,SNR=20						
BATI	**Baumata**	**5.48**	**240**	P	**Pn**	**20 28 36.8**	**+3.1**
	1.3nm2μm80nm,0.6s						
FAKI	**Fak Fak**	**5.88**	**40**		**Pn**	**20 28 39.4**	**+0.4**
FAKI	**Fak Fak**	**5.88**	**40**	P	**Pn**	**20 28 39.0**	**+0.1**
	0.4nm986nm22nm,0.9s						
MTN	**Manton Dam**	**5.93**	**154**	Pn	**Pn**	**20 28 40.9**	**+1.3**
MMRI	**Maumere**	**6.29**	**259**	Pn	**Pn**	**20 28 48.4**	**+3.9**
MMRI	**Maumere**	**6.29**	**259**	P	**Pn**	**20 28 49.1**	**+4.6**
	0.2nm27nm,0.8s						
SIJI	**Sorong**	**7.13**	**23**	P	**Pn**	**20 28 56.4**	**+0.7**
	6.4nm,0.3s,baz=75,slow=11,SNR=49						
SIJI				S	**Sn**	**20 30 11.3**	**-4.2**
	5.3nm,0.3s,baz=237,slow=23,SNR=11						
SWI	**Sorong**	**7.13**	**23**	P	**Pn**	**20 28 56.2**	**+0.6**
KNRA	**Kununurra**	**8.15**	**178**		**Pn**	**20 29 09.5**	**+0.3**
BASI	**Baing, Sumba**	**8.28**	**250**	P	**Pn**	**20 29 13.5**	**+2.6**
	40nm,1.1s						
WBSI	**Waikabubak, Su**	**9.25**	**256**	P	**Pn**	**20 29 24.1**	**+0.2**
	34nm,0.8s						
PLAI

*IDC **18** 20:31:34.8±12.0,36°03S×177°36E,h0km,mb3.9/2, mb1 4.1/2,mb1mx3.7/29,mbtmp3.9/2,Error ellipse: s-maj=668.2km s-min=62.8km az=170.0*
*NOU **18** 20:31:59.6,37°56S×176°53E,h261km,MLv3.9,North Island, New Zealand*
*WEL **18** 20:32:02.3,38°S±3°×17°6E±°,h236km±5km,M3.3/68, MLv3.6/68,Error ellipse: s-maj=0.0km s-min=0.0km az=9.2*
ISC 18 20:32:01.5±1.0,37°62S±0°06×176°45E±0°06,h244km±6km, n164,σ1§19/188,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.19**	**233**	P	**Pn**	**20 32 32.8**	**-0.2**
OPRZ	**Ohinepanea**	**0.24**	**160**	P	**Pn**	**20 32 32.8**	**-0.3**
OPRZ				S	**S**	**20 32 57.3**	**-0.8**
MYRZ	**Mayor Island**	**0.38**	**334**	P	**Pn**	**20 32 33.1**	**-0.4**
MARZ	**Manawahe**	**0.41**	**154**	P	**Pn**	**20 32 33.7**	**+0.2**
MARZ				S	**S**	**20 32 58.1**	**-0.6**
KARZ	**Kaharoa**	**0.43**	**202**	P	**Pn**	**20 32 33.6**	**+0.1**
KMRZ	**Kaimai**	**0.46**	**240**	P	**Pn**	**20 32 33.6**	**0.0**
OMRZ	**Omania**	**0.49**	**187**	P	**Pn**	**20 32 34.1**	**+0.3**
OMRZ				S	**S**	**20 32 59.3**	**+0.1**
MKRZ	**Makatiti**	**0.52**	**178**	P	**Pn**	**20 32 35.0**	**+1.1**
NGRZ	**Ngongotaha**	**0.53**	**203**	P	**Pn**	**20 32 34.4**	**+0.5**
EDRZ	**Edgecumbe**	**0.54**	**155**	P	**Pn**	**20 32 34.5**	**+0.6**
UTU	**Utuhina**	**0.59**	**200**	P	**Pn**	**20 32 35.0**	**+1.0**
TARZ	**Mount Tarawera**	**0.62**	**176**	P	**Pn**	**20 32 34.8**	**+0.6**
HLRZ	**Highlands Stat**	**0.64**	**187**	P	**Pn**	**20 32 34.9**	**+0.7**
HSRZ	**Hossack Road**	**0.71**	**193**	P	**Pn**	**20 32 35.3**	**+0.8**
RRRZ	**Republican Roa**	**0.72**	**176**	P	**Pn**	**20 32 34.9**	**+0.4**
RRRZ				S	**S**	**20 33 00.6**	**0.0**
TOZ	**Tahuroa Road**	**0.76**	**261**	P	**Pn**	**20 32 34.8**	**+0.1**
GRGZ	**Galatos Road**	**0.78**	**200**	P	**Pn**	**20 32 35.7**	**+0.9**
HRRZ	**Handcock Road**	**0.78**	**190**	P	**Pn**	**20 32 35.5**	**+0.7**
URZ	**Urewera**	**0.83**	**141**	P	**Pn**	**20 32 34.6**	**-0.4**
URZ				S	**S**	**20 32 58.4**	**-2.9**
PRRZ	**Plateau Road**	**0.88**	**183**	P	**Pn**	**20 32 35.7**	**+0.4**
MUGZ	**Murupara**	**0.90**	**164**	P	**Pn**	**20 32 35.5**	**+0.2**
MUGZ				S	**S**	**20 32 58.9**	**-3.1**
WPRZ	**Whakapapatarin**	**0.93**	**194**	P	**Pn**	**20 32 36.3**	**+0.8**
ALRZ	**Allen Road**	**0.95**	**185**	P	**Pn**	**20 32 36.2**	**+0.6**
KUTZ	**Kaahu Road**	**1.00**	**209**	P	**Pn**	**20 32 36.9**	**+1.0**
TLZ	**Tolley Road**	**1.01**	**225**	P	**Pn**	**20 32 36.6**	**+0.6**
RUGZ	**Raukumara Rang**	**1.03**	**110**	P	**Pn**	**20 32 35.3**	**-1.0**
RUGZ				S	**S**	**20 32 59.6**	**-3.9**
KUZ	**Kuaotunu**	**1.05**	**326**	P	**Pn**	**20 32 35.2**	**-1.0**
HAZ	**Te Kaha**	**1.07**	**98**	P	**Pn**	**20 32 35.8**	**-0.4**
HAZ				S	**S**	**20 33 00.6**	**-3.0**
RTZ	**Ruatahuna**	**1.08**	**157**	P	**Pn**	**20 32 36.6**	**+0.2**
RTZ				S	**S**	**20 33 01.6**	**-2.4**
MWZ	**Matawai**	**1.11**	**130**	P	**Pn**	**20 32 36.5**	**-0.1**
MWZ				S	**S**	**20 33 02.2**	**-2.0**
RAGZ	**Rawiri**	**1.16**	**139**	P	**Pn**	**20 32 37.6**	**+0.6**
RAGZ				S	**S**	**20 33 03.7**	**-1.1**
MRHZ	**Matea Rd**	**1.22**	**181**	P	**Pn**	**20 32 37.7**	**+0.4**
MRHZ				S	**S**	**20 33 03.8**	**-1.6**
WATZ	**Wairara**	**1.23**	**207**	P	**Pn**	**20 32 38.4**	**+1.1**
MTHZ	**Maungataniwha**	**1.27**	**166**	P	**Pn**	**20 32 38.1**	**+0.5**
MTHZ				S	**S**	**20 33 04.8**	**-1.4**
HATZ	**Hinemaiaia**	**1.30**	**192**	P	**Pn**	**20 32 37.7**	**-0.1**
HATZ				S	**S**	**20 33 05.1**	**-1.4**
PKGZ	**Pakihiroa**	**1.32**	**102**	P	**Pn**	**20 32 38.2**	**+0.2**
PKGZ				S	**S**	**20 33 05.1**	**-1.5**
TWGZ	**Tauwhareparae**	**1.33**	**115**	P	**Pn**	**20 32 38.8**	**+0.7**
TWGZ				S	**S**	**20 33 06.9**	**0.0**
WIAZ	**Waiheke Island**	**1.33**	**308**	P	**Pn**	**20 32 37.5**	**-0.6**
RATZ	**Rangitukua**	**1.36**	**203**	P	**Pn**	**20 32 38.9**	**+0.7**
SNGZ	**Shannon Statio**	**1.36**	**149**	P	**Pn**	**20 32 39.1**	**+0.9**
SNGZ				S	**S**	**20 33 06.4**	**-0.7**
TKGZ	**Te Karaka**	**1.38**	**127**	P	**Pn**	**20 32 39.0**	**+0.7**
TKGZ				S	**S**	**20 33 05.8**	**-1.4**
ETAZ	**East Tamaki Re**	**1.38**	**298**	P	**Pn**	**20 32 38.1**	**-0.3**
RAHZ	**Arahi**	**1.39**	**159**	P	**Pn**	**20 32 39.6**	**+1.2**
RAHZ				S	**S**	**20 33 06.7**	**-0.8**
RITZ	**Rihia Road**	**1.44**	**199**	P	**Pn**	**20 32 40.1**	**+1.3**
MXZ	**Matakaoa Point**	**1.48**	**88**	P	**Pn**	**20 32 39.0**	**-0.1**
MXZ				S	**S**	**20 33 06.3**	**-2.2**
KATZ	**Kakaramea**	**1.48**	**203**	P	**Pn**	**20 32 40.6**	**+1.4**
MBAZ	**Motutapu North**	**1.50**	**304**	P	**Pn**	**20 32 38.9**	**-0.3**
PUZ	**Puketiti**	**1.50**	**108**	P	**Pn**	**20 32 39.5**	**+0.3**
PUZ				S	**S**	**20 33 06.2**	**-2.8**
RIGZ	**Rimuhau**	**1.50**	**137**	P	**Pn**	**20 32 40.4**	**+1.1**
RIGZ				S	**S**	**20 33 08.4**	**-0.6**
NMHZ	**Naumai**	**1.50**	**169**	P	**Pn**	**20 32 41.0**	**+1.6**
AWAZ	**Awhitu Peninsu**	**1.54**	**290**	P	**Pn**	**20 32 39.4**	**-0.2**
HIZ	**Hauiti**	**1.54**	**234**	P	**Pn**	**20 32 40.4**	**+0.9**
BKZ	**Black Stump Fm**	**1.55**	**179**	P	**Pn**	**20 32 40.0**	**+0.4**
BKZ				S	**S**	**20 33 07.8**	**-1.9**
EPAZ	**Eden Park BICE**	**1.55**	**298**	P	**Pn**	**20 32 39.3**	**-0.3**
HBAZ	**Herne Bay Bore**	**1.57**	**299**	P	**Pn**	**20 32 39.3**	**-0.5**
WMGZ	**Waiomatatini S**	**1.57**	**98**	P	**Pn**	**20 32 40.2**	**+0.4**
WMGZ				S	**S**	**20 33 07.8**	**-2.1**
GRZ	**Great Barrier**	**1.58**	**330**	P	**Pn**	**20 32 38.9**	**-1.0**
WHHZ	**Waihua**	**1.58**	**157**	P	**Pn**	**20 32 41.1**	**+1.2**
NTVZ	**North Tongarir**	**1.60**	**202**	P	**Pn**	**20 32 41.2**	**+1.1**
KRVZ	**Karewarewa**	**1.61**	**203**	P	**Pn**	**20 32 41.0**	**+0.8**
TMVZ	**Te Maari**	**1.61**	**201**	P	**Pn**	**20 32 41.0**	**+0.8**
ETVZ	**East Tongariro**	**1.62**	**201**	P	**Pn**	**20 32 41.2**	**+0.9**
CNGZ	**Carnagh Statio**	**1.64**	**122**	P	**Pn**	**20 32 41.9**	**+1.6**
WTVZ	**West Tongariro**	**1.64**	**204**	P	**Pn**	**20 32 41.3**	**+0.8**
ABAZ	**Army Bay**	**1.64**	**308**	P	**Pn**	**20 32 40.3**	**-0.1**
WTAZ	**Waiatarua**	**1.65**	**294**	P	**Pn**	**20 32 40.3**	**-0.1**
NNVZ	**North Ngauruho**	**1.65**	**203**	P	**Pn**	**20 32 41.3**	**+0.8**
TWVZ	**Taurewa**	**1.66**	**208**	P	**Pn**	**20 32 40.5**	**+1.0**
OTVZ	**Oturere**	**1.66**	**202**	P	**Pn**	**20 32 41.8**	**+1.1**
SNVZ	**South Ngauruho**	**1.69**	**202**	P	**Pn**	**20 32 41.7**	**+0.8**
NGZ	**Ngauruhoe**	**1.69**	**203**	P	**Pn**	**20 32 42.2**	**+1.3**
ARHZ	**Aropaoanui**	**1.70**	**166**	P	**Pn**	**20 32 42.1**	**+1.3**
KNZ	**Kokohu**	**1.70**	**146**	P	**Pn**	**20 32 41.8**	**+1.1**
RVAZ	**Riverhead Bore**	**1.72**	**299**	P	**Pn**	**20 32 40.5**	**-0.5**
PRGZ	**Paritu Road**	**1.72**	**140**	P	**Pn**	**20 32 42.1**	**+1.1**
TUVZ	**Tukino**	**1.76**	**201**	P	**Pn**	**20 32 42.4**	**+0.9**
FWVZ	**Far West T-bar**	**1.78**	**203**	P	**Pn**	**20 32 42.8**	**+1.0**
WHVZ	**Whangaehu Hut**	**1.79**	**202**	P	**Pn**	**20 32 42.8**	**+0.9**
KWHZ	**Kaweka Forest**	**1.80**	**181**	P	**Pn**	**20 32 42.7**	**+1.0**
TRVZ	**Turoa**	**1.82**	**203**	P	**Pn**	**20 32 43.1**	**+0.9**
WNVZ	**Wahianoa**	**1.83**	**201**	P	**Pn**	**20 32 43.0**	**+0.8**
MCHZ	**McNeill Hill**	**1.83**	**174**	P	**Pn**	**20 32 43.4**	**+1.4**
MOVZ	**Moawhango**	**1.87**	**197**	P	**Pn**	**20 32 42.8**	**+0.5**
PKVZ	**Pokaka**	**1.88**	**207**	P	**Pn**	**20 32 43.3**	**+0.9**
BHHZ	**Black Hill Sta**	**1.89**	**189**	P	**Pn**	**20 32 43.0**	**+0.5**
MHGZ	**Mahia Peninsul**	**1.91**	**144**	P	**Pn**	**20 32 43.9**	**+1.3**
MTVZ	**Mangateitei**	**1.92**	**203**	P	**Pn**	**20 32 43.8**	**+0.9**
VRZ	**Vera Road**	**2.01**	**221**	P	**Pn**	**20 32 45.1**	**+1.6**
KRHZ	**Kereru**	**2.02**	**182**	P	**Pn**	**20 32 44.5**	**+0.8**
CKHZ	**Cape Kidnapper**	**2.10**	**167**	P	**Pn**	**20 32 45.7**	**+1.4**
KAHZ	**Kahuranaki**	**2.20**	**171**	P	**Pn**	**20 32 46.7**	**+1.3**
MHEZ	**Mangahewa**	**2.22**	**228**	P	**Pn**	**20 32 48.0**	**+2.5**
PNHZ	**Pukenui**	**2.30**	**185**	P	**Pn**	**20 32 47.0**	**+0.7**
DREZ	**Durham Road**	**2.36**	**228**	P	**Pn**	**20 32 49.5**	**+2.6**
WCZ	**Waipu Caves**	**2.38**	**314**	P	**Pn**	**20 32 46.8**	**-0.4**
WAZ	**Wanganui**	**2.42**	**208**	P	**Pn**	**20 32 48.4**	**+0.9**
PXZ	**Pawanui**	**2.43**	**173**	P	**Pn**	**20 32 48.5**	**+0.9**
LREZ	**Lake Rotokare**	**2.44**	**220**	P	**Pn**	**20 32 49.5**	**+1.9**
WPHZ	**Waipukurau**	**2.44**	**180**	P	**Pn**	**20 32 48.5**	**+0.8**
TSZ	**Takapari Road**	**2.47**	**189**	P	**Pn**	**20 32 48.7**	**+0.7**
NEZ	**North Egmont**	**2.48**	**228**	P	**Pn**	**20 32 50.6**	**+2.4**
PREZ	**Palmer Road**	**2.49**	**226**	P	**Pn**	**20 32 50.3**	**+2.1**
PKE	**Pukeiti**	**2.49**	**230**	P	**Pn**	**20 32 50.4**	**+2.1**
KHEZ	**Kahui Hut**	**2.54**	**228**	P	**Pn**	**20 32 50.9**	**+2.1**
NBEZ	**Newall Road No**	**2.61**	**230**	P	**Pn**	**20 32 51.6**	**+2.2**
PRHZ	**Porangahau**	**2.65**	**177**	P	**Pn**	**20 32 50.8**	**+1.0**
DVHZ	**Dannevirke**	**2.69**	**185**	P	**Pn**	**20 32 50.7**	**+0.5**
NMEZ	**Namu Road**	**2.70**	**228**	P	**Pn**	**20 32 52.8**	**+2.4**
OHWZ	**Ohakea**	**2.73**	**199**	P	**Pn**	**20 32 51.9**	**+1.3**
POWZ	**Post Office Ro**	**2.82**	**191**	P	**Pn**	**20 32 52.0**	**+0.4**
ANWZ	**Angora Road**	**2.84**	**180**	P	**Pn**	**20 32 52.6**	**+0.8**
PRWZ	**Pori Road**	**2.96**	**187**	P	**Pn**	**20 32 53.8**	**+0.7**
BFZ	**Birch Farm**	**3.06**	**183**	P	**Pn**	**20 32 54.7**	**+0.5**
MRZ	**Mangatainoka R**	**3.11**	**192**	P	**Pn**	**20 32 54.9**	**+0.1**
TIWZ	**Tintock**	**3.19**	**188**	P	**Pn**	**20 32 55.9**	**+0.3**
CPWZ	**Castlepoint**	**3.29**	**183**	P	**Pn**	**20 32 57.9**	**+1.1**
OUZ	**Omahuta**	**3.32**	**315**	P	**Pn**	**20 32 56.7**	**-0.5**
OGWZ	**Otaki Gorge**	**3.35**	**197**	P	**Pn**	**20 32 57.5**	**+0.2**
HOWZ	**Holdsworth Sta**	**3.35**	**192**	P	**Pn**	**20 32 57.3**	**-0.2**
KIW	**Kapiti Island**	**3.45**	**200**	P	**Pn**	**20 32 58.3**	**-0.3**
TMWZ	**Te Maipa**	**3.51**	**187**	P	**Pn**	**20 32 59.3**	**0.0**
MTW	**Mount Morrison**	**3.61**	**191**	P	**Pn**	**20 33 00.0**	**-0.4**
CAW	**Cannon Point**	**3.65**	**197**	P	**Pn**	**20 33 00.6**	**-0.3**
DUWZ	**D'Urville Isla**	**3.74**	**211**	P	**Pn**	**20 33 01.3**	**-0.6**
TRWZ	**Traveller**	**3.82**	**189**	P	**Pn**	**20 33 02.7**	**-0.2**
PAWZ	**Paruwai Farm**	**3.84**	**192**	P	**Pn**	**20 33 02.7**	**-0.4**
WEL	**Wellington**	**3.89**	**199**	P	**Pn**	**20 33 03.4**	**-0.2**
MSWZ	**Moikau Station**	**3.91**	**193**	P	**Pn**	**20 33 03.3**	**-0.5**
TCW	**Tory Channel**	**3.96**	**204**	P	**Pn**	**20 33 04.0**	**-0.5**
BHW	**Baring Head**	**3.98**	**197**	P	**Pn**	**20 33 04.1**	**-0.6**
PLWZ	**Palliser**	**4.05**	**193**	P	**Pn**	**20 33 05.0**	**-0.6**
TUWZ	**Tuamarina**	**4.27**	**206**	P	**Pn**	**20 33 07.3**	**-0.9**
NNZ	**Nelson**	**4.31**	**213**	P	**Pn**	**20 33 07.8**	**-0.8**
QRZ	**Quartz Range**	**4.42**	**222**	P	**Pn**	**20 33 08.9**	**-1.1**
CMWZ	**Cape Campbell**	**4.47**	**202**	P	**Pn**	**20 33 11.0**	**+0.4**
BSWZ	**Blackbirch Sta**	**4.55**	**205**	P	**Pn**	**20 33 11.0**	**-0.5**
THZ	**Tophouse**	**4.96**	**212**	P	**Pn**	**20 33 15.6**	**-1.0**
KHZ	**Kahutara**	**5.29**	**204**	P	**Pn**	**20 33 20.1**	**-0.4**
DSZ	**Dennistone Nort**	**5.46**	**220**	P	**Pn**	**20 33 20.9**	**-1.8**
GVZ	**Greta Valley S**	**5.95**	**205**	P	**Pn**	**20 33 28.1**	**-0.7**
LTZ	**Lake Taylor**	**6.07**	**210**	P	**Pn**	**20 33 29.3**	**-1.0**
AMCZ	**Amberley**	**6.26**	**206**	P	**Pn**	**20 33 31.9**	**-0.8**
INZ	**Inchbonnie**	**6.38**	**215**	P	**Pn**	**20 33 32.5**	**-1.7**
OXZ	**Oxford**	**6.62**	**209**	P	**Pn**	**20 33 35.4**	**-1.7**
OKCZ	**Okains Bay**	**6.62**	**202**	P	**Pn**	**20 33 36.4**	**-0.8**
MQZ	**McQueen's Vall**	**6.73**	**204**	P	**Pn**	**20 33 36.9**	**-1.7**
AKCZ	**Akaroa Harbour**	**6.80**	**202**	P	**Pn**	**20 33 38.6**	**-0.9**
RACZ	**Rakaia**	**6.92**	**207**	P	**Pn**	**20 33 39.4**	**-1.6**
WVZ	**Waitaha Valley**	**6.98**	**217**	P	**Pn**	**20 33 40.8**	**-1.0**
WACZ	**Wakanui South**	**7.22**	**208**	P	**Pn**	**20 33 43.5**	**-1.2**
RPZ	**Rata Peaks**	**7.34**	**212**	P	**Pn**	**20 33 45.2**	**-1.1**
GCSZ	**Gaunt Creek Bo**	**7.36**	**217**	P	**Pn**	**20 33 45.1**	**-1.4**
ARCZ	**Arundel**	**7.48**	**211**	P	**Pn**	**20 33 46.8**	**-1.3**
FOZ	**Fox Glacier**	**7.77**	**218**	P	**Pn**	**20 33 50.4**	**-1.3**
TMZ	**Timaru**	**7.91**	**210**	P	**Pn**	**20 33 52.2**	**-1.3**
LBZ	**Lake Benmore**	**8.25**	**213**	P	**Pn**	**20 33 56.8**	**-1.1**
ODZ	**Otahua Downs**	**8.61**	**209**	P	**Pn**	**20 34 02.0**	**-0.3**
JCZ	**Jackson Bay**	**8.68**	**220**	P	**Pn**	**20 34 01.4**	**-1.9**
WKZ	**Wanaka**	**9.12**	**216**	P	**Pn**	**20 34 07.3**	**-1.6**
HHSZ	**Highcliff Hill**	**9.34**	**206**	P	**Pn**	**20 34 12.5**	**+0.8**
SYZ	**Scrubby Hill**	**10.43**	**209**	P	**Pn**	**20 34 26.2**	**+0.8**
ASAR	**Alice Springs**	**38.83**	**279**	P	**P**	**20 39 05.7**	**+2.4**
	0.8nm,0.6s,baz=113,slow=8.1,SNR=4.7						
WRA	**Warramunga Arr**	**40.51**	**284**	P	**P**	**20 39 18.9**	**+1.8**
	0.8nm,0.3s,baz=121,slow=8.4,SNR=2.9						
FINES	**FINESS Array B**	**149.85**	**332**	PKPbc	**PKiKP**	**20 51 22.7**	**+0.2**
	1.0nm,0.8s,baz=89,slow=3.8,SNR=5.6						

*KRNET **18** 20:41:55.3±0.1,39°49N×73°48E,h11km,mb3.1*
*SOME **18** 20:41:57.6,39°68N×73°35E,h10km*
*NNC **18** 20:41:59.0±3.2,39°72N×73°49E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=28.8km s-min=14.9km az=158.0*
ISC 18 20:42:00.9±1.2,39°86N±0°05×73°26E±0°03,h15km±9km, n36,σ2§31/58,20C-15D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.24**	**50**	⇑*i* P	**Pg**	**20 42 05.6**	**-0.8**
	baz=2.0						
SFK				⇑*i* S	**Sb**	**20 42 13.6**	**+2.3**
	baz=2.0						
OHH	**Osh**	**0.76**	**331**	⇓*i* P	**Pn**	**20 42 17.7**	**+0.6**
	baz=33						
OHH				⇓*i* S	**Sn**	**20 42 33.9**	**+5.5**
	baz=33						
DRK	**Karamyk**	**1.19**	**252**	⇑*i* P	**Pg**	**20 42 20.1**	**-3.8**
	baz=70						
DRK				⇑*i* S	**Sb**	**20 42 38.3**	**-0.3**
	baz=70						
ARSB	**Arslanbob**	**1.48**	**352**	⇑*i* P	**Pg**	**20 42 30.7**	**+1.3**
	baz=48						
ARSB				⇑*i* S	Sg	20 42 56.0	+7.4
	baz=48						
BTK	**Batken**	**1.89**	**277**	⇑*i* P	**Pb**	**20 42 34.1**	**-1.0**
	baz=86						
BTK				⇑*i* S	**Sg**	**20 43 03.0**	**+1.4**
	baz=86						
ARLS	**Aral**	**2.16**	**22**	⇑*i* P	**Pb**	**20 42 39.0**	**-0.7**
	baz=15						
ARLS				⇑*i* S	**Sg**	**20 43 10.4**	**+0.1**
	baz=15						
AML	**Almayashu**	**2.29**	**8**	⇓*i* P	**Pb**	**20 42 42.0**	**-0.2**
	baz=3.0						
AML				⇓*i* S	**Sg**	**20 43 15.5**	**+0.8**
	baz=3.0						
UCH	**Uchtor**	**2.55**	**21**	⇓*e* P	**Pb**	**20 42 44.7**	**-1.9**
	baz=16						
UCH				⇓*i* S	**Sg**	**20 43 20.2**	**-2.7**
	baz=16						
MNAS	**Manas**	**2.69**	**348**	⇓*i* P	**Pb**	**20 42 47.6**	**-1.2**
	baz=46						
MNAS				⇓*i* S	**Sg**	**20 43 25.8**	**-1.4**
	baz=46						
EKS2	**Erkin-Say**	**2.83**	**8**	⇓*i* P	**Pb**	**20 42 49.0**	**-2.1**
	baz=4.0						
EKS2				⇓*i* S	**Sg**	**20 43 28.1**	**-3.6**
	baz=4.0						
AAK	**Ala-Archa**	**2.93**	**18**	⇑Pn	**Pb**	**20 42 51.4**	**-1.5**
	4.7nm,0.6s						
AAK				⇑Lg	Lg	20 43 35.0	
	20nm,0.6s						
KBK	**Karagaybulak**	**3.07**	**24**	⇑*i* P	**Pn**	**20 42 51.1**	**+2.1**
	baz=19						
KBK				⇑*i* S	**Sb**	**20 43 32.0**	**-0.7**
	baz=19						
FRU1	**Bishkek**	**3.12**	**19**	⇑*i* P	**Pb**	**20 42 52.7**	**-3.5**
	baz=14						
FRU1				⇑*i* S	**Sb**	**20 43 34.2**	**+0.1**
	baz=14						
BOOM	**Boomskoye usch**	**3.32**	**37**	⇑*e* P	**Pn**	**20 42 53.9**	**+1.5**
	baz=31						
BOOM				⇑*i* S	**Sb**	**20 43 36.4**	**-3.3**
	baz=31						
IUG	**Iuzhnay**	**3.35**	**314**	*e* P	**Pg**	**20 43 04.3**	**-0.7**
	12nm,0.4s						
IUG				*e* S	**Sg**	**20 43 51.7**	**+3.3**
	33nm,0.8s						
IUG	**Iuzhnay**	**3.35**	**314**	Pg	**Pb**	**20 42 57.5**	**-2.5**
	6.4nm,0.2s						
IUG				Lg	Lg	20 43 44.2	
	23nm,0.5s						
DZA	**Taraz**	**3.36**	**335**	Pg	**Pb**	**20 42 57.5**	**-2.7**
	23nm,0.2s						
DZA				Lg	Lg	20 43 43.9	
	49nm,0.3s						
TKM2	**Tokmak 2**	**3.53**	**29**	⇓Pg	**Pb**	**20 43 03.8**	**+0.7**
	2.3nm,0.5s						
TKM2				⇓Lg	Lg	20 43 56.8	
	12nm,0.6s						
SGDS	**Sogindy**	**3.73**	**16**	Pg	**Pb**	**20 43 05.2**	**-1.4**
	3.1nm,0.5s						
SGDS				Lg	Lg	20 43 57.7	
	14nm,0.8s						
KST	**Kastek**	**3.77**	**32**	*e* P	**Pg**	**20 43 11.0**	**-2.2**
	4.2nm,0.5s						
KST				*e* S	**Sg**	**20 44 03.4**	**+1.3**
	21nm,0.8s						
KST	**Kastek**	**3.77**	**32**	Pg	**Pb**	**20 43 07.1**	**-0.2**
	3.5nm,0.4s						
KST				Lg	Lg	20 44 00.4	
	21nm,0.8s						
KK31	**Karatay Array**	**3.84**	**328**	⇑Pn	**Pn**	**20 43 02.8**	**+3.3**
	0.6nm,0.4s,baz=140,slow=13,SNR=17						
KK31				⇓Pg	**Pg**	**20 43 13.3**	**-1.2**
	0.9nm,0.3s,baz=144,slow=16,SNR=9.2						
KK31				⇓Lg	Lg	20 44 07.1	
	4.7nm,0.5s,baz=152,slow=26,SNR=4.0						
IZV	**Izvestkoviy**	**4.05**	**37**	*e* P	**Pg**	**20 43 15.9**	**-2.6**
	3.4nm,0.6s						
IZV				*e* S	**Sg**	**20 44 11.1**	**+0.1**
	16nm,0.6s						
IZV	**Izvestkviy**	**4.05**	**37**	Pg	**Pb**	**20 43 10.5**	**-1.5**
	3.9nm,0.6s						
IZV				Lg	Lg	20 44 07.1	
	18nm,0.7s						
TNSS	**Tian-Shan**	**4.21**	**40**	*e* P	**Pg**	**20 43 18.3**	**-3.3**
	3.8nm,0.6s						
TNSS				*e* S	**Sg**	**20 44 15.6**	**-0.6**
	5.2nm,0.7s						
TNSS	**Tian-Shan**	**4.21**	**40**	Pg	**Pb**	**20 43 14.4**	**-0.6**
	3.8nm,0.6s						
TNSS				Lg	Lg	20 44 12.9	
	5.2nm,0.7s						
KRBS	**Karabastau**	**4.24**	**24**	*e* P	**Pg**	**20 43 19.9**	**-2.1**
	1.8nm,0.5s						
KRBS				*e* S	**Sg**	**20 44 18.5**	**+1.6**
	6.1nm,0.5s						
MDOK	**Medeo**	**4.36**	**40**	*e* P	**Pb**	**20 43 19.6**	**+2.4**
	4.0nm,0.6s						
MDOK				*e* S	**Sg**	**20 44 17.8**	**-2.9**
	16nm,0.8s						
MDOK	**Medeo**	**4.36**	**40**	Pg	**Pb**	**20 43 18.8**	**+1.6**
	3.8nm,0.7s						
MDOK				Lg	Lg	20 44 19.5	
	21nm,0.8s						
MDOK	**Medeo**	**4.36**	**40**	Pg	**Pb**	**20 43 17.2**	**0.0**
	4.0nm,0.6s						
MDOK				Lg	Lg	20 44 17.6	
	16nm,0.8s						
KOTS	**Kotyrbulak**	**4.44**	**39**	*e* P	**Pg**	**20 43 21.7**	**-4.3**
	14nm,0.5s						
KOTS				*e* S	**Sg**	**20 44 21.8**	**-1.7**
	14nm,0.5s						
KOTS	**Kotyrbulak**	**4.44**	**39**	Pg	**Pb**	**20 43 18.8**	**+0.1**
	14nm,0.5s						
KOTS				Lg	Lg	20 44 20.4	
	14nm,0.5s						
KTBS	**Karatobe**	**4.62**	**32**	*e* P	**Pg**	**20 43 25.7**	**-3.7**
	2.3nm,0.3s						
KTBS				*e* S	**Sg**	**20 44 28.1**	**-1.1**
	18nm,0.6s						
KTBS	**Karatobe**	**4.62**	**32**	Pg	**Pb**	**20 43 23.2**	**+1.6**
	2.3nm,0.3s						
KTBS				Lg	Lg	20 44 28.1	
	18nm,0.6s						
BTLS	**Baital**	**5.21**	**6**	*e* P	**Pg**	**20 43 35.9**	**-4.7**
	0.4nm,0.2s						
BTLS				*e* S	**Sg**	**20 44 45.6**	**-2.5**
	4.8nm,0.6s						
PDGK	**Podgornoye**	**5.82**	**51**	⇑Pg	**Pb**	**20 43 45.2**	**+3.1**
	1.6nm,0.6s						
PDGK				⇓Lg	Lg	20 45 04.9	
	6.8nm,1.0s						

*MAN **18** 20:42:53.0,6°42N×126°08E,h158km,MS2.9*
*DJA **18** 20:42:53.2±0.7,7°N±6°×12°6E±°,h170km±6km,M4.5/10, mB4.9/6,mb4.5/10,MLv4.8/6,Mw(mB)4.2/6*
*IDC **18** 20:42:55.9±0.4,6°56N×125°72E,h154km±3km,mb3.7/11, mb1 3.9/14,mb1mx3.6/38,mbtmp4.2/14,Error ellipse: s-maj=28.5km s-min=9.4km az=81.0*
*NEIC **18** 20:42:56.8±1.9,6°59N±0°07×125°91E±0°10,h160km±5km, mb4.4/31,Error ellipse: s-maj=14.3km s-min=9.1km az=66.0*
ISC 18 20:42:56.0±0.6,6°59N±0°04×125°98E±0°06,h154km±5km, n79,σ1§23/91,mb4.2/24,2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.45**	**38**	*e* P	**Pn**	**20 43 16.4**	**-1.1**
MATI				*e* S	**Sn**	**20 43 34.0**	**0.0**
DDMP	**Don Marcelino,**	**0.55**	**209**	*e* P	**Pn**	**20 43 17.0**	**-1.1**
DDMP				*e* S	**Sn**	**20 43 33.8**	**-1.1**
DAV	**Davao City (W)**	**0.62**	**320**	P	**Pn**	**20 43 19.0**	**+0.5**
	225nm,0.3s,baz=81,slow=2.2,SNR=84						
DAV				S	**Sn**	**20 43 35.7**	**+0.1**
	646nm,0.3s,baz=177,slow

BBOO	**Buckleboo**	**40.34**	**167**	P		**P**		**20 50 19.6**	**+1.0**
STKA	**Stephens Creek**	**41.05**	**160**	P		**P**		**20 50 25.3**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=336,slow=9.0,SNR=6.1								
STKA	**Stephens Creek**	**41.05**	**160**	P		**P**		**20 50 25.1**	**+0.6**
SONM	**Songino Array**	**44.37**	**341**	P		**P**		**20 50 49.3**	**-1.9**
	comp=Z,0.2nm,0.5s,baz=141,slow=9.3,SNR=2.2								
SONM				PcP		**PcP**		**20 52 32.1**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=161,slow=3.9,SNR=5.9								
SONM	**Songino Array**	**44.37**	**341**	P		**P**		**20 50 49.4**	**-1.7**
PEA0B	**Petropavlovsk-**	**53.10**	**23**	P		**P**		**20 51 58.4**	**+0.9**
PETK	**Petropavlovsk-**	**53.10**	**23**	P		**P**		**20 51 58.5**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=190,slow=4.0,SNR=9.5								
PETK	**Petropavlovsk-**	**53.10**	**23**	P		**P**		**20 51 58.9**	**+1.3**
MK31	**Makanchi Array**	**54.80**	**324**	P		**P**		**20 52 08.8**	**-1.2**
MKAR	**Makanchi Array**	**54.80**	**324**	P		**P**		**20 52 09.0**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=126,slow=8.3,SNR=7.0								
MKAR	**Makanchi Array**	**54.80**	**324**	P		**P**		**20 52 08.8**	**-1.2**
YAK	**Yakutsk**	**55.39**	**2**	P		**P**		**20 52 15.0**	**+1.1**
YAK				IAmb		IAmb		20 52 16.7	
	comp=Z,7.1nm,0.8s								
MA2	**Magadan**	**56.14**	**15**	P		**P**		**20 52 19.6**	**+0.3**
MA2				IAmb		IAmb		20 52 21.4	
	comp=Z,4.1nm,0.9s								
BKZ	**Black Stump Fm**	**65.20**	**139**	P		**P**		**20 53 22.7**	**+1.6**
BKZ				IAmb		IAmb		20 53 31.1	
	comp=Z,15nm,1.2s								
NRIK	**Noril'sk**	**67.49**	**346**	P		**P**		**20 53 34.0**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=131,slow=6.4,SNR=4.1								
KDAK	**Kodiak Island**	**79.89**	**33**	P		**P**		**20 54 48.3**	**+0.8**
IMAR	**Indian Mountai**	**80.05**	**24**	P		**P**		**20 54 49.0**	**+0.7**
PPLA	**Purkeypile**	**80.44**	**27**	P		**P**		**20 54 51.4**	**+0.8**
PPLA				IAmb		IAmb		20 55 08.3	
	comp=Z,15nm,1.3s								
BPAW	**Bear Paw Mtn.**	**81.06**	**26**	P		**P**		**20 54 54.3**	**+0.6**
BPAW				IAmb		IAmb		20 54 58.4	
	comp=Z,6.2nm,1.1s								
COLD	**Coldfoot**	**81.57**	**23**	P		**P**		**20 54 58.3**	**+2.0**
I23K	**Minto, Yukon-K**	**81.81**	**25**	P		**P**		**20 54 58.5**	**+0.9**
ILAR	**Eielson Array**	**82.86**	**26**	P		**P**		**20 55 02.9**	**-0.2**
	comp=Z,1.6nm,1.0s,baz=228,slow=6.4,SNR=10								
ILAR	**Eielson Array**	**82.86**	**26**	P		**P**		**20 55 02.7**	**-0.4**
BMAR	**Burnt Mountain**	**83.75**	**23**	P		**P**		**20 55 09.1**	**+1.5**
YKA	**Yellowknife Ar**	**97.21**	**24**	P		Pdif		20 56 11.1	+0.1
	comp=Z,0.4nm,0.8s,baz=302,slow=4.8,SNR=7.7								
TORD	**Torodi Ar. Bea**	**121.29**	**290**	PKP		**PKPdf**		**21 01 30.9**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=52,slow=1.2,SNR=4.3								

INET 18 21:44:06.6, 14°.84N×86°.17W, h4km, MW3.6, Honduras

IDC ***18*** *22:00:31.7±0.9, 5°.60S×152°.68E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.0/37, mbtmp4.0/13, ML2.0/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/30, Error ellipse: s-maj=28.6km s-min=17.3km az=130.0*

NEIC ***18*** *22:00:33.3±2.5, 5°.70S±0°.07×152°.8E±0°.1, h10km±1km, mb4.2/10, Error ellipse: s-maj=20.4km s-min=11.9km az=90.0*

ISC 18 22:00:37.8±0.8, 5°.63S±0°.07×152°.7E±0°.1, h40km, n30, σ1§03/31, mb4.1/17, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.52**	**340**	Pn	**Pn**	**22 01 00.9**	**-1.6**
RABL				Sn	**Sn**	22 01 22.6	+1.5
PMG	**Port Moresby**	**6.63**	**235**	Pn	**Pn**	**22 02 13.0**	**+0.2**
	1.8nm,0.3s,baz=6.7,slow=7.4,SNR=2.0						
PMG				Sn	**Sn**	**22 03 26.7**	**-0.5**
	12nm,0.3s,baz=204,slow=16,SNR=8.7						
PMG				LR	LR	22 04 57.6	
	comp=Z,170nm,18.5s,baz=96,slow=40						
PMG	**Port Moresby**	**6.63**	**235**		**Pn**	**22 02 12.7**	**-0.2**
MTN	**Manton Dam**	**22.43**	**250**	P	**P**	**22 05 34.2**	**+0.8**
MTN				IAmb	IAmb	22 05 40.5	
	comp=Z,12nm,0.9s						
WR0	**Warramunga Arr**	**22.67**	**229**	P	**P**	**22 05 37.0**	**+1.0**
WR0				IAmb	IAmb	22 05 50.8	
	comp=Z,8.5nm,1.3s						
WRA	**Warramunga Arr**	**22.81**	**230**	P	**P**	**22 05 36.5**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=54,slow=9.8,SNR=4.9						
AS31	**Alice Springs**	**25.46**	**223**	P	**P**	**22 06 02.5**	**+0.2**
ASAR	**Alice Springs**	**25.46**	**223**	P	**P**	**22 06 02.3**	**0.0**
	comp=Z,1.4nm,0.6s,baz=60,slow=9.0,SNR=21						
ASAR	**Alice Springs**	**25.46**	**223**	P	**P**	**22 06 02.8**	**+0.5**
KNRA	**Kununurra**	**25.50**	**245**	P	**P**	**22 06 05.2**	**+2.5**
MSVF	**Nonsavu**	**27.56**	**118**	P	**P**	**22 06 20.2**	**-1.1**
	comp=Z,4.9nm,0.7s,baz=155,slow=15,SNR=1.7						
BATI	**Baumata**	**29.09**	**259**	P	**P**	**22 06 33.6**	**-1.4**
	comp=Z,10nm,0.4s,baz=90,slow=5.3,SNR=4.4						
FITZ	**Fitzroy Crossi**	**29.16**	**243**	P	**P**	**22 06 35.1**	**-0.5**
	comp=Z,1.8nm,0.5s,baz=56,slow=8.5,SNR=9.3						
FITZ	**Fitzroy Crossi**	**29.16**	**243**	P	**P**	**22 06 34.9**	**-0.6**
FITZ				IAmb	IAmb	22 06 41.5	
	comp=Z,12nm,1.4s						
CMAR	**Chiang Mai Arr**	**58.12**	**296**	P	**P**	**22 10 26.8**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=118,slow=5.2,SNR=2.4						
PETK	**Petropavlovsk-**	**58.67**	**4**	P	**P**	**22 10 30.8**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=154,slow=7.1,SNR=12						
PETK	**Petropavlovsk-**	**58.67**	**4**	P	**P**	**22 10 31.1**	**0.0**
SONM	**Songino Array**	**66.96**	**328**	P	**P**	**22 11 26.4**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=110,slow=2.6,SNR=4.8						
SONM	**Songino Array**	**66.96**	**328**	IAmb	IAmb	22 11 27.8	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**80.87**	**319**	P	**P**	**22 12 48.0**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=108,slow=6.7,SNR=2.8						
MAKZ	**Makanchi**	**81.08**	**319**	P	**P**		
MAKZ				IAmb	IAmb	22 13 03.2	
	comp=Z,1.7nm,1.0s						
IMAR	**Indian Mountai**	**81.20**	**19**	P	**P**	**22 12 50.2**	**+1.1**
ZALV	**Zalesovo Beam**	**81.77**	**326**	P	**P**	**22 12 50.8**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=115,slow=5.4,SNR=3.3						
I23K	**Minto, Yukon-K**	**82.25**	**21**	P	**P**	**22 12 55.8**	**+1.2**
ILAR	**Eielson Array**	**82.97**	**22**	P	**P**	**22 12 57.9**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=250,slow=5.5,SNR=6.9						
ILAR	**Eielson Array**	**82.97**	**22**	P	**P**	**22 12 58.2**	**-0.2**
NRIK	**Noril'sk**	**86.71**	**341**	P	**P**	**22 13 17.6**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=130,slow=4.2,SNR=3.8						
KKAR	**Karatay Array**	**88.11**	**313**	P	**P**	**22 13 25.2**	**+0.7**
KKAR				IAmb	IAmb	22 13 26.9	
	comp=Z,1.9nm,1.1s						
YKA	**Yellowknife Ar**	**96.21**	**28**	P	**P**	**22 14 02.8**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=268,slow=4.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**150.44**	**287**	PKPbc	**PKPbc**	**22 20 25.8**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=64,slow=3.4,SNR=2.2						

DDA ***18*** *22:31:07.2, 35°.22N×26°.70E, h11km±2km, ML2.4*
ATH ***18*** *22:31:07.9, 34°.98N×26°.73E, h16km±3km, ML2.8/5, Error ellipse: s-maj=5.0km s-min=1.2km az=162.0*
ISK ***18*** *22:31:07.4, 35°.02N×26°.75E, h9km, ML2.8/4*
HLW ***18*** *22:31:08.3, 35°.02N×26°.92E, h31km±26km, Ml3.4*
THE ***18*** *22:31:08.4, 35°.11N×26°.67E, h0km±4km, ML3.0/2, Error ellipse: s-maj=13.5km s-min=1.0km az=159.0*

ISC 18 22:31:06.6±1.2, 34°.92N±0°.04×26°.76E±0°.03, h13km±9km, n37, σ1§05/52, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.48**	**294**	P	**Pg**	**22 31 16.4**	**+0.3**
ZKR				S	**Sb**	**22 31 23.1**	**-0.8**
ZKR				AML	AML	22 31 23.8	
	comp=N,1660μm,0.4s						
ZKR				AML	AML	22 31 23.9	
	comp=E,3286μm,0.3s						
ZKR	**Zakros**	**0.48**	**294**	P	**Pg**	**22 31 16.4**	**+0.3**
ZKR				S	**Sg**	**22 31 22.9**	**+0.3**
	comp=E,1μm,0.4s						
ZKR	**Zakros**	**0.48**	**294**	PG	**Pg**	**22 31 16.6**	**+0.5**
ZKR				SG	**Sb**	**22 31 23.4**	**-0.6**
STIA	**Sitia Lasithi**	**0.61**	**297**	P	**Pg**	**22 31 17.5**	**-1.1**
STIA				S	**Sg**	**22 31 26.0**	**-0.7**
KARP	**Karpathos**	**0.71**	**28**	P	**Pg**	**22 31 20.2**	**-0.2**
KARP				S	**Sb**	**22 31 30.2**	**-0.2**
KARP				AML	AML	22 31 30.8	
	comp=N,10106μm,0.4s						
KARP				AML	AML	22 31 30.9	
	comp=E,8627μm,0.4s						
KARP	**Karpathos**	**0.71**	**28**	P	**Pg**	**22 31 20.0**	**-0.3**
KARP				S	**Sb**	**22 31 30.2**	**-0.2**
	comp=E,5μm,0.3s						
NPS	**Neapolis**	**1.00**	**290**	P	**Pg**	**22 31 25.6**	**-0.2**
NPS				S	**Sg**	**22 31 38.2**	**-0.7**
NPS				AML	AML	22 31 46.4	
	comp=E,1654μm,0.8s						
NPS				AML	AML	22 31 46.7	
	comp=N,888μm,0.5s						
NPS	**Neapolis**	**1.00**	**290**	P	**Pg**	**22 31 26.1**	**+0.2**
HRKL	**Herakleio**	**1.41**	**286**	P	**Pn**	**22 31 32.7**	**+0.8**
HRKL	**Herakleio**	**1.41**	**286**	PN	**Pb**	**22 31 33.5**	**+0.7**
IDI	**Anoyia**	**1.57**	**284**	P	**Pn**	**22 31 35.5**	**+1.3**
IDI				AML	AML	22 32 05.1	
	comp=E,227μm,0.7s						
IDI				AML	AML	22 32 13.7	
	comp=N,238μm,0.5s						
ARG	**Arkhangelos**	**1.71**	**40**	P	**Pb**	**22 31 37.7**	**-0.1**
ARG				AML	AML	22 32 06.3	
	comp=E,246μm,0.5s						
ARG				AML	AML	22 32 09.1	
	comp=N,212μm,0.5s						
ARG	**Arkhangelos**	**1.71**	**40**	PN	**Pn**	**22 31 37.1**	**+1.1**
NIS1	**Nisyros Isl.**	**1.71**	**11**	PN	**Pn**	**22 31 36.8**	**+0.7**
SANT	**Santorini**	**1.79**	**324**	*i* P	**Pg**	**22 31 40.2**	**-0.8**
SANT				*i* S	**Sn**	**22 31 58.2**	**-1.6**
SANT	**Santorini**	**1.79**	**324**	PN	**Pn**	**22 31 38.1**	**+0.9**
VAM	**Vamos**	**2.15**	**284**	P	**Pb**	**22 31 45.5**	**+0.1**
BODT	**Bodrum**	**2.18**	**12**	PN	**Pn**	**22 31 43.5**	**+0.9**
TURN	**Turunc**	**2.21**	**33**	*i* P	**Pn**	**22 31 44.3**	**+1.4**
TURN				*i* S	**Sn**	**22 32 11.0**	**+1.0**
TURN				IAML		22 32 22.0	
	comp=E,30nm,0.4s						
TURN				IAML		22 32 23.0	
	comp=N,23nm,0.6s						
TURN	**Turunc**	**2.21**	**33**	PN	**Pn**	**22 31 44.3**	**+1.4**
BDRM	**Kayabasi**	**2.21**	**14**	*i* P	**Pb**	**22 31 46.5**	**+0.1**
BDRM				*i* S	**Sn**	**22 32 09.8**	**-0.4**
APE	**Apeiranthos**	**2.36**	**335**	*i* P	**Pn**	**22 31 44.1**	**-1.0**
APE				*i* S	**Sn**	**22 32 12.3**	**-1.6**
APE	**Apeiranthos**	**2.36**	**335**	PN	**Pn**	**22 31 46.1**	**+1.0**
DALY	**Dalyan (Mula)**	**2.44**	**39**	PN	**Pn**	**22 31 47.6**	**+1.5**
AKAS	**Kas**	**2.66**	**60**	*i* P	**Pn**	**22 31 48.0**	**-1.3**
AKAS				*i* S	**Sn**	**22 32 20.4**	**-1.1**
GCAM	**G?zelcaml?**	**2.80**	**8**	*i* P	**Pn**	**22 31 52.0**	**+1.0**
AYDN	**Tasoluk**	**2.88**	**18**	*i* P	**Pn**	**22 31 52.5**	**+0.3**
TAVA	**DENIZLI_Tavas**	**3.08**	**34**	*i* P	**Pn**	**22 31 55.4**	**+0.4**
TAVA				*i* S	**Sn**	**22 32 34.0**	**+2.3**
TAVA				IAML		22 32 45.0	
	comp=N,13nm,0.5s						
AKUM	**Antalya-Kumluc**	**3.24**	**63**	*i* P	**Pn**	**22 31 55.4**	**-1.6**
AKUM				*i* S	**Sn**	**22 32 34.8**	**-0.6**
GOLH	**Golhisar**	**3.24**	**44**	*i* P	**Pn**	**22 31 57.9**	**+0.7**
KORT	**Korkueli**	**3.58**	**54**	*i* P	**Pn**	**22 32 02.8**	**+0.9**
SLUM	**Salum**	**3.66**	**201**	P	**Pn**	**22 32 04.4**	**+1.6**
	baz=203						
SLUM				AMP		22 32 00.0	
	baz=203						
USAK	**Uak-Merkez**	**4.20**	**25**	*i* P	**Pn**	**22 32 11.0**	**+0.7**
SWA2		**5.77**	**191**	P	**Pn**	**22 32 33.9**	**+2.1**
	baz=193						
SWA2				AMP		22 33 00.0	
	baz=193						
SWA2				S	**Sn**	**22 33 36.0**	**-1.9**
	baz=193						
RYAN	**Fayoum**	**6.54**	**152**	P	**Pn**	**22 32 43.6**	**+1.1**
	baz=153						
RYAN				AMP		22 33 00.0	
	baz=153						
GLL	**Jalalah**	**6.78**	**140**	P	**Pn**	**22 32 45.8**	**-0.1**
	baz=141						
HFRF	**Wahat Farafira**	**7.86**	**170**	P	**Pn**	**22 33 01.7**	**+1.1**
	baz=171						

HLW 18 22:59:03.1, 34°.30N×26°.95E, h31km±39km, Md3.9, MI3.4, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATC	**Matruh**	**2.95**	**175**	P	Pn	22 59 48.9	+1.0
	baz=175						
SLUM	**Salum**	**3.16**	**208**	P	Pn	22 59 50.3	-0.3
	baz=209						
SLUM				AMP		23 00 00.0	
	baz=209						
SLUM				S	Sn	23 00 24.7	-2.6
	baz=209						
SWA2		**5.20**	**195**	P	Pn	23 00 18.7	0.0
	baz=195						
SWA2				AMP		23 01 00.0	
	baz=195						
SWA2				S	Sn	23 01 14.1	-3.5
	baz=195						
HNAT	**Natroun**	**5.60**	**145**	P	Pn	23 00 24.1	-0.2
	baz=145						
RYAN	**Fayoum**	**5.92**	**151**	P	Pn	23 00 28.6	-0.1
	baz=150						
RYAN				AMP		23 01 00.0	
	baz=150						
GLL	**Jalalah**	**6.21**	**138**	P	Pn	23 00 32.5	-0.1
	baz=138						
SUZ	**Suez**	**6.68**	**130**	P	Pn	23 00 39.7	+0.6
	baz=130						
NBNS	**Bani Suef**	**6.77**	**146**	P	Pn	23 00 41.0	+0.8
	baz=145						
HFRF	**Wahat Farafira**	**7.22**	**170**	P	Pn	23 00 46.9	+0.3
	baz=170						
HDK1	**Dakhla**	**8.98**	**166**	P	Pn	23 01 11.2	+0.5
	baz=165						

IDC ***18*** *23:02:08.9±1.5, 36°.31N×140°.06E, h90km±13km, mb3.5/9, mb1 3.6/13, mb1mx3.3/57, mbtmp3.8/13, Error ellipse: s-maj=21.0km s-min=9.1km az=67.0*

NEIC ***18*** *23:02:08.8±1.9, 36°.34N±0°.06×139°.91E±0°.08, h79km±6km, mb4.1/8, Error ellipse: s-maj=9.8km s-min=7.9km az=109.0*

JMA ***18*** *23:02:09.3±0.1, 36°.33N×139°.94E, h77km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕs114.00000°, δ13.00000°, λ-32.00000°. NP2: ϕs236.00000°, δ83.00000°, λ-101.00000°. Principal axes: T Plg37.0000°, Azm336.0000°; N Plg11.0000°, Azm237.0000°; P Plg51.0000°, Azm133.0000°;*

JMA Felt I J1.

NIED ***18*** *23:02:09.3, 36°.33N×139°.94E, h77km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-0.66; Mθθ2.21; Mϕϕ-1.54; Mrθ2.66; Mθϕ0.15; Mrϕ2.19; Fault plane solution: Mo3.96000×10¹⁴ NP1: ϕs231.00000°, δ84.00000°, λ-117.00000°. NP2: ϕs129.00000°, δ28.00000°, λ-13.00000°.*

ISC 18 23:02:08.4±0.7, 36°.27N±0°.05×140°.00E±0°.05, h84km±6km, n61, σ1§30/70, mb3.8/12, 2C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.16**	**106**	↑P	**Pn**	**23 02 20.9**	**+0.5**
JYT				S	**Sn**	**23 02 29.3**	**-0.1**
JYT	**Yasato**	**0.16**	**106**	Pn	**Pn**	**23 02 20.9**	**+0.5**
JYT				Sn	**Sn**	**23 02 29.3**	**-0.1**
JAG	**Ashikaga**	**0.47**	**289**	↓P	**Pn**	**23 02 21.9**	**-0.4**
JAG				S	**Sn**	**23 02 31.4**	**-1.1**
JKT	**Katashina**	**0.78**	**309**	↓P	**Pn**	**23 02 25.0**	**-0.3**
JKT				S	**Sn**	**23 02 37.1**	**-0.8**
JRY	**Ryogami san**	**0.93**	**254**	↓P	**Pn**	**23 02 27.2**	**+0.3**
JRY				S	**Sn**	**23 02 40.4**	**-0.3**
JFY	**Yanaizu**	**1.16**	**348**	↓P	**Pn**	**23 02 29.2**	**-0.4**
JOD2	**Odawara 2**	**1.25**	**217**	↑P	**Pn**	**23 02 31.4**	**+0.6**
JOD2				S	**Sn**	**23 02 47.7**	**+0.1**
JFT	**Otama**	**1.27**	**12**	↓P	**Pn**	**23 02 31.2**	**+0.2**
JFK	**Kawauchi**	**1.30**	**32**	P	**Pn**	**23 02 31.6**	**+0.3**
JYN	**Shimob**	**1.42**	**237**	P	**Pn**	**23 02 33.9**	**+1.0**
JYN				S	**Sn**	**23 02 52.1**	**+0.8**
MJAR	**Matsushiro Arr**	**1.47**	**281**	P	**Pn**	**23 02 33.3**	**-0.2**
	7.8nm,0.3s,baz=88,slow=14,SNR=211						
MJAR				LR	LR	23 02 51.0	
	comp=Z,30nm,18.7s,baz=275,slow=28						
MJAR				S	**Sn**	**23 02 53.8**	**+1.3**
	3.5nm,0.3s,baz=92,slow=16,SNR=4.5						
MJAR	**Matsushiro Arr**	**1.47**	**281**	Pn	**Pn**	**23 02 32.6**	**-1.0**
MAJO	**Matsushiro**	**1.48**	**281**		**Pn**	**23 02 33.7**	**+0.1**
MAT	**Matsushiro**	**1.48**	**281**	P	**Pn**	**23 02 33.6**	**0.0**
MAT				*e*S	**Sn**	**23 02 50.1**	**-2.5**
MAT	**Matsushiro**	**1.48**	**281**	P	**Pn**	**23 02 33.7**	**+0.1**
MJB9	**Matsu-Tunnel**	**1.48**	**281**		**Pn**	**23 02 34.0**	**+0.3**
JFNN	**Fujinakano**	**1.52**	**225**	P	**Pn**	**23 02 35.2**	**+1.1**
JFNN				S	**Sn**	**23 02 54.2**	**+0.7**
JNS	**Sasagawa**	**1.64**	**341**	P	**Pn**	**23 02 35.5**	**-0.2**
JMM	**Marumori**	**1.71**	**21**	Pn	**Pn**	**23 02 37.4**	**+0.8**
JSG	**Sagara**	**2.18**	**223**	Pn	**Pn**	**23 02 44.6**	**+1.9**
JSD	**Sado**	**2.25**	**322**	Pn	**Pn**	**23 02 42.9**	**-0.7**
JGF	**Kuroka**	**2.25**	**253**	Pn	**Pn**	**23 02 45.0**	**+1.3**
JHJ	**Hachijo jima 2**	**3.15**	**183**	P	**Pn**	**23 02 57.2**	**+1.4**
	47nm,0.3s,baz=3.2,slow=17,SNR=33						
JHJ				S	**Sn**	**23 03 34.5**	**+2.0**
	94nm,0.3s,baz=83,slow=22,SNR=8.8						
JHJ2	**Mitsune**	**3.16**	**183**	Pn	**Pn**	**23 02 57.1**	**+1.1**
JWT	**Wachi**	**3.87**	**257**	Pn	**Pn**	**23 03 06.6**	**+1.0**
JTM	**Tenmabayashi**	**4.58**	**10**	Pn	**Pn**	**23 03 15.4**	**+0.1**
JMN	**Monobe**	**5.63**	**245**	Pn	**Pn**	**23 03 30.0**	**+0.4**
JHS	**Saijyo**	**5.75**	**259**	Pn	**Pn**	**23 03 32.6**	**+1.4**
ERM	**Erimo**	**6.24**	**22**	Pn	**Pn**	**23 03 35.9**	**-1.8**
ASAJ	**Asahikawa**	**8.08**	**13**	P	**Pn**	**23 04 01.6**	**-1.3**
	0.7nm,0.3s,baz=220,slow=14,SNR=6.0						
JKA	**Kamikawa-asahi**	**8.08**	**13**		**Pn**	**23 04 01.9**	**-1.0**
JCJ	**Chichijima**	**9.34**	**168**	P	**Pn**	**23 04 18.2**	**-2.0**
	5.2nm,0.3s,baz=296,slow=21,SNR=1.5						
JCJ				S	**Sn**	**23 05 57.6**	**-5.8**
	5.9nm,0.3s,baz=290,slow=23,SNR=2.5						
JCJ	**Chichijima**	**9.34**	**168**		**Pn**	**23 04 18.4**	**-1.8**
KSRS	**Korea Array**	**9.75**	**281**	P	**Pn**	**23 04 28.9**	**+3.2**
	0.1nm,0.3s,baz=94,slow=14,SNR=5.4						
USRK	**Ussuriysk Ar.**	**10.01**	**325**	P	**Pn**	**23 04 31.2**	**+2.0**
	baz=149,slow=14,SNR=10						
USRK	**Ussuriysk Ar.**	**10.01**	**325**	Pn	**Pn**	**23 04 30.7**	**+1.5**
MA2	**Magadan**	**24.34**	**13**	P	**P**	**23 07 18.4**	**+0.3**
	3.1nm,0.8s,baz=227,slow=9.8,SNR=4.7						
SONM	**Songino Array**	**27.29**	**306**	P	**P**	**23 07 43.8**	**-1.3**
	0.5nm,0.7s,baz=111,slow=9.4,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**29.43**	**120**	T	T	23 39 07.5	
	baz=314						
H11S3	**WAKE ISLAND Hy**	**29.43**	**120**	T	T	23 39 08.4	
	baz=314						
H11S2	**WAKE ISLAND Hy**	**29.45**	**120**	T	T	23 39 00.8	
	baz=314						
TIXI	**Tiksi**	**35.92**	**354**	P	**P**	**23 08 59.1**	**-1.0**
	0.4nm,0.3s,baz=136,slow=7.7,SNR=2.3						
TIXI	**Tiksi**	**35.92**	**354**	P	**P**	**23 08 59.6**	**-0.5**
TIXI				IAmb	IAmb	23 08 59.4	
	comp=Z,1.2nm,0.8s						
WMQ	**Urumqi**	**40.18**	**297**	*e*P	**P**	**23 09 37.8**	**+1.4**
ZALV	**Zalesovo Beam**	**41.60**	**313**	P	**P**	**23 09 47.5**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=86,slow=7.6,SNR=5.4						
ZALV	**Zalesovo Beam**	**41.60**	**313**		**P**	**23 09 46.3**	**-1.5**
MK31	**Makanchi Array**	**43.57**	**303**	P	**P**	**23 10 03.6**	**-0.4**
MKAR	**Makanchi Array**	**43.57**	**303**	P	**P**	**23 10 04.0**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=92,slow=9.6,SNR=8.8						
MKAR	**Makanchi Array**	**43.57**	**303**	P	**P**	**23 10 03.5**	**-0.4**
MAKZ	**Makanchi**	**43.78**	**303**	P	**P**	**23 10 05.2**	**-0.4**
MAKZ				IAmb	IAmb	23 10 07.5	
	comp=Z,2.7nm,1.2s						
KURK	**Kurchatov**	**45.51**	**309**	P	**P**	**23 10 19.2**	**-0.2**
KURBB	**Kurchatov Arra**	**45.58**	**308**	P	**P**	**23 10 19.2**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=85,slow=8.1,SNR=13						
KK31	**Karatay Array**	**52.53**	**300**	P	**P**	**23 11 13.2**	**+0.1**
KK31				IAmb	IAmb	23 11 14.3	
	comp=Z,2.7nm,1.2s						
KKAR	**Karatay Array**	**52.53**	**300**	P	**P**	**23 11 12.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**55.76**	**197**	P	**P**	**23 11 38.7**	**+2.1**
FITZ				IAmb	IAmb	23 11 53.3	
	comp=Z,4.7nm,1.2s						
WB0	**Warramunga Arr**	**55.99**	**186**	P	**P**	**23 11 38.9**	**+0.6**
WR0	**Warramunga Arr**	**56.16**	**186**	P	**P**	**23 11 40.0**	**+0.5**
WRA	**Warramunga Arr**	**56.16**	**186**	P	**P**	**23 11 39.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=0.7,slow=7.5,SNR=10						
WRA	**Warramunga Arr**	**56.16**	**186**	P	**P**	**23 11 40.9**	**+1.4**
FINES	**FINESS Array B**	**68.95**	**332**	P	**P**	**23 13 05.2**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=50,slow=9.2,SNR=2.2						
NOA	**NORSAR Array B**	**74.44**	**337**	P	**P**	**23 13 37.1**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=54,slow=7.8,SNR=1.8						

FUNV ***18*** *23:03:55.7, 11°.88N×70°.16W, h18km, MW3.7*

ISC 18 23:03:54.0±1.4, 11°.96N±0°.07×70°.14W±0°.03, h31km±9km, n19, σ1§39/38, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MONV	**Montecano**	**0.17**	**93**	*e*P	**Pn**	**23 04 01.0**	**+0.5**
MONV				*e*S	**Sb**	**23 04 04.4**	**

comp=N,13nm,0.3s,baz=72,slow=34,SNR=2.5
PDAR Pinedale Array 3.33 253 Pn **Pn 23 05 58.6 -0.2**
YNE Yellowstone No 3.63 291 Pn **Pn 23 06 03.2 +0.2**
YMP Mirror Lake Pl 3.66 286 **Pn 23 06 04.0 +0.5**
OGNE Ogallala 3.71 139 Pn **Pn 23 06 05.9 +2.0**
GCMT Greycliff 3.73 304 **Pn 23 06 04.6 +0.3**
H17A Grant Village 3.90 281 **Pn 23 06 07.4 +0.7**
H17A IAML 23 07 11.6
comp=E,15nm,0.3s
H17A IAML 23 07 13.7
comp=N,16nm,0.7s
LOHW Long Hollow 3.91 269 **Pn 23 06 06.9 +0.1**
LOHW IAML 23 07 13.9
comp=N,15nm,0.8s
FLWY Flagg Ranch 3.96 276 Pn **Pn 23 06 07.8 +0.2**
FLWY IAML 23 07 18.1
comp=N,33nm,1.8s
FLWY IAML 23 07 28.4
comp=N,26nm,1.4s
MOOW Moose Ponds 4.00 271 Pn **Pn 23 06 08.5 +0.5**
ISCO Idaho Springs 4.01 184 Pn **Pn 23 06 09.0 +0.7**
ISCO IAML 23 07 15.1
comp=N,12nm,0.6s
SNOW Snow King Moun 4.03 267 **Pn 23 06 08.9 +0.4**
SNOW IAML 23 07 24.0
comp=N,34nm,0.8s
SNOW IAML 23 07 32.6
comp=N,28nm,1.3s
YPP Pitchstone Pla 4.05 279 **Pn 23 06 08.9 +0.2**
REDW Red Top Meadow 4.11 266 **Pn 23 06 07.2 -2.4**
YHH Holmes Hill 4.16 286 **Pn 23 06 09.9 -0.4**
E28A Huff 4.23 48 **Pn 23 06 13.2 +2.2**
O20A White River Ci 4.30 213 **Pn 23 06 12.4 +0.3**
O20A IAML 23 07 35.2
comp=N,25nm,1.9s
YHL Hebgen Lake 4.40 286 **Pn 23 06 12.9 -0.7**
YHL IAML 23 07 28.1
comp=N,16nm,1.2s
YHL IAML 23 07 34.8
comp=E,20nm,1.1s
AHID Auburn Hatcher 4.42 258 **Pn 23 06 14.1 +0.4**
AHID IAML 23 07 26.0
comp=E,24nm,0.6s
DGMT Dagmar 4.72 8 Pn **Pn 23 06 20.1 +2.4**
SMCO Snowmass 4.81 196 Pn **Pn 23 06 21.6 +2.3**
SMCO IAML 23 07 46.8
comp=E,12nm,1.4s
SMCO IAML 23 07 48.3
comp=E,15nm,0.9s
BOZ Bozeman (W) 4.91 294 **Pn 23 06 20.0 -0.4**
BOZ IAML 23 07 42.4
comp=E,9.3nm,0.6s
BOZ IAML 23 07 42.9
comp=E,9.8nm,1.3s
HWUT Hardware Ranch 5.16 247 Pn **Pn 23 06 24.4 +0.4**
HWUT IAML 23 08 00.3
comp=E,14nm,0.7s
HWUT IAML 23 08 05.3
comp=E,14nm,0.8s
EGMT Eagleton 5.27 325 **Pn 23 06 25.8 +0.5**
PV22 Blue Mesa, Par 5.91 208 **Pn 23 06 35.1 +0.8**
PV07 Paradox Valley 5.95 207 **Pn 23 06 35.8 +1.0**
PV15 Paradox Valley 5.99 205 Pn **Pn 23 06 37.2 +1.9**
PV04 Paradox Valley 6.08 208 **Pn 23 06 37.7 +1.2**
PV12 Saucer Basin, 6.11 207 **Pn 23 06 38.0 +0.9**
PV14 Lion Creek, Pa 6.14 209 **Pn 23 06 38.1 +0.7**
SRU San Rafael Swe 6.15 222 Pn **Pn 23 06 37.9 +0.4**
NLU North Lily Min 6.40 235 Pn **Pn 23 06 43.3 +0.3**
F33A 5 Mile Ranch, 6.67 69 Pn **Pn 23 06 43.7 -0.7**
HLID Hailey 6.67 271 Pn **Pn 23 06 42.7 -1.9**
T25A Trinidad 6.69 174 Pn **Pn 23 06 45.6 +0.7**
DUG Dugway, Tooele 6.71 240 Pn **Pn 23 06 45.1 0.0**
L34A Svendsen Farm, 6.75 103 Pn **Pn 23 06 46.0 +0.4**
MSO Missoula 6.85 299 Pn **Pn 23 06 46.8 -0.2**
MSU Marysvale 7.45 227 Pn **Pn 23 06 56.0 +0.6**
JTMT Jette 7.46 305 Pn **Pn 23 06 56.1 +0.7**
WALA Waterton Lakes 7.97 314 Pn **Pn 23 07 01.8 -0.6**
F36A Milaca 8.56 72 Pn **Pn 23 07 11.3 +0.8**
ULM Lac du Bonnet 9.07 41 Pn **Pn 23 07 16.7 -0.6**
comp=E,0.9nm,0.3s,baz=228,slow=12,SNR=7.7
ULM Lg Lg 23 09 43.9
comp=E,0.4nm,0.3s,baz=139,slow=20,SNR=1.6
YKA Yellowknife Ar 19.51 347 P **P 23 09 33.5 -0.3**
comp=E,0.1nm,0.3s,baz=160,slow=13,SNR=3.2
MKAR Makanchi Array 89.54 355 P **P 23 18 04.1 -0.2**
comp=E,0.2nm,0.7s,baz=18,slow=6.2,SNR=2.5

MOS ***18*** *23:14:33.8±0.9,36°.92N×135°.33E,h352km,mb4.2/15, Error ellipse: s-maj=7.5km s-min=5.9km az=100.4*
IDC ***18*** *23:14:34.7±0.5,36°.89N×135°.35E,h348km±5km,mb3.5/26, mb1 3.7/34,mb1mx3.6/51,mbtmp4.2/34,Error ellipse: s-maj=8.1km s-min=7.5km az=158.0*
NIED ***18*** *23:14:34.6,36°.88N×135°.41E,h353km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.74; Mθθ-0.42; Mφφ-1.31; Mrθ-0.10; Mθφ2.34; Mφr-4.20; Fault plane solution: M0 5.06000×10¹⁵ NP1: φs175.00000°,δ79.00000°,λ117.00000°. NP2: φs286.00000°,δ29.00000°,λ24.00000°.*
NEIC ***18*** *23:14:34.9±1.8,36°.93N±0°.07×135°.36E±0°.09, h351km±6km,mb4.2/86 Error ellipse: s-maj=10.3km s-min=9.3km az=123.0*
JMA ***18*** *23:14:34.5±0.1,36°.87N×135°.41E,h353km±1km,M3.9*
ISC 18 23:14:34.5±0.4,36°.95N±0°.04×135°.41E±0°.04,h347km±3km, h345km:pP-P,n275,σ1ϑ28/322,mb4.1/94,12C-3D,Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**1.00**	**132**	P	**Pn**	**23 15 20.6**	**+0.7**
JKG				S	**S**	**23 15 56.4**	**+0.1**
JJH	**Hakui**	**1.10**	**91**	P	**Pn**	**23 15 21.3**	**+1.1**
JJH				*eS*	**S**	**23 15 58.3**	**+1.4**
JHG	**Hegura jima**	**1.50**	**53**	P	**Pn**	**23 15 23.8**	**+1.6**
JHG				*eS*	**S**	**23 16 02.2**	**+1.7**
JSZ	**Suzu**	**1.64**	**72**	P	**Pn**	**23 15 24.3**	**+1.3**
JSZ				*eS*	**S**	**23 16 03.8**	**+1.8**
JWT	**Wachi**	**1.66**	**180**	P	**Pn**	**23 15 23.8**	**+0.5**
JWT				*eS*	**S**	**23 16 01.8**	**-0.7**
JWT	**Wachi**	**1.66**	**180**	Pn	**Pn**	**23 15 23.8**	**+0.5**
JYTA	**Yamagatataniai**	**1.72**	**141**	P	**Pn**	**23 15 24.2**	**+0.5**
JYTA				S	**S**	**23 16 02.7**	**-0.4**
JOI	**OKI**	**1.86**	**250**	P	**Pn**	**23 15 25.3**	**+0.8**
JOI				*eS*	**S**	**23 16 05.3**	**+0.7**
JGF	**Kuroka**	**2.07**	**130**	Pn	**Pn**	**23 15 26.5**	**+0.4**
MJB9	**Matsu-Tunnel**	**2.28**	**99**		**Pn**	**23 15 28.5**	**+0.9**
MAJO	**Matsushiro**	**2.28**	**99**	*d iP*	**Pn**	**23 15 28.4**	**+0.8**
MAJO	**Matsushiro**	**2.28**	**99**	Pn	**Pn**	**23 15 28.5**	**+0.9**
MAT	**Matsushiro**	**2.28**	**99**	P	**Pn**	**23 15 28.5**	**+0.9**
MAT				S	**S**	**23 16 11.4**	**+1.2**
MAT	**Matsushiro**	**2.28**	**99**	P	**Pn**	**23 15 28.4**	**+0.9**
MJAR	**Matsushiro Arr**	**2.28**	**99**	P	**Pn**	**23 15 28.9**	**+1.3**
	14nm,0.3s,baz=277,slow=9.7,SNR=2036						
MJAR				S	**S**	**23 16 11.5**	**+1.2**
	baz=290,slow=27,SNR=0.6						
MJAR	**Matsushiro Arr**	**2.28**	**99**	P	**Pn**	**23 15 27.9**	**+0.3**
MJAR	**Matsushiro Arr**	**2.28**	**99**		**Pn**	**23 15 27.9**	**+0.3**
JSD	**Sado**	**2.51**	**63**	P	**Pn**	**23 15 30.4**	**+1.1**
JSD	**Sado**	**2.51**	**63**	Pn	**Pn**	**23 15 30.4**	**+1.1**
JHS	**Saijyo**	**2.69**	**224**	P	**Pn**	**23 15 31.1**	**+0.1**
JHS				*eS*	**S**	**23 16 16.1**	**-0.2**
JHS	**Saijyo**	**2.69**	**224**	Pn	**Pn**	**23 15 31.1**	**+0.1**
JWY	**Kouya**	**2.73**	**177**	P	**Pn**	**23 15 31.6**	**+0.2**
JWY				S	**S**	**23 16 15.7**	**-1.3**
JIE	**Ise**	**2.76**	**157**	P	**Pn**	**23 15 32.2**	**+0.7**
JIE				*eS*	**S**	**23 16 16.6**	**-0.7**
JYN	**Shimob**	**2.92**	**119**	P	**Pn**	**23 15 32.9**	**-0.1**
JRY	**Ryogami san**	**2.96**	**107**	P	**Pn**	**23 15 33.5**	**+0.2**
JGT2	**ShimaneMisato**	**3.01**	**232**	P	**Pn**	**23 15 33.9**	**+0.2**
JTNC	**Tanabenakahech**	**3.12**	**177**	P	**Pn**	**23 15 34.6**	**-0.2**
JTNC				*eS*	**S**	**23 16 21.1**	**-2.3**
JSG	**Sagara**	**3.20**	**134**		**Pn**	**23 15 36.4**	**+1.0**
JAI	**Aioi**	**3.24**	**194**	P	**Pn**	**23 15 36.2**	**+0.3**
JAI				*eS*	**S**	**23 16 25.2**	**-0.1**
JOD2	**Odawara 2**	**3.42**	**118**	P	**Pn**	**23 15 37.9**	**+0.4**
JOD2				*eS*	**S**	**23 16 29.0**	**+0.7**
JMN	**Monobe**	**3.45**	**202**	Pn	**Pn**	**23 15 38.1**	**+0.2**
JYT	**Yasato**	**3.92**	**99**	Pn	**Pn**	**23 15 41.8**	**-0.6**
JMM	**Marumori**	**4.38**	**76**	Pn	**Pn**	**23 15 47.5**	**+0.3**
JTO	**Tosashimizu**	**4.61**	**208**	P	**Pn**	**23 15 49.9**	**+0.2**
JMK	**Ichinoseki**	**5.01**	**65**	P	**Pn**	**23 15 54.2**	**+0.3**
BSO1	**Boso 1**	**5.07**	**115**	P	**Pn**	**23 15 53.1**	**-1.0**
BSO1				*eS*	**S**	**23 16 55.5**	**-3.1**
JHJ	**Hachijo jima 2**	**5.24**	**136**	P	**Pn**	**23 15 55.9**	**-0.7**
	11nm,0.3s,baz=343,slow=19,SNR=2.9						
JHJ				S	**S**	**23 17 03.8**	**+0.7**
	41nm,0.3s,baz=38,slow=19,SNR=12						
JHJ2	**Mitsune**	**5.26**	**135**	Pn	**Pn**	**23 15 57.9**	**+1.1**
JNU	**Nakatsue**	**5.33**	**226**	P	**Pn**	**23 15 57.7**	**+0.1**
	2.4nm,0.3s,baz=38,slow=3.6,SNR=16						
JNU				S	**S**	**23 17 03.3**	**-1.7**
	baz=107,slow=18,SNR=2.0						
JTU	**Tsushima**	**5.45**	**245**	Pn	**Pn**	**23 15 58.5**	**-0.5**
JTM	**Tenmabayashi**	**5.85**	**47**	Pn	**Pn**	**23 16 03.6**	**+0.4**
KSRS	**Korea Array**	**6.00**	**277**	P	**Pn**	**23 16 06.5**	**+1.4**
	2.0nm,0.3s,baz=99,slow=12,SNR=82						
KSRS				S	**S**	**23 17 18.7**	**+0.2**
	baz=46,slow=23,SNR=0.4						
KSAR	**Wonju Array Be**	**6.03**	**277**	P	**Pn**	**23 16 05.4**	**0.0**
KSAR	**Wonju Array Be**	**6.03**	**277**		**Pn**	**23 16 05.4**	**0.0**
KS19	**Wonju Array Si**	**6.05**	**278**		**Pn**	**23 16 06.1**	**+0.5**
TJN	**Taejon**	**6.49**	**267**	*ceP*	**Pn**	**23 16 11.3**	**+0.5**
MSHR	**Mys Shultsa**	**6.51**	**331**	*ceP*	**Pn**	**23 16 12.6**	**+1.7**
MSHR				pmax	pmax		
	comp=Z,47nm,1.7s						
JSU	**Suzuyama**	**6.80**	**219**	Pn	**Pn**	**23 16 13.8**	**-0.7**
JEW	**Eniwo**	**7.50**	**36**	Pn	**Pn**	**23 16 23.0**	**+0.6**
USA0B	**Ussuriysk Arra**	**7.70**	**341**	*i* P	**Pn**	**23 16 26.5**	**+1.7**
USA0B	**Ussuriysk Arra**	**7.70**	**341**	Pn	**Pn**	**23 16 26.4**	**+1.7**
USRK	**Ussuriysk Ar.**	**7.70**	**341**	P	**Pn**	**23 16 26.7**	**+1.9**
	baz=165,slow=11,SNR=28						
USRK	**Ussuriysk Ar.**	**7.70**	**341**	P	**Pn**	**23 16 25.9**	**+1.1**
USRK	**Ussuriysk Ar.**	**7.70**	**341**	Pn	**Pn**	**23 16 25.9**	**+1.1**
ERM	**Erimo**	**7.84**	**47**	*ceP*	**Pn**	**23 16 26.3**	**-0.2**
ERM				pmax	pmax		
	comp=Z,142nm,0.7s						
ERM	**Erimo**	**7.84**	**47**	Pn	**Pn**	**23 16 26.2**	**-0.3**
MDJ	**Mudanjiang**	**8.84**	**332**	P	**P**	**23 16 40.3**	**-0.6**
MDJ				pmax	pmax		
	comp=Z,21nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,240nm,3.7s						
MDJ	**Mudanjiang**	**8.84**	**332**	Pn	**Pn**	**23 16 39.0**	**+0.6**
ASAJ	**Asahikawa**	**9.01**	**35**	P	**Pn**	**23 16 39.9**	**-0.5**
	comp=Z,29nm,0.3s,baz=233,slow=11,SNR=212						
ASAJ				S	**S**	**23 18 17.1**	**-6.3**
	comp=Z,5.3nm,0.3s,baz=240,slow=20,SNR=4.6						
ASAJ	**Asahikawa**	**9.01**	**35**	P	**Pn**	**23 16 40.0**	**-0.4**
JKA	**Kamikawa-asahi**	**9.01**	**35**	Pn	**Pn**	**23 16 40.0**	**-0.4**
NMR	**Nemuro--Hokkai**	**10.17**	**48**	*eP*	**Pn**	**23 16 51.4**	**-2.8**
NMR				*eS*	**S**	**23 18 40.7**	**-8.3**
GRPR	**Tuman**	**10.57**	**45**	*eP*	**Pn**	**23 16 58.7**	**-0.3**
GRPR				*eS*	**S**	**23 18 50.8**	**-7.0**
GRPR				pmax	pmax		
	comp=Z,75nm,0.4s						
GRPR				pmax	pmax		
	comp=E,55nm,0.5s						
GRPR				pmax	pmax		
	comp=N,48nm,0.1s						
DL2	**Dalian**	**11.06**	**284**	P	**P**	**23 17 05.8**	**+0.1**
DL2				*sP*		23 18 20.8	
DL2				S	**S**	**23 19 12.5**	**+3.6**
DL2				pmax	pmax		
	comp=N,40nm,1.0s						
DL2				pmax	pmax		
	comp=N,230nm,3.7s						
JCJ	**Chichijima**	**11.38**	**148**	P	Pn	23 17 04.0	-4.8
	comp=N,7.8nm,0.3s,baz=284,slow=14,SNR=5.4						
JCJ				S		23 19 01.0	-15
	comp=N,20nm,0.3s,baz=252,slow=22,SNR=12						
YSS	**Yuzh-Sakhalins**	**11.39**	**26**	*eP*	**Pn**	**23 17 09.0**	**+0.2**
YSS				*eS*	**S**	**23 19 11.7**	**-4.3**
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				smax	smax		
	comp=N,20nm,2.0s						
YSS	**Yuzh-Sakhalins**	**11.39**	**26**	P	**Pn**	**23 17 08.7**	**-0.1**
JOW	**Kunigami**	**11.76**	**213**	P	**Pn**	**23 17 11.2**	**-2.2**
	comp=N,3.9nm,0.3s,baz=351,slow=13,SNR=6.0						
JOW	**Kunigami**	**11.76**	**213**	P	**Pn**	**23 17 11.7**	**-1.8**
KLR	**Kul'dur**	**12.56**	**349**	P	**Pn**	**23 17 22.6**	**-0.1**
	comp=N,0.3nm,0.3s,baz=172,slow=8.5,SNR=10						
KLR				S	**S**	**23 19 40.5**	**-0.6**
	comp=N,0.1nm,0.3s,baz=162,slow=20,SNR=1.8						
KLR	**Kul'dur**	**12.56**	**349**	*ceP*	**P**	**23 17 21.6**	**-0.6**
SSE	**Sheshan**	**13.16**	**248**	P	**P**	**23 17 28.3**	**-0.7**
BJT	**Baijiatuan**	**15.38**	**287**	P	**P**	**23 17 52.6**	**-0.6**
BJT				pmax	pmax		
	comp=Z,28nm,1.3s						
BJT	**Baijiatuan**	**15.38**	**287**	P	**P**	**23 17 52.6**	**-0.6**
YHNB	**Yeheng**	**17.15**	**228**	P	**P**	**23 18 12.2**	**-0.6**
WHN	**Wuhan**	**18.63**	**256**	P	**P**	**23 18 27.6**	**-0.6**
TPUB	**Ta-pu**	**18.63**	**227**	P	**P**	**23 18 27.7**	**-0.6**
HHC	**Hu-ho-hao-te**	**18.95**	**289**	*eP*	**P**	**23 18 29.8**	**-1.9**
HHC				S	**S**	**23 21 47.8**	**-0.5**
HHC				PcP	**PcP**	**23 22 40.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,71nm,4.6s						
XAN	**Xi'an**	**21.74**	**270**	P	**P**	**23 18 56.5**	**-2.0**
XAN				pmax	pmax		
	comp=Z,21nm,1.2s						
XAN				pmax	pmax		
	comp=Z,130nm,6.3s						
XAN				LR	LR		
	comp=Z,130nm,14.1s						
XAN	**Xi'an**	**21.74**	**270**	P	**P**	**23 18 56.7**	**-1.8**
XAN				pmax	pmax		
	comp=Z,36nm,1.4s						
XAN	**Xi'an**	**21.74**	**270**	P	**P**	**23 18 56.7**	**-1.8**
PEA0B	**Petropavlovsk-**	**22.42**	**37**	P	**P**	**23 19 05.4**	**+0.9**
PEA0B				pmax	pmax		
	comp=Z,51nm,1.5s						
PEA0B	**Petropavlovsk-**	**22.42**	**37**	P	**P**	**23 19 05.4**	**+0.9**
PETK	**Petropavlovsk-**	**22.42**	**37**	P	**P**	**23 19 04.4**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=213,slow=7.9,SNR=3.2						
PETK				ScP	**ScP**	**23 25 50.3**	**0.0**
	comp=Z,0.9nm,0.7s,baz=267,slow=2.5,SNR=1.6						
PETK	**Petropavlovsk-**	**22.42**	**37**	P	**P**	**23 19 05.8**	**+1.3**
PETK	**Petropavlovsk-**	**22.42**	**37**	P	**P**	**23 19 05.8**	**+1.3**
ENH	**Enshi**	**22.55**	**260**	P	**P**	**23 19 04.8**	**-1.2**
SZP	**Santa**	**23.39**	**218**	P	**P**	**23 19 13.2**	**-0.4**
ULN	**Ulaanbaatar**	**23.48**	**307**	*ceP*	**P**	**23 19 13.6**	**-0.7**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.7s						
ULN	**Ulaanbaatar**	**23.48**	**307**	P	**P**	**23 19 13.5**	**-0.9**
SONM	**Songino Array**	**23.90**	**306**	P	**P**	**23 19 17.6**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=117,slow=9.7,SNR=13						
SONM				pP	**pP**	**23 20 16.5**	**+1.3**
	comp=Z,1.2nm,1.2s,baz=120,slow=8.5,SNR=1.0						
SONM	**Songino Array**	**23.90**	**306**	P	**P**	**23 19 17.0**	**-1.1**
MA2	**Magadan**	**24.72**	**19**	P	**P**	**23 19 25.0**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=217,slow=9.4,SNR=5.8						
MA2	**Magadan**	**24.72**	**19**	*ceP*	**P**	**23 19 25.8**	**+0.7**
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GUMO	**Guam**	**24.75**	**158**	P	**P**	**23 19 25.4**	**-0.5**
GUMO				pmax	pmax		
	comp=Z,196nm,1.2s						
GUMO	**Guam**	**24.75**	**158**	P	**P**	**23 19 25.4**	**-0.5**
LZH	**Lanzhou**	**25.33**	**278**	*eP*	**P**	**23 19 30.4**	**-0.7**
LZH				pP	PP	23 20 36.8	+0.2
LZH				sP	sP	23 21 18.9	+4.2
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
TLY	**Talaya**	**26.82**	**313**	*i* P	**P**	**23 19 44.0**	**0.0**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CD2	**Chengdu**	**26.87**	**266**	P	**P**	**23 19 43.0**	**-1.7**
CD2				pmax	pmax		
	comp=Z,20nm,1.1s						
GTA	**Gaotai**	**27.98**	**286**	*eP*	**P**	**23 19 54.1**	**-0.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SEY	**Seymchan**	**28.03**	**17**	P	**P**	**23 19 55.3**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=213,slow=5.4,SNR=5.5						
SEY	**Seymchan**	**28.03**	**17**	*i* P	**P**	**23 19 55.0**	**+0.6**
KMI	**Kunming**	**30.23**	**256**	P	**P**	**23 20 12.5**	**-2.0**
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI	**Kunming**	**30.23**	**256**	P	**P**	**23 20 12.5**	**-2.0**
KMI				IAmb	IAmb	23 20 15.0	
	comp=Z,19nm,1.1s						
TIXI	**Tiksi**	**34.94**	**356**	*i* P	**P**	**23 20 54.3**	**+0.2**
TIXI	**Tiksi**	**34.94**	**356**	P	**P**	**23 20 53.9**	**-0.3**
MYLDM	**Lahad Datu**	**35.21**	**210**	P	**P**	**23 20 57.7**	**+0.6**
MYLDM				IAmb	IAmb	23 21 01.9	
	comp=Z,22nm,1.3s						
BILL	**Bilibino**	**35.59**	**19**	*de*P	**P**	**23 21 01.2**	**+1.5**
BILL				*PP	**pwP**	**23 22 12.0**	**+3.3**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BILL	**Bilibino**	**35.59**	**19**	P	**P**	**23 21 00.6**	**+0.9**
BILL				IAmb	IAmb	23 21 02.0	
	comp=Z,5.6nm,0.6s						
DGZ	**Jazzator, Alta**	**36.55**	**306**	*iP*	**P**	**23 21 08.4**	**+0.2**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	**Urumqi**	**36.57**	**296**	*e*P	**P**	**23 21 09.6**	**+1.2**
CHTO	**Chiang Mai**	**36.67**	**251**	P	**P**	**23 21 09.2**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHTO	**Chiang Mai**	**36.67**	**251**	P	**P**	**23 21 09.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**36.88**	**250**	P	**P**	**23 21 12.4**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=37,slow=8.5,SNR=8.9						
CMAR				ScP	**ScP**	**23 26 37.7**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=27,slow=3.0,SNR=9.3						
CMAR	**Chiang Mai Arr**	**36.88**	**250**	*i* P	**P**	**23 21 12.3**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**36.88**	**250**	P	**P**	**23 21 11.5**	**+0.3**
LSA	**Lhasa**	**37.42**	**272**	P	**P**	**23 21 15.9**	**-0.2**
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LSA	**Lhasa**	**37.42**	**272**	P	**P**	**23 21 15.9**	**-0.2**
TOLI2	**Tolitoli**	**38.14**	**204**	P	**P**	**23 21 21.4**	**-0.2**
ZALV	**Zalesovo Beam**	**38.43**	**313**	P	**P**	**23 21 22.4**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=95,slow=9.5,SNR=4.0						
ZALV				ScP	**ScP**	**23 26 41.5**	**-1.3**
	comp=Z,1.0nm,0.4s,baz=96,slow=3.6,SNR=6.1						
ZALV	**Zalesovo Beam**	**38.43**	**313**	*i* P	**P**	**23 21 22.6**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**38.43**	**313**	P	**P**	**23 21 22.2**	**-1.4**
SHL	**Shillong**	**38.60**	**266**	P	**P**	**23 21 24.1**	**-1.5**
SHL				pmax	pmax		
	comp=Z,22nm,0.9s						
SHL	**Shillong**	**38.60**	**266**	P	**P**	**23 21 24.1**	**-1.5**
SHL				IAmb	IAmb	23 21 25.9	
	comp=Z,22nm,0.9s						
FAKI	**Fak Fak**	**39.77**	**185**	P	**P**	**23 21 34.3**	**-0.7**
FAKI				IAmb	IAmb	23 21 38.6	
	comp=Z,7.5nm,0.9s						
MK31	**Makanchi Array**	**40.08**	**301**	*i* P	**P**	**23 21 36.5**	**-0.7**
MK31	**Makanchi Array**	**40.08**	**301**	P	**P**	**23 21 36.5**	**-0.7**
MKAR	**Makanchi Array**	**40.08**	**301**	P	**P**	**23 21 36.6**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=84,slow=11,SNR=14						
MKAR				pP	**pwP**	**23 22 47.2**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=98,slow=8.8,SNR=3.1						
MKAR				ScP	**ScP**	**23 26 48.3**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=80,slow=5.2,SNR=6.6						
MKAR	**Makanchi Array**	**40.08**	**301**	P	**P**	**23 21 36.5**	**-0.8**
MAKZ	**Makanchi**	**40.29**	**301**	P	**P**	**23 21 38.6**	**-0.4**
MAKZ	**Makanchi**	**40.29**	**301**	P	**P**	**23 21 38.6**	**-0.4**
TAPN	**Taplejung**	**41.14**	**271**	*eP*	**P**	**23 21 46.0**	**-0.4**
NRIK	**Noril'sk**	**41.38**	**337**	P	**P**	**23 21 46.8**	**-0.6**
	comp=Z,1.7nm,0.3s,baz=113,slow=9.5,SNR=3.8						
NRIK	**Noril'sk**	**41.38**	**337**	*ceP*	**P**	**23 21 48.2**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ODAN	**Odare**	**41.61**	**270**	*eP*	**P**	**23 21 49.4**	**-0.8**
	comp=Z,14nm,0.8s						
RAMN	**Ramite**	**42.21**	**271**	*eP*	**P**	**23 21 54.3**	**-0.6**
	comp=Z,32nm,0.9s						
JIRN	**Jiri**	**42.23**	**272**	*eP*	**P**	**23 21 55.0**	**-0.2**
	comp=Z,33nm,1.0s						
GUN	**Gumba**	**42.37**	**272**	*eP*	**P**	**23 21 55.7**	**-0.6**
	comp=Z,35nm,1.0s						
PKI	**Pulchoki**	**42.89**	**272**	*eP*	**P**	**23 21 59.6**	**-0.9**
	comp=Z,8.6nm,0.8s						
KKN	**Kakani**	**42.90**	**273**	*eP*	**P**	**23 21 59.9**	**-0.5**
	comp=Z,18nm,0.9s						
GKN	**Gorkha**	**43.32**	**273**	*eP*	**P**	**23 22 02.9**	**-0.8**
KOLN	**Koldanda**	**44.25**	**274**	*eP*	**P**	**23 22 10.7**	**-0.4**
TKM2	**Tokmak 2**	**45.41**	**297**	P	**P**	**23 22 20.7**	**+0.7**
	SNR=8.3						
KBK	**Karagaybulak**	**45.94**	**297**	P	**P**	**23 22 24.5**	**+0.5**
	SNR=14						
USP	**Ospenovka**	**46.11**	**298**	P	**P**	**23 22 25.1**	**-0.1**
	SNR=7.1						
AAK	**Ala-Archa**	**46.27**	**297**	P	**P**	**23 22 26.6**	**0.0**
	SNR=6.0						
AAK	**Ala-Archa**	**46.27**	**297**	*ceP*	**P**	**23 22 26.5**	**0.0**
AAK				pmax	pmax		
	comp=Z,16nm,0.9s						
AAK	**Ala-Archa**	**46.27**	**297**	P	**P**	**23 22 26.3**	**-0.2**
UCH	**Uchtor**	**46.36**	**296**	P	**P**	**23 22 28.2**	**+0.7**
	SNR=5.6						
EKS2	**Erkin-Say**	**46.78**	**297**	P	**P**	**23 22 30.4**	**+0.1**
	SNR=6.5						
AML	**Almayashu**	**46.97**	**296**	P	**P**	**23 22 32.4**	**+0.2**
	SNR=25						
BRVK	**Borovoye**	**47.11**	**312**	*ceP*	**P**	**23 22 32.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	**Borovoye**	**47.11**	**312**	P	**P**	**23 22 32.3**	**-0.3**
BATI	**Baumata**	**48.18**	**196**	P	**P**	**23 22 44.0**	**+2.8**
	comp=Z,14nm,0.5s,baz=297

comp=Z,1.5nm,1.0s,baz=272,slow=6.8,SNR=2.7
ILAR Eielson Array 52.13 32 P **P** **23 23 10.1 +0.3**
KNRA Kununurra 52.71 188 P **P** **23 23 14.0 -0.6**
KNRA IAmb IAmb 23 23 20.7
comp=Z,16nm,1.2s
BMAR Burnt Mountain 52.72 29 P **P** **23 23 16.3 +2.1**
KBL Kabul 52.92 289 P **P** **23 23 15.5 -0.9**
KBL pmax pmax
comp=Z,5.0nm,1.0s
KBL Kabul 52.92 289 P **P** **23 23 15.5 -0.9**
ARU Arti 53.21 318 *d iP* **P** **23 23 17.3 -0.5**
ARU 23 24 18.5
ARU *PP **pP** **23 24 27.8 -2.0**
ARU 23 25 22.1
ARU S **S** **23 30 23.1 +2.0**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ARU Arti 53.21 318 P **P** **23 23 17.4 -0.4**
ARU IAmb IAmb 23 23 18.3
comp=Z,6.4nm,0.9s
SCRK Sand Creek 53.50 33 P **P** **23 23 21.0 +1.1**
SCRK IAmb IAmb 23 23 21.7
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 54.28 309 P **P** **23 23 24.8 -0.8**
ABKAR Akbulak array 54.28 309 P **P** **23 23 24.8 -0.8**
ABKAR IAmb IAmb 23 23 25.8
comp=Z,2.4nm,0.6s
K27K Chicken 54.32 33 P **P** **23 23 27.4 +1.7**
K27K IAmb IAmb 23 23 28.3
comp=Z,9.3nm,0.9s
EGAK Eagle 54.55 32 P **P** **23 23 28.3 +1.1**
EGAK IAmb IAmb 23 23 29.6
comp=Z,5.7nm,0.8s
BCAR Beaver Creek A 54.65 34 P **P** **23 23 30.1 +1.9**
BARN Barnard Glacie 55.19 36 P **P** **23 23 33.7 +1.6**
BARN IAmb IAmb 23 23 34.5
comp=Z,7.5nm,0.6s
FITZ Fitzroy Crossi 55.52 191 P **P** **23 23 38.8 +4.1**
comp=Z,2.5nm,1.0s,baz=23,slow=11,SNR=1.3
WB0 Warramunga Arr 56.41 181 P **P** **23 23 40.0 -1.0**
WB0 IAmb IAmb 23 23 40.9
comp=Z,9.6nm,1.1s
WRA Warramunga Arr 56.59 181 P **P** **23 23 41.2 -1.0**
comp=Z,2.2nm,0.4s,baz=357,slow=7.5,SNR=45
WRA PcP **PcP** **23 24 34.1 0.0**
comp=Z,0.4nm,0.4s,baz=358,slow=4.7,SNR=1.5
WRA Warramunga Arr 56.59 181 P **P** **23 23 40.9 -1.3**
WR0 Warramunga Arr 56.60 181 P **P** **23 23 41.3 -1.0**
WR0 IAmb IAmb 23 23 42.7
comp=Z,16nm,1.5s
INK Inuvik 56.63 26 P **P** **23 23 43.1 +1.2**
comp=Z,2.2nm,0.5s,baz=292,slow=7.2,SNR=12
INK Inuvik 56.63 26 P **P** **23 23 43.1 +1.2**
INK IAmb IAmb 23 23 43.9
comp=Z,6.7nm,1.2s
HRA Herat 58.11 291 P **P** **23 23 52.2 -0.8**
HRA IAmb IAmb 23 23 53.9
comp=Z,4.8nm,0.8s
C36M Paulatuk 59.49 24 P **P** **23 24 02.6 +1.1**
GEYT Alibeck 59.62 297 P **P** **23 24 03.0 -0.1**
comp=Z,1.2nm,0.4s,baz=50,slow=10,SNR=5.0
GEYT Alibeck 59.62 297 P **P** **23 24 02.8 -0.2**
AS31 Alice Springs 60.30 182 P **P** **23 24 08.1 +0.5**
ASAR Alice Springs 60.30 182 P **P** **23 24 06.9 -0.6**
comp=Z,1.7nm,0.8s,baz=8.9,slow=7.8,SNR=15
ASAR Alice Springs 60.30 182 P **P** **23 24 07.0 -0.6**
BELG Belogornoye 60.53 315 *i* P **P** **23 24 08.8 0.0**
BELG pmax pmax
comp=Z,2.0nm,1.0s
RES Resolute Bay 63.83 13 P **P** **23 24 30.5 +0.4**
comp=Z,2.2nm,0.7s,baz=313,slow=7.0,SNR=6.6
RES Resolute Bay 63.83 13 P **P** **23 24 30.3 +0.2**
RES IAmb IAmb 23 24 31.4
comp=Z,3.5nm,0.9s
VALR Valaam 64.68 329 *i* P **P** **23 24 35.2 -0.6**
VALR pmax pmax
comp=Z,24nm,0.9s
OBN Obninsk 65.22 321 *i* P **P** **23 24 40.1 +0.8**
OBN pmax pmax
comp=Z,5.0nm,0.4s
DZM Mont Dzumac 65.59 148 P **P** **23 24 43.3 +1.0**
comp=Z,7.8nm,0.8s,baz=27,slow=4.5,SNR=2.8
DZM Mont Dzumac 65.59 148 P **P** **23 24 42.5 +0.3**
YKA Yellowknife Ar 66.24 28 P **P** **23 24 46.3 +0.7**
comp=Z,1.6nm,0.9s,baz=300,slow=6.2,SNR=22
YKA PcP **PcP** **23 25 13.6 +0.9**
comp=Z,0.5nm,0.7s,baz=310,slow=3.7,SNR=7.1
FIA1 FINESS Array S 66.58 330 P **P** **23 24 47.6 -0.3**
FINES FINESS Array B 66.58 330 P **P** **23 24 47.6 -0.2**
comp=Z,1.0nm,0.5s,baz=55,slow=6.2,SNR=19
FINES PcP **PcP** **23 25 13.3 -0.9**
comp=Z,0.5nm,0.4s,baz=52,slow=7.2,SNR=3.5
FINES FINESS Array B 66.58 330 P **P** **23 24 47.4 -0.5**
UOSS Minazif 67.22 285 P **P** **23 24 51.6 -0.9**
KIV Kislovodsk 67.27 309 *eP* **P** **23 24 53.0 +0.4**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,65nm,17.0s
ARMA Armidale 68.72 165 P **P** **23 25 01.9 +0.4**
MNK Minsk 69.79 324 *i* P **P** **23 25 07.2 -0.5**
comp=E,2.0nm,0.8s
MNK *i* P **P** **23 25 07.2 -0.5**
comp=N,6.0nm,0.9s
MNK *i* P **P** **23 25 07.2 -0.5**
comp=Z,4.0nm,0.8s
MNK *i* pP **pP** **23 26 24.6 +0.5**
MNK *i* PP **PP** **23 27 45.9 -0.9**
MNK *i* PPP PPP 23 29 30.1
MNK *i* S **S** **23 33 46.2 -1.7**
MNK *i* sS **sS** **23 36 04.1 +0.2**
MNK *i* SS **SS** **23 38 22.5 -0.9**
MNK *i* SSS SSS 23 41 47.4
NLWA Neilton Lookou 70.25 45 P **P** **23 25 12.3 +1.6**
SUMG Summit 70.69 358 P **P** **23 25 13.8 +0.5**
SUMG pmax pmax
comp=Z,4.0nm,0.7s
SUMG Summit 70.69 358 P **P** **23 25 13.8 +0.5**
SUMG IAmb IAmb 23 25 15.1
comp=Z,4.0nm,0.7s
AKASG Malin Array Be 71.34 320 P **P** **23 25 16.8 -0.3**
comp=Z,1.1nm,0.5s,baz=49,slow=6.2,SNR=8.2
AKASG Malin Array Be 71.34 320 P **P** **23 25 16.4 -0.7**
B08A Colville Reser 72.22 43 P **P** **23 25 23.0 +0.7**
B08A IAmb IAmb 23 25 24.5
comp=Z,3.7nm,0.8s
C09A Chrisman Ranch 73.12 43 P **P** **23 25 28.7 +1.1**
NEW Newport 73.47 42 P **P** **23 25 30.5 +0.8**
comp=Z,2.5nm,0.8s,baz=275,slow=6.5,SNR=4.3
PINE Pine Mountain 73.99 47 P **P** **23 25 34.8 +1.9**
BRTR Keskin Array B 75.23 309 P **P** **23 25 41.5 +1.5**
comp=Z,0.8nm,0.6s,baz=129,slow=4.0,SNR=3.5
BRTR Keskin Array B 75.23 309 *i* P **P** **23 25 42.0 +2.0**
JTMT Jette 75.29 41 P **P** **23 25 41.7 +1.5**
JTMT IAmb IAmb 23 25 42.6
comp=Z,4.7nm,0.8s
BURAR Bucovina Array 75.31 319 P **P** **23 25 40.3 +0.1**
BMO Blue Mountains 75.44 45 P **P** **23 25 41.9 +0.8**
BMO pmax pmax
comp=Z,3.0nm,0.9s
BMO Blue Mountains 75.44 45 P **P** **23 25 41.9 +0.8**
BMO IAmb IAmb 23 25 43.3
comp=Z,2.9nm,0.8s
SOCY Socotra 75.97 275 P **P** **23 25 42.1 -2.3**
FCC Fort Churchill 76.14 24 P **P** **23 25 45.1 +0.6**
FCC pmax pmax
comp=Z,3.0nm,0.8s
FCC Fort Churchill 76.14 24 P **P** **23 25 45.1 +0.6**
FCC IAmb IAmb 23 25 45.8
comp=Z,3.4nm,0.8s
FFC Flin Flon 76.29 30 P **P** **23 25 45.7 +0.3**
FFC pmax pmax
comp=Z,6.0nm,0.8s
FFC Flin Flon 76.29 30 P **P** **23 25 45.7 +0.3**
FFC IAmb IAmb 23 25 46.9
comp=Z,5.6nm,0.8s
BEKR Beckworth 76.67 50 P **P** **23 25 49.0 +0.8**
BEKR IAmb IAmb 23 25 50.3
comp=Z,7.1nm,1.1s
PAHR Pah Rah Range 77.36 50 P **P** **23 25 52.9 +1.0**
PAHR IAmb IAmb 23 25 54.2
comp=Z,8.9nm,1.4s
CMB Columbia Colle 77.76 52 P **P** **23 25 55.2 +1.2**
CMB pmax pmax
comp=Z,8.0nm,1.3s
CMB Columbia Colle 77.76 52 P **P** **23 25 55.2 +1.2**
FRB Frobisher Bay 77.85 11 P **P** **23 25 54.8 +0.9**
FRB pmax pmax
comp=Z,5.0nm,1.2s
HLID Hailey 77.87 44 P **P** **23 25 56.1 +1.4**
HLID IAmb IAmb 23 25 57.2
comp=Z,3.4nm,0.9s
BOZ Bozeman (W) 78.07 41 P **P** **23 25 56.5 +0.8**
BOZ pmax pmax
comp=Z,8.0nm,1.3s
BOZ Bozeman (W) 78.07 41 P **P** **23 25 56.5 +0.8**
BOZ IAmb IAmb 23 25 57.8
comp=Z,7.6nm,1.3s
KVN Kaiserville 78.55 50 P **P** **23 25 59.9 +1.5**
KVN pmax pmax
comp=Z,4.0nm,0.7s
KVN Kaiserville 78.55 50 P **P** **23 25 59.9 +1.5**
KVN IAmb IAmb 23 26 00.9
comp=Z,4.4nm,0.7s
QLMT Earthquake Lak 78.68 42 P **P** **23 25 59.7 +0.6**
YHL Hebgen Lake 78.80 42 P **P** **23 26 01.0 +1.2**
YHL IAmb IAmb 23 26 02.4
comp=Z,6.1nm,1.0s
NVAR Mina Array Bea 78.81 50 P **P** **23 26 01.5 +1.6**
comp=Z,1.4nm,0.6s,baz=292,slow=5.7,SNR=14
NVAR Mina Array Bea 78.81 50 P **P** **23 26 01.1 +1.2**
H17A Grant Village 79.42 42 P **P** **23 26 04.9 +1.8**
GERES GERESS Array B 80.15 325 P **P** **23 26 05.4 -1.3**
comp=Z,0.1nm,0.3s,baz=32,slow=5.2,SNR=3.5
TPNV Topopah Spring 81.01 50 P **P** **23 26 12.5 +1.0**
TPNV IAmb IAmb 23 26 13.8
comp=Z,4.4nm,0.7s
PD31 Pinedale Array 81.07 42 P **P** **23 26 12.2 +0.4**
PD31 IAmb IAmb 23 26 13.4
comp=Z,2.0nm,0.9s
PDAR Pinedale Array 81.07 42 P **P** **23 26 12.5 +0.7**
comp=Z,1.7nm,0.8s,baz=302,slow=1.7,SNR=18
PDAR Pinedale Array 81.07 42 P **P** **23 26 12.2 +0.4**
SHPR Sheep Range 81.97 50 P **P** **23 26 17.9 +1.4**
SHPR IAmb IAmb 23 26 19.0
comp=Z,2.7nm,0.8s
ULM Lac du Bonnet 82.11 30 P **P** **23 26 17.0 +0.2**
comp=Z,5.3nm,0.8s,baz=307,slow=5.3,SNR=9.8
ULM Lac du Bonnet 82.11 30 P **P** **23 26 16.7 -0.1**
ULM pmax pmax
comp=Z,8.0nm,1.0s
ULM Lac du Bonnet 82.11 30 P **P** **23 26 16.7 -0.1**
MSU Marysvale 82.44 47 P **P** **23 26 20.4 +1.4**
MSU Marysvale 82.44 47 P **P** **23 26 20.4 +1.4**
TX31 Lajitas Ar. Si 93.89 49 P **P** **23 27 14.7 +1.2**
TXAR Lajitas Array 93.89 49 P **P** **23 27 14.8 +1.3**
comp=Z,1.5nm,0.6s,baz=288,slow=3.1,SNR=14
TXAR Lajitas Array 93.89 49 P **P** **23 27 14.5 +1.0**
TXAR Lajitas Array 93.89 49 P **P** **23 27 14.5 +1.0**
LPAZ La Paz 150.71 52 PKPbc **PKPbc** **23 33 47.4 +0.2**
comp=Z,1.1nm,0.7s,baz=0,slow=2.0,SNR=4.0
LPAZ La Paz 150.71 52 PKIKP **PKPbc** **23 33 47.2 0.0**
LPAZ La Paz 150.71 52 **PKPbc** **23 33 47.2 0.0**
LPAZ PKPab **PKPab** **23 33 54.9 -0.5**
SIV San Ignacio 154.52 39 PKPab **PKPab** **23 34 11.2 +0.4**
comp=Z,2.3nm,0.7s,baz=333,slow=4.5,SNR=10

*ASIES **18** 23:21:50.4, 22°.34N×120°.37E, h33km, MW3.4*
TAP 18 23:21:51.4, 22°.43N×120°.33E, h28km, ML3.7, 17C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWP	**Hsiaoliuchiu** baz=169	**0.09**	**163**	*i*P		Pb	23 21 57.1	+0.6
TWP				*i* S		Sb	23 22 02.1	+2.2
WLCH	**Liuqiu** baz=164	**0.09**	**153**	*e*P		Pb	23 21 57.2	+0.8
WLCH				*e*S		Sb	23 22 02.4	+2.5
KAU	**Kaohsiung** baz=345	**0.14**	**350**	⇑*i*P		Pn	23 21 57.5	-0.1
KAU				*i* S		Sb	23 22 02.6	+2.2
SSPT	**Xinbi** baz=87	**0.22**	**77**	⇓*i*P		Pn	23 21 58.3	-0.5
SSPT				*i* S		Sb	23 22 03.5	+1.5
SCZT	**Fangliau** baz=103	**0.27**	**103**	⇑*i*P		Pn	23 21 59.0	-0.5
SCZT				*i* S		Sn	23 22 04.9	+0.2
TSPT	**Pingtung City** baz=20	**0.28**	**32**	*i* P		Pn	23 21 59.8	+0.2
TSPT				S		Sn	23 22 07.1	+2.1
SNJT	**Kaohsiung City** baz=350	**0.32**	**0**	*e*P		Pn	23 21 59.9	-0.2
SNJT				*e*S		Sn	23 22 06.4	+0.6
SGLT	**Jiouru** baz=17	**0.33**	**27**	P		Pn	23 22 00.6	+0.4
SGLT				S		Sn	23 22 08.2	+2.2
MASBT	**Mashibuluo** baz=70	**0.33**	**57**	⇑*i*P		Pb	23 21 59.6	+0.5
MASBT				*i* S		Sn	23 22 05.7	-0.4
TSMG	**Majia** baz=58	**0.40**	**47**	P		Pn	23 22 00.7	-0.5
TSMG				S		Sn	23 22 07.2	-0.6
TWM1	**Shoushan** baz=4.0	**0.40**	**12**	P		Pn	23 22 02.0	+0.7
TWM1				S		Sn	23 22 12.1	+4.3
SSD	**Sandimen** baz=53	**0.42**	**41**	⇑*i*P		Pn	23 22 01.0	-0.4
SSD				*i* S		Sn	23 22 08.3	0.0
SCST	**Cishan** baz=10.0	**0.47**	**18**	P		Pn	23 22 02.5	+0.2
SCST				*e*S		Sn	23 22 11.5	+1.8
EAST	**Anshuo** baz=104	**0.48**	**96**	⇑*i*P		Pn	23 22 02.5	+0.2
EAST				*i* S		Sn	23 22 11.2	+1.4
SLIU	**Shizi** baz=128	**0.48**	**117**	⇑*i*P		Pn	23 22 02.2	-0.2
SLIU				*i* S		Sn	23 22 10.2	+0.3
TAW	**Tawu** baz=98	**0.53**	**98**	*e*P		Pn	23 22 03.0	+0.1
TAW				*e*S		Sn	23 22 12.2	+1.2
HEN	**Hengchun** baz=127	**0.57**	**139**	*e*P		Pn	23 22 03.5	-0.1
HEN				*e*S		Sn	23 22 12.6	+0.7
ECL	**Taimali** baz=74	**0.60**	**74**	⇑*i*P		Pn	23 22 04.0	0.0
ECL				*i* S		Sn	23 22 12.6	-0.1
SNW	**Nanwan** baz=130	**0.61**	**141**	*e*S		Sn	23 22 14.4	+1.4
TAI1	**Yung-k'ang** baz=351	**0.61**	**351**	*e*P		Pb	23 22 03.8	+0.2
TAI1				*e*S		Sn	23 22 15.3	+2.2
SLGT	**Liugui** baz=27	**0.63**	**27**	*e*P		Pn	23 22 04.2	-0.2
SLGT				*e*S		Sn	23 22 13.9	+0.4
CHN3	**Shinhua** baz=2.0	**0.64**	**3**	*e*P		Pn	23 22 06.0	+1.4
CHN3				*e*S		Sn	23 22 16.6	+2.8
TWK1	**Hengchun** baz=128	**0.65**	**138**	⇑*i*P		Pn	23 22 04.8	0.0
TWK1				*i* S		Sn	23 22 14.7	+0.6
TWKBT	**Hengchun** baz=128	**0.66**	**138**	*i* P		Pb	23 22 04.6	+0.2
TWKBT				S		Sn	23 22 14.4	+0.1
SGST	**Jiashian** baz=20	**0.69**	**20**	⇑*i*P		Pb	23 22 04.3	-0.5
SGST				*i* S		Sn	23 22 14.8	-0.2
TSEB	**Hengchuen, Pin** baz=130	**0.75**	**135**	*e*P		Pb	23 22 05.6	-0.2
TSEB				*e*S		Sn	23 22 16.9	+0.6
SCLT	**Jiali** baz=350	**0.75**	**350**	*e*P		Pn	23 22 06.2	+0.2
SCLT				S		Sn	23 22 17.7	+1.2
CHN1	**Nanshi** baz=13	**0.77**	**13**	P		Pn	23 22 06.6	+0.2
CHN1				S		Sn	23 22 18.2	+1.1
TWG	**Pinlang** baz=61	**0.78**	**60**	⇑*i*P		Pn	23 22 07.4	+0.9
TWG				*i* S		Sn	23 22 18.1	+0.7
TWGBT	**Beinan** baz=61	**0.79**	**61**	⇑*i*P		Pn	23 22 07.0	+0.3
TWGBT				S		Sn	23 22 17.8	+0.3
SNST	**Tainan City** baz=11	**0.80**	**11**	*e*P		Pn	23 22 07.0	+0.3
SNST				*e*S		Sn	23 22 19.7	+2.0
TTN	**Taitung** baz=68	**0.82**	**67**	P		Pn	23 22 08.1	+1.1
TTN				S		Sn	23 22 21.4	+3.2
STYT	**Tauyuan** baz=13	**0.82**	**28**	⇑*i*P		Pn	23 22 06.9	-0.2
STYT				S		Sn	23 22 19.6	+1.1
STYH	**Taoyuan** baz=14	**0.84**	**29**	*e*P		Pb	23 22 07.5	+0.1
STYH				*e*S		Sn	23 22 19.8	+1.1
TWK	**Hsinying** baz=11	**0.84**	**10**	⇓*i*P		Pn	23 22 07.3	-0.1
TWK				S		Sn	23 22 20.4	+1.6
WTP	**Ta-pu** baz=18	**0.85**	**18**	*e*P		Pn	23 22 07.5	0.0
WTP				*e*S		Sn	23 22 20.1	+1.1
LONT	**Longtian** baz=58	**0.87**	**57**	P		Pb	23 22 08.6	+0.6
LONT				S		Sn	23 22 20.4	+0.8
TPUB	**Ta-pu** baz=17	**0.91**	**17**	⇑*i*P		Pn	23 22 07.7	-0.5
TPUB				S		Sn	23 22 20.5	+0.1
CHN8	**Yiju** baz=353	**0.92**	**353**	*e*S		Sn	23 22 22.2	+1.6
ICHU	**Yijhu** baz=357	**0.93**	**357**	*e*P		Pb	23 22 09.4	+0.6
ICHU				*e*S		Sn	23 22 23.3	+2.5
CHN4	**Tsaushan** baz=15	**0.94**	**15**	⇑*i*P		Pn	23 22 08.4	-0.4
CHN4				S		Sb	23 22 23.2	+1.9
ELDTW	**Lidau** baz=26	**0.98**	**40**	P		Pn	23 22 09.5	+0.2
ELDTW				*e*S		Sn	23 22 22.3	-0.1
WDGT	**Dungji** baz=323	**1.03**	**323**	*e*P		Pn	23 22 08.8	-1.2
WDGT				*e*S		Sb	23 22 24.6	+0.8
EDH	**Donghe** baz=75	**1.04**	**59**	*e*P		Pb	23 22 11.2	+0.4
EDH				*e*S		Sb	23 22 27.2	+3.0
CHY	**Chiayi** baz=5.0	**1.06**	**4**	*e*P		Pb	23 22 10.9	-0.2
CHY				*e*S		Sb	23 22 27.1	+2.4
LDUT	**Ludao** baz=78	**1.08**	**77**	*e*P		Pb	23 22 11.4	0.0
VCHM	**Qimei** baz=312	**1.14**	**313**	*e*P		Pn	23 22 09.8	-1.6
VCHM				*e*S		Sn	23 22 23.5	-2.6
ALS	**Alishan** baz=23	**1.16**	**22**	⇑*i*P		Pn	23 22 11.7	-0.3
ALS				S		Sb	23 22 30.2	+2.5
FULB	**Fuli** baz=50	**1.17**	**49**	*e*P		Pb	23 22 12.9	-0.1
FULB				*e*S		Sb	23 22 31.5	+3.8
YUS	**Yu-Shan** baz=13	**1.20**	**28**	*e*P		Pb	23 22 13.4	-0.3
YUS				*e*S		Sb	23 22 30.4	+1.3
CHN5	**Tsauling** baz=15	**1.20**	**15**	⇑*i*P		Pn	23 22 11.9	-0.5
CHN5				S		Sb	23 22 30.4	+1.6
WSF	**Szhu** baz=355	**1.20**	**355**	*e*P		Pn	23 22 11.7	-0.7
WSF				S		Sn	23 22 27.4	-0.3
WTK	**Tuku** baz=2.0	**1.25**	**2**	*e*P		Pn	23 22 12.1	-0.8
WTK				*e*S		Sn	23 22 28.1	-0.7
WDLH	**Douliu** baz=8.0	**1.26**	**9**	*e*P		Pn	23 22 12.8	-0.4
WDLH				*e*S		Sn	23 22 29.5	+0.3
WGK	**Gukeng** baz=357	**1.27**	**10**	*e*P		Pn	23 22 12.5	-0.7
WGK				*e*S		Sb	23 22 30.3	-0.1
PHUB	**P'eng-hu** baz=326	**1.28**	**327**	*e*P		Pn	23 22 12.7	-0.7
PHUB				*e*S		Sb	23 22 31.4	+0.4
EYUL	**Yuli** baz=46	**1.29**	**45**	*e*P		Pb	23 22 14.2	-0.7
EYUL				*e*S		Sb	23 22 32.3	+1.2
YULB	**Yu-li** baz=44	**1.30**	**43**	P		Pn	23 22 14.2	+0.4
YULB				*e*S		Sb	23 22 32.4	+0.8
PNG	**Penghu** baz=328	**1.34**	**328**	*e*P		Pb	23 22 15.0	-0.8
WJS	**Zhushan** baz=15	**1.43**	**15**	*e*P		Pn	23 22 15.2	-0.2
WJS				*e*S		Sn	23 22 33.5	+0.2
HGSD	**Ruisui** baz=44	**1.46**	**43**	*e*P		Pb	23 22 17.1	-0.7
HGSD				*e*S		Sb	23 22 38.1	+2.1
SSLB	**Suanglung** baz=23	**1.46**	**23**	*e*P		Pn	23 22 15.9	-0.1
SSLB				*e*S		Sn	23 22 34.4	+0.2
WNT	**Mingjian** baz=13	**1.47**	**13**	*e*P		Pn	23 22 15.7	-0.4
WNT				*e*S		Sn	23 22 34.9	+0.5
VWDT	**VWDT** baz=31	**1.51**	**29**	*e*P		Pn	23 22 17.1	+0.6
SMLT	**Sun Moon Lake** baz=22	**1.53**	**20**	P		Pn	23 22 17.0	0.0
TYC	**Yuchr** baz=19	**1.54**	**18**	P		Pn	23 22 17.0	0.0
TYC				*e*S		Sn	23 22 37.0	+1.0
EGFH	**Guangfu** baz=29	**1.59**	**39**	*e*P		Pn	23 22 18.8	+1.1
DPDB	**Guoxing** baz=21	**1.68**	**19**	*e*P		Pn	23 22 19.3	+0.3
OWD	**Renai** baz=29	**1.70**	**27**	*e*P		Pn	23 22 20.0	+0.7
ESL	**Shilin** baz=27	**1.71**	**36**	*e*P		Pn	23 22 20.6	+1.4
CHGB	**Renai** baz=15	**1.79**	**25**	*e*P		Pn	23 22 20.7	+0.1
WHP	**Taichung City** baz=17	**1.92**	**17**	*e*P		Pn	23 22 22.3	+0.1
WHP				*e*S		Sn	23 22 46.7	+1.2

WDJ	Dajia District	1.93	8	eP		Pb	23 22 24.9	-0.9
TWQ1	Liyutan	1.95	12	eP		Pb	23 22 25.4	-0.8
	baz=15							
TDCB	Techi	1.96	23	eP		Pn	23 22 23.4	+0.5
	baz=25							
TWT	Tachien	1.97	23	eP		Pn	23 22 23.4	+0.4
	baz=23							
TWT				eS		Sn	23 22 47.7	+0.8
	baz=23							
FUSS	Fushou	1.99	25	eP		Pn	23 22 24.9	+1.6
	baz=27							
TWD	Chiawan	2.01	35	eP		Pn	23 22 23.3	-0.1
	baz=38							
ETLH	Xiulin Townshi	2.06	31	eP		Pn	23 22 25.6	+1.5
	baz=20							
NACB	Ninganchiao	2.08	34	eP		Pn	23 22 24.9	+0.4
	baz=37							
NNSB	Datong	2.21	26	eP		Pn	23 22 27.1	+0.8
	baz=29							
NNSH	Datong	2.21	26	eP		Pn	23 22 26.8	+0.6
	baz=28							
NNS	Nan Shan	2.21	25	eP		Pn	23 22 27.3	+0.9
	baz=29							
NSTT	Nanjuang	2.27	16	eP		Pn	23 22 27.3	+0.3
	baz=18							
LIOB	Emei	2.29	16	eP		Pn	23 22 27.5	+0.2
	baz=17							
YHNB	Yeheng	2.42	23	eP		Pn	23 22 30.6	+1.4
	baz=27							
ENTT	Nioudou	2.47	27	eP		Pn	23 22 32.1	+2.3
	baz=18							
NWLT	Wulai	2.57	24	eP		Pb	23 22 34.5	-2.3
	baz=27							

*FUNV **18** 23:22:00.5, 10.71N×62.20W, h19km, MW3.9*
*TRN **18** 23:22:01.4, 10.83N×62.38W, h83km, MD3.6*
ISC 18 23:21:59.9±1.3, 10.74N±0.04×62.32W±0.03, h103km±12km, n26, σ1§52/45, 2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.90	96	eP	Pn	23 22 20.7	+1.2
TRN				eS	Sn	23 22 33.6	-0.7
CRUV	Carupano	0.91	266	eP	Pn	23 22 18.7	-0.8
CRUV				eS	Sn	23 22 31.7	-2.6
TPP	Pointe-a-Pierr	0.95	116	eP	Pn	23 22 22.0	+2.0
TBH	Brigand Hill	1.25	102	eP	Pn	23 22 25.4	+2.1
GRGR	Grenville	1.53	25	eP	Pn	23 22 26.5	-0.2
GRGR				eS	Sn	23 22 45.8	-1.1
GRGR	Grenville	1.53	25	eP	Pn	23 22 26.4	-0.2
GRGR				⇓eS	Sn	23 22 45.1	-1.8
TPR	Prospect	1.57	74	eP	Pn	23 22 29.0	+1.8
TPR				eS	Sn	23 22 48.6	+0.6
BOT	Bacolet	1.63	75	⇓iP	Pn	23 22 29.6	+1.7
BOT				eS	Sn	23 22 49.9	+0.8
TOSP	Speyside	1.83	72	eP	Pn	23 22 31.8	+1.4
TOSP				eS	Sn	23 22 53.5	-0.3
GCMP	Grenada, Carri	1.94	27	eP	Pn	23 22 32.2	+0.4
GCMP				eS	Sn	23 22 55.2	-1.0
PCRV	Puerto La Cruz	2.35	256	eP	Pn	23 22 39.0	+1.9
PCRV				eS	Sn	23 23 06.5	+0.8
RIOV	Rio Grande	2.70	169	eP	Pn	23 22 42.2	+0.4
RIOV				eS	Sn	23 23 12.7	-1.3
SVB	Belmont	2.72	22	eP	Pn	23 22 42.7	+0.7
SVV	Soufriere Volc	2.78	23	eP	Pn	23 22 43.4	+0.6
PRGV	PARIAGUAN	3.02	230	eP	Pn	23 22 47.4	+1.3
PRGV				eS	Sn	23 23 22.1	+0.5
MCLT	Moule a Chique	3.24	24	eP	Pn	23 22 49.7	+0.7
MCLT				eS	Sn	23 23 24.7	-2.1
SLB	Belfond	3.31	22	eP	Pn	23 22 50.3	+0.4
SLBI	Saint Lucia, B	3.52	22	eP	Pn	23 22 53.5	+0.9
SLBI				eS	Sn	23 23 31.8	-1.6
BIRV	Birongo	3.90	266	eP	Pn	23 23 00.0	+2.3
BIRV				eS	Sn	23 23 44.2	+1.6
MERV	Las Mercedes	4.19	250	eP	Pn	23 23 02.6	+0.9
MERV				eS	Sn	23 23 49.4	-0.3
TACV	Tcata	4.67	263	eP	Pn	23 23 10.1	+1.8
TACV				eS	Sn	23 24 01.9	+0.5
LUEV	Luepa	4.94	170	eP	Pn	23 23 11.4	-0.6
LUEV				eS	Sn	23 24 03.9	-4.2
BAUV	El Baul	5.92	253	eP	Pn	23 23 25.6	+0.5
BAUV	El Baul	5.92	253	eS	Sn	23 24 28.9	-2.7
BAUV	El Baul	5.92	253	eP	Pn	23 23 25.6	+0.5
BAUV				eS	Sn	23 24 29.8	-1.8
MAPV	Macapo	6.11	262	eP	Pn	23 23 29.0	+1.3
MAPV				eS	Sn	23 24 35.7	-0.6

*THR **18** 23:23:23.2±0.5, 31.87N×48.63E, h14km±7km, ML3.0*
*ISN **18** 23:23:24.5±0.8, 31.75N×48.61E, h18km±51km, ML2.7*
ISC 18 23:23:22.7±1.8, 31.85N±0.10×48.77E±0.09, h10km, n7, σ1§40/12, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.26	6	ePg	Pb	23 23 03.0	-0.6
SHGR				eSg	Sb	23 23 33.4	-0.7
SHGR				IAML		23 23 33.8	
	comp=N,4μm,0.3s						
SHGR				IAML		23 23 34.2	
	comp=E,3μm,0.4s						
KHMZ	Khomeyn	2.14	28	ePg	Pg	23 24 03.1	-0.6
NSR	Nassriya	2.40	250	ePg	Pn	23 24 03.0	+1.0
NSR				eSg	Sn	23 24 30.0	-1.5
NSR				AML	AML	23 24 40.4	
	comp=E,106nm,0.4s						
IBDR	Badra	2.71	298	ePn	Pn	23 24 08.0	+1.6
IBDR				eSn	Sn	23 24 40.0	+0.8
IBDR				AML	AML	23 25 04.0	
	comp=E,27nm,0.4s						
IBDR				AML	AML	23 25 16.4	
	comp=N,28nm,0.5s						
ASAO	Ashtian	2.89	21	ePn	Pn	23 24 11.5	+2.4
ASAO				eSg	Sg	23 24 54.6	-1.1
ASAO				IAML		23 25 03.8	
	comp=E,21nm,0.5s						
SNGE	Sanandaj	3.45	340	ePn	Pn	23 24 17.8	+1.1
BHD	Baghdad	3.97	292	ePn	Pn	23 24 25.0	+1.3
BHD				eSn	Sn	23 25 10.0	-0.2
BHD				AML	AML	23 25 14.3	
	comp=E,65nm,0.6s						

*IDC **18** 23:24:09.1±1.4, 5.21N×124.09E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/27, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=48.6km s-min=24.5km az=80.0*
*MAN **18** 23:24:19.4, 5.77N×126.09E, h143km, MS3.6*
ISC 18 23:24:22.0±1.4, 5.8N±0.1×126.0E±0.1, h127km, n9, σ2§01/10, mb3.1/3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.46	319	eP	Pn	23 24 41.9	+1.4
DDMP				eS	Sn	23 24 57.4	+2.9
MATI	Mati	1.21	12	eP	Pn	23 24 45.6	-1.2
DAV	Davao City (W)	1.38	342	Pn	Pn	23 24 49.2	+0.6
	25nm,0.3s,baz=21,slow=7.5,SNR=5.4						
DAV				Sn	Sn	23 25 10.9	+2.1
	146nm,0.3s,baz=128,slow=23,SNR=22						
KCP	Kidapawan	1.55	324	⇓eP	Pn	23 24 51.0	+0.5
KCP				i S	Sn	23 25 14.1	+1.7
SKMP	Bagumbayan, Su	1.65	298	eP	Pn	23 24 51.2	-0.5
PAGZ	Pagadian	3.34	309	eP	Pn	23 25 11.7	-1.4
WRA	Warramunga Arr	26.81	162	P	P	23 29 52.1	+1.5
	0.2nm,0.3s,baz=335,slow=9.6,SNR=2.2						
ASAR	Alice Springs	30.24	166	P		23 30 22.2	+1.3
	0.5nm,0.4s,baz=341,slow=7.0,SNR=14						
MKAR	Makanchi Array	55.50	325	P	P	23 33 41.3	-2.5
	0.1nm,0.5s,baz=125,slow=6.1,SNR=5.2						

*UCR **18** 23:33:03.5±1.4, 9.45N×84.00W, h52km±4km, ML4.1, MW4.8, mb4.3(NEIC)*
*IDC **18** 23:33:05.2±0.7, 9.76N×83.88W, h58km±5km, mb3.8/15, mb1 4.1/18, mb1mx3.9/34, mbtmp4.1/18, MS3.3/14, Ms1 3.4/14, ms1mx3.2/31, Error ellipse: s-maj=20.2km s-min=7.1km az=26.0*
*NEIC **18** 23:33:06.2±2.8, 9.58N±0.07×84.03W±0.06, h57km±5km, mb4.3/44, Error ellipse: s-maj=10.2km s-min=7.5km az=206.0*
*INET **18** 23:33:06.1, 9.62N×84.00W, h41km, MW5.0*

*SNET **18** 23:33:10.2±1.6, 9.55N×84.52W, h32km±999km, ML4.6*
ISC 18 23:33:05.3±0.5, 9.59N±0.05×84.03W±0.05, h62km±4km, n132, σ1§36/145, mb4.2/35, 7C, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEZE	Perez Zeledon,	0.40	121		Pn	23 33 15.8	-0.8
PEZE					Sn	23 33 24.5	-0.4
HDC	Heredia	0.41	348		Pn	23 33 16.1	-0.7
HDC				Sn	Sn	23 33 24.3	-0.8
BATAN	Batan	0.81	52		Pn	23 33 21.1	0.0
BATAN				Sn	Sn	23 33 34.0	+1.3
RIOS	Rincon, Osa	1.02	150		Pn	23 33 23.0	-0.8
CAO2	Cobano, Puntar	1.07	275		Pn	23 33 22.6	-1.7
FORC	Fortuna	1.07	324	⇑iP	Pn	23 33 24.6	+0.1
FORC				i S	Sn	23 33 40.5	+1.8
CEDE	Laguna Cedeo	1.11	323	⇑iP	Pn	23 33 24.2	-0.7
CEDE				i S	Sn	23 33 40.6	+1.0
JTS	Las Juntas de	1.14	307	P	Pn	23 33 25.2	-0.2
	475nm,0.3s,baz=145,slow=7.9,SNR=2173						
JTS				S	Sn	23 33 40.8	+0.5
	2μm,0.3s,baz=32,slow=23,SNR=18						
JTS	Las Juntas de	1.14	307		Pn	23 33 24.9	-0.4
COVE	Coope Vega, Sa	1.18	342		Pn	23 33 25.2	-0.6
ACAL	Aguas Claras	1.43	316	⇑iP	Pn	23 33 29.4	+0.1
PTEN	Parque Tenorio	1.46	320	⇑iP	Pn	23 33 29.7	+0.1
CUI	Cuipilapa	1.54	313	⇑iP	Pn	23 33 29.6	-1.1
COLC	Colonia	1.57	313	iP	Pn	23 33 31.0	-0.1
HORNC	Hornillas	1.59	315	⇑iP	Pn	23 33 31.1	-0.2
ORTG	Ortega, Santa	1.60	299		Pn	23 33 30.6	-1.0
GUAB	Guayabo de Bag	1.62	313	iP	Pn	23 33 31.6	-0.1
GPS2	Hotel Rincn d	1.74	312	iP	Pn	23 33 33.3	0.0
GPS3	Bodega del ICE	1.75	311	iP	Pn	23 33 33.4	-0.1
BUAI	Buenos Aires	1.81	315	⇑iP	Pn	23 33 33.0	-1.3
GBS3	Finca Las Img	1.83	310	iP	Pn	23 33 34.2	-0.4
ESPN	Las Esperanzas	2.60	354		Pn	23 33 44.5	-0.5
ACON	Acoyapa	2.61	335		Pn	23 33 44.7	-0.5
BOAB	BOACO BROADBAN	3.26	331		Pn	23 33 52.4	-1.6
MATN	Matagalpa	3.80	331	Pn	Pn	23 34 04.7	+3.2
BCIP	Isla Barro Col	4.16	96		Pn	23 34 06.2	0.0
CRIN	San Cristobal	4.28	316		Pn	23 34 08.5	+0.4
LCND	La Caada	5.29	315	eP	Pn	23 34 23.2	+1.4
LCND				IAML		23 35 24.0	
	comp=Z,354nm,0.3s						
LCND	La Caada	5.29	315	eP	Pn	23 34 23.2	+1.4
LCND				eS	Sn	23 35 20.4	-1.0
LCND				IAML		23 35 24.0	
	comp=Z,354nm,0.3s						
TGUH	Tegucigalpa,Un	5.46	325		Pn	23 34 25.1	+0.9
COEG	Centro de Oper	6.21	311	eP	Pn	23 34 36.4	+1.9
COEG				IAML		23 35 54.3	
	comp=Z,206nm,0.4s						
COEG	Centro de Oper	6.21	311	eP	Pn	23 34 36.4	+1.9
COEG				eS	Sn	23 35 44.7	+0.5
COEG				IAML		23 35 54.3	
	comp=Z,206nm,0.4s						
LFRS	El Faro	6.35	310	eP	Pn	23 34 38.2	+1.7
LFRS	El Faro	6.35	310	eP	Pn	23 34 38.2	+1.7
LFRS				eS	Sn	23 35 45.3	-2.4
CEVE	Cerro Verde	6.91	308	eP	Pn	23 34 46.2	+1.9
CEVE	Cerro Verde	6.91	308	eP	Pn	23 34 46.2	+1.9
MTO3	Montecristo	7.07	313	Pn	Pn	23 34 48.2	+1.7
ESQI	Esquipulas	7.17	314	Pn	Pn	23 34 49.6	+2.0
APG	El Apazote	8.27	311	P	Pn	23 35 04.6	+1.7
	comp=Z,5.0nm,0.3s,baz=122,slow=6.5,SNR=23						
APG				LR	LR	23 38 36.9	
	comp=Z,147nm,20.2s,baz=143,slow=40						
RTAL	Retalhuleu	8.96	304	Pn	Pn	23 35 15.1	+3.1
PETF	Flores	9.23	323	Pn	Pn	23 35 18.9	+3.1
HUEH	Huehuetenango	9.25	309	Pn	Pn	23 35 19.0	+2.7
FSCY	Frank Sound, G	10.05	16	Pn	Pn	23 35 30.0	+3.1
CCIG	Comitan	10.32	311	Pn	Pn	23 35 32.4	+1.5
ROSC	El Rosal	10.72	115	LR	LR	23 39 46.2	
	comp=Z,148nm,21.8s,baz=254,slow=38						
ROSC	El Rosal	10.72	115	Pn	Pn	23 35 38.5	+1.9
OTAV	Otavalo	10.83	149	Pn	Pn	23 35 39.3	+1.3
TEIG	Tepich	11.34	339	P	Pn	23 35 44.7	+0.2
	comp=Z,0.9nm,0.3s,baz=83,slow=21,SNR=2.7						
TEIG				LR	LR	23 40 10.8	
	comp=Z,189nm,20.2s,baz=116,slow=38						
TEIG	Tepich	11.34	339	Pn	Pn	23 35 45.2	+0.7
SOR	Soroa	13.16	4	Pn	Pn	23 36 11.0	+1.6
SDV	Santo Domingo	13.24	92		Pn	23 36 11.5	+0.8
TLIG	Tlapa	16.19	301		Pn	23 36 50.1	+1.0
TLIG				IAmb	IAmb	23 37 05.2	
	comp=Z,23nm,0.8s						
ATAH	Atahualpa	17.54	161	LR	LR	23 43 14.9	
	comp=Z,160nm,21.4s,baz=337,slow=34						
PCRV	Puerto La Cruz	19.11	87	P	P	23 37 24.2	+0.8
	comp=Z,0.5nm,0.3s,baz=270,slow=4.0,SNR=2.9						
PLCV	Puerto La Cruz	19.16	87	P	P	23 37 24.2	+0.4
SJG	San Juan	19.30	62	P	Pn	23 37 26.5	-0.4
	comp=Z,1.0nm,0.3s,baz=323,slow=5.1,SNR=2.5						
656A	Willston	19.72	4	Pn	Pn	23 37 32.0	+0.2
553A	Crawfordville	20.50	359		P	23 37 38.9	+0.6
250A	Grady	22.37	355	P	P	23 37 57.5	-0.9
250A				IAmb	IAmb	23 38 01.1	
	comp=Z,15nm,1.1s						
NNA	Nana	22.60	161	LR	LR	23 46 10.1	
	comp=Z,55nm,20.5s,baz=9.0,slow=35						
152A	Waverly Hall	22.97	359		P	23 38 05.9	+1.2
LRAL	Lakeview Retre	23.49	354	P	P	23 38 10.3	+0.7
LRAL				IAmb	IAmb	23 38 11.0	
	comp=Z,7.2nm,0.9s						
GOGA	Godfrey	23.71	1	P	P	23 38 12.0	+0.4
GOGA				IAmb	IAmb	23 38 15.2	
	comp=Z,9.3nm,1.1s						
Z47A	Carrollton	23.79	352	P	P	23 38 13.1	+0.8
V52A	Lilburn	24.16	360	P	P	23 38 16.7	+1.0
Y52A				IAmb	IAmb	23 38 34.2	
	comp=Z,6.9nm,0.8s						
HODGE	Hodges	24.58	4	P	P	23 38 19.8	+0.3
BG3	Lake Jocassee	25.30	2	P	P	23 38 27.1	+1.0
BG3				IAmb	IAmb	23 38 44.1	
	comp=Z,7.8nm,1.0s						
W52A	Murphy	25.38	0	P	P	23 38 27.3	+0.4
W50A	Signal Mountai	25.52	358	P	P	23 38 31.6	+3.5
PLAL	Pickwick Lake	25.54	352	P	P	23 38 29.7	+1.5
SWET	Sewanee	25.56	356	P	P	23 38 30.9	+2.4
SWET				IAmb	IAmb	23 38 49.6	
	comp=Z,6.4nm,0.8s						
CPCT	Cooper Cave	25.74	359	P	P	23 38 31.9	+1.8
TKL	Tuckaleechee C	25.95	0	P	P	23 38 34.1	+2.1
	comp=Z,1.1nm,0.6s,baz=135,slow=10.0,SNR=2.1						
TKL				pP	pP	23 38 48.8	+1.4
	comp=Z,5.6nm,1.0s,baz=175,slow=11,SNR=5.4						
TKL				LR	LR	23 49 11.9	
	comp=Z,75nm,18.9s,baz=166,slow=38						
TKL	Tuckaleechee C	25.95	0	P	P	23 38 34.5	+2.5
V53A	Saluda	25.98	2	P	P	23 38 33.0	+0.7
PTGA	Pitinga	26.06	112	P	P	23 38 34.0	+0.8
	comp=Z,5.6nm,0.9s,baz=310,slow=10,SNR=6.5						
PTGA				LR	LR	23 49 28.6	
	comp=Z,61nm,19.5s,baz=332,slow=38						
PTGA	Pitinga	26.06	112	P	P	23 38 34.7	+1.5
PTGA				IAmb	IAmb	23 38 53.4	
	comp=Z,10nm,1.2s						
MIAR	Mount Ida	26.33	342	P	P	23 38 36.4	+1.0
MIAR				IAmb	IAmb	23 38 39.6	
	comp=Z,6.2nm,0.6s						
V58A	Windy Hill, Pi	26.46	9	P	P	23 38 37.0	+0.4
V58A				IAmb	IAmb	23 38 54.2	
	comp=Z,8.2nm,1.1s						
WHAR	Wooly Hollow	26.67	345	P	P	23 38 38.2	-0.2
WHAR				IAmb	IAmb	23 38 39.8	
	comp=Z,9.1nm,1.4s						
TXAR	Lajitas Array	26.91	320	P	P	23 38 42.8	+1.9
	comp=Z,0.8nm,0.6s,baz=145,slow=9.7,SNR=9.8						
TXAR				PcP	PcP	23 42 02.7	+0.9
	comp=Z,0.3nm,0.6s,baz=151,slow=4.1,SNR=3.2						
TXAR				LR	LR	23 50 28.9	
	comp=Z,46nm,18.2s,baz=0.0,slow=39						
TXAR	Lajitas Array	26.91	320	P	P	23 38 42.5	+1.7
TX31	Lajitas Ar. Si	26.91	320	P	P	23 38 41.7	+0.9
TX31				IAmb	IAmb	23 38 59.8	
	comp=Z,10nm,1.2s						
W39A	Magazine	27.00	342	P	P	23 38 40.6	-0.8
W39A				IAmb	IAmb	23 38 59.1	
	comp=Z,12nm,1.3s						
LCAR	Lake Charles	27.14	347	P	P	23 38 44.6	+1.9
LCAR				IAmb	IAmb	23 38 59.6	
	comp=Z,6.2nm,0.9s						
FCAR	Ozark Folk Cen	27.20	346	P	P	23 38 42.7	-0.4
FCAR				IAmb	IAmb	23 39 01.4	
	comp=Z,12nm,1.5s						
T57A	Hurt	27.62	8	P	P	23 38 47.2	+0.3
S51A	Beattyville	27.93	1	P	P	23 38 50.8	+1.1
S51A				IAmb	IAmb	23 39 08.9	
	comp=Z,13nm,1.4s						
Q51A	Peebles	29.31	1	P	P	23 39 03.1	+1.1
LPAZ	La Paz	30.15	148	LR	LR	23 51 17.6	
	comp=Z,68nm,21.5s,baz=262,slow=36						
P38A	Dawn	31.09	346	P	P	23 39 18.9	+1.2
P38A				IAmb	IAmb	23 39 19.8	
	comp=Z,3.5nm,0.6s						
PB16	IPOC Station P	31.23	153	P	P	23 39 21.0	+1.2
PB16				IAmb	IAmb	23 39 22.7	
	comp=Z,4.5nm,0.9s						
N59A	State Game Lan	32.04	12	P	P	23 39 26.5	+0.4
N59A				IAmb	IAmb	23 39 31.4	
	comp=Z,6.1nm,1.1s						
PKME	Peaks-Kenny Pk	37.74	17	P	P	23 40 16.8	+1.8
F64A	Sherman	38.56	18	P	P	23 40 23.3	+1.3
LMN	Caledonia Moun	39.71	21	P	P	23 40 31.4	-0.2
PDAR	Pinedale Array	39.88	330	P	P	23 40 34.4	+1.0
	comp=Z,0.3nm,0.5s,baz=124,slow=11,SNR=5.5						
PDAR				LR	LR	23 59 34.3	
	comp=Z,62nm,18.5s,baz=136,slow=40						
PDAR	Pinedale Array	39.88	330	P	P	23 40 34.0	+0.6
BATG	Bathurst New B	40.53	19	P	P	23 40 39.5	+1.2
ULM	Lac du Bonnet	41.70	349	P	P	23 40 44.1	-3.9
	comp=Z,2.0nm,0.7s,baz=196,slow=7.4,SNR=3.9						
NVAR	Mina Array Bea	42.05	319	P	P	23 40 52.1	+0.8
	comp=Z,0.6nm,0.5s,baz=135,slow=7.9,SNR=5.6						
NVAR				PcP	PcP	23 42 46.2	+0.9
	comp=Z,0.7nm,0.7s,baz=154,slow=4.4,SNR=4.0						
NVAR	Mina Array Bea	42.05	319	P	P	23 40 53.5	+2.3
BDFB	Brasilia	43.60	125	P	P	23 41 04.1	+0.2
	comp=Z,5.0nm,0.8s,baz=295,slow=6.0,SNR=6.2						
BDFB	Brasilia	43.60	125	P	P	23 41 04.0	+0.2
BDFB				IAmb	IAmb	23 41 04.9	
	comp=Z,6.5nm,1.0s						
PLCA	Paso Flores	51.60	167	P	P	23 42 06.1	+0.6
	comp=Z,3.9nm,0.8s,baz=343,slow=9.9,SNR=6.5						
PLCA				pP	pP	23 42 23.1	+1.4
	comp=Z,4.2nm,0.9s,baz=334,slow=12,SNR=3.9						
PLCA	Paso Flores	51.60	167	P	P	23 42 05.8	+0.3
YKA	Yellowknife Ar	57.26	344	P	P	23 42 43.9	-2.2
	comp=Z,0.4nm,0.6s,baz=138,slow=7.4,SNR=15						
YKA				pP	pP	23 43 01.1	-2.0
	comp=Z,1.3nm,0.8s,baz=135,slow=7.8,SNR=9.8						
YKA				PcP	PcP	23 43 39.5	-0.3
	comp=Z,0.3nm,0.8s,baz=141,slow=4.2,SNR=1.1						
INK	Inuvik	66.93	342	P	P	23 43 50.8	0.0
	comp=Z,0.6nm,0.5s,baz=166,slow=8.3,SNR=2.4						
INK				pP	pP	23 44 05.9	-2.2
	comp=Z,2.0nm,0.9s,baz=121,slow=9.4,SNR=4.8						
INK	Inuvik	66.93	342	P	P	23 43 51.2	+0.3
INK				IAmb	IAmb	23 44 07.7	
	comp=Z,5.9nm,1.4s						
ILAR	Eielson Array	69.98	336	P	P	23 44 10.5	+0.5
	comp=Z,0.7nm,0.6s,baz=108,slow=4.9,SNR=9.5						
ILAR				pP	pP	23 44 25.6	-1.7
	comp=Z,0.8nm,0.8s,baz=105,slow=4.4,SNR=4.9						
ILAR				LR	LR	00 17 08.2	
	comp=Z,12nm,19.9s,baz=59,slow=38						
ILAR	Eielson Array	69.98	336	P	P	23 44 11.2	+1.2
ESDC	Sonseca Array	76.31	51	P	P	23 44 47.6	-0.3
	comp=Z,4.2nm,0.7s,baz=280,slow=5.6,SNR=37						
ESDC	Sonseca Array	76.31	51	P	P	23 44 47.8	-0.2
ESBB	Sonseca Array	76.31	51	P	P	23 44 47.7	-0.2
KOWA	Kowa	78.06	77	P	P	23 44 57.8	-0.3
KOWA				IAmb	IAmb	23 45 06.6	
	comp=Z,4.8nm,1.2s						
SPITS	Spitsbergen Ar	82.80	12	LR	LR	00 21 55.4	
	comp=Z,56nm,21.0s,baz=235,slow=36						
TORD	Torodi Ar. Bea	83.74	78	P	P	23 45 26.9	-1.4
	comp=Z,1.2nm,0.7s,baz=287,slow=5.4,SNR=5.3						
TORD	Torodi Ar. Bea	83.74	78	P	P	23 45 27.4	-1.0
NOA	NORSAR Array B	84.22	29	P	P	23 45 28.8	-1.2
	comp=Z,0.8nm,0.9s,baz=316,slow=1.9,SNR=3.3						
NOA				LR	LR	00 22 57.7	
	comp=Z,11nm,18.6s,baz=280,slow=36						
ARCES	ARCESS Array B	87.76	19	P	P	23 45 45.4	-1.9
	comp=Z,6.4nm,1.0s,baz=311,slow=6.3,SNR=4.7						
GERES	GERESS Array B	87.90	41	P	P	23 45 47.5	-0.9
	comp=Z,0.7nm,0.6s,baz=270,slow=2.7,SNR=7.6						
GERES	GERESS Array B	87.90	41	P	P	23 45 47.3	-1.2
FINES	FINESS Array B	91.01	27	P	P	23 46 01.1	-1.4
	comp=Z,1.1nm,0.7s,baz=286,slow=5.2,SNR=3.9						
FINES				LR	LR	00 21 35.6	
	comp=Z,20nm,19.6s,baz=286,slow=32						
KURK	Kurchatov	118.07	12		PKPdf	23 51 44.3	-0.9
KURBB	Kurchatov Arra	118.14	13	PKP	PKPdf	23 51 44.3	-1.1
	comp=Z,0.2nm,0.5s,baz=329,slow=2.3,SNR=2.6						
SONM	Songino Array	122.08	352	PKP	PKPdf	23 51 52.4	-0.9
	comp=Z,0.3nm,0.3s,baz=52,slow=5.7,SNR=2.6						
MKAR	Makanchi Array	122.55	11	PKhKP	PKPpre	23 51 46.2	
	comp=Z,0.1nm,0.4s,baz=41,slow=4.6,SNR=5.1						
MKAR				PKP	PKPdf	23 51 52.7	-1.4
	comp=Z,0.3nm,0.7s,baz=302,slow=2.5,SNR=2.5						
KSRS	Korea Array	124.45	329	PKP	PKPdf	23 51 57.2	-0.7
	comp=Z,1.2nm,0.8s,baz=31,slow=0.5,SNR=5.5						
KSRS				pPKP	pPKPdf	23 52 14.6	-1.9
	comp=Z,0.

δ49.00000°,λ65.00000°. NP2:φ≈229.00000°,δ46.00000°, λ116.00000°.
*IDC **18** 23:45:21.9±4.7,39°.22N×143°.31E,h76km±50km,mb3.0/2, mb1 3.3/4,mb1mx3.0/28,mbtmp3.4/4,ML2.6/2 Error ellipse: s-maj=57.7km s-min=44.6km az=157.0*
ISC 18 23:45:15.2±1.5,**39°.41N**±0°.07×**143°.34E**±0°.09,**h11**km,**n24,** σ0$84/20,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.19**	**279**	P	**Pb**	**23 45 37.1**	**-0.6**
MIYJ				*eS*	**Sb**	**23 45 52.9**	**-0.2**
JTH	**Tanohata**	**1.25**	**295**	P	**Pn**	**23 45 38.3**	**-0.4**
OFUJ	**Ofunato**	**1.34**	**256**	P	**Pn**	**23 45 38.8**	**-1.0**
JOM	**Ohasama**	**1.58**	**273**	P	**Pn**	**23 45 43.1**	**-0.1**
JANG	**Nango**	**1.70**	**305**	P	**Pn**	**23 45 44.4**	**-0.4**
JMK	**Ichinoseki**	**1.71**	**255**	P	**Pn**	**23 45 44.9**	**0.0**
JIO	**Ouri**	**1.82**	**239**	P	**Pn**	**23 45 45.9**	**-0.6**
JRG	**Rokugo**	**2.09**	**270**	P	**Pn**	**23 45 51.0**	**+0.8**
JRG				*eS*	**Sn**	**23 46 17.4**	**+1.1**
JTM	**Tenmabayashi**	**2.22**	**309**	P	**Pn**	**23 45 53.0**	**+1.1**
JAH	**Hinai**	**2.22**	**291**	P	**Pn**	**23 45 52.6**	**+0.6**
JOU	**Okura**	**2.33**	**244**	P	**Pn**	**23 45 53.8**	**+0.3**
JYK	**Kaneyama**	**2.37**	**259**	P	**Pn**	**23 45 54.7**	**+0.7**
JMM	**Marumori**	**2.52**	**233**	P	**Pn**	**23 45 55.6**	**-0.5**
MJAR	**Matsushiro Arr**	**4.96**	**236**	P	**Pn**	**23 46 31.4**	**+1.8**
	0.6nm,0.3s,baz=35,slow=14,SNR=37						
MAT	**Matsushiro**	**4.96**	**236**	P	**Pn**	**23 46 31.2**	**+1.5**
MAT				*eS*	**Sn**	**23 47 26.9**	**-0.1**
USRK	**Ussuriysk Ar.**	**9.73**	**303**	P	Pn	23 47 41.0	+5.9
	baz=101,slow=15,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**28.22**	**127**	T	T	00 21 57.5	
	baz=318,slow=76,SNR=41						
H11N1	**WAKE ISLAND Hy**	**28.23**	**127**	T	T	00 21 57.3	
	baz=318,slow=76,SNR=32						
H11N3	**WAKE ISLAND Hy**	**28.24**	**127**	T	T	00 21 52.6	
	baz=318,slow=76,SNR=36						
H11S1	**WAKE ISLAND Hy**	**29.03**	**129**	T	T	00 22 39.4	
	baz=320						
H11S3	**WAKE ISLAND Hy**	**29.03**	**129**	T	T	00 23 00.4	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**29.05**	**129**	T	T	00 22 46.6	
	baz=320						
MKAR	**Makanchi Array**	**44.18**	**300**	P	**P**	**23 53 23.5**	**-0.5**
	0.3nm,0.7s,baz=83,slow=8.4,SNR=3.4						
ILAR	**Eielson Array**	**46.68**	**34**	P	**P**	**23 53 43.7**	**+0.1**
	0.3nm,0.8s,baz=258,slow=8.1,SNR=2.2						

*TRN **19** 00:00:55.1,11°.10N×62°.25W,h108km,MD3.6*
*FUNV **19** 00:00:59.6,11°.01N×62°.24W,h26km,MW3.7*
ISC 19 00:00:55.1±1.4,**11°.11N**±0°.04×**62°.22W**±0°.04, **h115**km±12km,**n20,**σ1$**66**/36,**1C-2D,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.92**	**120**	⇓*iP*	**Pn**	**00 01 17.0**	**+1.1**
TRN				*eS*	**Sn**	**00 01 30.8**	**-0.8**
TRN	**Trinidad (W)**	**0.92**	**120**	*eP*	**Pn**	**00 01 15.8**	**-0.1**
TRN				*eS*	**Sn**	**00 01 29.7**	**-1.8**
CRUV	**Carupano**	**1.09**	**247**	⇓*iP*	**Pn**	**00 01 19.4**	**+1.8**
CRUV				*eS*	**Sn**	**00 01 32.2**	**-2.4**
GRGR	**Grenville**	**1.16**	**28**	*eP*	**Pn**	**00 01 19.1**	**+0.8**
GRGR				*eS*	**Sn**	**00 01 35.5**	**-0.4**
TPR	**Prospect**	**1.41**	**87**	*eP*	**Pn**	**00 01 22.7**	**+1.5**
TPR				*eS*	**Sn**	**00 01 41.0**	**0.0**
BOT	**Bacolet**	**1.47**	**88**	*eP*	**Pn**	**00 01 23.1**	**+1.3**
BOT				*eS*	**Sn**	**00 01 42.0**	**-0.1**
GCMP	**Grenada, Carri**	**1.57**	**29**	*eP*	**Pn**	**00 01 23.6**	**+0.6**
GCMP				*eS*	**Sn**	**00 01 43.8**	**-0.5**
TOSP	**Speyside**	**1.66**	**83**	*eP*	**Pn**	**00 01 23.9**	**-0.1**
TOSP				*eS*	**Sn**	**00 01 45.0**	**-1.1**
SVB	**Belmont**	**2.35**	**24**	*eP*	**Pn**	**00 01 33.8**	**+1.0**
SVB				*eS*	**Sn**	**00 02 00.7**	**-0.9**
PCRV	**Puerto La Cruz**	**2.55**	**249**	⇓*eP*	**Pn**	**00 01 38.2**	**+2.8**
PCRV				*eS*	**Sn**	**00 02 04.6**	**-1.8**
MCLT	**Moule a Chique**	**2.87**	**26**	*eP*	**Pn**	**00 01 40.1**	**+0.6**
MCLT				*eS*	**Sn**	**00 02 12.8**	**-0.9**
SLB	**Belfond**	**2.94**	**23**	*eS*	**Sn**	**00 02 14.8**	**-0.6**
RIOV	**Rio Grande**	**3.05**	**173**	*eP*	**Pn**	**00 01 43.2**	**+1.3**
RIOV				*eS*	**Sn**	**00 02 16.5**	**-1.4**
SLBI	**Saint Lucia, B**	**3.14**	**23**	*eP*	**Pn**	**00 01 43.0**	**-0.1**
SLBI				*eS*	**Sn**	**00 02 19.8**	**-0.3**
PRGV	**PARIAGUAN**	**3.34**	**226**	*eP*	**Pn**	**00 01 48.6**	**+2.9**
PRGV				*eS*	**Sn**	**00 02 24.8**	**-0.2**
BIRV	**Birongo**	**4.03**	**261**	*eP*	**Pn**	**00 01 58.1**	**+3.1**
BIRV				*eS*	**Sn**	**00 02 41.0**	**-0.5**
MERV	**Las Mercedes**	**4.42**	**246**	*eP*	**Pn**	**00 02 01.0**	**+0.8**
MERV				*eS*	**Sn**	**00 02 49.4**	**-1.3**
BAUV	**El Baul**	**6.13**	**250**	*eP*	**Pn**	**00 02 23.1**	**-0.1**
BAUV	**El Baul**	**6.13**	**250**	*eS*	**Sn**	**00 03 27.2**	**-4.8**
BAUV	**El Baul**	**6.13**	**250**	*eS*	**Sn**	**00 03 29.8**	**-2.2**

ISK 19 00:09:04.1,36°.27N×27°.27E,h17km,ML1.9/4,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.70**	**94**	PG	Pn	00 09 18.5	-0.7
ARG				SG	Sn	00 09 28.4	-1.1
ARG	**Arkhangelos**	**0.70**	**94**	PG	Pn	00 09 19.1	-0.1
ARG				SG	Sb	00 09 27.9	+0.8
KARP	**Karpathos**	**0.73**	**187**	PG	Pg	00 09 18.7	+0.3
TURN	**Turunc**	**0.93**	**57**	PG	Pn	00 09 22.5	+0.1
TURN	**Turunc**	**0.93**	**57**	PG	Pn	00 09 22.5	+0.1
TURN				SG	Sg	00 09 34.7	+0.1
YER	**Yerkesik**	**1.19**	**43**	PN	Pg	00 09 26.7	-0.4
YER	**Yerkesik**	**1.19**	**43**	PG	Pg	00 09 26.7	-0.4
DALY	**Dalyan (Mula)**	**1.24**	**64**	PN	Pb	00 09 26.9	-0.2
DALY	**Dalyan (Mula)**	**1.24**	**64**	PG	Pn	00 09 26.6	0.0
DALY				SG	Sb	00 09 40.3	-2.5
FETY	**Fethiye**	**1.51**	**76**	PN	Pn	00 09 28.4	-2.0
FETY				SN	Sn	00 09 44.7	-4.9
AKAS	**Kas**	**1.89**	**90**	PN	Pn	00 09 32.7	-3.0
AKAS				SN	Sn	00 09 51.9	-7.3

*IDC **19** 00:31:30.9±2.3,20°.36S×177°.68W,h510km±23km,mb2.9/8, mb1 3.2/11,mb1mx3.1/25,mbtmp3.8/11,Error ellipse: s-maj=32.3km s-min=18.7km az=141.0*
ISC 19 00:31:29.9±0.9,**20°.4S**±0°.2×**177°.6W**±0°.1,**h500**km,**n15,** σ1$**12**/15,**mb3.3/8,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.91**	**302**	P	**P**	**00 32 56.9**	**+0.7**
	1.1nm,0.3s,baz=248,slow=24,SNR=5.8						
DZM	**Mont Dzumac**	**15.02**	**261**	P	**P**	**00 34 41.7**	**+1.3**
	0.1nm,0.3s,baz=98,slow=19,SNR=1.2						
URZ	**Urewera**	**18.41**	**193**	P	**P**	**00 35 13.0**	**-0.9**
	0.7nm,0.3s,baz=301,slow=22,SNR=1.6						
ASAR	**Alice Springs**	**44.95**	**257**	P	**P**	**00 38 59.8**	**-0.2**
	2.3nm,0.7s,baz=83,slow=8.9,SNR=20						
ASAR				PcP	**PcP**	**00 40 30.5**	**-0.4**
	0.5nm,0.7s,baz=89,slow=3.7,SNR=4.9						
WRA	**Warramunga Arr**	**45.03**	**262**	P	**P**	**00 38 59.5**	**-1.0**
	0.9nm,0.3s,baz=97,slow=7.7,SNR=23						
MJAR	**Matsushiro Arr**	**70.35**	**323**	P	**P**	**00 41 51.6**	**-1.3**
	0.6nm,0.6s,baz=155,slow=5.3,SNR=1.9						
PETK	**Petropavlovsk-**	**76.25**	**345**	P	**P**	**00 42 26.0**	**-0.2**
	1.3nm,0.8s,baz=117,slow=8.8,SNR=2.2						
NVAR	**Mina Array Bea**	**80.65**	**43**	P	**P**	**00 42 51.5**	**+1.1**
	0.1nm,0.4s,baz=238,slow=8.4,SNR=1.7						
TXAR	**Lajitas Array**	**86.64**	**57**	P	**P**	**00 43 20.7**	**+0.4**
	0.3nm,0.7s,baz=213,slow=9.0,SNR=3.4						
ILAR	**Eielson Array**	**88.10**	**13**	P	**P**	**00 43 24.3**	**-1.9**
	0.4nm,0.8s,baz=221,slow=5.4,SNR=2.3						
PDAR	**Pinedale Array**	**88.58**	**43**	P	**P**	**00 43 31.0**	**+1.6**
	0.2nm,0.5s,baz=228,slow=1.1,SNR=2.2						
ARCES	**ARCESS Array B**	**128.87**	**350**	PKP	**PKPdf**	**00 49 39.5**	**-0.1**
	3.5nm,0.9s,baz=354,slow=3.7,SNR=3.5						
FINES	**FINESS Array B**	**135.77**	**344**	PKP	**PKPdf**	**00 49 53.7**	**+1.1**
	1.9nm,1.0s,baz=64,slow=4.4,SNR=4.4						
AKASG	**Malin Array Be**	**143.10**	**331**	PKP	PKPab	00 50 03.2	-0.6
	0.5nm,0.4s,baz=42,slow=4.1,SNR=4.7						
GERES	**GERESS Array B**	**150.19**	**345**	PKPbc	**PKPbc**	**00 50 24.5**	**+0.5**
	0.5nm,0.5s,baz=29,slow=3.0,SNR=6.6						

IDC 19 01:39:22.5±10.0,**1°.96S×127°.67E,h0km,mb3.6/2, mb1 3.7/3,mb1mx3.3/34,mbtmp3.5/3,ML3.5/1,Error ellipse: s-maj=164.7km s-min=143.1km az=112.0,**

Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.03**	**160**	P	P	01 43 45.9	-0.3
	0.1nm,0.3s,baz=339,slow=12,SNR=2.1						
ASAR	**Alice Springs**	**22.41**	**165**	P	P	01 44 23.8	+0.8
	0.4nm,0.4s,baz=347,slow=12,SNR=7.1						
STKA	**Stephens Creek**	**32.53**	**158**	P	P	01 45 54.7	-0.6
	0.9nm,0.4s,baz=321,slow=6.5,SNR=2.8						

*IDC **19** 01:40:33.4±6.7,35°.12N×71°.19E,h0km,mb3.3/3, mb1 3.4/4,mb1mx3.2/42,mbtmp3.3/4,ML2.9/1,Error ellipse: s-maj=147.2km s-min=49.4km az=154.0*
*NNC **19** 01:40:53.8±4.0,36°.70N×70°.45E,h0km,mb4.2,mpv4.0, Error ellipse: s-maj=32.4km s-min=26.4km az=0.0*
ISC 19 01:40:54.5±1.9,**36°.4N**±0°.1×**70°.7E**±0°.1,**h100**km,**n17,** σ1$**71**/21,**6C-2D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.17**	**21**	P	**Pn**	**01 42 23.9**	**+0.6**
	SNR=59						
UCH	**Uchtor**	**6.51**	**26**	P	**Pn**	**01 42 28.6**	**+0.5**
	SNR=17						
EKS2	**Erkin-Say**	**6.68**	**20**	P	**Pn**	**01 42 31.0**	**+0.9**
	SNR=15						
KK31	**Karatay Array**	**6.69**	**359**	P	**Pn**	**01 42 31.3**	**+1.1**
	2.8nm,0.5s,baz=179,slow=9.2,SNR=38						
KK31				⇓S	**Sn**	**01 43 45.2**	**+0.3**
	4.7nm,0.6s,baz=188,slow=22,SNR=7.9						
AAK	**Ala-Archa**	**6.87**	**24**	P	**Pn**	**01 42 33.6**	**+0.9**
	SNR=26						
AAK	**Ala-Archa**	**6.87**	**24**	⇑P	**Pn**	**01 42 33.3**	**+0.6**
	8.8nm,0.4s						
AAK				⇑S	**Sn**	**01 43 51.1**	**+1.7**
	3.7nm,0.6s						
KBK	**Karagaybulak**	**7.04**	**26**	P	**Pn**	**01 42 36.1**	**+1.0**
	SNR=7.8						
CHMS	**Chumysh**	**7.28**	**24**	P	**Pn**	**01 42 39.1**	**+1.0**
	SNR=7.9						
USP	**Ospenovka**	**7.44**	**22**	P	**Pn**	**01 42 41.3**	**+0.9**
	SNR=12						
TKM2	**Tokmak 2**	**7.51**	**28**	P	**Pn**	**01 42 41.7**	**+0.2**
	SNR=14						
TKM2	**Tokmak 2**	**7.51**	**28**	⇑P	**Pn**	**01 42 41.4**	**-0.1**
	6.6nm,0.6s						
MKAR	**Makanchi Array**	**13.50**	**36**	Pn	**Pn**	**01 43 58.1**	**-3.7**
	0.1nm,0.3s,baz=216,slow=10.0,SNR=2.5						
AB31	**Akbulak array**	**15.06**	**332**	⇑P	**Pn**	**01 44 21.9**	**0.0**
	0.6nm,0.3s,baz=147,slow=14,SNR=51						
AB31				⇓S	**Sn**	**01 47 05.9**	**-2.1**
	0.9nm,0.6s,baz=150,slow=24,SNR=4.5						
AKTO	**Aktyubinsk**	**16.76**	**331**	⇑P	**P**	**01 44 46.2**	**+2.8**
	2.7nm,0.8s						
AKTO				⇑S	**Sn**	**01 47 44.8**	**-4.0**
	3.3nm,1.0s						
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**01 45 19.4**	**-0.5**
	1.7nm,0.5s,baz=220,slow=10,SNR=9.0						
NOA	**NORSAR Array B**	**44.33**	**323**	P	**P**	**01 48 54.7**	**+0.5**
	0.5nm,0.9s,baz=104,slow=7.3,SNR=1.4						
YKA	**Yellowknife Ar**	**81.35**	**3**	P	**P**	**01 52 58.3**	**-1.3**
	0.1nm,0.4s,baz=350,slow=5.0,SNR=4.8						

IDC 19 01:43:04.1±7.6,**10°.46S×161°.32E,h86**km±49km,**mb3.2**/3, **mb1 3.4**/3,**mb1mx3.2**/33,**mbtmp3.5**/3,**Error ellipse: s-maj=73.3km s-min=39.7km az=102.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.69**	**307**	P	Pn	01 43 32.4	+0.2
	93nm,0.3s,baz=180,slow=11,SNR=2.5						
HNR				S	Sn	01 43 53.5	0.0
	184nm,0.3s,baz=202,slow=19,SNR=4.2						
WRA	**Warramunga Arr**	**27.65**	**247**	P	P	01 48 44.6	+0.6
	0.4nm,0.5s,baz=79,slow=8.7,SNR=2.3						
ASAR	**Alice Springs**	**29.24**	**240**	P	P	01 48 57.6	-0.5
	0.5nm,1.1s,baz=63,slow=10,SNR=1.5						
SONM	**Songino Array**	**75.67**	**325**	P	P	01 54 40.1	0.0
	0.3nm,0.6s,baz=134,slow=4.2,SNR=2.1						

*NEIC **19** 02:03:16.9±2.7,21°.61S×0°.06×66°.74W×0°.08,h219km±4km, mb4.5/81,Error ellipse: s-maj=10.5km s-min=9.1km az=67.0*
*IDC **19** 02:03:17.6±0.9,21°.55S×66°.58W,h212km±7km,mb4.2/17, mb1 4.3/25,mb1mx4.2/35,mbtmp4.8/25,Error ellipse: s-maj=10.4km s-min=9.2km az=82.0*
*VAO **19** 02:03:17.5±0.3,21°.46S×66°.81W,h228km,mb4.8*
*GUC **19** 02:03:18.7±0.5,21°.64S×66°.96W,h239km±6km,ML5.0*
*SCB **19** 02:03:19.7±2.6,21°.58S×66°.80W,h207km±14km,ML4.8/11, Error ellipse: s-maj=7.0km s-min=6.2km az=0.0*
ISC 19 02:03:16.8±0.5,**21°.60S**±0°.04×**66°.78W**±0°.04,**h216**km±5km, **n323,**σ1$**34**/335,**mb4.6**/53,**6C-11D,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.12**	**72**	P	**Pn**	**02 03 51.2**	**+1.6**
MOCB				S	**S**	**02 04 14.1**	**-0.8**
MOCB				IAML		02 04 16.6	
	6μm,0.4s						
YJA	**Yavi**	**1.31**	**116**	P	**Pn**	**02 03 52.5**	**+1.6**
LVC	**Limon Verde**	**2.22**	**242**	P	**Pn**	**02 04 01.0**	**+1.9**
	62nm,0.3s,baz=44,slow=7.9,SNR=552						
LVC	**Limon Verde**	**2.22**	**242**	*eP*	**Pn**	**02 04 01.0**	**+1.9**
LVC				*i S*	**S**	**02 04 33.0**	**+1.2**
LVC	**Limon Verde**	**2.22**	**242**	P	**Pn**	**02 04 01.1**	**+1.9**
LVC	**Limon Verde**	**2.22**	**242**	*eP*	**Pn**	**02 04 01.0**	**+1.9**
PB09	**IPOC Station P**	**2.30**	**265**	⇓*iP*	**Pn**	**02 04 01.7**	**+1.9**
PB09				*i S*	**S**	**02 04 33.8**	**+0.8**
PB09	**IPOC Station P**	**2.30**	**265**		**Pn**	**02 04 01.7**	**+1.9**
PB09	**IPOC Station P**	**2.30**	**265**	P	**Pn**	**02 04 02.0**	**+2.2**
PB01	**IPOC Station P**	**2.58**	**282**	⇓*iP*	**Pn**	**02 04 03.9**	**+1.2**
PB01				*i S*	**S**	**02 04 38.8**	**+0.5**
PB01				IAML		02 04 40.5	
	comp=N,3μm,0.3s						
PB01	**IPOC Station P**	**2.58**	**282**		**Pn**	**02 04 03.9**	**+1.2**
PB01	**IPOC Station P**	**2.58**	**282**	P	**Pn**	**02 04 04.3**	**+1.6**
PB01				S	**S**	**02 04 38.4**	**+0.1**
PB01				IAML		02 04 41.2	
	comp=N,3μm,0.3s						
PB08	**IPOC Station P**	**2.65**	**303**	⇓*iP*	**Pn**	**02 04 05.8**	**+2.0**
PB08				*i S*	**S**	**02 04 41.9**	**+1.7**
PB08	**IPOC Station P**	**2.65**	**303**		**Pn**	**02 04 05.8**	**+2.0**
PB08	**IPOC Station P**	**2.65**	**303**	P	**Pn**	**02 04 06.1**	**+2.3**
PB08				S	**S**	**02 04 40.4**	**+0.3**
PB08				IAML		02 04 45.9	
	comp=N,718nm,0.4s						
PB03	**IPOC Station P**	**2.80**	**260**	⇓*iP*	**Pn**	**02 04 06.1**	**+0.9**
PB03				*i S*	**S**	**02 04 42.2**	**-0.5**
PB03				IAML		02 04 43.7	
	comp=E,2μm,0.3s						
PB03	**IPOC Station P**	**2.80**	**260**	P	**Pn**	**02 04 06.6**	**+1.4**
PB03				S	**S**	**02 04 42.6**	**-0.1**
PB03				IAML		02 04 44.1	
	comp=E,2μm,0.2s						
PB06	**IPOC Station P**	**2.81**	**246**	⇑*iP*	**Pn**	**02 04 06.1**	**+0.8**
PB06				*i S*	**S**	**02 04 43.3**	**+0.3**
PB06				IAML		02 04 45.5	
	comp=E,2μm,0.3s						
PB06	**IPOC Station P**	**2.81**	**246**		**Pn**	**02 04 06.2**	**+0.8**
PB06	**IPOC Station P**	**2.81**	**246**	P	**Pn**	**02 04 07.0**	**+1.6**
PB07	**IPOC Station P**	**2.89**	**267**	⇓*iP*	**Pn**	**02 04 07.2**	**+1.0**
PB07				*i S*	**S**	**02 04 44.4**	**-0.3**
PB07				IAML		02 04 46.0	
	comp=N,4μm,0.3s						
PB07	**IPOC Station P**	**2.89**	**267**		**Pn**	**02 04 07.3**	**+1.0**
PB07	**IPOC Station P**	**2.89**	**267**	P	**Pn**	**02 04 07.8**	**+1.5**
PB07				S	**S**	**02 04 44.2**	**-0.4**
PB07				IAML		02 04 45.6	
	comp=N,4μm,0.3s						
PB15	**IPOC Station P**	**2.96**	**237**	*eP*	**Pn**	**02 04 08.5**	**+1.4**
PB15				*i S*	**S**	**02 04 46.8**	**+0.7**
PB15	**IPOC Station P**	**2.96**	**237**		**Pn**	**02 04 08.5**	**+1.4**
PB15	**IPOC Station P**	**2.96**	**237**	P	**Pn**	**02 04 08.4**	**+1.4**
PB04	**IPOC Station P**	**3.21**	**256**	⇓*iP*	**Pn**	**02 04 10.7**	**+0.8**
PB04	**IPOC Station P**	**3.21**	**256**		**Pn**	**02 04 10.2**	**+0.3**
PB04	**IPOC Station P**	**3.21**	**256**	P	**Pn**	**02 04 11.3**	**+1.4**
PB04				S	**S**	**02 04 50.3**	**-1.0**
PB04				IAML		02 04 54.8	
	comp=N,946nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**3.25**	**304**	⇓*iP*	**Pn**	**02 04 11.5**	**+1.0**
PB11				*i S*	**S**	**02 04 52.3**	**+0.2**
PB11	**IPOC Station P**	**3.25**	**304**		**Pn**	**02 04 11.5**	**+1.0**
PB11	**IPOC Station P**	**3.25**	**304**	P	**Pn**	**02 04 11.4**	**+1.0**
SLA	**San Lorenzo**	**3.33**	**160**	P	**Pn**	**02 04 12.1**	**+0.8**
TA01	**Diego Aracena**	**3.34**	**287**	⇓*iP*	**Pn**	**02 04 11.7**	**+0.5**
TA01				*i S*	**S**	**02 04 52.4**	**-1.2**
TA01	**Diego Aracena**	**3.34**	**287**		**Pn**	**02 04 11.7**	**+0.5**
TA02	**Huaiquique**	**3.40**	**292**	*eP*	**Pn**	**02 04 12.5**	**+0.6**
TA02				*i S*	**S**	**02 04 53.6**	**-1.3**
TA02	**Huaiquique**	**3.40**	**292**		**Pn**	**02 04 12.3**	**+0.3**
PB05	**IPOC Station P**	**3.41**	**248**	⇓*iP*	**Pn**	**02 04 12.7**	**+0.5**
PB05				*i S*	**S**	**02 04 53.9**	**-1.5**
PB05	**IPOC Station P**	**3.41**	**248**	P	**Pn**	**02 04 13.8**	**+1.6**
PB05				S	**S**	**02 04 53.4**	**-1.9**
PB05				IAML		02 04 55.7	
	comp=N,665nm,0.3s						
MNMC	**Minye Minye**	**3.60**	**312**	⇑*iP*	**Pn**	**02 04 16.5**	**+1.7**
MNMC				*i S*	**S**	**02 05 00.8**	**+1.0**
MNMC	**Minye Minye**	**3.60**	**312**		**Pn**	**02 04 16.2**	**+1.5**
MNMC	**Minye Minye**	**3.60**	**312**	P	**Pn**	**02 04 16.6**	**+1.9**
MNMC				S	**S**	**02 04 58.3**	**-1.5**
MNMC				IAML		02 05 03.5	
	comp=N,4μm,0.5s						
PSGC	**Pisagua**	**3.71**	**302**	⇓*iP*	**Pn**	**02 04 15.7**	**-0.1**
PSGC				*i S*	**S**	**02 05 00.4**	**-1.5**
PSGC	**Pisagua**	**3.71**	**302**	P	**Pn**	**02 04 16.9**	**+1.1**
PSGC				S	**S**	**02 05 00.8**	**-1.0**
PSGC				IAML		02 05 04.5	
	comp=N,1μm,0.3s						
PSGCX	**Pisagua**	**3.71**	**302**		**Pn**	**02 04 16.2**	**+0.4**
PB10	**IPOC Station P**	**3.98**	**241**	⇑*iP*	**Pn**	**02 04 19.6**	**+0.7**
PB10	**IPOC Station P**	**3.98**	**241**	Pn	**Pn**	**02 04 19.6**	**+0.7**
PB10	**IPOC Station P**	**3.98**	**241**	P	**Pn**	**02 04 20.1**	**+1.2**
PB10				S	**S**	**02 05 05.1**	**-2.4**
PB10				IAML		02 05 06.9	
	comp=N,829nm,0.3s						
PB16	**IPOC Station P**	**4.13**	**321**	⇑*iP*	**Pn**	**02 04 23.8**	**+2.3**
PB16				*i S*	**S**	**02 05 12.9**	**+1.0**
PB16	**IPOC Station P**	**4.13**	**321**		**Pn**	**02 04 23.6**	**+2.2**
PB16	**IPOC Station P**	**4.13**	**321**	P	**Pn**	**02 04 23.9**	**+2.4**
PB16				S	**S**	**02 05 09.9**	**-2.1**
PB16				IAML		02 05 16.4	
	comp=N,635nm,0.4s						
GO02	**Mina Guanaco**	**4.39**	**215**	⇑*iP*	**Pn**	**02 04 25.4**	**+1.0**
GO02				*i S*	**S**	**02 05 16.3**	**-1.0**
GO02	**Mina Guanaco**	**4.39**	**215**	Pn	**Pn**	**02 04 25.3**	**+1.0**
PB14	**IPOC Station P**	**4.50**	**227**	Pn	**Pn**	**02 04 26.0**	**+0.4**
PB14	**IPOC Station P**	**4.50**	**227**	P	**Pn**	**02 04 26.3**	**+0.7**
BBOE	**La Paz, Chanca**	**4.89**	**346**	P	**Pn**	**02 04 32.8**	**+1.9**
LPAZ	**La Paz**	**5.43**	**346**	P	**Pn**	**02 04 39.6**	**+1.8**
	comp=N,50nm,0.3s,baz=141,slow=6.4,SNR=772						
LPAZ	**La Paz**	**5.43**	**346**	P	**Pn**	**02 04 39.7**	**+1.9**
BBOB	**La Paz, Bander**	**5.57**	**347**	P	**Pn**	**02 04 41.1**	**+1.6**
AC02	**Maricunga**	**5.64**	**202**	Pn	**Pn**	**02 04 40.5**	**+0.3**
AC01	**Pan de Azucar**	**5.72**	**217**	Pn	**Pn**	**02 04 40.0**	**-0.8**
SIV	**San Ignacio**	**7.76**	**45**	P	**Pn**	**02 05 05.9**	**-1.3**
	comp=N,26nm,0.3s,baz=238,slow=13,SNR=364						
SIV	**San Ignacio**	**7.76**	**45**	P	**Pn**	**02 05 07.0**	**-0.2**
LCO	**Las Campanas**	**8.19**	**205**	Pn	**Pn**	**02 05 10.7**	**-2.1**
PTLB	**Pontes e Lacer**	**9.48**	**51**	*eP*	**Pn**	**02 05 27.9**	**-1.4**
CPUP	**Villa Florida**	**9.84**	**120**	P	**Pn**	**02 05 34.0**	**+0.2**
	comp=N,0.3nm,0.3s,baz=300,slow=12,SNR=12						
CPUP	**Villa Florida**	**9.84**	**120**		**Pn**	**02 05 34.7**	**+0.9**
CO03	**El Pedregal**	**9.85**	**200**		**Pn**	**02 05 32.0**	**-2.0**
ZON	**Zonda**	**10.05**	**189**		**Pn**	**02 05 35.8**	**-0.8**
CO02	**Combarbal**	**10.29**	**201**		**Pn**	**02 05 36.9**	**-2.7**
AQDB	**Aquidauana**	**10.41**	**86**	*eP*	**Pn**	**02 05 41.5**	**+0.4**
VILB	**Vilhena**	**10.64**	**37**	P	**Pn**	**02 05 44.8**	**+0.6**
**V

ROSC **El Rosal** 27.29 343 P **P** 02 08 43.6 +1.6
comp=Z,7.9nm,0.5s,baz=82,slow=20,SNR=4.8
ROSC **El Rosal** 27.29 343 P **P** 02 08 40.3 -1.7
ROSC IAmb IAmb 02 08 59.9
comp=Z,14nm,0.6s
ROSC **El Rosal** 27.29 343 *e*P **P** 02 08 44.4 +2.3
TOLC **Tolima** 27.33 341 *e*P **P** 02 08 42.8 +0.4
NBPN **Ponto Novo - B** 27.62 71 *e*P **P** 02 08 43.1 -1.5
GUY2C **Guyana, Caldas** 27.95 342 *e*P **P** 02 08 49.0 +1.0
SPBC **San Pablo de B** 28.01 344 *e*P **P** 02 08 48.1 0.0
RUSC **La Rusia** 28.01 347 *e*P **P** 02 08 49.1 +0.6
NORC **Norcasia** 28.13 343 *e*P **P** 02 08 48.6 -0.5
BARC **Barichara** 28.71 347 *e*P **P** 02 08 53.9 -0.5
CBOC **Ciudad Bolivar** 28.75 341 *e*P **P** 02 08 55.3 +0.6
HELC **Santa Helena** 28.91 342 *e*P **P** 02 08 55.5 -1.0
PTBC **PUERTO BERRIO,** 28.95 344 *e*P **P** 02 08 54.4 -2.0
PAMC **Pamplona, Colo** 29.34 348 *e*P **P** 02 08 59.8 -0.5
NBLA **Lagarto - SE** 29.70 74 *e*P **P** 02 09 01.0 -2.0
MDP **Montagnes des** 29.93 29 P **P** 02 09 04.2 -0.8
comp=Z,9.7nm,0.5s,baz=207,slow=11,SNR=13
NBPS **Pedro II - PI** 29.94 59 *e*P **P** 02 09 04.6 -0.6
ZARC **Zaragoza, Cauc** 29.97 344 *e*P **P** 02 09 03.6 -1.8
OCAC **Ocana** 30.33 347 *e*P **P** 02 09 06.8 -1.9
UREC **San Jos de Ur** 30.40 343 *e*P **P** 02 09 08.3 -0.9
NBMA **Muriti-CE** 30.52 67 *e*P **P** 02 09 08.6 -1.6
SDV **Santo Domingo** 30.53 352 P **P** 02 09 09.6 -0.8
SDV IAmb IAmb 02 09 15.9
comp=Z,16nm,0.8s
SMLC **San Martn de** 31.04 346 *e*P **P** 02 09 12.0 -2.8
MOTC **Monteria, Cord** 31.42 343 *e*P **P** 02 09 16.7 -1.3
NBAN **Anadia - AL** 31.61 73 *e*P **P** 02 09 18.5 -1.3
PCRV **Puerto La Cruz** 31.64 4 P **P** 02 09 21.6 +1.6
comp=Z,22nm,0.6s,baz=216,slow=2.0,SNR=14
SJCC **San Jacinto, C** 32.36 344 *e*P **P** 02 09 25.0 -1.3
URIC **Uribia, Colomb** 33.48 351 *e*P **P** 02 09 33.3 -2.6
RCBR **Riachuelo** 33.74 67 P **P** 02 09 38.0 -0.2
comp=Z,9.9nm,0.8s,baz=241,slow=12,SNR=5.5
RCBR **Riachuelo** 33.74 67 *e*P **P** 02 09 38.1 -0.2
NBPV **Pedro Velho** 33.97 68 *e*P **P** 02 09 39.9 -0.3
MLPR **Maguegos Islan** 39.32 360 P **P** 02 10 23.1 -2.0
ANWB **Willy Bob** 39.33 8 P **P** 02 10 23.6 -1.7
SJG **San Juan** 39.47 1 P **P** 02 10 25.2 -1.2
HUMP **Col San Antoni** 39.50 1 IAmb IAmb 02 10 31.6
comp=Z,19nm,0.6s
MPR **Mayaguez** 39.56 359 P **P** 02 10 26.2 -1.0
CBYP **Canovanas** 39.63 1 IAmb IAmb 02 10 30.3
comp=Z,22nm,0.7s
DR12 **Loma Pena Alta** 40.22 356 P **P** 02 10 31.4 -1.2
SDDR **Presa de Saban** 40.57 353 P **P** 02 10 35.4 -0.1
SDDR IAmb IAmb 02 10 43.2
comp=Z,11nm,0.7s
MTO3 **Montecristo** 42.08 326 IAmb IAmb 02 10 51.1
comp=Z,9.1nm,0.8s
352A **Blakely** 55.57 341 IAmb IAmb 02 12 42.7
comp=Z,17nm,0.8s
BG3 **Lake Jocassee** 58.33 344 P **P** 02 12 47.7 -1.6
V55A **Taylorsville** 58.75 346 IAmb IAmb 02 13 03.0
comp=Z,13nm,0.8s
X48A **Hartselle** 58.98 340 P **P** 02 12 53.4 -0.3
X48A IAmb IAmb 02 13 05.2
comp=Z,10nm,1.1s
VNA3 **Neumayer Olymp** 59.36 162 P **P** 02 12 57.2 +1.3
VNA1 **Neumayer--Stat** 59.54 161 P **P** 02 12 56.5 -0.6
VNA2 **Neumayer--Watz** 59.91 161 P **P** 02 13 01.2 +1.5
baz=296,slow=6.8
V48A **Smith Brothers** 60.10 341 IAmb IAmb 02 13 13.1
comp=Z,6.7nm,0.9s
S54A **Dingess, Beckl** 60.64 347 IAmb IAmb 02 13 15.2
comp=Z,9.6nm,0.7s
JCT **Junction City** 60.73 327 P **P** 02 13 06.2 +0.4
JCT IAmb IAmb 02 13 09.0
comp=Z,6.3nm,0.8s
WVT **Waverly** 60.77 341 P **P** 02 13 06.0 +0.1
WVT IAmb IAmb 02 13 07.0
comp=Z,7.6nm,0.7s
T47A **Sharon Grove** 61.34 342 IAmb IAmb 02 13 20.9
comp=Z,11nm,0.8s
SNAA **Sanae** 61.55 161 P **P** 02 13 11.9 +1.1
SNAA **Sanae** 61.55 161 P **P** 02 13 11.5 +0.7
TXAR **Lajitas Array** 61.86 324 P **P** 02 13 15.0 +1.5
comp=Z,0.8nm,0.7s,baz=146,slow=7.9,SNR=10
P53A **Whipple** 62.28 347 IAmb IAmb 02 13 26.9
comp=Z,11nm,0.9s
FVM **French Village** 63.30 339 IAmb IAmb 02 13 38.4
comp=Z,9.3nm,0.9s
CCM **Cathedral Cave** 63.63 339 P **P** 02 13 24.5 -0.4
CCM IAmb IAmb 02 13 37.3
comp=Z,7.6nm,0.7s
S39A **Bolivar** 64.04 337 IAmb IAmb 02 13 29.3
comp=Z,6.0nm,0.6s
R40A **Maddies Statio** 64.20 338 IAmb IAmb 02 13 44.4
comp=Z,4.1nm,0.7s
MSTX **Muleshoe** 65.02 327 IAmb IAmb 02 13 36.7
comp=Z,10nm,0.9s
DBIC **Dimbokro** 66.87 72 P **P** 02 13 45.6 -0.5
comp=Z,22nm,0.8s,baz=211,slow=6.1,SNR=30
DBIC **Dimbokro** 66.87 72 P **P** 02 13 44.0 -2.1
ANMO **Albuquerque** 67.68 325 P **P** 02 13 49.4 -1.7
TUC **Tucson** 68.15 321 P **P** 02 13 52.8 -1.1
QSPA **South Pole Qui** 68.60 180 P **P** 02 13 56.8 +0.5
X18A **Snowflake** 69.27 323 P **P** 02 13 58.9 -2.0
E46A **Sault Ste Mari** 69.48 347 IAmb IAmb 02 14 12.4
comp=Z,6.6nm,0.8s
ISCO **Idaho Springs** 71.02 329 P **P** 02 14 11.1 -0.5
KOWA **Kowa** 71.25 65 P **P** 02 14 12.6 -0.5
comp=Z,18nm,0.9s,baz=245,slow=6.6,SNR=36
KOWA **Kowa** 71.25 65 P **P** 02 14 12.6 -0.5
KOWA IAmb IAmb 02 14 13.6
comp=Z,19nm,0.9s
PV13 **Radium Mtn., P** 71.35 326 P **P** 02 14 14.4 +0.9
O20A **White River Ci** 72.56 328 IAmb IAmb 02 14 24.1
comp=Z,5.4nm,0.9s
KNB **Kanab** 72.68 323 P **P** 02 14 22.7 +1.4
KNB IAmb IAmb 02 14 25.7
comp=Z,14nm,1.0s
SRU **San Rafael Swe** 72.95 326 IAmb IAmb 02 14 26.6
comp=Z,5.6nm,0.8s
MTPU **Mount Pierson** 73.06 324 P **P** 02 14 23.1 -0.7
P17A **Butcher Ranch,** 73.33 326 IAmb IAmb 02 14 28.6
comp=Z,7.5nm,1.0s
TPNV **Topopah Spring** 74.60 321 P **P** 02 14 34.1 +1.6
TPNV IAmb IAmb 02 14 36.7
comp=Z,5.6nm,0.9s
PDAR **Pinedale Array** 75.20 329 P **P** 02 14 37.4 +1.5
comp=Z,0.5nm,0.5s,baz=130,slow=8.2,SNR=8.6
PDAR **Pinedale Array** 75.20 329 P **P** 02 14 36.3 +0.4
TOA0 **Torodi Ar. Sit** 75.53 69 P **P** 02 14 36.7 -1.3
TORD **Torodi Ar. Bea** 75.53 69 P **P** 02 14 37.6 -0.4
comp=Z,29nm,0.6s,baz=257,slow=5.3,SNR=291
TORD **Torodi Ar. Bea** 75.53 69 P **P** 02 14 37.0 -1.0
SYO **Syowa Base** 75.71 159⇑ *e*P **P** 02 14 31.7 -6.4
SYO **Syowa Base** 75.71 159⇓ *e*P **P** 02 14 40.2 +2.1
ULM **Lac du Bonnet** 76.02 341 P **P** 02 14 40.0 0.0
comp=Z,3.2nm,0.5s,baz=155,slow=6.7,SNR=10
ULM **Lac du Bonnet** 76.02 341 IAmb IAmb 02 14 51.8
comp=Z,4.7nm,0.7s
NV11 **Mina Array Sit** 76.72 321 P **P** 02 14 45.6 +1.1
NVAR **Mina Array Bea** 76.80 321 P **P** 02 14 47.3 +2.3
comp=Z,2.1nm,0.9s,baz=147,slow=6.6,SNR=12
NVAR **Mina Array Bea** 76.80 321 P **P** 02 14 45.9 +0.8
VNDA **Vanda** 77.09 190 P **P** 02 14 46.9 +1.1
comp=Z,2.1nm,0.8s,baz=140,slow=3.4,SNR=9.6
VNDA **Vanda** 77.09 190 P **P** 02 14 41.8 -4.0
VNDA IAmb IAmb 02 14 48.9
comp=Z,6.5nm,1.2s
YHH **Holmes Hill** 77.33 329 P **P** 02 14 48.3 +0.4
YHH IAmb IAmb 02 14 51.8
comp=Z,5.8nm,1.0s
VCNR **Virginia City** 78.16 321 P **P** 02 14 52.2 -0.3
HLID **Hailey** 78.19 327 P **P** 02 14 54.1 +1.5
PAHR **Pah Rah Range** 78.28 321 P **P** 02 14 52.9 -0.2
PAHR IAmb IAmb 02 14 57.0
comp=Z,11nm,1.0s
J08A **Circle Bar Ran** 80.19 324 P **P** 02 15 03.5 +0.3
PTEO **Sao Teotonio** 80.25 43 *e*P **P** 02 15 05.9 +2.4
BMO **Blue Mountains** 80.58 326 P **P** 02 15 04.6 -0.7
BMO IAmb IAmb 02 15 08.8
comp=Z,7.8nm,1.2s
K05A **Summer Lake** 81.10 323 P **P** 02 15 07.3 -1.0
K05A IAmb IAmb 02 15 11.8
comp=Z,12nm,1.0s
PSBE **So Bento** 81.39 42 *e*P **P** 02 15 11.1 +1.5
PMTG **Montargil** 81.47 42 *e*P **P** 02 15 11.7 +1.7
BOSA **Boshof** 81.65 117 P **P** 02 15 11.8 +0.3
comp=Z,13nm,0.6s,baz=258,slow=4.8,SNR=35
BOSA **Boshof** 81.65 117 P **P** 02 15 10.5 -1.0
BOSA IAmb IAmb 02 15 12.8
comp=Z,17nm,0.8s
PBAR **Barrancos** 81.70 43 *e*P **P** 02 15 12.6 +1.4
PCAS **Casmilo, Conde** 81.89 41 *e*P **P** 02 15 13.3 +1.1
WALA **Waterton Lakes** 81.90 331 P **P** 02 15 09.7 -2.5
PCBR **Castelo Branco** 82.40 42 *e*P **P** 02 15 15.9 +1.1
MTE **Manteigas** 82.69 41 *e*P **P** 02 15 16.9 +0.6
C09A **Chrisman Ranch** 83.08 328 P **P** 02 15 18.7 +0.5
C09A IAmb IAmb 02 15 21.0
comp=Z,6.5nm,0.8s
TAM **Tamanrasset** 83.10 62 P **P** 02 15 18.3 -0.7
TAM IAmb IAmb 02 15 21.1
comp=Z,15nm,1.4s
POLO **Lamas de Olo** 83.11 41 *e*P **P** 02 15 17.9 -0.6
PCAB **Cabril** 83.17 40 *e*P **P** 02 15 15.1 -3.7
LBTB **Lobatse** 83.17 114 P **P** 02 15 18.9 -0.5
FCC **Fort Churchill** 83.18 346 P **P** 02 15 18.4 +0.1
FCC IAmb IAmb 02 15 20.5
comp=Z,5.6nm,0.8s
MVO **Moncorvo** 83.45 41 *e*P **P** 02 15 21.4 +1.1
MAW **Mawson** 83.66 163 P **P** 02 15 22.6 +1.8
comp=Z,14nm,0.8s,baz=224,slow=8.0,SNR=16
MAW **Mawson** 83.66 163 P **P** 02 15 21.4 +0.6
PBRG **Braganca** 84.00 41 *e*P **P** 02 15 24.0 +1.0
PAB **San Pablo** 84.20 44 P **P** 02 15 23.6 -0.6
PAB IAmb IAmb 02 15 26.3
comp=Z,24nm,1.4s
ESDC **Sonseca Array** 84.52 44 P **P** 02 15 26.8 +1.1
comp=Z,7.1nm,1.0s,baz=246,slow=4.6,SNR=34
ESBB **Sonseca Array** 84.53 44 IAmb IAmb 02 15 28.0
comp=Z,19nm,1.2s
YKA **Yellowknife Ar** 91.95 340 P **P** 02 16 01.8 +1.5
comp=Z,3.6nm,0.8s,baz=128,slow=4.7,SNR=70
WLF **Walferdange** 95.78 39 P **P** 02 16 16.8 -1.4
MOTA **Moosalm** 97.78 42 *e*P Pdif 02 16 28.3 +0.7
comp=Z,4.4nm,0.9s
SQTA **Sankt Quirin** 97.80 42 *i* P Pdif 02 16 28.4 +0.8
comp=Z,7.0nm,0.7s
WATA **Walderalm** 98.08 42 *e*P **P** 02 16 28.7 -0.1
comp=Z,6.1nm,1.1s
WTTA **Wattenberg** 98.09 42 *e*P Pdif 02 16 30.0 +1.0
comp=Z,7.1nm,0.8s
KLMR **Klimovskoe** 116.55 32 *e*PKPdf PKPdf 02 21 26.7 -7.8
KLMR AMP 02 21 35.3
comp=Z,15nm,1.4s
KBZ **Khabaz** 118.64 51 PKP **PKiKP** 02 21 39.8 +0.7
comp=Z,2.9nm,0.9s,baz=71,slow=2.5,SNR=5.5
ARU **Arti** 127.11 35 PKP **PKiKP** 02 21 56.3 +0.9
comp=Z,0.9nm,0.4s,baz=153,slow=3.0,SNR=7.3
ARU **Arti** 127.11 35 PKPdf **PKiKP** 02 21 56.0 +0.6
AKTO **Aktyubinsk** 128.38 42 PKP **PKiKP** 02 21 59.1 +0.9
comp=Z,2.6nm,0.8s,baz=16,slow=2.9,SNR=6.4
TIXI **Tiksi** 129.12 354 PKPdf **PKPdf** 02 21 58.7 +0.4
NRIK **Noril'sk** 129.78 12 PKP **PKiKP** 02 22 00.7 +0.2
comp=Z,3.0nm,0.8s,baz=63,slow=1.9,SNR=4.9
NRIK SKPbc SKPbc 02 25 02.9 +1.4
comp=Z,1.0nm,0.3s,baz=338,slow=6.6,SNR=4.8
ABKAR **Akbulak array** 129.87 43 PKPdf **PKiKP** 02 22 02.3 +1.1
ASAR **Alice Springs** 130.71 205 PKP **PKiKP** 02 22 03.8 -0.1
comp=Z,2.1nm,0.5s,baz=134,slow=1.8,SNR=25
ASAR SKPbc **SKPbc** 02 25 06.5 0.0
comp=Z,1.3nm,0.7s,baz=150,slow=3.6,SNR=8.9
ASAR **Alice Springs** 130.71 205 PKPdf **PKiKP** 02 22 03.6 -0.2
SEY **Seymchan** 130.96 338 PKP **PKiKP** 02 22 02.8 -0.2
comp=Z,6.5nm,1.0s,baz=95,slow=2.1,SNR=22
WRA **Warramunga Arr** 133.84 208 PKP **PKiKP** 02 22 09.8 -0.4
comp=Z,2.3nm,0.5s,baz=158,slow=1.8,SNR=18
WRA SKPbc **SKPbc** 02 25 17.6 0.0
comp=Z,2.6nm,1.0s,baz=146,slow=2.8,SNR=5.2
WRA **Warramunga Arr** 133.84 208 **PKiKP** 02 22 10.2 0.0
BVAR **Borovoye Array** 134.74 35 PKP **PKPdf** 02 22 09.8 +0.3
comp=Z,1.5nm,0.7s,baz=148,slow=12,SNR=6.3
BVAR SKPbc **SKPbc** 02 25 20.6 +1.3
comp=Z,0.8nm,0.6s,baz=0.0,slow=9.3,SNR=3.6
CHGR **Chuyangaron** 138.70 56 PKPdf **PKPdf** 02 22 16.2 -1.2
KURK **Kurchatov** 140.31 34 **PKPdf** 02 22 20.1 +0.3
KURBB **Kurchatov Arra** 140.31 35 PKP **PKPdf** 02 22 20.1 +0.3
comp=Z,2.6nm,0.8s,baz=301,slow=2.4,SNR=4.3
ZAA0 **Zalesovo Array** 141.17 27 PKPdf **PKPdf** 02 22 22.0 +0.7
ZALV **Zalesovo Beam** 141.17 27 PKhKP PKPpre 02 22 17.7
comp=Z,3.2nm,0.6s,baz=306,slow=5.3,SNR=3.7
ZALV PKP **PKPdf** 02 22 22.2 +0.9
comp=Z,4.0nm,0.4s,baz=296,slow=3.1,SNR=12
ZALV SKPbc **SKPbc** 02 25 37.3 -0.3
comp=Z,5.1nm,0.8s,baz=290,slow=4.4,SNR=14
ZALV **Zalesovo Beam** 141.17 27 **PKPdf** 02 22 20.7 -0.6
AAK **Ala-Archa** 141.51 48 PKP **PKPdf** 02 22 22.9 +0.4
comp=Z,2.1nm,0.8s,baz=215,slow=1.7,SNR=4.7
AAK SKPbc **SKiKP** 02 25 41.3 +0.4
comp=Z,2.4nm,0.8s,baz=226,slow=5.8,SNR=6.0
JAY **Jayapura** 143.99 232 PKP PKPbc 02 22 26.8 +0.7
comp=Z,22nm,1.0s
MAKZ **Makanchi** 144.34 38 PKPdf **PKPdf** 02 22 26.8 -0.4
MK31 **Makanchi Array** 144.53 37 PKPdf **PKPdf** 02 22 27.4 0.0
MKAR **Makanchi Array** 144.53 37 PKP **PKPdf** 02 22 27.9 +0.4
comp=Z,40nm,0.8s,baz=316,slow=3.3,SNR=97
MKAR SKPbc **SKiKP** 02 25 47.5 +0.7
comp=Z,2.5nm,0.9s,baz=318,slow=1.6,SNR=6.3
MKAR **Makanchi Array** 144.53 37 PKPbc 02 22 27.0 +0.3
PALK **Pallekele** 145.54 110 PKPbc **PKPab** 02 22 31.2 -0.1
KLR **Kul'dur** 148.73 336 PKPbc **PKiKP** 02 22 39.4 -0.4
comp=Z,4.9nm,0.7s,baz=39,slow=3.8,SNR=18
TLY **Talaya** 149.06 12 PKPbc **PKPbc** 02 22 39.9 +0.6
comp=Z,5.0nm,0.6s,baz=315,slow=7.1,SNR=3.6
WMQ **Urumqi** 149.36 38 *e*P **PKPdf** 02 22 34.8 -0.9
WMQ pmax pmax
comp=Z,73nm,4.3s
USRK **Ussuriysk Ar.** 152.62 330 PKPbc **PKiKP** 02 22 49.3 +1.4
comp=Z,3.6nm,0.8s,baz=3.6,slow=0.9,SNR=13
SONM **Songino Array** 153.25 10 PKP **PKPdf** 02 22 43.7 +2.2
comp=Z,4.6nm,0.9s,baz=292,slow=0.3,SNR=10
SONM PKPbc **PKiKP** 02 22 50.6 +1.3
comp=Z,8.8nm,0.8s,baz=312,slow=1.1,SNR=17
SONM PKPab **PKPab** 02 23 03.2 +1.4
comp=Z,2.2nm,0.9s,baz=296,slow=4.0,SNR=3.9
SONM **Songino Array** 153.25 10 **PKPdf** 02 22 42.0 +0.5
MJAR **Matsushiro Arr** 153.67 310 PKPbc **PKiKP** 02 22 51.8 +1.4
comp=Z,0.5nm,0.5s,baz=83,slow=3.1,SNR=4.0
MJAR PKPab **PKPab** 02 23 04.3 +0.4
comp=Z,0.4nm,0.4s,baz=84,slow=2.1,SNR=4.1
GTA **Gaotai** 158.86 30 PKPbc **PKPdf** 02 22 47.0 -2.2
KSRS **Korea Array** 159.71 324 PKP **PKPdf** 02 22 52.1 +2.1
comp=Z,2.3nm,0.9s,baz=201,slow=0.3,SNR=8.2
HHC **Hu-ho-hao-te** 160.75 4 *e*P **PKPdf** 02 22 48.6 -2.6
CMAR **Chiang Mai Arr** 166.22 101 PKP **PKPdf** 02 22 58.4 +1.6
comp=Z,1.4nm,0.6s,baz=269,slow=1.8,SNR=12
CMAR PKPab **PKPab** 02 23 59.3 +0.2
comp=Z,1.4nm,0.6s,baz=247,slow=6.6,SNR=7.1
CMAR PP **PP** 02 27 48.1 +0.7
comp=Z,0.9nm,0.3s,baz=236,slow=4.8,SNR=8.4
XAN **Xi'an** 167.03 16 PKP **PKPdf** 02 22 58.4 +1.3
XAN pPKP PKPab 02 23 58.8 -3.3
XAN LR LR
comp=N,160nm,19.5s
NJ2 **Nanjing** 168.44 335 *e*P **PKPdf** 02 22 56.3 -1.7
NJ2 pmax pmax
comp=Z,170nm,0.5s

UKR **Ust'-Kan** 4.32 325 Pg **Pg** 02 17 12.7 -1.8
UKR Sg **Sg** 02 18 06.4 -4.1
MK31 **Makanchi Array** 4.44 264 Pn **Pn** 02 17 02.4 +3.4
0.6nm,0.3s,baz=87,slow=15,SNR=61
MK31 ⇑Pg **Pg** 02 17 13.5 -3.1
2.2nm,0.3s,baz=86,slow=18,SNR=38
MK31 ⇓Lg Lg 02 18 13.6
7.7nm,0.4s,baz=81,slow=30,SNR=9.2
MKAR **Makanchi Array** 4.44 264 Pn **Pn** 02 17 02.5 +3.5
0.7nm,0.3s,baz=85,slow=14,SNR=29
MKAR Lg Lg 02 18 11.8
8.2nm,0.3s,baz=84,slow=29,SNR=14
MAKZ **Makanchi** 4.64 264 ⇓Pn **Pn** 02 17 05.0 +3.1
4.2nm,1.1s
MAKZ ⇑Pg **Pg** 02 17 17.8 -2.8
8.3nm,0.7s
MAKZ ⇓Lg Lg 02 18 19.5
12nm,0.6s
SEM **Semipalatinsk** 6.30 301 *e*P **Pg** 02 17 49.6 -2.7
3.4nm,0.4s
SEM *e*S **Sg** 02 19 14.6 +0.7
25nm,0.5s
SEM **Semipalatinsk** 6.30 301 Pg **Pg** 02 17 49.6 -2.7
3.4nm,0.4s
SEM Lg Lg 02 19 14.6
25nm,0.5s
ZALV **Zalesovo Beam** 6.94 341 Pn **Pn** 02 17 33.6 +0.2
0.6nm,0.3s,baz=161,slow=14,SNR=8.4
ZALV Lg Lg 02 19 29.0
0.7nm,0.3s,baz=153,slow=26,SNR=5.6
KURBB **Kurchatov Arra** 7.40 299 Pn **Pn** 02 17 41.4 +1.7
0.2nm,0.3s,baz=106,slow=14,SNR=11
KURBB Sn **Sn** 02 19 04.0 +0.5
0.2nm,0.3s,baz=107,slow=24,SNR=6.2
KURBB Lg Lg 02 19 46.9
0.3nm,0.3s,baz=107,slow=33,SNR=6.4
KURBB **Kurchatov Arra** 7.40 299 ⇓Pn **Pn** 02 17 42.9 +3.3
1.2nm,0.3s
KURBB ⇓Sn **Sn** 02 19 04.8 +1.3
13nm,0.8s
KURBB ⇑Lg Lg 02 19 44.7
29nm,0.6s
PDGK **Podgornoye** 7.70 241 Pg **Pg** 02 18 15.0 -4.1
1.1nm,0.8s
PDGK Lg Lg 02 19 58.1
PDGK **Podgornoye** 7.70 241 ⇓Sn **Sn** 02 19 14.3 +3.1
8.7nm,0.6s
PDGK ⇑Lg Lg 02 19 56.8
22nm,1.0s
UZB **Uzynbulak** 8.08 241 *e*P Pg 02 18 20.7 -5.7
4.1nm,0.3s
UZB *e*S **Sg** 02 20 06.8 -4.1
7.5nm,0.6s
UZB **Uzynbulak** 8.08 241 Pg Pg 02 18 20.7 -5.7
4.1nm,0.3s
UZB Lg Lg 02 20 06.8
7.5nm,0.6s
KPKS **Kokpek** 8.11 244 *e*P Pg 02 18 21.3 -5.6
5.3nm,0.5s
KPKS *e*S **Sg** 02 20 08.6 -3.1
15nm,0.7s
ARXS **Arharly** 8.27 251 *e*P Pg 02 18 23.8 -6.1
2.7nm,0.5s
ARXS *e*S **Sg** 02 20 14.3 -2.6
6.5nm,0.6s
SATY **Saty** 8.50 243 *e*P Pg 02 18 29.8 -4.6
3.1nm,1.2s
SATY *e*S **Sg** 02 20 23.1 -1.3
10nm,1.2s
SATY **Saty** 8.50 243 Pg **Pg** 02 18 29.8 -4.6
3.1nm,1.2s
SATY Lg Lg 02 20 23.1
10nm,1.2s
KTBS **Karatobe** 9.23 250 Pg Pn 02 18 43.2 +38
0.8nm,0.4s
KTBS Lg Lg 02 20 47.4
8.5nm,0.9s
TLY **Talaya** 10.57 61 Lg Lg 02 21 12.6
0.0nm,0.3s,baz=220,slow=22,SNR=1.3
AAK **Ala-Archa** 11.16 250 Pn **Pn** 02 18 33.4 +2.1
0.2nm,0.3s,baz=82,slow=17,SNR=5.0
SONM **Songino Array** 11.93 82 Lg Lg 02 21 58.4
0.2nm,0.3s,baz=270,slow=28,SNR=7.6
YKA **Yellowknife Ar** 68.81 11 P **P** 02 26 54.6 -1.0
0.1nm,0.9s,baz=347,slow=6.5,SNR=5.7
TORD **Torodi Ar. Bea** 78.44 277 P **P** 02 27 54.2 +1.4
0.5nm,0.9s,baz=49,slow=4.4,SNR=2.3

*IDC **19** 02:15:50.4±1.6,47.°54N×88.°86E,h0km,mb3.4/2, mb1 3.5/6,mb1mx3.2/55,mbtmp3.4/6,ML2.9/4,Error ellipse: s-maj=19.8km s-min=17.1km az=160.0*
*SOME **19** 02:15:51.9,47.°42N×88.°65E,h20km*
*NNC **19** 02:15:55.9±1.8,47.°51N×88.°47E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=14.4km s-min=9.7km az=100.0*

ISC 19 02:15:51.7±1.3,47.°47N±0.°05×88.°71E±0.°07,h10km,n29, σ26°69/37,4C-6D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGZ	**Jazzator, Alta**	2.39	340	Pg	**Pb**	02 16 35.5	+0.6
DGZ				Sg	**Sg**	02 17 06.1	-2.3
ZSN	**Zaisan**	2.61	271	*e*P	**Pg**	02 16 42.8	+1.1
	8.9nm,0.2s						
ZSN				*e*S	**Sg**	02 17 19.3	+3.8
	92nm,0.4s						
CUR	**Chagan-Uzun**	2.64	355	Pg	**Pb**	02 16 40.2	+1.0
CUR				Sg	**Sb**	02 17 12.2	+0.5
CHBI	**Chibit, Altay**	2.95	345	Pg	**Pg**	02 16 46.0	-2.2
CHBI				Sg	**Sb**	02 17 20.9	+0.3
ULGR	**Ulagan, Altay**	3.19	351	Pg	**Pg**	02 16 50.3	-2.5
ULGR				Sg	**Sb**	02 17 28.1	+0.5
TEL	**Teeli**	3.68	15	Sg	**Sb**	02 17 41.5	0.0

*JMA **19** 02:31:26.6±0.2,24.°56N×122.°30E,h87km±3km,M2.4*
*TAP **19** 02:31:27.3,24.°61N×122.°31E,h79km,ML3.1,C*

ISC 19 02:31:27.7±1.4,24.°60N±0.°04×122.°33E±0.°02,h78km±8km, n75,σ0°56/125,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.43	304	*e*P	**Pn**	02 31 40.8	+0.1
	baz=305						
TWC	**Suao**	0.44	271	P	**Pn**	02 31 40.5	-0.2
	baz=270						
TWC				S	**Sn**	02 31 50.2	-0.2
	baz=270						
TWB1	**Santiao Chiao**	0.51	323	P	**Pn**	02 31 41.2	-0.1
	baz=324						
TWB1				*e*S	**Sn**	02 31 51.4	0.0
	baz=324						
NTC	**Toucheng**	0.52	299	*e*P	**Pn**	02 31 41.4	0.0
	baz=299						
NTC				*e*S	**Sn**	02 31 51.4	-0.2
	baz=299						
EWUT	**Wuta**	0.53	253	P	**Pn**	02 31 41.7	+0.3
	baz=251						
EWUT				*e*S	**Sn**	02 31 52.4	+0.7
	baz=251						
ILA	**Ilan**	0.55	287	*e*S	**Sn**	02 31 52.8	+0.7
	baz=287						
NDS	**Dongshan**	0.56	273	P	**Pn**	02 31 41.8	0.0
	baz=272						
NDS				S	**Sn**	02 31 52.2	0.0
	baz=272						
JYNG	**Yonaguni jima**	0.58	105	P	**Pn**	02 31 42.0	0.0
JYNG				S	**Sn**	02 31 53.4	+0.8
TIPB	**Shuangxi**	0.59	309	P	**Pn**	02 31 42.0	-0.1
	baz=309						
TIPB				S	**Sn**	02 31 52.7	-0.1
	baz=309						
TWE	**Neicheng**	0.61	281	P	**Pn**	02 31 42.4	+0.1
	baz=281						
TWE				*e*S	**Sn**	02 31 53.1	0.0
	baz=281						
YOJ	**Yonaguni jima**	0.64	103	P	**Pn**	02 31 42.5	0.0
YOJ				*e*S	**Sn**	02 31 54.0	+0.5
YOJ	**Yonaguni jima**	0.64	103	P	**Pn**	02 31 42.5	0.0
	baz=102						
YOJ				*e*S	**Sn**	02 31 54.1	+0.5
	baz=102						
NWF	**Wu-fen Shan**	0.68	313	P	**Pn**	02 31 43.0	-0.1
	baz=313						
NWF				*e*S	**Sn**	02 31 54.6	+0.1
	baz=313						
WFSB	**Wu-fen Shan**	0.68	313	P	**Pn**	02 31 43.1	+0.1
	baz=313						
WFSB				*e*S	**Sn**	02 31 54.7	+0.3
	baz=313						
ENTT	**Nioudou**	0.69	273	P	**Pn**	02 31 43.7	+0.5
	baz=272						
NDT	**Datong Townshi**	0.74	270	*e*P	**Pn**	02 31 44.3	+0.6
	baz=269						
NDT				S	**Sn**	02 31 56.1	+0.5
	baz=269						
TNOU	**National Taiwa**	0.74	317	*e*S	**Sn**	02 31 55.7	+0.2
	baz=317						
NWLT	**Wulai**	0.77	283	*e*P	**Pn**	02 31 43.9	-0.1
	baz=283						
NWLT				*e*S	**Sn**	02 31 55.9	-0.2
	baz=283						
TWA	**Mucha**	0.77	299	*e*P	**Pn**	02 31 43.7	-0.4
	baz=299						
TWA				*e*S	**Sn**	02 31 55.9	-0.3
	baz=299						
NACB	**Ninganchiao**	0.79	238	P	**Pn**	02 31 43.9	-0.3
	baz=236						
NACB				S	**Sn**	02 31 55.8	-0.7
	baz=236						
NHDH	**Xindian Distri**	0.81	296	*e*S	**Sn**	02 31 56.3	-0.6
	baz=296						
TWD	**Chiawan**	0.85	232	*e*P	**Pn**	02 31 44.7	-0.1
	baz=230						

TWD				*eS*		**Sn**	**02 31 57.6 0.0**
	baz=230						
ETLH	**Xiulin Townshi**	**0.87**	**243**	P		**Pn**	**02 31 44.7 -0.5**
	baz=242						
ETLH				*eS*		**Sn**	**02 31 57.6 -0.5**
	baz=242						
YHNB	**Yeheng**	**0.87**	**275**	*eP*		**Pn**	**02 31 45.4 +0.2**
	baz=274						
YHNB				*eS*		**Sn**	**02 31 58.4 +0.2**
	baz=274						
YM01	**YM01**	**0.88**	**308**	*eP*		**Pn**	**02 31 45.0 -0.3**
	baz=308						
YM01				*eS*		**Sn**	**02 31 58.0 -0.2**
	baz=308						
NNSH	**Datong**	**0.88**	**259**	*eP*		**Pn**	**02 31 45.2 -0.1**
	baz=258						
NNSH				*eS*		**Sn**	**02 31 58.4 -0.1**
	baz=258						
NNSB	**Datong**	**0.88**	**259**	*eP*		**Pn**	**02 31 45.2 -0.1**
	baz=258						
NNSB				*eS*		**Sn**	**02 31 58.3 -0.2**
	baz=258						
NNS	**Nan Shan**	**0.89**	**260**	P		**Pn**	**02 31 45.4 0.0**
	baz=258						
NNS				S		**Sn**	**02 31 58.4 -0.2**
	baz=258						
YM11	**YM11**	**0.89**	**309**	*eP*		**Pn**	**02 31 45.2 -0.1**
	baz=309						
YM11				*eS*		**Sn**	**02 31 58.2 -0.3**
	baz=309						
NSK	**Sanguang**	**0.89**	**275**	*eP*		**Pn**	**02 31 45.3 0.0**
	baz=274						
NSK				*eS*		**Sn**	**02 31 58.5 0.0**
	baz=274						
YM08	**YM08**	**0.89**	**311**	*eS*		**Sn**	**02 31 57.5 -1.0**
	baz=311						
YM10	**YM10**	**0.89**	**308**	*eP*		**Pn**	**02 31 45.0 -0.3**
	baz=308						
YM10				*eS*		**Sn**	**02 31 58.3 -0.3**
	baz=308						
YM05	**YM05**	**0.89**	**309**	*eP*		**Pn**	**02 31 45.0 -0.4**
	baz=309						
YM05				*eS*		**Sn**	**02 31 57.8 -0.8**
	baz=309						
YM04	**YM04**	**0.91**	**307**	*eP*		**Pn**	**02 31 45.1 -0.4**
	baz=307						
YM04				*eS*		**Sn**	**02 31 58.3 -0.5**
	baz=307						
TWY	**Chenhua**	**0.94**	**316**	*eP*		**Pn**	**02 31 45.8 -0.1**
	baz=316						
TWS1	**Kuangyinshan**	**0.96**	**301**	*eP*		**Pn**	**02 31 46.0 -0.2**
	baz=301						
TWS1				*eS*		**Sn**	**02 31 59.9 -0.1**
	baz=301						
FUSS	**Fushou**	**1.05**	**251**	P		**Pn**	**02 31 47.6 +0.1**
	baz=249						
FUSS				*eS*		**Sn**	**02 32 01.9 -0.4**
	baz=249						
WHF	**Hehuan Shan**	**1.07**	**245**	*eP*		**Pn**	**02 31 47.5 -0.4**
	baz=244						
WHF				*eS*		**Sn**	**02 32 02.2 -0.8**
	baz=244						
NCUH	**Zhongli**	**1.10**	**290**	*eS*		**Sn**	**02 32 03.9 +0.9**
	baz=289						
TWT	**Tachien**	**1.11**	**252**	*eP*		**Pn**	**02 31 48.6 +0.5**
	baz=251						
TWT				*eS*		**Sn**	**02 32 03.5 +0.1**
	baz=251						
TDCB	**Techi**	**1.12**	**252**	*eP*		**Pn**	**02 31 48.5 +0.3**
	baz=251						
TDCB				*eS*		**Sn**	**02 32 03.5 -0.1**
	baz=251						
ESL	**Shilin**	**1.13**	**226**	*eP*		**Pn**	**02 31 47.2 -1.0**
	baz=225						
CHGB	**Renai**	**1.18**	**243**	*eP*		**Pn**	**02 31 49.0 -0.1**
	baz=242						
CHGB				*eS*		**Sn**	**02 32 05.0 -0.1**
	baz=242						
LIOB	**Emei**	**1.20**	**272**	*eP*		**Pn**	**02 31 49.0 0.0**
	baz=271						
HSN1	**Hsinchu**	**1.21**	**279**	*eS*		**Sn**	**02 32 04.9 -0.3**
	baz=278						
NSTT	**Nanjuang**	**1.21**	**272**	*eS*		**Sn**	**02 32 05.1 -0.2**
	baz=271						
OWD	**Renai**	**1.23**	**239**	*eP*		**Pn**	**02 31 49.5 -0.1**
	baz=237						
OWD				*eS*		**Sn**	**02 32 05.5 -0.6**
	baz=237						
EGFH	**Guangfu**	**1.24**	**222**	*eS*		**Sn**	**02 32 04.6 -1.5**
	baz=220						
WHP	**Taichung City**	**1.30**	**256**	*eP*		**Pn**	**02 31 51.0 +0.6**
	baz=255						
WHP				*eS*		**Sn**	**02 32 07.9 +0.3**
	baz=255						
IRIF	**Iriomote-Funau**	**1.30**	**102**	P		**Pn**	**02 31 49.8 -0.6**
IRIF				S		**Sn**	**02 32 07.7 +0.2**
VWDT	**VWDT**	**1.38**	**232**	*eP*		**Pn**	**02 31 51.2 -0.1**
	baz=231						
VWDT				*eS*		**Sn**	**02 32 08.7 -0.3**
	baz=231						
HGSD	**Ruisui**	**1.38**	**217**	*eP*		**Pn**	**02 31 52.0 +0.6**
	baz=216						
HGSD				*eS*		**Sn**	**02 32 09.0 -0.2**
	baz=216						
SMLT	**Sun Moon Lake**	**1.49**	**241**	*eP*		**Pn**	**02 31 53.8 +0.9**
	baz=240						
SMLT				*eS*		**Sn**	**02 32 13.7 +1.8**
	baz=240						
SSLB	**Suanglung**	**1.50**	**237**	*eP*		**Pn**	**02 31 53.4 +0.5**
	baz=236						
SSLB				*eS*		**Sn**	**02 32 12.5 +0.6**
	baz=236						
TYC	**Yuchr**	**1.51**	**243**	*eP*		**Pn**	**02 31 54.0 +0.9**
	baz=242						
TYC				*eS*		**Sn**	**02 32 14.8 +2.5**
	baz=242						
YULB	**Yu-li**	**1.53**	**218**	*eP*		**Pn**	**02 31 52.1 -1.2**
	baz=217						
EYUL	**Yuli**	**1.55**	**217**	*eS*		**Sn**	**02 32 13.5 +0.2**
	baz=215						
JKRS	**Kuro-shima**	**1.57**	**103**	P		**Pn**	**02 31 53.9 0.0**
JKRS				*eS*		**Sn**	**02 32 13.7 0.0**
WJS	**Zhushan**	**1.66**	**242**	*eP*		**Pn**	**02 31 55.6 +0.6**
	baz=241						
WJS				*eS*		**Sn**	**02 32 17.3 +1.7**
	baz=241						
JIJ	**Ishigaki jima**	**1.67**	**98**	P		**Pn**	**02 31 54.8 -0.3**
JIJ				S		**Sn**	**02 32 15.5 -0.5**
FULB	**Fuli**	**1.69**	**214**	*eP*		**Pn**	**02 31 55.3 -0.1**
	baz=213						
FULB				*eS*		**Sn**	**02 32 15.9 -0.6**
	baz=213						
ALS	**Alishan**	**1.77**	**232**	*eP*		**Pn**	**02 31 57.6 +0.9**
	baz=231						
JISG	**Ishigakijimahi**	**1.81**	**90**	P		**Pn**	**02 31 56.9 0.0**
JISG				S		**Sn**	**02 32 19.1 0.0**
CHN5	**Tsauling**	**1.81**	**237**	*eP*		**Pn**	**02 31 57.2 +0.1**
	baz=236						
ELDTW	**Lidau**	**1.85**	**221**	*eP*		**Pn**	**02 31 56.8 -0.8**
	baz=219						
ELDTW				*eS*		**Sn**	**02 32 19.2 -1.2**
	baz=219						
EDH	**Donghe**	**1.88**	**210**	*eP*		**Pn**	**02 31 57.8 -0.1**
	baz=209						
WRL	**Guolierlin Hig**	**1.91**	**249**	*eS*		**Sn**	**02 32 20.8 -0.9**
	baz=248						
CHN4	**Tsaushan**	**2.02**	**232**	*eP*		**Pn**	**02 32 00.4 +0.6**
	baz=231						
TPUB	**Ta-pu**	**2.02**	**231**	*eP*		**Pn**	**02 32 00.4 +0.5**
	baz=229						
STYT	**Tauyuan**	**2.03**	**225**	*eS*		**Sn**	**02 32 24.1 -0.6**
	baz=224						
CHY	**Chiayi**	**2.06**	**238**	*eP*		**Pn**	**02 32 00.6 +0.3**
	baz=237						
TTN	**Taitung**	**2.13**	**211**	*eP*		**Pn**	**02 32 01.7 +0.3**
	baz=209						
TWK	**Hsinying**	**2.15**	**232**	*eP*		**Pn**	**02 32 01.6 +0.1**
	baz=231						
JTJ	**Tarama**	**2.16**	**89**	P		**Pn**	**02 32 02.0 +0.4**
JTJ				S		**Sn**	**02 32 27.9 +0.3**
CHN1	**Nanshi**	**2.17**	**230**	*eP*		**Pn**	**02 32 02.0 +0.2**
	baz=229						
CHN1				*eS*		**Sn**	**02 32 27.6 -0.3**
	baz=229						

*GUC **19** 02:33:46.9±0.7, 19°.37S×70°.18W, h39km±2km, ML4.0*

*IDC **19** 02:33:51.4±3.0, 19°.32S×69°.71W, h75km±27km, mb3.1/3, mb1 3.5/6, mb1mx3.2/29, mbtmp3.6/6, Error ellipse: s-maj=50.8km s-min=14.9km az=98.0*

ISC 19 02:33:46.3±1.1, **19°.36S**±0°.03×**70°.20W**±0°.06, **h31**km±8km, **n27**, **σ1s20**/31, **mb3.5**/3, **3C-4D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.25**	**163**	*eP*		**Pb**	**02 33 53.3**	**0.0**
PSGC				*i* S		**Sn**	**02 33 58.4**	**-0.5**
PSGC				IAML			02 33 58.7	
	comp=N,10μm,0.4s							
MNMC	**Minye Minye**	**0.61**	**69**⇑	*i* P		**Pb**	**02 33 59.0**	**+0.2**
MNMC				*i* S		**Sn**	**02 34 08.2**	**+0.2**
MNMC				IAML			02 34 08.6	
	comp=E,40μm,0.4s							
PB11	**IPOC Station P**	**0.65**	**128**⇑	*i* P		**Pb**	**02 33 59.0**	**-0.4**
PB11				*i* S		**Sb**	**02 34 08.0**	**-0.3**
TA02	**Huaiquique**	**0.91**	**176**⇓	*i* P		**Pn**	**02 34 02.3**	**-0.7**
TA02				*i* S		**Sn**	**02 34 14.3**	**-0.7**
TA02				IAML			02 34 15.9	
	comp=N,12μm,0.1s							
AP01	**Chacalluta**	**0.99**	**352**⇓	*i* P		**Pb**	**02 34 04.5**	**-0.4**
AP01				*i* S		**Sb**	**02 34 17.8**	**+0.1**
AP01				IAML			02 34 20.5	
	comp=N,15μm,0.4s							
TA01	**Diego Aracena**	**1.20**	**179**⇓	*i* P		**Pn**	**02 34 06.5**	**-0.4**
TA01				*i* S		**Sn**	**02 34 21.6**	**-0.6**
TA01				IAML			02 34 23.3	
	comp=N,3μm,0.1s							
PB16	**IPOC Station P**	**1.21**	**33**⇓	*i* P		**Pn**	**02 34 08.3**	**+0.8**
PB16				*i* S		**Sb**	**02 34 24.6**	**+0.2**
PB16				IAML			02 34 25.6	
	comp=N,2μm,0.5s							
PB08	**IPOC Station P**	**1.26**	**129**⇑	*i* P		**Pn**	**02 34 08.5**	**+0.4**
PB08				*i* S		**Sb**	**02 34 24.9**	**-0.7**
PB08				IAML			02 34 25.4	
	comp=N,7μm,0.2s							
PB01	**IPOC Station P**	**1.81**	**158**	*eP*		**Pn**	**02 34 15.0**	**-0.4**
PB01				*i* S		**Sn**	**02 34 37.5**	**+0.3**
PB01				IAML			02 34 48.1	
	comp=E,2μm,0.3s							
PB07	**IPOC Station P**	**2.38**	**173**	*eP*		**Pn**	**02 34 23.9**	**+0.6**
PB07				*i* S		**Sn**	**02 34 51.5**	**0.0**
PB09	**IPOC Station P**	**2.59**	**160**	*eP*		**Pn**	**02 34 27.3**	**+1.1**
PB09				*i* S		**Sn**	**02 34 57.2**	**+0.5**
PB03	**IPOC Station P**	**2.71**	**171**	*eP*		**Pn**	**02 34 28.8**	**+0.9**
PB03				*i* S		**Sn**	**02 34 59.6**	**-0.1**
PB03				IAML			02 35 17.6	
	comp=E,649nm,0.3s							
LVC	**Limon Verde**	**3.45**	**160**	P		**Pn**	**02 34 40.4**	**+2.1**
	comp=E,18nm,0.3s,baz=345,slow=11,SNR=37							
LVC				S		**Sn**	**02 35 22.1**	**+3.8**
	comp=E,20nm,0.3s,baz=62,slow=17,SNR=7.2							
LPAZ	**La Paz**	**3.63**	**33**	P		**Pn**	**02 34 42.0**	**+1.0**
	comp=E,0.2nm,0.3s,baz=211,slow=5.9,SNR=16							
SIV	**San Ignacio**	**9.32**	**70**	P		**Pn**	**02 35 57.4**	**-1.2**
	comp=E,0.8nm,0.3s,baz=241,slow=13,SNR=22							
H03N1	**Juan Fernandez**	**16.04**	**207**	T		T	02 53 48.7	
	baz=32,slow=72,SNR=597							
H03N2	**Juan Fernandez**	**16.05**	**207**	T		T	02 53 45.8	
	baz=32,slow=72,SNR=459							
H03N3	**Juan Fernandez**	**16.06**	**207**	T		T	02 53 44.8	
	baz=32,slow=72,SNR=369							
PLCA	**Paso Flores**	**21.31**	**181**	P		**P**	**02 38 31.4**	**+0.9**
	comp=E,1.4nm,0.7s,baz=359,slow=8.4,SNR=4.7							
TORD	**Torodi Ar. Bea**	**77.80**	**71**	P		**P**	**02 45 38.2**	**-2.9**
	comp=E,0.4nm,0.7s,baz=254,slow=5.5,SNR=2.2							
YKA	**Yellowknife Ar**	**88.78**	**341**	P		**P**	**02 46 38.0**	**+1.5**
	comp=E,0.1nm,0.5s,baz=131,slow=5.1,SNR=4.7							
H11S2	**WAKE ISLAND Hyl**	**26.38**	**279**	T		T	05 11 48.1	
	baz=100,slow=75,SNR=350							
H11S1	**WAKE ISLAND Hyl**	**26.39**	**279**	T		T	05 11 46.1	
	baz=100,slow=75,SNR=376							
H11S3	**WAKE ISLAND Hyl**	**26.40**	**279**	T		T	05 11 49.4	
	baz=100,slow=75,SNR=310							
H11N3	**WAKE ISLAND Hyl**	**26.41**	**281**	T		T	05 11 49.5	
	baz=100,slow=75,SNR=63							
H11N2	**WAKE ISLAND Hyl**	**26.42**	**281**	T		T	05 11 49.5	
	baz=100,slow=75,SNR=73							
H11N1	**WAKE ISLAND Hyl**	**26.42**	**281**	T		T	05 11 49.5	
	baz=100,slow=75,SNR=49							

*IDC **19** 02:48:44.4±0.8, 35°.12N×26°.93E, h0km, mb3.9/13, mb1 3.9/19, mb1mx3.7/51, mbtmp3.7/19, ML3.2/6, MS2.7/2, Ms1 2.7/2, ms1mx2.4/44, Error ellipse: s-maj=23.7km s-min=10.0km az=178.0*

*NEIC **19** 02:48:45.5±1.7, 35°.06N±0°.04×26°.77E±0°.04, h11km±5km, mb4.0/9, ML3.7(THE), Error ellipse: s-maj=6.1km s-min=3.5km az=216.0*

*NIC **19** 02:48:46.9±0.0, 35°.08N×26°.85E, h21km±1km, Ml3.8/4*

*ATH **19** 02:48:46.8, 35°.03N×26°.86E, h12km±2km, ML3.7/10, Error ellipse: s-maj=4.5km s-min=1.0km az=334.0*

*ISK **19** 02:48:47.8, 35°.24N×26°.74E, h4km, ML3.6/12*

*HLW **19** 02:48:48.3, 35°.11N×26°.97E, h31km±17km, Md4.2, Ml4.0*

*THE **19** 02:48:48.0, 35°.17N×26°.77E, h0km±1km, ML3.7/7, Error ellipse: s-maj=3.4km s-min=0.9km az=153.0*

*DDA **19** 02:48:50.0, 35°.24N×26°.75E, h21km±8km, MW3.9*

ISC 19 02:48:45.7±1.2, **35°.04N**±0°.03×**26°.80E**±0°.02, **h16**km±8km, **n140**, **σ1s52**/168, **mb4.0**/17, **6C**, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.48**	**279**	P		**Pb**	**02 48 56.6**	**+0.7**
ZKR				S		**Sb**	**02 49 04.5**	**+1.7**
ZKR				AML	AML		02 49 09.6	
	comp=N,10463μm,0.5s							
ZKR				AML	AML		02 49 10.4	
	comp=E,21471μm,0.4s							
ZKR	**Zakros**	**0.48**	**279**	P		**Pb**	**02 48 56.6**	**+0.7**
ZKR				S		**Sb**	**02 49 05.6**	**+2.8**
	comp=E,8μm,0.5s							
ZKR	**Zakros**	**0.48**	**279**	PG		**Pb**	**02 48 56.7**	**+0.7**
ZKR				SG		**Sb**	**02 49 03.9**	**+1.1**
ZKR	**Zakros**	**0.48**	**279**	P		**Pb**	**02 48 56.6**	**+0.7**
ZKR				S		**Sb**	**02 49 06.0**	**+3.2**
ZKR				AML	AML		02 49 08.2	
	comp=E,9.9nm,0.5s							
ZKR				AML	AML		02 49 08.2	
	comp=E,9.9nm,0.5s							
ZKR				AML	AML		02 49 09.3	
	comp=E,19nm,0.5s							
ZKR				AML	AML		02 49 09.3	
	comp=E,19nm,0.5s							
KARP	**Karpathos**	**0.58**	**30**	P		**Pb**	**02 48 57.6**	**0.0**
KARP				S		**Sb**	**02 49 06.2**	**+0.5**
KARP				AML	AML		02 49 07.4	
	comp=N,46575μm,0.2s							
KARP				AML	AML		02 49 07.5	
	comp=E,42548μm,0.2s							
KARP	**Karpathos**	**0.58**	**30**	P		**Pb**	**02 48 57.5**	**-0.1**
KARP				S		**Sb**	**02 49 06.1**	**+0.4**
	comp=E,22μm,0.2s							
KARP	**Karpathos**	**0.58**	**30**	PG		**Pb**	**02 48 57.5**	**-0.1**
KARP				SG		**Sg**	**02 49 04.2**	**-0.8**
KARP	**Karpathos**	**0.58**	**30**			**Pg**	**02 48 56.9**	**-0.4**
KARP	**Karpathos**	**0.58**	**30**	⇑P		**Pb**	**02 48 57.3**	**-0.3**
KARP				S		**Sb**	**02 49 06.3**	**+0.7**
KARP				AML	AML		02 49 06.5	
	comp=E,43nm,0.5s							
KARP				AML	AML		02 49 06.5	
	comp=E,43nm,0.5s							
KARP				AML	AML		02 49 07.0	
	comp=E,47nm,0.2s							
KARP				AML	AML		02 49 07.0	
	comp=E,47nm,0.2s							
STIA	**Sitia Lasithi**	**0.60**	**285**	P		**Pb**	**02 48 58.5**	**+0.6**
STIA				S		**Sn**	**02 49 07.8**	**-1.3**
FRMA	**Ierapetra Chan**	**0.88**	**268**	P		**Pg**	**02 49 01.6**	**-1.1**
FRMA				S		**Sn**	**02 49 16.2**	**+0.4**
	comp=E,3μm,0.5s							
NPS	**Neapolis**	**1.00**	**283**	P		**Pn**	**02 49 06.2**	**+1.1**
NPS				S		**Sn**	**02 49 20.7**	**+1.8**
NPS				AML	AML		02 49 28.1	
	comp=N,8140μm,0.8s							
NPS				AML	AML		02 49 28.6	
	comp=E,8037μm,0.8s							
NPS	**Neapolis**	**1.00**	**283**	P		**Pn**	**02 49 06.0**	**+0.9**
HRKL	**Herakleio**	**1.42**	**281**	P		**Pg**	**02 49 13.9**	**+0.9**
HRKL	**Herakleio**	**1.42**	**281**	PN		**Pg**	**02 49 14.3**	**+1.3**
KSTL	**Kastelli Herak**	**1.44**	**281**	P		**Pn**	**02 49 10.8**	**-0.4**

IDI	**Anoyia**	**1.58**	**279**	Pg		**Pg**	**02 49 16.9**	**+0.7**
	comp=E,55nm,0.3s,baz=87,slow=15,SNR=90							
IDI				Lg		Lg	02 49 39.6	
	comp=E,100nm,0.3s,baz=332,slow=14,SNR=8.4							
IDI				LR		LR	02 50 13.1	
	comp=E,199nm,18.7s,baz=74,slow=53							
NIS1	**Nisyros Isl.**	**1.58**	**11**	P		**Pb**	**02 49 14.8**	**+0.1**
NIS1				AML	AML		02 49 46.6	
	comp=E,4458μm,0.7s							
NIS1				AML	AML		02 49 49.1	
	comp=N,4194μm,0.4s							
NIS1	**Nisyros Isl.**	**1.58**	**11**	P		**Pb**	**02 49 14.8**	**+0.1**
NIS1	**Nisyros Isl.**	**1.58**	**11**	PN		**Pb**	**02 49 14.8**	**+0.1**
ARG	**Arkhangelos**	**1.59**	**42**	P		**Pb**	**02 49 15.3**	**+0.5**
ARG				S		**Sn**	**02 49 35.4**	**+1.8**
ARG				AML	AML		02 49 42.2	
	comp=E,3744μm,0.6s							
ARG				AML	AML		02 49 47.3	
	comp=N,2996μm,0.8s							
ARG	**Arkhangelos**	**1.59**	**42**	P		**Pb**	**02 49 15.5**	**+0.7**
ARG				S		**Sb**	**02 49 36.2**	**+1.5**
	comp=N,2μm,0.8s							
ARG	**Arkhangelos**	**1.59**	**42**	PN		**Pg**	**02 49 15.8**	**-0.5**
SIVA	**Sivas**	**1.63**	**270**	P		**Pg**	**02 49 17.4**	**+0.3**
SIVA				AML	AML		02 49 52.5	
	comp=N,3848μm,0.6s							
SIVA				AML	AML		02 49 56.0	
	comp=E,6563μm,0.8s							
KOSK	**Kos Island**	**1.71**	**5**	PN		**Pb**	**02 49 16.9**	**+0.1**
SANT	**Santorini**	**1.72**	**321**	P		**Pg**	**02 49 17.2**	**-1.5**
SANT				AML	AML		02 49 46.4	
	comp=N,1006μm,0.7s							
SANT				AML	AML		02 49 47.1	
	comp=E,2353μm,0.4s							
SANT	**Santorini**	**1.72**	**321**	P		**Pb**	**02 49 16.6**	**-0.3**
SANT	**Santorini**	**1.72**	**321**	*i* P		**Pb**	**02 49 16.8**	**-0.1**
SANT				*i* S		**Sb**	**02 49 37.8**	**-0.5**
SANT	**Santorini**	**1.72**	**321**	PN		**Pb**	**02 49 16.8**	**-0.1**
SANT	**Santorini**	**1.72**	**321**	Pn		**Pn**	**02 49 15.3**	**+0.3**
THR8	**Santorini-Mono**	**1.73**	**322**	P		**Pb**	**02 49 16.6**	**-0.6**
THR6	**Thira Island,**	**1.74**	**319**	P		**Pb**	**02 49 16.9**	**-0.4**
THR9	**Santorini-Faro**	**1.76**	**319**	P		**Pb**	**02 49 17.4**	**-0.2**
SNT1	**Gialos, Santor**	**1.77**	**321**	P		**Pn**	**02 49 16.4**	**+0.7**
SNT1				S		**Sb**	**02 49 39.3**	**-0.4**
	comp=E,2μm,0.7s							
SNT5	**Nea Kammeni, S**	**1.77**	**320**	P		**Pb**	**02 49 17.5**	**-0.4**
THR3	**Thira Island,**	**1.77**	**321**	P		**Pb**	**02 49 17.4**	**-0.5**
THT2	**Imerovigli**	**1.78**	**321**	P		**Pb**	**02 49 17.2**	**-0.9**
THT2	**Imerovigli**	**1.78**	**321**	PN		**Pb**	**02 49 17.9**	**-0.2**
THR5	**Thira Island,**	**1.81**	**320**	P		**Pb**	**02 49 17.7**	**-0.8**
SAP3	**Santorini-Thir**	**1.82**	**320**	P		**Pb**	**02 49 18.5**	**-0.2**
SAP3				S		**Sb**	**02 49 41.0**	**-0.4**
	comp=E,4μm,0.7s							
BODT	**Bodrum**	**2.06**	**11**	PN		**Pn**	**02 49 20.8**	**+1.1**
BDRM	**Kayabasi**	**2.08**	**14**	*i* P		**Pn**	**02 49 21.1**	**+1.1**
BDRM				*i* S		**Sn**	**02 49 41.3**	**-4.5**
BDRM				IAML			02 49 52.0	
	comp=N,174nm,0.8s							
TURN	**Turunc**	**2.09**	**34**	*i* P		**Pn**	**02 49 21.6**	**+1.5**
TURN	**Turunc**	**2.09**	**34**	PN		**Pb**	**02 49 23.1**	**-0.1**
VAM	**Vamos**	**2.16**	**280**	P		**Pg**	**02 49 26.2**	**-0.9**
VAM				AML	AML		02 50 05.5	
	comp=N,2307μm,0.8s							
VAM				AML	AML		02 50 14.7	
	comp=E,1350μm,0.7s							
GVDS	**Gavdos**	**2.23**	**266**	P		**Pb**	**02 49 26.1**	**+0.4**
GVD	**Gavdhos**	**2.24**	**266**	P		**Pg**	**02 49 26.7**	**-1.9**
GVD				AML	AML		02 50 23.3	
	comp=E,1467μm,0.7s							
GVD				AML	AML		02 50 23.7	
	comp=N,1070μm,0.7s							
APE	**Apeiranthos**	**2.27**	**333**	P		**Pn**	**02 49 24.0**	**+1.4**
APE				S		**Sn**	**02 49 51.0**	**+0.7**
	comp=N,640nm,0.5s							
APE	**Apeiranthos**	**2.27**	**333**	*i* P		**Pn**	**02 49 24.0**	**+1.4**
APE				*i* S		**Sn**	**02 49 50.7**	**+0.4**
APE	**Apeiranthos**	**2.27**	**333**	PN		**Pn**	**02 49 24.2**	**+1.6**
APE	**Apeiranthos**	**2.27**	**333**	⇑P		**Pn**	**02 49 24.0**	**+1.4**
APE				S		**Sn**	**02 49 51.1**	**+0.7**
DALY	**Dalyan (Mula)**	**2.32**	**40**	PN		**Pb**	**02 49 26.2**	**-1.0**
IMMV	**Iera Moni Meta**	**2.34**	**281**	P		**Pg**	**02 49 29.3**	**-1.4**
IMMV				AML	AML		02 50 15.7	
	comp=E,1574μm,0.5s							
IMMV				AML	AML		02 50 23.8	
	comp=N,1851μm,0.9s							
IMMV	**Iera Moni Meta**	**2.34**	**281**	P		**Pb**	**02 49 26.6**	**-1.0**
YER	**Yerkesik**	**2.41**	**30**	PN		**Pn**	**02 49 27.2**	**+2.6**
DDIM	**Aydin, Didim**	**2.44**	**8**	*i* P		**Pb**	**02 49 28.1**	**-1.0**
KSL	**Kastellorizon**	**2.52**	**63**	⇑P		**Pn**	**02 49 27.7**	**+1.6**
MULA	**Mugla, Merkez-**	**2.53**	**29**	*i* P		**Pb**	**02 49 31.8**	**+1.0**
MULA				*i* S		**Sn**	**02 50 00.5**	**+3.7**
AKAS	**Kas**	**2.58**	**62**	*i* P		**Pn**	**02 49 28.1**	**+1.1**
AKAS	**Kas**	**2.58**	**62**	Pn		**Pn**	**02 49 27.5**	**+0.5**
SMG	**Samos**	**2.66**	**1**	P		**Pn**	**02 49 28.9**	**+0.9**
GCAM	**G?zelcami?**	**2.67**	**7**	*i* P		**Pn**	**02 49 30.1**	**+2.0**
GCAM	**G?zelcami?**	**2.67**	**7**	PN		**Pn**	**02 49 30.4**	**+2.3**
AYDN	**Tasoluk**	**2.75**	**18**	*i* P		**Pn**	**02 49 31.1**	**+1.8**
CAEL	**Denizli, Camel**	**2.91**	**44**	*i* P		**Pn**	**02 49 34.6**	**+3.1**
TAVA	**DENIZLI_Tavas**	**2.96**	**35**	*i* P		**Pn**	**02 49 35.1**	**+2.9**
ANKY	**Antikythira Is**	**2.97**	**287**	P		**Pb**	**02 49 35.5**	**-2.8**
DGB	**zmir**	**3.00**	**1**	*i* P		**Pn**	**02 49 33.6**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**3.03**	**17**	PN		**Pn**	**02 49 35.6**	**+2.5**
ELL	**Elmali**	**3.04**	**55**			**Pn**	**02 49 35.5**	**+2.1**
GOLH	**Golhisar**	**3.13**	**45**	*i* P		**Pn**	**02 49 37.9**	**+3.4**
AKUM	**Antalya-Kumluc**	**3.15**	**65**	*i* P		**Pn**	**02 49 35.6**	**+0.8**
URLA	**Izmir**	**3.31**	**357**	*i* P		**Pn**	**02 49 35.6**	**-1.4**
CHOS	**Chios island**	**3.39**	**350

	baz=154								
RYAN					AMP			02 51 00.0	
	baz=154								
HSAF	**As Saff**	**6.74**	**142**		P		**Pn**	**02 50 24.9**	**+0.8**
	baz=143								
BR231	**Keskin MP Arra**	**6.75**	**43**		Pn		**Pn**	**02 50 23.9**	**-0.4**
ANTO	**Ankara**	**6.78**	**43**		Pn		**Pn**	**02 50 25.3**	**+0.7**
GLL	**Jalalah**	**6.85**	**141**		P		**Pn**	**02 50 26.2**	**+0.5**
	baz=142								
FNA	**Florina**	**7.16**	**325**		Pn		**Pn**	**02 50 28.7**	**-1.1**
BRTR	**Keskin Array B**	**7.17**	**47**		Pn		**Pn**	**02 50 31.6**	**+1.5**
	comp=N,0.3nm,0.3s,baz=227,slow=14,SNR=4.3								
BRTR					Sn		**Sn**	**02 51 46.9**	**-4.4**
	baz=243,slow=9.5,SNR=1.2								
BRTR					LR		LR	02 54 13.2	
	comp=N,145nm,20.4s,baz=240,slow=47								
SUZ	**Suez**	**7.27**	**134**		P		**Pn**	**02 50 33.0**	**+1.6**
	baz=135								
MMAI	**Mount Meron Ar**	**7.42**	**103**		Pn		**Pn**	**02 50 34.4**	**+0.9**
	comp=N,1.8nm,0.3s,baz=301,slow=12,SNR=9.2								
MMAI					Sn		**Sn**	**02 51 52.7**	**-4.8**
	comp=N,1.7nm,0.3s,baz=297,slow=9.2,SNR=4.2								
NBNS	**Bani Suef**	**7.46**	**148**		P		**Pn**	**02 50 35.4**	**+1.5**
	baz=149								
HFRF	**Wahat Farafira**	**7.98**	**170**		P		**Pn**	**02 50 43.0**	**+2.0**
	baz=171								
VTS	**Vitosha**	**8.06**	**341**		Pn		**Pn**	**02 50 41.6**	**-0.6**
EIL	**Elat**	**8.73**	**126**		Pn		**Pn**	**02 50 49.9**	**-1.5**
	comp=N,0.3nm,0.3s,baz=86,slow=7.4,SNR=1.7								
EIL					Sn		**Sn**	**02 52 24.8**	**-4.7**
	comp=N,2.3nm,0.3s,baz=18,slow=13,SNR=7.3								
EIL					LR		LR	02 54 50.6	
	comp=N,20nm,19.2s,baz=300,slow=42								
HKAT	**Jabal Katrina**	**8.93**	**135**		P		**Pn**	**02 50 54.4**	**+0.1**
	baz=135								
KEST	**Kesra**	**14.26**	**278**		Pn		**Pn**	**02 52 08.8**	**+1.7**
	comp=N,0.0nm,0.3s,baz=65,slow=23,SNR=0.8								
AKASG	**Malin Array Be**	**15.75**	**6**		Pn		**P**	**02 52 30.0**	**-0.7**
	comp=N,0.5nm,0.3s,baz=196,slow=11,SNR=9.8								
AKASG	**Malin Array Be**	**15.75**	**6**		Pn		**Pn**	**02 52 25.2**	**-1.6**
GERES	**GERESS Array B**	**16.85**	**329**		Pn		**P**	**02 52 43.0**	**-0.1**
	comp=N,0.1nm,0.3s,baz=142,slow=12,SNR=7.2								
DAVOX	**Davos/Dischmat**	**17.31**	**318**		P		**P**	**02 52 48.6**	**+0.4**
	comp=N,0.0nm,0.3s,baz=166,slow=17,SNR=1.2								
CLL	**Collm**	**19.06**	**333**	*i*	P		**P**	**02 53 08.0**	**+0.7**
ESDC	**Sonseca Array**	**24.82**	**290**		P		**P**	**02 54 07.6**	**+0.3**
	comp=N,0.4nm,0.6s,baz=81,slow=10,SNR=8.0								
FINES	**FINESS Array B**	**26.42**	**359**		P		**P**	**02 54 20.5**	**-0.9**
	comp=N,2.7nm,0.8s,baz=173,slow=17,SNR=2.4								
AKTO	**Aktyubinsk**	**27.35**	**46**		P		**P**	**02 54 30.0**	**0.0**
	comp=N,0.4nm,0.5s,baz=96,slow=14,SNR=1.6								
TOA0	**Torodi Ar. Sit**	**31.46**	**232**		P		**P**	**02 55 07.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**31.46**	**232**		P		**P**	**02 55 08.3**	**+1.6**
	comp=N,1.0nm,0.5s,baz=34,slow=8.9,SNR=11								
TORD	**Torodi Ar. Bea**	**31.46**	**232**		IAmb		IAmb	02 55 59.7	
	comp=Z,1.1nm,1.1s								
KKAR	**Karatay Array**	**34.55**	**63**		P		**P**	**02 55 34.2**	**+0.7**
KKAR					IAmb		IAmb	02 55 39.4	
	comp=Z,2.3nm,1.1s								
BRVK	**Borovoye**	**35.40**	**46**		P		**P**	**02 55 41.5**	**+0.8**
AAK	**Ala-Archa**	**37.50**	**64**		P		**P**	**02 55 59.8**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=194,slow=18,SNR=1.7								
AAK	**Ala-Archa**	**37.50**	**64**		P		**P**	**02 56 00.5**	**+1.5**
AAK					IAmb		IAmb	02 56 13.4	
	comp=Z,9.2nm,1.8s								
MK31	**Makanchi Array**	**42.72**	**57**		P		**P**	**02 56 42.5**	**+0.5**
MK31					IAmb		IAmb	02 56 44.3	
	comp=Z,1.7nm,0.8s								
MKAR	**Makanchi Array**	**42.72**	**57**		P		**P**	**02 56 43.6**	**+1.6**
	comp=Z,2.1nm,0.6s,baz=279,slow=6.9,SNR=25								
MKAR	**Makanchi Array**	**42.72**	**57**		P		**P**	**02 56 43.3**	**+1.3**
ZAA0	**Zalesovo Array**	**44.12**	**46**		P		**P**	**02 56 54.5**	**+1.4**
ZAA0					IAmb		IAmb	02 56 54.9	
	comp=Z,2.1nm,0.6s								
ZALV	**Zalesovo Beam**	**44.12**	**46**		P		**P**	**02 56 53.6**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=266,slow=8.0,SNR=11								
ZALV					PcP		**PcP**	**02 58 38.9**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=294,slow=4.6,SNR=2.0								
ZALV	**Zalesovo Beam**	**44.12**	**46**		P		**P**	**02 56 53.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**65.25**	**84**		P		**P**	**02 59 27.6**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=287,slow=8.7,SNR=4.0								
USRK	**Ussuriysk Ar.**	**75.97**	**46**		P		**P**	**03 00 32.1**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=292,slow=5.4,SNR=2.2								
KSRS	**Korea Array**	**77.28**	**53**		P		**P**	**03 00 40.4**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=308,slow=6.2,SNR=4.1								
YKA	**Yellowknife Ar**	**77.96**	**343**		P		**P**	**03 00 42.4**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=35,slow=5.6,SNR=7.7								
ILAR	**Eielson Array**	**80.39**	**357**		P		**P**	**03 00 55.4**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=349,slow=4.9,SNR=4.5								
ULM	**Lac du Bonnet**	**81.15**	**327**		P		**P**	**03 00 58.5**	**-1.9**
	comp=Z,1.0nm,0.5s,baz=45,slow=4.4,SNR=4.4								
MJAR	**Matsushiro Arr**	**84.39**	**49**		P		**P**	**03 01 18.0**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=298,slow=6.4,SNR=5.6								

*NEIC **19** 03:06:02.9±2.5, 61.63N±0.02×141.22W±0.07, h8km±8km, Error ellipse: s-maj=5.3km s-min=2.1km az=116.0*
*ANF **19** 03:06:03.1±0.3, 61.58N×141.18W, h3km±2km, ML3.7/20, Error ellipse: s-maj=2.1km s-min=1.8km az=101.0, Hypocentre not reviewed by the ISC*
AEIC 19 03:06:02±2.4**, 61.59N**±0.03×**141.10W**±0.08**, h12**km±5km**, ML3.4, ML3.6**/111(NEIC)**, Error ellipse: s-maj=5.4km s-min=4.3km az=108.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.23**	**32**		Pb	03 06 07.9	-0.4
YUK2					Sg	03 06 11.3	+0.9
YUK3	**Moose Creek**	**0.36**	**58**		Pb	03 06 10.3	-0.1
YUK3					Sb	03 06 15.2	-0.9
BARN	**Barnard Glacie**	**0.60**	**207**		Pb	03 06 14.5	0.0
CTGM	**Chitina Glacie**	**0.64**	**190**		Pb	03 06 15.4	+0.2
CTGM					Sb	03 06 24.8	+0.8
CTG	**Chitna Glacier**	**0.64**	**190**	P		03 06 15.2	
	baz=10						
CTG				S		03 06 24.1	
	baz=10						
LOGN	**Logan Glacier**	**0.77**	**176**		Pb	03 06 17.8	+0.4
PTPK	**Patty Peak**	**0.77**	**239**		Pb	03 06 17.9	+0.5
PTPK					Sb	03 06 29.2	+1.2
BALM	**Baldy**	**0.82**	**228**		Pb	03 06 18.4	+0.2
BVCY	**Beaver Creek**	**0.83**	**8**		Pb	03 06 18.9	+0.4
BVCY					Sb	03 06 30.1	+0.5
KIAG	**Kiagna River**	**0.90**	**223**		Pb	03 06 19.8	+0.1
GRNC	**Granite Creek**	**0.92**	**200**		Pb	03 06 20.4	+0.5
GRNC					Sn	03 06 33.6	-0.6
GRNC	**Granite Creek**	**0.92**	**200**	IAML		03 06 37.1	
	comp=N,2μm,0.6s						
MCARA	**McCarthy VSAT**	**0.94**	**258**		Pn	03 06 21.5	+0.4
MCARA	**McCarthy VSAT**	**0.94**	**258**	IAML		03 06 37.7	
	comp=N,2μm,0.9s						
MCARA	**McCarthy VSAT**	**0.94**	**258**	P		03 06 21.0	
	baz=76						
MCARA				Sb		03 06 34.8	
	baz=76						
TABL	**Table Mountain**	**1.15**	**181**		Pg	03 06 24.7	+0.5
TABL	**Table Mountain**	**1.15**	**181**	IAML		03 06 45.9	
	comp=E,842nm,0.7s						
TABL				IAML		03 06 46.7	
	comp=N,810nm,0.5s						
TGL	**Tana Glacier**	**1.18**	**226**		Pg	03 06 25.0	+0.2
TGL	**Tana Glacier**	**1.18**	**226**	IAML		03 06 43.7	
	comp=N,879nm,0.6s						
TGL				IAML		03 06 44.5	
	comp=E,929nm,0.6s						
VRDI	**Verde Repeater**	**1.19**	**253**		Pg	03 06 25.1	+0.3
VRDI	**Verde Repeater**	**1.19**	**253**	IAML		03 06 42.9	
	comp=N,896nm,0.6s						
YUK4	**Talbot Arm**	**1.21**	**101**		Pg	03 06 26.2	+1.0
YAH	**Yahtse**	**1.27**	**195**		Pg	03 06 27.1	+0.7
YAH	**Yahtse**	**1.27**	**195**	IAML		03 06 46.1	
	comp=E,899nm,0.7s						
YAH				IAML		03 06 55.0	
	comp=N,864nm,0.6s						
CRQE	**Cirque**	**1.28**	**230**	P		03 06 26.5	
	baz=48						
CRQE				S		03 06 44.1	
	baz=48						
CRQM	**Cirque**	**1.29**	**231**		Pb	03 06 26.5	+0.2
CRQM	**Cirque**	**1.29**	**231**	IAML		03 06 47.8	
	comp=E,1μm,1.1s						
GLB	**Gilahina Butte**	**1.31**	**265**		Pg	03 06 27.3	+0.3
GLB	**Gilahina Butte**	**1.31**	**265**	IAML		03 06 46.7	
	comp=N,729nm,0.6s						
SAMH	**Samovar Hills**	**1.47**	**174**		Pg	03 06 31.3	+1.0
YUK6	**Outpost Mounta**	**1.48**	**115**		Pg	03 06 30.2	-0.1
BC03		**1.52**	**348**		Pg	03 06 31.2	+0.2
BCAR	**Beaver Creek A**	**1.52**	**348**		Pb	03 06 29.8	-0.3
L27K	**Beaver Creek,**	**1.52**	**347**		Pb	03 06 30.1	0.0
L27K	**Beaver Creek,**	**1.52**	**347**	P		03 06 30.9	
	baz=167,SNR=106						
L27K				S		03 06 51.6	
	baz=167						
CHX	**Chaix Hills**	**1.53**	**180**		Pg	03 06 32.2	+0.9
KHIT	**Khitrov Hills**	**1.56**	**223**		Pg	03 06 31.9	+0.1
PCA	**Pinnacle**	**1.56**	**164**		Pg	03 06 32.7	+0.9
PINM	**Pinnacle**	**1.56**	**164**	P		03 06 32.0	
	baz=345,SNR=39						
PINM				S		03 06 53.6	
	baz=345						
KULT	**Kultieth River**	**1.56**	**211**		Pg	03 06 33.7	+1.8
YUK5	**Granite Creek**	**1.63**	**105**		Pg	03 06 33.9	+0.7
SNH	**Sunshine Point**	**1.65**	**212**		Pg	03 06 34.5	+0.9
CYK	**Cape Yakataga**	**1.66**	**205**		Pg	03 06 33.9	+0.2
N25K	**Chitina, Valde**	**1.67**	**272**		Pg	03 06 33.5	-0.6
N25K	**Chitina, Valde**	**1.67**	**272**	P		03 06 32.5	
	baz=89,SNR=29						
N25K				S		03 06 55.6	
	baz=89						
GRIN	**Grindle Hills**	**1.70**	**220**		Pg	03 06 35.0	+0.4
BERG	**Berg Lake**	**1.75**	**228**	Pn	Pb	03 06 33.8	-0.1
YUK7	**Dusty Glacier**	**1.79**	**125**		Pg	03 06 36.6	+0.3
BCPM	**Bancas Point**	**1.79**	**156**		Pg	03 06 36.7	+0.3
BCPM	**Bancas Point**	**1.79**	**156**	IAML		03 07 10.4	
	comp=E,611nm,0.6s						
BMRM	**Bremner River**	**1.80**	**251**		Pb	03 06 34.3	-0.6
BMRM				IAML		03 07 05.3	
	comp=E,716nm,0.8s						
BMRM	**Bremner River**	**1.80**	**251**	P		03 06 34.3	
	baz=68,SNR=26						
BMRM				Sb		03 07 00.3	
	baz=68						
MENT	**Mentasta**	**1.82**	**319**		Pg	03 06 36.2	-0.8
MENT	**Mentasta**	**1.82**	**319**	IAML		03 07 05.0	
	comp=N,669nm,0.4s						
HYT	**Haines Junctio**	**1.90**	**112**		Pb	03 06 37.0	+0.3
HYT	**Haines Junctio**	**1.90**	**112**	IAML		03 07 09.8	
	comp=N,556nm,0.6s						
HMT	**Hamilton**	**1.99**	**232**	Pn	Pn	03 06 35.6	+0.1
PNL	**Peninsula**	**2.10**	**156**		Pb	03 06 41.1	+1.1
YKU2	**Yakutat**	**2.20**	**161**	Pn	Pn	03 06 38.5	+0.2
DIV	**Divide**	**2.30**	**260**		Pb	03 06 43.6	+0.3
KLU	**Klutina**	**2.31**	**270**		Pb	03 06 44.2	+0.6
KLU	**Klutina**	**2.31**	**270**	IAML		03 07 21.6	
	comp=E,304nm,0.8s						
KLU				IAML		03 07 23.7	
	comp=N,336nm,0.6s						
KLU	**Klutina**	**2.31**	**270**	Pb		03 06 44.6	
	baz=85,SNR=51						
KLU				Sb		03 07 15.3	
	baz=85						
M24K	**Tolsona, Glenn**	**2.46**	**284**		Pb	03 06 45.7	-0.5
M24K	**Tolsona, Glenn**	**2.46**	**284**	IAML		03 07 41.6	
	comp=E,194nm,2.4s						
M24K	**Tolsona, Glenn**	**2.46**	**284**	Pb		03 06 46.4	
	baz=100,SNR=9.2						
PAX	**Paxson**	**2.47**	**306**		Pb	03 06 46.3	0.0
PAX	**Paxson**	**2.47**	**306**	Pb		03 06 46.8	
	baz=122,SNR=10						
DOT	**Dot Lake**	**2.48**	**328**		Pb	03 06 44.5	-1.9
EYAK	**Cordova Ski Ar**	**2.49**	**247**	Pn	Pn	03 06 41.6	-0.7
EYAK	**Cordova Ski Ar**	**2.49**	**247**	Pb		03 06 47.6	
	baz=63						
EYAK				Sb		03 07 21.5	
	baz=63						
K27K	**Chicken**	**2.49**	**350**		Pb	03 06 45.0	-1.7
K27K	**Chicken**	**2.49**	**350**	IAML		03 07 22.5	
	comp=E,263nm,0.8s						
K27K	**Chicken**	**2.49**	**350**	P		03 06 44.5	
	baz=169						
K27K				S		03 07 15.6	
	baz=169						
DAWY	**Dawson**	**2.61**	**17**		Pn	03 06 46.2	+2.3
FID	**Port Fidalgo**	**2.74**	**254**		Pb	03 06 50.9	+0.1
FID	**Port Fidalgo**	**2.74**	**254**	IAML		03 07 39.9	
	comp=E,233nm,0.9s						
FID				IAML		03 07 41.2	
	comp=N,185nm,1.0s						
SCRK	**Sand Creek**	**2.74**	**332**		Pn	03 06 47.9	+2.1
SCRK	**Sand Creek**	**2.74**	**332**	IAML		03 07 33.5	
	comp=E,183nm,0.7s						
SCRK				IAML		03 07 36.4	
	comp=N,177nm,1.1s						
SCRK	**Sand Creek**	**2.74**	**332**	P		03 06 48.0	
	baz=150,SNR=22						
SCRK				Sb		03 07 28.5	
	baz=150						
SCM	**Sheep Creek Mo**	**2.97**	**277**		Pb	03 06 53.7	-1.2
SCM	**Sheep Creek Mo**	**2.97**	**277**	IAML		03 07 46.8	
	comp=N,149nm,1.0s						
SCM				IAML		03 07 54.2	
	comp=E,153nm,0.8s						
GLI	**Glacier Island**	**2.98**	**259**	Pn	Pn	03 06 48.7	-0.4
GLI				IAML		03 07 38.4	
	comp=N,162nm,1.3s						
GLI				IAML		03 07 41.0	
	comp=E,165nm,0.9s						
GLI	**Glacier Island**	**2.98**	**259**	Sb		03 07 34.4	
	baz=74						
WHY	**Whitehorse**	**3.16**	**104**		Pn	03 06 53.9	+2.2
WHY	**Whitehorse**	**3.16**	**104**	IAML		03 07 50.9	
	comp=E,138nm,0.6s						
WHY				IAML		03 07 51.6	
	comp=N,205nm,0.8s						
PLBC	**Pleasant Camp**	**3.17**	**130**		Pb	03 06 55.6	-2.6
EGAK	**Eagle**	**3.20**	**360**		Pn	03 06 54.9	+2.9
EGAK	**Eagle**	**3.20**	**360**	P		03 06 54.7	
	baz=180,SNR=28						
EGAK				S		03 07 33.7	
	baz=180						
WAT6	**Susitna Watana**	**3.28**	**291**	Sb		03 07 43.6	
	baz=105						
Q23K	**Middleton Isla**	**3.38**	**232**	Pb		03 07 03.0	
	baz=48						
SML	**Sawmill**	**3.45**	**277**	Pb		03 07 03.3	
	baz=90						
SML				Sb		03 07 48.6	
	baz=90						
KNK	**Knik Glacier**	**3.53**	**270**	Pb		03 07 05.3	
	baz=84						
SKAG	**Skagway**	**3.56**	**124**	Pn	Pn	03 06 57.5	+0.4
SKAG				IAML		03 08 09.0	
	comp=E,70nm,1.5s						
SKAG	**Skagway**	**3.56**	**124**	Pb		03 07 07.5	
	baz=309						
PWL	**Port Wells**	**3.57**	**261**	Pn	Pn	03 06 56.5	-0.7
GHO	**Glory Hole Cre**	**3.73**	**276**	Pn	Pn	03 06 57.9	-1.5
GHO				IAML		03 08 03.8	
	comp=N,89nm,2.8s						
GHO				IAML		03 08 51.1	
	comp=E,75nm,4.9s						
PMR	**Palmer**	**3.84**	**274**	Pn	Pn	03 07 00.2	-0.6
PMR				IAML		03 08 10.0	
	comp=N,59nm,0.8s						
PMR	**Palmer**	**3.84**	**274**	Pb		03 07 09.5	
	baz=86,SNR=6.8						
RND	**Reindeer**	**4.03**	**300**	Pn	Pn	03 07 02.3	-1.2
IL31		**4.13**	**323**	Pn	Pn	03 07 05.2	+0.5
ILAR	**Eielson Array**	**4.13**	**323**	Pn	Pn	03 07 05.2	+0.4
RC01	**Rabbit Creek A**	**4.19**	**267**	Pn	Pn	03 07 06.6	+1.0
RC01				IAML		03 07 49.7	
	comp=E,61nm,5.0s						
RC01				IAML		03 08 19.2	
	comp=N,76nm,2.0s						
MCK	**McKinley**	**4.20**	**304**	Pn	Pn	03 07 05.7	-0.1
MCK				IAML		03 08 37.1	
	comp=N,69nm,2.2s						
MCK				IAML		03 09 05.7	
	comp=E,55nm,4.2s						
WRH	**Wood River Hil**	**4.30**	**315**	Pn	Pn	03 07 07.0	-0.1
WRH				IAML		03 08 22.8	
	comp=E,44nm,1.3s						
CCB	**Clear Creek Bu**	**4.32**	**318**	Pn	Pn	03 07 08.1	+0.7
CCB				IAML		03 08 30.8	
	comp=N,39nm,3.5s						
BESE	**Bessie Mountai**	**4.35**	**131**	Pn	Pn	03 07 08.8	+0.9
CUT	**Chulitna**	**4.40**	**285**	Pn	Pn	03 07 08.9	+0.4
PRP	**Porcupine Dome**	**4.41**	**335**	Pn	Pn	03 07 09.4	+0.6
COLA	**College**	**4.49**	**320**	Pn	Pn	03 07 10.0	+0.2
TCOL	**CIGO, UAF Yank**	**4.49**	**320**	Pn	Pn	03 07 09.2	-0.6
POKR	**Poker Plat Res**	**4.54**	**324**		Pn	03 07 11.2	+0.7
POKR				IAML		03 08 27.6	
	comp=E,68nm,0.9s						
POKR				IAML		03 08 35.4	
	comp=N,73nm,0.8s						
POKR	**Poker Plat Res**	**4.54**	**324**	P		03 07 11.9	
	baz=138						
BWN	**Browne**	**4.62**	**308**		Pn	03 07 08.4	-3.1
TRF	**Thorofare Moun**	**4.65**	**298**		Pn	03 07 12.4	+0.3
TRF				IAML		03 08 53.6	
	comp=E,60nm,3.3s						
TRF				IAML		03 09 57.9	
	comp=N,49nm,4.1s						
MDM	**Murphy Dome**	**4.67**	**320**	Pn	Pn	03 07 12.6	+0.4
MDM				IAML		03 08 33.1	
	comp=E,43nm,0.9s						
MDM				IAML		03 08 44.9	
	comp=N,56nm,1.2s						
NEA2	**Nenana**	**4.71**	**313**	Pn	Pn	03 07 12.9	+0.2
NEA2				IAML		03 09 13.1	
	comp=E,32nm,4.7s						
NEA2				IAML		03 09 33.7	
	comp=N,33nm,4.7s						
JIS	**Juneau Island**	**4.74**	**132**		Pn	03 07 13.9	+0.7
JIS				IAML		03 08 38.6	
	comp=E,49nm,1.7s						
JIS				IAML		03 08 38.6	
	comp=N,60nm,1.5s						
KTH	**Kantishna Hill**	**4.95**	**298**	Pn	Pn	03 07 16.5	+0.4
KTH				IAML		03 08 52.9	
	comp=E,41nm,2.8s						
KTH				IAML		03 08 57.9	
	comp=N,48nm,3.8s						
SKT	**Skwentna**	**4.97**	**279**	Pn	Pn	03 07 16.8	+0.4
SKT				IAML		03 08 57.0	
	comp=N,48nm,4.6s						
SKT				IAML		03 09 33.4	
	comp=E,50nm,4.8s						
I23K	**Minto, Yukon-K**	**5.15**	**317**		Pn	03 07 22.1	+3.3
I23K	**Minto, Yukon-K**	**5.15**	**317**	IAML		03 08 58.7	
	comp=E,36nm,1.2s						
I23K				IAML		03 08 59.1	
	comp=N,40nm,1.0s						
EPYK	**Eagle Plains**	**5.17**	**20**	Pn	Pn	03 07 20.1	+0.9
BPAW	**Bear Paw Mtn.**	**5.18**	**303**		Pn	03 07 20.5	+1.2
BPAW				IAML		03 08 49.8	
	comp=E,38nm,4.7s						
BPAW				IAML		03 09 10.3	
	comp=N,33nm,4.6s						
FYU	**Fort Yukon**	**5.31**	**342**	Pn	Pn	03 07 21.5	+0.5
MLY	**Manley**	**5.55**	**313**	Pn	Pn	03 07 23.4	-0.9
BM03	**Burnt Mountain**	**6.04**	**347**		Pn	03 07 34.2	+3.1
BMAR	**Burnt Mountain**	**6.05**	**347**		Pn	03 07 33.5	+2.3
BMAR					LR	03 09 16.6	
DLBC	**Dease Lake**	**6.39**	**115**	Pn	Pn	03 07 37.6	+1.7
WRAK	**Wrangell Islan**	**6.88**	**135**	Pn	Pn	03 07 43.0	+0.5
COLD	**Coldfoot**	**6.89**	**329**		Pn	03 07 44.0	+1.3
COLD	**Coldfoot**	**6.89**	**329**	P		03 07 44.8	
	baz=141,SNR=6.3						
IM03		**7.12**	**314**		Pn	03 07 48.6	+2.8
INK	**Inuvik**	**7.46**	**22**		Pn	03 07 54.0	+3.5
TOLK	**Toolik Lake Re**	**7.92**	**337**		Pn	03 08 00.7	+3.8
TOLK	**Toolik Lake Re**	**7.92**	**337**	P		03 08 00.3	
	baz=149,SNR=25						
C36M	**Paulatuk**	**10.48**	**35**	Pn	Pn	03 08 30.8	-1.0
C36M	**Paulatuk**	**10.48**	**35**	P		03 08 32.5	
	baz=230,SNR=9.1						

*IDC **19** 03:06:01.3±0.7, 60.36S×24.84W, h0km, mb4.2/8, mb1 4.2/8, mb1mx4.0/26, mbtmp4.2/8, MS3.2/6, Ms1 3.1/6, ms1mx3.0/18, Error ellipse: s-maj=24.3km s-min=20.1km az=78.0*
*NEIC **19** 03:06:05.8±1.6, 60.4S±0.1×24.8W±0.3, h32km±4km, mb4.5/17, Error ellipse: s-maj=21.6km s-min=16.9km az=49.0*
ISC 19 03:06:02.3±0.5**, 60.47S**±0.10×**24.6W**±0.1**, h10**km**, n45, σ1s36/36, mb4.4/12, MS3.1/5, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.20**	**154**	P	**Pn**	**03 08 54.1**	**-1.7**
VNA3	**Neumayer Olymp**	**12.37**	**157**	P	**Pn**	**03 08 56.1**	**-2.1**
VNA2	**Neumayer--Watz**	**12.59**	**153**	P	**Pn**	**03 08 58.6**	**-2.6**
	baz=314,slow=14						
SNAA	**Sanae**	**14.17**	**151**	P	**Pn**	**03 09 20.6**	**-2.2**
SNAA	**Sanae**	**14.17**	**151**	Pn	**Pn**	**03 09 20.5**	**-2.2**
	8.1nm,0.3s,baz=319,slow=16,SNR=113						
SNAA				Sn	Sn	03 11 43.9	-16
	0.6nm,0.3s,baz=308,slow=19,SNR=5.0						
SNAA				LR	LR	03 13 28.7	
	comp=Z,104nm,21.3s,baz=346,slow=31						
SNAA	**Sanae**	**14.17**	**151**		**Pn**	**03 09 19.9**	**-2.9**
BELA	**Belgrano 2**	**17.79**	**187**		**P**	**03 10 11.1**	**+0.8**
EFI	**East Falkland**	**20.42**	**281**	P	**P**	**03 10 39.5**	**+0.3**
EFI				IAmb	IAmb	03 10 41.9	
	comp=Z,47nm,1.3s						
QSPA	**South Pole Qui**	**29.76**	**180**	P	**P**	**03 12 10.5**	**+1.8**
	comp=Z,4.2nm,0.6s,baz=198,slow=2.1,SNR=20						
QSPA	**South Pole Qui**	**29.76**	**180**	P	**P**	**03 12 10.8**	**+2.2**
PLCA	**Paso Flores**	**34.25**	**284**	P	**P**	**03 12 47.3**	**-0.9**
	comp=Z,5.2nm,0.8s,baz=130,slow=6.2,SNR=7.8						
PLCA				LR	LR	03 25 49.6	
	comp=Z,47nm,18.5s,baz=156,slow

FINES	**FINESS Array B**	**127.67**	**28**	PKP	**PKPdf**	**03 25 04.8**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=191,slow=1.0,SNR=5.7						
YKA	**Yellowknife Ar**	**140.29**	**313**	PKP	**PKPdf**	**03 25 29.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=125,slow=2.6,SNR=8.3						
EUNU	**Eureka**	**144.56**	**345**	PKPdf	**PKPdf**	**03 25 37.1**	**+0.1**
SONM	**Songino Array**	**149.43**	**92**	PKPbc	**PKPbc**	**03 25 50.8**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=225,slow=3.7,SNR=4.6						
INK	**Inuvik**	**150.00**	**315**	PKPbc	**PKPbc**	**03 25 50.4**	**-0.6**
KSRS	**Korea Array**	**151.15**	**131**	PKPbc	**PKPbc**	**03 25 54.3**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=216,slow=5.4,SNR=3.5						
ILAR	**Eielson Array**	**153.92**	**304**	PKPbc	**PKiKP**	**03 26 01.3**	**+1.1**
	comp=Z,1.6nm,1.0s,baz=175,slow=2.3,SNR=7.5						
ILAR	**Eielson Array**	**153.92**	**304**		**PKiKP**	**03 26 00.8**	**+0.6**

*SOF **19** 03:10:31.4, 41°.17N×24°.68E, h12km, MD2.6*
*ATH **19** 03:10:32.5, 41°.26N×24°.68E, h8km±4km, ML2.4/2, Error ellipse: s-maj=4.8km s-min=0.8km az=183.0*
*THE **19** 03:10:32.8, 41°.23N×24°.67E, h4km±1km, ML2.5/10, Error ellipse: s-maj=1.2km s-min=0.5km az=196.0*
*ISK **19** 03:10:32.5, 41°.22N×24°.70E, h7km, ML2.7/10*
*DDA **19** 03:10:33.0, 41°.17N×24°.72E, h18km±11km, ML2.5*
*BEO **19** 03:10:33.8±0.7, 41°.22N×24°.67E, h0km, ML2.9/6*

ISC 19 03:10:32.8±1.0, 41°.23N±0'.02×24°.67E±0'.01, h8km±8km, n79, σ0°.81/113, 4C-6D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAVA	**Kavala**	**0.26**	**207**	P	**Pg**	**03 10 38.1**	**+0.1**
KAVA				S	**Sg**	**03 10 42.4**	**+0.9**
KAVA				AML	AML	03 10 42.5	
	comp=E,3807μm,0.2s						
KAVA				AML	AML	03 10 42.6	
	comp=N,2804μm,0.2s						
KAVA	**Kavala**	**0.26**	**207**	P	**Pg**	**03 10 38.1**	**+0.1**
KAVA				S	**Sg**	**03 10 42.4**	**+0.9**
KVLA	**Kavala**	**0.36**	**216**	P	**Pg**	**03 10 39.8**	**-0.1**
KVLA				S	**Sg**	**03 10 45.4**	**+0.6**
NVR	**Nevrokopi**	**0.62**	**281**	P	**Pg**	**03 10 44.1**	**-0.7**
NVR				S	**Sg**	**03 10 52.8**	**-0.1**
NVR				AML	AML	03 10 55.9	
	comp=E,594μm,0.2s						
NVR				AML	AML	03 10 56.9	
	comp=N,710μm,0.2s						
NVR	**Nevrokopi**	**0.62**	**281**	P	**Pg**	**03 10 44.1**	**-0.7**
NVR				S	**Sg**	**03 10 53.4**	**+0.5**
	comp=N,332nm,0.2s						
THAS	**Thassos island**	**0.62**	**177**	P	**Pg**	**03 10 44.9**	**0.0**
THAS	**Thassos island**	**0.62**	**177**	P	**Pg**	**03 10 44.9**	**0.0**
THAS				S	**Sg**	**03 10 53.3**	**+0.3**
	comp=N,628nm,0.3s						
RDO	**Rodhopi**	**0.66**	**97**	P	**Pg**	**03 10 45.2**	**-0.4**
RDO				S	**Sg**	**03 10 53.6**	**-0.5**
RDO	**Rodhopi**	**0.66**	**97**	P	**Pg**	**03 10 45.2**	**-0.4**
RDO	**Rodhopi**	**0.66**	**97**	PG	**Pg**	**03 10 44.9**	**-0.7**
RDO				SG	**Sg**	**03 10 54.5**	**+0.3**
KDZ	**Kurdzhali**	**0.70**	**53**	PG	**Pg**	**03 10 45.1**	**-1.2**
KDZ				SG	**Sg**	**03 10 53.8**	**-1.7**
KDZ	**Kurdzhali**	**0.70**	**53**	*i* P	**Pg**	**03 10 45.2**	**-1.1**
MMB	**Musomiste**	**0.79**	**297**	*i* P	**Pg**	**03 10 47.4**	**-0.7**
SRS	**Serrai**	**0.82**	**262**	P	**Pg**	**03 10 48.3**	**-0.4**
SRS	**Serrai**	**0.82**	**262**	P	**Pg**	**03 10 48.1**	**-0.5**
SRS				S	**Sg**	**03 11 00.1**	**+0.8**
PLD	**Plovdiv**	**0.87**	**2**	PG	**Pg**	**03 10 50.0**	**+0.4**
PLD				SG	**Sb**	**03 11 02.9**	**+0.8**
PLD	**Plovdiv**	**0.87**	**2**	*i* P	**Pb**	**03 10 50.2**	**0.0**
SMTH	**Samothraki Isl**	**1.00**	**139**	P	**Pg**	**03 10 51.6**	**-0.4**
SMTH	**Samothraki Isl**	**1.00**	**139**	P	**Pg**	**03 10 51.8**	**-0.3**
SMTH				S	**Sn**	**03 11 06.7**	**-0.7**
	comp=N,358nm,0.2s						
OUR	**Ouranopolis**	**1.04**	**210**	P	**Pg**	**03 10 52.6**	**-0.1**
OUR	**Ouranopolis**	**1.04**	**210**	P	**Pg**	**03 10 52.6**	**-0.1**
OUR				S	**Sn**	**03 11 07.7**	**-0.6**
	comp=N,435nm,0.3s						
OUR	**Ouranopolis**	**1.04**	**210**	PG	**Pg**	**03 10 52.5**	**-0.2**
OUR				SG	**Sn**	**03 11 07.9**	**-0.4**
DIM	**Dimitrovgrad**	**1.04**	**38**	*i* P	**Pg**	**03 10 52.9**	**0.0**
SOH	**Sokhos**	**1.08**	**248**	P	**Pg**	**03 10 52.7**	**-0.8**
SOH	**Sokhos**	**1.08**	**248**	P	**Pg**	**03 10 52.8**	**-0.7**
SOH				S	**Sb**	**03 11 08.0**	**+0.1**
	comp=N,502nm,0.4s						
ALN	**Alexandroupoli**	**1.09**	**107**	P	**Pg**	**03 10 53.4**	**-0.3**
ALN	**Alexandroupoli**	**1.09**	**107**	P	**Pg**	**03 10 53.5**	**-0.3**
ALN				S	**Sb**	**03 11 08.3**	**0.0**
	comp=N,225nm,0.6s						
ALN	**Alexandroupoli**	**1.09**	**107**	*i* P	**Pg**	**03 10 52.8**	**-1.0**
ALN				*i* S	**Sb**	**03 11 08.4**	**0.0**
ALN				IAML		03 11 12.0	
	comp=N,66nm,0.7s						
ALN				IAML		03 11 13.0	
	comp=E,120nm,0.6s						
ALN				IAML		03 11 14.0	
	comp=Z,65nm,0.5s						
ALN	**Alexandroupoli**	**1.09**	**107**	PG	**Pg**	**03 10 53.3**	**-0.5**
ALN				SG	**Sb**	**03 11 08.5**	**+0.2**
ENEZ	**Enez**	**1.23**	**113**	P	**Pb**	**03 10 56.0**	**-0.2**
ENEZ				S	**Sn**	**03 11 13.8**	**+0.8**
	comp=Z,265nm,0.3s						
ENEZ	**Enez**	**1.23**	**113**	PN	**Pb**	**03 10 56.1**	**-0.2**
ENEZ				SN	**Sn**	**03 11 13.7**	**+0.8**
CAVK	**Edirne/Enez-Ca**	**1.25**	**115**	*i* P	**Pn**	**03 10 55.2**	**-1.4**
CAVK				*i* S	**Sn**	**03 11 13.9**	**+0.3**
CAVK				IAML		03 11 21.0	
	comp=N,143nm,0.7s						
CAVK				IAML		03 11 22.0	
	comp=E,133nm,1.4s						
PLG	**Polygyros**	**1.26**	**228**	P	**Pn**	**03 10 56.2**	**-0.6**
KNT	**Kendrikon**	**1.34**	**268**	PN	**Pb**	**03 10 58.4**	**+0.2**
HORT	**Hortiatis**	**1.35**	**243**	P	**Pn**	**03 10 57.6**	**-0.3**
HORT	**Hortiatis**	**1.35**	**243**	P	**Pn**	**03 10 57.7**	**-0.3**
HORT				S	**Sn**	**03 11 16.6**	**+0.5**
	comp=E,180nm,0.5s						
HORT	**Hortiatis**	**1.35**	**243**	PN	**Pn**	**03 10 57.6**	**-0.3**
KKB	**Krupnik**	**1.35**	**299**	*i* P	**Pn**	**03 10 57.2**	**-0.8**
PGB	**Panagyurishte**	**1.37**	**344**	*i* P	**Pn**	**03 10 57.8**	**-0.5**
LIA	**Limnos Island**	**1.39**	**163**	P	**Pn**	**03 10 58.1**	**-0.3**
GADA	**Gvkgeada**	**1.40**	**138**	P	**Pn**	**03 10 58.6**	**0.0**
GADA				S	**Sg**	**03 11 17.3**	**-0.4**
	comp=E,122nm,0.4s						
GADA	**Gvkgeada**	**1.40**	**138**	PN	**Pb**	**03 10 58.8**	**-0.3**
GOKA	**anakkale-Gk**	**1.40**	**137**	*i* P	**Pb**	**03 10 59.1**	**-0.1**
GOKA				*i* S	**Sg**	**03 11 17.9**	**0.0**
GOKA				IAML		03 11 20.0	
	comp=E,285nm,0.5s						
ERIK	**Erikli-Kesan**	**1.50**	**111**	PN	**Pn**	**03 11 00.3**	**+0.3**
PAIG	**Paliouri**	**1.50**	**210**	P	**Pn**	**03 10 59.3**	**-0.8**
KESN	**Edirne-Kesan**	**1.57**	**104**	*i* P	**Pn**	**03 11 01.3**	**-0.1**
KESN				*i* S	**Sg**	**03 11 24.5**	**+1.1**
KESN				IAML		03 11 29.0	
	comp=E,117nm,0.2s						
KESN				IAML		03 11 29.0	
	comp=N,98nm,0.3s						
VAY	**Valandovo**	**1.58**	**274**	*e*Pg	**Pn**	**03 11 01.7**	**+0.5**
VAY				*e*Sg	**Sg**	**03 11 25.0**	**+1.2**
VAY	**Valandovo**	**1.58**	**274**	*i* Pn	**Pn**	**03 11 01.9**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.60**	**121**	PN	**Pn**	**03 11 01.5**	**+0.1**
EDRB	**Edirne**	**1.67**	**68**	P	**Pn**	**03 11 02.3**	**-0.1**
EDRB				S	**Sb**	**03 11 25.5**	**+0.4**
	comp=N,78nm,0.4s						
EDRB	**Edirne**	**1.67**	**68**	PN	**Pn**	**03 11 02.5**	**+0.1**
VTS	**Vitosha**	**1.75**	**323**	*e*Pg	**Pn**	**03 11 04.3**	**+0.7**
VTS				*e*Sg	**Sg**	**03 11 29.9**	**+0.8**
VTS	**Vitosha**	**1.75**	**323**	⇑P	**Pn**	**03 11 03.8**	**+0.1**
VTS				⇓S	**Sg**	**03 11 30.0**	**+0.8**
VTS	**Vitosha**	**1.75**	**323**	*i* P	**Pn**	**03 11 04.0**	**+0.4**
LPK	**Lapseki**	**1.80**	**118**	PN	**Pn**	**03 11 03.9**	**-0.3**
EZN	**Ezine**	**1.89**	**138**	PN	**Pn**	**03 11 05.7**	**+0.4**
KIRK	**Kırklareli**	**1.90**	**72**	*i* P	**Pb**	**03 11 07.7**	**-0.1**
KIRK				*i* S	**Sn**	**03 11 30.2**	**+0.5**
KIRK				IAML		03 11 34.0	
	comp=N,54nm,0.4s						
STIP	**Stip**	**1.92**	**285**	*i* Pn	**Pn**	**03 11 04.4**	**-1.4**
RKY	**Sarkoy-Tekirda**	**1.98**	**105**	PN	**Pn**	**03 11 07.5**	**+0.9**
SART	**Tekirdag**	**1.98**	**105**	*i* P	**Pb**	**03 11 08.3**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**2.06**	**135**	*i* P	**Pn**	**03 11 08.3**	**+0.6**
BAYC				*i* S	**Sn**	**03 11 32.9**	**-0.8**
BOSS	**Bosilegrad**	**2.07**	**308**	*e*Pn	**Pn**	**03 11 09.4**	**+1.6**
BOSS				*e*Sg	**Sg**	**03 11 39.5**	**+0.2**
ARMN	**Kirklareli, Me**	**2.17**	**72**	*i* P	**Pb**	**03 11 12.6**	**+0.3**
ARMN				*i* S	**Sb**	**03 11 39.6**	**+0.4**
ARMN				IAML		03 11 49.0	
	comp=N,31nm,0.7s						
ARMN				IAML		03 11 49.0	
	comp=E,46nm,0.6s						
MPEP	**Malo Peshtene**	**2.23**	**342**	*i* P	**Pg**	**03 11 14.7**	**-0.9**
PRVS	**Prvonek**	**2.32**	**304**	*e*Pn	**Pb**	**03 11 13.7**	**-1.2**
PRVS				*e*Sg	**Sg**	**03 11 46.7**	**-0.7**
VIZE	**Kirklareli, Vi**	**2.41**	**81**	*i* P	**Pb**	**03 11 16.9**	**+0.5**
ZAPS	**Zavoj**	**2.54**	**324**	*e*Pn	**Pb**	**03 11 17.1**	**-1.6**
BLKB	**Belogradchik**	**2.81**	**329**	⇑S	**Sb**	**03 11 55.8**	**-2.1**
ZAGS	**Zajecar**	**3.15**	**326**	*e*Pn	**Pn**	**03 11 25.2**	**+2.6**
BOVS	**Bovan**	**3.25**	**319**	*e*Pn	**Pn**	**03 11 25.4**	**+1.3**
SELS	**Selova**	**3.30**	**308**	*e*Pn	**Pn**	**03 11 27.1**	**+2.3**
HERR	**Herculane**	**4.00**	**336**	⇓P	**Pn**	**03 11 34.3**	**-0.1**
IVAS	**Ivanjica**	**4.08**	**307**	*e*Pn	**Pn**	**03 11 36.8**	**+1.2**
ARR	**Arges**	**4.13**	**360**	⇑P	**Pn**	**03 11 38.2**	**+1.9**
MDVR	**Moldovita**	**4.16**	**330**	⇓P	**Pn**	**03 11 37.5**	**+0.9**
VOIR		**4.21**	**4**	⇑P	**Pn**	**03 11 38.9**	**+1.5**
GZR	**Gura Zlata**	**4.38**	**342**	⇓P	**Pn**	**03 11 40.5**	**+0.8**
VRI	**Vrincioaia**	**4.87**	**17**	⇓P	**Pn**	**03 11 47.8**	**+1.5**
BZS	**Buzias**	**4.92**	**334**	⇓P	**Pn**	**03 11 48.0**	**+1.1**

*IDC **19** 03:17:02.4±1.0, 27°.28N×52°.83E, h0km, mb3.7/12, mb1 3.8/14, mb1mx3.6/48, mbtmp3.7/14, ML3.3/2, Error ellipse: s-maj=22.6km s-min=21.1km az=119.0*
*TEH **19** 03:17:05.3, 27°.29N×53°.01E, h10km, ML3.6*
*THR **19** 03:17:06.9±0.4, 27°.37N×53°.05E, h15km, ML3.2*

ISC 19 03:17:03.6±0.7, 27°.23N±0'.07×52°.86E±0'.05, h10km, n48, σ1°.31/51, mb3.7/11, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.29**	**67**	*e*Pg	**Pg**	**03 17 08.6**	**-1.0**
QIR1	**Qir**	**1.26**	**7**	*e*Pg	**Pn**	**03 17 27.9**	**+0.5**
QIR1				*e*Sg	**Sn**	**03 17 45.3**	**+0.9**
LAR1	**LAR**	**1.42**	**71**	*e*Pg	**Pn**	**03 17 30.4**	**+0.9**
LAR1				*e*Sg	**Sn**	**03 17 48.3**	**0.0**
JHRM	**Jahrom**	**1.42**	**26**	*e*Pg	**Pn**	**03 17 30.5**	**+0.8**
AHBU	**AHRAM**	**2.14**	**320**	*e*Pn	**Pg**	**03 17 44.1**	**-0.6**
SHI	**Shiraz**	**2.43**	**353**	*e*Pn	**Pb**	**03 17 46.1**	**-1.4**
GENO	**Geno**	**2.95**	**86**	*e*Pn	**Pn**	**03 17 52.2**	**+1.4**
KLNJ	**Kolanjah**	**3.93**	**344**	*e*Pn	**Pn**	**03 18 05.7**	**+1.3**
NGRK	**Negar Kerman**	**4.17**	**54**	*e*Pn	**Pn**	**03 18 08.4**	**+0.7**
KRBR	**Kerman**	**4.39**	**50**	*e*Pn	**Pn**	**03 18 12.7**	**+2.0**
KRBR				IAML		03 19 16.0	
	comp=E,21nm,0.3s						
KRBR				IAML		03 19 36.8	
	comp=N,25nm,0.6s						
KRBR	**Kerman**	**4.39**	**50**	*e*Pn	**Pn**	**03 18 12.7**	**+2.0**
TVBK	**TV Kerman**	**4.39**	**50**	*e*Pn	**Pn**	**03 18 12.3**	**+1.5**
IMEH	**Mehriz**	**4.42**	**20**	*e*Pn	**Pn**	**03 18 12.8**	**+1.7**
KHGB	**Koh Gabri**	**4.46**	**44**	*e*Pn	**Pn**	**03 18 12.8**	**+1.2**
IRAM	**Ramesheh**	**4.59**	**355**	*e*Pn	**Pn**	**03 18 14.3**	**+1.0**
ISAD	**Sadrabad**	**4.73**	**9**	*e*Pn	**Pn**	**03 18 17.1**	**+1.8**
CHMN	**Cheshme madani**	**4.88**	**56**	*e*Pn	**Pn**	**03 18 18.8**	**+1.3**
IBAF	**Bafgh**	**4.95**	**28**	*e*Pn	**Pn**	**03 18 19.6**	**+1.4**
ICHK	**Chekchek**	**5.18**	**15**	*e*Pn	**Pn**	**03 18 21.6**	**+0.2**
YZKH	**Yazd**	**5.36**	**16**	*e*Pn	**Pn**	**03 18 26.0**	**+2.2**
YZKH	**Yazd**	**5.36**	**16**	*e*Pn	**Pn**	**03 18 26.0**	**+2.2**
NASN	**Na'in**	**5.55**	**360**	*e*P	**Pn**	**03 18 29.9**	**+3.2**
NASN	**Na'in**	**5.55**	**360**	*e*Pn	**Pn**	**03 18 29.9**	**+3.2**
ANAR	**Anarak**	**5.99**	**7**	*e*Pn	**Pn**	**03 18 32.1**	**-0.4**
WSAR	**Wadi Sarin**	**6.56**	**126**	Pn	**Pn**	**03 18 41.8**	**+1.5**
	comp=N,0.8nm,0.3s,baz=330,slow=11,SNR=7.8						
WSAR				Sn	**Sn**	**03 19 54.3**	**-0.9**
	comp=N,0.4nm,0.3s,baz=262,slow=10,SNR=1.7						
TPRV	**Parvadeh(Tabas**	**6.66**	**29**	*e*Pn	**Pn**	**03 18 42.6**	**+0.9**
ISFB	**Sefidab**	**7.12**	**356**	*e*Pn	**Pn**	**03 18 48.3**	**+0.3**
ZHDN	**Zahedan**	**7.33**	**71**	*e*Pn	**Pn**	**03 18 52.0**	**+1.0**
TKDS	**Koohdasht(Taba**	**7.35**	**29**	*e*Pn	**Pn**	**03 18 51.5**	**+0.3**
ZHSF	**Zahedan**	**7.36**	**69**	*e*Pn	**Pn**	**03 18 53.4**	**+2.0**
ZHSF	**Zahedan**	**7.36**	**69**	*e*Pn	**Pn**	**03 18 53.4**	**+2.0**
TNSJ	**Nastanj**	**7.45**	**25**	*e*Pn	**Pn**	**03 18 52.5**	**0.0**
HSAM	**Samen**	**7.87**	**333**	*e*Pn	**Pn**	**03 18 58.1**	**-0.3**
SRVN	**Saravan**	**8.48**	**87**	*e*Pn	**Pn**	**03 19 08.3**	**+1.5**
KBZ	**Khabaz**	**18.33**	**336**	P	**Pn**	**03 21 17.6**	**-0.4**
	comp=N,0.1nm,0.3s,baz=102,slow=19,SNR=2.7						
BRTR	**Keskin Array B**	**20.26**	**313**	P	**P**	**03 21 40.0**	**+0.6**
	comp=N,0.6nm,0.5s,baz=141,slow=9.3,SNR=1.7						
AKTO	**Aktyubinsk**	**23.51**	**8**	P	**P**	**03 22 14.6**	**+0.9**
	comp=N,0.3nm,0.3s,baz=308,slow=7.9,SNR=2.0						
BELG	**Belogornoye**	**25.44**	**353**	P	**P**	**03 22 31.7**	**+0.2**
	comp=N,10nm,0.9s,baz=225,slow=10,SNR=5.1						
BVAR	**Borovoye Array**	**28.89**	**22**	P	**P**	**03 23 02.2**	**-0.2**
	comp=N,0.8nm,0.6s,baz=174,slow=16,SNR=6.0						
MKAR	**Makanchi Array**	**30.29**	**42**	P	**P**	**03 23 15.4**	**+0.4**
	comp=N,0.4nm,0.5s,baz=235,slow=9.5,SNR=6.5						
ZALV	**Zalesovo Beam**	**35.55**	**33**	P	**P**	**03 24 00.4**	**-0.4**
	comp=N,0.9nm,0.6s,baz=251,slow=7.7,SNR=3.8						
FINES	**FINESS Array B**	**38.64**	**340**	P	**P**	**03 24 26.3**	**-0.7**
	comp=N,1.9nm,0.8s,baz=152,slow=11,SNR=11						
NOA	**NORSAR Array B**	**43.83**	**332**	P	**P**	**03 25 08.8**	**-0.8**
	comp=N,0.9nm,0.7s,baz=122,slow=7.5,SNR=4.3						
ESDC	**Sonseca Array**	**48.28**	**300**	P	**P**	**03 25 45.6**	**+0.5**
	comp=N,0.5nm,1.1s,baz=257,slow=31,SNR=4.1						
LSZ	**Lusaka**	**48.56**	**213**	P	**P**	**03 25 48.0**	**+0.5**
	comp=N,0.8nm,0.5s,baz=111,slow=17,SNR=1.9						
TORD	**Torodi Ar. Bea**	**49.70**	**264**	P	**P**	**03 25 56.1**	**-0.2**
	comp=N,0.8nm,0.8s,baz=52,slow=7.0,SNR=2.7						
YKA	**Yellowknife Ar**	**90.03**	**354**	P	**P**	**03 30 03.1**	**-0.2**
	comp=N,0.4nm,0.8s,baz=9.6,slow=4.2,SNR=8.1						
RAR	**Rarotonga**	**149.70**	**86**	PKPbc	**PKPbc**	**03 36 54.2**	**-0.1**
	comp=N,28nm,0.6s,baz=51,slow=21,SNR=3.9						

IDC 19 03:20:39.1±2.5, 28°.39S×177°.81W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/25, mbtmp3.6/2, Error ellipse: s-maj=43.4km s-min=21.2km az=67.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.87**	**186**	Pn	Pn	03 20 59.3	+0.7
	96nm,0.3s,baz=9.4,slow=19,SNR=24						
RAO				Sn	Sn	03 21 11.3	-0.6
	188nm,0.3s,baz=339,slow=20,SNR=9.3						
ASAR	**Alice Springs**	**43.42**	**265**	P	P	03 28 43.7	-0.3
	0.2nm,0.4s,baz=100,slow=6.9,SNR=1.7						
WRA	**Warramunga Arr**	**44.23**	**270**	P	P	03 28 50.2	-0.3
	0.4nm,0.3s,baz=110,slow=8.0,SNR=8.7						
H03N3	**Juan Fernandez**	**81.62**	**123**	T	T	05 02 00.3	
	baz=250						
H03N2	**Juan Fernandez**	**81.62**	**123**	T	T	05 01 56.1	
	baz=250						
H03N1	**Juan Fernandez**	**81.64**	**123**	T	T	05 01 59.1	
	baz=250						
FINES	**FINESS Array B**	**143.31**	**341**	PKP	PKPdf	03 40 13.8	-1.0
	3.2nm,1.0s,baz=26,slow=3.5,SNR=3.6						

*KRNET **19** 03:28:15.9±0.1, 40°.27N×77°.51E, mb3.1*
*SOME **19** 03:28:16.0, 40°.25N×77°.52E, h15km*
*NNC **19** 03:28:17.3±1.4, 40°.32N×77°.55E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=10.0km s-min=7.8km az=1.0*

ISC 19 03:28:19.6±2.1, 40°.32N±0'.10×77°.50E±0'.05, h10km, n39, σ1°.63/62, 22C-6D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.83**	**352**	⇓*e*P	**Pn**	**03 28 50.8**	**-0.5**
	baz=53						
KDJ				⇓*i*S	**Sb**	**03 29 16.5**	**+0.2**
	baz=53						
ULHL	**Ulahol**	**2.15**	**334**	⇑*i*P	**Pn**	**03 28 55.9**	**+0.2**
	baz=35						
ULHL				⇑*i*S	**Sb**	**03 29 24.9**	**-0.7**
	baz=35						
PRZ	**Przheval'sk**	**2.27**	**17**	⇑*i*P	**Pn**	**03 28 57.7**	**+0.3**
	baz=16						
PRZ				⇑*i*S	**Sb**	**03 29 28.3**	**-0.7**
	baz=16						
ANVS	**Anan'yevo**	**2.47**	**3**	⇑*i*P	**Pn**	**03 29 00.5**	**+0.4**
	baz=3.0						
ANVS				⇑*i*S	**Sb**	**03 29 33.0**	**-1.7**
	baz=3.0						
BOOM	**Boomskoye usch**	**2.47**	**332**	⇑*i*P	**Pn**	**03 29 00.3**	**+0.2**
	baz=33						
BOOM				⇑*i*S	**Sb**	**03 29 32.7**	**-2.0**
	baz=33						
TNSS	**Tian-Shan**	**2.75**	**352**	*e*P	**Pb**	**03 29 07.8**	**-1.3**
	36nm,0.4s						
TNSS				*e*S	**Sb**	**03 29 45.4**	**+2.4**
	27nm,0.3s						
TNSS	**Tian-Shan**	**2.75**	**352**	Pg	**Pb**	**03 29 07.8**	**-1.3**
	36nm,0.4s						
TNSS				Lg	Lg	03 29 45.4	
	27nm,0.3s						
IZV	**Izvestkoviy**	**2.80**	**347**	*e*P	**Pb**	**03 29 08.6**	**-1.2**
	14nm,0.5s						
IZV				*e*S	**Sg**	**03 29 47.2**	**-2.3**
	35nm,0.5s						
IZV	**Izvestkoviy**	**2.80**	**347**	Pg	**Pb**	**03 29 08.6**	**-1.2**
	14nm,0.5s						
IZV				Lg	Lg	03 29 47.2	
	35nm,0.5s						
SATY	**Saty**	**2.82**	**14**	*e*P	**Pb**	**03 29 09.6**	**-0.6**
	11nm,0.4s						
SATY				*e*S	**Sg**	**03 29 48.5**	**-1.8**
	32nm,0.4s						
SATY	**Saty**	**2.82**	**14**	Pg	**Pb**	**03 29 09.6**	**-0.6**
	11nm,0.4s						
SATY				Lg	Lg	03 29 48.5	
	32nm,0.4s						
ARLS	**Aral**	**2.85**	**304**	⇑*e*P	**Pn**	**03 29 05.4**	**0.0**
	baz=4.0						
ARLS				⇑*i*S	**Sn**	**03 29 41.2**	**+1.3**
	baz=4.0						
MDOK	**Medeo**	**2.86**	**353**	*e*P	**Pb**	**03 29 09.6**	**-1.3**
	15nm,0.4s						
MDOK				*e*S	**Sb**	**03 29 48.8**	**+2.7**
	34nm,0.6s						
MDOK	**Medeo**	**2.86**	**353**	Pn	**Pn**	**03 29 06.2**	**+0.7**
	3.1nm,0.4s						
MDOK				Pg	**Pb**	**03 29 09.6**	**-1.3**
	9.8nm,0.5s						
MDOK				⇓Lg	Lg	03 29 48.5	
	36nm,0.8s						
MDOK	**Medeo**	**2.86**	**353**	Pg	**Pb**	**03 29 09.6**	**-1.3**
	15nm,0.4s						
MDOK				Lg	Lg	03 29 48.8	
	34nm,0.6s						
KOTS	**Kotyrbulak**	**2.93**	**354**	*e*P	**Pb**	**03 29 11.2**	**-0.8**
	38nm,0.4s						
KOTS				*e*S	**Sg**	**03 29 51.6**	**-2.1**
	45nm,0.4s						
KOTS	**Kotyrbulak**	**2.93**	**354**	Pg	**Pb**	**03 29 11.2**	**-0.8**
	38nm,0.4s						
KOTS				Lg	Lg	03 29 51.6	
	45nm,0.4s						
UCH	**Uchtor**	**2.95**	**311**	⇑*i*P	**Pn**	**03 29 07.0**	**0.0**
	baz=12						
UCH				⇑*i*S	**Sn**	**03 29 44.4**	**+1.7**
	baz=12						
KST	**Kastek**	**2.96**	**338**	*e*P	**Pb**	**03 29 11.1**	**-1.4**
	6.8nm,0.4s						
KST				*e*S	**Sb**	**03 29 51.5**	**+2.8**
	36nm,0.4s						
KST	**Kastek**	**2.96**	**338**	Pg	**Pb**	**03 29 11.1**	**-1.4**
	6.8nm,0.4s						
KST				Lg	Lg	03 29 51.6	
	36nm,0.4s						
TKM2	**Tokmak 2**	**2.97**	**332**	⇓*e*P	**Pn**	**03 29 07.4**	**+0.4**
	baz=32						
TKM2				⇓*i*S	**Sn**	**03 29 44.9**	**+2.1**
	baz=32						
TKM2	**Tokmak 2**	**2.97**	**332**	⇑Pg	**Pb**	**03 29 10.8**	**-1.9**
	6.0nm,0.8s						
TKM2				⇓Lg	Lg	03 29 52.0	
	18nm,0.7s						
KBK	**Karagaybulak**	**3.02**	**321**	⇑*i*P	**Pn**	**03 29 07.9**	**+0.2**
	baz=22						
KBK				⇑*i*S	**Sn**	**03 29 46.0**	**+1.9**
	baz=22						
UZB	**Uzynbulak**	**3.05**	**21**	*e*P	**Pb**	**03 29 13.3**	**-0.8**
	6.4nm,0.6s						
UZB				*e*S	**Sg**	**03 29 55.0**	**-2.5**
	12nm,0.3s						
UZB	**Uzynbulak**	**3.05**	**21**	Pg	**Pb**	**03 29 13.3**

BANOM	**Banah**		**3.36**	**113**	*e*Pn		**Pn**	**03 42 12.2**	**+1.6**
BANOM	**Banah**		**3.36**	**113**	P		**Pn**	**03 42 12.1**	**+1.5**
	SNR=15								
NAZ	**Nazwa, Dubai**		**3.39**	**131**	*i* P		**Pn**	**03 42 13.2**	**+2.2**
	SNR=12								
NAZ					P		Pb	03 42 13.2	-5.3
NAZ					S		**Sn**	**03 42 53.1**	**+2.5**
NAZ	**Nazwa, Dubai**		**3.39**	**131**	*e*Pn		**Pn**	**03 42 13.0**	**+2.1**
NAZ	**Nazwa, Dubai**		**3.39**	**131**	P		**Pn**	**03 42 13.1**	**+2.2**
	SNR=12								
NAZ					S		**Sn**	**03 42 53.4**	**+2.9**
ASUD	**Al Ashush, Dub**		**3.44**	**139**	*i* P		**Pn**	**03 42 14.4**	**+2.7**
	SNR=10.0								
ASUD	**Al Ashush, Dub**		**3.44**	**139**	*e*Pn		**Pn**	**03 42 14.7**	**+3.1**
ASUD	**Al Ashush, Dub**		**3.44**	**139**	P		**Pn**	**03 42 14.4**	**+2.7**
	SNR=10								
ASUD					S		**Sn**	**03 42 54.4**	**+2.6**
MASF	**Masafi**		**3.51**	**122**	P		**Pn**	**03 42 14.2**	**+1.5**
	SNR=6.2								
MASF					S		**Sn**	**03 42 55.6**	**+2.0**
FAQ	**Al Faqa, Dubai**		**3.51**	**135**	P		**Pn**	**03 42 15.2**	**+2.6**
FAQ	**Al Faqa, Dubai**		**3.51**	**135**	*e*Pn		**Pn**	**03 42 15.3**	**+2.6**
MSFE	**Esma-Masafi**		**3.52**	**122**	*i* P		**Pn**	**03 42 14.0**	**+1.2**
	SNR=6.2								
MSFE	**Esma-Masafi**		**3.52**	**122**	*e*Pn		**Pn**	**03 42 14.1**	**+1.4**
MDH	**Madha**		**3.65**	**122**	*e*Pn		**Pn**	**03 42 15.9**	**+1.3**
UOSS	**Minazif**		**3.79**	**127**	*i* P		**Pn**	**03 42 17.5**	**+1.0**
	SNR=35								
UOSS	**Minazif**		**3.79**	**127**			**Pn**	**03 42 17.3**	**+0.8**
UOSS	**Minazif**		**3.79**	**127**	*e*Pn		**Pn**	**03 42 17.5**	**+1.0**
HATD	**Hatta, Dubai**		**3.81**	**129**	P		**Pn**	**03 42 18.1**	**+1.3**
HATD	**Hatta, Dubai**		**3.81**	**129**	*e*Pn		**Pn**	**03 42 18.4**	**+1.6**
HATD	**Hatta, Dubai**		**3.81**	**129**	P		**Pn**	**03 42 18.5**	**+1.6**
	SNR=7.8								
ALNE	**Al Ain**		**4.12**	**140**	*i* P		**Pn**	**03 42 23.1**	**+2.0**
	SNR=7.3								
ALNE	**Al Ain**		**4.12**	**140**	*e*Pn		**Pn**	**03 42 23.2**	**+2.1**
ALNE	**Al Ain**		**4.12**	**140**	P		**Pn**	**03 42 23.0**	**+2.0**
	SNR=7.4								
ALNE					S		**Sn**	**03 43 10.5**	**+1.8**
NGRK	**Negar Kerman**		**4.16**	**54**	Pn		**Pn**	**03 42 22.0**	**+0.1**
NGRK	**Negar Kerman**		**4.16**	**54**	*e*Pn		**Pn**	**03 42 22.0**	**+0.1**
KRBR	**Kerman**		**4.37**	**51**	*e*Pn		**Pn**	**03 42 26.4**	**+1.6**
KRBR					IAML			03 43 24.4	
	comp=N,95nm,0.3s								
KRBR					IAML			03 43 29.7	
	comp=E,112nm,0.4s								
KRBR	**Kerman**		**4.37**	**51**	*e*Pn		**Pn**	**03 42 26.4**	**+1.6**
TVBK	**TV Kerman**		**4.38**	**51**	Pn		**Pn**	**03 42 26.1**	**+1.2**
TVBK	**TV Kerman**		**4.38**	**51**	*e*Pn		**Pn**	**03 42 26.1**	**+1.2**
IMEH	**Mehriz**		**4.39**	**20**	*e*Pn		**Pn**	**03 42 26.3**	**+1.3**
KHGB	**Koh Gabri**		**4.44**	**45**	Pn		**Pn**	**03 42 26.7**	**+1.0**
KHGB	**Koh Gabri**		**4.44**	**45**	*e*Pn		**Pn**	**03 42 26.7**	**+1.0**
SOHO	**SOHO**		**4.55**	**132**	*i* P		**Pn**	**03 42 27.8**	**+0.9**
	SNR=13								
IRAM	**Ramesheh**		**4.55**	**355**	*e*Pn		**Pn**	**03 42 27.9**	**+0.7**
ISAD	**Sadrabad**		**4.69**	**9**	*e*Pn		**Pn**	**03 42 29.8**	**+0.6**
CHMN	**Cheshme madani**		**4.87**	**57**	Pn		**Pn**	**03 42 33.1**	**+1.5**
CHMN	**Cheshme madani**		**4.87**	**57**	*e*Pn		**Pn**	**03 42 33.2**	**+1.6**
IBAF	**Bafgh**		**4.92**	**28**	*e*Pn		**Pn**	**03 42 33.4**	**+1.2**
ARQ	**Araqi**		**5.12**	**139**	P		**Pn**	**03 42 37.1**	**+2.3**
	SNR=17								
ARQ					S		**Sn**	**03 43 34.3**	**+0.9**
ICHK	**Chekchek**		**5.15**	**15**	*e*Pn		**Pn**	**03 42 36.6**	**+1.2**
KBAM	**BAM**		**5.28**	**68**	*e*Pn		**Pn**	**03 42 38.5**	**+1.5**
YZKH	**Yazd**		**5.33**	**16**	*e*Pn		**Pn**	**03 42 39.6**	**+1.8**
YZKH	**Yazd**		**5.33**	**16**	*e*Pn		**Pn**	**03 42 39.6**	**+1.8**
HOQ	**Hoqain**		**5.44**	**131**	P		**Pn**	**03 42 40.8**	**+1.6**
	SNR=5.2								
IZEF	**Zefreh**		**5.64**	**355**	*e*Pn		**Pn**	**03 42 42.1**	**0.0**
IPIR	**Pirpir**		**5.67**	**343**	*e*Pn		**Pn**	**03 42 43.4**	**+0.8**
ANAR	**Anarak**		**5.96**	**7**	*e*Pn		**Pn**	**03 42 46.5**	**+0.1**
BSY	**Bisya**		**5.98**	**138**	P		**Pn**	**03 42 48.2**	**+1.6**
	SNR=21								
BSY					S		**Sn**	**03 43 55.5**	**+1.1**
BIDO	**Bidbid**		**6.05**	**127**	*e*Pn		**Pn**	**03 42 49.0**	**+1.5**
IKLH	**Kolahrood**		**6.14**	**350**	*e*Pn		**Pn**	**03 42 49.3**	**+0.3**
SMDO	**Samad**		**6.29**	**131**	P		**Pn**	**03 42 52.2**	**+1.2**
	SNR=15								
WSAR	**Wadi Sarin**		**6.58**	**126**	Pn		**Pn**	**03 42 55.8**	**+0.9**
	comp=E,3.0nm,0.3s,baz=312,slow=9.9,SNR=23								
WSAR					Sn		**Sn**	**03 44 05.9**	**-3.5**
	comp=E,2.0nm,0.3s,baz=36,slow=6.1,SNR=1.4								
TPRV	**Parvadeh(Tabas**		**6.64**	**29**	*e*Pn		**Pn**	**03 42 56.3**	**+0.6**
ISFB	**Sefidab**		**7.09**	**356**	*e*Pn		**Pn**	**03 43 01.3**	**-0.6**
WBK	**Wadi Bani Khal**		**7.22**	**129**	P		**Pn**	**03 43 04.2**	**+0.4**
	SNR=13								
WBK					S		**Sn**	**03 44 26.3**	**+1.1**
TKDS	**Koohdasht(Taba**		**7.33**	**29**	*e*Pn		**Pn**	**03 43 05.5**	**+0.3**
ZHDN	**Zahedan**		**7.33**	**71**	*e*Pn		**Pn**	**03 43 06.1**	**+0.9**
ZHSF	**Zahedan**		**7.35**	**70**	*e*Pn		**Pn**	**03 43 07.3**	**+1.7**
ZHSF	**Zahedan**		**7.35**	**70**	*e*Pn		**Pn**	**03 43 07.3**	**+1.7**
IKOO	**Kooshah**		**7.42**	**45**	*e*Pn		**Pn**	**03 43 06.5**	**0.0**
TNSJ	**Nastanj**		**7.42**	**25**	*e*Pn		**Pn**	**03 43 06.7**	**+0.2**
NHDN	**Nehbandan**		**7.51**	**55**	*e*Pn		**Pn**	**03 43 08.1**	**+0.4**
ITEG	**Tejag**		**7.59**	**41**	*e*Pn		**Pn**	**03 43 10.2**	**+1.3**
IKFM	**Kafar-mosalman**		**7.60**	**326**	*e*Pn		**Pn**	**03 43 07.8**	**-0.9**
RAYN	**Ar Rayn**		**7.62**	**242**	*i* P		**Pn**	**03 43 10.3**	**+1.1**
	SNR=16								
RAYN	**Ar Rayn**		**7.62**	**242**	P		**Pn**	**03 43 09.3**	**+0.1**
RAYN	**Ar Rayn**		**7.62**	**242**			**Pn**	**03 43 09.3**	**+0.1**
IDOB	**Doab**		**7.66**	**329**	*e*Pn		**Pn**	**03 43 09.1**	**-0.7**
MHTO	**MHTO**		**7.79**	**142**	P		**Pn**	**03 43 12.4**	**+0.9**
	SNR=12								
JLN	**Jalan Bani Buh**		**7.83**	**129**	P		**Pn**	**03 43 12.6**	**+0.6**
	SNR=6.2								
HSAM	**Samen**		**7.84**	**333**	*e*Pn		**Pn**	**03 43 12.3**	**0.0**
AFRZ	**Afriz**		**8.13**	**39**	*e*Pn		**Pn**	**03 43 16.2**	**0.0**
HAGD	**Aghdareh**		**8.19**	**338**	*e*Pn		**Pn**	**03 43 16.3**	**-0.8**
IANJ	**Anjilo**		**8.23**	**6**	*e*Pn		**Pn**	**03 43 18.4**	**+0.7**
SRVN	**Saravan**		**8.49**	**87**	*e*Pn		**Pn**	**03 43 21.8**	**+0.7**
IRAZ	**Razeghan**		**8.50**	**344**	*e*Pn		**Pn**	**03 43 21.2**	**-0.1**
IGLO	**Ghaloghah**		**9.25**	**5**	*e*Pn		**Pn**	**03 43 33.0**	**+1.3**
IDHR	**Dehrash**		**9.26**	**325**	*e*Pn		**Pn**	**03 43 31.1**	**-0.7**
WHFO	**Wadi Hawf**		**9.33**	**175**	P		**Pn**	**03 43 33.0**	**+0.3**
	SNR=21								
SHAO	**Shalim**		**9.54**	**164**	P		**Pn**	**03 43 36.2**	**+0.7**
	SNR=14								
DMTO	**DMTO**		**9.69**	**168**	P		**Pn**	**03 43 38.0**	**+0.5**
	SNR=12								
SBZV	**Sabzevar**		**9.96**	**23**	*e*Pn		**Pn**	**03 43 41.3**	**-0.1**
ISFR	**Sfrayin**		**10.69**	**23**	*e*Pn		**Pn**	**03 43 52.8**	**+1.3**
HRA	**Herat**		**10.75**	**46**	Pn		**Pn**	**03 43 52.6**	**+0.5**
GEYT	**Alibeck**		**11.52**	**21**	Pn		**Pn**	**03 44 02.1**	**-0.5**
	comp=E,0.5nm,0.3s,baz=218,slow=14,SNR=5.7								
GEYT	**Alibeck**		**11.52**	**21**			**Pn**	**03 44 04.1**	**+1.5**
GYA0B	**ALIBECK ARRAY**		**11.52**	**21**	Pn		**Pn**	**03 44 01.6**	**-1.0**
MARD	**Mardin**		**14.30**	**318**	Pn		**Pn**	**03 44 38.3**	**-2.4**
AKT	**Akhty**		**14.80**	**345**	*e*P		Pn	03 44 41.5	-5.9
AKT					pmax		pmax		
	comp=Z,6.0nm,0.3s								
SOCY	**Socotra**		**15.03**	**176**	Pn		**Pn**	**03 44 45.5**	**-5.1**
KBL	**Kabul**		**15.66**	**58**	P		**Pn**	**03 44 56.6**	**-2.4**
KBL					pmax		pmax		
	comp=Z,10.0nm,1.1s								
KBL	**Kabul**		**15.66**	**58**	Pn		**Pn**	**03 44 56.6**	**-2.4**
KBL					IAmb		IAmb	03 45 01.6	
	comp=Z,10nm,1.1s								
MMAI	**Mount Meron Ar**		**16.15**	**295**	Pn		**P**	**03 45 06.8**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=105,slow=12,SNR=8.2								
KOPT	**Kop Dagi**		**16.34**	**324**	Pn		**Pn**	**03 45 05.2**	**-2.6**
KOPT					IAmb		IAmb	03 45 16.6	
	comp=Z,19nm,1.0s								
GAZ	**Gaziantep**		**16.50**	**311**	Pn		**Pn**	**03 45 07.8**	**-1.8**
ZEI	**Tsey**		**17.12**	**337**	*e*P		**Pn**	**03 45 18.0**	**+0.5**
ZEI					pmax		pmax		
	comp=Z,18nm,0.8s								
THW	**Thamme Wali**		**17.25**	**67**	P		**Pn**	**03 45 18.2**	**-0.8**
CEP	**Cherat**		**17.66**	**64**	P		**Pn**	**03 45 23.7**	**-0.4**
ATD	**Arta Tunnel**		**18.26**	**213**	Pn		**Pn**	**03 45 29.8**	**-1.7**
KBZ	**Khabaz**		**18.30**	**336**	P		**P**	**03 45 32.9**	**+1.1**
	baz=168,slow=11,SNR=6.5								
KBZ	**Khabaz**		**18.30**	**336**	*ce*P		**P**	**03 45 32.6**	**+0.8**
CSS	**Mathiatis**		**18.38**	**299**			**P**	**03 45 31.3**	**-1.6**
CSS					IAmb		IAmb	03 45 35.6	
	comp=Z,9.0nm,0.9s								
SHA1	**Shidzhatmaz**		**18.39**	**336**	*i* P		**Pn**	**03 45 34.5**	**+1.3**
KVAR	**Kislovodsk Arr**		**18.57**	**336**	P		**Pn**	**03 45 35.1**	**-0.1**
	baz=173,slow=13,SNR=2.7								
KIV	**Kislovodsk**		**18.57**	**336**	*e*P		**Pn**	**03 45 36.5**	**+1.3**
KIV					pmax		pmax		
	comp=Z,41nm,1.1s								
KIV	**Kislovodsk**		**18.57**	**336**			**P**	**03 45 33.8**	**-1.2**
KIV					IAmb		IAmb	03 45 39.6	
	comp=Z,18nm,1.2s								
NIL	**Nilore**		**18.69**	**65**	P		**P**	**03 45 34.2**	**-2.0**
NIL					pmax		pmax		
	comp=Z,16nm,0.7s								
NIL	**Nilore**		**18.69**	**65**	P		**P**	**03 45 34.2**	**-2.0**
NIL					IAmb		IAmb	03 45 37.4	
	comp=Z,16nm,0.7s								
GAR	**Garm**		**18.70**	**47**	P		**P**	**03 45 34.1**	**-2.3**
GAR					IAmb		IAmb	03 45 37.1	
	comp=Z,14nm,0.6s								
CHCP	**Chirah Chowk**		**18.70**	**65**	P		**Pn**	**03 45 36.4**	**-0.4**
SOC	**Sochi**		**19.45**	**330**	*e*P		**P**	**03 45 40.5**	**-4.0**
SOC					*e*			03 49 14.9	
SOC					MLR		MLR		
	comp=Z,186nm,19.0s								
BR131	**Keskin Array S**		**20.23**	**313**	P		**P**	**03 45 50.7**	**-2.5**
BR131					pmax		pmax		
	comp=Z,7.0nm,0.8s								
BR131	**Keskin Array S**		**20.23**	**313**	P		**P**	**03 45 50.7**	**-2.5**
BR131					IAmb		IAmb	03 46 00.9	
	comp=Z,6.9nm,0.8s								
BRTR	**Keskin Array B**		**20.23**	**313**	P		Pn	03 45 54.5	-0.7
	comp=Z,2.6nm,0.6s,baz=132,slow=14,SNR=10								
ANTO	**Ankara**		**20.86**	**312**	P		**P**	**03 45 57.8**	**-2.2**
ANTO					pmax		pmax		
	comp=Z,9.0nm,0.7s								
ANTO	**Ankara**		**20.86**	**312**	P		**P**	**03 45 57.8**	**-2.2**
ANTO					IAmb		IAmb	03 46 10.0	
	comp=Z,9.2nm,0.7s								
KK31	**Karatay Array**		**21.34**	**38**	P		**P**	**03 46 03.8**	**-1.1**
KK31					pmax		pmax		
	comp=Z,5.0nm,0.8s								
KK31	**Karatay Array**		**21.34**	**38**	P		**P**	**03 46 03.8**	**-1.1**
KK31					IAmb		IAmb	03 46 08.3	
	comp=Z,4.9nm,0.8s								
KKAR	**Karatay Array**		**21.34**	**38**	P		**P**	**03 46 04.0**	**-1.0**
KKAR	**Karatay Array**		**21.34**	**38**	P		**P**	**03 46 04.0**	**-1.0**
ELL	**Elmali**		**21.60**	**302**	P		**P**	**03 46 08.2**	**+0.3**
ELL					pmax		pmax		
	comp=Z,61nm,0.9s								
ELL	**Elmali**		**21.60**	**302**	P		**P**	**03 46 08.2**	**+0.3**
ABKAR	**Akbulak array**		**22.64**	**12**	P		**P**	**03 46 17.5**	**-1.2**
ABKAR	**Akbulak array**		**22.64**	**12**	P		**P**	**03 46 18.4**	**-0.4**
ABKAR					IAmb		IAmb	03 46 27.8	
	comp=Z,2.6nm,0.8s								
AAK	**Ala-Archa**		**23.35**	**43**	P		**P**	**03 46 27.3**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=319,slow=4.4,SNR=6.4								
AAK					LR		LR	03 57 29.1	
	comp=Z,142nm,18.5s,baz=258,slow=42								
AAK	**Ala-Archa**		**23.35**	**43**	*ce*P		**P**	**03 46 28.1**	**+1.6**
AAK					pmax		pmax		
	comp=Z,8.0nm,0.8s								
AAK	**Ala-Archa**		**23.35**	**43**	P		**P**	**03 46 25.7**	**-0.8**
AAK					IAmb		IAmb	03 46 42.4	
	comp=Z,8.8nm,1.4s								
AKTO	**Aktyubinsk**		**23.48**	**8**	P		**P**	**03 46 26.4**	**-1.0**
	comp=Z,1.9nm,0.6s,baz=203,slow=12,SNR=5.9								
VRH	**Novokhopyorsk**		**25.36**	**344**	*e*P		**P**	**03 46 45.7**	**+0.9**
VRH					pmax		pmax		
	comp=Z,70nm,0.6s								
BELG	**Belogornoye**		**25.41**	**353**	P		**P**	**03 46 44.0**	**-1.2**
	comp=Z,35nm,0.8s,baz=302,slow=1.6,SNR=8.4								
BELG	**Belogornoye**		**25.41**	**353**	*i* P		**P**	**03 46 46.7**	**+1.5**
BELG					pmax		pmax		
	comp=Z,7.0nm,0.9s								
VORD	**Divnogorie**		**25.82**	**340**	*e*P		**P**	**03 46 48.7**	**-0.3**
VORD					pmax		pmax		
	comp=Z,10.0nm,0.8s								
VSR	**Storozhevoye**		**26.08**	**340**	*e*P		**P**	**03 46 50.7**	**-0.6**
VSR					pmax		pmax		
	comp=Z,10.0nm,0.8s								
LPSR	**Galich'ya Gora**		**27.38**	**341**	*e*P		**P**	**03 47 01.9**	**-1.0**
LPSR					pmax		pmax		
	comp=Z,7.0nm,0.6s								
BRVK	**Borovoye**		**28.85**	**22**	*ce*P		**P**	**03 47 16.4**	**+0.3**
BRVK					pmax		pmax		
	comp=Z,2.0nm,0.6s								
BRVK	**Borovoye**		**28.85**	**22**	P		**P**	**03 47 14.7**	**-1.4**
BRVK					IAmb		IAmb	03 47 17.3	
	comp=Z,3.1nm,0.7s								
BVAR	**Borovoye Array**		**28.86**	**22**	P		**P**	**03 47 15.9**	**-0.3**
	comp=Z,4.6nm,0.8s,baz=173,slow=13,SNR=28								
BVAR					PcP		**PcP**		
	comp=Z,0.6nm,0.6s,baz=226,slow=14,SNR=3.5								
ARU	**Arti**		**29.44**	**6**	P		**P**	**03 47 20.9**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=209,slow=8.4,SNR=3.1								
ARU	**Arti**		**29.44**	**6**	*d* *i* P		**P**	**03 47 22.3**	**+1.0**
ARU								03 48 11.6	
ARU					S		**S**	**03 52 19.3**	**+5.1**
ARU					SS		**SnSn**	**03 53 44.4**	**+2.8**
ARU					pmax		pmax		
	comp=Z,7.0nm,1.8s								
AKASG	**Malin Array Be**		**29.52**	**329**	P		**P**	**03 47 21.4**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=133,slow=8.3,SNR=5.4								
AKASG	**Malin Array Be**		**29.52**	**329**	*ce*P		**P**	**03 47 22.3**	**+0.2**
MAKZ	**Makanchi**		**30.09**	**42**	P		**P**	**03 47 27.1**	**-0.1**
MAKZ					pmax		pmax		
	comp=Z,5.0nm,0.7s								
MAKZ	**Makanchi**		**30.09**	**42**	P		**P**	**03 47 27.1**	**-0.1**
OBN	**Obninsk**		**30.25**	**341**	*ce*P		**P**	**03 47 28.9**	**+0.4**
OBN					pmax		pmax		
	comp=Z,17nm,1.7s								
MK31	**Makanchi Array**		**30.27**	**42**	*i* P		**P**	**03 47 29.0**	**+0.2**
MK31	**Makanchi Array**		**30.27**	**42**	P		**P**	**03 47 28.1**	**-0.7**
MK31					IAmb		IAmb	03 47 30.7	
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**		**30.27**	**42**	P		**P**	**03 47 29.1**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=231,slow=9.0,SNR=23								
MKAR					PcP		**PcP**	**03 50 29.1**	**0.0**
	comp=Z,0.5nm,1.0s,baz=238,slow=5.6,SNR=4.5								
MKAR	**Makanchi Array**		**30.27**	**42**	P		**P**	**03 47 28.1**	**-0.7**
KURBB	**Kurchatov Arra**		**30.43**	**33**	P		**P**	**03 47 30.3**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=233,slow=9.0,SNR=8.7								
KURBB					PcP		**PcP**	**03 50 29.2**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=244,slow=3.1,SNR=4.3								
KURK	**Kurchatov**		**30.53**	**33**	P		**P**	**03 47 30.3**	**-0.7**
KURK								03 50 29.2	
KURK	**Kurchatov**		**30.53**	**33**	P		**P**	**03 47 30.3**	**-0.7**
KIRV	**Kirov**		**31.40**	**357**	*ce*P		**P**	**03 47 40.0**	**+1.4**
KMBO	**Kilima Mbogo**		**31.97**	**211**	P		**P**	**03 47 45.8**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=45,slow=19,SNR=2.2								
CRVS	**Cervenica-Dubn**		**32.47**	**320**	*e*P		**P**	**03 47 52.4**	**+4.3**
CRVS	**Cervenica-Dubn**		**32.47**	**320**	*e*P		**P**	**03 47 52.4**	**+4.3**
WMQ	**Urumqi**		**32.52**	**50**	*e*P		**P**	**03 47 50.0**	**+1.3**
LANS	**Liptovska Anna**		**33.73**	**319**	*e*P		**P**	**03 48 00.7**	**+1.5**
LANS	**Liptovska Anna**		**33.73**	**319**	*e*P		**P**	**03 48 00.7**	**+1.5**
DGZ	**Jazzator, Alta**		**34.67**	**40**	*i* P		**P**	**03 48 08.2**	**+0.7**
DGZ					pmax		pmax		
	comp=Z,4.0nm,0.6s								
KLMR	**Klimovskoe**		**34.79**	**349**	*e*P		**P**	**03 48 06.6**	**-1.5**
KLMR					pmax		pmax		
	comp=Z,12nm,1.5s								
KLMR	**Klimovskoe**		**34.79**	**349**	*e*P		**P**	**03 48 06.6**	**-1.5**
KLMR					AMP			03 48 18.1	
	comp=Z,12nm,1.5s								
ZAA0	**Zalesovo Array**		**35.52**	**33**	P		**P**	**03 48 13.1**	**-1.4**
ZALV	**Zalesovo Beam**		**35.52**	**33**	P		**P**	**03 48 14.3**	**-0.2**
	comp=Z,3.7nm,0.6s,baz=237,slow=9.6,SNR=14								
ZALV					PcP		**PcP**	**03 50 41.1**	**-2.4**
	comp=Z,0.6nm,0.5s,baz=267,slow=2.9,SNR=2.2								
ZALV					LR		LR	04 03 55.1	
	comp=Z,60nm,19.9s,baz=138,slow=38								
GERES	**GERESS Array B**		**37.06**	**316**	P		**P**	**03 48 27.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=102,slow=9.1,SNR=1.5								
SQTA	**Sankt Quirin**		**38.12**	**313**	*e*P		**P**	**03 48 36.7**	**-0.2**
	comp=Z,3.7nm,0.6s								
FETA	**Feichten**		**38.38**	**312**	*e*P		**P**	**03 48 39.1**	**0.0**
	comp=Z,3.6nm,1.0s								
CLL	**Collm**		**38.41**	**320**	*e*P		**P**	**03 48 40.0**	**+0.9**
FINES	**FINESS Array B**		**38.61**	**340**	P		**P**	**03 48 40.6**	**0.0**
	comp=Z,3.9nm,0.6s,baz=144,slow=9.8,SNR=23								
DAVOX	**Davos/Dischmat**		**38.87**	**312**	P		**P**	**03 48 42.8**	**-0.6**
	comp=Z,2.5nm,0.9s,baz=118,slow=8.9,SNR=2.3								
DAVA	**Damuels**		**39.01**	**312**	*e*P		**P**	**03 48 44.0**	**-0.4**
	comp=Z,5.1nm,0.6s								
GTA	**Gaotai**		**40.64**	**60**	*e*P		**P**	**03 48 58.5**	**+0.4**
GTA					pP		pP	03 49 02.8	-1.7
GTA					sP		sP	03 49 05.8	-1.2
GTA					pmax		pmax		
	comp=Z,5.0nm,0.6s								
HFS	**Hagfors**		**42.28**	**332**	P		**P**	**03 49 10.9**	**-0.1**
	comp=Z,4.4nm,0.6s,baz=128,slow=8.4,SNR=34								
TAM	**Tamanrasset**		**42.93**	**275**	P		**P**	**03 49 16.8**	**-0.2**
TAM					pmax		pmax		
	comp=Z,3.0nm,0.9s								
TAM	**Tamanrasset**		**42.93**	**275**	P		**P**	**03 49 16.8**	**-0.2**
TAM					IAmb		IAmb	03 49 19.6	
	comp=Z,2.6nm,0.9s								
CHTO	**Chiang Mai**		**43.04**	**91**	P		**P**	**03 49 19.3**	**+1.5**
CHTO					pmax		pmax		
	comp=Z,9.0nm,1.6s								
CHTO	**Chiang Mai**		**43.04**	**91**	P		**P**	**03 49 19.3**	**+1.5**
CHTO					IAmb		IAmb	03 49 51.5	
	comp=Z,9.4nm,1.6s								
NOA	**NORSAR Array B**		**43.80**	**332**	P		**P**	**03 49 22.9**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=121,slow=8.1,SNR=12								
TLY	**Talaya**		**45.02**	**43**	LR		LR	04 09 12.6	
	comp=Z,31nm,21.8s,baz=354,slow=37								
ARCES	**ARCESS Array B**		**45.21**	**347**	P		**P**	**03 49 34.4**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=143,slow=8.8,SNR=6.3								
SONM	**Songino Array**		**46.12**	**49**	P		**P**	**03 49 42.7**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=274,slow=8.8,SNR=6.4								
SONM	**Songino Array**		**46.12**	**49**	P		**P**	**03 49 42.2**	**0.0**
ULN	**Ulaanbaatar**		**46.57**	**49**	*ce*P		**P**	**03 49 47.4**	**+1.6**
ULN					pmax		pmax		
	comp=Z,2.0nm,1.0s								
ESDC	**Sonseca Array**		**48.27**	**300**	P		**P**	**03 49 58.7**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=58,slow=8.5,SNR=17								
HHC	**Hu-ho-hao-te**		**49.64**	**58**	*e*P		**P**	**03 50 08.9**	**-0.6**
TORD	**Torodi Ar. Bea**		**49.70**	**264**	P		**P**	**03 50 10.3**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=59,slow=7.3,SNR=11								
BOD	**Bodaibo**		**52.07**	**36**	*e*P		**P**	**03 50 27.2**	**-0.2**
BOD					pmax		pmax		
	comp=Z,7.0nm,0.9s								
DBIC	**Dimbokro**		**58.34**	**261**	P		**P**	**03 51 13.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=60,slow=4.9,SNR=4.2								
DBIC					PcP		**PcP**	**03 52 05.2**	**+1.0**
	comp=Z,2.3nm,1.1s,baz=98,slow=6.2,SNR=3.3								
DBIC					LR		LR	04 16 14.6	
	comp=Z,41nm,18.3s,baz=352,slow=36								
BOSA	**Boshof**		**61.54**	**208**	LR		LR	04 19 02.7	
	comp

ZEI	**Tsey**	**1.89**	**352**	*e*Pg	**Pb**	**03 42 20.7**	**-0.3**
ZEI				*e*Sg	**Sg**	**03 42 46.2**	**-0.4**
LACR	**Lac**	**1.91**	**1**	*e*Pg	**Pb**	**03 42 20.9**	**-0.4**
LACR				*e*Sg	**Sg**	**03 42 46.5**	**-0.8**
ZKTA	**Zakatala** SNR=14	**1.91**	**67**	P	**Pb**	**03 42 20.1**	**-1.2**
ZKTA				S	**Sb**	**03 42 45.8**	**+0.3**
DBAD	**Bademkaya**	**1.96**	**274**	*i* P	**Pb**	**03 42 21.7**	**-0.4**
DBAD				*i* S	**Sg**	**03 42 49.7**	**+0.9**
NAX	**Nakhchivan** SNR=12	**1.98**	**151**	P	**Pb**	**03 42 22.6**	**+0.1**
NAX				S	**Sg**	**03 42 50.8**	**+1.2**
DBOC	**Borcka**	**2.02**	**283**	*i* P	**Pb**	**03 42 23.5**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.04**	**346**	*i* Pg	**Pb**	**03 42 24.1**	**+0.4**
DIGR				*e*Sg	**Sg**	**03 42 51.8**	**+0.1**
KOPR	**Koprukoy-ERZUR**	**2.07**	**244**	PN	**Pn**	**03 42 22.3**	**+0.8**
MNGR	**Mingechevir, A**	**2.14**	**93**	P	**Pb**	**03 42 24.6**	**-0.5**
MNGR				S	**Sg**	**03 42 54.9**	**+0.2**
SEKA	**Sheki** SNR=23	**2.23**	**82**	P	**Pn**	**03 42 24.8**	**+1.2**
SEKA				S	**Sb**	**03 42 54.8**	**+0.1**
AGDM	**Agdam** SNR=3.7	**2.31**	**110**	P	**Pb**	**03 42 27.4**	**-0.7**
AGDM				S	**Sb**	**03 42 57.7**	**+0.8**
BRDA	**Brd**	**2.31**	**106**	P	**Pb**	**03 42 27.1**	**-1.0**
BRDA				S	**Sb**	**03 42 57.9**	**+1.0**
ORD	**Ordubad** SNR=8.2	**2.39**	**146**	P	**Pb**	**03 42 29.2**	**-0.3**
ORD				S	**Sg**	**03 43 01.3**	**-1.4**
DVE	**Vedeno**	**2.46**	**34**	*e*Pn	**Pb**	**03 42 31.1**	**+0.3**
DVE				*e*Sn	**Sg**	**03 43 03.3**	**-1.7**
GNBR	**Gunib**	**2.49**	**53**	*e*Pn	**Pb**	**03 42 30.4**	**-0.9**
GNBR				*e*Sn	**Sb**	**03 43 03.9**	**+1.6**
AKT	**Akhty**	**2.67**	**77**	*e*Pn	**Pb**	**03 42 32.4**	**-1.8**
AKT				*e*Sn	**Sb**	**03 43 07.5**	**+0.2**
ZRD	**Zardab**	**2.67**	**103**	P	**Pb**	**03 42 31.9**	**-2.3**
ZRD				S	**Sb**	**03 43 05.7**	**-1.7**
QBL	**Gabala**	**2.70**	**88**	P	**Pb**	**03 42 32.5**	**-2.3**
QBL				S	**Sb**	**03 43 06.1**	**-2.1**
QRD	**Qoradiz**	**2.75**	**121**	P	**Pn**	**03 42 31.1**	**+0.4**
QRD				S	**Sb**	**03 43 08.9**	**-0.7**
XNQ	**Khinaliq**	**2.94**	**84**	P	**Pn**	**03 42 35.3**	**+1.9**
XNQ				S	**Sb**	**03 43 12.0**	**-3.1**
QSAR	**Qusar**	**3.07**	**78**	P	**Pn**	**03 42 37.3**	**+2.2**
PQL	**Pirkuli**	**3.28**	**91**	P	**Pn**	**03 42 40.6**	**+2.5**
SIZA	**Siyzn**	**3.50**	**86**	P	**Pn**	**03 42 42.7**	**+1.6**

*IDC **19** 03:58:04.4±1.6,35.07'N×26.99'E,h0km,mb3.2/4,*
mb1 3.3/4,mb1mx3.1/41,mbtmp3.2/4,Error ellipse:
s-maj=46.4km s-min=13.8km az=176.0
*ATH **19** 03:58:05.9,34.97'N×26.87'E,h17km±3km, ML2.9/3, Error*
ellipse: s-maj=6.1km s-min=1.4km az=159.0
*ISK **19** 03:58:07.6,35.17'N×26.76'E,h9km, ML2.8/2*
*THE **19** 03:58:07.1,35.10'N×26.78'E,h0km±2km,ML2.7/4, Error*
ellipse: s-maj=7.9km s-min=0.9km az=152.0
*DDA **19** 03:58:09.0,35.09'N×26.68'E,h40km±28km,ML2.4*

ISC 19 03:58:07.3±1.4,35.11N±0.09×26.77E±0.04,h16km±8km, n27,σ1§04/38,mb3.1/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.45**	**271**	P	**Pg**	**03 58 16.7**	**+0.3**
ZKR				S	**Sb**	**03 58 24.5**	**+1.1**
ZKR				AML	AML	03 58 25.9	
	comp=N,1269µm,0.2s						
ZKR				AML	AML	03 58 27.7	
	comp=E,2748µm,0.3s						
ZKR	**Zakros**	**0.45**	**271**	P	**Pg**	**03 58 16.7**	**+0.3**
ZKR				S	**Sb**	**03 58 23.8**	**+0.4**
	comp=E,958nm,0.4s						
ZKR	**Zakros**	**0.45**	**271**	PG	**Pb**	**03 58 16.8**	**-0.1**
ZKR				SG	**Sb**	**03 58 23.5**	**+0.1**
KARP	**Karpathos**	**0.55**	**36**	P	**Pg**	**03 58 17.6**	**-0.6**
KARP				S	**Sb**	**03 58 26.8**	**+0.5**
KARP				AML	AML	03 58 29.6	
	comp=N,5260µm,0.5s						
KARP				AML	AML	03 58 29.7	
	comp=E,2999µm,0.3s						
KARP	**Karpathos**	**0.55**	**36**	P	**Pg**	**03 58 17.7**	**-0.5**
KARP				S	**Sb**	**03 58 27.5**	**+1.2**
	comp=E,2µm,0.3s						
KARP	**Karpathos**	**0.55**	**36**	PG	**Pg**	**03 58 17.8**	**-0.5**
KARP				SG	**Sg**	**03 58 25.4**	**-0.1**
STIA	**Sitia Lasithi**	**0.56**	**280**	P	**Pg**	**03 58 18.6**	**+0.2**
STIA				S	**Sb**	**03 58 27.6**	**+1.0**
FRMA	**Ierapetra Chan**	**0.85**	**264**	P	**Pg**	**03 58 22.0**	**-1.9**
FRMA				S	**Sg**	**03 58 34.9**	**-0.2**
	comp=E,258nm,0.5s						
NPS	**Neapolis**	**0.96**	**280**	P	**Pg**	**03 58 25.7**	**-0.2**
NPS				S	**Sb**	**03 58 39.6**	**+1.5**
NPS				AML	AML	03 58 44.6	
	comp=E,1234µm,0.5s						
NPS				AML	AML	03 58 49.3	
	comp=N,1052µm,0.5s						
NPS	**Neapolis**	**0.96**	**280**	P	**Pb**	**03 58 26.2**	**+0.6**
NPS				S	**Sn**	**03 58 40.1**	**+0.6**
	comp=N,580nm,0.5s						
IDI	**Anoyia**	**1.55**	**277**	Pg	**Pg**	**03 58 37.1**	**0.0**
	comp=N,5.4nm,0.3s,baz=90,slow=6.1,SNR=31						
IDI				Lg	Lg	03 58 59.7	
	comp=N,5.9nm,0.3s,baz=358,slow=21,SNR=6.9						
IDI				LR	LR	03 59 14.7	
	comp=N,17nm,21.6s,baz=273,slow=40						
ARG	**Arkhangelos**	**1.57**	**45**	PN	**Pb**	**03 58 35.9**	**-0.1**
SANT	**Santorini**	**1.65**	**320**	*i* P	**Pn**	**03 58 35.4**	**-0.4**
BDRM	**Kayabasi**	**2.03**	**16**	*i* P	**Pn**	**03 58 41.1**	**+0.1**
TURN	**Turunc**	**2.05**	**35**	*i* P	**Pb**	**03 58 44.7**	**+0.4**
TURN	**Turunc**	**2.05**	**35**	PN	**Pn**	**03 58 43.2**	**+2.0**
APE	**Apeiranthos**	**2.20**	**333**	PN	**Pn**	**03 58 44.5**	**+1.2**
YER	**Yerkesik**	**2.37**	**31**	PN	**Pn**	**03 58 47.2**	**+1.5**
AKAS	**Kas**	**2.57**	**63**	*i* P	**Pn**	**03 58 49.1**	**+0.6**
AKAS				*i* S	**Sn**	**03 59 20.8**	**+1.2**
AKAS				IAML		03 59 27.0	
	comp=N,19nm,0.8s						
AYDN	**Tasoluk**	**2.70**	**19**	*i* P	**Pb**	**03 58 54.0**	**-1.4**
CAEL	**Denizli, Camel**	**2.89**	**45**	*i* P	**Pn**	**03 58 54.0**	**+1.2**
TAVA	**DENIZLI_Tavas**	**2.92**	**36**	*i* P	**Pn**	**03 58 55.0**	**+1.7**
GOLH	**Golhisar**	**3.10**	**46**	*i* P	**Pn**	**03 58 58.0**	**+2.1**
TORD	**Torodi Ar. Bea**	**31.48**	**232**	P	**P**	**04 04 28.7**	**+0.2**
	comp=N,0.3nm,0.8s,baz=31,slow=8.6,SNR=1.5						
KURBB	**Kurchatov Arra**	**40.13**	**51**	P	**P**	**04 05 41.6**	**-0.7**
	comp=N,0.2nm,0.4s,baz=272,slow=8.3,SNR=1.6						
MKAR	**Makanchi Array**	**42.71**	**57**	P	**P**	**04 06 02.5**	**-1.0**
	comp=N,0.2nm,0.5s,baz=274,slow=7.1,SNR=4.6						
YKA	**Yellowknife Ar**	**77.90**	**343**	P	**P**	**04 10 02.3**	**-1.7**
	comp=N,0.1nm,0.7s,baz=45,slow=9.7,SNR=1.7						

DJA 19 04:02:23.3±1.5,3°N±9'×12°5E±', h125km±21km, M3.8/6, mB5.5/2,MLv3.8/6,Mw(mB)5.0/2,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.01**	**10**	P	Pn	04 02 46.4	+0.5
SGSI				S	Sn	04 03 03.6	+0.5
TNTI	**Ternate**	**2.76**	**133**	P	Pn	04 03 07.6	+1.0
SANI	**Sanana**	**4.74**	**172**	P	Pn	04 03 31.6	-1.3
NLAI	**Namlea**	**6.13**	**164**	P	Pn	04 03 51.5	-0.1

*IDC **19** 04:11:02.4±13.0,12.74N×87.32W,h0km,mb3.4/4,*
mb1 3.8/4,mb1mx3.6/24,mbtmp3.4/4, Error ellipse:
s-maj=279.4km s-min=103.7km az=6.0
*INET **19** 04:11:02.9,12.10N×87.92W,h11km,MW3.6*
*SNET **19** 04:11:03.5±1.0,12.18N×87.97W,h15km±4km,ML2.8*

ISC 19 04:11:02.6±3.3,12.2N±0.1×87.91W±0.09,h12km±16km, n16,σ0§62/25,mb3.2/4,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.10**	**4**	*e*P	**Pb**	**04 11 23.6**	**-0.1**
CNCH				*e*S	**Sn**	**04 11 39.4**	**+0.2**
LCND	**La Caada**	**1.13**	**1**	*e*P	**Pb**	**04 11 24.1**	**0.0**
LCND				*e*S	**Sb**	**04 11 38.6**	**-0.2**
ALJI	**Alcalda de J**	**1.31**	**331**	*e*P	**Pn**	**04 11 25.9**	**-0.9**
ALJI				*e*S	**Sb**	**04 11 43.6**	**-0.5**
PACA	**Pacayal**	**1.35**	**343**	*e*P	**Pn**	**04 11 27.3**	**-0.2**
PACA				*e*S	**Sg**	**04 11 46.4**	**+0.3**
TECA	**Tecapa**	**1.43**	**336**	*e*P	**Pn**	**04 11 28.3**	**-0.4**
FAGO	**Alcalda de S**	**1.52**	**353**	*e*P	**Pn**	**04 11 30.0**	**+0.2**
FAGO				*e*S	**Sn**	**04 11 49.6**	**+0.1**
FAGO				IAML		04 11 57.3	
	comp=Z,59nm,0.3s						
PQSS	**Presa 15 de Se**	**1.57**	**336**	*e*P	**Pn**	**04 11 29.9**	**-0.5**
PQSS				*e*S	**Sn**	**04 11 50.8**	**0.0**
COEG	**Centro de Oper**	**1.72**	**327**	*e*P	**Pn**	**04 11 32.2**	**-0.3**
COEG				*e*S	**Sn**	**04 11 54.9**	**+0.4**
COEG				IAML		04 11 55.7	
	comp=Z,111nm,0.4s						
LFRS	**El Faro**	**1.82**	**322**	*e*P	**Pn**	**04 11 34.0**	**+0.1**
LFRS				*e*S	**Sn**	**04 11 57.8**	**+0.7**
PAVA	**Las Pavas**	**1.83**	**327**	*e*P	**Pn**	**04 11 34.1**	**+0.1**
PAVA				*e*S	**Sb**	**04 11 58.8**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.98**	**18**	*e*P	**Pn**	**04 11 36.5**	**+0.4**
CEVE	**Cerro Verde**	**2.34**	**315**	*e*S	**Sn**	**04 12 11.0**	**+0.9**
CEVE				IAML		04 12 23.1	
	comp=Z,101nm,0.3s						
TXAR	**Lajitas Array**	**22.50**	**322**	P	**P**	**04 16 02.5**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=137,slow=11,SNR=26						
PDAR	**Pinedale Array**	**35.80**	**332**	P	**P**	**04 18 02.4**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=129,slow=7.1,SNR=2.6						
NVAR	**Mina Array Bea**	**37.61**	**319**	P	**P**	**04 18 19.2**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=133,slow=6.5,SNR=2.5						
YKA	**Yellowknife Ar**	**53.76**	**345**	P	**P**	**04 20 23.2**	**-1.4**
	comp=Z,0.2nm,0.8s,baz=140,slow=7.1,SNR=3.6						

IDC 19 04:29:43.3±27.0,19.56S×174.02W,h0km,mb4.2/4, mb1 4.3/4,mb1mx3.8/28,mbtmp4.2/4,MS3.4/1,Ms1 3.4/1, ms1mx2.7/33,Error ellipse: s-maj=509.5km s-min=165.7km az=74.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**18.43**	**259**	LR	LR	04 39 58.9	
	comp=Z,126nm,20.7s,baz=357,slow=33						
CTA	**Charters Tower**	**37.31**	**262**	P	P	04 36 58.6	+1.0
	2.1nm,0.4s,baz=88,slow=11,SNR=5.6						
STKA	**Stephens Creek**	**41.56**	**244**	P	P	04 37 32.0	-0.8
	2.5nm,1.0s,baz=66,slow=10.0,SNR=2.1						
ASAR	**Alice Springs**	**48.37**	**255**	P	P	04 38 26.9	-0.5
	1.6nm,0.5s,baz=95,slow=7.9,SNR=28						
WRA	**Warramunga Arr**	**48.44**	**260**	P	P	04 38 27.6	-0.2
	0.8nm,0.3s,baz=95,slow=7.7,SNR=9.5						

*NOU **19** 04:35:14.6,12.06S×169.39E,h639km, mb4.7, Santa*
Cruz Islands Region
*IDC **19** 04:35:20.7±1.0,12.82S×169.07E,h637km±12km,*
mb3.7/23,mb1 3.9/26,mb1mx3.8/33,mbtmp4.7/26,Error
ellipse: s-maj=11.9km s-min=9.9km az=72.0
*NEIC **19** 04:35:20.8±1.1,12.7S±0.1×169.0E±0.1,h642km±7km,*
mb4.4/78,Error ellipse: s-maj=15.5km s-min=15.5km
az=166.0

ISC 19 04:35:21.3±0.3,12.79S±0.06×169.02E±0.07,h650km, n169,σ1§12/156,mb4.3/66,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.18**	**214**	P	**P**	**04 36 42.8**	**-2.8**
DVP	**Devils Point**	**4.97**	**189**	P	**P**	**04 36 55.6**	**-1.5**
KOUNC	**Koumac, New Ca**	**8.95**	**210**	P	**P**	**04 37 31.8**	**+0.6**
HNR	**Honiara**	**9.51**	**290**	P	**P**	**04 37 36.5**	**-0.1**
	27nm,0.3s,baz=233,slow=2.0,SNR=5.7						
HNR	**Honiara**	**9.51**	**290**	P	**P**	**04 37 36.0**	**-0.6**
DZM	**Mont Dzumac**	**9.55**	**195**	P	**P**	**04 37 37.3**	**+0.4**
	2.1nm,0.3s,baz=190,slow=18,SNR=16						
DZM	**Mont Dzumac**	**9.55**	**195**	P	**P**	**04 37 36.9**	**0.0**
MSVF	**Nonsavu**	**10.00**	**121**	P	**P**	**04 37 41.2**	**0.0**
	6.2nm,0.3s,baz=276,slow=11,SNR=30						
MSVF	**Nonsavu**	**10.00**	**121**	P	**P**	**04 37 40.7**	**-0.6**
FUNA	**Funafuti**	**10.86**	**68**	P	P	04 37 36.5	-13
EIDS	**Eidsvold**	**21.04**	**231**	P	**P**	**04 39 22.4**	**+0.1**
EIDS				IAmb	IAmb	04 39 40.2	
	comp=Z,31nm,1.4s						
PMG	**Port Moresby**	**21.71**	**277**	P	**P**	**04 39 28.8**	**+0.4**
	comp=Z,26nm,0.8s,baz=88,slow=6.3,SNR=9.8						
PMG	**Port Moresby**	**21.71**	**277**	P	**P**	**04 39 28.4**	**0.0**
CTA	**Charters Tower**	**23.00**	**249**	P	**P**	**04 39 40.2**	**+0.5**
	comp=Z,13nm,0.6s,baz=78,slow=11,SNR=26						
CTAO	**Charters Tower**	**23.00**	**249**	P	**P**	**04 39 39.8**	**+0.1**
ARMA	**Armidale**	**23.80**	**220**	P	**P**	**04 39 47.7**	**+0.9**
ARMA				IAmb	IAmb	04 39 48.5	
	comp=Z,11nm,0.8s						
COEN	**Coen**	**25.17**	**264**	P	**P**	**04 39 59.2**	**+0.3**
TOZ	**Tahuna Road**	**25.50**	**168**	P	**P**	**04 40 02.2**	**+0.8**
HAZ	**Te Kaha**	**26.07**	**164**	P	**P**	**04 40 06.3**	**-0.1**
HIZ	**Hauiti**	**26.14**	**170**	P	**P**	**04 40 08.4**	**+1.4**
HIZ	**Hauiti**	**26.14**	**170**	P	**P**	**04 40 08.6**	**+1.6**
RUGZ	**Raukumara Rang**	**26.23**	**164**	P	**P**	**04 40 07.3**	**-0.7**
URZ	**Urewera**	**26.37**	**166**	P	**P**	**04 40 08.6**	**-0.5**
	comp=Z,14nm,1.0s,baz=124,slow=23,SNR=8.4						
URZ	**Urewera**	**26.37**	**166**	P	**P**	**04 40 09.8**	**+0.8**
TWGZ	**Tauwhareparae**	**26.51**	**164**	P	**P**	**04 40 10.0**	**-0.4**
RATZ	**Rangitukua**	**26.65**	**168**	P	**P**	**04 40 13.4**	**+1.8**
WTVZ	**West Tongariro**	**26.86**	**169**	P	**P**	**04 40 14.9**	**+1.4**
NTVZ	**North Tongarir**	**26.86**	**168**	P	**P**	**04 40 15.0**	**+1.5**
NNVZ	**North Ngauruho**	**26.88**	**169**	P	**P**	**04 40 15.1**	**+1.4**
TMVZ	**Te Maari**	**26.88**	**168**	P	**P**	**04 40 14.8**	**+1.2**
TRVZ	**Turoa**	**27.03**	**169**	P	**P**	**04 40 16.6**	**+1.6**
CAN	**Canberra**	**28.82**	**216**	P	**P**	**04 40 30.4**	**-0.1**
MSWZ	**Moikau Station**	**29.03**	**170**	P	**P**	**04 40 30.5**	**-1.6**
JAY	**Jayapura**	**29.83**	**288**	P	**P**	**04 40 39.4**	**0.0**
	comp=Z,13nm,0.6s,baz=143,slow=3.1,SNR=9.4						
RPZ	**Rata Peaks**	**30.86**	**177**	P	**P**	**04 40 47.0**	**-0.6**
	comp=Z,9.3nm,0.6s,baz=260,slow=3.3,SNR=6.1						
STKA	**Stephens Creek**	**31.54**	**229**	P	**P**	**04 40 54.5**	**+0.9**
	comp=Z,9.7nm,0.3s,baz=54,slow=9.4,SNR=58						
STKA				PcP	**PcP**	**04 43 25.4**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=45,slow=7.8,SNR=3.3						
STKA				ScP	**ScP**	**04 46 10.8**	**+2.5**
	comp=Z,3.0nm,0.7s,baz=103,slow=5.4,SNR=4.4						
STKA	**Stephens Creek**	**31.54**	**229**	P	**P**	**04 40 53.9**	**+0.3**
TOO	**Toolangi**	**32.41**	**216**	P	**P**	**04 41 01.4**	**+0.5**
TOO				IAmb	IAmb	04 41 07.2	
	comp=Z,22nm,1.2s						
WR0	**Warramunga Arr**	**33.79**	**253**	P	**P**	**04 41 12.4**	**-0.3**
WB0	**Warramunga Arr**	**33.91**	**254**	P	**P**	**04 41 13.5**	**-0.2**
WB2	**Warramunga Arr**	**33.97**	**253**	P	**P**	**04 41 14.0**	**-0.1**
WRA	**Warramunga Arr**	**33.98**	**253**	P	**P**	**04 41 14.0**	**-0.2**
	comp=Z,43nm,0.4s,baz=85,slow=8.7,SNR=338						
WRA				S	**S**	**04 45 52.1**	**-3.9**
	comp=Z,9.1nm,0.9s,baz=85,slow=13,SNR=11						
WRA	**Warramunga Arr**	**33.98**	**253**	P	**P**	**04 41 13.1**	**-1.1**
AS31	**Alice Springs**	**34.97**	**247**	P	**P**	**04 41 22.4**	**-0.1**
ASAR	**Alice Springs**	**34.97**	**247**	P	**P**	**04 41 22.4**	**0.0**
	comp=Z,75nm,0.6s,baz=73,slow=9.5,SNR=1084						
ASAR				PcP	**PcP**	**04 43 35.5**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=84,slow=4.2,SNR=6.2						
ASAR				S	**S**	**04 46 08.6**	**-2.2**
	comp=Z,12nm,0.9s,baz=75,slow=16,SNR=26						
ASAR	**Alice Springs**	**34.97**	**247**	P	**P**	**04 41 21.6**	**-0.8**
BBOO	**Buckleboo**	**36.11**	**231**	P	**P**	**04 41 32.2**	**+0.7**
MTN	**Manton Dam**	**36.92**	**266**	P	**P**	**04 41 38.9**	**+0.5**
FAKI	**Fak Fak**	**37.67**	**282**	P	**P**	**04 41 42.8**	**-1.7**
FAKI				IAmb	IAmb	04 41 45.4	
	comp=Z,17nm,0.8s						
KNRA	**Kununurra**	**39.09**	**261**	P	**P**	**04 41 55.9**	**+0.1**
FORT	**Forrest**	**41.76**	**238**	P	**P**	**04 42 17.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**42.08**	**257**	P	**P**	**04 42 19.8**	**+0.5**
FITZ				IAmb	IAmb	04 42 20.3	
	comp=Z,7.8nm,0.7s						
SOEI	**Soe**	**43.96**	**269**	P	**P**	**04 42 33.5**	**-0.6**
BATI	**Baumata**	**44.48**	**268**	P	**P**	**04 42 39.4**	**+1.4**
	comp=Z,62nm,0.7s						
MJAR	**Matsushiro Arr**	**57.02**	**331**	P	**P**	**04 44 08.1**	**+0.3**
	comp=Z,3.0nm,0.6s,baz=166,slow=8.4,SNR=13						
MJAR	**Matsushiro Arr**	**57.02**	**331**	P	**P**	**04 44 07.4**	**-0.4**
MAJO	**Matsushiro**	**57.02**	**331**	P	**P**	**04 44 07.6**	**-0.2**
MAT	**Matsushiro**	**57.02**	**331**	P	**P**	**04 44 08.2**	**+0.4**
KSRS	**Korea Array**	**63.14**	**324**	P	**P**	**04 44 49.1**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=132,slow=5.4,SNR=3.7						
VNDA	**Vanda**	**64.83**	**182**	P	**P**	**04 44 58.5**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=356,slow=8.0,SNR=24						
VNDA	**Vanda**	**64.83**	**182**	P	**P**	**04 44 58.3**	**+0.4**
SBA	**Scott Base**	**65.07**	**181**	P	**P**	**04 45 00.3**	**+0.9**
ADK	**Adak**	**65.59**	**10**	P	**P**	**04 45 01.7**	**-1.2**
USRK	**Ussuriysk Ar.**	**65.97**	**332**	P	**P**	**04 45 06.9**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=124,slow=7.0,SNR=7.8						
PETK	**Petropavlovsk-**	**66.35**	**353**	P	**P**	**04 45 08.9**	**+1.3**
	comp=Z,5.4nm,0.6s,baz=145,slow=5.8,SNR=16						
PETK	**Petropavlovsk-**	**66.35**	**353**	P	**P**	**04 45 08.4**	**+0.8**
XAN	**Xi'an**	**73.67**	**311**	P	**P**	**04 45 52.1**	**+0.9**
XAN				pP	PcP	04 46 05.1	+2.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**75.24**	**319**	*e*P	**P**	**04 45 58.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**75.74**	**293**	P	**P**	**04 46 05.0**	**+1.9**
	comp=Z,1.4nm,0.4s,baz=120,slow=4.2,SNR=12						
CMAR	**Chiang Mai Arr**	**75.74**	**293**	P	**P**	**04 46 04.7**	**+1.6**
CD2	**Chengdu**	**76.21**	**307**	*e*P	**P**	**04 46 06.9**	**+1.5**
QSPA	**South Pole Qui**	**77.23**	**180**	P	**P**	**04 46 10.2**	**-0.2**
QSPA				IAmb	IAmb	04 46 11.4	
	comp=Z,14nm,0.7s						
BILL	**Bilibino**	**80.64**	**359**	P	**P**	**04 46 27.2**	**-0.7**
BILL				IAmb	IAmb	04 46 29.3	
	comp=Z,10nm,1.0s						
ULN	**Ulaanbaatar**	**81.60**	**323**	P	**P**	**04 46 33.5**	**0.0**
SONM	**Songino Array**	**81.97**	**323**	P	**P**	**04 46 36.1**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=141,slow=5.9,SNR=7.8						
SONM	**Songino Array**	**81.97**	**323**	P	**P**	**04 46 35.2**	**-0.2**
KTH	**Kantishna Hill**	**82.09**	**17**	IAmb	IAmb	04 46 35.7	
	comp=Z,11nm,0.9s						
GTA	**Gaotai**	**82.58**	**313**	P	**P**	**04 46 40.3**	**+1.7**
GTA				pP	PcP	04 46 47.6	+5.8
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MCK	**McKinley**	**82.80**	**17**	IAmb	IAmb	04 46 40.9	
	comp=Z,11nm,1.0s						
AFDM	**Forest Hills D**	**82.97**	**48**	IAmb	IAmb	04 46 42.4	
	comp=Z,5.4nm,0.9s						
CMB	**Columbia Colle**	**83.05**	**49**	P	**P**	**04 46 41.3**	**+0.4**
IMAR	**Indian Mountai**	**83.27**	**14**	P	**P**	**04 46 41.7**	**+0.5**
WRH	**Wood River Hil**	**83.60**	**17**	IAmb	IAmb	04 46 43.4	
	comp=Z,8.4nm,0.6s						
ISA	**Isabella, Lake**	**83.62**	**51**	P	**P**	**04 46 43.9**	**+0.1**
ISA				IAmb	IAmb	04 46 46.2	
	comp=Z,6.9nm,1.1s						
CCB	**Clear Creek Bu**	**83.81**	**17**	IAmb	IAmb	04 46 44.4	
	comp=Z,7.0nm,0.7s						
MDM	**Murphy Dome**	**83.92**	**17**	P	**P**	**04 46 44.2**	**-0.3**
MDM				IAmb	IAmb	04 46 45.4	
	comp=Z,7.6nm,0.8s						
COLA	**College**	**83.97**	**17**	P	**P**	**04 46 44.1**	**-0.6**
SHL	**Shillong**	**84.16**	**298**	P	**P**	**04 46 47.0**	**+0.2**
SHL				IAmb	IAmb	04 46 48.6	
	comp=Z,6.2nm,0.7s						
IL31		**84.17**	**17**	IAmb	IAmb	04 46 46.6	
	comp=Z,10nm,0.8s						
ILAR	**Eielson Array**	**84.17**	**17**	P	**P**	**04 46 45.0**	**-0.7**
	comp=Z,8.4nm,0.6s,baz=236,slow=5.1,SNR=97						
ILAR	**Eielson Array**	**84.17**	**17**	P	**P**	**04 46 44.9**	**-0.8**
DOT	**Dot Lake**	**84.23**	**19**	IAmb	IAmb	04 46 48.0	
	comp=Z,8.4nm,1.1s						
MAW	**Mawson**	**84.31**	**202**	P	**P**	**04 46 47.2**	**+0.8**
	comp=Z,7.1nm,0.6s,baz=126,slow=5.6,SNR=16						
MAW	**Mawson**	**84.31**	**202**	P	**P**	**04 46 46.4**	**0.0**
LHV	**Little Huntoon**	**84.51**	**49**	P	**P**	**04 46 48.6**	**+0.6**
LHV				IAmb	IAmb	04 46 50.7	
	comp=Z,9.8nm,1.4s						
NVAR	**Mina Array Bea**	**84.72**	**49**	P	**P**	**04 46 50.6**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=231,slow=6.5,SNR=14						
NVAR	**Mina Array Bea**	**84.72**	**49**	P	**P**	**04 46 49.1**	**-0.2**
PINE	**Pine Mountain**	**84.86**	**43**	IAmb	IAmb	04 46 52.3	
	comp=Z,6.5nm,0.8s						
TPNV	**Topopah Spring**	**85.75**	**51**	IAmb	IAmb	04 46 55.9	
	comp=Z,3.8nm,0.8s						
I07A	**Izee**	**85.94**	**43**	IAmb	IAmb	04 46 57.0	
	comp=Z,4.3nm,0.8s						
J08A	**Circle Bar Ran**	**86.36**	**44**	IAmb	IAmb	04 46 59.6	
	comp=Z,6.1nm,0.9s						
SHPR	**Sheep Range**	**86.43**	**52**	P	**P**	**04 46 57.7**	**+0.3**
E07A	**Sunnyside**	**86.64**	**41**	IAmb	IAmb	04 47 00.2	
	comp=Z,6.0nm,0.7s

TUE	**Stuetta**	**142.30**	**337**	PKPdf	**PKPdf**	**04 53 40.2**	**-1.8**
SENIN	**Lac Senin/Sane**	**143.15**	**339**	PKPdf	**PKPdf**	**04 53 42.5**	**-1.0**
ZCCA	**Zocca**	**143.35**	**333**	PKPdf	**PKiKP**	**04 53 45.1**	**-2.2**
MURB	**Monte Urbino**	**143.49**	**331**	PKPdf	**PKPdf**	**04 53 43.9**	**-0.1**
INTR	**Introdacqua**	**143.72**	**328**		**PKPdf**	**04 53 44.1**	**-0.4**
OSSC	**Osservatorio P**	**143.88**	**332**		PKPbc	04 53 43.0	-1.2
TIP	**Timpagrande**	**144.05**	**322**		**PKPab**	**04 53 45.4**	**+0.1**
BNI	**Bardonecchia**	**144.50**	**338**	PKPdf	**PKPab**	**04 53 46.6**	**-0.3**
RAFF	**Raffo Rosso**	**146.75**	**321**	PKPbc	**PKiKP**	**04 53 54.1**	**-0.4**
VSL	**Villasalto**	**147.89**	**330**		**PKiKP**	**04 53 56.1**	**-0.7**
KEST	**Kesra**	**150.71**	**325**	PKPbc	**PKiKP**	**04 54 03.3**	**+0.5**
	comp=Z,7.2nm,0.7s,baz=174,slow=0.6,SNR=14						
PBRG	**Braganca**	**150.86**	**353**	*e*PKPbc	**PKiKP**	**04 54 03.1**	**+0.2**
PCAB	**Cabril**	**151.07**	**355**	*e*PKPbc	**PKiKP**	**04 54 03.8**	**+0.5**
POLO	**Lamas de Olo**	**151.39**	**355**	*e*PKPbc	**PKiKP**	**04 54 04.5**	**+0.5**
PVRL	**Vila Real**	**151.48**	**355**	*e*PKPbc	**PKiKP**	**04 54 04.8**	**+0.6**
MVO	**Moncorvo**	**151.52**	**354**	*e*PKPbc	**PKiKP**	**04 54 05.0**	**+0.7**
PTO	**Porto**	**151.68**	**356**	*e*PKPbc	**PKiKP**	**04 54 04.8**	**+0.3**
PVIS	**Viseu**	**152.05**	**355**	*e*PKPbc	**PKiKP**	**04 54 06.0**	**+0.6**
MTE	**Manteigas**	**152.33**	**354**	*e*PKPbc	**PKiKP**	**04 54 06.8**	**+0.8**
ESDC	**Sonseca Array**	**152.51**	**348**	PKPbc	**PKiKP**	**04 54 06.7**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=18,slow=2.3,SNR=13						
ESDC				PKPab	**PKPab**	**04 54 20.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=9.3,slow=3.8,SNR=6.4						
PCBR	**Castelo Branco**	**152.88**	**354**	*e*PKPbc	**PKiKP**	**04 54 07.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**167.64**	**273**	PKP	**PKPdf**	**04 54 15.1**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=68,slow=1.0,SNR=5.4						
TORD				PKPab	**PKPab**	**04 55 27.3**	**+0.4**
	comp=Z,1.5nm,1.0s,baz=74,slow=5.2,SNR=5.4						
TORD	**Torodi Ar. Bea**	**167.64**	**273**		**PKPdf**	**04 54 15.6**	**-0.1**
TORD				PKPab	**PKPab**	**04 55 26.4**	**-0.5**

*SCEDC **19** 04:35:45.6, 34.02N×116.44W, h1km, Hypocentre not reviewed by the ISC*

*ANF **19** 04:35:45.1±0.1, 34.01N×116.44W, h15km, ML3.2/24, Error ellipse: s-maj=0.9km s-min=0.9km az=117.0, Hypocentre not reviewed by the ISC*

*PAS **19** 04:35:45.6±1.1, 34.016N±0.007×116.438W±0.005, h1km±7km, ML3.2/136, ML2.9/70(NEIC), Error ellipse: s-maj=1.1km s-min=0.5km az=201.0*

NEIC 19 04:35:45.8±1.2, 34.010N±0.004×116.44W±0.01, h2km±6km, Error ellipse: s-maj=1.3km s-min=0.6km az=76.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLAC	**Blackrock camp**	**0.07**	**34**		Pg	04 35 48.3	+1.0
EW2	**E Wide Canyon**	**0.07**	**161**		Pg	04 35 48.5	+1.9
DEVC	**Devers**	**0.14**	**238**		Pg	04 35 48.5	+0.1
DEVC					Sg	04 35 50.6	+0.3
GTM	**Goat Mountain**	**0.29**	**13**		Pg	04 35 51.1	-0.3
GTM					Sg	04 35 55.2	0.0
PMD	**Palm Desert**	**0.36**	**172**		Pg	04 35 52.7	-0.1
PMD					Sg	04 35 57.9	+0.4
BELC	**Belle Mtn. Jos**	**0.36**	**91**		Pg	04 35 52.9	+0.1
BELC					Sg	04 35 58.1	+0.6
BELC	**Belle Mtn. Jos**	**0.36**	**91**	P		04 35 52.9	
	baz=273,SNR=590						
BELC				S		04 35 58.2	
	baz=273						
GVDA	**Garner Valley**	**0.39**	**210**		Pg	04 35 53.3	-0.1
PFO	**Pinyon Flats O**	**0.40**	**183**		Pg	04 35 53.4	0.0
PFO				IAML		04 36 00.3	
	877nm,0.3s						
PFO	**Pinyon Flats O**	**0.40**	**183**		Pg	04 35 53.4	0.0
PFO	**Pinyon Flats O**	**0.40**	**183**	P		04 35 53.4	
	baz=2.6,SNR=222						
PFO				S		04 35 58.9	
	baz=2.6						
XPFO	**Pion Flat**	**0.40**	**182**		Pg	04 35 53.4	-0.1
XPFO					Sg	04 35 59.0	+0.3
TPFO	**Pinon Flats**	**0.40**	**182**	P		04 35 53.5	
	baz=2.0,SNR=360						
BBSC	**Beaumont Base**	**0.46**	**259**		Pg	04 35 55.0	+0.4
BBSC					Sg	04 36 02.0	+1.4
DNR	**Dunn Ranch,Anz**	**0.47**	**200**		Pg	04 35 54.9	+0.1
DNR					Sg	04 36 01.7	+0.8
BBRC	**Big Bear Solar**	**0.47**	**302**		Pg	04 35 54.9	0.0
BBRC					Sg	04 36 01.6	+0.6
BBRC	**Big Bear Solar**	**0.47**	**302**	P		04 35 54.9	
	baz=122,SNR=114						
BBRC				S		04 36 01.1	
	baz=122						
SNDA	**J Saunders Pla**	**0.48**	**198**		Pg	04 35 55.1	+0.1
SNDA					Sg	04 36 01.8	+0.6
CRY	**Cary Ranch**	**0.51**	**210**		Pg	04 35 55.6	0.0
CRY					Sg	04 36 02.8	+0.6
CTCC	**Cactus City**	**0.51**	**133**		Sg	04 36 03.4	+1.1
POB	**Polly Butte**	**0.52**	**232**		Pg	04 35 55.8	+0.1
BTL	**Butler Peak**	**0.53**	**298**		Pg	04 35 56.1	+0.2
FRD	**Ford Ranch, An**	**0.53**	**195**		Pg	04 35 56.0	+0.1
FRD					Sg	04 36 03.4	+0.5
FRD	**Ford Ranch, An**	**0.53**	**195**		Pg	04 35 56.0	0.0
FRD					Sg	04 36 03.3	+0.4
BZNA	**Buzz No.'s Pla**	**0.55**	**200**		Pg	04 35 56.4	+0.1
BZNA					Sg	04 36 04.2	+0.7
SVD	**Seven Oaks Dam**	**0.56**	**280**		Pg	04 35 56.3	-0.1
HMTC	**Hemet**	**0.56**	**238**		Pg	04 35 56.5	0.0
HMTC					Sg	04 36 04.3	+0.5
CFT	**Crafton Hills**	**0.56**	**273**		Pg	04 35 56.6	0.0
CTW	**Cottonwood Mou**	**0.57**	**125**		Pg	04 35 57.1	+0.2
CTW					Sg	04 36 05.4	+1.1
DGR	**Domenigoni Val**	**0.60**	**233**		Pg	04 35 57.1	-0.1
PEC	**Perris**	**0.61**	**259**		Pg	04 35 57.5	-0.1
PEC					Sg	04 36 05.7	+0.2
BACC	**Bachelor Mtn.**	**0.64**	**232**		Pg	04 35 57.9	-0.2
HAY	**Hayfield**	**0.70**	**115**		Pg	04 35 59.8	+0.7
HAY					Sb	04 36 09.7	-0.9
BORC	**Borrego Spring**	**0.74**	**179**		Pg	04 35 59.8	-0.2
RSBC	**Riverside Bore**	**0.74**	**267**		Sg	04 36 10.0	+0.4
PLM	**Palomar**	**0.74**	**209**		Pg	04 36 00.0	0.0
PLM					Sg	04 36 10.2	+0.5
MURC	**Murrieta**	**0.75**	**237**		Pg	04 36 00.1	-0.1
MURC					Sg	04 36 10.1	+0.2
MURC	**Murrieta**	**0.75**	**237**	P		04 35 59.9	
	baz=56,SNR=48						
MURC				S		04 36 10.2	
	baz=56						
RVR	**Riverside**	**0.78**	**269**		Pg	04 36 00.3	-0.4
RVR					Sg	04 36 10.7	-0.2
SME	**Santa Rosa Min**	**0.79**	**257**		Pg	04 36 00.3	-0.6
CSP	**Cedar Springs**	**0.82**	**291**		Pg	04 36 01.1	-0.3
SALN	**Salton City**	**0.82**	**153**		Pg	04 36 01.8	+0.3
SALN					Sb	04 36 13.6	-0.6
HEC	**Hector,Ludlow**	**0.82**	**6**	P		04 36 01.0	
	baz=186,SNR=58						
HEC				S		04 36 12.5	
	baz=186						
MATG	**Mataguay Scout**	**0.83**	**192**		Pg	04 36 01.6	-0.1
MATG					Sg	04 36 12.6	+0.2
SLH	**Sleepy Hollow**	**0.83**	**169**		Pg	04 36 01.6	0.0
SLH					Sb	04 36 13.5	-1.0
BC3	**Big Chuckawall**	**0.89**	**113**		Pg	04 36 03.0	+0.1
BC3					Sg	04 36 15.0	+0.6
BC3	**Big Chuckawall**	**0.89**	**113**	P		04 36 03.0	
	baz=294,SNR=139						
BC3				S		04 36 15.0	
	baz=294						
ELS	**Elsinore Mount**	**0.90**	**247**		Pg	04 36 02.5	-0.5
ELS					Sg	04 36 14.5	-0.2
FRK	**Frink**	**0.90**	**132**		Pg	04 36 02.5	-0.5
SS2	**San Sevaine**	**0.90**	**283**		Pg	04 36 02.9	-0.2
VTV	**Victorville**	**0.92**	**307**		Pg	04 36 02.9	-0.5
VTV					Sg	04 36 14.8	-0.5
RRX	**Edison Barstow**	**0.98**	**332**		Pg	04 36 04.0	-0.5
RRX					Sg	04 36 17.5	+0.2
RRX	**Edison Barstow**	**0.98**	**332**	P		04 36 04.1	
	baz=152,SNR=14						
RRX				S		04 36 17.7	
	baz=152						
ADO	**Adelanto Recei**	**0.99**	**303**		Pg	04 36 04.4	-0.3
GMRC	**Granite Mounta**	**1.00**	**40**		Pg	04 36 04.4	-0.7
GMRC					Sg	04 36 17.8	-0.3
GMRC	**Granite Mounta**	**1.00**	**40**	P		04 36 04.4	
	baz=220,SNR=174						
GMRC				S		04 36 18.1	
	baz=220						
SSK	**Sunset Peak**	**1.06**	**281**		Pg	04 36 05.5	-0.7
HWB	**Hans Werner Br**	**1.07**	**204**		Pg	04 36 05.4	-0.9
HWB					Sg	04 36 19.4	-0.8
GORC	**Green Oak Ranc**	**1.08**	**218**		Pg	04 36 05.4	-1.1
GORC					Sg	04 36 19.3	-1.2
IRM	**Iron Mountain**	**1.08**	**82**		Pg	04 36 05.8	-0.7
IRM					Sg	04 36 20.5	-0.1
IRM	**Iron Mountain**	**1.08**	**82**	P		04 36 05.8	
	baz=263,SNR=114						
IRM				S		04 36 20.4	
	baz=263						
DPP	**Dos Picos Cty**	**1.09**	**203**		Pg	04 36 05.7	-1.0
DPP					Sg	04 36 19.8	-1.1
MONP2	**Monument Peak**	**1.11**	**179**		Pg	04 36 06.7	-0.5
MONP2	**Monument Peak**	**1.11**	**179**	P		04 36 06.6	
	baz=359,SNR=66						
MONP2				S		04 36 21.3	
	baz=359						
CBKC	**Canebrake**	**1.12**	**172**		Pg	04 36 06.4	-0.8
PSRC	**Puddingstone R**	**1.14**	**274**		Pg	04 36 06.5	-1.2
DSCC	**Desert Studies**	**1.16**	**14**		Pg	04 36 07.3	-0.7
EML	**El Monte Cty P**	**1.17**	**197**		Pg	04 36 07.0	-1.1
EML					Sg	04 36 22.2	-1.1
CRR	**Carrizo Plain**	**1.19**	**161**		Pg	04 36 07.0	-1.5
SWSC	**Sam W. Stewart**	**1.19**	**153**		Pg	04 36 06.7	-1.8
SWSC	**Sam W. Stewart**	**1.19**	**153**	P		04 36 06.7	
	baz=334,SNR=22						
SWSC				S		04 36 23.0	
	baz=334						
PEM	**Pine Mountain**	**1.20**	**278**		Pg	04 36 07.8	-1.0
XTL	**Crystal Lake,**	**1.22**	**284**		Pg	04 36 08.1	-1.0
109C	**Camp Elliot, M**	**1.25**	**207**		Pg	04 36 08.3	-1.4
109C	**Camp Elliot, M**	**1.25**	**207**	P		04 36 08.3	
	baz=26,SNR=31						
109C				S		04 36 24.8	
	baz=26						
CPE	**Camp Elliot**	**1.25**	**207**		Pg	04 36 08.4	-1.4
HYS	**Haystack Butte**	**1.27**	**313**		Pg	04 36 09.2	-0.8
JNH	**Juniper Hills**	**1.33**	**290**		Pg	04 36 10.3	-1.0
SBB	**Saddle Back Bu**	**1.33**	**301**		Pg	04 36 10.3	-1.0
SDRC	**San Diego Road**	**1.34**	**199**		Pg	04 36 10.1	-1.3
BAR	**Barrett**	**1.34**	**189**		Pg	04 36 10.0	-1.5
BAR				IAML		04 36 29.1	
	comp=N,195nm,0.2s						
CHFC	**Chilao Flat St**	**1.36**	**284**		Pg	04 36 11.3	-0.5
MWC	**Mount Wilson**	**1.36**	**279**		Pg	04 36 10.5	-1.4
IKP	**In-Ko-Pah, Jac**	**1.38**	**168**	P		04 36 10.2	
	baz=349,SNR=15						
IKP				S		04 36 28.0	
	baz=349						
IKP	**In-Ko-Pah, Jac**	**1.38**	**168**		Pn	04 36 10.2	-1.9
GVRC	**Garvey Reservo**	**1.40**	**272**		Pg	04 36 12.5	-0.1
LRRC	**Littlerock Res**	**1.42**	**292**		Pn	04 36 11.8	-0.7
YUH	**Yuha Desert**	**1.43**	**162**		Pn	04 36 10.5	-2.1
PASC	**Pasadena Art C**	**1.46**	**277**		Pn	04 36 11.9	-1.2
PASC				IAML		04 36 33.8	
	comp=E,211nm,0.4s						
TUQ	**Turquoise Moun**	**1.48**	**16**	P		04 36 11.9	
	baz=197,SNR=41						
TUQ				Sb		04 36 33.0	
	baz=197						
EDW2	**Edwards Air Fo**	**1.55**	**304**	Pb		04 36 13.5	
	baz=124,SNR=64						
EDW2				Sb		04 36 34.3	
	baz=124						
FMP	**Fort Macarthur**	**1.57**	**260**	Pb		04 36 13.9	
	baz=78						
FMP				Sb		04 36 34.8	
	baz=78						
DECC	**Green Verdugo**	**1.59**	**279**	Pb		04 36 14.5	
	baz=98,SNR=10						
DECC				Sb		04 36 35.7	
	baz=98						
GLA	**Glamis**	**1.65**	**125**		Pn	04 36 16.2	+0.4
GLA	**Glamis**	**1.65**	**125**	P		04 36 13.8	
	baz=306						
GLA				Sg		04 36 40.2	
	baz=306						
NEE2	**Needles Airpor**	**1.68**	**63**		Pb	04 36 17.1	-0.4
NEE2	**Needles Airpor**	**1.68**	**63**	P		04 36 14.3	
	baz=244,SNR=31						
NEE2				Sb		04 36 38.8	
	baz=244						
CCCA	**Chr Cany lake**	**1.69**	**333**		Pb	04 36 17.7	0.0
DTP	**Desert Tortois**	**1.71**	**318**		Pb	04 36 17.9	-0.1
CCAC	**Calif City Air**	**1.73**	**312**		Pn	04 36 17.6	+0.7
CIS	**Catalina Islan**	**1.76**	**250**	Pb		04 36 17.2	
	baz=69						
LRMC	**Laurel Mtn Rad**	**1.79**	**325**	Pb		04 36 17.4	
	baz=145,SNR=19						
OSI	**Osito Audit: C**	**1.99**	**288**		Pn	04 36 20.4	0.0
ARVC	**Arvin**	**2.27**	**300**	P		04 36 22.5	
	baz=119,SNR=15						
ISA	**Isabella, Lake**	**2.35**	**315**		Pn	04 36 24.8	-0.7
ISA	**Isabella, Lake**	**2.35**	**315**	P		04 36 24.0	
	baz=134,SNR=52						
W13A	**Hualapai Mount**	**2.37**	**62**		Pn	04 36 24.6	-1.2
W13A				IAML		04 37 03.0	
	comp=N,48nm,0.8s						
113A	**Mohawk Valley,**	**2.55**	**118**	Pn	Pn	04 36 29.1	+0.9
113A				IAML		04 37 10.6	
	comp=N,39nm,0.7s						
SHPR	**Sheep Range**	**2.70**	**22**		Pn	04 36 30.2	-0.2
Y14A	**Wickenburg**	**2.85**	**90**		Pn	04 36 31.1	-1.3
Y14A				IAML		04 37 22.0	
	comp=E,54nm,0.4s						
Y14A				IAML		04 37 27.7	
	comp=N,62nm,0.8s						
TPNV	**Topopah Spring**	**2.94**	**3**		Pn	04 36 32.9	-0.7
TPNV				IAML		04 37 25.9	
	comp=N,28nm,0.9s						
PRN	**Pahroc Range**	**3.57**	**18**		Pn	04 36 42.2	-0.1
PRN				IAML		04 37 47.4	
	comp=N,22nm,0.7s						
PRN				IAML		04 38 03.1	
	comp=E,25nm,0.9s						
214A	**Organ Pipe Nat**	**3.67**	**123**	Pn	Pn	04 36 43.7	+0.1
214A					Lg	04 37 44.7	
214A				IAML		04 37 49.0	
	comp=N,18nm,1.1s						
214A				IAML		04 37 53.9	
	comp=E,20nm,0.9s						
LCMT	**Little Creek M**	**3.97**	**40**		Pn	04 36 47.4	-0.4
TPH	**Tonopah**	**4.11**	**351**	Pn	Pn	04 36 49.5	-0.2
TPH	**Tonopah**	**4.11**	**351**	IAML		04 38 10.7	
	comp=E,11nm,4.2s						
X16A	**Lo Mia Camp, P**	**4.16**	**83**		Pn	04 36 49.8	-0.6
X16A				IAML		04 38 03.1	
	comp=E,14nm,1.0s						
X16A				IAML		04 38 05.4	
	comp=N,12nm,0.9s						
KNB	**Kanab**	**4.21**	**43**		Pn	04 36 50.9	-0.2
KNB				IAML		04 38 01.9	
	comp=N,14nm,1.0s						
KNB				IAML		04 38 18.5	
	comp=E,9.3nm,1.1s						
CCUT	**Cedar City**	**4.33**	**34**		Pn	04 36 52.6	-0.2
WUAZ	**Wupatki**	**4.43**	**69**	Pn	Pn	04 36 54.6	+0.4
WUAZ				IAML		04 38 08.1	
	comp=E,13nm,0.5s						
WUAZ				IAML		04 38 17.6	
	comp=E,16nm,2.2s						
SZCU	**Shurtz Canyon**	**4.50**	**36**	Pn	Pn	04 36 54.6	-0.5
LHV	**Little Huntoon**	**4.55**	**339**	Pn	Pn	04 36 55.9	+0.3
LHV				IAML		04 37 30.9	
	comp=N,9.4nm,3.7s						
LHV				IAML		04 38 43.4	
	comp=E,12nm,4.3s						
NV11	**Mina Array Sit**	**4.63**	**343**	Pn	Pn	04 36 57.0	+0.1
NV11				IAML		04 38 19.6	
	comp=E,7.5nm,3.0s						
NV11				IAML		04 38 24.8	
	comp=N,8.8nm,5.0s						
NVAR	**Mina Array Bea**	**4.66**	**342**	Pn	Pn	04 36 58.0	+0.6
PKCU	**Pink Cliffs**	**4.80**	**43**		Pn	04 36 59.6	+0.2
RYN	**Ryan**	**4.91**	**341**	Pn	Pn	04 37 01.6	+0.9
RYN				IAML		04 39 44.2	
	comp=N,5.5nm,4.1s						
RYN				IAML		04 40 11.5	
	comp=E,6.6nm,4.9s						
PSUT	**Pine Spring**	**4.97**	**24**		Pn	04 37 00.4	-1.3
PSUT				IAML		04 38 32.9	
	comp=E,6.3nm,2.8s						
PSUT				IAML		04 38 42.4	
	comp=N,5.5nm,2.6s						
TUC	**Tucson**	**5.03**	**108**	Pn	Pn	04 37 03.5	+1.1
TUC				IAML		04 38 29.6	
	comp=N,6.0nm,1.4s						
TUC				IAML		04 38 42.6	
	comp=N,5.3nm,3.0s						
CMB	**Columbia Colle**	**5.13**	**323**		Pn	04 37 04.2	+0.5
CMB				IAML		04 38 32.4	
	comp=E,7.1nm,2.5s						
CMB				IAML		04 38 36.7	
	comp=N,6.2nm,4.2s						
KVN	**Kaiserville**	**5.21**	**346**	Pn	Pn	04 37 05.2	+0.3
KVN				IAML		04 38 26.3	
	comp=N,5.3nm,4.8s						
KVN				IAML		04 38 38.6	
	comp=E,5.0nm,3.2s						
MTPU	**Mount Pierson**	**5.30**	**39**	Pn	Pn	04 37 06.7	+0.5
MTPU				IAML		04 38 36.9	
	comp=N,8.6nm,4.6s						
MTPU				IAML		04 38 41.6	
	comp=E,6.1nm,3.7s						
X18A	**Snowflake**	**5.40**	**83**	Pn	Pn	04 37 07.6	+0.1
X18A					Lg	04 38 41.4	
MSU	**Marysvale**	**5.66**	**36**	Pn	Pn	04 37 09.8	-1.3
PNTR	**Pine Nut**	**5.67**	**334**	Pn	Pn	04 37 12.4	+1.1

*IDC **19** 05:27:14.7±0.6, 35.95N×97.34W, h0km, mb3.9/7, mb1 4.1/17, mb1mx3.9/63, mbtmp3.9/17, ML3.6/9, MS3.5/14, Ms1 3.5/14, ms1mx3.3/48, Error ellipse: s-maj=10.0km s-min=9.1km az=160.0*

*NEIC **19** 05:27:14.8±1.2, 35.95N±0.02×97.33W±0.04, h3km±5km, mb4.1/28, mb_Lg4.5/157, Mwr4.2/63, Error ellipse: s-maj=5.5km s-min=2.3km az=72.0*

*NEIC **19** 05:27:15.3, 35.94N×97.34W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-0.15; $M_{\theta\theta}$1.84; $M_{\phi\phi}$-1.69; $M_{r\theta}$-0.08; $M_{\theta\phi}$1.24; $M_{r\phi}$0.94; Fault plane solution: $M_0$2.36000×10^{15} NP1:ϕ_s209.38000°, δ78.54000°, λ-160.51000°. NP2:ϕ_s115.36000°, δ70.92000°, λ-12.14000°. Principal axes: T 2.2490, Plg5.0000°, Azm241.0000°; N 0.2015, Plg68.0000°, Azm239.0000°; P -2.4505, Plg22.0000°, Azm73.0000°;*

*ANF **19** 05:27:15.4±0.3, 35.97N×97.29W, h8km, ML5.4/28 Error ellipse: s-maj=4.4km s-min=3.4km az=119.0*

ISC 19 05:27:15.0±1.0, 35.95N±0.02×97.32W±0.02, h7km±7km, n337, σ1°27/327, mb4.0/6, MS3.5/6, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.18**	**216**		**Pg**	**05 27 18.7**	**0.0**
OK029				Sg	**Sg**	**05 27 21.4**	**+0.2**
OK005	**Luther M Schoo**	**0.31**	**160**	Pg	**Pg**	**05 27 21.1**	**+0.1**
OK025	**Westminster Rd**	**0.36**	**182**		**Pg**	**05 27 22.2**	**+0.1**
BCOK	**Bluff Creek, N**	**0.37**	**219**		**Pg**	**05 27 22.2**	**0.0**
BCOK				Sg	**Sg**	**05 27 27.3**	**+0.2**
OK009	**Oakdale Elemen**	**0.37**	**193**		**Pg**	**05 27 22.2**	**0.0**
OK009				Sg	**Sg**	**05 27 27.4**	**+0.3**
OK001	**Jones High Sch**	**0.39**	**176**	Pg	**Pg**	**05 27 22.5**	**0.0**
OK001				Sg	**Sg**	**05 27 27.8**	**+0.2**
OK031	**S. Brethren Rd**	**0.39**	**89**		**Pg**	**05 27 23.2**	**+0.6**
OK031				Sg	**Sg**	**05 27 28.9**	**+1.1**
OK030	**Cody Creek RV**	**0.44**	**92**		**Pg**	**05 27 24.0**	**+0.5**
OK030				Sg	**Sg**	**05 27 30.3**	**+1.1**
OKCFA	**Oklahoma City**	**0.54**	**191**		**Pg**	**05 27 25.3**	**-0.1**
OKCFA	**Oklahoma City**	**0.54**	**191**	P	**Pg**	**05 27 25.3**	**-0.1**
	baz=9.4,SNR=452						
OKCFA				S	**Sg**	**05 27 32.7**	**+0.2**
	baz=9.4						
OKCFA	**Oklahoma City**	**0.54**	**191**	P		05 27 25.3	
	baz=9.4,SNR=452						
OKCFA				S		05 27 32.7	
	baz=9.4						
OKCSW	**OKLAHOMA CITY**	**0.55**	**190**		**Pg**	**05 27 25.5**	**-0.1**
QUOK	**Quay**	**0.55**	**66**		**Pg**	**05 27 26.2**	**+0.7**
QUOK				IAmb_Lg		05 27 32.4	
	comp=Z,4μm,0.8s						
FNO	**Franklin**	**0.69**	**185**		**Pg**	**05 27 28.6**	**+0.3**
FNO				IAmb_Lg		05 27 38.5	
	comp=Z,5μm,0.9s						
CROK	**Carrier**	**0.77**	**316**		**Pb**	**05 27 30.1**	**-0.7**
CROK				IAmb_Lg		05 27 39.5	
	comp=Z,7μm,0.9s						
GC02	**Grant County #**	**1.00**	**335**		**Pb**	**05 27 34.5**	**-0.2**
KAN13	**South Haven SW**	**1.07**	**353**		**Pb**	**05 27 35.9**	**-0.1**
OK032	**Salt Plains WL**	**1.12**	**320**		**Pb**	**05 27 36.3**	**-0.3**
KAN14	**Manchester OK**	**1.13**	**333**		**Pb**	**05 27 36.7**	**-0.2**
T35A	**Sooner Cattle**	**1.17**	**34**		**Pg**	**05 27 37.4**	**0.0**
T35B	**Sooner Cattle**	**1.17**	**34**	P	**Pg**	**05 27 37.4**	**-0.1**
	baz=215,SNR=1000						
T35B				S	**Sb**	**05 27 53.4**	**+0.4**
	baz=215						
T35B	**Sooner Cattle**	**1.17**	**34**	P		05 27 37.4	
	baz=215,SNR=1000						
T35B				S		05 27 53.4	
	baz=215						
KAN05	**Bluff City Nor**	**1.24**	**339**		**Pb**	**05 27 38.8**	**-0.1**
TUL1	**Leonard**	**1.24**	**91**	P	**Pg**	**05 27 37.8**	**-1.1**
	baz=272,SNR=1000						
TUL1				S	**Sg**	**05 27 54.9**	**-0.1**
	baz=272						
TUL1	**Leonard**	**1.24**	**91**	P		05 27 37.7	
	baz=272,SNR=937						
TUL1				S		05 27 54.9	
	baz=272						
TUL1	**Leonard**	**1.24**	**91**	P		05 27 37.8	
	baz=272,SNR=1000						
TUL1				S		05 27 54.9	
	baz=272						
KAN01	**Argonia South**	**1.25**	**344**		**Pb**	**05 27 39.0**	**0.0**
KS20	**Mayfield South**	**1.29**	**352**		**Pn**	**05 27 39.8**	**+0.2**
KAN10	**Anthony SW Sta**	**1.33**	**332**		**Pg**	**05 27 40.0**	**-0.5**
KS21	**Milan North St**	**1.37**	**349**		**Pb**	**05 27 40.9**	**0.0**
KAN08	**Anthony NE Sta**	**1.38**	**338**		**Pg**	**05 27 41.0**	**-0.4**
KAN16	**Harper SW Stat**	**1.41**	**335**	IAmb_Lg		05 28 01.1	
	comp=Z,2μm,1.2s						
U32A	**Winter Ranch,**	**1.

comp=Z,904nm,0.9s
R32A Long Quarter, 2.71 336 P Pn 05 27 59.8 +0.7
baz=156,SNR=1000
R32A S Sn **05 28 33.3 +1.2**
baz=156
R32A Long Quarter, 2.71 336 P 05 27 59.8
baz=156,SNR=1000
R32A S 05 28 33.3
baz=156
HHAR Hobbs 2.76 82 Pn Pn **05 28 00.2 +0.5**
HHAR Hobbs 2.76 82 P Pn **05 28 00.3 +0.5**
baz=264,SNR=96
HHAR Hobbs 2.76 82 P 05 28 00.3
baz=264,SNR=96
W39A Magazine 2.98 104 Pn **05 28 03.4 +0.7**
W39A IAmb_Lg 05 28 53.3
comp=Z,1μm,0.8s
W39A Magazine 2.98 104 P Pn **05 28 03.4 +0.7**
baz=286,SNR=202
W39A S Sn **05 28 39.9 +1.2**
baz=286
W39A Magazine 2.98 104 P 05 28 03.3
baz=286,SNR=167
W39A Magazine 2.98 104 P 05 28 03.4
baz=286,SNR=202
W39A S 05 28 39.9
baz=286
KSU1 Kansas State U 3.20 10 Pn **05 28 07.2 +1.4**
KSU1 IAmb_Lg 05 29 04.0
comp=Z,2μm,0.9s
KSU1 Kansas State U 3.20 10 P Pn **05 28 06.9 +1.1**
baz=191,SNR=66
KSU1 Kansas State U 3.20 10 P 05 28 06.0
baz=191,SNR=58
KSU1 Kansas State U 3.20 10 P 05 28 06.9
baz=191,SNR=66
Z38A Mt. Pleasant 3.30 144 Pn Pn **05 28 07.4 +0.3**
Z38A IAmb_Lg 05 29 05.4
comp=Z,2μm,0.9s
Z38A Mt. Pleasant 3.30 144 P Pn **05 28 07.5 +0.4**
baz=325,SNR=32
Z38A Mt. Pleasant 3.30 144 P 05 28 07.5
baz=325,SNR=32
MIAR Mount Ida 3.37 113 Pn **05 28 08.8 +0.7**
MIAR IAmb_Lg 05 29 11.8
comp=Z,2μm,1.1s
MIAR Mount Ida 3.37 113 P Pn **05 28 08.7 +0.6**
baz=296,SNR=361
MIAR Mount Ida 3.37 113 P 05 28 08.7
baz=296,SNR=110
MIAR S 05 28 49.1
baz=296
MIAR Mount Ida 3.37 113 P 05 28 08.7
baz=296,SNR=361
CBKS Cedar Bluff 3.45 327 Pn **05 28 10.4 +1.2**
CBKS IAmb_Lg 05 29 08.4
comp=Z,721nm,0.7s
CBKS Cedar Bluff 3.45 327 P Pn **05 28 10.2 +1.0**
baz=146,SNR=30
CBKS Cedar Bluff 3.45 327 P 05 28 09.5
baz=146,SNR=45
CBKS Cedar Bluff 3.45 327 P 05 28 10.2
baz=146,SNR=30
U40A Yellville 3.64 82 Pn Pn **05 28 11.6 -0.2**
U40A IAmb_Lg 05 29 15.9
comp=Z,2μm,0.9s
U40A Yellville 3.64 82 P Pn **05 28 11.8 0.0**
baz=265,SNR=272
U40A Yellville 3.64 82 P 05 28 11.7
baz=265,SNR=168
U40A Yellville 3.64 82 P 05 28 11.8
baz=265,SNR=272
U40A P 05 28 11.8
baz=265,SNR=272
S39A Bolivar 3.65 60 Pn **05 28 12.7 +0.7**
S39A IAmb_Lg 05 29 13.9
comp=Z,2μm,1.0s
S39A Bolivar 3.65 60 P Pn **05 28 12.3 +0.3**
baz=243,SNR=178
S39A S Sn **05 28 56.9 +1.6**
baz=243
S39A Bolivar 3.65 60 P 05 28 12.3
baz=243,SNR=178
S39A S 05 28 56.9
baz=243
AMTX Amarillo 3.71 255 Pn **05 28 13.7 +0.8**
AMTX Amarillo 3.71 255 P Pn **05 28 13.6 +0.7**
baz=72,SNR=51
AMTX Amarillo 3.71 255 P 05 28 13.1
baz=72
AMTX Amarillo 3.71 255 P 05 28 13.6
baz=72,SNR=51
ABTX Abilene, Hawle 3.83 211 Pn Pn **05 28 14.8 +0.4**
ABTX IAmb_Lg 05 29 17.3
comp=Z,1μm,0.9s
ABTX Abilene, Hawle 3.83 211 P Pn **05 28 14.5 +0.1**
baz=29,SNR=21
ABTX S Sb **05 29 11.7 +2.2**
baz=29
ABTX Abilene, Hawle 3.83 211 P 05 28 14.5
baz=29
ABTX Abilene, Hawle 3.83 211 P 05 28 14.5
baz=29,SNR=21
ABTX S 05 29 11.7
baz=29
WHTX Lake Whitney, 3.95 182 Pn Pn **05 28 15.8 -0.1**
WHTX Lake Whitney, 3.95 182 P Pn **05 28 15.9 -0.1**
baz=1.3,SNR=23
WHTX S Sb **05 29 14.2 +1.3**
baz=1.3
WHTX Lake Whitney, 3.95 182 P 05 28 15.9
baz=1.3,SNR=17
WHTX Sb 05 29 14.8
baz=1.3
WHTX Lake Whitney, 3.95 182 P 05 28 15.9
baz=1.3,SNR=23
WHTX S 05 29 14.2
baz=1.3
X40A Basin Creek Fa 3.95 110 Pn **05 28 16.9 +0.8**
X40A Basin Creek Fa 3.95 110 P Pn **05 28 16.5 +0.4**
baz=293,SNR=52
X40A Basin Creek Fa 3.95 110 P 05 28 16.2
baz=293,SNR=48
X40A Basin Creek Fa 3.95 110 P 05 28 16.5
baz=293,SNR=52
X40A P 05 28 16.5
baz=293,SNR=52
237A Washetta, Mont 4.13 162 Pn Pn **05 28 17.9 -0.7**
237A Washetta, Mont 4.13 162 P Pn **05 28 18.2 -0.4**
baz=342,SNR=38
237A S Sn **05 29 08.4 +1.2**
baz=342
237A Washetta, Mont 4.13 162 P 05 28 18.2
baz=342,SNR=38
237A S 05 29 08.4
baz=342
WHAR Wooly Hollow 4.15 98 Pn **05 28 19.2 +0.4**
WHAR IAmb_Lg 05 29 29.9
comp=Z,912nm,0.7s
W41B Gary Mavity, V 4.21 99 P Pn **05 28 19.8 +0.2**
baz=282,SNR=170
W41B Gary Mavity, V 4.21 99 P 05 28 19.2
baz=282,SNR=117
W41B Gary Mavity, V 4.21 99 P 05 28 19.8
baz=282,SNR=170
FCAR Ozark Folk Cen 4.22 89 Pn **05 28 19.5 -0.2**
FCAR IAmb_Lg 05 29 31.2
comp=Z,655nm,0.7s
MGMO Mountain Grove 4.25 72 Pn **05 28 20.5 +0.4**
MGMO IAmb_Lg 05 29 40.8
comp=Z,781nm,0.8s
Z41A Richland Creek 4.59 124 P Pn **05 28 24.6 -0.2**
baz=307,SNR=13
Z41A Richland Creek 4.59 124 P 05 28 24.6
baz=307,SNR=9.4
Z41A Richland Creek 4.59 124 P 05 28 24.6
baz=307,SNR=13
Z41A P 05 28 24.6
baz=307,SNR=13
R40A Maddies Statio 4.67 58 Pn Pn **05 28 26.3 +0.3**
R40A IAmb_Lg 05 29 45.8
comp=Z,853nm,0.8s
R40A Maddies Statio 4.67 58 P Pn **05 28 26.3 +0.3**
baz=241,SNR=132
R40A Maddies Statio 4.67 58 P 05 28 26.3
baz=241,SNR=132
NATX Nacogdoches 4.73 151 Pn **05 28 26.5 -0.2**
baz=333
NATX Nacogdoches 4.73 151 P 05 28 26.7
P38A Dawn 4.74 38 Pn **05 28 27.8 +0.9**
P38A IAmb_Lg 05 29 50.9
comp=Z,1μm,1.0s
P38A Dawn 4.74 38 P Pn **05 28 27.4 +0.5**
baz=220,SNR=70
P38A Dawn 4.74 38 P 05 28 27.4
baz=220,SNR=70
N33B J Bar K, Exete 4.79 359 P Pn **05 28 27.4 -0.1**
baz=179,SNR=24
N33B J Bar K, Exete 4.79 359 P 05 28 27.4
baz=179,SNR=24
N33A J Bar K, Exete 4.79 359 Pn **05 28 28.2 +0.7**
N33A IAmb_Lg 05 29 58.2
comp=Z,1μm,0.8s
MSTX Muleshoe 4.89 248 Pn **05 28 29.2 +0.1**
MSTX Muleshoe 4.89 248 P 05 28 29.0
baz=65
MSTX S 05 29 24.8
baz=65
CCAR Cane Creek 4.99 112 Pn **05 28 30.6 +0.2**
CCAR IAmb_Lg 05 29 57.6
comp=Z,1μm,0.9s
CCAR Cane Creek 4.99 112 P Pn **05 28 30.5 +0.2**
baz=296,SNR=21
CCAR Cane Creek 4.99 112 P 05 28 30.5
baz=296,SNR=21
LCAR Lake Charles 5.00 87 Pn **05 28 30.0 -0.5**
LCAR IAmb_Lg 05 29 54.1
comp=Z,808nm,0.7s
N35A Tabor 5.08 15 Pn **05 28 32.0 +0.4**
N35A Tabor 5.08 15 P Pn **05 28 31.9 +0.3**
baz=196,SNR=46
N35A Tabor 5.08 15 P 05 28 31.9
baz=196,SNR=46
435B Jarrell 5.15 183 Pn **05 28 32.3 -0.4**
435B IAmb_Lg 05 30 07.4
comp=Z,885nm,0.7s
435B Jarrell 5.15 183 P Pn **05 28 32.2 -0.4**
baz=2.2,SNR=21
435B Jarrell 5.15 183 P 05 28 32.3
baz=2.2,SNR=14
435B S 05 29 33.4
baz=2.2
435B Jarrell 5.15 183 P 05 28 32.2
baz=2.2,SNR=21
KSCO Kaye Shedlock' 5.21 308 Pn **05 28 34.5 +1.0**
KSCO IAmb_Lg 05 30 11.0
comp=Z,800nm,0.8s
KSCO Kaye Shedlock' 5.21 308 S 05 29 34.1
baz=125
CCM Cathedral Cave 5.30 65 Pn Pn **05 28 34.8 +0.2**
CCM IAmb_Lg 05 30 12.7
comp=Z,450nm,0.7s
CCM Cathedral Cave 5.30 65 P Pn **05 28 34.8 +0.2**
baz=248,SNR=48
CCM Cathedral Cave 5.30 65 P 05 28 34.3
baz=248
CCM S 05 29 37.0
baz=248
CCM Cathedral Cave 5.30 65 P 05 28 34.8
baz=248,SNR=48
X43A Marvell 5.46 103 P 05 28 36.8
baz=287
X43A S 05 29 40.8
baz=287
BGNE Belgrade 5.49 353 Pn Pn **05 28 37.2 0.0**
BGNE Belgrade 5.49 353 P Pn **05 28 37.0 -0.2**
baz=173,SNR=35
BGNE Belgrade 5.49 353 P 05 28 37.2
baz=173,SNR=18
BGNE Belgrade 5.49 353 P 05 28 37.0
baz=173,SNR=35
P40A Paris 5.50 48 Pn **05 28 37.2 -0.1**
P40A IAmb_Lg 05 30 15.2
comp=Z,1μm,0.8s
P40A Paris 5.50 48 P Pn **05 28 37.6 +0.3**
baz=231,SNR=67
P40A Paris 5.50 48 P 05 28 37.6
baz=231,SNR=67
LPAR Lepanto 5.72 91 IAmb_Lg 05 30 20.3
comp=Z,1μm,0.7s
N38A Joes South For 5.81 32 Pn **05 28 41.7 +0.1**
N38A Joes South For 5.81 32 P Pn **05 28 41.7 +0.1**
baz=215,SNR=46
N38A Joes South For 5.81 32 P 05 28 41.7
baz=215,SNR=46
T25A Trinidad 5.83 284 Pn Pn **05 28 42.2 +0.1**
T25A Trinidad 5.83 284 P 05 28 42.2
baz=100,SNR=47
JCT Junction City 5.83 202 Pn Pn **05 28 41.4 -0.7**
JCT Junction City 5.83 202 P Pn **05 28 41.1 -0.9**
baz=20,SNR=26
JCT Junction City 5.83 202 P 05 28 41.2
baz=20,SNR=17
JCT Junction City 5.83 202 P 05 28 41.1
baz=20,SNR=26
143A Socs Landing, 5.87 122 Pn **05 28 42.8 +0.4**
143A IAmb_Lg 05 30 31.3
comp=Z,706nm,0.8s
143A Socs Landing, 5.87 122 P Pn **05 28 42.0 -0.4**
baz=305,SNR=8.1
143A Socs Landing, 5.87 122 P 05 28 42.0
baz=305,SNR=8.1
FVM French Village 5.88 68 Pn **05 28 43.0 +0.4**
FVM French Village 5.88 68 P Pn **05 28 42.4 -0.3**
baz=252,SNR=28
FVM French Village 5.88 68 P 05 28 42.4
baz=252,SNR=28
L34A Svendsen Farm, 6.06 7 Pn Pn **05 28 44.8 -0.3**
L34A Svendsen Farm, 6.06 7 P Pn **05 28 44.5 -0.5**
baz=187,SNR=13
L34A Svendsen Farm, 6.06 7 P 05 28 44.5
baz=187,SNR=13
MET Memphis--Engin 6.08 96 IAmb_Lg 05 30 39.1
comp=Z,940nm,0.8s
HKT Hockley 6.11 168 Pn Pn **05 28 45.9 +0.2**
HKT Hockley 6.11 168 P Pn **05 28 45.8 +0.2**
baz=348,SNR=11
HKT Hockley 6.11 168 P 05 28 45.8
baz=348,SNR=11
342A Flagon Creek P 6.18 136 Pn Pn **05 28 47.1 +0.5**
342A IAmb_Lg 05 30 47.6
comp=Z,362nm,1.2s
OGNE Ogallala 6.21 325 IAmb_Lg 05 30 37.0
comp=Z,694nm,0.8s
OGNE Ogallala 6.21 325 P Pn **05 28 48.8 +1.6**
baz=142,SNR=12
OGNE Ogallala 6.21 325 P 05 28 48.8
baz=142,SNR=12
441A DeRidder 6.23 145 Pn **05 28 47.9 +0.5**
SLM Saint Louis 6.25 62 IAmb_Lg 05 30 32.4
comp=Z,761nm,0.7s
HENM Henderson Moun 6.38 81 Pn Pn **05 28 50.1 +0.6**
HICK Hickman 6.57 82 Pn Pn **05 28 52.7 +0.7**
OXF Oxford 6.63 100 Pn Pn **05 28 51.9 -1.1**
OXF IAmb_Lg 05 31 04.4
comp=Z,811nm,0.9s
OXF Oxford 6.63 100 P 05 28 52.0
baz=285
W45A Hickory Valley 6.68 94 Pn **05 28 53.1 -0.4**
W45A IAmb_Lg 05 30 50.9
comp=Z,724nm,0.8s
W45A Hickory Valley 6.68 94 P Pn **05 28 53.2 -0.4**
baz=279,SNR=24
W45A Hickory Valley 6.68 94 P 05 28 53.2
baz=279,SNR=24
S44A Carbondale 6.70 73 Pn **05 28 53.2 -0.6**
S44A Carbondale 6.70 73 P Pn **05 28 53.7 -0.1**
baz=257,SNR=6.6
S44A Carbondale 6.70 73 P 05 28 53.7
baz=257,SNR=6.6
Y45A Yeager Farm, C 6.72 106 Pn Pn **05 28 54.4 +0.3**
Y45A IAmb_Lg 05 31 02.2
comp=Z,516nm,0.8s
SCIA State Center 6.76 27 Pn **05 28 55.1 +0.5**
SCIA State Center 6.76 27 P 05 28 54.3
baz=210,SNR=5.8
K31A O'Neill 6.76 351 Pn **05 28 55.0 +0.4**
K31A O'Neill 6.76 351 P Pn **05 28 55.2 +0.5**
baz=170,SNR=30
K31A O'Neill 6.76 351 P 05 28 55.2
baz=170,SNR=30
UTMT University of 6.86 84 IAmb_Lg 05 31 00.2
comp=Z,922nm,0.9s
T45A Paducah 7.07 79 Pn **05 28 58.9 -0.1**
735A Kenedy 7.08 183 IAmb_Lg 05 31 17.1
comp=Z,655nm,1.1s
344A Westbrook Farm 7.09 127 Pn **05 28 59.4 +0.2**
P43A Skaggs, Pawnee 7.19 57 Pn **05 29 00.2 -0.3**
P43A Skaggs, Pawnee 7.19 57 P Pn **05 29 00.3 -0.3**
baz=242,SNR=32
P43A Skaggs, Pawnee 7.19 57 P 05 29 00.3
baz=242,SNR=32
Q44A Meyer Farm, Va 7.24 63 Pn Pn **05 29 01.5 +0.3**
Q44A Meyer Farm, Va 7.24 63 P Pn **05 29 01.4 +0.2**
baz=248,SNR=15
Q44A Meyer Farm, Va 7.24 63 P 05 29 01.4
baz=248,SNR=15
ANMO Albuquerque 7.52 265 Pn Pn **05 29 06.5 +1.2**
comp=Z,0.4nm,0.3s,baz=95,slow=16,SNR=8.0
ANMO Pg Pg 05 29 33.2 -5.8
comp=Z,5.7nm,0.3s,baz=83,slow=14,SNR=30
ANMO Lg Lg 05 31 11.3
comp=Z,8.5nm,0.3s,baz=319,slow=20,SNR=7.1
ANMO LR LR 05 32 18.9
comp=Z,561nm,18.7s,baz=79,slow=40
ANMO Albuquerque 7.52 265 P 05 29 05.0
baz=80
K38A Parkersburg 7.56 26 Pn **05 29 06.0 +0.3**
K38A Parkersburg 7.56 26 P Pn **05 29 05.9 +0.2**
baz=209,SNR=5.6
K38A Parkersburg 7.56 26 P 05 29 05.9
baz=209,SNR=5.6
146A Union 7.59 113 Pn **05 29 05.5 -0.6**
146A IAmb_Lg 05 31 37.0
comp=Z,463nm,1.1s
ISCO Idaho Springs 7.60 303 Pn Pn **05 29 06.9 +0.4**
ISCO IAmb_Lg 05 31 23.0
comp=Z,339nm,1.0s
ISCO Idaho Springs 7.60 303 P 05 29 05.7
baz=118
PLAL Pickwick Lake 7.61 95 Pn **05 29 05.2 -1.1**
PLAL IAmb_Lg 05 31 17.6
comp=Z,415nm,1.0s
WVT Waverly 7.69 86 Pn Pn **05 29 07.2 -0.3**
WVT Waverly 7.69 86 P 05 29 06.3
baz=271
L40A Anamosa 7.74 36 Pn **05 29 07.6 -0.4**
L40A IAmb_Lg 05 31 35.8
comp=Z,637nm,0.7s
L40A Anamosa 7.74 36 P Pn **05 29 08.2 +0.2**
baz=220,SNR=12
L40A Anamosa 7.74 36 P 05 29 08.2
baz=220,SNR=12
ECSD EROS Data Cent 7.80 4 Pn Pn **05 29 08.3 -0.6**
ECSD IAmb_Lg 05 31 28.1
comp=Z,482nm,0.9s
ECSD EROS Data Cent 7.80 4 P Pn **05 29 08.2 -0.6**
baz=184,SNR=71
ECSD EROS Data Cent 7.80 4 P 05 29 08.1
baz=184,SNR=57
ECSD EROS Data Cent 7.80 4 P 05 29 08.2
baz=184,SNR=71
833A Chaparral WMA, 7.80 194 P 05 29 08.6
baz=12
HDIL Hopedale 7.81 52 Pn **05 29 09.0 -0.1**
HDIL Hopedale 7.81 52 P Pn **05 29 09.0 -0.1**
baz=236,SNR=22
HDIL Hopedale 7.81 52 P 05 29 08.5
baz=236,SNR=12
HDIL Hopedale 7.81 52 P 05 29 09.0
baz=236,SNR=22
BNM Barren Site 7.84 259 Pn Pn **05 29 09.6 -0.1**
MNTX Cornudas Mount 7.93 240 Pn Pn **05 29 10.5 -0.2**
MNTX IAmb_Lg 05 31 36.4
comp=Z,426nm,1.1s
MNTX Cornudas Mount 7.93 240 P Pn **05 29 10.8 0.0**
baz=55,SNR=24
MNTX Cornudas Mount 7.93 240 P 05 29 10.5
baz=55,SNR=38
MNTX Cornudas Mount 7.93 240 P 05 29 10.8
baz=55,SNR=24
USIN University of 7.99 73 IAmb_Lg 05 31 34.3
comp=Z,746nm,1.2s
Z47A Carrollton 8.11 107 Pn **05 29 13.5 +0.3**
Z47A IAmb_Lg 05 31 46.3
comp=Z,236nm,0.8s
O44A Mansfield 8.15 56 Pn **05 29 13.2 -0.6**
T47A Sharon Grove 8.30 80 Pn **05 29 15.3 -0.5**
T47A IAmb_Lg 05 31 39.5
comp=Z,511nm,0.9s
T47A Sharon Grove 8.30 80 P Pn **05 29 15.5 -0.2**
baz=266,SNR=7.4
T47A Sharon Grove 8.30 80 P 05 29 15.5
baz=266,SNR=7.4
PHWY Pilot Hill 8.31 312 Pn Pn **05 29 16.3 +0.1**
PHWY IAmb_Lg 05 31 54.9
comp=Z,337nm,0.9s
N23A Red Feather La 8.38 309 P 05 29 18.0
baz=124
TX31 Lajitas Ar. Si 8.49 221 Pn **05 29 18.1 -0.4**
TX31 Lajitas Ar. Si 8.49 221 P Pn **05 29 17.0 -1.5**
baz=37,SNR=15
TX31 Lajitas Ar. Si 8.49 221 P 05 29 17.0
baz=37,SNR=15
TX32 Lajitas Array 8.49 221 Pn **05 29 18.2 -0.3**
TXAR Lajitas Array 8.49 221 Pn Pn **05 29 17.1 -1.4**
comp=Z,1.7nm,0.3s,baz=44,slow=10,SNR=88
TXAR Lg Lg 05 31 39.9
comp=Z,14nm,0.3s,baz=45,slow=27,SNR=12
TXAR Lajitas Array 8.49 221 Pn Pn **05 29 18.2 -0.3**
L42A Oliver, Polo 8.49 42 Pn **05 29 18.7 +0.3**
L42A IAmb_Lg 05 31 52.3
comp=Z,648nm,0.9s
V48A Smith Brothers 8.53 88 IAmb_Lg 05 31 46.5
comp=Z,422nm,1.1s
X48A Hartselle 8.54 97 IAmb_Lg 05 31 49.3
comp=Z,254nm,0.8s
SUSD Miller 8.58 352 Pn **05 29 19.7 +0.1**
SUSD IAmb_Lg 05 31 51.8
comp=Z,451nm,0.9s
SUSD Miller 8.58 352 P 05 29 19.0
baz=171,SNR=6.1
P46A Rosedale 8.81 62 Pn **05 29 23.0 +0.3**
JFWS Jewell Farm 8.85 36 Pn Pn **05 29 23.4 0.0**
JFWS Jewell Farm 8.85 36 P 05 29 22.1
baz=220,SNR=20
CLTN Cedars of Leba 8.91 86 Pn Pn **05 29 24.1 0.0**
CLTN IAmb_Lg 05 31 59.4
comp=Z,228nm,1.0s
LRAL Lakeview Retre 9.00 106 Pn Pn **05 29 25.4 0.0**
M44A Midewin, Midew 9.06 50 Pn Pn **05 29 25.6 -0.7**
MVCO Mesa Verde 9.08 281 P 05 29 25.7
baz=95
WCI Wyandotte Cave 9.10 72 Pn Pn **05 29 26.9 +0.1**
WCI IAmb_Lg 05 32 13.3
comp=Z,387nm,0.9s
WCI Wyandotte Cave 9.10 72 P Pn **05 29 26.3 -0.5**
baz=259,SNR=9.0
WCI Wyandotte Cave 9.10 72 P 05 29 26.0
baz=259
WCI Wyandotte Cave 9.10 72 P 05 29 26.3
baz=259,SNR=9.0
BLO Bloomington 9.16 66 Pn **05 29 28.4 +0.8**
BLO IAmb_Lg 05 32 13.1
comp=Z,589nm,0.8s
SFIN Lafayette 9.19 58 Pn Pn **05 29 28.2 +0.3**
SFIN IAmb_Lg 05 32 06.8
comp=Z,477nm,0.7s
SFIN Lafayette 9.19 58 P Pn **05 29 27.3 -0.7**
baz=244,SNR=13
SFIN Lafayette 9.19 58 P 05 29 26.9
baz=244
SFIN Lafayette 9.19 58 P 05 29 27.3
baz=244,SNR=13
Y49A Blount Mountai 9.20 100 Pn **05 29 27.3 -0.9**
Y49A IAmb_Lg 05 32 17.0
comp=Z,454nm,1.2s
PV01 Paradox Valley 9.25 287 IAmb_Lg 05 32 19.8
comp=Z,291nm,1.3s
121A Cookes Peak, D 9.31 252 P 05 29 29.0
baz=66
SWET Sewanee 9.31 91 Pn Pn **05 29 30.3 +0.6**
SWET IAmb_Lg 05 32 06.1
comp=Z,372nm,1.0s
U49A Red Boiling Sp 9.35 83 Pn Pn **05 29 30.5 +0.4**
U49A IAmb_Lg 05 32 27.4
comp=Z,213nm,1.1s
PV02 Paradox Valley 9.40 287 IAmb_Lg 05 32 23.8
comp=Z,359nm,1.2s
HQIL Hanson Quary C 9.41 49 Pn Pn **05 29 30.4 -0.7**

PV13	**Radium Mtn., P**	**9.45**	**287**	IAmb_Lg			05 32 24.6		
	comp=Z,327nm,1.1s								
I40A	**Norwalk**	**9.46**	**31**	Pn	**Pn**		**05 29 31.2**	**-0.4**	
I40A				IAmb_Lg			05 32 21.5		
	comp=Z,417nm,0.9s								
I40A	**Norwalk**	**9.46**	**31**	P	**Pn**		**05 29 31.2**	**-0.4**	
	baz=215,SNR=12								
I40A	**Norwalk**	**9.46**	**31**	P			05 29 31.2		
	baz=215,SNR=12								
PV12	**Saucer Basin,**	**9.47**	**288**	IAmb_Lg			05 32 22.4		
	comp=Z,445nm,1.2s								
PV11	**David Mesa, Pa**	**9.52**	**288**	IAmb_Lg			05 32 26.3		
	comp=Z,318nm,1.0s								
PV16	**Nyswonger Mesa**	**9.55**	**288**	IAmb_Lg			05 32 36.0		
	comp=Z,250nm,1.2s								
PV04	**Paradox Valley**	**9.56**	**288**	IAmb_Lg			05 32 37.0		
	comp=Z,399nm,1.2s								
O20A	**White River Ci**	**9.57**	**299**	IAmb_Lg			05 32 46.2		
	comp=Z,252nm,1.3s								
L44A	**Lake County Fo**	**9.60**	**47**		**Pn**		**05 29 33.5**	**-0.2**	
L44A	**Lake County Fo**	**9.60**	**47**	P	**Pn**		**05 29 33.9**	**+0.3**	
	baz=233,SNR=11								
L44A	**Lake County Fo**	**9.60**	**47**	P			05 29 32.5		
	baz=233								
L44A	**Lake County Fo**	**9.60**	**47**	P			05 29 33.9		
	baz=233,SNR=11								
PV19	**Morning Glory**	**9.61**	**288**	IAmb_Lg			05 32 31.5		
	comp=Z,284nm,1.2s								
RWWY	**Rawlins**	**9.61**	**310**			**Pn**	**05 29 34.6**	**+0.6**	
RWWY				IAmb_Lg			05 32 33.4		
	comp=Z,269nm,1.0s								
RSSD	**Black Hills**	**9.65**	**330**	Pn	**Pn**		**05 29 35.3**	**+0.8**	
RSSD	**Black Hills**	**9.65**	**330**	P			05 29 33.8		
	baz=146								
PV05	**Paradox Valley**	**9.66**	**286**	IAmb_Lg			05 32 25.8		
	comp=Z,199nm,1.2s								
PV10	**Paradox Valley**	**9.66**	**288**	IAmb_Lg			05 32 33.2		
	comp=Z,313nm,1.2s								
FPAL	**Fort Paine**	**9.68**	**95**	IAmb_Lg			05 32 29.3		
	comp=Z,300nm,1.0s								
K43A	**Burlington**	**9.70**	**43**		**Pn**		**05 29 33.9**	**-1.0**	
K43A	**Burlington**	**9.70**	**43**	P	**Pn**		**05 29 33.9**	**-1.0**	
	baz=229,SNR=17								
K43A	**Burlington**	**9.70**	**43**	P			05 29 33.9		
	baz=229,SNR=17								
K22A	**Casper**	**9.78**	**316**		**Pn**		**05 29 36.3**	**+0.1**	
K22A				IAmb_Lg			05 32 45.4		
	comp=Z,551nm,1.1s								
K22A	**Casper**	**9.78**	**316**	P			05 29 35.6		
	baz=130								
BRAL	**Brewton**	**9.80**	**116**	Pn	**Pn**		**05 29 36.6**	**+0.2**	
W50A	**Signal Mountai**	**9.81**	**91**	IAmb_Lg			05 32 35.6		
	comp=Z,302nm,0.8s								
SPMN	**Marine on St.**	**9.88**	**19**	Pn	**Pn**		**05 29 35.9**	**-1.5**	
SPMN				IAmb_Lg			05 32 42.0		
	comp=Z,295nm,0.8s								
SPMN	**Marine on St.**	**9.88**	**19**	P			05 29 35.9		
	baz=202,SNR=10								
F33A	**5 Mile Ranch,**	**9.91**	**4**	Pn	**Pn**		**05 29 36.2**	**-1.7**	
R49A	**Shelbyville**	**9.98**	**73**		**Pn**		**05 29 39.0**	**+0.2**	
250A	**Grady**	**10.00**	**110**		**Pn**		**05 29 38.2**	**-0.9**	
P48A	**Milroy**	**10.06**	**66**		**Pn**		**05 29 39.1**	**-0.8**	
T50A	**Nancy**	**10.11**	**80**	Pn	**Pn**		**05 29 40.2**	**-0.5**	
I42A	**Draeger Farm,**	**10.23**	**37**	Pn	**Pn**		**05 29 41.0**	**-1.2**	
X51A	**Calhoun**	**10.29**	**94**		**Pn**		**05 29 42.8**	**-0.3**	
F36A	**Milaca**	**10.31**	**15**	Pn	**Pn**		**05 29 42.0**	**-1.3**	
Z51A	**Franklin**	**10.35**	**101**		**Pn**		**05 29 43.8**	**-0.1**	
N47A	**Urbana**	**10.37**	**58**	Pn	**Pn**		**05 29 41.7**	**-2.4**	
CPCT	**Cooper Cave**	**10.42**	**89**	Pn	**Pn**		**05 29 44.5**	**-0.5**	
L46A	**Eue Claire**	**10.50**	**51**		**Pn**		**05 29 45.0**	**-0.9**	
L46A	**Eue Claire**	**10.50**	**51**	P	**Pn**		**05 29 44.9**	**-1.1**	
	baz=238,SNR=6.8								
L46A	**Eue Claire**	**10.50**	**51**	P			05 29 44.9		
	baz=238,SNR=6.8								
L46A				P			05 29 44.9		
	baz=238,SNR=6.8								
V51A	**Loudon**	**10.53**	**87**		**Pn**		**05 29 46.1**	**-0.3**	
V51A	**Loudon**	**10.53**	**87**	P	**Pn**		**05 29 46.0**	**-0.3**	
	baz=275,SNR=8.6								
V51A	**Loudon**	**10.53**	**87**	P			05 29 46.0		
	baz=275,SNR=8.6								
P49A	**Miami Univ. Ec**	**10.61**	**67**		**Pn**		**05 29 45.9**	**-1.5**	
P49A	**Miami Univ. Ec**	**10.61**	**67**	P	**Pn**		**05 29 45.8**	**-1.5**	
	baz=254,SNR=7.9								
P49A	**Miami Univ. Ec**	**10.61**	**67**	P			05 29 46.1		
	baz=254								
P49A	**Miami Univ. Ec**	**10.61**	**67**	P			05 29 45.8		
	baz=254,SNR=7.9								
R50A	**Paris**	**10.64**	**73**		**Pn**		**05 29 47.8**	**-0.1**	
G40A	**Rib Lake**	**10.77**	**28**		**Pn**		**05 29 48.9**	**-0.7**	
152A	**Waverly Hall**	**10.93**	**104**		**Pn**		**05 29 52.5**	**+0.7**	
W52A	**Murphy**	**10.95**	**91**		**Pn**		**05 29 52.3**	**+0.1**	
TKL	**Tuckaleechee C**	**11.01**	**88**	Pn	**Pn**		**05 29 53.2**	**+0.3**	
	comp=Z,0.6nm,0.3s,baz=219,slow=7.1,SNR=11								
TKL				Lg	Lg		05 32 56.1		
	comp=Z,6.4nm,0.3s,baz=170,slow=23,SNR=6.4								
TKL	**Tuckaleechee C**	**11.01**	**88**		**Pn**		**05 29 53.7**	**+0.8**	
451A	**Vernon**	**11.05**	**115**	Pn	**Pn**		**05 29 53.0**	**-0.4**	
O49A	**Covington**	**11.08**	**64**		**Pn**		**05 29 53.4**	**-0.5**	
V52A	**Sevierville**	**11.14**	**87**	Pn	**Pn**		**05 29 53.7**	**-1.0**	
S51A	**Beattyville**	**11.14**	**77**		**Pn**		**05 29 54.0**	**-0.7**	
H43A	**Windswept, Lux**	**11.21**	**38**	Pn	**Pn**		**05 29 53.8**	**-1.8**	
352A	**Blakely**	**11.24**	**110**	Pn	**Pn**		**05 29 55.9**	**-0.2**	
N49A	**Columbus Grove**	**11.44**	**60**	Pn	**Pn**		**05 29 56.5**	**-2.3**	
E38A	**The Farm, Brul**	**11.50**	**20**	Pn	**Pn**		**05 29 57.9**	**-1.6**	
Q51A	**Peebles**	**11.52**	**70**	Pn	**Pn**		**05 29 59.2**	**-0.8**	
BW06	**Boulder Array**	**11.66**	**309**		**Pn**		**05 30 01.9**	**-0.1**	
PD31	**Pinedale Array**	**11.66**	**309**		**Pn**		**05 30 01.9**	**-0.1**	
PDAR	**Pinedale Array**	**11.66**	**309**	Pn	**Pn**		**05 30 01.6**	**-0.4**	
	comp=Z,1.1nm,0.3s,baz=118,slow=13,SNR=51								
PDAR				Lg	Lg		05 33 16.4		
	comp=Z,0.7nm,0.3s,baz=115,slow=21,SNR=2.6								
BW06	**Boulder Array**	**11.66**	**309**	P			05 30 00.8		
	baz=122,SNR=15								
L48A	**N Adams**	**11.68**	**55**	Pn	**Pn**		**05 30 00.7**	**-1.4**	
L48A	**N Adams**	**11.68**	**55**	P	**Pn**		**05 30 00.3**	**-1.9**	
	baz=243,SNR=17								
L48A	**N Adams**	**11.68**	**55**	P			05 30 00.3		
	baz=243,SNR=17								
L48A				P			05 30 00.3		
	baz=243,SNR=17								
GOGA	**Godfrey**	**11.69**	**98**		**Pn**		**05 30 01.7**	**-0.5**	
GOGA	**Godfrey**	**11.69**	**98**	P			05 30 01.0		
	baz=286								
I45A	**Fountain**	**11.72**	**43**	Pn	**Pn**		**05 30 02.1**	**-0.5**	
V53A	**Saluda**	**11.79**	**87**	Pn	**Pn**		**05 30 03.3**	**-0.3**	
P51A	**Williamsport**	**11.83**	**68**		**Pn**		**05 30 02.8**	**-1.4**	
COWI	**Conover**	**11.87**	**29**	Pn	**Pn**		**05 30 03.2**	**-1.5**	
F42A	**Maple Grove Fa**	**12.01**	**32**	Pn	**Pn**		**05 30 05.2**	**-1.3**	
J47A	**Sunmer**	**12.08**	**49**	Pn	**Pn**		**05 30 05.6**	**-1.9**	
ACSO	**Alum Creek Sta**	**12.08**	**65**	Pn	**Pn**		**05 30 05.8**	**-1.7**	
ACSO	**Alum Creek Sta**	**12.08**	**65**	P			05 30 05.1		
	baz=254,SNR=17								
553A	**Crawfordville**	**12.24**	**114**	Pn	**Pn**		**05 30 09.4**	**-0.3**	
Q52A	**Bidwell**	**12.34**	**71**		**Pn**		**05 30 10.8**	**-0.3**	
AAM	**Ann Arbor**	**12.36**	**55**	Pn	**Pn**		**05 30 09.9**	**-1.4**	
AAM	**Ann Arbor**	**12.36**	**55**	P			05 30 09.0		
	baz=244,SNR=9.5								
AGMN	**Agassiz Nation**	**12.39**	**5**	Pn	**Pn**		**05 30 08.8**	**-3.0**	
AGMN	**Agassiz Nation**	**12.39**	**5**	P			05 30 08.8		
	baz=186,SNR=9.6								
R53A	**Hurricane**	**12.50**	**74**	Pn	**Pn**		**05 30 12.1**	**-1.2**	
P52A	**Corning**	**12.57**	**68**		**Pn**		**05 30 12.8**	**-1.4**	
P52A	**Corning**	**12.57**	**68**	P			05 30 11.6		
	baz=256,SNR=10								
LAO	**LASA Array**	**12.64**	**331**		**Pn**		**05 30 14.9**	**-0.3**	
LAO	**LASA Array**	**12.64**	**331**	P			05 30 13.4		
	baz=145,SNR=6.0								
B35A	**Bob, Littlefor**	**12.69**	**11**	Pn	**Pn**		**05 30 13.3**	**-2.5**	
N51A	**Ashland**	**12.72**	**63**		**Pn**		**05 30 15.3**	**-1.0**	
EYMN	**Ely**	**12.75**	**18**	Pn	**Pn**		**05 30 13.2**	**-3.4**	
EYMN	**Ely**	**12.75**	**18**	P			05 30 14.2		
	baz=202								
D41A	**Chassel**	**12.89**	**28**	Pn	**Pn**		**05 30 15.5**	**-3.1**	
RLMT	**Red Lodge**	**12.89**	**319**		**Pn**		**05 30 18.1**	**-0.7**	
RLMT	**Red Lodge**	**12.89**	**319**	P			05 30 17.5		
	baz=131,SNR=11								
Q53A	**Leroy**	**12.89**	**72**	P			05 30 16.5		
	baz=262,SNR=23								
O52A	**Adamsville**	**12.90**	**67**	Pn	**Pn**		**05 30 18.1**	**-0.6**	
MOOW	**Moose Ponds**	**12.91**	**311**	Pn	**Pn**		**05 30 19.3**	**+0.1**	
S54A	**Dingess, Beckl**	**12.96**	**77**	P	**Pn**		**05 30 17.4**	**-2.2**	
	baz=267,SNR=5.5								
S54A	**Dingess, Beckl**	**12.96**	**77**	P			05 30 17.2		
	baz=267,SNR=20								
S54A	**Dingess, Beckl**	**12.96**	**77**	P			05 30 17.4		
	baz=267,SNR=5.5								
S54A				P			05 30 17.4		
	baz=267,SNR=5.5								
255A	**Hazlehurst**	**12.96**	**104**	Pn	**Pn**		**05 30 19.2**	**-0.5**	
E43A	**Lone Tree Farm**	**12.99**	**34**	Pn	**Pn**		**05 30 16.9**	**-3.1**	
V55A	**Taylorsville**	**13.06**	**86**		**Pn**		**05 30 19.5**	**-1.5**	
P53A	**Whipple**	**13.10**	**70**	Pn	**Pn**		**05 30 19.7**	**-1.8**	
GLMI	**Grayling**	**13.12**	**44**	Pn	**Pn**		**05 30 19.9**	**-1.9**	
GLMI	**Grayling**	**13.12**	**44**	P			05 30 18.7		
	baz=232,SNR=15								
YNE	**Yellowstone No**	**13.22**	**317**		**Pn**		**05 30 22.4**	**-1.0**	
R54A	**Victor**	**13.24**	**75**	P			05 30 20.9		
	baz=265,SNR=6.4								
K50A	**Casco**	**13.25**	**55**		**Pn**		**05 30 21.3**	**-2.3**	
O53A	**New Philadelph**	**13.39**	**66**		**Pn**		**05 30 22.0**	**-3.5**	
O53A	**New Philadelph**	**13.39**	**66**	P			05 30 23.0		
	baz=256								
Q54A	**Coxs Mills**	**13.45**	**72**	Pn	**Pn**		**05 30 24.5**	**-1.7**	
DGMT	**Dagmar**	**13.50**	**340**	Pn	**Pn**		**05 30 24.9**	**-2.1**	
GCMT	**Greycliff**	**13.55**	**320**		**Pn**		**05 30 27.1**	**-0.6**	
BLA	**Blacksburg**	**13.65**	**80**		**Pn**		**05 30 27.6**	**-1.4**	
BLA	**Blacksburg**	**13.65**	**80**	P			05 30 26.7		
	baz=270,SNR=6.7								
M52A	**Chesterland**	**13.65**	**61**	Pn	**Pn**		**05 30 25.9**	**-3.1**	
N53A	**Lisbon**	**13.81**	**64**	Pn	**Pn**		**05 30 28.0**	**-3.2**	
BIRD	**Birdtown, Kers**	**13.84**	**90**	Pn	**Pn**		**05 30 29.2**	**-2.3**	
R55A	**Marlinton**	**13.93**	**75**	P	**Pn**		**05 30 30.3**	**-2.6**	
	baz=266								
R55A	**Marlinton**	**13.93**	**75**	P			05 30 30.1		
	baz=266,SNR=9.8								
R55A	**Marlinton**	**13.93**	**75**	P			05 30 30.3		
	baz=266								
R55A				P			05 30 30.3		
	baz=266								
W57A	**Gilead**	**14.14**	**88**	Pn	**Pn**		**05 30 34.7**	**-0.9**	
E46A	**Sault Ste Mari**	**14.28**	**39**	Pn	**Pn**		**05 30 34.2**	**-3.4**	
S56A	**Natural Bridge**	**14.33**	**78**	P			05 30 36.1		
	baz=268								
ULM	**Lac du Bonnet**	**14.34**	**4**	Pn	Pn		05 30 33.5	-4.9	
	comp=Z,1.1nm,0.3s,baz=180,slow=12,SNR=13								
ULM				Sn	Sn		05 33 06.2	-11	
	comp=Z,1.2nm,0.3s,baz=90,slow=20,SNR=2.9								
ULM				Lg	Lg		05 34 40.8		
	comp=Z,0.5nm,0.3s,baz=114,slow=20,SNR=4.3								
ULM				LR	LR		05 36 20.9		
	comp=Z,263nm,18.9s,baz=144,slow=38								
N54A	**Moraine State**	**14.47**	**65**	Pn	**Pn**		**05 30 36.8**	**-3.5**	
N54A	**Moraine State**	**14.47**	**65**	P	**Pn**		**05 30 36.4**	**-3.9**	
	baz=255								
N54A	**Moraine State**	**14.47**	**65**	P			05 30 36.2		
	baz=255								
N54A	**Moraine State**	**14.47**	**65**	P			05 30 36.4		
	baz=255								
R56A	**Bull Pasture M**	**14.50**	**75**	P			05 30 37.2		
	baz=266,SNR=9.3								
ALLY	**Alegheny Colle**	**14.55**	**62**	Pn	**Pn**		**05 30 38.6**	**-2.7**	
L53A	**Girard**	**14.56**	**61**	P			05 30 38.0		
	baz=251								
T57A	**Hurt**	**14.58**	**81**		**Pn**		**05 30 40.2**	**-1.6**	
Q56A	**Snyder Ridge,**	**14.73**	**72**	P			05 30 40.3		
	baz=264,SNR=5.7								
I51A	**Listowel**	**14.76**	**53**	P			05 30 39.4		
	baz=243								
MCMT	**McKenzie Canyo**	**14.77**	**312**	Pn	**Pn**		**05 30 44.3**	**-0.2**	
V58A	**Windy Hill, Pi**	**14.77**	**85**	Pn	**Pn**		**05 30 42.4**	**-1.9**	
S57A	**Dark Hollow, R**	**14.82**	**78**	P			05 30 41.7		
	baz=269								
ELK	**Elko**	**14.85**	**294**	Pn	**Pn**		**05 30 46.1**	**+0.5**	
	comp=Z,0.1nm,0.3s,baz=88,slow=7.3,SNR=2.7								
ELK				Lg	Lg		05 35 07.2		
	comp=Z,0.1nm,0.3s,baz=340,slow=15,SNR=4.2								
ELK				LR	LR		05 37 14.0		
	comp=Z,89nm,19.3s,baz=99,slow=40								
M54A	**Oil Creek Stat**	**14.85**	**63**	Pn	**Pn**		**05 30 41.8**	**-3.6**	
M54A	**Oil Creek Stat**	**14.85**	**63**	P			05 30 41.2		
	baz=254								
P56A	**Dayton Farm, R**	**15.05**	**71**	P			05 30 45.5		
	baz=262								
EGMT	**Eagleton**	**15.18**	**326**		**Pn**		**05 30 49.2**	**-0.6**	
EGMT	**Eagleton**	**15.18**	**326**	P			05 30 47.5		
	baz=138								
R57A	**Stanardsville**	**15.18**	**76**	P			05 30 47.1		
	baz=262								
Q57A	**Strasburg**	**15.33**	**73**	P			05 30 48.3		
	baz=264								
O56A	**Blue Knob Stat**	**15.38**	**68**	Pn	**Pn**		**05 30 50.0**	**-2.5**	
O56A				IAmb	IAmb		05 31 01.6		
	comp=Z,8.6nm,0.8s								
O56A	**Blue Knob Stat**	**15.38**	**68**	P			05 30 49.5		
	baz=260								
WVNY	**West Valley, N**	**15.87**	**60**	Pn	**Pn**		**05 30 55.9**	**-3.0**	
WVNY				IAmb	IAmb		05 31 19.7		
	comp=Z,9.6nm,0.7s								
M56A	**Emporium**	**15.92**	**64**	Pn	**Pn**		**05 30 56.0**	**-3.5**	
M56A				IAmb	IAmb		05 31 04.1		
	comp=Z,18nm,1.1s								
M56A	**Emporium**	**15.92**	**64**	P			05 30 55.4		
	baz=256								
T59A	**Double "B" Far**	**15.94**	**80**	Pn	**Pn**		**05 30 57.8**	**-2.0**	
T59A				IAmb	IAmb		05 30 58.5		
	comp=Z,17nm,1.4s								
O57A	**Amberson**	**16.07**	**69**	P			05 30 57.1		
	baz=261,SNR=5.8								
N57A	**Milroy**	**16.23**	**67**	P			05 30 59.4		
	baz=259								
LPIG	**La Paz**	**16.28**	**227**	LR	LR		05 36 33.5		
	comp=Z,141nm,19.4s,baz=42,slow=34								
SADO	**Sadowa**	**16.40**	**52**	Pn	**Pn**		**05 31 01.2**	**-4.3**	
	comp=Z,0.5nm,0.3s,baz=265,slow=13,SNR=5.5								
SADO				Lg	Lg		05 35 45.1		
	comp=Z,2.0nm,0.3s,baz=343,slow=16,SNR=5.7								
SADO				LR	LR		05 37 25.4		
	comp=Z,350nm,19.2s,baz=300,slow=37								
L56A	**Greenwood**	**16.54**	**62**	Pn	**Pn**		**05 31 04.9**	**-2.6**	
L56A				IAmb	IAmb		05 31 11.8		
	comp=Z,17nm,0.7s								
L56A	**Greenwood**	**16.54**	**62**	P			05 31 03.6		
	baz=254,SNR=7.3								
O58A	**Lewisberry**	**16.60**	**69**	P			05 31 05.2		
	baz=262								
M57A	**Sunshine Farm,**	**16.66**	**65**		**Pn**		**05 31 08.3**	**-0.7**	
M57A				IAmb	IAmb		05 31 27.5		
	comp=Z,13nm,0.8s								
H53A	**Bobcaygeon**	**16.67**	**53**	P			05 31 04.9		
	baz=245								
V61A	**Roper**	**16.82**	**84**	Pn	**Pn**		**05 31 11.5**	**+0.5**	
K56A	**Middlesex**	**16.86**	**60**	P			05 31 08.1		
	baz=253								
N58A	**Sunbury**	**16.87**	**67**	Pn	**Pn**		**05 31 08.8**	**-2.7**	
N58A	**Sunbury**	**16.87**	**67**	P			05 31 07.8		
	baz=260								
NVAR	**Mina Array Bea**	**16.90**	**285**	Pn	**P**		**05 31 14.8**	**+0.4**	
	comp=Z,0.1nm,0.3s,baz=85,slow=10,SNR=6.6								
L57A	**Andrews Acres**	**17.02**	**63**	P			05 31 09.6		
	baz=256								
MVL	**Millersville**	**17.02**	**70**	P	**Pn**		**05 31 10.0**	**-3.5**	
O59A	**Robesonia**	**17.18**	**69**	P			05 31 12.6		
	baz=262								
DELO	**Deloro Mine**	**17.28**	**54**		**Pn**		**05 31 13.8**	**-2.9**	
G54A	**Lake Saint Pet**	**17.34**	**51**	P			05 31 13.9		
	baz=244								
J56A	**Wolcott**	**17.36**	**59**	P	**Pn**		**05 31 15.0**	**-2.8**	
J56A				IAmb	IAmb		05 31 20.6		
	comp=Z,14nm,1.1s								
P60A	**Greenville**	**17.54**	**71**	P	**Pn**		**05 31 17.3**	**-2.8**	
TEIG	**Tepich**	**17.56**	**151**	P	**P**		**05 31 23.6**	**+2.1**	
	comp=Z,1.5nm,0.3s,baz=236,slow=2.1,SNR=12								
TEIG				S	**Sn**		**05 34 31.4**	**-4.8**	
	comp=Z,1.0nm,0.3s,baz=77,slow=8.8,SNR=3.1								
TEIG				LR	LR		05 38 30.6		
	comp=Z,66nm,20.6s,baz=328,slow=38								
BINY	**Binghamton**	**17.69**	**63**	P	**Pn**		**05 31 19.1**	**-2.7**	
BINY				IAmb	IAmb		05 31 25.1		
	comp=Z,10.0nm,0.7s								
KSPA	**Keystone Colle**	**17.71**	**65**	P	**Pn**		**05 31 18.9**	**-3.1**	
L58A	**Harry Jones Me**	**17.75**	**63**	P			05 31 18.4		
	baz=257								
O60A	**Telford**	**17.78**	**69**	P			05 31 18.3		
	baz=263								
LUPA	**Lehigh Univers**	**17.84**	**68**	P	**Pn**		**05 31 22.2**	**-1.5**	
LUPA				IAmb	IAmb		05 31 26.8		
	comp=Z,14nm,0.6s								
PLVO	**Plevna**	**17.84**	**53**	P	**Pn**		**05 31 20.1**	**-3.6**	
J57A	**Williamstown**	**18.00**	**59**	P	**Pn**		**05 31 22.7**	**-3.0**	
J57A				IAmb	IAmb		05 31 28.4		
	comp=Z,13nm,0.8s								
J57A	**Williamstown**	**18.00**	**59**	P			05 31 23.0		
	baz=253								
K58A	**Earlville**	**18.07**	**61**	P	**Pn**		**05 31 23.6**	**-3.0**	
K58A				IAmb	IAmb		05 31 37.3		
	comp=Z,9.8nm,0.6s								
K58A	**Earlville**	**18.07**	**61**	P			05 31 23.2		
	baz=255								
L59A	**Walton**	**18.37**	**63**	P			05 31 26.8		
	baz=258,SNR=5.5								
I57A	**Carthage**	**18.39**	**58**	P			05 31 26.5		
	baz=252								
BRNJ	**Basking Ridge**	**18.46**	**68**	P	**Pn**		**05 31 31.7**	**+0.4**	
ODNJ	**Ogdensburg**	**18.48**	**67**	P	**P**		**05 31 30.9**	**-0.6**	
ODNJ				IAmb	IAmb		05 31 33.4		
	comp=Z,7.2nm,0.6s								
M60A	**Port Jervis**	**18.51**	**66**	P			05 31 27.9		
	baz=260								
K59A	**Cooperstown**	**18.64**	**62**	P			05 31 29.7		
	baz=256								
TRNY	**Table Rock, Ra**	**18.78**	**67**	P	**P**		**05 31 34.7**	**-0.1**	
I58A	**Old Forge**	**18.79**	**59**	P			05 31 31.9		
	baz=253								
CMIG	**Matias Romero**	**18.91**	**173**	P	**Pn**		**05 31 37.7**	**+0.8**	
	comp=Z,0.6nm,0.3s,baz=346,slow=6.6,SNR=9.0								
CMIG				LR	LR		05 40 35.7		
	comp=Z,52nm,21.2s,baz=350,slow=42								
L60A	**Shokan**	**18.92**	**64**	P			05 31 32.6		
	baz=259								
VLDQ	**Val d'Or**	**19.06**	**44**	P	**P**		**05 31 34.4**	**-3.4**	
VLDQ				IAmb	IAmb		05 31 36.4		
	comp=Z,13nm,0.7s								
J59A	**Piesco**	**19.06**	**60**	P	**P**		**05 31 37.8**	**-0.1**	
NEW	**Newport**	**19.10**	**316**	P	**Pn**		**05 31 39.9**	**+0.9**	
	comp=Z,0.1nm,0.3s,baz=60,slow=22,SNR=3.7								
NEW				Lg	Lg		05 37 16.5		
	comp=Z,0.1nm,0.3s,baz=22,slow=22,SNR=1.8								
NEW				LR	LR		05 39 57.2		
	comp=Z,104nm,21.2s,baz=118,slow=40								
NCB	**Newcomb**	**19.39**	**59**	P	**P**		**05 31 40.5**	**-1.0**	
NCB				IAmb	IAmb		05 31 45.0		
	comp=Z,6.5nm,0.7s								
KSCT	**Kent School, K**	**19.42**	**65**	P	**P**		**05 31 42.4**	**+0.6**	
TRY	**Troy**	**19.48**	**62**	P	**P**		**05 31 42.2**	**-0.2**	
TRQ	**Mont Tremblant**	**19.93**	**52**	P	**P**		**05 31 48.1**	**+0.7**	
YBH	**Yreka Blue Hor**	**20.57**	**294**	P	Pn		05 31 56.4	-0.2	
	comp=Z,4.7nm,0.8s,baz=39,slow=2.2,SNR=3.8								
WES	**Weston**	**21.11**	**64**	P	**P**		**05 32 00.6**	**+0.4**	
MOQ	**Mont Orford**	**21.13**	**56**	P	**P**		**05 32 01.1**	**+0.7**	
APG	**El Apazote**	**21.74**	**162**	P	**P**		**05 32 07.5**	**+0.2**	
	comp=Z,3.7nm,0.8s,baz=337,slow=13,SNR=5.1								
BBB	**Bella Bella**	**27.16**	**316**	LR	LR		05 44 34.7		
	comp=Z,254nm,20.7s,baz=124,slow=38								
JTS	**Las Juntas de**	**27.90**	**153**	LR	LR		05 46 25.1		
	comp=Z,61nm,18.1s,baz=31,slow=41								
YKA	**Yellowknife Ar**	**28.67**	**343**	P	**P**		**05 33 12.7**	**+0.5**	
	comp=Z,1.2nm,0.7s,baz=142,slow=9.0,SNR=23								
YKA				LR	LR		05 45 08.3		
	comp=Z,137nm,20.2s,baz=0.0,slow=38								
DLBC	**Dease Lake**	**31.11**	**327**	LR	LR		05 46 27.8		
	comp=Z,92nm,18.3s,baz=145,slow=37								
FRB	**Frobisher Bay**	**32.88**	**23**	P	**P**		**05 33 50.8**	**+1.5**	
	comp=Z,1.3nm,0.6s,baz=188,slow=8.1,SNR=4.7								
**ILAR

comp=Z,40nm,1.0s
LODK Lodwar 36.93 301 P **P** **05 39 26.5 +2.3**
SNR=7.4
RPSI Rantau Prapat 37.52 61 P **P** **05 39 28.4 -0.8**
DOK Doka 37.55 340 P **P** **05 39 30.0 +0.9**
SNR=8.7
PSI Prapat 37.58 61 P **P** **05 39 28.4 -1.4**
PSI pmax pmax
comp=Z,10.0nm,1.3s
MNAI Manna 37.86 75 P **P** **05 39 31.0 -1.0**
MHTO MHTO 38.78 347 P **P** **05 39 39.9 +0.3**
SNR=5.9
MBAR Mbarara 38.87 291*c i* P **P** **05 39 41.3 +0.5**
MBAR pmax pmax
comp=Z,15nm,1.6s
MBAR Mbarara 38.87 291 P **P** **05 39 41.0 +0.3**
MBAR Mbarara 38.87 291 P **P** **05 39 42.8 +2.1**
MBAR P **P** **05 39 42.8 +2.1**
LBTB Lobatse 38.90 251 P **P** **05 39 41.5 +0.7**
LBTB pmax pmax
comp=Z,53nm,0.9s
LBTB Lobatse 38.90 251 P **P** **05 39 41.5 +0.7**
LBTB IAmb IAmb 05 39 42.7
comp=Z,52nm,0.9s
BOSA Boshof 39.55 246 P **P** **05 39 46.6 +0.4**
comp=Z,12nm,1.0s,baz=86,slow=10,SNR=15
BOSA LR LR 05 53 02.7
comp=Z,401nm,20.1s,baz=66,slow=32
BOSA Boshof 39.55 246 P **P** **05 39 46.7 +0.4**
BOSA pmax pmax
comp=Z,27nm,1.2s
BOSA Boshof 39.55 246 P **P** **05 39 46.7 +0.5**
WBK Wadi Bani Khal 40.16 349 P **P** **05 39 51.8 +0.7**
WBK P **P** **05 39 51.8 +0.7**
DBJI Dramaga 40.64 80 P P 05 40 00.1 +4.8
comp=Z,13µmcomp=Z,78nm,0.6s
BSY Bisya 40.65 347 P **P** **05 39 56.0 +0.9**
SNR=8.4
BSY P **P** **05 39 56.0 +0.9**
SNR=8.4
SMDO Samad 40.78 348 P **P** **05 39 57.1 +0.8**
SNR=5.1
WSAR Wadi Sarin 40.84 349 P **P** **05 39 57.2 +0.5**
comp=Z,10.0nm,0.8s,baz=175,slow=6.7,SNR=5.9
UMZA Um Al Zommool 41.12 344 P **P** **05 39 58.5 -0.5**
ARQ Araqi 41.37 346 P **P** **05 40 01.3 +0.1**
ARQ P **P** **05 40 01.3 +0.1**
HOQ Hoqain 41.44 347 P **P** **05 40 02.1 +0.5**
SNR=5.0
SUR Sutherland 43.90 241 P **P** **05 40 21.9 0.0**
SUR IAmb IAmb 05 40 23.8
comp=Z,48nm,1.5s
SUR Sutherland 43.90 241 P **P** **05 40 24.2 +2.3**
SMRI Semarang 43.97 82 P P 05 40 27.4 +4.9
comp=Z,50nm,1.0s
RAYN Ar Rayn 45.32 332 P **P** **05 40 33.1 +0.1**
RAYN pmax pmax
comp=Z,21nm,1.0s
RAYN Ar Rayn 45.32 332 P **P** **05 40 33.1 +0.1**
KSM Kuching 46.92 71 P **P** **05 40 46.7 +0.9**
KMMI Kalianget 47.32 84 P **P** **05 40 53.4 +4.4**
comp=Z,3µmcomp=Z,25nm,0.9s
SUKH Sukhothai 47.36 45 P **P** **05 40 51.2 +2.1**
comp=Z,15nm,0.7s
CM13 Chiang Mai Arr 47.54 44 P **P** **05 40 53.0 +2.5**
comp=Z,105nmcomp=Z,6.6nm,1.1s
CM05 Chiang Mai Arr 47.55 44 P **P** **05 40 52.4 +1.7**
comp=Z,67nmcomp=Z,4.3nm,0.9s
CM04 Chiang Mai Arr 47.57 44 P **P** **05 40 52.0 +1.2**
comp=Z,82nmcomp=Z,8.7nm,1.1s
CM01 Chiang Mai Arr 47.57 44 P **P** **05 40 53.0 +2.2**
comp=Z,104nmcomp=Z,8.8nm,1.2s
CM15 Chiang Mai Arr 47.57 44 P P 05 40 55.4 +4.6
comp=Z,6.6nm,0.9s
CM02 Chiang Mai Arr 47.57 44 P **P** **05 40 53.0 +2.2**
comp=Z,68nmcomp=Z,6.9nm,1.1s
KOLN Koldanda 47.57 21 *e*P **P** **05 40 51.9 +1.0**
comp=Z,124nm,1.4s
CM31 Chiang Mai Arr 47.59 44 P P 05 40 55.7 +4.8
CM31 Chiang Mai Arr 47.59 44 P **P** **05 40 51.4 +0.4**
CMAR Chiang Mai Arr 47.59 44 P **P** **05 40 52.0 +1.0**
comp=Z,3.3nm,0.8s,baz=234,slow=8.5,SNR=26
CMAR PcP **PcP** **05 42 21.4 +0.6**
comp=Z,2.1nm,0.8s,baz=237,slow=4.5,SNR=5.3
CMAR LR LR 05 58 19.6
comp=Z,274nm,20.2s,baz=249,slow=33
CMAR Chiang Mai Arr 47.59 44*ce*P **P** **05 40 52.0 +1.0**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 47.59 44 P **P** **05 40 51.3 +0.4**
CM09 Chiang Mai Arr 47.61 44 P **P** **05 40 53.0 +1.9**
comp=Z,82nmcomp=Z,10nm,1.1s
PYUN Piuthan 47.68 20 *e*P **P** **05 40 53.0 +1.3**
comp=Z,97nm,1.0s
PHIT Phitsanulok 47.69 46 P **P** **05 40 54.0 +2.2**
comp=Z,77nm,0.7s
CM36 Chiang Mai Arr 47.73 44 P **P** **05 40 53.0 +0.9**
CHTO Chiang Mai 47.84 43 P **P** **05 40 53.0 +0.1**
CHTO pmax pmax
comp=Z,18nm,1.6s
CHTO Chiang Mai 47.84 43 P **P** **05 40 53.0 +0.1**
CMMT Chiang Mai 47.85 43 P **P** **05 40 54.2 +1.2**
comp=Z,3.0nm,1.4s
RAMN Ramite 47.93 24 *e*P **P** **05 40 54.9 +1.2**
comp=Z,75nm,1.0s
DMN Daman 47.95 22 *e*P **P** **05 40 55.0 +1.1**
comp=Z,87nm,1.2s
PKI Pulchoki 48.03 23 *e*P **P** **05 40 55.3 +0.7**
comp=Z,53nm,1.2s
PKIN Phulchoki 48.03 23 *e*P **P** **05 40 55.0 +0.5**
comp=Z,25nm,0.9s
GKN Gorkha 48.15 22 *e*P **P** **05 40 56.1 +0.8**
comp=Z,83nm,1.0s
ODAN Odare 48.16 25 *e*P **P** **05 40 56.4 +0.9**
UTTA Uttaradit 48.17 46 P **P** **05 40 57.1 +1.7**
comp=Z,17nm,0.7s
JIRN Jiri 48.40 23 *e*P **P** **05 40 58.2 +0.7**
comp=Z,61nm,1.1s
GUN Gumba 48.51 23 *e*P **P** **05 40 58.6 +0.3**
comp=Z,74nm,0.9s
TAPN Taplejung 48.73 25 *e*P **P** **05 41 00.8 +0.8**
comp=Z,70nm,1.4s
SBUM Sibu 49.06 71 P **P** **05 41 02.7 +0.3**
SBUM IAmb IAmb 05 41 11.8
comp=Z,25nm,1.2s
SHL Shillong 49.07 31 P **P** **05 41 02.4 -0.1**
SHL pmax pmax
comp=Z,23nm,1.0s
SHL Shillong 49.07 31 P **P** **05 41 02.4 -0.1**
SHL IAmb IAmb 05 41 04.4
comp=Z,22nm,1.0s
SHL Shillong 49.07 31 P **P** **05 41 03.6 +1.1**
SNR=11
UBPT Khong Chiam 50.10 52 P **P** **05 41 12.3 +2.0**
comp=Z,7.6nm,0.7s
NONG Nongkai 50.19 48 P **P** **05 41 12.9 +2.0**
MBWA Marble Bar 50.22 104 P **P** **05 41 11.1 -0.1**
MAW Mawson 50.52 182 P **P** **05 41 14.1 +1.4**
comp=Z,14nm,1.0s,baz=19,slow=7.1,SNR=9.8
MAW LR LR 05 58 10.7
comp=Z,128nm,19.1s,baz=48,slow=31
MAW Mawson 50.52 182 P **P** **05 41 14.4 +1.6**
baz=51,SNR=6.9
MAW Mawson 50.52 182 P **P** **05 41 13.4 +0.6**
MAW pmax pmax
comp=Z,6.0nm,1.1s
MAW Mawson 50.52 182 P **P** **05 41 13.4 +0.6**
NIL Nilore 50.88 7 P **P** **05 41 15.4 -0.5**
NIL pmax pmax
comp=Z,30nm,1.4s
NIL Nilore 50.88 7 P **P** **05 41 15.4 -0.5**
HRA Herat 51.37 355 P **P** **05 41 19.6 -0.3**
KBL Kabul 51.42 3 P **P** **05 41 20.3 +0.1**
KBL pmax pmax
comp=Z,40nm,1.5s
KBL Kabul 51.42 3 P **P** **05 41 20.3 +0.1**
KBL IAmb IAmb 05 41 25.1
comp=Z,40nm,1.5s
KBL Kabul 51.42 3 P **P** **05 41 20.3 +0.1**
SNR=14
SLVN Son La 52.92 45 P **P** **05 41 31.2 -0.2**
KAPI Kappang 53.41 83 P **P** **05 41 35.0 -0.2**
KAPI pmax pmax
comp=Z,27nm,1.2s
KAPI Kappang 53.41 83 P **P** **05 41 35.0 -0.2**
KAPI IAmb IAmb 05 41 39.1

comp=Z,26nm,1.1s
BNSI Bone 53.94 83 P **P** **05 41 41.2 +2.2**
comp=Z,25nm,1.2s
TTSI Tana Toraja 54.09 81 P **P** **05 41 44.1 +4.0**
comp=Z,15nm,0.9s
SYO Syowa Base 54.56 192‖ *e*X **P** **05 41 40.2 -2.4**
SYO Syowa Base 54.56 192‖ *e*pP pP 05 41 45.9 +2.5
KMI Kunming 54.82 41 *e*P P 05 41 50.6 +5.2
KMI S **S** **05 49 29.3 +2.0**
KMI pmax pmax
comp=Z,22nm,1.1s
KMI LR LR
comp=Z,180nm,25.3s
KMI LR LR
comp=Z,180nm,22.0s
GEYT Alibeck 55.31 352 P **P** **05 41 47.9 -0.7**
comp=Z,1.6nm,0.5s,baz=202,slow=7.5,SNR=3.9
GEYT PcP **PcP** **05 42 49.0 -0.2**
comp=Z,2.9nm,0.8s,baz=15,slow=6.2,SNR=5.1
GEYT LR LR 06 03 05.6
comp=Z,120nm,19.8s,baz=180,slow=34
GEYT Alibeck 55.31 352 P **P** **05 41 48.0 -0.5**
GYA0B ALIBECK ARRAY 55.31 352 P **P** **05 41 48.3 -0.2**
EIL Elat 55.60 326 P **P** **05 41 52.1 +1.4**
comp=Z,21nm,0.9s,baz=132,slow=4.4,SNR=9.5
QIZ Qiongzhong 55.69 52 P **P** **05 41 51.5 0.0**
QIZ S **S** **05 49 38.3 -0.4**
QIZ LR LR
comp=Z,240nm,15.7s
QIZ LR LR
comp=Z,310nm,17.7s
QIZ LR LR
comp=Z,290nm,17.7s
GAR Garm 55.92 4 P **P** **05 41 52.2 -0.8**
GAR IAmb IAmb 05 41 56.4
comp=Z,41nm,1.3s
FITZ Fitzroy Crossi 56.12 101 P **P** **05 41 55.5 +0.8**
baz=56,SNR=8.2
KSH Kashi 57.01 9 P **P** **05 41 57.0 -3.8**
KSH pmax pmax
comp=Z,21nm,0.6s
LUWI Luwuk 57.53 80 P **P** **05 42 04.0 -0.8**
LUWI IAmb IAmb 05 42 26.4
comp=Z,27nm,0.6s
WRKA Warakurna 57.75 109 P **P** **05 42 06.9 +0.7**
baz=58,SNR=6.5
MMAI Mount Meron Ar 58.05 329 P **P** **05 42 09.5 +1.4**
comp=Z,7.7nm,0.8s,baz=132,slow=4.1,SNR=5.5
MMAI PcP **PcP** **05 43 01.5 +1.4**
comp=Z,9.2nm,1.0s,baz=160,slow=5.3,SNR=5.0
CUKT Cukurca 58.23 339 *e*P **P** **05 42 08.9 -0.5**
GYA Guiyang 58.26 43 *e*P **P** **05 42 13.0 +3.2**
GYA S **S** **05 50 12.6 -0.1**
GYA pmax pmax
comp=Z,11nm,1.6s
GYA LR LR
comp=Z,280nm,18.0s
IUG Iuzhnay 59.04 3 *e*P **P** **05 42 13.5 -1.5**
comp=Z,10nm,1.3s,baz=2.9
IUG *i* S **S** **05 50 19.3 -2.9**
baz=2.9
IUG *i* LR LR 06 07 54.9
baz=2.9
IUG *i* LRM MLR 06 10 06.5
baz=2.9
IUG Iuzhnay 59.04 3 *e*P **P** **05 42 13.4 -1.5**
IUG pmax pmax
comp=Z,10.0nm,1.3s
AML Almayashu 59.31 6 P **P** **05 42 16.8 -0.3**
SNR=8.9
MARD Mardin 59.33 336 P **P** **05 42 18.1 +1.1**
UCH Uchtor 59.49 7 P **P** **05 42 18.8 +0.3**
SNR=5.1
CD2 Chengdu 59.66 37 P **P** **05 42 19.4 0.0**
CD2 S **S** **05 50 30.4 -0.1**
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 pmax pmax
comp=Z,90nm,5.0s
CD2 LR LR
comp=Z,330nm,17.3s
CD2 LR LR
comp=Z,250nm,11.6s
CD2 LR LR
comp=Z,330nm,14.9s
ULHL Ulahol 59.73 8 P **P** **05 42 19.6 -0.2**
SNR=13
EKS2 Erkin-Say 59.84 6 P **P** **05 42 20.8 +0.3**
SNR=8.9
DZA Taraz 59.86 4 *e*P **P** **05 42 18.8 -1.8**
comp=Z,8.2nm,1.0s,baz=3.9
DZA *i* S **S** **05 50 30.6 -2.0**
baz=3.9
DZA Taraz 59.86 4 *e*P **P** **05 42 18.7 -1.8**
DZA pmax pmax
comp=Z,8.0nm,1.0s
AAK Ala-Archa 59.90 7 P **P** **05 42 20.5 -0.4**
comp=Z,9.0nm,1.1s,baz=198,slow=7.3,SNR=16
AAK LR LR 06 06 18.9
comp=Z,212nm,19.8s,baz=196,slow=34
AAK Ala-Archa 59.90 7 P **P** **05 42 21.1 +0.2**
SNR=7.9
AAK Ala-Archa 59.90 7*ce*P **P** **05 42 20.9 0.0**
AAK pmax pmax
comp=Z,54nm,1.2s
AAK Ala-Archa 59.90 7 P **P** **05 42 20.8 -0.1**
AAK IAmb IAmb 05 42 26.1
comp=Z,19nm,1.2s
KK31 Karatay Array 60.02 3 P **P** **05 42 21.0 -0.6**
KK31 pmax pmax
comp=Z,21nm,1.5s
KK31 Karatay Array 60.02 3 P **P** **05 42 21.0 -0.6**
KKAR Karatay Array 60.02 3 P **P** **05 42 21.1 -0.5**
KKAR pmax pmax
comp=Z,21nm,1.5s
KKAR Karatay Array 60.02 3 P **P** **05 42 20.9 -0.7**
KKAR Karatay Array 60.02 3 P **P** **05 42 21.1 -0.5**
KKAR IAmb IAmb 05 42 23.0
comp=Z,21nm,1.5s
TKM2 Tokmak 2 60.31 8 P **P** **05 42 23.9 +0.1**
SNR=11
TAHT Tahtakopru-Hat 60.44 332 *e*P **P** **05 42 25.9 +1.3**
GNI Garni 60.48 341 P **P** **05 42 26.1 +1.2**
comp=Z,45nm,0.9s,baz=194,slow=1.8,SNR=22
GNI Garni 60.48 341 *e*P **P** **05 42 26.0 +1.1**
GNI Garni 60.48 341*de*P **P** **05 42 25.6 +0.6**
GNI pmax pmax
comp=Z,66nm,1.0s
GNI Garni 60.48 341 P **P** **05 42 25.6 +0.6**
GNI Garni 60.48 341 P **P** **05 42 25.1 +0.2**
GNI P **P** **05 42 25.1 +0.2**
USP Ospenovka 60.52 7 P **P** **05 42 24.8 -0.2**
SNR=5.3
TNSS Tian-Shan 60.60 9 *e*P **P** **05 42 23.9 -2.1**
baz=8.6
TNSS Tian-Shan 60.60 9 *e*P **P** **05 42 23.8 -2.2**
CSS Mathiatis 60.64 329 *e*P **P** **05 42 26.9 +0.9**
CSS Mathiatis 60.64 329 P **P** **05 42 25.9 -0.1**
GAZ Gaziantep 60.66 333 P **P** **05 42 25.9 -0.2**
GAZ IAmb IAmb 05 42 28.4
comp=Z,42nm,1.0s
MDOK Medeo 60.74 9 *e*P **P** **05 42 24.9 -1.8**
baz=8.7
MDOK Medeo 60.74 9 *e*P **P** **05 42 24.8 -1.8**
AAA Alma-Ata 60.77 9 *e*P **P** **05 42 25.5 -1.2**
baz=8.5
AAA *i* S **S** **05 50 42.8 -1.6**
baz=8.5
AAA Alma-Ata 60.77 9 *e*P **P** **05 42 25.5 -1.2**
LFK Lefkose 60.79 329 *e*P **P** **05 42 28.5 +1.4**
BNGB Bingl 60.83 337 *e*P **P** **05 42 28.8 +1.5**
KARO Karliova-Bingo 60.98 338 *e*P **P** **05 42 29.9 +1.5**
LEF Lefka 60.98 329 *e*P **P** **05 42 28.5 +0.2**
UZB Uzunbulak 61.04 10 *e*P **P** **05 42 28.0 -0.7**
comp=Z,8.0nm,1.3s,baz=10
UZB Uzunbulak 61.04 10 *e*P **P** **05 42 28.0 -0.7**
UZB pmax pmax
comp=Z,8.0nm,1.3s
KMRS Kahramanmaras 61.07 333 *e*P **P** **05 42 29.8 +0.9**
MALT Malatya 61.12 335 *e*P **P** **05 42 30.9 +1.6**
MALT Malatya 61.12 335 P **P** **05 42 30.8 +1.5**
SHLS Shalkode 61.13 11 *e*P **P** **05 42 28.0 -1.3**
comp=Z,31nm,1.6s,baz=11
SHLS Shalkode 61.13 11 *e*P **P** **05 42 27.9 -1.3**
SHLS pmax pmax
comp=Z,31nm,1.6s

CEYT Ceyhan 61.16 332 *e*P **P** **05 42 31.1 +1.7**
DDFL Dedoflistskaro 61.25 343 P **P** **05 42 32.9 +2.8**
YEDI Yedisu-Bingol 61.27 337 *e*P **P** **05 42 31.5 +1.1**
KPKS Kokpek 61.30 10 *e*P **P** **05 42 28.7 -1.6**
comp=Z,5.9nm,1.2s,baz=9.9
KPKS Kokpek 61.30 10 *e*P **P** **05 42 28.7 -1.6**
KPKS pmax pmax
comp=Z,6.0nm,1.2s
IKL Isikli 61.49 330 *e*P **P** **05 42 31.9 +0.2**
KOZT Kozan 61.52 332 *e*P **P** **05 42 32.4 +0.5**
LGD Lagodekhi 61.58 343 P **P** **05 42 33.6 +1.4**
KEBE Keben-Mersin 61.64 330 *e*P **P** **05 42 33.7 +0.9**
KARA Karaisali 61.68 332 *e*P **P** **05 42 33.6 +0.6**
DARE Darende-Malaty 61.73 334 *e*P **P** **05 42 34.5 +1.1**
TEVE Tevekalti-Mers 61.76 330 *e*P **P** **05 42 34.4 +0.8**
BERE Bereket-Mersin 61.80 330 *e*P **P** **05 42 34.3 +0.3**
KOPT Kop Dagi 61.80 338 P **P** **05 42 33.9 -0.2**
KOPT IAmb IAmb 05 42 37.0
comp=Z,35nm,1.2s
AKH Akhalkalaki 62.02 341 P **P** **05 42 36.7 +1.3**
SARI SarD1z-Kayseri 62.04 333 *e*P **P** **05 42 35.6 0.0**
CMRD Camardi-Nigde 62.04 332 *e*P **P** **05 42 36.2 +0.7**
GAZI Gazipasa 62.15 329 *e*P **P** **05 42 36.4 +0.2**
BTLS Baital 62.22 6 *e*P **P** **05 42 34.9 -1.5**
comp=Z,5.4nm,1.0s,baz=5.9
BTLS Baital 62.22 6 *e*P **P** **05 42 34.9 -1.5**
BTLS pmax pmax
comp=Z,5.0nm,1.0s
BNN Bunyan 62.65 333 *e*P **P** **05 42 39.9 +0.3**
ENH Enshi 62.68 42 P **P** **05 42 39.2 -0.7**
ENH IAmb IAmb 05 42 45.5
comp=Z,28nm,1.3s
NVL N'lazarevskaya 62.68 198 *e*P **P** **05 42 36.0 -3.2**
NVL pmax pmax
comp=Z,20nm,1.0s
ASAR Alice Springs 62.98 108 P **P** **05 42 42.0 -0.2**
comp=Z,9.1nm,0.6s,baz=271,slow=5.8,SNR=152
ASAR LR LR 06 07 13.6
comp=Z,1µm,18.9s,baz=268,slow=33
ASAR Alice Springs 62.98 108 P **P** **05 42 41.7 -0.5**
ASAR Alice Springs 62.98 108 P **P** **05 42 41.7 -0.5**
AS31 Alice Springs 62.98 108 P **P** **05 42 41.8 -0.3**
SVSK Karacayir 63.07 335 *e*P **P** **05 42 43.2 +1.1**
DAV Davao City (W) 63.09 73 LR LR 06 08 27.3
comp=Z,195nm,20.7s,baz=174,slow=34
KONT Konya--Tatoy 63.49 330 *e*P **P** **05 42 46.1 +1.0**
AKAS Kas 63.52 327 P **P** **05 42 44.7 -0.7**
AKAS IAmb IAmb 05 42 51.9
comp=Z,18nm,1.3s
LZH Lanzhou 63.59 33 *e*P **P** **05 42 46.9 +0.9**
LZH pP pwP 05 42 50.4 -1.0
LZH sP sP 05 42 52.3 +5.4
LZH S **S** **05 51 21.1 +0.6**
LZH sS sS 05 51 32.3 +10
LZH pmax pmax
comp=Z,19nm,1.1s
LZH pmax pmax
comp=Z,90nm,4.1s
TOKT Tokat 63.59 335 *e*P **P** **05 42 46.6 +0.9**
KDU Kakadu 63.61 96 P **P** **05 42 46.6 +0.3**
baz=64,SNR=5.1
TOKA Tokat 63.62 335 P **P** **05 42 46.9 +0.9**
WMQ Urumqi 63.65 17 *e*P **P** **05 42 47.0 +0.9**
WMQ pP pwP 05 42 50.0 -1.6
WMQ sP sP 05 42 55.0 +8.1
WMQ pmax pmax
comp=Z,47nm,1.5s
WMQ pmax pmax
comp=Z,240nm,5.3s
WMQ LR LR
comp=Z,380nm,25.3s
WMQ LR LR
comp=Z,350nm,18.5s
WMQ LR LR
comp=Z,380nm,20.5s
WMQ Urumqi 63.65 17 P **P** **05 42 46.2 +0.2**
WMQ pmax pmax
comp=Z,46nm,1.2s
WMQ Urumqi 63.65 17 P **P** **05 42 46.2 +0.2**
LADK Ladik-KONYA 63.69 330 *e*P **P** **05 42 46.2 -0.3**
KORT Korkueli 63.73 328 *e*P **P** **05 42 47.3 +0.5**
SERE Serefiikochisa 63.74 332 *e*P **P** **05 42 47.6 +0.8**
ELL Elmali 63.76 328 P **P** **05 42 46.6 -0.4**
ELL pmax pmax
comp=Z,48nm,1.1s
ELL Elmali 63.76 328 P **P** **05 42 46.6 -0.4**
WRA Warramunga Arr 63.95 104 P **P** **05 42 49.0 +0.5**
comp=Z,11nm,0.6s,baz=267,slow=5.8,SNR=75
WRA LR LR 06 05 58.1
comp=Z,281nm,21.9s,baz=205,slow=32
WRA Warramunga Arr 63.95 104 P **P** **05 42 49.0 +0.5**
WB2 Warramunga Arr 63.96 104 P **P** **05 42 48.6 0.0**
WB2 IAmb IAmb 05 42 52.4
comp=Z,24nm,0.9s
WRAB Tennant Creek 63.96 104*ce*P **P** **05 42 49.6 +1.0**
WRAB pmax pmax
comp=Z,29nm,1.0s
WRAB Tennant Creek 63.96 104 P **P** **05 42 48.6 -0.1**
BCK Bucak 63.97 329 P **P** **05 42 48.9 +0.6**
KAMT Kaman 64.01 332 *e*P **P** **05 42 49.0 +0.4**
WB0 Warramunga Arr 64.03 104 P **P** **05 42 49.0 -0.1**
WB0 IAmb IAmb 05 42 52.7
comp=Z,24nm,1.2s
WR0 Warramunga Arr 64.13 104 P **P** **05 42 49.5 -0.3**
WR0 IAmb IAmb 05 42 51.4
comp=Z,22nm,1.2s
GTA Gaotai 64.24 28‖ P **P** **05 42 50.4 +0.3**
GTA pP pwP 05 42 54.5 -1.1
GTA sP sP 05 42 57.4 +6.4
GTA S **S** **05 51 27.9 -0.5**
GTA sS sS 05 51 43.4 +13
GTA pmax pmax
comp=Z,23nm,1.1s
GTA pmax pmax
comp=Z,120nm,9.2s
GTA LR LR
comp=Z,110nm,16.3s
GTA LR LR
comp=Z,110nm,15.1s
GTA LR LR
comp=Z,160nm,20.3s
ISP Isparta 64.28 329 P **P** **05 42 47.6 -2.8**
ISP pmax pmax
comp=Z,25nm,1.1s
ISP Isparta 64.28 329 P **P** **05 42 47.6 -2.8**
ISP IAmb IAmb 05 42 50.9
comp=Z,25nm,1.1s
KBZ Khabaz 64.30 341 P **P** **05 42 51.0 +0.8**
comp=Z,8.7nm,0.9s,baz=185,slow=5.9,SNR=11
KBZ LR LR 06 10 07.2
comp=Z,205nm,19.6s,baz=151,slow=35
KBZ Khabaz 64.30 341*ce*P **P** **05 42 50.4 +0.2**
KBZ pmax pmax
comp=Z,16nm,1.0s
BRTR Keskin Array B 64.34 332 P **P** **05 42 51.0 +0.2**
comp=Z,17nm,1.0s,baz=145,slow=7.5,SNR=36
BRTR LR LR 06 10 18.5
comp=Z,273nm,18.1s,baz=147,slow=36
BRTR Keskin Array B 64.34 332 *e*P **P** **05 42 50.9 +0.2**
BRTR Keskin Array B 64.34 332 P **P** **05 42 50.5 -0.3**
BR131 Keskin Array S 64.34 332 P **P** **05 42 50.9 +0.2**
BR131 pmax pmax
comp=Z,46nm,1.1s
BR131 Keskin Array S 64.34 332 P **P** **05 42 50.9 +0.2**
SHA1 Shidzhatmaz 64.38 341 *i* P **P** **05 42 50.8 -0.3**
KVT Kavak 64.44 335 *e*P **P** **05 42 52.4 +1.1**
KVT Kavak 64.44 335 P **P** **05 42 52.6 +1.3**
KIV Kislovodsk 64.57 341 *e*P **P** **05 42 52.2 +0.1**
KIV Kislovodsk 64.57 341 *e*P **P** **05 42 51.9 -0.3**
KIV pmax pmax
comp=Z,72nm,1.1s
KIV Kislovodsk 64.57 341 P **P** **05 42 51.8 -0.3**
KIV IAmb IAmb 05 42 55.4
comp=Z,21nm,1.0s
KIV Kislovodsk 64.57 341 P **P** **05 42 52.4 +0.2**
KIV P **P** **05 42 52.4 +0.2**
ANTO Ankara 64.83 332 P **P** **05 42 53.3 -0.6**
ANTO pmax pmax
comp=Z,10.0nm,0.8s
ANTO Ankara 64.83 332 P **P** **05 42 53.3 -0.6**
YER Yerkesik 64.89 327 *e*P **P** **05 42 54.5 +0.1**
YER Yerkesik 64.89 327 P **P** **05 42 55.5 +1.1**
XAN Xi'an 64.93 38 P **P** **05 42 54.0 -0.6**
XAN S **S** **05 51 30.0 -6.9**

XAN pmax pmax
comp=Z,18nm,1.5s
XAN pmax pmax
comp=Z,130nm,5.1s
XAN LR LR
comp=Z,180nm,20.6s
XAN LR LR
comp=Z,210nm,19.5s
XAN LR LR
comp=Z,210nm,18.4s
XAN Xi'an 64.93 38 P P 05 42 54.4 -0.3
XAN pmax pmax
comp=Z,18nm,1.1s
XAN Xi'an 64.93 38 P P 05 42 54.4 -0.3
XAN IAmb IAmb 05 42 55.5
comp=Z,18nm,1.1s
MAKZ Makanchi 65.12 12 P P 05 42 54.4 -1.2
MAKZ pmax pmax
comp=Z,13nm,1.0s
MAKZ Makanchi 65.12 12 P P 05 42 54.4 -1.2
MK31 Makanchi Array 65.17 12 P P 05 42 55.1 -0.8
MK31 pmax pmax
comp=Z,18nm,1.2s
MK31 Makanchi Array 65.17 12 P P 05 42 55.1 -0.8
MK31 IAmb IAmb 05 42 56.5
comp=Z,18nm,1.1s
MKAR Makanchi Array 65.17 12 P P 05 42 55.2 -0.7
comp=Z,18nm,1.1s,baz=198,slow=7.3,SNR=60
MKAR LR LR 06 09 53.5
comp=Z,158nm,20.0s,baz=193,slow=35
MKAR Makanchi Array 65.17 12 P P 05 42 54.7 -1.2
MKAR Makanchi Array 65.17 12 P P 05 42 54.7 -1.2
MLSB Milas 65.28 327 *eP* P 05 43 05.3 +8.5
ILGA Ilgaz 65.39 333 P P 05 42 57.0 -0.8
ILGA IAmb IAmb 05 42 59.5
comp=Z,36nm,1.2s
IDI Anoyia 65.39 323 P P 05 42 58.7 +1.0
comp=Z,24nm,1.0s,baz=138,slow=8.7,SNR=5.3
YUVA Yuva-Kibriscik 65.76 331 *eP* **P 05 43 00.5 +0.6**
MANT Manisa 65.78 328 P P 05 43 00.6 +0.3
BORA Eskisehir 65.93 330 *eP* **P 05 43 01.2 +0.2**
WHN Wuhan 66.03 44 ⇓P P 05 43 13.1 +11
MDUB Mudurnu 66.05 331 P P 05 43 01.2 -0.6
TVSB Tavsanli 66.07 329 *eP* **P 05 43 01.4 -0.6**
AUBOZ BOZOYUK 66.15 330 *eP* **P 05 43 02.3 -0.1**
HTT Hallett 66.27 119 P P 05 43 04.1 +0.6
baz=66,SNR=3.3
ABKAR Akbulak array 66.33 355 P P 05 43 02.8 -0.5
ABKAR IAmb IAmb 05 43 04.0
comp=Z,32nm,1.4s
ABKAR Akbulak array 66.33 355 P P 05 43 02.9 -0.4
GULT Gulveren 66.33 331 *eP* **P 05 43 04.3 +0.7**
ZSN Zaisan 66.33 13 *eP* **P 05 43 02.0 -1.4**
comp=Z,6.5nm,0.9s,baz=13
ZSN Zaisan 66.33 13 *eP* **P 05 43 01.9 -1.4**
ZSN pmax pmax
comp=Z,6.0nm,0.9s
ADVT Abdulvahap 66.70 330 *eP* **P 05 43 06.3 +0.5**
YLV Yalova 66.98 330 *eP* **P 05 43 08.0 +0.3**
BRZS Berezniki 67.01 4 *eP* **P 05 43 06.4 -1.3**
comp=Z,3.9nm,0.5s,baz=4.2
BRZS Berezniki 67.01 4 *eP* **P 05 43 06.3 -1.3**
BRZS pmax pmax
comp=Z,4.0nm,0.5s
HRT Hereke 67.04 330 *eP* **P 05 43 08.4 +0.3**
ANN Anapa 67.08 338 *eP* **P 05 43 06.8 -1.3**
ANN pmax pmax
comp=Z,136nm,1.6s
SNAA Sanae 67.43 199 P P 05 43 10.6 +0.4
SNAA Sanae 67.43 199 *ceP* **P 05 43 11.2 +1.0**
SNAA pmax pmax
comp=Z,25nm,1.7s
SNAA Sanae 67.43 199 P P 05 43 10.6 +0.4
SNAA IAmb IAmb 05 43 12.2
comp=Z,26nm,1.4s
AKTO Aktyubinsk 67.67 354 P P 05 43 11.2 -0.6
comp=Z,7.7nm,1.0s,baz=165,slow=6.8,SNR=20
EZN Ezine 67.93 328 P P 05 43 15.0 +1.4
KURBB Kurchatov Arra 68.25 8 P P 05 43 15.1 -0.4
comp=Z,14nm,1.0s,baz=203,slow=6.7,SNR=44
SEM Semipalatinsk 68.30 9 *eP* **P 05 43 14.0 -2.1**
comp=Z,10nm,1.1s,baz=9.3
SEM Semipalatinsk 68.30 9 *eP* **P 05 43 13.9 -2.1**
SEM pmax pmax
comp=Z,10.0nm,1.1s
ITM Ithomi 68.42 323 P P 05 43 16.0 -0.9
ITM IAmb IAmb 05 43 17.4
comp=Z,26nm,0.9s
STKA Stephens Creek 68.68 118 P P 05 43 18.3 -0.4
comp=Z,4.1nm,0.7s,baz=267,slow=8.4,SNR=6.2
STKA LR LR 06 09 52.1
comp=Z,324nm,19.2s,baz=230,slow=33
STKA Stephens Creek 68.68 118 P P 05 43 20.0 +1.3
baz=69,SNR=3.6
STKA Stephens Creek 68.68 118 P P 05 43 18.3 -0.4
STKA pmax pmax
comp=Z,2.0nm,1.0s
STKA Stephens Creek 68.68 118 IAmb IAmb 05 43 22.4
comp=Z,1.5nm,0.9s
QIS Mount Isa 68.70 106 P P 05 43 19.7 +0.6
baz=69,SNR=9.4
VNA2 Neumayer--Watz 68.71 200 P P 05 43 19.8 +1.6
baz=79,slow=4.9
VNA2 Neumayer--Watz 68.71 200 PcP **PcP 05 43 44.5 +1.5**
VNA2 Neumayer--Watz 68.71 200 sP sP 05 43 24.2 +5.0
VNA1 Neumayer--Stat 68.95 200 P P 05 43 21.4 +1.8
VNA1 Neumayer--Stat 68.95 200 PcP **PcP 05 43 46.1 +2.2**
VNA1 Neumayer--Stat 68.95 200 sP sP 05 43 26.4 +5.7
DGZ Jazzator, Alta 69.03 14 *d iP* **P 05 43 20.6 0.0**
DGZ pmax pmax
comp=Z,24nm,1.4s
AGG Agios Georgios 69.48 325 P P 05 43 21.8 -1.6
AGG pmax pmax
comp=Z,60nm,1.0s
AGG Agios Georgios 69.48 325 P P 05 43 21.8 -1.6
VNA3 Neumayer Olymp 69.49 200 P P 05 43 23.9 +0.8
VNA3 Neumayer Olymp 69.49 200 pP pP 05 43 27.2 +3.4
VNA3 Neumayer Olymp 69.49 200 sP sP 05 43 29.4 +5.3
KDZ Kurdzhali 69.74 328 *eP* **P 05 43 24.9 -0.1**
BVAR Borovoye Array 69.92 2 P P 05 43 24.5 -1.2
comp=Z,5.4nm,0.8s,baz=153,slow=13,SNR=25
BRVK Borovoye 69.95 2 *deP* **P 05 43 25.1 -0.8**
BRVK pmax pmax
comp=Z,19nm,1.3s
BRVK Borovoye 69.95 2 P P 05 43 25.4 -0.6
BRVK IAmb IAmb 05 43 26.5
comp=Z,21nm,1.2s
NJ2 Nanjing 69.99 46 *eP* **P 05 43 27.0 +0.3**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
LIT Litokhoron 70.15 325 P P 05 43 26.9 -0.6
LIT pmax pmax
comp=Z,57nm,1.0s
LIT Litokhoron 70.15 325 P P 05 43 26.9 -0.6
SRS Serrai 70.29 327 P P 05 43 28.1 -0.2
SRS pmax pmax
comp=Z,37nm,1.0s
PLD Plovdiv 70.44 328 *eP* **P 05 43 28.6 -0.6**
PLD Plovdiv 70.44 328 P P 05 43 29.7 +0.5
PLD pmax pmax
comp=Z,353nm,1.1s
TIRR Tirgusor 70.45 332 P P 05 43 29.1 -0.1
TIRR pmax pmax
comp=Z,126nm,1.0s
TIRR Tirgusor 70.45 332 P P 05 43 29.1 -0.1
TLBR Topalu 70.69 332 ⇓P **P 05 43 30.7 +0.1**
TOA0 Torodi Ar. Sit 70.75 291 P P 05 43 31.7 0.0
TOA0 IAmb IAmb 05 43 32.8
comp=Z,26nm,1.4s
TORD Torodi Ar. Bea 70.75 291 P P 05 43 31.6 0.0
comp=Z,7.8nm,1.1s,baz=120,slow=4.6,SNR=22
TORD LR LR 06 12 39.4
comp=Z,300nm,20.0s,baz=115,slow=34
TORD Torodi Ar. Bea 70.75 291 P P 05 43 31.3 -0.3
TPGR Topolog 70.76 332 ⇓P **P 05 43 30.7 -0.5**
HARR Harsova 70.85 332 ⇓P **P 05 43 32.2 +0.5**
HARR Harsova 70.85 332 P P 05 43 32.1 +0.5
VAY Valandovo 70.97 326 *i* P **P 05 43 32.3 -0.1**
BELG Belogornoye 71.14 348 P P 05 43 32.3 -0.8
comp=Z,46nm,1.0s,baz=71,slow=2.2,SNR=16
BELG Belogornoye 71.14 348 *d iP* **P 05 43 32.5 -0.6**
BELG pmax pmax
comp=Z,15nm,1.2s
CFR Carcaliu 71.14 332 ⇓P **P 05 43 33.7 +0.4**
CFR Carcaliu 71.14 332 P P 05 43 33.7 +0.4

HHC Hu-ho-hao-te 71.19 35 *eP* **P 05 43 35.0 +1.0**
HHC S **S 05 52 51.5 -0.2**
HHC LR LR
comp=Z,190nm,17.9s
HHC LR LR
comp=Z,170nm,16.2s
HHC LR LR
comp=Z,74nm,15.3s
FNA Florina 71.23 325 P P 05 43 33.6 -0.5
FNA pmax pmax
comp=Z,32nm,1.0s
FNA Florina 71.23 325 P P 05 43 33.6 -0.5
FNA IAmb IAmb 05 43 34.8
comp=Z,32nm,1.0s
TIA Tai'an 71.39 41 P P 05 43 35.6 +0.5
TIA pmax pmax
comp=Z,9.0nm,1.1s
SGRR Singureni 71.39 330 ⇓P **P 05 43 36.3 +1.4**
VRH Novokhopyorsk 71.41 344 *eP* **P 05 43 33.8 -1.1**
VRH pmax pmax
comp=Z,30nm,0.9s
PLVB Pleven 71.42 329 ⇓P **P 05 43 35.6 +0.5**
STIP Stip 71.44 326 *i* P **P 05 43 34.5 -0.7**
VTS Vitosha 71.56 328 ⇓P **P 05 43 36.1 0.0**
VTS Vitosha 71.56 328 P P 05 43 36.3 +0.1
VTS pmax pmax
comp=Z,48nm,1.1s
VTS Vitosha 71.56 328 P P 05 43 36.3 +0.1
VTS IAmb IAmb 05 43 37.5
comp=Z,48nm,1.1s
SULR 71.61 331 ⇓P **P 05 43 37.4 +1.2**
TAM Tamanrasset 71.64 302 P P 05 43 37.4 +0.3
TAM pmax pmax
comp=Z,9.0nm,1.2s
TAM Tamanrasset 71.64 302 P P 05 43 37.4 +0.3
OHR Ohrid 71.78 325 *i* P **P 05 43 37.4 0.0**
ISR Istrita 71.81 331 ⇓P **P 05 43 38.7 +1.1**
ISR Istrita 71.81 331 P P 05 43 39.4 +1.9
ISR pmax pmax
comp=Z,89nm,1.1s
VORD Divnogorie 71.88 342 *eP* **P 05 43 36.8 -0.9**
VORD pmax pmax
comp=Z,70nm,1.6s
SKO Skopje 72.03 326 *i* P **P 05 43 38.6 -0.3**
ODBI Odobesti 72.07 332 ⇓P **P 05 43 40.7 +1.7**
VSR Storozhevoye 72.14 342 *eP* **P 05 43 37.7 -1.5**
VSR pmax pmax
comp=Z,50nm,1.2s
CMSA Cobar Meteorol 72.18 118 P P 05 43 41.3 +1.2
baz=72,SNR=8.0
MILM Milestii Mici 72.21 334 ⇓P **P 05 43 39.6 -0.2**
MILM Milestii Mici 72.21 334 P P 05 43 39.5 -0.2
VRI Vrincioaia 72.30 332 ⇓P **P 05 43 41.3 +0.9**
VRI Vrincioaia 72.30 332 P P 05 43 41.2 +0.9
PLOR Plostina 72.32 332 ⇓P **P 05 43 41.4 +0.8**
PLOR Plostina 72.32 332 P P 05 43 41.3 +0.8
STFAR Stefanesti-Arg 72.35 330 ⇓P **P 05 43 41.8 +1.0**
MLR Muntele Rosu 72.37 331 ⇓P **P 05 43 41.8 +0.9**
MLR Muntele Rosu 72.37 331 P P 05 43 41.4 -0.4
MLR pmax pmax
comp=Z,66nm,1.2s
MLR Muntele Rosu 72.37 331 P P 05 43 41.4 +0.4
TIR Tirane 72.45 325 ⇓P **P 05 43 41.8 +0.4**
TIR Tirane 72.45 325 P P 05 43 41.2 -0.1
TIR pmax pmax
comp=Z,85nm,1.0s
TIR Tirane 72.45 325 P P 05 43 41.2 -0.1
ZAA0 Zalesovo Array 72.48 11 P P 05 43 40.6 -0.7
ZAA0 IAmb IAmb 05 43 41.7
comp=Z,40nm,1.1s
ZALV Zalesovo Beam 72.48 11 P P 05 43 40.9 -0.4
comp=Z,24nm,0.8s,baz=212,slow=5.3,SNR=65
ZALV LR LR 06 15 22.5
comp=Z,89nm,18.8s,baz=132,slow=36
ZALV Zalesovo Beam 72.48 11 P P 05 43 40.4 -0.9
CEL Celeste 72.72 320 P P 05 43 43.2 0.0
VOIR 72.74 331 ⇓P **P 05 43 42.7 -0.4**
VOIR 72.74 331 P P 05 43 43.0 -0.1
VOIR pmax pmax
comp=Z,45nm,1.2s
TIP Timpagrande 72.79 322 ⇓P **P 05 43 44.3 +0.8**
TIP Timpagrande 72.79 322 P P 05 43 43.5 0.0
TIP IAmb IAmb 05 43 45.1
comp=Z,20nm,1.0s
TESR Tescani 72.83 332 ⇓P **P 05 43 43.4 -0.1**
ARR Arges 72.89 330 ⇓P **P 05 43 44.0 0.0**
IAS Iasi 72.96 333 ⇓P **P 05 43 44.6 +0.3**
IAS Iasi 72.96 333 P P 05 43 44.5 +0.3
DOPR Dopca 72.98 331 ⇓P **P 05 43 44.4 -0.1**
QSPA South Pole Qui 72.99 180 P P 05 43 44.8 +0.4
QSPA IAmb IAmb 05 43 46.2
comp=Z,52nm,1.1s
RAFF Raffo Rosso 73.03 319 P P 05 43 45.4 +0.5
LOT Lotru 73.35 330 ⇓P **P 05 43 46.3 -0.5**
SORM Soroca 73.36 334 ⇓P **P 05 43 46.0 -0.6**
SORM Soroca 73.36 334 P P 05 43 45.9 -0.6
DRME Dracevica, Mon 73.39 325 P P 05 43 41.9 -5.1
BIZ Bicaz 73.40 332 ⇓P **P 05 43 47.3 +0.4**
LPSR Galich'ya Gora 73.43 343 *eP* **P 05 43 46.0 -0.9**
LPSR pmax pmax
comp=Z,30nm,1.0s
PDG Podgorica 73.52 325 ⇓P **P 05 43 48.0 +0.3**
PDG Podgorica 73.52 325 ⇓*iP* **P 05 43 47.9 +0.2**
PDG Podgorica 73.52 325 P P 05 43 47.9 +0.2
PDG IAmb IAmb 05 43 49.2
comp=Z,46nm,1.0s
MTSU Mount Surprise 73.55 104 P P 05 43 49.9 +1.4
baz=74,SNR=4.1
ARU Arti 73.56 355 P P 05 43 46.9 -0.7
comp=Z,1.8nm,0.6s,baz=186,slow=5.4,SNR=15
ARU Arti 73.56 355 *d iP* **P 05 43 46.9 -0.7**
ARU 05 46 29.1
ARU S **SKiKP 05 53 18.9 +0.1**
ARU SS **SS 05 57 58.6 -2.7**
ARU pmax pmax
comp=Z,34nm,1.4s
ARU Arti 73.56 355 P P 05 43 46.5 -1.1
ARU IAmb IAmb 05 43 48.3
comp=Z,24nm,1.1s
HERR Herculane 73.60 329 ⇓P **P 05 43 48.4 +0.3**
GZR Gura Zlata 73.79 329 ⇓P **P 05 43 49.9 +0.6**
SVE Sverdlovsk 73.82 357 *eP* **P 05 43 49.0 -0.1**
SVE pmax pmax
comp=Z,40nm,1.6s
SONM Songino Array 73.82 27 P P 05 43 50.4 +0.8
comp=Z,13nm,0.9s,baz=217,slow=6.1,SNR=57
SONM LR LR 06 15 08.1
comp=Z,248nm,20.3s,baz=181,slow=35
MDVR Moldovita 73.88 328 ⇓P **P 05 43 49.9 +0.1**
HCY Herceg Novi 73.95 325 *eP* **P 05 43 50.8 +0.6**
CLTB Caltabellotta 73.97 318 P P 05 43 50.2 -0.4
CLTB IAmb IAmb 05 43 52.2
comp=Z,42nm,1.4s
DEV Deva 74.09 330 ⇓P **P 05 43 52.0 +1.0**
DEV Deva 74.09 330 P P 05 43 51.9 +1.0
CORL Corleone 74.10 319 P P 05 43 51.3 0.0
ULN Ulaanbaatar 74.13 27 *deP* **P 05 43 51.4 0.0**
ULN pmax pmax
comp=Z,19nm,1.3s
ULN Ulaanbaatar 74.13 27 P P 05 43 51.4 0.0
BRY Bratogost 74.23 325 *eP* **P 05 43 52.5 +0.5**
UPM Unac-Piva 74.23 326 *eP* **P 05 43 53.1 +1.0**
DIVS Divibare 74.27 327 ⇓*iP* **P 05 43 52.4 +0.2**
DIVS Divibare 74.27 327 P P 05 43 52.8 +0.6
ARCR ARCALIA 74.29 332 ⇓P **P 05 43 53.2 +1.1**
BURAR Bucovina Array 74.30 332 ⇓P **P 05 43 53.2 +0.9**
BURAR Bucovina Array 74.30 332 P P 05 43 53.2 +0.9
BURAR Bucovina Array 74.30 332 P P 05 43 52.9 +0.6
BUR08 Bucovina Ar. S 74.33 332 P P 05 43 52.7 +0.2
BUR08 IAmb IAmb 05 43 54.6
comp=Z,42nm,1.5s
CJR Cluj-Napoca 74.37 331 ⇓P **P 05 43 53.5 +0.8**
CJR Cluj-Napoca 74.37 331 P P 05 43 53.4 +0.8
DBIC Dimbokro 74.39 282 P P 05 43 53.5 +0.1
comp=Z,19nm,1.0s,baz=98,slow=5.7,SNR=15
DBIC Dimbokro 74.39 282 P P 05 43 53.4 +0.1
DBIC pmax pmax
comp=Z,29nm,1.1s
DBIC Dimbokro 74.39 282 P P 05 43 53.4 +0.1
DBIC IAmb IAmb 05 43 54.6
comp=Z,29nm,1.1s
BBLS Lazići 74.42 327 ⇓*iP* **P 05 43 53.9 +0.9**
BZS Buzias 74.52 329 ⇓P **P 05 43 54.0 +0.5**

BZS Buzias 74.52 329 P P 05 43 53.8 +0.3
BZS pmax pmax
comp=Z,57nm,1.3s
VNDA Vanda 74.57 167 P P 05 43 53.6 +0.3
comp=Z,9.1nm,1.0s,baz=275,slow=7.2,SNR=25
VNDA LR LR 06 13 03.7
comp=Z,129nm,18.9s,baz=290,slow=33
VNDA Vanda 74.57 167 P P 05 43 53.8 +0.4
VNDA pmax pmax
comp=Z,23nm,1.2s
VNDA Vanda 74.57 167 P P 05 43 53.8 +0.4
VNDA IAmb IAmb 05 43 55.2
comp=Z,23nm,1.2s
ZAK Zakamensk 74.57 23 *eP* **P 05 43 53.2 -0.6**
ZAK pmax pmax
comp=Z,7.0nm,1.7s
HAPS Han Pijesak,Bl 74.81 327 ⇓*iP* **P 05 43 55.6 +0.3**
TEKS Tekeris 74.83 327 *eP* **P 05 43 56.1 +0.8**
DRGR 74.84 330 ⇓P **P 05 43 56.2 +0.8**
DRGR 74.84 330 P P 05 43 55.7 +0.3
DRGR pmax pmax
comp=Z,41nm,1.2s
AKASG Malin Array Be 75.05 336 P P 05 43 56.0 -0.4
comp=Z,28nm,0.9s,baz=140,slow=5.0,SNR=77
AKASG PP **PP 05 46 43.6 -1.1**
comp=Z,0.4nm,0.4s,baz=140,slow=8.8,SNR=5.2
AKASG Malin Array Be 75.05 336 *ceP* **P 05 43 56.0 -0.4**
AKASG pmax pmax
comp=Z,28nm,0.9s
AKBB Malin Array Si 75.05 336 *deP* **P 05 43 55.8 -0.6**
AKBB Malin Array Si 75.05 336 P P 05 43 55.7 -0.6
AKBB IAmb IAmb 05 43 57.2
comp=Z,55nm,1.1s
FRGS Fruska Gora 75.10 328 ⇓P **P 05 43 57.3 +0.4**
FRGS Fruska Gora 75.10 328 ⇓*iP* **P 05 43 56.9 0.0**
BMR Baia Mare 75.12 331 ⇓P **P 05 43 57.7 +0.8**
BMR Baia Mare 75.12 331 P P 05 43 57.7 +0.8
PAOL Paolisi 75.26 322 P P 05 43 57.7 -0.2
PAOL IAmb IAmb 05 43 58.7
comp=Z,21nm,1.0s
KEST Kesra 75.44 315 P P 05 44 00.0 +0.9
comp=Z,10nm,1.0s,baz=120,slow=2.1,SNR=7.7
SBA Scott Base 75.53 168 P P 05 43 59.1 +0.2
SBA pmax pmax
comp=Z,40nm,1.7s
SBA Scott Base 75.53 168 P P 05 43 59.1 +0.2
SBA IAmb IAmb 05 44 24.9
comp=Z,40nm,1.6s
BELA Belgrano 2 75.72 192 P P 05 43 58.6 -1.5
BELA IAmb IAmb 05 44 01.8
comp=Z,34nm,1.4s
TLY Talaya 75.75 23 P P 05 44 00.6 +0.1
comp=Z,2.0nm,0.4s,baz=292,slow=14,SNR=4.2
TLY Talaya 75.75 23 *eP* **P 05 44 01.0 +0.5**
TLY *eS* **S 05 53 37.2 -5.5**
TLY *i* SS **SS 05 58 31.2 -3.7**
TLY pmax pmax
comp=Z,30nm,1.2s
TLY MLR MLR
comp=Z,704nm,21.0s
TLY Talaya 75.75 23 P P 05 44 00.8 +0.3
BLY Banja Luka 76.19 326 ⇓*iP* **P 05 44 03.1 0.0**
INTR Introdacqua 76.26 322 P P 05 44 02.7 -0.9
OBN Obninsk 76.31 343 *ceP* **P 05 44 03.4 -0.1**
OBN *e* 05 44 15.4
OBN *e* 05 46 54.8
OBN *eS* **S 05 53 43.7 -4.9**
OBN pmax pmax
comp=Z,76nm,1.3s
OBN Obninsk 76.31 343 P P 05 44 03.3 -0.1
UZH Uzhgorod 76.37 332 *eP* **P 05 44 03.5 -0.5**
UZH *e* 05 44 07.4
UZH *e* 05 44 13.6
KOWA Kowa 76.38 290 P P 05 44 04.7 -0.1
KOWA IAmb IAmb 05 44 06.5
comp=Z,24nm,1.1s
MORH Mrgy, Hungar 76.42 328 ⇓*iP* **P 05 44 04.2 -0.2**
LVV L'vov 76.48 333 *eP* **P 05 44 04.5 -0.1**
MOS Moscow 76.57 344 *eP* **P 05 44 01.2 -3.8**
MOS *e* 05 46 54.0
MOS *eS* **S 05 53 45.4 -6.0**
MOS pmax pmax
comp=Z,300nm,2.0s
MOS pmax pmax
comp=Z,103nm,1.5s
KIRV Kirov 76.72 351 *ceP* **P 05 44 05.0 -0.7**
AQU L'Aquila 76.77 322 P P 05 44 06.3 -0.2
AQU pmax pmax
comp=Z,73nm,1.2s
AQU L'Aquila 76.77 322 *eP* **P 05 44 05.4 -1.1**
AQU L'Aquila 76.77 322 P P 05 44 06.3 -0.2
CRVS Cervenica-Dubn 76.95 331 *eP* **P 05 44 07.9 +0.6**
CRVS pmax pmax
comp=Z,125nm,1.5s
CRVS Cervenica-Dubn 76.95 331 *eP* **P 05 44 07.9 +0.6**
PSZ Piszkesteto 76.98 330 ⇓P **P 05 44 07.5 -0.1**
PSZ Piszkesteto 76.98 330 P P 05 44 07.1 -0.5
PSZ pmax pmax
comp=Z,23nm,1.1s
PSZ Piszkesteto 76.98 330 P P 05 44 07.1 -0.5
PSZ IAmb IAmb 05 44 08.5
comp=Z,23nm,1.1s
KECS Kecovo 77.10 331 *eP* **P 05 44 08.4 +0.2**
KECS pmax pmax
comp=Z,18nm,1.0s
KECS Kecovo 77.10 331 *eP* **P 05 44 08.4 +0.2**
NRCA Norcia 77.23 323 P P 05 44 08.7 -0.4
VSL Villasalto 77.53 318 P P 05 44 11.1 +0.3
VSL IAmb IAmb 05 44 12.4
comp=Z,38nm,1.1s
BEHE Becsehely 77.55 327 ⇓*iP* **P 05 44 13.1 +2.4**
SRO2 Moca 77.61 329 *eP* **P 05 44 10.5 -0.5**
SRO2 pmax pmax
comp=Z,52nm,1.0s
SRO2 Moca 77.61 329 *eP* **P 05 44 10.5 -0.5**
SRO Srobarova 77.68 329 *eP* **P 05 44 11.9 +0.5**
SRO pmax pmax
comp=Z,46nm,1.0s
SRO Srobarova 77.68 329 *eP* **P 05 44 11.9 +0.5**
KOGS Kog 77.81 327 *i* P **P 05 44 12.5 +0.3**
comp=Z,88nm,1.0s
CRES Cresnjev 77.82 326 ⇓*iP* **P 05 44 12.5 +0.2**
NIE Niedzica 77.85 331 *eP* **P 05 44 13.1 +0.7**
NIE Niedzica 77.85 331 P P 05 44 13.3 +0.9
NIE pmax pmax
comp=Z,11nm,1.5s
VYHS Vyhne 77.89 330 *eP* **P 05 44 12.9 +0.3**
VYHS Vyhne 77.89 330 *eP* **P 05 44 12.9 +0.3**
LANS Liptovska Anna 78.05 331 *eP* **P 05 44 14.5 +1.0**
LANS pmax pmax
comp=Z,20nm,1.1s
LANS Liptovska Anna 78.05 331 *eP* **P 05 44 14.5 +1.0**
KOLL Kolacno 78.16 330 *eP* **P 05 44 14.4 +0.3**
CEY Cerknica 78.32 326 ⇓*iP* **P 05 44 14.7 -0.4**
LJU Ljubljana 78.46 326 *i* P **P 05 44 15.9 +0.1**
SOP Sopron 78.47 328 P P 05 44 16.3 +0.5
SOP pmax pmax
comp=Z,44nm,1.2s
CASP Castiglione de 78.52 322 P P 05 44 16.1 -0.1
ZST Bratislava 78.54 329 *eP* **P 05 44 16.0 -0.2**
ZST pmax pmax
comp=Z,96nm,1.1s
ZST Bratislava 78.54 329 *eP* **P 05 44 16.0 -0.2**
MODS Modra-Piesok 78.57 329 *eP* **P 05 44 15.5 -0.9**
MODS pmax pmax
comp=Z,38nm,1.1s
MODS Modra-Piesok 78.57 329 *eP* **P 05 44 15.4 -0.9**
MNK Minsk 78.58 338 *eP* **P 05 44 17.0 +0.8**
MNK Minsk 78.58 338 *i* P **P 05 44 16.7 +0.5**
comp=E,4.0nm,1.0s
MNK *i* P **P 05 44 16.7 +0.5**
comp=N,24nm,1.0s
MNK *i* P **P 05 44 16.7 +0.5**
comp=Z,52nm,1.0s
MNK *i* PcP **PcP 05 44 25.6 +0.3**
MNK *i* PP **PP 05 47 13.9 -0.3**
MNK *i* PPP PPP 05 49 02.0
MNK *i* S **S 05 54 15.8 +2.6**
MNK *i* SS **SS 05 59 27.1 +10**
MNK *i* SSS SSS 06 02 42.7
MNK *i* LQ LQ 06 12 02.7
MNK *i* LR LR 06 14 55.8
MNK *i* LRM MLR 06 20 27.2
comp=E,42nm,20.1s

MNK *i* LRM MLR 06 21 09.7
comp=N,496nm,18.5s
MNK *i* LRM MLR 06 21 13.2
comp=Z,161nm,18.5s
SMOL Smolenice 78.59 329 *eP* **P 05 44 16.5 0.0**
SMOL pmax pmax
comp=Z,11nm,1.2s
SMOL Smolenice 78.59 329 *eP* **P 05 44 16.5 0.0**
SOKA Soboth 78.60 327 *i* P **P 05 44 16.8 +0.2**
comp=Z,23nm,1.1s,SNR=11
OJC Ojcow 78.65 331 *eP* **P 05 44 16.9 +0.2**
OJC Ojcow 78.65 331 P **P 05 44 16.2 -0.5**
OJC pmax pmax
comp=Z,49nm,1.2s
OJC Ojcow 78.65 331 P **P 05 44 16.2 -0.5**
OJC IAmb IAmb 05 44 17.8
comp=Z,49nm,1.2s
JAVC Velka Javorina 78.71 330 *eP* **P 05 44 18.0 +0.8**
ARSA Arzberg 78.71 327 *eP* **P 05 44 17.6 +0.4**
comp=Z,44nm,1.0s,SNR=22
OBKA Obir 78.74 326 *eP* **P 05 44 17.6 +0.2**
comp=Z,18nm,1.0s
CONA Conrad Observa 78.98 328 *i* P **P 05 44 18.8 0.0**
comp=Z,48nm,1.0s,SNR=25
OKC Ostrava-Krasne 79.15 330 *eP* **P 05 44 19.2 -0.3**
OKC Ostrava-Krasne 79.15 330 *eP* **P 05 44 19.2 -0.3**
KSAR Wonju Array Be 79.16 45 P **P 05 44 19.5 -0.3**
KSAR Wonju Array Be 79.16 45 P **P 05 44 19.5 -0.3**
KSRS Korea Array 79.19 45 P **P 05 44 19.9 0.0**
comp=Z,4.2nm,1.1s,baz=232,slow=5.7,SNR=10
KSRS LR LR 06 17 36.3
comp=Z,51nm,21.9s,baz=214,slow=34
KSRS Korea Array 79.19 45 P **P 05 44 20.0 0.0**
NACGM Naroch 79.29 338 *i* P **P 05 44 19.9 -0.2**
NACGM *i* P **P 05 44 19.9 -0.2**
NACGM *i* P **P 05 44 19.9 -0.2**
NACGM *i* PP **PP 05 47 26.5 +6.3**
NACGM *i* PPP PPP 05 48 58.3
NACGM *i* S **S 05 54 24.2 +3.4**
NACGM *i* SS **SS 05 59 35.7 +7.6**
NACGM *i* SSS SSS 06 04 00.2
NACGM *i* LQ LQ 06 13 31.6
NACGM *i* LR LR 06 16 48.6
MYKA Terra Mystica 79.30 326 *eP* **P 05 44 20.4 -0.1**
comp=Z,18nm,1.2s
BEL Belsk 79.36 333 *eP* **P 05 44 21.2 +0.6**
ZCCA Zocca 79.39 323 P **P 05 44 21.7 +0.8**
MORC Moravsky Berou 79.39 330 *eP* **P 05 44 21.0 +0.1**
MORC Moravsky Berou 79.39 330 P **P 05 44 20.5 -0.4**
MORC pmax pmax
comp=Z,29nm,1.0s
MORC Moravsky Berou 79.39 330 P **P 05 44 20.5 -0.4**
MORC IAmb IAmb 05 44 22.3
comp=Z,28nm,1.0s
KRUC Moravsky 79.47 329 *eP* **P 05 44 21.2 -0.1**
KRUC Moravsky 79.47 329 P **P 05 44 21.2 -0.1**
KRUC pmax pmax
comp=Z,56nm,1.1s
VRAC Vranov 79.53 329 *eP* **P 05 44 21.6 0.0**
TEOL Teolo 79.60 324 P **P 05 44 21.8 -0.2**
TEOL IAmb IAmb 05 44 23.3
comp=Z,37nm,1.1s
ZOU Zoufplan 79.62 326 P **P 05 44 22.1 -0.3**
ZOU IAmb IAmb 05 44 23.6
comp=Z,34nm,1.1s
IDID Didziasalis 79.63 338 *eP* **P 05 44 23.1 +1.2**
KBA Koelnbreinsper 79.74 326 *eP* **P 05 44 22.8 -0.3**
comp=Z,23nm,1.4s,SNR=6.6
KBA Koelnbreinsper 79.74 326 P **P 05 44 23.3 +0.3**
MOA Molln 79.75 327 *i* P **P 05 44 22.9 0.0**
comp=Z,51nm,1.1s,SNR=17
IIGN Ignalina 79.84 338 *eP* **P 05 44 24.7 +1.6**
KRLC Kraliky 79.96 330 *eP* **P 05 44 23.5 -0.5**
KRLC Kraliky 79.96 330 *eP* **P 05 44 23.5 -0.5**
SUW Suwalki 79.96 336 *eP* **P 05 44 24.1 +0.3**
SUW Suwalki 79.96 336 *eP* **P 05 44 24.5 +0.7**
SUW Suwalki 79.96 336 P **P 05 44 23.7 -0.1**
SUW pmax pmax
comp=Z,86nm,1.0s
SUW Suwalki 79.96 336 P **P 05 44 23.7 -0.1**
ABTA Abfaltersbach 79.98 326 *i* P **P 05 44 24.4 +0.1**
comp=Z,43nm,1.0s,SNR=18
CTI Castel Tesino 80.03 325 P **P 05 44 24.3 -0.2**
CTI pmax pmax
comp=Z,16nm,1.1s
CTI Castel Tesino 80.03 325 P **P 05 44 24.3 -0.2**
ISAL Salakas 80.05 338 *eP* **P 05 44 25.4 +1.2**
PRGR Permogore 80.23 350 *eP* **P 05 44 23.5 -1.6**
PRGR pmax pmax
comp=Z,20nm,1.0s
CKRC Cesky Krumlov 80.35 328 *eP* **P 05 44 23.4 -2.7**
DPC Dobruska-Polom 80.36 330 *eP* **P 05 44 25.7 -0.4**
DPC Dobruska-Polom 80.36 330 *eP* **P 05 44 25.7 -0.4**
OSTC Ostas 80.55 330 *eP* **P 05 44 26.8 -0.3**
UPC Upice 80.61 330 *eP* **P 05 44 28.1 +0.7**
UPC Upice 80.61 330 *eP* **P 05 44 28.1 +0.7**
CHVC Chvalec 80.65 330 *eP* **P 05 44 27.6 0.0**
KLMR Klimovskoe 80.67 347 *eP* **P 05 44 25.5 -2.0**
KLMR *e* 05 47 28.4
KLMR pmax pmax
comp=Z,94nm,1.5s
KLMR Klimovskoe 80.67 347 *eP* **P 05 44 25.5 -2.0**
KLMR AMP 05 44 29.2
comp=Z,94nm,1.5s
KLMR *e*PP **PP 05 47 28.5 -3.0**
GEC2 GERESS Array S 80.67 328 P **P 05 44 27.1 -0.8**
GERES GERESS Array B 80.67 328 P **P 05 44 26.9 -1.0**
comp=Z,3.7nm,0.9s,baz=132,slow=5.8,SNR=26
GERES LR LR 06 21 16.1
comp=Z,72nm,18.5s,baz=326,slow=36
GERES GERESS Array B 80.67 328 P **P 05 44 26.4 -1.5**
GERES GERESS Array B 80.67 328 P **P 05 44 26.4 -1.5**
KSP Ksiaz 80.70 330 *eP* **P 05 44 28.5 +0.6**
KSP Ksiaz 80.70 330 P **P 05 44 28.7 +0.8**
KSP pmax pmax
comp=Z,27nm,1.4s
WTTA Wattenberg 80.77 326 *i* P **P 05 44 28.1 -0.5**
comp=Z,31nm,1.1s,SNR=13
WTTA Wattenberg 80.77 326 P **P 05 44 28.3 -0.3**
PABE Paberze 80.78 337 *eP* **P 05 44 29.2 +1.0**
WATA Walderalm 80.85 326 *i* P **P 05 44 28.2 -0.7**
comp=Z,25nm,1.0s,SNR=9.6
KHC Kasperske Hory 80.92 328 *i* P **P 05 44 28.3 -0.8**
KHC pmax pmax
comp=Z,63nm,1.3s
KHC Kasperske Hory 80.92 328 *eP* **P 05 44 28.1 -1.1**
KHC *ex* x 05 45 26.5
KHC Kasperske Hory 80.92 328 P **P 05 44 28.3 -0.8**
KHC IAmb IAmb 05 44 29.8
comp=Z,28nm,1.2s
SQTA Sankt Quirin 80.98 325 *i* P **P 05 44 29.1 -0.5**
comp=Z,21nm,1.0s,SNR=8.7
PRU Pruhonice 80.99 329 *eP* **P 05 44 29.6 +0.2**
PRU Pruhonice 80.99 329 *eP* **P 05 44 29.6 +0.2**
CN2 Changchun 81.03 39 *eP* **P 05 44 27.3 -2.5**
PRA Prague 81.09 329 *eP* **P 05 44 30.5 +0.5**
PRA Prague 81.09 329 *eP* **P 05 44 30.5 +0.5**
MOTA Moosalm 81.11 325 *i* P **P 05 44 29.7 -0.7**
comp=Z,28nm,1.0s,SNR=14
HIA Hailar 81.12 32 P **P 05 44 29.8 -0.4**
HIA pmax pmax
comp=Z,13nm,1.1s
HIA Hailar 81.12 32 P **P 05 44 29.8 -0.4**
FETA Feichten 81.12 325 *i* P **P 05 44 30.3 -0.2**
comp=Z,32nm,1.0s,SNR=10
SBF Sospel 81.19 321 *eP* **P 05 44 30.5 -0.2**
SBF pmax pmax
comp=Z,35nm,0.9s
PVCC Panska Ves 81.32 329 *eP* **P 05 44 31.6 +0.4**
PVCC Panska Ves 81.32 329 *eP* **P 05 44 31.6 +0.4**
RETA Reutte 81.38 325 *i* P **P 05 44 31.4 -0.3**
comp=Z,19nm,1.2s
FUR Furstenfeldbru 81.52 326 P **P 05 44 32.6 +0.3**
TUE Stuetta 81.56 324 P **P 05 44 32.6 -0.2**
TUE IAmb IAmb 05 44 36.5
comp=Z,54nm,1.3s
DAVA Damuels 81.74 325 *i* P **P 05 44 33.4 -0.4**
comp=Z,25nm,1.0s,SNR=5.5
BRG Berggiesshubel 81.85 329 P **P 05 44 34.5 +0.5**
BRG Berggiesshubel 81.85 329 *eP* **P 05 44 34.5 +0.5**
BRG Amp 05 44 35.9
comp=Z,24nm,1.3s
GKP Gorka Klasztor 81.91 333 *eP* **P 05 44 35.2 +1.0**
MBDF Montbardon 82.06 322 *eP* **P 05 44 35.7 +0.2**
MBDF pmax pmax
comp=Z,25nm,1.1s
VSU Vasula 82.10 340 *eP* **P 05 44 36.2 +1.1**
VSU Vasula 82.10 340 *d i* P **P 05 44 35.7 +0.6**
VSU pmax pmax
comp=Z,98nm,1.0s
NKC Novy Kostel 82.18 328 *eP* **P 05 44 35.9 +0.1**
NKC Novy Kostel 82.18 328 *eP* **P 05 44 35.9 +0.1**
BNI Bardonecchia 82.30 322 P **P 05 44 35.8 -0.9**
BNI pmax pmax
comp=Z,23nm,1.2s
BNI Bardonecchia 82.30 322 P **P 05 44 35.8 -0.9**
BNI IAmb IAmb 05 44 38.9
comp=Z,23nm,1.2s
GRA1 Grafenberg Arr 82.47 327 P **P 05 44 36.9 -0.4**
GRF Grafenberg Arr 82.47 327 P **P 05 44 36.9 -0.4**
GRF pmax pmax
comp=Z,51nm,1.1s
GRFO Grafenberg 82.47 327 P **P 05 44 37.5 +0.2**
GRFO pmax pmax
comp=Z,50nm,1.1s
GRFO Grafenberg 82.47 327 P **P 05 44 37.5 +0.2**
LPG La Plagne 82.50 322 *eP* **P 05 44 36.8 -1.1**
LPG pmax pmax
comp=Z,15nm,1.1s
LPL La Plagne 82.52 322 *eP* **P 05 44 36.9 -1.0**
LPL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 82.58 329 *i* P **P 05 44 38.1 +0.3**
comp=Z,32nm,1.2s
CLL Collm 82.58 329 P **P 05 44 38.1 +0.3**
CLL pmax pmax
comp=Z,29nm,1.1s
CLL Collm 82.58 329 P **P 05 44 38.1 +0.3**
CLL IAmb IAmb 05 44 39.6
comp=Z,29nm,1.1s
SENIN Lac Senin/Sane 82.66 323 P **P 05 44 38.5 -0.2**
SENIN IAmb IAmb 05 44 39.7
comp=Z,15nm,0.9s
ORIF Oris-en-Rattie 82.70 321 *eP* **P 05 44 38.6 -0.1**
ORIF pmax pmax
comp=Z,30nm,1.3s
MOX Moxa 82.86 328 P **P 05 44 39.5 +0.2**
STU Stuttgart 82.99 326 P **P 05 44 39.6 -0.4**
STU pmax pmax
comp=Z,17nm,0.9s
STU Stuttgart 82.99 326 P **P 05 44 39.6 -0.4**
STU IAmb IAmb 05 44 41.1
comp=Z,17nm,0.9s
BFO Black Forest 83.20 325 P **P 05 44 40.8 -0.3**
BFO pmax pmax
comp=Z,34nm,1.4s
BFO Black Forest 83.20 325 P **P 05 44 40.8 -0.3**
BFO IAmb IAmb 05 44 42.4
comp=Z,34nm,1.4s
VALR Valaam 83.22 344 *i* P **P 05 44 41.6 +0.8**
VALR pmax pmax
comp=Z,30nm,1.0s
MTSE Matsula 83.27 339 *eP* **P 05 44 42.4 +1.3**
VIVF Saint-Julien-l 83.39 321 *eP* **P 05 44 42.0 -0.2**
VIVF pmax pmax
comp=Z,22nm,1.4s
CABF La Chapelle 83.50 323 *eP* **P 05 44 42.7 -0.1**
CABF pmax pmax
comp=Z,35nm,1.2s
SSB Saint Sauveur 83.69 321 P **P 05 44 44.3 +0.5**
SSB pmax pmax
comp=Z,21nm,1.1s
SSB Saint Sauveur 83.69 321 P **P 05 44 44.3 +0.5**
SSB IAmb IAmb 05 44 45.3
comp=Z,21nm,1.1s
ECH Echery 83.78 325 P **P 05 44 44.1 0.0**
ECH pmax pmax
comp=Z,33nm,1.5s
ECH Echery 83.78 325 P **P 05 44 44.1 0.0**
ECH IAmb IAmb 05 44 45.2
comp=Z,33nm,1.5s
MSHR Mys Shultsa 83.93 42 *ce*P **P 05 44 45.6 +0.7**
MSHR pmax pmax
comp=Z,34nm,2.5s
MDJ Mudanjiang 83.97 40 P **P 05 44 45.4 +0.2**
MDJ S **S 05 55 11.3 +1.5**
MDJ pmax pmax
comp=Z,17nm,1.0s
MDJ pmax pmax
comp=Z,160nm,3.8s
MDJ LR LR
comp=Z,200nm,3.9s
MDJ LR LR
comp=Z,140nm,6.0s
MDJ Mudanjiang 83.97 40 P **P 05 44 45.2 0.0**
MDJ IAmb IAmb 05 44 47.7
comp=Z,32nm,1.3s
BOD Bodaibo 84.31 23 *eP* **P 05 44 46.1 -0.5**
BOD pmax pmax
comp=Z,34nm,1.9s
FINES FINESS Array B 84.65 342 P **P 05 44 48.4 +0.2**
comp=Z,20nm,1.0s,baz=103,slow=6.1,SNR=24
FINES LR LR 06 23 28.8
comp=Z,75nm,20.9s,baz=166,slow=36
FINES FINESS Array B 84.65 342 P **P 05 44 48.1 -0.1**
FIA1 FINESS Array S 84.66 342 P **P 05 44 48.6 +0.4**
CAF Calviac 85.02 320 *eP* **P 05 44 50.5 0.0**
CAF pmax pmax
comp=Z,16nm,1.2s
WLF Walferdange 85.14 325 *dP* **P 05 44 51.4 +0.5**
comp=Z,13nm,1.1s
WLF Walferdange 85.14 325 P **P 05 44 50.8 -0.1**
WLF pmax pmax
comp=Z,27nm,1.1s
WLF Walferdange 85.14 325 P **P 05 44 50.8 -0.1**
WLF IAmb IAmb 05 44 52.4
comp=Z,27nm,1.1s
AVF Avril sur Loir 85.19 322 *eP* **P 05 44 50.6 -0.6**
AVF pmax pmax
comp=Z,7.0nm,1.0s
USA0B Ussuriysk Arra 85.25 41 *i* P **P 05 44 52.3 +0.7**
USA0B Ussuriysk Arra 85.25 41 P **P 05 44 51.1 -0.5**
USA0B IAmb IAmb 05 44 52.1
comp=Z,31nm,1.6s
USRK Ussuriysk Ar. 85.25 41 P **P 05 44 50.5 -1.1**
comp=Z,4.8nm,0.7s,baz=249,slow=4.1,SNR=11
USRK Ussuriysk Ar. 85.25 41 P **P 05 44 50.4 -1.2**
RJF Les Rejaudoux 85.54 320 *eP* **P 05 44 53.0 -0.1**
RJF pmax pmax
comp=Z,29nm,1.2s
BTNL Ternell 85.66 326 *dP* **P 05 44 54.0 +0.4**
comp=Z,8.4nm,1.3s
ETSF Etsaut 85.69 317 *eP* **P 05 44 54.1 +0.1**
ETSF pmax pmax
comp=Z,36nm,1.4s
MEM Membach 85.74 326 *dP* **P 05 44 54.7 +0.8**
BSTI Sart Tilman 85.96 326 *dP* **P 05 44 55.9 +0.9**
BCLA Clavier 86.01 326 *dP* **P 05 44 55.6 +0.4**
comp=Z,11nm,1.1s
BEBN Eben Emael 86.02 326 *dP* **P 05 44 54.9 -0.4**
MAJO Matsushiro 86.04 50 P **P 05 44 55.5 -0.3**
MAJO pmax pmax
comp=Z,18nm,1.2s
MAJO Matsushiro 86.04 50 P **P 05 44 55.5 -0.3**
MAJO IAmb IAmb 05 44 57.2
comp=Z,18nm,1.2s
MAT Matsushiro 86.04 50 P **P 05 44 56.2 +0.4**
MAT S **S** 05 55 16.0 -15
MJAR Matsushiro Arr 86.04 50 P **P 05 44 55.8 0.0**
comp=Z,1.7nm,0.7s,baz=335,slow=19,SNR=16
GIVF Givet 86.10 325 *eP* **P 05 44 55.9 +0.2**
GIVF pmax pmax
comp=Z,53nm,1.4s
BGES Gesves 86.11 326 *dP* **P 05 44 56.3 +0.6**
comp=Z,7.6nm,1.0s
DOU Dourbes 86.22 325 *dP* **P 05 44 56.7 +0.4**
comp=Z,9.1nm,1.4s
BMRD Maredsous 86.24 326 *dP* **P 05 44 55.5 -0.9**
comp=Z,12nm,1.1s
BAIF Baives 86.41 325 *eP* **P 05 44 57.5 +0.3**
BAIF pmax pmax
comp=Z,47nm,1.4s
ESBB Sonseca Array 86.54 313 P **P 05 44 58.0 -0.2**
ESBB IAmb IAmb 05 44 59.8
comp=Z,29nm,1.3s
ESDC Sonseca Array 86.54 313 P **P 05 44 58.5 +0.3**
comp=Z,15nm,1.2s,baz=103,slow=3.8,SNR=46
ESDC LR LR 06 24 06.3
comp=Z,139nm,18.6s,baz=105,slow=36
ESDC Sonseca Array 86.54 313 P **P 05 44 58.2 0.0**
SNF Seneffe 86.61 326 *dP* **P 05 44 58.5 +0.4**
PAB San Pablo 86.76 313 P **P 05 44 59.6 +0.3**
PAB pmax pmax
comp=Z,51nm,1.4s
PAB San Pablo 86.76 313 P **P 05 44 59.5 +0.3**
JYT Yasato 87.38 51 P **P 05 45 01.8 -0.5**
JYT IAmb IAmb 05 45 03.0
comp=Z,24nm,1.2s
NRIK Noril'sk 87.51 7 P **P 05 45 01.4 -0.7**
comp=Z,1.2nm,0.4s,baz=223,slow=3.6,SNR=11
NRIK PP **PP 05 48 25.2 -1.9**
comp=Z,3.5nm,0.6s,baz=110,slow=2.4,SNR=4.2
NRIK LR LR 06 24 29.9
comp=Z,95nm,19.0s,baz=228,slow=36
NRIK Noril'sk 87.51 7 *de*P **P 05 45 01.8 -0.3**
NRIK pmax pmax
comp=Z,21nm,1.6s
NRIK Noril'sk 87.51 7 P **P 05 45 02.0 -0.1**
MUD Monsted U'grnd 87.53 332 *i* P **P 05 45 03.4 +0.9**
MUD IAmb IAmb 05 45 04.5
comp=Z,22nm,1.0s
MUD Monsted U'grnd 87.53 332 P **P 05 45 05.1 +2.6**
MUD pmax pmax
comp=Z,53nm,1.4s
ZEA Zeya 87.55 31 *eP* **P 05 45 02.4 -0.3**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
KLR Kul'dur 87.58 37 P **P 05 45 02.0 -1.0**
comp=Z,5.3nm,0.9s,baz=271,slow=5.1,SNR=10
KLR Kul'dur 87.58 37 *de*P **P 05 45 01.9 -1.0**
KLR pmax pmax
comp=Z,12nm,1.4s
PBAR Barrancos 88.11 311 *eP* **P 05 45 06.2 +0.5**
comp=Z,26nm,1.4s
PCVE Castro Verde 88.62 310 *eP* **P 05 45 09.5 +1.3**
comp=Z,36nm,1.4s
PMRV Marv??o 88.86 312 *eP* **P 05 45 09.6 +0.3**
comp=Z,25nm,1.6s
EVO Evora 88.95 311 *eP* **P 05 45 10.8 +1.1**
comp=Z,19nm,1.8s
PCBR Castelo Branco 89.08 312 *eP* **P 05 45 11.3 +1.0**
comp=Z,24nm,1.7s
PNCL Nicolau / Gran 89.17 310 *eP* **P 05 45 12.0 +1.3**
KONO Kongsberg 89.26 335 *ce*P **P 05 45 12.1 +1.5**
KONO pmax pmax
comp=Z,46nm,2.5s
MVO Moncorvo 89.29 314 *eP* **P 05 45 12.2 +0.9**
comp=Z,24nm,1.4s
PMTG Montargil 89.31 311 *eP* **P 05 45 12.6 +1.2**
comp=Z,28nm,1.7s
PBRG Braganca 89.35 314 *eP* **P 05 45 12.2 +0.6**
comp=Z,20nm,1.6s
NOA NORSAR Array B 89.47 336 P **P 05 45 10.4 -1.2**
comp=Z,3.4nm,0.9s,baz=117,slow=4.6,SNR=5.1
PVIS Viseu 89.72 313 *eP* **P 05 45 14.8 +1.5**
comp=Z,30nm,1.4s
PVRL Vila Real 89.81 313 *eP* **P 05 45 15.1 +1.4**
comp=Z,34nm,1.6s
PCAS Casmilo, Conde 89.89 312 *eP* **P 05 45 14.9 +0.8**
comp=Z,44nm,1.8s
POLO Lamas de Olo 89.90 314 *eP* **P 05 45 15.1 +0.9**
comp=Z,18nm,1.5s
HNR Honiara 90.48 100 LR LR 06 24 50.7
comp=Z,268nm,19.4s,baz=237,slow=35
ARCES ARCESS Array B 91.15 347 P **P 05 45 19.4 +0.1**
comp=Z,12nm,0.9s,baz=141,slow=4.1,SNR=10.0
ARCES LR LR 06 26 19.1
comp=Z,64nm,20.0s,baz=120,slow=36
URZ Urewera 94.83 132 LR LR 06 20 16.9
comp=Z,112nm,20.2s,baz=211,slow=30
TIXI Tiksi 97.85 16 *i* P **P 05 45 48.8 -1.1**
TIXI Tiksi 97.85 16 P **P 05 45 48.3 -1.6**
TIXI IAmb IAmb 05 45 49.6
comp=Z,6.5nm,1.1s
MA2 Magadan 101.69 31 P **Pdif 05 46 05.9 -1.4**
comp=Z,1.3nm,0.5s,baz=247,slow=5.4,SNR=4.4
MA2 Magadan 101.69 31 *i* P **Pdif 05 46 06.5 -0.8**
MA2 pmax pmax
comp=Z,6.0nm,1.0s
ANM Nome 121.22 23 P 05 51 08.0
baz=298
TOLK Toolik Lake Re 123.71 15 PKPdf **PKiKP 05 51 13.1 +0.6**
TOLK Toolik Lake Re 123.71 15 P 05 51 12.6
baz=317
LPAZ La Paz 124.35 236 PKP **PKiKP 05 51 15.8 -0.2**
comp=Z,3.7nm,1.0s,baz=54,slow=3.5,SNR=8.3
COLD Coldfoot 124.58 16 PKPdf **PKPdf 05 51 13.6 -0.2**
COLD Coldfoot 124.58 16 P 05 51 14.8
baz=316
MLY Manley 125.99 19 PKPdf **PKiKP 05 51 17.1 0.0**
MLY Manley 125.99 19 P 05 51 17.4
baz=314
I23K Minto, Yukon-K 126.32 18 **PKiKP 05 51 17.8 +0.1**
I23K Minto, Yukon-K 126.32 18 P 05 51 17.8
baz=316
FYU Fort Yukon 126.38 15 PKPdf **PKiKP 05 51 18.3 +0.5**
BPAW Bear Paw Mtn. 126.56 19 P 05 51 18.1
baz=314
POKR Poker Plat Res 126.90 17 P 05 51 18.2
baz=318
PPLA Purkeypile 126.98 21 P 05 51 18.0
baz=312
PRP Porcupine Dome 127.12 16 P 05 51 18.7
baz=320
WRH Wood River Hil 127.19 18 **PKPdf 05 51 18.3 -0.6**
TRF Thorofare Moun 127.24 20 P 05 51 19.0
baz=314
INK Inuvik 127.25 9 PKIKP **PKPdf 05 51 18.7 -0.2**
INK Inuvik 127.25 9 PKPdf **PKPdf 05 51 18.6 -0.2**
IL31 127.31 17 **PKPdf 05 51 18.0 -1.1**
ILAR Eielson Array 127.31 17 PKP **PKPdf 05 51 18.2 -1.0**
comp=Z,4.7nm,1.0s,baz=312,slow=2.7,SNR=21
ILAR PP **PP 05 53 21.1 +2.6**
comp=Z,1.4nm,1.1s,baz=317,slow=5.0,SNR=4.5
C36M Paulatuk 127.36 5 PKPdf **PKPdf 05 51 18.2 -0.8**
C36M Paulatuk 127.36 5 P 05 51 18.6
baz=347
MCK McKinley 127.47 19 P 05 51 19.1
baz=316
HDA Harding Lake 127.57 18 P 05 51 19.4
baz=318
HDA P 05 51 19.4
baz=318
SDPT Sand Point 127.76 32 P 05 51 19.6
baz=298
SKT Skwentna 127.82 22 P 05 51 20.5
baz=312
SPCR Spurr Chakacha 128.09 23 P 05 51 20.9
baz=310
WAT2 Susitna Watana 128.13 20 P 05 51 20.8
baz=316
EPYK Eagle Plains 128.44 12 PKPdf **PKPdf 05 51 21.3 -0.1**
EPYK Eagle Plains 128.44 12 P 05 51 21.4
baz=331,SNR=11
SCRK Sand Creek 128.74 17 P 05 51 22.0
baz=322
EGAK Eagle 128.82 15 P 05 51 21.8
baz=325
PMR Palmer 128.92 21 P 05 51 22.6
baz=314
DOT Dot Lake 128.97 17 **PKiKP 05 51 22.5 -0.5**
PAX Paxson 129.09 18 P 05 51 22.9
baz=319
K27K Chicken 129.21 16 P 05 51 23.5
baz=324
DAWY Dawson 129.85 15 **PKiKP 05 51 24.5 -0.4**
L27K Beaver Creek, 130.05 16 P 05 51 25.4
baz=324
BCAR Beaver Creek A 130.06 16 **PKiKP 05 51 24.8 -0.5**
N25K Chitina, Valde 130.39 19 P 05 51 26.1
baz=320
MCARA McCarthy VSAT 131.05 18 P 05 51 27.2
baz=321
Q23K Middleton Isla 131.43 22 P 05 51 28.0
baz=316
YKA Yellowknife Ar 134.66 1 PKP **PKPdf 05 51 32.5 -0.6**
comp=Z,3.7nm,0.9s,baz=4.8,slow=2.1,SNR=23
YKA PP **PP 05 54 04.7 -1.0**
comp=Z,1.0nm,1.0s,baz=357,slow=6.7,SNR=6.9
MATQ Matagami 136.51 327 P 05 51 37.5
baz=54
LSQQ Lebel-sur-Quev 136.56 325 P 05 51 37.6
baz=56
L63A North Scituate 136.60 314 P 05 51 37.6
baz=68
J61A Chester 136.66 316 P 05 51 38.3

baz=66
E56A St. Veronique 136.78 321 P 05 51 38.1
baz=60
D55A Sainte-Anne-du 136.80 322 P 05 51 38.0
baz=59
SIT Sitka 136.87 17 P 05 51 38.0
baz=329
I60A Shoreham 136.94 317 P 05 51 38.0
baz=64
M63A Gales Ferry 137.07 313 P 05 51 38.4
baz=68
L61B Northampton 137.11 315 P 05 51 38.4
baz=66
L60A Shokan 138.34 315 P 05 51 41.0
baz=65
PAL Palisades 138.52 313 P 05 51 41.5
baz=67
ALGO Algonquin Park 138.88 322 P 05 51 41.8
baz=57
M60A Port Jervis 138.89 314 P 05 51 41.9
baz=66
N61A South Mountain 138.89 313 P 05 51 42.1
baz=66
K58A Earlville 138.96 317 P 05 51 42.1
baz=63
G54A Lake Saint Pet 139.20 321 P 05 51 42.5
baz=58
BINY Binghamton 139.44 316 P 05 51 43.0
baz=63
K57A Scipio Center 139.54 317 P 05 51 42.9
baz=62
O60A Telford 139.84 313 P 05 51 43.8
baz=66
N59A State Game Lan 139.85 314 P 05 51 43.3
baz=65
H53A Bobcaygeon 139.93 321 P 05 51 43.8
baz=58
L57A Andrews Acres 140.10 316 P 05 51 44.1
baz=62
RSD Rainshed 140.28 80 PKPdf 05 51 44.8 -0.1
O59A Robesonia 140.39 313 P 05 51 44.7
baz=65
L56A Greenwood 140.50 317 P 05 51 44.8
baz=62
N58A Sunbury 140.53 314 P 05 51 44.5
baz=64
M57A Sunshine Farm, 140.59 315 PKPdf 05 51 44.3 -0.4
M57A Sunshine Farm, 140.59 315 P 05 51 44.6
baz=63
P59A Jarrettsville 140.85 313 P 05 51 44.9
baz=66
O58A Lewisberry 140.98 314 P 05 51 45.4
baz=64
N57A Milroy 141.13 315 P 05 51 45.8
baz=63
M56A Emporium 141.22 316 P 05 51 46.1
baz=62
Q59A Harwood 141.31 312 P 05 51 46.2
baz=66
FFC Flin Flon 141.43 349 PKIKP PKPdf 05 51 45.9 +0.1
FFC Flin Flon 141.43 349 PKPdf 05 51 45.9 +0.1
O57A Amberson 141.43 314 P 05 51 46.3
baz=64
N56A West Decatur 141.56 315 P 05 51 46.7
baz=62
S60A Water View 141.76 310 P 05 51 47.2
baz=68
I51A Listowel 141.82 321 P 05 51 47.0
baz=56
R59A King George, V 141.91 311 P 05 51 47.5
baz=66
Q58A Fox Den Farm, 142.01 312 P 05 51 47.7
baz=65
P57A Homestead Farm 142.01 313 PKPdf 05 51 47.5 +0.2
P57A Homestead Farm 142.01 313 P 05 51 47.9
baz=64
T60A Surry 142.03 309 P 05 51 47.9
baz=68
O56A Blue Knob Stat 142.04 315 PKPdf 05 51 47.3 -0.1
O56A Blue Knob Stat 142.04 315 P 05 51 47.6
baz=62
ERPA Erie 142.08 318 P 05 51 47.8
baz=59
S59A Mechanicsville 142.21 310 P 05 51 48.3
baz=67
Q57A Strasburg 142.48 313 P 05 51 48.6
baz=64
R58B Mineral 142.55 311 PKPdf 05 51 46.6 -1.7
M53A WI Miller and 142.87 318 P 05 51 49.3
baz=59
R57A Stanardsville 142.88 312 P 05 51 49.3
baz=65,SNR=6.1
Q56A Snyder Ridge, 143.02 313 P 05 51 50.0
baz=63
U59A Littleton 143.11 308 PKPdf 05 51 49.1 -0.3
GLMI Grayling 143.28 325 P 05 51 49.2
baz=50
S57A Dark Hollow, R 143.41 311 PKPdf 05 51 50.8 +1.0
S57A Dark Hollow, R 143.41 311 P 05 51 49.8
baz=65,SNR=7.2
R56A Bull Pasture M 143.46 312 P 05 51 49.4
baz=64
O53A New Philadelph 143.83 316 PKPbc 05 51 48.7 +0.6
O53A New Philadelph 143.83 316 P 05 51 48.8
baz=60
M51A Elyria 143.89 318 P 05 51 48.1
baz=57
Q54A Coxs Mills 144.19 314 PKPdf 05 51 50.0 -1.2
N51A Ashland 144.24 318 PKPbc 05 51 49.6 +0.2
O52A Adamsville 144.31 316 PKPbc 05 51 49.8 +0.2
V58A Windy Hill, Pi 144.31 308 PKPab 05 51 49.1 -0.3
P53A Whipple 144.32 315 PKPdf PKPbc 05 51 49.9 +0.2
EYMN Ely 144.36 334 PKPdf PKPbc 05 51 49.2 -0.3
EYMN Ely 144.36 334 P 05 51 48.8
baz=38
J47A Sunmer 144.39 323 PKPbc 05 51 49.9 +0.1
F42A Maple Grove Fa 144.49 329 PKPbc 05 51 49.8 -0.2
R54A Victor 144.67 313 P 05 51 49.7
baz=62
BLA Blacksburg 144.70 311 PKIKP PKPdf 05 51 51.8 -0.4
BLA Blacksburg 144.70 311 PKPdf 05 51 51.8 -0.4
BLA Blacksburg 144.70 311 P 05 51 50.0
baz=64
COWI Conover 144.72 330 PKPab 05 51 50.2 -0.5
Q53A Leroy 144.72 314 P 05 51 50.6
baz=61,SNR=7.1
P52A Corning 144.75 316 PKPbc 05 51 51.0 0.0
P52A Corning 144.75 316 P 05 51 50.2
baz=59,SNR=16
Y59A Loris 144.78 305 PKPbc 05 51 51.0 -0.3
B35A Bob, Littlefor 144.91 337 PKPab 05 51 50.2 -1.0
L48A N Adams 144.94 321 PKPdf PKPbc 05 51 51.3 -0.3
X58A Rowland 144.94 306 PKPdf 05 51 52.0 -0.6
ACSO Alum Creek Sta 145.00 317 PKPbc 05 51 51.6 -0.2
ACSO Alum Creek Sta 145.00 317 P 05 51 51.4
baz=57
S54A Dingess, Beckl 145.07 313 PKPbc 05 51 51.9 -0.3
S54A Dingess, Beckl 145.07 313 P 05 51 51.1
baz=62,SNR=5.3
Q52A Bidwell 145.18 315 PKPab 05 51 52.3 -0.2
W57A Gilead 145.22 308 PKPbc 05 51 52.3 -0.4
R53A Hurricane 145.27 314 PKPdf 05 51 53.4 +0.3
N49A Columbus Grove 145.38 319 PKPbc 05 51 52.8 -0.2
E38A The Farm, Brul 145.44 333 PKPbc 05 51 52.8 -0.3
P51A Williamsport 145.44 316 PKPbc 05 51 52.9 -0.4
AGMN Agassiz Nation 145.72 339 PKPdf 05 51 53.2 -0.3
AGMN Agassiz Nation 145.73 339 P 05 51 53.1
baz=31
BIRD Birdtown, Kers 145.77 307 PKPdf PKPbc 05 51 54.3 -0.1
G40A Rib Lake 145.84 330 PKPbc 05 51 54.2 -0.2
V55A Taylorsville 145.85 309 PKPab 05 51 54.7 -0.4
Q51A Peebles 145.87 316 PKPbc 05 51 54.5 -0.1
O49A Covington 145.89 318 PKPbc 05 51 54.6 -0.1
Y57A Sumter 145.95 306 PKPbc 05 51 54.8 -0.3
NHSC New Hope 146.10 304 P 05 51 54.9
baz=70
KMSC Kings Mountain 146.23 308 PKPbc 05 51 55.1 -0.7
KMSC Kings Mountain 146.23 308 P 05 51 55.7
baz=66
N47A Urbana 146.34 320 PKPdf PKPdf 05 51 54.7 -0.1
BCIP Isla Barro Col 146.37 261 PKP2 PKPab 05 51 57.6 -0.1
BCIP Isla Barro Col 146.37 261 PKPab 05 51 57.5 -0.1
P49A Miami Univ. Ec 146.49 318 PKPdf 05 51 54.9 -0.3
P49A Miami Univ. Ec 146.49 318 P 05 51 55.9
baz=56
JSC Jenkinsville 146.52 307 PKIKP PKPdf 05 51 55.2 -0.1
JSC Jenkinsville 146.52 307 PKPdf 05 51 55.2 -0.1
K43A Burlington 146.70 325 PKPdf 05 51 54.6 -0.7
PAULI Pauline 146.72 308 PKPdf 05 51 55.8 +0.1
S51A Beattyville 146.74 314 PKPdf 05 51 55.4 -0.2
F36A Milaca 146.87 334 PKPdf PKPdf 05 51 55.7 +0.2
R50A Paris 146.91 315 PKPdf 05 51 55.8 0.0
P48A Milroy 146.99 318 PKPdf 05 51 55.3 -0.7
I40A Norwalk 147.06 329 PKPdf PKPdf 05 51 55.4 -0.6
SPMN Marine on St. 147.06 333 PKPdf 05 51 55.5 -0.4
SPMN Marine on St. 147.06 333 P 05 51 57.4
baz=38
V53A Saluda 147.11 310 PKPdf 05 51 56.3 -0.1
HODGE Hodges 147.30 307 PKPdf 05 51 56.3 -0.3
HODGE PKPbc pPKPbc 05 51 59.2 -0.5
MDND Maddock 147.30 343 PKPdf 05 51 55.8 -0.5
MDND Maddock 147.30 343 P 05 51 58.4
baz=25
M44A Midewin, Midew 147.41 323 PKPbc 05 51 59.5 +0.5
A05A Maple Falls 147.42 11 PKPdf 05 51 55.9 -0.4
A05A PKPbc PKPbc 05 51 58.8 0.0
R49A Shelbyville 147.47 316 PKPdf 05 51 55.7 -1.1
R49A PKPbc PKPbc 05 51 59.1 -0.2
BG3 Lake Jocassee 147.49 309 PKPdf 05 51 55.7 -1.3
BG3 PKPbc PKPbc 05 51 59.7 +0.2
SFIN Lafayette 147.49 321 PKPbc 05 51 59.4 +0.1
SFIN Lafayette 147.49 321 P 05 51 58.7
baz=52,SNR=6.6
PGC Sidney 147.50 12 PKPab 05 51 59.9 -1.1
JFWS Jewell Farm 147.57 327 PKIKP PKPdf 05 51 56.2 -0.6
JFWS 05 51 59.2
JFWS Jewell Farm 147.57 327 PKPdf PKPdf 05 51 56.2 -0.6
JFWS PKPbc PKPbc 05 51 59.2 -0.2
JFWS Jewell Farm 147.57 327 P 05 51 58.7
baz=44
A04D Lummi Island 147.58 11 P 05 51 58.9
baz=343,SNR=7.9
V52A Sevierville 147.60 311 PKPdf 05 51 56.6 -0.5
TKL Tuckaleechee C 147.81 311 PKIKP PKPdf 05 51 57.2 -0.3
TKL 05 52 00.3
TKL Tuckaleechee C 147.81 311 PKPdf 05 51 57.2 -0.3
TKL PKPbc PKPbc 05 52 00.3 0.0
BLO Bloomington 147.85 319 PKIKP PKPdf 05 51 57.1 -0.3
BLO 05 52 00.1
BLO Bloomington 147.85 319 PKPdf 05 51 57.1 -0.3
BLO PKPbc PKPbc 05 52 00.1 -0.2
L42A Oliver, Polo 147.90 326 PKPbc 05 52 00.2 -0.2
T50A Nancy 147.91 314 PKPbc 05 52 00.1 -0.5
F33A 5 Mile Ranch, 147.98 337 PKPdf 05 51 57.2 -0.2
B06A Marblemount 147.99 10 PKPbc 05 52 00.6 +0.2
P46A Rosedale 148.02 320 PKPdf 05 51 57.1 -0.5
WALA Waterton Lakes 148.13 1 PKPbc 05 52 01.2 +0.3
B05A Bryant 148.13 11 P 05 52 00.8
baz=344,SNR=22
V51A Loudon 148.16 311 PKPbc 05 52 01.4 +0.1
V51A PKPab pPKPab 05 52 04.6 -0.2
W52A Murphy 148.18 310 PKPbc 05 52 01.2 -0.2
WCI Wyandotte Cave 148.24 317 PKIKP PKPdf 05 51 57.9 -0.2
WCI 05 52 01.0
WCI Wyandotte Cave 148.24 317 PKPdf PKPdf 05 51 57.9 -0.2
WCI PKPbc PKPbc 05 52 01.0 -0.4
WCI Wyandotte Cave 148.24 317 P 05 52 00.3
baz=56
I37A Lemond, Waseca 148.28 332 PKPdf PKPdf 05 51 56.9 -1.0
I37A PKPbc pPKPbc 05 52 01.6 -0.4
CPCT Cooper Cave 148.45 311 PKPdf 05 51 59.1 +0.6
O44A Mansfield 148.45 322 PKPbc 05 52 02.2 +0.4
B08A Colville Reser 148.46 8 PKPdf PKPdf 05 51 59.0 +0.8
B08A PKPbc sPKPbc 05 52 02.5 -0.1
GOGA Godfrey 148.55 307 PKIKP PKPdf 05 51 59.5 +0.8
GOGA Godfrey 148.55 307 PKPdf 05 51 59.5 +0.8
GOGA Godfrey 148.55 307 P 05 52 01.9
baz=66
DWPF Disney Wildern 148.57 296 PKPbc 05 52 02.7 +0.2
DWPF Disney Wildern 148.57 296 P 05 52 02.2
baz=76
154A Montrose 148.58 305 PKPbc 05 52 02.5 0.0
NLWA Neilton Lookou 148.60 14 PKiKP 05 52 03.2 -0.4
D03D Eldon 148.63 13 P 05 52 02.3
baz=342,SNR=12
C06D Leavenworth 148.67 10 P 05 52 02.1
baz=346
HDIL Hopedale 148.67 323 PKPbc 05 52 02.8 +0.4
HDIL Hopedale 148.67 323 P 05 52 02.2
baz=48
L40A Anamosa 148.69 327 PKPdf 05 51 57.9 -0.8
E28A Huff 148.77 343 PKPdf 05 51 58.0 -0.7
NEW Newport 148.78 5 PKIKP PKPdf 05 51 59.3 +0.6
NEW Newport 148.78 5 PKPdf PKPdf 05 51 59.3 +0.6
NEW Newport 148.78 5 P 05 52 02.8
baz=353,SNR=23
Y52A Lilburn 148.81 308 PKPdf 05 51 58.5 -0.6
U49A Red Boiling Sp 148.82 314 PKPbc 05 52 02.6 -0.3
EGMT Eagleton 149.02 355 PKPdf 05 51 58.8 -0.4
EGMT Eagleton 149.02 355 P 05 52 03.3
baz=68
K38A Parkersburg 149.03 330 PKPdf 05 51 58.6 -0.7
D04E Lakebay 149.04 12 P 05 52 03.7
baz=342,SNR=6.0
C09A Chrisman Ranch 149.13 6 PKPdf PKPdf 05 51 58.7 -0.6
W50A Signal Mountai 149.13 311 PKPdf 05 51 59.7 0.0
LTY Liberty 149.35 10 PKPbc PKPbc 05 52 04.1 +0.1
TIGA Tifton 149.39 303 PKPdf PKPdf 05 51 59.0 -1.1
TIGA pPKPbc 05 52 04.8 -0.4
TIGA Tifton 149.39 303 P 05 52 04.5
baz=69
P43A Skaggs, Pawnee 149.40 322 PKPdf 05 51 59.6 -0.3
P43A PKPbc pPKPbc 05 52 04.8 -0.2
CLTN Cedars of Leba 149.41 313 PKPdf PKPbc 05 51 59.8 -0.3
CLTN PKPbc PKPbc 05 52 04.2 -0.2
JTMT Jette 149.44 1 PKPdf PKPdf 05 51 59.7 -0.2
N41A Harden Midland 149.44 325 PKPdf PKPdf 05 51 59.7 -0.3
N41A PKPbc PKPbc 05 52 04.3 -0.1
T47A Sharon Grove 149.47 316 PKPbc 05 52 03.6 -0.9
E03A Lebam 149.47 14 PKiKP 05 52 05.4 +0.1
Q44A Meyer Farm, Va 149.56 320 PKiKP 05 52 05.2 -0.6
SWET Sewanee 149.57 312 PKPbc 05 52 04.9 0.0
LON Longmire 149.64 11 PKP2 PKiKP 05 52 05.4 -0.4
LON Longmire 149.64 11 PKiKP 05 52 05.4 -0.4
FPAL Fort Paine 149.66 310 PKPbc 05 52 05.2 +0.1
E04D Cinebar 149.68 13 P 05 52 04.9
baz=343,SNR=8.4
RIOS Rincon, Osa 149.68 258 PKiKP 05 52 06.9 +0.1
D08A Wollman Farm, 149.79 7 PKPdf PKPdf 05 51 59.6 -0.7
SCIA State Center 149.81 329 PKPbc 05 52 05.0 -0.2
SCIA State Center 149.81 329 P 05 52 05.0
baz=41
ECSD EROS Data Cent 149.87 335 PKPdf PKPdf 05 52 00.5 -0.1
ECSD PKPbc PKPbc 05 52 05.5 +0.2
ECSD EROS Data Cent 149.87 335 P 05 52 05.0
baz=33
Z51A Franklin 149.89 308 PKiKP 05 52 06.0 -0.7
LAO LASA Array 149.90 350 PKPdf 05 52 02.0 +1.4
LAO LASA Array 149.90 350 P 05 52 05.6
baz=14
V48A Smith Brothers 149.94 313 PKPbc 05 52 04.9 -0.9
PEZE Perez Zeledon, 150.05 259 PKiKP 05 52 07.5 -0.2
SUSD Miller 150.13 339 PKPdf 05 52 01.4 +0.5
SUSD PKPbc PKiKP 05 52 06.2 -0.6
SUSD PKPab sPKPab 05 52 12.6 -0.1
SUSD Miller 150.13 339 P 05 52 05.6
baz=28
E07A Sunnyside 150.16 9 PKPdf 05 52 02.4 +1.5
E07A PKPbc sPKPbc 05 52 06.9 -0.1
E08A Dider Farm, El 150.33 8 PKiKP 05 52 07.5 +0.4
MSO Missoula 150.36 1 PKPdf 05 52 01.5 +0.1
MSO PKPbc PKiKP 05 52 06.8 -0.6
MSO Missoula 150.36 1 P 05 52 06.0
baz=359,SNR=38
HAWA Hanford 150.37 9 PKPdf PKPdf 05 52 01.1 -0.2
HAWA PKPbc sPKPbc 05 52 07.6 +0.2
E09A Wood Farm, Sta 150.42 7 PKPdf PKPdf 05 52 01.0 -0.3
E09A sPKPbc 05 52 07.4 -0.1
WVT Waverly 150.42 315 PKIKP PKPbc 05 52 05.8 -1.1
WVT Waverly 150.42 315 PKPbc 05 52 05.8 -1.1
WVT Waverly 150.42 315 P 05 52 06.2
baz=57
352A Blakely 150.44 304 PKiKP 05 52 07.5 -0.3
HRY Holter Researc 150.45 358 PKiKP 05 52 07.6 +0.1
HRY PKPab pPKPab 05 52 14.3 +0.5
S44A Carbondale 150.46 319 PKPdf 05 52 02.2 +0.6
S44A PKPbc pPKPbc 05 52 07.5 -0.1
T45A Paducah 150.46 317 PKiKP 05 52 07.2 -0.5
T45A sPKPab 05 52 14.1 -0.3
SLM Saint Louis 150.47 321 PKIKP PKiKP 05 52 07.1 -0.6
SLM Saint Louis 150.47 321 PKiKP 05 52 07.1 -0.6
F05D White Salmon 150.54 11 P 05 52 06.7
baz=344
Y49A Blount Mountai 150.57 310 PKPdf 05 52 01.7 -0.2
X48A Hartselle 150.74 311 PKPdf PKPdf 05 52 02.0 -0.2
X48A PKPbc 05 52 07.3 -0.4
F07A Phinny Hill Vi 150.79 9 PKPdf 05 52 02.4 +0.5
G03D McMinnville, O 150.80 14 P 05 52 06.7
baz=340
P40A Paris 150.92 325 PKPdf 05 52 02.8 +0.5
P40A PKPbc pPKPbc 05 52 08.7 0.0
P40A PKPab sPKPab 05 52 15.8 -0.4
UTMT University of 151.00 316 PKPbc 05 52 08.1 -0.1
FVM French Village 151.00 320 PKIKP PKPdf 05 52 02.9 +0.4
FVM 05 52 08.4
FVM French Village 151.00 320 PKPdf 05 52 02.9 +0.4
FVM PKiKP 05 52 08.4 -0.4
F10A Beach Ranch, E 151.05 5 PKPdf 05 52 02.5 +0.1
HICK Hickman 151.12 317 PKiKP 05 52 09.1 0.0
G05D Wamic, OR 151.19 12 P 05 52 08.6
baz=344,SNR=6.1
PLAL Pickwick Lake 151.21 313 PKPdf 05 52 02.5 -0.4
PLAL PKPbc 05 52 07.8 -1.0
L34A Svendsen Farm, 151.22 333 PKPbc 05 52 08.2 -0.5
GCMT Greycliff 151.23 354 PKiKP 05 52 09.3 +0.1
250A Grady 151.29 306 PKPdf 05 52 04.2 +1.2
250A PKPbc PKiKP 05 52 09.3 -0.3
LRAL Lakeview Retre 151.38 309 PKPdf PKPdf 05 52 03.4 +0.2
LRAL PKPbc PKPbc 05 52 09.1 -0.1
LRAL Lakeview Retre 151.38 309 P 05 52 08.7
baz=62
PARMO Parma 151.39 318 PKiKP 05 52 09.6 -0.1
CCM Cathedral Cave 151.45 321 PKIKP PKiKP 05 52 09.4 -0.4
CCM Cathedral Cave 151.45 321 PKiKP 05 52 09.4 -0.4
CCM Cathedral Cave 151.45 321 P 05 52 08.8
baz=49
CAO2 Cobano, Puntar 151.48 259 PKiKP 05 52 11.3 +0.9
G08A Pilot Rock 151.53 8 PKPdf 05 52 04.0 +0.8
H04A Detroit Lake 151.54 13 PKiKP 05 52 09.7 -0.1
BOZ Bozeman (W) 151.55 357 PKIKP PKPdf 05 52 04.1 +0.8
BOZ 05 52 10.3
BOZ Bozeman (W) 151.55 357 PKPdf 05 52 04.1 +0.8
BOZ PKPbc sPKPbc 05 52 10.3 -0.2
BOZ Bozeman (W) 151.55 357 P 05 52 09.3
baz=3.5,SNR=18
H04D Lebanon 151.57 14 P 05 52 09.6
baz=341
K31A O'Neill 151.64 337 PKPdf 05 52 03.9 +0.6
K31A PKPbc PKiKP 05 52 09.9 -0.1
K31A PKPab sPKPab 05 52 19.2 +0.1
P38A Dawn 151.66 326 PKPbc 05 52 09.4 -0.2
I02D Swisshome 151.69 16 P 05 52 09.5
baz=339
N35A Tabor 151.78 331 PKPbc 05 52 09.7 -0.2
DLMT Dillon 151.82 359 PKPdf 05 52 04.8 +1.1
DLMT PKPbc sPKPbc 05 52 11.1 0.0
RLMT Red Lodge 151.85 354 PKPdf 05 52 05.0 +1.1
RLMT PKPbc sPKPbc 05 52 11.4 +0.2
RLMT Red Lodge 151.85 354 P 05 52 10.7
baz=8.4
R40A Maddies Statio 151.89 323 PKPdf PKPdf 05 52 03.8 0.0
R40A PKPab sPKPab 05 52 20.0 -0.3
RSSD Black Hills 151.92 346 PKIKP PKPdf 05 52 04.4 +0.4
RSSD 05 52 11.0
RSSD Black Hills 151.92 346 PKPdf PKPdf 05 52 04.4 +0.4
RSSD PKPbc pPKPbc 05 52 11.0 -0.2
RSSD Black Hills 151.92 346 P 05 52 10.0
baz=19
YNE Yellowstone No 152.03 355 PKPdf 05 52 06.3 +2.1
I05D Terrebonne, OR 152.05 12 P 05 52 10.6
baz=344,SNR=6.3
Z47A Carrollton 152.10 310 PKPbc 05 52 10.4 -0.5
BMO Blue Mountains 152.15 6 PKIKP PKiKP 05 52 10.8 -0.3
BMO Blue Mountains 152.15 6 PKiKP 05 52 10.8 -0.3
I03D Drain, OR 152.20 16 P 05 52 10.5
baz=339
BRAL Brewton 152.23 305 P 05 52 11.3
baz=66
YHL Hebgen Lake 152.28 357 PKPdf 05 52 06.7 +2.1
QLMT Earthquake Lak 152.31 357 PKPbc 05 52 09.8 -1.4
YMP Mirror Lake Pl 152.31 355 PKPdf 05 52 06.8 +2.2
YHH Holmes Hill 152.32 356 PKPdf 05 52 06.6 +1.9
I04A Tendick Farm, 152.34 14 P 05 52 10.9
baz=341
MCMT McKenzie Canyo 152.36 359 PKPdf 05 52 05.7 +1.1
YHB Horse Butte 152.38 357 PKPdf 05 52 06.8 +2.2
YNR Norris Junctio 152.38 356 PKiKP 05 52 12.7 +0.9
BGNE Belgrade 152.44 335 PKPbc 05 52 11.2 -0.3
BGNE PKPab sPKPab 05 52 21.9 -0.5
BGNE Belgrade 152.44 335 P 05 52 10.9
baz=33
YMR Madison River 152.44 356 PKiKP 05 52 13.8 +1.9
J01E Myrtle Point 152.54 17 P 05 52 11.9
baz=338
I07A Izee 152.63 10 PKiKP 05 52 13.1 +0.9
LCAR Lake Charles 152.65 318 PKPdf 05 52 05.3 +0.3
LCAR PKPab PKPab 05 52 22.6 +0.1
PINE Pine Mountain 152.65 12 PKPdf PKPdf 05 52 05.6 +0.6
PINE PKPbc sPKPbc 05 52 13.4 +0.4
MGMO Mountain Grove 152.65 321 PKPdf PKPdf 05 52 04.7 -0.3
H17A Grant Village 152.69 356 PKPdf 05 52 04.7 -0.4
H17A Grant Village 152.69 356 P 05 52 12.5
baz=5.9
N33A J Bar K, Exete 152.69 333 PKPbc PKPbc 05 52 11.3 -0.7
N33A PKPab PKPab 05 52 22.1 -0.5
Y45A Yeager Farm, C 152.82 312 PKPdf PKPdf 05 52 04.8 -0.5
Y45A PKPab PKPab 05 52 23.5 +0.1
BCYI Bear Canyon 152.88 360 PKiKP 05 52 13.2 +0.4
S39A Bolivar 152.91 323 PKPdf 05 52 04.5 -0.8
S39A PKiKP 05 52 12.8 0.0
J04D Umpqua Nationa 152.93 14 P 05 52 13.1
baz=342
K02D Willamette Mer 153.05 17 P 05 52 13.5
baz=338
J05D Fort Rock, OR 153.08 13 P 05 52 13.6
baz=343,SNR=8.2
MOOW Moose Ponds 153.34 356 PKPdf PKPdf 05 52 06.8 +0.7
FCAR Ozark Folk Cen 153.38 319 PKPdf 05 52 06.1 0.0
X43A Marvell 153.39 315 P 05 52 13.8
baz=55
U40A Yellville 153.53 320 PKPdf PKPdf 05 52 05.8 -0.5
U40A Yellville 153.53 320 P 05 52 13.6
baz=49
K04D Chiloquin, OR 153.60 14 P 05 52 13.5
baz=342
KSU1 Kansas State U 153.62 330 PKPdf PKPdf 05 52 06.1 -0.2
KSU1 PKPbc 05 52 13.8 -0.3
KSU1 Kansas State U 153.62 330 P 05 52 13.6
baz=38,SNR=5.9
HLID Hailey 153.62 2 PKPdf PKPdf 05 52 07.3 +0.8
HLID Hailey 153.62 2 P 05 52 14.2
baz=358
SNOW Snow King Moun 153.63 356 PKPdf 05 52 06.7 +0.1
SNOW PKPbc 05 52 13.5 -0.8
K05A Summer Lake 153.69 12 PKiKP 05 52 16.1 +1.6
MFID Camas Ranch 153.70 4 PKPdf PKPdf 05 52 07.3 +0.9
REDW Red Top Meadow 153.74 356 PKPdf 05 52 08.1 +1.4
L04D Klamath Falls 153.85 15 P 05 52 14.4
baz=340
K22A Casper 153.86 348 PKiKP 05 52 14.7 -0.1
K22A Casper 153.86 348 P 05 52 14.3
baz=15
W41B Gary Mavity, V 153.90 318 P 05 52 14.6
baz=52
BW06 Boulder Array 154.21 353 P 05 52 15.1
baz=8.4,SNR=6.1
PD31 Pinedale Array 154.21 353 PKPdf 05 52 07.3 0.0
PD31 PKPbc PKiKP 05 52 15.7 +0.1
PDAR Pinedale Array 154.21 353 PKP PKPdf 05 52 06.8 -0.6
comp=Z,1.7nm,1.0s,baz=117,slow=0.7,SNR=13
PDAR PKPbc PKPbc 05 52 15.2 -0.4
comp=Z,4.2nm,0.8s,baz=67,slow=2.2,SNR=25
PDAR Pinedale Array 154.21 353 PKPdf 05 52 06.3 -1.0
PDAR PKPbc PKiKP 05 52 15.6 -0.1
HHAR Hobbs 154.24 322 PKPdf 05 52 07.6 +0.2
HHAR pPKPbc 05 52 15.9 -0.4
HHAR PKPab 05 52 28.8 -0.5
OGNE Ogallala 154.28 340 P 05 52 15.5
baz=26
WVOR Wild Horse Val 154.37 9 PKIKP PKPdf 05 52 09.1 +1.6
WVOR Wild Horse Val 154.37 9 PKPdf 05 52 09.1 +1.6

WVOR sPKPab 05 52 30.5 -0.2
M04C Macdoel 154.38 15 P 05 52 16.3
baz=341
U38A Gravette 154.39 322 PKiKP 05 52 16.0 +0.1
U38A PKPab 05 52 29.6 -0.4
M02C Callahan 154.48 17 P 05 52 15.6
baz=339
MOD Modoc Plateau 154.60 12 PKPdf PKPdf 05 52 09.0 +1.1
X40A Basin Creek Fa 154.71 317 PKPab 05 52 31.6 +0.2
X40A Basin Creek Fa 154.71 317 P 05 52 16.9
baz=52
W39A Magazine 154.86 320 PKPdf 05 52 08.5 +0.3
W39A PKPab 05 52 31.8 -0.2
W39A Magazine 154.86 320 P 05 52 16.3
baz=49
N02D Trinity Center 154.91 17 P 05 52 07.0
baz=339
PHWY Pilot Hill 154.93 346 PKiKP 05 52 17.7 +0.5
PHWY PKPab 05 52 32.5 +0.1
R32A Long Quarter, 155.15 332 PKPdf 05 52 08.7 +0.1
R32A pPKPbc 05 52 17.6 -0.5
R32A PKPab PKPab 05 52 32.7 -0.4
MIAR Mount Ida 155.15 318 PKiKP PKPdf 05 52 09.3 +0.7
MIAR Mount Ida 155.15 318 PKPdf PKPdf 05 52 09.3 +0.7
MIAR Mount Ida 155.15 318 P 05 52 17.2
baz=50
T35A Sooner Cattle 155.23 326 PKPdf 05 52 08.8 +0.1
T35A sPKPab 05 52 33.9 -0.5
CBKS Cedar Bluff 155.27 334 PKP2 PKPab 05 52 33.4 -0.2
CBKS Cedar Bluff 155.27 334 PKPab 05 52 33.4 -0.2
CBKS Cedar Bluff 155.27 334 P 05 52 08.3
baz=32
HVU Hansel Valley 155.40 359 PKP2 PKPab 05 52 34.8 +0.6
HVU Hansel Valley 155.40 359 PKPab 05 52 34.8 +0.6
Z41A Richland Creek 155.42 315 P 05 52 09.6
baz=54
N23A Red Feather La 155.43 346 P 05 52 08.3
baz=17,SNR=5.2
HWUT Hardware Ranch 155.53 357 PKPdf PKPdf 05 52 09.5 +0.3
HWUT PKPab sPKPab 05 52 35.5 -0.2
TUL1 Leonard 155.57 323 P 05 52 09.3
baz=44
O02D Mt. Diablo Mer 155.63 18 P 05 52 09.5
baz=338
KAN13 South Haven SW 155.67 328 PKPab 05 52 35.9 +0.5
QUOK Quay 155.89 325 PKPab PKPab 05 52 37.1 +0.7
TCUT Toone Canyon 156.01 356 PKPab 05 52 38.2 +1.3
OK030 Cody Creek RV 156.11 325 PKPab 05 52 38.0 +0.7
OK031 S. Brethren Rd 156.12 325 PKPab 05 52 38.1 +0.7
KSCO Kaye Shedlock' 156.22 339 PKPdf 05 52 10.2 +0.1
KSCO Kaye Shedlock' 156.22 339 P 05 52 10.3
baz=26
X37A Clayton 156.24 321 PKPab 05 52 38.5 +0.6
BGU Big Grassy Mou 156.26 359 PKPdf 05 52 10.5 +0.4
BGU pPKPab 05 52 39.0 +0.4
RDMU Red Mountain 156.38 353 PKPab 05 52 39.0 +0.5
ISCO Idaho Springs 156.38 345 PKP2 PKPab 05 52 38.8 +0.2
ISCO Idaho Springs 156.38 345 PKPab PKPab 05 52 38.8 +0.2
ISCO Idaho Springs 156.38 345 P 05 52 10.8
baz=19
ELK Elko 156.39 3 PKiKP PKPdf 05 52 10.3 -0.1
ELK Elko 156.39 3 PKPdf 05 52 10.3 -0.1
CTU Camp Tracy 156.45 357 PKPab 05 52 39.6 +0.9
JLU Jordanelle 156.52 356 PKPab 05 52 39.7 +0.6
BEKR Beckworth 156.54 13 PKPdf 05 52 11.5 +1.0
BEKR PKPab 05 52 39.3 +0.1
OK029 Liberty Lake 156.57 326 PKPab 05 52 39.4 +0.2
O20A White River Ci 156.61 350 P 05 52 10.0
baz=12
DUG Dugway, Tooele 156.99 359 PKiKP PKPdf 05 52 11.5 +0.4
DUG Dugway, Tooele 156.99 359 PKPdf PKPdf 05 52 11.5 +0.4
DUG PKPab PKPab 05 52 41.1 +0.1
DUG Dugway, Tooele 156.99 359 P 05 52 10.9
baz=1.4,SNR=6.6
Q24A Divide 157.05 343 P 05 52 10.5
baz=20
VCNR Virginia City 157.24 13 PKPab 05 52 43.1 +0.9
AFDM Forest Hills D 157.27 15 PKPdf 05 52 10.7 -0.6
AFDM sPKPab 05 52 42.6 -0.4
SMCO Snowmass 157.29 347 PKPdf PKPdf 05 52 11.6 -0.2
PNTR Pine Nut 157.45 13 PKPab 05 52 43.8 +0.6
P17A Butcher Ranch, 157.59 354 PKPab 05 52 44.0 +0.3
KVN Kaiserville 157.76 10 PKP2 PKPab 05 52 44.4 0.0
KVN Kaiserville 157.76 10 PKPab PKPab 05 52 44.4 0.0
SRU San Rafael Swe 157.93 354 PKiKP PKPdf 05 52 12.2 -0.1
SRU San Rafael Swe 157.93 354 PKPdf 05 52 12.2 -0.1
SRU PKPab 05 52 45.3 +0.2
WMOK Wichita Mounta 158.08 326 PKP2 PKPab 05 52 46.0 +0.1
WMOK Wichita Mounta 158.08 326 PKPab 05 52 46.0 +0.1
WMOK Wichita Mounta 158.08 326 P 05 52 12.9
baz=40,SNR=8.6
RYN Ryan 158.10 11 PKPab 05 52 46.9 +1.0
Q16A Castle Valley 158.18 355 PKPdf 05 52 13.6 +0.9
Q16A sPKPab 05 52 47.1 0.0
Z35A Perchaven, San 158.24 321 PKPab 05 52 47.2 +0.7
PV22 Blue Mesa, Par 158.26 350 PKPdf 05 52 13.4 +0.6
PV22 sPKPab 05 52 47.3 -0.3
PV07 Paradox Valley 158.34 350 PKPab 05 52 47.7 +0.7
NVAR Mina Array Bea 158.34 10 PKP PKPdf 05 52 13.7 +0.8
comp=Z,1.4nm,0.9s,baz=45,slow=1.2,SNR=8.9
NVAR PKPab sPKPab 05 52 47.4 -0.5
comp=Z,5.0nm,0.9s,baz=345,slow=3.0,SNR=16
NV11 Mina Array Sit 158.36 10 PKPdf PKPdf 05 52 14.2 +1.3
NV11 PKPab sPKPab 05 52 47.5 -0.5
PV15 Paradox Valley 158.40 349 PKPab 05 52 48.4 +1.1
PV04 Paradox Valley 158.42 350 PKPdf 05 52 13.4 +0.4
PV04 pPKPab 05 52 48.5 +0.5
PV12 Saucer Basin, 158.48 350 PKPdf 05 52 13.9 +0.8
PV12 sPKPab 05 52 48.4 -0.1
PV20 West Nyswonger 158.48 350 PKPab 05 52 48.3 +0.7
PV16 Nyswonger Mesa 158.50 350 PKPdf 05 52 13.8 +0.7
PV16 pPKPab 05 52 48.8 +0.4
T25A Trinidad 158.51 340 PKPab PKPab 05 52 47.7 -0.1
PV11 David Mesa, Pa 158.51 350 PKPdf 05 52 13.7 +0.7
PV11 sPKPab 05 52 48.5 -0.2
T25A Trinidad 158.51 340 P 05 52 13.4
baz=24,SNR=5.8
PV19 Morning Glory 158.52 350 PKPab 05 52 48.8 +1.0
PV17 East Wray Mesa 158.54 350 PKPdf 05 52 13.7 +0.6
PV03 Paradox Valley 158.55 350 PKPdf 05 52 13.8 +0.6
PV03 PKPab 05 52 48.1 +0.3
TCRU Three Creeks R 158.56 358 PKPdf 05 52 15.0 +1.8
PV18 Skein Mesa, Pa 158.57 350 PKPab PKPab 05 52 49.0 +1.0
PV02 Paradox Valley 158.58 350 PKPab 05 52 48.9 +0.8
PV01 Paradox Valley 158.62 349 PKPab 05 52 48.9 +0.7
S22A 4UR Ranch, Cre 158.63 345 P 05 52 13.4
baz=17,SNR=9.1
MSU Marysvale 158.65 357 PKiKP PKPdf 05 52 14.7 +1.4
MSU Marysvale 158.65 357 PKPdf PKPdf 05 52 14.7 +1.4
PSUT Pine Spring 158.65 1 PKPdf PKPdf 05 52 14.6 +1.3
PSUT pPKPab 05 52 49.4 +0.4
R11A Troy Canyon, C 158.75 5 PKPdf 05 52 13.2 -0.1
R11A PKPab 05 52 48.9 +0.1
R11A Troy Canyon, C 158.76 5 P 05 52 13.5
baz=354
PV05 Paradox Valley 158.76 350 PKPdf 05 52 13.5 +0.1
TPH Tonopah 158.85 8 PKP2 PKPab 05 52 49.2 0.0
TPH Tonopah 158.85 8 PKPab 05 52 49.2 0.0
MTPU Mount Pierson 159.12 357 PKPdf 05 52 15.8 +1.8
WHTX Lake Whitney, 159.27 319 PKPdf PKPdf 05 52 13.1 -0.8
WHTX Lake Whitney, 159.27 319 P 05 52 13.9
baz=48
AMTX Amarillo 159.41 332 P 05 52 14.6
baz=33
MVCO Mesa Verde 159.50 349 P 05 52 14.5
baz=13
CCIG Comitan 159.57 271 PKPab 05 52 52.5 -0.5
SZCU Shurtz Canyon 159.59 359 PKPdf 05 52 16.7 +2.3
CCUT Cedar City 159.63 360 PKPdf PKPdf 05 52 14.0 -0.5
PKCU Pink Cliffs 159.72 357 PKPdf 05 52 14.6 -0.1
PRN Pahroc Range 159.73 4 PKPdf 05 52 16.5 +2.0
GRAC Grapevine Rang 159.89 9 P 05 52 15.3
baz=349,SNR=7.1
TPNV Topopah Spring 160.08 7 P 05 52 15.3
baz=352
ABTX Abilene, Hawle 160.14 324 PKPdf PKPdf 05 52 15.1 +0.2
ABTX PKPab sPKPab 05 52 55.4 -0.4
ABTX Abilene, Hawle 160.14 324 P 05 52 15.7
baz=42,SNR=6.3
435B Jarrell 160.14 316 P 05 52 15.7
baz=50
KNB Kanab 160.16 359 PKIKP PKPdf 05 52 14.2 -0.8
KNB Kanab 160.16 359 PKPdf PKPdf 05 52 14.2 -0.8
LCMT Little Creek M 160.17 360 PKPdf 05 52 16.7 +1.8
CWC Cottonwood Cre 160.31 11 P 05 52 15.6
baz=347
FURC Furnace Creek, 160.48 8 P 05 52 16.7
baz=350,SNR=5.6
ISA Isabella, Lake 160.99 13 P 05 52 17.0
baz=345
SHOC Shoshone, Teco 161.12 7 P 05 52 16.4
baz=352,SNR=5.4
ANMO Albuquerque 161.17 342 PKIKP PKPdf 05 52 16.5 +0.3
ANMO Albuquerque 161.17 342 PKPdf PKPdf 05 52 16.5 +0.3
ANMO PKPab sPKPab 05 53 00.1 -0.2
ANMO Albuquerque 161.17 342 P 05 52 16.3
baz=21
LRMC Laurel Mtn Rad 161.32 11 P 05 52 16.9
baz=347
PKM Mcpherson Peak 161.40 17 P 05 52 16.8
baz=341
WUAZ Wupatki 161.57 355 PKPab PKPab 05 53 02.3 +1.3
JCT Junction City 161.77 319 PKIKP PKPdf 05 52 16.1 -0.7
JCT Junction City 161.77 319 PKPdf PKPdf 05 52 16.1 -0.7
JCT sPKPab 05 53 02.8 -0.2
JCT Junction City 161.77 319 P 05 52 17.0
baz=46
EDW2 Edwards Air Fo 161.84 12 P 05 52 17.5
baz=346
SBC Santa Barbara 161.85 17 P 05 52 16.4
baz=340
BNM Barren Site 161.96 341 PKPdf 05 52 18.2 +1.1
BNM PKPab sPKPab 05 53 03.7 -0.1
HEC Hector,Ludlow 162.16 8 P 05 52 18.6
baz=351
GMRC Granite Mounta 162.28 6 P 05 52 18.3
baz=353
SCZ2 Santa Cruz Isl 162.29 17 P 05 52 18.3
baz=340
MWC Mount Wilson 162.46 13 PKP2 PKPab 05 53 05.7 +0.7
MWC Mount Wilson 162.46 13 PKPab 05 53 05.7 +0.7
X16A Lo Mia Camp, P 162.67 354 PKPdf 05 52 18.1 +0.4
PDMCI Parker Dam,Lak 162.86 2 P 05 52 18.6
baz=358
833A Chaparral WMA, 162.91 313 P 05 52 18.9
baz=52
IRM Iron Mountain 162.95 5 P 05 52 18.8
baz=354
BELC Belle Mtn. Jos 163.02 7 P 05 52 19.3
baz=352
MURC Murrieta 163.24 11 P 05 52 19.6
baz=348
PFO Pinyon Flats O 163.34 9 P 05 52 19.7
baz=350
TPFO Pinon Flats 163.35 9 P 05 52 19.6
baz=350
BC3 Big Chuckawall 163.42 6 P 05 52 19.9
baz=353
MNTX Cornudas Mount 163.73 335 PKPdf 05 52 19.1 +0.5
MNTX PKPab PKPab 05 53 10.6 +0.1
MNTX Cornudas Mount 163.73 335 P 05 52 19.3
baz=28
121A Cookes Peak, D 163.81 343 PKPab PKPab 05 53 12.0 +1.0
121A Cookes Peak, D 163.81 343 P 05 52 20.3
baz=20
GLA Glamis 164.08 4 P 05 52 20.8
baz=355
TUC Tucson 164.67 351 PKIKP PKPdf 05 52 20.7 +1.2
TUC Tucson 164.67 351 PKPdf 05 52 20.7 +1.2
TUC Tucson 164.67 351 P 05 52 20.8
baz=9.4
TXAR Lajitas Array 164.88 325 PKP PKPdf 05 52 20.1 +0.2
comp=Z,4.5nm,1.2s,baz=129,slow=0.8,SNR=15
TXAR PKPab PKPab 05 53 15.8 +0.1
comp=Z,5.6nm,0.9s,baz=61,slow=3.3,SNR=21
TXAR Lajitas Array 164.88 325 PKIKP PKPdf 05 52 19.5 -0.3
TXAR 05 53 15.4
TXAR Lajitas Array 164.88 325 PKPdf 05 52 19.5 -0.3
TXAR PKPab PKPab 05 53 15.4 -0.4
TX31 Lajitas Ar. Si 164.88 325 PKPdf 05 52 19.8 0.0
TX31 PKPab 05 53 15.8 +0.1
TX32 Lajitas Array 164.88 325 PKPdf 05 52 20.4 +0.6
TX32 PKPab 05 53 15.9 +0.1
319A Douglas 165.30 346 PKPdf 05 52 19.9 -0.2
HPIG 167.85 325 PKPdf 05 52 22.7 +0.4

IDC 19 06:14:59.2±4.8, **30.52S**×**138.29E, h0**km, **mb1 3.1**/3, **mb1mx3.1**/28, **mbtmp2.9**/3, **ML2.3**/3 **Error ellipse: s-maj=109.4km s-min=17.3km az=40.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	3.14	116	Pn	Pn	06 15 51.2	+1.2
	0.1nm,0.3s,baz=296,slow=12,SNR=1.0						
STKA				Sn	Sn	06 16 29.1	+0.9
	0.9nm,0.3s,baz=14,slow=17,SNR=5.0						
STKA				Lg	Lg	06 16 37.8	
	1.6nm,0.3s,baz=201,slow=15,SNR=9.5						
ASAR	Alice Springs	7.86	329	Pn	Pn	06 16 54.9	0.0
	0.0nm,0.3s,baz=150,slow=13,SNR=1.2						
ASAR				Sn	Sn	06 18 24.2	-0.5
	0.1nm,0.3s,baz=152,slow=22,SNR=3.2						
WRA	Warramunga Arr	11.12	340	Pn	Pn	06 17 39.6	+0.1
	0.1nm,0.3s,baz=168,slow=12,SNR=1.7						

*IDC **19** 06:22:59.2±1.4, 34.82N×27.00E, h0km, mb3.5/3, mb1 3.5/6, mb1mx3.3/48, mbtmp3.4/6, ML3.6/3, Error ellipse: s-maj=27.8km s-min=14.1km az=13.0*
*HLW **19** 06:23:00.7, 35.26N×26.96E, h29km±19km, Md3.9, MI3.5*
*ISK **19** 06:23:02.2, 35.23N×26.80E, h8km, ML3.3/18*
*THE **19** 06:23:02.3, 35.14N×26.80E, h0km±1km, ML3.3/8, Error ellipse: s-maj=3.2km s-min=0.7km az=153.0*
*ATH **19** 06:23:03.7, 35.34N×26.70E, h14km±5km, ML3.2/7, Error ellipse: s-maj=8.4km s-min=1.3km az=151.0*
*DDA **19** 06:23:05.0, 35.59N×26.97E, h8km±9km, ML2.6*

ISC 19 06:23:00.4±1.3, **35.07N**±0.03×**26.85E**±0.02, **h10**km±9km, **n72**, σ1°64/96, **mb3.4**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.52	275	P	Pb	06 23 11.9	+0.2
ZKR				S	Sb	06 23 19.3	0.0
ZKR				AML	AML	06 23 21.8	
	comp=N,7156μm,0.4s						
ZKR				AML	AML	06 23 22.5	
	comp=E,14259μm,0.2s						
ZKR	Zakros	0.52	275	P	Pb	06 23 11.8	+0.2
ZKR				S	Sb	06 23 19.8	+0.5
	comp=E,5μm,0.3s						
ZKR	Zakros	0.52	275	PG	Pb	06 23 11.9	+0.2
ZKR				SG	Sb	06 23 19.9	+0.6
KARP	Karpathos	0.54	28	P	Pb	06 23 12.0	0.0
KARP				S	Sb	06 23 19.1	-0.7
KARP				AML	AML	06 23 21.6	
	comp=N,15781μm,0.4s						
KARP				AML	AML	06 23 23.6	
	comp=E,12048μm,0.5s						
KARP	Karpathos	0.54	28	P	Pb	06 23 12.0	0.0
KARP				S	Sb	06 23 20.4	+0.6
	comp=E,7μm,0.5s						
KARP	Karpathos	0.54	28	PG	Pg	06 23 11.2	+0.3
STIA	Sitia Lasithi	0.64	282	P	Pb	06 23 13.6	0.0
STIA				S	Sn	06 23 24.2	-1.5
FRMA	Ierapetra Chan	0.92	267	P	Pg	06 23 17.2	-0.9
FRMA				S	Sb	06 23 30.7	0.0
	comp=E,1μm,0.3s						
NPS	Neapolis	1.03	281	P	Pn	06 23 21.3	+0.2
NPS				AML	AML	06 23 40.6	
	comp=E,5172μm,0.5s						
NPS				AML	AML	06 23 40.8	
	comp=N,3306μm,0.5s						
NPS	Neapolis	1.03	281	P	Pn	06 23 21.2	+0.2
NPS				S	Sn	06 23 35.9	+0.4
	comp=N,2μm,0.5s						
HRKL	Herakleio	1.45	280	P	Pg	06 23 28.4	+0.2
HRKL				S	Sn	06 23 48.2	+2.3
	comp=N,2μm,0.5s						
HRKL	Herakleio	1.45	280	PN	Pg	06 23 28.5	+0.2
ARG	Arkhangelos	1.54	42	P	Pg	06 23 29.9	-0.1
ARG				AML	AML	06 24 00.8	
	comp=E,1135μm,0.4s						
ARG				AML	AML	06 24 01.3	
	comp=N,916μm,0.5s						
ARG	Arkhangelos	1.54	42	P	Pg	06 23 30.1	+0.1
	comp=N,512nm,0.5s						
ARG	Arkhangelos	1.54	42	PN	Pg	06 23 29.7	-0.3
NIS1	Nisyros Isl.	1.55	10	PN	Pb	06 23 29.0	-0.2
IDI	Anoyia	1.62	278	Pg	Pg	06 23 32.0	+0.5
	comp=N,24nm,0.3s,baz=82,slow=18,SNR=95						
IDI				Lg	Lg	06 23 55.8	
	comp=N,36nm,0.3s,baz=327,slow=16,SNR=6.8						
IDI				LR	LR	06 24 36.0	
	comp=N,79nm,21.8s,baz=44,slow=54						
SIVA	Sivas	1.68	269	P	Pg	06 23 33.0	+0.4
SIVA				AML	AML	06 24 02.5	
	comp=N,1669μm,0.7s						
SIVA				AML	AML	06 24 06.0	
	comp=E,2375μm,0.7s						
SANT	Santorini	1.72	319	P	Pn	06 23 30.5	0.0
SANT				AML	AML	06 23 58.2	
	comp=N,474μm,0.8s						
SANT				AML	AML	06 24 01.6	
	comp=E,1605μm,0.4s						
SANT	Santorini	1.72	319	P	Pn	06 23 30.7	+0.2
SANT				S	Sg	06 23 53.9	-1.9
	comp=E,502nm,0.5s						
SANT	Santorini	1.72	319	PN	Pn	06 23 30.9	+0.4
THR6	Thira Island,	1.74	318	P	Pb	06 23 31.5	-1.0
THR9	Santorini-Faro	1.77	317	P	Pb	06 23 31.7	-1.2
SNT1	Gialos, Santor	1.77	320	P	Pb	06 23 31.8	-1.2
SNT1				S	Sb	06 23 54.6	-0.7
	comp=E,742nm,0.6s						
SNT5	Nea Kammeni, S	1.78	319	P	Pn	06 23 31.8	+0.5
THR3	Thira Island,	1.78	319	P	Pn	06 23 31.8	+0.5
THT2	Imerovigli	1.79	320	PN	Pb	06 23 32.3	-1.0
THR5	Thira Island,	1.81	318	P	Pn	06 23 32.0	+0.2
SAP3	Santorini-Thir	1.83	318	P	Pn	06 23 32.5	+0.5
BODT	Bodrum	2.02	10	PN	Pn	06 23 35.7	+1.1
TURN	Turunc	2.04	33	*i* P	Pb	06 23 38.1	+0.5
TURN				*i* S	Sn	06 23 58.0	-2.4
TURN	Turunc	2.04	33	PN	Pb	06 23 36.7	-0.9
BDRM	Kayabasi	2.05	13	*i* P	Pn	06 23 33.5	-1.5
BDRM				*i* S	Sn	06 23 53.4	-7.2
BDRM				IAML		06 24 13.0	
	comp=N,66nm,0.5s						
VAM	Vamos	2.19	279	P	Pb	06 23 39.1	-1.2
VAM	Vamos	2.19	279	P	Pb	06 23 39.0	-1.2
APE	Apeiranthos	2.26	332	P	Pn	06 23 38.2	+0.3
APE				AML	AML	06 24 06.4	
	comp=N,429μm,0.5s						
APE				AML	AML	06 24 11.3	
	comp=E,370μm,0.3s						
APE	Apeiranthos	2.26	332	P	Pn	06 23 38.3	+0.4
APE	Apeiranthos	2.26	332	PN	Pn	06 23 38.3	+0.4
APE				SN	Sn	06 24 05.3	-0.6
DALY	Dalyan (Mula)	2.27	40	*i* P	Pn	06 23 38.7	+0.7
DALY				*i* S	Sn	06 24 06.5	+0.3
DALY				IAML		06 24 23.0	
	comp=E,62nm,0.6s						
DALY				IAML		06 24 34.0	
	comp=N,70nm,0.6s						
DALY	Dalyan (Mula)	2.27	40	PN	Pn	06 23 39.3	+1.3
GVDS	Gavdos	2.28	265	PN	Pb	06 23 41.3	-0.4
GVD	Gavdhos	2.28	265	PN	Pb	06 23 41.5	-0.2
YER	Yerkesik	2.36	29	PN	Pn	06 23 40.8	+1.5
IMMV	Iera Moni Meta	2.38	280	P	Pb	06 23 42.0	-1.4
IMMV	Iera Moni Meta	2.38	280	PN	Pb	06 23 42.4	-1.0
FETY	Fethiye	2.39	49	*i* P	Pn	06 23 38.1	-1.6
FETY				*i* S	Sb	06 24 13.3	+0.2
FETY	Fethiye	2.39	49	PN	Pn	06 23 41.3	+1.6
MULA	Mugla, Merkez-	2.48	28	*i* P	Pb	06 23 45.3	+0.1
MULA				*i* S	Sn	06 24 06.6	-4.8
AKAS	Kas	2.52	62	PN	Pn	06 23 43.4	+1.8
KNDR	Palaiochora Ch	2.60	274	PN	Pb	06 23 46.0	-1.1
AYDN	Tasoluk	2.71	18	*i* P	Pn	06 23 46.1	+1.9
AYDN				*i* S	Sn	06 24 15.4	-1.7
TAVA	DENIZLI_Tavas	2.91	34	*i* P	Pn	06 23 49.2	+2.2
TAVA				*i* S	Sn	06 24 21.7	-0.3
TAVA				IAML		06 24 34.0	
	comp=E,39nm,0.5s						
TAVA				IAML		06 24 40.0	
	comp=N,28nm,0.6s						
AYDB	Zeytinkoy-Aydi	2.99	16	PN	Pn	06 23 49.8	+1.8
ELL	Elmali	2.99	55	PN	Pn	06 23 50.7	+2.6
ANKY	Antikythira Is	3.00	286	P	Pn	06 23 48.8	+0.7
GOLH	Golhisar	3.08	45	*i* P	Pn	06 23 51.5	+2.2
GOLH				*i* S	Sn	06 24 29.7	+3.5
GOLH				IAML		06 25 03.0	
	comp=N,54nm,1.0s						
URLA	Izmir	3.29	356	PN	Pn	06 23 52.2	+0.2
KTHA	Kythira Island	3.30	292	PN	Pn	06 23 54.1	+1.9
CHOS	Chios island	3.37	349	PN	Pn	06 23 54.1	+0.9
KORT	Korkueli	3.43	55	PN	Pn	06 23 57.0	+3.0
SLUM	Salum	3.83	201	P	Pn	06 24 00.2	+0.8
	baz=202						
SLUM				AMP		06 24 00.0	
	baz=202						
SLUM				S	Sn	06 24 44.3	-0.2
	baz=202						
ITM	Ithomi	4.51	299	PN	Pn	06 24 11.1	+2.3
SWA2		5.93	192	P	Pn	06 24 29.4	+1.1
	baz=193						
SWA2				AMP		06 25 00.0	
	baz=193						
SWA2				S	Sn	06 25 33.9	-2.4
	baz=193						
RYAN	Fayoum	6.64	153	P	Pn	06 24 38.9	+0.8
	baz=154						
RYAN				AMP		06 25 00.0	
	baz=154						
GLL	Jalalah	6.85	142	P	Pn	06 24 40.7	-0.3
	baz=143						
HFRF	Wahat Farafira	8.00	171	P	Pn	06 24 57.4	+0.6
	baz=171						
EIL	Elat	8.71	126	Pn	Pn	06 25 04.0	-2.6
	comp=N,0.3nm,0.3s,baz=26,slow=15,SNR=2.0						
EIL				Sn	Sn	06 26 39.6	-5.2
	comp=N,0.4nm,0.3s,baz=45,slow=20,SNR=1.6						
AKASG	Malin Array Be	15.71	6	Pn	P	06 26 44.3	-1.5
	comp=N,0.4nm,0.3s,baz=194,slow=11,SNR=3.1						
GERES	GERESS Array B	16.85	329	P	P	06 26 58.2	-0.3
	comp=N,0.1nm,0.3s,baz=137,slow=13,SNR=4.6						
EKA	Eskdalemuir Ar	28.92	324	P	P	06 29 03.3	+3.9
	comp=N,0.3nm,0.4s,baz=110,slow=10,SNR=2.0						
TORD	Torodi Ar. Bea	31.51	232	P	P	06 29 22.3	-0.4
	comp=N,0.3nm,0.4s,baz=33,slow=8.7,SNR=5.1						
MKAR	Makanchi Array	42.66	57	P	P	06 30 57.0	-0.2
	comp=N,0.3nm,0.5s,baz=280,slow=8.3,SNR=3.5						

KRSC 19 06:27:02.0±2.0, **50.68N**×**152.67E, h474**km±24km, **ML4.2, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIPR	Malaya Ipel'ka	3.02	56	*eP*	P	06 28 10.7	-0.1
KDTR	Khodutka, Kamc	3.58	70	*eP*	P	06 28 15.7	+0.6
KDTR				*eS*	S	06 29 14.2	-0.5
ASAK	Asacha	3.69	60	*eP*	P	06 28 17.6	+1.6
GRL	Gorelyy	3.85	59	*eP*	P	06 28 19.3	+1.9
RUS	Russkaya	4.05	62	*eP*	P	06 28 20.4	+1.5
RUS				*eS*	S	06 29 22.8	+1.1
GNL	Ganaly	4.43	45	*eP*	P	06 28 27.3	+5.0
KOK	Koryaka	4.52	52	*eP*	P	06 28 25.6	+2.5
KRX	Arik	4.56	52	*eP*	P	06 28 25.6	+2.0
UGLR	Uglovaya	4.57	54	*eP*	P	06 28 25.9	+2.3
KRER	Koryakskii	4.58	53	*eP*	P	06 28 25.9	+2.1
SMAR	Somma	4.59	53	*eP*	P	06 28 25.8	+1.9
NLC	Nalytchevo	4.83	56	S	S	06 29 34.0	-0.2
SPN	Mys Shipunski	5.16	59	*eP*	P	06 28 29.7	+0.9
SPN				*eS*	S	06 29 38.9	-1.0
KZV	Kizimen	6.40	43	*eP*	P	06 28 42.9	+1.7
TUMR	Tumrok	6.45	42	*eP*	P	06 28 44.0	+2.4
TUMD	Tumrok D	6.51	43	*eP*	P	06 28 43.7	+1.7
TUMD				*eS*	S	06 30 03.5	-0.7
MKZ	Mys Kozlova	6.75	51	*i* P	P	06 28 45.3	+0.9
MKZ				*eS*	S	06 30 06.6	-1.9
KMNR	Kamenistaya	6.82	39	*eP*	P	06 28 48.4	+3.1
KPT	Kopyto	6.96	38	*eP*	P	06 28 49.7	+2.9
SRDR	Sredinnyy	7.04	34	*eP*	P	06 28 49.2	+1.7
KRSR	Krestovskiy	7.28	37	*eP*	P	06 28 51.6	+1.6
SRKR	Sorokina	7.83	37	*eP*	P	06 28 57.7	+2.0
SMKR	Semkarok	7.89	38	*eP*	P	06 28 58.8	+2.4
BKI	Bering	9.22	55	*eP*	P	06 29 14.4	+4.0
BKI				*eS*	S	06 30 57.5	+1.3

IDC ***19*** *06:28:13.2±0.8, 35°.98N×97°.28W, h0km, mb3.7/5, mb1 3.9/14,mb1mx3.7/51,mbtmp3.7/14,ML3.0/7,MS2.7/2, Ms1 2.7/2,ms1mx2.5/40,Error ellipse: s-maj=11.4km s-min=10.2km az=136.0*

ANF ***19*** *06:28:14.0±0.3, 35°.94N×97°.32W, h4km±2km, ML4.8/27, Error ellipse: s-maj=1.7km s-min=1.5km az=137.0*

TUL ***19*** *06:28:14.4±2.0, 35°.92N±0°.01×97°.32W±0°.02, h6km±5km, ML4.0, mb3.7/7(NEIC), mb_Lg3.8/139(NEIC), Mwr3.5/16(NEIC), Error ellipse: s-maj=2.7km s-min=1.9km az=118.0*

NEIC ***19*** *06:28:14.4±1.5, 35°.94N±0°.02×97°.34W±0°.02, h9km±6km, Error ellipse: s-maj=3.0km s-min=2.1km az=121.0*

NEIC ***19*** *06:28:14.5, 35°.94N×97°.35W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=0.73; Mθθ=0.66; Mϕϕ=0.07; Mrθ=-0.72; Mθϕ=1.18; Mϕr=1.43; Fault plane solution: M0=2.11000×10^14^ NP1:ϕs=192.08000°, δ=70.32000°, λ=-136.78000°. NP2:ϕs=84.52000°, δ=49.85000°, λ=-26.14000°. Principal axes: T 1.6537, Plg=13.0000°, Azm=314.0000°; N 0.7160, Plg=43.0000°, Azm=212.0000°; P -2.3697, Plg=44.0000°, Azm=56.0000°.*

ISC 19 06:28:14.2±0.9, 35°.94N±0°.02×97°.32W±0°.02, h10km±6km, n231,σ1°01/232, mb3.8/4, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.18**	**218**		**Pg**	**06 28 18.0**	**0.0**
OK029				Sg	**Sg**	**06 28 20.5**	**-0.1**
OK005	**Luther M Schoo**	**0.30**	**159**		**Pg**	**06 28 20.5**	**+0.2**
OK025	**Westminster Rd**	**0.36**	**182**		**Pg**	**06 28 21.5**	**+0.2**
OK025				Sg	**Sg**	**06 28 26.3**	**+0.3**
OK009	**Oakdale Elemen**	**0.36**	**193**		**Pg**	**06 28 21.6**	**+0.1**
BCOK	**Bluff Creek, N**	**0.36**	**220**		**Pg**	**06 28 21.4**	**0.0**
BCOK				Sg	**Sg**	**06 28 26.4**	**+0.1**
OK001	**Jones High Sch**	**0.38**	**176**	Pg	**Pg**	**06 28 21.8**	**+0.1**
OK031	**S. Brethren Rd**	**0.39**	**88**		**Pg**	**06 28 22.5**	**+0.5**
OK031				Sg	**Sg**	**06 28 28.1**	**+0.9**
OK030	**Cody Creek RV**	**0.44**	**91**		**Pg**	**06 28 23.3**	**+0.5**
OK030				Sg	**Sg**	**06 28 29.4**	**+0.8**
OKCFA	**Oklahoma City**	**0.53**	**191**		**Pg**	**06 28 24.6**	**0.0**
OKCFA				Sg	**Sg**	**06 28 32.0**	**+0.4**
OKCFA	**Oklahoma City** baz=9.3,SNR=190	**0.53**	**191**	P	**Pg**	**06 28 24.6**	**0.0**
OKCFA				S	**Sg**	**06 28 32.0**	**+0.4**
OKCFA	**Oklahoma City** baz=9.3,SNR=190	**0.53**	**191**	P		06 28 24.6	
OKCFA				S		06 28 32.0	
OKCSW	**OKLAHOMA CITY**	**0.54**	**190**		**Pg**	**06 28 24.7**	**0.0**
OKCSW				Sg	**Sg**	**06 28 32.3**	**+0.5**
QUOK	**Quay**	**0.55**	**65**		**Pg**	**06 28 25.5**	**+0.6**
QUOK				Sg	**Sg**	**06 28 33.0**	**+0.8**
FNO	**Franklin**	**0.68**	**185**		**Pg**	**06 28 27.9**	**+0.5**
CROK	**Carrier**	**0.78**	**317**		**Pg**	**06 28 29.5**	**+0.3**
CROK	comp=Z,1μm,0.9s			IAmb_Lg		06 28 39.4	
GC02	**Grant County #**	**1.01**	**335**		**Pg**	**06 28 33.7**	**0.0**
KAN13	**South Haven SW**	**1.08**	**353**		**Pg**	**06 28 35.1**	**+0.1**
OK032	**Salt Plains WL**	**1.12**	**321**		**Pg**	**06 28 35.7**	**-0.2**
KAN14	**Manchester OK**	**1.14**	**333**	Pg	**Pg**	**06 28 36.1**	**-0.1**
KAN17	**Caldwell West**	**1.16**	**342**	Pg	**Pg**	**06 28 36.5**	**-0.1**
T35A	**Sooner Cattle**	**1.18**	**34**		**Pg**	**06 28 36.7**	**-0.2**
T35B	**Sooner Cattle** baz=215,SNR=601	**1.18**	**34**	P	**Pg**	**06 28 36.7**	**-0.2**
T35B	baz=215			S	**Sb**	**06 28 52.6**	**+0.7**
T35B	**Sooner Cattle** baz=215,SNR=601	**1.18**	**34**	P		06 28 36.7	
T35B	baz=215			S		06 28 52.6	
TUL1	**Leonard** baz=272,SNR=760	**1.24**	**91**	P	**Pg**	**06 28 37.0**	**-1.1**
TUL1	baz=272			S	**Sb**	**06 28 54.3**	**+0.5**
TUL1	**Leonard** baz=272,SNR=150	**1.24**	**91**	P		06 28 37.0	
TUL1	baz=272			S		06 28 53.9	
TUL1	**Leonard** baz=272,SNR=760	**1.24**	**91**	P		06 28 37.0	
TUL1	baz=272			S		06 28 54.3	
KAN05	**Bluff City Nor**	**1.25**	**339**		**Pg**	**06 28 38.1**	**-0.2**
KAN01	**Argonia South**	**1.26**	**344**		**Pg**	**06 28 38.3**	**-0.2**
KS20	**Mayfield South**	**1.30**	**352**		**Pn**	**06 28 39.1**	**+0.6**
KAN10	**Anthony SW Sta**	**1.34**	**332**		**Pn**	**06 28 39.4**	**+0.4**
KAN08	**Anthony NE Sta**	**1.39**	**338**		**Pn**	**06 28 40.4**	**+0.7**
KAN16	**Harper SW Stat**	**1.42**	**335**	Pn	**Pn**	**06 28 40.8**	**+0.7**
U32A	**Winter Ranch,**	**1.43**	**288**		**Pn**	**06 28 40.5**	**+0.3**
U32A	**Winter Ranch,** baz=108,SNR=1000	**1.43**	**288**	P	**Pn**	**06 28 40.5**	**+0.3**
U32A	baz=108			S	**Sg**	**06 29 00.4**	**+0.2**
U32A	**Winter Ranch,** baz=108,SNR=1000	**1.43**	**288**	P		06 28 40.5	
U32A	baz=108			S		06 29 00.4	
KAN12	**Harper NE Stat**	**1.46**	**338**	Pn	**Pb**	**06 28 41.7**	**+0.2**
WMOK	**Wichita Mounta**	**1.69**	**225**		**Pn**	**06 28 44.5**	**+0.7**
WMOK	**Wichita Mounta** baz=44,SNR=1000	**1.69**	**225**	P	**Pn**	**06 28 44.7**	**+0.8**
WMOK	baz=44			S	**Sn**	**06 29 07.1**	**+1.6**
WMOK	**Wichita Mounta** baz=44,SNR=1000	**1.69**	**225**	P		06 28 44.5	
WMOK	baz=44			S		06 29 06.8	
WMOK	**Wichita Mounta** baz=44,SNR=1000	**1.69**	**225**	P		06 28 44.7	
WMOK	baz=44			S		06 29 07.1	
X37A	**Clayton**	**2.09**	**130**		**Pn**	**06 28 50.1**	**+0.8**
X37A	comp=Z,693nm,0.9s			IAmb_Lg		06 29 22.9	
X37A	**Clayton** baz=310,SNR=818	**2.09**	**130**	P	**Pn**	**06 28 50.4**	**+1.2**
X37A	baz=310			S	**Sb**	**06 29 18.2**	**0.0**
X37A	**Clayton** baz=310,SNR=818	**2.09**	**130**	P		06 28 50.4	
X37A	baz=310			S		06 29 18.2	
U38A	**Gravette**	**2.43**	**77**		**Pn**	**06 28 55.0**	**+1.1**
U38A	comp=Z,552nm,0.7s			IAmb_Lg		06 29 34.9	
U38A	**Gravette** baz=259,SNR=132	**2.43**	**77**	P	**Pn**	**06 28 55.1**	**+1.1**
U38A	**Gravette** baz=259,SNR=132	**2.43**	**77**	P		06 28 55.1	
Z35A	**Perchaven, San**	**2.60**	**179**		**Pn**	**06 28 57.2**	**+0.9**
Z35A	**Perchaven, San** baz=358,SNR=52	**2.60**	**179**	P	**Pn**	**06 28 57.3**	**+1.0**
Z35A	**Perchaven, San** baz=358,SNR=52	**2.60**	**179**	P		06 28 57.3	
R32A	**Long Quarter,**	**2.72**	**336**		**Pn**	**06 28 58.8**	**+0.8**
R32A	comp=Z,328nm,0.7s			IAmb_Lg		06 29 45.9	
R32A	**Long Quarter,** baz=156,SNR=641	**2.72**	**336**	P	**Pn**	**06 28 58.9**	**+1.0**
R32A	baz=156			S	**Sn**	**06 29 32.5**	**+1.6**
R32A	**Long Quarter,** baz=156,SNR=641	**2.72**	**336**	P		06 28 58.9	
R32A	baz=156			S		06 29 32.5	
HHAR	**Hobbs**	**2.76**	**82**		**Pn**	**06 28 59.3**	**+0.8**
HHAR	comp=Z,239nm,0.7s			IAmb_Lg		06 29 49.8	
HHAR	**Hobbs** baz=264,SNR=44	**2.76**	**82**	P	**Pn**	**06 28 59.3**	**+0.8**
HHAR	**Hobbs** baz=264,SNR=44	**2.76**	**82**	P		06 28 59.3	
W39A	**Magazine**	**2.98**	**103**		**Pn**	**06 29 02.8**	**+1.3**
W39A	**Magazine** baz=285,SNR=226	**2.98**	**103**	P	**Pn**	**06 29 02.4**	**+0.9**
W39A	**Magazine** baz=285,SNR=174	**2.98**	**103**	P		06 29 02.4	
W39A	**Magazine** baz=285,SNR=226	**2.98**	**103**	P		06 29 02.4	
KSU1	**Kansas State U**	**3.21**	**10**		**Pn**	**06 29 06.6**	**+1.9**
KSU1	comp=Z,355nm,0.8s			IAmb_Lg		06 30 03.5	
KSU1	**Kansas State U** baz=191,SNR=35	**3.21**	**10**	P	**Pn**	**06 29 05.8**	**+1.1**
KSU1	**Kansas State U** baz=191,SNR=9.1	**3.21**	**10**	P		06 29 05.9	
KSU1	baz=191			S		06 29 42.6	
KSU1	**Kansas State U** baz=191,SNR=35	**3.21**	**10**	P		06 29 05.8	
Z38A	**Mt. Pleasant** baz=325,SNR=17	**3.29**	**144**	P		06 29 06.8	
Z38A	**Mt. Pleasant**	**3.29**	**144**	Pn	**Pn**	**06 29 07.1**	**+1.2**
Z38A	comp=Z,332nm,0.8s			IAmb_Lg		06 30 05.0	
Z38A	**Mt. Pleasant** baz=325,SNR=17	**3.29**	**144**	P	**Pn**	**06 29 06.8**	**+1.0**
MIAR	**Mount Ida**	**3.37**	**113**		**Pn**	**06 29 08.6**	**+1.8**
MIAR	comp=Z,244nm,0.8s			IAmb_Lg		06 30 06.4	
MIAR	**Mount Ida** baz=295,SNR=431	**3.37**	**113**	P	**Pn**	**06 29 08.0**	**+1.1**
MIAR	baz=295			S	**Sn**	**06 29 48.7**	**+1.9**
MIAR	**Mount Ida** baz=295,SNR=173	**3.37**	**113**	P		06 29 07.9	
MIAR	baz=295			S		06 29 47.3	
MIAR	**Mount Ida** baz=295,SNR=431	**3.37**	**113**	P		06 29 08.0	
MIAR	baz=295			S		06 29 48.7	
CBKS	**Cedar Bluff**	**3.46**	**327**		**Pn**	**06 29 10.8**	**+2.7**
CBKS	comp=Z,204nm,0.7s			IAmb_Lg		06 30 12.9	
CBKS	**Cedar Bluff** baz=146,SNR=61	**3.46**	**327**	P	**Pn**	**06 29 08.6**	**+0.5**
CBKS	**Cedar Bluff** baz=146	**3.46**	**327**	P		06 29 09.3	
CBKS	**Cedar Bluff** baz=146,SNR=61	**3.46**	**327**	P		06 29 08.6	
U40A	**Yellville**	**3.64**	**82**	Pn	**Pn**	**06 29 11.4**	**+0.8**
U40A	**Yellville** baz=265,SNR=138	**3.64**	**82**	P	**Pn**	**06 29 11.1**	**+0.4**
U40A	**Yellville** baz=265,SNR=75	**3.64**	**82**	P		06 29 10.9	
U40A	**Yellville** baz=265,SNR=138	**3.64**	**82**	P		06 29 11.1	
U40A	baz=265,SNR=138			P		06 29 11.1	
S39A	**Bolivar**	**3.66**	**60**		**Pn**	**06 29 12.4**	**+1.6**
S39A	comp=Z,151nm,0.7s			IAmb_Lg		06 30 18.8	
S39A	**Bolivar** baz=243,SNR=101	**3.66**	**60**	P	**Pn**	**06 29 12.0**	**+1.2**
S39A	baz=243			S	**Sn**	**06 29 55.6**	**+1.6**
S39A	**Bolivar** baz=243,SNR=101	**3.66**	**60**	P		06 29 12.0	
S39A	baz=243			S		06 29 55.6	
AMTX	**Amarillo**	**3.71**	**255**		**Pn**	**06 29 14.0**	**+2.3**
AMTX	comp=Z,366nm,0.7s			IAmb_Lg		06 30 13.5	
AMTX	**Amarillo** baz=72,SNR=75	**3.71**	**255**	P	**Pn**	**06 29 13.0**	**+1.3**
AMTX	**Amarillo** baz=72	**3.71**	**255**	P		06 29 13.0	
AMTX	**Amarillo** baz=72,SNR=75	**3.71**	**255**	P		06 29 13.0	
ABTX	**Abilene, Hawle**	**3.82**	**211**	Pn	**Pn**	**06 29 15.0**	**+1.8**
ABTX	comp=Z,134nm,0.8s			IAmb_Lg		06 30 16.6	
ABTX	**Abilene, Hawle** baz=29,SNR=11	**3.82**	**211**	P	**Pn**	**06 29 13.7**	**+0.5**
ABTX	**Abilene, Hawle** baz=29	**3.82**	**211**	P		06 29 13.8	
ABTX	baz=29			S		06 29 58.4	
ABTX	**Abilene, Hawle** baz=29,SNR=11	**3.82**	**211**	P		06 29 13.7	
WHTX	**Lake Whitney,**	**3.94**	**182**	Pn	**Pn**	**06 29 15.5**	**+0.8**
WHTX	**Lake Whitney,** baz=1.3,SNR=26	**3.94**	**182**	P	**Pn**	**06 29 15.1**	**+0.4**
WHTX	**Lake Whitney,** baz=1.3,SNR=19	**3.94**	**182**	P		06 29 15.0	
WHTX	baz=1.3			S		06 30 01.1	
WHTX	**Lake Whitney,** baz=1.3,SNR=26	**3.94**	**182**	P		06 29 15.1	
X40A	**Basin Creek Fa**	**3.95**	**110**		**Pn**	**06 29 16.6**	**+1.8**
X40A	**Basin Creek Fa** baz=293,SNR=88	**3.95**	**110**	P	**Pn**	**06 29 15.7**	**+0.9**
X40A	**Basin Creek Fa** baz=293,SNR=43	**3.95**	**110**	P		06 29 15.6	
X40A	**Basin Creek Fa** baz=293,SNR=88	**3.95**	**110**	P		06 29 15.7	
X40A	baz=293,SNR=88			P		06 29 15.7	
237A	**Washetta, Mont**	**4.12**	**162**	Pn	**Pn**	**06 29 17.6**	**+0.4**
237A	**Washetta, Mont** baz=342,SNR=13	**4.12**	**162**	P	**Pn**	**06 29 17.4**	**+0.1**
237A	baz=342			S	**Sn**	**06 30 06.5**	**+1.0**
237A	**Washetta, Mont** baz=342,SNR=13	**4.12**	**162**	P		06 29 17.4	
237A				S		06 30 06.5	
WHAR	**Wooly Hollow**	**4.15**	**97**		**Pn**	**06 29 19.2**	**+1.5**
WHAR	comp=Z,356nm,0.9s			IAmb_Lg		06 30 26.4	
W41B	**Gary Mavity, V** baz=282,SNR=180	**4.21**	**99**	P	**Pn**	**06 29 19.2**	**+0.8**
W41B	**Gary Mavity, V** baz=282,SNR=34	**4.21**	**99**	P		06 29 18.9	
W41B	**Gary Mavity, V** baz=282,SNR=180	**4.21**	**99**	P		06 29 19.2	
FCAR	**Ozark Folk Cen**	**4.22**	**89**		**Pn**	**06 29 18.9**	**+0.4**
MGMO	**Mountain Grove**	**4.25**	**72**		**Pn**	**06 29 19.8**	**+0.8**
MGMO	comp=Z,261nm,1.0s			IAmb_Lg		06 30 37.0	
Z41A	**Richland Creek** baz=307,SNR=12	**4.59**	**124**	P	**Pn**	**06 29 24.0**	**+0.4**
Z41A	**Richland Creek** baz=307,SNR=8.7	**4.59**	**124**	P		06 29 23.7	
Z41A	baz=307			S		06 30 15.7	
Z41A	**Richland Creek** baz=307,SNR=12	**4.59**	**124**	P		06 29 24.0	
Z41A	baz=307,SNR=12			P		06 29 24.0	
R40A	**Maddies Statio**	**4.67**	**58**	Pn	**Pn**	**06 29 25.7**	**+0.9**
R40A	comp=Z,146nm,0.8s			IAmb_Lg		06 30 52.2	
R40A	**Maddies Statio** baz=241,SNR=93	**4.67**	**58**	P	**Pn**	**06 29 25.7**	**+0.9**
R40A	**Maddies Statio** baz=241,SNR=93	**4.67**	**58**	P		06 29 25.7	
NATX	**Nacogdoches** baz=333	**4.72**	**151**	S		06 30 19.1	
P38A	**Dawn**	**4.75**	**38**	Pn	**Pn**	**06 29 29.0**	**+3.1**
P38A	comp=Z,145nm,0.8s			IAmb_Lg		06 30 46.3	
P38A	**Dawn** baz=220,SNR=31	**4.75**	**38**	P	**Pn**	**06 29 26.7**	**+0.8**
P38A	**Dawn** baz=220,SNR=31	**4.75**	**38**	P		06 29 26.7	
N33A	**J Bar K, Exete**	**4.79**	**359**		**Pn**	**06 29 25.7**	**-0.8**
N33A	comp=Z,201nm,0.9s			IAmb_Lg		06 30 56.4	
MSTX	**Muleshoe**	**4.89**	**248**	Pn	**Pn**	**06 29 28.5**	**+0.6**
MSTX	comp=Z,108nm,1.1s			IAmb_Lg		06 31 01.8	
MSTX	**Muleshoe** baz=65,SNR=28	**4.89**	**248**	P	**Pn**	**06 29 28.4**	**+0.6**
MSTX	**Muleshoe** baz=65,SNR=23	**4.89**	**248**	P		06 29 28.3	
MSTX	baz=65			S		06 30 23.7	
MSTX	**Muleshoe** baz=65,SNR=28	**4.89**	**248**	P		06 29 28.4	
CCAR	**Cane Creek**	**4.99**	**112**	IAmb_Lg		06 30 58.4	
CCAR	**Cane Creek** baz=295,SNR=20	**4.99**	**112**	P	**Pn**	**06 29 29.8**	**+0.7**
CCAR	**Cane Creek** baz=295,SNR=20	**4.99**	**112**	P		06 29 29.8	
LCAR	**Lake Charles**	**5.00**	**87**		**Pn**	**06 29 29.6**	**+0.3**
LCAR				IAmb_Lg		06 30 53.7	
	comp=Z,220nm,0.8s						
N35A	**Tabor**	**5.09**	**15**		**Pn**	**06 29 31.5**	**+1.0**
N35A	**Tabor** baz=196,SNR=64	**5.09**	**15**	P	**Pn**	**06 29 31.1**	**+0.6**
N35A	**Tabor** baz=196,SNR=64	**5.09**	**15**	P		06 29 31.1	
435B	**Jarrell**	**5.14**	**183**		**Pn**	**06 29 31.6**	**+0.3**
435B	comp=Z,175nm,0.8s			IAmb_Lg		06 30 59.3	
435B	**Jarrell** baz=2.2	**5.14**	**183**	P		06 29 31.7	
KSCO	**Kaye Shedlock'**	**5.22**	**308**		**Pn**	**06 29 32.9**	**+0.5**
KSCO	comp=Z,163nm,0.7s			IAmb_Lg		06 31 14.9	
CCM	**Cathedral Cave**	**5.30**	**65**	Pn	**Pn**	**06 29 34.2**	**+0.7**
CCM	comp=Z,161nm,0.7s			IAmb_Lg		06 31 14.2	
CCM	**Cathedral Cave** baz=248,SNR=21	**5.30**	**65**	P	**Pn**	**06 29 34.0**	**+0.6**
CCM	**Cathedral Cave** baz=248	**5.30**	**65**	P		06 29 34.0	
CCM	**Cathedral Cave** baz=248,SNR=21	**5.30**	**65**	P		06 29 34.0	
X43A	**Marvell** baz=287,SNR=7.1	**5.46**	**103**	P	**Pn**	**06 29 36.8**	**+1.2**
X43A	**Marvell** baz=287,SNR=7.1	**5.46**	**103**	P		06 29 36.8	
BGNE	**Belgrade**	**5.50**	**353**	Pn	**Pn**	**06 29 36.8**	**+0.6**
BGNE	**Belgrade** baz=173,SNR=9.2	**5.50**	**353**	P	**Pn**	**06 29 36.5**	**+0.3**
BGNE	**Belgrade** baz=173	**5.50**	**353**	P		06 29 36.4	
BGNE	baz=173			S		06 30 38.0	
BGNE	**Belgrade** baz=173,SNR=9.2	**5.50**	**353**	P		06 29 36.5	
P40A	**Paris** comp=Z,180nm,1.0s	**5.51**	**48**	IAmb_Lg		06 31 12.0	
P40A	**Paris** baz=231,SNR=24	**5.51**	**48**	P	**Pn**	**06 29 36.7**	**+0.4**
P40A	**Paris** baz=231,SNR=24	**5.51**	**48**	P		06 29 36.7	
N38A	**Joes South For**	**5.81**	**32**		**Pn**	**06 29 41.2**	**+0.7**
N38A	**Joes South For** baz=215,SNR=23	**5.81**	**32**	P	**Pn**	**06 29 41.0**	**+0.5**
N38A	**Joes South For** baz=215,SNR=23	**5.81**	**32**	P		06 29 41.0	
JCT	**Junction City**	**5.83**	**202**	Pn	**Pn**	**06 29 41.4**	**+0.7**
JCT	comp=Z,153nm,0.8s			IAmb_Lg		06 31 32.3	
JCT	**Junction City** baz=20	**5.83**	**202**	P		06 29 41.4	
T25A	**Trinidad**	**5.83**	**284**	Pn	**Pn**	**06 29 41.5**	**+0.6**
T25A	comp=Z,209nm,0.9s			IAmb_Lg		06 31 26.2	
T25A	**Trinidad** baz=100,SNR=29	**5.83**	**284**	P		06 29 41.4	
143A	**Socs Landing,**	**5.86**	**122**	Pn	**Pn**	**06 29 41.5**	**+0.4**
143A	comp=Z,172nm,1.1s			IAmb_Lg		06 31 32.7	
143A	**Socs Landing,** baz=305,SNR=9.5	**5.86**	**122**	P	**Pn**	**06 29 41.5**	**+0.4**
143A	**Socs Landing,** baz=305,SNR=9.5	**5.86**	**122**	P		06 29 41.5	
FVM	**French Village**	**5.89**	**68**		**Pn**	**06 29 41.6**	**+0.2**
FVM	comp=Z,152nm,0.7s			IAmb_Lg		06 31 25.7	
FVM	**French Village** baz=252,SNR=21	**5.89**	**68**	P	**Pn**	**06 29 41.7**	**+0.2**
FVM	**French Village** baz=252,SNR=21	**5.89**	**68**	P		06 29 41.7	
MET	**Memphis--Engin** comp=Z,204nm,0.8s	**6.08**	**96**	IAmb_Lg		06 31 29.9	
OGNE	**Ogallala**	**6.22**	**325**		**Pn**	**06 29 47.1**	**+1.0**
OGNE	**Ogallala** baz=142,SNR=18	**6.22**	**325**	P	**Pn**	**06 29 47.3**	**+1.2**
OGNE	**Ogallala** baz=142,SNR=17	**6.22**	**325**	P		06 29 46.3	
OGNE	baz=142			S		06 30 56.2	
OGNE	**Ogallala** baz=142,SNR=18	**6.22**	**325**	P		06 29 47.3	
SLM	**Saint Louis**	**6.26**	**62**		**Pn**	**06 29 47.0**	**+0.5**
SLM	comp=Z,167nm,0.9s			IAmb_Lg		06 31 33.0	
OXF	**Oxford**	**6.63**	**100**	Pn	**Pn**	**06 29 51.5**	**-0.2**
OXF	comp=Z,110nm,0.8s			IAmb_Lg		06 32 03.7	
OXF	**Oxford** baz=285	**6.63**	**100**	P		06 29 51.2	
W45A	**Hickory Valley**	**6.68**	**94**	Pn	**Pn**	**06 29 51.3**	**-1.0**
W45A	**Hickory Valley** baz=279,SNR=23	**6.68**	**94**	P	**Pn**	**06 29 53.4**	**+1.1**
W45A	**Hickory Valley** baz=279,SNR=23	**6.68**	**94**	P		06 29 53.4	
S44A	**Carbondale**	**6.70**	**72**		**Pn**	**06 29 51.4**	**-1.3**
S44A	**Carbondale** baz=257,SNR=11	**6.70**	**72**	P	**Pn**	**06 29 52.6**	**-0.1**
S44A	**Carbondale** baz=257,SNR=11	**6.70**	**72**	P		06 29 52.6	
Y45A	**Yeager Farm, C**	**6.72**	**106**	Pn	**Pn**	**06 29 52.9**	**0.0**
Y45A	comp=Z,98nm,0.8s			IAmb_Lg		06 31 59.5	
Y45A	**Yeager Farm, C** baz=290,SNR=18	**6.72**	**106**	P	**Pn**	**06 29 53.0**	**+0.2**
Y45A	**Yeager Farm, C** baz=290,SNR=18	**6.72**	**106**	P		06 29 53.0	
VBMS	**Vicksburg**	**6.75**	**121**	Pn	**Pn**	**06 29 53.8**	**+0.4**
VBMS	**Vicksburg** baz=305	**6.75**	**121**	S		06 31 08.7	
SCIA	**State Center**	**6.76**	**27**		**Pn**	**06 29 53.7**	**+0.2**
SCIA	comp=Z,172nm,0.8s			IAmb_Lg		06 31 59.6	
SCIA	**State Center** baz=210,SNR=6.7	**6.76**	**27**	P	**Pn**	**06 29 55.1**	**+1.5**
SCIA	**State Center** baz=210	**6.76**	**27**	P		06 29 53.7	
SCIA	baz=210			S		06 31 09.0	
SCIA	**State Center** baz=210,SNR=6.7	**6.76**	**27**	P		06 29 55.1	
Q24A	**Divide** baz=114	**6.92**	**298**	P		06 29 56.2	
735A	**Kenedy** comp=Z,97nm,0.8s	**7.07**	**183**	IAmb_Lg		06 32 13.4	
P43A	**Skaggs, Pawnee**	**7.20**	**57**		**Pn**	**06 29 59.7**	**+0.2**
P43A	**Skaggs, Pawnee** baz=242,SNR=54	**7.20**	**57**	P	**Pn**	**06 29 59.4**	**0.0**
P43A	**Skaggs, Pawnee** baz=242,SNR=54	**7.20**	**57**	P		06 29 59.4	
Q44A	**Meyer Farm, Va**	**7.24**	**63**	Pn	**Pn**	**06 30 00.3**	**+0.2**
Q44A	**Meyer Farm, Va** baz=248,SNR=8.2	**7.24**	**63**	P	**Pn**	**06 30 01.3**	**+1.2**
Q44A	**Meyer Farm, Va** baz=248,SNR=8.2	**7.24**	**63**	P		06 30 01.3	
ANMO	**Albuquerque** comp=Z,0.3nm,0.3s,baz=70,slow=16,SNR=6.2	**7.52**	**265**	Pn	**Pn**	**06 30 04.8**	**+0.7**
ANMO	comp=Z,2.2nm,0.3s,baz=80,slow=14,SNR=36			Pg	Pg	06 30 32.6	-5.7
ANMO	comp=Z,4.1nm,0.3s,baz=356,slow=17,SNR=4.3			Lg	Lg	06 32 08.2	
ANMO	**Albuquerque** baz=80	**7.52**	**265**	P		06 30 04.8	
K38A	**Parkersburg**	**7.57**	**26**		**Pn**	**06 30 04.9**	**+0.3**
K38A	comp=Z,163nm,0.9s			IAmb_Lg		06 32 32.8	
146A	**Union**	**7.59**	**113**		**Pn**	**06 30 04.6**	**-0.3**
146A	comp=Z,54nm,0.8s			IAmb_Lg		06 32 24.3	
PLAL	**Pickwick Lake**	**7.61**	**95**	Pn	**Pn**	**06 30 05.2**	**+0.1**
PLAL	comp=Z,90nm,0.9s			IAmb_Lg		06 32 21.4	
ISCO	**Idaho Springs**	**7.61**	**303**	Pn	**Pn**	**06 30 06.0**	**+0.6**
ISCO	comp=Z,58nm,0.7s			IAmb_Lg		06 32 35.7	
ISCO	**Idaho Springs** baz=118,SNR=48	**7.61**	**303**	P	**Pn**	**06 30 06.0**	**+0.6**
ISCO	**Idaho Springs** baz=118,SNR=46	**7.61**	**303**	P		06 30 05.8	
ISCO	**Idaho Springs** baz=118,SNR=48	**7.61**	**303**	P		06 30 06.0	
WVT	**Waverly**	**7.69**	**86**	Pn	**Pn**	**06 30 06.7**	**+0.4**
WVT	comp=Z,86nm,0.8s			IAmb_Lg		06 32 20.1	
WVT	**Waverly** baz=271	**7.69**	**86**	P		06 30 05.7	
L40A	**Anamosa**	**7.74**	**36**		**Pn**	**06 30 06.7**	**-0.2**

L40A IAmb_Lg 06 32 27.8
comp=Z,124nm,1.1s
ECSD EROS Data Cent 7.81 4 Pn **Pn 06 30 06.5 -1.3**
ECSD IAmb_Lg 06 32 22.7
comp=Z,82nm,0.9s
ECSD EROS Data Cent 7.81 4 P 06 30 07.4
baz=184,SNR=8.8
HDIL Hopedale 7.82 51 Pn 06 30 07.6 -0.4
HDIL Hopedale 7.82 51 P **Pn 06 30 07.8 -0.2**
baz=236,SNR=28
HDIL Hopedale 7.82 51 P 06 30 07.7
baz=236,SNR=16
HDIL Hopedale 7.82 51 P 06 30 07.8
baz=236,SNR=28
BNM Barren Site 7.84 260 Pn 06 30 08.5 0.0
MNTX Cornudas Mount 7.93 240 Pn **Pn 06 30 09.5 0.0**
MNTX Cornudas Mount 7.93 240 P **Pn 06 30 09.7 +0.1**
baz=55,SNR=35
MNTX Cornudas Mount 7.93 240 P 06 30 09.8
baz=55,SNR=22
MNTX Cornudas Mount 7.93 240 P 06 30 09.7
baz=55,SNR=35
USIN University of 7.99 72 Pn **Pn 06 30 08.6 -1.7**
Y22D IRIS PASSCAL I 8.09 260 IAmb_Lg 06 32 46.1
comp=Z,114nm,0.8s
Z47A Carrollton 8.11 107 Pn 06 30 11.9 0.0
O44A Mansfield 8.15 56 Pn 06 30 12.0 -0.6
O44A IAmb_Lg 06 32 41.0
comp=Z,152nm,0.7s
T47A Sharon Grove 8.30 80 Pn 06 30 14.0 -0.5
T47A IAmb_Lg 06 32 43.4
comp=Z,131nm,0.7s
T47A Sharon Grove 8.30 80 P **Pn 06 30 14.5 -0.1**
baz=266,SNR=19
T47A Sharon Grove 8.30 80 P 06 30 14.5
baz=266,SNR=19
PHWY Pilot Hill 8.32 313 Pn 06 30 15.2 +0.1
PHWY IAmb_Lg 06 32 53.2
comp=Z,108nm,0.9s
SMCO Snowmass 8.32 296 Pn **Pn 06 30 15.7 +0.5**
N23A Red Feather La 8.38 309 P 06 30 17.2
baz=124
TX31 Lajitas Ar. Si 8.48 221 Pn 06 30 17.4 +0.1
TX31 Lajitas Ar. Si 8.48 221 P **Pn 06 30 17.4 +0.1**
baz=37,SNR=15
TX31 Lajitas Ar. Si 8.48 221 P 06 30 17.4
baz=37,SNR=15
TX32 Lajitas Array 8.48 221 Pn 06 30 17.2 0.0
TXAR Lajitas Array 8.48 221 Pn **Pn 06 30 16.4 -0.9**
comp=Z,0.8nm,0.3s,baz=46,slow=10,SNR=40
TXAR Lg Lg 06 32 40.2
comp=Z,4.7nm,0.3s,baz=36,slow=26,SNR=7.6
TXAR LR LR 06 33 36.1
comp=Z,35nm,21.1s,baz=0.0,slow=38
L42A Oliver, Polo 8.50 42 Pn 06 30 17.2 -0.1
L42A IAmb_Lg 06 32 56.8
comp=Z,101nm,0.8s
V48A Smith Brothers 8.53 88 IAmb_Lg 06 32 56.3
comp=Z,48nm,0.7s
X48A Hartselle 8.54 97 IAmb_Lg 06 32 53.9
comp=Z,102nm,1.1s
SUSD Miller 8.59 352 Pn **Pn 06 30 18.4 -0.1**
SUSD IAmb_Lg 06 33 06.8
comp=Z,88nm,0.9s
SUSD Miller 8.59 352 P 06 30 18.9
baz=171
I37A Lemond, Waseca 8.61 19 IAmb_Lg 06 32 57.2
comp=Z,118nm,0.8s
P46A Rosedale 8.81 62 Pn 06 30 21.5 -0.1
JFWS Jewell Farm 8.86 36 Pn **Pn 06 30 22.0 -0.3**
JFWS IAmb_Lg 06 32 52.7
comp=Z,124nm,0.8s
JFWS Jewell Farm 8.86 36 P **Pn 06 30 21.8 -0.4**
baz=220,SNR=16
JFWS Jewell Farm 8.86 36 P 06 30 21.5
baz=220
JFWS Jewell Farm 8.86 36 P 06 30 21.8
baz=220,SNR=16
CLTN Cedars of Leba 8.91 86 Pn **Pn 06 30 23.0 +0.1**
CLTN IAmb_Lg 06 32 56.6
comp=Z,57nm,0.9s
LRAL Lakeview Retre 9.00 106 Pn **Pn 06 30 23.8 -0.4**
LRAL Lakeview Retre 9.00 106 P **Pn 06 30 23.7 -0.5**
baz=292,SNR=13
LRAL Lakeview Retre 9.00 106 P 06 30 23.5
baz=292,SNR=6.2
LRAL Lakeview Retre 9.00 106 P 06 30 23.7
baz=292,SNR=13
M44A Midewin, Midew 9.07 50 Pn **Pn 06 30 24.8 -0.3**
M44A IAmb_Lg 06 33 03.1
comp=Z,119nm,1.0s
WCI Wyandotte Cave 9.11 72 Pn **Pn 06 30 25.5 -0.1**
WCI IAmb_Lg 06 33 04.3
comp=Z,119nm,1.1s
WCI Wyandotte Cave 9.11 72 P 06 30 25.2
baz=259
BLO Bloomington 9.16 66 Pn 06 30 26.8 +0.3
SFIN Lafayette 9.19 58 Pn 06 30 27.1 +0.2
SFIN Lafayette 9.19 58 P 06 30 26.5
baz=244
Y49A Blount Mountai 9.20 100 Pn 06 30 27.3 +0.3
Y49A IAmb_Lg 06 33 18.8
comp=Z,62nm,0.9s
Y49A Blount Mountai 9.20 100 P **Pn 06 30 27.6 +0.6**
baz=286,SNR=5.9
Y49A Blount Mountai 9.20 100 P 06 30 27.6
baz=286,SNR=5.9
PV01 Paradox Valley 9.26 287 Pn 06 30 29.6 +1.6
121A Cookes Peak, D 9.30 252 Pn **Pn 06 30 28.6 0.0**
SWET Sewanee 9.31 91 IAmb_Lg 06 33 05.1
comp=Z,54nm,0.7s
U49A Red Boiling Sp 9.35 83 Pn **Pn 06 30 30.4 +1.5**
U49A IAmb_Lg 06 33 09.8
comp=Z,50nm,0.8s
PV02 Paradox Valley 9.40 287 Pn **Pn 06 30 31.8 +1.9**
PV02 IAmb_Lg 06 33 20.4
comp=Z,57nm,1.2s
PV13 Radium Mtn., P 9.46 287 Pn **Pn 06 30 32.2 +1.5**
PV13 IAmb_Lg 06 33 22.7
comp=Z,51nm,1.2s
I40A Norwalk 9.46 31 Pn **Pn 06 30 29.6 -0.9**
I40A IAmb_Lg 06 33 18.5
comp=Z,69nm,0.9s
PV12 Saucer Basin, 9.47 288 IAmb_Lg 06 33 34.7
comp=Z,48nm,1.0s
PV03 Paradox Valley 9.49 288 Pn 06 30 31.9 +0.7
PV11 David Mesa, Pa 9.52 288 IAmb_Lg 06 33 29.1
comp=Z,46nm,1.0s
PV18 Skein Mesa, Pa 9.54 287 Pn **Pn 06 30 33.6 +1.8**
L44A Lake County Fo 9.61 47 Pn **Pn 06 30 32.2 -0.3**
L44A Lake County Fo 9.61 47 P 06 30 32.0
baz=233
RWWY Rawlins 9.62 310 Pn 06 30 34.8 +1.9
RSSD Black Hills 9.66 330 Pn **Pn 06 30 34.0 +0.6**
PV10 Paradox Valley 9.66 288 IAmb_Lg 06 33 32.8
comp=Z,43nm,1.2s
FPAL Fort Paine 9.68 95 IAmb_Lg 06 33 37.0
comp=Z,62nm,1.0s
K43A Burlington 9.70 43 Pn **Pn 06 30 33.4 -0.4**
K43A IAmb_Lg 06 33 23.4
comp=Z,98nm,0.9s
K22A Casper 9.78 316 Pn 06 30 35.7 +0.6
K22A IAmb_Lg 06 33 48.2
comp=Z,62nm,0.9s
K22A Casper 9.78 316 P 06 30 34.7
baz=130,SNR=5.0
BRAL Brewton 9.80 116 Pn **Pn 06 30 34.9 -0.3**
BRAL Brewton 9.80 116 P 06 30 35.0
baz=302
W50A Signal Mountai 9.81 91 Pn **Pn 06 30 35.4 0.0**
W50A IAmb_Lg 06 33 34.1
comp=Z,109nm,0.8s
SPMN Marine on St. 9.89 19 Pn 06 30 35.6 -0.8
SPMN IAmb_Lg 06 33 26.7
comp=Z,48nm,0.9s
F33A 5 Mile Ranch, 9.92 4 Pn 06 30 36.6 -0.2
F33A IAmb_Lg 06 33 30.1
comp=Z,74nm,1.2s
R49A Shelbyville 9.98 73 Pn 06 30 37.6 -0.1
R49A IAmb_Lg 06 33 34.2
comp=Z,62nm,0.9s
250A Grady 9.99 110 Pn 06 30 37.0 -0.8
250A Grady 9.99 110 P **Pn 06 30 37.2 -0.7**
baz=296,SNR=9.6
250A Grady 9.99 110 P 06 30 37.2
baz=296,SNR=9.6

P48A Milroy 10.06 66 Pn 06 30 38.1 -0.6
T50A Nancy 10.11 80 Pn 06 30 39.3 -0.1
I42A Draeger Farm, 10.23 37 Pn **Pn 06 30 40.0 -1.1**
X51A Calhoun 10.29 94 Pn **Pn 06 30 41.5 -0.3**
F36A Milaca 10.32 15 Pn 06 30 40.7 -1.6
CPCT Cooper Cave 10.42 89 Pn 06 30 43.4 -0.3
V51A Loudon 10.53 87 P **Pn 06 30 44.5 -0.6**
baz=275,SNR=7.5
V51A Loudon 10.53 87 P 06 30 44.5
baz=275,SNR=7.5
P49A Miami Univ. Ec 10.61 66 P **Pn 06 30 45.4 -0.9**
baz=254,SNR=9.2
P49A Miami Univ. Ec 10.61 66 P 06 30 45.4
baz=254
P49A Miami Univ. Ec 10.61 66 P 06 30 45.4
baz=254,SNR=9.2
R50A Paris 10.64 73 Pn 06 30 46.5 -0.1
TKL Tuckaleechee C 11.01 87 Pn **Pn 06 30 50.5 -1.2**
comp=Z,0.3nm,0.3s,baz=250,slow=5.9,SNR=3.3
TKL Lg Lg 06 33 55.7
comp=Z,4.7nm,0.3s,baz=178,slow=22,SNR=9.5
TKL Tuckaleechee C 11.01 87 Pn **Pn 06 30 51.1 -0.6**
S51A Beattyville 11.14 77 P **Pn 06 30 53.4 -0.1**
baz=265,SNR=12
S51A Beattyville 11.14 77 P 06 30 53.4
baz=265,SNR=12
S51A P 06 30 53.4
baz=265,SNR=12
BW06 Boulder Array 11.66 309 P 06 31 00.3
baz=122,SNR=7.4
PDAR Pinedale Array 11.66 309 Pn **Pn 06 31 00.7 -0.3**
comp=Z,1.1nm,0.3s,baz=124,slow=15,SNR=27
PDAR Lg Lg 06 34 17.0
comp=Z,0.3nm,0.3s,baz=121,slow=29,SNR=2.7
PDAR LR LR 06 36 39.7
comp=Z,60nm,20.3s,baz=53,slow=43
PDAR Pinedale Array 11.66 309 Pn 06 31 00.9 0.0
GOGA Godfrey 11.68 98 P 06 31 00.4
baz=286
L48A N Adams 11.69 55 P **Pn 06 30 59.3 -1.7**
baz=243,SNR=8.7
L48A N Adams 11.69 55 P 06 30 59.3
baz=243,SNR=8.7
L48A P 06 30 59.3
baz=243,SNR=8.7
ACSO Alum Creek Sta 12.08 65 P 06 31 04.6
baz=254,SNR=5.3
AAM Ann Arbor 12.36 55 Pn **Pn 06 31 09.1 -1.1**
AAM Ann Arbor 12.36 55 P 06 31 08.5
baz=244
AGMN Agassiz Nation 12.40 5 P 06 31 09.7
baz=186
P52A Corning 12.57 68 P 06 31 11.5
baz=258
EYMN Ely 12.75 18 Pn Pn 06 31 12.8 -2.8
REDW Red Top Meadow 12.79 310 Pn Pn 06 31 17.2 +1.0
D41A Chassel 12.89 28 Pn Pn 06 31 14.3 -3.2
Q53A Leroy 12.90 72 P 06 31 15.7
baz=262,SNR=5.6
MOOW Moose Ponds 12.92 311 Pn Pn 06 31 18.4 +0.3
S54A Dingess, Beckl 12.96 77 P 06 31 16.5
baz=267,SNR=7.0
255A Hazlehurst 12.96 104 Pn Pn 06 31 16.5 -1.9
V55A Taylorsville 13.06 86 Pn Pn 06 31 18.8 -1.0
GLMI Grayling 13.12 44 P 06 31 18.2
baz=232
R54A Victor 13.24 75 P 06 31 20.4
baz=265
O53A New Philadelph 13.40 66 P 06 31 21.3
baz=256
BLA Blacksburg 13.65 80 P 06 31 26.2
baz=270
R55A Marlinton 13.93 75 P 06 31 29.9
baz=266
ULM Lac du Bonnet 14.34 4 Pn Pn 06 31 32.1 -5.1
comp=Z,0.3nm,0.3s,baz=186,slow=11,SNR=6.7
ULM Sn Sn 06 34 04.5 -12
comp=Z,0.8nm,0.3s,baz=107,slow=17,SNR=5.1
ULM Lg Lg 06 35 36.7
comp=Z,0.7nm,0.3s,baz=89,slow=19,SNR=2.4
N54A Moraine State 14.47 65 Pn **Pn 06 31 36.0 -3.1**
N54A Moraine State 14.47 65 P 06 31 35.7
baz=255
R56A Bull Pasture M 14.50 75 P 06 31 36.8
baz=266
L53A Girard 14.56 60 P 06 31 38.8
baz=251
T57A Hurt 14.58 80 Pn 06 31 39.2 -1.4
ELK Elko 14.85 294 Pn **Pn 06 31 46.3 +1.8**
comp=Z,0.0nm,0.3s,baz=54,slow=4.9,SNR=2.3
M54A Oil Creek Stat 14.86 63 Pn **Pn 06 31 41.1 -3.2**
HLID Hailey 15.18 305 Pn **Pn 06 31 48.6 -0.1**
HLID IAmb IAmb 06 31 52.9
comp=Z,1.6nm,0.9s
WVNY West Valley, N 15.88 60 Pn **Pn 06 31 54.9 -2.8**
WVNY IAmb IAmb 06 31 55.5
comp=Z,13nm,1.4s
T59A Double "B" Far 15.94 80 Pn **Pn 06 31 56.6 -1.9**
T59A IAmb IAmb 06 32 21.9
comp=Z,4.3nm,1.2s
SSPA Standing Stone 15.96 67 Pn **Pn 06 31 55.9 -2.8**
SSPA IAmb IAmb 06 32 12.2
comp=Z,11nm,1.4s
SADO Sadowa 16.40 52 Lg Lg 06 36 43.4
comp=Z,0.2nm,0.3s,baz=341,slow=18,SNR=3.8
N58A Sunbury 16.87 67 Pn **Pn 06 32 08.0 -2.4**
NVAR Mina Array Bea 16.90 285 Pn **Pn 06 32 12.1 +1.0**
comp=Z,0.1nm,0.3s,baz=89,slow=13,SNR=3.2
TEIG Tepich 17.55 151 P **Pn 06 32 19.0 0.0**
comp=Z,0.2nm,0.3s,baz=353,slow=14,SNR=1.8
WUPA West Chester U 17.58 100 P **Pn 06 32 17.3 -2.0**
CMIG Matias Romero 18.90 173 P **Pn 06 32 36.2 +0.7**
comp=Z,0.2nm,0.3s,baz=6.4,slow=6.4,SNR=2.7
YBH Yreka Blue Hor 20.57 294 P Pn 06 32 55.2 -0.2
comp=Z,4.3nm,0.7s,baz=104,slow=9.5,SNR=10
YBH Yreka Blue Hor 20.57 294 IAmb IAmb 06 33 00.5
comp=Z,5.5nm,0.8s
YKA Yellowknife Ar 28.68 343 P **P 06 34 11.2 +0.2**
comp=Z,0.2nm,0.6s,baz=141,slow=8.7,SNR=9.7
ILAR Eielson Array 41.10 330 P **P 06 35 59.0 +1.1**
comp=Z,0.9nm,0.8s,baz=106,slow=7.0,SNR=8.2
EKA Eskdalemuir Ar 63.52 40 P **P 06 38 43.8 -0.7**
comp=Z,0.8nm,0.6s,baz=302,slow=4.8,SNR=4.7
FINES FINESS Array B 72.67 25 P **P 06 39 41.7 -0.1**
comp=Z,0.8nm,0.6s,baz=317,slow=8.1,SNR=5.6

*IDC **19** 06:34:59.5±1.6,34.˙79N×26.˙98E,h0km,mb3.6/4,*
mb1 3.6/6,mb1mx3.4/41,mbtmp3.5/6,ML3.8/2,Error
ellipse: s-maj=42.1km s-min=24.9km az=151.0
*ATH **19** 06:35:00.6,34.˙87N×26.˙77E,h12km±2km,ML3.7/4,Error*
ellipse: s-maj=4.3km s-min=1.1km az=343.0
*ISK **19** 06:35:01.1,34.˙96N×26.˙75E,h10km,ML3.5/13*
*THE **19** 06:35:03.0,35.˙07N×26.˙66E,h1km±1km,ML3.4/6,Error*
ellipse: s-maj=5.1km s-min=0.9km az=160.0
*HLW **19** 06:35:04.5,34.˙76N×26.˙90E,h13km±12km,Md3.8,Ml3.8*
*DDA **19** 06:35:07.1,35.˙42N×27.˙06E,h13km±1km,MW3.6*
ISC 19 06:35:00.9±1.1,**34.˙92N**±0.˙03×**26.71E**±0.03,**h13**km±8km,
n69,σ1.5**69**/92,**mb3.5**/4,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
ZKR	**Zakros**	**0.45**	**295**	P	**Pb**	**06 35 10.5**	**-0.2**
ZKR				S	**Sb**	**06 35 17.8**	**+0.5**
ZKR				AML	AML	06 35 17.8	
	comp=N,18106μm,0.4s						
ZKR				AML	AML	06 35 17.9	
	comp=E,21132μm,0.4s						
ZKR	**Zakros**	**0.45**	**295**	P	**Pb**	**06 35 10.5**	**-0.2**
ZKR				S	**Sb**	**06 35 17.3**	**0.0**
	comp=E,10μm,0.4s						
ZKR	**Zakros**	**0.45**	**295**	PG	**Pb**	**06 35 10.6**	**-0.1**
ZKR				SG	**Sb**	**06 35 17.8**	**+0.5**
STIA	**Sitia Lasithi**	**0.58**	**299**	P	**Pg**	**06 35 12.5**	**+0.2**
STIA				S	**Sb**	**06 35 20.7**	**-0.4**
KARP	**Karpathos**	**0.72**	**30**	P	**Pg**	**06 35 14.7**	**-0.3**
KARP				S	**Sg**	**06 35 25.3**	**+0.7**
KARP				AML	AML	06 35 25.6	
	comp=N,21924μm,0.4s						
KARP				AML	AML	06 35 25.8	
	comp=E,25764μm,0.5s						
KARP	**Karpathos**	**0.72**	**30**	P	**Pg**	**06 35 14.5**	**-0.5**
KARP				S	**Sg**	**06 35 25.1**	**+0.6**
	comp=E,12μm,0.5s						
KARP	**Karpathos**	**0.72**	**30**	PG	**Pg**	**06 35 14.5**	**-0.5**

KARP SG **Sg 06 35 24.8 +0.3**
FRMA Ierapetra Chan 0.81 277 P **Pg 06 35 15.1 -1.5**
FRMA S **Sg 06 35 26.0 -1.2**
comp=E,1μm,0.4s
NPS Neapolis 0.96 291 P **Pb 06 35 19.9 +0.5**
NPS S **Sn 06 35 33.7 -0.1**
NPS AML AML 06 35 40.1
comp=N,7525μm,0.8s
NPS AML AML 06 35 40.5
comp=E,9733μm,0.5s
NPS Neapolis 0.96 291 P **Pb 06 35 19.7 +0.2**
NPS S **Sn 06 35 33.3 -0.4**
comp=E,4μm,0.7s
HRKL Herakleio 1.38 287 P **Pg 06 35 27.0 -0.4**
HRKL Herakleio 1.38 287 PN **Pg 06 35 27.7 +0.3**
KSTL Kastelli Herak 1.40 286 P **Pn 06 35 24.7 -1.4**
KSTL S **Sb 06 35 38.6 -6.0**
SIVA Sivas 1.57 274 P **Pg 06 35 31.0 0.0**
NIS1 Nisyros Isl. 1.72 13 PN **Pn 06 35 31.1 +0.6**
ARG Arkhangelos 1.73 41 P **Pn 06 35 31.8 +1.1**
ARG AML AML 06 35 59.9
comp=N,1057μm,0.5s
ARG AML AML 06 36 03.9
comp=E,1221μm,0.8s
ARG Arkhangelos 1.73 41 P **Pn 06 35 32.6 +1.9**
ARG S **Sn 06 35 54.7 +2.1**
comp=E,602nm,0.7s
ARG Arkhangelos 1.73 41 PN **Pn 06 35 31.8 +1.1**
SANT Santorini 1.77 325 P **Pn 06 35 31.6 +0.3**
SANT Santorini 1.77 325 PN **Pn 06 35 32.6 +1.3**
THR8 Santorini-Mono 1.79 326 P **Pn 06 35 31.7 +0.2**
SNT5 Nea Kammeni, S 1.83 324 P **Pn 06 35 32.6 +0.6**
THR3 Thira Island, 1.83 325 P **Pn 06 35 32.5 +0.5**
KOSK Kos Island 1.84 7 PN **Pn 06 35 33.3 +1.2**
THT2 Imerovigli 1.84 326 PN **Pn 06 35 33.7 +1.5**
THR5 Thira Island, 1.86 324 P **Pn 06 35 33.0 +0.5**
DATC Datca-Mugla 1.99 23 PN **Pb 06 35 34.8 +0.6**
VAM Vamos 2.12 284 P **Pb 06 35 39.0 -0.1**
GVDS Gavdos 2.16 269 PN **Pb 06 35 39.2 -0.6**
GVD Gavdhos 2.16 269 PN **Pb 06 35 38.8 -1.1**
BODT Bodrum 2.19 13 PN **Pn 06 35 37.5 +0.5**
BDRM Kayabasi 2.22 15 *i*P **Pn 06 35 38.1 +0.7**
BDRM *i*S **Sn 06 36 04.8 +0.1**
BDRM IAML 06 36 14.0
comp=E,54nm,0.6s
BDRM IAML 06 36 25.0
comp=N,84nm,0.6s
TURN Turunc 2.23 33 *i*P **Pn 06 35 37.2 -0.3**
TURN *i*S **Sn 06 36 01.6 -3.3**
TURN IAML 06 36 13.0
comp=E,108nm,0.8s
TURN IAML 06 36 15.0
comp=N,120nm,0.6s
TURN Turunc 2.23 33 PN **Pn 06 35 38.3 +0.8**
IMMV Iera Moni Meta 2.30 284 PN **Pn 06 35 40.4 +1.9**
APE Apeiranthos 2.35 336 P **Pn 06 35 39.5 +0.3**
APE Apeiranthos 2.35 336 P **Pn 06 35 39.7 +0.5**
APE S **Sn 06 36 06.6 -1.3**
comp=N,330nm,0.6s
APE Apeiranthos 2.35 336 PN **Pn 06 35 39.9 +0.7**
DALY Dalyan (Mula) 2.46 39 *i*P **Pn 06 35 42.4 +1.6**
DALY *i*S **Sn 06 36 10.8 +0.1**
DALY IAML 06 36 23.0
comp=E,103nm,0.5s
DALY IAML 06 36 30.0
comp=N,108nm,0.8s
DALY Dalyan (Mula) 2.46 39 PN **Pn 06 35 42.1 +1.4**
YER Yerkesik 2.55 30 PN **Pn 06 35 42.8 +0.8**
FETY Fethiye 2.58 48 *i*P **Pn 06 35 42.1 -0.2**
FETY *i*S **Sn 06 36 11.7 -1.8**
FETY IAML 06 36 33.0
comp=N,51nm,0.8s
FETY IAML 06 36 35.0
comp=E,29nm,0.8s
MULA Mugla, Merkez- 2.67 29 *i*P **Pn 06 35 45.6 +2.0**
MULA *i*S **Sn 06 36 12.1 -3.8**
MULA IAML 06 36 26.0
comp=N,58nm,0.9s
MULA IAML 06 36 29.0
comp=E,100nm,0.8s
AKAS Kas 2.70 60 *i*P **Pn 06 35 43.8 -0.3**
AKAS *i*S Sn 06 36 04.9 -12
AKAS IAML 06 36 18.0
comp=N,92nm,0.4s
AKAS IAML 06 36 18.0
comp=E,54nm,0.4s
AKAS Kas 2.70 60 PN **Pn 06 35 45.1 +1.0**
SMG Samos 2.78 2 P **Pn 06 35 44.1 -1.1**
AYDN Tasoluk 2.89 19 *i*P **Pn 06 35 47.4 +0.7**
AYDN *i*S **Sn 06 36 18.9 -2.4**
AYDN IAML 06 36 47.0
comp=E,31nm,1.3s
AYDN IAML 06 36 48.0
comp=N,25nm,0.8s
TAVA DENIZLI_Tavas 3.10 34 *i*P **Pn 06 35 50.8 +1.2**
TAVA *i*S **Sn 06 36 23.2 -3.4**
TAVA IAML 06 36 40.0
comp=N,70nm,0.8s
TAVA IAML 06 36 44.0
comp=E,75nm,0.8s
AYDB Zeytinkoy-Aydi 3.16 17 PN **Pn 06 35 51.5 +1.0**
ELL Elmali 3.17 54 PN **Pn 06 35 51.9 +1.3**
GOLH Golhisar 3.27 44 *i*P **Pn 06 35 53.3 +1.5**
GOLH *i*S **Sn 06 36 25.4 -5.3**
GOLH IAML 06 36 52.0
comp=N,135nm,1.3s
GOLH IAML 06 36 53.0
comp=E,18nm,1.3s
KORT Korkueli 3.61 54 *i*P **Pn 06 35 58.7 +2.1**
KORT *i*S Sn 06 36 28.5 -11
KORT IAML 06 36 48.0
comp=E,68nm,0.7s
KORT IAML 06 36 52.0
comp=N,33nm,0.9s
SLUM Salum 3.65 201 P **Pn 06 35 59.2 +2.3**
baz=205
SLUM AMP 06 36 00.0
baz=205
SLUM S **Sn 06 36 38.5 -1.3**
baz=205
USAK Uak-Merkez 4.21 25 *i*P **Pn 06 36 05.5 +0.7**
USAK *i*S Sn 06 36 42.0 -12
USAK IAML 06 36 49.0
comp=N,5.3nm,0.7s
USAK IAML 06 38 18.0
comp=E,19nm,4.6s
SEDI Konya, Seydise 4.80 57 *i*P **Pn 06 36 15.0 +2.0**
SEDI *i*S Sn 06 36 53.0 -15
SEDI IAML 06 37 16.0
comp=E,21nm,0.6s
SEDI IAML 06 37 21.0
comp=N,32nm,0.8s
SWA2 5.76 191 P **Pn 06 36 28.1 +2.0**
baz=193
SWA2 AMP 06 37 00.0
baz=193
HNAT Natroun 6.22 147 P **Pn 06 36 33.2 +0.7**
baz=147
HNAT AMP 06 37 00.0
baz=147
RYAN Fayoum 6.56 152 P **Pn 06 36 37.7 +0.6**
baz=152
RYAN AMP 06 37 00.0
baz=152
RYAN S **Sn 06 37 46.1 -5.6**
baz=152
HSAF As Saff 6.69 141 P **Pn 06 36 39.3 +0.4**
baz=141
GLL Jalalah 6.80 140 P **Pn 06 36 40.3 -0.2**
baz=140
SUZ Suez 7.24 133 P **Pn 06 36 47.7 +1.3**
baz=132
HFRF Wahat Farafira 7.87 170 P **Pn 06 36 56.2 +1.1**
baz=170
MODS Modra-Piesok 15.16 335 *e*PN **Pn 06 38 30.9 -3.7**
AKASG Malin Array Be 15.88 6 Pn **Pn 06 38 45.3 +1.4**
comp=N,0.6nm,0.3s,baz=194,slow=10,SNR=4.2
GERES GERESS Array B 16.92 329 P **Pn 06 38 58.8 +1.5**
comp=N,0.1nm,0.3s,baz=148,slow=15,SNR=2.6
ESDC Sonseca Array 24.79 290 P **P 06 40 26.0 +3.5**
comp=N,0.2nm,0.5s,baz=87,slow=9.4,SNR=1.8
TORD Torodi Ar. Bea 31.33 232 P **P 06 41 22.5 +1.4**
comp=N,0.9nm,0.9s,baz=29,slow=8.6,SNR=2.3
MKAR Makanchi Array 42.84 56 P **P 06 42 58.8 +0.2**
comp=N,0.4nm,0.6s,baz=269,slow=9.4,SNR=7.5

ZALV **Zalesovo Beam** 44.25 46 P P 06 43 08.8 -1.0
comp=N,1.1nm,0.4s,baz=275,slow=8.5,SNR=2.7

TAP ***19*** *07:01:33.2,24.82N×121.95E,h9km,ML3.2,C*
JMA ***19*** *07:01:34.0±0.1,24.80N×121.92E,h16km,M2.5*
ISC 19 07:01:33.3±0.8,**24.81N**±0.02×**121.96E**±0.02,**h10**km±5km,
n87,σ0s**63**/152,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EGS		**0.04**	**324**	*i*	P		**Pg**	**07 01 35.1**	**-0.1**
	baz=331								
NTC	**Toucheng**	**0.12**	**290**		P		**Pg**	**07 01 36.3**	**+0.1**
	baz=294								
NTC					S		**Sg**	**07 01 38.4**	**+0.1**
	baz=294								
ILA	**Ilan**	**0.20**	**256**		P		**Pg**	**07 01 37.6**	**+0.2**
	baz=252								
ILA				*i*	S		**Sg**	**07 01 41.2**	**+1.0**
	baz=252								
TWB1	**Santiao Chiao**	**0.20**	**8**		P		**Pg**	**07 01 36.7**	**-0.7**
	baz=11								
TWB1				*i*	S		**Sg**	**07 01 40.0**	**-0.3**
	baz=11								
TIPB	**Shuangxi**	**0.20**	**323**	*i*	P		**Pg**	**07 01 37.7**	**+0.2**
	baz=321								
TIPB				*i*	S		**Sg**	**07 01 40.5**	**+0.1**
	baz=321								
TWC	**Suao**	**0.23**	**206**	*i*	P		**Pg**	**07 01 38.3**	**+0.3**
	baz=203								
TWC				*i*	S		**Sg**	**07 01 41.4**	**+0.3**
	baz=203								
TWE	**Neicheng**	**0.28**	**251**		P		**Pg**	**07 01 39.1**	**+0.2**
	baz=248								
TWE					S		**Sg**	**07 01 43.3**	**+0.6**
	baz=248								
NDS	**Dongshan**	**0.28**	**231**		P		**Pg**	**07 01 39.4**	**+0.4**
	baz=229								
NDS					S		**Sb**	**07 01 44.3**	**-0.9**
	baz=229								
NWF	**Wu-fen Shan**	**0.30**	**328**	*i*	P		**Pg**	**07 01 39.8**	**+0.4**
	baz=318								
NWF				*i*	S		**Sg**	**07 01 44.5**	**+1.0**
	baz=318								
WFSB	**Wu-fen Shan**	**0.30**	**328**		P		**Pg**	**07 01 39.8**	**+0.4**
	baz=318								
WFSB					S		**Sg**	**07 01 44.5**	**+1.1**
	baz=318								
TNOU	**National Taiwa**	**0.38**	**334**		P		**Pg**	**07 01 41.1**	**+0.4**
	baz=325								
TNOU					S		**Sg**	**07 01 45.9**	**+0.2**
	baz=325								
ENTT	**Nioudou**	**0.40**	**244**	*i*	P		**Pg**	**07 01 41.6**	**+0.5**
	baz=242								
ENTT					S		**Sb**	**07 01 47.4**	**-1.1**
	baz=242								
EWUT	**Wuta**	**0.40**	**204**	*i*	P		**Pg**	**07 01 41.4**	**+0.2**
	baz=211								
EWUT					S		**Sg**	**07 01 47.5**	**+1.0**
	baz=211								
NWLT	**Wulai**	**0.41**	**265**	*i*	P		**Pg**	**07 01 41.7**	**+0.2**
	baz=264								
NWLT				*i*	S		**Sg**	**07 01 46.6**	**-0.3**
	baz=264								
NHDH	**Xindian Distri**	**0.42**	**291**	*i*	P		**Pb**	**07 01 42.3**	**-0.5**
	baz=280								
NHDH				*i*	S		**Sb**	**07 01 48.0**	**-1.2**
	baz=280								
NDT	**Datong Townshi**	**0.46**	**243**	*i*	P		**Pg**	**07 01 42.7**	**+0.5**
	baz=242								
NDT					S		**Sg**	**07 01 48.0**	**-0.2**
	baz=242								
TATO	**Taipei**	**0.46**	**291**		P		**Pg**	**07 01 42.5**	**+0.3**
	baz=280								
TATO					S		**Sg**	**07 01 48.8**	**+0.6**
	baz=280								
NWRT	**Kuosheng**	**0.47**	**325**		P		**Pg**	**07 01 43.1**	**+0.6**
	baz=324								
YM01	**YM01**	**0.48**	**313**		P		**Pb**	**07 01 43.6**	**-0.3**
	baz=303								
YM01					S		**Sg**	**07 01 49.9**	**+0.8**
	baz=303								
YM11	**YM11**	**0.49**	**315**		P		**Pb**	**07 01 44.0**	**-0.1**
	baz=314								
YM10	**YM10**	**0.49**	**314**		P		**Pb**	**07 01 43.9**	**-0.2**
	baz=313								
YM05	**YM05**	**0.50**	**315**		P		**Pb**	**07 01 43.7**	**-0.4**
	baz=314								
YM08	**YM08**	**0.50**	**318**		P		**Pg**	**07 01 43.5**	**+0.5**
	baz=317								
YM04	**YM04**	**0.51**	**312**		P		**Pg**	**07 01 43.8**	**+0.6**
	baz=310								
YM04					*e*S		**Sb**	**07 01 51.0**	**-0.8**
	baz=310								
ANP	**Anpu**	**0.54**	**313**		P		**Pg**	**07 01 44.4**	**+0.5**
	baz=313								
YHNB	**Yeheng**	**0.55**	**255**		P		**Pg**	**07 01 43.9**	**-0.1**
	baz=254								
YHNB					S		**Sg**	**07 01 50.8**	**-0.4**
	baz=254								
NSK	**Sanguang**	**0.56**	**256**	*i*	P		**Pg**	**07 01 44.2**	**0.0**
	baz=264								
NSK				*i*	S		**Sg**	**07 01 50.7**	**-0.9**
	baz=264								
TWS1	**Kuangyinshan**	**0.57**	**300**	*i*	P		**Pb**	**07 01 45.5**	**+0.3**
	baz=300								
NTY	**Taoyuan**	**0.63**	**287**		P		**Pb**	**07 01 46.1**	**-0.2**
	baz=276								
NTY					S		**Sb**	**07 01 54.6**	**-0.6**
	baz=276								
NNS	**Nan Shan**	**0.65**	**235**	*i*	P		**Pg**	**07 01 45.8**	**-0.1**
	baz=227								
NNS					S		**Sg**	**07 01 54.5**	**+0.1**
	baz=227								
NNSB	**Datong**	**0.65**	**234**		P		**Pg**	**07 01 45.4**	**-0.4**
	baz=233								
NNSB					*e*S		**Sb**	**07 01 55.3**	**-0.6**
	baz=233								
NNSH	**Datong**	**0.65**	**234**		P		**Pg**	**07 01 46.0**	**+0.1**
	baz=234								
NNSH					S		**Sg**	**07 01 54.2**	**-0.2**
	baz=234								
NACB	**Ninganchiao**	**0.72**	**207**		P		**Pg**	**07 01 47.5**	**+0.3**
	baz=218								
NACB					S		**Sg**	**07 01 56.7**	**+0.2**
	baz=218								
NCUH	**Zhongli**	**0.72**	**283**	*i*	P		**Pb**	**07 01 48.3**	**+0.4**
	baz=281								
NCUH					S		**Sb**	**07 01 58.0**	**+0.3**
	baz=281								
ETLH	**Xiulin Townshi**	**0.74**	**216**		P		**Pg**	**07 01 47.8**	**+0.1**
	baz=215								
ETLH					S		**Sb**	**07 01 58.3**	**-0.3**
	baz=215								
NJD	**Zhudong**	**0.79**	**265**	*e*P			**Pn**	**07 01 50.1**	**-0.4**
	baz=256								
TWD	**Chiawan**	**0.80**	**204**	*i*	P		**Pg**	**07 01 49.0**	**+0.3**
	baz=204								
TWD					S		**Sg**	**07 01 59.0**	**-0.2**
	baz=204								
PCYT	**Pengchaiyu**	**0.82**	**7**	*i*	P		**Pg**	**07 01 49.4**	**+0.3**
	baz=7.0								
PCYT					S		**Sn**	**07 02 02.7**	**-0.4**
	baz=7.0								
HSN1	**Hsinchu**	**0.85**	**268**		P		**Pb**	**07 01 50.5**	**+0.3**
	baz=260								
HSN1					S		**Sn**	**07 02 03.9**	**0.0**
	baz=260								
FUSS	**Fushou**	**0.86**	**229**		P		**Pg**	**07 01 49.9**	**0.0**
	baz=229								
FUSS					S		**Sb**	**07 02 02.1**	**0.0**
	baz=229								
LIOB	**Emei**	**0.87**	**259**	*i*	P		**Pn**	**07 01 52.2**	**+0.6**
	baz=259								
LIOB					S		**Sn**	**07 02 03.2**	**-1.2**
	baz=259								
SBCB	**Hsinchu**	**0.88**	**269**		P		**Pn**	**07 01 51.6**	**-0.1**
	baz=268								
SBCB					S		**Sn**	**07 02 05.0**	**+0.4**
	baz=268								
NSTT	**Nanjuang**	**0.89**	**258**	*i*	P		**Pn**	**07 01 51.7**	**-0.1**
	baz=258								
NSTT					S		**Sn**	**07 02 03.9**	**-0.8**
	baz=258								
HSN	**Hsinchu**	**0.90**	**270**	*e*P			**Pn**	**07 01 51.9**	**0.0**
	baz=270								
HSN				*e*S			**Sb**	**07 02 02.7**	**-0.3**
	baz=270								
TDCB	**Techi**	**0.92**	**233**		P		**Pg**	**07 01 50.9**	**-0.1**
	baz=227								
TDCB					S		**Sb**	**07 02 03.6**	**-0.1**
	baz=227								
WHF	**Hehuan Shan**	**0.92**	**224**	*i*	P		**Pg**	**07 01 50.4**	**-0.6**
	baz=223								
WHF				*e*S			**Sb**	**07 02 03.7**	**-0.2**
	baz=223								
JYNG	**Yonagunijimaku**	**0.97**	**112**		P		**Pb**	**07 01 51.9**	**-0.2**
JYNG				*e*S			**Sg**	**07 02 04.8**	**+0.3**
YOJ	**Yonaguni jima**	**1.02**	**110**		P		**Pb**	**07 01 53.2**	**+0.2**
YOJ				*e*S			**Sb**	**07 02 06.5**	**0.0**
YOJ	**Yonaguni jima**	**1.02**	**110**		P		**Pb**	**07 01 52.2**	**-0.8**
	baz=111								
YOJ					S		**Sb**	**07 02 06.0**	**-0.5**
	baz=111								
CHGB	**Renai**	**1.03**	**224**		P		**Pb**	**07 01 51.9**	**-1.5**
	baz=216								
CHGB					S		**Sn**	**07 02 09.0**	**+0.3**
	baz=216								
WHP	**Taichung City**	**1.06**	**240**		P		**Pb**	**07 01 53.5**	**-0.3**
	baz=240								
WHP				*e*S			**Sn**	**07 02 08.2**	**-1.0**
	baz=240								
ESL	**Shilin**	**1.10**	**206**		P		**Pb**	**07 01 53.6**	**-0.8**
	baz=205								
ESL					S		**Sg**	**07 02 09.0**	**+0.1**
	baz=205								
OWD	**Renai**	**1.11**	**220**		P		**Pb**	**07 01 54.2**	**-0.5**
	baz=220								
OWD					S		**Sn**	**07 02 10.7**	**+0.2**
	baz=220								
NSY	**Sanyi**	**1.16**	**250**	*e*S			**Sn**	**07 02 12.5**	**+1.1**
	baz=250								
DPDB	**Guoxing**	**1.22**	**231**		P		**Pg**	**07 01 56.8**	**+0.1**
	baz=239								
DPDB				*e*S			**Sb**	**07 02 11.8**	**-0.4**
	baz=239								
EGFH	**Guangfu**	**1.24**	**203**		P		**Pn**	**07 01 55.7**	**-0.9**
	baz=210								
EGFH				*e*S			**Sb**	**07 02 12.6**	**-0.2**
	baz=210								
WDJ	**Dajia District**	**1.28**	**249**	*e*P			**Pg**	**07 01 58.8**	**+0.8**
	baz=248								
WDJ					S		**Sg**	**07 02 15.8**	**+1.2**
	baz=248								
VWDT	**VWDT**	**1.29**	**215**		P		**Pb**	**07 01 57.5**	**-0.2**
	baz=215								
VWDT					*e*S		**Sg**	**07 02 14.6**	**-0.3**
	baz=215								
SMLT	**Sun Moon Lake**	**1.34**	**226**	*i*	P		**Pb**	**07 01 58.3**	**-0.2**
	baz=218								
SMLT					*e*S		**Sg**	**07 02 17.0**	**+0.7**
	baz=218								
TYC	**Yuchr**	**1.35**	**228**	*i*	P		**Pb**	**07 01 58.5**	**-0.1**
	baz=219								
TYC					*e*S		**Sg**	**07 02 16.6**	**-0.2**
	baz=219								
SSLB	**Suanglung**	**1.37**	**222**		P		**Pg**	**07 01 59.4**	**-0.2**
	baz=211								
SSLB					*e*S		**Sn**	**07 02 16.8**	**+0.1**
	baz=211								
HGSD	**Ruisui**	**1.40**	**200**		P		**Pb**	**07 01 59.5**	**0.0**
	baz=212								
HGSD					*e*S		**Sg**	**07 02 19.6**	**+1.2**
	baz=212								
WCHH	**Zhanghua**	**1.47**	**240**	*e*P			**Pg**	**07 02 01.1**	**-0.4**
	baz=238								
WCHH					*e*S		**Sg**	**07 02 20.6**	**0.0**
	baz=238								
WNT	**Mingjian**	**1.49**	**232**		P		**Pg**	**07 02 02.5**	**+0.7**
	baz=216								
WNT					*e*S		**Sg**	**07 02 22.2**	**+1.1**
	baz=216								
WJS	**Zhushan**	**1.49**	**229**		P		**Pg**	**07 02 02.5**	**+0.5**
	baz=217								
WJS					S		**Sg**	**07 02 24.1**	**+2.7**
	baz=217								
YULB	**Yu-li**	**1.54**	**203**		P		**Pb**	**07 02 01.7**	**-0.2**
	baz=213								
YULB					*e*S		**Sb**	**07 02 21.7**	**+0.3**
	baz=213								
ALS	**Alishan**	**1.67**	**219**	*i*	P		**Pg**	**07 02 05.3**	**0.0**
	baz=218								
ALS					S		**Sg**	**07 02 27.6**	**+0.6**
	baz=218								
CHN5	**Tsauling**	**1.68**	**224**	*i*	P		**Pg**	**07 02 06.3**	**+0.8**
	baz=223								
CHN5					S		**Sg**	**07 02 28.2**	**+0.8**
	baz=223								
IRIF	**Iriomote-Funau**	**1.68**	**106**		P		**Pg**	**07 02 06.0**	**+0.4**
IRIF				*e*S			**Sb**	**07 02 26.1**	**+0.6**
WDLH	**Douliu**	**1.71**	**229**	*e*P			**Pg**	**07 02 05.5**	**-0.6**
	baz=228								
WDLH					S		**Sg**	**07 02 28.6**	**+0.2**
	baz=228								
FULB	**Fuli**	**1.72**	**201**	*e*P			**Pn**	**07 02 03.6**	**+0.4**
	baz=211								
JKRS	**Kuro-shima**	**1.96**	**107**		P		**Pn**	**07 02 06.2**	**-0.3**
JKRS				*e*S			**Sn**	**07 02 29.7**	**-1.4**
STYH	**Taoyuan**	**1.96**	**214**	*e*P			**Pb**	**07 02 08.4**	**-0.6**
	baz=200								
STYH					*e*S		**Sb**	**07 02 34.4**	**+0.9**
	baz=200								
STYT	**Tauyuan**	**1.98**	**214**	*e*S			**Sg**	**07 02 35.8**	**-1.0**
	baz=200								
JIJ	**Ishigaki jima**	**2.04**	**102**		P		**Pn**	**07 02 08.6**	**+1.0**
JIJ				*e*S			**Sn**	**07 02 33.3**	**+0.1**
LONT	**Longtian**	**2.04**	**202**	*e*P			**Pb**	**07 02 09.3**	**-1.1**
	baz=199								
CHN1	**Nanshi**	**2.08**	**219**		P		**Pg**	**07 02 12.3**	**-0.9**
	baz=202								
CHN1					S		**Sg**	**07 02 40.1**	**-0.1**
	baz=202								
TWG	**Pinlang**	**2.14**	**202**	*e*P			**Pn**	**07 02 10.3**	**+1.2**
	baz=199								
TWGBT	**Beinan**	**2.14**	**202**	*e*P			**Pn**	**07 02 10.5**	**+1.4**
	baz=199								
MATB	**Ma-tsu**	**2.25**	**307**		P		**Pn**	**07 02 10.5**	**-0.1**
	baz=304								
VWUC	**VWUC**	**2.28**	**275**		P		**Pn**	**07 02 10.5**	**-0.5**
	baz=271								
SSD	**Sandimen**	**2.39**	**211**	*e*P			**Pb**	**07 02 16.0**	**-0.4**
	baz=207								
TSMG	**Majia**	**2.42**	**210**	*e*P			**Pb**	**07 02 16.8**	**-0.1**
	baz=207								
TSMG				*e*S			**Sb**	**07 02 47.4**	**+0.6**
	baz=207								
MASBT	**Mashibuluo**	**2.50**	**209**	*e*P			**Pb**	**07 02 17.9**	**-0.4**
	baz=205								
LYJJ	**Jianjiangzhen**	**2.63**	**312**		P		**Pn**	**07 02 15.2**	**-0.6**
	baz=310								
XPSS	**Dashiqiu**	**2.64**	**323**	*e*P			**Pn**	**07 02 15.3**	**-0.6**
	baz=322								
MHZQ	**Yeshan**	**2.94**	**296**	*e*P			**Pn**	**07 02 21.7**	**+1.7**
	baz=293								

TAP ***19*** *07:03:12.7,24.82N×121.96E,h9km,ML3.5,C*
JMA ***19*** *07:03:13.4±0.1,24.79N×121.92E,h15km,M2.7*
ISC 19 07:03:12.8±0.8,**24.81N**±0.01×**121.96E**±0.02,**h11**km±5km,
n104,σ0s**88**/192,**1C-1D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EGS		**0.04**	**319**	⇓*i*	P		**Pg**	**07 03 14.7**	**-0.2**
	baz=327								
NTC	**Toucheng**	**0.13**	**289**	*i*	P		**Pg**	**07 03 16.1**	**+0.2**
	baz=294								
NTC				*i*	S		**Sg**	**07 03 17.9**	**-0.2**
	baz=294								
TWB1	**Santiao Chiao**	**0.20**	**7**	*i*	P		**Pg**	**07 03 17.0**	**0.0**
	baz=10.0								
TWB1				*i*	S		**Sg**	**07 03 19.6**	**-0.3**
	baz=10.0								
ILA	**Ilan**	**0.20**	**256**	*i*	P		**Pg**	**07 03 17.5**	**+0.4**
	baz=252								
ILA				*i*	S		**Sg**	**07 03 20.9**	**+0.9**
	baz=252								
TIPB	**Shuangxi**	**0.20**	**322**	*i*	P		**Pg**	**07 03 17.3**	**+0.1**
	baz=321								
TIPB				*i*	S		**Sg**	**07 03 20.1**	**+0.1**
	baz=321								
TWC	**Suao**	**0.23**	**207**	*i*	P		**Pg**	**07 03 17.8**	**+0.3**
	baz=203								
TWC				*i*	S		**Sg**	**07 03 20.9**	**+0.1**
	baz=203								
TWE	**Neicheng**	**0.28**	**251**	*i*	P		**Pg**	**07 03 18.9**	**+0.3**
	baz=248								
TWE				*i*	S		**Sg**	**07 03 22.9**	**+0.5**
	baz=248								
NDS	**Dongshan**	**0.29**	**231**	*i*	P		**Pg**	**07 03 19.0**	**+0.4**
	baz=230								
NDS					S		**Sg**	**07 03 22.9**	**+0.3**
	baz=230								
NWF	**Wu-fen Shan**	**0.30**	**327**	⇑*i*	P		**Pg**	**07 03 19.5**	**+0.5**
	baz=317								
NWF				*i*	S		**Sg**	**07 03 24.0**	**+0.9**
	baz=317								
WFSB	**Wu-fen Shan**	**0.30**	**327**		P		**Pg**	**07 03 19.4**	**+0.5**
	baz=317								
WFSB					S		**Sg**	**07 03 24.1**	**+1.0**
	baz=317								
TNOU	**National Taiwa**	**0.38**	**333**		P		**Pg**	**07 03 20.7**	**+0.4**
	baz=324								
TNOU					S		**Sg**	**07 03 25.4**	**+0.1**
	baz=324								
ENTT	**Nioudou**	**0.40**	**244**	*i*	P		**Pg**	**07 03 21.1**	**+0.4**
	baz=242								
ENTT					S		**Sg**	**07 03 26.5**	**+0.5**
	baz=242								
EWUT	**Wuta**	**0.40**	**204**	*i*	P		**Pg**	**07 03 21.0**	**+0.2**
	baz=211								
EWUT				*i*	S		**Sg**	**07 03 26.8**	**+0.6**
	baz=211								
NWLT	**Wulai**	**0.42**	**265**	*i*	P		**Pg**	**07 03 21.2**	**+0.1**
	baz=264								
NWLT				*i*	S		**Sg**	**07 03 26.3**	**-0.4**
	baz=264								
NHDH	**Xindian Distri**	**0.42**	**291**	*i*	P		**Pb**	**07 03 21.9**	**-0.4**
	baz=279								
NHDH				*i*	S		**Sg**	**07 03 27.2**	**+0.5**
	baz=279								
NDT	**Datong Townshi**	**0.46**	**243**	*i*	P		**Pg**	**07 03 22.0**	**+0.2**
	baz=242								
NDT					S		**Sb**	**07 03 28.6**	**-1.1**
	baz=242								
TATO	**Taipei**	**0.46**	**291**		P		**Pg**	**07 03 22.1**	**+0.3**
	baz=280								
TATO					S		**Sg**	**07 03 28.1**	**+0.2**
	baz=280								
NWRT	**Kuosheng**	**0.47**	**325**		P		**Pg**	**07 03 22.8**	**+0.7**
	baz=324								
NWRT				*e*S			**Sg**	**07 03 28.6**	**+0.2**
	baz=324								
YM01	**YM01**	**0.49**	**313**		P		**Pb**	**07 03 23.2**	**-0.2**
	baz=303								
YM01					S		**Sg**	**07 03 29.1**	**+0.3**
	baz=303								
YM11	**YM11**	**0.50**	**315**		P		**Pb**	**07 03 23.4**	**-0.1**
	baz=314								
YM10	**YM10**	**0.50**	**313**		P		**Pb**	**07 03 23.3**	**-0.3**
	baz=312								
YM05	**YM05**	**0.50**	**314**		P		**Pb**	**07 03 23.4**	**-0.3**
	baz=313								
YM08	**YM08**	**0.50**	**318**		P		**Pg**	**07 03 23.1**	**+0.5**
	baz=306								
YM08					*e*S		**Sb**	**07 03 30.6**	**-0.4**
	baz=306								
BACT	**New Taipei Cit**	**0.51**	**291**		S		**Sb**	**07 03 31.1**	**0.0**
	baz=279								
YM04	**YM04**	**0.51**	**311**		P		**Pb**	**07 03 23.6**	**-0.3**
	baz=310								
YM04					*e*S		**Sb**	**07 03 30.5**	**-0.8**
	baz=310								
ANP	**Anpu**	**0.55**	**313**	*e*P			**Pg**	**07 03 23.8**	**+0.3**
	baz=312								
ANP				*e*S			**Sg**	**07 03 31.0**	**+0.3**
	baz=312								
YHNB	**Yeheng**	**0.55**	**255**		P		**Pg**	**07 03 23.4**	**-0.2**
	baz=254								
YHNB					S		**Sg**	**07 03 30.3**	**-0.6**
	baz=254								
NSK	**Sanguang**	**0.57**	**256**	*i*	P		**Pg**	**07 03 23.6**	**-0.2**
	baz=264								
NSK					S		**Sg**	**07 03 30.4**	**-0.9**
	baz=264								
TWS1	**Kuangyinshan**	**0.57**	**300**	*i*	P		**Pb**	**07 03 25.1**	**+0.3**
	baz=299								
TWS1				*e*S			**Sb**	**07 03 33.0**	**0.0**
	baz=299								
NTY	**Taoyuan**	**0.63**	**287**		P		**Pb**	**07 03 26.5**	**+0.7**
	baz=276								
NTY					S		**Sb**	**07 03 35.1**	**+0.4**
	baz=276								
NNS	**Nan Shan**	**0.65**	**235**	*i*	P		**Pg**	**07 03 25.6**	**+0.1**
	baz=234								
NNS				*e*S			**Sb**	**07 03 34.6**	**-0.8**
	baz=234								
NNSB	**Datong**	**0.65**	**234**		P		**Pg**	**07 03 25.4**	**-0.1**
	baz=233								
NNSB					S		**Sb**	**07 03 34.4**	**-1.0**
	baz=233								
NNSH	**Datong**	**0.65**	**234**	*i*	P		**Pg**	**07 03 25.4**	**0.0**
	baz=234								
NNSH					S		**Sb**	**07 03 35.0**	**-0.4**
	baz=234								
NACB	**Ninganchiao**	**0.72**	**208**		P		**Pg**	**07 03 26.9**	**+0.2**
	baz=207								
NACB					S		**Sg**	**07 03 36.2**	**+0.1**
	baz=207								
NCUH	**Zhongli**	**0.72**	**282**	*i*	P		**Pn**	**07 03 28.2**	**-0.8**
	baz=281								
NCUH					S		**Sn**	**07 03 38.6**	**-1.4**
	baz=281								
ETLH	**Xiulin Townshi**	**0.75**	**216**		P		**Pg**	**07 03 27.4**	**+0.1**
	baz=216								
ETLH					S		**Sb**	**07 03 37.6**	**-0.5**
	baz=216								
NJD	**Zhudong**	**0.80**	**265**		P		**Pn**	**07 03 29.7**	**-0.2**
	baz=256								
NJD					*e*S		**Sb**	**07 03 38.7**	**-0.8**
	baz=256								
TWD	**Chiawan**	**0.80**	**205**		P		**Pb**	**07 03 28.5**	**-0.2**
	baz=204								
TWD					S		**Sb**	**07 03 39.9**	**+0.3**
	baz=204								
PCYT	**Pengchaiyu**	**0.82**	**7**	*i*	P		**Pg**	**07 03 29.2**	**+0.6**
	baz=7.0								
PCYT				*e*S			**Sn**	**07 03 41.7**	**-0.6**
	baz=7.0								
HSN1	**Hsinchu**	**0.86**	**268**		P		**Pn**	**07 03 30.9**	**+0.1**
	baz=260								
HSN1					S		**Sn**	**07 03 42.7**	**-0.7**
	baz=260								
FUSS	**Fushou**	**0.86**	**229**	*i*	P		**Pg**	**07 03 29.4**	**-0.1**
	baz=229								
FUSS					S		**Sb**	**07 03 41.0**	**-0.6**
	baz=229								
LIOB	**Emei**	**0.88**	**259**	*i*	P		**Pn**	**07 03 30.6**	**-0.5**
	baz=259								
LIOB					S		**Sn**	**07 03 42.6**	**-1.2**
	baz=259								
SBCB	**Hsinchu**	**0.89**	**269**		P		**Pn**	**07 03 31.8**	**+0.5**
	baz=285								
SBCB					S		**Sn**	**07 03 44.4**	**+0.4**
	baz=285								
NSTT	**Nanjuang**	**0.89**	**258**	*i*	P		**Pn**	**07 03 30.8**	**-0.5**
	baz=258								
NSTT					S		**Sn**	**07 03 43.0**	**-1.2**
	baz=258								
HWA	**Hwalien**	**0.90**	**201**	*i*	P		**Pn**	**07 03 31.0**	**-0.3**
	baz=212								
HWA					S		**Sn**	**07 03 43.3**	**-0.9**
	baz=212								
HSN	**Hsinchu**	**0.90**	**269**	*i*	P		**Pn**	**07 03 31.0**	**-0.4**
	baz=270								
HSN					S		**Sb**	**07 03 42.9**	**+0.5**
	baz=270								
TDCB	**Techi**	**0.92**	**233**		P		**Pb**	**07 03 30.8**	**-0.1**
	baz=227								
TDCB				*e*S			**Sb**	**07 03 43.5**	**+0.3**
	baz=227								
WHF	**

YOJ	**Yonaguni jima**	**1.02 110**	P		**Pb**	07 03 32.2	-0.2
	baz=111						
CHGB	**Renai**	**1.04 224**	P		**Pg**	07 03 32.5	-0.3
	baz=216						
CHGB			S		**Sn**	07 03 47.7	-0.4
	baz=216						
WHP	**Taichung City**	**1.07 240**	*i* P		**Pn**	07 03 33.8	0.0
	baz=240						
WHP			*e*S		**Sn**	07 03 48.0	-0.7
	baz=240						
ESL	**Shilin**	**1.11 206**	*i* P		**Pb**	07 03 33.8	-0.1
	baz=205						
ESL			*i* S		**Sn**	07 03 49.1	-0.4
	baz=205						
OWD	**Renai**	**1.12 220**	*i* P		**Pb**	07 03 34.0	-0.2
	baz=226						
OWD			S		**Sg**	07 03 49.0	+0.1
	baz=226						
DPDB	**Guoxing**	**1.22 231**	P		**Pg**	07 03 36.4	+0.1
	baz=239						
DPDB			S		**Sn**	07 03 53.9	+1.4
	baz=239						
EGFH	**Guangfu**	**1.24 203**	*i* P		**Pn**	07 03 35.4	-0.7
	baz=210						
EGFH			S		**Sg**	07 03 52.9	+0.1
	baz=210						
WDJ	**Dajia District**	**1.29 249**	P		**Pg**	07 03 38.0	+0.4
	baz=248						
WDJ			S		**Sg**	07 03 57.2	+2.9
	baz=248						
VWDT	**VWDT**	**1.29 216**	P		**Pb**	07 03 37.0	-0.1
	baz=215						
VWDT			S		**Sg**	07 03 54.4	-0.1
	baz=215						
SMLT	**Sun Moon Lake**	**1.34 226**	*i* P		**Pg**	07 03 38.5	-0.1
	baz=218						
SMLT			S		**Sg**	07 03 57.5	+1.5
	baz=218						
TCU	**Taichung**	**1.35 241**	*e*P		**Pg**	07 03 38.5	-0.2
	baz=240						
TCU			*e*S		**Sg**	07 03 58.7	+2.5
	baz=240						
TYC	**Yuchr**	**1.35 228**	*i* P		**Pg**	07 03 38.6	-0.3
	baz=220						
TYC			*e*S		**Sg**	07 03 56.5	0.0
	baz=220						
SSLB	**Suanglung**	**1.38 222**	P		**Pg**	07 03 39.0	-0.2
	baz=212						
SSLB			*e*S		**Sn**	07 03 56.1	-0.1
	baz=212						
WWF	**Wufeng**	**1.38 237**	*e*S		**Sg**	07 03 59.9	+2.5
	baz=228						
HGSD	**Ruisui**	**1.41 201**	P		**Pg**	07 03 39.7	-0.1
	baz=212						
HGSD			*e*S		**Sg**	07 03 59.7	+1.6
	baz=212						
WCHH	**Zhanghua**	**1.47 241**	*e*P		**Pb**	07 03 40.2	+0.1
	baz=238						
WCHH			*e*S		**Sg**	07 04 00.9	+0.7
	baz=238						
WNT1	**Nantou City**	**1.48 233**	*e*S		**Sg**	07 04 01.6	+1.3
	baz=249						
WNT	**Mingjian**	**1.49 232**	*i* P		**Pg**	07 03 42.4	+1.0
	baz=216						
WNT			S		**Sg**	07 04 03.1	+2.2
	baz=216						
WJS	**Zhushan**	**1.50 229**	*i* P		**Pg**	07 03 42.2	+0.7
	baz=217						
WJS			*i* S		**Sg**	07 04 03.6	+2.6
	baz=217						
YULB	**Yu-li**	**1.54 203**	P		**Pb**	07 03 40.9	-0.5
	baz=213						
YULB			S		**Sg**	07 04 02.4	0.0
	baz=213						
EYUL	**Yuli**	**1.57 202**	*e*P		**Pg**	07 03 42.8	-0.2
	baz=212						
EYUL			*e*S		**Sb**	07 04 02.2	+0.4
	baz=212						
YUS	**Yu-Shan**	**1.61 215**	*e*P		**Pg**	07 03 43.9	+0.2
	baz=213						
ALS	**Alishan**	**1.67 219**	*i* P		**Pg**	07 03 45.1	+0.2
	baz=218						
ALS			S		**Sg**	07 04 07.6	+0.9
	baz=218						
IRIF	**Iriomote-Funau**	**1.68 106**	P		**Pb**	07 03 44.6	+0.9
IRIF			S		**Sb**	07 04 05.5	+0.7
CHN5	**Tsauling**	**1.69 224**	*i* P		**Pg**	07 03 45.4	+0.2
	baz=223						
CHN5			S		**Sg**	07 04 08.4	+1.3
	baz=223						
WGK	**Gukeng**	**1.70 229**	*e*S		**Sg**	07 04 09.9	+2.4
	baz=227						
WDLH	**Douliu**	**1.72 230**	P		**Pg**	07 03 45.1	-0.6
	baz=243						
WDLH			*i* S		**Sg**	07 04 09.3	+1.3
	baz=243						
FULB	**Fuli**	**1.72 201**	P		**Pb**	07 03 44.4	-0.1
	baz=214						
FULB			*e*S		**Sg**	07 04 07.1	-1.0
	baz=214						
WTK	**Tuku**	**1.82 232**	P		**Pg**	07 03 47.0	-0.8
	baz=248						
WTK			*e*S		**Sb**	07 04 09.7	+0.7
	baz=248						
ELDTW	**Lidau**	**1.83 208**	P		**Pb**	07 03 47.0	+0.6
	baz=207						
ELDTW			*e*S		**Sb**	07 04 09.4	0.0
	baz=207						
CHY	**Chiayi**	**1.92 227**	*e*S		**Sg**	07 04 13.5	-1.0
	baz=239						
EDH	**Donghe**	**1.93 198**	P		**Pb**	07 03 48.1	+0.1
	baz=211						
EDH			*e*S		**Sb**	07 04 11.0	-1.1
	baz=211						
JKRS	**Kuro-shima**	**1.95 107**	P		**Pn**	07 03 45.9	+0.1
JKRS			S		**Sn**	07 04 09.7	-0.6
STYH	**Taoyuan**	**1.96 214**	P		**Pb**	07 03 48.5	-0.1
	baz=201						
STYH			S		**Sb**	07 04 14.0	+1.0
	baz=201						
STYT	**Tauyuan**	**1.98 214**	*i* P		**Pb**	07 03 49.6	+0.7
	baz=201						
STYT			*e*S		**Sg**	07 04 14.9	-1.5
	baz=201						
JIJ	**Ishigaki jima**	**2.04 102**	P		**Pn**	07 03 47.3	+0.3
JIJ			*e*S		**Sn**	07 04 10.8	-1.6
LONT	**Longtian**	**2.05 202**	*e*P		**Pn**	07 03 48.3	+1.1
	baz=202						
LONT			*e*S		**Sb**	07 04 14.4	-1.0
	baz=202						
TWK	**Hsinying**	**2.05 221**	*e*P		**Pb**	07 03 50.5	+0.5
	baz=220						
TWK			*e*S		**Sg**	07 04 17.9	-0.7
	baz=220						
CHN1	**Nanshi**	**2.08 219**	P		**Pb**	07 03 51.4	+0.8
	baz=202						
CHN1			S		**Sg**	07 04 19.9	0.0
	baz=202						
ICHU	**Yijhu**	**2.11 227**	P		**Pb**	07 03 52.0	+0.9
	baz=241						
ICHU			*e*S		**Sg**	07 04 18.7	-2.0
	baz=241						
TWG	**Pinlang**	**2.15 203**	P		**Pb**	07 03 50.3	-1.4
	baz=201						
TWG			*e*S		**Sb**	07 04 17.1	-1.2
	baz=201						
TWGBT	**Beinan**	**2.15 202**	P		**Pn**	07 03 49.9	+1.3
	baz=201						
TWGBT			*e*S		**Sb**	07 04 17.1	-1.2
	baz=201						
LDUT	**Ludao**	**2.18 192**	*e*P		**Pb**	07 03 50.8	-1.4
	baz=196						
MATB	**Ma-tsu**	**2.26 307**	P		**Pn**	07 03 49.6	-0.5
	baz=302						
MATB			*e*S		**Sn**	07 04 18.1	+0.2
	baz=302						
MSUT	**Lienchiang**	**2.28 307**	*e*P		**Pn**	07 03 49.8	-0.6
	baz=304						
VWUC	**VWUC**	**2.29 275**	P		**Pn**	07 03 49.8	-0.7
	baz=271						
ECL	**Taimali**	**2.39 203**	*e*P		**Pn**	07 03 53.0	+1.1
	baz=193						
SSD	**Sandimen**	**2.39 211**	P		**Pb**	07 03 54.5	-1.4
	baz=209						
SSD			*e*S		**Sg**	07 04 27.8	-1.9
	baz=209						
TSMG	**Majia**	**2.42 210**	P		**Pb**	07 03 56.7	+0.3
	baz=207						
TSMG			*e*S		**Sb**	07 04 27.8	+1.6
	baz=207						
MASBT	**Mashibuluo**	**2.51 209**	P		**Pb**	07 03 56.8	-1.0
	baz=206						
MASBT			S		**Sb**	07 04 30.6	+1.9
	baz=206						
PHUB	**P'eng-hu**	**2.54 240**	*e*P		**Pb**	07 03 56.1	-2.2
	baz=236						
PHUB			*e*S		**Sb**	07 04 26.8	-2.8
	baz=236						
PTMZ	**Houxiangcun**	**2.59 276**	*e*P		**Pn**	07 03 55.2	+0.5
	baz=272						
WDGT	**Dungji**	**2.61 234**	P		**Pn**	07 03 56.6	+1.7
	baz=246						
WDGT			*e*S		**Sn**	07 04 28.3	+1.7
	baz=246						

TAP **19** *07:16:07.7, 24.°82N × 121.°95E, h9km, ML3.7, B*
JMA **19** *07:16:08.9 ± 0.1, 24.°80N × 121.°89E, h27km, M3.1*
ISC 19 07:16:07.8 ± 0.8, **24.°82N** ± 0.°02 × **121.°94E** ± 0.°02, **h11** km ± 4km,
n113, σ 0.°99/153, **17C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res
EGS		**0.03**	**339**	⇓	*i* P		**Pg**	**07 16 09.7**	**-0.1**
	baz=333								
EGS					*e*S		**Sg**	**07 16 10.9**	**-0.3**
	baz=333								
NTC	**Toucheng**	**0.11**	**288**	⇓	P		**Pg**	**07 16 11.0**	**+0.4**
	baz=294								
NTC					*i* S		**Sg**	**07 16 13.0**	**+0.4**
	baz=294								
TIPB	**Shuangxi**	**0.18**	**325**	⇑	*i* P		**Pb**	**07 16 12.3**	**-1.0**
	baz=321								
TIPB					*i* S		**Sb**	**07 16 15.1**	**+0.5**
	baz=321								
ILA	**Ilan**	**0.18**	**252**	⇓	P		**Pb**	**07 16 12.4**	**-0.9**
	baz=252								
ILA					S		**Sg**	**07 16 15.7**	**+1.1**
	baz=252								
TWB1	**Santiao Chiao**	**0.19**	**13**	⇑	*i* P		**Pg**	**07 16 12.0**	**+0.1**
	baz=11								
TWB1					*i* S		**Sb**	**07 16 14.6**	**-0.1**
	baz=11								
TWC	**Suao**	**0.23**	**202**	⇑	*i* P		**Pg**	**07 16 12.9**	**+0.3**
	baz=202								
TWC					S		**Sg**	**07 16 15.7**	**-0.1**
	baz=202								
TWE	**Neicheng**	**0.27**	**248**	⇓	*i* P		**Pg**	**07 16 13.7**	**+0.4**
	baz=247								
TWE					S		**Sg**	**07 16 17.3**	**+0.3**
	baz=247								
NDS	**Dongshan**	**0.28**	**228**		P		**Pg**	**07 16 13.9**	**+0.5**
	baz=239								
NWF	**Wu-fen Shan**	**0.29**	**330**	⇑	*i* P		**Pg**	**07 16 14.4**	**+0.7**
	baz=318								
NWF					S		**Sg**	**07 16 19.2**	**+1.5**
	baz=318								
WFSB	**Wu-fen Shan**	**0.29**	**330**	⇑	P		**Pg**	**07 16 14.4**	**+0.7**
	baz=318								
WFSB					S		**Sg**	**07 16 18.7**	**+1.1**
	baz=318								
TNOU	**National Taiwa**	**0.36**	**335**	⇑	P		**Pg**	**07 16 15.7**	**+0.7**
	baz=325								
TNOU					*e*S		**Sg**	**07 16 20.5**	**+0.6**
	baz=325								
TWA	**Mucha**	**0.36**	**296**	⇑	*i* P		**Pg**	**07 16 15.8**	**+0.8**
	baz=284								
TWA					*i* S		**Sg**	**07 16 20.9**	**+1.0**
	baz=284								
ENTT	**Nioudou**	**0.39**	**242**		*e*P		**Pg**	**07 16 16.1**	**+0.6**
	baz=242								
ENTT					S		**Sb**	**07 16 22.0**	**-0.7**
	baz=242								
NWLT	**Wulai**	**0.40**	**264**		P		**Pg**	**07 16 16.2**	**+0.4**
	baz=264								
NWLT					S		**Sg**	**07 16 21.4**	**+0.3**
	baz=264								
EWUT	**Wuta**	**0.40**	**202**		*e*P		**Pg**	**07 16 16.0**	**+0.2**
	baz=203								
NHDH	**Xindian Distri**	**0.40**	**290**	⇑	*e*P		**Pb**	**07 16 16.9**	**-0.2**
	baz=279								
NHDH					*e*S		**Sb**	**07 16 22.3**	**-0.9**
	baz=279								
TATO	**Taipei**	**0.44**	**290**	⇑	P		**Pb**	**07 16 17.5**	**-0.2**
	baz=280								
TATO					S		**Sg**	**07 16 22.9**	**+0.6**
	baz=280								
NDT	**Datong Townshi**	**0.45**	**241**		*e*P		**Pg**	**07 16 17.1**	**+0.4**
	baz=242								
NDT					*e*S		**Sb**	**07 16 23.4**	**-1.1**
	baz=242								
TAP	**Taipei**	**0.45**	**299**		P		**Pb**	**07 16 17.9**	**0.0**
	baz=298								
TAP					S		**Sb**	**07 16 24.0**	**-0.6**
	baz=298								
NWRT	**Kuosheng**	**0.46**	**326**		P		**Pg**	**07 16 17.7**	**+0.9**
	baz=325								
YM01	**YM01**	**0.47**	**314**	⇑	P		**Pb**	**07 16 18.1**	**0.0**
	baz=312								
YM01					S		**Sg**	**07 16 24.1**	**+0.9**
	baz=312								
YM11	**YM11**	**0.48**	**316**		P		**Pb**	**07 16 18.5**	**+0.2**
	baz=314								
YM10	**YM10**	**0.48**	**314**	⇑	P		**Pb**	**07 16 18.4**	**0.0**
	baz=313								
YM05	**YM05**	**0.48**	**315**	⇑	P		**Pb**	**07 16 18.4**	**-0.1**
	baz=314								
YM08	**YM08**	**0.48**	**319**	⇑	P		**Pg**	**07 16 18.1**	**+0.8**
	baz=317								
BACT	**New Taipei Cit**	**0.49**	**291**		*e*P		**Pb**	**07 16 19.0**	**+0.5**
	baz=279								
BACT					*e*S		**Sb**	**07 16 26.1**	**+0.5**
	baz=279								
YM04	**YM04**	**0.49**	**312**	⇑	P		**Pb**	**07 16 18.5**	**-0.1**
	baz=311								
ANP	**Anpu**	**0.53**	**314**	⇑	P		**Pb**	**07 16 19.0**	**-0.2**
	baz=313								
YHNB	**Yeheng**	**0.54**	**254**	⇓	P		**Pg**	**07 16 18.5**	**+0.2**
	baz=254								
YHNB					*e*S		**Sg**	**07 16 25.7**	**+0.3**
	baz=254								
NSK	**Sanguang**	**0.55**	**255**	⇓	*i* P		**Pg**	**07 16 18.7**	**+0.1**
	baz=262								
TWS1	**Kuangyinshan**	**0.55**	**300**		*e*P		**Pb**	**07 16 20.1**	**+0.5**
	baz=299								
TWS1					*e*S		**Sb**	**07 16 27.3**	**-0.2**
	baz=299								
NTY	**Taoyuan**	**0.61**	**287**		*e*P		**Pn**	**07 16 21.8**	**-0.8**
	baz=276								
NNS	**Nan Shan**	**0.64**	**234**		*e*P		**Pg**	**07 16 20.6**	**+0.3**
	baz=234								
NNSB	**Datong**	**0.64**	**233**		*e*P		**Pg**	**07 16 20.4**	**+0.1**
	baz=233								
NNSH	**Datong**	**0.64**	**233**		*e*P		**Pg**	**07 16 20.5**	**+0.2**
	baz=239								
NCU	**National Centr**	**0.70**	**282**		*e*P		**Pn**	**07 16 23.3**	**-0.4**
	baz=281								
NCU					*e*S		**Sn**	**07 16 33.0**	**-1.7**
	baz=281								
NCUH	**Zhongli**	**0.70**	**282**		*e*P		**Pn**	**07 16 23.3**	**-0.5**
	baz=281								
NCUH					*e*S		**Sn**	**07 16 32.5**	**-2.2**
	baz=281								
NACB	**Ninganchiao**	**0.72**	**206**	⇓	*e*P		**Pg**	**07 16 22.1**	**+0.3**
	baz=218								
NACB					S		**Sg**	**07 16 31.6**	**+0.4**
	baz=218								
ETLH	**Xiulin Townshi**	**0.74**	**214**		*e*P		**Pg**	**07 16 22.6**	**+0.4**
	baz=215								
NJD	**Zhudong**	**0.78**	**264**		*e*P		**Pn**	**07 16 24.3**	**-0.5**
	baz=256								
TWD	**Chiawan**	**0.80**	**203**		*e*P		**Pb**	**07 16 23.4**	**-0.4**
	baz=204								
TWD					*e*S		**Sb**	**07 16 33.8**	**-0.9**
	baz=204								
PCYT	**Pengchaiyu**	**0.81**	**8**	⇑	*i* P		**Pb**	**07 16 24.1**	**+0.1**
	baz=13								
HSN1	**Hsinchu**	**0.84**	**267**		*e*P		**Pn**	**07 16 26.1**	**+0.5**
	baz=260								
FUSS	**Fushou**	**0.85**	**228**		*e*P		**Pb**	**07 16 24.5**	**-0.4**
	baz=229								
LIOB	**Emei**	**0.86**	**258**		*e*P		**Pn**	**07 16 26.6**	**+0.6**
	baz=250								
SBCB	**Hsinchu**	**0.87**	**268**		*e*P		**Pn**	**07 16 26.9**	**+0.8**
	baz=287								
NSTT	**Nanjuang**	**0.88**	**258**		*e*P		**Pn**	**07 16 25.9**	**-0.3**
	baz=257								
NSTT					*e*S		**Sn**	**07 16 39.6**	**+0.7**
	baz=257								
HSN	**Hsinchu**	**0.88**	**269**		*e*P		**Pn**	**07 16 26.3**	**0.0**
	baz=279								
HSN					*e*S		**Sn**	**07 16 38.3**	**-0.8**
	baz=279								
HWA	**Hwalien**	**0.90**	**200**		*e*P		**Pn**	**07 16 26.2**	**-0.2**
	baz=200								
TWT	**Tachien**	**0.90**	**231**		*e*P		**Pn**	**07 16 25.8**	**-0.8**
	baz=224								
TDCB	**Techi**	**0.91**	**232**		*e*P		**Pg**	**07 16 25.5**	**+0.1**
	baz=224								
WHF	**Hehuan Shan**	**0.91**	**223**		*e*P		**Pb**	**07 16 25.4**	**-0.6**
	baz=223								
JYNG	**Yonagunijimaku**	**0.98**	**112**		P		**Pb**	**07 16 27.0**	**+0.1**
JYNG					S		**Sb**	**07 16 39.4**	**-0.6**
CHGB	**Renai**	**1.03**	**223**		P		**Pn**	**07 16 27.7**	**-0.8**
	baz=216								
CHGB					S		**Sn**	**07 16 42.6**	**-0.5**
	baz=216								
YOJ	**Yonaguni jima**	**1.04**	**110**		P		**Pb**	**07 16 28.0**	**+0.2**
YOJ					*e*S		**Sb**	**07 16 41.4**	**-0.1**
YOJ	**Yonaguni jima**	**1.04**	**110**		*e*P		**Pb**	**07 16 27.3**	**-0.6**
	baz=110								
WHP	**Taichung City**	**1.06**	**239**		*e*P		**Pn**	**07 16 28.3**	**+0.2**
	baz=240								
ESL	**Shilin**	**1.10**	**205**	⇓	P		**Pb**	**07 16 28.6**	**-0.5**
	baz=205								
ESL					S		**Sn**	**07 16 43.5**	**-1.1**
	baz=205								
OWD	**Renai**	**1.11**	**219**		*e*P		**Pn**	**07 16 28.9**	**-0.6**
	baz=220								
NSY	**Sanyi**	**1.15**	**250**		*e*P		**Pg**	**07 16 31.6**	**+1.7**
	baz=250								
NSY					*e*S		**Sg**	**07 16 48.1**	**+3.3**
	baz=250								
DPDB	**Guoxing**	**1.21**	**230**		*e*P		**Pg**	**07 16 31.8**	**+0.6**
	baz=217								
EGFH	**Guangfu**	**1.24**	**202**		*e*P		**Pb**	**07 16 30.8**	**-0.5**
	baz=209								
WDJ	**Dajia District**	**1.27**	**249**		*e*P		**Pg**	**07 16 33.6**	**+1.3**
	baz=248								
WDJ					*e*S		**Sg**	**07 16 52.3**	**+3.4**
	baz=248								
VWDT	**VWDT**	**1.29**	**215**		*e*P		**Pb**	**07 16 32.2**	**+0.1**
	baz=221								
SMLT	**Sun Moon Lake**	**1.33**	**226**		P		**Pg**	**07 16 33.3**	**-0.1**
	baz=215								
TCU	**Taichung**	**1.33**	**240**		*e*P		**Pg**	**07 16 35.4**	**+1.9**
	baz=258								
TYC	**Yuchr**	**1.35**	**228**		*e*P		**Pg**	**07 16 33.8**	**+0.1**
	baz=216								
SSLB	**Suanglung**	**1.37**	**221**		*e*P		**Pb**	**07 16 33.3**	**-0.2**
	baz=221								
WWF	**Wufeng**	**1.37**	**236**		*e*P		**Pg**	**07 16 35.8**	**+1.6**
	baz=236								
HGSD	**Ruisui**	**1.41**	**200**	⇓	P		**Pg**	**07 16 35.2**	**+0.3**
	baz=212								
HGSD					*e*S		**Sg**	**07 16 56.8**	**+3.7**
	baz=212								
WCHH	**Zhanghua**	**1.46**	**240**		*e*P		**Pg**	**07 16 37.7**	**+1.8**
	baz=256								
WNT	**Mingjian**	**1.48**	**231**		*e*P		**Pg**	**07 16 37.5**	**+1.2**
	baz=216								
WNT					S		**Sg**	**07 16 58.7**	**+3.2**
	baz=216								
WJS	**Zhushan**	**1.49**	**228**		*e*P		**Pg**	**07 16 37.3**	**+0.9**
	baz=216								
WJS					*e*S		**Sg**	**07 16 58.4**	**+2.6**
	baz=216								
YULB	**Yu-li**	**1.54**	**203**		*e*P		**Pb**	**07 16 36.3**	**-0.1**
	baz=200								
EYUL	**Yuli**	**1.57**	**201**		*e*P		**Pg**	**07 16 38.7**	**+0.7**
	baz=211								
YUS	**Yu-Shan**	**1.60**	**214**		*e*P		**Pg**	**07 16 38.6**	**-0.1**
	baz=213								
ALS	**Alishan**	**1.67**	**219**		*e*P		**Pg**	**07 16 39.8**	**-0.1**
	baz=210								
CHN5	**Tsauling**	**1.68**	**224**	⇑	P		**Pg**	**07 16 40.9**	**+0.8**
	baz=222								
IRIF	**Iriomote-Funau**	**1.70**	**106**		P		**Pn**	**07 16 36.8**	**-0.7**
IRIF					*e*S		**Sn**	**07 16 58.8**	**-0.4**
WDLH	**Douliu**	**1.71**	**229**		*e*P		**Pg**	**07 16 40.9**	**+0.3**
	baz=227								
FULB	**Fuli**	**1.72**	**200**		*e*P		**Pb**	**07 16 40.0**	**+0.5**
	baz=211								
ELDTW	**Lidau**	**1.83**	**208**		*e*P		**Pb**	**07 16 41.1**	**-0.4**
	baz=206								
HATJ	**Hateruma jima**	**1.86**	**114**		P		**Pn**	**07 16 39.6**	**-0.1**
HATJ					*e*S		**Sn**	**07 17 02.5**	**-0.7**
CHY	**Chiayi**	**1.91**	**227**		*e*P		**Pb**	**07 16 43.4**	**+0.6**
	baz=224								
EDH	**Donghe**	**1.93**	**198**		*e*P		**Pn**	**07 16 41.0**	**+0.3**
	baz=209								
TPUB	**Ta-pu**	**1.93**	**219**		*e*P		**Pb**	**07 16 43.4**	**+0.3**
	baz=215								
STYH	**Taoyuan**	**1.96**	**213**		*e*P		**Pg**	**07 16 44.6**	**-0.8**
	baz=197								
JKRS	**Kuro-shima**	**1.97**	**107**		P		**Pn**	**07 16 40.9**	**-0.3**
JKRS					*e*S		**Sn**	**07 17 05.0**	**-0.9**
STYT	**Tauyuan**	**1.98**	**214**		*e*P		**Pb**	**07 16 44.6**	**+0.7**
	baz=197								
TWK	**Hsinying**	**2.04**	**221**		*e*P		**Pg**	**07 16 45.9**	**-1.1**
	baz=217								
JIJ	**Ishigaki jima**	**2.06**	**102**		P		**Pn**	**07 16 42.4**	**0.0**
JIJ					*e*S		**Sn**	**07 17 08.1**	**+0.1**
CHN1	**Nanshi**	**2.08**	**219**		*e*P		**Pb**	**07 16 46.5**	**+0.9**
	baz=216								
TWG	**Pinlang**	**2.15**	**202**		*e*P		**Pb**	**07 16 47.1**	**+0.3**
	baz=199								
TWGBT	**Beinan**	**2.15**	**202**		*e*P		**Pb**	**07 16 46.0**	**-0.8**
	baz=199								
JISG	**Ishigakijimahi**	**2.17**	**96**		P		**Pn**	**07 16 45.3**	**+1.4**
MATB	**Ma-tsu**	**2.24**	**307**		*e*P		**Pn**	**07 16 43.7**	**-1.2**
	baz=304								
MSUT	**Lienchiang**	**2.27**	**307**		*e*P		**Pn**	**07 16 43.9**	**-1.4**
	baz=305								
VWUC	**VWUC**	**2.27**	**275**		*e*P		**Pn**	**07 16 44.6**	**-0.7**
	baz=271								
SSD	**Sandimen**	**2.39**	**210**		*e*P		**Pb**	**07 16 51.3**	**+0.4**
	baz=207								
ECL	**Taimali**	**2.39**	**202**		*e*P		**Pb**	**07 16 50.5**	**-0.5**
	baz=192								
MASBT	**Mashibuluo**	**2.51**	**209**		*e*P		**Pb**	**07 16 52.1**	**-0.8**
	baz=205								
PNG	**Penghu**	**2.51**	**241**		*e*P		**Pb**	**07 16 51.4**	**-1.6**
	baz=236								
PHUB	**P'eng-hu**	**2.53**	**239**		*e*P		**Pb**	**07 16 50.9**	**-2.3**
	baz=235								
PTMZ	**Houxiangcun**	**2.57**	**275**		*e*P		**Pn**	**07 16 50.5**	**+1.0**
	baz=272								
WDGT	**Dungji**	**2.60**	**234**		*e*P		**Pb**	**07 16 51.8**	**-2.7**
	baz=230								
LYJJ	**Jianjiangzhen**	**2.62**	**312**		*e*P		**Pn**	**07 16 49.4**	**-0.7**
	baz=310								
XPSS	**Dashiqiu**	**2.63**	**323**		*e*P		**Pn**	**07 16 49.0**	**-1.2**
	baz=322								
SSPT	**Xinbi**	**2.65**	**209**		*e*P		**Pb**	**07 16 54.4**	**-0.9**
	baz=205								
SCZT	**Fangliau**	**2.72**	**207**		*e*P		**Pb**	**07 16 52.0**	**+0.4**
	baz=203								
SLIU	**Shizi**	**2.80**	**202**		*e*P		**Pb**	**07 16

	baz=15								
TIPB	**Shuangxi**	**0.19 321**	*i*	P	**Pg**	**07 18 53.3**	**+0.3**		
	baz=324								
TIPB			*i*	S	**Sg**	**07 18 56.2**	**+0.5**		
	baz=324								
ILA	**Ilan**	**0.20 254**	*i*	P	**Pg**	**07 18 53.3**	**+0.3**		
	baz=251								
ILA				S	**Sg**	**07 18 56.7**	**+0.8**		
	baz=251								
TWC	**Suao**	**0.23 205**	*i*	P	**Pg**	**07 18 53.9**	**+0.2**		
	baz=200								
TWC			*i*	S	**Sg**	**07 18 56.9**	**0.0**		
	baz=200								
TWE	**Neicheng**	**0.28 249**	*i*	P	**Pg**	**07 18 54.7**	**+0.1**		
	baz=246								
TWE			*i*	S	**Sg**	**07 18 58.7**	**+0.2**		
	baz=246								
NDS	**Dongshan**	**0.29 230**	*i*	P	**Pg**	**07 18 54.9**	**+0.1**		
	baz=228								
NDS			*i*	S	**Sg**	**07 18 58.8**	**+0.2**		
	baz=228								
NWF	**Wu-fen Shan**	**0.30 327**	*i*	P	**Pg**	**07 18 55.3**	**+0.4**		
	baz=320								
NWF				S	**Sb**	**07 19 00.1**	**-1.4**		
	baz=320								
WFSB	**Wu-fen Shan**	**0.30 327**		P	**Pb**	**07 18 55.4**	**-1.0**		
	baz=320								
WFSB				S	**Sb**	**07 19 00.2**	**-1.2**		
	baz=320								
TNOU	**National Taiwa**	**0.37 333**		P	**Pg**	**07 18 56.7**	**+0.5**		
	baz=327								
TNOU				S	**Sg**	**07 19 01.5**	**+0.4**		
	baz=327								
TWA	**Mucha**	**0.38 295**		P	**Pg**	**07 18 56.5**	**+0.2**		
	baz=296								
TWA			*i*	S	**Sg**	**07 19 01.7**	**+0.4**		
	baz=296								
ENTT	**Nioudou**	**0.40 243**	*i*	P	**Pb**	**07 18 57.2**	**-1.0**		
	baz=241								
ENTT			*i*	S	**Sg**	**07 19 02.3**	**+0.2**		
	baz=241								
EWUT	**Wuta**	**0.41 204**		P	**Pg**	**07 18 56.4**	**-0.6**		
	baz=209								
EWUT				S	**Sg**	**07 19 02.6**	**+0.2**		
	baz=209								
NWLT	**Wulai**	**0.42 264**	*i*	P	**Pg**	**07 18 57.2**	**+0.1**		
	baz=264								
NWLT			*i*	S	**Sg**	**07 19 02.3**	**-0.3**		
	baz=264								
NHDH	**Xindian Distri**	**0.42 290**		P	**Pg**	**07 18 57.4**	**+0.3**		
	baz=290								
NHDH			*i*	S	**Sb**	**07 19 03.3**	**-1.7**		
	baz=290								
TATO	**Taipei**	**0.45 290**		P	**Pb**	**07 18 58.6**	**-0.5**		
	baz=281								
TATO				S	**Sb**	**07 19 04.4**	**-1.6**		
	baz=281								
NDT	**Datong Townshi**	**0.46 242**	*i*	P	**Pg**	**07 18 58.0**	**+0.1**		
	baz=241								
NDT				S	**Sg**	**07 19 03.7**	**-0.3**		
	baz=241								
TAP	**Taipei**	**0.47 298**	*i*	P	**Pb**	**07 19 00.0**	**+0.7**		
	baz=299								
TAP			*i*	S	**Sb**	**07 19 05.2**	**-1.1**		
	baz=299								
NWRT	**Kuosheng**	**0.47 324**		P	**Pg**	**07 18 58.3**	**+0.2**		
	baz=325								
NWRT				S	**Sb**	**07 19 05.1**	**-1.3**		
	baz=325								
YM01	**YM01**	**0.48 313**		P	**Pb**	**07 18 59.2**	**-0.4**		
	baz=313								
YM01				S	**Sb**	**07 19 05.3**	**-1.4**		
	baz=313								
YM11	**YM11**	**0.49 315**		P	**Pb**	**07 18 59.8**	**0.0**		
	baz=315								
YM10	**YM10**	**0.49 313**		P	**Pb**	**07 18 59.5**	**-0.2**		
	baz=313								
YM10				*e*S	**Sb**	**07 19 06.0**	**-1.1**		
	baz=313								
YM05	**YM05**	**0.49 314**		P	**Pb**	**07 18 59.5**	**-0.3**		
	baz=315								
YM08	**YM08**	**0.49 317**		P	**Pb**	**07 18 59.2**	**-0.6**		
	baz=318								
BACT	**New Taipei Cit**	**0.50 291**		S	**Sb**	**07 19 06.7**	**-0.6**		
	baz=279								
YM04	**YM04**	**0.51 311**		P	**Pb**	**07 18 59.7**	**-0.3**		
	baz=311								
YM04				*e*S	**Sb**	**07 19 06.6**	**-0.9**		
	baz=311								
ANP	**Anpu**	**0.54 312**		P	**Pg**	**07 18 59.3**	**-0.2**		
	baz=314								
YHNB	**Yeheng**	**0.55 254**		P	**Pg**	**07 18 59.6**	**0.0**		
	baz=254								
YHNB				S	**Sg**	**07 19 06.2**	**-0.7**		
	baz=254								
TWS1	**Kuangyinshan**	**0.56 300**	*i*	P	**Pb**	**07 19 01.4**	**+0.4**		
	baz=300								
TWS1				S	**Sb**	**07 19 08.4**	**-0.8**		
	baz=300								
NSK	**Sanguang**	**0.56 255**	*i*	P	**Pg**	**07 18 59.6**	**-0.3**		
	baz=254								
NSK				S	**Sg**	**07 19 06.4**	**-0.9**		
	baz=254								
NTY	**Taoyuan**	**0.63 287**		P	**Pn**	**07 19 02.8**	**-1.2**		
	baz=276								
NTY				*e*S	**Sb**	**07 19 10.4**	**-0.6**		
	baz=276								
NNS	**Nan Shan**	**0.66 235**	*i*	P	**Pg**	**07 19 01.5**	**-0.1**		
	baz=226								
NNS				S	**Sg**	**07 19 09.7**	**-0.5**		
	baz=226								
NNSB	**Datong**	**0.66 233**		P	**Pg**	**07 19 01.0**	**-0.7**		
	baz=225								
NNSB				S	**Sg**	**07 19 09.7**	**-0.6**		
	baz=225								
NNSH	**Datong**	**0.66 233**	*i*	P	**Pg**	**07 19 01.4**	**-0.2**		
	baz=233								
NNSH				S	**Sg**	**07 19 09.4**	**-0.8**		
	baz=233								
NCU	**National Centr**	**0.72 282**		P	**Pn**	**07 19 05.0**	**-0.2**		
	baz=282								
NCU				S	**Sb**	**07 19 14.5**	**+0.9**		
	baz=282								
NCUH	**Zhongli**	**0.72 282**	*i*	P	**Pb**	**07 19 04.0**	**+0.4**		
	baz=282								
NCUH				S	**Sb**	**07 19 13.8**	**+0.2**		
	baz=282								
NACB	**Ninganchiao**	**0.73 207**		P	**Pg**	**07 19 02.8**	**-0.2**		
	baz=215								
NACB				S	**Sg**	**07 19 12.8**	**+0.4**		
	baz=215								
ETLH	**Xiulin Townshi**	**0.75 215**		P	**Pb**	**07 19 03.7**	**-0.5**		
	baz=215								
ETLH				S	**Sg**	**07 19 13.2**	**-0.1**		
	baz=215								
NJD	**Zhudong**	**0.80 264**	*e*P		**Pb**	**07 19 05.0**	**0.0**		
	baz=256								
NJD				*e*S	**Sb**	**07 19 15.3**	**-0.5**		
	baz=256								
TWD	**Chiawan**	**0.81 204**	*i*	P	**Pg**	**07 19 04.4**	**-0.1**		
	baz=203								
TWD			*i*	S	**Sg**	**07 19 14.7**	**-0.3**		
	baz=203								
PCYT	**Pengchaiyu**	**0.81 7**	*i*	P	**Pb**	**07 19 05.2**	**0.0**		
	baz=14								
HSN1	**Hsinchu**	**0.86 267**		P	**Pn**	**07 19 07.1**	**-0.1**		
	baz=260								
HSN1				S	**Sn**	**07 19 20.0**	**+0.2**		
	baz=260								
FUSS	**Fushou**	**0.87 229**	*i*	P	**Pg**	**07 19 04.9**	**-0.8**		
	baz=223								
FUSS				S	**Sg**	**07 19 16.6**	**-0.4**		
	baz=223								
LIOB	**Emei**	**0.88 259**	*i*	P	**Pb**	**07 19 06.5**	**+0.2**		
	baz=258								
LIOB				*e*S	**Sb**	**07 19 18.5**	**+0.4**		
	baz=258								
SBCB	**Hsinchu**	**0.89 268**		P	**Pn**	**07 19 07.3**	**-0.3**		
	baz=268								
SBCB				S	**Sn**	**07 19 20.1**	**-0.4**		
	baz=268								
NSTT	**Nanjuang**	**0.89 258**	*i*	P	**Pb**	**07 19 06.7**	**+0.2**		
	baz=257								
NSTT				S	**Sn**	**07 19 19.8**	**-0.9**		
	baz=257								
HSN	**Hsinchu**	**0.90 269**	*e*P		**Pb**	**07 19 06.8**	**+0.1**		
	baz=279								
HSN				*e*S	**Sb**	**07 19 18.7**	**-0.1**		
	baz=279								
HWA	**Hwalien**	**0.90 201**	*e*P		**Pn**	**07 19 07.3**	**-0.5**		
	baz=212								
HWA				*e*S	**Sb**	**07 19 18.6**	**-0.2**		
	baz=212								
TWT	**Tachien**	**0.91 232**	*i*	P	**Pb**	**07 19 06.8**	**-0.2**		
	baz=226								
TWT			*i*	S	**Sg**	**07 19 18.2**	**-0.2**		
	baz=226								
TDCB	**Techi**	**0.92 232**		P	**Pb**	**07 19 07.1**	**-0.1**		
	baz=227								
TDCB				S	**Sg**	**07 19 18.0**	**-0.8**		
	baz=227								
WHF	**Hehuan Shan**	**0.92 223**		P	**Pb**	**07 19 07.4**	**0.0**		
	baz=222								
WHF				S	**Sg**	**07 19 18.5**	**-0.4**		
	baz=222								
JYNG	**Yonagunijimaku**	**0.97 112**		P	**Pb**	**07 19 08.1**	**+0.2**		
JYNG				*e*S	**Sb**	**07 19 21.5**	**+0.7**		
YOJ	**Yonaguni jima**	**1.02 110**		P	**Pg**	**07 19 08.5**	**-0.1**		
YOJ				*e*S	**Sg**	**07 19 21.8**	**-0.1**		
YOJ	**Yonaguni jima**	**1.02 110**		P	**Pg**	**07 19 08.4**	**-0.1**		
	baz=111								
YOJ				S	**Sb**	**07 19 22.8**	**+0.5**		
	baz=111								
CHGB	**Renai**	**1.04 224**		P	**Pb**	**07 19 09.2**	**-0.1**		
	baz=216								
CHGB				S	**Sb**	**07 19 22.6**	**-0.5**		
	baz=216								
WHP	**Taichung City**	**1.07 240**	*i*	P	**Pg**	**07 19 08.9**	**-0.6**		
	baz=239								
WHP				S	**Sg**	**07 19 22.6**	**-0.8**		
	baz=239								
ESL	**Shilin**	**1.11 206**	*i*	P	**Pb**	**07 19 10.2**	**-0.1**		
	baz=205								
ESL				S	**Sb**	**07 19 24.7**	**-0.2**		
	baz=205								
OWD	**Renai**	**1.12 220**	*i*	P	**Pg**	**07 19 10.2**	**-0.3**		
	baz=219								
OWD				S	**Sg**	**07 19 24.2**	**-0.8**		
	baz=219								
NSY	**Sanyi**	**1.16 250**	*i*	P	**Pn**	**07 19 11.9**	**+0.5**		
	baz=249								
NSY				S	**Sn**	**07 19 28.7**	**+1.3**		
	baz=249								
WPL	**Puli Township**	**1.22 229**	*e*P		**Pg**	**07 19 12.4**	**+0.1**		
	baz=237								
WPL				*e*S	**Sg**	**07 19 27.8**	**-0.4**		
	baz=237								
DPDB	**Guoxing**	**1.23 230**		P	**Pg**	**07 19 13.0**	**+0.5**		
	baz=217								
EGFH	**Guangfu**	**1.25 203**		P	**Pg**	**07 19 13.3**	**+0.4**		
	baz=209								
EGFH				S	**Sn**	**07 19 29.8**	**+0.3**		
	baz=209								
WDJ	**Dajia District**	**1.29 249**		P	**Pg**	**07 19 14.6**	**+0.9**		
	baz=248								
WDJ				S	**Sn**	**07 19 32.9**	**+2.4**		
	baz=248								
VWDT	**VWDT**	**1.30 215**		P	**Pg**	**07 19 13.9**	**0.0**		
	baz=215								
VWDT				S	**Sg**	**07 19 30.2**	**-0.5**		
	baz=215								
SMLT	**Sun Moon Lake**	**1.34 226**		P	**Pg**	**07 19 15.1**	**+0.3**		
	baz=217								
SMLT				S	**Sg**	**07 19 31.8**	**-0.4**		
	baz=217								
TCU	**Taichung**	**1.35 240**		P	**Pg**	**07 19 16.5**	**+1.7**		
	baz=240								
TCU				*e*S	**Sg**	**07 19 33.6**	**+1.3**		
	baz=240								
TYC	**Yuchr**	**1.36 228**	*i*	P	**Pg**	**07 19 14.8**	**-0.2**		
	baz=219								
TYC				*e*S	**Sg**	**07 19 32.3**	**-0.4**		
	baz=219								
SSLB	**Suanglung**	**1.38 222**		P	**Pg**	**07 19 16.2**	**+0.8**		
	baz=211								
SSLB				*e*S	**Sg**	**07 19 33.4**	**+0.1**		
	baz=211								
WWF	**Wufeng**	**1.39 236**	*e*S		**Sg**	**07 19 35.3**	**+1.8**		
	baz=228								
HGSD	**Ruisui**	**1.41 200**	*i*	P	**Pb**	**07 19 15.3**	**-0.1**		
	baz=212								
HGSD				*e*S	**Sg**	**07 19 34.7**	**+0.3**		
	baz=212								
WCHH	**Zhanghua**	**1.48 240**	*e*S		**Sg**	**07 19 38.0**	**+1.6**		
	baz=238								
WNT1	**Nantou City**	**1.48 232**	*e*P		**Pg**	**07 19 19.7**	**+2.3**		
	baz=249								
WNT1				S	**Sg**	**07 19 37.1**	**+0.5**		
	baz=249								
WNT	**Mingjian**	**1.50 231**		P	**Pg**	**07 19 20.1**	**+2.4**		
	baz=216								
WNT				S	**Sg**	**07 19 39.2**	**+2.2**		
	baz=216								
WJS	**Zhushan**	**1.50 229**		P	**Pg**	**07 19 19.1**	**+1.3**		
	baz=215								
WJS				S	**Sg**	**07 19 40.3**	**+3.0**		
	baz=215								
YULB	**Yu-li**	**1.55 203**		P	**Pb**	**07 19 17.2**	**-0.5**		
	baz=203								
YULB				S	**Sb**	**07 19 37.4**	**-0.1**		
	baz=203								
ALS	**Alishan**	**1.68 219**	*i*	P	**Pg**	**07 19 21.5**	**+0.3**		
	baz=218								
ALS				S	**Sg**	**07 19 43.2**	**+0.3**		
	baz=218								
IRIF	**Iriomote-Funau**	**1.68 106**	*e*S		**Sn**	**07 19 39.1**	**-1.1**		
CHN5	**Tsauling**	**1.69 224**	*i*	P	**Pg**	**07 19 21.8**	**+0.4**		
	baz=223								
CHN5			*i*	S	**Sg**	**07 19 45.5**	**+2.2**		
	baz=223								
WRL	**Guolierlin Hig**	**1.71 238**	*e*S		**Sg**	**07 19 43.2**	**-0.7**		
	baz=236								
WDLH	**Douliu**	**1.72 229**		P	**Pb**	**07 19 20.5**	**-0.2**		
	baz=228								
WDLH				S	**Sg**	**07 19 45.9**	**+1.7**		
	baz=228								
FULB	**Fuli**	**1.73 201**	*e*P		**Pb**	**07 19 20.3**	**-0.5**		
	baz=214								
FULB				*e*S	**Sb**	**07 19 43.1**	**+0.5**		
	baz=214								
WTK	**Tuku**	**1.82 232**	*e*S		**Sg**	**07 19 47.9**	**+0.3**		
	baz=249								
ELDTW	**Lidau**	**1.84 208**		P	**Pb**	**07 19 22.4**	**-0.4**		
	baz=207								
ELDTW				S	**Sg**	**07 19 46.8**	**-1.3**		
	baz=207								
CHY	**Chiayi**	**1.92 227**	*e*S		**Sg**	**07 19 51.2**	**+0.4**		
	baz=226								
EDH	**Donghe**	**1.94 198**		P	**Pb**	**07 19 23.4**	**-1.0**		
	baz=211								
EDH				S	**Sb**	**07 19 49.2**	**+0.6**		
	baz=211								
TPUB	**Ta-pu**	**1.94 219**	*e*S		**Sg**	**07 19 50.8**	**-0.6**		
	baz=218								
JKRS	**Kuro-shima**	**1.96 107**	*e*S		**Sn**	**07 19 46.2**	**-0.7**		
STYH	**Taoyuan**	**1.97 214**	*e*S		**Sg**	**07 19 51.6**	**-0.6**		
	baz=200								
STYT	**Tauyuan**	**1.98 214**	*e*P		**Pb**	**07 19 24.5**	**-0.7**		
	baz=199								
STYT				S	**Sg**	**07 19 51.9**	**-0.8**		
	baz=199								
JIJ	**Ishigaki jima**	**2.04 102**		P	**Pn**	**07 19 24.5**	**+1.1**		
JIJ				*e*S	**Sn**	**07 19 49.6**	**+0.6**		
TWK	**Hsinying**	**2.05 221**	*e*P		**Pb**	**07 19 26.7**	**+0.4**		
	baz=220								
TWK				*e*S	**Sg**	**07 19 54.4**	**-0.5**		
	baz=220								
SNST	**Tainan City**	**2.08 220**	*e*S		**Sg**	**07 19 56.5**	**+0.6**		
	baz=219								
CHN1	**Nanshi**	**2.09 219**		P	**Pg**	**07 19 28.2**	**-0.8**		
	baz=202								
CHN1				S	**Sg**	**07 19 55.4**	**-0.8**		
	baz=202								
SLGT	**Liugui**	**2.18 214**	*e*S		**Sb**	**07 19 56.8**	**+1.0**		
	baz=198								
MATB	**Ma-tsu**	**2.25 306**		P	**Pn**	**07 19 26.5**	**+0.2**		
	baz=302								
MATB				S	**Sb**	**07 19 56.7**	**-1.0**		
	baz=302								
MSUT	**Lienchiang**	**2.28 307**	*e*S		**Sn**	**07 19 55.5**	**+0.6**		
	baz=302								
VWUC	**VWUC**	**2.29 275**	*e*S		**Sn**	**07 19 54.7**	**-0.4**		
	baz=271								
TSMG	**Majia**	**2.43 210**	*e*P		**Pb**	**07 19 31.1**	**-1.6**		
	baz=207								
TSMG				*e*S	**Sb**	**07 20 02.4**	**-0.4**		
	baz=207								
MASBT	**Mashibuluo**	**2.51 209**		P	**Pb**	**07 19 32.6**	**-1.7**		
	baz=206								
MASBT				*e*S	**Sb**	**07 20 05.5**	**+0.2**		
	baz=206								
PHUB	**P'eng-hu**	**2.54 240**	*e*S		**Sn**	**07 20 01.7**	**+0.4**		
	baz=237								
WDGT	**Dungji**	**2.61 234**		P	**Pb**	**07 19 33.7**	**-2.3**		
	baz=231								
XPSS	**Dashiqiu**	**2.64 323**	*e*P		**Pn**	**07 19 33.4**	**+1.7**		
	baz=320								
XPSS				*e*S	**Sn**	**07 20 04.5**	**+0.8**		
	baz=320								
SCZT	**Fangliau**	**2.73 207**	*e*P		**Pb**	**07 19 37.3**	**-0.7**		
	baz=203								

IDC ***19*** *07:42:07.8±4.0, 11°.64S×166°.55E, h143km±35km, mb3.8/16, mb1 4.0/17, mb1mx3.9/29, mbtmp4.2/17, Error ellipse: s-maj=19.8km s-min=15.2km az=85.0*

NEIC ***19*** *07:42:08.0±1.0, 11°.6S±0°.1×166°.6E±0°.2, h145km±9km, mb4.7/34, Error ellipse: s-maj=26.9km s-min=14.8km az=76.0*

ISC 19 07:42:08.3±0.5, 11°.71S±0°.06×166°.6E±0°.1, h150km, n64, σ1s01/63, mb4.6/33, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.76**	**171**		**Pn**	**07 43 06.0**	**+0.4**
DZM	**Mont Dzumac**	**10.30**	**181**	P	**Pn**	**07 44 34.2**	**+1.7**
	0.5nm,0.3s,baz=29,slow=6.0,SNR=20						
DZM				S	**Sn**	**07 46 22.0**	**-4.5**
	0.1nm,0.3s,baz=121,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**10.30**	**181**		**Pn**	**07 44 33.5**	**+1.0**
EIDS	**Eidsvold**	**19.97**	**225**	P	**Pn**	**07 46 31.0**	**-1.3**
EIDS				IAmb	IAmb	07 46 31.7	
	comp=Z,30nm,0.8s						
CTA	**Charters Tower**	**21.22**	**244**	P	**P**	**07 46 42.4**	**-0.1**
	comp=Z,4.2nm,0.6s,baz=69,slow=12,SNR=9.6						
CTAO	**Charters Tower**	**21.22**	**244**	P	**P**	**07 46 43.1**	**+0.6**
ARMA	**Armidale**	**23.20**	**214**	P	**P**	**07 47 03.9**	**+1.7**
CAN	**Canberra**	**28.39**	**211**	P	**P**	**07 47 49.4**	**+0.7**
H11S2	**WAKE ISLAND Hy**	**30.01**	**0**	T	T	08 18 58.9	
	baz=181,slow=76,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**30.02**	**0**	T	T	08 19 00.8	
	baz=181,slow=76,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**30.03**	**0**	T	T	08 19 01.4	
	baz=181,slow=76,SNR=3.9						
THZ	**Tophouse**	**30.45**	**171**	P	**P**	**07 48 07.9**	**+1.1**
THZ				IAmb	IAmb	07 48 33.4	
	comp=Z,30nm,1.4s						
THZ	**Tophouse**	**30.45**	**171**	P	**P**	**07 48 07.7**	**+0.9**
STKA	**Stephens Creek**	**30.53**	**225**	P	**P**	**07 48 08.6**	**+1.0**
	comp=Z,7.5nm,0.7s,baz=46,slow=8.9,SNR=14						
STKA	**Stephens Creek**	**30.53**	**225**	P	**P**	**07 48 08.7**	**+1.1**
WR0	**Warramunga Arr**	**31.84**	**251**	P	**P**	**07 48 18.5**	**-0.7**
WR0				IAmb	IAmb	07 48 31.6	
	comp=Z,15nm,1.5s						
TOO	**Toolangi**	**31.93**	**213**	P	**P**	**07 48 20.9**	**+1.0**
WB0	**Warramunga Arr**	**31.94**	**251**	P	**P**	**07 48 19.6**	**-0.6**
WB0				IAmb	IAmb	07 48 20.4	
	comp=Z,16nm,1.1s						
WB2	**Warramunga Arr**	**32.01**	**251**	P	**P**	**07 48 19.8**	**-1.0**
WB2				IAmb	IAmb	07 48 21.0	
	comp=Z,13nm,1.2s						
WRA	**Warramunga Arr**	**32.02**	**251**	P	**P**	**07 48 20.1**	**-0.8**
	comp=Z,3.4nm,0.6s,baz=84,slow=9.2,SNR=20						
WRA				PcP	**PcP**	**07 51 07.0**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=83,slow=3.2,SNR=4.9						
WRA	**Warramunga Arr**	**32.02**	**251**	P	**P**	**07 48 19.0**	**-1.9**
RPZ	**Rata Peaks**	**32.12**	**174**	P	**P**	**07 48 22.1**	**+0.7**
	comp=Z,12nm,0.8s,baz=46,slow=2.3,SNR=5.1						
MQZ	**McQueen's Vall**	**32.31**	**172**	P	**P**	**07 48 23.9**	**+0.9**
MQZ				IAmb	IAmb	07 48 24.5	
	comp=Z,12nm,0.8s						
AS31	**Alice Springs**	**33.22**	**245**	P	**P**	**07 48 30.8**	**-0.6**
ASAR	**Alice Springs**	**33.22**	**245**	P	**P**	**07 48 30.4**	**-1.0**
	comp=Z,5.2nm,0.7s,baz=70,slow=9.7,SNR=80						
ASAR				PcP	**PcP**	**07 51 10.6**	**0.0**
	comp=Z,0.8nm,0.5s,baz=75,slow=2.3,SNR=8.3						
BBOO	**Buckleboo**	**34.97**	**228**	P	**P**	**07 48 46.7**	**+0.4**
BBOO				IAmb	IAmb	07 48 47.2	
	comp=Z,16nm,0.7s						
KNRA	**Kununurra**	**36.91**	**259**	P	**P**	**07 49 02.9**	**0.0**
KNRA				IAmb	IAmb	07 49 03.2	
	comp=Z,20nm,1.0s						
FITZ	**Fitzroy Crossi**	**39.99**	**256**	P	**P**	**07 49 29.3**	**+0.6**
FITZ				IAmb	IAmb	07 49 29.5	
	comp=Z,20nm,0.8s						
FORT	**Forrest**	**40.33**	**236**	P	**P**	**07 49 31.6**	**+0.3**
FORT				IAmb	IAmb	07 49 31.7	
	comp=Z,15nm,0.6s						
PSA00	**Pilbara Seismi**	**45.67**	**251**	P	**P**	**07 50 14.7**	**+0.3**
TOLI2	**Tolitoli**	**47.23**	**283**	P	**P**	**07 50 27.1**	**+0.5**
TOLI2				IAmb	IAmb	07 50 27.6	
	comp=Z,6.8nm,0.7s						
NWAO	**Narrogin (SRO)**	**49.76**	**237**	P	**P**	**07 50 45.6**	**-0.2**
NWAO				IAmb	IAmb	07 50 46.4	
	comp=Z,9.1nm,0.7s						
MORW	**Morawa**	**50.01**	**242**	P	**P**	**07 50 47.9**	**+0.1**
MORW				IAmb	IAmb	07 50 53.5	
	comp=Z,19nm,1.5s						
JAGI	**Jajag, Banyuwa**	**51.65**	**268**	P	**P**	**07 50 58.9**	**-1.2**
KKM	**Kota Kinabalu**	**53.10**	**287**	P	**P**	**07 51 10.9**	**0.0**
JMN	**Monobe**	**54.86**	**327**	P	**P**	**07 51 23.7**	**+0.3**
MJAR	**Matsushiro Arr**	**54.93**	**332**	P	**P**	**07 51 22.5**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=174,slow=7.5,SNR=2.3						
JNU	**Nakatsue**	**56.09**	**324**	P	**P**	**07 51 31.5**	**-0.6**
JHS	**Saijyo**	**56.24**	**327**	P	**P**	**07 51 32.9**	**-0.2**
JHS				IAmb	IAmb	07 51 38.3	
	comp=Z,8.6nm,1.0s						
KSRS	**Korea Array**	**60.88**	**325**	P	**P**	**07 52 05.0**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=130,slow=6.5,SNR=7.5						
USRK	**Usuriysk Ar.**	**63.90**	**333**	P	**P**	**07 52 25.8**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=134,slow=4.2,SNR=3.0						
PETK	**Petropavlovsk-**	**65.01**	**354**	P	**P**	**07 52 32.0**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=145,slow=5.3,SNR=1.8						
VNDA	**Vanda**	**65.84**	**181**	P	**P**	**07 52 38.0**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=353,slow=7.7,SNR=19						
VNDA	**Vanda**	**65.84**	**181**	P	**P**	**07 52 38.0**	**+0.8**
CASY	**Casey**	**66.06**	**202**	P	**P**	**07 52 38.5**	**-0.2**
CASY				IAmb	IAmb	07 52 39.1	
	comp=Z,12nm,1.3s						
SBA	**Scott Base**	**66.13**	**180**	P	**P**	**07 52 40.9**	**+1.8**
SBA				IAmb	IAmb	07 52 42.1	
	comp=Z,4.4nm,0.8s						
IPM	**Ipoh**	**67.13**	**280**	P	**P**	**07 52 46.9**	**+0.4**
IPM				IAmb	IAmb	07 52 47.5	
	comp=Z,21nm,1.5s						
GSI	**Gunungsitoli**	**69.73**	**276**	P	**P**	**07 53 02.6**

s-min=0.0km az=88.6,North Island

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PRHZ	**Porangahau**	**0.02**	**348**	P Pg	07 47 22.0	+0.4
PRHZ				S Sg	07 47 24.6	+1.1
ANWZ	**Angora Road**	**0.21**	**217**	P Pb	07 47 24.8	+0.5
ANWZ				S Sb	07 47 30.1	+2.1
WPHZ	**Waipukurau**	**0.27**	**326**	P Pb	07 47 25.5	+0.1
WPHZ				S Sb	07 47 31.3	+1.5
PXZ	**Pawanui**	**0.31**	**33**	P Pb	07 47 26.1	+0.1
PXZ				S Sb	07 47 32.2	+1.4
DVHZ	**Dannevirke**	**0.36**	**268**	P Pb	07 47 27.0	+0.1
DVHZ				S Sb	07 47 33.6	+1.3
BFZ	**Birch Farm**	**0.49**	**218**	P Pb	07 47 29.4	+0.3
BFZ				S Sn	07 47 38.3	-1.2
PNHZ	**Pukenui**	**0.51**	**318**	P Pb	07 47 29.5	+0.2
KAHZ	**Kahuranaki**	**0.53**	**20**	P Pb	07 47 30.3	+0.6
KAHZ				S Sn	07 47 40.1	-0.2
TSZ	**Takapari Road**	**0.57**	**294**	P Pb	07 47 30.5	+0.1
PRWZ	**Pori Road**	**0.58**	**242**	P Pb	07 47 31.2	+0.6
PRWZ				S Sn	07 47 41.6	+0.1
POWZ	**Post Office Ro**	**0.68**	**261**	P Pb	07 47 32.6	+0.4
KRHZ	**Kereru**	**0.68**	**342**	P Pb	07 47 32.5	+0.2
CPWZ	**Castlepoint**	**0.70**	**208**	P Pn	07 47 33.5	-0.6
TIWZ	**Tintock**	**0.75**	**230**	P Pb	07 47 33.8	+0.2
MCHZ	**McNeill Hill**	**0.85**	**3**	P Pg	07 47 35.6	+0.4
KWHZ	**Kaweka Forest**	**0.88**	**349**	P Pb	07 47 35.8	0.0
MRZ	**Mangatainoka R**	**0.89**	**245**	P Pb	07 47 35.3	-0.6
BHHZ	**Black Hill Sta**	**0.92**	**331**	P Pb	07 47 36.1	-0.2
TMWZ	**Te Maipa**	**1.00**	**215**	P Pb	07 47 36.2	-1.5
OHWZ	**Ohakea**	**1.02**	**274**	P Pg	07 47 39.0	+0.5
HOWZ	**Holdsworth Sta**	**1.05**	**234**	P Pb	07 47 37.2	-1.4
MOVZ	**Moawhango**	**1.12**	**322**	P Pn	07 47 39.8	0.0
BKZ	**Black Stump Fm**	**1.13**	**354**	P Pb	07 47 39.0	-1.0
MTW	**Mount Morrison**	**1.23**	**295**	P Pn	07 47 39.2	-2.1
OGWZ	**Otaki Gorge**	**1.24**	**244**	P Pn	07 47 40.1	-1.3
WNVZ	**Wahianoa**	**1.25**	**320**	P Pb	07 47 42.5	+0.4
TUVZ	**Tukino**	**1.27**	**323**	P Pg	07 47 43.3	-0.1
MTVZ	**Mangateitei**	**1.28**	**315**	P Pg	07 47 43.0	-0.4
SNVZ	**South Ngauruho**	**1.35**	**325**	P Pb	07 47 44.0	+0.2
OTVZ	**Oturere**	**1.35**	**326**	P Pb	07 47 43.9	+0.1
ETVZ	**East Tongariro**	**1.36**	**328**	P Pb	07 47 44.1	+0.2
NGZ	**Ngauruhoe**	**1.37**	**324**	P Pb	07 47 44.5	+0.4
TMVZ	**Te Maari**	**1.38**	**328**	P Pb	07 47 44.5	+0.3
WAZ	**Wanganui**	**1.38**	**292**	P Pb	07 47 44.1	-0.1
NNVZ	**North Ngauruho**	**1.40**	**325**	P Pb	07 47 44.9	+0.2
NTVZ	**North Tongarir**	**1.40**	**328**	P Pb	07 47 44.9	+0.2
WTVZ	**West Tongariro**	**1.43**	**325**	P Pb	07 47 45.3	+0.2
RITZ	**Rihia Road**	**1.44**	**335**	P Pg	07 47 48.0	+1.5
CAW	**Cannon Point**	**1.45**	**235**	P Pn	07 47 42.5	-1.9
RATZ	**Rangitukua**	**1.57**	**334**	P Pg	07 47 49.0	0.0

IDC ***19*** *08:10:32.8±2.4, 6°.26S×153°.39E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/38, mbtmp3.8/8, ML2.7/1, Error ellipse: s-maj=80.4km s-min=21.1km az=123.0*

ISC 19 08:10:36.8±1.9, 6°.4S±0°.3×153°.5E±0°.3, h29km, n9, σ0§46/10, mb3.7/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PMG	**Port Moresby**	**6.94**	**244**	Pn **Pn**	**08 12 16.2**	**-0.5**
	8.0nm,0.3s,baz=54,slow=5.7,SNR=14					
PMG				Sn **Sn**	**08 13 35.2**	**+0.5**
	2.4nm,0.3s,baz=165,slow=23,SNR=2.2					
WRA	**Warramunga Arr**	**22.97**	**232**	P **P**	**08 15 39.8**	**+0.6**
	1.1nm,0.9s,baz=56,slow=11,SNR=4.0					
ASAR	**Alice Springs**	**25.50**	**225**	P **P**	**08 16 03.2**	**+0.3**
	0.2nm,0.4s,baz=58,slow=9.2,SNR=8.1					
FITZ	**Fitzroy Crossi**	**29.54**	**244**	P **P**	**08 16 38.9**	**-0.3**
	1.6nm,0.7s,baz=77,slow=14,SNR=1.7					
PETK	**Petropavlovsk-**	**59.34**	**3**	P **P**	**08 20 36.1**	**+0.1**
	1.5nm,0.8s,baz=184,slow=8.7,SNR=2.2					
SONM	**Songino Array**	**67.97**	**328**	P **P**	**08 21 33.4**	**+0.1**
	0.4nm,0.6s,baz=119,slow=5.2,SNR=4.6					
MKAR	**Makanchi Array**	**81.92**	**319**	P **P**	**08 22 53.4**	**-0.4**
	0.1nm,0.4s,baz=89,slow=7.9,SNR=2.0					
NRIK	**Noril'sk**	**87.63**	**341**	P **P**	**08 23 22.5**	**+0.5**
	0.5nm,0.3s,baz=179,slow=2.7,SNR=4.3					
TORD	**Torodi Ar. Bea**	**151.38**	**286**	PKPbc **PKPbc**	**08 30 28.5**	**-0.4**
	0.6nm,0.7s,baz=60,slow=2.8,SNR=3.7					

IDC ***19*** *08:41:50.7±2.0, 17°.55S×178°.78W, h610km±20km, mb3.1/10, mb1 3.3/12, mb1mx3.1/43, mbtmp4.0/12, Error ellipse: s-maj=78.6km s-min=15.1km az=152.0*

ISC 19 08:41:49.9±1.5, 17°.6S±0°.5×178°.7W±0°.3, h600km, n12, σ0§58/12, mb3.5/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MSVF	**Nonsavu**	**3.09**	**267**	P **P**	**08 43 10.9**	**+1.2**
	5.3nm,0.3s,baz=131,slow=21,SNR=19					
DZM	**Mont Dzumac**	**14.66**	**250**	P **P**	**08 44 55.0**	**-0.1**
	0.2nm,0.3s,baz=279,slow=23,SNR=1.7					
CTA	**Charters Tower**	**33.21**	**260**	P **P**	**08 47 39.4**	**+0.3**
	1.5nm,0.4s,baz=100,slow=11,SNR=6.3					
STKA	**Stephens Creek**	**38.53**	**241**	P **P**	**08 48 22.3**	**-0.4**
	2.3nm,0.7s,baz=72,slow=7.6,SNR=4.7					
WRA	**Warramunga Arr**	**44.40**	**259**	P **P**	**08 49 08.7**	**-0.3**
	1.4nm,0.5s,baz=96,slow=7.2,SNR=30					
ASAR	**Alice Springs**	**44.60**	**254**	P **P**	**08 49 10.2**	**-0.3**
	11nm,0.6s,baz=87,slow=8.5,SNR=132					
FITZ	**Fitzroy Crossi**	**52.79**	**260**	P **P**	**08 50 10.2**	**-0.8**
	1.5nm,0.7s,baz=101,slow=2.9,SNR=3.9					
NVAR	**Mina Array Bea**	**79.40**	**44**	P **P**	**08 52 55.0**	**-0.3**
	0.6nm,0.7s,baz=221,slow=8.8,SNR=6.0					
ILAR	**Eielson Array**	**85.64**	**13**	P **P**	**08 53 25.2**	**-0.4**
	0.2nm,0.4s,baz=220,slow=5.7,SNR=7.0					
TXAR	**Lajitas Array**	**86.07**	**58**	P **P**	**08 53 29.1**	**+0.4**
	0.8nm,0.7s,baz=222,slow=5.9,SNR=9.4					
PDAR	**Pinedale Array**	**87.32**	**44**	P **P**	**08 53 34.5**	**+0.1**
	0.4nm,0.6s,baz=207,slow=2.7,SNR=5.5					
YKA	**Yellowknife Ar**	**94.17**	**25**	P **P**	**08 54 05.1**	**-0.1**
	0.1nm,0.6s,baz=249,slow=4.3,SNR=1.6					

IASPEI ***19*** *08:48:54.9±0.8, 44°.50N±0°.02×6°.91E±0°.02, h9km±6km, Error ellipse: s-maj=2.5km s-min=2.2km az=62.0, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

ROM ***19*** *08:48:55.0±0.2, 44°.494N±0°.008×6°.89E±0°.01, h10km, ML1.9/16, Error ellipse: s-maj=1.2km s-min=0.3km az=52.0*

STR ***19*** *08:48:55.5±0.4, 45°.N±2°×±°, h0km, MLv2.1/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*

LDG ***19*** *08:48:55.3±0.0, 44°.50N×6°.88E, h2km, Md2.7/2, Ml2.4/29, Error ellipse: s-maj=1.1km s-min=0.8km az=66.0*

GEN ***19*** *08:48:55.2, 44°.49N×6°.88E, h2km±1km, Ml1.8*

ISC 19 08:48:55.2±0.8, 44°.50N±0°.01×6°.93E±0°.02, h11km±4km, n78, σ1§82/135, 3C, France

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
SURF	**Saint Ours**	**0.08**	**258**	Pg **Pg**	**08 48 56.6**	**-1.3**
SURF				Sg **Sg**	**08 48 57.8**	**-2.1**
PZZ	**Stroppo**	**0.14**	**86**	P **Pg**	**08 48 59.0**	**+0.5**
PZZ				S **Sb**	**08 49 01.3**	**+0.4**
PZZ	**Stroppo**	**0.14**	**86**	⇑P **Pg**	**08 48 59.1**	**+0.5**
PZZ				S **Sb**	**08 49 01.6**	**+0.8**
PZZ				AML AML		
	comp=N,3795μm,0.2s					
PZZ				AML AML		
	comp=E,4760μm,0.2s					
MBDF	**Montbardon**	**0.26**	**334**	*e*Pg **Pg**	**08 49 00.1**	**-0.5**
MBDF				*e*Sg **Sg**	**08 49 03.5**	**-0.6**
	comp=E,121nm,0.2s					
OGAG	**Argentiere**	**0.28**	**261**	Pg **Pg**	**08 49 03.0**	**+2.0**
OGAG				Sg **Sb**	**08 49 08.7**	**+1.5**
ISO	**Isola**	**0.33**	**164**	Pg **Pg**	**08 49 01.8**	**0.0**
ISO				Sg **Sg**	**08 49 06.2**	**0.0**
STV	**Sant Anna di V**	**0.38**	**131**	P **Pg**	**08 49 03.4**	**+0.6**
STV				S **Sg**	**08 49 08.8**	**+0.9**
STV	**Sant Anna di V**	**0.38**	**131**	P **Pg**	**08 49 03.3**	**+0.5**
STV				S **Sg**	**08 49 08.7**	**+0.9**
STV				AML AML		
	comp=N,131μm,0.8s					
STV				AML AML		
	comp=E,154μm,0.1s					
BHB	**Bricherasio**	**0.42**	**35**	P **Pg**	**08 49 03.8**	**+0.3**
BHB	**Bricherasio**	**0.42**	**35**	P **Pg**	**08 49 03.8**	**+0.3**
BHB				S **Sg**	**08 49 09.7**	**+0.6**
BHB				AML AML		
	comp=E,147μm,0.3s					
BHB				AML AML		
	comp=N,191μm,0.6s					
RRL	**Rocca Remolon**	**0.43**	**347**	P **Pg**	**08 49 03.6**	**-0.3**
RRL				S **Sg**	**08 49 10.3**	**+0.6**
RRL	**Rocca Remolon**	**0.43**	**347**	⇑P **Pg**	**08 49 03.6**	**-0.3**
RRL				S **Sg**	**08 49 10.3**	**+0.6**
RRL				AML AML		
	comp=E,218μm,0.3s					
RRL				AML AML		
	comp=N,209μm,1.0s					
RRL				AML AML		
	comp=N,210μm,1.0s					
RRL				AML AML		
	comp=E,218μm,0.3s					
ENR	**Entracque**	**0.45**	**127**	P **Pg**	**08 49 04.5**	**+0.5**
ENR				S **Sg**	**08 49 11.4**	**+1.5**
ENR	**Entracque**	**0.45**	**127**	P **Pg**	**08 49 04.3**	**+0.3**
ENR				S **Sg**	**08 49 11.1**	**+1.1**
ENR				AML AML		
	comp=E,338μm,1.2s					
ENR				AML AML		
	comp=N,308μm,0.1s					
ENR				AML AML		
	comp=N,307μm,0.1s					
BNI	**Bardonecchia**	**0.58**	**342**	P **Pg**	**08 49 06.3**	**-0.3**
BNI				S **Sg**	**08 49 14.8**	**+0.5**
BNI				AML AML		
	comp=E,55μm,1.1s					
BNI				AML AML		
	comp=N,53μm,0.5s					
OGDI	**Digne**	**0.59**	**229**	Pg **Pg**	**08 49 08.0**	**+1.2**
SAOF	**Saorge**	**0.68**	**138**	Pg **Pg**	**08 49 09.1**	**+0.7**
SAOF				Sg **Sg**	**08 49 18.1**	**+0.7**
SAOF	**Saorge**	**0.68**	**138**	⇑P **Pg**	**08 49 09.2**	**+0.8**
SAOF				S **Sg**	**08 49 18.1**	**+0.7**
SAOF	**Saorge**	**0.68**	**138**	AML AML		
	comp=N,102μm,1.1s					
SAOF				AML AML		
	comp=E,87μm,1.3s					
RSP	**Reno Superiore**	**0.69**	**20**	P **Pg**	**08 49 08.8**	**+0.1**
RSP				S **Sg**	**08 49 18.0**	**+0.2**
RSP	**Reno Superiore**	**0.69**	**20**	P **Pg**	**08 49 08.8**	**+0.1**
RSP				S **Sg**	**08 49 18.8**	**+1.0**
RSP				AML AML		
	comp=N,91μm,0.9s					
RSP				AML AML		
	comp=E,112μm,0.2s					
RSP				AML AML		
	comp=N,91μm,0.9s					
GBOS	**Grotte di Boss**	**0.70**	**111**	P **Pg**	**08 49 09.4**	**+0.5**
GBOS				S **Sg**	**08 49 19.4**	**+1.3**
GBOS	**Grotte di Boss**	**0.70**	**111**	P **Pg**	**08 49 09.3**	**+0.5**
GBOS				S **Sg**	**08 49 19.2**	**+1.2**
GBOS				AML AML		
	comp=E,294μm,0.4s					
GBOS				AML AML		
	comp=N,219μm,0.2s					
SBF	**Sospel**	**0.73**	**150**	*e*Pg **Pb**	**08 49 09.6**	**-0.5**
SBF				*e*Sg **Sb**	**08 49 18.6**	**-1.5**
	comp=N,26nm,0.2s					
ESCA	**l'Escarene**	**0.74**	**154**	Pg **Pb**	**08 49 10.0**	**-0.2**
ESCA				Sg **Sb**	**08 49 20.3**	**0.0**
CALF	**Calern**	**0.74**	**180**	Pg **Pb**	**08 49 10.1**	**-0.2**
BLAF	**les Blancs**	**0.84**	**230**	Pg **Pb**	**08 49 11.8**	**-0.1**
ORIF	**Oris-en-Rattie**	**0.86**	**300**	*e*Pg **Pb**	**08 49 10.6**	**-1.6**
ORIF				*e*Sg **Sb**	**08 49 21.8**	**-2.0**
	comp=N,27nm,0.3s					
ORIF	**Oris-en-Rattie**	**0.86**	**300**	Pg **Pb**	**08 49 11.0**	**-1.2**
ORIF				Sg **Sb**	**08 49 21.2**	**-2.6**
ORIF	**Oris-en-Rattie**	**0.86**	**300**	P **Pb**	**08 49 10.9**	**-1.3**
ORIF				S **Sb**	**08 49 21.5**	**-2.3**
ORIF				AML AML		
	comp=N,52μm,0.4s					
ORIF				AML AML		
	comp=E,49μm,0.5s					
RORO	**Rocca Rossa**	**0.90**	**115**	P **Pb**	**08 49 12.8**	**-0.2**
IMI	**Imperia**	**0.91**	**130**	P **Pb**	**08 49 12.9**	**-0.2**
IMI				S **Sg**	**08 49 25.9**	**+1.3**
IMI				AML AML		
	comp=E,97μm,0.3s					
IMI				AML AML		
	comp=N,150μm,0.3s					
MONC	**Moncucco Torin**	**0.92**	**51**	P **Pb**	**08 49 13.9**	**+0.7**
MONC				AML AML		
	comp=E,133μm,1.6s					
MONC				AML AML		
	comp=N,128μm,0.8s					
FRF	**La Foret Royal**	**0.96**	**192**	*e*Pg **Pb**	**08 49 12.8**	**-1.1**
FRF				*e*Sg **Sb**	**08 49 25.3**	**-1.3**
	comp=N,58nm,0.2s					
LSD	**Lago del Serru**	**0.97**	**9**	P **Pb**	**08 49 13.5**	**-0.9**
LSD				S **Sb**	**08 49 27.7**	**+0.4**
LSD				AML AML		
	comp=E,113μm,0.2s					
LSD				AML AML		
	comp=N,74μm,0.3s					
MLYF	**Mely**	**0.98**	**239**	Pg **Pb**	**08 49 15.2**	**+1.0**
LPG	**La Plagne**	**1.01**	**353**	*e*Pg **Pb**	**08 49 14.5**	**-0.4**
LPG				*e*Sg **Sb**	**08 49 26.8**	**-1.5**
	comp=N,20nm,0.3s					
LPL	**La Plagne**	**1.03**	**352**	*e*Pg **Pb**	**08 49 14.5**	**-0.7**
LPL				*e*Sg **Sb**	**08 49 27.5**	**-1.4**
	comp=N,14nm,0.3s					
QLNO	**Quiliano**	**1.03**	**99**	P **Pb**	**08 49 15.3**	**+0.1**
QLNO				S **Sb**	**08 49 28.9**	**+0.2**
SMRF	**Simiane la Rot**	**1.10**	**242**	*e*Pg **Pb**	**08 49 15.7**	**-0.7**
SMRF	**Simiane la Rot**	**1.10**	**242**	*e*P **Pn**	**08 49 17.5**	**+0.8**
SMRF				*e*Sg **Sb**	**08 49 30.3**	**-0.5**
	comp=N,73nm,0.3s					
PCP	**Piancastagn**	**1.16**	**87**	P **Pn**	**08 49 17.4**	**-0.2**
PCP				S **Sn**	**08 49 33.0**	**-0.4**
TRAV	**Traversella**	**1.17**	**30**	P **Pn**	**08 49 16.5**	**-1.2**
RUSF	**Rustrel**	**1.18**	**242**	Pg **Pn**	**08 49 18.3**	**+0.6**
RUSF				Sg **Sg**	**08 49 35.0**	**+1.9**
CIRO	**Champorcher**	**1.19**	**22**	P **Pn**	**08 49 16.9**	**-1.3**
CIRO				AML AML		
	comp=E,29μm,0.8s					
CIRO				AML AML		
	comp=N,34μm,1.6s					
LMR	**La Mourre**	**1.20**	**195**	*e*Pg **Pn**	**08 49 17.1**	**-0.9**
LMR				*e*Sg **Sb**	**08 49 33.1**	**-0.5**
	comp=N,45nm,0.2s					
ARTF	**Artigues**	**1.22**	**222**	Pn **Pn**	**08 49 16.1**	**-2.2**
MRGE	**Morge**	**1.28**	**4**	P **Pn**	**08 49 19.1**	**-0.2**
MRGE				AML AML		
	comp=N,44μm,0.8s					
MRGE				AML AML		
	comp=E,39μm,1.5s					
REMY	**Saint-Rhmy-en**	**1.35**	**7**	P **Pn**	**08 49 20.6**	**+0.3**
REMY				AML AML		
	comp=N,65μm,0.7s					
REMY				AML AML		
	comp=E,51μm,0.9s					
DIX	**Grande Dixence**	**1.62**	**12**	P **Pn**	**08 49 25.1**	**+1.1**
VIVF	**Saint-Julien-l**	**1.65**	**283**	*e*Pn **Pn**	**08 49 23.8**	**-0.4**
VIVF				*e*Sn **Sn**	**08 49 43.5**	**-1.9**
VIVF				*e*Sg **Sb**	**08 49 46.8**	**+0.3**
	comp=E,6.0nm,0.3s					
MMK	**Mattmark**	**1.72**	**25**	P **Pn**	**08 49 26.2**	**+0.8**
EUCT	**Pavia**	**1.72**	**65**	P **Pb**	**08 49 26.8**	**-0.1**
CABF	**La Chapelle**	**2.19**	**345**	*e*P **Pn**	**08 49 33.3**	**+1.5**
CABF	**La Chapelle**	**2.19**	**345**	*e*Pg **Pb**	**08 49 36.0**	**+1.0**
CABF				*e*Sn **Sn**	**08 49 56.6**	**-2.4**
CABF				*e*Sg **Sb**	**08 50 04.2**	**+1.9**
	comp=E,2.2nm,0.3s					
LASF	**Ste Croix**	**2.25**	**260**	*e*P **Pn**	**08 49 33.5**	**+1.1**
LASF	**Ste Croix**	**2.25**	**260**	*e*Pg **Pb**	**08 49 36.4**	**+0.6**
LASF				*e*Sn **Sn**	**08 49 57.9**	**-2.2**
	comp=E,2.9nm,0.3s					
LASF				*e*Sg **Sb**	**08 50 05.3**	**+1.6**
	comp=E,2.0nm,0.3s					
PGF	**Pioggiola**	**2.46**	**142**	*e*Pn **Pn**	**08 49 35.2**	**-0.3**
PGF				*e*Sn **Sn**	**08 50 04.0**	**-1.6**
	comp=E,3.9nm,0.2s					
MNTV	**Mantova**	**2.82**	**75**	S Sg	08 50 35.0	+9.1
SMF	**Signal de Mont**	**3.05**	**316**	*e*P **Pn**	**08 49 45.3**	**+1.8**
SMF	**Signal de Mont**	**3.05**	**316**	*e*Pg **Pb**	**08 49 51.2**	**+1.6**
SMF				*e*Sn **Sn**	**08 50 17.2**	**-2.8**
	comp=E,0.8nm,0.2s					
SMF				*e*Sg **Sb**	**08 50 30.1**	**+3.3**
	comp=E,4.1nm,0.4s					
HINF	**Hinteralfeld**	**3.32**	**359**	*e*P **Pn**	**08 49 48.4**	**+1.2**
HINF	**Hinteralfeld**	**3.32**	**359**	*e*Pg **Pb**	**08 49 57.1**	**+2.9**
HINF				*e*Sn **Sn**	**08 50 23.8**	**-2.9**
HINF				*e*Sg **Sg**	**08 50 39.7**	**-2.1**
	comp=E,2.0nm,0.4s					
AVF	**Avril sur Loir**	**3.40**	**314**	*e*P **Pn**	**08 49 49.9**	**+1.7**
AVF				*e*Sn **Sn**	**08 50 24.7**	**-3.8**
AVF				*e*Sg **Sb**	**08 50 40.8**	**+4.0**
	comp=E,1.2nm,0.3s					
CAF	**Calviac**	**3.49**	**279**	*e*P **Pn**	**08 49 50.3**	**+0.7**
CAF				*e*Sg **Sb**	**08 50 43.7**	**+4.1**
	comp=E,0.6nm,0.3s					
LOR	**Lormes**	**3.50**	**323**	*e*Pn **Pn**	**08 49 48.5**	**-1.2**
LOR				*e*Sn **Sn**	**08 50 28.2**	**-3.0**
	comp=E,4.8nm,0.5s					
LOR				*e*Sg **Sb**	**08 50 43.8**	**+4.0**
	comp=E,2.0nm,0.3s					
SSF	**Saint Saulge**	**3.51**	**318**	*e*P **Pn**	**08 49 51.5**	**+1.8**
SSF	**Saint Saulge**	**3.51**	**318**	*e*Pg **Pb**	**08 49 59.3**	**+1.9**
SSF				*e*Sn **Sn**	**08 50 27.2**	**-4.1**
	comp=E,0.7nm,0.3s					
SSF				*e*Sg **Sb**	**08 50 44.0**	**+4.0**
	comp=E,1.2nm,0.4s					
BGF	**Bois d'Agland**	**3.53**	**307**	*e*P **Pn**	**08 49 52.0**	**+1.9**
HAU	**Haudompre**	**3.53**	**354**	*e*P **Pn**	**08 49 52.4**	**+2.3**
HAU				*e*Sn **Sn**	**08 50 28.4**	**-3.5**
	comp=E,3.2nm,0.3s					
MTLF	**Montolieu**	**3.59**	**253**	*e*P **Pn**	**08 49 52.1**	**+1.2**
MTLF				*e*Sn **Sn**	**08 50 29.6**	**-3.8**
	comp=E,1.3nm,0.2s					
MTLF				*e*Sg **Sb**	**08 50 47.4**	**+4.9**
	comp=E,0.5nm,0.2s					
TCF	**Toulx Ste Croi**	**3.77**	**300**	*e*P **Pn**	**08 49 55.4**	**+2.0**
TCF				*e*Sg **Sb**	**08 50 52.6**	**+4.9**
	comp=E,0.3nm,0.2s					
CDF	**Champ du Feu**	**3.92**	**3**	*e*Pn **Pn**	**08 49 55.0**	**-0.5**
CDF	**Champ du Feu**	**3.92**	**3**	*e*P **Pn**	**08 49 58.3**	**+2.8**
CDF				*e*Sn **Sn**	**08 50 37.8**	**-3.8**
	comp=E,1.1nm,0.3s					
SFTF	**Sexfontaines**	**3.93**	**341**	*e*P **Pn**	**08 49 58.0**	**+2.4**
SFTF				*e*Sn **Sn**	**08 50 38.7**	**-3.0**
	comp=E,2.9nm,0.4s					
SAVF	**Savonnieres en**	**4.30**	**344**	*e*Pn **Pn**	**08 49 59.3**	**-1.4**
	baz=162					
SAVF				*e*Sn **Sn**	**08 50 45.7**	**-5.1**
	comp=E,3.9nm,0.5s					
EPF	**Esparros**	**4.99**	**255**	*e*Pn **Pn**	**08 50 08.5**	**-1.7**
BAIF	**Baives**	**5.86**	**343**	*e*P Pn	08 50 25.6	+3.5

IDC ***19*** *09:05:27.0±1.5, 67°.56N×142°.82E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.4/60, mbtmp3.4/6, ML4.8/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/44, Error ellipse: s-maj=38.8km s-min=24.4km az=1.0*

YARS ***19*** *09:05:27.9±0.0, 67°.55N×142°.83E, h20km*

ISC 19 09:05:27.8±0.7, 67°.55N±0°.03×142°.84E±0°.03, h10km, n14, σ1§62/36, mb3.4/4, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MOMR	**Moma**	**1.10**	**172**	*i* Pg **Pb**	**09 05 47.9**	**-0.9**
	41nm,0.3s					
MOMR				*e*Sg **Sg**	**09 06 02.7**	**-0.4**
	2μm,0.5s					
YBGR	**Belaya Gora**	**1.60**	**50**	*i* Pn **Pn**	**09 05 55.7**	**-0.3**
YBGR				*e*Pn **Pn**	**09 05 55.8**	**-0.3**
YBGR				*e*Pn **Pn**	**09 05 55.8**	**-0.3**
YBGR				*i* Pg **Pb**	**09 05 57.0**	**-0.4**
	30nm,0.2s					
YBGR				*e*Sn **Sn**	**09 06 16.2**	**-0.5**
YBGR				*e*Sn **Sn**	**09 06 16.2**	**-0.5**
YBGR				*e*Sg **Sb**	**09 06 18.1**	**+0.5**
	2μm,0.5s					
DEPR	**Deputatskiy**	**2.15**	**331**	*e*Pn **Pn**	**09 06 03.8**	**+0.2**
DEPR				*e*Pg **Pb**	**09 06 06.6**	**-0.1**
	12nm,0.4s					
DEPR				*e*Sn **Sn**	**09 06 30.0**	**-0.2**
DEPR				*e*Sn **Sn**	**09 06 30.0**	**-0.2**
DEPR				*e*Sg **Sg**	**09 06 34.9**	**-1.7**
	98nm,0.4s					
UNR	**Ust'-Nera**	**3.00**	**177**	*e*Pn **Pn**	**09 06 15.1**	**-0.1**
UNR				*e*Pg **Pb**	**09 06 22.3**	**+1.2**
	22nm,0.5s					
UNR				*e*Sn **Sn**	**09 06 50.4**	**-0.8**
UNR				*e*Sn **Sn**	**09 06 50.4**	**-0.8**
UNR				*e*Sg **Sg**	**09 07 01.6**	**-2.3**
	941nm,1.4s					
BTGS	**Batagay**	**3.14**	**276**	*e*Pg **Pb**	**09 06 24.7**	**+1.1**
	7.5nm,0.2s					
BTGS				*e*Sn **Sn**	**09 06 54.4**	**-0.3**
BTGS				*e*Sn **Sn**	**09 06 54.4**	**-0.3**
BTGS				*e*Sg **Sg**	**09 07 06.1**	**-2.4**
	668nm,1.2s					
BTGS				*e*Sg **Sg**	**09 07 06.1**	**-2.4**
	256nm,0.6s					
SEY	**Seymchan**	**6.12**	**135**	Pn **Pn**	**09 06 58.3**	**+0.2**
	0.3nm,0.3s,baz=79,slow=23,SNR=6.5					
SEY				Lg Lg	09 08 38.3	
	1.1nm,0.3s,baz=209,slow=22,SNR=4.6					
TIXI	**Tiksi**	**6.38**	**316**	Pn **Pn**	**09 07 01.9**	**+0.3**
	0.8nm,0.3s,baz=124,slow=15,SNR=14					
TIXI				Sn **Sn**	**09 08 10.8**	**-3.5**
	1.3nm,0.3s,baz=347,slow=5.7,SNR=4.1					
TIXI				Lg Lg	09 08 43.4	
	1.0nm,0.3s,baz=59,slow=16,SNR=5.2					
TIXI	**Tiksi**	**6.38**	**316**	*e*Pn **Pn**	**09 07 02.1**	**+0.6**
TIXI				*e*Pg **Pb**	**09 07 23.0**	**+4.4**
	9.8nm,0.2s					
TIXI	

SOEI	Soe	4.57	109	Pn		Pn	09 11 58.4	-0.3	
SOEI	Soe	4.57	109	P		Pn	09 12 00.2	+1.5	
SRBI	Singaraja	4.63	272	P		Pn	09 11 59.6	+0.3	
DNP	Denpasar	4.64	265	P		Pn	09 12 15.0	+16	
TTSI	Tana Toraja	5.21	359	P		Pn	09 12 08.8	+2.0	
	0.3nm70nm,0.9s								
ABJI	Asem Bagus	5.62	275	P		Pn	09 12 22.4	+10	
JAGI	Jajag, Banyuwa	5.67	268			Pn	09 12 10.4	-2.3	
KMMI	Kalianget	5.99	281	P		Pn	09 12 19.5	+2.7	
	0.5nm142nm,0.9s								
BBKI	Banjar Baru	6.94	313	P		Pn	09 12 32.0	+2.9	
	34nm,1.0s								
SANI	Sanana	8.68	45	P		Pn	09 12 53.7	+1.9	
	0.2nm56nm,1.2s								
MRSI	Marisa	8.95	13	P		Pn	09 12 56.5	+1.2	
	23nm,0.7s								
UGM	Wanagama	9.28	272	Pn		Pn	09 12 57.2	-2.4	
UGM	Wanagama	9.28	272	P		Pn	09 13 00.3	+0.7	
	5µm233nm,0.7s								
TOLI2	Tolitoli	9.38	6	Pn		Pn	09 12 58.4	-2.6	
SMRI	Semarang	9.44	277	Pn		Pn	09 12 58.9	-2.8	
SMRI	Semarang	9.44	277	P		Pn	09 13 02.4	+0.7	
	5µm378nm,0.8s								
FITZ	Fitzroy Crossi	11.24	151	P		Pn	09 13 26.5	+1.6	
	2.9nm,0.3s,baz=333,slow=10,SNR=65								
FITZ				S		Sn	09 15 27.9	-2.4	
	1.6nm,0.3s,baz=175,slow=13,SNR=2.4								
FITZ	Fitzroy Crossi	11.24	151			Pn	09 13 25.5	+0.6	
KNRA	Kununurra	11.37	131	Pn		Pn	09 13 27.0	+0.5	
MTN	Manton Dam	11.95	113	Pn		Pn	09 13 34.3	+0.4	
LEM	Lembang	12.25	276	P		P	09 13 39.0	-3.2	
	5.1nm,0.3s,baz=108,slow=9.3,SNR=8.5								
LEM				S		S	09 15 51.8	-3.0	
	4.9nm,0.3s,baz=343,slow=22,SNR=1.6								
SBUM	Sibu	13.12	324	Pn		Pn	09 13 46.5	-2.2	
PSA00	Pilbara Seismi	13.21	180	Pn		Pn	09 13 49.7	0.0	
PSA00	Pilbara Seismi	13.21	180	Pn		Pn	09 13 50.4	+0.7	
FAKI	Fak Fak	13.41	67	Pn		Pn	09 13 51.9	-0.5	
FAKI	Fak Fak	13.41	67	P		Pn	09 13 51.5	-0.8	
	39nm,0.7s								
MYLDM	Lahad Datu	13.45	354	Pn		Pn	09 13 50.9	-1.9	
SWI	Sorong	13.52	58	P		Pn	09 13 53.9	+0.2	
	31nm,1.1s								
SIJI	Sorong	13.52	58	P		Pn	09 13 54.0	+0.2	
	2.4nm,0.3s,baz=220,slow=3.9,SNR=7.9								
SIJI				S		S	09 16 15.9	-8.7	
	1.1nm,0.3s,baz=258,slow=22,SNR=2.3								
KSM	Kuching	13.61	315	Pn		Pn	09 13 52.7	-2.1	
KSM	Kuching	13.61	315	P		P	09 13 57.0	-0.2	
XMIS	Christmas Isla	14.21	260	Pn		Pn	09 14 00.6	-1.7	
KKM	Kota Kinabalu	14.70	345			Pn	09 14 06.6	-1.8	
GIRL	Giralia	15.27	200	P		Pn	09 14 14.7	-0.4	
DAV	Davao City (W)	16.28	21	P		Pn	09 14 25.9	-1.5	
	17nm,0.3s,baz=55,slow=15,SNR=1.8								
MNAI	Manna	17.27	282			Pn	09 14 36.6	-2.6	
WB0	Warramunga Arr	18.10	131	P		Pn	09 14 48.0	-0.9	
WB0				IAmb		IAmb	09 15 08.5		
	comp=Z,23nm,1.4s								
WRA	Warramunga Arr	18.17	131	P		Pn	09 14 49.9	+0.2	
	comp=Z,1.2nm,0.3s,baz=296,slow=12,SNR=34								
WRA				S		S	09 18 06.9	+1.9	
	comp=Z,0.7nm,0.3s,baz=311,slow=23,SNR=10								
WRA	Warramunga Arr	18.17	131	P		P	09 14 48.2	+0.8	
WRAB	Tennant Creek	18.17	131	P		P	09 14 48.7	+1.3	
WRAB				IAmb		IAmb	09 15 10.4		
	comp=Z,14nm,1.1s								
WB2	Warramunga Arr	18.18	131	P		P	09 14 48.2	+0.7	
WB2				IAmb		IAmb	09 14 53.1		
	comp=Z,21nm,1.2s								
WR0	Warramunga Arr	18.33	131	P		P	09 14 50.3	+1.2	
WR0				IAmb		IAmb	09 14 52.5		
	comp=Z,12nm,0.8s								
MYKOM	Kota Tinggi	18.86	301	P		P	09 14 53.5	-1.4	
MYKOM				IAmb		IAmb	09 15 02.4		
	comp=Z,18nm,0.8s								
MYKOM	Kota Tinggi	18.86	301	P		Pn	09 14 59.0	+1.1	
AS31	Alice Springs	20.35	140	P		P	09 15 11.9	+1.0	
AS31				IAmb		IAmb	09 15 31.7		
	comp=Z,12nm,1.4s								
ASAR	Alice Springs	20.35	140	P		Pn	09 15 13.8	-2.2	
	comp=Z,4.8nm,0.6s,baz=321,slow=11,SNR=66								
ASAR				S		S	09 18 49.8	+1.8	
	comp=Z,7.0nm,0.8s,baz=322,slow=22,SNR=13								
ASAR	Alice Springs	20.35	140	P		P	09 15 12.0	+1.1	
MORW	Morawa	20.98	189	P		P	09 15 17.1	-0.4	
MORW				IAmb		IAmb	09 15 42.9		
	comp=Z,12nm,0.8s								
JRMM	Jerantut	21.16	304	P		P	09 15 24.0	+4.5	
IPM	Ipoh	22.69	303	P		P	09 15 32.9	-1.5	
IPM	Ipoh	22.69	303	P		P	09 15 38.0	+3.6	
KULM	Kulim	23.45	304	P		P	09 15 40.1	-1.1	
KULM				IAmb		IAmb	09 15 45.5		
	comp=Z,8.6nm,0.7s								
KULM	Kulim	23.45	304	P		P	09 15 43.0	+1.8	
COEN	Coen	23.53	106	P		P	09 15 42.5	+0.5	
COEN				IAmb		IAmb	09 15 46.0		
	comp=Z,7.4nm,0.7s								
RPSI	Rantau Prapat	23.58	297	P		P	09 15 41.8	-0.6	
RPSI				IAmb		IAmb	09 15 46.4		
	comp=Z,7.0nm,0.5s								
PSI	Prapat	23.63	297	P		P	09 15 44.8	+1.8	
	comp=Z,5.7nm,0.4s,baz=0.7,slow=0.8,SNR=6.5								
FORT	Forrest	23.64	162	P		P	09 15 43.3	+0.5	
NWAO	Narrogin (SRO)	24.64	185	P		P	09 15 51.6	-0.2	
NWAO				IAmb		IAmb	09 15 54.9		
	comp=Z,11nm,1.1s								
NWAO	Narrogin (SRO)	24.64	185	P		P	09 15 51.6	-0.2	
NWAO				IAmb		IAmb	09 15 54.9		
	comp=Z,14nm,1.1s								
SRAK	Srakaew	28.36	321	P		P	09 16 24.7	-0.6	
	comp=Z,143nm,0.5s								
BBOO	Buckleboo	28.64	151	P		P	09 16 28.9	+1.3	
CHAI	Chaiyaphum	29.86	324	P		P	09 16 42.0	+3.4	
	comp=Z,11nm,0.5s								
STKA	Stephens Creek	30.96	142	P		P	09 16 52.0	+4.0	
	comp=Z,4.6nm,0.5s,baz=315,slow=10,SNR=18								
STKA	Stephens Creek	30.96	142	P		P	09 16 49.2	+1.1	
NONG	Nongkai	30.96	328	P		P	09 16 52.8	+4.6	
	comp=Z,16nm,1.1s								
UTHA	Uthaitani	31.17	319	P		P	09 16 53.3	+3.2	
	comp=Z,14nm,1.1s								
PHIT	Phitsanulok	31.80	323	P		P	09 16 59.5	+4.0	
	comp=Z,65nm,0.9s								
UTTA	Uttaradit	32.15	324	P		P	09 17 02.0	+3.4	
	comp=Z,8.6nm,1.0s								
SUKH	Sukhothai	32.50	322	P		P	09 17 07.6	+5.9	
	comp=Z,10nm,0.6s								
LAMP	Lampang	33.30	323	P		P	09 17 12.7	+4.0	
	comp=Z,24nm,0.9s								
CM05	Chiang Mai Arr	33.62	322	P		P	09 17 15.2	+3.7	
	comp=Z,4.4nm,1.3s								
CM09	Chiang Mai Arr	33.63	322	P		P	09 17 15.2	+3.8	
	comp=Z,7.5nm,0.8s								
CMAR	Chiang Mai Arr	33.67	322	P		P	09 17 14.3	+2.6	
	comp=Z,2.6nm,0.6s,baz=151,slow=6.9,SNR=15								
CMAR				PcP		PcP	09 19 49.5	+2.4	
	comp=Z,0.7nm,0.3s,baz=176,slow=2.7,SNR=4.7								
CMAR	Chiang Mai Arr	33.67	322	P		P	09 17 10.5	-1.3	
CMMT	Chiang Mai	33.94	323	P		P	09 17 16.3	+2.1	
	comp=Z,4.1nm,1.0s								
CHTO	Chiang Mai	33.94	323	P		P	09 17 12.7	-1.4	
CHTO				IAmb		IAmb	09 17 17.6		
	comp=Z,6.0nm,0.8s								
CD2	Chengdu	41.93	339	*e*P		P	09 18 23.9	+3.1	
SHL	Shillong	43.30	322	P		P	09 18 31.5	-0.6	
XAN	Xi'an	43.36	347	P		P	09 18 34.5	+2.2	
XAN				pmax		pmax			
	comp=Z,6.0nm,0.9s								
KSAR	Wonju Array Be	46.10	9	P		P	09 18 53.0	-0.8	
ODAN	Odare	47.05	319	*e*P		P	09 19 03.0	+1.3	
	comp=Z,20nm,0.5s								
TAPN	Taplejung	47.18	320	*e*P		P	09 19 04.1	+1.4	
RAMN	Ramite	47.63	318	*e*P		P	09 19 07.6	+1.5	
	comp=Z,33nm,0.5s								
MJAR	Matsushiro Arr	47.80	20	P		P	09 19 05.5	-1.5	
	comp=Z,0.6nm,0.5s,baz=191,slow=8.4,SNR=3.2								
MJAR	Matsushiro Arr	47.80	20	P		P	09 19 06.6	-0.4	
JIRN	Jiri	48.38	319	*e*P		P	09 19 13.1	+1.1	
	comp=Z,34nm,0.6s								
GUN	Gumba	48.75	319	*e*P		P	09 19 16.0	+1.2	
	comp=Z,42nm,0.6s								
PKI	Pulchoki	48.83	318	*e*P		P	09 19 16.1	+0.7	
	comp=Z,26nm,0.5s								
PKIN	Phulchoki	48.84	318	*e*P		P	09 19 16.1	+0.7	
	comp=Z,35nm,0.6s								
DMN	Daman	49.05	318	*e*P		P	09 19 18.1	+1.1	
	comp=Z,29nm,0.7s								
HHC	Hu-ho-hao-te	49.49	352	*e*P		P	09 19 20.3	+0.4	
GKN	Gorkha	49.63	318	*e*P		P	09 19 22.1	+0.9	
	comp=Z,28nm,0.5s								
KOLN	Koldanda	50.17	317	*e*P		P	09 19 26.1	+0.7	
	comp=Z,34nm,0.7s								
GTA	Gaotai	50.98	340	*e*P		P	09 19 34.1	+3.0	
GTA				pmax		pmax			
	comp=Z,10.0nm,0.6s								
USRK	Ussuriysk Ar.	53.38	11	P		P	09 19 48.6	+0.1	
	comp=Z,0.9nm,0.6s,baz=164,slow=4.7,SNR=4.3								
SONM	Songino Array	57.14	349	P		P	09 20 16.5	+1.0	
	comp=Z,1.1nm,0.4s,baz=162,slow=8.7,SNR=12								
SONM				PcP		PcP	09 21 09.5	+1.8	
	comp=Z,0.4nm,0.5s,baz=172,slow=5.7,SNR=1.5								
SONM	Songino Array	57.14	349	P		P	09 20 14.3	-1.2	
WMQ	Urumqi	59.51	333	*e*P		P	09 20 32.8	+0.9	
NIL	Nilore	60.80	316	P		P	09 20 40.2	-0.6	
NIL				IAmb		IAmb	09 20 41.5		
	comp=Z,9.1nm,1.2s								
TLY	Talaya	61.35	349	P		P	09 20 45.9	+1.8	
	comp=Z,2.9nm,0.4s,baz=160,slow=4.4,SNR=6.5								
TLY	Talaya	61.35	349	P		P	09 20 44.2	+0.1	
TLY				IAmb		IAmb	09 20 46.8		
	comp=Z,2.9nm,0.5s								
KBL	Kabul	64.21	315	P		P	09 21 02.3	-1.3	
KBL				IAmb		IAmb	09 21 04.2		
	comp=Z,4.6nm,0.7s								
MK31	Makanchi Array	64.23	332	P		P	09 21 03.1	-0.1	
MKAR	Makanchi Array	64.23	332	P		P	09 21 04.9	+1.6	
	comp=Z,10.0nm,0.5s,baz=144,slow=7.5,SNR=150								
MKAR	Makanchi Array	64.23	332	P		P	09 21 03.1	-0.2	
MAKZ	Makanchi	64.39	332	P		P	09 21 02.7	-1.5	
MAKZ				IAmb		IAmb	09 21 06.2		
	comp=Z,3.8nm,0.6s								
AAK	Ala-Archa	65.40	325	P		P	09 21 10.2	-0.9	
AAK				IAmb		IAmb	09 21 13.3		
	comp=Z,4.4nm,0.7s								
KK31	Karatay Array	68.01	323	P		P	09 21 26.1	-1.3	
KKAR	Karatay Array	68.01	323	P		P	09 21 26.8	-0.6	
SOCY	Socotra	68.58	287	P		P	09 21 30.6	-0.9	
SOCY				IAmb		IAmb	09 21 32.9		
	comp=Z,6.6nm,0.8s								
ZAA0	Zalesovo Array	68.70	339	P		P	09 21 30.8	-0.5	
ZALV	Zalesovo Beam	68.70	339	P		P	09 21 31.9	+0.5	
	comp=Z,9.6nm,0.4s,baz=139,slow=4.9,SNR=30								
ZALV	Zalesovo Beam	68.70	339	P		P	09 21 30.6	-0.8	
PEA0B	Petropavlovsk-	69.08	23	P		P	09 21 34.1	+0.3	
PETK	Petropavlovsk-	69.08	23	P		P	09 21 34.6	+0.9	
	comp=Z,0.9nm,0.7s,baz=163,slow=5.6,SNR=7.2								
PETK	Petropavlovsk-	69.08	23	P		P	09 21 33.4	-0.4	
VNDA	Vanda	72.55	171	P		P	09 21 54.8	+0.5	
	comp=Z,0.4nm,0.4s,baz=288,slow=6.4,SNR=3.0								
VNDA	Vanda	72.55	171	P		P	09 21 54.6	+0.3	
GEYT	Alibeck	73.59	313	P		P	09 22 03.0	+1.9	
	comp=Z,1.4nm,0.5s,baz=102,slow=12,SNR=2.0								
ABKAR	Akbulak array	77.49	324	P		P	09 22 22.0	-1.0	
ABKAR	Akbulak array	77.49	324	P		P	09 22 22.4	-0.5	
TIXI	Tiksi	79.99	3	P		P	09 22 35.8	-0.4	
ARU	Arti	81.68	330	P		P	09 22 45.0	-0.4	
ARU				IAmb		IAmb	09 22 46.3		
	comp=Z,5.9nm,1.1s								
QSPA	South Pole Qui	81.70	180	P		P	09 22 44.9	-0.7	
TABL	Table Mountain	101.59	30	Pdif		Pdif	09 24 18.3	-0.8	
CRVS	Cervenica-Dubn	101.73	318	*e*PDIFF		Pdif	09 24 18.6	-1.1	
YKA	Yellowknife Ar	113.19	24	PKiKP		PKiKP	09 29 03.9	+1.0	
	comp=Z,0.5nm,0.5s,baz=309,slow=1.4,SNR=17								
TORD	Torodi Ar. Bea	119.19	280	PKP		PKiKP	09 29 17.5	+1.6	
	comp=Z,0.6nm,0.5s,baz=57,slow=2.1,SNR=7.3								
NVAR	Mina Array Bea	119.89	50	PKP		PKiKP	09 29 19.1	+2.2	
	comp=Z,0.3nm,0.6s,baz=245,slow=2.5,SNR=4.2								
DBIC	Dimbokro	125.22	272	PKP		PKiKP	09 29 29.5	+1.7	
	comp=Z,0.7nm,0.4s,baz=50,slow=7.9,SNR=1.3								
ULM	Lac du Bonnet	128.71	29	PKP		PKiKP	09 29 34.0	+0.2	
	comp=Z,0.9nm,0.5s,baz=181,slow=0.2,SNR=3.5								
CPUP	Villa Florida	145.48	184	PKPbc		PKiKP	09 30 09.0	+0.3	
	comp=Z,1.4nm,0.6s,baz=224,slow=2.9,SNR=4.7								
CPUP	Villa Florida	145.48	184	PKPdf		PKPdf	09 30 03.6	-1.0	

IDC ***19*** *09:31:54.2±0.9,38.46N×12.79E,h0km,mb3.5/10, mb1 3.6/14,mb1mx3.5/46,mbtmp3.4/14,ML3.5/4,MS3.0/3, Ms1 3.1/3,ms1mx2.5/38,Error ellipse: s-maj=18.8km s-min=16.1km az=110.0*

ROM ***19*** *09:31:54.5±0.2,38.506N×0.010×12.92E×0.02, h22km±1km,ML3.5/1,Error ellipse: s-maj=1.2km s-min=1.0km az=119.0*

LDG ***19*** *09:31:54.9,38.47N×12.77E,h30km*

ISC 19 09:31:53.8±1.4,38.54N±0.03×12.84E±0.04,h7km±10km, n73,σ2.944/82,mb3.5/9,3D,Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
USI	Ustica	0.31	57	P	Pb	09 32 02.2	+0.4
USI				S	Sb	09 32 06.8	-0.3
USI				AML	AML		
	comp=E,62250µm,0.3s						
USI				AML	AML		
	comp=N,54450µm,0.7s						
USI				AML	AML		
	comp=N,54450µm,0.7s						
MPG	Monte Pellegri	0.55	133	P	Pg	09 32 03.4	-1.2
MPG				S	Sb	09 32 11.9	-2.1
MPG				AML	AML		
	comp=E,10050µm,0.4s						
MPG				AML	AML		
	comp=N,16700µm,0.6s						
MPG				AML	AML		
	comp=E,10035µm,0.4s						
MPG				AML	AML		
	comp=N,16650µm,0.6s						
MPG				AML	AML		
	comp=E,10060µm,0.4s						
MPG				AML	AML		
	comp=N,16650µm,0.6s						
SOLUN	Solunto	0.70	129	P	Pg	09 32 06.4	-1.0
SOLUN				S	Sg	09 32 16.3	-0.1
SOLUN				AML	AML		
	comp=N,4335µm,0.4s						
SOLUN				AML	AML		
	comp=E,5545µm,0.6s						
CORL	Corleone	0.74	150	P	Pg	09 32 06.5	-1.5
CORL				AML	AML		
	comp=E,5310µm,0.5s						
CORL				AML	AML		
	comp=N,2720µm,0.5s						
CORL				AML	AML		
	comp=E,5930µm,0.5s						
CORL				AML	AML		
	comp=N,3215µm,0.5s						
CRJA	Costa Raja	0.75	170	P	Pn	09 32 08.4	-2.4
MFNL	Monte Finestre	0.75	175	P	Pn	09 32 08.2	-2.7
MMGO	Monte Magaggia	0.88	173	P	Pb	09 32 10.1	-1.4
CLTB	Caltabellotta	1.00	163	P	Pn	09 32 12.9	-1.5
CLTB				S	Sn	09 32 26.0	-2.8
CLTB				AML	AML		
	comp=E,8545µm,0.6s						
CLTB				AML	AML		
	comp=N,12700µm,0.6s						
ALJA	Alia	1.07	137	P	Pn	09 32 14.0	-1.2
ALJA				AML	AML		
	comp=E,6700µm,0.9s						
ALJA				AML	AML		
	comp=N,7050µm,0.6s						
GIB	Gibilmanna	1.08	120	P	Pn	09 32 13.9	-1.5
GIB				S	Sg	09 32 25.9	-2.6
GIB				AML	AML		
	comp=N,6085µm,0.6s						
GIB				AML	AML		
	comp=E,7235µm,0.5s						
CSLB	Castelbuono	1.13	122	P	Pb	09 32 14.2	-1.5
CSLB				S	Sb	09 32 28.5	-2.1
CSLB				AML	AML		
	comp=E,1495µm,0.9s						
CSLB				AML	AML		
	comp=N,1605µm,0.5s						
IACL	Alicudi	1.19	90	P	Pn	09 32 14.8	-2.0
IACL				AML	AML		
	comp=N,3085µm,0.3s						
IACL				AML	AML		
	comp=E,3600µm,1.6s						
PETRA	Petralia Sopra	1.22	125	P	Pn	09 32 16.1	-1.4
PETRA				AML	AML		
	comp=N,4185µm,0.6s						
PETRA				AML	AML		
	comp=E,5885µm,0.7s						
RESU	Resuttano	1.31	133	P	Pg	09 32 18.3	-0.5
RESU				AML	AML		
	comp=N,4075µm,0.7s						
RESU				AML	AML		
	comp=E,2530µm,0.5s						
IFIL	Filicudi I Eol	1.35	88	P	Pn	09 32 17.4	-1.7
IFIL				S	Sb	09 32 34.6	-2.4
IFIL				AML	AML		
	comp=E,8325µm,0.4s						
IFIL				AML	AML		
	comp=N,2455µm,0.5s						
FAVR	Favara	1.43	153	P	Pb	09 32 19.2	-1.6
MSFR	San Fratello	1.47	110	P	Pn	09 32 18.8	-1.9
MSFR				AML	AML		
	comp=N,632µm,1.2s						
MSFR				AML	AML		
	comp=N,631µm,1.2s						
MSFR				AML	AML		
	comp=E,511µm,0.7s						
GALF	Gagliano Caste	1.59	121	AML	AML		
	comp=E,1590µm,0.7s						
GALF				AML	AML		
	comp=N,1315µm,0.6s						
CAGR	Agira	1.59	124	AML	AML		
	comp=E,2630µm,0.5s						
CAGR				AML	AML		
	comp=N,2740µm,0.7s						
VAE	Valguarnera	1.63	130	Pn	Pg	09 32 25.3	+0.2
	comp=N,7.6nm,0.3s,baz=144,slow=2.4,SNR=11						
VAE				Sn	Sg	09 32 51.0	+4.8
	comp=N,18nm,0.3s,baz=41,slow=22,SNR=8.9						
CLTA	Licata	1.64	147	P	Pb	09 32 23.3	-1.1
CLTA				AML	AML		
	comp=E,835µm,1.1s						
CLTA				AML	AML		
	comp=N,851µm,1.4s						
CLTA				AML	AML		
	comp=E,884µm,0.8s						
CLTA				AML	AML		
	comp=N,1440µm,1.4s						
LLI	Lipari	1.65	93	P	Pn	09 32 21.6	-1.6
MUCR	Ucria	1.67	107	P	Pn	09 32 21.8	-1.8
MUCR				AML	AML		
	comp=E,1220µm,0.6s						
MUCR				AML	AML		
	comp=N,1112µm,0.6s						
VPL	Vulcano Piano	1.69	95	P	Pn	09 32 22.1	-1.6
EPZF	Pizzo Felice	1.74	114	P	Pb	09 32 24.9	-1.3
EPZF				AML	AML		
	comp=E,1800µm,0.6s						
EPZF				AML	AML		
	comp=N,2105µm,0.6s						
EPZF				AML	AML		
	comp=E,1845µm,0.6s						
ECNV	Catenanuova	1.75	122	AML	AML		
	comp=E,360µm,0.4s						
ECNV				AML	AML		
	comp=N,696µm,0.7s						
RAFF	Raffo Rosso	1.78	137	P	Pb	09 32 25.4	-1.4
RAFF				AML	AML		
	comp=E,762µm,1.6s						
RAFF				AML	AML		
	comp=N,794µm,1.4s						
RAFF				AML	AML		
	comp=E,1000µm,1.6s						
RAFF				AML	AML		
	comp=N,1068µm,0.8s						
EMSG	Monte Spagnolo	1.81	113	AML	AML		
	comp=E,1320µm,0.9s						
EMSG				AML	AML		
	comp=N,1115µm,0.5s						
NOV	Novara	1.88	105	P	Pn	09 32 25.3	-1.1
NOV				AML	AML		
	comp=N,808µm,1.5s						
NOV				AML	AML		
	comp=E,734µm,0.5s						
IST3	Stromboli F	1.89	81	P	Pn	09 32 25.1	-1.3
IST3				AML	AML		
	comp=N,527µm,1.6s						
IST3				AML	AML		
	comp=E,374µm,0.7s						
MCSR	Castroreale	1.95	103	P	Pn	09 32 25.5	-1.9
MCSR				AML	AML		
	comp=E,1210µm,0.7s						
MCSR				AML	AML		
	comp=N,1315µm,1.0s						
HLNI	Lentini	2.00	126	P	Pn	09 32 27.8	-0.2
HLNI				AML	AML		
	comp=N,561µm,1.1s						
HLNI				AML	AML		
	comp=E,474µm,0.9s						
MPNC	Port Mandanici	2.01	100	P	Pn	09 32 26.6	-1.6
MPNC				AML	AML		
	comp=E,1675µm,0.6s						
MPNC				AML	AML		
	comp=N,1186µm,1.0s						
MEU	Monte Lauro	2.19	130	P	Pn	09 32 29.8	-0.9
MEU				AML	AML		
	comp=E,1450µm,0.7s						
MEU				AML	AML		
	comp=N,1590µm,0.4s						
HMDC	Modica	2.20	135	P	Pn	09 32 30.6	-0.2
HMDC				AML	AML		
	comp=N,788µm,0.7s						
HMDC				AML	AML		
	comp=E,874µm,0.7s						
MTTG	Motta San Giov	2.31	103	P	Pn	09 32 31.3	-0.9
MTTG				AML	AML		
	comp=E,360µm,0.7s						
MTTG				AML	AML		
	comp=N,478µm,0.6s						
JOPP	Joppolo	2.38	87	P	Pn	09 32 31.9	-1.4
HAVL	Avola	2.40	130	P	Pn	09 32 33.0	-0.6
HAVL				AML	AML		
	comp=E,674µm,0.5s						
HAVL				AML	AML		
	comp=N,616µm,0.7s						
MPAZ	Palizzi	2.56	102	P	Pn	09 32 35.2	-0.5
MPAZ				AML	AML		
	comp=E,320µm,0.9s						
MPAZ				AML	AML		
	comp=N,362µm,0.6s						
SOI	Samo	2.57	99	P	Pn	09 32 34.3	-1.5
SOI				AML	AML		
	comp=E,170µm,0.7s						
SOI				AML	AML		
	comp=N,238µm,0.9s						
CMPR	Campora	2.60	46	P	Pn	09 32 36.0	-0.4
CMPR				AML	AML		
	comp=E,65µm,0.3s						
CMPR				AML	AML		
	comp=N,59µm,1.3s						
MGR	Morigerati	2.64	52	P	Pn	09 32 35.9	-0.9
MGR				AML	AML		
	comp=N,54µm,0.9s						
MGR				AML	AML		
	comp=E,55µm,0.7s						
CAR1	CAROLEI	2.72	74	P	Pn	09 32 36.5	-1.

SBF	**Sospel**	**6.70**	**324**	*e*Pn	**Pn**	**09 33 29.3**	**-3.4**
SBF	**Sospel**	**6.70**	**324**	*e*P	**Pn**	**09 33 33.8**	**+1.1**
SBF				*e*Sn	**Sn**	**09 34 42.5**	**-6.8**
	comp=E,10.0nm,0.6s						
LMR	**La Mourre**	**6.78**	**317**	*e*P	**Pn**	**09 33 34.0**	**+0.4**
LMR				*e*Sn	**Sn**	**09 34 44.0**	**-7.0**
	comp=E,1.0nm,0.3s						
FRF	**La Foret Royal**	**6.86**	**319**	*e*P	**Pn**	**09 33 35.2**	**+0.4**
FRF				*e*Sn	**Sn**	**09 34 45.2**	**-7.9**
	comp=E,0.9nm,0.3s						
MBDF	**Montbardon**	**7.67**	**326**	*e*P	**Pn**	**09 33 48.4**	**+2.3**
SMRF	**Simiane la Rot**	**7.71**	**317**	*e*P	**Pn**	**09 33 47.3**	**+0.8**
SMRF				*e*Sn	**Sn**	**09 35 06.4**	**-7.7**
	comp=E,0.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**8.23**	**323**	*e*P	**Pn**	**09 33 55.9**	**+2.3**
LPG	**La Plagne**	**8.30**	**329**	*e*Pn	**Pn**	**09 33 52.3**	**-2.5**
LPG	**La Plagne**	**8.30**	**329**	*e*P	**Pn**	**09 33 57.4**	**+2.6**
DAVOX	**Davos/Dischmat**	**8.52**	**346**	Pn	Pn	09 34 03.3	+5.6
	comp=E,0.2nm,0.3s,baz=149,slow=17,SNR=6.7						
DAVOX				LR	LR	09 37 09.8	
	comp=E,109nm,20.9s,baz=259,slow=37						
VIVF	**Saint-Julien-l**	**8.78**	**319**	*e*P	**Pn**	**09 34 02.3**	**+1.1**
GERES	**GERESS Array B**	**10.32**	**3**	Pn	**Pn**	**09 34 25.6**	**+3.2**
	comp=E,0.1nm,0.3s,baz=188,slow=12,SNR=3.6						
ESDC	**Sonseca Array**	**13.11**	**280**	Pn	**Pn**	**09 35 02.8**	**+2.4**
	comp=E,0.1nm,0.3s,baz=87,slow=12,SNR=2.3						
AKASG	**Malin Array Be**	**16.80**	**38**	Pn	**P**	**09 35 52.5**	**+0.9**
	comp=E,0.8nm,0.3s,baz=231,slow=10,SNR=2.6						
EKA	**Eskdalemuir Ar**	**19.96**	**333**	P	**Pn**	**09 36 29.1**	**+1.1**
	comp=E,0.7nm,0.7s,baz=148,slow=12,SNR=1.7						
HFS	**Hagfors**	**21.62**	**1**	P	**P**	**09 36 45.4**	**+1.1**
	comp=E,1.3nm,0.7s,baz=174,slow=15,SNR=4.2						
HFS				LR	LR	09 45 16.7	
	comp=E,81nm,18.1s,baz=190,slow=37						
NOA	**NORSAR Array B**	**22.55**	**358**	P	**P**	**09 36 55.3**	**+1.0**
	comp=E,0.3nm,0.6s,baz=173,slow=11,SNR=3.7						
NOA				LR	LR	09 46 01.1	
	comp=E,19nm,18.2s,baz=270,slow=37						
KVAR	**Kislovodsk Arr**	**23.02**	**67**	P	**P**	**09 37 01.4**	**+2.0**
	comp=E,1.8nm,0.4s,baz=315,slow=4.3,SNR=1.9						
KBZ	**Khabaz**	**23.15**	**67**	P	**P**	**09 37 02.3**	**+1.7**
	comp=E,0.9nm,0.3s,baz=225,slow=1.4,SNR=2.8						
FINES	**FINESS Array B**	**24.36**	**15**	P	**P**	**09 37 13.7**	**+1.6**
	comp=E,1.6nm,0.7s,baz=204,slow=4.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**27.16**	**204**	P	**P**	**09 37 37.0**	**-0.8**
	comp=E,0.4nm,0.7s,baz=17,slow=10,SNR=2.6						
MKAR	**Makanchi Array**	**50.21**	**57**	P	**P**	**09 40 51.1**	**+0.9**
	comp=E,1.3nm,0.7s,baz=282,slow=6.0,SNR=14						
YKA	**Yellowknife Ar**	**70.84**	**337**	P	**P**	**09 43 12.7**	**+1.9**
	comp=E,0.2nm,0.7s,baz=46,slow=5.3,SNR=5.1						
PDAR	**Pinedale Array**	**83.67**	**321**	P	**P**	**09 44 25.7**	**+2.2**
	comp=E,0.2nm,0.7s,baz=60,slow=4.3,SNR=2.7						

JMA 19 09:33:38.2±0.2, 24°.53N×140°.72E, h118km, M4.3,
Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.47**	**32**	P	Pn	09 34 17.9	+0.4
JHH2				*e*S	Sn	09 34 48.2	+0.4
CBIJ	**Chichi jima**	**2.88**	**27**	P	Pn	09 34 23.3	+0.5
CBIJ				*e*S	Sn	09 34 58.0	+0.8
BSO1	**Boso 1**	**10.09**	**1**	P	Pn	09 35 59.7	+0.3
BSO1				*e*S	Sn	09 37 52.2	+1.8
BSO3	**Boso 3**	**10.24**	**359**	P	Pn	09 36 01.4	-0.2
JAG	**Ashikaga**	**11.91**	**355**	P	Pn	09 36 22.9	-1.2
JAG				*e*S	Sn	09 38 35.3	+0.2
JHO	**Hitachi**	**12.04**	**359**	P	Pn	09 36 24.6	-1.3
JHO				*e*S	Sn	09 38 35.6	-2.8

*NOU **19** 09:35:23.7, 31°.17S×178°.32W, h328km, mb3.9, Kermadec Islands Region*
*IDC **19** 09:35:37.5±6.9, 31°.86S×179°.78W, h154km±53km, mb3.7/3, mb1 4.0/4, mb1mx3.4/24, mbtmp4.2/4, Error ellipse: s-maj=61.8km s-min=25.6km az=44.0*
*WEL **19** 09:35:42.3±0.5, 32°.5±8°×18°.0E±1°.8, h200km±12km, M4.3/13, mB4.8/12, ML5.1/5, MLv5.0/13, Mw(mB)4.0/12, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6*
ISC 19 09:35:40.2±1.7, 32°.00S±0°.10×179°.4E±0°.2, h150km, n38,
σ1s87/45, mb4.0/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.58**	**41**	P	Pn	09 36 34.7	-0.4
GLKZ				S	Sn	09 37 15.1	-2.5
MXZ	**Matakaoa Point**	**5.62**	**189**	P	**Pn**	**09 37 05.9**	**+4.1**
MXZ				S	**Sn**	**09 38 07.4**	**+1.8**
WCZ	**Waipu Caves**	**5.74**	**225**	P	Pn	09 37 14.8	+11
HAZ	**Te Kaha**	**5.89**	**192**	P	**Pn**	**09 37 07.2**	**+1.7**
HAZ				S	**Sn**	**09 38 13.6**	**+1.5**
PKGZ	**Pakihiroa**	**5.97**	**190**	P	**Pn**	**09 37 07.1**	**+0.5**
PKGZ				S	**Sn**	**09 38 15.2**	**+1.1**
PUZ	**Puketiti**	**6.13**	**188**	P	**Pn**	**09 37 11.4**	**+2.8**
PUZ				S	**Sn**	**09 38 16.1**	**+1.6**
TWGZ	**Tauwhareparae**	**6.27**	**190**	P	**Pn**	**09 37 14.6**	**+4.1**
TWGZ				S	**Sn**	**09 38 21.7**	**+0.5**
MWZ	**Matawai**	**6.50**	**193**	P	**Pn**	**09 37 14.0**	**+0.4**
MWZ				S	**Sn**	**09 38 25.5**	**-1.2**
URZ	**Urewera**	**6.52**	**196**	P	**Pn**	**09 37 16.0**	**+2.2**
	5.2nm,0.3s,baz=301,slow=23,SNR=71						
URZ				S	**Sn**	**09 38 26.0**	**-1.0**
	6.6nm,0.3s,baz=303,slow=22,SNR=6.4						
TKGZ	**Te Karaka**	**6.55**	**191**	P	**Pn**	**09 37 17.6**	**+3.5**
TKGZ				S	**Sn**	**09 38 26.6**	**-1.1**
KWHZ	**Kaweka Forest**	**7.79**	**197**	P	**Pn**	**09 37 32.5**	**+1.6**
KWHZ				S	**Sn**	**09 38 56.8**	**-0.9**
TSZ	**Takapari Road**	**8.51**	**198**	P	**Pn**	**09 37 40.6**	**+0.2**
TSZ				S	Sn	09 39 10.1	-4.8
WAZ	**Wanganui**	**8.52**	**204**	P	**Pn**	**09 37 43.6**	**+3.1**
PRWZ	**Pori Road**	**8.97**	**197**	P	**Pn**	**09 37 47.0**	**+0.5**
PRWZ				S	Sn	09 39 20.7	-5.3
BFZ	**Birch Farm**	**9.03**	**195**	P	**Pn**	**09 37 46.9**	**-0.3**
BFZ				S	Sn	09 39 21.3	-6.0
MRZ	**Mangatainoka R**	**9.17**	**198**	P	**Pn**	**09 37 47.4**	**-1.8**
MRZ				S	Sn	09 39 22.6	-8.2
TIWZ	**Tintock**	**9.20**	**197**	P	**Pn**	**09 37 49.5**	**-0.1**
TIWZ				S	Sn	09 39 23.2	-8.4
CPWZ	**Castlepoint**	**9.25**	**195**	P	**Pn**	**09 37 50.6**	**+0.4**
CPWZ				S	Sn	09 39 27.8	-5.0
HOWZ	**Holdsworth Sta**	**9.41**	**198**	P	**Pn**	**09 37 51.0**	**-1.4**
HOWZ				S	Sn	09 39 27.9	-8.7
OGWZ	**Otaki Gorge**	**9.43**	**200**	P	**Pn**	**09 37 50.3**	**-2.3**
OGWZ				S	Sn	09 39 30.9	-6.2
TMWZ	**Te Maipa**	**9.51**	**196**	P	**Pn**	**09 37 52.8**	**-0.9**
TMWZ				S	Sn	09 39 32.4	-6.7
KIW	**Kapiti Island**	**9.55**	**201**	P	**Pn**	**09 37 53.6**	**-0.6**
KIW				S	Sn	09 39 31.9	-8.1
MTW	**Mount Morrison**	**9.66**	**198**	P	**Pn**	**09 37 54.2**	**-1.4**
MTW				S	Sn	09 39 35.4	-7.1
CAW	**Cannon Point**	**9.73**	**200**	P	**Pn**	**09 37 54.9**	**-1.6**
CAW				S	Sn	09 39 36.6	-7.7
DUWZ	**D'Urville Isla**	**9.82**	**205**	P	**Pn**	**09 37 57.9**	**+0.1**
DUWZ				S	Sn	09 39 44.7	-1.9
TRWZ	**Traveller**	**9.84**	**197**	P	**Pn**	**09 37 56.7**	**-1.3**
TRWZ				S	Sn	09 39 38.8	-8.1
PAWZ	**Paruwai Farm**	**9.89**	**198**	P	**Pn**	**09 37 57.3**	**-1.4**
PAWZ				S	Sn	09 39 39.6	-8.5
MSWZ	**Moikau Station**	**9.97**	**198**	P	**Pn**	**09 37 58.3**	**-1.4**
MSWZ				S	Sn	09 39 41.0	-8.9
BHW	**Baring Head**	**10.06**	**200**	P	**Pn**	**09 37 59.1**	**-1.8**
TCW	**Tory Channel**	**10.07**	**203**	P	**Pn**	**09 37 59.7**	**-1.3**
PLWZ	**Palliser**	**10.11**	**198**	P	**Pn**	**09 37 59.7**	**-1.9**
TUWZ	**Tuamarina**	**10.37**	**203**	P	**Pn**	**09 38 04.1**	**-1.0**
BSWZ	**Blackbirch Sta**	**10.65**	**203**	P	**Pn**	**09 38 07.8**	**-0.9**
KHZ	**Kahutara**	**11.39**	**202**	P	**Pn**	**09 38 16.6**	**-1.9**
ASAR	**Alice Springs**	**40.83**	**270**	P	**P**	**09 43 09.7**	**+2.3**
	1.4nm,0.5s,baz=106,slow=7.3,SNR=36						
WRA	**Warramunga Arr**	**41.97**	**275**	P	**P**	**09 43 19.1**	**+2.5**
	2.8nm,0.4s,baz=112,slow=7.8,SNR=40						
QSPA	**South Pole Qui**	**58.11**	**180**	P	**P**	**09 45 15.3**	**-2.4**
	1.2nm,0.7s,baz=34,slow=4.9,SNR=8.4						
FINES	**FINESS Array B**	**145.82**	**337**	PKPbc	**PKPdf**	**09 54 57.8**	**-2.4**
	3.5nm,0.8s,baz=48,slow=3.7,SNR=13						

IDC 19 10:08:51.4±2.6, 15°.33S×173°.79W, h0km, mb3.8/5,
mb1 4.2/5, mb1mx3.8/34, mbtmp3.8/5, MS3.3/8, Ms1 3.4/8,
ms1mx3.2/30, Error ellipse: s-maj=229.2km
s-min=23.7km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**26.30**	**280**	LR	LR	10 22 23.9	
	comp=Z,100nm,21.6s,baz=141,slow=31						
H11S2	**WAKE ISLAND Hy**	**38.71**	**330**	T	T	10 57 02.7	
	baz=149,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**38.72**	**330**	T	T	10 57 04.6	
	baz=149,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**38.73**	**330**	T	T	10 57 05.0	
	baz=149,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**39.67**	**331**	T	T	10 58 19.6	
	baz=149,slow=76,SNR=9.0						
H11N1	**WAKE ISLAND Hy**	**39.67**	**331**	T	T	10 58 21.5	
	baz=149,slow=76,SNR=8.9						
H11N2	**WAKE ISLAND Hy**	**39.68**	**331**	T	T	10 58 25.1	
	baz=149,slow=76,SNR=10						
WRA	**Warramunga Arr**	**49.49**	**257**	P	P	10 17 44.0	0.0
	0.7nm,0.6s,baz=94,slow=7.4,SNR=9.4						
ASAR	**Alice Springs**	**49.77**	**252**	P	P	10 17 46.0	-0.2
	6.5nm,0.8s,baz=86,slow=8.2,SNR=70						
SIJI	**Sorong**	**56.08**	**279**	LR	LR	10 41 30.2	
	comp=Z,32nm,19.9s,baz=222,slow=35						
DAV	**Davao City (W)**	**64.05**	**286**	LR	LR	10 43 52.3	
	comp=Z,27nm,19.7s,baz=192,slow=33						
MJAR	**Matsushiro Arr**	**68.64**	**320**	LR	LR	10 44 29.2	
	comp=Z,18nm,21.9s,baz=230,slow=31						
NVAR	**Mina Array Bea**	**74.53**	**42**	P	P	10 20 31.9	-0.5
	0.7nm,0.9s,baz=222,slow=8.9,SNR=4.5						
KSRS	**Korea Array**	**75.84**	**316**	LR	LR	10 53 27.6	
	comp=Z,12nm,18.0s,baz=95,slow=35						
USRK	**Ussuriysk Ar.**	**77.10**	**323**	LR	LR	10 49 01.7	
	comp=Z,20nm,19.6s,baz=106,slow=31						
TXAR	**Lajitas Array**	**80.89**	**56**	P	P	10 21 08.2	+0.3
	0.6nm,0.9s,baz=229,slow=8.2,SNR=4.8						
PDAR	**Pinedale Array**	**82.47**	**42**	P	P	10 21 16.5	+0.3
	0.3nm,0.6s,baz=219,slow=2.3,SNR=2.5						
MAW	**Mawson**	**87.74**	**199**	LR	LR	10 59 51.2	
	comp=Z,56nm,18.3s,baz=82,slow=35						
CMAR	**Chiang Mai Arr**	**92.23**	**288**	LR	LR	10 57 56.5	
	comp=Z,5.6nm,19.7s,baz=100,slow=32						

*UCR **19** 10:38:24.5±2.0, 6°.51N×82°.90W, h5km, MW4.2*
ISC 19 10:38:20.5±1.5, 6°.31N±0°.09×82°.7W±0°.1, h10km, n51,
σ1s35/51, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIRO	**Carate, Puerto**	**2.17**	**344**	*e*S	**Sn**	**10 39 22.6**	**-0.9**
PTJ1	**Puerto Jimnez**	**2.29**	**346**	*e*S	**Sn**	**10 39 26.1**	**-0.4**
BRU2	**Volcan**	**2.47**	**1**	*e*S	**Sn**	**10 39 31.5**	**+0.1**
EDSV	**San Vito**	**2.51**	**355**	*e*P	**Pn**	**10 39 02.6**	**+1.1**
LPLA	**Las Palmas La**	**2.72**	**354**	*e*P	**Pn**	**10 39 05.0**	**+0.6**
EDPN	**Palmar Norte**	**2.73**	**345**	*e*P	**Pn**	**10 39 05.0**	**+0.5**
POTG	**Potrero Grande**	**2.75**	**352**	*e*P	**Pn**	**10 39 05.9**	**+1.0**
EDBA	**Buenos Aires**	**2.89**	**349**	*e*P	**Pn**	**10 39 06.6**	**0.0**
DRK0	**Durika**	**2.98**	**350**	*e*P	**Pn**	**10 39 08.2**	**+0.2**
EDDO	**Dominical**	**3.13**	**339**	*e*P	**Pn**	**10 39 10.6**	**+0.7**
PEZE	**Perez Zeledon,**	**3.19**	**343**	*e*P	**Pn**	**10 39 11.6**	**+0.7**
RGM0	**Gandoca**	**3.27**	**2**	*e*S	**Sn**	**10 39 56.4**	**-2.0**
CDM	**Cerro De Muert**	**3.38**	**343**	*e*P	**Pn**	**10 39 14.4**	**+0.7**
MRVA	**Moravia de Chi**	**3.56**	**349**	*e*P	**Pn**	**10 39 17.0**	**+1.0**
RIMA	**Rio Macho**	**3.61**	**342**	*e*P	**Pn**	**10 39 17.4**	**+0.6**
OCM	**Ochomogo**	**3.77**	**341**	*e*P	**Pn**	**10 39 19.7**	**+0.8**
HDC	**Heredia**	**3.92**	**340**	*e*P	**Pn**	**10 39 22.0**	**+1.2**
BCIP	**Isla Barro Col**	**4.04**	**45**	*e*P	**Pn**	**10 39 22.2**	**-0.2**
LAFE	**Finca La Fe, P**	**4.09**	**328**	*e*P	**Pn**	**10 39 23.5**	**+0.4**
SRA1	**San Ramn**	**4.13**	**335**	*e*P	**Pn**	**10 39 24.4**	**+0.6**
INDI	**Punta indio, G**	**4.47**	**322**	*e*P	**Pn**	**10 39 28.7**	**+0.3**
JTS	**Las Juntas de**	**4.52**	**331**	*e*P	**Pn**	**10 39 29.6**	**+0.5**
FORC	**Fortuna**	**4.55**	**335**	*e*P	**Pn**	**10 39 31.1**	**+1.6**
ARE1	**Arenal 1**	**4.57**	**335**	*e*P	**Pn**	**10 39 31.2**	**+1.4**
CEDE	**Laguna Cedeo**	**4.59**	**335**	*e*P	**Pn**	**10 39 32.0**	**+1.9**
GRZA	**Playa Garza**	**4.59**	**322**	*e*P	**Pn**	**10 39 30.4**	**+0.4**
COVE	**Coope Vega, Sa**	**4.68**	**340**	*e*P	**Pn**	**10 39 32.4**	**+1.1**
SAJU	**San Juanillo,**	**4.75**	**322**	*e*P	**Pn**	**10 39 33.5**	**+1.2**
PLVR	**Palo Verde**	**4.78**	**327**	*e*P	**Pn**	**10 39 32.4**	**-0.4**
GUAI	**GUAI**	**4.80**	**325**	*e*P	**Pn**	**10 39 33.7**	**+0.8**
ACAL	**Aguas Claras**	**4.86**	**332**	*e*P	**Pn**	**10 39 35.1**	**+1.2**
PTEN	**Parque Tenorio**	**4.91**	**333**	*e*P	**Pn**	**10 39 36.1**	**+1.6**
CUI	**Cuipilapa**	**4.94**	**331**	*e*P	**Pn**	**10 39 36.3**	**+1.4**
COLC	**Colonia**	**4.97**	**331**	*e*P	**Pn**	**10 39 36.9**	**+1.6**
HORNC	**Hornillas**	**5.00**	**331**	*e*P	**Pn**	**10 39 36.3**	**+0.6**
GUAB	**Guayabo de Bag**	**5.02**	**331**	*e*P	**Pn**	**10 39 37.3**	**+1.3**
LIM1	**Limonal**	**5.02**	**331**	*e*P	**Pn**	**10 39 38.0**	**+2.0**
BUEV	**Buena Vista**	**5.18**	**330**	*e*P	**Pn**	**10 39 40.5**	**+2.2**
GUY2C	**Guyana, Caldas**	**7.42**	**98**	*e*P	**Pn**	**10 40 10.7**	**+1.4**
MOTC	**Monteria, Cord**	**7.43**	**70**	*e*P	**Pn**	**10 40 11.2**	**+2.1**
PCON	**Cinco Dias**	**7.46**	**122**	*e*P	**Pn**	**10 40 09.8**	**-0.1**
TOLC	**Tolima**	**7.58**	**103**	*e*P	**Pn**	**10 40 12.2**	**+0.7**
ORTC	**Ortega, Tolima**	**7.83**	**107**	*e*P	**Pn**	**10 40 15.1**	**+0.4**
ZARC	**Zaragoza, Cauc**	**7.91**	**81**	*e*P	**Pn**	**10 40 12.4**	**-3.3**
GARC	**Garzon, Huila**	**8.30**	**119**	*e*P	**Pn**	**10 40 21.6**	**+0.3**

*IDC **19** 10:56:20.4±1.4, 34°.82N×3°.97W, h0km, mb2.9/2, mb1 3.4/5, mb1mx3.2/48, mbtmp3.1/5, ML3.4/3, Error ellipse: s-maj=48.6km s-min=18.1km az=96.0*
*CNRM **19** 10:56:22.7, 34°.77N×3°.93W, h21km, ml3.6, Hypocentre not reviewed by the ISC*
*MDD **19** 10:56:22.5±0.3, 34°.68N×3°.93W, h0km, mbLg2.9/17, Error ellipse: s-maj=3.4km s-min=2.0km az=178.0, PRXIMO*
*SFS **19** 10:56:22.0, 34°.81N×4°.00W, ML2.8, BOU ZINEB (MARRUECOS)*
*INMG **19** 10:56:24.6±1.6, 34°.80N×4°.00W, h19km±14km, ML2.8, Error ellipse: s-maj=6.5km s-min=6.1km az=147.0*
ISC 19 10:56:22.4±1.4, 34°.79N±0°.04×3°.92W±0°.04, h17km±10km,
n74, σ2s12/131, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKLM	**AKL**	**0.28**	**170**	P		10 56 27.3	
AKLM				S		10 56 32.3	
AKLM	**AKL**	**0.28**	**170**	P		10 57 06.1	
AKLM				S		10 57 10.4	
PALE	**Palemas**	**0.43**	**358**	P		10 56 32.0	
PALE				S		10 56 37.8	
PALE	**Palemas**	**0.43**	**358**	P		10 57 09.4	
PALE				S		10 57 15.4	
MELI	**Melilla**	**0.96**	**58**	*i* P	**Pg**	**10 56 40.9**	**-0.1**
MELI				*i* S	**Sg**	**10 56 55.1**	**+1.6**
CHEFC	**Chefchaouen**	**1.21**	**286**	P		10 56 43.7	
JBK	**JBK**	**1.21**	**112**	P		10 56 43.9	
JBK	**JBK**	**1.21**	**112**	S		10 57 38.7	
TAF	**Taforalt**	**1.24**	**88**	P		10 56 45.1	
LCRM	**LCR**	**1.34**	**215**	P		10 56 46.1	
LCRM	**LCR**	**1.34**	**215**	S		10 57 44.6	
SMIR	**Smir Dam**	**1.49**	**307**	P		10 56 48.1	
RSA	**Sarsar**	**1.56**	**274**	P		10 56 53.0	
IFR	**Ifrane**	**1.61**	**219**	*e*P	**Pn**	**10 56 50.1**	**-0.2**
IFR				*e*S	**Sg**	**10 57 11.8**	**-2.7**
CEU	**Ceuta**	**1.62**	**314**	*e*P	**Pn**	**10 56 47.7**	**-2.6**
CEU				*e*S	**Sn**	**10 57 06.2**	**-4.6**
ECEU	**Ceuta**	**1.62**	**313**	P	**Pn**	**10 56 48.9**	**-1.4**
	3.6nm,0.1s,SNR=8.2						
ECEU				S	**Sn**	**10 57 09.5**	**-1.4**
	61nm,0.6s,SNR=4.8						
EMIJ	**Mijas**	**1.90**	**339**	P	**Pn**	**10 56 52.6**	**-1.6**
	1.7nm,0.2s,SNR=20						
EMIJ				S	**Sn**	**10 57 16.2**	**-1.6**
	37nm,0.3s,SNR=7.2						
CZD	**Col de Zad**	**1.98**	**208**	P		10 56 56.2	
EMAL	**Malaga-Limoner**	**2.01**	**348**	*e*P	**Pn**	**10 56 55.2**	**-0.5**
EMAL				*e*S	**Sn**	**10 57 18.6**	**-1.8**
MD31	**MD31**	**2.04**	**200**	S		10 58 03.1	
MDT	**Midelt**	**2.05**	**196**	Pn	**Pn**	**10 56 56.8**	**+0.5**
	13nm,0.3s,baz=342,slow=10,SNR=122						
MDT				Sn	**Sb**	**10 57 23.2**	**-1.2**
	15nm,0.3s,baz=145,slow=18,SNR=4.5						
MDT	**Midelt**	**2.05**	**196**	P		10 56 56.2	
ELGU	**Los Guajares,**	**2.09**	**7**	P	**Pn**	**10 56 56.0**	**-0.8**
	3.5nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**10 57 23.1**	**+0.6**
	133nm,0.4s,SNR=7.9						
EBER	**Berja**	**2.27**	**21**	P	**Pn**	**10 56 58.5**	**-0.8**
	6.9nm,0.3s,SNR=16						
EBER				S	**Sn**	**10 57 27.2**	**+0.2**
	72nm,0.5s,SNR=6.9						
EGOR	**Sierra Gorda,**	**2.32**	**356**	P	**Pn**	**10 56 59.7**	**-0.4**
	3.5nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**10 57 29.5**	**+1.1**
	40nm,0.5s,SNR=7.9						
EQUE	**Quentar**	**2.44**	**9**	P	**Pn**	**10 57 02.5**	**+0.7**
	2.0nm,0.2s,SNR=12						
EQUE				S	**Sn**	**10 57 32.6**	**+1.3**
	32nm,0.5s,SNR=5.4						
ENIJ	**Nijar**	**2.59**	**32**	S	**Sn**	**10 57 32.8**	**-1.9**
	53nm,0.6s,SNR=7.9						
ESPR	**Espera**	**2.60**	**323**	P	**Pn**	**10 57 04.9**	**+1.1**
	2.3nm,0.2s,SNR=6.5						
ESPR				S	**Sn**	**10 57 38.2**	**+3.2**
	34nm,0.6s,SNR=5.7						
ZHG	**ZHG**	**2.62**	**240**	P		10 57 04.2	
EQES	**Quesada**	**3.09**	**13**	P	**Pn**	**10 57 12.1**	**+1.5**
	4.4nm,0.3s,SNR=15						
EQES				S	**Sn**	**10 57 50.2**	**+3.0**
	50nm,0.4s						
HORN	**Hornachuelos**	**3.24**	**341**	P		10 57 12.8	
AVE	**Averroes**	**3.25**	**244**	*e*P	**Pn**	**10 57 13.3**	**+0.6**
AVE				*e*S	**Sn**	**10 57 49.4**	**-1.7**
EADA	**Adamuz**	**3.42**	**351**	P	**Pn**	**10 57 15.8**	**+0.8**
	1.6nm,0.2s,SNR=13						
EADA				S	**Sn**	**10 57 54.7**	**-0.4**
	18nm,0.5s,SNR=4.8						
ECAB	**El Cabril**	**3.50**	**340**	P	**Pn**	**10 57 16.3**	**+0.2**
	1.2nm,0.2s,SNR=16						
ECAB				S	**Sn**	**10 57 56.7**	**-0.4**
	24nm,0.5s,SNR=5.6						
EMIN	**Mina Concepcio**	**3.71**	**324**	P	**Pn**	**10 57 19.1**	**+0.1**
	1.0nm,0.1s,SNR=17						
EMIN				S	**Sn**	**10 58 00.8**	**-1.6**
	3.6nm,0.2s						
EMUR	**La Murta**	**3.74**	**35**	P	**Pn**	**10 57 21.1**	**+1.6**
	1.4nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**10 58 01.1**	**-2.1**
	15nm,0.4s,SNR=9.5						
EGRO	**El Granado**	**3.98**	**315**	P	**Pn**	**10 57 22.4**	**-0.3**
	1.5nm,0.1s,SNR=9.7						
EGRO				S	**Sn**	**10 58 06.4**	**-2.5**
	9.4nm,0.2s						
PVAQ	**Vaqueiros**	**4.03**	**311**	P	**Pn**	**10 57 23.4**	**0.0**
PVAQ				S	**Sn**	**10 58 08.3**	**-2.0**
	12nm,0.3s						
PVAQ	**Vaqueiros**	**4.03**	**311**	*e*Pn	**Pn**	**10 57 23.4**	**0.0**
PVAQ				*e*Sn	**Sn**	**10 58 08.3**	**-2.0**
PVAQ				A	A	10 58 17.5	
	12nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.07**	**308**	P	**Pn**	**10 57 25.0**	**+1.0**
PBDV				S	**Sn**	**10 58 17.5**	**+6.3**
	12nm,0.5s						
PBDV	**Barranco-do-Ve**	**4.07**	**308**	*e*Pn	**Pn**	**10 57 25.0**	**+1.0**
PBDV				*e*Sn	**Sn**	**10 58 17.5**	**+6.3**
PBDV				A	A	10 58 20.6	
	12nm,0.5s						
PBAR	**Barrancos**	**4.21**	**324**	P	**Pn**	**10 57 26.9**	**+1.0**
PBAR				S	**Sn**	**10 58 14.9**	**+0.2**
	6.4nm,0.4s						
PBAR	**Barrancos**	**4.21**	**324**	*e*Pn	**Pn**	**10 57 26.9**	**+1.0**
PBAR				*e*Sn	**Sn**	**10 58 14.9**	**+0.2**
PBAR				A	A	10 58 15.4	
	6.4nm,0.4s						
TZRR	**Tazzarine**	**4.22**	**200**	P		10 57 27.0	
ETOB	**Tobarra**	**4.30**	**26**	P	**Pn**	**10 57 28.7**	**+1.5**
	5.6nm,0.5s,SNR=13						
ETOB				S	**Sn**	**10 58 17.9**	**+0.9**
	21nm,0.8s						
PCVE	**Castro Verde**	**4.37**	**312**	P	**Pn**	**10 57 28.7**	**+0.6**
PCVE				S	**Sn**	**10 58 21.9**	**+3.2**
	9.4nm,0.3s						
PCVE	**Castro Verde**	**4.37**	**312**

PVRL				S	Sn	10 59 24.3	-2.5	
	2.3nm,0.7s							
PVRL	**Vila Real**	**7.13**	**336**	*e*Pn	**Pn**	**10 58 06.8**	**+0.7**	
PVRL				*e*Sn	**Sn**	**10 59 24.3**	**-2.5**	
PVRL				A	A	10 59 30.3		
	4.7nm,0.7s							
POLO	**Lamas de Olo**	**7.25**	**336**	P	**Pn**	**10 58 08.9**	**+1.2**	
POLO				S	**Sn**	**10 59 26.8**	**-2.9**	
	2.1nm,0.5s							
POLO	**Lamas de Olo**	**7.25**	**336**	*e*Pn	**Pn**	**10 58 08.9**	**+1.2**	
POLO				*e*Sn	**Sn**	**10 59 26.8**	**-2.9**	
POLO				A	A	10 59 32.9		
	2.1nm,0.5s							
PBRG	**Braganca**	**7.35**	**343**	P	**Pn**	**10 58 09.8**	**+0.8**	
PBRG				S	**Sn**	**10 59 30.1**	**-2.0**	
	1.6nm,0.6s							
PBRG	**Braganca**	**7.35**	**343**	*e*Pn	**Pn**	**10 58 09.8**	**+0.8**	
PBRG				*e*Sn	**Sn**	**10 59 30.1**	**-2.0**	
PBRG				A	A	10 59 31.7		
	3.2nm,0.6s							
ECAL	**Calabor**	**7.48**	**344**	P	**Pn**	**10 58 12.3**	**+1.5**	
	3.1nm,0.4s,SNR=6.4							
ECAL				S	**Sn**	**10 59 33.1**	**-2.2**	
	8.0nm,0.5s,SNR=4.5							
PCAB	**Cabril**	**7.63**	**336**	P	**Pn**	**10 58 14.5**	**+1.7**	
PCAB	**Cabril**	**7.63**	**336**	*e*Pn	**Pn**	**10 58 14.5**	**+1.7**	
ELOB	**Lobios**	**7.78**	**337**	P	**Pn**	**10 58 15.5**	**+0.5**	
	0.2nm,0.1s,SNR=7.9							
ELOB				S	**Sn**	**10 59 38.7**	**-4.0**	
	3.9nm,0.5s,SNR=7.9							
PGAV	**Gavieira, Arco**	**7.94**	**336**	P	**Pn**	**10 58 19.0**	**+1.9**	
PGAV	**Gavieira, Arco**	**7.94**	**336**	*e*Pn	**Pn**	**10 58 19.0**	**+1.9**	
GERES	**GERESS Array B**	**19.17**	**38**	P	**P**	**11 00 45.1**	**-0.1**	
	0.1nm,0.3s,baz=225,slow=15,SNR=2.6							
TORD	**Torodi Ar. Bea**	**22.14**	**165**	P	**P**	**11 01 18.6**	**+1.3**	
	0.4nm,0.7s,baz=346,slow=12,SNR=2.2							
YKA	**Yellowknife Ar**	**68.41**	**332**	P	**P**	**11 07 22.5**	**-0.4**	
	0.1nm,0.5s,baz=64,slow=6.8,SNR=3.7							

*NOU **19** 11:12:26.6,40.˝24S×174.˝51E,h3km,MLv3.4,Cook Strait, New Zealand*
WEL 19 11:12:25.5,40.˝3S±1.˝1×17.˝4E±.˝,h5km±2km,M3.5/20, ML3.8/20,MLv3.5/20,Error ellipse: s-maj=0.0km s-min=0.0km az=34.3,Cook Strait

Code	Station Name	Δ°	AZ°	Op	Phase ID ISC	Time h m s	Res ISC
OHWZ	**Ohakea**	**0.63**	**82**	P	Pg	11 12 38.2	+0.6
KIW	**Kapiti Island**	**0.65**	**151**	P	Pb	11 12 39.2	-0.1
WAZ	**Wanganui**	**0.66**	**35**	P	Pg	11 12 38.2	+0.1
DUWZ	**D'Urville Isla**	**0.67**	**221**	P	Pb	11 12 40.1	+0.4
DUWZ				S	Sb	11 12 50.3	+0.9
OGWZ	**Otaki Gorge**	**0.73**	**136**	P	Pb	11 12 40.8	+0.1
LREZ	**Lake Rotokare**	**0.84**	**355**	P	Pb	11 12 42.6	+0.1
LREZ				S	Sb	11 12 55.3	+1.2
MRZ	**Mangatainoka R**	**0.90**	**114**	P	Pb	11 12 43.0	0.0
CAW	**Cannon Point**	**0.92**	**152**	P	Pb	11 12 44.4	+0.5
CAW				S	Sn	11 12 58.3	-0.5
TCW	**Tory Channel**	**0.93**	**190**	P	Pb	11 12 44.2	+0.1
TCW				S	Sb	11 12 57.6	+0.8
POWZ	**Post Office Ro**	**0.97**	**96**	P	Pb	11 12 44.6	-0.3
POWZ				S	Sg	11 12 57.1	+0.2
HOWZ	**Holdsworth Sta**	**0.98**	**128**	P	Pb	11 12 45.4	+0.4
HOWZ				S	Sb	11 12 59.0	+0.8
PREZ	**Palmer Road**	**0.99**	**344**	P	Pb	11 12 45.3	+0.2
NMEZ	**Namu Road**	**1.00**	**331**	P	Pb	11 12 45.7	+0.3
NEZ	**North Egmont**	**1.07**	**343**	P	Pb	11 12 46.4	-0.2
DREZ	**Durham Road**	**1.13**	**348**	P	Pb	11 12 47.4	-0.1
DREZ				S	Sn	11 13 04.0	+0.1
TSZ	**Takapari Road**	**1.14**	**79**	P	Pg	11 12 47.3	-0.2
TSZ				S	Sg	11 13 01.3	-1.0
BHW	**Baring Head**	**1.15**	**166**	P	Pn	11 12 48.7	+0.5
BHW				S	Sb	11 13 03.7	+0.6
MTW	**Mount Morrison**	**1.15**	**139**	P	Pn	11 12 49.1	+0.8
MTW				S	Sn	11 13 04.8	+0.3
PRWZ	**Pori Road**	**1.15**	**103**	P	Pn	11 12 48.6	+0.2
PRWZ				S	Sn	11 13 04.2	-0.2
TIWZ	**Tintock**	**1.16**	**115**	P	Pn	11 12 48.9	+0.4
TIWZ				S	Sn	11 13 04.5	-0.2
PKE	**Pukeiti**	**1.17**	**340**	P	Pb	11 12 48.2	0.0
MTVZ	**Mangateitei**	**1.18**	**40**	P	Pg	11 12 46.8	-1.3
MTVZ				S	Sg	11 13 01.8	-1.6
VRZ	**Vera Road**	**1.19**	**10**	P	Pg	11 12 47.8	-0.4
PKVZ	**Pokaka**	**1.20**	**33**	P	Pg	11 12 47.5	-1.0
TUWZ	**Tuamarina**	**1.21**	**200**	P	Pn	11 12 49.3	+0.2
MHEZ	**Mangahewa**	**1.23**	**354**	P	Pn	11 12 49.3	0.0
NNZ	**Nelson**	**1.25**	**222**	P	Pn	11 12 50.2	+0.5
MSWZ	**Moikau Station**	**1.26**	**153**	P	Pn	11 12 51.3	+1.5
DVHZ	**Dannevirke**	**1.27**	**91**	P	Pb	11 12 50.3	+0.3
TRVZ	**Turoa**	**1.28**	**39**	P	Pg	11 12 48.5	-1.6
TRVZ				S	Sg	11 13 04.3	-2.4
WNVZ	**Wahianoa**	**1.28**	**42**	P	Pg	11 12 48.7	-1.5
PAWZ	**Paruwai Farm**	**1.29**	**147**	P	Pb	11 12 51.7	+1.3
DRZ	**Dome Shelter**	**1.31**	**39**	P	Pg	11 12 50.0	-0.6
MOVZ	**Moawhango**	**1.31**	**48**	P	Pn	11 12 49.0	-1.6
WHVZ	**Whangaehu Hut**	**1.31**	**40**	P	Pg	11 12 49.3	-1.4
FWVZ	**Far West T-bar**	**1.32**	**38**	P	Pn	11 12 49.1	-1.7
TMWZ	**Te Maipa**	**1.33**	**128**	P	Pg	11 12 52.2	+1.1
PNHZ	**Pukenui**	**1.36**	**74**	P	Pn	11 12 50.9	-0.3
TUVZ	**Tukino**	**1.36**	**41**	P	Pn	11 12 50.1	-1.1
BFZ	**Birch Farm**	**1.39**	**107**	P	Pg	11 12 52.4	+0.3
PLWZ	**Palliser**	**1.40**	**156**	P	Pg	11 12 52.9	+0.6
NGZ	**Ngauruhoe**	**1.40**	**38**	P	Pn	11 12 50.6	-1.3
SNVZ	**South Ngauruho**	**1.41**	**39**	P	Pn	11 12 51.0	-1.1
TWVZ	**Taurewa**	**1.42**	**31**	P	Pn	11 12 51.2	-0.9
TRWZ	**Traveller**	**1.42**	**141**	P	Pg	11 12 53.7	+0.9
CPWZ	**Castlepoint**	**1.43**	**116**	P	Pg	11 12 53.8	+0.8
OTVZ	**Oturere**	**1.44**	**39**	P	Pn	11 12 51.4	-1.1
NNVZ	**North Ngauruho**	**1.45**	**37**	P	Pn	11 12 51.3	-1.2
BHHZ	**Black Hill Sta**	**1.45**	**57**	P	Pn	11 12 51.4	-1.0
WTVZ	**West Tongariro**	**1.45**	**36**	P	Pn	11 12 51.2	-1.2
CMWZ	**Cape Campbell**	**1.47**	**188**	P	Pg	11 12 55.9	+2.2
ETVZ	**East Tongariro**	**1.49**	**39**	P	Pn	11 12 52.1	-0.9
KRVZ	**Karewarewa**	**1.49**	**37**	P	Pn	11 12 51.9	-1.1
BSWZ	**Blackbirch Sta**	**1.50**	**198**	P	Pg	11 12 54.7	+0.5
NTVZ	**North Tongarir**	**1.50**	**38**	P	Pn	11 12 52.3	-0.9
TMVZ	**Te Maari**	**1.50**	**39**	P	Pn	11 12 52.2	-1.0
WPHZ	**Waipukurau**	**1.50**	**82**	P	Pg	11 12 54.7	+0.4
ANWZ	**Angora Road**	**1.52**	**97**	P	Pg	11 12 54.5	-0.1
KRHZ	**Kereru**	**1.58**	**66**	P	Pn	11 12 54.4	+0.3
QRZ	**Quartz Range**	**1.59**	**250**	P	Pb	11 12 55.7	+0.2
KATZ	**Kakaramea**	**1.61**	**35**	P	Pn	11 12 54.2	-0.6
PRHZ	**Porangahau**	**1.63**	**90**	P	Pg	11 12 57.4	+0.6
RITZ	**Rihia Road**	**1.68**	**39**	P	Pn	11 12 55.9	+0.3
KWHZ	**Kaweka Forest**	**1.72**	**60**	P	Pn	11 12 56.5	+0.4
RATZ	**Rangitukua**	**1.73**	**35**	P	Pn	11 12 56.5	+0.2
HIZ	**Hauiti**	**1.80**	**9**	P	Pn	11 12 57.4	+0.2
PXZ	**Pawanui**	**1.83**	**82**	P	Pg	11 13 00.8	+0.2
WATZ	**Wairara**	**1.85**	**31**	P	Pn	11 12 58.2	+0.3
HATZ	**Hinemaiaia**	**1.86**	**42**	P	Pn	11 12 58.7	+0.6
KAHZ	**Kahuranaki**	**1.89**	**75**	P	Pb	11 12 59.8	-0.8
MCHZ	**McNeill Hill**	**1.89**	**64**	P	Pb	11 13 00.7	+0.1
THZ	**Tophouse**	**1.90**	**219**	P	Pb	11 13 00.9	+0.2
BKZ	**Black Stump Fm**	**1.91**	**54**	P	Pn	11 12 59.1	+0.4
WHTZ	**Whakaora**	**1.98**	**35**	P	Pb	11 13 02.6	+0.5
KUTZ	**Kaahu Road**	**2.07**	**30**	P	Pb	11 13 02.5	-1.2
CKHZ	**Cape Kidnapper**	**2.08**	**73**	P	Pg	11 13 05.7	+0.3
MRHZ	**Matea Rd**	**2.08**	**46**	P	Pn	11 13 01.9	+0.8
TLZ	**Tolley Road**	**2.12**	**23**	P	Pn	11 13 01.3	-0.4
NMHZ	**Naumai**	**2.14**	**57**	P	Pb	11 13 03.7	-1.2
ARHZ	**Aropaoanui**	**2.18**	**63**	P	Pb	11 13 05.8	+0.3
WPRZ	**Whakapapatarin**	**2.19**	**37**	P	Pb	11 13 05.4	-0.3
KHZ	**Kahutara**	**2.24**	**199**	P	Pb	11 13 05.3	-1.1
ALRZ	**Allen Road**	**2.24**	**40**	P	Pb	11 13 05.5	-1.1
GRRZ	**Galatos Road**	**2.31**	**33**	P	Pb	11 13 07.2	-0.5
MTHZ	**Maungataniwha**	**2.31**	**52**	P	Pn	11 13 04.7	+0.4
PRRZ	**Plateau Road**	**2.32**	**40**	P	Pb	11 13 06.7	-1.1
HRRZ	**Handcock Road**	**2.35**	**37**	P	Pb	11 13 08.3	-0.1
HSRZ	**Hossack Road**	**2.40**	**35**	P	Pb	11 13 10.1	+0.9
RAHZ	**Arahi**	**2.43**	**56**	P	Pb	11 13 10.2	+0.6
WHHZ	**Waihua**	**2.44**	**61**	P	Pg	11 13 11.4	-0.8
HLRZ	**Highlands Stat**	**2.50**	**36**	P	Pb	11 13 10.7	-0.1
DSZ	**Denniston Nort**	**2.50**	**234**	P	Pn	11 13 08.8	+1.9
RRRZ	**Republican Roa**	**2.50**	**39**	P	Pb	11 13 09.3	-1.6
MUGZ	**Murupara**	**2.53**	**45**	P	Pn	11 13 09.0	+1.8
RTZ	**Ruatahuna**	**2.55**	**50**	P	Pn	11 13 09.5	+1.9
NGRZ	**Ngongotaha**	**2.55**	**31**	P	Pb	11 13 11.5	-0.3
TARZ	**Mount Tarawera**	**2.58**	**38**	P	Pb	11 13 11.1	-1.2
SNGZ	**Shannon Statio**	**2.67**	**56**	P	Pn	11 13 11.3	+2.1
TOZ	**Tahuroa Road**	**2.68**	**17**	P	Pn	11 13 09.2	0.0
KNZ	**Kokohu**	**2.76**	**64**	P	Pb	11 13 15.0	-0.4
URZ	**Urewera**	**2.87**	**46**	P	Pn	11 13 11.7	-0.2
RAGZ	**Rawiri**	**2.89**	**52**	P	Pb	11 13 17.7	+0.2
GVZ	**Greta Valley S**	**2.89**	**202**	P	Pn	11 13 13.9	+1.7
OPRZ	**Ohinepanea**	**2.92**	**34**	P	Pn	11 13 15.4	+2.7
PRGZ	**Paritu Road**	**2.95**	**63**	P	Pn	11 13 13.7	+0.6
RIGZ	**Rimuhau**	**2.98**	**59**	P	Pn	11 13 14.0	+0.5
LTZ	**Lake Taylor**	**3.00**	**213**	P	Pn	11 13 16.1	+2.4
MWZ	**Matawai**	**3.06**	**51**	P	Pn	11 13 15.1	+0.5
AWAZ	**Awhitu Peninsu**	**3.23**	**2**	P	Pn	11 13 17.2	+0.3
INZ	**Inchbonnie**	**3.34**	**222**	P	Pn	11 13 21.1	+2.7
ETAZ	**East Tamaki Re**	**3.35**	**6**	P	Pn	11 13 19.1	+0.5
RUGZ	**Raukumara Rang**	**3.39**	**48**	P	Pn	11 13 19.6	+0.4
TWGZ	**Tauwhareparae**	**3.43**	**53**	P	Pn	11 13 20.5	+0.8
RVAZ	**Riverhead Bore**	**3.52**	**1**	P	Pn	11 13 21.1	+0.2
WIAZ	**Waiheke Island**	**3.53**	**8**	P	Pn	11 13 21.5	+0.5
MBAZ	**Motutapu North**	**3.53**	**5**	P	Pn	11 13 21.7	+0.7
OKCZ	**Okains Bay**	**3.59**	**197**	P	Pn	11 13 22.8	+1.0
HAZ	**Te Kaha**	**3.60**	**46**	P	Pn	11 13 22.3	+0.3
PUZ	**Puketiti**	**3.67**	**54**	P	Pb	11 13 27.3	-3.6
MQZ	**McQueen's Vall**	**3.68**	**201**	P	Pn	11 13 23.2	+0.3
PKGZ	**Pakihiroa**	**3.68**	**50**	P	Pn	11 13 23.4	+0.4
AKCZ	**Akaroa Harbour**	**3.77**	**198**	P	Pn	11 13 25.2	+1.0
RACZ	**Rakaia**	**3.85**	**206**	P	Pn	11 13 28.5	+3.0
WVZ	**Waitaha Valley**	**3.96**	**224**	P	Pn	11 13 29.9	+3.1
GCSZ	**Gaunt Creek Bo**	**4.34**	**225**	P	Pn	11 13 34.7	+2.6
WCZ	**Waipu Caves**	**4.35**	**358**	P	Pn	11 13 32.0	-0.2
FOZ	**Fox Glacier**	**4.76**	**226**	P	Pn	11 13 39.6	+1.7
TMZ	**Timaru**	**4.84**	**211**	P	Pn	11 13 40.8	+1.8
OUZ	**Omahuta**	**5.12**	**352**	P	Pn	11 13 43.2	+0.4
JCZ	**Jackson Bay**	**5.68**	**226**	P	Pn	11 13 52.1	+1.4
CTZ	**Chatham Island**	**7.45**	**120**	P	Pn	11 14 14.4	-0.4

*IDC **19** 11:12:41.1±2.0,2.˝72N×126.˝60E,h0km,mb3.5/4, mb1 3.8/4,mb1mx3.4/48,mbtmp3.6/4,Error ellipse: s-maj=120.6km s-min=24.6km az=69.0*
*DJA **19** 11:12:48.2±0.9,3.˝N±5.˝×12.˝6E±.˝,h64km±30km,M4.0/6, mb4.6/1,MLv3.7/6*
ISC 19 11:12:48.7±1.2,2.˝58N±0.˝07×126.˝4E±0.˝1,h55km,n8, σ1§34/10,mb3.5/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	Phase ID ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.40**	**322**	P	**Pn**	**11 13 11.7**	**-0.2**
SGSI				S	**Sn**	**11 13 28.8**	**-0.5**
TNTI	**Ternate**	**2.04**	**152**	P	**Pn**	**11 13 22.5**	**+1.8**
SANI	**Sanana**	**4.62**	**185**	P	**Pn**	**11 13 54.9**	**-1.1**
SANI				S	**Sn**	**11 14 46.5**	**-1.9**
MRSI	**Marisa**	**4.92**	**245**	P	**Pn**	**11 14 02.1**	**+2.0**
FITZ	**Fitzroy Crossi**	**20.57**	**182**	P	**P**	**11 17 23.4**	**+0.4**
	2.6nm,0.9s,baz=29,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**23.71**	**161**	P	**P**	**11 17 55.6**	**-0.2**
	0.5nm,0.3s,baz=341,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**27.10**	**165**	P	**P**	**11 18 26.6**	**+0.1**
	0.2nm,0.4s,baz=343,slow=7.7,SNR=10						
MKAR	**Makanchi Array**	**58.30**	**326**	P	**P**	**11 22 37.7**	**-0.2**
	0.3nm,0.4s,baz=114,slow=7.9,SNR=5.4						

*AEIC **19** 11:21:57.4±1.9,51.˝7N±0.˝1×177.˝38E±0.˝05,h58km±6km, Error ellipse: s-maj=18.8km s-min=3.6km az=189.0*
*NEIC **19** 11:21:58.8±1.7,51.˝8N±0.˝1×177.˝46E±0.˝08,h64km±7km, mb4.2/50,ML4.0/29(AEIC),Error ellipse: s-maj=19.7km s-min=6.2km az=189.0*
*IDC **19** 11:22:01.3±4.0,51.˝97N×177.˝37E,h87km±36km,mb3.6/16, mb1 3.7/19,mb1mx3.5/51,mbtmp3.9/19,MS3.0/2, Ms1 3.1/2,ms1mx2.6/45,Error ellipse: s-maj=38.3km s-min=12.4km az=1.0*
ISC 19 11:21:58.3±0.7,51.˝8N±0.˝1×177.˝40E±0.˝04,h64km,n108, σ0§92/110,mb4.1/37,Rat Islands

Code	Station Name	Δ°	AZ°	Op	Phase ID ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**0.71**	**75**		**Pn**	**11 22 12.9**	**0.0**
LSNW	**Little Sitkin**	**0.72**	**74**		**Pn**	**11 22 12.9**	**-0.1**
LSSE	**Little Sitkin**	**0.74**	**77**		**Pn**	**11 22 13.1**	**-0.2**
LSPA	**Little Sitkin**	**0.75**	**75**		**Pn**	**11 22 13.3**	**0.0**
LSPA					**Sn**	**11 22 24.7**	**+0.2**
AMKA	**Amchitka**	**1.25**	**108**		**Pn**	**11 22 19.0**	**-0.7**
AMKA					**Sn**	**11 22 35.5**	**-0.3**
CETU	**Semis' Tuman**	**1.31**	**81**		**Pn**	**11 22 20.8**	**+0.2**
CESW	**Semis' Southwe**	**1.35**	**84**		**Pn**	**11 22 20.6**	**-0.4**
CEAP	**Semis' Anvil P**	**1.37**	**80**		**Pn**	**11 22 21.3**	**0.0**
CERAA	**Semis' Rag'd T**	**1.43**	**84**		**Pn**	**11 22 22.7**	**-0.3**
SMY	**Shemya**	**2.24**	**297**		**Pn**	**11 22 33.6**	**+0.7**
SMY					**Sn**	**11 23 00.6**	**+1.1**
GALAA	**Gareloi Lava P**	**2.38**	**89**		**Pn**	**11 22 35.9**	**+1.0**
TASE	**Tanaga Southea**	**2.83**	**87**		**Pn**	**11 22 41.5**	**+0.3**
TAFP	**Tanaga Falls P**	**2.87**	**86**		**Pn**	**11 22 41.7**	**+0.2**
TAFP					**Sn**	**11 23 15.2**	**+0.3**
KIMD	**Kanaga Island**	**3.33**	**88**		**Pn**	**11 22 48.2**	**+0.3**
KICM	**Kanaga Island**	**3.36**	**85**		**Pn**	**11 22 48.8**	**+0.6**
KICM					**Sn**	**11 23 27.4**	**+0.6**
KIKV	**Kanaga Island**	**3.37**	**86**		**Pn**	**11 22 48.7**	**+0.2**
KIWB	**Kanaga Island**	**3.38**	**87**		**Pn**	**11 22 48.6**	**0.0**
KIRH	**Kanaga Island**	**3.42**	**86**		**Pn**	**11 22 49.3**	**+0.3**
ADK	**Adak**	**3.67**	**86**		**Pn**	**11 22 52.7**	**+0.2**
ADK					**Sn**	**11 23 35.0**	**+0.4**
GSTD	**Great Sitkin T**	**4.01**	**83**		**Pn**	**11 22 57.4**	**+0.2**
GSMY	**Great Sitkin M**	**4.06**	**84**		**Pn**	**11 22 59.3**	**+1.4**
ATKA	**Atka Island**	**5.21**	**82**		**Pn**	**11 23 14.2**	**+0.6**
ATKA					**Sn**	**11 24 13.6**	**+1.3**
KOFP	**Korovin Flat P**	**5.28**	**81**		**Pn**	**11 23 15.1**	**+0.6**
PEA0B	**Petropavlovsk-**	**12.09**	**284**	Pn	**Pn**	**11 24 48.8**	**+1.3**
PETK	**Petropavlovsk-**	**12.09**	**284**	P	**Pn**	**11 24 49.9**	**+2.4**
	0.2nm,0.3s,baz=103,slow=19,SNR=15						
PETK				S	**Sn**	**11 26 55.2**	**-5.3**
	0.5nm,0.3s,baz=201,slow=33,SNR=9.8						
PETK				LR	LR	11 30 02.9	
	comp=Z,28nm,18.2s,baz=100,slow=40						
PETK	**Petropavlovsk-**	**12.09**	**284**		**Pn**	**11 24 49.3**	**+1.8**
BILL	**Bilibino**	**17.19**	**346**	P	**P**	**11 25 55.5**	**+1.0**
SEY	**Seymchan**	**17.38**	**320**	P	**P**	**11 25 56.7**	**+0.1**
	0.1nm,0.3s,baz=137,slow=9.7,SNR=5.0						
SVW2	**Sparrevohn**	**17.49**	**47**	P	**Pn**	**11 25 56.9**	**-0.6**
OHAK	**Old Harbor**	**17.79**	**61**	P	**P**	**11 25 59.3**	**-1.8**
KDAK	**Kodiak Island**	**18.23**	**59**	P	**P**	**11 26 04.8**	**-1.1**
	1.0nm,0.3s,baz=154,slow=2.3,SNR=15						
KDAK	**Kodiak Island**	**18.23**	**59**	P	**P**	**11 26 04.6**	**-1.4**
KDAK				IAmb	IAmb	11 26 13.0	
	comp=Z,40nm,1.4s						
CNPM	**China Poot**	**19.17**	**54**	P	**P**	**11 26 15.6**	**-0.7**
PPLA	**Purkeypile**	**19.62**	**44**	P	**P**	**11 26 21.5**	**+0.2**
PPLA				IAmb	IAmb	11 26 43.5	
	comp=Z,16nm,1.3s						
SUA	**Susitna One**	**19.83**	**48**		**P**	**11 26 24.1**	**+0.6**
SUA				IAmb	IAmb	11 26 52.8	
	comp=Z,26nm,1.2s						
RC01	**Rabbit Creek A**	**20.21**	**50**	P	**P**	**11 26 28.5**	**+0.9**
IMAR	**Indian Mountai**	**20.34**	**35**	P	**P**	**11 26 28.3**	**-0.6**
BPAW	**Bear Paw Mtn.**	**20.56**	**41**	P	**P**	**11 26 31.2**	**-0.1**
SML	**Sawmill**	**21.03**	**48**	P	**P**	**11 26 36.7**	**+0.2**
MCK	**McKinley**	**21.28**	**43**	P	**P**	**11 26 39.2**	**+0.1**
SCM	**Sheep Creek Mo**	**21.50**	**48**	P	**P**	**11 26 41.9**	**+0.4**
SCM				IAmb	IAmb	11 26 46.4	
	comp=Z,14nm,1.1s						
I23K	**Minto, Yukon-K**	**21.60**	**39**	P	**P**	**11 26 43.4**	**+0.9**
MDM	**Murphy Dome**	**21.98**	**40**	P	**P**	**11 26 46.9**	**+0.4**
KLU	**Klutina**	**22.10**	**50**	P	**P**	**11 26 47.4**	**-0.5**
KLU				IAmb	IAmb	11 26 48.2	
	comp=Z,24nm,1.4s						
ILAR	**Eielson Array**	**22.46**	**41**	P	**P**	**11 26 50.4**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=250,slow=7.6,SNR=6.5						
PAX	**Paxson**	**22.59**	**46**	P	**P**	**11 26 52.5**	**-0.6**
PAX				IAmb	IAmb	11 27 17.6	
	comp=Z,12nm,1.4s						
BMRM	**Bremner River**	**22.66**	**51**	P	**P**	**11 26 54.1**	**+0.3**
N25K	**Chitina, Valde**	**22.74**	**50**	P	**P**	**11 26 54.0**	**-0.8**
N25K				IAmb	IAmb	11 26 55.9	
	comp=Z,9.5nm,0.9s						
BERG	**Berg Lake**	**23.04**	**53**	P	**P**	**11 26 56.7**	**-1.1**
TOLK	**Toolik Lake Re**	**23.09**	**31**	P	**P**	**11 26 58.9**	**+0.7**
CRQM	**Cirque**	**23.35**	**52**	P	**P**	**11 27 00.8**	**0.0**
DOT	**Dot Lake**	**23.35**	**45**	P	**P**	**11 27 00.1**	**-0.6**
DOT				IAmb	IAmb	11 27 00.9	
	comp=Z,8.0nm,1.5s						
MENT	**Mentasta**	**23.36**	**46**		**P**	**11 27 01.3**	**+0.4**
MENT				IAmb	IAmb	11 27 02.6	
	comp=Z,13nm,1.4s						
SCRK	**Sand Creek**	**23.46**	**44**		**P**	**11 27 01.3**	**-0.5**
SCRK				IAmb	IAmb	11 27 28.5	
	comp=Z,5.7nm,1.3s						
MCARA	**McCarthy VSAT**	**23.46**	**50**	P	**P**	**11 27 02.1**	**+0.4**
GRNC	**Granite Creek**	**24.02**	**52**	P	**P**	**11 27 07.9**	**+0.8**
GRNC				IAmb	IAmb	11 27 28.7	
	comp=Z,21nm,1.1s						
L27K	**Beaver Creek,**	**24.24**	**46**	P	**P**	**11 27 10.0**	**+1.2**
L27K				IAmb	IAmb	11 27 11.3	
	comp=Z,6.1nm,0.7s						
CTGM	**Chitina Glacie**	**24.24**	**52**	P	**P**	**11 27 09.7**	**+0.7**
CTGM				IAmb	IAmb	11 27 20.5	
	comp=Z,16nm,1.4s						
BMAR	**Burnt Mountain**	**24.25**	**35**	P	**P**	**11 27 09.2**	**+0.4**
BCAR	**Beaver Creek A**	**24.26**	**46**	P	**P**	**11 27 09.8**	**+0.8**
K27K	**Chicken**	**24.29**	**44**	P	**P**	**11 27 08.9**	**-0.3**
K27K				IAmb	IAmb	11 27 38.0	
	comp=Z,5.1nm,1.1s						
DAWY	**Dawson**	**25.46**	**44**	P	**P**	**11 27 18.5**	**-1.4**
HYT	**Haines Junctio**	**26.11**	**52**	P	**P**	**11 27 25.0**	**-0.9**
INK	**Inuvik**	**28.51**	**36**	P	**P**	**11 27 47.5**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=237,slow=8.4,SNR=9.1						
INK	**Inuvik**	**28.51**	**36**	P	**P**	**11 27 47.0**	**-0.1**
KLR	**Kul'dur**	**28.78**	**283**	P	**P**	**11 27 49.5**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=50,slow=17,SNR=3.8						
C36M	**Paulatuk**	**32.04**	**35**	P	**P**	**11 28 18.6**	**+0.3**
C36M				IAmb	IAmb	11 28 25.1	
	comp=Z,2.5nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**33.02**	**198**	T	T	12 03 43.9	
	baz=11,slow=76,SNR=92						
H11N3	**WAKE ISLAND Hy**	**33.03**	**198**	T	T	12 03 31.9	
	baz=11,slow=76,SNR=89						
H11N1	**WAKE ISLAND Hy**	**33.04**	**198**	T	T	12 03 54.5	
	baz=11,slow=76,SNR=65						
H11S1	**WAKE ISLAND Hy**	**34.25**	**198**	T	T	12 05 24.3	
	baz=11,slow=76,SNR=28						
H11S2	**WAKE ISLAND Hy**	**34.27**	**198**	T	T	12 05 05.7	
	baz=11,slow=76,SNR=9.4						
H11S3	**WAKE ISLAND Hy**	**34.27**	**198**	T	T	12 05 26.8	
	baz=11,slow=76,SNR=16						
YKA	**Yellowknife Ar**	**36.67**	**46**	P	**P**	**11 28 58.5**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=286,slow=7.3,SNR=11						
MOD	**Modoc Plateau**	**42.53**	**78**	P	**P**	**11 29 46.8**	**-0.6**
MOD				IAmb	IAmb	11 30 11.2	
	comp=Z,2.3nm,1.1s						
SONM	**Songino Array**	**44.33**	**294**	P	**P**	**11 30 02.4**	**+0.6

mb3.3/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.02**	**303**	P	**Pn**	**11 38 13.9**	**-1.0**
SGSI				S	**Sn**	**11 38 28.5**	**0.0**
TNTI	**Ternate**	**2.54**	**157**	P	**Pn**	**11 38 35.1**	**-0.3**
TNTI				S	**Sn**	**11 39 06.1**	**+0.9**
GTOI	**Gorontalo**	**4.18**	**234**	P	**Pn**	**11 38 58.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**21.10**	**182**	P	**P**	**11 42 34.2**	**-1.8**
	1.3nm,0.8s,baz=5.7,slow=10,SNR=1.3						
WRA	**Warramunga Arr**	**24.22**	**161**	P	**P**	**11 43 06.1**	**-1.5**
	0.4nm,0.3s,baz=337,slow=10,SNR=7.2						
ASAR	**Alice Springs**	**27.62**	**165**	P	**P**	**11 43 37.7**	**-0.6**
	0.2nm,0.6s,baz=341,slow=7.2,SNR=6.8						
MKAR	**Makanchi Array**	**57.85**	**326**	P	**P**	**11 47 44.0**	**+2.2**
	0.1nm,0.4s,baz=127,slow=6.5,SNR=2.5						

*ISK **19** 11:41:35.8, 37.°10N×31.°02E, h118km±2km, ML2.9/22*
*DDA **19** 11:41:39.1, 37.°16N×31.°11E, h73km±2km, ML2.8*
*HLW **19** 11:41:39.8, 36.°76N×30.°77E, h29km±30km, Ml3.6*

ISC 19 11:41:34.1±1.5, 37.°17N±0.°04×31.°09E±0.°03, h119km±9km, n47, σ2§64/67, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTB	**Antalya**	**0.44**	**232**	PG	**Pn**	**11 41 53.7**	**+2.1**
BUCA	**Burdur, Bucak-**	**0.45**	**290**	*i* P	**Pn**	**11 41 53.4**	**+1.7**
BUCA				*i* S	**Sn**	**11 42 02.7**	**-2.3**
BCK	**Bucak**	**0.49**	**306**	PG	**Pn**	**11 41 54.2**	**+2.2**
BCK				SG	**Sn**	**11 42 06.5**	**+1.0**
KEPZ	**Antalya-Kepez**	**0.49**	**123**	*i* P	**Pn**	**11 41 53.1**	**+1.1**
KEPZ				*i* S	**Sn**	**11 42 02.2**	**-3.3**
SEDI	**Konya, Seydise**	**0.60**	**62**	*i* P	**Pn**	**11 41 54.7**	**+1.9**
SEDI				*i* S	**Sn**	**11 42 04.6**	**-2.2**
SEDI				IAML		11 42 09.0	
	comp=N,255nm,0.6s						
SEDI				IAML		11 42 10.0	
	comp=E,333nm,0.5s						
KORT	**Korkueli**	**0.61**	**254**	PG	**Pn**	**11 41 55.1**	**+2.2**
KORT				SG	**Sn**	**11 42 08.7**	**+1.6**
ISP	**Isparta**	**0.79**	**325**	PG	**Pn**	**11 41 56.4**	**+2.1**
ISP				SG	**Sn**	**11 42 11.5**	**+2.0**
BAGO	**Egridir - ISPA**	**0.85**	**344**	*i* P	**Pn**	**11 41 57.0**	**+2.3**
BAGO				*i* S	**Sn**	**11 42 07.0**	**-3.4**
BRDR	**BURDUR-Merkez**	**0.97**	**303**	*i* P	**Pn**	**11 41 57.5**	**+1.7**
BRDR				*i* S	**Sn**	**11 42 09.0**	**-3.3**
ELL	**Elmali**	**1.04**	**246**	PG	**Pn**	**11 41 58.0**	**+1.4**
DOGA	**KONYA_Doganhis**	**1.04**	**26**	*i* P	**Pn**	**11 41 59.3**	**+2.6**
DOGA				*i* S	**Sn**	**11 42 09.8**	**-3.9**
DOGA				IAML		11 42 15.0	
	comp=N,181nm,0.4s						
DOGA				IAML		11 42 16.0	
	comp=E,148nm,0.4s						
AKUM	**Antalya-Kumluc**	**1.04**	**215**	*i* P	**Pn**	**11 41 57.8**	**+1.3**
AKUM				*i* S	**Sn**	**11 42 14.7**	**+1.4**
AKUM				IAML		11 42 24.0	
	comp=E,161nm,0.5s						
AKUM				IAML		11 42 26.0	
	comp=N,136nm,0.4s						
YVAC	**Isparta, Yalva**	**1.10**	**6**	*i* P	**Pn**	**11 41 59.6**	**+2.4**
YVAC				*i* S	**Sn**	**11 42 10.8**	**-4.0**
BASM	**Basmaki-Afyon**	**1.11**	**312**	PN	**Pn**	**11 41 59.4**	**+2.1**
GOLH	**Golhisar**	**1.22**	**273**	*i* P	**Pn**	**11 42 01.0**	**+2.6**
GOLH				*i* S	**Sn**	**11 42 16.1**	**-0.8**
KONT	**Konya--Tatoy**	**1.27**	**52**	*i* P	**Pn**	**11 42 00.9**	**+2.0**
KONT				*i* S	**Sn**	**11 42 15.5**	**-2.3**
KONT	**Konya--Tatoy**	**1.27**	**52**	PN	**Pn**	**11 42 01.5**	**+2.6**
KZIL	**AFYON_Kizioren**	**1.32**	**326**	*i* P	**Pn**	**11 42 01.4**	**+1.8**
KZIL				*i* S	**Sn**	**11 42 14.7**	**-4.2**
GAZI	**Gazipasa**	**1.36**	**133**	*i* P	**Pn**	**11 42 01.4**	**+1.4**
GAZI				*i* S	**Sn**	**11 42 16.3**	**-3.2**
GAZI				IAML		11 42 23.0	
	comp=E,219nm,0.3s						
GAZI				IAML		11 42 24.0	
	comp=N,110nm,0.3s						
GAZI	**Gazipasa**	**1.36**	**133**	PN	**Pn**	**11 42 01.3**	**+1.4**
GAZI				SN	**Sn**	**11 42 21.0**	**+1.5**
CAEL	**Denizli, Camel**	**1.41**	**268**	*i* P	**Pn**	**11 42 01.3**	**+2.7**
CAEL				*i* S	**Sn**	**11 42 18.4**	**-2.4**
CAEL				IAML		11 42 25.0	
	comp=N,153nm,0.7s						
CAEL				IAML		11 42 28.0	
	comp=E,134nm,1.3s						
KKBE	**Karaman, Kazim**	**1.48**	**88**	*i* P	**Pn**	**11 42 03.8**	**+2.4**
KKBE				*i* S	**Sn**	**11 42 16.8**	**-5.2**
AKAS	**Kas**	**1.52**	**232**	*i* P	**Pn**	**11 42 01.7**	**-0.1**
AKAS				*i* S	**Sn**	**11 42 17.4**	**-5.5**
AKAS	**Kas**	**1.52**	**232**	PN	**Pn**	**11 42 02.4**	**+0.6**
FETY	**Fethiye**	**1.69**	**252**	PN	**Pn**	**11 42 04.5**	**+0.7**
KRMN	**Karaman**	**1.74**	**89**	PN	**Pn**	**11 42 07.5**	**+3.1**
BERE	**Bereket-Mersin**	**1.90**	**115**	PN	**Pn**	**11 42 09.5**	**+3.0**
DALY	**Dalyan (Mula)**	**1.98**	**260**	PN	**Pn**	**11 42 08.9**	**+1.6**
TEVE	**Tevekalti-Mers**	**2.03**	**111**	PN	**Pn**	**11 42 10.9**	**+2.9**
GULN	**MERSIN_Gulnar**	**2.21**	**116**	*i* P	**Pn**	**11 42 12.5**	**+2.4**
GULN				*i* S	**Sn**	**11 42 34.4**	**-3.3**
AKKU	**Akkuyu-Mersin**	**2.22**	**116**	PN	**Pn**	**11 42 12.9**	**+2.5**
YER	**Yerkesik**	**2.24**	**270**	PN	**Pn**	**11 42 13.2**	**+2.6**
IKL	**Isikli**	**2.29**	**113**	PN	**Pn**	**11 42 13.9**	**+2.8**
TURN	**Turunc**	**2.31**	**261**	PN	**Pn**	**11 42 13.0**	**+1.6**
TISA	**Tisan-Mersin**	**2.31**	**115**	PN	**Pn**	**11 42 14.9**	**+3.4**
KERG	**Konya-Eregli**	**2.43**	**83**	*i* P	**Pn**	**11 42 15.8**	**+2.6**
KERG				*i* S	**Sn**	**11 42 38.7**	**-4.4**
LEF	**Lefka**	**2.52**	**144**	PN	**Pn**	**11 42 15.5**	**+1.4**
KIZK	**Mersin**	**2.55**	**105**	PN	**Pn**	**11 42 18.1**	**+3.6**
MERS	**Mersin**	**2.77**	**95**	PN	**Pn**	**11 42 20.8**	**+3.4**
CSS	**Mathiatis**	**2.86**	**140**	PN	**Pn**	**11 42 21.0**	**+2.4**
CMRD	**Camardi-Nigde**	**3.15**	**80**	PN	**Pn**	**11 42 25.9**	**+3.5**
SUZ	**Suez**	**7.46**	**168**	P	**Pn**	**11 43 21.9**	**+1.6**
	baz=165						
SLUM	**Salum**	**7.46**	**222**	P	**Pn**	**11 43 20.7**	**+0.4**
	baz=223						
SLUM				AMP		11 44 00.0	
	baz=223						
SLUM				S	Sn	11 44 34.3	-9.1
	baz=223						
HSAF	**As Saff**	**7.54**	**177**	P	**Pn**	**11 43 23.4**	**+1.9**
	baz=174						
GLL	**Jalalah**	**7.59**	**176**	P	**Pn**	**11 43 24.1**	**+2.0**
	baz=173						
RYAN	**Fayoum**	**8.10**	**185**	P	**Pn**	**11 43 29.1**	**+0.2**
	baz=184						
RYAN				AMP		11 44 00.0	
	baz=184						
SWA2		**9.21**	**212**	AMP		11 45 00.0	
	baz=213						

*NNC **19** 11:51:51.6±0.3, 43.°30N×78.°36E, h0km, mb2.9, mpv3.1,*
Error ellipse: s-maj=4.4km s-min=1.5km az=176.0
*KRNET **19** 11:51:52.5±0.1, 43.°30N×78.°36E, h20km, mb2.9*
*SOME **19** 11:51:52.3, 43.°30N×78.°35E, h15km*

ISC 19 11:51:52.3±1.1, 43.°31N±0.°02×78.°35E±0.°02, h3km±10km, n48, σ1§41/93, 15C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.26**	**171**	*e*P	**Pg**	**11 51 57.8**	**+0.5**
	baz=72						
SATY				*e*S	**Sg**	**11 52 01.6**	**+0.9**
	baz=72						
SATY	**Saty**	**0.26**	**171**	*e*P	**Pg**	**11 51 57.8**	**+0.5**
	35nm,0.1s						
SATY				*e*S	**Sg**	**11 52 01.6**	**+0.9**
	1µm,0.1s						
SATY	**Saty**	**0.26**	**171**	P	**Pg**	**11 51 57.8**	**+0.5**
	35nm,0.1s						
SATY				S	**Sg**	**11 52 01.6**	**+0.9**
	1µm,0.1s						
KPKS	**Kokpek**	**0.28**	**58**	*e*P	**Pg**	**11 51 58.8**	**+1.0**
	baz=55						
KPKS				*e*S	**Sb**	**11 52 03.3**	**-2.0**
	baz=55						
KPKS	**Kokpek**	**0.28**	**58**	*e*P	**Pg**	**11 51 58.8**	**+1.0**
	87nm,0.1s						
KPKS				*e*S	**Sb**	**11 52 03.4**	**-2.0**
	458nm,0.2s						
UZB	**Uzynbulak**	**0.52**	**109**	*e*P	**Pg**	**11 52 02.2**	**-0.1**
	baz=7.0						
UZB				*e*S	**Sg**	**11 52 08.9**	**0.0**
	baz=7.0						
UZB	**Uzynbulak**	**0.52**	**109**	*e*P	**Pg**	**11 52 02.1**	**-0.1**
	20nm,0.1s						
UZB				*e*S	**Sg**	**11 52 08.9**	**0.0**
	54nm,0.1s						
UZB	**Uzynbulak**	**0.52**	**109**	P	**Pg**	**11 52 02.1**	**-0.1**
	29nm,0.1s						
UZB				S	**Sg**	**11 52 08.9**	**0.0**
	54nm,0.1s						
ANVS	**Anan'yevo**	**0.73**	**224**	⇓*i*P	**Pg**	**11 52 05.8**	**-0.5**
	baz=25						
ANVS				⇓*i*S	**Sb**	**11 52 16.4**	**-1.9**
	baz=25						
SHLS	**Shalkode**	**0.82**	**101**	*e*P	**Pn**	**11 52 13.2**	**+2.2**
	baz=97						
SHLS				*e*S	**Sn**	**11 52 28.1**	**+4.3**
	baz=97						
SHLS	**Shalkode**	**0.82**	**101**	*e*P	**Pn**	**11 52 13.2**	**+2.2**
	10nm,0.2s						
SHLS				*e*S	**Sn**	**11 52 28.1**	**+4.3**
	17nm,0.1s						
SHLS	**Shalkode**	**0.82**	**101**	P	**Pn**	**11 52 13.2**	**+2.2**
	10nm,0.2s						
SHLS				S	**Sn**	**11 52 28.0**	**+4.3**
	17nm,0.1s						
PDGK	**Podgornoye**	**0.83**	**89**	P	**Pg**	**11 52 07.5**	**-0.8**
	2.3nm,0.1s						
PDGK				S	**Sg**	**11 52 18.2**	**-0.8**
	12nm,0.2s						
PDGK	**Podgornoye**	**0.83**	**89**	⇑P	**Pg**	**11 52 07.5**	**-0.8**
	1.2nm,0.3s						
PDGK				⇓S	**Sg**	**11 52 18.5**	**-0.4**
	5.8nm,0.2s						
PRZ	**Przheval'sk**	**0.83**	**178**	⇑*i*P	**Pg**	**11 52 08.1**	**-0.1**
	baz=78						
PRZ				⇑*i*S	**Sg**	**11 52 18.8**	**-0.2**
	baz=78						
KOTS	**Kotyrbulak**	**0.91**	**265**	*e*P	**Pb**	**11 52 09.8**	**-1.0**
	baz=66						
KOTS				*e*S	**Sg**	**11 52 22.2**	**+0.6**
	baz=66						
KOTS	**Kotyrbulak**	**0.91**	**265**	*e*P	**Pb**	**11 52 09.8**	**-1.0**
	28nm,0.2s						
KOTS				*e*S	**Sg**	**11 52 22.2**	**+0.6**
	32nm,0.2s						
KOTS	**Kotyrbulak**	**0.91**	**265**	P	**Pb**	**11 52 09.8**	**-1.0**
	28nm,0.2s						
KOTS				S	**Sg**	**11 52 22.2**	**+0.6**
	32nm,0.2s						
MDOK	**Medeo**	**0.97**	**261**	*e*P	**Pb**	**11 52 10.5**	**-1.3**
	baz=62						
MDOK				*e*S	**Sb**	**11 52 23.5**	**-1.5**
	baz=62						
MDOK	**Medeo**	**0.97**	**261**	*e*P	**Pb**	**11 52 10.5**	**-1.3**
	4.4nm,0.2s						
MDOK				*e*S	**Sb**	**11 52 23.5**	**-1.5**
	24nm,0.2s						
MDOK	**Medeo**	**0.97**	**261**	P	**Pb**	**11 52 10.2**	**-1.6**
	0.7nm,0.2s						
MDOK				⇓S	**Sb**	**11 52 23.5**	**-1.5**
	7.7nm,0.3s						
MDOK	**Medeo**	**0.97**	**261**	Pg	**Pb**	**11 52 10.5**	**-1.3**
	4.4nm,0.2s						
MDOK				Lg	Lg	11 52 23.5	
	24nm,0.2s						
ARXS	**Arharly**	**0.98**	**337**	*e*P	**Pg**	**11 52 11.4**	**+0.3**
	2.6nm,0.1s						
ARXS				*e*S	**Sg**	**11 52 24.7**	**+1.0**
	21nm,0.2s						
ARXS	**Arharly**	**0.98**	**337**	P	**Pg**	**11 52 11.4**	**+0.3**
	2.6nm,0.1s						
ARXS				S	**Sg**	**11 52 24.7**	**+1.0**
	21nm,0.2s						
TNSS	**Tian-Shan**	**1.06**	**255**	*e*P	**Pb**	**11 52 12.3**	**-1.4**
	baz=57						
TNSS				*e*S	**Sb**	**11 52 26.6**	**-1.6**
	baz=57						
TNSS	**Tian-Shan**	**1.06**	**255**	*e*P	**Pb**	**11 52 12.2**	**-1.4**
	2.5nm,0.2s						
TNSS				*e*S	**Sb**	**11 52 26.5**	**-1.6**
	11nm,0.3s						
TNSS	**Tian-Shan**	**1.06**	**255**	P	**Pb**	**11 52 12.2**	**-1.4**
	2.5nm,0.2s						
TNSS				S	**Sb**	**11 52 26.5**	**-1.6**
	11nm,0.3s						
KTBS	**Karatobe**	**1.28**	**289**	*e*P	**Pb**	**11 52 16.3**	**-0.7**
	baz=89						
KTBS				*e*S	**Sg**	**11 52 33.4**	**0.0**
	baz=89						
KTBS	**Karatobe**	**1.28**	**289**	*e*P	**Pb**	**11 52 16.3**	**-0.7**
	8.6nm,0.2s						
KTBS				*e*S	**Sg**	**11 52 33.4**	**0.0**
	24nm,0.3s						
KTBS	**Karatobe**	**1.28**	**289**	P	**Pb**	**11 52 16.3**	**-0.7**
	8.6nm,0.2s						
KTBS				S	**Sg**	**11 52 33.4**	**0.0**
	24nm,0.3s						
IZV	**Izvestkoviy**	**1.30**	**258**	*e*P	**Pb**	**11 52 16.8**	**-0.7**
	baz=59						
IZV				*e*S	**Sg**	**11 52 34.3**	**+0.1**
	baz=59						
IZV	**Izvestkoviy**	**1.30**	**258**	*e*P	**Pb**	**11 52 16.8**	**-0.7**
	3.9nm,0.2s						
IZV				*e*S	**Sg**	**11 52 34.3**	**+0.1**
	24nm,0.2s						
IZV	**Izvestkoviy**	**1.30**	**258**	P	**Pb**	**11 52 16.8**	**-0.7**
	3.9nm,0.2s						
IZV				S	**Sg**	**11 52 34.3**	**+0.1**
	24nm,0.2s						
KTMS	**Ketmen**	**1.46**	**84**	*e*P	**Pn**	**11 52 18.5**	**-1.3**
	12nm,0.1s						
KTMS				*e*S	**Sn**	**11 52 37.2**	**-2.3**
	19nm,0.1s						
KTMS	**Ketmen**	**1.46**	**84**	P	**Pn**	**11 52 18.5**	**-1.3**
	12nm,0.1s						
KTMS				S	**Sn**	**11 52 37.2**	**-2.3**
	19nm,0.1s						
KDJ	**Kajisay**	**1.47**	**217**	⇑*e*P	**Pb**	**11 52 19.5**	**-0.8**
	baz=17						
KDJ				⇑*i*S	**Sg**	**11 52 38.7**	**-0.7**
	baz=17						
KST	**Kastek**	**1.77**	**262**	*e*P	**Pb**	**11 52 24.6**	**-0.8**
	baz=62						
KST				*e*S	**Sb**	**11 52 47.5**	**-0.6**
	baz=62						
KST	**Kastek**	**1.77**	**262**	*e*P	**Pb**	**11 52 24.6**	**-0.8**
	3.6nm,0.2s						
KST				*e*S	**Sb**	**11 52 47.5**	**-0.6**
	11nm,0.3s						
KST	**Kastek**	**1.77**	**262**	P	**Pb**	**11 52 24.6**	**-0.8**
	3.6nm,0.2s						
KST				S	**Sb**	**11 52 47.6**	**-0.6**
	11nm,0.3s						
BOOM	**Boomskoye usch**	**1.96**	**246**	⇓*i*P	**Pb**	**11 52 27.9**	**-0.8**
	baz=46						
BOOM				⇓*i*S	**Sb**	**11 52 52.8**	**-0.7**
	baz=46						
KRBS	**Karabastau**	**1.99**	**282**	*e*P	**Pb**	**11 52 28.1**	**-1.0**
	baz=82						
KRBS				*e*S	**Sb**	**11 52 53.6**	**-0.6**
	baz=82						
KRBS	**Karabastau**	**1.99**	**282**	*e*P	**Pb**	**11 52 28.1**	**-1.0**
	5.1nm,0.2s						
KRBS				*e*S	**Sb**	**11 52 53.6**	**-0.6**
	7.1nm,0.3s						
KRBS	**Karabastau**	**1.99**	**282**	P	**Pb**	**11 52 28.1**	**-1.0**
	5.1nm,0.2s						
KRBS				S	**Sb**	**11 52 53.6**	**-0.6**
	7.1nm,0.3s						
TKM2	**Tokmak 2**	**2.06**	**260**	⇑*e*P	**Pb**	**11 52 29.7**	**-0.7**
	baz=60						
TKM2				⇑*i*S	**Sb**	**11 52 56.0**	**-0.5**
	baz=60						
TKM2	**Tokmak 2**	**2.06**	**260**	⇑Pg	**Pb**	**11 52 29.2**	**-1.2**
	1.1nm,0.3s						
TKM2				⇑Lg	Lg	11 52 58.0	
	5.3nm,0.3s						
CHMS	**Chumnysh**	**2.66**	**264**	⇑*i*P	**Pb**	**11 52 37.9**	**-2.6**
	baz=65						
CHMS				⇑*i*S	**Sb**	**11 53 10.0**	**-3.5**
	baz=65						
AML	**Almayashu**	**3.63**	**253**	⇑*e*P	**Pn**	**11 52 51.7**	**+1.9**
	baz=53						
AML				⇑*e*S	**Sn**	**11 53 33.8**	**+0.5**
	baz=53						
MK31	**Makanchi Array**	**4.46**	**37**	⇑Pn	**Pn**	**11 53 02.2**	**+1.4**
	0.3nm,0.5s,baz=0.0,slow=0.1,SNR=3.6						
MK31				⇑Lg	Lg	11 54 13.7	
	0.2nm,0.3s,baz=218,slow=29,SNR=3.7						

*IDC **19** 11:54:36.5±2.1, 2.°77N×127.°20E, h0km, mb3.4/4,*
mb1 3.6/4, mb1mx3.3/42, mbtmp3.5/4, Error ellipse:
s-maj=161.4km s-min=27.3km az=65.0
*DJA **19** 11:54:45.6±1.8, 2.°N±8.°×12.°7E±1.°4, h70km±23km, M3.2/4,*
MLv3.2/4

ISC 19 11:54:44.9±1.4, 2.°6N±0.°1×127.°4E±0.°1, h64km, n7, σ1§54/8, mb3.3/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.82**	**182**	P	**Pn**	**11 55 13.2**	**-0.8**
TNTI				S	**Sn**	**11 55 34.7**	**-1.4**
SGSI	**Sangihe**	**2.17**	**300**	P	**Pn**	**11 55 44.8**	**+0.1**
GTOI	**Gorontalo**	**4.82**	**246**	P	**Pn**	**11 55 55.3**	**+0.3**
WRA	**Warramunga Arr**	**23.41**	**163**	P	**P**	**11 59 49.8**	**+1.3**
	0.5nm,0.4s,baz=343,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**26.86**	**167**	P	**P**	**12 00 20.3**	**+0.5**
	0.3nm,0.7s,baz=343,slow=9.5,SNR=2.3						
STKA	**Stephens Creek**	**36.84**	**160**	P	**P**	**12 01 48.9**	**+1.9**
	1.0nm,0.7s,baz=350,slow=9.9,SNR=4.2						
MKAR	**Makanchi Array**	**58.87**	**325**	P	**P**	**12 04 35.3**	**-1.9**
	0.1nm,0.5s,baz=119,slow=7.4,SNR=1.8						

IDC 19 11:59:41.7±4.5, 15.°78S×175.°17W, h0km, mb3.8/3, mb1 4.2/3, mb1mx3.6/47, mbtmp3.8/3, MS2.8/1, Ms1 2.8/1, ms1mx2.5/34, Error ellipse: s-maj=337.7km s-min=31.7km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.78**	**252**	LR	LR	12 03 44.5	
	comp=Z,80nm,19.6s,baz=194,slow=36						
WRA	**Warramunga Arr**	**48.09**	**257**	P	P	12 08 23.5	-0.1
	0.2nm,0.3s,baz=90,slow=8.0,SNR=6.2						
ASAR	**Alice Springs**	**48.37**	**252**	P	P	12 08 25.6	-0.1
	2.3nm,0.6s,baz=89,slow=8.5,SNR=49						
NVAR	**Mina Array Bea**	**75.76**	**43**	P	P	12 11 29.9	0.0
	0.4nm,0.9s,baz=209,slow=7.2,SNR=4.1						

*SOME **19** 12:03:14.0, 40.°20N×75.°65E, h5km*
*NNC **19** 12:03:17.4±1.9, 40.°20N×75.°73E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=14.5km s-min=8.9km az=166.0
*KRNET **19** 12:03:17.9±0.1, 40.°06N×75.°69E, mb3.2*

ISC 19 12:03:18.4±1.3, 40.°20N±0.°06×75.°64E±0.°03, h10km, n48, σ1§81/73, 26C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.65**	**264**	⇑*i*P	**Pb**	**12 03 47.5**	**-1.5**
	baz=69						
SFK				⇑*i*S	**Sb**	**12 04 09.3**	**-0.6**
	baz=69						
ARLS	**Aral**	**1.94**	**330**	⇓*i*P	**Pb**	**12 03 53.1**	**-0.8**
	baz=30						
ARLS				⇓*i*S	**Sb**	**12 04 18.5**	**+0.3**
	baz=30						
ULHL	**Ulahol**	**2.10**	**12**	⇑*i*P	**Pb**	**12 03 55.4**	**-1.3**
	baz=11						
ULHL				⇑*i*S	**Sb**	**12 04 22.0**	**-0.9**
	baz=11						
ULHL	**Ulahol**	**2.10**	**12**	P	**Pb**	**12 03 56.1**	**-0.6**
	SNR=22						
UCH	**Uchtor**	**2.20**	**338**	⇑*i*P	**Pb**	**12 03 57.0**	**-1.6**
	baz=38						
UCH				⇑*i*S	**Sb**	**12 04 25.0**	**-1.1**
	baz=38						
UCH	**Uchtor**	**2.20**	**338**	P	**Pb**	**12 03 57.3**	**-1.3**
	SNR=28						
KDJ	**Kajisay**	**2.26**	**31**	⇑*e*P	**Pb**	**12 03 57.4**	**-2.0**
	baz=28						
KDJ				⇑*i*S	**Sb**	**12 04 25.4**	**-2.0**
	baz=28						
BOOM	**Boomskoye usch**	**2.30**	**6**	⇓*i*P	**Pb**	**12 03 58.3**	**-1.9**
	baz=4.0						
BOOM				⇓*i*S	**Sb**	**12 04 27.4**	**-1.4**
	baz=4.0						
ARSB	**Arslanbob**	**2.31**	**300**	⇑*i*P	**Pb**	**12 03 58.3**	**-2.0**
	baz=2.0						
ARSB				⇑*i*S	**Sb**	**12 04 26.9**	**-2.0**
	baz=2.0						
AML	**Almayashu**	**2.43**	**323**	⇑*e*P	**Pb**	**12 04 00.0**	**-2.4**
	baz=25						
AML				⇑*i*S	**Sn**	**12 04 30.4**	**+1.9**
	baz=25						
AML	**Almayashu**	**2.43**	**323**	P	**Pb**	**12 04 00.2**	**-2.2**
	SNR=20						
KBK	**Karagaybulak**	**2.51**	**348**	⇑*i*P	**Pb**	**12 04 01.1**	**-2.6**
	baz=48						
KBK				⇑*i*S	**Sn**	**12 04 32.0**	**+1.7**
	baz=48						
KBK	**Karagaybulak**	**2.51**	**348**	P	**Sg**	**12 04 40.1**	**+0.9**
	SNR=9.2						
TKM2	**Tokmak 2**	**2.72**	**359**	⇑*i*P	**Pn**	**12 04 04.1**	**+1.7**
	baz=59						
TKM2				⇑*i*S	**Sn**	**12 04 37.2**	**+1.7**
	baz=59						
TKM2	**Tokmak 2**	**2.72**	**359**	P	**Pb**	**12 04 04.4**	**-2.9**
	SNR=6.4						
TKM2	**Tokmak 2**	**2.72**	**359**	⇑Pn	**Pb**	**12 04 04.3**	**-3.1**
	4.0nm,0.5s						
TKM2				⇓Lg	Lg	12 04 44.8	
	28nm,0.5s						
EKS2	**Erkin-Say**	**2.83**	**331**	⇑*i*P	**Pn**	**12 04 05.7**	**+1.8**
	baz=32						
EKS2				⇑*i*S	**Sn**	**12 04 39.7**	**+1.6**
	baz=32						
EKS2	**Erkin-Say**	**2.83**	**331**	P	**Pb**	**12 04 06.3**	**-2.9**
	SNR=7.7						
KST	**Kastek**	**2.85**	**5**	*e*P	**Pb**	**12 04 06.7**	**-2.9**
	8.8nm,0.3s						
KST				*e*S	**Sb**	**12 04 45.7**	**+1.1**
	31nm,0.5s						
KST	**Kastek**	**2.85**	**5**	Pg	**Pb**	**12 04 06.7**	**-2.9**
	8.8nm,0.3s						
KST				Lg	Lg	12 04 45.7	
	31nm,0.5s						
CHMS	**Chumysh**	**2.88**	**347**	P	Pg	12 04 50.4	+37
	SNR=6.8						
IZV	**Izvestkoviy**	**2.93**	**14**	*e*P	**Pb**	**12 04 10.4**	**-0.4**
	9.7nm,0.5s						
IZV				*e*S	**Sg**	**12 04 52.5**	**-0.1**
	28nm,0.3s						
IZV	**Izvestkoviy**	**2.93**	**14**	Pg	**Pb**	**12 04 10.4**	**-0.4**
	9.7nm,0.5s						
IZV				Lg	Lg	12 04 52.5	
	28nm,0.3s						
ANVS	**Anan'yevo**	**3.00**	**30**	⇓*e*P	**Pn**	**12 04 07.7**	**+1.5**
	baz=28						
ANVS				⇓*i*S	**Sn**	**12 04 43.9**	**+1.5**
	baz=28

	1.3nm,0.2s								
KRBS					*e*S		**Sg**	**12 05 09.7**	**-1.1**
	18nm,0.5s								
KRBS	**Karabastau**	**3.50**	**0**	Pg		**Pb**	**12 04 20.5**	**+0.1**
	1.3nm,0.2s								
KRBS					Lg	Lg	12 05 09.7		
	18nm,0.5s								
SATY	**Saty**	**3.53**	**35**	*e*P		**Pb**	**12 04 20.5**	**-0.6**
	5.5nm,0.4s								
SATY					*e*S		**Sg**	**12 05 10.0**	**-2.0**
	12nm,0.4s								
SATY	**Saty**	**3.53**	**35**	Pg		**Pb**	**12 04 20.5**	**-0.6**
	5.5nm,0.4s								
SATY					Lg	Lg	12 05 10.0		
	12nm,0.4s								
KTBS	**Karatobe**	**3.60**	**12**	*e*P		**Pb**	**12 04 21.9**	**-0.3**
	6.2nm,0.5s								
KTBS					*e*S		**Sg**	**12 05 12.0**	**-2.0**
	47nm,0.6s								
KTBS	**Karatobe**	**3.60**	**12**	Pg		**Pb**	**12 04 21.9**	**-0.3**
	6.2nm,0.5s								
KTBS					Lg	Lg	12 05 12.0		
	47nm,0.6s								
TRKS	**Terek-Say**	**3.66**	**293**	⇑*i*P		**Pn**	**12 04 16.1**	**+0.8**
	baz=94								
TRKS				⇑*i*S		**Sn**	**12 04 57.8**	**-0.8**
	baz=94								
UZB	**Uzynbulak**	**3.89**	**40**	*e*P		**Pb**	**12 04 25.9**	**-1.3**
	2.1nm,0.2s								
UZB					*e*S		**Sg**	**12 05 19.2**	**-4.1**
	8.0nm,0.7s								
UZB	**Uzynbulak**	**3.89**	**40**	Pg		**Pb**	**12 04 25.9**	**-1.3**
	2.1nm,0.2s								
UZB					Lg	Lg	12 05 19.2		
	8.0nm,0.7s								
KPKS	**Kokpek**	**3.98**	**34**	*e*P		**Pb**	**12 04 26.0**	**-2.7**
	1.4nm,0.1s								
KPKS					*e*S		**Sb**	**12 05 19.4**	**+2.4**
	27nm,0.6s								
PDGK	**Podgornoye**	**4.25**	**41**	Pg		**Pb**	**12 04 32.0**	**-1.4**
	1.3nm,0.5s								
PDGK					Lg	Lg	12 05 29.9		
	5.9nm,0.9s								
PDGK	**Podgornoye**	**4.25**	**41**	⇓Pg		**Pb**	**12 04 35.3**	**+1.8**
	6.2nm,0.8s								
PDGK				⇓Lg		Lg	12 05 31.6		
	10nm,0.7s								
KTMS	**Ketmen**	**4.79**	**46**	*e*P		**Pb**	**12 04 43.2**	**+0.7**
	1.9nm,0.2s								
KTMS					*e*S		**Sg**	**12 05 48.9**	**-3.4**
	3.6nm,0.5s								
KTMS	**Ketmen**	**4.79**	**46**	Pg		**Pb**	**12 04 43.2**	**+0.7**
	1.9nm,0.2s								
KTMS					Lg	Lg	12 05 48.9		
	3.6nm,0.5s								
KK31	**Karatay Array**	**4.81**	**309**	⇑Pg		**Pb**	**12 04 44.5**	**+1.7**
	1.2nm,0.5s,baz=121,slow=16,SNR=8.9								
KK31				⇑Sn		**Sn**	**12 05 30.2**	**+3.4**
	1.0nm,0.4s,baz=139,slow=24,SNR=2.8								
KK31				⇓Lg		Lg	12 05 51.1		
	3.3nm,0.5s,baz=122,slow=29,SNR=5.8								

IDC ***19*** *12:05:58.3±0.9, 31˚.23N×141˚.19E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/53, mbtmp3.7/10, ML3.0/2, MS4.1/5, Ms1 4.1/5, ms1mx3.6/25, Error ellipse: s-maj=34.4km s-min=19.4km az=77.0*

JMA ***19*** *12:06:04.4±0.3, 31˚.79N×141˚.13E, h0km, M3.9*

ISC 19 12:06:06.4±0.9, 31˚.4N±0˚.1×140˚.9E±0˚.2, h57km, n23, σ1§31/22, mb3.7/8, MS4.1/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.44**	**316**	P	**Pn**	**12 06 30.3**	**+0.1**
JHCJ	**Hachijojimakas**	**1.91**	**330**	P	**Pn**	**12 06 35.5**	**-1.1**
JHCJ				S	**Sn**	**12 06 57.9**	**-1.6**
JHJ2	**Mitsune**	**1.93**	**331**	P	**Pn**	**12 06 36.0**	**-0.9**
JHJ2				S	**Sn**	**12 06 58.6**	**-1.5**
JHJ	**Hachijo jima 2**	**1.95**	**330**	Pn	**Pn**	**12 06 36.2**	**-1.0**
	18nm,0.3s,baz=47,slow=23,SNR=74						
JHJ				Sn	**Sn**	**12 06 58.7**	**-1.9**
	89nm,0.3s,baz=45,slow=19,SNR=14						
JMKN	**Mikurajimanish**	**2.71**	**336**	P	**Pn**	**12 06 46.5**	**-1.1**
JMKN				S	**Sn**	**12 07 17.7**	**-1.4**
JOD2	**Odawara 2**	**4.13**	**339**	P	**Pn**	**12 07 06.9**	**-0.1**
JYN	**Shimob**	**4.53**	**334**	P	**Pn**	**12 07 14.4**	**+1.9**
JRY	**Ryogami san**	**4.88**	**340**	P	**Pn**	**12 07 18.0**	**+0.6**
JAG	**Ashikaga**	**5.14**	**347**	P	**Pn**	**12 07 20.2**	**-0.6**
MJAR	**Matsushiro Arr**	**5.58**	**337**	Pn	**Pn**	**12 07 28.0**	**+1.1**
	0.2nm,0.3s,baz=161,slow=13,SNR=20						
TGY	**Tagaytay City**	**25.17**	**231**	LR	LR	12 20 17.1	
	comp=Z,419nm,18.8s,baz=86,slow=34						
MA2	**Magadan**	**28.92**	**10**	LR	LR	12 24 47.3	
	comp=Z,251nm,18.0s,baz=188,slow=39						
SONM	**Songino Array**	**30.93**	**312**	P	**P**	**12 12 20.1**	**+2.2**
	0.5nm,0.5s,baz=117,slow=8.0,SNR=5.4						
TLY	**Talaya**	**33.96**	**318**	LR	LR	12 27 42.8	
	comp=Z,325nm,18.5s,baz=116,slow=38						
MKAR	**Makanchi Array**	**46.95**	**307**	P	**P**	**12 14 32.2**	**+0.6**
	0.7nm,0.7s,baz=89,slow=9.8,SNR=6.2						
NRIK	**Noril'sk**	**48.24**	**338**	LR	LR	12 36 36.7	
	comp=Z,226nm,18.5s,baz=110,slow=38						
WRA	**Warramunga Arr**	**51.46**	**188**	P	**P**	**12 15 04.8**	**-1.3**
	0.4nm,0.5s,baz=4.5,slow=7.6,SNR=6.7						
ASAR	**Alice Springs**	**55.19**	**188**	P	**P**	**12 15 31.3**	**-2.1**
	0.1nm,0.5s,baz=2.9,slow=5.9,SNR=4.8						
RES	**Resolute Bay**	**68.12**	**14**	P	**P**	**12 17 00.2**	**+0.4**
	0.5nm,0.5s,baz=302,slow=1.8,SNR=4.1						
YKA	**Yellowknife Ar**	**68.88**	**29**	P	**P**	**12 17 04.5**	**-0.2**
	0.2nm,0.7s,baz=302,slow=6.3,SNR=3.1						
FINES	**FINESS Array B**	**73.60**	**333**	P	**P**	**12 17 34.1**	**+0.9**
	2.1nm,0.9s,baz=71,slow=5.5,SNR=7.2						
FRB	**Frobisher Bay**	**82.31**	**13**	LR	LR	13 01 12.2	
	comp=Z,69nm,18.0s,baz=347,slow=40						
TXAR	**Lajitas Array**	**93.86**	**52**	P	**P**	**12 19 18.3**	**+0.3**
	0.3nm,0.8s,baz=308,slow=4.4,SNR=4.5						

IDC ***19*** *12:06:35.1±0.3, 30˚.46N×142˚.84E, h0km, mb5.0/39, mb1 5.1/46, mb1mx5.0/55, mbtmp5.0/46, ML3.9/7, MS3.9/8, Ms1 3.9/8, ms1mx3.7/22, Error ellipse: s-maj=11.7km s-min=7.9km az=102.0*

BJI ***19*** *12:06:36.9±0.0, 30˚.57N×142˚.53E, h15km, mB4.9/59, mb4.9/74, Ms4.8/81, Ms7 4.6/77*

NEIC ***19*** *12:06:36.5±1.3, 30˚.47N±0˚.05×142˚.79E±0˚.09, h10km±1km, mb5.3/349, Error ellipse: s-maj=13.6km s-min=9.1km az=259.0*

NIED ***19*** *12:06:36.9, 30˚.47N×142˚.82E, h50km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr-2.40; Mθθ-0.01; Mφφ2.41; Mrθ-0.07; Mθφ-0.34; Mφr0.68; Fault plane solution: Mw2.52000×10^16 NP1: φs173.00000°, δ53.00000°, λ-89.00000°. NP2: φs352.00000°, δ37.00000°, λ-91.00000°.*

JMA ***19*** *12:06:36.8±0.3, 30˚.47N×142˚.82E, h50km, M5.0*

MOS ***19*** *12:06:38.7±0.7, 31˚.08N×142˚.89E, h17km, mb5.5/141, MS4.5/11, Error ellipse: s-maj=9.9km s-min=5.7km az=114.0*

GCMT ***19*** *12:06:38.5±0.2, 30˚.45N±0˚.01×142˚.84E±0˚.01, h12km, MW5.1/135, Moment Tensor Solution. s62, c85; s135, c227; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-5.17±.08; Mθθ0.32±.08; Mφφ4.85±.07; Mrθ-0.28±.28; Mθφ-0.61±.07; Mφr1.90±.23; Best double couple: Mw5.40300×10^16 NP1:φs353.00000°, δ35.00000°, λ-89.00000°. NP2:φs172.00000°, δ55.00000°, λ-90.00000°. Principal axes: T 5.2830, Plg10.0000°, Azm262.0000°; N 0.2360, Plg0.0000°, Azm172.0000°; P -5.5230, Plg80.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 12:06:37.5±0.5, 30˚.54N±0˚.03×142˚.78E±0˚.04, h16km±3km, n16km:pP-P,n1081,σ1§19/1160,mb5.2/378,MS4.5/36, 99C-169D, Fault plane solution: NP1:φs182.79999°, δ38.03933°, λ-96.77741°. NP2:φs11.38088°, δ52.27325°, λ-84.72473°. Principal axes: T Plg7.1365°, Azm97.6242°; N Plg4.1702°, Azm188.1472°; P Plg81.7235°, Azm308.2289°; Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**3.22**	**307**	P	**Pn**	**12 07 27.2**	**-0.2**
CBIJ	**Chichi jima**	**3.47**	**189**	P	**Pn**	**12 07 28.8**	**-2.1**
CBIJ				*e*S	**Sn**	**12 08 07.5**	**-4.2**
JCJ	**Chichijima**	**3.47**	**189**	Pn	**Pn**	**12 07 29.0**	**-1.9**
	96nm,0.3s,baz=5.5,slow=13,SNR=77						
JCJ				Sn	**Sn**	**12 08 05.5**	**-6.1**
	209nm,0.3s,baz=123,slow=23,SNR=10.0						
JCJ	**Chichijima**	**3.47**	**189**	Pn	**Pn**	**12 07 28.6**	**-2.3**
JHCJ	**Hachijojimakas**	**3.58**	**316**	P	**Pn**	**12 07 33.0**	**+0.6**
JHCJ				S	**Sn**	**12 08 14.9**	**+0.4**
JHJ2	**Mitsune**	**3.60**	**316**	P	**Pn**	**12 07 32.8**	**+0.1**
JHJ2				S	**Sn**	**12 08 12.9**	**-1.9**
JHJ2	**Mitsune**	**3.60**	**316**	Pn	**Pn**	**12 07 32.1**	**-0.6**
JHJ	**Hachijo jima 2**	**3.62**	**316**	Pn	**Pn**	**12 07 32.8**	**-0.2**
	70nm,0.3s,baz=91,slow=21,SNR=5.0						
JHJ				Sn	**Sn**	**12 08 12.1**	**-3.4**
	174nm,0.3s,baz=32,slow=20,SNR=8.5						
JHH2	**Haha-jima-NKT2**	**3.93**	**188**	P	**Pn**	**12 07 34.9**	**-2.3**
JMKN	**Mikurajimanish**	**4.30**	**322**	S	**Sn**	**12 08 32.8**	**+0.6**
BSO1	**Boso 1**	**4.38**	**340**	P	**Pn**	**12 07 42.7**	**-0.1**
BSO1				*e*S	**Sn**	**12 08 32.8**	**-0.4**
JOD2	**Odawara 2**	**5.64**	**328**	P	**Pn**	**12 08 01.4**	**+0.6**
JOD2				*e*S	**Sn**	**12 09 02.9**	**-2.4**
JSG	**Sagara**	**5.66**	**318**	Pn	**Pn**	**12 08 01.5**	**+0.5**
SHZ3	**Shizuoka 3**	**5.93**	**321**	P	**Pn**	**12 08 07.0**	**+2.2**
TTO1	**TONANKAI O.B.S**	**5.95**	**303**	P	**Pn**	**12 08 06.2**	**+1.5**
HMMJ	**Hamamatsu 2**	**6.06**	**317**	P	**Pn**	**12 08 08.7**	**+2.2**
JYT	**Yasato**	**6.07**	**340**	Pn	**Pn**	**12 08 06.2**	**-0.4**
JYZW	**Yoshizawa**	**6.15**	**318**	P	**Pn**	**12 08 09.6**	**+1.9**
JSSY	**Shinshiroyabe**	**6.23**	**316**	P	**Pn**	**12 08 11.5**	**+2.7**
JHO	**Hitachi**	**6.33**	**344**	P	**Pn**	**12 08 08.3**	**-1.9**
JRY	**Ryogami san**	**6.36**	**330**	P	**Pn**	**12 08 10.7**	**+0.1**
JRY				*e*S	**Sn**	**12 09 20.9**	**-2.0**
JIE	**Ise**	**6.41**	**308**	P	**Pn**	**12 08 12.1**	**+0.8**
JIE				S	**Sn**	**12 09 23.1**	**-1.1**
JNT	**Takato**	**6.59**	**325**	P	**Pn**	**12 08 15.7**	**+1.8**
JAO	**Obara**	**6.62**	**317**	P	**Pn**	**12 08 15.5**	**+1.3**
JGF	**Kuroka**	**6.80**	**319**	Pn	**Pn**	**12 08 16.6**	**-0.1**
JTNC	**Tanabenakahech**	**6.90**	**300**	P	**Pn**	**12 08 19.5**	**+1.4**
JNG	**Nsakai**	**7.04**	**327**	P	**Pn**	**12 08 21.1**	**+1.1**
MJAR	**Matsushiro Arr**	**7.10**	**329**	Pn	**Pn**	**12 08 21.1**	**+0.4**
	3.0nm,0.3s,baz=153,slow=11,SNR=116						
MJAR				Sn	**Sn**	**12 09 38.0**	**-3.2**
	1.1nm,0.3s,baz=157,slow=20,SNR=10						
MJAR	**Matsushiro Arr**	**7.10**	**329**		**Pn**	**12 08 20.3**	**-0.5**
MAJO	**Matsushiro**	**7.10**	**329**	*c iP*	**Pn**	**12 08 21.2**	**+0.4**
MAJO	**Matsushiro**	**7.10**	**329**		**Pn**	**12 08 21.0**	**+0.2**
MAT	**Matsushiro**	**7.10**	**329**	P	**Pn**	**12 08 21.1**	**+0.3**
MAT				*e*S	**Sn**	**12 09 33.9**	**-7.3**
MAT	**Matsushiro**	**7.10**	**329**	P	**Pn**	**12 08 21.1**	**+0.3**
MJB9	**Matsu-Tunnel**	**7.11**	**329**		**Pn**	**12 08 21.0**	**+0.1**
JGN	**Niukaw**	**7.28**	**323**	P	**Pn**	**12 08 25.6**	**+2.3**
JMM	**Marumori**	**7.49**	**348**	Pn	**Pn**	**12 08 25.3**	**-0.8**
JWT	**Wachi**	**7.80**	**309**		**Pn**	**12 08 30.9**	**+0.5**
JMN	**Monobe**	**8.19**	**295**		**Pn**	**12 08 36.2**	**+0.4**
JSD	**Sado**	**8.36**	**335**	Pn	**Pn**	**12 08 37.2**	**-0.9**
JHS	**Saijyo**	**9.27**	**301**	Pn	**Pn**	**12 08 49.8**	**-0.8**
JOI	**Oki**	**9.82**	**308**	P	**Pn**	**12 09 00.3**	**+2.3**
JTM	**Tenmabayashi**	**10.32**	**353**	Pn	**Pn**	**12 09 04.7**	**-0.2**
JNU	**Nakatsue**	**10.45**	**287**	Pn	**Pn**	**12 09 09.1**	**+2.3**
	0.6nm,0.3s,baz=89,slow=9.0,SNR=5.7						
JNU				LR	LR	12 12 48.6	
	comp=Z,2μm,21.5s,baz=108,slow=36						
JNU	**Nakatsue**	**10.45**	**287**		**Pn**	**12 09 07.1**	**+0.4**
ERM	**Erimo**	**11.46**	**1**	*ce*P	**Pn**	**12 09 17.3**	**-3.1**
JEW	**Eniwo**	**12.32**	**355**	Pn	**Pn**	**12 09 31.1**	**-1.2**
NMR	**Nemuro--Hokkai**	**13.02**	**10**	*e*P	**Pn**	**12 09 37.4**	**-4.4**
NMR				*e*S	Sn	12 11 51.7	-15
JOW	**Kunigami**	**13.26**	**257**	Pn	**Pn**	**12 09 46.5**	**+1.3**
	0.9nm,0.3s,baz=81,slow=19,SNR=1.2						
JOW				LR	LR	12 14 18.4	
	comp=Z,1μm,20.9s,baz=130,slow=35						
GLVR	**Golovnino**	**13.35**	**9**	P	**Pn**	**12 09 43.1**	**-3.2**
GLVR				*e*S	Sn	12 12 00.9	-13
GLVR				smax	smax		
	comp=E,531nm,1.6s						
GLVR				smax	smax		
	comp=N,943nm,1.2s						
JKA	**Kamikawa-asahi**	**13.55**	**359**	Pn	**Pn**	**12 09 47.6**	**-1.5**
ASAJ	**Asahikawa**	**13.55**	**359**	Pn	**Pn**	**12 09 47.1**	**-2.0**
	comp=N,3.2nm,0.3s,baz=235,slow=6.4,SNR=31						
ASAJ				Sn	Sn	12 12 08.4	-11
	comp=N,1.4nm,0.3s,baz=44,slow=26,SNR=2.6						
ASAJ				LR	LR	12 16 32.6	
	comp=N,470nm,20.5s,baz=168,slow=44						
ASAJ	**Asahikawa**	**13.55**	**359**	P	**Pn**	**12 09 47.6**	**-1.5**
GRPR	**Tuman**	**13.64**	**9**	⇑*i*P	**Pn**	**12 09 46.6**	**-3.6**
GRPR				*e*S	Sn	12 12 05.8	-16
GRPR				pmax	pmax		
	comp=Z,185nm,1.2s						
GRPR				pmax	pmax		
	comp=Z,70nm,0.4s						
GRPR				smax	smax		
	comp=N,312nm,1.5s						
GRPR				smax	smax		
	comp=E,446nm,1.5s						
RUSJ	**Misakicho**	**13.68**	**8**	*e*P	**Pn**	**12 09 47.7**	**-3.1**
RUSJ				*e*S	Sn	12 12 10.4	-12
KSRS	**Korea Array**	**14.12**	**303**	Pn	**Pn**	**12 09 59.1**	**+2.3**
	comp=E,0.9nm,0.3s,baz=111,slow=12,SNR=59						
KSRS				LR	LR	12 15 35.8	
	comp=E,879nm,18.4s,baz=112,slow=38						
TJN	**Taejon**	**14.12**	**298**	⇑*e*P	**Pn**	**12 09 58.9**	**+2.0**
KSAR	**Wonju Array Be**	**14.14**	**303**	P	**Pn**	**12 09 58.2**	**+1.1**
KSAR	**Wonju Array Be**	**14.14**	**303**		**Pn**	**12 09 58.2**	**+1.1**
INCN	**Inchon**	**15.07**	**302**	P	**Pn**	**12 10 10.6**	**+0.8**
INCN				pmax	pmax		
	comp=Z,190nm,1.2s						
INCN	**Inchon**	**15.07**	**302**	Pn	**Pn**	**12 10 10.6**	**+0.8**
INCN				IAmb	IAmb	12 10 17.6	
	comp=Z,190nm,1.2s						
INCN	**Inchon**	**15.07**	**302**	P	**P**	**12 10 15.0**	**-0.1**
MSHR	**Mys Shultsa**	**15.20**	**325**	⇓*e*P	**Pn**	**12 10 13.0**	**+1.5**
MSHR				pmax	pmax		
	comp=Z,31nm,0.9s						
KUR	**Kuril'sk**	**15.20**	**14**	P	**P**	**12 10 14.5**	**-1.9**
KUR				S	Sn	12 12 46.9	-13
KUR				pmax	pmax		
	comp=Z,79nm,0.9s						
KUR				pmax	pmax		
	comp=E,22nm,0.5s						
KUR				pmax	pmax		
	comp=N,31nm,0.7s						
KUR				smax	smax		
	comp=N,46nm,0.5s						
KUR				MLR	MLR		
	comp=Z,1μm,13.0s						
TEY	**Ternei**	**15.27**	**343**	⇑*e*P	**Pn**	**12 10 12.9**	**+0.6**
TEY				pmax	pmax		
	comp=N,20nm,1.0s						
TEY				pmax	pmax		
	comp=E,10.0nm,1.0s						
TEY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
USRK	**Ussuriysk Ar.**	**16.09**	**331**	Pn	**Pn**	**12 10 21.9**	**-1.1**
	baz=143,slow=12,SNR=28						
USRK				LR	LR	12 16 09.8	
	comp=Z,146nm,21.9s,baz=137,slow=36						
USA0B	**Ussuriysk Arra**	**16.09**	**331**	*c iP*	**Pn**	**12 10 21.3**	**-1.7**
USA0B	**Ussuriysk Arra**	**16.09**	**331**	Pn	**Pn**	**12 10 22.3**	**-0.7**
YSS	**Yuzh-Sakhalins**	**16.39**	**360**	⇓*e*P	**Pn**	**12 10 23.0**	**-3.8**
YSS				*e*S	**Sn**	**12 13 23.9**	**-4.4**
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				pmax	pmax		
	comp=Z,400nm,2.9s						
YSS				smax	smax		
	comp=E,20nm,1.1s						
YSS				MLR	MLR		
	comp=N,1μm,14.0s						
YSS				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS	**Yuzh-Sakhalins**	**16.39**	**360**	Pn	**Pn**	**12 10 25.3**	**-1.5**
GUMO	**Guam**	**16.98**	**173**	P	**P**	**12 10 35.5**	**-0.8**
GUMO				pmax	pmax		
	comp=Z,331nm,1.1s						
GUMO	**Guam**	**16.98**	**173**	P	**P**	**12 10 35.5**	**-0.8**
GUMO				IAmb	IAmb	12 10 37.0	
	comp=Z,331nm,1.1s						
MDJ	**Mudanjiang**	**17.48**	**327**	P	**Pn**	**12 10 39.6**	**-1.0**
MDJ				pP	pP	12 10 44.8	+0.6
MDJ				sP	sP	12 10 47.8	+2.4
MDJ				PP	**PnPn**	**12 10 50.3**	**-0.6**
MDJ				S	**S**	**12 13 59.1**	**-3.7**
MDJ				SS	**SnSn**	**12 14 14.3**	**+5.9**
MDJ				pmax	pmax		
	comp=Z,39nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,210nm,3.5s						
MDJ				LR	LR		
	comp=Z,1μm,12.4s						
MDJ				LR	LR		
	comp=Z,930nm,13.7s						
MDJ				LR	LR		
	comp=Z,2μm,15.9s						
MDJ	**Mudanjiang**	**17.48**	**327**		**Pn**	**12 10 40.6**	**0.0**
UGL	**Uglegorsk**	**18.52**	**359**	⇓*i*P	**Pn**	**12 10 55.6**	**+2.3**
UGL				pmax	pmax		
	comp=Z,500nm,1.2s						
UGL				pmax	pmax		
	comp=N,88nm,1.0s						
UGL				pmax	pmax		
	comp=E,216nm,1.0s						
UGL				pmax	pmax		
	comp=Z,291nm,1.0s						
UGL				MLR	MLR		
	comp=Z,1μm,16.0s						
UGL				MLR	MLR		
	comp=N,800nm,12.0s						
UGL				MLR	MLR		
	comp=E,2μm,13.0s						
SSE	**Sheshan**	**18.56**	**277**	P	**P**	**12 10 51.5**	**-2.2**
SSE				S	**Sn**	**12 14 19.5**	**-1.6**
SSE				pmax	pmax		
	comp=E,180nm,8.2s						
SSE				LR	LR		
	comp=E,320nm,13.2s						
SSE				LR	LR		
	comp=E,630nm,13.1s						
CN2	**Changchun**	**19.08**	**319**	*e*P	**Pn**	**12 10 59.9**	**-0.3**
CN2				pmax	pmax		
	comp=E,90nm,1.0s						
CN2				pmax	pmax		
	comp=E,370nm,5.0s						
CN2				LR	LR		
	comp=E,1μm,15.0s						
CN2				LR	LR		
	comp=E,790nm,14.0s						
CN2				LR	LR		
	comp=E,1μm,15.0s						
SNY	**Shenyang**	**19.12**	**311**	⇓P	**Pn**	**12 11 00.5**	**-0.1**
SNY				pmax	pmax		
	comp=E,34nm,0.9s						
SNY				pmax	pmax		
	comp=E,230nm,5.5s						
SNY				LR	LR		
	comp=E,1μm,14.9s						
SNY				LR	LR		
	comp=E,1μm,13.7s						
SNY				LR	LR		
	comp=E,2μm,14.3s						
DL2	**Dalian**	**19.26**	**301**	P	**Pn**	**12 11 03.9**	**+1.6**
DL2				pmax	pmax		
	comp=E,54nm,1.0s						
DL2				pmax	pmax		
	comp=E,400nm,3.5s						
DL2				LR	LR		
	comp=E,980nm,15.2s						
DL2				LR	LR		
	comp=E,1μm,16.5s						
DL2				LR	LR		
	comp=E,2μm,15.2s						
TATO	**Taipei**	**19.63**	**259**	P	**Pn**	**12 11 06.3**	**-0.6**
TATO				IAmb	IAmb	12 11 11.0	
	comp=Z,158nm,0.8s						
TATO	**Taipei**	**19.63**	**259**	P	**Pn**	**12 11 08.4**	**+1.5**
TATO				P	**Pn**	**12 11 08.4**	**+1.5**
NACB	**Ninganchiao**	**19.85**	**257**	P	**P**	**12 11 07.0**	**-0.9**
TYV	**Tymovskoe**	**20.30**	**360**	*e*P	Pn	12 11 14.6	0.0
TYV				pmax	pmax		
	comp=Z,300nm,5.0s						
TYV				pmax	pmax		
	comp=Z,104nm,1.0s						
YULB	**Yu-li**	**20.41**	**255**	P	**P**	**12 11 13.9**	**-0.1**
YULB				IAmb	IAmb	12 11 31.5	
	comp=Z,184nm,1.3s						
KLR	**Kul'dur**	**20.46**	**339**	P	Pn	12 11 15.8	-0.6
	comp=Z,25nm,0.8s,baz=144,slow=11,SNR=49						
KLR				LR	LR	12 20 16.7	
	comp=Z,270nm,18.6s,baz=146,slow=40						
KLR	**Kul'dur**	**20.46**	**339**	*ce*P	**P**	**12 11 14.8**	**+0.5**
KLR				pmax	pmax		
	comp=Z,49nm,1.1s						
NJ2	**Nanjing**	**20.50**	**280**	*e*P	**P**	**12 11 15.3**	**+0.4**
NJ2				pP	**sP**	**12 11 20.8**	**+2.2**
NJ2				sP	**pwP**	**12 11 24.3**	**-2.3**
NJ2				S	**S**	**12 15 05.1**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,66nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,410nm,3.5s						
NJ2				LR	LR		
	comp=Z,2μm,20.6s						
NJ2				LR	LR		
	comp=Z,2μm,19.4s						
NJ2				LR	LR		
	comp=Z,1μm,17.5s						
SSLB	**Suanglung**	**20.54**	**256**	P	**P**	**12 11 15.9**	**+0.5**
SSLB				IAmb	IAmb	12 11 30.8	
	comp=Z,111nm,0.8s						
GRNR	**Gornyy**	**20.76**	**349**	⇓*i*P	Pn	12 11 19.1	-0.9
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=E,3.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
TWG	**Pinlang**	**20.85**	**254**	P	**P**	**12 11 19.5**	**+0.8**
TWG				IAmb	IAmb	12 11 30.3	
	comp=Z,106nm,1.0s						
TPUB	**Ta-pu**	**21.01**	**255**	P	**P**	**12 11 21.0**	**+0.5**
TPUB				IAmb	IAmb	12 11 39.1	
	comp=Z,100nm,0.8s						
BBP	**Basco**	**21.28**	**247**	*e*P	**P**	**12 11 22.4**	**-1.0**
QZH	**Quanzhou**	**22.11**	**261**	⇑*i*P	**P**	**12 11 31.3**	**-0.9**
QZH				S	**S**	**12 15 31.3**	**-4.1**
QZH				LR	LR		
	comp=Z,510nm,17.4s						
QZH				LR	LR		
	comp=Z,670nm,17.0s						
QZH				LR	LR		
	comp=Z,1μm,20.6s						
TIA	**Tai'an**	**22.13**	**292**	P	**P**	**12 11 31.3**	**-1.2**
TIA				S	**S**	**12 15 30.6**	**-5.2**
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						

BJI LR LR
comp=Z,840nm,16.4s
SZP Santa 24.09 243 P **P** **12 11 51.0 -1.4**
SZP IAmb IAmb 12 12 18.7
comp=Z,121nm,1.2s
WHN Wuhan 24.47 277 ⇑P **P** **12 11 56.0 +0.2**
WHN S **S** **12 16 11.8 -3.6**
WHN pmax pmax
comp=Z,590nm,3.2s
WHN LR LR
comp=Z,1μm,12.1s
WHN LR LR
comp=Z,3μm,16.8s
WHN LR LR
comp=Z,3μm,14.1s
JCNP Jose Panganiba 24.56 233 *e*P **P** **12 11 56.9 +0.2**
H11S3 WAKE ISLAND Hy 24.77 113 T T 12 37 36.4
baz=304,slow=75,SNR=12
H11S1 WAKE ISLAND Hy 24.78 113 T T 12 37 41.5
baz=304,slow=75,SNR=12
H11S2 WAKE ISLAND Hy 24.79 113 T T 12 37 41.8
baz=304,slow=75,SNR=12
PEA0B Petropavlovsk- 25.04 22⇑ *e*P **P** **12 12 00.7 -0.1**
PETK Petropavlovsk- 25.04 22 P **P** **12 12 01.6 +0.8**
comp=Z,4.7nm,1.0s,baz=160,slow=4.7,SNR=5.7
PETK PcP **PcP** **12 15 35.1 -0.1**
comp=Z,4.0nm,1.0s,baz=183,slow=2.9,SNR=3.8
PETK Petropavlovsk- 25.04 22 P **P** **12 12 00.4 -0.4**
PETK Petropavlovsk- 25.04 22 P **P** **12 12 00.3 -0.4**
PET Petropavlovsk 25.28 23 *e*P **P** **12 12 04.2 +1.3**
PET *e* 12 12 43.4
PET *e*S **S** **12 16 24.3 -3.7**
PET pmax pmax
comp=Z,26nm,1.1s
PET pmax pmax
comp=Z,100nm,10.2s
PET MLR MLR
comp=Z,900nm,17.0s
PET Petropavlovsk 25.28 23 P **P** **12 12 03.2 +0.3**
LQP Lukban 25.49 235⇑ *e*P **P** **12 12 04.3 -1.1**
HIA Hailar 25.57 324 P **P** **12 12 06.5 +0.8**
HIA pmax pmax
comp=Z,65nm,1.1s
HIA Hailar 25.57 324 P **P** **12 12 06.5 +0.8**
HIA IAmb IAmb 12 12 12.4
comp=Z,65nm,1.1s
OCLP Ormoc 25.71 225 *e*P P 12 12 16.7 +10
ZEA Zeya 25.77 339 *de*P **P** **12 12 08.2 +0.8**
ZEA *e* 12 12 42.8
ZEA *e*S **S** **12 16 32.2 -3.6**
ZEA *e* 12 22 58.5
ZEA pmax pmax
comp=N,60nm,1.1s
ZEA pmax pmax
comp=Z,100nm,0.9s
ZEA pmax pmax
comp=Z,100nm,2.0s
ZEA pmax pmax
comp=Z,100nm,5.1s
ZEA smax smax
comp=E,300nm,5.6s
ZEA smax smax
comp=N,300nm,6.5s
TGY Tagaytay City 25.92 236 P **P** **12 12 09.2 +0.1**
comp=N,377nm,0.7s,baz=104,slow=2.3,SNR=9.6
TIY Taiyuan 26.05 294 *e*P **P** **12 12 10.6 +0.4**
TIY pP **pwP** **12 12 21.5 -0.8**
TIY S **S** **12 16 39.3 -1.4**
TIY pmax pmax
comp=N,35nm,0.8s
TIY LR LR
comp=N,440nm,15.9s
TIY LR LR
comp=N,850nm,14.1s
TIY LR LR
comp=N,2μm,16.3s
MSLP Maasin 26.28 223 *e*P **P** **12 12 15.0 +2.6**
PGP Puerto Galera 26.32 235⇑ *e*P **P** **12 12 11.7 -1.0**
LUBP Lubang 26.66 236 *e*P **P** **12 12 13.5 -2.3**
HHC Hu-ho-hao-te 27.23 301 *e*P **P** **12 12 20.9 0.0**
HHC S **S** **12 16 58.5 -1.0**
HHC pmax pmax
comp=N,20nm,0.8s
HHC pmax pmax
comp=N,150nm,5.4s
HHC LR LR
comp=N,1μm,20.4s
HHC LR LR
comp=N,2μm,16.2s
HHC LR LR
comp=N,3μm,16.2s
CNOP Candoni, Negro 27.87 227 *e*P **P** **12 12 27.5 +0.8**
CUYO Cuyo Island 28.15 231 *e*P **P** **12 12 27.9 -1.3**
BTO Baotou 28.34 300 P **P** **12 12 31.8 +1.0**
ENH Enshi 28.66 278 P **P** **12 12 32.6 -1.1**
XAN Xi'an 28.76 286 P **P** **12 12 33.5 -1.1**
XAN pP sP 12 12 40.6 +2.2
XAN PcP **PcP** **12 15 44.6 +0.1**
XAN S **S** **12 17 24.5 +1.0**
XAN SS **SnSn** **12 18 49.1 +4.3**
XAN pmax pmax
comp=N,29nm,1.3s
XAN pmax pmax
comp=N,180nm,6.5s
XAN LR LR
comp=N,660nm,13.1s
XAN LR LR
comp=N,460nm,15.7s
XAN LR LR
comp=N,710nm,16.7s
XAN Xi'an 28.76 286 P **P** **12 12 33.4 -1.1**
XAN pmax pmax
comp=Z,37nm,1.2s
XAN Xi'an 28.76 286 P **P** **12 12 33.4 -1.2**
PAGZ Pagadian 28.97 223 *e*P **P** **12 12 35.1 -1.4**
ENPP El Nido 28.98 233 *e*P **P** **12 12 34.7 -1.8**
MA2 Magadan 29.54 8 P **P** **12 12 41.6 +0.5**
comp=Z,20nm,1.0s,baz=187,slow=8.1,SNR=22
MA2 Magadan 29.54 8 *de*P **P** **12 12 41.4 +0.3**
MA2 pmax pmax
comp=Z,35nm,1.3s
MA2 Magadan 29.54 8 P **P** **12 12 41.1 0.0**
MA2 IAmb IAmb 12 12 42.8
comp=Z,39nm,1.2s
CIT Chita 30.37 323 *e*P P 12 12 54.6 +6.0
CIT *e* 12 13 03.5
CIT pmax pmax
comp=Z,140nm,2.6s
SGSI Sangihe 31.29 215 P **P** **12 12 56.2 -0.8**
BATP Bataraza 31.81 232 *e*P **P** **12 13 00.7 -0.8**
QIZ Qiongzhong 31.91 257 P **P** **12 13 02.8 +0.3**
QIZ S **S** **12 18 15.8 +2.7**
QIZ LR LR
comp=Z,370nm,16.0s
QIZ LR LR
comp=Z,440nm,14.9s
QIZ LR LR
comp=Z,710nm,38.2s
GYA Guiyang 31.92 272 ⇓P **P** **12 13 06.5 +3.9**
GYA S **S** **12 18 15.6 +2.4**
GYA pmax pmax
comp=Z,13nm,0.9s
GYA pmax pmax
comp=Z,180nm,5.0s
GYA LR LR
comp=Z,570nm,16.7s
BAKI Biak 32.19 193 P **P** **12 13 04.3 -0.6**
ULN Ulaanbaatar 32.29 313 *d* iP **P** **12 13 07.4 +1.7**
ULN pmax pmax
comp=Z,111nm,1.3s
ULN Ulaanbaatar 32.29 313 P **P** **12 13 06.1 +0.5**
ULN Ulaanbaatar 32.29 313 P **P** **12 13 08.5 +2.8**
YAK Yakutsk 32.64 349 LR LR 12 28 52.3
comp=Z,138nm,20.3s,baz=93,slow=41
YAK Yakutsk 32.64 349 *e*P **P** **12 13 08.0 -0.4**
YAK *e*PPP PPP 12 14 31.5
YAK *e* 12 15 51.9
YAK *e*S **S** **12 18 22.9 -0.6**
YAK *e*SS **SnSn** **12 20 17.2 -1.2**
YAK *e*SSS SSS 12 20 36.9
YAK pmax pmax
comp=Z,37nm,1.0s
YAK pmax pmax
comp=N,20nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK smax smax
comp=N,179nm,5.1s
YAK smax smax
comp=E,108nm,5.3s
YAK MLR MLR
comp=Z,437nm,16.0s
YAK MLR MLR
comp=N,425nm,19.0s
YAK MLR MLR
comp=E,380nm,20.0s
YAK Yakutsk 32.64 349 P **P** **12 13 08.0 -0.4**
YAK IAmb IAmb 12 13 09.5
comp=Z,39nm,0.9s
MANU Manus Island 32.69 172 P **P** **12 13 07.7 -1.6**
SONM Songino Array 32.70 312 P **P** **12 13 11.5 +2.2**
comp=Z,51nm,1.1s,baz=118,slow=8.4,SNR=139
SONM Songino Array 32.70 312 P **P** **12 13 10.9 +1.6**
SONM pmax pmax
comp=Z,45nm,1.1s
SONM Songino Array 32.70 312 P **P** **12 13 10.8 +1.6**
SONM IAmb IAmb 12 13 12.9
comp=Z,45nm,1.1s
LZH Lanzhou 32.85 290 *e*P **P** **12 13 10.8 0.0**
LZH sP pwP 12 13 20.4 -2.5
LZH pmax pmax
comp=Z,31nm,1.0s
LZH pmax pmax
comp=Z,130nm,5.2s
LZH LR LR
comp=Z,720nm,13.3s
LZH LR LR
comp=Z,580nm,14.6s
LZH LR LR
comp=Z,610nm,14.6s
SEY Seymchan 32.99 8 P **P** **12 13 12.6 +1.2**
comp=Z,24nm,1.0s,baz=193,slow=6.8,SNR=88
SEY Seymchan 32.99 8⇓ *e*P **P** **12 13 12.1 +0.7**
SWI Sorong 33.10 201 P **P** **12 13 12.4 -0.4**
SWI pmax pmax
comp=Z,43nm,1.0s
SWI Sorong 33.10 201 P **P** **12 13 12.4 -0.4**
comp=Z,862nmcomp=Z,46nm,1.0s
SIJI Sorong 33.10 201 P **P** **12 13 12.2 -0.7**
comp=Z,19nm,0.6s,baz=26,slow=10,SNR=19
CD2 Chengdu 33.44 281 P **P** **12 13 14.6 -1.2**
CD2 S **S** **12 18 36.5 -0.2**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,100nm,4.9s
CD2 LR LR
comp=Z,1μm,13.3s
CD2 LR LR
comp=Z,990nm,16.3s
CD2 LR LR
comp=Z,800nm,14.7s
BOD Bodaibo 33.72 332 *e*P **P** **12 13 18.3 +0.5**
BOD pmax pmax
comp=Z,29nm,1.4s
MYLDM Lahad Datu 34.04 227 P **P** **12 13 20.8 -0.3**
MYLDM IAmb IAmb 12 13 26.8
comp=Z,36nm,1.2s
FAKI Fak Fak 34.76 199 P **P** **12 13 26.4 -0.9**
FAKI IAmb IAmb 12 13 28.9
comp=Z,40nm,0.9s
FAKI Fak Fak 34.76 199 P **P** **12 13 26.0 -1.3**
comp=Z,537nmcomp=Z,49nm,0.9s
GTOI Gorontalo 35.17 216 P **P** **12 13 29.8 -1.0**
comp=Z,294nmcomp=Z,24nm,0.9s
ZAK Zakamensk 35.45 315 *e*P **P** **12 13 34.1 +1.0**
ZAK *e* 12 19 08.1
ZAK pmax pmax
comp=Z,37nm,1.2s
IRK Irkutsk 35.53 319 *e*P **P** **12 13 33.8 +0.2**
IRK pmax pmax
comp=Z,54nm,1.3s
RABL Rabaul 35.68 164 P **P** **12 13 33.7 -1.5**
RABL IAmb IAmb 12 13 36.9
comp=Z,46nm,0.9s
TLY Talaya 35.68 318 *e*P **P** **12 13 36.3 +1.4**
TLY pmax pmax
comp=Z,140nm,1.1s
TLY MLR MLR
comp=Z,2μm,15.0s
TLY Talaya 35.68 318 P **P** **12 13 37.4 +2.4**
KMI Kunming 35.69 271 *e*P **P** **12 13 32.1 -3.4**
KMI pP pP 12 13 37.9 -0.4
KMI PP **PP** **12 14 56.0 -0.6**
KMI S **S** **12 19 06.8 -5.1**
KMI pmax pmax
comp=Z,13nm,0.5s
KMI LR LR
comp=Z,330nm,15.5s
KMI LR LR
comp=Z,400nm,14.0s
KMI LR LR
comp=Z,480nm,28.7s
MRSI Marisa 35.86 217 P **P** **12 13 36.7 0.0**
comp=Z,680nmcomp=Z,84nm,0.9s
GTA Gaotai 36.02 296 P **P** **12 13 39.0 +0.8**
GTA pP pwP 12 13 46.5 -3.8
GTA sP sP 12 13 49.5 +7.5
GTA PcP **PcP** **12 16 05.1 +0.7**
GTA S **S** **12 19 13.3 -3.3**
GTA sS sS 12 19 27.5 +6.5
GTA pmax pmax
comp=Z,11nm,1.4s
GTA pmax pmax
comp=Z,140nm,8.8s
GTA LR LR
comp=Z,560nm,19.1s
GTA LR LR
comp=Z,1μm,16.3s
GTA LR LR
comp=Z,1μm,15.5s
SANI Sanana 36.15 209 P **P** **12 13 37.5 -1.7**
comp=Z,664nmcomp=Z,67nm,0.9s
LUWI Luwuk 36.73 215 P **P** **12 13 42.8 -1.4**
comp=Z,31nm,1.1s
NLAI Namlea 36.78 207 P **P** **12 13 44.6 0.0**
comp=Z,23nm,0.9s
BNDI Bandanaira 36.98 202 P **P** **12 13 45.6 -0.7**
comp=Z,102nm,1.0s
APSI Ampana 37.19 217 P **P** **12 13 46.1 -2.0**
comp=Z,41nm,1.2s
MOY Mondy 37.23 317 *e*P **P** **12 13 49.5 +1.2**
MOY pmax pmax
comp=Z,58nm,1.3s
UBPT Khong Chiam 37.38 255 P **P** **12 13 51.5 +1.8**
comp=Z,9.3nm,1.3s
UBPT Khong Chiam 37.38 255 P **P** **12 13 50.0 +0.2**
NONG Nongkai 38.01 260 P **P** **12 13 55.5 +0.4**
comp=Z,22nm,0.9s
KHON Khomkaen 39.08 258 P **P** **12 14 05.1 +1.0**
comp=Z,34nm,0.8s
SAUI Saumlaki 39.85 198 P **P** **12 14 09.8 -0.7**
comp=Z,162nm,1.0s
PMG Port Moresby 39.94 173 P **P** **12 14 10.5 -0.7**
comp=Z,31nm,1.0s,baz=340,slow=4.0,SNR=8.6
PMG PcP **PcP** **12 16 15.9 -0.7**
comp=Z,6.2nm,0.7s,baz=269,slow=0.6,SNR=3.0
PMG Port Moresby 39.94 173 *d* iP **P** **12 14 10.4 -0.7**
PMG pmax pmax
comp=Z,34nm,1.0s
PMG Port Moresby 39.94 173 P **P** **12 14 09.4 -1.7**
TTSI Tana Toraja 39.95 217 P **P** **12 14 10.3 -1.0**
comp=Z,2μmcomp=Z,13nm,0.8s
BILL Bilibino 39.99 13 *ce*P **P** **12 14 11.3 +0.2**
BILL pmax pmax
comp=Z,44nm,1.0s
BILL Bilibino 39.99 13 P **P** **12 14 10.7 -0.4**
BILL IAmb IAmb 12 14 12.9
comp=Z,55nm,1.2s
BKB Balikpapan 40.10 223 P **P** **12 14 10.2 -2.3**
comp=Z,80nm,0.9s
SBUM Sibu 40.21 232 P **P** **12 14 12.8 -0.7**
UTTA Uttaradit 40.36 262 P **P** **12 14 15.9 +1.2**
comp=Z,15nm,1.0s
PHIT Phitsanulok 40.73 261 P P 12 14 23.1 +5.3
comp=Z,34nm,0.8s
SPSI Sidrap Palu 40.76 217 P **P** **12 14 17.2 -0.8**
comp=Z,6μmcomp=Z,1μmcomp=Z,32nm,0.7s
LAMP Lampang 40.81 263 P **P** **12 14 18.9 +0.4**
comp=Z,22nm,0.8s
BNSI Bone 40.95 216 P **P** **12 14 19.0 -0.6**
comp=Z,25nm,1.0s
MTKI Muara Teweh, K 41.04 225 P **P** **12 14 20.2 -0.2**
comp=Z,7μmcomp=Z,52nm,0.9s
CM34 Chiang Mai Arr 41.09 264 P **P** **12 14 20.0 -0.8**
CM35 Chiang Mai Arr 41.16 264 P **P** **12 14 20.0 -1.3**
CM33 Chiang Mai Arr 41.27 264 P **P** **12 14 21.0 -1.3**
CM36 Chiang Mai Arr 41.27 264 P **P** **12 14 23.0 +0.7**
CHTO Chiang Mai 41.28 264 P **P** **12 14 21.5 -0.8**
CHTO pmax pmax
comp=Z,11nm,0.7s
CHTO Chiang Mai 41.28 264 P **P** **12 14 21.5 -0.8**
CHTO Chiang Mai 41.28 264 P **P** **12 14 22.1 -0.2**
CM09 Chiang Mai Arr 41.39 263 P **P** **12 14 24.0 +0.7**
comp=Z,79nmcomp=Z,9.8nm,0.8s
CM04 Chiang Mai Arr 41.42 263 P **P** **12 14 24.9 +1.3**
comp=Z,74nmcomp=Z,6.8nm,1.3s
CM32 Chiang Mai Arr 41.43 264 P **P** **12 14 25.0 +1.4**
CMAR Chiang Mai Arr 41.43 264 P **P** **12 14 23.4 -0.2**
comp=Z,3.1nm,0.4s,baz=59,slow=6.2,SNR=18
CMAR PcP **PcP** **12 16 22.0 +0.5**
comp=Z,0.7nm,0.4s,baz=35,slow=2.5,SNR=6.1
CMAR Chiang Mai Arr 41.43 264 P **P** **12 14 22.8 -0.8**
CM01 Chiang Mai Arr 41.43 263 P **P** **12 14 24.6 +0.9**
comp=Z,107nmcomp=Z,8.0nm,0.8s
CM02 Chiang Mai Arr 41.44 263 P **P** **12 14 24.0 +0.4**
comp=Z,64nmcomp=Z,7.8nm,0.8s
CM05 Chiang Mai Arr 41.45 263 P **P** **12 14 24.6 +0.8**
comp=Z,52nmcomp=Z,5.7nm,0.7s
NIKH Nikolski High 41.47 43 P 12 14 23.4
baz=257
CM13 Chiang Mai Arr 41.48 263 P **P** **12 14 24.8 +0.8**
comp=Z,5.3nm,0.7s
KAPI Kappang 41.66 216 P **P** **12 14 24.8 -0.6**
comp=Z,16nm,0.9s,baz=40,slow=4.0,SNR=13
KAPI PcP **PcP** **12 16 23.2 +1.1**
comp=Z,13nm,0.9s,baz=234,slow=1.9,SNR=6.0
KAPI Kappang 41.66 216 P **P** **12 14 24.3 -1.1**
KAPI 12 16 22.9
KAPI pmax pmax
comp=Z,21nm,1.0s
KAPI Kappang 41.66 216 P **P** **12 14 24.3 -1.1**
KAPI **PcP** **12 16 22.9 +0.7**
TIXI Tiksi 41.86 353 P **P** **12 14 26.3 -0.1**
comp=Z,15nm,1.0s,baz=143,slow=6.7,SNR=25
TIXI LR LR 12 39 00.5
comp=Z,92nm,18.3s,baz=179,slow=46
TIXI Tiksi 41.86 353 *d* iP **P** **12 14 26.2 -0.2**
TIXI pmax pmax
comp=Z,101nm,1.3s
TIXI Tiksi 41.86 353 P **P** **12 14 25.5 -0.9**
SPIA Saint Paul Isl 41.87 37 P 12 14 27.6
baz=251
KBKI Kotabaru 42.17 222 P **P** **12 14 28.9 -0.7**
comp=Z,1μmcomp=Z,38nm,0.9s
KSM Kuching 42.22 233 P **P** **12 14 29.6 -0.4**
UTHA Uthaitani 42.31 259 P **P** **12 14 31.6 +0.8**
comp=Z,229nmcomp=Z,17nm,0.7s
BBKI Banjar Baru 43.07 223 P **P** **12 14 36.5 -0.4**
comp=Z,10nm,0.6s
SRDT SRDT 43.16 258 P P 12 14 43.0 +5.3
comp=Z,4μmcomp=Z,8.5nm,1.4s
MMRI Maumere 43.66 210 P **P** **12 14 40.6 -1.1**
MMRI IAmb IAmb 12 14 52.2
comp=Z,46nm,1.0s
MMRI Maumere 43.66 210 P **P** **12 14 41.0 -0.7**
comp=Z,43nm,0.7s
GAMB Gambell 43.82 27 P 12 14 43.5
baz=243
SOEI Soe 43.84 207 P **P** **12 14 42.3 -0.9**
SOEI IAmb IAmb 12 15 01.1
comp=Z,56nm,0.9s
SOEI Soe 43.84 207 P **P** **12 14 41.4 -1.8**
comp=Z,61nm,0.9s
COEN Coen 44.24 179 P **P** **12 14 45.7 -0.5**
COEN IAmb IAmb 12 14 48.0
comp=Z,45nm,0.9s
PBKI Pangkalan Bun 44.43 228 P **P** **12 14 47.8 0.0**
comp=Z,149nm,0.7s
BATI Baumata 44.48 207 P **P** **12 14 47.1 -1.2**
comp=Z,51nm,0.8s,baz=344,slow=3.9,SNR=8.3
BATI Baumata 44.48 207 P **P** **12 14 47.1 -1.2**
comp=Z,33nm,0.8s
MTN Manton Dam 44.56 196 P **P** **12 14 47.2 -1.7**
SHL Shillong 44.89 277 P **P** **12 14 51.2 -0.5**
SHL pmax pmax
comp=Z,19nm,1.3s
SHL Shillong 44.89 277 P **P** **12 14 51.2 -0.5**
WMQ Urumqi 45.07 303 *e*P **P** **12 14 54.8 +2.0**
WMQ pP sP 12 15 00.1 +3.4
WMQ sP pwP 12 15 05.5 +0.4
WMQ pmax pmax
comp=Z,76nm,1.5s
WMQ pmax pmax
comp=Z,340nm,5.3s
WMQ LR LR
comp=Z,1μm,21.9s
WMQ LR LR
comp=Z,950nm,15.9s
WMQ LR LR
comp=Z,810nm,21.5s
WMQ Urumqi 45.07 303 P **P** **12 14 53.3 +0.5**
WMQ pmax pmax
comp=Z,85nm,1.4s
WMQ Urumqi 45.07 303 P **P** **12 14 53.3 +0.5**
DGZ Jazzator, Alta 45.33 311 *d* iP **P** **12 14 56.3 +1.4**
DGZ pmax pmax
comp=Z,64nm,1.0s
BASI Baing, Sumba 45.80 211 P **P** **12 14 57.7 -1.0**
comp=Z,30nm,0.7s
WBSI Waikabubak, Su 45.84 213 P **P** **12 14 58.1 -1.0**
comp=Z,21nm,0.8s
PLAI Plampang 45.92 216 P **P** **12 14 58.3 -1.4**
comp=Z,48nm,0.9s
TNA Tin City 46.06 26 P **P** **12 15 00.8 +0.6**
TNA IAmb IAmb 12 15 02.9
comp=Z,24nm,1.1s
TNA Tin City 46.06 26 P 12 15 01.5
baz=245
TWSI Taliwang, Sumb 46.30 217 P **P** **12 15 00.9 -1.7**
comp=Z,16nm,0.9s
KMMI Kalianget 46.48 221 P **P** **12 15 01.3 -2.8**
SRBI Singaraja 46.63 219 P **P** **12 15 06.0 +0.7**
comp=Z,999nmcomp=Z,37nm,0.8s
ANM Nome 46.67 28 P **P** **12 15 05.7 +0.7**
ANM pmax pmax
comp=Z,49nm,1.0s
ANM Nome 46.67 28 P **P** **12 15 05.7 +0.7**
ANM Nome 46.67 28 P 12 15 06.7
baz=249,SNR=6.7
SDPT Sand Point 46.74 41 P 12 15 06.4
baz=262
ABJI Asem Bagus 46.94 220 P **P** **12 15 08.1 +0.5**
comp=Z,65nm,0.9s
ZSN Zaisan 46.98 308 *e*P **P** **12 15 06.6 -1.1**
comp=Z,28nm,1.1s,baz=308
ZSN *e*S **S** **12 21 58.9 +0.4**
baz=308
ZSN Zaisan 46.98 308 *e*P **P** **12 15 06.6 -1.1**
ZSN *e*S **S** **12 21 58.8 +0.4**
ZSN pmax pmax
comp=Z,28nm,1.1s
DNP Denpasar 47.13 219 P **P** **12 15 08.4 -0.7**
ZAA0 Zalesovo Array 47.29 317 P **P** **12 15 10.1 +0.1**
ZAA0 IAmb IAmb 12 15 11.7
comp=Z,22nm,1.0s
ZALV Zalesovo Beam 47.29 317 P **P** **12 15 10.5 +0.5**
comp=Z,15nm,0.8s,baz=102,slow=6.7,SNR=41
ZALV PcP **PcP** **12 16 41.5 +0.6**
comp=Z,14nm,0.7s,baz=101,slow=3.2,SNR=13
ZALV Zalesovo Beam 47.29 317 P **P** **12 15 09.8 -0.2**
ZALV **PcP** **12 16 40.6 -0.3**
KNRA Kununurra 47.89 198 P **P** **12 15 14.5 -0.5**
KNRA IAmb IAmb 12 15 20.8
comp=Z,36nm,1.0s
TAPN Taplejung 47.90 281 *e*P **P** **12 15 15.6 +0.1**
ODAN Odare 48.32 280 *e*P **P** **12 15 18.7 0.0**
comp=Z,41nm,0.8s
MK31 Makanchi Array 48.75 307 *d* iP **P** **12 15 22.4 +0.9**
MK31 pmax pmax
comp=Z,41nm,0.9s
MK31 Makanchi Array 48.75 307 P **P** **12 15 22.5 +1.0**
MK31 IAmb IAmb 12 15 23.6
comp=Z,30nm,0.9s
MKAR Makanchi Array 48.75 307 P **P** **12 15 22.5 +1.0**
comp=Z,26nm,0.8s,baz=90,slow=9.7,SNR=145
MKAR PcP **PcP** **12 16 46.5 +0.2**

comp=Z,6.5nm,0.9s,baz=93,slow=5.8,SNR=1.6
MKAR Makanchi Array 48.75 307 P **P** **12 15 22.2 +0.7**
RDOG Red Dog Mine 48.87 24 P **P** **12 15 22.5 +0.4**
RDOG Red Dog Mine 48.87 24 P 12 15 23.4
baz=248
RAMN Ramite 48.97 281 *e*P **P** **12 15 23.7 0.0**
comp=Z,54nm,0.8s
MAKZ Makanchi 48.97 307 P **P** **12 15 24.1 +1.0**
MAKZ Makanchi 48.97 307 P **P** **12 15 23.8 +0.6**
MAKZ IAmb IAmb 12 15 25.4
comp=Z,31nm,1.0s
JIRN Jiri 49.09 282 *e*P **P** **12 15 25.2 +0.4**
comp=Z,51nm,0.6s
UGM Wanagama 49.19 224 P **P** **12 15 24.3 -0.8**
comp=Z,59nm,1.7s
GUN Gumba 49.28 282 *e*P **P** **12 15 26.7 +0.5**
comp=Z,46nm,0.7s
NRIK Noril'sk 49.66 338 P **P** **12 15 28.5 +0.4**
comp=Z,24nm,1.0s,baz=112,slow=9.0,SNR=24
NRIK PcP **PcP** **12 16 49.4 +0.2**
comp=Z,12nm,0.7s,baz=104,slow=5.7,SNR=4.6
NRIK Noril'sk 49.66 338 *i*P **P** **12 15 28.5 +0.4**
NRIK pmax pmax
comp=Z,39nm,1.0s
NRIK Noril'sk 49.66 338 P **P** **12 15 28.4 +0.3**
NRIK IAmb IAmb 12 15 29.8
comp=Z,34nm,1.1s
PSI Prapat 49.77 245 P **P** **12 15 29.3 -0.4**
PSI pmax pmax
comp=Z,13nm,0.8s
PKI Pulchoki 49.78 282 *e*P **P** **12 15 30.0 0.0**
comp=Z,12nm,0.5s
PKIN Phulchoki 49.79 282 *e*P **P** **12 15 30.1 +0.1**
comp=Z,16nm,0.7s
RPSI Rantau Prapat 49.83 245 P **P** **12 15 29.3 -0.8**
SEM Semipalatinsk 49.97 312 *e*P **P** **12 15 29.1 -1.9**
comp=Z,15nm,0.6s,baz=312
SEM *e*S **S** **12 22 40.5 -0.6**
baz=312
SEM LR LR 12 36 44.7
comp=Z,236nm,15.0s,baz=312
SEM Semipalatinsk 49.97 312 *e*P **P** **12 15 29.1 -1.9**
SEM *e*S **S** **12 22 40.4 -0.6**
SEM pmax pmax
comp=Z,15nm,0.6s
SEM MLR MLR
comp=Z,236nm,15.0s
DMN Daman 50.03 282 *e*P **P** **12 15 31.8 0.0**
comp=Z,20nm,0.6s
LEM Lembang 50.16 228 P **P** **12 15 31.1 -1.6**
comp=Z,41nm,1.2s
GKN Gorkha 50.30 283 *e*P **P** **12 15 34.0 +0.3**
SII Sitkinak Islan 50.38 40 P 12 15 34.3
baz=266
CTA Charters Tower 50.45 176 P **P** **12 15 34.5 0.0**
comp=Z,7.2nm,0.8s,baz=26,slow=8.4,SNR=9.4
CTAO Charters Tower 50.45 176 P **P** **12 15 36.6 +2.1**
MNSI Mandailing Nat 50.52 242 P **P** **12 15 35.8 +0.5**
comp=Z,18nm,0.5s
WB0 Warramunga Arr 50.66 190 P **P** **12 15 35.0 -1.2**
LHSI Lahat 50.73 235 P **P** **12 15 36.6 -0.2**
comp=Z,1µmcomp=Z,33nm,1.0s
WR0 Warramunga Arr 50.83 190 P **P** **12 15 36.5 -1.0**
WRAB Tennant Creek 50.83 190 *d*P **P** **12 15 36.7 -0.8**
WRAB pmax pmax
comp=Z,112nm,1.0s
WRAB Tennant Creek 50.83 190 P **P** **12 15 36.9 -0.6**
WB2 Warramunga Arr 50.84 190 P **P** **12 15 36.4 -1.2**
WRA Warramunga Arr 50.84 190 P **P** **12 15 37.0 -0.5**
comp=Z,107nm,0.9s,baz=9.3,slow=8.0,SNR=27.8
WRA Warramunga Arr 50.84 190 P **P** **12 15 36.5 -1.1**
PDGK Podgornoye 51.05 303 P **P** **12 15 39.5 +0.3**
BSI Banda Aceh 51.06 251 P **P** **12 15 38.8 -0.6**
KURBB Kurchatov Arra 51.06 312 P **P** **12 15 39.0 +0.1**
FITZ Fitzroy Crossi 51.09 201 P **P** **12 15 39.2 -0.2**
comp=Z,37nm,1.1s,baz=23,slow=8.8,SNR=16
FITZ Fitzroy Crossi 51.09 201 P **P** **12 15 39.0 -0.5**
FITZ IAmb IAmb 12 15 40.6
comp=Z,68nm,1.4s
SHLS Shalkode 51.09 303 *e*P **P** **12 15 35.9 -3.6**
baz=303
SHLS *e*S **S** **12 22 52.5 -4.2**
baz=303
SHLS Shalkode 51.09 303 *e*P **P** **12 15 35.9 -3.6**
SHLS *e*S **S** **12 22 52.4 -4.2**
KOLN Koldanda 51.25 283 *e*P **P** **12 15 41.5 +0.6**
comp=Z,29nm,0.6s
KASI Kota Agung 51.26 232 P **P** **12 15 39.7 -1.1**
comp=Z,25nm,1.1s
KDAK Kodiak Island 51.32 38 P **P** **12 15 41.4 +0.6**
comp=Z,49nm,1.0s,baz=310,slow=1.2,SNR=5.1
KDAK Kodiak Island 51.32 38 *i*P **P** **12 15 40.8 0.0**
KDAK pmax pmax
comp=Z,109nm,1.1s
KDAK Kodiak Island 51.32 38 P **P** **12 15 39.9 -0.9**
KDAK IAmb IAmb 12 15 42.9
comp=Z,56nm,1.1s
KDAK Kodiak Island 51.32 38 P 12 15 41.2
baz=267
UZB Uzynbulak 51.41 303 *e*P **P** **12 15 40.4 -1.5**
comp=Z,6.3nm,0.6s,baz=303
UZB *e*S **S** **12 23 00.9 -0.3**
baz=303
UZB Uzynbulak 51.41 303 *e*P **P** **12 15 40.4 -1.5**
UZB *e*S **S** **12 23 00.8 -0.3**
UZB pmax pmax
comp=Z,6.0nm,0.6s
KPKS Kokpek 51.61 303 *e*P **P** **12 15 42.0 -1.3**
comp=Z,14nm,0.8s,baz=303
KPKS *e*S **S** **12 23 03.7 -0.1**
baz=303
KPKS Kokpek 51.61 303 *e*P **P** **12 15 42.0 -1.3**
KPKS *e*S **S** **12 23 03.6 -0.2**
KPKS pmax pmax
comp=Z,14nm,0.8s
PYUN Piuthan 51.66 283 *e*P **P** **12 15 44.8 +0.8**
GSI Gunungsitoli 51.75 245 P **P** **12 15 44.1 -0.4**
GSI IAmb IAmb 12 15 46.1
comp=Z,40nm,0.9s
GSI Gunungsitoli 51.75 245 P **P** **12 15 44.3 -0.2**
comp=Z,2µmcomp=Z,49nm,0.8s
IMAR Indian Mountai 51.75 28 P **P** **12 15 44.3 +0.4**
SPCR Spurr Chakacha 51.77 34 P 12 15 43.8
baz=264
SATY Saty 51.87 303 *e*P **P** **12 15 44.0 -1.3**
comp=Z,11nm,1.1s,baz=303
SATY *e*S **S** **12 23 07.3 -0.2**
baz=303
SATY Saty 51.87 303 *e*P **P** **12 15 44.0 -1.3**
SATY *e*S **S** **12 23 07.2 -0.2**
SATY pmax pmax
comp=Z,11nm,1.1s
PPLA Purkeypile 51.95 32 P **P** **12 15 45.3 -0.4**
PPLA IAmb IAmb 12 15 49.0
comp=Z,50nm,1.4s
PPLA Purkeypile 51.95 32 P 12 15 45.4
baz=263
CHUM Lake Minchumin 52.02 31 P 12 15 47.2
baz=262
SKT Skwentna 52.16 33 P 12 15 47.3
baz=264
BRSE Bradley Lake S 52.38 36 P 12 15 49.7
baz=267
SUA Susitna One 52.49 34 P 12 15 49.2
baz=266
KTH Kantishna Hill 52.60 31 P **P** **12 15 50.4 +0.1**
BPAW Bear Paw Mtn. 52.63 30 P 12 15 51.2
baz=263
CUT Chulitna 52.79 33 P 12 15 52.6
baz=265
MDOK Medeo 52.84 303 *e*P **P** **12 15 50.9 -1.7**
baz=303
MDOK *e*S **S** **12 23 20.3 -0.5**
baz=303
MDOK LR LR 12 38 48.2
comp=Z,276nm,15.2s,baz=303
MDOK Medeo 52.84 303 *e*P **P** **12 15 50.8 -1.7**
MDOK *e*S **S** **12 23 20.2 -0.5**
MDOK MLR MLR
comp=Z,276nm,15.0s
MLY Manley 52.85 29 P **P** **12 15 52.7 +0.6**
MLY Manley 52.85 29 P 12 15 53.5
baz=263,SNR=8.5
TRF Thorofare Moun 52.87 31 P **P** **12 15 52.2 -0.3**
TRF Thorofare Moun 52.87 31 P 12 15 52.7
baz=265

AAA Alma-Ata 52.93 303 *e*P **P** **12 15 52.6 -0.5**
comp=Z,29nm,0.6s,baz=303
AAA *e*S **S** **12 23 22.6 +0.8**
baz=303
AAA LR LR 12 38 56.2
comp=Z,204nm,14.1s,baz=303
AAA Alma-Ata 52.93 303 *e*P **P** **12 15 52.5 -0.5**
AAA *e*S **S** **12 23 22.5 +0.8**
AAA pmax pmax
comp=Z,29nm,0.6s
AAA MLR MLR
comp=Z,204nm,14.0s
O22K Cooper Landing 52.93 35 P 12 15 52.6
baz=267
RC01 Rabbit Creek A 52.95 34 P 12 15 52.7
baz=267
PMR Palmer 53.27 34 P **P** **12 15 54.2 -1.0**
PMR pmax pmax
comp=Z,47nm,1.4s
PMR Palmer 53.27 34 P **P** **12 15 54.2 -1.0**
PMR IAmb IAmb 12 15 57.5
comp=Z,47nm,1.4s
PMR Palmer 53.27 34 P 12 15 56.0
baz=267
BWN Browne 53.30 30 P **P** **12 15 56.8 +1.4**
COLD Coldfoot 53.35 27 P **P** **12 15 56.1 +0.3**
COLD Coldfoot 53.35 27 P 12 15 55.9
baz=262,SNR=20
GHO Glory Hole Cre 53.38 33 P **P** **12 15 55.3 -0.8**
I23K Minto, Yukon-K 53.44 29 P **P** **12 15 56.2 -0.1**
I23K IAmb IAmb 12 15 59.6
comp=Z,32nm,1.4s
I23K Minto, Yukon-K 53.44 29 P 12 15 57.7
baz=264,SNR=12
MCK McKinley 53.50 31 P **P** **12 15 57.3 +0.4**
MCK pmax pmax
comp=Z,31nm,1.1s
MCK McKinley 53.50 31 P **P** **12 15 57.3 +0.4**
MCK IAmb IAmb 12 15 59.7
comp=Z,31nm,1.1s
MCK McKinley 53.50 31 P 12 15 57.3
baz=266,SNR=8.5
NEA2 Nenana 53.51 30 P **P** **12 15 57.6 +0.7**
NEA2 IAmb IAmb 12 15 59.0
comp=Z,38nm,1.0s
NEA2 Nenana 53.51 30 P 12 15 58.0
baz=265,SNR=9.4
RND Reindeer 53.51 31 P **P** **12 15 56.3 -0.7**
RND pmax pmax
comp=Z,34nm,1.2s
RND Reindeer 53.51 31 P **P** **12 15 56.3 -0.7**
RND IAmb IAmb 12 15 58.2
comp=Z,34nm,1.2s
ULHL Ulahol 53.58 302 P **P** **12 15 59.4 +1.3**
SNR=14
KNK Knik Glacier 53.59 34 P 12 15 57.8
baz=268
WAT2 Susitna Watana 53.60 32 P 12 15 57.6
baz=266
SML Sawmill 53.66 33 P **P** **12 15 57.0 -1.1**
SML pmax pmax
comp=Z,69nm,1.4s
SML Sawmill 53.66 33 P **P** **12 15 58.0 -0.2**
SML Sawmill 53.66 33 P 12 15 58.4
baz=268
TOLK Toolik Lake Re 53.80 25 P **P** **12 15 59.6 +0.6**
TOLK IAmb IAmb 12 16 01.6
comp=Z,42nm,1.1s
TOLK Toolik Lake Re 53.80 25 P 12 16 00.0
baz=261,SNR=30
MDM Murphy Dome 53.90 29 P **P** **12 16 00.2 +0.4**
MDM IAmb IAmb 12 16 02.1
comp=Z,38nm,1.3s
TKM2 Tokmak 2 53.93 303 P **P** **12 16 02.2 +1.6**
SNR=18
TKM2 Tokmak 2 53.93 303 P **P** **12 16 01.0 +0.4**
WAT6 Susitna Watana 53.97 32 P 12 16 00.7
baz=268
TCOL CIGO, UAF Yank 54.05 30 P **P** **12 16 00.9 +0.1**
TCOL CIGO, UAF Yank 54.05 30 P 12 16 01.6
baz=266
COLA College 54.05 30⇑ *e*P **P** **12 16 01.5 +0.6**
COLA pmax pmax
comp=Z,6.0nm,0.7s
COLA College 54.05 30 P 12 16 01.5
baz=266
CCB Clear Creek Bu 54.06 30 P **P** **12 16 01.0 +0.1**
SCM Sheep Creek Mo 54.14 33 P **P** **12 16 00.8 -0.8**
SCM pmax pmax
comp=Z,90nm,1.2s
SCM Sheep Creek Mo 54.14 33 P **P** **12 16 00.8 -0.8**
POKR Poker Plat Res 54.25 29 P 12 16 02.6
baz=266
KSH Kashi 54.32 299 P **P** **12 16 07.8 +4.4**
KSH S **S** **12 23 47.6 +6.7**
KSH SS **SS** **12 27 27.3 +4.6**
KSH pmax pmax
comp=Z,23nm,0.6s
KSH pmax pmax
comp=Z,230nm,2.8s
KSH LR LR
comp=Z,520nm,13.7s
KSH LR LR
comp=Z,590nm,12.8s
KSH LR LR
comp=Z,590nm,6.1s
HDA Harding Lake 54.41 30 P 12 16 03.4
baz=267
HDA P 12 16 03.4
baz=267
KBK Karagaybulak 54.45 303 P **P** **12 16 06.3 +1.9**
SNR=5.5
IL31 54.46 30 P **P** **12 16 02.7 -1.1**
IL31 IAmb IAmb 12 16 04.8
comp=Z,28nm,1.2s
ILAR Eielson Array 54.46 30 P **P** **12 16 03.6 -0.3**
comp=Z,12nm,1.0s,baz=260,slow=5.9,SNR=60
ILAR Eielson Array 54.46 30 P **P** **12 16 03.1 -0.8**
ILAR Eielson Array 54.46 30 P **P** **12 16 03.0 -0.8**
CHMS Chumysh 54.53 303 P **P** **12 16 06.0 +1.3**
SNR=6.6
AS31 Alice Springs 54.56 190 P **P** **12 16 03.9 -1.2**
AS31 IAmb IAmb 12 16 06.7
comp=Z,12nm,0.6s
ASAR Alice Springs 54.56 190 P **P** **12 16 04.5 -0.6**
comp=Z,29nm,0.7s,baz=7.4,slow=6.6,SNR=272
ASAR Alice Springs 54.56 190 P **P** **12 16 04.1 -1.0**
Q23K Middleton Isla 54.61 36 P 12 16 04.6
baz=271
USP Ospenovka 54.66 304 P **P** **12 16 07.0 +1.3**
SNR=7.8
BTLS Baital 54.66 306 *e*P **P** **12 16 04.6 -1.1**
comp=Z,16nm,0.9s,baz=306
BTLS *e*S **S** **12 23 45.3 +0.3**
baz=306
BTLS Baital 54.66 306 *e*P **P** **12 16 04.5 -1.1**
BTLS *e*S **S** **12 23 45.3 +0.3**
BTLS pmax pmax
comp=Z,16nm,0.9s
M24K Tolsona, Glenn 54.69 33 P 12 16 04.9
baz=269
AAK Ala-Archa 54.78 303 P **P** **12 16 08.3 +1.6**
SNR=9.7
AAK Ala-Archa 54.78 303 *i*P **P** **12 16 08.2 +1.4**
SNR=11
AAK Ala-Archa 54.78 303 *d*P **P** **12 16 07.6 +0.9**
AAK pmax pmax
comp=Z,49nm,1.3s
AAK Ala-Archa 54.78 303 P **P** **12 16 07.4 +0.7**
AAK Ala-Archa 54.78 303 P **P** **12 16 08.1 +1.4**
KLU Klutina 54.80 34 P **P** **12 16 07.1 +0.6**
KLU IAmb IAmb 12 16 16.5
comp=Z,35nm,1.2s
KLU Klutina 54.81 34 P 12 16 07.2
baz=270
UCH Uchtor 54.85 302 P **P** **12 16 09.3 +1.7**
SNR=19
BRZS Berezniki 54.85 312 *e*P **P** **12 16 05.6 -1.4**
comp=Z,18nm,1.2s,baz=312
BRZS *e*S **S** **12 23 47.6 +0.1**
baz=312
BRZS Berezniki 54.85 312 *e*P **P** **12 16 05.6 -1.4**
BRZS *e*S **S** **12 23 47.5 +0.1**
BRZS pmax pmax
comp=Z,18nm,1.2s
PAX Paxson 55.03 32 P **P** **12 16 08.0 -0.1**

PAX pmax pmax
comp=Z,19nm,1.2s
PAX Paxson 55.03 32 P **P** **12 16 08.0 -0.1**
PAX Paxson 55.03 32 P 12 16 08.3
baz=269
EKS2 Erkin-Say 55.29 303 P **P** **12 16 11.7 +1.3**
SNR=7.5
BMRM Bremner River 55.45 34 P 12 16 11.9
baz=271
AML Almayashu 55.46 302 P **P** **12 16 13.8 +1.8**
SNR=55
DOT Dot Lake 55.66 31 P **P** **12 16 12.1 -0.5**
SCRK Sand Creek 55.70 31 P **P** **12 16 12.9 -0.1**
SCRK IAmb IAmb 12 16 15.5
comp=Z,24nm,1.2s
SCRK Sand Creek 55.70 31 P 12 16 13.5
baz=270,SNR=9.4
BRVK Borovoye 55.97 316 *d*P **P** **12 16 15.3 +0.4**
BRVK pmax pmax
comp=Z,23nm,1.0s
BRVK Borovoye 55.97 316 P **P** **12 16 14.8 -0.1**
BRVK IAmb IAmb 12 16 16.7
comp=Z,22nm,0.8s
BRVK Borovoye 55.97 316 P **P** **12 16 15.9 +1.0**
MBWA Marble Bar 55.97 206 P **P** **12 16 14.9 -0.3**
EIDS Eidsvold 56.16 171 P **P** **12 16 16.5 +0.1**
EIDS IAmb IAmb 12 16 18.0
comp=Z,37nm,1.2s
CRQE Cirque 56.20 35 P 12 16 17.1
baz=273
MCARA McCarthy VSAT 56.20 34 P 12 16 17.3
baz=272
NDI New Delhi 56.29 286 *e*P P 12 16 25.0 +7.4
K27K Chicken 56.54 31 P **P** **12 16 18.7 -0.1**
K27K IAmb IAmb 12 16 21.3
comp=Z,29nm,1.2s
K27K Chicken 56.54 31 P 12 16 19.7
baz=272
L27K Beaver Creek, 56.69 32 P **P** **12 16 19.3 -0.7**
L27K IAmb IAmb 12 16 22.4
comp=Z,21nm,1.1s
L27K Beaver Creek, 56.69 32 P 12 16 21.0
baz=272,SNR=11
BCAR Beaver Creek A 56.70 32 P **P** **12 16 19.6 -0.5**
EGAK Eagle 56.91 30 P **P** **12 16 20.5 -1.0**
EGAK Eagle 56.91 30 P 12 16 21.8
baz=272
DZM Mont Dzumac 57.03 154 *e*P **P** **12 16 23.4 +0.5**
comp=Z,83nm,1.4s
DZM Mont Dzumac 57.03 154 *e*LR LR 12 33 00.8
comp=Z,326nm,30.6s
CTG Chitna Glacier 57.04 34 P 12 16 22.6
baz=274
KK31 Karatay Array 57.55 304 *i*P **P** **12 16 27.6 +1.3**
KK31 Karatay Array 57.55 304 P **P** **12 16 26.7 +0.4**
KK31 IAmb IAmb 12 16 28.5
comp=Z,40nm,1.0s
KKAR Karatay Array 57.55 304 P **P** **12 16 26.6 +0.3**
KKAR pmax pmax
comp=Z,40nm,1.0s
KKAR Karatay Array 57.55 304 P **P** **12 16 26.6 +0.3**
KKAR IAmb IAmb 12 16 28.5
comp=Z,40nm,1.0s
DAWY Dawson 57.72 31 P **P** **12 16 28.1 +0.9**
DAWY IAmb IAmb 12 16 30.3
comp=Z,55nm,1.4s
NIL Nilore 57.96 293 P **P** **12 16 30.8 +1.4**
NIL pmax pmax
comp=Z,47nm,0.8s
NIL Nilore 57.96 293 P **P** **12 16 30.8 +1.4**
IUG luzhnay 58.11 303 *e*P **P** **12 16 29.3 -1.2**
comp=Z,26nm,0.8s,baz=303
IUG *e*S **S** **12 24 31.5 +0.4**
baz=303
IUG luzhnay 58.11 303 *e*P **P** **12 16 29.2 -1.2**
IUG *e*S **S** **12 24 31.4 +0.4**
IUG pmax pmax
comp=Z,26nm,0.8s
EPYK Eagle Plains 58.66 28 P **P** **12 16 34.9 +1.1**
EPYK Eagle Plains 58.66 28 P 12 16 35.1
baz=275,SNR=43
GAR Garm 58.71 300 P **P** **12 16 34.9 +0.3**
HYT Haines Junctio 58.92 34 P **P** **12 16 35.6 -0.1**
HYT IAmb IAmb 12 16 38.5
comp=Z,22nm,1.1s
HYB Hyderabad 59.44 273 *i*P **P** **12 16 41.0 +1.1**
INK Inuvik 59.70 25 P **P** **12 16 41.5 +0.7**
comp=Z,8.4nm,0.6s,baz=288,slow=6.1,SNR=36
INK Inuvik 59.70 25 P **P** **12 16 41.1 +0.3**
INK pmax pmax
comp=Z,27nm,1.3s
INK Inuvik 59.70 25 P **P** **12 16 41.1 +0.3**
INK IAmb IAmb 12 16 42.6
comp=Z,27nm,1.2s
SVE Sverdlovsk 60.85 321 *c*e P **P** **12 16 49.9 +1.0**
SVE pmax pmax
comp=Z,44nm,1.2s
JIS Juneau Island 60.91 37 P **P** **12 16 49.5 +0.2**
JIS IAmb IAmb 12 16 52.5
comp=Z,32nm,1.1s
KBL Kabul 61.00 295 P **P** **12 16 51.3 +0.7**
KBL pmax pmax
comp=Z,39nm,0.9s
KBL Kabul 61.00 295 P **P** **12 16 51.3 +0.7**
KBL Kabul 61.00 295 P **P** **12 16 51.6 +1.0**
SNR=16
ARU Arti 62.05 321 *d*iP **P** **12 16 57.4 +0.3**
ARU 12 17 34.5
ARU S **S** **12 25 24.5 +3.5**
ARU SS **SS** **12 29 22.3 -0.8**
ARU pmax pmax
comp=Z,58nm,1.0s
ARU MLR MLR
comp=Z,240nm,18.0s
ARU Arti 62.05 321 P **P** **12 16 56.9 -0.2**
STKA Stephens Creek 62.09 181 P **P** **12 16 57.1 -0.4**
comp=Z,6.4nm,0.9s,baz=2.6,slow=6.8,SNR=7.9
STKA Stephens Creek 62.09 181 P **P** **12 16 56.2 -1.2**
PALK Pallekele 62.33 262⇑ *e*P **P** **12 17 00.6 +1.0**
PALK pmax pmax
comp=Z,4.0nm,0.8s
FORT Forrest 62.57 194 P **P** **12 17 00.1 -0.5**
C36M Paulatuk 62.88 23 P **P** **12 17 01.7 -0.6**
C36M IAmb IAmb 12 17 03.3
comp=Z,14nm,0.8s
C36M Paulatuk 62.88 23 P 12 17 02.7
baz=284,SNR=16
AB31 Akbulak array 63.10 313 P **P** **12 17 04.3 +0.1**
ABKAR Akbulak array 63.10 313 P **P** **12 17 03.9 -0.3**
ABKAR IAmb IAmb 12 17 05.8
comp=Z,29nm,1.0s
ABKAR Akbulak array 63.10 313 P **P** **12 17 04.3 +0.1**
DLBC Dease Lake 63.11 36 P **P** **12 17 05.4 +1.2**
comp=Z,19nm,1.2s,baz=300,slow=7.0,SNR=9.5
DLBC Dease Lake 63.11 36 P **P** **12 17 04.6 +0.4**
MORW Morawa 64.53 206 P **P** **12 17 13.3 -0.3**
KIRV Kirov 66.16 325 *d*iP **P** **12 17 24.5 +0.5**
HRA Herat 66.33 297 P **P** **12 17 26.7 +0.9**
HRA IAmb IAmb 12 17 28.3
comp=Z,19nm,0.9s
EUNU Eureka 66.43 8 P **P** **12 17 25.5 0.0**
EUNU IAmb IAmb 12 17 27.1
comp=Z,20nm,0.8s
PRGR Permogore 66.87 329 *e*P **P** **12 17 27.1 -1.3**
PRGR *e**SP **pwP** **12 17 36.5 -3.9**
PRGR pmax pmax
comp=Z,41nm,1.0s
SPA0 Spitsbergen Ar 67.10 350 *e*P **P** **12 17 30.9 +1.2**
KBS Kingsbay 67.23 351⇑ *e*P **P** **12 17 32.0 +1.5**
KBS pmax pmax
comp=Z,66nm,1.2s
NOR Nord 67.59 357 *i*P **P** **12 17 31.9 -0.9**
NOR IAmb IAmb 12 17 33.6
comp=Z,9.5nm,1.0s
NOR Nord 67.59 357 *i*P **P** **12 17 31.8 -0.9**
NOR pmax pmax
comp=Z,10.0nm,1.0s
NWAO Narrogin (SRO) 67.60 203 P **P** **12 17 33.1 -0.3**
comp=Z,51nm,0.9s,baz=35,slow=6.9,SNR=16
NWAO Narrogin (SRO) 67.60 203 P **P** **12 17 33.2 -0.1**
NWAO Narrogin (SRO) 67.60 203 P **P** **12 17 33.4 +0.1**
NWAO IAmb IAmb 12 17 34.5
comp=Z,52nm,1.0s
NWAO Narrogin (SRO) 67.60 203 P **P** **12 17 33.6 +0.3**
GEYT Alibeck 68.11 302 P **P** **12 17 37.9 +1.0**

comp=Z,21nm,1.1s,baz=95,slow=3.1,SNR=21
GEYT Alibeck 68.11 302 P **P** **12 17 37.8 +1.0**
GEYT IAmb IAmb 12 17 39.6
comp=Z,13nm,1.0s
GYA0B ALIBECK ARRAY 68.11 302 P **P** **12 17 37.4 +0.7**
GYA0B IAmb IAmb 12 17 40.2
comp=Z,25nm,1.1s
RES Resolute Bay 68.60 14 P **P** **12 17 39.5 +0.4**
comp=Z,21nm,1.1s,baz=323,slow=6.7,SNR=36
RES Resolute Bay 68.60 14 P **P** **12 17 39.0 -0.2**
RES pmax pmax
comp=Z,22nm,1.0s
RES Resolute Bay 68.60 14 P **P** **12 17 39.0 -0.2**
RES IAmb IAmb 12 17 40.7
comp=Z,22nm,1.0s
YKA Yellowknife Ar 68.88 29 P **P** **12 17 41.1 +0.1**
comp=Z,16nm,0.9s,baz=292,slow=5.8,SNR=168
BJO1 Bjornoya 69.02 346 *e*P **P** **12 17 42.8 +1.0**
APA Apatity 69.08 337 ǁ *i*P **P** **12 17 40.6 -1.7**
APA pmax pmax
comp=Z,20nm,0.8s
APA MLR MLR
comp=Z,1µm,15.0s
KLMR Klimovskoe 69.88 330 *e*P **P** **12 17 46.6 -0.7**
KLMR *e* 12 20 21.4
KLMR pmax pmax
comp=Z,37nm,1.3s
KLMR Klimovskoe 69.88 330 *e*P **P** **12 17 46.6 -0.7**
KLMR AMP 12 17 51.6
comp=Z,37nm,1.3s
KLMR *e*PP **PP** **12 20 21.4 -0.1**
PGC Sidney 70.07 45 P **P** **12 17 49.2 +0.6**
PGC IAmb IAmb 12 17 51.0
comp=Z,28nm,1.1s
NLWA Neilton Lookou 70.32 46 P **P** **12 17 50.8 +0.4**
NLWA IAmb IAmb 12 17 53.2
comp=Z,29nm,1.1s
ARA0 ARCESS Array S 70.47 341 *e*P **P** **12 17 51.5 +0.7**
ARCES ARCESS Array B 70.47 341 P **P** **12 17 51.5 +0.6**
comp=Z,7.3nm,0.7s,baz=59,slow=5.8,SNR=13
ARCES ARCESS Array B 70.47 341 P **P** **12 17 51.4 +0.6**
ARCES pmax pmax
comp=Z,9.0nm,0.8s
ARCES ARCESS Array B 70.47 341 P **P** **12 17 51.4 +0.6**
D03D Eldon 70.75 46 P 12 17 52.6
baz=294,SNR=17
A05A Maple Falls 70.75 44 P **P** **12 17 52.4 -0.5**
A05A IAmb IAmb 12 17 55.0
comp=Z,32nm,1.2s
E03A Lebam 70.86 47 P **P** **12 17 54.6 +1.0**
B05A Bryant 71.05 45 P 12 17 56.0
baz=295,SNR=7.2
D04E Lakebay 71.09 46 P 12 17 55.4
baz=295
B06A Marblemount 71.31 44 P **P** **12 17 56.6 +0.4**
B06A IAmb IAmb 12 17 58.3
comp=Z,20nm,1.0s
TULEG Thule 71.38 7 ǁ *i*P **P** **12 17 56.5 +0.3**
TULEG IAmb IAmb 12 17 56.9
comp=Z,29nm,0.8s
TULEG Thule 71.38 7 P **P** **12 17 56.0 -0.2**
F04D Rainier, OR 71.40 47 P 12 17 57.3
baz=295
KTK1 Kautokeino 71.44 341 *e*P **P** **12 17 57.6 +0.9**
E04D Cinebar 71.48 46 P 12 17 58.1
baz=295,SNR=8.7
D05A Enumclaw 71.57 46 P **P** **12 17 58.8 +0.9**
LON Longmire 71.87 46 P **P** **12 18 00.1 +0.3**
LON pmax pmax
comp=Z,13nm,1.2s
LON Longmire 71.87 46 P **P** **12 18 00.1 +0.3**
JETT Jettan, Norway 71.88 342 *e*P **P** **12 18 00.1 +0.7**
NEEM North Greenlan 71.94 3 ǁ *i*P **P** **12 18 00.6 +0.7**
NEEM IAmb IAmb 12 18 01.5
comp=Z,52nm,1.1s
J01E Myrtle Point 72.03 50 P 12 18 01.5
baz=295
I03D Drain, OR 72.19 49 P 12 18 02.2
baz=295
TRO Tromso 72.22 342 *e*P **P** **12 18 02.2 +0.8**
H04D Lebanon 72.23 48 P 12 18 03.1
baz=295
LTY Liberty 72.35 45 P **P** **12 18 02.9 +0.2**
LTY IAmb IAmb 12 18 04.5
comp=Z,18nm,1.1s
K02D Willamette Mer 72.41 51 P 12 18 03.8
baz=295
F05D White Salmon 72.46 47 P 12 18 04.4
baz=296
H04A Detroit Lake 72.52 48 P **P** **12 18 04.2 +0.5**
H04A IAmb IAmb 12 18 05.8
comp=Z,33nm,1.1s
B08A Colville Reser 72.67 44 P **P** **12 18 04.5 0.0**
B08A IAmb IAmb 12 18 06.5
comp=Z,26nm,1.2s
L02E Cave Junction 72.68 51 P 12 18 05.6
baz=296
I04A Tendick Farm, 72.76 49 P 12 18 05.9
baz=296,SNR=5.7
G05D Wamic, OR 72.83 47 P 12 18 06.1
baz=296
HUMO Hull Mountain 72.92 50 P **P** **12 18 05.2 -0.8**
HUMO IAmb IAmb 12 18 08.1
comp=Z,25nm,1.5s
KHMM Horse Mountain 73.15 52 P **P** **12 18 06.9 -0.8**
KHMM IAmb IAmb 12 18 10.5
comp=Z,48nm,1.3s
E07A Sunnyside 73.16 46 P **P** **12 18 08.4 +1.0**
E07A IAmb IAmb 12 18 09.7
comp=Z,29nm,1.0s
MOS Moscow 73.18 325 *e*P **P** **12 18 06.1 -1.2**
MOS pmax pmax
comp=Z,100nm,1.4s
MOS pmax pmax
comp=Z,74nm,1.1s
MOS MLR MLR
comp=Z,400nm,14.0s
J04D Umpqua Nationa 73.20 49 P 12 18 08.5
baz=296
VRH Novokhopyorsk 73.21 320 *e*P **P** **12 18 07.5 -0.1**
VRH pmax pmax
comp=Z,40nm,0.8s
I05D Terrebonne, OR 73.22 48 P 12 18 08.5
baz=296
VALR Valaam 73.26 332 *i*P **P** **12 18 08.5 +0.8**
VALR pmax pmax
comp=Z,63nm,1.0s
F07A Phinny Hill Vi 73.42 46 P **P** **12 18 09.5 +0.6**
F07A IAmb IAmb 12 18 11.2
comp=Z,34nm,1.3s
HAWA Hanford 73.44 46 P **P** **12 18 09.0 0.0**
HAWA IAmb IAmb 12 18 11.2
comp=Z,22nm,1.3s
MAK Makhachkala 73.44 310 *e*P **P** **12 18 04.9 -4.2**
MAK *e* 12 20 52.6
MAK *e*PPP PPP 12 22 34.3
MAK *e*S **S** **12 27 33.4 -4.4**
MAK *e*SS **SS** **12 32 17.7 -1.9**
MAK *e*SSS SSS 12 35 36.4
MAK pmax pmax
comp=Z,157nm,1.2s
MAK MLR MLR
comp=Z,757nm,16.0s
YBH Yreka Blue Hor 73.47 51 P **P** **12 18 10.2 +0.8**
comp=Z,13nm,1.0s,baz=278,slow=2.6,SNR=14
YBH Yreka Blue Hor 73.47 51 P **P** **12 18 09.2 -0.2**
YBH pmax pmax
comp=Z,23nm,1.2s
YBH Yreka Blue Hor 73.47 51 P **P** **12 18 09.2 -0.2**
YBH IAmb IAmb 12 18 11.9
comp=Z,23nm,1.1s
D08A Wollman Farm, 73.51 45 P **P** **12 18 09.4 0.0**
D08A IAmb IAmb 12 18 11.4
comp=Z,21nm,1.1s
M02C Callahan 73.52 51 P 12 18 10.4
baz=296
L04D Klamath Falls 73.53 51 P 12 18 10.6
baz=296,SNR=6.0
C09A Chrisman Ranch 73.56 44 P **P** **12 18 09.7 0.0**
C09A IAmb IAmb 12 18 11.7
comp=Z,36nm,1.4s
E08A Dider Farm, El 73.68 45 P **P** **12 18 11.1 +0.6**
K04D Chiloquin, OR 73.71 50 P 12 18 10.8
baz=297
PINE Pine Mountain 73.72 49 P **P** **12 18 12.1 +1.1**
J05D Fort Rock, OR 73.75 49 P 12 18 12.1
baz=297,SNR=13
WBK Wadi Bani Khal 73.79 287 P **P** **12 18 11.0 -0.5**
N02D Trinity Center 73.81 52 P 12 18 12.1
baz=296
OBN Obninsk 74.02 325 *d*e*i*P **P** **12 18 12.6 +0.4**
OBN 12 18 20.3
OBN *e* 12 20 57.8
OBN pmax pmax
comp=Z,60nm,1.3s
OBN MLR MLR
comp=Z,475nm,15.0s
OBN Obninsk 74.02 325 P **P** **12 18 12.9 +0.7**
NEW Newport 74.03 43 P **P** **12 18 13.2 +0.7**
comp=Z,17nm,1.0s,baz=287,slow=4.5,SNR=27
NEW Newport 74.03 43 P **P** **12 18 12.7 +0.2**
NEW pmax pmax
comp=Z,24nm,1.1s
NEW Newport 74.03 43 P **P** **12 18 12.7 +0.2**
NEW IAmb IAmb 12 18 14.5
comp=Z,24nm,1.1s
NEW Newport 74.03 43 P 12 18 13.3
baz=298,SNR=22
LPSR Galich'ya Gora 74.06 322 *e*P **P** **12 18 12.8 +0.3**
LPSR pmax pmax
comp=Z,50nm,1.0s
WDC Whiskeytown Da 74.09 52 P **P** **12 18 13.7 +0.7**
WDC pmax pmax
comp=Z,17nm,1.2s
WDC Whiskeytown Da 74.09 52 P **P** **12 18 13.7 +0.7**
O02D Mt. Diablo Mer 74.11 53 P 12 18 13.6
baz=297
K05A Summer Lake 74.23 50 P **P** **12 18 14.0 0.0**
E09A Wood Farm, Sta 74.23 45 P **P** **12 18 14.3 +0.6**
E09A IAmb IAmb 12 18 15.8
comp=Z,34nm,1.2s
G08A Pilot Rock 74.30 47 P **P** **12 18 14.9 +0.7**
SMDO Samad 74.35 288 P **P** **12 18 17.2 +2.3**
STEI Steigen 74.37 342 *e*P **P** **12 18 14.9 +0.9**
SEKA Sheki 74.43 309 P **P** **12 18 16.0 +1.0**
LKRN Lenkeran, Azer 74.47 306 P **P** **12 18 16.4 +1.2**
BANOM Banah 74.49 291 P **P** **12 18 17.1 +1.5**
BANOM Banah 74.49 291 P **P** **12 18 17.7 +2.1**
I07A Izee 74.51 48 P **P** **12 18 16.2 +0.7**
SHME Shamm 74.56 291 *i*P **P** **12 18 17.7 +1.8**
SNR=9.1
SHME Shamm 74.56 291 P **P** **12 18 17.7 +1.8**
SNR=9.1
JMDO Jabal Madar 74.61 287 P **P** **12 18 17.2 +0.9**
VSR Storozhevoye 74.61 321 *e*P **P** **12 18 15.8 0.0**
VSR pmax pmax
comp=Z,50nm,0.9s
ZKTA Zakatala 74.62 309 P **P** **12 18 17.8 +1.7**
N2TV TVrnvik 74.66 342 *e*P **P** **12 18 16.7 +1.0**
VORD Divnogorie 74.67 320 *e*P **P** **12 18 16.1 0.0**
VORD pmax pmax
comp=Z,30nm,1.0s
LOF Lofoten 74.67 342 *e*P **P** **12 18 16.7 +0.8**
MNGR Mingechevir, A 74.70 308 P **P** **12 18 17.8 +1.3**
HOQ Hoqain 74.72 289 P **P** **12 18 17.9 +1.0**
O03E Paynes Creek 74.73 52 P 12 18 16.7
baz=297,SNR=8.6
FAUS Fauske 74.75 341 *e*P **P** **12 18 17.0 +0.7**
LGD Lagodekhi 74.78 310 P **P** **12 18 18.3 +1.3**
DBG Daneborg 74.81 355 *i*P **P** **12 18 16.5 0.0**
DBG IAmb IAmb 12 18 17.6
comp=Z,19nm,1.1s
MASF Masafi 74.85 291 P **P** **12 18 19.9 +2.3**
MSFE Esma-Masafi 74.85 291 P **P** **12 18 19.5 +1.8**
N2SV S rv\gen 74.99 342 *e*P **P** **12 18 18.4 +0.7**
MOD Modoc Plateau 75.00 50 P **P** **12 18 18.3 -0.1**
UOSS Minazif 75.00 290 P **P** **12 18 19.8 +1.3**
UOSS Minazif 75.00 290 P **P** **12 18 18.7 +0.2**
UOSS IAmb IAmb 12 18 20.9
comp=Z,34nm,1.1s
UOSS Minazif 75.00 290 P **P** **12 18 20.1 +1.6**
DDFL Dedoflistskaro 75.04 309 P **P** **12 18 19.8 +1.2**
F10A Beach Ranch, E 75.05 45 P **P** **12 18 18.8 +0.3**
SOHO SOHO 75.10 289 *i*P **P** **12 18 21.0 +1.9**
SNR=10
SOHO SOHO 75.10 289 P **P** **12 18 20.4 +1.3**
FIA1 FINESS Array S 75.10 334 P **P** **12 18 18.4 0.0**
FIA1 IAmb IAmb 12 18 20.0
comp=Z,33nm,0.9s
FINES FINESS Array B 75.10 334 P **P** **12 18 19.1 +0.7**
comp=Z,16nm,0.8s,baz=72,slow=6.2,SNR=40
FINES FINESS Array B 75.10 334 P **P** **12 18 18.7 +0.3**
FINES FINESS Array B 75.10 334 P **P** **12 18 18.7 +0.3**
HATD Hatta, Dubai 75.11 290 *i*P **P** **12 18 21.0 +1.8**
SNR=8.1
HATD Hatta, Dubai 75.11 290 P **P** **12 18 21.1 +1.9**
SNR=8.0
BSY Bisya 75.19 288 P **P** **12 18 21.3 +1.6**
N2VA Vr,y 75.24 342 *e*P **P** **12 18 20.0 +1.0**
ORV Oroville 75.27 53 P **P** **12 18 19.2 -0.6**
ORV pmax pmax
comp=Z,26nm,1.2s
ORV Oroville 75.27 53 P **P** **12 18 19.2 -0.6**
ORV IAmb IAmb 12 18 21.3
comp=Z,26nm,1.1s
GANJ Ganja 75.28 309 P **P** **12 18 20.6 +0.7**
NBB05 Inndyr 75.34 342 *e*P **P** **12 18 20.7 +1.0**
MHTO MHTO 75.35 286 P **P** **12 18 21.8 +1.2**
SNR=9.0
ARQ Araqi 75.47 289 P **P** **12 18 23.2 +1.9**
SNR=6.7
J08A Circle Bar Ran 75.51 48 P **P** **12 18 22.1 +0.8**
J08A IAmb IAmb 12 18 23.6
comp=Z,34nm,1.1s
WALA Waterton Lakes 75.51 41 P **P** **12 18 21.7 +0.5**
WALA IAmb IAmb 12 18 23.4
comp=Z,25nm,1.1s
BMO Blue Mountains 75.54 46 P **P** **12 18 21.9 +0.5**
BMO pmax pmax
comp=Z,23nm,1.3s
BMO Blue Mountains 75.54 46 P **P** **12 18 21.9 +0.5**
BMO IAmb IAmb 12 18 23.5
comp=Z,23nm,1.3s
FAQ Al Faqa, Dubai 75.59 290 P **P** **12 18 23.3 +1.4**
FAQ Al Faqa, Dubai 75.59 290 P **P** **12 18 23.3 +1.4**
GUDG Gudauri 75.65 311 P **P** **12 18 24.6 +2.4**
NCK Nalchik 75.73 312 ǁ *e*P **P** **12 18 23.6 +1.2**
NCK pmax pmax
comp=Z,16nm,0.9s
BTNK Botanikuri 75.81 310 P **P** **12 18 24.2 +1.3**
WVOR Wild Horse Val 75.84 49 P **P** **12 18 23.6 +0.4**
WVOR pmax pmax
comp=Z,23nm,1.3s
WVOR Wild Horse Val 75.84 49 P **P** **12 18 23.6 +0.4**
WVOR IAmb IAmb 12 18 25.4
comp=Z,22nm,1.3s
MOR8 Moi Rana 75.85 341 *e*P **P** **12 18 22.4 -0.2**
ASUD Al Ashush, Dub 75.86 290 P **P** **12 18 24.7 +1.3**
ASUD Al Ashush, Dub 75.86 290 P **P** **12 18 24.8 +1.3**
ZEI Tsey 75.87 311 *e*P **P** **12 18 23.0 -0.5**
ZEI pmax pmax
comp=Z,20nm,1.5s
BEKR Beckworth 75.91 52 P **P** **12 18 23.9 +0.2**
BEKR IAmb IAmb 12 18 25.3
comp=Z,30nm,1.0s
AFDM Forest Hills D 75.92 53 P **P** **12 18 24.2 +0.6**
KONS Konsvik 75.98 341 *e*P **P** **12 18 24.1 +0.7**
KBZ Khabaz 76.06 313 P **P** **12 18 25.6 +1.4**
comp=Z,34nm,0.8s,baz=80,slow=3.3,SNR=77
KBZ Khabaz 76.06 313 *d*i*P* **P** **12 18 25.1 +0.9**
KBZ pmax pmax
comp=Z,50nm,0.9s
KIV Kislovodsk 76.09 313 *i*P **P** **12 18 25.8 +1.3**
SNR=9.0
KIV Kislovodsk 76.09 313 *e*P **P** **12 18 25.5 +1.0**
KIV pmax pmax
comp=Z,143nm,1.1s
KIV MLR MLR
comp=Z,328nm,18.0s
KIV Kislovodsk 76.09 313 P **P** **12 18 26.4 +1.8**
STOK Stokkvaagen 76.13 341 *e*P **P** **12 18 24.9 +0.7**
UPNV Upernavik 76.14 6 *i*P **P** **12 18 24.5 +0.4**
UPNV IAmb IAmb 12 18 25.5
comp=Z,34nm,1.3s
ONI Oni 76.25 311 P **P** **12 18 27.5 +2.0**
NAX Nakhchivan 76.53 308 P **P** **12 18 28.3 +1.2**
GNI Garni 76.57 309 P **P** **12 18 29.9 +2.4**
SAO San Andreas Ge 76.61 55 P **P** **12 18 28.1 +0.6**
SAO pmax pmax
comp=Z,19nm,1.2s
SAO San Andreas Ge 76.61 55 P **P** **12 18 28.1 +0.6**
MSO Missoula 76.61 43 P **P** **12 18 27.8 +0.3**
MSO Missoula 76.61 43 P 12 18 27.8
baz=300,SNR=7.4
PAHR Pah Rah Range 76.64 52 P **P** **12 18 28.1 +0.2**
PAHR IAmb IAmb 12 18 29.6
comp=Z,24nm,1.1s
VSU Vasula 76.65 331 *e*P **P** **12 18 28.3 +1.0**
VSU Vasula 76.65 331 *d*i*P* **P** **12 18 27.7 +0.4**
VSU pmax pmax
comp=Z,86nm,1.0s
VCNR Virginia City 76.66 52 P **P** **12 18 27.3 -0.7**
CMB Columbia Colle 76.75 54 P **P** **12 18 28.5 +0.2**
CMB pmax pmax
comp=Z,27nm,1.0s
CMB Columbia Colle 76.75 54 P **P** **12 18 28.5 +0.2**
CMB IAmb IAmb 12 18 30.2
comp=Z,27nm,1.0s
PNTR Pine Nut 76.79 52 P **P** **12 18 29.3 +0.5**
PNTR IAmb IAmb 12 18 30.9
comp=Z,26nm,0.9s
UMZA Um Al Zommool 76.87 289 P **P** **12 18 30.4 +1.1**
YERR Yerington 77.09 52 P **P** **12 18 30.8 +0.4**
YERR IAmb IAmb 12 18 32.4
comp=Z,38nm,1.1s
SUMG Summit 77.16 0 *i*P **P** **12 18 32.0 +1.5**
SUMG IAmb IAmb 12 18 32.8
comp=Z,29nm,0.8s
SUMG Summit 77.16 0 P **P** **12 18 31.3 +0.8**
SUMG pmax pmax
comp=Z,109nm,1.5s
SUMG Summit 77.16 0 P **P** **12 18 31.3 +0.8**
MFID Camas Ranch 77.17 47 P **P** **12 18 31.4 +0.7**
MFID IAmb IAmb 12 18 32.9
comp=Z,29nm,1.2s
WAKR Walker 77.18 53 P **P** **12 18 32.0 +1.0**
MTSE Matsula 77.69 332 *e*P **P** **12 18 30.5 -2.6**
RYN Ryan 77.75 52 P **P** **12 18 34.5 +0.4**
RYN IAmb IAmb 12 18 36.0
comp=Z,25nm,1.0s
NSS Namsos 77.76 340 *e*P **P** **12 18 34.3 +0.9**
KVN Kaiserville 77.83 52 P **P** **12 18 34.4 -0.2**
KVN pmax pmax
comp=Z,28nm,1.0s
KVN Kaiserville 77.83 52 P **P** **12 18 34.4 -0.2**
KVN IAmb IAmb 12 18 36.5
comp=Z,28nm,1.0s
HRY Holter Researc 77.92 43 P **P** **12 18 35.5 +0.7**
LHV Little Huntoon 77.95 53 P **P** **12 18 36.3 +1.4**
LHV IAmb IAmb 12 18 37.6
comp=Z,42nm,1.2s
PAGB Antelope Grade 77.95 56 P **P** **12 18 35.4 +0.3**
HLID Hailey 77.98 46 P **P** **12 18 35.3 0.0**
HLID Hailey 77.98 46 P 12 18 36.0
baz=301,SNR=11
NVAR Mina Array Bea 78.00 52 P **P** **12 18 36.3 +0.8**
comp=Z,16nm,0.9s,baz=285,slow=5.6,SNR=106
NVAR Mina Array Bea 78.00 52 P **P** **12 18 35.6 0.0**
LRM Limekiln Ridge 78.02 44 P **P** **12 18 36.2 +0.6**
MLAC Mammoth, Mammo 78.02 53 P 12 18 36.5
baz=299,SNR=9.3
NV11 Mina Array Sit 78.10 52 P **P** **12 18 36.5 +0.5**
NV11 IAmb IAmb 12 18 38.0
comp=Z,31nm,1.4s
DLMT Dillon 78.17 44 P **P** **12 18 36.6 +0.3**
DLMT IAmb IAmb 12 18 38.3
comp=Z,21nm,1.2s
BCYI Bear Canyon 78.22 45 P **P** **12 18 37.2 +0.5**
MCMT McKenzie Canyo 78.29 45 P **P** **12 18 37.0 -0.2**
SMMC Simmler 78.33 56 P 12 18 38.0
baz=299
EGMT Eagleton 78.41 41 P **P** **12 18 37.6 +0.1**
EGMT IAmb IAmb 12 18 39.4
comp=Z,28nm,1.1s
EGMT Eagleton 78.41 41 P 12 18 38.0
baz=303,SNR=14
MNK Minsk 78.53 327 *e*P **P** **12 18 39.0 +1.1**
MNK Minsk 78.53 327 *i*P **P** **12 18 39.0 +1.1**
comp=E,3.0nm,1.1s
MNK *i*P **P** **12 18 39.0 +1.1**
comp=N,32nm,1.1s
MNK *i*P **P** **12 18 39.0 +1.1**
comp=Z,56nm,1.1s
MNK *i*PP **PP** **12 21 36.8 +1.9**
MNK *i*PPP PPP 12 23 25.0
MNK *i*S **S** **12 28 38.4 +4.9**
MNK *i*ScS **ScS** **12 28 59.0 +0.9**
MNK *i*SS **SS** **12 33 40.9 +4.9**
MNK *i*SSS SSS 12 37 05.9
MNK *i*LQ LQ 12 47 40.4
MNK *i*LR LR 12 51 24.7
MNK *i*LRM MLR 12 56 54.7
comp=E,17nm,19.3s
MNK *i*LRM MLR 12 56 54.7
comp=N,362nm,19.3s
MNK *i*LRM MLR 12 56 54.7
comp=Z,305nm,19.4s
FFC Flin Flon 78.55 32 P **P** **12 18 38.1 0.0**
FFC pmax pmax
comp=Z,29nm,1.0s
FFC Flin Flon 78.55 32 P **P** **12 18 38.1 0.0**
FFC IAmb IAmb 12 18 39.6
comp=Z,29nm,0.9s
IDID Didziasalis 78.56 328 *e*P **P** **12 18 38.4 +0.3**
BOZ Bozeman (W) 78.62 44 P **P** **12 18 38.9 +0.1**
BOZ pmax pmax
comp=Z,11nm,1.1s
BOZ Bozeman (W) 78.62 44 P **P** **12 18 38.9 +0.1**
BOZ Bozeman (W) 78.62 44 P 12 18 39.4
baz=302,SNR=12
PKM Mcpherson Peak 78.67 56 P 12 18 39.7
baz=299,SNR=7.0
ISAL Salakas 78.68 329 *e*P **P** **12 18 38.8 +0.1**
VES Vestal, Richgr 78.72 55 P 12 18 39.0
baz=300,SNR=15
IIGN Ignalina 78.78 329 *e*P **P** **12 18 39.6 +0.3**
NACGM Naroch 78.80 328 *i*P **P** **12 18 40.2 +0.9**
NACGM *i*P **P** **12 18 40.2 +0.9**
NACGM *i*P **P** **12 18 40.2 +0.9**
NACGM *i*PP **PP** **12 21 38.6 +1.5**
NACGM *i*PPP PPP 12 24 20.3
NACGM *i*S **S** **12 28 36.1 -0.3**
NACGM *i*SS SS 12 32 58.0 -42
NACGM *i*SSS SSS 12 36 45.1
NACGM *i*LQ LQ 12 47 23.9
NACGM *i*LR LR 12 52 52.4
ELK Elko 78.89 49 P **P** **12 18 40.7 +0.2**
ELK pmax pmax
comp=Z,15nm,1.3s
ELK Elko 78.89 49 P **P** **12 18 40.7 +0.2**
TPH Tonopah 78.91 52 P **P** **12 18 40.5 -0.1**
TPH pmax pmax
comp=Z,131nm,1.3s
TPH Tonopah 78.91 52 P **P** **12 18 40.5 -0.1**
SBC Santa Barbara 78.96 57 P 12 18 41.3
baz=299
CWC Cottonwood Cre 79.13 54 P 12 18 41.7
baz=300
QLMT Earthquake Lak 79.15 44 P **P** **12 18 42.8 +1.0**
TBLU Trondheim 79.22 340 *e*P **P** **12 18 41.2 -0.3**
ISA Isabella, Lake 79.24 55 P **P** **12 18 41.7 -0.6**
ISA pmax pmax
comp=Z,16nm,1.4s
ISA Isabella, Lake 79.24 55 P **P** **12 18 41.7 -0.6**
ISA Isabella, Lake 79.24 55 P 12 18 42.0
baz=300,SNR=6.3
ARVC Arvin 79.25 56 P 12 18 42.0
baz=300,SNR=5.1
YHL Hebgen Lake 79.29 44 P **P** **12 18 43.2 +0.6**
YHL IAmb IAmb 12 18 45.1
comp=Z,21nm,1.1s
FCC Fort Churchill 79.29 26 P **P** **12 18 40.9 -1.1**
FCC pmax pmax
comp=Z,15nm,1.1s
FCC Fort Churchill 79.29 26 P **P** **12 18 40.9 -1.1**
YHB Horse Butte 79.33 44 P **P** **12 18 43.3 +0.5**
YHB IAmb IAmb 12 18 45.3
comp=Z,26nm,1.1s
GRAC Grapevine Rang 79.35 53 P 12 18 43.4
baz=300
YMR Madison River 79.52 44 P **P** **12 18 44.9 +1.1**
YMR IAmb IAmb 12 18 46.4
comp=Z,25nm,1.1s
YHH Holmes Hill 79.52 44 P **P** **12 18 45.0 +1.1**

OSI	**Osito Audit: C**	**79.58**	**56**	P			12 18 45.0	
	baz=300							
DOK	**Doka**	**79.65**	**285**	P		**P**	**12 18 45.5**	**+0.9**
YNR	**Norris Junctio**	**79.66**	**44**	P		**P**	**12 18 45.4**	**+0.7**
GCMT	**Greycliff**	**79.68**	**43**	P		**P**	**12 18 45.2**	**+0.7**
PABE	**Paberze**	**79.68**	**330**	*e*P		**P**	**12 18 45.1**	**+0.9**
YPP	**Pitchstone Pla**	**79.83**	**44**	P		**P**	**12 18 45.8**	**+0.1**
R11A	**Troy Canyon, C**	**79.88**	**51**	P		**P**	**12 18 45.9**	**0.0**
R11A	**Troy Canyon, C**	**79.89**	**51**	P			12 18 46.3	
	baz=301,SNR=26							
LRMC	**Laurel Mtn Rad**	**79.89**	**55**	P			12 18 46.3	
	baz=300,SNR=10							
H17A	**Grant Village**	**79.90**	**44**	P			12 18 48.7	
	baz=303,SNR=24							
YNE	**Yellowstone No**	**79.91**	**43**	P		**P**	**12 18 46.7**	**+0.7**
HVU	**Hansel Valley**	**79.94**	**47**	P		**P**	**12 18 47.0**	**+0.9**
HVU				pmax		pmax		
	comp=Z,10.0nm,0.9s							
HVU	**Hansel Valley**	**79.94**	**47**	P		**P**	**12 18 47.0**	**+0.9**
YMP	**Mirror Lake Pl**	**79.96**	**44**	P		**P**	**12 18 46.8**	**+0.4**
FURC	**Furnace Creek,**	**79.97**	**54**	P			12 18 46.6	
	baz=300,SNR=16							
EDW2	**Edwards Air Fo**	**79.97**	**55**	P			12 18 47.0	
	baz=300,SNR=15							
FLWY	**Flagg Ranch**	**79.99**	**45**	P		**P**	**12 18 46.3**	**-0.1**
FLWY				IAmb		IAmb	12 18 49.6	
	comp=Z,26nm,1.2s							
DECC	**Green Verdugo**	**80.04**	**56**	P			12 18 46.7	
	baz=300							
ECR	**Eagle Creek**	**80.14**	**46**	P		**P**	**12 18 48.3**	**+1.1**
MOOW	**Moose Ponds**	**80.15**	**45**	P		**P**	**12 18 47.8**	**+0.5**
TPNV	**Topopah Spring**	**80.15**	**53**	P		**P**	**12 18 47.3**	**0.0**
TPNV				pmax		pmax		
	comp=Z,24nm,1.0s							
TPNV	**Topopah Spring**	**80.15**	**53**	P		**P**	**12 18 47.3**	**0.0**
TPNV				IAmb		IAmb	12 18 49.0	
	comp=Z,24nm,1.0s							
TPNV	**Topopah Spring**	**80.15**	**53**	P			12 18 47.6	
	baz=301,SNR=29							
AKASG	**Malin Array Be**	**80.16**	**324**	P		**P**	**12 18 47.1**	**+0.3**
	comp=Z,28nm,0.8s,baz=46,slow=6.0,SNR=60							
AKASG	**Malin Array Be**	**80.16**	**324**	P		**P**	**12 18 47.0**	**+0.1**
AKASG				pmax		pmax		
	comp=Z,20nm,1.1s							
AKASG	**Malin Array Be**	**80.16**	**324**	P		**P**	**12 18 47.0**	**+0.1**
AKBB	**Malin Array Si**	**80.16**	**324**	*de*P		**P**	**12 18 47.0**	**+0.1**
AKBB	**Malin Array Si**	**80.16**	**324**	P		**P**	**12 18 46.9**	**+0.1**
AKBB				IAmb		IAmb	12 18 48.2	
	comp=Z,37nm,0.9s							
KIEV	**Kiev**	**80.17**	**324**	P		**P**	**12 18 45.0**	**-1.9**
PASC	**Pasadena Art C**	**80.19**	**56**	P		**P**	**12 18 47.0**	**-0.3**
PASC				IAmb		IAmb	12 18 48.8	
	comp=Z,27nm,1.3s							
PBUR	**Paburge**	**80.22**	**331**	*e*P		**P**	**12 18 48.4**	**+1.4**
BGU	**Big Grassy Mou**	**80.23**	**48**	P		**P**	**12 18 48.6**	**+0.9**
MWC	**Mount Wilson**	**80.25**	**56**	P		**P**	**12 18 48.3**	**+0.3**
MWC				pmax		pmax		
	comp=Z,33nm,1.3s							
MWC	**Mount Wilson**	**80.25**	**56**	P		**P**	**12 18 48.2**	**+0.3**
MWC				IAmb		IAmb	12 18 49.5	
	comp=Z,33nm,1.3s							
RLMT	**Red Lodge**	**80.28**	**43**	P		**P**	**12 18 48.7**	**+0.8**
RLMT	**Red Lodge**	**80.28**	**43**	P			12 18 48.9	
	baz=304,SNR=18							
WHFO	**Wadi Hawf**	**80.28**	**285**	P		**P**	**12 18 48.2**	**+0.1**
REDW	**Red Top Meadow**	**80.29**	**45**	P		**P**	**12 18 48.8**	**+0.7**
SNOW	**Snow King Moun**	**80.30**	**45**	P		**P**	**12 18 49.2**	**+1.1**
LOHW	**Long Hollow**	**80.31**	**45**	P		**P**	**12 18 49.0**	**+0.9**
FMP	**Fort Macarthur**	**80.34**	**57**	P			12 18 48.6	
	baz=300							
NC405	**NORSAR Array S**	**80.40**	**338**	P		**P**	**12 18 48.2**	**+0.2**
CIS	**Catalina Islan**	**80.41**	**57**	P			12 18 48.4	
	baz=300							
NC303	**NORSAR Array S**	**80.43**	**338**	P		**P**	**12 18 48.3**	**+0.2**
DOMB	**Dombas**	**80.51**	**340**	*e*P		**P**	**12 18 48.9**	**+0.3**
SCI2	**San Clemente I**	**80.53**	**57**	P			12 18 49.0	
	baz=300							
NC204	**NORSAR Array S**	**80.58**	**339**	P		**P**	**12 18 49.1**	**+0.1**
NB201	**NORSAR Array S**	**80.58**	**338**	P		**P**	**12 18 49.3**	**+0.3**
NB2	**NORSAR Subarra**	**80.62**	**338**	P		**P**	**12 18 45.7**	**-3.5**
NB2	**NORSAR Subarra**	**80.62**	**338**	P		**P**	**12 18 49.2**	**0.0**
	baz=41,slow=5.3							
NOA	**NORSAR Array B**	**80.62**	**338**	P		**P**	**12 18 49.4**	**+0.2**
	comp=Z,12nm,0.8s,baz=40,slow=5.3,SNR=44							
ICESG	**Greenland Ices**	**80.65**	**1**	⇓*i*	P	**P**	**12 18 50.6**	**+1.0**
ICESG				IAmb		IAmb	12 18 51.6	
	comp=Z,81nm,1.3s							
SHOC	**Shoshone, Teco**	**80.67**	**54**	P			12 18 50.2	
	baz=301,SNR=8.8							
MARD	**Mardin**	**80.67**	**308**	P		**P**	**12 18 51.4**	**+1.4**
MARD				IAmb		IAmb	12 18 52.3	
	comp=Z,28nm,1.0s							
RRX	**Edison Barstow**	**80.68**	**55**	P			12 18 50.0	
	baz=301							
PPT2	**Papeete2**	**80.72**	**117**	*e*LR		LR	12 43 33.7	
	comp=Z,337nm,24.5s							
PRN	**Pahroc Range**	**80.73**	**52**	P		**P**	**12 18 51.0**	**+0.6**
PRN				IAmb		IAmb	12 18 52.3	
	comp=Z,24nm,1.0s							
NC602	**NORSAR Array S**	**80.74**	**338**	*e*P		**P**	**12 18 50.3**	**+0.5**
NORES	**NORESS Array B**	**80.74**	**338**	P		**P**	**12 18 49.7**	**-0.1**
DUG	**Dugway, Tooele**	**80.76**	**49**	P		**P**	**12 18 51.0**	**+0.5**
DUG				pmax		pmax		
	comp=Z,27nm,1.3s							
DUG	**Dugway, Tooele**	**80.76**	**49**	P		**P**	**12 18 51.0**	**+0.5**
DUG				IAmb		IAmb	12 18 52.5	
	comp=Z,26nm,1.3s							
DUG	**Dugway, Tooele**	**80.76**	**49**	P			12 18 51.3	
	baz=302,SNR=17							
NBO00	**NORSAR Array S**	**80.76**	**338**	P		**P**	**12 18 50.4**	**+0.4**
NBO00				IAmb		IAmb	12 18 51.4	
	comp=Z,31nm,1.0s							
HWUT	**Hardware Ranch**	**80.80**	**47**	P		**P**	**12 18 51.5**	**+0.7**
HWUT				IAmb		IAmb	12 18 53.0	
	comp=Z,27nm,1.1s							
PSUT	**Pine Spring**	**80.95**	**51**	P		**P**	**12 18 52.0**	**+0.4**
ABTO	**Aybut**	**80.95**	**285**	P		**P**	**12 18 52.3**	**+0.5**
SUW	**Suwalki**	**80.99**	**329**	*e*P		**P**	**12 18 52.1**	**+0.8**
SUW	**Suwalki**	**80.99**	**329**	*e*P		**P**	**12 18 52.4**	**+1.2**
SUW	**Suwalki**	**80.99**	**329**	P		**P**	**12 18 51.6**	**+0.3**
SUW				pmax		pmax		
	comp=Z,178nm,1.0s							
SUW	**Suwalki**	**80.99**	**329**	P		**P**	**12 18 51.5**	**+0.3**
BBRC	**Big Bear Solar**	**81.05**	**56**	P			12 18 52.1	
	baz=301,SNR=6.3							
SHPR	**Sheep Range**	**81.12**	**53**	P		**P**	**12 18 53.0**	**+0.4**
LAO	**LASA Array**	**81.14**	**41**	P		**P**	**12 18 53.1**	**+0.7**
LAO				IAmb		IAmb	12 18 54.5	
	comp=Z,52nm,1.3s							
LAO	**LASA Array**	**81.14**	**41**	P			12 18 53.0	
	baz=305,SNR=6.4							
TUQ	**Turquoise Moun**	**81.15**	**54**	P			12 18 53.1	
	baz=301,SNR=16							
TCUT	**Toone Canyon**	**81.16**	**47**	P		**P**	**12 18 53.2**	**+0.4**
HEC	**Hector Ludlow**	**81.17**	**55**	P			12 18 53.0	
	baz=301,SNR=8.5							
MURC	**Murrieta**	**81.19**	**56**	P			12 18 53.0	
	baz=301,SNR=9.4							
BW06	**Boulder Array**	**81.41**	**45**	P		**P**	**12 18 53.5**	**-0.6**
PD31	**Pinedale Array**	**81.41**	**45**	P		**P**	**12 18 54.2**	**+0.1**
PDAR	**Pinedale Array**	**81.41**	**45**	P		**P**	**12 18 54.5**	**+0.5**
	comp=Z,6.1nm,1.0s,baz=278,slow=2.5,SNR=28							
PDAR	**Pinedale Array**	**81.41**	**45**	P		**P**	**12 18 53.5**	**-0.6**
BW06	**Boulder Array**	**81.41**	**45**	P			12 18 54.2	
	baz=304,SNR=9.9							
JLU	**Jordanelle**	**81.42**	**48**	P		**P**	**12 18 54.7**	**+0.6**
JLU				IAmb		IAmb	12 18 56.2	
	comp=Z,24nm,1.2s							
MPU	**Maple Canyon**	**81.61**	**48**	P		**P**	**12 18 55.6**	**+0.4**
OSL	**Oslo**	**81.61**	**338**	*e*P		**P**	**12 18 55.2**	**+0.8**
109C	**Camp Elliot, M**	**81.62**	**57**	P		**P**	**12 18 55.3**	**+0.4**
109C				IAmb		IAmb	12 18 57.3	
	comp=Z,31nm,1.4s							
109C	**Camp Elliot, M**	**81.62**	**57**	P			12 18 54.9	
	baz=301							
GMRC	**Granite Mounta**	**81.67**	**55**	P			12 18 55.9	
	baz=301,SNR=11							
PFO	**Pinyon Flats O**	**81.71**	**56**	*d*iP		**P**	**12 18 55.7**	**+0.1**
PFO				pmax		pmax		
	comp=Z,40nm,1.0s							
PFO	**Pinyon Flats O**	**81.71**	**56**	P		**P**	**12 18 54.6**	**-1.1**
PFO				IAmb		IAmb	12 18 57.1	
	comp=Z,29nm,1.0s							
PFO	**Pinyon Flats O**	**81.71**	**56**	P			12 18 55.9	
	baz=301,SNR=21							
TPFO	**Pinon Flats**	**81.72**	**56**	P			12 18 56.0	
	baz=301							
MALT	**Malatya**	**81.73**	**310**	P		**P**	**12 18 57.6**	**+2.0**
KVT	**Kavak**	**81.77**	**313**	P		**P**	**12 18 58.1**	**+2.4**
CCUT	**Cedar City**	**81.80**	**51**	P		**P**	**12 18 56.3**	**+0.1**
SKAR	**Skarslia**	**81.80**	**339**	*e*P		**P**	**12 18 56.1**	**+0.5**
BELC	**Belle Mtn. Jos**	**81.84**	**55**	P			12 18 56.3	
	baz=301,SNR=18							
TCRU	**Three Creeks R**	**81.84**	**50**	P		**P**	**12 18 56.8**	**+0.4**
SZCU	**Shurtz Canyon**	**81.96**	**51**	P		**P**	**12 18 57.4**	**+0.4**
BAR	**Barrett**	**82.04**	**57**	P		**P**	**12 18 57.4**	**+0.1**
MSU	**Marysvale**	**82.07**	**50**	P		**P**	**12 18 58.3**	**+0.7**
MSU	**Marysvale**	**82.07**	**50**	P		**P**	**12 18 58.3**	**+0.7**
MONP2	**Monument Peak**	**82.11**	**57**	P			12 18 58.2	
	baz=301,SNR=11							
SORM	**Soroca**	**82.16**	**322**	⇑P		**P**	**12 18 57.3**	**-0.2**
SORM	**Soroca**	**82.16**	**322**	P		**P**	**12 18 57.3**	**-0.2**
LCMT	**Little Creek M**	**82.17**	**52**	P		**P**	**12 18 58.5**	**+0.4**
LCMT				IAmb		IAmb	12 18 60.0	
	comp=Z,18nm,0.9s							
KONO	**Kongsberg**	**82.20**	**338**	⇑*e*P		**P**	**12 18 57.1**	**-0.4**
KONO				pmax		pmax		
	comp=Z,9.0nm,1.4s							
KONO	**Kongsberg**	**82.20**	**338**	*e*P		**P**	**12 18 58.1**	**+0.6**
SFJD	**Kangerlussuaq**	**82.24**	**5**	*i*P		**P**	**12 18 58.4**	**+0.8**
SFJD				IAmb		IAmb	12 18 59.5	
	comp=Z,18nm,1.1s							
SFJD	**Kangerlussuaq**	**82.24**	**5**	P		**P**	**12 18 58.1**	**+0.5**
SFJD				pmax		pmax		
	comp=Z,26nm,1.0s							
SFJD	**Kangerlussuaq**	**82.24**	**5**	P		**P**	**12 18 58.1**	**+0.5**
SFJD				IAmb		IAmb	12 18 59.2	
	comp=Z,26nm,1.0s							
TMUT	**Trail Mountain**	**82.28**	**49**	P		**P**	**12 18 58.6**	**-0.1**
MTPU	**Mount Pierson**	**82.32**	**50**	P		**P**	**12 18 59.7**	**+0.6**
IRM	**Iron Mountain**	**82.36**	**55**	P			12 18 59.4	
	baz=302,SNR=19							
BC3	**Big Chuckawall**	**82.40**	**55**	P			12 18 59.7	
	baz=302,SNR=27							
NEE2	**Needles Airpor**	**82.41**	**54**	P			12 18 59.1	
	baz=302							
KNB	**Kanab**	**82.45**	**51**	P		**P**	**12 19 00.0**	**+0.4**
KNB				pmax		pmax		
	comp=Z,36nm,1.0s							
KNB	**Kanab**	**82.45**	**51**	P		**P**	**12 18 60.0**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**82.46**	**57**	P			12 18 59.9	
	baz=301,SNR=8.7							
P17A	**Butcher Ranch,**	**82.49**	**48**	P		**P**	**12 18 59.8**	**+0.1**
P17A				IAmb		IAmb	12 19 01.7	
	comp=Z,16nm,1.0s							
HORU	**Horodok**	**82.50**	**324**	P		**P**	**12 18 59.3**	**0.0**
Q16A	**Castle Valley**	**82.51**	**49**	P		**P**	**12 19 00.6**	**+0.7**
Q16A				IAmb		IAmb	12 19 02.1	
	comp=Z,37nm,1.4s							
SWSC	**Sam W. Stewart**	**82.53**	**56**	P			12 18 60.0	
	baz=302,SNR=5.5							
PKCU	**Pink Cliffs**	**82.56**	**51**	P		**P**	**12 19 01.2**	**+0.9**
RDMU	**Red Mountain**	**82.63**	**47**	P		**P**	**12 19 00.9**	**+0.4**
RDMU				IAmb		IAmb	12 19 01.9	
	comp=Z,20nm,0.9s							
W13A	**Hualapai Mount**	**82.75**	**54**	P		**P**	**12 19 01.5**	**+0.3**
FRB	**Frobisher Bay**	**82.81**	**13**	P		**P**	**12 19 00.6**	**0.0**
SRU	**San Rafael Swe**	**82.83**	**49**	P		**P**	**12 19 01.5**	**0.0**
SRU				pmax		pmax		
	comp=Z,9.0nm,0.8s							
SRU	**San Rafael Swe**	**82.83**	**49**	P		**P**	**12 19 01.5**	**0.0**
KMPD	**K-Podol'skiy**	**82.89**	**323**	P		**P**	**12 19 01.0**	**-0.3**
SOCY	**Socotra**	**82.89**	**280**	P		**P**	**12 19 00.6**	**-1.5**
SOCY				IAmb		IAmb	12 19 08.2	
	comp=Z,17nm,0.9s							
SOCY	**Socotra**	**82.89**	**280**	P		**P**	**12 19 00.8**	**-1.2**
PDMCI	**Parker Dam,Lak**	**82.99**	**54**	P			12 19 02.5	
	baz=302							
DY2G	**Dye2**	**83.05**	**4**	⇓*i*P		**P**	**12 19 02.9**	**+0.7**
DY2G				IAmb		IAmb	12 19 03.7	
	comp=Z,21nm,0.8s							
ONAU	**Onsala**	**83.14**	**336**	*i*P		**P**	**12 19 02.1**	**-0.3**
GAZ	**Gaziantep**	**83.16**	**309**	P		**P**	**12 19 04.3**	**+1.2**
IAS	**Iasi**	**83.16**	**322**	P		**P**	**12 19 05.9**	**+3.1**
GLA	**Glamis**	**83.17**	**56**	P		**P**	**12 19 04.0**	**+0.9**
GLA				pmax		pmax		
	comp=Z,26nm,1.0s							
GLA	**Glamis**	**83.17**	**56**	P		**P**	**12 19 04.0**	**+0.9**
GLA				IAmb		IAmb	12 19 04.9	
	comp=Z,26nm,1.0s							
GLA	**Glamis**	**83.17**	**56**	P			12 19 03.5	
	baz=302,SNR=6.6							
ILGA	**Ilgaz**	**83.25**	**314**	P		**P**	**12 19 04.8**	**+1.2**
K22A	**Casper**	**83.32**	**44**	P		**P**	**12 19 03.9**	**-0.1**
K22A				IAmb		IAmb	12 19 05.0	
	comp=Z,15nm,0.9s							
K22A	**Casper**	**83.32**	**44**	P			12 19 04.3	
	baz=306,SNR=8.2							
LVV	**L'vov**	**83.32**	**325**	*e*P		**P**	**12 19 04.1**	**+0.5**
RWWY	**Rawlins**	**83.46**	**45**	P		**P**	**12 19 04.2**	**-0.6**
BEL	**Belsk**	**83.52**	**328**	*e*P		**P**	**12 19 05.7**	**+1.1**
BEL	**Belsk**	**83.52**	**328**	P		**P**	**12 19 06.2**	**+1.7**
O20A	**White River Ci**	**83.71**	**47**	P		**P**	**12 19 06.1**	**0.0**
O20A	**White River Ci**	**83.71**	**47**	P			12 19 06.3	
	baz=305,SNR=15							
BSD	**Bornholm Skovb**	**83.71**	**333**	*e*P		**P**	**12 19 06.3**	**+0.8**
BSD	**Bornholm Skovb**	**83.71**	**333**	*i*P		**P**	**12 19 05.6**	**+0.1**
BSD				IAmb		IAmb	12 19 06.5	
	comp=Z,70nm,1.2s							
BSD	**Bornholm Skovb**	**83.71**	**333**	*i*P		**P**	**12 19 05.5**	**+0.1**
BSD				pmax		pmax		
	comp=Z,70nm,1.2s							
KSV	**Kosov**	**83.77**	**324**	P		**P**	**12 19 04.6**	**-1.3**
MORS	**Morshin**	**83.83**	**325**	P		**P**	**12 19 06.8**	**+0.6**
RSSD	**Black Hills**	**83.91**	**42**	P		**P**	**12 19 06.7**	**-0.3**
RSSD				pmax		pmax		
	comp=Z,9.0nm,0.9s							
RSSD	**Black Hills**	**83.91**	**42**	P		**P**	**12 19 06.7**	**-0.3**
RSSD	**Black Hills**	**83.91**	**42**	P			12 19 07.0	
	baz=307							
Y14A	**Wickenburg**	**83.98**	**54**	P		**P**	**12 19 07.0**	**-0.4**
Y14A				IAmb		IAmb	12 19 08.4	
	comp=Z,11nm,0.9s							
MDND	**Maddock**	**84.01**	**37**	P		**P**	**12 19 06.8**	**-0.4**
MDND	**Maddock**	**84.01**	**37**	P			12 19 07.5	
	baz=310							
BR131	**Keskin Array S**	**84.05**	**313**	*d*iP		**P**	**12 19 07.9**	**+0.2**
BR131	**Keskin Array S**	**84.05**	**313**	P		**P**	**12 19 08.2**	**+0.5**
BRTR	**Keskin Array B**	**84.05**	**313**	P		**P**	**12 19 08.7**	**+1.0**
	comp=Z,27nm,0.8s,baz=102,slow=4.0,SNR=63							
BRTR	**Keskin Array B**	**84.05**	**313**	*i*P		**P**	**12 19 08.6**	**+0.9**
BRTR				pmax		pmax		
	comp=Z,29nm,0.8s							
BRTR	**Keskin Array B**	**84.05**	**313**	P		**P**	**12 19 08.2**	**+0.5**
113A	**Mohawk Valley,**	**84.07**	**55**	P		**P**	**12 19 07.9**	**+0.1**
TESR	**Tescani**	**84.08**	**321**	⇓P		**P**	**12 19 08.2**	**+0.7**
GKP	**Gorka Klasztor**	**84.09**	**331**	*e*P		**P**	**12 19 08.2**	**+0.8**
GKP	**Gorka Klasztor**	**84.09**	**331**	*e*P		**P**	**12 19 08.2**	**+0.8**
GKP	**Gorka Klasztor**	**84.09**	**331**	P		**P**	**12 19 08.2**	**+0.8**
CFR	**Carcaliu**	**84.09**	**320**	⇓P		**P**	**12 19 08.3**	**+0.7**
BIZ	**Bicaz**	**84.10**	**322**	⇑P		**P**	**12 19 07.9**	**+0.2**
BUR08	**Bucovina Ar. S**	**84.13**	**323**	P		**P**	**12 19 08.3**	**+0.4**
BUR08				IAmb		IAmb	12 19 09.8	
	comp=Z,17nm,0.9s							
TPGR	**Topolog**	**84.13**	**319**	⇑P		**P**	**12 19 08.6**	**+0.8**
BURAR	**Bucovina Array**	**84.14**	**323**	⇓P		**P**	**12 19 08.9**	**+1.0**
BURAR	**Bucovina Array**	**84.14**	**323**	P		**P**	**12 19 08.7**	**+0.8**
BURAR	**Bucovina Array**	**84.14**	**323**	P		**P**	**12 19 08.7**	**+0.8**
PV10	**Paradox Valley**	**84.20**	**49**	P		**P**	**12 19 09.5**	**+0.8**
TBI	**Tubuai**	**84.21**	**121**	*e*LR		LR	12 45 20.0	
	comp=Z,373nm,31.0s							
PV14	**Lion Creek, Pa**	**84.21**	**49**	P		**P**	**12 19 08.8**	**+0.1**
ISOG	**Isortoq, Green**	**84.22**	**1**	*e*P		**P**	**12 19 08.1**	**+0.3**
COP	**Copenhagen**	**84.24**	**334**	*i*P		**P**	**12 19 08.7**	**+0.6**
COP				IAmb		IAmb	12 19 09.5	
	comp=Z,58nm,1.0s							
COP	**Copenhagen**	**84.24**	**334**	*i*P		**P**	**12 19 08.7**	**+0.6**
COP				pmax		pmax		
	comp=Z,58nm,1.0s							
RAYN	**Ar Rayn**	**84.25**	**294**	*i*P		**P**	**12 19 10.3**	**+1.5**
	SNR=11							
RAYN	**Ar Rayn**	**84.25**	**294**	P		**P**	**12 19 09.5**	**+0.6**
RAYN				pmax		pmax		
	comp=Z,84nm,0.9s							
RAYN	**Ar Rayn**	**84.25**	**294**	P		**P**	**12 19 09.5**	**+0.6**
WUAZ	**Wupatki**	**84.25**	**52**	P		**P**	**12 19 09.2**	**+0.4**
WUAZ				IAmb		IAmb	12 19 10.7	
	comp=Z,24nm,1.1s							
WUAZ	**Wupatki**	**84.25**	**52**	P			12 19 09.5	
	baz=304,SNR=15							
PETR	**Petresti**	**84.26**	**321**	⇓P		**P**	**12 19 09.3**	**+0.9**
ULM	**Lac du Bonnet**	**84.29**	**33**	P		**P**	**12 19 08.1**	**-0.4**
	comp=Z,6.7nm,1.0s,baz=304,slow=5.1,SNR=9.6							
ULM	**Lac du Bonnet**	**84.29**	**33**	*de*P		**P**	**12 19 07.6**	**-0.9**
ULM	**Lac du Bonnet**	**84.29**	**33**	P		**P**	**12 19 07.4**	**-1.1**
PV05	**Paradox Valley**	**84.33**	**49**	P		**P**	**12 19 09.0**	**-0.3**
GOET	**G??ttrup**	**84.36**	**337**	*e*P		**P**	**12 19 06.4**	**-2.3**
PV12	**Saucer Basin,**	**84.39**	**49**	P		**P**	**12 19 09.5**	**-0.1**
PV03	**Paradox Valley**	**84.39**	**49**	P		**P**	**12 19 09.5**	**-0.1**
PV03				IAmb		IAmb	12 19 11.3	
	comp=Z,32nm,1.2s							
VRI	**Vrincioaia**	**84.44**	**321**	⇓P		**P**	**12 19 10.4**	**+1.0**
VRI	**Vrincioaia**	**84.44**	**321**	P		**P**	**12 19 10.4**	**+1.0**
PV13	**Radium Mtn., P**	**84.47**	**49**	P		**P**	**12 19 09.9**	**-0.1**
PV13				IAmb		IAmb	12 19 11.6	
	comp=Z,20nm,1.0s							
PV02	**Paradox Valley**	**84.49**	**49**	P		**P**	**12 19 10.4**	**+0.3**
PV02				IAmb		IAmb	12 19 11.8	
	comp=Z,20nm,1.1s							
PLOR	**Plostina**	**84.49**	**321**	⇓P		**P**	**12 19 10.4**	**+0.7**
PLOR	**Plostina**	**84.49**	**321**	P		**P**	**12 19 10.4**	**+0.7**
ANTO	**Ankara**	**84.50**	**313**	P		**P**	**12 19 10.7**	**+0.8**
ANTO	**Ankara**	**84.50**	**313**	P		**P**	**12 19 10.7**	**+0.8**
HARR	**Harsova**	**84.51**	**319**	⇑P		**P**	**12 19 10.2**	**+0.4**
HARR	**Harsova**	**84.51**	**319**	P		**P**	**12 19 10.1**	**+0.4**
PV15	**Paradox Valley**	**84.58**	**48**	P		**P**	**12 19 11.2**	**+0.6**
PV15				IAmb		IAmb	12 19 12.2	
	comp=Z,18nm,1.3s							
PV01	**Paradox Valley**	**84.64**	**49**	P		**P**	**12 19 10.2**	**-0.6**
PV01				IAmb		IAmb	12 19 12.5	
	comp=Z,15nm,1.1s							
N23A	**Red Feather La**	**84.70**	**45**	P			12 19 12.2	
	baz=306,SNR=26							
PHWY	**Pilot Hill**	**84.75**	**45**	P		**P**	**12 19 11.9**	**+0.5**
PHWY				IAmb		IAmb	12 19 13.3	
	comp=Z,24nm,1.2s							
X16A	**Lo Mia Camp, P**	**84.80**	**53**	P		**P**	**12 19 12.1**	**+0.4**
X16A				IAmb		IAmb	12 19 13.8	
	comp=Z,16nm,1.2s							
MUD	**Monsted U'grnd**	**84.83**	**336**	*i*P		**P**	**12 19 11.3**	**+0.2**
MUD				IAmb		IAmb	12 19 13.1	
	comp=Z,44nm,1.2s							
MUD	**Monsted U'grnd**	**84.83**	**336**	*i*P		**P**	**12 19 11.2**	**+0.2**
MUD				pmax		pmax		
	comp=Z,44nm,1.2s							
NUUK	**Nuuk**	**84.91**	**6**	*i*P		**P**	**12 19 12.1**	**+0.8**
NUUK				IAmb		IAmb	12 19 13.2	
	comp=Z,67nm,1.3s							
UZH	**Uzhgorod**	**84.96**	**325**	*e*P		**P**	**12 19 11.8**	**-0.1**
UZH				*e*			12 19 20.5	
TRSU	**Trosnyk**	**84.98**	**324**	P		**P**	**12 19 12.5**	**+0.5**
BMR	**Baia Mare**	**84.99**	**324**	⇑P		**P**	**12 19 12.9**	**+0.8**
BMR	**Baia Mare**	**84.99**	**324**	P		**P**	**12 19 12.9**	**+0.8**
SMCO	**Snowmass**	**85.06**	**47**	P		**P**	**12 19 13.4**	**+0.3**
SMCO				IAmb		IAmb	12 19 15.2	
	comp=Z,35nm,1.4s							
OJC	**Ojcow**	**85.08**	**327**	*e*P		**P**	**12 19 13.2**	**+0.7**
OJC	**Ojcow**	**85.08**	**327**	P		**P**	**12 19 12.6**	**+0.1**
OJC				pmax		pmax		
	comp=Z,70nm,1.2s							
OJC	**Ojcow**	**85.08**	**327**	P		**P**	**12 19 12.6**	**+0.1**
DOPR	**Dopca**	**85.10**	**322**	⇓P		**P**	**12 19 14.1**	**+1.3**
MLR	**Muntele Rosu**	**85.10**	**321**	⇓P		**P**	**12 19 12.7**	**-0.2**
MLR	**Muntele Rosu**	**85.10**	**321**	P		**P**	**12 19 12.6**	**-0.3**
MLR				pmax		pmax		
	comp=Z,22nm,1.2s							
MLR	**Muntele Rosu**	**85.10**	**321**	P		**P**	**12 19 12.6**	**-0.3**
MLR				IAmb		IAmb	12 19 35.4	
	comp=Z,22nm,1.2s							
MDUB	**Mudurnu**	**85.14**	**315**	P		**P**	**12 19 13.5**	**+0.3**
CRVS	**Cervenica-Dubn**	**85.19**	**326**	*e*P		**P**	**12 19 14.1**	**+1.0**
CRVS				pmax		pmax		
	comp=Z,77nm,1.5s							
CRVS	**Cervenica-Dubn**	**85.19**	**326**	*e*P		**P**	**12 19 14.1**	**+1.0**
214A	**Organ Pipe Nat**	**85.19**	**56**	P		**P**	**12 19 14.3**	**+0.8**
214A				IAmb		IAmb	12 19 15.3	
	comp=Z,26nm,1.1s							
214A	**Organ Pip

CLL	**Collm**	**87.30**	**331**		P		**P**	**12 19 23.1**	**-0.3**
CLL					IAmb		IAmb	12 19 24.8	
	comp=Z,27nm,1.1s								
SMOL	**Smolenice**	**87.38**	**327**		*e*P		**P**	**12 19 25.0**	**+1.1**
SMOL					pmax		pmax		
	comp=Z,17nm,1.4s								
SMOL	**Smolenice**	**87.38**	**327**		*e*P		**P**	**12 19 25.0**	**+1.1**
KRUC	**Moravsky**	**87.47**	**328**		*e*P		**P**	**12 19 24.7**	**+0.4**
MODS	**Modra-Piesok**	**87.55**	**327**		*e*P		**P**	**12 19 24.9**	**+0.2**
MODS					pmax		pmax		
	comp=Z,32nm,1.3s								
MODS	**Modra-Piesok**	**87.55**	**327**		*e*P		**P**	**12 19 24.9**	**+0.2**
PRU	**Pruhonice**	**87.62**	**330**		*e*P		**P**	**12 19 26.0**	**+1.0**
PRU	**Pruhonice**	**87.62**	**330**		*e*P		**P**	**12 19 26.0**	**+1.0**
ZST	**Bratislava**	**87.76**	**327**		*e*P		**P**	**12 19 26.6**	**+0.9**
ZST					pmax		pmax		
	comp=Z,116nm,1.9s								
ZST	**Bratislava**	**87.76**	**327**		*e*P		**P**	**12 19 26.6**	**+0.9**
MDVR	**Moldovita**	**87.83**	**322**	⇑	P		**P**	**12 19 26.3**	**+0.1**
ANMO	**Albuquerque**	**87.87**	**50**	⇑	*e*P		**P**	**12 19 27.6**	**+0.8**
ANMO					pmax		pmax		
	comp=Z,9.0nm,1.3s								
ANMO	**Albuquerque**	**87.87**	**50**		P		**P**	**12 19 26.8**	**0.0**
ANMO	**Albuquerque**	**87.88**	**50**		P			12 19 27.3	
	baz=306								
T25A	**Trinidad**	**87.90**	**47**		P		**P**	**12 19 26.8**	**0.0**
T25A					IAmb		IAmb	12 19 28.8	
	comp=Z,11nm,1.1s								
T25A	**Trinidad**	**87.90**	**47**		P			12 19 27.4	
	baz=307,SNR=7.1								
EYMN	**Ely**	**87.96**	**33**		P		**P**	**12 19 26.3**	**-0.4**
EYMN	**Ely**	**87.96**	**33**		P			12 19 26.8	
	baz=316								
Y22D	**IRIS PASSCAL I**	**88.08**	**51**		P			12 19 27.9	
	baz=306								
PBCC	**Pribram**	**88.09**	**330**		*e*P		**P**	**12 19 25.9**	**-1.4**
ECSD	**EROS Data Cent**	**88.29**	**39**		P		**P**	**12 19 28.1**	**-0.3**
ECSD					IAmb		IAmb	12 19 29.6	
	comp=Z,24nm,1.2s								
ECSD	**EROS Data Cent**	**88.29**	**39**		P			12 19 28.1	
	baz=312								
NKC	**Novy Kostel**	**88.34**	**331**		*e*P		**P**	**12 19 28.7**	**+0.2**
NKC	**Novy Kostel**	**88.34**	**331**		*e*P		**P**	**12 19 28.7**	**+0.2**
SOP	**Sopron**	**88.39**	**327**		P		**P**	**12 19 31.0**	**+2.3**
121A	**Cookes Peak, D**	**88.39**	**53**		P			12 19 29.3	
	baz=306								
MORH	**Mrgy, Hungar**	**88.42**	**325**	⇑	P		**P**	**12 19 28.5**	**-0.3**
F36A	**Milaca**	**88.44**	**36**		P		**P**	**12 19 28.5**	**-0.5**
F36A					IAmb		IAmb	12 19 29.4	
	comp=Z,12nm,1.1s								
VTS	**Vitosha**	**88.45**	**320**		P		**P**	**12 19 29.3**	**0.0**
VTS					pmax		pmax		
	comp=Z,18nm,1.4s								
VTS	**Vitosha**	**88.45**	**320**		P		**P**	**12 19 29.2**	**0.0**
VTS					IAmb		IAmb	12 19 30.8	
	comp=Z,18nm,1.4s								
CONA	**Conrad Observa**	**88.53**	**327**	*i*	P		**P**	**12 19 30.1**	**+0.6**
	comp=Z,14nm,1.2s,SNR=6.3								
FRGS	**Fruska Gora**	**88.56**	**324**	⇑	P		**P**	**12 19 29.4**	**-0.2**
CKRC	**Cesky Krumlov**	**88.59**	**329**		*e*P		**P**	**12 19 29.8**	**+0.1**
KHC	**Kasperske Hory**	**88.68**	**329**	*d*	*i*P		**P**	**12 19 30.0**	**-0.1**
KHC					pmax		pmax		
	comp=Z,18nm,1.1s								
KHC	**Kasperske Hory**	**88.68**	**329**		*e*P		**P**	**12 19 30.1**	**-0.1**
KHC	**Kasperske Hory**	**88.68**	**329**		P		**P**	**12 19 30.4**	**+0.3**
KHC					IAmb		IAmb	12 19 31.7	
	comp=Z,12nm,1.2s								
GEC2	**GERESS Array S**	**88.84**	**329**		P		**P**	**12 19 30.8**	**-0.1**
GERES	**GERESS Array B**	**88.84**	**329**		P		**P**	**12 19 30.9**	**0.0**
	comp=Z,3.8nm,1.0s,baz=46,slow=3.9,SNR=21								
GERES					PP		**PP**	**12 23 02.9**	**+3.5**
	comp=Z,1.0nm,0.9s,baz=44,slow=8.6,SNR=3.5								
GERES	**GERESS Array B**	**88.84**	**329**		P		**P**	**12 19 30.8**	**-0.1**
GERES	**GERESS Array B**	**88.84**	**329**		P		**P**	**12 19 30.8**	**-0.1**
E38A	**The Farm, Brul**	**88.89**	**34**		P		**P**	**12 19 30.9**	**-0.2**
BGNE	**Belgrade**	**88.98**	**41**		P			12 19 31.3	
	baz=311								
ARSA	**Arzberg**	**89.18**	**327**		*e*P		**P**	**12 19 32.8**	**+0.3**
	comp=Z,8.8nm,1.1s,SNR=5.3								
DIVS	**Divibare**	**89.20**	**323**		P		**P**	**12 19 32.8**	**0.0**
DIVS					IAmb		IAmb	12 19 33.5	
	comp=Z,11nm,1.0s								
SPMN	**Marine on St.**	**89.25**	**36**		P		**P**	**12 19 32.8**	**0.0**
SPMN					IAmb		IAmb	12 19 34.2	
	comp=Z,18nm,0.9s								
SPMN	**Marine on St.**	**89.25**	**36**		P			12 19 32.8	
	baz=315								
GRA1	**Grafenberg Arr**	**89.27**	**331**		P		**P**	**12 19 33.5**	**+0.6**
GRF	**Grafenberg Arr**	**89.27**	**331**		P		**P**	**12 19 33.5**	**+0.6**
GRF					pmax		pmax		
	comp=Z,27nm,1.0s								
GRFO	**Grafenberg**	**89.27**	**331**		P		**P**	**12 19 33.6**	**+0.8**
GRFO					pmax		pmax		
	comp=Z,27nm,1.0s								
GRFO	**Grafenberg**	**89.27**	**331**		P		**P**	**12 19 33.6**	**+0.8**
MOA	**Molln**	**89.32**	**328**		*e*P		**P**	**12 19 33.5**	**+0.4**
	comp=Z,7.8nm,1.1s								
L34A	**Svendsen Farm,**	**89.60**	**40**		P		**P**	**12 19 34.2**	**-0.3**
CBKS	**Cedar Bluff**	**89.74**	**44**		P			12 19 34.6	
	baz=310								
I37A	**Lemond, Waseca**	**89.79**	**37**		P		**P**	**12 19 35.9**	**+0.5**
PERS	**Pernice**	**89.82**	**327**	*i*	P		**P**	**12 19 35.5**	**-0.1**
SOKA	**Soboth**	**89.83**	**327**		*e*P		**P**	**12 19 35.6**	**0.0**
	comp=Z,15nm,1.0s,SNR=6.8								
COWI	**Conover**	**90.41**	**33**		P		**P**	**12 19 38.0**	**-0.2**
COWI					IAmb		IAmb	12 19 39.5	
	comp=Z,15nm,1.1s								
MYKA	**Terra Mystica**	**90.51**	**328**		*e*P		**P**	**12 19 38.0**	**-0.8**
	comp=Z,6.8nm,0.7s								
MNTX	**Cornudas Mount**	**90.52**	**52**		P		**P**	**12 19 38.8**	**-0.2**
MNTX	**Cornudas Mount**	**90.53**	**52**		P			12 19 39.5	
	baz=307,SNR=7.1								
BTNL	**Ternell**	**90.60**	**334**		*d*P		**P**	**12 19 38.0**	**-1.0**
	comp=Z,7.8nm,1.2s								
BTNL					*d*PcP		**PcP**	**12 19 39.1**	**-1.0**
BTNL					*d*pP		**sP**	**12 19 44.7**	**+1.5**
MEM	**Membach**	**90.62**	**334**		*d*PcP		**P**	**12 19 39.5**	**+0.4**
GBAS	**Gorenja Brezov**	**90.65**	**327**	*i*	P		**P**	**12 19 38.9**	**-0.5**
N35A	**Tabor**	**90.75**	**40**		P		**P**	**12 19 39.8**	**-0.1**
BSTI	**Sart Tilman**	**90.81**	**334**	*d*	PcP		**PcP**	**12 19 40.9**	**-0.1**
STU	**Stuttgart**	**90.83**	**331**		P		**P**	**12 19 40.1**	**0.0**
STU					pmax		pmax		
	comp=Z,34nm,1.0s								
STU	**Stuttgart**	**90.83**	**331**		P		**P**	**12 19 40.1**	**0.0**
BHOU	**Houvegnez**	**90.83**	**334**	*d*	PcP		**P**	**12 19 40.6**	**+0.5**
ZOU	**Zoufplan**	**90.88**	**328**		P		**P**	**12 19 39.9**	**-0.7**
ZOU					IAmb		IAmb	12 19 40.7	
	comp=Z,29nm,1.4s								
MSTX	**Muleshoe**	**90.89**	**49**		P		**P**	**12 19 41.2**	**+0.4**
MSTX	**Muleshoe**	**90.89**	**49**		P			12 19 40.6	
	baz=308								
ABTA	**Abfaltersbach**	**90.94**	**328**		*e*P		**P**	**12 19 39.9**	**-0.9**
	comp=Z,12nm,0.9s,SNR=6.3								
WTTA	**Wattenberg**	**90.94**	**329**		*e*P		**P**	**12 19 40.6**	**-0.3**
	comp=Z,11nm,1.2s								
AMTX	**Amarillo**	**91.03**	**48**		P		**P**	**12 19 42.0**	**+0.6**
AMTX					IAmb		IAmb	12 19 42.7	
	comp=Z,9.2nm,0.9s								
AMTX	**Amarillo**	**91.03**	**48**		P			12 19 41.7	
	baz=309								
BCLA	**Clavier**	**91.04**	**334**		*d*PcP		**P**	**12 19 41.4**	**+0.3**
MOTA	**Moosalm**	**91.12**	**329**		*e*P		**P**	**12 19 41.6**	**-0.1**
	comp=Z,17nm,1.2s,SNR=7.0								
BGES	**Gesves**	**91.15**	**334**		*d*PcP		**P**	**12 19 41.2**	**-0.3**
RETA	**Reutte**	**91.16**	**330**		*i* P		**P**	**12 19 41.9**	**+0.1**
	comp=Z,30nm,1.0s,SNR=8.4								
SQTA	**Sankt Quirin**	**91.17**	**329**		*e*P		**P**	**12 19 41.7**	**-0.2**
	comp=Z,12nm,1.1s								
STAL	**STALIGIAL**	**91.22**	**328**		P		**P**	**12 19 41.2**	**-0.8**
STAL					IAmb		IAmb	12 19 41.8	
	comp=Z,16nm,1.0s								
WLF	**Walferdange**	**91.33**	**333**		*d*PcP		**PcP**	**12 19 43.3**	**-0.1**
WLF	**Walferdange**	**91.33**	**333**		P		**P**	**12 19 42.6**	**+0.2**
WLF					pmax		pmax		
	comp=Z,39nm,1.2s								
WLF	**Walferdange**	**91.33**	**333**		P		**P**	**12 19 42.6**	**+0.2**
BMRD	**Maredsous**	**91.34**	**335**		*d*PcP		**PcP**	**12 19 43.0**	**-0.4**
SNF	**Seneffe**	**91.35**	**335**		*d*PcP		**PcP**	**12 19 43.0**	**-0.4**
KSU1	**Kansas State U**	**91.39**	**42**		P		**P**	**12 19 42.9**	**0.0**
KSU1	**Kansas State U**	**91.39**	**42**		P			12 19 42.8	
	baz=312								
FETA	**Feichten**	**91.53**	**329**	*i*	P		**P**	**12 19 43.2**	**-0.4**
	comp=Z,24nm,1.0s,SNR=10								
BFO	**Black Forest**	**91.53**	**332**		P		**P**	**12 19 43.0**	**-0.4**
BFO					pmax		pmax		
	comp=Z,35nm,1.0s								
BFO	**Black Forest**	**91.53**	**332**		P		**P**	**12 19 43.0**	**-0.4**
DAVA	**Damuels**	**91.69**	**330**	*i*	P		**P**	**12 19 44.4**	**0.0**
	comp=Z,40nm,0.9s,SNR=14								
BAIF	**Baives**	**91.74**	**335**		*e*P		**P**	**12 19 44.0**	**-0.3**
BAIF					pmax		pmax		
	comp=Z,23nm,1.2s								
KAN10	**Anthony SW Sta**	**91.82**	**44**		P		**P**	**12 19 45.2**	**+0.3**
KAN10					IAmb		IAmb	12 19 46.5	
	comp=Z,13nm,1.1s								
KAN08	**Anthony NE Sta**	**91.83**	**44**		P		**P**	**12 19 45.3**	**+0.3**
KAN08					IAmb		IAmb	12 19 46.2	
	comp=Z,14nm,1.2s								
CTI	**Castel Tesino**	**91.86**	**328**		P		**P**	**12 19 43.8**	**-1.3**
CTI					pmax		pmax		
	comp=Z,28nm,1.5s								
CTI	**Castel Tesino**	**91.86**	**328**		P		**P**	**12 19 43.8**	**-1.3**
CTI					IAmb		IAmb	12 19 45.2	
	comp=Z,28nm,1.5s								
CDF	**Champ du Feu**	**91.89**	**332**		*e*P		**P**	**12 19 44.8**	**-0.4**
CDF					pmax		pmax		
	comp=Z,24nm,1.0s								
OK032	**Salt Plains WL**	**91.96**	**45**		P		**P**	**12 19 45.8**	**+0.2**
KAN05	**Bluff City Nor**	**91.96**	**44**		P		**P**	**12 19 45.6**	**-0.1**
KAN01	**Argonia South**	**92.00**	**44**		P		**P**	**12 19 45.7**	**-0.1**
KAN01					IAmb		IAmb	12 19 47.2	
	comp=Z,22nm,1.3s								
KAN14	**Manchester OK**	**92.01**	**44**		P		**P**	**12 19 45.7**	**-0.1**
ECH	**Echery**	**92.10**	**332**		P		**P**	**12 19 45.8**	**-0.3**
ECH					pmax		pmax		
	comp=Z,16nm,0.9s								
ECH	**Echery**	**92.10**	**332**		P		**P**	**12 19 45.8**	**-0.3**
ECH					IAmb		IAmb	12 19 47.1	
	comp=Z,16nm,0.9s								
N38A	**Joes South For**	**92.12**	**39**		P		**P**	**12 19 46.3**	**0.0**
JFWS	**Jewell Farm**	**92.19**	**36**		P			12 19 46.0	
	baz=316								
MATQ	**Matagami**	**92.36**	**25**		P			12 19 46.7	
	baz=326								
TEOL	**Teolo**	**92.38**	**328**		P		**P**	**12 19 46.6**	**-0.7**
E46A	**Sault Ste Mari**	**92.41**	**31**		P		**P**	**12 19 48.0**	**+0.6**
HINF	**Hinteralfeld**	**92.54**	**332**		*e*P		**P**	**12 19 47.4**	**-0.7**
HINF					pmax		pmax		
	comp=Z,15nm,1.0s								
TUE	**Stuetta**	**92.56**	**330**		P		**P**	**12 19 47.9**	**-0.5**
HAU	**Haudompre**	**92.59**	**332**		*e*P		**P**	**12 19 47.7**	**-0.6**
HAU					pmax		pmax		
	comp=Z,12nm,0.9s								
P38A	**Dawn**	**92.77**	**40**		P		**P**	**12 19 49.2**	**-0.1**
T35A	**Sooner Cattle**	**92.91**	**44**		P		**P**	**12 19 49.9**	**-0.1**
T35A					IAmb		IAmb	12 19 51.4	
	comp=Z,21nm,1.2s								
WMOK	**Wichita Mounta**	**92.95**	**46**		P		**P**	**12 19 50.1**	**-0.2**
WMOK					pmax		pmax		
	comp=Z,17nm,1.1s								
WMOK	**Wichita Mounta**	**92.95**	**46**		P		**P**	**12 19 50.1**	**-0.2**
WMOK					IAmb		IAmb	12 19 51.6	
	comp=Z,17nm,1.1s								
WMOK	**Wichita Mounta**	**92.95**	**46**		P			12 19 50.2	
	baz=311								
OK029	**Liberty Lake**	**93.08**	**45**		P		**P**	**12 19 50.9**	**+0.1**
TX31	**Lajitas Ar. Si**	**93.13**	**53**		P		**P**	**12 19 51.5**	**+0.2**
TX32	**Lajitas Array**	**93.13**	**53**		P		**P**	**12 19 51.5**	**+0.3**
TXAR	**Lajitas Array**	**93.13**	**53**		P		**P**	**12 19 52.0**	**+0.8**
	comp=Z,15nm,1.0s,baz=298,slow=2.6,SNR=92								
TXAR	**Lajitas Array**	**93.13**	**53**		P		**P**	**12 19 51.7**	**+0.5**
HPIG		**93.16**	**56**		P		**P**	**12 19 52.1**	**+0.5**
HPIG					IAmb		IAmb	12 19 53.6	
	comp=Z,11nm,1.1s								
LSQQ	**Lebel-sur-Quev**	**93.18**	**25**		P			12 19 50.1	
	baz=326								
OK031	**S. Brethren Rd**	**93.35**	**45**		P		**P**	**12 19 51.7**	**-0.3**
CHGQ	**Chibougamau**	**93.37**	**23**		P			12 19 51.5	
	baz=329								
OK030	**Cody Creek RV**	**93.40**	**45**		P		**P**	**12 19 52.4**	**+0.1**
OK030					IAmb		IAmb	12 19 53.6	
	comp=Z,16nm,1.1s								
FNO	**Franklin**	**93.47**	**45**		P		**P**	**12 19 53.6**	**+1.0**
SENIN	**Lac Senin/Sane**	**93.52**	**331**		P		**P**	**12 19 52.5**	**-0.4**
SENIN					IAmb		IAmb	12 19 53.9	
	comp=Z,10nm,1.1s								
P40A	**Paris**	**93.66**	**39**		P		**P**	**12 19 53.0**	**-0.4**
ABTX	**Abilene, Hawle**	**93.77**	**49**		P		**P**	**12 19 54.3**	**+0.2**
ABTX	**Abilene, Hawle**	**93.77**	**49**		P			12 19 54.0	
	baz=310								
VLDQ	**Val d'Or**	**93.79**	**26**		P		**P**	**12 19 52.6**	**-1.1**
VLDQ					IAmb		IAmb	12 19 53.6	
	comp=Z,8.6nm,1.1s								
TUL1	**Leonard**	**94.01**	**44**		P			12 19 54.7	
	baz=312								
CLF	**Chambon-Foret**	**94.15**	**335**		P		**P**	**12 19 56.1**	**+0.6**
LOR	**Lormes**	**94.17**	**333**		*e*P		**P**	**12 19 55.2**	**-0.4**
LOR					pmax		pmax		
	comp=Z,36nm,1.1s								
S39A	**Bolivar**	**94.23**	**41**		P		**P**	**12 19 55.1**	**-1.0**
S39A					IAmb		IAmb	12 19 56.5	
	comp=Z,19nm,1.1s								
HDIL	**Hopedale**	**94.39**	**37**		P			12 19 56.5	
	baz=317								
R40A	**Maddies Statio**	**94.41**	**40**		P		**P**	**12 19 56.0**	**-0.9**
R40A					IAmb		IAmb	12 19 57.6	
	comp=Z,16nm,1.0s								
LPL	**La Plagne**	**94.43**	**331**		*e*P		**P**	**12 19 56.7**	**-0.4**
LPL					pmax		pmax		
	comp=Z,17nm,1.0s								
LPG	**La Plagne**	**94.44**	**331**		*e*P		**P**	**12 19 56.9**	**-0.3**
LPG					pmax		pmax		
	comp=Z,12nm,0.9s								
U38A	**Gravette**	**94.48**	**43**		P		**P**	**12 19 56.8**	**-0.5**
U38A					IAmb		IAmb	12 19 58.2	
	comp=Z,18nm,1.1s								
FLN	**La Foliniere**	**94.50**	**337**		*e*P		**P**	**12 19 58.0**	**+1.0**
FLN					pmax		pmax		
	comp=Z,33nm,1.2s								
AVF	**Avril sur Loir**	**94.76**	**333**		*e*P		**P**	**12 19 58.0**	**-0.3**
AVF					pmax		pmax		
	comp=Z,57nm,1.1s								
Z35A	**Perchaven, San**	**94.83**	**47**		P		**P**	**12 19 58.9**	**0.0**
HHAR	**Hobbs**	**94.85**	**43**		P		**P**	**12 19 58.5**	**-0.5**
HHAR					IAmb		IAmb	12 19 59.7	
	comp=Z,18nm,1.3s								
GRR	**Gorron**	**94.95**	**337**		*e*P		**P**	**12 19 58.9**	**-0.2**
GRR					pmax		pmax		
	comp=Z,56nm,1.3s								
JCT	**Junction City**	**95.03**	**50**		P		**P**	**12 19 59.5**	**-0.4**
JCT					pmax		pmax		
	comp=Z,9.0nm,0.9s								
JCT	**Junction City**	**95.03**	**50**		P		**P**	**12 19 59.5**	**-0.4**
JCT					IAmb		IAmb	12 20 00.6	
	comp=Z,9.2nm,0.8s								
JCT	**Junction City**	**95.03**	**50**		P			12 19 59.7	
	baz=310								
MBDF	**Montbardon**	**95.04**	**330**		*e*P		**P**	**12 19 59.6**	**-0.2**
MBDF					pmax		pmax		
	comp=Z,11nm,1.1s								
CCM	**Cathedral Cave**	**95.15**	**40**		P		**P**	**12 19 59.8**	**-0.4**
CCM					pmax		pmax		
	comp=Z,20nm,1.1s								
CCM	**Cathedral Cave**	**95.15**	**40**		P		**P**	**12 19 59.8**	**-0.4**
CCM	**Cathedral Cave**	**95.15**	**40**		P			12 20 00.1	
	baz=316								
BGF	**Bois d'Agland**	**95.15**	**334**		*e*P		**P**	**12 19 59.8**	**-0.3**
BGF					pmax		pmax		
	comp=Z,18nm,1.2s								
RKT	**Rikitea**	**95.17**	**114**		*e*LR		LR	12 50 07.8	
	comp=Z,382nm,32.8s								
MGMO	**Mountain Grove**	**95.21**	**41**		P		**P**	**12 19 59.4**	**-1.2**
MGMO					IAmb		IAmb	12 20 01.2	
	comp=Z,15nm,1.1s								
ORIF	**Oris-en-Rattie**	**95.27**	**331**		*e*P		**P**	**12 20 00.4**	**-0.4**
ORIF					pmax		pmax		
	comp=Z,20nm,1.4s								
ALGO	**Algonquin Park**	**95.35**	**27**		P			12 20 00.2	
	baz=326								
U40A	**Yellville**	**95.43**	**42**		P		**P**	**12 20 01.1**	**-0.5**
U40A	**Yellville**	**95.44**	**42**		P			12 20 01.2	
	baz=314								
D55A	**Sainte-Anne-du**	**95.44**	**25**		P			12 20 01.4	
	baz=328								
WHTX	**Lake Whitney,**	**95.58**	**48**		P		**P**	**12 20 03.0**	**+0.7**
WHTX	**Lake Whitney,**	**95.59**	**48**		P			12 20 02.6	
	baz=311								
TCF	**Toulx Ste Croi**	**95.62**	**334**		*e*P		**P**	**12 20 02.1**	**-0.2**
TCF					pmax		pmax		
	comp=Z,27nm,1.3s								
SFIN	**Lafayette**	**95.65**	**36**		P			12 20 01.7	
	baz=318								
D56A	**ZEC Mazanza, M**	**95.68**	**25**		P			12 20 01.8	
	baz=328								
W39A	**Magazine**	**95.69**	**43**		P			12 20 02.1	
	baz=314								
G54A	**Lake Saint Pet**	**95.79**	**28**		P			12 20 01.5	
	baz=326								
I51A	**Listowel**	**95.86**	**30**		P			12 20 02.3	
	baz=323								
E56A	**St. Veronique**	**96.00**	**25**		P			12 20 03.4	
	baz=328								
FCAR	**Ozark Folk Cen**	**96.18**	**42**		P		**P**	**12 20 04.3**	**-0.7**
FCAR					IAmb		IAmb	12 20 05.4	
	comp=Z,9.3nm,1.2s								
MIAR	**Mount Ida**	**96.27**	**44**		P		**P**	**12 20 05.5**	**+0.1**
MIAR					pmax		pmax		
	comp=Z,13nm,1.0s								
MIAR	**Mount Ida**	**96.27**	**44**		P		**P**	**12 20 05.5**	**+0.1**
MIAR					IAmb		IAmb	12 20 06.5	
	comp=Z,12nm,0.9s								
MIAR	**Mount Ida**	**96.27**	**44**		P			12 20 05.2	
	baz=314								
H53A	**Bobcaygeon**	**96.27**	**28**		P			12 20 04.5	
	baz=325								
435B	**Jarrell**	**96.30**	**49**		P			12 20 05.5	
	baz=311								
WHAR	**Wooly Hollow**	**96.51**	**42**		P		**P**	**12 20 06.0**	**-0.5**
WHAR					IAmb		IAmb	12 20 07.2	
	comp=Z,15nm,1.2s								
W41B	**Gary Mavity, V**	**96.61**	**43**		P			12 20 06.1	
	baz=315								
833A	**Chaparral WMA,**	**96.68**	**52**		P			12 20 08.0	
	baz=310								
RJF	**Les Rejaudoux**	**96.71**	**334**		*e*P		**P**	**12 20 07.3**	**+0.1**
RJF					pmax		pmax		
	comp=Z,33nm,1.5s								
X40A	**Basin Creek Fa**	**96.75**	**43**		P			12 20 07.6	
	baz=314								
CAF	**Calviac**	**96.81**	**333**		*e*P		**P**	**12 20 08.3**	**+0.6**
CAF					pmax		pmax		
	comp=Z,21nm,1.2s								
E60A	**Ste Agathe de**	**97.42**	**23**		P			12 20 09.4	
	baz=331								
P49A	**Miami Univ. Ec**	**97.48**	**35**		P			12 20 10.3	
	baz=320								
G58A	**Ormstown**	**97.55**	**25**		P			12 20 09.4	
	baz=329								
L53A	**Girard**	**97.68**	**31**		P			12 20 10.0	
	baz=324								
LONY	**Lake Ozonia**	**97.81**	**26**		P			12 20 10.5	
	baz=328								
WVT	**Waverly**	**98.42**	**39**		P			12 20 13.4	
	baz=318								
O53A	**New Philadelph**	**98.61**	**33**		P			12 20 14.3	
	baz=323								
P52A	**Corning**	**98.66**	**33**		P			12 20 14.9	
	baz=322								
SSPA	**Standing Stone**	**99.79**	**30**		P			12 20 19.7	
	baz=325								
H65A	**Eastbrook**	**99.96**	**22**		P			12 20 20.4	
	baz=333								
H66A	**Whiting**	**100.17**	**21**		P			12 20 20.6	
	baz=334								
L60A	**Shokan**	**100.18**	**27**		P			12 20 20.9	
	baz=328								
J63A	**Strafford**	**100.25**	**24**		P			12 20 21.0	
	baz=331								
LRAL	**Lakeview Retre**	**101.17**	**41**		P			12 20 24.7	
	baz=318								
L63A	**North Scituate**	**101.28**	**25**		P			12 20 25.1	
	baz=330								
R57A	**Stanardsville**	**101.42**	**32**		P			12 20 25.6	
	baz=325								
P60A	**Greenville**	**101.44**	**29**		P			12 20 25.2	
	baz=327								
M63A	**Gales Ferry**	**101.52**	**26**		P			12 20 27.6	
	baz=330								
GOGA	**Godfrey**	**102.82**	**38**		P			12 20 33.0	
	baz=320								
QSPA	**South Pole Qui**	**120.30**	**180**				**PKPdf**	**12 25 26.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**122.66**	**313**		PKP		**PKPdf**	**12 25 32.6**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=4.5,slow=2.9,SNR=9.1								
TORD	**Torodi Ar. Bea**	**122.66**	**313**				**PKPdf**	**12 25 32.5**	**-0.8**
SYO	**Syowa Base**	**122.86**	**205**	⇑	*e*Pdiff		**Pdif**	**12 22 03.0**	**+0.2**
SYO	**Syowa Base**	**122.86**	**205**	⇑	*e*pPdiff		pPdif	12 22 06.1	+0.3
KOWA	**Kowa**	**124.99**	**320**		PKPdf		**PKiKP**	**12 25 38.0**	**0.0**
SDV	**Santo Domingo**	**129.35**	**45**				**PKiKP**	**12 25

VILB	Vilhena	152.49	56	eP		PKPdf	12 26 27.9 +1.1
PRPB	Parauapebas	153.02	29	eP		PKPdf	12 26 28.9 +1.2
ZON	Zonda	153.07	100			PKiKP	12 26 35.4 +0.6
NBPS	Pedro II - PI	153.69	10	eP		PKPdf	12 26 28.4 -0.4
CLDB	Colider	153.91	45	eP		PKPdf	12 26 27.8 -1.1
PTLB	Pontes e Lacer	154.91	58	eP		PKPdf	12 26 31.6 +1.4
NBPB	Pedra_Branca-C	155.04	6	eP		PKPdf	12 26 31.6 +1.1
NBPA	Parau_RN	155.34	360	eP		PKPdf	12 26 32.7 +1.7
SMTB	Santa Maria do	156.36	26	eP		PKPdf	12 26 33.2 +0.9
SNDB	Serra Nova Dou	157.38	38	eP		PKPdf	12 26 34.7 +1.1
CPUP	Villa Florida	161.82	82	PKP		PKPdf	12 26 39.1 +0.8
	comp=Z,2.8nm,0.9s,baz=326,slow=1.2,SNR=5.6						
CPUP				PKPab		PKPab	12 27 24.5 +0.5
	comp=Z,4.1nm,1.0s,baz=302,slow=2.8,SNR=5.9						
CPUP	Villa Florida	161.82	82			PKPdf	12 26 39.3 +1.0
BDFB	Brasilia	162.17	36	PKP		PKPdf	12 26 39.8 +0.7
	comp=Z,5.0nm,1.1s,baz=308,slow=3.3,SNR=4.9						
BDFB	Brasilia	162.17	36	PKIKP		PKPdf	12 26 39.5 +0.5
BDFB	Brasilia	162.17	36	PKPdf		PKPdf	12 26 39.5 +0.5

IDC ***19*** *12:17:37.0±0.7,5.°40S×153.°00E, h0km, mb4.2/23, mb1 4.3/25,mb1mx4.2/46,mbtmp4.2/25,ML2.9/2,MS3.5/4, Ms1 3.5/4,ms1mx3.2/29 Error ellipse: s-maj=24.9km s-min=13.1km az=109.0*

DJA ***19*** *12:17:42.7±1.1,5.°S±5.°×15.°3E±1.°1, h51km±8km, M4.6/12, mB4.7/2, mb4.5/12, MLv4.7/3, Mw(mB)4.0/2*

NEIC ***19*** *12:17:42.3±0.9,5.°40S±0.°07×152.°96E±0.°05, h42km±4km, mb4.5/43, Error ellipse: s-maj=10.3km s-min=7.4km az=165.0*

ISC 19 12:17:42.1±0.5,5.°39S±0.°06×152.°93E±0.°09, h37km, n89, σ0s80/92, mb4.3/38, MS3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.42	327	Pn	Pn	12 18 06.0	+0.6
MANU	Manus Island	6.47	301	Pn	Pn	12 19 15.2	+0.3
PMG	Port Moresby	6.97	235	Pn	Pn	12 19 23.2	+1.5
	2.6nm,0.3s,baz=27,slow=6.8,SNR=18						
PMG				Sn	Sn	12 20 39.3	-0.5
	10nm,0.3s,baz=148,slow=21,SNR=15						
PMG	Port Moresby	6.97	235	Pn	Pn	12 19 22.6	+0.9
PATS	Pohnpei	13.28	24	Pn	Pn	12 20 47.7	-0.5
CTA	Charters Tower	15.98	203	Pn	Pn	12 21 25.8	+1.4
	0.2nm,0.3s,baz=360,slow=13,SNR=3.9						
CTAO	Charters Tower	15.98	203		Pn	12 21 23.8	-0.5
EIDS	Eidsvold	19.94	185	P	P	12 22 10.9	-0.1
FAKI	Fak Fak	20.77	276	P	P	12 22 19.1	-1.1
FAKI				IAmb	IAmb	12 22 21.4	
	comp=Z,18nm,1.1s						
SIJI	Sorong	22.09	281	P	P	12 22 35.6	+1.3
	comp=Z,6.4nm,0.7s,baz=52,slow=9.5,SNR=5.2						
SWI	Sorong	22.09	281	P	P	12 22 35.0	+0.7
	comp=Z,19nm,1.0s						
WB0	Warramunga Arr	23.01	230	P	P	12 22 44.4	+0.3
WB0				IAmb	IAmb	12 22 55.3	
	comp=Z,19nm,1.1s						
WR0	Warramunga Arr	23.01	229	P	P	12 22 44.3	+0.3
WR0				IAmb	IAmb	12 23 01.1	
	comp=Z,9.9nm,0.8s						
WB2	Warramunga Arr	23.15	230	P	P	12 22 45.8	+0.4
WB2				IAmb	IAmb	12 22 54.2	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	23.16	230	P	P	12 22 46.0	+0.6
	comp=Z,4.9nm,0.7s,baz=55,slow=10,SNR=21						
WRA				PcP	PcP	12 26 34.7	+1.3
	comp=Z,0.9nm,0.9s,baz=38,slow=1.9,SNR=2.9						
WRA	Warramunga Arr	23.16	230	P	P	12 22 45.6	+0.2
AS31	Alice Springs	25.80	223	P	P	12 23 10.2	+0.2
ASAR	Alice Springs	25.80	223	P	P	12 23 09.8	-0.2
	comp=Z,3.2nm,0.8s,baz=56,slow=9.0,SNR=22						
ASAR				PcP	PcP	12 26 41.2	+2.1
	comp=Z,0.4nm,0.7s,baz=48,slow=4.1,SNR=2.5						
ASAR	Alice Springs	25.80	223	P	P	12 23 08.9	-1.1
KNRA	Kununurra	25.83	245	P	P	12 23 10.0	-0.3
KNRA				IAmb	IAmb	12 23 17.4	
	comp=Z,20nm,1.0s						
STKA	Stephens Creek	28.41	201	P	P	12 23 32.6	-0.6
	comp=Z,2.0nm,0.6s,baz=22,slow=12,SNR=7.1						
STKA				LR	LR	12 34 51.6	
	comp=Z,154nm,18.9s,baz=21,slow=36						
STKA	Stephens Creek	28.41	201	P	P	12 23 32.4	-0.8
FITZ	Fitzroy Crossi	29.49	242	P	P	12 23 42.8	-0.3
	comp=Z,5.9nm,0.8s,baz=53,slow=7.7,SNR=8.2						
FITZ	Fitzroy Crossi	29.49	242	P	P	12 23 42.5	-0.5
FITZ				IAmb	IAmb	12 23 48.7	
	comp=Z,13nm,1.2s						
BBOO	Buckleboo	31.49	208	P	P	12 23 59.5	-1.0
FORT	Forrest	34.41	220	P	P	12 24 24.7	-1.4
JNU	Nakatsue	43.65	333	P	P	12 25 42.5	-0.7
MJAR	Matsushiro Arr	43.93	343	P	P	12 25 44.1	-1.4
	comp=Z,2.0nm,0.9s,baz=177,slow=8.2,SNR=6.8						
JTM	Tenmabayashi	47.23	348	P	P	12 26 11.4	-0.1
KSRS	Korea Array	48.58	333	P	P	12 26 22.6	+0.6
	comp=Z,0.8nm,0.8s,baz=141,slow=8.3,SNR=2.5						
USRK	Ussuriysk Ar.	52.85	341	P	P	12 26 54.8	+0.8
	comp=Z,1.3nm,0.7s,baz=165,slow=6.1,SNR=6.7						
USRK	Ussuriysk Ar.	52.85	341	P	P	12 26 54.0	-0.1
ENH	Enshi	54.65	313	P	P	12 27 07.4	-0.1
KLR	Kul'dur	57.45	344	P	P	12 27 28.1	+0.9
	comp=Z,3.0nm,0.8s,baz=125,slow=3.8,SNR=11						
CMAR	Chiang Mai Arr	58.25	295	P	P	12 27 34.6	+1.3
	comp=Z,1.4nm,0.5s,baz=111,slow=5.9,SNR=11						
CMAR				LR	LR	12 53 21.6	
	comp=Z,14nm,18.6s,baz=80,slow=37						
CMAR	Chiang Mai Arr	58.25	295	P	P	12 27 33.0	-0.4
CHTO	Chiang Mai	58.36	296	P	P	12 27 34.2	+0.1
CHTO				IAmb	IAmb	12 27 36.1	
	comp=Z,3.3nm,1.1s						
PET	Petropavlovsk	58.40	4	P	P	12 27 33.9	+0.2
PEA0B	Petropavlovsk-	58.42	3	P	P	12 27 34.1	+0.2
PETK	Petropavlovsk-	58.42	3	P	P	12 27 35.3	+1.4
	comp=Z,11nm,0.8s,baz=153,slow=5.9,SNR=43						
PETK				LR	LR	12 48 07.3	
	comp=Z,43nm,20.0s,baz=173,slow=31						
PETK	Petropavlovsk-	58.42	3	P	P	12 27 34.4	+0.5
MA2	Magadan	64.79	359	P	P	12 28 16.8	+0.1
ULN	Ulaanbaatar	66.56	328	P	P	12 28 28.5	-0.2
ULN				IAmb	IAmb	12 28 30.7	
	comp=Z,3.3nm,1.1s						
SHL	Shillong	66.72	301	P	P	12 28 29.1	-1.0
SHL				IAmb	IAmb	12 28 31.5	
	comp=Z,7.6nm,1.1s						
SONM	Songino Array	66.89	328	P	P	12 28 32.3	+1.6
	comp=Z,0.9nm,0.4s,baz=150,slow=6.0,SNR=7.6						
SONM	Songino Array	66.89	328	P	P	12 28 30.7	0.0
CASY	Casey	67.49	197	P	P	12 28 33.3	-0.7
CASY				IAmb	IAmb	12 28 38.1	
	comp=Z,5.5nm,1.1s						
VNDA	Vanda	72.24	178	P	P	12 29 04.6	+1.6
	comp=Z,0.7nm,0.8s,baz=297,slow=5.1,SNR=2.4						
VNDA	Vanda	72.24	178	P	P	12 29 02.7	-0.3
PALK	Pallekele	73.16	279	LR	LR	13 05 13.5	
	comp=Z,41nm,18.8s,baz=144,slow=39						
BILL	Bilibino	73.87	5	P	P	12 29 12.3	-0.5
AIS	Amsterdam Isla	75.15	232	P	P	12 29 19.5	-1.4
TIXI	Tiksi	78.50	352	P	P	12 29 39.3	+0.4
	comp=Z,0.6nm,0.3s,baz=138,slow=5.9,SNR=6.3						
TIXI	Tiksi	78.50	352	P	P	12 29 38.7	-0.3
SKT	Skwentna	79.41	23	P	P	12 29 43.5	-0.7
RDOG	Red Dog Mine	79.52	15	P	P	12 29 44.1	-0.5
RDOG				IAmb	IAmb	12 29 47.6	
	comp=Z,8.0nm,1.0s						
MK31	Makanchi Array	80.86	319	P	P	12 29 52.2	-0.1
MKAR	Makanchi Array	80.86	319	P	P	12 29 53.3	+0.9
	comp=Z,1.6nm,0.8s,baz=99,slow=6.0,SNR=11						
MKAR	Makanchi Array	80.86	319	P	P	12 29 52.3	0.0
IMAR	Indian Mountai	80.90	19	P	P	12 29 51.8	-0.3
MAKZ	Makanchi	81.06	319	P	P	12 29 52.7	-0.8
MAKZ				IAmb	IAmb	12 29 56.8	
	comp=Z,5.0nm,1.1s						
ZAA0	Zalesovo Array	81.72	326	P	P	12 29 56.4	-0.3
ZAA0				IAmb	IAmb	12 30 08.6	
	comp=Z,3.0nm,0.8s						
ZALV	Zalesovo Beam	81.72	326	P	P	12 29 56.7	0.0
	comp=Z,1.8nm,0.6s,baz=106,slow=5.3,SNR=11						
ZALV	Zalesovo Beam	81.72	326	P	P	12 29 56.5	-0.2
ILAR	Eielson Array	82.66	22	P	P	12 30 01.1	-0.3
	comp=Z,1.2nm,0.8s,baz=246,slow=5.2,SNR=7.7						
ILAR	Eielson Array	82.66	22	P	P	12 30 00.7	-0.7
TOLK	Toolik Lake Re	83.74	18	P	P	12 30 06.6	-0.4
TOLK				IAmb	IAmb	12 30 18.9	
	comp=Z,3.9nm,1.1s						
KURBB	Kurchatov Arra	84.34	322	P	P	12 30 10.8	+0.5
	comp=Z,0.9nm,0.8s,baz=109,slow=4.1,SNR=10						
NIL	Nilore	84.42	304	P	P	12 30 11.3	+0.1
QSPA	South Pole Qui	84.57	180	P	P	12 30 11.8	+0.3
AAK	Ala-Archa	85.17	313	P	P	12 30 16.4	+1.4
	comp=Z,1.9nm,0.6s,baz=110,slow=3.5,SNR=7.0						
AAK	Ala-Archa	85.17	313	P	P	12 30 14.9	0.0
AAK				IAmb	IAmb	12 30 17.6	
	comp=Z,5.7nm,1.1s						
WHY	Whitehorse	86.06	28	P	P	12 30 18.3	-0.6
NRIK	Noril'sk	86.56	341	P	P	12 30 23.6	+2.6
	comp=Z,2.1nm,0.5s,baz=100,slow=3.7,SNR=4.2						
NRIK	Noril'sk	86.56	341	P	P	12 30 20.7	-0.3
NRIK				IAmb	IAmb	12 30 25.1	
	comp=Z,2.9nm,0.7s						
KK31	Karatay Array	88.13	313	P	P	12 30 29.6	+0.4
KK31				IAmb	IAmb	12 30 43.3	
	comp=Z,3.0nm,1.2s						
KKAR	Karatay Array	88.13	313	P	P	12 30 29.0	-0.3
KKAR	Karatay Array	88.13	313	P	P	12 30 28.6	-0.6
KKAR				IAmb	IAmb	12 30 43.2	
	comp=Z,3.0nm,1.2s						
KBO	Bosley Butte	88.30	48	P	P	12 30 29.6	-0.6
INK	Inuvik	88.96	21	P	P	12 30 32.7	+0.2
	comp=Z,1.6nm,0.9s,baz=254,slow=6.1,SNR=5.4						
INK	Inuvik	88.96	21	P	P	12 30 32.3	-0.2
BVAR	Borovoye Array	89.79	323	P	P	12 30 36.5	-0.3
	comp=Z,1.7nm,0.7s,baz=135,slow=17,SNR=12						
YKA	Yellowknife Ar	95.89	28	P	P	12 31 06.0	+1.4
	comp=Z,0.3nm,0.8s,baz=264,slow=4.6,SNR=5.4						
PLCA	Paso Flores	119.23	143	PKP	PKPdf	12 36 27.4	-0.5
	comp=Z,2.1nm,0.9s,baz=174,slow=3.4,SNR=2.9						
PLCA	Paso Flores	119.23	143		PKPdf	12 36 26.9	-0.9
GERES	GERESS Array B	124.62	328	PKP	PKiKP	12 36 39.0	+0.8
	comp=Z,0.4nm,0.6s,baz=0.0,slow=2.7,SNR=4.0						
GERES	GERESS Array B	124.62	328		PKPdf	12 36 37.7	-0.3
TORD	Torodi Ar. Bea	150.61	287	PKPbc	PKPbc	12 37 31.1	-0.1
	comp=Z,3.3nm,0.8s,baz=49,slow=1.9,SNR=8.2						
TORD	Torodi Ar. Bea	150.61	287		PKPbc	12 37 31.1	-0.1
TORD				PKPab	PKPab	12 37 37.5	-0.5

IDC ***19*** *12:19:35.8±3.9, 17.°46S×179.°06W, h541km±19km, mb3.0/4, mb1 3.1/5,mb1mx2.8/36,mbtmp3.8/5, Error ellipse: s-maj=103.4km s-min=28.9km az=125.0*

ISC 19 12:19:35.0±3.9, 17.°5S±0.°5×178.°9W±0.°7, h539km, n6, σ0s28/6, mb3.6/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	2.88	265	P	P	12 20 48.8	+0.3
	2.6nm,0.3s,baz=91,slow=4.1,SNR=13						
STKA	Stephens Creek	38.38	241	P	P	12 26 10.4	+0.1
	1.9nm,0.9s,baz=67,slow=7.7,SNR=1.7						
ASAR	Alice Springs	44.42	254	P	P	12 26 57.9	-0.3
	0.4nm,0.5s,baz=90,slow=8.1,SNR=7.9						
MJAR	Matsushiro Arr	67.30	324	P	P	12 29 36.3	0.0
	0.5nm,0.3s,baz=116,slow=7.2,SNR=2.5						
PETK	Petropavlovsk-	73.18	346	P	P	12 30 10.8	0.0
	2.2nm,0.9s,baz=193,slow=5.0,SNR=2.7						
GERES	GERESS Array B	147.11	345	PKPbc	PKPbc	12 38 17.5	-0.1
	0.2nm,0.5s,baz=90,slow=2.0,SNR=2.2						

NOU ***19*** *12:37:38.0, 14.°23S×172.°19W, h33km, MLv3.0, Samoa Islands*

IDC 19 12:37:25.8±11.0, 14.°75S×174.°57W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/30, mbtmp3.8/3, MS3.9/3, Ms1 3.9/3, ms1mx3.2/38, Error ellipse: s-maj=512.8km s-min=39.6km az=139.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.83	73	P	Pn	12 37 50.0	-22
RPZ	Rata Peaks	31.38	200	LR	LR	12 55 35.5	
	comp=Z,251nm,18.9s,baz=286,slow=35						
H11S2	WAKE ISLAND Hy	37.83	330	T	T	13 26 13.9	
	baz=149,slow=76,SNR=3.9						
H11S3	WAKE ISLAND Hy	37.84	330	T	T	13 26 10.1	
	baz=149,slow=76,SNR=4.3						
H11S1	WAKE ISLAND Hy	37.85	330	T	T	13 26 09.0	
	baz=149,slow=76,SNR=4.2						
H11N3	WAKE ISLAND Hy	38.79	331	T	T	13 27 25.7	
	baz=150,slow=76,SNR=7.2						
H11N1	WAKE ISLAND Hy	38.80	331	T	T	13 27 26.6	
	baz=150,slow=76,SNR=5.8						
H11N2	WAKE ISLAND Hy	38.81	331	T	T	13 27 21.8	
	baz=150,slow=76,SNR=6.0						
WRA	Warramunga Arr	48.90	256	P	P	12 46 14.1	+0.1
	0.5nm,0.5s,baz=90,slow=7.6,SNR=8.9						
ASAR	Alice Springs	49.24	251	P	P	12 46 16.2	-0.4
	1.4nm,0.5s,baz=85,slow=8.0,SNR=41						
ASAR				LR	LR	13 05 57.6	
	comp=Z,147nm,18.9s,baz=52,slow=35						
KLR	Kul'dur	79.36	327	LR	LR	13 18 04.2	
	comp=Z,32nm,20.4s,baz=352,slow=31						
ILAR	Eielson Array	82.03	12	P	P	12 49 47.5	0.0
	0.3nm,0.7s,baz=211,slow=6.9,SNR=2.0						

IDC ***19*** *12:48:37.8±0.8,5.°44S×153.°03E, h0km, mb4.3/19, mb1 4.4/21,mb1mx4.2/41,mbtmp4.3/21,ML2.9/2,MS3.6/10, Ms1 3.6/10,ms1mx3.3/39, Error ellipse: s-maj=24.7km s-min=13.8km az=112.0*

DJA ***19*** *12:48:39.5±2.5,5.°S±4.°×15.°3E±.°, h11km±16km, M4.7/16, mB5.0/2, mb4.6/16, MLv4.8/3, Mw(mB)4.3/2*

NEIC ***19*** *12:48:42.5±1.1,5.°49S±0.°07×153.°01E±0.°08, h37km±6km, mb4.6/44, Error ellipse: s-maj=11.5km s-min=9.2km az=58.0*

ISC 19 12:48:42.9±0.4,5.°49S±0.°05×153.°03E±0.°07, h37km, n98, σ0s93/93, mb4.4/41, MS3.6/9, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.55	326	Pn	Pn	12 49 07.9	0.0
MANU	Manus Island	6.60	301	Pn	Pn	12 50 16.0	-1.4
PMG	Port Moresby	7.00	236	Pn	Pn	12 50 24.0	+1.1
	3.5nm,0.3s,baz=78,slow=9.6,SNR=20						
PMG				Sn	Sn	12 51 40.4	-0.8
	14nm,0.3s,baz=56,slow=18,SNR=14						
PMG	Port Moresby	7.00	236	Pn	Pn	12 50 22.8	0.0
HNR	Honiara	7.90	120	LR	LR	12 54 14.7	
	comp=Z,378nm,18.1s,baz=298,slow=42						
HNR	Honiara	7.90	120	Pn	Pn	12 50 35.2	0.0
PATS	Pohnpei	13.33	23	Pn	Pn	12 51 49.5	-0.1
CTA	Charters Tower	15.94	204	Pn	Pn	12 52 25.9	+1.4
	0.1nm,0.3s,baz=33,slow=12,SNR=3.0						
CTAO	Charters Tower	15.94	204		Pn	12 52 24.0	-0.5
EIDS	Eidsvold	19.86	185		P	12 53 09.9	-0.9
FAKI	Fak Fak	20.88	276	P	P	12 53 21.4	-0.6
FAKI				IAmb	IAmb	12 53 26.4	
	comp=Z,27nm,1.5s						
DZM	Mont Dzumac	20.98	143	LR	LR	13 00 53.6	
	comp=Z,152nm,19.9s,baz=20,slow=35						
SAUI	Saumlaki	21.72	262	P	P	12 53 34.3	+3.3
	comp=Z,116nm,1.2s						
SIJI	Sorong	22.20	281	P	P	12 53 36.8	+0.5
	comp=Z,6.4nm,0.6s,baz=64,slow=11,SNR=5.5						
SWI	Sorong	22.21	281	P	P	12 53 38.5	+2.2
	comp=Z,868nmcomp=Z,14nm,0.8s						
MTN	Manton Dam	22.80	250	P	P	12 53 43.3	+0.7
MTN				IAmb	IAmb	12 53 48.0	
	comp=Z,23nm,1.1s						
WR0	Warramunga Arr	23.02	230	P	P	12 53 45.0	+0.1
WR0				IAmb	IAmb	12 53 50.5	
	comp=Z,10nm,1.0s						
WB0	Warramunga Arr	23.02	230	P	P	12 53 45.0	+0.1
BNDI	Bandanaira	23.05	271	P	P	12 53 48.9	+3.7
	comp=Z,81nm,1.3s						
WB2	Warramunga Arr	23.16	230	P	P	12 53 46.1	-0.1
WB2				IAmb	IAmb	12 54 05.2	
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	23.17	230	P	P	12 53 46.4	0.0
	comp=Z,5.1nm,0.7s,baz=55,slow=10,SNR=24						
WRA	Warramunga Arr	23.17	230	P	P	12 53 45.7	-0.7
MSAI	Masohi	24.12	274	P	P	12 53 58.5	+3.0
	comp=Z,227nm,1.0s						
ARMA	Armidale	24.83	183	P	P	12 54 00.9	-1.0
ARMA				IAmb	IAmb	12 54 23.7	
	comp=Z,34nm,1.4s						
AS31	Alice Springs	25.80	224	P	P	12 54 10.8	+0.1
ASAR	Alice Springs	25.80	224	P	P	12 54 10.7	0.0
	comp=Z,3.8nm,0.8s,baz=58,slow=9.0,SNR=27						
ASAR				PcP	PcP	12 57 40.7	+0.8
	comp=Z,0.8nm,1.0s,baz=56,slow=3.6,SNR=3.5						
ASAR	Alice Springs	25.80	224	P	P	12 54 10.2	-0.5
KNRA	Kununurra	25.88	245	P	P	12 54 11.4	0.0
KNRA				IAmb	IAmb	12 54 19.0	
	comp=Z,15nm,0.8s						
STKA	Stephens Creek	28.35	201	P	P	12 54 32.9	-0.6
	comp=Z,2.8nm,0.7s,baz=9.2,slow=11,SNR=7.3						
STKA				LR	LR	13 05 10.8	
	comp=Z,107nm,19.5s,baz=31,slow=35						
STKA	Stephens Creek	28.35	201	P	P	12 54 32.5	-1.0
SOEI	Soe	28.81	260	P	P	12 54 37.3	-0.6
SOEI				IAmb	IAmb	12 54 46.0	
	comp=Z,23nm,1.1s						
BATI	Baumata	29.45	259	LR	LR	13 08 53.9	
	comp=Z,130nm,18.2s,baz=110,slow=41						
FITZ	Fitzroy Crossi	29.53	243	P	P	12 54 44.2	+0.1
	comp=Z,4.7nm,0.8s,baz=46,slow=8.5,SNR=6.4						
FITZ	Fitzroy Crossi	29.53	243	P	P	12 54 43.7	-0.4
FITZ				IAmb	IAmb	12 54 59.6	
	comp=Z,17nm,1.4s						
FORT	Forrest	34.40	220	P	P	12 55 26.1	-0.6
AFI	Afiamalu	35.65	106	P	P	12 55 37.2	-0.5
SRBI	Singaraja	37.63	264	P	P	12 56 05.3	+11
CMWZ	Cape Campbell	40.75	156	P	P	12 56 19.9	-0.4
MORW	Morawa	42.09	232	P	P	12 56 30.5	-1.0
MORW				IAmb	IAmb	12 56 52.4	
	comp=Z,24nm,1.4s						
JNU	Nakatsue	43.77	333	P	P	12 56 44.3	-0.7
	comp=Z,12nm,0.9s,baz=110,slow=6.2,SNR=3.6						
JNU	Nakatsue	43.77	333	P	P	12 56 44.3	-0.7
JWT	Wachi	43.81	339	P	P	12 56 44.7	-0.6
JWT				IAmb	IAmb	12 57 10.9	
	comp=Z,13nm,1.3s						
MJAR	Matsushiro Arr	44.05	343	P	P	12 56 45.2	-2.0
	comp=Z,2.0nm,0.9s,baz=167,slow=8.7,SNR=7.4						
MJAR	Matsushiro Arr	44.05	343	P	P	12 56 46.3	-0.9
MAJO	Matsushiro	44.05	343	P	P	12 56 46.1	-1.1
MAJO				IAmb	IAmb	12 56 48.1	
	comp=Z,5.8nm,1.1s						
MJB9	Matsu-Tunnel	44.06	343	P	P	12 56 47.2	-0.1
JHS	Saijyo	44.42	336	P	P	12 56 49.6	-0.7
JHS				IAmb	IAmb	12 56 50.0	
	comp=Z,26nm,1.4s						
JTM	Tenmabayashi	47.34	348	P	P	12 57 12.5	-0.6
KSRS	Korea Array	48.71	333	P	P	12 57 22.7	-1.0
	comp=Z,1.4nm,0.8s,baz=147,slow=10,SNR=4.3						
KSRS				LR	LR	13 18 13.6	
	comp=Z,28nm,18.1s,baz=242,slow=36						
JKA	Kamikawa-asahi	50.26	350	P	P	12 57 35.3	-0.1
ASAJ	Asahikawa	50.26	350	P	P	12 57 35.8	+0.3
	comp=Z,6.6nm,0.8s,baz=141,slow=6.3,SNR=4.1						
USRK	Ussuriysk Ar.	52.97	341	P	P	12 57 56.1	+0.4
	comp=Z,2.4nm,0.8s,baz=168,slow=5.7,SNR=4.3						
USRK	Ussuriysk Ar.	52.97	341	P	P	12 57 55.4	-0.3
CMAR	Chiang Mai Arr	58.37	295	P	P	12 58 35.9	+0.9
	comp=Z,1.1nm,0.3s,baz=105,slow=5.3,SNR=10						
CMAR	Chiang Mai Arr	58.37	295	P	P	12 58 34.9	-0.1
PET	Petropavlovsk	58.48	4	P	P	12 58 33.7	-1.4
PEA0B	Petropavlovsk-	58.51	3		P	12 58 35.7	+0.4
PETK	Petropavlovsk-	58.51	3	P	P	12 58 36.4	+1.1
	comp=Z,9.8nm,0.7s,baz=160,slow=6.0,SNR=55						
PETK	Petropavlovsk-	58.51	3	P	P	12 58 35.3	+0.1
MA2	Magadan	64.88	359		P	12 59 18.1	0.0
SONM	Songino Array	67.02	328	P	P	12 59 33.4	+1.1
	comp=Z,1.1nm,0.5s,baz=147,slow=5.9,SNR=13						
SONM	Songino Array	67.02	328	P	P	12 59 32.2	-0.1
BILL	Bilibino	73.95	5		P	13 00 14.3	+0.3
TIXI	Tiksi	78.60	352	P	P	13 00 40.4	+0.1
PWL	Port Wells	80.17	25	P	P	13 00 49.0	-0.1
PMR	Palmer	80.22	24	P	P	13 00 48.6	-0.6
SML	Sawmill	80.65	24	P	P	13 00 52.0	+0.3
IMAR	Indian Mountai	80.95	19	P	P	13 00 53.5	+0.3
MK31	Makanchi Array	80.99	319	P	P	13 00 53.9	+0.1
MKAR	Makanchi Array	80.99	319	P	P	13 00 53.8	0.0
	comp=Z,1.4nm,0.8s,baz=101,slow=6.3,SNR=10						
MKAR				LR	LR	13 36 48.7	
	comp=Z,23nm,20.5s,baz=356,slow=36						
MKAR	Makanchi Array	80.99	319	P	P	13 00 53.7	-0.1
EYAK	Cordova Ski Ar	81.13	26	P	P	13 00 53.7	-0.5
MAKZ	Makanchi	81.20	319	P	P	13 00 55.4	+0.5
MAKZ				IAmb	IAmb	13 00 57.9	
	comp=Z,3.6nm,1.1s						
ZAA0	Zalesovo

MAJO	Matsushiro	7.15	330			Pn	13 05 52.5	+1.3
JMM	Marumori	7.57	348	Pn		Pn	13 05 55.7	-1.3
JSD	Sado	8.42	335	Pn		Pn	13 06 08.6	-0.1
SONM	Songino Array	32.70	312	P		P	13 10 41.1	+2.3
	1.2nm,0.8s,baz=112,slow=7.5,SNR=6.8							
SONM	Songino Array	32.70	312	P		P	13 10 40.1	+1.3
MTN	Manton Dam	44.45	196	P		P	13 12 16.1	-1.3
MTN				IAmb	IAmb		13 12 44.6	
	comp=Z,22nm,1.3s							
MK31	Makanchi Array	48.75	307	P		P	13 12 51.9	+1.0
MKAR	Makanchi Array	48.75	307	P		P	13 12 52.5	+1.6
	comp=Z,0.9nm,0.3s,baz=90,slow=8.9,SNR=5.9							
MKAR	Makanchi Array	48.75	307	P		P	13 12 51.9	+1.0
WB0	Warramunga Arr	50.55	190	P		P	13 13 05.1	+0.3
WB0				IAmb	IAmb		13 13 21.1	
	comp=Z,4.5nm,1.0s							
WR0	Warramunga Arr	50.72	190	P		P	13 13 06.5	+0.4
WR0				IAmb	IAmb		13 13 07.2	
	comp=Z,3.3nm,0.8s							
WB2	Warramunga Arr	50.73	190	P		P	13 13 06.2	0.0
WB2				IAmb	IAmb		13 13 08.0	
	comp=Z,4.4nm,0.8s							
WRA	Warramunga Arr	50.73	190	P		P	13 13 07.0	+0.8
	comp=Z,3.4nm,0.8s,baz=11,slow=7.9,SNR=16							
WRA	Warramunga Arr	50.73	190	P		P	13 13 06.2	0.0
TRF	Thorofare Moun	52.99	31	P		P	13 13 21.0	-1.8
TRF				IAmb	IAmb		13 13 44.9	
	comp=Z,20nm,1.4s							
TOLK	Toolik Lake Re	53.92	25	P		P	13 13 29.9	+0.5
MDM	Murphy Dome	54.02	29	P		P	13 13 29.8	-0.3
MDM				IAmb	IAmb		13 13 31.3	
	comp=Z,3.0nm,0.7s							
SCM	Sheep Creek Mo	54.26	33	P		P	13 13 29.4	-2.6
AS31	Alice Springs	54.45	190	P		P	13 13 34.0	+0.3
ASAR	Alice Springs	54.46	190	P		P	13 13 34.6	+0.9
	comp=Z,1.1nm,0.5s,baz=3.8,slow=6.5,SNR=40							
ASAR	Alice Springs	54.46	190	P		P	13 13 34.2	+0.5
ILAR	Eielson Array	54.58	30	P		P	13 13 33.8	-0.4
ABKAR	Akbulak array	63.11	313	P		P	13 14 34.4	+0.7
MORW	Morawa	64.40	206	P		P	13 14 42.2	-0.1
MORW				IAmb	IAmb		13 14 55.1	
	comp=Z,16nm,1.4s							
BBB	Bella Bella	66.12	42	P		P	13 14 52.4	-0.8
EUNU	Eureka	66.54	8	P		P	13 14 56.0	+0.4
EUNU				IAmb	IAmb		13 15 02.1	
	comp=Z,2.8nm,1.4s							
NWAO	Narrogin (SRO)	67.48	203	P		P	13 15 03.5	+1.6
YKA	Yellowknife Ar	69.00	29	P		P	13 15 10.8	-0.4
	comp=Z,0.4nm,0.8s,baz=291,slow=5.8,SNR=6.6							
TAU	Tasmania Unive	73.11	176	P		P	13 15 35.6	-0.7
E07A	Sunnyside	73.29	46	P		P	13 15 36.6	-0.9
E07A				IAmb	IAmb		13 15 38.0	
	comp=Z,5.0nm,0.8s							
NVAR	Mina Array Bea	78.12	52	P		P	13 16 05.8	+0.2
	comp=Z,0.1nm,0.5s,baz=288,slow=6.1,SNR=3.9							
TXAR	Lajitas Array	93.25	53	P		P	13 17 22.4	+1.2
	comp=Z,0.4nm,0.9s,baz=282,slow=1.2,SNR=4.2							
LPAZ	La Paz	148.51	70	PKPbc		PKPbc	13 23 54.9	+0.6
	comp=Z,0.8nm,0.7s,baz=135,slow=1.4,SNR=3.7							

*GCG **19** 13:15:01.6±0.7, 14.2°82N×91.4°41W, h155km±11km, MD3.4*
*SNET **19** 13:15:11.4±0.9, 14.6°66N×91.0°02W, h35km±61km, ML3.1*

ISC 19 13:15:02.1±3.8, 14.3°N±0.2°×91.5°W±0.1°, h155km±22km**, n10, σ2.9 s96/19, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ERG	Entre ros, C	0.15	309	*eP*		Pn	13 15 23.9	+1.0
ERG				*eS*		Sn	13 15 39.9	+1.1
RTAL	Retalhuleu	0.30	307	*eP*		Pn	13 15 23.5	+0.3
RTAL				*eS*		Sn	13 15 34.5	-4.9
RTAL				IAML			13 15 47.3	
	comp=Z,307nm,0.4s							
FUG	Fuego 3	0.59	80	*eP*		Pn	13 15 24.8	0.0
FUG				*eS*		Sn	13 15 43.6	+1.6
PCG	Pacaya	0.81	87	*eP*		Pn	13 15 27.0	+0.8
PCG				*eS*		Sn	13 15 47.0	+2.4
NBG	Las Nubes	1.09	77	*eP*		Pn	13 15 30.9	+2.4
NBG				*eS*		Sn	13 15 49.5	+1.0
RTR	El Retiro	1.80	104	*eP*		Pn	13 15 37.3	+1.8
SBLS	San Blas	1.84	106	*eP*		Pn	13 15 38.0	+2.1
SBLS				*eS*		Sn	13 15 58.7	-3.3
CEVE	Cerro Verde	1.84	106	*eP*		Pn	13 15 38.5	+2.5
CEVE				*eS*		Sn	13 15 58.4	-3.6
CEVE				IAML			13 16 02.3	
	comp=Z,627nm,0.4s							
MTO3	Montecristo	2.02	88	*eP*		Pn	13 15 38.8	+0.7
MTO3				*eS*		Sn	13 15 59.3	-6.3
LFRS	El Faro	2.42	107	*eP*		Pn	13 15 45.3	+2.6
LFRS				*eS*		Sn	13 16 11.8	-2.1

*IDC **19** 13:18:03.8±0.9, 53.4°43N×164.7°47W, h0km, mb4.1/27, mb1 4.1/30, mb1mx4.0/60, mbtmp4.0/30, ML3.3/3, MS3.4/8, Ms1 3.4/8, ms1mx3.1/41, Error ellipse: s-maj=23.1km s-min=12.3km az=176.0*
*NEIC **19** 13:18:04.2±1.5, 53.3°33N±0.0°5×164.2°2W±0.0°6, h8km±5km, mb4.2/27, ML3.7/39(AEIC), Error ellipse: s-maj=8.1km s-min=5.2km az=171.0*
*AEIC **19** 13:18:05±2.1, 53.3°39N±0.0°5×164.2°8W±0.0°5, h5km±4km, Error ellipse: s-maj=7.0km s-min=4.4km az=166.0*

ISC 19 13:18:03.9±1.7, 53.2°35N±0.0°6×164.3°21W±0.0°4, h5km±9km**, n132, σ1.9±1.2**s/130**, mb4.2**/32**, MS3.3**/7**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AKSA	Akutan Strait	1.18	312			Pn	13 18 27.0	0.0
AKSA						Sb	13 18 41.6	-0.6
AKSA	Akutan Strait	1.18	312			Pn	13 18 27.5	+0.5
WESP	Westdahl Peak	1.18	345			Pn	13 18 27.1	0.0
AKUT	Akutan	1.21	311	Pn		Pn	13 18 27.6	+0.2
AKUT	Akutan	1.21	311			Sn	13 18 44.2	-0.1
WECS	Westdahl Cape	1.23	344			Pn	13 18 28.2	+0.5
AKBBA	Akutan Broad B	1.27	307			Pn	13 18 28.5	+0.3
AKBBA						Sn	13 18 46.9	+1.3
WEBT	Westdahl Beart	1.28	346			Pn	13 18 28.8	+0.4
AKMO	Akutan Morgan	1.30	305			Pn	13 18 29.1	+0.4
AKMO						Sn	13 18 46.9	+0.5
AKLV	Akutan Long Va	1.31	309			Pn	13 18 29.5	+0.6
AKLV						Sn	13 18 47.5	+0.7
AKRB	Akutan Reef Bi	1.35	306			Pb	13 18 30.1	+0.5
AKGG	Akutan Green G	1.35	309			Pg	13 18 30.2	+0.5
SSLS	Shishaldin Sou	1.37	5			Pg	13 18 30.6	+0.5
SSLS						Sn	13 18 49.5	+1.3
SSLW	Shishaldin Wes	1.42	2			Pg	13 18 31.2	+0.1
SSBA	Shishaldin	1.42	2			Pg	13 18 31.3	+0.2
SSBA						Sn	13 18 50.5	+0.9
SSLN	Shishaldin Nor	1.47	5			Pg	13 18 32.0	+0.1
MNAT	Makushin Natee	1.56	291			Pb	13 18 32.9	-0.4
FALS	False Pass	1.58	17			Pn	13 18 32.9	+0.4
FALS	False Pass	1.58	17			Sg	13 18 54.8	+0.3
MSW	Makushin Switc	1.63	291			Pb	13 18 33.9	-0.5
MSW						Sg	13 18 55.6	-0.6
MGOD	Makushin Gods	1.65	287			Pb	13 18 33.9	-0.8
MGOD						Sg	13 18 55.9	-0.9
MAPS	Pakushin South	1.69	287			Pb	13 18 35.0	-0.4
MAPS						Sg	13 18 57.8	-0.3
OKFG	Magazine Ridge	2.22	273			Pn	13 18 41.7	+0.5
OKSO	Okmok South	2.37	272			Pn	13 18 43.6	+0.2
NIKH	Nikolski High	2.82	264	Pn		Pn	13 18 49.5	-0.1
SDPT	Sand Point	2.96	46	Pn		Pn	13 18 52.6	+1.1
VNHG	Veniaminof 1	4.10	43			Pn	13 19 08.9	+1.8
KOFP	Korovin Flat P	6.09	264			Pn	13 19 36.2	+1.6
ATKA	Atka Island	6.17	263	Pn		Pn	13 19 36.3	+0.8
OHAK	Old Harbor	7.34	54	Pn		Pn	13 19 51.8	+0.2
ADK	Adak	7.73	264	Pn		Pn	13 19 57.6	+0.6
KDAK	Kodiak Island	7.94	51	Pn		Pn	13 20 00.8	+0.9
	1.1nm,0.3s,baz=242,slow=6.2,SNR=11							
KDAK						Sn	13 21 22.9	-7.1
	0.5nm,0.3s,baz=326,slow=23,SNR=6.4							
KDAK	Kodiak Island	7.94	51	Pn		Pn	13 20 00.6	+0.8
SVW2	Sparrevohn	9.06	28	Pn		Pn	13 20 16.1	+1.0
AMKA	Amchitka	10.28	266	Pn		Pn	13 20 31.8	0.0
SUA	Susitna One	10.88	36	Pn		Pn	13 20 40.6	+0.5
RC01	Rabbit Creek A	11.01	40	Pn		Pn	13 20 42.0	+0.1
PPLA	Purkeypile	11.46	29	Pn		Pn	13 20 49.2	+1.0
CUT	Chulitna	11.69	34	Pn		Pn	13 20 51.4	+0.3
GHO	Glory Hole Cre	11.74	38	Pn		Pn	13 20 51.5	-0.4
SCM	Sheep Creek Mo	12.38	40	Pn		Pn	13 20 59.9	-0.7
KLU	Klutina	12.75	43			Pn	13 21 04.4	-1.3
RAGM	Ragged Mountai	12.76	49	Pn		Pn	13 21 03.9	-1.9
RND	Reindeer	12.86	32	Pn		Pn	13 21 06.5	-0.6
M24K	Tolsona, Glenn	12.98	40	Pn		Pn	13 21 08.0	-0.9
BMRM	Bremner River	13.05	46	Pn		Pn	13 21 09.8	+0.1
N25K	Chitina, Valde	13.35	44	Pn		Pn	13 21 12.4	-1.5
CRQM	Cirque	13.61	49	Pn		Pn	13 21 17.4	-0.1
GLB	Gilahina Butte	13.61	45	Pn		Pn	13 21 16.8	-0.6
PAX	Paxson	13.75	38	Pn		Pn	13 21 15.9	-3.5
I23K	Minto, Yukon-K	14.00	27	Pn		Pn	13 21 22.3	-0.3
GRNC	Granite Creek	14.23	50	Pn		Pn	13 21 25.2	-0.8
BARN	Barnard Glacie	14.39	49	Pn		Pn	13 21 28.1	-0.1
TABL	Table Mountain	14.41	51	Pn		Pn	13 21 28.1	-0.4
ILAR	Eielson Array	14.44	31	Pn		Pn	13 21 30.4	+1.8
	0.1nm,0.3s,baz=225,slow=11,SNR=2.3							
ILAR	Eielson Array	14.44	31	Pn		Pn	13 21 29.2	+0.6
CTGM	Chitina Glacie	14.50	49	Pn		Pn	13 21 29.6	-0.1
LOGN	Logan Glacier	14.60	50	Pn		Pn	13 21 31.4	+0.3
DOT	Dot Lake	14.66	37	Pn		Pn	13 21 30.2	-1.5
PCA	Pinnacle	14.72	53	Pn		Pn	13 21 33.9	+1.3
SCRK	Sand Creek	14.88	36			P	13 21 39.8	-0.9
L27K	Beaver Creek,	15.20	41	P		P	13 21 44.7	+0.6
COLD	Coldfoot	15.49	21			P	13 21 47.1	-0.2
COLD					IAmb	IAmb	13 21 59.1	
	comp=Z,9.3nm,1.1s							
HYT	Haines Junctio	16.23	52	P		P	13 21 56.0	+0.3
HYT					IAmb	IAmb	13 22 15.5	
	comp=Z,17nm,1.2s							
EGAK	Eagle	16.35	37	P		P	13 21 57.0	+0.2
DAWY	Dawson	16.64	40	P		P	13 22 00.3	+0.2
DAWY					IAmb	IAmb	13 22 06.4	
	comp=Z,9.0nm,0.9s							
TOLK	Toolik Lake Re	16.82	19			P	13 22 01.6	-0.4
EPYK	Eagle Plains	18.77	35	P		Pn	13 22 24.0	+0.1
DLBC	Dease Lake	19.68	61	P		Pn	13 22 34.9	-0.1
	comp=Z,0.0nm,0.3s,baz=298,slow=15,SNR=1.7							
DLBC					LR	LR	13 29 24.2	
	comp=Z,126nm,18.1s,baz=241,slow=34							
BILL	Bilibino	20.31	328			P	13 22 39.3	-1.0
INK	Inuvik	20.82	32	P		P	13 22 45.2	-0.6
	comp=Z,4.9nm,0.5s,baz=246,slow=7.8,SNR=21							
INK	Inuvik	20.82	32	P		P	13 22 44.3	-1.5
INK					IAmb	IAmb	13 22 54.2	
	comp=Z,6.4nm,0.6s							
PEA0B	Petropavlovsk-	22.63	285	P		P	13 23 04.2	-1.2
PEA0B					IAmb	IAmb	13 23 06.3	
	comp=Z,18nm,1.2s							
PETK	Petropavlovsk-	22.63	285	P		P	13 23 04.2	-1.1
	comp=Z,2.0nm,0.4s,baz=88,slow=14,SNR=33							
SEY	Seymchan	24.36	310	P		P	13 23 21.7	-0.7
	comp=Z,1.5nm,0.6s,baz=111,slow=9.6,SNR=9.7							
C36M	Paulatuk	24.37	34	P		P	13 23 22.4	0.0
C36M					IAmb	IAmb	13 23 24.0	
	comp=Z,9.9nm,1.1s							
MA2	Magadan	25.22	302	P		P	13 23 29.4	-0.8
	comp=Z,1.4nm,0.3s,baz=104,slow=11,SNR=8.2							
MA2	Magadan	25.22	302	P		P	13 23 29.5	-0.8
MA2					IAmb	IAmb	13 23 30.7	
	comp=Z,4.8nm,1.0s							
YKA	Yellowknife Ar	27.22	51	P		P	13 23 50.4	+2.1
	comp=Z,0.4nm,0.4s,baz=273,slow=10,SNR=15							
YKA					LR	LR	13 35 41.9	
	comp=Z,75nm,18.1s,baz=0.0,slow=39							
TIXI	Tiksi	33.53	328	P		P	13 24 43.1	-0.7
	comp=Z,0.6nm,0.3s,baz=94,slow=12,SNR=2.5							
NVAR	Mina Array Bea	34.61	97	P		P	13 24 56.6	+2.7
	comp=Z,1.2nm,0.8s,baz=294,slow=9.3,SNR=11							
NVAR	Mina Array Bea	34.61	97	P		P	13 24 55.4	+1.5
H11N2	WAKE ISLAND Hy	40.27	225	T		T	14 09 13.4	
	baz=26,slow=76,SNR=24							
H11N3	WAKE ISLAND Hy	40.27	225	T		T	14 09 20.1	
	baz=26,slow=76,SNR=50							
H11N1	WAKE ISLAND Hy	40.29	225	T		T	14 09 17.9	
	baz=26,slow=76,SNR=22							
H11S1	WAKE ISLAND Hy	41.44	224	T		T	14 10 44.3	
	baz=25,slow=74							
H11S2	WAKE ISLAND Hy	41.45	224	T		T	14 10 36.0	
	baz=25							
H11S3	WAKE ISLAND Hy	41.46	224	T		T	14 10 35.4	
	baz=25,slow=74							
USRK	Ussuriysk Ar.	41.72	284	LR		LR	13 45 20.5	
	comp=Z,40nm,18.1s,baz=198,slow=39							
MJAR	Matsushiro Arr	42.83	271	P		P	13 26 01.7	-0.9
	comp=Z,1.0nm,0.9s,baz=39,slow=6.3,SNR=3.2							
MJAR					LR	LR	13 41 35.3	
	comp=Z,25nm,21.5s,baz=120,slow=33							
MAT	Matsushiro	42.83	271	P		P	13 26 02.9	+0.3
NRIK	Noril'sk	47.02	333	P		P	13 26 35.5	-0.1
	comp=Z,1.1nm,0.4s,baz=71,slow=8.1,SNR=4.3							
NRIK	Noril'sk	47.02	333	IAmb		IAmb	13 26 36.8	
	comp=Z,3.0nm,0.9s							
KSRS	Korea Array	48.36	279	P		P	13 26 46.9	+0.5
	comp=Z,2.9nm,0.8s,baz=50,slow=7.5,SNR=10.0							
KSRS					LR	LR	13 48 27.9	
	comp=Z,18nm,18.0s,baz=355,slow=38							
TX31	Lajitas Ar. Si	49.65	94	P		P	13 26 57.6	+1.2
TX32	Lajitas Array	49.65	94	P		P	13 26 57.6	+1.2
TX32					IAmb	IAmb	13 27 16.2	
	comp=Z,4.9nm,1.4s							
TXAR	Lajitas Array	49.65	94	P		P	13 26 58.0	+1.5
	comp=Z,0.6nm,0.5s,baz=301,slow=5.6,SNR=22							
TXAR	Lajitas Array	49.65	94	P		P	13 26 57.5	+1.1
TLY	Talaya	52.24	308	P		P	13 27 14.8	-0.8
ULN	Ulaanbaatar	53.08	303	P		P	13 27 20.9	-1.1
SONM	Songino Array	53.43	303	P		P	13 27 24.2	-0.3
	comp=Z,2.6nm,0.8s,baz=47,slow=9.0,SNR=14							
SONM	Songino Array	53.43	303	P		P	13 27 23.7	-0.8
SONM					IAmb	IAmb	13 27 25.2	
	comp=Z,2.7nm,0.9s							
HHC	Hu-ho-hao-te	55.44	294	*eP*		P	13 27 40.8	+1.6
ARCES	ARCESS Array B	57.22	356	P		P	13 27 50.8	-0.5
	comp=Z,1.6nm,0.6s,baz=8.8,slow=8.2,SNR=7.2							
250A	Grady	58.11	78	P		P	13 27 58.0	-0.1
ZALV	Zalesovo Beam	58.75	320	P		P	13 28 01.6	-0.7
	comp=Z,1.0nm,0.3s,baz=40,slow=7.2,SNR=5.1							
ZALV					LR	LR	13 54 23.1	
	comp=Z,45nm,19.4s,baz=26,slow=37							
KURBB	Kurchatov Arra	63.76	321	P		P	13 28 36.3	0.0
	baz=42,slow=7.0							
BRVK	Borovoye	64.66	327	P		P	13 28 41.7	-0.5
ARU	Arti	65.10	335	P		P	13 28 44.5	-0.4
	comp=Z,1.1nm,0.5s,baz=281,slow=22,SNR=2.8							
FINES	FINESS Array B	65.26	355	P		P	13 28 44.9	-1.0
	comp=Z,1.4nm,0.5s,baz=19,slow=6.7,SNR=13							
WMQ	Urumqi	65.32	311	*eP*		P	13 28 48.3	+1.6
MKAR	Makanchi Array	65.33	316	P		P	13 28 45.8	-0.9
	comp=Z,1.0nm,0.6s,baz=52,slow=5.8,SNR=9.4							
AKTO	Aktyubinsk	70.64	333	P		P	13 29 19.8	-0.2
	comp=Z,6.1nm,0.8s,baz=41,slow=6.3,SNR=14							
ABKAR	Akbulak array	71.16	331	P		P	13 29 23.3	+0.2
ABKAR					IAmb	IAmb	13 29 24.2	
	comp=Z,2.5nm,0.8s							
PPT	Papeete	71.75	165	LR		LR	13 57 10.4	
	comp=Z,68nm,18.7s,baz=333,slow=33							
AAK	Ala-Archa	71.92	318	P		P	13 29 28.3	+0.3
	comp=Z,4.1nm,1.0s,baz=100,slow=3.2,SNR=8.5							
KK31	Karatay Array	73.06	321	P		P	13 29 34.0	-0.6
KK31					IAmb	IAmb	13 29 35.4	
	comp=Z,3.9nm,0.8s							
KKAR	Karatay Array	73.06	321	P		P	13 29 34.1	-0.5
KKAR	Karatay Array	73.06	321	P		P	13 29 34.0	-0.7
KKAR					IAmb	IAmb	13 29 35.4	
	comp=Z,3.9nm,0.8s							
AKASG	Malin Array Be	75.70	351	P		P	13 29 48.6	-1.3
	comp=Z,1.7nm,0.5s,baz=12,slow=5.8,SNR=6.3							
AKASG	Malin Array Be	75.70	351	IAmb		IAmb	13 29 57.1	
	comp=Z,0.9nm,1.1s							
CRVS	Cervenica-Dubn	78.01	356	*eP*		P	13 30 04.7	+1.8
GERES	GERESS Array B	78.16	1	P		P	13 30 03.5	-0.3
	comp=Z,0.5nm,0.5s,baz=18,slow=4.8,SNR=4.2							
CMAR	Chiang Mai Arr	79.39	287	P		P	13 30 11.1	+0.1
	comp=Z,1.6nm,0.8s,baz=14,slow=5.7,SNR=6.9							
CMAR					LR	LR	14 07 06.6	
	comp=Z,12nm,19.8s,baz=40,slow=37							
KBZ	Khabaz	80.53	340	P		P	13 30 18.3	+1.6
	comp=Z,0.9nm,0.4s,baz=322,slow=6.6,SNR=3.8							
GEYT	Alibeck	81.98	327	P		P	13 30 24.3	-0.3
	comp=Z,1.3nm,0.6s,baz=352,slow=7.3,SNR=4.1							
GEYT	Alibeck	81.98	327	IAmb		IAmb	13 30 26.1	
	comp=Z,1.6nm,0.8s							
ESDC	Sonseca Array	85.78	15	P		P	13 30 44.8	+0.7
	comp=Z,0.4nm,0.7s,baz=331,slow=4.7,SNR=4.2							
ESDC	Sonseca Array	85.78	15	IAmb		IAmb	13 30 57.0	
	comp=Z,1.3nm,1.4s							
BRTR	Keskin Array B	86.02	346	P		P	13 30 46.1	+0.8
	comp=Z,3.7nm,0.9s,baz=64,slow=2.9,SNR=6.7							
ASAR	Alice Springs	93.47	234	P		P	13 31 19.0	-1.3
	comp=Z,0.4nm,1.0s,baz=32,slow=5.5,SNR=2.4							
BOSA	Boshof	154.32	341	PKPab		PKPab	13 38 18.6	-0.4
	comp=Z,3.2nm,0.8s,baz=27,slow=4.5,SNR=5.9							

*JMA **19** 13:18:58.1±0.2, 30.5°54N×143.0°6E, h23km, M4.2*
*IDC **19** 13:18:59.4±0.7, 30.4°46N×142.8°3E, h0km, mb3.9/16, mb1 4.1/19, mb1mx3.9/52, mbtmp3.9/19, ML3.4/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/46, Error ellipse: s-maj=20.2km s-min=15.3km az=87.0*
*NEIC **19** 13:19:00.4±1.5, 30.4°45N±0.0°3×142.8°2E±0.1°, h10km±1km, mb4.5/19, Error ellipse: s-maj=16.5km s-min=2.9km az=108.0*

ISC 19 13:19:02.3±0.5, 30.4°46N±0.0°5×142.7°9E±0.0°9, h23km**, n65, σ1.9±48/62, mb4.2/25, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CBIJ	Chichi jima	3.40	189	P		Pn	13 19 53.0	-0.9
JCJ	Chichijima	3.40	189	Pn		Pn	13 19 53.2	-0.7
	14nm,0.3s,baz=6.0,slow=19,SNR=21							
JCJ				Sn		Sn	13 20 30.2	-3.3
	26nm,0.3s,baz=271,slow=22,SNR=7.2							
JCJ	Chichijima	3.40	189			Pn	13 19 52.8	-1.2
JHJ2	Mitsune	3.66	317	Pn		Pn	13 19 56.3	-1.3
JHJ	Hachijo jima 2	3.68	317	Pn		Pn	13 19 56.2	-1.7
	5.1nm,0.3s,baz=91,slow=23,SNR=19							
JHJ				Sn		Sn	13 20 35.7	-4.9
	14nm,0.3s,baz=71,slow=23,SNR=6.5							
BSO1	Boso 1	4.45	340	P		Pn	13 20 06.0	-1.9
BSO3	Boso 3	4.74	337	S		Sn	13 21 05.1	-1.0
JOD2	Odawara 2	5.71	328	P		Pn	13 20 24.9	-0.9
JHU	Hanno	6.13	332	P		Pn	13 20 30.7	-0.7
JYT	Yasato	6.15	340	P		Pn	13 20 31.3	-0.4
JYT	Yasato	6.15	340	Pn		Pn	13 20 31.3	-0.4
JHO	Hitachi	6.41	344	P		Pn	13 20 33.1	-2.2
JRY	Ryogami san	6.42	331	P		Pn	13 20 34.6	-1.0
JAG	Ashikaga	6.57	336	P		Pn	13 20 36.6	-0.9
JGF	Kuroka	6.86	320	Pn		Pn	13 20 41.0	-0.5
MJAR	Matsushiro Arr	7.17	329	Pn		Pn	13 20 44.5	-1.3
	0.3nm,0.3s,baz=160,slow=11,SNR=26							
MJAR	Matsushiro Arr	7.17	329			Pn	13 20 44.3	-1.5
MAJO	Matsushiro	7.17	329			Pn	13 20 44.3	-1.5
JMM	Marumori	7.57	348			Pn	13 20 48.0	-3.2
JSD	Sado	8.43	335	Pn		Pn	13 21 00.8	-2.3
JNU	Nakatsue	10.48	288	LR		LR	13 25 00.0	
	comp=Z,64nm,19.2s,baz=54,slow=34							
ERM	Erimo	11.53	1	Pn		Pn	13 21 41.6	-3.9
ASAJ	Asahikawa	13.63	359	Pn		Pn	13 22 11.5	-2.6
	0.4nm,0.3s,baz=190,slow=13,SNR=5.3							
ASAJ				Sn		Sn	13 24 32.9	-12
	0.2nm,0.3s,baz=146,slow=8.9,SNR=1.8							
JKA	Kamikawa-asahi	13.63	359			Pn	13 22 11.5	-2.6
KSRS	Korea Array	14.16	303	LR		LR	13 28 20.8	
	comp=Z,25nm,19.2s,baz=116,slow=40							
KLR	Kul'dur	20.53	339	P		Pn	13 23 40.5	-0.7
	1.0nm,0.4s,baz=137,slow=8.4,SNR=5.8							
SONM	Songino Array	32.75	312	P		P	13 25 35.6	+2.1
	1.2nm,0.8s,baz=118,slow=8.9,SNR=8.0							
SONM	Songino Array	32.75	312	IAmb	IAmb		13 25 38.3	
	comp=Z,1.3nm,0.9s							
FAKI	Fak Fak	34.69	199	P		P	13 25 50.9	+0.4
FAKI				IAmb	IAmb		13 26 12.2	
	comp=Z,8.4nm,0.9s							
KMI	Kun

9.4nm,0.3s,baz=327,slow=6.1,SNR=195
ASAJ S **S** **14 09 27.2 -0.5**
0.4nm,0.3s,baz=200,slow=30,SNR=1.3
ASAJ Asahikawa 1.38 166 P **Pn** **14 08 54.5 +1.0**
JKA Kamikawa-asahi 1.39 166 Pn **Pn** **14 08 54.5 +0.9**
YSS Yuzh-Sakhalins 1.56 16 Pn **Pn** **14 08 54.5 +0.1**
YSS Yuzh-Sakhalins 1.56 16 *eP* **Pn** **14 08 54.7 +0.3**
YSS AMB AMB 14 08 55.0
140nm,0.4s
YSS *i* S **S** **14 09 27.5 -1.8**
YSS A A 14 09 29.3
100nm,0.9s
YSS A A 14 09 29.3
40nm,0.9s
JKK2 Kamakawa 2 1.65 164 P **Pn** **14 08 56.4 +1.2**
JMP Maruseppu 1.70 148 P **Pn** **14 08 56.5 +0.9**
JHR Hokuryu 1.74 189 P **Pn** **14 08 57.1 +1.3**
JAB Ashibetsu 1.96 178 P **Pn** **14 08 58.6 +1.2**
JTKR Abashiri--Toko 1.96 139 P **Pn** **14 08 58.7 +1.3**
JFR Furan 2.32 171 P **Pn** **14 09 01.3 +0.9**
JAR Ashorobuto 2.46 151 P **Pn** **14 09 03.1 +1.4**
JAR *eS* **S** **14 09 44.5 +2.1**
JEW Eniwo 2.66 191 P **Pn** **14 09 05.0 +1.5**
JEW Eniwo 2.66 191 Pn **Pn** **14 09 04.7 +1.3**
JCH Churui 2.98 162 P **Pn** **14 09 05.9 -0.6**
JCH *eS* **S** **14 09 48.2 -2.9**
JAK Akkeshi 3.08 142 P **Pn** **14 09 07.7 +0.3**
JAK *eS* **S** **14 09 51.0 -1.8**
JNBK Urakawa-nobuka 3.21 172 P **Pn** **14 09 08.8 0.0**
NEM2 Nemuro 2 3.33 128 P **Pn** **14 09 10.1 +0.1**
NEM2 *eS* **S** **14 09 55.3 -2.2**
JEM Erimo 3.52 167 **Pn** **14 09 12.4 +0.5**
ERM Erimo 3.52 167 Pn **Pn** **14 09 12.5 +0.5**
JKB Kayabe 3.66 193 P **Pn** **14 09 13.2 -0.2**
JKB *eS* **S** **14 10 02.3 -1.3**
JTM Tenmabayashi 4.73 190 Pn **Pn** **14 09 24.5 -0.7**
USA0B Ussuriysk Arra 7.31 264 Pn **Pn** **14 09 56.2 +0.5**
USRK Ussuriysk Ar. 7.31 264 P **Pn** **14 09 56.2 +0.5**
baz=69,slow=13,SNR=30
USRK Ussuriysk Ar. 7.31 264 Pn **Pn** **14 09 55.6 -0.1**
JMM Marumori 7.65 188 Pn **Pn** **14 09 59.2 -0.8**
JSD Sado 7.96 203 Pn **Pn** **14 10 03.1 -0.6**
MDJ Mudanjiang 8.91 269 Pn **Pn** **14 10 15.3 0.0**
MAJO Matsushiro 9.38 200 Pn **Pn** **14 10 22.1 +0.9**
MJAR Matsushiro Arr 9.38 200 P **Pn** **14 10 21.8 +0.6**
0.1nm,0.3s,baz=15,slow=9.3,SNR=7.9
PETK Petropavlovsk- 12.71 47 P **P** **14 11 02.1 +0.1**
0.1nm,0.3s,baz=224,slow=5.3,SNR=4.9
KSRS Korea Array 13.30 238 P **Pn** **14 11 10.1 +1.4**
0.2nm,0.3s,baz=57,slow=11,SNR=3.3
MA2 Magadan 15.07 17 P **Pn** **14 11 28.2 -1.2**
0.4nm,0.3s,baz=200,slow=9.9,SNR=9.7
MA2 Magadan 15.07 17 P **Pn** **14 11 28.1 -1.2**
MA2 IAmb IAmb 14 11 31.5
comp=Z,7.0nm,1.2s
SEY Seymchan 18.47 15 P **P** **14 12 04.3 -0.3**
comp=Z,1.7nm,0.3s,baz=198,slow=8.1,SNR=96
HHC Hu-ho-hao-te 22.69 269 *eP* **P** **14 12 46.3 -0.3**
ULN Ulaanbaatar 24.06 288 P **P** **14 12 59.2 +0.2**
ULN IAmb IAmb 14 13 01.0
comp=Z,1.5nm,0.5s
SONM Songino Array 24.51 288 P **P** **14 13 03.3 +0.2**
comp=Z,0.6nm,0.4s,baz=84,slow=9.1,SNR=6.1
SONM Songino Array 24.51 288 P **P** **14 13 03.2 +0.2**
WMQ Urumqi 38.14 288 *eP* **P** **14 15 02.3 +1.2**
TOLK Toolik Lake Re 40.86 31 P **P** **14 15 22.4 -0.7**
TOLK IAmb IAmb 14 15 33.3
comp=Z,5.3nm,1.4s
TRF Thorofare Moun 40.96 39 P **P** **14 15 24.4 +0.3**
TRF IAmb IAmb 14 15 29.1
comp=Z,10nm,1.2s
PATS Pohnpei 40.96 155 P **P** **14 15 25.5 +1.1**
CUT Chulitna 41.11 41 P **P** **14 15 25.3 +0.3**
I23K Minto, Yukon-K 41.17 37 P **P** **14 15 24.8 -0.8**
MCK McKinley 41.52 39 P **P** **14 15 28.5 0.0**
MCK IAmb IAmb 14 15 43.5
comp=Z,17nm,1.5s
RND Reindeer 41.60 39 P **P** **14 15 28.9 -0.3**
PMR Palmer 41.77 42 P **P** **14 15 32.0 +1.6**
PMR IAmb IAmb 14 15 52.0
comp=Z,21nm,1.5s
GHO Glory Hole Cre 41.83 42 P **P** **14 15 31.2 +0.2**
GHO IAmb IAmb 14 15 52.4
comp=Z,29nm,1.4s
CCB Clear Creek Bu 41.89 37 P **P** **14 15 30.5 -0.8**
SML Sawmill 42.10 42 P **P** **14 15 33.8 +0.6**
IL31 42.26 37 P **P** **14 15 34.5 +0.2**
ILAR Eielson Array 42.26 37 P **P** **14 15 34.2 -0.2**
comp=Z,0.8nm,0.6s,baz=275,slow=9.5,SNR=14
PWL Port Wells 42.28 43 P **P** **14 15 35.3 +0.7**
SCM Sheep Creek Mo 42.56 41 P **P** **14 15 37.4 +0.5**
SCRK Sand Creek 43.64 38 P **P** **14 15 44.9 -0.6**
SCRK IAmb IAmb 14 15 45.4
comp=Z,4.0nm,0.8s
EPYK Eagle Plains 46.08 34 P **P** **14 16 04.6 +0.2**
EPYK IAmb IAmb 14 16 10.5
comp=Z,10nm,1.5s
INK Inuvik 46.75 31 P **P** **14 16 08.4 -1.1**
C36M Paulatuk 49.64 28 P **P** **14 16 31.2 -0.2**
C36M IAmb IAmb 14 16 32.0
comp=Z,1.7nm,0.3s
EUNU Eureka 51.79 10 P **P** **14 16 46.1 -1.2**
RES Resolute Bay 54.34 16 P **P** **14 17 05.0 -0.7**
YKA Yellowknife Ar 56.35 33 P **P** **14 17 20.5 +0.4**
comp=Z,0.4nm,0.6s,baz=306,slow=6.5,SNR=13
FINES FINESS Array B 61.67 331 P **P** **14 17 55.0 -1.4**
comp=Z,1.0nm,0.6s,baz=44,slow=8.3,SNR=1.8
WB0 Warramunga Arr 65.29 188 P **P** **14 18 17.3 -3.2**
WB0 IAmb IAmb 14 18 27.2
comp=Z,8.3nm,1.2s
WR0 Warramunga Arr 65.47 188 P **P** **14 18 19.7 -1.8**
WR0 IAmb IAmb 14 18 42.8
comp=Z,7.4nm,1.4s
WB2 Warramunga Arr 65.47 188 P **P** **14 18 20.5 -1.1**
WB2 IAmb IAmb 14 18 38.7
comp=Z,11nm,1.4s
MOD Modoc Plateau 66.21 54 P **P** **14 18 25.6 -0.8**
FCC Fort Churchill 66.28 28 P **P** **14 18 26.3 +0.1**
FFC Flin Flon 66.40 35 P **P** **14 18 27.4 +0.3**
FFC IAmb IAmb 14 18 40.7
comp=Z,1.2nm,0.8s
NC405 NORSAR Array S 66.45 336 P **P** **14 18 27.8 +0.5**
NC303 NORSAR Array S 66.46 336 P **P** **14 18 26.7 -0.7**
NOA NORSAR Array B 66.66 336 P **P** **14 18 28.3 -0.3**
comp=Z,0.2nm,0.7s,baz=31,slow=5.2,SNR=4.1
AS31 Alice Springs 69.20 188 P **P** **14 18 45.6 +0.8**
AS31 IAmb IAmb 14 19 03.4
comp=Z,1.8nm,1.4s
ASAR Alice Springs 69.20 188 P **P** **14 18 47.1 +2.3**
comp=Z,0.2nm,0.8s,baz=355,slow=7.6,SNR=3.5
ASAR Alice Springs 69.20 188 P **P** **14 18 45.0 +0.3**
NVAR Mina Array Bea 69.65 56 P **P** **14 18 49.2 +1.4**
comp=Z,0.5nm,0.7s,baz=297,slow=6.0,SNR=3.7
PDAR Pinedale Array 71.48 47 P **P** **14 18 59.8 +1.1**
comp=Z,0.4nm,0.8s,baz=309,slow=5.7,SNR=3.5
TXAR Lajitas Array 84.60 53 P **P** **14 20 11.4 +1.0**
comp=Z,0.2nm,0.5s,baz=305,slow=3.2,SNR=3.9

*NEIC **19** 14:20:01.8±1.9,35°.01N±0°.04×26°.79E±0°.06,h10km±1km, mb4.0/17,ML3.8(CSEM), Error ellipse: s-maj=8.9km s-min=5.5km az=129.0*
*ISK **19** 14:20:03.5,35°.19N×26°.79E,h5km,ML3.5/11*
*HLW **19** 14:20:04.0,35°.13N×26°.92E,h29km±17km,Md4.1,Ml4.1*
*ATH **19** 14:20:05.4,35°.21N×26°.72E,h11km±2km,ML3.6/5, Error ellipse: s-maj=4.5km s-min=1.3km az=154.0*
*DDA **19** 14:20:05.5,35°.38N×26°.80E,h9km±4km,MW3.7*
*IDC **19** 14:20:05.6±2.1,35°.23N×26°.71E,h35km±17km,mb3.7/16, mb1 3.7/20,mb1mx3.5/54,mbtmp3.8/20,ML3.7/4,MS3.2/3, Ms1 3.2/3,ms1mx2.5/53,Error ellipse: s-maj=18.9km s-min=12.4km az=162.0*
*THE **19** 14:20:05.2,35°.15N×26°.75E,h0km±1km,ML3.7/8, Error ellipse: s-maj=4.0km s-min=0.8km az=152.0*
ISC 19 14:20:02.9±0.5,35°.04N±0°.03×26°.86E±0°.02,h21km±3km, n155,σ1§50/179,mb3.9/22,Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.53**	**278**	P		**Pb**	**Pb**	**14 20 13.4**	**-0.2**
ZKR				S		**Sb**	**Sb**	**14 20 19.6**	**-1.3**
ZKR				AML		AML	AML	14 20 23.5	
	comp=N,7682μm,0.4s								
ZKR				AML		AML	AML	14 20 25.6	
	comp=E,14849μm,0.3s								
ZKR	**Zakros**	**0.53**	**278**	P		**Pb**	**Pb**	**14 20 13.6**	**0.0**
ZKR				S		**Sb**	**Sb**	**14 20 21.6**	**+0.7**
	comp=E,6μm,0.4s								
ZKR	**Zakros**	**0.53**	**278**	PG		**Pb**	**Pb**	**14 20 13.7**	**+0.1**
ZKR				SG		**Sb**	**Sb**	**14 20 21.8**	**+0.9**
KARP	**Karpathos**	**0.56**	**26**	P		**Pb**	**Pb**	**14 20 14.5**	**+0.3**
KARP				S		**Sb**	**Sb**	**14 20 22.4**	**+0.5**
KARP				AML		AML	AML	14 20 24.9	
	comp=N,33470μm,0.4s								
KARP				AML		AML	AML	14 20 25.4	
	comp=E,39304μm,0.4s								
KARP	**Karpathos**	**0.56**	**26**	P		**Pb**	**Pb**	**14 20 14.5**	**+0.3**
KARP				S		**Sn**	**Sn**	**14 20 24.5**	**0.0**
	comp=E,18μm,0.4s								
KARP	**Karpathos**	**0.56**	**26**				**Pb**	**14 20 14.7**	**+0.5**
KARP							**Sb**	**14 20 22.6**	**+0.7**
STIA	**Sitia Lasithi**	**0.65**	**285**	P		**Pb**	**Pb**	**14 20 15.5**	**-0.1**
STIA				S		**Sb**	**Sb**	**14 20 25.1**	**+0.8**
FRMA	**Ierapetra Chan**	**0.92**	**269**	P		**Pb**	**Pb**	**14 20 18.8**	**-1.4**
FRMA				S		**Sb**	**Sb**	**14 20 31.9**	**-0.1**
	comp=E,2μm,0.4s								
NPS	**Neapolis**	**1.04**	**283**	P		**Pn**	**Pn**	**14 20 23.2**	**+0.9**
NPS				S		**Sb**	**Sb**	**14 20 34.9**	**-0.7**
NPS				AML		AML	AML	14 20 39.6	
	comp=N,7011μm,0.4s								
NPS				AML		AML	AML	14 20 39.6	
	comp=E,10564μm,0.5s								
NPS	**Neapolis**	**1.04**	**283**	P		**Pn**	**Pn**	**14 20 23.2**	**+0.9**
NPS				S		**Sn**	**Sn**	**14 20 37.5**	**+1.2**
	comp=E,4μm,0.5s								
HRKL	**Herakleio**	**1.46**	**281**	P		**Pb**	**Pb**	**14 20 31.1**	**+1.7**
HRKL				S		**Sb**	**Sb**	**14 20 50.3**	**+2.7**
	comp=E,3μm,0.7s								
HRKL	**Herakleio**	**1.46**	**281**	PN		**Pb**	**Pb**	**14 20 31.4**	**+2.0**
IACM	**Heraklion**	**1.49**	**281**	P		**Pb**	**Pb**	**14 20 29.5**	**-0.3**
KSTL	**Kastelli Herak**	**1.49**	**281**	P		**Pn**	**Pn**	**14 20 27.8**	**-0.6**
KSTL				S		**Sn**	**Sn**	**14 20 45.0**	**-2.2**
ARG	**Arkhangelos**	**1.56**	**41**	P		**Pb**	**Pb**	**14 20 32.9**	**+1.8**
ARG	**Arkhangelos**	**1.56**	**41**	P		**Pb**	**Pb**	**14 20 33.0**	**+1.8**
ARG				S		**Sb**	**Sb**	**14 20 54.4**	**+4.0**
	comp=E,1μm,0.6s								
ARG	**Arkhangelos**	**1.56**	**41**	PN		**Pb**	**Pb**	**14 20 32.7**	**+1.6**
NIS1	**Nisyros Isl.**	**1.58**	**9**	P		**Pb**	**Pb**	**14 20 32.2**	**+0.8**
NIS1				S		**Sb**	**Sb**	**14 20 52.7**	**+1.7**
	comp=E,2μm,0.5s								
NIS1	**Nisyros Isl.**	**1.58**	**9**	PN		**Pb**	**Pb**	**14 20 32.2**	**+0.8**
IDI	**Anoyia**	**1.63**	**279**	Pg		**Pb**	**Pb**	**14 20 33.3**	**+0.9**
	comp=E,37nm,0.3s,baz=110,slow=14,SNR=115								
IDI				Lg		Lg		14 20 54.9	
	comp=E,50nm,0.3s,baz=16,slow=24,SNR=6.8								
IDI	**Anoyia**	**1.63**	**279**	P		**Pb**	**Pb**	**14 20 33.2**	**+0.9**
IDI				S		**Sb**	**Sb**	**14 20 52.4**	**0.0**
IDI				AML		AML	AML	14 20 57.3	
	comp=N,1377μm,0.8s								
IDI				AML		AML	AML	14 21 01.6	
	comp=E,2007μm,0.5s								
IDI	**Anoyia**	**1.63**	**279**	P		**Pb**	**Pb**	**14 20 33.5**	**+1.2**
IDI	**Anoyia**	**1.63**	**279**	PN		**Pb**	**Pb**	**14 20 33.8**	**+1.5**
IDI	**Anoyia**	**1.63**	**279**	Pn		**Pb**	**Pb**	**14 20 32.4**	**+0.1**
SIVA	**Sivas**	**1.68**	**270**	P		**Pb**	**Pb**	**14 20 34.0**	**+0.9**
SIVA				AML		AML	AML	14 21 07.5	
	comp=N,2886μm,0.7s								
SIVA				AML		AML	AML	14 21 09.9	
	comp=E,4168μm,0.7s								
KOSK	**Kos Island**	**1.71**	**3**	PN		**Pb**	**Pb**	**14 20 33.6**	**0.0**
SANT	**Santorini**	**1.75**	**320**	P		**Pb**	**Pb**	**14 20 33.4**	**-0.9**
SANT	**Santorini**	**1.75**	**320**	P		**Pb**	**Pb**	**14 20 33.4**	**-0.9**
SANT	**Santorini**	**1.75**	**320**	PN		**Pb**	**Pb**	**14 20 33.7**	**-0.6**
SANT	**Santorini**	**1.75**	**320**	Pn		**Pb**	**Pb**	**14 20 33.4**	**-0.9**
THR8	**Santorini-Mono**	**1.77**	**321**	P		**Pb**	**Pb**	**14 20 33.6**	**-1.0**
THR8	**Santorini-Mono**	**1.77**	**321**	P		**Pb**	**Pb**	**14 20 34.0**	**-0.6**
THR6	**Thira Island,**	**1.77**	**318**	P		**Pb**	**Pb**	**14 20 33.8**	**-0.9**
THR9	**Santorini-Faro**	**1.79**	**318**	P		**Pb**	**Pb**	**14 20 34.7**	**-0.3**
THR9	**Santorini-Faro**	**1.79**	**318**	P		**Pb**	**Pb**	**14 20 34.8**	**-0.3**
THR7	**Fira-Santorini**	**1.80**	**320**	P		**Pb**	**Pb**	**14 20 34.6**	**-0.7**
SNT5	**Nea Kammeni, S**	**1.81**	**319**	P		**Pb**	**Pb**	**14 20 34.0**	**-1.3**
THR3	**Thira Island,**	**1.81**	**319**	P		**Pb**	**Pb**	**14 20 34.3**	**-1.0**
THR3	**Thira Island,**	**1.81**	**319**	P		**Pb**	**Pb**	**14 20 34.1**	**-1.2**
THT2	**Imerovigli**	**1.82**	**320**	P		**Pb**	**Pb**	**14 20 34.9**	**-0.5**
THT2	**Imerovigli**	**1.82**	**320**	P		**Pb**	**Pb**	**14 20 34.9**	**-0.5**
THT2				S		**Sb**	**Sb**	**14 20 56.9**	**-0.9**
	comp=E,1μm,0.5s								
THT2	**Imerovigli**	**1.82**	**320**	PN		**Pb**	**Pb**	**14 20 35.4**	**-0.1**
THR5	**Thira Island,**	**1.84**	**319**	P		**Pb**	**Pb**	**14 20 35.0**	**-0.9**
SAP3	**Santorini-Thir**	**1.86**	**319**	P		**Pb**	**Pb**	**14 20 35.7**	**-0.5**
BODT	**Bodrum**	**2.05**	**10**	P		**Pn**	**Pn**	**14 20 37.6**	**+1.4**
BODT	**Bodrum**	**2.05**	**10**	PN		**Pb**	**Pb**	**14 20 38.0**	**-1.4**
TURN	**Turunc**	**2.06**	**33**	*i* P		**Pb**	**Pb**	**14 20 40.0**	**+0.3**
TURN				*i* S		**Sb**	**Sb**	**14 21 04.9**	**+0.1**
TURN	**Turunc**	**2.06**	**33**	PN		**Pb**	**Pb**	**14 20 39.7**	**0.0**
BDRM	**Kayabasi**	**2.08**	**13**	*i* P		**Pn**	**Pn**	**14 20 36.1**	**-0.4**
BDRM				*i* S		**Sn**	**Sn**	**14 20 57.8**	**-4.0**
VAM	**Vamos**	**2.21**	**280**	P		**Pb**	**Pb**	**14 20 43.1**	**+1.0**
GVDS	**Gavdos**	**2.28**	**266**	P		**Pb**	**Pb**	**14 20 42.9**	**-0.5**
GVDS	**Gavdos**	**2.28**	**266**	PN		**Pb**	**Pb**	**14 20 43.2**	**-0.2**
GVD	**Gavdhos**	**2.29**	**266**	P		**Pb**	**Pb**	**14 20 43.1**	**-0.3**
GVD	**Gavdhos**	**2.29**	**266**	PN		**Pb**	**Pb**	**14 20 42.9**	**-0.5**
APE	**Apeiranthos**	**2.29**	**332**	P		**Pn**	**Pn**	**14 20 41.2**	**+1.6**
APE	**Apeiranthos**	**2.29**	**332**	P		**Pn**	**Pn**	**14 20 41.1**	**+1.6**
APE	**Apeiranthos**	**2.29**	**332**	PN		**Pb**	**Pb**	**14 20 41.5**	**-2.1**
DALY	**Dalyan (Mula)**	**2.29**	**39**	*i* P		**Pb**	**Pb**	**14 20 42.9**	**-0.8**
DALY				*i* S		**Sb**	**Sb**	**14 21 11.0**	**-0.5**
DALY	**Dalyan (Mula)**	**2.29**	**39**	PN		**Pb**	**Pb**	**14 20 42.8**	**-0.8**
YER	**Yerkesik**	**2.39**	**28**	PN		**Pb**	**Pb**	**14 20 43.9**	**-1.3**
IMMV	**Iera Moni Meta**	**2.39**	**281**	P		**Pb**	**Pb**	**14 20 44.0**	**-1.3**
IMMV	**Iera Moni Meta**	**2.39**	**281**	P		**Pb**	**Pb**	**14 20 43.9**	**-1.3**
IMMV	**Iera Moni Meta**	**2.39**	**281**	PN		**Pb**	**Pb**	**14 20 44.3**	**-0.9**
DDIM	**Aydin, Didim**	**2.43**	**7**	*i* P		**Pb**	**Pb**	**14 20 44.9**	**-1.0**
DDIM				*i* S		**Sn**	**Sn**	**14 21 11.0**	**+0.5**
MULA	**Mugla, Merkez-**	**2.51**	**28**	*i* P		**Pb**	**Pb**	**14 20 47.2**	**-0.1**
MULA				*i* S		**Sn**	**Sn**	**14 21 09.2**	**-3.4**
AKAS	**Kas**	**2.53**	**61**	*i* P		**Pn**	**Pn**	**14 20 44.6**	**+1.7**
AKAS	**Kas**	**2.53**	**61**	Pn		**Pn**	**Pn**	**14 20 44.5**	**+1.6**
MHLO	**Agia Marina, M**	**2.59**	**310**	P		**Pb**	**Pb**	**14 20 47.3**	**-1.3**
KNDR	**Palaiochora Ch**	**2.61**	**275**	PN		**Pb**	**Pb**	**14 20 48.1**	**-0.8**
MHLA	**Plaka, Milos I**	**2.61**	**311**	P		**Pb**	**Pb**	**14 20 46.8**	**-2.1**
SMG	**Samos**	**2.66**	**360**	P		**Pn**	**Pn**	**14 20 46.4**	**+1.8**
AYDN	**Tasoluk**	**2.74**	**17**	*i* P		**Pb**	**Pb**	**14 21 49.0**	**-2.2**
AYDN				*i* S		**Sn**	**Sn**	**14 21 18.7**	**+0.4**
CAEL	**Denizli, Camel**	**2.88**	**43**	*i* P		**Pb**	**Pb**	**14 20 51.2**	**-2.4**
TAVA	**DENIZLI_Tavas**	**2.94**	**34**	*i* P		**Pb**	**Pb**	**14 20 51.7**	**-2.9**
DGB	**zmir**	**3.01**	**0**	*i* P		**Pn**	**Pn**	**14 20 51.5**	**+2.2**
DGB				*i* S		**Sn**	**Sn**	**14 21 26.0**	**+1.4**
ELL	**Elmali**	**3.01**	**55**				**Pn**	**14 20 50.7**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.02**	**16**	PN		**Pn**	**Pn**	**14 20 52.5**	**+2.9**
ANKY	**Antikythira Is**	**3.02**	**287**	P		**Pn**	**Pn**	**14 20 52.2**	**+2.7**
AKUM	**Antalya-Kumluc**	**3.11**	**65**	*i* P		**Pn**	**Pn**	**14 20 53.5**	**+2.7**
ZEYE	**Izmir, Urla-Ze**	**3.21**	**355**	*i* P		**Pn**	**Pn**	**14 20 53.2**	**+1.1**
ZEYE				*i* S		**Sn**	**Sn**	**14 21 30.6**	**+1.1**
URLA	**Izmir**	**3.32**	**356**	*i* P		**Pn**	**Pn**	**14 20 54.7**	**+1.0**
KTHA	**Kythira Island**	**3.32**	**293**	P		**Pn**	**Pn**	**14 20 55.0**	**+1.3**
KTHA	**Kythira Island**	**3.32**	**293**	PN		**Pn**	**Pn**	**14 20 56.9**	**+3.2**
KTHR	**Kythira**	**3.37**	**292**	P		**Pn**	**Pn**	**14 20 56.9**	**+2.6**
KORT	**Korkueli**	**3.44**	**54**	*i* P		**Pb**	**Pb**	**14 20 59.4**	**-3.8**
VLI	**Veliai**	**3.60**	**299**	P		**Pn**	**Pn**	**14 20 59.4**	**+2.0**
MANT	**Manisa**	**3.70**	**21**	*i* P		**Pn**	**Pn**	**14 21 01.8**	**+2.7**
BUCA	**Burdur, Bucak-**	**3.77**	**52**	*i* P		**Pb**	**Pb**	**14 21 04.5**	**-4.2**
SLUM	**Salum**	**3.80**	**202**	P		**Pn**	**Pn**	**14 21 02.3**	**+2.1**
	baz=202								
SLUM				AMP				14 21 00.0	
	baz=202								
ISP	**Isparta**	**4.05**	**46**	Pn		**Pn**	**Pn**	**14 21 04.4**	**+0.6**
LTK	**Loutraki**	**4.32**	**315**	P		**Pn**	**Pn**	**14 21 09.6**	**+2.2**
ITM	**Ithomi**	**4.53**	**300**	Pn		**Pn**	**Pn**	**14 21 10.2**	**-0.1**
KLV	**Kalavryta, Ach**	**4.83**	**310**	P		**Pn**	**Pn**	**14 21 16.2**	**+1.7**
CSS	**Mathiatis**	**5.31**	**89**	Pn		**Pn**	**Pn**	**14 21 22.6**	**+1.5**
AGG	**Agios Georgios**	**5.38**	**319**	Pn		**Pn**	**Pn**	**14 21 21.7**	**-0.3**
ALN	**Alexandroupoli**	**5.88**	**354**	Pn		**Pn**	**Pn**	**14 21 31.1**	**+2.3**
SWA2		**5.90**	**192**	P		**Pn**	**Pn**	**14 21 32.1**	**+2.1**
	baz=193								
SWA2				AMP				14 22 00.0	
	baz=193								
SWA2				S		**Sn**	**Sn**	**14 22 34.4**	**-1.7**
	baz=193								
LIT	**Litokhoron**	**6.13**	**327**	Pn		**Pn**	**Pn**	**14 21 32.9**	**+0.7**
HMYD	**Mayadein**	**6.20**	**146**	P		**Pn**	**Pn**	**14 21 34.6**	**+1.4**
	baz=147								
KOT	**Kottamia**	**6.60**	**139**	P		**Pn**	**Pn**	**14 21 39.8**	**+1.0**
	baz=140								
KOT				AMP				14 22 00.0	
	baz=140								
RYAN	**Fayoum**	**6.61**	**153**	P		**Pn**	**Pn**	**14 21 40.0**	**+1.2**
	baz=153								
RYAN				AMP				14 22 00.0	
	baz=153								
RYAN				S		**Sn**	**Sn**	**14 22 51.2**	**-2.4**
	baz=153								
HSAF	**As Saff**	**6.71**	**142**	P		**Pn**	**Pn**	**14 21 42.0**	**+1.8**
	baz=143								
GLL	**Jalalah**	**6.82**	**142**	P		**Pn**	**Pn**	**14 21 42.7**	**+0.9**
	baz=142								
BRTR	**Keskin Array B**	**7.14**	**47**	Pn		**Pn**	**Pn**	**14 21 48.7**	**+2.5**
	comp=E,0.1nm,0.3s,baz=233,slow=16,SNR=1.5								
BRTR				S		**Sn**	**Sn**	**14 23 08.3**	**+1.5**
	baz=258,slow=24,SNR=1.6								
SUZ	**Suez**	**7.24**	**134**	P		**Pn**	**Pn**	**14 21 49.0**	**+1.6**
	baz=135								
MMAI	**Mount Meron Ar**	**7.38**	**103**	Pn		**Pn**	**Pn**	**14 21 51.9**	**+2.4**
	comp=E,1.9nm,0.3s,baz=296,slow=14,SNR=3.8								
MMAI				S		**Sn**	**Sn**	**14 23 12.0**	**-0.5**
	comp=E,3.5nm,0.3s,baz=293,slow=26,SNR=3.2								
HFRF	**Wahat Farafira**	**7.96**	**171**	P		**Pn**	**Pn**	**14 21 59.3**	**+1.9**
	baz=171								
SCTE	**Santa Cesarea**	**8.34**	**309**	Pn		**Pn**	**Pn**	**14 22 03.7**	**+1.1**
EIL	**Elat**	**8.69**	**126**	Pn		**Pn**	**Pn**	**14 22 08.6**	**+1.2**
	comp=E,0.5nm,0.3s,baz=266,slow=2.1,SNR=8.2								
EIL				S		**Sn**	**Sn**	**14 23 40.7**	**-4.0**
	comp=E,1.9nm,0.3s,baz=328,slow=4.4,SNR=8.1								
TIP	**Timpagrande**	**9.06**	**300**	Pn		**Pn**	**Pn**	**14 22 11.9**	**-0.7**
RAFF	**Raffo Rosso**	**10.34**	**286**	Pn		**Pn**	**Pn**	**14 22 30.6**	**+0.7**
MLR	**Muntele Rosu**	**10.46**	**356**	LR		LR	LR	14 27 18.4	
	comp=E,60nm,21.4s,baz=273,slow=42								
SGRT	**San Giovanni R**	**10.99**	**311**	Pn		**Pn**	**Pn**	**14 22 38.3**	**-0.7**
INTR	**Introdacqua**	**12.29**	**308**	Pn		**Pn**	**Pn**	**14 22 56.7**	**-0.1**
NRCA	**Norcia**	**13.22**	**310**	Pn		**Pn**	**Pn**	**14 23 10.4**	**+1.0**
MODS	**Modra-Piesok**	**15.10**	**335**	*eP*		P	**Pn**	14 23 49.0	+9.0
ZOU	**Zoufplan**	**15.56**	**322**	P		P	**Pn**	**14 23 44.7**	**-0.6**
AKASG	**Malin Array Be**	**15.75**	**6**	Pn		**Pn**	**Pn**	**14 23 42.8**	**-0.5**
	comp=E,0.8nm,0.3s,baz=195,slow=11,SNR=4.7								
AKASG	**Malin Array Be**	**15.75**	**6**	P		**P**	**P**	**14 23 47.8**	**+0.6**
CTI	**Castel Tesino**	**15.93**	**318**	P		P	**P**	**14 23 49.1**	**-0.1**
CTI				IAmb		IAmb	IAmb	14 24 01.6	
	comp=Z,7.0nm,1.4s								
GEC2	**GERESS Array S**	**16.88**	**329**	P		**P**	**P**	**14 23 59.8**	**0.0**
GERES	**GERESS Array B**	**16.88**	**329**	Pn		**Pn**	**Pn**	**14 23 58.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=133,slow=13,SNR=5.9								
GERES				LR		LR	LR	14 31 51.1	
	comp=Z,98nm,18.5s,baz=326,slow=42								
SENIN	**Lac Senin/Sane**	**18.60**	**313**	P		P	**P**	**14 24 18.1**	**-0.8**
SENIN				IAmb		IAmb	IAmb	14 24 21.7	
	comp=Z,14nm,1.4s								
ESBB	**Sonseca Array**	**24.86**	**290**	P		P	**P**	**14 25 24.0**	**0.0**
ESBB				IAmb		IAmb	IAmb	14 25 29.2	
	comp=Z,8.5nm,1.4s								
ESDC	**Sonseca Array**	**24.86**	**290**	P		P	**P**	**14 25 23.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=85,slow=9.7,SNR=13								
ESDC	**Sonseca Array**	**24.86**	**290**	IAmb		IAmb	IAmb	14 25 31.0	
	comp=Z,1.7nm,1.4s								
PAB	**San Pablo**	**25.16**	**290**	P		P	**P**	**14 25 26.6**	**-0.2**
PAB				IAmb		IAmb	IAmb	14 25 37.3	
	comp=Z,6.7nm,1.2s								
FINES	**FINESS Array B**	**26.43**	**359**	P		P	**P**	**14 25 36.6**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=189,slow=8.3,SNR=1.3	

TAPN	**Taplejung**	**33.51 299**	*eP*	**P**	**14 32 27.1**	**+1.3**
	14nm,0.5s						
RAMN	**Ramite**	**34.34 298**	*eP*	**P**	**14 32 34.5**	**+1.5**
	23nm,0.5s						
JIRN	**Jiri**	**34.89 299**	*eP*	**P**	**14 32 39.3**	**+1.5**
	32nm,0.5s						
GUN	**Gumba**	**35.23 299**	*eP*	**P**	**14 32 42.1**	**+1.4**
	36nm,0.4s						
PKI	**Pulchoki**	**35.53 298**	*eP*	**P**	**14 32 44.0**	**+0.7**
PKIN	**Phulchoki**	**35.55 298**	*eP*	**P**	**14 32 44.2**	**+0.9**
	18nm,0.4s						
DMN	**Daman**	**35.80 298**	*eP*	**P**	**14 32 46.5**	**+1.0**
	8.9nm,0.4s						
SONM	**Songino Array**	**36.02 344**	P	**P**	**14 32 46.9**	**0.0**
	2.0nm,0.5s,baz=167,slow=11,SNR=16						
SONM	**Songino Array**	**36.02 344**	P	**P**	**14 32 46.7**	**-0.2**
WRA	**Warramunga Arr**	**36.08 158**	P	**P**	**14 32 46.1**	**-1.4**
	0.6nm,0.6s,baz=338,slow=9.6,SNR=5.0						
WRA			pP	**pP**	**14 33 06.6**	**-1.2**
	0.9nm,0.9s,baz=332,slow=9.9,SNR=4.9						
WR0	**Warramunga Arr**	**36.17 157**	P	**P**	**14 32 47.9**	**-0.5**
WR0			IAmb	IAmb	14 33 12.1		
	comp=Z,11nm,1.4s						
GKN	**Gorkha**	**36.31 299**	*eP*	**P**	**14 32 50.3**	**+0.6**
	comp=Z,12nm,0.7s						
KOLN	**Koldanda**	**37.13 298**	*eP*	**P**	**14 32 57.7**	**+0.9**
	comp=Z,9.8nm,0.8s						
ASAR	**Alice Springs**	**39.37 161**	P	**P**	**14 33 14.5**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=336,slow=6.6,SNR=13						
ASAR			pP	**pP**	**14 33 34.7**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=340,slow=7.4,SNR=12						
ASAR	**Alice Springs**	**39.37 161**	P	**P**	**14 33 13.7**	**-1.6**
ASAR				**pP**	**14 33 35.1**	**-0.5**
TLY	**Talaya**	**40.26 344**	P	**P**	**14 33 22.4**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=185,slow=9.9,SNR=5.2						
TLY	**Talaya**	**40.26 344**	IAmb	IAmb	14 33 24.4		
	comp=Z,1.8nm,0.5s						
MORW	**Morawa**	**42.74 186**	P	**P**	**14 33 41.8**	**-1.0**
MORW			IAmb	IAmb	14 34 06.9		
	comp=Z,8.2nm,1.1s						
MK31	**Makanchi Array**	**45.95 324**	P	**P**	**14 34 09.5**	**+1.1**
MKAR	**Makanchi Array**	**45.95 324**	P	**P**	**14 34 09.0**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=125,slow=9.1,SNR=20						
MKAR	**Makanchi Array**	**45.95 324**	P	**P**	**14 34 09.4**	**+1.1**
MAKZ	**Makanchi**	**46.14 324**	P	**P**	**14 34 10.4**	**+0.6**
NWAO	**Narrogin (SRO)**	**46.47 184**	P	**P**	**14 34 10.9**	**-1.6**
NWAO			IAmb	IAmb	14 34 35.9		
	comp=Z,11nm,1.1s						
YAK	**Yakutsk**	**48.70 6**	P	**P**	**14 34 28.5**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=330,slow=2.4,SNR=1.2						
YAK	**Yakutsk**	**48.70 6**	P	**P**	**14 34 28.1**	**-1.2**
AAK	**Ala-Archa**	**48.97 315**	P	**P**	**14 34 33.7**	**+1.7**
	comp=Z,0.9nm,0.5s,baz=179,slow=11,SNR=4.7						
ZALV	**Zalesovo Beam**	**48.99 333**	P	**P**	**14 34 31.6**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=126,slow=6.9,SNR=9.7						
PETK	**Petropavlovsk-**	**49.09 29**	P	**P**	**14 34 32.3**	**-0.2**
	comp=Z,1.7nm,1.0s,baz=218,slow=6.8,SNR=2.2						
KURBB	**Kurchatov Arra**	**50.11 326**	P	**P**	**14 34 41.2**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=125,slow=7.7,SNR=36						
KURK	**Kurchatov**	**50.11 326**	P	**P**	**14 34 41.2**	**+0.9**
GAR	**Garm**	**50.81 309**	P	**P**	**14 34 46.4**	**+0.4**
KK31	**Karatay Array**	**51.88 314**	P	**P**	**14 34 53.9**	**+0.2**
KK31			IAmb	IAmb	14 34 55.4		
	comp=Z,2.7nm,0.6s						
KKAR	**Karatay Array**	**51.88 314**	P	**P**	**14 34 54.2**	**+0.5**
KKAR			IAmb	IAmb	14 34 55.4		
	comp=Z,2.7nm,0.6s						
KKAR	**Karatay Array**	**51.88 314**	P	**P**	**14 34 54.1**	**+0.4**
BVAR	**Borovoye Array**	**55.70 326**	P	**P**	**14 35 21.6**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=176,slow=8.9,SNR=11						
BRVK	**Borovoye**	**55.77 326**	P	**P**	**14 35 22.2**	**+0.4**
GEYT	**Alibeck**	**60.03 306**	P	**P**	**14 35 53.0**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=165,slow=6.2,SNR=3.9						
GEYT	**Alibeck**	**60.03 306**	IAmb	IAmb	14 35 54.4		
	comp=Z,2.1nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**60.03 306**	P	**P**	**14 35 52.5**	**+0.5**
ABKAR	**Akbulak array**	**60.64 319**	P	**P**	**14 35 56.2**	**+0.3**
ABKAR			IAmb	IAmb	14 35 57.2		
	comp=Z,2.8nm,0.6s						
AKTO	**Aktyubinsk**	**62.13 320**	P	**P**	**14 36 06.4**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=178,slow=3.1,SNR=4.6						
ARU	**Arti**	**63.31 327**	P	**P**	**14 36 13.2**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=146,slow=2.4,SNR=4.8						
SOCY	**Socotra**	**64.71 277**	P	**P**	**14 36 23.3**	**-0.4**
SOCY			IAmb	IAmb	14 36 47.3		
	comp=Z,6.5nm,1.1s						
IMAR	**Indian Mountai**	**75.84 25**	P	**P**	**14 37 30.3**	**-0.3**
TOLK	**Toolik Lake Re**	**77.30 22**	P	**P**	**14 37 38.7**	**-0.1**
TOLK			IAmb	IAmb	14 37 47.8		
	comp=Z,7.5nm,1.4s						
ILAR	**Eielson Array**	**78.81 26**	P	**P**	**14 37 42.8**	**-4.3**
ARCES	**ARCESS Array B**	**79.03 339**	P	**P**	**14 37 47.3**	**-1.0**
	comp=Z,6.8nm,1.0s,baz=85,slow=4.5,SNR=5.0						
BMAR	**Burnt Mountain**	**79.32 23**	P	**P**	**14 37 50.7**	**+0.7**
FINES	**FINESS Array B**	**80.22 331**	P	**P**	**14 37 53.2**	**-1.7**
	comp=Z,2.9nm,1.1s,baz=54,slow=7.2,SNR=1.6						
INK	**Inuvik**	**83.14 21**	P	**P**	**14 38 08.7**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=310,slow=4.7,SNR=4.0						
INK	**Inuvik**	**83.14 21**	IAmb	IAmb	14 38 19.1		
	comp=Z,3.5nm,1.4s						
NOA	**NORSAR Array B**	**87.20 333**	P	**P**	**14 38 29.1**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=68,slow=4.6,SNR=2.3						
YKA	**Yellowknife Ar**	**92.83 22**	P	**P**	**14 38 55.5**	**-1.3**
	comp=Z,0.1nm,0.4s,baz=308,slow=4.2,SNR=5.8						

*IDC **19** 14:35:30.6±4.2,25°.98N×125°.36E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.2/45,mbtmp3.5/4,Error ellipse: s-maj=265.6km s-min=23.5km az=63.0*
*JMA **19** 14:35:50.1±0.2,25°.14N×123°.94E,h124km±3km,M3.4*
ISC 19 14:35:49.3±1.2,**25°.2N**±0°.1×**123°.91E**±0°.06,**h130**km±9km, **n16**,σ0**44**/27,**mb3.4**/4,**Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JISG	**Ishigakijimahi**	**0.68**	**148**	P	**Pn**	**14 36 09.3**	**-0.2**
JISG				S	**Sn**	**14 36 24.6**	**-0.2**
JIJ	**Ishigaki jima**	**0.83**	**165**	P	**Pn**	**14 36 10.5**	**-0.2**
JIJ				S	**Sn**	**14 36 25.7**	**-1.2**
IRIF	**Iriomote-Funau**	**0.85**	**191**	P	**Pn**	**14 36 10.7**	**-0.1**
IRIF				S	**Sn**	**14 36 27.2**	**+0.1**
JTJ	**Tarama**	**0.89**	**126**	P	**Pn**	**14 36 11.3**	**+0.1**
JTJ				*e*S	**Sn**	**14 36 28.0**	**+0.3**
JKRS	**Kuro-shima**	**0.93**	**175**	P	**Pn**	**14 36 11.7**	**+0.1**
JKRS				S	**Sn**	**14 36 28.4**	**0.0**
YOJ	**Yonaguni jima**	**1.08**	**230**	P	**Pn**	**14 36 13.5**	**+0.5**
YOJ				S	**Sn**	**14 36 31.1**	**+0.2**
HATJ	**Hateruma jima**	**1.11**	**185**	P	**Pn**	**14 36 13.7**	**+0.4**
HATJ				*e*S	**Sn**	**14 36 31.7**	**+0.2**
JYNG	**Yonagunijimaku**	**1.13**	**231**	P	**Pn**	**14 36 14.2**	**+0.7**
JYNG				*e*S	**Sn**	**14 36 31.9**	**+0.1**
JIRB	**Irabujima**	**1.19**	**106**	P	**Pn**	**14 36 14.0**	**-0.1**
JIRB				S	**Sn**	**14 36 32.6**	**-0.2**
JIKM	**Ikemajima**	**1.23**	**101**	P	**Pn**	**14 36 14.8**	**+0.3**
JIKM				S	**Sn**	**14 36 33.8**	**+0.2**
JMJ2	**Miyako jima3**	**1.35**	**108**	P	**Pn**	**14 36 16.1**	**+0.3**
JMJ2				*e*S	**Sn**	**14 36 36.2**	**+0.3**
JOGS	**Gusukube**	**1.42**	**106**	P	**Pn**	**14 36 17.0**	**+0.6**
JOGS				S	**Sn**	**14 36 37.7**	**+0.6**
MKAR	**Makanchi Array**	**39.40**	**314**	P	**P**	**14 43 05.8**	**-0.6**
	0.2nm,0.3s,baz=99,slow=8.5,SNR=8.3						
ZALV	**Zalesovo Beam**	**40.81**	**325**	P	P	14 43 13.7	-4.1
	0.5nm,0.4s,baz=119,slow=9.8,SNR=2.5						
WRA	**Warramunga Arr**	**45.97**	**166**	P	**P**	**14 43 59.5**	**-0.1**
	0.7nm,0.7s,baz=349,slow=9.3,SNR=3.1						
ASAR	**Alice Springs**	**49.50**	**168**	P	**P**	**14 44 27.1**	**+0.3**
	0.1nm,0.4s,baz=353,slow=6.8,SNR=8.8						

IDC 19 14:51:40.2±6.3,**30°.27N**×**142°.19E**,**h0**km,**mb3.3**/3, **mb1 3.4**/5,**mb1mx3.2**/53,**mbtmp3.3**/5,**ML2.6/2**,**Error ellipse: s-maj=261.9km s-min=23.5km az=72.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.50**	**325**	Pn	Pn	14 52 35.8	-0.1
	2.0nm,0.3s,baz=120,slow=22,SNR=1.8						
JHJ				Sn	Sn	14 53 13.7	-4.3
	6.3nm,0.3s,baz=63,slow=22,SNR=1.6						
MJAR	**Matsushiro Arr**	**7.08**	**333**	Pn	Pn	14 53 24.1	-1.0
	0.1nm,0.3s,baz=156,slow=11,SNR=7.6						
WRA	**Warramunga Arr**	**50.50**	**190**	P	P	15 00 40.0	-0.1
	0.4nm,0.7s,baz=8.5,slow=8.0,SNR=1.9						
KURBB	**Kurchatov Arra**	**50.86**	**313**	P	P	15 00 42.8	+0.2
	0.1nm,0.5s,baz=92,slow=6.9,SNR=2.7						
ASAR	**Alice Springs**	**54.22**	**189**	P	P	15 01 07.7	-0.1
	0.2nm,0.5s,baz=7.6,slow=7.1,SNR=8.4						

*IDC **19** 14:53:46.8±1.3,35°.17N×26°.70E,h0km,mb3.6/5, mb1 3.5/7,mb1mx3.3/48,mbtmp3.4/7,ML3.2/2,Error ellipse: s-maj=45.5km s-min=19.4km az=150.0*
*THE **19** 14:53:50.1,35°.03N×26°.75E,h1km±2km,ML3.4/4,Error ellipse: s-maj=5.1km s-min=0.8km az=154.0*
*ATH **19** 14:53:50.9,35°.07N×26°.73E,h25km±8km,ML3.5/6,Error ellipse: s-maj=11.1km s-min=1.8km az=334.0*
*DDA **19** 14:53:50.8,35°.11N×26°.78E,h9km±5km,MW3.6*
*ISK **19** 14:53:51.7,35°.23N×26°.64E,h6km,ML3.3/12*
*HLW **19** 14:53:53.5,34°.68N×27°.03E,h11km±11km,Md3.8,Ml3.6*
ISC 19 14:53:49.1±1.1,**34°.98N**±0°.04×**26°.81E**±0°.02,**h17**km±8km, **n84**,σ2**°02**/108,**mb3.5**/5,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.51**	**286**	P	**Pg**	**14 53 59.3**	**+0.1**
ZKR				S	**Sg**	**14 54 06.4**	**+0.3**
ZKR				AML	AML	14 54 07.1	
	comp=E,26540μm,0.2s						
ZKR				AML	AML	14 54 07.5	
	comp=N,8749μm,0.3s						
ZKR	**Zakros**	**0.51**	**286**	P	**Pg**	**14 53 59.3**	**+0.1**
ZKR				S	**Sb**	**14 54 06.6**	**0.0**
	comp=N,9μm,0.3s						
ZKR	**Zakros**	**0.51**	**286**	PG	**Pg**	**14 53 59.2**	**+0.1**
STIA	**Sitia Lasithi**	**0.63**	**291**	P	**Pg**	**14 54 01.2**	**-0.3**
STIA				S	**Sb**	**14 54 10.9**	**+0.7**
KARP	**Karpathos**	**0.64**	**27**	P	**Pg**	**14 54 01.6**	**0.0**
KARP				S	**Sb**	**14 54 11.0**	**+0.6**
KARP				AML	AML	14 54 12.5	
	comp=N,28982μm,0.4s						
KARP				AML	AML	14 54 13.4	
	comp=E,29190μm,0.4s						
KARP	**Karpathos**	**0.64**	**27**	P	**Pg**	**14 54 02.0**	**+0.3**
KARP				S	**Sb**	**14 54 12.2**	**+1.8**
	comp=E,15μm,0.5s						
KARP	**Karpathos**	**0.64**	**27**	PG	**Pb**	**14 54 02.3**	**+0.5**
FRMA	**Ierapetra Chan**	**0.89**	**273**	P	**Pg**	**14 54 04.0**	**-2.3**
FRMA				S	**Sg**	**14 54 16.4**	**-1.6**
	comp=E,968nm,0.5s						
NPS	**Neapolis**	**1.02**	**286**	P	**Pg**	**14 54 08.9**	**0.0**
NPS				AML	AML	14 54 25.6	
	comp=E,5253μm,0.3s						
NPS				AML	AML	14 54 26.5	
	comp=N,5317μm,0.3s						
NPS	**Neapolis**	**1.02**	**286**	P	**Pg**	**14 54 08.6**	**-0.3**
NPS				S	**Sb**	**14 54 22.8**	**+1.3**
	comp=N,3μm,0.3s						
HRKL	**Herakleio**	**1.44**	**284**	PN	**Pb**	**14 54 16.5**	**+1.1**
IDI	**Anoyia**	**1.60**	**282**	P	**Pn**	**14 54 18.9**	**+2.1**
IDI				AML	AML	14 54 47.1	
	comp=N,1255μm,0.7s						
IDI				AML	AML	14 54 47.9	
	comp=E,1064μm,0.4s						
IDI	**Anoyia**	**1.60**	**282**	P	**Pn**	**14 54 18.8**	**+2.1**
IDI	**Anoyia**	**1.60**	**282**	PN	**Pn**	**14 54 18.8**	**+2.1**
ARG	**Arkhangelos**	**1.64**	**41**	P	**Pg**	**14 54 20.9**	**+0.4**
ARG	**Arkhangelos**	**1.64**	**41**	PN	**Pg**	**14 54 21.0**	**+0.4**
SIVA	**Sivas**	**1.64**	**272**	P	**Pn**	**14 54 19.2**	**+2.0**
SIVA				AML	AML	14 54 55.7	
	comp=N,2402μm,0.6s						
SIVA				AML	AML	14 54 55.9	
	comp=E,3316μm,0.6s						
NIS1	**Nisyros Isl.**	**1.65**	**10**	PN	**Pn**	**14 54 18.7**	**+1.4**
SANT	**Santorini**	**1.77**	**322**	P	**Pn**	**14 54 19.7**	**+0.7**
SANT	**Santorini**	**1.77**	**322**	P	**Pn**	**14 54 19.7**	**+0.7**
SANT	**Santorini**	**1.77**	**322**	*i* P	**Pn**	**14 54 19.6**	**+0.7**
SANT				*i* S	**Sn**	**14 54 35.5**	**-5.7**
SANT	**Santorini**	**1.77**	**322**	PN	**Pn**	**14 54 19.7**	**+0.7**
KOSK	**Kos Island**	**1.77**	**4**	PN	**Pn**	**14 54 20.6**	**+1.6**
THR8	**Santorini-Mono**	**1.79**	**323**	P	**Pn**	**14 54 20.2**	**+1.0**
THR6	**Thira Island,**	**1.79**	**320**	P	**Pn**	**14 54 20.6**	**+1.4**
THR9	**Santorini-Faro**	**1.82**	**320**	P	**Pn**	**14 54 20.4**	**+0.9**
SNT5	**Nea Kammeni, S**	**1.83**	**321**	P	**Pn**	**14 54 21.0**	**+1.3**
THR3	**Thira Island,**	**1.83**	**322**	P	**Pn**	**14 54 21.0**	**+1.3**
THT2	**Imerovigli**	**1.84**	**323**	PN	**Pn**	**14 54 21.0**	**+1.1**
THR5	**Thira Island,**	**1.87**	**321**	P	**Pn**	**14 54 20.8**	**+0.6**
BODT	**Bodrum**	**2.12**	**11**	P	**Pn**	**14 54 24.5**	**+0.8**
BODT	**Bodrum**	**2.12**	**11**	PN	**Pn**	**14 54 24.9**	**+1.2**
TURN	**Turunc**	**2.14**	**33**	*i* P	**Pn**	**14 54 25.7**	**+1.7**
TURN				*i* S	**Sn**	**14 54 48.7**	**-1.4**
TURN	**Turunc**	**2.14**	**33**	PN	**Pb**	**14 54 27.1**	**-0.2**
BDRM	**Kayabasi**	**2.15**	**14**	*i* P	**Pn**	**14 54 24.8**	**+0.7**
BDRM				*i* S	**Sn**	**14 54 50.3**	**0.0**
VAM	**Vamos**	**2.18**	**282**	P	**Pn**	**14 54 27.3**	**+2.8**
VAM				AML	AML	14 55 10.1	
	comp=N,1063μm,0.6s						
VAM				AML	AML	14 55 11.2	
	comp=E,1119μm,0.8s						
GVDS	**Gavdos**	**2.24**	**267**	PN	**Pn**	**14 54 28.8**	**+3.4**
GVD	**Gavdhos**	**2.24**	**267**	P	**Pn**	**14 54 28.4**	**+3.0**
GVD	**Gavdhos**	**2.24**	**267**	PN	**Pn**	**14 54 28.6**	**+3.2**
APE	**Apeiranthos**	**2.33**	**334**	P	**Pn**	**14 54 27.6**	**+0.9**
APE	**Apeiranthos**	**2.33**	**334**	*i* P	**Pn**	**14 54 27.1**	**+0.4**
APE				*i* S	**Sn**	**14 54 47.5**	**-7.5**
APE	**Apeiranthos**	**2.33**	**334**	PN	**Pn**	**14 54 27.7**	**+1.0**
APE				SN	**Sn**	**14 54 53.9**	**-1.0**
IMMV	**Iera Moni Meta**	**2.37**	**283**	P	**Pn**	**14 54 29.8**	**+2.7**
IMMV	**Iera Moni Meta**	**2.37**	**283**	PN	**Pn**	**14 54 29.6**	**+2.5**
DALY	**Dalyan (Mula)**	**2.37**	**39**	*i* P	**Pn**	**14 54 29.6**	**+2.5**
DALY				*i* S	**Sb**	**14 55 00.6**	**+0.4**
DALY	**Dalyan (Mula)**	**2.37**	**39**	PN	**Pb**	**14 54 31.2**	**0.0**
YER	**Yerkesik**	**2.46**	**29**	P	**Pn**	**14 54 30.6**	**+2.1**
YER	**Yerkesik**	**2.46**	**29**	PN	**Pn**	**14 54 31.8**	**+3.3**
FETY	**Fethiye**	**2.48**	**48**	*i* P	**Pn**	**14 54 29.4**	**+0.7**
DDIM	**Aydin, Didim**	**2.50**	**8**	*i* P	**Pn**	**14 54 34.4**	**+1.0**
DDIM				*i* S	**Sg**	**14 55 05.6**	**-3.8**
KNDR	**Palaiochora Ch**	**2.58**	**277**	PN	**Pn**	**14 54 33.8**	**+3.9**
MULA	**Mugla, Merkez-**	**2.58**	**28**	P	**Pn**	**14 54 32.8**	**+2.6**
MULA				*i* S	**Sn**	**14 55 03.9**	**+2.7**
AKAS	**Kas**	**2.60**	**60**	*i* P	**Pn**	**14 54 30.3**	**-0.1**
AKAS				*i* S	**Sn**	**14 54 58.8**	**-2.9**
AYDN	**Tasoluk**	**2.81**	**18**	*i* P	**Pn**	**14 54 35.5**	**+2.1**
AYDN				*i* S	**Sn**	**14 55 07.2**	**+0.3**
ANKY	**Antikythira Is**	**3.00**	**288**	P	**Pn**	**14 54 36.9**	**+1.1**
TAVA	**DENİZLİ_Tavas**	**3.01**	**34**	*i* P	**Pn**	**14 54 37.9**	**+1.8**
TAVA				*i* S	**Sn**	**14 55 10.8**	**-1.0**
DGB	**zmir**	**3.07**	**1**	*i* P	**Pn**	**14 54 38.6**	**+1.9**
DGB				*i* S	**Sn**	**14 55 14.9**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**3.09**	**16**	PN	**Pn**	**14 54 39.0**	**+1.8**
ZEYE	**Izmir, Urla-Ze**	**3.26**	**356**	*i* P	**Pn**	**14 54 39.3**	**-0.1**
KTHA	**Kythira Island**	**3.31**	**294**	P	**Pn**	**14 54 41.5**	**+1.4**
KTHA	**Kythira Island**	**3.31**	**294**	PN	**Pn**	**14 54 41.8**	**+1.7**
KTHR	**Kythira**	**3.35**	**294**	P	**Pn**	**14 54 41.6**	**+0.9**
URLA	**Izmir**	**3.38**	**357**	*i* P	**Pn**	**14 54 40.2**	**-0.9**
KORT	**Korkueli**	**3.51**	**54**	*i* P	**Pn**	**14 54 40.6**	**+2.5**
KORT				*i* S	**Sn**	**14 55 18.6**	**-5.5**
SLUM	**Salum**	**3.73**	**202**	P	**Pn**	**14 54 47.7**	**+1.9**
	baz=207						
SLUM				AMP		14 55 00.0	
	baz=207						
SLUM				S	**Sn**	**14 55 27.3**	**-2.0**
	baz=207						
BUCA	**Burdur, Bucak-**	**3.83**	**51**	*i* P	**Pn**	**14 54 49.5**	**+2.1**
KEPZ	**Antalya-Kepez**	**4.34**	**62**	*i* P	**Pn**	**14 54 56.2**	**+2.0**
KEPZ				*i* S	**Sn**	**14 55 42.5**	**-2.0**
GAZI	**Gazipasa**	**4.66**	**73**	*i* P	**Pn**	**14 54 59.8**	**+1.2**
GAZI				*i* S	**Sn**	**14 55 49.0**	**-3.3**
SEDI	**Konya, Seydise**	**4.70**	**57**	*i* P	**Pn**	**14 54 59.6**	**+3.5**
SEDI				*i* S	**Sn**	**14 55 53.1**	**-0.3**
CSS	**Mathiatis**	**5.35**	**88**	*i* P	**Pn**	**14 55 08.9**	**+0.7**
CSS				*i* S	Sn	14 56 03.2	-6.3
SWA2		**5.83**	**192**	P	**Pn**	**14 55 16.7**	**+1.9**
	baz=195						
SWA2				AMP		14 56 00.0	
	baz=195						
SWA2				S	Sn	14 56 17.1	-4.2
	baz=195						
HMYD	**Mayadein**	**6.17**	**146**	P	**Pn**	**14 55 20.2**	**+0.8**
	baz=145						
RYAN	**Fayoum**	**6.57**	**152**	P	**Pn**	**14 55 25.0**	**0.0**
	baz=152						
RYAN				AMP		14 56 00.0	
	baz=152						
HSAF	**As Saff**	**6.68**	**142**	P	**Pn**	**14 55 27.4**	**+0.9**
	baz=141						
GLL	**Jalalah**	**6.79**	**141**	P	**Pn**	**14 55 28.3**	**+0.2**
	baz=140						
BRTR	**Keskin Array B**	**7.21**	**47**	Pn	**Pn**	**14 55 33.8**	**-0.1**
	comp=E,0.2nm,0.3s,baz=228,slow=16,SNR=1.7						
HFRF	**Wahat Farafira**	**7.91**	**170**	P	**Pn**	**14 55 44.1**	**+0.8**
	baz=171						
MODS	**Modra-Piesok**	**15.14**	**335**	*e*P	**P**	**14 57 31.2**	**+4.0**
AKASG	**Malin Array Be**	**15.81**	**6**	Pn	**Pn**	**14 57 27.0**	**-3.7**
	comp=E,0.2nm,0.3s,baz=194,slow=11,SNR=1.4						
ESDC	**Sonseca Array**	**24.85**	**290**	P	**P**	**14 59 09.8**	**-0.9**
	comp=E,0.6nm,0.6s,baz=83,slow=10,SNR=9.3						
TORD	**Torodi Ar. Bea**	**31.43**	**232**	P	**P**	**15 00 10.1**	**+0.5**
	comp=E,0.4nm,0.3s,baz=31,slow=8.4,SNR=8.7						
KURBB	**Kurchatov Arra**	**40.19**	**51**	P	**P**	**15 01 23.2**	**-1.0**
	comp=E,0.3nm,0.3s,baz=277,slow=8.8,SNR=8.4						
MKAR	**Makanchi Array**	**42.74**	**57**	P	**P**	**15 01 46.4**	**+1.0**
	comp=E,0.4nm,0.5s,baz=279,slow=7.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**44.15**	**46**	P	**P**	**15 01 56.8**	**+0.2**
	comp=E,0.5nm,0.4s,baz=280,slow=8.5,SNR=3.6						

IDC 19 15:14:34.4±4.3,**5°.56S**×**102°.41E**,**h0**km,**mb3.3**/4, **mb1 3.4**/4,**mb1mx3.2**/45,**mbtmp3.3**/4,**Error ellipse: s-maj=177.0km s-min=29.0km az=57.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**24.11**	**352**	P	P	15 19 52.4	+0.3
	0.4nm,0.5s,baz=180,slow=7.9,SNR=2.5						
H08S2	**Diego Garcia H**	**29.78**	**264**	T	T	15 52 16.2	
	baz=88,slow=75,SNR=16						
H08S3	**Diego Garcia H**	**29.79**	**264**	T	T	15 52 17.1	
	baz=88,slow=75,SNR=10						
H08S1	**Diego Garcia H**	**29.80**	**264**	T	T	15 52 20.0	
	baz=88,slow=75,SNR=6.0						
ASAR	**Alice Springs**	**35.25**	**124**	P	P	15 21 31.0	-0.1
	0.2nm,0.6s,baz=298,slow=7.6,SNR=4.5						
SONM	**Songino Array**	**53.28**	**3**	P	P	15 23 55.5	+0.3
	0.5nm,0.6s,baz=197,slow=7.7,SNR=4.0						
MKAR	**Makanchi Array**	**55.10**	**343**	P	P	15 24 07.8	-0.6
	0.2nm,0.5s,baz=150,slow=8.5,SNR=5.8						

IDC 19 15:26:57.0±3.1,**32°.54S**×**179°.26W**,**h0**km,**mb3.4**/2, **mb1 3.7**/3,**mb1mx3.5**/29,**mbtmp3.5**/3,**ML3.3/1**,**MS3.5/2**, **Ms1 3.5**/2,**ms1mx2.8**/16,**Error ellipse: s-maj=72.0km s-min=37.3km az=108.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.43**	**206**	Pn	Pn	15 28 32.7	-0.1
	0.7nm,0.3s,baz=298,slow=23,SNR=1.7						
URZ				Sn	Sn	15 29 46.7	-0.2
	0.2nm,0.3s,baz=300,slow=23,SNR=1.6						
MSVF	**Nonsavu**	**14.94**	**350**	LR	LR	15 34 53.3	
	comp=Z,113nm,20.0s,baz=113,slow=32						
PMG	**Port Moresby**	**38.62**	**299**	LR	LR	15 48 17.8	
	comp=Z,102nm,18.4s,baz=279,slow=33						
ASAR	**Alice Springs**	**41.97**	**270**	P	P	15 34 49.9	0.0
	0.4nm,0.8s,baz=104,slow=7.8,SNR=4.7						
WRA	**Warramunga Arr**	**43.16**	**275**	P	P	15 34 59.5	-0.1
	0.5nm,0.6s,baz=113,slow=8.1,SNR=2.4						
H03N3	**Juan Fernandez**	**80.39**	**123**	T	T	17 07 34.4	
	baz=238						
H03N2	**Juan Fernandez**	**80.39**	**123**	T	T	17 07 45.8	
	baz=238						
H03N1	**Juan Fernandez**	**80.40**	**123**	T	T	17 07 45.8	
	baz=238						
FINES	**FINESS Array B**	**146.75**	**338**	PKPbc	PKPbc	15 46 39.3	-0.8
	0.8n

KAPI LR LR 15 52 48.7
comp=Z,44nm,21.6s,baz=280,slow=42
KAPI Kappang 9.61 229 Pn Pn 15 48 11.7 -0.1
OCLP Ormoc 9.98 346 *eP* **Pn 15 48 13.3 -3.4**
SAUI Saumlaki 10.16 155 P **Pn 15 48 21.2 +2.2**
7µm228nm,0.9s
BKB Balikpapan 10.46 256 P **Pn 15 48 23.9 +0.9**
52nm,0.5s
MMRI Maumere 10.97 206 Pn **Pn 15 48 29.5 -0.3**
SOEI Soe 11.33 194 Pn **Pn 15 48 33.3 -1.3**
KKM Kota Kinabalu 11.78 294 Pn **Pn 15 48 39.1 -1.4**
KBKI Kotabaru 11.79 247 P **Pn 15 48 40.4 -0.1**
22nm,0.7s
BATP Bataraza 11.83 309 *eP* **P 15 48 46.3 -1.7**
BATI Baumata 11.92 196 P **Pn 15 48 44.2 +2.0**
1.3nm,0.3s,baz=347,slow=4.5,SNR=4.0
BATI Baumata 11.92 196 P **P 15 48 45.6 -3.3**
11nm,0.8s
ENPP El Nido 12.41 323 *eP* **Pn 15 48 47.1 -1.4**
BBKI Banjar Baru 13.08 249 P **Pn 15 48 57.7 +0.5**
14nm,1.1s
PLAI Plampang 13.66 222 P **P 15 49 05.8 -2.5**
22nm,0.9s
LQP Lukban 13.84 337⇓ *eP* **P 15 49 07.8 -2.7**
LUBP Lubang 14.06 332 *eP* **Pn 15 49 06.7 -2.9**
JAY Jayapura 14.18 106 P **P 15 49 12.4 -1.6**
0.8nm,0.3s,baz=146,slow=14,SNR=2.9
JAY Jayapura 14.18 106 P **P 15 49 14.4 +0.3**
11nm,0.8s
TWSI Taliwang, Sumb 14.21 225 P **P 15 49 14.8 +0.4**
16nm,1.1s
MTN Manton Dam 14.63 164 Pn **Pn 15 49 15.2 -1.6**
SBUM Sibu 14.86 275 Pn **P 15 49 19.3 -2.3**
KMMI Kalianget 15.46 237 P **P 15 49 29.8 +1.5**
70nm,1.4s
JAGI Jajag, Banyuwa 16.11 233 P **P 15 49 34.8 -0.7**
JAGI IAmb IAmb 15 49 40.9
comp=Z,22nm,0.8s
KSM Kuching 16.73 271 Pn 15 49 42.1 -0.5
KNRA Kununurra 16.96 174 P **Pn 15 49 45.1 -0.2**
APYP Conner 17.41 341 *eP* **Pn 15 49 51.1 +0.3**
UGM Wanagama 18.85 241 P **Pn 15 50 05.6 -2.2**
FITZ Fitzroy Crossi 19.33 184 P **Pn 15 50 11.3 -2.0**
comp=Z,1.1nm,0.3s,baz=16,slow=9.6,SNR=30
FITZ Fitzroy Crossi 19.33 184 P **Pn 15 50 11.1 -2.2**
LEM Lembang 21.00 247 P **P 15 50 32.0 +3.1**
comp=Z,25nm,0.6s,baz=15,slow=11,SNR=9.3
PPBI Pangkal Pinang 21.18 261 P **P 15 50 31.2 +0.5**
CBJI Citeko 21.57 249 P **P 15 50 39.0 +4.2**
DBJI Dramaga 21.71 249 P **P 15 50 40.5 +4.2**
comp=Z,2µmcomp=Z,17nm,0.6s
COEN Coen 22.03 134 P **P 15 50 38.7 -0.9**
COEN IAmb IAmb 15 51 07.6
comp=Z,11nm,1.2s
WB0 Warramunga Arr 22.15 161 P **P 15 50 40.7 +0.1**
WB0 IAmb IAmb 15 50 48.1
comp=Z,42nm,1.1s
WRA Warramunga Arr 22.30 162 P **P 15 50 42.2 +0.1**
comp=Z,7.1nm,0.3s,baz=341,slow=11,SNR=53
WRA S **S 15 54 35.1 -1.4**
comp=Z,2.3nm,0.8s,baz=340,slow=16,SNR=5.4
WRA ScP **ScP 15 57 56.0 -0.1**
comp=Z,0.7nm,0.7s,baz=340,slow=3.0,SNR=4.0
WRA Warramunga Arr 22.30 162 P **P 15 50 40.5 -1.6**
WB2 Warramunga Arr 22.30 162 P **P 15 50 42.2 0.0**
WB2 IAmb IAmb 15 50 49.4
comp=Z,26nm,0.7s
WR0 Warramunga Arr 22.38 161 P **P 15 50 43.0 +0.1**
WR0 IAmb IAmb 15 50 50.9
comp=Z,18nm,0.9s
TPUB Ta-pu 22.73 345 P **P 15 50 44.5 -1.8**
TPUB IAmb IAmb 15 51 02.2
comp=Z,28nm,1.2s
SSLB Suanglung 23.12 346 P **P 15 50 49.1 -0.7**
SSLB IAmb IAmb 15 50 58.2
comp=Z,23nm,1.4s
MYKOM Kota Tinggi 23.19 271 P **P 15 50 50.3 -0.3**
MYKOM IAmb IAmb 15 50 52.3
comp=Z,6.1nm,0.6s
KASI Kota Agung 23.52 253 P **P 15 50 59.1 +5.6**
PSA00 Pilbara Seismi 23.80 197 P **P 15 50 56.3 +0.3**
XMIS Christmas Isla 24.29 241 P **P 15 51 01.4 +0.8**
AS31 Alice Springs 25.70 165 P **P 15 51 13.7 +0.4**
ASAR Alice Springs 25.70 165 P **P 15 51 13.8 +0.6**
comp=Z,1.4nm,0.3s,baz=342,slow=7.9,SNR=56
ASAR S **S 15 55 27.8 -3.2**
comp=Z,0.4nm,0.7s,baz=339,slow=18,SNR=2.6
ASAR ScP **ScP 15 58 07.8 +2.4**
comp=Z,0.5nm,0.6s,baz=346,slow=3.0,SNR=6.1
KULM Kulim 26.64 279 P **P 15 51 22.6 +0.8**
CTA Charters Tower 28.40 139 P P 15 51 42.0 +4.6
comp=Z,3.3nm,0.5s,baz=316,slow=10,SNR=8.0
GSI Gunungsitoli 29.46 270 P **P 15 51 46.8 -0.1**
GSI IAmb IAmb 15 51 47.8
comp=Z,16nm,0.9s
NJ2 Nanjing 31.54 347 *eP* **P 15 52 07.6 +2.6**
NJ2 pmax pmax
comp=Z,6.0nm,0.7s
FORT Forrest 31.92 178 P **P 15 52 09.0 +0.7**
MORW Morawa 31.98 198 P **P 15 52 09.6 +0.7**
MORW IAmb IAmb 15 52 35.3
comp=Z,12nm,1.4s
CMAR Chiang Mai Arr 32.41 303 P **P 15 52 13.1 +0.3**
comp=Z,0.5nm,0.3s,baz=134,slow=7.7,SNR=7.3
CHTO Chiang Mai 32.58 304 P **P 15 52 14.5 +0.2**
CHTO IAmb IAmb 15 52 15.7
comp=Z,3.1nm,0.8s
JWT Wachi 34.69 12 P **P 15 52 32.4 +0.2**
JWT IAmb IAmb 15 52 44.9
comp=Z,26nm,1.5s
BBOO Buckleboo 34.98 167 P **P 15 52 35.5 +0.7**
EIDS Eidsvold 35.28 140 P **P 15 52 38.1 +0.6**
NWAO Narrogin (SRO) 35.28 194 P **P 15 52 38.9 +1.5**
STKA Stephens Creek 35.77 159 P **P 15 52 42.2 +0.7**
comp=Z,4.0nm,0.7s,baz=328,slow=8.8,SNR=14
STKA Stephens Creek 35.77 159 P **P 15 52 42.8 +1.3**
KSRS Korea Array 35.98 1 P **P 15 52 43.3 +0.1**
comp=Z,0.7nm,0.6s,baz=175,slow=11,SNR=5.0
XAN Xi'an 36.72 334 P **P 15 52 49.6 0.0**
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN Xi'an 36.72 334 P **P 15 52 50.2 +0.5**
XAN IAmb IAmb 15 52 50.5
comp=Z,4.3nm,0.5s
JMM Marumori 38.52 18 P **P 15 53 05.7 +1.0**
JMM IAmb IAmb 15 53 20.0
comp=Z,16nm,1.0s
ARMA Armidale 39.29 145 P **P 15 53 13.2 +1.9**
ARMA IAmb IAmb 15 53 33.5
comp=Z,21nm,1.2s
LZH Lanzhou 40.75 331 *eP* P 15 53 28.8 +5.4
LZH pP pP 15 53 54.3 -1.5
LZH sP sP 15 54 10.4 -2.1
LZH pmax pmax
comp=Z,17nm,1.1s
SHL Shillong 41.59 308 P **P 15 53 30.6 +0.2**
SHL IAmb IAmb 15 53 31.5
comp=Z,11nm,1.0s
HHC Hu-ho-hao-te 41.79 342 *eP* P 15 53 35.8 +4.1
CAN Canberra 41.82 153 P **P 15 53 34.1 +2.2**
CAN IAmb IAmb 15 53 35.4
comp=Z,18nm,1.1s
USA0B Ussuriysk Arra 42.94 5 P **P 15 53 40.6 -0.2**
USA0B IAmb IAmb 15 54 06.6
comp=Z,3.5nm,0.7s
USRK Ussuriysk Ar. 42.94 5 P **P 15 53 40.6 -0.2**
LHI Lord Howe Isla 44.59 140 P **P 15 53 54.0 -0.2**
GTA Gaotai 45.33 330 *eP* **P 15 54 01.6 +1.5**
GTA pP pP 15 54 30.0 -3.0
GTA sP sP 15 54 43.1 -6.5
GTA pmax pmax
comp=Z,3.0nm,0.9s
TAPN Taplejung 45.72 308 *eP* **P 15 54 04.3 +0.7**
comp=Z,8.2nm,0.6s
ODAN Odare 45.75 307 *eP* **P 15 54 04.4 +0.7**
comp=Z,9.7nm,0.6s
RAMN Ramite 46.42 307 *eP* **P 15 54 10.2 +1.2**
comp=Z,16nm,0.6s
JIRN Jiri 47.06 308 *eP* **P 15 54 15.0 +0.9**
comp=Z,18nm,0.7s
GUN Gumba 47.42 308 *eP* **P 15 54 17.6 +0.7**
comp=Z,25nm,0.6s
PKI Pulchoki 47.65 307 *eP* **P 15 54 18.9 +0.3**
comp=Z,5.0nm,0.5s
PKIN Phulchoki 47.66 307 *eP* **P 15 54 19.1 +0.5**
comp=Z,38nm,0.4s
DMN Daman 47.90 307 *eP* **P 15 54 21.5 +1.0**
comp=Z,9.3nm,0.7s
GKN Gorkha 48.45 307 *eP* **P 15 54 25.5 +0.9**
comp=Z,11nm,0.6s
KOLN Koldanda 49.18 306 *eP* **P 15 54 31.2 +1.0**
comp=Z,38nm,0.6s
SONM Songino Array 49.68 342 P **P 15 54 34.4 +0.8**
comp=Z,1.0nm,0.7s,baz=156,slow=9.3,SNR=7.2
SONM Songino Array 49.68 342 P **P 15 54 34.6 +1.0**
PYUN Piuthan 49.81 306 *eP* **P 15 54 36.4 +1.4**
comp=Z,39nm,0.6s
MNCI Minicoy 54.19 279 P **P 15 55 08.1 +0.7**
WMQ Urumqi 54.89 326 *eP* **P 15 55 15.0 +3.1**
QRZ Quartz Range 58.86 141 P **P 15 55 39.4 -0.5**
LBZ Lake Benmore 59.52 145 P **P 15 55 45.9 +1.5**
MK31 Makanchi Array 59.72 326 P **P 15 55 46.8 +1.0**
MK31 IAmb IAmb 15 55 47.7
comp=Z,3.6nm,0.7s
MKAR Makanchi Array 59.72 326 P **P 15 55 47.0 +1.2**
comp=Z,3.9nm,0.6s,baz=122,slow=8.4,SNR=68
MKAR ScP **ScP 16 00 20.1 +2.1**
comp=Z,0.3nm,0.6s,baz=132,slow=5.1,SNR=3.9
MAKZ Makanchi 59.90 326 P **P 15 55 47.9 +0.9**
MAKZ IAmb IAmb 15 55 48.5
comp=Z,3.7nm,0.7s
URZ Urewera 60.58 136 P **P 15 55 52.2 +0.6**
BKZ Black Stump Fm 60.59 137 P **P 15 55 52.5 +0.7**
BKZ IAmb IAmb 15 56 18.6
comp=Z,15nm,1.3s
TKM2 Tokmak 2 61.77 319 P **P 15 56 01.4 +1.4**
SNR=5.3
UCH Uchtor 62.17 318 P **P 15 56 04.9 +2.0**
SNR=5.6
AAK Ala-Archa 62.36 319 P **P 15 56 05.2 +1.4**
USP Ospenovka 62.64 319 P **P 15 56 07.0 +1.4**
SNR=5.5
AML Almayashu 62.67 318 P **P 15 56 08.0 +1.8**
SNR=7.9
EKS2 Erkin-Say 62.85 318 P **P 15 56 09.0 +2.0**
SNR=6.3
ZALV Zalesovo Beam 62.88 333 P **P 15 56 07.8 +1.1**
comp=Z,0.5nm,0.4s,baz=130,slow=3.7,SNR=3.4
KBL Kabul 63.25 308 P **P 15 56 11.0 +1.1**
KBL IAmb IAmb 15 56 11.8
comp=Z,4.4nm,0.8s
GAR Garm 63.80 313 P **P 15 56 14.3 +1.0**
KK31 Karatay Array 65.22 318 P **P 15 56 23.2 +0.9**
KK31 IAmb IAmb 15 56 24.1
comp=Z,3.8nm,0.9s
KKAR Karatay Array 65.22 318 P **P 15 56 23.3 +0.9**
KKAR Karatay Array 65.22 318 P **P 15 56 23.2 +0.9**
KKAR IAmb IAmb 15 56 24.1
comp=Z,3.8nm,0.9s
BRVK Borovoye 69.59 327 P **P 15 56 50.1 +0.5**
TIXI Tiksi 70.25 1 P **P 15 56 52.9 -0.3**
BILL Bilibino 71.81 15 P **P 15 57 03.2 +0.6**
GEYT Alibeck 72.66 309 P **P 15 57 07.7 -0.8**
comp=Z,1.8nm,0.6s,baz=85,slow=3.1,SNR=3.7
GEYT Alibeck 72.66 309 P **P 15 57 08.0 -0.4**
GYA0B ALIBECK ARRAY 72.66 309 P **P 15 57 08.6 +0.1**
GYA0B IAmb IAmb 15 57 10.4
comp=Z,3.1nm,0.8s
NRIK Noril'sk 72.84 346 P **P 15 57 08.7 -0.2**
comp=Z,2.7nm,0.7s,baz=124,slow=7.0,SNR=5.3
NRIK Noril'sk 72.84 346 P **P 15 57 09.3 +0.5**
NRIK IAmb IAmb 15 57 10.1
comp=Z,2.7nm,0.7s
SOCY Socotra 73.16 282 P **P 15 57 11.8 -0.1**
SOCY IAmb IAmb 15 57 14.4
comp=Z,6.3nm,0.7s
ABKAR Akbulak array 74.22 321 P **P 15 57 17.5 +0.3**
VNDA Vanda 81.00 173 P **P 15 57 54.6 +0.3**
comp=Z,0.7nm,0.6s,baz=323,slow=7.3,SNR=7.6
VNDA Vanda 81.00 173 IAmb IAmb 15 57 56.5
comp=Z,5.0nm,1.4s
TORD Torodi Ar. Bea 123.94 287 PKP **PKiKP 16 04 39.2 +0.6**
comp=Z,0.6nm,0.6s,baz=35,slow=2.1,SNR=3.9

*ECX **19** 15:49:23.8±0.5, 32.°39N×115.°28W, h9km±1km, MD1.9, ML2.1*
*MEX **19** 15:49:23.1±0.6, 32.°39N×114.°83W, h5km, MD3.8*
ISC 19 15:49:24.2±1.1, 32.°20N±0.°04×115.°36W±0.°03, h7km±11km, n16, σ0ˢ49/27, 2C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.23**	**11**	*eP*	**Pg**	**15 49 28.7**	**0.0**
CPBX				*eS*	**Sg**	**15 49 31.5**	**-0.3**
CPBX				IAML		15 49 34.6	
	comp=N,3µm,0.2s						
CPBX				⇓*e*		15 49 34.6	
MBIG	**Mexicali**	**0.25**	**32**	*iP*	**Pg**	**15 49 29.1**	**0.0**
MBIG				*iS*	**Sg**	**15 49 33.2**	**+0.8**
GUVIX	**Guadalupe Vict**	**0.26**	**66**	*eP*	**Pg**	**15 49 29.3**	**0.0**
GUVIX				*eS*	**Sg**	**15 49 33.2**	**+0.4**
CTLX	**Tlaxcala, TLX**	**0.33**	**33**	*eP*	**Pg**	**15 49 30.4**	**-0.2**
CTLX				*eS*	**Sg**	**15 49 35.4**	**+0.4**
DREC	**Desert Rsrch C**	**0.61**	**353**	*eP*	**Pg**	**15 49 36.3**	**-0.3**
EMSC	**East Mesa**	**0.62**	**30**	*eP*	**Pg**	**15 49 35.5**	**-0.7**
RMX	**La Rumorosa**	**0.73**	**304**⇑	*eP*	**Pg**	**15 49 38.0**	**-0.3**
RMX				*eS*	**Sg**	**15 49 47.1**	**-0.7**
ECBX	**El Chinero**	**0.77**	**160**	*eP*	**Pg**	**15 49 38.5**	**-0.4**
ECBX				*eS*	**Sb**	**15 49 50.5**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**0.78**	**305**	*eP*	**Pg**	**15 49 39.7**	**+0.4**
CBX	**Cerro Bola**	**1.11**	**276**	*eP*	**Pn**	**15 49 46.1**	**-0.2**
CBX				*eS*	**Sn**	**15 50 01.9**	**0.0**
CBX				⇓*e*		15 50 05.4	
CBX				IAML		15 50 05.4	
	comp=E,47nm,0.5s						
MONP2	**Monument Peak**	**1.14**	**308**	*eP*	**Pg**	**15 49 46.2**	**+0.1**
TJIG	**Tijuana**	**1.14**	**282**	*eP*	**Pb**	**15 49 46.1**	**-0.1**
TJIG				*eS*	**Sn**	**15 50 03.3**	**+0.8**
TJIG	**Tijuana**	**1.14**	**282**	*eP*	**Pb**	**15 49 46.1**	**-0.1**
TJIG				*eS*	**Sg**	**15 50 01.4**	**+0.4**
SPIG	**San Pedro Mart**	**1.15**	**185**	*iP*	**Pb**	**15 49 46.5**	**-0.1**
SPIG				*eS*	**Sn**	**15 50 04.1**	**+1.0**
BAR	**Barrett**	**1.21**	**294**	*eP*	**Pn**	**15 49 47.1**	**-0.5**
BAR				*eS*	**Sn**	**15 50 03.9**	**-0.4**
SDRC	**San Diego Road**	**1.45**	**292**⇑	*e*	**Sg**	**15 50 11.2**	**+0.6**
SDRC				IAML		15 50 11.2	
	comp=N,16nm,0.3s						

*JMA **19** 16:00:05.9, 34.°66N×137.°34E, h37km±1km, M3.3*
Broadband fault plane solution: P waves. NP1: ϕs=330.00000°, δ32.00000°, λ-94.00000°. NP2: ϕs=155.00000°, δ58.00000°, λ-88.00000°. Principal axes: T Plg13.0000°, Azm243.0000°; N Plg2.0000°, Azm333.0000°; P Plg77.0000°, Azm72.0000°;
JMA Felt It J1.
*IDC **19** 16:00:31.7±1.2, 36.°13N×138.°03E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.2/28, mbtmp3.7/2 Error ellipse: s-maj=13.2km s-min=9.3km az=106.0*
ISC 19 16:00:05.5±5.8, 34.°6N±0.°3×137.°3E±0.°1, h35km, n15, σ1ˢ39/5, 6C-2D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAA	**Atsumi**	**0.17**	**283**	⇓*P*		16 00 12.5	+0.4
JAA				*S*		16 00 17.0	+0.5
JSSY	**Shinshiroyabe**	**0.35**	**23**	⇑*P*		16 00 13.7	-0.4
JSSY				*S*		16 00 19.1	-0.8
TK04	**Tokai 4**	**0.49**	**115**	⇑*P*		16 00 17.0	+1.1
JIE	**Ise**	**0.56**	**249**	⇑*P*		16 00 17.3	+0.2
JIE				*S*		16 00 25.6	+0.5
TK02	**Tokai 2**	**0.73**	**152**	⇓*P*		16 00 19.9	+0.7
TSUJ	**Tsu 2**	**0.77**	**279**	⇑*P*		16 00 19.8	-0.1
TSUJ				*S*		16 00 30.4	+0.2
SHZ3	**Shizuoka 3**	**0.85**	**56**	*P*		16 00 20.5	-0.7
SHZ3				*S*		**16 00 31.2**	**-1.3**
TTO2	**TONANKAI O.B.S**	**0.90**	**197**	⇑*P*		16 00 22.6	+1.2
JKN2	**Miekihoku**	**0.95**	**248**	⇑*P*		16 00 22.7	+0.3
TTO1	**TONANKAI O.B.S**	**1.07**	**206**	*P*		16 00 24.9	+1.1
JYTA	**Yamagatataniai**	**1.11**	**334**	*P*		16 00 24.5	-0.1
JYTA				*S*		**16 00 37.6**	**-1.1**
MAT	**Matsushiro**	**2.07**	**20**	*P*		**16 00 38.2**	**+0.4**
MAT				*S*		**16 01 02.7**	**+0.4**
MJAR	**Matsushiro Arr**	**2.07**	**20**	*Pg*		**16 00 38.5**	**+0.8**
	1.7nm,0.3s,baz=205,slow=14,SNR=119						
MJAR				Lg		16 00 49.0	
	2.7nm,0.3s,baz=202,slow=14,SNR=2.4						
WRA	**Warramunga Arr**	**54.31**	**183**	P		16 10 10.7	+42
	1.0nm,0.6s,baz=9.2,slow=7.7,SNR=4.2						
ASAR	**Alice Springs**	**58.03**	**184**	P		16 10 38.5	+43
	0.5nm,0.6s,baz=3.8,slow=5.9,SNR=20						

*IDC **19** 16:25:11.2±3.0, 5.°0S±0.°4×152.°1E±0.°6, h70km, n7, σ1ˢ10/7, mb3.4/5, New Britain region*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.60**	**228**	P	**Pn**	**16 26 45.6**	**0.0**
	0.4nm,0.3s,baz=45,slow=15,SNR=2.0						
PMG				S	**Sn**	**16 27 59.6**	**+0.1**
	0.7nm,0.3s,baz=134,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**22.82**	**228**	P	**P**	**16 30 06.6**	**-2.1**
	0.6nm,0.8s,baz=50,slow=9.7,SNR=2.1						
ASAR	**Alice Springs**	**25.57**	**222**	P	**P**	**16 30 34.4**	**+0.5**
	0.4nm,0.8s,baz=57,slow=9.6,SNR=5.7						
FITZ	**Fitzroy Crossi**	**28.98**	**241**	P	**P**	**16 31 04.9**	**+0.5**
	3.0nm,1.0s,baz=63,slow=11,SNR=1.7						
JOW	**Kunigami**	**39.15**	**325**	LR	LR	16 47 41.9	
	comp=Z,143nm,19.6s,baz=275,slow=35						
PETK	**Petropavlovsk-**	**58.06**	**4**	P	**P**	**16 34 56.9**	**-0.1**
	1.0nm,0.9s,baz=168,slow=6.6,SNR=6.2						
MKAR	**Makanchi Array**	**80.02**	**319**	P	**P**	**16 37 12.9**	**-0.3**
	0.5nm,0.9s,baz=123,slow=5.3,SNR=2.7						

*TIR **19** 16:40:12.7, 41.°98N×20.°36E, h5km, Md2.5*
*PDG **19** 16:40:12.4±0.1, 41.°92N×20.°35E, h7km, ML2.5/14, Error ellipse: s-maj=0.1km s-min=0.1km az=90.0*
*SKO **19** 16:40:14.1, 41.°94N×20.°28E, h8km*
*BEO **19** 16:40:15.0±0.2, 41.°93N×20.°40E, h0km, ML2.2/10*
ISC 19 16:40:13.4±0.9, 41.°94N±0.°02×20.°33E±0.°02, h16km±7km, n43, σ1ˢ11/76, 4C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.27**	**161**	P	**Pg**	**16 40 18.5**	**-0.7**
	baz=167						
PHP				S	**Sb**	**16 40 23.9**	**-0.4**
	baz=167						
PUK	**Puka**	**0.34**	**288**	P	**Pg**	**16 40 19.5**	**-1.0**
	baz=281						
PUK				S	**Sg**	**16 40 24.9**	**-0.4**
	baz=281						
PRZK	**Prizren**	**0.42**	**50**	*i* Pg	**Pg**	**16 40 22.0**	**+0.1**
PRZK				*i* Sg	**Sb**	**16 40 29.5**	**+0.8**
BCI	**Bajram Curri**	**0.47**	**336**	P	**Pg**	**16 40 22.4**	**-0.4**
	baz=332						
BCI				S	**Sb**	**16 40 29.2**	**-0.9**
	baz=332						
TIR	**Tirane**	**0.69**	**210**	*e*Pg	**Pn**	**16 40 27.9**	**-0.6**
TIR				*e*Sg	**Sn**	**16 40 38.3**	**-0.6**
TIR	**Tirane**	**0.69**	**210**	P	**Pn**	**16 40 27.7**	**-0.8**
	baz=211						
TIR				S	**Sn**	**16 40 39.0**	**+0.1**
	baz=211						
TIR	**Tirane**	**0.69**	**210**	*i* Pg	**Pg**	**16 40 26.5**	**-0.3**
PVY	**Plav**	**0.71**	**337**⇓	*i* Pg	**Pg**	**16 40 26.2**	**-1.1**
PVY				*i* Sg	**Sb**	**16 40 37.8**	**+0.7**
ULC	**Ulcinj**	**0.81**	**272**⇓	*i* Pg	**Pb**	**16 40 27.8**	**-1.3**
ULC				*i* Sg	**Sn**	**16 40 40.9**	**-1.0**
SKO	**Skopje**	**0.83**	**87**	*e*Pg	**Pb**	**16 40 28.3**	**-1.2**
SKO				*e*Sg	**Sg**	**16 40 40.8**	**+0.3**
SKO	**Skopje**	**0.83**	**87**	*i* Pg	**Pb**	**16 40 28.9**	**-0.6**
SKO				*i* Sg	**Sn**	**16 40 41.5**	**-0.9**
DRME	**Dracevica, Mon**	**0.89**	**286**⇓	*i* Pg	**Pb**	**16 40 29.2**	**-1.2**
DRME				*i* Sg	**Sn**	**16 40 43.7**	**-0.1**
OHR	**Ohrid**	**0.90**	**157**	*i* Pg	**Pb**	**16 40 29.8**	**-0.9**
OHR				*i* Sg	**Sn**	**16 40 44.4**	**+0.1**
OHR				*e*Lg	Lg	16 40 44.5	
	comp=N,45nm,0.4s						
OHR				*e*Lg	Lg	16 40 45.5	
	comp=E,48nm,0.5s						
PDG	**Podgorica**	**0.93**	**302**	*e*Pg	**Pn**	**16 40 31.9**	**0.0**
PDG				*e*Sg	**Sn**	**16 40 46.3**	**+1.3**
TTG	**Podgorica**	**0.93**	**302**	*e*Pg	**Pb**	**16 40 30.2**	**-1.1**
TTG				*i* Sg	**Sn**	**16 40 45.5**	**+0.5**
GJIK	**Gjilan**	**0.97**	**57**	*i* Pg	**Pn**	**16 40 32.4**	**-0.2**
GJIK				*i* Sg	**Sn**	**16 40 46.8**	**+0.7**
IVA	**Berane**	**0.98**	**341**⇓	*i* Pg	**Pb**	**16 40 31.1**	**-1.1**
IVA				*i* Sg	**Sn**	**16 40 47.1**	**+0.7**
KOME	**Kolasin**	**1.09**	**327**⇓	*i* Pg	**Pb**	**16 40 33.1**	**-0.9**
KOME				*i* Sg	**Sn**	**16 40 50.8**	**+1.8**
BUM	**Brajici-Budva**	**1.12**	**289**⇓	*i* Pg	**Pb**	**16 40 33.7**	**-0.9**
BUM				*i* Sg	**Sg**	**16 40 51.9**	**+2.0**
CEME	**Cevo**	**1.21**	**301**⇑	*i* Pg	**Pn**	**16 40 35.2**	**-0.6**
CEME				*i* Sg	**Sg**	**16 40 54.8**	**+2.3**
NKME	**Niksic**	**1.31**	**310**⇑	*i* Pg	**Pb**	**16 40 37.1**	**-0.6**
NKME				*i* Sg	**Sg**	**16 40 58.2**	**+2.4**
NKY	**Niksic**	**1.32**	**312**	*e*Pg	**Pn**	**16 40 37.2**	**-0.1**
NKY				*i* Sg	**Sg**	**16 40 58.3**	**+2.3**
FNA	**Florina**	**1.40**	**145**	P	**Pb**	**16 40 39.1**	**-0.1**
	baz=146						
FNA				S	**Sg**	**16 41 00.7**	**+2.1**
	baz=146						
FNA	**Florina**	**1.40**	**145**	*i* Pn	**Pn**	**16 40 38.4**	**0.0**
SELS	**Selova**	**1.41**	**24**	*e*Pg	**Pg**	**16 40 40.2**	**-0.3**
SELS				*e*Sg	**Sg**	**16 40 59.8**	**+1.0**
BARS	**Barje**	**1.41**	**51**	*e*Pg	**Pb**	**16 40 39.2**	**-0.2**
BARS				*e*Sg	**Sb**	**16 40 57.8**	**+0.7**
BARS	**Barje**	**1.41**	**51**	*i* Pn	**Pn**	**16 40 35.5**	**-3.0**
STIP	**Stip**	**1.41**	**99**	*i* Pn	**Pg**	**16 40 42.4**	**+1.8**
PRVS	**Prvonek**	**1.42**	**66**	*e*Pg	**Pg**	**16 40 40.2**	**-0.5**
PRVS				*e*Sg	**Sg**	**16 40 58.8**	**-0.4**
HCY	**Herceg Novi**	**1.45**	**291**⇑	*i* Pg	**Pb**	**16 40 39.6**	**-0.5**
HCY				*i* Sg	**Sg**	**16 41 02.7**	**+2.4**
PLE	**Pljevlja**	**1.55**	**334**	*e*Pn	**Pb**	**16 40 41.3**	**-0.6**
PLE				*i* Sn	**Sg**	**16 41 05.4**	**+1.9**
BRY	**Bratogost**	**1.64**	**307**	*e*Pn	**Pb**	**16 40 42.9**	**-0.4**
BRY				*i* Sn	**Sg**	**16 41 07.4**	**+1.3**
IVAS	**Ivanjica**	**1.64**	**356**	*e*Pn	**Pg**	**16 40 44.4**	**-0.5**
IVAS				*e*Sg	**Sg**	**16 41 07.6**	**+1.3**
UPM	**Unac-Piva**	**1.64**	**321**⇑	*i*Pn	**Pb**	**16 40 43.0**	**-0.4**
UPM				*i* Sn	**Sg**	**16 41 07.6**	**+1.3**
BOSS	**Bosilegrad**	**1.69**	**70**	*e*Pg	**Pb**	**16 40 44.9**	**+0.7**
BOSS				*e*Sg	**Sb**	**16 41 05.8**	**+0.5**
GRG	**Griva**	**1.84**	**122**	*i* Pn	**Pb**	**16 40 47.6**	**+0.8**
GRUS	**Gruza**	**1.97**	**8**	*e*Pn	**Pg**	**16 40 50.8**	**-0.4**
GRUS				*e*Sg	**Sg**	**16 41 16.6**	**-0.3**
BOVS	**Bovan**	**1.97**	**30**	*e*Sg	**Pg**	**16 40 49.2**	**-2.1**
BOVS	**Bovan**	**1.97**	**30**	*e*Pg	**Pg**	**16 41 17.3**	**+0.4**
BBLS	**Lazići**	**2.04**	**341**	*e*Pn	**Pb**	**16 40 50.9**	**+0.7**
ZAPS	**Zavoj**	**2.16**	**51**	*e*Pn	**Pb**	**16 40 51.9**	**-0.3**
ZAPS				*e*Sg	**Sg**	**16 41 22.8**	**-0.2**
DIVS	**Divibare**	**2.17**	**354**	*e*Pn	**Pb**	**16 40 53.3**	**+0.9**
ZAGS	**Zajecar**	**2.34**	**36**	*e*Pn	**Pb**	**16 40 54.6**	**-0.6**

*GUC **19** 16:43:50.0±0.6, 21.°22S×68.°63W, h114km±5km, ML3.5*
*IDC **19** 16:43:57.0±8.8, 20.°77S×68.°14W, h169km±61km, mb3.4/2, mb1 3.5/3, mb1mx3.1/26, mbtmp3.7/3, Error ellipse: s-maj=91.2km s-min=53.8km az=32.0*
ISC 19 16:43:49.2±1.0, 21.°22S±0.°04×68.°74W±0.°10, h126km±9km, n16, σ0ˢ83/26, 6C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.72**	**284**	*eP*	**Pn**	**16 44 09.0**	**-0.4**
PB01				*eS*	**Sn**	**16 44 24.0**	**-0.7**
PB01				IAML		16 44 27.6	
	comp=E,1µm,0.1s						
PB08	**IPOC Station P**	**1.14**	**340**⇓	*eP

TA01	**Diego Aracena**	**1.50**	**296**	*e*P		**Pn**	**16 44 17.4**	**+0.5**
TA01				*e*S		**Sn**	**16 44 38.8**	**+0.7**
TA01				IAML			16 44 39.5	
	comp=N,749nm,0.5s							
PB06	**IPOC Station P**	**1.67**	**207**‖	*e*P		**Pn**	**16 44 19.6**	**+0.5**
PB04	**IPOC Station P**	**1.71**	**230**‖	*e*P		**Pn**	**16 44 20.1**	**+0.5**
PB04				*e*S		**Sn**	**16 44 43.1**	**+0.2**
PB04				IAML			16 44 53.1	
	comp=N,695nm,0.2s							
PSGC	**Pisagua**	**2.07**	**321**	*e*P		**Pn**	**16 44 23.6**	**-0.3**
PSGC				*e*S		**Sn**	**16 44 50.3**	**-0.2**
PSGC				IAML			16 44 56.5	
	comp=E,216nm,0.7s							
PB15	**IPOC Station P**	**2.09**	**199**‖	*e*P		**Pn**	**16 44 24.7**	**+0.5**
PB15				*e*S		**Sn**	**16 44 51.4**	**+0.3**
PB05	**IPOC Station P**	**2.12**	**220**	IAML			16 45 03.0	
	comp=E,212nm,0.5s							
MNMC	**Minye Minye**	**2.23**	**339**‖	*e*P		**Pn**	**16 44 26.5**	**+0.4**
MNMC				*e*S		**Sn**	**16 44 55.0**	**+0.6**
MNMC				IAML			16 45 01.3	
	comp=E,563nm,0.2s							
LPAZ	**La Paz**	**4.94**	**7**	P		**Pn**	**16 45 04.2**	**+2.1**
	comp=E,1.1nm,0.3s,baz=180,slow=5.1,SNR=27							
LPAZ				S		**Sn**	**16 45 57.6**	**-1.0**
	baz=200,slow=12,SNR=1.3							
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P		**P**	**16 55 28.1**	**-1.2**
	comp=E,1.1nm,0.9s,baz=261,slow=5.3,SNR=3.8							
YKA	**Yellowknife Ar**	**90.98**	**341**	P		**P**	**16 56 39.8**	**+1.3**
	comp=E,0.3nm,0.7s,baz=127,slow=5.2,SNR=6.7							
MKAR	**Makanchi Array**	**145.32**	**36**	PKP		**PKiKP**	**17 03 14.4**	**-1.7**
	comp=E,0.6nm,0.6s,baz=332,slow=3.0,SNR=8.1							

IDC ***19*** *17:37:22.6±3.0, 5.°40S×153.°38E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, ML2.1/1, Error ellipse: s-maj=102.7km s-min=28.9km az=116.0*

ISC 19 17:37:30.4±2.5, 5.°3S±0.°4×152.°9E±0.°4, h37km, n6, σ1s 49/7, mb3.6/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.04**	**234**	Pn			**Pn**	**17 39 13.0**	**+2.0**
	1.7nm,0.3s,baz=54,slow=10,SNR=14								
PMG				Sn			**Sn**	**17 40 28.6**	**-1.3**
	1.3nm,0.3s,baz=351,slow=17,SNR=2.2								
WRA	**Warramunga Arr**	**23.23**	**229**	P			**P**	**17 42 33.0**	**-1.5**
	1.3nm,0.4s,baz=55,slow=9.8,SNR=7.7								
ASAR	**Alice Springs**	**25.89**	**223**	P			**P**	**17 42 58.6**	**-0.5**
	0.5nm,0.5s,baz=59,slow=9.1,SNR=22								
MKAR	**Makanchi Array**	**80.75**	**319**	P			**P**	**17 49 40.5**	**+0.4**
	0.1nm,0.5s,baz=93,slow=6.4,SNR=1.6								
ZALV	**Zalesovo Beam**	**81.60**	**326**	P			**P**	**17 49 43.8**	**-0.6**
	0.5nm,0.5s,baz=104,slow=6.1,SNR=2.6								
TORD	**Torodi Ar. Bea**	**150.56**	**287**	PKPbc			**PKPbc**	**17 57 19.2**	**-0.2**
	1.3nm,0.8s,baz=90,slow=2.6,SNR=5.6								

IDC 19 18:08:23.7±6.0, 10.°25S×161.°38E, h102km±38km, mb3.2/3, mb1 3.4/3, mb1mx3.1/21, mbtmp3.6/3, Error ellipse: s-maj=60.7km s-min=37.9km az=104.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.63**	**300**	P			Pn	18 08 51.2	-0.5
	37nm,0.3s,baz=179,slow=4.1,SNR=23								
HNR				S			Sn	18 09 13.2	+0.1
	112nm,0.3s,baz=162,slow=22,SNR=22								
WRA	**Warramunga Arr**	**27.79**	**247**	P			P	18 14 03.5	+0.1
	0.5nm,0.7s,baz=75,slow=9.0,SNR=2.5								
ASAR	**Alice Springs**	**29.40**	**240**	P			P	18 14 17.4	-0.2
	0.4nm,1.0s,baz=62,slow=9.8,SNR=4.6								
SONM	**Songino Array**	**75.53**	**325**				P	18 19 57.3	+0.2
	0.4nm,0.5s,baz=124,slow=6.7,SNR=4.0								

MEX ***19*** *18:26:29.2±0.6, 14.°42N×92.°65W, h17km±48km, MD4.0*
GCG ***19*** *18:26:30.7±0.5, 15.°06N×92.°35W, h66km±130km, MD3.7*

ISC 19 18:26:28.6±2.2, 14.°5N±0.°1×92.°7W±0.°1, h62km, n7, σ0s 80/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**1.07**	**93**	*e*P			**Pn**	**18 26 48.7**	**+1.0**
PCIG		**1.31**	**337**	*i* P			**Pn**	**18 26 50.5**	**-0.3**
PCIG				*i* S			**Sn**	**18 27 06.6**	**-0.7**
FUG	**Fuego 3**	**1.78**	**91**	*e*P			**Pn**	**18 26 57.5**	**+0.2**
FUG				*e*S			**Sn**	**18 27 17.9**	**-1.1**
CCIG	**Comitan**	**1.85**	**16**	*e*P			**Pn**	**18 26 58.8**	**+0.6**
CCIG				*e*S			**Sn**	**18 27 20.2**	**-0.5**
PCG	**Pacaya**	**2.01**	**93**	*e*P			**Pn**	**18 27 00.5**	**+0.1**
PCG				*e*S			**Sn**	**18 27 24.3**	**-0.4**
TGIG		**2.31**	**349**	*e*P			**Pn**	**18 27 05.5**	**+1.1**
CMIG	**Matias Romero**	**3.34**	**321**	*e*P			**Pn**	**18 27 18.9**	**+0.4**

BJI ***19*** *18:40:22.0±0.0, 1.°69N×98.°97E, h125km, mB5.0/47, mb5.3/71*
NEIC ***19*** *18:40:24.9±1.9, 1.°90N±0.°04×98.°96E±0.°05, h123km±4km, mb5.3/150, Error ellipse: s-maj=7.5km s-min=5.9km az=125.0*
MOS ***19*** *18:40:25.1±1.1, 1.°99N×99.°05E, h132km, mb5.2/53, Error ellipse: s-maj=6.8km s-min=3.7km az=111.1*
DJA ***19*** *18:40:25.5±0.1, 2.°N±1.°×97.°E±.°, h121km±1km, M5.2/100, mB5.7/66, mb5.5/100, MLv5.6/18, Mw(mB)5.2/66, MwMwp5.0/7, Mwp5.2/7*
IDC ***19*** *18:40:25.2±0.3, 1.°95N×99.°05E, h120km±2km, mb4.9/33, mb1 4.9/36, mb1mx4.8/39, mbtmp5.3/36, MS3.8/25, Ms1 3.8/25, ms1mx3.6/53, Error ellipse: s-maj=8.7km s-min=7.1km az=64.0*
KLM ***19*** *18:40:27, 1.°91N×98.°96E, h134km, mb5.5*
GCMT ***19*** *18:40:27.0±0.2, 2.°02N±0.°01×98.°94E±0.°01, h131km±1km, MW5.2/133, Moment Tensor Solution. s98,c141; s133,c224; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr 3.03±.12; Mθθ-6.12±.13; Mϕϕ 3.09±.15; Mrθ 0.52±.10; Mθϕ-3.97±.13; Mϕr~3.93±.10; Best double couple: Mo 7.71800×10^16 NP1: ϕs 107.00000°, δ59.00000°, λ153.00000°. NP2: ϕs 212.00000°, δ67.00000°, λ34.00000°. Principal axes: T 7.7590, Plg40.0000°, Azm72.0000°; N -0.0830, Plg50.0000°, Azm242.0000°; P -7.6760, Plg5.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 18:40:25.0±0.3, 1.°90N±0.°03×98.°96E±0.°03, h124km±2km, h124km: pP-P, n844, σ1s 61/973, mb5.4/240, 95C-166D, Fault plane solution: NP1: ϕs 130.64562°, δ42.76210°, λ159.39861°. NP2: ϕs 236.07407°, δ76.17835°, λ49.11911°. Principal axes: T Plg43.4776°, Azm106.4483°; N Plg39.4598°, Azm247.7583°; P Plg20.5005°, Azm355.6834°; **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.90**	**358**	P			**Pn**	**18 40 46.6**	**0.0**
	1μm,0.3s,baz=180,slow=7.0,SNR=1216								
PSI				S			**Sn**	**18 41 00.9**	**-2.0**
PSI				LR		LR	LR	18 41 09.2	
	comp=Z,6μm,18.7s,baz=270,slow=58								
MNSI	**Mandailing Nat**	**1.26**	**151**	P			**Pn**	**18 40 51.1**	**+1.1**
MNSI				S			**Sn**	**18 41 08.2**	**-0.8**
GSI	**Gunungsitoli**	**1.51**	**247**	Pn			**Pn**	**18 40 53.8**	**+1.0**
GSI	**Gunungsitoli**	**1.51**	**247**	P			**Pn**	**18 40 53.8**	**+1.0**
GSI				S			**Sn**	**18 41 13.5**	**-0.4**
TSI	**Tuntungan**	**1.64**	**346**	P			**Pn**	**18 40 56.0**	**+1.6**
TSI				S			**Sn**	**18 41 19.3**	**+2.6**
TPTI		**2.24**	**307**	P			**Pn**	**18 41 02.2**	**+0.6**
TPTI				S			**Sn**	**18 41 29.2**	**-0.5**
BKNI	**Bangkinang**	**2.60**	**127**				**Pn**	**18 41 07.7**	**+1.4**
BKNI	**Bangkinang**	**2.60**	**127**	P			**Pn**	**18 41 07.4**	**+1.2**
BKNI				S			**Sn**	**18 41 37.2**	**-0.7**
IPM	**Ipoh**	**3.29**	**39**	Pn			**Pn**	**18 41 17.6**	**+2.3**
IPM	**Ipoh**	**3.29**	**39**	P			**Pn**	**18 41 18.0**	**+2.7**
KULM	**Kulim**	**3.77**	**27**	Pn			**Pn**	**18 41 22.9**	**+1.3**
KULM	**Kulim**	**3.77**	**27**	P			**Pn**	**18 41 23.0**	**+1.4**
LHMI	**Lhok Sumawe**	**3.87**	**329**	Pn			**Pn**	**18 41 23.6**	**+0.7**
LHMI	**Lhok Sumawe**	**3.87**	**329**	P			**Pn**	**18 41 23.7**	**+0.7**
JRMM	**Jerantut**	**4.03**	**61**	P			**Pn**	**18 41 27.0**	**+2.0**
RGRI	**Rengat**	**4.04**	**123**	P			**Pn**	**18 41 27.2**	**+2.0**
MYKOM	**Kota Tinggi**	**4.89**	**91**				**Pn**	**18 41 37.6**	**+1.1**
MYKOM	**Kota Tinggi**	**4.89**	**91**	P			**Pn**	**18 41 38.0**	**+1.5**
JMBI	**JAMBI**	**5.85**	**127**	P			**Pn**	**18 41 52.2**	**+2.7**
	3.6nm11μm1μm,1.1s								
PKDT	**Phuket**	**5.99**	**354**	P			**Pn**	**18 41 49.7**	**-1.7**
	4.6nm13μm1μm,0.7s								
KRAB	**Krabi**	**6.29**	**2**	P			**Pn**	**18 41 55.5**	**+0.1**
	86nm250μm30μm,0.7s								
SURT	**Suratani**	**7.01**	**359**	P			**Pn**	**18 42 05.5**	**+0.3**
	169nm22nm,1.3s								
LHSI	**Lahat**	**7.29**	**141**	P			**Pn**	**18 42 09.9**	**+1.0**
	9.2nm28μm3μm,0.9s								
PMBI	**Palembang**	**7.53**	**130**				**Pn**	**18 42 13.0**	**+0.9**
PMBI	**Palembang**	**7.53**	**130**	P			**Pn**	**18 42 13.7**	**+1.5**
	3.7nm3μm1μm1μm,1.1s								
PPBI	**Pangkal Pinang**	**8.23**	**119**	P			**Pn**	**18 42 23.8**	**+2.2**
	4μm188nm,1.0s								
LWLI	**Liwa**	**8.55**	**143**	P			**Pn**	**18 42 24.8**	**-1.3**
	831nm,0.6s								
KASI	**Kota Agung**	**9.21**	**143**	P			**Pn**	**18 42 32.5**	**-2.4**
	7μm333nm,0.6s								
BLSI	**Bandar Lampung**	**9.56**	**139**	P			**Pn**	**18 42 38.6**	**-1.1**
	3μm230nm,0.9s								
PHET	**Kaeng Krachan**	**10.96**	**3**	P			**Pn**	**18 42 59.0**	**+0.6**
	3μm423nm,0.7s								
PATY	**Pattaya**	**11.12**	**10**	P			**Pn**	**18 43 02.0**	**+1.5**
	4μm310nm,0.7s								
KSM	**Kuching**	**11.35**	**92**	Pn			**Pn**	**18 43 06.2**	**+2.6**
KSM	**Kuching**	**11.35**	**92**	P			**Pn**	**18 43 07.0**	**+3.4**
DBJI	**Dramaga**	**11.44**	**137**	P			**Pn**	**18 43 03.4**	**-1.4**
	2μm125nm,1.0s								
LEM	**Lembang**	**12.24**	**135**	P			**Pn**	**18 43 14.2**	**-1.2**
	5.1nm,0.3s,baz=346,slow=9.5,SNR=23								
LEM	**Lembang**	**12.24**	**135**	P			**Pn**	**18 43 14.0**	**-1.4**
	2μm1μm62nm,0.8s								
SRDT	**SRDT**	**12.37**	**1**	P			**Pn**	**18 43 17.0**	**0.0**
	53nm,1.0s								
SRAK	**Srakaew**	**12.41**	**14**	P			**P**	**18 43 22.1**	**-2.3**
	14μm2μm,0.7s								
JCJI	**Jativngi**	**12.48**	**132**	P			**Pn**	**18 43 20.8**	**+2.3**
	5μm310nm,0.9s								
STKI	**Sintang**	**12.64**	**98**	P			**P**	**18 43 24.8**	**-2.2**
KHLT	**Khaolaem Dam**	**12.82**	**358**	P			**Pn**	**18 43 23.8**	**+0.9**
	1μm162nm,0.7s								
SBUM	**Sibu**	**13.26**	**87**	Pn			**Pn**	**18 43 31.1**	**+2.6**
SBUM	**Sibu**	**13.26**	**87**	P			**P**	**18 43 32.0**	**-1.8**
PBKI	**Pangkalan Bun**	**13.50**	**110**	P			**Pn**	**18 43 31.7**	**0.0**
	5μm495nm,1.1s								
UTHA	**Uthaitani**	**13.58**	**2**	P			**Pn**	**18 43 33.4**	**+0.7**
	4μm509nm,1.0s								
DLV	**T Lat**	**13.74**	**43**	Pn			**Pn**	**18 43 37.0**	**+2.1**
COCO	**West Island**	**14.15**	**189**	P			**P**	**18 43 43.5**	**-0.2**
COCO	**West Island**	**14.15**	**189**	P			**P**	**18 43 43.5**	**-0.2**
UMPA	**Umpang Tak**	**14.22**	**360**	P			**Pn**	**18 43 39.6**	**-1.3**
	2μm228nm,0.8s								
CHAI	**Chaiyaphum**	**14.23**	**12**	P			**Pn**	**18 43 42.0**	**+1.0**
	2μm289nm,0.8s								
SMRI	**Semarang**	**14.50**	**128**	Pn			**Pn**	**18 43 45.6**	**+1.1**
SMRI	**Semarang**	**14.50**	**128**	P			**P**	**18 43 47.0**	**-0.6**
	254nm,0.9s								
UBPT	**Khong Chiam**	**14.77**	**25**	P			**P**	**18 43 49.5**	**-1.0**
	638nm66nm,0.8s								
UBPT	**Khong Chiam**	**14.77**	**25**				**Pn**	**18 43 48.5**	**+0.7**
UGM	**Wanagama**	**15.10**	**130**				**Pn**	**18 43 49.0**	**-3.0**
UGM						IAmb	IAmb	18 44 10.2	
	comp=Z,166nm,1.0s								
UGM	**Wanagama**	**15.10**	**130**	P			**Pn**	**18 43 49.9**	**-2.1**
	comp=Z,179nm,1.4s								
PHIT	**Phitsanulok**	**15.26**	**5**	P			**P**	**18 43 55.7**	**-0.3**
	comp=Z,20μmcomp=Z,3μm,0.8s								
SUKH	**Sukhothai**	**15.50**	**2**	P			**P**	**18 43 58.2**	**-0.4**
	comp=Z,7μmcomp=Z,868nm,0.8s								
UTTA	**Uttaradit**	**15.82**	**6**	P			**P**	**18 44 02.0**	**-0.3**
	comp=Z,3μmcomp=Z,491nm,0.7s								
MTKI	**Muara Teweh, K**	**16.18**	**100**	P			**P**	**18 44 07.8**	**+1.5**
	comp=Z,194nm,1.0s								
MHMT	**Maesarieng**	**16.21**	**356**	P			**Pn**	**18 44 05.3**	**-0.4**
	comp=Z,2μmcomp=Z,210nm,1.1s								
CM04	**Chiang Mai Arr**	**16.40**	**0**	P			**P**	**18 44 09.2**	**+0.6**
	comp=Z,4μmcomp=Z,366nm,0.8s								
CM05	**Chiang Mai Arr**	**16.40**	**360**	P			**P**	**18 44 09.1**	**+0.4**
	comp=Z,2μmcomp=Z,213nm,0.8s								
CM01	**Chiang Mai Arr**	**16.42**	**360**	P			**P**	**18 44 09.4**	**+0.6**
	comp=Z,3μmcomp=Z,333nm,0.8s								
CM13	**Chiang Mai Arr**	**16.42**	**360**	P			**P**	**18 44 09.2**	**+0.4**
	comp=Z,3μmcomp=Z,324nm,0.8s								
CM02	**Chiang Mai Arr**	**16.43**	**360**	P			**P**	**18 44 09.0**	**0.0**
	comp=Z,2μmcomp=Z,252nm,0.8s								
CM09	**Chiang Mai Arr**	**16.44**	**0**	P			**P**	**18 44 09.0**	**-0.1**
	comp=Z,4μmcomp=Z,461nm,0.8s								
CM15	**Chiang Mai Arr**	**16.45**	**360**	P			**P**	**18 44 09.0**	**-0.2**
	comp=Z,4μmcomp=Z,377nm,0.8s								
CM31	**Chiang Mai Arr**	**16.46**	**360**	P			**P**	**18 44 09.0**	**-0.3**
	comp=Z,96μmcomp=Z,10μm,0.5s								
CM31	**Chiang Mai Arr**	**16.46**	**360**				**P**	**18 44 09.6**	**+0.3**
CM31						IAmb	IAmb	18 44 13.4	
	comp=Z,274nm,0.9s								
CMAR	**Chiang Mai Arr**	**16.46**	**360**	P			**P**	**18 44 09.4**	**+0.1**
	comp=Z,37nm,0.3s,baz=191,slow=11,SNR=874								
CMAR						PcP	**PcP**	**18 48 54.6**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=202,slow=1.9,SNR=6.8								
CMAR						LR	LR	18 50 50.2	
	comp=Z,274nm,20.5s,baz=234,slow=38								
CMAR						ScP	**ScP**	**18 52 16.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=215,slow=3.3,SNR=14								
CMAR						PKiKP	**PKiKP**	**18 56 46.9**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=232,slow=2.4,SNR=5.7								
CMAR	**Chiang Mai Arr**	**16.46**	**360**	*i* P			**P**	**18 44 09.5**	**+0.2**
CMAR						pmax	pmax		
	comp=Z,187nm,0.5s								
CMAR	**Chiang Mai Arr**	**16.46**	**360**	P			**Pn**	**18 44 08.2**	**-0.6**
CM36	**Chiang Mai Arr**	**16.52**	**0**	P			**P**	**18 44 10.0**	**+0.1**
LAMP	**Lampang**	**16.54**	**2**	P			**P**	**18 44 11.0**	**+0.9**
	comp=Z,3μmcomp=Z,436nm,0.9s								
NONG	**Nongkai**	**16.58**	**14**	P			**Pn**	**18 44 10.0**	**-0.3**
	comp=Z,158nm,1.2s								
CM32	**Chiang Mai Arr**	**16.65**	**360**	P			**Pn**	**18 44 11.0**	**-0.2**
CM35	**Chiang Mai Arr**	**16.68**	**1**	P			**P**	**18 44 12.0**	**+0.3**
BBKI	**Banjar Baru**	**16.74**	**109**	P			**P**	**18 44 14.2**	**+1.7**
	comp=Z,211nm,0.8s								
CMMT	**Chiang Mai**	**16.81**	**360**	P			**Pn**	**18 44 12.4**	**-0.7**
	comp=Z,897nmcomp=Z,84nm,0.9s								
CHTO	**Chiang Mai**	**16.81**	**360**	P			**P**	**18 44 13.9**	**+0.7**
CHTO						pmax	pmax		
	comp=Z,108nm,0.8s								
CHTO	**Chiang Mai**	**16.81**	**360**				**P**	**18 44 13.9**	**+0.7**
CHTO						IAmb	IAmb	18 44 15.2	
	comp=Z,108nm,0.8s								
CHTO	**Chiang Mai**	**16.81**	**360**	P			**P**	**18 44 13.7**	**+0.5**
CM33	**Chiang Mai Arr**	**16.82**	**360**	P			**Pn**	**18 44 13.0**	**-0.2**
CM34	**Chiang Mai Arr**	**16.85**	**1**	P			**P**	**18 44 14.0**	**+0.4**
KMMI	**Kalianget**	**17.41**	**121**	P			**Pn**	**18 44 21.1**	**+0.7**
	comp=Z,319nm,0.9s								
KKM	**Kota Kinabalu**	**17.69**	**76**	Pn			**Pn**	**18 44 25.1**	**+1.2**
KKM						IAmb	IAmb	18 44 29.6	
	comp=Z,277nm,0.9s								
SPMM	**Sapulut**	**17.69**	**80**	P			**Pn**	**18 44 28.0**	**+4.1**
KBKI	**Kotabaru**	**17.95**	**107**	P			**Pn**	**18 44 28.8**	**+1.8**
	comp=Z,136nm,0.8s								
ABJI	**Asem Bagus**	**18.02**	**122**	P			**P**	**18 44 27.3**	**-0.4**
	comp=Z,4μmcomp=Z,350nm,0.8s								
BKB	**Balikpapan**	**18.20**	**100**				**Pn**	**18 44 31.4**	**+1.5**
BKB	**Balikpapan**	**18.20**	**100**	P			**Pn**	**18 44 31.9**	**+2.0**
	comp=Z,9μmcomp=Z,682nm,0.8s								
JAGI	**Jajag, Banyuwa**	**18.32**	**124**	P			**P**	**18 44 29.9**	**+0.2**
JAGI						IAmb	IAmb	18 44 37.1	
	comp=Z,88nm,0.8s								
JAGI	**Jajag, Banyuwa**	**18.32**	**124**	P			**Pn**	**18 44 31.2**	**0.0**
	comp=Z,2μmcomp=Z,115nm,0.9s								
SGKI	**Sangatta, Kali**	**18.79**	**97**	P			**P**	**18 44 35.0**	**0.0**
	comp=Z,5μmcomp=Z,353nm,0.7s								
PALK	**Pallekele**	**18.96**	**287**	P			**Pn**	**18 44 39.8**	**+0.9**
	comp=Z,6.0nm,0.3s,baz=212,slow=9.3,SNR=106								
PALK				S			**S**	**18 47 57.2**	**-8.7**
	comp=Z,5.9nm,0.3s,baz=88,slow=20,SNR=13								
PALK	**Pallekele**	**18.96**	**287**	*d i* P			**Pn**	**18 44 39.7**	**+0.8**
PALK						pmax	pmax		
	comp=Z,66nm,0.8s								
PALK	**Pallekele**	**18.96**	**287**				**Pn**	**18 44 40.0**	**+1.1**
PALK						IAmb	IAmb	18 44 41.3	
	comp=Z,74nm,0.8s								
PALK	**Pallekele**	**18.96**	**287**	P			**Pn**	**18 44 40.5**	**+1.5**
SRBI	**Singaraja**	**19.00**	**122**	P			**Pn**	**18 44 40.0**	**+0.7**
	comp=Z,6μmcomp=Z,439nm,1.2s								
DNP	**Denpasar**	**19.30**	**123**	P			**P**	**18 44 41.1**	**+0.6**
	comp=Z,9μmcomp=Z,274nm,0.8s								
MYLDM	**Lahad Datu**	**19.77**	**80**	P			**Pn**	**18 44 47.5**	**-0.7**
SLVN	**Son La**	**19.91**	**14**			IAmb	IAmb	18 44 54.3	
	comp=Z,108nm,0.7s								
BATP	**Bataraza**	**19.96**	**69**	*e*P			**Pn**	**18 44 49.1**	**-1.4**
QIZ	**Qiongzhong**	**20.09**	**31**	P			**P**	**18 44 50.3**	**+1.4**
QIZ				S			**S**	**18 48 30.3**	**+2.3**
QIZ				pmax		pmax			
	comp=Z,130nm,1.9s								
QIZ				LR		LR			
	comp=Z,430nm,8.0s								
QIZ				LR		LR			
	comp=Z,420nm,15.2s								
QIZ				LR		LR			
	comp=Z,350nm,13.1s								
TWSI	**Taliwang, Sumb**	**20.75**	**121**	P			**P**	**18 44 56.3**	**+0.1**
	comp=Z,917nmcomp=Z,132nm,0.7s								
SAIH	**SAIHA**	**21.28**	**345**	*e*P			**P**	**18 45 01.7**	**-0.1**
SAIH						IAmb	IAmb	18 45 03.0	
	comp=Z,228nm,0.8s								
SAIH				*e*S			**S**	**18 48 48.6**	**-2.7**
TTSI	**Tana Toraja**	**21.42**	**103**	P			**P**	**18 45 05.1**	**+1.8**
	comp=Z,2μmcomp=Z,232nm,1.4s								
PLAI	**Plampang**	**21.57**	**120**	P			**P**	**18 45 02.9**	**-2.0**
	comp=Z,2μmcomp=Z,141nm,0.6s								
SPSI	**Sidrap Palu**	**21.59**	**106**	P			**P**	**18 45 05.4**	**+0.2**
	comp=Z,2μmcomp=Z,171nm,1.2s								
MDRS	**Chennai**	**21.60**	**302**	*e*P			**P**	**18 45 08.1**	**+2.9**
TOLI2	**Tolitoli**	**21.82**	**92**	P			**P**	**18 45 08.1**	**+0.4**
KAPI	**Kappang**	**21.87**	**108**	P			**P**	**18 45 08.8**	**+0.6**
	comp=Z,165nm,0.9s,baz=288,slow=9.7,SNR=99								
KAPI						ScP	**ScP**	**18 52 28.5**	**-0.6**
	comp=Z,8.1nm,0.5s,baz=130,slow=14,SNR=4.1								
KAPI	**Kappang**	**21.87**	**108**	P			**P**	**18 45 09.4**	**+1.2**
KAPI						IAmb	IAmb	18 45 11.3	
	comp=Z,262nm,1.1s								
BNSI	**Bone**	**22.04**	**107**	P			**P**	**18 45 10.9**	**+1.1**
	comp=Z,5μmcomp=Z,462nm,0.8s								
ENPP	**El Nido**	**22.31**	**65**	*e*P			**P**	**18 45 13.2**	**+0.5**
APSI	**Ampana**	**22.85**	**97**	P			**P**	**18 45 19.7**	**+1.7**
	comp=Z,1μmcomp=Z,14μmcomp=Z,1μm,1.1s								
TRD	**Trivandrum**	**22.86**	**287**	*e*P			**P**	**18 45 21.1**	**+3.0**
MRSI	**Marisa**	**23.02**	**93**	P			**P**	**18 45 19.7**	**+0.2**
	comp=Z,1μmcomp=Z,6μmcomp=Z,621nm,0.6s								
AGT	**Agartala**	**23.10**	**342**	*e*P			**P**	**18 45 21.1**	**+1.0**
AGT						IAmb	IAmb	18 45 22.9	
	comp=Z,611nm,1.0s								
WBSI	**Waikabubak, Su**	**23.35**	**120**	P			**P**	**18 45 21.7**	**-1.0**
	comp=Z,6μmcomp=Z,741nm,0.7s								
KMI	**Kunming**	**23.38**	**9**	‖P			**P**	**18 45 24.1**	**+1.1**
KMI				pP		pP	18 45 51.3	+3.8	
KMI				sP		sP	18 46 07.0	+4.0	
KMI				PcP		PcP	**18 49 08.0**	**+1.8**	
KMI				S		S	**18 49 26.0**	**-0.8**	
KMI				ScP		**ScP**	**18 52 34.1**	**+1.0**	
KMI				pmax		pmax			
	comp=Z,46nm,0.9s								
KMI				LR		LR			
	comp=Z,520nm,13.5s								
KMI				LR		LR			
	comp=Z,420nm,10.6s								
KMI				LR		LR			
	comp=Z,570nm,13.1s								
CUYO	**Cuyo Island**	**23.63**	**67**	*e*P			**P**	**18 45 25.0**	**-0.2**
LUWI	**Luwuk**	**23.98**	**97**	P			**P**	**18 45 30.2**	**+1.9**
LUWI	**Luwuk**	**23.98**	**97**	P			**P**	**18 45 29.5**	**+1.2**
	comp=Z,3μmcomp=Z,14μmcomp=Z,2μm,1.0s								
LUBP	**Lubang**	**24.11**	**60**	*e*P			**P**	**18 45 29.3**	**-0.2**
KOHI	**KOHIMA**	**24.14**	**349**	*e*P			**P**	**18 45 29.3**	**-0.5**
KO

comp=Z,290nm,20.9s,baz=349,slow=37
BATI Baumata 27.37 117 P **P** **18 45 57.5 -1.5**
comp=Z,883nmcomp=Z,74nm,0.6s
BUTP Butuan 27.43 74 *e*P **P** **18 46 00.3 +0.8**
TAPN Taplejung 27.51 338 *e*P **P** **18 46 01.5 +1.2**
comp=Z,529nm,0.9s
TAPN Taplejung 27.51 338 *e*P **P** **18 46 01.3 +1.0**
comp=Z,699nm,0.9s
RAMN Ramite 27.59 336 *e*P **P** **18 46 02.0 +1.0**
comp=Z,180nm,0.6s
RAMN Ramite 27.59 336 *e*P **P** **18 46 02.0 +1.0**
comp=Z,180nm,0.6s
MATI Mati 27.66 79 *e*P **P** **18 46 00.3 -1.2**
SOEI Soe 27.73 115 P **P** **18 46 00.8 -1.5**
SOEI IAmb IAmb 18 46 14.4
comp=Z,63nm,0.8s
SOEI Soe 27.73 115 P **P** **18 46 00.5 -1.8**
comp=Z,90nm,1.0s
SGCP Mt. Cagua 27.87 53 *e*P **P** **18 46 01.0 -2.3**
GLSP General Luna, 28.11 73 *e*P **P** **18 46 05.2 -0.4**
JIRN Jiri 28.39 336 *e*P **P** **18 46 09.0 +0.8**
comp=Z,62nm,0.4s
JIRN Jiri 28.39 336 *e*P **P** **18 46 09.0 +0.8**
comp=Z,138nm,0.7s
TNTI Ternate 28.42 92 P **P** **18 46 06.0 -2.2**
TNTI Ternate 28.42 92 P **P** **18 46 08.7 +0.4**
comp=Z,420nmcomp=Z,30nm,1.1s
NLAI Namlea 28.59 100 P **P** **18 46 10.4 +0.7**
comp=Z,3µmcomp=Z,264nm,0.6s
LSA Lhasa 28.63 346 P **P** **18 46 11.8 +1.3**
LSA Lhasa 28.63 346 P **P** **18 46 12.0 +1.6**
LSA Lhasa 28.63 346 P **P** **18 46 12.1 +1.6**
PKI Pulchoki 28.64 334 *e*P **P** **18 46 10.8 +0.3**
PKI Pulchoki 28.64 334 *e*P **P** **18 46 10.7 +0.3**
comp=Z,62nm,0.6s
PKIN Phulchoki 28.65 334 *e*P **P** **18 46 10.8 +0.3**
comp=Z,77nm,0.6s
PKIN Phulchoki 28.65 334 *e*P **P** **18 46 10.7 +0.3**
comp=Z,77nm,0.6s
GUN Gumba 28.73 335 *e*P **P** **18 46 11.9 +0.6**
comp=Z,168nm,0.5s
GUN Gumba 28.73 335 *e*P **P** **18 46 11.8 +0.5**
comp=Z,299nm,0.6s
DMN Daman 28.80 334 *e*P **P** **18 46 12.2 +0.5**
comp=Z,26nm,0.4s
DMN Daman 28.80 334 *e*P **P** **18 46 12.3 +0.5**
comp=Z,84nm,0.7s
KKN Kakani 28.88 334 *e*P **P** **18 46 13.0 +0.5**
KKN Kakani 28.88 334 *e*P **P** **18 46 13.0 +0.5**
comp=Z,72nm,0.5s
BBP Basco 29.05 49 *e*P **P** **18 46 12.6 -1.2**
CD2 Chengdu 29.21 8 P **P** **18 46 14.6 -0.5**
CD2 S **S** **18 50 59.5 +0.8**
CD2 pmax pmax
comp=Z,130nm,0.7s
CD2 pmax pmax
comp=Z,80nm,5.1s
CD2 LR LR
comp=Z,510nm,9.8s
CD2 LR LR
comp=Z,920nm,12.0s
CD2 LR LR
comp=Z,510nm,10.8s
GKN Gorkha 29.35 333 *e*P **P** **18 46 17.1 +0.6**
comp=Z,58nm,0.4s
GKN Gorkha 29.35 333 *e*P **P** **18 46 17.1 +0.6**
comp=Z,47nm,0.3s
KOLN Koldanda 29.63 332 *e*P **P** **18 46 20.0 +0.9**
KOLN Koldanda 29.63 332 *e*P **P** **18 46 19.7 +0.6**
comp=Z,301nm,0.9s
QZH Quanzhou 29.73 38 *e*P **P** **18 46 23.8 +4.1**
QZH S **S** **18 51 06.4 -0.4**
QZH LR LR
comp=Z,410nm,13.8s
BHPL Bhopal 29.77 317 *e*P **P** **18 46 20.7 +0.6**
BHPL IAmb IAmb 18 46 21.6
comp=Z,135nm,0.7s
TPUB Ta-pu 29.90 43 IAmb IAmb 18 46 24.2
comp=Z,74nm,0.8s
ENH Enshi 29.93 18 IAmb IAmb 18 46 24.4
comp=Z,78nm,0.7s
DANN Dangsing 30.05 333 *e*P **P** **18 46 23.5 +0.7**
comp=Z,182nm,0.4s
DANN Dangsing 30.05 333 *e*P **P** **18 46 23.1 +0.3**
comp=Z,182nm,0.4s
PYUN Piuthan 30.20 331 *e*P **P** **18 46 24.9 +0.8**
comp=Z,145nm,0.5s
PYUN Piuthan 30.20 331 *e*P **P** **18 46 24.9 +0.8**
comp=Z,145nm,0.5s
YULB Yu-li 30.41 44 IAmb IAmb 18 46 28.8
comp=Z,43nm,0.6s
YULB **PcP** **18 49 22.9 +0.2**
SSLB Suanglung 30.44 43 P **P** **18 46 26.2 +0.1**
SSLB IAmb IAmb 18 46 28.8
comp=Z,89nm,0.8s
PSA00 Pilbara Seismi 31.00 140 P **P** **18 46 29.8 -1.2**
NACB Ninganchiao 31.14 43 IAmb IAmb 18 46 35.2
comp=Z,35nm,0.9s
YHNB Yeheng 31.32 42 P **P** **18 46 34.4 +0.5**
YHNB IAmb IAmb 18 47 00.3
comp=Z,41nm,1.0s
WHN Wuhan 32.01 26 ⇓P **P** **18 46 43.3 +3.6**
YOJ Yonaguni jima 32.30 44 P **P** **18 46 42.5 +0.2**
YOJ pmax pmax
comp=Z,116nm,1.1s
YOJ Yonaguni jima 32.30 44 P **P** **18 46 42.5 +0.2**
SWI Sorong 32.41 95 P **P** **18 46 43.2 -0.2**
comp=Z,2µmcomp=Z,217nm,0.7s
FITZ Fitzroy Crossi 32.94 128 PcP **PcP** **18 49 29.9 +0.3**
comp=Z,18nm,0.7s,baz=4.0,slow=3.6,SNR=6.8
FITZ Fitzroy Crossi 32.94 128 P **P** **18 46 46.3 -1.6**
baz=33,SNR=70
FITZ Fitzroy Crossi 32.94 128 P **P** **18 46 46.3 -1.6**
FITZ IAmb IAmb 18 46 50.6
comp=Z,61nm,0.7s
FITZ **PcP** **18 49 29.2 -0.3**
XAN Xi'an 33.30 15 P **P** **18 46 49.9 -1.1**
XAN PcP **PcP** **18 49 31.3 +0.9**
XAN S **S** **18 51 56.0 -6.5**
XAN ScP **ScP** **18 53 04.0 +0.5**
XAN pmax pmax
comp=Z,65nm,0.5s
XAN pmax pmax
comp=Z,120nm,4.9s
XAN LR LR
comp=Z,470nm,17.3s
XAN LR LR
comp=Z,420nm,13.0s
XAN LR LR
comp=Z,690nm,18.4s
XAN Xi'an 33.30 15 P **P** **18 46 50.5 -0.5**
XAN pmax pmax
comp=Z,47nm,0.5s
XAN Xi'an 33.30 15 P **P** **18 46 50.5 -0.5**
XAN IAmb IAmb 18 46 53.6
comp=Z,47nm,0.5s
FAKI Fak Fak 33.62 98 P **P** **18 46 53.5 -0.5**
FAKI IAmb IAmb 18 46 54.3
comp=Z,49nm,0.7s
FAKI Fak Fak 33.62 98 P **P** **18 46 53.5 -0.5**
comp=Z,1µmcomp=Z,92nm,1.2s
LZH Lanzhou 34.32 7 *e*P **P** **18 47 00.4 +0.5**
LZH pP pP 18 47 25.0 -2.6
LZH PcP **PcP** **18 49 34.4 +1.0**
LZH S **S** **18 52 14.1 -4.2**
LZH ScS **ScS** **18 57 09.3 -0.8**
LZH pmax pmax
comp=Z,36nm,1.1s
LZH pmax pmax
comp=Z,140nm,4.1s
DDI Dehra Dun 34.53 327 *e*P **P** **18 47 00.2 -1.5**
MORW Morawa 34.87 153 P **P** **18 47 05.9 +1.4**
baz=35,SNR=14
MORW Morawa 34.87 153 P **P** **18 47 04.1 -0.4**
MTN Manton Dam 35.13 116 P **P** **18 47 06.1 -0.8**
baz=35,SNR=13
MTN Manton Dam 35.13 116 IAmb IAmb 18 47 06.7
comp=Z,83nm,1.5s
NJ2 Nanjing 35.37 30 *e*P **P** **18 47 10.3 +1.5**
NJ2 pmax pmax
comp=Z,13nm,0.7s
SMLA Simla 35.64 327 *e*P **P** **18 47 11.4 +0.4**
KDU Kakadu 36.29 114 P **P** **18 47 16.6 -0.2**
baz=36,SNR=13
BLDU Ballidu 36.49 154 P **P** **18 47 19.6 +1.2**
baz=37,SNR=16

DHRM DHARAMSHALA 36.97 327⇑ *e*P **P** **18 47 22.6 0.0**
DHRM *e*S **S** **18 52 56.2 -2.9**
GTA Gaotai 37.34 1 P **P** **18 47 25.8 +0.2**
GTA pP pP 18 47 53.8 +0.2
GTA sP sP 18 48 08.9 +1.0
GTA PcP **PcP** **18 49 42.6 +0.3**
GTA S **S** **18 53 02.9 -1.5**
GTA ScP **ScP** **18 53 18.5 +0.3**
GTA ScS **ScS** **18 57 23.8 -2.8**
GTA pmax pmax
comp=Z,160nm,8.0s
GTA LR LR
comp=Z,120nm,14.3s
GTA LR LR
comp=Z,170nm,13.1s
GTA LR LR
comp=Z,130nm,17.5s
MUN Mundaring 37.45 156 P **P** **18 47 28.1 +1.6**
baz=38,SNR=56
SRPI Serui, Papua 37.46 96 P **P** **18 47 25.8 -1.0**
comp=Z,2µmcomp=Z,190nm,0.7s
JOW Kunigami 37.49 46 P **P** **18 47 27.2 +0.4**
comp=Z,45nm,0.7s,baz=203,slow=23,SNR=7.2
JOW Kunigami 37.49 46 IAmb IAmb 18 47 30.6
comp=Z,51nm,0.7s
KLBR Kellerberrin 37.79 153 P **P** **18 47 30.2 +0.9**
baz=38,SNR=14
NWAO Narrogin (SRO) 38.70 155 ScP **ScP** **18 53 22.3 -1.0**
comp=Z,8.5nm,0.8s,baz=66,slow=18,SNR=4.2
NWAO LR LR 19 01 37.2
comp=Z,110nm,21.1s,baz=322,slow=33
NWAO Narrogin (SRO) 38.70 155 P **P** **18 47 38.5 +1.5**
baz=39,SNR=8.2
NWAO Narrogin (SRO) 38.70 155 P **P** **18 47 38.1 +1.1**
NWAO pmax pmax
comp=Z,26nm,0.9s
NWAO Narrogin (SRO) 38.70 155 P **P** **18 47 38.1 +1.1**
NWAO IAmb IAmb 18 47 39.3
comp=Z,26nm,0.8s
WRKA Warakurna 39.06 135 P **P** **18 47 38.7 -1.4**
baz=39,SNR=34
KMBL Kambalda 39.61 148 P **P** **18 47 45.0 +0.4**
baz=40,SNR=9.0
NIL Nilore 39.71 325 P **P** **18 47 45.3 -0.1**
NIL pmax pmax
comp=Z,297nm,0.9s
NIL Nilore 39.71 325 P **P** **18 47 45.3 -0.1**
NIL Nilore 39.71 325 P **P** **18 47 46.0 +0.6**
HHC Hu-ho-hao-te 40.41 15 *e*P **P** **18 47 52.3 +1.1**
HHC pP pP 18 48 14.4 -5.2
HHC sP sP 18 48 29.8 -4.1
HHC S **S** **18 53 50.3 -0.1**
HHC ScS **ScS** **18 57 40.8 -3.6**
HHC pmax pmax
comp=Z,16nm,0.7s
HHC pmax pmax
comp=Z,100nm,4.6s
HHC LR LR
comp=Z,450nm,13.6s
HHC LR LR
comp=Z,250nm,13.6s
HHC LR LR
comp=Z,310nm,18.7s
WRA Warramunga Arr 40.93 124 P **P** **18 47 54.9 -0.8**
comp=Z,281nm,0.5s,baz=302,slow=9.1,SNR=335
WRA PcP **PcP** **18 49 54.0 +0.1**
comp=Z,21nm,0.7s,baz=307,slow=2.7,SNR=7.9
WRA ScP **ScP** **18 53 31.3 -1.0**
comp=Z,6.5nm,0.9s,baz=313,slow=3.5,SNR=7.7
WRA S **S** **18 53 51.3 -7.2**
comp=Z,20nm,1.1s,baz=297,slow=15,SNR=11
WRA Warramunga Arr 40.93 124 P **P** **18 47 54.8 -0.8**
WRA ScP **ScP** **18 53 30.7 -1.6**
WRAB Tennant Creek 40.94 124*c* *i*P **P** **18 47 54.6 -1.1**
WRAB pmax pmax
comp=Z,244nm,0.9s
WRAB Tennant Creek 40.94 124 P **P** **18 47 55.3 -0.4**
WB2 Warramunga Aer 40.94 124 P **P** **18 47 54.9 -0.8**
baz=41
BJI Beijing 41.06 20 P **P** **18 47 56.9 +0.6**
BJI PcP **PcP** **18 49 55.1 +1.3**
BJI S **S** **18 53 59.5 -0.2**
BJI pmax pmax
comp=Z,22nm,0.6s
BJI pmax pmax
comp=Z,97nm,3.5s
BJI LR LR
comp=Z,160nm,11.4s
BJI LR LR
comp=Z,150nm,19.4s
WR0 Warramunga Arr 41.11 124 P **P** **18 47 55.9 -1.1**
GENI Genyem 41.44 96 P **P** **18 47 58.9 -0.9**
comp=Z,3µmcomp=Z,359nm,0.7s
JAY Jayapura 41.96 96 P **P** **18 48 03.1 -1.1**
comp=Z,427nmcomp=Z,61nm,0.7s
DL2 Dalian 42.25 27 P **P** **18 48 06.0 -0.1**
DL2 pmax pmax
comp=Z,69nm,0.7s
ASAR Alice Springs 42.43 129 P **P** **18 48 06.7 -1.2**
comp=Z,44nm,0.6s,baz=300,slow=7.4,SNR=331
ASAR PcP **PcP** **18 49 59.0 +0.2**
comp=Z,24nm,0.8s,baz=310,slow=2.9,SNR=19
ASAR ScP **ScP** **18 53 36.9 -1.4**
comp=Z,2.4nm,0.8s,baz=303,slow=4.4,SNR=5.2
ASAR S **S** **18 54 13.3 -7.3**
comp=Z,4.9nm,0.9s,baz=302,slow=16,SNR=8.9
ASAR P4KPbc 19 26 12.2
comp=Z,0.2nm,0.7s,baz=309,slow=5.1,SNR=4.0
ASAR Alice Springs 42.43 129 P **P** **18 48 06.2 -1.7**
FORT Forrest 42.70 142 P **P** **18 48 09.9 0.0**
baz=43,SNR=18
FORT Forrest 42.70 142 P **P** **18 48 09.6 -0.3**
KBL Kabul 42.81 323 P **P** **18 48 10.1 -0.8**
KBL pmax pmax
comp=Z,55nm,0.7s
KBL Kabul 42.81 323 P **P** **18 48 10.1 -0.8**
KBL IAmb IAmb 18 48 15.3
comp=Z,54nm,0.7s
KBL Kabul 42.81 323 P **P** **18 48 11.6 +0.6**
SNR=27
KSH Kashi 42.90 334 P **P** **18 48 10.0 -1.5**
KSH PP **PP** **18 49 54.3 +0.7**
KSH pmax pmax
comp=Z,110nm,0.4s
KSH LR LR
comp=Z,88nm,3.8s
KSH LR LR
comp=Z,140nm,7.1s
KSH LR LR
comp=Z,130nm,4.4s
WMQ Urumqi 42.93 348 P **P** **18 48 13.4 +1.8**
WMQ pP pP 18 48 41.6 +1.4
WMQ sP sP 18 48 55.0 +0.7
WMQ S **S** **18 54 27.3 0.0**
WMQ ScS **ScS** **18 57 55.9 -3.6**
WMQ pmax pmax
comp=Z,280nm,0.9s
WMQ pmax pmax
comp=Z,240nm,4.1s
JNU Nakatsue 43.13 40 P **P** **18 48 13.6 +0.2**
comp=Z,12nm,0.4s,baz=244,slow=5.6,SNR=18
JNU LR LR 19 08 46.7
comp=Z,139nm,18.1s,baz=45,slow=40
TJN Taejon 43.20 34*de*P **P** **18 48 14.5 +0.7**
JLN Jalan Bani Buh 43.38 301 P **P** **18 48 15.8 +0.3**
WBK Wadi Bani Khal 43.93 301 P **P** **18 48 20.3 +0.4**
MHTO MHTO 44.22 298 P **P** **18 48 23.0 +0.7**
KSRS Korea Array 44.29 33 P **P** **18 48 22.4 -0.1**
comp=Z,53nm,0.7s,baz=220,slow=8.2,SNR=144
KSRS PcP **PcP** **18 50 05.0 +0.3**
comp=Z,5.5nm,0.9s,baz=231,slow=1.8,SNR=5.8
KSRS ScP **ScP** **18 53 45.0 -0.4**
comp=Z,3.0nm,0.8s,baz=226,slow=4.8,SNR=5.6
KSRS LR LR 19 06 44.1
comp=Z,86nm,21.4s,baz=216,slow=36
KS19 Wonju Array Si 44.29 33 IAmb IAmb 18 48 24.5
comp=Z,62nm,0.8s
JMDO Jabal Madar 44.59 300 P **P** **18 48 27.0 +1.9**
SHLS Shalkode 44.62 340⇓ *i*P **P** **18 48 25.6 +0.4**
comp=Z,67nm,0.7s,baz=340
SHLS *e*S **S** **18 54 50.8 -1.2**
baz=340
SHLS Shalkode 44.62 340*d* *i*P **P** **18 48 25.5 +0.4**
SHLS *e*S **S** **18 54 50.8 -1.2**
SHLS pmax pmax
comp=Z,67nm,0.7s

PDGK Podgornoye 44.76 340 P **P** **18 48 27.1 +0.8**
UZB Uzynbulak 44.76 339⇓ *i*P **P** **18 48 27.7 +1.3**
comp=Z,45nm,0.6s,baz=339
UZB *e*S **S** **18 54 53.6 -0.6**
comp=Z,20nm,1.6s,baz=339
UZB Uzynbulak 44.76 339*d* *i*P **P** **18 48 27.6 +1.3**
UZB *e*S **S** **18 54 53.6 -0.6**
UZB pmax pmax
comp=Z,45nm,0.6s
UZB smax smax
comp=E,20nm,1.6s
SMDO Samad 44.89 301 P **P** **18 48 29.4 +1.7**
SATY Saty 44.91 339⇓ *i*P **P** **18 48 29.0 +1.5**
comp=E,68nm,0.9s,baz=339
SATY *i* S **S** **18 54 56.8 +0.6**
comp=E,77nm,2.4s,baz=339
SATY Saty 44.91 339*d* *i*P **P** **18 48 28.9 +1.5**
SATY *i* S **S** **18 54 56.8 +0.6**
SATY pmax pmax
comp=Z,68nm,0.9s
SATY smax smax
comp=E,77nm,2.4s
BIDO Bidbid 45.00 302 P **P** **18 48 31.0 +2.6**
SNR=5.9
ULHL Ulahol 45.04 336 P **P** **18 48 30.5 +1.8**
SNR=7.2
KPKS Kokpek 45.16 339⇓ *i*P **P** **18 48 30.7 +1.3**
comp=E,59nm,0.7s,baz=339
KPKS Kokpek 45.16 339*d* *i*P **P** **18 48 30.7 +1.3**
KPKS pmax pmax
comp=Z,59nm,0.7s
SHAO Shalim 45.43 294 P **P** **18 48 33.8 +2.0**
SHAO Shalim 45.43 294 P **P** **18 48 32.5 +0.7**
TNSS Tian-Shan 45.43 337⇓ *i*P **P** **18 48 33.2 +1.2**
baz=337
TNSS Tian-Shan 45.43 337⇓ *i*P **P** **18 48 33.2 +1.2**
JMN Monobe 45.48 42 P **P** **18 48 32.4 +0.4**
JMN IAmb IAmb 18 48 34.2
comp=Z,57nm,0.8s
MDOK Medeo 45.50 337 *i*P **P** **18 48 33.7 +1.5**
baz=337
MDOK *e*S **S** **18 55 06.1 +1.3**
baz=337
MDOK Medeo 45.50 337 *i*P **P** **18 48 33.7 +1.5**
MDOK *e*S **S** **18 55 06.1 +1.3**
BSY Bisya 45.50 300 P **P** **18 48 34.3 +1.9**
AAA Alma-Ata 45.59 337⇓ *i*P **P** **18 48 34.5 +1.6**
comp=Z,126nm,0.6s,baz=337
AAA *e*S **S** **18 55 07.4 +1.4**
baz=337
AAA Alma-Ata 45.59 337*d* *i*P **P** **18 48 34.4 +1.6**
AAA *e*S **S** **18 55 07.4 +1.4**
AAA pmax pmax
comp=Z,127nm,0.6s
QIS Mount Isa 45.64 121 P **P** **18 48 33.2 -0.3**
baz=46,SNR=23
HOQ Hoqain 45.71 302 P **P** **18 48 35.9 +1.9**
SOCY Socotra 45.72 285 P **P** **18 48 34.1 -0.2**
SOCY IAmb IAmb 18 48 37.6
comp=Z,36nm,1.0s
SOCY Socotra 45.72 285 P **P** **18 48 36.3 +2.1**
SNR=7.5
UCH Uchtor 45.75 335 P **P** **18 48 36.0 +1.4**
SNR=284
TKM2 Tokmak 2 45.87 336 P **P** **18 48 36.4 +1.2**
SNR=114
TKM2 Tokmak 2 45.87 336 P **P** **18 48 36.1 +0.9**
KBK Karagaybulak 45.92 335 P **P** **18 48 37.2 +1.7**
SNR=318
DMTO DMTO 45.97 293 P **P** **18 48 37.8 +1.7**
AML Almayashu 46.03 334 P **P** **18 48 38.4 +1.7**
SNR=52
AAK Ala-Archa 46.09 335 ScP **ScP** **18 53 53.2 +0.2**
comp=Z,2.5nm,0.5s,baz=81,slow=2.0,SNR=5.7
AAK S **S** **18 55 14.7 +1.3**
comp=Z,1.6nm,0.9s,baz=266,slow=15,SNR=7.7
AAK Ala-Archa 46.09 335 P **P** **18 48 38.4 +1.5**
SNR=122
AAK Ala-Archa 46.09 335 *i*P **P** **18 48 38.8 +1.9**
SNR=165
AAK Ala-Archa 46.09 335*d* *i*P **P** **18 48 38.4 +1.5**
AAK pmax pmax
comp=Z,266nm,0.8s
AAK Ala-Archa 46.09 335 P **P** **18 48 37.9 +1.0**
AAK IAmb IAmb 18 48 40.9
comp=Z,84nm,0.8s
SONM Songino Array 46.21 7 P **P** **18 48 38.8 +1.1**
comp=Z,28nm,0.6s,baz=190,slow=9.5,SNR=186
SONM PcP **PcP** **18 50 12.0 +0.7**
comp=Z,13nm,0.7s,baz=202,slow=3.5,SNR=7.7
SONM ScP **ScP** **18 53 53.2 -0.1**
comp=Z,10nm,1.0s,baz=193,slow=4.3,SNR=14
CHMS Chumysh 46.28 335 P **P** **18 48 39.3 +1.1**
SNR=64
ARQ Araqi 46.30 301 P **P** **18 48 40.4 +1.8**
ULN Ulaanbaatar 46.32 8*c* *i*P **P** **18 48 39.4 +0.9**
ULN pmax pmax
comp=Z,45nm,1.3s
ULN Ulaanbaatar 46.32 8 P **P** **18 48 39.0 +0.4**
ULN Ulaanbaatar 46.32 8 P **P** **18 48 39.8 +1.2**
EKS2 Erkin-Say 46.42 334 P **P** **18 48 41.0 +1.6**
SNR=326
SOHO SOHO 46.58 302 *i*P **P** **18 48 41.6 +0.9**
SNR=7.5
SOHO SOHO 46.58 302 P **P** **18 48 42.1 +1.3**
RBK Rabkut 46.60 292 P **P** **18 48 42.9 +1.8**
SNR=5.2
USP Ospenovka 46.61 335 P **P** **18 48 41.9 +1.2**
SNR=461
SGDS Sogindy 46.70 336⇓ *i*P **P** **18 48 42.5 +1.0**
comp=Z,36nm,0.9s,baz=336
SGDS *e*S **S** **18 55 22.4 +0.5**
comp=Z,29nm,2.3s,baz=336
SGDS Sogindy 46.70 336*d* *i*P **P** **18 48 42.5 +1.0**
SGDS *e*S **S** **18 55 22.4 +0.5**
SGDS pmax pmax
comp=Z,36nm,0.9s
SGDS smax smax
comp=N,29nm,2.3s
DOK Doka 46.95 294 P **P** **18 48 45.3 +1.5**
ZSN Zaisan 46.99 347⇓ *i*P **P** **18 48 45.2 +1.6**
comp=N,72nm,0.9s,baz=347
ZSN Zaisan 46.99 347*d* *i*P **P** **18 48 45.2 +1.6**
ZSN pmax pmax
comp=Z,72nm,0.9s
MK31 Makanchi Array 47.02 344 *i*P **P** **18 48 44.3 +0.4**
MK31 Makanchi Array 47.02 344 IAmb IAmb 18 48 47.0
comp=Z,88nm,0.8s
MKAR Makanchi Array 47.02 344 P **P** **18 48 44.7 +0.8**
comp=Z,139nm,0.8s,baz=156,slow=7.2,SNR=710
MKAR pP **pP** **18 49 11.9 -1.0**
comp=Z,28nm,0.9s,baz=153,slow=6.5,SNR=2.1
MKAR S **S** **18 55 24.8 -1.4**
comp=Z,4.4nm,1.0s,baz=165,slow=14,SNR=6.3
MKAR Makanchi Array 47.02 344 P **P** **18 48 44.5 +0.6**
MKAR Makanchi Array 47.02 344 P **P** **18 48 44.5 +0.6**
WHFO Wadi Hawf 47.10 293 P **P** **18 48 46.2 +1.2**
SNR=5.3
MAKZ Makanchi 47.12 344 P **P** **18 48 44.3 -0.3**
MAKZ Makanchi 47.12 344 P **P** **18 48 44.8 +0.2**
UOSS Minazif 47.16 303 P **P** **18 48 46.3 +1.0**
HATD Hatta, Dubai 47.17 303 *i*P **P** **18 48 47.0 +1.6**
SNR=6.3
HATD Hatta, Dubai 47.17 303 P **P** **18 48 47.1 +1.7**
ALNE Al Ain 47.22 301 *i*P **P** **18 48 47.4 +1.6**
SNR=11
ALNE Al Ain 47.22 301 P **P** **18 48 47.9 +2.1**
SNR=6.1
UMZA Um Al Zommool 47.26 300 P **P** **18 48 47.4 +1.3**
MSFE Esma-Masafi 47.35 303 P **P** **18 48 48.9 +2.1**
MASF Masafi 47.36 303 P **P** **18 48 49.0 +2.1**
ABTO Aybut 47.41 292 P **P** **18 48 48.9 +1.6**
SNR=5.8
JWT Wachi 47.41 41 IAmb IAmb 18 48 48.5
comp=Z,36nm,0.8s
FAQ Al Faqa, Dubai 47.60 302 P **P** **18 48 50.4 +1.7**
FAQ Al Faqa, Dubai 47.60 302 P **P** **18 48 50.5 +1.7**
NAZ Nazwa, Dubai 47.63 303 P **P** **18 48 50.2 +1.3**
NAZ Nazwa, Dubai 47.63 303 P **P** **18 48 50.7 +1.8**
SHME Shamm 47.64 304 P **P** **18 48 51.7 +2.7**
SHME Shamm 47.64 304 P **P** **18 48 51.5 +2.5**
DZA Taraz 47.70 333⇓ *i*P **P** **18 48 49.8 +0.6**
comp=Z,31nm,0.6s,baz=332
DZA Taraz 47.70 333*d* *i*P **P** **18 48 49.7 +0.6**
DZA pmax pmax
comp=Z,31nm,0.6s

IUG	**luzhnay**	**47.74**	**331**	⇓	*i*	P		**P**	**18 48 50.7 +1.1**
	comp=Z,31nm,0.6s,baz=331								
IUG					*e*	S		**S**	**18 55 37.1 +0.4**
	comp=Z,50nm,2.0s,baz=331								
IUG	**luzhnay**	**47.74**	**331**		*d*	*i*	P	**P**	**18 48 50.7 +1.1**
IUG						*e*	S	**S**	**18 55 37.1 +0.4**
IUG							pmax	pmax	
	comp=Z,31nm,0.6s								
IUG							smax	smax	
	comp=N,50nm,2.0s								
ASUD	**Al Ashush, Dub**	**47.78**	**302**			*i*	P	**P**	**18 48 52.2 +2.1**
	SNR=16								
ASUD	**Al Ashush, Dub**	**47.78**	**302**				P	**P**	**18 48 52.5 +2.4**
CN2	**Changchun**	**47.90**	**26**		*e*	P		**P**	**18 48 50.3 -0.4**
CN2							pmax	pmax	
	comp=N,70nm,0.6s								
AJN	**Ajban**	**48.05**	**302**			P		**P**	**18 48 53.8 +1.6**
CHM	**Chimkent**	**48.08**	**331**	⇓	*i*	P		**P**	**18 48 54.2 +2.1**
	baz=331								
CHM	**Chimkent**	**48.08**	**331**		*d*	*i*	P	**P**	**18 48 54.2 +2.1**
KK31	**Karatay Array**	**48.24**	**332**			*e*	P	**P**	**18 48 54.2 +0.9**
KK31	**Karatay Array**	**48.24**	**332**				IAmb	IAmb	18 48 55.2
	comp=Z,70nm,1.4s								
KKAR	**Karatay Array**	**48.24**	**332**				P	**P**	**18 48 53.4 +0.1**
KKAR							pmax	pmax	
	comp=Z,71nm,1.4s								
KKAR	**Karatay Array**	**48.24**	**332**				P	**P**	**18 48 53.4 +0.1**
KKAR	**Karatay Array**	**48.24**	**332**				P	**P**	**18 48 53.7 +0.3**
KKAR							IAmb	IAmb	18 48 55.2
	comp=Z,70nm,1.4s								
BTLS	**Baital**	**48.25**	**336**	⇓	*i*	P		**P**	**18 48 54.0 +0.6**
	comp=Z,22nm,1.1s,baz=336								
BTLS						*e*	S	**S**	**18 55 42.4 -1.3**
	baz=336								
BTLS	**Baital**	**48.25**	**336**		*d*	*i*	P	**P**	**18 48 54.0 +0.6**
BTLS						*e*	S	**S**	**18 55 42.3 -1.3**
BTLS							pmax	pmax	
	comp=Z,22nm,1.1s								
JCJ	**Chichijima**	**48.38**	**55**			P		**P**	**18 48 54.1 -0.6**
	comp=Z,42nm,0.3s,baz=280,slow=22,SNR=14								
ZAK	**Zakamensk**	**48.45**	**4**		*e*	P		**P**	**18 48 55.4 +0.5**
ZAK							pmax	pmax	
	comp=Z,9.0nm,1.1s								
MANU	**Manus Island**	**48.55**	**94**			IAmb		IAmb	18 48 57.7
	comp=Z,58nm,0.8s								
DGZ	**Jazzator, Alta**	**48.63**	**350**		*d*	*i*	P	**P**	**18 48 57.4 +1.0**
DGZ							pmax	pmax	
	comp=Z,103nm,0.9s								
MZWR	**Madinat Zayed**	**48.72**	**300**			P		**P**	**18 48 58.6 +1.3**
MTSU	**Mount Surprise**	**48.87**	**116**			P		**P**	**18 48 59.1 +0.5**
	baz=49,SNR=62								
JGF	**Kuroka**	**48.90**	**42**			IAmb		IAmb	18 48 60.0
	comp=Z,46nm,0.8s								
BBOO	**Buckleboo**	**49.19**	**138**			P		**P**	**18 48 59.7 -1.0**
	baz=49,SNR=13								
BBOO	**Buckleboo**	**49.19**	**138**			IAmb		IAmb	18 49 04.5
	comp=Z,39nm,0.6s								
PMG	**Port Moresby**	**49.30**	**104**		*c*	*i*	P	**P**	**18 49 01.4 -0.5**
PMG							pmax	pmax	
	comp=Z,32nm,0.6s								
PMG	**Port Moresby**	**49.30**	**104**			P		**P**	**18 49 01.3 -0.6**
PMG						IAmb		IAmb	18 49 02.8
	comp=Z,52nm,0.8s								
MOY	**Mondy**	**49.62**	**2**		*e*	P		**P**	**18 49 04.8 +1.0**
MOY							pmax	pmax	
	comp=Z,21nm,2.2s								
MSHR	**Mys Shultsa**	**49.69**	**31**		*c*	*i*	P	**P**	**18 49 04.6 +0.2**
MSHR							pmax	pmax	
	comp=Z,21nm,1.0s								
TLY	**Talaya**	**49.76**	**4**			LR		LR	19 12 40.6
	comp=Z,173nm,19.6s,baz=242,slow=39								
TLY	**Talaya**	**49.76**	**4**		*e*	P		**P**	**18 49 06.9 +2.1**
TLY							pmax	pmax	
	comp=Z,28nm,0.6s								
TLY							MLR	MLR	
	comp=Z,523nm,16.0s								
TLY	**Talaya**	**49.76**	**4**			P		**P**	**18 49 04.7 -0.1**
MAJO	**Matsushiro**	**49.99**	**42**		*d*	*i*	P	**P**	**18 49 06.7 -0.1**
MAJO							pmax	pmax	
	comp=Z,30nm,1.1s								
MAJO	**Matsushiro**	**49.99**	**42**			P		**P**	**18 49 06.0 -0.8**
MAJO						IAmb		IAmb	18 49 08.3
	comp=Z,34nm,1.1s								
MAT	**Matsushiro**	**49.99**	**42**			P		**P**	**18 49 06.0 -0.8**
MJAR	**Matsushiro Arr**	**50.00**	**42**			P		**P**	**18 49 06.7 -0.1**
	comp=Z,27nm,0.7s,baz=223,slow=6.4,SNR=62								
MJAR						PcP		**PcP**	**18 50 25.6 +0.5**
	comp=Z,9.0nm,0.9s,baz=229,slow=3.6,SNR=6.4								
MJAR						PP		**PP**	**18 50 58.3 -4.8**
	comp=Z,6.1nm,0.9s,baz=241,slow=3.1,SNR=4.3								
MJAR						ScP		**ScP**	**18 54 08.7 -0.8**
	comp=Z,8.0nm,1.1s,baz=222,slow=5.2,SNR=12								
MJAR						LR		LR	19 12 41.0
	comp=Z,55nm,18.0s,baz=280,slow=39								
MJAR	**Matsushiro Arr**	**50.00**	**42**			P		**P**	**18 49 06.4 -0.4**
MJAR						IAmb		IAmb	18 49 08.3
	comp=Z,33nm,1.3s								
JRN	**Qarnain Island**	**50.00**	**301**			P		**P**	**18 49 08.5 +1.5**
IRK	**Irkutsk**	**50.37**	**4**		*e*	P		**P**	**18 49 09.0 -0.3**
IRK							pmax	pmax	
	comp=Z,28nm,1.4s								
MDJ	**Mudanjiang**	**50.41**	**28**			P		**P**	**18 49 11.3 +1.5**
MDJ						pP		pP	18 49 41.4 +2.5
MDJ						S		**S**	**18 56 16.4 +2.6**
MDJ							pmax	pmax	
	comp=Z,20nm,0.9s								
MDJ							pmax	pmax	
	comp=Z,200nm,3.8s								
SLWR	**Sila**	**50.71**	**300**			P		**P**	**18 49 13.9 +1.5**
SEM	**Semipalatinsk**	**50.88**	**345**	⇓	*i*	P		**P**	**18 49 13.8 +0.4**
	comp=Z,37nm,0.9s,baz=345								
SEM	**Semipalatinsk**	**50.88**	**345**		*d*	*i*	P	**P**	**18 49 13.8 +0.4**
SEM							pmax	pmax	
	comp=Z,37nm,0.9s								
JSD	**Sado**	**50.88**	**40**			P		**P**	**18 49 12.9 -0.5**
JYT	**Yasato**	**51.16**	**43**			P		**P**	**18 49 13.4 -2.1**
JYT						IAmb		IAmb	18 49 17.5
	comp=Z,45nm,0.6s								
CTA	**Charters Tower**	**51.25**	**118**			ScP		**ScP**	**18 54 13.9 -1.3**
	comp=Z,7.9nm,0.9s,baz=280,slow=7.4,SNR=4.8								
CTAO	**Charters Tower**	**51.25**	**118**			P		**P**	**18 49 16.3 -0.2**
CTAO						pmax		pmax	
	comp=Z,53nm,0.9s								
CTAO	**Charters Tower**	**51.25**	**118**			P		**P**	**18 49 16.3 -0.2**
CTAO						IAmb		IAmb	18 49 17.7
	comp=Z,53nm,0.9s								
USA0B	**Ussuriysk Arra**	**51.28**	**30**		*c*	*i*	P	**P**	**18 49 16.8 +0.5**
USA0B	**Ussuriysk Arra**	**51.28**	**30**			P		**P**	**18 49 15.9 -0.4**
USA0B						IAmb		IAmb	18 49 18.1
	comp=Z,86nm,1.3s								
USRK	**Ussuriysk Ar.**	**51.28**	**30**			P		**P**	**18 49 16.7 +0.4**
	comp=Z,23nm,0.6s,baz=223,slow=5.0,SNR=79								
USRK						ScP		**ScP**	**18 54 13.3 -1.5**
	comp=Z,2.1nm,0.7s,baz=219,slow=3.6,SNR=4.1								
USRK						LR		LR	19 11 24.3
	comp=Z,90nm,21.7s,baz=206,slow=36								
USRK	**Ussuriysk Ar.**	**51.28**	**30**			P		**P**	**18 49 15.9 -0.3**
HTT	**Hallett**	**51.49**	**137**			P		**P**	**18 49 17.9 -0.3**
	baz=52,SNR=23								
KURBB	**Kurchatov Arra**	**51.54**	**344**			ScP		**ScP**	**18 54 15.7 -0.1**
	comp=Z,4.9nm,0.8s,baz=158,slow=3.6,SNR=6.9								
KURBB						S		**S**	**18 56 28.8 -0.3**
	comp=Z,5.1nm,0.9s,baz=158,slow=13,SNR=13								
KURBB	**Kurchatov Arra**	**51.54**	**344**			P		**P**	**18 49 18.4 +0.3**
GEYT	**Alibeck**	**51.83**	**319**			P		**P**	**18 49 21.4 +0.9**
	comp=Z,52nm,0.7s,baz=159,slow=8.9,SNR=68								
GEYT						pP		**pP**	**18 49 49.7 -0.3**
	comp=Z,19nm,0.8s,baz=145,slow=8.7,SNR=2.9								
GEYT						LR		LR	19 14 18.5
	comp=Z,70nm,19.3s,baz=200,slow=39								
GYA0B	**ALIBECK ARRAY**	**51.83**	**319**			IAmb		IAmb	18 49 25.9
	comp=Z,70nm,0.9s								
QLP	**Quilpie**	**52.03**	**126**			P		**P**	**18 49 22.5 +0.3**
	baz=52,SNR=84								
SAKB	**Bahrain**	**52.32**	**302**			P		**P**	**18 49 25.6 +1.3**
STKA	**Stephens Creek**	**52.53**	**133**			P		**P**	**18 49 25.4 -0.5**
	comp=Z,35nm,0.8s,baz=310,slow=7.0,SNR=55								
STKA						LR		LR	19 14 53.4
	comp=Z,72nm,18.1s,baz=310,slow=39								
STKA	**Stephens Creek**	**52.53**	**133**			P		**P**	**18 49 25.4 -0.5**
	baz=53,SNR=32								
STKA	**Stephens Creek**	**52.53**	**133**		*ce*	P		**P**	**18 49 25.1 -0.7**
BRZS	**Berezniki**	**52.87**	**339**	⇓	*i*	P		**P**	**18 49 28.5 +0.5**
	comp=Z,20nm,1.2s,baz=339								
BRZS						*e*	S	**S**	**18 56 47.0 -0.4**
	baz=339								
BRZS	**Berezniki**	**52.87**	**339**		*d*	*i*	P	**P**	**18 49 28.5 +0.5**
BRZS						*e*	S	**S**	**18 56 46.9 -0.4**
BRZS							pmax	pmax	
	comp=Z,20nm,1.2s								
ZALV	**Zalesovo Beam**	**53.17**	**350**			P		**P**	**18 49 30.6 +0.5**
	comp=Z,105nm,0.4s,baz=178,slow=6.5,SNR=586								
ZALV						pP		**pP**	**18 49 59.5 -0.2**
	comp=Z,40nm,0.6s,baz=176,slow=6.5,SNR=2.8								
ZALV						ScP		**ScP**	**18 54 21.8 -1.0**
	comp=Z,3.0nm,0.7s,baz=175,slow=2.6,SNR=3.9								
ZALV						S		**S**	**18 56 49.5 -1.7**
	comp=Z,7.4nm,0.8s,baz=174,slow=13,SNR=9.6								
ZALV						ScS		**ScS**	**18 59 02.7 -4.4**
	comp=Z,5.3nm,1.0s,baz=197,slow=4.5,SNR=6.4								
ZALV						PKPPKP		**P'P'df**	**19 19 56.5 +4.2**
	comp=Z,0.7nm,0.7s,baz=85,slow=3.1,SNR=3.6								
ZALV	**Zalesovo Beam**	**53.17**	**350**		*i*	P		**P**	**18 49 30.6 +0.5**
ZALV							pmax	pmax	
	comp=Z,219nm,0.8s								
ZALV	**Zalesovo Beam**	**53.17**	**350**			P		**P**	**18 49 29.9 -0.2**
RABL	**Rabaul**	**53.51**	**97**			P		**P**	**18 49 32.3 -1.0**
TEY	**Ternei**	**54.24**	**32**	⇑	*i*	P		**P**	**18 49 38.0 0.0**
TEY							pmax	pmax	
	comp=Z,30nm,1.2s								
TEY							pmax	pmax	
	comp=N,10.0nm,1.2s								
KLR	**Kul'dur**	**54.85**	**26**			P		**P**	**18 49 43.0 +0.6**
	comp=N,103nm,0.8s,baz=236,slow=7.3,SNR=295								
KLR	**Kul'dur**	**54.85**	**26**		*c*	*i*	P	**P**	**18 49 43.5 +1.1**
KLR							pmax	pmax	
	comp=Z,113nm,0.9s								
CMSA	**Cobar Meteorol**	**55.40**	**131**			P		**P**	**18 49 46.6 0.0**
	baz=56,SNR=222								
QRN	**Al-Qurain**	**55.42**	**304**		*e*	P			18 49 47.1
RMQ	**Roma**	**55.69**	**124**			P		**P**	**18 49 50.0 +1.1**
	baz=56,SNR=49								
RDF	**Al-Radifah**	**55.79**	**304**		*e*	P			18 49 49.3
UMR	**Umm Al-Rimmam**	**55.86**	**305**		*e*	P			18 49 49.5
RAYN	**Ar Rayn**	**56.00**	**297**		*i*	P		**P**	**18 49 52.0 +0.9**
	SNR=43								
RAYN	**Ar Rayn**	**56.00**	**297**			P		**P**	**18 49 51.2 +0.1**
RAYN							pmax	pmax	
	comp=Z,29nm,0.8s								
RAYN	**Ar Rayn**	**56.00**	**297**			P		**P**	**18 49 51.2 +0.1**
RAYN						IAmb		IAmb	18 49 53.4
	comp=Z,29nm,0.8s								
ERM	**Erimo**	**56.22**	**39**		*de*	P		**P**	**18 49 53.4 +1.1**
ERM							pmax	pmax	
	comp=Z,36nm,0.7s								
ERM	**Erimo**	**56.22**	**39**			P		**P**	**18 49 53.0 +0.7**
BRVK	**Borovoye**	**56.26**	**340**			P		**P**	**18 49 52.3 -0.1**
BRVK							pmax	pmax	
	comp=Z,42nm,0.6s								
BRVK	**Borovoye**	**56.26**	**340**			P		**P**	**18 49 52.3 -0.1**
BRVK	**Borovoye**	**56.26**	**340**			P		**P**	**18 49 52.6 +0.3**
ZEA	**Zeya**	**56.68**	**20**		*e*	P		**P**	**18 49 56.4 +1.1**
ZEA						*e*	S	**S**	**18 57 41.5 +3.4**
ZEA							pmax	pmax	
	comp=N,30nm,0.6s								
ZEA							pmax	pmax	
	comp=E,20nm,0.6s								
ZEA							pmax	pmax	
	comp=Z,60nm,0.7s								
ZEA							smax	smax	
	comp=E,200nm,12.9s								
ZEA							smax	smax	
	comp=N,300nm,15.1s								
BOD	**Bodaibo**	**57.02**	**10**		*e*	P		**P**	**18 49 58.7 +1.0**
BOD							pmax	pmax	
	comp=Z,109nm,0.8s								
ASAJ	**Asahikawa**	**57.05**	**36**			P		**P**	**18 49 58.9 +0.7**
	comp=Z,37nm,0.5s,baz=246,slow=10,SNR=68								
EIDS	**Eidsvold**	**57.24**	**122**			P		**P**	**18 50 00.2 +0.4**
	baz=57,SNR=12								
AB31	**Akbulak array**	**57.75**	**331**		*i*	P		**P**	**18 50 03.3 +0.4**
ABKAR	**Akbulak array**	**57.75**	**331**			P		**P**	**18 50 03.1 +0.2**
ABKAR	**Akbulak array**	**57.75**	**331**			IAmb		IAmb	18 50 04.1
	comp=Z,82nm,0.7s								
GRNR	**Gornyy**	**58.05**	**27**	⇓	*i*	P		**P**	**18 50 06.3 +1.3**
GRNR						*e*	S	**S**	**18 58 00.3 +4.2**
GRNR							pmax	pmax	
	comp=E,8.0nm,1.0s								
GRNR							pmax	pmax	
	comp=N,2.0nm,0.9s								
GRNR							pmax	pmax	
	comp=Z,30nm,1.2s								
GRNR							smax	smax	
	comp=N,2.0nm,0.9s								
GRNR							MLR	MLR	
	comp=N,60nm,16.0s								
GRNR							MLR	MLR	
	comp=Z,150nm,14.0s								
TOO	**Toolangi**	**58.24**	**137**			P		**P**	**18 50 08.1 +1.4**
	baz=58,SNR=5.8								
YSS	**Yuzh-Sakhalins**	**58.79**	**34**		*α*	*i*	P	**P**	**18 50 11.2 +1.0**
YSS						*e*	*PP	**pP**	**18 50 38.3 -2.0**
YSS						*e*			18 50 59.0
YSS						*e*	S	**S**	**18 58 07.5 +1.7**
YSS							pmax	pmax	
	comp=Z,370nm,1.0s								
YSS	**Yuzh-Sakhalins**	**58.79**	**34**			P		**P**	**18 50 10.4 +0.2**
PATS	**Pohnpei**	**59.35**	**83**			P		**P**	**18 50 15.9 +1.2**
	baz=59,SNR=5.2								
AKTO	**Aktyubinsk**	**59.47**	**331**			ScP		**ScP**	**18 54 50.8 +0.1**
	comp=Z,2.0nm,0.7s,baz=124,slow=4.7,SNR=3.5								
AKTO						S		**S**	**18 58 11.2 -3.3**
	comp=Z,1.8nm,0.7s,baz=3.3,slow=22,SNR=12								
AKTO						LR		LR	19 20 38.5
	comp=Z,48nm,18.2s,baz=146,slow=41								
ARMA	**Armidale**	**59.53**	**127**			P		**P**	**18 50 17.3 +1.5**
	baz=60,SNR=18								
MGCD	**Mangrove Creek**	**60.25**	**130**			P		**P**	**18 50 21.4 +0.9**
	baz=60,SNR=10								
TYV	**Tymovskoe**	**61.09**	**30**		*e*	P		**P**	**18 50 27.5 +1.6**
TYV						*e*	S	**S**	**18 58 39.0 +3.9**
TYV							pmax	pmax	
	comp=Z,300nm,3.8s								
TYV							pmax	pmax	
	comp=Z,47nm,1.1s								
TYV							smax	smax	
	comp=E,8.0nm,1.1s								
DDFL	**Dedoflistskaro**	**61.61**	**317**			P		**P**	**18 50 32.1 +2.4**
LGD	**Lagodekhi**	**61.69**	**318**			P		**P**	**18 50 31.0 +0.9**
CUKT	**Cukurca**	**61.76**	**312**		*e*	P		**P**	**18 50 29.9 -0.9**
HNR	**Honiara**	**61.77**	**102**			P		**P**	**18 50 34.2 +3.1**
KMBO	**Kilima Mbogo**	**61.77**	**268**			P		**P**	**18 50 33.8 +2.3**
	comp=E,1.7nm,0.7s,baz=44,slow=9.6,SNR=5.6								
KMBO						pP		**pP**	**18 51 02.1 +0.6**
	comp=E,6.6nm,0.9s,baz=44,slow=5.2,SNR=7.1								
GNI	**Garni**	**62.03**	**315**			LR		LR	19 19 32.8
	comp=E,46nm,21.8s,baz=96,slow=38								
GNI	**Garni**	**62.03**	**315**			P		**P**	**18 50 33.7 +1.1**
GNI	**Garni**	**62.03**	**315**		*e*	P		**P**	**18 50 33.8 +1.1**
GNI	**Garni**	**62.03**	**315**		*d*	*i*	P	**P**	**18 50 33.2 +0.6**
GNI							pmax	pmax	
	comp=Z,39nm,1.0s								
GNI	**Garni**	**62.03**	**315**			P		**P**	**18 50 31.6 -1.0**
GNI						IAmb		IAmb	18 50 48.7
	comp=Z,36nm,0.9s								
GNI	**Garni**	**62.03**	**315**			P		**P**	**18 50 33.9 +1.2**
CLDR	**Caldiran**	**62.23**	**314**		*e*	P		**P**	**18 50 34.0 0.0**
GEVA	**Gevas**	**62.54**	**313**			P		**P**	**18 50 35.5 -0.6**
GEVA						IAmb		IAmb	18 50 39.1
	comp=Z,33nm,0.9s								
GROC	**Groznyy**	**62.58**	**319**		*e*	P		**P**	**18 50 36.2 +0.2**
GROC						*e*	*PP	**pP**	**18 51 04.6 -1.9**
GROC						*e*			18 51 14.9
GROC						*e*			18 52 56.7
GROC						*e*	S	**S**	**18 58 52.5 -1.7**
GROC							pmax	pmax	
	comp=Z,87nm,0.9s								
AKDM	**Akdamar-Van**	**62.61**	**313**		*e*	P		**P**	**18 50 37.9 +1.4**
SVE	**Sverdlovsk**	**62.71**	**337**	⇑	*e*	P		**P**	**18 50 37.0 +0.4**
SVE						*e*	S	**S**	**18 58 53.7 -1.6**
SVE							pmax	pmax	
	comp=Z,69nm,0.9s								
KZRT	**Kazreti**	**62.76**	**316**			P		**P**	**18 50 38.2 +0.9**
GUDG	**Gudauri**	**63.15**	**318**			P		**P**	**18 50 41.7 +1.6**
ARU	**Arti**	**63.24**	**336**		*d*	*i*	P	**P**	**18 50 40.1 0.0**
ARU							*PP	**pP**	**18 51 08.9 -1.9**
ARU									18 51 17.3
ARU									18 52 57.1
ARU						*e*	S	**S**	**18 59 03.5 +1.5**
ARU						SS		**SS**	**19 03 15.9 +5.3**
ARU							pmax	pmax	
	comp=Z,36nm,0.7s								
ARU	**Arti**	**63.24**	**336**			P		**P**	**18 50 39.4 -0.7**
ARU						IAmb		IAmb	18 50 41.0
	comp=Z,38nm,0.8s								
AKH	**Akhalkalaki**	**63.40**	**316**			P		**P**	**18 50 43.2 +1.5**
ZEI	**Tsey**	**63.66**	**318**		*e*	P		**P**	**18 50 43.5 0.0**
ZEI							pmax	pmax	
	comp=Z,46nm,0.8s								
SENK	**Senkaya-Erzuru**	**63.87**	**315**		*e*	P		**P**	**18 50 46.4 +1.5**
ONI	**Oni**	**63.89**	**317**			P		**P**	**18 50 46.6 +1.8**
VRTB	**Varto-Mus**	**64.02**	**313**		*e*	P		**P**	**18 50 48.0 +2.2**
KOPR	**Koprukoy-ERZUR**	**64.02**	**314**		*e*	P		**P**	**18 50 46.7 +0.9**
NCK	**Nalchik**	**64.16**	**318**		*ce*	P		**P**	**18 50 47.2 +0.8**
NCK							pmax	pmax	
	comp=Z,34nm,0.8s								
YAK	**Yakutsk**	**64.27**	**16**			LR		LR	19 22 15.8
	comp=Z,194nm,18.5s,baz=258,slow=39								
YAK	**Yakutsk**	**64.27**	**16**		*c*	*i*	P	**P**	**18 50 46.7 -0.1**
YAK						*e*	*PP	**pP**	**18 51 17.8 +0.5**
YAK						*e*	PPP	PPP	18 54 38.8
YAK						*e*	S	**S**	**18 59 12.2 -2.3**
YAK						*e*			19 00 27.1
YAK							pmax	pmax	
	comp=Z,134nm,0.9s								
YAK							pmax	pmax	
	comp=N,36nm,0.9s								
YAK							pmax	pmax	
	comp=E,25nm,1.1s								
YAK							smax	smax	
	comp=N,132nm,2.2s								
YAK							smax	smax	
	comp=E,258nm,2.1s								
YAK	**Yakutsk**	**64.27**	**16**			P		**P**	**18 50 46.7 -0.1**
KBZ	**Khabaz**	**64.71**	**318**			P		**P**	**18 50 50.8 +0.8**
	comp=E,44nm,0.8s,baz=114,slow=5.3,SNR=68								
KBZ						pP		**pP**	**18 51 20.0 -0.7**
	comp=E,34nm,0.9s,baz=125,slow=3.3,SNR=5.7								
KBZ	**Khabaz**	**64.71**	**318**		*de*	P		**P**	**18 50 50.3 +0.3**
KBZ							pmax	pmax	
	comp=Z,49nm,0.9s								
YEDI	**Yedisu-Bingol**	**64.78**	**313**		*e*	P		**P**	**18 50 52.4 +1.7**
KIV	**Kislovodsk**	**64.94**	**318**		*i*	P		**P**	**18 50 52.3 +0.7**
	SNR=5.2								
KIV	**Kislovodsk**	**64.94**	**318**		*e*	P		**P**	**18 50 52.9 +1.3**
KIV	**Kislovodsk**	**64.94**	**318**		*e*	P		**P**	**18 50 51.9 +0.3**
KIV						*e*	*PP	**pP**	**18 51 21.2 -1.2**
KIV						*e*			18 53 16.2
KIV						*e*	S	**S**	**18 59 24.1 +0.4**
KIV							pmax	pmax	
	comp=Z,138nm,1.1s								
KIV							pmax	pmax	
	comp=Z,19nm,4.0s								
KIV	**Kislovodsk**	**64.94**	**318**			P		**P**	**18 50 51.6 -0.1**
KIV						IAmb		IAmb	18 50 53.7
	comp=Z,37nm,0.9s								
BELG	**Belogornoye**	**65.88**	**328**			LR		LR	19 23 38.3
	comp=Z,42nm,18.8s,baz=134,slow=39								
BELG	**Belogornoye**	**65.88**	**328**		*d*	*i*	P	**P**	**18 50 56.9 -0.4**
BELG						*i*	*PP	**PcP**	**18 51 25.7 -1.6**
BELG							pmax	pmax	
	comp=Z,14nm,0.9s								
MALT	**Malatya**	**65.98**	**311**		*e*	P		**P**	**18 51 00.4 +2.0**
MALT	**Malatya**	**65.98**	**311**			P		**P**	**18 50 59.9 +1.5**
GAZ	**Gaziantep**	**66.57**	**310**		*e*	P		**P**	**18 51 03.6 +1.4**
GAZ	**Gaziantep**	**66.57**	**310**			IAmb		IAmb	18 51 04.9
	comp=Z,57nm,1.0s								
HRFI	**Mount Harif**	**66.59**	**302**		*e*	P		**P**	**18 51 04.2 +1.8**
DARE	**Darende-Malaty**	**66.77**	**311**		*e*	P		**P**	**18 51 05.1 +1.7**
MMLI	**Mount Malkishu**	**66.79**	**305**		*e*	P		**P**	**18 51 06.3 +2.7**
SOC	**Sochi**	**66.80**	**317**		*e*	P		**P**	**18 51 02.7 -0.7**
SOC						*e*	*PP	**PcP**	**18 51 32.0 +0.7**
SOC						*e*			18 53 30.0
SOC						*e*	PPP	PPP	18 55 10.2
SOC						*e*	S	**S**	**18 59 44.2 -1.8**
SOC						*e*	SS	**SS**	**19 04 03.4 -3.0**
SOC							pmax	pmax	
	comp=Z,82nm,0.8s								
KMRS	**Kahramanmaras**	**66.90**	**310**		*e*	P		**P**	**18 51 05.6 +1.4**
SARI	**SarD1z-Kayseri**	**67.52**	**311**		*e*	P		**P**	**18 51 08.4 +0.1**
SVSK	**Karacayir**	**67.52**	**313**		*e*	P		pP	18 51 39.4 +0.6
CEYT	**Ceyhan**	**67.65**	**309**		*e*	P		**P**	**18 51 11.0 +2.1**
KOZT	**Kozan**	**67.72**	**310**		*e*	P		**P**	**18 51 11.6 +2.3**
NRIK	**Noril'sk**	**67.76**	**356**			P		**P**	**18 51 09.4 +0.4**
	comp=Z,10nm,0.5s,baz=158,slow=6.0,SNR=20								
NRIK						LR		LR	19 24 19.2
	comp=Z,71nm,18.2s,baz=218,slow=39								
**NRI

comp=Z,38nm,0.7s,baz=200,slow=3.9,SNR=105
PETK LR LR 19 26 13.5
comp=Z,54nm,18.1s,baz=198,slow=39
PETK Petropavlovsk- 70.19 33 P **P** **18 51 22.9 -1.4**
ANTO Ankara 70.62 312 P **P** **18 51 28.4 +1.1**
PET Petropavlovsk 70.68 34 *eP* **P** **18 51 28.1 +0.9**
PET *e**PP **pP** **18 51 59.6 +1.2**
PET *e* 18 54 10.4
PET *eS* **S** **19 00 31.4 0.0**
PET pmax pmax
comp=Z,281nm,1.4s
PET pmax pmax
comp=Z,100nm,13.4s
PET Petropavlovsk 70.68 34 P **P** **18 51 27.3 +0.1**
LPSR Galich'ya Gora 70.70 326 *eP* **P** **18 51 27.7 +0.3**
LPSR *e**PP **pP** **18 51 56.6 -1.9**
LPSR *eS* **S** **19 00 28.1 -3.6**
LPSR pmax pmax
comp=Z,60nm,0.8s
LPSR smax smax
comp=N,140nm,1.4s
SIM Simferopol' 71.05 317 *eP* **P** **18 51 29.0 -0.7**
SIM *e**PP **pP** **18 51 59.0 -1.8**
SIM *eS* **S** **19 00 29.0 -7.0**
SIM pmax pmax
comp=Z,40nm,0.6s
PRGR Permogore 71.70 336⇑ *iP* **P** **18 51 33.5 +0.3**
PRGR *i* *PP **pP** **18 52 03.0 -1.4**
PRGR *e* 18 54 14.8
PRGR *eS* **S** **19 00 39.1 -3.8**
PRGR pmax pmax
comp=Z,43nm,0.6s
BCK Bucak 71.76 309 P **P** **18 51 35.3 +1.1**
KORT Korkueli 71.85 308 *eP* **P** **18 51 36.0 +1.2**
ISP Isparta 71.89 309 P P 18 51 40.7 +5.7
MDUB Mudurnu 71.95 312 *eP* **P** **18 51 35.6 +0.3**
MDUB Mudurnu 71.95 312 P **P** **18 51 34.5 -0.9**
ELL Elmali 72.15 308 P **P** **18 51 38.0 +1.4**
ELL Elmali 72.15 308 IAmb IAmb 18 51 48.5
comp=Z,62nm,0.6s
TIXI Tiksi 72.20 10 LR LR 19 26 46.4
comp=Z,108nm,19.4s,baz=196,slow=39
TIXI Tiksi 72.20 10*c iP* **P** **18 51 35.6 -0.4**
TIXI pmax pmax
comp=Z,187nm,1.0s
TIXI Tiksi 72.20 10 P **P** **18 51 36.0 0.0**
TIXI IAmb IAmb 18 51 37.1
comp=Z,62nm,1.2s
SEY Seymchan 72.44 23⇑ *iP* **P** **18 51 38.1 +0.5**
SEY *i* *PP **pP** **18 52 10.3 +1.6**
MOS Moscow 72.65 329 *eP* **P** **18 51 38.0 -1.0**
MOS *e**PP **pP** **18 52 07.7 -2.6**
MOS *e* 18 54 20.2
MOS *eS* **S** **19 00 49.3 -4.6**
MOS pmax pmax
comp=Z,100nm,1.0s
MOS pmax pmax
comp=Z,62nm,0.9s
OBN Obninsk 72.96 328*d iP* **P** **18 51 41.7 +0.9**
OBN *i* *PP **pP** **18 52 10.7 -1.5**
OBN *i* 18 54 23.0
OBN *i* S **S** **19 00 54.7 -2.8**
OBN pmax pmax
comp=Z,64nm,1.3s
MAW Mawson 73.79 194 P **P** **18 51 47.5 +2.1**
comp=Z,12nn,0.9s,baz=50,slow=4.5,SNR=15
MAW LR LR 19 17 44.5
comp=Z,102nm,21.3s,baz=50,slow=30
MAW Mawson 73.79 194 P **P** **18 51 47.9 +2.5**
baz=74,SNR=10
MAW Mawson 73.79 194 P **P** **18 51 45.3 -0.1**
KLMR Klimovskoe 73.89 334 *eP* **P** **18 51 45.4 -0.8**
KLMR *e**PP **pP** **18 52 14.8 -2.9**
KLMR *e* 18 54 32.4
KLMR pmax pmax
comp=Z,22nm,1.1s
KLMR Klimovskoe 73.89 334 *eP* **P** **18 51 45.4 -0.8**
KLMR AMP 18 51 48.8
comp=Z,22nm,1.1s
KLMR *ep*P **pP** **18 52 14.9 -2.8**
KLMR *ep*P **PP** **18 54 32.5 -0.2**
KARP Karpathos 74.12 306 P **P** **18 51 48.7 +0.6**
KARP IAmb IAmb 18 51 58.5
comp=Z,46nm,0.9s
TPGR Topolog 74.94 316⇓ P **P** **18 51 52.6 0.0**
CFR Carcaliu 75.20 316⇑ P **P** **18 51 53.9 -0.1**
CFR Carcaliu 75.20 316 P **P** **18 51 53.9 -0.1**
HARR Harsova 75.24 316⇓ P **P** **18 51 54.3 0.0**
HARR Harsova 75.24 316 P **P** **18 51 54.3 0.0**
SORM Soroca 75.72 319⇑ P **P** **18 51 57.3 +0.4**
SORM Soroca 75.72 319 P **P** **18 51 57.3 +0.4**
AKASG Malin Array Be 75.79 322 P **P** **18 51 57.1 -0.3**
comp=Z,4.9nm,0.5s,baz=86,slow=4.8,SNR=28
AKASG pP **pP** **18 52 27.2 -1.6**
comp=Z,34nm,0.9s,baz=87,slow=4.8,SNR=9.3
AKASG PP **PP** **18 54 47.5 -1.4**
comp=Z,4.3nm,0.8s,baz=94,slow=6.2,SNR=5.7
AKASG Malin Array Be 75.79 322 P **P** **18 51 57.0 -0.3**
AKBB Malin Array Si 75.79 322*de*P **P** **18 51 58.0 +0.7**
AKBB Malin Array Si 75.79 322 P **P** **18 51 56.7 -0.6**
IDI Anoyia 75.92 306 P **P** **18 51 58.2 -0.3**
BISRR Bisoca 76.26 316⇓ P **P** **18 52 00.3 +0.1**
VRI Vrincioaia 76.31 317⇑ P **P** **18 52 02.0 +1.5**
VRI Vrincioaia 76.31 317 P **P** **18 52 01.9 +1.5**
PLOR Plostina 76.36 317⇓ P **P** **18 52 01.2 +0.4**
PLOR Plostina 76.36 317 P **P** **18 52 01.2 +0.4**
TESR Tescani 76.50 317⇑ P **P** **18 52 02.5 +1.0**
BOSA Boshof 76.65 240 P **P** **18 52 04.5 +1.7**
comp=Z,3.8nm,0.8s,baz=82,slow=3.7,SNR=7.7
BOSA pP **pP** **18 52 34.4 +0.4**
comp=Z,22nm,0.9s,baz=87,slow=6.5,SNR=16
BOSA LR LR 19 21 51.9
comp=Z,51nm,20.3s,baz=28,slow=32
MLR Muntele Rosu 76.78 316⇓ P **P** **18 52 04.3 +1.1**
MLR Muntele Rosu 76.78 316 P **P** **18 52 05.7 +2.5**
MLR pmax pmax
comp=Z,50nm,1.2s
BIZ Bicaz 76.95 318⇓ P **P** **18 52 04.9 +0.9**
PRAR RASCA 76.95 318⇑ P **P** **18 52 04.0 0.0**
DOPR Dopca 77.25 317⇓ P **P** **18 52 05.9 +0.2**
PLVB Pleven 77.34 314⇓ P **P** **18 52 06.6 +0.4**
VOIR 77.39 316⇑ P **P** **18 52 06.9 +0.3**
VOIR 77.39 316 P **P** **18 52 06.8 +0.3**
MNK Minsk 77.54 326 *iP* **P** **18 52 08.8 +1.7**
comp=E,3.0nm,0.9s
MNK *i* P **P** **18 52 08.8 +1.7**
comp=N,6.0nm,0.9s
MNK *i* P **P** **18 52 08.8 +1.7**
comp=Z,28nm,0.9s
MNK *i* PcP **PcP** **18 52 18.3 +1.4**
MNK *i* pP **pP** **18 52 39.0 +0.2**
MNK *i* sP **sP** **18 52 52.1 -0.1**
MNK *i* PP **PP** **18 55 04.9 +1.4**
MNK *i* PPP PPP 18 56 52.9
MNK *i* S **S** **19 01 52.4 +4.2**
MNK *i* ScS **ScS** **19 02 15.9 +1.7**
MNK *i* sS **sS** **19 02 43.4 +1.2**
MNK *i* SS **SS** **19 06 53.4 +3.5**
MNK *i* SSS SSS 19 10 18.2
MNK *i* SKKS **SKKSdf** **19 17 54.8 -3.1**
MNK *i* LRM MLR 19 29 46.0
comp=Z,115nm,19.8s
MNK *i* LRM MLR 19 29 52.0
comp=N,788nm,19.8s
MNK *i* LRM MLR 19 29 54.0
comp=E,12nm,19.8s
ARR Arges 77.66 316⇑ P **P** **18 52 08.3 +0.2**
BURAR Bucovina Array 77.67 318 P **P** **18 52 10.0 +1.9**
BURAR Bucovina Array 77.67 318 P **P** **18 52 08.9 +0.8**
ARCR ARCALIA 78.15 318⇑ P **P** **18 52 11.1 +0.4**
VTS Vitosha 78.22 313⇓ P **P** **18 52 11.7 +0.3**
VTS Vitosha 78.22 313 P **P** **18 52 15.9 +4.5**
VTS pmax pmax
comp=Z,18nm,1.7s
NACGM Naroch 78.26 326 *iP* **P** **18 52 11.6 +0.6**
NACGM *i* P **P** **18 52 11.6 +0.6**
NACGM *i* P **P** **18 52 11.6 +0.6**
NACGM *i* pP pP 18 52 33.5 -9.2
NACGM *i* sP **sP** **18 52 51.4 -4.8**
NACGM *i* PP PP 18 54 37.4 -32
NACGM *i* PPP PPP 18 56 49.0
NACGM *i* S **S** **19 01 59.6 +3.7**
NACGM *i* sS **ScS** **19 02 22.5 +2.5**
NACGM *i* PS **PnS** **19 03 06.9 +13**
NACGM *i* SS SS 19 07 47.6 +47
NACGM *i* SSS SSS 19 12 10.8
IDID Didziasalis 78.38 326 *eP* **P** **18 52 12.9 +1.2**
RPZ Rata Peaks 78.45 135 P **P** **18 52 12.4 0.0**
RPZ IAmb IAmb 18 52 14.1
comp=Z,46nm,0.6s
ITM Ithomi 78.53 307 P **P** **18 52 12.5 -0.5**
IIGN Ignalina 78.67 326 *eP* **P** **18 52 14.7 +1.3**
ISAL Salakas 78.78 326 *eP* **P** **18 52 14.9 +1.0**
LVZ Lovozero 78.79 340 P **P** **18 52 14.0 +0.2**
LVZ pmax pmax
comp=Z,73nm,1.3s
LVZ Lovozero 78.79 340 P **P** **18 52 13.9 +0.2**
LVZ IAmb IAmb 18 52 22.2
comp=Z,73nm,1.3s
DEV Deva 78.95 316⇓ P **P** **18 52 15.0 -0.1**
DEV Deva 78.95 316 P **P** **18 52 14.9 -0.1**
GZR Gura Zlata 78.96 316⇓ P **P** **18 52 16.3 +1.1**
OXZ Oxford 79.06 135 IAmb IAmb 18 52 22.6
comp=Z,31nm,0.6s
APA Apatity 79.10 339⇓ *iP* P 18 52 24.5 +9.1
APA pmax pmax
comp=Z,8.0nm,0.7s
HERR Herculane 79.14 315⇓ P **P** **18 52 16.9 +0.8**
VSU Vasula 79.14 329 *eP* **P** **18 52 16.7 +0.9**
DRGR 79.22 317⇑ P **P** **18 52 18.1 +1.4**
DRGR 79.22 317 P **P** **18 52 18.0 +1.4**
THZ Tophouse 79.34 133 IAmb IAmb 18 52 18.1
comp=Z,58nm,0.9s
BOVS Bovan 79.47 314⇑ P **P** **18 52 17.9 0.0**
UZH Uzhgorod 79.78 319 *eP* **P** **18 52 24.0 +4.5**
UZH *e* 18 55 20.1
UZH *eS* **S** **19 02 17.0 +4.8**
BZS Buzias 79.80 316⇑ P **P** **18 52 19.9 +0.2**
BZS Buzias 79.80 316 P **P** **18 52 21.8 +2.1**
BZS pmax pmax
comp=Z,21nm,1.3s
BILL Bilibino 79.89 21⇑ *eP* **P** **18 52 20.5 +0.8**
BILL pmax pmax
comp=Z,6.0nm,0.7s
BILL Bilibino 79.89 21 P **P** **18 52 19.1 -0.6**
KHZ Kahutara 79.94 134 P **P** **18 52 19.7 -0.7**
KHZ IAmb IAmb 18 52 21.8
comp=Z,68nm,1.3s
PABE Paberze 79.96 326 *eP* **P** **18 52 21.8 +1.5**
TUWZ Tuamarina 80.03 132 P **P** **18 52 19.2 -1.8**
SUW Suwalki 80.13 324 *eP* pP 18 52 51.9 -1.1
SUW Suwalki 80.13 324 *eP* **P** **18 52 22.6 +1.4**
HIZ Hauiti 80.17 129 P **P** **18 52 22.5 +0.6**
HIZ IAmb IAmb 18 52 24.3
comp=Z,75nm,0.9s
HIZ Hauiti 80.17 129 P **P** **18 52 22.7 +0.9**
FIA1 FINESS Array S 80.20 332 P **P** **18 52 21.7 +0.3**
FIA1 IAmb IAmb 18 52 24.9
comp=Z,20nm,0.7s
FIA1 **pP** **18 52 52.1 -1.1**
FINES FINESS Array B 80.20 332 P **P** **18 52 22.1 +0.6**
comp=Z,16nm,0.4s,baz=105,slow=5.5,SNR=88
FINES pP **pP** **18 52 52.5 -0.8**
comp=Z,23nm,0.7s,baz=104,slow=6.9,SNR=8.5
FINES PP **PP** **18 55 26.7 +1.2**
comp=Z,5.8nm,0.8s,baz=98,slow=9.8,SNR=4.3
FINES PKKPbc **PKKPbc** **19 11 04.5 -2.5**
comp=Z,0.8nm,0.5s,baz=227,slow=2.2,SNR=10
FINES LR LR 19 31 50.3
comp=Z,111nm,19.0s,baz=238,slow=38
CRVS Cervenica-Dubn 80.36 319 *eP* **P** **18 52 25.7 +3.1**
CRVS *e* 18 52 55.7
CRVS pmax pmax
comp=Z,24nm,1.5s
CRVS Cervenica-Dubn 80.36 319 *eP* **P** **18 52 25.7 +3.1**
CRVS *e* 18 52 55.7
TOZ Tahuroa Road 80.54 129 P **P** **18 52 28.6 +4.8**
STHS Stebnicka Huta 80.58 320 *eP* **P** **18 52 26.6 +2.8**
STHS Stebnicka Huta 80.58 320 *eP* **P** **18 52 26.6 +2.8**
KIW Kapiti Island 80.64 132 P **P** **18 52 28.8 +4.5**
TWVZ Taurewa 80.72 130 P **P** **18 52 21.8 -3.1**
OGWZ Otaki Gorge 80.83 132 P **P** **18 52 26.4 +1.2**
FWVZ Far West T-bar 80.84 130 P P 18 52 31.4 +5.8
WTVZ West Tongariro 80.84 130 P **P** **18 52 26.3 +0.7**
NGZ Ngauruhoe 80.86 130 P **P** **18 52 26.5 +0.8**
NNVZ North Ngauruho 80.86 130 P **P** **18 52 26.3 +0.6**
KRVZ Karewarewa 80.88 130 P **P** **18 52 26.7 +0.9**
SNVZ South Ngauruho 80.89 130 P **P** **18 52 27.1 +1.2**
TMVZ Te Maari 80.93 130 P **P** **18 52 27.1 +1.1**
ETVZ East Tongariro 80.94 130 P **P** **18 52 26.8 +0.7**
KECS Kecovo 80.94 319 *eP* **P** **18 52 27.1 +1.4**
KECS Kecovo 80.94 319 *eP* **P** **18 52 27.1 +1.4**
FRGS Fruska Gora 81.01 315⇓ P **P** **18 52 26.7 +0.6**
MOVZ Moawhango 81.02 130 P **P** **18 52 26.7 +0.2**
HOWZ Holdsworth Sta 81.10 132 P **P** **18 52 27.8 +1.1**
MRZ Mangatainoka R 81.10 131 P **P** **18 52 27.0 +0.3**
PDG Podgorica 81.12 313⇓ P **P** **18 52 27.2 +0.4**
PDG Podgorica 81.12 313 IAmb IAmb 18 52 34.3
comp=Z,27nm,0.6s
NIE Niedzica 81.19 320 *eP* pP 18 52 58.1 -0.9
PBUR Paburge 81.19 326 *eP* **P** **18 52 26.9 0.0**
BEL Belsk 81.20 322 *eP* pP 18 52 58.5 -0.5
SYO Syowa Base 81.21 198‖ *eP* **P** **18 52 29.1 +2.4**
SYO Syowa Base 81.21 198‖ *ePcP* **PcP** **18 52 35.9 +3.4**
SYO Syowa Base 81.21 198‖ *epP* pP 18 52 59.4 +1.3
PSZ Piszkesteto 81.27 318⇓ P **P** **18 52 28.4 +0.8**
PSZ Piszkesteto 81.27 318 P **P** **18 52 32.0 +4.4**
PSZ pmax pmax
comp=Z,20nm,1.0s
BHHZ Black Hill Sta 81.27 130 P **P** **18 52 27.7 0.0**
TSZ Takapari Road 81.29 131 P **P** **18 52 23.9 -3.9**
PRWZ Pori Road 81.38 131 P **P** **18 52 29.1 +0.9**
PNHZ Pukenui 81.44 131 P **P** **18 52 28.7 +0.1**
DVHZ Dannevirke 81.48 131 P **P** **18 52 28.9 +0.1**
KRHZ Kereru 81.53 130 P **P** **18 52 29.5 +0.5**
KWHZ Kaweka Forest 81.53 130 P **P** **18 52 30.4 +1.2**
BFZ Birch Farm 81.61 131 IAmb IAmb 18 52 31.0
comp=Z,114nm,1.3s
BFZ Birch Farm 81.61 131 P **P** **18 52 29.7 +0.3**
OJC Ojcow 81.61 320 *eP* pP 18 53 00.7 -0.4
OJC Ojcow 81.61 320 P P 18 52 35.6 +6.4
OJC pmax pmax
comp=Z,25nm,1.4s
WPHZ Waipukurau 81.65 131 P **P** **18 52 30.2 +0.5**
LANS Liptovska Anna 81.69 319 *eP* **P** **18 52 30.9 +1.1**
LANS *e* 18 53 02.1
LANS Liptovska Anna 81.69 319 *eP* **P** **18 52 30.9 +1.1**
LANS *e* 18 53 02.1
MCHZ McNeill Hill 81.74 130 P **P** **18 52 31.8 +1.7**
MTHZ Maungataniwha 81.76 130 P **P** **18 52 30.2 -0.1**
PRHZ Porangahau 81.83 131 P **P** **18 52 30.7 +0.1**
URZ Urewera 81.88 129 P **P** **18 52 30.5 -0.4**
MORH Mrgy, Hungar 81.93 316⇑ P **P** **18 52 31.9 +1.0**
KAHZ Kahuranaki 81.94 130 P **P** **18 52 32.1 +0.9**
VYHS Vyhne 82.03 319 *eP* **P** **18 52 35.1 +3.6**
VYHS Vyhne 82.03 319 *eP* **P** **18 52 35.1 +3.6**
VYHS *e* 18 53 02.5
SRO2 Moca 82.25 318 *eP* P 18 52 37.8 +5.2
SRO2 pmax pmax
comp=Z,18nm,0.7s
SRO2 Moca 82.25 318 *eP* P 18 52 37.8 +5.2
SRO2 *e* 18 53 05.4
RUGZ Raukumara Rang 82.27 129 P **P** **18 52 32.0 -1.1**
SRO Srobarova 82.31 318 *eP* **P** **18 52 36.5 +3.6**
SRO *e* 18 53 06.2
SRO pmax pmax
comp=Z,15nm,0.7s
SRO Srobarova 82.31 318 *eP* **P** **18 52 36.5 +3.6**
SRO *e* 18 53 06.2
HAZ Te Kaha 82.33 128 P **P** **18 52 32.3 -0.9**
ARCES ARCESS Array B 82.48 340 P **P** **18 52 34.2 +0.8**
comp=Z,6.4nm,0.5s,baz=101,slow=4.6,SNR=64
ARCES pP **pP** **18 53 04.3 -1.0**
comp=Z,12nn,0.5s,baz=98,slow=3.7,SNR=7.0
ARCES LR LR 19 32 10.5
comp=Z,53nn,22.0s,baz=45,slow=38
ARCES ARCESS Array B 82.48 340 P **P** **18 52 34.2 +0.8**
TWGZ Tauwhareparae 82.54 129 P **P** **18 52 34.3 -0.1**
JAVC Velka Javorina 82.84 319 *eP* **P** **18 52 37.6 +1.9**
JAVC *ep*P **pP** **18 53 08.0 +0.3**
AAL Aland 82.87 330 *eP* **P** **18 52 36.0 +0.5**
MORC Moravsky Berou 83.01 320 *eP* **P** **18 52 37.7 +1.1**
MORC *ep*P **pP** **18 53 08.0 -0.6**
MODS Modra-Piesok 83.06 318 *eP* **P** **18 52 41.1 +4.3**
MODS pmax pmax
comp=Z,11nm,1.1s
MODS Modra-Piesok 83.06 318 *eP* **P** **18 52 41.1 +4.3**
MODS *e* 18 53 07.3
ZST Bratislava 83.16 318 *eP* **P** **18 52 40.0 +2.7**
ZST *e* 18 53 09.1
ZST pmax pmax
comp=Z,37nm,0.9s
ZST Bratislava 83.16 318 *eP* **P** **18 52 40.0 +2.7**
ZST *e* 18 53 09.1
KRLC Kraliky 83.53 320 *eP* **P** **18 52 40.7 +1.5**
KRLC *e* 18 53 09.8
KRLC Kraliky 83.53 320 *eP* **P** **18 52 40.7 +1.5**
KRLC *ep*P **pP** **18 53 09.8 -1.5**
GKP Gorka Klasztor 83.53 323 *eP* pP 18 53 09.4 -1.6
VRAC Vranov 83.58 319 *eP* **P** **18 52 41.1 +1.6**
VRAC *e*PCP **PcP** **18 52 45.2 +1.7**
VRAC *ep*P **pP** **18 53 10.6 -1.0**
KRUC Moravsky 83.69 319 *eP* **P** **18 52 40.6 +0.6**
KRUC *e*PCP **PcP** **18 52 44.4 +0.5**
KRUC *ep*P **pP** **18 53 10.8 -1.3**
KRUC Moravsky 83.69 319 P P 18 52 46.7 +6.7
KRUC pmax pmax
comp=Z,6.0nm,0.9s
DPC Dobruska-Polom 83.84 320 *eP* **P** **18 52 41.2 +0.4**
DPC *e* 18 53 11.7
DPC Dobruska-Polom 83.84 320 *eP* **P** **18 52 41.2 +0.4**
DPC *ep*P **pP** **18 53 11.7 -1.2**
KSP Ksiaz 83.90 321 *eP* pP 18 53 10.0 -3.1
KSP Ksiaz 83.90 321 P **P** **18 52 44.9 +3.9**
KSP pmax pmax
comp=Z,19nm,1.2s
OSTC Ostas 83.92 320 *eP* **P** **18 52 42.4 +1.2**
OSTC *ep*P **pP** **18 53 12.7 -0.6**
CONA Conrad Observa 83.97 318 *eP* **P** **18 52 40.4 -1.2**
comp=Z,6.2nm,1.8s
CONA *eP* **pP** **18 53 12.7 -0.9**
comp=Z,4.3nm,1.1s
UPP Uppsala 84.01 330 *eP* **P** **18 52 42.2 +0.9**
CHVC Chvalec 84.03 321 *eP* **P** **18 52 43.0 +1.2**
CHVC *ep*P **pP** **18 53 12.5 -1.3**
ARSA Arzberg 84.15 317 *eP* **P** **18 52 45.3 +2.8**
comp=Z,4.4nm,1.1s
ARSA *eP* **pP** **18 53 14.3 -0.2**
comp=Z,7.1nm,0.8s
SOKA Soboth 84.45 317 *eP* **P** **18 52 45.9 +1.8**
comp=Z,4.9nm,0.8s,SNR=7.3
SOKA *eP* **pP** **18 53 15.7 -0.5**
comp=Z,14nm,1.1s,SNR=6.5
BLEU Blekinge 84.62 326 *iP* **P** **18 52 45.1 +0.6**
BLEU Blekinge 84.62 326 *iP* pP 18 53 16.2 -0.4
LJU Ljubljana 84.77 316 *iP* **P** **18 52 46.9 +1.3**
LJU *ep*P **pP** **18 53 17.1 -0.6**
LJU *e* 18 53 49.4
OBKA Obir 84.78 316 *eP* pP 18 53 17.4 -0.4
comp=Z,14nm,1.3s
PRU Pruhonice 84.96 320 *eP* **P** **18 52 47.4 +1.0**
PRU *e* 18 53 17.2
PRU Pruhonice 84.96 320 *eP* **P** **18 52 47.4 +1.0**
PRU *ep*P **pP** **18 53 17.2 -1.3**
MOA Molln 85.03 318 *eP* **P** **18 52 47.5 +0.6**
comp=Z,2.5nm,0.8s
MOA *eP* **pP** **18 53 18.1 -1.0**
comp=Z,5.2nm,1.1s
BSD Bornholm Skovb 85.04 325 IAmb IAmb 18 53 19.0
comp=Z,24nm,1.1s
BSD *i* P **pP** **18 53 17.9 -0.9**
CKRC Cesky Krumlov 85.05 319 *eP* **P** **18 52 47.8 +0.9**
CKRC *ep*P **pP** **18 53 18.7 -0.4**
PBCC Pribram 85.30 320 *eP* **P** **18 52 48.7 +0.6**
PBCC *ep*P **pP** **18 53 19.4 -0.9**
BRG Berggiesshubel 85.39 321 *eP* **P** **18 52 49.3 +0.8**
BRG Amp 18 52 56.3
comp=Z,8.9nm,1.1s
BRG *ex* x 18 53 19.9
BRG Amp 18 53 22.1
comp=Z,27nm,1.3s
GERES GERESS Array B 85.45 319 P **P** **18 52 50.2 +1.1**
comp=Z,4.2nm,0.9s,baz=93,slow=3.9,SNR=13
GERES pP **pP** **18 53 19.6 -1.6**
comp=Z,17nm,1.1s,baz=95,slow=5.8,SNR=8.2
GERES GERESS Array B 85.45 319 P **P** **18 52 49.6 +0.6**
GERES GERESS Array B 85.45 319 P **P** **18 52 49.6 +0.6**
KHC Kasperske Hory 85.55 319‖ *eP* **P** **18 52 50.0 +0.6**
KHC pmax pmax
comp=Z,9.0nm,0.9s
KHC Kasperske Hory 85.55 319 *eP* **P** **18 52 49.8 +0.4**
KHC *ep*P **pP** **18 53 20.4 -1.2**
KBA Koelnbreinsper 85.63 317 *eP* **P** **18 52 50.1 0.0**
comp=Z,1.5nm,0.6s
NRCA Norcia 85.67 313 pP 18 53 21.1 -1.2
DEL Delary 85.71 326 *iP* **P** **18 52 51.0 +1.1**
DEL Delary 85.71 326 *iP* pP 18 53 21.9 -0.2
LUNU Lund 85.91 325 *iP* **P** **18 52 52.0 +1.0**
LUNU Lund 85.91 325 *iP* pP 18 53 23.1 -0.1
CLL Collm 86.00 321 *eP* **P** **18 52 52.0 +0.5**
comp=Z,7.0nm,0.9s
CLL *i* pP **pP** **18 53 23.0 -0.7**
comp=Z,16nm,1.1s
CLL *eS* **S** **19 03 11.0 -4.1**
CLL Collm 86.00 321 *eP* **P** **18 52 52.0 +0.5**
CLL *i* *PP **pP** **18 53 23.0 -0.7**
CLL *eS* **S** **19 03 11.0 -4.1**
CLL pmax pmax
comp=Z,7.0nm,0.9s
STAL STALIGIAL 86.04 316 pP 18 53 22.6 -1.5
VNDA Vanda 86.16 169 P **P** **18 52 52.6 +0.8**
comp=Z,5.0nm,0.9s,baz=298,slow=5.1,SNR=23
VNDA LR LR 19 25 04.9
comp=Z,60nm,21.6s,baz=315,slow=31
VNDA Vanda 86.16 169 P **P** **18 52 52.2 +0.4**
VNDA Vanda 86.16 169 P **P** **18 52 52.2 +0.4**
ABTA Abfaltersbach 86.19 317 P **P** **18 52 54.4 +1.7**
comp=Z,2.2nm,0.7s
ABTA *eP* **pP** **18 53 23.6 -1.3**
comp=Z,5.7nm,0.9s,SNR=5.1
NKC Novy Kostel 86.32 320 *eP* P 18 52 59.8 +6.6
NKC Novy Kostel 86.32 320 *eP* P 18 52 59.8 +6.6
NKC *ep*P pP 18 53 25.0 -0.4
BORU Boraas 86.36 327 *iP* **P** **18 52 53.9 +0.8**
BORU Boraas 86.36 327 *iP* pP 18 53 25.0 -0.3
FABU Falkenberg 86.37 327 *eP* **P** **18 52 54.7 +1.5**
FABU Falkenberg 86.37 327 *iP* pP 18 53 25.3 -0.1
COP Copenhagen 86.48 326 IAmb IAmb 18 53 26.8
comp=Z,25nm,0.8s
COP *iP* **pP** **18 53 25.2 -0.8**
SPA0 Spitsbergen Ar 86.63 348 IAmb IAmb 18 52 55.1
comp=Z,33nm,0.7s
WTTA Wattenberg 86.80 317 *eP* **P** **18 52 56.2 +0.4**
comp=Z,2.1nm,0.5s,SNR=9.8
WTTA *eP* **pP** **18 53 26.5 -1.5**
comp=Z,16nm,1.2s,SNR=5.6
ONAU Onsala 86.81 327 *iP* **P** **18 52 56.5 +1.2**
ONAU Onsala 86.81 327 *iP* pP 18 53 27.5 0.0
WATA Walderalm 86.84 317 *eP* **P** **18 52 56.0 +0.1**
comp=Z,2.7nm,0.7s
WATA *eP* **pP** **18 53 26.8 -1.4**
comp=Z,14nm,1.3s
NC405 NORSAR Array S 87.02 331 P **P** **18 52 57.1 +0.8**
NC405 IAmb IAmb 18 52 57.9
comp=Z,21nm,0.8s
NC405 pP **pP** **18 53 28.4 -0.1**
SQTA Sankt Quirin 87.09 317 *eP* **P** **18 52 57.4 +0.3**
comp=Z,4.7nm,0.6s,SNR=5.4
SQTA *eP* **pP** **18 53 28.1 -1.3**
comp=Z,4.5nm,0.6s
NC602 NORSAR Array S 87.09 331 IAmb IAmb 18 52 58.0
comp=Z,20nm,0.8s
NORES NORESS Array B 87.09 331 P **P** **18 52 59.2 +2.6**
MOTA Moosalm 87.16 317 *eP* **P** **18 52 57.7 +0.2**
comp=Z,5.2nm,0.7s
MOTA *eP* **pP** **18 53 28.5 -1.3**
comp=Z,16nm,1.3s,SNR=6.4
NC303 NORSAR Array S 87.19 331 IAmb IAmb 18 53 03.3
comp=Z,60nm,1.5s
STRU Stroemstad 87.24 329 *eP* **P** **18 52 58.5 +1.1**
NB2 NORSAR Subarra 87.26 331 P **P** **18 52 57.7 +0.2**
baz=93,slow=4.8
NOA NORSAR Array B 87.26 331 P **P** **18 52 58.1 +0.6**
comp=Z,5.3nm,0.8s,baz=94,slow=4.9,SNR=25
NOA pP **pP** **18 53 28.6 -1.3**
comp=Z,26nm,0.8s,baz=93,slow=4.9,SNR=20
NOA PP **PP** **18 56 23.0 -0.1**
comp=Z,2.4nm,0.8s,baz=94,slow=7.7,SNR=5.4
SBA Scott Base 87.26 169 P **P** **18 52 58.7 +1.6**

SBA pmax pmax
comp=Z,18nm,0.9s
SBA Scott Base 87.26 169 P P 18 52 58.7 +1.6
SBA IAmb IAmb 18 53 00.2
comp=Z,18nm,0.8s
RETA Reutte 87.39 317 *e*P **P 18 52 58.8 +0.3**
comp=Z,5.5nm,0.7s
RETA *e*P **pP 18 53 29.8 -1.1**
comp=Z,4.9nm,0.7s
FETA Feichten 87.42 317 *e*P **P 18 52 59.6 +0.8**
comp=Z,4.7nm,0.9s,SNR=5.7
FETA *e*P **pP 18 53 29.8 -1.3**
comp=Z,5.6nm,0.9s
NBO00 NORSAR Array S 87.47 331 IAmb IAmb 18 53 04.9
comp=Z,27nm,1.1s
NC204 NORSAR Array S 87.48 331 IAmb IAmb 18 53 07.9
comp=Z,24nm,1.0s
KBS Kingsbay 87.57 349 *i* P **P 18 52 58.6 0.0**
KBS IAmb IAmb 18 52 59.9
comp=Z,91nm,0.9s
KBS Kingsbay 87.57 349⇓ *e*P **P 18 52 57.9 -0.7**
KBS pmax pmax
comp=Z,92nm,2.5s
DAVA Damuels 87.99 317 *e*P **P 18 53 02.6 +1.2**
comp=Z,5.7nm,0.9s
DAVA *e*P **pP 18 53 33.3 -0.5**
comp=Z,12nm,0.9s
GAMB Gambell 88.02 26 P 18 53 01.0
baz=270
KONO Kongsberg 88.05 329↑ *e*P **P 18 53 01.6 +0.4**
KONO pmax pmax
comp=Z,7.0nm,1.0s
GOET G??ttrup 88.28 327 *i* P pP 18 53 35.0 +0.3
MUD Monsted U'grnd 88.31 326 *i* P **P 18 53 04.2 +1.7**
MUD Monsted U'grnd 88.31 326 *i* P **P 18 53 04.2 +1.7**
KEST Kesra 88.59 306 P **P 18 53 06.4 +2.0**
comp=Z,9.2nm,0.9s,baz=10,slow=3.3,SNR=8.4
KEST pP **pP 18 53 36.0 -0.7**
comp=Z,16nm,1.0s,baz=236,slow=3.8,SNR=5.3
BFO Black Forest 89.02 318 P **P 18 53 05.7 -0.4**
BFO pmax pmax
comp=Z,6.0nm,0.8s
BFO Black Forest 89.02 318 P **P 18 53 05.7 -0.4**
TNA Tin City 89.58 25 P **P 18 53 08.3 0.0**
TNA Tin City 89.58 25 P 18 53 08.4
baz=274
NIKH Nikolski High 89.82 37 P 18 53 09.7
baz=273
BTNL Ternell 90.35 320 *dx* x 18 53 18.0
BTNL *dp*P pP 18 53 44.1 -0.6
WLF Walferdange 90.39 320 *dx* x 18 53 19.3
WLF *dp*P pP 18 53 45.0 +0.1
MEM Membach 90.43 320 *dx* x 18 53 21.9
MEM *dp*P pP 18 53 44.6 -0.4
BSTI Sart Tilman 90.71 320 *dp*P pP 18 53 46.1 -0.2
ANM Nome 90.74 25 P 18 53 14.4
baz=276
BCLA Clavier 90.89 320 *dx* x 18 53 21.4
BCLA *dp*P pP 18 53 47.3 +0.2
BCLA *ds*P sP 18 54 02.8 +2.4
RCHB Rochefort 90.96 320 *dp*P pP 18 53 47.6 +0.1
BGES Gesves 91.03 320 *dx* x 18 53 22.4
BGES *dp*P pP 18 53 47.0 -0.8
BMRD Maredsous 91.24 320 *dp*P pP 18 53 48.4 -0.5
DOU Dourbes 91.37 320 *d*PcP **PcP 18 53 18.6 +0.7**
DOU *dp*P **pP 18 53 49.1 -0.3**
SNF Seneffe 91.53 320 *dx* x 18 53 23.7
SNF *dp*P pP 18 53 50.3 +0.2
NOR Nord 91.78 352 *e*P **P 18 53 18.2 -0.1**
NOR *i* 18 53 49.8
NOR Nord 91.78 352 *e*P **P 18 53 18.2 -0.1**
NOR *i* 18 53 49.7
QSPA South Pole Qui 91.83 180 P **P 18 53 20.4 +1.5**
SDPT Sand Point 94.45 34 P 18 53 31.0
baz=280
IMAR Indian Mountai 95.25 23 P **P 18 53 35.0 +0.5**
SNAA Sanae 95.50 198 P **P 18 53 32.0 -3.6**
TOLK Toolik Lake Re 95.93 20 P 18 53 38.1
baz=291
COLD Coldfoot 96.20 21 P 18 53 38.9
baz=290
CHUM Lake Minchumin 96.46 25 P 18 53 40.4
baz=288
TORD Torodi Ar. Bea 96.65 283 P **P 18 53 42.0 +0.1**
comp=Z,0.6nm,1.1s,baz=131,slow=4.1,SNR=5.1
TORD pP **pP 18 54 12.6 -1.5**
comp=Z,0.4nm,0.6s,baz=94,slow=4.5,SNR=3.1
TORD PP **PP 18 57 41.0 +2.8**
comp=Z,1.2nm,0.9s,baz=93,slow=4.7,SNR=4.4
TORD PKKPbc **PKKPbc 19 10 23.9 -0.8**
comp=Z,0.6nm,0.6s,baz=312,slow=2.7,SNR=6.3
TORD LR LR 19 37 59.2
comp=Z,45nm,18.3s,baz=225,slow=36
MLY Manley 96.74 24 P 18 53 41.4
baz=289
PPLA Purkeypile 96.81 26 P 18 53 41.7
baz=288
BPAW Bear Paw Mtn. 96.95 25 IAmb IAmb 18 53 44.4
comp=Z,13nm,0.8s
BPAW Bear Paw Mtn. 96.95 25 P 18 53 42.1
baz=289
VNA2 Neumayer--Watz 97.10 199 P **P 18 53 42.7 0.0**
I23K Minto, Yukon-K 97.25 23 P 18 53 43.5
baz=291
SPCR Spurr Chakacha 97.32 28 P 18 53 43.8
baz=288
SKT Skwentna 97.39 27 P 18 53 43.9
baz=288
VNA1 Neumayer--Stat 97.45 199 P Pdif 18 53 46.1 +1.8
SUA Susitna One 97.91 27 P 18 53 45.8
baz=289
MCK McKinley 97.92 25 IAmb IAmb 18 53 48.3
comp=Z,16nm,1.1s
MCK McKinley 97.92 25 P 18 53 45.9
baz=291
OHAK Old Harbor 97.94 32 P 18 53 46.2
baz=286
CAPN Captain Cook N 97.94 28 P 18 53 46.1
baz=288
EUNU Eureka 98.08 1 IAmb IAmb 18 53 48.4
comp=Z,8.3nm,0.8s
BMAR Burnt Mountain 98.14 20 P Pdif 18 53 47.9 +0.3
KDAK Kodiak Island 98.15 31 P 18 53 47.4
baz=287
WAT2 Susitna Watana 98.35 25 P 18 53 48.0
baz=291
ILAR Eielson Array 98.37 23 P **P 18 53 47.6 -0.9**
comp=Z,0.9nm,0.9s,baz=295,slow=5.7,SNR=5.0
ILAR PP PP 18 57 38.5 -11
comp=Z,2.0nm,1.0s,baz=280,slow=8.6,SNR=6.8
ILAR PKKPbc **PKKPbc 19 10 19.6 -2.2**
comp=Z,2.7nm,0.9s,baz=159,slow=2.2,SNR=18
RC01 Rabbit Creek A 98.49 27 P 18 53 49.0
baz=290
ESDC Sonseca Array 98.72 310 PKKPbc PKKPbc 19 10 18.9 -1.0
comp=Z,1.4nm,0.9s,baz=279,slow=3.7,SNR=8.8
WAT6 Susitna Watana 98.85 25 P 18 53 50.4
baz=292
NEEM North Greenlan 99.05 354 *i* P **Pdif 18 53 52.4 +0.6**
NEEM IAmb IAmb 18 53 53.2
comp=Z,6.5nm,0.7s
CRQE Cirque 101.62 26 P 18 54 02.2
baz=296
C36M Paulatuk 103.20 14 P 18 54 09.9
baz=316
YKA Yellowknife Ar 110.95 16 Pdiff **Pdif 18 54 46.6 +2.0**
comp=Z,0.4nm,0.9s,baz=328,slow=4.0,SNR=6.1
YKA PKiKP **PKiKP 18 58 42.2 -1.2**
comp=Z,1.1nm,0.8s,baz=318,slow=1.9,SNR=12
YKA PKKPbc **PKKPbc 19 09 41.0 -2.7**
comp=Z,0.7nm,0.9s,baz=138,slow=3.6,SNR=9.9
D03D Eldon 118.60 31 P 18 58 57.9
baz=310
B05A Bryant 118.63 30 P 18 58 58.5
baz=312
D04E Lakebay 119.00 31 P 18 58 59.0
baz=311
E04D Cinebar 119.51 32 P 18 59 00.3
baz=310,SNR=6.7
F04D Rainier, OR 119.58 32 P 18 59 01.0
baz=310
LTY Liberty 120.01 30 PKiKP 18 59 01.6 +0.2
I02D Swisshome 120.36 35 P 18 59 02.2
baz=308
H04D Lebanon 120.72 34 P 18 59 02.9
baz=309,SNR=6.4
J01E Myrtle Point 120.89 35 P 18 59 03.3
baz=308
I03D Drain, OR 120.89 35 P 18 59 03.3
baz=308
FFC Flin Flon 120.98 14 PKiKP **PKiKP 18 59 03.3 +0.3**
FFC Flin Flon 120.98 14 PKPdf **PKiKP 18 59 03.3 +0.3**
NEW Newport 121.01 27 P 18 59 03.5
baz=317,SNR=12
G05D Wamic, OR 121.03 32 P 18 59 03.6
baz=311
K02D Willamette Mer 121.33 36 P 18 59 04.1
baz=308
I04A Tendick Farm, 121.36 34 P 18 59 04.2
baz=309,SNR=6.7
I05D Terrebonne, OR 121.60 33 P 18 59 05.0
baz=311
L02E Cave Junction 121.69 36 P 18 59 05.2
baz=308
J04D Umpqua Nationa 121.88 34 P 18 59 05.7
baz=309,SNR=13
J05D Fort Rock, OR 122.34 34 P 18 59 06.4
baz=310
L04D Klamath Falls 122.41 35 P 18 59 06.5
baz=309,SNR=8.3
K04D Chiloquin, OR 122.47 35 P 18 59 06.6
baz=310
M02C Callahan 122.60 37 P 18 59 07.0
baz=308,SNR=6.8
N02D Trinity Center 122.94 37 P 18 59 07.5
baz=308,SNR=7.8
M04C Macdoel 122.96 36 P 18 59 07.9
baz=309
O02D Mt. Diablo Mer 123.38 38 P 18 59 08.3
baz=307,SNR=7.1
O03E Paynes Creek 123.90 37 P 18 59 09.1
baz=308,SNR=10
EGMT Eagleton 124.33 23 P 18 59 10.1
baz=324,SNR=19
BOZ Bozeman (W) 125.49 26 P 18 59 12.6
baz=321
HLID Hailey 125.74 30 P 18 59 13.2
baz=318
ULM Lac du Bonnet 126.51 12 PKP **PKPdf 18 59 13.7 +0.1**
comp=Z,20nm,0.6s,baz=343,slow=2.6,SNR=35
ULM pPKP **pPKPdf 18 59 46.3 -1.1**
comp=Z,6.8nm,0.9s,baz=355,slow=5.5,SNR=2.7
LAO LASA Array 126.78 21 P 18 59 15.0
baz=328
RLMT Red Lodge 126.88 25 P 18 59 15.6
baz=324
H17A Grant Village 126.90 26 P 18 59 15.7
baz=322
NVAR Mina Array Bea 127.18 37 PKhKP PKPpre 18 59 10.3
comp=Z,0.5nm,0.7s,baz=264,slow=3.0,SNR=3.8
NVAR PKP **PKiKP 18 59 16.1 0.0**
comp=Z,13nm,0.8s,baz=267,slow=2.0,SNR=75
NVAR pPKP pPKPdf 18 59 48.8 -0.6
comp=Z,4.6nm,0.9s,baz=230,slow=0.9,SNR=3.7
NVAR PKKPbc PKKPdf 19 08 43.8 -46
comp=Z,0.2nm,0.6s,baz=134,slow=4.1,SNR=3.8
MDND Maddock 127.87 16 P 18 59 16.7
baz=336
SMMC Simmler 128.07 41 P 18 59 17.5
baz=307,SNR=5.3
CHGQ Chibougamau 128.08 355 P 18 59 16.8
baz=8.4
VES Vestal, Richgr 128.34 40 P 18 59 17.7
baz=308
AGMN Agassiz Nation 128.37 13 P 18 59 17.0
baz=341
PKM Mcpherson Peak 128.45 41 P 18 59 18.5
baz=307,SNR=5.8
MATQ Matagami 128.46 357 P 18 59 17.7
baz=4.3
CWC Cottonwood Cre 128.60 38 P 18 59 18.7
baz=310
BW06 Boulder Array 128.64 27 P 18 59 18.8
baz=322
PDAR Pinedale Array 128.64 27 PKhKP PKPpre 18 59 13.1
comp=Z,0.8nm,0.9s,baz=104,slow=4.7,SNR=4.0
PDAR PKP **PKPdf 18 59 18.4 +0.2**
comp=Z,6.7nm,0.8s,baz=270,slow=0.1,SNR=40
PDAR pPKP pPKPdf 18 59 50.7 -1.4
comp=Z,2.0nm,0.8s,baz=217,slow=0.7,SNR=3.1
PDAR PP **PP 19 01 26.1 +1.6**
comp=Z,1.4nm,0.9s,baz=270,slow=1.5,SNR=4.7
PDAR Pinedale Array 128.64 27 PKPdf **PKPdf 18 59 18.1 -0.2**
R11A Troy Canyon, C 128.82 35 P 18 59 19.8
baz=313
ISA Isabella, Lake 128.84 39 P 18 59 19.6
baz=309
ARVC Arvin 128.94 40 P 18 59 19.6
baz=308
DUG Dugway, Tooele 129.03 31 P 18 59 20.1
baz=318
LSQQ Lebel-sur-Quev 129.13 357 P 18 59 19.5
baz=5.2
FURC Furnace Creek, 129.33 38 P 18 59 20.5
baz=311
TPNV Topopah Spring 129.38 37 P 18 59 20.7
baz=312
LRMC Laurel Mtn Rad 129.46 39 P 18 59 20.6
baz=310
EYMN Ely 129.53 9 P 18 59 20.1
baz=346
EDW2 Edwards Air Fo 129.63 40 P 18 59 21.2
baz=309,SNR=10
RSSD Black Hills 129.78 21 PKiKP **PKiKP 18 59 21.2 +0.1**
RSSD Black Hills 129.78 21 PKPdf **PKiKP 18 59 21.2 +0.1**
RSSD Black Hills 129.78 21 P 18 59 21.0
baz=330
K22A Casper 130.05 24 P 18 59 20.4
baz=326
FMP Fort Macarthur 130.16 41 P 18 59 21.0
baz=308
D61A St Aubert, Com 130.19 350 P 18 59 21.1
baz=14
LATQ La Tuque 130.39 353 P 18 59 21.3
baz=11
E64A Bridgewater 130.50 348 P 18 59 21.0
baz=17
D60A Saint Jean D'O 130.59 351 P 18 59 20.9
baz=13
E63A Oxbow 130.61 349 P 18 59 21.0
baz=17
D58A Chemin du LacG 130.69 353 P 18 59 21.6
baz=11
HEC Hector,Ludlow 130.72 39 P 18 59 22.3
baz=310,SNR=5.2
D56A ZEC Mazanza, M 130.95 354 P 18 59 22.1
baz=8.3
MURC Murrieta 130.95 41 P 18 59 22.4
baz=309
E61A Lac Etchemin 130.98 350 P 18 59 22.2
baz=14
D55A Sainte-Anne-du 131.04 355 P 18 59 22.3
baz=7.4
F64A Sherman 131.13 348 PKiKP 18 59 23.3 -0.2
F64A Sherman 131.13 348 P 18 59 22.9
baz=17
SUSD Miller 131.16 17 P 18 59 23.0
baz=336
GMRC Granite Mounta 131.17 38 P 18 59 23.3
baz=311
E60A Ste Agathe de 131.20 351 P 18 59 22.8
baz=13
O20A White River Ci 131.33 28 P 18 59 23.7
baz=323
PFO Pinyon Flats O 131.42 40⇓ *i*PKIKP **PKiKP 18 59 25.1 +0.5**
PFO Pinyon Flats O 131.42 40 P 18 59 24.1
baz=310,SNR=5.9
F63A Nahmakanta, Br 131.44 349 P 18 59 23.5
baz=16
E58A La Victoria 131.45 353 P 18 59 23.5
baz=10
BELC Belle Mtn. Jos 131.47 39 P 18 59 24.2
baz=310,SNR=8.7
E56A St. Veronique 131.47 354 P 18 59 23.6
baz=8.0
F61A St Evariste 131.51 351 P 18 59 23.7
baz=13
F60A Warwick 131.66 352 P 18 59 24.0
baz=12
N23A Red Feather La 131.74 25 P 18 59 24.3
baz=326
PKME Peaks-Kenny Pk 131.90 349 P 18 59 24.0
baz=16
F59A Saint Guilaume 131.90 352 P 18 59 24.0
baz=11
SPMN Marine on St. 131.93 11 P 18 59 24.4
baz=344
H66A Whiting 131.94 347 P 18 59 24.2
baz=18
G62A West of Eustis 132.17 350 P 18 59 24.5
baz=14
H65A Eastbrook 132.23 348 P 18 59 24.7
baz=17
IKP In-Ko-Pah, Jac 132.25 41 P 18 59 24.8
baz=309
G61A St-Isidore-de- 132.27 351 P 18 59 24.8
baz=13
ALGO Algonquin Park 132.28 357 P 18 59 25.0
baz=4.0
PDMCI Parker Dam,Lak 132.43 38 P 18 59 25.4
baz=312
ECSD EROS Data Cent 132.47 15 P 18 59 25.1
baz=339,SNR=17
H64A Troy 132.48 349 P 18 59 25.2
baz=16
PV12 Saucer Basin, 132.48 30 PKPdf 18 59 25.4 -0.2
G60A Masonville 132.57 352 P 18 59 25.8
baz=12
H63A New Sharon 132.62 349 P 18 59 25.9
baz=15
G58A Ormstown 132.75 353 P 18 59 25.9
baz=9.5
ISCO Idaho Springs 132.78 26 PKIKP **PKiKP 18 59 27.9 +0.5**
ISCO Idaho Springs 132.78 26 PKPdf **PKiKP 18 59 27.9 +0.5**
ISCO Idaho Springs 132.79 26 P 18 59 26.0
baz=326
G54A Lake Saint Pet 132.84 357 P 18 59 26.0
baz=4.0
G57A Newington 132.90 354 P 18 59 26.1
baz=8.2
H62A Milan 132.90 350 P 18 59 26.2
baz=14
H61A Lyndonville 133.06 351 P 18 59 26.7
baz=12
H60A Morristown 133.15 352 P 18 59 26.6
baz=11
H59A Cadyville 133.20 353 P 18 59 26.8
baz=10
I64A Boothbay 133.26 349 P 18 59 26.9
baz=16
OGNE Ogallala 133.26 22 P 18 59 26.8
baz=331
I63A Otisfield 133.31 350 P 18 59 27.1
baz=14
LONY Lake Ozonia 133.33 354 P 18 59 26.9
baz=8.9
LBNH Lisbon 133.35 351 P 18 59 27.0
baz=12
GLMI Grayling 133.37 4 P 18 59 27.0
baz=355
H58A Gabriels 133.48 353 P 18 59 27.2
baz=9.4
MVCO Mesa Verde 133.49 30 P 18 59 28.0
baz=321
H57A Richville 133.57 354 P 18 59 27.6
baz=7.8
I62A Tamworth 133.61 350 P 18 59 27.3
baz=13
Q24A Divide 133.68 26 P 18 59 27.8
baz=326
H53A Bobcaygeon 133.68 358 P 18 59 27.6
baz=3.4
I61A Oroboro, Fairl 133.69 351 P 18 59 28.0
baz=12
S22A 4UR Ranch, Cre 133.89 29 P 18 59 28.5
baz=323
I60A Shoreham 133.94 352 P 18 59 28.0
baz=11
I59A Olmsteadville 134.06 353 P 18 59 28.6
baz=10.0
I57A Carthage 134.12 355 P 18 59 28.6
baz=7.5
J63A Strafford 134.14 350 P 18 59 28.8
baz=14
BGNE Belgrade 134.18 18 P 18 59 28.7
baz=336
I58A Old Forge 134.29 354 P 18 59 29.2
baz=8.5
J61A Chester 134.32 351 P 18 59 29.2
baz=12
J62A Henniker 134.32 351 P 18 59 29.1
baz=13
W18A Petrified Fore 134.41 33 P 18 59 29.3
baz=318
J59A Piesco 134.46 353 P 18 59 29.4
baz=9.1
I51A Listowel 134.50 360 P 18 59 29.0
baz=0.0
J60A Lant Hill Farm 134.54 352 P 18 59 29.4
baz=11
JFWS Jewell Farm 134.63 10 P 18 59 29.5
baz=347
J57A Williamstown 134.67 355 P 18 59 29.7
baz=7.1
K63A Dunstable 134.79 350 P 18 59 30.1
baz=13
214A Organ Pipe Nat 134.82 39 P 18 59 30.2
baz=312
J56A Wolcott 134.87 356 P 18 59 30.2
baz=5.9
K62A Royalston 134.94 351 P 18 59 30.2
baz=12
HRV Adam Dziewonsk 134.98 350 P 18 59 30.2
baz=13
K61A Williamstown 135.09 352 P 18 59 30.4
baz=11
K59A Cooperstown 135.18 354 P 18 59 30.7
baz=8.8
L61B Northampton 135.22 351 P 18 59 30.6
baz=12
K58A Earlville 135.28 354 P 18 59 30.7
baz=7.7
K57A Scipio Center 135.39 355 P 18 59 31.0
baz=6.4
L64A Middleborough 135.40 349 P 18 59 31.3
baz=15
K56A Middlesex 135.48 356 P 18 59 31.3
baz=5.3
T25A Trinidad 135.51 27 P 18 59 31.7
baz=326,SNR=12
L61A Hillsdale 1, H 135.59 352 P 18 59 31.6
baz=11
M65A Busby, Falmout 135.72 349 P 18 59 31.8
baz=15
L59A Walton 135.78 354 P 18 59 32.0
baz=8.6
M64A Tiverton 135.84 349 P 18 59 31.8
baz=14
BINY Binghamton 135.87 355 P 18 59 31.7
baz=7.2
L60A Shokan 135.88 353 P 18 59 32.2
baz=9.8
M66A Nantucket 135.91 348 P 18 59 32.2
baz=16
CBKS Cedar Bluff 135.98 21 P 18 59 32.4
baz=333
L58A Harry Jones Me 136.01 354 P 18 59 32.5
baz=7.5
L56A Greenwood 136.06 356 P 18 59 32.6
baz=5.0
M63A Gales Ferry 136.13 350 P 18 59 32.8
baz=13
L57A Andrews Acres 136.14 355 P 18 59 32.8
baz=6.0
ERPA Erie 136.18 359 P 18 59 32.6
baz=1.5
M62A Hamden 136.23 351 P 18 59 32.8
baz=12
ANMO Albuquerque 136.29 31⇓ *i*PKIKP **PKiKP 18 59 34.0 -0.5**
ANMO pmax pmax
comp=Z,15nm,1.3s
ANMO Albuquerque 136.29 31 P 18 59 33.2
baz=322
L53A Girard 136.35 359 P 18 59 33.1
baz=1.1
M59A Waymart 136.47 354 P 18 59 33.5
baz=8.1
M61A Granite Spring 136.49 352 P 18 59 33.3
baz=11
M60A Port Jervis 136.59 353 P 18 59 33.5
baz=9.3
Y22D IRIS PASSCAL I 136.72 32 P 18 59 33.9

	baz=321							
M58A	**Price's Panora**	**136.73**	**355**	P			18 59 33.8	
	baz=6.7							
M56A	**Emporium**	**136.75**	**357**	P			18 59 33.9	
	baz=4.2							
KSU1	**Kansas State U**	**136.76**	**18**	P			18 59 33.9	
	baz=337							
M54A	**Oil Creek Stat**	**136.78**	**358**	P			18 59 33.9	
	baz=2.0							
PAL	**Palisades**	**136.81**	**352**	P			18 59 33.9	
	baz=10							
M57A	**Sunshine Farm,**	**136.82**	**356**	P			18 59 34.1	
	baz=5.7							
M53A	**WI Miller and**	**136.87**	**360**	P			18 59 34.0	
	baz=0.5							
M51A	**Elyria**	**136.96**	**1**	P			18 59 34.2	
	baz=358							
HDIL	**Hopedale**	**137.08**	**9**	P			18 59 34.6	
	baz=348							
N60A	**Cedar Hill Far**	**137.09**	**353**	P			18 59 34.4	
	baz=8.7							
N61A	**South Mountain**	**137.11**	**352**	P			18 59 34.5	
	baz=9.9							
N59A	**State Game Lan**	**137.12**	**354**	P			18 59 34.6	
	baz=7.7							
N58A	**Sunbury**	**137.28**	**355**	P			18 59 34.5	
	baz=6.4							
N56A	**West Decatur**	**137.31**	**357**	P			18 59 35.0	
	baz=4.0							
N54A	**Moraine State**	**137.33**	**359**	P			18 59 34.5	
	baz=1.6							
121A	**Cookes Peak, D**	**137.42**	**34**	P			18 59 35.4	
	baz=318,SNR=6.6							
N57A	**Milroy**	**137.43**	**356**	P			18 59 35.1	
	baz=5.1							
SFIN	**Lafayette**	**137.56**	**7**	P			18 59 35.6	
	baz=351							
SSPA	**Standing Stone**	**137.57**	**356**	P			18 59 35.5	
	baz=4.7							
O60A	**Telford**	**137.67**	**354**	P			18 59 35.6	
	baz=8.3							
O59A	**Robesonia**	**137.76**	**354**	P			18 59 35.7	
	baz=7.2							
O61A	**Allentown**	**137.79**	**353**	P			18 59 35.7	
	baz=9.6							
O56A	**Blue Knob Stat**	**137.98**	**357**	P			18 59 36.2	
	baz=3.7							
O57A	**Amberson**	**137.98**	**356**	P			18 59 36.7	
	baz=5.1							
O58A	**Lewisberry**	**138.01**	**355**	P			18 59 36.6	
	baz=6.1							
ACSO	**Alum Creek Sta**	**138.03**	**2**	P			18 59 36.2	
	baz=357							
O53A	**New Philadelph**	**138.06**	**0**	P			18 59 36.0	
	baz=360							
P60A	**Greenville**	**138.20**	**354**	P			18 59 36.6	
	baz=8.1							
P59A	**Jarrettsville**	**138.48**	**355**	P			18 59 37.6	
	baz=6.9							
AMTX	**Amarillo**	**138.61**	**26**	P			18 59 37.2	
	baz=328							
MCWV	**Mont Chateau**	**138.63**	**359**	P			18 59 37.8	
	baz=1.8							
P49A	**Miami Univ. Ec**	**138.63**	**4**	P			18 59 37.3	
	baz=354							
P52A	**Corning**	**138.66**	**1**	P			18 59 36.5	
	baz=358							
P57A	**Homestead Farm**	**138.73**	**356**	P			18 59 37.1	
	baz=4.6							
P56A	**Dayton Farm, R**	**138.75**	**357**	P			18 59 37.3	
	baz=3.3							
MSTX	**Muleshoe**	**138.88**	**28**	P			18 59 37.5	
	baz=326							
Q61A	**Milford**	**139.08**	**353**	P			18 59 38.5	
	baz=8.7							
CCM	**Cathedral Cave**	**139.14**	**12**	P			18 59 37.9	
	baz=344							
Q57A	**Strasburg**	**139.20**	**357**	P			18 59 38.0	
	baz=4.0							
Q56A	**Snyder Ridge,**	**139.23**	**358**	P			18 59 38.6	
	baz=2.8							
Q59A	**Harwood**	**139.24**	**355**	P			18 59 38.6	
	baz=6.7							
Q58A	**Fox Den Farm,**	**139.25**	**356**	P			18 59 38.9	
	baz=5.1							
MNTX	**Cornudas Mount**	**139.38**	**33**	P			18 59 39.4	
	baz=321							
Q53A	**Leroy**	**139.44**	**1**	P			18 59 39.3	
	baz=359							
WCI	**Wyandotte Cave**	**139.78**	**6**	P			18 59 39.4	
	baz=352							
R60A	**Leonardtown, M**	**139.82**	**355**	P			18 59 39.8	
	baz=6.9							
R56A	**Bull Pasture M**	**139.87**	**358**	P			18 59 40.0	
	baz=2.5							
WMOK	**Wichita Mounta**	**139.93**	**23**	P			18 59 40.3	
	baz=332							
R57A	**Stanardsville**	**139.94**	**357**	P			18 59 40.4	
	baz=3.9							
R59A	**King George, V**	**139.94**	**355**	P			18 59 40.4	
	baz=6.1							
TUL1	**Leonard**	**139.94**	**19**	P			18 59 40.4	
	baz=337							
CBN	**Corbin Frederi**	**139.95**	**356**	P			18 59 40.5	
	baz=5.7							
R55A	**Marlinton**	**140.01**	**359**	P			18 59 40.4	
	baz=1.4							
R54A	**Victor**	**140.12**	**360**	P			18 59 40.5	
	baz=0.1							
PLCA	**Paso Flores**	**140.19**	**192**	PKhKP	PKPpre		18 59 34.0	
	comp=Z,2.7nm,0.8s,baz=298,slow=2.0,SNR=4.7							
R58B	**Mineral**	**140.23**	**356**	P			18 59 40.8	
	baz=4.9							
U40A	**Yellville**	**140.38**	**15**	P			18 59 41.2	
	baz=341							
S59A	**Mechanicsville**	**140.39**	**355**	P			18 59 41.0	
	baz=5.9							
S60A	**Water View**	**140.39**	**355**	P			18 59 41.3	
	baz=6.9							
S57A	**Dark Hollow, R**	**140.49**	**357**	P			18 59 41.4	
	baz=3.3							
S54A	**Dingess, Beckl**	**140.50**	**0**	P			18 59 41.2	
	baz=360							
S58A	**Poland Farm, P**	**140.59**	**356**	P			18 59 41.6	
	baz=4.7							
T60A	**Surry**	**140.96**	**355**	P			18 59 42.5	
	baz=6.8							
BLA	**Blacksburg**	**141.09**	**359**	P			18 59 42.6	
	baz=1.0							
W39A	**Magazine**	**141.22**	**17**	P			18 59 42.7	
	baz=340							
ABTX	**Abilene, Hawle**	**141.41**	**26**	P			18 59 43.5	
	baz=329							
WVT	**Waverly**	**141.64**	**9**	P			18 59 43.7	
	baz=349							
W41B	**Gary Mavity, V**	**141.66**	**15**	P			18 59 43.7	
	baz=342							
TXAR	**Lajitas Array**	**142.14**	**33**	PKhKP	PKPpre		18 59 39.7	
	comp=Z,6.7nm,0.7s,baz=263,slow=0.4,SNR=46							
TXAR				PP	**PP**		**19 02 49.0**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=299,slow=5.6,SNR=4.8							
X40A	**Basin Creek Fa**	**142.15**	**16**	P			18 59 44.6	
	baz=341							
TKL	**Tuckaleechee C**	**142.55**	**4**	PKIKP	**PKPdf**		**18 59 40.4**	**-3.5**
TKL	**Tuckaleechee C**	**142.55**	**4**		**PKPdf**		**18 59 40.4**	**-3.5**
X43A	**Marvell**	**142.62**	**13**	P			18 59 45.6	
	baz=344							
WHTX	**Lake Whitney,**	**142.87**	**23**	P			18 59 46.2	
	baz=332							
OXF	**Oxford**	**142.94**	**12**	P			18 59 46.0	
	baz=346							
CNNC	**Cliffs of the**	**142.94**	**356**	P			18 59 46.4	
	baz=5.2							
KMSC	**Kings Mountain**	**143.15**	**0**	P			18 59 46.6	
	baz=360							
435B	**Jarrell**	**143.88**	**25**	P			18 59 47.7	
	baz=331							
NATX	**Nacogdoches**	**144.11**	**20**	PKPdf	**PKPdf**		**18 59 45.9**	**-0.8**
BI02	**San Fabin de**	**144.25**	**193**	PKPdf	**PKPdf**		**18 59 46.8**	**-0.1**
BDFB	**Brasilia**	**144.70**	**245**	PKP	**PKPdf**		**18 59 48.5**	**+0.2**
	comp=Z,32nm,0.7s,baz=114,slow=3.1,SNR=48							
BDFB	**Brasilia**	**144.70**	**245**	PKPdf	**PKPdf**		**18 59 49.2**	**+0.9**
LRAL	**Lakeview Retre**	**144.80**	**9**	P			18 59 47.5	
	baz=350							
GOGA	**Godfrey**	**144.81**	**4**	P			18 59 47.8	
	baz=356							
VBMS	**Vicksburg**	**144.90**	**14**	P			18 59 48.8	
	baz=343							
833A	**Chaparral WMA,**	**145.16**	**29**	P			18 59 50.1	
	baz=327							
NHSC	**New Hope**	**145.18**	**359**	P			18 59 49.2	
	baz=1.5							
HKT	**Hockley**	**145.32**	**23**	*d i* PKIKP	**PKPab**		**18 59 49.6**	**+0.6**
RGRS	**Roger Stewart**	**145.37**	**359**		**PKPab**		**18 59 49.9**	**+0.7**
152A	**Waverly Hall**	**145.44**	**5**		**PKPab**		**18 59 50.0**	**+0.5**
BRAL	**Brewton**	**146.62**	**9**	P			18 59 53.6	
	baz=349							
CPUP	**Villa Florida**	**146.69**	**221**	PKPbc	**PKPbc**		**18 59 53.8**	**+0.6**
	comp=Z,30nm,0.8s,baz=106,slow=2.2,SNR=79							
CPUP				pPKPbc	pPKPbc		19 00 26.2	+0.1
	comp=Z,15nm,0.8s,baz=139,slow=2.2,SNR=5.3							
TIGA	**Tifton**	**146.76**	**4**	P			18 59 53.6	
	baz=355							
ZON	**Zonda**	**148.28**	**200**	PKP2	**PKiKP**		**18 59 58.8**	**-0.2**
ZON	**Zonda**	**148.28**	**200**		**PKiKP**		**18 59 58.8**	**-0.2**
CO03	**El Pedregal**	**149.59**	**198**		**PKiKP**		**19 00 01.7**	**-0.1**
LPAZ	**La Paz**	**160.87**	**221**	PKP	**PKPdf**		**19 00 13.1**	**+0.8**
	comp=Z,9.0nm,0.8s,baz=55,slow=1.9,SNR=33							
ROSC	**El Rosal**	**170.52**	**315**	PKP	**PKPdf**		**19 00 20.4**	**+0.4**
	comp=Z,17nm,0.6s,baz=96,slow=4.0,SNR=9.7							

ROM 19 18:49:48.7±0.1, 42°90N±0′01×11°758E±0′006, h4km±1km, ML1.3/3, 1C-1D Error ellipse: s-maj=1.2km s-min=0.4km az=167.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SACS	**San Casciano d**	**0.12**	**112**	P	Pg	18 49 51.7	+0.6
SACS				S	Sg	18 49 53.8	+1.1
SACS				AML	AML		
	comp=N,220μm,1.3s						
SACS				AML	AML		
	comp=E,278μm,0.7s						
MCIV	**Monte Civitell**	**0.13**	**207**	P	Pg	18 49 51.7	+0.4
MCIV				S	Sg	18 49 54.0	+0.9
MCIV				AML	AML		
	comp=E,340μm,0.2s						
MCIV				AML	AML		
	comp=N,449μm,1.2s						
ARCI	**Arcidosso**	**0.21**	**258**	P	Pg	18 49 53.7	+0.9
ARCI				S	Sg	18 49 56.8	+1.2
ARCI				AML	AML		
	comp=E,104μm,0.7s						
ARCI				AML	AML		
	comp=N,108μm,0.2s						
MGAB	**Montegabbione**	**0.26**	**86**	P	Pg	18 49 54.4	+0.6
MGAB				S	Sg	18 49 58.5	+1.3
LATE	**Laterza**	**0.28**	**173**	P	Pg	18 49 54.6	+0.4
CAFI	**Castiglion Fio**	**0.46**	**19**	P	Pg	18 49 58.4	+0.9
CAFI				S	Sb	18 50 06.3	-0.3
FROS	**Frosini**	**0.54**	**306**	P	Pb	18 50 00.1	-0.7
ATMI	**Monte Miggiano**	**0.58**	**40**	P	Pb	18 50 01.3	-0.1
ATMI				S	Sb	18 50 10.1	+0.1
CASP	**Castiglione de**	**0.67**	**261**	P	Pb	18 50 02.3	-0.6
TRIF	**Trifonti**	**0.67**	**290**	P	Pb	18 50 02.8	-0.1

*IDC **19** 19:12:17.0±1.1, 35°.32N×23°.13E, h0km, mb3.8/16, mb1 3.8/23, mb1mx3.7/64, mbtmp3.7/23, ML3.6/7, MS3.3/1, Ms1 3.3/1, ms1mx2.6/36, Error ellipse: s-maj=22.0km s-min=15.2km az=16.0*
*ATH **19** 19:12:18.0, 35°.14N×23°.02E, h10km±31km, ML3.3/5, Error ellipse: s-maj=31.6km s-min=1.3km az=0.0*
*THE **19** 19:12:19.1, 35°.20N×23°.13E, h0km±2km, ML3.3/5, Error ellipse: s-maj=3.5km s-min=0.8km az=226.0*
ISC 19 19:12:19.0±1.4, 35°.20N±0′.04×23°.11E±0′.04, h18km±8km, n69, σ1°30/78, mb3.8/16, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.47**	**85**	P	**Pg**	**19 12 27.5**	**-1.1**
ANKY	**Antikythira Is**	**0.69**	**13**	P	**Pg**	**19 12 31.8**	**-0.7**
ANKY				S	**Sn**	**19 12 42.9**	**-1.2**
ANKY				AML	AML	19 12 49.9	
	comp=E,5157μm,0.6s						
ANKY				AML	AML	19 12 54.1	
	comp=N,5977μm,0.6s						
ANKY	**Antikythira Is**	**0.69**	**13**	P	**Pg**	**19 12 31.7**	**-0.8**
ANKY				S	**Sb**	**19 12 42.1**	**+0.4**
	comp=N,3μm,0.6s						
IMMV	**Iera Moni Meta**	**0.76**	**70**	P	**Pb**	**19 12 33.8**	**0.0**
IMMV				S	**Sn**	**19 12 45.5**	**-0.5**
IMMV				AML	AML	19 12 53.8	
	comp=N,4522μm,0.8s						
IMMV				AML	AML	19 13 01.1	
	comp=E,3679μm,0.5s						
IMMV	**Iera Moni Meta**	**0.76**	**70**	P	**Pb**	**19 12 33.3**	**-0.5**
IMMV				S	**Sn**	**19 12 44.8**	**-1.2**
	comp=E,2μm,0.7s						
GVD	**Gavdhos**	**0.88**	**114**	P	**Pg**	**19 12 35.2**	**-1.0**
GVD				AML	AML	19 12 56.5	
	comp=N,6248μm,0.4s						
GVD				AML	AML	19 12 56.9	
	comp=E,3381μm,0.4s						
GVD	**Gavdhos**	**0.88**	**114**	P	**Pb**	**19 12 35.4**	**-0.4**
GVDS	**Gavdos**	**0.88**	**113**	P	**Pg**	**19 12 34.9**	**-1.2**
GVDS				S	**Sn**	**19 12 48.0**	**-0.9**
	comp=E,2μm,0.5s						
VAM	**Vamos**	**0.92**	**77**	P	**Pn**	**19 12 36.3**	**-0.7**
VAM				S	**Sn**	**19 12 50.5**	**+0.7**
VAM				AML	AML	19 12 59.4	
	comp=E,3479μm,0.5s						
VAM				AML	AML	19 13 02.5	
	comp=N,3052μm,1.0s						
VAM	**Vamos**	**0.92**	**77**	P	**Pg**	**19 12 35.7**	**-1.2**
KTHA	**Kythira Island**	**1.06**	**358**	P	**Pb**	**19 12 38.7**	**-0.1**
KTHA				S	**Sn**	**19 12 54.3**	**+0.9**
KTHA				AML	AML	19 13 03.6	
	comp=E,13371μm,0.9s						
KTHA				AML	AML	19 13 07.0	
	comp=N,3064μm,0.4s						
KTHA	**Kythira Island**	**1.06**	**358**	P	**Pb**	**19 12 38.6**	**-0.2**
KTHA				S	**Sn**	**19 12 54.9**	**+1.6**
	comp=N,4μm,0.7s						
KTHR	**Kythira**	**1.06**	**356**	P	**Pb**	**19 12 38.5**	**-0.4**
KTHR				S	**Sn**	**19 12 55.4**	**+1.9**
	comp=N,2μm,0.5s						
SIVA	**Sivas**	**1.41**	**97**	P	**Pg**	**19 12 45.2**	**-0.9**
IDI	**Anoyia**	**1.46**	**86**	Pn	**Pg**	**19 12 46.4**	**-0.8**
	comp=N,14nm,0.3s,baz=251,slow=15,SNR=22						
IDI				Sn	**Sg**	**19 13 09.2**	**+3.0**
	comp=N,22nm,0.3s,baz=160,slow=23,SNR=7.4						
IDI	**Anoyia**	**1.46**	**86**	P	**Pg**	**19 12 46.0**	**-1.2**
IDI	**Anoyia**	**1.46**	**86**	P	**Pb**	**19 12 45.5**	**-0.2**
VLI	**Veliai**	**1.52**	**355**	P	**Pb**	**19 12 46.6**	**-0.1**
VLI	**Veliai**	**1.52**	**355**	P	**Pb**	**19 12 47.1**	**+0.3**
MHLO	**Agia Marina, M**	**1.82**	**35**	P	**Pg**	**19 12 52.3**	**-1.7**
PYL	**PYLOS**	**2.02**	**327**	P	**Pb**	**19 12 54.6**	**-0.7**
NPS	**Neapolis**	**2.05**	**87**	P	**Pb**	**19 12 56.3**	**+0.5**
TREB	**Trebinje**	**8.37**	**335**	*e*Pn	**Pn**	**19 14 18.3**	**-1.1**
BRY	**Bratogost**	**8.47**	**337**	*e*Pn	**Pn**	**19 14 21.0**	**0.0**
UPM	**Unac-Piva**	**8.63**	**339**	*e*Pn	**Pn**	**19 14 24.9**	**+1.7**
BBLS	**Lazići**	**9.12**	**343**	*e*Pn	**Pn**	**19 14 29.6**	**-0.1**
DIVS	**Divibare**	**9.21**	**346**	*e*Pn	**Pn**	**19 14 30.6**	**-0.4**
HAPS	**Han Pijesak,BI**	**9.44**	**341**	*e*Pn	**Pn**	**19 14 33.6**	**-0.6**
BRTR	**Keskin Array B**	**9.51**	**59**	Pn	**Pn**	**19 14 36.1**	**+0.9**
	comp=N,0.1nm,0.3s,baz=314,slow=39,SNR=3.4						
FRGS	**Fruska Gora**	**10.26**	**347**	*e*Pn	**Pn**	**19 14 44.9**	**-0.5**
MMAI	**Mount Meron Ar**	**10.43**	**99**	Pn	**Pn**	**19 14 48.9**	**+1.2**
	comp=N,0.4nm,0.3s,baz=264,slow=26,SNR=2.2						
MLR	**Muntele Rosu**	**10.51**	**11**	Pn	**Pn**	**19 14 47.2**	**-1.6**
	comp=N,0.2nm,0.3s,baz=211,slow=7.2,SNR=3.0						
BLY	**Banja Luka**	**10.56**	**336**	*e*Pn	**Pn**	**19 14 49.6**	**+0.1**
EIL	**Elat**	**11.42**	**116**	Pn	**Pn**	**19 15 03.0**	**+1.8**
	comp=N,0.3nm,0.3s,baz=27,slow=11,SNR=2.5						
MORH	**Mrgy, Hungar**	**11.51**	**344**	*e*Pn	**Pn**	**19 15 00.8**	**-1.6**
CRES	**Cresnjev**	**12.10**	**334**	*e*Pn	**Pn**	**19 15 09.8**	**-0.7**
CEY	**Cerknica**	**12.42**	**331**	*e*Pn	**Pn**	**19 15 13.8**	**-1.1**
VYHS	**Vyhne**	**13.66**	**348**	*e*PN	**Pn**	**19 15 28.1**	**-3.7**
MODS	**Modra-Piesok**	**13.86**	**344**	*e*P	**P**	**19 15 40.9**	**-1.8**
ABTA	**Abfaltersbach**	**14.03**	**329**	*e*Pn	**Pn**	**19 15 40.3**	**+3.4**
	comp=N,1.5nm,0.5s						
WATA	**Walderalm**	**14.89**	**328**	*e*Pn	**P**	**19 15 52.2**	**-2.1**
	comp=N,3.3nm,0.7s						
SQTA	**Sankt Quirin**	**14.96**	**327**	*e*Pn	**P**	**19 15 53.2**	**-1.9**
	comp=N,3.3nm,0.7s						
FETA	**Feichten**	**15.03**	**326**	*e*Pn	**P**	**19 15 54.0**	**-1.9**
	comp=N,6.6nm,1.5s						
CKRC	**Cesky Krumlov**	**15.09**	**337**	*e*P	**P**	**19 15 59.0**	**+2.6**
GERES	**GERESS Array B**	**15.31**	**336**	Pn	**Pn**	**19 15 53.0**	**-1.1**
	comp=N,0.1nm,0.3s,baz=154,slow=16,SNR=2.5						
KRLC	**Kraliky**	**15.57**	**345**	*e*P	**P**	**19 16 03.5**	**+1.7**
KHC	**Kasperske Hory**	**15.59**	**336**	*e*P	**P**	**19 16 03.4**	**+1.4**
DAVA	**Damuels**	**15.62**	**325**	*e*Pn	**P**	**19 16 01.7**	**-0.8**
	comp=N,6.5nm,1.4s						
DPC	**Dobruska-Polom**	**15.93**	**344**	*e*P	**P**	**19 16 06.2**	**+0.4**
AKASG	**Malin Array Be**	**16.12**	**14**	Pn	**Pn**	**19 16 02.9**	**-1.7**
	comp=N,0.5nm,0.3s,baz=204,slow=11,SNR=4.0						
OSTC	**Ostas**	**16.15**	**344**	*e*P	**P**	**19 16 10.0**	**+1.9**
KBZ	**Khabaz**	**17.47**	**55**	P	**Pn**	**19 16 21.0**	**-0.6**
	comp=N,0.1nm,0.3s,baz=266,slow=14,SNR=1.9						
ESDC	**Sonseca Array**	**21.92**	**290**	P	**P**	**19 17 13.0**	**+1.6**
	comp=N,0.4nm,0.9s,baz=89,slow=9.7,SNR=2.3						
HFS	**Hagfors**	**25.69**	**349**	P	**P**	**19 17 48.1**	**+0.3**
	comp=N,3.8nm,0.8s,baz=135,slow=11,SNR=6.8						
FINES	**FINESS Array B**	**26.33**	**3**	P	**P**	**19 17 53.6**	**0.0**
	comp=N,1.7nm,0.9s,baz=165,slow=16,SNR=4.9						
NOA	**NORSAR Array B**	**26.96**	**347**	P	**P**	**19 18 00.5**	**+1.1**
	comp=N,0.2nm,0.5s,baz=159,slow=9.9,SNR=5.6						
EKA	**Eskdalemuir Ar**	**27.06**	**326**	P	**P**	**19 18 02.0**	**+1.8**
	comp=N,2.5nm,0.8s,baz=110,slow=10.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**29.26**	**227**	P	**P**	**19 18 20.9**	**+0.6**
	comp=N,0.5nm,0.7s,baz=46,slow=8.3,SNR=2.7						
ARU	**Arti**	**32.03**	**37**	P	**P**	**19 18 44.3**	**-0.1**
	comp=N,0.5nm,0.4s,baz=258,slow=11,SNR=3.7						
ARCES	**ARCESS Array B**	**34.42**	**1**	P	**P**	**19 19 03.5**	**-1.5**
	comp=N,2.7nm,0.6s,baz=119,slow=1.5,SNR=7.9						
DBIC	**Dimbokro**	**38.30**	**229**	LR	LR	19 35 58.9	
	comp=N,48nm,21.9s,baz=50,slow=37						
KURBB	**Kurchatov Arra**	**42.41**	**51**	P	**P**	**19 20 11.7**	**-0.6**
	comp=N,1.3nm,0.8s,baz=276,slow=8.8,SNR=11						
MKAR	**Makanchi Array**	**45.16**	**56**	P	**P**	**19 20 34.2**	**-0.3**
	comp=N,0.6nm,0.5s,baz=265,slow=7.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**46.19**	**46**	P	**P**	**19 20 41.8**	**-0.8**
	comp=N,0.8nm,0.3s,baz=277,slow=9.1,SNR=4.6						
SONM	**Songino Array**	**60.76**	**50**	P	**P**	**19 22 29.5**	**-0.3**
	comp=N,0.4nm,0.7s,baz=273,slow=5.6,SNR=3.6						
TIXI	**Tiksi**	**61.72**	**20**	P	**P**	**19 22 34.9**	**-0.8**
	comp=N,0.5nm,0.3s,baz=304,slow=4.4,SNR=7.2						
MA2	**Magadan**	**76.16**	**25**	P	**P**	**19 24 06.5**	**+0.8**
	comp=N,1.0nm,0.2s,baz=319,slow=12,SNR=3.6						
YKA	**Yellowknife Ar**	**76.89**	**341**	P	**P**	**19 24 08.8**	**-0.9**
	comp=N,0.6nm,1.0s,baz=50,slow=5.6,SNR=6.0						
USRK	**Ussuriysk Ar.**	**77.99**	**44**	P	**P**	**19 24 16.6**	**+0.3**
	comp=N,1.2nm,0.6s,baz=320,slow=6.2,SNR=4.8						

*IDC **19** 19:15:49.0±2.3, 43°.45N×105°.34W, h0km, mb4.0/1, mb1 3.7/4, mb1mx3.3/42, mbtmp3.5/4, ML3.3/3, Error ellipse: s-maj=53.1km s-min=9.4km az=152.0*
*NEIC **19** 19:15:50.5±1.7, 43°.64N±0°.06×105°.16W±0°.06, h0km±2km, ML3.4/30, Error ellipse: s-maj=11.5km s-min=3.3km az=325.0*
ISC 19 19:15:48.3±0.8, 43°52N±0′.04×105°37W±0′.06, h0km, n31, σ2°71/27, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.14**	**58**	Pn	**Pg**	**19 16 10.6**	**+0.5**
K22A	**Casper**	**1.21**	**225**		**Pn**	**19 16 15.1**	**+2.4**
PHWY	**Pilot Hill**	**2.22**	**182**		**Pg**	**19 16 31.0**	**+0.3**
RWWY	**Rawlins**	**2.28**	**217**		**Pg**	**19 16 32.0**	**+0.1**
RWWY				IAML		19 17 08.6	
	242nm,2.1s						
BW06	**Boulder Array**	**3.16**	**258**		**Pb**	**19 16 43.5**	**-1.9**
BW06				IAML		19 17 38.9	
	62nm,0.8s						
PD31	**Pinedale Array**	**3.16**	**258**		**Pb**	**19 16 43.5**	**-1.9**
PDAR	**Pinedale Array**	**3.16**	**258**	Pn	**Pb**	**19 16 43.5**	**-1.9**
	3.5nm,0.3s,baz=80,slow=17,SNR=43						
PDAR				Lg	Lg	19 17 27.5	
	6.6nm,0.3s,baz=92,slow=21,SNR=2.5						
PDAR	**Pinedale Array**	**3.16**	**258**		**Pb**	**19 16 43.4**	**-2.0**
RLMT	**Red Lodge**	**3.23**	**301**		**Pb**	**19 16 43.4**	**-3.1**
RLMT				IAML		19 18 41.0	
	76nm,2.7s						
RLMT				IAML		19 18 54.9	
	77nm,1.8s						
YNE	**Yellowstone No**	**3.65**	**296**		**Pn**	**19 16 48.7**	**+2.5**
YNE				IAML		19 17 54.0	
	comp=N,78nm,1.0s						
YNE				IAML		19 17 56.3	
	comp=E,62nm,1.0s						
YMP	**Mirror Lake Pl**	**3.66**	**291**		**Pb**	**19 16 50.1**	**-3.8**
ISCO	**Idaho Springs**	**3.72**	**183**	Pn	**Pb**	**19 16 52.0**	**-3.0**
ISCO				IAML		19 18 08.8	
	comp=E,36nm,2.2s						
ISCO				IAML		19 18 56.2	
	comp=E,36nm,2.7s						
LKWY	**Lake**	**3.78**	**288**		**Pb**	**19 16 52.8**	**-3.2**
LKWY				IAML		19 18 26.6	
	comp=E,58nm,1.3s						
LOHW	**Long Hollow**	**3.81**	**273**		**Pb**	**19 16 54.2**	**-2.3**
LOHW				IAML		19 17 57.4	
	comp=E,36nm,1.3s						
LOHW				IAML		19 17 59.2	
	comp=E,39nm,1.1s						
GCMT	**Greycliff**	**3.82**	**308**		**Pn**	**19 16 51.8**	**+3.4**
H17A	**Grant Village**	**3.86**	**285**		**Pb**	**19 16 54.9**	**-2.6**
H17A				IAML		19 17 58.6	
	comp=E,59nm,2.3s						
H17A				IAML		19 17 59.0	
	comp=N,78nm,1.8s						
MOOW	**Moose Ponds**	**3.91**	**275**		**Pb**	**19 16 55.4**	**-2.9**
YPP	**Pitchstone Pla**	**4.00**	**283**		**Pn**	**19 16 54.6**	**+3.5**
YPP				IAML		19 18 07.4	
	comp=E,46nm,2.6s						
YPP				IAML		19 18 28.1	
	comp=N,36nm,1.7s						
O20A	**White River Ci**	**4.00**	**213**		**Pb**	**19 16 56.2**	**-3.6**
RDMU	**Red Mountain**	**4.30

comp=E,21nm,0.2s
SURC IAML 19 24 20.0
comp=N,19nm,0.3s
MAZI Mazidag 1.60 122 PN **Pg** **19 23 55.6 -0.2**
KAHM Kahramanmaras, 1.61 241 *i* P **Pg** **19 23 55.4 -0.6**
KAHM IAML 19 24 21.0
comp=E,21nm,1.1s
KAHM IAML 19 24 24.0
comp=N,22nm,0.5s
GAZ Gaziantep 1.67 227 PN **Pg** **19 23 56.9 -0.4**
KMRS Kahramanmaras 1.67 241 PN **Pg** **19 23 56.9 -0.4**
KMRS SN **Sg** **19 24 19.8 +0.8**
SARI SarD1z-Kayseri 1.83 273 PN **Pb** **19 23 58.8 0.0**
KAMA Osmaniye 2.00 236 *i* P **Pn** **19 23 59.7 +0.7**
SVSK Karacayir 2.10 320 PN **Pb** **19 24 02.5 -0.7**
MUSM Mu-Merkez 2.21 79 *i* P **Pb** **19 24 03.8 -1.3**
MIDY Mardin/Midyat- 2.29 113 *i* P **Pn** **19 24 02.8 -0.2**
MIDY *i* S **Sb** **19 24 34.9 0.0**
BNN Bunyan 2.33 284 PN **Pb** **19 24 06.2 -1.1**
KOZT Kozan 2.46 251 PN **Pb** **19 24 08.3 -1.1**

*ECX **19** 19:41:05.3±0.3,27.91N×111.91W,h12km±30km,MD3.2*
*MEX **19** 19:41:06.9±0.5,27.83N×111.85W,h10km,MD4.0*
ISC 19 19:41:04.0±1.2,**27.92N**±0.10×**111.87W**±0.08,**h10**km,**n6,** σ0°**19**/10,**1C, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.68**	**209**	*i* P	**Pg**	**19 41 17.3**	**+0.1**
SRIG				*i* S	**Sg**	**19 41 26.4**	**+0.3**
SRIG	**Santa Rosalia**	**0.68**	**209**	*e*P	**Pg**	**19 41 16.9**	**-0.2**
SRIG				*e*S	**Sg**	**19 41 26.0**	**-0.1**
GUYB	**Guaymas**	**0.88**	**91**	*e*P	**Pg**	**19 41 21.0**	**0.0**
GUYB				*e*S	**Sg**	**19 41 32.4**	**-0.2**
GUYB	**Guaymas**	**0.88**	**91**⇑	*e*P	**Pg**	**19 41 21.2**	**+0.2**
HSIG		**1.36**	**36**	*e*P	**Pn**	**19 41 29.2**	**0.0**
HSIG				*i* S	**Sn**	**19 41 47.4**	**+0.1**
HSIG		**1.36**	**36**	*e*P	**Pn**	**19 41 29.1**	**-0.1**

*IDC **19** 19:50:54.1±1.5,22.83S×170.52E,h0km,mb4.1/10, mb1 4.3/11,mb1mx4.1/22,mbtmp4.1/11,ML3.8/1,MS3.5/10, Ms1 3.5/10,ms1mx3.3/24,Error ellipse: s-maj=53.7km s-min=21.2km az=154.0*
*NEIC **19** 19:50:59.6±1.8,22.8S±0.2×170.40E±0.05,h46km±10km, mb4.3/11,Error ellipse: s-maj=24.9km s-min=4.5km az=190.0*
ISC 19 19:50:58.3±0.7,**22.9S**±0.1×**170.35E**±0.08,**h28**km,**n55,** σ1°**25**/49,**mb4.2**/15,**MS3.4**/8,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINNC	**Pines Island,**	**2.69**	**275**	P	**Pn**	**19 51 41.1**	**+1.4**
YATNC	**Mamie plateau,**	**3.30**	**284**	P	**Pn**	**19 51 49.5**	**+1.4**
ONTNC	**Ouen Toro**	**3.64**	**278**	P	**Pn**	**19 51 54.5**	**+1.7**
DZM	**Mont Dzumac**	**3.70**	**282**	*e*Pn	**Pn**	**19 51 54.8**	**+1.1**
	44nm,0.2s						
DZM				*e*Sn	**Sn**	**19 52 32.2**	**-4.2**
	36nm,0.2s						
DZM				*e*LR	LR	19 52 41.5	
	comp=Z,527nm,23.4s						
DZM	**Mont Dzumac**	**3.70**	**282**	Pn	**Pn**	**19 51 54.9**	**+1.1**
	6.9nm,0.3s,baz=117,slow=13,SNR=282						
DZM				Sn	**Sn**	**19 52 37.9**	**+1.5**
	9.9nm,0.3s,baz=104,slow=23,SNR=6.9						
DZM				LR	LR	19 53 31.1	
	comp=Z,569nm,19.2s,baz=56,slow=41						
DZM	**Mont Dzumac**	**3.70**	**282**	P	**Pn**	**19 51 54.7**	**+1.1**
NOUC	**Port Laguerre**	**3.82**	**281**	P	**Pn**	**19 51 56.5**	**+1.3**
MSVF	**Nonsavu**	**8.85**	**56**	LR	LR	19 55 58.3	
	comp=Z,486nm,21.9s,baz=193,slow=35						
URZ	**Urewera**	**16.40**	**161**	LR	LR	19 59 50.4	
	comp=Z,194nm,18.4s,baz=31,slow=33						
MLZ	**Mavora Lakes**	**22.51**	**184**	P	**P**	**19 55 55.8**	**0.0**
MLZ				IAmb	IAmb	19 55 58.0	
	comp=Z,28nm,1.3s						
CTA	**Charters Tower**	**22.59**	**272**	P	**P**	**19 55 59.0**	**+2.3**
	comp=Z,6.8nm,0.8s,baz=104,slow=12,SNR=7.0						
CTAO	**Charters Tower**	**22.59**	**272**	P	**P**	**19 55 54.4**	**-2.3**
CTAO				IAmb	IAmb	19 56 01.7	
	comp=Z,9.7nm,0.9s						
STKA	**Stephens Creek**	**27.00**	**244**	P	**P**	**19 56 39.7**	**+1.8**
STKA				LR	LR	20 05 39.6	
	comp=Z,74nm,21.1s,baz=40,slow=33						
STKA	**Stephens Creek**	**27.00**	**244**	P	**P**	**19 56 37.0**	**-0.9**
COEN	**Coen**	**27.22**	**284**	P	**P**	**19 56 39.6**	**-0.4**
COEN				IAmb	IAmb	19 56 43.6	
	comp=Z,9.2nm,0.8s						
RAR	**Rarotonga**	**27.73**	**92**	LR	LR	20 05 49.8	
	comp=Z,64nm,18.6s,baz=263,slow=32						
BBOO	**Buckleboo**	**31.77**	**244**	P	**P**	**19 57 19.4**	**-0.9**
WR0	**Warramunga Arr**	**33.41**	**268**	P	**P**	**19 57 34.2**	**-0.6**
WR0				IAmb	IAmb	19 57 52.0	
	comp=Z,6.9nm,1.4s						
AS31	**Alice Springs**	**33.43**	**261**	P	**P**	**19 57 35.3**	**+0.3**
AS31				IAmb	IAmb	19 57 48.3	
	comp=Z,2.6nm,0.8s						
ASAR	**Alice Springs**	**33.43**	**261**	P	**P**	**19 57 35.9**	**+0.9**
	comp=Z,6.9nm,0.8s,baz=94,slow=10.0,SNR=62						
ASAR	**Alice Springs**	**33.43**	**261**	P	**P**	**19 57 36.0**	**+1.0**
WRA	**Warramunga Arr**	**33.60**	**268**	P	**P**	**19 57 36.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=13,slow=29,SNR=2.9						
WRA	**Warramunga Arr**	**33.60**	**268**	P	**P**	**19 57 34.5**	**-1.9**
PPT2	**Papeete2**	**37.89**	**90**	*e*LR	LR	20 08 49.6	
	comp=Z,71nm,25.5s						
FITZ	**Fitzroy Crossi**	**42.03**	**268**	P	**P**	**19 58 47.2**	**-0.4**
FITZ				IAmb	IAmb	19 58 50.2	
	comp=Z,7.1nm,0.9s						
NWAO	**Narrogin (SRO)**	**47.57**	**246**	P	**P**	**19 59 31.5**	**-0.1**
VNDA	**Vanda**	**54.86**	**182**	LR	LR	20 20 29.3	
	comp=Z,31nm,18.1s,baz=0.0,slow=32						
MJAR	**Matsushiro Arr**	**66.43**	**332**	P	**P**	**20 01 44.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=144,slow=4.6,SNR=2.4						
KSRS	**Korea Array**	**72.08**	**326**	LR	LR	20 31 52.7	
	comp=Z,8.8nm,19.7s,baz=135,slow=34						
PETK	**Petropavlovsk-**	**76.45**	**352**	P	**P**	**20 02 45.1**	**0.0**
	comp=Z,3.4nm,0.8s,baz=158,slow=4.3,SNR=7.4						
PETK				LR	LR	20 31 25.7	
	comp=Z,22nm,19.8s,baz=125,slow=32						
CMAR	**Chiang Mai Arr**	**80.94**	**294**	P	**P**	**20 03 12.2**	**+1.6**
	comp=Z,1.6nm,0.8s,baz=131,slow=4.3,SNR=11						
CMAR	**Chiang Mai Arr**	**80.94**	**294**	P	**P**	**20 03 09.4**	**-1.1**
NVAR	**Mina Array Bea**	**90.43**	**48**	P	**P**	**20 03 57.0**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=225,slow=8.9,SNR=9.3						
NVAR				LR	LR	20 37 57.4	
	comp=Z,43nm,18.9s,baz=262,slow=31						
NVAR	**Mina Array Bea**	**90.43**	**48**	P	**P**	**20 03 55.1**	**-2.5**
SONM	**Songino Array**	**90.73**	**323**	P	**P**	**20 03 58.9**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=151,slow=4.2,SNR=5.8						
SONM	**Songino Array**	**90.73**	**323**	P	**P**	**20 03 57.5**	**-1.1**
SONM				IAmb	IAmb	20 04 13.1	
	comp=Z,1.5nm,1.2s						
ILAR	**Eielson Array**	**93.38**	**17**	P	**P**	**20 04 11.9**	**+1.6**
	comp=Z,0.6nm,0.9s,baz=230,slow=6.7,SNR=2.9						
PDAR	**Pinedale Array**	**98.32**	**47**	LR	LR	20 41 51.2	
	comp=Z,22nm,18.8s,baz=46,slow=31						
ARCES	**ARCESS Array B**	**128.83**	**345**	PKP	**PKPdf**	**20 10 01.8**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=103,slow=3.9,SNR=1.5						
OSTC	**Ostas**	**145.79**	**330**	*e*PKP	**PKPab**	**20 10 35.1**	**+0.1**
CHVC	**Chvalec**	**145.84**	**330**	*e*PKP	**PKPab**	**20 10 36.0**	**+0.8**
CHVC				*ex*	x	20 10 48.2	
KRLC	**Kraliky**	**145.86**	**329**	*e*PKP	**PKPab**	**20 10 35.5**	**+0.2**
KRLC				*ex*	x	20 10 47.6	
DPC	**Dobruska-Polom**	**145.88**	**330**	*e*PKP	**PKPab**	**20 10 36.3**	**+0.9**
DPC				*ex*	x	20 10 47.9	
CLL	**Collm**	**146.63**	**334**	*i* PKPbc	**PKPab**	**20 10 38.1**	**0.0**
	comp=Z,6.0nm,1.0s						
NKC	**Novy Kostel**	**147.67**	**333**	*e*PKP	PKPab	20 10 51.7	+9.4
CKRC	**Cesky Krumlov**	**147.89**	**330**	*e*PKP	**PKPbc**	**20 10 41.5**	**+0.8**
KHC	**Kasperske Hory**	**148.00**	**331**	*e*PKP	**PKPbc**	**20 10 41.4**	**+0.4**
KHC				*ex*	x	20 10 54.3	
GERES	**GERESS Array B**	**148.16**	**330**	PKPbc	**PKPbc**	**20 10 41.7**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=29,slow=3.0,SNR=9.8						
SOKA	**Soboth**	**149.01**	**326**	*e*P	**PKPbc**	**20 10 43.8**	**0.0**
	comp=Z,1.2nm,0.6s						
KBA	**Koelnbreinsper**	**149.58**	**328**	*e*P	**PKiKP**	**20 10 47.1**	**+0.8**
	comp=Z,1.5nm,0.6s						
ABTA	**Abfaltersbach**	**150.22**	**329**	*e*P	**PKPbc**	**20 10 46.6**	**-0.2**
	comp=Z,1.7nm,0.5s						
WTTA	**Wattenberg**	**150.26**	**330**	*e*P	**PKPbc**	**20 10 47.1**	**+0.2**
	comp=Z,2.2nm,0.7s						
MOTA	**Moosalm**	**150.44**	**331**	*e*P	**PKPbc**	**20 10 47.5**	**+0.2**
	comp=Z,3.0nm,0.8s						
SQTA	**Sankt Quirin**	**150.49**	**330**	*e*P	**PKPbc**	**20 10 47.4**	**0.0**
	comp=Z,0.8nm,0.3s						
FETA	**Feichten**	**150.85**	**331**	*e*P	**PKiKP**	**20 10 48.8**	**-0.1**
	comp=Z,1.5nm,0.7s						

*SSNC **19** 20:26:02.5±1.6,19.53N×77.88W,h25km±11km,MD3.6, ML3.2,MW3.6*
*JSN **19** 20:26:04.2±0.4,19.62N×77.75W,h47km±5km,MD3.4*
ISC 19 20:25:58.9±1.0,**19.56N**±0.04×**77.90W**±0.05,**h10**km,**n12,** σ1°**29**/20,**3C-2D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**0.98**	**59**	*e*Pg	**Pg**	**20 26 18.5**	**+0.7**
LMGC				*e*Pn	**Pn**	**20 26 19.6**	**+0.9**
LMGC				*e*Sg	**Sg**	**20 26 30.0**	**-0.6**
LMGC				Sn	**Sb**	**20 26 31.6**	**+0.6**
LMGC				IAML		20 26 31.9	
	comp=E,5μm,0.1s						
LMGC				IAML		20 26 32.2	
	comp=N,5μm,0.1s						
BBJ	**Bamboo Saint A**	**1.31**	**153**⇑	*i*P	**Pg**	**20 26 25.8**	**+1.6**
BNJ	**Bonny Gate**	**1.52**	**144**⇑	*i*P	**Pg**	**20 26 28.5**	**+0.3**
MCJ	**Malvern**	**1.64**	**173**⇑	*i*P	**Pg**	**20 26 31.0**	**+0.7**
MCJ				*i* S	**Sg**	**20 26 51.1**	**-0.5**
CCCC	**Cccc**	**1.64**	**4**	*e*P	**Pn**	**20 26 29.2**	**+1.4**
CCCC				*e*S	**Sn**	**20 26 48.7**	**-0.3**
CCCC				IAML		20 26 56.2	
	comp=N,124nm,0.3s						
CCCC				IAML		20 27 01.0	
	comp=E,162nm,0.5s						
STH	**Stony Hill**	**1.80**	**145**	*i*P	**Pb**	**20 26 31.9**	**-0.1**
GWJ	**Greenwich**	**1.85**	**143**⇓	*i*P	**Pb**	**20 26 32.7**	**-0.2**
HOJ	**Hope**	**1.89**	**145**⇓	*i*P	**Pb**	**20 26 33.6**	**0.0**
RCC	**Rio Carpintero**	**2.12**	**78**	*e*P	**Pn**	**20 26 34.7**	**+0.2**
RCC				*e*S	**Sn**	**20 26 57.3**	**-3.6**
RCC				IAML		20 27 00.3	
	comp=N,52nm,0.1s						
RCC				IAML		20 27 00.7	
	comp=E,44nm,0.2s						
MOAC	**Moa**	**2.97**	**68**	*e*P	**Pb**	**20 26 52.3**	**+0.3**
MGV	**Manicaragua**	**3.20**	**323**	*e*P	**Pn**	**20 26 49.0**	**-0.4**
MGV				*e*S	**Sn**	**20 27 25.6**	**-1.9**
MGV				IAML		20 27 42.7	
	comp=N,21nm,0.5s						
MGV				IAML		20 27 46.0	
	comp=E,26nm,0.3s						
MASC	**Masc**	**3.51**	**79**	*e*P	**Pn**	**20 26 54.7**	**+1.2**
MASC				*e*Pg	Pb	20 26 56.2	-4.9
MASC				*e*S	**Sn**	**20 27 33.4**	**-1.7**
MASC				*e*Sg	Sb	20 27 35.1	-8.7
MASC				IAML		20 27 39.9	
	comp=E,35nm,0.3s						
MASC				IAML		20 27 40.5	
	comp=N,32nm,0.2s						

*UCR **19** 20:36:47.8±1.4,15.48N×89.86W,h193km±24km,ML3.3*
*SNET **19** 20:36:47.8±1.3,15.44N×89.87W,h196km±21km,ML3.6*
*GCG **19** 20:36:48.0±1.1,15.33N×88.74W,h50km±279km,MD3.7*
ISC 19 20:36:47.8±3.8,**15.9N**±0.1×**89.48W**±0.06,**h5**km±24km,**n34,** σ0°**77**/56,**Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.82**	**194**	*e*P	**Pb**	**20 37 02.9**	**-1.8**
NBG	**Las Nubes**	**1.54**	**213**	*e*P	**Pb**	**20 37 17.2**	**+0.3**
NBG				*e*S	**Sg**	**20 37 37.9**	**+0.7**
FUG	**Fuego 3**	**1.94**	**223**	*e*P	**Pn**	**20 37 22.9**	**+1.2**
FUG				*e*S	**Sg**	**20 37 50.6**	**+0.4**
RTR	**El Retiro**	**1.98**	**185**	*e*P	**Pn**	**20 37 22.8**	**+0.6**
RTR				*e*S	**Sb**	**20 37 49.1**	**-0.4**
RTR	**El Retiro**	**1.98**	**185**	*e*P	**Pn**	**20 37 22.8**	**+0.6**
RTR				*e*S	**Sb**	**20 37 49.1**	**-0.4**
SNJE	**San Jose**	**2.00**	**184**	*e*P	**Pn**	**20 37 22.5**	**-0.1**
SNJE				*e*S	**Sb**	**20 37 50.1**	**-0.2**
SNJE	**San Jose**	**2.00**	**184**	*e*P	**Pn**	**20 37 22.5**	**-0.1**
SNJE				*e*S	**Sb**	**20 37 50.1**	**-0.2**
HUEH	**Huehuetenango**	**2.03**	**254**	*e*P	**Pn**	**20 37 23.2**	**+0.3**
HUEH				*e*S	**Sb**	**20 37 50.9**	**-0.2**
SBLS	**San Blas**	**2.03**	**184**	*e*P	**Pn**	**20 37 24.1**	**+1.0**
SBLS				*e*S	**Sb**	**20 37 51.5**	**+0.3**
SBLS	**San Blas**	**2.03**	**184**	*e*P	**Pn**	**20 37 24.1**	**+1.0**
SBLS				*e*S	**Sb**	**20 37 51.5**	**+0.3**
CEVE	**Cerro Verde**	**2.04**	**184**	*e*P	**Pn**	**20 37 24.0**	**+0.8**
CEVE				*e*S	**Sb**	**20 37 51.3**	**-0.3**
CEVE				IAML		20 37 55.1	
	comp=Z,610nm,0.3s						
CEVE	**Cerro Verde**	**2.04**	**184**	*e*P	**Pn**	**20 37 24.0**	**+0.8**
CEVE				*e*S	**Sb**	**20 37 51.3**	**-0.3**
CEVE				IAML		20 37 55.1	
	comp=Z,610nm,0.3s						
BOQS	**Boqueron**	**2.14**	**175**	*e*P	**Pn**	**20 37 25.2**	**+0.8**
BOQS				*e*S	**Sb**	**20 37 55.0**	**+0.7**
BOQS	**Boqueron**	**2.14**	**175**	*e*P	**Pn**	**20 37 25.2**	**+0.8**
BOQS				*e*S	**Sb**	**20 37 55.0**	**+0.7**
UEES	**Universidad Ev**	**2.16**	**174**	*e*P	**Pn**	**20 37 25.4**	**+0.7**
UEES				*e*S	**Sb**	**20 37 54.5**	**-0.3**
UEES	**Universidad Ev**	**2.16**	**174**	*e*P	**Pn**	**20 37 25.4**	**+0.7**
UEES				*e*S	**Sb**	**20 37 54.5**	**-0.3**
PAVA	**Las Pavas**	**2.22**	**166**	*e*P	**Pn**	**20 37 26.0**	**+0.6**
PAVA				*e*S	**Sb**	**20 37 55.7**	**-0.6**
PAVA				IAML		20 37 59.0	
	comp=Z,342nm,0.4s						
PAVA	**Las Pavas**	**2.22**	**166**	*e*P	**Pn**	**20 37 26.0**	**+0.6**
PAVA				*e*S	**Sb**	**20 37 55.7**	**-0.6**
PAVA				IAML		20 37 59.0	
	comp=Z,342nm,0.4s						
LFRS	**El Faro**	**2.28**	**170**	*e*P	**Pn**	**20 37 26.7**	**+0.4**
LFRS				*e*S	**Sb**	**20 37 58.0**	**-0.2**
LFRS	**El Faro**	**2.28**	**170**	*e*P	**Pn**	**20 37 26.7**	**+0.4**
LFRS				*e*S	**Sb**	**20 37 58.0**	**-0.2**
COEG	**Centro de Oper**	**2.32**	**166**	*e*P	**Pn**	**20 37 27.6**	**+0.8**
COEG				*e*S	**Sb**	**20 37 58.2**	**-1.1**
COEG				IAML		20 38 07.0	
	comp=Z,337nm,0.4s						
COEG	**Centro de Oper**	**2.32**	**166**	*e*P	**Pn**	**20 37 27.6**	**+0.8**
COEG				*e*S	**Sb**	**20 37 58.2**	**-1.1**
COEG				IAML		20 38 07.0	
	comp=Z,337nm,0.4s						
PQSS	**Presa 15 de Se**	**2.41**	**158**	*e*P	**Pn**	**20 37 28.6**	**+0.6**
PQSS				*e*S	**Sb**	**20 38 01.6**	**-0.2**
ERG	**Entre ros, C**	**2.48**	**235**	*e*P	**Pb**	**20 37 31.6**	**-1.3**
FAGO	**Alcalda de S**	**2.54**	**148**	*e*P	**Pn**	**20 37 30.9**	**+1.0**
FAGO				IAML		20 38 09.0	
	comp=Z,36nm,0.3s						
FAGO	**Alcalda de S**	**2.54**	**148**	*e*P	**Pn**	**20 37 30.9**	**+1.0**
FAGO				IAML		20 38 09.0	
	comp=Z,36nm,0.3s						
TECA	**Tecapa**	**2.55**	**158**	*e*P	**Pn**	**20 37 31.3**	**+1.2**
TECA				*e*S	**Sb**	**20 38 05.7**	**-0.4**
TECA	**Tecapa**	**2.55**	**158**	*e*P	**Pn**	**20 37 31.3**	**+1.2**
TECA				*e*S	**Sb**	**20 38 05.7**	**-0.4**
PACA	**Pacayal**	**2.64**	**155**	*e*P	**Pn**	**20 37 32.4**	**+1.1**
PACA	**Pacayal**	**2.64**	**155**	*e*P	**Pn**	**20 37 32.4**	**+1.1**
LCND	**La Caada**	**2.98**	**149**	IAML		20 38 23.9	
	comp=Z,111nm,0.3s						
LCND	**La Caada**	**2.98**	**149**	IAML		20 38 23.9	
	comp=Z,111nm,0.3s						
CNCH	**Conchagua**	**3.04**	**148**	*e*P	**Pn**	**20 37 37.6**	**+0.9**
CNCH	**Conchagua**	**3.04**	**148**	*e*P	**Pn**	**20 37 37.6**	**+0.9**

*IDC **19** 20:41:11.5±1.6,9.46N×127.39E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.5/39,mbtmp3.7/6,ML4.5/1,Error ellipse: s-maj=52.6km s-min=22.1km az=61.0*
*MAN **19** 20:41:20.0,8.98N×126.48E,h23km,MS3.5*
ISC 19 20:41:18.1±1.7,**8.94N**±0.04×**126.60E**±0.07,**h24**km±12km, **n18,** σ1°**94**/29,**mb3.5**/5,**2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.96**	**331**	*e*P	**Pn**	**20 41 35.8**	**-0.3**
GLSP				*e*S	**Sb**	**20 41 48.4**	**0.0**
BUTP	**Butuan**	**0.96**	**272**	*e*P	**Pb**	**20 41 35.6**	**-0.5**
BUTP				*e*S	**Sb**	**20 41 48.5**	**0.0**
CGP	**Cagayan de Oro**	**1.94**	**256**⇑	*e*P	**Pn**	**20 41 50.6**	**+1.1**
CGP				*e*S	**Sn**	**20 42 13.2**	**0.0**
MATI	**Mati**	**2.01**	**190**	*e*P	**Pn**	**20 41 52.0**	**+1.5**
MATI				*e*S	**Sb**	**20 42 19.1**	**+0.6**
MSLP	**Maasin**	**2.08**	**305**	*e*P	**Pn**	**20 41 52.7**	**+1.1**
MSLP				*e*S	**Sb**	**20 42 22.1**	**+1.4**
DAV	**Davao City (W)**	**2.11**	**209**	Pn	Pb	20 42 01.0	+5.3
	64nm,0.3s,baz=247,slow=12,SNR=5.6						
DAV				Sn	**Sb**	**20 42 25.1**	**+3.6**
	62nm,0.3s,baz=286,slow=20,SNR=9.0						
KCP	**Kidapawan**	**2.43**	**218**⇑	*e*P	**Pb**	**20 41 58.9**	**-2.3**
KCP				*i* S	**Sb**	**20 42 28.6**	**-2.1**
OCLP	**Ormoc**	**2.87**	**317**	*e*P	**Pn**	**20 42 04.5**	**+2.1**
OCLP				*e*S	**Sn**	**20 42 36.7**	**+0.5**
LLP	**Lapu-Lapu**	**2.93**	**298**	*e*P	**Pn**	**20 42 05.5**	**+2.3**
LLP				*e*S	**Sn**	**20 42 39.4**	**+1.7**
DDMP	**Don Marcelino,**	**2.95**	**197**	*e*P	**Pn**	**20 42 05.8**	**+2.4**
DDMP				*e*S	**Sn**	**20 42 41.0**	**+2.9**
PAGZ	**Pagadian**	**3.36**	**251**	*e*P	**Pn**	**20 42 10.4**	**+1.3**
PAGZ				*e*S	**Sn**	**20 42 43.9**	**-4.3**
CNOP	**Candoni, Negro**	**4.00**	**283**	*e*P	**Pn**	**20 42 20.0**	**+2.1**
CNOP				*e*S	**Sn**	**20 43 04.2**	**+0.1**
TGY	**Tagaytay City**	**7.55**	**313**	*e*P	**Pn**	**20 43 09.5**	**+2.6**
CMAR	**Chiang Mai Arr**	**28.45**	**292**	P	**P**	**20 47 12.3**	**+0.9**
	0.2nm,0.4s,baz=94,slow=7.5,SNR=1.9						
WRA	**Warramunga Arr**	**29.69**	**165**	P	**P**	**20 47 21.9**	**-0.5**
	0.4nm,0.5s,baz=348,slow=9.3,SNR=2.5						
ASAR	**Alice Springs**	**33.18**	**168**	P	**P**	**20 47 52.0**	**-1.1**
	0.3nm,0.4s,baz=354,slow=6.9,SNR=7.5						
STKA	**Stephens Creek**	**43.05**	**161**	P	**P**	**20 49 16.0**	**0.0**
	1.1nm,0.4s,baz=339,slow=7.6,SNR=7.5						
MKAR	**Makanchi Array**	**53.28**	**323**	P	**P**	**20 50 33.1**	**-2.0**
	0.4nm,0.5s,baz=116,slow=8.4,SNR=5.9						

*NEIC **19** 21:01:48.7±0.5,22.15N±0.04×143.8E±0.1,h131km±6km, mb4.5/112,Error ellipse: s-maj=14.3km s-min=5.2km az=79.0*
*IDC **19** 21:01:49.3±2.5,22.13N×143.82E,h137km±22km, mb3.9/21,mb1 4.0/25,mb1mx3.9/42,mbtmp4.4/25,MS2.8/3, Ms1 2.8/3,ms1mx2.6/47,Error ellipse: s-maj=16.5km s-min=10.2km az=96.0*
ISC 19 21:01:45.9±0.3,**22.14N**±0.04×**143.81E**±0.07,**h105**km, **n184,** σ0°**88**/183,**mb4.6**/84,**1D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.15**	**344**	P	**Pn**	**21 03 03.5**	**+2.9**
	81nm,0.3s,baz=311,slow=23,SNR=65						
JCJ				S	**Sn**	**21 03 58.5**	**-0.4**
	334nm,0.3s,baz=308,slow=23,SNR=22						
JCJ	**Chichijima**	**5.15**	**344**		**Pn**	**21 03 03.7**	**+3.1**
JCJ				Sn	**Sn**	**21 03 59.3**	**+0.5**
JHJ	**Hachijo jima 2**	**11.50**	**343**	P	**Pn**	**21 04 28.7**	**+1.9**
	3.2nm,0.3s,baz=40,slow=22,SNR=2.0						
JHJ				S	**Sn**	**21 06 26.7**	**-6.5**
	6.5nm,0.3s,baz=248,slow=21,SNR=1.5						
JMN	**Monobe**	**14.49**	**325**	Pn	**Pn**	**21 05 06.8**	**+1.0**
JGF	**Kuroka**	**14.54**	**339**	Pn	**Pn**	**21 05 07.7**	**+1.1**
JWT	**Wachi**	**15.02**	**333**	P	**Pn**	**21 05 13.7**	**+1.1**
MJAR	**Matsushiro Arr**	**15.15**	**343**	P	**Pn**	**21 05 14.8**	**+0.5**
	0.4nm,0.3s,baz=159,slow=10,SNR=13						
MJAR	**Matsushiro Arr**	**15.15**	**343**		**Pn**	**21 05 15.1**	**+0.9**
MAJO	**Matsushiro**	**15.15**	**343**	Pn	**Pn**	**21 05 15.1**	**+0.9**
MAJO				IAmb	IAmb	21 05 20.5	
	comp=Z,22nm,0.6s						
MAT	**Matsushiro**	**15.15**	**343**	P	**Pn**	**21 05 14.8**	**+0.5**
MAT				*e*S	**Sn**	**21 08 00.3**	**-1.4**
JNU	**Nakatsue**	**15.82**	**316**	P	**P**	**21 05 26.2**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=276,slow=17,SNR=1.9						
JHS	**Saijyo**	**15.87**	**326**	P	**P**	**21 05 24.9**	**0.0**
JHS				IAmb	IAmb	21 05 30.9	
	comp=Z,29nm,0.6s						
JMM	**Marumori**	**15.89**	**351**		**P**	**21 05 24.4**	**-0.6**
JSD	**Sado**	**16.55**	**344**	Pn	**Pn**	**21 05 31.1**	**-0.5**
JSD				IAmb	IAmb	21 05 36.4	
	comp=Z,27nm,0.8s						
KSRS	**Korea Array**	**20.52**	**322**	P	Pn	21 06 17.8	-1.0
	comp=Z,4.9nm,0.8s,baz=134,slow=11,SNR=15						
KSRS				LR	LR	21 13 31.6	
	comp=Z,32nm,19.1s,baz=52,slow=34						
KS19	**Wonju Array Si**	**20.58**	**322**	P	**P**	**21 06 17.2**	**+0.8**
PATS	**Pohnpei**	**20.68**	**135**	P	**P**	**21 06 18.5**	**+0.9**
JEW	**Eniwo**	**20.73**	**355**	P	**P**	**21 06 18.7**	**+0.8**
YHNB	**Yeheng**	**20.74**	**281**	P	**P**	**21 06 18.8**	**+0.5**
YHNB				IAmb	IAmb	21 06 28.1	
	comp=Z,12nm,0.9s						
YULB	**Yu-li**	**20.79**	**278**	P	**P**	**21 06 19.3**	**+0.5**
**SS

	comp=Z,2.0nm,0.5s						
SEY	**Seymchan**	**41.18**	**6**	P	**P**	**21 09 20.8**	**+1.1**
	comp=Z,4.0nm,0.6s,baz=183,slow=7.3,SNR=26						
CTAO	**Charters Tower**	**42.04**	**177**	P	**P**	**21 09 27.5**	**+0.3**
CHTO	**Chiang Mai**	**42.05**	**274**	P	**P**	**21 09 27.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**42.12**	**273**	P	**P**	**21 09 29.1**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=66,slow=7.4,SNR=8.3						
CMAR				LR	LR	21 27 18.3	
	comp=Z,7.8nm,20.2s,baz=200,slow=36						
ADK	**Adak**	**42.49**	**36**	P	**P**	**21 09 30.9**	**+0.4**
WB0	**Warramunga Arr**	**42.66**	**193**	P	**P**	**21 09 32.4**	**+0.2**
WB0				IAmb	IAmb	21 09 34.5	
	comp=Z,6.4nm,0.9s						
WR0	**Warramunga Arr**	**42.81**	**193**	P	**P**	**21 09 33.4**	**-0.1**
WB2	**Warramunga Arr**	**42.84**	**193**	P	**P**	**21 09 33.8**	**+0.1**
WB2				IAmb	IAmb	21 09 34.7	
	comp=Z,9.8nm,0.9s						
WRA	**Warramunga Arr**	**42.84**	**193**	P	**P**	**21 09 33.7**	**0.0**
	comp=Z,3.2nm,0.5s,baz=8.2,slow=8.1,SNR=37						
WRA	**Warramunga Arr**	**42.84**	**193**	P	**P**	**21 09 33.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**43.77**	**205**	P	**P**	**21 09 41.3**	**+0.1**
ATKA	**Atka Island**	**43.99**	**36**	P	**P**	**21 09 42.9**	**+0.2**
UGM	**Wanagama**	**44.23**	**231**	P	**P**	**21 09 45.0**	**0.0**
KULM	**Kulim**	**44.94**	**255**	P	**P**	**21 09 50.6**	**-0.2**
KULM				IAmb	IAmb	21 09 52.8	
	comp=Z,6.4nm,0.5s						
AS31	**Alice Springs**	**46.54**	**193**	P	**P**	**21 10 02.9**	**-0.2**
ASAR	**Alice Springs**	**46.54**	**193**	P	**P**	**21 10 02.8**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=15,slow=8.5,SNR=34						
ASAR				PcP	**PcP**		
	comp=Z,1.0nm,0.6s,baz=32,slow=3.1,SNR=5.8						
ASAR	**Alice Springs**	**46.54**	**193**	P	**P**	**21 10 02.7**	**-0.4**
ASAR					**PcP**	**21 11 35.3**	**-0.5**
SHL	**Shillong**	**47.37**	**285**	P	**P**	**21 10 09.6**	**-0.3**
SHL				IAmb	IAmb	21 10 11.4	
	comp=Z,4.3nm,0.7s						
LSA	**Lhasa**	**47.62**	**291**	P	**P**	**21 10 11.6**	**-0.5**
RPSI	**Rantau Prapat**	**47.65**	**253**	P	**P**	**21 10 11.7**	**-0.2**
RPSI				IAmb	IAmb	21 10 13.3	
	comp=Z,7.4nm,0.4s						
EIDS	**Eidsvold**	**47.75**	**171**	P	**P**	**21 10 12.6**	**+0.2**
BILL	**Bilibino**	**47.97**	**11**	P	**P**	**21 10 14.3**	**+0.7**
BILL				IAmb	IAmb	21 10 15.3	
	comp=Z,4.9nm,0.7s						
SPIA	**Saint Paul Isl**	**48.29**	**32**	P	**P**	**21 10 16.4**	**+0.2**
DZM	**Mont Dzumac**	**49.17**	**152**	P	**P**	**21 10 23.5**	**0.0**
PSA00	**Pilbara Seismi**	**49.34**	**210**	P	**P**	**21 10 24.5**	**-0.1**
PSA00				IAmb	IAmb	21 10 28.8	
	comp=Z,18nm,1.1s						
GSI	**Gunungsitoli**	**49.48**	**252**	P	**P**	**21 10 25.9**	**-0.1**
KNTN	**Kanton**	**50.00**	**114**	P	**P**	**21 10 29.6**	**-0.3**
TIXI	**Tiksi**	**50.27**	**354**	P	**P**	**21 10 31.0**	**-0.1**
WMQ	**Urumqi**	**50.75**	**309**	*e*P	**P**	**21 10 37.3**	**+2.1**
WMQ				pP	pwP	21 11 03.3	+0.4
WMQ				sP	sP	21 11 19.8	+8.9
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,68nm,5.1s						
TAPN	**Taplejung**	**50.86**	**288**	*e*P	**P**	**21 10 37.1**	**+0.5**
	comp=Z,7.2nm,0.5s						
GAMB	**Gambell**	**50.98**	**24**	P	**P**	**21 10 36.8**	**+0.3**
GAMB				IAmb	IAmb	21 10 38.0	
	comp=Z,4.0nm,0.7s						
ODAN	**Odare**	**51.20**	**287**	*e*P	**P**	**21 10 39.2**	**+0.1**
	comp=Z,9.2nm,0.5s						
RAMN	**Ramite**	**51.89**	**288**	*e*P	**P**	**21 10 44.1**	**-0.1**
	comp=Z,4.7nm,0.4s						
JIRN	**Jiri**	**52.16**	**288**	*e*P	**P**	**21 10 47.1**	**+0.7**
	comp=Z,9.7nm,0.4s						
GUN	**Gumba**	**52.40**	**289**	*e*P	**P**	**21 10 48.6**	**+0.5**
	comp=Z,8.9nm,0.5s						
SDPT	**Sand Point**	**52.71**	**36**	P	**P**	**21 10 49.1**	**-0.3**
ARMA	**Armidale**	**52.80**	**172**	P	**P**	**21 10 50.3**	**-0.2**
ARMA				IAmb	IAmb	21 11 06.4	
	comp=Z,12nm,1.1s						
PKI	**Pulchoki**	**52.86**	**288**	*e*P	**P**	**21 10 51.2**	**-0.3**
	comp=Z,3.3nm,0.5s						
PKIN	**Phulchoki**	**52.87**	**288**	*e*P	**P**	**21 10 51.4**	**-0.1**
	comp=Z,6.8nm,0.5s						
TNA	**Tin City**	**53.31**	**23**	P	**P**	**21 10 53.9**	**+0.2**
TNA				IAmb	IAmb	21 10 55.6	
	comp=Z,4.4nm,0.9s						
GKN	**Gorkha**	**53.48**	**289**	*e*P	**P**	**21 10 55.8**	**0.0**
	comp=Z,4.4nm,0.3s						
STKA	**Stephens Creek**	**53.75**	**182**	P	**P**	**21 10 56.9**	**-0.5**
	comp=Z,7.3nm,0.5s,baz=6.6,slow=7.6,SNR=48						
STKA	**Stephens Creek**	**53.75**	**182**	P	**P**	**21 10 57.1**	**-0.3**
ZAA0	**Zalesovo Array**	**54.22**	**321**	P	**P**	**21 11 00.2**	**-0.4**
ZAA0				IAmb	IAmb	21 11 00.8	
	comp=Z,3.7nm,0.6s						
ZALV	**Zalesovo Beam**	**54.22**	**321**	P	**P**	**21 11 00.1**	**-0.5**
	comp=Z,3.5nm,0.5s,baz=104,slow=7.9,SNR=17						
ZALV	**Zalesovo Beam**	**54.22**	**321**	P	**P**	**21 10 60.0**	**-0.6**
KOLN	**Koldanda**	**54.42**	**289**	*e*P	**P**	**21 11 03.2**	**+0.5**
	comp=Z,5.9nm,0.4s						
FORT	**Forrest**	**54.75**	**197**	P	**P**	**21 11 04.8**	**+0.2**
MK31	**Makanchi Array**	**54.83**	**312**	P	**P**	**21 11 05.1**	**0.0**
MKAR	**Makanchi Array**	**54.83**	**312**	P	**P**	**21 11 05.5**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=88,slow=8.3,SNR=28						
MKAR	**Makanchi Array**	**54.83**	**312**	P	**P**	**21 11 05.2**	**0.0**
PYUN	**Piuthan**	**54.90**	**289**	*e*P	**P**	**21 11 06.7**	**+0.5**
	comp=Z,6.9nm,0.3s						
MAKZ	**Makanchi**	**55.04**	**312**	P	**P**	**21 11 06.8**	**+0.1**
MAKZ				IAmb	IAmb	21 11 10.2	
	comp=Z,3.3nm,0.8s						
BBOO	**Buckleboo**	**55.14**	**188**	P	**P**	**21 11 06.4**	**-1.1**
BBOO				IAmb	IAmb	21 11 08.5	
	comp=Z,6.3nm,0.8s						
SII	**Sitkinak Islan**	**56.43**	**36**	P	**P**	**21 11 16.7**	**+0.3**
KDAK	**Kodiak Island**	**57.51**	**35**	P	**P**	**21 11 24.1**	**+0.2**
KDAK				IAmb	IAmb	21 11 38.0	
	comp=Z,8.6nm,0.9s						
MORW	**Morawa**	**57.52**	**209**	P	**P**	**21 11 24.3**	**0.0**
PPLA	**Purkeypile**	**58.72**	**29**	P	**P**	**21 11 32.7**	**+0.1**
PPLA				IAmb	IAmb	21 11 37.1	
	comp=Z,5.5nm,1.2s						
SKT	**Skwentna**	**58.82**	**30**	P	**P**	**21 11 32.7**	**-0.4**
SKT				IAmb	IAmb	21 11 34.4	
	comp=Z,6.3nm,0.9s						
SUA	**Susitna One**	**59.09**	**31**	P	**P**	**21 11 34.9**	**-0.2**
KTH	**Kantishna Hill**	**59.42**	**28**	P	**P**	**21 11 37.5**	**+0.2**
BPAW	**Bear Paw Mtn.**	**59.51**	**28**	P	**P**	**21 11 38.1**	**+0.3**
TRF	**Thorofare Moun**	**59.68**	**28**	P	**P**	**21 11 39.2**	**+0.1**
MLY	**Manley**	**59.82**	**27**	P	**P**	**21 11 40.2**	**+0.3**
GHO	**Glory Hole Cre**	**60.00**	**30**	P	**P**	**21 11 41.1**	**-0.2**
PWL	**Port Wells**	**60.15**	**32**	P	**P**	**21 11 42.2**	**0.0**
KNK	**Knik Glacier**	**60.17**	**31**	P	**P**	**21 11 42.4**	**0.0**
SML	**Sawmill**	**60.28**	**30**	P	**P**	**21 11 43.4**	**+0.2**
SML				IAmb	IAmb	21 11 43.6	
	comp=Z,7.6nm,0.7s						
RND	**Reindeer**	**60.30**	**29**	P	**P**	**21 11 43.2**	**-0.1**
MCK	**McKinley**	**60.33**	**28**	P	**P**	**21 11 43.4**	**0.0**
MCK				IAmb	IAmb	21 11 49.4	
	comp=Z,2.6nm,0.8s						
NWAO	**Narrogin (SRO)**	**60.35**	**206**	P	**P**	**21 11 44.0**	**+0.1**
NWAO				IAmb	IAmb	21 11 48.2	
	comp=Z,8.0nm,0.9s						
NWAO	**Narrogin (SRO)**	**60.35**	**206**	P	**P**	**21 11 44.0**	**+0.1**
NWAO				IAmb	IAmb	21 11 47.7	
	comp=Z,11nm,1.1s						
AAK	**Ala-Archa**	**60.36**	**307**	P	**P**	**21 11 43.9**	**-0.3**
I23K	**Minto, Yukon-K**	**60.41**	**27**	P	**P**	**21 11 44.2**	**+0.3**
I23K				IAmb	IAmb	21 11 46.1	
	comp=Z,2.1nm,0.5s						
NEA2	**Nenana**	**60.43**	**27**	P	**P**	**21 11 44.3**	**+0.3**
COLD	**Coldfoot**	**60.53**	**24**	P	**P**	**21 11 44.8**	**+0.1**
COLD				IAmb	IAmb	21 11 46.3	
	comp=Z,3.2nm,0.7s						
SCM	**Sheep Creek Mo**	**60.76**	**30**	P	**P**	**21 11 46.7**	**+0.2**
WRH	**Wood River Hil**	**60.82**	**27**	P	**P**	**21 11 46.1**	**-0.6**
CCB	**Clear Creek Bu**	**60.97**	**27**	P	**P**	**21 11 47.4**	**-0.3**
FID	**Port Fidalgo**	**61.03**	**32**	P	**P**	**21 11 48.5**	**+0.3**
TOLK	**Toolik Lake Re**	**61.09**	**23**	P	**P**	**21 11 48.8**	**+0.2**
TOLK				IAmb	IAmb	21 11 50.6	
	comp=Z,7.3nm,1.1s						
M24K	**Tolsona, Glenn**	**61.34**	**30**	P	**P**	**21 11 50.4**	**+0.1**
IL31		**61.38**	**27**	P	**P**	**21 11 49.4**	**-1.0**
IL31				IAmb	IAmb	21 11 50.2	
	comp=Z,3.2nm,0.7s						
ILAR	**Eielson Array**	**61.38**	**27**	P	**P**	**21 11 49.5**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=258,slow=5.4,SNR=26						
ILAR	**Eielson Array**	**61.38**	**27**	P	**P**	**21 11 49.2**	**-1.3**
KLU	**Klutina**	**61.38**	**31**	P	**P**	**21 11 50.6**	**-0.1**
BMRM	**Bremner River**	**61.97**	**32**	P	**P**	**21 11 54.7**	**+0.1**
BMRM				IAmb	IAmb	21 11 56.5	
	comp=Z,7.2nm,0.8s						
N25K	**Chitina, Valde**	**62.03**	**31**	P	**P**	**21 11 54.8**	**-0.2**
N25K				IAmb	IAmb	21 12 12.6	
	comp=Z,3.8nm,0.8s						
NIL	**Nilore**	**62.34**	**297**	P	**P**	**21 11 57.2**	**-0.3**
NIL				IAmb	IAmb	21 11 59.6	
	comp=Z,8.3nm,0.9s						
GLB	**Gilahina Butte**	**62.39**	**31**	P	**P**	**21 11 57.4**	**+0.1**
GLB				IAmb	IAmb	21 12 14.9	
	comp=Z,8.3nm,1.0s						
SCRK	**Sand Creek**	**62.53**	**28**	P	**P**	**21 11 58.3**	**0.0**
SCRK				IAmb	IAmb	21 11 58.7	
	comp=Z,5.1nm,0.7s						
BMAR	**Burnt Mountain**	**62.70**	**24**	P	**P**	**21 11 59.5**	**+0.2**
MCARA	**McCarthy VSAT**	**62.76**	**31**	P	**P**	**21 12 00.2**	**+0.4**
MCARA				IAmb	IAmb	21 12 01.0	
	comp=Z,9.4nm,0.8s						
BRVK	**Borovoye**	**62.77**	**319**	P	**P**	**21 11 59.9**	**-0.1**
BRVK				IAmb	IAmb	21 12 01.0	
	comp=Z,7.4nm,0.8s						
KK31	**Karatay Array**	**63.23**	**308**	P	**P**	**21 12 03.1**	**-0.2**
KKAR	**Karatay Array**	**63.23**	**308**	P	**P**	**21 12 03.1**	**-0.1**
KKAR	**Karatay Array**	**63.23**	**308**	P	**P**	**21 12 03.3**	**+0.1**
BARN	**Barnard Glacie**	**63.41**	**32**	P	**P**	**21 12 04.4**	**+0.1**
BARN				IAmb	IAmb	21 12 14.8	
	comp=Z,4.6nm,1.0s						
L27K	**Beaver Creek,**	**63.42**	**29**	P	**P**	**21 12 04.3**	**+0.1**
L27K				IAmb	IAmb	21 12 05.0	
	comp=Z,3.5nm,0.7s						
BCAR	**Beaver Creek A**	**63.44**	**29**	P	**P**	**21 12 04.5**	**+0.2**
CTGM	**Chitina Glacie**	**63.56**	**32**	P	**P**	**21 12 05.3**	**0.0**
CTGM				IAmb	IAmb	21 12 13.0	
	comp=Z,9.0nm,1.2s						
TABL	**Table Mountain**	**63.64**	**32**	P	**P**	**21 12 06.0**	**+0.1**
GAR	**Garm**	**63.88**	**304**	P	**P**	**21 12 07.3**	**-0.5**
GAR				IAmb	IAmb	21 12 10.9	
	comp=Z,4.9nm,0.5s						
KBL	**Kabul**	**65.63**	**299**	P	**P**	**21 12 18.7**	**-0.6**
KBL				IAmb	IAmb	21 12 21.1	
	comp=Z,6.0nm,0.9s						
INK	**Inuvik**	**66.93**	**24**	P	**P**	**21 12 26.4**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=280,slow=6.5,SNR=14						
INK	**Inuvik**	**66.93**	**24**	P	**P**	**21 12 26.8**	**+0.2**
INK				IAmb	IAmb	21 12 27.5	
	comp=Z,4.5nm,1.0s						
DLBC	**Dease Lake**	**69.43**	**34**	P	**P**	**21 12 43.2**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=318,slow=23,SNR=4.6						
ABKAR	**Akbulak array**	**69.63**	**316**	P	**P**	**21 12 43.6**	**-0.2**
ABKAR	**Akbulak array**	**69.63**	**316**	P	**P**	**21 12 43.6**	**-0.2**
C36M	**Paulatuk**	**70.23**	**22**	P	**P**	**21 12 46.9**	**-0.2**
YKA	**Yellowknife Ar**	**75.79**	**28**	P	**P**	**21 13 19.8**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=291,slow=5.2,SNR=28						
PINE	**Pine Mountain**	**78.64**	**47**	P	**P**	**21 13 36.1**	**-0.5**
PINE				IAmb	IAmb	21 13 46.9	
	comp=Z,7.1nm,1.1s						
ARCES	**ARCESS Array B**	**78.69**	**342**	P	**P**	**21 13 35.8**	**-0.3**
	comp=Z,11nm,1.2s,baz=72,slow=8.6,SNR=8.4						
ARCES	**ARCESS Array B**	**78.69**	**342**	P	**P**	**21 13 36.3**	**+0.2**
BEKR	**Beckworth**	**80.40**	**51**	P	**P**	**21 13 45.7**	**-0.5**
NVAR	**Mina Array Bea**	**82.42**	**52**	P	**P**	**21 13 57.4**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=277,slow=5.6,SNR=9.7						
NVAR	**Mina Array Bea**	**82.42**	**52**	P	**P**	**21 13 56.5**	**-0.4**
FINES	**FINESS Array B**	**83.03**	**335**	P	**P**	**21 13 58.1**	**-1.2**
	comp=Z,1.4nm,0.4s,baz=62,slow=4.7,SNR=27						
YHL	**Hebgen Lake**	**84.69**	**44**	P	**P**	**21 14 07.9**	**-0.7**
FFC	**Flin Flon**	**85.14**	**32**	P	**P**	**21 14 10.1**	**-0.1**
FFC				IAmb	IAmb	21 14 11.3	
	comp=Z,4.8nm,0.8s						
AKASG	**Malin Array Be**	**87.48**	**325**	P	**P**	**21 14 19.8**	**-1.9**
	comp=Z,0.2nm,0.2s,baz=54,slow=5.5,SNR=2.2						
NOA	**NORSAR Array B**	**88.74**	**339**	P	**P**	**21 14 25.8**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=34,slow=3.2,SNR=1.4						
SNAA	**Sanae**	**126.91**	**193**	PKPdf	**PKiKP**	**21 20 37.5**	**+0.3**
VNA2	**Neumayer--Watz**	**128.39**	**192**	PKPdf	**PKiKP**	**21 20 41.0**	**+0.9**
VNA3	**Neumayer Olymp**	**128.53**	**191**	PKPdf	**PKiKP**	**21 20 40.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**128.91**	**310**	PKP	**PKPdf**	**21 20 41.0**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=13,slow=2.3,SNR=1.8						
PLCA	**Paso Flores**	**145.61**	**131**	PKPbc	**PKPdf**	**21 21 12.3**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=212,slow=3.3,SNR=14						
LPAZ	**La Paz**	**149.32**	**85**	PKPbc	**PKPbc**	**21 21 23.7**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=298,slow=2.9,SNR=6.7						
LPAZ	**La Paz**	**149.32**	**85**	PKPdf	**PKPdf**	**21 21 17.8**	**-1.8**

*ATH **19** 21:03:21.1,34.99N×26.93E,h12km±2km, ML2.8/5, Error ellipse: s-maj=4.7km s-min=1.2km az=336.0*
*DDA **19** 21:03:23.0,35.44N×26.87E,h14km±25km, ML2.5*
ISC 19 21:03:20.8±1.9,35.05N±0.09×26.97E±0.05,h20km±8km, n18,σ1.93/28, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.52**	**17**	P	**Pn**	**21 03 32.4**	**-0.8**
KARP				S	**Sn**	**21 03 40.8**	**-0.7**
KARP				AML	AML	21 03 41.9	
	comp=E,12020μm,0.4s						
KARP				AML	AML	21 03 42.1	
	comp=N,16282μm,0.3s						
ZKR	**Zakros**	**0.62**	**276**	P	**Pb**	**21 03 32.4**	**-0.6**
ZKR				S	**Sb**	**21 03 40.5**	**-0.7**
ZKR				AML	AML	21 03 41.9	
	comp=E,1618μm,0.4s						
ZKR				AML	AML	21 03 42.2	
	comp=N,766μm,0.4s						
NPS	**Neapolis**	**1.13**	**281**	P	**Pb**	**21 03 41.6**	**-0.1**
NPS				S	**Sn**	**21 03 57.0**	**+0.4**
NPS				AML	AML	21 04 03.9	
	comp=E,867μm,0.7s						
NPS				AML	AML	21 04 04.2	
	comp=N,715μm,0.5s						
ARG	**Arkhangelos**	**1.50**	**39**	P	**Pg**	**21 03 49.3**	**-0.4**
NIS1	**Nisyros Isl.**	**1.56**	**6**	P	**Pb**	**21 03 49.8**	**+0.8**
IDI	**Anoyia**	**1.72**	**279**	P	**Pb**	**21 03 51.2**	**-0.6**
IDI				AML	AML	21 04 20.9	
	comp=E,225μm,0.8s						
IDI				AML	AML	21 04 22.1	
	comp=N,250μm,0.5s						
SIVA	**Sivas**	**1.77**	**270**	P	**Pb**	**21 03 52.9**	**+0.3**
SIVA				AML	AML	21 04 28.8	
	comp=N,303μm,0.5s						
SIVA				AML	AML	21 04 35.2	
	comp=E,542μm,0.7s						
TURN	**Turunc**	**2.01**	**31**	*i* P	**Pg**	**21 03 59.1**	**-0.3**
TURN				*i* S	**Sb**	**21 04 20.7**	**-0.5**
BDRM	**Kayabasi**	**2.05**	**11**	*i* P	**Pn**	**21 03 54.2**	**+0.1**
BDRM				*i* S	**Sn**	**21 04 19.1**	**0.0**
DALY	**Dalyan (Mula)**	**2.23**	**37**	*i* P	**Pb**	**21 03 59.9**	**-0.5**
DALY				*i* S	**Sb**	**21 04 28.4**	**+0.8**
DALY				IAML		21 04 40.0	
	comp=E,25nm,0.6s						
DALY				IAML		21 04 42.0	
	comp=N,34nm,1.2s						
VAM	**Vamos**	**2.30**	**280**	P	**Pb**	**21 04 01.4**	**-0.1**
AKAS	**Kas**	**2.45**	**60**	*i* P	**Pn**	**21 04 00.1**	**+0.3**
MULA	**Mugla, Merkez-**	**2.46**	**26**	*i* P	**Pb**	**21 04 03.3**	**-1.1**
MULA				*i* S	**Sn**	**21 04 30.8**	**+1.4**
MULA				IAML		21 04 47.0	
	comp=E,27nm,0.7s						
AYDN	**Tasoluk**	**2.71**	**15**	*i* P	**Pn**	**21 04 05.6**	**+2.3**
AYDN				*i* S	**Sn**	**21 04 31.6**	**-3.9**
CAEL	**Denizli, Camel**	**2.81**	**42**	*i* P	**Pn**	**21 04 06.7**	**+1.9**
CAEL				IAML		21 05 03.0	
	comp=E,54nm,1.6s						
CAEL				IAML		21 05 04.0	
	comp=N,72nm,1.7s						
GOLH	**Golhisar**	**3.03**	**43**	*i* P	**Pn**	**21 04 09.8**	**+2.1**
GOLH				*i* S	**Sn**	**21 04 45.2**	**+1.8**
GOLH				IAML		21 05 06.0	
	comp=N,33nm,1.3s						
GOLH				IAML		21 05 13.0	
	comp=E,15nm,0.8s						
KEPZ	**Antalya-Kepez**	**4.19**	**62**	*i* P	**Pn**	**21 04 24.6**	**+1.0**
KEPZ				*i* S	**Sn**	**21 05 05.9**	**-6.1**
SEDI	**Konya, Seydise**	**4.55**	**57**	*i* P	Pb	21 04 33.9	-6.1
SEDI				*i* S	**Sn**	**21 05 24.3**	**+3.3**
SEDI				IAML		21 05 29.0	
	comp=E,6.5nm,0.8s						
SEDI				IAML		21 05 30.0	
	comp=N,6.2nm,0.8s						

*NEIC **19** 21:28:26.7±1.4,35.52N±0.03×120.95W±0.03,h9km±7km, Error ellipse: s-maj=5.0km s-min=2.7km az=206.0*
*ANF **19** 21:28:27.1±1.2,35.67N×120.80W,h5km,ML3.2/14,Error ellipse: s-maj=10.8km s-min=6.6km az=113.0,Hypocentre not reviewed by the ISC*
NCEDC 19 21:28:27.7±1.9,35.58N±0.04×120.86W±0.03,h5km±6km, ML3.2/23,ML2.9/49(NEIC),Error ellipse: s-maj=6.5km s-min=2.8km az=207.0,Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	IAC	Time h m s	Res IAC
RAMR	**Ramage Ranch**	**0.06**	**351**		Pg	21 28 29.6	+0.4
TCHL	**Shandon**	**0.39**	**73**		Pg	21 28 36.0	+0.8
TSCN	**Private Proper**	**0.42**	**94**		Pg	21 28 36.5	+0.7
PKD	**Bear Valley Ra**	**0.45**	**35**		Pg	21 28 36.6	+0.2
TRAM	**Private Proper**	**0.49**	**78**		Pg	21 28 37.7	+0.6
PAGB	**Antelope Grade**	**0.52**	**72**		Pg	21 28 38.1	+0.4
PAGB				Sg	Sg	21 28 44.4	-0.1
PAPM	**Alder Peak**	**0.53**	**310**		Pg	21 28 38.0	0.0
THIS	**South End of C**	**0.53**	**74**		Pg	21 28 38.5	+0.5
PMPB	**Monarch Peak**	**0.64**	**4**		Pg	21 28 40.0	0.0
PMPB				Sg	Sg	21 28 48.7	+0.3
PMLM	**Mount Lospe**	**0.71**	**163**		Pg	21 28 41.9	+0.6
SMMC	**Simmler**	**0.75**	**110**	P		21 28 42.2	
	baz=291						
SMMC				S		21 28 51.7	
	baz=291						
PDRM	**Domengine Ranc**	**0.86**	**27**		Pb	21 28 45.0	-0.1
LRV	**Little Rabbit**	**0.86**	**351**		Pg	21 28 44.2	0.0
PHBM	**Huron Fishing**	**0.92**	**43**		Pb	21 28 46.7	+0.5
BSMM	**Soledad Missio**	**0.93**	**330**		Pg	21 28 45.0	-0.6
BBNM	**San Benito**	**0.95**	**349**		Pg	21 28 45.9	-0.1
HAST	**Hastings Reser**	**0.99**	**326**		Pg	21 28 45.9	-0.8
BJCM	**Johnson Can.**	**1.06**	**336**		Pg	21 28 47.3	-0.8
PKM	**Mcpherson Peak**	**1.10**	**128**	P		21 28 48.6	
	baz=309						
SCZ	**Santa Cruz**	**1.11**	**337**		Pg	21 28 48.0	-1.0
BLRM	**Lewis Ranch**	**1.14**	**343**		Pg	21 28 48.9	-0.7
SAO	**San Andreas Ge**	**1.28**	**338**		Pg	21 28 50.2	-2.1
HSFM	**Saint Francis**	**1.34**	**337**		Pn	21 28 51.8	-1.3
VOG	**Valley Oaks Go**	**1.41**	**58**	P		21 28 53.5	
	baz=238						
VOG				S		21 29 11.5	
	baz=238						
VES	**Vestal, Richgr**	**1.47**	**79**	P		21 28 53.0	
	baz=260						
VES				S		21 29 12.4	
	baz=260						
SBC	**Santa Barbara**	**1.47**	**140**	P		21 28 54.6	
	baz=321						
PACP	**Pacheco Peak**	**1.47**	**347**		Pn	21 28 53.9	-1.0
HFEM	**San Felipe**	**1.47**	**343**		Pn	21 28 53.8	-1.1
HCOM	**Corn Cob Canyo**	**1.48**	**333**		Pn	21 28 55.6	-0.1
MOBB	**Monterey Bay O**	**1.54**	**317**		Pn	21 28 55.0	-0.6
GHS	**Gilroy Hot Spr**	**1.59**	**343**		Pn	21 28 55.2	-1.4
ARVC	**Arvin**	**1.72**	**104**	P		21 28 57.0	
	baz=286						
HELL	**Mitchell Peak,**	**1.85**	**53**		Pn	21 28 58.9	-1.4
SCZ2	**Santa Cruz Isl**	**1.87**	**147**	P		21 28 59.4	
	baz=328						
MHC	**Mount Hamilton**	**1.87**	**341**		Pn	21 28 59.1	-1.4
ISA	**Isabella, Lake**	**1.94**	**87**		Pn	21 28 60.0	-1.5
ISA				Sn	Sn	21 29 25.5	-0.8
ISA				IAML		21 29 26.4	
	comp=N,110nm,0.5s						
ISA				IAML		21 29 31.1	
	comp=E,97nm,0.6s						
ISA	**Isabella, Lake**	**1.94**	**87**	P		21 29 00.2	
	baz=268						
OSI	**Osito Audit: C**	**2.00**	**118**		Pn	21 29 01.2	-0.9
OSI				IAML		21 29 41.1	
	comp=N,69nm,0.8s						
OSI				IAML		21 29 42.8	
	comp=E,106nm,0.7s						
JRSC	**Jasper Ridge**	**2.14**	**329**		Pn	21 29 02.4	-1.7
CWC	**Cottonwood Cre**	**2.41**	**68**	P		21 29 07.8	
	baz=250						
EDW2	**Edwards Air Fo**	**2.44**	**106**	P		21 29 07.3	
	baz=287						
DECC	**Green Verdugo**	**2.46**	**122**	P		21 29 07.6	
	baz=303						
CMB	**Columbia Colle**	**2.48**	**9**		Pn	21 29 08.6	-0.3
CMB	**Columbia Colle**	**2.48**	**9**	IAML		21 29 40.0	
	comp=E,52nm,0.7s						
CMB				IA

*DDA **19** 21:42:30.9,35˚.40N×26˚.79E,h9km±3km,MW3.6*

ISC 19 21:42:26.9±1.1,**35˚.08N**±0˚.04×**26˚.84E**±0˚.02,**h15**km±7km, **n105**,σ1°**58**/133,**mb3.5**/6,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**0.51**	**274**	P		**Pg**	**21 42 36.5**	**-0.6**
ZKR				S		**Sg**	**21 42 43.7**	**-0.3**
ZKR				AML		AML	21 42 44.6	
	comp=E,18196μm,0.6s							
ZKR				AML		AML	21 42 46.7	
	comp=N,9276μm,0.3s							
ZKR	**Zakros**	**0.51**	**274**	P		**Pg**	**21 42 36.3**	**-0.8**
ZKR				S		**Sg**	**21 42 43.6**	**-0.3**
	comp=N,7μm,0.4s							
ZKR	**Zakros**	**0.51**	**274**	PG		**Pg**	**21 42 36.6**	**-0.5**
ZKR				SG		**Sg**	**21 42 44.6**	**+0.7**
KARP	**Karpathos**	**0.53**	**30**	P		**Pg**	**21 42 37.2**	**-0.3**
KARP				S		**Sb**	**21 42 45.4**	**0.0**
KARP				AML		AML	21 42 46.9	
	comp=N,44483μm,0.5s							
KARP				AML		AML	21 42 47.6	
	comp=E,46414μm,0.4s							
KARP	**Karpathos**	**0.53**	**30**	P		**Pg**	**21 42 36.9**	**-0.6**
KARP				S		**Sb**	**21 42 45.6**	**+0.1**
	comp=E,23μm,0.4s							
KARP	**Karpathos**	**0.53**	**30**	PG		**Pg**	**21 42 37.2**	**-0.3**
KARP				SG		**Sb**	**21 42 45.6**	**+0.1**
STIA	**Sitia Lasithi**	**0.62**	**281**	P		**Pg**	**21 42 38.4**	**-0.8**
STIA				S		**Sg**	**21 42 47.7**	**+0.2**
FRMA	**Ierapetra Chan**	**0.91**	**266**	P		**Pg**	**21 42 41.7**	**-2.9**
FRMA				S		**Sg**	**21 42 54.5**	**-2.0**
	comp=E,1μm,0.4s							
NPS	**Neapolis**	**1.02**	**280**	P		**Pg**	**21 42 46.1**	**-0.6**
NPS				AML		AML	21 43 05.8	
	comp=E,7357μm,0.5s							
NPS				AML		AML	21 43 06.7	
	comp=N,4973μm,0.6s							
NPS	**Neapolis**	**1.02**	**280**	P		**Pg**	**21 42 45.8**	**-0.9**
NPS				S		**Sg**	**21 42 59.6**	**-0.4**
	comp=N,3μm,0.6s							
HRKL	**Herakleio**	**1.44**	**280**	P		**Pn**	**21 42 53.5**	**+1.1**
HRKL	**Herakleio**	**1.44**	**280**	PN		**Pn**	**21 42 54.6**	**+2.2**
HRKL				SN		**Sg**	**21 43 14.6**	**+1.2**
KSTL	**Kastelli Herak**	**1.47**	**279**	P		Pn	21 42 50.4	-2.3
NIS1	**Nisyros Isl.**	**1.54**	**10**	P		**Pn**	**21 42 54.4**	**+0.6**
NIS1	**Nisyros Isl.**	**1.54**	**10**	PN		**Pn**	**21 42 54.8**	**+1.0**
NIS1				SN		**Sg**	**21 43 15.4**	**-1.2**
ARG	**Arkhangelos**	**1.54**	**42**	P		**Pb**	**21 42 56.1**	**+1.0**
ARG				AML		AML	21 43 22.7	
	comp=N,2264μm,0.8s							
ARG				AML		AML	21 43 23.6	
	comp=E,2720μm,0.8s							
ARG	**Arkhangelos**	**1.54**	**42**	P		**Pb**	**21 42 56.2**	**+1.0**
ARG				S		**Sg**	**21 43 16.0**	**-0.6**
	comp=E,1μm,0.8s							
ARG	**Arkhangelos**	**1.54**	**42**	PN		**Pn**	**21 42 55.7**	**+1.9**
ARG				SN		**Sg**	**21 43 16.9**	**+0.3**
IDI	**Anoyia**	**1.61**	**278**	Pg		**Pn**	**21 42 56.4**	**+1.6**
	comp=E,30nm,0.3s,baz=91,slow=14,SNR=58							
IDI				Lg		Lg	21 43 20.0	
	comp=E,47nm,0.3s,baz=337,slow=19,SNR=6.8							
IDI	**Anoyia**	**1.61**	**278**	P		**Pn**	**21 42 56.4**	**+1.6**
IDI				AML		AML	21 43 27.4	
	comp=E,1690μm,0.7s							
IDI				AML		AML	21 43 28.4	
	comp=N,1980μm,0.5s							
IDI	**Anoyia**	**1.61**	**278**	P		**Pn**	**21 42 55.9**	**+1.1**
IDI				S		**Sn**	**21 43 15.8**	**+0.5**
	comp=N,858nm,0.7s							
IDI	**Anoyia**	**1.61**	**278**	PN		**Pn**	**21 42 56.7**	**+1.9**
SIVA	**Sivas**	**1.67**	**268**	P		**Pn**	**21 42 57.4**	**+1.9**
SIVA	**Sivas**	**1.67**	**268**	P		**Pn**	**21 42 57.1**	**+1.6**
SIVA				S		**Sn**	**21 43 18.0**	**+1.4**
	comp=N,2μm,0.7s							
KOSK	**Kos Island**	**1.67**	**4**	PN		**Pn**	**21 42 56.9**	**+1.4**
KOSK				SN		**Sg**	**21 43 18.9**	**-1.8**
SANT	**Santorini**	**1.71**	**319**	P		**Pn**	**21 42 56.5**	**+0.4**
SANT	**Santorini**	**1.71**	**319**	PN		**Pn**	**21 42 57.9**	**+1.8**
SANT				SN		**Sb**	**21 43 20.4**	**+1.1**
THR8	**Santorini-Mono**	**1.72**	**320**	P		**Pn**	**21 42 56.4**	**+0.1**
THR6	**Thira Island,**	**1.73**	**318**	P		**Pn**	**21 42 56.6**	**+0.2**
THR9	**Santorini-Faro**	**1.75**	**317**	P		**Pn**	**21 42 57.4**	**+0.7**
SNT1	**Gialos, Santor**	**1.76**	**320**	P		**Pn**	**21 42 56.6**	**-0.1**
SNT1				S		**Sn**	**21 43 18.6**	**-0.2**
	comp=N,1μm,0.7s							
SNT5	**Nea Kammeni, S**	**1.77**	**319**	P		**Pn**	**21 42 57.3**	**+0.4**
THR3	**Thira Island,**	**1.77**	**319**	P		**Pn**	**21 42 57.1**	**+0.2**
THT2	**Imerovigli**	**1.77**	**320**	P		**Pn**	**21 42 57.3**	**+0.3**
THT2	**Imerovigli**	**1.77**	**320**	PN		**Pn**	**21 42 58.2**	**+1.2**
THT2				SN		**Sb**	**21 43 21.8**	**+0.6**
DATC	**Datca-Mugla**	**1.80**	**21**	PN		**Pn**	**21 42 58.5**	**+1.1**
BODT	**Bodrum**	**2.01**	**11**	P		**Pn**	**21 42 59.9**	**-0.4**
BDRM	**Kayabasi**	**2.04**	**14**	*i* P		**Pn**	**21 43 01.0**	**+0.4**
BDRM				*i* S		**Sn**	**21 43 23.5**	**-2.4**
TURN	**Turunc**	**2.04**	**34**	*i* P		**Pn**	**21 43 02.3**	**+1.7**
TURN				*i* S		**Sn**	**21 43 25.2**	**-0.5**
TURN	**Turunc**	**2.04**	**34**	PN		**Pn**	**21 43 02.1**	**+1.5**
VAM	**Vamos**	**2.18**	**279**	P		**Pn**	**21 43 04.4**	**+1.8**
APE	**Apeiranthos**	**2.25**	**332**	P		**Pn**	**21 43 03.5**	**-0.1**
APE	**Apeiranthos**	**2.25**	**332**	P		**Pn**	**21 43 03.5**	**-0.1**
APE				S		**Sn**	**21 43 30.6**	**-0.4**
	comp=N,352nm,0.6s							
GVDS	**Gavdos**	**2.27**	**265**	PN		**Pn**	**21 43 06.8**	**+3.0**
DALY	**Dalyan (Mula)**	**2.27**	**40**	*i* P		**Pn**	**21 43 05.1**	**+1.3**
DALY				*i* S		**Sn**	**21 43 32.0**	**+0.5**
DALY	**Dalyan (Mula)**	**2.27**	**40**	PN		**Pn**	**21 43 06.2**	**+2.4**
GVD	**Gavdhos**	**2.27**	**265**	P		**Pn**	**21 43 06.5**	**+2.7**
GVD	**Gavdhos**	**2.27**	**265**	P		**Pn**	**21 43 04.8**	**+0.9**
GVD	**Gavdhos**	**2.27**	**265**	PN		**Pn**	**21 43 05.9**	**+2.0**
YER	**Yerkesik**	**2.36**	**29**	P		**Pn**	**21 43 06.6**	**+1.5**
YER				S		**Sn**	**21 43 35.0**	**+1.2**
YER	**Yerkesik**	**2.36**	**29**	PN		**Pn**	**21 43 06.6**	**+1.5**
IMMV	**Iera Moni Meta**	**2.37**	**280**	P		**Pn**	**21 43 06.6**	**+1.4**
IMMV	**Iera Moni Meta**	**2.37**	**280**	P		**Pn**	**21 43 06.4**	**+1.2**
IMMV	**Iera Moni Meta**	**2.37**	**280**	PN		**Pn**	**21 43 06.9**	**+1.7**
DDIM	**Aydin, Didim**	**2.39**	**8**	*i* P		**Pn**	**21 43 07.0**	**+1.5**
FETY	**Fethiye**	**2.39**	**49**	*i* P		**Pn**	**21 43 04.4**	**-1.1**
FETY				*i* S		**Sn**	**21 43 36.5**	**+1.9**
FETY	**Fethiye**	**2.39**	**49**	PN		**Pn**	**21 43 07.0**	**+1.5**
MULA	**Mugla, Merkez-**	**2.48**	**28**	*i* P		**Pn**	**21 43 09.4**	**+2.7**
MULA				*i* S		**Sn**	**21 43 34.6**	**-2.2**
AKAS	**Kas**	**2.53**	**62**	*i* P		**Pn**	**21 43 07.3**	**-0.2**
SMG	**Samos**	**2.62**	**360**	P		**Pn**	**21 43 08.4**	**-0.3**
GCAM	**G?zelcaml?**	**2.63**	**7**	*i* P		**Pn**	**21 43 09.5**	**+0.7**
GCAM	**G?zelcaml?**	**2.63**	**7**	PN		**Pn**	**21 43 10.9**	**+2.1**
AYDN	**Tasoluk**	**2.71**	**18**	*i* P		**Pn**	**21 43 10.7**	**+0.8**
AYDN				*i* S		**Sn**	**21 43 41.9**	**-0.5**
CAEL	**Denizli, Camel**	**2.86**	**44**	*i* P		**Pn**	**21 43 13.5**	**+1.4**
CAEL				*i* S		**Sb**	**21 43 53.2**	**+0.6**
TAVA	**DENIZLI_Tavas**	**2.91**	**35**	*i* P		**Pn**	**21 43 14.4**	**+1.7**
TAVA				*i* S		**Sn**	**21 43 49.4**	**+2.0**
DGB	**zmir**	**2.96**	**1**	*i* P		**Pn**	**21 43 12.7**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**2.98**	**16**	PN		**Pn**	**21 43 15.1**	**+1.4**
ANKY	**Antikythira Is**	**2.99**	**286**	P		**Pn**	**21 43 15.0**	**+1.3**
ELL	**Elmali**	**3.00**	**55**	PN		**Pn**	**21 43 15.9**	**+2.0**
GOLH	**Golhisar**	**3.08**	**45**	*i* P		**Pn**	**21 43 16.4**	**+1.3**
AKUM	**Antalya-Kumluc**	**3.11**	**66**	*i* P		**Pn**	**21 43 16.2**	**+0.8**
URLA	**Izmir**	**3.28**	**357**	*i* P		**Pn**	**21 43 15.9**	**-1.8**
KORT	**Korkueli**	**3.43**	**55**	*i* P		**Pn**	**21 43 22.1**	**+2.3**
VLI	**Veliai**	**3.56**	**298**	P		**Pn**	**21 43 22.1**	**+0.5**
MANT	**Manisa**	**3.67**	**22**	*i* P		**Pn**	**21 43 24.5**	**+1.2**
MANT				*i* S		**Sn**	**21 44 01.1**	**-5.3**
BRDR	**BURDUR-Merkez**	**3.68**	**44**	*i* P		**Pn**	**21 43 27.7**	**+4.4**
BUCA	**Burdur, Bucak-**	**3.75**	**52**	*i* P		**Pn**	**21 43 27.6**	**+3.3**
SLUM	**Salum**	**3.83**	**201**	P		**Pn**	**21 43 26.2**	**+0.9**
	baz=205							
SLUM				AMP			21 44 00.0	
	baz=205							
USAK	**Uak-Merkez**	**4.02**	**25**	*i* P		**Pn**	**21 43 28.9**	**+0.9**
KZIL	**AFYON_Kizioren**	**4.13**	**39**	*i* P		**Pn**	**21 43 32.6**	**+3.1**
DEMI	**Demirci**	**4.23**	**20**	*i* P		**Pn**	**21 43 31.1**	**+0.3**
DEMI				*i* S		**Sn**	**21 44 17.4**	**-2.6**
VLX	**Vlachokerasia**	**4.27**	**304**	P		**Pn**	**21 43 32.4**	**+1.0**
KEPZ	**Antalya-Kepez**	**4.27**	**63**	*i* P		**Pn**	**21 43 32.5**	**+1.2**
KEPZ				*i* S		**Sn**	**21 44 15.0**	**-5.8**
GDZ	**Gediz**	**4.52**	**27**	*i* P		**Pn**	**21 43 35.8**	**+0.9**
DURS	**Dursunbey**	**4.70**	**16**	*i* P		**Pn**	**21 43 39.2**	**+2.0**
YVAC	**Isparta, Yalva**	**4.76**	**47**	*i* P		**Pn**	**21 43 40.4**	**+2.3**
SWA2		**5.94**	**192**	P		**Pn**	**21 43 54.3**	**0.0**
	baz=194							
SWA2				S		Sn	21 44 57.4	-4.6
	baz=194							
SWA2				AMP			21 45 00.0	
	baz=194							
RYAN	**Fayoum**	**6.66**	**153**	P		**Pn**	**21 44 03.4**	**-0.7**
	baz=154							
RYAN				AMP			21 45 00.0	
	baz=154							
RYAN				S		Sn	21 45 11.8	-7.9
	baz=154							
GLL	**Jalalah**	**6.86**	**142**	P		Pn	21 44 05.5	-1.5
	baz=142							
BRTR	**Keskin Array B**	**7.12**	**47**	Pn		Pn	21 44 16.7	+6.1
	comp=N,0.1nm,0.3s,baz=316,slow=39,SNR=3.2							
SUZ	**Suez**	**7.28**	**134**	P		**Pn**	**21 44 11.5**	**-1.1**
	baz=135							
MMAI	**Mount Meron Ar**	**7.40**	**104**	Pn		Pn	21 44 11.9	-2.5
	comp=N,1.1nm,0.3s,baz=289,slow=10,SNR=8.6							
MMAI				Sn		**Sn**	**21 45 37.0**	**-1.2**
	comp=N,2.4nm,0.3s,baz=313,slow=30,SNR=7.4							
NBNS	**Bani Suef**	**7.47**	**148**	P		**Pn**	**21 44 14.6**	**-0.8**
	baz=149							
HFRF	**Wahat Farafira**	**8.01**	**171**	P		**Pn**	**21 44 22.4**	**-0.3**
	baz=171							
EIL	**Elat**	**8.73**	**126**	Pn		Pn	21 44 31.0	-1.6
	comp=N,0.4nm,0.3s,baz=314,slow=4.5,SNR=6.3							
EIL				Sn		Sn	21 46 04.0	-6.6
	comp=N,0.7nm,0.3s,baz=32,slow=16,SNR=2.6							
HBST	**Basata**	**8.88**	**129**	P		**Pn**	**21 44 33.5**	**-1.2**
	baz=129							
HDK1	**Dakhla**	**9.76**	**166**	P		**Pn**	**21 44 47.2**	**+0.4**
	baz=167							
AKASG	**Malin Array Be**	**15.71**	**6**	Pn		**Pn**	**21 46 10.8**	**+3.3**
	comp=N,0.6nm,0.3s,baz=194,slow=11,SNR=1.6							
GERES	**GERESS Array B**	**16.83**	**329**	P		**Pn**	**21 46 22.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=143,slow=13,SNR=6.3							
ESDC	**Sonseca Array**	**24.84**	**290**	P		**P**	**21 47 47.3**	**-1.3**
	comp=N,0.4nm,0.7s,baz=78,slow=10,SNR=6.9							
TORD	**Torodi Ar. Bea**	**31.51**	**232**	P		**P**	**21 48 47.1**	**-1.3**
	comp=N,0.4nm,0.4s,baz=34,slow=8.8,SNR=5.7							
KURBB	**Kurchatov Arra**	**40.10**	**51**	P		**P**	**21 50 01.7**	**+0.1**
	comp=N,0.5nm,0.4s,baz=276,slow=8.7,SNR=9.1							
MKAR	**Makanchi Array**	**42.67**	**57**	P		**P**	**21 50 22.9**	**+0.1**
	comp=N,0.5nm,0.5s,baz=270,slow=7.6,SNR=8.8							
ZALV	**Zalesovo Beam**	**44.06**	**46**	P		**P**	**21 50 33.3**	**-0.7**
	comp=N,0.9nm,0.5s,baz=273,slow=8.5,SNR=5.4							
SONM	**Songino Array**	**58.47**	**51**	P		**P**	**21 52 22.5**	**+0.2**
	comp=N,0.2nm,0.5s,baz=299,slow=9.5,SNR=2.3							

*IDC **19** 21:53:48.5±1.2,35˚.03N×27˚.09E,h0km,mb3.7/4, mb1 3.5/6,mb1mx3.2/63,mbtmp3.5/6,ML3.1/2,Error ellipse: s-maj=33.3km s-min=12.2km az=180.0*

*DDA **19** 21:53:49.4,34˚.95N×27˚.03E,h8km±4km,ML2.8*

*ISK **19** 21:53:50.2,35˚.07N×26˚.98E,h10km,ML3.1/14*

*THE **19** 21:53:51.8,35˚.15N×26˚.87E,h0km±1km,ML2.8/3,Error ellipse: s-maj=5.5km s-min=0.9km az=152.0*

*ATH **19** 21:53:51.9,35˚.14N×26˚.90E,h28km±5km,ML3.0/5,Error ellipse: s-maj=9.4km s-min=1.7km az=333.0*

*HLW **19** 21:53:52.8,35˚.05N×27˚.06E,h31km±17km,Ml3.1*

ISC 19 21:53:49.5±1.2,**35˚.00N**±0˚.04×**26˚.97E**±0˚.03,**h16**km±9km, **n74**,σ1°**69**/97,**mb3.6**/4,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KARP	**Karpathos**	**0.57**	**16**	P		**Pb**	**21 54 00.8**	**-0.3**
KARP				S		**Sb**	**21 54 08.4**	**-0.5**
KARP				AML		AML	21 54 10.3	
	comp=E,7599μm,0.4s							
KARP				AML		AML	21 54 10.9	
	comp=N,7785μm,0.4s							
KARP	**Karpathos**	**0.57**	**16**	P		**Pb**	**21 54 00.7**	**-0.4**
KARP				S		**Sb**	**21 54 08.5**	**-0.5**
	comp=N,3μm,0.2s							
KARP	**Karpathos**	**0.57**	**16**	PG		**Pg**	**21 54 00.3**	**-0.5**
KARP				SG		**Sb**	**21 54 08.3**	**-0.7**
ZKR	**Zakros**	**0.63**	**281**	P		**Pb**	**21 54 02.0**	**-0.1**
ZKR				S		**Sb**	**21 54 11.5**	**+0.8**
ZKR				AML		AML	21 54 15.8	
	comp=N,2058μm,0.3s							
ZKR				AML		AML	21 54 16.0	
	comp=E,3064μm,0.2s							
ZKR	**Zakros**	**0.63**	**281**	P		**Pb**	**21 54 02.1**	**-0.1**
ZKR				S		**Sb**	**21 54 11.4**	**+0.6**
	comp=E,1μm,0.3s							
ZKR	**Zakros**	**0.63**	**281**	PG		**Pb**	**21 54 02.5**	**+0.3**
ZKR				SG		**Sb**	**21 54 11.9**	**+1.1**
STIA	**Sitia Lasithi**	**0.75**	**286**	P		**Pb**	**21 54 04.3**	**+0.1**
STIA				S		**Sn**	**21 54 15.4**	**-1.1**
FRMA	**Ierapetra Chan**	**1.02**	**271**	P		**Pg**	**21 54 07.4**	**-1.8**
FRMA				S		**Sg**	**21 54 21.5**	**-1.1**
	comp=E,408nm,0.6s							
NPS	**Neapolis**	**1.15**	**284**	P		**Pn**	**21 54 11.6**	**+0.8**
NPS				AML		AML	21 54 32.7	
	comp=E,1604μm,0.5s							
NPS				AML		AML	21 54 32.8	
	comp=N,1572μm,0.6s							
NPS	**Neapolis**	**1.15**	**284**	P		**Pn**	**21 54 11.7**	**+0.8**
ARG	**Arkhangelos**	**1.54**	**37**	P		**Pg**	**21 54 18.7**	**-0.3**
ARG	**Arkhangelos**	**1.54**	**37**	P		**Pg**	**21 54 18.6**	**-0.4**
ARG				S		**Sg**	**21 54 39.6**	**+0.6**
ARG	**Arkhangelos**	**1.54**	**37**	PN		**Pb**	**21 54 17.8**	**+0.2**
HRKL	**Herakleio**	**1.56**	**282**	PN		**Pg**	**21 54 19.1**	**-0.5**
KSTL	**Kastelli Herak**	**1.59**	**282**	P		**Pn**	**21 54 15.6**	**-1.4**
NIS1	**Nisyros Isl.**	**1.61**	**6**	PN		**Pb**	**21 54 18.7**	**-0.1**
IDI	**Anoyia**	**1.73**	**280**	Pg		**Pg**	**21 54 22.3**	**-0.5**
	comp=N,6.9nm,0.3s,baz=42,slow=5.4,SNR=59							
IDI				Lg		Lg	21 54 47.0	
	comp=N,17nm,0.3s,baz=315,slow=16,SNR=8.8							
IDI				LR		LR	21 55 20.1	
	comp=N,38nm,21.6s,baz=90,slow=50							
IDI	**Anoyia**	**1.73**	**280**	P		**Pg**	**21 54 21.6**	**-1.2**
IDI				AML		AML	21 54 52.2	
	comp=E,410μm,0.5s							
IDI				AML		AML	21 54 53.5	
	comp=N,319μm,0.3s							
IDI	**Anoyia**	**1.73**	**280**	PN		**Pg**	**21 54 21.8**	**-1.0**
KOSK	**Kos Island**	**1.75**	**0**	PN		**Pb**	**21 54 20.9**	**-0.3**
SIVA	**Sivas**	**1.78**	**271**	P		**Pg**	**21 54 23.1**	**-0.5**
SIVA				AML		AML	21 54 55.2	
	comp=N,757μm,0.7s							
SIVA				AML		AML	21 55 00.4	
	comp=E,746μm,0.6s							
DATC	**Datca-Mugla**	**1.84**	**17**	PN		**Pn**	**21 54 21.7**	**+1.2**
SANT	**Santorini**	**1.84**	**318**	P		**Pn**	**21 54 21.5**	**+1.0**
SANT	**Santorini**	**1.84**	**318**	PN		**Pn**	**21 54 21.2**	**+0.7**
THR6	**Thira Island,**	**1.86**	**317**	P		**Pn**	**21 54 21.6**	**+0.8**
THT2	**Imerovigli**	**1.91**	**319**	PN		**Pn**	**21 54 22.0**	**+0.6**
TURN	**Turunc**	**2.05**	**30**	*i* P		**Pn**	**21 54 25.0**	**+1.7**
TURN				*i* S		**Sn**	**21 54 48.4**	**-0.2**
TURN				IAML			21 55 02.0	
	comp=N,58nm,0.4s							
TURN	**Turunc**	**2.05**	**30**	PN		**Pn**	**21 54 25.1**	**+1.7**
BDRM	**Kayabasi**	**2.10**	**10**	*i* P		**Pn**	**21 54 24.5**	**+0.5**
BDRM				*i* S		**Sn**	**21 54 46.3**	**-3.4**
DALY	**Dalyan (Mula)**	**2.27**	**36**	*i* P		**Pn**	**21 54 28.2**	**+2.0**
DALY				*i* S		**Sb**	**21 54 58.6**	**+0.8**
DALY				IAML			21 55 11.0	
	comp=N,78nm,0.7s							
DALY				IAML			21 55 17.0	
	comp=E,43nm,0.8s							
DALY	**Dalyan (Mula)**	**2.27**	**36**	PN		**Pn**	**21 54 28.3**	**+2.0**
VAM	**Vamos**	**2.31**	**281**	P		**Pb**	**21 54 30.4**	**-0.3**
VAM	**Vamos**	**2.31**	**281**	P		**Pn**	**21 54 28.9**	**+2.0**
FETY	**Fethiye**	**2.37**	**46**	*i* P		**Pn**	**21 54 27.3**	**-0.4**
APE	**Apeiranthos**	**2.37**	**331**	P		**Pn**	**21 54 28.1**	**+0.3**
APE	**Apeiranthos**	**2.37**	**331**	PN		**Pn**	**21 54 28.7**	**+0.9**
GVDS	**Gavdos**	**2.37**	**267**	PN		**Pb**	**21 54 31.3**	**-0.6**
GVD	**Gavdhos**	**2.38**	**267**	PN		**Pb**	**21 54 30.6**	**-1.3**
YER	**Yerkesik**	**2.38**	**26**	P		**Pn**	**21 54 29.4**	**+1.5**
YER	**Yerkesik**	**2.38**	**26**	PN		**Pn**	**21 54 29.3**	**+1.4**
AKAS	**Kas**	**2.47**	**59**	*i* P		**Pn**	**21 54 29.1**	**-0.2**
AKAS				*i* S		**Sn**	**21 54 56.0**	**-3.2**
AKAS				IAML			21 55 25.0	
	comp=N,50nm,1.1s							
AKAS				IAML			21 55 49.0	
	comp=E,38nm,1.9s							
AKAS	**Kas**	**2.47**	**59**	PN		**Pn**	**21 54 30.3**	**+1.0**
IMMV	**Iera Moni Meta**	**2.49**	**281**	P		**Pb**	**21 54 32.3**	**-1.6**
IMMV	**Iera Moni Meta**	**2.49**	**281**	P		**Pb**	**21 54 31.8**	**-2.1**
IMMV	**Iera Moni Meta**	**2.49**	**281**	PN		**Pb**	**21 54 32.4**	**-1.5**
MULA	**Mugla, Merkez-**	**2.50**	**25**	*i* P		**Pn**	**21 54 31.5**	**+1.9**
MULA				IAML			21 55 21.0	
	comp=E,46nm,0.7s							
GCAM	**G?zelcaml?**	**2.70**	**4**	*i* P		**Pn**	**21 54 31.3**	**-1.0**
GCAM	**G?zelcaml?**	**2.70**	**4**	PN		**Pn**	**21 54 34.3**	**+2.0**
AYDN	**Tasoluk**	**2.75**	**15**	*i* P		**Pn**	**21 54 34.7**	**+1.6**
AYDN				*i* S		**Sn**	**21 55 07.9**	**+1.9**
CAEL	**Denizli, Camel**	**2.85**	**41**	*i* P		**Pn**	**21 54 36.3**	**+1.9**
CAEL				IAML			21 55 37.0	
	comp=N,74nm,1.1s							
CAEL				IAML			21 55 42.0	
	comp=E,84nm,0.8s							
ELL	**Elmali**	**2.95**	**53**	PN		**Pn**	**21 54 37.9**	**+2.0**
AYDB	**Zeytinkoy-Aydi**	**3.03**	**14**	PN		**Pn**	**21 54 38.0**	**+1.0**
AKUM	**Antalya-Kumluc**	**3.04**	**63**	*i* P		**Pn**	**21 54 37.0**	**0.0**
AKUM				*i* S		**Sn**	**21 55 10.4**	**-2.7**
GOLH	**Golhisar**	**3.06**	**42**	*i* P		**Pn**	**21 54 39.0**	**+1.7**
GOLH				*i* S		**Sn**	**21 55 15.2**	**+1.5**
GOLH				IAML			21 55 39.0	
	comp=N,26nm,0.9s							
KORT	**Korkueli**	**3.39**	**53**	*i* P		**Pn**	**21 54 43.9**	**+2.0**
KORT				IAML			21 55 30.0	
	comp=N,21nm,1.3s							
KORT				IAML			21 55 53.0	
	comp=E,21nm,0.8s							
BRDR	**BURDUR-Merkez**	**3.67**	**42**	*i* P		**Pn**	**21 54 47.6**	**+2.0**
MANT	**Manisa**	**3.71**	**20**	*i* P		**Pn**	**21 54 46.8**	**+0.5**
SLUM	**Salum**	**3.80**	**203**	P		**Pn**	**21 54 50.5**	**+3.2**
	baz=205							
SLUM				AMP			21 55 00.0	
	baz=205							
SLUM				S		**Sn**	**21 55 31.5**	**-0.2**
	baz=205							
USAK	**Uak-Merkez**	**4.05**	**23**	*i* P		**Pn**	**21 54 51.3**	**+0.4**
USAK				IAML			21 55 37.0	
	comp=E,27nm,2.4s							
KEPZ	**Antalya-Kepez**	**4.21**	**62**	*i* P		**Pn**	**21 54 54.0**	**+1.0**
KEPZ				*i* S		**Sn**	**21 55 41.2**	**-0.7**
DEMI	**Demirci**	**4.27**	**19**	*i* P		**Pn**	**21 54 54.5**	**+0.6**
DEMI				*i* S		**Sn**	**21 55 39.7**	**-3.7**
GAZI	**Gazipasa**	**4.52**	**73**	*i* P		**Pn**	**21 54 57.3**	**0.0**
GAZI				*i* S		**Sn**	**21 55 43.6**	**-6.0**
GAZI				IAML			21 55 51.0	
	comp=N,22nm,0.8s							
GAZI				IAML			21 55 54.0	
	comp=E,15nm,0.7s							
DURS	**Dursunbey**	**4.75**	**14**	*i* P		**Pn**	**21 55 00.6**	**+0.1**
DURS				IAML			21 56 18.0	
	comp=N,12nm,2.0s							
SWA2		**5.88**	**193**	P		**Pn**	**21 55 18.6**	**+2.6**
	baz=194							
SWA2				AMP			21 56 00.0	
	baz=194							
SWA2				S		**Sn**	**21 56 22.3**	**-0.8**
	baz=194							
RYAN	**Fayoum**	**6.53**	**154**	P		**Pn**	**21 55 27.5**	**+2.5**
	baz=154							
RYAN				AMP			21 56 00.0	
	baz=154							
GLL	**Jalalah**	**6.73**	**142**	P		**Pn**	**21 55 29.7**	**+2.0**
	baz=142							
MMAI	**Mount Meron Ar**	**7.27**	**103**	Pn		**Pn**	**21 55 36.1**	**+0.9**
	comp=N,0.4nm,0.3s,baz=268,slow=11,SNR=11							
MMAI				Sn		**Sn**	**21 56 54.1**	**-3.4**
	comp=N,0.3nm,0.3s,baz=328,slow=14,SNR=1.4							
HFRF	**Wahat Farafira**	**7.91**	**171**	P		**Pn**	**21 55 47

PDA	**Ponta Delgada**	**2.91**	**108**	*eP*		**Pn**	**22 03 06.5**	**-0.9**
PDA				*eS*		**Sn**	**22 03 39.0**	**-3.5**
PDA				A		A	22 03 42.0	
	452nm,0.3s							
GRON	**Grota Negra**	**3.00**	**107**	*eP*		**Pn**	**22 03 09.0**	**+0.3**
GRON				*eS*		**Sn**	**22 03 43.9**	**-1.0**
GRON				A		A	22 03 48.1	
	272nm,0.5s							
CMLA	**Cha da Macela**	**3.00**	**107**	*eP*		**Pn**	**22 03 08.3**	**-0.5**
CMLA				*eS*		**Sn**	**22 03 41.2**	**-3.8**
CMLA				A		A	22 03 47.4	
	696nm,0.5s							
CMLA	**Cha da Macela**	**3.00**	**107**	Pn		**Pn**	**22 03 08.1**	**-0.6**
CMLA				Sn		**Sn**	**22 03 44.0**	**-1.0**
PCALD	**Caldeiras da R**	**3.02**	**106**	*eP*		**Pn**	**22 03 08.3**	**-0.7**
PCALD				*eS*		**Sn**	**22 03 41.6**	**-3.8**
PCALD				A		A	22 03 46.1	
	415nm,0.3s							
BART	**Pico Bartolome**	**3.27**	**105**	*eP*		**Pn**	**22 03 11.4**	**-1.0**
BART				*eS*		**Sn**	**22 03 47.5**	**-4.1**
BART				A		A	22 03 58.2	
	426nm,0.4s							
PSMA	**Santa Maria**	**3.61**	**117**	⇓*iP*		**Pn**	**22 03 15.7**	**-1.4**
PSMA				*eS*		**Sn**	**22 03 55.9**	**-4.1**
PSMA				A		A	22 03 57.0	
	215nm,0.2s							
PSMN	**Pico do Norte,**	**3.65**	**117**	⇓*iP*		**Pn**	**22 03 16.3**	**-1.4**
PSMN				*eS*		**Sn**	**22 03 56.5**	**-4.5**
PSMN				A		A	22 03 59.7	
	182nm,0.4s							
PMTG	**Montargil**	**16.30**	**82**	*eP*		**P**	**22 06 12.4**	**-0.6**
	45nm,1.4s							
POLO	**Lamas de Olo**	**16.56**	**74**	*eP*		**P**	**22 06 15.6**	**-0.5**
	14nm,1.8s							
PBDV	**Barranco-do-Ve**	**16.79**	**88**	*eP*		**P**	**22 06 21.0**	**+2.4**
	35nm,1.5s							
PESTR	**Estremoz**	**16.81**	**83**	Pn		**Pn**	**22 06 17.0**	**+0.5**
PCBR	**Castelo Branco**	**16.82**	**79**	*eP*		**P**	**22 06 21.6**	**+2.8**
	22nm,1.4s							
MVO	**Moncorvo**	**17.13**	**75**	*eP*		**P**	**22 06 23.0**	**+0.6**
	30nm,1.9s							
PBAR	**Barrancos**	**17.33**	**85**	*eP*		**P**	**22 06 26.1**	**+1.7**
	19nm,1.3s							
PAB	**San Pablo**	**19.25**	**80**			**Pn**	**22 06 46.3**	**-0.3**
ESDC	**Sonseca Array**	**19.53**	**79**	P		**Pn**	**22 06 50.6**	**+0.6**
	0.1nm,0.3s,baz=278,slow=9.2,SNR=4.6							
ESDC				LR		LR	22 13 04.0	
	comp=Z,252nm,19.6s,baz=310,slow=33							
ESDC	**Sonseca Array**	**19.53**	**79**	P		**P**	**22 06 49.3**	**+0.5**
MDT	**Midelt**	**20.73**	**99**	P		Pn	22 07 04.8	+0.5
	3.1nm,0.9s,baz=313,slow=8.9,SNR=3.8							
MDT				LR		LR	22 14 12.9	
	comp=Z,79nm,18.1s,baz=296,slow=34							
EKA	**Eskdalemuir Ar**	**24.08**	**38**	P		**P**	**22 07 36.8**	**+0.2**
	1.9nm,0.7s,baz=243,slow=6.2,SNR=5.4							
SNF	**Seneffe**	**26.33**	**52**	*dP*		**P**	**22 07 57.5**	**+0.5**
SNF				*dx*		x	22 08 08.6	
DOU	**Dourbes**	**26.43**	**53**	*dx*		P	22 08 09.7	+12
BORG	**Borgarnes**	**26.48**	**8**	LR		LR	22 15 36.1	
	comp=Z,899nm,21.8s,baz=182,slow=30							
BMRD	**Maredsous**	**26.59**	**53**	*dx*		P	22 08 10.9	+12
BGES	**Gesves**	**26.80**	**53**	*dx*		P	22 08 13.2	+12
BGES				*dP*	nPn	**PnPn**	**22 08 40.4**	**-2.1**
WLF	**Walferdange**	**27.34**	**55**	*dP*		**P**	**22 08 06.4**	**+0.3**
WLF				*dx*		x	22 08 16.3	
MEM	**Membach**	**27.43**	**53**	*dx*		P	22 08 18.0	+11
DAVOX	**Davos/Dischmat**	**29.52**	**61**	P		**P**	**22 08 28.7**	**+2.8**
	2.6nm,0.9s,baz=325,slow=5.6,SNR=4.3							
DAVOX				LR		LR	22 18 30.8	
	comp=Z,207nm,20.4s,baz=264,slow=33							
MOTA	**Moosalm**	**30.38**	**60**	*eP*		**P**	**22 08 35.3**	**+1.9**
	3.4nm,0.9s							
WATA	**Walderalm**	**30.70**	**60**	*eP*		**P**	**22 08 39.1**	**+2.9**
	11nm,1.4s							
WTTA	**Wattenberg**	**30.74**	**61**	*eP*		**P**	**22 08 39.1**	**+2.5**
	5.0nm,1.2s							
ABTA	**Abfaltersbach**	**31.34**	**62**	*eP*		**P**	**22 08 42.0**	**+0.3**
	6.1nm,1.1s							
KBA	**Koelnbreinsper**	**31.90**	**61**	*eP*		**P**	**22 08 48.8**	**+2.0**
	5.9nm,1.2s							
CLL	**Collm**	**31.90**	**53**	*eS*		**S**	**22 14 00.0**	**+2.4**
CLL				Lm		MLR	22 19 00.0	
	comp=Z,400nm,22.0s							
KHC	**Kasperske Hory**	**32.10**	**57**	*eP*		P	22 08 53.1	+4.7
GERES	**GERESS Array B**	**32.17**	**58**	P		**P**	**22 08 52.4**	**+3.4**
	comp=Z,0.6nm,0.8s,baz=264,slow=7.8,SNR=6.0							
GERES	**GERESS Array B**	**32.17**	**58**	P		**P**	**22 08 49.7**	**+0.7**
MOA	**Molln**	**32.52**	**59**	*eP*		**P**	**22 08 54.4**	**+2.2**
	comp=Z,13nm,1.9s							
CKRC	**Cesky Krumlov**	**32.57**	**58**	*eP*		**P**	**22 08 53.9**	**+1.4**
OBKA	**Obir**	**32.74**	**62**	P		**P**	**22 08 56.0**	**+1.9**
	comp=Z,9.8nm,1.2s							
KOWA	**Kowa**	**32.76**	**131**	P		**P**	**22 08 55.7**	**+1.4**
	comp=Z,1.7nm,0.5s,baz=306,slow=3.4,SNR=6.5							
KOWA	**Kowa**	**32.76**	**131**	P		**P**	**22 08 53.1**	**-1.3**
NOA	**NORSAR Array B**	**33.47**	**35**	P		**P**	**22 09 02.2**	**+2.0**
	comp=Z,1.2nm,1.1s,baz=247,slow=8.1,SNR=2.9							
NOA				LR		LR	22 20 55.3	
	comp=Z,421nm,19.5s,baz=250,slow=33							
TAM	**Tamanrasset**	**33.52**	**108**	P		**P**	**22 09 00.0**	**-1.2**
TAM				IAmb		IAmb	22 09 05.7	
	comp=Z,12nm,1.1s							
OSTC	**Ostas**	**33.87**	**55**	*eP*		**P**	**22 09 05.6**	**+1.8**
DPC	**Dobruska-Polom**	**33.93**	**55**	*eP*		P	22 09 09.9	+5.5
VRAC	**Vranov**	**34.08**	**57**	LR		LR	22 22 04.4	
	comp=Z,137nm,19.8s,baz=254,slow=35							
VRAC	**Vranov**	**34.08**	**57**	*eP*		**P**	**22 09 06.5**	**+0.9**
KRLC	**Kraliky**	**34.21**	**55**	*eP*		**P**	**22 09 09.5**	**+2.6**
HFS	**Hagfors**	**34.28**	**37**	LR		LR	22 22 00.5	
	comp=Z,351nm,18.4s,baz=272,slow=34							
OJC	**Ojcow**	**36.16**	**55**	P		**P**	**22 09 23.4**	**-0.1**
CRVS	**Cervenica-Dubn**	**37.29**	**57**	*eP*		P	22 09 41.2	+8.0
TOA0	**Torodi Ar. Sit**	**37.33**	**125**	P		**P**	**22 09 33.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**37.33**	**125**	P		**P**	**22 09 34.3**	**+0.4**
	comp=Z,3.2nm,1.0s,baz=316,slow=8.2,SNR=11							
TORD				LR		LR	22 23 23.8	
	comp=Z,73nm,19.0s,baz=295,slow=34							
TORD	**Torodi Ar. Bea**	**37.33**	**125**	P		**P**	**22 09 33.3**	**-0.5**
DBIC	**Dimbokro**	**38.72**	**139**	P		**P**	**22 09 47.1**	**+1.5**
	comp=Z,2.6nm,0.6s,baz=299,slow=8.1,SNR=5.2							
DBIC				LR		LR	22 23 45.0	
	comp=Z,142nm,21.1s,baz=303,slow=33							
DBIC	**Dimbokro**	**38.72**	**139**	P		**P**	**22 09 44.6**	**-0.9**
DBIC				IAmb		IAmb	22 09 55.3	
	comp=Z,9.8nm,1.1s							
FINES	**FINESS Array B**	**40.48**	**37**	P		**P**	**22 10 01.5**	**+1.8**
	comp=Z,3.4nm,0.8s,baz=260,slow=15,SNR=2.5							
FINES				LR		LR	22 25 33.6	
	comp=Z,418nm,19.2s,baz=244,slow=34							
ARCES	**ARCESS Array B**	**42.08**	**25**	LR		LR	22 24 28.3	
	comp=Z,234nm,21.7s,baz=240,slow=32							
AKASG	**Malin Array Be**	**42.13**	**54**	P		**P**	**22 10 14.6**	**+1.1**
	comp=Z,7.2nm,1.1s,baz=275,slow=8.0,SNR=12							
AKASG				LR		LR	22 27 36.8	
	comp=Z,171nm,18.1s,baz=285,slow=36							
AKASG	**Malin Array Be**	**42.13**	**54**	P		**P**	**22 10 13.9**	**+0.4**
SPITS	**Spitsbergen Ar**	**43.74**	**12**	LR		LR	22 24 33.7	
	comp=Z,120nm,18.2s,baz=165,slow=30							
FCC	**Fort Churchill**	**45.23**	**318**	P		**P**	**22 10 38.5**	**+0.2**
FCC				IAmb		IAmb	22 10 39.8	
	comp=Z,6.7nm,1.1s							
FVM	**French Village**	**47.25**	**289**	P		**P**	**22 10 54.0**	**-0.5**
ULM	**Lac du Bonnet**	**47.47**	**307**	LR		LR	22 29 58.4	
	comp=Z,58nm,18.3s,baz=120,slow=35							
BRTR	**Keskin Array B**	**47.75**	**68**	LR		LR	22 30 19.7	
	comp=Z,108nm,21.7s,baz=284,slow=35							
P40A	**Paris**	**47.90**	**292**	P		**P**	**22 10 59.2**	**-0.3**
H10N2	**ASCENSION HYDR**	**48.27**	**160**	T		T	23 02 12.5	
	baz=345,slow=75,SNR=164							
H10N3	**ASCENSION HYDR**	**48.28**	**160**	T		T	23 02 13.1	
	baz=345,slow=75,SNR=148							
H10N1	**ASCENSION HYDR**	**48.29**	**160**	T		T	23 02 13.9	
	baz=345,slow=75,SNR=130							
R40A	**Maddies Statio**	**48.50**	**290**	P		**P**	**22 11 03.9**	**-0.3**
LCAR	**Lake Charles**	**48.50**	**287**	P		**P**	**22 11 03.6**	**-0.6**
LCAR				IAmb		IAmb	22 11 04.2	
	comp=Z,6.5nm,1.0s							
MGMO	**Mountain Grove**	**48.92**	**289**	P		**P**	**22 11 07.0**	**-0.5**
H10S3	**ASCENSION HYDR**	**49.30**	**161**	T		T	23 03 32.1	
	baz=235,slow=74,SNR=34							
H10S2	**ASCENSION HYDR**	**49.31**	**161**	T		T	23 03 31.5	
	baz=345,slow=74,SNR=17							
S39A	**Bolivar**	**49.49**	**290**	P		**P**	**22 11 11.6**	**-0.2**
U40A	**Yellville**	**49.66**	**288**	P		**P**	**22 11 12.5**	**-0.6**
ECSD	**EROS Data Cent**	**49.73**	**299**	P		**P**	**22 11 13.0**	**-0.5**
ECSD				IAmb		IAmb	22 11 14.4	
	comp=Z,7.3nm,1.1s							
X40A	**Basin Creek Fa**	**50.39**	**286**	P		**P**	**22 11 18.0**	**-0.7**
X40A				IAmb		IAmb	22 11 18.4	
	comp=Z,5.8nm,0.7s							
W39A	**Magazine**	**50.81**	**287**	P		**P**	**22 11 21.2**	**-0.7**
W39A				IAmb		IAmb	22 11 22.2	
	comp=Z,9.8nm,1.1s							
MIAR	**Mount Ida**	**50.93**	**286**	P		**P**	**22 11 22.0**	**-0.7**
MIAR				IAmb		IAmb	22 11 23.1	
	comp=Z,8.6nm,0.9s							
MMAI	**Mount Meron Ar**	**51.67**	**75**	P		**P**	**22 11 31.9**	**+3.6**
	comp=Z,2.9nm,0.9s,baz=303,slow=7.9,SNR=3.6							
KBZ	**Khabaz**	**52.85**	**60**	LR		LR	22 36 08.3	
	comp=Z,48nm,18.9s,baz=294,slow=38							
BELG	**Belogornoye**	**52.99**	**48**	LR		LR	22 34 22.7	
	comp=Z,367nm,18.6s,baz=314,slow=36							
ROSC	**El Rosal**	**53.00**	**242**	LR		LR	22 31 32.6	
	comp=Z,236nm,21.8s,baz=50,slow=33							
YKA	**Yellowknife Ar**	**54.52**	**325**	P		**P**	**22 11 48.6**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=76,slow=7.5,SNR=6.6							
YKA				LR		LR	22 32 14.3	
	comp=Z,97nm,18.4s,baz=0.0,slow=33							
BDFB	**Brasilia**	**56.88**	**202**	LR		LR	22 32 41.3	
	comp=Z,339nm,21.7s,baz=4.8,slow=32							
SAML	**Samuel**	**57.02**	**221**	P		**P**	**22 12 06.1**	**-1.2**
SAML				IAmb		IAmb	22 12 08.1	
	comp=Z,6.1nm,1.1s							
JCT	**Junction City**	**57.45**	**285**	P		**P**	**22 12 09.5**	**-0.9**
JCT				IAmb		IAmb	22 12 10.5	
	comp=Z,12nm,1.1s							
ARU	**Arti**	**57.64**	**41**	P		**P**	**22 12 12.3**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=303,slow=6.0,SNR=5.6							
ARU	**Arti**	**57.64**	**41**	P		**P**	**22 12 11.3**	**+0.1**
ARU				IAmb		IAmb	22 12 13.6	
	comp=Z,4.6nm,1.1s							
MSTX	**Muleshoe**	**58.02**	**290**	P		**P**	**22 12 13.4**	**-1.0**
MSTX				IAmb		IAmb	22 12 15.1	
	comp=Z,3.9nm,0.8s							
BW06	**Boulder Array**	**58.85**	**302**	P		**P**	**22 12 19.5**	**-0.7**
BW06				IAmb		IAmb	22 12 20.1	
	comp=Z,4.9nm,1.1s							
PD31	**Pinedale Array**	**58.85**	**302**	P		**P**	**22 12 19.6**	**-0.7**
PD31				IAmb		IAmb	22 12 20.1	
	comp=Z,3.7nm,1.1s							
PDAR	**Pinedale Array**	**58.85**	**302**	P		**P**	**22 12 19.2**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=64,slow=6.8,SNR=14							
PDAR				LR		LR	22 36 31.6	
	comp=Z,88nm,19.7s,baz=110,slow=35							
PDAR	**Pinedale Array**	**58.85**	**302**	P		**P**	**22 12 19.5**	**-0.7**
WALA	**Waterton Lakes**	**58.93**	**310**	P		**P**	**22 12 20.3**	**-0.3**
INK	**Inuvik**	**59.61**	**335**	P		**P**	**22 12 23.8**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=80,slow=9.0,SNR=4.7							
INK	**Inuvik**	**59.61**	**335**	P		**P**	**22 12 25.0**	**+0.2**
AKTO	**Aktyubinsk**	**59.76**	**48**	P		**P**	**22 12 27.7**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=297,slow=6.4,SNR=5.0							
AKTO				LR		LR	22 38 31.1	
	comp=Z,242nm,18.5s,baz=304,slow=36							
TX31	**Lajitas Ar. Si**	**60.93**	**286**	P		**P**	**22 12 33.6**	**-1.0**
TX32	**Lajitas Array**	**60.93**	**286**	P		**P**	**22 12 33.7**	**-0.9**
TX32				IAmb		IAmb	22 12 35.4	
	comp=Z,7.2nm,1.1s							
TXAR	**Lajitas Array**	**60.93**	**286**	P		**P**	**22 12 34.5**	**-0.1**
	comp=Z,3.4nm,0.8s,baz=79,slow=7.8,SNR=38							
TXAR				LR		LR	22 36 48.0	
	comp=Z,38nm,20.9s,baz=0.0,slow=34							
TXAR	**Lajitas Array**	**60.93**	**286**	P		**P**	**22 12 33.7**	**-0.9**
NEW	**Newport**	**61.19**	**310**	LR		LR	22 37 21.1	
	comp=Z,157nm,20.8s,baz=42,slow=34							
NEW	**Newport**	**61.19**	**310**	P		**P**	**22 12 35.5**	**-0.5**
TMUT	**Trail Mountain**	**61.53**	**299**	P		**P**	**22 12 37.8**	**-1.0**
TMUT				IAmb		IAmb	22 12 39.8	
	comp=Z,4.9nm,1.0s							
BGU	**Big Grassy Mou**	**61.99**	**301**	P		**P**	**22 12 41.1**	**-0.6**
BGU				IAmb		IAmb	22 12 42.3	
	comp=Z,4.4nm,1.1s							
DUG	**Dugway, Tooele**	**62.19**	**301**	P		**P**	**22 12 42.4**	**-0.7**
DUG				IAmb		IAmb	22 12 44.1	
	comp=Z,4.0nm,0.9s							
TCRU	**Three Creeks R**	**62.71**	**299**	P		**P**	**22 12 45.6**	**-1.0**
PKCU	**Pink Cliffs**	**63.18**	**298**	P		**P**	**22 12 48.9**	**-1.0**
PKCU				IAmb		IAmb	22 12 50.9	
	comp=Z,7.1nm,1.1s							
WUAZ	**Wupatki**	**63.48**	**295**	P		**P**	**22 12 50.9**	**-0.8**
WUAZ				IAmb		IAmb	22 12 53.7	
	comp=Z,7.1nm,1.0s							
ELK	**Elko**	**63.55**	**302**	P		**P**	**22 12 51.6**	**-0.6**
PSUT	**Pine Spring**	**63.70**	**299**	P		**P**	**22 12 52.4**	**-0.8**
PSUT				IAmb		IAmb	22 12 54.6	
	comp=Z,4.7nm,1.0s							
CCUT	**Cedar City**	**63.85**	**298**	P		**P**	**22 12 53.3**	**-0.9**
CCUT				IAmb		IAmb	22 12 55.7	
	comp=Z,4.2nm,1.0s							
X16A	**Lo Mia Camp, P**	**64.08**	**294**	P		**P**	**22 12 54.9**	**-0.8**
X16A				IAmb		IAmb	22 12 58.1	
	comp=Z,4.3nm,1.1s							
J08A	**Circle Bar Ran**	**64.36**	**306**	P		**P**	**22 12 56.6**	**-0.6**
WVOR	**Wild Horse Val**	**64.92**	**305**	P		**P**	**22 13 00.5**	**-0.5**
WVOR				IAmb		IAmb	22 13 02.7	
	comp=Z,5.6nm,1.0s							
PRN	**Pahroc Range**	**65.09**	**299**	P		**P**	**22 13 01.4**	**-0.8**
PRN				IAmb		IAmb	22 13 04.0	
	comp=Z,6.4nm,1.1s							
LPAZ	**La Paz**	**65.77**	**221**	P		**P**	**22 13 07.0**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=28,slow=6.9,SNR=12							
LPAZ				LR		LR	22 39 27.2	
	comp=Z,170nm,20.8s,baz=12,slow=34							
LPAZ	**La Paz**	**65.77**	**221**	P		**P**	**22 13 05.2**	**-2.0**
ILAR	**Eielson Array**	**66.00**	**335**	P		**P**	**22 13 07.5**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=60,slow=5.9,SNR=4.3							
ILAR				LR		LR	22 38 16.4	
	comp=Z,60nm,19.8s,baz=23,slow=33							
TPH	**Tonopah**	**66.22**	**300**	P		**P**	**22 13 08.7**	**-0.9**
KVN	**Kaiserville**	**66.30**	**302**	P		**P**	**22 13 09.5**	**-0.6**
KVN				IAmb		IAmb	22 13 10.6	
	comp=Z,6.3nm,1.1s							
NV11	**Mina Array Sit**	**66.66**	**301**	P		**P**	**22 13 11.3**	**-1.0**
NVAR	**Mina Array Bea**	**66.76**	**301**	P		**P**	**22 13 12.1**	**-0.9**
	comp=Z,0.9nm,1.0s,baz=50,slow=8.4,SNR=4.9							
NVAR				LR		LR	22 41 33.2	
	comp=Z,52nm,19.8s,baz=108,slow=35							
BEKR	**Beckworth**	**67.36**	**304**	P		**P**	**22 13 15.0**	**-1.8**
BEKR				IAmb		IAmb	22 13 17.0	
	comp=Z,3.7nm,1.2s							
PB16	**IPOC Station P**	**68.19**	**221**	P		**P**	**22 13 20.8**	**-1.8**
PB16				IAmb		IAmb	22 13 23.3	
	comp=Z,4.4nm,0.9s							
CPUP	**Villa Florida**	**69.87**	**207**	LR		LR	22 40 49.4	
	comp=Z,108nm,21.5s,baz=38,slow=33							
KURBB	**Kurchatov Arra**	**70.80**	**40**	P		**P**	**22 13 38.9**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=312,slow=6.0,SNR=13							
ZALV	**Zalesovo Beam**	**71.67**	**35**	P		**P**	**22 13 43.7**	**+0.9**
	comp=Z,1.9nm,0.9s,baz=302,slow=8.5,SNR=5.8							
ZALV	**Zalesovo Beam**	**71.67**	**35**	P		**P**	**22 13 42.9**	**+0.1**
GAR	**Garm**	**73.13**	**53**	P		**P**	**22 13 51.7**	**-0.4**
AAK	**Ala-Archa**	**73.49**	**48**	P		**P**	**22 13 55.8**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=301,slow=9.7,SNR=1.7							
MKAR	**Makanchi Array**	**75.16**	**41**	P		**P**	**22 14 04.9**	**+1.2**
	comp=Z,1.6nm,0.8s,baz=332,slow=6.8,SNR=8.6							
MKAR	**Makanchi Array**	**75.16**	**41**	P		**P**	**22 14 03.7**	**0.0**
LSZ	**Lusaka**	**75.85**	**123**	P		**P**	**22 14 09.8**	**+1.8**
	comp=Z,3.0nm,1.1s,baz=349,slow=6.5,SNR=5.0							
LSZ	**Lusaka**	**75.85**	**123**	P		**P**	**22 14 07.2**	**-0.9**
WMQ	**Urumqi**	**79.98**	**41**	*eP*		**P**	**22 14 32.8**	**+2.1**
BOSA	**Boshof**	**84.05**	**134**	LR		LR	22 49 38.9	
	comp=Z,73nm,19.8s,baz=348,slow=34							
SONM	**Songino Array**	**85.18**	**28**	P		**P**	**22 14 59.0**	**+1.2**
	comp=Z,2.1nm,1.0s,baz=309,slow=4.9,SNR=13							
SONM	**Songino Array**	**85.18**	**28**	P		**P**	**22 14 57.6**	**-0.2**
ULN	**Ulaanbaatar**	**85.40**	**28**	P		**P**	**22 14 58.5**	**-0.4**
ULN				IAmb		IAmb	22 15 01.1	
	comp=Z,4.8nm,1.0s							
PLCA	**Paso Flores**	**87.64**	**210**	LR		LR	22 52 54.8	
	comp=Z,117nm,21.1s,baz=32,slow=35							
PETK	**Petropavlovsk-**	**88.36**	**356**	LR		LR	22 53 49.7	
	comp=Z,212nm,18.2s,baz=241,slow=35							
GTA	**Gaotai**	**89.27**	**37**	*eP*		**P**	**22 15 15.5**	**-2.3**
GTA				pP		pP	22 15 20.3	+0.8
GTA				sP		pwP	22 15 23.3	+1.3
GTA				pmax		pmax		
	comp=Z,1.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**93.07**	**29**	*eP*		**P**	**22 15 33.4**	**-1.9**
ASAR	**Alice Springs**	**159.19**	**49**	PKPab		**PKPab**	**22 22 56.7**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=326,slow=4.8,SNR=7.1							

IDC ***19*** *22:03:47.3±1.2,30.47N×142.91E,h0km,mb3.8/6, mb1 3.9/9,mb1mx3.5/63,mbtmp3.8/9,ML3.2/3,Error ellipse: s-maj=39.8km s-min=17.6km az=77.0*
JMA ***19*** *22:03:49.9±0.2,30.54N×142.74E,h53km,M3.8*
NEIC ***19*** *22:03:51.3±1.6,30.45N±0.05×142.62E±0.09,h27km±8km, mb4.5/4,Error ellipse: s-maj=12.5km s-min=4.2km az=121.0*

ISC 19 22:03:50.7±0.9,30.48N±0.06×142.7E±0.1,h24km,n27, σ1$35/36,mb4.0/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.40**	**188**	P		**Pn**	**22 04 42.8**	**+0.5**
CBIJ				*eS*		**Sn**	**22 05 18.5**	**-3.4**
JCJ	**Chichijima**	**3.40**	**188**	Pn		**Pn**	**22 04 41.1**	**-1.2**
	8.1nm,0.3s,baz=285,slow=23,SNR=9.0							
JCJ				Sn		**Sn**	**22 05 20.0**	**-1.9**
	9.8nm,0.3s,baz=282,slow=23,SNR=1.8							
JCJ	**Chichijima**	**3.40**	**188**			**Pn**	**22 04 41.9**	**-0.4**
JCJ						**Sn**	**22 05 20.1**	**-1.8**
JHJ2	**Mitsune**	**3.59**	**318**	P		**Pn**	**22 04 44.8**	**0.0**
JHJ2				*eS*		**Sn**	**22 05 25.4**	**-1.0**
JHJ2	**Mitsune**	**3.59**	**318**	Pn		**Pn**	**22 04 44.9**	**0.0**
JHJ	**Hachijo jima 2**	**3.61**	**317**	Pn		**Pn**	**22 04 44.3**	**-0.8**
	3.7nm,0.3s,baz=353,slow=14,SNR=1.5							
JHJ				Sn		**Sn**	**22 05 25.2**	**-1.9**
	5.6nm,0.3s,baz=226,slow=21,SNR=1.6							
JMKN	**Mikurajimanish**	**4.30**	**323**	*eS*		**Sn**	**22 05 42.4**	**-1.6**
BSO1	**Boso 1**	**4.41**	**341**	P		**Pn**	**22 04 55.3**	**-0.3**
BSO1				*eS*		**Sn**	**22 05 44.3**	**-1.5**
BSO3	**Boso 3**	**4.69**	**337**	P		**Pn**	**22 04 59.9**	**+0.2**
BSO3				*eS*		**Sn**	**22 05 52.2**	**-0.9**
JSG	**Sagara**	**5.65**	**319**	Pn		**Pn**	**22 05 14.0**	**+0.8**
JHO	**Hitachi**	**6.37**	**344**	P		**Pn**	**22 05 20.8**	**-2.2**
JRY	**Ryogami san**	**6.37**	**331**	P		**Pn**	**22 05 21.9**	**-1.2**
JRY				S		**Sn**	**22 06 32.9**	**-2.1**
MJAR	**Matsushiro Arr**	**7.11**	**329**	Pn		**Pn**	**22 05 33.4**	**+0.1**
	0.2nm,0.3s,baz=159,slow=12,SNR=8.4							
MJAR				Sn		**Sn**	**22 06 53.3**	**0.0**
	0.1nm,0.3s,baz=244,slow=26,SNR=4.0							
JEW	**Eniwo**	**12.38**	**356**	Pn		**Pn**	**22 06 45.5**	**+0.2**
SONM	**Songino Array**	**32.68**	**312**	P		**P**	**22 10 24.2**	**+3.1**
	0.9nm,0.8s,baz=114,slow=8.4,SNR=6.1							
SONM	**Songino Array**	**32.68**	**312**	P		**P**	**22 10 20.2**	**-0.9**
MKAR	**Makanchi Array**	**48.72**	**307**	P		**P**	**22 12 34.2**	**+0.9**
	0.7nm,0.8s,baz=97,slow=5.5,SNR=4.7							
MKAR	**Makanchi Array**	**48.72**	**307**	P		**P**	**22 12 33.6**	**+0.3**
WB0	**Warramunga Arr**	**50.59**	**190**	P		**P**	**22 12 48.0**	**+0.3**
WR0	**Warramunga Arr**	**50.76**	**190**	P		**P**	**22 12 49.2**	**+0.3**
WR0				IAmb		IAmb	22 12 50.3	
	comp=Z,3.8nm,0.8s							
WB2	**Warramunga Arr**	**50.77**	**190**	P		**P**	**22 12 48.9**	**-0.1**
WB2				IAmb		IAmb	22 12 50.7	
	comp=Z,5.8nm,1.0s							
WRA	**Warramunga Arr**	**50.77**	**190**	P		**P**	**22 12 49.4**	**+0.3**
	comp=Z,2.6nm,0.

LTK Loutraki 4.56 353 P Pn 22 10 49.5 +0.8
ARG Arkhangelos 4.58 52 P Pn 22 10 49.6 +0.7
ARG Arkhangelos 4.58 52 P Pn 22 10 49.9 +1.0
ARG Arkhangelos 4.58 52 PN Pn 22 10 50.1 +1.2
DION Dionisos Attik 4.58 3 P Pn 22 10 49.6 +0.5
DATC Datca-Mugla 4.63 44 PN Pn 22 10 50.1 +0.4
BODT Bodrum 4.65 39 PN Pn 22 10 49.7 -0.3
VILL Villia 4.67 357 P Pn 22 10 50.9 +0.6
KLV Kalavryta, Ach 4.71 345 P Pn 22 10 52.5 +1.7
DRO Drossia 4.72 341 P Pn 22 10 53.0 +2.0
LTHK Lithakia 4.79 332 P Pn 22 10 52.6 +0.7
LAKA Lakka 4.93 344 P Pn 22 10 55.5 +1.6
TURN Turunc 4.99 48 PN Pn 22 10 55.4 +0.8
TRIZ Trizonia 5.03 346 P Pn 22 10 56.5 +1.3
AXS Araxos 5.05 339 P Pn 22 10 57.8 +2.4
GCAM G?zelcaml? 5.12 34 PN Pn 22 10 57.4 +1.1
LKR Lokris 5.18 354 P Pn 22 10 57.7 +0.5
PSDA Pessada-Kefalo 5.24 332 P Pn 22 10 58.9 +0.8
YER Yerkesik 5.25 45 P Pn 22 10 59.2 +1.0
YER Yerkesik 5.25 45 P Pn 22 10 59.1 +0.8
YER Yerkesik 5.25 45 PN Pn 22 10 59.3 +1.0
CHOS Chios island 5.26 21 PN Pn 22 11 00.5 +2.1
DALY Dalyan (Mula) 5.27 50 PN Pn 22 10 59.2 +0.7
ANX Ano Chora 5.28 345 P Pn 22 11 00.2 +1.5
VLS Valsamata 5.30 333 P Pn 22 10 59.7 +0.8
VLS Valsamata 5.30 333 P Pn 22 11 00.2 +1.3
AXAR Agios Charalam 5.33 352 P Pn 22 10 59.7 +0.4
KEF5 Kardakata, Kep 5.43 333 P Pn 22 11 01.6 +0.9
AKAS Kas 5.61 59 P Pn 22 11 02.1 -1.1
AGG Agios Georgios 5.62 349 P Pn 22 11 04.0 +0.6
AGG Agios Georgios 5.62 349 P Pn 22 11 04.0 +0.6
AYDB Zeytinkoy-Aydi 5.63 37 PN Pn 22 11 04.4 +0.9
NYDR Nydri-Lefkada 5.73 336 P Pn 22 11 06.3 +1.5
DRAG Dragano-Lefkad 5.75 335 P Pn 22 11 06.8 +1.7
TSLK Tsoukalades, L 5.85 336 P Pn 22 11 08.2 +1.8
ELL Elmali 6.07 56 P Pn 22 11 09.8 +0.2
ELL Elmali 6.07 56 PN Pn 22 11 10.5 +0.9
ELL Elmali 6.07 56 P Pn 22 11 09.8 +0.2
PRK Paraskevi 6.12 19 P Pn 22 11 10.7 +0.5
MANT Manisa 6.38 37 P Pn 22 11 13.2 -0.7
KULA Kula-Manisa 6.45 38 PN Pn 22 11 16.3 +1.5
KEMT Kemer-ANTALYA 6.46 59 PN Pn 22 11 15.9 +1.1
KORT Korkueli 6.50 56 PN Pn 22 11 16.8 +1.2
ANTB Antalya 6.67 57 PN Pn 22 11 19.6 +2.0
BASM Basmaki-Afyon 6.83 48 PN Pn 22 11 21.1 +1.1
BCK Bucak 6.91 53 P Pn 22 11 22.4 +1.3
BCK Bucak 6.91 53 PN Pn 22 11 21.8 +0.7
KZN Kozani 6.97 348 P Pn 22 11 23.1 +1.2
ISP Isparta 7.07 50 P Pn 22 11 22.7 -0.6
ISP Isparta 7.07 50 PN Pn 22 11 24.6 +1.3
ISP Isparta 7.07 50 Pn Pn 22 11 22.7 -0.6
HNAT Natroun 7.08 121 P Pn 22 11 23.1 -0.2
baz=122
HNAT AMP 22 12 00.0
baz=122
HNAT S Sn 22 12 37.3 -6.1
baz=122
HMYD Mayadein 7.12 119 P Pn 22 11 24.0 +0.1
baz=120
RYAN Fayoum 7.17 126 P Pn 22 11 23.3 -1.4
baz=127
RYAN AMP 22 12 00.0
baz=127
NEST Nestorio 7.22 344 P Pn 22 11 26.8 +1.5
HFRF Wahat Farafira 7.49 146 P Pn 22 11 28.2 -0.8
baz=147
FNA Florina 7.50 347 P Pn 22 11 29.4 +0.2
FNA Florina 7.50 347 Pn Pn 22 11 29.4 +0.2
ALN Alexandroupoli 7.64 14 P Pn 22 11 29.7 -1.2
ALN Alexandroupoli 7.64 14 Pn Pn 22 11 29.7 -1.2
HSAF As Saff 7.77 118 P Pn 22 11 32.1 -0.8
baz=118
SCTE Santa Cesarea 7.77 329 Pn Pn 22 11 32.9 0.0
KOT Kottamia 7.82 115 P Pn 22 11 32.4 -1.1
baz=116
VAY Valandovo 7.86 354 *i* Pn Pn 22 11 35.2 +1.1
CEL Celeste 7.89 309 Pn Pn 22 11 35.1 +0.5
GLL Jalalah 7.91 117 P Pn 22 11 34.0 -0.7
baz=118
OHR Ohrid 7.94 344 *i* Pn Pn 22 11 35.4 +0.2
TIP Timpagrande 7.95 318 ⇑P Pn 22 11 35.4 +0.1
TIP Timpagrande 7.95 318 Pn Pn 22 11 35.6 +0.3
CSS Mathiatis 8.15 77 Pn Pn 22 11 36.0 -2.1
NBNS Bani Suef 8.15 124 P Pn 22 11 36.4 -1.7
baz=125
STIP Stip 8.27 352 *i* Pn Pn 22 11 40.9 +1.2
TIR Tirane 8.40 340 ⇑P Pn 22 11 41.6 +0.2
TIR Tirane 8.40 340 P Pn 22 11 42.1 +0.6
TIR Tirane 8.40 340 Pn 22 11 42.0 +0.6
RAFF Raffo Rosso 8.45 299 Pn Pn 22 11 42.9 +0.7
VAE Valguarnera 8.52 300 Pn Pn 22 11 44.3 +1.1
6.4nm,0.3s,baz=302,slow=4.5,SNR=30
VAE Sn Sn 22 13 13.3 -5.7
3.1nm,0.3s,baz=79,slow=13,SNR=3.5
TAMRE El Minia 8.53 131 P Pn 22 11 42.5 -0.7
baz=131
TAMRE AMP 22 13 00.0
baz=131
SUZ Suez 8.63 112 P Pn 22 11 43.1 -1.5
baz=113
SKO Skopje 8.65 349 P Pn 22 11 45.2 +0.4
SKO Skopje 8.65 349 *i* Pn Pn 22 11 44.5 -0.3
ZAF Zafarana 8.68 117 P Pn 22 11 43.9 -1.5
baz=117
MATE Matera 9.04 324 ⇑P Pn 22 11 49.9 -0.4
VTS Vitosha 9.12 358 ⇑P Pn 22 11 51.4 0.0
VTS Vitosha 9.12 358 P Pn 22 11 51.4 0.0
ULC Ulcinj 9.15 339 P Pn 22 11 50.8 -0.9
ULC Ulcinj 9.15 339 ⇓*i* Pn Pn 22 11 50.5 -1.2
ULC *i* Sn Sn 22 13 21.8 -13
HDK1 Dakhla 9.37 146 P Pn 22 11 53.1 -1.8
baz=146
DRME Dracevica, Mon 9.37 339 *e* Pn Pn 22 11 53.4 -1.3
DRME Dracevica, Mon 9.37 339 ⇑*i* Pn Pn 22 11 53.5 -1.3
DRME *i* Sn Sn 22 13 27.2 -13
GRB Gharib 9.41 121 P Pn 22 11 53.9 -1.5
baz=122
CLTB Caltabellotta 9.43 299 Pn 22 11 55.5 -0.2
CORL Corleone 9.49 300 Pn Pn 22 11 56.7 +0.2
PVY Plav 9.54 343 ⇑*i* Pn Pn 22 11 56.2 -1.0
PVY *i* Sn Sn 22 13 31.9 -12
BUM Brajici-Budva 9.56 338 ⇓*i* Pn Pn 22 11 56.0 -1.5
BUM *i* Sn Sn 22 13 31.7 -13
PDG Podgorica 9.57 340 ⇓P Pn 22 11 56.7 -0.8
PDG Podgorica 9.57 340 *e* Pn Pn 22 11 56.0 -1.5
PDG Podgorica 9.57 340 Pn Pn 22 11 56.4 -1.2
TTG Podgorica 9.57 340 ⇑*i* Pn Pn 22 11 56.3 -1.2
TTG *i* Sn Sn 22 13 32.2 -12
BR231 Keskin MP Arra 9.69 47 Pn 22 11 59.8 +0.6
ANTO Ankara 9.71 46 P Pn 22 12 01.5 +2.0
CEME Cevo 9.78 339 *e* Pn Pn 22 11 58.7 -1.7
CEME *i* Sn Sn 22 13 37.0 -13
IVA Berane 9.82 344 ⇓*i* Pn Pn 22 12 00.0 -1.0
IVA *i* Sn Sn 22 13 38.6 -12
HCY Herceg Novi 9.82 337 *e* Pn Pn 22 11 58.7 -2.2
HCY Herceg Novi 9.82 337 *e* Pn Pn 22 11 59.2 -1.7
HCY *i* Sn Sn 22 13 37.7 -13
MMAI Mount Meron Ar 9.85 90 Pn Pn 22 11 58.8 -2.7
17nm,0.3s,baz=267,slow=11,SNR=11.7
MMAI Sn Sn 22 13 42.2 -10
27nm,0.3s,baz=274,slow=22,SNR=9.3
KOME Kolasin 9.89 342 ⇓*i* Pn Pn 22 12 00.9 -1.1
KOME *i* Sn Sn 22 13 40.1 -13
DQRL Deir Qamar 9.95 85 *e* P Pn 22 12 00.2 -2.6
NKME Niksic 9.97 340 *e* Pn Pn 22 12 01.7 -1.3
NKME *i* Sn Sn 22 13 41.6 -13
NKY Niksic 10.00 340 ⇓*i* Pn Pn 22 12 02.2 -1.3
NKY *i* Sn Sn 22 13 42.4 -13
QRWL Qaraoun 10.04 86 *e* P Pn 22 12 01.2 -3.0
TREB Trebinje 10.11 337 *e* Pn Pn 22 12 02.1 -2.8
BR131 Keskin Array S 10.15 49 *ce* P Pn 22 12 05.6 0.0
BR131 Keskin Array S 10.15 49 Pn 22 12 05.3 -0.3
BRTR Keskin Array B 10.15 49 Pn Pn 22 12 05.7 +0.1
0.8nm,0.3s,baz=217,slow=13,SNR=9.1
BRTR Sn Sn 22 13 55.3 -3.8
0.4nm,0.3s,baz=206,slow=26,SNR=4.5
BRTR Keskin Array B 10.15 49 *i* P Pn 22 12 05.8 +0.1
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 10.15 49 Pn 22 12 05.1 -0.6
RCY Rachaya 10.18 87 *e* P Pn 22 12 02.8 -3.1
BRY Bratogost 10.22 338 *e* Pn Pn 22 12 04.2 -2.3
BRY Bratogost 10.22 338 *e* Pn Pn 22 12 05.0 -1.5
BRY *i* Sn Sn 22 13 47.4 -13
SGRT San Giovanni R 10.36 325 Pn 22 12 07.3 -1.0
EIL Elat 10.36 109 Pn Pn 22 12 06.8 -1.6
comp=Z,2.0nm,0.3s,baz=276,slow=1.6,SNR=27
EIL Sn Sn 22 13 53.5 -11
comp=Z,3.4nm,0.3s,baz=217,slow=8.3,SNR=4.2
PLE Pljevlja 10.38 342 ⇑*i* Pn Pn 22 12 07.5 -1.1
PLE *i* Sn Sn 22 13 51.7 -13
UPM Unac-Piva 10.39 340 *e* Pn Pn 22 12 07.9 -0.9
UPM Unac-Piva 10.39 340 ⇓*i* Pn Pn 22 12 07.5 -1.3
UPM *i* Sn Sn 22 13 51.6 -13
RUDO Rudo 10.65 343 *e* Pn Pn 22 12 09.8 -2.5
BBLS Lazići 10.88 344 *e* Pn Pn 22 12 12.9 -2.5
DIVS Divibare 10.97 346 *e* Pn Pn 22 12 14.0 -2.7
DIVS Divibare 10.97 346 Pn Pn 22 12 14.1 -2.6
HAPS Han Pijesak,Bl 11.20 342 *e* Pn Pn 22 12 16.4 -3.4
MDVR Moldovita 11.38 353 ⇑P Pn 22 12 21.9 -0.3
HERR Herculane 11.42 356 ⇓P Pn 22 12 22.6 -0.1
INTR Introdacqua 11.48 321 Pn Pn 22 12 24.4 +0.8
TEKS Tekeris 11.50 345 *e* Pn Pn 22 12 21.1 -2.8
AQU L'Aquila 11.98 321 P Pn 22 12 31.1 +0.5
AQU L'Aquila 11.98 321 *e* Pn Pn 22 12 32.2 +1.6
AQU L'Aquila 11.98 321 Pn 22 12 31.1 +0.5
KEST Kesra 12.00 285 Pn Pn 22 12 35.5 +4.7
comp=Z,0.1nm,0.3s,baz=212,slow=17,SNR=1.5
KEST Sn Sn 22 14 36.2 -8.1
comp=Z,0.1nm,0.3s,baz=349,slow=22,SNR=1.3
FRGS Fruska Gora 12.02 347 ⇑P Pn 22 12 29.1 -1.9
FRGS Fruska Gora 12.02 347 *e* Pn Pn 22 12 28.9 -2.2
MGRS Mrkonjic Grad 12.04 337 *e* Pn Pn 22 12 30.0 -1.4
MLR Muntele Rosu 12.12 8 Pn P 22 12 42.7 -2.4
comp=Z,0.2nm,0.3s,baz=144,slow=19,SNR=1.8
BLY Banja Luka 12.31 338 *e* Pn Pn 22 12 32.9 -2.0
NRCA Norcia 12.47 321 Pn 22 12 37.5 +0.2
MURB Monte Urbino 13.08 321 Pn 22 12 46.1 +0.6
MORH Mrgy, Hungar 13.27 345 *e* Pn Pn 22 12 44.6 -3.5
CRES Cresnjev 13.83 335 *e* Pn Pn 22 12 53.1 -2.6
CEY Cerknica 14.13 333 *e* Pn Pn 22 12 58.7 -1.2
BURAR Bucovina Array 14.16 4 ⇑P Pn 22 12 59.6 -0.8
BURAR Bucovina Array 14.16 4 Pn Pn 22 13 00.3 0.0
BUR08 Bucovina Ar. S 14.19 4 Pn Pn 22 13 01.2 +0.5
ZCCA Zocca 14.64 321 Pn Pn 22 13 07.4 +0.6
SOKA Soboth 14.72 336 *e* Pn Pn 22 13 05.2 -2.8
comp=Z,7.8nm,0.4s,SNR=10
OBKA Obir 14.74 335 *i* Pn Pn 22 13 05.8 -2.4
comp=Z,1.5nm,0.2s,SNR=10
TEOL Teolo 15.02 326 Pn 22 13 11.1 -0.8
TEOL IAmb IAmb 22 13 13.1
comp=Z,11nm,0.5s
ARSA Arzberg 15.06 338 *e* Pn Pn 22 13 12.2 -0.4
comp=Z,1.4nm,0.3s
STAL STALIGIAL 15.25 330 Pn 22 13 12.7 -2.3
ZOU Zoufplan 15.38 331 Pn Pn 22 13 16.3 -0.6
ZOU IAmb IAmb 22 13 26.5
comp=Z,15nm,0.8s
CTI Castel Tesino 15.55 327 P Pn 22 13 18.8 -0.1
CTI pmax pmax
comp=Z,7.0nm,0.6s
CTI Castel Tesino 15.55 327 Pn 22 13 18.8 -0.1
CTI IAmb IAmb 22 13 34.7
comp=Z,7.4nm,0.6s
CONA Conrad Observa 15.57 340 *e* Pn Pn 22 13 16.6 -2.6
comp=Z,1.2nm,0.5s
KBA Koelnbreinsper 15.67 333 *e* Pn Pn 22 13 19.1 -1.5
comp=Z,2.0nm,0.3s
ABTA Abfaltersbach 15.72 331 *e* Pn Pn 22 13 20.2 -1.0
comp=Z,0.9nm,0.2s,SNR=6.0
SALO Salr 15.76 324 Pn Pn 22 13 20.4 -1.3
MOA Molln 15.99 337 *e* Pn Pn 22 13 22.9 -1.8
comp=Z,3.7nm,0.3s,SNR=17
WTTA Wattenberg 16.50 330 *i* Pn Pn 22 13 32.2 +0.9
comp=Z,1.5nm,0.2s,SNR=6.2
WTTA Wattenberg 16.50 330 P P 22 13 33.3 -0.5
WTTA pmax pmax
comp=Z,13nm,1.3s
WATA Walderalm 16.58 330 *e* Pn Pn 22 13 32.6 +0.4
comp=Z,3.5nm,0.3s,SNR=7.1
SQTA Sankt Quirin 16.64 329 *e* Pn P 22 13 34.4 -1.0
comp=Z,2.5nm,0.3s
VRAC Vranov 16.66 344 Pn P 22 13 36.1 +0.7
comp=Z,0.5nm,0.3s,baz=151,slow=15,SNR=5.4
VRAC Vranov 16.66 344 *e* PN P 22 13 36.3 +0.9
FETA Feichten 16.70 328 *e* Pn P 22 13 36.0 -0.1
comp=Z,0.8nm,0.4s
MOTA Moosalm 16.79 329 *e* Pn Pn 22 13 35.7 +0.8
comp=Z,1.4nm,0.4s,SNR=4.3
CKRC Cesky Krumlov 16.83 338 *e* Pn Pn 22 13 34.9 -0.4
DAVOX Davos/Dischmat 16.91 326 Pn P 22 13 38.6 +0.1
comp=Z,1.1nm,0.3s,baz=129,slow=23,SNR=17
DAVOX Sn Sn 22 16 32.8 -11
comp=Z,0.3nm,0.3s,baz=139,slow=11,SNR=3.2
TREC Trest 16.92 341 *e* P 22 13 39.8 +1.5
TREC Trest 16.92 341 *e* P 22 13 39.8 +1.5
TUE Stuetta 16.94 324 Pn Pn 22 13 37.1 +0.2
TUE IAmb IAmb 22 13 41.9
comp=Z,8.3nm,0.6s
GEC2 GERESS Array S 17.05 337 Pn 22 13 37.6 -0.5
GERES GERESS Array B 17.05 337 P Pn 22 13 36.7 -1.4
comp=Z,0.8nm,0.3s,baz=158,slow=14,SNR=29
GERES S Sn 22 16 31.8 -15
comp=Z,0.4nm,0.3s,baz=150,slow=24,SNR=5.7
GERES GERESS Array B 17.05 337 P Pn 22 13 37.4 -0.7
DAVA Damuels 17.28 327 *e* Pn P 22 13 42.9 +0.4
comp=Z,4.0nm,0.5s
KRLC Kraliky 17.33 345 *e* P Pn 22 13 42.0 +0.4
KRLC Kraliky 17.33 345 *e* P Pn 22 13 42.0 +0.4
KHC Kasperske Hory 17.34 337 *ce* P Pn 22 13 41.4 -0.2
KHC pmax pmax
comp=Z,11nm,0.9s
KHC Kasperske Hory 17.34 337 *e* P P 22 13 43.0 +0.1
KHC Kasperske Hory 17.34 337 P Pn 22 13 40.1 -1.5
WET Wettzell 17.58 336 P P 22 13 47.6 +2.0
WET pmax pmax
comp=Z,9.0nm,0.9s
AKASG Malin Array Be 17.68 12 P Pn 22 13 42.8 -3.0
comp=Z,3.8nm,0.3s,baz=204,slow=10,SNR=20
AKASG S Sn 22 17 04.8 +2.5
comp=Z,1.4nm,0.3s,baz=201,slow=19,SNR=13
AKBB Malin Array Si 17.68 12 ⇑*e* P Pn 22 13 42.8 -3.0
AKBB Malin Array Si 17.68 12 Pn Pn 22 13 43.1 -2.7
DPC Dobruska-Polom 17.69 344 *e* P P 22 13 47.7 +0.8
DPC Dobruska-Polom 17.69 344 *e* P P 22 13 47.7 +0.8
PRU Pruhonice 17.81 340 P P 22 13 47.8 -0.3
PRU pmax pmax
comp=Z,2.0nm,1.2s
OSTC Ostas 17.91 344 *e* P P 22 13 49.9 +0.7
SENIN Lac Senin/Sane 17.91 321 P 22 13 49.4 -0.2
SHA1 Shidzhatmaz 18.00 50 *ce* P P 22 13 51.5 +1.0
GNI Garni 18.13 62 P P 22 13 52.0 +0.1
comp=Z,1.8nm,0.3s,baz=307,slow=3.7,SNR=22
GNI Garni 18.13 62 P Pn 22 13 51.5 -0.1
GNI pmax pmax
comp=Z,15nm,0.7s
GNI Garni 18.13 62 P Pn 22 13 51.5 -0.1
GNI IAmb IAmb 22 13 53.9
comp=Z,14nm,0.7s
KBZ Khabaz 18.15 50 P P 22 13 52.3 +0.5
comp=Z,0.7nm,0.3s,baz=218,slow=7.8,SNR=16
KBZ Khabaz 18.15 50 *d* P P 22 13 52.6 +0.8
KBZ pmax pmax
comp=Z,9.0nm,0.7s
KSP Ksiaz 18.16 345 P P 22 13 53.1 +1.1
KSP pmax pmax
comp=Z,8.0nm,1.5s
PVCC Panska Ves 18.29 341 P P 22 13 54.2 +0.8
PVCC pmax pmax
comp=Z,4.0nm,1.6s
ZEI Tsey 18.40 54 *e* P P 22 13 54.5 -0.4
ZEI pmax pmax
comp=Z,10.0nm,1.2s
MOX Moxa 19.29 336 P Pn 22 14 06.5 +1.1
MOX pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.43 340 *e* P P 22 14 05.0 -0.9
comp=Z,4.0nm,0.7s
CLL Collm 19.43 340 P P 22 14 05.9 0.0
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 19.43 340 P P 22 14 05.9 0.0
DBC Dubki 20.48 56 *d* P P 22 14 17.0 -0.6
DBC pmax pmax
comp=Z,7.0nm,0.3s
VORD Divnogorie 20.88 29 *e* P P 22 14 21.5 -0.1
VORD pmax pmax
comp=Z,9.0nm,0.6s
VSR Storozhevoye 21.02 28 *e* P P 22 14 21.6 -1.6
VSR pmax pmax
comp=Z,20nm,1.1s
NACGM Naroch 21.52 5 *i* P P 22 14 27.0 -1.5
NACGM *i* P P 22 14 27.0 -1.5
NACGM *i* P P 22 14 27.0 -1.5
NACGM *i* PP PnPn 22 14 43.9 -5.1
NACGM *i* PPP PPP 22 14 51.7
NACGM *i* S S 22 18 16.9 -10
NACGM *i* SSS SSS 22 18 46.8
NACGM *i* LR LR 22 23 48.5
RAYN Ar Rayn 21.58 112 P P 22 14 29.5 0.0
RAYN pmax pmax
comp=Z,6.0nm,1.0s
RAYN Ar Rayn 21.58 112 P P 22 14 29.5 0.0
IDID Didziasalis 21.93 5 *e* P P 22 14 32.2 -0.6
IIGN Ignalina 21.93 4 *e* P P 22 14 32.7 -0.2
PABE Paberze 22.01 0 *e* P P 22 14 33.6 -0.1
LPSR Galich'ya Gora 22.04 25 *e* P P 22 14 33.8 -0.3
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VRH Novokhopyorsk 22.07 31 *e* P P 22 14 34.5 +0.1
VRH pmax pmax
comp=Z,20nm,0.5s
ISAL Salakas 22.15 4 *e* P P 22 14 35.4 +0.2
BSD Bornholm Skovb 22.47 347 *e* P P 22 14 37.9 -0.8
BSD Bornholm Skovb 22.47 347 *i* P P 22 14 37.2 -1.5
BSD Bornholm Skovb 22.47 347 *i* P P 22 14 37.1 -1.5
ESDC Sonseca Array 22.97 294 P P 22 14 44.4 +0.3
comp=Z,1.2nm,0.7s,baz=96,slow=10,SNR=12
OBN Obninsk 23.44 19 ⇑*e* P P 22 14 47.9 -0.8
OBN *e* 22 15 13.5
OBN pmax pmax
comp=Z,19nm,1.3s
BLEU Blekinge 23.45 349 *e* P P 22 14 46.5 -2.3
MDT Midelt 23.64 276 P P 22 14 52.6 +1.5
comp=Z,1.7nm,0.7s,baz=98,slow=17,SNR=4.9
DEL Delary 23.95 347 *i* P P 22 14 54.3 +0.7
MOS Moscow 24.27 19 *e* P P 22 14 54.8 -1.8
MOS *e* 22 15 05.2
MOS pmax pmax
comp=Z,41nm,1.1s
BELG Belogornoye 25.59 35 P P 22 15 07.9 -0.6
comp=Z,62nm,0.7s,baz=358,slow=3.3,SNR=18
BELG Belogornoye 25.59 35 *de* P P 22 15 08.0 -0.6
BELG pmax pmax
comp=Z,14nm,0.9s
PESTR Estremoz 25.71 291 P P 22 15 08.0 -1.8
PESTR IAmb IAmb 22 15 14.0
comp=Z,3.9nm,1.0s
AAL Aland 26.81 356 *e* P P 22 15 19.7 +0.2
HFS Hagfors 27.45 349 P P 22 15 25.0 -0.3
comp=Z,5.5nm,0.4s,baz=154,slow=12,SNR=50
HFS Hagfors 27.45 349 P P 22 15 25.0 -0.3
FINES FINESS Array B 28.01 2 P P 22 15 29.8 -0.6
comp=Z,2.0nm,0.3s,baz=168,slow=10.0,SNR=38
GEYT Alibeck 28.23 71 P P 22 15 32.0 -0.7
comp=Z,1.7nm,0.4s,baz=269,slow=8.9,SNR=5.7
GEYT Alibeck 28.23 71 P P 22 15 32.0 -0.7
GEYT IAmb IAmb 22 15 32.6
comp=Z,1.5nm,0.5s
VALR Valaam 28.27 7 ⇑*e* P P 22 15 32.7 +0.1
VALR pmax pmax
comp=Z,23nm,0.8s
NORES NORESS Array B 28.38 347 P P 22 15 33.1 -0.5
TOA0 Torodi Ar. Sit 28.46 230 P P 22 15 34.9 +0.1
TOA0 IAmb IAmb 22 15 36.3
comp=Z,5.2nm,0.9s
TORD Torodi Ar. Bea 28.46 230 P P 22 15 35.5 +0.7
comp=Z,3.1nm,0.7s,baz=34,slow=9.2,SNR=21
TORD Torodi Ar. Bea 28.46 230 P P 22 15 34.5 -0.2
NOA NORSAR Array B 28.72 347 P P 22 15 36.8 +0.1
comp=Z,0.4nm,0.4s,baz=151,slow=9.7,SNR=12
EKA Eskdalemuir Ar 28.73 328 P P 22 15 37.0 +0.2
comp=Z,0.6nm,0.5s,baz=120,slow=7.8,SNR=4.4
EKA Eskdalemuir Ar 28.73 328 P P 22 15 37.0 +0.2
AKTO Aktyubinsk 30.30 46 P P 22 15 50.0 -0.8
comp=Z,1.7nm,0.6s,baz=320,slow=4.0,SNR=5.5
AKTO Aktyubinsk 30.30 46 P P 22 15 50.0 -0.8
ABKAR Akbulak array 31.10 49 P P 22 15 57.6 -0.3
ABKAR IAmb IAmb 22 16 00.8
comp=Z,2.4nm,0.9s
ABKAR Akbulak array 31.10 49 P P 22 15 57.9 0.0
KOWA Kowa 31.41 240 P P 22 16 01.8 +0.9
comp=Z,3.1nm,0.8s,baz=66,slow=9.2,SNR=9.2
KOWA Kowa 31.41 240 P P 22 16 00.9 0.0
KOWA IAmb IAmb 22 16 02.4
comp=Z,2.4nm,0.7s
PRGR Permogore 31.50 20 *e* P P 22 15 59.0 -2.2
PRGR pmax pmax
comp=Z,7.0nm,0.8s
HRA Herat 31.90 77 P P 22 16 04.8 -0.6
HRA IAmb IAmb 22 16 06.7
comp=Z,3.2nm,0.7s
ARU Arti 33.14 36 P P 22 16 15.5 -0.1
comp=Z,0.7nm,0.3s,baz=250,slow=14,SNR=5.4
ARU Arti 33.14 36 ⇓*e* P P 22 16 14.5 -1.1
ARU pmax pmax
comp=Z,4.0nm,0.9s
ARCES ARCESS Array B 36.11 1 P P 22 16 40.7 -0.5
comp=Z,3.3nm,0.5s,baz=181,slow=9.4,SNR=37
DBIC Dimbokro 37.55 231 P P 22 16 54.8 +0.8
comp=Z,1.9nm,0.5s,baz=24,slow=10,SNR=6.4
KK31 Karatay Array 37.59 61 P P 22 16 53.9 -0.2
KK31 pmax pmax
comp=Z,7.0nm,0.7s
KK31 Karatay Array 37.59 61 P P 22 16 53.9 -0.2
KKAR Karatay Array 37.59 61 P P 22 16 53.8 -0.3
KKAR pmax pmax
comp=Z,7.0nm,0.7s
KKAR Karatay Array 37.59 61 P P 22 16 53.8 -0.3
GAR Garm 37.71 68 P P 22 16 54.9 -0.5
GAR IAmb IAmb 22 16 58.7
comp=Z,5.7nm,1.1s
BRVK Borovoye 38.35 45 ⇓*e* P P 22 17 00.4 0.0
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BVAR Borovoye Array 38.40 45 P P 22 17 00.5 -0.3
comp=Z,0.8nm,0.6s,baz=145,slow=5.4,SNR=4.2
EKS2 Erkin-Say 40.00 62 P P 22 17 15.1 +0.6
SNR=7.8
AAK Ala-Archa 40.53 62 P P 22 17 19.2 +0.3
comp=Z,2.9nm,0.5s,baz=254,slow=7.8,SNR=18
AAK Ala-Archa 40.53 62 P P 22 17 19.4 +0.5
SNR=5.7
AAK Ala-Archa 40.53 62 ⇓*e* P P 22 17 19.8 +0.9
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 40.53 62 P P 22 17 18.7 -0.3
AAK IAmb IAmb 22 17 20.2
comp=Z,3.9nm,0.8s
KBK Karagaybulak 40.86 62 P P 22 17 22.4 +0.7
SNR=5.4
NIL Nilore 41.00 76 P P 22 17 22.1 -0.7
NIL pmax pmax
comp=Z,7.0nm,0.6s
NIL Nilore 41.00 76 P P 22 17 22.1 -0.7
NIL IAmb IAmb 22 17 23.8
comp=Z,7.0nm,0.6s
TKM2 Tokmak 2 41.32 61 P P 22 17 25.6 +0.1
SNR=6.0
ULHL Ulahol 41.85 62 P P 22 17 30.9 +1.1
SNR=7.2
KURBB Kurchatov Arra 43.15 50 P P 22 17 39.9 0.0
comp=Z,5.2nm,0.5s,baz=271,slow=8.4,SNR=40
KURK Kurchatov 43.21 49 P P 22 17 39.9 -0.6
SPITS Spitsbergen Ar 44.90 358 P P 22 17 53.9 +0.2
comp=Z,1.7nm,0.5s,baz=161,slow=18,SNR=12
MK31 Makanchi Array 45.74 55 *c* P P 22 18 00.9 +0.1
MK31 Makanchi Array 45.74 55 P P 22 18 00.9 +0.1
MKAR Makanchi Array 45.74 55 P P 22 18 01.1 +0.2
comp=Z,10nm,0.6s,baz=265,slow=7.1,SNR=103
ZAA0 Zalesovo Array 47.06 45 P P 22 18 10.5 -0.5
ZALV Zalesovo Beam 47.06 45 P P 22 18 10.3 -0.7
comp=Z,10nm,0.5s,baz=267,slow=9.1,SNR=52
LSZ Lusaka 48.69 174 P P 22 18 24.8 +0.7
comp=Z,1.1nm,0.4s,baz=32,slow=11,SNR=4.0
LSZ Lusaka 48.69 174 P P 22 18 24.1 +0.1
LSZ IAmb IAmb 22 18 25.5
comp=Z,1.9nm,0.6s
DGZ Jazzator, Alta 48.90 51 *c* P P 22 18 25.5 0.0
DGZ pmax pmax
comp=Z,2.0nm,0.7s

NRIK	**Noril'sk**	**49.91**	**25**	P		**P**	**22 18 32.9**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=231,slow=4.1,SNR=2.6							
PYUN	**Piuthan**	**50.67**	**79**	*e*P		**P**	**22 18 39.4**	**0.0**
	comp=Z,43nm,0.5s							
KOLN	**Koldanda**	**51.29**	**79**	*e*P		**P**	**22 18 43.5**	**-0.6**
	comp=Z,7.8nm,0.7s							
GKN	**Gorkha**	**52.05**	**79**	*e*P		**P**	**22 18 49.0**	**-0.7**
	comp=Z,18nm,0.6s							
DMN	**Daman**	**52.59**	**79**	*e*P		**P**	**22 18 53.2**	**-0.6**
	comp=Z,19nm,0.7s							
KKN	**Kakani**	**52.66**	**79**	*e*P		**P**	**22 18 54.2**	**-0.1**
PKIN	**Phulchoki**	**52.84**	**79**	*e*P		**P**	**22 18 55.0**	**-0.7**
	comp=Z,22nm,0.7s							
PKI	**Pulchoki**	**52.85**	**79**	*e*P		**P**	**22 18 55.1**	**-0.7**
	comp=Z,24nm,0.7s							
GUN	**Gumba**	**53.11**	**78**	*e*P		**P**	**22 18 57.2**	**-0.5**
	comp=Z,28nm,0.7s							
JIRN	**Jiri**	**53.46**	**78**	*e*P		**P**	**22 18 59.9**	**-0.4**
	comp=Z,9.6nm,0.5s							
RAMN	**Ramite**	**54.07**	**79**	*e*P		**P**	**22 19 03.3**	**-1.4**
	comp=Z,6.9nm,0.6s							
ODAN	**Odare**	**54.75**	**79**	*e*P		**P**	**22 19 08.7**	**-0.9**
	comp=Z,4.2nm,0.4s							
TAPN	**Taplejung**	**54.82**	**78**	*e*P		**P**	**22 19 09.4**	**-0.8**
	comp=Z,15nm,0.8s							
LSA	**Lhasa**	**56.70**	**74**	P		**P**	**22 19 23.0**	**-0.9**
LSA				pmax	pmax			
	comp=Z,4.0nm,0.7s							
LSA	**Lhasa**	**56.70**	**74**	P		**P**	**22 19 22.9**	**-0.9**
SHL	**Shillong**	**58.96**	**78**	P		**P**	**22 19 38.4**	**-1.1**
SHL				pmax	pmax			
	comp=Z,4.0nm,0.8s							
SHL	**Shillong**	**58.96**	**78**	P		**P**	**22 19 38.4**	**-1.1**
SHL				IAmb	IAmb		22 19 38.8	
	comp=Z,3.8nm,0.8s							
GTA	**Gaotai**	**59.86**	**60**	*e*P		**P**	**22 19 45.6**	**+0.2**
GTA				pP	pP		22 19 50.0	-0.3
GTA				sP	pwP		22 19 52.8	0.0
GTA				pmax	pmax			
	comp=Z,5.0nm,0.9s							
SONM	**Songino Array**	**61.51**	**50**	P		**P**	**22 19 57.1**	**+0.6**
	comp=Z,4.1nm,0.7s,baz=282,slow=7.8,SNR=38							
SONM	**Songino Array**	**61.51**	**50**			**P**	**22 19 56.3**	**-0.3**
SONM				IAmb	IAmb		22 19 57.8	
	comp=Z,3.0nm,0.7s							
BOSA	**Boshof**	**61.78**	**178**	P		**P**	**22 19 58.7**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=3.2,slow=8.5,SNR=4.1							
ULN	**Ulaanbaatar**	**61.92**	**49**	*ce*P		**P**	**22 19 59.6**	**+0.3**
ULN				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ULN	**Ulaanbaatar**	**61.92**	**49**			**P**	**22 19 59.1**	**-0.2**
BOD	**Bodaibo**	**62.54**	**37**	*e*P		**P**	**22 20 02.2**	**-0.9**
BOD				pmax	pmax			
	comp=Z,5.0nm,0.8s							
TIXI	**Tiksi**	**63.16**	**20**	*ce*P		**P**	**22 20 06.2**	**-0.8**
TIXI				pmax	pmax			
	comp=Z,7.0nm,1.3s							
CMAR	**Chiang Mai Arr**	**68.02**	**82**	P		**P**	**22 20 38.9**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=301,slow=7.9,SNR=10							
SEY	**Seymchan**	**75.57**	**22**	*e*P		**P**	**22 21 24.6**	**+0.7**
INK	**Inuvik**	**77.09**	**351**	P		**P**	**22 21 32.1**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=20,slow=6.0,SNR=5.2							
MA2	**Magadan**	**77.52**	**25**	*e*P		**P**	**22 21 35.8**	**+0.8**
MA2				pmax	pmax			
	comp=Z,2.0nm,0.8s							
YKA	**Yellowknife Ar**	**78.64**	**342**	P		**P**	**22 21 41.2**	**0.0**
	comp=Z,0.5nm,0.4s,baz=38,slow=5.4,SNR=32							
USA0B	**Ussuriysk Arra**	**78.90**	**44**	*e*P		**P**	**22 21 43.3**	**+0.4**
USRK	**Ussuriysk Ar.**	**78.90**	**44**	P		**P**	**22 21 42.7**	**-0.3**
	comp=Z,3.9nm,0.5s,baz=290,slow=4.6,SNR=19							
KSRS	**Korea Array**	**80.29**	**51**	P		**P**	**22 21 50.8**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=311,slow=4.6,SNR=7.0							
ILAR	**Eielson Array**	**81.78**	**356**	P		**P**	**22 21 58.7**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=351,slow=3.3,SNR=4.0							
ASAJ	**Asahikawa**	**84.86**	**39**	P		**P**	**22 22 14.5**	**+0.3**
	comp=Z,2.7nm,0.5s,baz=323,slow=7.4,SNR=7.9							
ASAJ	**Asahikawa**	**84.86**	**39**	P		**P**	**22 22 13.9**	**-0.4**
ASAJ				pmax	pmax			
	comp=Z,7.0nm,1.0s							
JKA	**Kamikawa-asahi**	**84.86**	**39**	P		**P**	**22 22 13.9**	**-0.4**
WRA	**Warramunga Arr**	**117.64**	**97**	PKP		**PKPdf**	**22 28 25.1**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=322,slow=1.6,SNR=5.2							
WRA	**Warramunga Arr**	**117.64**	**97**			**PKPdf**	**22 28 25.3**	**-0.8**
WRA	**Warramunga Arr**	**117.64**	**97**			**PKPdf**	**22 28 25.3**	**-0.8**
ASAR	**Alice Springs**	**118.98**	**100**	PKP		**PKPdf**	**22 28 27.9**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=315,slow=1.5,SNR=11							
ASAR	**Alice Springs**	**118.98**	**100**	PKIKP		**PKPdf**	**22 28 28.0**	**-0.7**

*IDC **19** 22:14:57.4±1.2,35°.06N×27°.09E,h0km,mb3.6/4, mb1 3.4/6,mb1mx3.2/53,mbtmp3.4/6,ML3.1/1,MS3.7/5, Ms1 3.7/5,ms1mx3.0/54,Error ellipse: s-maj=34.9km s-min=12.1km az=1.0*
*ISK **19** 22:14:58.9,35°.04N×27°.00E,h8km,ML3.1/13*
*DDA **19** 22:14:58.3,35°.17N×27°.07E,h6km±4km,ML2.7*
*ATH **19** 22:15:00.1,35°.05N×26°.94E,h8km±5km,ML2.9/3,Error ellipse: s-maj=8.2km s-min=1.4km az=333.0*
*THE **19** 22:15:00.7,35°.14N×26°.87E,h0km±1km,ML2.8/5,Error ellipse: s-maj=5.0km s-min=0.8km az=152.0*
ISC 19 22:14:58.7±1.2,34°.98N±0°.05×27°.00E±0°.03,h14km±8km, n64,σ1§24/81,mb3.5/4,MS3.9/4,Crete

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KARP	**Karpathos**	**0.58**	**13**	P		**Pg**	**22 15 09.8**	**-0.3**
KARP				S		**Sg**	**22 15 17.7**	**-0.1**
KARP				AML	AML		22 15 18.4	
	comp=N,6561μm,0.2s							
KARP				AML	AML		22 15 19.3	
	comp=E,6176μm,0.4s							
KARP	**Karpathos**	**0.58**	**13**	P		**Pg**	**22 15 09.8**	**-0.3**
KARP				S		**Sg**	**22 15 17.7**	**-0.1**
	comp=E,3μm,0.1s							
KARP	**Karpathos**	**0.58**	**13**	PG		**Pg**	**22 15 09.6**	**-0.5**
KARP				SG		**Sg**	**22 15 17.3**	**-0.5**
ZKR	**Zakros**	**0.66**	**282**	P		**Pg**	**22 15 11.4**	**-0.1**
ZKR				S		**Sg**	**22 15 20.0**	**-0.2**
ZKR				AML	AML		22 15 22.0	
	comp=N,1721μm,0.5s							
ZKR				AML	AML		22 15 24.6	
	comp=E,2460μm,0.4s							
ZKR	**Zakros**	**0.66**	**282**	P		**Pg**	**22 15 11.3**	**-0.1**
ZKR				S		**Sg**	**22 15 20.2**	**0.0**
	comp=E,1μm,0.3s							
ZKR	**Zakros**	**0.66**	**282**	PG		**Pg**	**22 15 11.4**	**-0.1**
ZKR				SG		**Sg**	**22 15 21.3**	**+1.1**
STIA	**Sitia Lasithi**	**0.78**	**287**	P		**Pg**	**22 15 13.3**	**-0.5**
STIA				S		**Sg**	**22 15 24.4**	**+0.4**
FRMA	**Ierapetra Chan**	**1.04**	**272**	P		**Pb**	**22 15 16.6**	**-1.9**
FRMA				S		**Sg**	**22 15 30.4**	**-1.9**
	comp=E,418nm,0.5s							
NPS	**Neapolis**	**1.17**	**284**	P		**Pb**	**22 15 21.0**	**+0.2**
NPS				S		**Sb**	**22 15 35.9**	**+0.1**
NPS				AML	AML		22 15 41.9	
	comp=N,970μm,0.5s							
NPS				AML	AML		22 15 43.1	
	comp=E,1090μm,0.5s							
NPS	**Neapolis**	**1.17**	**284**	P		**Pb**	**22 15 20.7**	**-0.1**
NPS				S		**Sb**	**22 15 36.2**	**+0.4**
	comp=E,592nm,0.5s							
ARG	**Arkhangelos**	**1.54**	**36**	P		**Pg**	**22 15 28.1**	**-0.1**
ARG	**Arkhangelos**	**1.54**	**36**	P		**Pg**	**22 15 28.1**	**-0.1**
ARG				S		**Sg**	**22 15 48.6**	**+0.4**
	comp=E,348nm,0.8s							
ARG	**Arkhangelos**	**1.54**	**36**	PN		**Pb**	**22 15 27.5**	**+0.5**
ARG				SN		**Sb**	**22 15 46.9**	**+0.6**
HRKL	**Herakleio**	**1.59**	**282**	PN		**Pb**	**22 15 28.2**	**+0.3**
NIS1	**Nisyros Isl.**	**1.62**	**5**	P		**Pn**	**22 15 26.7**	**-0.3**
NIS1	**Nisyros Isl.**	**1.62**	**5**	PN		**Pn**	**22 15 27.5**	**+0.5**
IDI	**Anoyia**	**1.75**	**281**	Pg		**Pb**	**22 15 31.5**	**+0.7**
	comp=E,6.2nm,0.3s,baz=106,slow=17,SNR=18							
IDI				Lg		Lg	22 15 55.3	
	comp=E,17nm,0.3s,baz=180,slow=22,SNR=9.0							
IDI	**Anoyia**	**1.75**	**281**	P		**Pb**	**22 15 31.3**	**+0.6**
IDI	**Anoyia**	**1.75**	**281**	PN		**Pb**	**22 15 31.1**	**+0.3**
KOSK	**Kos Island**	**1.77**	**359**	PN		**Pn**	**22 15 29.6**	**+0.7**
SIVA	**Sivas**	**1.80**	**272**	P		**Pb**	**22 15 32.2**	**+0.8**
SANT	**Santorini**	**1.87**	**318**	PN		**Pn**	**22 15 30.9**	**+0.5**
THR6	**Thira Island,**	**1.89**	**317**	P		**Pn**	**22 15 31.1**	**+0.5**
THR3	**Thira Island,**	**1.93**	**318**	P		**Pn**	**22 15 31.3**	**+0.2**
THT2	**Imerovigli**	**1.94**	**319**	PN		**Pn**	**22 15 32.2**	**+0.9**
TURN	**Turunc**	**2.06**	**29**	*i* P		**Pn**	**22 15 34.3**	**+1.4**
TURN				*i* S		**Sn**	**22 15 53.5**	**-4.8**
TURN	**Turunc**	**2.06**	**29**	PN		**Pn**	**22 15 34.3**	**+1.4**
BODT	**Bodrum**	**2.09**	**7**	P		**Pn**	**22 15 32.9**	**-0.5**
BDRM	**Kayabasi**	**2.11**	**10**	*i* P		**Pn**	**22 15 33.1**	**-0.5**
BDRM				*i* S		**Sn**	**22 16 00.2**	**+0.5**
DALY	**Dalyan (Mula)**	**2.27**	**36**	*i* P		**Pn**	**22 15 36.7**	**+0.9**
DALY				*i* S		**Sn**	**22 16 05.1**	**+1.5**
DALY				IAML			22 16 20.0	
	comp=N,65nm,0.7s							
DALY				IAML			22 16 25.0	
	comp=E,48nm,0.8s							
DALY	**Dalyan (Mula)**	**2.27**	**36**	PN		**Pn**	**22 15 37.1**	**+1.3**
VAM	**Vamos**	**2.33**	**281**	P		**Pb**	**22 15 39.9**	**-0.6**
YER	**Yerkesik**	**2.39**	**25**	PN		**Pn**	**22 15 38.5**	**+1.0**
GVDS	**Gavdos**	**2.39**	**268**	PN		**Pn**	**22 15 40.1**	**+2.6**
GVD	**Gavdhos**	**2.40**	**267**	PN		**Pn**	**22 15 39.9**	**+2.3**
APE	**Apeiranthos**	**2.40**	**331**	P		**Pn**	**22 15 37.1**	**-0.6**
AKAS	**Kas**	**2.46**	**59**	*i* P		**Pn**	**22 15 38.9**	**+0.3**
AKAS				IAML			22 16 21.0	
	comp=N,56nm,1.7s							
AKAS	**Kas**	**2.46**	**59**	PN		**Pn**	**22 15 39.2**	**+0.6**
MULA	**Mugla, Merkez-**	**2.51**	**25**	*i* P		**Pn**	**22 15 41.6**	**+2.4**
MULA				*i* S		**Sn**	**22 16 12.0**	**+2.3**
MULA				IAML			22 16 30.0	
	comp=E,40nm,0.7s							
IMMV	**Iera Moni Meta**	**2.52**	**282**	P		**Pb**	**22 15 42.5**	**-1.2**
IMMV	**Iera Moni Meta**	**2.52**	**282**	P		**Pn**	**22 15 40.4**	**+1.2**
IMMV	**Iera Moni Meta**	**2.52**	**282**	PN		**Pn**	**22 15 41.1**	**+1.9**
GCAM	**G?zelcami?**	**2.72**	**4**	*i* P		**Pn**	**22 15 42.6**	**+0.6**
GCAM	**G?zelcami?**	**2.72**	**4**	PN		**Pn**	**22 15 43.6**	**+1.6**
AYDN	**Tasoluk**	**2.77**	**15**	*i* P		**Pn**	**22 15 43.7**	**+1.0**
CAEL	**Denizli, Camel**	**2.85**	**41**	*i* P		**Pn**	**22 15 45.1**	**+1.2**
CAEL				*i* S		**Sn**	**22 16 20.1**	**+2.0**
CAEL				IAML			22 16 37.0	
	comp=N,55nm,0.8s							
CAEL				IAML			22 16 53.0	
	comp=E,72nm,1.2s							
TAVA	**DENIZLI_Tavas**	**2.92**	**31**	*i* P		**Pn**	**22 15 45.9**	**+1.0**
TAVA				*i* S		**Sn**	**22 16 20.1**	**+0.2**
AKUM	**Antalya-Kumluc**	**3.03**	**63**	*i* P		**Pn**	**22 15 44.9**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**3.04**	**13**	PN		**Pn**	**22 15 47.1**	**+0.5**
GOLH	**Golhisar**	**3.06**	**42**	*i* P		**Pn**	**22 15 47.6**	**+0.8**
GOLH				IAML			22 16 43.0	
	comp=N,27nm,0.6s							
KORT	**Korkueli**	**3.38**	**52**	*i* P		**Pn**	**22 15 52.9**	**+1.6**
KORT				*i* S		**Sn**	**22 16 30.6**	**-0.7**
KORT	**Korkueli**	**3.38**	**52**	PN		**Pn**	**22 15 53.2**	**+1.9**
BRDR	**BURDUR-Merkez**	**3.67**	**42**	*i* P		**Pn**	**22 15 55.9**	**+0.8**
MANT	**Manisa**	**3.72**	**19**	*i* P		**Pn**	**22 15 54.6**	**-1.4**
MMAI	**Mount Meron Ar**	**7.25**	**103**	Pn		**Pn**	**22 16 45.5**	**+1.1**
	baz=316,slow=14,SNR=1.6							
MMAI				Sn		**Sn**	**22 18 08.3**	**+1.7**
	comp=N,1.1nm,0.3s,baz=306,slow=24,SNR=4.4							
EIL	**Elat**	**8.56**	**126**	Pn		**Pn**	**22 17 03.2**	**+0.9**
	comp=N,0.2nm,0.3s,baz=26,slow=16,SNR=1.0							
EIL				Sn		**Sn**	**22 18 35.4**	**-3.3**
	comp=N,0.3nm,0.3s,baz=77,slow=17,SNR=1.5							
EIL				LR	LR		22 22 16.1	
	comp=N,51nm,19.4s,baz=353,slow=51							
BRG	**Berggiesshubel**	**18.49**	**333**	Amp			22 19 17.0	
	comp=E,0.3nm,10.9s							
BRG				Amp			22 21 14.0	
	comp=Z,0.6nm,8.8s							
ARU	**Arti**	**30.32**	**35**	LR	LR		22 37 11.0	
	comp=Z,297nm,18.3s,baz=286,slow=44							
TORD	**Torodi Ar. Bea**	**31.56**	**233**	P		**P**	**22 21 21.4**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=36,slow=8.5,SNR=2.6							
KURBB	**Kurchatov Arra**	**40.06**	**51**	P		**P**	**22 22 32.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=275,slow=8.7,SNR=2.9							
MKAR	**Makanchi Array**	**42.61**	**57**	P		**P**	**22 22 54.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=279,slow=7.4,SNR=4.3							
ZALV	**Zalesovo Beam**	**44.04**	**46**	P		**P**	**22 23 05.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=286,slow=5.8,SNR=2.9							
ZALV				LR	LR		22 43 43.4	
	comp=Z,132nm,22.0s,baz=302,slow=39							
KSRS	**Korea Array**	**77.19**	**53**	LR	LR		23 03 06.9	
	comp=Z,37nm,20.1s,baz=320,slow=38							
JNU	**Nakatsue**	**81.66**	**55**	LR	LR		23 10 14.9	
	comp=Z,101nm,21.2s,baz=328,slow=41							

*NORS **19** 22:15:58.6±0.0,42°.38N×44°.03E,h5km,MPVA3.3*
*TIF **19** 22:15:58.3,42°.40N×44°.04E,h20km±1km*
*DDA **19** 22:15:59.5,42°.28N×44°.01E,h20km±1km,ML1.9*
ISC 19 22:15:59.2±1.0,42°.36N±0°.02×44°.02E±0°.02,h19km±3km, n28,σ1§09/54,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GUDG	**Gudauri**	**0.35**	**73**	P		**Pb**	**22 16 06.2**	**-0.8**
GUDG				S		**Sb**	**22 16 11.3**	**-1.0**
ZEI	**Tsey**	**0.43**	**349**	*i* Pg		**Pg**	**22 16 07.1**	**-1.2**
ZEI				*e*Sg		**Sg**	**22 16 13.4**	**-1.0**
ONI	**Oni**	**0.48**	**299**	P		**Pg**	**22 16 08.2**	**-0.7**
ONI				S		**Sb**	**22 16 15.6**	**0.0**
ONI	**Oni**	**0.48**	**299**	*i* Pg		**Pg**	**22 16 08.3**	**-0.7**
ONI				*e*Sg		**Sb**	**22 16 15.7**	**0.0**
LACR	**Lac**	**0.51**	**24**	*e*Pg		**Pg**	**22 16 08.3**	**-1.2**
LACR				*e*Sg		**Sb**	**22 16 15.6**	**-1.0**
PNSH	**Pansheti**	**0.52**	**58**	P		**Pb**	**22 16 08.7**	**-1.0**
PNSH				S		**Sb**	**22 16 16.2**	**-0.7**
DIGR	**Digorskoe uzhe**	**0.63**	**329**	*e*Pg		**Pb**	**22 16 10.7**	**-0.8**
DIGR				*e*Sg		**Sg**	**22 16 19.4**	**-0.8**
BKRG	**Bakuriani**	**0.71**	**212**	P		**Pg**	**22 16 13.1**	**-0.1**
BKRG				S		**Sn**	**22 16 23.9**	**-0.7**
TKB	**Tkibuli**	**0.76**	**269**	P		**Pb**	**22 16 13.3**	**-0.4**
TKB				S		**Sg**	**22 16 24.6**	**+0.3**
BTNK	**Botanikuri**	**0.89**	**139**	P		**Pn**	**22 16 16.3**	**-0.4**
BTNK	**Botanikuri**	**0.89**	**139**	*i* P		**Pg**	**22 16 16.0**	**-0.6**
BTNK				*i* S		**Sb**	**22 16 27.6**	**+0.1**
BTNK				IAML			22 16 34.0	
	comp=E,27nm,0.1s							
LSNR	**Lesken**	**0.93**	**351**	*e*Pg		**Pg**	**22 16 16.8**	**-0.4**
LSNR				*e*Sg		**Sn**	**22 16 30.6**	**+0.6**
KMGR	**Komgaron**	**0.93**	**42**	*e*Pg		**Pg**	**22 16 19.4**	**+2.0**
KMGR				*e*Sg		**Sn**	**22 16 33.7**	**+3.6**
STDR	**Stavd-Durt**	**1.01**	**2**	*e*Pg		**Pg**	**22 16 19.1**	**+0.4**
STDR				*e*Sg		**Sg**	**22 16 35.6**	**+3.6**
KZRT	**Kazreti**	**1.02**	**164**	P		**Pg**	**22 16 18.4**	**-0.5**
KZRT				S		**Sg**	**22 16 32.7**	**+0.4**
KZRT	**Kazreti**	**1.02**	**164**	*i* P		**Pn**	**22 16 18.2**	**-0.2**
KZRT				*i* S		**Sn**	**22 16 31.5**	**-0.7**
AKH	**Akhalkalaki**	**1.03**	**203**	P		**Pg**	**22 16 18.8**	**-0.4**
AKH				S		**Sg**	**22 16 34.1**	**+1.3**
DMNI	**Dmanisi**	**1.04**	**173**	P		**Pn**	**22 16 18.8**	**-0.1**
DMNI				S		**Sg**	**22 16 33.5**	**+0.4**
ABS	**Abastumani**	**1.08**	**236**	P		**Pg**	**22 16 19.6**	**-0.6**
ABS				S		**Sg**	**22 16 35.5**	**+1.0**
NCK	**Nalchik**	**1.17**	**345**	*e*Pg		**Pg**	**22 16 22.1**	**+0.2**
NCK				*e*Sg		**Sg**	**22 16 38.6**	**+1.3**
EPOS	**Posof**	**1.29**	**229**	*i* P		**Pb**	**22 16 22.6**	**-0.3**
EPOS				*i* S		**Sn**	**22 16 38.4**	**-0.7**
SHA1	**Shidzhatmaz**	**1.70**	**324**	*e*Pg		**Pg**	**22 16 30.4**	**-1.5**
SHA1				*e*Sg		**Sg**	**22 16 53.9**	**-0.2**
EAK	**Akyaka**	**1.70**	**191**	*i* P		**Pn**	**22 16 28.5**	**+0.5**
EAK				*i* S		**Sn**	**22 16 50.0**	**+0.7**
EAK				IAML			22 16 56.0	
	comp=E,15nm,1.2s							
EAK				IAML			22 16 59.0	
	comp=N,9.2nm,0.7s							
LGD	**Lagodekhi**	**1.74**	**107**	P		**Pg**	**22 16 31.2**	**-1.4**
LGD				S		**Sg**	**22 16 55.3**	**+0.1**
DDFL	**Dedoflistskaro**	**1.82**	**120**	P		**Pg**	**22 16 34.6**	**+0.5**
DDFL	**Dedoflistskaro**	**1.82**	**120**	*i* P		**Pg**	**22 16 34.0**	**-0.1**
DDFL				*i* S		**Sg**	**22 16 57.9**	**+0.1**
DBOC	**Borcka**	**2.03**	**241**	*i* P		**Pb**	**22 16 36.4**	**+1.0**
DBOC				*i* S		**Sb**	**22 17 01.6**	**+1.3**
DBOC				IAML			22 17 07.0	
	comp=E,16nm,0.7s							
DBAD	**Bademkaya**	**2.20**	**233**	*i* P		**Pb**	**22 16 39.4**	**+1.1**
DBAD				*i* S		**Sb**	**22 17 03.7**	**-1.5**
DBAD				IAML			22 17 14.0	
	comp=E,17nm,0.4s							
DBAD				IAML			22 17 14.0	
	comp=N,14nm,1.0s							

*IDC **19** 22:21:34.4±0.9,35°.20N×27°.00E,h0km,mb4.0/13, mb1 3.9/16,mb1mx3.7/57,mbtmp3.9/16,ML3.6/3,Error ellipse: s-maj=22.9km s-min=10.3km az=175.0*
*NIC **19** 22:21:35.0±0.0,35°.00N×27°.01E,h3km±1km,Ml3.7/5*
*ISK **19** 22:21:36.9,35°.08N×26°.96E,h10km,ML3.5/24*
*HLW **19** 22:21:36.0,35°.24N×27°.03E,h31km±26km,Md4.2,Ml4.0*

*THE **19** 22:21:39.2,35°.22N×26°.84E,h0km±1km,ML3.4/7,Error ellipse: s-maj=3.2km s-min=0.7km az=151.0*
*ATH **19** 22:21:39.3,35°.28N×26°.82E,h32km±8km,ML3.5/6,Error ellipse: s-maj=10.4km s-min=2.2km az=145.0*
*DDA **19** 22:21:43.3,35°.36N×27°.19E,h30km±4km,MW3.7*
ISC 19 22:21:36.2±1.0,35°.05N±0°.03×26°.94E±0°.02,h19km±3km, n131,σ1§65/165,mb4.0/13,5C,Crete

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KARP	**Karpathos**	**0.53**	**20**	P		**Pb**	**22 21 47.2**	**+0.4**
KARP				S		**Sb**	**22 21 54.9**	**+0.9**
KARP				AML	AML		22 21 56.3	
	comp=E,15050μm,0.3s							
KARP				AML	AML		22 21 56.5	
	comp=N,24154μm,0.4s							
KARP	**Karpathos**	**0.53**	**20**	P		**Pb**	**22 21 47.2**	**+0.4**
KARP				S		**Sb**	**22 21 55.2**	**+1.2**
	comp=N,10μm,0.3s							
KARP	**Karpathos**	**0.53**	**20**	PG		**Pb**	**22 21 47.0**	**+0.2**
KARP				SG		**Sb**	**22 21 54.9**	**+0.9**
KARP	**Karpathos**	**0.53**	**20**	P		**Pb**	**22 21 47.2**	**+0.4**
KARP				S		**Sb**	**22 21 55.3**	**+1.3**
KARP				AML	AML		22 21 55.9	
	comp=N,24nm,0.4s							
KARP				AML	AML		22 21 55.9	
	comp=N,24nm,0.4s							
KARP				AML	AML		22 21 56.4	
	comp=N,18nm,0.5s							
KARP				AML	AML		22 21 56.4	
	comp=N,18nm,0.5s							
ZKR	**Zakros**	**0.59**	**276**	P		**Pn**	**22 21 48.9**	**-0.7**
ZKR				S		**Sn**	**22 21 58.2**	**-0.6**
ZKR				AML	AML		22 21 59.9	
	comp=N,9420μm,0.3s							
ZKR				AML	AML		22 22 02.0	
	comp=E,11600μm,0.3s							
ZKR	**Zakros**	**0.59**	**276**	P		**Pn**	**22 21 48.7**	**-0.9**
ZKR				S		**Sn**	**22 21 58.6**	**-0.1**
	comp=E,5μm,0.3s							
ZKR	**Zakros**	**0.59**	**276**	PG		**Pn**	**22 21 48.9**	**-0.7**
ZKR				SG		**Sn**	**22 21 58.4**	**-0.3**
ZKR	**Zakros**	**0.59**	**276**	P		**Pn**	**22 21 48.7**	**-0.9**
ZKR				AML	AML		22 21 58.5	
	comp=E,8.5nm,0.4s							
ZKR				AML	AML		22 21 58.5	
	comp=E,8.5nm,0.4s							
ZKR				S		**Sn**	**22 21 58.8**	**0.0**
ZKR				AML	AML		22 22 00.8	
	comp=E,11nm,0.3s							
ZKR				AML	AML		22 22 00.8	
	comp=E,11nm,0.3s							
STIA	**Sitia Lasithi**	**0.71**	**282**	P		**Pn**	**22 21 50.6**	**-0.6**
STIA				S		**Sn**	**22 22 01.3**	**-0.3**
NPS	**Neapolis**	**1.10**	**281**	P		**Pg**	**22 21 58.3**	**+0.7**
NPS				AML	AML		22 22 19.4	
	comp=N,4340μm,0.6s							
NPS				AML	AML		22 22 20.0	
	comp=E,6962μm,0.5s							
NPS	**Neapolis**	**1.10**	**281**	P		**Pg**	**22 21 58.1**	**+0.5**
NPS				S		**Sg**	**22 22 13.6**	**+1.4**
	comp=E,3μm,0.6s							
ARG	**Arkhangelos**	**1.51**	**39**	P		**Pg**	**22 22 05.1**	**-0.3**
ARG				AML	AML		22 22 29.4	
	comp=N,1770μm,0.9s							
ARG				AML	AML		22 22 30.3	
	comp=E,3735μm,0.7s							
ARG	**Arkhangelos**	**1.51**	**39**	P		**Pg**	**22 22 04.8**	**-0.5**
ARG				S		**Sg**	**22 22 25.7**	**+0.6**
	comp=E,1μm,0.8s							
ARG	**Arkhangelos**	**1.51**	**39**	PN		**Pb**	**22 22 04.2**	**+0.6**
ARG				SN		**Sg**	**22 22 24.7**	**-0.4**
ARG	**Arkhangelos**	**1.51**	**39**	⇑P		**Pb**	**22 22 04.3**	**+0.6**
ARG				S		**Sg**	**22 22 25.2**	**+0.1**
HRKL	**Her

CAEL	Denizli, Camel	2.83	42	*i*	P		Pn	22 22 22.1	+1.7
TAVA	DENIZLI_Tavas	2.89	33	*i*	P		Pn	22 22 22.7	+1.4
TAVA					*i*	S	Sn	22 22 57.2	+1.6
ELL	Elmali	2.95	54		PN		Pn	22 22 24.9	+2.8
AYDB	Zeytinkoy-Aydi	2.99	15		PN		Pn	22 22 24.8	+2.1
DGB	zmir	2.99	359	*i*	P		Pn	22 22 24.2	+1.6
DGB					*i*	S	Sn	22 22 55.8	-2.1
GOLH	Golhisar	3.04	43	*i*	P		Pn	22 22 25.6	+2.2
GOLH					*i*	S	Sn	22 23 00.9	+1.5
AKUM	Antalya-Kumluc	3.05	64	*i*	P		Pn	22 22 24.6	+1.3
AKUM					*i*	S	Sn	22 22 57.2	-2.0
ZEYE	Izmir, Urla-Ze	3.20	354	*i*	P		Pn	22 22 26.2	+0.8
URLA	Izmir	3.31	355	*i*	P		Pn	22 22 26.6	-0.4
URLA	Izmir	3.31	355		P		Pn	22 22 29.6	+2.6
KTHA	Kythira Island	3.38	292		P		Pn	22 22 29.9	+2.0
KTHA	Kythira Island	3.38	292		PN		Pn	22 22 31.5	+3.6
KORT	Korkueli	3.38	54	*i*	P		Pn	22 22 30.5	+2.5
KORT					*i*	S	Sn	22 23 00.4	-7.3
KORT	Korkueli	3.38	54		PN		Pn	22 22 31.1	+3.0
CHOS	Chios island	3.40	348		PN		Pn	22 22 31.0	+2.7
KTHR	Kythira	3.42	292		P		Pn	22 22 30.8	+2.3
ANTB	Antalya	3.53	57		PN		Pn	22 22 32.9	+2.9
VLI	Veliai	3.65	298		P		Pn	22 22 33.2	+1.6
BRDR	BURDUR-Merkez	3.65	43	*i*	P		Pn	22 22 31.5	-0.2
MANT	Manisa	3.67	20	*i*	P		Pn	22 22 33.7	+1.6
BUCA	Burdur, Bucak-	3.71	51	*i*	P		Pn	22 22 31.8	-0.7
BUCA					*i*	S	Sn	22 23 12.0	-3.7
KULA	Kula-Manisa	3.72	21		PN		Pn	22 22 34.8	+2.1
BCK	Bucak	3.81	50		PN		Pn	22 22 37.4	+3.5
SLUM	Salum	3.83	203		P		Pn	22 22 35.2	+1.0
	baz=203								
SLUM						AMP		22 23 00.0	
	baz=203								
SLUM						S	Sn	22 23 19.4	+0.7
	baz=203								
OSC1	CSNet OBS 1	3.91	112		P		Pn	22 22 36.4	+1.2
OSC1					S		Sn	22 23 22.5	+1.9
ISP	Isparta	4.00	45		PN		Pn	22 22 40.2	+3.7
USAK	Uak-Merkez	4.02	24	*i*	P		Pn	22 22 38.2	+1.5
KEPZ	Antalya-Kepez	4.21	63	*i*	P		Pn	22 22 41.5	+2.2
KEPZ					*i*	S	Sn	22 23 27.2	-0.8
AKMS	Akamas	4.43	89		P		Pn	22 22 43.1	+0.7
AKMS						AML	AML	22 23 34.9	
	comp=N,0.7nm,0.3s								
AKMS						AML	AML	22 23 35.0	
	comp=N,0.7nm,0.3s								
BUHA	Balikesir, Bur	4.44	1	*i*	P		Pn	22 22 44.2	+1.7
SEDI	Konya, Seydise	4.57	57	*i*	P		Pn	22 22 47.3	+2.9
SEDI					*i*	S	Sn	22 23 32.6	-4.4
NATA	Nata	4.64	92		P		Pn	22 22 46.2	+1.0
ALFC	Alefka	4.64	87	⇑	P		Pn	22 22 45.6	+0.3
ALFC						AML	AML	22 23 38.9	
	comp=N,0.8nm,0.5s								
ALFC						AML	AML	22 23 39.2	
	comp=N,1.1nm,0.7s								
DOGA	KONYA_Doganhis	4.88	50	*i*	P		Pn	22 22 50.7	+2.0
DOGA					*i*	S	Sn	22 23 35.6	-9.0
SZAC	Souni	4.89	92	⇑	P		Pn	22 22 49.2	+0.4
ASGA	Asgata	5.19	91		P		Pn	22 22 53.7	+0.8
CSS	Mathiatis	5.25	89	⇑	P		Pn	22 22 54.2	+0.5
CSS						AML	AML	22 23 54.2	
	comp=N,0.1nm,1.0s								
CSS						AML	AML	22 23 59.5	
	comp=N,0.1nm,0.5s								
MVOU	Mavrovouni	5.49	88		P		Pn	22 22 57.8	+0.8
SWA2		5.93	193		P		Pn	22 23 04.9	+1.9
	baz=194								
SWA2						AMP		22 24 00.0	
	baz=194								
SWA2						S	Sn	22 24 09.0	-1.3
	baz=194								
HNAT	Natroun	6.24	149		P		Pn	22 23 07.9	+0.7
	baz=150								
HNAT						AMP		22 24 00.0	
	baz=150								
RYAN	Fayoum	6.59	154		P		Pn	22 23 12.7	+0.6
	baz=154								
RYAN						AMP		22 24 00.0	
	baz=154								
HSAF	As Saff	6.68	143		P		Pn	22 23 14.1	+0.8
	baz=144								
GLL	Jalalah	6.79	142		P		Pn	22 23 15.1	+0.2
	baz=143								
SUZ	Suez	7.20	135		P		Pn	22 23 20.9	+0.5
	baz=136								
MMAI	Mount Meron Ar	7.32	104		Pn		Pn	22 23 21.7	-0.4
	comp=N,1.7nm,0.3s,baz=288,slow=11,SNR=31								
MMAI						Sn	Sn	22 24 41.6	-3.0
	comp=N,1.9nm,0.3s,baz=306,slow=17,SNR=2.2								
NBNS	Bani Suef	7.40	149		P		Pn	22 23 24.2	+1.0
	baz=150								
HFRF	Wahat Farafira	7.97	171		P		Pn	22 23 33.0	+2.1
	baz=171								
EIL	Elat	8.64	126		Pn		Pn	22 23 40.9	+0.6
	comp=N,0.5nm,0.3s,baz=244,slow=1.7,SNR=28								
EIL						Sn	Sn	22 25 11.8	-5.4
	comp=N,2.6nm,0.3s,baz=9.7,slow=11,SNR=9.9								
AKASG	Malin Array Be	15.73	5		Pn		P	22 25 19.5	-1.0
	comp=N,1.0nm,0.3s,baz=193,slow=12,SNR=10								
GERES	GERESS Array B	16.90	329		Pn		Pn	22 25 32.3	+0.7
	comp=N,0.1nm,0.3s,baz=144,slow=11,SNR=3.0								
ESDC	Sonseca Array	24.92	290		P		P	22 26 58.0	-0.2
	comp=N,0.5nm,0.6s,baz=82,slow=10,SNR=12								
FINES	FINESS Array B	26.42	359		P		P	22 27 10.8	-0.5
	comp=N,1.5nm,0.7s,baz=169,slow=11,SNR=6.0								
HFS	Hagfors	26.53	345		P		P	22 27 11.9	-0.5
	comp=N,0.9nm,0.6s,baz=124,slow=7.2,SNR=1.4								
AKTO	Aktyubinsk	27.27	46		P		P	22 27 19.3	+0.2
	comp=N,0.5nm,0.4s,baz=188,slow=5.8,SNR=2.1								
TORD	Torodi Ar. Bea	31.56	233		P		P	22 27 59.0	+1.5
	comp=N,2.3nm,0.5s,baz=33,slow=9.0,SNR=26								
ARCES	ARCESS Array B	34.55	359		P		P	22 28 21.2	-1.9
	comp=N,1.9nm,0.8s,baz=175,slow=12,SNR=1.6								
AAK	Ala-Archa	37.40	64		P		P	22 28 49.7	+1.7
	comp=N,1.9nm,0.7s,baz=192,slow=16,SNR=8.0								
KURBB	Kurchatov Arra	40.06	51		P		P	22 29 10.8	+0.8
	comp=N,2.2nm,0.5s,baz=274,slow=8.6								
MKAR	Makanchi Array	42.62	57		P		P	22 29 32.2	+1.1
	comp=N,2.9nm,0.6s,baz=274,slow=7.9,SNR=26								
ZALV	Zalesovo Beam	44.03	46		P		P	22 29 42.7	+0.3
	comp=N,2.6nm,0.5s,baz=269,slow=9.0,SNR=11								
SONM	Songino Array	58.42	51		P		P	22 31 31.4	+0.8
	comp=N,0.7nm,0.5s,baz=288,slow=7.1,SNR=7.7								
USRK	Ussuriysk Ar.	75.88	46		P		P	22 33 21.4	+0.1
	comp=N,0.9nm,0.6s,baz=299,slow=3.0,SNR=3.4								
YKA	Yellowknife Ar	77.99	343		P		P	22 33 31.6	-1.3
	comp=N,0.3nm,0.7s,baz=41,slow=5.6,SNR=4.2								

KRSC ***19*** *22:24:35.9±1.7, 48°.85N×155°.14E, h171km±18km, ML4.7*
SKHL ***19*** *22:24:36.6±0.6, 49°.00N×154°.30E, h148km±5km, mb5.5/4.8, msha5.9/4*
MOS ***19*** *22:24:36.3±0.9, 49°.13N×154°.11E, h154km, mb4.4/7, Error ellipse: s-maj=10.9km s-min=3.3km az=69.0*
NEIC ***19*** *22:24:37.2±1.4, 49°.2N±0°.1×154°.0E±0°.2, h146km±9km, mb4.0/21, Error ellipse: s-maj=22.7km s-min=10.7km az=126.0*
IDC ***19*** *22:24:38.6±2.1, 49°.20N×153°.97E, h155km±18km, mb3.7/27, mb1 3.8/32, mb1mx3.6/77, mbtmp4.2/32, MS2.9/1, Ms1 2.9/1, ms1mx2.3/45, Error ellipse: s-maj=17.2km s-min=11.6km az=123.0*

ISC 19 22:24:35.6±0.8, 48°.90N±0°.07×154°.43E±0°.07, h148km±6km, n242, σ1§90/275, mb4.1/52, 10C-1D, Kuril Islands

Code	Station Name	Δ°	Az°	Op	Phase	ID	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.09	31	⇓	*i*	PN	Pn	22 25 12.8	+1.2
SKR					*e*	S	Sn	22 25 39.2	-0.1
SKR						pmax	pmax		
	comp=Z,3μm,0.5s								
SKR						smax	smax		
	comp=E,3μm,0.5s								
SKR						smax	smax		
	comp=N,4μm,0.3s								
SKR						MLR	MLR		
	comp=Z,300nm,17.0s								
SKR	Severo-Kuril's	2.09	31		*i*	P	Pn	22 25 13.0	+1.5
SKR					*e*	S	Sn	22 25 39.9	+0.6
SKR	Severo-Kuril's	2.09	31		*i*	P	Pn	22 25 13.1	+1.5
SKR						AMB	AMB	22 25 13.9	
	comp=Z,3μm,0.5s								
SKR					*i*	S	Sn	22 25 40.1	+0.8
SKR						A	A	22 25 43.0	
	comp=Z,3μm,0.5s								
SKR						A	A	22 25 43.0	
	comp=Z,4μm,0.5s								
ALID	Alaid	2.10	20		PN		Pn	22 25 13.3	+1.4
ALID	Alaid	2.10	20	*i*	P		Pn	22 25 13.3	+1.4
PAU	Pauzhetka	2.99	30		PN		Pn	22 25 23.6	+1.0
PAU					S		Sn	22 25 58.5	-0.6
PAU	Pauzhetka	2.99	30	*i*	P		Pn	22 25 23.6	+1.0
PAU					*e*	S	Sn	22 25 58.5	-0.6
PAU	Pauzhetka	2.99	30	*e*	P		Pn	22 25 23.6	+1.0
PAU						AMB	AMB	22 25 24.5	
	comp=Z,620nm,0.5s								
PAU					*e*	S	Sn	22 25 59.3	+0.2
PAU						A	A	22 25 59.8	
	comp=Z,790nm,0.4s								
PAU						A	A	22 25 59.8	
	comp=Z,1μm,0.4s								
MIPR	Malaya Ipel'ka	3.69	23		PN		Pn	22 25 32.5	+0.8
MIPR	Malaya Ipel'ka	3.69	23	*i*	P		Pn	22 25 32.5	+0.8
KDTR	Khodutka, Kamc	3.73	37		PN		Pn	22 25 31.8	-0.4
KDTR					S		Sn	22 26 12.5	-3.6
KDTR	Khodutka, Kamc	3.73	37	*i*	P		Pn	22 25 31.8	-0.4
KDTR					*e*	S	Sn	22 26 12.5	-3.6
ASAK	Asacha	4.12	31		PN		Pn	22 25 38.5	+1.1
ASAK					S		Sn	22 26 24.9	-0.6
ASAK	Asacha	4.12	31	*e*	P		Pn	22 25 38.5	+1.1
ASAK					*e*	S	Sn	22 26 24.9	-0.6
MTVR	Mutnovka	4.30	32		PN		Pn	22 25 41.0	+1.2
MTVR					S		Sn	22 26 28.5	-1.3
MTVR	Mutnovka	4.30	32	*e*	P		Pn	22 25 41.0	+1.2
MTVR					*e*	S	Sn	22 26 28.5	-1.3
GRL	Gorelyy	4.32	31		PN		Pn	22 25 41.3	+1.2
GRL					S		Sn	22 26 29.3	-1.0
GRL	Gorelyy	4.32	31	*e*	P		Pn	22 25 41.3	+1.2
GRL					*e*	S	Sn	22 26 29.3	-1.0
APC	Apacha	4.38	22		PN		Pn	22 25 41.1	+0.4
APC	Apacha	4.38	22	*e*	P		Pn	22 25 41.1	+0.4
RUS	Russkaya	4.38	35		PN		Pn	22 25 40.6	-0.1
RUS					S		Sn	22 26 28.1	-3.4
RUS	Russkaya	4.38	35	*e*	P		Pn	22 25 40.6	-0.1
RUS					*e*	S	Sn	22 26 28.1	-3.4
RUS	Russkaya	4.38	35	*e*	P		Pn	22 25 40.6	-0.1
KRMR	Karymshinskiy	4.58	29		PN		Pn	22 25 45.0	+1.8
KRMR					S		Sn	22 26 35.5	-0.5
KRMR	Karymshinskiy	4.58	29	*i*	P		Pn	22 25 45.0	+1.8
KRMR					*e*	S	Sn	22 26 35.5	-0.5
PEA0B	Petropavlovsk-	4.69	25	⇑	*e*	PN	Pn	22 25 45.3	+0.5
PEA0B	Petropavlovsk-	4.69	25		Pn		Pn	22 25 45.5	+0.8
PETK	Petropavlovsk-	4.69	25		P		Pn	22 25 45.6	+0.9
	comp=Z,4.3nm,0.3s,baz=168,slow=12,SNR=83								
PETK	Petropavlovsk-	4.69	25				Pn	22 25 45.5	+0.8
PET	Petropavlovsk	4.91	31	⇑	*e*	PN	Pn	22 25 47.4	-0.3
PET	Petropavlovsk	4.91	31		*e*	P	Pn	22 25 48.1	+0.4
PET					*e*	S	Sn	22 26 41.7	-2.2
PET	Petropavlovsk	4.91	31		Pn		Pn	22 25 47.6	-0.1
PET					Sn		Sn	22 26 44.1	+0.2
PET	Petropavlovsk	4.91	31	*i*	P		Pn	22 25 48.2	+0.5
PET						AMB	AMB	22 25 49.7	
	comp=Z,120nm,0.6s								
PET					*e*	S	Sn	22 26 43.8	-0.1
PET						A	A	22 26 44.1	
	comp=Z,130nm,0.5s								
PET						A	A	22 26 44.1	
	comp=Z,120nm,0.5s								
DALK	Dalny	4.95	32		PN		Pn	22 25 48.6	+0.4
DALK					S		Sn	22 26 41.3	-3.6
DALK	Dalny	4.95	32	*e*	P		Pn	22 25 48.6	+0.4
DALK					*e*	S	Sn	22 26 41.3	-3.6
UGLR	Uglovaya	5.12	31		PN		Pn	22 25 52.0	+1.4
UGLR	Uglovaya	5.12	31	*e*	P		Pn	22 25 52.0	+1.4
KOK	Koryaka	5.13	30		PN		Pn	22 25 52.4	+1.7
KOK	Koryaka	5.13	30	*e*	P		Pn	22 25 52.4	+1.7
KOK	Koryaka	5.13	30	*e*	P		Pn	22 25 52.4	+1.7
AVH	Avacha	5.14	30		PN		Pn	22 25 52.3	+1.5
AVH	Avacha	5.14	30	*e*	P		Pn	22 25 52.3	+1.5
SMAR	Somma	5.16	31		PN		Pn	22 25 52.3	+1.1
SMAR	Somma	5.16	31	*e*	P		Pn	22 25 52.3	+1.1
KRER	Koryakskii	5.18	30		PN		Pn	22 25 52.8	+1.4
KRER	Koryakskii	5.18	30	*e*	P		Pn	22 25 52.8	+1.4
KRX	Arik	5.19	29		PN		Pn	22 25 52.7	+1.2
KRX	Arik	5.19	29	*e*	P		Pn	22 25 52.7	+1.2
SDLR	Sedlovina	5.20	31		PN		Pn	22 25 52.4	+0.7
SDLR					S		Sn	22 26 48.2	-2.8
SDLR	Sedlovina	5.20	31	*e*	P		Pn	22 25 52.4	+0.7
SDLR					*e*	S	Sn	22 26 48.2	-2.8
NLC	Nalytchevo	5.28	34		PN		Pn	22 25 51.6	-0.9
NLC					S		Sn	22 26 47.9	-4.7
NLC	Nalytchevo	5.28	34	*e*	P		Pn	22 25 51.6	-0.9
NLC					*e*	S	Sn	22 26 47.9	-4.7
GNL	Ganaly	5.28	23		PN		Pn	22 25 53.4	+0.7
GNL	Ganaly	5.28	23	*e*	P		Pn	22 25 53.4	+0.7
SPN	Mys Shipunski	5.49	38		PN		Pn	22 25 55.1	-0.2
SPN					S		Sn	22 26 51.7	-5.9
SPN	Mys Shipunski	5.49	38	*e*	P		Pn	22 25 55.1	-0.2
SPN					*e*	S	Sn	22 26 51.7	-5.9
SPN	Mys Shipunski	5.49	38	*e*	P		Pn	22 25 55.1	-0.2
KUR	Kuril'sk	5.79	233	*e*	PN		Pn	22 26 02.7	+3.2
KUR					S		Sn	22 27 08.7	+3.7
KUR						pmax	pmax		
	comp=Z,92nm,0.5s								
KUR						pmax	pmax		
	comp=N,45nm,0.3s								
KUR						pmax	pmax		
	comp=E,42nm,0.3s								
KUR						smax	smax		
	comp=N,94nm,0.1s								
KUR						smax	smax		
	comp=E,25nm,0.1s								
KUR	Kuril'sk	5.79	233	*e*	P		Pn	22 26 01.5	+2.0
KUR						AMB	AMB	22 26 08.0	
	comp=E,50nm,0.3s								
KUR						AMB	AMB	22 26 08.0	
	comp=E,40nm,0.3s								
KUR						AMB	AMB	22 26 08.0	
	comp=E,90nm,0.5s								
KUR					*e*	S	Sn	22 27 06.6	+1.6
KUR						A	A	22 27 16.2	
	comp=E,90nm,0.2s								
KUR						A	A	22 27 16.2	
	comp=E,30nm,0.2s								
KII	Karymskiy	6.02	29		PN		Pn	22 26 02.9	+0.4
KII	Karymskiy	6.02	29	*e*	P		Pn	22 26 02.9	+0.4
KZV	Kizimen	7.19	28		PN		Pn	22 26 19.0	+0.8
KZV	Kizimen	7.19	28	*e*	P		Pn	22 26 19.0	+0.8
MKZ	Mys Kozlova	7.25	36		PN		Pn	22 26 17.1	-1.7
MKZ	Mys Kozlova	7.25	36	*e*	P		Pn	22 26 17.1	-1.7
MKZ					*e*	S	Sn	22 27 33.1	-6.6
TUMR	Tumrok	7.29	27		PN		Pn	22 26 20.9	+1.4
TUMR	Tumrok	7.29	27	*e*	P		Pn	22 26 20.9	+1.4
TUMD	Tumrok D	7.30	28	*e*	P		Pn	22 26 20.2	+0.7
TUMD					*e*	S	Sn	22 27 36.9	-4.2
ESO	Esso	7.50	19		PN		Pn	22 26 23.7	+1.5
ESO	Esso	7.50	19	*e*	P		Pn	22 26 23.7	+1.5
YUK	Yuzh-Kuril'sk	7.66	234	*i*	PN		Pn	22 26 26.2	+1.8
YUK	Yuzh-Kuril'sk	7.66	234	*i*	P		Pn	22 26 26.2	+1.8
YUK						AMB	AMB	22 26 27.3	
	comp=E,280nm,0.5s								
KMNR	Kamenistaya	7.73	25		PN		Pn	22 26 26.7	+1.4
KMNR	Kamenistaya	7.73	25	*e*	P		Pn	22 26 26.7	+1.4
GRPR	Tuman	7.74	234	*e*	PN		Pn	22 26 26.3	+0.9
GRPR					*e*	S	Sn	22 27 51.1	-0.5
GRPR						pmax	pmax		
	comp=Z,127nm,0.3s								
GRPR	Tuman	7.74	234	*e*	P		Pn	22 26 26.6	+1.2
GRPR						AMB	AMB	22 26 28.0	
	comp=Z,130nm,0.3s								
TYV	Tymovskoe	7.86	289	*e*	P		Pn	22 26 28.0	+1.1
TYV						AMB	AMB	22 26 29.9	
	comp=Z,300nm,0.7s								
KPT	Kopyto	7.91	24		PN		Pn	22 26 27.2	-0.5
KPT	Kopyto	7.91	24	*e*	P		Pn	22 26 27.2	-0.5
KIRR	Kirishev	7.93	25		PN		Pn	22 26 28.8	+0.8
KIRR	Kirishev	7.93	25	*e*	P		Pn	22 26 28.8	+0.8
RUSJ	Misakicho	7.95	236	*e*	PN		Pn	22 26 30.3	+2.1
RUSJ					S		Sn	22 27 56.9	+0.2
BZMR	Bezymyannaya	7.95	25		PN		Pn	22 26 28.2	-0.1
BZMR	Bezymyannaya	7.95	25	*e*	P		Pn	22 26 28.2	-0.1
BZWR	Bezymyannyi-We	7.98	25		PN		Pn	22 26 30.0	+1.3
BZWR	Bezymyannyi-We	7.98	25	*e*	P		Pn	22 26 30.0	+1.3
BZGR	Bezymyannyi-Gr	8.02	26		PN		Pn	22 26 30.4	+1.2
BZGR	Bezymyannyi-Gr	8.02	26	*e*	P		Pn	22 26 30.4	+1.2
SRDR	Sredinnyy	8.09	21		PN		Pn	22 26 31.4	+1.3
SRDR	Sredinnyy	8.09	21	*e*	P		Pn	22 26 31.4	+1.3
ZLN	Zelenaya	8.12	26		PN		Pn	22 26 30.3	-0.2
ZLN	Zelenaya	8.12	26	*e*	P		Pn	22 26 30.3	-0.2
NEM2	Nemuro 2	8.19	231		P		Pn	22 26 29.6	-1.8
NEM2					*e*	S	Sn	22 27 54.6	-7.9
NMR	Nemuro--Hokkai	8.19	231	*e*	PN		Pn	22 26 29.9	-1.6
JNK	Nakash	8.57	235		P		Pn	22 26 37.1	+0.5
BDR	Baidarnaya	8.70	26		PN		Pn	22 26 36.9	-1.4
BDR	Baidarnaya	8.70	26	*e*	P		Pn	22 26 36.9	-1.4
SRKR	Sorokina	8.77	25		PN		Pn	22 26 39.0	-0.1
SRKR	Sorokina	8.77	25	*e*	P		Pn	22 26 39.0	-0.1
JTKR	Abashiri--Toko	8.78	240		P		Pn	22 26 40.8	+1.5
KBG	Krutoberegovo	8.91	31		PN		Pn	22 26 41.1	+0.1
KBG	Krutoberegovo	8.91	31	*i*	P		Pn	22 26 41.1	+0.1
KBG					*e*	S	Sn	22 28 11.7	-8.1
KBG	Krutoberegovo	8.91	31	*e*	P		Pn	22 26 41.1	+0.1
KBTR	Krutoberegovo	8.92	32		PN		Pn	22 26 39.6	-1.4
KBTR	Krutoberegovo	8.92	32	*e*	P		Pn	22 26 39.6	-1.4
JAK	Akkeshi	8.99	233		P		Pn	22 26 40.6	-1.5
JAK					*e*	S	Sn	22 28 15.0	-6.8
JMP	Maruseppu	9.07	241		P		Pn	22 26 44.8	+1.5
JAR	Ashorobuto	9.29	237		P		Pn	22 26 47.1	+1.0
JKA	Kamikawa-asahi	9.46	244		Pn		Pn	22 26 50.9	+2.6
JKA	Kamikawa-asahi	9.46	244	*e*	P		Pn	22 26 51.3	+3.0
ASAJ	Asahikawa	9.46	244		P		Pn	22 26 51.3	+3.0
	comp=Z,5.7nm,0.3s,baz=67,slow=13,SNR=53								
ASAJ	Asahikawa	9.46	244		P		Pn	22 26 51.2	+2.9
BKI	Bering	9.50	44		PN		Pn	22 26 47.8	-0.9
BKI	Bering	9.50	44	*e*	P		Pn	22 26 47.8	-0.9
BKI					*e*	S	Sn	22 28 22.1	-12
JKK2	Kamakawa 2	9.51	242		P		Pn	22 26 51.7	+2.7
JOB	Onbets	9.51	235		P		Pn	22 26 48.9	-0.1
JOB					*e*	S	Sn	22 28 27.7	-6.7
JCH	Churui	9.96	235		P		Pn	22 26 53.3	-1.7
JCH					*e*	S	Sn	22 28 36.4	-8.9
JBT2	Biratori 2	10.40	238		P		Pn	22 27 00.0	-0.9
JEM	Erimo	10.49	233		P		Pn	22 27 01.2	-0.8
ERM	Erimo	10.49	233		PN		Pn	22 27 01.5	-0.5
ERM	Erimo	10.49	233				Pn	22 27 01.5	-0.5
JNBK	Urakawa-nobuka	10.52	235		P		Pn	22 27 00.6	-1.8
JNB	Noboribetsu	11.36	240		P		Pn	22 27 12.6	-0.8
JKB	Kayabe	11.73	238		P		Pn	22 27 15.4	-2.9
JKB					*e*	S	Sn	22 29 15.4	-13
JYM2	Yakumo 2	11.96	241		P		Pn	22 27 19.2	-2.1
JTM	Tenmabayashi	12.47	234		P		Pn	22 27 24.1	-3.8
JTM					*e*	S	Sn	22 29 30.0	-16
SEY	Seymchan	14.11	356	⇑	*e*	P	Pn	22 27 48.6	0.0
SEY	Seymchan	14.11	356		*e*	P	Pn	22 27 48.6	0.0
EKMR	Ekimchan	14.14	295	*i*	P		Pn	22 27 50.0	+0.9
EKMR						AMB	AMB	22 27 54.9	
	comp=Z,10.0nm,0.6s								
KLR	Kul'dur	14.86	280		P		P	22 28 00.2	0.0
	comp=Z,0.6nm,0.3s,baz=77,slow=12,SNR=23								
KLR						LR	LR	22 34 47.3	
	comp=Z,49nm,18.5s,baz=4.0,slow=42								
USRK	Ussuriysk Ar.	16.12	261		P		P	22 28 14.1	0.0
	baz=65,slow=11,SNR=7.4								
BMKR	Bomnak	16.80	300	*i*	P		P	22 28 21.0	-0.6
BMKR						AMB	AMB	22 28 22.0	
	comp=Z,10.0nm,0.8s								
MAJO	Matsushiro	17.12	230	⇑	*e*	P	Pn	22 28 26.7	+0.8
MAJO						pmax	pmax		
	comp=Z,7.0nm,0.7s								
MAT	Matsushiro	17.12	230		P		Pn	22 28 26.5	+0.6
MJAR	Matsushiro Arr	17.12	230		P		Pn	22 28 27.0	+1.1
	comp=Z,0.1nm,0.3s,baz=28,slow=12,SNR=9.2								
MJAR	Matsushiro Arr	17.12	230		P		Pn	22 28 27.0	+1.1
YAK	Yakutsk	19.06	323		P		P	22 28 44.

comp=Z,1.0nm,0.9s
RES Resolute Bay 48.51 19 P P 22 33 04.0 +1.3
YKA Yellowknife Ar 48.67 38 P P 22 33 06.4 +2.3
comp=Z,0.2nm,0.7s,baz=300,slow=7.3,SNR=4.2
BVAR Borovoye Array 50.19 309 P P 22 33 14.1 -1.7
comp=Z,1.4nm,0.4s,baz=94,slow=14,SNR=21
BVAR PcP **PcP 22 34 33.6 +0.9**
comp=Z,1.5nm,0.4s,baz=148,slow=3.3,SNR=11
SPITS Spitsbergen Ar 50.65 350 P P 22 33 18.0 -0.9
comp=Z,9.4nm,1.0s,baz=289,slow=2.6,SNR=1.9
SPITS Spitsbergen Ar 50.65 350 P P 22 33 18.0 -0.9
ARU Arti 54.03 317 P P 22 33 42.8 -1.2
comp=Z,2.6nm,0.4s,baz=50,slow=6.2,SNR=19
ARU Arti 54.03 317 *c i P* **P 22 33 42.6 -1.5**
ARU 22 34 47.0
ARU 22 35 42.5
ARU S **S 22 41 04.6 -3.7**
ARU pmax pmax
comp=Z,9.0nm,1.1s
ARU Arti 54.03 317 P P 22 33 42.8 -1.2
ARU Arti 54.03 317 *i* P **P 22 33 42.6 -1.5**
ODAN Odare 55.41 272 *eP* **P 22 33 55.6 +0.9**
JIRN Jiri 55.67 274 *eP* **P 22 33 57.1 +0.4**
GUN Gumba 55.71 274 *eP* **P 22 33 57.4 +0.4**
comp=Z,12nm,0.4s
RAMN Ramite 55.88 273 *eP* **P 22 33 58.6 +0.6**
comp=Z,11nm,0.5s
ARCES ARCESS Array B 56.11 341 P P 22 33 58.0 -0.8
comp=Z,0.5nm,0.4s,baz=54,slow=8.0,SNR=7.0
PKI Pulchoki 56.24 274 *eP* **P 22 34 01.3 +0.6**
PKIN Phulchoki 56.25 274 *eP* **P 22 34 01.9 +1.2**
comp=Z,5.0nm,0.4s
GKN Gorkha 56.46 275 *eP* **P 22 34 02.7 +0.6**
comp=Z,13nm,0.4s
KIRV Kirov 56.59 323⇑ *eP* **P 22 34 01.7 -0.6**
KOLN Koldanda 57.30 276 *eP* **P 22 34 08.4 +0.4**
comp=Z,12nm,0.6s
PYUN Piuthan 57.48 277 *eP* **P 22 34 10.5 +1.2**
comp=Z,28nm,0.9s
ABKAR Akbulak array 57.73 309 P P 22 34 09.5 -1.0
ABKAR Akbulak array 57.73 309 P P 22 34 09.7 -0.8
HNR Honiara 58.29 174 P P 22 34 26.5 +12
KLMR Klimovskoe 58.72 329 *eP* **P 22 34 13.5 -3.6**
KLMR pmax pmax
comp=Z,17nm,1.3s
KLMR Klimovskoe 58.72 329 *eP* **P 22 34 13.6 -3.6**
KLMR AMP 22 34 19.0
comp=Z,17nm,1.3s
FINES FINESS Array B 62.47 335 P P 22 34 41.9 -0.6
comp=Z,3.2nm,0.5s,baz=37,slow=8.4,SNR=37
NOA NORSAR Array B 66.47 341 P P 22 35 08.0 -0.6
comp=Z,0.5nm,0.6s,baz=26,slow=6.4,SNR=8.0
NORES NORESS Array B 66.68 341 P P 22 35 10.7 +0.9
HFS Hagfors 66.74 340 P P 22 35 10.1 -0.2
comp=Z,1.3nm,0.4s,baz=48,slow=4.4,SNR=17
AKASG Malin Array Be 70.24 326 P P 22 35 31.1 -1.1
comp=Z,1.5nm,0.5s,baz=32,slow=6.3,SNR=11
AKASG Malin Array Be 70.24 326 P P 22 35 31.3 -0.8
AKASG Malin Array Be 70.24 326 P P 22 35 31.3 -0.8
WB0 Warramunga Arr 70.66 200 P P 22 35 36.9 +2.0
WB0 lAmb lAmb 22 35 54.0
comp=Z,4.8nm,1.1s
WR0 Warramunga Arr 70.81 200 P P 22 35 37.9 +2.0
WR0 lAmb lAmb 22 35 43.4
comp=Z,3.2nm,0.9s
WB2 Warramunga Arr 70.84 200 P P 22 35 37.9 +1.9
WB2 lAmb lAmb 22 35 39.3
comp=Z,4.1nm,0.9s
WRA Warramunga Arr 70.84 200 P P 22 35 38.1 +2.1
comp=Z,0.3nm,0.4s,baz=16,slow=6.4,SNR=5.0
WRA Warramunga Arr 70.84 200 *i P* **P 22 35 39.7 +3.7**
WRA Warramunga Arr 70.84 200 P P 22 35 38.1 +2.1
EKA Eskdalemuir Ar 74.45 347 P P 22 35 57.3 +0.3
comp=Z,3.2nm,0.6s,baz=21,slow=5.0,SNR=12
ASAR Alice Springs 74.53 199 P P 22 36 00.9 +3.1
comp=Z,1.4nm,0.5s,baz=12,slow=5.4,SNR=16
CLL Collm 74.86 336 *i P* **P 22 35 59.8 +0.4**
comp=Z,5.0nm,0.6s
CLL Collm 74.86 336 *i P* **P 22 35 59.8 +0.4**
CLL pmax pmax
comp=Z,5.0nm,0.6s
MLR Muntele Rosu 75.80 325 P P 22 36 05.6 +0.5
comp=Z,1.5nm,0.5s,baz=167,slow=15,SNR=4.2
GERES GERESS Array B 76.90 335 P P 22 36 11.6 +0.4
comp=Z,1.3nm,0.5s,baz=41,slow=6.1,SNR=6.6
GERES GERESS Array B 76.90 335 P P 22 36 11.1 0.0
BRTR Keskin Array B 77.42 317 P P 22 36 14.8 +0.6
comp=Z,0.7nm,0.5s,baz=316,slow=39,SNR=2.8
SOKA Soboth 78.46 333 *i P* **P 22 36 20.4 +0.6**
comp=Z,2.6nm,0.7s
KBA Koelnbreinsper 78.60 334 *eP* **P 22 36 22.0 +1.3**
comp=Z,5.7nm,0.5s,SNR=11
OBKA Obir 78.76 333 *eP* **P 22 36 22.1 +0.6**
comp=Z,2.8nm,0.7s
WATA Walderalm 78.87 335 *eP* **P 22 36 23.3 +1.1**
comp=Z,2.7nm,0.6s,SNR=4.2
WTTA Wattenberg 78.92 335 *eP* **P 22 36 23.5 +1.1**
comp=Z,5.3nm,0.6s
MOTA Moosalm 78.99 336 *eP* **P 22 36 23.7 +0.9**
comp=Z,4.3nm,0.7s,SNR=5.8
SQTA Sankt Quirin 79.07 335 *eP* **P 22 36 24.3 +1.1**
comp=Z,6.0nm,1.0s
DAVOX Davos/Dischmat 79.84 336 P P 22 36 28.1 +0.6
comp=Z,3.3nm,0.8s,baz=107,slow=4.1,SNR=6.6
MMAI Mount Meron Ar 82.04 312 P P 22 36 40.1 +0.9
comp=Z,3.6nm,0.5s,baz=39,slow=6.8,SNR=25
EIL Elat 84.98 310 P P 22 36 55.2 +1.0
comp=Z,2.5nm,0.6s,baz=310,slow=5.3,SNR=4.8
ESDC Sonseca Array 89.75 343 P P 22 37 16.7 -0.3
comp=Z,0.5nm,0.9s,baz=16,slow=3.7,SNR=4.9
ESDC Sonseca Array 89.75 343 P P 22 37 16.9 0.0
KEST Kesra 90.19 332 P P 22 37 19.7 +0.6
comp=Z,2.3nm,0.7s,baz=335,slow=3.6,SNR=7.3
H03N2 Juan Fernandez 137.85 89 T T 01 17 32.3
baz=310,slow=77,SNR=6.4
H03N1 Juan Fernandez 137.86 89 T T 01 17 30.0
baz=310,slow=77,SNR=14
H03N3 Juan Fernandez 137.87 89 T T 01 17 23.3
baz=310,slow=77,SNR=7.7

NEIC ***19*** *22:29:47.3±1.2,30.41S±0.04×177.9W±0.2, h30km±5km, mb4.5/15, Error ellipse: s-maj=20.7km s-min=6.1km az=94.0*
IDC ***19*** *22:29:51.6±3.0,30.05S×178.01W, h58km±22km, mb4.1/4, mb1 4.4/4, mb1mx3.8/35, mbtmp4.4/4, MS3.4/3, Ms1 3.4/3, ms1mx3.0/24, Error ellipse: s-maj=45.4km s-min=21.6km az=149.0*

ISC 19 22:29:49.0±0.7, 30.45S±0.06×178.0W±0.1, h46km, n60, σ3§07/71, mb4.5/13, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.18**	**3**	P	**Pn**	**22 30 06.7**	**-2.4**
GLKZ				S	**Sn**	**22 30 20.4**	**-3.7**
RAO	**Raoul Island**	**1.19**	**4**	P	**Pn**	**22 30 07.7**	**-1.6**
	273nm,0.3s,baz=60,slow=16,SNR=15						
RAO				S	**Sn**	**22 30 19.3**	**-5.0**
	2µm,0.3s,baz=76,slow=22,SNR=15						
RAO	**Raoul Island**	**1.19**	**4**		**Pn**	**22 30 07.6**	**-1.7**
RAO				Sn	**Sn**	**22 30 22.3**	**-2.0**
RIZ	**Raoul Island**	**1.20**	**3**	P	**Pn**	**22 30 07.8**	**-1.5**
RIZ				S	**Sn**	**22 30 22.3**	**-2.2**
MXZ	**Matakaoa Point**	**7.73**	**202**	P	**Pn**	**22 31 38.7**	**-0.2**
MXZ				S	**Sn**	**22 33 05.1**	**0.0**
WMGZ	**Waiomatatini S**	**7.93**	**201**	P	**Pn**	**22 31 41.2**	**-0.5**
HAZ	**Te Kaha**	**8.09**	**204**	P	**Pn**	**22 31 41.9**	**-1.9**
HAZ				S	**Sn**	**22 33 16.4**	**+2.5**
PKGZ	**Pakihiroa**	**8.10**	**203**	P	**Pn**	**22 31 42.3**	**-1.8**
PKGZ				S	**Sn**	**22 33 14.2**	**-0.2**
PUZ	**Puketiti**	**8.21**	**201**	P	**Pn**	**22 31 42.9**	**-2.7**
PUZ				S	**Sn**	**22 33 14.9**	**-2.2**
RUGZ	**Raukumara Rang**	**8.31**	**204**	P	**Pn**	**22 31 45.8**	**-1.3**
RUGZ				S	**Sn**	**22 33 21.5**	**+2.0**
TWGZ	**Tauwhareparae**	**8.40**	**202**	P	**Pn**	**22 31 46.9**	**-1.2**
TWGZ				S	**Sn**	**22 33 21.0**	**-0.6**
URZ	**Urewera**	**8.78**	**206**	P	**Pn**	**22 31 53.8**	**+0.5**
	0.6nm,0.3s,baz=308,slow=23,SNR=2.2						
URZ				S	**Sn**	**22 33 31.6**	**+0.8**
	3.4nm,0.3s,baz=305,slow=23,SNR=4.7						
URZ	**Urewera**	**8.78**	**206**		**Pn**	**22 31 53.3**	**0.0**
URZ					**Sn**	**22 33 31.9**	**+1.0**
BKZ	**Black Stump Fm**	**9.80**	**206**	Pn	**Pn**	**22 32 07.0**	**-0.4**
CKHZ	**Cape Kidnapper**	**10.04**	**202**	S	**Sn**	**22 33 56.8**	**-4.9**
BHHZ	**Black Hill Sta**	**10.25**	**207**	P	**Pn**	**22 32 13.6**	**+0.1**
BHHZ				S	**Sn**	**22 34 05.1**	**-1.9**
MOVZ	**Moawhango**	**10.30**	**208**	S	**Sn**	**22 34 05.7**	**-2.6**
PXZ	**Pawanui**	**10.44**	**202**	S	**Sn**	**22 34 07.3**	**-4.4**
DVHZ	**Dannevirke**	**10.92**	**204**	S	**Sn**	**22 34 18.4**	**-5.0**
PRWZ	**Pori Road**	**11.21**	**204**	S	**Sn**	**22 34 23.3**	**-7.3**
BFZ	**Birch Farm**	**11.23**	**203**	S	**Sn**	**22 34 25.0**	**-6.0**
MRZ	**Mangatainoka R**	**11.45**	**205**	P	**Pn**	**22 32 28.6**	**-1.2**
MRZ				S	**Sn**	**22 34 29.5**	**-6.8**
HOWZ	**Holdsworth Sta**	**11.68**	**205**	S	**Sn**	**22 34 35.0**	**-7.0**
TMWZ	**Te Maipa**	**11.73**	**203**	S	**Sn**	**22 34 34.8**	**-8.5**
KIW	**Kapiti Island**	**11.88**	**207**	S	**Sn**	**22 34 38.9**	**-8.0**
MTW	**Mount Morrison**	**11.91**	**204**	S	**Sn**	**22 34 41.2**	**-6.5**
CAW	**Cannon Point**	**12.03**	**206**	S	**Sn**	**22 34 42.8**	**-7.7**
RPZ	**Rata Peaks**	**15.84**	**210**	LR	LR	22 39 33.2	
	comp=Z,131nm,21.5s,baz=138,slow=36						
DZM	**Mont Dzumac**	**16.24**	**297**	LR	LR	22 38 17.8	
	comp=Z,112nm,19.8s,baz=42,slow=32						
PPT	**Papeete**	**28.87**	**70**	LR	LR	22 47 27.7	
	comp=Z,75nm,18.2s,baz=166,slow=37						
CTAO	**Charters Tower**	**33.80**	**279**	P	**P**	**22 36 28.7**	**+1.8**
CTAO				lAmb	lAmb	22 36 32.9	
	comp=Z,6.8nm,0.9s						
STKA	**Stephens Creek**	**34.47**	**257**	P	**P**	**22 36 35.7**	**+3.1**
	comp=Z,1.1nm,0.8s,baz=93,slow=10,SNR=19						
STKA	**Stephens Creek**	**34.47**	**257**	P	**P**	**22 36 35.6**	**+3.1**
BBOO	**Buckleboo**	**38.95**	**254**	P	**P**	**22 37 12.1**	**+1.4**
BBOO				lAmb	lAmb	22 37 20.7	
	comp=Z,5.3nm,0.9s						
AS31	**Alice Springs**	**43.10**	**267**	P	**P**	**22 37 46.6**	**+1.6**
ASAR	**Alice Springs**	**43.10**	**267**	P	**P**	**22 37 45.9**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=102,slow=7.6,SNR=22						
ASAR	**Alice Springs**	**43.10**	**267**	P	**P**	**22 37 45.2**	**+0.2**
WR0	**Warramunga Arr**	**43.92**	**272**	P	**P**	**22 37 52.1**	**+0.5**
WR0				lAmb	lAmb	22 37 54.4	
	comp=Z,7.4nm,0.9s						
WB2	**Warramunga Arr**	**44.09**	**272**	P	**P**	**22 37 53.4**	**+0.5**
WB2				lAmb	lAmb	22 37 56.2	
	comp=Z,8.1nm,0.8s						
WRAB	**Tennant Creek**	**44.09**	**272**	P	**P**	**22 37 52.9**	**0.0**
WRA	**Warramunga Arr**	**44.10**	**272**	P	**P**	**22 37 53.8**	**+0.8**
	comp=Z,4.8nm,0.4s,baz=111,slow=7.9,SNR=42						
WRA	**Warramunga Arr**	**44.10**	**272**	P	**P**	**22 37 53.5**	**+0.5**
WB0	**Warramunga Arr**	**44.12**	**272**	P	**P**	**22 37 53.7**	**+0.5**
WB0				lAmb	lAmb	22 37 56.4	
	comp=Z,7.9nm,0.8s						
KNRA	**Kununurra**	**50.71**	**274**	P	**P**	**22 38 45.2**	**+0.9**
CASY	**Casey**	**55.10**	**208**	P	**P**	**22 39 17.1**	**+1.1**
CASY				lAmb	lAmb	22 39 21.9	
	comp=Z,5.2nm,1.0s						
MORW	**Morawa**	**56.52**	**253**	P	**P**	**22 39 26.6**	**-0.2**
QSPA	**South Pole Qui**	**59.66**	**180**	P	**P**	**22 39 50.7**	**+2.3**
QSPA				lAmb	lAmb	22 39 59.4	
	comp=Z,4.2nm,0.7s						
BELA	**Belgrano 2**	**69.74**	**172**	P	**P**	**22 40 55.2**	**+1.5**
BELA				lAmb	lAmb	22 41 12.3	
	comp=Z,2.5nm,0.9s						
SNAA	**Sanae**	**78.11**	**178**	P	**P**	**22 41 42.8**	**0.0**
SNAA				lAmb	lAmb	22 41 51.9	
	comp=Z,2.3nm,0.9s						
NVAR	**Mina Array Bea**	**88.27**	**43**	P	**P**	**22 42 36.5**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=224,slow=6.1,SNR=5.2						
NVAR	**Mina Array Bea**	**88.27**	**43**	P	**P**	**22 42 35.6**	**-0.1**
MKAR	**Makanchi Array**	**117.80**	**310**	PKP	**PKPdf**	**22 48 29.1**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=223,slow=1.2,SNR=5.6						
FINES	**FINESS Array B**	**145.19**	**340**	PKP	**PKPbc**	**22 49 19.9**	**-0.6**
	comp=Z,3.9nm,0.4s,baz=58,slow=4.0,SNR=36						
FINES	**FINESS Array B**	**145.19**	**340**		**PKPbc**	**22 49 20.1**	**-0.4**
NOA	**NORSAR Array B**	**148.79**	**351**	PKPbc	**PKPbc**	**22 49 30.8**	**0.0**
	comp=Z,0.9nm,0.6s,baz=17,slow=4.3,SNR=5.4						
AKASG	**Malin Array Be**	**151.33**	**323**	PKPbc	**PKPbc**	**22 49 36.9**	**-0.3**
	comp=Z,1.9nm,0.5s,baz=51,slow=2.7,SNR=12						
AKASG	**Malin Array Be**	**151.33**	**323**		**PKPbc**	**22 49 37.0**	**-0.2**
MMAI	**Mount Meron Ar**	**151.54**	**284**	PKPbc	**PKiKP**	**22 49 39.8**	**+0.9**
	comp=Z,2.5nm,0.6s,baz=84,slow=7.6,SNR=14						
TORD	**Torodi Ar. Bea**	**162.78**	**179**	PKPab	**PKPab**	**22 50 37.0**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=182,slow=2.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	**162.78**	**179**		**PKPab**	**22 50 36.3**	**+0.9**

BJI ***19*** *22:33:20.5±0.0, 27.28N×130.71E, h12km, mB4.9/51, mb4.6/58, Ms4.7/61, Ms7 4.4/57*
MOS ***19*** *22:33:23.4±0.9, 27.26N×130.49E, h18km, mb4.9/20, MS4.5/8, Error ellipse: s-maj=8.4km s-min=4.9km az=101.1*
IDC ***19*** *22:33:23.1±0.5, 27.35N×130.52E, h0km, mb4.3/36, mb1 4.4/44, mb1mx4.3/71, mbtmp4.4/44, ML4.2/7, MS4.2/30, Ms1 4.2/30, ms1mx4.0/47, Error ellipse: s-maj=13.2km s-min=11.6km az=83.0*
NEIC ***19*** *22:33:23.7±0.9, 27.25N±0.05×130.49E±0.05, h10km±1km, mb4.7/63, Error ellipse: s-maj=8.7km s-min=6.5km az=31.0*
NIED ***19*** *22:33:24.7, 27.36N×130.59E, h67km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr=2.16; Mθθ 0.70; Mφφ 1.46; Mrθ 0.41; Mrφ 1.47; Mθφ -1.43; Fault plane solution: M0 2.83000×10^16 NP1: φs 13.00000°, δ61.00000°, λ-119.00000°. NP2: φs 241.00000°, δ40.00000°, λ-50.00000°.*
JMA ***19*** *22:33:24.7±0.1, 27.36N×130.59E, h67km±4km, M4.6*
GCMT ***19*** *22:33:27.7±0.2, 27.34N±0.02×130.54E±0.02, h12km, MW5.0/105, Moment Tensor Solution. s44,c61; s105,c186; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.78±.11; Mθθ 0.26±.10; Mφφ 2.52±.09; Mrθ 1.74±.33; Mrφ 3.21±.08; Mθφ 1.35±.28; Best double couple: M0 4.45800×10^16 NP1: φs 10.00000°, δ35.00000°, λ-128.00000°. NP2: φs 233.00000°, δ63.00000°, λ-67.00000°. Principal axes: T 5.3430, Plg15.0000°, Azm307.0000°; N -1.7720, Plg21.0000°, Azm42.0000°; P -3.5740, Plg64.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 22:33:26.6±0.7, 27.35N±0.03×130.56E±0.03, h26km±5km, n309, σ1§70/330, mb4.7/123, MS4.5/49, 13C-22D, Fault plane solution: NP1: φs 225.75983°, δ43.79989°, λ-83.37300°. NP2: φs 36.61541°, δ46.56611°, λ-96.31518°.
Principal axes: T Plg1.3875°, Azm131.0777°; N Plg4.5815°, Azm40.9665°; P Plg85.2122°, Azm237.8867°;
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**1.09**	**332**	P	**Pn**	**22 33 44.8**	**-1.4**
JAM	**Amami Oshima**	**1.35**	**322**	P	**Pn**	**22 33 48.2**	**-1.5**
JAM				*eS*	**Sn**	**22 34 05.0**	**-1.8**
JTK	**Tokunoshima**	**1.49**	**287**	P	**Pn**	**22 33 50.6**	**-1.1**
JAMN	**Amaminishikomi**	**1.51**	**306**	P	**Pn**	**22 33 50.1**	**-1.9**
JAMN				*eS*	**Sn**	**22 34 09.5**	**-1.3**
JKDJ	**Kitadaitoujima**	**1.54**	**155**	P	**Pn**	**22 33 50.4**	**-2.0**
JKDJ				S	**Sn**	**22 34 09.0**	**-2.6**
JMZ	**Minamidaito 2**	**1.64**	**159**	P	**Pn**	**22 33 51.6**	**-2.1**
JMZ				S	**Sn**	**22 34 10.8**	**-3.1**
JMZ	**Minamidaito 2**	**1.64**	**159**		**Pn**	**22 33 51.6**	**-2.1**
JMZ				Sn	**Sn**	**22 34 10.3**	**-3.6**
JOKE	**Okinoerabujima**	**1.77**	**271**	P	**Pn**	**22 33 54.4**	**-1.1**
JOKE				*eS*	**Sn**	**22 34 14.9**	**-2.2**
JYRO	**Yoronjima**	**1.91**	**261**	P	**Pn**	**22 33 56.1**	**-1.3**
JYRO				S	**Sn**	**22 34 18.7**	**-1.8**
JOW	**Kunigami**	**2.10**	**256**	Pn	**Pn**	**22 33 59.1**	**-1.0**
	575nm,0.3s,baz=113,slow=24,SNR=470						
JOW				Sn	**Sn**	**22 34 23.3**	**-2.0**
	432nm,0.3s,baz=148,slow=27,SNR=5.8						
JOW	**Kunigami**	**2.10**	**256**	P	**Pn**	**22 33 59.0**	**-1.0**
JOW				S	**Sn**	**22 34 24.0**	**-1.4**
JOW	**Kunigami**	**2.10**	**256**	Pn	**Pn**	**22 33 58.8**	**-1.2**
JOW				Sn	**Sn**	**22 34 23.6**	**-1.7**
JTAJ	**Takarajima**	**2.16**	**327**	P	**Pn**	**22 33 59.0**	**-1.8**
JTAJ				*eS*	**Sn**	**22 34 24.2**	**-2.5**
JIH	**Iheya**	**2.33**	**263**	P	**Pn**	**22 34 02.1**	**-1.1**
JIH				S	**Sn**	**22 34 28.6**	**-2.4**
JNTH	**Nagotoyohara**	**2.41**	**250**	P	**Pn**	**22 34 03.3**	**-1.0**
JNTH				S	**Sn**	**22 34 30.5**	**-2.5**
JNN	**Nakanoshima**	**2.55**	**347**	P	**Pn**	**22 34 03.9**	**-2.4**
JNN				*eS*	**Sn**	**22 34 32.6**	**-3.9**
JJT3	**Tamagusuku3**	**2.76**	**245**	P	**Pn**	**22 34 08.2**	**-0.9**
JJT3				S	**Sn**	**22 34 40.5**	**-1.1**
JYAK	**Yakushimahirau**	**2.88**	**359**	P	**Pn**	**22 34 09.0**	**-1.7**
JYAK				S	**Sn**	**22 34 40.5**	**-3.9**
JMTN	**Minamitane**	**3.05**	**6**	P	**Pn**	**22 34 11.5**	**-1.6**
JMTN				S	**Sn**	**22 34 45.6**	**-3.1**
JAGN	**Aguni-jima**	**3.06**	**256**	P	**Pn**	**22 34 11.7**	**-1.5**
JAGN				S	**Sn**	**22 34 47.6**	**-1.3**
JKC	**Kuchinoerabu**	**3.12**	**354**	S	**Sn**	**22 34 46.9**	**-3.4**
JTN	**Tanegashima 3**	**3.31**	**6**	P	**Pn**	**22 34 14.7**	**-2.0**
JTN				S	**Sn**	**22 34 51.4**	**-3.8**
JKE	**Kume jima 2**	**3.52**	**254**	P	**Pn**	**22 34 17.8**	**-1.8**
JSU	**Suzuyama**	**4.14**	**359**		**Pn**	**22 34 26.9**	**-1.2**
JNU	**Nakatsue**	**5.76**	**3**	Pn	**Pn**	**22 34 49.4**	**-0.9**
	6.8nm,0.3s,baz=214,slow=2.7,SNR=26						
JNU				Sn	**Sn**	**22 35 50.2**	**-5.3**
	4.1nm,0.3s,baz=170,slow=11,SNR=1.4						
JNU	**Nakatsue**	**5.76**	**3**	Pn	**Pn**	**22 34 50.2**	**-0.1**
JMN	**Monobe**	**6.97**	**23**	Pn	**Pn**	**22 35 06.0**	**-1.0**
JHS	**Saijyo**	**7.93**	**15**	Pn	**Pn**	**22 35 19.1**	**-1.1**
NACB	**Ninganchiao**	**8.68**	**251**	Pn	**Pn**	**22 35 26.7**	**-3.7**
JWT	**Wachi**	**8.92**	**26**	Pn	**Pn**	**22 35 33.6**	**-0.2**
YULB	**Yu-li**	**9.26**	**247**	Pn	Pn	22 35 32.9	-5.5
SSLB	**Suanglung**	**9.37**	**250**	Pn	**Pn**	**22 35 38.1**	**-1.9**
JHJ	**Hachijo jima 2**	**9.83**	**52**	Pn	**Pn**	**22 35 47.2**	**+1.0**
	22nm,0.3s,baz=107,slow=9.5,SNR=9.7						
JHJ				LR	LR	22 38 53.4	
	comp=Z,2µm,21.0s,baz=350,slow=33						
JHJ2	**Mitsune**	**9.85**	**52**	Pn	**Pn**	**22 35 46.0**	**-0.4**
JGF	**Kuroka**	**10.06**	**34**		**Pn**	**22 35 48.8**	**-0.6**
KSRS	**Korea Array**	**10.31**	**348**	Pn	**Pn**	**22 35 54.2**	**+1.3**
	0.2nm,0.3s,baz=168,slow=14,SNR=16						
KSRS				LR	LR	22 40 34.2	
	comp=Z,1µm,18.0s,baz=168,slow=42						
JCJ	**Chichijima**	**10.35**	**89**	Pn	**Pn**	**22 35 52.1**	**-1.3**
	11nm,0.3s,baz=248,slow=23,SNR=8.0						
JCJ				LR	LR	22 39 34.0	
	comp=Z,258nm,18.3s,baz=279,slow=36						
JCJ	**Chichijima**	**10.35**	**89**	Pn	**Pn**	**22 35 52.0**	**-1.4**
QZH	**Quanzhou**	**11.02**	**260**	*eP*	**Pn**	**22 35 55.6**	**-6.9**
QZH				*eS*	**Sn**	**22 38 00.3**	**-4.5**
QZH				LR	LR		
	comp=N,1µm,15.3s						
QZH				LR	LR		
	comp=E,1µm,14.2s						
QZH				LR	LR		
	comp=Z,1µm,13.5s						
NJ2	**Nanjing**	**11.20**	**298**	*eP*	**Pn**	**22 36 05.8**	**+0.8**
NJ2				S	**Sn**	**22 38 09.6**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,29nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,350nm,4.5s						
NJ2				LR	LR		
	comp=Z,3µm,14.2s						
NJ2				LR	LR		
	comp=Z,2µm,13.7s						
NJ2				LR	LR		
	comp=Z,2µm,21.3s						
MAJO	**Matsushiro**	**11.23**	**33**⇓	*eP*	**Pn**	**22 36 05.9**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MJAR	**Matsushiro Arr**	**11.23**	**33**	Pn	**Pn**	**22 36 05.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=6.9						
DL2	**Dalian**	**13.73**	**329**	P	**Pn**	**22 36 37.6**	**-1.9**
DL2				S	**Sn**	**22 39 11.3**	**+0.2**
DL2				pmax	pmax		
	comp=Z,36nm,1.2s						
DL2				pmax	pmax		
	comp=Z,350nm,4.1s						
DL2				LR	LR		
	comp=Z,2µm,20.6s						
DL2				LR	LR		
	comp=Z,1µm,17.2s						
DL2				LR	LR		
	comp=Z,1µm,21.3s						
TIA	**Tai'an**	**14.43**	**311**	P	**P**	**22 36 55.0**	**-0.7**
TIA				pP	Pn	22 37 01.6	+13
TIA				S	Sn	22 39 01.6	-27
TIA				pmax	pmax		
	comp=Z,24nm,0.9s						
TIA				LR	LR		
	comp=N,1µm,15.0s						
TIA				LR	LR		
	comp=E,2µm,17.1s						
TIA				LR	LR		
	comp=Z,2µm,17.1s						
WHN	**Wuhan**	**14.54**	**286**	⇑P	**P**	**22 36 56.8**	**-0.1**
WHN				S	**Sn**	**22 39 34.0**	**+3.0**
WHN				pmax	pmax		
	comp=Z,50nm,0.8s						
WHN				LR	LR		
	comp=N,7µm,14.7s						
WHN				LR	LR		
	comp=E,730nm,8.8s						
WHN				LR	LR		
	comp=Z,4µm,17.8s						
MSHR	**Mys Shultsa**	**15.20**	**2**⇑	*eP*	**Pn**	**22 37 01.5**	**+2.1**
MSHR				pmax	pmax		
	comp=Z,17nm,0.8s						
USA0B	**Ussuriysk Arra**	**16.85**	**4**	*eP*	**Pn**	**22 37 21.4**	**+0.8**
USA0B	**Ussuriysk Arra**	**16.85**	**4**	Pn	**Pn**	**22 37 20.6**	**0.0**
USRK	**Ussuriysk Ar.**	**16.85**	**4**	Pn	**P**	**22 37 21.6**	**-0.9**
	baz=179,slow=8.7,SNR=27						
USRK				LR	LR	22 44 23.7	
	comp=Z,401nm,18.1s,baz=173,slow=39						
USRK	**Ussuriysk Ar.**	**16.85**	**4**	Pn	**Pn**	**22 37 20.7**	**+0.1**
BJT	**Baijiatuau**	**17.38**	**320**	P	**Pn**	**22 37 26.7**	**-0.5**
BJT				pmax	pmax		
	comp=Z,35nm,0.9s						
BJT	**Baijiatuau**	**17.38**	**320**	P	**Pn**	**22 37 26.7**	**-0.5**
BJI	**Beijing**	**17.39**	**320**	P	**Pn**	**22 37 26.6**	**-0.7**
BJI				S	**S**	**22 40 44.8**	**-3.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BJI				pmax	pmax		
	comp=Z,180nm,5.1s						
BJI				LR	LR		
	comp=Z,740nm,19.4s						
BJI				LR	LR		
	comp=Z,830nm,19.6s						
BJI				LR	LR		
	comp=Z,830nm,27.1s						
ERM	**Erimo**	**17.89**	**32**⇑	*eP*	**Pn**	**22 37 32.9**	**-0.6**
ERM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIY	**Ta

comp=Z,920nm,15.6s
HHC LR LR
comp=Z,1μm,21.3s
DAV Davao City (W) 20.72 194 LR LR 22 47 43.9
comp=Z,679nm,18.3s,baz=24,slow=42
QIZ Qiongzhong 20.75 251 P **P** **22 38 00.9 -4.5**
QIZ S **S** **22 41 53.4 -2.5**
QIZ LR LR
comp=Z,590nm,23.0s
QIZ LR LR
comp=Z,440nm,15.2s
QIZ LR LR
comp=Z,360nm,9.3s
GYA Guiyang 21.32 273 ⇓P **P** **22 38 12.0 +0.3**
GYA S **S** **22 42 08.3 +0.9**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,170nm,3.5s
GYA LR LR
comp=Z,540nm,12.4s
GYA LR LR
comp=Z,1μm,16.8s
GYA LR LR
comp=Z,2μm,16.1s
BTO Baotou 21.49 313 P **P** **22 38 13.8 +0.4**
YSS Yuzh-Sakhalins 21.80 23⇓*e*P **P** **22 38 19.2 +2.8**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,500nm,13.0s
YSS MLR MLR
comp=N,300nm,14.0s
KLR Kul'dur 21.86 2 P **P** **22 38 16.1 -1.0**
comp=N,7.8nm,0.7s,baz=193,slow=6.1,SNR=17
KLR LR LR 22 46 35.5
comp=N,190nm,21.2s,baz=182,slow=36
KLR Kul'dur 21.86 2⇓*e*P **P** **22 38 15.7 -1.4**
KLR pmax pmax
comp=Z,13nm,0.9s
KUR Kuril'sk 22.57 33 P **P** **22 38 25.3 +0.6**
HIA Hailar 23.42 342⇓*e*P **P** **22 38 32.6 -0.9**
HIA pmax pmax
comp=Z,4.0nm,0.9s
CD2 Chengdu 23.66 285 P **P** **22 38 34.3 -1.7**
CD2 sP pP 22 38 38.6 -3.3
CD2 S **S** **22 42 47.4 -1.9**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,200nm,4.3s
CD2 LR LR
comp=Z,4μm,18.6s
CD2 LR LR
comp=Z,3μm,17.6s
CD2 LR LR
comp=Z,2μm,17.9s
LZH Lanzhou 24.28 298 *e*P **P** **22 38 41.8 -0.1**
LZH pP pP 22 38 47.0 -0.8
LZH sP sP 22 38 52.8 +2.5
LZH PP **PnPn** **22 39 16.9 +4.7**
LZH S **S** **22 42 58.3 -1.1**
LZH sS pS 22 43 03.8 -2.8
LZH SS **SnSn** **22 43 46.3 +3.5**
LZH pmax pmax
comp=Z,35nm,1.1s
LZH pmax pmax
comp=Z,280nm,5.7s
LZH LR LR
comp=Z,3μm,13.8s
LZH LR LR
comp=Z,1μm,14.6s
LZH LR LR
comp=Z,1μm,14.9s
MYLDM Lahad Datu 24.86 210 P **P** **22 38 44.2 -3.0**
MYLDM IAmb IAmb 22 39 03.5
comp=Z,26nm,1.1s
SLVN Son La 24.98 262 P **P** **22 38 47.0 -1.4**
SLVN IAmb IAmb 22 38 53.3
comp=Z,11nm,0.9s
KMI Kunming 25.03 271 ⇓P **P** **22 38 51.3 +2.4**
KMI sP sP 22 38 58.0 +0.6
KMI PP **PnPn** **22 39 23.8 +1.1**
KMI S **S** **22 43 12.1 +0.3**
KMI sS pS 22 43 20.0 +1.0
KMI pmax pmax
comp=Z,18nm,0.9s
KMI pmax pmax
comp=Z,150nm,3.9s
KMI LR LR
comp=Z,900nm,13.7s
KMI LR LR
comp=Z,990nm,15.7s
KMI LR LR
comp=Z,990nm,14.3s
KMI Kunming 25.03 271 P **P** **22 38 47.5 -1.4**
KMI pmax pmax
comp=Z,25nm,1.0s
KMI Kunming 25.03 271 P **P** **22 38 47.5 -1.4**
KMI IAmb IAmb 22 38 53.3
comp=Z,25nm,1.0s
UBPT Khong Chiam 26.22 248 P **P** **22 39 05.1 +5.6**
comp=Z,4.9nm,1.2s
UBPT Khong Chiam 26.22 248 P **P** **22 38 58.1 -1.4**
ZEA Zeya 26.47 356 *e*P **P** **22 39 02.1 +0.7**
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,10.0nm,0.9s
NKL Nikolayevsk 26.85 14 *e*P **P** **22 39 02.8 -1.9**
NKL *e*S **S** **22 43 38.9 -0.6**
NKL pmax pmax
comp=E,147nm,1.2s
NKL pmax pmax
comp=N,1.0nm,0.8s
NKL pmax pmax
comp=Z,17nm,1.2s
NKL smax smax
comp=E,224nm,6.4s
NKL smax smax
comp=N,2.0nm,6.8s
NKL MLR MLR
comp=E,5μm,22.0s
NKL MLR MLR
comp=N,7.0nm,9.0s
NKL MLR MLR
comp=Z,326nm,15.0s
NONG Nongkai 26.88 256 P **P** **22 39 10.4 +5.0**
comp=Z,27nm,1.0s
ULN Ulaanbaatar 27.49 324⇓*e*P **P** **22 39 11.7 +0.9**
ULN pmax pmax
comp=Z,8.0nm,1.2s
ULN Ulaanbaatar 27.49 324 P **P** **22 39 08.9 -1.9**
TOLI2 Tolitoli 27.73 201 P **P** **22 39 10.9 -2.1**
TOLI2 IAmb IAmb 22 39 13.6
comp=Z,17nm,1.1s
SONM Songino Array 27.81 324 P **P** **22 39 14.7 +1.1**
comp=Z,5.7nm,0.7s,baz=139,slow=9.9,SNR=46
SONM Songino Array 27.81 324 P **P** **22 39 13.5 -0.2**
KHON Khomkaen 27.92 253 P P 22 39 23.0 +8.3
comp=Z,26nm,0.4s
SIJI Sorong 28.07 178 LR LR 22 49 44.7
comp=Z,382nm,18.7s,baz=28,slow=35
CHAI Chaiyaphum 28.83 253 P **P** **22 39 26.0 +3.1**
comp=Z,23nm,0.8s
LUWI Luwuk 29.21 196 P **P** **22 39 28.1 +1.9**
comp=Z,2μmcomp=Z,24nm,0.8s
UTTA Uttaradit 29.25 257 P **P** **22 39 29.7 +3.1**
comp=Z,208nmcomp=Z,18nm,0.7s
PHIT Phitsanulok 29.60 256 P P 22 39 35.3 +5.6
comp=Z,65nm,0.7s
LAMP Lampang 29.74 259 P P 22 39 36.0 +5.0
comp=Z,19nm,0.8s
CMMT Chiang Mai 30.23 260 P **P** **22 39 36.0 +0.7**
comp=Z,6.2nm,1.1s
CHTO Chiang Mai 30.23 260 P **P** **22 39 32.9 -2.4**
CHTO pmax pmax
comp=Z,11nm,0.9s
CHTO Chiang Mai 30.23 260 P **P** **22 39 32.9 -2.4**
CHTO IAmb IAmb 22 39 40.4
comp=Z,10nm,0.9s
CM04 Chiang Mai Arr 30.36 260 P P 22 39 44.0 +7.6
comp=Z,51nmcomp=Z,6.8nm,1.0s
CMAR Chiang Mai Arr 30.37 260 P **P** **22 39 37.9 +1.4**
comp=Z,1.7nm,0.8s,baz=56,slow=8.1,SNR=12
CMAR LR LR 22 53 59.4
comp=Z,345nm,19.3s,baz=101,slow=41
CMAR Chiang Mai Arr 30.37 260 P **P** **22 39 35.5 -1.1**
CMAR Chiang Mai Arr 30.37 260 P **P** **22 39 35.5 -1.1**
CM32 Chiang Mai Arr 30.38 260 P **P** **22 39 41.0 +4.4**
CM13 Chiang Mai Arr 30.41 260 P P 22 39 42.0 +5.1
comp=Z,4.3nm,0.9s
UTHA Uthaitani 31.16 254 P P 22 39 50.3 +6.9
comp=Z,229nmcomp=Z,12nm,0.9s
UMPA Umpang Tak 31.37 256 P P 22 39 53.0 +7.6
TLY Talaya 31.63 327 LR LR 22 54 02.4
comp=Z,749nm,19.7s,baz=124,slow=39
KSM Kuching 32.23 220 P **P** **22 39 50.9 -2.1**
KSM IAmb IAmb 22 39 54.8
comp=Z,10nm,1.1s
PETK Petropavlovsk- 32.67 31 P **P** **22 39 58.9 +2.6**
comp=Z,1.8nm,0.8s,baz=164,slow=8.4,SNR=3.5
PETK Petropavlovsk- 32.67 31 P **P** **22 39 56.8 +0.5**
SHL Shillong 34.58 276 P **P** **22 40 11.7 -1.9**
SHL pmax pmax
comp=Z,19nm,1.1s
SHL Shillong 34.58 276 P **P** **22 40 11.7 -1.9**
YAK Yakutsk 34.68 359 *e*P **P** **22 40 13.6 -0.1**
YAK *e**PP **sP** **22 40 23.6 +1.2**
YAK *e* 22 41 28.2
YAK *e*PPP PPP 22 41 52.7
YAK *e*S **S** **22 45 42.7 +1.0**
YAK *e* 22 50 27.8
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=N,7.0nm,1.1s
YAK pmax pmax
comp=E,1.0nm,0.6s
YAK pmax pmax
comp=Z,137nm,4.8s
YAK pmax pmax
comp=N,49nm,3.3s
YAK pmax pmax
comp=E,75nm,5.3s
YAK smax smax
comp=N,118nm,4.6s
YAK smax smax
comp=E,102nm,4.9s
YAK MLR MLR
comp=Z,378nm,19.0s
YAK MLR MLR
comp=N,112nm,14.0s
YAK MLR MLR
comp=E,115nm,16.0s
YAK Yakutsk 34.68 359 P **P** **22 40 13.6 -0.1**
MA2 Magadan 35.09 18⇓*e*P **P** **22 40 19.5 +2.1**
MA2 pmax pmax
comp=Z,4.0nm,0.9s
SOEI Soe 37.39 190 P **P** **22 40 36.3 -1.2**
SOEI Soe 37.39 190 P P 22 40 49.2 +12
KMMI Kalianget 37.78 208 P **P** **22 40 40.8 +0.1**
comp=Z,11nm,0.9s
BATI Baumata 37.93 191 P **P** **22 40 41.0 -1.0**
comp=Z,33nm,0.7s
PLAI Plampang 38.04 201 P **P** **22 40 42.6 -0.3**
comp=Z,19nm,1.0s
WMQ Urumqi 38.07 307 *e*P **P** **22 40 43.8 +0.7**
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ pmax pmax
comp=Z,160nm,4.5s
WMQ LR LR
comp=Z,940nm,17.9s
WMQ LR LR
comp=Z,910nm,16.5s
WMQ LR LR
comp=Z,2μm,21.1s
SRBI Singaraja 38.24 205 P **P** **22 40 45.5 +1.0**
comp=Z,25nm,0.8s
TWSI Taliwang, Sumb 38.25 202 P **P** **22 40 44.8 +0.2**
comp=Z,20nm,1.0s
ODAN Odare 38.29 279 *e*P **P** **22 40 45.4 +0.1**
comp=Z,74nm,0.5s
WBSI Waikabubak, Su 38.34 198 P **P** **22 40 46.5 +1.1**
comp=Z,18nm,0.9s
SEY Seymchan 38.36 16 P **P** **22 40 45.9 +0.8**
comp=Z,4.0nm,0.7s,baz=204,slow=4.1,SNR=5.8
RAMN Ramite 38.96 280 *e*P **P** **22 40 50.8 -0.2**
comp=Z,16nm,0.5s
JIRN Jiri 39.19 281 *e*P **P** **22 40 53.6 +0.6**
GUN Gumba 39.42 281 *e*P **P** **22 40 55.4 +0.5**
comp=Z,57nm,0.8s
PKI Pulchoki 39.89 281 *e*P **P** **22 40 58.8 0.0**
comp=Z,43nm,0.7s
PKIN Phulchoki 39.90 281 *e*P **P** **22 40 58.9 +0.1**
comp=Z,34nm,0.6s
KKN Kakani 39.96 281 *e*P **P** **22 40 59.7 +0.4**
UGM Wanagama 40.07 212 P **P** **22 41 01.8 +1.9**
comp=Z,82nm,1.2s
DMN Daman 40.15 281 *e*P **P** **22 41 01.0 +0.1**
comp=Z,26nm,0.7s
GKN Gorkha 40.49 282 *e*P **P** **22 41 03.5 0.0**
comp=Z,42nm,0.6s
LEM Lembang 40.59 217 P **P** **22 41 06.7 +2.3**
LEM pmax pmax
comp=Z,60nm,0.8s
LEM Lembang 40.59 217 P **P** **22 41 06.3 +1.9**
comp=Z,38nm,0.8s
KOLN Koldanda 41.43 282 *e*P **P** **22 41 11.4 0.0**
comp=Z,19nm,0.7s
PYUN Piuthan 41.90 282 *e*P **P** **22 41 15.9 +0.7**
comp=Z,32nm,0.8s
MKAR Makanchi Array 42.37 310 P **P** **22 41 17.2 -1.3**
comp=Z,2.3nm,0.9s,baz=90,slow=11,SNR=12
MKAR LR LR 23 01 00.3
comp=Z,602nm,18.4s,baz=90,slow=39
MKAR Makanchi Array 42.37 310*ce*P **P** **22 41 20.3 +1.7**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 42.37 310 P **P** **22 41 18.1 -0.4**
ZAA0 Zalesovo Array 42.64 321 P **P** **22 41 20.0 -0.6**
ZALV Zalesovo Beam 42.64 321 P **P** **22 41 19.5 -1.2**
comp=Z,3.4nm,0.6s,baz=104,slow=8.3,SNR=16
ZALV LR LR 23 00 42.1
comp=Z,343nm,19.6s,baz=109,slow=38
ZALV Zalesovo Beam 42.64 321 P **P** **22 41 19.9 -0.8**
ZALV Zalesovo Beam 42.64 321 P **P** **22 41 19.9 -0.8**
TIXI Tiksi 44.35 359 P **P** **22 41 35.0 +0.9**
comp=Z,3.5nm,0.7s,baz=142,slow=5.5,SNR=16
TIXI Tiksi 44.35 359⇓*e*P **P** **22 41 35.4 +1.3**
TIXI pmax pmax
comp=Z,16nm,0.8s
TIXI Tiksi 44.35 359 P **P** **22 41 34.5 +0.4**
KURK Kurchatov 45.46 315 P **P** **22 41 42.8 -0.5**
KURK Kurchatov 45.46 315 P **P** **22 41 42.8 -0.5**
KURBB Kurchatov Arra 45.50 315 P **P** **22 41 42.8 -0.8**
comp=Z,2.3nm,0.6s,baz=101,slow=8.9,SNR=18
BILL Bilibino 45.96 18⇓*e*P **P** **22 41 47.3 +0.3**
BILL pmax pmax
comp=Z,3.0nm,1.0s
WB0 Warramunga Arr 46.99 175 P **P** **22 41 54.9 -0.6**
WRAB Tennant Creek 47.15 175*de*P **P** **22 41 56.7 -0.1**
WRAB pmax pmax
comp=Z,15nm,0.9s
WRA Warramunga Arr 47.16 175 P **P** **22 41 57.2 +0.3**
comp=Z,15nm,0.8s,baz=354,slow=8.5,SNR=41
WRA Warramunga Arr 47.16 175 P **P** **22 41 56.3 -0.6**
WRA pmax pmax
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 47.16 175 P **P** **22 41 56.3 -0.6**
WB2 Warramunga Arr 47.16 175 P **P** **22 41 55.8 -1.1**
WR0 Warramunga Arr 47.19 175 P **P** **22 41 56.4 -0.8**
AAK Ala-Archa 47.56 304 P **P** **22 42 00.5 +0.4**
comp=Z,0.9nm,0.5s,baz=77,slow=8.2,SNR=5.6
AAK LR LR 23 03 44.7
comp=Z,409nm,18.1s,baz=98,slow=38
AAK Ala-Archa 47.56 304⇓*e*P **P** **22 42 00.3 +0.2**
AAK pmax pmax
comp=Z,5.0nm,1.1s
AAK Ala-Archa 47.56 304 P **P** **22 41 59.8 -0.3**
NRIK Noril'sk 48.84 341 P **P** **22 42 09.4 +0.1**
comp=Z,8.2nm,0.8s,baz=114,slow=9.6,SNR=11
NRIK LR LR 23 04 49.2
comp=Z,381nm,18.2s,baz=140,slow=39
NRIK Noril'sk 48.84 341*d*/*i*P **P** **22 42 09.6 +0.2**
NRIK pmax pmax
comp=Z,10.0nm,0.8s
NRIK Noril'sk 48.84 341 P **P** **22 42 09.8 +0.4**
NRIK IAmb IAmb 22 42 10.3
comp=Z,9.0nm,0.8s
NIL Nilore 49.25 292 P **P** **22 42 12.4 -0.7**
NIL pmax pmax
comp=Z,10.0nm,0.9s
NIL Nilore 49.25 292 P **P** **22 42 12.4 -0.7**
NIL IAmb IAmb 22 42 28.5
comp=Z,10nm,0.9s
PSA00 Pilbara Seismi 49.73 193 P **P** **22 42 16.0 -0.7**
KK31 Karatay Array 50.47 305 P **P** **22 42 22.2 -0.1**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 50.47 305 P **P** **22 42 22.1 -0.1**
KK31 IAmb IAmb 22 42 39.7
comp=Z,5.8nm,0.9s
KKAR Karatay Array 50.47 305 P **P** **22 42 22.2 -0.1**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 50.47 305 P **P** **22 42 22.1 -0.1**
KKAR IAmb IAmb 22 42 39.7
comp=Z,5.8nm,0.9s
AS31 Alice Springs 50.82 176 P **P** **22 42 24.3 -0.7**
ASAR Alice Springs 50.82 176 P **P** **22 42 25.6 +0.6**
comp=Z,8.1nm,0.7s,baz=6.8,slow=14,SNR=92
ASAR LR LR 23 03 01.4
comp=Z,102nm,21.0s,baz=9.0,slow=35
ASAR Alice Springs 50.82 176 P **P** **22 42 24.3 -0.7**
ASAR Alice Springs 50.82 176 P **P** **22 42 24.3 -0.7**
BVAR Borovoye Array 50.84 317 P **P** **22 42 24.7 -0.2**
comp=Z,4.6nm,0.9s,baz=228,slow=1.8,SNR=15
BRVK Borovoye 50.91 318*ce*P **P** **22 42 24.9 -0.4**
BRVK pmax pmax
comp=Z,12nm,1.3s
BRVK Borovoye 50.91 318 P **P** **22 42 25.3 0.0**
BRVK IAmb IAmb 22 42 43.3
comp=Z,13nm,1.1s
PALK Pallekele 51.22 257 LR LR 23 06 32.5
comp=Z,115nm,18.0s,baz=160,slow=39
KBL Kabul 52.55 294 P **P** **22 42 37.4 -0.7**
KBL pmax pmax
comp=Z,12nm,1.1s
KBL Kabul 52.55 294 P **P** **22 42 37.4 -0.7**
KBL IAmb IAmb 22 42 53.6
comp=Z,12nm,1.1s
TNA Tin City 53.70 27 P **P** **22 42 46.4 +0.6**
TNA IAmb IAmb 22 42 58.2
comp=Z,12nm,1.2s
SVE Sverdlovsk 56.66 322⇑*e*P **P** **22 43 08.7 +1.4**
SVE pmax pmax
comp=Z,12nm,0.7s
SVE MLR MLR
comp=Z,374nm,15.0s
ABKAR Akbulak array 57.41 313 P **P** **22 43 12.8 +0.1**
ABKAR IAmb IAmb 22 43 26.9
comp=Z,7.7nm,0.8s
ARU Arti 57.81 321 P **P** **22 43 16.0 +0.5**
comp=Z,1.0nm,0.4s,baz=192,slow=0.8,SNR=11
ARU Arti 57.81 321*d*/*i*P **P** **22 43 16.2 +0.7**
ARU 22 44 05.6
ARU 22 45 20.6
ARU S **S** **22 51 17.0 +4.0**
ARU SS **SS** **22 55 05.0 +1.6**
ARU pmax pmax
comp=Z,9.0nm,1.0s
ARU MLR MLR
comp=Z,539nm,18.0s
ARU Arti 57.81 321 P **P** **22 43 15.7 +0.2**
ARU IAmb IAmb 22 43 28.1
comp=Z,6.9nm,0.8s
AKTO Aktyubinsk 58.53 314 P **P** **22 43 21.4 +0.8**
comp=Z,1.6nm,0.7s,baz=90,slow=4.9,SNR=4.8
AKTO LR LR 23 10 27.2
comp=Z,398nm,19.5s,baz=85,slow=38
STKA Stephens Creek 59.83 169 P **P** **22 43 30.3 +0.6**
comp=Z,5.6nm,0.6s,baz=344,slow=7.5,SNR=15
STKA LR LR 23 08 41.5
comp=Z,73nm,22.0s,baz=3.2,slow=35
STKA Stephens Creek 59.83 169⇓*e*P **P** **22 43 28.9 -0.8**
STKA Stephens Creek 59.83 169 P **P** **22 43 29.4 -0.4**
DZM Mont Dzumac 60.15 141 *e*Pn P 22 43 38.8 +6.6
comp=Z,57nm,1.4s
DZM *e*S **S** **22 51 51.0 +6.7**
comp=Z,288nm,26.8s
DZM *e*LR LR 23 01 19.7
comp=Z,430nm,27.1s
DZM Mont Dzumac 60.15 141 P **P** **22 43 33.2 +1.0**
comp=Z,4.4nm,0.8s,baz=252,slow=20,SNR=1.4
DZM Mont Dzumac 60.15 141 P **P** **22 43 31.7 -0.6**
GEYT Alibeck 60.53 300 P **P** **22 43 36.1 +1.4**
comp=Z,1.1nm,0.5s,baz=168,slow=2.1,SNR=2.7
GEYT LR LR 23 14 20.1
comp=Z,332nm,18.9s,baz=50,slow=41
MLY Manley 60.80 28 P **P** **22 43 36.7 +0.6**
MLY IAmb IAmb 22 43 51.2
comp=Z,8.5nm,1.1s
RND Reindeer 61.73 30 P **P** **22 43 42.9 +0.4**
RND pmax pmax
comp=Z,15nm,0.8s
RND Reindeer 61.73 30 P **P** **22 43 42.9 +0.4**
MDM Murphy Dome 61.87 28 P **P** **22 43 44.1 +0.7**
ILAR Eielson Array 62.46 29 P **P** **22 43 46.7 -0.5**
comp=Z,0.9nm,0.7s,baz=268,slow=5.9,SNR=9.6
ILAR LR LR 23 14 19.6
comp=Z,53nm,19.1s,baz=296,slow=39
KIRV Kirov 62.55 324 P **P** **22 43 49.2 +1.4**
comp=Z,11nm,0.5s,baz=68,slow=2.3,SNR=5.9
KIRV Kirov 62.55 324⇓*e*P **P** **22 43 48.6 +0.8**
BMAR Burnt Mountain 63.10 26 P **P** **22 43 52.1 +0.6**
SCRK Sand Creek 63.82 29 P **P** **22 43 57.0 +0.6**
SCRK IAmb IAmb 22 44 08.4
comp=Z,6.5nm,0.8s
DOT Dot Lake 63.83 30 P **P** **22 43 56.9 +0.5**
PRGR Permogore 63.95 328 *e*P **P** **22 43 58.3 +1.2**
PRGR pmax pmax
comp=Z,7.0nm,0.9s
K27K Chicken 64.64 29 P **P** **22 44 02.0 +0.4**
K27K IAmb IAmb 22 44 14.5
comp=Z,5.0nm,0.8s
BCAR Beaver Creek A 64.95 30 P **P** **22 44 03.3 -0.4**
KLMR Klimovskoe 67.01 328 *e*P **P** **22 44 16.7 -0.1**
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 67.01 328 *e*P **P** **22 44 16.8 -0.1**
KLMR AMP 22 44 28.4
comp=Z,22nm,1.5s
KLMR LQ LQ 23 09 03.9
KLMR LQ LQ 23 09 03.9
KLMR LR LR 23 13 28.6
INK Inuvik 67.03 24 P **P** **22 44 18.0 +1.1**
comp=Z,0.9nm,0.5s,baz=345,slow=4.0,SNR=5.6
INK Inuvik 67.03 24 P **P** **22 44 18.0 +1.1**
INK Inuvik 67.03 24 P **P** **22 44 17.7 +0.8**
INK IAmb IAmb 22 44 29.2
comp=Z,4.4nm,1.0s
SPITS Spitsbergen Ar 68.16 348 P **P** **22 44 25.9 +2.0**
comp=Z,9.7nm,1.0s,baz=183,slow=15,SNR=2.1
ZEI Tsey 69.67 308 *e*P **P** **22 44 34.5 +0.3**
ZEI pmax pmax
comp=Z,11nm,0.9s
LPSR Galich'ya Gora 69.71 319 *e*P **P** **22 44 34.2 +0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
ARCES ARCESS Array B 69.72 339 P **P** **22 44 35.6 +1.8**
comp=Z,5.3nm,0.9s,baz=85,slow=11,SNR=2.3
ARCES LR LR 23 20 36.4
comp=Z,418nm,19.4s,baz=55,slow=41
ARCES ARCESS Array B 69.72 339 P **P** **22 44 34.4 +0.7**
ARCES ARCESS Array B 69.72 339 P **P** **22 44 34.4 +0.7**
C36M Paulatuk 69.90 21 P **P** **22 44 35.8 +1.0**
GNI Garni 69.92 306 P **P** **22 44 37.4 +1.6**
comp=Z,3.7nm,0.9s,baz=192,slow=19,SNR=1.7
GNI Garni 69.92 306 P **P** **22 44 35.2 -0.6**
GNI pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 69.92 306 P **P** **22 44 35.1 -0.6**
GNI IAmb IAmb 22 44 52.1
comp=Z,7.4nm,0.9s
VSR Storozhevoye 70.02 318 *e*P **P** **22 44 36.1 +0.2**
VSR pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 70.06 310 P **P** **22 44 38.3 +2.1**
comp=Z,8.5nm,0.8s,baz=148,slow=1.8,SNR=11
KBZ LR LR 23 18 17.6
comp=Z,246nm,20.1s,baz=52,slow=38
KBZ Khabaz 70.06 310⇓*e*P **P** **22 44 36.3 +0.1**
KBZ pmax pmax
comp=Z,13nm,1.0s
KIV Kislovodsk 70.12 310 *e*P **P** **22 44 38.3 +1.5**

KIV pmax pmax
comp=Z,42nm,1.1s
KIV MLR MLR
comp=Z,261nm,18.0s
OBN Obninsk 70.21 322 *eP* **P 22 44 38.3 +1.3**
OBN pmax pmax
comp=Z,5.0nm,0.9s
SOCY Socotra 72.67 275 P **P 22 44 51.0 -1.7**
FINES FINESS Array B 72.91 331 P **P 22 44 53.2 +0.1**
comp=Z,4.7nm,0.8s,baz=89,slow=6.2,SNR=11
FINES LR LR 23 21 08.0
comp=Z,329nm,18.9s,baz=62,slow=39
RES Resolute Bay 74.05 11 P **P 22 45 00.6 +1.0**
RES pmax pmax
comp=Z,4.0nm,0.9s
RES Resolute Bay 74.05 11 P **P 22 45 00.6 +1.0**
RAYN Ar Rayn 75.42 289 P **P 22 45 07.5 -1.0**
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 75.42 289 P **P 22 45 07.5 -1.0**
RAYN IAmb IAmb 22 45 24.5
comp=Z,7.0nm,1.1s
NEEM North Greenlan 75.44 0 *i* P **P 22 45 08.1 0.0**
NEEM *i* 22 45 20.0
NACGM Naroch 75.48 325 *i* P **P 22 45 12.9 +4.7**
NACGM *i* P **P 22 45 12.9 +4.7**
NACGM *i* P **P 22 45 12.9 +4.7**
NACGM *i* PcP **pwP 22 45 25.0 +2.5**
NACGM *i* PP **PP 22 47 51.5 -5.5**
NACGM *i* PPP PPP 22 49 29.4
NACGM *i* S S 22 55 04.5 +18
NACGM *i* PS 22 56 56.9
NACGM *i* SS SS 23 00 26.5 +50
NACGM *i* SSS SSS 23 03 59.2
NACGM *i* LQ LQ 23 13 44.4
NACGM *i* LR LR 23 20 32.8
AKASG Malin Array Be 76.02 320 P **P 22 45 11.8 +0.4**
comp=Z,5.2nm,0.6s,baz=55,slow=6.2,SNR=16
AKASG LR LR 23 21 43.9
comp=Z,303nm,18.4s,baz=45,slow=38
AKASG Malin Array Be 76.02 320 P **P 22 45 11.6 +0.2**
AKBB Malin Array Si 76.02 320‖ *eP* **P 22 45 11.3 -0.1**
AKBB Malin Array Si 76.02 320 P **P 22 45 11.4 0.0**
AKBB IAmb IAmb 22 45 16.1
comp=Z,6.0nm,0.7s
YKA Yellowknife Ar 76.62 26 P **P 22 45 15.2 +0.6**
comp=Z,0.9nm,0.8s,baz=303,slow=5.3,SNR=16
YKA LR LR 23 21 36.8
comp=Z,42nm,19.0s,baz=0.0,slow=38
BRTR Keskin Array B 77.98 308 P **P 22 45 23.4 +0.5**
comp=Z,2.9nm,0.8s,baz=316,slow=39,SNR=3.2
BRTR LR LR 23 25 10.3
comp=Z,208nm,20.7s,baz=56,slow=40
NOA NORSAR Array B 79.22 334 P **P 22 45 29.3 +0.1**
comp=Z,2.0nm,0.8s,baz=50,slow=5.3,SNR=9.8
NOA LR LR 23 24 53.7
comp=Z,171nm,19.2s,baz=55,slow=39
MMAI Mount Meron Ar 79.59 302 P **P 22 45 32.1 +0.4**
comp=Z,1.1nm,0.7s,baz=76,slow=12,SNR=4.9
BURAR Bucovina Array 79.79 318 P **P 22 45 32.3 -0.2**
SUMG Summit 80.05 357 *i* P **P 22 45 33.9 -0.1**
SUMG Summit 80.05 357 *i* P **P 22 45 33.8 -0.1**
SUMG Summit 80.05 357 P **P 22 45 34.3 +0.4**
SUMG IAmb IAmb 22 45 51.1
comp=Z,9.1nm,0.9s
CSS Mathiatis 80.28 304 P **P 22 45 35.3 -0.1**
CSS IAmb IAmb 22 45 38.9
comp=Z,7.8nm,0.7s
CRVS Cervenica-Dubn 81.29 321 *eP* **P 22 45 43.5 +3.0**
CRVS Cervenica-Dubn 81.29 321 *eP* **P 22 45 43.5 +3.0**
OJC Ojcow 81.50 323 P **P 22 45 41.5 -0.1**
OJC pmax pmax
comp=Z,8.0nm,0.8s
OJC Ojcow 81.50 323 P **P 22 45 41.5 -0.1**
OJC IAmb IAmb 22 46 00.2
comp=Z,7.9nm,0.8s
LANS Liptovska Anna 82.27 322 *eP* **P 22 45 48.7 +3.0**
LANS Liptovska Anna 82.27 322 *eP* **P 22 45 48.7 +3.0**
VYHS Vyhne 82.98 321 *eP* **P 22 45 50.7 +1.3**
VYHS Vyhne 82.98 321 *eP* **P 22 45 50.7 +1.3**
KOLL Kolacno 83.17 322 *eP* **P 22 45 53.3 +3.0**
KRLC Kraliky 83.20 324 *eP* **P 22 45 50.7 +0.2**
KRLC Kraliky 83.20 324 *eP* **P 22 45 50.7 +0.2**
OSTC Ostas 83.22 324 AMS AMS 23 26 40.0
comp=Z,600nm,22.6s
DPC Dobruska-Polom 83.28 324 *eP* **P 22 45 52.2 +1.3**
DPC MLR MLR
comp=Z,300nm,11.3s
DPC Dobruska-Polom 83.28 324 *eP* **P 22 45 52.2 +1.3**
DPC AMS AMS 23 26 10.0
comp=Z,300nm,11.3s
CHVC Chvalec 83.28 324 AMS AMS 23 25 50.0
comp=Z,400nm,20.1s
UPC Upice 83.35 324 AMS AMS 23 26 50.0
comp=Z,500nm,23.2s
JAVC Velka Javorina 83.41 322 *eP* **P 22 45 54.7 +3.0**
VTS Vitosha 83.52 315 P **P 22 45 52.2 -0.3**
VTS pmax pmax
comp=Z,7.0nm,1.0s
VTS Vitosha 83.52 315 P **P 22 45 52.2 -0.3**
VTS IAmb IAmb 22 46 08.2
comp=Z,6.8nm,1.0s
VRAC Vranov 83.74 323 *eP* **P 22 45 54.4 +1.1**
SMOL Smolenice 83.74 322 *eP* **P 22 45 55.2 +1.9**
SMOL Smolenice 83.74 322 *eP* **P 22 45 55.2 +1.9**
MODS Modra-Piesok 83.90 322 *eP* **P 22 45 54.9 +0.8**
MODS Modra-Piesok 83.90 322 *eP* **P 22 45 54.9 +0.8**
KRUC Moravsky 83.99 323 *eP* **P 22 45 55.6 +1.1**
PVCC Panska Ves 84.08 325 AMS AMS 23 27 00.0
comp=Z,400nm,18.7s
BRG Berggiesshubel 84.20 325 *eP* **P 22 45 56.5 +1.0**
BRG Amp 22 45 60.0
comp=Z,4.9nm,1.0s
CLL Collm 84.41 326↓↓ *iP* **P 22 45 56.9 +0.3**
comp=Z,6.0nm,1.0s
CLL LmV 23 27 00.0
comp=Z,400nm,18.3s
CLL Collm 84.41 326↓↓ *iP* **P 22 45 56.9 +0.3**
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL MLR MLR
comp=Z,400nm,18.3s
CLL Collm 84.41 326 P **P 22 45 56.6 0.0**
CLL IAmb IAmb 22 46 10.5
comp=Z,5.2nm,0.7s
PRU Pruhonice 84.42 324 AMS AMS 23 27 30.0
comp=Z,500nm,19.3s
PRA Prague 84.43 324 AMS AMS 23 27 30.0
comp=Z,500nm,22.7s
DIVS Divibare 84.73 317 P **P 22 45 57.4 -1.1**
DIVS IAmb IAmb 22 46 05.0
comp=Z,4.5nm,0.9s
CONA Conrad Observa 84.94 322 *eP* **P 22 46 00.6 +1.1**
comp=Z,4.1nm,1.0s
CKRC Cesky Krumlov 85.24 324 *eP* **P 22 46 02.1 +1.2**
NKC Novy Kostel 85.34 325 AMS AMS 23 27 40.0
comp=Z,600nm,8.0s
KHC Kasperske Hory 85.44 324 *eP* **P 22 46 02.0 +0.1**
KHC MLR MLR
comp=Z,600nm,23.0s
KHC Kasperske Hory 85.44 324 *eP* **P 22 46 02.0 +0.1**
KHC AMS AMS 23 27 50.0
comp=Z,600nm,23.0s
ARSA Arzberg 85.52 322 *eP* **P 22 46 03.9 +1.5**
comp=Z,3.1nm,0.8s
GERES GERESS Array B 85.55 324 P **P 22 46 03.0 +0.5**
comp=Z,0.9nm,0.7s,baz=55,slow=5.1,SNR=9.1
GERES GERESS Array B 85.55 324 P **P 22 46 02.2 -0.3**
GERES GERESS Array B 85.55 324 P **P 22 46 02.1 -0.3**
MOA Molln 85.85 323 *eP* **P 22 46 05.4 +1.4**
comp=Z,4.4nm,0.9s
BEKR Beckworth 86.10 47 P **P 22 46 05.6 0.0**
BEKR IAmb IAmb 22 46 21.0
comp=Z,4.4nm,1.1s
SOKA Soboth 86.13 321 *eP* **P 22 46 06.4 +1.0**
comp=Z,1.5nm,0.7s
OBKA Obir 86.50 322 *eP* **P 22 46 09.0 +1.7**
comp=Z,2.5nm,0.9s
FCC Fort Churchill 86.55 22 P **P 22 46 07.7 +0.7**
FCC pmax pmax
comp=Z,7.0nm,0.9s
FCC Fort Churchill 86.55 22 P **P 22 46 07.7 +0.7**
FCC IAmb IAmb 22 46 19.4
comp=Z,7.1nm,0.8s
KBA Koelnbreinsper 86.81 323 *eP* **P 22 46 08.7 -0.2**
comp=Z,4.3nm,1.0s
ABTA Abfaltersbach 87.47 323 *eP* **P 22 46 12.2 +0.3**
comp=Z,2.7nm,0.9s
NVAR Mina Array Bea 88.22 47 P **P 22 46 17.7 +1.8**
comp=Z,0.4nm,0.7s,baz=264,slow=4.5,SNR=2.1
NVAR LR LR 23 18 21.5
comp=Z,98nm,21.3s,baz=290,slow=30
EKA Eskdalemuir Ar 88.63 336 P **P 22 46 16.0 -1.1**
comp=Z,1.5nm,0.7s,baz=39,slow=4.6,SNR=3.5
PPT Papeete 89.30 110 LR LR 23 17 47.1
comp=Z,66nm,20.8s,baz=358,slow=30
PPT2 Papeete2 89.31 110 *eLR* LR 23 14 50.3
comp=Z,458nm,33.2s
HWUT Hardware Ranch 90.55 42 P **P 22 46 26.8 0.0**
HWUT IAmb IAmb 22 46 46.0
comp=Z,4.3nm,1.0s
PDAR Pinedale Array 90.98 40 P **P 22 46 29.1 +0.3**
comp=Z,1.3nm,0.9s,baz=180,slow=0.3,SNR=7.9
PDAR Pinedale Array 90.98 40 P **P 22 46 28.6 -0.2**
P17A Butcher Ranch, 92.36 43 P **P 22 46 35.0 -0.1**
P17A IAmb IAmb 22 46 42.4
comp=Z,4.2nm,0.8s
KEST Kesra 96.28 316 LR LR 23 36 39.7
comp=Z,94nm,18.5s,baz=314,slow=39

PRU 19 22:34:58.0±0.0,**49.85N**×**18.50E**,**h0**km,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**267**	*e*	P	Pg		22 35 01.5	-0.9
OKC				*e*	S	Sg		22 35 05.0	-0.3
comp=Z,22nm,0.4s									
MORC	**Moravsky Berou**	**0.62**	**264**	*e*	P	Pg		22 35 10.1	+0.1
MORC				*e*	S	Sg		22 35 17.2	-0.8
KRLC	**Kraliky**	**1.13**	**282**	*e*	P	Pg		22 35 17.3	-2.4
KRLC				*e*	S	Sg		22 35 34.4	0.0
comp=Z,2.5nm,0.4s									
VRAC	**Vranov**	**1.35**	**247**	*e*	P	Pg		22 35 22.7	-1.2
VRAC				*e*	S	Sg		22 35 40.4	-1.1
DPC	**Dobruska-Polom**	**1.49**	**290**	*e*	P	Pn		22 35 25.0	-1.1
DPC				*e*	S	Sg		22 35 45.4	-0.4
comp=Z,1.1nm,0.5s									

ROM 19 22:44:04.1±0.1,**44.199N**±0.005×**10.921E**±0.007, **h18**km±1km,**ML1.6/6**,**Error ellipse: s-maj=0.6km s-min=0.5km az=354.0**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FNVD	**Fontana Vidola**	**0.15**	**102**		P	Pg		22 44 08.4	-0.1
FNVD					S	Sg		22 44 11.5	0.0
ZCCA	**Zocca**	**0.16**	**15**		P	Pg		22 44 09.0	+0.4
ZCCA					AML	AML			
comp=E,124μm,1.0s									
ZCCA					AML	AML			
comp=N,220μm,1.5s									
MTCR	**Monte La Croce**	**0.18**	**162**		P	Pg		22 44 09.2	+0.2
MTCR					S	Sg		22 44 12.7	+0.4
POPM	**Popiglio**	**0.19**	**218**		P	Pg		22 44 09.3	+0.2
POPM					S	Sg		22 44 13.1	+0.7
POPM	**Popiglio**	**0.19**	**218**		P	Pg		22 44 09.3	+0.2
POPM					S	Sg		22 44 13.0	+0.6
POPM					AML	AML			
comp=N,474μm,0.1s									
POPM					AML	AML			
comp=E,557μm,0.2s									
BDI	**Bagni Di Lucca**	**0.27**	**240**		P	Pg		22 44 10.3	0.0
BDI					S	Sb		22 44 14.8	+0.3
BDI					AML	AML			
comp=E,95μm,1.0s									
BDI					AML	AML			
comp=N,164μm,0.4s									
CARD	**Cardoso**	**0.36**	**242**		P	Pg		22 44 11.7	0.0
CARD					S	Sb		22 44 17.3	0.0
SARO	**Sassorosso**	**0.37**	**268**		P	Pg		22 44 12.1	0.0
SARO					S	Sb		22 44 17.9	0.0
SARO	**Sassorosso**	**0.37**	**268**		P	Pg		22 44 12.1	0.0
SARO					S	Sg		22 44 17.6	+0.2
SARO					AML	AML			
comp=N,104μm,0.5s									
SARO					AML	AML			
comp=E,43μm,0.3s									
VLC	**Villacollemand**	**0.39**	**264**		P	Pg		22 44 12.3	+0.1
VLC					S	Sb		22 44 18.3	+0.1
VLC					AML	AML			
comp=E,155μm,1.3s									
VLC					AML	AML			
comp=N,124μm,0.4s									
VLC					AML	AML			
comp=N,134μm,1.1s									
VLC					AML	AML			
comp=E,142μm,0.2s									
ERBM	**Eremo**	**0.43**	**301**		P	Pb		22 44 13.1	-0.1
ERBM					S	Sb		22 44 19.1	-0.2
PII	**Pisa**	**0.56**	**211**		P	Pg		22 44 15.4	+0.1
PII					AML	AML			
comp=E,54μm,0.2s									
PII					AML	AML			
comp=N,41μm,1.0s									

IDC 19 23:00:44.6±2.8,**4.30N**×**123.84E**,**h0**km,**mb3.6**/3, **mb1 3.8**/3,**mb1mx3.2**/44,**mbtmp3.6**/3,**Error ellipse: s-maj=385.4km s-min=27.5km az=63.0**,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.21**	**157**		P	P		23 06 21.0	-0.3
0.5nm,0.4s,baz=336,slow=10.0,SNR=2.6									
ASAR	**Alice Springs**	**29.48**	**161**		P	P		23 06 50.9	+0.3
0.3nm,0.3s,baz=338,slow=7.0,SNR=5.0									
MKAR	**Makanchi Array**	**55.47**	**326**		P	P		23 10 21.1	-0.1
0.2nm,0.3s,baz=132,slow=7.0,SNR=5.7									

HLW ***19*** *23:08:34.0,35˚.18N×28˚.22E,h9km±14km,Md3.7,Ml3.1*
DDA ***19*** *23:08:35.3,35˚.83N×28˚.54E,h8km±3km,ML2.0*

ISC 19 23:08:27.4±0.9,**35.56N**±0.03×**28.22E**±0.05,**h10**km,**n18**, **σ2.62/28**,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**1.21**	**1**	*i*	P	**Pg**		**23 08 53.3**	**+2.6**
TURN				*i*	S	**Sb**		**23 09 06.3**	**+0.1**
TURN					IAML			23 09 08.0	
comp=N,32nm,0.6s									
DALY	**Dalyan (Mula)**	**1.30**	**16**	*i*	P	**Pg**		**23 08 53.3**	**+0.9**
DALY				*i*	S	**Sb**		**23 09 06.4**	**-2.3**
DALY					IAML			23 09 18.0	
comp=N,37nm,1.9s									
AKAS	**Kas**	**1.31**	**59**	*i*	P	**Pb**		**23 08 53.0**	**+0.9**
AKAS				*i*	S	**Sb**		**23 09 08.1**	**-1.0**
AKAS					IAML			23 09 13.0	
comp=E,37nm,1.5s									
BDRM	**Kayabasi**	**1.63**	**338**	*i*	P	**Pn**		**23 08 57.0**	**+0.8**
BDRM				*i*	S	**Sn**		**23 09 14.1**	**-3.1**
MULA	**Mugla, Merkez-**	**1.69**	**3**	*i*	P	**Pb**		**23 08 59.8**	**+1.1**
MULA				*i*	S	**Sn**		**23 09 15.7**	**-3.2**
MULA					IAML			23 09 26.0	
comp=E,19nm,0.5s									
CAEL	**Denizli, Camel**	**1.80**	**29**	*i*	P	**Pb**		**23 09 01.0**	**+0.6**
CAEL				*i*	S	**Sn**		**23 09 19.9**	**-1.6**
CAEL					IAML			23 09 25.0	
comp=E,34nm,0.8s									
CAEL					IAML			23 09 28.0	
comp=N,30nm,0.7s									
AKUM	**Antalya-Kumluc**	**1.88**	**66**	*i*	P	**Pb**		**23 09 01.7**	**-0.1**
AKUM				*i*	S	**Sn**		**23 09 19.0**	**-4.4**
AKUM					IAML			23 09 33.0	
comp=N,25nm,1.4s									
TAVA	**DENIZLI_Tavas**	**1.98**	**16**	*i*	P	**Pn**		**23 09 02.8**	**+1.7**
GOLH	**Golhisar**	**1.99**	**32**	*i*	P	**Pb**		**23 09 03.9**	**+0.1**
DDIM	**Aydin, Didim**	**2.05**	**338**	*i*	P	**Pg**		**23 09 09.3**	**+2.7**
AYDN	**Tasoluk**	**2.12**	**353**	*i*	P	**Pb**		**23 09 05.6**	**-0.3**
AYDN				*i*	S	**Sn**		**23 09 24.0**	**-5.3**
KORT	**Korkueli**	**2.24**	**50**	*i*	P	**Pb**		**23 09 07.8**	**-0.2**
GAZI	**Gazipasa**	**3.39**	**77**	*i*	P	**Pn**		**23 09 21.7**	**+1.3**
GAZI				*i*	S	Sn		23 09 52.3	-8.5
SLUM	**Salum**	**4.77**	**213**		P	**Pn**		**23 09 41.9**	**+2.6**
baz=216									
SLUM					S	**Sn**		**23 10 30.3**	**-4.4**
baz=216									
GLL	**Jalalah**	**6.65**	**153**		P	**Pn**		**23 10 07.3**	**+2.1**
baz=151									
RYAN	**Fayoum**	**6.69**	**164**		P	**Pn**		**23 10 07.0**	**+1.4**
baz=163									
RYAN					AMP			23 11 00.0	
baz=163									
SWA2		**6.72**	**201**		P	**Pn**		**23 10 07.6**	**+1.6**
baz=203									
SWA2					AMP			23 11 00.0	
baz=203									
SWA2					S	**Sn**		**23 11 17.0**	**-5.6**
baz=203									
SUZ	**Suez**	**6.90**	**144**		P	**Pn**		**23 10 11.4**	**+2.8**
baz=142									

IDC ***19*** *23:25:59.8±1.3,35˚.15N×27˚.04E,h0km,mb3.5/2, mb1 3.4/6,mb1mx3.2/37,mbtmp3.3/6,ML3.5/4,Error ellipse: s-maj=27.7km s-min=12.8km az=4.0*
THE ***19*** *23:26:02.1,35˚.14N×26˚.76E,h1km±2km,ML2.9/5,Error ellipse: s-maj=6.6km s-min=1.0km az=155.0*
ATH ***19*** *23:26:02.4,35˚.16N×26˚.79E,h6km±2km,ML3.0/6,Error ellipse: s-maj=4.0km s-min=0.8km az=152.0*
ISK ***19*** *23:26:04.0,35˚.34N×26˚.75E,h8km,ML3.0/16*
DDA ***19*** *23:26:05.0,35˚.07N×26˚.89E,h35km±504km,ML2.7*

ISC 19 23:26:01.4±1.1,**35.08N**±0.05×**26.83E**±0.03,**h14**km±8km, **n63,σ1.974/89**,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**274**		P	**Pg**		**23 26 11.2**	**-0.1**
ZKR					S	**Sg**		**23 26 18.0**	**0.0**
ZKR					AML	AML		23 26 24.5	
comp=E,3464μm,0.5s									
ZKR					AML	AML		23 26 24.7	
comp=N,2387μm,0.7s									
ZKR	**Zakros**	**0.50**	**274**		P	**Pg**		**23 26 11.3**	**-0.1**
ZKR					S	**Sg**		**23 26 17.7**	**-0.3**
comp=N,2μm,0.3s									
KARP	**Karpathos**	**0.54**	**30**		P	**Pg**		**23 26 11.7**	**-0.4**
KARP					S	**Sg**		**23 26 18.3**	**-1.0**
KARP					AML	AML		23 26 21.9	
comp=E,8988μm,0.4s									
KARP					AML	AML		23 26 22.6	
comp=N,10475μm,0.3s									
KARP	**Karpathos**	**0.54**	**30**		P	**Pg**		**23 26 11.5**	**-0.6**
KARP					S	**Sb**		**23 26 20.6**	**+0.2**
comp=N,5μm,0.3s									
KARP	**Karpathos**	**0.54**	**30**		PG	**Pg**		**23 26 11.7**	**-0.4**
KARP					SG	**Sg**		**23 26 18.6**	**-0.7**
STIA	**Sitia Lasithi**	**0.61**	**282**		P	**Pg**		**23 26 13.2**	**-0.2**
STIA					S	**Sg**		**23 26 21.9**	**+0.3**
FRMA	**Ierapetra Chan**	**0.90**	**266**		P	**Pg**		**23 26 16.4**	**-2.4**
FRMA					S	**Sg**		**23 26 29.0**	**-1.6**
comp=N,402nm,0.4s									
NPS	**Neapolis**	**1.01**	**281**		P	**Pg**		**23 26 20.7**	**-0.2**
NPS					S	**Sg**		**23 26 33.9**	**-0.3**
NPS					AML	AML		23 26 42.6	
comp=E,1279μm,0.7s									
NPS					AML	AML		23 26 43.0	
comp=N,1361μm,0.6s									
NPS	**Neapolis**	**1.01**	**281**		P	**Pg**		**23 26 21.1**	**+0.2**
NPS					S	**Sb**		**23 26 35.5**	**+1.6**
comp=N,712nm,0.5s									
HRKL	**Herakleio**	**1.43**	**280**		PN	**Pg**		**23 26 29.5**	**+0.6**
NIS1	**Nisyros Isl.**	**1.54**	**11**		P	**Pn**		**23 26 29.0**	**+0.5**
NIS1					S	**Sn**		**23 26 49.3**	**+0.9**
NIS1					AML	AML		23 27 04.1	
comp=N,1652μm,0.7s									
NIS1					AML	AML		23 27 06.5	
comp=E,1152μm,0.7s									
NIS1	**Nisyros Isl.**	**1.54**	**11**		P	**Pn**		**23 26 29.5**	**+0.9**
NIS1	**Nisyros Isl.**	**1.54**	**11**		PN	**Pn**		**23 26 29.2**	**+0.7**
ARG	**Arkhangelos**	**1.55**	**43**		P	**Pn**		**23 26 30.3**	**+1.7**
ARG					S	**Sn**		**23 26 50.1**	**+1.6**
ARG					AML	AML		23 26 56.8	
comp=N,619μm,0.4s									
ARG					AML	AML		23 26 57.6	
comp=E,1072μm,0.6s									
ARG	**Arkhangelos**	**1.55**	**43**		P	**Pn**		**23 26 30.4**	**+1.8**
ARG					S	**Sb**		**23 26 50.8**	**+1.4**
comp=E,425nm,0.5s									
ARG	**Arkhangelos**	**1.55**	**43**		PN	**Pb**		**23 26 31.0**	**+1.1**
IDI	**Anoyia**	**1.60**	**278**		Pg	**Pg**		**23 26 32.1**	**0.0**
comp=E,8.3nm,0.3s,baz=97,slow=15,SNR=59									
IDI					Lg	Lg		23 26 56.4	
comp=E,9.1nm,0.3s,baz=18,slow=15,SNR=5.0									
IDI	**Anoyia**	**1.60**	**278**		P	**Pn**		**23 26 30.3**	**+0.9**
IDI					S	**Sb**		**23 26 51.7**	**+0.8**
IDI					AML	AML		23 27 02.1	
comp=N,434μm,0.8s									
IDI					AML	AML		23 27 07.7	
comp=E,283μm,0.9s									
IDI	**Anoyia**	**1.60**	**278**		PN	**Pg**		**23 26 32.2**	**0.0**
SIVA	**Sivas**	**1.66**	**268**		P	**Pb**		**23 26 32.5**	**+0.8**
KOSK	**Kos Island**	**1.67**	**4**		PN	**Pn**		**23 26 31.0**	**+0.8**
SANT	**Santorini**	**1.70**	**320**		PN	**Pn**		**23 26 31.3**	**+0.6**
THIR	**Thira Island,**	**1.76**	**319**		P	**Pn**		**23 26 32.1**	**+0.6**
THT2	**Imerovigli**	**1.77**	**320**		PN	**Pn**		**23 26 33.1**	**+1.5**
BODT	**Bodrum**	**2.02**	**11**		PN	**Pn**		**23 26 35.4**	**+0.4**
BDRM	**Kayabasi**	**2.04**	**14**	*i*	P	**Pn**		**23 26 34.8**	**-0.6**
BDRM				*i*	S	**Sn**		**23 26 58.3**	**-2.4**
TURN	**Turunc**	**2.05**	**34**	*i*	P	**Pn**		**23 26 37.9**	**+2.5**
TURN				*i*	S	**Sn**		**23 27 01.7**	**+1.0**
TURN	**Turunc**	**2.05**	**34**		PN	**Pn**		**23 26 37.6**	**+2.2**
APE	**Apeiranthos**	**2.25**	**333**		P	**Pn**		**23 26 38.5**	**+0.4**
APE	**Apeiranthos**	**2.25**	**333**		PN	**Pn**		**23 26 38.6**	**+0.4**
GVDS	**Gavdos**	**2.26**	**265**		PN	**Pb**		**23 26 43.1**	**+1.1**
GVD	**Gavdhos**	**2.26**	**265**		PN	**Pb**		**23 26 42.7**	**+0.7**
DALY	**Dalyan (Mula)**	**2.28**	**40**	*i*	P	**Pn**		**23 26 39.2**	**+0.6**
DALY				*i*	S	**Sb**		**23 27 12.5**	**+2.1**
DALY					IAML			23 27 25.0	
comp=E,70nm,1.3s									
DALY					IAML			23 27 28.0	
comp=N,99nm,0.7s									
DALY	**Dalyan (Mula)**	**2.28**	**40**		PN	**Pn**		**23 26 40.9**	**+2.3**
IMMV	**Iera Moni Meta**	**2.36**	**280**		P	**Pb**		**23 26 43.2**	**-0.5**
IMMV	**Iera Moni Meta**	**2.36**	**280**		PN	**Pb**		**23 26 43.5**	**-0.2**
YER	**Yerkesik**	**2.37**	**29**		PN	**Pn**		**23 26 41.3**	**+1.4**
DDIM	**Aydin, Didim**	**2.40**	**8**	*i*	P	**Pn**		**23 26 42.8**	**+2.6**
DDIM				*i*	S	**Sn**		**23 27 05.7**	**-3.7**
DDIM					IAML			23 27 20.0	
comp=N,56nm,0.9s									
DDIM					IAML			23 27 35.0	
comp=E,58nm,1.9s									
MULA	**Mugla, Merkez-**	**2.48**	**29**	*i*	P	**Pn**		**23 26 43.0**	**+1.5**
MULA				*i*	S	**Sn**		**23 27 12.0**	**+0.3**
AKAS	**Kas**	**2.54**	**62**	*i*	P	**Pn**		**23 26 41.4**	**-0.9**
KNDR	**Palaiochora Ch**	**2.58**	**274**		PN	**Pb**		**23 26 47.1**	**-0.3**
GCAM	**G?zelcaml?**	**2.63**	**7**	*i*	P	**Pn**		**23 26 45.0**	**+1.5**
GCAM	**G?zelcaml?**	**2.63**	**7**		PN	**Pn**		**23 26 45.1**	**+1.6**
AYDN	**Tasoluk**	**2.71**	**18**	*i*	P	**Pn**		**23 26 46.2**	**+1.5**
AYDN				*i*	S	**Sn**		**23 27 13.4**	**-3.9**
CAEL	**Denizli, Camel**	**2.87**	**44**	*i*	P	**Pn**		**23 26 47.6**	**+0.7**
TAVA	**DENIZLI_Tavas**	**2.92**	**35**	*i*	P	**Pn**		**23 26 48.5**	**+1.0**
TAVA				*i*	S	**Sn**		**23 27 18.8**	**-3.6**
TAVA					IAML			23 27 36.0	
comp=E,35nm,0.6s									
TAVA					IAML			23 27 44.0	
comp=N,28nm,0.7s									
AYDB	**Zeytinkoy-Aydi**	**2.99**	**16**		PN	**Pn**		**23 26 50.2**	**+1.7**
GOLH	**Golhisar**	**3.09**	**45**	*i*	P	**Pn**		**23 26 51.7**	**+1.9**
GOLH				*i*	S	**Sn**		**23 27 28.5**	**+1.9**
GOLH					IAML			23 27 54.0	
comp=N,40nm,0.7s									
AKUM	**Antalya-Kumluc**	**3.12**	**66**	*i*	P	**Pn**		**23 26 50.2**	**+0.1**
AKUM				*i*	S	**Sn**		**23 27 26.4**	**-0.8**
CHOS	**Chios island**	**3.36**	**350**		PN	**Pn**		**23 26 54.9**	**+1.4**
KORT	**Korkueli**	**3.44**	**55**	*i*	P	**Pn**		**23 26 55.8**	**+1.1**
KORT				*i*	S	**Sn**		**23 27 36.5**	**+1.1**
KORT					IAML			23 27 43.0	
comp=N,22nm,0.7s									
KORT					IAML			23 27 46.0	
comp=E,28nm,0.7s									
KORT	**Korkueli**	**3.44**	**55**		PN	**Pn**		**23 26 58.2**	**+3.5**
MANT	**Manisa**	**3.68**	**22**	*i*	P	**Pn**		**23 26 58.9**	**+0.8**
BRDR	**BURDUR

comp=E,9.8nm,0.8s
KEPZ Antalya-Kepez 4.28 63 *i* P **Pn** **23 27 07.9 +1.7**
KEPZ *i* S **Sn** **23 27 50.0 -5.9**
KEPZ IAML 23 28 01.0
comp=E,9.8nm,0.6s
MMAI Mount Meron Ar 7.41 104 Pn **Pn** **23 27 48.0 -1.2**
comp=E,0.7nm,0.3s,baz=294,slow=13,SNR=11
MMAI Sn **Sn** **23 29 10.9 -2.2**
comp=E,1.4nm,0.3s,baz=308,slow=24,SNR=3.9
EIL Elat 8.73 126 Pn **Pn** **23 28 06.8 -0.5**
comp=E,0.2nm,0.3s,baz=16,slow=16,SNR=2.2
EIL Sn Sn 23 29 40.3 -5.3
comp=E,0.7nm,0.3s,baz=283,slow=4.3,SNR=6.0
AKASG Malin Array Be 15.71 6 Pn **Pn** **23 29 40.5 -1.7**
comp=E,0.3nm,0.3s,baz=190,slow=12,SNR=2.3
GERES GERESS Array B 16.83 329 Pn **Pn** **23 29 57.3 +0.7**
comp=E,0.1nm,0.3s,baz=145,slow=12,SNR=2.1
TORD Torodi Ar. Bea 31.50 232 P **P** **23 32 24.4 +1.4**
comp=E,0.2nm,0.4s,baz=38,slow=8.3,SNR=1.5
MKAR Makanchi Array 42.68 57 P **P** **23 33 56.4 -1.2**
comp=E,0.7nm,0.7s,baz=271,slow=7.3,SNR=4.4

*IDC **19** 23:28:27.8±1.1,35°.10N×26°.95E,h0km,mb3.8/8,*
mb1 3.7/13,mb1mx3.6/38,mbtmp3.7/13,ML3.6/5,Error
ellipse: s-maj=22.4km s-min=11.3km az=176.0
*NIC **19** 23:28:28.0±0.0,35°.03N×26°.89E,h5km±1km,Ml3.7/5*
*NEIC **19** 23:28:29.7±2.0,35°.02N±0°.04×26°.96E±0°.04,h9km±4km,*
mb4.0/7,Error ellipse: s-maj=6.8km s-min=3.1km
az=137.0
*DDA **19** 23:28:30.8,35°.11N×26°.92E,h9km±4km,MW3.7*
*ATH **19** 23:28:30.4,35°.16N×26°.82E,h6km±2km,ML3.4/6,Error*
ellipse: s-maj=4.0km s-min=0.9km az=156.0
*THE **19** 23:28:30.0,35°.12N×26°.79E,h1km±1km,ML3.3/5,Error*
ellipse: s-maj=5.3km s-min=0.9km az=155.0
*ISK **19** 23:28:31.8,35°.31N×26°.80E,h10km,ML3.4/21*
*HLW **19** 23:28:31.3,34°.96N×27°.01E,h19km±22km,Md3.9,Ml4.0*
ISC 19 23:28:29.3±1.2,**35°.08N**±0°.03×**26°.88E**±0°.02,**h12**km±8km,
n138,σ1§74/175,mb4.0/12,2C,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.53**	**26**	P	**Pg**	**23 28 39.8**	**+0.2**
KARP				S	**Sg**	**23 28 46.0**	**-0.6**
KARP				AML	AML	23 28 49.9	
	comp=E,29896μm,0.3s						
KARP				AML	AML	23 28 50.9	
	comp=N,29329μm,0.3s						
KARP	**Karpathos**	**0.53**	**26**	P	**Pg**	**23 28 39.5**	**-0.1**
KARP				S	**Sn**	**23 28 48.8**	**-2.7**
	comp=N,15μm,0.3s						
KARP	**Karpathos**	**0.53**	**26**	PG	**Pg**	**23 28 39.8**	**+0.2**
KARP	**Karpathos**	**0.53**	**26**	Pg	**Pg**	**23 28 39.8**	**+0.2**
KARP				Sg	**Sb**	**23 28 48.5**	**+0.4**
KARP	**Karpathos**	**0.53**	**26**	P	**Pg**	**23 28 39.7**	**0.0**
KARP				S	**Sn**	**23 28 48.7**	**-2.7**
KARP				AML	AML	23 28 49.5	
	comp=N,30nm,0.3s						
KARP				AML	AML	23 28 49.5	
	comp=N,30nm,0.3s						
KARP				AML	AML	23 28 50.4	
	comp=N,29nm,0.3s						
KARP				AML	AML	23 28 50.4	
	comp=N,29nm,0.3s						
ZKR	**Zakros**	**0.54**	**274**	P	**Pb**	**23 28 39.3**	**-1.5**
ZKR				S	**Sb**	**23 28 46.6**	**-1.8**
ZKR				AML	AML	23 28 49.1	
	comp=E,10610μm,0.4s						
ZKR				AML	AML	23 28 52.7	
	comp=N,7000μm,0.4s						
ZKR	**Zakros**	**0.54**	**274**	P	**Pb**	**23 28 39.2**	**-1.5**
ZKR				S	**Sb**	**23 28 46.3**	**-2.1**
	comp=N,4μm,0.4s						
ZKR	**Zakros**	**0.54**	**274**	P	**Pb**	**23 28 39.2**	**-1.5**
ZKR				AML	AML	23 28 47.9	
	comp=N,10.0nm,0.4s						
ZKR				AML	AML	23 28 47.9	
	comp=N,10.0nm,0.4s						
ZKR				S	**Sb**	**23 28 48.9**	**+0.5**
ZKR				AML	AML	23 28 51.6	
	comp=N,6.6nm,0.4s						
ZKR				AML	AML	23 28 51.6	
	comp=N,6.6nm,0.4s						
STIA	**Sitia Lasithi**	**0.66**	**281**	P	**Pb**	**23 28 41.1**	**-1.5**
STIA				S	**Sb**	**23 28 51.0**	**-0.7**
FRMA	**Ierapetra Chan**	**0.94**	**267**	P	**Pb**	**23 28 44.4**	**-3.0**
FRMA				S	**Sb**	**23 28 57.9**	**-1.9**
	comp=N,1μm,0.4s						
NPS	**Neapolis**	**1.05**	**281**	P	**Pn**	**23 28 49.3**	**-0.4**
NPS				S	**Sb**	**23 29 02.7**	**-0.4**
NPS				AML	AML	23 29 08.0	
	comp=E,4688μm,0.3s						
NPS				AML	AML	23 29 13.7	
	comp=N,3224μm,0.5s						
NPS	**Neapolis**	**1.05**	**281**	P	**Pn**	**23 28 49.4**	**-0.4**
NPS				S	**Sb**	**23 29 03.0**	**-0.1**
	comp=N,2μm,0.5s						
HRKL	**Herakleio**	**1.47**	**280**	PN	**Pb**	**23 28 58.3**	**+1.8**
KSTL	**Kastelli Herak**	**1.50**	**279**	P	**Pn**	**23 28 53.2**	**-2.7**
ARG	**Arkhangelos**	**1.53**	**41**	P	**Pb**	**23 28 57.8**	**+0.4**
ARG				S	**Sg**	**23 29 17.9**	**-0.6**
ARG				AML	AML	23 29 25.6	
	comp=E,2818μm,0.6s						
ARG				AML	AML	23 29 29.6	
	comp=N,1078μm,0.9s						
ARG	**Arkhangelos**	**1.53**	**41**	P	**Pb**	**23 28 57.5**	**0.0**
ARG				S	**Sg**	**23 29 18.7**	**+0.2**
	comp=N,1μm,0.5s						
ARG	**Arkhangelos**	**1.53**	**41**	PN	**Pb**	**23 28 57.9**	**+0.4**
ARG				SN	**Sg**	**23 29 17.6**	**-0.9**
ARG	**Arkhangelos**	**1.53**	**41**	P	**Pb**	**23 28 57.6**	**0.0**
ARG				S	**Sg**	**23 29 18.1**	**-0.4**
NIS1	**Nisyros Isl.**	**1.54**	**9**	P	**Pb**	**23 28 57.3**	**-0.5**
NIS1				S	**Sb**	**23 29 17.4**	**+0.1**
NIS1				AML	AML	23 29 29.9	
	comp=E,4642μm,0.7s						
NIS1				AML	AML	23 29 32.1	
	comp=N,4814μm,0.7s						
NIS1	**Nisyros Isl.**	**1.54**	**9**	P	**Pb**	**23 28 57.1**	**-0.7**
NIS1	**Nisyros Isl.**	**1.54**	**9**	PN	**Pb**	**23 28 57.6**	**-0.2**
IDI	**Anoyia**	**1.64**	**278**	Pg	**Pb**	**23 29 00.2**	**+0.7**
	comp=N,17nm,0.3s,baz=104,slow=15,SNR=3.6						
IDI				Lg	Lg	23 29 21.8	
	comp=N,33nm,0.3s,baz=356,slow=9.2,SNR=4.3						
IDI	**Anoyia**	**1.64**	**278**	P	**Pn**	**23 28 59.5**	**+1.5**
IDI				S	**Sn**	**23 29 20.4**	**+1.4**
IDI				AML	AML	23 29 30.1	
	comp=N,1258μm,0.8s						
IDI				AML	AML	23 29 33.3	
	comp=E,852μm,0.6s						
IDI	**Anoyia**	**1.64**	**278**	PN	**Pb**	**23 29 00.3**	**+0.9**
IDI	**Anoyia**	**1.64**	**278**		**Pb**	**23 29 00.4**	**+0.9**
KOSK	**Kos Island**	**1.68**	**3**	PN	**Pb**	**23 28 59.2**	**-0.8**
KOSK				SN	**Sn**	**23 29 18.2**	**-1.5**
SIVA	**Sivas**	**1.70**	**269**	P	**Pb**	**23 29 01.9**	**+1.6**
SANT	**Santorini**	**1.73**	**319**	P	**Pn**	**23 28 59.6**	**+0.4**
SANT	**Santorini**	**1.73**	**319**	PN	**Pn**	**23 28 59.1**	**-0.1**
SANT	**Santorini**	**1.73**	**319**		**Pn**	**23 28 59.6**	**+0.4**
THR8	**Santorini-Mono**	**1.75**	**320**	P	**Pn**	**23 28 59.1**	**-0.3**
THR6	**Thira Island,**	**1.75**	**317**	P	**Pn**	**23 28 59.4**	**-0.1**
THR9	**Santorini-Faro**	**1.78**	**316**	P	**Pn**	**23 28 59.8**	**0.0**
SNT1	**Gialos, Santor**	**1.78**	**319**	P	**Pn**	**23 28 59.8**	**0.0**
THR3	**Thira Island,**	**1.79**	**318**	P	**Pn**	**23 29 00.2**	**+0.2**
DATC	**Datca-Mugla**	**1.80**	**21**	PN	**Pb**	**23 29 01.7**	**-0.4**
THT2	**Imerovigli**	**1.80**	**319**	PN	**Pn**	**23 29 00.3**	**+0.2**
BODT	**Bodrum**	**2.01**	**10**	P	**Pn**	**23 29 02.9**	**-0.2**
BODT	**Bodrum**	**2.01**	**10**	PN	**Pn**	**23 29 03.2**	**+0.1**
TURN	**Turunc**	**2.03**	**33**	*i* P	**Pb**	**23 29 05.0**	**-1.0**
TURN				*i* S	**Sb**	**23 29 30.3**	**-0.9**
TURN	**Turunc**	**2.03**	**33**	PN	**Pb**	**23 29 05.2**	**-0.8**
BDRM	**Kayabasi**	**2.04**	**13**	*i* P	**Pn**	**23 29 04.0**	**+0.6**
VAM	**Vamos**	**2.21**	**279**	P	**Pb**	**23 29 08.9**	**-0.3**
DALY	**Dalyan (Mula)**	**2.26**	**39**	*i* P	**Pn**	**23 29 07.8**	**+1.4**
DALY				*i* S	**Sg**	**23 29 40.6**	**-1.3**
DALY	**Dalyan (Mula)**	**2.26**	**39**	PN	**Pb**	**23 29 09.1**	**-0.9**
APE	**Apeiranthos**	**2.27**	**332**	P	**Pn**	**23 29 06.2**	**0.0**
APE	**Apeiranthos**	**2.27**	**332**	PN	**Pn**	**23 29 06.2**	**-0.4**
APE	**Apeiranthos**	**2.27**	**332**	P	**Pn**	**23 29 06.5**	**-0.1**
GVDS	**Gavdos**	**2.30**	**265**	PN	**Pb**	**23 29 11.3**	**+0.7**
GVD	**Gavdhos**	**2.30**	**265**	PN	**Pb**	**23 29 10.9**	**+0.2**
YER	**Yerkesik**	**2.35**	**29**	PN	**Pn**	**23 29 09.3**	**+1.6**
FETY	**Fethiye**	**2.38**	**48**	*i* P	**Pn**	**23 29 08.3**	**+0.3**
DDIM	**Aydin, Didim**	**2.40**	**7**	*i* P	**Pb**	**23 29 11.2**	**-1.1**
DDIM				*i* S	**Sn**	**23 29 33.9**	**-3.6**
IMMV	**Iera Moni Meta**	**2.40**	**280**	PN	**Pn**	**23 29 11.1**	**+2.8**
MULA	**Mugla, Merkez-**	**2.47**	**28**	*i* P	**Pn**	**23 29 09.9**	**+0.5**
AKAS	**Kas**	**2.50**	**62**	*i* P	**Pn**	**23 29 10.0**	**+0.1**
AKAS				*i* S	**Sn**	**23 29 37.8**	**-2.6**
AKAS	**Kas**	**2.50**	**62**	Pn	**Pn**	**23 29 10.3**	**+0.4**
KNDR	**Palaiochora Ch**	**2.62**	**274**	PN	**Pb**	**23 29 15.1**	**-1.0**
GCAM	**G?zelcami?**	**2.64**	**6**	*i* P	**Pn**	**23 29 12.2**	**+0.6**
GCAM	**G?zelcami?**	**2.64**	**6**	PN	**Pn**	**23 29 13.4**	**+1.8**
AYDN	**Tasoluk**	**2.71**	**17**	*i* P	**Pn**	**23 29 13.6**	**+1.0**
AYDN				*i* S	**Sn**	**23 29 45.1**	**-0.2**
CAEL	**Denizli, Camel**	**2.84**	**43**	*i* P	**Pn**	**23 29 16.3**	**+1.7**
TAVA	**DENIZLI_Tavas**	**2.90**	**34**	*i* P	**Pn**	**23 29 17.1**	**+1.8**
TAVA				*i* S	**Sb**	**23 29 54.2**	**-2.2**
DGB	**zmir**	**2.97**	**0**	*i* P	**Pn**	**23 29 15.3**	**-0.9**
ELL	**Elmali**	**2.98**	**55**	PN	**Pn**	**23 29 18.7**	**+2.4**
ELL	**Elmali**	**2.98**	**55**	Pn	**Pn**	**23 29 18.8**	**+2.4**
AYDB	**Zeytinkoy-Aydi**	**2.98**	**16**	PN	**Pn**	**23 29 17.7**	**+1.3**
GOLH	**Golhisar**	**3.06**	**44**	*i* P	**Pn**	**23 29 19.4**	**+1.9**
GOLH				*i* S	**Sn**	**23 29 55.5**	**+1.3**
AKUM	**Antalya-Kumluc**	**3.08**	**65**	*i* P	**Pn**	**23 29 18.0**	**+0.2**
AKUM				*i* S	**Sn**	**23 29 55.1**	**+0.6**
URLA	**Izmir**	**3.29**	**356**	*i* P	**Pn**	**23 29 19.6**	**-0.9**
URLA				*i* S	**Sn**	**23 29 54.7**	**-4.9**
URLA	**Izmir**	**3.29**	**356**	PN	**Pn**	**23 29 22.0**	**+1.4**
KTHA	**Kythira Island**	**3.32**	**292**	PN	**Pn**	**23 29 23.4**	**+2.4**
CHOS	**Chios island**	**3.37**	**349**	PN	**Pn**	**23 29 22.6**	**+0.8**
KORT	**Korkueli**	**3.41**	**55**	*i* P	**Pn**	**23 29 23.7**	**+1.4**
KORT				*i* S	**Sn**	**23 30 02.2**	**-0.5**
KORT	**Korkueli**	**3.41**	**55**	PN	**Pn**	**23 29 24.8**	**+2.5**
MANT	**Manisa**	**3.67**	**21**	*i* P	**Pn**	**23 29 27.2**	**+1.2**
MANT	**Manisa**	**3.67**	**21**		**Pn**	**23 29 27.4**	**+1.4**
BRDR	**BURDUR-Merkez**	**3.67**	**44**	*i* P	**Pn**	**23 29 28.0**	**+2.2**
KULA	**Kula-Manisa**	**3.72**	**22**	PN	**Pn**	**23 29 28.4**	**+1.8**
MATC	**Matruh**	**3.73**	**175**	P	**Pn**	**23 29 26.4**	**-0.2**
	baz=177						
BUCA	**Burdur, Bucak-**	**3.73**	**52**	*i* P	**Pn**	**23 29 29.2**	**+2.5**
BASM	**Basmaki-Afyon**	**3.82**	**41**	PN	**Pn**	**23 29 30.4**	**+2.5**
SLUM	**Salum**	**3.83**	**202**	P	**Pn**	**23 29 28.1**	**0.0**
	baz=205						
SLUM				AMP		23 30 00.0	
	baz=205						
OSC1	**CSNet OBS 1**	**3.97**	**112**	S	**Sn**	**23 30 17.6**	**+1.4**
DKL	**Dikili**	**3.99**	**0**	PN	**Pn**	**23 29 32.3**	**+2.1**
USAK	**Uak-Merkez**	**4.02**	**25**	*i* P	**Pn**	**23 29 31.3**	**+0.6**
ISP	**Isparta**	**4.02**	**46**	PN	**Pn**	**23 29 33.7**	**+3.0**
ISP	**Isparta**	**4.02**	**46**		**Pn**	**23 29 32.4**	**+1.7**
KEPZ	**Antalya-Kepez**	**4.25**	**63**	*i* P	**Pn**	**23 29 35.3**	**+1.5**
KEPZ				*i* S	**Sn**	**23 30 15.3**	**-7.9**
STEP	**BALIKESIR_Sava**	**4.35**	**9**	*i* P	**Pn**	**23 29 37.9**	**+2.8**
BUHA	**Balikesir, Bur**	**4.42**	**2**	*i* P	**Pn**	**23 29 37.5**	**+1.3**
AKMS	**Akamas**	**4.48**	**89**	P	**Pn**	**23 29 37.8**	**+0.9**
AKMS				AML	AML	23 30 31.9	
	comp=E,0.5nm,0.4s						
AKMS				AML	AML	23 30 31.9	
	comp=E,0.5nm,0.5s						
ITM	**Ithomi**	**4.52**	**299**	Pn	**Pn**	**23 29 41.1**	**+3.6**
GAZI	**Gazipasa**	**4.58**	**74**	*i* P	**Pn**	**23 29 37.1**	**-1.2**
GAZI				*i* S	**Sn**	**23 30 26.9**	**-4.5**
SEDI	**Konya, Seydise**	**4.60**	**58**	*i* P	**Pn**	**23 29 41.3**	**+2.6**
SEDI				*i* S	**Sn**	**23 30 33.2**	**+1.1**
NATA	**Nata**	**4.69**	**92**	P	**Pn**	**23 29 39.9**	**+0.1**
ALFC	**Alefka**	**4.69**	**87**	⇑P	**Pn**	**23 29 39.7**	**-0.2**
ALFC				AML	AML	23 30 34.5	
	comp=E,0.6nm,0.7s						
ALFC				AML	AML	23 30 34.9	
	comp=E,0.6nm,0.5s						
DURS	**Dursunbey**	**4.69**	**15**	*i* P	**Pn**	**23 29 41.1**	**+1.1**
OSC2	**CSNet OBS 4**	**4.90**	**113**	S	**Sn**	**23 30 40.7**	**+1.4**
DOGA	**KONYA_Doganhis**	**4.90**	**50**	*i* P	**Pn**	**23 29 44.4**	**+1.5**
SZAC	**Souni**	**4.95**	**92**	P	**Pn**	**23 29 43.8**	**+0.5**
SZAC				S	**Sn**	**23 30 42.0**	**+1.5**
CSS	**Mathiatis**	**5.30**	**89**	Pn	**Pn**	**23 29 48.8**	**+0.6**
CSS	**Mathiatis**	**5.30**	**89**	⇑P	**Pn**	**23 29 48.4**	**+0.2**
CSS				AML	AML	23 30 55.2	
	comp=E,0.1nm,0.7s						
CSS				AML	AML	23 31 02.8	
	comp=E,0.1nm,0.6s						
AGG	**Agios Georgios**	**5.36**	**319**		**Pn**	**23 29 53.1**	**+4.0**
MVOU	**Mavrovouni**	**5.54**	**89**	P	**Pn**	**23 29 52.2**	**+0.6**
SWA2		**5.94**	**192**	P	**Pn**	**23 29 57.7**	**+0.7**
	baz=194						
SWA2				AMP		23 31 00.0	
	baz=194						
SWA2				S	**Sn**	**23 31 00.1**	**-4.7**
	baz=194						
HMYD	**Mayadein**	**6.22**	**147**	P	**Pn**	**23 30 00.9**	**0.0**
	baz=147						
HNAT	**Natroun**	**6.28**	**149**	P	**Pn**	**23 30 00.3**	**-1.4**
	baz=149						
HNAT				AMP		23 31 00.0	
	baz=149						
RYAN	**Fayoum**	**6.63**	**153**	P	**Pn**	**23 30 06.4**	**-0.1**
	baz=153						
RYAN				AMP		23 31 00.0	
	baz=153						
RYAN				S	**Sn**	**23 31 15.2**	**-6.9**
	baz=153						
HSAF	**As Saff**	**6.73**	**143**	P	**Pn**	**23 30 07.7**	**-0.1**
	baz=143						
GLL	**Jalalah**	**6.84**	**142**	P	**Pn**	**23 30 08.6**	**-0.8**
	baz=142						
BRTR	**Keskin Array B**	**7.11**	**47**	Pn	**Pn**	**23 30 14.9**	**+1.8**
	comp=E,0.2nm,0.3s,baz=220,slow=15,SNR=3.1						
BRTR				Sn	**Sn**	**23 31 33.6**	**-0.2**
	comp=E,0.0nm,0.3s,baz=199,slow=29,SNR=1.7						
MMAI	**Mount Meron Ar**	**7.37**	**104**	Pn	**Pn**	**23 30 16.2**	**-0.5**
	comp=E,2.4nm,0.3s,baz=295,slow=14,SNR=13						
MMAI				Sn	**Sn**	**23 31 36.8**	**-3.5**
	comp=E,2.3nm,0.3s,baz=293,slow=23,SNR=3.4						
HFRF	**Wahat Farafira**	**8.00**	**171**	P	**Pn**	**23 30 24.8**	**-0.5**
	baz=171						
EIL	**Elat**	**8.70**	**126**	Pn	**Pn**	**23 30 35.2**	**+0.3**
	comp=E,0.4nm,0.3s,baz=352,slow=4.6,SNR=7.0						
EIL				Sn	**Sn**	**23 32 06.9**	**-6.0**
	comp=E,2.3nm,0.3s,baz=312,slow=7.1,SNR=7.8						
TIRR	**Tirgusor**	**9.45**	**7**	Pn	**Pn**	**23 30 47.5**	**+2.5**
RAFF	**Raffo Rosso**	**10.34**	**286**	Pn	**Pn**	**23 30 58.7**	**+1.3**
AKASG	**Malin Array Be**	**15.71**	**6**	Pn	**Pn**	**23 32 09.6**	**-0.7**
	comp=E,0.7nm,0.3s,baz=195,slow=11,SNR=4.8						
GERES	**GERESS Array B**	**16.86**	**329**	Pn	**P**	**23 32 27.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=139,slow=12,SNR=5.9						
GERES	**GERESS Array B**	**16.86**	**329**	P	**P**	**23 32 28.1**	**+1.0**
BNI	**Bardonecchia**	**18.35**	**309**	P	**Pn**	**23 32 45.0**	**+1.4**
BNI				IAmb	IAmb	23 32 50.6	
	comp=Z,8.0nm,1.3s						
ESDC	**Sonseca Array**	**24.87**	**290**	P	**P**	**23 33 51.2**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=356,slow=39,SNR=2.1						
FINES	**FINESS Array B**	**26.39**	**359**	P	**P**	**23 34 05.8**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=159,slow=12,SNR=1.1						
EKA	**Eskdalemuir Ar**	**28.93**	**324**	P	**P**	**23 34 28.0**	**0.0**
	comp=Z,0.9nm,0.6s,baz=120,slow=9.9,SNR=3.7						
ARU	**Arti**	**30.30**	**35**	P	**P**	**23 34 40.5**	**+0.4**
ARU				IAmb	IAmb	23 34 48.3	
	comp=Z,3.3nm,1.2s						
TOA0	**Torodi Ar. Sit**	**31.53**	**232**	P	**P**	**23 34 52.8**	**+1.4**
TOA0				IAmb	IAmb	23 35 04.2	
	comp=Z,3.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**31.53**	**232**	P	**P**	**23 34 52.0**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=35,slow=8.3,SNR=6.7						
TORD	**Torodi Ar. Bea**	**31.53**	**232**	P	**P**	**23 34 52.6**	**+1.2**
ARCES	**ARCESS Array B**	**34.52**	**359**	P	**P**	**23 35 15.9**	**-1.0**
	comp=Z,2.5nm,0.9s,baz=191,slow=8.7,SNR=1.4						
MK31	**Makanchi Array**	**42.65**	**57**	P	**P**	**23 36 26.1**	**+0.6**
MK31				IAmb	IAmb	23 36 43.8	
	comp=Z,8.0nm,1.4s						
MKAR	**Makanchi Array**	**42.65**	**57**	P	**P**	**23 36 26.0**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=282,slow=6.4,SNR=12						
MKAR	**Makanchi Array**	**42.65**	**57**	P	**P**	**23 36 26.2**	**+0.7**
ZAA0	**Zalesovo Array**	**44.05**	**46**	P	**P**	**23 36 36.9**	**+0.3**
ZAA0				IAmb	IAmb	23 36 37.4	
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**44.05**	**46**	P	**P**	**23 36 36.4**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=269,slow=9.3,SNR=8.2						
ZALV	**Zalesovo Beam**	**44.05**	**46**	P	**P**	**23 36 36.1**	**-0.5**
SACV	**Santiago Islan**	**49.36**	**259**	P	**P**	**23 37 20.3**	**+1.5**
SONM	**Songino Array**	**58.45**	**51**	P	**P**	**23 38 24.8**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=290,slow=10,SNR=5.1						
SONM	**Songino Array**	**58.45**	**51**	P	**P**	**23 38 24.8**	**-0.2**

*IDC **19** 23:36:45.3±0.9,35°.18N×26°.92E,h0km,mb4.0/15,*
mb1 4.0/23,mb1mx3.9/43,mbtmp3.9/23,ML3.7/8,MS3.2/4,
Ms1 3.2/4,ms1mx2.8/35,Error ellipse: s-maj=19.4km
s-min=9.8km az=176.0
*NIC **19** 23:36:45.6±0.0,35°.01N×26°.87E,h5km±2km,Ml4.4/3*
*HLW **19** 23:36:46.6,35°.28N×26°.91E,h31km±37km,Md4.2,Ml4.2*
*NEIC **19** 23:36:47.4±2.1,34°.99N±0°.05×26°.91E±0°.06,h10km±1km,*
mb4.0/28,Error ellipse: s-maj=9.6km s-min=7.5km
az=304.0
*MOS **19** 23:36:47.0±1.1,34°.92N×26°.86E,h25km,mb4.5/12,Error*
ellipse: s-maj=6.0km s-min=3.7km az=100.5
*THE **19** 23:36:48.5,35°.12N×26°.73E,h0km±1km,ML3.5/5,Error*
ellipse: s-maj=2.9km s-min=0.7km az=156.0
*MED_RC **19** 23:36:48.0±0.6,35°.02N×26°.88E,h28km±3km,MW4.0/9,*
Moment Tensor Solution.Mantle waves: s9,c12; Duration:
1s0 Moment tensor: Scale 10¹⁵Nm; Mrr0.18±.46;
Mθθ-1.36±.28; Mφφ 1.18±.24; Mrθ 0.37±.24; Mrφ-0.67±.21;
Mθφ-0.17±.31; Best double couple: Mo1.49000×10¹⁵
NP1:ϕs211.00000°,δ74.00000°,λ1.00000°. NP2:
ϕs121.00000°,δ89.00000°,λ164.00000°. Principal axes:
T 1.4000, Plg12.0000°, Azm75.0000°; N 0.1800,
Plg74.0000°, Azm297.0000°; P -1.5800, Plg11.0000°,
Azm167.0000°; nsta1 refers to body waves. nsta2 refers
to surface waves, cutoff=30s.
*ISK **19** 23:36:48.5,35°.22N×26°.79E,h9km,ML3.7/24*
*ATH **19** 23:36:49.2,35°.25N×26°.74E,h7km±2km,ML3.7/7,Error*
ellipse: s-maj=3.5km s-min=0.8km az=155.0
*DDA **19** 23:36:50.3,35°.31N×26°.87E,h6km±3km,MW4.0*
ISC 19 23:36:47.3±1.0,**35°.10N**±0°.03×**26°.87E**±0°.02,**h13**km±7km,
n306,σ1§69/342,mb4.3/28,17C-5D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.51**	**28**	P	**Pb**	**23 36 57.7**	**-0.4**
KARP				S	**Sb**	**23 37 04.3**	**-1.2**
KARP				AML	AML	23 37 08.0	
	comp=E,49499μm,0.4s						
KARP				AML	AML	23 37 09.0	
	comp=N,47334μm,0.3s						
KARP	**Karpathos**	**0.51**	**28**	PG	**Pb**	**23 36 57.6**	**-0.6**
KARP				SG	**Sb**	**23 37 05.0**	**-0.5**
KARP	**Karpathos**	**0.51**	**28**		**Pb**	**23 36 57.8**	**-0.4**
KARP					**Sb**	**23 37 06.9**	**+1.4**
KARP	**Karpathos**	**0.51**	**28**	⇑P	**Pb**	**23 36 57.4**	**-0.8**
KARP				S	**Sb**	**23 37 07.0**	**+1.4**
KARP				AML	AML	23 37 07.6	
	comp=N,50nm,0.3s						
KARP				AML	AML	23 37 07.6	
	comp=N,50nm,0.3s						
KARP				AML	AML	23 37 08.5	
	comp=N,47nm,0.3s						
KARP				AML	AML	23 37 08.5	
	comp=N,47nm,0.3s						
ZKR	**Zakros**	**0.54**	**272**	P	**Pg**	**23 36 57.4**	**-0.6**
ZKR				S	**Sg**	**23 37 04.3**	**-0.7**
ZKR				AML	AML	23 37 07.2	
	comp=E,16250μm,0.3s						
ZKR				AML	AML	23 37 10.8	
	comp=N,11968μm,0.4s						
ZKR	**Zakros**	**0.54**	**272**	P	**Pg**	**23 36 57.3**	**-0.6**
ZKR				S	**Sg**	**23 37 04.4**	**-0.7**
	comp=N,7μm,0.5s						
ZKR	**Zakros**	**0.54**	**272**	PG	**Pg**	**23 36 57.5**	**-0.4**
ZKR				SG	**Sg**	**23 37 05.9**	**+0.8**
ZKR	**Zakros**	**0.54**	**272**	P	**Pg**	**23 36 57.2**	**-0.7**
ZKR				S	**Sg**	**23 37 05.2**	**+0.1**
STIA	**Sitia Lasithi**	**0.65**	**280**	P	**Pg**	**23 36 59.2**	**-0.8**
STIA				S	**Sg**	**23 37 08.5**	**-0.1**
FRMA	**Ierapetra Chan**	**0.94**	**265**	P	**Pg**	**23 37 02.5**	**-3.0**
FRMA				S	**Sg**	**23 37 15.2**	**-2.5**
	comp=N,2μm,0.6s						
NPS	**Neapolis**	**1.05**	**280**	P	**Pg**	**23 37 06.8**	**-0.7**
NPS				S	**Sg**	**23 37 19.2**	**-1.9**
NPS				AML	AML	23 37 25.7	
	comp=E,7946μm,0.4s						
NPS				AML	AML	23 37 25.9	
	comp=N,8519μm,0.7s						
NPS	**Neapolis**	**1.05**	**280**	P	**Pg**	**23 37 06.4**	**-1.1**
NPS				S	**Sg**	**23 37 20.1**	**-1.1**
	comp=N,4μm,0.6s						
NPS	**Neapolis**	**1.05**	**280**	P	**Pg**	**23 37 07.5**	**0.0**
HRKL	**Herakleio**	**1.47**	**279**	PN	**Pb**	**23 37 14.9**	**+0.5**
ARG	**Arkhangelos**	**1.51

DALY IAML 23 38 14.0
comp=N,498nm,0.6s
DALY Dalyan (Mula) 2.25 40 PN **Pb 23 37 26.6 -1.1**
APE Apeiranthos 2.25 331 P **Pn 23 37 24.4 +0.2**
APE Apeiranthos 2.25 331 P **Pn 23 37 24.3 0.0**
APE S **Sn 23 37 52.0 +0.1**
comp=N,848nm,0.7s
APE Apeiranthos 2.25 331 PN **Pn 23 37 24.6 +0.3**
APE Apeiranthos 2.25 331 ⇑P **Pn 23 37 24.5 +0.2**
GVDS Gavdos 2.30 265 PN **Pn 23 37 27.3 +2.4**
GVD Gavdhos 2.30 264 P **Pn 23 37 27.5 +2.6**
GVD Gavdhos 2.30 264 PN **Pn 23 37 27.1 +2.2**
YER Yerkesik 2.33 29 P **Pb 23 37 27.4 -1.9**
YER Yerkesik 2.33 29 P **Pb 23 37 27.4 -1.9**
YER Yerkesik 2.33 29 PN **Pn 23 37 27.1 +1.6**
FETY Fethiye 2.36 49 *i* P **Pn 23 37 26.3 +0.5**
DDIM Aydin, Didim 2.38 7 *i* P **Pn 23 37 27.0 +1.0**
DDIM IAML 23 38 04.0
comp=N,267nm,1.0s
DDIM IAML 23 38 07.0
comp=E,327nm,0.9s
IMMV Iera Moni Meta 2.39 280 PN **Pn 23 37 28.2 +2.0**
MULA Mugla, Merkez- 2.45 28 *i* P **Pn 23 37 28.6 +1.4**
MULA *i* S **Sn 23 37 56.7 -0.3**
MULA IAML 23 38 16.0
comp=N,84nm,0.5s
MULA IAML 23 38 22.0
comp=E,270nm,0.7s
AKAS Kas 2.50 62 *i* P **Pn 23 37 27.8 +0.1**
AKAS *i* S **Sn 23 37 55.5 -2.6**
AKAS IAML 23 38 06.0
comp=E,154nm,0.5s
AKAS IAML 23 38 28.0
comp=N,225nm,0.8s
AKAS Kas 2.50 62 Pn 23 37 28.5 +0.8
KNDR Palaiochora Ch 2.62 274 PN **Pn 23 37 32.1 +2.9**
GCAM G?zelcaml? 2.62 6 *i* P **Pn 23 37 29.1 -0.2**
GCAM *i* S **Sn 23 37 60.0 -0.9**
GCAM IAML 23 38 27.0
comp=N,153nm,0.7s
GCAM IAML 23 38 31.0
comp=E,117nm,1.2s
GCAM G?zelcaml? 2.62 6 PN **Pn 23 37 31.2 +1.9**
AYDN Tasoluk 2.69 17 *i* P **Pn 23 37 31.9 +1.6**
AYDN *i* S **Sn 23 38 02.3 -0.4**
AYDN IAML 23 38 12.0
comp=N,99nm,0.7s
AYDN IAML 23 38 19.0
comp=E,81nm,0.7s
CAEL Denizli, Camel 2.83 44 *i* P **Pn 23 37 34.5 +2.1**
CAEL IAML 23 38 28.0
comp=N,560nm,0.7s
CAEL IAML 23 38 32.0
comp=E,716nm,0.7s
TAVA DENIZLI_Tavas 2.88 34 *i* P **Pn 23 37 34.6 +1.5**
TAVA *i* S **Sb 23 38 12.0 -1.8**
DGB zmir 2.95 0 *i* P **Pn 23 37 33.6 -0.2**
AYDB Zeytinkoy-Aydi 2.96 16 PN **Pn 23 37 36.3 +2.2**
ELL Elmali 2.96 55 P **Pn 23 37 36.7 +2.5**
ELL Elmali 2.96 55 PN **Pn 23 37 36.5 +2.3**
ELL Elmali 2.96 55 Pn 23 37 36.7 +2.5
ELL Elmali 2.96 55 P **Pn 23 37 34.9 +0.7**
GOLH Golhisar 3.05 45 *i* P **Pn 23 37 37.7 +2.4**
GOLH *i* S **Sn 23 38 12.9 +1.2**
GOLH IAML 23 38 38.0
comp=E,46nm,0.8s
GOLH IAML 23 38 40.0
comp=N,289nm,0.8s
AKUM Antalya-Kumluc 3.08 66 *i* P **Pn 23 37 36.9 +1.3**
AKUM *i* S **Sn 23 38 08.3 -3.9**
AKUM IAML 23 38 21.0
comp=E,75nm,0.9s
AKUM IAML 23 38 23.0
comp=N,58nm,0.5s
ZEYE Izmir, Urla-Ze 3.15 355 *i* P **Pn 23 37 33.8 -2.8**
ZEYE IAML 23 38 31.0
comp=E,94nm,0.9s
ZEYE IAML 23 38 33.0
comp=N,83nm,0.5s
URLA Izmir 3.27 356 *i* P **Pn 23 37 36.7 -1.5**
URLA *i* S **Sn 23 38 12.0 -4.9**
URLA IAML 23 38 35.0
comp=N,81nm,1.0s
URLA IAML 23 38 40.0
comp=E,55nm,0.7s
KTHA Kythira Island 3.31 292 PN **Pn 23 37 40.3 +1.4**
CHOS Chios island 3.35 349 PN **Pn 23 37 39.7 +0.3**
KORT Korkueli 3.40 55 *i* P **Pn 23 37 42.7 +2.5**
KORT *i* S **Sn 23 38 21.2 +0.8**
KORT Korkueli 3.40 55 PN **Pn 23 37 43.1 +2.9**
ANTB Antalya 3.56 58 PN **Pn 23 37 45.9 +3.7**
VLI Veliai 3.58 298 P **Pn 23 37 43.2 +0.7**
MANT Manisa 3.65 21 *i* P **Pn 23 37 45.2 +1.5**
MANT IAML 23 38 37.0
comp=N,48nm,0.8s
MANT IAML 23 38 48.0
comp=E,37nm,1.1s
MANT Manisa 3.65 21 Pn 23 37 45.7 +2.1
BRDR BURDUR-Merkez 3.65 44 *i* P **Pn 23 37 45.8 +2.1**
BRDR IAML 23 38 58.0
comp=N,71nm,1.4s
BRDR IAML 23 39 12.0
comp=E,74nm,0.8s
KULA Kula-Manisa 3.70 22 P **Pn 23 37 46.2 +1.9**
KULA Kula-Manisa 3.70 22 PN **Pn 23 37 45.9 +1.6**
BUCA Burdur, Bucak- 3.72 52 *i* P **Pn 23 37 46.6 +2.0**
BUCA IAML 23 38 50.0
comp=N,69nm,0.6s
BUCA IAML 23 38 52.0
comp=E,72nm,0.8s
MATC Matruh 3.75 175 P **Pn 23 37 45.8 +0.9**
MATC AMP 23 38 00.0
baz=176
BASM Basmaki-Afyon 3.81 41 PN **Pn 23 37 48.0 +2.3**
BCK Bucak 3.82 51 P **Pn 23 37 48.5 +2.6**
BCK Bucak 3.82 51 PN **Pn 23 37 48.5 +2.6**
ATH Athens Observa 3.83 319 P **Pn 23 37 49.4 +3.4**
AKHS Akhisar 3.85 11 *i* P **Pn 23 37 49.0 +2.7**
SLUM Salum 3.85 202 P **Pn 23 37 45.9 -0.4**
SLUM AMP 23 38 00.0
baz=202
ZEDA zmir-Bergama 3.87 2 *i* P **Pn 23 37 48.0 +1.6**
DKL Dikili 3.97 0 PN **Pn 23 37 49.3 +1.5**
OSC1 CSNet OBS 1 3.98 112 P **Pn 23 37 47.5 -0.4**
OSC1 S **Sn 23 38 35.8 +1.3**
USAK Uak-Merkez 4.00 25 *i* P **Pn 23 37 49.7 +1.3**
USAK IAML 23 40 03.0
comp=N,23nm,5.4s
USAK IAML 23 40 03.0
comp=E,27nm,5.9s
ISP Isparta 4.01 46 P **Pn 23 37 50.2 +1.7**
ISP Isparta 4.01 46 PN **Pn 23 37 51.5 +3.0**
ISP Isparta 4.01 46 Pn 23 37 50.2 +1.7
KZIL AFYON_Kizioren 4.11 39 *i* P **Pn 23 37 50.6 +0.8**
KZIL *i* S **Sn 23 38 30.6 -7.2**
KZIL IAML 23 39 15.0
comp=N,41nm,1.4s
KZIL IAML 23 39 27.0
comp=E,46nm,2.2s
PRK Paraskevi 4.17 354 P **Pn 23 37 52.4 +1.8**
DEMI Demirci 4.21 20 *i* P **Pn 23 37 52.7 +1.5**
DEMI *i* S **Sn 23 38 38.4 -1.9**
AYVA Ayvalik 4.21 358 *i* P **Pn 23 37 54.5 +3.4**
KEPZ Antalya-Kepez 4.24 63 *i* P **Pn 23 37 53.2 +1.6**
KEPZ *i* S **Sn 23 38 35.1 -5.9**
BAGO Egridir - ISPA 4.28 46 *i* P **Pn 23 37 54.8 +2.6**
STEP BALIKESIR_Sava 4.33 9 *i* P **Pn 23 37 55.0 +2.2**
BUHA Balikesir, Bur 4.40 2 *i* P **Pn 23 37 54.5 +0.7**
AKMS Akamas 4.48 89 P **Pn 23 37 54.8 -0.1**
AKMS S **Sn 23 38 48.2 +1.3**
AKMS AML AML 23 38 53.2
comp=E,0.9nm,0.5s
AKMS AML AML 23 38 53.2
comp=E,0.9nm,0.5s
AKMS AML AML 23 38 54.0
comp=E,1.2nm,0.7s
AKMS AML AML 23 38 54.0
comp=E,1.2nm,0.7s
GDZ Gediz 4.50 27 *i* P **Pn 23 37 55.4 +0.1**
ITM Ithomi 4.51 299 Pn **Pn 23 37 57.9 +2.5**
SEDI Konya, Seydise 4.59 58 *i* P **Pn 23 37 59.6 +3.1**
SEDI *i* S **Sn 23 38 50.0 +0.2**

BALY Balya 4.67 7 *i* P **Pn 23 37 57.4 -0.2**
DURS Dursunbey 4.67 15 *i* P **Pn 23 37 58.8 +1.1**
NATA Nata 4.69 92 P **Pn 23 37 58.0 +0.2**
ALFC Alefka 4.69 88 ⇑P **Pn 23 37 57.3 -0.5**
ALFC AML AML 23 38 53.5
comp=E,1.0nm,0.6s
ALFC AML AML 23 38 55.4
comp=E,1.4nm,0.7s
YVAC Isparta, Yalva 4.73 47 *i* P **Pn 23 37 59.7 +1.3**
EZN Ezine 4.74 355 P **Pn 23 38 00.9 +2.4**
AMT Artemida-Makis 4.83 302 P **Pn 23 38 00.7 +1.0**
SZAC Souni 4.95 92 ⇑P **Pn 23 38 01.1 -0.2**
ASGA Asgata 5.25 92 P **Pn 23 38 05.1 -0.3**
CSS Mathiatis 5.30 90 Pn **Pn 23 38 06.2 0.0**
CSS Mathiatis 5.30 90 ⇓P **Pn 23 38 05.8 -0.4**
AGG Agios Georgios 5.34 319 P **Pn 23 38 07.8 +1.0**
AGG Agios Georgios 5.34 319 P **Pn 23 38 09.3 +2.5**
AGG Agios Georgios 5.34 319 Pn **Pn 23 38 09.3 +2.5**
PAIG Paliouri 5.45 333 P **Pn 23 38 10.1 +1.9**
MVOU Mavrovouni 5.54 89 ⇓P **Pn 23 38 09.3 -0.2**
ALN Alexandroupoli 5.83 354 P **Pn 23 38 15.0 +1.6**
ALN Alexandroupoli 5.83 354 Pn **Pn 23 38 14.9 +1.6**
SWA2 5.96 192 P **Pn 23 38 15.2 0.0**
baz=192
SWA2 AMP 23 39 00.0
baz=192
SWA2 S **Sn 23 39 20.1 -3.2**
baz=192
LIT Litokhoron 6.09 326 P **Pn 23 38 19.1 +2.1**
LIT Litokhoron 6.09 326 Pn **Pn 23 38 19.1 +2.1**
HMYD Mayadein 6.24 147 P **Pn 23 38 18.2 -0.9**
baz=147
HNAT Natroun 6.30 149 P **Pn 23 38 19.2 -0.8**
baz=149
HNAT AMP 23 39 00.0
baz=149
RYAN S **Sn 23 39 36.2 -4.2**
baz=154
THE Thessaloniki 6.33 332 P Pn 23 38 25.8 +5.5
THE pmax pmax
comp=Z,16nm,0.8s
KZN Kozani 6.59 324 P Pn 23 38 29.4 +5.5
KOT Kottamia 6.64 140 P **Pn 23 38 23.9 -0.7**
baz=140
RYAN Fayoum 6.65 153 P **Pn 23 38 24.9 +0.1**
baz=154
RYAN AMP 23 39 00.0
baz=154
RYAN S **Sn 23 39 36.2 -4.2**
baz=154
BR231 Keskin MP Arra 6.67 43 Pn 23 38 27.6 +2.6
ANTO Ankara 6.70 43 P **Pn 23 38 27.5 +2.1**
ANTO Ankara 6.70 43 Pn 23 38 27.5 +2.1
HSAF As Saff 6.75 143 P **Pn 23 38 26.2 +0.1**
baz=143
KNT Kendrikon 6.82 334 P **Pn 23 38 31.4 +4.4**
KNT pmax pmax
comp=Z,16nm,2.8s
GRG Griva 6.83 330 P **Pn 23 38 30.1 +2.9**
GRG pmax pmax
comp=E,25nm,0.9s
GLL Jalalah 6.86 142 P **Pn 23 38 27.1 -0.5**
baz=143
BRTR Keskin Array B 7.09 47 Pn **Pn 23 38 31.9 +1.0**
comp=Z,0.4nm,0.3s,baz=217,slow=11,SNR=8.5
BRTR LR LR 23 42 10.9
comp=Z,276nm,18.7s,baz=253,slow=46
BRTR Keskin Array B 7.09 47 P **Pn 23 38 32.3 +1.4**
BRTR Keskin Array B 7.09 47 Pn **Pn 23 38 32.3 +1.4**
BR131 Keskin Array S 7.09 47 *ce*P **Pn 23 38 34.1 +3.2**
BR131 Keskin Array S 7.09 47 Pn **Pn 23 38 32.0 +1.1**
FNA Florina 7.15 324 P **Pn 23 38 35.1 +3.5**
FNA Florina 7.15 324 Pn **Pn 23 38 35.1 +3.5**
SUZ Suez 7.27 134 P **Pn 23 38 33.0 -0.2**
baz=135
MMAI Mount Meron Ar 7.38 104 Pn **Pn 23 38 34.4 -0.4**
comp=Z,3.6nm,0.3s,baz=296,slow=11,SNR=27
MMAI Sn **Sn 23 39 56.6 -1.7**
comp=Z,7.2nm,0.3s,baz=301,slow=17,SNR=12
NBNS Bani Suef 7.47 149 P **Pn 23 38 35.5 -0.5**
baz=149
HWQ Hawqa 7.52 94 *e*P **Pn 23 38 36.3 -0.4**
RCY Rachaya 7.59 100 *e*P **Pn 23 38 37.0 -0.7**
HFRF Wahat Farafira 8.02 171 P **Pn 23 38 43.5 0.0**
baz=171
VTS Vitosha 8.03 340 P **Pn 23 38 45.6 +1.8**
VTS Vitosha 8.03 340 Pn **Pn 23 38 45.5 +1.8**
SCTE Santa Cesarea 8.32 309 Pn **Pn 23 38 49.0 +1.5**
EIL Elat 8.71 126 Pn **Pn 23 38 52.8 -0.2**
comp=Z,0.8nm,0.3s,baz=308,slow=3.6,SNR=13
EIL Sn **Sn 23 40 25.0 -6.1**
comp=Z,3.5nm,0.3s,baz=318,slow=3.2,SNR=9.8
HBST Basata 8.87 129 P **Pn 23 38 54.7 -0.5**
baz=130
TIP Timpagrande 9.04 300 Pn **Pn 23 38 58.3 +0.7**
TIRR Tirgusor 9.43 7 P **Pn 23 39 06.0 +3.3**
TIRR Tirgusor 9.43 7 Pn **Pn 23 39 06.0 +3.3**
PDG Podgorica 9.43 323 Pn **Pn 23 39 05.0 +2.2**
HDK1 Dakhla 9.77 166 P **Pn 23 39 08.5 +1.0**
baz=166
RAFF Raffo Rosso 10.34 285 Pn **Pn 23 39 14.9 -0.4**
MLR Muntele Rosu 10.41 356 Pn **Pn 23 39 15.8 -0.6**
comp=Z,0.1nm,0.3s,baz=187,slow=12,SNR=1.4
MLR LR LR 23 44 02.9
comp=Z,154nm,20.1s,baz=134,slow=42
MLR Muntele Rosu 10.41 356 P **Pn 23 39 18.4 +2.1**
MLR Muntele Rosu 10.41 356 Pn 23 39 18.4 +2.1
DIVS Divibare 10.44 332 Pn **Pn 23 39 19.8 +3.1**
SGRT San Giovanni R 10.97 311 Pn **Pn 23 39 25.4 +1.4**
CORL Corleone 11.27 288 Pn **Pn 23 39 30.0 +1.8**
INTR Introdacqua 12.27 308 Pn **Pn 23 39 43.5 +1.7**
BURAR Bucovina Array 12.57 355 Pn **Pn 23 39 49.2 +3.3**
BUR08 Bucovina Ar. S 12.60 355 Pn **Pn 23 39 49.9 +3.6**
AQU L'Aquila 12.76 309 P **Pn 23 39 49.6 +1.1**
AQU L'Aquila 12.76 309 Pn **Pn 23 39 49.6 +1.1**
KEST Kesra 14.31 278 Pn **Pn 23 40 14.3 +4.6**
comp=Z,0.0nm,0.3s,baz=251,slow=23,SNR=2.2
TRI Trieste 14.54 321 P **Pn 23 40 15.1 +2.4**
TRI Trieste 14.54 321 Pn **Pn 23 40 15.1 +2.4**
CASP Castiglione de 14.62 306 Pn **Pn 23 40 16.1 +2.3**
OSSC Osservatorio P 14.72 310 Pn **Pn 23 40 18.6 +3.4**
KIV Kislovodsk 15.05 49 *e*P **Pn 23 40 19.5 -0.2**
KIV pmax pmax
comp=Z,24nm,1.1s
KBZ Khabaz 15.07 50 Pn **Pn 23 40 20.8 +0.9**
comp=Z,0.0nm,0.3s,baz=204,slow=20,SNR=0.8
KBZ Khabaz 15.07 50⇑*e*P **Pn 23 40 21.2 +1.3**
STAL STALIGIAL 15.46 320 Pn **P 23 40 28.8 -0.7**
STAL IAmb IAmb 23 41 00.4
comp=Z,18nm,1.7s
TEOL Teolo 15.46 316 Pn **Pn 23 40 27.7 +2.6**
TEOL IAmb IAmb 23 41 15.0
comp=Z,5.9nm,0.8s
ZOU Zoufplan 15.52 322 Pn **Pn 23 40 28.5 +2.5**
ZOU IAmb IAmb 23 41 00.7
comp=Z,8.7nm,1.2s
AKASG Malin Array Be 15.69 6 Pn **Pn 23 40 27.5 -0.4**
comp=Z,1.8nm,0.3s,baz=194,slow=12,SNR=16
AKASG Malin Array Be 15.69 6*ce*P **P 23 40 31.2 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 15.69 6 Pn 23 40 30.0 +2.1
AKBB Malin Array Si 15.69 6*ce*P **P 23 40 31.0 -1.0**
AKBB Malin Array Si 15.69 6 P **P 23 40 31.2 -0.8**
AKBB IAmb IAmb 23 40 31.8
comp=Z,6.5nm,1.1s
KBA Koelnbreinsper 15.70 324 *e*P **P 23 40 31.4 -0.9**
comp=Z,1.0nm,0.6s
MOA Molln 15.84 327 *e*P **P 23 40 35.4 +1.8**
comp=Z,3.2nm,0.9s
ABTA Abfaltersbach 15.88 321 *e*P **P 23 40 33.7 -0.6**
comp=Z,1.9nm,0.7s
CTI Castel Tesino 15.89 318 P **P 23 40 33.5 -0.9**
CTI pmax pmax
comp=Z,21nm,1.9s
CTI Castel Tesino 15.89 318 Pn **P 23 40 33.5 -0.9**
CTI IAmb IAmb 23 40 34.8
comp=Z,21nm,1.9s
MORC Moravsky Berou 16.19 338 P **P 23 40 37.8 +0.2**
MORC pmax pmax
comp=Z,10.0nm,1.6s
MORC Moravsky Berou 16.19 338 P 23 40 37.8 +0.2
MSSA Maissana 16.20 310 Pn **P 23 40 36.8 -0.9**
MSSA IAmb IAmb 23 40 46.0
comp=Z,25nm,1.2s
CKRC Cesky Krumlov 16.56 330 *e*P **P 23 40 41.2 -0.5**

WTTA Wattenberg 16.68 321 *e*P **Pn 23 40 42.3 +1.5**
comp=Z,2.9nm,0.9s
KRLC Kraliky 16.69 337 *e*P **P 23 40 42.6 -0.5**
KRLC Kraliky 16.69 337 *e*P **P 23 40 42.6 -0.5**
WATA Walderalm 16.75 322 *e*P **P 23 40 44.0 0.0**
comp=Z,1.5nm,0.5s
GEC2 GERESS Array S 16.84 329 P 23 40 46.1 +1.3
GERES GERESS Array B 16.84 329 Pn **Pn 23 40 42.5 -0.2**
comp=Z,0.2nm,0.3s,baz=133,slow=12,SNR=12
GERES GERESS Array B 16.84 329 P **P 23 40 44.4 -0.4**
GERES GERESS Array B 16.84 329 P 23 40 44.4 -0.4
FETA Feichten 16.99 319 *e*P **P 23 40 47.1 +0.4**
comp=Z,1.6nm,1.0s
DPC Dobruska-Polom 17.07 336 *e*P **Pn 23 40 46.5 +0.8**
DPC Dobruska-Polom 17.07 336 *e*P **Pn 23 40 46.5 +0.8**
KHC Kasperske Hory 17.11 329⇑*e*P **P 23 40 47.8 0.0**
KHC pmax pmax
comp=Z,5.0nm,0.8s
KHC Kasperske Hory 17.11 329 *e*P **P 23 40 48.4 +0.6**
KHC Kasperske Hory 17.11 329 P 23 40 49.4 +1.6
DAVOX Davos/Dischmat 17.31 318 P **Pn 23 40 49.5 +0.7**
comp=Z,0.1nm,0.3s,baz=99,slow=8.6,SNR=2.2
PRU Pruhonice 17.40 333 *e*P **Pn 23 40 48.9 -0.8**
PRU Pruhonice 17.40 333 *e*P **Pn 23 40 48.9 -0.8**
TUE Stuetta 17.43 316 P 23 40 52.2 +0.7
BNI Bardonecchia 18.33 309 P **Pn 23 41 01.8 +0.4**
BNI pmax pmax
comp=Z,5.0nm,1.0s
BNI Bardonecchia 18.33 309 Pn 23 41 01.8 +0.4
VSR Storozhevoye 18.40 25 *e*P **P 23 41 05.8 +3.9**
VSR pmax pmax
comp=Z,4.0nm,0.5s
LPG La Plagne 18.49 310 *e*P **Pn 23 41 04.9 +1.5**
LPG pmax pmax
comp=Z,8.0nm,1.0s
LPL La Plagne 18.51 310 *e*P **P 23 41 03.1 -0.3**
LPL pmax pmax
comp=Z,9.0nm,1.3s
SENIN Lac Senin/Sane 18.57 313 P 23 41 03.5 -0.6
SENIN IAmb IAmb 23 41 13.4
comp=Z,18nm,1.6s
ORIF Oris-en-Rattie 18.79 308 *e*P **Pn 23 41 11.7 +4.8**
ORIF pmax pmax
comp=Z,6.0nm,1.0s
VRH Novokhopyorsk 19.34 29 *e*P **P 23 41 12.0 -0.3**
VRH pmax pmax
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 19.49 22 *e*P **Pn 23 41 17.2 +2.0**
LPSR pmax pmax
comp=Z,5.0nm,0.8s
VIVF Saint-Julien-l 19.55 307 *e*P **P 23 41 15.5 +0.8**
VIVF pmax pmax
comp=Z,4.0nm,0.8s
SSB Saint Sauveur 19.80 308 P P 23 41 17.9 +0.5
SSB pmax pmax
comp=Z,20nm,1.5s
SSB Saint Sauveur 19.80 308 P P 23 41 17.9 +0.5
SSB IAmb IAmb 23 41 24.5
comp=Z,20nm,1.5s
RAYN Ar Rayn 19.89 120 P **P 23 41 19.1 +0.6**
RAYN pmax pmax
comp=Z,8.0nm,1.8s
RAYN Ar Rayn 19.89 120 P P 23 41 19.1 +0.6
WLF Walferdange 21.02 320 P **P 23 41 31.4 +0.8**
WLF pmax pmax
comp=Z,18nm,1.3s
WLF Walferdange 21.02 320 P P 23 41 31.4 +0.8
WLF IAmb IAmb 23 41 46.9
comp=Z,18nm,1.3s
OBN Obninsk 21.12 16⇑*e*P **P 23 41 33.6 +2.1**
OBN pmax pmax
comp=Z,5.0nm,1.0s
RJF Les Rejaudoux 21.80 306 *e*P **P 23 41 40.1 +1.1**
RJF pmax pmax
comp=Z,25nm,1.6s
BELG Belogornoye 22.75 34 P **P 23 41 47.8 -1.2**
comp=Z,15nm,0.8s,baz=188,slow=2.9,SNR=5.0
BELG Belogornoye 22.75 34*de*P **P 23 41 49.5 +0.5**
BELG pmax pmax
comp=Z,4.0nm,0.9s
LDF La Druitiere 24.06 312 *e*P **P 23 42 02.3 +0.1**
LDF pmax pmax
comp=Z,33nm,1.6s
FLN La Foliniere 24.35 312 *e*P **P 23 42 05.0 +0.2**
FLN pmax pmax
comp=Z,31nm,1.5s
GRR Gorron 24.43 311 *e*P **P 23 42 04.1 -1.4**
GRR pmax pmax
comp=Z,65nm,1.9s
ESBB Sonseca Array 24.86 290 P **P 23 42 09.5 0.0**
ESDC Sonseca Array 24.86 290 P **P 23 42 08.6 -1.0**
comp=Z,0.5nm,0.6s,baz=81,slow=9.3,SNR=11
GEYT Alibeck 25.21 74 P **P 23 42 12.6 -0.1**
comp=Z,1.5nm,0.6s,baz=264,slow=10.0,SNR=5.7
GEYT Alibeck 25.21 74 P **P 23 42 13.7 +0.9**
GEYT IAmb IAmb 23 42 23.0
comp=Z,1.9nm,0.8s
FINES FINESS Array B 26.37 359 P **P 23 42 20.7 -2.3**
comp=Z,2.9nm,0.9s,baz=163,slow=10,SNR=1.9
FINES LR LR 23 54 55.0
comp=Z,59nm,18.3s,baz=260,slow=42
FINES FINESS Array B 26.37 359*ce*P **P 23 42 25.3 +2.4**
FINES pmax pmax
comp=Z,5.0nm,0.9s
HFS Hagfors 26.48 345 P **P 23 42 22.0 -1.9**
comp=Z,3.5nm,1.0s,baz=111,slow=7.9,SNR=2.0
HFS Hagfors 26.48 345 P **P 23 42 22.0 -1.9**
NOA NORSAR Array B 27.84 344 LR LR 23 53 37.2
comp=Z,25nm,19.5s,baz=260,slow=36
ABKAR Akbulak array 28.04 50 P **P 23 42 37.6 -0.5**
EKA Eskdalemuir Ar 28.91 324 P **P 23 42 45.9 +0.2**
comp=Z,0.5nm,0.5s,baz=124,slow=9.7,SNR=5.5
TOA0 Torodi Ar. Sit 31.54 232 P **P 23 43 10.2 +0.8**
TORD Torodi Ar. Bea 31.54 232 P **P 23 43 08.9 -0.5**
comp=Z,1.2nm,0.6s,baz=31,slow=8.7,SNR=8.5
TORD Torodi Ar. Bea 31.54 232 P **P 23 43 09.5 +0.1**
TORD IAmb IAmb 23 43 12.0
comp=Z,1.1nm,0.8s
KKAR Karatay Array 34.48 63 P **P 23 43 35.3 +0.4**
KKAR Karatay Array 34.48 63 P **P 23 43 35.3 +0.4**
ARCES ARCESS Array B 34.50 359 P **P 23 43 32.4 -2.3**
comp=Z,1.2nm,0.7s,baz=168,slow=8.9,SNR=3.8
BRVK Borovoye 35.33 46⇓*e*P **P 23 43 42.5 +0.5**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
AAK Ala-Archa 37.43 64⇑*e*P **P 23 44 01.2 +0.9**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 37.43 64 P **P 23 44 01.3 +0.9**
AAK IAmb IAmb 23 44 03.0
comp=Z,4.6nm,0.8s
NIL Nilore 38.04 78 P **P 23 44 06.4 +0.9**
NIL pmax pmax
comp=Z,7.0nm,1.2s
NIL Nilore 38.04 78 P **P 23 44 06.4 +0.9**
NIL IAmb IAmb 23 44 07.6
comp=Z,7.5nm,1.2s
MAKZ Makanchi 42.42 57 P **P 23 44 42.4 +0.8**
MAKZ pmax pmax
comp=Z,25nm,1.7s
MAKZ Makanchi 42.42 57 P **P 23 44 42.4 +0.8**
MK31 Makanchi Array 42.64 57*c i*P **P 23 44 43.9 +0.5**
MK31 Makanchi Array 42.64 57 P **P 23 44 44.2 +0.9**
MKAR Makanchi Array 42.64 57 P **P 23 44 44.2 +0.8**
comp=Z,7.5nm,0.8s,baz=281,slow=6.3,SNR=38
ZAA0 Zalesovo Array 44.04 46 P **P 23 44 54.2 -0.3**
ZALV Zalesovo Beam 44.04 46 P **P 23 44 54.3 -0.2**
comp=Z,4.2nm,0.5s,baz=269,slow=9.0,SNR=32
ZALV Zalesovo Beam 44.04 46 P **P 23 44 54.2 -0.3**
DGZ Jazzator, Alta 45.81 52*c i*P **P 23 45 09.4 +0.5**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
WMQ Urumqi 46.82 60 *e*P **P 23 45 20.4 +3.6**
NRIK Noril'sk 47.34 25 P **P 23 45 20.8 +0.3**
comp=Z,1.3nm,0.4s,baz=77,slow=20,SNR=5.7
NRIK Noril'sk 47.34 25⇑*e*P **P 23 45 21.1 +0.7**
NRIK pmax pmax
comp=Z,2.0nm,0.6s
NRIK Noril'sk 47.34 25 P **P 23 45 21.1 +0.7**
SONM Songino Array 58.44 51 P **P 23 46 43.6 +0.8**
comp=Z,1.8nm,0.8s,baz=270,slow=5.3,SNR=17
SONM Songino Array 58.44 51 P **P 23 46 42.7 -0.1**
SONM IAmb IAmb 23 46 44.3
comp=Z,1.7nm,0.9s
ULN Ulaanbaatar 58.85 51*ce*P **P 23 46 46.1 +0.4**

ULN					pmax	pmax			
	comp=Z,8.0nm,2.5s								
ULN	**Ulaanbaatar**	**58.85**	**51**	P		**P**	**23 46 45.8**	**+0.1**	
TIXI	**Tiksi**	**60.73**	**21**	⇓*e*P		**P**	**23 46 57.1**	**-1.0**	
TIXI					pmax	pmax			
	comp=Z,9.0nm,1.3s								
HHC	**Hu-ho-hao-te**	**64.50**	**57**	*e*P		**P**	**23 47 24.9**	**+1.0**	
USRK	**Ussuriysk Ar.**	**75.89**	**46**	P		**P**	**23 48 33.0**	**-0.5**	
	comp=Z,1.8nm,0.7s,baz=336,slow=4.2,SNR=5.5								
USRK	**Ussuriysk Ar.**	**75.89**	**46**	P		**P**	**23 48 33.0**	**-0.5**	
YKA	**Yellowknife Ar**	**77.93**	**343**	P		**P**	**23 48 42.6**	**-2.1**	
	comp=Z,0.8nm,0.9s,baz=38,slow=5.5,SNR=12								
YKA	**Yellowknife Ar**	**77.93**	**343**	*ce*P		**P**	**23 48 43.0**	**-1.6**	
YKA					pmax	pmax			
	comp=Z,1.0nm,0.8s								
ILAR	**Eielson Array**	**80.34**	**357**	P		**P**	**23 48 56.3**	**-1.5**	
	comp=Z,0.4nm,0.5s,baz=334,slow=3.5,SNR=7.1								

KRSC 19 23:40:12.9±1.6, 51.63N×158.85E, h52km±15km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**0.51**	**291**	*i* P	Pn	23 40 25.5	+1.1
KDTR				*e*S	Sn	23 40 32.4	-0.2
RUS	**Russkaya**	**0.83**	**346**	*e*P	Pn	23 40 29.8	+1.4
RUS				*e*S	Sn	23 40 40.2	+0.4
MTVR	**Mutnovka**	**0.95**	**335**	*e*P	Pn	23 40 31.6	+1.5
MTVR				*e*S	Sn	23 40 43.2	+0.4
ASAK	**Asacha**	**0.96**	**323**	*e*P	Pn	23 40 31.9	+1.8
ASAK				*e*S	Sn	23 40 43.8	+1.0
GRL	**Gorelyy**	**1.04**	**333**	*i* P	Pn	23 40 33.1	+1.8
GRL				*e*S	Sn	23 40 46.3	+1.4
PAU	**Pauzhetka**	**1.28**	**264**	*e*P	Pn	23 40 36.3	+1.9
PAU				*e*S	Sn	23 40 51.6	+1.1
KRMR	**Karymshinskiy**	**1.28**	**340**	*e*P	Pn	23 40 37.5	+3.1
KRMR				*e*S	Sn	23 40 53.2	+2.7
PET	**Petropavlovsk**	**1.40**	**355**	*e*P	Pn	23 40 38.3	+2.3
PET				*e*S	Sn	23 40 54.8	+1.4
DALK	**Dalny**	**1.41**	**358**	*i* P	Pn	23 40 38.2	+2.1
DALK				*e*S	Sn	23 40 55.3	+1.8
MIPR	**Malaya Ipel'ka**	**1.45**	**297**	*i* P	Pn	23 40 38.9	+2.2
MIPR				*e*S	Sn	23 40 56.3	+1.7
NLC	**Nalytchevo**	**1.58**	**11**	*e*P	Pn	23 40 39.5	+1.1
NLC				*e*S	Sn	23 40 57.7	+0.1
UGLR	**Uglovaya**	**1.58**	**359**	*i* P	Pn	23 40 41.1	+2.5
SMAR	**Somma**	**1.64**	**359**	*e*P	Pn	23 40 42.2	+2.7
SPN	**Mys Shipunski**	**1.64**	**26**	*e*P	Pn	23 40 42.3	+3.0
SPN				*e*S	Sn	23 41 02.6	+3.4
AVH	**Avacha**	**1.64**	**358**	*e*P	Pn	23 40 42.1	+2.7
SDLR	**Sedlovina**	**1.65**	**1**	*e*P	Pn	23 40 41.5	+1.9
APC	**Apacha**	**1.67**	**322**	*e*P	Pn	23 40 42.0	+2.4
APC				*e*S	Sn	23 41 02.0	+2.2
KOK	**Koryaka**	**1.67**	**356**	*e*P	Pn	23 40 42.6	+2.8
KRER	**Koryakskii**	**1.68**	**358**	*e*P	Pn	23 40 42.5	+2.5
KRX	**Arik**	**1.74**	**356**	*e*P	Pn	23 40 43.3	+2.5
KRX				*e*S	Sn	23 41 03.8	+1.9
GNL	**Ganaly**	**2.14**	**345**	*e*P	Pn	23 40 48.8	+2.5
ALID	**Alaid**	**2.21**	**251**	*e*P	Pn	23 40 49.4	+2.2
KII	**Karymskiy**	**2.44**	**8**	*e*P	Pn	23 40 54.0	+3.7
KII				*e*S	Sn	23 41 22.4	+3.5
MKZ	**Mys Kozlova**	**3.41**	**29**	*e*P	Pn	23 41 07.4	+4.0
MKZ				S	Sn	23 41 45.1	+2.6
KZV	**Kizimen**	**3.60**	**13**	*e*P	Pn	23 41 10.8	+4.6
TUMD	**Tumrok D**	**3.70**	**14**	*e*S	Sn	23 41 54.5	+4.7
TUMR	**Tumrok**	**3.74**	**11**	P	Pn	23 41 13.0	+4.8
KMNR	**Kamenistaya**	**4.22**	**11**	*e*P	Pn	23 41 19.3	+4.7
KBTR	**Krutoberegovo**	**5.15**	**26**	*e*P	Pn	23 41 31.7	+4.4
KBTR				*e*S	Sn	23 42 28.1	+2.7
KBG	**Krutoberegovo**	**5.17**	**25**	P	Pn	23 41 31.7	+4.2
SMKR	**Semkarok**	**5.20**	**16**	P	Pn	23 41 33.0	+5.0
BKI	**Bering**	**5.56**	**47**	*e*P	Pn	23 41 36.0	+3.0
BKI				*e*S	Sn	23 42 33.2	-2.3

KRSC 20 00:13:17.5±2.3, 50.65N×157.12E, h127km±20km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.84**	**347**	*e*P	Pn	00 13 40.2	+1.5
PAU				*e*S	Sn	00 13 56.2	+1.4
ALID	**Alaid**	**1.02**	**283**	*i* P	Pn	00 13 40.4	-0.1
KDTR	**Khodutka, Kamc**	**1.31**	**27**	*e*P	Pn	00 13 45.8	+2.6
KDTR				*e*S	Sn	00 14 05.7	+2.9
MIPR	**Malaya Ipel'ka**	**1.64**	**352**	*e*P	Pn	00 13 47.6	+0.6
ASAK	**Asacha**	**1.80**	**15**	*i* P	Pn	00 13 51.3	+2.3
MTVR	**Mutnovka**	**1.95**	**19**	*e*P	Pn	00 13 53.2	+2.4
MTVR				*e*S	Sn	00 14 18.8	+2.5
RUS	**Russkaya**	**1.99**	**25**	*i* P	Pn	00 13 53.2	+2.1
GRL	**Gorelyy**	**2.00**	**17**	*i* P	Pn	00 13 53.9	+2.6
KRMR	**Karymshinskiy**	**2.27**	**16**	*e*P	Pn	00 13 57.2	+2.6
APC	**Apacha**	**2.28**	**1**	*i* P	Pn	00 13 55.2	+0.5
PET	**Petropavlovsk**	**2.56**	**21**	*e*P	Pn	00 14 00.2	+1.9
PET				*e*S	Sn	00 14 31.0	+1.3
DALK	**Dalny**	**2.59**	**22**	*e*P	Pn	00 14 00.7	+2.1
DALK				*e*S	Sn	00 14 31.7	+1.4
UGLR	**Uglovaya**	**2.77**	**22**	*i* P	Pn	00 14 04.1	+3.0
AVH	**Avacha**	**2.80**	**20**	*i* P	Pn	00 14 04.5	+3.0
KOK	**Koryaka**	**2.81**	**19**	*i* P	Pn	00 14 04.4	+2.9
SMAR	**Somma**	**2.82**	**21**	*i* P	Pn	00 14 04.4	+2.6
KRER	**Koryakskii**	**2.84**	**20**	*i* P	Pn	00 14 04.9	+2.8
SDLR	**Sedlovina**	**2.85**	**22**	*e*P	Pn	00 14 04.5	+2.4
KRX	**Arik**	**2.87**	**19**	*e*P	Pn	00 14 04.7	+2.3
NLC	**Nalytchevo**	**2.88**	**28**	*e*P	Pn	00 14 03.2	+0.9
NLC				*e*S	Sn	00 14 36.3	-0.6
SPN	**Mys Shipunski**	**3.04**	**35**	*e*P	Pn	00 14 06.6	+2.1
SPN				*e*S	Sn	00 14 41.1	+0.4
GNL	**Ganaly**	**3.09**	**9**	*e*P	Pn	00 14 06.0	+0.8
MKZ	**Mys Kozlova**	**4.82**	**34**	*e*P	Pn	00 14 29.7	+1.8
MKZ				*e*S	Sn	00 15 21.5	-1.3
KZV	**Kizimen**	**4.87**	**22**	*e*P	Pn	00 14 31.6	+2.8
KZV				*e*S	Sn	00 15 25.4	+1.2
KMNR	**Kamenistaya**	**5.45**	**19**	*e*P	Pn	00 14 39.3	+2.8
KBTR	**Krutoberegovo**	**6.53**	**29**	*e*P	Pn	00 14 51.9	+1.0
BKI	**Bering**	**7.03**	**46**	*e*S	Sn	00 16 13.6	-2.5

*IDC **20** 00:32:12.5±3.8, 11.01S×165.99E, h61km±34km, mb3.7/9, mb1 4.0/11, mb1mx3.7/30, mbtmp4.1/11, ML4.4/2, MS3.4/4, Ms1 3.4/4, ms1mx3.0/27, Error ellipse: s-maj=26.7km s-min=22.5km az=54.0*
*NEIC **20** 00:32:13.2±1.5, 10.95S±0.10×165.9E±0.1, h69km±7km, mb4.5/13, Error ellipse: s-maj=22.2km s-min=8.9km az=59.0*

ISC 20 00:32:12.4±0.6, 10.99S±0.08×166.0E±0.1, h61km, n40, σ1.05/38, mb4.2/15, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.60**	**165**	Pn	**Pn**	**00 33 20.9**	**+1.5**
HNR	**Honiara**	**6.11**	**284**	P	**Pn**	**00 33 40.7**	**+0.6**
	26nm,0.3s,baz=199,slow=2.3,SNR=4.8						
HNR				LR	LR	00 36 13.2	
	comp=Z,267nm,20.7s,baz=133,slow=39						
HNR	**Honiara**	**6.11**	**284**		**Pn**	**00 33 40.2**	**+0.1**
DZM	**Mont Dzumac**	**11.03**	**178**	P	**Pn**	**00 34 48.0**	**+0.5**
	1.1nm,0.3s,baz=343,slow=17,SNR=14						
DZM				S	**Sn**	**00 36 46.5**	**-2.9**
	0.4nm,0.3s,baz=248,slow=22,SNR=1.5						
DZM	**Mont Dzumac**	**11.03**	**178**	Pn	**Pn**	**00 34 49.5**	**+2.0**
MSVF	**Nonsavu**	**13.50**	**121**	LR	LR	00 39 31.7	
	comp=Z,163nm,21.8s,baz=183,slow=33						
PMG	**Port Moresby**	**18.56**	**273**	P	**P**	**00 36 22.1**	**-2.4**
URZ	**Urewera**	**28.94**	**162**	P	**P**	**00 38 06.8**	**+1.0**
	2.4nm,0.5s,baz=296,slow=24,SNR=3.2						
URZ				LR	LR	00 47 23.5	
	comp=Z,80nm,19.8s,baz=31,slow=32						
URZ	**Urewera**	**28.94**	**162**	P	**P**	**00 38 05.9**	**+0.1**
URZ				IAmb	IAmb	00 38 19.1	
	comp=Z,10nm,1.0s						
BKZ	**Black Stump Fm**	**29.59**	**163**	P	**P**	**00 38 12.0**	**+0.3**
BKZ				IAmb	IAmb	00 38 14.1	
	comp=Z,6.9nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**30.52**	**2**	T	T	01 10 08.3	
	baz=182,slow=76,SNR=45						
H11N3	**WAKE ISLAND Hy**	**30.52**	**2**	T	T	01 10 04.3	
	baz=182,slow=76,SNR=34						
H11N2	**WAKE ISLAND Hy**	**30.54**	**2**	T	T	01 10 05.3	
	baz=182,slow=76,SNR=26						
BFZ	**Birch Farm**	**30.95**	**165**	P	**P**	**00 38 21.4**	**-2.1**
THZ	**Tophouse**	**31.26**	**170**	P	**P**	**00 38 27.4**	**+1.0**
THZ				IAmb	IAmb	00 38 29.6	
	comp=Z,10nm,0.8s						
BHW	**Baring Head**	**31.30**	**167**	P	**P**	**00 38 26.5**	**-0.2**
MSWZ	**Moikau Station**	**31.40**	**167**	P	**P**	**00 38 27.5**	**-0.1**
WR0	**Warramunga Arr**	**31.51**	**250**	P	**P**	**00 38 29.1**	**+0.3**
PLWZ	**Palliser**	**31.54**	**167**	P	**P**	**00 38 29.3**	**+0.4**
WB0	**Warramunga Arr**	**31.61**	**250**	P	**P**	**00 38 29.4**	**-0.3**
WB0				IAmb	IAmb	00 38 39.3	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**31.69**	**250**	P	**P**	**00 38 30.8**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=83,slow=9.1,SNR=5.0						
WRA	**Warramunga Arr**	**31.69**	**250**	P	**P**	**00 38 29.6**	**-0.9**
KHZ	**Kahutara**	**32.01**	**169**	P	**P**	**00 38 33.2**	**+0.4**
LTZ	**Lake Taylor**	**32.15**	**171**	P	**P**	**00 38 35.3**	**+1.1**
LTZ				IAmb	IAmb	00 38 37.6	
	comp=Z,12nm,0.8s						
TOO	**Toolangi**	**32.23**	**211**	P	**P**	**00 38 35.8**	**+0.8**
TOO				IAmb	IAmb	00 38 44.0	
	comp=Z,5.8nm,0.9s						
ASAR	**Alice Springs**	**33.00**	**243**	P	**P**	**00 38 41.8**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=64,slow=10,SNR=10						
ASAR				LR	LR	00 51 34.8	
	comp=Z,68nm,18.4s,baz=102,slow=35						
MQZ	**McQueen's Vall**	**33.11**	**171**	P	**P**	**00 38 43.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**39.59**	**255**	P	**P**	**00 39 39.1**	**+0.9**
FITZ				IAmb	IAmb	00 39 46.4	
	comp=Z,6.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**72.27**	**293**	P	**P**	**00 43 33.3**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=114,slow=4.4,SNR=1.4						
SONM	**Songino Array**	**78.74**	**324**	P	**P**	**00 44 09.0**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=150,slow=6.1,SNR=3.0						
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**00 44 33.0**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=235,slow=5.0,SNR=21						
ILAR	**Eielson Array**	**83.39**	**18**	P	**P**	**00 44 32.5**	**-0.1**
NVAR	**Mina Array Bea**	**85.83**	**50**	P	**P**	**00 44 46.1**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=243,slow=6.0,SNR=2.8						
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**00 45 21.6**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=92,slow=6.2,SNR=4.0						
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**00 45 21.2**	**-0.9**
YKA	**Yellowknife Ar**	**94.83**	**27**	P	**P**	**00 45 25.6**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=257,slow=4.4,SNR=2.8						
ARCES	**ARCESS Array B**	**116.33**	**346**	PKP	**PKPdf**	**00 50 48.0**	**-0.5**
	comp=Z,5.0nm,1.0s,baz=40,slow=2.2,SNR=8.4						
KEST	**Kesra**	**147.49**	**323**	PKPbc	**PKPbc**	**00 51 50.0**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=36,slow=4.3,SNR=5.9						
ESDC	**Sonseca Array**	**150.06**	**344**	PKPbc	**PKPbc**	**00 51 56.1**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=5.2,slow=4.2,SNR=8.5						
ESDC				PKPab	**PKPab**	**00 52 02.6**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=21,slow=3.8,SNR=8.6						
ESDC	**Sonseca Array**	**150.06**	**344**	PKPbc	**PKPbc**	**00 51 56.9**	**+0.3**

*KRNET **20** 00:50:33.9±0.1, 41.34N×78.17E, h12km, mb2.8*
*SOME **20** 00:50:33.4, 41.33N×78.15E, h5km*
*NNC **20** 00:50:35.8±1.1, 41.38N×78.15E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=7.7km s-min=4.8km az=170.0*

ISC 20 00:50:30.9±2.0, 41.16N±0.07×78.07E±0.03, h4km±14km, n54, σ0.93/80, 19C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.18**	**326**	⇑*i*P	**Pn**	**00 50 54.5**	**+0.2**
KDJ	baz=17			⇑*i*S	**Sb**	**00 51 09.6**	**0.0**
	baz=17						
PRZ	**Przheval'sk**	**1.34**	**10**	⇑*i*P	**Pg**	**00 50 55.8**	**-0.9**
PRZ	baz=8.0			⇑*i*S	**Sg**	**00 51 12.6**	**-1.5**
	baz=8.0						
ANVS	**Anan'yevo**	**1.65**	**350**	⇑*i*P	**Pg**	**00 51 02.3**	**-0.2**
ANVS	baz=46			⇑*i*S	**Sg**	**00 51 23.0**	**-0.9**
	baz=46						
ULHL	**Ulahol**	**1.75**	**309**	⇑*i*P	**Pg**	**00 51 05.9**	**+1.5**
ULHL	baz=3.0			⇑*i*S	**Sg**	**00 51 28.7**	**+1.6**
	baz=3.0						
ULHL	**Ulahol**	**1.75**	**309**	P	**Pg**	**00 51 05.9**	**+1.5**
	SNR=13						
SATY	**Saty**	**1.91**	**7**	*e*P	**Pg**	**00 51 07.3**	**-0.3**
SATY	4.9nm,0.4s			*e*S	**Sg**	**00 51 31.4**	**-0.9**
	24nm,0.1s						
SATY	**Saty**	**1.91**	**7**	P	**Pg**	**00 51 07.3**	**-0.3**
SATY	4.9nm,0.4s			S	**Sg**	**00 51 31.4**	**-0.9**
	24nm,0.1s						
TNSS	**Tian-Shan**	**2.05**	**336**	*e*P	**Pg**	**00 51 10.2**	**-0.1**
	4.7nm,0.2s						
TNSS				*e*S	**Sg**	**00 51 36.5**	**-0.3**
	10nm,0.4s						
TNSS	**Tian-Shan**	**2.05**	**336**	Pg	**Pg**	**00 51 10.2**	**-0.1**
	4.7nm,0.2s						
TNSS				Lg	Lg	00 51 36.3	
	19nm,0.4s						
BOOM	**Boomskoye usch**	**2.07**	**310**	⇑*e*P	**Pg**	**00 51 11.3**	**+0.6**
BOOM	baz=5.0			⇑*i*S	**Sg**	**00 51 38.8**	**+1.2**
	baz=5.0						
UZB	**Uzynbulak**	**2.10**	**19**	*e*P	**Pb**	**00 51 10.1**	**+0.3**
UZB	3.6nm,0.2s			*e*S	**Sb**	**00 51 35.9**	**-0.4**
	15nm,0.3s						
UZB	**Uzynbulak**	**2.10**	**19**	P	**Pb**	**00 51 10.1**	**+0.3**
UZB				S	**Sb**	**00 51 35.9**	**-0.4**
MDOK	**Medeo**	**2.14**	**340**	*e*P	**Pg**	**00 51 11.4**	**-0.5**
MDOK	8.9nm,0.3s			*e*S	**Sg**	**00 51 38.8**	**-0.9**
	48nm,0.6s						
MDOK	**Medeo**	**2.14**	**340**	Pn	**Pg**	**00 51 11.3**	**-0.6**
MDOK	4.7nm,0.4s			⇓Lg	Lg	00 51 37.8	
	45nm,0.5s						
MDOK	**Medeo**	**2.14**	**340**	Pg	**Pg**	**00 51 11.4**	**-0.5**
MDOK	8.9nm,0.3s			Lg	Lg	00 51 38.8	
	48nm,0.6s						
IZV	**Izvestkoviy**	**2.16**	**330**	*e*P	**Pg**	**00 51 12.8**	**+0.4**
IZV	6.0nm,0.4s			*e*S	**Sg**	**00 51 41.0**	**+0.5**
	53nm,0.6s						
IZV	**Izvestkoviy**	**2.16**	**330**	Pg	**Pg**	**00 51 12.8**	**+0.4**
IZV	6.0nm,0.4s			Lg	Lg	00 51 41.0	
	53nm,0.6s						
KOTS	**Kotyrbulak**	**2.19**	**341**	*e*P	**Pg**	**00 51 12.4**	**-0.5**
KOTS	32nm,0.3s			*e*S	**Sg**	**00 51 40.6**	**-0.7**
	28nm,0.5s						
KOTS	**Kotyrbulak**	**2.19**	**341**	Pg	**Pg**	**00 51 12.4**	**-0.5**
KOTS	32nm,0.3s			Lg	Lg	00 51 40.6	
	28nm,0.5s						
KNDC	**Almaty**	**2.21**	**339**	⇑Pg	**Pg**	**00 51 13.0**	**-0.3**
KNDC	12nm,0.5s			⇓Lg	Lg	00 51 41.6	
	49nm,0.5s						
SHLS	**Shalkode**	**2.25**	**27**	*e*P	**Pg**	**00 51 15.0**	**+1.0**
SHLS	11nm,0.3s			*e*S	**Sg**	**00 51 44.7**	**+1.6**
	54nm,0.5s						
SHLS	**Shalkode**	**2.25**	**27**	Pg	**Pg**	**00 51 15.0**	**+1.0**
SHLS	11nm,0.3s			Lg	Lg	00 51 44.7	
	54nm,0.5s						
KPKS	**Kokpek**	**2.35**	**11**	*e*P	**Pb**	**00 51 14.1**	**+0.3**
KPKS	20nm,0.4s			*e*S	**Sb**	**00 51 43.2**	**+0.1**
	76nm,0.6s						
PDGK	**Podgornoye**	**2.41**	**25**	Pg	**Pb**	**00 51 14.3**	**-0.5**
PDGK	5.3nm,0.3s			Lg	Lg	00 51 43.6	
	21nm,0.6s						
PDGK	**Podgornoye**	**2.41**	**25**	⇓Pn	**Pb**	**00 51 14.4**	**-0.5**
PDGK	4.3nm,0.3s			⇓Lg	Lg	00 51 45.9	
	46nm,0.8s						
KST	**Kastek**	**2.45**	**321**	*e*P	**Pg**	**00 51 17.8**	**-0.1**
KST	5.7nm,0.4s			*e*S	**Sg**	**00 51 49.5**	**-0.1**
	15nm,0.4s						
KST	**Kastek**	**2.45**	**321**	Pg	**Pg**	**00 51 17.8**	**-0.1**
KST	5.7nm,0.4s			Lg	Lg	00 51 49.5	
	15nm,0.4s						
TKM2	**Tokmak 2**	**2.55**	**314**	⇑*e*P	**Pb**	**00 51 18.0**	**+0.7**
TKM2	baz=10.0			⇑*i*S	**Sb**	**00 51 49.5**	**+0.4**
	baz=10.0						
TKM2	**Tokmak 2**	**2.55**	**314**	P	**Pg**	**00 51 19.5**	**-0.3**
	SNR=6.6						
TKM2	**Tokmak 2**	**2.55**	**314**	⇑Pn	**Pg**	**00 51 18.7**	**-1.0**
TKM2	2.2nm,0.5s			⇓Lg	Lg	00 51 54.5	
	14nm,0.6s						
KTBS	**Karatobe**	**2.75**	**338**	*e*P	**Pb**	**00 51 21.8**	**+1.1**
KTBS	4.1nm,0.4s			*e*S	**Sb**	**00 51 56.4**	**+1.7**
	38nm,0.6s						
KTBS	**Karatobe**	**2.75**	**338**	Pg	**Pb**	**00 51 21.7**	**+1.1**
KTBS	4.1nm,0.4s			Lg	Lg	00 51 56.4	
	38nm,0.6s						
KBK	**Karagaybulak**	**2.77**	**304**	⇓*i*P	**Pb**	**00 51 21.4**	**+0.3**
KBK	baz=0.0			⇓*i*S	**Sb**	**00 51 55.6**	**+0.2**
	baz=0.0						
KBK	**Karagaybulak**	**2.77**	**304**	P	**Pg**	**00 51 24.9**	**+0.9**
	SNR=12						
KTMS	**Ketmen**	**2.84**	**36**	*e*P	**Pb**	**00 51 22.5**	**+0.2**
KTMS				*e*S	**Sb**	**00 51 57.4**	**0.0**
KTMS	**Ketmen**	**2.84**	**36**	Pg	**Pb**	**00 51 22.5**	**+0.2**
KTMS				Lg	Lg	00 51 57.4	
UCH	**Uchtor**	**2.87**	**293**	⇑*e*P	**Pb**	**00 51 23.0**	**0.0**
UCH	baz=89			⇑*i*S	**Sb**	**00 51 59.0**	**+0.4**
	baz=89						
UCH	**Uchtor**	**2.87**	**293**	P	**Pg**	**00 51 26.9**	**+1.0**
	SNR=7.8						
AAK	**Ala-Archa**	**3.05**	**300**	⇓*i*P	**Pb**	**00 51 25.4**	**-0.5**
AAK	baz=97			⇓*i*S	**Sb**	**00 52 02.8**	**-0.7**
	baz=97						
AAK	**Ala-Archa**	**3.05**	**300**	P	**Pg**	**00 51 29.6**	**+0.2**
	SNR=6.5						
AAK	**Ala-Archa**	**3.05**	**300**	⇑Pg	**Pg**	**00 51 30.0**	**+0.6**
AAK	1.7nm,0.3s			⇑Lg	Lg	00 52 11.0	
	15nm,0.9s						
ARXS	**Arharly**	**3.05**	**357**	*e*P	**Pb**	**00 51 26.1**	**+0.3**
ARXS	16nm,0.6s			*e*S	**Sb**	**00 52 03.7**	**+0.2**
	21nm,0.6s						
ARXS	**Arharly**	**3.05**	**357**	Pg	**Pb**	**00 51 26.1**	**+0.3**
ARXS	16nm,0.6s			Lg	Lg	00 52 03.7	
	21nm,0.6s						
KRBS	**Karabastau**	**3.09**	**326**	*e*P	**Pb**	**00 51 27.8**	**+1.3**
KRBS	2.2nm,0.3s			*e*S	**Sb**	**00 52 06.5**	**+1.9**
	9.0nm,0.6s						
KRBS	**Karabastau**	**3.09**	**326**	Pg	**Pb**	**00 51 27.8**	**+1.3**
KRBS	2.2nm,0.3s			Lg	Lg	00 52 06.5	
	9.0nm,0.6s						
USP	**Ospenovka**	**3.38**	**310**	⇓*e*P	**Pb**	**00 51 29.5**	**-2.0**
USP	baz=6.0			⇓*i*S	**Sb**	**00 52 09.9**	**-3.1**
	baz=6.0						
DJR	**Jarkent**	**3.41**	**21**	*e*P	**Pb**	**00 51 32.1**	**+0.2**
DJR	3.7nm,0.3s			*e*S	**Sb**	**00 52 14.3**	**+0.5**
	21nm,0.4s						
DJR	**Jarkent**	**3.41**	**21**	Pg	**Pb**	**00 51 32.1**	**+0.2**
DJR	3.7nm,0.3s			Lg	Lg	00 52 14.3	
	21nm,0.4s						
AML	**Almayashu**	**3.42**	**288**	⇓*e*P	**Pb**	**00 51 31.0**	**-1.3**
AML	baz=85			⇓*i*S	**Sb**	**00 52 13.0**	**-1.4**
	baz=85						
AML	**Almayashu**	**3.42**	**288**	P	**Pg**	**00 51 36.8**	**+0.3**
	SNR=14						
SGDS	**Sogindy**	**3.43**	**313**	Pg	**Pg**	**00 51 35.0**	**-1.6**
SGDS	2.4nm,0.5s			Lg	Lg	00 52 19.2	
	7.4nm,0.4s						
EKS2	**Erkin-Say**	**3.54**	**296**	P	**Pg**	**00 51 39.6**	**+0.9**
	SNR=5.6						
KK31	**Karatay Array**	**5.95**	**292**	Pg	**Pg**	**00 52 23.2**	**-1.7**
KK31	0.5nm,0.5s,baz=111,slow=16,SNR=3.7			Lg	Lg	00 53 44.4	
	0.4nm,0.3s,baz=105,slow=27,SNR=5.3						
MK31	**Makanchi Array**	**6.40**	**27**	⇑Lg	Lg	00 53 52.4	
	1.8nm,0.7s,baz=206,slow=27,SNR=2.5						

*JSN **20** 00:50:40.7±1.0, 19.44N×77.92W, h8km±20km, MD3.1*
*SSNC **20** 00:50:40.6±1.0, 19.38N×77.94W, h5km, MD3.0, ML1.7, MW2.4*

ISC 20 00:50:38.6±1.7, 19.43N±0.04×77.92W±0.10, h15km±13km, n6, σ0.58/11, 2C, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMGC	**Las Mercedes**	**1.07**	**54**	*e*P	**Pg**	**00 50 59.2**	**-0.1**
LMGC				*e*S	**Sg**	**00 51 13.1**	**-0.2**
LMGC				IAML		00 51 14.7	
	comp=N,38nm,0.1s						
LMGC				IAML		00 51 14.9	
	comp=E,49nm,0.1s						
BBJ	**Bamboo Saint A**	**1.21**	**149**	*i* P	**Pg**	**00 51 02.7**	**+0.7**
BBJ				*i* S	**Sg**	**00 51 17.9**	**+0.1**
MCJ	**Malvern**	**1.51**	**172**	*i* P	**Pb**	**00 51 06.2**	**-0.3**
MCJ				*i* S	**Sg**	**00 51 26.6**	**-0.9**
STH	**Stony Hill**	**1.71**	**142**	*i* P	**Pb**	**00 51 09.4**	**-0.4**
CCCC	**Cccc**	**1.77**	**5**	*e

	comp=E,990nm,0.4s							
PEL	**Peldehue**	**1.72**	**173**			**Pn**	**01 20 07.8**	**-0.3**
MT02	**Curacav**	**1.83**	**185**	⇓	*i*P	**Pn**	**01 20 09.4**	**-0.1**
MT02					*i* S	**Sn**	**01 20 32.3**	**+0.1**
MT02					IAML		01 20 38.6	
	comp=E,775nm,0.2s							
MT02	**Curacav**	**1.83**	**185**			**Pn**	**01 20 09.6**	**+0.1**
ZON	**Zonda**	**1.94**	**94**			**Pn**	**01 20 10.9**	**0.0**
MT05	**Renca**	**1.96**	**175**	⇑	*i*P	**Pn**	**01 20 11.4**	**+0.2**
MT05					*i* S	**Sn**	**01 20 36.1**	**+0.7**
MT05					IAML		01 20 40.1	
	comp=E,2μm,0.4s							
MT05	**Renca**	**1.96**	**175**			**Pn**	**01 20 11.5**	**+0.2**
MT03	**Universidad Ad**	**2.09**	**170**		*e*P	**Pn**	**01 20 12.8**	**-0.2**
MT03					IAML		01 20 45.7	
	comp=E,2μm,0.2s							
MT03	**Universidad Ad**	**2.09**	**170**			**Pn**	**01 20 13.3**	**+0.3**
VA05	**Santo Domingo**	**2.29**	**194**		*e*P	**Pn**	**01 20 15.3**	**-0.3**
VA05					*i* S	**Sn**	**01 20 43.3**	**+0.2**
VA05					IAML		01 20 51.7	
	comp=E,3μm,0.4s							
VA05	**Santo Domingo**	**2.29**	**194**			**Pn**	**01 20 15.5**	**-0.1**
MT09	**Talagante**	**2.34**	**181**	⇑	*i*P	**Pn**	**01 20 16.3**	**0.0**
MT09					*i* S	**Sn**	**01 20 45.3**	**+0.9**
MT09					IAML		01 20 49.5	
	comp=N,917nm,0.2s							
MT09	**Talagante**	**2.34**	**181**			**Pn**	**01 20 16.3**	**0.0**
LCO	**Las Campanas**	**2.42**	**5**	Pn		**Pn**	**01 20 17.8**	**+0.2**
MT01	**Popeta**	**2.44**	**186**	⇑	*i*P	**Pn**	**01 20 17.4**	**-0.2**
MT01					IAML		01 20 56.3	
	comp=E,1μm,0.2s							
MT01	**Popeta**	**2.44**	**186**			**Pn**	**01 20 17.2**	**-0.4**
LMEL	**Las Melosas**	**2.49**	**166**	*i*	S	**Sn**	**01 20 49.1**	**+1.1**
LMEL					IAML		01 20 57.9	
	comp=N,681nm,0.3s							
BO01	**Tunca**	**2.95**	**182**		*e*P	**Pn**	**01 20 24.0**	**-0.5**
BO01					IAML		01 21 11.8	
	comp=N,212nm,0.2s							
BO01	**Tunca**	**2.95**	**182**	Pn		**Pn**	**01 20 24.2**	**-0.3**
BO03	**Pichilemu**	**3.17**	**195**		*e*P	**Pn**	**01 20 26.5**	**-0.9**
BO03					IAML		01 21 18.1	
	comp=E,227nm,0.7s							
AC04	**Llanos de Chal**	**3.22**	**358**	⇑	*i*P	**Pn**	**01 20 28.8**	**+0.7**
AC04	**Llanos de Chal**	**3.22**	**358**	Pn		**Pn**	**01 20 28.8**	**+0.7**
BO02	**Sierra Bellavi**	**3.35**	**178**		*e*P	**Pn**	**01 20 29.9**	**-0.1**
BO02					IAML		01 21 25.7	
	comp=N,460nm,0.3s							
BO02	**Sierra Bellavi**	**3.35**	**178**	Pn		**Pn**	**01 20 29.9**	**-0.1**
GO03	**Copiap**	**3.88**	**9**	Pn		**Pn**	**01 20 37.2**	**+0.1**
ML02	**Panimavida**	**4.34**	**185**	Pn		**Pn**	**01 20 42.2**	**-1.0**
AC02	**Maricunga**	**4.85**	**20**	Pn		**Pn**	**01 20 50.2**	**-0.5**
BI02	**San Fabin de**	**5.22**	**183**	Pn		**Pn**	**01 20 55.0**	**-0.4**
AC01	**Pan de Azucar**	**5.27**	**3**	Pn		**Pn**	**01 20 54.1**	**-1.9**
GO02	**Mina Guanaco**	**6.36**	**11**	Pn		**Pn**	**01 21 09.5**	**-1.5**
PB14	**IPOC Station P**	**6.80**	**4**	Pn		**Pn**	**01 21 13.9**	**-3.2**

*THE **20** 01:38:52.8, 35.°17N×26.°76E, h0km±1km, ML3.1/4, Error ellipse: s-maj=4.9km s-min=0.9km az=152.0*
*ISK **20** 01:38:53.7, 35.°20N×26.°91E, h8km, ML3.1/11*
*ATH **20** 01:38:54.2, 35.°33N×26.°71E, h10km±3km, ML3.0/5, Error ellipse: s-maj=5.1km s-min=1.1km az=153.0*
*DDA **20** 01:38:54.4, 35.°16N×27.°00E, h11km±5km, ML3.0*
*IDC **20** 01:38:56.3±1.3, 34.°79N×26.°93E, h57km±14km, mb3.5/9, mb1 3.5/13, mb1mx3.3/71, mbtmp3.7/13, MS2.7/1, Ms1 2.7/1, ms1mx2.2/49, Error ellipse: s-maj=21.0km s-min=8.8km az=12.0*

ISC 20 01:38:51.7±1.2, **35.°06N**±0.°05×**26.°89E**±0.°03, **h11**km±8km, **n90**, σ1**°70**/119, **mb3.8/9**, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.53**	**25**	P		**Pg**	**01**	**39 02.3**	**+0.3**
KARP				S		**Sg**	**01**	**39 08.6**	**-0.5**
KARP				AML		AML	01	39 13.7	
	comp=E,9149μm,0.3s								
KARP				AML		AML	01	39 13.8	
	comp=N,7772μm,0.3s								
KARP	**Karpathos**	**0.53**	**25**	P		**Pg**	**01**	**39 02.2**	**+0.1**
KARP				S		**Sb**	**01**	**39 10.5**	**-0.3**
	comp=N,4μm,0.4s								
KARP	**Karpathos**	**0.53**	**25**	PG		**Pg**	**01**	**39 02.3**	**+0.3**
KARP				SG		**Sg**	**01**	**39 08.2**	**-0.9**
ZKR	**Zakros**	**0.55**	**275**	P		**Pg**	**01**	**39 02.1**	**-0.3**
ZKR				S		**Sg**	**01**	**39 09.9**	**+0.1**
ZKR				AML		AML	01	39 19.3	
	comp=E,3581μm,0.5s								
ZKR				AML		AML	01	39 21.1	
	comp=N,1449μm,0.6s								
ZKR	**Zakros**	**0.55**	**275**	P		**Pg**	**01**	**39 02.0**	**-0.5**
ZKR				S		**Sg**	**01**	**39 09.5**	**-0.3**
	comp=N,1μm,0.5s								
STIA	**Sitia Lasithi**	**0.67**	**282**	P		**Pg**	**01**	**39 03.7**	**-0.9**
STIA				S		**Sg**	**01**	**39 12.6**	**-0.8**
FRMA	**Ierapetra Chan**	**0.95**	**267**	P		Pg	01	39 07.5	-2.5
FRMA				S		**Sg**	**01**	**39 20.4**	**-1.9**
NPS	**Neapolis**	**1.06**	**281**	P		**Pg**	**01**	**39 11.8**	**-0.3**
NPS				S		**Sg**	**01**	**39 22.9**	**-3.1**
NPS				AML		AML	01	39 33.1	
	comp=E,1478μm,0.5s								
NPS				AML		AML	01	39 35.6	
	comp=N,1793μm,0.6s								
NPS	**Neapolis**	**1.06**	**281**	P		**Pg**	**01**	**39 12.0**	**-0.2**
NPS				S		**Sg**	**01**	**39 25.0**	**-1.0**
	comp=N,842nm,0.6s								
HRKL	**Herakleio**	**1.48**	**280**	P		**Pn**	**01**	**39 20.0**	**+1.6**
HRKL	**Herakleio**	**1.48**	**280**	PN		**Pn**	**01**	**39 21.4**	**+3.0**
HRKL				S		**Sg**	**01**	**39 41.6**	**+2.2**
KSTL	**Kastelli Herak**	**1.51**	**280**	P		**Pn**	**01**	**39 16.8**	**-1.9**
ARG	**Arkhangelos**	**1.53**	**41**	P		**Pb**	**01**	**39 21.1**	**+1.0**
ARG				S		**Sn**	**01**	**39 38.7**	**-0.1**
ARG				AML		AML	01	39 48.1	
	comp=N,827μm,0.8s								
ARG				AML		AML	01	39 49.8	
	comp=E,1366μm,0.4s								
ARG	**Arkhangelos**	**1.53**	**41**	P		**Pb**	**01**	**39 20.9**	**+0.8**
ARG	**Arkhangelos**	**1.53**	**41**	PN		**Pn**	**01**	**39 20.6**	**+1.6**
NIS1	**Nisyros Isl.**	**1.55**	**9**	P		**Pn**	**01**	**39 18.5**	**-0.8**
NIS1				S		**Sn**	**01**	**39 35.6**	**-4.0**
NIS1	**Nisyros Isl.**	**1.55**	**9**	P		**Pn**	**01**	**39 20.1**	**+0.8**
NIS1	**Nisyros Isl.**	**1.55**	**9**	PN		**Pn**	**01**	**39 20.4**	**+1.1**
IDI	**Anoyia**	**1.65**	**278**	P		**Pn**	**01**	**39 22.9**	**+2.2**
	comp=E,6.6nm,0.3s,baz=107,slow=13,SNR=32								
IDI				S		**Sb**	**01**	**39 46.1**	**+3.0**
	comp=E,12nm,0.3s,baz=107,slow=14,SNR=8.9								
IDI	**Anoyia**	**1.65**	**278**	P		**Pn**	**01**	**39 21.9**	**+1.1**
IDI				S		**Sn**	**01**	**39 40.7**	**-1.4**
IDI	**Anoyia**	**1.65**	**278**	P		**Pn**	**01**	**39 22.3**	**+1.5**
IDI	**Anoyia**	**1.65**	**278**	PN		**Pn**	**01**	**39 23.3**	**+2.5**
KOSK	**Kos Island**	**1.69**	**2**	P		**Pn**	**01**	**39 21.6**	**+0.5**
KOSK				S		**Sb**	**01**	**39 44.2**	**+0.2**
	comp=E,435nm,0.9s								
KOSK	**Kos Island**	**1.69**	**2**	PN		**Pn**	**01**	**39 22.5**	**+1.4**
KOSK				SN		**Sn**	**01**	**39 43.1**	**+0.4**
SIVA	**Sivas**	**1.71**	**269**	P		**Pn**	**01**	**39 23.3**	**+1.9**
SIVA				S		**Sn**	**01**	**39 43.2**	**-0.1**
SIVA				AML		AML	01	40 03.4	
	comp=N,760μm,0.6s								
SIVA				AML		AML	01	40 07.2	
	comp=E,1063μm,0.6s								
SIVA	**Sivas**	**1.71**	**269**	P		**Pn**	**01**	**39 23.8**	**+2.4**
SANT	**Santorini**	**1.75**	**319**	PN		**Pn**	**01**	**39 23.9**	**+1.9**
THR6	**Thira Island,**	**1.77**	**317**	P		**Pn**	**01**	**39 22.0**	**-0.3**
THR9	**Santorini-Faro**	**1.79**	**316**	P		**Pn**	**01**	**39 21.4**	**-1.2**
SNT1	**Gialos, Santor**	**1.80**	**319**	P		**Pn**	**01**	**39 22.3**	**-0.4**
SNT5	**Nea Kammeni, S**	**1.81**	**318**	P		**Pn**	**01**	**39 21.2**	**-1.6**
SNT5	**Nea Kammeni, S**	**1.81**	**318**	P		**Pn**	**01**	**39 21.3**	**-1.5**
THR3	**Thira Island,**	**1.81**	**318**	P		**Pn**	**01**	**39 21.7**	**-1.1**
THT2	**Imerovigli**	**1.81**	**319**	P		**Pn**	**01**	**39 23.0**	**+0.1**
THR2	**Thira island,**	**1.82**	**320**	P		**Pn**	**01**	**39 21.4**	**-1.6**
THR5	**Thira Island,**	**1.84**	**318**	P		**Pn**	**01**	**39 22.2**	**-1.1**
BODT	**Bodrum**	**2.02**	**10**	P		**Pn**	**01**	**39 25.2**	**-0.6**
BODT				S		**Sn**	**01**	**39 50.5**	**-0.6**
TURN	**Turunc**	**2.03**	**32**	*i*	P	**Pn**	**01**	**39 27.5**	**+1.6**
TURN				*i*	S	**Sn**	**01**	**39 50.4**	**-0.9**
TURN					IAML		01	40 02.0	
	comp=E,85nm,0.6s								
TURN	**Turunc**	**2.03**	**32**	PN		**Pn**	**01**	**39 27.5**	**+1.6**
BDRM	**Kayabasi**	**2.05**	**13**	*i*	P	**Pn**	**01**	**39 27.0**	**+0.8**
VAM	**Vamos**	**2.23**	**280**	P		**Pn**	**01**	**39 30.8**	**+2.2**
VAM	**Vamos**	**2.23**	**280**	P		**Pn**	**01**	**39 32.0**	**+3.4**
DALY	**Dalyan (Mula)**	**2.26**	**39**	*i*	P	**Pn**	**01**	**39 31.2**	**+2.2**
DALY				*i*	S	**Sb**	**01**	**40 01.6**	**+1.1**
DALY					IAML		01	40 19.0	
	comp=N,104nm,0.8s								
DALY	**Dalyan (Mula)**	**2.26**	**39**	PN		**Pn**	**01**	**39 31.2**	**+2.2**
GVD	**Gavdhos**	**2.31**	**265**	P		**Pn**	**01**	**39 32.2**	**+2.5**
GVD	**Gavdhos**	**2.31**	**265**	PN		**Pn**	**01**	**39 33.4**	**+3.6**
YER	**Yerkesik**	**2.35**	**28**	P		**Pn**	**01**	**39 31.7**	**+1.3**
YER				S		**Sn**	**01**	**40 00.7**	**+1.3**
YER	**Yerkesik**	**2.35**	**28**	PN		**Pn**	**01**	**39 31.9**	**+1.5**
FETY	**Fethiye**	**2.37**	**48**	P		**Pn**	**01**	**39 31.1**	**+0.5**
FETY				S		**Sb**	**01**	**40 03.6**	**-0.2**
DDIM	**Aydin, Didim**	**2.41**	**7**	*i*	P	**Pn**	**01**	**39 32.8**	**+1.7**
DDIM					IAML		01	40 20.0	
	comp=E,108nm,1.5s								
DDIM					IAML		01	40 25.0	
	comp=N,82nm,1.3s								
IMMV	**Iera Moni Meta**	**2.41**	**280**	P		**Pn**	**01**	**39 33.9**	**+2.8**
IMMV	**Iera Moni Meta**	**2.41**	**280**	P		**Pn**	**01**	**39 32.9**	**+1.8**
IMMV	**Iera Moni Meta**	**2.41**	**280**	PN		**Pn**	**01**	**39 34.8**	**+3.7**
MULA	**Mugla, Merkez-**	**2.48**	**27**	*i*	P	**Pn**	**01**	**39 33.4**	**+1.3**
AKAS	**Kas**	**2.50**	**61**	*i*	P	**Pn**	**01**	**39 31.9**	**-0.5**
AKAS				*i*	S	**Sn**	**01**	**40 01.1**	**-2.0**
AKAS					IAML		01	40 41.0	
	comp=N,68nm,1.6s								
GCAM	**G?zelcaml?**	**2.65**	**6**	*i*	P	**Pn**	**01**	**39 34.7**	**+0.3**
AYDN	**Tasoluk**	**2.71**	**17**	*i*	P	**Pn**	**01**	**39 36.4**	**+1.0**
CAEL	**Denizli, Camel**	**2.84**	**43**	*i*	P	**Pn**	**01**	**39 38.9**	**+1.6**
CAEL					IAML		01	40 44.0	
	comp=E,147nm,0.8s								
CAEL					IAML		01	40 50.0	
	comp=N,140nm,1.4s								
TAVA	**DENIZLI_Tavas**	**2.90**	**34**	*i*	P	**Pn**	**01**	**39 39.3**	**+1.3**
TAVA				*i*	S	**Sn**	**01**	**40 15.9**	**+3.0**
ELL	**Elmali**	**2.97**	**55**	PN		**Pn**	**01**	**39 40.9**	**+1.9**
DGB	**zmir**	**2.98**	**360**	*i*	P	**Pn**	**01**	**39 39.0**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**2.99**	**15**	PN		**Pn**	**01**	**39 40.7**	**+1.5**
GOLH	**Golhisar**	**3.06**	**44**	*i*	P	**Pn**	**01**	**39 41.4**	**+1.3**
GOLH				*i*	S	**Sn**	**01**	**40 18.5**	**+1.6**
GOLH					IAML		01	40 51.0	
	comp=N,66nm,1.2s								
AKUM	**Antalya-Kumluc**	**3.08**	**65**	*i*	P	**Pn**	**01**	**39 38.9**	**-1.4**
AKUM				*i*	S	**Sn**	**01**	**40 15.7**	**-1.4**
URLA	**Izmir**	**3.30**	**356**	*i*	P	**Pn**	**01**	**39 42.0**	**-1.4**
KORT	**Korkueli**	**3.41**	**54**	*i*	P	**Pn**	**01**	**39 45.7**	**+0.8**
KORT				*i*	S	**Sn**	**01**	**40 25.6**	**+0.2**
BRDR	**BURDUR-Merkez**	**3.67**	**43**	*i*	P	**Pb**	**01**	**39 54.7**	**-1.9**
MANT	**Manisa**	**3.67**	**21**	*i*	P	**Pn**	**01**	**39 49.7**	**+1.0**
MANT				*i*	S	**Sn**	**01**	**40 31.8**	**-0.3**
BUCA	**Burdur, Bucak-**	**3.73**	**52**	*i*	P	**Pn**	**01**	**39 52.8**	**+3.4**
ZEDA	**zmir-Bergama**	**3.90**	**2**	*i*	P	**Pn**	**01**	**39 50.5**	**-1.1**
USAK	**Uak-Merkez**	**4.02**	**24**	*i*	P	**Pn**	**01**	**39 54.5**	**+1.2**
USAK					IAML		01	40 38.0	
	comp=N,23nm,4.5s								
KEPZ	**Antalya-Kepez**	**4.24**	**63**	*i*	P	**Pn**	**01**	**39 57.4**	**+1.1**
KEPZ				*i*	S	**Sn**	**01**	**40 45.9**	**+0.1**
BUHA	**Balikesir, Bur**	**4.43**	**2**	*i*	P	**Pn**	**01**	**39 58.9**	**0.0**
BUHA					IAML		01	40 59.0	
	comp=N,20nm,2.6s								
BUHA					IAML		01	41 45.0	
	comp=E,23nm,1.7s								
GDZ	**Gediz**	**4.52**	**27**	*i*	P	**Pn**	**01**	**39 57.4**	**-2.9**
SEDI	**Konya, Seydise**	**4.60**	**57**	*i*	P	**Pn**	**01**	**40 02.5**	**+1.3**
SEDI				*i*	S	**Sn**	**01**	**40 53.6**	**-1.2**
SEDI					IAML		01	41 04.0	
	comp=E,16nm,0.6s								
SEDI					IAML		01	41 06.0	
	comp=N,14nm,0.7s								
YVAC	**Isparta, Yalva**	**4.74**	**46**	*i*	P	**Pn**	**01**	**40 06.4**	**+3.1**
BRTR	**Keskin Array B**	**7.11**	**47**	LR		LR	01	44 16.8	
	comp=N,56nm,19.7s,baz=354,slow=44								
MMAI	**Mount Meron Ar**	**7.36**	**104**	P		**Pn**	**01**	**40 39.4**	**+0.3**
	comp=N,0.7nm,0.3s,baz=300,slow=12,SNR=4.8								
MMAI					S	**Sn**	**01**	**42 01.3**	**-1.4**
	comp=N,1.0nm,0.3s,baz=257,slow=11,SNR=4.0								
EIL	**Elat**	**8.68**	**126**	P		**Pn**	**01**	**40 57.3**	**0.0**
	comp=N,0.3nm,0.3s,baz=128,slow=14,SNR=1.6								
EIL					S	**Sn**	**01**	**42 30.3**	**-4.9**
	comp=N,0.4nm,0.3s,baz=304,slow=14,SNR=3.6								
AKASG	**Malin Array Be**	**15.72**	**5**	P		**Pn**	**01**	**42 35.9**	**+2.9**
	comp=N,0.4nm,0.3s,baz=194,slow=10.0,SNR=5.2								
GERES	**GERESS Array B**	**16.87**	**329**	P		**P**	**01**	**42 50.8**	**+0.9**
	comp=N,0.1nm,0.3s,baz=147,slow=13,SNR=1.9								
BELG	**Belogornoye**	**22.77**	**34**	P		**P**	**01**	**43 56.8**	**+2.9**
	comp=N,6.1nm,1.0s,baz=282,slow=9.3,SNR=1.4								
ESDC	**Sonseca Array**	**24.88**	**290**	P		**P**	**01**	**44 13.1**	**-1.5**
	comp=N,0.3nm,0.7s,baz=77,slow=8.6,SNR=4.0								
TORD	**Torodi Ar. Bea**	**31.53**	**232**	P		P	01	45 12.3	-1.8
	comp=N,0.5nm,0.5s,baz=42,slow=8.8,SNR=2.5								
AAK	**Ala-Archa**	**37.43**	**64**	P		**P**	**01**	**46 05.2**	**+0.1**
	comp=N,0.8nm,0.5s,baz=255,slow=12,SNR=3.6								
KURBB	**Kurchatov Arra**	**40.08**	**51**	P		**P**	**01**	**46 27.6**	**+0.6**
	comp=N,1.5nm,0.7s,baz=276,slow=8.9,SNR=18								
MKAR	**Makanchi Array**	**42.64**	**57**	P		**P**	**01**	**46 48.7**	**+0.5**
	comp=N,1.5nm,0.7s,baz=284,slow=5.5,SNR=9.4								
ZALV	**Zalesovo Beam**	**44.05**	**46**	P		**P**	**01**	**46 59.3**	**-0.1**
	comp=N,1.4nm,0.5s,baz=267,slow=8.7,SNR=9.0								
YKA	**Yellowknife Ar**	**77.97**	**343**	P		**P**	**01**	**50 47.5**	**-2.1**
	comp=N,0.2nm,0.8s,baz=78,slow=31,SNR=3.3								
BDFB	**Brasilia**	**86.98**	**249**	P		**P**	**01**	**51 36.3**	**-1.2**
	comp=N,3.6nm,0.9s,baz=82,slow=9.7,SNR=5.8								

*IDC **20** 01:42:27.8±0.8, 35.°95N×139.°14E, h85km±10km, mb3.5/11, mb1 3.7/12, mb1mx3.4/66, mbtmp3.9/12, Error ellipse: s-maj=26.5km s-min=7.9km az=66.0*
*NIED **20** 01:42:27.7, 36.°09N×139.°40E, h67km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=1.51; Mθθ=2.26; Mϕϕ=3.77; Mrθ=2.35; Mθϕ=0.04; Mϕr=0.20; Fault plane solution: M=4.02000×10¹⁴ NP1: ϕs=142.00000°, δ65.00000°, λ=-147.00000°. NP2: ϕs=37.00000°, δ60.00000°, λ=-29.00000°.*
*NEIC **20** 01:42:27.7±2.5, 36.°03N±0.°06×139.°43E±0.°06, h68km±7km, mb4.2/9 Error ellipse: s-maj=8.5km s-min=6.6km az=157.0*
*JMA **20** 01:42:27.6±0.1, 36.°09N×139.°40E, h67km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕs=32.00000°, δ49.00000°, λ=-24.00000°. NP2: ϕs=139.00000°, δ72.00000°, λ=-137.00000°. Principal axes: T Plg14.0000°, Azm261.0000°; N Plg44.0000°, Azm157.0000°; P Plg43.0000°, Azm4.0000°;*
JMA Felt I J1.

ISC 20 01:42:27.2±0.7, **36.°08N**±0.°04×**139.°39E**±0.°05, **h69**km±5km, **n57**, σ1**°00**/62, **mb4.0**/14, **2C-3D**, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHU	**Hanno**	**0.24**	**202**	⇓	P	**Pn**	**01**	**42 38.6**	**+0.6**
JHU					S	**Sn**	**01**	**42 46.4**	**+0.6**
JAG	**Ashikaga**	**0.35**	**8**	⇑	P	**Pn**	**01**	**42 38.9**	**+0.1**
JAG					S	**Sn**	**01**	**42 47.1**	**-0.1**
JRY	**Ryogami san**	**0.40**	**262**	⇓	P	**Pn**	**01**	**42 39.4**	**+0.2**
JRY					S	**Sn**	**01**	**42 48.0**	**+0.1**
JYT	**Yasato**	**0.67**	**77**			**Pn**	**01**	**42 41.6**	**-0.1**
JYT					Sn	**Sn**	**01**	**42 52.3**	**-0.1**
JKT	**Katashina**	**0.70**	**351**	⇑	P	**Pn**	**01**	**42 42.3**	**+0.1**
JKT					S	**Sn**	**01**	**42 53.6**	**+0.4**
JOD2	**Odawara 2**	**0.85**	**197**	⇓	P	**Pn**	**01**	**42 43.7**	**-0.2**
JOD2					S	**Sn**	**01**	**42 56.1**	**0.0**
JYN	**Shimob**	**0.90**	**230**		P	**Pn**	**01**	**42 44.9**	**+0.4**
JYN					S	**Sn**	**01**	**42 57.9**	**+0.6**
JFNN	**Fujinakano**	**1.05**	**213**		P	**Pn**	**01**	**42 46.9**	**+0.6**
JFNN					S	**Sn**	**01**	**43 01.6**	**+1.1**
MJAR	**Matsushiro Arr**	**1.06**	**296**		P	**Pn**	**01**	**42 46.2**	**-0.3**
	14nm,0.3s,baz=128,slow=10,SNR=253								
MJAR					S	**Sn**	**01**	**43 01.0**	**+0.2**
	7.3nm,0.3s,baz=147,slow=30,SNR=4.9								
MJAR	**Matsushiro Arr**	**1.06**	**296**		Pn	**Pn**	**01**	**42 49.4**	**+2.9**
MAJO	**Matsushiro**	**1.06**	**296**		Pn	**Pn**	**01**	**42 46.7**	**+0.2**
MAT	**Matsushiro**	**1.06**	**296**		P	**Pn**	**01**	**42 46.6**	**+0.1**
MAT					S	**Sn**	**01**	**43 00.7**	**-0.2**
MAT	**Matsushiro**	**1.06**	**296**		P	**Pn**	**01**	**42 46.6**	**+0.1**
MAT					*e*S	**Sn**	**01**	**43 00.8**	**-0.2**
MJB9	**Matsu-Tunnel**	**1.07**	**296**			**Pn**	**01**	**42 46.5**	**0.0**
JSG	**Sagara**	**1.71**	**216**		Pn	**Pn**	**01**	**42 56.4**	**+1.4**
JGF	**Kuroka**	**1.72**	**255**			**Pn**	**01**	**42 56.1**	**+1.0**
JMM	**Marumori**	**2.11**	**32**			**Pn**	**01**	**43 01.6**	**+1.3**
JSD	**Sado**	**2.16**	**336**		Pn	**Pn**	**01**	**43 01.0**	**0.0**
JHJ	**Hachijo jima 2**	**2.97**	**174**		P	**Pn**	**01**	**43 12.3**	**+0.3**
	140nm,0.3s,baz=58,slow=3.2,SNR=47								
JHJ					S	**Sn**	**01**	**43 45.7**	**-0.7**
	136nm,0.3s,baz=98,slow=22,SNR=17								
JHJ2	**Mitsune**	**2.98**	**173**		Pn	**Pn**	**01**	**43 12.4**	**+0.2**
JWT	**Wachi**	**3.34**	**257**		Pn	**Pn**	**01**	**43 17.4**	**+0.3**
JTM	**Tenmabayashi**	**4.88**	**15**		Pn	**Pn**	**01**	**43 40.3**	**+2.2**
JHS	**Saijyo**	**5.23**	**260**		Pn	**Pn**	**01**	**43 44.5**	**+1.6**
ERM	**Erimo**	**6.62**	**25**		Pn	**Pn**	**01**	**44 01.8**	**0.0**
KSRS	**Korea Array**	**9.31**	**282**		P	**Pn**	**01**	**44 40.6**	**+2.1**
	0.3nm,0.3s,baz=98,slow=15,SNR=2.0								
USRK	**Ussuriysk Ar.**	**9.89**	**327**		P	Pn	01	44 51.6	+5.1
	baz=146,slow=13,SNR=2.9								
H11N2	**WAKE ISLAND Hy**	**29.12**	**117**		T	T	02	18 17.5	
	baz=308,slow=75,SNR=11								
H11N1	**WAKE ISLAND Hy**	**29.12**	**117**		T	T	02	18 20.5	
	baz=308,slow=75,SNR=9.0								
H11N3	**WAKE ISLAND Hy**	**29.14**	**117**		T	T	02	18 28.8	
	baz=308,slow=75,SNR=7.7								
H11S1	**WAKE ISLAND Hy**	**29.77**	**119**		T	T	02	19 27.6	
	baz=313								
H11S3	**WAKE ISLAND Hy**	**29.77**	**119**		T	T	02	19 25.0	
	baz=319								
H11S2	**WAKE ISLAND Hy**	**29.78**	**119**		T	T	02	19 07.6	
	baz=313								
ZALV	**Zalesovo Beam**	**41.37**	**313**		P	**P**	**01**	**50 05.0**	**-1.3**
	0.5nm,0.4s,baz=96,slow=12,SNR=4.6								
ZALV	**Zalesovo Beam**	**41.37**	**313**		P	**P**	**01**	**50 05.6**	**-0.6**
KURK	**Kurchatov**	**45.25**	**309**		P	**P**	**01**	**50 36.2**	**-1.3**
KURBB	**Kurchatov Arra**	**45.31**	**309**		P	**P**	**01**	**50 36.2**	**-1.8**
	1.5nm,0.6s,baz=84,slow=7.8,SNR=3.9								
BPAW	**Bear Paw Mtn.**	**49.41**	**33**		P	**P**	**01**	**51 11.4**	**+1.7**
RND	**Reindeer**	**50.38**	**34**		P	**P**	**01**	**51 18.1**	**+1.0**
MDM	**Murphy Dome**	**50.59**	**32**		P	**P**	**01**	**51 20.2**	**+1.6**
MDM					IAmb	IAmb	01	51 20.6	
	comp=Z,3.1nm,0.7s								
ILAR	**Eielson Array**	**51.17**	**32**		P	**P**	**01**	**51 23.4**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=279,slow=5.8,SNR=9.6								
SCRK	**Sand Creek**	**52.50**	**33**		P	**P**	**01**	**51 33.7**	**+0.8**
K27K	**Chicken**	**53.32**	**33**		P	**P**	**01**	**51 40.3**	**+1.4**
K27K					IAmb	IAmb	01	51 47.5	
	comp=Z,1.9nm,1.0s								
BCAR	**Beaver Creek A**	**53.60**	**34**		P	**P**	**01**	**51 42.6**	**+1.6**
EPYK	**Eagle Plains**	**55.16**	**29**		P	**P**	**01**	**51 54.0**	**+1.7**
INK	**Inuvik**	**55.98**	**27**		P	**P**	**01**	**51 57.9**	**0.0**
	comp=Z,2.2nm,1.0s,baz=294,slow=5.6,SNR=6.5								
INK	**Inuvik**	**55.98**	**27**		P	**P**	**01**	**51 58.4**	**+0.5**
INK					IAmb	IAmb	01	51 59.2	
	comp=Z,2.3nm,0.9s							

YOJ	Yonaguni jima	0.66	53	Pn	Pb	01 43 09.6	-1.5
EWUT	Wuta	0.71	303	⇓P	Pb	01 43 10.0	-1.9
	baz=305						
EWUT				eS	Sb	01 43 21.8	+0.5
	baz=305						
ENA	Nanau	0.73	300	⇓iP	Pb	01 43 10.4	-1.8
	baz=302						
ENA				S	Sb	01 43 22.1	+0.3
	baz=302						
HWA	Hwalien	0.76	264	P	Pb	01 43 10.5	-2.2
	baz=266						
HWA				eS	Sb	01 43 22.6	-0.1
	baz=266						
TWD	Chiawan	0.76	272	iP	Pb	01 43 10.4	-2.4
	baz=274						
TWD				S	Sb	01 43 21.3	-1.5
	baz=274						
TWC	Suao	0.77	316	⇓iP	Pb	01 43 10.7	-2.1
	baz=318						
TWC				eS	Sb	01 43 23.1	+0.3
	baz=318						
NACB	Ninganchiao	0.77	279	⇑iP	Pb	01 43 10.7	-2.2
	baz=281						
NACB				eS	Sn	01 43 24.4	+0.6
	baz=281						
NACB	Ninganchiao	0.77	279	Pn	Pb	01 43 10.8	-2.1
NDS	Dongshan	0.87	311	⇓iP	Pn	01 43 12.8	-1.6
	baz=313						
NDS				eS	Sn	01 43 27.1	+1.0
	baz=313						
ETLH	Xiulin Townshi	0.88	280	⇑iP	Pn	01 43 12.3	-2.3
	baz=282						
ETLH				eS	Sb	01 43 25.7	-0.5
	baz=282						
EGS		0.91	330	⇓iP	Pn	01 43 13.8	-1.1
	baz=331						
EGS				eS	Sn	01 43 28.8	+1.8
	baz=331						
ILA	Ilan	0.94	319	eP	Pn	01 43 14.2	-1.2
	baz=320						
ILA				eS	Sn	01 43 29.9	+2.0
	baz=320						
ESL	Shilin	0.95	255	P	Pn	01 43 12.8	-2.6
	baz=257						
ESL				eS	Sb	01 43 24.9	-3.1
	baz=257						
TWE	Neicheng	0.96	314	⇓iP	Pn	01 43 14.5	-1.1
	baz=315						
TWE				eS	Sb	01 43 29.5	+1.1
	baz=315						
NTC	Toucheng	0.96	325	⇑iP	Pn	01 43 14.6	-1.1
	baz=326						
NTC				eS	Sb	01 43 29.4	+0.9
	baz=326						
ENTT	Nioudou	0.98	306	⇑iP	Pn	01 43 14.7	-1.2
	baz=308						
ENTT				eS	Sn	01 43 28.0	-0.9
	baz=308						
EGFH	Guangfu	1.00	247	iP	Pn	01 43 13.5	-2.7
	baz=249						
EGFH				eS	Sn	01 43 26.5	-2.8
	baz=249						
NDT	Datong Townshi	1.00	303	iP	Pn	01 43 14.9	-1.3
	baz=304						
NDT				eS	Sb	01 43 30.2	+0.7
	baz=304						
NNSB	Datong	1.03	291	⇑P	Pn	01 43 15.1	-1.6
	baz=293						
NNSB				eS	Sb	01 43 31.6	+1.2
	baz=293						
NNSH	Datong	1.03	291	⇑iP	Pn	01 43 15.0	-1.6
	baz=293						
NNSH				eS	Sb	01 43 31.5	+1.1
	baz=293						
TWB1	Santiao Chiao	1.03	337	⇑iP	Pn	01 43 15.3	-1.3
	baz=338						
TWB1				eS	Sb	01 43 31.4	+1.0
	baz=338						
NNS	Nan Shan	1.04	292	P	Pn	01 43 15.3	-1.6
	baz=293						
NNS				eS	Sb	01 43 31.9	+1.1
	baz=293						
TIPB	Shuangxi	1.06	329	⇑iP	Pn	01 43 15.9	-1.2
	baz=329						
TIPB				eS	Sb	01 43 32.7	+1.3
	baz=329						
WHF	Hehuan Shan	1.07	275	iP	Pn	01 43 15.3	-2.2
	baz=276						
WHF				eS	Sn	01 43 30.2	-1.5
	baz=276						
HGSD	Ruisui	1.08	239	⇓iP	Pn	01 43 14.3	-3.0
	baz=240						
HGSD				eS	Sn	01 43 29.0	-2.4
	baz=240						
FUSS	Fushou	1.10	280	⇑P	Pn	01 43 16.0	-1.8
	baz=282						
FUSS				eS	Sb	01 43 33.1	+0.4
	baz=282						
NWLT	Wulai	1.11	310	P	Pn	01 43 16.8	-0.9
	baz=311						
NWLT				eS	Sb	01 43 34.3	+1.6
	baz=311						
YHNB	Yeheng	1.14	303	⇑P	Pn	01 43 17.1	-1.2
	baz=304						
YHNB				eS	Sb	01 43 34.4	+0.8
	baz=304						
YHNB	Yeheng	1.14	303	Pn	Pn	01 43 17.0	-1.2
CHGB	Renai	1.15	270	eP	Pn	01 43 16.6	-1.9
	baz=272						
CHGB				eS	Sn	01 43 33.1	-0.2
	baz=272						
OWD	Renai	1.15	265	⇓iP	Pn	01 43 16.3	-2.1
	baz=267						
OWD				eS	Sn	01 43 33.5	+0.1
	baz=267						
NSK	Sanguang	1.16	302	⇑P	Pn	01 43 17.2	-1.2
	baz=304						
NSK				eS	Sb	01 43 35.3	+1.2
	baz=304						
TWT	Tachien	1.16	280	eP	Pn	01 43 17.6	-1.0
	baz=281						
TWT				eS	Sb	01 43 35.2	+0.8
	baz=281						
NWF	Wu-fen Shan	1.17	330	⇑P	Pn	01 43 17.7	-1.0
	baz=330						
NWF				eS	Sb	01 43 36.6	+2.1
	baz=330						
WFSB	Wu-fen Shan	1.17	330	⇑P	Pn	01 43 17.6	-0.9
	baz=330						
WFSB				eS	Sn	01 43 33.7	+0.2
	baz=330						
TDCB	Techi	1.18	280	eP	Pn	01 43 17.2	-1.5
	baz=281						
TDCB				eS	Sn	01 43 33.5	-0.5
	baz=281						
TWA	Mucha	1.20	320	⇑P	Pn	01 43 18.4	-0.6
	baz=321						
TWA				eS	Sb	01 43 37.0	+1.7
	baz=321						
IRIF	Iriomote-Funau	1.22	77	P	Pn	01 43 18.1	-1.1
VWDT	VWDT	1.22	256	⇓iP	Pn	01 43 17.3	-1.9
	baz=257						
VWDT				eS	Sn	01 43 34.2	-0.5
	baz=257						
NHDH	Xindian Distri	1.22	318	eP	Pn	01 43 18.3	-0.9
	baz=318						
NHDH				eS	Sb	01 43 36.1	+0.2
	baz=318						
YULB	Yu-li	1.23	238	⇓iP	Pn	01 43 16.7	-2.6
	baz=239						
YULB				eS	Sn	01 43 32.4	-2.7
	baz=239						
YULB	Yu-li	1.23	238	Pn	Pn	01 43 16.8	-2.6
EYUL	Yuli	1.24	235	⇓P	Pn	01 43 16.8	-2.7
	baz=237						
EYUL				eS	Sn	01 43 34.6	-0.8
	baz=237						
TNOU	National Taiwa	1.24	331	⇑P	Pn	01 43 18.2	-1.3
	baz=332						
TNOU				eS	Sn	01 43 33.5	-1.8
	baz=332						
HATJ	Hateruma jima	1.25	90	P	Pn	01 43 18.6	-1.1
TATO	Taipei	1.25	317	⇑P	Pn	01 43 19.1	-0.6
	baz=318						
TATO				eS	Sb	01 43 38.3	+1.4
	baz=318						
TATO	Taipei	1.25	317		Pn	01 43 19.0	-0.7
TATO	Taipei	1.25	317	P	Pb	01 43 23.3	+2.3

TAP1	Taipei	1.28	320	eP	Pn	01 43 19.7	-0.3
	baz=320						
TAP	Taipei	1.29	319	eP	Pn	01 43 19.4	-0.7
	baz=320						
BACT	New Taipei Cit	1.30	316	eP	Pb	01 43 21.3	-0.5
	baz=317						
BACT				eS	Sb	01 43 40.2	+2.1
	baz=317						
YM01	YM01	1.34	324	⇑eP	Pn	01 43 19.8	-1.1
	baz=325						
NWRT	Kuosheng	1.34	329	eP	Pn	01 43 21.1	+0.3
	baz=329						
NWRT				eS	Sb	01 43 39.5	+0.2
	baz=329						
FULB	Fuli	1.35	231	eP	Pn	01 43 18.0	-3.0
	baz=232						
FULB				eS	Sn	01 43 36.0	-2.0
	baz=232						
WPL	Puli Township	1.35	268	eP	Pn	01 43 19.4	-1.5
	baz=270						
YM10	YM10	1.35	324	eP	Pn	01 43 19.9	-1.2
	baz=325						
YM11	YM11	1.35	325	eP	Pn	01 43 20.0	-1.1
	baz=325						
YM05	YM05	1.35	325	⇑eP	Pn	01 43 19.9	-1.2
	baz=325						
YM05				eS	Sb	01 43 39.9	+0.1
	baz=325						
YM04	YM04	1.36	323	⇑eP	Pn	01 43 20.0	-1.2
	baz=324						
YM04				eS	Sb	01 43 40.9	+0.9
	baz=324						
YM08	YM08	1.36	326	eP	Pn	01 43 19.8	-1.4
	baz=326						
YM08				eS	Sb	01 43 39.7	-0.2
	baz=326						
CHKT	Chengkung	1.37	226	P	Pn	01 43 18.0	-3.2
	baz=227						
CHKT				eS	Sn	01 43 35.1	-3.3
	baz=227						
WHP	Taichung City	1.38	279	eP	Pn	01 43 20.4	-1.1
	baz=279						
WHP				eS	Sn	01 43 38.5	-0.3
	baz=279						
DPDB	Guoxing	1.38	269	eP	Pn	01 43 20.3	-1.1
	baz=270						
DPDB				eS	Sn	01 43 38.8	0.0
	baz=270						
SSLB	Suanglung	1.38	259	⇓P	Pn	01 43 19.5	-1.9
	baz=260						
SSLB				eS	Sn	01 43 37.2	-1.6
	baz=260						
SSLB	Suanglung	1.38	259		Pn	01 43 19.9	-1.6
TWS1	Kuangyinshan	1.39	319	eP	Pn	01 43 21.1	-0.5
	baz=319						
TWS1				eS	Sb	01 43 43.8	+3.1
	baz=319						
WCS	Beigang Elemen	1.39	270	eP	Pn	01 43 20.5	-1.0
	baz=271						
WCS				eS	Sn	01 43 38.7	-0.3
	baz=271						
NTY	Taoyuan	1.40	312	eP	Pn	01 43 20.7	-0.9
	baz=313						
ANP	Anpu	1.40	324	eP	Pn	01 43 21.3	-0.4
	baz=324						
ANP				eS	Sb	01 43 40.6	-0.4
	baz=324						
NJD	Zhudong	1.40	299	eP	Pb	01 43 22.8	-0.7
	baz=300						
NJD				eS	Sb	01 43 43.4	+2.4
	baz=300						
SMLT	Sun Moon Lake	1.41	263	⇓eP	Pn	01 43 20.6	-1.3
	baz=264						
SMLT				eS	Sn	01 43 40.1	+0.4
	baz=264						
LIOB	Emei	1.42	295	⇑eP	Pn	01 43 21.9	0.0
	baz=296						
LIOB				eS	Sb	01 43 42.8	+1.2
	baz=296						
NTST	Danshui	1.42	321	eP	Pn	01 43 21.2	-0.8
	baz=322						
NTST				eS	Sb	01 43 42.5	+1.0
	baz=322						
NSTT	Nanjuang	1.43	294	eP	Pn	01 43 21.9	-0.1
	baz=295						
NSTT				eS	Sb	01 43 42.7	+1.0
	baz=295						
TWY	Chenhua	1.43	328	eP	Pn	01 43 21.4	-0.7
	baz=329						
TWY				eS	Sb	01 43 42.3	+0.4
	baz=329						
TYC	Yuchr	1.45	264	eP	Pn	01 43 21.1	-1.2
	baz=265						
TYC				eS	Sb	01 43 41.8	-0.6
	baz=265						
JKRS	Kuro-shima	1.45	83	P	Pn	01 43 21.7	-0.7
JKRS				eS	Sn	01 43 39.7	-0.8
NCU	National Centr	1.45	309	eP	Pn	01 43 21.6	-0.8
	baz=310						
NCUH	Zhongli	1.45	309	eP	Pn	01 43 21.7	-0.7
	baz=309						
NCUH				eS	Sb	01 43 44.3	+1.8
	baz=309						
YUS	Yu-Shan	1.47	248	eP	Pn	01 43 21.1	-2.0
	baz=249						
YUS				eS	Sn	01 43 38.5	-3.2
	baz=249						
HSN1	Hsinchu	1.48	299	eP	Pn	01 43 21.7	-1.1
	baz=300						
WHYT	Xinyi Township	1.49	256	eP	Pn	01 43 23.2	+0.3
	baz=257						
EDH	Donghe	1.50	224	⇓P	Pn	01 43 19.7	-3.3
	baz=225						
EDH				eS	Sn	01 43 38.4	-3.2
	baz=225						
SBCB	Hsinchu	1.51	299	⇑eP	Pn	01 43 23.0	-0.2
	baz=300						
SBCB				eS	Sb	01 43 43.6	-0.5
	baz=300						
HSN	Hsinchu	1.52	299	eP	Pn	01 43 21.9	-1.5
	baz=302						
HSN				eS	Sb	01 43 46.5	+1.9
	baz=302						
TWQ1	Liyutan	1.54	281	eP	Pn	01 43 23.0	-0.6
	baz=282						
TWQ1				eS	Sb	01 43 46.8	+1.7
	baz=282						
NJN	Zhunan	1.56	294	eP	Pn	01 43 23.6	-0.1
	baz=295						
NJN				eS	Sb	01 43 46.6	+1.2
	baz=295						
ELDTW	Lidau	1.56	237	eP	Pn	01 43 20.9	-3.1
	baz=237						
ELDTW				eS	Sn	01 43 40.8	-2.6
	baz=237						
NSY	Sanyi	1.57	284	eP	Pn	01 43 24.3	+0.3
	baz=284						
NSY				eS	Sb	01 43 47.2	+1.4
	baz=284						
NHW	Xinwu Township	1.58	307	eP	Pn	01 43 23.3	-0.8
	baz=308						
NHW				eS	Sb	01 43 45.2	-0.8
	baz=308						
WJS	Zhushan	1.58	262	eP	Pn	01 43 24.1	-0.1
	baz=263						
WJS				eS	Sb	01 43 46.3	+0.2
	baz=263						
WWF	Wufeng	1.58	270	eP	Pn	01 43 24.7	+0.5
	baz=271						
WWF				eS	Sb	01 43 47.3	+1.0
	baz=271						
ALS	Alishan	1.59	250	⇓eP	Pn	01 43 23.2	-1.3
	baz=251						
ALS				eS	Sn	01 43 43.0	-1.2
	baz=251						
JIJ	Ishigaki jima	1.59	79	⇑P	Pn	01 43 22.9	-1.4
PCYT	Pengchaiyu	1.60	348	P	Pn	01 43 23.5	-0.9
	baz=348						
PCYT				eS	Sn	01 43 45.0	+0.8
	baz=348						
TCU	Taichung	1.61	274	eP	Pn	01 43 24.7	+0.1
	baz=274						
WNT	Mingjian	1.61	264	eP	Pn	01 43 24.3	-0.2
	baz=265						
WNT				eS	Sb	01 43 48.2	+1.3
	baz=265						
LDUT	Ludao	1.64	213	P	Pn	01 43 21.5	-3.4
	baz=214						

LDUT				eS	Sn	01 43 41.5	-3.6
	baz=214						
LONT	Longtian	1.66	226	eP	Pn	01 43 22.4	-2.8
	baz=227						
LONT				eS	Sn	01 43 43.9	-1.7
	baz=227						
WDJ	Dajia District	1.66	280	eP	Pn	01 43 25.3	0.0
	baz=281						
WDJ				eS	Sb	01 43 49.2	+0.7
	baz=281						
CHN5	Tsauling	1.67	254	⇓eP	Pn	01 43 24.8	-0.6
	baz=255						
WCHH	Zhanghua	1.71	271	eP	Pn	01 43 25.5	-0.5
	baz=272						
WCHH				eS	Sb	01 43 50.1	+0.2
	baz=272						
TWGBT	Beinan	1.75	225	⇓eP	Pn	01 43 23.5	-3.0
	baz=226						
TWGBT				eS	Sn	01 43 45.1	-2.8
	baz=226						
WGK	Gukeng	1.75	258	eP	Pn	01 43 26.3	-0.3
	baz=259						
TTN	Taitung	1.75	223	eP	Pn	01 43 25.4	-1.2
	baz=223						
TWG	Pinlang	1.75	226	eP	Pn	01 43 23.7	-2.8
	baz=226						
TWG				eS	Sn	01 43 46.1	-1.9
	baz=226						
TWG	Pinlang	1.75	226		Pn	01 43 23.7	-2.8
STYH	Taoyuan	1.76	240	⇓eP	Pn	01 43 25.0	-1.6
	baz=241						
STYH				eS	Sn	01 43 47.6	-0.4
	baz=241						
WDLH	Douliu	1.77	258	eP	Pn	01 43 26.8	0.0
	baz=259						
STYT	Tauyuan	1.78	240	⇓eP	Pn	01 43 25.4	-1.5
	baz=241						
JISG	Ishigakijimahi	1.79	73	⇑P	Pn	01 43 25.6	-1.5
TPUB	Ta-pu	1.82	246	eP	Pn	01 43 26.1	-1.3
	baz=247						
TPUB				eS	Sb	01 43 51.7	-1.3
	baz=247						
TPUB	Ta-pu	1.82	246	Pn	Pn	01 43 27.0	-0.4
CHN4	Tsaushan	1.83	248	eP	Pn	01 43 27.1	-0.5
	baz=248						
CHN4				eS	Sb	01 43 52.0	-1.3
	baz=248						
WTP	Ta-pu	1.85	245	eP	Pn	01 43 27.2	-0.8
	baz=245						
WTP				eS	Sn	01 43 51.8	+1.3
	baz=245						
CHN2	Minshiung	1.87	254	eP	Pn	01 43 28.9	+0.8
	baz=255						
CHN2				eS	Sb	01 43 54.8	+0.4
	baz=255						
WRL	Guolierlin Hig	1.89	266	eP	Pn	01 43 28.4	+0.1
	baz=266						
WRL				eS	Sn	01 43 52.6	+1.4
	baz=266						
WTK	Tuku	1.91	259	eP	Pn	01 43 28.9	+0.2
	baz=260						
WTK				eS	Sb	01 43 55.0	-0.5
	baz=260						
CHY	Chiayi	1.92	254	eP	Pn	01 43 29.5	+0.6
	baz=254						
CHY				eS	Sb	01 43 54.6	-1.3
	baz=254						
TWK	Hsinying	1.95	247	eP	Pn	01 43 28.7	-0.6
	baz=247						
TWK				eS	Sn	01 43 53.1	+0.3
	baz=247						
CHN1	Nanshi	1.95	244	eP	Pn	01 43 29.1	-0.2
	baz=245						
SLGT	Liugui	1.95	237	eP	Pn	01 43 29.6	+0.3
	baz=238						
SGST	Jiashian	1.96	241	eP	Pn	01 43 28.2	-1.1
	baz=241						
SGST				eS	Sb	01 43 56.2	-0.7
	baz=241						
SNST	Tainan City	1.96	245	eP	Pn	01 43 29.0	-0.4
	baz=246						
WTCT	Ta-ch'eng	1.98	265	eP	Pn	01 43 29.6	0.0
	baz=265						
WTCT				eS	Sb	01 43 56.6	-0.9
	baz=265						
ECL	Taimali	1.99	223	eP	Pn	01 43 26.6	-3.2
	baz=224						
ECL				eS	Sn	01 43 50.8	-3.0
	baz=224						
WMLT	Mailiao	2.04	263	eP	Pn	01 43 31.6	+1.1
	baz=264						
WMLT				eS	Sb	01 43 57.6	-1.7
	baz=264						
WSF	Szhu	2.07	259	eP	Pb	01 43 33.0	-1.9
	baz=259						
WSF				eS	Sb	01 43 58.5	-1.6
	baz=259						
ICHU	Yijhu	2.09	251	eP	Pn	01 43 30.9	-0.3
	baz=252						
ICHU				eS	Sn	01 43 58.0	+1.7
	baz=252						
SSD	Sandimen	2.11	232	eP	Pn	01 43 29.6	-1.8
	baz=232						
SSD				eS	Sn	01 43 56.8	+0.1
	baz=232						
TSMG	Majia	2.12	231	eP	Pn	01 43 29.8	-1.8
	baz=232						
TSMG				eS	Sn	01 43 58.5	+1.5
	baz=232						
SCST	Cishan	2.13	237	eP	Pn	01 43 31.8	+0.1
	baz=238						
SCST				eS	Sb	01 44 00.7	-1.2
	baz=238						
CHN3	Shinhua	2.13	243	eP	Pn	01 43 32.4	+0.6
	baz=244						
CHN3				eS	Sb	01 44 01.6	-0.4
	baz=244						
JTJ	Tarama	2.15	74	P	Pn	01 43 31.1	-0.9
CHN8	Yiju	2.15	251	eP	Pn	01 43 31.9	-0.1
	baz=252						
CHN8				eS	Sb	01 44 00.5	-2.1
	baz=252						
LAY	Lan-yu	2.17	202	eP	Pn	01 43 29.8	-2.5
	baz=202						
LAY				eS	Sn	01 43 55.0	-3.2
	baz=202						
MASBT	Mashibuluo	2.19	229	eP	Pn	01 43 30.6	-2.0
	baz=230						
MASBT				eS	Sn	01 43 58.8	0.0
	baz=230						
TAW	Tawu	2.20	220	eP	Pn	01 43 30.3	-2.4
	baz=220						
EAST	Anshuo	2.21	221	eP	Pn	01 43 30.1	-2.8
	baz=222						
TWM1	Shoushan	2.22	237	eP	Pn	01 43 34.2	+1.3
	baz=237						
SGLT	Jiouru	2.22	234	eP	Pn	01 43 31.9	-1.1
	baz=234						
SCLT	Jiali	2.23	247	eP	Pn	01 43 35.1	+2.0
	baz=248						
TSPT	Pingtung City	2.25	233	eP	Pn	01 43 35.5	+2.2
	baz=233						
TSPT				eS	Sb	01 44 05.7	+0.4
	baz=233						
TAI1	Yung-k'ang	2.26	244	eP	Pn	01 43 35.7	+2.2
	baz=244						
TAI1				eS	Sb	01 44 04.0	-1.7
	baz=244						
TAI	Tainan	2.31	243	eP	Pn	01 43 35.2	+1.0
	baz=244						
SSPT	Xinbi	2.32	228	eP	Pn	01 43 33.9	-0.5
	baz=228						
SSPT				eS	Sb	01 44 06.4	-1.0
	baz=228						
SNJT	Kaohsiung City	2.32	236	eP	Pn	01 43 35.1	+0.7
	baz=237						
SNJT				eS	Sn	01 44 02.0	0.0
	baz=237						
SCZT	Fangliau	2.37	225	eP	Pn	01 43 33.3	-1.7
	baz=225						
SCZT				eS	Sn	01 44 02.7	-0.4
	baz=225						
SLIU	Shizi	2.37	220	eP	Pn	01 43 32.5	-2.5
	baz=220						
SLIU				eS	Sn	01 44 01.0	-2.2
	baz=220						
KAU	Kaohsiung	2.45	233	eP	Pn	01 43 37.4	+1.3
	baz=233						

WLCH **Liuqiu** 2.54 228 *e*P Pn 01 43 39.2 +1.8
baz=229
TWP **Hsiaoliuchiu** 2.56 229 *e*P Pn 01 43 38.0 +0.4
baz=229
HEN **Hengchun** 2.57 218 *e*P Pn 01 43 36.3 -1.5
baz=218
HEN *e*S Sn 01 44 07.5 -0.7
baz=218
TSEB **Hengchuen, Pin** 2.57 214 *e*P Pn 01 43 36.4 -1.4
baz=215
TSEB *e*S Sn 01 44 08.9 +0.8
baz=215
TWKBT **Hengchun** 2.58 216 *e*P Pn 01 43 36.0 -2.0
baz=216
TWKBT *e*S Sn 01 44 08.7 +0.3
baz=216
TWK1 **Hengchun** 2.58 216 *e*P Pn 01 43 36.2 -1.8
baz=216
TWK1 *e*S Sn 01 44 07.2 -1.3
baz=216
SNW **Nanwan** 2.60 217 *e*P Pn 01 43 38.2 0.0
baz=217
JIRB **Irabujima** 2.61 72 P Pn 01 43 38.3 -0.1
WDGT **Dungji** 2.66 253 *e*P Pn 01 43 37.2 -1.9
baz=253
WDGT *e*S Sn 01 44 06.9 -3.5
baz=253
PHUB **P'eng-hu** 2.67 259 *e*P Pn 01 43 37.8 -1.4
baz=259
PHUB *e*S Sn 01 44 09.1 -1.6
baz=259
PNG **Penghu** 2.68 260 *e*P Pn 01 43 37.9 -1.4
baz=260
PNG *e*S Sn 01 44 10.4 -0.4
baz=260
JIKM **Ikemajima** 2.71 71 P Pn 01 43 40.1 +0.5
JMJ **Miyako jima 2** 2.71 73 *e*P Pn 01 43 40.0 +0.2
baz=73
JMJ *e*S Sb 01 44 15.6 -3.2
baz=73
JMJ2 **Miyako jima3** 2.73 75 P Pn 01 43 39.6 -0.3
JOGS **Gusukube** 2.80 75 P Pn 01 43 40.8 -0.1
VWUC **VWUC** 2.87 290 *e*P Pn 01 43 40.3 -1.7
baz=289
VWUC *e*S Sn 01 44 14.8 -0.8
baz=289
VCHM **Qimei** 2.88 254 *e*P Pn 01 43 41.1 -1.0
baz=254
VCHM *e*S Sn 01 44 15.0 -0.8
baz=254
MATB **Ma-tsu** 3.07 313 *e*P Pn 01 43 42.9 -1.7
baz=313
MSUT **Lienchiang** 3.10 313 *e*P Pn 01 43 43.6 -1.5
baz=313
MSUT *e*S Sn 01 44 21.1 0.0
baz=313
QZH **Quanzhou** 3.61 285⇑*i*Pn Pn 01 43 49.9 -2.1
QZH Sn Sn 01 44 31.8 -1.9
QZH smax smax
comp=N,22μm,1.7s
QZH smax smax
comp=E,14μm,1.4s
QZH LR LR
comp=N,511μm,14.2s
QZH LR LR
comp=E,419μm,15.4s
QZH LR LR
comp=Z,463μm,16.1s
BBP **Basco** 3.62 187 *e*P Pn 01 43 48.1 -4.2
KNM **Kinmen** 3.67 276 *e*P Pn 01 43 52.8 0.0
baz=276
KNM *e*S Sn 01 44 36.5 +1.3
baz=276
KNMB **Chin-men Tao** 3.71 277 *e*P Pn 01 43 51.6 -1.8
baz=277
KNMB *e*S Sn 01 44 33.9 -2.4
baz=277
KNMB **Chin-men Tao** 3.71 277 Pn 01 43 51.9 -1.6
SGCP **Mt. Cagua** 5.80 184 *e*P Pn 01 44 22.4 +0.2
JOW **Kunigami** 5.96 61 Pn Pn 01 44 23.0 -1.4
118nm,0.3s,baz=139,slow=18,SNR=37
JOW Sn Sn 01 45 30.7 -1.0
baz=258,slow=25,SNR=1.6
JOW **Kunigami** 5.96 61 *e*P Pn 01 44 24.1 -0.3
baz=62
JOW **Kunigami** 5.96 61 Pn 01 44 24.0 -0.4
VDOS **Pratas Island** 6.24 239 *e*P Pn 01 44 28.8 +0.5
baz=238
APYP **Conner** 6.26 190 *e*P Pn 01 44 25.8 -2.8
CVP **Callao Caves** 6.35 185⇓*i*P Pn 01 44 30.0 +0.2
CVP *i*S Sn 01 45 48.6 +7.3
SZP **Santa** 6.73 196 Pn Pn 01 44 35.7 +0.7
SSE **Sheshan** 7.10 351 Pn Pn 01 44 40.9 +0.9
SSE Sn Sn 01 46 02.8 +3.1
SSE smax smax
comp=N,2μm,1.4s
SSE smax smax
comp=E,3μm,1.5s
SSE **Sheshan** 7.10 351 Pn 01 44 40.0 0.0
BCP **Baguio City** 7.79 193⇓*i*P Pn 01 44 52.9 +3.1
HKC **Hong Kong Obse** 7.80 259⇑P Pn 01 44 54.0 +4.4
JMZ **Minamidaito 2** 8.17 76 Pn 01 44 53.8 -0.9
GZH **Guangzhou** 8.39 265 P Pn 01 44 55.0 -2.8
GZH S Sn 01 46 28.3 -3.4
GZH smax smax
comp=E,8μm,1.3s
MCO **Taipa Grande** 8.39 258 P Pn 01 45 04.0 +6.2
NJ2 **Nanjing** 8.57 339⇓*i*P Pn 01 44 59.3 -0.9
NJ2 S Sn 01 46 35.3 -0.6
NJ2 pmax pmax
comp=Z,45nm,0.7s
NJ2 pmax pmax
comp=Z,940nm,3.5s
NJ2 smax smax
comp=N,7μm,1.3s
NJ2 smax smax
comp=E,11μm,1.7s
NJ2 LR LR
comp=N,645μm,13.2s
NJ2 LR LR
comp=E,407μm,13.2s
NJ2 LR LR
comp=Z,784μm,14.2s
QVP **Quezon City--P** 9.48 188 *e*P Pn 01 45 17.1 +4.3
WHN **Wuhan** 9.66 314 ⇓P Pn 01 45 15.8 +0.6
WHN pP 01 45 23.0
WHN S Sn 01 47 03.8 +1.0
WHN LR LR
comp=N,413μm,11.5s
WHN LR LR
comp=E,340μm,9.8s
WHN LR LR
comp=Z,797μm,16.1s
JCNP **Jose Panganiba** 9.72 178 *e*P Pn 01 45 16.6 +0.5
MACP **Maragondon, Ca** 9.88 190 *e*P Pn 01 45 17.8 -0.4
LQP **Lukban** 9.93 185⇑*e*P Pn 01 45 20.3 +1.2
TGY **Tagaytay City** 10.00 188 Pn Pn 01 45 23.1 +3.1
59nm,0.3s,baz=348,slow=3.3,SNR=7.7
TGY LR LR 01 49 25.2
comp=Z,168μm,21.2s,baz=358,slow=38
TGY **Tagaytay City** 10.00 188⇓*e*P Pn 01 45 26.9 +7.0
GQP **Guinayangan** 10.10 180⇓*e*P Pn 01 45 22.5 +1.3
JSU **Suzuyama** 10.27 42 Pn 01 45 25.4 +1.8
SCSP **San Jose Seism** 10.40 174 *e*P Pn 01 45 24.2 -1.2
UBP **Lubang** 10.47 192 *e*P Pn 01 45 25.8 -0.6
PGP **Puerto Galera** 10.59 188⇓*e*P Pn 01 45 28.8 +0.8
SJMP **San Jose** 11.60 186 *e*P Pn 01 45 44.7 +2.9
JNU **Nakatsue** 11.68 37 Pn Pn 01 45 40.2 -2.7
0.3nm,0.3s,baz=295,slow=2.0,SNR=1.8
JNU LR LR 01 50 35.5
comp=Z,217μm,18.6s,baz=216,slow=40
JNU **Nakatsue** 11.68 37 Pn 01 45 46.0 +3.1
JTU **Tsushima** 12.07 29 Pn 01 45 50.4 +2.3
RCP **Roxas** 12.43 179⇑*e*P Pn 01 45 57.0 +3.8
QIZ **Qiongzhong** 12.73 249 P Pn 01 45 59.3 +2.0
QIZ S Sn 01 48 18.8 +0.6
QIZ pmax pmax
comp=Z,49nm,1.5s
QIZ pmax pmax
comp=Z,3μm,7.7s
QIZ LR LR
comp=N,110μm,19.1s
QIZ LR LR
comp=E,63μm,16.7s
QIZ LR LR
comp=Z,104μm,17.5s

QIZ **Qiongzhong** 12.73 249 Pn Pn 01 46 00.4 +3.1
TIA **Tai'an** 12.95 340 P Pn 01 46 04.8 +4.6
TIA S Sn 01 48 32.1 +8.7
TIA pmax pmax
comp=Z,150nm,2.0s
TIA pmax pmax
comp=Z,22μm,9.8s
TIA LR LR
comp=N,316μm,13.5s
TIA LR LR
comp=E,128μm,14.1s
TIA LR LR
comp=Z,527μm,17.2s
TJN **Taejon** 12.99 18*ce*P Pn 01 45 59.5 -1.3
ENH **Enshi** 13.08 301 Pn Pn 01 46 03.9 +2.0
ENPP **El Nido** 13.10 193 *e*P Pn 01 46 01.3 -0.9
OCLP **Ormoc** 13.10 171 *e*P P 01 46 10.2 -2.1
INCN **Inchon** 13.86 14 P Pn 01 46 15.5 +2.9
INCN **Inchon** 13.86 14 Pn 01 46 15.5 +2.9
INCN **Inchon** 13.86 14 P P 01 46 16.8 -3.8
INCN P P 01 46 16.8 -3.8
INCN S Sn 01 48 51.1 +5.5
INCN S Sn 01 48 51.1 +5.5
JMN **Monobe** 13.89 44 Pn Pn 01 46 09.9 -3.2
MSLP **Maasin** 14.04 170 *e*P Pn 01 46 18.8 +3.6
KSAR **Wonju Array Be** 14.14 18 P P 01 46 21.1 -2.5
KSAR **Wonju Array Be** 14.14 18 P P 01 46 21.1 -2.5
CNOP **Candoni, Negro** 14.15 179 *e*P Pn 01 46 17.8 +1.1
KSRS **Korea Array** 14.16 18 Pn Pn 01 46 13.6 -3.0
0.1nm,0.3s,baz=345,slow=22,SNR=2.8
KSRS LR LR 01 52 27.7
comp=Z,196μm,18.9s,baz=189,slow=41
KS19 **Wonju Array Si** 14.19 18 P Pn 01 46 19.8 +2.8
JHS **Saijyo** 14.32 38 Pn Pn 01 46 17.7 -1.2
GYA **Guiyang** 14.47 283 ⇓P Pn 01 46 23.9 +2.8
GYA sP P 01 46 32.5 +5.0
GYA S Sn 01 48 59.9 -0.7
GYA pmax pmax
comp=Z,38nm,1.6s
GYA pmax pmax
comp=Z,7μm,7.9s
GYA LR LR
comp=N,117μm,14.0s
GYA LR LR
comp=E,140μm,14.1s
GYA LR LR
comp=Z,197μm,15.5s
GLSP **General Luna,** 14.63 165 *e*P Pn 01 46 22.7 -0.5
DL2 **Dalian** 14.82 358⇑*i*P P 01 46 28.8 -2.4
DL2 S Sn 01 49 17.3 +8.4
DL2 pmax pmax
comp=Z,530nm,1.2s
DL2 pmax pmax
comp=Z,28μm,8.3s
DL2 LR LR
comp=N,276μm,14.6s
DL2 LR LR
comp=E,80μm,13.6s
DL2 LR LR
comp=Z,348μm,14.4s
BUTP **Butuan** 15.31 168 *e*P Pn 01 46 34.1 +1.8
XAN **Xi'an** 15.43 313 ⇑P Pn 01 46 34.4 +0.6
XAN pP pP 01 46 43.5 -1.6
XAN sP pwP 01 46 47.0 -0.3
XAN pmax pmax
comp=Z,580nm,1.8s
XAN pmax pmax
comp=Z,22μm,9.3s
XAN LR LR
comp=N,191μm,16.3s
XAN LR LR
comp=E,116μm,20.6s
XAN LR LR
comp=Z,265μm,17.5s
XAN **Xi'an** 15.43 313 P Pn 01 46 34.7 +0.9
XAN pmax pmax
comp=Z,3μm,2.0s
XAN **Xi'an** 15.43 313 Pn 01 46 34.7 +0.9
CGP **Cagayan de Oro** 15.67 172⇓*e*P P 01 46 50.4 +10
BATP **Bataraza** 15.81 197 *e*P Pn 01 46 37.3 -1.5
JWT **Wachi** 15.86 42 Pn Pn 01 46 37.8 -1.6
TIY **Taiyuan** 16.07 330 *e*P P 01 46 45.5 +0.2
TIY S Sn 01 49 39.6 0.0
TIY pmax pmax
comp=Z,170nm,0.9s
TIY pmax pmax
comp=Z,19μm,5.4s
TIY LR LR
comp=Z,347μm,13.3s
TIY LR LR
comp=Z,112μm,10.1s
TIY LR LR
comp=Z,353μm,14.6s
PAGZ **Pagadian** 16.14 177 *e*P Pn 01 46 41.7 -1.3
BUKP **Musuan** 16.28 171 *e*P P 01 46 47.4 -0.3
BJT **Baijiatuau** 16.77 343 P P 01 46 53.4 +0.6
BJT pmax pmax
comp=Z,3μm,1.9s
BJT **Baijiatuau** 16.77 343 P P 01 46 53.4 +0.6
BJT lAmb lAmb 01 47 25.0
comp=Z,3μm,1.9s
BJI **Beijing** 16.79 343 P P 01 46 53.1 +0.1
BJI pmax pmax
comp=Z,28μm,6.5s
BJI LR LR
comp=Z,96μm,19.5s
BJI LR LR
comp=Z,80μm,17.7s
BJI LR LR
comp=Z,120μm,19.0s
KCP **Kidapawan** 17.14 171⇑*e*P P 01 46 58.6 +1.4
DAV **Davao City (W)** 17.16 169 P P 01 46 58.7 +1.4
comp=Z,43nm,0.3s,baz=265,slow=9.2,SNR=1.4
DAV LR LR 01 53 27.6
comp=Z,111μm,21.2s,baz=9.5,slow=36
DAV **Davao City (W)** 17.16 169 P 01 46 59.4 +2.1
DAV lAmb lAmb 01 47 25.5
comp=Z,2μm,1.8s
DAV **Davao City (W)** 17.16 169 P P 01 46 57.0 -0.3
DAV P P 01 46 57.0 -0.3
JGF **Kuroka** 17.30 45 P Pn 01 46 57.6 0.0
SLVN **Son La** 17.31 265 P P 01 47 00.4 +1.3
SLVN lAmb lAmb 01 47 51.7
comp=Z,1μm,1.9s
JSG **Sagara** 17.31 49 Pn Pn 01 46 57.3 -0.4
MATI **Mati** 17.41 167 *e*P Pn 01 46 57.5 -1.4
SKMP **Bagumbayan, Su** 17.56 173 *e*P P 01 47 02.3 +0.6
JHJ **Hachijo jima 2** 17.69 55 P Pn 01 47 01.3 -1.1
comp=Z,7.8nm,0.3s,baz=219,slow=19,SNR=2.4
JHJ S Sn 01 50 18.7 -0.1
comp=Z,12nm,0.3s,baz=29,slow=15,SNR=1.5
JHJ LR LR 01 53 35.9
comp=Z,57μm,20.9s,baz=264,slow=37
JHJ2 **Mitsune** 17.71 56 P P 01 47 04.6 +1.3
JHJ2 lAmb lAmb 01 47 24.6
comp=Z,2μm,1.0s
SNY **Shenyang** 17.75 3 ⇑P P 01 47 04.3 +0.7
SNY S S 01 50 23.3 -3.1
SNY pmax pmax
comp=Z,33μm,6.4s
SNY LR LR
comp=Z,193μm,11.8s
SNY LR LR
comp=Z,113μm,14.9s
SNY LR LR
comp=Z,292μm,12.9s
DLV **T Lat** 17.90 230 P 01 47 09.4 +3.7
CD2 **Chengdu** 17.91 296 P Pn 01 47 04.0 -1.1
CD2 pP pP 01 47 09.3 -3.1
CD2 S Sn 01 50 18.0 -6.1
CD2 pmax pmax
comp=Z,1μm,1.1s
CD2 pmax pmax
comp=Z,36μm,9.5s
CD2 LR LR
comp=Z,214μm,12.6s
CD2 LR LR
comp=Z,231μm,16.1s
CD2 LR LR
comp=Z,271μm,15.1s
KMI **Kunming** 17.94 277 ⇑P P 01 47 06.3 +0.1
KMI sP pwP 01 47 16.5 -0.4
KMI PP PnPn 01 47 22.8 +5.9
KMI S Sn 01 50 23.3 -1.9
KMI sS sS 01 50 38.8 -2.8

KMI pmax pmax
comp=Z,280nm,2.0s
KMI pmax pmax
comp=Z,17μm,9.2s
KMI LR LR
comp=Z,60μm,9.2s
KMI LR LR
comp=Z,157μm,13.9s
KMI LR LR
comp=Z,173μm,13.1s
KMI **Kunming** 17.94 277 P P 01 47 06.6 +0.4
KMI pmax pmax
comp=Z,502nm,1.8s
KMI **Kunming** 17.94 277 lAmb lAmb 01 47 33.5
comp=Z,1μm,1.5s
JCJ **Chichijima** 18.07 76 P P 01 47 07.2 -0.2
comp=Z,29nm,0.3s,baz=236,slow=1.7,SNR=14
JCJ LR LR 01 53 31.5
comp=Z,86μm,20.5s,baz=262,slow=35
JCJ **Chichijima** 18.07 76 P P 01 47 08.8 +1.5
DDMP **Don Marcelino,** 18.13 169 *e*P Pn 01 47 05.2 -2.6
UBPT **Khong Chiam** 18.19 244 P P 01 47 13.2 +4.5
comp=Z,9μmcomp=Z,123nm,2.1s
UBPT **Khong Chiam** 18.19 244 P P 01 47 12.5 +3.8
MAJO **Matsushiro** 18.42 44*ce*P P 01 47 09.8 -1.3
MAJO **Matsushiro** 18.42 44 P P 01 47 10.3 -0.8
MAT **Matsushiro** 18.42 44 P P 01 47 09.4 -1.7
MAT S Sn 01 50 35.6 -0.7
MJAR **Matsushiro Arr** 18.42 44 P P 01 47 09.6 -1.6
comp=Z,0.8nm,0.3s,baz=238,slow=11,SNR=20
MJAR LR LR 01 54 43.6
comp=Z,100μm,20.9s,baz=230,slow=39
MJAR ScP ScP 01 55 17.1 +2.2
comp=Z,0.1nm,0.3s,baz=234,slow=3.2,SNR=6.4
MJAR **Matsushiro Arr** 18.42 44 ScP 01 55 15.4 +0.6
MJB9 **Matsu-Tunnel** 18.42 44 P P 01 47 09.5 -1.6
KKM **Kota Kinabalu** 18.88 199 Pn 01 47 18.2 +1.0
KKM lAmb lAmb 01 47 33.7
comp=Z,597nm,1.1s
NONG **Nongkai** 18.95 255 P Pn 01 47 22.0 +4.1
comp=Z,21μmcomp=Z,425nm,0.9s
HHC **Hu-ho-hao-te** 19.06 334 *e*P Pn 01 47 19.3 +0.1
HHC PP PnPn 01 47 34.9 +2.8
HHC S Sn 01 50 47.3 -4.6
HHC SS SnSn 01 51 17.1 +11
HHC pmax pmax
comp=Z,180nm,1.4s
HHC pmax pmax
comp=Z,32μm,5.2s
HHC LR LR
comp=Z,357μm,14.9s
HHC LR LR
comp=Z,171μm,16.3s
HHC LR LR
comp=Z,386μm,14.2s
MYLDM **Lahad Datu** 19.15 192 Pn 01 47 24.1 +3.9
MYLDM lAmb lAmb 01 48 22.5
comp=Z,1μm,1.2s
BTO **Baotou** 19.52 331 *e*P Pn 01 47 24.6 0.0
BTO S Sn 01 51 04.4 +1.5
BTO pmax pmax
comp=Z,1μm,3.2s
BTO LR LR
comp=Z,582μm,15.7s
MSHR **Mys Shultsa** 19.84 19*ce*P P 01 47 26.9 +0.3
MSHR pmax pmax
comp=Z,506nm,0.8s
MSHR MLR MLR
comp=Z,218μm,16.0s
CN2 **Changchun** 19.85 6 *e*P P 01 47 25.8 -0.9
CN2 sP sP 01 47 38.5 +1.0
CN2 S S 01 51 01.8 -6.9
CN2 pmax pmax
comp=Z,60nm,0.8s
CN2 pmax pmax
comp=Z,15μm,4.0s
CN2 LR LR
comp=Z,362μm,13.0s
CN2 LR LR
comp=Z,63μm,13.0s
CN2 LR LR
comp=Z,405μm,15.0s
KHON **Khomkaen** 19.93 251 P Pn 01 47 33.0 +3.5
comp=Z,7μmcomp=Z,443nm,1.1s
LZH **Lanzhou** 20.02 311 *e*P Pn 01 47 29.8 -0.9
LZH pP pP 01 47 36.3 +0.3
LZH PP sP 01 47 47.0 +8.0
LZH S Sn 01 51 14.6 -0.6
LZH sS sS 01 51 25.4 +1.4
LZH pmax pmax
comp=Z,620nm,1.3s
LZH pmax pmax
comp=Z,32μm,6.0s
LZH LR LR
comp=Z,120μm,14.4s
LZH LR LR
comp=Z,183μm,12.7s
LZH LR LR
comp=Z,218μm,16.3s
CHAI **Chaiyaphum** 20.84 251 P Pn 01 47 39.9 -0.4
comp=Z,5μmcomp=Z,408nm,1.0s
JMM **Marumori** 20.86 44 P P 01 47 33.2 -4.5
JMM lAMs_20 lAMs_20 01 56 11.3
comp=Z,145μm,20.0s
MDJ **Mudanjiang** 21.33 14 P P 01 47 41.6 -1.1
MDJ S S 01 51 40.4 +2.3
MDJ sS Sn 01 51 43.4 -2.8
MDJ SS SnSn 01 52 05.6 +4.1
MDJ pmax pmax
comp=Z,44nm,1.1s
MDJ pmax pmax
comp=Z,10μm,6.6s
MDJ LR LR
comp=Z,207μm,13.8s
MDJ LR LR
comp=Z,154μm,13.0s
MDJ LR LR
comp=Z,333μm,13.4s
MDJ **Mudanjiang** 21.33 14 lAmb lAmb 01 48 22.0
comp=Z,796nm,1.4s
MDJ lAMs_20 lAMs_20 01 56 23.5
comp=Z,152μm,20.0s
UTTA **Uttaradit** 21.37 257 P P 01 47 47.3 +4.0
comp=Z,2μmcomp=Z,154nm,1.0s
USRK **Ussuriysk Ar.** 21.56 19 P P 01 47 41.8 -3.4
comp=Z,58nm,0.7s,baz=201,slow=8.6,SNR=46
USRK PcP PcP 01 51 47.8 +1.0
comp=Z,5.2nm,0.7s,baz=231,slow=2.4,SNR=2.4
USRK LR LR 01 56 41.1
comp=Z,148μm,19.0s,baz=190,slow=39
USRK **Ussuriysk Ar.** 21.56 19 P P 01 47 41.7 -3.5
USA0B **Ussuriysk Arra** 21.56 19*ce*P P 01 47 42.1 -3.1
USA0B **Ussuriysk Arra** 21.56 19 P P 01 47 41.9 -3.3
USA0B lAmb lAmb 01 48 07.8
comp=Z,551nm,1.4s
USA0B lAMs_20 lAMs_20 01 56 47.9
comp=Z,159μm,18.0s
SRAK **Srakaew** 21.68 246 P P 01 47 44.4 -2.4
comp=Z,35μmcomp=Z,4μm,1.0s
PHIT **Phitsanulok** 21.69 256 P P 01 47 50.0 +3.2
comp=Z,11μmcomp=Z,2μm,0.9s
LAMP **Lampang** 21.93 260 P P 01 47 52.0 +2.5
comp=Z,4μmcomp=Z,498nm,1.0s
CM34 **Chiang Mai Arr** 22.27 261 P P 01 47 55.0 +2.0
SUKH **Sukhothai** 22.29 257 P P 01 47 55.9 +2.7
comp=Z,3μmcomp=Z,277nm,1.4s
CM35 **Chiang Mai Arr** 22.32 261 P P 01 47 55.0 +1.4
CM36 **Chiang Mai Arr** 22.42 260 P P 01 47 58.0 +3.3
CM33 **Chiang Mai Arr** 22.46 261 P P 01 47 56.0 +0.9
CMMT **Chiang Mai** 22.46 261 P P 01 47 56.1 +1.0
comp=Z,4μmcomp=Z,86nm,2.5s
CHTO **Chiang Mai** 22.47 261 P P 01 47 56.3 +1.1
CHTO pmax pmax
comp=Z,581nm,1.5s
CHTO MLR MLR
comp=Z,48μm,20.0s
CHTO **Chiang Mai** 22.47 261 P P 01 47 56.3 +1.1
CHTO lAmb lAmb 01 48 32.0
comp=Z,581nm,1.4s
CHTO **Chiang Mai** 22.47 261 P P 01 47 57.2 +2.0
CHTO P P 01 47 57.2 +2.0
CHTO P P 01 47 57.2 +2.0
CHTO S S 01 52 04.0 +3.7
CHTO S S 01 52 04.0 +3.7
CHTO S S 01 52 04.0 +3.7
CM09 **Chiang Mai Arr** 22.54 260 P P 01 47 59.0 +3.1

comp=Z,2µmcomp=Z,150nm,1.2s
CM04 Chiang Mai Arr 22.56 260 P **P** **01 47 58.6 +2.4**
comp=Z,2µmcomp=Z,159nm,1.1s
CM01 Chiang Mai Arr 22.57 260 P **P** **01 48 00.1 +3.7**
comp=Z,2µmcomp=Z,123nm,1.0s
CM31 Chiang Mai Arr 22.58 260 P **P** **01 47 60.0 +3.6**
comp=Z,31µmcomp=Z,40µmcomp=Z,3µm,1.3s
CM31 Chiang Mai Arr 22.58 260 P **P** **01 47 57.8 +1.4**
CMAR Chiang Mai Arr 22.58 260 P **P** **01 47 57.3 +0.9**
comp=Z,44nm,0.9s,baz=66,slow=7.6,SNR=84
CMAR PcP **PcP** **01 51 50.1 +0.8**
comp=Z,26nm,0.8s,baz=79,slow=0.8,SNR=11
CMAR LR LR 01 57 39.1
comp=Z,53µm,18.1s,baz=104,slow=39
CMAR PKPPKP **P'P'df** **02 23 10.1 -1.7**
comp=Z,1.1nm,0.4s,baz=266,slow=3.6,SNR=1.6
CMAR Chiang Mai Arr 22.58 260 *i* P **P** **01 47 57.9 +1.6**
CMAR pmax pmax
comp=Z,45nm,0.9s
CMAR Chiang Mai Arr 22.58 260 P **P** **01 47 58.4 +2.1**
CMAR **PcP** **01 51 50.4 +1.1**
CM02 Chiang Mai Arr 22.58 260 P **P** **01 48 00.0 +3.6**
comp=Z,1µmcomp=Z,99nm,0.9s
CM05 Chiang Mai Arr 22.59 260 P **P** **01 47 59.9 +3.4**
comp=Z,1µmcomp=Z,103nm,1.1s
CM15 Chiang Mai Arr 22.59 260 P **P** **01 48 00.1 +3.6**
comp=Z,1µmcomp=Z,95nm,0.9s
CM32 Chiang Mai Arr 22.60 261 P **P** **01 48 00.0 +3.4**
CM13 Chiang Mai Arr 22.62 260 P **P** **01 48 00.0 +3.2**
comp=Z,1µmcomp=Z,114nm,1.1s
JTM Tenmabayashi 22.85 39 IAmb IAmb 01 48 40.5
comp=Z,456nm,1.4s
TOLI2 Tolitoli 22.87 184 P **P** **01 47 59.0 -0.4**
TOLI2 IAmb IAmb 01 48 21.6
comp=Z,578nm,1.5s
ANA2 Anatahan 23.14 105 P **P** **01 48 03.2 +1.1**
ANA2 IAmb IAmb 01 48 47.6
comp=Z,300nm,0.5s
UTHA Uthaitani 23.20 253 P **P** **01 48 05.0 +2.3**
comp=Z,3µmcomp=Z,181nm,1.1s
PATY Pattaya 23.22 245 P **P** **01 48 08.2 +5.2**
GTOI Gorontalo 23.29 179 P **P** **01 48 03.6 0.0**
comp=Z,43µmcomp=Z,11µmcomp=Z,247nm,1.0s
KMSI Cibinong 23.39 176 P P 01 48 17.0 +12
MRSI Marisa 23.45 181 P **P** **01 48 09.0 +3.8**
comp=Z,62µmcomp=Z,18µmcomp=Z,514nm,1.0s
UMPA Umpang Tak 23.45 255 P **P** **01 48 08.0 +2.7**
comp=Z,6µmcomp=Z,425nm,0.9s
MHMT Maesarieng 23.58 260 P **P** **01 48 08.7 +2.3**
comp=Z,35µmcomp=Z,10µmcomp=Z,431nm,2.6s
GUMO Guam 23.62 112 P **P** **01 48 08.4 +1.5**
GUMO pmax pmax
comp=Z,2µm,1.3s
GUMO MLR MLR
comp=Z,70µm,19.0s
GUMO Guam 23.62 112 P **P** **01 48 08.4 +1.5**
TNTI Ternate 23.64 168 P **P** **01 48 08.2 +1.2**
TNTI Ternate 23.64 168 P **P** **01 48 08.9 +1.9**
comp=Z,44µmcomp=Z,17µmcomp=Z,648nm,1.7s
SBUM Sibu 23.64 206 P **P** **01 48 07.9 +0.8**
SBUM IAmb IAmb 01 48 38.0
comp=Z,312nm,1.1s
SBUM Sibu 23.64 206 P **P** **01 48 08.0 +0.9**
TEY Ternei 23.89 25⇑ *e*P **P** **01 48 05.5 -3.7**
TEY *e* 01 51 58.1
LKP Lekhapani 24.16 283⇑ *e*P **P** **01 48 12.9 +1.0**
LKP IAmb IAmb 01 48 17.3
comp=Z,1µm,1.1s
PHET Kaeng Krachan 24.26 247 P **P** **01 48 15.0 +2.1**
comp=Z,2µmcomp=Z,209nm,0.9s
KHLT Khaolaem Dam 24.27 252 P **P** **01 48 16.0 +3.0**
comp=Z,1µmcomp=Z,80nm,1.0s
JEW Eniwo 24.45 35 P **P** **01 48 13.8 -0.6**
JEW IAmb IAmb 01 48 35.9
comp=Z,346nm,0.9s
JEW IAMs_20 IAMs_20 01 58 54.4
comp=Z,94µm,18.0s
GTA Gaotai 24.49 314 P **P** **01 48 12.9 -2.1**
GTA pP pP 01 48 20.8 -1.5
GTA sP sP 01 48 23.8 -1.8
GTA S **S** **01 52 31.4 -2.3**
GTA sS pS 01 52 43.9 +2.4
GTA SS **SnSn** **01 53 29.3 +10**
GTA pmax pmax
comp=Z,35nm,1.0s
GTA pmax pmax
comp=Z,14µm,9.2s
GTA LR LR
comp=Z,54µm,13.9s
GTA LR LR
comp=Z,105µm,17.5s
GTA LR LR
comp=Z,133µm,15.9s
APSI Ampana 24.83 182 P **P** **01 48 21.8 +3.7**
comp=Z,33µmcomp=Z,11µmcomp=Z,411nm,1.4s
ERM Erimo 24.84 39*de*P **P** **01 48 16.3 -1.7**
ERM pmax pmax
comp=Z,116nm,0.8s
ERM MLR MLR
comp=Z,65µm,16.0s
ERM Erimo 24.84 39 P **P** **01 48 14.7 -3.3**
LUWI Luwuk 24.95 179 P **P** **01 48 19.2 +0.1**
LUWI Luwuk 24.95 179 P **P** **01 48 23.5 +4.4**
comp=Z,52µmcomp=Z,13µmcomp=Z,667nm,1.1s
HIA Hailar 25.25 356 P **P** **01 48 20.0 -1.6**
HIA pmax pmax
comp=Z,374nm,1.3s
HIA Hailar 25.25 356 IAmb IAmb 01 48 49.5
comp=Z,435nm,1.2s
HIA Hailar 25.25 356 IAMs_20 IAMs_20 01 59 41.5
comp=Z,150µm,18.0s
KSM Kuching 25.34 209 P **P** **01 48 22.6 -0.1**
KSM IAmb IAmb 01 48 55.4
comp=Z,876nm,1.6s
MOKO MOKOCHONG 25.34 281 *e*P **P** **01 48 23.9 +1.0**
JORH JORHAT 25.58 282 *e*P **P** **01 48 26.3 +1.5**
KOHI KOHIMA 25.73 280 *e*P **P** **01 48 25.9 -0.5**
KOHI IAmb IAmb 01 48 44.0
comp=Z,267nm,1.2s
BKB Balikpapan 25.73 193 P **P** **01 48 28.0 +1.7**
BKB IAmb IAmb 01 48 59.9
comp=Z,473nm,1.0s
BKB Balikpapan 25.73 193 P **P** **01 48 32.7 +6.4**
MTKI Muara Teweh, K 25.91 197 P **P** **01 48 28.7 +0.9**
comp=Z,26µmcomp=Z,8µmcomp=Z,498nm,1.4s
IMP Imphal 25.93 278 *e*P **P** **01 48 28.6 +0.6**
IMP IAmb IAmb 01 48 41.5
comp=Z,154nm,1.1s
ASAJ Asahikawa 25.94 35 P **P** **01 48 25.6 -2.3**
comp=Z,44nm,0.5s,baz=238,slow=4.9,SNR=23
ASAJ LR LR 01 58 42.4
comp=Z,123µm,20.4s,baz=240,slow=37
ASAJ Asahikawa 25.94 35 P **P** **01 48 24.0 -3.9**
ASAJ pmax pmax
comp=Z,94nm,0.7s
JKA Kamikawa-asahi 25.94 35 IAMs_20 IAMs_20 01 58 31.7
comp=Z,117µm,20.0s
ZIRO ZIRO 25.94 284 *e*P **P** **01 48 30.9 +2.6**
ZIRO IAmb IAmb 01 48 58.4
comp=Z,2µm,1.9s
KLR Kul'dur 26.17 14 P **P** **01 48 28.8 -1.2**
comp=Z,12nm,0.4s,baz=205,slow=8.1,SNR=34
KLR PcP **PcP** **01 51 56.7 +0.2**
comp=Z,32nm,0.8s,baz=180,slow=3.4,SNR=9.7
KLR LR LR 01 59 54.4
comp=Z,181µm,18.8s,baz=196,slow=39
KLR Kul'dur 26.17 14*ce*P **P** **01 48 28.6 -1.4**
KLR pmax pmax
comp=Z,305nm,2.8s
KLR MLR MLR
comp=Z,223µm,16.0s
SANI Sanana 26.18 172 P **P** **01 48 31.9 +1.6**
comp=Z,44µmcomp=Z,12µmcomp=Z,310nm,1.1s
SWI Sorong 26.21 160 P **P** **01 48 31.5 +0.9**
SWI pmax pmax
comp=Z,242nm,1.0s
SWI Sorong 26.21 160 P **P** **01 48 34.2 +3.6**
comp=Z,47µmcomp=Z,10µmcomp=Z,244nm,1.0s
SIJI Sorong 26.22 160 P **P** **01 48 33.0 +2.3**
comp=Z,125nm,0.8s,baz=344,slow=11,SNR=24
SIJI LR LR 01 58 03.8
comp=Z,33µm,19.9s,baz=360,slow=34
ULN Ulaanbaatar 26.72 337*ce*P **P** **01 48 32.8 -2.4**
ULN pmax pmax
comp=Z,221nm,0.8s
ULN MLR MLR
comp=Z,246µm,16.0s
ULN Ulaanbaatar 26.72 337 P **P** **01 48 32.8 -2.4**
ULN pP 01 48 34.5 -8.4
ULN IAmb IAmb 01 48 39.3
comp=Z,184nm,0.8s
ULN Ulaanbaatar 26.72 337 P **P** **01 48 35.0 -0.1**
ULN P **P** **01 48 35.0 -0.1**
ULN S S 01 53 29.0 +20
ULN S S 01 53 29.0 +20
SONM Songino Array 26.94 336 P **P** **01 48 34.5 -2.6**
comp=Z,203nm,0.8s,baz=157,slow=4.3,SNR=90
SONM PcP **PcP** **01 51 58.9 +0.3**
comp=Z,13nm,0.7s,baz=166,slow=2.2,SNR=11
SONM LR LR 02 00 29.7
comp=Z,234µm,19.0s,baz=152,slow=40
SONM Songino Array 26.94 336 P **P** **01 48 34.4 -2.6**
SONM 01 51 58.3
SONM pmax pmax
comp=Z,207nm,0.8s
SONM Songino Array 26.94 336 P **P** **01 48 34.4 -2.6**
SONM IAmb IAmb 01 48 40.3
comp=Z,207nm,0.8s
SONM **PcP** **01 51 58.3 -0.3**
TTSI Tana Toraja 27.06 186 P **P** **01 48 42.5 +4.3**
comp=Z,35µmcomp=Z,5µmcomp=Z,81nm,1.2s
SAIH SAIHA 27.07 273 *e*P **P** **01 48 38.9 +0.3**
SAIH IAmb IAmb 01 48 46.3
comp=Z,172nm,0.7s
KRAB Krabi 27.24 239 P **P** **01 48 43.1 +3.2**
NLAI Namlea 27.51 170 P **P** **01 48 45.4 +3.1**
comp=Z,14µmcomp=Z,676nm,1.5s
YUK Yuzh-Kuril'sk 27.66 38 *e*P **P** **01 48 41.4 -1.9**
YUK *e*PPP PPP 01 49 34.0
YUK *e*S **S** **01 53 23.3 -0.2**
YUK *e*SS **SnSn** **01 54 37.3 +1.1**
YUK *e*SSS SSS 01 54 49.1
YUK pmax pmax
comp=Z,369nm,1.3s
SHL Shillong 27.74 280 P **P** **01 48 44.3 -0.3**
SHL pmax pmax
comp=Z,1µm,1.3s
SHL MLR MLR
comp=Z,50µm,20.0s
SHL Shillong 27.74 280 *e*P **P** **01 48 45.2 +0.6**
SHL IAmb IAmb 01 48 55.3
comp=Z,217nm,1.2s
SHL Shillong 27.74 280 P **P** **01 48 44.3 -0.3**
SHL Shillong 27.74 280 P **P** **01 48 46.4 +1.8**
SNR=110
KBKI Kotabaru 27.87 193 P **P** **01 48 52.1 +6.6**
comp=Z,3µmcomp=Z,77nm,0.7s
GUWA GUWAHATI 27.88 281 *e*P **P** **01 48 46.0 +0.4**
GUWA IAmb IAmb 01 48 51.5
comp=Z,332nm,0.9s
SPSI Sidrap Palu 27.97 186 P **P** **01 48 49.8 +3.4**
comp=Z,33µmcomp=Z,4µmcomp=Z,102nm,1.1s
YSS Yuzh-Sakhalins 28.05 30*c i* P **P** **01 48 44.5 -2.3**
YSS *e**SP **sP** **01 48 58.1 +0.7**
YSS *e* 01 49 34.0
YSS *e*PPP PPP 01 49 47.0
YSS *e* 01 52 01.7
YSS *e*S **S** **01 53 23.9 -5.7**
YSS *e*SS **SnSn** **01 54 49.0 +3.3**
YSS pmax pmax
comp=Z,10µm,3.7s
YSS pmax pmax
comp=N,2µm,13.2s
YSS pmax pmax
comp=E,1µm,9.5s
YSS pmax pmax
comp=Z,160nm,0.9s
YSS MLR MLR
comp=N,56µm,16.0s
YSS MLR MLR
comp=Z,90µm,16.0s
YSS MLR MLR
comp=E,44µm,15.0s
YSS Yuzh-Sakhalins 28.05 30 P **P** **01 48 47.2 +0.4**
YSS IAMs_20 IAMs_20 02 00 06.4
comp=Z,112µm,19.0s
KULM Kulim 28.06 232 IAmb IAmb 01 49 25.1
comp=Z,324nm,1.5s
BBKI Banjar Baru 28.34 196 P **P** **01 48 51.5 +1.8**
comp=Z,8µmcomp=Z,224nm,1.5s
IPM Ipoh 28.36 230 P **P** **01 48 50.6 +0.7**
IPM IAmb IAmb 01 49 26.3
comp=Z,485nm,1.6s
BELO BELONIA 28.37 275 *e*P **P** **01 48 52.8 +2.9**
LSA Lhasa 28.41 288 P **P** **01 48 53.3 +2.5**
LSA S **S** **01 53 38.5 +1.8**
LSA pmax pmax
comp=Z,430nm,0.9s
LSA LR LR
comp=Z,34µm,17.8s
LSA LR LR
comp=Z,74µm,15.7s
LSA LR LR
comp=Z,76µm,14.2s
LSA Lhasa 28.41 288 P **P** **01 48 52.7 +1.9**
LSA Lhasa 28.41 288 P **P** **01 48 53.4 +2.6**
LSA pmax pmax
comp=Z,200nm,1.4s
LSA Lhasa 28.41 288 IAmb IAmb 01 49 19.2
comp=Z,215nm,1.1s
LSA IAMs_20 IAMs_20 02 01 09.5
comp=Z,77µm,19.0s
FAKI Fak Fak 28.46 159 P **P** **01 48 52.3 +1.5**
FAKI IAmb IAmb 01 49 31.4
comp=Z,437nm,1.3s
FAKI Fak Fak 28.46 159 P **P** **01 48 53.8 +3.0**
AGT Agartala 28.47 276 *e*P **P** **01 48 53.5 +2.8**
AGT IAmb IAmb 01 49 01.8
comp=Z,194nm,0.8s
MYKOM Kota Tinggi 28.52 222 P **P** **01 48 52.1 +0.8**
CIT Chita 28.74 349 *e*P **P** **01 48 52.8 -0.2**
CIT *e* 01 49 44.8
CIT *e* 01 50 01.4
CIT pmax pmax
comp=Z,858nm,2.1s
GRNR Gornyy 28.79 19⇑ *i*P **P** **01 48 54.1 +0.7**
GRNR *e*S **S** **01 53 45.0 +3.8**
GRNR pmax pmax
comp=N,10.0nm,0.9s
GRNR pmax pmax
comp=E,7.0nm,0.9s
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR smax smax
comp=N,7.0nm,0.9s
GRNR MLR MLR
comp=E,23µm,14.0s
GRNR MLR MLR
comp=N,66µm,16.0s
KAPI Kappang 29.01 186 P **P** **01 48 56.4 +0.8**
comp=N,16nm,0.8s,baz=12,slow=4.9,SNR=29
KAPI LR LR 02 00 28.1
comp=N,26µm,21.0s,baz=17,slow=36
KAPI Kappang 29.01 186 P **P** **01 48 54.6 -1.1**
KAPI pmax pmax
comp=Z,339nm,1.5s
KAPI MLR MLR
comp=Z,28µm,22.0s
KAPI Kappang 29.01 186 P **P** **01 48 54.5 -1.1**
KAPI IAmb IAmb 01 49 27.1
comp=Z,339nm,1.5s
KUR Kuril'sk 29.52 38*ce*P **P** **01 48 58.3 -1.6**
KUR *e*S **S** **01 53 55.6 +2.8**
KUR *i* SS **SnSn** **01 55 14.7 -6.9**
KUR *i* SSS SSS 01 55 46.8
KUR pmax pmax
comp=E,99nm,1.2s
KUR pmax pmax
comp=Z,279nm,1.2s
KUR pmax pmax
comp=N,95nm,1.3s
KUR pmax pmax
comp=Z,3µm,8.0s
KUR MLR MLR
comp=E,24µm,17.0s
KUR MLR MLR
comp=Z,65µm,17.0s
KUR MLR MLR
comp=N,93µm,18.0s
ZEA Zeya 29.86 6 *e*P **P** **01 49 01.7 -1.2**
ZEA *e*S **S** **01 53 50.8 -7.2**
ZEA pmax pmax
comp=Z,6µm,12.3s
ZEA pmax pmax
comp=N,130nm,0.8s
ZEA pmax pmax
comp=Z,180nm,1.0s
ZEA MLR MLR
comp=E,21µm,11.0s
ZEA MLR MLR
comp=N,83µm,14.0s
ZEA MLR MLR
comp=Z,92µm,14.0s
DGPR DIGLIPUR 29.91 254 *e*P **P** **01 49 05.7 +2.0**
DGPR IAmb IAmb 01 49 28.4
comp=Z,103nm,1.1s
ZAK Zakamensk 30.20 335 *e*P **P** **01 49 02.8 -3.2**
ZAK pmax pmax
comp=Z,92nm,1.6s
GTK Tadong 30.61 283 *e*P **P** **01 49 11.8 +1.8**
GTK IAmb IAmb 01 49 22.7
comp=Z,216nm,0.8s
LHMI Lhok Sumawe 30.85 237 P **P** **01 49 12.2 +0.3**
LHMI IAmb IAmb 01 49 19.0
comp=Z,222nm,0.9s
TYV Tymovskoe 31.00 25 *e*P P 01 49 19.9 +7.0
TYV pmax pmax
comp=Z,2µm,8.0s
TYV pmax pmax
comp=Z,56nm,1.3s
PSI Prapat 31.02 231 P **P** **01 49 15.1 +1.5**
comp=Z,60nm,0.9s,baz=0.2,slow=5.5,SNR=31
PSI PcP **PcP** **01 52 09.8 +0.4**
comp=Z,29nm,0.8s,baz=179,slow=2.1,SNR=4.8
RPSI Rantau Prapat 31.10 230 **PcP** **01 52 09.8 +0.4**
RPSI Rantau Prapat 31.10 230 IAmb IAmb 01 49 51.4
comp=Z,173nm,1.2s
TLY Talaya 31.12 337 P **P** **01 49 11.9 -2.2**
comp=Z,99nm,0.8s,baz=244,slow=1.2,SNR=42
TLY PcP **PcP** **01 52 10.2 +1.3**
comp=Z,11nm,0.6s,baz=287,slow=3.4,SNR=3.6
TLY Talaya 31.12 337 *e*P **P** **01 49 11.8 -2.3**
TLY *e* 01 50 16.4
TLY pmax pmax
comp=Z,474nm,0.9s
TLY MLR MLR
comp=Z,316µm,18.0s
TLY Talaya 31.12 337 P **P** **01 49 11.1 -3.0**
TLY IAmb IAmb 01 49 18.6
comp=Z,167nm,0.8s
TLY **PcP** **01 52 09.8 +1.0**
TLY Talaya 31.12 337 P **P** **01 49 13.6 -0.5**
TLY P **P** **01 49 13.6 -0.5**
IRK Irkutsk 31.38 338 *e*P **P** **01 49 14.2 -2.1**
IRK pmax pmax
comp=Z,680nm,2.9s
TAPN Taplejung 31.40 283 *e*P **P** **01 49 18.4 +1.3**
comp=Z,717nm,1.0s
BKNI Bangkinang 31.41 224 P **P** **01 49 18.9 +2.0**
BKNI IAmb IAmb 01 49 40.4
comp=Z,324nm,1.2s
ODAN Odare 31.70 283 *e*P **P** **01 49 20.4 +0.7**
comp=Z,791nm,0.9s
MOY Mondy 32.10 335 *e*P **P** **01 49 20.1 -2.7**
MOY *e* 01 59 44.7
MOY pmax pmax
comp=Z,448nm,2.6s
CMBY CAMPBELL BAY 32.16 243 *e*P **P** **01 49 25.9 +2.3**
CMBY IAmb IAmb 01 49 29.7
comp=Z,194nm,0.8s
NKL Nikolayevsk 32.17 21 *e*P **P** **01 49 21.6 -1.5**
NKL *e* 01 50 47.6
NKL pmax pmax
comp=N,1.0nm,1.0s
NKL pmax pmax
comp=E,46nm,1.0s
NKL pmax pmax
comp=Z,37nm,0.9s
NKL pmax pmax
comp=Z,432nm,5.6s
NKL MLR MLR
comp=Z,141µm,16.0s
RAMN Ramite 32.40 283 *e*P **P** **01 49 27.5 +1.6**
comp=Z,216nm,0.7s
JIRN Jiri 32.74 284 *e*P **P** **01 49 30.3 +1.3**
comp=Z,399nm,0.8s
SAUI Saumlaki 33.00 164 P **P** **01 49 34.6 +3.8**
GUN Gumba 33.00 285 *e*P **P** **01 49 31.8 +0.5**
comp=Z,904nm,1.1s
GSI Gunungsitoli 33.03 230 P **P** **01 49 32.2 +1.1**
GSI IAmb IAmb 01 49 46.0
comp=Z,71nm,0.7s
SMRI Semarang 33.06 202 P **P** **01 49 34.0 +2.7**
DNP Denpasar 33.29 193 P **P** **01 49 35.2 +1.9**
DNP pmax pmax
comp=Z,1µm,1.2s
JAGI Jajag, Banyuwa 33.33 195 IAmb IAmb 01 50 34.2
comp=Z,152nm,0.9s
BOK Bokaro 33.35 277 *e*P **P** **01 49 35.7 +1.8**
BOK IAmb IAmb 01 49 50.2
comp=Z,294nm,1.2s
PKI Pulchoki 33.43 284 *e*P **P** **01 49 35.6 +0.6**
comp=Z,349nm,1.2s
PKIN Phulchoki 33.44 284 *e*P **P** **01 49 36.1 +1.1**
KKN Kakani 33.54 284 *e*P **P** **01 49 37.1 +1.3**
comp=Z,230nm,0.9s
KSI Kapahiang 33.64 218 P **P** **01 49 39.3 +2.8**
KSI pmax pmax
comp=Z,209nm,0.8s
SOEI Soe 33.65 177 IAmb IAmb 01 50 13.8
comp=Z,184nm,0.9s
DMN Daman 33.70 284 *e*P **P** **01 49 38.1 +0.9**
comp=Z,313nm,0.9s
LEM Lembang 33.93 207 P **P** **01 49 41.9 +2.8**
comp=Z,83nm,0.7s,baz=51,slow=7.1,SNR=7.8
LEM Lembang 33.93 207 P **P** **01 49 42.5 +3.4**
LEM pmax pmax
comp=Z,227nm,0.9s
MNAI Manna 34.03 216 P **P** **01 49 40.5 +0.6**
GKN Gorkha 34.10 285 *e*P **P** **01 49 41.2 +0.6**
comp=Z,412nm,1.0s
BOD Bodaibo 34.27 352 *e*P **P** **01 49 39.9 -1.6**
BOD pmax pmax
comp=Z,43nm,2.0s
WMQ Urumqi 34.57 313 P **P** **01 49 46.0 +1.7**
WMQ pP pP 01 49 52.5 +0.8
WMQ PP **PP** **01 51 00.8 -2.1**
WMQ S **S** **01 55 12.3 +0.6**
WMQ ScP **ScP** **01 55 57.9 -4.2**
WMQ ScS **ScS** **02 00 06.0 +1.0**
WMQ pmax pmax
comp=Z,410nm,0.9s
WMQ pmax pmax
comp=Z,7µm,5.5s
WMQ LR LR
comp=Z,72µm,17.7s
WMQ LR LR
comp=Z,69µm,13.5s
WMQ LR LR
comp=Z,77µm,16.5s
WMQ Urumqi 34.57 313 IAmb IAmb 01 49 49.2
comp=Z,211nm,0.8s
KOLN Koldanda 35.03 285 *e*P **P** **01 49 49.7 +1.0**
comp=Z,597nm,0.9s
MANU Manus Island 35.51 133 P **P** **01 49 54.6 +2.0**
MANU IAmb IAmb 01 50 37.5
comp=Z,281nm,1.9s
PYUN Piuthan 35.55 285 *e*P **P** **01 49 54.5 +1.3**
comp=Z,473nm,0.8s
SKR Severo-Kuril's 37.19 36 *e*P P 01 49 57.9 -8.7
SKR *e* 01 51 37.4
SKR *e*PPP PPP 01 52 22.3
SKR pmax pmax
comp=Z,118nm,0.9s
SKR pmax pmax
comp=Z,2µm,15.7s
DGZ Jazzator, Alta 37.39 322⇓ *e*P **P** **01 50 06.5 -2.0**
DGZ pmax pmax
comp=Z,138nm,1.0s
DGZ MLR MLR
comp=Z,131µm,17.0s
MTN Manton Dam 37.65 166 IAmb IAmb 01 50 19.0
comp=Z,503nm,1.6s
ZSN Zaisan 37.86 318 *e*P **P** **01 50 11.6 -0.8**
baz=318
ZSN Zaisan 37.86 318 *e*P **P** **01 50 11.6 -0.8**
XMIS Christmas Isla 38.04 207 P **P** **01 50 14.3 +0.2**

XMIS IAmb IAmb 01 51 02.2
comp=Z,243nm,1.8s
YAK Yakutsk 38.28 6 P **P** **01 50 14.1 -1.5**
comp=Z,184nm,0.8s,baz=343,slow=0.5,SNR=32
YAK PcP **PcP** **01 52 29.8 +0.5**
comp=Z,58nm,0.8s,baz=185,slow=2.6,SNR=4.4
YAK LR LR 02 07 44.7
comp=Z,94µm,19.6s,baz=192,slow=39
YAK Yakutsk 38.28 6*c iP* **P** **01 50 13.7 -1.9**
YAK *e**PP **pP** **01 50 23.0 -0.6**
YAK *e* 01 51 45.3
YAK *e* 01 52 31.7
YAK *e*S **S** **01 56 03.1 -4.6**
YAK *e**SS **sS** **01 56 24.8 +4.3**
YAK *e*SS SnSn 01 58 37.1 -16
YAK *e* 02 00 25.5
YAK pmax pmax
comp=Z,468nm,0.9s
YAK pmax pmax
comp=E,47nm,1.1s
YAK pmax pmax
comp=N,151nm,1.0s
YAK pmax pmax
comp=Z,8µm,7.8s
YAK pmax pmax
comp=E,1µm,5.3s
YAK pmax pmax
comp=N,3µm,5.4s
YAK smax smax
comp=E,2µm,6.8s
YAK smax smax
comp=N,5µm,8.1s
YAK MLR MLR
comp=Z,175µm,17.0s
YAK MLR MLR
comp=E,49µm,13.0s
YAK MLR MLR
comp=N,115µm,15.0s
YAK Yakutsk 38.28 6 P **P** **01 50 13.9 -1.7**
PATS Pohnpei 38.42 111 P **P** **01 50 18.2 +0.8**
PATS IAMs_20 IAMs_20 02 06 37.2
comp=Z,67µm,19.0s
MK31 Makanchi Array 39.22 316*c iP* **P** **01 50 21.8 -2.1**
MK31 Makanchi Array 39.22 316 P **P** **01 50 21.5 -2.3**
MK31 IAmb IAmb 01 50 28.0
comp=Z,213nm,1.0s
MKAR Makanchi Array 39.22 316 P **P** **01 50 22.4 -1.5**
comp=Z,75nm,0.5s,baz=103,slow=7.7,SNR=98
MKAR PcP **PcP** **01 52 33.5 +0.9**
comp=Z,50nm,0.9s,baz=222,slow=3.1,SNR=4.6
MKAR ScP **S** **01 56 22.0 -0.5**
comp=Z,7.6nm,0.8s,baz=110,slow=5.6,SNR=3.8
MKAR LR LR 02 08 08.3
comp=Z,93µm,18.5s,baz=102,slow=39
MKAR PKPPKP **P'P'df** **02 22 56.3 -4.2**
comp=Z,1.3nm,1.0s,baz=289,slow=4.4,SNR=3.6
MKAR Makanchi Array 39.22 316*i* P **P** **01 50 21.8 -2.1**
MKAR pmax pmax
comp=Z,75nm,0.5s
MKAR Makanchi Array 39.22 316 P **P** **01 50 22.1 -1.8**
MKAR **PcP** **01 52 32.6 0.0**
PEA0B Petropavlovsk- 39.34 33‖*eP* **P** **01 50 23.4 -1.3**
PEA0B Petropavlovsk- 39.34 33 IAMs_20 IAMs_20 02 07 11.2
comp=Z,80µm,19.0s
PETK Petropavlovsk- 39.34 33 P **P** **01 50 23.0 -1.7**
comp=Z,9.5nm,0.6s,baz=218,slow=6.6,SNR=19
PETK PcP **PcP** **01 52 33.3 +0.5**
comp=Z,8.5nm,0.8s,baz=184,slow=3.0,SNR=2.5
PETK ScP **ScP** **01 56 20.5 +0.9**
comp=Z,5.7nm,1.1s,baz=107,slow=5.1,SNR=3.5
PETK LR LR 02 07 21.5
comp=Z,81µm,18.9s,baz=228,slow=38
PETK Petropavlovsk- 39.34 33 P **P** **01 50 23.2 -1.5**
PETK **ScP** **01 56 19.3 -0.2**
MAKZ Makanchi 39.43 315 P **P** **01 50 23.9 -1.7**
MAKZ Makanchi 39.43 315 P **P** **01 50 23.6 -1.9**
MAKZ IAmb IAmb 01 50 29.9
comp=Z,278nm,0.8s
DDI Dehra Dun 39.77 289*eP* **P** **01 50 30.3 +1.7**
DDI IAmb IAmb 01 50 34.2
comp=Z,571nm,1.1s
PET Petropavlovsk 39.78 34*deP* **P** **01 50 28.1 -0.2**
PET pmax pmax
comp=Z,155nm,1.8s
PET MLR MLR
comp=Z,65µm,23.0s
PET Petropavlovsk 39.78 34 P **P** **01 50 27.3 -1.0**
PET IAMs_20 IAMs_20 02 07 24.7
comp=Z,56µm,19.0s
KNRA Kununurra 39.97 170 P **P** **01 50 30.8 +0.6**
KNRA IAmb IAmb 01 50 51.1
comp=Z,272nm,1.1s
SHLS Shalkode 40.02 309*eP* **P** **01 50 27.2 -3.6**
comp=Z,234nm,0.7s,baz=309
SHLS *e*S **S** **01 56 28.4 -6.5**
baz=309
SHLS Shalkode 40.02 309*eP* **P** **01 50 27.1 -3.6**
SHLS *e*S **S** **01 56 28.4 -6.5**
SHLS pmax pmax
comp=Z,234nm,0.7s
PDGK Podgornoye 40.05 309 P **P** **01 50 30.2 -0.7**
RABL Rabaul 40.33 130 P **P** **01 50 35.1 +1.7**
RABL IAmb IAmb 01 50 50.4
comp=Z,485nm,1.2s
UZB Uzynbulak 40.34 309*eP* **P** **01 50 32.2 -1.2**
comp=Z,697nm,2.2s,baz=309
UZB *e*S **S** **01 56 37.8 -1.8**
baz=309
UZB Uzynbulak 40.34 309*eP* **P** **01 50 32.1 -1.2**
UZB *e*S **S** **01 56 37.7 -1.8**
UZB pmax pmax
comp=Z,697nm,2.2s
SMLA Simla 40.51 290*eP* **P** **01 50 36.0 +1.3**
SMLA IAmb IAmb 01 50 40.1
comp=Z,608nm,1.0s
KPKS Kokpek 40.65 309*eP* **P** **01 50 34.7 -1.2**
comp=Z,652nm,1.9s,baz=309
KPKS Kokpek 40.65 309*eP* **P** **01 50 34.6 -1.2**
KPKS pmax pmax
comp=Z,652nm,1.9s
MA2 Magadan 40.67 22 P **P** **01 50 33.9 -1.8**
comp=Z,9.5nm,0.8s,baz=208,slow=8.4,SNR=8.8
MA2 PcP **PcP** **01 52 37.7 +0.8**
comp=Z,34nm,0.7s,baz=217,slow=1.3,SNR=6.8
MA2 ScP **ScP** **01 56 25.4 +0.8**
comp=Z,8.8nm,0.8s,baz=188,slow=2.5,SNR=4.9
MA2 LR LR 02 09 15.2
comp=Z,117µm,18.0s,baz=215,slow=39
MA2 Magadan 40.67 22‖*eP* **P** **01 50 33.7 -2.0**
MA2 pmax pmax
comp=Z,25nm,0.9s
MA2 MLR MLR
comp=Z,104µm,18.0s
MA2 Magadan 40.67 22 P **P** **01 50 33.2 -2.5**
SATY Saty 40.75 309*eP* **P** **01 50 35.5 -1.2**
comp=Z,538nm,2.3s,baz=309
SATY Saty 40.75 309*eP* **P** **01 50 35.5 -1.2**
SATY pmax pmax
comp=Z,538nm,2.3s
ZAA0 Zalesovo Array 40.97 327 P **P** **01 50 35.1 -3.1**
ZAA0 IAmb IAmb 01 50 41.0
comp=Z,302nm,0.9s
ZALV Zalesovo Beam 40.97 327 P **P** **01 50 37.4 -0.8**
comp=Z,141nm,0.7s,baz=111,slow=8.1,SNR=82
ZALV PcP **PcP** **01 52 38.3 +0.3**
comp=Z,28nm,0.5s,baz=104,slow=3.9,SNR=6.6
ZALV ScP **ScP** **01 56 27.4 +1.5**
comp=Z,9.0nm,0.8s,baz=130,slow=6.0,SNR=4.8
ZALV ScS **ScS** **02 00 37.6 -3.2**
comp=Z,2.2nm,0.9s,baz=116,slow=6.6,SNR=2.3
ZALV LR LR 02 08 57.2
comp=Z,142µm,18.1s,baz=124,slow=38
ZALV Zalesovo Beam 40.97 327*i* P **P** **01 50 35.2 -3.0**
ZALV pmax pmax
comp=Z,141nm,0.7s
ZALV Zalesovo Beam 40.97 327 P **P** **01 50 34.9 -3.3**
ZALV **PcP** **01 52 37.9 -0.1**
ZALV **ScP** **01 56 26.0 +0.1**
BHPL Bhopal 41.10 278*eP* **P** **01 50 38.9 -0.8**
BHPL IAmb IAmb 01 50 43.3
comp=Z,103nm,1.1s
PMG Port Moresby 41.11 141 LR LR 02 07 40.2
comp=Z,40µm,19.1s,baz=320,slow=36
PMG Port Moresby 41.11 141‖*eP* **P** **01 50 41.3 +1.6**
PMG pmax pmax
comp=Z,109nm,1.2s
PMG MLR MLR
comp=Z,38µm,19.0s
PMG Port Moresby 41.11 141 P **P** **01 50 41.6 +1.9**
PMG IAmb IAmb 01 51 26.2
comp=Z,186nm,1.1s
PMG Port Moresby 41.11 141 IAMs_20 IAMs_20 02 07 28.4
comp=Z,40µm,19.0s
DHRM DHARAMSHALA 41.23 292*eP* **P** **01 50 40.6 -0.3**
DHRM IAmb IAmb 01 50 46.7
comp=Z,502nm,1.1s
TDK Taldyqorghan 41.23 312*eP* **P** **01 50 39.5 -1.0**
baz=311
TDK *e*S **S** **01 56 51.0 -1.7**
baz=311
TDK LR LR 02 08 11.0
comp=Z,25µm,14.2s,baz=311
TDK Taldyqorghan 41.23 312*eP* **P** **01 50 39.5 -1.0**
TDK *e*S **S** **01 56 50.9 -1.7**
TDK MLR MLR
comp=Z,25µm,14.0s
WAKE Wake Island 41.25 88 P **P** **01 50 42.5 +1.7**
WAKE IAmb IAmb 01 50 55.5
comp=Z,442nm,1.1s
MDRS Chennai 41.31 262*eP* **P** **01 50 43.8 +2.3**
MDRS IAmb IAmb 01 50 48.2
comp=Z,137nm,1.0s
H11N1 WAKE ISLAND Hy 41.35 87 T T 02 36 42.7
baz=283,slow=75,SNR=8.4
H11N2 WAKE ISLAND Hy 41.36 87 T T 02 36 40.6
baz=283,slow=75,SNR=37
H11N3 WAKE ISLAND Hy 41.37 87 T T 02 36 40.9
baz=283,slow=75,SNR=30
HYB Hyderabad 41.44 269*i* P **P** **01 50 43.0 +0.5**
comp=Z,375nm,1.4s
HYB *e*S **S** **01 56 56.0 -0.2**
HYB Hyderabad 41.44 269*eP* **P** **01 50 42.8 +0.2**
HYB IAmb IAmb 01 50 46.9
comp=Z,112nm,1.1s
H11S3 WAKE ISLAND Hy 41.48 89 T T 02 36 43.8
baz=284,slow=74,SNR=7.6
H11S1 WAKE ISLAND Hy 41.49 89 T T 02 36 49.2
baz=284,slow=74,SNR=6.2
H11S2 WAKE ISLAND Hy 41.50 89 T T 02 36 48.7
baz=284,slow=74,SNR=8.5
MDOK Medeo 41.75 309*eP* **P** **01 50 43.9 -1.0**
baz=308
MDOK *e*S **S** **01 56 58.9 -1.6**
baz=308
MDOK LR LR 02 08 48.1
comp=Z,24µm,13.0s,baz=308
MDOK Medeo 41.75 309*eP* **P** **01 50 43.9 -1.0**
MDOK *e*S **S** **01 56 58.9 -1.6**
MDOK MLR MLR
comp=Z,24µm,13.0s
SEM Semipalatinsk 41.84 320 LR LR 02 08 28.9
comp=Z,9µm,14.1s,baz=320
AAA Alma-Ata 41.85 309*eP* **P** **01 50 44.7 -1.0**
baz=308
AAA *e*S **S** **01 57 00.3 -1.6**
baz=308
AAA LR LR 02 08 39.7
comp=Z,17µm,13.2s,baz=308
AAA Alma-Ata 41.85 309*eP* **P** **01 50 44.6 -1.0**
AAA *e*S **S** **01 57 00.3 -1.6**
AAA MLR MLR
comp=Z,17µm,13.0s
KSH Kashi 41.92 303 P **P** **01 50 47.6 +1.2**
KSH PP **PnPn** **01 52 29.9 +1.1**
KSH S **S** **01 57 06.1 +2.9**
KSH SS **SnSn** **02 00 16.4 -5.8**
KSH pmax pmax
comp=Z,180nm,0.8s
KSH pmax pmax
comp=Z,4µm,3.3s
KSH LR LR
comp=Z,34µm,11.1s
KSH LR LR
comp=Z,91µm,13.3s
KSH LR LR
comp=Z,124µm,8.7s
FITZ Fitzroy Crossi 42.02 175 P **P** **01 50 48.4 +1.3**
comp=Z,24nm,0.8s,baz=357,slow=6.2,SNR=14
FITZ LR LR 02 10 52.5
comp=Z,4µm,18.1s,baz=347,slow=40
FITZ Fitzroy Crossi 42.02 175 P **P** **01 50 47.5 +0.4**
FITZ IAmb IAmb 01 51 09.4
comp=Z,308nm,1.7s
ULHL Ulahol 42.15 307 P **P** **01 50 48.1 -0.2**
SNR=64
TKM2 Tokmak 2 42.74 308 P **P** **01 50 52.4 -0.7**
SNR=94
TKM2 Tokmak 2 42.74 308 P **P** **01 50 52.8 -0.3**
COEN Coen 42.88 150 P **P** **01 50 56.3 +2.1**
KURK Kurchatov 42.92 320 P **P** **01 50 52.2 -2.0**
KURK 01 52 45.1
KURK Kurchatov 42.92 320 P **P** **01 50 52.2 -2.0**
KURK **PcP** **01 52 45.1 +0.6**
KURK **ScP** **01 56 37.0 +3.3**
KURBB Kurchatov Arra 42.94 320 P **P** **01 50 52.2 -2.1**
comp=Z,84nm,0.8s,baz=110,slow=10,SNR=109
KURBB PcP **PcP** **01 52 45.1 +0.5**
comp=Z,42nm,0.8s,baz=112,slow=3.8,SNR=5.4
KURBB ScP **ScP** **01 56 37.0 +3.2**
comp=Z,1.7nm,0.2s,baz=107,slow=5.0,SNR=1.9
KURBB Kurchatov Arra 42.94 320 P **P** **01 50 52.8 -1.5**
KBK Karagaybulak 43.16 307 P **P** **01 50 56.1 -0.4**
SNR=80
PALK Pallekele 43.30 254 P **P** **01 50 58.0 +0.3**
comp=Z,21nm,0.9s,baz=164,slow=6.9,SNR=16
PALK PcP **PcP** **01 52 48.4 +1.9**
comp=Z,25nm,0.8s,baz=100,slow=1.4,SNR=4.2
PALK Pallekele 43.30 254*ceP* **P** **01 50 59.1 +1.4**
PALK pmax pmax
comp=Z,148nm,1.9s
PALK Pallekele 43.30 254 P **P** **01 50 59.3 +1.5**
PALK Pallekele 43.30 254 P **P** **01 51 00.3 +2.6**
PALK P **P** **01 51 00.3 +2.6**
PALK P **P** **01 51 00.3 +2.6**
PALK S **S** **01 57 26.6 +2.9**
PALK S **S** **01 57 26.6 +2.9**
PALK S **S** **01 57 26.6 +2.9**
CHMS Chumysh 43.37 308 P **P** **01 50 57.3 -0.6**
SNR=52
UCH Uchtor 43.41 307 P **P** **01 50 58.8 0.0**
SNR=125
AAK Ala-Archa 43.49 307 PcP **PcP** **01 52 47.9 +1.0**
comp=Z,35nm,0.8s,baz=144,slow=2.5,SNR=3.3
AAK LR LR 02 12 07.1
comp=Z,83µm,18.4s,baz=90,slow=40
AAK Ala-Archa 43.49 307 P **P** **01 50 58.3 -0.8**
SNR=55
AAK Ala-Archa 43.49 307*i* P **P** **01 50 58.7 -0.4**
SNR=69
AAK Ala-Archa 43.49 307*c iP* **P** **01 50 57.8 -1.3**
AAK pmax pmax
comp=Z,452nm,1.0s
AAK MLR MLR
comp=Z,223µm,18.0s
AAK Ala-Archa 43.49 307 P **P** **01 50 58.6 -0.4**
AAK Ala-Archa 43.49 307 IAMs_20 IAMs_20 02 12 03.5
comp=Z,85µm,18.0s
AAK Ala-Archa 43.49 307 P **P** **01 51 00.5 +1.4**
AAK P **P** **01 51 00.5 +1.4**
AAK P **P** **01 51 00.5 +1.4**
SGDS Sogindy 43.53 308*eP* **P** **01 50 57.9 -1.4**
comp=Z,342nm,2.3s,baz=308
SGDS Sogindy 43.53 308*eP* **P** **01 50 57.9 -1.4**
SGDS pmax pmax
comp=Z,342nm,2.3s
USP Ospenovka 43.59 308 P **P** **01 51 01.2 +1.4**
SNR=48
SEY Seymchan 43.71 19 P **P** **01 50 58.2 -2.2**
comp=Z,20nm,0.8s,baz=227,slow=5.7,SNR=24
SEY PcP **PcP** **01 52 46.9 -0.1**
comp=Z,40nm,0.7s,baz=198,slow=5.0,SNR=13
SEY ScP **ScP** **01 56 38.2 +1.5**
comp=Z,6.4nm,0.8s,baz=270,slow=5.3,SNR=3.7
SEY Seymchan 43.71 19‖*eP* **P** **01 50 58.8 -1.6**
NIL Nilore 43.78 294 P **P** **01 51 00.5 -0.9**
NIL pmax pmax
comp=Z,344nm,0.9s
NIL MLR MLR
comp=Z,20µm,19.0s
NIL Nilore 43.78 294 P **P** **01 51 00.5 -0.9**
COCO West Island 43.86 218 P **P** **01 51 04.5 +2.4**
COCO IAmb IAmb 01 51 46.0
comp=Z,256nm,1.2s
AML Almayashu 44.00 306 P **P** **01 51 03.2 -0.3**
SNR=106
EKS2 Erkin-Say 44.02 307 P **P** **01 51 05.1 +1.8**
SNR=70
BTLS Baital 44.25 311*eP* **P** **01 51 03.5 -1.6**
comp=Z,362nm,2.0s,baz=310
BTLS Baital 44.25 311*eP* **P** **01 51 03.4 -1.6**
BTLS pmax pmax
comp=Z,362nm,2.0s
MBWA Marble Bar 45.02 184 P **P** **01 51 08.3 -2.9**
MBWA P **P** **01 51 08.3 -2.9**
MBWA S **S** **01 57 43.3 -5.0**
MBWA S **S** **01 57 43.3 -5.0**
WB0 Warramunga Arr 45.09 164 IAmb IAmb 01 51 29.3
comp=Z,131nm,0.8s
WRAB Tennant Creek 45.24 164*deP* **P** **01 51 14.0 +0.9**
WRAB pmax pmax
comp=Z,222nm,1.0s
WRAB MLR MLR
comp=Z,16µm,20.0s
WRAB Tennant Creek 45.24 164 P **P** **01 51 13.7 +0.6**
WRAB IAmb IAmb 01 51 30.6
comp=Z,202nm,1.0s
WRA Warramunga Arr 45.25 164 P **P** **01 51 12.1 -1.0**
comp=Z,36nm,0.6s,baz=345,slow=8.7,SNR=123
WRA PcP **PcP** **01 52 54.3 +1.4**
comp=Z,42nm,0.8s,baz=344,slow=3.6,SNR=3.6
WRA S **S** **01 57 50.9 -0.8**
comp=Z,9.7nm,1.2s,baz=344,slow=14,SNR=7.2
WRA Warramunga Arr 45.25 164*i* P **P** **01 51 14.1 +1.0**
WRA pmax pmax
comp=Z,36nm,0.6s
WRA Warramunga Arr 45.25 164 P **P** **01 51 12.1 -1.0**
WB2 Warramunga Arr 45.25 164 IAmb IAmb 01 51 30.6
comp=Z,214nm,0.9s
WR0 Warramunga Arr 45.31 164 P **P** **01 51 14.5 +0.9**
WR0 IAmb IAmb 01 51 31.1
comp=Z,191nm,0.9s
POO Poona 45.43 273*eP* **P** **01 51 15.7 +1.0**
POO IAmb IAmb 01 51 19.6
comp=Z,268nm,1.0s
PSA00 Pilbara Seismi 45.43 183 IAmb IAmb 01 51 51.2
comp=Z,139nm,0.9s
KWAJ Kwajalein Atol 45.69 102 IAMs_20 IAMs_20 02 07 56.4
comp=Z,36µm,20.0s
DZA Taraz 45.83 307*eP* **P** **01 51 16.6 -1.0**
baz=307
DZA Taraz 45.83 307*eP* **P** **01 51 16.6 -1.0**
BRZS Berezniki 46.30 317*eP* **P** **01 51 19.3 -2.0**
baz=317
BRZS Berezniki 46.30 317*eP* **P** **01 51 19.2 -2.0**
GOA Goa 46.34 269*eP* **P** **01 51 23.5 +1.6**
GOA IAmb IAmb 01 51 27.5
comp=Z,187nm,1.0s
KK31 Karatay Array 46.45 307 P **P** **01 51 21.4 -1.1**
KK31 Karatay Array 46.45 307 P **P** **01 51 21.5 -1.1**
KKAR Karatay Array 46.45 307 P **P** **01 51 21.5 -1.0**
KKAR Karatay Array 46.45 307 P **P** **01 51 21.5 -1.0**
KKAR Karatay Array 46.45 307 IAmb IAmb 01 51 26.9
comp=Z,728nm,1.9s
IUG Iuzhnay 46.70 306*eP* **P** **01 51 23.6 -1.1**
comp=Z,442nm,1.6s,baz=306
IUG *e*S **S** **01 58 10.8 -1.9**
baz=306
IUG Iuzhnay 46.70 306*eP* **P** **01 51 23.5 -1.1**
IUG *e*S **S** **01 58 10.7 -1.9**
IUG pmax pmax
comp=Z,442nm,1.6s
CHM Chimkent 47.03 306*eP* **P** **01 51 26.7 -0.4**
comp=Z,147nm,1.2s,baz=306
CHM Chimkent 47.03 306*eP* **P** **01 51 26.7 -0.4**
CHM pmax pmax
comp=Z,147nm,1.2s
GIRL Giralia 47.10 190 P **P** **01 51 28.5 +0.9**
KBL Kabul 47.25 296 P **P** **01 51 29.7 +0.6**
KBL pmax pmax
comp=Z,633nm,0.9s
KBL MLR MLR
comp=Z,20µm,18.0s
KBL Kabul 47.25 296 P **P** **01 51 29.7 +0.6**
KBL Kabul 47.25 296 P **P** **01 51 30.3 +1.3**
SNR=389
KBL P **P** **01 51 30.3 +1.3**
SNR=389
KBL S **S** **01 58 21.8 +1.0**
KBL S **S** **01 58 21.8 +1.0**
TIXI Tiksi 47.76 3 P **P** **01 51 29.6 -2.6**
comp=Z,99nm,0.8s,baz=160,slow=5.8,SNR=13
TIXI PcP **PcP** **01 53 01.1 +0.2**
comp=Z,24nm,0.7s,baz=120,slow=1.2,SNR=1.4
TIXI Tiksi 47.76 3*ceP* **P** **01 51 30.6 -1.6**
TIXI Tiksi 47.76 3 P **P** **01 51 30.4 -1.8**
TIXI IAmb IAmb 01 52 01.9
comp=Z,149nm,0.9s
BHUJ Bhuj 48.11 280*eP* **P** **01 51 37.5 +1.8**
BHUJ IAmb IAmb 01 51 41.3
comp=Z,244nm,0.8s
SMY Shemya 48.20 40 IAMs_20 IAMs_20 02 10 30.9
comp=Z,36µm,22.0s
BVAR Borovoye Array 48.49 321 P **P** **01 51 35.7 -2.5**
comp=Z,8.7nm,0.3s,baz=27,slow=45,SNR=72
BVAR PcP **PcP** **01 53 04.2 +0.3**
comp=Z,81nm,0.8s,baz=128,slow=12,SNR=7.7
BVAR ScP **ScP** **01 56 59.5 +2.7**
comp=Z,9.6nm,0.9s,baz=104,slow=6.3,SNR=4.4
BRVK Borovoye 48.56 321*ceP* **P** **01 51 36.1 -2.6**
BRVK pmax pmax
comp=Z,198nm,0.9s
BRVK MLR MLR
comp=Z,29µm,17.0s
BRVK Borovoye 48.56 321 P **P** **01 51 37.0 -1.7**
BRVK IAmb IAmb 01 51 42.9
comp=Z,208nm,0.9s
BRVK Borovoye 48.56 321 IAMs_20 IAMs_20 02 14 28.4
comp=Z,31µm,19.0s
BRVK Borovoye 48.56 321 P **P** **01 51 39.3 +0.5**
BRVK P **P** **01 51 39.3 +0.5**
BRVK S **S** **01 58 40.0 +1.5**
BRVK S **S** **01 58 40.0 +1.5**
ASAR Alice Springs 48.73 166 P **P** **01 51 39.0 -1.3**
comp=Z,16nm,0.5s,baz=343,slow=6.5,SNR=85
ASAR ScP **ScP** **01 57 00.6 +2.4**
comp=Z,1.0nm,0.7s,baz=326,slow=4.5,SNR=4.2
ASAR LR LR 02 12 28.9
comp=Z,12µm,19.9s,baz=324,slow=36
ASAR PKPPKP **P'P'df** **02 22 44.1 +5.8**
comp=Z,1.6nm,0.8s,baz=114,slow=3.5,SNR=5.0
ASAR Alice Springs 48.73 166 P **P** **01 51 41.3 +1.0**
ASAR Alice Springs 48.73 166 P **P** **01 51 41.3 +1.0**
HNR Honiara 49.50 128 LR LR 02 11 17.9
comp=Z,23µm,20.2s,baz=294,slow=34
HNR Honiara 49.50 128 P **P** **01 51 46.2 -0.2**
HNR pmax pmax
comp=Z,415nm,1.1s
HNR Honiara 49.50 128 P **P** **01 51 46.2 -0.2**
CTA Charters Tower 49.64 150 LR LR 02 10 48.9
comp=Z,31µm,21.5s,baz=342,slow=34
CTAO Charters Tower 49.64 150 P **P** **01 51 49.5 +2.2**
CTAO pmax pmax
comp=Z,192nm,1.4s
CTAO Charters Tower 49.64 150 P **P** **01 51 49.5 +2.2**
CTAO IAmb IAmb 01 52 04.3
comp=Z,192nm,1.4s
CTAO Charters Tower 49.64 150 IAMs_20 IAMs_20 02 10 24.5
comp=Z,37µm,22.0s
MNCI Minicoy 49.67 260 P **P** **01 51 47.7 0.0**
MNCY Minicoy 49.70 260*eP* **P** **01 51 49.1 +1.2**
MNCY IAmb IAmb 01 51 53.3
comp=Z,159nm,1.1s
NRIK Noril'sk 49.82 345 P **P** **01 51 45.5 -2.6**
comp=Z,56nm,0.8s,baz=118,slow=7.3,SNR=25
NRIK PcP **PcP** **01 53 08.5 +0.1**
comp=Z,46nm,0.6s,baz=118,slow=3.4,SNR=5.2
NRIK ScP **ScP** **01 57 03.8 +1.6**
comp=Z,10nm,0.8s,baz=31,slow=2.0,SNR=2.5
NRIK LR LR 02 14 53.4
comp=Z,108µm,19.2s,baz=138,slow=39
NRIK Noril'sk 49.82 345*ceP* **P** **01 51 45.5 -2.6**
NRIK pmax pmax
comp=Z,82nm,1.0s
NRIK MLR MLR
comp=Z,90µm,17.0s

NRIK	**Noril'sk**	**49.82**	**345**		P	**P**	**01 51 46.1**	**-2.0**
NRIK					IAmb	IAmb	01 52 17.2	
	comp=Z,166nm,1.1s							
AMKA	**Amchitka**	**51.02**	**42**		P	**P**	**01 51 57.1**	**-0.3**
BILL	**Bilibino**	**51.42**	**19**	*de*	P	**P**	**01 51 59.0**	**-1.2**
BILL					pmax	pmax		
	comp=Z,35nm,0.9s							
BILL					MLR	MLR		
	comp=Z,81µm,17.0s							
BILL	**Bilibino**	**51.42**	**19**		P	**P**	**01 51 58.8**	**-1.4**
HRA	**Herat**	**52.86**	**296**		IAmb	IAmb	01 52 16.4	
	comp=Z,184nm,1.1s							
HRA					IAMs_20	IAMs_20	02 17 20.1	
	comp=Z,33µm,20.0s							
AB31	**Akbulak array**	**54.34**	**314**	*i*	P	**P**	**01 52 20.2**	**-1.8**
SVE	**Sverdlovsk**	**54.82**	**324**	*de*	P	**P**	**01 52 25.0**	**-0.4**
SVE				*e*			01 54 30.2	
SVE				*e*	PPP	PPP	01 55 43.4	
SVE				*e*	S	**S**	**02 00 05.4**	**+1.0**
SVE					pmax	pmax		
	comp=Z,175nm,0.9s							
SVE					MLR	MLR		
	comp=E,63µm,17.0s							
SVE					MLR	MLR		
	comp=Z,75µm,17.0s							
ASHT	**Ashkhabad**	**55.63**	**301**		P	**P**	**01 52 33.0**	**+1.4**
ASHT					pmax	pmax		
	comp=Z,687nm,0.9s							
ASHT	**Ashkhabad**	**55.63**	**301**		P	**P**	**01 52 33.0**	**+1.4**
AKTO	**Aktyubinsk**	**55.66**	**316**		P	**P**	**01 52 29.8**	**-1.7**
	comp=Z,13nm,0.4s,baz=92,slow=8.6,SNR=53							
AKTO					PcP	**PcP**	**01 53 32.1**	**+1.3**
	comp=Z,44nm,0.8s,baz=207,slow=3.1,SNR=3.9							
AKTO	**Aktyubinsk**	**55.66**	**316**		P	**P**	**01 52 31.2**	**-0.3**
GEYT	**Alibeck**	**55.84**	**301**		P	**P**	**01 52 32.9**	**-0.2**
	comp=Z,307nm,0.8s,baz=86,slow=6.1,SNR=71							
GEYT					LR	LR	02 21 33.1	
	comp=Z,34µm,18.3s,baz=75,slow=42							
GYA0B	**ALIBECK ARRAY**	**55.84**	**301**		IAMs_20	IAMs_20	02 20 42.8	
	comp=Z,37µm,20.0s							
ARU	**Arti**	**55.89**	**323**		P	**P**	**01 52 30.4**	**-2.8**
	comp=Z,43nm,0.5s,baz=96,slow=5.2,SNR=74							
ARU	**Arti**	**55.89**	**323**	*c i*	P	**P**	**01 52 29.9**	**-3.2**
ARU							01 53 28.9	
ARU							01 54 33.7	
ARU					PPP	PPP	01 55 46.6	
ARU					S	**S**	**02 00 15.4**	**-3.4**
ARU							02 02 15.6	
ARU					SS	**SS**	**02 04 06.7**	**+2.2**
ARU					pmax	pmax		
	comp=Z,164nm,1.7s							
ARU					MLR	MLR		
	comp=Z,21µm,13.0s							
ARU	**Arti**	**55.89**	**323**		P	**P**	**01 52 30.3**	**-2.8**
ARU					IAmb	IAmb	01 52 36.0	
	comp=Z,123nm,0.7s							
ARU					IAMs_20	IAMs_20	02 17 59.2	
	comp=Z,35µm,22.0s							
EIDS	**Eidsvold**	**56.42**	**149**		IAmb	IAmb	01 53 30.5	
	comp=Z,296nm,1.9s							
NWAO	**Narrogin (SRO)**	**56.88**	**185**		P	**P**	**01 52 41.8**	**+1.5**
	comp=Z,25nm,1.0s,baz=23,slow=6.8,SNR=6.0							
NWAO	**Narrogin (SRO)**	**56.88**	**185**		P	**P**	**01 52 41.8**	**+1.5**
NWAO					pmax	pmax		
	comp=Z,123nm,1.2s							
NWAO	**Narrogin (SRO)**	**56.88**	**185**		P	**P**	**01 52 41.8**	**+1.5**
NWAO					IAmb	IAmb	01 52 54.3	
	comp=Z,123nm,1.2s							
NWAO	**Narrogin (SRO)**	**56.88**	**185**		S	**S**	**02 00 26.5**	**-5.7**
JLN	**Jalan Bani Buh**	**57.56**	**282**		P	**P**	**01 52 46.5**	**+1.0**
JLN					P	**P**	**01 52 46.5**	**+1.0**
WBK	**Wadi Bani Khal**	**57.83**	**282**		P	**P**	**01 52 48.7**	**+1.2**
	SNR=14							
WBK					P	**P**	**01 52 48.7**	**+1.2**
	SNR=14							
WBK					P	**P**	**01 52 48.7**	**+1.2**
	SNR=14							
WBK					S	**S**	**02 00 44.3**	**-1.2**
WBK					S	**S**	**02 00 44.3**	**-1.2**
WBK					S	**S**	**02 00 44.3**	**-1.2**
SPIA	**Saint Paul Isl**	**57.86**	**36**		P		01 52 47.4	
	baz=265							
WSAR	**Wadi Sarin**	**57.98**	**283**		LR	LR	02 20 11.7	
	comp=Z,19µm,21.1s,baz=98,slow=39							
BBOO	**Buckleboo**	**58.02**	**166**		IAmb	IAmb	01 53 08.5	
	comp=Z,187nm,1.1s							
GAMB	**Gambell**	**58.05**	**29**		IAMs_20	IAMs_20	02 20 10.4	
	comp=Z,41µm,19.0s							
GAMB	**Gambell**	**58.05**	**29**		P		01 52 47.7	
	baz=260							
GAMB					S		02 00 47.7	
	baz=260							
BIDO	**Bidbid**	**58.35**	**284**		P	**P**	**01 52 52.6**	**+1.6**
	SNR=16							
BIDO					P	**P**	**01 52 52.6**	**+1.6**
	SNR=16							
BIDO					P	**P**	**01 52 52.6**	**+1.6**
	SNR=16							
BIDO					S	**S**	**02 00 52.6**	**+0.4**
BIDO					S	**S**	**02 00 52.6**	**+0.4**
BIDO					S	**S**	**02 00 52.6**	**+0.4**
NIKH	**Nikolski High**	**58.43**	**41**		IAMs_20	IAMs_20	02 15 55.7	
	comp=Z,31µm,22.0s							
NIKH	**Nikolski High**	**58.43**	**41**		P		01 52 49.6	
	baz=269							
SMDO	**Samad**	**58.54**	**283**		P	**P**	**01 52 54.1**	**+1.6**
	SNR=20							
SMDO					P	**P**	**01 52 54.1**	**+1.6**
	SNR=20							
SMDO					P	**P**	**01 52 54.1**	**+1.6**
	SNR=20							
STKA	**Stephens Creek**	**58.56**	**161**		P	**P**	**01 52 52.2**	**+0.1**
	comp=Z,33nm,0.8s,baz=346,slow=7.3,SNR=34							
STKA					LR	LR	02 20 15.1	
	comp=Z,15µm,19.4s,baz=340,slow=38							
STKA	**Stephens Creek**	**58.56**	**161**	*de*	P	**P**	**01 52 52.8**	**+0.6**
STKA	**Stephens Creek**	**58.56**	**161**		IAmb	IAmb	01 53 06.5	
	comp=Z,130nm,1.9s							
JMDO	**Jabal Madar**	**58.67**	**282**		P	**P**	**01 52 54.7**	**+1.4**
	SNR=14							
JMDO					P	**P**	**01 52 54.7**	**+1.4**
	SNR=14							
SANVU	**Saraoutou**	**58.77**	**127**		IAmb	IAmb	01 53 34.2	
	comp=Z,136nm,0.9s							
HOQ	**Hogain**	**59.06**	**284**		P	**P**	**01 52 57.5**	**+1.5**
	SNR=18							
HOQ					P	**P**	**01 52 57.5**	**+1.5**
	SNR=18							
HOQ					P	**P**	**01 52 57.5**	**+1.5**
	SNR=18							
MHTO	**MHTO**	**59.16**	**281**		P	**P**	**01 52 58.0**	**+1.3**
	SNR=26							
MHTO					P	**P**	**01 52 58.0**	**+1.3**
	SNR=26							
MHTO					P	**P**	**01 52 58.0**	**+1.3**
	SNR=26							
BSY	**Bisya**	**59.38**	**283**		P	**P**	**01 52 59.9**	**+1.7**
	SNR=17							
BSY					P	**P**	**01 52 59.9**	**+1.7**
	SNR=17							
BSY					P	**P**	**01 52 59.9**	**+1.7**
	SNR=17							
BANOM	**Banah**	**59.38**	**287**	*i*	P	**P**	**01 52 58.6**	**+0.4**
	SNR=13							
BANOM	**Banah**	**59.38**	**287**		P	**P**	**01 52 58.7**	**+0.5**
	SNR=6.1							
BANOM					P	**P**	**01 52 58.7**	**+0.5**
	SNR=6.1							
SHME	**Shamm**	**59.49**	**287**		P	**P**	**01 52 59.7**	**+0.8**
SHME	**Shamm**	**59.49**	**287**		P	**P**	**01 53 00.6**	**+1.7**
SHME					P	**P**	**01 53 00.6**	**+1.7**
SHME					P	**P**	**01 53 00.6**	**+1.7**
MDH	**Madha**	**59.53**	**286**		P	**P**	**01 52 58.9**	**-0.3**
MDH	**Madha**	**59.53**	**286**		P	**P**	**01 52 59.6**	**+0.4**
MDH					P	**P**	**01 52 59.6**	**+0.4**
SOHO	**SOHO**	**59.61**	**285**	*i*	P	**P**	**01 53 00.2**	**+0.5**
	SNR=47							
SOHO	**SOHO**	**59.61**	**285**		P	**P**	**01 53 00.8**	**+1.0**
SOHO					P	**P**	**01 53 00.8**	**+1.0**
MASF	**Masafi**	**59.63**	**286**		P	**P**	**01 53 01.9**	**+1.9**
	SNR=5.8							
MASF					P	**P**	**01 53 01.9**	**+1.9**
	SNR=5.8							
MASF					P	**P**	**01 53 01.9**	**+1.9**
	SNR=5.8							
MSFE	**Esma-Masafi**	**59.64**	**286**	*i*	P	**P**	**01 52 60.0**	**0.0**
	SNR=16							
UOSS	**Minazif**	**59.70**	**286**		P	**P**	**01 53 00.8**	**+0.5**
UOSS	**Minazif**	**59.70**	**286**		P	**P**	**01 52 59.4**	**-1.0**
UOSS					IAmb	IAmb	01 53 12.6	
	comp=Z,80nm,1.2s							
HATD	**Hatta, Dubai**	**59.79**	**286**	*i*	P	**P**	**01 53 01.5**	**+0.5**
	SNR=18							
HATD	**Hatta, Dubai**	**59.79**	**286**		P	**P**	**01 53 05.0**	**+3.9**
	SNR=10							
HATD					P	**P**	**01 53 05.0**	**+3.9**
	SNR=10							
HATD					P	**P**	**01 53 05.0**	**+3.9**
	SNR=10							
ARQ	**Araqi**	**59.83**	**284**		P	**P**	**01 53 02.5**	**+1.2**
ARQ					P	**P**	**01 53 02.5**	**+1.2**
ARQ					P	**pP**	**01 53 03.0**	**-5.9**
ARQ					P	**pP**	**01 53 03.0**	**-5.9**
DQM	**DQM**	**59.85**	**280**		P	**P**	**01 53 02.2**	**+0.8**
	SNR=8.6							
DQM					P	**P**	**01 53 02.2**	**+0.8**
	SNR=8.6							
DQM					P	**P**	**01 53 02.2**	**+0.8**
	SNR=8.6							
TNA	**Tin City**	**59.94**	**27**		P	**P**	**01 53 01.4**	**+0.1**
TNA	**Tin City**	**59.94**	**27**		P		01 53 00.8	
	baz=262,SNR=9.5							
TNA					S		02 01 10.2	
	baz=262							
NAZ	**Nazwa, Dubai**	**60.16**	**286**	*i*	P	**P**	**01 53 04.3**	**+0.8**
	SNR=12							
NAZ	**Nazwa, Dubai**	**60.16**	**286**		P	**P**	**01 53 05.1**	**+1.6**
	SNR=8.4							
NAZ					P	**P**	**01 53 05.1**	**+1.6**
	SNR=8.4							
FAQ	**Al Faqa, Dubai**	**60.29**	**286**	*i*	P	**P**	**01 53 05.6**	**+1.2**
	SNR=38							
FAQ	**Al Faqa, Dubai**	**60.29**	**286**		P	**P**	**01 53 05.6**	**+1.2**
	SNR=10							
FAQ					P	**P**	**01 53 05.6**	**+1.2**
	SNR=10							
ALNE	**Al Ain**	**60.32**	**285**	*i*	P	**P**	**01 53 05.8**	**+1.1**
	SNR=41							
ALNE	**Al Ain**	**60.32**	**285**		P	**P**	**01 53 06.2**	**+1.6**
	SNR=31							
ALNE					P	**P**	**01 53 06.2**	**+1.6**
	SNR=31							
ALNE					P	**P**	**01 53 06.2**	**+1.6**
	SNR=31							
ASUD	**Al Ashush, Dub**	**60.55**	**286**	*i*	P	**P**	**01 53 07.4**	**+1.2**
	SNR=19							
ASUD	**Al Ashush, Dub**	**60.55**	**286**		P	**P**	**01 53 08.2**	**+2.0**
	SNR=6.7							
ASUD					P	**P**	**01 53 08.2**	**+2.0**
	SNR=6.7							
ASUD					P	**P**	**01 53 08.2**	**+2.0**
	SNR=6.7							
AJN	**Ajban**	**60.87**	**286**	*i*	P	**P**	**01 53 09.0**	**+0.6**
	SNR=5.7							
AJN	**Ajban**	**60.87**	**286**		P	**P**	**01 53 10.1**	**+1.7**
	SNR=6.3							
AJN					P	**P**	**01 53 10.1**	**+1.7**
	SNR=6.3							
AJN					P	**P**	**01 53 10.1**	**+1.7**
	SNR=6.3							
ANM	**Nome**	**60.90**	**28**		P	**P**	**01 53 06.7**	**-1.2**
ANM					pmax	pmax		
	comp=Z,46nm,0.7s							
ANM					MLR	MLR		
	comp=Z,25µm,18.0s							
ANM	**Nome**	**60.90**	**28**		P	**P**	**01 53 06.7**	**-1.2**
ANM					IAmb	IAmb	01 53 11.8	
	comp=Z,46nm,0.7s							
ANM					IAMs_20	IAMs_20	02 21 38.7	
	comp=Z,25µm,18.0s							
ANM	**Nome**	**60.90**	**28**		P		01 53 07.6	
	baz=265,SNR=60							
ANM					S		02 01 25.6	
	baz=265							
KIRV	**Kirov**	**60.98**	**325**		P	**P**	**01 53 06.1**	**-2.3**
	comp=Z,244nm,0.8s,baz=81,slow=2.9,SNR=31							
ARMA	**Armidale**	**60.98**	**151**		P	**P**	**01 53 10.9**	**+2.0**
ARMA					IAmb	IAmb	01 53 25.8	
	comp=Z,58nm,0.9s							
ARMA					IAMs_20	IAMs_20	02 17 31.9	
	comp=Z,31µm,22.0s							
FALS	**False Pass**	**61.63**	**39**		P		01 53 11.5	
	baz=272							
MZWR	**Madinat Zayed**	**62.05**	**285**		P	**P**	**01 53 17.3**	**+0.9**
SHAO	**Shalim**	**62.15**	**278**	*i*	P	**P**	**01 53 17.4**	**+0.3**
	SNR=6.0							
SHAO	**Shalim**	**62.15**	**278**		P	**P**	**01 53 18.4**	**+1.3**
	SNR=5.3							
SHAO					P	**P**	**01 53 18.4**	**+1.3**
	SNR=5.3							
SHAO					P	**P**	**01 53 18.4**	**+1.3**
	SNR=5.3							
BELG	**Belogornoye**	**62.15**	**318**		P	**P**	**01 53 14.1**	**-2.4**
	comp=Z,214nm,0.8s,baz=304,slow=1.5,SNR=34							
BELG	**Belogornoye**	**62.15**	**318**	*c i*	P	**P**	**01 53 15.0**	**-1.5**
BELG					pmax	pmax		
	comp=Z,38nm,0.8s							
BELG					MLR	MLR		
	comp=Z,3µm,17.0s							
RDOG	**Red Dog Mine**	**62.19**	**24**		IAMs_20	IAMs_20	02 22 28.5	
	comp=Z,30µm,19.0s							
RDOG	**Red Dog Mine**	**62.19**	**24**		P		01 53 15.8	
	baz=266							
RDOG					S		02 01 38.8	
	baz=266							
JRN	**Qarnain Island**	**62.64**	**287**		P	**P**	**01 53 21.0**	**+0.7**
	SNR=9.7							
JRN					P	**P**	**01 53 21.0**	**+0.7**
	SNR=9.7							
JRN					P	**P**	**01 53 21.0**	**+0.7**
	SNR=9.7							
DZM	**Mont Dzumac**	**62.72**	**134**	*e*	P	**P**	**01 53 22.9**	**+2.1**
	comp=Z,208nm,1.4s							
DZM				*e*	S	**S**	**02 01 51.0**	**+3.0**
	comp=Z,42µm,28.2s							
DZM				*e*	SS	**SS**	**02 05 57.6**	**+4.2**
	comp=Z,17µm,25.6s							
DZM				*e*	LR	LR	02 12 05.0	
	comp=Z,85µm,24.4s							
DZM	**Mont Dzumac**	**62.72**	**134**		LR	LR	02 16 04.3	
	comp=Z,29µm,21.7s,baz=320,slow=32							
DZM	**Mont Dzumac**	**62.72**	**134**		P	**P**	**01 53 23.0**	**+2.2**
DZM					IAmb	IAmb	01 53 34.3	
	comp=Z,144nm,1.4s							
DZM					IAMs_20	IAMs_20	02 15 53.0	
	comp=Z,26µm,22.0s							
DMTO	**DMTO**	**62.85**	**278**		P	**P**	**01 53 22.6**	**+0.8**
	SNR=9.9							
DMTO					P	**P**	**01 53 22.6**	**+0.8**
	SNR=9.9							
DMTO					P	**P**	**01 53 22.6**	**+0.8**
	SNR=9.9							
PRGR	**Permogore**	**62.88**	**329**	*e*	P	**P**	**01 53 18.4**	**-2.8**
PRGR				*i*			01 53 59.5	
PRGR					pmax	pmax		
	comp=Z,182nm,0.8s							
MAK	**Makhachkala**	**63.27**	**307**	*e*	P	**P**	**01 53 21.5**	**-2.7**
MAK				*e*			01 55 37.4	
MAK				*e*	PPP	PPP	01 57 10.6	
MAK				*e*	S	**S**	**02 01 49.6**	**-4.8**
MAK				*e*	SS	**SS**	**02 05 59.5**	**-1.2**
MAK					pmax	pmax		
	comp=Z,379nm,1.5s							
SDPT	**Sand Point**	**63.30**	**39**		P		01 53 21.4	
	baz=274							
DOK	**Doka**	**63.31**	**280**		P	**P**	**01 53 25.1**	**+0.3**
	SNR=29							
DOK					P	**P**	**01 53 25.1**	**+0.3**
	SNR=29							
AKT	**Akhty**	**63.34**	**306**	*de*	P	**P**	**01 53 23.4**	**-1.4**
AKT					pmax	pmax		
	comp=Z,231nm,1.0s							
AKT					MLR	MLR		
	comp=Z,25µm,17.0s							
RBK	**Rabkut**	**63.59**	**278**		P	**P**	**01 53 27.0**	**+0.2**
	SNR=48							
RBK					P	**P**	**01 53 27.0**	**+0.2**
	SNR=48							
RBK					P	**P**	**01 53 27.0**	**+0.2**
	SNR=48							
GNBR	**Gunib**	**63.76**	**307**	*de*	P	**P**	**01 53 26.3**	**-1.2**
GNBR					pmax	pmax		
	comp=Z,282nm,1.2s							
GNBR					MLR	MLR		
	comp=Z,17µm,17.0s							
WHFO	**Wadi Hawf**	**63.85**	**279**		P	**P**	**01 53 29.0**	**+0.5**
	SNR=43							
WHFO					P	**P**	**01 53 29.0**	**+0.5**
	SNR=43							
WHFO					P	**P**	**01 53 29.0**	**+0.5**
	SNR=43							
SLWR	**Sila**	**63.90**	**286**		P	**P**	**01 53 29.7**	**+1.1**
CAN	**Canberra**	**64.20**	**156**		IAMs_20	IAMs_20	02 24 01.9	
	comp=Z,18µm,18.0s							
LGD	**Lagodekhi**	**64.38**	**306**		P	**P**	**01 53 30.7**	**-0.8**
ABTO	**Aybut**	**64.46**	**278**		P	**P**	**01 53 33.0**	**+0.5**
	SNR=60							
ABTO					P	**P**	**01 53 33.0**	**+0.5**
	SNR=60							
ABTO					P	**P**	**01 53 33.0**	**+0.5**
	SNR=60							
GROC	**Groznyy**	**64.47**	**308**	*e*	P	**P**	**01 53 28.8**	**-3.3**
GROC				*e*			01 54 03.7	
GROC				*e*			01 55 47.8	
GROC				*e*	S	**S**	**02 02 07.7**	**-1.6**
GROC				*e*			02 03 20.6	
GROC					pmax	pmax		
	comp=Z,313nm,1.2s							
GROC					MLR	MLR		
	comp=Z,43µm,16.0s							
A21K	**Barrow**	**64.53**	**21**		P		01 53 31.7	
	baz=270							
DDFL	**Dedoflistskaro**	**64.54**	**306**		P	**P**	**01 53 33.4**	**+0.7**
TOO	**Toolangi**	**65.03**	**160**		P	**P**	**01 53 37.3**	**+1.7**
TOO					pmax	pmax		
	comp=Z,58nm,0.9s							
TOO					MLR	MLR		
	comp=Z,16µm,19.0s							
TOO	**Toolangi**	**65.03**	**160**		P	**P**	**01 53 37.3**	**+1.7**
TOO					IAmb	IAmb	01 54 09.6	
	comp=Z,58nm,0.9s							
GUDG	**Gudauri**	**65.55**	**307**		P	**P**	**01 53 39.3**	**-0.1**
SOCY	**Socotra**	**65.58**	**273**		P	**P**	**01 53 38.3**	**-1.5**
SOCY					IAmb	IAmb	01 53 43.5	
	comp=Z,138nm,1.0s							
SOCY	**Socotra**	**65.58**	**273**		P	**P**	**01 53 39.5**	**-0.4**
	SNR=46							
IMAR	**Indian Mountai**	**65.79**	**26**		P	**P**	**01 53 40.0**	**-0.2**
GNI	**Garni**	**65.81**	**305**		P	**P**	**01 53 41.9**	**+0.8**
	comp=Z,272nm,1.3s,baz=140,slow=1.1,SNR=45							
GNI	**Garni**	**65.81**	**305**		P	**P**	**01 53 42.0**	**+1.0**
GNI	**Garni**	**65.81**	**305**	*ce*	P	**P**	**01 53 40.1**	**-1.0**
GNI					pmax	pmax		
	comp=Z,528nm,1.6s							
GNI					MLR	MLR		
	comp=Z,18µm,17.0s							
GNI	**Garni**	**65.81**	**305**		P	**P**	**01 53 40.5**	**-0.5**
GNI	**Garni**	**65.81**	**305**		IAMs_20	IAMs_20	02 26 53.4	
	comp=Z,19µm,19.0s							
GNI	**Garni**	**65.81**	**305**		P	**P**	**01 53 42.1**	**+1.0**
GNI					P	**P**	**01 53 42.1**	**+1.0**
GNI					P	**P**	**01 53 42.1**	**+1.0**
KZRT	**Kazreti**	**65.82**	**306**		P	**P**	**01 53 41.5**	**+0.5**
UMR	**Umm Al-Rimmam**	**65.87**	**293**	*e*	P		01 53 41.1	
KLMR	**Klimovskoe**	**65.88**	**328**	*e*	P	**P**	**01 53 38.4**	**-2.5**
KLMR				*e*	S	**S**	**02 02 23.6**	**-2.3**
KLMR				*e*	SS	**SS**	**02 06 39.7**	**-0.7**
KLMR					pmax	pmax		
	comp=Z,146nm,1.0s							
KLMR					MLR	MLR		
	comp=Z,64µm,17.0s							
KLMR	**Klimovskoe**	**65.88**	**328**	*e*	P	**P**	**01 53 38.4**	**-2.5**
KLMR					AMP		01 53 44.4	
	comp=Z,146nm,1.0s							
KLMR				*e*	S	**S**	**02 02 23.6**	**-2.3**
KLMR				*e*	S	**S**	**02 02 23.6**	**-2.3**
KLMR				*e*	SS	**SS**	**02 06 39.8**	**-0.7**
KLMR				*e*	SS	**SS**	**02 06 39.8**	**-0.7**
KLMR					LQ	LQ	02 16 44.3	
KLMR					LQ	LQ	02 16 44.3	
KLMR					LR	LR	02 20 46.0	
KLMR					AMP		02 24 53.0	
	comp=Z,64µm,17.2s							
QRN	**Al-Qurain**	**65.90**	**292**	*e*	P		01 53 41.4	
ZEI	**Tsey**	**65.91**	**308**	*e*	P	**P**	**01 53 38.3**	**-3.4**
ZEI					pmax	pmax		
	comp=Z,133nm,1.0s							
VRH	**Novokhopyorsk**	**65.92**	**317**	*e*	P	**P**	**01 53 40.5**	**-0.8**
VRH				*e*			01 56 02.5	
VRH				*e*	S	**S**	**02 02 26.8**	**0.0**
VRH					pmax	pmax		
	comp=Z,160nm,0.8s							
VRH					smax	smax		
	comp=N,3µm,13.3s							
VRH					MLR	MLR		
	comp=Z,24µm,17.0s							
NCK	**Nalchik**	**65.99**	**309**	*ce*	P	**P**	**01 53 41.8**	**-0.2**
NCK					pmax	pmax		
	comp=Z,230nm,1.8s							
NCK					MLR	MLR		
	comp=Z,25µm,16.0s							
GOF	**Gofitskoye**	**66.09**	**310**	⇑ *e*	P	**P**	**01 53 43.5**	**+0.9**
GOF				*e*	S	**S**	**02 02 30.4**	**+1.3**
GOF					pmax	pmax		
	comp=Z,377nm,1.4s							
GOF					smax	smax		
	comp=E,271nm,2.0s							
GOF					smax	smax		
	comp=N,314nm,2.0s							
RDF	**Al-Radifah**	**66.17**	**292**	*e*	P		01 53 43.3	
TASB	**TASBURUN-IGDIR**	**66.22**	**305**		P	**P**	**01 53 44.6**	**+1.0**
ONI	**Oni**	**66.27**	**308**		P	**P**	**01 53 45.2**	**+1.3**
KBZ	**Khabaz**	**66.45**	**309**		P	**P**	**01 53 43.6**	**-1.3**
	comp=N,103nm,1.0s,baz=87,slow=3.3,SNR=45							
KBZ					LR	LR	02 26 26.6	
	comp=N,32µm,19.1s,baz=68,slow=39							
KBZ	**Khabaz**	**66.45**	**309**	*de*	P	**P**	**01 53 43.5**	**-1.3**
KBZ					pmax	pmax		
	comp=Z,250nm,1.2s							
KBZ					MLR	MLR		
	comp=Z,29µm,16.0s							
AKH	**Akhalkalaki**	**66.48**	**306**	⇑	P	**P**	**01 53 45.9**	**+0.5**
AKH	**Akhalkalaki**	**66.48**	**306**		P	**P**	**01 53 45.8**	**+0.5**
KIV	**Kislovodsk**	**66.55**	**309**	⇑	P	**P**	**01 53 45.9**	**+0.3**
KIV	**Kislovodsk**	**66.55**	**309**	*i*	P	**P**	**01 53 44.4**	**-1.2**
	SNR=64							
KIV	**Kislovodsk**	**66.55**	**309**	*e*	P	**P**	**01 53 43.8**	**-1.9**
KIV				*e*			01 56 11.1	
KIV				*e*	S	**S**	**02 02 32.2**	**-2.8**
KIV				*e*	SS	**SS**	**02 06 53.1**	**+1.1**
KIV					pmax	pmax		
	comp=Z,863nm,1.0s							
KIV					pmax	pmax		
	comp=Z,4µm,4.7s							
KIV					MLR	MLR		
	comp=Z,49µm,17.0s							
KIV	**Kislovodsk**	**66.55**	**309**		P	**P**	**01 53 44.6**	**-1.1**
KIV					IAMs_20	IAMs_20	02 26 03.7	
	comp=Z,22µm,20.0s							
KIV	**Kislovodsk**	**66.55**	**309**		P	**P**	**01 53 46.6**	**+0.9**
KIV					P	**P**	**01 53 46.6**	**+0.9**
KIV					P	**P**	**01 53 46.6**	**+0.9**
CHUM	**Lake Minchumin**	**66.61**	**29**		P		01 53 45.1	
	baz=277,SNR=13							
CHUM					S		02 02 34.8	
	baz=277							
SHA1	**Shidzhatmaz**	**66.62**	**309**	*ce*	P	**P**	**01 53 46.4**	**+0.1**
CLDR	**Caldiran**	**66.65**	**304**		P	**P**	**01 53 46.4**	**-0.1**
SII	**Sitkinak Islan**	**66.68**	**37**		IAMs_20	IAMs_20	02 28 05.4

baz=278
OHAK Old Harbor 67.06 36 P **P** **01 53 48.5 0.0**
OHAK IAmb IAmb 01 54 29.6
comp=Z,90nm,1.1s
OHAK IAMs_20 IAMs_20 02 23 44.5
comp=Z,23µm,22.0s
OHAK Old Harbor 67.06 36 P 01 53 47.7
baz=279
TOLK Toolik Lake Re 67.11 23 IAmb IAmb 01 54 22.6
comp=Z,109nm,0.9s
TOLK IAMs_20 IAMs_20 02 25 17.5
comp=Z,43µm,18.0s
TOLK Toolik Lake Re 67.11 23 P 01 53 48.4
baz=278,SNR=56
TOLK S 02 02 40.9
baz=278
LVZ Lovozero 67.13 336⇓ *e*P **P** **01 53 49.6 +0.7**
LVZ pmax pmax
comp=Z,66nm,0.9s
LVZ MLR MLR
comp=Z,44µm,16.0s
MLY Manley 67.14 27 IAmb IAmb 01 54 35.8
comp=Z,75nm,1.0s
MLY IAMs_20 IAMs_20 02 25 46.5
comp=Z,24µm,18.0s
MLY Manley 67.14 27 P 01 53 48.7
baz=278,SNR=42
MLY S 02 02 42.4
baz=278
BPAW Bear Paw Mtn. 67.16 28 IAMs_20 IAMs_20 02 23 22.3
comp=Z,25µm,21.0s
BPAW Bear Paw Mtn. 67.16 28 P 01 53 48.8
baz=278,SNR=26
BPAW S 02 02 41.9
baz=278
VANB Van 67.17 303 P **P** **01 53 50.8 +1.1**
SKT Skwentna 67.22 31 IAMs_20 IAMs_20 02 23 11.1
comp=Z,26µm,21.0s
SKT Skwentna 67.22 31 P 01 53 49.1
baz=279
CHVG Ch'k'valeri 67.23 308⇑ P **P** **01 53 50.1 +0.2**
AGRB Hanur-Agry 67.25 305 P **P** **01 53 51.4 +1.1**
KTH Kantishna Hill 67.27 29 IAmb IAmb 01 54 51.8
comp=Z,154nm,1.6s
KTH IAMs_20 IAMs_20 02 23 04.2
comp=Z,24µm,21.0s
CUKT Cukurca 67.31 302 P **P** **01 53 49.6 -1.1**
KDAK Kodiak Island 67.35 35⇑ *e*P **P** **01 53 49.9 -0.4**
KDAK pmax pmax
comp=Z,321nm,2.1s
KDAK Kodiak Island 67.35 35 P **P** **01 53 50.3 0.0**
KDAK IAmb IAmb 01 54 36.5
comp=Z,230nm,1.6s
KDAK Kodiak Island 67.35 35 IAMs_20 IAMs_20 02 22 57.0
comp=Z,25µm,22.0s
KDAK Kodiak Island 67.35 35 P 01 53 50.3
baz=280
VORR Voronezh 67.40 318 *e*P **P** **01 53 48.0 -2.7**
VORR pmax pmax
comp=Z,400nm,2.0s
LPSR Galich'ya Gora 67.40 319 *e*P **P** **01 53 50.4 -0.3**
LPSR *e* 01 56 14.8
LPSR *e*S **S** **02 02 46.8 +2.2**
LPSR pmax pmax
comp=Z,150nm,0.8s
LPSR smax smax
comp=N,4µm,11.2s
LPSR MLR MLR
comp=Z,15µm,14.0s
VORD Divnogorie 67.47 317 *e*P **P** **01 53 51.1 -0.1**
VORD *e*S **S** **02 02 39.2 -6.4**
VORD pmax pmax
comp=Z,80nm,1.1s
VORD smax smax
comp=N,140nm,5.3s
VORD MLR MLR
comp=Z,7µm,14.0s
GEVA Gevas 67.49 303 P **P** **01 53 50.4 -1.4**
VSR Storozhevoye 67.51 317 *e*P **P** **01 53 51.1 -0.3**
VSR *e* 01 56 19.6
VSR *e*S **S** **02 02 41.1 -4.9**
VSR pmax pmax
comp=Z,190nm,1.4s
VSR smax smax
comp=N,2µm,8.6s
VSR MLR MLR
comp=Z,27µm,16.0s
SENK Senkaya-Erzuru 67.51 306 P **P** **01 53 53.2 +1.2**
HOM Homer 67.53 33 P 01 53 50.8
baz=280
AKDM Akdamar-Van 67.54 303 P **P** **01 53 51.2 -1.0**
TRF Thorofare Moun 67.56 29 P **P** **01 53 52.6 +0.8**
TRF IAMs_20 IAMs_20 02 23 12.9
comp=Z,24µm,21.0s
TRF Thorofare Moun 67.56 29 P 01 53 51.5
baz=279,SNR=6.5
TRF S 02 02 45.1
baz=279
CAPN Captain Cook N 67.59 32 IAMs_20 IAMs_20 02 21 34.0
comp=Z,21µm,20.0s
CAPN Captain Cook N 67.59 32 P 01 53 50.3
baz=280
MOS Moscow 67.60 322 *e*P **P** **01 53 48.6 -3.3**
MOS *e* 01 54 14.9
MOS *e*PPP PPP 01 57 56.6
MOS *e*S **S** **02 02 41.6 -5.3**
MOS *e* 02 03 45.0
MOS pmax pmax
comp=Z,282nm,2.0s
MOS pmax pmax
comp=Z,4µm,5.0s
MOS pmax pmax
comp=N,1µm,4.2s
MOS pmax pmax
comp=E,2µm,4.7s
MOS MLR MLR
comp=E,33µm,17.0s
MOS MLR MLR
comp=Z,38µm,17.0s
ARXR Arkhyz 67.63 309*c i*P **P** **01 53 52.8 +0.2**
ARXR pmax pmax
comp=Z,99nm,0.8s
ARXR MLR MLR
comp=Z,15µm,16.0s
APA Apatity 67.65 335⇑ *i*P **P** **01 53 51.3 -0.8**
APA *i* 01 54 21.0
APA *i* PPP PPP 01 57 56.0
APA *i* S **S** **02 02 45.0 -2.2**
APA *i* 02 03 22.0
APA pmax pmax
comp=Z,76nm,0.7s
SUA Susitna One 67.67 31 P 01 53 51.6
baz=280
I23K Minto, Yukon-K 67.70 27 IAmb IAmb 01 55 11.3
comp=Z,92nm,1.2s
I23K IAMs_20 IAMs_20 02 26 03.4
comp=Z,24µm,19.0s
I23K Minto, Yukon-K 67.70 27 P 01 53 52.5
baz=279,SNR=31
I23K S 02 02 48.9
baz=279
CUT Chulitna 67.74 30 IAmb IAmb 01 55 09.0
comp=Z,174nm,1.0s
CUT IAMs_20 IAMs_20 02 27 38.9
comp=Z,24µm,18.0s
CUT Chulitna 67.74 30 P 01 53 51.2
baz=280
CNPM China Poot 67.75 33 P **P** **01 53 54.2 +1.3**
CNPM IAmb IAmb 01 54 11.2
comp=Z,75nm,1.0s
CNPM IAMs_20 IAMs_20 02 25 23.5
comp=Z,18µm,19.0s
BWN Browne 67.81 28 IAMs_20 IAMs_20 02 24 16.3
comp=Z,22µm,21.0s
BRLK Bradley Lake 67.89 33 IAmb IAmb 01 54 30.3
comp=Z,115nm,0.9s
NEA2 Nenana 67.91 28 IAmb IAmb 01 54 07.2
comp=Z,84nm,0.9s
NEA2 IAMs_20 IAMs_20 02 24 26.0
comp=Z,20µm,20.0s
NEA2 Nenana 67.91 28 P 01 53 53.5
baz=280,SNR=42
NEA2 S 02 02 50.9
baz=280
BRSE Bradley Lake S 67.97 33 P 01 53 54.1
baz=280
KOPR Koprukoy-ERZUR 68.01 305 P **P** **01 53 55.7 +0.6**
MCK McKinley 68.12 29 IAmb IAmb 01 54 08.2
comp=Z,68nm,0.9s
MCK IAMs_20 IAMs_20 02 24 01.5
comp=Z,25µm,21.0s
MCK McKinley 68.12 29 P 01 53 54.1
baz=280,SNR=14
SIRT Sirnak 68.16 302 P **P** **01 53 56.4 +0.4**
MDM Murphy Dome 68.20 27 IAmb IAmb 01 54 06.2
comp=Z,130nm,1.0s
MDM IAMs_20 IAMs_20 02 26 19.7
comp=Z,20µm,18.0s
RND Reindeer 68.21 29 IAmb IAmb 01 54 08.4
comp=Z,142nm,0.9s
RND IAMs_20 IAMs_20 02 24 06.0
comp=Z,29µm,21.0s
GURO Guroymak-BITLI 68.21 304 P **P** **01 53 57.3 +0.9**
RC01 Rabbit Creek A 68.22 32 IAMs_20 IAMs_20 02 28 23.5
comp=Z,21µm,18.0s
RC01 Rabbit Creek A 68.22 32 P 01 53 54.7
baz=280
RC01 S 02 02 54.1
baz=280
OBN Obninsk 68.30 322⇑ P **P** **01 53 55.4 -1.0**
OBN Obninsk 68.30 322*c i*P **P** **01 53 54.9 -1.5**
OBN *e* 01 54 20.0
OBN *e* 01 56 21.6
OBN *e*PPP PPP 01 58 01.7
OBN *e*S **S** **02 03 00.4 +5.1**
OBN pmax pmax
comp=Z,272nm,2.3s
OBN MLR MLR
comp=Z,41µm,19.0s
OBN Obninsk 68.30 322 P **P** **01 53 55.7 -0.7**
OBN IAmb IAmb 01 54 29.4
comp=Z,148nm,1.2s
OBN IAMs_20 IAMs_20 02 27 18.4
comp=Z,42µm,19.0s
RPOR Krasnaya Polya 68.32 309*de*P **P** **01 53 57.4 +0.6**
RPOR pmax pmax
comp=Z,150nm,1.3s
RPOR MLR MLR
comp=Z,35µm,17.0s
MSVF Nonsavu 68.33 122 LR LR 02 20 47.1
comp=Z,15µm,20.1s,baz=301,slow=33
MSVF Nonsavu 68.33 122 P **P** **01 53 59.1 +1.9**
MSVF pmax pmax
comp=Z,148nm,1.2s
MSVF Nonsavu 68.33 122 P **P** **01 53 59.1 +1.9**
MSVF IAmb IAmb 01 54 29.6
comp=Z,148nm,1.1s
O22K Cooper Landing 68.33 32 P **P** **01 53 57.1 +0.6**
O22K IAMs_20 IAMs_20 02 28 42.6
comp=Z,24µm,18.0s
O22K Cooper Landing 68.33 32 P 01 53 55.5
baz=281
WRH Wood River Hil 68.35 28 IAMs_20 IAMs_20 02 25 46.6
comp=Z,20µm,19.0s
GUZR Guzeripl' 68.36 310*ce*P **P** **01 53 55.0 -2.0**
GUZR pmax pmax
comp=Z,127nm,1.0s
GUZR MLR MLR
comp=Z,17µm,17.0s
TCOL CIGO, UAF Yank 68.37 27 P **P** **01 53 57.4 +0.8**
TCOL IAmb IAmb 01 54 01.2
comp=Z,62nm,0.9s
TCOL IAMs_20 IAMs_20 02 26 25.2
comp=Z,24µm,18.0s
TCOL CIGO, UAF Yank 68.37 27 P 01 53 56.0
baz=281,SNR=6.7
TCOL S 02 02 54.4
baz=281
COLA College 68.38 27*ce*P **P** **01 53 55.4 -1.3**
COLA pmax pmax
comp=Z,198nm,2.6s
COLA MLR MLR
comp=Z,21µm,18.0s
COLA College 68.38 27 P **P** **01 53 58.0 +1.3**
COLA IAmb IAmb 01 54 01.2
comp=Z,59nm,0.8s
COLA College 68.38 27 IAMs_20 IAMs_20 02 26 25.2
comp=Z,23µm,18.0s
COLA College 68.38 27 P 01 53 56.2
baz=281
COLA S 02 02 55.6
baz=281
WAT2 Susitna Watana 68.41 29 P 01 53 55.7
baz=281
WAT2 S 02 02 55.3
baz=281
PMR Palmer 68.41 31 IAmb IAmb 01 54 34.0
comp=Z,81nm,1.2s
PMR IAMs_20 IAMs_20 02 26 00.6
comp=Z,20µm,20.0s
PMR Palmer 68.41 31 P 01 53 56.0
baz=281
PMR S 02 02 56.5
baz=281
CCB Clear Creek Bu 68.44 28 IAMs_20 IAMs_20 02 24 52.0
comp=Z,19µm,20.0s
GHO Glory Hole Cre 68.47 31 IAmb IAmb 01 54 29.4
comp=Z,82nm,1.1s
VRTB Varto-Mus 68.50 304 P **P** **01 53 59.5 +1.3**
POKR Poker Plat Res 68.51 27 IAmb IAmb 01 54 01.9
comp=Z,78nm,0.8s
POKR IAMs_20 IAMs_20 02 26 29.7
comp=Z,25µm,19.0s
POKR Poker Plat Res 68.51 27 P 01 53 56.8
baz=281,SNR=21
POKR S 02 02 57.0
baz=281
HOPEN Hopen 68.51 346 *e*P **P** **01 53 57.6 +0.3**
HOPEN IVmB_BB 01 53 58.3
comp=Z,5µm,3.1s
HOPEN IVMs_BB IVMs_BB 02 03 05.2
comp=Z,3µm,3.1s
CHOM Cayeli-Rize 68.56 307 P **P** **01 53 59.1 +0.8**
SOC Sochi 68.73 309*c i*P **P** **01 53 58.4 -0.9**
SOC *e**SP **pwP** **01 54 10.0 -0.4**
SOC *e* 01 56 31.4
SOC *e*S **S** **02 03 01.1 +0.2**
SOC *e*SS **SS** **02 07 23.4 -2.1**
SOC pmax pmax
comp=Z,188nm,1.2s
SOC MLR MLR
comp=Z,21µm,14.0s
SML Sawmill 68.75 31 P 01 53 58.5
baz=281
SML S 02 02 59.8
baz=281
KNK Knik Glacier 68.76 31 IAMs_20 IAMs_20 02 26 20.9
comp=Z,20µm,20.0s
KNK Knik Glacier 68.76 31 P 01 53 58.2
baz=282
KNK S 02 02 59.3
baz=282
KARO Karlova-Bingo 68.78 305 P **P** **01 54 00.5 +0.6**
ILAR Eielson Array 68.80 27 P **P** **01 53 58.1 -1.2**
comp=Z,5.1nm,0.6s,baz=254,slow=2.9,SNR=50
ILAR PKPPKP **P'P'df** **02 22 12.3 -5.2**
comp=Z,1.8nm,1.1s,baz=88,slow=1.1,SNR=6.4
ILAR LR LR 02 26 02.8
comp=Z,16µm,18.8s,baz=308,slow=38
ILAR Eielson Array 68.80 27 P **P** **01 53 57.9 -1.5**
ILAR Eielson Array 68.80 27 P **P** **01 53 57.9 -1.5**
HDA Harding Lake 68.85 28 IAMs_20 IAMs_20 02 26 10.8
comp=Z,24µm,19.0s
HDA Harding Lake 68.85 28 P 01 53 57.6
baz=282,SNR=32
HDA P 01 53 57.6
baz=282,SNR=32
WAT6 Susitna Watana 68.86 30 P 01 53 58.8
baz=282
WAT6 S 02 03 01.4
baz=282
PWL Port Wells 68.93 32 IAmb IAmb 01 54 12.7
comp=Z,119nm,0.9s
PWL IAMs_20 IAMs_20 02 26 18.4
comp=Z,19µm,20.0s
KOPT Kop Dagi 69.01 305 IAMs_20 IAMs_20 02 29 17.1
comp=Z,19µm,19.0s
FYU Fort Yukon 69.11 25 IAmb IAmb 01 54 54.3
comp=Z,223nm,1.5s
YEDI Yedisu-Bingol 69.12 305 P **P** **01 54 02.7 +0.7**
BNGB Bingl 69.13 304 P **P** **01 54 02.5 +0.5**
BMAR Burnt Mountain 69.17 24 P **P** **01 54 00.1 -1.6**
SCM Sheep Creek Mo 69.21 31 IAmb IAmb 01 54 47.6
comp=Z,148nm,1.0s
SCM IAMs_20 IAMs_20 02 28 34.5
comp=Z,20µm,18.0s
PRP Porcupine Dome 69.21 26 IAMs_20 IAMs_20 02 28 00.3
comp=Z,18µm,18.0s
PRP Porcupine Dome 69.21 26 P 01 54 01.8
baz=282
PRP S 02 03 06.3
baz=282
BINT Bingol 69.31 304 P **P** **01 54 03.4 +0.3**
KTUT Trabzon 69.32 307 P **P** **01 54 04.0 +1.0**
JOF Joensuu 69.38 331 P **P** **01 54 01.8 -1.1**
JOF pmax pmax
comp=Z,124nm,0.8s
RAYN Ar Rayn 69.47 287 *i* P **P** **01 54 03.8 -0.5**
SNR=257
RAYN Ar Rayn 69.47 287 P **P** **01 54 03.8 -0.5**
RAYN pmax pmax
comp=Z,224nm,1.1s
RAYN Ar Rayn 69.47 287 P **P** **01 54 03.8 -0.5**
KEV Kevo 69.52 338 P **P** **01 54 03.3 -0.4**
KEV pmax pmax
comp=Z,108nm,1.1s
KEV MLR MLR
comp=Z,35µm,18.0s
KEV Kevo 69.52 338 P **P** **01 54 03.3 -0.4**
KEV IAmb IAmb 01 54 31.7
comp=Z,108nm,1.1s
KEV IAMs_20 IAMs_20 02 27 44.1
comp=Z,35µm,18.0s
GLI Glacier Island 69.52 31 IAMs_20 IAMs_20 02 29 04.9
comp=Z,18µm,18.0s
GLI Glacier Island 69.52 31 P 01 54 02.7
baz=283
GLI S 02 03 09.2
baz=283
MSF Maaselka 69.67 334 P **P** **01 54 04.6 -0.1**
M24K Tolsona, Glenn 69.68 30 IAMs_20 IAMs_20 02 27 48.0
comp=Z,19µm,19.0s
M24K Tolsona, Glenn 69.68 30 P 01 54 04.7
baz=283
M24K S 02 03 12.9
baz=283
ERZN Erzincan 69.70 305 P **P** **01 54 05.8 +0.2**
PAX Paxson 69.80 29 IAMs_20 IAMs_20 02 24 35.1
comp=Z,20µm,20.0s
PAX Paxson 69.80 29 P 01 54 05.1
baz=283
FID Port Fidalgo 69.84 32 IAMs_20 IAMs_20 02 26 47.1
comp=Z,20µm,20.0s
SPA0 Spitsbergen Ar 69.85 348 IAmb IAmb 01 54 31.9
comp=Z,119nm,1.0s
SPA0 Spitsbergen Ar 69.85 348 *e*P **P** **01 54 04.4 -1.2**
SPITS Spitsbergen Ar 69.85 348 P **P** **01 54 03.1 -2.6**
comp=Z,34nm,0.5s,baz=121,slow=12,SNR=80
VALR Valaam 69.92 329 *i* P **P** **01 54 05.7 -0.6**
VALR pmax pmax
comp=Z,140nm,1.0s
VALR MLR MLR
comp=Z,42µm,15.0s
KLU Klutina 69.94 31 IAMs_20 IAMs_20 02 23 05.8
comp=Z,21µm,22.0s
KLU Klutina 69.94 31 P 01 54 05.4
baz=284
ANN Anapa 70.04 311⇑ *i*P **P** **01 54 06.9 -0.4**
ANN *e* 01 56 43.3
ANN *e*PPP PPP 01 58 26.0
ANN *i* S **S** **02 03 16.9 +0.7**
ANN pmax pmax
comp=Z,458nm,1.0s
ANN pmax pmax
comp=Z,2µm,2.8s
ARA0 ARCESS Array S 70.08 338 *e*P **P** **01 54 07.5 +0.4**
ARCES ARCESS Array B 70.08 338 P **P** **01 54 05.9 -1.3**
comp=Z,9.6nm,0.4s,baz=54,slow=5.8,SNR=50
ARCES PKiKP **PKiKP** **02 00 19.5 -0.1**
comp=Z,3.9nm,0.9s,baz=355,slow=1.6,SNR=5.1
ARCES LR LR 02 30 05.0
comp=Z,28µm,18.9s,baz=80,slow=40
ARCES ARCESS Array B 70.08 338 P **P** **01 54 06.7 -0.5**
ARCES pmax pmax
comp=Z,51nm,1.0s
ARCES ARCESS Array B 70.08 338 P **P** **01 54 06.7 -0.5**
SCRK Sand Creek 70.21 28 IAMs_20 IAMs_20 02 25 56.7
comp=Z,21µm,21.0s
SCRK Sand Creek 70.21 28 P 01 54 07.3
baz=284,SNR=20
SCRK S 02 03 17.0
baz=284
Q23K Middleton Isla 70.22 33 IAMs_20 IAMs_20 02 29 56.5
comp=Z,25µm,18.0s
Q23K Middleton Isla 70.22 33 P 01 54 09.0
baz=284
Q23K S 02 03 18.0
baz=284
MID Middleton Isla 70.22 33 IAMs_20 IAMs_20 02 29 55.6
comp=Z,23µm,18.0s
EYAK Cordova Ski Ar 70.24 32 P 01 54 07.4
baz=284
DOT Dot Lake 70.26 28 IAmb IAmb 01 54 35.0
comp=Z,59nm,0.9s
DOT IAMs_20 IAMs_20 02 27 59.0
comp=Z,18µm,18.0s
SGF Sodankyl 70.26 336 P **P** **01 54 07.7 -0.6**
KBS Kingsbay 70.38 349⇑ *i*P **P** **01 54 08.5 -0.3**
KBS IAMs_20 IAMs_20 02 28 19.4
comp=Z,172µm,19.3s
KBS Kingsbay 70.38 349*c i*P **P** **01 54 08.1 -0.7**
KBS pmax pmax
comp=Z,99nm,2.0s
KBS MLR MLR
comp=Z,70µm,19.0s
KBS Kingsbay 70.38 349 P **P** **01 54 08.1 -0.7**
KBS Kingsbay 70.38 349⇑ *i*P **P** **01 54 08.8 0.0**
KBS IVmB_BB 01 54 10.0
comp=Z,3µm,4.5s
KBS *e*S **S** **02 03 21.6 +2.4**
HAMF Hammerfest 70.38 340 *e*P **P** **01 54 07.7 -1.2**
HSPB Hornsund (broa 70.45 347 *e*P **P** **01 54 09.0 -0.2**
HSPB *e*L L 02 29 41.6
comp=Z,141µm,18.6s
HSPB Hornsund (broa 70.45 347 *e*P **P** **01 54 09.2 0.0**
HSPB IVmB_BB 01 54 09.8
comp=Z,3µm,3.3s
HSPB IVMs_BB IVMs_BB 02 03 24.4
comp=Z,1µm,3.4s
TAU Tasmania Unive 70.47 161 P **P** **01 54 11.4 +1.6**
TAU pmax pmax
comp=Z,269nm,1.5s
TAU MLR MLR
comp=Z,14µm,19.0s
TAU Tasmania Unive 70.47 161 P **P** **01 54 11.4 +1.6**
TAU IAmb IAmb 01 54 24.9
comp=Z,269nm,1.5s
N25K Chitina, Valde 70.52 30 P **P** **01 54 11.4 +1.3**
N25K IAmb IAmb 01 55 09.5
comp=Z,166nm,1.5s
N25K IAMs_20 IAMs_20 02 25 48.4
comp=Z,20µm,21.0s
N25K Chitina, Valde 70.52 30 P 01 54 09.8
baz=285
PUL Pulkovo 70.57 328⇓ *e*P **P** **01 54 08.7 -1.6**
PUL pmax pmax
comp=Z,129nm,0.7s
MENT Mentasta 70.58 29 P **P** **01 54 11.2 +0.8**
MENT IAmb IAmb 01 54 38.0
comp=Z,98nm,1.0s
MENT IAMs_20 IAMs_20 02 25 30.8
comp=Z,30µm,21.0s
ILIC ilic-Erzincan 70.60 305 P **P** **01 54 11.9 +0.8**
BMRM Bremner River 70.68 31 IAmb IAmb 01 54 56.8
comp=Z,92nm,0.9s
BMRM IAMs_20 IAMs_20 02 25 22.6
comp=Z,23µm,21.0s
BMRM Bremner River 70.68 31 P 01 54 10.8
baz=285
BMRM S 02 03 23.6
baz=285
RAGM Ragged Mountai 70.80 32 IAMs_20 IAMs_20 02 29 47.7
comp=Z,37µm,18.0s
KTK1 Kautokeino 71.00 338 *e*P **P** **01 54 12.2 -0.6**
KTK1 IVmBBB 01 54 13.8
comp=Z,3µm,3.9s
HMT Hamilton 71.01 32 IAMs_20 IAMs_20 02 29 55.3
comp=Z,25µm,18.0s
K27K Chicken 71.01 28 IAmb IAmb 01 54 26.3
comp=Z,73nm,1.0s

K27K IAMs_20 IAMs_20 02 27 27.3
comp=Z,18µm,18.0s
K27K Chicken 71.01 28 P 01 54 13.2
baz=286
K27K S 02 03 27.6
baz=286
MALT Malatya 71.01 304 P **P** **01 54 13.0 -0.6**
MALT Malatya 71.01 304 P **P** **01 54 13.0 -0.6**
KAIM Kayak Island 71.04 32 IAMs_20 IAMs_20 02 30 17.2
comp=Z,26µm,18.0s
OUL Oulu 71.15 334 P **P** **01 54 12.9 -0.8**
OUL pmax pmax
comp=Z,72nm,0.6s
VRDI Verde Repeater 71.15 31 IAMs_20 IAMs_20 02 29 03.9
comp=Z,16µm,18.0s
EGAK Eagle 71.18 27 IAMs_20 IAMs_20 02 29 11.4
comp=Z,21µm,18.0s
EGAK Eagle 71.18 27 P 01 54 12.6
baz=286,SNR=26
EGAK S 02 03 29.3
baz=286
RSDY Resadiye-TOKAT 71.26 307 P **P** **01 54 15.4 +0.5**
MCARA McCarthy VSAT 71.31 30 P **P** **01 54 16.2 +1.4**
MCARA IAmb IAmb 01 54 40.5
comp=Z,130nm,1.0s
MCARA McCarthy VSAT 71.31 30 P 01 54 14.9
baz=286
L27K Beaver Creek, 71.38 29 IAmb IAmb 01 55 10.7
comp=Z,84nm,1.2s
L27K IAMs_20 IAMs_20 02 26 24.9
comp=Z,25µm,20.0s
L27K Beaver Creek, 71.38 29 P 01 54 15.2
baz=286,SNR=18
L27K S 02 03 31.1
baz=286
BCAR Beaver Creek A 71.40 29 P **P** **01 54 15.1 -0.3**
CRQM Cirque 71.43 31 IAmb IAmb 01 54 26.5
comp=Z,109nm,1.0s
CRQM IAMs_20 IAMs_20 02 25 10.5
comp=Z,28µm,22.0s
SVSK Karacayir 71.64 306 P **P** **01 54 18.2 +1.1**
SUF Sumiainen 71.72 331 P **P** **01 54 17.7 +0.5**
SUF pmax pmax
comp=Z,101nm,0.9s
JETT Jettan, Norway 71.78 339⇑ *i*P **P** **01 54 17.8 +0.2**
TOKT Tokat 71.86 307 P **P** **01 54 19.1 +0.5**
KVT Kavak 72.00 308 P **P** **01 54 19.0 -0.5**
KVT Kavak 72.00 308 P **P** **01 54 18.9 -0.5**
BARN Barnard Glacie 72.04 31 IAMs_20 IAMs_20 02 25 20.3
comp=Z,23µm,22.0s
DAWY Dawson 72.13 27 IAMs_20 IAMs_20 02 28 58.4
comp=Z,28µm,19.0s
FIA1 FINESS Array S 72.13 330 IAmb IAmb 01 54 24.3
comp=Z,98nm,0.9s
FINES FINESS Array B 72.13 330 P **P** **01 54 17.3 -2.4**
comp=Z,54nm,0.7s,baz=55,slow=5.6,SNR=53
FINES LR LR 02 29 29.6
comp=Z,104µm,19.0s,baz=73,slow=39
FINES FINESS Array B 72.13 330 *i* P **P** **01 54 18.7 -1.0**
FINES pmax pmax
comp=Z,54nm,0.7s
FINES FINESS Array B 72.13 330 P **P** **01 54 17.9 -1.8**
YAH Yahtse 72.20 31 IAMs_20 IAMs_20 02 28 24.8
comp=Z,22µm,19.0s
CTG Chitna Glacier 72.21 31 P 01 54 19.9
baz=288
CTG S 02 03 41.3
baz=288
CTGM Chitina Glacie 72.22 31 IAmb IAmb 01 54 31.1
comp=Z,128nm,1.0s
CTGM IAMs_20 IAMs_20 02 25 35.0
comp=Z,26µm,22.0s
TRO Tromso 72.24 339 *e*P **P** **01 54 19.8 -0.5**
TRO IVmB_BB 01 54 20.8
comp=Z,3µm,5.0s
TRO IVMs_BB IVMs_BB 02 04 01.1
comp=Z,2µm,4.1s
GAZ Gaziantep 72.26 303 P **P** **01 54 20.5 -0.6**
GAZ Gaziantep 72.26 303 IAMs_20 IAMs_20 02 31 26.1
comp=Z,16µm,18.0s
SIM Simferopol' 72.27 312 *e*P **P** **01 54 20.4 -0.5**
SIM *e* 01 57 02.0
SIM *e*PPP PPP 01 58 52.0
SIM *e*S **S** **02 03 41.0 -1.2**
SIM pmax pmax
comp=Z,223nm,1.0s
SNOP Sinop 72.34 309 P **P** **01 54 21.3 -0.1**
KMRS Kahramanmaras 72.40 304 P **P** **01 54 20.7 -1.1**
DIKM Dikmen 72.41 308⇑⇑P **P** **01 54 22.9 +1.1**
DIKM Dikmen 72.41 308 P **P** **01 54 22.8 +1.0**
LOGN Logan Glacier 72.41 31 P **P** **01 54 21.8 +0.1**
LOGN IAmb IAmb 01 54 32.2
comp=Z,97nm,0.9s
LOGN IAMs_20 IAMs_20 02 27 21.3
comp=Z,23µm,21.0s
KIP Kipapa 72.44 74 IAMs_20 IAMs_20 02 20 41.3
comp=Z,21µm,21.0s
EPYK Eagle Plains 72.44 25 P **P** **01 54 19.7 -1.9**
EPYK IAmb IAmb 01 54 25.8
comp=Z,61nm,0.8s
EPYK Eagle Plains 72.45 25 P 01 54 20.5
baz=290
EPYK S 02 03 41.7
baz=290
TABL Table Mountain 72.46 31 IAMs_20 IAMs_20 02 24 47.7
comp=Z,25µm,22.0s
HON Honolulu 72.49 74 IAMs_20 IAMs_20 02 19 58.5
comp=Z,24µm,22.0s
SARI SarD1z-Kayseri 72.50 305 P **P** **01 54 22.3 -0.3**
NOR Nord 72.58 354⇑ *i*P **P** **01 54 20.1 -2.1**
NOR IAMs_20 IAMs_20 02 29 14.1
comp=Z,29µm,16.0s
NOR Nord 72.58 354⇑ *i*P **P** **01 54 20.0 -2.1**
NOR MLR MLR
comp=Z,29µm,16.0s
VSU Vasula 72.71 327 *e*P **P** **01 54 24.4 +1.2**
VSU Vasula 72.71 327 *ce*P **P** **01 54 23.0 -0.2**
BNN Bunyan 72.80 305 P **P** **01 54 21.7 -2.6**
INK Inuvik 72.91 22 P **P** **01 54 21.3 -2.9**
comp=Z,23nm,0.6s,baz=298,slow=5.8,SNR=36
INK PKPPKP 02 22 09.4
comp=Z,1.3nm,1.0s,baz=198,slow=3.2,SNR=3.8
INK Inuvik 72.91 22 P **P** **01 54 22.7 -1.5**
INK pmax pmax
comp=Z,79nm,0.9s
INK MLR MLR
comp=Z,49µm,21.0s
INK Inuvik 72.91 22 P **P** **01 54 22.6 -1.5**
INK IAmb IAmb 01 54 33.6
comp=Z,79nm,0.9s
PCA Pinnacle 72.99 31 IAMs_20 IAMs_20 02 25 12.7
comp=Z,20µm,22.0s
PINM Pinnacle 72.99 31 P 01 54 25.3
baz=289
PINM S 02 03 49.6
baz=289
VAF Ylistaro 73.13 332 P **P** **01 54 26.3 +0.7**
VAF pmax pmax
comp=Z,56nm,0.8s
BZK Bozkurt 73.22 309⇑P **P** **01 54 26.8 +0.3**
BZK Bozkurt 73.22 309 P **P** **01 54 26.9 +0.3**
KOZT Kozan 73.22 304 P **P** **01 54 26.8 +0.1**
TAHT Tahtakopru-Hat 73.28 303 P **P** **01 54 27.2 +0.1**
CORM Corum 73.30 307 P **P** **01 54 27.2 -0.1**
MNK Minsk 73.32 323⇑ *e*P **P** **01 54 25.0 -1.9**
MNK *e* 01 54 40.0
MNK *e*PPP PPP 01 58 50.0
MNK *e*S **S** **02 03 50.0 -3.7**
MNK *e*SS **SS** **02 08 40.0 +4.7**
MNK pmax pmax
comp=Z,430nm,2.0s
MNK MLR MLR
comp=Z,49µm,16.0s
MNK MLR MLR
comp=Z,41µm,16.0s
MNK MLR MLR
comp=E,29µm,16.0s
MNK MLR MLR
comp=E,24µm,16.0s
MNK Minsk 73.32 323 *i* P **P** **01 54 24.4 -2.5**
comp=E,10.0nm,0.8s
MNK *i* P **P** **01 54 24.4 -2.5**
comp=N,20nm,0.8s
MNK *i* P **P** **01 54 24.4 -2.5**
comp=Z,131nm,0.8s
MNK *i* PcP **PcP** **01 54 41.3 -1.8**

MNK *i* PP **PP** **01 57 06.2 -3.8**
MNK *i* PPP PPP 01 58 50.8
MNK *i* S **S** **02 03 48.7 -5.1**
MNK *i* ScS **SKSac** **02 04 29.4 -1.7**
MNK *i* SS **SS** **02 08 29.6 -5.7**
MNK *i* SSS SSS 02 11 50.5
MNK *i* LQ LQ 02 21 12.7
MNK *i* LR LR 02 23 41.9
MNK *i* LRM MLR 02 30 44.9
comp=Z,20µm,17.7s
MNK *i* LRM MLR 02 30 54.1
comp=E,2µm,17.7s
MNK *i* LRM MLR 02 30 54.1
comp=N,18µm,17.7s
CEYT Ceyhan 73.42 304 P **P** **01 54 26.7 -1.2**
ALE Alert 73.61 1 IAMs_20 IAMs_20 02 29 51.4
comp=Z,22µm,20.0s
IDID Didziasalis 73.69 324 *e*P **P** **01 54 30.6 +1.5**
AKASG Malin Array Be 73.72 319 P **P** **01 54 26.4 -2.9**
comp=Z,61nm,0.7s,baz=61,slow=5.9,SNR=52
AKASG LR LR 02 30 04.4
comp=Z,21µm,18.4s,baz=55,slow=38
AKASG Malin Array Be 73.72 319 P **P** **01 54 26.4 -2.9**
AKASG pmax pmax
comp=Z,32nm,1.0s
AKASG Malin Array Be 73.72 319 P **P** **01 54 26.4 -2.9**
AKBB Malin Array Si 73.72 319 *ce*P **P** **01 54 28.0 -1.3**
AKBB Malin Array Si 73.72 319 IAmb IAmb 01 54 31.9
comp=Z,79nm,1.0s
AKBB IAMs_20 IAMs_20 02 29 53.8
comp=Z,25µm,18.0s
NACGM Naroch 73.80 323 *i* P **P** **01 54 29.2 -0.6**
NACGM *i* P **P** **01 54 29.2 -0.6**
NACGM *i* P **P** **01 54 29.2 -0.6**
NACGM *i* PP **PP** **01 57 14.6 +0.4**
NACGM *i* PPP PPP 01 59 06.1
NACGM *i* S **S** **02 04 00.4 +1.3**
NACGM *i* PS PnS 02 04 59.8 +26
NACGM *i* SS **SS** **02 08 48.9 +6.3**
NACGM *i* SSS SSS 02 12 12.7
NACGM *i* LQ LQ 02 26 43.5
NACGM *i* LRM MLR 02 29 30.4
KRTS Karatas 73.84 303 P **P** **01 54 30.3 0.0**
KARA Karaisali 73.87 304 P **P** **01 54 28.7 -1.8**
N2IH Innhavet 73.89 338 *i* P **P** **01 54 29.8 -0.2**
N2IH IAmb IAmb 01 54 33.7
comp=Z,140nm,1.1s
N2IH IVMsBB 02 03 58.6
comp=Z,1µm,5.1s
N2IH *e*ScS **ScS** **02 04 37.5 -0.1**
CANT Cankiri 73.90 308 P **P** **01 54 30.7 0.0**
ISAL Salakas 73.94 324 *e*P **P** **01 54 32.0 +1.5**
IIGN Ignalina 73.96 324 *e*P **P** **01 54 32.0 +1.4**
N2HS Hamsund 73.98 338 *e*P **P** **01 54 30.2 -0.2**
N2HS IVmB_BB 01 54 31.1
comp=Z,4µm,4.9s
N2HS *e*S **S** **02 04 01.3 +0.7**
N2HS IVMs_BB IVMs_BB 02 04 12.5
comp=Z,1µm,4.2s
HYT Haines Junctio 74.03 30 IAMs_20 IAMs_20 02 27 54.1
comp=Z,22µm,21.0s
MTSE Matsula 74.08 328 *e*P **P** **01 54 32.3 +1.0**
HWQ Hawqa 74.12 301 *e*P **P** **01 54 32.1 0.0**
STEI Steigen 74.14 338 *e*P **P** **01 54 30.5 -0.9**
STEI IVmB_BB 01 54 32.8
comp=Z,3µm,2.6s
STEI *e*S **S** **02 04 00.8 -1.7**
STEI IVMs_BB IVMs_BB 02 04 05.3
comp=Z,2µm,3.7s
STEI *e*ScS **ScS** **02 04 39.8 +0.1**
KURC Kurucasile-Bar 74.15 309 P **P** **01 54 29.9 -2.1**
BR131 Keskin Array S 74.16 307 *d*P **P** **01 54 30.3 -2.1**
BRTR Keskin Array B 74.16 307 P **P** **01 54 30.8 -1.5**
comp=Z,83nm,0.9s,baz=101,slow=6.7,SNR=66
BRTR LR LR 02 32 23.8
comp=Z,11µm,19.2s,baz=80,slow=40
BRTR Keskin Array B 74.16 307 *i* P **P** **01 54 30.7 -1.7**
BRTR pmax pmax
comp=Z,83nm,0.9s
BRTR Keskin Array B 74.16 307 P **P** **01 54 30.7 -1.7**
HLK Haleakala 74.22 74 IAMs_20 IAMs_20 02 21 51.3
comp=Z,25µm,21.0s
KAMT Kaman 74.22 306 P **P** **01 54 32.2 -0.5**
N2ST Straumen 74.27 337⇑ *i*P **P** **01 54 30.4 -1.7**
N2ST IVmB_BB 01 54 32.8
comp=Z,3µm,3.4s
N2TV T¥rnvik 74.34 338 *e*P **P** **01 54 32.6 0.0**
N2TV *e*S **S** **02 04 05.2 +0.5**
FAUS Fauske 74.36 337 *e*P **P** **01 54 32.4 -0.4**
MERS Mersin 74.40 304 P **P** **01 54 33.5 -0.2**
RCY Rachaya 74.45 300 *e*P **P** **01 54 33.2 -0.9**
SERE Sereflikochisa 74.46 306 P **P** **01 54 33.7 -0.4**
AFI Afiamalu 74.50 113 IAMs_20 IAMs_20 02 24 58.4
comp=Z,16µm,19.0s
NBB29 Rokland skole 74.51 337 *e*P **P** **01 54 33.8 +0.2**
NBB29 Rokland skole 74.51 337 *e*S **S** **02 04 07.3 +0.7**
NBB29 Rokland skole 74.51 337 *e*ScS **ScS** **02 04 42.7 +0.1**
QRWL Qaraoun 74.56 300 *e*P **P** **01 54 33.6 -1.1**
DQRL Deir Qamar 74.60 300 *e*P **P** **01 54 34.0 -1.0**
LOF Lofoten 74.64 338⇑ *i*P **P** **01 54 33.1 -1.2**
AFSR Afar-Bala (An 74.67 307 P **P** **01 54 34.5 -0.7**
NBB28 Valnes 74.73 337 *e*P **P** **01 54 34.8 -0.1**
NBB28 IVmB_BB 01 54 35.6
comp=Z,3µm,4.6s
NBB28 Valnes 74.73 337 *e*S **S** **02 04 09.4 +0.2**
NBB28 *e*S **S** **02 04 09.9 +0.8**
ANTO Ankara 74.74 307 P **P** **01 54 33.6 -2.0**
ANTO Ankara 74.74 307 P **P** **01 54 33.6 -2.0**
LOD Lodumlu 74.75 307 P **P** **01 54 34.9 -0.8**
KIZK Mersin 74.81 303 P **P** **01 54 33.7 -2.3**
N2SV S¸rv¥gen 74.92 338 *i*P **P** **01 54 35.2 -0.8**
N2SV IVmB_BB 01 54 36.0
comp=Z,3µm,4.9s
N2SV IVMs_BB IVMs_BB 02 04 36.2
comp=Z,2µm,3.8s
EUNU Eureka 74.93 5 P **P** **01 54 34.8 -1.2**
EUNU IAMs_20 IAMs_20 02 28 48.7
comp=Z,29µm,20.0s
NBB05 Inndyr 74.95 337 *e*P **P** **01 54 36.1 -0.1**
NBB05 IVmB_BB 01 54 36.9
comp=Z,4µm,3.7s
SILI Silifke-Mersin 75.02 303 P **P** **01 54 37.3 +0.1**
NBB17 Glomfjord B¥r 75.08 337 *e*P **P** **01 54 36.7 -0.2**
NBB17 IVmB_BB 01 54 37.5
comp=Z,4µm,4.8s
CHBY Cihanbeyli 75.08 306 P **P** **01 54 36.9 -0.7**
NBB30 Finnes 75.08 337⇑ *i*P **P** **01 54 36.5 -0.4**
NBB30 IVmB_BB 01 54 37.5
comp=Z,4µm,3.6s
NBB30 *e*S **S** **02 04 13.6 +0.5**
SORM Soroca 75.08 316⇑⇑P **P** **01 54 36.1 -1.2**
SORM Soroca 75.08 316 P **P** **01 54 36.1 -1.2**
EREN Erenkoy 75.10 302 P **P** **01 54 36.8 -0.8**
PABE Paberze 75.12 324 *e*P **P** **01 54 37.5 +0.2**
N2VA Vr¸y 75.13 338 *e*P **P** **01 54 37.2 0.0**
N2VA IVmB_BB 01 54 38.7
comp=Z,2µm,2.1s
N2VA IVMs_BB IVMs_BB 02 04 18.4
comp=Z,789nm,4.6s
KEBE Keben-Mersin 75.15 303 P **P** **01 54 38.2 +0.2**
KIS Kishinev 75.16 315⇑ *i*P **P** **01 54 36.0 -1.8**
comp=Z,2µm,8.8s
KIS Kishinev 75.16 315 *i* PP PP 01 57 26.0 +0.1
comp=Z,630nm,8.5s
KIS Kishinev 75.16 315 *c i*P **P** **01 54 36.6 -1.2**
KIS *i* 01 57 26.0
KIS *e*S **S** **02 04 11.5 -3.2**
KIS pmax pmax
comp=Z,2µm,8.8s
KIS pmax pmax
comp=Z,630nm,8.5s
KIS MLR MLR
comp=N,4µm,16.0s
KIS MLR MLR
comp=E,5µm,16.0s
MOR8 Moi Rana 75.19 336⇑ *i*P **P** **01 54 35.4 -2.2**
MOR8 ⇑ *e*P **P** **01 54 36.0 -1.6**
MOR8 IVmB_BB 01 54 37.1
comp=Z,4µm,4.8s
MOR8 IVMs_BB IVMs_BB 02 04 30.7
comp=Z,1µm,4.2s
SLIT Slitere, Latvi 75.22 327 *e*P **P** **01 54 37.3 -0.6**
IKL Isikli 75.24 303 P **P** **01 54 35.9 -2.6**

NBB15 Halsa Church 75.24 337 *e*P **P** **01 54 38.0 +0.1**
NBB15 IVmB_BB 01 54 38.2
comp=Z,4µm,4.0s
NBB15 IVMs_BB IVMs_BB 02 04 34.0
comp=Z,2µm,4.3s
WHY Whitehorse 75.29 30 IAMs_20 IAMs_20 02 34 05.3
comp=Z,17µm,18.0s
KHU Kahuku 75.30 75 IAMs_20 IAMs_20 02 24 15.1
comp=Z,16µm,20.0s
TEVE Tevekalti-Mers 75.36 304 P **P** **01 54 39.1 -0.2**
AAL Aland 75.36 330 *e*P **P** **01 54 39.0 +0.3**
AKKU Akkuyu-Mersin 75.37 303 P **P** **01 54 38.7 -0.5**
N2RO R¸st 75.40 338 *e*P **P** **01 54 37.9 -0.8**
N2RO IVmB_BB 01 54 39.0
comp=Z,3µm,3.9s
KONS Konsvik 75.52 337 *e*P **P** **01 54 39.5 +0.1**
UWB Uwekahuna B 75.54 75 IAMs_20 IAMs_20 02 23 35.3
comp=Z,18µm,21.0s
C36M Paulatuk 75.54 20 IAmb IAmb 01 54 43.7
comp=Z,64nm,0.8s
C36M IAMs_20 IAMs_20 02 31 10.9
comp=Z,21µm,20.0s
C36M Paulatuk 75.54 20 P 01 54 38.6
baz=300
C36M S 02 04 13.7
baz=300
SKAG Skagway 75.55 31 IAMs_20 IAMs_20 02 31 57.3
comp=Z,17µm,18.0s
SKAG Skagway 75.55 31 P 01 54 39.3
baz=293
SKAG S 02 04 18.8
baz=293
HLP Hilina Pali 75.56 75 IAMs_20 IAMs_20 02 24 22.8
comp=Z,17µm,20.0s
BERE Bereket-Mersin 75.56 304 P **P** **01 54 40.6 +0.1**
LADK Ladik-KONYA 75.59 306 P **P** **01 54 38.8 -1.8**
STOK Stokkvaagen 75.63 337 *e*P **P** **01 54 39.9 -0.2**
KONT Konya--Tatoy 75.68 305 P **P** **01 54 40.4 -0.6**
MDUB Mudurnu 75.70 308 P **P** **01 54 39.6 -1.5**
TLCR 75.77 313⇑P **P** **01 54 41.0 -0.3**
TLCR 75.77 313 P **P** **01 54 41.0 -0.3**
SVRH Sivrihisar-ESK 75.80 307 P **P** **01 54 39.3 -2.4**
JURR Jurilovca 75.87 313⇑P **P** **01 54 42.3 +0.4**
IAS Iasi 75.90 316⇑P **P** **01 54 42.0 0.0**
IAS Iasi 75.90 316 P **P** **01 54 42.2 +0.2**
IAS pmax pmax
comp=Z,216nm,1.0s
HORU Horodok 75.92 318 P **P** **01 54 41.2 -0.9**
CSS Mathiatis 75.94 302 P **P** **01 54 40.5 -2.0**
VASR Vaslui 75.95 315⇑P **P** **01 54 42.0 -0.3**
ATD Arta Tunnel 75.97 276 P **P** **01 54 44.3 +1.2**
comp=Z,109nm,0.9s,baz=359,slow=2.7,SNR=35
ATD LR LR 02 29 54.9
comp=Z,4µm,18.1s,baz=70,slow=37
ATD Arta Tunnel 75.97 276 IAmb IAmb 01 54 49.0
comp=Z,120nm,0.9s
ATD Arta Tunnel 75.97 276 *i*P **P** **01 54 42.9 -0.2**
ATD IAmb IAmb 01 54 49.9
comp=Z,132nm,1.0s
ATD IVMs_BB IVMs_BB 02 22 31.8
comp=Z,2µm,25.3s
PBUR Paburge 76.00 325 *e*P **P** **01 54 43.7 +1.3**
SUW Suwalki 76.08 323 *i*P **P** **01 54 42.0 -0.9**
SUW *e*S S 02 04 34.9 +10
SUW *e*L L 02 31 08.8
comp=Z,55µm,18.1s
SUW Suwalki 76.08 323 *e*P **P** **01 54 43.0 +0.1**
SUW Suwalki 76.08 323 P **P** **01 54 43.3 +0.4**
SUW pmax pmax
comp=Z,428nm,0.9s
BESE Bessie Mountai 76.12 32 IAMs_20 IAMs_20 02 34 49.4
comp=Z,17µm,18.0s
TPGR Topolog 76.14 313⇑P **P** **01 54 43.6 +0.1**
CIFT Cifteler, Eski 76.17 307 P **P** **01 54 43.0 -0.8**
BIR Birlad 76.18 315⇑P **P** **01 54 43.8 +0.1**
BIR Birlad 76.18 315 P **P** **01 54 43.7 +0.1**
GULT Gulveren 76.20 308 P **P** **01 54 43.1 -0.9**
CFR Carcaliu 76.22 313⇑P **P** **01 54 43.6 -0.2**
CFR Carcaliu 76.22 313 P **P** **01 54 43.7 -0.2**
CFR pmax pmax
comp=Z,68nm,1.3s
LEF Lefka 76.22 302⇑P **P** **01 54 44.4 +0.3**
LEF Lefka 76.22 302 P **P** **01 54 43.7 -0.4**
SAUV Serdivan-Sakar 76.23 309 P **P** **01 54 42.7 -1.3**
SRCK Saricakaya, Es 76.25 308 P **P** **01 54 43.7 -0.5**
GAZI Gazipasa 76.29 304 P **P** **01 54 43.7 -0.8**
TIRR Tirgusor 76.29 313 P **P** **01 54 42.7 -1.6**
TIRR pmax pmax
comp=Z,188nm,1.4s
OUZ Omahuta 76.31 139 IAMs_20 IAMs_20 02 24 41.1
comp=Z,23µm,20.0s
GHRR 76.40 314⇑P **P** **01 54 45.8 +0.9**
JIS Juneau Island 76.47 32 IAmb IAmb 01 54 50.7
comp=Z,90nm,1.0s
JIS IAMs_20 IAMs_20 02 34 49.7
comp=Z,18µm,18.0s
SIT Sitka 76.49 33 P 01 54 44.3
baz=294
TLBR Topalu 76.50 313⇑P **P** **01 54 45.0 -0.5**
HARR Harsova 76.53 313⇑P **P** **01 54 45.7 0.0**
HARR Harsova 76.53 313 P **P** **01 54 45.6 0.0**
UPP Uppsala 76.58 330 *e*P **P** **01 54 46.1 +0.8**
PETR Petresti 76.63 314⇑P **P** **01 54 47.1 +1.0**
HRT Hereke 76.67 309 P **P** **01 54 45.8 -0.8**
PRAR RASCA 76.70 316⇑P **P** **01 54 45.9 -0.7**
TESR Tescani 76.73 315⇑P **P** **01 54 46.4 -0.4**
ODBI Odobesti 76.73 314⇑P **P** **01 54 46.5 -0.2**
ADVT Abdulvahap 76.76 308 P **P** **01 54 46.3 -0.7**
CAVI Cavuskoy 76.76 308 P **P** **01 54 46.7 -0.4**
SHUT Suhut-Afyon 76.82 306 P **P** **01 54 47.9 +0.3**
NSS Namsos 76.86 335⇑ *i*P **P** **01 54 46.4 -0.7**
VRI Vrincioaia 76.91 314⇑P **P** **01 54 48.3 +0.5**
VRI Vrincioaia 76.91 314 P **P** **01 54 46.4 -1.4**
VRI pmax pmax
comp=Z,138nm,1.7s
BIZ Bicaz 76.93 316⇑P **P** **01 54 47.7 -0.2**
AMRR Amara 76.95 313⇑P **P** **01 54 48.6 +0.5**
PLOR Plostina 76.97 314⇓P **P** **01 54 48.8 +0.7**
PLOR Plostina 76.97 314 P **P** **01 54 48.8 +0.7**
KLYT Kilyos 76.97 309 P **P** **01 54 48.0 -0.2**
YLV Yalova 76.97 309 P **P** **01 54 47.8 -0.5**
ISK Istanbul-Kandi 77.02 309 P **P** **01 54 48.3 -0.2**
ISK Istanbul-Kandi 77.02 309 P **P** **01 54 48.2 -0.2**
KAVV Kandilli-Istan 77.02 309 P **P** **01 54 48.2 -0.3**
KSV Kosov 77.08 317 P **P** **01 54 47.0 -1.7**
ISP Isparta 77.09 306 P **P** **01 54 46.5 -2.6**
ISP pmax pmax
comp=Z,321nm,1.1s
ISP Isparta 77.09 306 P **P** **01 54 46.5 -2.6**
GEMT Gemlik 77.15 309 P **P** **01 54 48.9 -0.3**
LVV L'vov 77.15 319 *e*P **P** **01 54 47.7 -1.4**
LVV *e* 01 57 49.2
LVV *e*S **S** **02 04 33.7 -2.8**
LVV *e* 02 05 20.5
LVV *e* 02 09 33.0
LVV pmax pmax
comp=Z,2µm,4.4s
LVV MLR MLR
comp=Z,28µm,19.0s
LVV MLR MLR
comp=N,11µm,20.0s
LVV MLR MLR
comp=E,19µm,19.0s
BCK Bucak 77.17 305 P **P** **01 54 48.0 -1.5**
BCK Bucak 77.17 305 P **P** **01 54 48.6 -0.9**
BGKT Bogazkoy 77.18 309 P **P** **01 54 49.2 -0.2**
BURAR Bucovina Array 77.24 317⇓P **P** **01 54 49.5 -0.3**
BURAR Bucovina Array 77.24 317 P **P** **01 54 49.4 -0.3**
BURAR Bucovina Array 77.24 317 P **P** **01 54 47.2 -2.6**
ISR Istrita 77.30 314⇓P **P** **01 54 51.2 +1.1**
ISR Istrita 77.30 314 P **P** **01 54 51.2 +1.1**
ISR pmax pmax
comp=Z,149nm,1.7s
TVSB Tavsanli 77.30 308 P **P** **01 54 48.7 -1.5**
ANTB Antalya 77.31 305 P **P** **01 54 48.9 -1.3**
LEHL Lehliu 77.35 313⇑P **P** **01 54 51.3 +1.0**
CTKS Kestanelik-??a 77.35 310 P **P** **01 54 49.4 -0.9**
NEHR Nehoiu 77.35 314⇑P **P** **01 54 51.1 +0.7**
CTYL Yalikoy Yolu 77.42 310 P **P** **01 54 50.1 -0.6**
OZUR 77.44 315⇓P **P** **01 54 51.2 +0.4**
GEDZ Gediz 77.48 307 P **P** **01 54 50.9 -0.3**
MORS Morshin 77.50 318 P **P** **01 54 51.2 +0.2**
KORT Korkueli 77.51 305 P **P** **01 54 50.4 -1.1**

MLR	**Muntele Rosu**	**77.56**	**314**	⇑	P		**P**	**01 54 51.7**	**+0.1**
MLR	**Muntele Rosu**	**77.56**	**314**		P		**P**	**01 54 52.5**	**+0.9**
MLR					pmax	pmax			
	comp=Z,68nm,0.8s								
MLR	**Muntele Rosu**	**77.56**	**314**		IAmb	IAmb		01 54 54.3	
	comp=Z,135nm,1.3s								
MLR					IAMs_20	IAMs_20		02 33 01.6	
	comp=Z,25µm,20.0s								
SLVT	**Silivri**	**77.56**	**310**		P		**P**	**01 54 51.1**	**-0.4**
SECR		**77.64**	**314**	⇓	P		**P**	**01 54 52.6**	**+0.7**
SULR		**77.65**	**313**	⇓	P		**P**	**01 54 53.1**	**+1.2**
DOPR	**Dopca**	**77.74**	**315**	⇑	P		**P**	**01 54 53.2**	**+0.7**
SIMA	**Simav-Kutahya**	**77.78**	**307**		P		**P**	**01 54 51.3**	**-1.6**
KCTX	**Karacabey (Bur**	**77.80**	**309**		P		**P**	**01 54 51.9**	**-1.0**
ELL	**Elmali**	**77.93**	**305**		P		**P**	**01 54 53.4**	**-0.4**
ELL	**Elmali**	**77.93**	**305**		P		**P**	**01 54 53.6**	**-0.2**
ELL	**Elmali**	**77.93**	**305**		IAMs_20	IAMs_20		02 35 19.1	
	comp=Z,33µm,20.0s								
ARCR	**ARCALIA**	**77.98**	**316**	⇓	P		**P**	**01 54 54.2**	**+0.4**
SGRR	**Singureni**	**78.00**	**313**	⇑	P		**P**	**01 54 54.7**	**+0.8**
EDC	**Edincik**	**78.12**	**309**		P		**P**	**01 54 53.9**	**-0.8**
EDC	**Edincik**	**78.12**	**309**		P		**P**	**01 54 55.6**	**+0.9**
TBLU	**Trondheim**	**78.15**	**335**	⇑	*i* P		**P**	**01 54 52.5**	**-1.8**
VOIR		**78.16**	**314**	⇑	P		**P**	**01 54 55.1**	**+0.2**
VOIR		**78.16**	**314**		P		**P**	**01 54 55.1**	**+0.2**
VOIR					pmax	pmax			
	comp=Z,31nm,0.9s								
KULA	**Kula-Manisa**	**78.22**	**307**		P		**P**	**01 54 54.8**	**-0.6**
KULA	**Kula-Manisa**	**78.22**	**307**		P		**P**	**01 54 54.7**	**-0.6**
MRMT	**Marmara Adasi**	**78.22**	**309**		P		**P**	**01 54 54.7**	**-0.6**
HFS	**Hagfors**	**78.23**	**331**		P		**P**	**01 54 52.8**	**-2.1**
	comp=Z,29nm,0.7s,baz=72,slow=7.3,SNR=41								
WRAK	**Wrangell Islan**	**78.25**	**33**		IAmb	IAmb		01 54 59.9	
	comp=Z,128nm,0.9s								
WRAK	**Wrangell Islan**	**78.25**	**33**		P			01 54 56.1	
	baz=296								
BEL	**Belsk**	**78.26**	**322**	*i*	P		**P**	**01 54 54.6**	**-0.6**
BEL					*e*S		**S**	**02 04 46.8**	**-1.6**
BEL					*e*L		L	02 32 53.1	
	comp=Z,38µm,16.8s								
BEL	**Belsk**	**78.26**	**322**		P		**P**	**01 54 56.3**	**+1.1**
BEL					pmax	pmax			
	comp=Z,374nm,0.8s								
CRAG	**Craig**	**78.27**	**34**		P		**P**	**01 54 56.3**	**+1.2**
CRAG					IAmb	IAmb		01 54 59.6	
	comp=Z,154nm,0.9s								
CRAG	**Craig**	**78.27**	**34**		P			01 54 56.3	
	baz=296								
BMR	**Baia Mare**	**78.30**	**317**	⇑	P		**P**	**01 54 55.7**	**+0.2**
BMR	**Baia Mare**	**78.30**	**317**		P		**P**	**01 54 56.4**	**+0.9**
BMR					pmax	pmax			
	comp=Z,780nm,1.0s								
MANT	**Manisa**	**78.30**	**307**		IAMs_20	IAMs_20		02 34 21.8	
	comp=Z,30µm,22.0s								
AKAS	**Kas**	**78.34**	**304**		P		**P**	**01 54 53.4**	**-2.7**
AKAS	**Kas**	**78.34**	**304**		IAmb	IAmb		01 55 02.7	
	comp=Z,76nm,1.0s								
EDRB	**Edirne**	**78.36**	**311**		P		**P**	**01 54 55.7**	**-0.3**
EDRB	**Edirne**	**78.36**	**311**		P		**P**	**01 54 55.7**	**-0.3**
BALB	**Balikesir**	**78.37**	**308**		P		**P**	**01 54 55.4**	**-0.7**
KSL	**Kastellorizon**	**78.39**	**304**		P		**P**	**01 54 54.8**	**-1.4**
ARR	**Arges**	**78.46**	**315**	⇑	P		**P**	**01 54 56.7**	**+0.1**
TRSU	**Trosnyk**	**78.47**	**318**		P		**P**	**01 54 56.5**	**+0.1**
DLBC	**Dease Lake**	**78.47**	**31**		IAmb	IAmb		01 55 01.2	
	comp=Z,89nm,0.9s								
DLBC					IAMs_20	IAMs_20		02 30 32.5	
	comp=Z,23µm,21.0s								
RKY	**Sarkoy-Tekirda**	**78.49**	**309**		P		**P**	**01 54 56.2**	**-0.6**
HUMR	**Humele**	**78.55**	**314**	⇑	P		**P**	**01 54 57.0**	**+0.1**
FETY	**Fethiye**	**78.59**	**305**		P		**P**	**01 54 54.6**	**-2.7**
FETY	**Fethiye**	**78.59**	**305**		P		**P**	**01 54 55.2**	**-2.1**
RES	**Resolute Bay**	**78.60**	**9**		P		**P**	**01 54 56.0**	**-0.7**
RES					pmax	pmax			
	comp=Z,70nm,1.5s								
CJR	**Cluj-Napoca**	**78.61**	**316**	⇑	P		**P**	**01 54 57.8**	**+0.5**
NC405	**NORSAR Array S**	**78.62**	**332**		IAmb	IAmb		01 55 28.9	
	comp=Z,171nm,1.0s								
ZIMR		**78.62**	**313**	⇑	P		**P**	**01 54 57.8**	**+0.5**
NEEM	**North Greenlan**	**78.65**	**359**	⇑	*i* P		**P**	**01 54 56.1**	**-1.1**
NEEM					IAmb	IAmb		01 55 01.6	
	comp=Z,95nm,0.9s								
NEEM					IAMs_20	IAMs_20		02 33 43.6	
	comp=Z,24µm,16.9s								
UZH	**Uzhgorod**	**78.66**	**318**	*ce*	P		**P**	**01 54 57.6**	**+0.1**
UZH				*e*				01 55 08.2	
UZH				*e*				01 57 56.6	
UZH				*e*	PPP		PPP	01 59 48.0	
UZH				*e*S			**S**	**02 04 53.8**	**+1.0**
UZH				*e*PS				02 05 29.0	
UZH				*e*SS			**SS**	**02 09 57.9**	**+1.5**
UZH					MLR	MLR			
	comp=N,4µm,16.5s								
UZH					MLR	MLR			
	comp=E,4µm,16.5s								
UZH					MLR	MLR			
	comp=Z,3µm,16.5s								
NC303	**NORSAR Array S**	**78.71**	**333**		IAmb	IAmb		01 55 24.7	
	comp=Z,150nm,1.1s								
NB201	**NORSAR Array S**	**78.83**	**332**		P		**P**	**01 54 57.2**	**-1.0**
NB201					IAmb	IAmb		01 55 04.3	
	comp=Z,108nm,0.9s								
DALY	**Dalyan (Mula)**	**78.84**	**305**		P		**P**	**01 54 58.3**	**-0.4**
NB2	**NORSAR Subarra**	**78.87**	**332**		P		**P**	**01 54 55.4**	**-3.0**
	baz=60,slow=5.6								
NOA	**NORSAR Array B**	**78.87**	**332**		P		**P**	**01 54 55.1**	**-3.4**
	comp=Z,14nm,0.7s,baz=60,slow=5.6,SNR=49								
NOA					LR	LR		02 33 33.3	
	comp=Z,72µm,18.0s,baz=65,slow=39								
NC602	**NORSAR Array S**	**78.88**	**332**		IAmb	IAmb		01 55 30.0	
	comp=Z,344nm,1.8s								
NC602	**NORSAR Array S**	**78.88**	**332**	⇑	*i* P		**P**	**01 54 57.2**	**-1.2**
NC602					IVmB_BB			01 54 58.5	
	comp=Z,3µm,6.0s								
NC602				*e*	SKSac		**SKSac**	**02 05 10.8**	**-1.1**
NC602					IVMs_BB	IVMs_BB		02 05 13.4	
	comp=Z,1µm,5.0s								
NORES	**NORESS Array B**	**78.88**	**332**		P		**P**	**01 55 00.5**	**+2.1**
LPK	**Lapseki**	**78.90**	**309**		P		**P**	**01 54 57.1**	**-1.9**
DBG	**Daneborg**	**78.91**	**350**	⇑	*i* P		**P**	**01 54 57.2**	**-1.2**
DBG					IAmb	IAmb		01 55 01.7	
	comp=Z,36nm,0.9s								
DBG					IAMs_20	IAMs_20		02 32 45.0	
	comp=Z,26µm,20.5s								
NC204	**NORSAR Array S**	**78.94**	**333**		IAmb	IAmb		01 55 26.0	
	comp=Z,187nm,1.2s								
ERIK	**Erikli-Kesan**	**78.96**	**310**		P		**P**	**01 54 59.2**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**78.99**	**307**		P		**P**	**01 54 59.6**	**-0.1**
LOT	**Lotru**	**78.99**	**315**	⇓	P		**P**	**01 55 00.1**	**+0.6**
BLEU	**Blekinge**	**79.00**	**327**	*i*	P		**P**	**01 54 57.3**	**-1.8**
YER	**Yerkesik**	**79.00**	**306**		P		**P**	**01 54 59.0**	**-0.7**
YER	**Yerkesik**	**79.00**	**306**		P		**P**	**01 54 59.4**	**-0.3**
CRVS	**Cervenica-Dubn**	**79.06**	**319**	*e*	P		**P**	**01 55 00.2**	**+0.5**
CRVS					pmax	pmax			
	comp=Z,771nm,2.2s								
CRVS	**Cervenica-Dubn**	**79.06**	**319**	*e*	P		**P**	**01 55 00.2**	**+0.5**
CRVS				*e*	PP		**PP**	**01 57 59.3**	**+0.7**
CRVS				*e*S			S	02 05 07.0	+10
CRVS				*e*SS			SS	02 10 27.7	+25
CRVS				*e*L			L	02 31 25.9	
GELI	**Tayfur-Gelibol**	**79.09**	**309**		P		**P**	**01 54 59.4**	**-0.6**
DRGR		**79.14**	**316**	⇑	P		**P**	**01 55 00.4**	**+0.1**
VLAD	**Vladila**	**79.14**	**313**	⇑	P		**P**	**01 55 00.5**	**+0.3**
TURN	**Turunc**	**79.16**	**305**		P		**P**	**01 55 00.8**	**+0.4**
ENEZ	**Enez**	**79.19**	**310**		P		**P**	**01 55 00.4**	**-0.1**
ENEZ	**Enez**	**79.19**	**310**	*e*	P		**P**	**01 55 00.6**	**+0.1**
ALN	**Alexandroupoli**	**79.20**	**310**		P		**P**	**01 55 00.0**	**-0.6**
ALN	**Alexandroupoli**	**79.20**	**310**		P		**P**	**01 55 00.8**	**+0.2**
ALN					pmax	pmax			
	comp=Z,405nm,1.9s								
ALN	**Alexandroupoli**	**79.20**	**310**		P		**P**	**01 55 00.8**	**+0.2**
ALN					IAmb	IAmb		01 55 03.1	
	comp=Z,404nm,1.9s								
PLVB	**Pleven**	**79.23**	**313**	⇓	P		**P**	**01 55 01.4**	**+0.7**
DOMB	**Dombas**	**79.24**	**334**	⇑	*i* P		**P**	**01 55 00.0**	**-0.4**
DOMB					IVmB_BB			01 55 00.9	
	comp=Z,3µm,4.8s								
DOMB				*e*	SKSac		**SKSac**	**02 05 13.0**	**-1.5**
DOMB					IVMs_BB	IVMs_BB		02 05 18.0	
	comp=Z,1µm,6.9s								
JMIC	**Jan Mayen**	**79.24**	**345**		P		**P**	**01 54 57.7**	**-2.5**
	comp=Z,67nm,0.7s,baz=4.1,slow=2.5,SNR=8.2								
JMIC	**Jan Mayen**	**79.24**	**345**	⇑	*i* P		**P**	**01 55 00.8**	**+0.5**
DKL	**Dikili**	**79.28**	**308**		P		**P**	**01 55 00.9**	**-0.2**
HIZ	**Hauiti**	**79.28**	**141**		IAmb	IAmb		01 55 15.1	
	comp=Z,172nm,1.0s								
DEV	**Deva**	**79.38**	**316**	⇑	P		**P**	**01 55 02.6**	**+1.1**
DEV	**Deva**	**79.38**	**316**		P		**P**	**01 55 02.4**	**+0.9**
DEV					pmax	pmax			
	comp=Z,126nm,1.6s								
TULEG	**Thule**	**79.39**	**3**	*i*	P		**P**	**01 54 59.0**	**-2.0**
TULEG				⇑	*i*P		P	**01 54 59.7**	**-1.3**
TULEG					IAmb	IAmb		01 55 03.2	
	comp=Z,44nm,1.0s								
TULEG					IAMs_20	IAMs_20		02 32 33.8	
	comp=Z,30µm,19.2s								
TULEG	**Thule**	**79.39**	**3**		IAmb	IAmb		01 55 02.9	
	comp=Z,284nm,2.0s								
TULEG					IAMs_20	IAMs_20		02 32 40.5	
	comp=Z,30µm,20.0s								
EZN	**Ezine**	**79.41**	**309**		P		**P**	**01 55 00.3**	**-1.5**
EZN	**Ezine**	**79.41**	**309**	*e*	P		**P**	**01 55 01.5**	**-0.3**
EZN	**Ezine**	**79.41**	**309**		P		**P**	**01 55 02.7**	**+0.9**
ARG	**Arkhangelos**	**79.46**	**305**		P		**P**	**01 55 01.7**	**-0.4**
RDO	**Rodhopi**	**79.47**	**310**		P		**P**	**01 55 00.4**	**-1.6**
OJC	**Ojcow**	**79.50**	**320**	*i*	P		**P**	**01 55 01.6**	**-0.4**
OJC					*e*S		S	02 05 15.6	+14
OJC					*e*SS		SS	02 10 23.3	+14
OJC					*e*SSS		SSS	02 14 32.6	
OJC					*e*L		L	02 35 19.1	
	comp=Z,22µm,19.1s								
OJC	**Ojcow**	**79.50**	**320**		IAmb	IAmb		01 55 05.7	
	comp=Z,83nm,0.7s								
NIE	**Niedzica**	**79.54**	**320**	*i*	P		**P**	**01 55 02.4**	**+0.1**
NIE					*e*S		S	02 05 17.5	+15
NIE					*e*SS		SS	02 10 47.5	+38
NIE					*e*L		L	02 33 47.1	
	comp=Z,14µm,20.7s								
NIE	**Niedzica**	**79.54**	**320**		P		**P**	**01 55 01.1**	**-1.2**
NIE					pmax	pmax			
	comp=Z,32nm,1.8s								
GCAM	**G?zelcaml?**	**79.56**	**307**		P		**P**	**01 55 02.8**	**+0.2**
MOL	**Molde**	**79.56**	**335**	⇑	*i* P		**P**	**01 55 01.6**	**-0.6**
MOL					IVmB_BB			01 55 04.5	
	comp=Z,4µm,8.0s								
MOL					*e*pP		**sP**	**01 55 12.2**	**-1.1**
MOL					*e*S		**S**	**02 05 01.7**	**-0.2**
QRZ	**Quartz Range**	**79.57**	**144**		P		**P**	**01 55 03.3**	**+1.0**
GADA	**Gvkgeada**	**79.58**	**309**		P		**P**	**01 55 01.4**	**-1.3**
GADA	**Gvkgeada**	**79.58**	**309**	*e*	P		**P**	**01 55 01.9**	**-0.8**
DIB	**Dawson Inlet,**	**79.59**	**36**		P		**P**	**01 55 02.4**	**-0.1**
BOZC	**Bozcaada**	**79.60**	**309**	*e*	P		**P**	**01 55 02.4**	**-0.4**
GKP	**Gorka Klasztor**	**79.62**	**324**	*i*	P		**P**	**01 55 01.3**	**-1.8**
GKP					*e*S		**SPn**	**02 05 40.9**	**-3.6**
GKP					*e*L		L	02 34 18.4	
	comp=Z,65µm,19.0s								
GKP	**Gorka Klasztor**	**79.62**	**324**	*e*	P		**P**	**01 55 04.0**	**+1.4**
OSL	**Oslo**	**79.63**	**332**	⇑	*i* P		**P**	**01 55 02.8**	**+0.3**
OSL					IVmBBB			01 55 03.7	
	comp=Z,4µm,3.8s								
GZR	**Gura Zlata**	**79.65**	**315**	⇑	P		**P**	**01 55 03.9**	**+0.8**
SRE	**Strehaia**	**79.67**	**314**	⇑	P		**P**	**01 55 03.7**	**+0.6**
SRE	**Strehaia**	**79.67**	**314**		P		**P**	**01 55 03.6**	**+0.6**
PLD	**Plovdiv**	**79.67**	**311**		P		**P**	**01 55 03.3**	**+0.2**
PLD					pmax	pmax			
	comp=Z,12nm,1.7s								
PRK	**Paraskevi**	**79.67**	**308**		P		**P**	**01 55 03.6**	**+0.4**
SMTH	**Samothraki Isl**	**79.73**	**310**		P		**P**	**01 55 02.3**	**-1.2**
BODT	**Bodrum**	**79.75**	**306**		P		**P**	**01 55 01.4**	**-2.3**
BODT	**Bodrum**	**79.75**	**306**		P		**P**	**01 55 01.9**	**-1.8**
URLA	**Izmir**	**79.78**	**307**	*e*	P		**P**	**01 55 03.2**	**-0.6**
KECS	**Kecovo**	**79.82**	**319**	*e*	P		**P**	**01 55 04.7**	**+0.9**
KECS					pmax	pmax			
	comp=Z,30nm,1.1s								
KECS	**Kecovo**	**79.82**	**319**	*e*	P		**P**	**01 55 04.7**	**+0.9**
BAIL	**Bailesti**	**79.83**	**314**	⇑	P		**P**	**01 55 04.5**	**+0.5**
BORU	**Boraas**	**79.85**	**329**	⇑	*i* P		**P**	**01 55 03.1**	**-0.6**
SMG	**Samos**	**79.85**	**307**		P		**P**	**01 55 03.9**	**-0.3**
DEL	**Delary**	**79.88**	**328**	⇑	*i* P		**P**	**01 55 02.8**	**-1.1**
DEL					*i* P		**P**	**01 55 03.0**	**-0.9**
STRU	**Stroemstad**	**79.88**	**331**	⇑	*i* P		**P**	**01 55 03.0**	**-0.9**
SIGR	**SIGRI**	**79.99**	**308**		P		**P**	**01 55 04.0**	**-0.9**
AKN	**Aaknes**	**79.99**	**335**	⇑	*i* P		**P**	**01 55 04.8**	**+0.3**
BSD	**Bornholm Skovb**	**80.00**	**326**	*e*	P		**P**	**01 55 05.4**	**+0.8**
BSD	**Bornholm Skovb**	**80.00**	**326**	⇑	*i* P		**P**	**01 55 04.1**	**-0.6**
BSD					IAmb	IAmb		01 55 05.5	
	comp=Z,34nm,0.8s								
BSD					IAMs_20	IAMs_20		02 33 34.4	
	comp=Z,78µm,15.2s								
BSD	**Bornholm Skovb**	**80.00**	**326**	⇑	*i* P		**P**	**01 55 04.0**	**-0.6**
BSD					pmax	pmax			
	comp=Z,34nm,0.8s								
BSD					MLR	MLR			
	comp=Z,78µm,15.0s								
PUNG	**Punghina**	**80.00**	**314**	⇑	P		**P**	**01 55 05.1**	**+0.2**
RMGR	**Halanga-Turnu**	**80.00**	**314**	⇑	P		**P**	**01 55 05.6**	**+0.8**
NIS1	**Nisyros Isl.**	**80.02**	**306**		P		**P**	**01 55 03.6**	**-1.6**
HERR	**Herculane**	**80.09**	**315**	⇑	P		**P**	**01 55 05.3**	**0.0**
KOSK	**Kos Island**	**80.11**	**306**		P		**P**	**01 55 04.0**	**-1.6**
LANS	**Liptovska Anna**	**80.15**	**320**	*e*	P		**P**	**01 55 06.8**	**+1.2**
LANS					pmax	pmax			
	comp=Z,69nm,2.0s								
LANS	**Liptovska Anna**	**80.15**	**320**	*e*	P		**P**	**01 55 06.8**	**+1.2**
XMAS	**Kiritimati**	**80.15**	**92**		P		**P**	**01 55 08.5**	**+2.3**
CHOS	**Chios island**	**80.16**	**308**		P		**P**	**01 55 05.8**	**-0.2**
FABU	**Falkenberg**	**80.18**	**328**	⇑	*i* P		**P**	**01 55 05.2**	**-0.3**
TJOU	**Tjoern**	**80.18**	**330**	⇑	*i* P		**P**	**01 55 04.8**	**-0.8**
LIA	**Limnos Island**	**80.20**	**309**		P		**P**	**01 55 05.5**	**-0.5**
KAVA	**Kavala**	**80.24**	**310**		P		**P**	**01 55 04.8**	**-1.4**
THAS	**Thassos island**	**80.25**	**310**		P		**P**	**01 55 05.6**	**-0.7**
KONO	**Kongsberg**	**80.27**	**332**	*c*	*i* P		**P**	**01 55 03.9**	**-2.1**
KONO					MLR	MLR			
	comp=Z,120µm,16.0s								
KONO	**Kongsberg**	**80.27**	**332**		P		**P**	**01 55 06.9**	**+0.9**
KONO	**Kongsberg**	**80.27**	**332**	⇑	*i* P		**P**	**01 55 05.4**	**-0.6**
SKAR	**Skarslia**	**80.27**	**333**	⇑	*i* P		**P**	**01 55 05.9**	**-0.2**
SKAR					IVmB_BB			01 55 07.2	
	comp=Z,4µm,4.8s								
SKAR					IAMs_20	IVMs_BB	IVMs_BB	02 05 09.4	
	comp=Z,545nm,4.4s								
SKAR				⇑	*e*S		**S**	**02 05 09.7**	**+0.2**
NNZ	**Nelson**	**80.31**	**144**		IAmb	IAmb		01 55 23.2	
	comp=Z,78nm,0.9s								
NNZ	**Nelson**	**80.31**	**144**		P		**P**	**01 55 06.4**	**+0.1**
BZS	**Buzias**	**80.31**	**316**	⇑	P		**P**	**01 55 05.8**	**-0.7**
BZS	**Buzias**	**80.31**	**316**		P		**P**	**01 55 06.4**	**-0.1**
BZS					pmax	pmax			
	comp=Z,40nm,2.4s								
DUWZ	**D'Urville Isla**	**80.31**	**143**		P		**P**	**01 55 07.9**	**+1.5**
INZ	**Inchbonnie**	**80.34**	**146**		P		**P**	**01 55 09.1**	**+2.6**
ONAU	**Onsala**	**80.36**	**329**	⇑	*i* P		**P**	**01 55 05.6**	**-0.9**
ONAU					*i* P		**P**	**01 55 05.8**	**-0.7**
PSZ	**Piszkesteto**	**80.42**	**318**	⇑	P		**P**	**01 55 08.0**	**+0.8**
PSZ	**Piszkesteto**	**80.42**	**318**		P		**P**	**01 55 07.7**	**+0.5**
PSZ					pmax	pmax			
	comp=Z,55nm,1.3s								
PSZ	**Piszkesteto**	**80.42**	**318**		IAMs_20	IAMs_20		02 34 27.0	
	comp=Z,25µm,18.0s								
THZ	**Tophouse**	**80.43**	**144**		IAMs_20	IAMs_20		02 30 00.9	
	comp=Z,14µm,19.0s								
THZ	**Tophouse**	**80.43**	**144**		P		**P**	**01 55 08.3**	**+1.2**
KARP	**Karpathos**	**80.44**	**305**		P		**P**	**01 55 06.1**	**-1.4**
URZ	**Urewera**	**80.44**	**139**		P		**P**	**01 55 07.5**	**+0.4**
	comp=Z,9.9nm,0.6s,baz=305,slow=23,SNR=7.0								
URZ	**Urewera**	**80.44**	**139**		IAmb	IAmb		01 55 33.5	
	comp=Z,164nm,1.6s								
URZ					IAMs_20	IAMs_20		02 24 36.3	
	comp=Z,15µm,22.0s								
BSZH	**Besenyszg**	**80.45**	**318**	⇑	P		**P**	**01 55 07.8**	**+0.6**
VTS	**Vitosha**	**80.47**	**312**	⇑	P		**P**	**01 55 07.9**	**+0.3**
VTS	**Vitosha**	**80.47**	**312**		P		**P**	**01 55 06.3**	**-1.3**
VTS					pmax	pmax			
	comp=Z,165nm,1.5s								
VTS	**Vitosha**	**80.47**	**312**		IAMs_20	IAMs_20		02 34 12.7	
	comp=Z,17µm,21.0s								
LUNU	**Lund**	**80.49**	**327**	⇑	*i* P		**P**	**01 55 07.0**	**-0.3**
RAC	**Raciborz**	**80.49**	**321**	*e*	P		**P**	**01 55 05.8**	**-1.6**
RAC					*e*S		**S**	**02 05 08.8**	**-3.3**
RAC					MLR	MLR			
	comp=Z,20µm,18.6s								
NVR	**Nevrokopi**	**80.55**	**311**		P		**P**	**01 55 06.5**	**-1.4**
AMBH	**Ambrzfalva**	**80.57**	**317**	⇑	P		**P**	**01 55 08.1**	**+0.2**
MDVR	**Moldovita**	**80.59**	**315**	⇓	P		**P**	**01 55 07.9**	**-0.2**
OKC	**Ostrava-Krasne**	**80.63**	**321**	*e*	P		**P**	**01 55 08.8**	**+0.7**
OKC					MLR	MLR			
	comp=Z,24µm,15.4s								
OKC	**Ostrava-Krasne**	**80.63**	**321**	*e*	P		**P**	**01 55 08.8**	**+0.7**
OKC					AMS	AMS		02 36 10.0	
	comp=Z,24µm,15.4s								
MLZ	**Mavora Lakes**	**80.64**	**149**		IAMs_20	IAMs_20		02 28 32.3	
	comp=Z,15µm,20.0s								
BKZ	**Black Stump Fm**	**80.67**	**140**		IAMs_20	IAMs_20		02 26 54.4	
	comp=Z,23µm,21.0s								
MXZ	**Matakaoa Point**	**80.71**	**138**		IAMs_20	IAMs_20		02 25 19.5	
	comp=Z,18µm,21.0s								
TUWZ	**Tuamarina**	**80.76**	**143**		P		**P**	**01 55 10.7**	**+1.9**
FURI	**Furi**	**80.76**	**276**	*i*	P		**P**	**01 55 12.2**	**+2.4**
FURI					IAmb	IAmb		01 55 14.5	
	comp=Z,116nm,1.1s								
FURI					IVMs_BB	IVMs_BB		02 35 05.0	
	comp=Z,2µm,20.0s								
VYHS	**Vyhne**	**80.81**	**319**	*e*	P		**P**	**01 55 08.0**	**-1.2**
VYHS				*e*				01 58 14.8	
VYHS				*e*S			**S**	**02 05 16.4**	**+0.9**
VYHS	**Vyhne**	**80.81**	**319**	*e*	P		**P**	**01 55 08.0**	**-1.2**
VYHS				*e*	PP		**PP**	**01 58 14.8**	**+1.7**
VYHS				*e*S			**S**	**02 05 16.4**	**+0.9**
VYHS				*e*SS			**SS**	**02 10 36.7**	**+8.2**
LTZ	**Lake Taylor**	**80.81**	**145**		IAMs_20	IAMs_20		02 28 10.0	
	comp=Z,15µm,20.0s								
LTZ	**Lake Taylor**	**80.81**	**145**		P		**P**	**01 55 10.1**	**+1.0**
SRS	**Serrai**	**80.83**	**311**		P		**P**	**01 55 08.4**	**-1.0**
SRS	**Serrai**	**80.83**	**311**		P		**P**	**01 55 09.1**	**-0.3**
SRS					pmax	pmax			
	comp=Z,65nm,1.0s								
RPZ	**Rata Peaks**	**80.85**	**147**		IAmb	IAmb		01 55 22.2	
	comp=Z,152nm,1.0s								
RPZ					IAMs_20	IAMs_20		02 27 55.0	
	comp=Z,18µm,20.0s								
OUR	**Ouranopolis**	**80.87**	**310**		P		**P**	**01 55 07.3**	**-2.3**
HYA	**Hoyanger**	**80.88**	**334**	*e*	P		**P**	**01 55 09.7**	**+0.6**
KIW	**Kapiti Island**	**80.90**	**142**		P		**P**	**01 55 09.6**	**0.0**
LBZ	**Lake Benmore**	**80.90**	**147**		IAmb	IAmb		01 55 34.4	
	comp=Z,107nm,1.3s								
COP	**Copenhagen**	**80.97**	**327**	⇑	*i* P		**P**	**01 55 09.6**	**-0.2**
COP					IAmb	IAmb		01 55 15.0	
	comp=Z,48nm,0.9s								
COP					IAMs_20	IAMs_20		02 34 31.9	
	comp=Z,41µm,14.9s								
COP	**Copenhagen**	**80.97**	**327**	⇑	*i* P		**P**	**01 55 09.6**	**-0.2**
COP					pmax	pmax			
	comp=Z,48nm,0.9s								
COP					MLR	MLR			
	comp=Z,41µm,15.0s								
MORC	**Moravsky Berou**	**81.00**	**321**	⇑	*i* P		**P**	**01 55 10.5**	**+0.3**
MORC	**Moravsky Berou**	**81.00**	**321**		*e*S		**S**	**02 05 18.4**	**+0.8**
MORC	**Moravsky Berou**	**81.00**	**321**		P		**P**	**01 55 10.6**	**+0.3**
MORC					pmax	pmax			
	comp=Z,232nm,2.0s								
MORC	**Moravsky Berou**	**81.00**	**321**		P		**P**	**01 55 10.6**	**+0.3**
MORC					IAmb	IAmb		01 55 13.2	

GRG	**Griva**	**81.71 311**		P	**P**	**01 55 13.0**	**-1.2**
GRG	**Griva**	**81.71 311**		P	**P**	**01 55 13.3**	**-0.9**
GRG				pmax	pmax		
	comp=Z,87nm,1.6s						
FRMA	**Ierapetra Chan**	**81.72 305**		P	**P**	**01 55 13.3**	**-0.9**
BLS5	**Blasjo**	**81.74 332**	⇑	*i*P	**P**	**01 55 14.0**	**+0.1**
VRAC	**Vranov**	**81.77 320**	⇑⇑	P	**P**	**01 55 14.6**	**+0.4**
VRAC	**Vranov**	**81.77 320**	⇑	*i*P	**P**	**01 55 14.3**	**+0.1**
VRAC				*e*PP	**PP**	**01 58 19.0**	**-2.0**
VRAC				*e*S	**S**	**02 05 28.4**	**+2.9**
VRAC	**Vranov**	**81.77 320**		P	**P**	**01 55 15.6**	**+1.4**
VRAC				pmax	pmax		
	comp=Z,68nm,1.0s						
MODS	**Modra-Piesok**	**81.79 319**		*e*P	**P**	**01 55 14.5**	**+0.1**
MODS				pmax	pmax		
	comp=Z,671nm,2.6s						
MODS	**Modra-Piesok**	**81.79 319**		*e*P	**P**	**01 55 14.5**	**+0.1**
MODS				*e*PP	**PP**	**01 58 24.0**	**+2.8**
MODS				*e*S	**S**	**02 05 25.7**	**-0.1**
MODS				*e*SS	SS	02 10 54.3	+11
MODS				*e*L	L	02 33 12.8	
GOET	**G??ttrup**	**81.81 329**	⇑	*i*P	**P**	**01 55 13.4**	**-0.8**
GOET				IAmb	IAmb	01 55 19.6	
	comp=Z,85nm,0.8s						
GOET				IAMs_20	IAMs_20	02 34 44.2	
	comp=Z,97µm,16.6s						
DION	**Dionisos Attik**	**81.82 308**		P	**P**	**01 55 13.0**	**-1.7**
XOR	**Xorichti**	**81.82 309**		P	**P**	**01 55 13.9**	**-0.8**
NEO	**Neokhori**	**81.82 309**		P	**P**	**01 55 13.6**	**-1.1**
RUE	**Ruedersdorf**	**81.84 324**		*e*P	**P**	**01 55 14.7**	**+0.3**
	comp=Z,349nm,2.1s,baz=58,slow=5.0						
MORH	**Mrgy, Hungar**	**81.93 317**	⇑⇑	P	**P**	**01 55 14.7**	**-0.3**
MORH	**Mrgy, Hungar**	**81.93 317**	⇑	*i*P	**P**	**01 55 14.6**	**-0.5**
SKO	**Skopje**	**81.95 312**		*i* P	**P**	**01 55 15.6**	**+0.3**
ATHU	**Athens Univers**	**81.97 308**		P	**P**	**01 55 13.1**	**-2.4**
ZST	**Bratislava**	**81.98 319**		*e*P	**P**	**01 55 18.7**	**+3.4**
ZST				*e*S	S	**02 05 29.7**	**+2.1**
ZST				*e*SS	**SS**	**02 10 51.4**	**+5.5**
ZST	**Bratislava**	**81.98 319**		*e*P	**P**	**01 55 18.7**	**+3.4**
DIVS	**Divibare**	**82.00 315**	⇑	P	**P**	**01 55 15.2**	**-0.4**
DIVS	**Divibare**	**82.00 315**		P	**P**	**01 55 14.6**	**-1.1**
DIVS				IAMs_20	IAMs_20	02 35 21.0	
	comp=Z,13µm,19.0s						
KRUC	**Moravsky**	**82.00 320**	⇑	*i*P	**P**	**01 55 15.4**	**0.0**
KRUC	**Moravsky**	**82.00 320**		*e*S	**S**	**02 05 28.4**	**+0.6**
KRUC	**Moravsky**	**82.00 320**		P	**P**	**01 55 16.5**	**+1.1**
SMIA	**Simia**	**82.01 309**		P	**P**	**01 55 14.4**	**-1.3**
LIT	**Litokhoron**	**82.01 310**		P	**P**	**01 55 13.6**	**-2.1**
LIT	**Litokhoron**	**82.01 310**		P	**P**	**01 55 13.8**	**-1.9**
LIT				pmax	pmax		
	comp=Z,86nm,1.1s						
LIT	**Litokhoron**	**82.01 310**		P	**P**	**01 55 13.8**	**-1.9**
VLY	**Voula,Athens**	**82.01 308**		P	**P**	**01 55 13.6**	**-2.1**
SNART	**Snartemo**	**82.01 331**		*i* P	**P**	**01 55 14.0**	**-1.3**
SNART				*i* P	**P**	**01 55 15.3**	**+0.1**
SNART	**Snartemo**	**82.01 331**	⇑	*i*P	**P**	**01 55 15.4**	**+0.1**
SNART				*e*sP	**pwP**	**01 55 29.5**	**+2.7**
SNART				*e*SKSac	**SKSac**	**02 05 32.7**	**-0.9**
ATH	**Athens Observa**	**82.02 308**		P	**P**	**01 55 14.4**	**-1.3**
TEKS	**Tekeris**	**82.10 315**	⇑	*i*P	**P**	**01 55 16.5**	**+0.4**
MUD	**Monsted U'grnd**	**82.14 329**	⇑	*i*P	**P**	**01 55 15.8**	**-0.2**
MUD			⇑	*i*P	**P**	**01 55 15.8**	**-0.2**
MUD				IAmb	IAmb	01 55 21.1	
	comp=Z,55nm,0.8s						
MUD				IAMs_20	IAMs_20	02 34 53.7	
	comp=Z,103µm,17.3s						
MUD	**Monsted U'grnd**	**82.14 329**	⇑	*i*P	**P**	**01 55 15.7**	**-0.2**
MUD				pmax	pmax		
	comp=Z,55nm,0.8s						
MUD				MLR	MLR		
	comp=Z,100µm,17.0s						
ATAL	**Atalanti**	**82.22 309**		P	**P**	**01 55 13.8**	**-3.0**
VILL	**Villia**	**82.23 308**		P	**P**	**01 55 14.5**	**-2.4**
IDI	**Anoyia**	**82.24 305**		P	**P**	**01 55 15.3**	**-1.8**
IDI	**Anoyia**	**82.24 305**	⇑⇑	P	**P**	**01 55 16.7**	**-0.4**
IDI	**Anoyia**	**82.24 305**		IAmb	IAmb	01 55 25.6	
	comp=Z,120nm,1.0s						
LKR	**Lokris**	**82.25 309**		P	**P**	**01 55 13.9**	**-3.1**
PVCC	**Panska Ves**	**82.35 322**		*e*P	**P**	**01 55 17.5**	**+0.2**
PVCC				MLR	MLR		
	comp=Z,51µm,17.4s						
PVCC	**Panska Ves**	**82.35 322**		*e*P	**P**	**01 55 17.5**	**+0.2**
PVCC				AMS	AMS	02 36 30.0	
	comp=Z,51µm,17.4s						
KMY	**Karmoy**	**82.37 333**	⇑	*i*P	**P**	**01 55 17.2**	**0.0**
SCO	**Scoresbysund**	**82.41 349**	⇑	*i*P	**P**	**01 55 16.7**	**-0.5**
SCO				IAmb	IAmb	01 55 21.8	
	comp=Z,47nm,1.0s						
SCO				IAMs_20	IAMs_20	02 37 12.4	
	comp=Z,30µm,16.8s						
SCO	**Scoresbysund**	**82.41 349**	⇑	*i*P	**P**	**01 55 16.6**	**-0.5**
SCO				pmax	pmax		
	comp=Z,47nm,1.0s						
SCO				MLR	MLR		
	comp=Z,30µm,17.0s						
SCO	**Scoresbysund**	**82.41 349**		IAMs_20	IAMs_20	02 37 09.8	
	comp=Z,29µm,18.0s						
SIVA	**Sivas**	**82.41 305**		P	**P**	**01 55 17.0**	**-0.9**
TREC	**Trest**	**82.42 321**		*e*P	**P**	**01 55 17.7**	**0.0**
TREC				MLR	MLR		
	comp=Z,39µm,15.8s						
TREC	**Trest**	**82.42 321**		*e*P	**P**	**01 55 17.7**	**0.0**
TREC				*e*x	x	02 05 43.8	
TREC				AMS	AMS	02 35 20.0	
	comp=Z,39µm,15.8s						
BBB	**Bella Bella**	**82.42 36**		P	**P**	**01 55 15.4**	**-2.1**
	comp=Z,41nm,0.7s,baz=312,slow=6.3,SNR=19						
BBB	**Bella Bella**	**82.42 36**		IAmb	IAmb	01 55 25.2	
	comp=Z,76nm,1.1s						
KZN	**Kozani**	**82.42 311**		P	**P**	**01 55 16.4**	**-1.5**
TMBK	**Timbaki Herakl**	**82.42 305**		P	**P**	**01 55 18.4**	**+0.5**
AXAR	**Agios Charalam**	**82.44 309**		P	**P**	**01 55 16.1**	**-1.9**
BBLS	**Lazići**	**82.48 315**	⇑	*i*P	**P**	**01 55 17.9**	**-0.3**
FNA	**Florina**	**82.49 311**		P	**P**	**01 55 16.6**	**-1.7**
FNA	**Florina**	**82.49 311**		P	**P**	**01 55 17.4**	**-0.9**
FNA				pmax	pmax		
	comp=Z,37nm,0.8s						
BRG	**Berggiesshubel**	**82.53 323**		P	**P**	**01 55 18.7**	**+0.5**
BRG				pmax	pmax		
	comp=Z,54nm,3.0s						
BRG	**Berggiesshubel**	**82.53 323**		*i* P	**P**	**01 55 18.8**	**+0.5**
BRG				Amp		01 55 23.4	
	comp=Z,448nm,2.6s						
BRG				*ex*	x	01 55 30.7	
BRG				Amp		01 55 33.4	
	comp=Z,253nm,2.2s						
BRG				PP	**PP**	**01 58 26.4**	**-0.8**
BRG				Amp		01 58 45.6	
	comp=Z,40nm,1.4s						
BRG	**Berggiesshubel**	**82.53 323**		S	S	02 05 46.0	+13
BRG	**Berggiesshubel**	**82.53 323**		*e*P	**P**	**01 55 18.2**	**0.0**
	comp=Z,448nm,2.6s,baz=58,slow=5.0						
BRG				*e*S	**S**	**02 05 37.2**	**+4.0**
	baz=59,slow=10						
SOP	**Sopron**	**82.54 319**		P	**P**	**01 55 18.4**	**+0.1**
SOP				pmax	pmax		
	comp=Z,62nm,1.5s						
LOUT	**Loutraki**	**82.54 308**		P	**P**	**01 55 15.6**	**-2.9**
THL	**Klokotos Trika**	**82.56 310**		P	**P**	**01 55 14.4**	**-4.2**
AGG	**Agios Georgios**	**82.57 309**		P	**P**	**01 55 16.1**	**-2.6**
AGG	**Agios Georgios**	**82.57 309**		IAmb	IAmb	01 55 20.7	
	comp=Z,89nm,0.8s						
EPID	**Epidavros**	**82.59 308**		P	**P**	**01 55 15.5**	**-3.3**
IVA	**Berane**	**82.59 314**		*e*P	**P**	**01 55 18.7**	**-0.1**
PRU	**Pruhonice**	**82.63 322**		*e*P	**P**	**01 55 19.5**	**+0.8**
PRU				MLR	MLR		
	comp=Z,35µm,18.6s						
PRU	**Pruhonice**	**82.63 322**		*e*P	**P**	**01 55 19.5**	**+0.8**
PRU				AMS	AMS	02 35 20.0	
	comp=Z,35µm,18.6s						
YKA	**Yellowknife Ar**	**82.64 23**		P	**P**	**01 55 15.8**	**-2.7**
	comp=Z,45nm,0.8s,baz=313,slow=7.6,SNR=88						
YKA				PKiKP	**PKiKP**	**02 00 37.2**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=330,slow=1.3,SNR=4.2						
YKA				PKKPbc	**PKKPbc**	**02 13 42.1**	**-2.4**
	comp=Z,2.5nm,0.8s,baz=125,slow=3.0,SNR=14						
YKA				PKPPKP		02 21 48.8	
	comp=Z,1.1nm,0.9s,baz=137,slow=2.9,SNR=7.7						
YKA				LR	LR	02 35 49.9	
	comp=Z,12µm,18.3s,baz=0.0,slow=38						
YKA	**Yellowknife Ar**	**82.64 23**		*i* P	**P**	**01 55 18.1**	**-0.4**
YKA				pmax	pmax		
	comp=Z,45nm,0.8s						
PRA	**Prague**	**82.65 322**		*e*P	**P**	**01 55 19.8**	**+1.0**
PRA				MLR	MLR		
	comp=Z,36µm,18.9s						
PRA	**Prague**	**82.65 322**		*e*P	**P**	**01 55 19.8**	**+1.0**
PRA				*ex*	x	02 05 45.0	
PRA				AMS	AMS	02 35 10.0	
	comp=Z,36µm,18.9s						
PVY	**Plav**	**82.67 313**		*e*P	**P**	**01 55 18.6**	**-0.7**
HAPS	**Han Pijesak,Bl**	**82.68 315**		*e*P	**P**	**01 55 18.9**	**-0.3**
VAM	**Vamos**	**82.71 305**		P	**P**	**01 55 18.1**	**-1.3**
MAKR	**Makrakomi, Fth**	**82.72 309**		P	**P**	**01 55 18.1**	**-1.3**
PLE	**Pljevlja**	**82.72 314**		*e*P	**P**	**01 55 19.0**	**-0.5**
PHP	**Peshkopia**	**82.74 312**		P	**P**	**01 55 18.0**	**-1.6**
SUMG	**Summit**	**82.74 354**	⇑	*i*P	**P**	**01 55 18.2**	**-1.2**
SUMG				IAmb	IAmb	01 55 23.3	
	comp=Z,49nm,0.9s						
SUMG				IAMs_20	IAMs_20	02 35 04.9	
	comp=Z,24µm,17.5s						
SUMG	**Summit**	**82.74 354**	⇑	*i*P	**P**	**01 55 18.1**	**-1.2**
SUMG				pmax	pmax		
	comp=Z,49nm,0.9s						
SUMG				MLR	MLR		
	comp=Z,24µm,18.0s						
SUMG	**Summit**	**82.74 354**		IAmb	IAmb	01 55 23.9	
	comp=Z,72nm,1.0s						
SUMG				IAMs_20	IAMs_20	02 35 02.7	
	comp=Z,23µm,18.0s						
THAL	**Thalero**	**82.75 308**		P	**P**	**01 55 17.8**	**-1.8**
OHR	**Ohrid**	**82.75 312**		*i* P	**P**	**01 55 18.3**	**-1.3**
FBE	**Freiberg**	**82.83 323**		*e*P	**P**	**01 55 19.7**	**0.0**
	comp=Z,412nm,2.2s,baz=58,slow=5.0						
CLL	**Collm**	**82.84 323**	⇑	*i*P	**P**	**01 55 19.7**	**-0.1**
	comp=Z,309nm,2.3s						
CLL				*e*Pmax		01 55 20.0	
CLL				*i* sP	**pwP**	**01 55 32.6**	**+1.4**
	comp=Z,58nm,1.2s						
CLL				*e*PP	**PP**	**01 58 30.0**	**+0.4**
	comp=Z,40nm,1.0s						
CLL				*e*PPIp		01 58 30.0	
CLL				*e*PPP	PPP	02 00 24.0	
CLL				*e*S	**S**	**02 05 32.0**	**-4.3**
CLL				*e*SKSac	**SKSac**	**02 05 38.0**	**-1.4**
CLL				*e*PS	**PnS**	**02 06 30.0**	**+1.4**
CLL				*e*SS	**SS**	**02 11 00.0**	**+1.6**
CLL				*e*		02 15 48.0	
CLL				Lmax		02 36 00.0	
CLL				Lm	MLR	02 36 00.0	
	comp=N,14µm,19.8s						
CLL				Lm	MLR	02 36 00.0	
	comp=E,35µm,20.1s						
CLL				Lm	MLR	02 36 00.0	
	comp=Z,54µm,19.7s						
CLL	**Collm**	**82.84 323**	⇑	*i*P	**P**	**01 55 19.7**	**-0.1**
CLL				*e*		01 58 30.0	
CLL				*e*		02 05 38.0	
CLL				pmax	pmax		
	comp=Z,309nm,2.3s						
CLL				MLR	MLR		
	comp=Z,54µm,19.7s						
CLL	**Collm**	**82.84 323**		*e*P	**P**	**01 55 19.3**	**-0.4**
	comp=Z,309nm,2.3s,baz=58,slow=5.0						
CLL				*e*S	**S**	**02 05 39.2**	**+2.9**
	baz=59,slow=10						
CONA	**Conrad Observa**	**82.84 319**		*i* P	**P**	**01 55 20.7**	**+0.8**
	comp=Z,95nm,1.3s,SNR=45						
CONA				*e*S	**S**	**02 05 36.6**	**-0.1**
	comp=Z,7.3nm,1.5s						
IMMV	**Iera Moni Meta**	**82.85 306**		P	**P**	**01 55 18.6**	**-1.6**
KOME	**Kolasin**	**82.85 314**		*e*P	**P**	**01 55 19.7**	**-0.5**
KPRO	**Kipourio**	**82.85 311**		P	**P**	**01 55 17.2**	**-3.0**
NEST	**Nestorio**	**82.88 311**		P	**P**	**01 55 18.6**	**-1.7**
PENT	**Pentalofos**	**82.91 311**		P	**P**	**01 55 18.6**	**-1.9**
BSEG	**Bad Segeberg**	**82.91 326**		P	**P**	**01 55 19.9**	**-0.1**
BSEG				pmax	pmax		
	comp=Z,56nm,1.0s						
BSEG	**Bad Segeberg**	**82.91 326**		*e*P	**P**	**01 55 19.7**	**-0.3**
	comp=Z,525nm,2.5s,baz=58,slow=5.0						
BSEG				*e*S	**S**	**02 05 43.0**	**+6.1**
	baz=59,slow=10						
SKMB	**Sankelmark Bun**	**82.94 327**		*e*P	**P**	**01 55 19.9**	**-0.3**
	comp=Z,190nm,0.9s,baz=58,slow=5.0						
KBN	**Korca**	**82.97 311**		P	**P**	**01 55 19.1**	**-1.7**
BEHE	**Becsehely**	**82.97 318**	⇑	*i*P	**P**	**01 55 22.9**	**+2.4**
EVR	**Evrytania**	**82.98 309**		P	**P**	**01 55 19.1**	**-1.8**
GVDS	**Gavdos**	**83.02 305**		P	**P**	**01 55 20.0**	**-1.1**
GVD	**Gavdhos**	**83.03 305**		P	**P**	**01 55 19.9**	**-1.2**
TRIZ	**Trizonia**	**83.03 309**		P	**P**	**01 55 18.6**	**-2.4**
ANX	**Ano Chora**	**83.04 309**		P	**P**	**01 55 20.0**	**-1.2**
PBCC	**Pribram**	**83.08 322**		*e*P	**P**	**01 55 20.7**	**-0.4**
UPM	**Unac-Piva**	**83.10 314**		*e*P	**P**	**01 55 23.7**	**+2.2**
UPM	**Unac-Piva**	**83.10 314**		*e*P	**P**	**01 55 20.7**	**-0.8**
VLI	**Veliai**	**83.10 307**		P	**P**	**01 55 19.2**	**-2.2**
KLV	**Kalavryta, Ach**	**83.11 309**		P	**P**	**01 55 19.4**	**-2.1**
LAKA	**Lakka**	**83.15 309**		P	**P**	**01 55 19.1**	**-2.6**
KNDR	**Palaiochora Ch**	**83.16 305**		P	**P**	**01 55 21.1**	**-0.7**
ANKY	**Antikythira Is**	**83.19 306**		P	**P**	**01 55 20.6**	**-1.3**
KTHA	**Kythira Island**	**83.20 307**		P	**P**	**01 55 19.7**	**-2.3**
PDG	**Podgorica**	**83.21 313**	⇑	P	**P**	**01 55 22.1**	**+0.3**
PDG	**Podgorica**	**83.21 313**	⇑	*i*P	**P**	**01 55 21.3**	**-0.6**
PDG	**Podgorica**	**83.21 313**		P	**P**	**01 55 21.6**	**-0.3**
PDG				IAmb	IAmb	01 55 25.5	
	comp=Z,207nm,1.9s						
PDG				IAMs_20	IAMs_20	02 38 04.2	
	comp=Z,13µm,20.0s						
TTG	**Podgorica**	**83.21 313**		*e*P	**P**	**01 55 21.6**	**-0.3**
NKY	**Niksic**	**83.21 314**		*e*P	**P**	**01 55 21.5**	**-0.5**
VLX	**Vlachokerasia**	**83.23 308**		P	**P**	**01 55 20.3**	**-1.9**
KTHR	**Kythira**	**83.24 307**		P	**P**	**01 55 20.8**	**-1.4**
NKME	**Niksic**	**83.26 314**		*e*P	**P**	**01 55 21.7**	**-0.5**
FLTG	**Flechtingen**	**83.27 325**		*e*P	**P**	**01 55 21.5**	**-0.4**
	comp=Z,368nm,2.5s,baz=58,slow=5.0						
TIR	**Tirane**	**83.28 312**		P	**P**	**01 55 22.2**	**-0.1**
TIR	**Tirane**	**83.28 312**	⇑	P	**P**	**01 55 22.6**	**+0.3**
TIR	**Tirane**	**83.28 312**		P	**P**	**01 55 22.9**	**+0.6**
TIR				pmax	pmax		
	comp=Z,218nm,2.2s						
TIR	**Tirane**	**83.28 312**		IAMs_20	IAMs_20	02 35 57.2	
	comp=Z,18µm,20.0s						
KOGS	**Kog**	**83.30 318**		*e*P	**P**	**01 55 21.8**	**-0.5**
KOGS				*e*		02 05 35.9	
KOGS				*e*S	**S**	**02 05 49.7**	**+8.6**
PVO	**Paravola**	**83.31 309**		P	**P**	**01 55 20.3**	**-2.2**
CKRC	**Cesky Krumlov**	**83.32 321**		*e*P	**P**	**01 55 21.2**	**-1.2**
CKRC				*e*SKS	**SKSac**	**02 05 41.6**	**-1.2**
CKRC				AMS	AMS	02 36 00.0	
	comp=Z,33µm,15.9s						
ARSA	**Arzberg**	**83.36 319**		*i* P	**P**	**01 55 20.5**	**-2.1**
	comp=Z,69nm,2.0s,SNR=25						
ARSA				*e*P	**PP**	**01 58 33.3**	**-0.8**
	comp=Z,18nm,1.4s						
DRME	**Dracevica, Mon**	**83.37 313**	⇑	*i*P	**P**	**01 55 21.8**	**-0.9**
DRME	**Dracevica, Mon**	**83.37 313**		*e*P	**P**	**01 55 22.0**	**-0.7**
CEME	**Cevo**	**83.38 314**		*e*P	**P**	**01 55 22.2**	**-0.7**
UPNV	**Upernavik**	**83.41 360**	⇑	*i*P	**P**	**01 55 21.5**	**-0.8**
UPNV				IAmb	IAmb	01 55 25.6	
	comp=Z,45nm,0.8s						
UPNV				IAMs_20	IAMs_20	02 37 25.2	
	comp=Z,22µm,17.1s						
DRO	**Drossia**	**83.46 309**		P	**P**	**01 55 21.9**	**-1.4**
BRY	**Bratogost**	**83.47 314**		*e*P	**P**	**01 55 22.4**	**-1.0**
BRY	**Bratogost**	**83.47 314**		*e*P	**P**	**01 55 22.6**	**-0.8**
BLY	**Banja Luka**	**83.51 316**	⇑	*i*P	**P**	**01 55 23.3**	**-0.1**
BUM	**Brajici-Budva**	**83.51 313**		*e*P	**P**	**01 55 22.9**	**-0.6**
NEUB	**Neuenburg**	**83.55 324**		*e*P	**P**	**01 55 23.0**	**-0.5**
	comp=Z,237nm,1.9s,baz=58,slow=5.0						
MRAK	**Mrakovica**	**83.56 317**		*e*P	P	01 55 33.9	+10
TANN	**Tannenbergstha**	**83.58 323**		*e*P	**P**	**01 55 23.5**	**-0.2**
	comp=Z,292nm,2.4s,baz=58,slow=5.0						
KHC	**Kasperske Hory**	**83.59 321**		*c*eP	**P**	**01 55 23.3**	**-0.5**
KHC				pmax	pmax		
	comp=Z,205nm,1.9s						
KHC	**Kasperske Hory**	**83.59 321**		*e*P	**P**	**01 55 23.1**	**-0.7**
KHC				*e*PP	**PP**	**01 58 37.6**	**+1.6**
KHC				*e*SKS	**SKSac**	**02 05 42.4**	**-2.2**
KHC				AMS	AMS	02 36 10.0	
	comp=Z,34µm,16.5s						
KHC	**Kasperske Hory**	**83.59 321**		IAmb	IAmb	01 55 26.6	
	comp=Z,206nm,1.9s						
KHC				IAMs_20	IAMs_20	02 36 35.8	
	comp=Z,32µm,19.0s						
RLS	**Riolos of Patr**	**83.59 309**		P	**P**	**01 55 22.1**	**-1.8**
AXS	**Araxos**	**83.60 309**		P	**P**	**01 55 23.0**	**-0.9**
ITM	**Ithomi**	**83.64 308**		P	**P**	**01 55 22.2**	**-2.0**
AMT	**Artemida-Makis**	**83.64 308**		P	**P**	**01 55 23.3**	**-1.0**
GEC2	**GERESS Array S**	**83.66 321**		*e*P	**P**	**01 55 23.8**	**-0.4**
	comp=Z,175nm,1.8s,baz=58,slow=5.0						
GEC2				*e*S	**S**	**02 05 49.1**	**+4.1**
	baz=59,slow=10						
GERES	**GERESS Array B**	**83.66 321**		P	**P**	**01 55 21.6**	**-2.6**
	comp=Z,9.0nm,0.7s,baz=60,slow=3.7,SNR=40						
GERES				PP	**PP**	**01 58 36.9**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=264,slow=40,SNR=4.0						
GERES				PKKPbc	**PKKPbc**	**02 13 42.4**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=214,slow=1.4,SNR=6.3						
GERES				LR	LR	02 36 50.5	
	comp=Z,39µm,18.3s,baz=62,slow=39						
GERES	**GERESS Array B**	**83.66 321**		P	**P**	**01 55 22.1**	**-2.1**
GERES	**GERESS Array B**	**83.66 321**		P	**P**	**01 55 22.1**	**-2.1**
ASSE	**Asse, Remlinge**	**83.67 325**		*e*P	**P**	**01 55 23.9**	**0.0**
	comp=Z,67nm,0.7s,baz=58,slow=5.0						
GUNZ	**Gunzen**	**83.68 323**		*e*P	**P**	**01 55 24.0**	**-0.2**
	comp=Z,314nm,2.2s,baz=58,slow=5.0						
NKC	**Novy Kostel**	**83.68 323**		*e*P	**P**	**01 55 24.7**	**+0.5**
NKC				MLR	MLR		
	comp=Z,50µm,16.7s						
NKC	**Novy Kostel**	**83.68 323**		*e*P	**P**	**01 55 24.7**	**+0.5**
NKC				AMS	AMS	02 37 10.0	
	comp=Z,50µm,16.7s						
TREB	**Trebinje**	**83.68 314**		*e*P	**P**	**01 55 23.8**	**-0.5**
WERN	**Wernitzgruen**	**83.69 323**		*e*P	**P**	**01 55 24.1**	**-0.1**
	comp=Z,247nm,2.2s,baz=58,slow=5.0						
HCY	**Herceg Novi**	**83.71 314**		*e*P	**P**	**01 55 23.9**	**-0.5**
HCY	**Herceg Novi**	**83.71 314**		*e*P	**P**	**01 55 24.0**	**-0.5**
PLN	**Plauen**	**83.71 323**		*e*P	**P**	**01 55 24.1**	**-0.2**
	comp=Z,440nm,2.7s,baz=58,slow=5.0						
MGRS	**Mrkonjic Grad**	**83.72 316**		*e*P	**P**	**01 55 24.8**	**+0.3**
IGT	**Igoumenitsa**	**83.75 310**		P	**P**	**01 55 22.7**	**-2.0**
IGT	**Igoumenitsa**	**83.75 310**		P	**P**	**01 55 23.7**	**-1.0**
IGT				pmax	pmax		
	comp=Z,141nm,1.4s						
NRDL	**Niedersach Rie**	**83.77 325**		*e*P	**P**	**01 55 24.7**	**+0.2**
	comp=Z,849nm,2.6s,baz=58,slow=5.0						
NRDL				*e*PP	**PP**	**01 58 35.4**	**-1.7**
	baz=58,slow=7.8						
NRDL				*e*S	**S**	**02 05 49.9**	**+4.3**
	baz=59,slow=10						
MOA	**Molln**	**83.82 320**		*i* P	**P**	**01 55 23.3**	**-1.6**
	comp=Z,38nm,0.9s,SNR=36						
SRN	**Sarande**	**83.83 311**		P	**P**	**01 55 22.8**	**-2.3**
LKD2	**Lefkada island**	**83.85 310**		P	**P**	**01 55 24.7**	**-0.6**
NYDR	**Nydri-Lefkada**	**83.85 310**		P	**P**	**01 55 24.2**	**-1.0**
PYL	**PYLOS**	**83.89 308**		P	**P**	**01 55 22.4**	**-3.1**
VLO	**Vlora**	**83.92 312**		P	**P**	**01 55 25.2**	**-0.3**
EVGI	**Lefkada island**	**83.92 310**		P	**P**	**01 55 23.5**	**-2.1**
MOX	**Moxa**	**83.93 323**		P	**P**	**01 55 26.0**	**+0.6**
MOX	**Moxa**	**83.93 323**		*e*P	**P**	**01 55 25.2**	**-0.3**
	comp=Z,179nm,1.9s,baz=58,slow=5.0						
MOX				*e*S	**S**	**02 05 52.0**	**+4.6**
	baz=59,slow=10						
MOX				*e*L	L	02 37 55.9	
	comp=Z,56µm,18.1s						
SOKA	**Soboth**	**83.93 319**		*i* P	**P**	**01 55 25.5**	**-0.1**
	comp=Z,69nm,1.1s,SNR=28						
SOKA				*e*P	**PP**	**01 58 37.8**	**-1.1**
	comp=Z,27nm,1.4s						
CLZ	**Clausthal**	**83.98 325**		*e*P	**P**	**01 55 25.8**	**+0.1**
	comp=Z,480nm,2.2s,baz=58,slow=5.0						
CLZ				*e*PP	**PP**	**01 58 36.6**	**-2.4**
	baz=58,slow=7.8						
CLZ				*e*S	**S**	**02 05 51.0**	**+3.1**
	baz=59,slow=10						
WET	**Wettzell**	**83.98 322**		P	**P**	**01 55 26.8**	**+1.0**
WET	**Wettzell**	**83.98 322**		*e*P	**P**	**01 55 25.8**	**0.0**
	comp=Z,354nm,2.3s,baz=58,slow=5.0						
WET				*e*S	**S**	**02 05 53.9**	**+5.9**
	baz=59,slow=10						
HLG	**Helgoland**	**83.99 327**		*e*PP	PP	01 58 37.6	-1.4
	baz=58,slow=7.8						
MANZ	**Manzenberg**	**83.99 323**		*e*P	**P**	**01 55 25.9**	**+0.1**
	comp=Z,370nm,2.4s,baz=58,slow=5.0						
MANZ				*e*PP	**PP**	**01 58 37.1**	**-2.1**
	baz=58,slow=7.8						
KEK	**Kerkira**	**84.04 311**		P	**P**	**01 55 25.0**	**-1.2**
ROTZ	**Rotzenmuhle**	**84.05 322**		*e*P	**P**	**01 55 26.1**	**+0.1**

SKDS Skadanscina 85.10 318 *i* P P 01 55 30.6 -0.8
SKDS *i* 01 55 38.1
TRI Trieste 85.17 318 P P 01 55 32.3 +0.5
TRI pmax pmax
comp=Z,67nm,1.4s
TRI Trieste 85.17 318 IAmb IAmb 01 55 39.5
comp=Z,118nm,1.4s
TRI IAMs_20 IAMs_20 02 37 45.8
comp=Z,27µm,19.0s
ZOU Zoufplan 85.22 319 IAMs_20 IAMs_20 02 37 40.1
comp=Z,19µm,18.0s
KASTN Kahler Asten 85.35 325 *e*P P 01 55 32.6 0.0
comp=Z,290nm,2.1s,baz=58,slow=5.0
FUR Furstenfeldbru 85.40 321 P P 01 55 32.1 -0.8
FUR pmax pmax
comp=Z,134nm,1.2s
FUR Furstenfeldbru 85.40 321 *e*P P 01 55 33.1 +0.2
comp=Z,481nm,1.6s,baz=58,slow=5.0
FUR *e*PP PP 01 58 48.9 -1.8
baz=58,slow=7.8
FUR *e*S S 02 06 07.1 +5.0
baz=59,slow=10
ABTA Abfaltersbach 85.40 320 *i* P P 01 55 31.9 -1.2
comp=Z,21nm,0.7s,SNR=15
ABTA *e*S S 02 05 57.7 -4.7
comp=Z,13nm,1.5s
STAL STALIGIAL 85.53 319 IAmb IAmb 01 55 40.3
comp=Z,112nm,1.2s
STAL IAMs_20 IAMs_20 02 37 51.3
comp=Z,30µm,19.0s
MILB Miltenberg 85.63 323 *e*P P 01 55 33.6 -0.4
comp=Z,175nm,1.7s,baz=58,slow=5.0
MILB *e*PP PP 01 58 50.3 -2.1
baz=58,slow=7.8
WATA Walderalm 85.65 320 *i* P P 01 55 32.0 -2.3
comp=Z,51nm,2.1s,SNR=28
WATA *e*P PP 01 58 51.6 -1.3
comp=Z,22nm,1.0s
WTTA Wattenberg 85.66 320 *i* P P 01 55 32.8 -1.6
comp=Z,87nm,1.3s,SNR=23
WTTA *e*P PP 01 58 52.5 -0.5
comp=Z,51nm,1.7s
WTTA *e*S S 02 06 01.7 -3.3
comp=Z,9.2nm,1.2s
WTTA Wattenberg 85.66 320 P P 01 55 32.6 -1.8
WTTA pmax pmax
comp=Z,64nm,0.9s
BUG Bochum--Univer 85.82 325 P P 01 55 35.6 +0.7
BUG pmax pmax
comp=Z,89nm,1.5s
BUG Bochum--Univer 85.82 325 *e*P P 01 55 34.4 -0.4
comp=Z,526nm,2.2s,baz=58,slow=5.0
BUG *e*PP PP 01 58 51.7 -2.2
baz=58,slow=7.8
BUG *e*S S 02 06 10.8 +4.8
baz=59,slow=10
SGRT San Giovanni R 85.84 314 P P 01 55 36.2 +0.9
SGRT IAMs_20 IAMs_20 02 40 00.8
comp=Z,17µm,18.0s
TNS Taunus Mts 85.87 324 P P 01 55 36.3 +1.0
TNS Taunus Mts 85.87 324 *e*P P 01 55 34.9 -0.3
comp=Z,436nm,2.3s,baz=58,slow=5.0
TNS *e*PP PP 01 58 52.4 -2.0
baz=58,slow=7.8
MOTA Moosalm 85.92 321 *i* P P 01 55 33.2 -2.5
comp=Z,30nm,1.4s,SNR=10
MOTA *e*P PP 01 58 54.0 -1.1
comp=Z,27nm,1.1s
SQTA Sankt Quirin 85.93 320 *i* P P 01 55 33.5 -2.2
comp=Z,62nm,1.4s,SNR=18
SQTA *e*P PP 01 58 53.5 -1.6
comp=Z,25nm,1.1s
SQTA *e*S S 02 06 04.4 -3.2
comp=Z,6.5nm,1.2s
RETA Reutte 86.05 321 *i* P P 01 55 36.0 -0.2
comp=Z,25nm,1.7s,SNR=16
RETA *e*P PP 01 58 55.5 -0.5
comp=Z,14nm,0.9s
RETA *e*S S 02 06 07.6 -1.1
comp=Z,7.2nm,1.5s
KMBO Kilima Mbogo 86.05 267 P P 01 55 38.0 +1.0
comp=Z,50nm,0.9s,baz=44,slow=6.0,SNR=72
KMBO LR LR 02 36 00.9
comp=Z,4µm,19.0s,baz=51,slow=37
ICESG Greenland Ices 86.21 354⇑ *i*P P 01 55 36.3 -0.6
ICESG IAMs_20 IAMs_20 02 37 04.0
comp=Z,20µm,17.6s
STU Stuttgart 86.25 322 P P 01 55 37.4 +0.3
STU pmax pmax
comp=Z,77nm,2.6s
STU Stuttgart 86.25 322 *e*P P 01 55 36.7 -0.4
comp=Z,452nm,2.4s,baz=58,slow=5.0
STU *e*PP PP 01 58 55.3 -2.2
baz=58,slow=7.8
STU *e*S S 02 06 15.4 +5.0
baz=59,slow=10
CTI Castel Tesino 86.27 319 IAMs_20 IAMs_20 02 38 21.9
comp=Z,21µm,19.0s
FETA Feichten 86.31 320 *i* P P 01 55 37.1 -0.5
comp=Z,38nm,1.4s,SNR=15
FETA *e*P PP 01 58 56.9 -1.4
comp=Z,13nm,0.9s
FETA *e*S S 02 06 12.5 +1.0
comp=Z,15nm,1.3s
UBR Ueberruh 86.32 321 *e*P P 01 55 37.0 -0.5
comp=Z,516nm,2.3s,baz=58,slow=5.0
UBR *e*PP PP 01 58 56.4 -1.7
baz=58,slow=7.8
TIP Timpagrande 86.38 311⇑ P P 01 55 38.2 +0.2
TIP Timpagrande 86.38 311 IAMs_20 IAMs_20 02 39 10.4
comp=Z,16µm,22.0s
AHRW Bad Neuenahr-A 86.43 325 *e*P P 01 55 37.8 -0.1
comp=Z,373nm,2.3s,baz=58,slow=5.0
AHRW *e*PP PP 01 58 56.4 -2.4
baz=58,slow=7.8
KTD Kalmit 86.56 323 P P 01 55 39.9 +1.2
TEOL Teolo 86.62 319 IAmb IAmb 01 55 43.1
comp=Z,72nm,0.7s
TEOL IAMs_20 IAMs_20 02 41 04.9
comp=Z,19µm,18.0s
DAVA Damuels 86.66 321 *i* P P 01 55 39.3 0.0
comp=Z,48nm,1.6s,SNR=16
DAVA *e*P PP 01 58 59.2 -1.8
comp=Z,22nm,1.5s
PGC Sidney 86.81 37 P P 01 55 40.5 +0.7
BTNL Ternell 86.90 325 *d*P P 01 55 38.5 -1.7
BTNL *d*PcP PcP 01 55 41.0 -1.5
BTNL *dx* x 01 55 42.4
INTR Introdacqua 86.92 315 IAmb IAmb 01 56 40.5
comp=Z,125nm,1.3s
INTR IAMs_20 IAMs_20 02 41 30.2
comp=Z,16µm,20.0s
DAVOX Davos/Dischmat 86.93 321 P P 01 55 40.1 -0.6
comp=Z,13nm,0.7s,baz=67,slow=1.2,SNR=28
DAVOX PP PP 01 59 03.9 +0.6
comp=Z,27nm,0.9s,baz=81,slow=6.9,SNR=8.6
MEM Membach 86.95 325 *d*P P 01 55 39.7 -0.8
MEM *d*PcP PcP 01 55 41.4 -1.3
MEM *dx* x 01 55 42.6
MEM Membach 86.95 325 P P 01 55 41.0 +0.5
BFO Black Forest 86.97 322 P P 01 55 40.5 -0.2
BFO pmax pmax
comp=Z,28nm,1.1s
BFO Black Forest 86.97 322 P P 01 55 40.5 -0.2
BFO Black Forest 86.97 322 *e*P P 01 55 40.0 -0.7
comp=Z,293nm,2.1s,baz=58,slow=5.0
BFO *e*PP PP 01 59 00.5 -2.9
baz=58,slow=7.8
BFO *e*S S 02 06 23.0 +5.5
baz=59,slow=10
NRCA Norcia 87.01 316 IAMs_20 IAMs_20 02 40 21.6
comp=Z,25µm,18.0s
BEBN Eben Emael 87.01 325 *d*P P 01 55 39.8 -1.0
BEBN *d*PcP PcP 01 55 41.5 -1.4
DRUM Mains of Drumt 87.02 333 *e*P P 01 55 38.9 -1.8
DRUM IAMs_20 IAMs_20 02 38 47.7
comp=Z,72µm,17.0s
AQU L'Aquila 87.07 315 P P 01 55 42.6 +1.3
AQU pmax pmax
comp=Z,163nm,1.1s
AQU L'Aquila 87.07 315⇑ *i*P P 01 55 41.2 -0.1
AQU L'Aquila 87.07 315 IAMs_20 IAMs_20 02 37 59.1
comp=Z,13µm,20.0s
BHOU Houvegnez 87.10 325 *d*PcP P 01 55 41.7 +0.4
BHOU *dx* x 01 55 43.6
MURB Monte Urbino 87.17 317 IAMs_20 IAMs_20 02 40 00.7
comp=Z,20µm,20.0s
A04D Lummi Island 87.18 37 P 01 55 42.0
baz=304,SNR=8.5
BSTI Sart Tilman 87.19 325 *d*PcP P 01 55 42.0 +0.4
BSTI *dx* x 01 55 43.7
SLE Schleitheim 87.19 322 P P 01 55 42.0 +0.2
SLE pmax pmax
comp=Z,60nm,2.5s
NLWA Neilton Lookou 87.26 39 P P 01 55 43.2 +1.1
A05A Maple Falls 87.36 37 IAMs_20 IAMs_20 02 42 41.4
comp=Z,12µm,18.0s
WLF Walferdange 87.41 324 *d*P P 01 55 41.5 -1.3
WLF *d*PcP PcP 01 55 43.5 -1.3
WLF *dx* x 01 55 45.6
WLF Walferdange 87.41 324 IAmb IAmb 01 55 46.4
comp=Z,83nm,0.9s
WLF Walferdange 87.41 324 *e*P P 01 55 42.6 -0.1
comp=Z,672nm,2.2s,baz=58,slow=5.0
WLF *e*PP PP 01 59 03.8 -3.1
baz=58,slow=7.8
BCLA Clavier 87.42 325 *d*PcP P 01 55 42.6 -0.2
BCLA *dx* x 01 55 45.0
CDF Champ du Feu 87.51 323 *e*P P 01 55 42.6 -0.8
CDF pmax pmax
comp=Z,97nm,1.2s
BGES Gesves 87.56 325 *d*P P 01 55 42.5 -0.9
BGES *dx* x 01 55 45.2
BGES *d*pP pP 01 55 51.4 -0.3
ZCCA Zocca 87.56 318 IAmb IAmb 01 55 53.9
comp=Z,123nm,1.2s
ZCCA IAMs_20 IAMs_20 02 41 27.1
comp=Z,25µm,18.0s
RCHB Rochefort 87.62 325 *d*P P 01 55 43.2 -0.5
RCHB *dx* x 01 55 45.7
D03D Eldon 87.62 38 P 01 55 44.3
baz=304,SNR=122
D03D S 02 06 24.7
baz=304
ECH Echery 87.69 323 P P 01 55 44.5 +0.4
ECH pmax pmax
comp=Z,52nm,2.3s
ECH Echery 87.69 323 IAmb IAmb 01 55 45.0
comp=Z,142nm,1.9s
UCC Uccle 87.69 326 *d*PcP P 01 55 44.1 +0.1
UCC *dx* x 01 55 45.9
PRMA PARMA 87.75 319 IAmb IAmb 01 56 38.8
comp=Z,134nm,1.2s
PRMA IAMs_20 IAMs_20 02 38 57.0
comp=Z,16µm,20.0s
B05A Bryant 87.77 37 P 01 55 45.0
baz=305,SNR=50
B05A S 02 06 24.2
baz=305
BMRD Maredsous 87.77 325 *d*P P 01 55 43.3 -1.1
BMRD *dx* x 01 55 46.5
BMRD *d*pP pP 01 55 52.3 -0.4
BMRD *d*sP pwP 01 55 56.1 +0.2
OSSC Osservatorio P 87.83 317 P P 01 55 45.4 +0.5
OSSC IAmb IAmb 01 56 20.4
comp=Z,62nm,1.2s
OSSC IAMs_20 IAMs_20 02 39 59.2
comp=Z,25µm,20.0s
SNF Seneffe 87.90 326 *d*P P 01 55 43.7 -1.3
SNF *d*PcP PcP 01 55 45.4 -1.5
SNF *dx* x 01 55 47.0
LEWI Lewis, Hebride 87.90 336 *e*P P 01 55 43.6 -1.3
LEWI IAMs_20 IAMs_20 02 39 38.0
comp=Z,37µm,16.0s
MOF Molkenrain 87.91 322 P P 01 55 45.5 +0.2
B06A Marblemount 87.96 37 IAMs_20 IAMs_20 02 42 52.3
comp=Z,11µm,19.0s
EDI Edinburgh 87.97 333 *e*P P 01 55 44.0 -1.3
EDI IAMs_20 IAMs_20 02 39 42.9
comp=Z,73µm,16.5s
DOU Dourbes 87.98 325 *d*PcP P 01 55 45.0 -0.4
DOU *dx* x 01 55 47.4
DOU Dourbes 87.98 325 P P 01 55 45.9 +0.5
D04E Lakebay 88.00 38 P 01 55 46.1
baz=304,SNR=11
VLC Villacollemand 88.03 318 IAMs_20 IAMs_20 02 40 54.3
comp=Z,26µm,19.0s
HINF Hinteralfeld 88.08 323 *e*P P 01 55 44.8 -1.2
HINF pmax pmax
comp=Z,131nm,1.7s
EDMD Edmundbyers 88.17 331 *e*P P 01 55 45.1 -1.1
EDMD IAMs_20 IAMs_20 02 40 07.5
comp=Z,52µm,15.6s
BAIF Baives 88.21 325 *e*P P 01 55 47.6 +1.1
BAIF pmax pmax
comp=Z,45nm,1.2s
HAU Haudompre 88.25 323 *e*P P 01 55 45.7 -1.1
HAU pmax pmax
comp=Z,188nm,2.0s
LMK Market Rasen 88.33 330 *e*P P 01 55 45.6 -1.4
LMK IAMs_20 IAMs_20 02 39 48.2
comp=Z,97µm,17.9s
WACR West Acre 88.35 329 *e*P P 01 55 44.9 -2.2
WACR IAMs_20 IAMs_20 02 39 30.4
comp=Z,74µm,18.7s
EKA Eskdalemuir Ar 88.36 332 P P 01 55 45.8 -1.3
comp=Z,6.8nm,0.5s,baz=7.7,slow=4.6,SNR=34
EKA PP PP 01 59 17.5 +3.3
comp=Z,4.0nm,0.8s,baz=44,slow=9.7,SNR=3.8
ESK Eskdalemuir 88.39 332 *e*P P 01 55 46.8 -0.5
ESK IAMs_20 IAMs_20 02 40 05.7
comp=Z,55µm,18.0s
ESK Eskdalemuir 88.39 332 P P 01 55 46.8 -0.5
ESK pmax pmax
comp=Z,108nm,1.5s
ESK Eskdalemuir 88.39 332 P P 01 55 46.8 -0.5
ESK IAmb IAmb 01 55 56.5
comp=Z,108nm,1.4s
E04D Cinebar 88.47 39 P 01 55 48.0
baz=304,SNR=31
E04D S 02 06 31.8
baz=304
MSSA Maissana 88.47 319 IAMs_20 IAMs_20 02 40 06.1
comp=Z,20µm,19.0s
F04D Rainier, OR 88.47 39 P 01 55 47.8
baz=304,SNR=9.2
F04D S 02 06 32.4
baz=304
HPK Haverah Park 88.60 331 *e*P P 01 55 47.1 -1.1
HPK IAMs_20 IAMs_20 02 40 46.7
comp=Z,48µm,15.9s
C06D Leavenworth 88.63 37 P 01 55 48.9
baz=306,SNR=8.5
SENIN Lac Senin/Sane 88.65 321 IAmb IAmb 01 56 17.8
comp=Z,74nm,1.6s
G03D McMinnville, O 88.81 40 P 01 55 49.7
baz=304,SNR=6.0
G03D S 02 06 35.2
baz=304
KESW Keswick, Cumbr 88.83 332 *e*P P 01 55 48.6 -0.8
KESW IAMs_20 IAMs_20 02 40 35.4
comp=Z,51µm,15.3s
NEWG New Galloway 88.95 333 *e*P P 01 55 48.8 -1.2
NEWG IAMs_20 IAMs_20 02 40 13.8
comp=Z,55µm,17.2s
LBWR Ladybower, Pea 89.01 330 *e*P P 01 55 49.0 -1.2
LBWR IAMs_20 IAMs_20 02 40 18.3
comp=Z,54µm,18.2s
I02D Swisshome 89.07 41 P 01 55 51.4
baz=303,SNR=5.2
I02D S 02 06 38.6
baz=303
SFJD Kangerlussuaq 89.08 357 P P 01 55 48.8 -1.5
comp=Z,11nm,0.4s,baz=329,slow=2.4,SNR=12
SFJD Kangerlussuaq 89.08 357⇑ *i*P P 01 55 48.7 -1.5
SFJD IAMs_20 IAMs_20 02 43 13.4
comp=Z,12µm,16.5s
SFJD Kangerlussuaq 89.08 357⇑ *i*P P 01 55 48.6 -1.7
SFJD MLR MLR
comp=Z,12µm,16.0s
SFJD Kangerlussuaq 89.08 357 P P 01 55 48.5 -1.7
SFJD Kangerlussuaq 89.08 357 IAMs_20 IAMs_20 02 39 55.0
comp=Z,19µm,18.0s
COR Corvallis 89.13 41 P P 01 55 52.9 +1.9
COR pmax pmax
comp=Z,182nm,0.9s
COR Corvallis 89.13 41 P P 01 55 52.9 +1.9
LTY Liberty 89.14 37 IAMs_20 IAMs_20 02 43 53.7
comp=Z,13µm,18.0s
B08A Colville Reser 89.22 36 IAMs_20 IAMs_20 02 42 11.6
comp=Z,16µm,20.0s
CWF Charnwood Fore 89.25 330 *e*P P 01 55 49.9 -1.4
CWF IAMs_20 IAMs_20 02 40 25.1
comp=Z,91µm,17.6s
ANGG Ammassalik, Gr 89.31 352⇑ *i*P P 01 55 50.2 -1.2
ANGG IAmb IAmb 01 55 54.8
comp=Z,20nm,0.8s
ANGG IAMs_20 IAMs_20 02 41 08.3
comp=Z,22µm,18.0s
ANGG Ammassalik, Gr 89.31 352 IAMs_20 IAMs_20 02 41 14.1
comp=Z,22µm,18.0s
GAL1 Galloway 89.33 333 *e*P P 01 55 50.5 -1.1
GAL1 IAMs_20 IAMs_20 02 40 25.4
comp=Z,61µm,17.4s
DY2G Dye2 89.34 355⇑ *i*P P 01 55 50.5 -1.3
DY2G IAMs_20 IAMs_20 02 39 14.5
comp=Z,25µm,17.7s
CORL Corleone 89.37 312 IAMs_20 IAMs_20 02 42 14.7
comp=Z,14µm,21.0s
STNC Stoke 89.43 330 *e*P P 01 55 50.7 -1.5
STNC IAMs_20 IAMs_20 02 40 40.5
comp=Z,59µm,18.3s
LPG La Plagne 89.45 321 *e*P P 01 55 50.1 -2.8
LPG pmax pmax
comp=Z,58nm,1.0s
LPL La Plagne 89.45 321 *e*P P 01 55 50.0 -2.8
LPL pmax pmax
comp=Z,32nm,0.8s
DODT Dodoma, Tanzan 89.47 263 *i* P P 01 55 52.4 -0.9
F05D White Salmon 89.48 39 P 01 55 52.8
baz=305,SNR=22
F05D S 02 06 40.8
baz=305
H04D Lebanon 89.50 40 P 01 55 53.3
baz=304,SNR=9.3
H04D S 02 06 40.3
baz=304
J01E Myrtle Point 89.54 42 P 01 55 53.5
baz=303,SNR=5.7
J01E S 02 06 41.4
baz=303
ISOG Isortoq, Green 89.55 352 *i* P P 01 55 50.8 -1.7
CLTB Caltabellotta 89.59 311 IAMs_20 IAMs_20 02 42 31.5
comp=Z,14µm,21.0s
I03D Drain, OR 89.60 41 P 01 55 54.7
baz=304,SNR=8.5
I03D S 02 06 42.6
baz=304
HMNX Herstmonceux 89.67 328 *e*P P 01 55 51.8 -1.5
HMNX IAMs_20 IAMs_20 02 39 49.7
comp=Z,47µm,21.1s
IOMK Kirk Michael 89.68 332 *e*P P 01 55 52.6 -0.7
IOMK IAMs_20 IAMs_20 02 41 02.7
comp=Z,139µm,16.5s
H04A Detroit Lake 89.74 40 P P 01 55 54.5 +0.6
H04A IAmb IAmb 01 56 05.8
comp=Z,94nm,1.1s
BNI Bardonecchia 89.75 320 P P 01 55 54.1 0.0
BNI pmax pmax
comp=Z,47nm,1.1s
BNI Bardonecchia 89.75 320 IAmb IAmb 01 56 07.3
comp=Z,48nm,1.1s
WIM Isle of Man 89.81 332 *e*P P 01 55 53.5 -0.5
MBDF Montbardon 89.88 320 *e*P P 01 55 54.0 -0.7
MBDF pmax pmax
comp=Z,14nm,0.7s
G05D Wamic, OR 89.93 39 P 01 55 55.5
baz=305,SNR=37
G05D S 02 06 43.8
baz=305
K02D Willamette Mer 89.95 42 P 01 55 55.2
baz=304
K02D S 02 06 44.6
baz=304
E07A Sunnyside 90.00 38 IAMs_20 IAMs_20 02 44 28.4
comp=Z,13µm,18.0s
LOR Lormes 90.05 323 P P 01 55 55.3 0.0
LOR pmax pmax
comp=Z,39nm,1.4s
I04A Tendick Farm, 90.11 41 P 01 55 55.9
baz=304,SNR=28
I04A S 02 06 45.3
baz=304
C09A Chrisman Ranch 90.12 36 IAMs_20 IAMs_20 02 42 55.5
comp=Z,15µm,18.0s
WPS Cemaes, Angles 90.24 331 *e*P P 01 55 55.8 -0.2
WPS IAMs_20 IAMs_20 02 41 21.6
comp=Z,39µm,16.0s
WLF1 Llynfaes 90.27 331 *e*P P 01 55 55.3 -0.8
WLF1 IAMs_20 IAMs_20 02 41 38.5
comp=Z,75µm,15.7s
STRD Stroud 90.28 329 *e*P P 01 55 53.9 -2.3
STRD IAMs_20 IAMs_20 02 40 49.6
comp=Z,94µm,19.0s
L02E Cave Junction 90.29 43 P 01 55 56.7
baz=304
L02E S 02 06 47.7
baz=304
ORIF Oris-en-Rattie 90.29 321 P P 01 55 57.1 +0.6
ORIF pmax pmax
comp=Z,46nm,1.8s
F07A Phinny Hill Vi 90.35 38 IAMs_20 IAMs_20 02 44 39.7
comp=Z,14µm,21.0s
YRC Rhoscolyn 90.38 331 *e*P P 01 55 54.8 -1.8
I05D Terrebonne, OR 90.43 40 P 01 55 57.6
baz=305,SNR=19
I05D S 02 06 49.8
baz=305
NEW Newport 90.45 35 P P 01 55 55.0 -2.1
comp=Z,56nm,0.8s,baz=308,slow=4.6,SNR=43
NEW Newport 90.45 35 P P 01 55 56.0 -1.2
NEW pmax pmax
comp=Z,359nm,0.9s
NEW Newport 90.45 35 IAMs_20 IAMs_20 02 43 31.1
comp=Z,22µm,18.0s
NEW Newport 90.45 35 P 01 55 56.6
baz=308
NEW S 02 06 49.2
baz=308
CLF Chambon-Foret 90.46 325 P P 01 55 57.7 +0.6
CLF IAmb IAmb 01 56 05.9
comp=Z,50nm,1.1s
CASY Casey 90.51 185 P P 01 55 57.4 +0.8
CASY IAmb IAmb 01 56 10.6
comp=Z,50nm,1.2s
MCH1 Michaelchurch 90.52 330 *e*P P 01 55 56.1 -1.1
MCH1 IAMs_20 IAMs_20 02 40 56.5
comp=Z,79µm,18.8s
MONM Monmouth 90.53 330 *e*P P 01 55 56.6 -0.7
MONM IAMs_20 IAMs_20 02 40 57.2
comp=Z,94µm,18.5s
J04D Umpqua Nationa 90.60 41 P 01 55 58.3
baz=305,SNR=31
J04D S 02 06 51.5
baz=305
FRF La Foret Royal 90.61 319 *e*P P 01 55 56.9 -1.0
FRF pmax pmax
comp=Z,38nm,1.0s
AVF Avril sur Loir 90.62 323 *e*P P 01 55 56.0 -1.9
AVF pmax pmax
comp=Z,81nm,1.2s
SSB Saint Sauveur 90.85 321 IAmb IAmb 01 56 01.3
comp=Z,127nm,1.7s
E09A Wood Farm, Sta 90.97 37 P P 01 55 58.8 -0.8
VIVF Saint-Julien-l 91.02 321 *e*P P 01 55 59.9 0.0
VIVF pmax pmax
comp=Z,61nm,1.2s
KIMO Ikongo 91.04 259 *i* P P 01 55 58.0 -2.5
L04D Klamath Falls 91.06 42 P 01 55 59.9
baz=304,SNR=24
L04D S 02 06 55.2
baz=304
YBH Yreka Blue Hor 91.08 43 IAmb IAmb 01 56 12.0
comp=Z,42nm,1.0s
J05D Fort Rock, OR 91.10 41 P 01 56 01.8
baz=305,SNR=34
J05D S 02 06 56.3
baz=305
MFRI Mfriga 91.13 260 *i* P P 01 56 00.3 -0.7
BANG Mbangamawe 91.16 260 *i* P P 01 55 58.7 -2.3
VSL Villasalto 91.16 315 IAmb IAmb 01 56 05.7
comp=Z,68nm,1.1s
K04D Chiloquin, OR 91.16 42 P 01 56 00.7
baz=305
K04D S 02 06 56.6
baz=305
M02C Callahan 91.18 43 P 01 56 01.5
baz=304
M02C S 02 06 56.4

baz=304
G08A Pilot Rock 91.25 38 IAmb IAmb 01 56 10.0
comp=Z,55nm,1.0s
WINO Wino 91.33 260 *i* P **P** **01 55 59.5 -2.4**
RSBS Rosebush, Pemb 91.34 330 *eP* **P** **01 55 59.4 -1.8**
RSBS IAMs_20 IAMs_20 02 42 07.7
comp=Z,39µm,15.8s
NGEA Songea 91.36 259 *i* P **P** **01 56 00.2 -1.8**
KIDE Kidegembe 91.38 261 *i* P **P** **01 56 01.1 -1.1**
BAKO Makambako 91.41 261 *i* P **P** **01 56 00.6 -1.8**
FLN La Foliniere 91.42 326 *eP* **P** **01 56 03.5 +2.0**
FLN pmax pmax
comp=Z,36nm,1.2s
N02D Trinity Center 91.50 43 P 01 56 02.7
baz=304
N02D S 02 07 00.3
baz=304
ZINI Mgazini 91.58 259 *i* P **P** **01 56 01.2 -1.9**
M04C Macdoel 91.59 42 P 01 56 02.9
baz=305
M04C S 02 06 59.5
baz=305
WALA Waterton Lakes 91.60 33 P **P** **01 56 00.8 -1.8**
I07A Izee 91.66 40 IAmb IAmb 01 56 32.3
comp=Z,124nm,1.4s
LIGA Liganga 91.74 259 *i* P **P** **01 56 03.5 -0.3**
GAWA Igawa 91.75 261 *i* P **P** **01 56 00.9 -3.0**
MBAR Mbarara 91.79 270 *i* P **P** **01 56 02.7 -1.5**
BUMI Ibumi 91.80 260 *i* P **P** **01 56 03.4 -0.7**
F10A Beach Ranch, E 91.81 37 IAmb IAmb 01 56 10.3
comp=Z,48nm,0.8s
WDC Whiskeytown Da 91.83 44 IAmb IAmb 01 56 15.6
comp=Z,45nm,1.0s
GRR Gorron 91.85 326 *eP* **P** **01 56 04.1 +0.5**
GRR pmax pmax
comp=Z,24nm,1.0s
HTL Hartland 91.88 330 *eP* **P** **01 56 03.0 -0.6**
HTL IAMs_20 IAMs_20 02 41 57.5
comp=Z,86µm,18.5s
O02D Mt. Diablo Mer 91.90 44 P 01 56 05.1
baz=304
O02D S 02 07 02.8
baz=304
TOLA Matola 91.91 260 *i* P **P** **01 56 04.0 -0.7**
KIPE Kipengere 91.92 261 *i* P **P** **01 56 03.1 -1.7**
NUUK Nuuk 91.94 357 *i* P **P** **01 56 02.7 -0.9**
NUUK IAmb IAmb 01 56 07.3
comp=Z,22nm,1.0s
NUUK IAMs_20 IAMs_20 02 42 59.9
comp=Z,25µm,17.4s
FRB Frobisher Bay 92.06 5 P **P** **01 56 02.0 -2.2**
comp=Z,33nm,1.0s,baz=12,slow=5.5,SNR=27
FRB Frobisher Bay 92.06 5 P **P** **01 56 03.3 -0.9**
FRB pmax pmax
comp=Z,62nm,1.1s
CHML Chimala 92.10 261 *i* P **P** **01 56 04.7 -0.7**
TIRI Matiri 92.11 259 *i* P **P** **01 56 04.4 -1.1**
UNDA Madunda 92.11 260 *i* P **P** **01 56 04.1 -1.5**
FCC Fort Churchill 92.11 18 IAMs_20 IAMs_20 02 42 58.6
comp=Z,24µm,20.0s
NIND Nindi 92.13 260 *i* P **P** **01 56 02.0 -3.7**
MAKE Makete 92.21 261 *i* P **P** **01 56 04.9 -1.3**
JTMT Jette 92.26 34 P **P** **01 56 04.2 -1.5**
JTMT IAMs_20 IAMs_20 02 43 01.8
comp=Z,20µm,19.0s
MKIL Mkili 92.34 259 *i* P **P** **01 56 05.6 -0.9**
MBAM Mbamba Bay 92.39 259 *i* P **P** **01 56 04.1 -2.6**
BMO Blue Mountains 92.45 38 IAMs_20 IAMs_20 02 44 27.3
comp=Z,12µm,20.0s
O03E Paynes Creek 92.45 44 P 01 56 06.4
baz=305
O03E S 02 07 07.8
baz=305
MOD Modoc Plateau 92.46 42 IAmb IAmb 01 56 18.8
comp=Z,88nm,1.1s
CAF Calviac 92.46 322 *eP* **P** **01 56 04.1 -2.4**
CAF pmax pmax
comp=Z,77nm,1.0s
NKAL Nkalisi 92.47 261 *i* P **P** **01 56 06.8 -0.5**
JILO Lwanjilo 92.48 262 *i* P **P** **01 56 05.9 -1.5**
RJF Les Rejaudoux 92.54 323 *eP* **P** **01 56 06.7 -0.1**
RJF pmax pmax
comp=Z,97nm,1.3s
MZUN Kiwira 92.69 261 *i* P **P** **01 56 09.1 +0.9**
LOSI Makongolosi 92.70 262 *i* P **P** **01 56 06.8 -1.4**
FFC Flin Flon 92.79 24 P **P** **01 56 05.1 -2.7**
FFC pmax pmax
comp=Z,189nm,0.9s
FFC Flin Flon 92.79 24 P **P** **01 56 05.1 -2.7**
FFC Flin Flon 92.79 24 IAMs_20 IAMs_20 02 41 53.3
comp=Z,19µm,19.0s
PDHT Panda Hill 92.87 262 *i* P **P** **01 56 07.9 -1.2**
ILOM Ilombo 92.90 261 *i* P **P** **01 56 07.8 -1.5**
MSO Missoula 93.03 35 IAmb IAmb 01 56 13.4
comp=Z,52nm,0.9s
MSO IAMs_20 IAMs_20 02 44 23.3
comp=Z,17µm,19.0s
MSO Missoula 93.03 35 P 01 56 09.8
baz=311
MSO S 02 07 11.7
baz=311
ITUM Tunduma 93.09 261 *i* P **P** **01 56 09.8 -0.3**
ROSF Rostrenen 93.10 327 *eP* **P** **01 56 10.7 +1.4**
ROSF pmax pmax
comp=Z,16nm,0.8s
WVOR Wild Horse Val 93.14 40 P **P** **01 56 11.1 +1.2**
KEST Kesra 93.21 311 P **P** **01 56 08.7 -1.5**
comp=Z,45nm,1.0s,baz=353,slow=1.1,SNR=23
KEST PP **PP** **01 59 50.8 -2.6**
comp=Z,8.5nm,1.0s,baz=252,slow=7.9,SNR=3.7
KEST LR LR 02 45 22.8
comp=Z,13µm,19.1s,baz=328,slow=40
KEST Kesra 93.21 311 IAmb IAmb 01 56 15.8
comp=Z,77nm,1.1s
KEST IAMs_20 IAMs_20 02 44 41.2
comp=Z,14µm,20.0s
QUIF Quistinic 93.33 327 *eP* **P** **01 56 10.6 +0.2**
QUIF pmax pmax
comp=Z,34nm,1.2s
BEKR Beckworth 93.61 43 P **P** **01 56 10.1 -2.0**
BEKR IAmb IAmb 01 56 23.6
comp=Z,36nm,0.9s
AFDM Forest Hills D 93.75 44 IAmb IAmb 01 56 41.0
comp=Z,79nm,1.8s
CMAH Djebel Manchou 94.02 313 P **P** **01 56 15.6 +1.7**
MFID Camas Ranch 94.18 38 IAmb IAmb 01 56 20.5
comp=Z,69nm,0.9s
PAHR Pah Rah Range 94.31 43 IAmb IAmb 01 56 43.9
comp=Z,66nm,1.3s
EGMT Eagleton 94.35 32 IAmb IAmb 01 56 20.1
comp=Z,70nm,0.8s
EGMT IAMs_20 IAMs_20 02 42 09.6
comp=Z,18µm,21.0s
EGMT Eagleton 94.35 32 P 01 56 15.0
baz=314,SNR=41
VCNR Virginia City 94.38 43 IAmb IAmb 01 56 31.6
comp=Z,35nm,0.9s
LRM Limekiln Ridge 94.47 35 P **P** **01 56 13.9 -2.1**
NRS Narsarsuaq 94.52 354 P **P** **01 56 13.5 -2.0**
NRS pmax pmax
comp=Z,41nm,1.9s
PNTR Pine Nut 94.54 44 IAmb IAmb 01 56 26.8
comp=Z,44nm,0.8s
CMB Columbia Colle 94.65 45 IAmb IAmb 01 56 52.6
comp=Z,36nm,1.1s
SAO San Andreas Ge 94.68 46 P **P** **01 56 18.4 +1.5**
SAO pmax pmax
comp=Z,13nm,1.0s
SAO San Andreas Ge 94.68 46 P **P** **01 56 18.4 +1.5**
DLMT Dillon 94.70 35 IAMs_20 IAMs_20 02 44 37.4
comp=Z,18µm,20.0s
CASM Ain Smara 94.85 313 P **P** **01 56 19.5 +1.8**
HLID Hailey 94.88 38 IAmb IAmb 01 56 24.0
comp=Z,60nm,0.9s
HLID IAMs_20 IAMs_20 02 44 57.6
comp=Z,18µm,20.0s
HLID Hailey 94.88 38 P 01 56 18.9
baz=310,SNR=142
HLID S 02 07 29.7
baz=310
BOZ Bozeman (W) 95.05 35 IAMs_20 IAMs_20 02 44 55.7
comp=Z,19µm,20.0s
BOZ Bozeman (W) 95.05 35 P 01 56 18.6
baz=312,SNR=39
BOZ S 02 07 29.8
baz=312

DFRA Djebel Bou Aff 95.09 314 P **P** **01 56 20.9 +2.0**
ETSF Etsaut 95.21 322 *eP* **P** **01 56 21.8 +2.5**
ETSF pmax pmax
comp=Z,92nm,1.8s
PPT Papeete 95.22 107 LR LR 02 31 08.3
comp=Z,10µm,21.6s,baz=279,slow=30
PPT2 Papeete2 95.23 107 *eP* **PP** **02 00 11.8 +1.6**
comp=Z,675nm,25.5s
PPT2 *eS* **S** **02 07 30.7 -3.1**
comp=Z,19µm,26.8s
PPT2 *eSS* **SS** **02 14 01.4 +0.2**
comp=Z,6µm,27.8s
PPT2 Papeete2 95.23 107 *eLR* LR 02 27 19.2
comp=Z,28µm,23.2s,baz=291
PPTF Pamatai, Papee 95.24 107 IAMs_20 IAMs_20 02 30 12.1
comp=Z,13µm,22.0s
PMPB Monarch Peak 95.42 46 P **P** **01 56 20.5 +0.2**
PMPB IAmb IAmb 01 56 26.6
comp=Z,39nm,0.8s
RYN Ryan 95.49 43 IAmb IAmb 01 56 29.1
comp=Z,38nm,1.0s
KVN Kaiserville 95.50 43 IAmb IAmb 01 56 33.3
comp=Z,39nm,1.1s
LHV Little Huntoon 95.72 44 IAmb IAmb 01 56 33.0
comp=Z,50nm,1.0s
NVAR Mina Array Bea 95.74 44 P **P** **01 56 21.1 -0.9**
comp=Z,15nm,0.7s,baz=291,slow=4.9,SNR=39
NVAR PKiKP **PKiKP** **02 01 02.0 +0.6**
comp=Z,11nm,1.4s,baz=254,slow=4.6,SNR=1.9
NVAR LR LR 02 35 22.3
comp=Z,7µm,21.2s,baz=310,slow=33
NVAR Mina Array Bea 95.74 44 P **P** **01 56 19.7 -2.3**
YHL Hebgen Lake 95.78 35 IAmb IAmb 01 56 33.7
comp=Z,31nm,1.0s
NV11 Mina Array Sit 95.83 43 IAmb IAmb 01 56 51.4
comp=Z,44nm,1.4s
YHB Horse Butte 95.85 35 IAmb IAmb 01 56 28.1
comp=Z,35nm,0.8s
MLAC Mammoth, Mammo 95.88 44 P 01 56 23.3
baz=307
YHH Holmes Hill 96.00 35 P **P** **01 56 24.0 +0.8**
YMR Madison River 96.02 35 IAmb IAmb 01 56 30.4
comp=Z,25nm,0.8s
YNR Norris Junctio 96.14 35 P **P** **01 56 22.8 -0.9**
ELK Elko 96.19 40 IAMs_20 IAMs_20 02 41 21.7
comp=Z,12µm,20.0s
VOG Valley Oaks Go 96.30 46 P 01 56 24.1
baz=306
LKWY Lake 96.39 35 IAmb IAmb 01 56 31.9
comp=Z,36nm,0.9s
H17A Grant Village 96.41 35 P **P** **01 56 24.9 -0.1**
H17A IAmb IAmb 01 56 37.5
comp=Z,29nm,0.9s
H17A IAMs_20 IAMs_20 02 45 00.7
comp=Z,18µm,19.0s
H17A Grant Village 96.41 35 P 01 56 26.8
baz=313,SNR=22
SMMC Simmler 96.47 47 P 01 56 26.1
baz=306
FLWY Flagg Ranch 96.56 35 IAmb IAmb 01 56 31.7
comp=Z,31nm,0.8s
RLMT Red Lodge 96.59 34 IAMs_20 IAMs_20 02 45 45.3
comp=Z,20µm,19.0s
RLMT Red Lodge 96.59 34 P 01 56 26.4
baz=314,SNR=22
RLMT S 02 07 42.8
baz=314
TIN Tinemaha, Big 96.61 45 P 01 56 26.5
baz=307,SNR=6.6
DGMT Dagmar 96.62 29 IAMs_20 IAMs_20 02 43 56.8
comp=Z,15µm,20.0s
MOOW Moose Ponds 96.76 36 IAMs_20 IAMs_20 02 46 02.0
comp=Z,11µm,20.0s
VES Vestal, Richgr 96.77 46 P 01 56 25.2
baz=306
PKM Mcpheson Peak 96.84 47 P 01 56 27.0
baz=306
PKM S 02 07 46.7
baz=306
LOHW Long Hollow 96.93 36 P **P** **01 56 27.9 +0.6**
LOHW IAMs_20 IAMs_20 02 46 07.5
comp=Z,12µm,20.0s
SNOW Snow King Moun 96.95 36 IAMs_20 IAMs_20 02 46 01.0
comp=Z,13µm,20.0s
REDW Red Top Meadow 96.96 36 IAMs_20 IAMs_20 02 46 02.5
comp=Z,19µm,19.0s
LAO LASA Array 96.99 31 IAmb IAmb 01 56 32.4
comp=Z,52nm,1.0s
LAO IAMs_20 IAMs_20 02 46 09.4
comp=Z,18µm,18.0s
LAO LASA Array 96.99 31 P 01 56 27.1
baz=316,SNR=9.9
CWC Cottonwood Cre 97.07 45 P 01 56 28.3
baz=307
CWC S 02 07 46.8
baz=307
SBC Santa Barbara 97.17 47 P 01 56 28.8
baz=306
GRAC Grapevine Rang 97.20 44 P 01 56 28.0
baz=308
AHID Auburn Hatcher 97.23 37 IAMs_20 IAMs_20 02 45 57.6
comp=Z,19µm,20.0s
ISA Isabella, Lake 97.28 46 IAMs_20 IAMs_20 02 34 48.2
comp=Z,13µm,21.0s
ISA Isabella, Lake 97.28 46 P 01 56 28.5
baz=307
ARVC Arvin 97.36 46 P 01 56 28.2
baz=306
SPUT South Promonto 97.45 38 P Pdif 01 56 30.3 +0.6
SCZ2 Santa Cruz Isl 97.48 48 P 01 56 29.0
baz=306
R11A Troy Canyon, C 97.48 42 P 01 56 30.8
baz=309,SNR=20
TBI Tubuai 97.58 112 *ePP* **PP** **02 00 30.1 +1.9**
TBI comp=Z,846nm,26.8s *eS* **S** **02 07 49.0 -4.7**
TBI comp=Z,10µm,27.8s *eSS* **SS** **02 14 37.5 +3.3**
comp=Z,5µm,29.8s
TBI Tubuai 97.58 112 *eLR* LR 02 28 17.4
comp=Z,13µm,24.5s,baz=297
OSI Osito Audit: C 97.73 47 IAMs_20 IAMs_20 02 36 26.5
comp=Z,14µm,20.0s
OSI Osito Audit: C 97.73 47 P 01 56 31.2
baz=306
HWUT Hardware Ranch 97.75 38 IAMs_20 IAMs_20 02 47 01.5
comp=Z,16µm,20.0s
FURC Furnace Creek, 97.84 44 P 01 56 31.3
baz=308,SNR=5.9
LRMC Laurel Mtn Rad 97.91 46 P 01 56 31.5
baz=307
LRMC S 02 07 55.4
baz=307
TPNV Topopah Spring 97.94 44 P 01 56 32.8
baz=308,SNR=16
TPNV S 02 07 55.5
baz=308
DUG Dugway, Tooele 97.97 39 P Pdif 01 56 33.8 +1.9
DUG pmax pmax
comp=Z,22nm,2.3s
DUG Dugway, Tooele 97.97 39 IAMs_20 IAMs_20 02 47 00.5
comp=Z,11µm,20.0s
DUG Dugway, Tooele 97.97 39 P 01 56 32.9
baz=311,SNR=14
SNCC San Nicolas Is 97.99 48 P 01 56 32.4
baz=306
EDW2 Edwards Air Fo 98.06 46 P 01 56 33.1
baz=307
BW06 Boulder Array 98.06 36 IAMs_20 IAMs_20 02 46 18.5
comp=Z,14µm,20.0s
PDAR Pinedale Array 98.06 36 P **P** **01 56 32.2 -0.2**
comp=Z,4.3nm,0.8s,baz=18,slow=0.4,SNR=22
PDAR PKKP **PKKPbc** **02 13 05.5 -0.2**
comp=Z,0.6nm,0.7s,baz=129,slow=4.0,SNR=4.4
PDAR LR LR 02 39 54.8
comp=Z,5µm,21.9s,baz=342,slow=35
PDAR Pinedale Array 98.06 36 P **P** **01 56 31.5 -0.9**
BW06 Boulder Array 98.06 36 P 01 56 31.9
baz=314
TCUT Toone Canyon 98.16 38 IAmb IAmb 01 56 42.2
comp=Z,23nm,0.9s
DECC Green Verdugo 98.20 47 P 01 56 33.5
baz=307
PASC Pasadena Art C 98.35 47 IAMs_20 IAMs_20 02 36 42.9
comp=Z,13µm,20.0s
PRN Pahroc Range 98.40 43 IAmb IAmb 01 57 02.2
comp=Z,42nm,1.6s
MWC Mount Wilson 98.41 47 IAMs_20 IAMs_20 02 36 56.3
comp=Z,14µm,20.0s
UCM Universidad Co 98.42 321 P **P** **01 56 32.5 -1.3**
UCM Universidad Co 98.42 321 PP **PP** **02 00 34.2 +0.8**
FMP Fort Macarthur 98.55 47 Pdiff 01 56 34.2
baz=307
SHOC Shoshone, Teco 98.56 45 Pdiff 01 56 34.7
baz=308
ULM Lac du Bonnet 98.61 24 P **P** **01 56 33.9 -0.5**
comp=Z,13nm,0.8s,baz=321,slow=4.9,SNR=16
ULM LR LR 02 46 07.6
comp=Z,18µm,18.4s,baz=330,slow=39
ULM Lac du Bonnet 98.61 24 *eP* Pdif 01 56 34.8 +0.4
ULM Lac du Bonnet 98.61 24 P **P** **01 56 34.2 -0.2**
ULM IAMs_20 IAMs_20 02 45 48.2
comp=Z,20µm,19.0s
CIS Catalina Islan 98.65 48 Pdiff 01 56 35.3
baz=306
RRX Edison Barstow 98.72 46 Pdiff 01 56 35.7
baz=308
CART Cartagena 98.85 318 P **P** **01 56 34.3 -1.4**
CART Cartagena 98.85 318 PP **PP** **02 00 40.0 +3.3**
CART Cartagena 98.85 318 IAMs_20 IAMs_20 02 48 36.9
comp=Z,15µm,18.0s
TUQ Turquoise Moun 99.07 45 Pdiff 01 56 37.8
baz=308
MDND Maddock 99.08 27 IAMs_20 IAMs_20 02 44 53.9
comp=Z,19µm,20.0s
MDND Maddock 99.08 27 Pdiff 01 56 36.1
baz=322
BBRC Big Bear Solar 99.14 46 Pdiff 01 56 37.5
baz=308
HEC Hector,Ludlow 99.18 45 Pdiff 01 56 38.1
baz=308
ES10 SONSECA Array 99.23 321 IAMs_20 IAMs_20 02 47 29.6
comp=Z,24µm,20.0s
ES11 SONSECA Array 99.25 321 IAMs_20 IAMs_20 02 47 31.1
comp=Z,24µm,20.0s
ESDC Sonseca Array 99.26 321 P **Pdif** **01 56 37.1 -0.5**
comp=Z,1.6nm,1.0s,baz=26,slow=4.6,SNR=9.6
ESDC PP PP 02 00 28.8 -11
comp=Z,2.5nm,0.9s,baz=49,slow=8.3,SNR=7.1
ESDC PKKP **PKKPdf** **02 13 05.3 +0.3**
comp=Z,1.0nm,0.8s,baz=257,slow=2.5,SNR=7.1
ESDC LR LR 02 46 53.2
comp=Z,20µm,18.0s,baz=10.0,slow=39
ESDC Sonseca Array 99.26 321 P **Pdif** **01 56 36.6 -1.0**
ES12 SONSECA Array 99.27 321 IAMs_20 IAMs_20 02 47 30.6
comp=Z,22µm,20.0s
PBRG Braganca 99.35 324 *ePdif* **Pdif** **01 56 37.7 -0.2**
PBRG Braganca 99.35 324 *ePP* **PP** **02 00 40.7 +0.3**
MURC Murrieta 99.35 47 Pdiff 01 56 38.4
baz=307
PAB San Pablo 99.56 321 IAMs_20 IAMs_20 02 46 50.4
comp=Z,22µm,20.0s
E28A Huff 99.60 29 IAMs_20 IAMs_20 02 46 53.1
comp=Z,25µm,20.0s
GMRC Granite Mounta 99.64 45 Pdiff 01 56 40.5
baz=308
K22A Casper 99.74 34 Pdiff 01 56 39.7
baz=316
PFO Pinyon Flats O 99.83 46 *ceP* **Pdif** **01 56 40.3 -0.1**
PFO pmax pmax
comp=Z,23nm,1.0s
PFO Pinyon Flats O 99.83 46 IAMs_20 IAMs_20 02 38 48.2
comp=Z,12µm,19.0s
PFO Pinyon Flats O 99.83 46 Pdiff 01 56 40.1
baz=308
109C Camp Elliot, M 99.84 47 Pdiff 01 56 40.1
baz=307
TPFO Pinon Flats 99.84 46 Pdiff 01 56 40.7
baz=308
LSZ Lusaka 99.87 258 P **Pdif** **01 56 40.6 -0.1**
comp=Z,10nm,0.8s,baz=71,slow=4.5,SNR=20
BELC Belle Mtn. Jos 99.90 46 Pdiff 01 56 40.7
baz=308
RSSD Black Hills 99.92 32 IAMs_20 IAMs_20 02 46 49.0
comp=Z,17µm,20.0s
RSSD Black Hills 99.92 32 Pdiff 01 56 40.6
baz=318
MVO Moncorvo 99.95 324 *ePdif* **Pdif** **01 56 40.3 -0.4**
MVO Moncorvo 99.95 324 *ePP* **PP** **02 00 44.4 -0.6**
MVO *eSKS* **SKSac** **02 07 28.1 +10**
MVO Moncorvo 99.95 324 *eLQ* LQ 02 29 13.4
MVO *eLR* LR 02 33 24.2
comp=Z,24µm,18.0s
PGAV Gavieira, Arco 100.05 325 *ePdif* **Pdif** **01 56 39.6 -1.5**
PGAV Gavieira, Arco 100.05 325 *ePP* **PP** **02 00 46.3 +0.5**
PGAV Gavieira, Arco 100.05 325 *eLQ* LQ 02 28 42.5
PGAV *eLR* LR 02 38 04.3
comp=Z,29µm,18.0s
RWWY Rawlins 100.07 35 IAMs_20 IAMs_20 02 47 44.4
comp=Z,14µm,20.0s
AGMN Agassiz Nation 100.22 25 Pdiff 01 56 39.6
baz=325
POLO Lamas de Olo 100.22 324 *ePP* **PP** **02 00 47.7 +0.6**
PVRL Vila Real 100.25 324 *ePdif* **Pdif** **01 56 41.8 -0.1**
TAOE Nuku Hiva Isla 100.29 95 *eSP* SP 02 09 42.6 -3.4
comp=Z,2µm,26.4s
TAOE Nuku Hiva Isla 100.29 95 *eLR* LR 02 29 36.2
comp=Z,10µm,22.5s
MONP2 Monument Peak 100.30 47 Pdiff 01 56 40.8
baz=308
NEE2 Needles Airpor 100.33 45 Pdiff 01 56 41.9
baz=309
IRM Iron Mountain 100.36 45 Pdiff 01 56 41.4
baz=309
BC3 Big Chuckawall 100.47 46 Pdiff 01 56 44.5
baz=308
O20A White River Ci 100.60 37 IAMs_20 IAMs_20 02 48 22.7
comp=Z,12µm,20.0s
O20A White River Ci 100.60 37 Pdiff 01 56 42.5
baz=314
IKP In-Ko-Pah, Jac 100.65 47 Pdiff 01 56 44.0
baz=308
SWSC Sam W. Stewart 100.68 47 Pdiff 01 56 45.4
baz=308
D32A Dogwood Acres, 100.70 26 IAMs_20 IAMs_20 02 49 57.9
comp=Z,23µm,19.0s
PVIS Viseu 100.73 324 *ePdif* **Pdif** **01 56 44.0 -0.1**
PVIS Viseu 100.73 324 *ePP* **PP** **02 00 53.5 +2.5**
MTE Manteigas 100.77 323 *ePP* **PP** **02 00 52.1 +0.9**
MTE *eSKS* **SKSac** **02 07 23.8 +2.0**
MTE Manteigas 100.77 323 *eLQ* LQ 02 30 36.0
MTE *eLR* LR 02 37 25.8
comp=Z,32µm,18.0s
PDMCI Parker Dam,Lak 100.92 45 Pdiff 01 56 44.8
baz=309
B35A Bob, Littlefor 100.96 24 IAMs_20 IAMs_20 02 50 59.5
comp=Z,16µm,18.0s
PCBR Castelo Branco 101.12 323 *ePP* **PP** **02 00 54.1 +0.3**
GLA Glamis 101.26 46 Pdiff 01 56 46.7
baz=309
PHWY Pilot Hill 101.26 35 IAMs_20 IAMs_20 02 47 09.0
comp=Z,10µm,20.0s
N23A Red Feather La 101.30 35 Pdiff 01 56 47.2
baz=316
PV10 Paradox Valley 101.36 39 IAMs_20 IAMs_20 02 52 04.8
comp=Z,21µm,18.0s
MAW Mawson 101.36 200 P **Pdif** **01 56 46.8 +0.9**
comp=Z,2.3nm,0.8s,baz=92,slow=24,SNR=3.7
MAW PKKPbc **PKKPbc** **02 12 57.0 -0.3**
comp=Z,2.1nm,0.7s,baz=265,slow=6.3,SNR=4.0
PMRV Marv??o 101.36 323 *ePdif* **Pdif** **01 56 46.2 -0.7**
PMRV Marv??o 101.36 323 *ePP* **PP** **02 00 52.8 -2.9**
PMRV *eSKS* **SKSac** **02 07 26.0 +1.4**
PMRV Marv??o 101.36 323 *eLQ* LQ 02 35 04.8
PMRV *eLR* LR 02 39 26.0
comp=Z,33µm,18.0s
PV14 Lion Creek, Pa 101.37 39 IAMs_20 IAMs_20 02 51 36.5
comp=Z,21µm,18.0s
COI Coimbra 101.37 324 *ePP* **PP** **02 00 53.7 -2.0**
PV22 Blue Mesa, Par 101.39 39 IAMs_20 IAMs_20 02 48 56.1
comp=Z,13µm,19.0s
PV04 Paradox Valley 101.42 39 IAMs_20 IAMs_20 02 51 29.0
comp=Z,18µm,18.0s
PV20 West Nyswonger 101.42 39 IAMs_20 IAMs_20 02 51 37.9
comp=Z,17µm,18.0s
PV19 Morning Glory 101.44 39 IAMs_20 IAMs_20 02 44 23.2
comp=Z,16µm,21.0s
EMAL Malaga-Limoner 101.47 319 P **Pdif** **01 56 40.3 -7.1**
EMAL Malaga-Limoner 101.47 319 PP **PP** **02 00 56.6 0.0**
PV17 East Wray Mesa 101.47 39 IAMs_20 IAMs_20 02 44 24.1
comp=Z,20µm,22.0s
PV16 Nyswonger Mesa 101.47 39 IAMs_20 IAMs_20 02 51 57.2
comp=Z,17µm,18.0s
MATP Matopo 101.50 253 P **Pdif** **01 56 48.4 +0.5**
comp=Z,7.2nm,0.8s,baz=44,slow=3.6,SNR=16

PV11 David Mesa, Pa 101.51 39 IAMs_20 IAMs_20 02 51 49.1
comp=Z,20µm,18.0s
MELI Melilla 101.52 317 P Pdif 01 56 46.5 -1.2
MELI Melilla 101.52 317 PP PP 02 00 54.8 -2.2
PV18 Skein Mesa, Pa 101.52 39 IAMs_20 IAMs_20 02 51 49.5
comp=Z,16µm,18.0s
PCAS Casmilo, Conde 101.53 324 eSKS SKSac 02 07 28.3 +3.0
PV12 Saucer Basin, 101.53 39 IAMs_20 IAMs_20 02 44 36.8
comp=Z,19µm,21.0s
PV13 Radium Mtn., P 101.63 39 IAMs_20 IAMs_20 02 44 38.4
comp=Z,16µm,21.0s
PV02 Paradox Valley 101.65 39 IAMs_20 IAMs_20 02 44 38.8
comp=Z,18µm,22.0s
PV15 Paradox Valley 101.70 39 IAMs_20 IAMs_20 02 49 05.2
comp=Z,14µm,20.0s
PESTR Estremoz 101.86 322 eSKS SKSac 02 07 29.2 +2.2
WUAZ Wupatki 101.89 42 Pdiff 01 56 49.4
baz=311
SMCO Snowmass 101.96 37 IAMs_20 IAMs_20 02 45 20.9
comp=Z,14µm,20.0s
SUSD Miller 102.03 29 IAMs_20 IAMs_20 02 48 35.4
comp=Z,20µm,19.0s
SUSD Miller 102.03 29 Pdiff 01 56 49.7
baz=322
PBAR Barrancos 102.03 322 ePdif Pdif 01 56 48.7 -1.2
PBAR Barrancos 102.03 322 ePP PP 02 00 58.2 -2.6
PBAR eSKS SKSac 02 07 29.4 +1.6
PSBE So Bento 102.07 323 eSKS SKSac 02 07 28.7 +0.7
PMTG Montargil 102.08 323 ePP PP 02 01 00.9 -0.1
PMTG eSKS SKSac 02 07 28.9 +1.0
EYMN Ely 102.12 23 Pdiff 01 56 49.3
baz=329
ISCO Idaho Springs 102.26 36 P Pdif 01 56 54.8 +3.5
ISCO pmax pmax
comp=Z,6.0nm,0.9s
ISCO Idaho Springs 102.26 36 IAMs_20 IAMs_20 02 47 19.6
comp=Z,17µm,21.0s
ISCO Idaho Springs 102.26 36 Pdiff 01 56 51.8
baz=316
EVO Evora 102.33 322 P Pdif 01 56 52.6 +1.4
EVO Evora 102.33 322 PP PP 02 01 04.8 +1.8
EVO Evora 102.33 322 ePP PP 02 01 00.7 -2.3
MVCO Mesa Verde 102.47 39 IAMs_20 IAMs_20 02 52 42.6
comp=Z,12µm,18.0s
MVCO Mesa Verde 102.47 39 Pdiff 01 56 49.6
baz=314
PBEJ Beja 102.61 322 ePP PP 02 01 05.8 +0.8
CEU Ceuta 102.61 319 P Pdif 01 56 40.9 -12
CEU Ceuta 102.61 319 PP PP 02 01 01.9 -3.3
SFS San Fernando 102.72 320 P Pdif 01 56 50.7 -2.3
SFS San Fernando 102.72 320 PP PP 02 01 07.7 +1.7
PMAFR Mafra 102.74 323 eSKS SKSac 02 07 32.0 +0.9
LIS Lisbon 102.83 323 ePdif Pdif 01 56 52.6 -0.8
LIS ePP PP 02 01 06.2 -0.4
LIS IAMs_20 IAMs_20 02 50 26.8
comp=Z,37µm,15.8s
LIS Lisbon 102.83 323 eP Pdif 01 56 52.6 -0.8
LIS Lisbon 102.83 323 ePdif Pdif 01 56 54.1 +0.7
PMST Lisbon--Monsan 102.84 323 ePdif Pdif 01 56 53.2 -0.2
PNCL Nicolau / Gran 102.92 322 ePP PP 02 01 08.9 +1.6
PNCL eSKS SKSac 02 07 31.6 -0.3
PVAQ Vaqueiros 102.95 321 ePP PP 02 01 05.6 -2.1
PVAQ eSKS SKSac 02 07 33.2 +1.1
PVAQ Vaqueiros 102.95 321 eLQ LQ 02 37 48.1
PVAQ eLR LR 02 40 35.5
comp=Z,17µm,16.0s
PCVE Castro Verde 102.98 322 ePdif Pdif 01 56 53.0 -1.1
PCVE Castro Verde 102.98 322 ePP PP 02 01 08.2 +0.4
PCVE eSKS SKSac 02 07 31.8 -0.5
TAM Tamanrasset 103.04 302 P Pdif 01 56 55.6 +0.8
TAM pmax pmax
comp=Z,5.0nm,1.6s
S22A 4UR Ranch, Cre 103.05 38 Pdiff 01 56 55.1
baz=315
Q24A Divide 103.11 36 Pdiff 01 56 54.6
baz=316
F36A Milaca 103.13 25 IAMs_20 IAMs_20 02 48 26.9
comp=Z,19µm,20.0s
W18A Petrified Fore 103.15 42 IAMs_20 IAMs_20 02 51 46.1
comp=Z,14µm,19.0s
W18A Petrified Fore 103.15 42 Pdiff 01 56 55.9
baz=312
PBDV Barranco-do-Ve 103.19 321 ePP PP 02 01 10.6 +1.1
PBDV eSKS SKSac 02 07 35.6 +2.3
E38A The Farm, Brul 103.24 23 IAMs_20 IAMs_20 02 48 09.5
comp=Z,18µm,20.0s
214A Organ Pipe Nat 103.27 46 Pdiff 01 56 56.9
baz=310
OGNE Ogallala 103.27 33 IAMs_20 IAMs_20 02 49 07.9
comp=Z,15µm,19.0s
OGNE Ogallala 103.27 33 Pdiff 01 56 55.0
baz=319
K31A O'Neill 103.55 30 IAMs_20 IAMs_20 02 52 22.7
comp=Z,19µm,18.0s
MORF Marmelete 103.55 322 ePdif Pdif 01 56 55.8 -0.9
MORF ePP PP 02 01 11.6 -0.6
MORF IAMs_20 IAMs_20 02 51 07.3
comp=Z,44µm,15.8s
MORF Marmelete 103.55 322 eP Pdif 01 56 55.8 -0.9
MORF e 02 01 11.6
MORF Marmelete 103.55 322 ePdif Pdif 01 56 57.4 +0.7
MORF Marmelete 103.55 322 ePP PP 02 01 12.4 +0.2
MORF eSKS SKSac 02 07 35.7 +0.6
ECSD EROS Data Cent 103.61 28 Pdiff 01 56 56.0
baz=324
PFVI Vila Bisbo 103.78 322 ePP PP 02 01 14.2 +0.4
D41A Chassel 103.88 21 IAMs_20 IAMs_20 02 47 33.3
comp=Z,22µm,21.0s
SPMN Marine on St. 103.94 25 IAMs_20 IAMs_20 02 53 15.3
comp=Z,17µm,18.0s
SPMN Marine on St. 103.94 25 Pdiff 01 56 56.1
baz=327
VNDA Vanda 104.01 172 PKiKP PKiKP 02 01 16.5 +1.8
comp=Z,5.4nm,1.0s,baz=288,slow=3.2,SNR=5.9
VNDA PKKPbc PKKPbc 02 12 49.0 -0.7
comp=Z,1.9nm,0.8s,baz=169,slow=2.6,SNR=8.0
IFR Ifrane 104.05 317 P Pdif 01 56 58.4 -0.8
IFR Ifrane 104.05 317 PP PP 02 01 17.5 +1.3
MDT Midelt 104.19 316 PP PP 02 01 10.6 -6.6
comp=Z,7.6nm,0.9s,baz=59,slow=7.7,SNR=5.3
MDT PKiKP PKiKP 02 01 15.2 -1.4
comp=Z,11nm,0.9s,baz=36,slow=5.3,SNR=9.0
TUC Tucson 104.35 44 IAMs_20 IAMs_20 02 41 10.4
comp=Z,9µm,20.0s
MATQ Matagami 104.38 13 Pdiff 01 56 58.5
baz=341
KSCO Kaye Shedlock' 104.42 35 Pdiff 01 56 59.4
baz=318
BGNE Belgrade 104.78 30 IAMs_20 IAMs_20 02 53 20.4
comp=Z,15µm,18.0s
BGNE Belgrade 104.78 30 Pdiff 01 57 00.0
baz=322
T25A Trinidad 104.83 37 IAMs_20 IAMs_20 02 51 20.8
comp=Z,13µm,18.0s
T25A Trinidad 104.83 37 Pdiff 01 57 02.3
baz=317
CHGQ Chibougamau 104.86 11 Pdiff 01 57 00.6
baz=344
G40A Rib Lake 104.87 23 IAMs_20 IAMs_20 02 52 48.7
comp=Z,20µm,18.0s
L34A Svendsen Farm, 105.14 29 IAMs_20 IAMs_20 02 52 35.7
comp=Z,20µm,18.0s
F42A Maple Grove Fa 105.16 22 IAMs_20 IAMs_20 02 49 06.3
comp=Z,18µm,20.0s
LSQQ Lebel-sur-Quev 105.18 13 Pdiff 01 57 01.1
baz=342
ANMO Albuquerque 105.23 40 IAMs_20 IAMs_20 02 54 32.8
comp=Z,15µm,18.0s
ANMO Albuquerque 105.23 40 Pdiff 01 57 05.4
baz=315
Y22D IRIS PASSCAL I 105.56 41 IAMs_20 IAMs_20 02 52 23.7
comp=Z,13µm,20.0s
Y22D IRIS PASSCAL I 105.56 41 PKiKP 02 01 23.4
baz=314
AVE Averroes 105.61 318 P Pdif 01 57 03.9 -2.0
AVE Averroes 105.61 318 PP PP 02 01 29.1 +1.6
N33A J Bar K, Exete 105.64 30 IAMs_20 IAMs_20 02 50 36.0
comp=Z,18µm,18.0s
E46A Sault Ste Mari 105.84 19 IAMs_20 IAMs_20 02 50 32.7
comp=Z,15µm,19.0s
I40A Norwalk 105.90 24 IAMs_20 IAMs_20 02 50 05.0
comp=Z,18µm,20.0s
CBKS Cedar Bluff 106.04 33 IAMs_20 IAMs_20 02 50 51.1
comp=Z,21µm,20.0s
CBKS Cedar Bluff 106.04 33 PKiKP 02 01 26.7
baz=321

121A Cookes Peak, D 106.09 43 IAMs_20 IAMs_20 02 52 29.1
comp=Z,11µm,20.0s
N35A Tabor 106.36 29 IAMs_20 IAMs_20 02 53 33.9
comp=Z,21µm,19.0s
H43A Windswept, Lux 106.42 22 IAMs_20 IAMs_20 02 52 04.6
comp=Z,19µm,18.0s
SCIA State Center 106.55 27 IAMs_20 IAMs_20 02 49 21.6
comp=Z,19µm,20.0s
G45A Suttons Bay 106.61 20 IAMs_20 IAMs_20 02 52 38.5
comp=Z,18µm,19.0s
R32A Long Quarter, 106.85 33 IAMs_20 IAMs_20 02 52 00.5
comp=Z,15µm,20.0s
JFWS Jewell Farm 106.87 24 IAMs_20 IAMs_20 02 50 16.9
comp=Z,20µm,19.0s
DRLN Deer Lake 107.02 360 IAMs_20 IAMs_20 02 53 20.4
comp=Z,18µm,18.0s
BOSA Boshof 107.07 246 PKiKP PKiKP 02 01 23.3 +1.3
comp=Z,1.9nm,0.8s,baz=132,slow=0.6,SNR=2.3
BOSA PKKPab PKKPab 02 12 54.5 +1.7
comp=Z,3.9nm,0.8s,baz=222,slow=6.3,SNR=6.2
GLMI Grayling 107.13 20 IAMs_20 IAMs_20 02 51 13.2
comp=Z,17µm,20.0s
L40A Anamosa 107.22 26 IAMs_20 IAMs_20 02 52 37.3
comp=Z,19µm,19.0s
I45A Fountain 107.32 21 IAMs_20 IAMs_20 02 50 50.3
comp=Z,17µm,20.0s
KSU1 Kansas State U 107.33 31 IAMs_20 IAMs_20 02 55 48.9
comp=Z,19µm,18.0s
EPT El Paso 107.40 42 IAMs_20 IAMs_20 02 53 15.6
comp=Z,10µm,20.0s
N38A Joes South For 107.46 28 IAMs_20 IAMs_20 02 54 41.9
comp=Z,20µm,18.0s
L42A Oliver, Polo 107.87 25 IAMs_20 IAMs_20 02 50 57.4
comp=Z,15µm,20.0s
AMTX Amarillo 107.99 37 IAMs_20 IAMs_20 02 54 26.3
comp=Z,12µm,19.0s
MSTX Muleshoe 108.05 38 IAMs_20 IAMs_20 02 53 14.2
comp=Z,14µm,19.0s
MNTX Cornudas Mount 108.14 42 IAMs_20 IAMs_20 02 53 38.2
comp=Z,16µm,20.0s
KS21 Milan North St 108.25 33 IAMs_20 IAMs_20 02 51 19.7
comp=Z,15µm,20.0s
U32A Winter Ranch, 108.28 34 IAMs_20 IAMs_20 02 55 11.7
comp=Z,18µm,18.0s
KS20 Mayfield South 108.35 33 IAMs_20 IAMs_20 02 51 23.3
comp=Z,15µm,21.0s
OK032 Salt Plains WL 108.36 33 IAMs_20 IAMs_20 02 52 32.5
comp=Z,18µm,18.0s
J47A Sunmer 108.49 21 IAMs_20 IAMs_20 02 54 48.3
comp=Z,15µm,18.0s
BATG Bathurst New B 108.59 6 IAMs_20 IAMs_20 02 51 44.3
comp=Z,15µm,19.0s
SADO Sadowa 108.72 16 PKiKP PKiKP 02 01 24.8 +0.3
comp=Z,6.4nm,0.9s,baz=231,slow=2.6,SNR=3.6
SADO Sadowa 108.72 16 IAMs_20 IAMs_20 02 51 03.8
comp=Z,16µm,20.0s
M44A Midewin, Midew 109.02 24 IAMs_20 IAMs_20 02 53 50.5
comp=Z,17µm,20.0s
L46A Eue Claire 109.09 22 IAMs_20 IAMs_20 02 53 35.3
comp=Z,20µm,20.0s
T35A Sooner Cattle 109.11 32 IAMs_20 IAMs_20 02 52 59.3
comp=Z,19µm,19.0s
HDIL Hopedale 109.26 25 IAMs_20 IAMs_20 02 51 52.2
comp=Z,19µm,19.0s
OK029 Liberty Lake 109.52 34 IAMs_20 IAMs_20 02 53 27.4
comp=Z,15µm,19.0s
QUOK Quay 109.60 33 IAMs_20 IAMs_20 02 52 28.4
comp=Z,16µm,20.0s
WMOK Wichita Mounta 109.66 35 IAMs_20 IAMs_20 02 56 22.3
comp=Z,16µm,18.0s
SYO Syowa Base 109.70 202 eP Pdif 01 57 17.4 -5.6
SYO Syowa Base 109.70 202 ePdiff Pdif 01 57 25.5 +2.5
SYO Syowa Base 109.70 202 epPdiff pPdif 01 57 34.2 +3.3
OK031 S. Brethren Rd 109.71 33 IAMs_20 IAMs_20 02 52 25.3
comp=Z,20µm,20.0s
AAM Ann Arbor 109.71 20 IAMs_20 IAMs_20 02 52 54.4
comp=Z,19µm,19.0s
OK025 Westminster Rd 109.75 34 IAMs_20 IAMs_20 02 53 26.5
comp=Z,16µm,19.0s
OK030 Cody Creek RV 109.76 33 IAMs_20 IAMs_20 02 52 27.5
comp=Z,19µm,20.0s
OKCFA Oklahoma City 109.82 34 IAMs_20 IAMs_20 02 53 27.4
comp=Z,19µm,19.0s
FRNY Flat Rock 109.90 12 IAMs_20 IAMs_20 02 57 07.4
comp=Z,19µm,18.0s
R40A Maddies Stadio 109.95 28 IAMs_20 IAMs_20 02 53 03.0
comp=Z,19µm,20.0s
S39A Bolivar 109.98 30 IAMs_20 IAMs_20 02 56 35.9
comp=Z,14µm,19.0s
RKT Rikitea 109.99 107 ePP PP 02 02 00.8 0.0
comp=Z,612nm,26.0s
RKT Rikitea 109.99 107 eSS SS 02 17 26.0 +1.1
comp=Z,5µm,29.2s
RKT Rikitea 109.99 107 eLR LR 02 34 05.3
comp=Z,19µm,24.8s
SFIN Lafayette 110.25 24 IAMs_20 IAMs_20 02 55 06.0
comp=Z,18µm,19.0s
J54A Appleton 110.25 16 IAMs_20 IAMs_20 02 53 29.3
comp=Z,19µm,20.0s
N47A Urbana 110.31 22 IAMs_20 IAMs_20 02 54 31.4
comp=Z,18µm,19.0s
SLM Saint Louis 110.53 27 IAMs_20 IAMs_20 02 56 59.9
comp=Z,13µm,18.0s
CCM Cathedral Cave 110.59 28 IAMs_20 IAMs_20 02 53 33.8
comp=Z,16µm,20.0s
NCB Newcomb 110.60 13 IAMs_20 IAMs_20 02 55 04.1
comp=Z,20µm,19.0s
M50A Fremont 110.72 20 IAMs_20 IAMs_20 02 53 26.1
comp=Z,16µm,19.0s
ABTX Abilene, Hawle 110.80 37 IAMs_20 IAMs_20 02 58 37.9
comp=Z,19µm,20.0s
WVL Waterville 110.82 9 IAMs_20 IAMs_20 02 57 18.6
comp=Z,18µm,20.0s
TXAR Lajitas Array 110.85 42 Pdiff Pdif 01 57 32.3 +2.9
comp=Z,1.6nm,0.8s,baz=318,slow=1.7,SNR=12
TXAR PKiKP PKiKP 02 01 28.1 -1.1
comp=Z,2.1nm,0.5s,baz=233,slow=0.4,SNR=20
TXAR PKKPbc PKKPbc 02 12 27.1 +0.2
comp=Z,1.4nm,0.9s,baz=148,slow=6.4,SNR=8.5
TXAR Lajitas Array 110.85 42 P Pdif 01 57 31.5 +2.1
TXAR 02 01 28.0
TXAR Lajitas Array 110.85 42 Pdif Pdif 01 57 31.5 +2.1
TXAR PKiKP PKiKP 02 01 28.0 -1.1
P46A Rosedale 110.87 24 IAMs_20 IAMs_20 02 52 12.7
comp=Z,15µm,21.0s
MGMO Mountain Grove 110.90 29 IAMs_20 IAMs_20 02 54 21.1
comp=Z,19µm,19.0s
FVM French Village 111.00 27 IAMs_20 IAMs_20 02 53 52.6
comp=Z,16µm,19.0s
WVNY West Valley, N 111.07 17 IAMs_20 IAMs_20 02 53 57.0
comp=Z,17µm,19.0s
HPIG 111.25 45 IAMs_20 IAMs_20 02 56 09.2
comp=Z,11µm,20.0s
ACCN Adirondack Com 111.28 13 IAMs_20 IAMs_20 02 53 44.0
comp=Z,19µm,20.0s
TOC1 Torodi Ar. Sit 111.30 296 IAMs_20 IAMs_20 02 54 21.1
comp=Z,9µm,21.0s
TORD Torodi Ar. Bea 111.32 296 Pdiff Pdif 01 57 36.2 +4.7
comp=Z,1.0nm,0.8s,baz=42,slow=4.1,SNR=4.3
TORD PKiKP PKiKP 02 01 30.4 +0.2
comp=Z,6.6nm,0.8s,baz=44,slow=2.2,SNR=15
TORD PP PP 02 02 09.1 -0.8
comp=Z,18nm,0.9s,baz=52,slow=4.6,SNR=4.1
TORD PKKPbc PKKPbc 02 12 25.0 +0.1
comp=Z,2.8nm,0.9s,baz=258,slow=2.4,SNR=4.1
TORD PKKPab PKKPab 02 12 37.5 +1.2
comp=Z,7.3nm,0.9s,baz=251,slow=3.6,SNR=12
TOC5 Torodi Ar. Sit 111.34 296 IAMs_20 IAMs_20 02 54 22.3
comp=Z,9µm,21.0s
N51A Ashland 111.37 20 IAMs_20 IAMs_20 02 50 44.2
comp=Z,19µm,22.0s
O49A Covington 111.39 22 IAMs_20 IAMs_20 02 56 25.0
comp=Z,18µm,18.0s
M53A WI Miller and 111.40 18 IAMs_20 IAMs_20 02 51 06.0
comp=Z,20µm,21.0s
HAL Halifax 111.42 5 IAMs_20 IAMs_20 02 56 07.1
comp=Z,19µm,19.0s
X37A Clayton 111.52 33 IAMs_20 IAMs_20 02 53 39.2
comp=Z,16µm,19.0s
CMLA Cha da Macela 111.53 333 IAMs_20 IAMs_20 02 50 09.0
comp=Z,13µm,20.0s
Z35A Perchaven, San 111.55 35 IAMs_20 IAMs_20 02 54 24.3
comp=Z,20µm,20.0s
PMOZ Porto Moniz, M 111.58 324 eLQ LQ 02 34 07.7
PMOZ eLR LR 02 42 24.3
comp=Z,11µm,20.0s
M54A Oil Creek Stat 111.62 18 IAMs_20 IAMs_20 02 51 41.8
comp=Z,20µm,20.0s

P48A Milroy 111.66 23 IAMs_20 IAMs_20 02 55 06.3
comp=Z,17µm,19.0s
ACSO Alum Creek Sta 111.80 21 IAMs_20 IAMs_20 02 54 07.7
comp=Z,18µm,20.0s
P49A Miami Univ. Ec 111.84 22 IAMs_20 IAMs_20 02 57 00.1
comp=Z,16µm,18.0s
N53A Lisbon 111.94 19 IAMs_20 IAMs_20 02 55 22.2
comp=Z,17µm,18.0s
FCAR Ozark Folk Cen 112.01 30 IAMs_20 IAMs_20 02 54 59.6
comp=Z,14µm,20.0s
M56A Emporium 112.05 17 IAMs_20 IAMs_20 02 52 58.8
comp=Z,19µm,20.0s
L59A Walton 112.13 14 IAMs_20 IAMs_20 02 54 34.8
comp=Z,18µm,20.0s
USIN University of 112.13 25 IAMs_20 IAMs_20 02 53 33.3
comp=Z,19µm,19.0s
O52A Adamsville 112.27 20 IAMs_20 IAMs_20 02 54 03.0
comp=Z,16µm,19.0s
LCAR Lake Charles 112.29 29 IAMs_20 IAMs_20 02 55 53.1
comp=Z,13µm,18.0s
JCT Junction City 112.32 39 IAMs_20 IAMs_20 02 59 44.3
comp=Z,14µm,19.0s
MIAR Mount Ida 112.43 32 IAMs_20 IAMs_20 02 58 22.1
comp=Z,18µm,19.0s
P51A Williamsport 112.45 21 IAMs_20 IAMs_20 02 58 02.1
comp=Z,17µm,19.0s
WHTX Lake Whitney, 112.48 36 IAMs_20 IAMs_20 02 52 56.1
comp=Z,17µm,22.0s
PVMO Portageville 112.64 28 IAMs_20 IAMs_20 02 55 00.9
comp=Z,16µm,19.0s
Q51A Peebles 112.77 22 IAMs_20 IAMs_20 02 53 47.5
comp=Z,21µm,21.0s
Z38A Mt. Pleasant 112.77 34 IAMs_20 IAMs_20 02 54 31.4
comp=Z,19µm,19.0s
L62A Suffield 112.78 12 IAMs_20 IAMs_20 02 53 22.6
comp=Z,20µm,20.0s
R49A Shelbyville 112.79 23 IAMs_20 IAMs_20 02 56 00.3
comp=Z,16µm,19.0s
PEBM Pemiscott Bayo 112.82 28 IAMs_20 IAMs_20 02 55 09.9
comp=Z,12µm,19.0s
GNAR Gosnell 112.88 28 IAMs_20 IAMs_20 02 55 13.4
comp=Z,12µm,19.0s
KSCT Kent School, K 112.91 13 IAMs_20 IAMs_20 02 53 31.2
comp=Z,18µm,20.0s
HBAR Harrisburg 112.94 29 IAMs_20 IAMs_20 02 57 36.3
comp=Z,15µm,18.0s
P53A Whipple 112.98 20 IAMs_20 IAMs_20 02 54 25.9
comp=Z,19µm,20.0s
R50A Paris 113.10 23 IAMs_20 IAMs_20 02 54 27.4
comp=Z,15µm,20.0s
L63A North Scituate 113.14 11 IAMs_20 IAMs_20 02 52 10.1
comp=Z,20µm,20.0s
Q52A Bidwell 113.18 21 IAMs_20 IAMs_20 02 55 00.3
comp=Z,17µm,19.0s
435B Jarrell 113.33 37 IAMs_20 IAMs_20 02 59 54.9
comp=Z,18µm,20.0s
237A Washetta, Mont 113.34 35 IAMs_20 IAMs_20 02 56 12.8
comp=Z,17µm,19.0s
WSPT Westport, CT 113.47 13 IAMs_20 IAMs_20 02 53 47.2
comp=Z,17µm,19.0s
HDBT Hernando Brdge 113.55 29 IAMs_20 IAMs_20 02 55 18.2
comp=Z,13µm,22.0s
MET Memphis--Engin 113.63 29 IAMs_20 IAMs_20 02 55 28.3
comp=Z,17µm,20.0s
WVT Waverly 113.66 26 IAMs_20 IAMs_20 02 53 40.7
comp=Z,20µm,21.0s
QSPA South Pole Qui 113.85 180 IAMs_20 IAMs_20 02 50 43.7
comp=Z,8µm,20.0s
R53A Hurricane 113.86 21 IAMs_20 IAMs_20 02 55 30.2
comp=Z,16µm,19.0s
S51A Beattyville 113.93 22 IAMs_20 IAMs_20 02 50 30.4
comp=Z,21µm,22.0s
T50A Nancy 114.03 24 IAMs_20 IAMs_20 02 56 42.4
comp=Z,17µm,19.0s
Q56A Snyder Ridge, 114.05 18 IAMs_20 IAMs_20 02 53 07.9
comp=Z,20µm,20.0s
WUPA West Chester U 114.15 15 IAMs_20 IAMs_20 02 56 00.4
comp=Z,18µm,19.0s
OXF Oxford 114.37 29 IAMs_20 IAMs_20 02 56 09.0
comp=Z,17µm,19.0s
V48A Smith Brothers 114.40 26 IAMs_20 IAMs_20 02 54 33.3
comp=Z,20µm,20.0s
R55A Marlinton 114.48 19 IAMs_20 IAMs_20 02 56 52.3
comp=Z,18µm,18.0s
735A Kenedy 114.68 39 IAMs_20 IAMs_20 02 58 55.8
comp=Z,11µm,19.0s
Y45A Yeager Farm, C 114.86 29 IAMs_20 IAMs_20 02 57 27.0
comp=Z,14µm,18.0s
HKT Hockley 114.93 36 i PKiKP PKPdf 02 01 37.2 +0.6
HKT Hockley 114.93 36 IAMs_20 IAMs_20 02 56 14.9
comp=Z,14µm,20.0s
KOWA Kowa 115.16 301 PKP PKiKP 02 01 35.6 -1.9
comp=Z,7.1nm,0.5s,baz=62,slow=1.9,SNR=27
KOWA PP PP 02 02 36.2 -1.0
comp=Z,13nm,0.8s,baz=18,slow=4.8,SNR=6.2
KOWA Kowa 115.16 301 PKiKP PKiKP 02 01 36.4 -1.1
KOWA IAMs_20 IAMs_20 02 57 22.9
comp=Z,9µm,22.0s
V51A Loudon 115.30 24 IAMs_20 IAMs_20 02 56 44.8
comp=Z,17µm,19.0s
S57A Dark Hollow, R 115.31 19 IAMs_20 IAMs_20 02 54 08.3
comp=Z,20µm,20.0s
X48A Hartselle 115.43 27 PKiKP 02 01 37.5 -0.1
X48A IAMs_20 IAMs_20 02 56 27.7
comp=Z,17µm,19.0s
V52A Sevierville 115.54 23 IAMs_20 IAMs_20 02 59 18.1
comp=Z,17µm,18.0s
KVTX Kingsville 115.62 40 IAMs_20 IAMs_20 02 59 36.8
comp=Z,13µm,20.0s
342A Flagon Creek P 115.62 33 IAMs_20 IAMs_20 03 00 19.7
comp=Z,16µm,18.0s
TKL Tuckaleechee C 115.64 24 PKP PKiKP 02 01 37.3 -0.6
comp=Z,8.0nm,0.8s,baz=156,slow=4.7,SNR=12
TKL Tuckaleechee C 115.64 24 IAMs_20 IAMs_20 02 53 05.7
comp=Z,14µm,22.0s
441A DeRidder 115.69 34 IAMs_20 IAMs_20 03 01 53.8
comp=Z,15µm,18.0s
VBMS Vicksburg 115.79 31 IAMs_20 IAMs_20 02 59 48.0
comp=Z,15µm,19.0s
FPAL Fort Payne 115.93 26 IAMs_20 IAMs_20 02 55 56.8
comp=Z,17µm,20.0s
W52A Murphy 116.08 24 PKPdf 02 01 39.3 +0.4
W52A IAMs_20 IAMs_20 02 53 09.6
comp=Z,17µm,22.0s
146A Union 116.11 29 IAMs_20 IAMs_20 02 58 26.2
comp=Z,17µm,19.0s
ZAIG Zacatecas 116.14 47 IAMs_20 IAMs_20 02 59 38.1
comp=Z,18µm,20.0s
X51A Calhoun 116.20 25 IAMs_20 IAMs_20 02 57 56.8
comp=Z,17µm,20.0s
V55A Taylorsville 116.35 21 IAMs_20 IAMs_20 02 59 31.4
comp=Z,17µm,19.0s
BG3 Lake Jocassee 116.54 23 IAMs_20 IAMs_20 03 00 03.5
comp=Z,15µm,19.0s
LRAL Lakeview Retre 116.67 28 PKPdf PKPdf 02 01 38.9 -1.1
LRAL IAMs_20 IAMs_20 02 58 21.7
comp=Z,16µm,20.0s
KMSC Kings Mountain 116.96 22 IAMs_20 IAMs_20 02 55 00.5
comp=Z,17µm,20.0s
346A Big Creek Wild 116.98 30 IAMs_20 IAMs_20 02 57 55.3
comp=Z,15µm,20.0s
V58A Windy Hill, Pi 117.08 20 IAMs_20 IAMs_20 02 55 50.3
comp=Z,18µm,20.0s
PAULI Pauline 117.09 22 IAMs_20 IAMs_20 02 52 50.8
comp=Z,20µm,22.0s
HODGE Hodges 117.46 23 IAMs_20 IAMs_20 02 55 44.0
comp=Z,19µm,20.0s
GOGA Godfrey 117.75 24 IAMs_20 IAMs_20 02 53 37.8
comp=Z,19µm,22.0s
JSC Jenkinsville 117.77 22 IAMs_20 IAMs_20 02 59 03.9
comp=Z,10µm,19.0s
CNNC Cliffs of the 117.96 19 IAMs_20 IAMs_20 02 55 39.5
comp=Z,19µm,21.0s
Y57A Sumter 118.30 21 IAMs_20 IAMs_20 03 01 59.9
comp=Z,17µm,18.0s
154A Montrose 118.60 24 IAMs_20 IAMs_20 02 54 02.2
comp=Z,18µm,22.0s
NHSC New Hope 119.20 22 IAMs_20 IAMs_20 03 02 37.8
comp=Z,16µm,18.0s
451A Vernon 119.29 28 IAMs_20 IAMs_20 03 01 36.1
comp=Z,13µm,20.0s
255A Hazlehurst 119.45 24 IAMs_20 IAMs_20 02 55 22.7
comp=Z,20µm,22.0s
TIGA Tifton 119.46 26 IAMs_20 IAMs_20 02 59 57.1
comp=Z,16µm,18.0s
DBIC Dimbokro 120.22 294 PKP PKPdf 02 01 46.9 -0.4
comp=Z,22nm,0.7s,baz=7.2,slow=2.1,SNR=21
DBIC PP PP 02 03 11.3 -1.3

comp=Z,21nm,0.9s,baz=47,slow=8.6,SNR=5.1
DBIC PKKPab **PKKPab** **02 11 56.4 -0.6**
comp=Z,5.2nm,0.7s,baz=213,slow=6.3,SNR=6.8
DBIC Dimbokro **120.22 294** PKIKP **PKPdf** **02 01 46.1 -1.2**
DBIC Dimbokro **120.22 294** PKPdf **PKPdf** **02 01 46.1 -1.2**
456A Hilliard **120.70 24** IAMs_20 IAMs_20 02 56 00.8
comp=Z,19μm,21.0s
UNM Universidad Na **120.80 47** IAMs_20 IAMs_20 03 02 52.4
comp=Z,9μm,20.0s
656A Willston **121.71 26** IAMs_20 IAMs_20 03 00 55.7
comp=Z,16μm,20.0s
TLIG Tlapa **122.45 48** IAMs_20 IAMs_20 03 05 52.4
comp=Z,7μm,19.0s
SNAA Sanae **123.47 198** PKPdf **PKiKP** **02 01 52.7 +0.5**
SNAA Sanae **123.47 198** PKiKP **PKiKP** **02 01 54.3 +2.1**
SNAA Sanae **123.47 198** PKKPbc PKKPbc 02 11 42.4 -0.3
comp=Z,5.7nm,1.0s,baz=270,slow=2.5,SNR=10
SNAA Sanae **123.47 198** *d* PKIKP **PKiKP** **02 01 52.2 +0.1**
SNAA Sanae **123.47 198** PKPdf **PKPdf** **02 01 51.5 -0.4**
BBSR BB Station **123.48 7** IAMs_20 IAMs_20 03 01 16.4
comp=Z,11μm,20.0s
VNA2 Neumayer--Watz **125.12 198** PKPdf **PKiKP** **02 01 55.5 +0.2**
VNA2 Neumayer--Watz **125.12 198** PKiKP **PKiKP** **02 01 57.7 +2.3**
VNA1 Neumayer--Stat **125.51 198** PKPdf **PKiKP** **02 01 56.2 +0.1**
VNA1 Neumayer--Stat **125.51 198** PKiKP **PKiKP** **02 01 58.8 +2.7**
VNA3 Neumayer Olymp **125.58 197** PKPdf **PKiKP** **02 01 56.9 +0.6**
VNA3 Neumayer Olymp **125.58 197** PKiKP **PKiKP** **02 01 58.4 +2.1**
TEIG Tepich **126.78 37** IAMs_20 IAMs_20 03 07 21.0
comp=Z,10μm,21.0s
CCIG Comitan **127.59 43** IAMs_20 IAMs_20 03 07 20.6
comp=Z,8μm,21.0s
PETF Flores **128.50 41** IAMs_20 IAMs_20 03 08 27.2
comp=Z,10μm,21.0s
HUEH Huehuetenango **128.71 44** IAMs_20 IAMs_20 03 09 59.5
comp=Z,8μm,22.0s
SACV Santiago Islan **128.96 316** IAMs_20 IAMs_20 03 04 44.5
comp=Z,11μm,18.0s
RTAL Retalhuleu **129.19 45** IAMs_20 IAMs_20 03 10 23.1
comp=Z,9μm,20.0s
ESQI Esquipulas **130.64 42** IAMs_20 IAMs_20 03 08 42.1
comp=Z,8μm,20.0s
TGUH Tegucigalpa,Un **132.28 41** PKPdf **PKPdf** **02 02 10.2 -0.2**
TGUH IAMs_20 IAMs_20 03 03 48.3
comp=Z,8μm,21.0s
TGUH Tegucigalpa,Un **132.28 41** *eP* **PKPdf** **02 02 10.4 -0.1**
GTBY Guantanamo Bay **133.06 23** IAMs_20 IAMs_20 03 06 54.0
comp=Z,13μm,20.0s
CRIN San Cristobal **133.47 41** IAMs_20 IAMs_20 03 10 55.2
comp=Z,9μm,21.0s
MTDJ Mount Denham **133.68 27** IAMs_20 IAMs_20 03 08 54.0
comp=Z,12μm,20.0s
MATN Matagalpa **133.96 40** IAMs_20 IAMs_20 03 12 22.9
comp=Z,8μm,20.0s
ACON Acoyapa **135.17 40** IAMs_20 IAMs_20 03 12 59.8
comp=Z,7μm,20.0s
ESPN Las Esperanzas **135.49 39** IAMs_20 IAMs_20 03 13 55.2
comp=Z,6μm,21.0s
JTS Las Juntas de **136.62 41** PKHKP PKPpre 02 02 07.8
JTS Las Juntas de **136.62 41** PKPpre 02 02 07.8
JTS Las Juntas de **136.62 41** IAMs_20 IAMs_20 03 15 01.6
comp=Z,7μm,20.0s
CAO2 Cobano, Guntar **137.00 42** IAMs_20 IAMs_20 03 15 23.8
comp=Z,6μm,20.0s
SJG San Juan **137.26 12** PKP **PKPdf** **02 02 17.6 -1.9**
comp=Z,6.0nm,0.7s,baz=137,slow=6.1,SNR=2.4
SJG San Juan **137.26 12** IAMs_20 IAMs_20 03 11 05.9
comp=Z,10μm,20.0s
HUMP Col San Antoni **137.29 12** **PKPdf** **02 02 19.7 +0.1**
HDC Heredia **137.35 41** IAMs_20 IAMs_20 03 13 48.9
comp=Z,7μm,21.0s
BATAN Batan **137.71 40** IAMs_20 IAMs_20 03 16 02.2
comp=Z,8μm,18.0s
PEZE Perez Zeledon, **138.10 41** IAMs_20 IAMs_20 03 16 42.8
comp=Z,12μm,18.0s
ANWB Willy Bob **138.32 6** *eP* PKPpre 02 02 09.1
SEUS St. Eustatius **138.37 8** *eP* **PKPdf** **02 02 21.9 +0.4**
SEUS St. Eustatius **138.37 8** IAMs_20 IAMs_20 03 07 56.8
comp=Z,12μm,20.0s
RIOS Rincon, Osa **138.74 41** **PKPdf** **02 02 22.8 +0.4**
ANBD Bethesda, Anti **138.94 6** *eP* PKPpre 02 02 13.6
MLYT Lee's Yard **139.22 7** *eP* **PKiKP** **02 02 25.4 -0.1**
MAGL Barre de l'ile **140.07 6** *eP* PKPpre 02 02 11.1
TBG Guadeloupe-3 **140.13 6** *eP* PKPdf 02 02 12.7 -12
TDBA Terre de Bas, **140.14 6** *eP* PKPdf 02 02 12.7 -12
BCIP Isla Barro Col **140.46 36** IAMs_20 IAMs_20 03 14 13.2
comp=Z,9μm,19.0s
DLPL La Plaine **140.69 6** *eP* PKPdf 02 02 16.5 -9.3
UPA Univ. de Panam **140.78 36** *eP* **PKPdf** **02 02 18.3 -7.8**
ILAM Ilet Lapin Mar **141.27 5** *eP* **PKPdf** **02 02 20.5 -6.4**
FDF Fort de France **141.29 6** *eP* PKPdf 02 02 12.6 -14
FDF Fort de France **141.29 6** IAMs_20 IAMs_20 03 09 16.0
comp=Z,8μm,21.0s
AZU Azuero **141.35 38** *eP* PKPdf 02 02 16.5 -11
SMRC Santa Marta, M **141.39 27** *eP* **PKPdf** **02 02 20.3 -6.9**
URIC Uribia, Colomb **141.77 23** *eP* PKPdf 02 02 19.9 -7.9
SLIB Saint Lucia, B **142.01 6** *eP* PKPdf 02 02 16.7 -12
CRJC Cerrejon, Guaj **142.06 25** *eP* PKPdf 02 02 18.7 -10
SJCC San Jacinto, C **142.12 29** *eP* **PKPdf** **02 02 21.1 -7.4**
CAPC Capurgana **142.20 33** *eP* **PKPdf** **02 02 21.0 -7.6**
MCLT Moule a Chique **142.32 5** *eP* PKPdf 02 02 18.2 -11
MCLT Moule a Chique **142.32 5** IAMs_20 IAMs_20 03 10 15.2
comp=Z,7μm,22.0s
ARGC Ariguani, Magd **142.56 28** *eP* PKPdf 02 02 20.8 -8.5
SVB Belmont **142.72 6** *eP* PKPdf 02 02 19.9 -10
SVB Belmont **142.72 6** IAMs_20 IAMs_20 03 10 18.2
comp=Z,7μm,21.0s
DABV Dabajuro **142.96 22** *eP* **PKPdf** **02 02 23.2 -6.8**
BBGH Gun Hill **142.98 3** *eP* **PKPdf** **02 02 25.5 -4.4**
BBGH Gun Hill **142.98 3** IAMs_20 IAMs_20 03 07 32.6
comp=Z,14μm,21.0s
LL3C La Loma 3 Cana **143.03 27** *e* PKPab 02 02 23.5 -1.8
PTAC Punta Ardita, **143.23 35** *eP* PKPab 02 02 26.1 -0.1
GCMP Grenada, Carri **143.49 6** *eP* PKPab 02 02 23.5 -3.6
SMLC San Martn de **143.58 28** *eP* PKPab 02 02 26.1 -1.4
GRGR Grenville **143.81 7** *eP* PKPab 02 02 27.4 -1.0
GRGR Grenville **143.81 7** IAMs_20 IAMs_20 03 10 31.0
comp=Z,10μm,21.0s
UREC San Jos de Ur **143.84 31** *eP* PKPab 02 02 25.3 -3.2
DBBC Dabeiba **144.15 33** *eP* **PKPab** **02 02 29.6 -0.1**
SOLC Bahia Solano **144.21 35** *eP* PKPbc 02 02 30.8 +0.5
ZARC Zaragoza, Cauc **144.39 30** *eP* **PKPab** **02 02 26.8 -3.7**
OCAC Ocana **144.41 27** *eP* **PKPab** **02 02 29.6 -1.2**
TOSP Speyside **144.74 5** *eP* PKPab 02 02 23.5 -8.2
TOSP Speyside **144.74 5** IAMs_20 IAMs_20 03 15 31.5
comp=Z,8μm,20.0s
HELC Santa Helena **145.20 32** *eP* **PKPbc** **02 02 32.3 -1.6**
CBOC Ciudad Bolivar **145.24 34** *eP* **PKPbc** **02 02 32.5 -1.3**
BRRC Barranca, Sant **145.25 29** *eP* **PKPbc** **02 02 32.4 -1.2**
PIZC Pizarro, Choco **145.30 36** *eP* **PKPbc** **02 02 33.3 -0.4**
TRN Trinidad (W) **145.30 7** *eP* **PKPbc** **02 02 30.8 -2.9**
SOCV Socops **145.34 24** *eP* **PKPbc** **02 02 33.1 -0.8**
PTBC PUERTO BERRIO **145.41 31** *eP* **PKPbc** **02 02 32.2 -1.9**
PAMC Pamplona, Colo **145.47 27** *eP* **PKPbc** **02 02 32.5 -2.4**
BAUV El Baul **145.64 19** *eP* **PKPdf** **02 02 32.9 -1.7**
BARC Barichara **145.94 29** *eP* **PKPdf** **02 02 32.6 -2.9**
HOPE Hope Point **145.95 202** IAMs_20 IAMs_20 03 16 24.5
comp=Z,5μm,20.0s
CNOCA NORCASIA, CALD **146.06 32** *eP* **PKPdf** **02 02 35.3 -0.2**
NORC Norcasia **146.07 32** *eP* **PKPdf** **02 02 34.9 -0.6**
MALC Bahia Malaga **146.10 37** *eP* **PKPab** **02 02 38.1 +1.2**
MALC Bahia Malaga **146.10 37** *eP* **PKPab** **02 02 38.1 +1.2**
GUY2C Guyana, Caldas **146.12 33** *eP* **PKPdf** **02 02 35.2 -0.9**
SPBC San Pablo de B **146.37 31** *eP* **PKPdf** **02 02 36.0 0.0**
RUSC La Rusia **146.61 29** *eP* **PKPbc** **02 02 37.7 -0.7**
YOTC Yotoco, Valle **146.66 36** *eP* **PKPbc** **02 02 38.6 +0.5**
YOTC Yotoco, Valle **146.66 36** *eP* **PKPdf** **02 02 36.7 +0.1**
TOLC Tolima **146.69 34** *eP* **PKPdf** **02 02 36.0 -0.9**
ANIL Santa Ana **146.73 34** *eP* **PKPbc** **02 02 37.7 -0.9**
ROSC El Rosal **146.96 32** PKPbc **PKPdf** **02 02 37.9 +0.6**
comp=Z,41nm,0.5s,baz=61,slow=2.6,SNR=21
ROSC El Rosal **146.96 32** PKP2 **PKPdf** **02 02 38.0 +0.6**
ROSC El Rosal **146.96 32** **PKPdf** **02 02 38.0 +0.6**
ROSC IAMs_20 IAMs_20 03 14 58.7
comp=Z,14μm,22.0s
ROSC El Rosal **146.96 32** *eP* **PKPbc** **02 02 38.9 -0.4**
ELOV Elorza **147.01 22** *eP* **PKPdf** **02 02 37.2 +0.2**
TUMC Tumaco **147.06 42** *eP* **PKPbc** **02 02 38.5 -0.6**
CTUM2 Tumaco **147.07 42** *eP* **PKPab** **02 02 40.2 -0.4**
ORTC Ortega, Tolima **147.30 34** *eP* **PKPdf** **02 02 36.8 -0.7**
VILC Villavicencio, **147.90 31** *eP* **PKPdf** **02 02 38.7 0.0**
PCON Cinco Dias **148.01 38** *eP* **PKPdf** **02 02 40.0 +0.6**
SOTA Rioblanco **148.05 38** *eP* **PKPdf** **02 02 39.5 +0.2**
USHA Ushuaia **148.22 168** PKPbc **PKPbc** **02 02 41.0 0.0**
comp=Z,140nm,0.9s,baz=58,slow=1.5,SNR=3.1

BETC Betania **148.24 36** *eP* **PKPdf** **02 02 39.5 +0.4**
CRUC La Cruz **148.32 39** *eP* **PKPdf** **02 02 41.0 +1.4**
GCUF Volcan Galeras **148.37 40** *eP* **PKPdf** **02 02 41.0 +1.1**
OTAV Otavalo **148.48 43** IAMs_20 IAMs_20 03 19 19.9
comp=Z,8μm,20.0s
PTGC Puerto Gaitan, **148.53 29** *eP* **PKPbc** **02 02 41.7 -1.4**
GARC Garzon, Huila **148.63 36** *eP* **PKPdf** **02 02 40.1 +0.1**
MACC Macarena, Meta **149.52 34** *eP* **PKPdf** **02 02 40.2 -0.9**
GUVC San Jose del G **149.77 31** *eP* **PKPbc** **02 02 46.0 -0.2**
MDP Montagnes des **150.62 350** PKP **PKPdf** **02 02 43.2 +0.3**
comp=Z,20nm,0.8s,baz=120,slow=9.0,SNR=2.6
MDP PKPbc **pPKPbc** **02 02 48.2 -0.1**
comp=Z,96nm,0.9s,baz=40,slow=0.9,SNR=9.3
MDP PKPab **sPKPdf** **02 02 54.1 +0.4**
comp=Z,51nm,0.8s,baz=26,slow=2.5,SNR=9.7
PTLC Puerto Leguiza **150.68 37** *eP* **PKPdf** **02 02 42.4 -0.6**
RCBR Riachuelo **152.39 308** PKP **PKPdf** **02 02 46.2 +0.7**
comp=Z,23nm,0.8s,baz=75,slow=1.5,SNR=10
RCBR PKPbc **pPKPdf** **02 02 53.2 -0.5**
comp=Z,97nm,0.8s,baz=28,slow=1.8,SNR=16
RCBR PKPab **pPKPbc** **02 03 01.2 +0.7**
comp=Z,69nm,0.9s,baz=21,slow=3.3,SNR=7.2
RCBR Riachuelo **152.39 308** PKIKP **PKPdf** **02 02 45.7 +0.2**
RCBR 02 02 52.9
RCBR Riachuelo **152.39 308** PKPdf **PKPdf** **02 02 45.7 +0.2**
RCBR **PKiKP** **02 02 52.9 +0.2**
RCBR Riachuelo **152.39 308** IAMs_20 IAMs_20 03 17 32.6
comp=Z,8μm,19.0s
EFI East Falkland **152.42 179** PKIKP **PKiKP** **02 02 51.6 +0.1**
EFI East Falkland **152.42 179** **PKiKP** **02 02 51.6 +0.1**
ATAH Atahualpa **153.88 53** PKPbc **PKiKP** **02 02 57.4 +1.2**
comp=Z,43nm,0.7s,baz=236,slow=3.9,SNR=16
ATAH PKPab **PKPab** **02 03 08.5 -0.7**
comp=Z,66nm,0.9s,baz=146,slow=10,SNR=6.3
PTGA Pitinga **156.69 6** PKP **PKPdf** **02 02 50.8 -0.7**
comp=Z,10nm,0.7s,baz=353,slow=3.2,SNR=12
PTGA PKPab **PKPab** **02 03 19.9 -0.6**
comp=Z,31nm,0.8s,baz=358,slow=9.7,SNR=8.6
PTGA Pitinga **156.69 6** PKPdf **PKPdf** **02 02 51.4 -0.1**
PTGA **PKPab** **02 03 19.6 -0.9**
PTGA IAMs_20 IAMs_20 03 18 05.4
comp=Z,8μm,20.0s
PTGA Pitinga **156.69 6** *eP* **PKPdf** **02 02 51.8 +0.3**
GO07 Milladeo Hill, **156.81 149** IAMs_20 IAMs_20 03 09 49.9
comp=Z,7μm,21.0s
LL02 Futaleuf **157.57 152** PKPdf **PKPdf** **02 02 51.8 +0.1**
LL02 **PKPab** **02 03 25.0 +1.3**
LL02 IAMs_20 IAMs_20 03 26 24.7
comp=Z,5μm,21.0s
LL01 San Ignacio de **157.97 150** **PKPdf** **02 02 52.8 +0.6**
LL01 **PKPab** **02 03 26.8 +1.5**
NNA Nana **158.12 60** PKP **PKPdf** **02 02 52.5 -0.8**
comp=Z,2.6nm,0.4s,baz=294,slow=12,SNR=1.9
NNA PKPab **PKPab** **02 03 26.8 -0.1**
comp=Z,20nm,0.8s,baz=39,slow=3.5,SNR=1.8
NNA Nana **158.12 60** IAMs_20 IAMs_20 03 23 19.2
comp=Z,6μm,20.0s
LL05 Los Muermos **158.19 146** IAMs_20 IAMs_20 03 08 05.6
comp=Z,5μm,19.0s
PLCA Paso Flores **160.12 150** PKP **PKPdf** **02 02 55.2 +0.3**
comp=Z,6.4nm,1.0s,baz=34,slow=1.1,SNR=5.2
PLCA PKPab **PKPab** **02 03 36.2 +1.3**
comp=Z,10nm,0.8s,baz=223,slow=3.4,SNR=8.8
BI02 San Fabin de **162.77 140** PKPdf **PKPdf** **02 02 56.4 -1.4**
MT01 Popeta **164.56 132** PKPdf **PKPdf** **02 02 59.0 -0.4**
MT01 PKPab **PKPab** **02 03 55.1 +0.6**
PEL Peldehue **165.36 131** PKP2 **PKPab** **02 03 57.2 -0.9**
PEL Peldehue **165.36 131** PKPab **PKPab** **02 03 57.2 -0.9**
CO02 Combarbal **166.13 124** PKPdf **PKPdf** **02 03 00.5 -0.6**
LCO Las Campanas **167.25 116** PKIKP **PKPdf** **02 03 03.4 +1.3**
LCO Las Campanas **167.25 116** **PKPdf** **02 03 03.4 +1.3**
LPAZ La Paz **167.43 54** PKP **PKPdf** **02 03 01.9 -1.1**
comp=Z,36nm,0.9s,baz=343,slow=1.0,SNR=42
LPAZ PKPab **PKPab** **02 04 07.9 -0.4**
comp=Z,17nm,0.9s,baz=16,slow=9.1,SNR=3.7
LPAZ La Paz **167.43 54** *eP* **PKPdf** **02 03 04.2 +1.2**
PB16 IPOC Station P **167.50 65** **PKPdf** **02 03 04.1 +1.2**
BDFB Brasilia **167.72 311** PKP **PKPdf** **02 03 01.5 -1.1**
comp=Z,29nm,0.9s,baz=51,slow=1.2,SNR=14
BDFB PKPab **PKPab** **02 04 08.5 -0.5**
comp=Z,30nm,0.9s,baz=106,slow=4.2,SNR=7.6
TA02 Huaiquique **167.77 75** PKPdf **PKPdf** **02 03 02.8 +0.5**
PB11 IPOC Station P **167.99 71** PKPdf **PKPdf** **02 03 02.3 -0.4**
GO03 Copiap **168.06 110** PKPdf **PKPdf** **02 03 03.5 +1.0**
PB14 IPOC Station P **168.28 95** PKPdf **PKPdf** **02 03 04.0 +1.0**
PB01 IPOC Station P **168.59 77** **PKPdf** **02 03 03.1 +0.1**
PB09 IPOC Station P **169.01 80** PKPdf **PKPdf** **02 03 04.2 +0.8**
LPA La Plata **169.18 178** PKIKP **PKPdf** **02 02 55.9 -6.9**
AC02 Maricunga **169.19 107** PKPdf **PKPdf** **02 03 05.7 +2.0**
LVC Limon Verde **169.48 84** PKP **PKPdf** **02 03 03.7 -0.2**
comp=Z,12nm,0.8s,baz=274,slow=4.7,SNR=12
LVC PKPab **PKPab** **02 04 16.6 -0.6**
comp=Z,12nm,1.0s,baz=334,slow=5.2,SNR=2.1
LVC PP **PP** **02 08 08.1 +0.8**
comp=Z,3.8nm,0.8s,baz=287,slow=4.8,SNR=3.8
LVC Limon Verde **169.48 84** PKIKP **PKPdf** **02 03 04.9 +1.0**
LVC Limon Verde **169.48 84** PKPdf **PKPdf** **02 03 04.9 +1.0**
SPB Sao Paulo **170.71 271** PKPdf **PKPdf** **02 03 04.4 +0.3**
SPB PKPab **PKPab** **02 04 22.8 +0.7**
SIV San Ignacio **171.33 23** PKP **PKPdf** **02 03 03.2 -1.4**
comp=Z,51nm,0.8s,baz=132,slow=0.9,SNR=53
SIV PKPab **PKPab** **02 04 23.5 -1.1**
comp=Z,34nm,0.8s,baz=357,slow=2.3,SNR=11
SIV PP **PP** **02 08 12.6 -1.6**
comp=Z,12nm,0.9s,baz=30,slow=3.5,SNR=5.1
CPUP Villa Florida **177.73 185** PKP **PKPdf** **02 03 06.3 -0.1**
comp=Z,8.8nm,0.9s,baz=17,slow=1.7,SNR=18
CPUP PKPab 02 04 53.3 +0.6
comp=Z,5.4nm,1.0s,baz=203,slow=4.0,SNR=2.5
CPUP Villa Florida **177.73 185** PKIKP **PKPdf** **02 03 06.6 +0.3**
CPUP Villa Florida **177.73 185** **PKPdf** **02 03 06.6 +0.3**

*KRNET **20** 01:47:14.9±0.1, 41.33N×78.24E, h16km, mb3.1*
*SOME **20** 01:47:15.1, 41.35N×78.23E, h5km*
*NNC **20** 01:47:17.8±1.1, 41.39N×78.22E, h0km, mb4.1, mpv3.7,*
Error ellipse: s-maj=7.7km s-min=5.1km az=171.0
ISC 20 01:47:16.7±1.9, 41.41N±0.07×78.18E±0.03, h0km±12km, n53, σ1s51/82, 29C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.04**	**314**	⇑	*i* P	**Pg**	**01 47 36.1**	**-0.6**
KDJ	baz=16			⇑	*i* S	**Sb**	**01 47 51.9**	**-0.1**
PRZ	**Przheval'sk**	**1.09**	**8**	⇑	*i* P	**Pg**	**01 47 37.1**	**-0.5**
PRZ	baz=6.0			⇑	*i* S	**Sn**	**01 47 53.6**	**-1.7**
ANVS	**Anan'yevo**	**1.43**	**345**	⇑	*i* P	**Pg**	**01 47 43.6**	**-0.5**
ANVS	baz=44			⇑	*i* S	**Sg**	**01 48 04.5**	**+1.9**
SATY	**Saty**	**1.66**	**6**		*e* P	**Pg**	**01 47 48.1**	**-0.4**
SATY	14nm,0.2s				*e* S	**Sg**	**01 48 11.7**	**+1.6**
SATY	**Saty**	**1.66**	**6**		P	**Pg**	**01 47 48.5**	**0.0**
SATY	14nm,0.2s				S	**Sg**	**01 48 12.6**	**+2.6**
ULHL	**Ulahol**	**1.68**	**301**	⇓	*i* P	**Pb**	**01 47 47.4**	**-1.1**
ULHL	baz=2.0			⇓	*i* S	**Sg**	**01 48 11.4**	**+0.9**
UZB	**Uzynbulak**	**1.85**	**19**		*e* P	**Pg**	**01 47 51.1**	**-1.0**
UZB	14nm,0.4s				*e* S	**Sg**	**01 48 16.8**	**+0.7**
UZB	**Uzynbulak**	**1.85**	**19**		P	**Pg**	**01 47 51.2**	**-1.0**
UZB	14nm,0.4s				S	**Sg**	**01 48 16.8**	**+0.7**
TNSS	**Tian-Shan**	**1.87**	**331**		*e* P	**Pg**	**01 47 51.7**	**-0.8**
TNSS	38nm,0.4s				*e* S	**Sg**	**01 48 18.1**	**+1.3**
TNSS	**Tian-Shan**	**1.87**	**331**		Pg	**Pg**	**01 47 51.7**	**-0.8**
TNSS	38nm,0.4s				Lg	Lg	01 48 18.1	
MDOK	**Medeo**	**1.95**	**335**	⇑	*e* P	**Pg**	**01 47 53.1**	**-0.9**
MDOK	34nm,0.3s				*e* S	**Sg**	**01 48 20.4**	**+1.1**
MDOK	**Medeo**	**1.95**	**335**	⇑	Pn	**Pb**	**01 47 52.9**	**-0.2**
MDOK	30nm,0.6s			⇓	Sn	**Sg**	**01 48 20.4**	**+1.1**
MDOK	**Medeo**	**1.95**	**335**		Pg	**Pg**	**01 47 53.1**	**-0.9**
MDOK	34nm,0.3s				Lg	Lg	01 48 20.4	
SHLS	**Shalkode**	**1.99**	**28**		*e* P	**Pg**	**01 47 55.9**	**+1.1**
SHLS	26nm,0.2s				*e* S	**Sg**	**01 48 25.3**	**+4.7**
SHLS	**Shalkode**	**1.99**	**28**		Pg	**Pg**	**01 47 55.9**	**+1.1**
SHLS	26nm,0.2s				Lg	Lg	01 48 25.3	
KOTS	**Kotyrbulak**	**1.99**	**337**	⇓	*e* P	**Pg**	**01 47 54.1**	**-0.8**
KOTS	170nm,0.3s				*e* S	**Sg**	**01 48 22.1**	**+1.4**
KOTS	**Kotyrbulak**	**1.99**	**337**		Pg	**Pg**	**01 47 54.1**	**-0.8**
KOTS	170nm,0.3s				Lg	Lg	01 48 22.1	
BOOM	**Boomskoye usch**	**1.99**	**304**	⇑	*i* P	**Pb**	**01 47 52.9**	**-1.0**
BOOM	baz=5.0			⇑	*i* S	**Sg**	**01 48 20.7**	**0.0**
IZV	**Izvestkoviy**	**2.00**	**325**	⇓	*e* P	**Pb**	**01 47 53.7**	**-0.4**
IZV	17nm,0.4s				*e* S	**Sg**	**01 48 21.4**	**+0.3**
IZV	**Izvestkoviy**	**2.00**	**325**		Pg	**Pb**	**01 47 53.7**	**-0.4**
IZV	17nm,0.4s				Lg	Lg	01 48 21.4	
KNDC	**Almaty**	**2.02**	**334**	⇑	Pg	**Pg**	**01 47 54.9**	**-0.5**
KNDC	22nm,0.4s			⇑	Lg	Lg	01 48 22.8	
AAA	**Alma-Ata**	**2.03**	**333**		*e* P	**Pg**	**01 47 55.2**	**-0.4**
AAA	82nm,0.3s				*e* S	**Sg**	**01 48 24.1**	**+2.0**
AAA	**Alma-Ata**	**2.03**	**333**		Pg	**Pg**	**01 47 55.2**	**-0.4**
AAA	82nm,0.3s				Lg	Lg	01 48 24.1	
KPKS	**Kokpek**	**2.09**	**10**		*e* P	**Pg**	**01 47 55.7**	**-1.1**
KPKS	30nm,0.3s				*e* S	**Sg**	**01 48 24.8**	**+0.9**
PDGK	**Podgornoye**	**2.15**	**26**		Pg	**Pb**	**01 47 56.1**	**-0.6**
PDGK	18nm,0.3s				Lg	Lg	01 48 25.3	
PDGK	**Podgornoye**	**2.15**	**26**	⇑	Pn	**Pb**	**01 47 56.0**	**-0.6**
PDGK	31nm,0.7s			⇓	Lg	Lg	01 48 24.8	
KST	**Kastek**	**2.32**	**316**	⇑	*e* P	**Pb**	**01 47 59.3**	**-0.2**
KST	17nm,0.3s				*e* S	**Sg**	**01 48 31.3**	**0.0**
KST	**Kastek**	**2.32**	**316**		Pg	**Pb**	**01 47 59.3**	**-0.2**
KST	17nm,0.3s				Lg	Lg	01 48 31.3	
TKM2	**Tokmak 2**	**2.45**	**309**	⇓	*i* P	**Pb**	**01 47 59.5**	**-2.2**
TKM2	baz=10.0			⇓	*i* S	**Sb**	**01 48 31.9**	**-0.6**
TKM2	**Tokmak 2**	**2.45**	**309**		P	**Pb**	**01 48 01.0**	**-0.6**
TKM2	**Tokmak 2**	**2.45**	**309**	⇑	Pn	**Pb**	**01 48 00.9**	**-0.8**
TKM2	10nm,0.4s			⇑	Lg	Lg	01 48 36.1	
KTBS	**Karatobe**	**2.56**	**335**		*e* P	**Pb**	**01 48 03.7**	**+0.2**
KTBS	10nm,0.3s				*e* S	**Sg**	**01 48 38.6**	**-0.3**
KTBS	**Karatobe**	**2.56**	**335**		Pg	**Pb**	**01 48 03.7**	**+0.2**
KTBS	10nm,0.3s				Lg	Lg	01 48 38.6	
KTMS	**Ketmen**	**2.60**	**37**		*e* P	**Pg**	**01 48 04.0**	**-2.4**
KTMS	3.3nm,0.1s				*e* S	**Sg**	**01 48 39.0**	**-1.0**
KTMS	**Ketmen**	**2.60**	**37**		Pg	**Pg**	**01 48 04.0**	**-2.4**
KTMS	3.3nm,0.1s				Lg	Lg	01 48 39.0	
KBK	**Karagaybulak**	**2.71**	**299**	⇑	*i* P	**Pb**	**01 48 03.0**	**-3.2**
KBK	baz=0.0			⇑	*i* S	**Sb**	**01 48 37.9**	**-2.2**
KBK	**Karagaybulak**	**2.71**	**299**		P	**Pb**	**01 48 06.6**	**+0.4**
ARXS	**Arharly**	**2.82**	**355**		*e* P	**Pb**	**01 48 07.8**	**-0.1**
ARXS	44nm,0.7s				*e* S	**Sg**	**01 48 45.3**	**-1.9**
ARXS	**Arharly**	**2.82**	**355**		Pg	**Pb**	**01 48 07.8**	**-0.1**
ARXS	44nm,0.7s				Lg	Lg	01 48 45.3	
UCH	**Uchtor**	**2.86**	**288**	⇓	*i* P	**Pn**	**01 48 05.0**	**+1.0**
UCH	baz=89			⇓	*i* S	**Sb**	**01 48 41.3**	**-3.4**
UCH	**Uchtor**	**2.86**	**288**		P	**Pb**	**01 48 08.5**	**-0.4**
CHMS	**Chumysh**	**3.01**	**303**	⇑	*i* P	**Pn**	**01 48 06.8**	**+1.2**
CHMS	baz=4.0			⇑	*i* S	**Sb**	**01 48 44.9**	**-3.5**
AAK	**Ala-Archa**	**3.01**	**295**	⇓	*i* P	**Pn**	**01 48 07.0**	**+1.2**
AAK	baz=96			⇓	*i* S	**Sb**	**01 48 44.9**	**-3.7**
AAK	**Ala-Archa**	**3.01**	**295**		P	**Pb**	**01 48 11.2**	**0.0**
AAK	**Ala-Archa**	**3.01**	**295**	⇑	Pn	**Pb**	**01 48 08.8**	**-2.4**
AAK	4.1nm,0.3s			⇑	Lg	Lg	01 48 55.7	
USP	**Ospenovka**	**3.30**	**306**	⇑	*i* P	**Pn**	**01 48 11.0**	**+1.3**
USP	baz=6.0			⇑	*i* S	**Sn**	**01 48 52.1**	**+2.4**
USP	**Ospenovka**	**3.30**	**306**		P	**Pb**	**01 48 14.9**	**-1.2**
SGDS	**Sogindy**	**3.33**	**309**		Pg	**Pb**	**01 48 16.8**	**+0.1**
SGDS	1.9nm,0.2s				Lg	Lg	01 49 01.1	
AML	**Almayashu**	**3.44**	**284**	⇑	*i* P	**Pn**	**01 48 13.0**	**+1.2**
AML	baz=85			⇑	*i* S	**Sn**	**01 48 54.6**	**+1.2**
AML	**Almayashu**	**3.44**	**284**		P	**Pb**	**01 48 18.8**	**+0.2**
EKS2	**Erkin-Say**	**3.51**	**292**		P	**Pb**	**01 48 20.9**	**+1.1**
MNAS	**Manas**	**4.37**	**286**	⇑	*i* P	**Pn**	**01 48 25.6**	**+1.2**
MNAS	baz=87			⇑	*i* S	**Sn**	**01 49 17.1**	**+1.0**
KK31	**Karatay Array**	**5.94**	**289**	⇑	Pg	**Pb**	**01 49 04.6**	**+3.5**
KK31	1.4nm,0.6s,baz=111,slow=15,SNR=17			⇓	Lg	Lg	01 50 28.7	
	1.5nm,0.4s,baz=105,slow=26,SNR=10							

*JMA **20** 01:48:48.2±0.2, 23.93N×122.40E, h8km±4km*
*TAP **20** 01:48:49.5, 24.03N×122.40E, h29km, ML4.2, C*
ISC 20 01:48:47.6±1.3, 23.99N±0.03×122.43E±0.03, h14km±10km, n82, σ0.66/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.66**	**45**		P	**Pn**	**01 49 02.1**	**-0.3**
JYNG					S	**Sn**	**01 49 12.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.71**	**48**		P	**Pn**	**01 49 03.0**	**-0.1**

YOJ				*eS*	**Sn**	**01 49 13.8**	**0.0**
YOJ	**Yonaguni jima**	**0.71**	**48**	P	**Pn**	**01 49 03.1**	**0.0**
	baz=52						
YOJ				S	**Sn**	**01 49 13.8**	**0.0**
	baz=52						
EWUT	**Wuta**	**0.75**	**307**	*eP*	**Pb**	**01 49 03.0**	**+0.6**
	baz=314						
EWUT				*eS*	**Sb**	**01 49 13.3**	**+0.7**
	baz=314						
HWA	**Hwalien**	**0.76**	**269**	*eP*	**Pb**	**01 49 03.3**	**+0.8**
	baz=253						
TWD	**Chiawan**	**0.77**	**277**	*eP*	**Pb**	**01 49 03.3**	**+0.5**
	baz=274						
TWC	**Suao**	**0.81**	**319**	P	**Pb**	**01 49 03.7**	**+0.1**
	baz=319						
TWC				*eS*	**Sb**	**01 49 14.4**	**0.0**
	baz=319						
ETLH	**Xiulin Townshi**	**0.90**	**284**	*eP*	**Pb**	**01 49 05.5**	**+0.5**
	baz=270						
NDS	**Dongshan**	**0.92**	**315**	*eP*	**Pn**	**01 49 06.1**	**0.0**
	baz=313						
NDS				*eS*	**Sn**	**01 49 18.2**	**-0.8**
	baz=313						
ESL	**Shilin**	**0.93**	**259**	*eP*	**Pg**	**01 49 05.5**	**-0.2**
	baz=247						
EGS		**0.97**	**332**	*eP*	**Pn**	**01 49 06.9**	**+0.2**
	baz=332						
EGFH	**Guangfu**	**0.97**	**251**	*eP*	**Pb**	**01 49 06.5**	**+0.2**
	baz=248						
TWE	**Neicheng**	**1.01**	**316**	*eP*	**Pn**	**01 49 07.4**	**+0.1**
	baz=316						
NTC	**Toucheng**	**1.02**	**328**	*eP*	**Pb**	**01 49 07.0**	**0.0**
	baz=327						
ENTT	**Nioudou**	**1.02**	**309**	*eP*	**Pn**	**01 49 07.9**	**+0.4**
	baz=308						
NDT	**Datong Townshi**	**1.04**	**306**	*eP*	**Pn**	**01 49 08.2**	**+0.5**
	baz=304						
NNSH	**Datong**	**1.05**	**295**	*eP*	**Pn**	**01 49 08.6**	**+0.6**
	baz=293						
NNSH				*eS*	**Sb**	**01 49 21.4**	**0.0**
	baz=293						
NNS	**Nan Shan**	**1.07**	**295**	*eP*	**Pg**	**01 49 08.3**	**+0.1**
	baz=282						
WHF	**Hehuan Shan**	**1.08**	**278**	*eP*	**Pb**	**01 49 08.4**	**+0.1**
	baz=264						
TWB1	**Santiao Chiao**	**1.09**	**338**	*eP*	**Pb**	**01 49 08.2**	**-0.1**
	baz=354						
TWB1				*eS*	**Sb**	**01 49 22.4**	**0.0**
	baz=354						
FUSS	**Fushou**	**1.12**	**283**	*eP*	**Pb**	**01 49 09.1**	**+0.2**
	baz=281						
TIPB	**Shuangxi**	**1.12**	**331**	*eP*	**Pg**	**01 49 09.2**	**-0.1**
	baz=330						
TIPB				*eS*	**Sb**	**01 49 23.0**	**-0.3**
	baz=330						
OWD	**Renai**	**1.15**	**268**	P	**Pb**	**01 49 09.4**	**+0.1**
	baz=266						
CHGB	**Renai**	**1.15**	**274**	*eP*	**Pb**	**01 49 09.4**	**-0.1**
	baz=261						
NWLT	**Wulai**	**1.16**	**313**	*eP*	**Pg**	**01 49 09.9**	**0.0**
	baz=311						
NWLT				*eS*	**Sn**	**01 49 25.1**	**+0.1**
	baz=311						
YHNB	**Yeheng**	**1.18**	**305**	*eP*	**Pn**	**01 49 09.9**	**+0.2**
	baz=292						
YHNB				*eS*	**Sg**	**01 49 25.2**	**-0.6**
	baz=292						
TDCB	**Techi**	**1.19**	**283**	*eP*	**Pb**	**01 49 10.2**	**+0.1**
	baz=270						
TDCB				*eS*	**Sb**	**01 49 25.3**	**-0.2**
	baz=270						
YULB	**Yu-li**	**1.20**	**240**	*eP*	**Pn**	**01 49 09.7**	**-0.3**
	baz=253						
YULB				*eS*	**Sb**	**01 49 24.5**	**-1.0**
	baz=253						
EYUL	**Yuli**	**1.21**	**238**	*eP*	**Pn**	**01 49 10.2**	**+0.2**
	baz=236						
NWF	**Wu-fen Shan**	**1.23**	**331**	*eP*	**Pn**	**01 49 10.5**	**+0.1**
	baz=330						
WFSB	**Wu-fen Shan**	**1.23**	**331**	*eP*	**Pb**	**01 49 10.6**	**0.0**
	baz=330						
IRIF	**Iriomote-Funau**	**1.23**	**74**	P	**Pg**	**01 49 12.0**	**+0.6**
TWA	**Mucha**	**1.25**	**322**	*eP*	**Pg**	**01 49 12.0**	**+0.2**
	baz=337						
NHDH	**Xindian Distri**	**1.27**	**320**	*eP*	**Pg**	**01 49 11.9**	**-0.3**
	baz=331						
TNOU	**National Taiwa**	**1.30**	**333**	*eP*	**Pn**	**01 49 11.5**	**+0.2**
	baz=332						
TATO	**Taipei**	**1.30**	**319**	*eP*	**Pg**	**01 49 12.5**	**-0.3**
	baz=317						
CHKT	**Chengkung**	**1.32**	**228**	*eP*	**Pn**	**01 49 10.6**	**-1.0**
	baz=225						
SSLB	**Suanglung**	**1.37**	**262**	*eP*	**Pn**	**01 49 12.2**	**-0.1**
	baz=259						
SSLB				*eS*	**Sn**	**01 49 29.1**	**-1.2**
	baz=259						
DPDB	**Guoxing**	**1.38**	**272**	*eP*	**Pn**	**01 49 12.9**	**+0.5**
	baz=270						
WHP	**Taichung City**	**1.39**	**282**	*eP*	**Pg**	**01 49 14.7**	**+0.3**
	baz=270						
YM01	**YM01**	**1.39**	**326**	*eP*	**Pb**	**01 49 13.5**	**0.0**
	baz=325						
YM10	**YM10**	**1.41**	**326**	*eP*	**Pn**	**01 49 13.2**	**+0.3**
	baz=324						
SMLT	**Sun Moon Lake**	**1.41**	**266**	*eP*	**Pb**	**01 49 14.0**	**+0.2**
	baz=254						
YM11	**YM11**	**1.41**	**326**	*eP*	**Pb**	**01 49 13.7**	**0.0**
	baz=325						
YM05	**YM05**	**1.41**	**326**	*eP*	**Pn**	**01 49 13.1**	**+0.1**
	baz=325						
YM04	**YM04**	**1.42**	**325**	*eP*	**Pn**	**01 49 13.4**	**+0.4**
	baz=323						
YM08	**YM08**	**1.42**	**327**	*eP*	**Pn**	**01 49 13.4**	**+0.4**
	baz=326						
TYC	**Yuchr**	**1.45**	**267**	*eP*	**Pn**	**01 49 13.8**	**+0.4**
	baz=265						
LIOB	**Emei**	**1.45**	**297**	*eP*	**Pb**	**01 49 14.5**	**+0.1**
	baz=295						
NSTT	**Nanjuang**	**1.45**	**296**	*eP*	**Pb**	**01 49 14.5**	**0.0**
	baz=294						
TWY	**Chenhua**	**1.49**	**330**	*eP*	**Pb**	**01 49 14.8**	**-0.2**
	baz=329						
ELDTW	**Lidau**	**1.52**	**239**	*eP*	**Pn**	**01 49 14.5**	**0.0**
	baz=237						
ALS	**Alishan**	**1.57**	**253**	*eP*	**Pn**	**01 49 15.9**	**+0.7**
	baz=250						
LDUT	**Ludao**	**1.58**	**214**	*eP*	**Pn**	**01 49 14.3**	**-0.9**
	baz=212						
WWF	**Wufeng**	**1.59**	**272**	*eP*	**Pb**	**01 49 16.5**	**-0.2**
	baz=270						
WNT	**Mingjian**	**1.60**	**266**	*eP*	**Pb**	**01 49 16.9**	**-0.1**
	baz=264						
LONT	**Longtian**	**1.61**	**228**	*eP*	**Pn**	**01 49 15.5**	**-0.1**
	baz=239						
CHN5	**Tsauling**	**1.66**	**257**	*eP*	**Pb**	**01 49 17.8**	**-0.1**
	baz=255						
PCYT	**Pengchaiyu**	**1.67**	**349**	*eP*	**Pn**	**01 49 16.4**	**0.0**
	baz=334						
TWGBT	**Beinan**	**1.71**	**227**	*eP*	**Pn**	**01 49 16.9**	**0.0**
	baz=237						
TWG	**Pinlang**	**1.71**	**227**	*eP*	**Pn**	**01 49 16.8**	**-0.2**
	baz=237						
STYH	**Taoyuan**	**1.73**	**242**	*eP*	**Pn**	**01 49 17.9**	**+0.7**
	baz=230						
STYT	**Tauyuan**	**1.75**	**242**	*eP*	**Pn**	**01 49 18.1**	**+0.6**
	baz=230						
TPUB	**Ta-pu**	**1.79**	**248**	*eP*	**Pn**	**01 49 19.4**	**+1.3**
	baz=246						
WTP	**Ta-pu**	**1.83**	**246**	*eP*	**Pb**	**01 49 20.2**	**-0.6**
	baz=245						
SLGT	**Liugui**	**1.92**	**239**	*eP*	**Pn**	**01 49 20.5**	**+0.6**
	baz=229						
CHN1	**Nanshi**	**1.92**	**246**	*eP*	**Pn**	**01 49 21.4**	**+1.5**
	baz=244						
SGST	**Jiashian**	**1.92**	**242**	*eP*	**Pn**	**01 49 21.6**	**+1.6**
	baz=231						
TWK	**Hsinying**	**1.92**	**248**	*eP*	**Pb**	**01 49 21.7**	**-0.8**
	baz=247						
ECL	**Taimali**	**1.94**	**225**	*eP*	**Pn**	**01 49 20.2**	**+0.1**
	baz=233						
SSD	**Sandimen**	**2.07**	**234**	*eP*	**Pb**	**01 49 24.0**	**-0.9**
	baz=225						
ICHU	**Yijhu**	**2.07**	**253**	*eP*	**Pb**	**01 49 24.6**	**-0.4**
	baz=252						
SCST	**Cishan**	**2.09**	**239**	*eP*	**Pb**	**01 49 25.5**	**+0.1**
	baz=238						
MASBT	**Mashibuluo**	**2.15**	**231**	*eP*	**Pn**	**01 49 23.8**	**+0.8**
	baz=222						
EAST	**Anshuo**	**2.17**	**223**	*eP*	**Pn**	**01 49 24.1**	**+0.8**
	baz=221						
SSPT	**Xinbi**	**2.28**	**229**	*eP*	**Pn**	**01 49 26.6**	**+1.8**
	baz=222						
SCZT	**Fangliau**	**2.32**	**226**	*eP*	**Pn**	**01 49 27.4**	**+2.0**
	baz=225						
HEN	**Hengchun**	**2.52**	**219**	*eP*	**Pn**	**01 49 30.7**	**+2.6**
	baz=217						
TWKBT	**Hengchun**	**2.53**	**217**	*eP*	**Pn**	**01 49 29.6**	**+1.4**
	baz=215						
TWK1	**Hengchun**	**2.53**	**217**	*eP*	**Pn**	**01 49 28.9**	**+0.6**
	baz=215						
WDGT	**Dungji**	**2.65**	**255**	*eP*	**Pn**	**01 49 30.8**	**+1.0**
	baz=254						
PNG	**Penghu**	**2.67**	**262**	*eP*	**Pn**	**01 49 31.0**	**+0.8**
	baz=261						

TAP **20** *01:49:10.9, 24.°05N × 122.°43E, h31 km, ML5.0, D*
JMA **20** *01:49:10.6 ± 0.1, 24.°00N × 122.°46E, h24 km ± 3 km, M5.4*
JMA Felt I J1.
NEIC **20** *01:49:11.6 ± 2.1, 24.°10N ± 0.°05 × 122.°46E ± 0.°07, h35 km ± 1 km, mb5.2/72, ML5.0(TAP), Error ellipse: s-maj=11.0km s-min=7.8km az=105.0*
IDC **20** *01:49:12.5 ± 2.3, 24.°25N × 122.°60E, h46 km ± 22 km, mb4.3/33, mb1 4.4/35, mb1mx4.3/60, mbtmp4.6/35, ML3.8/2, Error ellipse: s-maj=15.9km s-min=10.6km az=67.0*
ISC 20 01:49:10.7 ± 0.9, 24.°03N ± 0.°02 × 122.°43E ± 0.°02, h31 km ± 6 km, n301, σ1°s14/416, mb5.1/66, 1C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.63**	**48**		P		**Pb**	**01 49 22.6**	**-0.7**
JYNG					S		**Sb**	**01 49 30.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.68**	**51**		P		**Pb**	**01 49 23.6**	**-0.5**
YOJ					S		**Sb**	**01 49 32.3**	**-1.1**
YOJ	**Yonaguni jima**	**0.68**	**51**	⇓	P		**Pb**	**01 49 23.6**	**-0.5**
	baz=51								
YOJ					S		**Sb**	**01 49 32.2**	**-1.1**
	baz=51								
YOJ	**Yonaguni jima**	**0.68**	**51**				**Pb**	**01 49 23.3**	**-0.8**
EWUT	**Wuta**	**0.72**	**305**		P		**Pn**	**01 49 25.0**	**+0.2**
	baz=303								
EWUT				*i*	S		**Sn**	**01 49 35.0**	**+0.2**
	baz=303								
HWA	**Hwalien**	**0.76**	**266**	*eP*			**Pn**	**01 49 25.6**	**+0.3**
	baz=252								
HWA					S		**Sn**	**01 49 36.1**	**+0.5**
	baz=252								
TWD	**Chiawan**	**0.77**	**274**	*eP*			**Pn**	**01 49 25.7**	**+0.3**
	baz=272								
TWD					S		**Sb**	**01 49 35.5**	**-0.2**
	baz=272								
NACB	**Ninganchiao**	**0.78**	**280**		P		**Pn**	**01 49 25.7**	**+0.2**
	baz=265								
NACB				*e*	S		**Sn**	**01 49 36.3**	**+0.2**
	baz=265								
NACB	**Ninganchiao**	**0.78**	**280**		Pn		**Pn**	**01 49 25.5**	**-0.1**
TWC	**Suao**	**0.78**	**317**	*i*	P		**Pn**	**01 49 25.2**	**-0.4**
	baz=316								
TWC				*i*	S		**Sb**	**01 49 35.2**	**-0.9**
	baz=316								
NDS	**Dongshan**	**0.88**	**313**		P		**Pb**	**01 49 27.7**	**+0.1**
	baz=311								
NDS					S		**Sb**	**01 49 39.7**	**+0.6**
	baz=311								
ETLH	**Xiulin Townshi**	**0.89**	**281**	*eP*			**Pb**	**01 49 28.1**	**+0.5**
	baz=267								
ETLH				*e*	S		**Sn**	**01 49 38.8**	**-0.1**
	baz=267								
EGS		**0.93**	**331**	*i*	P		**Pb**	**01 49 28.1**	**-0.2**
	baz=318								
EGS					S		**Sb**	**01 49 41.0**	**+0.8**
	baz=318								
ESL	**Shilin**	**0.94**	**257**	*eP*			**Pn**	**01 49 28.1**	**+0.4**
	baz=246								
ILA	**Ilan**	**0.96**	**320**	*i*	P		**Pb**	**01 49 28.9**	**+0.1**
	baz=312								
ILA					S		**Sb**	**01 49 42.0**	**+0.9**
	baz=312								
TWE	**Neicheng**	**0.98**	**315**		P		**Pb**	**01 49 29.0**	**-0.1**
	baz=314								
TWE					S		**Sb**	**01 49 42.8**	**+1.1**
	baz=314								
NTC	**Toucheng**	**0.98**	**326**		P		**Pb**	**01 49 29.4**	**+0.1**
	baz=325								
NTC					S		**Sb**	**01 49 42.2**	**+0.3**
	baz=325								
EGFH	**Guangfu**	**0.99**	**249**	*eP*			**Pn**	**01 49 28.6**	**+0.1**
	baz=247								
EGFH				*e*	S		**Sn**	**01 49 41.5**	**+0.1**
	baz=247								
ENTT	**Nioudou**	**0.99**	**308**	⇓	P		**Pb**	**01 49 29.5**	**+0.1**
	baz=292								
ENTT					S		**Sb**	**01 49 43.2**	**+1.0**
	baz=292								
NDT	**Datong Townshi**	**1.01**	**304**	*eP*			**Pb**	**01 49 29.7**	**0.0**
	baz=290								
NDT				*e*	S		**Sb**	**01 49 43.2**	**+0.5**
	baz=290								
NNSB	**Datong**	**1.03**	**293**		P		**Pn**	**01 49 29.6**	**+0.4**
	baz=280								
NNSB				*e*	S		**Sb**	**01 49 43.4**	**-0.1**
	baz=280								
NNSH	**Datong**	**1.03**	**293**		P		**Pn**	**01 49 29.4**	**+0.2**
	baz=280								
NNSH				*e*	S		**Sb**	**01 49 43.5**	**0.0**
	baz=280								
NNS	**Nan Shan**	**1.05**	**293**		P		**Pn**	**01 49 30.0**	**+0.6**
	baz=291								
NNS					S		**Sb**	**01 49 43.8**	**0.0**
	baz=291								
TWB1	**Santiao Chiao**	**1.05**	**337**		P		**Pn**	**01 49 29.8**	**+0.5**
	baz=353								
TWB1				*i*	S		**Sb**	**01 49 44.3**	**+0.5**
	baz=353								
HGSD	**Ruisui**	**1.07**	**240**	*eP*			**Pn**	**01 49 29.4**	**-0.1**
	baz=238								
HGSD					S		**Sn**	**01 49 43.2**	**-0.1**
	baz=238								
WHF	**Hehuan Shan**	**1.07**	**276**		P		**Pn**	**01 49 30.3**	**+0.3**
	baz=263								
WHF					S		**Sn**	**01 49 44.1**	**+0.1**
	baz=263								
TIPB	**Shuangxi**	**1.08**	**330**	⇓	*i* P		**Pb**	**01 49 30.6**	**-0.4**
	baz=329								
TIPB					*i* S		**Sb**	**01 49 44.9**	**0.0**
	baz=329								
FUSS	**Fushou**	**1.11**	**281**	*eP*			**Pn**	**01 49 30.9**	**+0.6**
	baz=280								
NWLT	**Wulai**	**1.12**	**311**		P		**Pb**	**01 49 31.5**	**-0.1**
	baz=310								
CHGB	**Renai**	**1.15**	**272**	*eP*			**Pn**	**01 49 31.6**	**+0.7**
	baz=259								
CHGB					S		**Sn**	**01 49 46.2**	**+0.6**
	baz=259								
OWD	**Renai**	**1.15**	**266**	*eP*			**Pn**	**01 49 31.2**	**+0.4**
	baz=264								
OWD				*e*	S		**Sn**	**01 49 45.6**	**+0.1**
	baz=264								
YHNB	**Yeheng**	**1.15**	**304**		P		**Pn**	**01 49 31.4**	**+0.6**
	baz=291								
YHNB				*e*	S		**Sb**	**01 49 47.4**	**+0.6**
	baz=291								
YHNB	**Yeheng**	**1.15**	**304**				**Pn**	**01 49 31.2**	**+0.5**
TDCB	**Techi**	**1.18**	**281**	*eP*			**Pn**	**01 49 31.7**	**+0.4**
	baz=268								
NWF	**Wu-fen Shan**	**1.19**	**330**		P		**Pn**	**01 49 31.8**	**+0.5**
	baz=329								
NWF					S		**Sb**	**01 49 47.9**	**0.0**
	baz=329								
WFSB	**Wu-fen Shan**	**1.19**	**330**		P		**Pn**	**01 49 31.9**	**+0.7**
	baz=329								
WFSB				*e*	S		**Sb**	**01 49 47.9**	**+0.1**
	baz=329								
VWDT	**VWDT**	**1.21**	**257**	*eP*			**Pn**	**01 49 31.9**	**+0.4**
	baz=255								
VWDT				*e*	S		**Sn**	**01 49 46.5**	**-0.4**
	baz=255								
TWA	**Mucha**	**1.22**	**321**		P		**Pb**	**01 49 33.1**	**-0.1**
	baz=320								
TWA					S		**Sb**	**01 49 49.6**	**+1.0**
	baz=320								
YULB	**Yu-li**	**1.22**	**239**		P		**Pn**	**01 49 31.5**	**-0.2**
	baz=252								
YULB				*e*	S		**Sn**	**01 49 47.1**	**0.0**
	baz=252								
YULB	**Yu-li**	**1.22**	**239**				**Pn**	**01 49 31.3**	**-0.3**
IRIF	**Iriomote-Funau**	**1.22**	**76**		P		**Pb**	**01 49 32.7**	**-0.6**
IRIF					S		**Sn**	**01 49 47.7**	**+0.6**
EYUL	**Yuli**	**1.23**	**236**	*eP*			**Pn**	**01 49 31.7**	**0.0**
	baz=235								
EYUL				*e*	S		**Sn**	**01 49 48.1**	**+0.9**
	baz=235								
NHDH	**Xindian Distri**	**1.24**	**318**	*eP*			**Pb**	**01 49 33.6**	**0.0**
	baz=317								
NHDH				*e*	S		**Sb**	**01 49 50.2**	**+1.0**
	baz=317								
HATJ	**Hateruma jima**	**1.26**	**89**		P		**Pn**	**01 49 32.3**	**+0.2**
HATJ					S		**Sn**	**01 49 47.9**	**0.0**
TNOU	**National Taiwa**	**1.26**	**332**		P		**Pn**	**01 49 32.6**	**+0.4**
	baz=331								
TNOU				*e*	S		**Sb**	**01 49 49.1**	**-0.7**
	baz=331								
TATO	**Taipei**	**1.27**	**318**	⇑	P		**Pb**	**01 49 34.2**	**+0.1**
	baz=316								
TATO				*e*	S		**Sb**	**01 49 50.9**	**+0.8**
	baz=316								
TATO	**Taipei**	**1.27**	**318**				**Pb**	**01 49 33.7**	**-0.4**
BACT	**New Taipei Cit**	**1.32**	**317**	*eP*			**Pb**	**01 49 34.9**	**0.0**
	baz=316								
FULB	**Fuli**	**1.33**	**232**	*eP*			**Pn**	**01 49 32.9**	**-0.3**
	baz=219								
FULB				*e*	S		**Sn**	**01 49 49.8**	**-0.2**
	baz=219								
WPL	**Puli Township**	**1.35**	**269**	*eP*			**Pn**	**01 49 34.4**	**+1.0**
	baz=259								
WPL				*e*	S		**Sn**	**01 49 51.3**	**+1.0**
	baz=259								
CHKT	**Chengkung**	**1.35**	**227**	*eP*			**Pn**	**01 49 33.4**	**0.0**
	baz=225								
CHKT				*e*	S		**Sn**	**01 49 49.2**	**-1.1**
	baz=225								
YM01	**YM01**	**1.36**	**325**	*eP*			**Pb**	**01 49 34.6**	**-1.0**
	baz=323								
YM01				*e*	S		**Sb**	**01 49 53.2**	**+0.6**
	baz=323								
NWRT	**Kuosheng**	**1.36**	**329**	*eP*			**Pn**	**01 49 34.2**	**+0.7**
	baz=328								
YM10	**YM10**	**1.37**	**325**	*eP*			**Pn**	**01 49 34.7**	**+0.9**
	baz=323								
YM11	**YM11**	**1.37**	**325**	*eP*			**Pb**	**01 49 35.5**	**-0.3**
	baz=324								
SSLB	**Suanglung**	**1.37**	**260**	*eP*			**Pb**	**01 49 34.3**	**+0.5**
	baz=258								
SSLB				*e*	S		**Sn**	**01 49 50.3**	**-0.6**
	baz=258								
SSLB	**Suanglung**	**1.37**	**260**		Pn		**Pb**	**01 49 35.3**	**-0.6**
YM05	**YM05**	**1.37**	**325**	*eP*			**Pn**	**01 49 34.2**	**+0.4**
	baz=324								
DPDB	**Guoxing**	**1.38**	**270**	*eP*			**Pb**	**01 49 35.5**	**-0.4**
	baz=269								
DPDB				*e*	S		**Sb**	**01 49 52.5**	**-0.7**
	baz=269								
WHP	**Taichung City**	**1.38**	**280**	*eP*			**Pb**	**01 49 36.4**	**+0.4**
	baz=269								
YM04	**YM04**	**1.38**	**324**	*eP*			**Pn**	**01 49 34.6**	**+0.7**
	baz=322								
YM08	**YM08**	**1.38**	**326**	*eP*			**Pb**	**01 49 35.0**	**-1.0**
	baz=325								
TWS1	**Kuangyinshan**	**1.41**	**319**	*eP*			**Pb**	**01 49 35.4**	**-1.0**
	baz=335								
TWS1				*e*	S		**Sb**	**01 49 55.5**	**+1.5**
	baz=335								
SMLT	**Sun Moon Lake**	**1.41**	**264**	*eP*			**Pn**	**01 49 35.5**	**+1.1**
	baz=262								
SMLT					S		**Sn**	**01 49 52.6**	**+0.7**
	baz=262								
NJD	**Zhudong**	**1.41**	**300**	*eP*			**Pn**	**01 49 35.4**	**+1.2**
	baz=298								
NTY	**Taoyuan**	**1.41**	**313**	*eP*			**Pn**	**01 49 35.0**	**+0.8**
	baz=327								
ANP	**Anpu**	**1.42**	**324**	*eP*			**Pb**	**01 49 35.9**	**-0.7**
	baz=323								
LIOB	**Emei**	**1.43**	**296**		P		**Pb**	**01 49 36.3**	**-0.5**
	baz=294								
LIOB				*e*	S		**Sb**	**01 49 54.0**	**-0.6**
	baz=294								
NSTT	**Nanjuang**	**1.43**	**295**		P		**Pb**	**01 49 36.4**	**-0.4**
	baz=293								
NSTT				*e*	S		**Sb**	**01 49 54.9**	**+0.1**
	baz=293								
TYC	**Yuchr**	**1.45**	**265**	*eP*			**Pn**	**01 49 35.7**	**+1.0**
	baz=263								
TYC				*e*	S		**Sb**	**01 49 54.4**	**-0.7**
	baz=263								
TWY	**Chenhua**	**1.45**	**329**	*eP*			**Pb**	**01 49 36.2**	**-0.9**
	baz=328								
JKRS	**Kuro-shima**	**1.46**	**82**		P		**Pn**	**01 49 35.7**	**+0.9**
JKRS					*e*	S	**Sb**	**01 49 54.3**	**-1.0**
YUS	**Yu-Shan**	**1.46**	**248**	*eP*			**Pn**	**01 49 36.4**	**+1.0**
	baz=246								
YUS				*e*	S		**Sn**	**01 49 53.9**	**+0.2**
	baz=246								
NCUH	**Zhongli**	**1.47**	**310**	*eP*			**Pb**	**01 49 36.7**	**-0.7**
	baz=307								
EDH	**Donghe**	**1.48**	**225**	*eP*			**Pn**	**01 49 34.9**	**-0.3**
	baz=215								
EDH				*e*	S		**Sn**	**01 49 52.2**	**-1.2**
	baz=215								
WHYT	**Xinyi Township**	**1.48**	**257**	*eP*			**Pn**	**01 49 36.6**	**+1.3**
	baz=256								
HSN1	**Hsinchu**	**1.49**	**300**		P		**Pb**	**01 49 36.9**	**-0.9**
	baz=298								
SBCB	**Hsinchu**	**1.52**	**300**	*eP*			**Pb**	**01 49 37.4**	**-0.9**
	baz=298								
HSN	**Hsinchu**	**1.54**	**300**		P		**Pn**	**01 49 37.2**	**+1.2**
	baz=299								
ELDTW	**Lidau**	**1.55**	**237**	*eP*			**Pn**	**01 49 36.0**	**-0.2**
	baz=236								
TWQ1	**Liyutan**	**1.55**	**282**	*eP*			**Pb**	**01 49 37.7**	**-1.1**
	baz=280								
TWQ1				*e*	S		**Sb**	**01 49 57.3**	**-0.6**
	baz=280								
NJN	**Zhunan**	**1.56**	**295**	*eP*			**Pn**	**01 49 37.7**	**+1.4**
	baz=292								
WJS	**Zhushan**	**1.57**	**263**	*eP*			**Pb**	**01 49 39.1**	**-0.1**
	baz=261								
ALS	**Alishan**	**1.58**	**251**	*eP*			**Pn**	**01 49 37.9**	**+1.1**
	baz=249								
ALS					S		**Sn**	**01 49 57.1**	**+0.7**
	baz=249								
WWF	**Wufeng**	**1.58**	**271**	*eP*			**Pb**	**01 49 39.3**	**-0.1**
	baz=269								
JIJ	**Ishigaki jima**	**1.60**	**78**		P		**Pn**	**01 49 37.5**	**+0.7**
JIJ					*e*	S	**Sn**	**01 49 56.9**	**+0.5**
WNT	**Mingjian**	**1.61**	**265**	*eP*			**Pb**	**01 49 39.4**	**-0.4**
	baz=263								
WNT				*i*	S		**Sb**	**01 49 59.9**	**+0.2**
	baz=263								
WNT1	**Nantou City**	**1.61**	**266**	*eP*			**Pb**	**01 49 39.4**	**-0.4**
	baz=264								
WNT1				*e*	S

baz=221
TWG Pinlang 1.74 226 *e*P **Pn 01 49 38.9 +0.1**
baz=236
TWG *e*S **Sn 01 49 58.5 -1.4**
baz=236
TWG Pinlang 1.74 226 Pn **Pn 01 49 38.4 -0.4**
STYH Taoyuan 1.75 241 *e*P **Pn 01 49 39.9 +1.0**
baz=229
WGK Gukeng 1.75 259 *e*P **Pb 01 49 41.7 -0.4**
baz=257
WGK S **Sb 01 50 03.8 +0.1**
baz=257
STYT Tauyuan 1.76 241 *e*P **Pn 01 49 40.3 +1.1**
baz=229
STYT *e*S **Sn 01 50 01.5 +0.9**
baz=229
WDLH Douliu 1.77 259 *e*P **Pb 01 49 41.7 -0.8**
baz=257
WDLH *e*S **Sb 01 50 04.3 +0.1**
baz=257
JISG Ishigakijimahi 1.80 72 P **Pn 01 49 40.1 +0.5**
JISG *e*S **Sn 01 50 02.2 +0.8**
TPUB Ta-pu 1.81 247 *e*P **Pn 01 49 41.5 +1.8**
baz=245
TPUB *e*S **Sb 01 50 04.6 -0.9**
baz=245
TPUB Ta-pu 1.81 247 Pn **Pb 01 49 42.1 -1.1**
WTP Ta-pu 1.84 245 *e*P **Pn 01 49 42.3 +2.0**
baz=243
WTP *e*S **Sn 01 50 04.7 +2.1**
baz=243
WTK Tuku 1.90 260 *e*P **Pn 01 49 42.4 +1.4**
baz=247
CHY Chiayi 1.92 254 *e*P **Pb 01 49 43.5 -1.5**
baz=252
CHY *e*S **Sb 01 50 07.2 -1.3**
baz=252
SLGT Liugui 1.94 238 *e*P **Pn 01 49 43.4 +1.8**
baz=228
TWK Hsinying 1.94 247 *e*P **Pn 01 49 43.9 +2.3**
baz=245
TWK *e*S **Sn 01 50 06.8 +1.8**
baz=245
CHN1 Nanshi 1.94 245 *e*P **Pb 01 49 44.1 -1.4**
baz=242
CHN1 *e*S **Sb 01 50 08.3 -0.9**
baz=242
SGST Jiashian 1.94 241 *e*P **Pn 01 49 43.3 +1.7**
baz=230
SGST *e*S **Sn 01 50 07.5 +2.6**
baz=230
SNST Tainan City 1.95 246 *e*P **Pn 01 49 43.8 +2.1**
baz=244
SNST *e*S **Sb 01 50 08.7 -0.8**
baz=244
ECL Taimali 1.97 224 *e*P **Pn 01 49 41.8 -0.2**
baz=221
ECL *e*S **Sn 01 50 04.0 -1.6**
baz=221
WTCT Ta-ch'eng 1.98 266 *e*P **Pn 01 49 43.8 +1.8**
baz=276
WTCT *e*S **Sb 01 50 09.4 -0.9**
baz=276
WSF Szhu 2.06 259 *e*P **Pn 01 49 45.4 +2.2**
baz=257
WSF *e*S **Sb 01 50 12.0 -0.7**
baz=257
ICHU Yijhu 2.08 252 *e*P **Pn 01 49 45.0 +1.5**
baz=249
ICHU *e*S **Sb 01 50 11.3 -2.0**
baz=249
SSD Sandimen 2.09 233 *e*P **Pn 01 49 45.4 +1.7**
baz=225
SSD *e*S **Sn 01 50 11.3 +2.7**
baz=225
TSMG Majia 2.11 232 *e*P **Pn 01 49 46.1 +2.2**
baz=223
SCST Cishan 2.12 238 *e*P **Pb 01 49 47.0 -1.4**
baz=223
SCST *e*S **Sb 01 50 14.4 +0.2**
baz=223
CHN3 Shinhua 2.12 244 *e*P **Pb 01 49 47.1 -1.4**
baz=242
CHN3 *e*S **Sb 01 50 14.8 +0.3**
baz=242
LAY Lan-yu 2.15 202 *e*P **Pn 01 49 43.6 -0.8**
baz=201
CHN8 Yiju 2.15 252 *e*P **Pn 01 49 46.4 +2.0**
baz=250
CHN8 S **Sn 01 50 12.9 +2.9**
baz=250
JTJ Tarama 2.16 73 P **Pn 01 49 45.7 +1.2**
JTJ *e*S **Sn 01 50 12.2 +2.0**
MASBT Mashibuluo 2.18 230 *e*P **Pn 01 49 45.8 +1.0**
baz=224
MASBT *e*S **Sn 01 50 13.6 +2.9**
baz=224
TAW Tawu 2.19 221 *e*P **Pn 01 49 46.0 +1.1**
baz=229
EAST Anshuo 2.20 222 *e*P **Pn 01 49 45.4 +0.3**
baz=221
TWM1 Shoushan 2.20 237 P **Pb 01 49 48.9 -1.0**
baz=236
TWM1 *e*S **Sb 01 50 17.5 +0.7**
baz=236
SGLT Jiouru 2.21 234 *e*P **Pb 01 49 49.2 -0.8**
baz=232
SGLT *e*S **Sb 01 50 16.8 -0.1**
baz=232
SCLT Jiali 2.22 248 *e*P **Pn 01 49 47.6 +2.2**
baz=246
SCLT *e*S **Sb 01 50 15.1 -2.3**
baz=246
TSPT Pingtung City 2.23 233 *e*P **Pn 01 49 48.1 +2.5**
baz=227
SSPT Xinbi 2.31 228 *e*P **Pb 01 49 49.7 -2.0**
baz=222
SNJT Kaohsiung City 2.31 237 *e*P **Pb 01 49 49.9 -1.8**
baz=234
SNJT *e*S **Sb 01 50 19.7 -0.1**
baz=234
SCZT Fangliau 2.35 226 *e*P **Pn 01 49 49.5 +2.3**
baz=218
SCZT *e*S **Sn 01 50 15.9 +1.0**
baz=218
SLIU Shizi 2.35 220 *e*P **Pn 01 49 47.5 +0.3**
baz=219
TWP Hsiaoliuchiu 2.54 229 P **Pb 01 49 54.2 -1.4**
baz=242
TSEB Hengchuen, Pin 2.55 214 P **Pn 01 49 51.5 +1.5**
baz=221
TSEB *e*S **Sn 01 50 21.0 +1.1**
baz=221
HEN Hengchun 2.55 218 *e*P **Pn 01 49 51.6 +1.7**
baz=216
HEN *e*S **Sn 01 50 21.8 +1.9**
baz=216
TWKBT Hengchun 2.56 216 *e*P **Pn 01 49 50.9 +0.8**
baz=214
TWKBT *e*S **Sn 01 50 21.0 +0.8**
baz=214
TWK1 Hengchun 2.56 216 *e*P **Pn 01 49 51.9 +1.8**
baz=214
TWK1 *e*S **Sn 01 50 22.2 +2.0**
baz=214
SNW Nanwan 2.58 217 *e*P **Pn 01 49 52.3 +1.9**
baz=216
JIRB Irabujima 2.62 72 P **Pn 01 49 52.4 +1.5**
JIRB *e*S **Sn 01 50 22.6 +1.0**
WDGT Dungji 2.66 254 P **Pn 01 49 53.0 +1.7**
baz=241
WDGT S **Sn 01 50 23.7 +1.2**
baz=241
PHUB P'eng-hu 2.67 259 *e*P **Pn 01 49 53.1 +1.6**
baz=271
PHUB S **Sn 01 50 24.5 +1.6**
baz=271
PNG Penghu 2.67 261 P **Pn 01 49 53.1 +1.5**
baz=258
PNG S **Sn 01 50 25.0 +2.0**
baz=258
JIKM Ikemajima 2.71 70 P **Pn 01 49 53.7 +1.5**
JIKM S **Sn 01 50 24.2 +0.2**
JMJ Miyako jima 2 2.72 73 *e*P **Pn 01 49 54.3 +2.0**
baz=76
JMJ S **Sn 01 50 25.2 +1.0**
baz=76
JMJ2 Miyako jima3 2.73 74 P **Pn 01 49 55.0 +2.6**
JMJ2 S **Sn 01 50 26.4 +2.0**
JOGS Gusukube 2.81 74 P **Pn 01 49 56.4 +3.0**
JOGS S **Sn 01 50 29.0 +2.8**
VCHM Qimei 2.87 254 *e*P **Pn 01 49 56.1 +1.7**
baz=252
VCHM *e*S **Sn 01 50 28.5 +0.6**
baz=252
VWUC VWUC 2.88 290 *e*P **Pn 01 49 54.7 +0.3**
baz=287
VWUC *e*S **Sn 01 50 27.9 -0.2**
baz=287
MATB Ma-tsu 3.09 314 *e*P **Pn 01 49 58.3 +1.0**
baz=299
MSUT Lienchiang 3.11 314 *e*P **Pn 01 49 58.4 +0.7**
baz=298
MSUT *e*S **Sn 01 50 34.0 +0.2**
baz=298
PTMZ Houxiangcun 3.18 289 *e*P **Pn 01 49 58.9 +0.4**
baz=286
PTMZ *e*S **Sn 01 50 35.0 -0.4**
baz=286
LYJJ Jianjiangzhen 3.48 317 *e*P **Pn 01 50 03.2 +0.4**
baz=313
XPSS Dashiqiu 3.52 325 *e*P **Pn 01 50 03.3 0.0**
baz=322
KNM Kinmen 3.67 277 *e*P **Pn 01 50 07.5 +2.2**
baz=273
KNM *e*S **Sn 01 50 49.4 +1.9**
baz=273
MHZQ Yeshan 3.71 304 *e*P **Pn 01 50 06.1 +0.3**
baz=301
KNMB Chin-men Tao 3.71 277 *e*P **Pn 01 50 06.1 +0.2**
baz=274
KNMB *e*S **Sn 01 50 47.0 -1.7**
baz=274
KNMB Chin-men Tao 3.71 277 Pn **Pn 01 50 06.6 +0.6**
AXDP Jialang 4.16 283 *e*P **Pn 01 50 12.5 +0.5**
baz=268
ZPLA Ao Xicun 4.28 270 *e*P **Pn 01 50 14.7 +0.9**
baz=267
ZPLA *e*S **Sn 01 51 01.2 -1.5**
baz=267
JOW Kunigami 5.97 61 P **Pn 01 50 36.4 -0.6**
9.3nm,0.3s,baz=85,slow=26,SNR=1.1
JOW Kunigami 5.97 61 *e*P **Pn 01 50 37.0 +0.1**
baz=66
VDOS Pratas Island 6.23 239 *e*P **Pn 01 50 43.4 +2.8**
baz=240
SZP Santa 6.71 196 *e*P **Pn 01 50 48.5 +1.4**
baz=182
SZP Santa 6.71 196 Pn **Pn 01 50 49.5 +2.4**
SSE Sheshan 7.12 351 Pn **Pn 01 50 53.0 +0.3**
TGY Tagaytay City 9.98 188 P Pn 01 51 38.3 +6.2
34nm,0.3s,baz=143,slow=4.0,SNR=3.0
KSAR Wonju Array Be 14.16 18 P **Pn 01 52 37.5 +1.3**
KSRS Korea Array 14.18 18 P **Pn 01 52 31.0 +1.7**
0.9nm,0.3s,baz=202,slow=14,SNR=1.4
KS19 Wonju Array Si 14.21 18 P **Pn 01 52 34.0 -2.8**
JHS Saijyo 14.34 38 **Pn 01 52 28.9 -2.7**
MJAR Matsushiro Arr 18.43 44 P **Pn 01 53 22.1 -1.5**
0.1nm,0.3s,baz=82,slow=33,SNR=2.1
USA0B Ussuriysk Arra 21.59 19 P **Pn 01 53 55.1 -2.6**
USRK Ussuriysk Ar. 21.59 19 P **Pn 01 53 55.6 -2.2**
8.3nm,0.8s,baz=208,slow=9.9,SNR=7.2
USRK Ussuriysk Ar. 21.59 19 P **Pn 01 53 56.2 -1.6**
CMAR Chiang Mai Arr 22.57 260 P **Pn 01 54 11.3 +2.7**
2.6nm,0.7s,baz=74,slow=5.7,SNR=1.5
TOLI2 Tolitoli 22.84 184 P **Pn 01 54 13.7 +2.3**
ERMI Erimo 24.86 39 P **Pn 01 54 26.9 -3.5**
JKA Kamikawa-asahi 25.96 35 P **Pn 01 54 39.2 -1.1**
JKA IAmb IAmb 01 55 12.9
comp=Z,102nm,1.8s
KLR Kul'dur 26.19 14 P **Pn 01 54 40.6 -1.9**
comp=Z,3.9nm,0.8s,baz=199,slow=11,SNR=2.5
SIJI Sorong 26.20 160 P **Pn 01 54 43.0 +0.2**
comp=Z,28nm,0.8s,baz=198,slow=23,SNR=5.7
SONM Songino Array 26.96 336 P **Pn 01 54 48.4 -1.1**
comp=Z,8.3nm,0.7s,baz=151,slow=8.2,SNR=5.9
SONM PcP **PcP 01 58 10.7 -0.1**
comp=Z,5.6nm,1.1s,baz=154,slow=5.8,SNR=2.4
SONM Songino Array 26.96 336 P **Pn 01 54 48.7 -0.9**
FAKI Fak Fak 28.44 159 P **Pn 01 55 04.3 +1.4**
MTN Manton Dam 37.63 166 P **Pn 01 56 22.5 -0.4**
MTN IAmb IAmb 01 56 22.8
comp=Z,50nm,1.0s
MK31 Makanchi Array 39.24 316 P **Pn 01 56 36.4 +0.1**
MK31 IAmb IAmb 01 56 37.1
comp=Z,56nm,1.3s
MKAR Makanchi Array 39.24 316 P **Pn 01 56 36.4 +0.1**
comp=Z,8.7nm,0.5s,baz=101,slow=10.0,SNR=28
MKAR PcP **PcP 01 58 44.3 -0.6**
comp=Z,0.5nm,0.4s,baz=90,slow=2.4,SNR=4.0
MAKZ Makanchi 39.45 315 P **Pn 01 56 38.3 +0.3**
MAKZ IAmb IAmb 01 56 39.0
comp=Z,54nm,1.2s
KNRA Kununurra 39.95 170 P **Pn 01 56 41.7 -0.7**
ZAA0 Zalesovo Array 40.99 327 P **Pn 01 56 48.9 -1.7**
ZALV Zalesovo Beam 40.99 327 P **Pn 01 56 49.1 -1.6**
comp=Z,14nm,0.7s,baz=114,slow=8.1,SNR=11
ZALV PcP **PcP 01 58 49.3 -1.0**
comp=Z,1.6nm,0.4s,baz=113,slow=3.0,SNR=4.9
ZALV Zalesovo Beam 40.99 327 P **Pn 01 56 50.0 -0.7**
ZALV **PcP 01 58 48.8 -1.5**
PMG Port Moresby 41.09 141 P **Pn 01 56 52.3 +0.5**
comp=Z,8.6nm,0.3s,baz=335,slow=14,SNR=2.3
COEN Coen 42.86 150 P **Pn 01 57 07.8 +1.5**
KURK Kurchatov 42.94 320 **PcP 01 58 56.5 -0.3**
KURBB Kurchatov Arra 42.96 320 P **Pn 01 57 05.9 -0.9**
comp=Z,2.6nm,0.5s,baz=107,slow=8.2,SNR=4.0
KURBB PcP **PcP 01 58 56.5 -0.4**
comp=Z,3.9nm,1.0s,baz=111,slow=5.5,SNR=2.6
AAK Ala-Archa 43.50 307 P **Pn 01 57 11.6 +0.2**
comp=Z,9.9nm,0.3s,baz=111,slow=13,SNR=11
WB0 Warramunga Arr 45.07 164 P **Pn 01 57 23.3 -0.7**
WRA Warramunga Arr 45.23 164 P **Pn 01 57 25.3 +0.1**
comp=Z,17nm,0.9s,baz=347,slow=8.3,SNR=7.9
WRA Warramunga Arr 45.23 164 P **Pn 01 57 26.4 +1.2**
WB2 Warramunga Arr 45.23 164 P **Pn 01 57 26.4 +1.2**
WB2 IAmb IAmb 01 58 20.7
comp=Z,69nm,1.5s
WR0 Warramunga Arr 45.29 164 P **Pn 01 57 26.7 +1.0**
PSA00 Pilbara Seismi 45.40 183 P **Pn 01 57 27.3 +0.7**
GAR Garm 46.26 302 P **Pn 01 57 34.7 +1.2**
KK31 Karatay Array 46.47 307 P **Pn 01 57 36.0 +1.1**
KK31 IAmb IAmb 01 57 36.6
comp=Z,62nm,1.8s
KKAR Karatay Array 46.47 307 P **Pn 01 57 35.8 +0.9**
KBL Kabul 47.26 296 P **Pn 01 57 43.3 +1.9**
KBL IAmb IAmb 01 57 43.7
comp=Z,31nm,0.9s
TIXI Tiksi 47.78 3 P **Pn 01 57 42.1 -2.6**
comp=Z,2.6nm,0.6s,baz=321,slow=22,SNR=1.2
TIXI Tiksi 47.78 3 P **Pn 01 57 42.3 -2.4**
TIXI IAmb IAmb 01 58 44.1
comp=Z,50nm,1.6s
BVAR Borovoye Array 48.51 321 P **Pn 01 57 49.7 -0.9**
comp=Z,2.6nm,0.7s,baz=64,slow=3.4,SNR=21
BVAR PcP **PcP 01 59 16.0 -0.2**
comp=Z,3.5nm,0.8s,baz=249,slow=2.9,SNR=3.2
BRVK Borovoye 48.58 321 P **Pn 01 57 50.6 -0.5**
BRVK IAmb IAmb 01 59 16.6
comp=Z,24nm,1.1s
AS31 Alice Springs 48.71 166 P **Pn 01 57 53.5 +1.2**
ASAR Alice Springs 48.71 166 P **Pn 01 57 54.0 +1.6**
comp=Z,3.0nm,0.4s,baz=340,slow=7.0,SNR=14
ASAR Alice Springs 48.71 166 P **Pn 01 57 54.0 +1.6**
NRIK Noril'sk 49.84 345 P **Pn 01 57 58.3 -2.2**
comp=Z,2.1nm,0.4s,baz=41,slow=2.9,SNR=0.8
ABKAR Akbulak array 54.36 314 P **Pn 01 58 34.3 -0.1**
AKTO Aktyubinsk 55.68 316 P **Pn 01 58 44.5 +0.6**
comp=Z,6.6nm,0.9s,baz=100,slow=17,SNR=2.8
GEYT Alibeck 55.85 301 P **Pn 01 58 45.9 +0.4**
comp=Z,22nm,0.8s,baz=84,slow=4.6,SNR=12
GEYT Alibeck 55.85 301 P **Pn 01 58 47.1 +1.6**
GYA0B ALIBECK ARRAY 55.85 301 P **Pn 01 58 47.2 +1.7**
GYA0B IAmb IAmb 01 58 48.0
comp=Z,30nm,0.8s
ARU Arti 55.91 323 P **Pn 01 58 44.0 -1.5**
comp=Z,2.4nm,0.5s,baz=124,slow=0.8,SNR=4.6
ARU Arti 55.91 323 P **Pn 01 58 44.6 -0.9**
EIDS Eidsvold 56.41 149 P **Pn 01 58 50.8 +1.4**
EIDS IAmb IAmb 02 00 42.8
comp=Z,52nm,1.7s
BBOO Buckleboo 58.00 166 P **Pn 01 59 02.0 +1.5**
BBOO IAmb IAmb 01 59 18.1
comp=Z,32nm,1.0s
STKA Stephens Creek 58.54 161 P **Pn 01 59 05.6 +1.4**
comp=Z,7.3nm,0.7s,baz=340,slow=7.4,SNR=5.8
STKA Stephens Creek 58.54 161 P **Pn 01 59 05.8 +1.5**
ANM Nome 60.92 28 P **Pn 01 59 20.1 -0.2**
KIRV Kirov 60.99 325 P **Pn 01 59 20.1 -0.7**
comp=Z,12nm,0.7s,baz=359,slow=0.6,SNR=3.6
SOCY Socotra 65.58 273 P **Pn 01 59 51.2 -0.9**
IMAR Indian Mountai 65.81 26 P **Pn 01 59 52.2 -0.4**
KBZ Khabaz 66.46 309 P **Pn 01 59 57.1 0.0**
comp=Z,7.3nm,0.9s,baz=88,slow=5.1,SNR=3.8
KIV Kislovodsk 66.57 309 P **Pn 01 59 59.4 +1.4**
KIV IAmb IAmb 02 00 08.2
comp=Z,35nm,1.3s
PPLA Purkeypile 66.81 30 P **Pn 01 59 58.8 -0.5**
COLD Coldfoot 67.08 25 P **Pn 02 00 01.3 +0.5**
TOLK Toolik Lake Re 67.14 23 P **Pn 02 00 00.9 -0.2**
TOLK IAmb IAmb 02 00 23.6
comp=Z,47nm,2.0s
MLY Manley 67.16 27 P **Pn 02 00 01.5 +0.2**
MLY IAmb IAmb 02 00 48.8
comp=Z,29nm,1.6s
BPAW Bear Paw Mtn. 67.18 28 P **Pn 02 00 00.8 -0.7**
KTH Kantishna Hill 67.29 29 P **Pn 02 00 02.3 0.0**
KTH IAmb IAmb 02 02 05.4
comp=Z,36nm,1.5s
GEVA Gevas 67.50 303 P **Pn 02 00 05.1 +1.0**
GEVA IAmb IAmb 02 00 05.9
comp=Z,22nm,0.9s
I23K Minto, Yukon-K 67.72 27 P **Pn 02 00 04.7 -0.1**
I23K IAmb IAmb 02 00 56.1
comp=Z,57nm,1.9s
MCK McKinley 68.14 29 P **Pn 02 00 06.6 -0.9**
MCK IAmb IAmb 02 00 57.0
comp=Z,35nm,1.5s
MDM Murphy Dome 68.22 27 P **Pn 02 00 08.0 0.0**
RND Reindeer 68.23 29 P **Pn 02 00 07.0 -1.2**
ILAR Eielson Array 68.82 27 P **Pn 02 00 09.7 -2.1**
comp=Z,0.8nm,0.5s,baz=274,slow=5.4,SNR=7.5
BMAR Burnt Mountain 69.19 24 P **Pn 02 00 14.4 +0.3**
SCM Sheep Creek Mo 69.23 30 P **Pn 02 00 13.7 -0.7**
MARD Mardin 69.50 303 P **Pn 02 00 17.9 +1.4**
M24K Tolsona, Glenn 69.70 30 P **Pn 02 00 17.4 +0.1**
SPITS Spitsbergen Ar 69.87 348 P **Pn 02 00 17.0 -1.0**
comp=Z,5.0nm,0.6s,baz=116,slow=13,SNR=16
SCRK Sand Creek 70.23 28 P **Pn 02 00 19.2 -1.4**
SCRK IAmb IAmb 02 01 00.6
comp=Z,40nm,1.8s
DOT Dot Lake 70.28 28 P **Pn 02 00 19.3 -1.4**
K27K Chicken 71.03 28 P **Pn 02 00 25.3 0.0**
K27K IAmb IAmb 02 01 13.9
comp=Z,49nm,1.9s
BCAR Beaver Creek A 71.42 29 P **Pn 02 00 27.7 0.0**
FIA1 FINESS Array S 72.15 330 P **Pn 02 00 32.8 +0.8**
FIA1 IAmb IAmb 02 01 08.6
comp=Z,53nm,1.4s
DAWY Dawson 72.15 27 P **Pn 02 00 31.6 -0.5**
FINES FINESS Array B 72.15 330 P **Pn 02 00 31.3 -0.7**
comp=Z,2.8nm,0.4s,baz=54,slow=5.3,SNR=20
FINES FINESS Array B 72.15 330 P **Pn 02 00 32.3 +0.2**
GAZ Gaziantep 72.27 303 P **Pn 02 00 34.5 +1.2**
GAZ IAmb IAmb 02 00 35.0
comp=Z,43nm,1.2s
INK Inuvik 72.93 22 P **Pn 02 00 34.6 -2.0**
comp=Z,6.1nm,1.0s,baz=298,slow=3.8,SNR=3.9
AKASG Malin Array Be 73.74 319 P **Pn 02 00 40.5 -1.2**
comp=Z,0.7nm,0.4s,baz=65,slow=6.0,SNR=4.1
AKASG Malin Array Be 73.74 319 P **Pn 02 00 40.9 -0.8**
BR131 Keskin Array S 74.18 307 P **Pn 02 00 45.2 +0.6**
BR131 IAmb IAmb 02 00 53.6
comp=Z,24nm,1.0s
BRTR Keskin Array B 74.18 307 P **Pn 02 00 45.0 +0.3**
comp=Z,11nm,0.8s,baz=112,slow=3.8,SNR=20
BRTR Keskin Array B 74.18 307 P **Pn 02 00 44.5 -0.1**
CSS Mathiatis 75.95 302 P **Pn 02 00 54.7 -0.1**
CSS IAmb IAmb 02 00 55.7
comp=Z,35nm,1.0s
BURAR Bucovina Array 77.26 317 P **Pn 02 01 02.4 +0.3**
ELL Elmali 77.94 305 P **Pn 02 01 05.5 -0.6**
NOA NORSAR Array B 78.89 332 P **Pn 02 01 10.1 -0.7**
comp=Z,0.5nm,0.7s,baz=55,slow=5.9,SNR=5.1
NC204 NORSAR Array S 78.96 333 P **Pn 02 01 10.1 -1.1**
DIB Dawson Inlet, 79.61 36 P **Pn 02 01 14.8 0.0**
DIB IAmb IAmb 02 04 10.7
comp=Z,52nm,1.4s
VTS Vitosha 80.48 312 P **Pn 02 01 20.2 +0.2**
IDI Anoyia 82.26 305 P **Pn 02 01 30.1 +0.8**
comp=Z,6.5nm,0.8s,baz=233,slow=12,SNR=2.6
AGG Agios Georgios 82.58 309 P **Pn 02 01 29.2 -1.8**
AGG IAmb IAmb 02 01 37.7
comp=Z,33nm,1.3s
YKA Yellowknife Ar 82.66 23 P **Pn 02 01 29.6 -1.2**
comp=Z,2.5nm,0.7s,baz=312,slow=4.7,SNR=9.9
SUMG Summit 82.77 354 P **Pn 02 01 31.6 -0.1**
SUMG IAmb IAmb 02 01 50.1
comp=Z,39nm,1.8s
ITM Ithomi 83.65 308 P **Pn 02 01 35.0 -1.5**
ITM IAmb IAmb 02 01 46.2
comp=Z,28nm,1.1s
GERES GERESS Array B 83.68 321 P **Pn 02 01 36.5 0.0**
comp=Z,1.1nm,0.7s,baz=64,slow=6.1,SNR=6.2
KMBO Kilima Mbogo 86.05 267 P **Pn 02 01 50.2 +1.0**
comp=Z,4.1nm,1.1s,baz=110,slow=2.6,SNR=3.6
D05A Enumclaw 88.46 38 P **Pn 02 02 00.4 +0.5**
LON Longmire 88.81 38 P **Pn 02 02 01.7 -0.1**
LON IAmb IAmb 02 02 02.8
comp=Z,10nm,1.0s
LTY Liberty 89.15 37 P **Pn 02 02 03.6 +0.3**
LTY IAmb IAmb 02 02 04.2
comp=Z,11nm,1.0s
B08A Colville Reser 89.24 36 P **Pn 02 02 04.0 +0.3**
E07A Sunnyside 90.02 38 P **Pn 02 02 08.1 +0.7**
C09A Chrisman Ranch 90.14 36 P **Pn 02 02 08.2 +0.3**
C09A IAmb IAmb 02 02 09.2
comp=Z,22nm,1.2s
D08A Wollman Farm, 90.24 37 P **Pn 02 02 09.4 +1.0**
D08A IAmb IAmb 02 02 09.6
comp=Z,13nm,0.8s
NEW Newport 90.47 35 P **Pn 02 02 10.0 +0.5**
NEW IAmb IAmb 02 02 10.7
comp=Z,14nm,0.9s
PINE Pine Mountain 91.00 40 P **Pn 02 02 14.5 +2.2**
JTMT Jette 92.28 34 P **Pn 02 02 19.1 +1.1**
JTMT IAmb IAmb 02 02 19.2
comp=Z,8.7nm,0.9s
BMO Blue Mountains 92.47 38 P **Pn 02 02 18.9 0.0**
NVAR Mina Array Bea 95.76 44 P **Pn 02 02 34.2 0.0**
comp=Z,1.9nm,0.8s,baz=270,slow=1.6,SNR=3.0
SYO Syowa Base 109.68 202 ‖ *e*Pdiff **Pdif 02 03 38.0 +2.9**
TXAR Lajitas Array 110.87 42 PKiKP **PKiKP 02 07 41.8 +0.4**
comp=Z,0.2nm,0.4s,baz=268,slow=0.5,SNR=4.5
TXAR Lajitas Array 110.87 42 PKiKP **PKiKP 02 07 40.5 -0.9**
KOWA Kowa 115.17 301 PKP **PKiKP 02 07 49.3 -0.4**
comp=Z,1.3nm,0.5s,baz=102,slow=5.9,SNR=1.7
KOWA Kowa 115.17 301 **PKiKP 02 07 49.5 -0.2**
PCRV Puerto La Cruz 145.31 12 PKPbc **PKPbc 02 08 45.7 -0.4**
comp=Z,10nm,0.5s,baz=172,slow=6.0,SNR=3.0
RCBR Riachuelo 152.40 308 PKPbc **PKPbc 02 09 04.6 0.0**
comp=Z,8.9nm,0.6s,baz=5.4,slow=4.7,SNR=9.0
RCBR Riachuelo 152.40 308 PKPbc **PKPbc 02 09 04.7 +0.1**

IDC **20** *02:04:19.8±2.2,5.6*4*S×146.3*9*E,h59*km*±19*km*,mb4.0/17, mb1 4.1/22,mb1mx4.0/47,mbtmp4.3/22,ML4.0/4, Error ellipse: s-maj=20.9km s-min=10.1km az=65.0*

NEIC **20** *02:04:20.5±2.1,5.7*58*S×0.7*08*×146.3*2*E±0.7*09*,h60*km*±5km, mb4.6/21,Error ellipse: s-maj=15.3km s-min=8.4km az=125.0*

DJA **20** *02:04:21.8±0.4,6.3*°*S×3.1*°*×14.7*°*E±.*°*,h78*km*±8km,M4.7/10, mB6.0/2,mb4.4/10,MLv4.8/4,Mw(mB)5.6/2*

ISC 20 02:04:19.1±0.5,**5.62S**±0.06×**146.41E**±0.07,**h50**km,**n61,** σ**1**§**05/64,mb4.4/22,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.84**	**169**	P	**Pn**	**02 05 16.0**	**+0.3**
	17nm,0.3s,baz=342,slow=7.8,SNR=16						
PMG				S	**Sn**	**02 05 59.9**	**+0.3**
	11nm,0.3s,baz=1.8,slow=9.0,SNR=5.1						
PMG	**Port Moresby**	**3.84**	**169**		**Pn**	**02 05 17.4**	**+1.6**
RABL	**Rabaul**	**5.91**	**76**	Pn	**Pn**	**02 05 45.7**	**+1.6**
JAY	**Jayapura**	**6.47**	**298**	P	**Pn**	**02 05 53.5**	**+1.6**
	0.3nm,0.3s,baz=156,slow=18,SNR=1.1						
JAY				S	**Sn**	**02 07 05.8**	**+1.4**
	0.5nm,0.3s,baz=255,slow=20,SNR=1.3						

JAY	Jayapura	6.47	298	P	Pn	02 05 57.3	+5.4
	0.2nm9.1nm,0.7s						
COEN	Coen	8.88	201	Pn	Pn	02 06 26.4	+1.5
FAKI	Fak Fak	14.37	280		P	02 07 44.2	-1.4
CTA	Charters Tower	14.39	181	P	Pn	02 07 40.3	+0.3
	0.3nm,0.3s,baz=4.2,slow=15,SNR=2.0						
CTAO	Charters Tower	14.39	181	Pn	P	02 07 43.6	-2.2
SIJI	Sorong	15.83	287	P	P	02 08 00.4	-1.5
	1.8nm,0.3s,baz=80,slow=9.8,SNR=10						
SWI	Sorong	15.84	287	P	P	02 08 00.8	-1.2
	58nm,0.9s						
WB0	Warramunga Arr	18.29	219	P	P	02 08 28.7	-0.4
WB0				IAmb	IAmb	02 08 35.0	
	comp=Z,14nm,1.2s						
WR0	Warramunga Arr	18.34	218	P	Pn	02 08 30.4	+0.3
WB2	Warramunga Arr	18.45	218	P	P	02 08 30.6	-0.2
WRA	Warramunga Arr	18.45	218	P	P	02 08 30.5	-0.4
	comp=Z,0.9nm,0.3s,baz=39,slow=12,SNR=16						
WRA				PcP	PcP	02 13 00.2	+0.3
	comp=Z,0.1nm,0.3s,baz=25,slow=1.4,SNR=6.2						
WRA	Warramunga Arr	18.45	218	P	Pn	02 08 32.3	+0.9
NLAI	Namlea	19.39	276	P	Pn	02 08 43.8	+1.1
	comp=Z,29nm,1.1s						
KNRA	Kununurra	20.00	239	P	P	02 08 48.2	+0.5
KNRA				IAmb	IAmb	02 08 51.5	
	comp=Z,20nm,1.0s						
AS31	Alice Springs	21.61	213	P	P	02 09 06.9	+1.8
ASAR	Alice Springs	21.61	213	P	P	02 09 05.0	-0.2
	comp=Z,2.0nm,0.5s,baz=44,slow=8.3,SNR=27						
ASAR				PcP	PcP	02 13 06.2	+0.5
	comp=Z,1.0nm,0.8s,baz=46,slow=3.4,SNR=4.2						
ASAR	Alice Springs	21.61	213	P	P	02 09 07.5	+2.3
BATI	Baumata	22.98	257	P	P	02 09 18.5	-1.3
	comp=Z,26nm,0.5s,baz=72,slow=6.4,SNR=2.1						
FITZ	Fitzroy Crossi	23.77	237	P	P	02 09 26.5	-0.8
	comp=Z,6.3nm,0.5s,baz=44,slow=9.2,SNR=18						
FITZ	Fitzroy Crossi	23.77	237	P	P	02 09 26.7	-0.6
FITZ				IAmb	IAmb	02 09 30.1	
	comp=Z,28nm,1.4s						
STKA	Stephens Creek	26.51	189	P	P	02 09 50.9	-1.2
	comp=Z,0.8nm,0.3s,baz=304,slow=21,SNR=1.2						
PSA00	Pilbara Seismi	30.22	236	P	P	02 10 25.6	+0.4
FORT	Forrest	30.40	212	P	P	02 10 25.5	-1.2
FORT				IAmb	IAmb	02 10 33.5	
	comp=Z,26nm,1.1s						
MORW	Morawa	36.99	227	P	P	02 11 24.1	+0.1
THZ	Tophouse	43.04	151	P	P	02 12 16.5	+2.4
THZ				IAmb	IAmb	02 12 28.5	
	comp=Z,34nm,1.5s						
LTZ	Lake Taylor	43.52	152	P	P	02 12 19.6	+1.7
LTZ				IAmb	IAmb	02 12 25.8	
	comp=Z,24nm,1.4s						
RPZ	Rata Peaks	43.71	154	P	P	02 12 20.2	+0.8
	comp=Z,12nm,0.6s,baz=281,slow=3.2,SNR=6.4						
RPZ	Rata Peaks	43.71	154	P	P	02 12 20.7	+1.4
LBZ	Lake Benmore	43.88	155	P	P	02 12 21.4	+0.7
KSRS	Korea Array	46.19	340	P	P	02 12 40.0	+1.0
	comp=Z,1.1nm,0.5s,baz=158,slow=11,SNR=4.5						
USRK	Ussuriysk Ar.	51.26	347	P	P	02 13 18.7	+0.8
	comp=Z,1.4nm,0.5s,baz=170,slow=8.0,SNR=6.0						
USRK	Ussuriysk Ar.	51.26	347	P	P	02 13 19.1	+1.1
CMAR	Chiang Mai Arr	52.55	298	P	P	02 13 27.6	-0.4
	comp=Z,1.0nm,0.3s,baz=124,slow=6.7,SNR=4.1						
CMAR	Chiang Mai Arr	52.55	298	P	P	02 13 28.4	+0.4
SONM	Songino Array	63.78	331	P	P	02 14 45.6	-0.6
	comp=Z,1.0nm,0.7s,baz=140,slow=4.3,SNR=4.8						
SONM	Songino Array	63.78	331	P	P	02 14 47.3	+1.1
SEY	Seymchan	68.51	3	P	P	02 15 15.2	-0.7
	comp=Z,0.7nm,0.3s,baz=194,slow=8.8,SNR=4.7						
VNDA	Vanda	72.33	177	P	P	02 15 38.9	-0.3
	comp=Z,1.9nm,0.7s,baz=335,slow=6.6,SNR=8.7						
VNDA	Vanda	72.33	177	P	P	02 15 39.8	+0.6
VNDA				IAmb	IAmb	02 15 40.3	
	comp=Z,2.5nm,0.7s						
MKAR	Makanchi Array	76.83	321	P	P	02 16 05.1	-0.7
	comp=Z,0.6nm,0.7s,baz=99,slow=8.8,SNR=4.8						
MKAR	Makanchi Array	76.83	321	P	P	02 16 05.6	-0.2
ZALV	Zalesovo Beam	78.38	328	P	P	02 16 13.1	-1.2
	comp=Z,0.9nm,0.5s,baz=109,slow=8.0,SNR=4.7						
ZALV	Zalesovo Beam	78.38	328	P	P	02 16 13.2	-1.0
MAW	Mawson	82.37	203	P	P	02 16 35.0	-0.4
	comp=Z,2.9nm,0.8s,baz=34,slow=10,SNR=5.0						
IMAR	Indian Mountai	83.34	21	P	P	02 16 41.2	+0.7
SML	Sawmill	83.55	296	P	P	02 16 42.3	+0.5
KKAR	Karatay Array	83.60	314	P	P	02 16 41.8	-0.6
MLY	Manley	83.99	22	P	P	02 16 44.4	+0.5
MLY				IAmb	IAmb	02 16 45.7	
	comp=Z,6.3nm,1.0s						
QSPA	South Pole Qui	84.35	180	P	P	02 16 45.5	-0.4
QSPA				IAmb	IAmb	02 16 46.3	
	comp=Z,4.0nm,0.7s						
NRIK	Noril'sk	84.73	342	P	P	02 16 46.6	-0.9
	comp=Z,3.0nm,0.7s,baz=151,slow=7.3,SNR=4.6						
CCB	Clear Creek Bu	84.95	23	P	P	02 16 47.6	-1.0
CCB				IAmb	IAmb	02 16 48.9	
	comp=Z,5.0nm,1.0s						
ILAR	Eielson Array	85.36	23	P	P	02 16 49.6	-1.1
	comp=Z,2.7nm,0.7s,baz=252,slow=4.9,SNR=22						
YKA	Yellowknife Ar	99.11	28	P	Pdif	02 17 53.9	-0.8
	comp=Z,0.3nm,0.9s,baz=272,slow=4.7,SNR=3.3						
TORD	Torodi Ar. Bea	144.43	285	PKP	PKPab	02 23 48.4	-0.8
	comp=Z,2.4nm,0.8s,baz=57,slow=2.9,SNR=10						
DBIC	Dimbokro	151.41	274	PKPbc	PKPbc	02 24 07.9	-0.7
	comp=Z,1.1nm,0.4s,baz=54,slow=1.9,SNR=6.2						
BDFB	Brasilia	154.50	146	PKPbc	PKPbc	02 24 14.9	-0.6
	comp=Z,2.3nm,0.7s,baz=71,slow=13,SNR=4.4						
BDFB	Brasilia	154.50	146		PKPbc	02 24 15.7	+0.2

JMA ***20*** *02:11:46.6±0.2,23.97N×122.41E,h25km±4km,M3.7*
TAP ***20*** *02:11:47.1,24.05N×122.40E,h26km,ML3.8,D*
IDC ***20*** *02:12:09.5±24.0,24.27N×123.17E,h295km±275km,*
mb3.3/3,mb1 3.3/4,mb1mx2.8/50,mbtmp4.0/4,ML3.6/1,
Error ellipse: s-maj=397.8km s-min=155.2km az=135.0

ISC 20 02:11:46.9±1.0,24.02N±0.02×122.40E±0.02,h29km±9km,
n136,σ1s14/194,mb3.9/3,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
				Op			h m s	
JYNG	Yonagunijimaku	0.66	49	P		Pb	02 11 59.6	-0.4
JYNG				S		Sb	02 12 08.1	-0.7
EWUT	Wuta	0.71	307	P		Pb	02 12 00.3	-0.5
	baz=304							
EWUT				eS		Sb	02 12 09.7	-0.6
	baz=304							
YOJ	Yonaguni jima	0.71	51	P		Pb	02 12 00.6	-0.3
YOJ				S		Sb	02 12 09.6	-0.7
YOJ	Yonaguni jima	0.71	51	P		Pb	02 12 00.6	-0.3
	baz=60							
YOJ				eS		Sn	02 12 12.1	+1.1
	baz=60							
HWA	Hwalien	0.73	267	eP		Pb	02 12 01.2	+0.1
	baz=251							
HWA				eS		Sb	02 12 11.6	+0.9
	baz=251							
TWD	Chiawan	0.74	275	P		Pb	02 12 01.1	-0.1
	baz=272							
TWD				eS		Sb	02 12 11.0	0.0
	baz=272							
NACB	Ninganchiao	0.75	282	eP		Pb	02 12 01.4	-0.2
	baz=265							
TWC	Suao	0.77	320	P		Pb	02 12 01.2	-0.6
	baz=318							
TWC				eS		Sb	02 12 10.9	-1.1
	baz=318							
ETLH	Xiulin Townshi	0.86	283	eP		Pb	02 12 03.1	-0.3
	baz=267							
ETLH				eS		Sb	02 12 14.8	+0.2
	baz=267							
NDS	Dongshan	0.88	315	P		Pb	02 12 03.3	-0.3
	baz=312							
NDS				eS		Sn	02 12 15.0	-0.1
	baz=312							
ESL	Shilin	0.91	257	eP		Pn	02 12 04.1	+0.3
	baz=246							
ESL				eS		Sb	02 12 15.8	-0.1
	baz=246							
EGS		0.93	333	P		Pb	02 12 04.5	0.0
	baz=321							
EGS				eS		Sn	02 12 16.4	0.0
	baz=321							
ILA	Ilan	0.95	322	eP		Pb	02 12 05.0	+0.1
	baz=319							
EGFH	Guangfu	0.96	249	eP		Pn	02 12 04.2	-0.2
	baz=246							
EGFH				eS		Sb	02 12 17.1	-0.1
	baz=246							
TWE	Neicheng	0.97	316	P		Pb	02 12 05.1	0.0
	baz=314							
TWE				eS		Sb	02 12 17.2	-0.4
	baz=314							
ENTT	Nioudou	0.98	309	P		Pb	02 12 05.3	-0.1
	baz=307							
NTC	Toucheng	0.98	328	P		Pb	02 12 05.4	0.0
	baz=326							
NTC				eS		Sn	02 12 18.7	+1.0
	baz=326							
NDT	Datong Townshi	1.00	306	eP		Pb	02 12 05.7	0.0
	baz=303							
NDT				eS		Sn	02 12 18.4	+0.3
	baz=303							
NNSB	Datong	1.01	294	P		Pn	02 12 05.6	+0.3
	baz=280							
NNSH	Datong	1.01	294	P		Pn	02 12 05.6	+0.2
	baz=291							
NNSH				eS		Sn	02 12 19.4	+0.7
	baz=291							
NNS	Nan Shan	1.03	294	P		Pn	02 12 05.8	+0.3
	baz=279							
HGSD	Ruisui	1.04	240	eP		Pn	02 12 04.9	-0.6
	baz=238							
WHF	Hehuan Shan	1.04	277	P		Pn	02 12 06.1	0.0
	baz=261							
WHF				eS		Sb	02 12 20.3	+0.1
	baz=261							
TWB1	Santiao Chiao	1.05	339	eP		Pb	02 12 06.2	-0.4
	baz=338							
FUSS	Fushou	1.08	282	eP		Pn	02 12 06.8	+0.5
	baz=280							
TIPB	Shuangxi	1.08	331	eP		Pb	02 12 06.8	-0.4
	baz=329							
TIPB				eS		Sb	02 12 21.0	+0.1
	baz=329							
NWLT	Wulai	1.11	313	eP		Pb	02 12 07.6	-0.1
	baz=310							
OWD	Renai	1.12	267	eP		Pn	02 12 06.9	0.0
	baz=264							
OWD				eS		Sb	02 12 22.6	+0.5
	baz=264							
CHGB	Renai	1.12	272	eP		Pn	02 12 07.0	+0.1
	baz=257							
CHGB				eS		Sb	02 12 22.5	+0.3
	baz=257							
YHNB	Yeheng	1.14	305	P		Pn	02 12 07.5	+0.5
	baz=290							
YHNB				eS		Sb	02 12 22.3	-0.2
	baz=290							
TWT	Tachien	1.14	282	eP		Pb	02 12 08.3	+0.1
	baz=266							
TWT				eS		Sb	02 12 23.4	+0.6
	baz=266							
NSK	Sanguang	1.16	305	P		Pn	02 12 07.7	+0.5
	baz=289							
NSK				eS		Sb	02 12 22.8	-0.2
	baz=289							
TDCB	Techi	1.16	282	eP		Pn	02 12 08.1	+0.7
	baz=268							
VWDT	VWDT	1.18	257	eP		Pn	02 12 07.9	+0.3
	baz=255							
VWDT				eS		Sb	02 12 24.4	+0.7
	baz=255							
YULB	Yu-li	1.19	239	eP		Pn	02 12 07.3	-0.3
	baz=237							
NWF	Wu-fen Shan	1.19	332	P		Pb	02 12 08.3	-0.7
	baz=331							
NWF				eS		Sb	02 12 24.7	+0.6
	baz=331							
WFSB	Wu-fen Shan	1.19	332	P		Pb	02 12 08.3	-0.6
	baz=330							
WFSB				eS		Sb	02 12 24.2	+0.3
	baz=330							
EYUL	Yuli	1.20	236	eP		Pn	02 12 07.5	-0.2
	baz=234							
TWA	Mucha	1.21	322	eP		Pb	02 12 09.4	+0.1
	baz=320							
TWA				eS		Sb	02 12 25.3	+0.7
	baz=320							
NHDH	Xindian Distri	1.23	320	eP		Pb	02 12 09.9	+0.3
	baz=331							
IRIF	Iriomote-Funau	1.25	75	P		Pn	02 12 09.2	+0.7
IRIF				eS		Sn	02 12 24.7	+0.3
TNOU	National Taiwa	1.26	333	eP		Pb	02 12 09.6	-0.6
	baz=331							
TATO	Taipei	1.27	319	eP		Pb	02 12 09.8	-0.4
	baz=317							
TATO				eS		Sb	02 12 26.4	+0.4
	baz=317							
HATJ	Hateruma jima	1.28	88	P		Pn	02 12 09.6	+0.7
HATJ				eS		Sn	02 12 25.9	+0.7
FULB	Fuli	1.30	231	eP		Pn	02 12 08.8	-0.4
	baz=230							
CHKT	Chengkung	1.32	226	eP		Pn	02 12 08.5	-0.9
	baz=224							
CHKT				eS		Sn	02 12 24.4	-1.6
	baz=224							
WPL	Puli Township	1.32	270	eP		Pn	02 12 10.6	+1.2
	baz=268							
SSLB	Suanglung	1.34	260	eP		Pn	02 12 10.6	+0.8
	baz=258							
DPDB	Guoxing	1.35	271	eP		Pn	02 12 10.9	+1.1
	baz=269							
WHP	Taichung City	1.35	281	eP		Pb	02 12 11.8	+0.1
	baz=269							
YM01	YM01	1.35	326	eP		Pb	02 12 10.9	-0.8
	baz=324							
WCS	Beigang Elemen	1.36	272	eP		Pb	02 12 11.3	-0.5
	baz=270							
YM10	YM10	1.37	326	eP		Pn	02 12 10.7	+0.5
	baz=323							
YM11	YM11	1.37	327	eP		Pb	02 12 11.2	-0.7
	baz=324							
YM05	YM05	1.37	327	eP		Pn	02 12 10.8	+0.6
	baz=324							
YM04	YM04	1.38	325	eP		Pn	02 12 10.8	+0.5
	baz=323							
SMLT	Sun Moon Lake	1.38	265	eP		Pn	02 12 11.1	+0.7
	baz=262							
YM08	YM08	1.38	328	eP		Pb	02 12 11.1	-1.0
	baz=325							
TWS1	Kuangyinshan	1.40	321	eP		Pb	02 12 11.7	-0.8
	baz=335							
LIOB	Emei	1.41	297	eP		Pb	02 12 12.6	0.0
	baz=294							
ANP	Anpu	1.41	326	eP		Pb	02 12 12.3	-0.5
	baz=323							
NSTT	Nanjuang	1.42	296	eP		Pb	02 12 12.5	-0.2
	baz=293							
NSTT				eS		Sb	02 12 29.9	-0.4
	baz=293							
TYC	Yuchr	1.42	266	eP		Pn	02 12 11.6	+0.9
	baz=264							
YUS	Yu-Shan	1.43	249	eP		Pn	02 12 11.7	+0.3
	baz=236							
EDH	Donghe	1.45	224	eP		Pn	02 12 10.2	-0.9
	baz=223							
TWY	Chenhua	1.45	330	eP		Pb	02 12 12.4	-0.9
	baz=328							
NCUH	Zhongli	1.46	311	eP		Pb	02 12 13.0	-0.4
	baz=308							
JKRS	Kuro-shima	1.49	81	P		Pn	02 12 12.8	+1.1
JKRS				S		Sb	02 12 31.9	-0.5
ELDTW	Lidau	1.51	237	eP		Pn	02 12 11.8	-0.4
	baz=236							
TWQ1	Liyutan	1.52	283	eP		Pb	02 12 14.1	-0.4
	baz=280							
WJS	Zhushan	1.54	263	eP		Pb	02 12 15.4	+0.5
	baz=261							
ALS	Alishan	1.55	251	eP		Pn	02 12 13.9	+1.1
	baz=249							
ALS				eS		Sn	02 12 33.4	+1.4
	baz=249							
NSY	Sanyi	1.55	285	eP		Pb	02 12 14.9	-0.1
	baz=283							
WWF	Wufeng	1.56	271	eP		Pb	02 12 15.5	+0.4
	baz=269							
WNT	Mingjian	1.58	265	eP		Pn	02 12 14.6	+1.7
	baz=263							
WNT1	Nantou City	1.58	266	eP		Pb	02 12 15.2	-0.3
	baz=254							
TCU	Taichung	1.58	275	eP		Pb	02 12 15.0	-0.5
	baz=273							
LDUT	Ludao	1.59	213	eP		Pn	02 12 12.1	-1.0
	baz=211							
LDUT				eS		Sn	02 12 30.6	-2.0
	baz=211							
LONT	Longtian	1.61	227	eP		Pn	02 12 13.0	-0.4
	baz=238							
JIJ	Ishigaki jima	1.63	77	P		Pn	02 12 14.0	+0.3
JIJ				S		Sn	02 12 34.3	+0.6
CHN5	Tsauling	1.63	255	eP		Pn	02 12 15.3	+1.5
	baz=254							
PCYT	Pengchaiyu	1.63	350	eP		Pn	02 12 14.4	+0.6
	baz=348							
WCHH	Zhanghua	1.69	272	eS		Sb	02 12 38.5	+0.4
	baz=270							
TWGBT	Beinan	1.70	226	eP		Pn	02 12 14.2	-0.5
	baz=236							
TWGBT				eS		Sn	02 12 34.7	-0.8
	baz=236							
TWG	Pinlang	1.71	226	eP		Pn	02 12 14.2	-0.6
	baz=236							
TWG				eS		Sn	02 12 34.9	-0.7
	baz=236							
STYH	Taoyuan	1.71	241	eP		Pn	02 12 15.7	+0.8
	baz=229							
STYH				eS		Sn	02 12 37.9	+2.1
	baz=229							
STYT	Tauyuan	1.73	241	eP		Pn	02 12 16.0	+0.9
	baz=229							
STYT				eS		Sn	02 12 38.0	+1.7
	baz=229							
WDLH	Douliu	1.74	260	eP		Pn	02 12 17.0	+1.9
	baz=258							
TPUB	Ta-pu	1.77	247	eP		Pn	02 12 17.4	+1.7
	baz=245							
TPUB				eS		Sn	02 12 39.9	+2.6
	baz=245							
WTP	Ta-pu	1.81	245	eP		Pn	02 12 17.8	+1.6
	baz=244							
WTP				eS		Sb	02 12 40.9	-0.8
	baz=244							
JISG	Ishigakijimahi	1.83	72	P		Pn	02 12 16.7	+0.2
JISG				S		Sn	02 12 39.3	+0.6
WRL	Guolierlin Hig	1.85	267	eS		Sb	02 12 42.6	-0.4
	baz=279							
WTK	Tuku	1.87	260	eP		Pn	02 12 18.9	+1.9
	baz=259							
WTK				eS		Sb	02 12 43.1	-0.3
	baz=259							
CHY	Chiayi	1.88	254	eS		Sb	02 12 43.1	-0.7
	baz=253							
SLGT	Liugui	1.91	238	eP		Pn	02 12 19.3	+1.8
	baz=228							
SLGT				eS		Sn	02 12 43.5	+2.9
	baz=228							
TWK	Hsinying	1.91	247	eP		Pn	02 12 19.6	+2.0
	baz=246							
TWK				eS		Sb	02 12 43.7	-0.8
	baz=246							
CHN1	Nanshi	1.91	245	eP		Pn	02 12 19.8	+2.3
	baz=243							
CHN1				eS		Sb	02 12 43.5	-1.0
	baz=243							
SGST	Jiashian	1.91	241	eP		Pn	02 12 19.4	+1.9
	baz=230							
SGST				eS		Sn	02 12 43.5	+2.9
	baz=230							
SNST	Tainan City	1.92	246	eP		Pn	02 12 19.9	+2.2
	baz=245							
ECL	Taimali	1.94	224	eP		Pn	02 12 17.7	-0.2
	baz=233							
ICHU	Yijhu	2.05	252	eP		Pn	02 12 21.5	+2.0
	baz=250							
ICHU				eS		Sn	02 12 46.6	+2.5
	baz=250							
SSD	Sandimen	2.06	232	eP		Pn	02 12 21.7	+2.1
	baz=223							
TSMG	Majia	2.08	231	eP		Pn	02 12 21.9	+2.0
	baz=224							
TSMG				eS		Sn	02 12 47.5	+2.7
	baz=224							
SCST	Cishan	2.08	238	eP		Pb	02 12 23.0	-1.0
	baz=228							
LAY	Lan-yu	2.12	202	eP		Pn	02 12 20.7	+0.2
	baz=201							
MASBT	Mashibuluo	2.14	230	eP		Pn	02 12 21.5	+0.7
	baz=221							
TAW	Tawu	2.15	220	eP		Pn	02 12 22.8	+1.9
	baz=229							
EAST	Anshuo	2.17	222	eP		Pn	02 12 23.0	+1.9
	baz=220							
JTJ	Tarama	2.19	73	P		Pn	02 12 23.0	+1.6
JTJ				eS		Sn	02 12 49.0	+1.5
SSPT	Xinbi	2.27	228	eP		Pn	02 12 25.1	+2.6
	baz=221							
SCZT	Fangliau	2.32	225	eP		Pn	02 12 25.1	+2.0
	baz=224							
SLIU	Shizi	2.32	220	eP		Pn	02 12 23.1	-0.1
	baz=219							
WLCH	Liuqiu	2.49	229	eP		Pb	02 12 30.1	-1.0
	baz=243							
HEN	Hengchun	2.52	218	eP		Pn	02 12 28.9	+2.9
	baz=217							
TSEB	Hengchuen, Pin	2.52	214	eP		Pn	02 12 28.6	+2.6
	baz=214							
TWKBT	Hengchun	2.53	216	eP		Pn	02 12 26.7	+0.5
	baz=214							
TWKBT				eS		Sn	02 12 56.7	+0.7
	baz=214							
TWK1	Hengchun	2.53	216	eP		Pn	02 12 26.7	+0.6
	baz=215							
WDGT	Dungji	2.62	254	eP		Pn	02 12 28.7	+1.4
	baz=253							
PNG	Penghu	2.64	261	eP		Pn	02 12 29.7	+2.0
	baz=259							
PNG				eS		Sn	02 13 00.3	+1.6
	baz=259							
JIRB	Irabujima	2.65	72	P		Pn	02 12 29.5	+1.7
JIRB				S		Sn	02 13 01.0	+2.0
JIKM	Ikemajima	2.75	70	P		Pn	02 12 31.1	+2.1
JIKM				eS		Sn	02 13 03.0	+1.7
JMJ	Miyako jima 2	2.75	73	eP		Pn	02 12 31.7	+2.5
	baz=75							
VCHM	Qimei	2.84	254	eP		Pn	02 12 32.2	+1.8
	baz=253							
VCHM				eS		Sn	02 13 05.7	+2.1
	baz=253							
VWUC	VWUC	2.86	290	eP		Pn	02 12 31.0	+0.4
	baz=288							
VWUC				eS		Sn	02 13 03.2	-0.8
	baz=288							
MATB	Ma-tsu	3.08	314	eP		Pn	02 12 34.2	+0.6
	baz=310							
PTMZ	Houxiangcun	3.16	289	eP		Pn	02 12 35.0	+0.3
	baz=287							
PTMZ				eS		Sn	02 13 10.2	-1.2
	baz=287							
LYJJ	Jianjiangzhen	3.47	317	eP		Pn	02 12 40.4	+1.3
	baz=313							
XPSS	Dashiqiu	3.52	326	eP		Pn	02 12 40.2	+0.5
	baz=321							
KNM	Kinmen	3.64	277	eP		Pn	02 12 44.9	+3.5
	baz=275							
KNMB	Chin-men Tao	3.69	278	eP		Pn	02 12 43.1	+1.1
	baz=276							
MHZQ	Yeshan	3.69	305	eP		Pn	02 12 41.7	-0.3
	baz=302							
AXDP	Jialang	4.13	283	eP		Pn	02 12 48.5	+0.4
	baz=281							
KSRS	Korea Array	14.21	18	P		P	02 15 12.8	-0.3
	0.3nm,0.3s,baz=196,slow=12,SNR=8.4							
SONM	Songino Array	26.96	336	P		P	02 17 25.2	-0.9
	0.8nm,0.6s,baz=156,slow=10,SNR=5.0							
MKAR	Makanchi Array	39.23	316	P		P	02 19 12.4	-0.4
	1.0nm,0.4s,baz=101,slow=9.8,SNR=14							
ZALV	Zalesovo Beam	40.99	327	P		P	02 19 25.1	-2.0
	1.8nm,0.5s,baz=113,slow=9.6

1.3nm,0.3s,baz=167,slow=18,SNR=5.8
MSVF Nonsavu 6.83 344 P P 02 13 50.5 +0.8
DZM Mont Dzumac 12.73 277 P P 02 14 54.9 +3.7
URZ Urewera 14.11 190 P P 02 15 05.6 +0.2
BKZ Black Stump Fm 15.10 191 P P 02 15 16.6 +0.8
QRZ Quartz Range 17.62 199 P P 02 15 40.2 -1.1
EIDS Eidsvold 26.30 262 P P 02 17 00.2 +0.6
EIDS IAmb IAmb 02 17 12.5
comp=Z,20nm,1.5s
CTA Charters Tower 31.54 271 P P 02 17 43.2 -2.1
comp=Z,6.0nm,0.5s,baz=93,slow=9.7,SNR=11
CTAO Charters Tower 31.54 271 P P 02 17 45.4 +0.1
CTAO IAmb IAmb 02 17 46.4
comp=Z,14nm,1.1s
STKA Stephens Creek 34.62 249 P P 02 18 10.7 -0.5
comp=Z,0.8nm,0.4s,baz=73,slow=8.7,SNR=5.4
STKA Stephens Creek 34.62 249 P P 02 18 11.3 0.0
BBOO Buckleboo 39.33 247 P P 02 18 48.6 -1.4
BBOO IAmb IAmb 02 18 55.2
comp=Z,7.2nm,1.1s
ASAR Alice Springs 42.02 261 P P 02 19 10.8 -1.0
comp=Z,1.1nm,0.5s,baz=95,slow=7.6,SNR=12
ASAR Alice Springs 42.02 261 P P 02 19 10.5 -1.2
WR0 Warramunga Arr 42.25 267 P P 02 19 12.2 -1.4
WR0 IAmb IAmb 02 19 12.8
comp=Z,12nm,1.4s
WB2 Warramunga Arr 42.43 267 P P 02 19 13.6 -1.4
WB2 IAmb IAmb 02 19 13.9
comp=Z,4.1nm,0.5s
WB0 Warramunga Arr 42.43 267 P P 02 19 13.6 -1.4
WB0 IAmb IAmb 02 19 20.7
comp=Z,21nm,1.5s
WRA Warramunga Arr 42.44 267 P P 02 19 13.7 -1.3
comp=Z,3.0nm,0.5s,baz=102,slow=8.3,SNR=20
WRA Warramunga Arr 42.44 267 P P 02 19 13.2 -1.8
FORT Forrest 46.22 250 P P 02 19 42.0 -2.1
MTN Manton Dam 47.55 275 P P 02 19 52.7 -1.7
MTN IAmb IAmb 02 19 54.0
comp=Z,26nm,1.2s
KNRA Kununurra 48.74 270 P P 02 20 02.7 -0.6
FITZ Fitzroy Crossi 50.85 266 P P 02 20 19.4 +0.6
FITZ IAmb IAmb 02 20 23.9
comp=Z,14nm,1.2s
SBA Scott Base 53.95 183 P P 02 20 42.4 +2.3
QSPA South Pole Qui 65.75 180 P P 02 21 58.9 -0.2
SNAA Sanae 84.24 179 P P 02 23 41.2 -1.3
SNAA IAmb IAmb 02 23 58.1
comp=Z,4.3nm,1.5s
NVAR Mina Array Bea 85.02 44 P P 02 23 45.9 -1.1
comp=Z,0.1nm,0.5s,baz=294,slow=6.6,SNR=1.8
NVAR Mina Array Bea 85.02 44 P P 02 23 45.8 -1.2
TXAR Lajitas Array 90.61 58 P P 02 24 13.8 +0.5
comp=Z,0.2nm,0.8s,baz=217,slow=4.4,SNR=2.6
TXAR Lajitas Array 90.61 58 P P 02 24 14.6 +1.3
AOPR Arecibo Observ 117.99 81 PKiKP 02 29 56.6 +2.0
AKASG Malin Array Be 145.36 327 PKPbc PKPdf 02 30 44.4 -0.2
comp=Z,1.0nm,0.4s,baz=48,slow=4.5,SNR=7.1
AKASG Malin Array Be 145.36 327 PKPab 02 30 45.8 -1.0
TORD Torodi Ar. Bea 168.77 188 PKPab 02 32 27.1 -0.8
comp=Z,0.3nm,0.5s,baz=195,slow=3.1,SNR=1.6

INET 20 02:15:02.9, 12.05N×86.54W, h139km, MW3.9, Nicaragua

*TAP **20** 02:19:47.6, 24.09N×122.45E, h37km±1km, ML2.6, D*
*JMA **20** 02:19:47.9±0.1, 24.08N×122.41E, h34km±5km, M2.0*
ISC 20 02:19:47.6±1.1, 24.07N±0.04×122.43E±0.02, h30km±12km, n37, σ0.51/69, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.66**	**53**	P			**Pb**	**02 20 00.7**	**+0.1**
YOJ				*e*S			**Sb**	**02 20 09.5**	**0.0**
YOJ	**Yonaguni jima**	**0.66**	**53**	P			**Pb**	**02 19 59.8**	**-0.8**
baz=62									
YOJ				S			**Sn**	**02 20 09.7**	**-0.6**
baz=62									
EWUT	**Wuta**	**0.70**	**302**	*e*P			**Pb**	**02 20 02.4**	**+0.9**
baz=300									
EWUT				*e*S			**Sn**	**02 20 11.6**	**+0.1**
baz=300									
TWC	**Suao**	**0.76**	**315**	P			**Pn**	**02 20 01.6**	**-0.7**
baz=306									
TWC				S			**Sb**	**02 20 11.6**	**-0.7**
baz=306									
TWD	**Chiawan**	**0.77**	**271**	*e*P			**Pb**	**02 20 03.0**	**+0.6**
baz=269									
NACB	**Ninganchiao**	**0.77**	**278**	P			**Pn**	**02 20 02.0**	**-0.5**
baz=264									
NACB				S			**Sb**	**02 20 12.2**	**-0.5**
baz=264									
NDS	**Dongshan**	**0.86**	**311**	P			**Pn**	**02 20 03.8**	**0.0**
baz=308									
NDS				S			**Sb**	**02 20 15.7**	**+0.4**
baz=308									
ETLH	**Xiulin Townshi**	**0.88**	**279**	*e*P			**Pn**	**02 20 04.4**	**+0.3**
baz=266									
ETLH				S			**Sb**	**02 20 16.7**	**+0.8**
baz=266									
EGS		**0.90**	**330**	P			**Pn**	**02 20 03.9**	**-0.3**
baz=317									
EGS				S			**Sb**	**02 20 16.7**	**+0.4**
baz=317									
ESL	**Shilin**	**0.95**	**255**	*e*P			**Pn**	**02 20 04.6**	**-0.3**
baz=245									
ESL				S			**Sn**	**02 20 17.0**	**-0.5**
baz=245									
TWE	**Neicheng**	**0.95**	**313**	P			**Pb**	**02 20 05.5**	**-0.1**
baz=311									
TWE				*e*S			**Sb**	**02 20 18.7**	**+0.8**
baz=311									
NTC	**Toucheng**	**0.96**	**325**	*e*P			**Pb**	**02 20 05.7**	**0.0**
baz=323									
ENTT	**Nioudou**	**0.97**	**306**	P			**Pb**	**02 20 06.0**	**+0.1**
baz=292									
ENTT				S			**Sb**	**02 20 18.2**	**-0.3**
baz=292									
NDT	**Datong Townshi**	**0.99**	**303**	P			**Pb**	**02 20 06.2**	**0.0**
baz=289									
NDT				S			**Sb**	**02 20 18.9**	**-0.1**
baz=289									
TWB1	**Santiao Chiao**	**1.02**	**337**	*i* P			**Pn**	**02 20 06.0**	**+0.1**
baz=350									
TWB1				*e*S			**Sb**	**02 20 18.8**	**-0.9**
baz=350									
NNSB	**Datong**	**1.02**	**291**	P			**Pn**	**02 20 06.2**	**+0.1**
baz=289									
NNSB				S			**Sb**	**02 20 20.1**	**+0.1**
baz=289									
NNSH	**Datong**	**1.02**	**291**	*e*P			**Pn**	**02 20 06.6**	**+0.5**
baz=289									
NNSH				*e*S			**Sb**	**02 20 20.3**	**+0.3**
baz=289									
NNS	**Nan Shan**	**1.04**	**291**	*e*P			**Pb**	**02 20 07.4**	**+0.3**
baz=289									
NNS				*e*S			**Sb**	**02 20 20.1**	**-0.3**
baz=289									
TIPB	**Shuangxi**	**1.06**	**329**	P			**Pn**	**02 20 06.2**	**-0.2**
baz=327									
TIPB				S			**Sb**	**02 20 20.5**	**-0.4**
baz=327									
WHF	**Hehuan Shan**	**1.07**	**274**	*e*P			**Pn**	**02 20 07.0**	**0.0**
baz=261									
WHF				*i* S			**Sn**	**02 20 21.0**	**-0.1**
baz=261									
HGSD	**Ruisui**	**1.09**	**238**	*e*P			**Pn**	**02 20 06.1**	**-0.7**
baz=237									
HGSD				S			**Sn**	**02 20 20.3**	**-0.7**
baz=237									
FUSS	**Fushou**	**1.10**	**280**	*e*P			**Pn**	**02 20 07.2**	**-0.1**
baz=277									
FUSS				*e*S			**Sb**	**02 20 22.2**	**-0.2**
baz=277									
NWLT	**Wulai**	**1.10**	**310**	*e*P			**Pb**	**02 20 08.1**	**-0.1**
baz=308									
NWLT				*e*S			**Sb**	**02 20 22.9**	**+0.7**
baz=308									
YHNB	**Yeheng**	**1.14**	**302**	P			**Pn**	**02 20 07.7**	**+0.1**
baz=287									
YHNB				S			**Sb**	**02 20 22.5**	**-0.6**
baz=287									
CHGB	**Renai**	**1.15**	**270**	P			**Pn**	**02 20 08.2**	**+0.2**
baz=268									
CHGB				*e*S			**Sn**	**02 20 23.1**	**+0.3**
baz=268									
NSK	**Sanguang**	**1.15**	**302**	*i* P			**Pn**	**02 20 08.4**	**+0.6**
baz=287									
NSK				*i* S			**Sb**	**02 20 23.3**	**-0.3**
baz=287									
NWF	**Wu-fen Shan**	**1.16**	**329**	*e*P			**Pb**	**02 20 08.4**	**-0.8**
baz=328									
WFSB	**Wu-fen Shan**	**1.16**	**329**	P			**Pn**	**02 20 08.3**	**+0.4**
baz=328									
WFSB				*e*S			**Sb**	**02 20 23.7**	**-0.1**
baz=328									
TWT	**Tachien**	**1.16**	**279**	P			**Pn**	**02 20 08.7**	**+0.6**
baz=266									
TWT				S			**Sb**	**02 20 24.1**	**0.0**
baz=266									
TDCB	**Techi**	**1.18**	**279**	*e*P			**Pn**	**02 20 08.5**	**+0.2**
baz=266									
TDCB				S			**Sn**	**02 20 23.7**	**+0.3**
baz=266									
TWA	**Mucha**	**1.19**	**320**	*e*P			**Pn**	**02 20 08.7**	**+0.4**
baz=334									
TWA				S			**Sb**	**02 20 24.1**	**-0.7**
baz=334									
IRIF	**Iriomote-Funau**	**1.21**	**77**	P			**Pb**	**02 20 09.6**	**-0.4**
IRIF				*e*S			**Sb**	**02 20 25.3**	**0.0**
VWDT	**VWDT**	**1.22**	**255**	*e*P			**Pn**	**02 20 09.5**	**+0.8**
baz=253									
VWDT				*e*S			**Sn**	**02 20 24.4**	**+0.2**
baz=253									
YULB	**Yu-li**	**1.24**	**237**	*e*P			**Pn**	**02 20 08.5**	**-0.5**
baz=250									
YULB				*e*S			**Sn**	**02 20 23.6**	**-1.1**
baz=250									
TATO	**Taipei**	**1.25**	**317**	*e*P			**Pn**	**02 20 09.1**	**0.0**
baz=332									
JIJ	**Ishigaki jima**	**1.59**	**79**	*e*S			**Sn**	**02 20 34.6**	**+1.3**
JISG	**Ishigakijimahi**	**1.79**	**73**	P			**Pn**	**02 20 17.3**	**+0.8**
JISG				S			**Sn**	**02 20 38.9**	**+0.6**

*SOME **20** 02:21:03.9, 39.60N×75.45E, h0km*
*KRNET **20** 02:21:05.6±0.1, 39.26N×75.42E, mb2.9*
*NNC **20** 02:21:08.4±1.1, 39.68N×75.45E, h0km, mb3.6, mpv3.3,*
Error ellipse: s-maj=9.0km s-min=6.0km az=157.0
ISC 20 02:21:10.4±2.0, 39.4N±0.1×75.45E±0.04, h28km, n36, σ2.78/58, 16C-18D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.61**	**292**	⇑*i*P			**Pn**	**02 21 36.2**	**-1.0**
baz=98									
SFK				⇑*i*S			**Sb**	**02 21 58.3**	**-1.3**
baz=98									
ARLS	**Aral**	**2.58**	**341**	⇑*i*P			**Pn**	**02 21 51.2**	**+0.8**
baz=43									
ARLS				⇑*i*S			**Sb**	**02 22 24.8**	**-2.5**
baz=43									
ARSB	**Arslanbob**	**2.67**	**316**	⇓*i*P			**Pn**	**02 21 51.8**	**+0.1**
baz=19									
ARSB				⇓*i*S			**Sn**	**02 22 26.3**	**+3.1**
baz=19									
ULHL	**Ulahol**	**2.88**	**12**	⇓*i*P			**Pn**	**02 21 55.7**	**+1.1**
baz=12									
ULHL				⇓*i*S			**Sb**	**02 22 32.9**	**-3.1**
baz=12									
UCH	**Uchtor**	**2.88**	**346**	⇑*i*P			**Pn**	**02 21 55.6**	**+0.7**
baz=47									
UCH				⇑*i*S			**Sn**	**02 22 32.7**	**+3.8**
baz=47									
KDJ	**Kajisay**	**3.00**	**25**	⇓*e*P			**Pn**	**02 21 57.5**	**+1.3**
baz=25									
KDJ				⇓*i*S			**Sb**	**02 22 36.0**	**-3.5**
baz=25									
AML	**Almayashu**	**3.01**	**334**	⇑*i*P			**Pn**	**02 21 57.4**	**+0.8**
baz=36									
AML				⇑*i*S			**Sn**	**02 22 35.7**	**+3.8**
baz=36									
BOOM	**Boomskoye usch**	**3.08**	**7**	⇑*e*P			**Pn**	**02 21 57.9**	**+0.6**
baz=7.0									
BOOM				⇑*i*S			**Sn**	**02 22 36.8**	**+3.5**
baz=7.0									
AAK	**Ala-Archa**	**3.29**	**348**	⇑*i*P			**Pn**	**02 22 00.5**	**+0.4**
baz=49									
AAK				⇑*i*S			**Sn**	**02 22 42.8**	**+4.4**
baz=49									
AAK	**Ala-Archa**	**3.29**	**348**	⇑Pn			**Pn**	**02 21 58.6**	**-1.5**
9.7nm,1.1s									
AAK				⇓Lg			Lg	02 22 45.4	
12nm,0.7s									
EKS2	**Erkin-Say**	**3.47**	**339**	⇓*i*P			**Pn**	**02 22 02.8**	**+0.2**
baz=40									
EKS2				⇓*i*S			**Sn**	**02 22 46.6**	**+3.8**
baz=40									
TKM2	**Tokmak 2**	**3.49**	**2**	⇓Pn			**Pn**	**02 22 01.9**	**-1.1**
2.7nm,0.8s									
TKM2				⇓Pg			**Pb**	**02 22 08.2**	**-3.4**
2.4nm,0.4s									
TKM2				⇑Lg			Lg	02 22 51.1	
16nm,0.5s									
KST	**Kastek**	**3.63**	**6**	*e*P			**Pb**	**02 22 09.8**	**-4.1**
5.3nm,0.5s									
KST				*e*S			**Sb**	**02 22 57.0**	**-0.6**
18nm,0.5s									
KST	**Kastek**	**3.63**	**6**	Pg			**Pb**	**02 22 09.8**	**-4.1**
5.3nm,0.5s									
KST				Lg			Lg	02 22 57.0	
18nm,0.5s									
IZV	**Izvestkoviy**	**3.71**	**13**	*e*P			**Pb**	**02 22 11.5**	**-3.8**
9.4nm,0.1s									
IZV				*e*S			**Sb**	**02 23 00.2**	**+0.4**
12nm,0.8s									
IZV	**Izvestkoviy**	**3.71**	**13**	Pg			**Pb**	**02 22 11.5**	**-3.8**
9.4nm,0.1s									
IZV				Lg			Lg	02 23 00.2	
12nm,0.8s									
ANVS	**Anan'yevo**	**3.75**	**26**	⇓*i*P			**Pn**	**02 22 07.2**	**+0.7**
baz=25									
ANVS				⇓*i*S			**Sn**	**02 22 52.2**	**+2.5**
baz=25									
TNSS	**Tian-Shan**	**3.78**	**17**	*e*P			**Pb**	**02 22 12.4**	**-4.2**
3.8nm,0.5s									
TNSS				*e*S			**Sb**	**02 23 01.6**	**-0.5**
3.4nm,0.8s									
TNSS	**Tian-Shan**	**3.78**	**17**	Pg			**Pb**	**02 22 12.4**	**-4.2**
3.8nm,0.5s									
TNSS				Lg			Lg	02 23 01.6	
3.4nm,0.8s									
TRKS	**Terek-Say**	**3.90**	**304**	⇓*i*P			**Pn**	**02 22 08.2**	**-0.4**
baz=5.0									
TRKS				⇓*i*S			**Sn**	**02 22 53.7**	**+0.2**
baz=5.0									
MDOK	**Medeo**	**3.92**	**17**	*e*P			**Pb**	**02 22 14.7**	**-4.2**
1.6nm,0.4s									
MDOK				*e*S			**Sb**	**02 23 05.4**	**-0.5**
9.6nm,0.8s									
MDOK	**Medeo**	**3.92**	**17**	Pg			**Pb**	**02 22 16.5**	**-2.3**
3.0nm,0.5s									
MDOK				⇓Lg			Lg	02 23 04.6	
14nm,0.9s									
MDOK	**Medeo**	**3.92**	**17**	Pg			**Pb**	**02 22 14.7**	**-4.2**
1.6nm,0.4s									
MDOK				Lg			Lg	02 23 05.4	
9.6nm,0.8s									
KOTS	**Kotyrbulak**	**4.00**	**18**	*e*P			**Pb**	**02 22 15.7**	**-4.6**
9.8nm,0.5s									
KOTS				*e*S			**Sb**	**02 23 07.1**	**-1.1**
20nm,0.7s									
KOTS	**Kotyrbulak**	**4.00**	**18**	Pg			**Pb**	**02 22 15.7**	**-4.6**
9.8nm,0.5s									
KOTS				Lg			Lg	02 23 07.1	
20nm,0.7s									
SGDS	**Sogindy**	**4.07**	**352**	Pg			**Pb**	**02 22 17.9**	**-3.4**
3.7nm,0.7s									
SGDS				Lg			Lg	02 23 10.7	
7.4nm,0.8s									
UZB	**Uzynbulak**	**4.58**	**35**	*e*P			**Pb**	**02 22 28.4**	**-1.8**
2.0nm,0.2s									
UZB				*e*S			**Sb**	**02 23 28.9**	**+3.8**
4.3nm,0.6s									
UZB	**Uzynbulak**	**4.58**	**35**	Pg			**Pb**	**02 22 28.4**	**-1.8**
2.0nm,0.2s									
UZB				Lg			Lg	02 23 28.8	
4.3nm,0.6s									
KPKS	**Kokpek**	**4.71**	**30**	*e*P			**Pb**	**02 22 29.5**	**-2.8**
5.0nm,0.3s									
KPKS				*e*S			**Sb**	**02 23 30.5**	**+2.0**
14nm,0.6s									
IUG	**luzhnay**	**4.93**	**305**	*e*P			**Pb**	**02 22 34.4**	**-1.6**
4.3nm,0.4s									
IUG				*e*S			**Sb**	**02 23 38.9**	**+4.0**
7.8nm,0.6s									
IUG	**luzhnay**	**4.93**	**305**	Pg			**Pb**	**02 22 34.4**	**-1.6**
4.3nm,0.4s									
IUG				Lg			Lg	02 23 38.9	
7.8nm,0.6s									
PDGK	**Podgornoye**	**4.94**	**37**	Pg			**Pb**	**02 22 33.0**	**-3.2**
0.6nm,0.4s									
PDGK				Lg			Lg	02 23 36.6	
3.3nm,0.7s									
PDGK	**Podgornoye**	**4.94**	**37**	⇓Pg			**Pb**	**02 22 35.9**	**-0.3**
PDGK				⇑Lg			Lg	02 23 38.8	
9.8nm,1.0s									
ARXS	**Arharly**	**5.10**	**20**	*e*P			**Pb**	**02 22 36.0**	**-2.9**
1.9nm,0.3s									
ARXS				*e*S			**Sb**	**02 23 42.1**	**+2.5**
4.7nm,0.6s									
ARXS	**Arharly**	**5.10**	**20**	Pg			**Pb**	**02 22 36.0**	**-2.9**
1.9nm,0.3s									
ARXS				Lg			Lg	02 23 42.1	
4.7nm,0.6s									
KK31	**Karatay Array**	**5.23**	**316**	⇑Pg			**Pb**	**02 22 39.7**	**-1.4**
1.2nm,0.8s									
KK31				⇓Lg			Lg	02 23 47.9	
0.6nm,0.4s									

*TAP **20** 02:23:36.6, 24.06N×122.37E, h25km, ML3.1, D*
*JMA **20** 02:23:36.1±0.1, 23.99N×122.37E, h19km±3km, M2.7*
ISC 20 02:23:36.3±1.3, 24.00N±0.02×122.36E±0.02, h21km±4km, n87, σ0.67/150, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.69**	**310**	*e*P			**Pb**	**02 23 49.2**	**-0.5**
baz=305									
EWUT				*e*S			**Sb**	**02 23 59.3**	**+0.4**
baz=305									
JYNG	**Yonagunijimaku**	**0.69**	**50**	P			**Pb**	**02 23 49.4**	**-0.3**
JYNG				*e*S			**Sb**	**02 23 58.2**	**-0.7**
HWA	**Hwalien**	**0.69**	**268**	P			**Pb**	**02 23 49.7**	**0.0**
baz=250									
HWA				*e*S			**Sn**	**02 24 01.4**	**+0.4**
baz=250									
TWD	**Chiawan**	**0.71**	**276**	*i* P			**Pb**	**02 23 50.0**	**0.0**
baz=272									
TWD				S			**Sb**	**02 24 00.0**	**+0.8**
baz=272									
NACB	**Ninganchiao**	**0.72**	**284**	*i* P			**Pb**	**02 23 50.3**	**+0.1**
baz=265									
NACB				S			**Sb**	**02 24 00.5**	**+0.8**
baz=265									
YOJ	**Yonaguni jima**	**0.75**	**52**	P			**Pb**	**02 23 50.5**	**-0.1**
YOJ				S			**Sb**	**02 23 59.7**	**-0.7**
YOJ	**Yonaguni jima**	**0.75**	**52**	*i* P			**Pb**	**02 23 50.6**	**0.0**
baz=63									
YOJ				*i* S			**Sb**	**02 23 59.6**	**-0.7**
baz=63									
TWC	**Suao**	**0.77**	**322**	⇑*i*P			**Pb**	**02 23 50.3**	**-0.6**
baz=319									
TWC				*e*S			**Sb**	**02 24 00.1**	**-0.8**
baz=319									
ETLH	**Xiulin Townshi**	**0.83**	**284**	⇑P			**Pb**	**02 23 52.1**	**0.0**
baz=267									
ETLH				*i* S			**Sb**	**02 24 03.7**	**+0.8**
baz=267									
NDS	**Dongshan**	**0.86**	**317**	P			**Pb**	**02 23 52.5**	**-0.1**
baz=312									
NDS				*e*S			**Sb**	**02 24 03.9**	**+0.2**
baz=312									
ESL	**Shilin**	**0.87**	**258**	P			**Pb**	**02 23 52.6**	**-0.2**
baz=246									
ESL				*e*S			**Sb**	**02 24 03.9**	**-0.1**
baz=246									
EGFH	**Guangfu**	**0.92**	**249**	*e*P			**Pb**	**02 23 53.7**	**+0.2**
baz=246									
EGFH				*e*S			**Sb**	**02 24 06.0**	**+0.7**
baz=246									
EGS		**0.93**	**335**	*e*P			**Pn**	**02 23 53.8**	**-0.3**
baz=323									
EGS				*e*S			**Sn**	**02 24 06.2**	**-0.5**
baz=323									
TWE	**Neicheng**	**0.96**	**319**	P			**Pb**	**02 23 54.1**	**-0.1**
baz=315									
TWE				*e*S			**Sb**	**02 24 04.8**	**-1.7**
baz=315									
ENTT	**Nioudou**	**0.97**	**311**	P			**Pb**	**02 23 54.3**	**-0.1**
baz=307									
ENTT				*e*S			**Sb**	**02 24 06.4**	**-0.3**
baz=307									
NTC	**Toucheng**	**0.98**	**330**	*e*P			**Pn**	**02 23 55.6**	**+0.8**
baz=326									
NTC				*e*S			**Sn**	**02 24 08.0**	**0.0**
baz=326									
NDT	**Datong Townshi**	**0.98**	**308**	*i* P			**Pn**	**02 23 54.8**	**0.0**
baz=314									
NDT				*e*S			**Sb**	**02 24 07.3**	**+0.2**
baz=314									
NNSB	**Datong**	**0.99**	**296**	P			**Pb**	**02 23 54.6**	**-0.2**
baz=291									
NNSB				S			**Sn**	**02 24 08.3**	**-0.2**
baz=291									
NNSH	**Datong**	**0.99**	**296**	P			**Pb**	**02 23 54.7**	**-0.1**
baz=291									
NNSH				S			**Sn**	**02 24 08.1**	**-0.4**
baz=291									
HGSD	**Ruisui**	**1.00**	**240**	P			**Pb**	**02 23 54.1**	**-0.8**
baz=237									
HGSD				*e*S			**Sb**	**02 24 07.3**	**-0.3**
baz=237									
NNS	**Nan Shan**	**1.00**	**296**	P			**Pb**	**02 23 54.9**	**-0.2**
baz=292									
NNS				*e*S			**Sn**	**02 24 08.4**	**-0.4**
baz=292									
WHF	**Hehuan Shan**	**1.01**	**278**	P			**Pb**	**02 23 55.1**	**-0.3**
baz=262									
WHF				*e*S			**Sb**	**02 24 08.4**	**-0.1**
baz=262									
FUSS	**Fushou**	**1.05**	**284**	P			**Pn**	**02 23 55.8**	**-0.2**
baz=280									
FUSS				*e*S			**Sb**	**02 24 09.1**	**-0.3**
baz=280									
TWB1	**Santiao Chiao**	**1.06**	**341**	*e*P			**Pn**	**02 23 55.3**	**-0.5**
baz=354									
TWB1				*e*S			**Sn**	**02 24 09.9**	**-0.1**
baz=354									
TIPB	**Shuangxi**	**1.08**	**333**	P			**Pn**	**02 23 56.1**	**-0.1**
baz=329									
TIPB				S			**Sn**	**02 24 10.0**	**-0.6**
baz=329									
OWD	**Renai**	**1.09**	**268**	P			**Pn**	**02 23 56.1**	**-0.3**
baz=265									
OWD				*e*S			**Sb**	**02 24 09.4**	**-0.9**
baz=265									
CHGB	**Renai**	**1.09**	**273**	P			**Pn**	**02 23 55.9**	**-0.6**
baz=259									
CHGB				*e*S			**Sb**	**02 24 10.2**	**-0.3**
baz=259									
NWLT	**Wulai**	**1.10**	**315**	P			**Pb**	**02 23 56.6**	**0.0**
baz=310									
NWLT				*e*S			**Sn**	**02 24 11.1**	**0.0**
baz=310									
TWT	**Tachien**	**1.11**	**283**	P			**Pb**	**02 23 57.5**	**+0.6**
baz=269									
TWT				*e*S			**Sn**	**02 24 12.0**	**+0.4**
baz=269									
YHNB	**Yeheng**	**1.12**	**307**	P			**Pb**	**02 23 56.9**	**-0.1**
baz=302									
YHNB				*e*S			**Sb**	**02 24 11.0**	**-0.2**
baz=302									
TDCB	**Techi**	**1.13**	**283**	P			**Pn**	**02 23 57.0**	**0.0**
baz=269									
TDCB				*e*S			**Sn**	**02 24 11.9**	**0.0**
baz=269									
NSK	**Sanguang**	**1.14**	**306**	P			**Pn**	**02 23 57.0**	**-0.1**
baz=302									
NSK				*e*S			**Sb**	**02 24 11.0**	**-0.7**
baz=302			

	baz=235							
EYUL				*e*S		**Sn**	02 24 13.2	+0.8
	baz=235							
NWF	**Wu-fen Shan**	**1.19**	**334**	P		**Pn**	02 23 57.2	-0.5
	baz=329							
NWF				*e*S		**Sn**	02 24 14.6	+1.2
	baz=329							
WFSB	**Wu-fen Shan**	**1.19**	**334**	*e*P		**Pn**	02 23 57.0	-0.7
	baz=331							
WFSB				*e*S		**Sn**	02 24 14.6	+1.4
	baz=331							
TWA	**Mucha**	**1.21**	**324**	P		**Pb**	02 23 59.0	+0.6
	baz=320							
TWA				*e*S		**Sb**	02 24 15.0	+1.4
	baz=320							
NHDH	**Xindian Distri**	**1.22**	**322**	*e*P		**Pb**	02 23 59.4	+0.7
	baz=331							
TNOU	**National Taiwa**	**1.26**	**335**	*e*P		**Pn**	02 23 58.2	-0.5
	baz=331							
TNOU				*e*S		**Sb**	02 24 15.5	+0.3
	baz=331							
FULB	**Fuli**	**1.27**	**231**	*e*P		**Pb**	02 24 00.2	+0.8
	baz=218							
FULB				*e*S		**Sn**	02 24 14.6	-0.5
	baz=218							
IRIF	**Iriomote-Funau**	**1.29**	**75**	P		**Pb**	02 24 00.0	+0.1
IRIF				S		**Sb**	02 24 16.1	+0.1
SSLB	**Suanglung**	**1.31**	**261**	*e*P		**Pn**	02 23 59.0	-0.4
	baz=258							
SSLB				*e*S		**Sn**	02 24 15.7	-0.5
	baz=258							
DPDB	**Guoxing**	**1.31**	**272**	P		**Pn**	02 23 59.9	+0.4
	baz=260							
DPDB				*e*S		**Sb**	02 24 17.2	+0.4
	baz=260							
WHP	**Taichung City**	**1.32**	**282**	P		**Pb**	02 24 00.6	+0.1
	baz=268							
WHP				*e*S		**Sb**	02 24 18.9	+1.9
	baz=268							
WCS	**Beigang Elemen**	**1.33**	**273**	P		**Pb**	02 24 00.8	+0.3
	baz=262							
WCS				*e*S		**Sb**	02 24 18.2	+1.1
	baz=262							
SMLT	**Sun Moon Lake**	**1.34**	**265**	P		**Pn**	02 24 00.1	+0.2
	baz=253							
SMLT				*e*S		**Sn**	02 24 17.4	+0.1
	baz=253							
YM01	**YM01**	**1.35**	**328**	P		**Pb**	02 24 00.4	-0.5
	baz=339							
YM01				*e*S		**Sb**	02 24 18.1	+0.4
	baz=339							
YM10	**YM10**	**1.36**	**328**	*e*P		**Pn**	02 23 59.5	-0.6
	baz=338							
YM11	**YM11**	**1.36**	**328**	*e*P		**Pn**	02 23 59.8	-0.4
	baz=324							
YM05	**YM05**	**1.37**	**328**	*e*P		**Pn**	02 23 59.5	-0.7
	baz=324							
YM05				*e*S		**Sn**	02 24 17.1	-0.6
	baz=324							
YM04	**YM04**	**1.37**	**327**	*e*P		**Pn**	02 23 59.7	-0.5
	baz=338							
YM04				*e*S		**Sb**	02 24 18.4	0.0
	baz=338							
TYC	**Yuchr**	**1.38**	**266**	*e*P		**Pn**	02 24 00.9	+0.6
	baz=264							
TYC				*e*S		**Sn**	02 24 18.4	+0.5
	baz=264							
LIOB	**Emei**	**1.39**	**298**	P		**Pb**	02 24 01.7	+0.2
	baz=294							
LIOB				*e*S		**Sb**	02 24 19.8	+0.9
	baz=294							
YUS	**Yu-Shan**	**1.39**	**249**	*e*P		**Pn**	02 24 01.2	+0.3
	baz=234							
NSTT	**Nanjuang**	**1.39**	**297**	P		**Pb**	02 24 01.5	-0.1
	baz=293							
NSTT				*e*S		**Sb**	02 24 19.8	+0.8
	baz=293							
EDH	**Donghe**	**1.41**	**224**	*e*P		**Pn**	02 23 59.1	-1.6
	baz=214							
EDH				*e*S		**Sn**	02 24 16.5	-2.2
	baz=214							
TWY	**Chenhua**	**1.45**	**331**	*e*P		**Pb**	02 24 02.7	+0.1
	baz=328							
TWQ1	**Liyutan**	**1.49**	**284**	*e*P		**Pb**	02 24 03.7	+0.3
	baz=280							
ALS	**Alishan**	**1.51**	**251**	P		**Pb**	02 24 03.9	+0.1
	baz=249							
ALS				*e*S		**Sn**	02 24 20.7	-0.9
	baz=249							
JKRS	**Kuro-shima**	**1.52**	**81**	S		**Sn**	02 24 21.8	+0.4
WWF	**Wufeng**	**1.52**	**272**	*e*P		**Pb**	02 24 04.2	+0.3
	baz=269							
WNT	**Mingjian**	**1.54**	**266**	*e*P		**Pb**	02 24 04.1	0.0
	baz=263							
LDUT	**Ludao**	**1.56**	**212**	*e*P		**Pn**	02 24 01.7	-1.1
	baz=212							
LONT	**Longtian**	**1.57**	**226**	*e*P		**Pn**	02 24 04.0	+1.1
	baz=238							
CHN5	**Tsauling**	**1.60**	**256**	*e*P		**Pb**	02 24 04.9	-0.2
	baz=243							
CHN5				*e*S		**Sb**	02 24 25.3	+0.4
	baz=243							
JIJ	**Ishigaki jima**	**1.66**	**77**	P		**Pn**	02 24 05.0	+0.8
JIJ				*e*S		**Sn**	02 24 25.4	+0.5
TWGBT	**Beinan**	**1.67**	**225**	*e*P		**Pn**	02 24 04.0	-0.2
	baz=235							
TWG	**Pinlang**	**1.67**	**226**	*e*P		**Pn**	02 24 04.0	-0.3
	baz=235							
STYT	**Tauyuan**	**1.69**	**241**	*e*P		**Pn**	02 24 05.4	+0.7
	baz=230							
STYT				*e*S		**Sn**	02 24 26.4	+0.7
	baz=230							
WDLH	**Douliu**	**1.70**	**260**	*e*P		**Pb**	02 24 07.1	+0.3
	baz=258							
WDLH				*e*S		**Sb**	02 24 27.8	0.0
	baz=258							
TPUB	**Ta-pu**	**1.74**	**247**	P		**Pb**	02 24 06.8	-0.8
	baz=245							
TPUB				*e*S		**Sn**	02 24 28.0	+1.2
	baz=245							
WRL	**Guolierlin Hig**	**1.82**	**267**	*e*P		**Pb**	02 24 07.8	-1.1
	baz=265							
WRL				*e*S		**Sb**	02 24 31.2	-0.1
	baz=265							
JISG	**Ishigakijimahi**	**1.87**	**71**	P		**Pn**	02 24 07.6	+0.6
JISG				*e*S		**Sn**	02 24 29.2	-0.8
SLGT	**Liugui**	**1.87**	**238**	*e*P		**Pb**	02 24 10.2	+0.5
	baz=229							
SLGT				*e*S		**Sb**	02 24 31.9	-0.8
	baz=229							
TWK	**Hsinying**	**1.87**	**247**	*e*P		**Pb**	02 24 09.1	-0.6
	baz=246							
TWK				*e*S		**Sb**	02 24 33.6	+0.9
	baz=246							
SSD	**Sandimen**	**2.02**	**232**	*e*P		**Pn**	02 24 11.1	+1.9
	baz=222							
MASBT	**Mashibuluo**	**2.11**	**229**	*e*P		**Pn**	02 24 10.5	+0.2
	baz=221							
JTJ	**Tarama**	**2.23**	**73**	*e*S		**Sn**	02 24 39.8	+1.0
SCZT	**Fangliau**	**2.28**	**225**	*e*P		**Pn**	02 24 13.1	+0.4
	baz=224							
SLIU	**Shizi**	**2.29**	**219**	*e*P		**Pn**	02 24 12.3	-0.5
	baz=219							
TWKBT	**Hengchun**	**2.50**	**215**	*e*P		**Pn**	02 24 16.5	+0.7
	baz=216							
WDGT	**Dungji**	**2.59**	**254**	*e*P		**Pn**	02 24 17.8	+0.8
	baz=252							
VWUC	**VWUC**	**2.83**	**291**	*e*P		**Pn**	02 24 19.6	-0.7
	baz=288							
MATB	**Ma-tsu**	**3.06**	**315**	*e*P		**Pn**	02 24 22.9	-0.6
	baz=310							
PTMZ	**Houxiangcun**	**3.13**	**290**	*e*P		**Pn**	02 24 24.1	-0.2
	baz=287							
KNMB	**Chin-men Tao**	**3.66**	**278**	*e*P		**Pn**	02 24 31.1	-0.6
	baz=276							

JMA ***20*** *02:26:54.9±0.2, 23°.95N×122°.38E, h17km±4km, M2.6*
TAP ***20*** *02:26:56.1, 24°.04N×122°.34E, h26km, ML3.0, D*
ISC 20 02:26:55.0±1.0, 23°.97N±0°.02×122°.37E±0°.02, h20km±7km, n76, σ0s59/118, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TWD	**Chiawan**	**0.71**	**279**	P		**Pb**	**02 27 09.6**	**+0.8**
	baz=273							
TWD				*i* S		**Sb**	**02 27 18.9**	**+0.8**
	baz=273							
JYNG	**Yonagunijimaku**	**0.72**	**47**	P		**Pb**	**02 27 08.7**	**-0.1**
JYNG				S		**Sb**	**02 27 17.6**	**-0.6**
EWUT	**Wuta**	**0.72**	**312**	P		**Pb**	**02 27 09.4**	**+0.6**
	baz=316							
EWUT				S		**Sb**	**02 27 19.2**	**+0.9**
	baz=316							
NACB	**Ninganchiao**	**0.73**	**287**	P		**Pb**	**02 27 09.2**	**+0.1**
	baz=268							
NACB				S		**Sb**	**02 27 18.3**	**-0.4**
	baz=268							
YOJ	**Yonaguni jima**	**0.77**	**50**	P		**Pb**	**02 27 09.6**	**-0.1**
YOJ				S		**Sb**	**02 27 19.0**	**-0.7**
YOJ	**Yonaguni jima**	**0.77**	**50**	P		**Pb**	**02 27 09.7**	**0.0**
	baz=62							
YOJ				*e*S		**Sb**	**02 27 19.2**	**-0.5**
	baz=62							
TWC	**Suao**	**0.80**	**324**	↓ *i* P		**Pb**	**02 27 09.7**	**-0.5**
	baz=321							
TWC				S		**Sb**	**02 27 19.6**	**-0.8**
	baz=321							
ETLH	**Xiulin Townshi**	**0.84**	**287**	*i* P		**Pb**	**02 27 11.3**	**+0.3**
	baz=270							
ETLH				*i* S		**Sb**	**02 27 22.8**	**+0.8**
	baz=270							
ESL	**Shilin**	**0.87**	**260**	*e*P		**Pb**	**02 27 10.8**	**-0.5**
	baz=246							
ESL				*e*S		**Sb**	**02 27 22.6**	**+0.1**
	baz=246							
NDS	**Dongshan**	**0.89**	**318**	P		**Pb**	**02 27 11.8**	**0.0**
	baz=315							
NDS				S		**Sb**	**02 27 22.9**	**-0.4**
	baz=315							
EGFH	**Guangfu**	**0.91**	**251**	*e*P		**Pb**	**02 27 12.1**	**0.0**
	baz=246							
EGFH				*e*S		**Sb**	**02 27 24.6**	**+0.9**
	baz=246							
EGS		**0.96**	**336**	P		**Pb**	**02 27 13.1**	**+0.2**
	baz=326							
EGS				*e*S		**Sn**	**02 27 25.9**	**-0.6**
	baz=326							
HGSD	**Ruisui**	**0.98**	**242**	*e*P		**Pb**	**02 27 12.6**	**-0.7**
	baz=238							
HGSD				*e*S		**Sb**	**02 27 26.1**	**+0.2**
	baz=238							
TWE	**Neicheng**	**0.99**	**320**	P		**Pn**	**02 27 13.6**	**-0.1**
	baz=325							
TWE				*e*S		**Sn**	**02 27 26.4**	**-0.7**
	baz=325							
ENTT	**Nioudou**	**0.99**	**313**	*e*P		**Pb**	**02 27 13.4**	**-0.1**
	baz=309							
ENTT				*e*S		**Sb**	**02 27 25.7**	**-0.5**
	baz=309							
NDT	**Datong Townshi**	**1.00**	**309**	P		**Pn**	**02 27 14.0**	**0.0**
	baz=305							
NDT				S		**Sb**	**02 27 26.7**	**+0.2**
	baz=305							
NNSB	**Datong**	**1.01**	**297**	P		**Pb**	**02 27 13.9**	**0.0**
	baz=293							
NNSB				S		**Sb**	**02 27 27.1**	**+0.4**
	baz=293							
NNSH	**Datong**	**1.01**	**297**	P		**Pb**	**02 27 13.9**	**0.0**
	baz=293							
NNSH				*e*S		**Sb**	**02 27 26.9**	**+0.1**
	baz=293							
NTC	**Toucheng**	**1.01**	**331**	*e*P		**Pn**	**02 27 14.0**	**-0.1**
	baz=328							
NTC				*e*S		**Sn**	**02 27 27.8**	**+0.2**
	baz=328							
WHF	**Hehuan Shan**	**1.02**	**280**	P		**Pb**	**02 27 14.1**	**-0.2**
	baz=263							
WHF				*e*S		**Sb**	**02 27 27.1**	**-0.3**
	baz=263							
NNS	**Nan Shan**	**1.02**	**298**	P		**Pb**	**02 27 14.2**	**+0.1**
	baz=294							
NNS				*e*S		**Sb**	**02 27 27.3**	**+0.2**
	baz=294							
FUSS	**Fushou**	**1.06**	**286**	*e*P		**Pb**	**02 27 15.0**	**+0.1**
	baz=281							
FUSS				*e*S		**Sb**	**02 27 28.6**	**+0.1**
	baz=281							
OWD	**Renai**	**1.09**	**270**	P		**Pn**	**02 27 14.8**	**-0.5**
	baz=265							
OWD				*e*S		**Sb**	**02 27 28.8**	**-0.2**
	baz=265							
CHGB	**Renai**	**1.09**	**275**	P		**Pn**	**02 27 15.1**	**-0.3**
	baz=259							
CHGB				S		**Sb**	**02 27 29.3**	**0.0**
	baz=259							
TWB1	**Santiao Chiao**	**1.09**	**342**	*e*P		**Pb**	**02 27 15.3**	**+0.1**
	baz=340							
TIPB	**Shuangxi**	**1.12**	**334**	P		**Pn**	**02 27 15.4**	**-0.1**
	baz=331							
TIPB				*e*S		**Sn**	**02 27 29.8**	**-0.5**
	baz=331							
TWT	**Tachien**	**1.12**	**285**	*e*P		**Pb**	**02 27 16.6**	**+0.7**
	baz=270							
TWT				*e*S		**Sn**	**02 27 30.7**	**-0.1**
	baz=270							
NWLT	**Wulai**	**1.13**	**316**	*e*P		**Pn**	**02 27 15.6**	**-0.1**
	baz=312							
NWLT				*e*S		**Sb**	**02 27 30.1**	**0.0**
	baz=312							
YULB	**Yu-li**	**1.13**	**240**	P		**Pn**	**02 27 15.5**	**-0.2**
	baz=252							
YULB				*e*S		**Sb**	**02 27 29.5**	**-0.7**
	baz=252							
EYUL	**Yuli**	**1.14**	**238**	*e*P		**Pn**	**02 27 15.5**	**-0.3**
	baz=234							
TDCB	**Techi**	**1.14**	**285**	P		**Pn**	**02 27 16.0**	**0.0**
	baz=270							
TDCB				S		**Sb**	**02 27 30.5**	**-0.1**
	baz=270							
VWDT	**VWDT**	**1.14**	**260**	P		**Pn**	**02 27 15.9**	**+0.2**
	baz=256							
VWDT				*e*S		**Sb**	**02 27 30.3**	**-0.1**
	baz=256							
YHNB	**Yeheng**	**1.14**	**308**	P		**Pn**	**02 27 16.1**	**+0.1**
	baz=304							
YHNB				S		**Sn**	**02 27 30.8**	**-0.3**
	baz=304							
NSK	**Sanguang**	**1.16**	**308**	P		**Pn**	**02 27 16.2**	**+0.1**
	baz=304							
NSK				S		**Sn**	**02 27 31.1**	**-0.3**
	baz=304							
NWF	**Wu-fen Shan**	**1.22**	**334**	P		**Pn**	**02 27 16.7**	**-0.3**
	baz=332							
WFSB	**Wu-fen Shan**	**1.22**	**334**	*e*P		**Pn**	**02 27 16.5**	**-0.5**
	baz=332							
TWA	**Mucha**	**1.24**	**325**	*e*P		**Pb**	**02 27 17.5**	**-0.1**
	baz=323							
FULB	**Fuli**	**1.25**	**232**	*e*P		**Pn**	**02 27 16.8**	**-0.4**
	baz=230							
TATO	**Taipei**	**1.29**	**322**	*e*P		**Pn**	**02 27 18.1**	**+0.3**
	baz=318							
TNOU	**National Taiwa**	**1.30**	**336**	*e*P		**Pb**	**02 27 18.5**	**-0.2**
	baz=333							
IRIF	**Iriomote-Funau**	**1.30**	**73**	P		**Pn**	**02 27 18.6**	**+0.6**
IRIF				*e*S		**Sn**	**02 27 35.0**	**+0.3**
WCS	**Beigang Elemen**	**1.33**	**274**	*e*P		**Pb**	**02 27 19.9**	**+0.6**
	baz=270							
WHP	**Taichung City**	**1.33**	**284**	*e*P		**Pb**	**02 27 20.4**	**+1.0**
	baz=270							
SMLT	**Sun Moon Lake**	**1.34**	**267**	*e*P		**Pn**	**02 27 19.1**	**+0.4**
	baz=263							
TYC	**Yuchr**	**1.38**	**268**	*e*P		**Pb**	**02 27 20.5**	**+0.4**
	baz=264							
YM01	**YM01**	**1.38**	**329**	*e*P		**Pb**	**02 27 19.8**	**-0.4**
	baz=341							
EDH	**Donghe**	**1.39**	**225**	*e*P		**Pn**	**02 27 19.2**	**0.0**
	baz=214							
EDH				*e*S		**Sn**	**02 27 35.3**	**-1.7**
	baz=214							
YM10	**YM10**	**1.39**	**328**	*e*P		**Pn**	**02 27 19.5**	**+0.2**
	baz=341							
YM11	**YM11**	**1.40**	**329**	*e*P		**Pn**	**02 27 19.7**	**+0.3**
	baz=341							
YM05	**YM05**	**1.40**	**329**	*e*P		**Pn**	**02 27 19.4**	**0.0**
	baz=341							
YM04	**YM04**	**1.40**	**328**	*e*P		**Pn**	**02 27 18.9**	**-0.6**
	baz=340							
LIOB	**Emei**	**1.41**	**299**	*e*P		**Pb**	**02 27 20.8**	**+0.2**
	baz=296							
YM08	**YM08**	**1.41**	**330**	*e*P		**Pn**	**02 27 19.8**	**+0.3**
	baz=327							
NSTT	**Nanjuang**	**1.41**	**298**	*e*P		**Pn**	**02 27 20.0**	**+0.4**
	baz=295							
NSTT				*e*S		**Sb**	**02 27 38.8**	**+0.6**
	baz=295							
ELDTW	**Lidau**	**1.46**	**238**	*e*P		**Pn**	**02 27 20.4**	**+0.1**
	baz=236							
ALS	**Alishan**	**1.50**	**253**	*e*P		**Pn**	**02 27 21.8**	**+0.7**
	baz=250							
TWQ1	**Liyutan**	**1.50**	**285**	*e*P		**Pb**	**02 27 22.5**	**+0.2**
	baz=282							
TWQ1				*e*S		**Sb**	**02 27 42.2**	**+1.3**
	baz=282							
WJS	**Zhushan**	**1.51**	**265**	*e*P		**Pb**	**02 27 22.3**	**+0.1**
	baz=262							
JKRS	**Kuro-shima**	**1.53**	**79**	*e*S		**Sb**	**02 27 41.6**	**+0.1**
LDUT	**Ludao**	**1.53**	**213**	*e*P		**Pn**	**02 27 20.1**	**-1.0**
	baz=212							
LDUT				*e*S		**Sn**	**02 27 39.0**	**-1.3**
	baz=212							
LONT	**Longtian**	**1.55**	**227**	*e*P		**Pn**	**02 27 22.1**	**+0.7**
	baz=237							
CHN5	**Tsauling**	**1.59**	**257**	*e*P		**Pb**	**02 27 23.8**	**+0.1**
	baz=244							
CHN5				*e*S		**Sb**	**02 27 43.7**	**+0.3**
	baz=244							
TWGBT	**Beinan**	**1.64**	**226**	*e*P		**Pn**	**02 27 22.6**	**-0.2**
	baz=237							
TWGBT				*e*S		**Sn**	**02 27 42.6**	**-0.6**
	baz=237							
TWG	**Pinlang**	**1.65**	**226**	*e*P		**Pn**	**02 27 22.8**	**0.0**
	baz=237							
TWG				*e*S		**Sn**	**02 27 42.4**	**-0.9**
	baz=237							
JIJ	**Ishigaki jima**	**1.67**	**76**	P		**Pn**	**02 27 24.3**	**+1.2**
JIJ				*e*S		**Sn**	**02 27 45.0**	**+1.1**
JISG	**Ishigakijimahi**	**1.88**	**70**	P		**Pn**	**02 27 26.4**	**+0.4**
JISG				S		**Sn**	**02 27 48.1**	**-1.0**
ECL	**Taimali**	**1.88**	**224**	*e*P		**Pn**	**02 27 27.1**	**+1.1**
	baz=233							
SSD	**Sandimen**	**2.00**	**233**	*e*P		**Pn**	**02 27 29.5**	**+1.8**
	baz=223							
TSMG	**Majia**	**2.02**	**232**	*e*P		**Pb**	**02 27 30.2**	**-0.8**
	baz=222							
MASBT	**Mashibuluo**	**2.09**	**230**	*e*P		**Pn**	**02 27 29.5**	**+0.7**
	baz=221							
EAST	**Anshuo**	**2.10**	**222**	*e*P		**Pn**	**02 27 30.1**	**+1.0**
	baz=221							
TWKBT	**Hengchun**	**2.47**	**216**	*e*P		**Pn**	**02 27 35.9**	**+1.7**
	baz=216							
WDGT	**Dungji**	**2.58**	**255**	*e*P		**Pn**	**02 27 36.7**	**+1.1**
	baz=253							
VWUC	**VWUC**	**2.85**	**292**	*e*P		**Pn**	**02 27 39.5**	**+0.2**
	baz=289							
PTMZ	**Houxiangcun**	**3.15**	**291**	*e*P		**Pn**	**02 27 43.5**	**+0.2**
	baz=288							
XPSS	**Dashiqiu**	**3.55**	**327**	*e*P		**Pn**	**02 27 48.8**	**-0.1**
	baz=333							

JMA ***20*** *02:40:46.8±0.1, 23°.95N×122°.39E, h28km±3km, M2.6*
TAP ***20*** *02:40:47.2, 24°.03N×122°.39E, h27km, ML3.2, D*
ISC 20 02:40:46.6±1.1, 23°.97N±0°.03×122°.39E±0°.02, h24km±13km, n79, σ0s77/134, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JYNG	**Yonagunijimaku**	**0.69**	**47**	P		**Pb**	**02 41 00.2**	**+0.1**
JYNG				S		**Sb**	**02 41 09.0**	**-0.3**
EWUT	**Wuta**	**0.73**	**310**	*i* P		**Pb**	**02 41 00.5**	**-0.2**
	baz=306							
EWUT				S		**Sn**	**02 41 10.7**	**-1.2**
	baz=306							
TWD	**Chiawan**	**0.73**	**278**	P		**Pb**	**02 41 00.5**	**-0.3**
	baz=274							
TWD				S		**Sb**	**02 41 10.6**	**+0.1**
	baz=274							
YOJ	**Yonaguni jima**	**0.75**	**49**	P		**Pb**	**02 41 01.2**	**+0.2**
YOJ				*e*S		**Sb**	**02 41 10.7**	**0.0**
YOJ	**Yonaguni jima**	**0.75**	**49**	*i* P		**Pb**	**02 41 01.0**	**+0.1**
	baz=61							
YOJ				*e*S		**Sb**	**02 41 10.4**	**-0.4**
	baz=61							
NACB	**Ninganchiao**	**0.76**	**285**	P		**Pb**	**02 41 01.1**	**0.0**
	baz=267							
NACB				*e*S		**Sb**	**02 41 10.7**	**-0.3**
	baz=267							
TWC	**Suao**	**0.80**	**322**	P		**Pb**	**02 41 01.4**	**-0.5**
	baz=320							
TWC				*e*S		**Sb**	**02 41 11.6**	**-0.8**
	baz=320							
ETLH	**Xiulin Townshi**	**0.86**	**286**	P		**Pb**	**02 41 02.7**	**-0.3**
	baz=269							
ETLH				*e*S		**Sb**	**02 41 14.2**	**0.0**
	baz=269							
NDS	**Dongshan**	**0.90**	**317**	P		**Pb**	**02 41 03.5**	**-0.2**
	baz=314							
NDS				*e*S		**Sb**	**02 41 14.7**	**-0.5**
	baz=314							
EGFH	**Guangfu**	**0.93**	**251**	P		**Pn**	**02 41 04.8**	**+0.6**
	baz=247							
EGFH				*e*S		**Sb**	**02 41 16.2**	**+0.1**
	baz=247							
EGS		**0.96**	**334**	P		**Pb**	**02 41 04.8**	**+0.2**
	baz=324							
EGS				*e*S		**Sn**	**02 41 18.6**	**+1.0**
	baz=324							
TWE	**Neicheng**	**0.99**	**319**	P		**Pb**	**02 41 05.4**	**+0.2**
	baz=316							
TWE				*e*S		**Sn**	**02 41 18.3**	**-0.1**
	baz=316							
ENTT	**Nioudou**	**1.00**	**312**	P		**Pb**	**02 41 05.4**	**0.0**
	baz=308							
ENTT				*e*S		**Sn**	**02 41 18.1**	**-0.6**
	baz=308							
HGSD	**Ruisui**	**1.01**	**242**	P		**Pn**	**02 41 04.2**	**-1.1**
	baz=238							
HGSD				*e*S		**Sn**	**02 41 18.0**	**-0.7**
	baz=238							
NTC	**Toucheng**	**1.01**	**330**	P		**Pb**	**02 41 05.3**	**-0.2**
	baz=327							
NTC				*e*S		**Sn**	**02 41 20.2**	**+1.2**
	baz=327							
NDT	**Datong Townshi**	**1.02**	**308**	P		**Pb**	**02 41 05.5**	**-0.1**
	baz=305							
NDT				*e*S		**Sn**	**02 41 18.3**	**-0.7**
	baz=305							
NNSB	**Datong**	**1.03**	**296**	*i* P		**Pn**	**02 41 05.6**	**-0.1**
	baz=293							
NNSB				*e*S		**Sn**	**02 41 19.2**	**-0.2**
	baz=293							
NNSH	**Datong**	**1.03**	**296**	P		**Pn**	**02 41 05.6**	**-0.1**
	baz=293							
NNSH				*e*S		**Sn**	**02 41 19.2**	**-0.2**
	baz=293							
NNS	**Nan Shan**	**1.04**	**297**	*i* P		**Pn**	**02 41 05.8**	**-0.1**
	baz=293							
NNS				*e*S		**Sn**	**02 41 19.2**	**-0.5**
	baz=293							
WHF	**Hehuan Shan**	**1.04**	**280**	P		**Pn**	**02 41 05.9**	**-0.3**
	baz=263							
WHF				*e*S		**Sb**	**02 41 19.4**	**-0.3**
	baz=263							
FUSS	**Fushou**	**1.08**	**285**	P		**Pn**	**02 41 06.7**	**+0.1**
	baz=281							
FUSS				*e*S		**Sb**	**02 41 20.8**	**+0.2**
	baz=281							
TWB1	**Santiao Chiao**	**1.09**	**340**	*e*P		**Pb**	**02 41 06.7**	**-0.1**
	baz=339							
OWD	**Renai**	**1.11**	**269**	P		**Pn**	**02 41 06.8**	**-0.1**
	baz=266							
OWD				S		**Sn**	**02 41 20.8**	**-0.7**
	baz=266							
CHGB	**Renai**	**1.12**	**275**	P		**Pn**	**02 41 06.7**	**-0.3**
	baz=260							
CHGB				*e*S		**Sn**	**02 41 20.9**	**-0.9**
	baz=260							
TIPB	**Shuangxi**	**1.12**	**333**	P		**Pb**	**02 41 07.3**	**-0.1**
	baz=330					

YULB	**Yu-li**	**1.16**	**240**	*i* P	**Pn**	**02 41 07.0**	**-0.4**
	baz=253						
YULB				*e*S	**Sn**	**02 41 21.2**	**-1.3**
	baz=253						
TDCB	**Techi**	**1.16**	**284**	*e*P	**Pn**	**02 41 07.8**	**+0.3**
	baz=268						
TDCB				*e*S	**Sb**	**02 41 23.0**	**+0.2**
	baz=268						
EYUL	**Yuli**	**1.16**	**238**	*e*P	**Pn**	**02 41 07.2**	**-0.3**
	baz=235						
EYUL				*e*S	**Sn**	**02 41 22.2**	**-0.4**
	baz=235						
VWDT	**VWDT**	**1.17**	**259**	P	**Pn**	**02 41 08.0**	**+0.5**
	baz=256						
VWDT				*e*S	**Sn**	**02 41 22.0**	**-0.6**
	baz=256						
NSK	**Sanguang**	**1.17**	**307**	P	**Pn**	**02 41 07.6**	**-0.1**
	baz=304						
NSK				*e*S	**Sb**	**02 41 22.6**	**-0.5**
	baz=304						
NWF	**Wu-fen Shan**	**1.23**	**333**	*e*P	**Pn**	**02 41 08.2**	**-0.1**
	baz=332						
NWF				*e*S	**Sb**	**02 41 25.3**	**+0.6**
	baz=332						
WFSB	**Wu-fen Shan**	**1.23**	**333**	*e*P	**Pn**	**02 41 08.1**	**-0.2**
	baz=330						
WFSB				*e*S	**Sb**	**02 41 24.8**	**+0.3**
	baz=330						
TWA	**Mucha**	**1.24**	**324**	*e*P	**Pb**	**02 41 10.4**	**+1.0**
	baz=321						
TWA				*e*S	**Sb**	**02 41 25.6**	**+0.6**
	baz=321						
FULB	**Fuli**	**1.27**	**233**	*e*P	**Pn**	**02 41 08.5**	**-0.4**
	baz=218						
FULB				*e*S	**Sn**	**02 41 24.6**	**-0.6**
	baz=218						
IRIF	**Iriomote-Funau**	**1.27**	**73**	P	**Pn**	**02 41 09.0**	**0.0**
TATO	**Taipei**	**1.29**	**321**	*e*P	**Pb**	**02 41 09.9**	**-0.4**
	baz=317						
TNOU	**National Taiwa**	**1.30**	**334**	*e*P	**Pb**	**02 41 10.4**	**0.0**
	baz=332						
SSLB	**Suanglung**	**1.33**	**262**	*e*P	**Pn**	**02 41 09.6**	**-0.1**
	baz=259						
DPDB	**Guoxing**	**1.34**	**273**	*e*P	**Pn**	**02 41 10.4**	**+0.5**
	baz=270						
WHP	**Taichung City**	**1.35**	**283**	*e*P	**Pb**	**02 41 12.1**	**+0.7**
	baz=269						
WHP				*e*S	**Sb**	**02 41 28.7**	**+0.4**
	baz=269						
WCS	**Beigang Elemen**	**1.36**	**274**	*e*P	**Pn**	**02 41 10.5**	**+0.4**
	baz=263						
WCS				*e*S	**Sb**	**02 41 28.3**	**+0.1**
	baz=263						
SMLT	**Sun Moon Lake**	**1.37**	**267**	*e*P	**Pn**	**02 41 11.4**	**+1.0**
	baz=253						
SMLT				*e*S	**Sn**	**02 41 27.9**	**+0.1**
	baz=253						
YM01	**YM01**	**1.39**	**328**	*e*P	**Pn**	**02 41 10.9**	**+0.3**
	baz=339						
YM10	**YM10**	**1.40**	**327**	*e*P	**Pn**	**02 41 10.1**	**-0.7**
	baz=339						
YM11	**YM11**	**1.40**	**328**	*e*P	**Pb**	**02 41 11.7**	**-0.5**
	baz=325						
YM05	**YM05**	**1.40**	**328**	*e*P	**Pn**	**02 41 11.1**	**+0.3**
	baz=325						
YUS	**Yu-Shan**	**1.40**	**250**	*e*S	**Sn**	**02 41 29.4**	**+0.2**
	baz=247						
TYC	**Yuchr**	**1.41**	**267**	*e*P	**Pb**	**02 41 12.1**	**-0.1**
	baz=264						
TYC				*e*S	**Sn**	**02 41 29.3**	**+0.7**
	baz=264						
YM04	**YM04**	**1.41**	**327**	*e*P	**Pn**	**02 41 09.5**	**-1.4**
	baz=339						
EDH	**Donghe**	**1.41**	**225**	*e*P	**Pn**	**02 41 09.6**	**-1.2**
	baz=213						
EDH				*e*S	**Sn**	**02 41 26.4**	**-2.3**
	baz=213						
YM08	**YM08**	**1.41**	**329**	*e*P	**Pb**	**02 41 11.6**	**-0.7**
	baz=326						
LIOB	**Emei**	**1.42**	**298**	P	**Pb**	**02 41 12.6**	**+0.1**
	baz=295						
LIOB				*e*S	**Sb**	**02 41 31.2**	**+1.0**
	baz=295						
NSTT	**Nanjuang**	**1.43**	**298**	*e*P	**Pb**	**02 41 12.8**	**+0.3**
	baz=294						
NSTT				*e*S	**Sb**	**02 41 30.3**	**0.0**
	baz=294						
ELDTW	**Lidau**	**1.48**	**238**	P	**Pn**	**02 41 11.9**	**-0.1**
	baz=236						
ELDTW				*e*S	**Sn**	**02 41 29.6**	**-1.0**
	baz=236						
JKRS	**Kuro-shima**	**1.50**	**80**	*e*S	**Sb**	**02 41 31.9**	**-0.6**
TWQ1	**Liyutan**	**1.52**	**284**	*e*P	**Pb**	**02 41 14.4**	**+0.1**
	baz=281						
TWQ1				*e*S	**Sb**	**02 41 34.3**	**+1.2**
	baz=281						
ALS	**Alishan**	**1.52**	**253**	*e*P	**Pb**	**02 41 14.4**	**0.0**
	baz=250						
ALS				*e*S	**Sn**	**02 41 31.0**	**-1.0**
	baz=250						
LDUT	**Ludao**	**1.55**	**213**	P	**Pn**	**02 41 11.7**	**-1.0**
	baz=211						
LDUT				*e*S	**Sn**	**02 41 29.8**	**-2.2**
	baz=211						
LONT	**Longtian**	**1.57**	**228**	*e*P	**Pn**	**02 41 12.6**	**-0.5**
	baz=239						
CHN5	**Tsauling**	**1.61**	**257**	*e*P	**Pn**	**02 41 14.9**	**+1.2**
	baz=244						
CHN5				*e*S	**Sb**	**02 41 35.9**	**+0.2**
	baz=244						
JIJ	**Ishigaki jima**	**1.65**	**76**	P	**Pn**	**02 41 14.7**	**+0.6**
JIJ				S	**Sn**	**02 41 35.0**	**+0.5**
TWGBT	**Beinan**	**1.67**	**227**	*e*P	**Pn**	**02 41 13.8**	**-0.6**
	baz=237						
TWGBT				*e*S	**Sn**	**02 41 34.3**	**-0.7**
	baz=237						
TWG	**Pinlang**	**1.67**	**227**	*e*P	**Pn**	**02 41 14.9**	**+0.5**
	baz=237						
TWG				*e*S	**Sn**	**02 41 34.0**	**-1.1**
	baz=237						
STYT	**Tauyuan**	**1.70**	**242**	P	**Pn**	**02 41 15.6**	**+0.7**
	baz=230						
STYT				*e*S	**Sn**	**02 41 35.8**	**-0.2**
	baz=230						
TPUB	**Ta-pu**	**1.75**	**248**	*e*P	**Pb**	**02 41 17.8**	**-0.3**
	baz=246						
JISG	**Ishigakijimahi**	**1.85**	**70**	P	**Pn**	**02 41 18.4**	**+1.4**
JISG				S	**Sb**	**02 41 41.3**	**-1.3**
CHN1	**Nanshi**	**1.88**	**246**	*e*P	**Pn**	**02 41 19.3**	**+1.9**
	baz=244						
SSD	**Sandimen**	**2.03**	**233**	*e*P	**Pn**	**02 41 21.8**	**+2.4**
	baz=224						
TSMG	**Majia**	**2.04**	**232**	P	**Pn**	**02 41 21.1**	**+1.6**
	baz=224						
TSMG				*e*S	**Sn**	**02 41 45.2**	**+0.9**
	baz=224						
MASBT	**Mashibuluo**	**2.11**	**230**	*e*P	**Pn**	**02 41 20.7**	**+0.3**
	baz=223						
MASBT				*e*S	**Sn**	**02 41 47.4**	**+1.5**
	baz=223						
EAST	**Anshuo**	**2.13**	**222**	*e*P	**Pn**	**02 41 22.8**	**+2.0**
	baz=221						
SLIU	**Shizi**	**2.28**	**220**	*e*P	**Pn**	**02 41 24.0**	**+1.2**
	baz=220						
TWKBT	**Hengchun**	**2.49**	**216**	*e*P	**Pn**	**02 41 27.2**	**+1.5**
	baz=216						
WDGT	**Dungji**	**2.60**	**255**	*e*P	**Pn**	**02 41 29.0**	**+1.8**
	baz=254						
VWUC	**VWUC**	**2.87**	**291**	*e*P	**Pn**	**02 41 30.3**	**-0.6**
	baz=289						
PTMZ	**Houxiangcun**	**3.16**	**290**	*e*P	**Pn**	**02 41 34.5**	**-0.5**
	baz=288						

JMA 20 02:44:02.6±0.1, 24°.15N×122°.87E, h53km±3km, M2.3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.31**	**13**	P	Pn	02 44 12.1	0.0
JYNG				S	Sn	02 44 18.8	-0.1
YOJ	**Yonaguni jima**	**0.34**	**22**	P	Pn	02 44 12.4	+0.1
YOJ				S	Sn	02 44 19.5	+0.2
IRIF	**Iriomote-Funau**	**0.81**	**77**	P	Pn	02 44 17.8	0.0
IRIF				S	Sn	02 44 29.0	0.0
HATJ	**Hateruma jima**	**0.86**	**96**	P	Pn	02 44 18.6	+0.1
JKRS	**Kuro-shima**	**1.04**	**85**	P	Pn	02 44 21.8	+0.8
JIJ	**Ishigaki jima**	**1.18**	**79**	P	Pn	02 44 22.9	+0.1
JIJ				S	Sn	02 44 38.1	+0.2
JISG	**Ishigakijimahi**	**1.38**	**71**	P	Pn	02 44 25.9	+0.3
JISG				S	Sn	02 44 44.0	+1.2

TAP 20 02:44:32.1, 24°.37N×121°.76E, h13km±1km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.08**	**11**	P	Pg	02 44 35.3	+0.4
	baz=10.0						
EWUT				S	Sg	02 44 37.6	+0.7
	baz=10.0						
NACB	**Ninganchiao**	**0.24**	**219**	P	Pb	02 44 38.0	-0.5
	baz=218						
NACB				S	Sb	02 44 42.3	-0.3
	baz=218						
TWC	**Suao**	**0.26**	**18**	P	Pg	02 44 37.7	+0.1
	baz=20						
TWC				*e*S	Sg	02 44 41.2	0.0
	baz=20						
NDS	**Dongshan**	**0.27**	**351**	*e*P	Pg	02 44 38.2	+0.4
	baz=351						
NDS				*e*S	Sg	02 44 42.4	+0.8
	baz=351						
ETLH	**Xiulin Townshi**	**0.30**	**238**	P	Pb	02 44 39.1	-0.4
	baz=238						
ETLH				S	Sb	02 44 44.0	-0.4
	baz=238						
TWD	**Chiawan**	**0.32**	**208**	*e*P	Pg	02 44 39.1	+0.3
	baz=206						
ENTT	**Nioudou**	**0.33**	**327**	P	Pb	02 44 39.9	+0.1
	baz=327						
ENTT				S	Sb	02 44 44.9	-0.2
	baz=327						
NDT	**Datong Townshi**	**0.33**	**316**	P	Pb	02 44 39.8	-0.1
	baz=316						
NDT				S	Sb	02 44 45.1	+0.1
	baz=316						
NNSB	**Datong**	**0.35**	**280**	P	Pb	02 44 40.5	+0.1
	baz=280						
NNSB				S	Sb	02 44 45.4	-0.4
	baz=280						
NNSH	**Datong**	**0.35**	**280**	P	Pb	02 44 40.3	0.0
	baz=280						
NNSH				S	Sb	02 44 45.5	-0.3
	baz=280						
NNS	**Nan Shan**	**0.36**	**282**	P	Pb	02 44 40.5	0.0
	baz=281						
NNS				S	Sb	02 44 45.7	-0.5
	baz=281						
TWE	**Neicheng**	**0.36**	**346**	*e*P	Pb	02 44 40.1	-0.4
	baz=348						
YHNB	**Yeheng**	**0.46**	**311**	P	Pb	02 44 42.2	-0.1
	baz=310						
YHNB				S	Sb	02 44 48.8	-0.3
	baz=310						
NWLT	**Wulai**	**0.47**	**330**	*e*P	Pb	02 44 42.4	+0.1
	baz=330						
NSK	**Sanguang**	**0.48**	**310**	P	Pb	02 44 42.7	+0.1
	baz=310						
NSK				S	Sb	02 44 49.2	-0.4
	baz=310						

*NEIC **20** 02:59:08.4±1.1, 56°.7S±0°.1×26°.6W±0°.3, h88km±4km, mb4.3/10, Error ellipse: s-maj=26.1km s-min=16.4km az=46.0*
*IDC **20** 02:59:09.1±0.9, 56°.60S×26°.61W, h98km±7km, mb3.7/6, mb1 3.8/6, mb1mx3.6/17, mbtmp4.0/6, Error ellipse: s-maj=26.4km s-min=20.8km az=57.0*
ISC 20 02:59:08.0±0.6, 56°.6S±0°.1×26°.5W±0°.1, h88km, n42, σ0s76/40, mb4.0/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.14**	**288**	Pn	**Pn**	**03 00 36.0**	**+0.1**
VNA1	**Neumayer--Stat**	**16.14**	**158**	P	**P**	**03 02 51.4**	**+0.7**
VNA3	**Neumayer Olymp**	**16.34**	**161**	P	**P**	**03 02 53.0**	**0.0**
VNA2	**Neumayer--Watz**	**16.53**	**158**	P	**P**	**03 02 56.7**	**+1.6**
	baz=317,slow=13						
SNAA	**Sanae**	**18.08**	**156**	P	**P**	**03 03 12.3**	**+0.1**
SNAA	**Sanae**	**18.08**	**156**		**P**	**03 03 11.7**	**-0.5**
BELA	**Belgrano 2**	**21.55**	**185**	P	**P**	**03 03 48.2**	**-1.4**
BELA				IAmb	IAmb	03 03 51.2	
	comp=Z,16nm,0.7s						
QSPA	**South Pole Qui**	**33.64**	**180**	P	**P**	**03 05 40.0**	**+0.2**
QSPA				IAmb	IAmb	03 05 41.7	
	comp=Z,5.1nm,0.6s						
MAW	**Mawson**	**39.48**	**143**	P	**P**	**03 06 29.6**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=239,slow=6.8,SNR=3.2						
MAW	**Mawson**	**39.48**	**143**	P	**P**	**03 06 29.7**	**+0.7**
BOSA	**Boshof**	**45.74**	**75**	P	**P**	**03 07 20.8**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=198,slow=9.6,SNR=1.1						
LVC	**Limon Verde**	**45.91**	**300**	P	**P**	**03 07 22.1**	**0.0**
LVC				IAmb	IAmb	03 07 28.1	
	comp=Z,12nm,1.5s						
VNDA	**Vanda**	**46.03**	**183**	P	**P**	**03 07 22.3**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=184,slow=6.2,SNR=12						
VNDA	**Vanda**	**46.03**	**183**	P	**P**	**03 07 22.5**	**+0.6**
VNDA				IAmb	IAmb	03 07 22.8	
	comp=Z,1.9nm,0.8s						
H10S2	**ASCENSION HYDR**	**48.43**	**16**	T	T	04 00 27.8	
	baz=31,slow=74,SNR=10						
H10S3	**ASCENSION HYDR**	**48.43**	**16**	T	T	04 00 25.2	
	baz=189,slow=74,SNR=20						
MNMC	**Minye Minye**	**49.22**	**301**	P	**P**	**03 07 47.7**	**+0.1**
H10N1	**ASCENSION HYDR**	**49.55**	**16**	T	T	04 01 49.2	
	baz=188,slow=75,SNR=13						
H10N3	**ASCENSION HYDR**	**49.55**	**16**	T	T	04 01 51.7	
	baz=188,slow=75,SNR=24						
H10N2	**ASCENSION HYDR**	**49.56**	**16**	T	T	04 01 52.5	
	baz=188,slow=75,SNR=24						
PB16	**IPOC Station P**	**49.86**	**302**	P	**P**	**03 07 52.7**	**-0.2**
PB16				IAmb	IAmb	03 07 56.5	
	comp=Z,4.4nm,1.4s						
LPAZ	**La Paz**	**51.01**	**305**	P	**P**	**03 08 01.3**	**-0.2**
	comp=Z,2.8nm,0.5s,baz=169,slow=5.3,SNR=22						
LPAZ				pP	**pP**	**03 08 24.1**	**+1.6**
	comp=Z,0.8nm,0.5s,baz=166,slow=6.3,SNR=2.2						
LPAZ	**La Paz**	**51.01**	**305**	P	**P**	**03 08 01.4**	**-0.2**
TOA0	**Torodi Ar. Sit**	**73.36**	**29**	P	**P**	**03 10 30.8**	**+0.8**
TOA0				IAmb	IAmb	03 10 50.7	
	comp=Z,2.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**73.36**	**29**	P	**P**	**03 10 30.5**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=197,slow=6.2,SNR=4.8						
TORD				pP	**pwP**	**03 10 55.3**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=203,slow=6.3,SNR=2.2						
TORD	**Torodi Ar. Bea**	**73.36**	**29**	P	**P**	**03 10 30.9**	**+0.9**
ASAR	**Alice Springs**	**98.34**	**162**	P	**P**	**03 12 35.1**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=186,slow=3.7,SNR=1.9						
YKA	**Yellowknife Ar**	**136.84**	**317**	PKP	**PKPdf**	**03 18 17.8**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=120,slow=3.0,SNR=9.6						
PCA	**Pinnacle**	**146.37**	**304**	PKPdf	**PKPbc**	**03 18 37.4**	**+0.1**
INK	**Inuvik**	**146.48**	**320**	PKPdf	**PKPbc**	**03 18 36.8**	**-0.5**
EPYK	**Eagle Plains**	**147.09**	**316**	PKPdf	**PKPbc**	**03 18 38.5**	**-0.7**
DAWY	**Dawson**	**147.45**	**311**	PKPdf	**PKPbc**	**03 18 39.6**	**-0.6**
L27K	**Beaver Creek,**	**148.16**	**309**	PKPab	**PKPab**	**03 18 45.6**	**+0.2**
KLU	**Klutina**	**149.47**	**305**	PKPbc	**PKPbc**	**03 18 46.2**	**+0.7**
SCM	**Sheep Creek Mo**	**150.21**	**305**	PKPbc	**PKiKP**	**03 18 47.9**	**-0.1**
SONM	**Songino Array**	**150.38**	**87**	PKPbc	**PKPbc**	**03 18 47.1**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=254,slow=2.8,SNR=3.0						
IL31		**150.77**	**311**	PKPbc	**PKPbc**	**03 18 48.1**	**-0.2**
ILAR	**Eielson Array**	**150.77**	**311**	PKPbc	**PKPbc**	**03 18 47.8**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=121,slow=0.7,SNR=17						
ILAR				pPKPbc	**sPKPdf**	**03 19 14.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=153,slow=3.3,SNR=3.0						
ILAR	**Eielson Array**	**150.77**	**311**		**PKPbc**	**03 18 47.7**	**-0.8**
POKR	**Poker Plat Res**	**151.07**	**311**	PKPbc	**PKiKP**	**03 18 50.7**	**+1.1**
CCB	**Clear Creek Bu**	**151.13**	**310**	PKPbc	**PKPbc**	**03 18 48.5**	**-0.7**
RND	**Reindeer**	**151.31**	**308**	PKPbc	**PKPbc**	**03 18 49.9**	**+0.1**

*JMA **20** 02:59:56.5±0.1, 23°.97N×122°.42E, h19km±3km, M2.4*
*TAP **20** 02:59:57.2, 24°.09N×122°.42E, h29km, ML2.9, D*
ISC 20 02:59:56.8±1.1, 24°.01N±0°.02×122°.41E±0°.02, h24km±13km, n62, σ0s45/115, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.66**	**48**	P	**Pb**	**03 00 09.4**	**-0.2**
JYNG				S	**Sb**	**03 00 19.0**	**+0.6**
YOJ	**Yonaguni jima**	**0.71**	**51**	P	**Pb**	**03 00 10.2**	**-0.4**
YOJ				S	**Sb**	**03 00 19.8**	**-0.1**
YOJ	**Yonaguni jima**	**0.71**	**51**	P	**Pb**	**03 00 10.2**	**-0.4**
	baz=54						
YOJ				S	**Sb**	**03 00 20.0**	**+0.1**
	baz=54						
EWUT	**Wuta**	**0.72**	**307**	*e*P	**Pb**	**03 00 10.8**	**+0.2**
	baz=301						
EWUT				*e*S	**Sb**	**03 00 19.9**	**-0.1**
	baz=301						
TWD	**Chiawan**	**0.74**	**276**	S	**Sn**	**03 00 22.8**	**+0.5**
	baz=270						
NACB	**Ninganchiao**	**0.76**	**283**	P	**Pb**	**03 00 11.1**	**-0.2**
	baz=261						
NACB				S	**Sb**	**03 00 22.1**	**+0.8**
	baz=261						
TWC	**Suao**	**0.78**	**320**	*i* P	**Pb**	**03 00 11.2**	**-0.6**
	baz=315						
TWC				*i* S	**Sb**	**03 00 21.4**	**-0.5**
	baz=315						
ETLH	**Xiulin Townshi**	**0.87**	**283**	P	**Pb**	**03 00 13.3**	**+0.2**
	baz=278						
ETLH				*e*S	**Sn**	**03 00 25.2**	**-0.3**
	baz=278						
NDS	**Dongshan**	**0.88**	**315**	*e*P	**Pb**	**03 00 13.6**	**+0.1**
	baz=310						
NDS				S	**Sb**	**03 00 24.9**	**+0.1**
	baz=310						
EGS		**0.94**	**333**	*i* P	**Pb**	**03 00 14.2**	**-0.1**
	baz=317						
EGS				*i* S	**Sb**	**03 00 25.6**	**-0.7**
	baz=317						
EGFH	**Guangfu**	**0.96**	**249**	*e*P	**Pb**	**03 00 14.2**	**-0.4**
	baz=245						
EGFH				S	**Sn**	**03 00 27.6**	**0.0**
	baz=245						
TWE	**Neicheng**	**0.98**	**317**	P	**Pn**	**03 00 14.8**	**-0.2**
	baz=313						
TWE				S	**Sb**	**03 00 27.3**	**-0.2**
	baz=313						
ENTT	**Nioudou**	**0.99**	**310**	*i* P	**Pb**	**03 00 15.5**	**+0.3**
	baz=305						
ENTT				S	**Sn**	**03 00 28.4**	**-0.1**
	baz=305						
NTC	**Toucheng**	**0.99**	**328**	P	**Pb**	**03 00 15.3**	**+0.1**
	baz=325						
NTC				*e*S	**Sb**	**03 00 27.8**	**-0.1**
	baz=325						
NDT	**Datong Townshi**	**1.00**	**306**	P	**Pb**	**03 00 16.3**	**+0.8**
	baz=302						
NDT				S	**Sn**	**03 00 29.2**	**+0.3**
	baz=302						
NNSB	**Datong**	**1.02**	**294**	P	**Pn**	**03 00 15.4**	**-0.4**
	baz=290						
NNSB				S	**Sb**	**03 00 29.0**	**+0.1**
	baz=290						
NNSH	**Datong**	**1.02**	**294**	*e*P	**Pn**	**03 00 15.4**	**-0.3**
	baz=290						
NNSH				S	**Sb**	**03 00 28.6**	**-0.3**
	baz=290						
NNS	**Nan Shan**	**1.03**	**295**	P	**Pb**	**03 00 16.6**	**+0.6**
	baz=290						
NNS				S	**Sb**	**03 00 29.1**	**-0.2**
	baz=290						
HGSD	**Ruisui**	**1.04**	**240**	*e*P	**Pn**	**03 00 15.3**	**-0.5**
	baz=237						
HGSD				S	**Sb**	**03 00 29.0**	**-0.2**
	baz=237						
WHF	**Hehuan Shan**	**1.05**	**278**	*i* P	**Pn**	**03 00 16.4**	**0.0**
	baz=273						
WHF				*i* S	**Sb**	**03 00 30.3**	**+0.2**
	baz=273						
FUSS	**Fushou**	**1.09**	**283**	*e*P	**Pn**	**03 00 16.6**	**-0.2**
	baz=278						
FUSS				*e*S	**Sn**	**03 00 31.2**	**0.0**
	baz=278						
TIPB	**Shuangxi**	**1.09**	**331**	*i* P	**Pb**	**03 00 17.1**	**+0.1**
	baz=328						
TIPB				S	**Sb**	**03 00 29.9**	**-1.0**
	baz=328						
NWLT	**Wulai**	**1.12**	**313**	*e*P	**Pb**	**03 00 18.1**	**+0.6**
	baz=309						
NWLT				*e*S	**Sn**	**03 00 32.2**	**+0.4**
	baz=309						
OWD	**Renai**	**1.12**	**267**	*e*P	**Pn**	**03 00 16.5**	**-0.7**
	baz=263						
OWD				*e*S	**Sb**	**03 00 32.0**	**+0.1**
	baz=263						
CHGB	**Renai**	**1.13**	**273**	P	**Pn**	**03 00 17.6**	**+0.3**
	baz=257						
CHGB				S	**Sb**	**03 00 32.1**	**+0.1**
	baz=257						
YHNB	**Yeheng**	**1.15**	**305**	P	**Pn**	**03 00 17.2**	**-0.2**
	baz=289						
YHNB				S	**Sn**	**03 00 32.2**	**-0.2**
	baz=289						
TWT	**Tachien**	**1.15**	**282**	*e*S	**Sb**	**03 00 33.5**	**+0.9**
	baz=266						
TDCB	**Techi**	**1.16**	**282**	*e*P	**Pb**	**03 00 18.3**	**0.0**
	baz=266						
TDCB				*e*S	**Sn**	**03 00 32.8**	**-0.1**
	baz=266						
VWDT	**VWDT**	**1.18**	**258**	P	**Pb**	**03 00 18.5**	**0.0**
	baz=254						
VWDT				S	**Sb**	**03 00 34.1**	**+0.7**
	baz=254						
YULB	**Yu-li**	**1.19**	**239**	P	**Pn**	**03 00 17.9**	**0.0**
	baz=225						
YULB				*e*S	**Sb**	**03 00 33.9**	**+0.3**
	baz=225						
NWF	**Wu-fen Shan**	**1.20**	**332**	P	**Pn**	**03 00 17.2**	**-0.9**
	baz=328						
NWF				S	**Sb**	**03 00 34.8**	**+0.8**
	baz=328						
WFSB	**Wu-fen Shan**	**1.20**	**332**	P	**Pn**	**03 00 18.2**	**+0.1**
	baz=328						
WFSB				S	**Sb**	**03 00 34.1**	**+0.2**
	baz=328						
TWA	**Mucha**	**1.22**	**322**	P	**Pb**	**03 00 18.8**	**-0.4**
	baz=319						
TWA				S	**Sb**	**03 00 35.5**	**+0.9**
	baz=319						
NHDH	**Xindian Distri**	**1.24**	**320**	*e*S	**Sb**	**03 00 35.8**	**+0.6**
	baz=316						
IRIF	**Iriomote-Funau**	**1.25**	**75**	P	**Pn**	**03 00 18.9**	**+0.1**
IRIF				S	**Sb**	**03 00 35.7**	**+0.3**
TATO	**Taipei**	**1.27**	**319**	P	**Pb**	**03 00 20.1**	**0.0**
	baz=315						
TATO				S	**Sb**	**03 00 36.6**	**+0.6**
	baz=315						
TNOU	**National Taiwa**	**1.27**	**333**	*e*S	**Sn**	**03 00 35.5**	**+0.1**
	baz=330						
TAP	**Taipei**	**1.31**	**322**	S	**Sb**	**03 00 37.0**	**-0.1**
	baz=318						
SSLB	**Suanglung**	**1.35**	**261**	*e*P	**Pb**	**03 00 21.1**	**-0.2**
	baz=258						
SSLB				*e*S	**Sn**	**03 00 37.3**	**-0.1**
	baz=258						
WHP	**Taichung City**	**1.36**	**282**	*e*P	**Pb**	**03 00 21.5**	**-0.1**
	baz=267						
WHP				S	**Sb**	**03 00 38.4**	**-0.2**
	baz=267						
YM01	**YM01**	**1.36**	**326**	*e*P	**Pn**	**03 00 19.9**	**-0.5**
	baz=338						
YM01				*e*S	**Sn**	**03 00 38.0**	**+0.3**
	baz=338						
YM10	**YM10**	**1.38**	**326**	*e*P	**Pn**	**03 00 20.5**	**-0.1**
	baz=323						
YM10				S	**Sb**	**03 00 38.7**	**-0.3**
	baz=323						
YM11	**YM11**	**1.38**	**327**	*e*P	**Pn**	**03 00 20.9**	**+0.3**
	baz=323						
YM11				S	**Sn**	**03 00 38.2**	**+0.1**
	baz=323						
SMLT	**Sun Moon Lake**	**1.38**	**265**	P	**Pn**	**

	baz=263								
TYC				S		Sb	03 00 40.3	+0.1	
	baz=263								
NSTT	**Nanjuang**	**1.42 296**		S		Sb	03 00 40.3	0.0	
	baz=292								
EDH	**Donghe**	**1.45 225**		*e*P		Pn	03 00 21.5	0.0	
	baz=213								
EDH				*e*S		Sn	03 00 38.7	-1.0	
	baz=213								
TWY	**Chenhua**	**1.46 330**		S		Sn	03 00 40.3	+0.3	
	baz=327								
JKRS	**Kuro-shima**	**1.48 81**		P		Pb	03 00 23.5	-0.1	
JKRS				*e*S		Sb	03 00 42.1	+0.1	
ELDTW	**Lidau**	**1.51 238**		*e*P		Pn	03 00 22.4	-0.1	
	baz=235								
ELDTW				S		Sn	03 00 41.0	-0.6	
	baz=235								
TWQ1	**Liyutan**	**1.53 283**		*e*P		Pb	03 00 24.1	-0.3	
	baz=279								
TWQ1				S		Sb	03 00 44.0	+0.7	
	baz=279								
ALS	**Alishan**	**1.55 252**		P		Pb	03 00 24.2	-0.8	
	baz=249								
ALS				S		Sn	03 00 43.2	+0.5	
	baz=249								
LONT	**Longtian**	**1.60 227**		*e*S		Sn	03 00 43.9	+0.2	
	baz=217								
JIJ	**Ishigaki jima**	**1.63 77**		P		Pn	03 00 24.5	+0.6	
JIJ				S		Sn	03 00 44.6	+0.4	
CHN5	**Tsauling**	**1.63 256**		*e*P		Pb	03 00 26.7	+0.4	
	baz=243								
CHN5				S		Sb	03 00 46.2	-0.3	
	baz=243								
STYT	**Tauyuan**	**1.73 241**		*e*P		Pn	03 00 26.7	+1.2	
	baz=229								
STYT				S		Sb	03 00 48.5	-0.8	
	baz=229								
CHN4	**Tsaushan**	**1.79 249**		*e*P		Pb	03 00 28.7	-0.1	
	baz=247								
CHN4				S		Sb	03 00 51.1	+0.3	
	baz=247								
WTP	**Ta-pu**	**1.81 246**		P		Pn	03 00 27.7	+1.1	
	baz=243								
WTP				*e*S		Sb	03 00 51.4	-0.1	
	baz=243								
JISG	**Ishigakijimahi**	**1.83 71**		S		Sn	03 00 48.7	-0.5	

IDC ***20*** *03:12:19.0±1.1,24˚.36N×122˚.84E,h0km,mb3.9/8, mb1 4.0/8,mb1mx3.6/53,mbtmp3.9/8,Error ellipse: s-maj=59.8km s-min=18.6km az=64.0*
JMA ***20*** *03:12:23.9±0.1,24˚.03N×122˚.43E,h23km±3km,M3.6*
NEIC ***20*** *03:12:24.5±2.6,24˚.06N±0˚.01×122˚.45E±0˚.06,h39km±9km, mb4.3/9,Error ellipse: s-maj=7.3km s-min=1.9km az=95.0*
TAP ***20*** *03:12:24.1,24˚.09N×122˚.44E,h33km,ML4.3,D*
ISC 20 03:12:23.9±0.9,24˚05N±0˚.02×122˚42E±0˚.02,h31km±7km, n182,σ0s96/316,mb3.9/12,4C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.63**	**50**	P	**Pb**	**03 12 36.0**	**-0.5**
JYNG				S	**Sb**	**03 12 44.1**	**-0.9**
YOJ	**Yonaguni jima**	**0.68**	**53**	P	**Pb**	**03 12 37.1**	**-0.2**
YOJ				S	**Sb**	**03 12 45.9**	**-0.6**
YOJ	**Yonaguni jima**	**0.68**	**53**	⇓P	**Pb**	**03 12 37.1**	**-0.2**
	baz=54						
YOJ				S	**Sb**	**03 12 45.8**	**-0.8**
	baz=54						
YOJ	**Yonaguni jima**	**0.68**	**53**		**Pb**	**03 12 37.1**	**-0.2**
EWUT	**Wuta**	**0.71**	**304**	P	**Pn**	**03 12 37.5**	**-0.2**
	baz=300						
EWUT				S	**Sn**	**03 12 47.8**	**+0.2**
	baz=300						
HWA	**Hwalien**	**0.75**	**265**	*e*P	**Pn**	**03 12 38.3**	**0.0**
	baz=260						
HWA				S	**Sb**	**03 12 47.8**	**-0.7**
	baz=260						
TWD	**Chiawan**	**0.75**	**273**	*i* P	**Pn**	**03 12 38.4**	**0.0**
	baz=268						
TWD				*i* S	**Sb**	**03 12 48.4**	**-0.1**
	baz=268						
NACB	**Ninganchiao**	**0.76**	**280**	P	**Pn**	**03 12 38.6**	**+0.1**
	baz=262						
NACB				S	**Sn**	**03 12 49.4**	**+0.4**
	baz=262						
NACB	**Ninganchiao**	**0.76**	**280**		**Pn**	**03 12 38.5**	**0.0**
TWC	**Suao**	**0.76**	**317**	*i* P	**Pn**	**03 12 37.9**	**-0.7**
	baz=305						
TWC				*i* S	**Sb**	**03 12 47.1**	**-1.8**
	baz=305						
NDS	**Dongshan**	**0.87**	**312**	P	**Pb**	**03 12 40.4**	**-0.2**
	baz=309						
NDS				S	**Sn**	**03 12 50.6**	**-0.9**
	baz=309						
ETLH	**Xiulin Townshi**	**0.87**	**281**	P	**Pn**	**03 12 40.4**	**+0.3**
	baz=266						
ETLH				S	**Sb**	**03 12 52.2**	**+0.2**
	baz=266						
EGS		**0.91**	**331**	⇑*i*P	**Pn**	**03 12 40.8**	**+0.2**
	baz=318						
EGS				*i* S	**Sb**	**03 12 53.3**	**+0.3**
	baz=318						
ESL	**Shilin**	**0.93**	**256**	*i* P	**Pn**	**03 12 40.6**	**-0.3**
	baz=243						
ESL				S	**Sn**	**03 12 52.7**	**-0.5**
	baz=243						
ILA	**Ilan**	**0.94**	**320**	*i* P	**Pb**	**03 12 41.7**	**-0.1**
	baz=309						
ILA				*i* S	**Sb**	**03 12 54.2**	**+0.3**
	baz=309						
TWE	**Neicheng**	**0.96**	**315**	⇑*i*P	**Pb**	**03 12 41.7**	**-0.3**
	baz=312						
TWE				*i* S	**Sn**	**03 12 53.2**	**-0.6**
	baz=312						
NTC	**Toucheng**	**0.97**	**326**	P	**Pb**	**03 12 42.9**	**+0.7**
	baz=324						
NTC				S	**Sb**	**03 12 55.6**	**+0.9**
	baz=324						
ENTT	**Nioudou**	**0.98**	**307**	*i* P	**Pb**	**03 12 42.5**	**+0.2**
	baz=304						
ENTT				*i* S	**Sb**	**03 12 55.7**	**+0.7**
	baz=304						
EGFH	**Guangfu**	**0.98**	**248**	P	**Pn**	**03 12 41.9**	**+0.4**
	baz=244						
EGFH				S	**Sb**	**03 12 55.3**	**+0.2**
	baz=244						
NDT	**Datong Townshi**	**0.99**	**304**	P	**Pb**	**03 12 42.6**	**0.0**
	baz=289						
NDT				S	**Sn**	**03 12 54.9**	**+0.2**
	baz=289						
NNSB	**Datong**	**1.02**	**292**	P	**Pn**	**03 12 42.5**	**+0.3**
	baz=289						
NNSB				S	**Sn**	**03 12 55.6**	**+0.2**
	baz=289						
NNSH	**Datong**	**1.02**	**292**	P	**Pb**	**03 12 42.8**	**-0.3**
	baz=289						
NNSH				S	**Sb**	**03 12 56.4**	**+0.2**
	baz=289						
NNS	**Nan Shan**	**1.03**	**292**	*i* P	**Pb**	**03 12 43.0**	**-0.3**
	baz=289						
NNS				*i* S	**Sb**	**03 12 57.2**	**+0.5**
	baz=289						
TWB1	**Santiao Chiao**	**1.03**	**338**	*i* P	**Pn**	**03 12 42.3**	**+0.1**
	baz=351						
TWB1				*i* S	**Sn**	**03 12 55.4**	**-0.2**
	baz=351						
WHF	**Hehuan Shan**	**1.06**	**275**	*i* P	**Pn**	**03 12 43.2**	**+0.2**
	baz=260						
WHF				*i* S	**Sn**	**03 12 57.2**	**+0.3**
	baz=260						
HGSD	**Ruisui**	**1.07**	**239**	P	**Pn**	**03 12 42.4**	**-0.3**
	baz=236						
HGSD				S	**Sn**	**03 12 57.0**	**+0.6**
	baz=236						
TIPB	**Shuangxi**	**1.07**	**330**	P	**Pn**	**03 12 43.0**	**+0.3**
	baz=327						
TIPB				S	**Sn**	**03 12 56.9**	**+0.4**
	baz=327						
FUSS	**Fushou**	**1.09**	**281**	*e*P	**Pn**	**03 12 43.8**	**+0.6**
	baz=277						
FUSS				*e*S	**Sb**	**03 12 58.1**	**-0.3**
	baz=277						
NWLT	**Wulai**	**1.11**	**311**	*e*P	**Pb**	**03 12 44.3**	**-0.2**
	baz=308						
NWLT				*e*S	**Sb**	**03 12 58.3**	**-0.3**
	baz=308						
YHNB	**Yeheng**	**1.14**	**303**	⇑P	**Pb**	**03 12 44.5**	**-0.6**
	baz=286						
YHNB				S	**Sb**	**03 12 59.5**	**0.0**
	baz=286						
YHNB	**Yeheng**	**1.14**	**303**		**Pb**	**03 12 44.4**	**-0.6**
CHGB	**Renai**	**1.14**	**271**	P	**Pn**	**03 12 43.9**	**0.0**
	baz=257						
CHGB				S	**Sn**	**03 12 58.9**	**+0.3**
	baz=257						
OWD	**Renai**	**1.14**	**266**	P	**Pb**	**03 12 44.6**	**-0.5**
	baz=262						
OWD				S	**Sn**	**03 12 59.0**	**+0.5**
	baz=262						
TWT	**Tachien**	**1.15**	**280**	*i* P	**Pb**	**03 12 46.0**	**+0.6**
	baz=267						
TWT				*i* S	**Sb**	**03 13 00.7**	**+0.5**
	baz=267						
TDCB	**Techi**	**1.17**	**280**	P	**Pb**	**03 12 45.0**	**-0.7**
	baz=267						
TDCB				S	**Sb**	**03 13 00.3**	**-0.3**
	baz=267						
NWF	**Wu-fen Shan**	**1.17**	**330**	*i* P	**Pn**	**03 12 44.5**	**+0.2**
	baz=328						
NWF				S	**Sb**	**03 13 00.8**	**+0.2**
	baz=328						
WFSB	**Wu-fen Shan**	**1.17**	**330**	P	**Pn**	**03 12 44.7**	**+0.5**
	baz=328						
WFSB				S	**Sb**	**03 13 00.9**	**+0.4**
	baz=328						
TWA	**Mucha**	**1.20**	**321**	*i* P	**Pb**	**03 12 45.8**	**-0.4**
	baz=336						
TWA				*i* S	**Sb**	**03 13 01.2**	**-0.1**
	baz=336						
VWDT	**VWDT**	**1.21**	**256**	P	**Pb**	**03 12 45.6**	**-0.5**
	baz=253						
VWDT				*e*S	**Sn**	**03 13 00.8**	**+0.9**
	baz=253						
YULB	**Yu-li**	**1.22**	**238**	P	**Pn**	**03 12 44.9**	**+0.1**
	baz=250						
YULB				S	**Sn**	**03 13 00.2**	**-0.1**
	baz=250						
YULB	**Yu-li**	**1.22**	**238**		**Pn**	**03 12 45.1**	**+0.3**
NHDH	**Xindian Distri**	**1.22**	**318**	*e*P	**Pb**	**03 12 46.4**	**-0.1**
	baz=331						
NHDH				S	**Sb**	**03 13 02.6**	**+0.7**
	baz=331						
EYUL	**Yuli**	**1.23**	**236**	P	**Pn**	**03 12 45.2**	**+0.3**
	baz=233						
EYUL				S	**Sb**	**03 13 01.8**	**-0.2**
	baz=233						
IRIF	**Iriomote-Funau**	**1.23**	**76**	P	**Pb**	**03 12 45.9**	**-0.7**
IRIF				S	**Sb**	**03 13 01.8**	**-0.3**
TNOU	**National Taiwa**	**1.25**	**332**	*e*P	**Pb**	**03 12 47.0**	**+0.2**
	baz=330						
TNOU				S	**Sb**	**03 13 01.9**	**-0.7**
	baz=330						
TATO	**Taipei**	**1.25**	**318**	⇑P	**Pb**	**03 12 46.7**	**-0.2**
	baz=315						
TATO				S	**Sb**	**03 13 02.8**	**0.0**
	baz=315						
TATO	**Taipei**	**1.25**	**318**		**Pb**	**03 12 46.8**	**-0.2**
HATJ	**Hateruma jima**	**1.27**	**89**	P	**Pb**	**03 12 46.6**	**-0.6**
HATJ				S	**Sb**	**03 13 02.9**	**-0.3**
TAP	**Taipei**	**1.29**	**320**	*i* P	**Pb**	**03 12 47.8**	**+0.2**
	baz=334						
TAP				*i* S	**Sb**	**03 13 04.9**	**+1.0**
	baz=334						
BACT	**New Taipei Cit**	**1.30**	**317**	*e*P	**Pb**	**03 12 47.5**	**-0.3**
	baz=331						
BACT				*e*S	**Sb**	**03 13 06.0**	**+1.9**
	baz=331						
FULB	**Fuli**	**1.33**	**231**	*e*P	**Pn**	**03 12 46.3**	**-0.1**
	baz=228						
FULB				S	**Sb**	**03 13 05.0**	**-0.1**
	baz=228						
WPL	**Puli Township**	**1.34**	**269**	P	**Pb**	**03 12 47.8**	**-0.6**
	baz=258						
WPL				S	**Sb**	**03 13 04.7**	**-0.5**
	baz=258						
YM01	**YM01**	**1.34**	**325**	P	**Pn**	**03 12 47.0**	**+0.5**
	baz=322						
YM01				*e*S	**Sb**	**03 13 04.4**	**-0.9**
	baz=322						
NWRT	**Kuosheng**	**1.34**	**329**	*e*P	**Pn**	**03 12 46.6**	**+0.1**
	baz=327						
CHKT	**Chengkung**	**1.35**	**226**	P	**Pn**	**03 12 46.5**	**-0.1**
	baz=223						
CHKT				*e*S	**Sn**	**03 13 04.6**	**+1.1**
	baz=223						
YM10	**YM10**	**1.35**	**325**	*e*P	**Pn**	**03 12 47.0**	**+0.3**
	baz=322						
YM10				*e*S	**Sn**	**03 13 04.4**	**+0.8**
	baz=322						
YM11	**YM11**	**1.35**	**326**	*e*P	**Pb**	**03 12 48.1**	**-0.6**
	baz=323						
YM05	**YM05**	**1.36**	**325**	*e*P	**Pn**	**03 12 46.8**	**0.0**
	baz=323						
YM05				*e*S	**Sb**	**03 13 05.7**	**-0.1**
	baz=323						
YM04	**YM04**	**1.36**	**324**	*e*P	**Pn**	**03 12 47.8**	**+1.0**
	baz=336						
YM04				*e*S	**Sb**	**03 13 06.3**	**+0.4**
	baz=336						
YM08	**YM08**	**1.36**	**327**	P	**Pn**	**03 12 47.6**	**+0.7**
	baz=324						
YM08				S	**Sb**	**03 13 05.3**	**-0.7**
	baz=324						
DPDB	**Guoxing**	**1.36**	**270**	P	**Pn**	**03 12 46.5**	**-0.4**
	baz=259						
DPDB				S	**Sb**	**03 13 06.0**	**0.0**
	baz=259						
WHP	**Taichung City**	**1.36**	**280**	P	**Pb**	**03 12 49.5**	**+0.5**
	baz=267						
WHP				S	**Sb**	**03 13 05.7**	**-0.4**
	baz=267						
SSLB	**Suanglung**	**1.37**	**259**	P	**Pb**	**03 12 48.0**	**-1.0**
	baz=256						
SSLB				S	**Sb**	**03 13 05.9**	**-0.1**
	baz=256						
SSLB	**Suanglung**	**1.37**	**259**		**Pn**	**03 12 47.8**	**+0.9**
WCS	**Beigang Elemen**	**1.38**	**271**	P	**Pb**	**03 12 48.6**	**-0.5**
	baz=260						
WCS				S	**Sb**	**03 13 06.7**	**+0.3**
	baz=260						
TWS1	**Kuangyinshan**	**1.39**	**319**	P	**Pn**	**03 12 48.1**	**+1.0**
	baz=333						
TWS1				S	**Sb**	**03 13 08.0**	**+1.3**
	baz=333						
NJD	**Zhudong**	**1.39**	**300**	*e*P	**Pn**	**03 12 47.8**	**+0.6**
	baz=296						
NJD				*e*S	**Sb**	**03 13 07.3**	**+0.5**
	baz=296						
NTY	**Taoyuan**	**1.39**	**313**	*e*P	**Pb**	**03 12 50.1**	**+0.7**
	baz=326						
NTY				S	**Sb**	**03 13 07.0**	**+0.2**
	baz=326						
ANP	**Anpu**	**1.40**	**324**	*e*P	**Pn**	**03 12 48.1**	**+0.8**
	baz=322						
ANP				S	**Sb**	**03 13 06.2**	**-0.9**
	baz=322						
SMLT	**Sun Moon Lake**	**1.40**	**264**	*i* P	**Pb**	**03 12 48.9**	**-0.7**
	baz=252						
SMLT				*i* S	**Sn**	**03 13 06.0**	**+1.1**
	baz=252						
LIOB	**Emei**	**1.41**	**295**	*e*P	**Pb**	**03 12 49.4**	**-0.3**
	baz=292						
LIOB				S	**Sb**	**03 13 07.3**	**0.0**
	baz=292						
NSTT	**Nanjuang**	**1.42**	**294**	*i* P	**Pb**	**03 12 49.1**	**-0.7**
	baz=291						
NSTT				*i* S	**Sb**	**03 13 08.0**	**+0.5**
	baz=291						
NTST	**Danshui**	**1.42**	**322**	*e*P	**Pn**	**03 12 48.0**	**+0.4**
	baz=334						
NTST				*e*S	**Sn**	**03 13 05.5**	**+0.3**
	baz=334						
TWY	**Chenhua**	**1.43**	**329**	P	**Pb**	**03 12 49.3**	**-0.7**
	baz=327						
TWY				S	**Sb**	**03 13 07.7**	**-0.2**
	baz=327						
TYC	**Yuchr**	**1.44**	**265**	P	**Pb**	**03 12 49.6**	**-0.5**
	baz=261						
TYC				*i* S	**Sn**	**03 13 06.8**	**+1.2**
	baz=261						
NCU	**National Centr**	**1.45**	**310**	*e*P	**Pn**	**03 12 48.8**	**+0.8**
	baz=306						
NCU				S	**Sn**	**03 13 06.8**	**+0.9**
	baz=306						
NCUH	**Zhongli**	**1.45**	**309**	*e*P	**Pn**	**03 12 48.5**	**+0.5**
	baz=306						
NCUH				*e*S	**Sb**	**03 13 07.7**	**-0.7**
	baz=306						
YUS	**Yu-Shan**	**1.46**	**248**	*i* P	**Pn**	**03 12 49.6**	**+1.1**
	baz=245						
YUS				*i* S	**Sn**	**03 13 07.5**	**+0.7**
	baz=245						
JKRS	**Kuro-shima**	**1.47**	**82**	P	**Pb**	**03 12 49.7**	**-0.9**
HSN1	**Hsinchu**	**1.47**	**300**	P	**Pb**	**03 12 50.7**	**+0.1**
	baz=296						
HSN1				S	**Sb**	**03 13 09.6**	**+0.6**
	baz=296						
WHYT	**Xinyi Township**	**1.48**	**257**	P	**Pb**	**03 12 49.8**	**-1.0**
	baz=244						
WHYT				*e*S	**Sb**	**03 13 08.9**	**-0.2**
	baz=244						
EDH	**Donghe**	**1.48**	**224**	P	**Pn**	**03 12 48.5**	**0.0**
	baz=213						
EDH				S	**Sn**	**03 13 06.3**	**-0.4**
	baz=213						
SBCB	**Hsinchu**	**1.50**	**300**	P	**Pb**	**03 12 50.2**	**-1.0**
	baz=296						
SBCB				*e*S	**Sb**	**03 13 08.7**	**-1.2**
	baz=296						
HSN	**Hsinchu**	**1.52**	**300**	*e*P	**Pb**	**03 12 50.3**	**-1.2**
	baz=298						
HSN				S	**Sb**	**03 13 09.2**	**-1.2**
	baz=298						
TWQ1	**Liyutan**	**1.53**	**282**	*i* P	**Pb**	**03 12 51.3**	**-0.5**
	baz=278						
TWQ1				*i* S	**Sb**	**03 13 11.2**	**+0.4**
	baz=278						
ELDTW	**Lidau**	**1.54**	**237**	P	**Pn**	**03 12 49.8**	**+0.4**
	baz=234						
ELDTW				*i* S	**Sn**	**03 13 08.3**	**-0.1**
	baz=234						
NJN	**Zhunan**	**1.55**	**294**	*e*S	**Sb**	**03 13 11.4**	**+0.2**
	baz=291						
NSY	**Sanyi**	**1.56**	**284**	P	**Pb**	**03 12 51.8**	**-0.4**
	baz=280						
NSY				S	**Sb**	**03 13 12.4**	**+0.9**
	baz=280						
WJS	**Zhushan**	**1.56**	**262**	*e*P	**Pb**	**03 12 51.0**	**-1.2**
	baz=259						
WJS				*e*S	**Sb**	**03 13 11.5**	**-0.1**
	baz=259						
ALS	**Alishan**	**1.57**	**250**	*i* P	**Pb**	**03 12 51.6**	**-0.9**
	baz=247						
ALS				S	**Sb**	**03 13 11.2**	**-1.0**
	baz=247						
WWF	**Wufeng**	**1.57**	**270**	P	**Pb**	**03 12 52.0**	**-0.4**
	baz=267						
WWF				S	**Sb**	**03 13 13.5**	**+1.6**
	baz=267						
TCU	**Taichung**	**1.60**	**274**	*e*P	**Pb**	**03 12 52.8**	**0.0**
	baz=270						
TCU				S	**Sb**	**03 13 13.7**	**+1.1**
	baz=270						
WNT	**Mingjian**	**1.60**	**264**	P	**Pb**	**03 12 53.0**	**+0.2**
	baz=261						
WNT				S	**Sb**	**03 13 12.8**	**+0.2**
	baz=261						
WNT1	**Nantou City**	**1.60**	**265**	P	**Pb**	**03 12 53.0**	**+0.2**
	baz=262						
WNT1				*e*S	**Sb**	**03 13 13.2**	**+0.5**
	baz=262						
JIJ	**Ishigaki jima**	**1.60**	**78**	P	**Pn**	**03 12 50.8**	**+0.7**
JIJ				S	**Sb**	**03 13 11.2**	**-1.6**
PCYT	**Pengchaiyu**	**1.61**	**349**	*i* P	**Pn**	**03 12 50.7**	**+0.6**
	baz=333						
PCYT				S	**Sn**	**03 13 10.3**	**+0.5**
	baz=333						
LDUT	**Ludao**	**1.62**	**213**	P	**Pn**	**03 12 50.1**	**-0.3**
	baz=210						
LDUT				S	**Sn**	**03 13 09.6**	**-0.6**
	baz=210						
LONT	**Longtian**	**1.64**	**226**	P	**Pn**	**03 12 51.4**	**+0.8**
	baz=236						
LONT				S	**Sn**	**03 13 10.9**	**+0.2**
	baz=236						
WDJ	**Dajia District**	**1.65**	**281**	*e*P	**Pb**	**03 12 52.9**	**-0.9**
	baz=277						
WDJ				S	**Sb**	**03 13 14.6**	**+0.4**
	baz=277						
CHN5	**Tsauling**	**1.66**	**255**	*i* P	**Pb**	**03 12 53.0**	**-0.8**
	baz=251						
CHN5				S	**Sb**	**03 13 14.5**	**+0.1**
	baz=251						
WCHH	**Zhanghua**	**1.70**	**271**	*e*P	**Pb**	**03 12 53.3**	**-1.2**
	baz=268						
WCHH				*e*S	**Sb**	**03 13 16.1**	**+0.5**
	baz=268						
TWGBT	**Beinan**	**1.74**	**225**	P	**Pn**	**03 12 52.0**	**+0.1**
	baz=234						
TWGBT				S	**Sn**	**03 13 12.5**	**-0.5**
	baz=234						
WGK	**Gukeng**	**1.74**	**258**	*e*S	**Sb**	**03 13 18.0**	**+1.4**
	baz=255						
TTN	**Taitung**	**1.74**	**222**	*e*S	**Sn**	**03 13 14.1**	**+1.1**
	baz=220						
TWG	**Pinlang**	**1.74**	**226**	*i* P	**Pn**	**03 12 52.0**	**+0.1**
	baz=234						
TWG				*i* S	**Sn**	**03 13 13.2**	**+0.1**
	baz=234						
TWG	**Pinlang**	**1.74**	**226**		**Pn**	**03 12 52.2**	**+0.2**
STYH	**Taoyuan**	**1.74**	**240**	*e*P	**Pn**	**03 12 53.3**	**+1.3**
	baz=229						
STYH				*e*S	**Sn**	**03 13 14.8**	**+1.7**
	baz=229						
WDLH	**Douliu**	**1.76**	**259**	*e*P	**Pb**	**03 12 55.6**	**+0.1**
	baz=256						
WDLH				*e*S	**Sb**	**03 13 18.7**	**+1.5**
	baz=256						
STYT	**Tauyuan**	**1.76**	**240**	P	**Pn**	**03 12 53.7**	**+1.3**
	baz=229						
STYT				*e*S	**Sb**	**03 13 16.4**	**-0.9**
	baz=229						
TPUB	**Ta-pu**	**1.80**	**246**	*e*P	**Pn**	**03 12 54.0**	**+1.1**
	baz=243						
TPUB				S	**Sb**	**03 13 17.7**	**-0.8**
	baz=243						
TPUB	**Ta-pu**	**1.80**	**246**		**Pb**	**03 12 55.3**	**-1.0**
JISG	**Ishigakijimahi**	**1.81**	**72**	P	**Pn**	**03 12 53.6**	**+0.7**
JISG				S	**Sn**	**03 13 15.7**	**+1.0**
CHN4	**Tsaushan**	**1.81**	**248**	P	**Pb**	**03 12 55.9**	**-0.5**
	baz=245						
CHN4				S	**Sb**	**03 13 19.0**	**+0.2**
	baz=245						
WTP	**Ta-pu**	**1.84**	**245**	*i* P	**Pb**	**03 12 55.9**	**-1.0**
	baz=241						
WTP				*i* S	**Sb**	**03 13 19.4**	**-0.2**
	baz=241						
WRL	**Guolierlin Hig**	**1.87**	**266**	*e*P	**Pb**	**03 12 56.9**	**-0.6**
	baz=276						
WRL				*e*S	**Sb**	**03 13 19.7**	**-0.9**
	baz=276						
WTK	**Tuku**	**1.89**	**260**	*e*P	**Pb**	**03 12 57.2**	**-0.6**
	baz=256						
WTK				S	**Sb**	**03 13 20.4**	**-0.7**
	baz=256						
CHY	**Chiayi**	**1.91**	**254**	*e*P	**Pn**	**03 12 55.6**	**+1.3**
	baz=251						
CHY				*e*S	**Sn**	**03 13 19.4**	**+2.1**
	baz=251						
TWK	**Hsinying**	**1.93**	**247**	*i* P	**Pb**	**03 12 56.9**	**-1.7**
	baz=243						
TWK				S	**Sb**	**03 13 20.3**	**-2.0**
	baz=243						
CHN1	**Nanshi**	**1.94**	**244**	P	**Pb**	**03 12 57.2**	**-1.3**
	baz=241						
CHN1				S	**Sb**	**03 13 21.0**	**-1.4**
	baz=241						
SLGT	**Liugui**	**1.94**	**238**	P	**Pb**	**03 12 58.5**	**-0.1**
	baz=227						
SLGT				*e*S	**Sn**	**03 13 20.0**	**+2.0**
	baz=227						
SGST	**Jiashian**	**1.94**	**241**	*i* P	**Pn**	**03 12 56.6**	**+1.8**
	baz=238						
SGST				*i* S	**Sb**	**03 13 22.3**	**-0.2**
	baz=238						
SNST	**Tainan City**	**1.95**	**245**	P	**Pb**	**03 12 57.5**	**-1.2**
	baz=242						
SNST				S	**Sb**	**03 13 22.9**	**+0.3**
	baz=242						
WTCT	**Ta-ch'eng**	**1.96**	**265**	P	**Pb**	**03 12 57.2**	**-1.8**
	baz=274						
WTCT				S	**Sb**	**03 13 21.9**	**-1.2**
	baz=274						

ECL	**Taimali**	**1.98 223**	P	**Pn**	**03 12 55.3**	**+0.1**
	baz=220					
ECL			*eS*	**Sn**	**03 13 19.0**	**+0.1**
	baz=220					
WMLT	**Mailiao**	**2.02 264**	*eS*	**Sb**	**03 13 23.9**	**-1.0**
	baz=275					
WSF	**Szhu**	**2.05 259**	*eP*	**Pn**	**03 12 58.2**	**+1.9**
	baz=256					
WSF			*eS*	**Sb**	**03 13 23.6**	**-2.1**
	baz=256					
ICHU	**Yijhu**	**2.08 251**	*eP*	**Pb**	**03 12 59.0**	**-2.0**
	baz=248					
ICHU			*eS*	**Sn**	**03 13 23.9**	**+2.5**
	baz=248					
SSD	**Sandimen**	**2.09 232**	P	**Pb**	**03 12 59.2**	**-2.0**
	baz=224					
SSD			*eS*	**Sn**	**03 13 23.6**	**+1.8**
	baz=224					
TSMG	**Majia**	**2.11 231**	*eP*	**Pb**	**03 12 59.5**	**-2.0**
	baz=224					
TSMG			*eS*	**Sn**	**03 13 23.6**	**+1.4**
	baz=224					
SCST	**Cishan**	**2.11 237**	*eP*	**Pb**	**03 13 00.2**	**-1.4**
	baz=223					
SCST			*eS*	**Sb**	**03 13 27.6**	**+0.2**
	baz=223					
CHN3	**Shinhua**	**2.12 243**	*eP*	**Pb**	**03 13 00.2**	**-1.5**
	baz=240					
CHN3			*eS*	**Sb**	**03 13 27.0**	**-0.6**
	baz=240					
CHN8	**Yiju**	**2.14 251**	*eS*	**Sb**	**03 13 26.2**	**-2.0**
	baz=249					
LAY	**Lan-yu**	**2.15 202**	P	**Pn**	**03 12 58.2**	**+0.5**
	baz=200					
LAY			S	**Sn**	**03 13 24.2**	**+0.9**
	baz=200					
JTJ	**Tarama**	**2.16 74**	P	**Pn**	**03 12 59.2**	**+1.4**
MASBT	**Mashibuluo**	**2.18 229**	*eP*	**Pn**	**03 12 59.5**	**+1.5**
	baz=219					
TAW	**Tawu**	**2.19 220**	*eS*	**Sn**	**03 13 24.9**	**+0.7**
	baz=226					
EAST	**Anshuo**	**2.20 221**	*eP*	**Pn**	**03 12 58.7**	**+0.3**
	baz=219					
EAST			*eS*	**Sn**	**03 13 24.3**	**-0.2**
	baz=219					
TWM1	**Shoushan**	**2.20 237**	*eP*	**Pb**	**03 13 01.5**	**-1.6**
	baz=235					
SCLT	**Jiali**	**2.22 247**	*eS*	**Sb**	**03 13 29.4**	**-1.0**
	baz=245					
SSPT	**Xinbi**	**2.31 228**	*eP*	**Pn**	**03 13 01.5**	**+1.7**
	baz=220					
SCZT	**Fangliau**	**2.35 225**	*eP*	**Pn**	**03 13 02.8**	**+2.4**
	baz=223					
SLIU	**Shizi**	**2.35 220**	*eP*	**Pn**	**03 13 01.1**	**+0.7**
	baz=218					
HEN	**Hengchun**	**2.56 218**	*eS*	**Sn**	**03 13 35.6**	**+2.4**
	baz=215					
TSEB	**Hengchuen, Pin**	**2.56 214**	*eP*	**Pn**	**03 13 05.4**	**+2.2**
	baz=219					
TSEB			*eS*	**Sn**	**03 13 35.0**	**+1.8**
	baz=219					
TWK1	**Hengchun**	**2.57 216**	*eP*	**Pn**	**03 13 04.1**	**+0.7**
	baz=213					
TWK1			*eS*	**Sn**	**03 13 34.3**	**+0.7**
	baz=213					
SNW	**Nanwan**	**2.58 217**	*eP*	**Pn**	**03 13 06.0**	**+2.4**
	baz=215					
JIRB	**Irabujima**	**2.63 72**	*eS*	**Sn**	**03 13 37.4**	**+2.4**
WDGT	**Dungji**	**2.65 253**	*eP*	**Pn**	**03 13 06.3**	**+1.9**
	baz=250					
WDGT			*eS*	**Sn**	**03 13 37.2**	**+1.7**
	baz=250					
PHUB	**P'eng-hu**	**2.66 259**	*eP*	**Pn**	**03 13 05.4**	**+0.7**
	baz=271					
PHUB			*eS*	**Sn**	**03 13 36.6**	**+0.7**
	baz=271					
PNG	**Penghu**	**2.67 260**	*eP*	**Pn**	**03 13 06.3**	**+1.6**
	baz=258					
PNG			*eS*	**Sn**	**03 13 37.2**	**+1.3**
	baz=258					
VWUC	**VWUC**	**2.86 290**	*eP*	**Pn**	**03 13 07.6**	**+0.2**
	baz=286					
VWUC			*eS*	**Sn**	**03 13 39.8**	**-1.0**
	baz=286					
VCHM	**Qimei**	**2.87 254**	*eP*	**Pn**	**03 13 09.3**	**+1.8**
	baz=251					
VCHM			*eS*	**Sn**	**03 13 41.5**	**+0.6**
	baz=251					
MATB	**Ma-tsu**	**3.07 314**	*eP*	**Pn**	**03 13 09.6**	**-0.7**
	baz=298					
MATB			*eS*	**Sn**	**03 13 45.7**	**-0.2**
	baz=298					
MSUT	**Lienchiang**	**3.10 314**	*eP*	**Pn**	**03 13 12.5**	**+1.9**
	baz=298					
MSUT			*eS*	**Sn**	**03 13 46.7**	**+0.1**
	baz=298					
PTMZ	**Houxiangcun**	**3.16 289**	*eP*	**Pn**	**03 13 12.2**	**+0.7**
	baz=285					
PTMZ			*eS*	**Sn**	**03 13 46.3**	**-1.9**
	baz=285					
LYJJ	**Jianjiangzhen**	**3.46 317**	*eP*	**Pn**	**03 13 15.4**	**-0.2**
	baz=301					
LYJJ			*eS*	**Sn**	**03 13 54.5**	**-1.2**
	baz=301					
XPSS	**Dashiqiu**	**3.51 325**	*eP*	**Pn**	**03 13 17.4**	**+1.1**
	baz=322					
XPSS			*eS*	**Sn**	**03 13 56.1**	**-0.6**
	baz=322					
KNM	**Kinmen**	**3.66 277**	*eP*	**Pn**	**03 13 20.3**	**+2.0**
	baz=272					
KNM			*eS*	**Sn**	**03 14 01.6**	**+1.2**
	baz=272					
MHZQ	**Yeshan**	**3.69 304**	*eP*	**Pn**	**03 13 19.0**	**+0.2**
	baz=300					
MHZQ			*eS*	**Sn**	**03 13 60.0**	**-1.2**
	baz=300					
KNMB	**Chin-men Tao**	**3.70 277**	*eP*	**Pn**	**03 13 19.7**	**+0.7**
	baz=273					
KNMB			*eS*	**Sn**	**03 14 00.3**	**-1.2**
	baz=273					
KNMB	**Chin-men Tao**	**3.70 277**	Pn	**Pn**	**03 13 19.3**	**+0.3**
AXDP	**Jialang**	**4.14 283**	*eP*	**Pn**	**03 13 26.2**	**+1.2**
	baz=268					
AXDP			*eS*	**Sn**	**03 14 11.1**	**-1.3**
	baz=268					
SONM	**Songino Array**	**26.94 336**	P	**P**	**03 18 02.1**	**-0.5**
	0.5nm,0.5s,baz=147,slow=8.9,SNR=2.7					
MK31	**Makanchi Array**	**39.22 316**	P	**P**	**03 19 49.0**	**-0.3**
MK31			IAmb	IAmb	03 19 57.3	
	comp=Z,4.9nm,1.4s					
MKAR	**Makanchi Array**	**39.22 316**	P	**P**	**03 19 49.3**	**0.0**
	comp=Z,1.6nm,0.8s,baz=104,slow=7.9,SNR=8.6					
PEA0B	**Petropavlovsk-**	**39.35 33**	P	**P**	**03 19 51.9**	**+1.6**
PEA0B			IAmb	IAmb	03 19 58.3	
	comp=Z,9.1nm,1.1s					
PETK	**Petropavlovsk-**	**39.35 33**	P	**P**	**03 19 52.0**	**+1.8**
ZAA0	**Zalesovo Array**	**40.98 327**	P	**P**	**03 20 02.5**	**-1.2**
ZALV	**Zalesovo Beam**	**40.98 327**	P	**P**	**03 20 02.0**	**-1.7**
	comp=Z,1.1nm,0.6s,baz=104,slow=9.3,SNR=5.1					
KURK	**Kurchatov**	**42.92 320**	P	**P**	**03 20 19.0**	**-0.6**
KURBB	**Kurchatov Arra**	**42.94 320**	P	**P**	**03 20 19.0**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=112,slow=8.0,SNR=4.6					
WRA	**Warramunga Arr**	**45.24 164**	P	**P**	**03 20 39.2**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=346,slow=8.8,SNR=7.5					
WB2	**Warramunga Arr**	**45.24 164**	P	**P**	**03 20 40.0**	**+1.4**
WR0	**Warramunga Arr**	**45.31 164**	P	**P**	**03 20 40.3**	**+1.2**
WR0			IAmb	IAmb	03 20 56.1	
	comp=Z,9.4nm,1.2s					
GAR	**Garm**	**46.25 302**	P	**P**	**03 20 47.1**	**+0.6**
ASAR	**Alice Springs**	**48.72 166**	P	**P**	**03 21 07.3**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=340,slow=7.0,SNR=9.4					
ASAR	**Alice Springs**	**48.72 166**	P	**P**	**03 21 03.4**	**-2.3**
ABKAR	**Akbulak array**	**54.34 314**	P	**P**	**03 21 47.8**	**+0.3**
ABKAR			IAmb	IAmb	03 21 48.3	
	comp=Z,1.2nm,0.7s					
GEYT	**Alibeck**	**55.84 301**	P	**P**	**03 22 00.6**	**+2.1**
	comp=Z,2.1nm,0.7s,baz=146,slow=3.1,SNR=3.7					
GEYT	**Alibeck**	**55.84 301**	P	**P**	**03 21 59.8**	**+1.3**
GEYT			IAmb	IAmb	03 22 01.4	
	comp=Z,2.2nm,0.8s					
L27K	**Beaver Creek,**	**71.40 29**	P	**P**	**03 23 38.2**	**-2.6**
YKA	**Yellowknife Ar**	**82.65 23**	P	**P**	**03 24 42.1**	**-1.9**
	comp=Z,0.1nm,0.7s,baz=318,slow=3.3,SNR=2.4					

*IDC **20** 03:15:59.2±3.8,5.°37S×152.°63E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.5/36,mbtmp3.7/4,MS4.4/1,Ms1 4.4/1, ms1mx3.6/33,Error ellipse: s-maj=130.2km s-min=31.5km az=112.0*

ISC 20 03:16:02.5±2.3,5.°7S±0.°4×153.°1E±0.°4,h37km,n7,σ0s74/6, mb3.5/4,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.98**	**238**	Sn	**Sn**	**03 19 00.2**	**-0.3**
	2.6nm,0.3s,baz=84,slow=19,SNR=1.7						
WRA	**Warramunga Arr**	**23.13**	**231**	P	**P**	**03 21 06.6**	**+1.0**
	1.7nm,0.9s,baz=54,slow=10,SNR=20						
ASAR	**Alice Springs**	**25.74**	**224**	P	**P**	**03 21 29.5**	**-0.3**
	0.8nm,0.8s,baz=40,slow=9.0,SNR=4.6						
RAR	**Rarotonga**	**48.12**	**113**	LR	LR	03 44 28.2	
	comp=Z,328nm,18.1s,baz=46,slow=35						
MKAR	**Makanchi Array**	**81.21**	**319**	P	**P**	**03 28 15.0**	**+0.4**
	0.3nm,0.6s,baz=104,slow=6.9,SNR=2.4						
ZALV	**Zalesovo Beam**	**82.07**	**326**	P	**P**	**03 28 18.8**	**-0.2**
	0.7nm,0.3s,baz=101,slow=5.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**150.89**	**287**	PKPbc	**PKPbc**	**03 35 51.8**	**-0.5**
	0.5nm,0.7s,baz=93,slow=2.1,SNR=2.5						

*NEIC **20** 03:24:31.5±2.1,23.°5S±0.°1×180.°0E±0.°2,h533km±11km, mb4.5/23,Error ellipse: s-maj=22.6km s-min=18.0km az=100.0*

*IDC **20** 03:24:31.8±1.4,23.°39S×179.°94E,h532km±16km, mb3.5/11,mb1 3.6/12,mb1mx3.4/25,mbtmp4.3/12,Error ellipse: s-maj=21.6km s-min=16.7km az=154.0*

ISC 20 03:24:31.2±0.6,23.°55S±0.°07×180.°0W±0.°1,h532km,n45, σ1s35/47,mb4.4/21,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.97**	**162**	P	**P**	**03 26 09.9**	**+1.3**
	111nm,0.3s,baz=264,slow=23,SNR=6.3						
RAO	**Raoul Island**	**5.97**	**162**	P	**P**	**03 26 10.2**	**+1.7**
MSVF	**Nonsavu**	**6.07**	**342**	P	**P**	**03 26 10.3**	**+0.5**
	1.0nm,0.3s,baz=138,slow=14,SNR=4.2						
URZ	**Urewera**	**14.87**	**189**	P	**P**	**03 27 37.4**	**-2.0**
	2.3nm,0.3s,baz=300,slow=22,SNR=8.3						
URZ				S	**S**	**03 30 10.1**	**-4.4**
	0.5nm,0.3s,baz=300,slow=23,SNR=3.6						
URZ	**Urewera**	**14.87**	**189**	P	**P**	**03 27 37.7**	**-1.7**
FUNA	**Funafuti**	**14.96**	**357**	P	**P**	**03 27 38.8**	**-2.0**
BKZ	**Black Stump Fm**	**15.85**	**190**	P	**P**	**03 27 48.5**	**-1.0**
BKZ				IAmb	IAmb	03 28 03.0	
	comp=Z,12nm,1.2s						
BFZ	**Birch Farm**	**17.37**	**190**	P	**P**	**03 28 03.7**	**-0.3**
QRZ	**Quartz Range**	**18.33**	**198**	P	**P**	**03 28 13.7**	**+0.9**
NNZ	**Nelson**	**18.47**	**196**	P	**P**	**03 28 14.2**	**+0.2**
THZ	**Tophouse**	**19.10**	**196**	P	**P**	**03 28 20.7**	**+0.9**
LTZ	**Lake Taylor**	**20.22**	**197**	P	**P**	**03 28 31.8**	**+1.7**
LTZ				IAmb	IAmb	03 28 40.0	
	comp=Z,29nm,1.2s						
RPZ	**Rata Peaks**	**21.42**	**198**	P	**P**	**03 28 43.5**	**+2.7**
	comp=Z,5.9nm,0.6s,baz=42,slow=23,SNR=1.6						
RPZ	**Rata Peaks**	**21.42**	**198**	P	**P**	**03 28 43.9**	**+3.1**
EIDS	**Eidsvold**	**26.37**	**260**	P	**P**	**03 29 26.3**	**+1.2**
EIDS				IAmb	IAmb	03 29 27.3	
	comp=Z,20nm,1.4s						
CTA	**Charters Tower**	**31.48**	**270**	P	**P**	**03 30 10.1**	**+0.5**
	comp=Z,8.5nm,0.5s,baz=93,slow=11,SNR=16						
CTAO	**Charters Tower**	**31.48**	**270**	P	**P**	**03 30 10.4**	**+0.8**
CTAO				IAmb	IAmb	03 30 11.1	
	comp=Z,8.9nm,0.7s						
STKA	**Stephens Creek**	**34.86**	**248**	P	**P**	**03 30 38.7**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=100,slow=6.1,SNR=1.8						
STKA	**Stephens Creek**	**34.86**	**248**	P	**P**	**03 30 38.9**	**+1.0**
BBOO	**Buckleboo**	**39.59**	**247**	P	**P**	**03 31 16.5**	**-0.2**
BBOO				IAmb	IAmb	03 31 16.8	
	comp=Z,22nm,1.4s						
AS31	**Alice Springs**	**42.10**	**260**	P	**P**	**03 31 37.2**	**+0.3**
ASAR	**Alice Springs**	**42.10**	**260**	P	**P**	**03 31 36.9**	**0.0**
	comp=Z,3.7nm,0.7s,baz=96,slow=7.9,SNR=32						
ASAR				pP	**pwP**	**03 33 14.9**	**-2.0**
	comp=Z,0.7nm,0.8s,baz=84,slow=8.4,SNR=2.0						
ASAR				ScP	**ScP**	**03 36 20.5**	**+1.4**
	comp=Z,1.7nm,1.0s,baz=101,slow=4.4,SNR=6.8						
ASAR	**Alice Springs**	**42.10**	**260**	P	**P**	**03 31 36.0**	**-0.8**
WR0	**Warramunga Arr**	**42.25**	**266**	P	**P**	**03 31 37.3**	**-0.7**
WB2	**Warramunga Arr**	**42.43**	**266**	P	**P**	**03 31 38.9**	**-0.5**
WB2				IAmb	IAmb	03 31 39.6	
	comp=Z,9.6nm,0.8s						
WB0	**Warramunga Arr**	**42.43**	**266**	P	**P**	**03 31 38.8**	**-0.7**
WB0				IAmb	IAmb	03 31 39.4	
	comp=Z,9.4nm,0.8s						
WRA	**Warramunga Arr**	**42.44**	**266**	P	**P**	**03 31 38.8**	**-0.8**
	comp=Z,3.5nm,0.5s,baz=102,slow=8.2,SNR=80						
WRA	**Warramunga Arr**	**42.44**	**266**	P	**P**	**03 31 38.9**	**-0.6**
FORT	**Forrest**	**46.44**	**249**	P	**P**	**03 32 09.8**	**-0.4**
FORT				IAmb	IAmb	03 32 19.1	
	comp=Z,18nm,0.9s						
MTN	**Manton Dam**	**47.44**	**274**	P	**P**	**03 32 16.8**	**-1.1**
MTN				IAmb	IAmb	03 32 20.2	
	comp=Z,45nm,1.4s						
KNRA	**Kununurra**	**48.70**	**269**	P	**P**	**03 32 27.1**	**-0.3**
KNRA				IAmb	IAmb	03 32 32.8	
	comp=Z,43nm,1.2s						
FITZ	**Fitzroy Crossi**	**50.86**	**265**	P	**P**	**03 32 44.3**	**+1.1**
FITZ				IAmb	IAmb	03 33 00.7	
	comp=Z,34nm,1.5s						
SIJI	**Sorong**	**52.33**	**288**	P	**P**	**03 32 53.0**	**-0.9**
	comp=Z,24nm,0.8s,baz=90,slow=5.6,SNR=8.4						
NWAO	**Narrogin (SRO)**	**55.39**	**245**	P	**P**	**03 33 15.8**	**+0.6**
NWAO				IAmb	IAmb	03 33 20.5	
	comp=Z,13nm,1.1s						
QSPA	**South Pole Qui**	**66.53**	**180**	P	**P**	**03 34 29.3**	**+1.3**
MJAR	**Matsushiro Ar**	**71.62**	**326**	P	**P**	**03 34 58.2**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=152,slow=5.4,SNR=3.8						
PETK	**Petropavlovsk-**	**78.77**	**347**	P	**P**	**03 35 38.2**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=130,slow=6.4,SNR=2.5						
NVAR	**Mina Array Bea**	**84.50**	**44**	P	**P**	**03 36 08.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=222,slow=6.6,SNR=3.6						
NVAR	**Mina Array Bea**	**84.50**	**44**	P	**P**	**03 36 07.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P	**P**	**03 36 33.0**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=112,slow=6.1,SNR=4.3						
TMUT	**Trail Mountain**	**89.60**	**46**	P	**P**	**03 36 32.6**	**+0.1**
TMUT				IAmb	IAmb	03 36 33.7	
	comp=Z,5.4nm,1.2s						
TXAR	**Lajitas Array**	**90.24**	**58**	P	**P**	**03 36 35.9**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=202,slow=6.3,SNR=8.9						
TXAR	**Lajitas Array**	**90.24**	**58**	P	**P**	**03 36 35.7**	**+0.2**
HFS	**Hagfors**	**142.21**	**349**	PKhKP	PKPpre	03 42 57.8	
	comp=Z,1.1nm,0.3s,baz=40,slow=2.5,SNR=16						
AKASG	**Malin Array Be**	**144.68**	**328**	PKP	**PKPdf**	**03 43 06.0**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=47,slow=4.3,SNR=8.2						

*IDC **20** 03:27:43.5±0.9,56.°56N×34.°33W,h0km,mb3.7/11, mb1 3.9/14,mb1mx3.7/43,mbtmp3.8/14,ML3.4/3,MS4.4/1, Ms1 4.4/1,ms1mx3.7/43,Error ellipse: s-maj=27.3km s-min=16.1km az=25.0*

ISC 20 03:27:46.8±0.8,56.°5N±0.°1×34.°3W±0.°1,h22km,n16, σ0s88/16,mb3.9/11,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**10.40**	**32**	Pn	**Pn**	**03 30 15.3**	**+0.9**
	1.4nm,0.3s,baz=194,slow=11,SNR=1.6						
EKA	**Eskdalemuir Ar**	**17.43**	**81**	P	**P**	**03 31 48.7**	**-0.8**
	baz=288,slow=9.6,SNR=2.4						
FRB	**Frobisher Bay**	**18.30**	**307**	P	**P**	**03 31 58.2**	**-0.7**
	0.1nm,0.3s,baz=81,slow=12,SNR=3.8						
NOA	**NORSAR Array B**	**23.64**	**60**	P	**P**	**03 32 54.4**	**-1.8**
	1.8nm,1.0s,baz=280,slow=10.0,SNR=4.5						
HFS	**Hagfors**	**25.02**	**62**	P	**P**	**03 33 08.5**	**-0.3**
	3.1nm,0.9s,baz=282,slow=7.1,SNR=3.2						
ESDC	**Sonseca Array**	**26.07**	**117**	P	**P**	**03 33 18.4**	**-0.1**
	0.3nm,0.7s,baz=321,slow=9.9,SNR=3.1						
RES	**Resolute Bay**	**28.96**	**331**	LR	LR	03 44 07.1	
	comp=Z,782nm,20.0s,baz=143,slow=34						
AKASG	**Malin Array Be**	**36.93**	**71**	P	**P**	**03 34 53.4**	**-0.3**
	2.2nm,0.8s,baz=304,slow=8.2,SNR=3.2						
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**03 35 07.4**	**-0.8**
	0.4nm,0.9s,baz=59,slow=9.3,SNR=7.1						
YKA				PcP	**PcP**	**03 37 18.9**	**-0.8**
	0.3nm,0.9s,baz=76,slow=2.5,SNR=2.6						
INK	**Inuvik**	**42.27**	**327**	P	**P**	**03 35 39.0**	**+1.1**
	0.9nm,1.0s,baz=62,slow=6.3,SNR=2.9						
PDAR	**Pinedale Array**	**48.14**	**287**	P	**P**	**03 36 25.9**	**+0.7**
	0.2nm,0.5s,baz=67,slow=6.9,SNR=1.7						
ILAR	**Eielson Array**	**48.61**	**328**	P	**P**	**03 36 27.5**	**-0.7**
	1.2nm,0.9s,baz=40,slow=6.0,SNR=5.2						
TORD	**Torodi Ar. Bea**	**51.35**	**133**	P	**P**	**03 36 49.8**	**+0.3**
	1.8nm,1.0s,baz=336,slow=7.1,SNR=4.1						
DBIC	**Dimbokro**	**54.90**	**143**	P	**P**	**03 37 16.1**	**+0.5**
	2.5nm,0.8s,baz=315,slow=8.6,SNR=1.9						
MKAR	**Makanchi Array**	**64.26**	**43**	P	**P**	**03 38 20.8**	**+1.0**
	1.1nm,0.8s,baz=338,slow=5.9,SNR=5.5						
ASAR	**Alice Springs**	**146.05**	**20**	PKPbc	**PKPdf**	**03 47 24.0**	**+0.2**
	0.6nm,0.7s,baz=343,slow=2.9,SNR=3.8						

*JMA **20** 03:38:34.9±0.1,24.°01N×122.°37E,h24km±4km,M2.3*
*TAP **20** 03:38:35.6,24.°04N×122.°37E,h31km,ML3.0,D*

ISC 20 03:38:35.2±1.0,24.°04N±0.°02×122.°35E±0.°02,h26km±11km, n92,σ0s71/172,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.66**	**307**	*eP*	**Pb**	**03 38 47.9**	**-0.2**
	baz=306						
EWUT				*eS*	**Sb**	**03 38 57.2**	**+0.3**
	baz=306						
JYNG	**Yonagunijimaku**	**0.68**	**53**	P	**Pb**	**03 38 47.6**	**-0.8**
JYNG				S	**Sb**	**03 38 57.0**	**-0.4**
HWA	**Hwalien**	**0.69**	**265**	*eP*	**Pn**	**03 38 49.3**	**+0.1**
	baz=264						
HWA				*eS*	**Sn**	**03 38 59.1**	**+0.1**
	baz=264						
TWD	**Chiawan**	**0.69**	**273**	*eP*	**Pn**	**03 38 49.3**	**+0.1**
	baz=273						
TWD				*eS*	**Sb**	**03 38 58.7**	**+0.9**
	baz=273						
NACB	**Ninganchiao**	**0.70**	**281**	*eP*	**Pb**	**03 38 48.9**	**+0.1**
	baz=280						
NACB				*eS*	**Sb**	**03 38 58.7**	**+0.6**
	baz=280						
TWC	**Suao**	**0.73**	**321**	*eP*	**Pb**	**03 38 48.6**	**-0.6**
	baz=320						
TWC				*eS*	**Sb**	**03 38 58.5**	**-0.2**
	baz=320						
YOJ	**Yonaguni jima**	**0.73**	**55**	P	**Pb**	**03 38 49.1**	**-0.1**
YOJ				S	**Sb**	**03 38 58.4**	**-0.5**
YOJ	**Yonaguni jima**	**0.73**	**55**	P	**Pb**	**03 38 49.2**	**-0.1**
	baz=53						
YOJ				S	**Sb**	**03 38 59.0**	**+0.1**
	baz=53						
ETLH	**Xiulin Townshi**	**0.81**	**282**	P	**Pb**	**03 38 50.7**	**0.0**
	baz=281						
ETLH				S	**Sb**	**03 39 01.9**	**+0.6**
	baz=281						
NDS	**Dongshan**	**0.83**	**315**	*eP*	**Pn**	**03 38 51.2**	**+0.1**
	baz=314						
NDS				*eS*	**Sb**	**03 39 02.4**	**+0.8**
	baz=314						
ESL	**Shilin**	**0.87**	**255**	*eS*	**Sb**	**03 39 03.2**	**+0.2**
	baz=254						
EGS		**0.89**	**334**	P	**Pn**	**03 38 51.6**	**-0.3**
	baz=333						
EGS				*eS*	**Sb**	**03 39 03.3**	**0.0**
	baz=333						
TWE	**Neicheng**	**0.92**	**317**	*eP*	**Pn**	**03 38 52.3**	**-0.1**
	baz=316						
TWE				*eS*	**Sb**	**03 39 04.8**	**+0.5**
	baz=316						
EGFH	**Guangfu**	**0.93**	**246**	*eP*	**Pn**	**03 38 52.7**	**+0.2**
	baz=246						
EGFH				S	**Sn**	**03 39 05.1**	**+0.2**
	baz=246						
ENTT	**Nioudou**	**0.93**	**310**	P	**Pn**	**03 38 52.6**	**+0.1**
	baz=309						
ENTT				S	**Sb**	**03 39 05.0**	**+0.4**
	baz=309						
NTC	**Toucheng**	**0.94**	**330**	*i* P	**Pn**	**03 38 52.4**	**-0.2**
	baz=328						
NTC				*eS*	**Sb**	**03 39 04.5**	**-0.3**
	baz=328						
NDT	**Datong Townshi**	**0.95**	**306**	P	**Pn**	**03 38 53.1**	**+0.3**
	baz=305						
NDT				S	**Sn**	**03 39 06.0**	**+0.6**
	baz=305						
NNSB	**Datong**	**0.96**	**294**	P	**Pn**	**03 38 52.9**	**-0.2**
	baz=292						
NNSB				S	**Sb**	**03 39 05.4**	**-0.3**
	baz=292						
NNSH	**Datong**	**0.96**	**294**	P	**Pn**	**03 38 53.1**	**-0.1**
	baz=292						
NNSH				S	**Sb**	**03 39 05.2**	**-0.5**
	baz=292						
NNS	**Nan Shan**	**0.98**	**294**	*eP*	**Pn**	**03 38 53.3**	**0.0**
	baz=293						
NNS				S	**Sn**	**03 39 06.5**	**+0.1**
	baz=293						
WHF	**Hehuan Shan**	**1.00**	**276**	P	**Pn**	**03 38 53.6**	**-0.3**
	baz=275						
WHF				S	**Sb**	**03 39 07.0**	**0.0**
	baz=275						
HGSD	**Ruisui**	**1.01**	**237**	P	**Pn**	**03 38 53.6**	**0.0**
	baz=237						
HGSD				S	**Sn**	**03 39 06.4**	**-0.6**
	baz=237						
TWB1	**Santiao Chiao**	**1.02**	**341**	*eP*	**Pn**	**03 38 53.2**	**-0.5**
	baz=340						
TWB1				*eS*	**Sn**	**03 39 07.2**	**0.0**
	baz=340						
FUSS	**Fushou**	**1.03**	**282**	*eP*	**Pn**	**03 38 54.4**	**+0.2**
	baz=281						
FUSS				*eS*	**Sn**	**03 39 07.8**	**-0.1**
	baz=281						
TIPB	**Shuangxi**	**1.04**	**333**	P	**Pn**	**03 38 54.7**	**+0.6**
	baz=331						
TIPB				S	**Sn**	**03 39 07.9**	**+0.1**
	baz=331						
NWLT	**Wulai**	**1.06**	**313**	*eP*	**Pn**	**03 38 54.8**	**+0.4**
	baz=312						
NWLT				*eS*	**Sn**	**03 39 08.2**	**-0.2**
	baz=312						
CHGB	**Renai**	**1.08**	**271**	*eP*	**Pn**	**03 38 55.0**	**+0.2**
	baz=270						
CHGB				S	**Sn**	**03 39 09.3**	**+0.3**
	baz=270						
OWD	**Renai**	**

		baz=229							
IRIF	**Iriomote-Funau**	**1.29**	**77**	P		**Pn**	**03 38 57.9**	**+0.4**
IRIF				S		**Sb**	**03 39 15.4**	**+0.5**
CHKT	**Chengkung**	**1.30**	**224**	*e*S		**Sn**	**03 39 12.8**	**-1.5**
		baz=224							
SSLB	**Suanglung**	**1.30**	**259**	*e*P		**Pn**	**03 38 57.6**	**-0.1**
		baz=258							
SSLB				*e*S		**Sn**	**03 39 13.6**	**-0.7**
		baz=258							
WHP	**Taichung City**	**1.31**	**281**	*e*P		**Pb**	**03 38 59.5**	**+0.4**
		baz=280							
WHP				*e*S		**Sn**	**03 39 13.9**	**-0.5**
		baz=280							
YM01	**YM01**	**1.31**	**327**	*e*P		**Pn**	**03 38 57.9**	**+0.1**
		baz=326							
YM01				*e*S		**Sn**	**03 39 14.2**	**-0.2**
		baz=326							
YM04	**YM04**	**1.33**	**326**	*e*P		**Pn**	**03 38 58.6**	**+0.5**
		baz=325							
YM04				*e*S		**Sn**	**03 39 14.8**	**-0.2**
		baz=325							
SMLT	**Sun Moon Lake**	**1.34**	**263**	*e*P		**Pn**	**03 38 58.6**	**+0.4**
		baz=263							
SMLT				*e*S		**Sn**	**03 39 15.1**	**-0.1**
		baz=263							
LIOB	**Emei**	**1.36**	**296**	*e*P		**Pn**	**03 38 58.9**	**+0.4**
		baz=295							
LIOB				*e*S		**Sn**	**03 39 15.6**	**-0.1**
		baz=295							
TYC	**Yuchr**	**1.38**	**264**	*e*P		**Pn**	**03 38 59.2**	**+0.5**
		baz=264							
TYC				*e*S		**Sn**	**03 39 16.6**	**+0.6**
		baz=264							
NTST	**Danshui**	**1.39**	**324**	*e*P		**Pn**	**03 38 59.9**	**+1.1**
		baz=322							
YUS	**Yu-Shan**	**1.40**	**247**	*e*P		**Pn**	**03 38 59.5**	**+0.1**
		baz=246							
YUS				*e*S		**Sn**	**03 39 17.1**	**-0.1**
		baz=246							
EDH	**Donghe**	**1.44**	**222**	*e*P		**Pn**	**03 38 59.4**	**-0.1**
		baz=222							
EDH				*e*S		**Sn**	**03 39 16.1**	**-1.4**
		baz=222							
ALS	**Alishan**	**1.51**	**250**	*e*P		**Pn**	**03 39 01.9**	**+1.0**
		baz=249							
ALS				*e*S		**Sn**	**03 39 19.5**	**-0.4**
		baz=249							
JKRS	**Kuro-shima**	**1.53**	**82**	*e*S		**Sn**	**03 39 19.3**	**-0.4**
LDUT	**Ludao**	**1.59**	**211**	P		**Pn**	**03 39 01.3**	**-0.3**
		baz=211							
LDUT				*e*S		**Sn**	**03 39 20.3**	**-0.9**
		baz=211							
LONT	**Longtian**	**1.59**	**225**	*e*P		**Pn**	**03 39 02.0**	**+0.3**
		baz=225							
LONT				*e*S		**Sn**	**03 39 21.3**	**-0.1**
		baz=225							
CHN5	**Tsauling**	**1.60**	**254**	*e*P		**Pn**	**03 39 02.4**	**+0.6**
		baz=254							
CHN5				*e*S		**Sn**	**03 39 22.1**	**+0.5**
		baz=254							
JIJ	**Ishigaki jima**	**1.67**	**79**	P		**Pn**	**03 39 03.5**	**+0.8**
JIJ				S		**Sn**	**03 39 23.4**	**+0.2**
STYH	**Taoyuan**	**1.69**	**239**	*e*P		**Pn**	**03 39 03.9**	**+1.0**
		baz=239							
STYH				*e*S		**Sn**	**03 39 24.4**	**+0.7**
		baz=239							
TWGBT	**Beinan**	**1.69**	**224**	*e*P		**Pn**	**03 39 03.9**	**+0.9**
		baz=224							
TWGBT				*e*S		**Sn**	**03 39 23.2**	**-0.6**
		baz=224							
TWG	**Pinlang**	**1.69**	**224**	*e*P		**Pn**	**03 39 03.7**	**+0.7**
		baz=224							
TWG				*e*S		**Sn**	**03 39 23.2**	**-0.6**
		baz=224							
WDLH	**Douliu**	**1.70**	**258**	*e*P		**Pn**	**03 39 03.7**	**+0.6**
		baz=258							
WDLH				*e*S		**Sn**	**03 39 24.4**	**+0.4**
		baz=258							
TPUB	**Ta-pu**	**1.74**	**245**	*e*S		**Sn**	**03 39 25.6**	**+0.4**
		baz=245							
CHN4	**Tsaushan**	**1.75**	**247**	*e*P		**Pn**	**03 39 04.7**	**+0.8**
		baz=247							
CHN4				*e*S		**Sn**	**03 39 26.3**	**+0.9**
		baz=247							
WTP	**Ta-pu**	**1.78**	**244**	*e*P		**Pn**	**03 39 05.2**	**+1.0**
		baz=243							
WTP				*e*S		**Sn**	**03 39 26.6**	**+0.5**
		baz=243							
WRL	**Guolierlin Hig**	**1.81**	**266**	*e*S		**Sn**	**03 39 27.6**	**+0.8**
		baz=265							
WTK	**Tuku**	**1.83**	**259**	*e*S		**Sn**	**03 39 28.0**	**+0.8**
		baz=258							
JISG	**Ishigakijimahi**	**1.87**	**73**	P		**Pn**	**03 39 06.1**	**+0.7**
JISG				*e*S		**Sn**	**03 39 28.9**	**+0.8**
TWK	**Hsinying**	**1.88**	**246**	*e*P		**Pb**	**03 39 08.0**	**-0.7**
		baz=245							
TWK				*e*S		**Sn**	**03 39 29.0**	**+0.5**
		baz=245							
CHN1	**Nanshi**	**1.88**	**243**	*e*S		**Sn**	**03 39 29.0**	**+0.5**
		baz=243							
SLGT	**Liugui**	**1.88**	**237**	*e*P		**Pn**	**03 39 06.7**	**+1.0**
		baz=236							
SLGT				*e*S		**Sn**	**03 39 29.5**	**+0.9**
		baz=236							
SNST	**Tainan City**	**1.89**	**245**	*e*S		**Sn**	**03 39 29.0**	**+0.3**
		baz=244							
ECL	**Taimali**	**1.93**	**222**	*e*P		**Pn**	**03 39 07.3**	**+1.0**
		baz=222							
ECL				*e*S		**Sn**	**03 39 28.7**	**-1.0**
		baz=222							
SSD	**Sandimen**	**2.04**	**231**	*e*P		**Pn**	**03 39 09.2**	**+1.3**
		baz=230							
SSD				*e*S		**Sn**	**03 39 32.9**	**+0.4**
		baz=230							
TSMG	**Majia**	**2.06**	**230**	*e*P		**Pn**	**03 39 09.7**	**+1.6**
		baz=230							
TSMG				*e*S		**Sn**	**03 39 34.5**	**+1.7**
		baz=230							
LAY	**Lan-yu**	**2.13**	**200**	*e*S		**Sn**	**03 39 34.8**	**+0.2**
		baz=200							
MASBT	**Mashibuluo**	**2.13**	**228**	P		**Pn**	**03 39 09.9**	**+0.9**
		baz=228							
MASBT				*e*S		**Sb**	**03 39 37.1**	**-2.0**
		baz=228							
TWM1	**Shoushan**	**2.15**	**236**	*e*P		**Pn**	**03 39 09.1**	**-0.2**
		baz=235							
TWM1				*e*S		**Sn**	**03 39 34.8**	**-0.3**
		baz=235							
SGLT	**Jiouru**	**2.16**	**233**	*e*S		**Sn**	**03 39 36.0**	**+0.7**
		baz=232							
SSPT	**Xinbi**	**2.26**	**227**	*e*P		**Pn**	**03 39 11.3**	**+0.5**
		baz=226							
SSPT				*e*S		**Sn**	**03 39 37.4**	**-0.5**
		baz=226							
SCZT	**Fangliau**	**2.30**	**224**	*e*P		**Pb**	**03 39 13.9**	**-2.2**
		baz=223							
SCZT				*e*S		**Sn**	**03 39 40.7**	**+1.8**
		baz=223							
SLIU	**Shizi**	**2.31**	**218**	*e*P		**Pn**	**03 39 11.9**	**+0.3**
		baz=218							
SLIU				*e*S		**Sn**	**03 39 39.0**	**-0.2**
		baz=218							
TSEB	**Hengchuen, Pin**	**2.52**	**212**	*e*S		**Sn**	**03 39 45.5**	**+1.2**
		baz=213							
TWKBT	**Hengchun**	**2.53**	**214**	*e*P		**Pn**	**03 39 15.0**	**+0.4**
		baz=214							
TWKBT				*e*S		**Sn**	**03 39 44.6**	**+0.1**
		baz=214							
TWK1	**Hengchun**	**2.53**	**215**	*e*P		**Pn**	**03 39 15.8**	**+1.3**
		baz=214							
TWK1				*e*S		**Sn**	**03 39 46.3**	**+1.8**
		baz=214							
WDGT	**Dungji**	**2.59**	**253**	*e*P		**Pn**	**03 39 16.1**	**+0.7**
		baz=252							
WDGT				*e*S		**Sn**	**03 39 46.3**	**+0.3**
		baz=252							
PHUB	**P'eng-hu**	**2.60**	**259**	*e*P		**Pn**	**03 39 16.7**	**+1.1**
		baz=258							
PHUB				*e*S		**Sn**	**03 39 46.6**	**+0.3**
		baz=258							
VCHM	**Qimei**	**2.81**	**253**	*e*P		**Pn**	**03 39 19.7**	**+1.4**
		baz=252							
VCHM				*e*S		**Sn**	**03 39 50.8**	**-0.6**
		baz=252							
VWUC	**VWUC**	**2.81**	**290**	*e*P		**Pn**	**03 39 20.6**	**+2.2**
		baz=289							
VWUC				*e*S		**Sn**	**03 39 50.2**	**-1.1**
		baz=289							
MATB	**Ma-tsu**	**3.03**	**314**	*e*P		**Pn**	**03 39 20.9**	**-0.5**
		baz=313							
MATB				*e*S		**Sn**	**03 39 56.1**	**-0.7**
		baz=313							
PTMZ	**Houxiangcun**	**3.11**	**289**	*e*P		**Pn**	**03 39 22.8**	**+0.4**
		baz=288							
PTMZ				*e*S		**Sn**	**03 39 56.1**	**-2.7**
		baz=288							
LYJJ	**Jianjiangzhen**	**3.42**	**317**	*e*P		**Pn**	**03 39 27.3**	**+0.4**
		baz=316							
LYJJ				*e*S		**Sn**	**03 40 05.3**	**-1.3**
		baz=316							

IDC ***20*** *03:51:21.1±70.0, 22.˙79N×124.˙32E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.4/34, mbtmp3.8/3, Error ellipse: s-maj=1259.0km s-min=186.4km az=133.0*
TAP ***20*** *03:51:42.8, 24.˙00N×122.˙43E, h29km, ML3.7, D*
JMA ***20*** *03:51:42.5±0.2, 23.˙96N×122.˙42E, h21km±4km, M3.4*

ISC 20 03:51:42.1±1.1, 23.˙94N±0.˙02×122.˙41E±0.˙02, h25km±11km, n107, σ0.81/150, mb3.6/3, 6C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.70**	**44**	P	**Pb**	**03 51 55.6**	**-0.2**
JYNG				S	**Sb**	**03 52 04.1**	**-0.9**
YOJ	**Yonaguni jima**	**0.75**	**46**	P	**Pb**	**03 51 56.5**	**-0.1**
YOJ				S	**Sb**	**03 52 05.4**	**-1.1**
YOJ	**Yonaguni jima**	**0.75**	**46**	⇓P	**Pb**	**03 51 56.6**	**-0.1**
	baz=55						
YOJ				S	**Sb**	**03 52 05.9**	**-0.6**
	baz=55						
TWD	**Chiawan**	**0.76**	**281**	*e*P	**Pn**	**03 51 57.5**	**+0.3**
	baz=276						
EWUT	**Wuta**	**0.77**	**311**	*e*P	**Pb**	**03 51 56.8**	**0.0**
	baz=306						
EWUT				*e*S	**Sn**	**03 52 08.0**	**-0.1**
	baz=306						
NACB	**Ninganchiao**	**0.78**	**287**	P	**Pb**	**03 51 57.1**	**+0.1**
	baz=269						
NACB				*e*S	**Sn**	**03 52 08.5**	**-0.1**
	baz=269						
TWC	**Suao**	**0.84**	**322**	⇓*i*P	**Pb**	**03 51 57.6**	**-0.4**
	baz=319						
ETLH	**Xiulin Townshi**	**0.89**	**287**	*e*P	**Pb**	**03 51 59.1**	**+0.1**
	baz=283						
ESL	**Shilin**	**0.91**	**262**	*e*P	**Pb**	**03 51 59.0**	**-0.2**
	baz=258						
NDS	**Dongshan**	**0.94**	**317**	P	**Pb**	**03 51 59.9**	**+0.1**
	baz=314						
EGS		**1.00**	**334**	P	**Pb**	**03 52 00.7**	**-0.1**
	baz=320						
EGS				*e*S	**Sn**	**03 52 14.9**	**+1.0**
	baz=320						
HGSD	**Ruisui**	**1.01**	**244**	P	**Pb**	**03 52 00.9**	**-0.1**
	baz=241						
HGSD				*e*S	**Sb**	**03 52 14.1**	**+0.3**
	baz=241						
TWE	**Neicheng**	**1.03**	**319**	P	**Pb**	**03 52 01.4**	**+0.1**
	baz=316						
TWE				*e*S	**Sn**	**03 52 16.3**	**+1.7**
	baz=316						
ENTT	**Nioudou**	**1.04**	**312**	⇑P	**Pb**	**03 52 01.6**	**+0.1**
	baz=295						
ENTT				*e*S	**Sb**	**03 52 14.1**	**-0.6**
	baz=295						
NDT	**Datong Townshi**	**1.05**	**309**	P	**Pn**	**03 52 01.9**	**+0.6**
	baz=305						
NDT				*e*S	**Sn**	**03 52 15.9**	**+0.7**
	baz=305						
NTC	**Toucheng**	**1.05**	**330**	*e*P	**Pn**	**03 52 02.2**	**+0.9**
	baz=327						
NTC				*e*S	**Sn**	**03 52 16.1**	**+0.9**
	baz=327						
NNSB	**Datong**	**1.06**	**297**	⇑P	**Pb**	**03 52 01.9**	**+0.1**
	baz=283						
NNSH	**Datong**	**1.06**	**297**	*e*P	**Pb**	**03 52 01.7**	**-0.1**
	baz=282						
WHF	**Hehuan Shan**	**1.07**	**281**	⇓P	**Pb**	**03 52 02.1**	**-0.1**
	baz=277						
WHF				*e*S	**Sb**	**03 52 16.0**	**0.0**
	baz=277						
NNS	**Nan Shan**	**1.07**	**298**	⇑*i*P	**Pb**	**03 52 02.0**	**-0.1**
	baz=283						
FUSS	**Fushou**	**1.11**	**286**	*e*P	**Pn**	**03 52 02.8**	**+0.5**
	baz=282						
TWB1	**Santiao Chiao**	**1.13**	**340**	*e*P	**Pn**	**03 52 02.5**	**+0.2**
	baz=338						
OWD	**Renai**	**1.13**	**271**	*e*P	**Pn**	**03 52 02.9**	**+0.3**
	baz=267						
CHGB	**Renai**	**1.14**	**276**	*e*P	**Pn**	**03 52 02.9**	**+0.2**
	baz=272						
CHGB				S	**Sb**	**03 52 17.2**	**-0.5**
	baz=272						
TIPB	**Shuangxi**	**1.16**	**333**	*e*P	**Pn**	**03 52 03.1**	**+0.3**
	baz=330						
TIPB				*e*S	**Sb**	**03 52 17.4**	**-0.7**
	baz=330						
YULB	**Yu-li**	**1.16**	**242**	P	**Pn**	**03 52 03.2**	**+0.4**
	baz=227						
YULB				S	**Sb**	**03 52 17.9**	**-0.2**
	baz=227						
EYUL	**Yuli**	**1.16**	**240**	P	**Pn**	**03 52 03.3**	**+0.4**
	baz=237						
EYUL				S	**Sn**	**03 52 19.3**	**+1.3**
	baz=237						
TWT	**Tachien**	**1.17**	**286**	*e*P	**Pb**	**03 52 04.7**	**+0.8**
	baz=271						
NWLT	**Wulai**	**1.18**	**315**	*e*P	**Pb**	**03 52 04.3**	**+0.5**
	baz=312						
VWDT	**VWDT**	**1.18**	**261**	*e*P	**Pn**	**03 52 03.9**	**+0.8**
	baz=257						
VWDT				S	**Sb**	**03 52 18.4**	**-0.3**
	baz=257						
TDCB	**Techi**	**1.19**	**285**	*e*P	**Pb**	**03 52 04.2**	**+0.1**
	baz=271						
YHNB	**Yeheng**	**1.19**	**308**	⇑P	**Pn**	**03 52 03.9**	**+0.6**
	baz=304						
NSK	**Sanguang**	**1.21**	**307**	⇑*i*P	**Pn**	**03 52 04.1**	**+0.6**
	baz=292						
NSK				S	**Sn**	**03 52 19.8**	**+0.6**
	baz=292						
NWF	**Wu-fen Shan**	**1.26**	**333**	*e*P	**Pn**	**03 52 04.6**	**+0.3**
	baz=331						
NWF				*e*S	**Sb**	**03 52 21.4**	**+0.3**
	baz=331						
WFSB	**Wu-fen Shan**	**1.26**	**333**	⇑P	**Pn**	**03 52 04.5**	**+0.3**
	baz=331						
WFSB				S	**Sn**	**03 52 21.0**	**+0.6**
	baz=331						
FULB	**Fuli**	**1.27**	**234**	P	**Pn**	**03 52 04.1**	**-0.2**
	baz=221						
FULB				*e*S	**Sn**	**03 52 20.2**	**-0.3**
	baz=221						
IRIF	**Iriomote-Funau**	**1.27**	**72**	P	**Pn**	**03 52 05.1**	**+0.9**
IRIF				S	**Sb**	**03 52 21.7**	**+0.5**
CHKT	**Chengkung**	**1.27**	**229**	P	**Pn**	**03 52 04.4**	**+0.1**
	baz=227						
CHKT				*e*S	**Sn**	**03 52 19.9**	**-0.8**
	baz=227						
HATJ	**Hateruma jima**	**1.28**	**85**	P	**Pb**	**03 52 05.6**	**+0.1**
HATJ				S	**Sn**	**03 52 21.5**	**+0.7**
TWA	**Mucha**	**1.28**	**324**	P	**Pb**	**03 52 05.9**	**+0.4**
	baz=321						
TWA				*e*S	**Sb**	**03 52 23.1**	**+1.4**
	baz=321						
NHDH	**Xindian Distri**	**1.30**	**322**	*e*P	**Pb**	**03 52 06.3**	**+0.4**
	baz=319						
NHDH				*e*S	**Sb**	**03 52 23.2**	**+1.0**
	baz=319						
TNOU	**National Taiwa**	**1.34**	**334**	*e*P	**Pn**	**03 52 05.7**	**+0.5**
	baz=332						
SSLB	**Suanglung**	**1.34**	**264**	*e*P	**Pb**	**03 52 07.0**	**+0.3**
	baz=261						
DPDB	**Guoxing**	**1.36**	**274**	*e*P	**Pb**	**03 52 07.1**	**+0.1**
	baz=271						
WCS	**Beigang Elemen**	**1.38**	**275**	*e*P	**Pb**	**03 52 07.8**	**+0.5**
	baz=272						
WHP	**Taichung City**	**1.38**	**284**	*e*P	**Pb**	**03 52 08.5**	**+1.1**
	baz=271						
SMLT	**Sun Moon Lake**	**1.39**	**268**	*e*P	**Pb**	**03 52 07.8**	**+0.3**
	baz=255						
EDH	**Donghe**	**1.40**	**227**	*e*P	**Pn**	**03 52 06.4**	**+0.3**
	baz=216						
EDH				*e*S	**Sn**	**03 52 23.7**	**-0.2**
	baz=216						
TYC	**Yuchr**	**1.42**	**269**	*e*P	**Pb**	**03 52 08.9**	**+0.9**
	baz=266						
YM01	**YM01**	**1.42**	**328**	*e*P	**Pn**	**03 52 06.9**	**+0.5**
	baz=325						
YM10	**YM10**	**1.44**	**328**	*e*P	**Pn**	**03 52 07.1**	**+0.4**
	baz=325						
YM11	**YM11**	**1.44**	**328**	*e*P	**Pb**	**03 52 08.4**	**+0.1**
	baz=325						
YM05	**YM05**	**1.44**	**328**	*e*P	**Pb**	**03 52 07.9**	**-0.4**
	baz=325						
YM04	**YM04**	**1.45**	**327**	*e*P	**Pn**	**03 52 07.0**	**+0.3**
	baz=324						
YM08	**YM08**	**1.45**	**329**	*e*P	**Pn**	**03 52 07.6**	**+0.8**
	baz=326						
LIOB	**Emei**	**1.45**	**299**	*e*P	**Pb**	**03 52 08.7**	**+0.2**
	baz=296						
NSTT	**Nanjuang**	**1.46**	**298**	*e*P	**Pb**	**03 52 08.5**	**-0.1**
	baz=295						
NSTT				*e*S	**Sb**	**03 52 26.7**	**-0.1**
	baz=295						
ANP	**Anpu**	**1.48**	**327**	*e*P	**Pb**	**03 52 08.6**	**-0.5**
	baz=324						
ELDTW	**Lidau**	**1.48**	**240**	P	**Pn**	**03 52 07.8**	**+0.4**
	baz=237						
ELDTW				*e*S	**Sn**	**03 52 26.2**	**+0.2**
	baz=237						
JKRS	**Kuro-shima**	**1.49**	**78**	P	**Pb**	**03 52 09.1**	**0.0**
JKRS				S	**Sb**	**03 52 28.5**	**+0.9**
TWY	**Chenhua**	**1.52**	**331**	*e*P	**Pb**	**03 52 10.1**	**+0.5**
	baz=329						
LDUT	**Ludao**	**1.53**	**215**	*e*P	**Pn**	**03 52 08.0**	**+0.1**
	baz=213						
LDUT				*e*S	**Sn**	**03 52 27.3**	**+0.3**
	baz=213						
ALS	**Alishan**	**1.53**	**254**	P	**Pb**	**03 52 09.7**	**-0.4**
	baz=251						
ALS				S	**Sn**	**03 52 28.7**	**+1.2**
	baz=251						
WJS	**Zhushan**	**1.55**	**266**	*e*P	**Pb**	**03 52 12.1**	**+2.0**
	baz=263						
TWQ1	**Liyutan**	**1.55**	**285**	*e*P	**Pb**	**03 52 10.8**	**+0.6**
	baz=283						
LONT	**Longtian**	**1.56**	**229**	P	**Pn**	**03 52 09.1**	**+0.7**
	baz=240						
LONT				S	**Sn**	**03 52 29.2**	**+1.3**
	baz=240						
WWF	**Wufeng**	**1.57**	**274**	*e*P	**Pb**	**03 52 11.2**	**+0.7**
	baz=271						
WNT	**Mingjian**	**1.58**	**268**	*e*P	**Pb**	**03 52 11.4**	**+0.7**
	baz=265						
CHN5	**Tsauling**	**1.62**	**258**	*e*P	**Pb**	**03 52 12.5**	**+1.0**
	baz=256						
JIJ	**Ishigaki jima**	**1.64**	**75**	P	**Pn**	**03 52 10.1**	**+0.8**
JIJ				S	**Sn**	**03 52 29.8**	**+0.2**
TWGBT	**Beinan**	**1.66**	**228**	P	**Pn**	**03 52 10.0**	**+0.4**
	baz=238						
TWGBT				*e*S	**Sn**	**03 52 30.2**	**0.0**
	baz=238						
TWG	**Pinlang**	**1.66**	**228**	*e*P	**Pn**	**03 52 10.1**	**+0.4**
	baz=238						
TWG				S	**Sn**	**03 52 30.2**	**0.0**
	baz=238						
STYH	**Taoyuan**	**1.69**	**243**	*e*P	**Pb**	**03 52 11.8**	**-0.7**
	baz=231						
STYT	**Tauyuan**	**1.71**	**243**	*e*P	**Pn**	**03 52 11.7**	**+1.3**
	baz=231						
PCYT	**Pengchaiyu**	**1.71**	**350**	*e*P	**Pn**	**03 52 10.3**	**0.0**
	baz=348						
TPUB	**Ta-pu**	**1.75**	**249**	*e*P	**Pb**	**03 52 14.6**	**+0.9**
	baz=247						
CHN4	**Tsaushan**	**1.77**	**251**	*e*P	**Pb**	**03 52 14.6**	**+0.7**
	baz=248						
CHN4				*e*S	**Sb**	**03 52 37.0**	**+1.4**
	baz=248						
WTP	**Ta-pu**	**1.79**	**248**	P	**Pb**	**03 52 13.9**	**-0.4**
	baz=245						
WTP				*e*S	**Sb**	**03 52 36.4**	**+0.1**
	baz=245						
JISG	**Ishigakijimahi**	**1.85**	**69**	P	**Pn**	**03 52 12.8**	**+0.5**
JISG				S	**Sn**	**03 52 35.3**	**+0.5**
SLGT	**Liugui**	**1.88**	**240**	*e*P	**Pb**	**03 52 15.6**	**-0.1**
	baz=230						
SGST	**Jiashian**	**1.88**	**243**	*e*P	**Pb**	**03 52 15.2**	**-0.7**
	baz=232						
CHN1	**Nanshi**	**1.89**	**247**	*e*P	**Pb**	**03 52 17.5**	**+1.6**
	baz=245						
TWK	**Hsinying**	**1.89**	**250**	*e*P	**Pb**	**03 52 15.4**	**-0.6**
	baz=246						
TWK				S	**Sb**	**03 52 39.5**	**+0.3**
	baz=246						
ECL	**Taimali**	**1.89**	**225**	*e*P	**Pn**	**03 52 13.2**	**+0.3**
	baz=235						
SSD	**Sandimen**	**2.02**	**234**	*e*P	**Pn**	**03 52 16.3**	**+1.6**
	baz=225						
TSMG	**Majia**	**2.04**	**233**	*e*P	**Pb**	**03 52 17.7**	**-0.7**
	baz=224						
SCST	**Cishan**	**2.05**	**240**	*e*P	**Pb**	**03 52 19.1**	**+0.3**
	baz=238						
MASBT	**Mashibuluo**	**2.10**	**231**	P	**Pn**	**03 52 17.6**	**+1.8**
	baz=225						
MASBT				*e*S	**Sb**	**03 52 44.5**	**-0.8**
	baz=225						
EAST	**Anshuo**	**2.12**	**223**	*e*P	**Pn**	**03 52 16.9**	**+0.9**
	baz=222						
TWM1	**Shoushan**	**2.14**	**239**	*e*P	**Pb**	**03 52 20.7**	**+0.4**
	baz=237						
JTJ	**Tarama**	**2.20**	**71**	P	**Pn**	**03 52 19.3**	**+2.2**
JTJ				*e*S	**Sn**	**03 52 45.6**	**+2.0**
SSPT	**Xinbi**	**2.23**	**230**	*e*P	**Pb**	**03 52 21.0**	**-0.7**
	baz=223						
SLIU	**Shizi**	**2.27**	**221**	*e*P	**Pn**	**03 52 18.7**	**+0.6**
	baz=229						
SCZT	**Fangliau**	**2.27**	**227**	*e*P	**Pb**	**03 52 20.9**	**-1.5**
	baz=217						
TWKBT	**Hengchun**	**2.48**	**217**	*e*P	**Pn**	**03 52 22.2**	**+1.3**
	baz=216						
TWK1	**Hengchun**	**2.48**	**217**	*e*P	**Pn**	**03 52 23.5**	**+2.6**
	baz=216						
WDGT	**Dungji**	**2.61**	**256**	*e*P	**Pn**	**03 52 25.0**	**+2.2**
	baz=254						
PHUB	**P'eng-hu**	**2.64**	**261**	*e*P	**Pn**	**03 52 25.3**	**+2.2**
	baz=258						
PHUB				*e*S	**Sn**	**03 52 55.3**	**+1.0**
	baz=258						
PNG	**Penghu**	**2.64**	**262**	*e*P	**Pn**	**03 52 25.1**	**+1.9**
	baz=261						
VWUC	**VWUC**	**2.90**	**292**	*e*P	**Pn**	**03 52 26.9**	**+0.2**
	baz=289						
PTMZ	**Houxiangcun**	**3.19**	**291**	*e*P	**Pn**	**03 52 31.3**	**+0.6**
	baz=288						
XPSS	**Dashiqiu**	**3.59**	**326**	*e*P	**Pn**	**03 52 36.5**	**+0.3**
	baz=333						
KNMB	**Chin-men Tao**	**3.71**	**279**	*e*P	**Pn**	**03 52 37.8**	**0.0**
	baz=278						
AXDP	**Jialang**	**4.16**	**284**	*e*P	**Pn**	**03 52 44.2**	**+0.1**
	baz=283						
SONM	**Songino Array**	**27.04**	**336**	P	**P**	**03 57 21.1**	**-1.4**
	0.5nm,0.5s,baz=135,slow=10.0,SNR=2.0						
MKAR	**Makanchi Array**	**39.29**	**316**	P	**P**	**03 59 08.5**	**-0.5**
	0.5nm,0.4s,baz=102,slow=9.9,SNR=7.5						
ZALV	**Zalesovo Beam**	**41.06**	**327**	P	**P**	**03 59 21.6**	**-1.8**
	1.1nm,0.6s,baz=134,slow=8.3,SNR=4.1						

WEL 20 03:53:32.4±0.5, 33˚S±4˚×17˚9E±˚, h33km, M4.3/41, mB5.0/23, ML4.7/39, MLv4.4/41, Mw(mB)4.3/23, Error ellipse: s-maj=0.0km s-min=0.0km az=105.3, South of Kermadec Islands

| Code | Station Name | Δ° |

MWZ	**Matawai**	**5.05**	**196**	P	Pn	03 54 46.8 +1.0
MWZ				S	Sn	03 55 47.7 +4.7
OUZ	**Omahuta**	**5.06**	**249**	P	Pn	03 54 48.4 +2.5
CNGZ	**Carnagh Statio**	**5.06**	**190**	P	Pn	03 54 46.5 +0.5
TKGZ	**Te Karaka**	**5.08**	**193**	P	Pn	03 54 48.3 +2.1
TKGZ				S	Sn	03 55 46.1 +2.4
URZ	**Urewera**	**5.08**	**200**	P	Pn	03 54 47.2 +0.9
URZ				S	Sn	03 55 46.4 +2.5
RAGZ	**Rawiri**	**5.23**	**197**	P	Pn	03 54 48.9 +0.6
RAGZ				S	Sn	03 55 49.8 +2.3
TOZ	**Tahuroa Road**	**5.26**	**215**	P	Pn	03 54 52.4 +3.7
TARZ	**Mount Tarawera**	**5.26**	**205**	P	Pn	03 54 51.7 +2.9
RIGZ	**Rimuhau**	**5.35**	**193**	P	Pn	03 54 51.4 +1.4
RIGZ				S	Sn	03 55 52.3 +1.8
MUGZ	**Murupara**	**5.39**	**202**	P	Pn	03 54 51.7 +1.2
MUGZ				S	Sn	03 55 51.5 +0.2
RTZ	**Ruatahuna**	**5.45**	**200**	P	Pn	03 54 50.4 -1.1
RTZ				S	Sn	03 55 52.6 -0.5
SNGZ	**Shannon Statio**	**5.52**	**197**	P	Pn	03 54 51.7 -0.6
SNGZ				S	Sn	03 55 55.6 +1.0
PRGZ	**Paritu Road**	**5.54**	**192**	P	Pn	03 54 53.2 +0.6
KNZ	**Kokohu**	**5.67**	**193**	P	Pn	03 54 52.5 -1.9
KNZ				S	Sn	03 55 58.2 -0.1
RAHZ	**Arahi**	**5.71**	**198**	P	Pn	03 54 53.7 -1.1
RAHZ				S	Sn	03 55 58.7 -0.5
MTHZ	**Maungataniwha**	**5.71**	**200**	P	Pn	03 54 55.2 +0.2
MTHZ				S	Sn	03 55 58.3 -1.2
TLZ	**Tolley Road**	**5.72**	**212**	P	Pn	03 54 58.2 +3.1
MHGZ	**Mahia Peninsul**	**5.76**	**191**	P	Pn	03 54 56.0 +0.4
WHHZ	**Waihua**	**5.82**	**196**	P	Pn	03 54 56.9 +0.5
WHHZ				S	Sn	03 56 02.2 +0.2
MRHZ	**Matea Rd**	**5.83**	**203**	P	Pn	03 54 56.3 -0.3
NMHZ	**Naumai**	**5.95**	**199**	P	Pn	03 54 56.8 -1.5
NMHZ				S	Sn	03 56 06.3 +1.0
ARHZ	**Aropaoanui**	**6.06**	**198**	P	Pn	03 54 57.4 -2.2
ARHZ				S	Sn	03 56 05.5 -2.3
BKZ	**Black Stump Fm**	**6.11**	**201**	P	Pn	03 54 58.6 -1.8
BKZ				S	Sn	03 56 06.5 -2.6
MCHZ	**McNeill Hill**	**6.31**	**199**	P	Pn	03 55 00.6 -2.5
MCHZ				S	Sn	03 56 11.5 -2.4
KRVZ	**Karewarewa**	**6.33**	**207**	P	Pn	03 55 03.5 -0.1
KWHZ	**Kaweka Forest**	**6.37**	**201**	P	Pn	03 55 01.0 -2.9
KWHZ				S	Sn	03 56 12.9 -2.6
WTVZ	**West Tongariro**	**6.37**	**207**	P	Pn	03 55 03.3 -0.8
OTVZ	**Oturere**	**6.38**	**207**	P	Pn	03 55 03.7 -0.6
TWVZ	**Taurewa**	**6.39**	**208**	P	Pn	03 55 03.3 -1.0
CKHZ	**Cape Kidnapper**	**6.41**	**196**	P	Pn	03 55 01.1 -3.5
CKHZ				S	Sn	03 56 13.4 -3.1
SNVZ	**South Ngauruho**	**6.42**	**207**	P	Pn	03 55 02.7 -2.1
BHHZ	**Black Hill Sta**	**6.54**	**203**	P	Pn	03 55 03.6 -2.7
BHHZ				S	Sn	03 56 16.0 -3.8
MOVZ	**Moawhango**	**6.57**	**205**	P	Pn	03 55 04.2 -2.6
KRHZ	**Kereru**	**6.58**	**200**	P	Pn	03 55 03.2 -3.7
KAHZ	**Kahuranaki**	**6.59**	**197**	P	Pn	03 55 05.0 -2.0
PKVZ	**Pokaka**	**6.62**	**208**	P	Pn	03 55 06.0 -1.4
MTVZ	**Mangateitei**	**6.65**	**207**	P	Pn	03 55 06.4 -1.5
PXZ	**Pawanui**	**6.82**	**196**	P	Pn	03 55 06.6 -3.4
WPHZ	**Waipukurau**	**6.96**	**199**	P	Pn	03 55 09.0 -3.0
DREZ	**Durham Road**	**7.03**	**215**	P	Pn	03 55 16.0 +3.0
TSZ	**Takapari Road**	**7.09**	**202**	P	Pn	03 55 10.2 -3.7
KHEZ	**Kahui Hut**	**7.21**	**215**	P	Pn	03 55 15.6 +0.1
ANWZ	**Angora Road**	**7.32**	**197**	P	Pn	03 55 13.6 -3.4

KRNET ***20*** *03:54:31.5±0.1, 42.99N × 76.38E, h24km, mb2.3*
SOME ***20*** *03:54:31.7, 43.02N × 76.40E, h20km*
NNC ***20*** *03:54:31.3±0.4, 43.02N × 76.39E, h3km ± 2km, mb2.7, mpv2.7, Error ellipse: s-maj=6.9km s-min=1.3km az=167.0*

ISC 20 03:54:31.9±0.8, 43°00N±0.03 × 76°39E±0.02, h16km ± 6km, n37, σ0°63/72, 24C-15D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IZV	**Izvestkoviy**	**0.17**	**77**	⇑	*e*P	**Pb**		**03 54 36.3**	**-0.5**
	baz=76								
IZV				⇑	*e*S	**Sg**		**03 54 39.7**	**+0.3**
	baz=76								
IZV	**Izvestkoviy**	**0.17**	**77**	⇑	*e*P	**Pb**		**03 54 36.3**	**-0.5**
	10nm,0.1s								
IZV					*e*S	**Sg**		**03 54 39.7**	**+0.3**
	72nm,0.1s								
IZV	**Izvestkoviy**	**0.17**	**77**		P	**Pb**		**03 54 36.3**	**-0.5**
	10nm,0.1s								
IZV					S	**Sg**		**03 54 39.7**	**+0.3**
	72nm,0.1s								
KST	**Kastek**	**0.31**	**278**	⇑	*e*P	**Pg**		**03 54 38.6**	**0.0**
	baz=79								
KST				⇑	*e*S	**Sg**		**03 54 43.7**	**+0.5**
	baz=79								
KST	**Kastek**	**0.31**	**278**	⇑	*e*P	**Pg**		**03 54 38.6**	**0.0**
	28nm,0.2s								
KST					*e*S	**Sg**		**03 54 43.7**	**+0.5**
	22nm,0.2s								
KST	**Kastek**	**0.31**	**278**		P	**Pg**		**03 54 38.6**	**0.0**
	28nm,0.2s								
KST					S	**Sg**		**03 54 43.7**	**+0.5**
	22nm,0.2s								
TNSS	**Tian-Shan**	**0.41**	**85**	⇑	*e*P	**Pg**		**03 54 40.0**	**-0.5**
	baz=83								
TNSS				⇑	*e*S	**Sg**		**03 54 46.1**	**-0.2**
	baz=83								
TNSS	**Tian-Shan**	**0.41**	**85**	⇑	*e*P	**Pg**		**03 54 40.0**	**-0.5**
	6.1nm,0.1s								
TNSS					*e*S	**Sg**		**03 54 46.0**	**-0.2**
	8.4nm,0.1s								
TNSS	**Tian-Shan**	**0.41**	**85**		P	**Pg**		**03 54 40.0**	**-0.5**
	6.1nm,0.1s								
TNSS					S	**Sg**		**03 54 46.0**	**-0.2**
	8.4nm,0.1s								
MDOK	**Medeo**	**0.51**	**71**	⇓	*e*P	**Pg**		**03 54 41.5**	**-0.7**
	baz=71								
MDOK				⇓	*e*S	**Sg**		**03 54 48.8**	**-0.3**
	baz=71								
MDOK	**Medeo**	**0.51**	**71**	⇓	*e*P	**Pg**		**03 54 41.5**	**-0.7**
	5.4nm,0.1s								
MDOK					*e*S	**Sg**		**03 54 48.8**	**-0.3**
	16nm,0.1s								
MDOK	**Medeo**	**0.51**	**71**	⇓	P	**Pg**		**03 54 41.5**	**-0.7**
	1.9nm,0.3s								
MDOK				⇓	S	**Sg**		**03 54 48.6**	**-0.5**
	4.7nm,0.4s								
MDOK	**Medeo**	**0.51**	**71**		Pg	**Pg**		**03 54 41.5**	**-0.7**
	5.4nm,0.1s								
MDOK					Lg	Lg		03 54 48.8	
	16nm,0.1s								
KOTS	**Kotyrbulak**	**0.58**	**66**		*e*P	**Pg**		**03 54 42.9**	**-0.6**
	baz=65								
KOTS					*e*S	**Sg**		**03 54 51.1**	**-0.2**
	baz=65								
KOTS	**Kotyrbulak**	**0.58**	**66**		*e*P	**Pg**		**03 54 42.9**	**-0.6**
	9.1nm,0.2s								
KOTS					*e*S	**Sg**		**03 54 51.1**	**-0.2**
	7.8nm,0.1s								
KOTS	**Kotyrbulak**	**0.58**	**66**		P	**Pg**		**03 54 42.9**	**-0.6**
	9.1nm,0.2s								
KOTS					S	**Sg**		**03 54 51.1**	**-0.2**
	7.8nm,0.1s								
TKM2	**Tokmak 2**	**0.58**	**263**	⇓	*i*P	**Pg**		**03 54 43.3**	**-0.2**
	baz=63								
TKM2				⇓	*i*S	**Sg**		**03 54 51.6**	**+0.2**
	baz=63								
TKM2	**Tokmak 2**	**0.58**	**263**	⇑	P	**Pg**		**03 54 43.1**	**-0.5**
	0.4nm,0.2s								
TKM2				⇑	S	**Sb**		**03 54 51.7**	**-0.3**
	2.2nm,0.2s								
BOOM	**Boomskoye usch**	**0.60**	**213**	⇑	*i*P	**Pg**		**03 54 43.3**	**-0.6**
	baz=13								
BOOM				⇑	*i*S	**Sg**		**03 54 51.6**	**-0.4**
	baz=13								
KTBS	**Karatobe**	**0.74**	**17**	⇓	*e*P	**Pb**		**03 54 45.7**	**-0.9**
	baz=17								
KTBS				⇓	*e*S	**Sb**		**03 54 55.8**	**-0.8**
	baz=17								
KTBS	**Karatobe**	**0.74**	**17**	⇓	*e*P	**Pb**		**03 54 45.6**	**-0.9**
	2.0nm,0.1s								
KTBS					*e*S	**Sb**		**03 54 55.7**	**-0.8**
	6.0nm,0.3s								
KTBS	**Karatobe**	**0.74**	**17**		P	**Pb**		**03 54 45.7**	**-0.9**
	2.0nm,0.1s								
KTBS					S	**Sb**		**03 54 55.7**	**-0.8**
	6.0nm,0.3s								
ULHL	**Ulahol**	**0.76**	**188**	⇓	*i*P	**Pb**		**03 54 46.0**	**-0.9**
	baz=88								
ULHL				⇓	*i*S	**Sb**		**03 54 56.1**	**-1.0**
	baz=88								
KDJ	**Kajisay**	**1.05**	**146**	⇑	*i*P	**Pb**		**03 54 51.1**	**-0.7**
	baz=45								
KDJ				⇑	*i*S	**Sb**		**03 55 05.3**	**0.0**
	baz=45								
SGDS	**Sogindy**	**1.36**	**290**		P	**Pn**		**03 54 56.4**	**+0.1**
	0.7nm,0.2s								
SGDS					S	**Sb**		**03 55 14.4**	**+0.1**
	2.1nm,0.3s								
USP	**Ospenovka**	**1.41**	**282**	⇑	*i*P	**Pb**		**03 54 57.4**	**-0.4**
	baz=82								
USP				⇑	*i*S	**Sb**		**03 55 15.8**	**+0.3**
	baz=82								
AAK	**Ala-Archa**	**1.44**	**256**	⇑	*i*P	**Pb**		**03 54 58.0**	**-0.4**
	baz=56								
AAK				⇑	*i*S	**Sb**		**03 55 16.6**	**0.0**
	baz=56								
AAK	**Ala-Archa**	**1.44**	**256**	⇑	P	**Pb**		**03 54 57.8**	**-0.6**
	0.5nm,0.4s								
AAK				⇓	S	**Sb**		**03 55 16.5**	**0.0**
	1.0nm,0.5s								
UCH	**Uchtor**	**1.58**	**241**	⇑	*i*P	**Pn**		**03 55 00.1**	**+0.4**
	baz=42								
UCH				⇑	*i*S	**Sb**		**03 55 21.1**	**+0.1**
	baz=42								
ARXS	**Arharly**	**1.60**	**40**		*e*P	**Pn**		**03 55 00.3**	**+0.6**
	2.9nm,0.2s								
ARXS					*e*S	**Sb**		**03 55 21.3**	**0.0**
	8.0nm,0.3s								
ARXS	**Arharly**	**1.60**	**40**		P	**Pn**		**03 55 00.3**	**+0.6**
	2.9nm,0.2s								
ARXS					S	**Sb**		**03 55 21.3**	**0.0**
	8.0nm,0.3s								
KPKS	**Kokpek**	**1.74**	**74**		*e*P	**Pb**		**03 55 03.7**	**+0.1**
	baz=74								
KPKS					*e*S	**Sb**		**03 55 26.7**	**+1.4**
	baz=74								
KPKS	**Kokpek**	**1.74**	**74**		*e*P	**Pb**		**03 55 03.7**	**+0.1**
	2.6nm,0.2s								
KPKS					*e*S	**Sb**		**03 55 26.6**	**+1.4**
	4.8nm,0.1s								
UZB	**Uzynbulak**	**1.94**	**85**		*e*P	**Pb**		**03 55 07.0**	**0.0**
	0.9nm,0.2s								
UZB					*e*S	**Sb**		**03 55 32.5**	**+1.6**
	2.1nm,0.2s								
UZB	**Uzynbulak**	**1.94**	**85**		Pg	**Pb**		**03 55 07.7**	**+0.8**
	0.9nm,0.2s								
UZB					Lg	Lg		03 55 33.6	
	2.1nm,0.2s								
EKS2	**Erkin-Say**	**1.95**	**261**	⇓	*e*P	**Pn**		**03 55 05.5**	**+1.0**
	baz=61								
EKS2				⇓	*i*S	**Sb**		**03 55 29.8**	**-1.4**
	baz=61								
AML	**Almayashu**	**2.17**	**247**	⇑	*i*P	**Pn**		**03 55 08.5**	**+0.8**
	baz=47								
AML				⇑	*i*S	**Sn**		**03 55 35.3**	**+0.8**
	baz=47								

IDC 20 04:13:04.3±15.0, 26.62S × 72.18E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/41, mbtmp3.7/4, MS4.0/1, Ms1 4.0/1, ms1mx3.5/50, Error ellipse: s-maj=518.6km s-min=37.5km az=47.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.87**	**1**		T	T	T	04 37 09.6	
	baz=181,slow=76,SNR=64								
H08S2	**Diego Garcia H**	**18.87**	**1**		T	T	T	04 37 09.7	
	baz=181,slow=76,SNR=84								
H08S3	**Diego Garcia H**	**18.89**	**1**		T	T	T	04 37 11.0	
	baz=181,slow=76,SNR=83								
H01W2	**Cape Leeuwin H**	**36.77**	**113**		T	T	T	04 58 46.5	
	baz=271,slow=74,SNR=7.8								
H01W3	**Cape Leeuwin H**	**36.77**	**113**		T	T	T	04 58 46.2	
	baz=271,slow=74,SNR=8.6								
H01W1	**Cape Leeuwin H**	**36.78**	**113**		T	T	T	04 58 47.2	
	baz=271,slow=74,SNR=7.1								
KMBO	**Kilima Mbogo**	**42.05**	**301**		LR	LR	LR	04 36 03.1	
	comp=Z,163nm,18.4s,baz=227,slow=33								
ASAR	**Alice Springs**	**55.48**	**101**		P	P	P	04 22 40.2	-1.0
	0.5nm,0.7s,baz=249,slow=6.9,SNR=5.1								
WRA	**Warramunga Arr**	**57.01**	**97**		P	P	P	04 22 53.4	+1.1
	1.0nm,0.8s,baz=254,slow=7.0,SNR=2.0								
MKAR	**Makanchi Array**	**73.63**	**7**		P	P	P	04 24 39.2	-0.2
	0.8nm,0.8s,baz=201,slow=7.7,SNR=4.4								
KURBB	**Kurchatov Arra**	**77.10**	**4**		P	P	P	04 24 59.5	+0.3
	0.2nm,0.3s,baz=188,slow=5.6,SNR=2.0								

JMA ***20*** *04:18:11.7±0.1, 24.00N × 122.43E, h22km ± 3km, M3.9*
TAP ***20*** *04:18:12.2, 24.07N × 122.43E, h33km, ML4.4, D*
NEIC ***20*** *04:18:12.0±2.3, 24.00N±0.07 × 122.51E±0.06, h37km ± 5km, mb4.4/10, Error ellipse: s-maj=11.2km s-min=6.2km az=141.0*
IDC ***20*** *04:18:22.2±5.2, 24.21N × 122.46E, h125km ± 48km, mb3.7/12, mb1 3.8/14, mb1mx3.5/47, mbtmp4.1/14, Error ellipse: s-maj=25.4km s-min=17.3km az=55.0*

ISC 20 04:18:10.9±1.0, 24°01N±0.02 × 122°48E±0.02, h27km ± 8km, n200, σ1°04/313, mb4.2/17, 20C-17D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.62**	**44**		P	**Pn**		**04 18 24.1**	**+0.2**
JYNG					S	**Sn**		**04 18 32.2**	**-0.7**
YOJ	**Yonaguni jima**	**0.67**	**47**		P	**Pn**		**04 18 25.1**	**+0.5**
YOJ					S	**Sn**		**04 18 33.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.67**	**47**	⇓	P	**Pn**		**04 18 25.1**	**+0.5**
	baz=53								
YOJ					S	**Sn**		**04 18 33.9**	**-0.3**
	baz=53								
YOJ	**Yonaguni jima**	**0.67**	**47**		Pn	**Pn**		**04 18 24.8**	**+0.2**
EWUT	**Wuta**	**0.77**	**305**	*i*	P	**Pn**		**04 18 25.7**	**-0.3**
	baz=302								
EWUT					S	**Sb**		**04 18 35.8**	**-0.1**
	baz=302								
HWA	**Hwalien**	**0.80**	**268**		*e*P	**Pn**		**04 18 27.3**	**+0.9**
	baz=262								
HWA					*e*S	**Sn**		**04 18 38.0**	**+0.6**
	baz=262								
TWD	**Chiawan**	**0.81**	**276**		P	**Pn**		**04 18 26.7**	**+0.2**
	baz=270								
TWD					*e*S	**Sb**		**04 18 36.9**	**-0.1**
	baz=270								
NACB	**Ninganchiao**	**0.82**	**282**		P	**Pn**		**04 18 26.5**	**-0.1**
	baz=264								
NACB					S	**Sb**		**04 18 37.3**	**-0.1**
	baz=264								
NACB	**Ninganchiao**	**0.82**	**282**			**Pn**		**04 18 26.6**	**-0.1**
TWC	**Suao**	**0.83**	**317**	⇓	*i*P	**Pb**		**04 18 26.3**	**-0.5**
	baz=316								
TWC					*e*S	**Sb**		**04 18 36.8**	**-0.7**
	baz=316								
ETLH	**Xiulin Townshi**	**0.93**	**283**	⇑	P	**Pn**		**04 18 28.4**	**+0.1**
	baz=266								
ETLH					S	**Sn**		**04 18 40.5**	**-0.2**
	baz=266								
NDS	**Dongshan**	**0.93**	**312**		P	**Pn**		**04 18 28.6**	**+0.3**
	baz=310								
NDS					S	**Sn**		**04 18 40.4**	**-0.3**
	baz=310								
EGS		**0.97**	**329**	⇓	*i*P	**Pn**		**04 18 29.2**	**+0.4**
	baz=319								
EGS					*e*S	**Sb**		**04 18 40.0**	**-1.7**
	baz=319								
ESL	**Shilin**	**0.97**	**259**		*e*P	**Pn**		**04 18 28.4**	**-0.3**
	baz=245								
ESL					*e*S	**Sb**		**04 18 40.4**	**-1.3**
	baz=245								
ILA	**Ilan**	**1.01**	**319**		P	**Pb**		**04 18 29.6**	**-0.1**
	baz=312								
ILA					S	**Sn**		**04 18 42.7**	**+0.1**
	baz=312								
EGFH	**Guangfu**	**1.02**	**251**		*e*P	**Pb**		**04 18 29.7**	**-0.2**
	baz=246								
EGFH					*e*S	**Sn**		**04 18 43.2**	**+0.4**
	baz=246								
TWE	**Neicheng**	**1.03**	**314**	⇑	*i*P	**Pb**		**04 18 30.2**	**+0.2**
	baz=313								
TWE					S	**Sn**		**04 18 43.2**	**+0.2**
	baz=313								
NTC	**Toucheng**	**1.03**	**325**		P	**Pb**		**04 18 30.2**	**+0.1**
	baz=325								
NTC					S	**Sn**		**04 18 43.7**	**+0.6**
	baz=325								
ENTT	**Nioudou**	**1.04**	**308**		P	**Pb**		**04 18 30.6**	**+0.3**
	baz=293								
ENTT					*e*S	**Sn**		**04 18 43.8**	**+0.3**
	baz=293								
NDT	**Datong Townshi**	**1.06**	**304**	⇑	P	**Pb**		**04 18 30.8**	**+0.1**
	baz=289								
NDT					S	**Sn**		**04 18 44.4**	**+0.5**
	baz=289								
NNSB	**Datong**	**1.08**	**293**	⇑	P	**Pb**		**04 18 30.9**	**-0.2**
	baz=279								
NNSB					S	**Sb**		**04 18 43.6**	**-1.4**
	baz=279								
NNSH	**Datong**	**1.08**	**293**	⇑	P	**Pb**		**04 18 30.9**	**-0.2**
	baz=290								
NNSH					*e*S	**Sn**		**04 18 44.5**	**-0.1**
	baz=290								
HGSD	**Ruisui**	**1.09**	**242**	⇓	P	**Pn**		**04 18 30.5**	**+0.1**
	baz=237								
HGSD					*e*S	**Sb**		**04 18 43.7**	**-1.3**
	baz=237								
TWB1	**Santiao Chiao**	**1.09**	**336**		P	**Pb**		**04 18 30.9**	**-0.4**
	baz=353								
TWB1					*e*S	**Sn**		**04 18 45.0**	**+0.3**
	baz=353								
NNS	**Nan Shan**	**1.10**	**294**	⇑	*i*P	**Pb**		**04 18 31.1**	**-0.3**
	baz=279								
NNS					S	**Sb**		**04 18 44.8**	**-0.5**
	baz=279								
WHF	**Hehuan Shan**	**1.11**	**277**	⇑	P	**Pb**		**04 18 31.3**	**-0.5**
	baz=262								
WHF					*e*S	**Sb**		**04 18 45.2**	**-0.9**
	baz=262								
TIPB	**Shuangxi**	**1.13**	**329**	⇑	P	**Pb**		**04 18 31.5**	**-0.3**
	baz=328								
TIPB					S	**Sn**		**04 18 45.7**	**+0.1**
	baz=328								
FUSS	**Fushou**	**1.15**	**282**	⇑	P	**Pb**		**04 18 31.9**	**-0.4**
	baz=279								
FUSS					S	**Sb**		**04 18 46.3**	**-0.7**
	baz=279								
NWLT	**Wulai**	**1.17**	**311**		P	**Pb**		**04 18 32.5**	**-0.1**
	baz=309								
NWLT					S	**Sb**		**04 18 47.0**	**-0.4**
	baz=309								
OWD	**Renai**	**1.19**	**268**		P	**Pb**		**04 18 32.5**	**-0.5**
	baz=264								
OWD					S	**Sn**		**04 18 46.9**	**-0.4**
	baz=264								
CHGB	**Renai**	**1.19**	**273**	⇑	P	**Pb**		**04 18 32.5**	**-0.5**
	baz=259								
CHGB					S	**Sn**		**04 18 46.7**	**-0.7**
	baz=259								
IRIF	**Iriomote-Funau**	**1.19**	**74**		P	**Pb**		**04 18 33.8**	**+0.9**
IRIF					S	**Sb**		**04 18 50.3**	**+2.4**
YHNB	**Yeheng**	**1.20**	**304**	⇑	P	**Pb**		**04 18 32.9**	**-0.2**
	baz=290								
YHNB					S	**Sn**		**04 18 46.9**	**-0.5**
	baz=290								
YHNB	**Yeheng**	**1.20**	**304**		Pn	**Pb**		**04 18 32.8**	**-0.3**
TWT	**Tachien**	**1.21**	**282**		P	**Pb**		**04 18 33.3**	**0.0**
	baz=268								
TWT					S	**Sb**		**04 18 48.3**	**-0.4**
	baz=268								
HATJ	**Hateruma jima**	**1.22**	**87**		P	**Pb**		**04 18 34.4**	**+1.1**
HATJ					S	**Sb**		**04 18 50.9**	**+2.3**
TDCB	**Techi**	**1.23**	**282**	⇑	P	**Pb**		**04 18 33.3**	**-0.3**
	baz=268								
TDCB					S	**Sn**		**04 18 47.6**	**-0.6**
	baz=268								
NWF	**Wu-fen Shan**	**1.24**	**329**	⇑	*i*P	**Pb**		**04 18 33.1**	**-0.5**
	baz=329								
NWF					S	**Sb**		**04 18 49.1**	**-0.2**
	baz=329								
WFSB	**Wu-fen Shan**	**1.24**	**329**	⇑	P	**Pb**		**04 18 33.2**	**-0.4**
	baz=329								
WFSB					S	**Sb**		**04 18 49.0**	**-0.2**
	baz=329								
YULB	**Yu-li**	**1.24**	**241**	⇓	P	**Pn**		**04 18 32.9**	**+0.4**
	baz=251								
YULB					*e*S	**Sn**		**04 18 47.9**	**-0.4**
	baz=251								
YULB	**Yu-li**	**1.24**	**241**		Pn	**Pn**		**04 18 32.8**	**+0.3**
EYUL	**Yuli**	**1.25**	**239**	⇓	P	**Pb**		**04 18 33.2**	**-0.6**
	baz=234								
EYUL					*e*S	**Sb**		**04 18 49.1**	**-0.3**
	baz=234								
VWDT	**VWDT**	**1.25**	**259**	⇓	P	**Pb**		**04 18 33.5**	**-0.3**
	baz=254								
VWDT					*e*S	**Sn**		**04 18 48.2**	**-0.2**
	baz=254								
TWA	**Mucha**	**1.27**	**320**		P	**Pb**		**04 18 33.7**	**-0.4**
	baz=319								
TWA					S	**Sb**		**04 18 49.9**	**-0.2**
	baz=319								
NHDH	**Xindian Distri**	**1.29**	**318**		P	**Pb**		**04 18 34.7**	**+0.2**
	baz=332								
NHDH					*e*S	**Sb**		**04 18 50.8**	**+0.1**
	baz=332								
TNOU	**National Taiwa**	**1.31**	**331**		P	**Pb**		**04 18 33.8**	**-1.0**
	baz=330								
TNOU					S	**Sn**		**04 18 49.6**	**-0.4**
	baz=330								
TATO	**Taipei**	**1.32**	**317**		P	**Pb**		**04 18 34.9**	**-0.2**
	baz=315								
TATO					S	**Sb**		**04 18 51.7**	**+0.1**
	baz=315								
TATO	**Taipei**	**1.32**	**317**		Pn	**Pb**		**04 18 34.9**	**-0.2**
FULB	**Fuli**	**1.35**	**234**		*e*P	**Pn**		**04 18 34.2**	**+0.2**
	baz=218								
FULB					*e*S	**Sn**		**04 18 50.8**	**-0.2**
	baz=218								
TAP	**Taipei**	**1.36**	**320**		*e*P	**Pb**		**04 18 35.1**	**-0.5**
	baz=335								
TAP					*e*S	**Sb**		**04 18 52.7**	**+0.1**
	baz=335								
CHKT	**Chengkung**	**1.36**	**229**		P	**Pn**		**04 18 34.0**	**-0.1**
	baz=224								
CHKT					*e*S	**Sn**		**04 18 50.0**	**-1.2**
	baz=224								
WPL	**Puli Township**	**

NTY	**Taoyuan**	**1.46 313**	*e*P	**Pb**	**04 18 36.6**	**-0.8**
	baz=326							
ANP	**Anpu**	**1.46 324**	*e*P	**Pb**	**04 18 36.7**	**-0.9**
	baz=322							
LIOB	**Emei**	**1.48 296**	*e*P	**Pb**	**04 18 37.5**	**-0.3**
	baz=293							
LIOB			*e*S	**Sb**	**04 18 56.6**	**+0.5**
	baz=293							
NSTT	**Nanjuang**	**1.48 295**	P	**Pb**	**04 18 37.5**	**-0.3**
	baz=292							
NSTT			*e*S	**Sb**	**04 18 55.2**	**-1.0**
	baz=292							
TYC	**Yuchr**	**1.48 266**	⇑P	**Pb**	**04 18 37.0**	**-0.9**
	baz=263							
TYC			S	**Sn**	**04 18 55.1**	**+0.8**
	baz=263							
EDH	**Donghe**	**1.49 227**	*e*P	**Pn**	**04 18 36.1**	**+0.2**
	baz=214							
EDH			*e*S	**Sn**	**04 18 53.7**	**-0.7**
	baz=214							
YUS	**Yu-Shan**	**1.49 250**	*e*P	**Pb**	**04 18 37.3**	**-0.9**
	baz=246							
YUS			*e*S	**Sn**	**04 18 54.9**	**-0.1**
	baz=246							
TWY	**Chenhua**	**1.50 328**	*e*P	**Pb**	**04 18 37.6**	**-0.4**
	baz=327							
TWY			*e*S	**Sn**	**04 18 55.0**	**+0.4**
	baz=327							
NCU	**National Centr**	**1.52 310**	*e*P	**Pb**	**04 18 37.3**	**-1.1**
	baz=307							
NCU			*e*S	**Sb**	**04 18 56.0**	**-1.2**
	baz=307							
NCUH	**Zhongli**	**1.52 309**	*e*P	**Pb**	**04 18 37.8**	**-0.6**
	baz=307							
NCUH			*e*S	**Sb**	**04 18 57.3**	**0.0**
	baz=307							
WHYT	**Xinyi Township**	**1.52 259**	*e*P	**Pb**	**04 18 37.9**	**-0.5**
	baz=255							
HSN1	**Hsinchu**	**1.54 300**	*e*P	**Pb**	**04 18 38.1**	**-0.6**
	baz=297							
JIJ	**Ishigaki jima**	**1.56 76**	P	**Pb**	**04 18 38.8**	**-0.4**
JIJ			S	**Sb**	**04 18 58.4**	**-0.2**
ELDTW	**Lidau**	**1.56 239**	⇓P	**Pn**	**04 18 37.4**	**+0.3**
	baz=234							
ELDTW			*e*S	**Sn**	**04 18 56.2**	**-0.3**
	baz=234							
SBCB	**Hsinchu**	**1.57 300**	*e*P	**Pb**	**04 18 38.9**	**-0.4**
	baz=297							
SBCB			*e*S	**Sb**	**04 18 59.9**	**+1.2**
	baz=297							
HSN	**Hsinchu**	**1.59 300**	*e*P	**Pn**	**04 18 38.0**	**+0.8**
	baz=299							
HSN			*e*S	**Sn**	**04 18 57.5**	**+0.7**
	baz=299							
ALS	**Alishan**	**1.61 253**	⇓P	**Pb**	**04 18 39.3**	**-0.8**
	baz=248							
ALS			S	**Sn**	**04 18 58.4**	**+0.6**
	baz=248							
WJS	**Zhushan**	**1.61 264**	*e*P	**Pb**	**04 18 39.8**	**-0.2**
	baz=260							
WJS			*e*S	**Sb**	**04 19 00.7**	**+0.8**
	baz=260							
LDUT	**Ludao**	**1.62 215**	⇓*e*P	**Pn**	**04 18 37.9**	**+0.2**
	baz=211							
LDUT			*e*S	**Sn**	**04 18 56.5**	**-1.1**
	baz=211							
NSY	**Sanyi**	**1.62 285**	P	**Pb**	**04 18 39.8**	**-0.3**
	baz=281							
NSY			*e*S	**Sb**	**04 18 59.0**	**-1.2**
	baz=281							
WWF	**Wufeng**	**1.62 272**	*e*P	**Pb**	**04 18 40.5**	**+0.2**
	baz=268							
WWF			*e*S	**Sb**	**04 19 01.3**	**+0.9**
	baz=268							
WNT	**Mingjian**	**1.64 266**	*e*P	**Pb**	**04 18 40.5**	**-0.1**
	baz=262							
WNT			*e*S	**Sb**	**04 19 00.7**	**-0.2**
	baz=262							
WNT1	**Nantou City**	**1.65 267**	*e*P	**Pb**	**04 18 40.5**	**-0.1**
	baz=263							
WNT1			S	**Sb**	**04 19 01.4**	**+0.5**
	baz=263							
LONT	**Longtian**	**1.65 229**	⇓*e*P	**Pn**	**04 18 38.6**	**+0.5**
	baz=237							
LONT			*e*S	**Sn**	**04 18 58.7**	**+0.3**
	baz=237							
TCU	**Taichung**	**1.65 275**	*e*P	**Pb**	**04 18 40.3**	**-0.4**
	baz=271							
TCU			*e*S	**Sb**	**04 19 01.6**	**+0.6**
	baz=271							
PCYT	**Pengchaiyu**	**1.66 347**	⇑P	**Pn**	**04 18 39.0**	**+0.7**
	baz=349							
PCYT			*e*S	**Sn**	**04 18 59.1**	**+0.5**
	baz=349							
CHN5	**Tsauling**	**1.70 257**	⇓P	**Pb**	**04 18 40.9**	**-0.7**
	baz=244							
CHN5			*e*S	**Sb**	**04 19 01.9**	**-0.5**
	baz=244							
WDJ	**Dajia District**	**1.71 282**	*e*P	**Pb**	**04 18 40.8**	**-0.9**
	baz=278							
WDJ			*e*S	**Sb**	**04 19 02.0**	**-0.8**
	baz=278							
TTN	**Taitung**	**1.74 225**	P	**Pb**	**04 18 40.8**	**-1.5**
	baz=220							
TTN			S	**Sn**	**04 19 01.3**	**+0.6**
	baz=220							
TWGBT	**Beinan**	**1.74 228**	⇓P	**Pn**	**04 18 39.7**	**+0.3**
	baz=235							
TWGBT			S	**Sn**	**04 18 59.9**	**-0.8**
	baz=235							
TWG	**Pinlang**	**1.75 228**	⇓P	**Pn**	**04 18 39.7**	**+0.3**
	baz=235							
TWG			*e*S	**Sn**	**04 19 00.2**	**-0.6**
	baz=235							
TWG	**Pinlang**	**1.75 228**	Pn	**Pn**	**04 18 39.6**	**+0.2**
WCHH	**Zhanghua**	**1.75 273**	*e*P	**Pb**	**04 18 41.6**	**-0.9**
	baz=269							
WCHH			*e*S	**Sb**	**04 19 04.1**	**0.0**
	baz=269							
STYH	**Taoyuan**	**1.77 242**	⇓P	**Pb**	**04 18 41.4**	**-1.3**
	baz=230							
STYH			*e*S	**Sn**	**04 19 02.5**	**+1.2**
	baz=230							
JISG	**Ishigakijimahi**	**1.77 71**	P	**Pb**	**04 18 41.5**	**-1.2**
JISG			S	**Sb**	**04 19 04.6**	**0.0**
WGK	**Gukeng**	**1.78 260**	*e*P	**Pb**	**04 18 42.4**	**-0.5**
	baz=256							
STYT	**Tauyuan**	**1.79 242**	⇓P	**Pb**	**04 18 41.6**	**-1.4**
	baz=230							
STYT			S	**Sn**	**04 19 03.1**	**+1.2**
	baz=230							
WDLH	**Douliu**	**1.80 260**	*e*P	**Pb**	**04 18 42.5**	**-0.8**
	baz=256							
WDLH			*e*S	**Sb**	**04 19 05.1**	**-0.3**
	baz=256							
TPUB	**Ta-pu**	**1.83 248**	*e*P	**Pb**	**04 18 42.7**	**-1.1**
	baz=244							
TPUB			*e*S	**Sb**	**04 19 04.7**	**-1.7**
	baz=244							
TPUB	**Ta-pu**	**1.83 248**	Pn	**Pb**	**04 18 43.2**	**-0.6**
CHN4	**Tsaushan**	**1.84 250**	P	**Pb**	**04 18 43.2**	**-0.8**
	baz=246							
CHN4			S	**Sb**	**04 19 06.4**	**-0.3**
	baz=246							
WTP	**Ta-pu**	**1.87 247**	⇓*e*P	**Pb**	**04 18 43.4**	**-1.0**
	baz=242							
WTP			*e*S	**Sb**	**04 19 06.2**	**-1.1**
	baz=242							
WTK	**Tuku**	**1.94 261**	*e*P	**Pb**	**04 18 44.8**	**-0.7**
	baz=257							
WTK			*e*S	**Sb**	**04 19 08.6**	**-0.7**
	baz=257							
CHY	**Chiayi**	**1.95 255**	*e*P	**Pb**	**04 18 44.2**	**-1.5**
	baz=251							
CHY			*e*S	**Sb**	**04 19 08.2**	**-1.4**
	baz=251							
SLGT	**Liugui**	**1.96 239**	*e*P	**Pb**	**04 18 44.6**	**-1.3**
	baz=228							
SLGT			*e*S	**Sb**	**04 19 09.2**	**-0.7**
	baz=228							
CHN1	**Nanshi**	**1.96 246**	*e*P	**Pb**	**04 18 45.1**	**-1.0**
	baz=242							
CHN1			*e*S	**Sb**	**04 19 09.6**	**-0.5**
	baz=242							
SGST	**Jiashian**	**1.96 243**	P	**Pb**	**04 18 44.6**	**-1.5**
	baz=228							
SGST			S	**Sb**	**04 19 08.7**	**-1.4**
	baz=228							
TWK	**Hsinying**	**1.96 248**	P	**Pb**	**04 18 45.1**	**-1.0**
	baz=244							
TWK			S	**Sb**	**04 19 09.2**	**-1.0**
	baz=244							
SNST	**Tainan City**	**1.98 247**	*e*P	**Pb**	**04 18 45.5**	**-0.7**
	baz=243							
ECL	**Taimali**	**1.98 225**	*e*P	**Pn**	**04 18 42.6**	**0.0**
	baz=221							
ECL			*e*S	**Sn**	**04 19 05.7**	**-0.8**
	baz=221							
WTCT	**Ta-ch'eng**	**2.01 266**	*e*P	**Pb**	**04 18 44.9**	**-1.9**
	baz=275							
WTCT			*e*S	**Sb**	**04 19 10.7**	**-0.8**
	baz=275							
WSF	**Szhu**	**2.10 260**	*e*P	**Pb**	**04 18 46.3**	**-1.9**
	baz=257							
WSF			*e*S	**Sb**	**04 19 12.1**	**-1.7**
	baz=257							
SSD	**Sandimen**	**2.11 234**	*e*P	**Pn**	**04 18 46.1**	**+1.7**
	baz=223							
ICHU	**Yijhu**	**2.11 253**	*e*P	**Pb**	**04 18 47.3**	**-1.3**
	baz=249							
ICHU			*e*S	**Sb**	**04 19 12.6**	**-1.8**
	baz=249							
TSMG	**Majia**	**2.12 233**	*e*P	**Pb**	**04 18 47.0**	**-1.7**
	baz=223							
JTJ	**Tarama**	**2.13 72**	P	**Pb**	**04 18 47.6**	**-1.2**
JTJ			S	**Sb**	**04 19 13.0**	**-1.8**
LAY	**Lan-yu**	**2.13 204**	*e*P	**Pn**	**04 18 46.1**	**+1.3**
	baz=201							
SCST	**Cishan**	**2.13 239**	*e*P	**Pb**	**04 18 48.0**	**-1.0**
	baz=223							
SCST			*e*S	**Sb**	**04 19 15.0**	**0.0**
	baz=223							
CHN8	**Yiju**	**2.18 253**	*e*P	**Pn**	**04 18 46.8**	**+1.5**
	baz=249							
CHN8			*e*S	**Sn**	**04 19 13.1**	**+1.7**
	baz=249							
MASBT	**Mashibuluo**	**2.19 231**	*e*P	**Pn**	**04 18 47.0**	**+1.5**
	baz=223							
MASBT			*e*S	**Sn**	**04 19 14.0**	**+2.3**
	baz=223							
EAST	**Anshuo**	**2.20 223**	*e*P	**Pn**	**04 18 46.6**	**+0.9**
	baz=220							
TWM1	**Shoushan**	**2.22 238**	*e*P	**Pb**	**04 18 50.1**	**-0.3**
	baz=236							
SSPT	**Xinbi**	**2.32 230**	*e*P	**Pb**	**04 18 50.1**	**-2.0**
	baz=221							
SNJT	**Kaohsiung City**	**2.33 238**	*e*P	**Pb**	**04 18 50.6**	**-1.6**
	baz=234							
SNJT			*e*S	**Sb**	**04 19 19.4**	**-1.1**
	baz=234							
SLIU	**Shizi**	**2.36 221**	*e*P	**Pn**	**04 18 48.8**	**+1.0**
	baz=218							
SCZT	**Fangliau**	**2.36 227**	*e*P	**Pn**	**04 18 50.0**	**+2.2**
	baz=218							
SCZT			*e*S	**Sb**	**04 19 18.7**	**-2.7**
	baz=218							
WLCH	**Liuqiu**	**2.54 230**	*e*P	**Pb**	**04 18 55.0**	**-0.7**
	baz=241							
TSEB	**Hengchuen, Pin**	**2.55 215**	*e*P	**Pn**	**04 18 52.8**	**+2.4**
	baz=220							
TSEB			*e*S	**Sn**	**04 19 23.1**	**+2.5**
	baz=220							
TWP	**Hsiaoliuchiu**	**2.55 230**	*e*P	**Pb**	**04 18 54.1**	**-1.9**
	baz=241							
HEN	**Hengchun**	**2.55 219**	*e*P	**Pn**	**04 18 52.7**	**+2.2**
	baz=215							
HEN			*e*S	**Sn**	**04 19 22.1**	**+1.3**
	baz=215							
TWKBT	**Hengchun**	**2.56 217**	P	**Pn**	**04 18 52.0**	**+1.3**
	baz=213							
TWKBT			*e*S	**Sn**	**04 19 22.6**	**+1.6**
	baz=213							
TWK1	**Hengchun**	**2.56 217**	*e*P	**Pn**	**04 18 51.7**	**+1.0**
	baz=213							
TWK1			*e*S	**Sn**	**04 19 22.5**	**+1.5**
	baz=213							
SNW	**Nanwan**	**2.58 218**	*e*P	**Pb**	**04 18 54.1**	**-2.4**
	baz=216							
JIRB	**Irabujima**	**2.59 71**	P	**Pb**	**04 18 54.6**	**-2.1**
JIRB			S	**Sb**	**04 19 25.0**	**-3.1**
WDGT	**Dungji**	**2.69 255**	P	**Pn**	**04 18 54.2**	**+1.9**
	baz=241							
WDGT			S	**Sn**	**04 19 24.7**	**+0.7**
	baz=241							
JIKM	**Ikemajima**	**2.69 70**	P	**Pb**	**04 18 55.7**	**-2.6**
JMJ	**Miyako jima 2**	**2.69 72**	*e*P	**Pb**	**04 18 55.7**	**-2.7**
	baz=76							
JMJ2	**Miyako jima3**	**2.70 74**	*e*S	**Sb**	**04 19 27.8**	**-3.5**
PHUB	**P'eng-hu**	**2.71 260**	⇑P	**Pn**	**04 18 53.9**	**+1.3**
	baz=271							
PHUB			S	**Sn**	**04 19 25.1**	**+0.7**
	baz=271							
PNG	**Penghu**	**2.71 261**	*e*P	**Pn**	**04 18 53.8**	**+1.1**
	baz=257							
PNG			*e*S	**Sn**	**04 19 25.1**	**+0.5**
	baz=257							
JOGS	**Gusukube**	**2.78 74**	*e*S	**Sb**	**04 19 29.9**	**-3.5**
VCHM	**Qimei**	**2.90 255**	*e*P	**Pn**	**04 18 57.4**	**+2.1**
	baz=251							
VCHM			*e*S	**Sn**	**04 19 29.1**	**-0.2**
	baz=251							
VWUC	**VWUC**	**2.93 290**	⇑*e*P	**Pn**	**04 18 56.0**	**+0.4**
	baz=287							
MATB	**Ma-tsu**	**3.13 314**	*e*P	**Pn**	**04 18 58.4**	**-0.1**
	baz=299							
MSUT	**Lienchiang**	**3.16 313**	*e*P	**Pn**	**04 18 59.2**	**+0.3**
	baz=299							
PTMZ	**Houxiangcun**	**3.23 289**	⇑*e*P	**Pn**	**04 19 00.2**	**+0.5**
	baz=286							
LYJJ	**Jianjiangzhen**	**3.53 316**	*e*P	**Pn**	**04 19 04.1**	**+0.1**
	baz=313							
XPSS	**Dashiqiu**	**3.57 325**	⇑*e*P	**Pn**	**04 19 05.1**	**+0.6**
	baz=322							
KNM	**Kinmen**	**3.71 277**	*e*P	**Pn**	**04 19 08.8**	**+2.3**
	baz=273							
KNM			*e*S	**Sn**	**04 19 50.8**	**+1.4**
	baz=273							
MHZQ	**Yeshan**	**3.76 304**	*e*P	**Pn**	**04 19 06.7**	**-0.4**
	baz=301							
KNMB	**Chin-men Tao**	**3.76 278**	*e*P	**Pn**	**04 19 07.5**	**+0.4**
	baz=274							
KNMB	**Chin-men Tao**	**3.76 278**	Pn	**Pn**	**04 19 07.1**	**0.0**
AXDP	**Jialang**	**4.20 283**	*e*P	**Pn**	**04 19 13.4**	**+0.2**
	baz=269							
ZPLA	**Ao Xicun**	**4.32 270**	*e*P	**Pn**	**04 19 15.3**	**+0.4**
	baz=266							
VDOS	**Pratas Island**	**6.25 239**	*e*P	**Pn**	**04 19 43.5**	**+2.1**
	baz=239							
KSAR	**Wonju Array Be**	**14.17 18**	P	**P**	**04 21 38.0**	**+0.9**
KSRS	**Korea Array**	**14.20 18**	P	**P**	**04 21 36.5**	**-0.8**
	0.4nm,0.3s,baz=198,slow=11,SNR=17							
MJAR	**Matsushiro Arr**	**18.43 44**	P	**Pn**	**04 22 26.2**	**+1.8**
	0.1nm,0.3s,baz=208,slow=6.9,SNR=1.7							
USRK	**Ussuriysk Ar.**	**21.60 19**	P	**P**	**04 22 59.9**	**+1.3**
	2.0nm,0.7s,baz=187,slow=11,SNR=4.3							
SONM	**Songino Array**	**27.00 336**	P	**P**	**04 23 50.0**	**-0.7**
	1.9nm,0.8s,baz=154,slow=10,SNR=5.0							
SONM	**Songino Array**	**27.00 336**	P	**P**	**04 23 49.5**	**-1.1**
MK31	**Makanchi Array**	**39.29 316**	P	**P**	**04 25 37.7**	**+0.3**
MK31				IAmb	IAmb	04 25 38.3		
	comp=Z,5.2nm,1.1s							
MKAR	**Makanchi Array**	**39.29 316**	P	**P**	**04 25 37.7**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=101,slow=9.9,SNR=25							
MKAR	**Makanchi Array**	**39.29 316**	P	**P**	**04 25 37.5**	**+0.1**
ZAA0	**Zalesovo Array**	**41.04 327**	P	**P**	**04 25 50.6**	**-1.1**
ZAA0				IAmb	IAmb	04 25 51.7		
	comp=Z,5.9nm,1.0s							
ZALV	**Zalesovo Beam**	**41.04 327**	P	**P**	**04 25 50.6**	**-1.1**
	comp=Z,3.4nm,0.6s,baz=111,slow=7.8,SNR=14							
H11N1	**WAKE ISLAND Hy**	**41.32 87**	T	T	05 11 52.7			
	baz=286							
H11N2	**WAKE ISLAND Hy**	**41.32 87**	T	T	05 11 55.4			
	baz=286							
H11N3	**WAKE ISLAND Hy**	**41.33 87**	T	T	05 11 50.7			
	baz=286							
H11S3	**WAKE ISLAND Hy**	**41.44 89**	T	T	05 12 06.2			
	baz=284							
H11S1	**WAKE ISLAND Hy**	**41.45 89**	T	T	05 11 57.8			
	baz=284							
H11S2	**WAKE ISLAND Hy**	**41.46 89**	T	T	05 11 51.5			
	baz=284							
KURK	**Kurchatov**	**42.99 320**	P	**P**	**04 26 07.3**	**-0.4**
KURBB	**Kurchatov Arra**	**43.01 320**	P	**P**	**04 26 07.3**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=108,slow=7.9,SNR=14							
WRA	**Warramunga Arr**	**45.19 164**	P	**P**	**04 26 27.3**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=351,slow=8.5,SNR=3.4							
GAR	**Garm**	**46.31 302**	P	**P**	**04 26 36.2**	**+1.6**
KK31	**Karatay Array**	**46.52 307**	P	**P**	**04 26 35.1**	**-0.9**
KKAR	**Karatay Array**	**46.52 307**	P	**P**	**04 26 36.9**	**+0.9**
BRVK	**Borovoye**	**48.63 321**	P	**P**	**04 26 52.5**	**+0.2**
BRVK				IAmb	IAmb	04 26 53.1		
	comp=Z,2.2nm,0.8s							
ASAR	**Alice Springs**	**48.67 166**	P	**P**	**04 26 56.2**	**+3.4**
	comp=Z,0.3nm,0.4s,baz=347,slow=7.6,SNR=2.3							
ABKAR	**Akbulak array**	**54.41 314**	P	**P**	**04 27 35.9**	**+0.4**
ABKAR				IAmb	IAmb	04 27 36.5		
	comp=Z,2.8nm,0.7s							
ABKAR	**Akbulak array**	**54.41 314**	P	**P**	**04 27 35.9**	**+0.4**
GEYT	**Alibeck**	**55.91 301**	P	**P**	**04 27 46.8**	**+0.2**
	comp=Z,5.4nm,0.8s,baz=29,slow=3.4,SNR=6.9							
GEYT	**Alibeck**	**55.91 301**	P	**P**	**04 27 48.0**	**+1.5**
GEYT				IAmb	IAmb	04 27 49.6		
	comp=Z,4.5nm,0.7s							
SOCY	**Socotra**	**65.62 273**	P	**P**	**04 28 50.8**	**-2.4**
SOCY				IAmb	IAmb	04 28 51.0		
	comp=Z,4.0nm,0.8s							
FINES	**FINESS Array B**	**72.19 330**	P	**P**	**04 29 33.7**	**+0.6**
	comp=Z,4.4nm,0.9s,baz=61,slow=4.8,SNR=5.3							
BR131	**Keskin Array S**	**74.23 307**	P	**P**	**04 29 46.7**	**+1.0**
BRTR	**Keskin Array B**	**74.23 307**	P	**P**	**04 29 44.3**	**-1.5**
	comp=Z,2.2nm,0.8s,baz=90,slow=5.8,SNR=4.6							
BRTR	**Keskin Array B**	**74.23 307**	P	**P**	**04 29 45.6**	**-0.1**
YKA	**Yellowknife Ar**	**82.67 23**	P	**P**	**04 30 30.3**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=315,slow=4.6,SNR=17							
CLL	**Collm**	**82.90 323**	*e*P	**P**	**04 30 33.0**	**-0.1**
NVAR	**Mina Array Bea**	**95.75 44**	P	**P**	**04 31 33.9**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=325,slow=1.1,SNR=2.8							
NVAR	**Mina Array Bea**	**95.75 44**	P	**P**	**04 31 34.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**111.38 296**	PKiKP	**PKiKP**	**04 36 42.0**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=79,slow=3.2,SNR=3.6							

IDC ***20*** *04:29:33.2±2.2,33°.88S×178°.81W, h0km, mb4.0/2, mb1 4.3/3, mb1mx3.8/48, mbtmp4.1/3, ML4.4/1, Error ellipse: s-maj=61.6km s-min=32.4km az=129.0*
WEL ***20*** *04:29:35.8±1.0,34°.S±12°×17°.9W±2°.8, h33km, M4.2/10, mB4.8/4, ML4.4/10, MLv4.2/10, Mw(mB)4.1/4, Error ellipse: s-maj=0.0km s-min=0.0km az=111.9*
NEIC ***20*** *04:29:35.9±2.6,34°.07S±0°.09×178°.4W±0°.1, h35km±2km, mb4.4/6, Error ellipse: s-maj=22.5km s-min=6.9km az=49.0*

ISC 20 04:29:34.6±1.4,**33°.95S**±0°.08×**178°.3W**±0°.2,**h37**km,**n36,** σ1§41/48,**mb4.1**/6,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
MXZ	**Matakaoa Point**	**4.54**	**216**	Pn	**Pn**	**04**	**30**	**41.7**	**+1.0**
MXZ	**Matakaoa Point**	**4.54**	**216**	P	**Pn**	**04**	**30**	**41.6**	**+0.8**
MXZ				S	**Sn**	**04**	**31**	**30.9**	**-1.4**
GLKZ	**Green Lake**	**4.68**	**4**	S	**Sn**	**04**	**31**	**32.5**	**-3.2**
WMGZ	**Waiomatatini S**	**4.70**	**214**	P	**Pn**	**04**	**30**	**44.3**	**+1.4**
WMGZ				S	**Sn**	**04**	**31**	**37.3**	**+1.3**
PKGZ	**Pakihiroa**	**4.91**	**216**	P	**Pn**	**04**	**30**	**45.9**	**0.0**
PKGZ				S	**Sn**	**04**	**31**	**41.0**	**-0.5**
HAZ	**Te Kaha**	**4.96**	**219**	P	**Pn**	**04**	**30**	**47.0**	**+0.6**
HAZ				S	**Sn**	**04**	**31**	**44.4**	**+1.9**
PUZ	**Puketiti**	**4.98**	**213**	P	**Pn**	**04**	**30**	**47.2**	**+0.5**
PUZ				S	**Sn**	**04**	**31**	**42.1**	**-0.9**
RUGZ	**Raukumara Rang**	**5.17**	**218**	P	**Pn**	**04**	**30**	**49.6**	**+0.1**
RUGZ				S	**Sn**	**04**	**31**	**47.8**	**-0.2**
TWGZ	**Tauwhareparae**	**5.19**	**214**	P	**Pn**	**04**	**30**	**51.4**	**+1.8**
TWGZ				S	**Sn**	**04**	**31**	**49.2**	**+1.0**
CNGZ	**Carnagh Statio**	**5.34**	**211**	P	**Pn**	**04**	**30**	**52.6**	**+0.9**
CNGZ				S	**Sn**	**04**	**31**	**51.6**	**-0.3**
TKGZ	**Te Karaka**	**5.46**	**214**	S	**Sn**	**04**	**31**	**54.9**	**0.0**
MWZ	**Matawai**	**5.53**	**216**	P	**Pn**	**04**	**30**	**55.5**	**+1.1**
MWZ				S	**Sn**	**04**	**31**	**54.7**	**-1.9**
URZ	**Urewera**	**5.69**	**219**	Pn	**Pn**	**04**	**30**	**57.1**	**+0.6**
	11nm,0.3s,baz=120,slow=24,SNR=32								
URZ				Sn	**Sn**	**04**	**31**	**59.3**	**-1.1**
	8.8nm,0.3s,baz=228,slow=15,SNR=8.3								
URZ	**Urewera**	**5.69**	**219**	Pn	**Pn**	**04**	**30**	**56.3**	**-0.2**
URZ	**Urewera**	**5.69**	**219**	P	**Pn**	**04**	**30**	**56.6**	**+0.1**
URZ				S	**Sn**	**04**	**31**	**59.4**	**-1.1**
OPRZ	**Ohinepanea**	**5.71**	**226**	P	**Pn**	**04**	**30**	**58.7**	**+1.9**
RAGZ	**Rawiri**	**5.71**	**216**	P	**Pn**	**04**	**30**	**56.3**	**-0.6**
RAGZ				S	**Sn**	**04**	**31**	**58.8**	**-2.4**
BKZ	**Black Stump Fm**	**6.69**	**217**	Pn	**Pn**	**04**	**31**	**09.9**	**-0.4**
OUZ	**Omahuta**	**6.81**	**257**	Pn	**Pn**	**04**	**31**	**12.6**	**+0.8**
HIZ	**Hauiti**	**7.17**	**229**	Pn	**Pn**	**04**	**31**	**17.8**	**+1.0**
BFZ	**Birch Farm**	**8.01**	**211**	Pn	**Pn**	**04**	**31**	**26.9**	**-1.4**
PLWZ	**Palliser**	**9.16**	**212**		**Pn**	**04**	**31**	**42.7**	**-1.5**
THZ	**Taphouse**	**10.45**	**219**		**Pn**	**04**	**32**	**00.4**	**-1.4**
TOO	**Toolangi**	**29.49**	**252**	P	**P**	**04**	**35**	**33.1**	**-2.2**
TOO				IAmb	IAmb	04	35	33.3	
	comp=Z,21nm,1.4s								
AS31	**Alice Springs**	**42.79**	**271**	P	**P**	**04**	**37**	**29.7**	**+0.9**
AS31				IAmb	IAmb	04	37	30.5	
	comp=Z,1.0nm,0.7s								
ASAR	**Alice Springs**	**42.79**	**271**	P	**P**	**04**	**37**	**29.4**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=114,slow=7.4,SNR=12								
ASAR	**Alice Springs**	**42.79**	**271**	P	**P**	**04**	**37**	**29.9**	**+1.0**
WR0	**Warramunga Arr**	**43.92**	**276**	P	**P**	**04**	**37**	**38.1**	**+0.2**
WR0				IAmb	IAmb	04	37	47.0	
	comp=Z,7.7nm,1.2s								
WB2	**Warramunga Arr**	**44.09**	**276**	P	**P**	**04**	**37**	**39.6**	**+0.3**
WB2				IAmb	IAmb	04	37	53.0	
	comp=Z,18nm,1.5s								
WRA	**Warramunga Arr**	**44.10**	**276**	P	**P**	**04**	**37**	**39.6**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=119,slow=7.3,SNR=9.5								
WRA	**Warramunga Arr**	**44.10**	**276**	P	**P**	**04**	**37**	**39.3**	**-0.1**
WB0	**Warramunga Arr**	**44.13**	**276**	P	**P**	**04**	**37**	**40.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**52.19**	**273**	P	**P**	**04**	**38**	**43.6**	**+1.7**
FINES	**FINESS Array B**	**148.35**	**338**	PKPbc	**PKiKP**	**04**	**49**	**18.3**	**+0.6**

TJIG	**Tijuana**	**1.54**	**323**	‖ *eP*	**Pb**	**04 31 18.2**	**0.0**
TKX	**Tecate**	**1.62**	**327**	‖ *eP*	**Pg**	**04 31 20.1**	**-1.2**
BAR	**Barrett**	**1.74**	**328**	‖ *eP*	**Pb**	**04 31 21.7**	**0.0**
SWSC	**Sam W. Stewart**	**1.74**	**354**	‖ *eP*	**Pg**	**04 31 23.5**	**-0.2**
SWSC	**Sam W. Stewart**	**1.74**	**354**	P		04 31 20.8	
	baz=178,SNR=49						
SWSC				Sg		04 31 45.3	
	baz=178						
MONP2	**Monument Peak**	**1.83**	**337**	P		04 31 22.9	
	baz=161,SNR=66						
MONP2				Sb		04 31 47.3	
	baz=161						
SDRC	**San Diego Road**	**1.92**	**323**	*eP*	**Pb**	**04 31 24.7**	**0.0**
GLA	**Glamis**	**1.94**	**19**	P		04 31 23.0	
	baz=202,SNR=9.8						
EML	**El Monte Cty P**	**2.00**	**327**	‖ *eP*	**Pb**	**04 31 25.8**	**-0.2**
109C	**Camp Elliot, M**	**2.12**	**322**	P		04 31 27.5	
	baz=146,SNR=13						
109C				S		04 31 54.2	
	baz=146						
214A	**Organ Pipe Nat**	**2.47**	**72**	*eP*	**Pn**	**04 31 30.6**	**+0.9**
214A				*eP*	**Pb**	**04 31 31.0**	**-3.1**
214A	**Organ Pipe Nat**	**2.47**	**72**	P		04 31 30.4	
	baz=253,SNR=11						
PFO	**Pinyon Flats O**	**2.51**	**343**	Pb		04 31 36.4	
	baz=166						
PFO				Sb		04 32 07.3	
	baz=166						
MURC	**Murrieta**	**2.75**	**330**	Sb		04 32 13.5	
	baz=153						
BBRC	**Big Bear Solar**	**3.25**	**340**	Sb		04 32 30.1	
	baz=162						
CIS	**Catalina Islan**	**3.25**	**313**	Sb		04 32 30.7	
	baz=134						

IDC ***20*** *04:42:02.2±2.6,26.2°15S×69.0°06W, h83km±20km, mb3.7/12, mb1 3.9/16, mb1mx3.7/34, mbtmp4.0/16, MS3.7/1, Ms1 3.7/1, ms1mx3.0/20, Error ellipse: s-maj=22.5km s-min=14.8km az=59.0*
GUC ***20*** *04:42:03.3±0.6,26.1°10S×69.3°33W, h111km±4km, ML4.1*
VAO ***20*** *04:42:04.1±1.5,26.1°12S×69.2°24W, h85km, mb4.3*
NEIC ***20*** *04:42:04.1±2.4,26.1°12S±0.0°04×69.3°33W±0.0°05, h101km±4km, mb4.3/29, ML4.1(GUC), Error ellipse: s-maj=6.9km s-min=5.4km az=104.0*

ISC 20 04:42:03.3±0.7,26.1°08S±0.0°04×69.3°30W±0.0°05, h95km±6km, n117, σ1§58/133, mb4.2/27, 5C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC02	**Maricunga**	**0.77**	**169**	‖ *iP*	**Pn**	**04 42 22.6**	**+1.1**
AC02				*i* S	**Sn**	**04 42 36.8**	**+1.7**
AC02	**Maricunga**	**0.77**	**169**	Pn	**Pn**	**04 42 22.3**	**+0.8**
AC02				Sn	**Sn**	**04 42 36.4**	**+1.4**
GO02	**Mina Guanaco**	**0.95**	**344**	⇑ *iP*	**Pn**	**04 42 24.9**	**+1.7**
GO02				*i* S	**Sn**	**04 42 40.7**	**+2.6**
GO02				IAML		04 42 45.2	
	comp=N,3μm,0.4s						
GO02	**Mina Guanaco**	**0.95**	**344**	Pn	**Pn**	**04 42 24.9**	**+1.7**
GO02				Sn	**Sn**	**04 42 40.8**	**+2.7**
AC01	**Pan de Azucar**	**1.17**	**266**	⇑ *iP*	**Pn**	**04 42 26.0**	**+0.7**
AC01				*i* S	**Sn**	**04 42 43.3**	**+1.3**
AC01	**Pan de Azucar**	**1.17**	**266**	Pn	**Pn**	**04 42 26.2**	**+0.9**
AC01				Sn	**Sn**	**04 42 43.0**	**+1.1**
GO03	**Copiap**	**1.72**	**209**	*i P*	**Pn**	**04 42 32.7**	**+0.5**
GO03				*i* S	**Sn**	**04 42 54.8**	**+0.7**
GO03				IAML		04 42 58.5	
	comp=N,2μm,0.8s						
GO03	**Copiap**	**1.72**	**209**		**Pn**	**04 42 33.0**	**+0.8**
PB14	**IPOC Station P**	**1.76**	**325**	⇑ *iP*	**Pn**	**04 42 34.5**	**+1.6**
PB14				*i* S	**Sn**	**04 42 57.2**	**+1.8**
PB14	**IPOC Station P**	**1.76**	**325**	Pn	**Pn**	**04 42 34.0**	**+1.0**
AC04	**Llanos de Chal**	**2.64**	**216**	*eP*	**Pn**	**04 42 43.9**	**-0.3**
AC04				*eS*	**Sn**	**04 43 15.3**	**-0.3**
AC04				IAML		04 43 24.1	
	comp=N,440nm,0.8s						
AC04	**Llanos de Chal**	**2.64**	**216**	Pn	**Pn**	**04 42 44.0**	**-0.1**
PB10	**IPOC Station P**	**2.80**	**336**	‖ *iP*	**Pn**	**04 42 46.9**	**+0.6**
PB10				*i* S	**Sn**	**04 43 13.9**	**-5.5**
PB10				IAML		04 43 20.6	
	comp=N,334nm,0.6s						
PB10	**IPOC Station P**	**2.80**	**336**	Pn	**Pn**	**04 42 46.8**	**+0.6**
PB15	**IPOC Station P**	**2.87**	**357**	‖ *iP*	**Pn**	**04 42 48.8**	**+1.4**
PB15				*i* S	**Sn**	**04 43 22.8**	**+1.6**
PB15	**IPOC Station P**	**2.87**	**357**	Pn	**Pn**	**04 42 48.8**	**+1.4**
LCO	**Las Campanas**	**3.17**	**203**	Pn	**Pn**	**04 42 51.4**	**-0.1**
PB05	**IPOC Station P**	**3.32**	**345**	*eP*	**Pn**	**04 42 53.4**	**0.0**
PB05				*i* S	**Sn**	**04 43 30.2**	**-1.8**
PB05				IAML		04 43 41.8	
	comp=E,482nm,0.5s						
PB06	**IPOC Station P**	**3.37**	**356**	⇑ *iP*	**Pn**	**04 42 55.1**	**+1.0**
PB06				*i* S	**Sn**	**04 43 33.0**	**-0.3**
PB06				IAML		04 43 39.0	
	comp=E,507nm,0.4s						
PB06	**IPOC Station P**	**3.37**	**356**		**Pn**	**04 42 54.9**	**+0.8**
LVC	**Limon Verde**	**3.47**	**6**	P	**Pn**	**04 42 56.7**	**+1.1**
	comp=E,29nm,0.3s,baz=183,slow=8.8,SNR=237						
LVC				S	**Sn**	**04 43 36.5**	**+0.5**
	comp=E,39nm,0.3s,baz=5.2,slow=20,SNR=18						
LVC	**Limon Verde**	**3.47**	**6**	*eP*	**Pn**	**04 42 56.8**	**+1.1**
LVC				*i* S	Sn	04 43 27.2	-8.8
LVC	**Limon Verde**	**3.47**	**6**	*eP*	**Pn**	**04 42 56.8**	**+1.1**
PB04	**IPOC Station P**	**3.81**	**348**	*eP*	**Pn**	**04 42 59.7**	**-0.4**
PB04				*i* S	**Sn**	**04 43 41.7**	**-2.2**
PB04	**IPOC Station P**	**3.81**	**348**	Pn	**Pn**	**04 42 59.4**	**-0.6**
PB03	**IPOC Station P**	**4.04**	**354**	⇑ *iP*	**Pn**	**04 43 03.1**	**0.0**
PB03				*i* S	**Sn**	**04 43 47.5**	**-1.9**
PB03				IAML		04 44 03.9	
	comp=N,256nm,0.4s						
PB09	**IPOC Station P**	**4.27**	**1**	Pn	**Pn**	**04 43 07.4**	**+1.2**
GO04	**Tololo Observa**	**4.29**	**198**	Pn	**Pn**	**04 43 06.6**	**+0.1**
PB07	**IPOC Station P**	**4.37**	**353**		**Pn**	**04 43 07.2**	**-0.4**
CO03	**El Pedregal**	**4.90**	**194**		**Pn**	**04 43 13.8**	**-0.8**
PB01	**IPOC Station P**	**5.02**	**358**		**Pn**	**04 43 15.4**	**-0.9**
CO02	**Combarbal**	**5.32**	**196**	Pn	**Pn**	**04 43 19.1**	**-1.3**
ZON	**Zonda**	**5.47**	**174**	Pn	**Pn**	**04 43 23.2**	**+0.8**
TA01	**Diego Aracena**	**5.55**	**351**	Pn	**Pn**	**04 43 20.6**	**-2.8**
PB08	**IPOC Station P**	**5.91**	**1**	Pn	**Pn**	**04 43 26.7**	**-2.0**
PB11	**IPOC Station P**	**6.30**	**357**	Pn	**Pn**	**04 43 31.7**	**-2.2**
PSGCX	**Pisagua**	**6.50**	**353**	Pn	**Pn**	**04 43 34.5**	**-2.0**
VA03	**San Esteban**	**6.75**	**189**	Pn	**Pn**	**04 43 41.0**	**+1.2**
MNMC	**Minye Minye**	**6.92**	**358**	Pn	**Pn**	**04 43 41.2**	**-1.2**
MT02	**Curacav**	**7.33**	**192**	Pn	**Pn**	**04 43 45.7**	**-1.9**
PB16	**IPOC Station P**	**7.71**	**359**	Pn	**Pn**	**04 43 53.0**	**-0.4**
MT01	**Popeta**	**7.94**	**192**	Pn	**Pn**	**04 43 55.4**	**-0.6**
BO01	**Tunca**	**8.43**	**190**	Pn	**Pn**	**04 44 03.5**	**+0.9**
LPAZ	**La Paz**	**9.80**	**7**	P	**Pn**	**04 44 21.2**	**-0.8**
	comp=N,0.6nm,0.3s,baz=206,slow=1.4,SNR=19						
LPAZ				S	**Sn**	**04 46 10.2**	**-0.4**
	comp=N,0.1nm,0.3s,baz=149,slow=6.4,SNR=1.5						
LPAZ	**La Paz**	**9.80**	**7**	*eP*	**Pn**	**04 44 21.3**	**-0.7**
CPUP	**Villa Florida**	**10.75**	**94**	P	**Pn**	**04 44 29.7**	**-4.5**
	comp=N,0.1nm,0.3s,baz=273,slow=12,SNR=4.0						
CPUP	**Villa Florida**	**10.75**	**94**	Pn	**Pn**	**04 44 33.0**	**-1.2**
SIV	**San Ignacio**	**12.63**	**39**	P	**Pn**	**04 44 55.9**	**-3.7**
	comp=N,0.9nm,0.3s,baz=245,slow=13,SNR=19						
SIV				S	Sn	04 47 02.3	-16
	comp=N,0.1nm,0.3s,baz=326,slow=17,SNR=1.3						
PLCA	**Paso Flores**	**14.65**	**184**	LR	LR	04 51 37.8	
	comp=N,282nm,18.7s,baz=131,slow=39						
PLTB	**Pedras Altas**	**14.86**	**116**	*eP*	**Pn**	**04 45 27.9**	**-0.5**
ITAB	**Concordia**	**15.39**	**98**	*eP*	**Pn**	**04 45 36.4**	**-1.3**
TRCB	**Terra Rica**	**15.52**	**81**	*eP*	**P**	**04 45 38.1**	**-1.2**
PTGB	**Pitanga**	**15.63**	**89**	*eP*	**P**	**04 45 40.0**	**-0.5**
NNA	**Nana**	**15.72**	**332**	P	**Pn**	**04 45 34.4**	**-5.1**
	comp=N,0.4nm,0.3s,baz=126,slow=8.7,SNR=2.0						
ETMB	**Extrema**	**16.44**	**11**	*eP*	**P**	**04 45 50.4**	**+1.0**
PCMB	**Pacaembu**	**17.09**	**79**	*eP*	**P**	**04 45 56.8**	**+0.2**
SAML	**Samuel**	**18.00**	**20**	P	**P**	**04 46 07.9**	**+1.2**
FRTB	**Fartura**	**18.14**	**86**	*eP*	**Pn**	**04 46 08.6**	**-0.4**
CZSB	**Cruzeiro do Su**	**18.54**	**349**	*eP*	**Pn**	**04 46 15.2**	**+1.4**
IPMB	**Ipameri, GO**	**21.12**	**72**	*eP*	**P**	**04 46 40.6**	**0.0**
PARB	**Paraibuna**	**21.68**	**88**	*eP*	**P**	**04 46 47.4**	**+1.0**
BDFB	**Brasilia**	**22.40**	**67**	P	**P**	**04 46 52.1**	**-2.2**
	comp=N,2.5nm,0.6s,baz=234,slow=12,SNR=4.9						
BDFB	**Brasilia**	**22.40**	**67**	P	**P**	**04 46 52.5**	**-1.7**
PTGA	**Pitinga**	**26.76**	**21**	P	**P**	**04 47 34.3**	**0.0**
	comp=N,3.3nm,0.8s,baz=329,slow=19,SNR=2.1						
SMTB	**Santa Maria do**	**26.79**	**54**	*eP*	**P**	**04 47 36.8**	**+2.2**
RPN	**Rapa Nui**	**35.71**	**259**	P	**P**	**04 48 49.7**	**-3.1**
HOPE	**Hope Point**	**37.12**	**148**	P	**P**	**04 49 01.4**	**-3.0**
GTBY	**Guantanamo Bay**	**46.08**	**352**	P	**P**	**04 50 17.7**	**-0.1**

SWET	**Sewanee**	**62.97**	**345**	P	**P**	**04 52 20.0**	**+0.2**
SWET				IAmb	IAmb	04 52 20.5	
	comp=Z,5.9nm,0.7s						
V52A	**Sevierville**	**63.05**	**347**	P	**P**	**04 52 20.5**	**+0.2**
QSPA	**South Pole Qui**	**64.13**	**180**	P	**P**	**04 52 27.6**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=130,slow=2.0,SNR=9.4						
QSPA	**South Pole Qui**	**64.13**	**180**	P	**P**	**04 52 27.9**	**+0.6**
TX31	**Lajitas Ar. Si**	**64.21**	**327**	P	**P**	**04 52 29.7**	**+1.5**
TX31				IAmb	IAmb	04 52 31.5	
	comp=Z,1.9nm,0.8s						
TXAR	**Lajitas Array**	**64.21**	**327**	P	**P**	**04 52 29.6**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=149,slow=8.2,SNR=7.8						
TXAR	**Lajitas Array**	**64.21**	**327**	P	**P**	**04 52 30.0**	**+1.8**
U40A	**Yellville**	**65.96**	**339**	P	**P**	**04 52 40.2**	**+0.9**
U40A				IAmb	IAmb	04 52 40.3	
	comp=Z,4.7nm,0.7s						
ACSO	**Alum Creek Sta**	**67.19**	**349**	P	**P**	**04 52 44.0**	**-3.0**
S39A	**Bolivar**	**67.33**	**340**	P	**P**	**04 52 48.8**	**+0.8**
S39A				IAmb	IAmb	04 52 49.3	
	comp=Z,7.1nm,0.8s						
R40A	**Maddies Statio**	**67.56**	**341**	P	**P**	**04 52 50.0**	**+0.6**
R40A				IAmb	IAmb	04 52 50.6	
	comp=Z,6.1nm,0.8s						
M55A	**Ridgway**	**67.78**	**352**	P	**P**	**04 52 51.6**	**+0.9**
DBIC	**Dimbokro**	**70.43**	**72**	P	**P**	**04 53 07.3**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=220,slow=4.0,SNR=4.9						
DBIC	**Dimbokro**	**70.43**	**72**	P	**P**	**04 53 07.9**	**+0.2**
G62A	**West of Eustis**	**70.97**	**359**	P	**P**	**04 53 11.8**	**+1.5**
G62A				IAmb	IAmb	04 53 29.0	
	comp=Z,8.7nm,1.4s						
F64A	**Sherman**	**71.61**	**1**	P	**P**	**04 53 15.2**	**+1.1**
F64A				IAmb	IAmb	04 53 33.0	
	comp=Z,7.8nm,1.2s						
KOWA	**Kowa**	**75.20**	**66**	P	**P**	**04 53 36.2**	**+0.4**
KOWA				IAmb	IAmb	04 53 36.5	
	comp=Z,3.4nm,0.8s						
CCUT	**Cedar City**	**75.63**	**325**	P	**P**	**04 53 41.4**	**+3.3**
CCUT				IAmb	IAmb	04 53 42.0	
	comp=Z,3.3nm,0.9s						
MSU	**Marysvale**	**75.77**	**327**	P	**P**	**04 53 41.1**	**+2.2**
HWUT	**Hardware Ranch**	**77.89**	**329**	P	**P**	**04 53 53.4**	**+2.6**
HWUT				IAmb	IAmb	04 53 54.2	
	comp=Z,2.1nm,0.6s						
PDAR	**Pinedale Array**	**77.91**	**331**	P	**P**	**04 53 51.9**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=126,slow=8.4,SNR=4.5						
NVAR	**Mina Array Bea**	**78.89**	**323**	P	**P**	**04 53 58.1**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=162,slow=7.2,SNR=7.6						
ELK	**Elko**	**79.00**	**326**	P	**P**	**04 53 58.5**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=119,slow=3.5,SNR=5.6						
KVN	**Kaiserville**	**79.23**	**323**	P	**P**	**04 53 58.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**79.25**	**70**	P	**P**	**04 53 58.1**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=267,slow=5.3,SNR=13						
TORD	**Torodi Ar. Bea**	**79.25**	**70**	P	**P**	**04 53 57.9**	**-0.7**
ULM	**Lac du Bonnet**	**79.57**	**343**	P	**P**	**04 53 60.0**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=146,slow=7.3,SNR=2.3						
RLMT	**Red Lodge**	**79.68**	**332**	P	**P**	**04 54 02.5**	**+2.0**
RLMT				IAmb	IAmb	04 54 02.9	
	comp=Z,2.4nm,0.7s						
YNE	**Yellowstone No**	**79.90**	**332**	P	**P**	**04 54 03.6**	**+1.9**
YNE				IAmb	IAmb	04 54 03.7	
	comp=Z,2.0nm,0.6s						
MAW	**Mawson**	**80.06**	**163**	P	**P**	**04 54 01.4**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=264,slow=10,SNR=2.1						
MAW	**Mawson**	**80.06**	**163**	P	**P**	**04 54 02.9**	**+0.8**
PNTR	**Pine Nut**	**80.07**	**323**	P	**P**	**04 54 05.4**	**+2.6**
PNTR				IAmb	IAmb	04 54 05.8	
	comp=Z,4.5nm,0.8s						
YHL	**Hebgen Lake**	**80.28**	**331**	P	**P**	**04 54 06.2**	**+2.4**
HLID	**Hailey**	**80.73**	**329**	P	**P**	**04 54 08.6**	**+2.4**
HLID				IAmb	IAmb	04 54 09.2	
	comp=Z,4.9nm,1.1s						
MCMT	**McKenzie Canyo**	**80.99**	**330**	P	**P**	**04 54 09.3**	**+1.8**
PINE	**Pine Mountain**	**84.11**	**325**	P	**P**	**04 54 25.7**	**+2.0**
PINE				IAmb	IAmb	04 54 26.3	
	comp=Z,3.5nm,0.8s						
YKA	**Yellowknife Ar**	**95.37**	**341**	P	**P**	**04 55 16.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=140,slow=4.5,SNR=15						
ASAR	**Alice Springs**	**125.69**	**206**	PKP	**PKPdf**	**05 00 53.3**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=154,slow=2.3,SNR=6.8						
WRA	**Warramunga Arr**	**128.82**	**209**	PKP	**PKPdf**	**05 01 00.6**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=176,slow=1.8,SNR=8.0						
WRA	**Warramunga Arr**	**128.82**	**209**		**PKPdf**	**05 01 00.4**	**0.0**
KURK	**Kurchatov**	**145.28**	**36**		**PKPbc**	**05 01 29.9**	**+0.4**
KURBB	**Kurchatov Arra**	**145.28**	**37**	PKPbc	**PKPbc**	**05 01 29.9**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=304,slow=3.5,SNR=14						
AAK	**Ala-Archa**	**146.16**	**52**	PKPbc	**PKPdf**	**05 01 31.9**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=170,slow=3.1,SNR=7.5						
AAK	**Ala-Archa**	**146.16**	**52**	PKPbc	**PKPbc**	**05 01 33.3**	**+0.6**
ZALV	**Zalesovo Beam**	**146.20**	**28**	PKPbc	**PKPdf**	**05 01 32.1**	**+1.0**
	comp=Z,6.4nm,0.6s,baz=301,slow=3.5,SNR=25						
ZALV	**Zalesovo Beam**	**146.20**	**28**	PKPbc	**PKPbc**	**05 01 32.8**	**+0.6**
MKAR	**Makanchi Array**	**149.45**	**40**	PKPbc	**PKPbc**	**05 01 41.8**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=309,slow=2.6,SNR=32						
KLR	**Kul'dur**	**151.69**	**330**	PKPbc	**PKPbc**	**05 01 46.3**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=109,slow=2.2,SNR=4.8						
JHJ	**Hachijo jima 2**	**153.82**	**292**	PKPbc	**PKiKP**	**05 01 53.4**	**+1.6**
	comp=Z,57nm,0.5s,baz=100,slow=23,SNR=1.9						

IDC 20 04:46:33.8±10.0, 0.5°59N×136.2°25E, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.3/46, mbtmp3.4/3, Error ellipse: s-maj=315.0km s-min=32.1km az=65.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.50**	**185**	P	P	04 51 12.3	-1.3
	0.3nm,0.5s,baz=6.0,slow=8.5,SNR=1.8						
ASAR	**Alice Springs**	**24.22**	**185**	P	P	04 51 53.5	+0.9
	0.4nm,0.6s,baz=11,slow=11,SNR=5.2						
CMAR	**Chiang Mai Arr**	**40.70**	**298**	P	P	04 54 16.2	-0.3
	0.6nm,0.3s,baz=104,slow=6.0,SNR=4.6						

IDC ***20*** *05:45:31.7±2.5, 48.0°04N×155.0°00E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/44, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=67.6km s-min=34.5km az=176.0*
KRSC ***20*** *05:45:35.9±2.0, 48.3°5N×156.0°05E, h16km±32km, ML3.9*

ISC 20 05:45:34.6±1.6, 48.3°3N±0.1×155.1°1E±0.2, h10km, n31, σ1§77/27, mb3.5/3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.46**	**15**	*eP*	**Pn**	**05 46 15.3**	**+0.6**
SKR				*eS*	**Sn**	**05 46 43.8**	**-1.0**
ALID	**Alaid**	**2.58**	**6**	*eP*	**Pn**	**05 46 17.8**	**+1.4**
PAU	**Pauzhetka**	**3.34**	**18**	S	**Sn**	**05 47 06.3**	**-0.2**
MIPR	**Malaya Ipel'ka**	**4.11**	**14**	*eP*	**Pn**	**05 46 39.4**	**+2.1**
ASAK	**Asacha**	**4.45**	**23**	*eP*	**Pn**	**05 46 43.6**	**+1.5**
MTVR	**Mutnovka**	**4.61**	**24**	P	**Pn**	**05 46 45.5**	**+1.1**
MTVR				*eS*	**Sn**	**05 47 37.9**	**-0.2**
GRL	**Gorelyy**	**4.64**	**23**	P	**Pn**	**05 46 46.4**	**+1.5**
GRL				S	**Sn**	**05 47 39.1**	**+0.2**
RUS	**Russkaya**	**4.66**	**26**	*eP*	**Pn**	**05 46 44.7**	**-0.2**
RUS				*eS*	**Sn**	**05 47 36.3**	**-2.7**
KRMR	**Karymshinskiy**	**4.91**	**22**	P	**Pn**	**05 46 50.1**	**+1.7**
PETK	**Petropavlovsk-**	**5.07**	**18**	Pn	**Pn**	**05 46 52.9**	**+2.3**
	0.6nm,0.3s,baz=176,slow=13,SNR=11						
PETK				Sn	**Sb**	**05 48 03.8**	**-0.6**
	0.4nm,0.3s,baz=88,slow=36,SNR=1.1						
UGLR	**Uglovaya**	**5.44**	**24**	*eP*	**Pn**	**05 46 58.4**	**+2.7**
KOK	**Koryaka**	**5.46**	**23**	P	**Pn**	**05 46 58.5**	**+2.5**
AVH	**Avacha**	**5.46**	**23**	*eP*	**Pn**	**05 46 59.9**	**+3.9**
SMAR	**Somma**	**5.48**	**24**	*eP*	**Pn**	**05 46 58.7**	**+2.3**
KRER	**Koryakskii**	**5.50**	**23**	P	**Pn**	**05 46 57.3**	**+0.6**
SDLR	**Sedlovina**	**5.51**	**24**	*eP*	**Pn**	**05 46 58.2**	**+1.4**
KRX	**Arik**	**5.53**	**23**	P	**Pn**	**05 46 58.9**	**+1.9**
SPN	**Mys Shipunski**	**5.71**	**31**	*eP*	**Pn**	**05 47 00.4**	**+2.0**
MKZ	**Mys Kozlova**	**7.49**	**31**	P	**Pn**	**05 47 23.9**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**30.06**	**157**	T	T	06 23 24.4	
	baz=345,slow=76,SNR=33						
H11N1	**WAKE ISLAND Hy**	**30.08**	**157**	T	T	06 23 31.3	
	baz=345,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy**	**30.08**	**157**	T	T	06 23 27.3	
	baz=345,slow=76,SNR=47						
H11S1	**WAKE ISLAND Hy**	**31.18**	**158**	T	T	06 24 53.3	
	baz=344,slow=76,SNR=283						
H11S3	**WAKE ISLAND Hy**	**31.20**	**158**	T	T	06 24 54.0	
	baz=344,slow=76,SNR=323						
H11S2	**WAKE ISLAND Hy**	**31.20**	**158**	T	T	06 24 51.1	
	baz=344,slow=76,SNR=267						
MKAR	**Makanchi Array**	**47.44**	**297**	P	**P**	**05 54 08.2**	**-0.9**
	0.2nm,0.5s,baz=63,slow=10.0,SNR=2.3						
KURBB	**Kurchatov Arra**	**47.73**	**303**	P	**P**	**05 54 10.5**	**-0.8**
	0.3nm,0.6s,baz=68,slow=8.6,SNR=2.0						

TXAR	**Lajitas Array**	**75.55**	**62**	P	**P**	**05 57 19.4**	**0.0**
	0.3nm,0.7s,baz=302,slow=5.2,SNR=4.9						
H03N2	**Juan Fernandez**	**137.40**	**90**	T	T	08 38 03.3	
	baz=310,slow=77,SNR=10						
H03N1	**Juan Fernandez**	**137.41**	**90**	T	T	08 38 10.2	
	baz=310,slow=77,SNR=12						
H03N3	**Juan Fernandez**	**137.41**	**90**	T	T	08 38 05.6	
	baz=310,slow=77,SNR=13						

KISR ***20*** *05:52:46.2±0.4, 29.2°42N×42.2°69E, h0km±283km, Hypocentre not reviewed by the ISC*
IDC ***20*** *05:52:52.2±1.2, 28.0°06N×52.8°48E, h0km, mb3.8/14, mb1 3.9/17, mb1mx3.7/40, mbtmp3.8/17, ML3.7/3, Error ellipse: s-maj=24.3km s-min=21.6km az=176.0*
TEH ***20*** *05:52:55.9, 28.1°17N×52.1°60E, h14km, ML3.7*
THR ***20*** *05:52:56.2±0.3, 28.1°14N×52.1°61E, h18km±6km, ML3.7*
DSN ***20*** *05:53:00.4±1.9, 27.7°75N×52.1°75E, h10km, ML3.7/6, Error ellipse: s-maj=33.7km s-min=13.2km az=13.0*

ISC 20 05:52:55.2±0.6, 28.1°0N±0.0°05×52.1°56E±0.0°05, h15km±9km, n58, σ1§65/62, mb3.8/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	**0.57**	**49**	*eP*	**Pg**	**05 53 05.3**	**-1.2**
LMD1	**Lamerd**	**0.93**	**144**	*eP*	**Pb**	**05 53 14.1**	**+1.1**
LMD1				*eSg*	**Sn**	**05 53 28.3**	**+1.6**
JHRM	**Jahrom**	**0.99**	**65**	*eP*	**Pb**	**05 53 14.2**	**+0.2**
AHBU	**AHRAM**	**1.35**	**305**	*eP*	**Pn**	**05 53 21.3**	**+1.9**
SHI	**Shiraz**	**1.54**	**359**	*eP*	**Pb**	**05 53 24.0**	**+0.5**
SHI				*eSg*	**Sb**	**05 53 44.0**	**+1.1**
LAR1	**LAR**	**1.66**	**104**	*eP*	**Pn**	**05 53 26.8**	**+1.2**
KAZ1	**Kazerun**	**1.72**	**332**	*eP*	**Pn**	**05 53 26.7**	**+2.0**
KLNJ	**Kolanjah**	**3.02**	**344**	*eP*	**Pn**	**05 53 42.5**	**-0.3**
IRAM	**Ramesheh**	**3.70**	**358**	*eP*	**Pn**	**05 53 52.8**	**+0.8**
IMEH	**Mehriz**	**3.74**	**28**	*eP*	**Pn**	**05 53 55.0**	**+2.5**
SHME	**Shamm**	**3.79**	**122**	P	**Pn**	**05 53 54.4**	**+1.4**
NGRK	**Negar Kerman**	**3.97**	**66**	*eP*	**Pn**	**05 53 57.0**	**+1.1**
BANOM	**Banah**	**3.98**	**122**	P	**Pn**	**05 53 56.9**	**+1.3**
BANOM				S	**Sn**	**05 54 41.2**	**-0.9**
KHGB	**Koh Gabri**	**4.11**	**56**	*ePn*	**Pn**	**05 53 59.3**	**+1.7**
KRBR	**Kerman**	**4.13**	**62**	*ePn*	**Pn**	**05 54 00.1**	**+2.1**
KRBR	**Kerman**	**4.13**	**62**	*ePn*	**Pn**	**05 54 00.1**	**+2.1**
TVBK	**TV Kerman**	**4.13**	**62**	*ePn*	**Pn**	**05 54 00.2**	**+2.1**
QRN	**Al-Qurain**	**4.14**	**280**	*eP*		05 53 57.1	
NAZ	**Nazwa, Dubai**	**4.16**	**137**	P	**Pn**	**05 53 59.4**	**+1.3**
MSFE	**Esma-Masafi**	**4.22**	**129**	P	**Pn**

	baz=272						
TWD				i S	Sb	06 51 35.5	+0.6
	baz=272						
NACB	Ninganchiao	0.72	283	P	Pb	06 51 25.7	-0.1
	baz=265						
NACB				S	Sb	06 51 35.5	+0.2
	baz=265						
YOJ	Yonaguni jima	0.74	53	P	Pb	06 51 26.1	0.0
YOJ				S	Sb	06 51 35.5	-0.3
YOJ	Yonaguni jima	0.74	53	P	Pb	06 51 26.0	0.0
	baz=54						
YOJ				S	Sb	06 51 35.4	-0.3
	baz=54						
TWC	Suao	0.75	321	i P	Pb	06 51 25.6	-0.8
	baz=319						
TWC				i S	Sb	06 51 35.2	-1.0
	baz=319						
ETLH	Xiulin Townshi	0.83	283	P	Pn	06 51 27.3	-0.9
	baz=269						
ETLH				S	Sb	06 51 38.8	+0.3
	baz=269						
NDS	Dongshan	0.85	316	i P	Pn	06 51 27.9	-0.6
	baz=313						
NDS				S	Sb	06 51 39.4	-0.8
	baz=313						
ESL	Shilin	0.88	257	P	Pn	06 51 27.9	-1.0
	baz=246						
ESL				eS	Sb	06 51 39.7	-0.2
	baz=246						
EGS		0.91	334	i P	Pb	06 51 29.2	+0.1
	baz=321						
EGS				i S	Sn	06 51 42.1	+0.4
	baz=321						
EGFH	Guangfu	0.93	248	i P	Pn	06 51 28.9	-0.6
	baz=247						
EGFH				S	Sn	06 51 41.4	-0.6
	baz=247						
TWE	Neicheng	0.95	318	i P	Pb	06 51 29.5	-0.1
	baz=322						
TWE				eS	Sb	06 51 41.8	0.0
	baz=322						
ENTT	Nioudou	0.96	310	i P	Pb	06 51 29.8	0.0
	baz=295						
ENTT				S	Sb	06 51 42.4	+0.3
	baz=295						
NTC	Toucheng	0.96	330	i P	Pn	06 51 29.6	-0.5
	baz=327						
NTC				S	Sb	06 51 42.8	+0.4
	baz=327						
NDT	Datong Townshi	0.97	307	i P	Pb	06 51 30.2	+0.1
	baz=304						
NDT				i S	Sb	06 51 43.0	+0.5
	baz=304						
NNSB	Datong	0.99	295	P	Pn	06 51 29.9	-0.5
	baz=292						
NNSB				S	Sb	06 51 43.5	+0.5
	baz=292						
NNSH	Datong	0.99	295	i P	Pn	06 51 30.0	-0.4
	baz=292						
NNSH				i S	Sb	06 51 43.4	+0.4
	baz=292						
NNS	Nan Shan	1.00	295	i P	Pn	06 51 30.0	-0.6
	baz=292						
NNS				i S	Sb	06 51 43.9	+0.4
	baz=292						
HGSD	Ruisui	1.01	239	P	Pn	06 51 29.9	-0.7
	baz=238						
HGSD				eS	Sn	06 51 42.9	-1.1
	baz=238						
WHF	Hehuan Shan	1.01	277	i P	Pn	06 51 30.6	-0.4
	baz=263						
WHF				i S	Sn	06 51 43.6	-1.2
	baz=263						
TWB1	Santiao Chiao	1.04	341	i P	Pn	06 51 30.3	-0.8
	baz=355						
TWB1				S	Sb	06 51 44.8	+0.2
	baz=355						
FUSS	Fushou	1.05	283	i P	Pn	06 51 31.4	0.0
	baz=280						
FUSS				S	Sb	06 51 45.1	+0.1
	baz=280						
TIPB	Shuangxi	1.07	333	i P	Pn	06 51 30.7	-0.8
	baz=330						
TIPB				i S	Sn	06 51 44.6	-1.0
	baz=330						
CHGB	Renai	1.09	272	P	Pn	06 51 31.7	-0.2
	baz=259						
CHGB				S	Sn	06 51 45.9	-0.5
	baz=259						
OWD	Renai	1.09	267	i P	Pn	06 51 31.7	-0.2
	baz=265						
OWD				i S	Sn	06 51 45.4	-0.9
	baz=265						
NWLT	Wulai	1.09	314	i P	Pb	06 51 32.1	0.0
	baz=311						
NWLT				S	Sb	06 51 47.4	+1.4
	baz=311						
YHNB	Yeheng	1.11	306	P	Pn	06 51 32.1	0.0
	baz=292						
YHNB				eS	Sb	06 51 47.9	+1.3
	baz=292						
TDCB	Techi	1.13	282	P	Pb	06 51 32.6	-0.2
	baz=269						
TDCB				S	Sb	06 51 47.2	0.0
	baz=269						
NSK	Sanguang	1.13	306	i P	Pn	06 51 32.2	-0.2
	baz=292						
NSK				S	Sb	06 51 47.4	+0.3
	baz=292						
VWDT	VWDT	1.15	257	P	Pn	06 51 32.7	+0.1
	baz=255						
VWDT				S	Sb	06 51 48.0	+0.3
	baz=255						
YULB	Yu-li	1.16	238	P	Pn	06 51 32.1	-0.6
	baz=251						
YULB				S	Sn	06 51 46.8	-1.0
	baz=251						
EYUL	Yuli	1.17	235	i P	Pn	06 51 32.6	-0.2
	baz=224						
EYUL				S	Sn	06 51 47.1	-0.9
	baz=224						
NWF	Wu-fen Shan	1.18	333	P	Pb	06 51 33.1	-0.5
	baz=330						
WFSB	Wu-fen Shan	1.18	333	P	Pn	06 51 33.0	+0.1
	baz=329						
WFSB				S	Sb	06 51 49.4	+1.0
	baz=329						
TWA	Mucha	1.19	324	i P	Pb	06 51 33.8	-0.1
	baz=320						
TWA				i S	Sb	06 51 50.2	+1.3
	baz=320						
NHDH	Xindian Distri	1.21	321	P	Pb	06 51 34.1	-0.1
	baz=318						
NHDH				S	Sb	06 51 50.5	+1.1
	baz=318						
TNOU	National Taiwa	1.25	335	P	Pn	06 51 33.5	-0.4
	baz=331						
TNOU				S	Sb	06 51 50.9	+0.4
	baz=331						
FULB	Fuli	1.28	231	i P	Pn	06 51 33.7	-0.6
	baz=220						
FULB				S	Sn	06 51 49.6	-1.2
	baz=220						
IRIF	Iriomote-Funau	1.28	76	P	Pb	06 51 35.0	-0.4
IRIF				eS	Sb	06 51 52.0	+0.5
CHKT	Chengkung	1.30	225	i P	Pn	06 51 33.6	-0.9
	baz=215						
CHKT				S	Sn	06 51 49.6	-1.5
	baz=215						
SSLB	Suanglung	1.31	260	P	Pn	06 51 33.0	-1.8
	baz=259						
SSLB				S	Sn	06 51 51.3	-0.3
	baz=259						
DPDB	Guoxing	1.32	271	P	Pb	06 51 35.6	-0.4
	baz=269						
HATJ	Hateruma jima	1.32	88	P	Pn	06 51 35.2	+0.4
HATJ				S	Sb	06 51 52.1	-0.3
WHP	Taichung City	1.32	282	i P	Pb	06 51 36.3	+0.2
	baz=270						
WHP				eS	Sb	06 51 53.0	+0.6
	baz=270						
YM01	YM01	1.34	327	P	Pb	06 51 36.1	-0.2
	baz=339						
YM01				eS	Sb	06 51 52.2	-0.9
	baz=339						
SMLT	Sun Moon Lake	1.35	265	i P	Pn	06 51 36.0	+0.6
	baz=263						
SMLT				i S	Sn	06 51 52.6	0.0
	baz=263						
YM10	YM10	1.35	327	P	Pn	06 51 35.1	-0.2
	baz=339						
YM11	YM11	1.35	328	P	Pn	06 51 36.5	-0.1
	baz=325						
YM05	YM05	1.35	328	P	Pn	06 51 35.5	0.0
	baz=325						
YM04	YM04	1.36	326	P	Pn	06 51 35.5	0.0
	baz=338						
YM08	YM08	1.36	329	P	Pn	06 51 35.9	+0.4
	baz=326						
LIOB	Emei	1.38	297	i P	Pb	06 51 37.1	0.0
	baz=294						
LIOB				eS	Sb	06 51 55.8	+1.4
	baz=294						
TWS1	Kuangyinshan	1.38	321	eP	Pb	06 51 36.4	-0.6
	baz=335						
TYC	Yuchr	1.39	266	i P	Pb	06 51 37.3	+0.2
	baz=264						
TYC				S	Sb	06 51 54.8	+0.4
	baz=264						
NSTT	Nanjuang	1.39	296	i P	Pb	06 51 37.3	+0.1
	baz=294						
NSTT				S	Sb	06 51 54.5	+0.1
	baz=294						
YUS	Yu-Shan	1.40	248	i P	Pn	06 51 36.9	+0.5
	baz=247						
YUS				i S	Sn	06 51 53.2	-1.1
	baz=247						
EDH	Donghe	1.43	223	i P	Pn	06 51 35.3	-1.0
	baz=215						
EDH				i S	Sn	06 51 52.3	-2.1
	baz=215						
ELDTW	Lidau	1.49	237	i P	Pn	06 51 36.7	-0.6
	baz=236						
ELDTW				S	Sn	06 51 54.7	-1.3
	baz=236						
WJS	Zhushan	1.51	263	P	Pb	06 51 39.5	+0.2
	baz=261						
WJS				i S	Sb	06 51 59.2	+1.2
	baz=261						
ALS	Alishan	1.52	251	i P	Pn	06 51 38.7	+0.8
	baz=250						
ALS				i S	Sn	06 51 57.1	+0.1
	baz=250						
JKRS	Kuro-shima	1.52	81	P	Pb	06 51 39.6	+0.2
JKRS				eS	Sb	06 51 57.6	-0.6
WWF	Wufeng	1.52	271	eP	Pb	06 51 40.9	+1.4
	baz=269						
WWF				S	Sb	06 52 00.0	+1.6
	baz=269						
WNT	Mingjian	1.54	265	eP	Pb	06 51 40.2	+0.3
	baz=263						
WNT				i S	Sb	06 51 59.5	+0.5
	baz=263						
TCU	Taichung	1.55	275	i S	Sb	06 52 01.1	+2.0
	baz=273						
LDUT	Ludao	1.57	212	i P	Pn	06 51 37.5	-0.9
	baz=213						
LDUT				i S	Sn	06 51 55.6	-2.4
	baz=213						
LONT	Longtian	1.58	226	i P	Pn	06 51 38.2	-0.3
	baz=239						
LONT				i S	Sn	06 51 57.7	-0.6
	baz=239						
CHN5	Tsauling	1.60	255	i P	Pb	06 51 40.5	-0.4
	baz=244						
CHN5				i S	Sb	06 52 01.6	+0.8
	baz=244						
WDJ	Dajia District	1.61	282	eS	Sb	06 52 01.4	+0.5
	baz=280						
PCYT	Pengchaiyu	1.63	351	P	Pn	06 51 38.9	-0.2
	baz=335						
WCHH	Zhanghua	1.65	272	S	Sb	06 52 03.4	+1.3
	baz=270						
JIJ	Ishigaki jima	1.66	78	P	Pn	06 51 40.3	+0.7
JIJ				S	Sn	06 52 00.5	+0.4
TWGBT	Beinan	1.68	225	P	Pn	06 51 39.3	-0.6
	baz=236						
TWGBT				S	Sn	06 52 00.1	-0.6
	baz=236						
STYH	Taoyuan	1.69	240	i P	Pn	06 51 40.6	+0.7
	baz=231						
STYH				i S	Sn	06 52 01.2	+0.4
	baz=231						
STYT	Tauyuan	1.70	240	P	Pn	06 51 40.7	+0.4
	baz=231						
STYT				i S	Sb	06 52 03.3	-0.4
	baz=231						
WDLH	Douliu	1.71	259	P	Pb	06 51 41.5	-1.1
	baz=258						
WDLH				i S	Sb	06 52 03.8	+0.1
	baz=258						
TPUB	Ta-pu	1.75	246	P	Pb	06 51 43.1	-0.2
	baz=246						
TPUB				S	Sb	06 52 05.2	+0.4
	baz=246						
WTK	Tuku	1.84	260	i S	Sb	06 52 07.4	-0.1
	baz=259						
CHY	Chiayi	1.85	254	eS	Sb	06 52 07.5	-0.4
	baz=253						
JISG	Ishigakijimahi	1.86	72	P	Pn	06 51 42.8	+0.4
JISG				eS	Sn	06 52 05.5	+0.4
TWK	Hsinying	1.88	247	i P	Pb	06 51 45.0	-0.6
	baz=246						
TWK				i S	Sb	06 52 08.6	0.0
	baz=246						
CHN1	Nanshi	1.88	244	i P	Pb	06 51 45.3	-0.2
	baz=244						
CHN1				i S	Sb	06 52 09.3	+0.6
	baz=244						
SLGT	Liugui	1.88	237	i P	Pb	06 51 45.6	0.0
	baz=230						
SLGT				i S	Sb	06 52 08.8	+0.2
	baz=230						
SGST	Jiashian	1.88	241	i P	Pn	06 51 44.1	+1.4
	baz=230						
SGST				i S	Sb	06 52 08.6	-0.2
	baz=230						
SNST	Tainan City	1.89	245	i S	Sb	06 52 09.3	+0.3
	baz=245						
ECL	Taimali	1.92	223	eS	Sn	06 52 06.1	-0.5
	baz=224						
ICHU	Yijhu	2.02	252	eP	Pb	06 51 46.7	-1.3
	baz=251						
ICHU				S	Sb	06 52 11.9	-0.8
	baz=251						
SSD	Sandimen	2.04	232	i P	Pn	06 51 46.5	+1.8
	baz=227						
SSD				eS	Sn	06 52 10.2	+0.7
	baz=227						
TSMG	Majia	2.05	231	i P	Pb	06 51 47.1	-1.4
	baz=226						
TSMG				S	Sn	06 52 11.5	+1.6
	baz=226						
SCST	Cishan	2.06	237	eS	Sb	06 52 15.3	+1.6
	baz=226						
MASBT	Mashibuluo	2.12	229	P	Pn	06 51 46.8	+0.8
	baz=225						
MASBT				S	Sn	06 52 12.4	+0.8
	baz=225						
EAST	Anshuo	2.15	221	P	Pn	06 51 46.4	+0.1
	baz=222						
EAST				eS	Sn	06 52 12.0	-0.2
	baz=222						
SSPT	Xinbi	2.25	228	P	Pn	06 51 49.6	+1.9
	baz=223						
SSPT				eS	Sn	06 52 16.6	+1.9
	baz=223						
SCZT	Fangliau	2.29	225	P	Pn	06 51 49.7	+1.4
	baz=220						
SCZT				S	Sn	06 52 17.0	+1.2
	baz=220						
SLIU	Shizi	2.30	219	P	Pn	06 51 49.7	+1.3
	baz=220						
TWKBT	Hengchun	2.52	215	P	Pn	06 51 51.1	-0.2
	baz=217						
TWKBT				eS	Sn	06 52 22.5	+1.3
	baz=217						
PHUB	P'eng-hu	2.61	259	S	Sn	06 52 24.5	+0.9
	baz=272						
VCHM	Qimei	2.81	254	S	Sn	06 52 29.7	+1.1
	baz=254						
VWUC	VWUC	2.83	291	P	Pn	06 51 55.4	-0.3
	baz=287						
VWUC				S	Sn	06 52 27.9	-1.0
	baz=287						
MATB	Ma-tsu	3.05	315	eP	Pn	06 51 59.6	+0.9
	baz=311						
PTMZ	Houxiangcun	3.13	290	P	Pn	06 52 00.0	+0.3
	baz=286						
PTMZ				eS	Sn	06 52 35.2	-1.2
	baz=286						
LYJJ	Jianjiangzhen	3.45	317	eP	Pn	06 52 04.2	0.0
	baz=314						
XPSS	Dashiqiu	3.50	326	eP	Pn	06 52 04.1	-0.8
	baz=332						
KNMB	Chin-men Tao	3.66	278	eS	Sn	06 52 49.1	-0.3
	baz=275						
MHZQ	Yeshan	3.67	305	eP	Pn	06 52 08.5	+1.3
	baz=302						

VAO **20** *07:11:37.3±0.7, 10°.57N×62°.12W, h10km, mb4.8*

NEIC **20** *07:11:41.7±1.6, 10°.86N±0°.06×62°.36W±0°.06, h90km±6km, mb4.7/175, Error ellipse: s-maj=10.1km s-min=6.9km az=140.0*

TRN **20** *07:11:41.7, 10°.79N×62°.34W, h63km, MD4.7*

TRN Felt widely in Trinidad, MMI IV, V.

FUNV **20** *07:11:41.7, 10°.74N×62°.29W, h24km, MW4.6*

IDC **20** *07:11:43.9±1.4, 10°.90N×62°.54W, h107km±13km, mb4.1/28, mb1 4.3/31, mb1mx4.2/42, mbtmp4.5/31, MS3.6/24, Ms1 3.6/24, ms1mx3.4/52, Error ellipse: s-maj=11.8km s-min=8.9km az=80.0*

ISC 20 07:11:40.2±0.7, **10°.81N**±0°.03×**62°.40W**±0°.03, **h73**km±6km, **n406**, σ1§46/444, **mb4.7**/114, **16C-32D, Fault plane solution: NP1:**φs69.83038°, δ18.74664°, λ46.55918°. **NP2:**φs294.83203°, δ76.50550°, λ103.13577°. **Principal axes:** T Plg56.5741°, Azm221.7930°; N Plg12.7669°, Azm111.7150°; P Plg30.3041°, Azm14.1050°; **Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRUV	Carupano	0.83	261	⇓i P	Pn	07 11 58.3	+1.5
CRUV				eS	Sn	07 12 10.8	+1.6
TRN	Trinidad (W)	0.99	99	eP	Pn	07 11 59.3	+0.6
TRN				eS	Sn	07 12 11.3	-1.2
TRN	Trinidad (W)	0.99	99	eP	Pn	07 11 59.1	+0.5
TRN				eS	Sn	07 12 11.0	-1.5
TPP	Pointe-a-Pierr	1.05	117	i P	Pn	07 12 00.5	+1.1
TBH	Brigand Hill	1.35	104	eP	Pn	07 12 04.4	+1.2
TBH				eS	Sn	07 12 19.9	-0.6
GRGR	Grenville	1.51	29	eP	Pn	07 12 06.8	+1.4
GRGR				eS	Sn	07 12 25.1	+0.8
GRGR	Grenville	1.51	29		Pn	07 12 05.9	+0.6
GRGR				Sn	Sn	07 12 25.9	+1.6
GRGR	Grenville	1.51	29	eP	Pn	07 12 06.2	+0.9
GRGR				eS	Sn	07 12 25.5	+1.1
TPR	Prospect	1.64	76	eP	Pn	07 12 08.6	+1.6
TPR				eS	Sn	07 12 26.5	-0.8
BOT	Bacolet	1.69	78	eP	Pn	07 12 08.8	+1.1
BOT				eS	Sn	07 12 28.9	+0.3
TOSP	Speyside	1.89	75	eP	Pn	07 12 10.9	+0.5
TOSP				eS	Sn	07 12 32.2	-1.2
TOSP	Speyside	1.89	75		Pn	07 12 11.0	+0.5
TOSP	Speyside	1.89	75	eP	Pn	07 12 11.1	+0.6
TOSP				eS	Sn	07 12 33.5	0.0
GCMP	Grenada, Carri	1.92	30	eP	Pn	07 12 11.7	+0.8
GCMP				eS	Sn	07 12 34.8	+0.6
PLCV	Puerto La Cruz	2.25	254		Pn	07 12 19.1	+3.9
PLCV					Sn	07 12 45.7	+3.6
PCRV	Puerto La Cruz	2.29	254	P	Pn	07 12 19.1	+3.3
	100nm,0.3s,baz=72,slow=3.8,SNR=721						
PCRV				S	Sn	07 12 45.7	+2.6
	130nm,0.3s,baz=307,slow=20,SNR=7.5						
PCRV	Puerto La Cruz	2.29	254	eP	Pn	07 12 18.7	+2.9
PCRV				eS	Sn	07 12 45.1	+2.1
SVOC	Richmond Hill,	2.60	26	eP	Pn	07 12 21.1	+1.1
SVOC				eS	Sn	07 12 51.3	+0.7
SVB	Belmont	2.69	24	eP	Pn	07 12 22.1	+0.8
SVB				eS	Sn	07 12 54.0	+1.1
SVB	Belmont	2.69	24	Pn	Pn	07 12 21.8	+0.5
SVV	Soufriere Volc	2.75	25	eP	Pn	07 12 24.0	+2.0
RIOV	Rio Grande	2.78	168	eP	Pn	07 12 23.1	+0.6
PRGV	PARIAGUAN	3.01	228	eP	Pn	07 12 26.9	+1.4
PRGV				eS	Sn	07 13 01.0	+0.5
MCLT	Moule a Chique	3.22	26	eP	Pn	07 12 30.0	+1.6
MCLT				eS	Sn	07 13 04.7	-0.9
MCLT	Moule a Chique	3.22	26		Pn	07 12 30.0	+1.6
SLB	Belfond	3.28	24	eP	Pn	07 12 31.2	+1.9
SLB				eS	Sn	07 13 07.9	+0.6
SLCP	Castries, St.	3.47	23	e	Pn	07 12 29.1	-2.7
SLCP	Castries, St.	3.47	23	eP	Pn	07 12 34.1	+2.3
SLCP				eS	Sn	07 13 11.9	+0.1
SLBI	Saint Lucia, B	3.49	23	eP	Pn	07 12 32.9	+0.8
SLBI				eS	Sn	07 13 11.1	-1.1
BCHC	Barbados, Cave	3.56	49	eP	Pn	07 12 33.9	+0.9
BBGH	Gun Hill	3.62	50	eP	Pn	07 12 37.1	+3.2
BBGH				eS	Sn	07 13 14.6	-0.9
BBGH	Gun Hill	3.62	50	Pn	Pn	07 12 32.6	-1.3
BBGH	Gun Hill	3.62	50	eP	Pn	07 12 34.0	+0.1
BIRV	Birongo	3.82	265	eP	Pn	07 12 39.3	+2.7
BIRV				eS	Sn	07 13 22.3	+1.9
BIM	Bigot	3.91	19	eP	Pn	07 12 40.0	+2.1
BIM				eS	Sn	07 13 21.7	-0.9
MPOM	Morne Pois Mar	3.92	22	eP	Pn	07 12 39.1	+1.2
MPOM				eS	Sn	07 13 22.1	-0.5
FDF	Fort de France	4.09	17	eP	Pn	07 12 42.1	+1.8
FDF				eS	Sn	07 13 23.8	-3.2
FDF	Fort de France	4.09	17	Pn	Pn	07 12 42.2	+1.8
FDF	Fort de France	4.09	17	eP	Pn	07 12 41.9	+1.6
MERV	Las Mercedes	4.14	248	eP	Pn	07 12 42.4	+1.4
MERV				eS	Sn	07 13 28.8	+0.6
ILAM	Ilet Lapin Mar	4.22	20	eP	Pn	07 12 44.0	+2.0
FUNV	FUNVISIS	4.35	266	eP	Pn	07 12 46.8	+2.9
FUNV				eS	Sn	07 13 35.1	+1.6
CARV	Caracas	4.46	267	eP	Pn	07 12 48.2	+2.7
CARV				eS	Sn	07 13 37.6	+1.3
TACV	Tcata	4.60	262	eP	Pn	07 12 49.8	+2.4
TACV				eS	Sn	07 13 40.4	+0.9
DLPL	La Plaine	4.64	14	eP	Pn	07 12 50.1	+2.3
DLPL	La Plaine	4.64	14	Pn	Pn	07 12 49.9	+2.1
DSLB	Salisbury	4.70	12	eP	Pn	07 12 49.9	+1.3
TDBA	Terre de Bas,	5.07	8	eP	Pn	07 12 56.2	+2.6
TDBA	Terre de Bas,	5.07	8	eS	Sn	07 13 50.0	-0.9
TBG	Guadaloupe-3	5.07	8	eP	Pn	07 12 56.4	+2.7
MAGL	Barre de l'ile	5.23	12	eP	Pn	07 12 58.2	+2.4
MAGL	Barre de l'ile	5.23	12	eS	Sn	07 13 54.3	-0.5
CBE	Ff, Capester	5.29	8	eP	Pn	07 12 58.6	+1.9
CBE	Ff, Capester	5.29	8	eS	Sn	07 13 54.3	-2.1
ABD	La Joyeuse, An	5.70	9	eP	Pn	07 13 04.3	+1.9
ABD	La Joyeuse, An	5.70	9	eS	Sn	07 14 06.8	+0.4
BAUV	El Baul	5.86	252	eP	Pn	07 13 05.5	+1.0
BAUV				eS	Sn	07 14 08.2	-2.2
MLYT	Lee's Yard	5.88	2	eP	Pn	07 13 08.1	+3.3
MLYT	Lee's Yard	5.88	2	eS	Sn	07 14 10.2	-0.8
MAPV	Macapo	6.04	261	eP	Pn	07 13 08.7	+1.7
MAPV				eS	Sn	07 14 13.9	-0.9
BPA	Boggy Peak	6.22	5	eP	Pn	07 13 11.9	+2.4
BPA	Boggy Peak	6.22	5	eS	Sn	07 14 18.2	-1.1
ANBD	Bethesda, Anti	6.24	6	eP	Pn	07 13 11.9	+2.4
ANBD	Bethesda, Anti	6.24	6	eS	Sn	07 14 18.7	-0.7
JACV	Jacura	6.32	273	eP	Pn	07 13 13.1	+2.2
JACV				eS	Sn	07 14 21.2	-0.5
SKOC	St. Kitts, UWI	6.46	357	eP	Pn	07 13 15.3	+2.7
SEUS	St. Eustatius	6.67	355	eP	Pn	07 13 18.1	+2.5
SEUS	St. Eustatius	6.67	355		Pn	07 13 17.3	+1.8
ANWB	Willy Bob	6.85	5	eP	Pn	07 13 19.9	+2.0
ANWB	Willy Bob	6.85	5	eS	Sn	07 14 32.1	-2.3
ANWB	Willy Bob	6.85	5	Pn	Pn	07 13 20.3	+2.3
CDVI	St. Croix	7.28	342	Pn	Pn	07 13 25.2	+1.3
SIQV	Siquisique	7.28	269	eP	Pn	07 13 26.3	+2.3
SIQV				eS	Sn	07 14 43.7	-1.6
CURV	Curarigua	7.48	265	eP	Pn	07 13 28.5	+1.7
CURV				eS	Sn	07 14 48.0	-2.2
MONV	Montecano	7.51	279	eP	Pn	07 13 28.1	+1.0
MONV				eS	Sn	07 14 49.3	-1.5
MTP	Monte Pirata	7.87	338	Pn	Pn	07 13 32.6	+0.7
STVI	Saint Thomas	7.90	342	Pn	Pn	07 13 32.9	+0.6
ELOV	Elorza	7.96	242	eP	Pn	07 13 33.7	+0.6
CUPR	Culebra, Puert	7.96	340	Pn	Pn	07 13 34.7	+1.5
PDPR	Patillas Dam,	7.98	334		Pn	07 13 33.9	+0.4
HUMP	Col San Antoni	8.02	336		Pn	07 13 35.0	+1.0
DABV	Dabajuro	8.09	272	eP	Pn	07 13 36.9	+1.9
DABV				eS	Sn	07 15 02.4	-2.6
ICMP	Isla Caja de M	8.10	331	Pn	Pn	07 13 35.6	+0.6

SJG **San Juan** 8.12 334 P **Pn** 07 13 36.3 +0.9
12nm,0.3s,baz=131,slow=17,SNR=18
SJG S **Sn** 07 14 59.4 -6.2
25nm,0.3s,baz=292,slow=21,SNR=10
SJG LR LR 07 16 46.6
comp=Z,189nm,21.0s,baz=120,slow=38
SJG San Juan 8.12 334 **Pn** 07 13 35.8 +0.4
SJG San Juan 8.12 334 *eP* **Pn** 07 13 36.1 +0.8
CBYP Canovanas 8.14 336 **Pn** 07 13 36.0 +0.3
GCPR Guaynabo City 8.27 335 **Pn** 07 13 38.6 +1.2
OBIP Obispado Ponce 8.27 331 **Pn** 07 13 38.0 +0.6
SDV Santo Domingo 8.34 257 **Pn** 07 13 38.8 +0.3
MLPR Magueyes Islan 8.42 328 Pn **Pn** 07 13 41.1 +1.6
AOPR Arecibo Observ 8.60 331 **Pn** 07 13 42.9 +1.0
EMPR Esperanza - Ma 8.61 333 **Pn** 07 13 41.9 -0.1
MPR Mayaguez 8.68 329 **Pn** 07 13 44.5 +1.6
SOCV Socops 8.71 254 *eP* **Pn** 07 13 43.6 +0.1
SOCV Socops 8.71 254 *eP* **Pn** 07 13 43.9 +0.4
SOCV *eS* **Sn** 07 15 15.1 -5.1
AGPR Aguadilla, PR 8.88 330 Pn **Pn** 07 13 49.0 +3.3
URIC Uribia, Colomb 9.45 276 *eP* **Pn** 07 13 52.9 -0.7
MCQV Machiques 10.00 267 *eP* **Pn** 07 14 02.6 +1.5
CRJC Cerrejon, Guaj 10.30 272 *eP* **Pn** 07 14 05.7 +0.4
DR12 Loma Pena Alta 10.42 320 **Pn** 07 14 09.8 +3.0
PAMC Pamplona, Colo 10.74 252 *eP* **Pn** 07 14 10.9 -0.8
BANI BANI 10.78 315 **Pn** 07 14 15.3 +3.5
OCAC Ocana 11.07 258 *eP* **Pn** 07 14 14.3 -1.5
MDP Montagnes des 11.20 120 P **Pn** 07 14 14.0 -3.5
13nm,0.3s,baz=315,slow=15,SNR=55
MDP S Sn 07 16 08.8 -12
74nm,0.3s,baz=232,slow=23,SNR=23
MDP LR LR 07 19 23.7
comp=Z,310nm,21.7s,baz=291,slow=40
BARC Barichara 11.45 249 *eP* **Pn** 07 14 20.3 -0.9
SMRC Santa Marta, M 11.62 273 *eP* **Pn** 07 14 22.2 -0.9
RUSC La Rusia 11.64 246 *eP* **Pn** 07 14 22.5 -1.4
PTGC Puerto Gaitan, 11.67 236 *eP* **Pn** 07 14 21.6 -2.2
SMLC San Martn de 11.68 261 *eP* **Pn** 07 14 21.9 -2.0
ARGC Ariguani, Magd 11.70 266 *eP* **Pn** 07 14 23.4 -0.9
PTGA Pitinga 11.71 168 P **Pn** 07 14 22.3 -2.2
58nm,0.3s,baz=353,slow=17,SNR=204
PTGA S Sn 07 16 25.2 -8.3
42nm,0.3s,baz=271,slow=14,SNR=14
PTGA LR LR 07 19 33.0
comp=Z,220nm,20.7s,baz=312,slow=40
PTGA Pitinga 11.71 168 *eP* **Pn** 07 14 22.1 -2.4
SC01 Santiago de lo 11.75 318 **Pn** 07 14 28.8 +3.9
BRRC Barranca, Sant 11.77 253 *eP* **Pn** 07 14 23.7 -1.5
SDDR Presa de Saban 11.82 314 **Pn** 07 14 28.5 +2.5
JAKH Jacmel 12.27 308 Pn **Pn** 07 14 32.7 +0.7
SJCC San Jacinto, C 12.61 267 *eP* **Pn** 07 14 34.4 -2.3
SPBC San Pablo de B 12.63 247 *eP* **Pn** 07 14 36.2 -1.0
PTBC PUERTO BERRIO, 12.65 251 *eP* Pn 07 14 33.8 -3.5
ZARC Zaragoza, Cauc 12.73 256 *eP* **Pn** 07 14 36.2 -2.2
VILC Villavicencio, 13.02 240 *eP* **Pn** 07 14 43.0 +0.6
GUVC San Jose del G 13.05 232 *eP* **Pn** 07 14 40.2 -2.5
ROSC El Rosal 13.21 244 P **Pn** 07 14 48.4 +3.3
3.9nm,0.3s,baz=12,slow=20,SNR=8.1
ROSC LR LR 07 21 36.3
comp=Z,104nm,18.3s,baz=54,slow=45
ROSC El Rosal 13.21 244 *eP* **Pn** 07 14 46.6 +1.4
UREC San Jos de Ur 13.31 258 *eP* **Pn** 07 14 43.6 -2.6
NORC Norcasia 13.39 248 *eP* **Pn** 07 14 45.4 -1.9
HELC Santa Helena 13.77 252 *eP* **Pn** 07 14 53.8 +1.2
MACA Manacapuru-AM 13.98 173 *eP* **Pn** 07 14 51.9 -3.1
GUY2C Guyana, Caldas 13.98 248 *eP* **Pn** 07 14 53.8 -1.7
DBBC Dabeiba 14.15 256 *eP* **Pn** 07 14 59.2 +1.9
TOLC Tolima 14.21 245 *eP* **Pn** 07 14 58.6 +0.2
TOLC *eP* P 07 14 59.2 -4.4
MACC Macarena, Meta 14.26 234 *eP* **Pn** 07 14 57.5 -1.1
ANIL Santa Ana 14.33 245 *eP* **Pn** 07 14 57.3 -2.6
CBOC Ciudad Bolivar 14.34 251 *eP* **Pn** 07 15 01.2 +1.4
ORTC Ortega, Tolima 14.46 243 *eP* **Pn** 07 15 01.0 -0.3
MALB Monte Alegre 14.95 147 *eP* Pn 07 15 02.9 -4.7
MCPB Macapa, AP 15.12 137 *eP* **Pn** 07 15 05.0 -4.8
GTBY Guantanamo Bay 15.24 308 Pn **Pn** 07 15 12.4 +1.2
GTBY IAmb IAmb 07 15 20.1
comp=Z,62nm,0.9s
YOTC Yotoco, Valle 15.40 245 *eP* **Pn** 07 15 14.4 +1.0
PCON Cinco Dias 16.25 240 *eP* **P** 07 15 27.2 +0.7
ITTB Itatuba 16.47 166 *eP* **Pn** 07 15 23.1 -3.7
SOTA Rioblanco 16.53 240 *eP* **Pn** 07 15 30.0 +2.0
GCUF Volcan Galeras 17.64 238 *eP* **P** 07 15 42.7 +1.0
NPGB Novo Progresso 19.07 158 *eP* **P** 07 15 56.5 -0.5
OTAV Otavalo 19.10 238 P **Pn** 07 15 59.8 +0.5
TMAB Tom-Au,PA,Br 19.34 132 *eP* **P** 07 15 59.8 -0.1
SAML Samuel 19.64 182 P **P** 07 16 03.4 +0.3
ETMB Extrema 20.84 191 *eP* **P** 07 16 16.9 +0.8
PRPB Parauapebas 21.01 143 *eP* **P** 07 16 16.6 -1.4
CZSB Cruzeiro do Su 21.08 210 *eP* **P** 07 16 20.5 +1.8
CLDB Colider 22.52 163 *eP* **P** 07 16 34.6 +0.5
SOR Soroa 23.01 304 P **P** 07 16 40.3 +1.1
061Z Ochoppi 23.04 313 P **P** 07 16 41.4 +2.0
VILB Vilhena 23.70 175 *eP* **P** 07 16 48.0 +2.3
ATAH Atahualpa 23.90 222 P **P** 07 16 49.6 +1.7
comp=Z,8.3nm,0.6s,baz=18,slow=7.1,SNR=8.5
ATAH LR LR 07 27 42.4
comp=Z,95nm,18.7s,baz=37,slow=40
TGUH Tegucigalpa,Un 24.50 280 P **P** 07 16 55.0 +1.9
TGUH IAmb IAmb 07 16 57.1
comp=Z,27nm,0.9s
SNDB Serra Nova Dou 25.18 154 *eP* **P** 07 16 59.9 +0.9
PTLB Pontes e Lacer 26.28 173 *eP* **P** 07 17 10.7 +1.7
ESQI Esquipulas 26.54 281 P **P** 07 17 13.5 +2.0
ESQI IAmb IAmb 07 17 13.5
comp=Z,24nm,1.1s
MTO3 Montecristo 26.55 281 P **P** 07 17 12.7 +1.0
TEIG Tepich 26.60 294 P **P** 07 17 12.8 +1.0
comp=Z,4.5nm,0.3s,baz=74,slow=2.6,SNR=10
TEIG LR LR 07 28 01.8
comp=Z,67nm,19.0s,baz=102,slow=37
TEIG Tepich 26.60 294 P **P** 07 17 13.2 +1.3
SIV San Ignacio 26.66 177 P **P** 07 17 13.8 +1.4
comp=Z,15nm,0.7s,baz=19,slow=8.6,SNR=90
SIV LR LR 07 28 17.7
comp=Z,195nm,21.5s,baz=308,slow=37
PEXB Peixe 26.72 148 *eP* **P** 07 17 14.5 +1.5
NNA Nana 26.81 213 P **P** 07 17 14.1 +0.3
comp=Z,12nm,0.8s,baz=1.2,slow=7.7,SNR=6.2
NNA LR LR 07 29 15.5
comp=Z,94nm,19.1s,baz=19,slow=39
NNA Nana 26.81 213 P **P** 07 17 14.2 +0.3
NNA IAmb IAmb 07 17 16.1
comp=Z,14nm,0.8s
PETF Flores 27.33 286 P **P** 07 17 19.9 +1.4
PETF IAmb IAmb 07 17 20.9
comp=Z,22nm,0.7s
LPAZ La Paz 27.51 192 P **P** 07 17 22.1 +1.4
comp=Z,4.2nm,0.8s,baz=11,slow=6.0,SNR=25
LPAZ LR LR 07 29 12.4
comp=Z,146nm,19.5s,baz=5.0,slow=38
LPAZ La Paz 27.51 192 P **P** 07 17 22.3 +1.6
LPAZ La Paz 27.51 192 *eP* **P** 07 17 22.6 +1.9
APG El Apazote 27.66 282 P **P** 07 17 20.4 -1.3
comp=Z,3.2nm,0.6s,baz=171,slow=8.6,SNR=4.0
NBPB Pedra_Branca-C 27.92 124 *eP* **P** 07 17 25.1 +1.3
ARAG Araguaiana, MT 28.35 158 *eP* **P** 07 17 29.3 +1.8
SDBA SAO DESIDERIO 28.88 143 *eP* **P** 07 17 33.3 +1.1
352A Blakely 29.29 318 P **P** 07 17 37.1 +1.3
352A IAmb IAmb 07 17 39.1
comp=Z,32nm,1.2s
CCIG Comitan 29.40 284 P **P** 07 17 37.5 +0.4
PB16 IPOC Station P 29.79 194 P **P** 07 17 41.5 +0.5
BDFB Brasilia 29.89 151 P **P** 07 17 43.3 +2.1
comp=Z,7.8nm,0.6s,baz=319,slow=8.9,SNR=20
BDFB Brasilia 29.89 151 P **P** 07 17 42.3 +1.0
BDFB IAmb IAmb 07 17 44.3
comp=Z,11nm,0.8s
152A Waverly Hall 29.93 320 P **P** 07 17 42.0 +0.6
MNMC Minye Minye 30.58 193 P **P** 07 17 47.1 -0.5
MNMC IAmb IAmb 07 17 47.8
comp=Z,8.0nm,0.6s
PB11 IPOC Station P 31.20 193 P **P** 07 17 52.4 -0.5
PB11 IAmb IAmb 07 17 53.0
comp=Z,20nm,1.0s
JANB Januaria 31.33 145 *eP* **P** 07 17 54.9 +1.0
PB08 IPOC Station P 31.46 192 P **P** 07 17 54.8 -0.7
PB08 IAmb IAmb 07 17 56.2
comp=Z,11nm,0.8s
LRAL Lakeview Retre 31.63 318 P **P** 07 17 57.5 +1.2
LRAL IAmb IAmb 07 17 58.3
comp=Z,16nm,1.2s
LRAL Lakeview Retre 31.63 318 P 07 17 57.3
baz=129
AQDB Aquidauana 31.78 168 *eP* **P** 07 18 00.0 +2.3
S54A Dingess, Beckl 31.79 331 P 07 17 58.8
baz=143
IPMB Ipameri, GO 31.85 154 *eP* **P** 07 18 00.2 +1.7
CMIG Matias Romero 32.11 285 P **P** 07 17 58.9 -1.9
comp=Z,1.2nm,0.5s,baz=84,slow=9.2,SNR=2.9
PB01 IPOC Station P 32.41 192 P **P** 07 18 03.1 -0.3
PB01 IAmb IAmb 07 18 04.0
comp=Z,14nm,0.8s
X48A Hartselle 32.56 320 P **P** 07 18 04.0 -0.5
X48A IAmb IAmb 07 18 06.4
comp=Z,14nm,1.2s
PB07 IPOC Station P 33.16 193 P **P** 07 18 10.4 +0.4
PB07 IAmb IAmb 07 18 10.8
comp=Z,14nm,0.7s
GDU01 Guandu, BA 33.26 137 *eP* **P** 07 18 11.7 +0.8
PLAL Pickwick Lake 33.55 320 P **P** 07 18 14.2 +1.0
PLAL IAmb IAmb 07 18 14.8
comp=Z,8.8nm,0.9s
LVC Limon Verde 33.82 191 P **P** 07 18 15.9 0.0
comp=Z,7.3nm,0.8s,baz=37,slow=7.2,SNR=11
LVC LR LR 07 33 05.4
comp=Z,171nm,21.2s,baz=341,slow=38
LVC Limon Verde 33.82 191 P **P** 07 18 16.6 +0.6
LVC IAmb IAmb 07 18 17.1
comp=Z,6.6nm,0.7s
LVC Limon Verde 33.82 191 *eP* **P** 07 18 16.6 +0.6
PCMB Pacaembu 34.02 161 *eP* **P** 07 18 19.3 +2.0
OXF Oxford 34.12 318 P **P** 07 18 19.5 +1.4
WVT Waverly 34.14 322 P 07 18 18.4
baz=131
WVT Waverly 34.14 322 P **P** 07 18 18.6 +0.3
WVT IAmb IAmb 07 18 19.0
comp=Z,6.4nm,0.9s
M54A Oil Creek Stat 34.14 337 P **P** 07 18 17.6 -0.6
M54A IAmb IAmb 07 18 40.9
comp=Z,20nm,1.2s
342A Flagon Creek P 34.43 311 P **P** 07 18 21.9 +1.1
143A Socs Landing, 34.45 314 P **P** 07 18 21.7 +0.8
BB19B Bebedouro 34.48 157 *eP* **P** 07 18 22.4 +1.1
TRCB Terra Rica 34.74 164 *eP* **P** 07 18 25.3 +1.7
P49A Miami Univ. Ec 34.82 329 P **P** 07 18 24.6 +0.5
P49A Miami Univ. Ec 34.82 329 P 07 18 24.6
baz=139
H59A Cadyville 35.09 346 P 07 18 27.6
baz=160
TLIG Tlapa 35.66 285 P **P** 07 18 32.2 +0.5
S44A Carbondale 36.03 322 P **P** 07 18 34.4 -0.1
FRTB Fartura 36.19 160 *eP* **P** 07 18 37.7 +1.7
NATX Nacogdoches 36.36 310 P **P** 07 18 37.8 +0.3
NATX Nacogdoches 36.36 310 P 07 18 37.8
baz=118
W41B Gary Mavity, V 36.40 317 P 07 18 37.4
baz=125
X40A Basin Creek Fa 36.42 315 P 07 18 37.8
baz=123
GO02 Mina Guanaco 36.43 191 P **P** 07 18 38.5 +0.1
GO02 IAmb IAmb 07 18 39.0
comp=Z,12nm,0.8s
HKT Hockley 36.48 306 P **P** 07 18 38.9 +0.5
HKT IAmb IAmb 07 18 39.7
comp=Z,11nm,1.0s
WHAR Wooly Hollow 36.49 317 P **P** 07 18 38.2 -0.2
WHAR IAmb IAmb 07 18 38.8
comp=Z,5.7nm,0.9s
Q44A Meyer Farm, Va 36.69 324 P **P** 07 18 41.1 +1.0
FCAR Ozark Folk Cen 36.72 318 P **P** 07 18 40.2 -0.3
FCAR IAmb IAmb 07 18 41.0
comp=Z,7.9nm,0.8s
VAO Valinhos 36.84 156 *eP* **P** 07 18 43.5 +1.9
MIAR Mount Ida 36.97 315 P **P** 07 18 42.8 +0.3
MIAR IAmb IAmb 07 18 43.0
comp=Z,18nm,1.5s
MIAR Mount Ida 36.97 315 P 07 18 41.6
baz=122
CPUP Villa Florida 37.24 172 P **P** 07 18 44.9 +0.1
comp=Z,9.2nm,0.8s,baz=354,slow=8.3,SNR=24
CPUP PcP **PcP** 07 21 03.5 +0.2
comp=Z,3.7nm,0.8s,baz=321,slow=3.4,SNR=6.4
CPUP LR LR 07 33 57.5
comp=Z,144nm,19.5s,baz=29,slow=36
CPUP Villa Florida 37.24 172 P **P** 07 18 44.8 0.0
CPUP IAmb IAmb 07 18 46.0
comp=Z,8.4nm,0.8s
Z38A Mt. Pleasant 37.32 312 P **P** 07 18 43.9 -1.6
W39A Magazine 37.46 315 P 07 18 46.9
baz=123,SNR=5.8
W39A Magazine 37.46 315 P **P** 07 18 46.9 +0.2
CCM Cathedral Cave 37.47 321 P 07 18 46.6
baz=129
U40A Yellville 37.48 318 P **P** 07 18 46.6 -0.3
U40A IAmb IAmb 07 18 47.5
comp=Z,9.2nm,1.1s
U40A Yellville 37.48 318 P 07 18 46.5
baz=125
HDIL Hopedale 37.98 326 P 07 18 51.8
baz=134
HDIL Hopedale 37.98 326 P **P** 07 18 51.7 +0.7
HDIL IAmb IAmb 07 18 59.2
comp=Z,13nm,1.1s
AC02 Maricunga 37.98 190 P **P** 07 18 52.1 +0.4
HHAR Hobbs 38.16 317 P **P** 07 18 52.0 -0.5
435B Jarrell 38.20 307 P **P** 07 18 53.0 0.0
435B Jarrell 38.20 307 P 07 18 52.9
baz=114,SNR=5.2
S39A Bolivar 38.55 319 P **P** 07 18 55.4 -0.5
WHTX Lake Whitney, 38.59 309 P **P** 07 18 55.9 -0.4
WHTX Lake Whitney, 38.59 309 P 07 18 56.3
baz=115
833A Chaparral WMA, 38.77 302 P 07 18 57.6
baz=109,SNR=10.0
P40A Paris 38.88 322 P **P** 07 18 58.6 0.0
P40A IAmb IAmb 07 18 59.0
comp=Z,13nm,0.9s
Z35A Perchaven, San 39.03 311 P **P** 07 18 58.3 -1.6
TUL1 Leonard 39.22 315 P 07 19 00.4
baz=121,SNR=6.1
AC04 Llanos de Chal 39.68 192 P **P** 07 19 05.0 -0.3
AC04 IAmb IAmb 07 19 12.1
comp=Z,16nm,1.4s
JCT Junction City 39.84 305 P **P** 07 19 06.5 -0.4
JCT Junction City 39.84 305 P 07 19 06.2
baz=111,SNR=6.9
OK030 Cody Creek RV 39.92 314 P **P** 07 19 06.2 -1.1
OK030 IAmb IAmb 07 19 07.2
comp=Z,12nm,1.2s
OK031 S. Brethren Rd 39.98 314 P **P** 07 19 06.3 -1.5
OK031 IAmb IAmb 07 19 07.1
comp=Z,7.5nm,0.6s
LSQQ Lebel-sur-Quev 40.02 345 P 07 19 08.5
baz=157
FNO Franklin 40.03 313 P **P** 07 19 07.9 -0.4
FNO IAmb IAmb 07 19 08.9
comp=Z,18nm,1.2s
JFWS Jewell Farm 40.13 328 P **P** 07 19 08.9 0.0
JFWS Jewell Farm 40.13 328 P 07 19 08.8
baz=135
OK025 Westminster Rd 40.15 314 P **P** 07 19 08.4 -0.8
CHGQ Chibougamau 40.23 348 P 07 19 09.8
baz=162
T35A Sooner Cattle 40.24 316 P **P** 07 19 09.0 -1.0
T35A IAmb IAmb 07 19 09.8
comp=Z,12nm,0.9s
BCOK Bluff Creek, N 40.38 314 P **P** 07 19 10.8 -0.3
N38A Joes South For 40.38 323 P **P** 07 19 10.1 -1.0
ABTX Abilene, Hawle 40.54 308 P 07 19 11.9
baz=114,SNR=6.9
ABTX Abilene, Hawle 40.54 308 P **P** 07 19 11.7 -0.8
ITQB Itaqui 40.62 172 *eP* **P** 07 19 13.5 +0.5
WMOK Wichita Mounta 40.79 312 P **P** 07 19 12.8 -1.8
WMOK IAmb IAmb 07 19 14.2
comp=Z,7.0nm,0.9s
WMOK Wichita Mounta 40.79 312 P 07 19 13.1
baz=117,SNR=7.3
KAN17 Caldwell West 41.17 315 P **P** 07 19 18.3 +0.7
KAN17 IAmb IAmb 07 19 38.9
comp=Z,13nm,1.1s
KAN14 Manchester OK 41.26 315 P **P** 07 19 17.1 -1.2
KSU1 Kansas State U 41.48 319 P **P** 07 19 18.9 -1.2
KSU1 IAmb IAmb 07 19 19.4
comp=Z,11nm,0.9s
KSU1 Kansas State U 41.48 319 P 07 19 18.6
baz=124
U32A Winter Ranch, 41.71 314 P **P** 07 19 21.6 -0.4
TXAR Lajitas Array 42.64 302 P **P** 07 19 29.6 -0.3
comp=Z,5.5nm,0.9s,baz=122,slow=8.1,SNR=27
TXAR PcP **PcP** 07 21 20.3 -0.5
comp=Z,3.3nm,0.8s,baz=122,slow=5.6,SNR=8.8
TXAR Lajitas Array 42.64 302 P **P** 07 19 29.6 -0.3
TXAR PcP **PcP** 07 21 19.7 -1.1
TX31 Lajitas Ar. Si 42.64 302 P **P** 07 19 29.5 -0.3
TX31 **PcP** 07 21 20.6 -0.2
TX32 Lajitas Array 42.64 302 P **P** 07 19 29.6 -0.2
TX32 **PcP** 07 21 20.3 -0.5
AMTX Amarillo 43.01 310 P **P** 07 19 32.1 -0.6
AMTX IAmb IAmb 07 19 32.2
comp=Z,10nm,1.1s
AMTX Amarillo 43.01 310 P 07 19 31.9
baz=114
CBKS Cedar Bluff 43.40 316 P 07 19 34.9
baz=120
MSTX Muleshoe 43.48 309 P **P** 07 19 36.0 -0.5
MSTX Muleshoe 43.48 309 P 07 19 35.9
baz=112,SNR=11
HPIG 43.73 298 P **P** 07 19 38.6 -0.1
HPIG IAmb IAmb 07 19 39.6
comp=Z,6.8nm,0.8s
ECSD EROS Data Cent 44.17 324 P **P** 07 19 40.6 -1.3
ECSD **PcP** 07 21 24.3 -1.3
ECSD EROS Data Cent 44.17 324 P 07 19 40.8
baz=128
EYMN Ely 44.35 332 P 07 19 42.5
baz=137
MNTX Cornudas Mount 44.76 304 P **P** 07 19 46.0 -0.7
MNTX Cornudas Mount 44.76 304 P 07 19 46.3
baz=108,SNR=8.4
K31A O'Neill 44.79 322 P **P** 07 19 46.2 -0.6
B35A Bob, Littlefor 45.69 331 P **P** 07 19 52.8 -1.0
B35A IAmb IAmb 07 20 15.4
comp=Z,10nm,1.1s
T25A Trinidad 45.95 312 P **P** 07 19 56.2 -0.1
T25A IAmb IAmb 07 19 57.0
comp=Z,9.8nm,1.1s
T25A Trinidad 45.95 312 P 07 19 55.7
baz=114,SNR=7.7
BO02 Sierra Bellavi 46.04 190 P **P** 07 19 57.5 +0.8
BO02 IAmb IAmb 07 19 58.1
comp=Z,14nm,0.8s
BNM Barren Site 46.53 307 P **P** 07 20 01.8 +0.8
ANMO Albuquerque 46.67 308 P **P** 07 20 01.9 0.0
ANMO IAmb IAmb 07 20 03.4
comp=Z,7.6nm,1.1s
ANMO Albuquerque 46.67 308 P 07 20 02.2
baz=110
121A Cookes Peak, D 46.96 305 P **P** 07 20 04.9 +0.7
121A IAmb IAmb 07 20 05.8
comp=Z,7.8nm,0.9s
121A Cookes Peak, D 46.96 305 P 07 20 04.6
baz=107,SNR=6.5
ISCO Idaho Springs 47.90 315 P 07 20 10.8
baz=115,SNR=6.4
ISCO Idaho Springs 47.90 315 P **P** 07 20 10.9 -0.7
S22A 4UR Ranch, Cre 47.95 312 P 07 20 11.6
baz=112,SNR=8.7
ULM Lac du Bonnet 48.02 332 P **P** 07 20 10.0 -1.9
comp=Z,2.9nm,0.4s,baz=134,slow=7.1,SNR=11
ULM LR LR 07 39 51.9
comp=Z,48nm,21.1s,baz=98,slow=35
ULM Lac du Bonnet 48.02 332 P **P** 07 20 10.6 -1.2
ULM IAmb IAmb 07 20 33.7
comp=Z,23nm,1.3s
E28A Huff 48.18 325 P **P** 07 20 12.5 -0.7
MDND Maddock 48.34 327 P **P** 07 20 15.1 +0.6
MDND Maddock 48.34 327 P 07 20 14.3
baz=127
PHWY Pilot Hill 48.45 317 P **P** 07 20 15.7 0.0
N23A Red Feather La 48.60 316 P 07 20 16.0
baz=116
SMCO Snowmass 48.61 313 P **P** 07 20 15.9 -1.2
RSSD Black Hills 48.85 321 P **P** 07 20 17.1 -1.5
MVCO Mesa Verde 49.00 310 P 07 20 19.7
baz=110
TUC Tucson 49.34 303 P **P** 07 20 21.6 -0.9
TUC Tucson 49.34 303 P 07 20 22.0
baz=104
PV01 Paradox Valley 49.38 311 P **P** 07 20 22.8 -0.1
PV01 IAmb IAmb 07 20 24.1
comp=Z,13nm,1.1s
PV02 Paradox Valley 49.53 311 P **P** 07 20 24.0 +0.1
PV02 IAmb IAmb 07 20 25.1
comp=Z,11nm,0.9s
PV03 Paradox Valley 49.62 311 P **P** 07 20 24.6 -0.1
PV03 IAmb IAmb 07 20 25.6
comp=Z,5.8nm,0.9s
PV22 Blue Mesa, Par 49.68 312 P **P** 07 20 24.5 -0.6
PV22 IAmb IAmb 07 20 25.9
comp=Z,11nm,1.4s
PV17 East Wray Mesa 49.72 311 P **P** 07 20 24.7 -0.7
PV17 IAmb IAmb 07 20 29.3
comp=Z,8.1nm,1.3s
K22A Casper 49.76 318 P **P** 07 20 23.5 -2.0
K22A IAmb IAmb 07 20 25.1
comp=Z,4.8nm,0.8s
K22A Casper 49.76 318 P 07 20 24.6
baz=116
PV14 Lion Creek, Pa 49.80 312 P **P** 07 20 25.4 -0.6
PV14 IAmb IAmb 07 20 26.2
comp=Z,6.1nm,0.7s
O20A White River Ci 49.89 314 P **P** 07 20 25.9 -0.7
O20A IAmb IAmb 07 20 29.5
comp=Z,7.6nm,1.2s
O20A White River Ci 49.89 314 P 07 20 26.2
baz=113
X16A Lo Mia Camp, P 50.42 306 P **P** 07 20 30.8 +0.1
WUAZ Wupatki 50.67 307 P **P** 07 20 32.7 +0.1
WUAZ IAmb IAmb 07 20 34.0
comp=Z,9.6nm,1.3s
WUAZ Wupatki 50.67 307 P 07 20 32.3
baz=107
214A Organ Pipe Nat 50.93 302 P 07 20 34.2
baz=103
RDMU Red Mountain 50.99 314 P **P** 07 20 33.8 -1.2
RDMU IAmb IAmb 07 20 35.1
comp=Z,12nm,1.3s
SRU San Rafael Swe 51.15 312 P **P** 07 20 35.5 -0.7
SRU IAmb IAmb 07 20 36.8
comp=Z,6.4nm,0.9s
DGMT Dagmar 51.21 325 P **P** 07 20 35.6 -0.6
P17A Butcher Ranch, 51.44 312 P **P** 07 20 37.7 -0.6
P17A IAmb IAmb 07 20 38.5
comp=Z,6.3nm,0.9s
Y14A Wickenburg 51.55 305 P **P** 07 20 37.0 -2.1
Y14A IAmb IAmb 07 21 03.8
comp=Z,10nm,1.5s
TMUT Trail Mountain 51.72 312 P **P** 07 20 39.9 -0.6
TMUT IAmb IAmb 07 20 41.1
comp=Z,5.7nm,1.1s
PLCA Paso Flores 51.83 188 P **P** 07 20 41.2 +0.3
comp=Z,3.6nm,0.7s,baz=7.0,slow=7.2,SNR=11
PLCA PcP **PcP** 07 21 52.9 -0.1
comp=Z,2.9nm,0.7s,baz=14,slow=3.8,SNR=5.2
PLCA LR LR 07 44 44.7
comp=Z,113nm,18.5s,baz=7.5,slow=38
PLCA Paso Flores 51.83 188 P **P** 07 20 42.0 +1.1
PLCA IAmb IAmb 07 21 06.9
comp=Z,6.9nm,1.1s
BW06 Boulder Array 51.83 317 P **P** 07 20 39.9 -1.3
BW06 IAmb IAmb 07 20 40.5
comp=Z,6.2nm,0.7s
BW06 Boulder Array 51.83 317 P 07 20 39.9
baz=114,SNR=11
PD31 Pinedale Array 51.83 317 P **P** 07 20 39.4 -1.9
PD31 IAmb IAmb 07 20 40.5
comp=Z,5.6nm,0.7s
PDAR Pinedale Array 51.83 317 P **P** 07 20 40.0 -1.3
comp=Z,5.9nm,0.7s,baz=114,slow=9.8,SNR=52
PDAR PcP **PcP** 07 21 51.3 -2.1
comp=Z,0.8nm,0.5s,baz=104,slow=6.3,SNR=4.1
PDAR LR LR 07 42 44.0
comp=Z,44nm,21.7s,baz=124,slow=36
PDAR Pinedale Array 51.83 317 P **P** 07 20 39.7 -1.6
MTPU Mount Pierson 52.04 310 P **P** 07 20 42.6 -0.4
MSU Marysvale 52.18 311 P **P** 07 20 43.1 -0.8
KNB Kanab 52.22 309 P **P** 07 20 44.5 +0.4
KNB IAmb IAmb 07 20 45.6
comp=Z,5.4nm,0.9s
JLU Jordanelle 52.34 313 P **P** 07 20 44.7 -0.4
JLU IAmb IAmb 07 20 45.8
comp=Z,9.2nm,1.2s

TCUT Toone Canyon 52.49 314 P P 07 20 45.4 -0.8
W13A Hualapai Mount 52.54 306 P P 07 20 46.9 +0.3
LCMT Little Creek M 52.54 309 P P 07 20 47.0 +0.5
NLU North Lily Min 52.57 312 P P 07 20 45.6 -1.2
SZCU Shurtz Canyon 52.59 309 P P 07 20 46.3 -0.6
RLMT Red Lodge 52.62 319 P P 07 20 46.0 -1.0
RLMT IAmb IAmb 07 20 47.3
comp=Z,6.6nm,0.9s
RLMT Red Lodge 52.62 319 P 07 20 46.0
baz=116,SNR=8.4
HWUT Hardware Ranch 52.77 315 P P 07 20 46.6 -1.5
HWUT IAmb IAmb 07 20 47.9
comp=Z,5.7nm,0.9s
CCUT Cedar City 52.78 309 P P 07 20 48.0 -0.4
SNOW Snow King Moun 52.91 317 P P 07 20 48.7 -0.5
SNOW IAmb IAmb 07 20 50.1
comp=Z,11nm,1.3s
REDW Red Top Meadow 52.94 317 P P 07 20 47.8 -1.6
REDW IAmb IAmb 07 20 49.7
comp=Z,8.3nm,1.0s
MOOW Moose Ponds 53.02 317 P P 07 20 49.8 -0.2
YMP Mirror Lake Pl 53.03 319 P P 07 20 50.1 0.0
YNE Yellowstone No 53.05 319 P P 07 20 49.7 -0.5
GCMT Greyciiff 53.16 320 P P 07 20 49.6 -1.3
DUG Dugway, Tooele 53.18 312 P P 07 20 50.1 -1.1
DUG IAmb IAmb 07 20 51.6
comp=Z,5.5nm,0.8s
DUG Dugway, Tooele 53.18 312 P 07 20 50.5
baz=109,SNR=8.4
IRM Iron Mountain 53.32 305 P 07 20 52.1
baz=103
PSUT Pine Spring 53.44 310 P P 07 20 53.6 +0.5
PSUT IAmb IAmb 07 20 54.5
comp=Z,8.9nm,1.0s
YHH Holmes Hill 53.50 318 P P 07 20 53.2 -0.4
FCC Fort Churchill 53.51 340 P P 07 20 52.8 -0.2
FCC IAmb IAmb 07 21 20.3
comp=Z,7.0nm,1.4s
YMR Madison River 53.53 318 P P 07 20 53.8 +0.1
BGU Big Grassy Mou 53.58 313 P P 07 20 52.9 -1.1
BGU IAmb IAmb 07 20 54.2
comp=Z,7.9nm,1.0s
HVU Hansel Valley 53.68 314 P P 07 20 53.5 -1.4
HVU IAmb IAmb 07 20 54.5
comp=Z,6.1nm,1.2s
YHB Horse Butte 53.71 318 P P 07 20 55.0 -0.1
YHL Hebgen Lake 53.74 318 P P 07 20 55.4 0.0
FFC Flin Flon 53.77 333 P P 07 20 52.8 -2.2
QLMT Earthquake Lak 53.90 318 P P 07 20 56.6 +0.2
MONP2 Monument Peak 54.11 303 P 07 20 57.7
baz=101
EGMT Eagleton 54.21 322 P P 07 20 57.7 -0.7
EGMT IAmb IAmb 07 20 58.4
comp=Z,6.8nm,0.9s
EGMT Eagleton 54.21 322 P 07 20 57.8
baz=117,SNR=5.2
TPFO Pinon Flats 54.27 304 P 07 20 58.9
baz=102
BOZ Bozeman (W) 54.33 319 P P 07 20 58.8 -0.7
BOZ IAmb IAmb 07 20 59.9
comp=Z,11nm,1.5s
BOZ Bozeman (W) 54.33 319 P 07 20 58.7
baz=114,SNR=7.8
R11A Troy Canyon, C 54.69 310 P P 07 21 02.1 -0.2
R11A Troy Canyon, C 54.69 310 P 07 21 01.7
baz=106
MCMT McKenzie Canyo 54.83 318 P P 07 21 02.5 -0.7
TPNV Topopah Spring 54.85 308 P P 07 21 03.7 +0.4
TPNV IAmb IAmb 07 21 04.8
comp=Z,5.3nm,1.0s
TPNV Topopah Spring 54.85 308 P 07 21 03.5
baz=104,SNR=5.3
DLMT Dillon 54.87 319 P P 07 21 02.7 -0.6
HRY Holter Researc 54.91 320 P P 07 21 03.0 -0.6
BCYI Bear Canyon 55.01 317 P P 07 21 04.7 +0.2
ELK Elko 55.11 312 LR LR 07 46 47.9
comp=Z,38nm,20.2s,baz=104,slow=38
ELK Elko 55.11 312 P P 07 21 05.2 -0.1
PNCL Nicolau / Gran 55.15 51 eP P 07 21 07.2 +1.9
comp=Z,31nm,2.3s
FURC Furnace Creek, 55.21 307 P 07 21 05.6
baz=103
HLID Hailey 55.43 316 P P 07 21 06.7 -0.7
HLID IAmb IAmb 07 21 07.9
comp=Z,5.5nm,1.1s
HLID Hailey 55.43 316 P 07 21 06.7
baz=110
PVAQ Vaqueiros 55.60 52 eP P 07 21 11.1 +2.5
PMTG Montargil 55.62 50 eP P 07 21 10.7 +2.0
comp=Z,28nm,1.3s
LRMC Laurel Mtn Rad 55.65 306 P 07 21 08.1
baz=102
EDW2 Edwards Air Fo 55.78 305 P 07 21 09.2
baz=101
TPH Tonopah 55.87 309 P P 07 21 10.6 -0.1
PESTR Estremoz 56.05 50 eP P 07 21 14.4 +2.6
comp=Z,33nm,1.3s
CWC Cottonwood Cre 56.16 307 P 07 21 12.7
baz=102
MSO Missoula 56.29 320 P 07 21 12.7
baz=112
PBAR Barrancos 56.30 51 eP P 07 21 16.1 +2.5
PVIS Viseu 56.31 48 eP P 07 21 15.4 +1.7
ISA Isabella, Lake 56.32 306 P 07 21 13.4
baz=102
PMRV Marv??o 56.34 50 eP P 07 21 15.4 +1.5
MFID Camas Ranch 56.35 315 P P 07 21 13.3 -0.7
PCBR Castelo Branco 56.38 49 eP P 07 21 16.0 +1.9
PGAV Gavieira, Arco 56.40 47 eP P 07 21 16.5 +2.2
comp=Z,29nm,1.5s
MTE Manteigas 56.48 49 eP P 07 21 16.8 +1.9
comp=Z,22nm,1.5s
POLO Lamas de Olo 56.57 47 eP P 07 21 17.2 +1.7
KVN Kaiserville 56.77 310 P P 07 21 17.0 -0.1
KVN IAmb IAmb 07 21 17.5
comp=Z,7.0nm,1.4s
NVAR Mina Array Bea 56.78 309 P P 07 21 16.4 -0.9
comp=Z,0.6nm,0.7s,baz=115,slow=6.4,SNR=8.2
NVAR PcP PcP 07 22 11.3 -1.1
comp=Z,0.9nm,0.7s,baz=131,slow=5.0,SNR=5.1
NVAR LR LR 07 50 18.0
comp=Z,24nm,18.2s,baz=126,slow=41
NVAR Mina Array Bea 56.78 309 P P 07 21 16.6 -0.7
VES Vestal, Richgr 56.84 306 P 07 21 17.0
baz=101
LHV Little Huntoon 56.89 309 P P 07 21 18.5 +0.8
LHV IAmb IAmb 07 21 18.9
comp=Z,9.2nm,1.4s
DBIC Dimbokro 56.96 89 P P 07 21 18.2 -0.3
comp=Z,3.4nm,0.9s,baz=225,slow=4.3,SNR=2.4
DBIC Dimbokro 56.96 89 IAmb IAmb 07 21 19.6
comp=Z,11nm,1.4s
RYN Ryan 56.99 309 P P 07 21 18.6 -0.1
RYN IAmb IAmb 07 21 19.5
comp=Z,6.0nm,1.3s
MVO Moncorvo 57.06 48 eP P 07 21 21.2 +2.2
comp=Z,19nm,1.2s
PBRG Braganca 57.45 47 eP P 07 21 23.6 +1.9
comp=Z,15nm,1.6s
YERR Yerington 57.62 309 P P 07 21 23.2 0.0
YERR IAmb IAmb 07 21 24.1
comp=Z,12nm,1.3s
BMO Blue Mountains 57.81 317 P P 07 21 22.1 -2.1
BMO IAmb IAmb 07 21 24.5
comp=Z,8.3nm,1.4s
WVOR Wild Horse Val 58.03 313 P P 07 21 25.3 -0.5
WVOR IAmb IAmb 07 21 25.8
comp=Z,8.4nm,1.5s
J08A Circle Bar Ran 58.17 315 P P 07 21 26.6 -0.2
NEW Newport 58.82 320 LR LR 07 46 18.2
comp=Z,49nm,19.7s,baz=105,slow=35
NEW Newport 58.82 320 P P 07 21 30.0 -1.2
NEW IAmb IAmb 07 21 30.1
comp=Z,3.7nm,0.8s
NEW Newport 58.82 320 P 07 21 29.5
baz=110,SNR=5.7
ESDC Sonseca Array 58.98 50 P P 07 21 34.0 +1.6
comp=Z,5.4nm,0.8s,baz=258,slow=7.3,SNR=33
ESDC PcP PcP 07 22 21.4 +0.6
comp=Z,2.4nm,0.8s,baz=270,slow=4.3,SNR=8.2
I07A Izee 59.09 315 P P 07 21 32.6 -0.6
J05D Fort Rock, OR 60.10 314 P 07 21 39.9
baz=104
M04C Macdoel 60.18 312 P 07 21 40.4
baz=103

B08A Colville Reser 60.24 320 P P 07 21 40.1 -0.8
O02D Mt. Diablo Mer 60.55 310 P 07 21 42.9
baz=101
J04D Umpqua Nationa 60.71 314 P 07 21 43.7
baz=103
LTY Liberty 60.77 318 P P 07 21 43.5 -1.1
LTY IAmb IAmb 07 21 43.9
comp=Z,4.1nm,0.8s
B05A Bryant 61.98 319 P 07 21 50.3
baz=106
D04E Lakebay 62.13 318 P 07 21 53.2
baz=105
TORD Torodi Ar. Bea 62.60 81 P P 07 21 58.3 +1.0
comp=Z,1.7nm,0.8s,baz=284,slow=6.7,SNR=6.5
TORD Torodi Ar. Bea 62.60 81 P P 07 21 57.7 +0.4
SUMG Summit 63.38 8 P P 07 22 01.4 -0.5
SUMG IAmb IAmb 07 22 03.0
comp=Z,14nm,1.0s
YKA Yellowknife Ar 63.61 336 P P 07 22 00.8 -2.3
comp=Z,0.5nm,0.3s,baz=102,slow=8.6,SNR=32
YKA LR LR 07 48 29.3
comp=Z,36nm,21.8s,baz=0.0,slow=35
RES Resolute Bay 66.44 351 P P 07 22 20.2 -1.1
comp=Z,0.7nm,0.5s,baz=189,slow=8.2,SNR=4.2
RES Resolute Bay 66.44 351 IAmb IAmb 07 22 20.8
comp=Z,4.6nm,1.2s
BBB Bella Bella 66.70 322 LR LR 07 50 56.1
comp=Z,27nm,18.3s,baz=152,slow=35
KEST Kesra 66.98 56 P P 07 22 38.2 0.0
comp=Z,2.1nm,0.6s,baz=160,slow=4.7,SNR=2.5
DLBC Dease Lake 69.20 329 LR LR 07 53 34.7
comp=Z,47nm,20.3s,baz=101,slow=36
EUNU Eureka 70.16 356 P P 07 22 44.5 0.0
NBO00 NORSAR Array S 72.47 29 P P 07 22 58.5 -0.3
NAO01 NORSAR Array S 72.50 29 P P 07 22 57.8 -1.1
CLL Collm 72.52 40 P P 07 22 59.9 +0.7
CLL IAmb IAmb 07 23 07.1
comp=Z,4.7nm,0.5s
NB2 NORAR Subarra 72.69 29 P P 07 23 01.1 +1.0
baz=264,slow=6.2
NOA NORSAR Array B 72.69 29 P P 07 23 01.1 +1.0
comp=Z,7.3nm,0.8s,baz=262,slow=6.0,SNR=23
NC602 NORSAR Array S 72.80 30 P P 07 23 02.1 +1.4
GEC2 GERESS Array S 72.80 42 P P 07 23 00.5 -0.6
GERES GERESS Array B 72.80 42 P P 07 23 00.7 -0.3
comp=Z,2.2nm,0.7s,baz=264,slow=4.0,SNR=10
NC405 NORSAR Array S 72.94 29 P P 07 23 02.5 +1.0
INK Inuvik 73.08 338 LR LR 07 56 08.9
comp=Z,24nm,19.8s,baz=108,slow=36
EPYK Eagle Plains 73.89 336 P 07 23 06.0
baz=100
BCPM Bancas Point 74.33 329 P P 07 23 08.8 -0.9
EGAK Eagle 75.50 334 P P 07 23 15.5 -0.8
EGAK Eagle 75.50 334 P 07 23 15.9
baz=96
L27K Beaver Creek, 75.65 332 P 07 23 16.4
baz=94
K27K Chicken 75.83 333 P 07 23 18.1
baz=94
MCARA McCarthy VSAT 76.10 331 P 07 23 20.0
baz=93
SCRK Sand Creek 76.67 333 P 07 23 22.2
baz=93
N25K Chitina, Valde 76.86 331 P 07 23 23.7
baz=92
M24K Tolsona, Glenn 77.62 331 P 07 23 28.1
baz=90
ILAR Eielson Array 77.95 334 P P 07 23 28.6 -1.6
comp=Z,0.4nm,0.3s,baz=94,slow=4.2,SNR=17
ILAR LR LR 07 57 50.7
comp=Z,41nm,21.7s,baz=112,slow=36
TCOL CIGO, UAF Yank 78.37 334 P 07 23 31.8
baz=89
MDM Murphy Dome 78.53 334 P P 07 23 33.0 -0.3
MCK McKinley 78.86 333 P 07 23 34.8
baz=88
NEA2 Nenana 78.89 334 P 07 23 34.3
baz=88
I23K Mio, Yukon-K 79.00 335 P 07 23 35.5
baz=88
ARCES ARCESS Array B 79.22 21 P P 07 23 35.4 -1.6
comp=Z,3.0nm,0.7s,baz=292,slow=4.8,SNR=6.6
ARCES ARCESS Array B 79.22 21 IAmb IAmb 07 23 41.4
comp=Z,21nm,1.4s
CUT Chulitna 79.52 332 P 07 23 38.8
baz=87
MLY Manley 79.59 334 P 07 23 38.9
baz=87
BPAW Bear Paw Mtn. 79.75 334 P 07 23 39.3
baz=86
FINES FINESS Array B 79.87 29 P P 07 23 40.9 +0.2
comp=Z,5.2nm,0.5s,baz=275,slow=3.7,SNR=46
PPLA Purkeypile 80.37 332 P 07 23 42.7
baz=85
BUR08 Bucovina Ar. S 80.50 43 P P 07 23 45.8 +1.3
BUR08 IAmb IAmb 07 23 47.4
comp=Z,8.5nm,0.9s
BURAR Bucovina Array 80.51 43 ⇓P P 07 23 46.4 +1.7
BURAR Bucovina Array 80.51 43 P P 07 23 45.6 +1.0
KDAK Kodiak Island 81.05 327 LR LR 07 59 39.4
comp=Z,66nm,20.5s,baz=62,slow=36
KDAK Kodiak Island 81.05 327 P 07 23 46.3
baz=84
MLR Muntele Rosu 81.23 45 ⇑P P 07 23 50.1 +1.5
MLR Muntele Rosu 81.23 45 P P 07 23 49.2 +0.7
MLR IAmb IAmb 07 23 51.0
comp=Z,16nm,1.0s
AKASG Malin Array Be 82.76 40 P P 07 23 56.2 0.0
comp=Z,2.8nm,0.7s,baz=264,slow=4.7,SNR=9.1
TNA Tin City 86.56 336 P 07 24 14.6
baz=72
BR131 Keskin Array S 87.77 50 P P 07 24 21.9 +0.2
BRTR Keskin Array B 87.77 50 P P 07 24 22.5 +0.8
comp=Z,6.3nm,0.8s,baz=262,slow=4.8,SNR=16
BRTR Keskin Array B 87.77 50 P P 07 24 21.1 -0.6
NRIK Noril'sk 97.34 10 LR LR 08 11 43.3
comp=Z,46nm,19.1s,baz=310,slow=37
CMAR Chiang Mai Arr 145.58 32 PKPbc PKPdf 07 31 10.9 -0.2
comp=Z,2.3nm,0.4s,baz=306,slow=4.5,SNR=4.9
CTA Charters Tower 150.92 248 PKPbc PKPbc 07 31 24.6 -0.9
comp=Z,11nm,0.7s,baz=101,slow=2.6,SNR=11

*IDC **20** 07:23:51.9±2.0,7°24S×129°09E,h142km±20km,mb3.8/5, mb1 3.9/8,mb1mx3.6/28,mbtmp4.3/8 Error ellipse: s-maj=19.5km s-min=15.9km az=59.0*
*NEIC **20** 07:23:51.8±2.5,7°33S±0°08×129°28E±0°08,h157km±10km, mb4.4/10,Error ellipse: s-maj=11.5km s-min=10.4km az=214.0*
*DJA **20** 07:23:51.3±0.2,7°S±3°×12°9E±°,h159km±7km, M4.4/12, mB5.0/7,mb4.5/12,MLv4.5/7,Mw(mB)4.4/7*
ISC 20 07:23:50.9±0.5,**7°34S**±0°04×**129°26E**±0°05,**h150**km,**n48,**
s2506/55,mb4.4/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	2.12	108	Pn	Pn	07 24 28.8	+1.3
SAUI	Saumlaki	2.12	108	P	Pn	07 24 29.6	+2.1
SAUI				S	Sn	07 24 57.5	+2.0
BNDI	Bandanaira	2.87	13	P	Pn	07 24 36.3	-0.4
BNDI				S	Sn	07 25 12.3	+0.3
NLAI	Namlea	4.61	332	P	Pn	07 24 59.5	+0.3
FAKI	Fak Fak	5.30	34	Pn	Pn	07 25 08.6	+0.1
FAKI	Fak Fak	5.30	34	P	Pn	07 25 06.3	-2.1
	0.4nm1µm22nm,0.6s						
SOEI	Soe	5.49	244	Pn	Pn	07 25 12.6	+1.5
SOEI				Sn	Sn	07 26 13.7	+0.1
SOEI	Soe	5.49	244	P	Pn	07 25 12.4	+1.4
	0.7nm2µm126nm,0.7s						
MTN	Manton Dam	5.77	162	Pn	Pn	07 25 16.3	+1.6
MTN				Sn	Sn	07 26 20.0	-0.2
BATI	Baumata	6.22	242	P	Pn	07 25 20.8	0.0
	22nm,0.3s,baz=251,slow=1.3,SNR=21						
BATI				S	Sn	07 26 29.1	-1.9
	36nm,0.3s,baz=98,slow=23,SNR=8.1						
BATI	Baumata	6.22	242	P	Pn	07 25 20.9	+0.2
	0.4nm2µm80nm,0.9s						
SIJI	Sorong	6.73	17	P	Pn	07 25 27.6	+0.2
	1.5nm,0.3s,baz=216,slow=22,SNR=13						
SIJI				S	Sn	07 26 36.4	-6.7
	2.0nm,0.3s,baz=163,slow=19,SNR=2.0						
KNRA	Kununurra	8.30	183	Pn	Pn	07 25 48.8	+0.4
BASI	Baing, Sumba	9.05	251	P	Pn	07 25 58.9	+0.5
	62nm,1.3s						
WBSI	Waikabubak, Su	10.03	256	P	Pn	07 26 12.0	+0.6
	1µm43nm,0.6s						
MRSI	Marisa	10.66	316	P	Pn	07 26 21.2	+1.5
	41nm,0.8s						
FITZ	Fitzroy Crossi	11.26	198	P	Pn	07 26 26.4	-1.2
	2.2nm,0.3s,baz=16,slow=11,SNR=113						
FITZ				S	Sn	07 28 22.8	-9.4
	2.8nm,0.3s,baz=87,slow=18,SNR=4.6						
FITZ	Fitzroy Crossi	11.26	198	Pn	Pn	07 26 27.3	-0.3
PLAI	Plampang	11.47	262	P	Pn	07 26 30.5	+0.1
	28nm,0.8s						
TOLI2	Tolitoli	11.92	314	Pn	Pn	07 26 37.0	+0.8
WB0	Warramunga Arr	13.32	159		Pn	07 26 53.9	-0.4
WRA	Warramunga Arr	13.46	159	P	Pn	07 26 55.5	-0.6
	3.2nm,0.3s,baz=344,slow=13,SNR=61						
WRA				S	Sn	07 29 19.3	-6.0
	6.3nm,0.3s,baz=332,slow=24,SNR=14						
WB2	Warramunga Arr	13.47	159	Pn	Pn	07 26 55.6	-0.6
WR0	Warramunga Arr	13.55	158	Pn	Pn	07 26 56.8	-0.5
PSA00	Pilbara Seismi	16.82	212	P	Pn	07 27 38.8	+1.0
PSA00				IAmb	IAmb	07 27 45.3	
	comp=Z,42nm,1.2s						
AS31	Alice Springs	16.84	165	P	Pn	07 27 38.9	+1.0
AS31				IAmb	IAmb	07 27 42.9	
	comp=Z,4.9nm,0.6s						
ASAR	Alice Springs	16.84	165	P	Pn	07 27 39.9	+1.9
	comp=Z,2.1nm,0.3s,baz=341,slow=9.8,SNR=139						
ASAR				S	S	07 30 37.1	-8.2
	comp=Z,0.5nm,0.3s,baz=347,slow=26,SNR=7.3						
ASAR	Alice Springs	16.84	165	P	P	07 27 37.7	+0.1
KKM	Kota Kinabalu	18.61	315	P	P	07 27 57.2	+0.1
KKM				IAmb	IAmb	07 28 06.6	
	comp=Z,21nm,0.9s						
CTA	Charters Tower	20.78	129	P	Pn	07 28 24.3	-0.4
	comp=Z,5.3nm,0.8s,baz=298,slow=14,SNR=5.1						
FORT	Forrest	23.35	183	P	P	07 28 48.4	+2.5
BBOO	Buckleboo	26.12	167	P	P	07 29 14.3	+3.3
STKA	Stephens Creek	26.99	156	P	P	07 29 21.9	+3.1
	comp=Z,4.0nm,0.8s,baz=346,slow=6.6,SNR=6.7						
RPSI	Rantau Prapat	31.87	287	P	P	07 30 03.5	+1.3
RPSI				IAmb	IAmb	07 30 04.7	
	comp=Z,5.0nm,0.8s						
CMAR	Chiang Mai Arr	39.39	311	P	P	07 31 07.0	+0.8
	comp=Z,1.4nm,0.5s,baz=139,slow=8.4,SNR=5.8						
CMAR	Chiang Mai Arr	39.39	311	P	P	07 31 06.4	+0.1
CHTO	Chiang Mai	39.61	311	P	P	07 31 08.7	+0.6
CHTO				IAmb	IAmb	07 31 10.8	
	comp=Z,16nm,1.3s						
ODAN	Odare	52.93	312	eP	P	07 32 52.3	0.0
	comp=Z,10.0nm,0.5s						
TAPN	Taplejung	52.97	312	eP	P	07 32 52.2	-0.4
	comp=Z,19nm,0.4s						
RAMN	Ramite	53.56	311	eP	P	07 32 57.4	+0.4
	comp=Z,23nm,0.6s						
JIRN	Jiri	54.26	312	eP	P	07 33 02.4	+0.3
GUN	Gumba	54.63	312	eP	P	07 33 04.7	0.0
	comp=Z,22nm,0.5s						
MK31	Makanchi Array	68.11	327	P	P	07 34 35.8	+1.1
MKAR	Makanchi Array	68.11	327	P	P	07 34 35.2	+0.6
	comp=Z,1.7nm,0.4s,baz=116,slow=8.2,SNR=34						
MAKZ	Makanchi	68.29	327	P	P	07 34 36.4	+0.7
MAKZ				IAmb	IAmb	07 34 41.3	
	comp=Z,9.5nm,1.4s						
ZALV	Zalesovo Beam	71.56	334	P	P	07 34 55.6	0.0
	comp=Z,0.8nm,0.4s,baz=115,slow=6.5,SNR=3.9						
BMAR	Burnt Mountain	95.24	23	P	P	07 36 55.8	-1.5
TORD	Torodi Ar. Bea	128.16	281	PKP	PKiKP	07 42 41.7	+0.7
	comp=Z,0.7nm,0.7s,baz=25,slow=2.5,SNR=3.3						

*TAP **20** 07:25:51.4,24°85N×122°04E,h8km,ML3.3,C*
*JMA **20** 07:25:52.0±0.1,24°89N×121°95E,h40km,M2.4*
ISC 20 07:25:51.9±0.9,**24°87N**±0°02×**122°05E**±0°02,**h9**km±6km,
n93,σ0**68**/149,**1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		0.11	255	*i* P	Pg	07 25 54.1	-0.4
	baz=268						
EGS				*e*S	Sg	07 25 56.6	+0.3
	baz=268						
TWB1	Santiao Chiao	0.14	339	⇑ *i* P	Pg	07 25 55.3	+0.2
	baz=347						
TWB1				*i* S	Sg	07 25 58.2	+0.9
	baz=347						
NTC	Toucheng	0.20	265	P	Pg	07 25 56.0	0.0
	baz=273						
TIPB	Shuangxi	0.22	297	*i* P	Pg	07 25 56.6	+0.1
	baz=302						
TIPB				S	Sg	07 25 60.0	+0.4
	baz=302						
ILA	Ilan	0.29	249	P	Pg	07 25 57.8	+0.1
	baz=253						
ILA				*i* S	Sg	07 26 02.0	+0.4
	baz=253						
NWF	Wu-fen Shan	0.31	310	*i* P	Pg	07 25 58.6	+0.5
	baz=313						
WFSB	Wu-fen Shan	0.31	310	P	Pg	07 25 58.6	+0.5
	baz=313						
WFSB				S	Sb	07 26 03.9	-0.9
	baz=313						
TWC	Suao	0.32	214	*i* P	Pg	07 25 57.6	-0.6
	baz=215						
TWC				S	Sg	07 26 00.9	-1.5
	baz=215						
TNOU	National Taiwa	0.37	318	P	Pb	07 26 00.2	-0.5
	baz=320						
TNOU				S	Sb	07 26 05.2	-1.3
	baz=320						
TWE	Neicheng	0.38	246	*i* P	Pg	07 25 58.8	-0.5
	baz=249						
TWE				*i* S	Sg	07 26 04.3	0.0
	baz=249						
NDS	Dongshan	0.38	232	P	Pg	07 25 59.3	-0.2
	baz=235						
NDS				S	Sg	07 26 04.6	+0.2
	baz=235						
TWA	Mucha	0.43	285	*i* P	Pg	07 26 00.8	+0.4
	baz=287						
TWA				*i* S	Sg	07 26 06.7	+0.6
	baz=287						
NWRT	Kuosheng	0.48	313	P	Pb	07 26 02.0	-0.5
	baz=315						
NHDH	Xindian Distri	0.48	281	P	Pg	07 26 01.8	+0.5
	baz=275						
NHDH				S	Sb	07 26 08.3	-1.4
	baz=275						
EWUT	Wuta	0.49	210	P	Pg	07 26 01.1	-0.3
	baz=218						
EWUT				S	Sg	07 26 07.5	-0.4
	baz=218						
ENTT	Nioudou	0.49	242	*i* P	Pg	07 26 01.2	-0.3
	baz=245						
ENTT				S	Sg	07 26 08.7	+0.7
	baz=245						
NWLT	Wulai	0.50	259	P	Pg	07 26 01.2	-0.5
	baz=262						
NWLT				S	Sg	07 26 07.7	-0.6
	baz=262						
YM01	YM01	0.51	302	P	Pb	07 26 02.7	-0.4
	baz=304						
YM01				S	Sb	07 26 10.1	-0.5
	baz=304						
TATO	Taipei	0.52	282	P	Pg	07 26 02.5	+0.6
	baz=276						
TATO				S	Sg	07 26 08.8	+0.1
	baz=276						
YM11	YM11	0.52	304	P	Pb	07 26 02.8	-0.4
	baz=306						
YM08	YM08	0.52	307	P	Pg	07 26 02.4	+0.4
	baz=309						
YM10	YM10	0.52	303	P	Pb	07 26 02.8	-0.5
	baz=305						
YM05	YM05	0.52	304	P	Pg	07 26 02.6	+0.6
	baz=306						
YM04	YM04	0.54	301	P	Pb	07 26 03.3	-0.2
	baz=303						
NDT	Datong Townshi	0.55	241	P	Pg	07 26 02.6	0.0
	baz=244						
NDT				S	Sg	07 26 09.4	-0.5
	baz=244						
ANP	Anpu	0.57	303	*i* P	Pg	07 26 03.5	+0.5
	baz=305						
TWS1	Kuangyinshan	0.61	292	*i* P	Pb	07 26 05.2	+0.4
	baz=294						
TWS1				*e*S	Sb	07 26 14.2	+0.7
	baz=294						
NTST	Danshui	0.61	298	P	Pb	07 26 05.3	+0.5

baz=300
NTST *eS* **Sb** **07 26 13.8 +0.3**
baz=300
YHNB **Yeheng** **0.64 252** P **Pg** **07 26 03.4 -0.9**
baz=254
YHNB S **Sg** **07 26 11.9 -0.9**
baz=254
NTY **Taoyuan** **0.69 281** P **Pn** **07 26 07.0 -0.8**
baz=274
NTY S **Sb** **07 26 15.4 -0.3**
baz=274
NNSB **Datong** **0.75 234** P **Pg** **07 26 05.9 -0.4**
baz=236
NNSB S **Sg** **07 26 15.7 -0.4**
baz=236
NNSH **Datong** **0.75 234** P **Pg** **07 26 06.2 -0.1**
baz=236
NNS **Nan Shan** **0.75 235** *i* P **Pg** **07 26 05.8 -0.5**
baz=243
PCYT **Pengchaiyu** **0.75 2** *i* P **Pn** **07 26 08.3 -0.4**
baz=355
PCYT S **Sn** **07 26 19.0 -1.2**
baz=355
NCU **National Centr** **0.79 277** P **Pn** **07 26 08.4 -0.7**
baz=269
NCU S **Sn** **07 26 20.0 -0.9**
baz=269
NCUH **Zhongli** **0.79 277** P **Pn** **07 26 08.6 -0.5**
baz=269
NCUH S **Sn** **07 26 20.3 -0.8**
baz=269
NACB **Ninganchiao** **0.81 211** P **Pg** **07 26 07.2 -0.3**
baz=203
NACB S **Sg** **07 26 17.9 -0.1**
baz=203
ETLH **Xiulin Townshi** **0.84 218** P **Pg** **07 26 07.5 -0.6**
baz=220
NJD **Zhudong** **0.88 261** P **Pb** **07 26 09.7 +0.4**
baz=256
NJD *eS* **Sb** **07 26 20.6 -0.6**
baz=256
TWD **Chiawan** **0.89 208** *i* P **Pg** **07 26 08.1 -0.9**
baz=202
TWD *i* S **Sg** **07 26 19.9 -0.7**
baz=202
JYNG **Yonagunijimaku** **0.92 117** P **Pg** **07 26 09.7 +0.1**
JYNG *eS* **Sg** **07 26 23.1 +1.5**
HSN1 **Hsinchu** **0.94 264** P **Pn** **07 26 11.2 0.0**
baz=258
HSN1 S **Sn** **07 26 25.8 +1.0**
baz=258
FUSS **Fushou** **0.96 230** P **Pg** **07 26 10.3 -0.1**
baz=232
FUSS *eS* **Sb** **07 26 24.5 +0.8**
baz=232
LIOB **Emei** **0.96 257** P **Pb** **07 26 11.2 +0.4**
baz=258
LIOB *eS* **Sb** **07 26 23.7 +0.1**
baz=258
SBCB **Hsinchu** **0.97 266** P **Pn** **07 26 11.4 -0.2**
baz=259
SBCB S **Sn** **07 26 25.3 -0.2**
baz=259
YOJ **Yonaguni jima** **0.97 115** P **Pb** **07 26 10.2 -0.6**
YOJ *eS* **Sg** **07 26 24.0 +0.8**
YOJ **Yonaguni jima** **0.97 115** P **Pb** **07 26 09.8 -1.0**
baz=114
YOJ S **Sg** **07 26 24.8 +1.7**
baz=114
NSTT **Nanjuang** **0.98 256** *i* P **Pb** **07 26 11.2 +0.2**
baz=258
NSTT *i* S **Sn** **07 26 25.7 0.0**
baz=258
TWT **Tachien** **1.00 232** *i* P **Pg** **07 26 11.5 +0.2**
baz=230
TWT *eS* **Sg** **07 26 24.6 +0.3**
baz=230
WHF **Hehuan Shan** **1.01 225** *i* P **Pg** **07 26 11.7 +0.2**
baz=226
TDCB **Techi** **1.02 233** P **Pg** **07 26 11.1 -0.3**
baz=227
CHGB **Renai** **1.13 225** P **Pb** **07 26 13.4 -0.4**
baz=227
CHGB *eS* **Sb** **07 26 27.8 -0.9**
baz=227
WHP **Taichung City** **1.16 240** P **Pg** **07 26 14.7 +0.5**
baz=242
WHP *eS* **Sb** **07 26 29.1 -0.3**
baz=242
ESL **Shilin** **1.19 208** P **Pn** **07 26 12.9 -1.9**
baz=210
ESL *eS* **Sb** **07 26 29.0 -1.2**
baz=210
OWD **Renai** **1.21 221** P **Pn** **07 26 14.9 -0.2**
baz=230
NSY **Sanyi** **1.25 249** P **Pg** **07 26 17.1 +1.2**
baz=250
NSY *eS* **Sg** **07 26 32.9 +0.6**
baz=250
WPL **Puli Township** **1.31 229** *eP* **Pn** **07 26 16.2 -0.1**
baz=221
WCS **Beigang Elemen** **1.31 232** *eP* **Pb** **07 26 17.1 +0.4**
baz=243
WCS *eS* **Sb** **07 26 32.7 -0.9**
baz=243
DPDB **Guoxing** **1.32 231** *eP* **Pn** **07 26 16.5 0.0**
baz=233
EGFH **Guangfu** **1.32 205** *eP* **Pn** **07 26 17.3 +0.8**
baz=220
WDJ **Dajia District** **1.38 248** *eP* **Pb** **07 26 18.0 +0.1**
baz=250
WDJ *eS* **Sg** **07 26 36.7 +0.4**
baz=250
VWDT **VWDT** **1.39 217** P **Pn** **07 26 17.8 +0.5**
baz=219
SMLT **Sun Moon Lake** **1.44 227** *i* P **Pb** **07 26 19.2 +0.3**
baz=229
SMLT *eS* **Sb** **07 26 37.6 +0.3**
baz=229
TCU **Taichung** **1.44 240** *eP* **Pg** **07 26 21.0 +1.5**
baz=262
TYC **Yuchr** **1.45 229** P **Pb** **07 26 19.8 +0.8**
baz=223
TYC *eS* **Sn** **07 26 37.4 0.0**
baz=223
SSLB **Suanglung** **1.47 223** *eP* **Pb** **07 26 20.3 +0.9**
baz=226
HGSD **Ruisui** **1.49 203** *eP* **Pn** **07 26 19.0 +0.2**
baz=224
HGSD *eS* **Sb** **07 26 39.3 +0.6**
baz=224
WJS **Zhushan** **1.59 229** *eP* **Pg** **07 26 22.8 +0.3**
baz=223
WJS *eS* **Sg** **07 26 44.9 +1.7**
baz=223
IRIF **Iriomote-Funau** **1.62 109** P **Pn** **07 26 20.2 -0.5**
YULB **Yu-li** **1.62 205** P **Pn** **07 26 20.9 +0.2**
baz=218
YULB *eS* **Sn** **07 26 42.0 +0.3**
baz=218
ALS **Alishan** **1.77 220** *i* P **Pb** **07 26 25.3 +0.7**
baz=211
ALS S **Sg** **07 26 48.9 +0.1**
baz=211
CHN5 **Tsauling** **1.78 225** *i* P **Pg** **07 26 26.3 +0.3**
baz=229
CHN5 S **Sg** **07 26 50.7 +1.6**
baz=229
HATJ **Hateruma jima** **1.80 116** P **Pn** **07 26 23.4 +0.4**
FULB **Fuli** **1.80 203** *eP* **Pn** **07 26 24.1 +1.0**
baz=220
WDLH **Douliu** **1.81 230** *eP* **Pb** **07 26 25.5 +0.3**
baz=249
WDLH *eS* **Sg** **07 26 50.2 0.0**
baz=249
JKRS **Kuro-shima** **1.90 109** P **Pn** **07 26 24.1 -0.3**
JIJ **Ishigaki jima** **1.98 104** P **Pn** **07 26 25.8 +0.3**
EDH **Donghe** **2.01 200** *eP* **Pn** **07 26 25.2 -0.7**
baz=180
STYT **Tauyuan** **2.07 215** P **Pb** **07 26 29.7 0.0**
baz=208
TWK **Hsinying** **2.14 222** P **Pb** **07 26 31.4 +0.6**
baz=227
TWK *eS* **Sb** **07 26 58.5 +0.9**
baz=227
CHN1 **Nanshi** **2.18 220** *eP* **Pb** **07 26 31.2 -0.3**
baz=225
TWG **Pinlang** **2.23 204** *eP* **Pn** **07 26 30.6 +1.6**
baz=209
SLGT **Liugui** **2.27 215** *eP* **Pb** **07 26 32.6 -0.4**
baz=220
MATB **Ma-tsu** **2.29 304** P **Pn** **07 26 29.1 -0.7**
baz=301
MATB *eS* **Sn** **07 26 58.5 +0.5**
baz=301
MSUT **Lienchiang** **2.31 304** P **Pn** **07 26 30.9 +0.8**
baz=302
MSUT *eS* **Sn** **07 26 57.8 -0.9**
baz=302
VWUC **VWUC** **2.36 273** P **Pn** **07 26 30.3 -0.4**
baz=273
MASBT **Mashibuluo** **2.60 210** P **Pb** **07 26 38.4 -0.2**
baz=216
XPSS **Dashiqiu** **2.64 321** P **Pn** **07 26 34.6 -0.1**
baz=317
LYJJ **Jianjiangzhen** **2.65 310** P **Pn** **07 26 34.0 -0.8**
baz=306
PTMZ **Houxiangcun** **2.66 274** P **Pn** **07 26 35.2 +0.3**
baz=273
EAST **Anshuo** **2.71 204** *eP* **Pn** **07 26 36.5 +0.8**
baz=197
MHZQ **Yeshan** **2.99 295** *eP* **Pn** **07 26 40.5 +1.1**
baz=290
MHZQ *eS* **Sn** **07 27 15.5 +0.1**
baz=290
AXDP **Jialang** **3.70 271** *eP* **Pn** **07 26 49.9 +0.7**
baz=269
AXDP *eS* **Sn** **07 27 31.4 -1.6**
baz=269

IDC ***20*** *07:32:58.4±10.0, 37°12′N×72°23′E, h177km±83km, mb3.4/6, mb1 3.5/7, mb1mx3.2/43, mbtmp3.9/7, Error ellipse: s-maj=65.2km s-min=27.1km az=149.0*
NNC ***20*** *07:33:04.9±8.6, 37°81′N×72°16′E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=111.0km s-min=40.5km az=45.0*
ISC 20 07:32:56.2±1.4, 37°1′N±0°1′×72°0′E±0°2′, h150km, n20, σ2s 0s 5/20, mb3.7/6, 3C, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.23**	**14**	P	**Pn**	**07 34 15.4**	**+2.5**
	SNR=258						
UCH	**Uchtor**	**5.51**	**20**	P	**Pn**	**07 34 19.2**	**+2.4**
	SNR=49						
THN	**Thein Dam**	**5.56**	**145**	*eP*	Pn	07 34 26.5	+9.5
EKS2	**Erkin-Say**	**5.76**	**13**	P	**Pn**	**07 34 22.1**	**+2.4**
	SNR=18						
AAK	**Ala-Archa**	**5.89**	**18**	P	**Pn**	**07 34 24.1**	**+2.5**
	SNR=25						
AAK	**Ala-Archa**	**5.89**	**18**	⇑P	**Pn**	**07 34 23.8**	**+2.2**
	13nm,0.4s						
KBK	**Karagaybulak**	**6.03**	**21**	P	**Pn**	**07 34 26.4**	**+2.9**
	SNR=13						
KK31	**Karatay Array**	**6.13**	**350**	P	**Pn**	**07 34 27.2**	**+2.6**
	10nm,0.5s,baz=152,slow=10,SNR=63						
KK31				⇑S	**Sn**	**07 35 31.5**	**-2.3**
	5.2nm,0.4s,baz=171,slow=23,SNR=6.2						
ULHL	**Ulahol**	**6.13**	**31**	P	**Pn**	**07 34 26.4**	**+1.6**
	SNR=18						
CHMS	**Chumysh**	**6.30**	**19**	P	**Pn**	**07 34 29.2**	**+2.4**
	SNR=7.4						
TKM2	**Tokmak 2**	**6.47**	**24**	P	**Pn**	**07 34 31.2**	**+1.9**
	SNR=21						
TKM2	**Tokmak 2**	**6.47**	**24**	⇑P	**Pn**	**07 34 30.8**	**+1.4**
	10nm,0.6s						
USP	**Ospenovka**	**6.49**	**17**	P	**Pn**	**07 34 31.3**	**+1.9**
	SNR=14						
ZALV	**Zalesovo Beam**	**19.08**	**24**	P	**P**	**07 37 05.8**	**-1.2**
	0.5nm,0.3s,baz=215,slow=10,SNR=7.3						
FINES	**FINESS Array B**	**37.45**	**325**	P	**P**	**07 39 54.7**	**0.0**
	2.1nm,0.9s,baz=119,slow=14,SNR=1.6						
ARCES	**ARCESS Array B**	**40.92**	**337**	P	**P**	**07 40 23.4**	**+0.1**
	4.9nm,1.1s,baz=117,slow=9.2,SNR=6.8						
NOA	**NORSAR Array B**	**44.40**	**323**	P	**P**	**07 40 51.3**	**-0.2**
	0.3nm,0.5s,baz=94,slow=7.7,SNR=2.6						
TORD	**Torodi Ar. Bea**	**66.51**	**269**	P	**P**	**07 43 30.8**	**+0.7**
	0.7nm,0.4s,baz=47,slow=5.7,SNR=8.1						
INK	**Inuvik**	**73.22**	**10**	P	**P**	**07 44 09.1**	**-1.1**
	0.5nm,0.4s,baz=322,slow=4.8,SNR=7.4						
YKA	**Yellowknife Ar**	**80.64**	**3**	P	**P**	**07 44 50.5**	**-1.3**
	0.5nm,0.6s,baz=356,slow=5.2,SNR=20						

IDC ***20*** *07:36:12.9±1.2, 23°06′N×142°52′E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.6/48, mbtmp3.9/6, ML3.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/38, Error ellipse: s-maj=75.0km s-min=20.5km az=102.0*
ISC 20 07:36:18.0±1.2, 23°07′N±0°10′×142°4′E±0°4′, h35km, n14, σ0s 5s 5/7, mb3.7/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**4.01**	**358**	Pn	**Pn**	**07 37 17.1**	**+0.2**
	2.9nm,0.3s,baz=221,slow=20,SNR=1.9						
JCJ				Sn	**Sn**	**07 38 02.5**	**-0.2**
	4.0nm,0.3s,baz=285,slow=20,SNR=1.3						
MJAR	**Matsushiro Arr**	**13.90**	**346**	LR	LR	07 43 42.7	
	comp=Z,40nm,21.9s,baz=235,slow=32						
KSRS	**Korea Array**	**18.97**	**322**	LR	LR	07 47 41.8	
	comp=Z,19nm,18.3s,baz=0.0,slow=36						
H11N1	**WAKE ISLAND Hy 23.06**	**94**		T	T	08 05 14.3	
	baz=283,slow=75,SNR=180						
H11N2	**WAKE ISLAND Hy 23.07**	**94**		T	T	08 05 14.4	
	baz=283,slow=75,SNR=208						
H11N3	**WAKE ISLAND Hy 23.08**	**94**		T	T	08 05 15.5	
	baz=283,slow=75,SNR=220						
H11S3	**WAKE ISLAND Hy 23.17**	**97**		T	T	08 05 23.7	
	baz=286,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy 23.18**	**97**		T	T	08 05 24.4	
	baz=286,slow=75,SNR=7.9						
H11S2	**WAKE ISLAND Hy 23.19**	**97**		T	T	08 05 24.1	
	baz=286,slow=75,SNR=7.9						
WRA	**Warramunga Arr**	**43.47**	**191**	P	**P**	**07 44 17.3**	**-0.6**
	2.5nm,0.8s,baz=12,slow=8.3,SNR=5.0						
ASAR	**Alice Springs**	**47.18**	**191**	P	**P**	**07 44 47.9**	**+0.5**
	0.7nm,0.8s,baz=10,slow=12,SNR=9.4						
BBB	**Bella Bella**	**71.83**	**40**	P	**P**	**07 47 36.5**	**-0.6**
	9.5nm,0.9s,baz=257,slow=18,SNR=3.2						
YKA	**Yellowknife Ar**	**75.59**	**28**	P	**P**	**07 47 59.0**	**0.0**
	0.2nm,0.7s,baz=290,slow=5.1,SNR=4.1						
NVAR	**Mina Array Bea**	**82.88**	**51**	P	**P**	**07 48 39.9**	**+0.5**
	0.2nm,0.5s,baz=271,slow=5.3,SNR=2.7						

NEIC ***20*** *07:42:59.9±3.7, 35°03′N±0°05′×26°82′E±0°03, h10km±1km, Error ellipse: s-maj=8.7km s-min=3.8km az=164.0*
DDA ***20*** *07:42:59.7, 35°08′N×26°81′E, h11km±6km, ML4.0*
NIC ***20*** *07:43:00.5±0.0, 34°99′N×26°84′E, h11km±2km, Ml4.5/5*
HLW ***20*** *07:43:01.4, 35°13′N×27°13′E, h32km±28km, Md4.5, Ml4.5*
ATH ***20*** *07:43:03.2, 35°19′N×26°75′E, h27km±8km, ML4.1/13, Error ellipse: s-maj=9.0km s-min=1.7km az=148.0*
MOS ***20*** *07:43:03.8±1.5, 35°13′N×26°68′E, h26km, mb4.8/38, Error ellipse: s-maj=4.9km s-min=2.8km az=102.8*
IDC ***20*** *07:43:03.0±1.9, 35°24′N×26°71′E, h33km±14km, mb4.2/28, mb1 4.3/34, mb1mx4.2/44, mbtmp4.3/34, ML3.9/6, MS3.5/14, Ms1 3.5/14, ms1mx3.3/45, Error ellipse: s-maj=14.9km s-min=9.9km az=162.0*
THE ***20*** *07:43:03.6, 35°19′N×26°74′E, h2km±1km, ML4.3/14, Error ellipse: s-maj=2.4km s-min=0.6km az=153.0*
ISK ***20*** *07:43:03.3, 35°22′N×26°75′E, h13km, ML4.2/18*
ISC 20 07:43:02.0±0.7, 35°03′N±0°03′×26°79′E±0°02′, h27km±5km, n469, σ1s 2s 2/526, mb4.5/69, MS3.5/8, 29C-24D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.48**	**281**	P	**Pb**	**07 43 11.3**	**-0.6**
ZKR				S	**Sb**	**07 43 19.3**	**+0.6**
ZKR				AML	AML	07 43 22.8	
	comp=E,68496μm,0.3s						
ZKR				AML	AML	07 43 23.2	
	comp=N,35443μm,0.3s						
ZKR	**Zakros**	**0.48**	**281**	P	**Pb**	**07 43 11.3**	**-0.6**
ZKR				S	**Sb**	**07 43 19.1**	**+0.4**
	comp=N,30μm,0.7s						
ZKR	**Zakros**	**0.48**	**281**	PG	**Pb**	**07 43 11.4**	**-0.6**
ZKR				SG	**Sb**	**07 43 19.1**	**+0.4**
ZKR	**Zakros**	**0.48**	**281**	P	**Pb**	**07 43 11.4**	**-0.6**
ZKR				AML	AML	07 43 18.6	
	comp=N,52nm,0.5s						
ZKR				AML	AML	07 43 18.6	
	comp=N,52nm,0.5s						
ZKR				S	**Sb**	**07 43 19.1**	**+0.4**
STIA	**Sitia Lasithi**	**0.60**	**287**	P	**Pb**	**07 43 13.2**	**-0.7**
STIA				S	**Sn**	**07 43 23.2**	**-0.3**
KARP	**Karpathos**	**0.60**	**30**	P	**Pb**	**07 43 12.8**	**-1.2**
KARP				S	**Sb**	**07 43 20.9**	**-1.3**
KARP				AML	AML	07 43 22.8	
KARP				AML	AML	07 43 23.5	
KARP	**Karpathos**	**0.60**	**30**	P	**Pb**	**07 43 12.4**	**-1.6**
KARP				S	**Sb**	**07 43 21.1**	**-1.1**
	comp=N,64μm,0.7s						
KARP	**Karpathos**	**0.60**	**30**	PG	**Pb**	**07 43 12.7**	**-1.3**
KARP	**Karpathos**	**0.60**	**30**	Pn	**Pb**	**07 43 12.7**	**-1.3**
KARP					**Sb**	**07 43 21.7**	**-0.5**
KARP	**Karpathos**	**0.60**	**30**	⇑P	**Pb**	**07 43 12.7**	**-1.3**
KARP				S	**Sb**	**07 43 21.9**	**-0.3**
KARP				AML	AML	07 43 22.2	
	comp=N,130nm,0.4s						
KARP				AML	AML	07 43 22.2	
	comp=N,130nm,0.4s						
KARP				AML	AML	07 43 22.2	
	comp=N,123nm,0.9s						
KARP				AML	AML	07 43 22.2	
	comp=N,123nm,0.9s						
FRMA	**Ierapetra Chan**	**0.87**	**269**	P	**Pn**	**07 43 16.4**	**-1.9**
FRMA				S	**Sb**	**07 43 29.5**	**-0.1**
NPS	**Neapolis**	**0.99**	**284**	P	**Pb**	**07 43 20.8**	**+0.2**
NPS				S	**Sn**	**07 43 33.9**	**+0.6**
NPS				AML	AML	07 43 41.1	
	comp=E,38780μm,0.5s						
NPS				AML	AML	07 43 41.9	
	comp=N,28142μm,0.7s						
NPS	**Neapolis**	**0.99**	**284**	P	**Pb**	**07 43 20.6**	**0.0**
NPS				S	**Sn**	**07 43 34.9**	**+1.7**
	comp=N,17μm,0.6s						
NPS	**Neapolis**	**0.99**	**284**	P	**Pb**	**07 43 20.6**	**0.0**
NPS				S	**Sn**	**07 43 34.9**	**+1.7**
HRKL	**Herakleio**	**1.41**	**282**	P	**Pb**	**07 43 28.7**	**+1.1**
HRKL				S	**Sb**	**07 43 47.0**	**+1.8**
	comp=N,19μm,0.7s						
HRKL	**Herakleio**	**1.41**	**282**	PN	**Pb**	**07 43 28.7**	**+1.1**
HRKL				SN	**Sb**	**07 43 47.3**	**+2.1**
KSTL	**Kastelli Herak**	**1.44**	**282**	P	**Pn**	**07 43 25.2**	**-1.0**
KSTL				S	**Sn**	**07 43 41.4**	**-2.7**
IACM	**Heraklion**	**1.44**	**282**	P	**Pb**	**07 43 29.1**	**+1.1**
IDI	**Anoyia**	**1.58**	**280**	Pg	**Pb**	**07 43 31.3**	**+0.7**
	comp=N,114nm,0.3s,baz=121,slow=13,SNR=290						
IDI					Lg	07 43 52.5	
	comp=N,174nm,0.3s,baz=49,slow=14,SNR=7.0						
IDI	**Anoyia**	**1.58**	**280**	P	**Pb**	**07 43 31.0**	**+0.5**
IDI				S	**Sb**	**07 43 50.2**	**+0.1**
IDI				AML	AML	07 44 07.2	
	comp=N,6491μm,0.5s						
IDI				AML	AML	07 44 07.4	
	comp=E,5769μm,0.8s						
IDI	**Anoyia**	**1.58**	**280**	P	**Pb**	**07 43 31.4**	**+0.9**
IDI				S	**Sb**	**07 43 50.7**	**+0.6**
IDI	**Anoyia**	**1.58**	**280**	PN	**Pb**	**07 43 30.9**	**+0.4**
IDI	**Anoyia**	**1.58**	**280**	Pn	**Pb**	**07 43 31.4**	**+0.9**
NIS1	**Nisyros Isl.**	**1.60**	**11**	P	**Pn**	**07 43 29.3**	**+0.8**
NIS1				S	**Sb**	**07 43 49.8**	**-1.0**
	comp=E,15μm,0.7s						
NIS1	**Nisyros Isl.**	**1.60**	**11**	PN	**Pn**	**07 43 29.3**	**+0.8**
NIS1				SN	**Sn**	**07 43 48.8**	**+0.5**
ARG	**Arkhangelos**	**1.61**	**42**	P	**Pb**	**07 43 30.5**	**-0.4**
ARG				AML	AML	07 43 58.2	
	comp=E,12609μm,0.9s						
ARG				AML	AML	07 43 59.3	
	comp=N,10750μm,0.7s						
ARG	**Arkhangelos**	**1.61**	**42**	P	**Pb**	**07 43 30.6**	**-0.4**
ARG				S	**Sb**	**07 43 50.8**	**-0.1**
	comp=N,6μm,0.8s						
ARG	**Arkhangelos**	**1.61**	**42**	P	**Pb**	**07 43 30.6**	**-0.4**
ARG				S	**Sb**	**07 43 50.8**	**-0.1**
ARG	**Arkhangelos**	**1.61**	**42**	PN	**Pb**	**07 43 30.4**	**-0.6**
ARG				SN	**Sb**	**07 43 50.7**	**-0.1**
ARG	**Arkhangelos**	**1.61**	**42**	⇑P	**Pb**	**07 43 30.1**	**-0.9**
ARG				S	**Sb**	**07 43 50.9**	**-0.1**
SIVA	**Sivas**	**1.62**	**270**	P	**Pb**	**07 43 32.1**	**+0.9**
SIVA				AML	AML	07 44 07.7	
	comp=E,21956μm,0.7s						
SIVA				AML	AML	07 44 08.5	
	comp=N,17555μm,0.7s						
SIVA	**Sivas**	**1.62**	**270**	P	**Pb**	**07 43 32.2**	**+0.9**
SIVA				S	**Sb**	**07 43 51.8**	**+0.5**
	comp=N,10μm,0.7s						
SANT	**Santorini**	**1.72**	**321**	P	**Pn**	**07 43 31.2**	**+1.0**
SANT				AML	AML	07 44 04.5	
	comp=N,4918μm,0.9s						
SANT				AML	AML	07 44 05.5	
	comp=E,15090μm,0.6s						
SANT	**Santorini**	**1.72**	**321**	P	**Pn**	**07 43 31.5**	**+1.3**
SANT				S	**Sn**	**07 43 52.0**	**+0.7**
	comp=E,5μm,0.8s						
SANT	**Santorini**	**1.72**	**321**	⇓P	**Pb**	**07 43 31.7**	**-1.3**
SANT	**Santorini**	**1.72**	**321**	PN	**Pn**	**07 43 31.5**	**+1.3**
SANT	**Santorini**	**1.72**	**321**	Pn	**Pn**	**07 43 30.1**	**0.0**
KOSK	**Kos Island**	**1.73**	**5**	P	**Pn**	**07 43 30.9**	**+0.7**
KOSK				S	**Sn**	**07 43 51.9**	**+0.6**
	comp=E,7μm,0.8s						
KOSK	**Kos Island**	**1.73**	**5**	PN	**Pn**	**07 43 31.2**	**+1.0**
THR8	**Santorini-Mono**	**1.74**	**323**	P	**Pn**	**07 43 31.3**	**+0.9**
THR8	**Santorini-Mono**	**1.74**	**323**	Pn	**Pn**	**07 43 31.3**	**+0.9**
THR6	**Thira Island,**	**1.74**	**320**	P	**Pn**	**07 43 31.6**	**+1.2**
THR6	**Thira Island,**	**1.74**	**320**	Pn	**Pn**	**07 43 31.4**	**+1.0**
THR9	**Santorini-Faro**	**1.77**	**319**	P	**Pb**	**07 43 32.5**	**-1.2**
THR9	**Santorini-Faro**	**1.77**	**319**	Pn	**Pn**	**07 43 31.9**	**+1.2**
SNT1	**Gialos, Santor**	**1.77**	**322**	P	**Pn**	**07 43 31.7**	**+0.9**
SNT1				S	**Sn**	**07 43 53.1**	**+0.6**
	comp=E,7μm,0.9s						
THR7	**Fira-Santorini**	**1.78**	**322**	P	**Pb**	**07 43 32.7**	**-1.2**
THR7	**Fira-Santorini**	**1.78**	**322**	P	**Pn**	**07 43 32.1**	**+1.2**
SNT5	**Nea Kammeni, S**	**1.78**	**321**	P	**Pn**	**07 43 31.9**	**+1.0**
THR3	**Thira Island,**	**1.78**	**321**	P	**Pn**	**07 43 32.3**	**+1.4**
THR3	**Thira Island,**	**1.78**	**321**	P	**Pn**	**07 43 32.1**	**+1.2**
THT2	**Imerovigli**	**1.79**	**322**	P	**Pn**	**07 43 32.5**	**+1.4**
THT2	**Imerovigli**	**1.79**	**322**	P	**Pn**	**07 43 32.2**	**+1.1**
THT2				S	**Sn**	**07 43 53.9**	**+0.9**
	comp=E,6μm,1.3s						
THT2	**Imerovigli**	**1.79**	**322**	PN	**Pb**	**07 43 32.6**	**-1.5**
THR2	**Thira island,**	**1.79**	**323**	P	**Pb**	**07 43 33.9**	**-0.3**
THR5	**Thira Island,**	**1.82**	**320**	P	**Pn**	**07 43 32.8**	**+1.4**
THR5	**Thira Island,**	**1.82**	**320**	P	**Pn**	**07 43 32.6**	**+1.4**
SAP3	**Santorini-Thir**	**1.83**	**321**	P	**Pn**	**07 43 33.0**	**+1.3**
SAP3	**Santorini-Thir**	**1.83**	**321**	P	**Pb**	**07 43 33.2**	**-1.6**
SAP4	**Santorini-Oia**	**1.85**	**322**	P	**Pb**	**07 43 34.3**	**-0.8**
PRNS	**Prines Rethymn**	**1.90**	**281**	P	**Pb**	**07 43 36.6**	**+0.6**
BODT	**Bodrum**	**2.07**	**12**	P	**Pn**	**07 43 35.1**	**+0.1**
BODT				S	**Sn**	**07 44 00.7**	**+0.8**
BDRM	**Kayabasi**	**2.10**	**14**	*i* P	**Pn**	**07 43 36.8**	**+1.4**
BDRM				*i* S	**Sb**	**07 44 05.1**	**0.0**
TURN	**Turunc**	**2.11**	**34**	*i* P	**Pn**	**07 43 37.1**	**+1.8**
TURN				*i* S	**Sb**	**07 44 03.8**	**-1.3**
TURN				IAML		07 44 14.0	
	comp=E,896nm,0.7s						
TURN				IAML		07 44 14.0	
	comp=N,911nm,0.6s						
TURN	**Turunc**	**2.11**	**34**	PN	**Pn**	**07 43 37.2**	**+1.8**
YKAV	**Yalikavak-Bodr**	**2.13**	**11**	PN	**Pn**	**07 43 36.5**	**+0.8**
VAM	**Vamos**	**2.15**	**281**	P	**Pb**	**07 43 39.4**	**-0.9**
VAM				AML	AML	07 44 20.8	
	comp=E,4786μm,0.6s						
VAM				AML	AML	07 44 22.4	
	comp=N,5952μm,0.5s						
VAM	**Vamos**	**2.15**	**281**	P	**Pb**	**07 43 39.6**	**-0.7**
VAM	**Vamos**	**2.15**	**281**	P	**Pb**	**07 43 39.6**	**-0.7**
GVDS	**Gavdos**	**2.23**	**266**	P	**Pb**	**07 43 40.5**	**-1.0**
GVDS	**Gavdos**	**2.23**	**266**	PN	**Pb**	**07 43 40.9**	**-0.6**
GVD	**Gavdhos**	**2.23**	**266**	P	**Pb**	**07 43 40.4**	**-1.1**
GVD	**Gavdhos**	**2.23**	**266**	PN	**Pb**	**07 43 40.7**	**-0.8**
APE	**Apeiranthos**	**2.28**	**334**	P	**Pn**	**07 43 38.6**	**+0.7**
APE				AML	AML	07 44 10.7	
	comp=E,4816μm,0.6s						
APE				AML	AML	07 44 13.6	
	comp=N,5156μm,0.6s						
APE	**Apeiranthos**	**2.28**	**334**	P	**Pn**	**07 43 38.5**	**+0.7**
APE				S	**Sn**	**07 44 05.4**	**+0.4**
	comp=N,2μm,0.6s						
APE	**Apeiranthos**	**2.28**	**334**	⇓P	**Pn**	**07 43 39.3**	**+1.5**
APE	**Apeiranthos**	**2.28**	**334**	PN	**Pn**	**07 43 38.8**	**+1.0**
APE	**Apeiranthos**	**2.28**	**334**	⇑P	**Pn**	**07 43 38.4**	**+0.5**
IMMV	**Iera Moni Meta**	**2.34**	**281**	P	**Pb**	**07 43 42.0**	**-1.4**
IMMV	**Iera Moni Meta**	**2.34**	**281**	PN	**Pb**	**07 43 42.0**	**-1.4**

DALY Dalyan (Mula) 2.34 40 *i* P **Pn** 07 43 40.6 +2.0
DALY *i* S **Sb** 07 44 15.7 +3.8
DALY IAML 07 44 25.0
comp=N,778nm,0.6s
DALY IAML 07 44 26.0
comp=E,643nm,0.7s
DALY Dalyan (Mula) 2.34 40 PN **Pn** 07 43 40.8 +2.2
YER Yerkesik 2.43 29 P **Pn** 07 43 41.1 +1.2
YER S **Sn** 07 44 10.3 +1.6
YER Yerkesik 2.43 29 P **Pn** 07 43 41.1 +1.2
YER S **Sn** 07 44 10.3 +1.6
YER Yerkesik 2.43 29 PN **Pn** 07 43 41.5 +1.6
DDIM Aydin, Didim 2.45 8 *i* P **Pn** 07 43 42.6 +2.4
DDIM *i* S **Sb** 07 44 20.7 +5.6
DDIM IAML 07 44 21.0
comp=E,1μm,0.8s
DDIM IAML 07 44 30.0
comp=N,1μm,0.7s
FETY Fethiye 2.46 49 P **Pn** 07 43 40.5 +0.2
KSL Kastellorizon 2.54 63 P **Pn** 07 43 42.2 +0.9
KSL AML AML 07 44 34.3
comp=E,967μm,0.8s
KSL AML AML 07 44 38.7
comp=N,835μm,0.8s
KSL Kastellorizon 2.54 63 P **Pn** 07 43 42.5 +1.2
KSL S **Sb** 07 44 14.6 -3.0
KSL Kastellorizon 2.54 63 ⇑P **Pn** 07 43 42.1 +0.8
MULA Mugla, Merkez- 2.55 29 *i* P **Pn** 07 43 43.8 +2.2
MULA *i* S **Sn** 07 44 14.3 +2.6
MULA IAML 07 44 20.0
comp=E,497nm,0.7s
MHLO Agia Marina, M 2.55 311 P **Pb** 07 43 44.3 -2.8
MHLO AML AML 07 44 26.6
comp=N,10128μm,0.6s
MHLO AML AML 07 44 27.2
comp=E,8402μm,0.6s
MHLO Agia Marina, M 2.55 311 P **Pb** 07 43 44.5 -2.6
MHLO S **Sn** 07 44 13.0 +1.3
comp=E,5μm,0.6s
KNDR Palaiochora Ch 2.55 276 P **Pb** 07 43 45.5 -1.6
KNDR Palaiochora Ch 2.55 276 PN **Pb** 07 43 45.7 -1.4
MHLA Plaka, Milos I 2.58 312 P **Pb** 07 43 45.1 -2.3
MHLA AML AML 07 44 27.4
comp=E,5966μm,0.9s
MHLA AML AML 07 44 49.9
comp=N,3808μm,1.2s
AKAS Kas 2.59 62 *i* P **Pn** 07 43 41.9 -0.3
AKAS *i* S **Sn** 07 44 11.8 -1.1
AKAS Kas 2.59 62 P **Pn** 07 43 42.5 +0.3
AKAS Sn **Sn** 07 44 12.0 -0.8
SMG Samos 2.68 1 P **Pn** 07 43 44.1 +0.8
SMG AML AML 07 44 34.8
comp=E,1921μm,0.7s
SMG AML AML 07 44 36.1
comp=N,1665μm,0.6s
SMG Samos 2.68 1 P **Pn** 07 43 44.1 +0.8
GCAM G?zelcaml? 2.69 8 *i* P **Pn** 07 43 45.9 +2.5
GCAM *i* S **Sb** 07 44 20.2 -1.8
GCAM IAML 07 44 24.0
comp=N,516nm,0.9s
GCAM G?zelcaml? 2.69 8 PN **Pn** 07 43 45.2 +1.8
AYDN Tasoluk 2.77 18 *i* P **Pn** 07 43 46.4 +1.8
AYDN *i* S **Sn** 07 44 16.4 -0.7
CAEL Denizli, Camel 2.93 44 *i* P **Pn** 07 43 48.6 +1.8
CAEL *i* S **Sb** 07 44 35.0 +6.1
CAEL IAML 07 44 49.0
comp=E,2μm,0.8s
CAEL IAML 07 45 00.0
comp=N,2μm,1.3s
ANKY Antikythira Is 2.97 287 P **Pn** 07 43 49.4 +2.1
TAVA DENIZLI_Tavas 2.98 35 *i* P **Pn** 07 43 49.2 +1.8
TAVA *i* S **Sb** 07 44 29.1 -1.3
AYDB Zeytinkoy-Aydi 3.04 17 PN **Pn** 07 43 50.2 +1.8
ELL Elmali 3.06 55 P **Pn** 07 43 50.8 +2.2
ELL Elmali 3.06 55 PN **Pn** 07 43 51.2 +2.6
ELL Elmali 3.06 55 **Pn** 07 43 50.8 +2.2
ELL Elmali 3.06 55 P **Pn** 07 43 50.0 +1.4
GOLH Golhisar 3.15 45 *i* P **Pn** 07 43 51.8 +2.0
GOLH *i* S **Sb** 07 44 40.7 +5.5
GOLH IAML 07 44 46.0
comp=N,507nm,0.7s
AKUM Antalya-Kumluc 3.17 65 *i* P **Pn** 07 43 51.0 +1.0
AKUM *i* S Sn 07 44 16.6 -10
ZEYE Izmir, Urla-Ze 3.21 356 *i* P **Pn** 07 43 48.6 -2.0
ZEYE *i* S **Sb** 07 44 44.1 +7.1
KTHA Kythira Island 3.27 293 P **Pn** 07 43 53.5 +2.0
KTHA Kythira Island 3.27 293 PN **Pn** 07 43 53.9 +2.4
KTHR Kythira 3.32 293 P **Pn** 07 43 54.1 +2.0
URLA Izmir 3.33 357 *i* P **Pn** 07 43 51.3 -0.9
URLA *i* S **Sn** 07 44 33.8 +2.9
URLA IAML 07 44 57.0
comp=N,390nm,0.9s
URLA Izmir 3.33 357 PN **Pn** 07 43 53.5 +1.2
CHOS Chios island 3.41 350 P **Pn** 07 43 54.0 +0.7
CHOS Chios island 3.41 350 PN **Pn** 07 43 54.8 +1.5
VLI Veliai 3.56 299 P **Pn** 07 43 56.7 +1.4
ANTB Antalya 3.65 58 PN **Pn** 07 43 59.9 +3.3
VLY Voula,Athens 3.71 320 P **Pn** 07 43 59.6 +2.1
MANT Manisa 3.74 22 *i* P **Pn** 07 43 59.3 +1.3
MANT *i* S **Sn** 07 44 40.9 -0.4
MANT Manisa 3.74 22 **Pn** 07 43 59.3 +1.3
MANT Sn **Sn** 07 44 41.1 -0.1
BRDR BURDUR-Merkez 3.75 44 *i* P **Pn** 07 44 01.0 +3.0
BRDR *i* S **Sn** 07 44 46.2 +4.8
SLUM Salum 3.77 201 P **Pn** 07 44 00.2 +2.0
baz=205
SLUM AMP 07 44 00.0
baz=205
SLUM S **Sn** 07 44 42.8 +1.2
baz=205
KRND KRANIDI 3.77 310 P **Pn** 07 44 00.9 +2.7
KULA Kula-Manisa 3.79 23 P **Pn** 07 43 59.8 +1.2
ATHU Athens Univers 3.80 321 P **Pn** 07 44 00.7 +2.0
ATHU S **Sn** 07 44 42.4 -0.2
DION Dionisos Attik 3.81 324 P **Pn** 07 44 01.5 +2.6
BUCA Burdur, Bucak- 3.82 52 *i* P **Pn** 07 44 02.1 +3.2
BUCA *i* S **Sb** 07 45 00.5 +6.1
ATH Athens Observa 3.84 321 P **Pn** 07 44 02.6 +3.3
EPID Epidavros 3.93 312 P **Pn** 07 44 03.0 +2.5
OSC1 CSNet OBS 1 4.02 111 P **Pn** 07 44 01.6 -0.1
OSC1 S **Sn** 07 44 49.5 +1.7
DKL Dikili 4.04 1 PN **Pn** 07 44 03.9 +2.0
USAK Uak-Merkez 4.09 25 *i* P **Pn** 07 44 04.2 +1.4
EREA Eretria 4.09 327 P **Pn** 07 44 05.0 +2.3
ISP Isparta 4.10 46 P **Pn** 07 44 03.8 +0.8
ISP Isparta 4.10 46 PN **Pn** 07 44 05.9 +2.9
ISP Isparta 4.10 46 Pn **Pn** 07 44 03.8 +0.8
VILL Villia 4.20 319 P **Pn** 07 44 06.5 +2.3
SIGR SIGRI 4.24 350 P **Pn** 07 44 05.6 +0.8
SIGR SIGRI 4.24 350 PN **Pn** 07 44 06.2 +1.4
LOUT Loutraki 4.26 315 P **Pn** 07 44 07.9 +2.8
VLX Vlachokerasia 4.26 305 P **Pn** 07 44 07.5 +2.3
LTK Loutraki 4.29 315 P **Pn** 07 44 08.5 +3.0
ITM Ithomi 4.49 300 P **Pn** 07 44 10.7 +2.6
ITM Ithomi 4.49 300 PN **Pn** 07 44 11.8 +3.7
ITM Ithomi 4.49 300 Pn **Pn** 07 44 10.5 +2.4
AKMS Akamas 4.55 89 P **Pn** 07 44 09.1 +0.1
AKMS AML AML 07 45 01.3
comp=N,2.6nm,0.9s
AKMS AML AML 07 45 02.8
comp=N,3.1nm,0.3s
LKR Lokris 4.72 321 P **Pn** 07 44 13.8 +2.4
ATAL Atalanti 4.74 322 P **Pn** 07 44 14.2 +2.5
ALFC Alefka 4.76 87 ⇑P **Pn** 07 44 11.7 -0.3
ALFC AML AML 07 45 06.0
comp=N,4.9nm,0.6s
ALFC AML AML 07 45 06.1
comp=N,2.6nm,0.5s
SMIA Simia 4.80 324 P **Pn** 07 44 15.0 +2.6
KLV Kalavryta, Ach 4.80 310 P **Pn** 07 44 15.1 +2.6
EZN Ezine 4.80 356 P **Pn** 07 44 14.5 +2.0
OSC2 CSNet OBS 4 4.95 112 S **Sn** 07 45 12.9 +2.2
AXAR Agios Charalam 4.99 320 P **Pn** 07 44 18.2 +3.2
LEF Lefka 5.00 87 ⇑P **Pn** 07 44 16.2 +0.9
SZAC Souni 5.01 91 ⇑P **Pn** 07 44 15.4 0.0
LAKA Lakka 5.03 311 P **Pn** 07 44 18.8 +3.2
DRO Drossia 5.03 307 P **Pn** 07 44 18.8 +3.2
DRO S **Sn** 07 45 14.7 +2.0
comp=N,700nm,0.9s
TRIZ Trizonia 5.05 313 P **Pn** 07 44 18.9 +3.1
XOR Xorichti 5.20 328 P **Pn** 07 44 20.4 +2.5
ANX Ano Chora 5.28 314 P **Pn** 07 44 22.7 +3.5

ASGA Asgata 5.31 91 P **Pn** 07 44 20.4 +0.9
AGG Agios Georgios 5.35 319 P **Pn** 07 44 22.6 +2.6
AGG Agios Georgios 5.35 319 P **Pn** 07 44 22.6 +2.6
AGG Agios Georgios 5.35 319 **Pn** 07 44 22.6 +2.6
CSS Mathiatis 5.37 89 Pn **Pn** 07 44 21.2 +0.9
CSS Mathiatis 5.37 89 ⇑P **Pn** 07 44 20.6 +0.4
CSS AML AML 07 45 28.9
comp=N,0.7nm,0.8s
CSS AML AML 07 45 31.3
comp=N,0.4nm,0.8s
EDC Edincik 5.38 9 P **Pn** 07 44 25.3 +4.9
MAKR Makrakomi, Fth 5.45 318 P **Pn** 07 44 24.5 +3.1
PAIG Paliouri 5.48 334 P **Pn** 07 44 25.3 +3.5
PAIG pmax pmax
comp=Z,47nm,0.7s
EVR Evrytania 5.56 316 P **Pn** 07 44 24.6 +1.6
MVOU Mavrovouni 5.61 88 ⇑P **Pn** 07 44 24.4 +0.8
SWA2 5.88 191 P **Pn** 07 44 28.6 +1.3
baz=194
ALN Alexandroupoli 5.89 354 P **Pn** 07 44 28.2 +0.8
ALN Alexandroupoli 5.89 354 Pn **Pn** 07 44 28.2 +0.8
THL Klokotos Trika 5.92 321 P **Pn** 07 44 31.2 +3.5
LIT Litokhoron 6.11 327 P **Pn** 07 44 29.7 -0.7
LIT Litokhoron 6.11 327 **Pn** 07 44 29.6 -0.7
THE Thessaloniki 6.36 333 P **Pn** 07 44 37.4 +3.6
THE pmax pmax
comp=Z,56nm,1.1s
SOH Sokhos 6.39 336 P **Pn** 07 44 37.9 +3.6
SOH pmax pmax
comp=Z,24nm,1.4s
MDUB Mudurnu 6.46 31 Pn **Pn** 07 44 34.1 -1.2
SRS Serrai 6.58 338 P **Pn** 07 44 40.2 +3.3
SRS pmax pmax
comp=Z,32nm,1.0s
RYAN Fayoum 6.62 153 AMP 07 45 00.0
baz=155
ANTO Ankara 6.79 43 P **Pn** 07 44 40.6 +0.7
ANTO Ankara 6.79 43 Pn **Pn** 07 44 40.6 +0.7
KNT Kendrikon 6.85 335 P **Pn** 07 44 44.5 +3.9
KNT pmax pmax
comp=Z,40nm,1.0s
GRG Griva 6.86 331 P **Pn** 07 44 44.0 +3.3
GRG pmax pmax
comp=Z,78nm,1.1s
VAY Valandovo 7.11 333 *i* P **Pn** 07 44 48.2 +4.1
FNA Florina 7.16 325 P **Pn** 07 44 45.8 +0.8
FNA Florina 7.16 325 **Pn** 07 44 45.8 +0.8
BR131 Keskin Array S 7.19 47 P **Pn** 07 44 45.1 -0.3
BR131 Keskin Array S 7.19 47 **Pn** 07 44 45.1 -0.3
BRTR Keskin Array B 7.19 47 Pn **Pn** 07 44 46.8 +1.4
comp=Z,0.3nm,0.3s,baz=218,slow=14,SNR=7.2
BRTR Sn **Sn** 07 46 06.1 -0.1
comp=Z,0.2nm,0.3s,baz=215,slow=25,SNR=1.8
BRTR LR LR 07 48 32.6
comp=Z,417nm,21.3s,baz=244,slow=46
BRTR Keskin Array B 7.19 47 *i* P **Pn** 07 44 49.7 +4.3
BRTR pmax pmax
comp=Z,2.0nm,0.6s
BRTR Keskin Array B 7.19 47 **Pn** 07 44 45.1 -0.3
PLD Plovdiv 7.25 348 P **Pn** 07 44 50.1 +4.0
PLD pmax pmax
comp=Z,2.0nm,1.2s
MMAI Mount Meron Ar 7.43 103 Pn **Pn** 07 44 48.9 +0.2
comp=Z,4.8nm,0.3s,baz=287,slow=11,SNR=7.7
MMAI Sn **Sn** 07 46 09.6 -2.4
comp=Z,16nm,0.3s,baz=299,slow=28,SNR=7.6
STIP Stip 7.57 333 *i* P **Pn** 07 44 54.2 +3.7
OHR Ohrid 7.69 324 *i* P Pn 07 44 59.9 +7.7
HFRF Wahat Farafira 7.96 170 P **Pn** 07 44 56.9 +1.0
baz=172
VTS Vitosha 8.07 341 ⇑P **Pn** 07 45 00.5 +3.1
VTS Vitosha 8.07 341 P **Pn** 07 44 55.5 -2.0
VTS Vitosha 8.07 341 **Pn** 07 44 55.5 -2.0
SKO Skopje 8.10 330 *i* P Pn 07 45 02.9 +5.2
SCTE Santa Cesarea 8.31 310 Pn **Pn** 07 45 00.1 -0.4
EIL Elat 8.73 125 Pn **Pn** 07 45 05.5 -0.9
comp=Z,2.7nm,0.3s,baz=334,slow=4.2,SNR=21
EIL Sn **Sn** 07 46 37.3 -6.6
comp=Z,10nm,0.3s,baz=307,slow=16,SNR=8.5
TR2 Tor 2 8.87 136 P **Pn** 07 45 07.1 -1.2
baz=138
HKAT Jabal Katrina 8.92 135 P **Pn** 07 45 07.8 -1.4
baz=136
TIP Timpagrande 9.02 300 ⇑P **Pn** 07 45 09.4 -1.0
TIP Timpagrande 9.02 300 **Pn** 07 45 10.0 -0.4
TR1 Tor 1 9.29 137 P **Pn** 07 45 12.3 -1.8
baz=138
CEL Celeste 9.33 293 Pn **Pn** 07 45 14.1 -0.6
PDG Podgorica 9.45 324 ⇑P **Pn** 07 45 17.9 +1.7
PDG Podgorica 9.45 324 Pn **Pn** 07 45 16.9 +0.8
BOVS Bovan 9.45 337 ⇑P **Pn** 07 45 19.5 +3.2
TIRR Tirgusor 9.50 7 P **Pn** 07 45 18.4 +1.5
TIRR Tirgusor 9.50 7 Pn **Pn** 07 45 18.4 +1.5
HHRG Al Ghardaqah 9.71 141 P **Pn** 07 45 20.8 +0.9
baz=143
TPGR Topolog 9.90 7 ⇑P **Pn** 07 45 26.4 +4.1
CFR Carcaliu 10.19 5 ⇑P **Pn** 07 45 29.2 +2.8
CFR Carcaliu 10.19 5 P **Pn** 07 45 26.6 +0.3
CFR pmax pmax
comp=Z,10.0nm,1.0s
RAFF Raffo Rosso 10.29 286 **Pn** 07 45 28.2 +0.4
VAE Valguarnera 10.29 287 Sn **Sn** 07 47 17.2 -5.1
comp=Z,1.1nm,0.3s,baz=9.9,slow=19,SNR=1.5
ARR Arges 10.46 352 ⇓P **Pn** 07 45 32.7 +2.6
MLR Muntele Rosu 10.47 357 Pn **Pn** 07 45 33.4 +3.1
comp=Z,0.5nm,0.3s,baz=185,slow=5.4,SNR=7.8
MLR LR LR 07 50 23.9
comp=Z,609nm,18.5s,baz=191,slow=43
MLR Muntele Rosu 10.47 357 ⇑P **Pn** 07 45 34.0 +3.7
MLR Muntele Rosu 10.47 357 P **Pn** 07 45 34.0 +3.7
VOIR 10.48 353 ⇑P **Pn** 07 45 33.2 +2.7
VOIR 10.48 353 P **Pn** 07 45 33.1 +2.7
VOIR pmax pmax
comp=Z,7.0nm,1.0s
MDVR Moldovita 10.49 340 ⇑P **Pn** 07 45 33.3 +2.8
GZR Gura Zlata 10.80 345 ⇑P **Pn** 07 45 37.0 +2.3
VRI Vrincioaia 10.83 360 ⇑P **Pn** 07 45 39.8 +4.6
VRI Vrincioaia 10.83 360 P **Pn** 07 45 39.7 +4.6
SGRT San Giovanni R 10.96 311 Pn **Pn** 07 45 36.4 -0.6
CORL Corleone 11.23 289 Pn **Pn** 07 45 42.4 +1.7
BZS Buzias 11.29 341 ⇑P **Pn** 07 45 44.8 +3.4
BZS Buzias 11.29 341 P **Pn** 07 45 45.9 +4.5
BZS pmax pmax
comp=Z,6.0nm,0.9s
BIZ Bicaz 11.91 358 ⇓P **Pn** 07 45 54.1 +4.2
INTR Introdacqua 12.26 308 Pn **Pn** 07 45 53.0 -1.8
BURAR Bucovina Array 12.63 355 ⇓P Pn 07 46 04.7 +4.8
BURAR Bucovina Array 12.63 355 P Pn 07 46 04.6 +4.8
BURAR Bucovina Array 12.63 355 **Pn** 07 45 57.4 -2.4
NRCA Norcia 13.18 310 Pn **Pn** 07 46 08.4 +1.1
GEVA Gevas 13.46 71 Pn **Pn** 07 46 09.7 -1.6
KMPD K-Podol'skiy 13.53 359 P **P** 07 46 17.0 -3.8
PSZ Piszkesteto 13.87 340 P **Pn** 07 46 14.6 -2.1
PSZ Piszkesteto 13.87 340 Pn **Pn** 07 46 14.6 -2.1
KEST Kesra 14.25 278 Pn **Pn** 07 46 23.1 +1.1
comp=Z,0.2nm,0.3s,baz=219,slow=2.8,SNR=4.2
KEST LR LR 07 52 28.7
comp=Z,81nm,20.7s,baz=344,slow=40
CRVS Cervenica-Dubn 14.41 346 *e*P **P** 07 46 30.5 -0.2
CRVS Cervenica-Dubn 14.41 346 *e*P **P** 07 46 30.5 -0.2
VSL Villasalto 14.56 293 Pn **Pn** 07 46 28.6 +2.5
CASP Castiglione de 14.61 307 Pn **Pn** 07 46 28.1 +1.3
SOKA Soboth 14.63 326 *e*Pn **P** 07 46 32.7 -0.4
comp=Z,1.2nm,0.2s
VYHS Vyhne 14.69 339 *e*P **P** 07 46 34.8 +1.0
VYHS Vyhne 14.69 339 *e*P **P** 07 46 34.8 +1.0
OBKA Obir 14.73 325 *e*Pn **P** 07 46 31.4 -2.8
comp=Z,1.3nm,0.3s
MODS Modra-Piesok 15.09 335 *e*P P 07 46 45.8 +7.6
KIV Kislovodsk 15.15 49 *e*P **Pn** 07 46 32.6 -1.5
KIV pmax pmax
comp=Z,33nm,1.0s
KIV MLR MLR
comp=Z,145nm,12.0s
KBZ Khabaz 15.17 50 Pn **P** 07 46 37.4 -1.6
comp=Z,0.1nm,0.3s,baz=258,slow=9.2,SNR=8.5
KBZ LR LR 07 54 13.0
comp=Z,98nm,20.3s,baz=257,slow=44
JAVC Velka Javorina 15.38 337 *e*PN **P** 07 46 40.6 -0.8
ZEI Tsey 15.39 55 *e*P **P** 07 46 41.7 -0.1
ZEI pmax pmax
comp=Z,18nm,1.1s
ZOU Zoufplan 15.53 322 Pn **Pn** 07 46 39.7 +0.5

ZOU IAmb IAmb 07 46 43.2
comp=Z,12nm,1.1s
KBA Koelnbreinsper 15.71 324 *e*Pn **P** 07 46 45.1 -0.2
comp=Z,5.1nm,0.7s
KBA Koelnbreinsper 15.71 324 P **P** 07 46 45.6 +0.3
KBA pmax pmax
comp=Z,7.0nm,0.7s
KIEV Kiev 15.76 6 P **P** 07 46 44.0 -1.5
AKASG Malin Array Be 15.77 6 Pn **Pn** 07 46 41.4 -0.5
comp=Z,1.8nm,0.3s,baz=194,slow=11,SNR=23
AKASG Malin Array Be 15.77 6 P **Pn** 07 46 42.4 +0.5
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 15.77 6 **Pn** 07 46 42.4 +0.5
AKBB Malin Array Si 15.77 6 ⇑*i*P **P** 07 46 44.1 -1.5
AKBB Malin Array Si 15.77 6 Pn **Pn** 07 46 40.4 -1.6
AKBB IAmb IAmb 07 46 47.8
comp=Z,8.2nm,0.8s
CTI Castel Tesino 15.90 318 P **Pn** 07 46 43.8 0.0
CTI pmax pmax
comp=Z,11nm,0.9s
CTI Castel Tesino 15.90 318 Pn **Pn** 07 46 43.8 0.0
CTI IAmb IAmb 07 46 51.5
comp=Z,10nm,0.9s
KRUC Moravsky 15.98 334 *e*PN **P** 07 46 48.3 +0.2
VRAC Vranov 16.12 335 Pn **Pn** 07 46 46.7 +0.1
comp=Z,0.3nm,0.3s,baz=130,slow=9.4,SNR=3.4
VRAC LR LR 07 52 57.2
comp=Z,179nm,19.9s,baz=156,slow=37
VRAC Vranov 16.12 335 *e*PN **P** 07 46 48.6 -1.1
MORC Moravsky Berou 16.23 338 *e*PN **Pn** 07 46 47.4 -0.5
MORC Moravsky Berou 16.23 338 P **Pn** 07 46 45.4 -2.5
MORC pmax pmax
comp=Z,6.0nm,0.7s
MORC Moravsky Berou 16.23 338 P **Pn** 07 46 45.4 -2.5
WTTA Wattenberg 16.69 322 *e*Pn **P** 07 46 56.7 +0.6
comp=Z,1.3nm,0.2s
WTTA Wattenberg 16.69 322 P **Pn** 07 46 53.5 -0.4
WTTA pmax pmax
comp=Z,9.0nm,1.3s
WATA Walderalm 16.77 322 *e*Pn **P** 07 46 58.2 +1.3
comp=Z,3.1nm,0.2s
GEC2 GERESS Array S 16.86 329 P **Pn** 07 46 53.5 -2.5
GERES GERESS Array B 16.86 329 Pn **Pn** 07 46 54.6 -1.4
comp=Z,0.4nm,0.3s,baz=135,slow=13,SNR=24
GERES LR LR 07 54 47.0
comp=Z,166nm,19.5s,baz=120,slow=42
GERES GERESS Array B 16.86 329 P **Pn** 07 46 55.2 -0.8
GERES GERESS Array B 16.86 329 P **Pn** 07 46 55.2 -0.8
SQTA Sankt Quirin 16.88 321 *e*Pn **P** 07 46 59.4 +1.3
comp=Z,4.5nm,0.5s
FETA Feichten 17.00 320 *e*Pn **P** 07 46 58.8 -0.7
comp=Z,4.5nm,0.7s
MOTA Moosalm 17.01 321 *e*Pn **Pn** 07 46 58.5 +0.5
comp=Z,0.8nm,0.2s
KHC Kasperske Hory 17.13 329 ⇓*i*P **P** 07 47 01.2 +0.4
KHC pmax pmax
comp=Z,42nm,1.6s
KHC Kasperske Hory 17.13 329 *e*P **Pn** 07 46 58.9 -0.4
KHC Kasperske Hory 17.13 329 P **Pn** 07 46 57.9 -1.4
KHC IAmb IAmb 07 47 01.9
comp=Z,24nm,1.5s
RETA Reutte 17.28 321 *e*Pn **P** 07 47 02.4 -0.2
comp=Z,2.1nm,0.3s
DAVOX Davos/Dischmat 17.31 318 P **Pn** 07 47 02.2 +0.4
comp=Z,0.4nm,0.3s,baz=149,slow=5.4,SNR=2.5
DAVOX LR LR 07 55 07.7
comp=Z,163nm,18.3s,baz=134,slow=42
SBF Sospel 17.33 306 *e*P **Pn** 07 47 02.4 +0.5
SBF pmax pmax
comp=Z,33nm,0.8s
PRU Pruhonice 17.43 333 *e*P **Pn** 07 47 02.8 -0.2
PRU MLR MLR
comp=Z,300nm,15.6s
PRU Pruhonice 17.43 333 *e*P **Pn** 07 47 02.8 -0.2
PRU AMS AMS 07 54 40.0
comp=Z,300nm,15.6s
TUE Stuetta 17.43 316 P **Pn** 07 47 02.8 -0.5
WET Wettzell 17.44 328 P **Pn** 07 47 02.7 -0.5
WET pmax pmax
comp=Z,8.0nm,1.0s
KSP Ksiaz 17.55 337 P **Pn** 07 47 04.3 -0.1
KSP pmax pmax
comp=Z,8.0nm,1.1s
DAVA Damuels 17.62 319 *e*Pn **Pn** 07 47 05.7 +0.1
comp=Z,5.6nm,0.5s
FRF La Foret Royal 17.74 305 *e*P **Pn** 07 47 06.8 0.0
FRF pmax pmax
comp=Z,14nm,0.9s
LMR La Mourre 17.75 304 *e*P **Pn** 07 47 06.6 -0.4
LMR pmax pmax
comp=Z,20nm,1.2s
PVCC Panska Ves 17.86 334 P **P** 07 47 08.9 +0.1
PVCC pmax pmax
comp=Z,8.0nm,1.0s
MBDF Montbardon 18.12 308 *e*P **Pn** 07 47 09.1 -2.6
MBDF pmax pmax
comp=Z,6.0nm,0.6s
BNI Bardonecchia 18.32 309 P **P** 07 47 13.2 -0.9
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 18.32 309 P **P** 07 47 13.2 -0.9
BRG Berggiesshubel 18.37 333 P **P** 07 47 13.7 -0.8
BRG pmax pmax
comp=Z,9.0nm,0.8s
BRG Berggiesshubel 18.37 333 *e*P **P** 07 47 13.4 -1.0
BRG Amp 07 47 15.4
comp=Z,7.2nm,0.8s
LPG La Plagne 18.48 311 *e*P **Pn** 07 47 16.1 -0.1
LPG pmax pmax
comp=Z,8.0nm,0.6s
VSR Storozhevoye 18.49 25 *e*P **Pn** 07 47 19.9 +3.9
VSR pmax pmax
comp=Z,7.0nm,0.6s
LPL La Plagne 18.50 311 *e*P **P** 07 47 15.4 -0.7
LPL pmax pmax
comp=Z,4.0nm,0.4s
SENIN Lac Senin/Sane 18.57 313 P **P** 07 47 15.9 -1.0
SENIN IAmb IAmb 07 47 24.1
comp=Z,16nm,0.6s
GRA1 Grafenberg Arr 18.57 327 P **P** 07 47 14.1 -2.6
GRA1 IAmb IAmb 07 47 25.0
comp=Z,13nm,0.7s
GRF Grafenberg Arr 18.57 327 P **P** 07 47 14.1 -2.6
GRF pmax pmax
comp=Z,13nm,0.7s
GRFO Grafenberg 18.57 327 P **P** 07 47 14.0 -2.7
GRFO pmax pmax
comp=Z,13nm,0.7s
GRFO Grafenberg 18.57 327 P **P** 07 47 14.0 -2.7
GRFO IAmb IAmb 07 47 24.9
comp=Z,13nm,0.7s
ORIF Oris-en-Rattie 18.78 308 *e*P **Pn** 07 47 19.5 -0.2
ORIF pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 19.07 333 ⇑*i*P **P** 07 47 21.9 -0.2
comp=Z,8.0nm,0.8s
CLL *i* sP **sP** 07 47 32.9 +0.4
CLL Collm 19.07 333 ⇑*i*P **P** 07 47 21.9 -0.2
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 19.07 333 P **P** 07 47 20.5 -1.6
BFO Black Forest 19.09 320 P **P** 07 47 21.1 -1.3
BFO pmax pmax
comp=Z,5.0nm,0.9s
BFO Black Forest 19.09 320 P **P** 07 47 21.1 -1.3
MOX Moxa 19.11 329 P **Pn** 07 47 24.9 +1.4
MOX pmax pmax
comp=Z,7.0nm,0.8s
VRH Novokhopyorsk 19.43 29 *e*P **P** 07 47 24.6 -1.5
VRH pmax pmax
comp=Z,60nm,1.5s
VIVF Saint-Julien-l 19.54 307 *e*P **P** 07 47 26.5 -0.9
VIVF pmax pmax
comp=Z,9.0nm,0.8s
LPSR Galich'ya Gora 19.58 22 *e*P **P** 07 47 28.0 +0.3
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ECH Echery 19.65 318 P **P** 07 47 27.7 -0.8
ECH pmax pmax
comp=Z,6.0nm,0.9s
ECH Echery 19.65 318 P **P** 07 47 27.7 -0.8
SSB Saint Sauveur 19.79 308 P **P** 07 47 29.4 -0.7
SSB pmax pmax
comp=Z,8.0nm,0.9s

SSB	**Saint Sauveur**	**19.79**	**308**	P	**P**	07 47 29.4	**-0.7**
SSB				IAmb	IAmb	07 47 30.6	
	comp=Z,8.1nm,0.9s						
NACGM	**Naroch**	**19.88**	**360**	*i* P	**P**	**07 47 28.6**	**-2.3**
NACGM				*i* P	**P**	**07 47 28.6**	**-2.3**
NACGM				*i* P	**P**	**07 47 28.6**	**-2.3**
NACGM				*i* PPP	PPP	07 47 48.1	
NACGM				*i* S	S	07 50 55.7	-17
NACGM				*i* SSS	SSS	07 51 35.5	
NACGM				*i* LQ	LQ	07 53 10.3	
NACGM				*i* LR	LR	07 54 22.9	
RAYN	**Ar Rayn**	**19.91**	**120**	P	**Pn**	**07 47 33.6**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
RAYN	**Ar Rayn**	**19.91**	**120**	P	**Pn**	**07 47 33.6**	**+0.3**
HAU	**Haudompre**	**19.98**	**317**	*e*P	**P**	**07 47 31.0**	**-1.1**
HAU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TNS	**Taunus Mts**	**20.23**	**324**	P	**P**	**07 47 34.0**	**-0.9**
TNS				pmax	pmax		
	comp=Z,13nm,0.9s						
MTLF	**Montolieu**	**20.72**	**301**	*e*P	**P**	**07 47 38.5**	**-1.7**
MTLF				pmax	pmax		
	comp=Z,82nm,2.0s						
LOR	**Lormes**	**21.07**	**312**	*e*P	**P**	**07 47 42.0**	**-1.9**
LOR				pmax	pmax		
	comp=Z,16nm,0.8s						
AVF	**Avril sur Loir**	**21.17**	**311**	*e*P	**P**	**07 47 44.3**	**-0.7**
AVF				pmax	pmax		
	comp=Z,21nm,0.9s						
OBN	**Obninsk**	**21.20**	**16**	*e*P	**P**	**07 47 46.5**	**+1.3**
OBN				*e*		07 48 08.0	
OBN				*e*PPP	PPP	07 48 14.4	
OBN				*e*		07 51 48.3	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,133nm,16.0s						
CAF	**Calviac**	**21.30**	**305**	*e*P	**P**	**07 47 49.2**	**+2.8**
CAF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BTNL	**Ternell**	**21.60**	**322**	*d*P	**P**	**07 47 49.2**	**-0.4**
MEM	**Membach**	**21.68**	**322**	*d*P	**P**	**07 47 50.0**	**-0.4**
MEM				*dx*	x	07 47 59.1	
TCF	**Toulx Ste Croi**	**21.69**	**309**	*e*P	**P**	**07 47 49.7**	**-0.9**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RJF	**Les Rejaudoux**	**21.79**	**306**	*e*P	**P**	**07 47 50.5**	**-1.1**
RJF				pmax	pmax		
	comp=Z,22nm,1.0s						
BCLA	**Clavier**	**21.92**	**321**	*d*P	**P**	**07 47 52.4**	**-0.6**
BCLA				*dx*	x	07 48 05.5	
GIVF	**Givet**	**21.99**	**320**	*e*P	**P**	**07 47 51.7**	**-2.0**
GIVF				pmax	pmax		
	comp=Z,24nm,1.1s						
BGES	**Gesves**	**22.01**	**321**	*d*P	**P**	**07 47 54.5**	**+0.6**
MOS	**Moscow**	**22.01**	**16**	*e*P	**P**	**07 47 53.7**	**-0.2**
DOU	**Dourbes**	**22.11**	**320**	*d*P	**P**	**07 47 53.4**	**-1.6**
DOU				*dx*	x	07 48 04.1	
DOU				*d*PnPn	**PnPn**	**07 48 18.8**	**+1.5**
TAM	**Tamanrasset**	**22.20**	**242**	P	**P**	**07 47 58.7**	**+2.3**
TAM				pmax	pmax		
	comp=Z,13nm,1.3s						
TAM	**Tamanrasset**	**22.20**	**242**	P	**P**	**07 47 58.7**	**+2.3**
TAM				IAmb	IAmb	07 48 01.1	
	comp=Z,13nm,1.3s						
BAIF	**Baives**	**22.29**	**319**	*e*P	**P**	**07 47 55.1**	**-1.9**
BAIF				pmax	pmax		
	comp=Z,28nm,1.1s						
ETSF	**Etsaut**	**22.60**	**299**	*e*P	**P**	**07 48 00.8**	**+0.3**
ETSF				pmax	pmax		
	comp=Z,17nm,1.4s						
BELG	**Belogornoye**	**22.84**	**34⇑**	*e*P	**P**	**07 48 05.5**	**+2.7**
BELG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FLN	**La Foliniere**	**24.34**	**313**	*e*P	**P**	**07 48 16.2**	**-1.2**
FLN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
GRR	**Gorron**	**24.42**	**312**	*e*P	**P**	**07 48 16.4**	**-1.7**
GRR				pmax	pmax		
	comp=Z,33nm,1.2s						
ESBB	**Sonseca Array**	**24.82**	**290**	P	**P**	**07 48 22.1**	**+0.3**
ESBB				IAmb	IAmb	07 48 22.2	
	comp=Z,5.6nm,0.7s						
ESDC	**Sonseca Array**	**24.82**	**290**	P	**P**	**07 48 21.1**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=82,slow=9.5,SNR=27						
ESDC	**Sonseca Array**	**24.82**	**290**	P	**P**	**07 48 21.4**	**-0.5**
PAB	**San Pablo**	**25.11**	**290**	P	**P**	**07 48 25.5**	**+0.9**
PAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
PAB	**San Pablo**	**25.11**	**290**	P	**P**	**07 48 25.4**	**+0.9**
PAB				IAmb	IAmb	07 48 26.8	
	comp=Z,7.7nm,1.1s						
GEYT	**Alibeck**	**25.30**	**74**	P	**P**	**07 48 25.6**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=271,slow=8.3,SNR=5.9						
GEYT	**Alibeck**	**25.30**	**74**	P	**P**	**07 48 26.0**	**-0.2**
GEYT				IAmb	IAmb	07 48 30.0	
	comp=Z,3.5nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**25.30**	**74**	P	**P**	**07 48 27.5**	**+1.3**
GYA0B				IAmb	IAmb	07 48 31.8	
	comp=Z,8.3nm,0.6s						
QUIF	**Quistinic**	**25.70**	**309**	*e*P	**P**	**07 48 28.5**	**-1.1**
QUIF				pmax	pmax		
	comp=Z,21nm,0.9s						
ROSF	**Rostrenen**	**25.91**	**310**	*e*P	**P**	**07 48 29.9**	**-1.6**
ROSF				pmax	pmax		
	comp=Z,35nm,1.2s						
MDT	**Midelt**	**26.09**	**274**	P	**P**	**07 48 33.3**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=67,slow=10,SNR=3.9						
FINES	**FINESS Array B**	**26.44**	**359**	P	**P**	**07 48 33.6**	**-2.6**
	comp=Z,2.1nm,0.6s,baz=163,slow=10,SNR=6.2						
FINES				PcP	**PcP**	**07 52 00.7**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=140,slow=3.3,SNR=3.5						
FINES	**FINESS Array B**	**26.44**	**359**	*i* P	**P**	**07 48 37.2**	**+1.0**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	**Hagfors**	**26.52**	**345**	P	**P**	**07 48 34.6**	**-2.4**
	comp=Z,3.5nm,0.8s,baz=110,slow=13,SNR=7.9						
HFS				LR	LR	08 00 48.4	
	comp=Z,270nm,18.0s,baz=144,slow=40						
PBRG	**Braganca**	**27.01**	**295**	*e*P	**P**	**07 48 40.8**	**-0.9**
KLMR	**Klimovskoe**	**27.11**	**14**	P	**P**	**07 48 39.5**	**-2.8**
KLMR				pmax	pmax		
	comp=Z,16nm,1.3s						
KLMR	**Klimovskoe**	**27.11**	**14**	P	**P**	**07 48 39.5**	**-2.8**
KLMR				AMP		07 48 41.1	
	comp=Z,16nm,1.3s						
MVO	**Moncorvo**	**27.20**	**293**	*e*P	**P**	**07 48 43.3**	**-0.1**
	comp=Z,21nm,1.5s						
PBAR	**Barrancos**	**27.25**	**287**	*e*P	**P**	**07 48 43.6**	**-0.2**
	comp=Z,22nm,1.8s						
AKTO	**Aktyubinsk**	**27.37**	**46**	P	**P**	**07 48 43.4**	**-1.3**
	comp=Z,4.3nm,0.8s,baz=246,slow=11,SNR=8.3						
PMRV	**Marv??o**	**27.47**	**289**	*e*P	**P**	**07 48 45.1**	**-0.7**
POLO	**Lamas de Olo**	**27.78**	**294**	*e*P	**P**	**07 48 48.6**	**0.0**
PVAQ	**Vaqueiros**	**27.85**	**285**	*e*P	**P**	**07 48 45.7**	**-3.5**
NOA	**NORSAR Array B**	**27.88**	**344**	P	**P**	**07 48 46.8**	**-2.5**
	comp=Z,0.3nm,0.4s,baz=143,slow=8.9,SNR=4.2						
NOA				LR	LR	08 00 58.5	
	comp=Z,101nm,19.0s,baz=155,slow=39						
PCAB	**Cabril**	**27.97**	**294**	*e*P	**P**	**07 48 50.3**	**+0.1**
ABKAR	**Akbulak array**	**28.14**	**49**	P	**P**	**07 48 53.2**	**+1.7**
EKA	**Eskdalemuir Ar**	**28.93**	**324**	P	**P**	**07 48 55.2**	**-3.3**
	comp=Z,0.7nm,0.4s,baz=127,slow=10,SNR=5.4						
PRGR	**Permogore**	**29.20**	**18**	*e*P	**P**	**07 48 58.5**	**-2.3**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARU	**Arti**	**30.38**	**35***d*	*i*P	**P**	**07 49 10.2**	**-1.2**
ARU				S	**S**	**07 54 11.6**	**+1.6**
ARU				SS	**SnSn**	**07 55 45.7**	**-0.4**
ARU				pmax	pmax		
	comp=Z,13nm,1.8s						
TOA0	**Torodi Ar. Sit**	**31.45**	**232**	P	**P**	**07 49 22.8**	**+1.6**
TORD	**Torodi Ar. Bea**	**31.45**	**232**	P	**P**	**07 49 22.1**	**+0.9**
	comp=Z,4.6nm,0.5s,baz=33,slow=8.7,SNR=38						
TORD				PcP	**PcP**	**07 52 13.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=42,slow=2.1,SNR=3.0						
TORD				LR	LR	08 05 15.8	
	comp=Z,60nm,20.3s,baz=340,slow=42						
TORD	**Torodi Ar. Bea**	**31.45**	**232**	P	**P**	**07 49 22.3**	**+1.1**
TORD				IAmb	IAmb	07 49 27.3	
	comp=Z,3.5nm,0.8s						
SOCY	**Socotra**	**33.53**	**126**	P	**P**	**07 49 37.9**	**-1.7**
SOCY				IAmb	IAmb	07 49 53.1	
	comp=Z,5.1nm,0.9s						
ARCES	**ARCESS Array B**	**34.57**	**359**	P	**P**	**07 49 44.7**	**-3.2**
	comp=Z,2.4nm,0.8s,baz=181,slow=6.1,SNR=6.1						
KK31	**Karatay Array**	**34.57**	**63**	P	**P**	**07 49 50.7**	**+2.4**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KK31	**Karatay Array**	**34.57**	**63**	P	**P**	**07 49 50.7**	**+2.4**
KKAR	**Karatay Array**	**34.57**	**63**	P	**P**	**07 49 48.8**	**+0.5**
KKAR	**Karatay Array**	**34.57**	**63**	P	**P**	**07 49 48.8**	**+0.5**
GAR	**Garm**	**34.74**	**70**	P	**P**	**07 49 51.5**	**+1.6**
GAR				IAmb	IAmb	07 50 09.9	
	comp=Z,7.4nm,0.9s						
BRVK	**Borovoye**	**35.42**	**46***d*	*i*P	**P**	**07 49 56.3**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**35.42**	**46**	P	**P**	**07 49 55.9**	**+0.4**
BRVK				IAmb	IAmb	07 49 57.8	
	comp=Z,7.8nm,1.0s						
MBAR	**Mbarara**	**35.64**	**173**	LR	LR	08 04 48.8	
	comp=Z,74nm,19.2s,baz=5.0,slow=36						
EKS2	**Erkin-Say**	**36.99**	**64**	P	**P**	**07 50 11.2**	**+2.0**
	SNR=7.5						
KMBO	**Kilima Mbogo**	**37.28**	**163**	LR	LR	08 07 10.9	
	comp=Z,87nm,18.2s,baz=299,slow=39						
AAK	**Ala-Archa**	**37.52**	**64**	P	**P**	**07 50 15.5**	**+1.9**
	SNR=7.4						
AAK	**Ala-Archa**	**37.52**	**64**	P	**P**	**07 50 15.3**	**+1.6**
AAK				pmax	pmax		
	comp=Z,11nm,1.0s						
AAK	**Ala-Archa**	**37.52**	**64**	P	**P**	**07 50 15.3**	**+1.6**
CHMS	**Chumysh**	**37.68**	**63**	P	**P**	**07 50 16.4**	**+1.5**
	SNR=5.2						
NIL	**Nilore**	**38.12**	**78**	P	**P**	**07 50 20.4**	**+1.7**
NIL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NIL	**Nilore**	**38.12**	**78**	P	**P**	**07 50 20.4**	**+1.7**
NIL				IAmb	IAmb	07 50 21.3	
	comp=Z,7.9nm,0.9s						
TKM2	**Tokmak 2**	**38.30**	**63**	P	**P**	**07 50 21.7**	**+1.3**
	SNR=6.4						
ULHL	**Ulahol**	**38.84**	**64**	P	**P**	**07 50 26.9**	**+2.0**
	SNR=5.4						
DBIC	**Dimbokro**	**40.54**	**233**	P	**P**	**07 50 39.4**	**+0.4**
	comp=Z,5.5nm,1.0s,baz=19,slow=8.6,SNR=6.3						
DBIC	**Dimbokro**	**40.54**	**233**	P	**P**	**07 50 39.1**	**+0.1**
DBIC				pmax	pmax		
	comp=Z,19nm,1.5s						
DBIC	**Dimbokro**	**40.54**	**233**	P	**P**	**07 50 39.0**	**+0.1**
MAKZ	**Makanchi**	**42.52**	**57**	P	**P**	**07 50 56.1**	**+1.2**
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MAKZ	**Makanchi**	**42.52**	**57**	P	**P**	**07 50 56.1**	**+1.2**
MAKZ				IAmb	IAmb	07 50 56.9	
	comp=Z,8.9nm,0.9s						
MK31	**Makanchi Array**	**42.73**	**57***c*	*i*P	**P**	**07 50 57.6**	**+0.9**
MK31	**Makanchi Array**	**42.73**	**57**	P	**P**	**07 50 57.7**	**+0.9**
MK31				IAmb	IAmb	07 50 58.6	
	comp=Z,10nm,0.8s						
MKAR	**Makanchi Array**	**42.73**	**57**	P	**P**	**07 50 57.7**	**+1.0**
	comp=Z,11nm,0.7s,baz=279,slow=6.5,SNR=78						
MKAR	**Makanchi Array**	**42.73**	**57**	P	**P**	**07 50 56.9**	**+0.2**
ZAA0	**Zalesovo Array**	**44.13**	**46**	P	**P**	**07 51 07.5**	**-0.3**
ZALV	**Zalesovo Beam**	**44.13**	**46**	P	**P**	**07 51 08.0**	**+0.2**
	comp=Z,13nm,0.5s,baz=267,slow=8.5,SNR=50						
DGZ	**Jazzator, Alta**	**45.91**	**52***c*	*i*P	**P**	**07 51 23.1**	**+0.9**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ	**Urumqi**	**46.91**	**60**	*e*P	**P**	**07 51 32.4**	**+2.3**
NRIK	**Noril'sk**	**47.43**	**25**	P	**P**	**07 51 34.1**	**+0.5**
	comp=Z,6.2nm,0.5s,baz=229,slow=5.5,SNR=12						
NRIK	**Noril'sk**	**47.43**	**25**	P	**P**	**07 51 34.2**	**+0.5**
NRIK				pmax	pmax		
	comp=Z,11nm,1.1s						
NRIK	**Noril'sk**	**47.43**	**25**	IAmb	IAmb	07 51 35.0	
	comp=Z,11nm,1.1s						
SFJD	**Kangerlussuaq**	**53.44**	**331**	P	**P**	**07 52 18.0**	**-1.0**
SFJD				pmax	pmax		
	comp=Z,14nm,1.1s						
SFJD	**Kangerlussuaq**	**53.44**	**331**	P	**P**	**07 52 18.0**	**-1.0**
TLY	**Talaya**	**55.71**	**47⇓**	*i*P	**P**	**07 52 38.0**	**+2.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	**Talaya**	**55.71**	**47**	P	**P**	**07 52 36.8**	**+1.0**
TLY				IAmb	IAmb	07 52 38.7	
	comp=Z,5.0nm,0.9s						
ZAK	**Zakamensk**	**55.83**	**49**	*e*P	**P**	**07 52 37.6**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TULEG	**Thule**	**57.54**	**344**	P	**P**	**07 52 49.1**	**+0.7**
SONM	**Songino Array**	**58.53**	**51**	P	**P**	**07 52 57.2**	**+1.2**
	comp=Z,5.3nm,0.9s,baz=284,slow=8.8,SNR=17						
SONM	**Songino Array**	**58.53**	**51**	P	**P**	**07 52 56.4**	**+0.4**
SONM				IAmb	IAmb	07 52 58.0	
	comp=Z,4.3nm,1.0s						
ULN	**Ulaanbaatar**	**58.94**	**51⇓**	*i*P	**P**	**07 53 00.3**	**+1.4**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**58.94**	**51**	P	**P**	**07 53 00.1**	**+1.2**
TIXI	**Tiksi**	**60.82**	**21⇓**	*i*P	**P**	**07 53 10.8**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,15nm,0.8s						
BOSA	**Boshof**	**63.31**	**182**	P	**P**	**07 53 30.6**	**+2.1**
	comp=Z,0.9nm,0.4s,baz=60,slow=9.6,SNR=3.8						
BOSA	**Boshof**	**63.31**	**182**	P	**P**	**07 53 30.6**	**+2.1**
BOSA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BOSA	**Boshof**	**63.31**	**182**	IAmb	IAmb	07 53 41.3	
	comp=Z,5.8nm,1.1s						
HHC	**Hu-ho-hao-te**	**64.60**	**57**	*e*P	**P**	**07 53 39.3**	**+2.3**
CMAR	**Chiang Mai Arr**	**65.26**	**84**	P	**P**	**07 53 41.3**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=295,slow=8.1,SNR=14						
CMAR	**Chiang Mai Arr**	**65.26**	**84**	*i* P	**P**	**07 53 42.2**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BILL	**Bilibino**	**72.86**	**15⇑**	*e*P	**P**	**07 54 27.3**	**-0.6**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KLR	**Kul'dur**	**72.99**	**41⇓**	*i*P	**P**	**07 54 29.5**	**+0.6**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SEY	**Seymchan**	**73.17**	**23⇓**	*e*P	**P**	**07 54 30.3**	**+0.5**
MA2	**Magadan**	**75.02**	**26⇓**	*i*P	**P**	**07 54 41.2**	**+0.5**
MA2				pmax	pmax		
	comp=Z,5.0nm,1.0s						
INK	**Inuvik**	**75.93**	**353**	P	**P**	**07 54 44.1**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=7.4,slow=7.5,SNR=11						
USRK	**Ussuriysk Ar.**	**75.98**	**46**	P	**P**	**07 54 45.7**	**-0.8**
	comp=Z,4.9nm,0.5s,baz=296,slow=4.3,SNR=19						
MSHR	**Mys Shultsa**	**76.42**	**47⇓**	*e*P	**P**	**07 54 51.7**	**+2.8**
MSHR				pmax	pmax		
	comp=Z,27nm,1.3s						
KSRS	**Korea Array**	**77.30**	**53**	P	**P**	**07 54 53.9**	**-0.1**
	comp=Z,5.0nm,0.9s,baz=306,slow=5.3,SNR=6.9						
KSRS				LR	LR	08 31 45.1	
	comp=Z,26nm,18.4s,baz=355,slow=38						
YKA	**Yellowknife Ar**	**77.98**	**343**	P	**P**	**07 54 56.4**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=38,slow=5.4,SNR=56						
YSS	**Yuzh-Sakhalins**	**80.20**	**39⇑**	*e*P	**P**	**07 55 09.5**	**-0.3**
YSS				pmax	pmax		
	comp=Z,18nm,1.5s						
ILAR	**Eielson Array**	**80.41**	**357**	P	**P**	**07 55 09.8**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=344,slow=3.7,SNR=11						
ILAR	**Eielson Array**	**80.41**	**357**	P	**P**	**07 55 09.0**	**-1.5**
ULM	**Lac du Bonnet**	**81.16**	**327**	P	**P**	**07 55 14.2**	**-0.7**
	comp=Z,4.8nm,0.5s,baz=44,slow=4.6,SNR=13						
ULM				LR	LR	08 32 03.3	
	comp=Z,46nm,18.7s,baz=75,slow=36						
ULM	**Lac du Bonnet**	**81.16**	**327**	P	**P**	**07 55 13.7**	**-1.1**
ASAJ	**Asahikawa**	**82.01**	**41**	P	**P**	**07 55 19.4**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=60,slow=20						
MJAR	**Matsushiro Arr**	**84.41**	**49**	P	**P**	**07 55 32.2**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=307,slow=4.9,SNR=4.8						
NEW	**Newport**	**91.03**	**337**	P	**P**	**07 56 02.6**	**-1.1**
	comp=Z,8.0nm,1.2s,baz=338,slow=1.3,SNR=7.2						
PDAR	**Pinedale Array**	**92.91**	**329**	P	**P**	**07 56 11.3**	**-1.5**
	comp=Z,0.7nm,0.7s,baz=72,slow=4.8,SNR=7.8						
NVAR	**Mina Array Bea**	**100.07**	**333**	P	**Pdif**	**07 56 45.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=42,slow=7.3,SNR=2.9						
ASAR	**Alice Springs**	**116.71**	**101**	PKP	**PKiKP**	**08 01 44.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=314,slow=1.1,SNR=6.7						
ASAR	**Alice Springs**	**116.71**	**101**	PKiKP	**PKPdf**	**08 01 43.5**	**-0.5**
ASAR	**Alice Springs**	**116.71**	**101**		**PKPdf**	**08 01 43.5**	**-0.5**

JMA 20 07:47:44.9±0.2, 37.96N×144.72E, h50km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.59**	**279**	*e*S	Sn	07 48 55.7	+1.2
OFUJ	**Ofunato**	**2.64**	**296**	P	Pn	07 48 26.4	+1.4
JKMT	**Kesennumamotoy**	**2.69**	**289**	P	Pn	07 48 27.0	+1.4
JIO	**Ouri**	**2.70**	**282**	P	Pn	07 48 27.2	+1.4
MIYJ	**Miyakonagasawa**	**2.78**	**306**	P	Pn	07 48 28.0	+1.0
MIYJ				*e*S	Sn	07 49 00.7	+1.4
JMK	**Ichinoseki**	**2.92**	**291**	P	Pn	07 48 30.8	+2.0
JOM	**Ohasama**	**3.08**	**300**	P	Pn	07 48 32.8	+1.8
JANG	**Nango**	**3.47**	**315**	P	Pn	07 48 38.0	+1.7
JFT	**Otama**	**3.50**	**264**	*e*S	Sn	07 49 18.8	+1.8
JCH	**Churui**	**4.76**	**348**	P	Pn	07 48 54.2	+0.1
JCH				*e*S	Sn	07 49 45.4	-2.6
JKB	**Kayabe**	**4.84**	**325**	P	Pn	07 48 57.0	+1.9
JRY	**Ryogami san**	**5.04**	**249**	P	Pn	07 48 59.1	+1.1
JRY				*e*S	Sn	07 49 53.7	-1.3
NEM2	**Nemuro 2**	**5.46**	**8**	P	Pn	07 49 01.1	-2.5
NEM2				*e*S	Sn	07 49 59.1	-5.9
JTKR	**Abashiri--Toko**	**6.04**	**354**	P	Pn	07 49 11.4	-0.1
JTKR				S	Sn	07 50 15.4	-3.8
JHR	**Hokuryu**	**6.21**	**339**	P	Pn	07 49 16.1	+2.2
JHR				*e*S	Sn	07 50 25.3	+1.8

*JMA **20** 07:57:22.9±0.1, 23.97N×122.39E, h26km, M3.0*
*TAP **20** 07:57:23.2, 24.02N×122.42E, h36km, ML3.4, D*
ISC 20 07:57:23.1±2.4, 23.98N±0.03×122.40E±0.02, h24km±22km, n103, σ1.908/168, 3C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.68**	**47**	P	**Pn**	**07 57 35.9**	**-1.4**
JYNG				*e*S	**Sb**	**07 57 45.2**	**-0.2**
HWA	**Hwalien**	**0.73**	**270**	*e*P	**Pn**	**07 57 37.2**	**-0.7**
	baz=256						
EWUT	**Wuta**	**0.73**	**309**	*e*P	**Pn**	**07 57 36.9**	**-1.1**
	baz=315						
EWUT				*i* S	**Sn**	**07 57 48.0**	**-0.4**
	baz=315						
YOJ	**Yonaguni jima**	**0.73**	**49**	P	**Pn**	**07 57 37.2**	**-0.8**
YOJ				S	**Sn**	**07 57 46.4**	**-2.1**
YOJ	**Yonaguni jima**	**0.73**	**49**	⇓P	**Pn**	**07 57 37.2**	**-0.8**
	baz=60						
YOJ				*i* S	**Sn**	**07 57 46.9**	**-1.6**
	baz=60						
TWD	**Chiawan**	**0.74**	**278**	*e*P	**Pn**	**07 57 37.7**	**-0.4**
	baz=274						
TWD				S	**Sn**	**07 57 46.8**	**-1.9**
	baz=274						
NACB	**Ninganchiao**	**0.76**	**285**	⇓P	**Pn**	**07 57 37.3**	**-1.1**
	baz=269						
NACB				S	**Sn**	**07 57 47.5**	**-1.7**
	baz=269						
TWC	**Suao**	**0.80**	**321**	⇑*i*P	**Pn**	**07 57 37.7**	**-1.2**
	baz=319						
TWC				*i* S	**Sn**	**07 57 48.4**	**-1.8**
	baz=319						
ETLH	**Xiulin Townshi**	**0.87**	**285**	*e*P	**Pn**	**07 57 39.1**	**-0.9**
	baz=271						
ETLH				*e*S	**Sn**	**07 57 50.6**	**-1.3**
	baz=271						
NDS	**Dongshan**	**0.90**	**316**	*e*P	**Pn**	**07 57 40.1**	**-0.3**
	baz=313						
NDS				S	**Sn**	**07 57 51.7**	**-0.9**
	baz=313						
ESL	**Shilin**	**0.90**	**259**	*e*P	**Pn**	**07 57 39.1**	**-1.2**
	baz=250						
ESL				*e*S	**Sn**	**07 57 50.8**	**-1.8**
	baz=250						
EGFH	**Guangfu**	**0.94**	**251**	P	**Pn**	**07 57 39.9**	**-1.1**
	baz=248						
EGFH				*e*S	**Sn**	**07 57 53.1**	**-0.6**
	baz=248						
EGS		**0.96**	**334**	⇑P	**Pn**	**07 57 40.8**	**-0.3**
	baz=321						
EGS				S	**Sn**	**07 57 53.2**	**-0.9**
	baz=321						
ILA	**Ilan**	**0.98**	**323**	*e*P	**Pn**	**07 57 41.1**	**-0.3**
	baz=311						
ILA				S	**Sn**	**07 57 55.1**	**+0.5**
	baz=311						
TWE	**Neicheng**	**0.99**	**318**	⇓P	**Pn**	**07 57 41.6**	**0.0**
	baz=316						
ENTT	**Nioudou**	**1.00**	**311**	*e*P	**Pn**	**07 57 41.6**	**-0.1**
	baz=296						
ENTT				*i* S	**Sn**	**07 57 55.0**	**-0.2**
	baz=296						
NTC	**Toucheng**	**1.01**	**329**	*e*P	**Pn**	**07 57 41.7**	**-0.1**
	baz=327						
NTC				S	**Sn**	**07 57 55.1**	**-0.2**
	baz=327						
NDT	**Datong Townshi**	**1.02**	**308**	*e*P	**Pn**	**07 57 42.1**	**+0.1**
	baz=294						
NDT				S	**Sn**	**07 57 55.4**	**-0.2**
	baz=294						
HGSD	**Ruisui**	**1.02**	**242**	⇓P	**Pn**	**07 57 41.0**	**-1.0**
	baz=240						
NNSB	**Datong**	**1.03**	**296**	P	**Pn**	**07 57 41.9**	**-0.3**
	baz=283						
NNSB				S	**Sn**	**07 57 55.9**	**-0.1**

baz=332
IRIF Iriomote-Funau 1.26 74 P **Pn 07 57 46.1 +0.8**
IRIF S **Sn 07 58 03.1 +1.5**
FULB Fuli 1.28 233 *e*P **Pn 07 57 44.6 -1.0**
baz=221
FULB *e*S **Sn 07 58 01.0 -1.0**
baz=221
TATO Taipei 1.29 320 *e*P **Pn 07 57 46.4 +0.7**
baz=318
TATO *e*S **Sn 07 58 02.3 0.0**
baz=318
CHKT Chengkung 1.29 227 *e*P **Pn 07 57 44.4 -1.3**
baz=217
CHKT S **Sn 07 58 00.5 -1.8**
baz=217
TNOU National Taiwa 1.29 334 *e*P **Pn 07 57 46.6 +0.9**
baz=332
WPL Puli Township 1.32 272 *e*P **Pn 07 57 46.3 +0.2**
baz=270
SSLB Suanglung 1.34 262 P **Pn 07 57 46.2 -0.1**
baz=260
SSLB *e*S **Sn 07 58 02.9 -0.5**
baz=260
DPDB Guoxing 1.35 272 *e*P **Pn 07 57 47.0 +0.5**
baz=271
WHP Taichung City 1.36 283 *e*P **Pn 07 57 48.1 +1.4**
baz=272
SMLT Sun Moon Lake 1.38 266 P **Pn 07 57 47.4 +0.5**
baz=264
SMLT *e*S **Sn 07 58 06.2 +1.7**
baz=264
YM01 YM01 1.38 327 *e*P **Pn 07 57 47.6 +0.6**
baz=339
YM01 *e*S **Sn 07 58 05.0 +0.4**
baz=339
YM10 YM10 1.40 327 *e*P **Pn 07 57 47.4 +0.2**
baz=325
YM11 YM11 1.40 328 *e*P **Pn 07 57 48.0 +0.7**
baz=325
YM05 YM05 1.40 327 P **Pn 07 57 47.6 +0.3**
baz=325
YM04 YM04 1.41 326 *e*P **Pn 07 57 47.3 0.0**
baz=338
YM08 YM08 1.41 329 *e*P **Pn 07 57 47.6 +0.3**
baz=326
TYC Yuchr 1.41 267 *e*P **Pn 07 57 47.6 +0.2**
baz=265
TYC *e*S **Sn 07 58 06.0 +0.7**
baz=265
YUS Yu-Shan 1.42 250 *e*P **Pn 07 57 47.8 -0.1**
baz=249
EDH Donghe 1.42 225 *e*P **Pn 07 57 46.5 -1.0**
baz=216
EDH *e*S **Sn 07 58 03.8 -1.7**
baz=216
LIOB Emei 1.43 298 *e*P **Pn 07 57 48.4 +0.8**
baz=295
TWS1 Kuangyinshan 1.43 321 *e*P **Pn 07 57 49.2 +1.7**
baz=335
NSTT Nanjuang 1.43 297 *e*P **Pn 07 57 48.6 +1.0**
baz=294
NSTT *e*S **Sn 07 58 06.5 +0.8**
baz=294
ANP Anpu 1.44 326 *e*P **Pn 07 57 48.4 +0.5**
baz=324
TWY Chenhua 1.48 331 *e*P **Pn 07 57 49.7 +1.4**
baz=329
JKRS Kuro-shima 1.49 80 P **Pn 07 57 49.4 +1.0**
ALS Alishan 1.54 252 *e*P **Pn 07 57 50.0 +0.6**
baz=250
ALS *e*S **Sn 07 58 08.7 0.0**
baz=250
WJS Zhushan 1.54 264 P **Pn 07 57 50.7 +1.5**
baz=263
WWF Wufeng 1.56 273 *e*P **Pn 07 57 50.6 +1.2**
baz=271
LDUT Ludao 1.56 213 *e*P **Pn 07 57 48.2 -1.2**
baz=212
LDUT *e*S **Sn 07 58 06.8 -2.0**
baz=212
WNT1 Nantou City 1.58 268 *e*P **Pn 07 57 50.3 +0.7**
baz=266
LONT Longtian 1.58 228 *e*P **Pn 07 57 49.4 -0.3**
baz=238
LONT S **Sn 07 58 08.4 -1.0**
baz=238
CHN5 Tsauling 1.62 257 P **Pn 07 57 51.3 +0.9**
baz=256
JIJ Ishigaki jima 1.64 76 P **Pn 07 57 50.8 +0.4**
JIJ *e*S **Sn 07 58 12.1 +1.3**
TWGBT Beinan 1.68 227 P **Pn 07 57 50.5 -0.6**
baz=237
TWGBT S **Sn 07 58 10.9 -0.9**
baz=237
TWG Pinlang 1.68 227 *e*P **Pn 07 57 50.5 -0.6**
baz=237
TWG *e*S **Sn 07 58 10.6 -1.3**
baz=237
STYH Taoyuan 1.70 242 *e*P **Pn 07 57 53.6 +2.3**
baz=232
STYT Tauyuan 1.71 242 *e*P **Pn 07 57 52.1 +0.6**
baz=231
WDLH Douliu 1.73 261 *e*P **Pn 07 57 53.2 +1.5**
baz=260
CHN4 Tsaushan 1.77 250 *e*P **Pn 07 57 54.0 +1.6**
baz=248
CHN4 *e*S **Sn 07 58 16.8 +2.7**
baz=248
WTP Ta-pu 1.79 246 *e*P **Pn 07 57 54.7 +2.1**
baz=236
JISG Ishigakijimahi 1.84 71 P **Pn 07 57 53.1 -0.2**
JISG *e*S **Sn 07 58 16.7 +0.8**
WTK Tuku 1.86 261 *e*P **Pn 07 57 55.8 +2.3**
baz=250
SLGT Liugui 1.89 239 *e*P **Pn 07 57 55.6 +1.7**
baz=230
CHN1 Nanshi 1.89 246 *e*P **Pn 07 57 55.8 +1.8**
baz=244
CHN1 *e*S **Sn 07 58 19.6 +2.4**
baz=244
SGST Jiashian 1.89 242 *e*P **Pn 07 57 55.6 +1.6**
baz=233
SGST *e*S **Sn 07 58 19.1 +1.9**
baz=233
TWK Hsinying 1.89 248 *e*P **Pn 07 57 55.6 +1.6**
baz=246
TWK *e*S **Sn 07 58 19.1 +1.9**
baz=246
WSF Szhu 2.02 261 *e*P **Pn 07 57 57.4 +1.6**
baz=259
WSF S **Sn 07 58 22.8 +2.4**
baz=259
SSD Sandimen 2.04 233 *e*P **Pn 07 57 57.2 +1.3**
baz=225
ICHU Yijhu 2.04 253 *e*P **Pn 07 57 57.5 +1.4**
baz=251
ICHU *e*S **Sn 07 58 23.2 +2.4**
baz=251
TSMG Majia 2.05 232 *e*P **Pn 07 57 57.4 +1.2**
baz=225
MASBT Mashibuluo 2.12 230 *e*P **Pn 07 57 57.6 +0.4**
baz=223
TAW Tawu 2.13 221 *e*P **Pn 07 57 57.0 -0.3**
baz=228
TAW *e*S **Sn 07 58 21.7 -1.2**
baz=228
EAST Anshuo 2.14 222 *i* P **Pn 07 57 57.2 -0.2**
baz=221
SSPT Xinbi 2.25 229 *e*P **Pn 07 58 00.2 +1.3**
baz=223
SCZT Fangliau 2.29 226 P **Pn 07 58 00.5 +1.0**
baz=219
SCZT *e*S **Sn 07 58 28.9 +1.9**
baz=219
TWKBT Hengchun 2.50 216 *e*P **Pn 07 58 02.1 -0.3**
baz=214
TWKBT *e*S **Sn 07 58 32.2 0.0**
baz=214
WDGT Dungji 2.61 255 P **Pn 07 58 04.6 +0.7**
baz=242
WDGT S **Sn 07 58 35.0 +0.1**
baz=242
PHUB P'eng-hu 2.63 260 *e*P **Pn 07 58 04.0 -0.2**
baz=274
PHUB *e*S **Sn 07 58 36.0 +0.7**
baz=274
PNG Penghu 2.64 262 *e*P **Pn 07 58 04.9 +0.6**
baz=260
PNG *e*S **Sn 07 58 35.4 -0.2**
baz=260
VWUC VWUC 2.87 291 *e*P **Pn 07 58 07.3 -0.1**
baz=288
VWUC *e*S **Sn 07 58 40.0 -1.2**
baz=288
MATB Ma-tsu 3.10 315 *e*P **Pn 07 58 10.8 +0.2**
baz=311
MATB *e*S **Sn 07 58 45.9 -1.0**
baz=311
MSUT Lienchiang 3.13 315 *e*P **Pn 07 58 11.2 +0.3**
baz=311
MSUT *e*S **Sn 07 58 47.3 -0.3**
baz=311
KNM Kinmen 3.65 278 *e*P **Pn 07 58 19.9 +1.8**
baz=276
KNM *e*S **Sn 07 59 00.6 +0.2**
baz=276
KNMB Chin-men Tao 3.69 278 *e*P **Pn 07 58 17.8 -1.0**
baz=277
KNMB *e*S **Sn 07 58 59.9 -1.7**
baz=277

ISC 20 08:04:09.2±1.1,**48.77N**±0.05×**18.07E**±0.04,**h13**km±9km,
n7,σ**0s53/12,Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAVC	**Velka Javorina**	**0.28**	**288**	*e*Pg	**Pg**	**08 04 14.8**	**-0.3**
JAVC				*e*SG	**Sg**	**08 04 19.4**	**+0.4**
KOLL	**Kolacno**	**0.29**	**131**	*e*SG	**Sg**	**08 04 19.7**	**+0.4**
SMOL	**Smolenice**	**0.50**	**239**	*e*SG	**Sb**	**08 04 26.4**	**-0.6**
VYHS	**Vyhne**	**0.58**	**118**	*e*Pg	**Pg**	**08 04 19.9**	**-0.6**
VYHS				*e*SG	**Sb**	**08 04 30.2**	**+0.9**
MODS	**Modra-Piesok**	**0.66**	**233**	*e*Pg	**Pg**	**08 04 22.0**	**-0.1**
MODS				*e*SG	**Sb**	**08 04 31.9**	**+0.2**
MODS				eLg	Lg	08 04 35.6	
MORC	**Moravsky Berou**	**1.06**	**341**	*e*Pg	**Pg**	**08 04 29.4**	**-0.3**
MORC				*e*SG	**Sn**	**08 04 44.4**	**-0.1**
VRAC	**Vranov**	**1.11**	**299**	*e*Pg	**Pb**	**08 04 30.2**	**-0.1**
VRAC				*e*SG	**Sb**	**08 04 45.1**	**+0.5**

*ISK **20** 08:05:05.5,36.97N×28.81E,h10km,ML2.5/9*
*DDA **20** 08:05:06.2,36.98N×28.78E,h7km±4km,ML2.1*
ISC 20 08:05:06.1±0.9,**36.98N**±0.03×**28.80E**±0.02,**h10**km±8km,
n19,σ**0s75/33,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.20**	**216**	*i* P	**Pg**	**08 05 10.3**	**0.0**
DALY				IAML		08 05 14.0	
	comp=E,474nm,0.4s						
DALY				*i* S	**Sg**	**08 05 14.2**	**+1.0**
DALY				IAML		08 05 17.0	
	comp=N,720nm,0.4s						
DALY	**Dalyan (Mula)**	**0.20**	**216**	PG	**Pg**	**08 05 10.3**	**0.0**
DALY				SG	**Sg**	**08 05 13.6**	**+0.4**
FETY	**Fethiye**	**0.41**	**147**	PG	**Pg**	**08 05 13.2**	**-1.0**
FETY				SG	**Sg**	**08 05 19.7**	**0.0**
CAEL	**Denizli, Camel**	**0.44**	**71**	*i* P	**Pn**	**08 05 17.4**	**-1.2**
CAEL				*i* S	**Sb**	**08 05 22.8**	**+0.1**
CAEL				IAML		08 05 28.0	
	comp=N,189nm,0.4s						
CAEL				IAML		08 05 29.0	
	comp=E,321nm,0.7s						
YER	**Yerkesik**	**0.44**	**290**	PG	**Pg**	**08 05 14.8**	**0.0**
YER				SG	**Sb**	**08 05 21.5**	**-1.2**
MULA	**Mugla, Merkez-**	**0.47**	**306**	*i* P	**Pb**	**08 05 15.8**	**-0.7**
MULA				*i* S	**Sb**	**08 05 22.9**	**-0.7**
MULA				IAML		08 05 25.0	
	comp=N,68nm,0.3s						
MULA				IAML		08 05 31.0	
	comp=E,147nm,0.5s						
TAVA	**DENIZLI_Tavas**	**0.49**	**10**	*i* P	**Pg**	**08 05 15.8**	**+0.1**
TAVA				*i* S	**Sg**	**08 05 22.2**	**0.0**
TAVA				IAML		08 05 28.0	
	comp=E,114nm,0.5s						
TAVA				IAML		08 05 30.0	
	comp=N,50nm,0.3s						
TURN	**Turunc**	**0.49**	**245**	PG	**Pg**	**08 05 15.6**	**-0.1**
TURN				SG	**Sb**	**08 05 23.1**	**-1.0**
GOLH	**Golhisar**	**0.66**	**67**	*i* P	**Pg**	**08 05 18.5**	**-0.4**
GOLH				*i* S	**Sb**	**08 05 29.8**	**+0.8**
GOLH				IAML		08 05 31.0	
	comp=E,5μm,0.6s						
GOLH				IAML		08 05 35.0	
	comp=N,70nm,0.4s						
ELL	**Elmali**	**0.92**	**104**	PG	**Pg**	**08 05 23.5**	**-0.3**
ELL				SG	**Sb**	**08 05 36.6**	**+0.1**
ARG	**Arkhangelos**	**0.94**	**216**	PG	**Pg**	**08 05 23.9**	**-0.2**
AKAS	**Kas**	**0.99**	**139**	*i* P	**Pg**	**08 05 24.7**	**-0.5**
AKAS				*i* S	**Sn**	**08 05 42.9**	**+2.6**
AKAS				IAML		08 05 46.0	
	comp=N,119nm,0.4s						
AKAS				IAML		08 05 48.0	
	comp=E,83nm,0.6s						
AKAS	**Kas**	**0.99**	**139**	PG	**Pg**	**08 05 24.8**	**-0.3**
AYDN	**Tasoluk**	**1.00**	**313**	*i* P	**Pg**	**08 05 25.2**	**-0.2**
AYDN				*i* S	**Sb**	**08 05 39.1**	**+0.3**
AYDN				IAML		08 05 45.0	
	comp=E,15nm,0.4s						
AYDN				IAML		08 05 47.0	
	comp=N,17nm,0.5s						
BDRM	**Kayabasi**	**1.09**	**275**	*i* P	**Pn**	**08 05 27.6**	**+0.2**
BDRM				*i* S	**Sn**	**08 05 42.7**	**+0.2**
BDRM				IAML		08 05 49.0	
	comp=N,60nm,0.4s						
BODT	**Bodrum**	**1.20**	**274**	PN	**Pb**	**08 05 28.7**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.21**	**323**	PN	**Pg**	**08 05 29.1**	**-0.2**
KORT	**Korkueli**	**1.24**	**89**	PN	**Pg**	**08 05 29.7**	**-0.2**
USAK	**Uak-Merkez**	**1.74**	**6**	*i* P	**Pn**	**08 05 37.0**	**+0.6**
USAK				*i* S	**Sn**	**08 05 59.1**	**+0.5**
USAK				IAML		08 06 02.0	
	comp=E,199nm,1.5s						
USAK				IAML		08 06 07.0	
	comp=N,35nm,1.2s						

*IDC **20** 08:05:15.8±3.7,28.52S×178.34W,h0km,mb3.8/2,*
mb1 4.1/2,mb1mx3.6/29,mbtmp3.8/2,MS3.5/1,Ms1 3.5/1,
ms1mx2.7/24,Error ellipse: s-maj=95.9km s-min=17.3km
az=45.0
*NEIC **20** 08:05:17.4±1.9,29.76S±0.04×178.23W±0.07,h10km±2km,*
mb4.5/4,Error ellipse: s-maj=10.9km s-min=6.9km
az=105.0
ISC 20 08:05:17.8±1.0,**29.9S**±0.1×**178.2W**±0.2,**h10**km,**n12,**
σ**2s01/12,mb4.2/4,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.68**	**22**	Pn	**Pn**	**08 05 35.2**	**+1.7**
	100nm,0.3s,baz=55,slow=11,SNR=8.5						
RAO				Sn	**Sn**	**08 05 47.3**	**+3.1**
	369nm,0.3s,baz=81,slow=24,SNR=12						
RAO	**Raoul Island**	**0.68**	**22**		**Pg**	**08 05 28.6**	**-2.4**
OUZ	**Omahuta**	**8.72**	**230**	Pn	**Pn**	**08 07 25.8**	**+1.8**
URZ	**Urewera**	**9.21**	**204**	Pn	**Pn**	**08 07 30.6**	**-0.1**
HNR	**Honiara**	**28.83**	**310**	LR	LR	08 20 07.6	
	comp=Z,103nm,20.8s,baz=159,slow=32						
ASAR	**Alice Springs**	**42.96**	**266**	P	**P**	**08 13 16.2**	**-1.1**
	0.5nm,0.6s,baz=102,slow=7.8,SNR=8.3						
WR0	**Warramunga Arr**	**43.72**	**272**	P	**P**	**08 13 23.4**	**0.0**
WB2	**Warramunga Arr**	**43.89**	**272**	P	**P**	**08 13 24.9**	**+0.1**
WB2				IAmb	IAmb	08 13 35.2	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**43.90**	**272**	P	**P**	**08 13 23.7**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=110,slow=7.9,SNR=17						
WB0	**Warramunga Arr**	**43.92**	**272**	P	**P**	**08 13 24.2**	**-0.9**
WB0				IAmb	IAmb	08 13 41.0	
	comp=Z,7.4nm,1.1s						
QSPA	**South Pole Qui**	**60.22**	**180**	P	**P**	**08 15 26.9**	**+1.0**
FINES	**FINESS Array B**	**144.60**	**340**	PKP	**PKPab**	**08 24 49.2**	**-3.2**
	comp=Z,2.0nm,0.8s,baz=55,slow=5.3,SNR=2.3						

*DDA **20** 08:27:26.2,39.75N×24.02E,h27km±4km,ML3.3*
*ATH **20** 08:27:27.6,39.68N×24.14E,h54km±3km,ML3.2/32,Error*
ellipse: s-maj=3.5km s-min=0.9km az=19.0
*SOF **20** 08:27:28.2,39.75N×24.31E,h15km,MD3.5*
*ISK **20** 08:27:28.0,39.68N×24.15E,h8km,ML3.4/20*
*THE **20** 08:27:28.9,39.68N×24.14E,h11km,ML3.3/24,Error*
ellipse: s-maj=0.8km s-min=0.4km az=277.0
ISC 20 08:27:28.2±1.1,**39.67N**±0.02×**24.13E**±0.02,**h8**km±10km,
n152,σ**0s78/204,13C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.43**	**306**	P	**Pb**	**08 27 37.5**	**-0.6**
PAIG				AML	AML	08 27 45.4	
	comp=E,19505μm,0.4s						
PAIG				AML	AML	08 27 46.2	
	comp=N,22796μm,0.5s						
PAIG	**Paliouri**	**0.43**	**306**	P	**Pb**	**08 27 37.4**	**-0.7**
PAIG				S	**Sb**	**08 27 44.3**	**-0.5**
	comp=N,11μm,0.4s						
OUR	**Ouranopolis**	**0.67**	**350**	P	**Pb**	**08 27 41.7**	**-0.4**
OUR				S	**Sb**	**08 27 51.9**	**+0.3**
OUR				AML	AML	08 27 53.7	
	comp=E,13298μm,0.6s						
OUR				AML	AML	08 27 54.2	
	comp=N,17121μm,0.5s						
OUR	**Ouranopolis**	**0.67**	**350**	P	**Pb**	**08 27 41.7**	**-0.4**
OUR				S	**Sb**	**08 27 51.4**	**-0.2**
	comp=N,8μm,0.6s						
OUR	**Ouranopolis**	**0.67**	**350**	PG	**Pb**	**08 27 41.8**	**-0.4**
OUR				SG	**Sb**	**08 27 51.3**	**-0.3**
XOR	**Xorichti**	**0.79**	**247**	P	**Pb**	**08 27 44.1**	**-0.2**
XOR				S	**Sb**	**08 27 55.0**	**-0.1**
XOR				AML	AML	08 27 56.3	
	comp=E,5077μm,0.4s						
XOR				AML	AML	08 27 57.3	
	comp=N,7983μm,0.3s						
XOR	**Xorichti**	**0.79**	**247**	P	**Pb**	**08 27 44.1**	**-0.2**
XOR				S	**Sb**	**08 27 55.2**	**+0.1**
	comp=N,3μm,0.3s						
NEO	**Neokhori**	**0.79**	**243**	P	**Pb**	**08 27 43.9**	**-0.4**
NEO				S	**Sb**	**08 27 55.4**	**+0.1**
NEO				AML	AML	08 27 57.3	
	comp=E,9074μm,0.4s						
NEO				AML	AML	08 27 58.9	
	comp=N,6360μm,0.3s						
NEO	**Neokhori**	**0.79**	**243**	P	**Pb**	**08 27 44.1**	**-0.2**
NEO				S	**Sb**	**08 27 55.6**	**+0.4**
	comp=N,4μm,0.3s						
LIA	**Limnos Island**	**0.84**	**74**	P	**Pb**	**08 27 45.0**	**-0.1**
LIA				S	**Sb**	**08 27 57.2**	**+0.6**
LIA				AML	AML	08 28 02.8	
	comp=E,7424μm,0.7s						
LIA				AML	AML	08 28 03.3	
	comp=N,5730μm,0.7s						
LIA	**Limnos Island**	**0.84**	**74**	P	**Pb**	**08 27 45.3**	**+0.2**
LIA				S	**Sb**	**08 27 57.1**	**+0.6**
	comp=N,3μm,0.6s						
SKY	**Skiros Island**	**0.86**	**158**	P	**Pb**	**08 27 45.5**	**+0.1**
SKY				S	**Sb**	**08 27 57.8**	**+0.7**
SKY				AML	AML	08 27 60.0	
	comp=N,17565μm,0.3s						
SKY				AML	AML	08 28 00.7	
	comp=E,19484μm,0.2s						
SKY	**Skiros Island**	**0.86**	**158**	P	**Pb**	**08 27 45.3**	**-0.1**
SKY				S	**Sb**	**08 27 57.8**	**+0.7**
PLG	**Polygyros**	**0.88**	**323**	P	**Pg**	**08 27 44.6**	**-0.5**
PLG				S	**Sb**	**08 27 57.8**	**+0.1**
PLG				AML	AML	08 27 59.9	
	comp=E,3570μm,0.7s						
PLG				AML	AML	08 28 03.1	
	comp=N,2400μm,0.5s						
PLG	**Polygyros**	**0.88**	**323**	P	**Pg**	**08 27 44.7**	**-0.4**
PLG				S	**Sb**	**08 27 57.1**	**-0.5**
	comp=N,2μm,0.5s						
THAS	**Thassos island**	**1.03**	**26**	P	**Pg**	**08 27 47.6**	**-0.5**
THAS				S	**Sb**	**08 28 02.1**	**0.0**
THAS				AML	AML	08 28 04.7	
	comp=N,1755μm,0.3s						
THAS				AML	AML	08 28 06.8	
	comp=E,2241μm,0.3s						
THAS	**Thassos island**	**1.03**	**26**	P	**Pg**	**08 27 47.7**	**-0.4**
THAS				S	**Sn**	**08 28 03.1**	**-0.6**
	comp=E,998nm,0.3s						
KYMI	**Kymi, Euboea I**	**1.04**	**181**	P	**Pg**	**08 27 48.1**	**-0.1**
KYMI				S	**Sb**	**08 28 02.5**	**+0.2**
KYMI				AML	AML	08 28 05.0	
	comp=E,2186μm,0.4s						
KYMI				AML	AML	08 28 06.4	
	comp=N,4748μm,0.5s						
KYMI	**Kymi, Euboea I**	**1.04**	**181**	P	**Pg**	**08 27 47.9**	**-0.3**
KYMI				S	**Sn**	**08 28 03.6**	**-0.3**
	comp=N,2μm,0.7s						
SMIA	**Simia**	**1.07**	**222**	P	**Pg**	**08 27 48.7**	**-0.1**
SMIA				S	**Sn**	**08 28 04.8**	**+0.1**
	comp=N,4μm,0.5s						
HORT	**Hortiatis**	**1.22**	**320**	P	**Pg**	**08 27 50.7**	**-0.8**
HORT				AML	AML	08 28 12.2	
	comp=E,1862μm,0.3s						
HORT				AML	AML	08 28 13.2	
	comp=N,1550μm,0.3s						
HORT	**Hortiatis**	**1.22**	**320**	P	**Pg**	**08 27 50.9**	**-0.7**
HORT				S	**Sb**	**08 28 07.6**	**+0.1**
	comp=N,830nm,0.3s						
HORT	**Hortiatis**	**1.22**	**320**	PN	**Pg**	**08 27 51.3**	**-0.3**
HORT				SN	**Sn**	**08 28 08.8**	**+0.4**
EREA	**Eretria**	**1.26**	**187**	P	**Pn**	**08 27 51.8**	**-0.4**
EREA				S	**Sb**	**08 28 09.0**	**+0.3**
	comp=N,2μm,0.4s						
SOH	**Sokhos**	**1.29**	**333**	P	**Pn**	**08 27 52.4**	**-0.2**
SOH				S	**Sb**	**08 28 09.2**	**-0.5**
SOH				AML	AML	08 28 13.7	
	comp=N,2768μm,0.4s						
SOH				AML	AML	08 28 14.8	
	comp=E,3409μm,0.6s						
SOH	**Sokhos**	**1.29**	**333**	P	**Pn**	**08 27 52.5**	**-0.2**
SOH				S	**Sn**	**08 28 10.4**	**+0.2**
	comp=E,1μm,0.5s						
ATAL	**Atalanti**	**1.31**	**222**	P	**Pn**	**08 27 51.9**	**-0.9**
THE	**Thessaloniki**	**1.31**	**317**	P	**Pn**	**08 27 52.4**	**-0.5**
THE				AML	AML	08 28 15.4	
	comp=E,1556μm,0.7s						
THE				AML	AML	08 28 16.7	
	comp=N,1139μm,0.4s						
THE	**Thessaloniki**	**1.31**	**317**	P	**Pn**	**08 27 52.6**	**-0.3**
THE				S	**Sn**	**08 28 11.1**	**+0.6**
	comp=N,520nm,0.4s						
LIT	**Litokhoron**	**1.33**	**289**	P	**Pn**	**08 27 52.8**	**-0.4**
LIT				AML	AML	08 28 17.1	
	comp=N,807μm,0.3s						
LIT				AML	AML	08 28 23.4	
	comp=E,415μm,0.7s						
LIT	**Litokhoron**	**1.33**	**289**	P	**Pn**	**08 27 52.8**	**-0.4**
SMTH	**Samothraki Isl**	**1.33**	**53**	P	**Pn**	**08 27 51.7**	**-1.5**
SMTH				S	**Sb**	**08 28 09.7**	**-1.1**
SMTH				AML	AML	08 28 13.3	
	comp=N,846μm,0.4s						
SMTH				AML	AML	08 28 13.6	
	comp=E,1101μm,0.5s						
SMTH	**Samothraki Isl**	**1.33**	**53**	P	**Pn**	**08 27 51.7**	**-1.5**
SMTH				S	**Sb**	**08 28 09.9**	**-0.9**
	comp=E,485nm,0.4s						
LKR	**Lokris**	**1.35**	**221**	P	**Pn**	**08 27 52.4**	**-1.1**
LKR				AML	AML	08 28 28.8	
	comp=E,645μm,0.6s						
LKR				AML	AML	08 28 30.0	
	comp=N,578μm,0.6s						
LKR	**Lokris**	**1.35**	**221**	P	**Pn**	**08 27 52.3**	**-1.1**
KAVA	**Kavala**	**1.35**	**12**	P	**Pn**	**08 27 52.3**	**-1.2**
KAVA				AML	AML	08 28 16.3	
	comp=N,1259μm,0.5s						
KAVA				AML	AML	08 28 21.4	
	comp=E,1205μm,0.5s						
KAVA	**Kavala**	**1.35**	**12**	P	**Pn**	**08 27 52.3**	**-1.2**
KAVA				S	**Sb**	**08 28 11.0**	**-0.3**
	comp=E,495nm,0.5s						
SIGR	**SIGRI**	**1.41**	**109**	P	**Pn**	**08 27 53.5**	**-0.7**
SIGR				AML	AML	08 28 19.5	
	comp=N,737μm,0.8s						
SIGR				AML	AML	08 28 21.9	
	comp=E,908μm,0.7s						
SIGR	**SIGRI**	**1.41**	**109**	P	**Pn**	**08 27 54.1**	**-0.1**
SIGR				S	**Sb**	**08 28 12.2**	**-0.8**
	comp=E,468nm,0.8s						
SIGR	**SIGRI**	**1.41**	**109**	PN	**Pn**	**08 27 54.1**	**-0.1**
SIGR				SN	**Sg**	**08 28 13.9**	**+0.3**
GADA	**Gvkgeada**	**1.45**	**69**	P	**Pn**	**08 27 54.0**	**-0.8**
GADA				S	**Sb**	**08 28 14.4**	**+0.2**
	comp=E,740nm,0.8s						
GADA	**Gvkgeada**	**1.45**	**69**	PN	**Pn**	**08 27 54.2**	**-0.6**
GOKA	**anakkale-Gk**	**1.46**	**69**	*i* P	**Pn**	**08 27 53.5**	**-1.4**

GOKA				*i* S	Sb	08 28 14.6	+0.3	
GOKA				IAML		08 28 27.0		
	comp=E,684nm,0.6s							
AXAR	**Agios Charalam**	**1.46**	**232**	P	Pn	**08 27 54.4**	**-0.5**	
BOZC	**Bozcaada**	**1.49**	**83**	*i* P	Pn	**08 27 54.4**	**-1.0**	
BOZC				*i* S	Sg	**08 28 16.9**	**+0.8**	
BOZC				IAML		08 28 18.0		
	comp=N,466nm,0.4s							
BOZC	**Bozcaada**	**1.49**	**83**	PN	Pn	**08 27 55.4**	**+0.1**	
SRS	**Serrai**	**1.50**	**344**	P	Pn	**08 27 54.8**	**-0.7**	
SRS				AML	AML	08 28 20.3		
	comp=E,558µm,0.5s							
SRS				AML	AML	08 28 32.9		
	comp=N,779µm,1.0s							
SRS	**Serrai**	**1.50**	**344**	P	Pn	**08 27 54.8**	**-0.7**	
AGG	**Agios Georgios**	**1.54**	**246**	P	Pn	**08 27 55.4**	**-0.7**	
AGG				AML	AML	08 28 28.6		
	comp=E,676µm,0.8s							
AGG				AML	AML	08 28 31.1		
	comp=N,1032µm,1.0s							
AGG	**Agios Georgios**	**1.54**	**246**	P	Pn	**08 27 55.4**	**-0.7**	
AGG	**Agios Georgios**	**1.54**	**246**	PN	Pn	**08 27 56.4**	**+0.3**	
KOCA	**Canakkale, Ayv**	**1.56**	**96**	*i* P	Pn	**08 27 55.6**	**-0.7**	
KOCA				*i* S	Sg	**08 28 19.6**	**+1.3**	
DION	**Dionisos Attik**	**1.60**	**186**	P	Pn	**08 27 56.5**	**-0.4**	
DION	**Dionisos Attik**	**1.60**	**186**	P	Pn	**08 27 56.3**	**-0.6**	
ECEA	**Canakkale, Ece**	**1.61**	**76**	*i* P	Pg	**08 27 59.4**	**+0.2**	
ECEA				*i* S	Sn	**08 28 17.4**	**-0.7**	
PTL	**Penteli**	**1.64**	**187**	P	Pn	**08 27 56.9**	**-0.4**	
PTL				AML	AML	08 28 30.0		
	comp=E,1130µm,0.6s							
PTL				AML	AML	08 28 30.0		
	comp=N,924µm,0.6s							
PTL	**Penteli**	**1.64**	**187**	P	Pn	**08 27 56.7**	**-0.7**	
PTL				S	Sn	**08 28 18.3**	**-0.3**	
	comp=N,550nm,0.6s							
VILL	**Villia**	**1.64**	**203**	P	Pn	**08 27 56.5**	**-0.9**	
VILL				S	Sn	**08 28 18.2**	**-0.5**	
	comp=N,930nm,0.6s							
THL	**Klokotos Trika**	**1.64**	**267**	P	Pn	**08 27 57.5**	**+0.1**	
THL				AML	AML	08 28 24.1		
	comp=N,648µm,0.5s							
THL				AML	AML	08 28 34.3		
	comp=E,497µm,0.7s							
THL	**Klokotos Trika**	**1.64**	**267**	P	Pn	**08 27 57.0**	**-0.4**	
KARY	**Karystos**	**1.66**	**172**	P	Pn	**08 27 57.4**	**-0.2**	
KARY				S	Sn	**08 28 17.2**	**-1.9**	
	comp=E,440nm,0.3s							
MAKR	**Makrakomi, Fth**	**1.69**	**248**	P	Pn	**08 27 58.1**	**0.0**	
NVR	**Nevrokopi**	**1.69**	**353**	P	Pn	**08 27 57.6**	**-0.6**	
NVR				AML	AML	08 28 29.2		
	comp=E,443µm,0.6s							
NVR				AML	AML	08 28 33.7		
	comp=N,353µm,1.0s							
NVR	**Nevrokopi**	**1.69**	**353**	P	Pn	**08 27 57.5**	**-0.6**	
EZN	**Ezine**	**1.70**	**84**	P	Pn	**08 27 58.1**	**-0.1**	
EZN				S	Sb	**08 28 20.8**	**-0.4**	
	comp=N,550nm,0.6s							
KTI	**Kastanea**	**1.71**	**296**	P	Pn	**08 27 59.1**	**+0.7**	
PRK	**Paraskevi**	**1.71**	**104**	P	Pn	**08 27 58.0**	**-0.4**	
PRK				AML	AML	08 28 29.0		
	comp=N,2158µm,0.7s							
PRK				AML	AML	08 28 40.1		
	comp=E,1954µm,0.8s							
PRK	**Paraskevi**	**1.71**	**104**	P	Pn	**08 27 58.3**	**0.0**	
PRK				S	Sb	**08 28 21.3**	**-0.3**	
ATHU	**Athens Univers**	**1.73**	**189**	P	Pn	**08 27 58.0**	**-0.6**	
ATH	**Athens Observa**	**1.73**	**191**	P	Pn	**08 27 58.5**	**-0.2**	
ATH				AML	AML	08 28 28.8		
	comp=E,1404µm,0.5s							
ATH				AML	AML	08 28 29.1		
	comp=N,1502µm,0.5s							
ATH	**Athens Observa**	**1.73**	**191**	P	Pn	**08 27 58.4**	**-0.2**	
KNT	**Kendrikon**	**1.76**	**328**	P	Pn	**08 27 59.6**	**+0.5**	
KNT				AML	AML	08 28 30.6		
	comp=N,532µm,0.4s							
KNT				AML	AML	08 28 32.9		
	comp=E,855µm,0.8s							
KNT	**Kendrikon**	**1.76**	**328**	P	Pn	**08 27 59.2**	**+0.1**	
KNT				S	Sn	**08 28 21.7**	**0.0**	
	comp=E,348nm,0.7s							
KNT	**Kendrikon**	**1.76**	**328**	PN	Pn	**08 27 59.5**	**+0.5**	
RDO	**Rodhopi**	**1.82**	**36**	P	Pn	**08 27 58.8**	**-1.1**	
RDO				AML	AML	08 28 42.6		
	comp=E,195µm,0.9s							
RDO				AML	AML	08 28 42.9		
	comp=N,451µm,0.8s							
RDO	**Rodhopi**	**1.82**	**36**	P	Pn	**08 27 58.6**	**-1.3**	
VLY	**Voula,Athens**	**1.84**	**188**	P	Pn	**08 27 59.6**	**-0.5**	
GRG	**Griva**	**1.84**	**315**	P	Pn	**08 28 00.7**	**+0.5**	
GRG				AML	AML	08 28 31.0		
	comp=N,1067µm,0.5s							
GRG				AML	AML	08 28 34.6		
	comp=E,768µm,0.8s							
GRG	**Griva**	**1.84**	**315**	P	Pn	**08 28 00.7**	**+0.5**	
GRG				S	Sn	**08 28 24.1**	**+0.3**	
	comp=E,460nm,0.7s							
GRG	**Griva**	**1.84**	**315**	PN	Pn	**08 28 00.9**	**+0.7**	
CAVK	**Edirne/Enez-Ca**	**1.86**	**56**	*i* P	Pn	**08 28 01.1**	**+0.7**	
CAVK				*i* S	Sn	**08 28 23.7**	**-0.5**	
CAVK				IAML		08 28 32.0		
	comp=E,307nm,0.5s							
CAVK				IAML		08 28 43.0		
	comp=N,252nm,1.4s							
BAYC	**CANAKKALE_Bayr**	**1.86**	**87**	*i* P	Pn	**08 27 60.0**	**-0.5**	
BAYC				*i* S	Sg	**08 28 28.4**	**+0.3**	
ENEZ	**Enez**	**1.88**	**55**	P	Pn	**08 28 00.0**	**-0.6**	
ENEZ				S	Sn	**08 28 24.1**	**-0.4**	
	comp=N,970nm,0.5s							
ENEZ	**Enez**	**1.88**	**55**	PN	Pn	**08 28 00.7**	**+0.1**	
LTK	**Loutraki**	**1.88**	**209**	P	Pn	**08 28 00.0**	**-0.8**	
ALN	**Alexandroupoli**	**1.91**	**50**	P	Pn	**08 27 60.0**	**-1.1**	
ALN				AML	AML	08 28 36.7		
	comp=E,370µm,0.5s							
ALN				AML	AML	08 28 38.4		
	comp=N,490µm,0.7s							
ALN	**Alexandroupoli**	**1.91**	**50**	P	Pn	**08 27 59.7**	**-1.3**	
LOUT	**Loutraki**	**1.91**	**209**	P	Pn	**08 28 00.5**	**-0.6**	
KZN	**Kozani**	**1.92**	**290**	P	Pn	**08 28 01.7**	**+0.3**	
KZN				AML	AML	08 28 26.8		
	comp=E,726µm,0.5s							
KZN				AML	AML	08 28 48.3		
	comp=N,465µm,0.5s							
KZN	**Kozani**	**1.92**	**290**	P	Pn	**08 28 01.6**	**+0.3**	
GELI	**Tayfur-Gelibol**	**1.94**	**67**	PN	Pn	**08 28 01.5**	**0.0**	
MMB	**Musomiste**	**1.94**	**351**	*i* P	Pn	**08 28 00.7**	**-0.8**	
EVR	**Evrytania**	**1.96**	**248**	P	Pn	**08 28 01.8**	**0.0**	
EVR				AML	AML	08 28 37.2		
	comp=E,402µm,1.0s							
EVR				AML	AML	08 28 40.0		
	comp=N,370µm,0.4s							
EVR	**Evrytania**	**1.96**	**248**	P	Pn	**08 28 01.6**	**-0.2**	
CHOS	**Chios island**	**1.97**	**130**	P	Pn	**08 28 02.2**	**+0.2**	
CHOS				AML	AML	08 28 37.2		
	comp=E,1002µm,0.7s							
CHOS				AML	AML	08 28 37.9		
	comp=N,809µm,0.7s							
CHOS	**Chios island**	**1.97**	**130**	P	Pn	**08 28 02.2**	**+0.2**	
CHOS	**Chios island**	**1.97**	**130**	PN	Pn	**08 28 02.3**	**+0.2**	
AYVA	**Ayvalik**	**2.01**	**100**	*i* P	Pn	**08 28 02.8**	**+0.3**	
AYVA				*i* S	Sb	**08 28 29.2**	**-1.1**	
ANX	**Ano Chora**	**2.03**	**239**	P	Pn	**08 28 02.7**	**-0.2**	
VAY	**Valandovo**	**2.03**	**325**	*i* Pn	Pg	**08 28 07.0**	**-0.1**	
RZN	**Rozhen**	**2.06**	**12**	*i* P	Pn	**08 28 02.9**	**-0.5**	
TRIZ	**Trizonia**	**2.07**	**231**	P	Pn	**08 28 02.7**	**-0.6**	
ERIK	**Erikli-Kesan**	**2.08**	**61**	PN	Pn	**08 28 03.7**	**+0.3**	
ALIK	**Aliki, Aigiali**	**2.12**	**229**	P	Pn	**08 28 04.2**	**+0.3**	
KPRO	**Kipourio**	**2.15**	**278**	P	Pn	**08 28 05.6**	**+1.1**	
KPRO				AML	AML	08 28 57.3		
	comp=N,580µm,1.0s							
KPRO				AML	AML	08 29 02.6		
	comp=E,434µm,1.1s							
KPRO	**Kipourio**	**2.15**	**278**	P	Pn	**08 28 05.0**	**+0.5**	
KDZ	**Kurdzhali**	**2.20**	**26**	*i* P	Pn	**08 28 03.6**	**-1.6**	
EPID	**Epidavros**	**2.21**	**201**	P	Pn	**08 28 04.8**	**-0.4**	
LAKA	**Lakka**	**2.21**	**230**	P	Pn	**08 28 05.3**	**+0.1**	
KLV	**Kalavryta, Ach**	**2.25**	**224**	P	Pn	**08 28 05.4**	**-0.4**	
KESN	**Edirne-Kesan**	**2.26**	**59**	*i* P	Pn	**08 28 06.0**	**-0.3**	
KESN				*i* S	Sn	**08 28 33.0**	**-1.7**	
KESN				IAML		08 28 47.0		
	comp=N,135nm,0.3s							
BUHA	**Balikesir, Bur**	**2.28**	**93**	*i* P	Pn	**08 28 06.3**	**+0.1**	
BUHA				*i* S	Pg	08 28 17.2	+5.3	
BUHA				IAML		08 28 51.0		
	comp=E,134nm,0.5s							
URLA	**Izmir**	**2.32**	**124**	*i* P	Pn	**08 28 05.9**	**-1.0**	
KKB	**Krupnik**	**2.33**	**340**	*i* P	Pn	**08 28 06.8**	**-0.1**	
FNA	**Florina**	**2.38**	**299**	P	Pn	**08 28 07.8**	**+0.1**	
FNA	**Florina**	**2.38**	**299**	PN	Pn	**08 28 08.6**	**+0.9**	
ZEDA	**zmir-Bergama**	**2.39**	**106**	*i* P	Pn	**08 28 08.1**	**+0.4**	
ZEDA				*i* S	Sg	**08 28 43.2**	**-1.9**	
PLD	**Plovdiv**	**2.47**	**10**	PN	Pn	**08 28 09.4**	**+0.6**	
STIP	**Stip**	**2.50**	**324**	*i* Pn	Pn	**08 28 08.9**	**-0.3**	
KRBG	**Karabiga-Canak**	**2.53**	**73**	PN	Pn	**08 28 10.3**	**+0.6**	
RKY	**Sarkoy-Tekirda**	**2.54**	**66**	PN	Pn	**08 28 10.5**	**+0.6**	
SART	**Tekirdag**	**2.54**	**66**	*i* P	Pn	**08 28 10.9**	**+1.0**	
SART				*i* S	Sg	**08 28 52.2**	**+2.2**	
MAR3	**Marsite Statio**	**2.65**	**65**	PN	Pn	**08 28 12.2**	**+1.0**	
MAR4	**Marsite Statio**	**2.67**	**64**	PN	Pn	**08 28 12.7**	**+1.1**	
GZKV	**Gazikoy-Tekird**	**2.67**	**65**	PN	Pn	**08 28 12.6**	**+1.1**	
KNL	**Balıkesir**	**2.67**	**76**	*i* P	Pb	**08 28 17.6**	**+1.3**	
KNL				*i* S	Sg	**08 28 53.5**	**-0.6**	
KNL				IAML		08 28 57.0		
	comp=E,146nm,0.6s							
KNL				IAML		08 29 14.0		
	comp=N,100nm,0.7s							
BALY	**Balya**	**2.69**	**87**	*i* P	Pb	**08 28 16.5**	**-0.2**	
BALY				*i* S	Sg	**08 28 53.2**	**-1.5**	
STEP	**BALIKESIR_Sava**	**2.79**	**95**	*i* P	Pn	**08 28 13.7**	**+0.5**	
STEP				*i* S	Sg	**08 28 56.7**	**-1.1**	
STEP				IAML		08 29 03.0		
	comp=N,99nm,0.7s							
STEP				IAML		08 29 09.0		
	comp=E,108nm,0.7s							
MRMT	**Marmara Adasi**	**2.81**	**70**	PN	Pn	**08 28 14.7**	**+1.1**	
APE	**Apeiranthos**	**2.82**	**157**	PN	Pn	**08 28 14.8**	**+1.1**	
BALB	**Balikesir**	**2.89**	**89**	PN	Pn	**08 28 15.9**	**+1.3**	
EDC	**Edincik**	**2.94**	**76**	PN	Pn	**08 28 16.3**	**+1.0**	
VTS	**Vitosha**	**3.02**	**347**	⇑P	Pn	**08 28 17.1**	**+0.6**	
VTS				⇑S	Pg	**08 28 27.3**	**+1.2**	
VTS	**Vitosha**	**3.02**	**347**	*i* P	Pn	**08 28 17.1**	**+0.6**	
ITM	**Ithomi**	**3.03**	**216**	PN	Pn	**08 28 18.3**	**+1.7**	
KCTX	**Karacabey (Bur**	**3.30**	**78**	PN	Pn	**08 28 21.6**	**+1.4**	
AYDB	**Zeytinkoy-Aydi**	**3.41**	**119**	PN	Pn	**08 28 22.8**	**+1.0**	
SLVT	**Silivri**	**3.48**	**62**	PN	Pn	**08 28 24.0**	**+1.4**	
KTHA	**Kythira Island**	**3.52**	**194**	PN	Pn	**08 28 24.8**	**+1.6**	
PLVB	**Pleven**	**3.73**	**5**	⇑P	Pn	**08 28 27.2**	**+1.1**	
NIS1	**Nisyros Isl.**	**3.90**	**141**	PN	Pn	**08 28 30.5**	**+2.1**	
BOVS	**Bovan**	**4.36**	**336**	⇑P	Pn	**08 28 35.6**	**+0.9**	
PDG	**Podgorica**	**4.60**	**308**	⇑P	Pn	**08 28 38.5**	**+0.4**	
MDVR	**Moldovita**	**5.41**	**341**	⇑P	Pn	**08 28 50.0**	**+0.7**	
ARR	**Arges**	**5.70**	**4**	⇑P	Pn	**08 28 54.7**	**+1.4**	
TIP	**Timpagrande**	**5.73**	**267**	⇑P	Pn	**08 28 54.6**	**+0.9**	
VOIR		**5.80**	**6**	⇑P	Pn	**08 28 55.7**	**+1.0**	
GZR	**Gura Zlata**	**5.80**	**351**	⇑P	Pn	**08 28 55.6**	**+0.9**	
MLR	**Muntele Rosu**	**5.96**	**12**	⇑P	Pn	**08 28 58.8**	**+1.9**	
VRI	**Vrincioaia**	**6.48**	**16**	⇑P	Pn	**08 29 05.4**	**+1.5**	
BIZ	**Bicaz**	**7.40**	**11**	⇑P	Pn	**08 29 18.5**	**+1.9**	
CRVS	**Cervenica-Dubn**	**9.42**	**349**	*e*	Pn	08 29 52.0	+7.7	

IDC 20 08:42:22.6±5.2, 11°.47S×112°.97E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.5/35, mbtmp3.5/4, ML2.9/1, Error ellipse: s-maj=275.7km s-min=26.1km az=43.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.91**	**120**	Pn	Pn	08 45 41.8	+0.7
	0.1nm,0.3s,baz=330,slow=20,SNR=1.1						
FITZ				Sn	Sn	08 48 07.7	-8.7
	0.1nm,0.3s,baz=203,slow=13,SNR=1.4						
WRA	**Warramunga Arr**	**22.21**	**115**	P	P	08 47 21.1	+0.2
	0.7nm,0.6s,baz=298,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**23.32**	**124**	P	P	08 47 32.1	-0.4
	0.8nm,0.8s,baz=303,slow=9.5,SNR=4.4						
H08S2	**Diego Garcia H**	**40.07**	**272**	T	T	09 31 53.9	
	baz=98,slow=76						
H08S3	**Diego Garcia H**	**40.08**	**272**	T	T	09 31 51.7	
	baz=98,slow=76						
H08S1	**Diego Garcia H**	**40.09**	**272**	T	T	09 31 52.7	
	baz=98,slow=76						
MKAR	**Makanchi Array**	**64.17**	**337**	P	P	08 52 59.1	+0.1
	0.4nm,0.5s,baz=143,slow=8.3,SNR=5.4						

*NNC **20** 08:57:03.2±11.0, 54°.44N×87°.65E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=195.1km s-min=78.0km az=179.0, Suspected Mining explosion.*
*IDC **20** 08:57:06.6±3.0, 54°.20N×87°.46E, h0km, mb1 3.3/2, mb1mx3.1/47, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=25.4km s-min=16.8km az=46.0*
ISC 20 08:57:05.5±4.5, 54°.3N±0°.2×87°.4E±0°.2, h0km, n7, σ1s70/9, 4C, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.55**	**256**	*i*		09 07 13.8	
	baz=82,slow=318,SNR=0.8						
ZAA0	**Zalesovo Array**	**1.55**	**256**	⇑P	**Pb**	**08 57 34.0**	**-1.1**
ZAA0	0.8nm,0.3s			⇑S	**Sn**	**08 57 57.9**	**+2.7**
	1.2nm,0.3s						
ZALV	**Zalesovo Beam**	**1.55**	**256**	Pg	**Pn**	**08 57 33.4**	**-1.0**
	8.4nm,0.3s,baz=78,slow=16,SNR=50						
ZALV				Lg	Lg	08 57 57.7	
	4.0nm,0.3s,baz=82,slow=23,SNR=8.9						
KURBB	**Kurchatov Arra**	**6.56**	**239**	Pn	**Pn**	**08 58 44.5**	**+1.3**
	0.2nm,0.3s,baz=53,slow=13,SNR=12						
KURBB				Sn	**Sn**	**08 59 58.0**	**-0.6**
	0.0nm,0.3s,baz=37,slow=28,SNR=1.7						
KURBB	**Kurchatov Arra**	**6.56**	**239**	⇑Pn	**Pn**	**08 58 44.1**	**+1.0**
	1.4nm,0.3s,baz=59,slow=15						
MK31	**Makanchi Array**	**8.21**	**205**	⇑Pn	**Pn**	**08 59 06.9**	**+1.0**
	baz=182,slow=49,SNR=17						
MKAR	**Makanchi Array**	**8.21**	**205**	Pn	**Pn**	**08 59 07.0**	**+1.1**
	0.3nm,0.3s,baz=27,slow=14,SNR=16						
MKAR				Sn	**Sn**	**09 00 37.8**	**-1.6**
	0.1nm,0.3s,baz=27,slow=29,SNR=2.0						

*UCC **20** 08:57:15.8±0.9, 50°.91N×6°.46E, h10km±1km, ML1.3*
*BNS **20** 08:57:15.9±0.3, 50°.92N×6°.40E, h8km±4km, ML1.2*
*LDG **20** 08:57:16.2±0.3, 50°.87N×6°.48E, h8km, Md2.1/2, Ml2.5/5, Error ellipse: s-maj=4.4km s-min=3.3km az=23.0*
*BGR **20** 08:57:16.3±0.5, 50°.90N×6°.47E, h10km, ML1.7/5, Error ellipse: s-maj=4.4km s-min=3.3km az=136.0*
ISC 20 08:57:15.3±1.0, 50°.92N±0°.04×6°.47E±0°.03, h9km±7km, n28, σ1s19/49, 4C-19D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUE	**Julich**	**0.04**	**256**	*e*Pg	**Pg**	**08 57 17.0**	**-0.2**
KLL	**Kalltalsperre**	**0.29**	**201**	*e*Pg	**Pg**	**08 57 21.4**	**+0.2**
DREG	**Dreilaegerbach**	**0.30**	**211**	⇑*e*Pg	**Pg**	**08 57 21.5**	**+0.2**
DREG				*e*Sg	**Sg**	**08 57 25.7**	**+0.5**
	31nm,0.1s						
BTNL	**Ternell**	**0.40**	**213**	*b*P	**Pg**	**08 57 23.2**	**+0.1**
BTNL				*d*S	**Sg**	**08 57 28.6**	**+0.2**
	comp=E,5.5nm,0.1s						
STB	**Steinbach**	**0.40**	**144**	*e*Pg	**Pb**	**08 57 24.2**	**-0.4**
MEM	**Membach**	**0.43**	**224**	*b*P	**Pg**	**08 57 23.8**	**+0.1**
MEM				*d*S	**Sg**	**08 57 29.6**	**+0.3**
	comp=E,10nm,0.3s						
MEM	**Membach**	**0.43**	**224**	*e*Pg	**Pg**	**08 57 23.9**	**+0.1**
MEM				*e*Sg	**Sg**	**08 57 29.8**	**+0.5**
AHRW	**Bad Neuenahr-A**	**0.54**	**134**	*e*Pg	**Pb**	**08 57 27.4**	**+0.5**
AHRW				*e*Sg	**Sb**	**08 57 34.0**	**-0.7**
BHOU	**Houvegnez**	**0.64**	**208**	*d*P	**Pg**	**08 57 27.5**	**-0.2**
BHOU				*d*S	**Sg**	**08 57 35.3**	**-0.8**
	comp=E,17nm,0.1s						
BUG	**Bochum--Univer**	**0.72**	**44**	*e*Sg	**Sb**	**08 57 40.2**	**+0.2**
LKLB	**Kalborn**	**0.85**	**196**	k̇P	**Pg**	**08 57 31.6**	**-0.1**
LKLB				*d*S	**Sg**	**08 57 42.4**	**-0.4**
	comp=Z,5.4nm,0.1s						
BGG	**Burgeitz**	**0.90**	**142**	*e*Pg	**Pb**	**08 57 33.2**	**+0.1**
BGES	**Gesves**	**1.03**	**239**	*b*P	**Pg**	**08 57 35.1**	**-0.1**
BGES				*d*S	**Sg**	**08 57 48.3**	**-0.2**
RCHB	**Rochefort**	**1.10**	**227**	*d*P	**Pg**	**08 57 36.0**	**-0.5**
RCHB				*d*S	**Sg**	**08 57 50.6**	**-0.2**
RIVT	**Riveris**	**1.23**	**171**	*e*Pg	**Pn**	**08 57 39.5**	**+0.9**
RIVT				*e*Sg	**Sg**	**08 57 53.7**	**-1.0**
ABH	**Alteburg**	**1.25**	**146**	*e*Pg	**Pn**	**08 57 40.0**	**+1.1**
ABH				*e*Sg	**Sb**	**08 57 55.4**	**+0.3**
KASTN	**Kahler Asten**	**1.26**	**76**	*e*Pg	**Pg**	**08 57 39.5**	**+0.1**
KASTN				*e*Sg	**Sb**	**08 57 56.0**	**+0.5**
WLF	**Walferdange**	**1.27**	**189**	*d*P	**Pn**	**08 57 36.3**	**-2.9**
WLF				*d*S	**Sg**	**08 57 50.7**	**-5.5**
WLF	**Walferdange**	**1.27**	**189**	*e*Pg	**Pg**	**08 57 40.3**	**+0.6**
WLF				*e*Sg	**Sb**	**08 57 56.1**	**+0.2**
GIVF	**Givet**	**1.33**	**233**	*e*Pg	**Pg**	**08 57 40.6**	**-0.3**
GIVF				*e*Sg	**Sb**	**08 57 57.8**	**+0.2**
	comp=Z,23nm,0.3s						
TNS	**Taunus Mts**	**1.44**	**118**	*e*Pg	**Pg**	**08 57 43.1**	**+0.2**
TNS				*e*Sg	**Sg**	**08 58 01.5**	**-0.1**
SNF	**Seneffe**	**1.45**	**254**	*d*P	**Pn**	**08 57 41.2**	**-0.4**
DOU	**Dourbes**	**1.46**	**236**	*d*S	**Sn**	**08 57 59.5**	**-1.4**
	comp=N,4.1nm,0.1s						
BSKQ	**Steenkerk**	**1.54**	**261**	*d*P	**Pn**	**08 57 42.6**	**-0.3**
BSKQ				*d*S	**Sn**	**08 58 03.0**	**0.0**
	comp=E,3.8nm,0.1s						
BAIF	**Baives**	**1.68**	**240**	*e*Pg	**Pg**	**08 57 47.4**	**-0.2**
BAIF				*e*Sg	**Sb**	**08 58 07.8**	**+0.1**
	comp=E,9.3nm,0.3s						
CDF	**Champ du Feu**	**2.56**	**168**	*e*Pg	**Pb**	**08 58 02.3**	**+0.8**
CDF				*e*Sg	**Sb**	**08 58 33.6**	**+0.5**
	comp=E,1.2nm,0.2s						
SFTF	**Sexfontaines**	**2.87**	**200**	*e*Pg	**Pb**	**08 58 07.9**	**+1.2**
SFTF				*e*Sg	**Sb**	**08 58 44.4**	**+2.5**
	comp=E,3.2nm,0.3s						
HAU	**Haudompre**	**2.92**	**182**	*e*Pg	**Pb**	**08 58 08.8**	**+1.3**
HAU				*e*Sg	**Sb**	**08 58 45.5**	**+2.3**
	comp=E,3.4nm,0.3s						

*IDC **20** 09:05:30.6±0.3, 5°.55S×102°.61E, h0km, mb5.5/44, mb1 5.5/46, mb1mx5.4/51, mbtmp5.4/46, ML4.6/2, MS5.5/26, Ms1 5.5/26, ms1mx5.4/34, Error ellipse: s-maj=12.2km s-min=7.9km az=41.0*
*BJI **20** 09:05:30.0±0.0, 5°.60S×102°.70E, h10km, mB5.8/69, mb5.7/81, Ms6.0/92, Ms7 5.9/88*
*NEIC **20** 09:05:31.7, 5°.72S×102°.48E, h18km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr2.89; Mθθ-3.18; Mφφ0.29; Mrθ2.41; Mrφ1.65; Mθr-0.95; Fault plane solution: Mo4.33000×10^17^ NP1:φs111.60000°, δ63.82000°, λ89.82000°. NP2:φs292.01000°, δ26.18000°, λ90.37000°. Principal axes: T 3.7767, Plg71.0000°, Azm21.0000°; N 0.9472, Plg0.0000°, Azm112.0000°; P -4.7238, Plg19.0000°, Azm202.0000°;*
*MOS **20** 09:05:31.8±1.1, 5°.42S×102°.66E, h17km, mb5.9/98, MS5.5/29 Error ellipse: s-maj=6.5km s-min=3.6km az=117.1*
*DJA **20** 09:05:34.5±0.4, 6°S±2°×10°3E±°, h27km±3km, M5.6/102, mb5.6/102, mB6.0/72, MLv6.2/23, Mw(mB)5.6/72, MwMwp5.5/59, Mwp5.7/59*
*NEIC **20** 09:05:34.1±2.5, 5°.68S±0°.05×102°.48E±0°.06, h27km±1km, mb5.7/158, Ms_20 5.8/629, Mwb5.7/63, Mwc5.8(GCMT), Error ellipse: s-maj=10.5km s-min=9.1km az=95.0*
*NEIC **20** 09:05:37, 5°.95S×102°.41E, h29km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr3.00; Mθθ-2.56; Mφφ-0.45; Mrθ4.62; Mrφ2.20; Mθr-2.17; Fault plane solution: Mo6.23000×10^17^ NP1:φs312.00000°, δ18.00000°, λ106.00000°. NP2:φs116.00000°, δ73.00000°, λ85.00000°. Principal axes: T 5.7355, Plg62.0000°, Azm18.0000°; N 0.8871, Plg5.0000°, Azm117.0000°; P -6.6225, Plg28.0000°, Azm210.0000°;*
*GCMT **20** 09:05:38.1±0.1, 5°.91S±0°.01×102°.36E±0°.01, h30km, MW5.8/151, Moment Tensor Solution. s151,c299; s144,c272; Duration: 1s9 Moment tensor: Scale 10^17^ Nm; Mrr3.60±.06; Mθθ-2.67±.04; Mφφ-0.92±.04; Mrθ3.73±.09; Mθφ1.89±.03; Mφr-2.38±.09; Best double couple: Mo5.79300×10^17^ NP1:φs303.00000°, δ20.00000°, λ90.00000°. NP2:φs123.00000°, δ70.00000°, λ90.00000°. Principal axes: T 5.6540, Plg65.0000°, Azm33.0000°; N 0.2870, Plg0.0000°, Azm123.0000°; P -5.9320, Plg25.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*KLM **20** 09:05:39, 5°.40S×102°.64E, h61km, mb5.8*
ISC 20 09:05:33.7±0.3, 5°.61S±0°.03×102°.59E±0°.03, h22km±2km, h22km:pP-P, n1186, σ1s86/953, mb5.7/295, MS5.8/394, 186C-56D, Fault plane solution: NP1:φs125.19750°, δ63.67297°, λ102.81410°. NP2:φs278.04575°, δ29.07841°, λ65.85702°. Principal axes: T Plg68.6821°, Azm60.7532°; N Plg11.4658°, Azm299.4373°; P Plg17.7210°, Azm205.7212°; Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.29**	**17**	Pn	**Pb**	**09 05 59.0**	**+1.6**
MNAI	**Manna**	**1.29**	**17**	⇑P	**Pb**	**09 05 58.6**	**+1.2**
MNAI	**Manna**	**1.29**	**17**	P	**Pb**	**09 05 58.3**	**+1.0**
MNAI				S	**Sb**	**09 06 17.6**	**+4.1**
LWLI	**Liwa**	**

KSM Kuching 10.44 48 Pn Pn 09 08 04.7 +2.5
KSM Kuching 10.44 48 P Pn 09 08 06.0 +3.8
KSM Kuching 10.44 48 ⇑P Pn 09 08 05.2 +3.0
STKI Sintang 10.51 58 P Pn 09 08 05.7 +2.4
138nm,0.9s
KULM Kulim 10.99 350 Pn Pn 09 08 09.4 -0.4
KULM Kulim 10.99 350 P Pn 09 08 10.0 +0.2
KULM Kulim 10.99 350 ⇑P Pn 09 08 09.4 -0.4
KMMI Kalianget 11.40 98 P Pn 09 08 17.2 +1.8
15µm10µm710nm,0.9s
MLSI Meulaboh, Aceh 11.59 328 P Pn 09 08 16.8 -1.2
8µm1µm,0.9s
JAGI Jajag, Banyuwa 11.83 105 Pn 09 08 21.4 +0.1
JAGI Jajag, Banyuwa 11.83 105 ⇑P Pn 09 08 19.8 -1.4
BBKI Banjar Baru 12.40 81 P Pn 09 08 31.0 +1.9
10µm6µm168nm,2.0s
SBUM Sibu 12.51 51 Pn Pn 09 08 36.3 +5.6
SBUM Sibu 12.51 51 P Pn 09 08 36.0 +5.3
SBUM Sibu 12.51 51 ⇑P Pn 09 08 34.6 +3.9
SRBI Singaraja 12.78 102 P Pn 09 08 34.5 +0.3
11µm8µm370nm,0.5s
DNP Denpasar 12.89 104 P Pn 09 08 35.5 -0.3
1µm,0.8s
MTKI Muara Teweh, K 13.13 70 P Pn 09 08 42.0 +2.9
10µm9µm221nm,0.8s
TRTT Trang 13.66 348 P Pn 09 08 43.3 -3.0
5µm134nm,0.9s
KBKI Kotabaru 13.73 81 P Pn 09 08 49.7 +2.4
3µm193nm,1.0s
TWSI Taliwang, Sumb 14.52 103 P Pn 09 08 56.5 -1.6
4µm2µm137nm,0.7s
BKB Balikpapan 14.92 74 Pn Pn 09 09 05.4 +1.9
BKB IAmb IAmb 09 09 15.0
comp=Z,430nm,0.7s
BKB Balikpapan 14.92 74 P Pn 09 09 06.0 +2.5
comp=Z,23µmcomp=Z,11µmcomp=Z,655nm,0.8s
PLAI Plampang 15.40 103 P Pn 09 09 05.1 -4.8
SMKI Samarinda 15.47 71 P P 09 09 13.7 -1.4
comp=Z,20µmcomp=Z,16µmcomp=Z,713nm,0.9s
KAPI Kappang 17.10 89 P Pn 09 09 31.5 -0.1
comp=Z,1.8nm,0.3s,baz=285,slow=12,SNR=17
KAPI LR LR 09 16 57.5
comp=Z,22µm,18.2s,baz=263,slow=40
KAPI Kappang 17.10 89 P Pn 09 09 31.6 -0.1
WBSI Waikabubak, Su 17.13 105 P Pn 09 09 27.5 -4.5
SPSI Sidrap Palu 17.20 85 P Pn 09 09 33.2 +0.4
comp=Z,13µmcomp=Z,7µmcomp=Z,202nm,0.8s
SPMM Sapulut 17.23 54 P P 09 09 37.0 +2.3
TTSI Tana Toraja 17.37 82 P P 09 09 37.2 +1.0
comp=Z,16µmcomp=Z,10µmcomp=Z,398nm,1.2s
BNSI Bone 17.49 87 P P 09 09 37.9 +0.3
comp=Z,13µmcomp=Z,14µmcomp=Z,358nm,1.0s
BSSI Bau Bau, Buton 17.82 93 P Pn 09 09 39.2 -1.3
comp=Z,6µmcomp=Z,5µmcomp=Z,106nm,1.9s
KKM Kota Kinabalu 17.86 50 IAmb IAmb 09 10 19.9
comp=Z,1µm,1.8s
KKM Kota Kinabalu 17.86 50 ⇑P Pn 09 09 40.8 -0.4
DLV T Lat 18.39 19 P Pn 09 09 48.7 +0.9
DLV IAmb IAmb 09 10 28.3
comp=Z,994nm,2.0s
BASI Baing, Sumba 18.40 106 P P 09 09 46.8 -0.7
comp=Z,5µmcomp=Z,20µmcomp=Z,1µm,1.6s
PATY Pattaya 18.49 73 P Pn 09 09 49.5 +0.9
comp=Z,11µmcomp=Z,657nm,0.8s
PHET Kaeng Krachan 18.63 351 P P 09 09 49.0 -1.0
comp=Z,1µmcomp=Z,147nm,0.8s
MYLDM Lahad Datu 19.16 56 P Pn 09 09 57.7 +0.8
MYLDM Lahad Datu 19.16 56 ⇑P Pn 09 09 58.5 +1.6
TOLI2 Tolitoli 19.36 70 P Pn 09 09 58.8 -0.5
TOLI2 IAmb IAmb 09 10 34.1
comp=Z,300nm,1.0s
SRAK Srakaew 19.50 358 P P 09 09 59.6 0.0
comp=Z,51µmcomp=Z,7µm,0.7s
APSI Ampana 19.59 77 P Pn 09 10 02.1 +0.1
comp=Z,10µmcomp=Z,6µmcomp=Z,522nm,1.0s
MMRI Maumere 19.73 100 P P 09 10 00.5 -1.7
MMRI Maumere 19.73 100 ⇑P P 09 09 58.7 -3.5
MMRI Maumere 19.73 100 P P 09 10 01.8 -0.4
comp=Z,8µmcomp=Z,5µmcomp=Z,310nm,0.7s
PBA Port Blair 19.75 330 eP P 09 10 01.2 -1.0
PBA IAmb IAmb 09 10 09.3
comp=Z,260nm,1.0s
PBA Port Blair 19.75 330 P P 09 10 01.4 -0.9
MRSI Marisa 20.25 73 P P 09 10 08.7 +0.9
comp=Z,17µmcomp=Z,10µmcomp=Z,918nm,0.7s
GIRL Giralia 20.33 148 P P 09 10 09.2 +0.5
baz=20,SNR=3.6
LUWI Luwuk 20.65 78 P P 09 10 12.6 +0.4
LUWI Luwuk 20.65 78 ⇑P P 09 10 12.3 +0.2
LUWI Luwuk 20.65 78 P P 09 10 12.4 +0.2
comp=Z,16µmcomp=Z,10µmcomp=Z,592nm,1.2s
UBPT Khong Chiam 20.95 8 P P 09 10 14.5 -0.8
comp=Z,3µmcomp=Z,200nm,0.9s
UBPT Khong Chiam 20.95 8 P P 09 10 14.5 -0.8
UBPT IAmb IAmb 09 10 17.2
comp=Z,318nm,0.9s
UBPT Khong Chiam 20.95 8 ⇑P P 09 10 14.5 -0.8
DGPR DIGLIPUR 20.98 333 eP P 09 10 15.5 -0.2
DGPR IAmb IAmb 09 10 18.5
comp=Z,868nm,0.9s
UTHA Uthaitani 21.26 352 P P 09 10 18.0 -0.6
comp=Z,4µmcomp=Z,632nm,0.8s
GTOI Gorontalo 21.32 74 P P 09 10 18.0 -1.4
comp=Z,4µmcomp=Z,152nm,0.9s
BATI Baumata 21.37 104 P P 09 10 20.4 +0.4
comp=Z,670nm,0.9s,baz=92,slow=0.2,SNR=47
BATI S S 09 14 09.4 -7.0
comp=Z,83nm,0.7s,baz=294,slow=20,SNR=3.0
BATI Baumata 21.37 104 P P 09 10 19.6 -0.3
comp=Z,4µmcomp=Z,6µmcomp=Z,605nm,1.2s
CHAI Chaiyaphum 21.38 358 P P 09 10 20.0 +0.1
comp=Z,6µmcomp=Z,743nm,0.8s
KHON Khomkaen 21.80 1 P P 09 10 25.6 +1.1
comp=Z,7µmcomp=Z,963nm,0.9s
SOEI Soe 21.87 102 P P 09 10 23.2 -2.3
SOEI Soe 21.87 102 ⇑S S 09 14 26.4 -0.1
SOEI Soe 21.87 102 P P 09 10 25.4 -0.1
comp=Z,8µmcomp=Z,7µmcomp=Z,566nm,0.9s
KMSI Cibinong 22.23 75 P P 09 10 43.7 +15
PHIT Phitsanulok 22.75 355 P P 09 10 34.0 -0.6
comp=Z,26µmcomp=Z,4µm,0.8s
PSA00 Pilbara Seismi 23.05 135 P P 09 10 37.5 -0.4
SUKH Sukhothai 23.12 353 P P 09 10 37.8 -0.7
comp=Z,4µmcomp=Z,589nm,0.8s
UTTA Uttaradit 23.29 55 P P 09 10 39.0 -1.1
comp=Z,4µmcomp=Z,601nm,0.8s
SANI Sanana 23.61 82 ⇑P P 09 10 42.0 -1.5
SANI Sanana 23.61 82 P P 09 10 42.5 -1.0
comp=Z,9µmcomp=Z,6µmcomp=Z,194nm,0.9s
CM04 Chiang Mai Arr 24.12 352 P P 09 10 47.0 -1.2
comp=Z,4µmcomp=Z,529nm,0.8s
CM05 Chiang Mai Arr 24.12 352 P P 09 10 47.0 -1.2
comp=Z,2µmcomp=Z,330nm,0.8s
LAMP Lampang 24.15 353 P P 09 10 48.0 -0.5
comp=Z,4µmcomp=Z,491nm,0.7s
CM02 Chiang Mai Arr 24.16 352 P P 09 10 48.3 -0.2
comp=Z,3µmcomp=Z,487nm,0.8s
CM09 Chiang Mai Arr 24.16 352 P P 09 10 48.4 -0.2
comp=Z,4µmcomp=Z,635nm,0.8s
CM15 Chiang Mai Arr 24.18 351 P P 09 10 48.5 -0.3
comp=Z,4µmcomp=Z,555nm,0.8s
CM31 Chiang Mai Arr 24.18 352 P P 09 10 48.0 -0.7
comp=Z,13µmcomp=Z,105µmcomp=Z,14µm,0.8s
CM31 Chiang Mai Arr 24.18 352 P P 09 10 48.2 -0.5
CMAR Chiang Mai Arr 24.18 352 P P 09 10 48.6 -0.1
comp=Z,327nm,0.7s,baz=184,slow=8.9,SNR=541
CMAR PcP PcP 09 14 31.1 +1.6
comp=Z,18nm,0.8s,baz=210,slow=3.1,SNR=6.3
CMAR ScP ScP 09 18 07.6 +0.8
comp=Z,0.7nm,0.3s,baz=211,slow=3.5,SNR=1.8
CMAR LR LR 09 21 09.1
comp=Z,13µm,20.9s,baz=220,slow=39
CMAR Chiang Mai Arr 24.18 352 i P P 09 10 48.0 -0.7
CMAR pmax pmax
comp=Z,327nm,0.7s
CMAR Chiang Mai Arr 24.18 352 P P 09 10 47.7 -1.0
CM36 Chiang Mai Arr 24.22 352 P P 09 10 48.0 -1.1
CM35 Chiang Mai Arr 24.36 352 P P 09 10 50.0 -0.4
CM32 Chiang Mai Arr 24.39 351 P P 09 10 50.0 -0.6
CMMT Chiang Mai 24.53 352 P P 09 10 50.0 -1.9
comp=Z,3µmcomp=Z,234nm,0.9s
CHTO Chiang Mai 24.53 352 P P 09 10 51.3 -0.6
CHTO pmax pmax
comp=Z,323nm,0.9s
CHTO MLR MLR
comp=Z,14µm,21.0s
CHTO Chiang Mai 24.53 352 P P 09 10 51.3 -0.6
CHTO Chiang Mai 24.53 352 ⇑P P 09 10 51.3 -0.6
NLAI Namlea 24.55 86 P P 09 10 52.0 -0.2
comp=Z,2µmcomp=Z,92nm,1.1s
HALK Hakmana 24.76 298 ⇑p P 09 10 57.1 +3.0
PALK Pallekele 25.31 300 P P 09 11 00.9 +1.8
comp=Z,42nm,1.0s,baz=234,slow=7.0,SNR=17
PALK LR LR 09 19 36.6
comp=Z,9µm,20.0s,baz=226,slow=33
PALK Pallekele 25.31 300 ceP P 09 11 01.2 +2.1
PALK pmax pmax
comp=Z,77nm,1.1s
PALK MLR MLR
comp=Z,11µm,18.0s
PALK Pallekele 25.31 300 P P 09 11 00.9 +1.8
PALK Pallekele 25.31 300 ⇑P P 09 11 01.6 +2.5
QIZ Qiongzhong 25.50 16 P P 09 11 02.4 +1.7
QIZ S S 09 15 32.8 +5.7
QIZ ScS ScS 09 22 00.5 +0.7
QIZ pmax pmax
comp=Z,81nm,1.0s
QIZ LR LR
comp=Z,9µm,15.2s
QIZ LR LR
comp=Z,11µm,15.2s
QIZ LR LR
comp=Z,10µm,17.8s
QIZ Qiongzhong 25.50 16 IAmb IAmb 09 11 42.6
comp=Z,466nm,1.8s
TNTI Ternate 25.54 76 P P 09 11 02.1 +0.9
TNTI IAmb IAmb 09 11 35.5
comp=Z,326nm,1.3s
TNTI Ternate 25.54 76 P P 09 10 59.7 -1.5
comp=Z,5µmcomp=Z,3µmcomp=Z,206nm,1.5s
FITZ Fitzroy Crossi 25.71 121 P P 09 11 02.9 +0.3
comp=Z,57nm,0.9s,baz=293,slow=5.2,SNR=40
FITZ LR LR 09 21 58.6
comp=Z,13µm,20.9s,baz=306,slow=38
FITZ Fitzroy Crossi 25.71 121 P P 09 11 03.3 +0.6
baz=26,SNR=25
FITZ Fitzroy Crossi 25.71 121 P P 09 11 02.1 -0.6
FITZ Fitzroy Crossi 25.71 121 ⇑P P 09 11 01.7 -1.0
DAV Davao City (W) 26.17 62 P P 09 11 06.9 0.0
comp=Z,156nm,0.4s,baz=275,slow=1.8,SNR=5.8
MORW Morawa 26.58 153 P P 09 11 11.6 +1.1
baz=27,SNR=4.8
MORW Morawa 26.58 153 P P 09 11 10.1 -0.4
MORW Morawa 26.58 153 ⇑P P 09 11 11.8 +1.3
TGY Tagaytay City 26.74 43 P P 09 11 12.6 +0.6
comp=Z,410nm,0.7s,baz=186,slow=9.5,SNR=9.1
TGY LR LR 09 23 41.5
comp=Z,10µm,19.8s,baz=220,slow=41
KNRA Kununurra 27.57 113 P P 09 11 19.0 -0.5
KNRA IAmb IAmb 09 11 58.2
comp=Z,175nm,1.0s
MDRS Chennai 28.93 310 eP P 09 11 33.5 +2.0
SZP Santa 29.00 37 IAmb IAmb 09 12 17.9
comp=Z,160nm,1.2s
SWI Sorong 29.00 82 P P 09 11 29.8 -2.5
SWI pmax pmax
comp=Z,82nm,1.0s
SWI Sorong 29.00 82 P P 09 11 33.2 +0.9
comp=Z,5µmcomp=Z,2µmcomp=Z,82nm,1.2s
SIJI Sorong 29.01 82 P P 09 11 30.9 -1.5
comp=Z,23nm,0.8s,baz=320,slow=6.8,SNR=6.3
MTN Manton Dam 29.06 106 P P 09 11 33.1 +0.3
baz=29,SNR=19
MTN Manton Dam 29.06 106 P P 09 11 33.4 +0.6
MTN IAmb IAmb 09 12 17.2
comp=Z,97nm,0.8s
MTN Manton Dam 29.06 106 ⇑P P 09 11 33.5 +0.7
MUN Mundaring 29.17 156 P P 09 11 35.6 +2.0
baz=29,SNR=4.4
SAIH SAIHA 29.46 342 eP P 09 11 36.9 +0.5
SAIH IAmb IAmb 09 11 38.7
comp=Z,126nm,0.7s
KLBR Kellerberrin 29.50 153 P P 09 11 37.2 +0.7
baz=30,SNR=5.1
FAKI Fak Fak 29.70 86 P P 09 11 37.0 -1.5
FAKI IAmb IAmb 09 11 39.0
comp=Z,112nm,1.0s
FAKI Fak Fak 29.70 86 ⇑P P 09 11 36.7 -1.8
FAKI Fak Fak 29.70 86 P P 09 11 37.5 -1.0
comp=Z,5µmcomp=Z,2µmcomp=Z,106nm,0.8s
H08S2 Diego Garcia H 29.96 264 T T 09 42 43.6
baz=88,slow=76,SNR=3274
H08S3 Diego Garcia H 29.97 264 T T 09 42 43.5
baz=88,slow=76,SNR=565
H08S1 Diego Carcia H 29.98 264 T T 09 42 45.0
baz=88,slow=76,SNR=2885
KDU Kakadu 30.31 106 P P 09 11 42.8 -1.0
baz=30,SNR=28
KDU Kakadu 30.31 106 ⇑P P 09 11 43.0 -0.9
NWAO Narrogin (SRO) 30.42 155 LR LR 09 22 09.8
comp=Z,19µm,21.9s,baz=338,slow=33
NWAO Narrogin (SRO) 30.42 155 P P 09 11 45.7 +1.1
baz=31,SNR=4.1
NWAO Narrogin (SRO) 30.42 155 P P 09 11 45.0 +0.4
NWAO pmax pmax
comp=Z,107nm,1.6s
NWAO Narrogin (SRO) 30.42 155 P P 09 11 45.0 +0.4
NWAO Narrogin (SRO) 30.42 155 IAMs_20 IAMs_20 09 22 08.6
comp=Z,17µm,20.0s
KMI Kunming 30.54 0 ⇑P P 09 11 47.1 +1.0
KMI sP pP 09 11 51.3 -1.1
KMI PP PnPn 09 12 45.6 +0.1
KMI PcP PcP 09 14 46.5 +1.7
KMI S S 09 16 44.8 -2.0
KMI ScS ScS 09 22 23.0 +0.2
KMI pmax pmax
comp=Z,150nm,0.7s
KMI pmax pmax
comp=Z,990nm,8.6s
KMI LR LR
comp=Z,29µm,15.2s
KMI LR LR
comp=Z,9µm,12.8s
KMI LR LR
comp=Z,31µm,15.5s
KMI Kunming 30.54 0 P P 09 11 47.0 +1.0
KMI pmax pmax
comp=Z,176nm,0.8s
KMI Kunming 30.54 0 IAmb IAmb 09 11 48.9
comp=Z,113nm,0.7s
KMI Kunming 30.54 0 IAMs_20 IAMs_20 09 25 34.3
comp=Z,25µm,20.0s
H01W3 Cape Leeuwin H 31.03 161 T T 09 44 25.5
baz=338,slow=76,SNR=1182
H01W2 Cape Leeuwin H 31.04 161 T T 09 44 26.6
baz=338,slow=76,SNR=1160
H01W1 Cape Leeuwin H 31.04 161 T T 09 44 27.8
baz=338,slow=76,SNR=1069
WRKA Warakurna 31.32 131 P P 09 11 52.6 -0.2
baz=31,SNR=12
WRKA Warakurna 31.32 131 ⇓P P 09 11 53.0 +0.3
AGT Agartala 31.33 340 eP P 09 11 53.5 +0.8
KMBL Kambalda 31.37 147 P P 09 11 53.6 +0.5
baz=32,SNR=6.7
IMP Imphal 31.40 345 eP P 09 11 52.5 -0.9
IMP IAmb IAmb 09 11 56.3
comp=Z,111nm,0.9s
GYA Guiyang 32.12 7 ⇓P P 09 12 00.9 +1.1
GYA PP PP 09 13 11.0 -1.6
GYA S S 09 17 13.6 +2.4
GYA pmax pmax
comp=Z,41nm,0.8s
GYA LR LR
comp=Z,12µm,16.7s
GYA LR LR
comp=Z,7µm,14.8s
GYA LR LR
comp=Z,15µm,17.9s
KOHI KOHIMA 32.21 346 eP P 09 11 60.0 -0.7
KOHI IAmb IAmb 09 12 03.3
comp=Z,211nm,0.8s
MNCI Minicoy 32.52 295 P P 09 12 03.2 -0.2
MNCI IAmb IAmb 09 12 48.5
comp=Z,138nm,1.2s
MNCY Minicoy 32.53 295 eP P 09 12 06.2 +2.7
SHL Shillong 32.68 342 eP P 09 12 04.6 -0.2
SHL IAmb IAmb 09 12 05.5
comp=Z,164nm,0.7s
MOKO MOKOCHONG 32.69 347 eP P 09 12 04.5 -0.4
MOKO IAmb IAmb 09 12 06.4
comp=Z,400nm,0.8s
HYB Hyderabad 32.97 314 i P P 09 12 08.0 +0.7
HYB eP cP P 09 14 49.5 -1.8
HYB eS S 09 17 25.0 +0.4
HYB Hyderabad 32.97 314 ⇑eP P 09 12 06.8 -0.5
JORH JORHAT 33.15 346 eP P 09 12 07.3 -1.3
GUWA GUWAHATI 33.33 342 eP P 09 12 09.9 -0.3
GUWA IAmb IAmb 09 12 11.8
comp=Z,166nm,1.0s
LKP Lekhapani 33.39 349 eP P 09 12 10.7 0.0
BOK Bokaro 33.46 331 eP P 09 12 13.5 +2.1
BOK IAmb IAmb 09 12 16.9
comp=Z,256nm,0.8s
TWG Pinlang 33.54 32 IAmb IAmb 09 12 20.7
comp=Z,155nm,1.3s
ITAN ITANAGAR 33.67 346 eP P 09 12 13.2 +0.1
DIBR DIBRUGARH 33.70 348 ⇑eP P 09 12 12.1 -1.4
TPUB Ta-pu 33.70 31 IAmb IAmb 09 12 16.8
comp=Z,115nm,0.8s
TPUB IAMs_20 IAMs_20 09 25 33.6
comp=Z,12µm,20.0s
DHUB DHUBRI 33.73 339 eP P 09 12 14.5 +0.8
DHUB IAmb IAmb 09 12 16.3
comp=Z,208nm,1.0s
WB0 Warramunga Arr 33.98 117 IAmb IAmb 09 12 32.2
comp=Z,99nm,1.1s
WRA Warramunga Arr 34.00 118 P P 09 12 16.3 +0.1
comp=Z,82nm,0.9s,baz=291,slow=10,SNR=138
WRA S S 09 17 43.6 +3.1
comp=Z,6.2nm,0.8s,baz=294,slow=16,SNR=4.6
WRA LR LR 09 27 12.3
comp=Z,6µm,22.0s,baz=285,slow=38
WRA Warramunga Arr 34.00 118 P P 09 12 15.7 -0.5
WRA Warramunga Arr 34.00 118 P P 09 12 15.7 -0.5
WRAB Tennant Creek 34.00 118 c iP P 09 12 16.4 +0.1
WRAB pmax pmax
comp=Z,105nm,0.8s
WRAB MLR MLR
comp=Z,7µm,21.0s
WRAB Tennant Creek 34.00 118 P P 09 12 13.8 -2.5
WRAB IAmb IAmb 09 12 18.7
comp=Z,97nm,0.8s
WRAB Tennant Creek 34.00 118 ⇑P P 09 12 16.1 -0.2
ZIRO ZIRO 34.00 346 eP P 09 12 15.9 -0.4
WB2 Warramunga Arr 34.01 118 P P 09 12 15.7 -0.7
WB2 IAmb IAmb 09 12 18.2
comp=Z,100nm,0.9s
YULB Yu-li 34.12 32 P P 09 12 16.8 -0.4
YULB IAmb IAmb 09 12 50.1
comp=Z,68nm,0.9s
WR0 Warramunga Arr 34.18 118 IAmb IAmb 09 12 19.4
comp=Z,112nm,1.1s
SSLB Suanglung 34.27 31 P P 09 12 19.0 +0.5
SSLB IAmb IAmb 09 12 21.8
comp=Z,121nm,1.3s
SSLB IAMs_20 IAMs_20 09 26 53.7
comp=Z,11µm,20.0s
FORT Forrest 34.64 139 P P 09 12 18.2 -3.4
FORT IAmb IAmb 09 13 10.4
comp=Z,65nm,0.8s
NACB Ninganchiao 34.92 31 IAmb IAmb 09 12 27.8
comp=Z,89nm,0.8s
NACB IAMs_20 IAMs_20 09 26 24.8
comp=Z,13µm,20.0s
ASAR Alice Springs 35.08 124 P P 09 12 25.6 0.0
comp=Z,71nm,1.0s,baz=298,slow=7.6,SNR=237
ASAR S S 09 18 03.2 +5.9
comp=Z,1.8nm,0.8s,baz=293,slow=14,SNR=1.4
ASAR LR LR 09 27 42.2
comp=Z,12µm,21.3s,baz=292,slow=38
ASAR P3KPbc 09 43 14.2
comp=Z,0.7nm,0.9s,baz=123,slow=4.6,SNR=4.5
ASAR PKPPKP 09 45 25.8
comp=Z,1.4nm,1.1s,baz=100,slow=1.5,SNR=4.4
ASAR Alice Springs 35.08 124 P P 09 12 24.7 -0.9
ASAR Alice Springs 35.08 124 P P 09 12 24.7 -0.9
YHNB Yeheng 35.22 31 P P 09 12 26.3 -0.5
YHNB IAmb IAmb 09 12 32.9
comp=Z,62nm,0.8s
YHNB IAMs_20 IAMs_20 09 27 24.7
comp=Z,12µm,20.0s
GTK Tadong 35.41 338 ⇑eP P 09 12 29.4 +1.0
GTK IAmb IAmb 09 12 31.6
comp=Z,204nm,1.2s
ODAN Odare 35.47 336 eP P 09 12 29.8 +0.7
comp=Z,363nm,0.7s
TAPN Taplejung 35.78 337 eP P 09 12 33.0 +1.2
comp=Z,246nm,0.6s
RAMN Ramite 35.87 335 eP P 09 12 33.7 +1.1
comp=Z,177nm,0.6s
SMPI Sarmi 36.22 86 P P 09 12 33.8 -1.6
comp=Z,2µmcomp=Z,1µmcomp=Z,36nm,1.1s
ENH Enshi 36.28 10 IAMs_20 IAMs_20 09 29 17.8
comp=Z,11µm,19.0s
CD2 Chengdu 36.33 2 P P 09 12 35.8 -0.3
CD2 PP PP 09 14 00.8 +1.7
CD2 S S 09 18 14.4 -1.6
CD2 pmax pmax
comp=Z,370nm,0.7s
CD2 pmax pmax
comp=Z,1µm,5.5s
CD2 LR LR
comp=Z,40µm,18.8s
CD2 LR LR
comp=Z,26µm,18.8s
CD2 LR LR
comp=Z,45µm,18.9s
JIRN Jiri 36.67 335 eP P 09 12 40.5 +1.0
comp=Z,473nm,0.8s
LSA Lhasa 36.78 343 P P 09 12 41.1 +0.5
LSA S S 09 18 19.5 -4.3
LSA pmax pmax
comp=Z,820nm,0.9s
LSA LR LR
comp=Z,4µm,18.5s
LSA LR LR
comp=Z,7µm,19.9s
LSA LR LR
comp=Z,7µm,17.8s
LSA Lhasa 36.78 343 P P 09 12 41.0 +0.5
LSA Lhasa 36.78 343 P P 09 12 41.5 +1.0
LSA pmax pmax
comp=Z,236nm,0.9s
PKI Pulchoki 36.92 334 eP P 09 12 42.3 +0.7
comp=Z,80nm,0.7s
PKIN Phulchoki 36.93 334 eP P 09 12 42.3 +0.7
GUN Gumba 37.02 335 eP P 09 12 43.3 +0.9
comp=Z,498nm,0.6s
DMN Daman 37.09 334 eP P 09 12 43.7 +0.8
comp=Z,158nm,0.8s
POO Poona 37.12 311 eP P 09 12 44.6 +1.5
KKN Kakani 37.17 334 eP P 09 12 44.6 +1.0
comp=Z,0.4nm,0.5s
GENI Genyem 37.60 87 P P 09 12 46.5 -0.7
comp=Z,3µmcomp=Z,2µmcomp=Z,44nm,0.6s
GKN Gorkha 37.64 333 eP P 09 12 48.2 +0.7
comp=Z,484nm,0.9s
WHN Wuhan 37.67 17 ⇓iP P 09 12 48.4 +0.9
WHN sP sP 09 12 56.3 -0.2
WHN PP PP 09 14 20.8 +7.0
WHN S S 09 18 41.8 +5.4
WHN sS ScP 09 18 51.4 +0.3
WHN pmax pmax
comp=Z,140nm,0.8s
WHN pmax pmax
comp=Z,3µm,4.6s
WHN LR LR
comp=Z,54µm,23.3s
WHN LR LR
comp=Z,36µm,17.6s
WHN LR LR
comp=Z,41µm,19.1s
BHPL Bhopal 37.76 320 eP P 09 12 48.2 -0.3
BHPL IAmb IAmb 09 13 23.0
comp=Z,116nm,0.8s
KOLN Koldanda 37.91 332 eP P 09 12 50.8 +1.0
comp=Z,503nm,1.0s
JAY Jayapura 38.14 87 LR LR 09 31 16.4
comp=Z,4µm,21.4s,baz=256,slow=41
JAY Jayapura 38.14 87 P P 09 12 48.3 -3.5
JAY pmax pmax
comp=Z,41nm,0.9s
JAY Jayapura 38.14 87 P P 09 12 49.4 -2.4
comp=Z,505nmcomp=Z,22nm,1.2s
PYUN Piuthan 38.48 332 eP P 09 12 55.9 +1.3
QIS Mount Isa 38.87 116 P P 09 12 58.2 +0.3
baz=39,SNR=26
XAN Xi'an 39.88 8 ⇑P P 09 13 05.4 -0.6

XAN PP **PP** **09 14 37.3 -0.7**
XAN S **S** **09 19 05.9 -3.9**
XAN sS sS 09 19 19.8 -0.5
XAN SS **SS** **09 22 03.5 -3.3**
XAN pmax pmax
comp=Z,300nm,0.8s
XAN pmax pmax
comp=Z,2μm,5.7s
XAN LR LR
comp=Z,18μm,18.1s
XAN LR LR
comp=Z,9μm,14.1s
XAN LR LR
comp=Z,26μm,17.2s
XAN Xi'an **39.88 8** P **P** **09 13 05.5 -0.6**
XAN pmax pmax
comp=Z,290nm,0.8s
XAN Xi'an **39.88 8** IAmb IAmb 09 13 07.8
comp=Z,188nm,0.8s
NJ2 Nanjing **40.53 21** ⇓*i*P **P** **09 13 12.6 +1.2**
NJ2 pP **pP** **09 13 17.3 -0.6**
NJ2 sP **sP** **09 13 18.8 -1.6**
NJ2 S **S** **09 19 19.0 -0.4**
NJ2 sS **sS** **09 19 33.6 +3.8**
NJ2 pmax pmax
comp=Z,49nm,0.6s
NJ2 pmax pmax
comp=Z,960nm,4.5s
NJ2 LR LR
comp=Z,8μm,15.2s
NJ2 LR LR
comp=Z,14μm,16.1s
NJ2 LR LR
comp=Z,10μm,16.1s
SSE Sheshan **40.59 25** IAMs_20 IAMs_20 09 31 36.3
comp=Z,11μm,18.0s
JOW Kunigami **40.72 36** ⇓P **P** **09 13 14.0 +0.9**
COEN Coen **40.80 105** P **P** **09 13 13.6 -0.3**
COEN Coen **40.80 105** ⇑P **P** **09 13 13.7 -0.3**
BBOO Buckleboo **41.28 135** P **P** **09 13 17.9 +0.2**
baz=41,SNR=15
BBOO Buckleboo **41.28 135** P **P** **09 13 17.4 -0.3**
LZH Lanzhou **41.49 2** *e*P **P** **09 13 19.9 +0.4**
LZH pP pP 09 13 23.5 -2.4
LZH sP sP 09 13 26.8 -1.7
LZH PP **PnPn** **09 14 58.8 -1.6**
LZH PcP **PcP** **09 15 18.8 +1.8**
LZH S **S** **09 19 35.3 +1.3**
LZH sS sS 09 19 48.3 +3.9
LZH SS **SS** **09 22 38.4 -0.6**
LZH pmax pmax
comp=Z,180nm,1.0s
LZH pmax pmax
comp=Z,1μm,4.1s
LZH LR LR
comp=Z,16μm,16.0s
LZH LR LR
comp=Z,13μm,16.8s
LZH LR LR
comp=Z,14μm,18.2s
MTSU Mount Surprise **42.58 111** P **P** **09 13 29.7 +1.1**
baz=43,SNR=31
DDI Dehra Dun **42.76 328** *e*P **P** **09 13 30.7 +0.8**
DDI IAmb IAmb 09 13 32.1
comp=Z,164nm,0.7s
HTT Hallett **43.64 134** P **P** **09 13 37.7 +0.7**
baz=44,SNR=17
HTT Hallett **43.64 134** ⇑P **P** **09 13 37.6 +0.6**
TIA Tai'an **43.77 17** P **P** **09 13 37.3 -0.5**
TIA PP **PP** **09 15 17.8 -2.2**
TIA pmax pmax
comp=Z,53nm,1.0s
TIA pmax pmax
comp=Z,810nm,11.2s
TIA LR LR
comp=Z,8μm,21.6s
TIA LR LR
comp=Z,8μm,18.1s
TIA LR LR
comp=Z,9μm,21.6s
SMLA Simla **43.87 328** *e*P **P** **09 13 38.9 +0.3**
SMLA IAmb IAmb 09 13 42.5
comp=Z,146nm,0.8s
TIY Taiyuan **44.06 11** *e*P **P** **09 13 41.0 +0.8**
TIY S **S** **09 20 10.3 -1.3**
TIY pmax pmax
comp=Z,94nm,0.7s
TIY pmax pmax
comp=Z,1μm,4.3s
TIY LR LR
comp=Z,15μm,15.0s
TIY LR LR
comp=Z,5μm,13.7s
TIY LR LR
comp=Z,17μm,16.3s
PMG Port Moresby **44.33 98** *c i*P **P** **09 13 42.0 -0.6**
PMG pmax pmax
comp=Z,127nm,1.0s
PMG MLR MLR
comp=Z,4μm,22.0s
PMG Port Moresby **44.33 98** P **P** **09 13 41.5 -1.2**
PMG IAmb IAmb 09 13 56.9
comp=Z,151nm,0.9s
PMG Port Moresby **44.33 98** ⇑P **P** **09 13 42.1 -0.6**
CTA Charters Tower **44.78 113** P **P** **09 13 47.0 +0.8**
CTA pmax pmax
comp=Z,117nm,1.0s
CTAO Charters Tower **44.78 113** P **P** **09 13 47.4 +1.1**
CTAO pmax pmax
comp=Z,173nm,1.2s
CTAO MLR MLR
comp=Z,5μm,21.0s
CTAO Charters Tower **44.78 113** P **P** **09 13 47.4 +1.1**
CTAO IAmb IAmb 09 14 28.4
comp=Z,173nm,1.1s
CTAO Charters Tower **44.78 113** ⇑P **P** **09 13 46.8 +0.6**
QLP Quilpie **44.83 122** P **P** **09 13 47.9 +1.4**
baz=45,SNR=28
QLP Quilpie **44.83 122** ⇓P **P** **09 13 47.9 +1.4**
STKA Stephens Creek **44.85 131** P **P** **09 13 47.3 +0.7**
comp=Z,90nm,0.7s,baz=302,slow=8.1,SNR=221
STKA LR LR 09 33 33.2
comp=Z,8μm,20.9s,baz=295,slow=38
STKA Stephens Creek **44.85 131** P **P** **09 13 47.0 +0.4**
baz=45,SNR=167
STKA Stephens Creek **44.85 131** *c i*P **P** **09 13 47.4 +0.8**
STKA Stephens Creek **44.85 131** P **P** **09 13 47.0 +0.4**
GTA Gaotai **44.86 357** P **P** **09 13 47.3 +0.6**
GTA pP pP 09 13 51.5 -1.9
GTA sP sP 09 13 54.5 -1.5
GTA ScP **ScP** **09 19 19.4 -0.1**
GTA S **S** **09 20 22.4 -0.9**
GTA sS sS 09 20 33.6 -0.3
GTA ScS **ScS** **09 23 40.5 -2.7**
GTA pmax pmax
comp=Z,2μm,7.6s
GTA LR LR
comp=Z,20μm,18.7s
GTA LR LR
comp=Z,11μm,17.1s
GTA LR LR
comp=Z,27μm,19.1s
DHRM DHARAMSHALA **45.20 328** ⇑*e*P **P** **09 13 48.6 -1.0**
DHRM IAmb IAmb 09 13 50.5
comp=Z,151nm,0.6s
JSU Suzuyama **45.49 34** IAmb IAmb 09 13 53.0
comp=Z,145nm,1.3s
JSU Suzuyama **45.49 34** ⇓P **P** **09 13 51.4 -0.3**
BTO Baotou **46.49 8** P **P** **09 14 00.5 +1.0**
JNU Nakatsue **46.95 33** P **P** **09 14 02.6 -0.5**
comp=Z,104nm,0.8s,baz=154,slow=3.9,SNR=24
JNU Nakatsue **46.95 33** IAMs_20 IAMs_20 09 35 57.5
comp=Z,8μm,20.0s
JNU Nakatsue **46.95 33** ⇑P **P** **09 14 03.3 +0.2**
HHC Hu-ho-hao-te **46.96 9** *e*P **P** **09 14 03.4 +0.3**
HHC PP **PP** **09 15 53.9 0.0**
HHC S **S** **09 20 53.3 0.0**
HHC SS **SS** **09 24 09.8 -11**
HHC pmax pmax
comp=Z,130nm,1.1s
HHC LR LR
comp=Z,21μm,17.0s
HHC LR LR
comp=Z,10μm,17.9s
HHC LR LR
comp=Z,20μm,18.7s
BJT Baijiatuau **47.09 14** P **P** **09 14 04.5 +0.4**
BJT pmax pmax
comp=Z,134nm,0.8s
BJT Baijiatuau **47.09 14** IAmb IAmb 09 14 05.7
comp=Z,68nm,0.7s
BJI Beijing **47.11 14** P **P** **09 14 04.3 +0.1**
BJI S **S** **09 20 54.3 -1.0**
BJI pmax pmax
comp=Z,89nm,0.7s
BJI pmax pmax
comp=Z,1μm,3.5s
BJI LR LR
comp=Z,12μm,18.8s
BJI LR LR
comp=Z,6μm,17.1s
BJI LR LR
comp=Z,11μm,19.2s
ARPS Mount Arapiles **47.41 136** P **P** **09 14 08.5 +1.8**
baz=48,SNR=5.0
DL2 Dalian **47.67 20** P **P** **09 14 06.0 -2.6**
DL2 S **S** **09 20 57.3 -6.0**
DL2 pmax pmax
comp=Z,45nm,1.5s
DL2 pmax pmax
comp=Z,950nm,6.8s
DL2 LR LR
comp=Z,3μm,15.7s
DL2 LR LR
comp=Z,8μm,16.3s
DL2 LR LR
comp=Z,7μm,21.3s
TJN Taejon **47.78 27** ⇓*e*P **P** **09 14 11.1 +1.6**
CMSA Cobar Meteorol **47.86 128** P **P** **09 14 11.0 +0.8**
baz=48,SNR=137
ANA2 Anatahan **47.91 62** P **P** **09 14 09.3 -1.6**
NIL Nilore **47.91 327** P **P** **09 14 10.4 -0.2**
NIL pmax pmax
comp=Z,163nm,0.9s
NIL MLR MLR
comp=Z,5μm,20.0s
NIL Nilore **47.91 327** P **P** **09 14 10.4 -0.2**
RMQ Roma **48.64 121** P **P** **09 14 18.6 +2.2**
baz=49,SNR=11
KSAR Wonju Array Be **48.89 27** P **P** **09 14 16.5 -1.5**
KSAR Wonju Array Be **48.89 27** P **P** **09 14 16.5 -1.5**
KSRS Korea Array **48.92 27** P **P** **09 14 18.4 +0.2**
comp=Z,24nm,0.5s,baz=225,slow=7.4,SNR=103
KSRS PP PP 09 16 01.5 -10
comp=Z,9.9nm,1.0s,baz=216,slow=4.3,SNR=4.1
KS19 Wonju Array Si **48.93 27** IAmb IAmb 09 14 21.5
comp=Z,222nm,1.9s
JMN Monobe **49.07 35** ⇓P **P** **09 14 19.8 +0.2**
JHS Saijyo **49.58 33** IAmb IAmb 09 14 30.1
comp=Z,116nm,0.9s
JHS Saijyo **49.58 33** ⇓P **P** **09 14 23.3 -0.1**
JCJ Chichijima **50.23 48** P **P** **09 14 25.9 -2.6**
comp=Z,86nm,0.5s,baz=282,slow=11,SNR=7.5
TOO Toolangi **50.34 135** P **P** **09 14 31.3 +2.0**
TOO pmax pmax
comp=Z,29nm,1.7s
EIDS Eidsvold **50.36 118** P **P** **09 14 30.4 +0.9**
baz=50,SNR=4.4
EIDS Eidsvold **50.36 118** IAmb IAmb 09 14 31.9
comp=Z,146nm,1.5s
EIDS Eidsvold **50.36 118** ⇑P **P** **09 14 30.4 +0.9**
KBL Kabul **50.95 324** P **P** **09 14 34.3 +0.3**
KBL pmax pmax
comp=Z,75nm,1.1s
KBL MLR MLR
comp=Z,5μm,21.0s
KBL Kabul **50.95 324** P **P** **09 14 34.3 +0.3**
KBL IAmb IAmb 09 15 34.9
comp=Z,75nm,1.1s
SNY Shenyang **50.95 20** ⇑P **P** **09 14 31.9 -1.7**
SNY pmax pmax
comp=Z,1μm,7.7s
SNY LR LR
comp=Z,6μm,19.2s
SNY LR LR
comp=Z,8μm,18.0s
SNY LR LR
comp=Z,7μm,21.4s
WMQ Urumqi **51.00 346** P **P** **09 14 35.5 +1.4**
WMQ sP sP 09 14 43.3 -0.1
WMQ S **S** **09 21 49.9 -0.2**
WMQ ScS **ScS** **09 24 24.4 +0.8**
WMQ pmax pmax
comp=Z,280nm,0.7s
WMQ pmax pmax
comp=Z,2μm,4.7s
WMQ LR LR
comp=Z,7μm,21.5s
WMQ LR LR
comp=Z,9μm,16.9s
WMQ LR LR
comp=Z,11μm,26.1s
YNG Young **51.04 130** P **P** **09 14 35.1 +0.5**
baz=51,SNR=8.9
JWT Wachi **51.06 35** IAmb IAmb 09 14 35.7
comp=Z,87nm,0.9s
JWT Wachi **51.06 35** ⇑P **P** **09 14 33.8 -0.8**
KSH Kashi **51.18 334** P **P** **09 14 34.0 -1.6**
KSH pP pP 09 14 43.3 +0.9
KSH PP **PP** **09 16 35.9 +3.3**
KSH S **S** **09 21 48.4 -4.5**
KSH pmax pmax
comp=Z,74nm,0.5s
KSH LR LR
comp=Z,3μm,10.4s
KSH LR LR
comp=Z,4μm,12.8s
KSH LR LR
comp=Z,4μm,11.8s
SOCY Socotra **51.45 290** P **P** **09 14 39.2 +1.2**
SOCY Socotra **51.45 290** ⇓P **P** **09 14 39.1 +1.2**
WSAR Wadi Sarin **51.61 305** P **P** **09 14 39.6 +0.7**
comp=Z,18nm,1.1s,baz=181,slow=13,SNR=3.1
WSAR LR LR 09 34 32.3
comp=Z,6μm,19.7s,baz=140,slow=34
CAN Canberra **51.90 131** P **P** **09 14 41.5 +0.5**
CAN pmax pmax
comp=Z,124nm,1.2s
CAN MLR MLR
comp=Z,9μm,22.0s
CAN Canberra **51.90 131** P **P** **09 14 41.5 +0.5**
CAN IAmb IAmb 09 14 55.8
comp=Z,124nm,1.2s
CAN IAMs_20 IAMs_20 09 36 52.6
comp=Z,9μm,22.0s
CAN Canberra **51.90 131** ⇑P **P** **09 14 42.8 +1.7**
SHAO Shalim **51.94 298** P **P** **09 14 42.5 +1.1**
ARMA Armidale **52.23 124** P **P** **09 14 43.1 -0.5**
baz=52,SNR=8.5
ARMA Armidale **52.23 124** P **P** **09 14 44.3 +0.7**
ARMA IAmb IAmb 09 14 47.0
comp=Z,83nm,1.2s
ARMA Armidale **52.23 124** ⇑P **P** **09 14 46.4 +2.7**
JGF Kuroka **52.41 36** IAmb IAmb 09 15 50.8
comp=Z,154nm,1.7s
JGF Kuroka **52.41 36** ⇑P **P** **09 14 43.5 -1.2**
SHLS Shalkode **52.87 339** *e*P **P** **09 14 45.9 -2.2**
comp=Z,62nm,0.6s,baz=339
SHLS *i* S **S** **09 22 14.7 -1.2**
comp=Z,272nm,2.5s,baz=339
SHLS Shalkode **52.87 339** *e*P **P** **09 14 45.9 -2.2**
SHLS *i* S **S** **09 22 14.6 -1.2**
SHLS pmax pmax
comp=Z,62nm,0.6s
PDGK Podgornoye **53.01 339** P **P** **09 14 49.1 0.0**
UZB Uzynbulak **53.02 339** *e*P **P** **09 14 48.0 -1.2**
comp=Z,48nm,0.6s,baz=338
UZB *e*S **S** **09 22 17.6 -0.4**
comp=Z,159nm,2.6s,baz=338
UZB Uzynbulak **53.02 339** *e*P **P** **09 14 48.0 -1.2**
UZB *e*S **S** **09 22 17.6 -0.4**
UZB pmax pmax
comp=Z,48nm,0.6s
UZB smax smax
comp=N,159nm,2.6s
SATY Saty **53.17 338** *e*P **P** **09 14 48.9 -1.4**
comp=N,64nm,0.9s,baz=338
SATY *e*S **S** **09 22 19.6 -0.4**
comp=N,173nm,2.5s,baz=338
SATY Saty **53.17 338** *e*P **P** **09 14 48.9 -1.4**
SATY *e*S **S** **09 22 19.6 -0.4**
SATY pmax pmax
comp=Z,64nm,0.9s
SATY smax smax
comp=N,173nm,2.5s
SONM Songino Array **53.32 3** P **P** **09 14 52.6 +1.3**
comp=N,434nm,0.8s,baz=182,slow=8.6,SNR=806
SONM PcP **PcP** **09 15 58.9 +0.2**
comp=N,18nm,0.7s,baz=182,slow=4.7,SNR=0.7
SONM ScP **ScP** **09 19 58.4 +3.1**
comp=N,1.2nm,0.7s,baz=175,slow=4.2,SNR=1.7
SONM Songino Array **53.32 3** P **P** **09 14 51.4 +0.1**
SONM pmax pmax
comp=Z,354nm,0.8s
SONM Songino Array **53.32 3** P **P** **09 14 51.4 +0.1**
ULHL Ulahol **53.33 336** P **P** **09 14 51.9 +0.3**
SNR=30
CN2 Changchun **53.34 21** *e*P **P** **09 14 50.3 -1.0**
CN2 S **S** **09 22 17.5 -4.4**
CN2 pmax pmax
comp=Z,800nm,4.0s
CN2 LR LR
comp=Z,7μm,17.0s
CN2 LR LR
comp=Z,6μm,17.0s
CN2 LR LR
comp=Z,8μm,18.0s
ULN Ulaanbaatar **53.39 4** *c i*P **P** **09 14 52.5 +0.7**
ULN pmax pmax
comp=Z,238nm,0.8s
ULN Ulaanbaatar **53.39 4** P **P** **09 14 52.8 +0.9**
ULN Ulaanbaatar **53.39 4** IAMs_20 IAMs_20 09 40 33.2
comp=Z,10μm,19.0s
ULN Ulaanbaatar **53.39 4** ⇑P **P** **09 14 52.6 +0.8**
KPKS Kokpek **53.42 338** *e*P **P** **09 14 50.4 -1.8**
comp=Z,84nm,1.1s,baz=338
KPKS Kokpek **53.42 338** *e*P **P** **09 14 50.3 -1.8**
KPKS pmax pmax
comp=Z,84nm,1.1s
GAR Garm **53.49 329** IAmb IAmb 09 15 23.5
comp=Z,125nm,0.9s
MAJO Matsushiro **53.56 36** ⇑*e*P **P** **09 14 50.9 -2.2**
MAJO pmax pmax
comp=Z,54nm,1.0s
MAJO Matsushiro **53.56 36** P **P** **09 14 50.0 -3.2**
MAJO Matsushiro **53.56 36** ⇑P **P** **09 14 50.9 -2.2**
MAT Matsushiro **53.56 36** P **P** **09 14 50.9 -2.2**
MAT S **S** **09 22 25.0 -0.3**
MJB9 Matsu-Tunnel **53.56 36** IAmb IAmb 09 14 56.5
comp=Z,51nm,0.8s
MJAR Matsushiro Arr **53.56 36** P **P** **09 14 51.5 -1.6**
comp=Z,50nm,0.9s,baz=213,slow=7.2,SNR=48
MJAR ScP **ScP** **09 19 57.2 +0.7**
comp=Z,2.0nm,0.8s,baz=201,slow=4.5,SNR=2.8
MJAR LR LR 09 38 25.9
comp=Z,2μm,20.1s,baz=225,slow=37
TNSS Tian-Shan **53.71 337** *e*P **P** **09 14 53.3 -1.4**
baz=337
TNSS Tian-Shan **53.71 337** *e*P **P** **09 14 53.2 -1.4**
SOHO SOHO **53.73 305** P **P** **09 14 55.6 +1.0**
MDOK Medeo **53.77 337** *i* P **P** **09 14 52.1 -2.7**
baz=337
MDOK *e*S **S** **09 22 28.8 +0.5**
comp=Z,2μm,2.9s,baz=337
MDOK *i* LR LR 09 37 09.2
comp=Z,1μm,19.6s,baz=337
MDOK Medeo **53.77 337** *i* P **P** **09 14 52.9 -1.9**
MDOK *e*S **S** **09 22 28.7 +0.5**
MDOK MLR MLR
comp=Z,1μm,20.0s
CHGR Chuyangaron **53.84 328** IAMs_20 IAMs_20 09 40 13.7
comp=Z,7μm,22.0s
AAA Alma-Ata **53.87 337** *e*P **P** **09 14 53.8 -1.6**
baz=337
AAA LR LR 09 37 30.1
comp=Z,936nm,18.0s,baz=337
AAA Alma-Ata **53.87 337** *e*P **P** **09 14 53.7 -1.6**
AAA MLR MLR
comp=Z,936nm,18.0s
UCH Uchtor **54.03 334** P **P** **09 14 57.3 +0.2**
SNR=66
TKM2 Tokmak 2 **54.15 336** P **P** **09 14 57.6 0.0**
SNR=131
TKM2 Tokmak 2 **54.15 336** *i* P **P** **09 14 57.3 -0.3**
TKM2 pmax pmax
comp=Z,98nm,0.8s
TAU Tasmania Unive **54.18 140** IAMs_20 IAMs_20 09 35 53.2
comp=Z,5μm,20.0s
KBK Karagaybulak **54.20 335** P **P** **09 14 58.5 +0.6**
SNR=31
AML Almayashu **54.31 334** P **P** **09 14 59.2 +0.2**
SNR=100
ALNE Al Ain **54.33 305** P **P** **09 14 59.9 +0.9**
UOSS Minazif **54.37 306** P **P** **09 14 59.2 -0.1**
UOSS Minazif **54.37 306** ⇑P **P** **09 14 59.7 +0.4**
HATD Hatta, Dubai **54.37 306** P **P** **09 15 00.1 +0.8**
AAK Ala-Archa **54.38 335** P **P** **09 14 59.7 +0.5**
comp=Z,23nm,0.9s,baz=155,slow=6.5,SNR=41
AAK Ala-Archa **54.38 335** P **P** **09 14 59.8 +0.6**
SNR=26
AAK Ala-Archa **54.38 335** *i* P **P** **09 14 59.7 +0.5**
SNR=35
AAK Ala-Archa **54.38 335** *c i*P **P** **09 14 59.4 +0.2**
AAK pmax pmax
comp=Z,154nm,1.3s
AAK MLR MLR
comp=Z,14μm,20.0s
AAK Ala-Archa **54.38 335** P **P** **09 14 59.6 +0.5**
AAK IAmb IAmb 09 15 44.8
comp=Z,115nm,1.5s
AAK Ala-Archa **54.38 335** ⇑P **P** **09 14 59.5 +0.3**
MDH Madha **54.45 306** P **P** **09 14 59.5 -0.4**
MSHR Mys Shultsa **54.54 26** *c i*P **P** **09 14 59.6 -0.5**
MSHR pmax pmax
comp=Z,127nm,0.8s
CHMS Chumysh **54.56 335** P **P** **09 15 00.1 -0.3**
SNR=16
MSFE Esma-Masafi **54.59 306** P **P** **09 15 01.6 +0.6**
JSD Sado **54.63 34** ⇑P **P** **09 14 59.5 -1.4**
EKS2 Erkin-Say **54.70 334** P **P** **09 15 02.1 +0.6**
SNR=75
BANOM Banah **54.75 307** P **P** **09 15 02.6 +0.6**
FAQ Al Faqa, Dubai **54.77 306** *i* P **P** **09 15 02.9 +0.7**
SNR=7.4
NAZ Nazwa, Dubai **54.82 306** P **P** **09 15 03.3 +0.7**
TDK Taldyqorghan **54.85 339** *e*P **P** **09 15 00.8 -1.6**
baz=339
TDK LR LR 09 38 15.8
comp=Z,2μm,18.8s,baz=339
TDK Taldyqorghan **54.85 339** *e*P **P** **09 15 00.8 -1.6**
TDK MLR MLR
comp=Z,2μm,19.0s
USP Ospenovka **54.89 335** P **P** **09 15 02.6 -0.1**
SNR=45
ASUD Al Ashush, Dub **54.93 305** P **P** **09 15 04.6 +1.3**
SGDS Sogindy **54.99 335** *e*P **P** **09 15 01.6 -2.0**
baz=335
SGDS Sogindy **54.99 335** *e*P **P** **09 15 01.5 -2.0**
HRA Herat **55.05 319** P **P** **09 15 04.5 +0.2**
HRA IAMs_20 IAMs_20 09 40 16.3
comp=Z,6μm,21.0s
ZSN Zaisan **55.10 345** *e*P **P** **09 15 02.8 -1.3**
comp=Z,131nm,0.9s,baz=345
ZSN Zaisan **55.10 345** *e*P **P** **09 15 02.8 -1.3**
ZSN pmax pmax
comp=Z,131nm,0.9s
MK31 Makanchi Array **55.19 343** *c i*P **P** **09 15 04.5 -0.3**
MKAR Makanchi Array **55.19 343** P **P** **09 15 05.2 +0.3**
comp=Z,194nm,0.8s,baz=148,slow=7.7,SNR=840
MKAR S **S** **09 22 45.6 -1.3**
comp=Z,3.8nm,1.1s,baz=162,slow=8.9,SNR=4.9
MKAR LR LR 09 43 08.4
comp=Z,4μm,21.2s,baz=148,slow=41
MKAR Makanchi Array **55.19 343** *i* P **P** **09 15 04.6 -0.2**
MKAR pmax pmax
comp=Z,194nm,0.8s
MKAR Makanchi Array **55.19 343** P **P** **09 15 04.2 -0.6**
MAKZ Makanchi **55.29 343** P **P** **09 15 05.3 -0.3**
MAKZ pmax pmax
comp=Z,54nm,0.9s
MAKZ MLR MLR
comp=Z,6μm,20.0s
MAKZ Makanchi **55.29 343** P **P** **09 15 05.3 -0.3**
MAKZ IAmb IAmb 09 15 22.5
comp=Z,54nm,0.8s
MAKZ IAMs_20 IAMs_20 09 43 11.8
comp=Z,6μm,20.0s

MAKZ Makanchi 55.29 343 ⇑P **P** **09 15 05.3 -0.3**
ABPO Ambohimpanom 55.48 251 P **P** **09 15 07.3 -0.4**
ABPO pmax pmax
comp=Z,30nm,1.2s
ABPO Ambohimpanom 55.48 251 P **P** **09 15 07.3 -0.4**
ABPO Ambohimpanom 55.48 251 ⇑P **P** **09 15 08.9 +1.3**
MDJ Mudanjiang 55.57 23 P **P** **09 15 07.3 -0.3**
MDJ S **S** **09 22 59.0 +7.0**
MDJ sS sS 09 23 03.6 +0.9
MDJ ScS **ScS** **09 24 57.3 +1.7**
MDJ pmax pmax
comp=Z,91nm,0.6s
MDJ pmax pmax
comp=Z,1μm,6.8s
MDJ LR LR
comp=Z,5μm,15.5s
MDJ LR LR
comp=Z,3μm,13.5s
MDJ LR LR
comp=Z,8μm,14.9s
MDJ Mudanjiang 55.57 23 IAmb IAmb 09 15 09.3
comp=Z,70nm,0.9s
TAS Tashkent 55.75 330 P **P** **09 15 08.8 -0.2**
TAS pmax pmax
comp=Z,156nm,0.8s
ZAK Zakamensk 55.76 1 *e*P **P** **09 15 09.1 +0.1**
ZAK pmax pmax
comp=Z,63nm,1.1s
JMM Marumori 55.97 36 ⇓P **P** **09 15 09.3 -1.2**
DZA Taraz 55.98 333 *e*P **P** **09 15 09.8 -0.8**
baz=332
DZA Taraz 55.98 333 *e*P **P** **09 15 09.8 -0.8**
IUG Iuzhnay 56.01 331 *e*P **P** **09 15 08.9 -2.1**
comp=Z,50nm,0.8s,baz=331
IUG Iuzhnay 56.01 331 *e*P **P** **09 15 08.9 -2.1**
IUG pmax pmax
comp=Z,50nm,0.8s
USRK Ussuriysk Ar. 56.20 25 P **P** **09 15 12.1 0.0**
comp=Z,163nm,0.8s,baz=218,slow=6.0,SNR=213
VOI Vohitsoka 56.25 247 ⇑P **P** **09 15 13.9 +0.9**
CHM Chimkent 56.35 331 *e*P **P** **09 15 11.5 -1.8**
baz=331
CHM Chimkent 56.35 331 *e*P **P** **09 15 11.4 -1.8**
KK31 Karatay Array 56.52 332 *i* P **P** **09 15 13.7 -0.8**
KKAR Karatay Array 56.52 332 P **P** **09 15 13.5 -1.0**
KKAR Karatay Array 56.52 332 P **P** **09 15 13.4 -1.0**
KKAR Karatay Array 56.52 332 ⇑P **P** **09 15 13.5 -1.0**
BTLS Baital 56.53 336 *e*P **P** **09 15 11.7 -2.8**
comp=Z,13nm,0.6s,baz=336
BTLS Baital 56.53 336 *e*P **P** **09 15 11.7 -2.8**
BTLS pmax pmax
comp=Z,13nm,0.6s
DGZ Jazzator, Alta 56.63 348 *c i*P **P** **09 15 15.8 +0.5**
DGZ pmax pmax
comp=Z,224nm,0.7s
DGZ MLR MLR
comp=Z,5μm,17.0s
HIA Hailar 56.66 13 IAmb IAmb 09 15 16.7
comp=Z,85nm,0.9s
HIA Hailar 56.66 13 IAMs_20 IAMs_20 09 41 20.2
comp=Z,9μm,20.0s
BRLS Borolday 56.78 332 *e*P **P** **09 15 14.6 -1.8**
baz=331
BRLS Borolday 56.78 332 *e*P **P** **09 15 14.5 -1.8**
MOY Mondy 57.06 359 *e*P **P** **09 15 18.4 +0.2**
MOY pmax pmax
comp=Z,211nm,2.6s
TLY Talaya 57.07 1 *c i*P **P** **09 15 19.3 +1.1**
TLY pmax pmax
comp=Z,89nm,0.9s
TLY MLR MLR
comp=Z,7μm,17.0s
TLY Talaya 57.07 1 P **P** **09 15 19.0 +0.8**
TLY IAmb IAmb 09 15 21.7
comp=Z,87nm,0.9s
TLY IAMs_20 IAMs_20 09 42 38.5
comp=Z,7μm,20.0s
TLY Talaya 57.07 1 ⇑P **P** **09 15 19.3 +1.1**
TLY ⇓P **pP** **09 15 19.9 -5.0**
IRK Irkutsk 57.64 1 *e*P **P** **09 15 22.2 0.0**
IRK pmax pmax
comp=Z,287nm,3.1s
JTM Tenmabayashi 58.10 34 ⇑P **P** **09 15 24.5 -1.1**
CIT Chita 58.16 8 *e*P **P** **09 15 26.4 +0.5**
CIT *e* 09 15 35.8
CIT *e*S **S** **09 23 29.6 +3.5**
CIT pmax pmax
comp=Z,387nm,2.6s
TEY Ternei 58.90 28 ⇑*e*P **P** **09 15 30.1 -1.0**
TEY pmax pmax
comp=Z,60nm,0.8s
TEY pmax pmax
comp=N,30nm,0.9s
SEM Semipalatinsk 59.04 344 *e*P **P** **09 15 30.0 -2.2**
comp=N,38nm,0.6s,baz=343
SEM LR LR 09 42 49.1
comp=N,1μm,16.5s,baz=343
SEM Semipalatinsk 59.04 344 *e*P **P** **09 15 30.0 -2.2**
SEM pmax pmax
comp=Z,38nm,0.6s
KURBB Kurchatov Arra 59.73 343 P **P** **09 15 36.8 +0.1**
comp=Z,112nm,0.9s,baz=159,slow=6.5,SNR=569
KURBB S **S** **09 23 43.1 -3.2**
comp=Z,2.0nm,0.9s,baz=152,slow=13,SNR=5.3
KURBB Kurchatov Arra 59.73 343 P **P** **09 15 36.2 -0.5**
KURK Kurchatov 59.78 343 P **P** **09 15 36.8 -0.3**
KURK Kurchatov 59.78 343 P **P** **09 15 36.8 -0.3**
GEYT Alibeck 59.85 320 P **P** **09 15 38.1 +0.2**
comp=Z,48nm,0.6s,baz=168,slow=9.0,SNR=64
GEYT LR LR 09 43 38.2
comp=Z,3μm,21.3s,baz=105,slow=38
GEYT Alibeck 59.85 320 P **P** **09 15 38.1 +0.2**
GEYT IAmb IAmb 09 15 39.4
comp=Z,71nm,1.1s
GYA0 ALIBECK ARRAY 59.85 320 P **P** **09 15 37.7 -0.2**
GYA0B ALIBECK ARRAY 59.85 320 IAmb IAmb 09 15 39.4
comp=Z,110nm,1.1s
ERM Erimo 60.09 34 *ce*P **P** **09 15 38.5 -0.8**
ERM pmax pmax
comp=Z,52nm,1.0s
ERM MLR MLR
comp=Z,2μm,16.0s
KLR Kul'dur 60.23 22 *c i*P **P** **09 15 39.5 -0.7**
KLR pmax pmax
comp=Z,60nm,0.7s
KLR MLR MLR
comp=Z,6μm,16.0s
CASY Casey 60.82 176 P **P** **09 15 44.5 +0.5**
CASY IAmb IAmb 09 16 53.6
comp=Z,29nm,0.6s
CASY Casey 60.82 176 IAMs_20 IAMs_20 09 36 24.6
comp=Z,5μm,20.0s
CASY Casey 60.82 176 ⇑P **P** **09 15 44.5 +0.5**
BRZS Berezniki 61.13 338 *e*P **P** **09 15 44.5 -1.8**
comp=Z,33nm,1.1s,baz=338
BRZS Berezniki 61.13 338 *e*P **P** **09 15 44.5 -1.8**
BRZS pmax pmax
comp=Z,33nm,1.1s
ZALV Zalesovo Beam 61.18 348 P **P** **09 15 46.6 0.0**
comp=Z,198nm,0.7s,baz=167,slow=4.3,SNR=190
ZALV S **S** **09 24 02.9 -2.0**
comp=Z,3.0nm,0.7s,baz=150,slow=15,SNR=5.8
ZALV PKP2bc 09 45 09.8
comp=Z,0.6nm,0.3s,baz=253,slow=1.5,SNR=4.3
ZALV LR LR 09 45 42.9
comp=Z,9μm,19.1s,baz=156,slow=40
ASAJ Asahikawa 61.20 32 P **P** **09 15 46.4 -0.6**
comp=Z,35nm,0.8s,baz=239,slow=9.6,SNR=22
KOUNC Koumac, New Ca 61.57 110 ⇓P **P** **09 15 51.3 +1.4**
KOUNC ⇓P **P** **09 15 51.3 +1.4**
ZEA Zeya 62.66 16 *e*P **P** **09 15 56.3 -0.2**
ZEA *e* 09 18 13.0
ZEA *e*S **S** **09 24 29.6 +6.0**
ZEA *e*SS **SS** **09 28 29.1 +0.6**
ZEA pmax pmax
comp=Z,500nm,10.1s
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=N,40nm,0.9s
ZEA pmax pmax
comp=Z,70nm,1.0s
ZEA pmax pmax
comp=Z,200nm,5.2s
ZEA smax smax
comp=N,600nm,13.4s
ZEA MLR MLR
comp=N,3μm,15.0s
ZEA MLR MLR
comp=Z,4μm,16.0s
QRN Al-Qurain 62.68 306 *e*P 09 15 56.8
RAYN Ar Rayn 62.75 300 *i* P **P** **09 15 57.3 -0.5**
SNR=11
RAYN Ar Rayn 62.75 300 P **P** **09 15 58.1 +0.3**
RAYN pmax pmax
comp=Z,25nm,1.0s
RAYN MLR MLR
comp=Z,3μm,22.0s
RAYN Ar Rayn 62.75 300 P **P** **09 15 58.1 +0.3**
YUK Yuzh-Kuril'sk 62.91 34 *e*P **P** **09 15 58.8 +0.5**
YUK *e* 09 16 35.9
YUK *e* 09 18 17.2
YUK *e*PPP PPP 09 19 45.4
YUK *e*S **S** **09 24 29.8 +2.8**
YUK *e* 09 25 51.1
YUK *e*SS **SS** **09 28 36.8 +4.1**
YUK pmax pmax
comp=E,138nm,0.8s
YUK pmax pmax
comp=Z,126nm,0.8s
YUK pmax pmax
comp=N,113nm,0.7s
YUK pmax pmax
comp=Z,403nm,1.4s
RDF Al-Radifah 63.04 306 *e*P 09 15 59.9
UMR Umm Al-Rimmam 63.16 307 *e*P 09 16 00.1
YSS Yuzh-Sakhalins 63.24 30 *α i*P **P** **09 16 00.0 -0.5**
YSS *e*SP **pP** **09 16 06.1 -1.1**
YSS *e* 09 18 18.9
YSS *e*PPP PPP 09 19 48.7
YSS *e*S **S** **09 24 28.9 -2.1**
YSS *e*PS **PnS** **09 24 39.6 -9.1**
YSS *e*PPS PPS 09 25 01.1
YSS *e*SS **SS** **09 28 35.7 -2.1**
YSS pmax pmax
comp=Z,140nm,0.9s
YSS pmax pmax
comp=Z,1μm,4.2s
YSS pmax pmax
comp=N,300nm,4.1s
YSS pmax pmax
comp=E,300nm,4.3s
YSS Yuzh-Sakhalins 63.24 30 P **P** **09 16 00.4 -0.1**
YSS Yuzh-Sakhalins 63.24 30 ⇑P **P** **09 16 00.3 -0.1**
GRNR Gornyy 63.26 23 ⇑*i*P **P** **09 16 00.6 0.0**
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR MLR MLR
comp=N,2μm,16.0s
GRNR MLR MLR
comp=Z,3μm,16.0s
DZM Mont Dzumac 63.70 112 *e*P **P** **09 16 02.5 -1.8**
comp=Z,98nm,1.2s
DZM *e*S **S** **09 24 33.5 -4.5**
comp=Z,4μm,28.1s
DZM *e*SS **SS** **09 28 45.2 -0.9**
comp=Z,2μm,24.4s
DZM *e*LR LR 09 35 07.9
comp=Z,7μm,24.4s
DZM Mont Dzumac 63.70 112 P **P** **09 16 04.2 0.0**
DZM Mont Dzumac 63.70 112 ⇓P **P** **09 16 05.5 +1.2**
BOD Bodaibo 63.89 7 ⇓*i*P **P** **09 16 04.0 -0.6**
BOD pmax pmax
comp=Z,148nm,0.9s
BVAR Borovoye Array 64.44 339 P **P** **09 16 07.1 -1.2**
comp=Z,46nm,0.6s,baz=163,slow=11,SNR=312
BRVK Borovoye 64.51 339 *c i*P **P** **09 16 07.8 -1.0**
BRVK pmax pmax
comp=Z,105nm,1.2s
BRVK Borovoye 64.51 339 P **P** **09 16 08.2 -0.5**
BRVK IAmb IAmb 09 16 09.4
comp=Z,61nm,0.7s
BRVK Borovoye 64.51 339 IAMs_20 IAMs_20 09 48 58.3
comp=Z,4μm,18.0s
KUR Kuril'sk 64.77 34 ⇓*i*P **P** **09 16 10.5 -0.1**
KUR pmax pmax
comp=Z,1μm,5.4s
KUR pmax pmax
comp=E,100nm,1.2s
KUR pmax pmax
comp=Z,207nm,1.2s
KUR pmax pmax
comp=N,79nm,1.1s
KUR MLR MLR
comp=N,1μm,19.0s
KUR MLR MLR
comp=Z,2μm,19.0s
KUR MLR MLR
comp=E,994nm,16.0s
FURI Furi 65.31 282 IAMs_20 IAMs_20 09 40 09.2
comp=Z,5μm,20.0s
KMBO Kilima Mbogo 65.34 271 P **P** **09 16 15.2 -0.2**
comp=Z,4.5nm,0.8s,baz=64,slow=8.3,SNR=6.7
KMBO LR LR 09 41 16.9
comp=Z,3μm,19.5s,baz=92,slow=33
TYV Tymovskoe 65.94 27 *e*P **P** **09 16 18.2 +0.1**
TYV *e*S **S** **09 25 07.6 +3.3**
TYV pmax pmax
comp=Z,19nm,1.4s
TYV pmax pmax
comp=Z,900nm,5.2s
TYV smax smax
comp=N,500nm,10.1s
AB31 Akbulak array 66.02 331 *i* P **P** **09 16 18.1 -0.6**
ABKAR Akbulak array 66.02 331 P **P** **09 16 18.2 -0.5**
NKL Nikolayevsk 66.78 24 *e*P **P** **09 16 22.4 -1.0**
NKL pmax pmax
comp=N,1.0nm,0.9s
NKL pmax pmax
comp=E,83nm,0.9s
NKL pmax pmax
comp=Z,45nm,1.2s
MAW Mawson 67.48 195 P **P** **09 16 28.2 +0.6**
comp=Z,18nm,0.8s,baz=32,slow=6.9,SNR=30
MAW LR LR 09 42 05.4
comp=Z,6μm,18.3s,baz=30,slow=32
MAW PKP2ab 09 44 53.2
comp=Z,1.9nm,0.9s,baz=234,slow=3.4,SNR=5.9
MAW Mawson 67.48 195 P **P** **09 16 28.5 +0.9**
baz=68,SNR=24
MAW Mawson 67.48 195 P **P** **09 16 28.6 +0.9**
AKTO Aktyubinsk 67.74 331 P **P** **09 16 29.4 -0.1**
comp=Z,25nm,0.8s,baz=130,slow=6.4,SNR=34
AKTO S **S** **09 25 23.2 -2.9**
comp=Z,2.1nm,1.0s,baz=108,slow=20,SNR=2.0
SEKA Sheki 68.72 318 P **P** **09 16 36.7 +0.6**
MLZ Mavora Lakes 68.94 137 IAMs_20 IAMs_20 09 45 18.1
comp=Z,4μm,22.0s
NAX Nakhchivan 68.94 316 P **P** **09 16 38.3 +0.8**
WHZ Wether Hill Ro 68.95 137 IAMs_20 IAMs_20 09 44 46.3
comp=Z,6μm,22.0s
GANJ Ganja 69.05 317 P **P** **09 16 38.6 +0.6**
ZKTA Zakatala 69.31 318 P **P** **09 16 40.5 +0.9**
MAK Makhachkala 69.37 320 *e*P P 09 16 34.4 -5.5
MAK *e*PPP PPP 09 20 51.9
MAK *e*S **S** **09 25 40.6 -5.1**
MAK pmax pmax
comp=Z,157nm,0.9s
MQOL MQOL 69.39 294 *i* P 09 16 40.8
MQOL *i* 09 16 43.9
baz=269,slow=11
MQOL *i* S 09 25 47.6
LGD Lagodekhi 69.65 318 P **P** **09 16 42.6 +0.9**
FOZ Fox Glacier 69.71 134 IAMs_20 IAMs_20 09 47 28.8
comp=Z,6μm,20.0s
GNI Garni 69.90 316 P **P** **09 16 44.1 +0.6**
comp=Z,53nm,1.0s,baz=110,slow=1.6,SNR=12
GNI Garni 69.90 316 P **P** **09 16 44.2 +0.6**
GNI Garni 69.90 316 *c i*P **P** **09 16 44.0 +0.6**
GNI pmax pmax
comp=Z,70nm,1.0s
GNI Garni 69.90 316 P **P** **09 16 43.5 0.0**
GNI IAmb IAmb 09 17 42.6
comp=Z,90nm,1.1s
GNI Garni 69.90 316 ⇑P **P** **09 16 44.1 +0.6**
GNI ⇓P **pP** **09 16 44.6 -5.8**
LBZ Lake Benmore 70.15 135 IAMs_20 IAMs_20 09 48 27.3
comp=Z,5μm,19.0s
GEVA Gevas 70.30 314 P **P** **09 16 46.5 +0.5**
BTNK Botanikuri 70.54 318 P **P** **09 16 48.0 +0.8**
YAK Yakutsk 70.60 13 *c i*P **P** **09 16 45.8 -1.2**
YAK *e**PP **sP** **09 16 55.5 -0.9**
YAK *e* 09 19 19.4
YAK *e*S **S** **09 25 53.9 -5.5**
YAK *e* 09 26 42.8
YAK pmax pmax
comp=Z,144nm,0.9s
YAK pmax pmax
comp=E,28nm,1.2s
YAK pmax pmax
comp=N,28nm,1.0s
YAK pmax pmax
comp=Z,11nm,0.5s
YAK smax smax
comp=E,120nm,2.1s
YAK MLR MLR
comp=Z,7μm,16.0s
YAK MLR MLR
comp=N,3μm,14.0s
YAK MLR MLR
comp=E,4μm,14.0s
YAK Yakutsk 70.60 13 P **P** **09 16 46.1 -1.0**
YAK IAMs_20 IAMs_20 09 53 45.8
comp=Z,5μm,18.0s
ODZ Otahua Downs 70.61 136 IAMs_20 IAMs_20 09 48 30.3
comp=Z,6μm,21.0s
RPZ Rata Peaks 70.63 134 P **P** **09 16 48.1 +0.3**
comp=Z,20nm,1.0s,baz=207,slow=3.2,SNR=7.0
RPZ Rata Peaks 70.63 134 IAmb IAmb 09 17 26.6
comp=Z,87nm,1.3s
KZRT Kazreti 70.68 317 P **P** **09 16 48.7 +0.6**
SVE Sverdlovsk 70.98 337 *d i*P **P** **09 16 49.9 +0.4**
SVE *e*S **S** **09 26 02.8 -1.3**
SVE pmax pmax
comp=Z,235nm,1.1s
SVE MLR MLR
comp=Z,3μm,22.0s
GUDG Gudauri 71.11 318 P **P** **09 16 52.5 +1.6**
QRZ Quartz Range 71.20 131 P **P** **09 16 52.8 +1.5**
QRZ IAmb IAmb 09 17 23.1
comp=Z,135nm,1.4s
QRZ IAMs_20 IAMs_20 09 46 57.5
comp=Z,6μm,21.0s
OXZ Oxford 71.26 134 IAMs_20 IAMs_20 09 48 17.8
comp=Z,6μm,20.0s
AKH Akhalkalaki 71.30 317 ⇑P **P** **09 16 53.8 +1.7**
AKH Akhalkalaki 71.30 317 P **P** **09 16 53.7 +1.7**
ARU Arti 71.52 336 *d i*P **P** **09 16 52.6 -0.2**
ARU 09 17 13.3
ARU 09 19 26.3
ARU PPP PPP 09 21 14.3
ARU S **S** **09 26 13.1 +2.7**
ARU SS **SS** **09 30 51.7 +5.9**
ARU pmax pmax
comp=Z,148nm,1.3s
ARU MLR MLR
comp=Z,3μm,24.0s
ARU Arti 71.52 336 P **P** **09 16 52.7 -0.2**
THZ Tophouse 71.63 132 P **P** **09 16 54.8 +0.9**
ZEI Tsey 71.63 318 *e*P **P** **09 16 50.7 -3.3**
ZEI pmax pmax
comp=Z,51nm,1.0s
MQZ McQueen's Vall 71.77 134 IAMs_20 IAMs_20 09 48 55.2
comp=Z,4μm,20.0s
ONI Oni 71.84 318 P **P** **09 16 56.6 +1.5**
MBAR Mbarara 71.88 271 P **P** **09 16 56.5 +0.4**
MBAR pmax pmax
comp=Z,55nm,1.4s
MBAR Mbarara 71.88 271 P **P** **09 16 56.5 +0.4**
MBAR Mbarara 71.88 271 IAMs_20 IAMs_20 09 45 13.9
comp=Z,4μm,20.0s
NCK Nalchik 72.14 319 ⇓*i*P **P** **09 16 57.9 +1.0**
NCK pmax pmax
comp=Z,65nm,0.6s
KHZ Kahutara 72.20 133 IAMs_20 IAMs_20 09 45 57.7
comp=Z,7μm,22.0s
SKR Severo-Kuril's 72.45 32 *ce*P **P** **09 16 57.9 -0.6**
NEY Neytrino 72.61 319 ⇑*e*P **P** **09 17 00.8 +1.0**
NEY pmax pmax
comp=Z,14nm,0.9s
HIZ Hauiti 72.67 128 IAmb IAmb 09 17 36.0
comp=Z,70nm,1.0s
HIZ IAMs_20 IAMs_20 09 48 24.5
comp=Z,4μm,20.0s
KBZ Khabaz 72.70 319 P **P** **09 17 00.6 +0.4**
comp=Z,82nm,0.9s,baz=123,slow=5.2,SNR=82
KOPT Kop Dagi 72.80 315 IAmb IAmb 09 17 40.2
comp=Z,54nm,0.9s
CHVG Ch'k'valeri 72.81 318 ⇓P **P** **09 17 02.3 +1.5**
SNZO South Karori 72.90 131 IAMs_20 IAMs_20 09 48 00.4
comp=Z,6μm,21.0s
KIV Kislovodsk 72.94 319 ⇑P **P** **09 17 03.0 +1.3**
KIV Kislovodsk 72.94 319 *i* P **P** **09 17 01.7 +0.1**
SNR=5.9
KIV Kislovodsk 72.94 319 *e*P **P** **09 17 01.8 +0.1**
KIV *e*S **S** **09 26 26.4 -0.9**
KIV *e*SS **SS** **09 31 11.9 +3.7**
KIV pmax pmax
comp=Z,248nm,1.0s
KIV pmax pmax
comp=Z,357nm,3.8s
KIV Kislovodsk 72.94 319 P **P** **09 17 02.3 +0.6**
KIV IAmb IAmb 09 17 04.2
comp=Z,82nm,1.0s
GOF Gofitskoye 73.19 320 ⇑*e*P **P** **09 17 03.3 +0.3**
GOF *e*S **S** **09 26 28.1 -1.9**
GOF pmax pmax
comp=Z,157nm,1.1s
LSZ Lusaka 73.52 256 P **P** **09 17 05.2 -0.5**
LSZ pmax pmax
comp=Z,25nm,1.0s
LSZ Lusaka 73.52 256 P **P** **09 17 05.2 -0.5**
LSZ Lusaka 73.52 256 IAMs_20 IAMs_20 09 47 09.9
comp=Z,4μm,19.0s
EIL Elat 73.63 303 P **P** **09 17 06.7 +0.8**
comp=Z,30nm,1.1s,baz=69,slow=3.2,SNR=11
MALT Malatya 73.66 312 P **P** **09 17 06.9 +0.8**
BHHZ Black Hill Sta 73.71 129 P **P** **09 17 05.0 -1.4**
TMWZ Te Maipa 73.76 131 P **P** **09 17 07.8 +1.2**
BFZ Birch Farm 73.98 131 P **P** **09 17 08.1 +0.3**
BKZ Black Stump Fm 74.01 129 P **P** **09 17 08.7 +0.6**
BKZ IAmb IAmb 09 17 33.1
comp=Z,64nm,0.8s
BKZ IAMs_20 IAMs_20 09 50 15.0
comp=Z,5μm,22.0s
BKZ Black Stump Fm 74.01 129 P **P** **09 17 08.3 +0.2**
BELG Belogornoye 74.13 329 *c i*P **P** **09 17 07.8 -0.5**
BELG pmax pmax
comp=Z,26nm,1.0s
GAZ Gaziantep 74.16 311 IAmb IAmb 09 17 11.8
comp=Z,65nm,1.1s
GAZ IAMs_20 IAMs_20 09 51 45.0
comp=Z,4μm,19.0s
MMAI Mount Meron Ar 74.24 306 P **P** **09 17 11.0 +1.5**
comp=Z,21nm,0.9s,baz=100,slow=9.7,SNR=22
MTHZ Maungataniwha 74.25 129 P **P** **09 17 09.7 +0.2**
RTZ Ruatahuna 74.33 128 P **P** **09 17 10.1 +0.1**
URZ Urewera 74.40 128 IAMs_20 IAMs_20 09 49 40.5
comp=Z,5μm,20.0s
MSVF Nonsavu 74.49 107 P **P** **09 17 12.6 +1.3**
MSVF pmax pmax
comp=Z,88nm,1.2s
MSVF Nonsavu 74.49 107 P **P** **09 17 12.6 +1.3**
MSVF IAmb IAmb 09 17 13.3
comp=Z,88nm,1.1s
MWZ Matawai 74.73 128 P **P** **09 17 12.2 -0.1**
SOC Sochi 74.74 318 *e*P **P** **09 17 10.4 -1.7**
SOC *e* 09 19 56.1
SOC *e*PPP PPP 09 21 41.4
SOC *e*S **S** **09 26 47.2 -0.2**
SOC *e*SS **SS** **09 31 33.4 -2.1**
SOC pmax pmax
comp=Z,80nm,0.9s
RUGZ Raukumara Rang 74.82 128 P **P** **09 17 12.5 -0.5**
HAZ Te Kaha 74.89 127 P **P** **09 17 13.1 0.0**
PET Petropavlovsk 75.03 31 *e*P **P** **09 17 12.9 -0.6**
PET *e*S **S** **09 26 47.7 -2.5**
PET *e*PPS PPS 09 27 40.6
PET pmax pmax
comp=Z,167nm,0.6s
PET pmax pmax
comp=Z,1μm,7.8s
PET pmax pmax
comp=Z,800nm,22.3s

PET MLR MLR
comp=Z,3µm,18.0s
PET MLR MLR
comp=Z,3µm,16.0s
PET Petropavlovsk 75.03 31 P **P 09 17 13.0 -0.5**
TWGZ Tauwhareparae 75.08 128 P **P 09 17 15.0 +0.7**
MA2 Magadan 75.27 23*c i*P **P 09 17 14.5 -0.3**
MA2 pmax pmax
comp=Z,58nm,0.8s
MA2 Magadan 75.27 23 P **P 09 17 14.1 -0.8**
MA2 IAmb IAmb 09 17 15.5
comp=Z,55nm,0.8s
PUZ Puketiti 75.29 128 P **P 09 17 15.5 +0.1**
SYO Syowa Base 75.33 199⇑*e*P **P 09 17 15.0 0.0**
SYO Syowa Base 75.33 199⇑*e*PP PP 09 17 21.6 -0.4
SYO Syowa Base 75.33 199⇓*e*PP PP 09 20 04.0 +0.3
WMGZ Waiomatatini S 75.39 127 P **P 09 17 14.4 -1.6**
NRIK Noril'sk 75.50 355 P **P 09 17 15.6 -0.3**
comp=Z,92nm,0.9s,baz=158,slow=5.0,SNR=92
NRIK LR LR 09 53 02.7
comp=Z,4µm,21.5s,baz=170,slow=38
NRIK Noril'sk 75.50 355 IAmb IAmb 09 17 17.6
comp=Z,109nm,1.1s
LBTB Lobatse 75.87 246 P **P 09 17 18.7 -0.5**
LBTB pmax pmax
comp=Z,12nm,0.9s
LBTB Lobatse 75.87 246 P **P 09 17 18.7 -0.5**
BOSA Boshof 76.22 242 P **P 09 17 21.6 +0.4**
comp=Z,4.8nm,0.8s,baz=73,slow=5.9,SNR=13
BOSA LR LR 09 47 02.3
comp=Z,4µm,18.4s,baz=82,slow=33
BOSA Boshof 76.22 242 P **P 09 17 20.2 -1.0**
KVT Kavak 76.35 314 P **P 09 17 23.8 +2.3**
CSS Mathiatis 76.46 308 IAmb IAmb 09 17 51.6
comp=Z,64nm,0.9s
ANN Anapa 76.73 318 *e*P **P 09 17 21.8 -1.6**
ANN *e*S **S 09 27 10.8 +1.5**
ANN pmax pmax
comp=Z,111nm,1.4s
VRH Novokhopyorsk 76.73 326 *e*P **P 09 17 22.6 -0.7**
VRH *e*S **S 09 27 04.6 -4.5**
VRH pmax pmax
comp=Z,170nm,0.8s
VRH smax smax
comp=N,570nm,2.7s
LEF Lefka 76.85 308⇑P **P 09 17 25.0 +0.7**
BR131 Keskin Array S 77.64 313*c i*P **P 09 17 28.0 -0.9**
BR131 Keskin Array S 77.64 313 IAmb IAmb 09 17 50.4
comp=Z,49nm,0.9s
BRTR Keskin Array B 77.64 313 P **P 09 17 28.8 -0.2**
comp=Z,24nm,1.0s,baz=126,slow=6.3,SNR=46
BRTR LR LR 09 54 21.3
comp=Z,3µm,18.5s,baz=126,slow=38
BRTR Keskin Array B 77.64 313 P **P 09 17 28.1 -0.9**
ILGA Ilgaz 78.00 314 IAmb IAmb 09 17 33.5
comp=Z,64nm,1.2s
VORD Divnogorie 78.01 325 *e*P **P 09 17 30.0 -0.5**
VORD *e*S **S 09 27 17.9 -5.1**
VORD pmax pmax
comp=Z,100nm,1.3s
VORD smax smax
comp=E,50nm,3.8s
SEY Seymchan 78.02 21⇑*i*P **P 09 17 30.1 -0.2**
BZK Bozkurt 78.09 315⇑P **P 09 17 32.5 +1.4**
VNDA Vanda 78.15 169 P **P 09 17 31.2 +0.4**
comp=E,10nm,1.1s,baz=293,slow=6.1,SNR=20
VNDA LR LR 09 48 42.4
comp=E,4µm,19.0s,baz=315,slow=33
VNDA Vanda 78.15 169 P **P 09 17 31.2 +0.4**
VSR Storozhevoye 78.19 325 *e*P **P 09 17 30.3 -1.2**
VSR *e*S **S 09 27 16.0 -8.9**
VSR pmax pmax
comp=Z,100nm,0.9s
VSR smax smax
comp=N,680nm,3.6s
VSR MLR MLR
comp=Z,1µm,16.0s
ANTO Ankara 78.31 312 P **P 09 17 32.9 +0.4**
ANTO Ankara 78.31 312 P **P 09 17 32.9 +0.4**
VORR Voronezh 78.36 325 P **P 09 17 32.0 -0.4**
VORR pmax pmax
comp=Z,250nm,1.4s
LPSR Galich'ya Gora 78.90 326 *e*P **P 09 17 35.1 -0.3**
LPSR *e*S **S 09 27 28.4 -4.1**
LPSR pmax pmax
comp=Z,100nm,0.8s
LPSR smax smax
comp=N,810nm,3.3s
SIM Simferopol' 78.98 318 *e*P **P 09 17 35.4 -0.6**
SIM pmax pmax
comp=Z,76nm,0.7s
TIXI Tiksi 79.01 8*c i*P **P 09 17 33.9 -1.7**
TIXI Tiksi 79.01 8 P **P 09 17 34.1 -1.5**
TIXI IAmb IAmb 09 17 36.3
comp=Z,68nm,0.9s
SBA Scott Base 79.24 169 P **P 09 17 37.3 +0.4**
SBA pmax pmax
comp=Z,74nm,1.7s
SBA Scott Base 79.24 169 P **P 09 17 37.2 +0.4**
SBA Scott Base 79.24 169 IAMs_20 IAMs_20 09 48 33.7
comp=Z,4µm,20.0s
PRGR Permogore 79.98 336⇑*i*P **P 09 17 41.2 +0.1**
PRGR *e*S S 09 27 55.1 +12
PRGR pmax pmax
comp=Z,84nm,0.8s
SUR Sutherland 80.08 238 P **P 09 17 43.3 +0.7**
SUR IAmb IAmb 09 17 59.2
comp=Z,67nm,1.2s
MOS Moscow 80.90 329 *e*P **P 09 17 44.9 -1.2**
MOS *e* 09 20 58.5
MOS *e*S **S 09 27 47.7 -5.7**
MOS pmax pmax
comp=Z,99nm,0.9s
MOS MLR MLR
comp=Z,3µm,22.0s
OBN Obninsk 81.20 328⇓P **P 09 17 48.2 +0.5**
OBN Obninsk 81.20 328*c i*P **P 09 17 48.0 +0.3**
OBN *e* 09 20 54.3
OBN *e*PPP PPP 09 22 42.9
OBN *i*S **S 09 27 51.5 -5.0**
OBN *e*SS **SS 09 33 14.4 +2.2**
OBN *e*SSS SSS 09 36 31.1
OBN pmax pmax
comp=Z,104nm,1.0s
OBN MLR MLR
comp=Z,2µm,21.0s
OBN Obninsk 81.20 328 P **P 09 17 48.5 +0.8**
KLMR Klimovskoe 82.18 334 *e*P **P 09 17 50.5 -2.3**
KLMR *e* 09 21 01.7
KLMR *e*S **S 09 28 06.5 +0.1**
KLMR pmax pmax
comp=Z,128nm,1.3s
KLMR Klimovskoe 82.18 334 *e*P **P 09 17 50.5 -2.3**
KLMR AMP 09 18 04.0
comp=Z,128nm,1.3s
KLMR *e*PP **PP 09 21 01.8 +0.6**
KLMR *e*S **S 09 28 06.6 +0.1**
KLMR *e*S **S 09 28 06.6 +0.1**
KLMR LQ LQ 09 48 15.0
KLMR LQ LQ 09 48 15.0
KLMR LR LR 09 54 34.8
KLMR AMP 10 00 27.5
comp=Z,2µm,18.2s
TIRR Tirgusor 82.72 316 P **P 09 17 55.8 -0.2**
TIRR pmax pmax
comp=Z,97nm,0.8s
TIRR Tirgusor 82.72 316 IAmb IAmb 09 18 10.2
comp=Z,82nm,1.0s
TIRR IAMs_20 IAMs_20 09 59 13.6
comp=Z,3µm,21.0s
TPGR Topolog 82.82 316⇑P **P 09 17 57.6 +1.0**
EZN Ezine 83.10 311 P **P 09 18 00.2 +2.2**
CFR Carcaliu 83.10 317⇑P **P 09 17 58.2 +0.2**
CFR Carcaliu 83.10 317 P **P 09 17 58.1 +0.2**
CFR pmax pmax
comp=Z,18nm,1.1s
KIS Kishinev 83.13 319⇓*i*P **P 09 18 00.0 +2.0**
KIS Kishinev 83.13 319*d i*P **P 09 18 00.0 +2.0**
KIS *e*S **S 09 28 20.0 +3.3**
KIS *e*PS **PnS 09 29 11.0 +1.6**
ALN Alexandroupoli 83.55 312 P **P 09 17 59.3 -1.0**
ALN pmax pmax
comp=Z,30nm,0.8s
SORM Soroca 83.74 320⇑P **P 09 18 01.6 +0.4**
SORM Soroca 83.74 320 P **P 09 18 01.5 +0.4**
AKASG Malin Array Be 83.89 322 P **P 09 18 01.7 -0.2**
comp=Z,27nm,0.8s,baz=83,slow=4.6,SNR=55
AKASG PP **PP 09 21 13.4 -2.1**
comp=Z,10.0nm,0.9s,baz=91,slow=6.0,SNR=5.8
AKASG Malin Array Be 83.89 322 P **P 09 18 01.4 -0.5**
AKASG pmax pmax
comp=Z,15nm,1.0s
AKASG Malin Array Be 83.89 322 P **P 09 18 01.4 -0.5**
AKBB Malin Array Si 83.89 322 IAmb IAmb 09 18 11.9
comp=Z,28nm,0.8s
VRI Vrincioaia 84.23 317⇑P **P 09 18 04.3 +0.6**
VRI Vrincioaia 84.23 317 P **P 09 18 04.8 +1.0**
VRI pmax pmax
comp=Z,78nm,0.9s
PLOR Plostina 84.28 317⇑P **P 09 18 05.9 +1.9**
PLOR Plostina 84.28 317 P **P 09 18 05.9 +1.9**
QSPA South Pole Qui 84.38 180 P **P 09 18 04.1 -0.2**
QSPA IAmb IAmb 09 18 18.3
comp=Z,42nm,1.1s
QSPA South Pole Qui 84.38 180 IAMs_20 IAMs_20 09 53 50.8
comp=Z,4µm,18.0s
NEHR Nehoiu 84.42 317⇓P **P 09 18 06.5 +1.7**
TESR Tescani 84.44 318⇑P **P 09 18 05.5 +0.7**
AFI Afiamalu 84.45 103 P **P 09 18 07.7 +2.1**
AFI pmax pmax
comp=Z,201nm,1.2s
AFI Afiamalu 84.45 103 P **P 09 18 07.7 +2.1**
MLR Muntele Rosu 84.67 317 P **P 09 18 06.1 -0.1**
comp=Z,54nm,1.1s,baz=36,slow=3.2,SNR=24
MLR Muntele Rosu 84.67 317 IAmb IAmb 09 18 48.1
comp=Z,65nm,1.0s
PLD Plovdiv 84.80 313 P **P 09 18 06.4 -0.3**
VOIR 85.28 316 P **P 09 18 09.0 -0.1**
VOIR pmax pmax
comp=Z,14nm,1.8s
SRS Serrai 85.41 312 P **P 09 18 08.7 -1.1**
SRS pmax pmax
comp=Z,22nm,1.2s
SOH Sokhos 85.53 312 P **P 09 18 09.4 -1.1**
SOH pmax pmax
comp=Z,11nm,1.2s
BILL Bilibino 85.64 20*d i*P **P 09 18 09.7 -0.6**
BILL pmax pmax
comp=Z,27nm,0.9s
BILL Bilibino 85.64 20 P **P 09 18 08.8 -1.5**
BILL IAMs_20 IAMs_20 10 02 43.5
comp=Z,4µm,18.0s
BURAR Bucovina Array 85.65 319⇓P **P 09 18 12.6 +1.6**
BURAR Bucovina Array 85.65 319 P **P 09 18 12.6 +1.6**
BURAR Bucovina Array 85.65 319 P **P 09 18 11.4 +0.4**
BUR08 Bucovina Ar. S 85.67 319 IAmb IAmb 09 18 24.1
comp=Z,42nm,0.9s
MNK Minsk 85.74 326⇓*e*P **P 09 18 12.0 +0.9**
MNK *e*S **S 09 28 42.0 -0.5**
MNK pmax pmax
comp=Z,300nm,1.0s
MNK Minsk 85.74 326 *i* P **P 09 18 11.4 +0.4**
comp=E,13nm,1.1s
MNK *i* P **P 09 18 11.4 +0.4**
comp=N,29nm,0.7s
MNK *i* P **P 09 18 11.4 +0.4**
comp=Z,92nm,1.0s
MNK *i* PcP **PcP 09 18 13.9 0.0**
MNK *i* PP **PP 09 21 29.9 -0.6**
MNK *i* PPP PPP 09 23 23.5
MNK *i* S **S 09 28 36.3 -6.2**
MNK *i* SS **SS 09 34 22.9 +3.5**
MNK *i* SSS SSS 09 37 52.2
MNK *i* LQ LQ 09 52 15.8
MNK *i* LR LR 09 58 11.0
MNK *i* LRM MLR 10 02 09.9
comp=N,2µm,23.2s
MNK *i* LRM MLR 10 02 47.6
comp=E,171nm,20.3s
MNK *i* LRM MLR 10 03 00.6
comp=Z,1µm,15.9s
KNT Kendrikon 85.93 312 P **P 09 18 11.7 -0.7**
KNT pmax pmax
comp=Z,17nm,1.1s
VTS Vitosha 85.97 313⇑P **P 09 18 13.8 +1.1**
VTS Vitosha 85.97 313 P **P 09 18 12.6 -0.1**
VTS pmax pmax
comp=Z,40nm,0.9s
VTS Vitosha 85.97 313 IAmb IAmb 09 18 33.4
comp=Z,27nm,0.8s
LIT Litokhoron 86.04 311 P **P 09 18 11.9 -1.1**
LIT pmax pmax
comp=Z,49nm,0.8s
LIT Litokhoron 86.04 311 IAmb IAmb 09 18 33.5
comp=Z,31nm,0.8s
ARCR ARCALIA 86.11 318⇑P **P 09 18 14.9 +1.7**
VALR Valaam 86.24 333 *i* P **P 09 18 13.9 +0.5**
VALR pmax pmax
comp=Z,68nm,1.2s
GRG Griva 86.26 312 P **P 09 18 14.2 +0.1**
GRG pmax pmax
comp=Z,22nm,0.8s
NACGM Naroch 86.46 326 *i* P **P 09 18 15.9 +1.3**
NACGM *i* P **P 09 18 15.9 +1.3**
NACGM *i* P **P 09 18 15.9 +1.3**
NACGM *i* PP PP 09 21 25.9 -10
NACGM *i* PPP PPP 09 23 28.3
NACGM *i* S S 09 28 36.2 -13
NACGM *i* SS SS 09 33 55.6 -34
NACGM *i* SSS SSS 09 37 38.2
NACGM *i* LQ LQ 09 53 04.5
NACGM *i* LR LR 10 00 23.6
JOF Joensuu 86.56 334 P **P 09 18 15.5 +0.5**
JOF pmax pmax
comp=Z,55nm,1.0s
IDID Didziasalis 86.59 326 *e*P **P 09 18 16.4 +1.1**
GZR Gura Zlata 86.83 316⇓P **P 09 18 17.7 +0.9**
DEV Deva 86.84 317 P **P 09 18 17.6 +0.9**
DEV pmax pmax
comp=Z,41nm,0.9s
IIGN Ignalina 86.88 326 *e*P **P 09 18 18.2 +1.5**
LVV L'vov 86.90 321 *e*P **P 09 18 17.1 +0.1**
LVV *e*S **S 09 28 52.7 -1.4**
LVV *e* 09 34 32.2
LVV *e* 09 38 03.9
LVV pmax pmax
comp=Z,120nm,1.2s
ISAL Salakas 86.99 326 *e*P **P 09 18 18.4 +1.2**
DRGR 87.15 317⇓P **P 09 18 19.3 +1.0**
DRGR 87.15 317 P **P 09 18 19.0 +0.7**
DRGR pmax pmax
comp=Z,25nm,1.3s
APA Apatity 87.35 339⇓*i*P P 09 18 24.7 +6.0
APA pmax pmax
comp=Z,20nm,1.1s
VSU Vasula 87.40 329 *e*P **P 09 18 19.9 +0.8**
VSU Vasula 87.40 329 P **P 09 18 19.5 +0.4**
VSU pmax pmax
comp=Z,209nm,1.0s
MDVR Moldovita 87.46 315⇑P **P 09 18 20.6 +0.8**
BZS Buzias 87.68 316⇑P **P 09 18 21.1 +0.3**
BZS Buzias 87.68 316 P **P 09 18 21.0 +0.2**
BZS pmax pmax
comp=Z,20nm,1.8s
UZH Uzhgorod 87.78 319 *e*P **P 09 18 23.5 +2.3**
UZH *e* 09 18 25.7
UZH *i* 09 18 30.9
UZH *i* 09 21 45.0
UZH *e*PPP PPP 09 23 40.5
UZH *e* 09 28 52.2
UZH *e*S **S 09 29 01.5 -1.0**
UZH *e*PS 09 30 04.6
UZH *e*SS **SS 09 34 45.6 -4.0**
PABE Paberze 88.17 326 *e*P **P 09 18 23.8 +0.9**
SUW Suwalki 88.30 325 *e*P **P 09 18 23.5 0.0**
SUW Suwalki 88.30 325 *e*P **P 09 18 24.1 +0.6**
SUW Suwalki 88.30 325 P **P 09 18 23.5 0.0**
SUW pmax pmax
comp=Z,249nm,1.1s
SUW Suwalki 88.30 325 IAMs_20 IAMs_20 10 06 01.2
comp=Z,3µm,19.0s
CRVS Cervenica-Dubn 88.37 319 *e*P **P 09 18 25.0 +1.0**
CRVS pmax pmax
comp=Z,205nm,2.6s
CRVS Cervenica-Dubn 88.37 319 *e*P **P 09 18 25.0 +1.0**
CRVS *e*PP **PP 09 21 53.9 +2.0**
FINES FINESS Array B 88.48 332 P **P 09 18 24.6 +0.4**
comp=Z,33nm,1.0s,baz=106,slow=6.2,SNR=21
FINES LR LR 10 03 12.5
comp=Z,2µm,20.9s,baz=104,slow=39
FINES FINESS Array B 88.48 332 *i* P **P 09 18 25.0 +0.8**
FINES pmax pmax
comp=Z,17nm,0.8s
FINES FINESS Array B 88.48 332 P **P 09 18 24.4 +0.2**
DIVS Divibare 88.56 314 *e*P **P 09 18 25.6 +0.5**
STHS Stebnicka Huta 88.60 320 *e*PP PP 09 21 57.6 +3.9
DRME Dracevica, Mon 88.85 312 *e*P **P 09 18 30.0 +3.6**
FRGS Fruska Gora 88.86 315 *e*P P 09 18 35.2 +8.8
KECS Kecovo 88.94 319 *e*P **P 09 18 27.6 +0.9**
KECS pmax pmax
comp=Z,12nm,1.0s
KECS Kecovo 88.94 319 *e*P **P 09 18 27.6 +0.9**
BBLS Lazići 88.94 314 *e*P **P 09 18 27.2 +0.3**
MTSE Matsula 88.95 329 *e*P **P 09 18 26.9 +0.5**
UPM Unac-Piva 89.20 313 *e*P **P 09 18 28.2 -0.1**
NIE Niedzica 89.21 320 *e*P P 09 18 15.5 -13
NIE Niedzica 89.21 320 P **P 09 18 27.9 -0.1**
NIE pmax pmax
comp=Z,19nm,1.5s
PSZ Piszkesteto 89.23 318⇑P **P 09 18 29.8 +1.6**
PSZ Piszkesteto 89.23 318 P **P 09 18 28.3 +0.1**
PSZ pmax pmax
comp=Z,41nm,1.1s
PSZ Piszkesteto 89.23 318 IAmb IAmb 09 19 02.5
comp=Z,58nm,1.2s
BRY Bratogost 89.42 313 *e*P **P 09 18 28.9 -0.4**
OUL Oulu 89.47 336 P **P 09 18 29.5 +0.7**
OUL pmax pmax
comp=Z,61nm,1.0s
SNAA Sanae 89.53 198 P **P 09 18 30.4 +1.3**
SNAA Sanae 89.53 198*d i*P **P 09 18 30.2 +1.1**
SNAA pmax pmax
comp=Z,21nm,1.3s
SNAA Sanae 89.53 198 IAmb IAmb 09 18 44.5
comp=Z,48nm,1.0s
SNAA IAMs_20 IAMs_20 09 55 56.0
comp=Z,3µm,19.0s
OJC Ojcow 89.66 320 *e*P **P 09 18 29.3 -0.8**
OJC Ojcow 89.66 320 IAmb IAmb 09 19 00.4
comp=Z,47nm,1.1s
LANS Liptovska Anna 89.71 319 *e*P **P 09 18 32.2 +1.8**
LANS pmax pmax
comp=Z,6.0nm,1.0s
LANS Liptovska Anna 89.71 319 *e*P **P 09 18 32.2 +1.8**
MORH Mrgy, Hungar 89.82 316⇑P **P 09 18 31.5 +0.7**
MORH Mrgy, Hungar 89.82 316 *e*P **P 09 18 31.2 +0.3**
VYHS Vyhne 90.02 319 *e*P **P 09 18 31.6 -0.2**
VYHS pmax pmax
comp=Z,49nm,1.8s
VYHS Vyhne 90.02 319 *e*P **P 09 18 31.6 -0.2**
VYHS *e*PP **PP 09 22 06.8 +1.7**
KEV Kevo 90.27 340 IAMs_20 IAMs_20 10 03 43.4
comp=Z,4µm,21.0s
SRO Srobarova 90.27 318 *e*P **P 09 18 34.7 +1.8**
SRO pmax pmax
comp=Z,49nm,0.9s
SRO Srobarova 90.27 318 *e*P **P 09 18 34.7 +1.8**
VAF Ylistaro 90.40 333 P **P 09 18 33.4 +0.3**
VAF pmax pmax
comp=Z,81nm,1.0s
BLY Banja Luka 90.64 315 *e*P **P 09 18 35.3 +0.5**
OKC Ostrava-Krasne 90.66 320 AMS AMS 10 08 20.0
comp=Z,2µm,17.8s
ARCES ARCESS Array B 90.72 340 P **P 09 18 35.2 +0.6**
comp=Z,13nm,0.9s,baz=86,slow=6.7,SNR=19
ARCES LR LR 10 04 08.8
comp=Z,4µm,21.6s,baz=110,slow=39
ARCES ARCESS Array B 90.72 340 P **P 09 18 35.3 +0.7**
ARCES IAmb IAmb 09 18 57.2
comp=Z,33nm,1.0s
JAVC Velka Javorina 90.84 319 *e*P **P 09 18 36.8 +1.1**
MRAK Mrakovica 90.88 315 *e*P **P 09 18 39.6 +3.7**
SMOL Smolenice 90.95 318 *e*P **P 09 18 36.4 +0.3**
SMOL pmax pmax
comp=Z,10.0nm,1.3s
SMOL Smolenice 90.95 318 *e*P **P 09 18 36.4 +0.3**
MODS Modra-Piesok 91.03 318 *e*P **P 09 18 36.2 -0.3**
MODS pmax pmax
comp=Z,25nm,1.3s
MODS Modra-Piesok 91.03 318 *e*P **P 09 18 36.2 -0.3**
MODS *e*PP **PP 09 22 14.0 +0.9**
MORC Moravsky Berou 91.04 320 *e*P **P 09 18 37.2 +0.6**
MORC Moravsky Berou 91.04 320 P **P 09 18 37.5 +0.9**
MORC pmax pmax
comp=Z,25nm,0.9s
MORC Moravsky Berou 91.04 320 IAmb IAmb 09 19 07.2
comp=Z,40nm,1.2s
ZST Bratislava 91.13 318 *e* P 09 18 47.1 +10
VNA2 Neumayer--Watz 91.16 198 P **P 09 18 37.8 +1.1**
VNA1 Neumayer--Stat 91.52 198 P **P 09 18 40.1 +1.8**
KRLC Kraliky 91.56 320 P **P 09 18 40.6 +1.6**
KRLC Kraliky 91.56 320 AMS AMS 10 09 00.0
comp=Z,2µm,19.3s
VRAC Vranov 91.59 319 *e*P **P 09 18 39.1 0.0**
KRUC Moravsky 91.70 319 *e*P **P 09 18 39.5 -0.1**
KRUC Moravsky 91.70 319 P **P 09 18 39.8 +0.2**
KRUC pmax pmax
comp=Z,7.0nm,1.0s
VNA3 Neumayer Olymp 91.73 197 P **P 09 18 40.4 +1.1**
GCIS Gornji Cirnik 91.86 316 *e*P **P 09 18 41.2 +0.8**
GCIS *e*pP **sP 09 18 50.8 +0.8**
GCIS *e* 09 19 10.8
DPC Dobruska-Polom 91.89 320 AMS AMS 10 09 10.0
comp=Z,3µm,20.3s
CONA Conrad Observa 91.92 318 *e*P **P 09 18 41.3 +0.5**
comp=Z,1.0nm,0.3s
KSP Ksiaz 91.96 321 *e*P **P 09 18 42.0 +1.2**
KSP Ksiaz 91.96 321 P **P 09 18 41.9 +1.2**
KSP pmax pmax
comp=Z,19nm,1.9s
CRES Cresnjev 91.98 316 *e*P **P 09 18 41.1 +0.1**
OSTC Ostas 91.98 320 *e*P **P 09 18 42.8 +1.9**
OSTC AMS AMS 10 09 00.0
comp=Z,2µm,21.2s
ARSA Arzberg 92.08 317 *e*P **P 09 18 42.4 +1.0**
comp=Z,6.3nm,0.8s
ARSA Arzberg 92.08 317 *e*P **P 09 18 42.0 +0.6**
comp=Z,12nm,1.1s,baz=91,slow=4.6
CHVC Chvalec 92.08 320 *e*P **P 09 18 42.4 +1.0**
BOJS Bojanci 92.09 315 *i* P **P 09 18 42.0 +0.5**
BOJS *i* pP **sP 09 18 51.7 +0.6**
TREC Trest 92.31 319 AMS AMS 10 09 40.0
comp=Z,3µm,20.2s
PDKS Podkum 92.32 316 *e*P **P 09 18 43.1 +0.5**
PDKS *e*pP **sP 09 18 52.8 +0.6**
SOKA Soboth 92.36 316 *e*P **P 09 18 44.1 +1.3**
comp=Z,1.4nm,0.3s
LJU Ljubljana 92.64 316 *e*P **P 09 18 44.6 +0.6**
LJU *e* 09 19 14.3
OBKA Obir 92.67 316 *e*P **P 09 18 44.6 +0.4**
comp=Z,1.9nm,0.4s
OBKA Obir 92.67 316 *e*P **P 09 18 44.4 +0.1**
comp=Z,42nm,2.0s,baz=91,slow=4.6
PRU Pruhonice 92.99 320 *e*P **P 09 18 46.4 +0.9**
PRU *e* 09 18 55.8
PRU *e* 09 22 31.1
PRU *e* 09 29 45.3
PRU MLR MLR
comp=Z,2µm,19.0s
PRU Pruhonice 92.99 320 *e*P **P 09 18 46.4 +0.9**
PRU *e*pP **sP 09 18 55.8 +0.6**
PRU *e*PP **PP 09 22 31.1 +2.6**
PRU *e*S **S 09 29 45.3 -5.2**
PRU AMS AMS 10 10 00.0
comp=Z,2µm,19.0s
PVCC Panska Ves 93.02 320 P **P 09 18 46.1 +0.5**
PVCC pmax pmax
comp=Z,6.0nm,0.9s
PVCC Panska Ves 93.02 320 AMS AMS 10 10 10.0
comp=Z,2µm,19.6s
CKRC Cesky Krumlov 93.04 319 *e*P **P 09 18 46.8 +1.0**
CKRC *e*x x 09 18 56.2
CKRC *e*S **S 09 29 48.2 -2.9**
CKRC AMS AMS 10 10 20.0
comp=Z,2µm,21.8s
PRA Prague 93.07 320 AMS AMS 10 09 50.0
comp=Z,2µm,19.3s
GAMB Gambell 93.09 26 P 09 18 46.0
baz=264
GEC2 GERESS Array S 93.44 319 IAmb IAmb 09 19 18.1
comp=Z,40nm,1.4s
GEC2 GERESS Array S 93.44 319 *e*P **P 09 18 48.3 +0.6**

comp=Z,12nm,1.1s,baz=91,slow=4.6
GERES **GERESS Array B** 93.44 319 P **P** 09 18 48.1 +0.4
comp=Z,4.7nm,0.9s,baz=93,slow=5.3,SNR=26
GERES **GERESS Array B** 93.44 319 P **P** 09 18 46.8 -1.0
GERES **GERESS Array B** 93.44 319 P **P** 09 18 46.8 -1.0
BRG **Berggiesshubel** 93.45 321 P **P** 09 18 47.9 +0.3
BRG pmax pmax
comp=Z,12nm,0.8s
BRG **Berggiesshubel** 93.45 321 *e*P **P** 09 18 48.5 +0.8
BRG Amp 09 18 49.1
comp=Z,11nm,0.9s
BRG **Berggiesshubel** 93.45 321 S **S** 09 29 55.0 +0.5
BRG **Berggiesshubel** 93.45 321 *e*P **P** 09 18 48.4 +0.8
comp=Z,11nm,0.9s,baz=91,slow=4.6
KBA **Koelnbreinsper** 93.54 317 *e*P **P** 09 18 48.3 0.0
comp=Z,1.2nm,0.5s
KBA **Koelnbreinsper** 93.54 317 P **P** 09 18 47.1 -1.3
KBA pmax pmax
comp=Z,8.0nm,1.0s
KHC **Kasperske Hory** 93.55 319 *e*P **P** 09 18 48.5 +0.3
KHC pmax pmax
comp=Z,41nm,3.3s
KHC **Kasperske Hory** 93.55 319 *e*P P 09 18 56.2 +8.0
KHC *e*PP **PP** 09 22 32.3 -0.6
KHC *e*S **S** 09 29 50.5 -5.0
KHC AMS AMS 10 10 30.0
comp=Z,3µm,19.8s
RUE **Ruedersdorf** 93.67 322 *e*P **P** 09 18 48.9 +0.4
comp=Z,20nm,0.5s,baz=91,slow=4.6
FBE **Freiberg** 93.82 321 *e*P **P** 09 18 50.0 +0.7
comp=Z,8.8nm,0.9s,baz=91,slow=4.6
STAL **STALIGIAL** 93.92 316 IAmb IAmb 09 19 20.9
comp=Z,25nm,1.1s
RJOB **Jochberg** 93.96 317 *e*P **P** 09 18 50.4 +0.3
comp=Z,11nm,0.7s,baz=91,slow=4.6
WET **Wettzell** 94.00 319 P **P** 09 18 51.4 +1.1
WET pmax pmax
comp=Z,17nm,1.4s
WET **Wettzell** 94.00 319 *e*P **P** 09 18 51.1 +0.8
comp=Z,11nm,1.1s,baz=91,slow=4.6
CLL **Collm** 94.07 321 *i* P **P** 09 18 51.1 +0.7
comp=Z,13nm,1.1s
CLL *e*(PP) 09 23 00.0
CLL *e*SKSac **SKSac** 09 29 26.0 +1.9
CLL *e*S **S** 09 29 54.0 -5.9
CLL *e*PS PS 09 31 28.0 +11
CLL L L 10 10 00.0
comp=Z,1µm,19.0s
CLL **Collm** 94.07 321 *i* P **P** 09 18 51.1 +0.7
CLL *e*S **S** 09 29 54.0 -5.9
CLL pmax pmax
comp=Z,13nm,1.1s
CLL MLR MLR
comp=Z,1µm,19.0s
CLL **Collm** 94.07 321 *e*P **P** 09 18 50.3 -0.1
comp=Z,6.2nm,0.9s,baz=91,slow=4.6
RGN **Rugen** 94.09 324 IAMs_20 IAMs_20 10 09 44.5
comp=Z,3µm,19.0s
HFS **Hagfors** 94.26 330 P **P** 09 18 51.4 +0.3
comp=Z,11nm,0.8s,baz=99,slow=4.9,SNR=12
HFS PP **PP** 09 22 32.2 -5.9
comp=Z,7.6nm,0.9s,baz=81,slow=8.9,SNR=3.7
NKC **Novy Kostel** 94.35 320 AMS AMS 10 11 00.0
comp=Z,2µm,18.3s
TANN **Tannenbergstha** 94.36 320 *e*P **P** 09 18 52.3 +0.4
comp=Z,11nm,1.2s,baz=91,slow=4.6
WERN **Wernitzgruen** 94.40 320 *e*P **P** 09 18 53.1 +1.0
comp=Z,8.4nm,1.1s,baz=91,slow=4.6
GUNZ **Gunzen** 94.44 320 *e*P **P** 09 18 52.8 +0.6
comp=Z,8.9nm,1.1s,baz=91,slow=4.6
ROTZ **Rotzenmuhle** 94.48 319 *e*P **P** 09 18 52.8 +0.4
comp=Z,9.9nm,1.3s,baz=91,slow=4.6
PLN **Plauen** 94.55 320 *e*P **P** 09 18 53.3 +0.5
comp=Z,7.2nm,0.8s,baz=91,slow=4.6
MANZ **Manzenberg** 94.56 320 *e*P **P** 09 18 53.5 +0.7
comp=Z,7.0nm,0.6s,baz=91,slow=4.6
CTI **Castel Tesino** 94.64 316 IAmb IAmb 09 19 24.6
comp=Z,39nm,1.4s
SPITS **Spitsbergen Ar** 94.67 348 P **P** 09 18 51.8 -0.9
comp=Z,7.0nm,0.7s,baz=133,slow=10,SNR=13
NEUB **Neuenburg** 94.83 321 *e*P **P** 09 18 54.6 +0.7
comp=Z,20nm,0.8s,baz=91,slow=4.6
MOX **Moxa** 94.91 320 P **P** 09 18 55.0 +0.7
MOX pmax pmax
comp=Z,10.0nm,1.1s
MOX **Moxa** 94.91 320 *e*P **P** 09 18 55.0 +0.7
comp=Z,9.8nm,1.2s,baz=91,slow=4.6
MOX *e*L L 10 10 04.9
comp=Z,1µm,21.4s
SQTA **Sankt Quirin** 95.01 317 *e*P **P** 09 18 55.2 +0.2
comp=Z,1.9nm,0.2s
MOTA **Moosalm** 95.08 317 *e*P **P** 09 18 55.4 -0.1
comp=Z,0.9nm,0.2s
GRF **Grafenberg Arr** 95.12 319 *e*P **P** 09 18 56.2 +0.8
comp=Z,16nm,0.9s,baz=91,slow=4.6
GRF *e*L L 10 12 05.9
comp=Z,2µm,19.2s
FLTG **Flechtingen** 95.22 322 *e*P **P** 09 18 56.1 +0.5
comp=Z,3.7nm,0.6s,baz=91,slow=4.6
FETA **Feichten** 95.33 317 *e*P **P** 09 18 56.6 +0.1
comp=Z,2.2nm,0.6s
NORES **NORESS Array B** 95.36 330 P **P** 09 18 56.3 +0.2
SALO **Salr** 95.41 315 IAMs_20 IAMs_20 10 08 48.8
comp=Z,2µm,19.0s
NOA **NORSAR Array B** 95.53 331 P **P** 09 18 56.8 -0.2
comp=Z,3.7nm,0.9s,baz=93,slow=4.7,SNR=9.6
NOA PP **PP** 09 22 48.8 +0.8
comp=Z,2.9nm,0.9s,baz=85,slow=7.9,SNR=4.4
NOA LR LR 10 06 26.9
comp=Z,2µm,21.5s,baz=110,slow=38
CLZ **Clausthal** 95.74 321 *e*P **P** 09 18 58.7 +0.5
comp=Z,8.5nm,1.0s,baz=91,slow=4.6
BSEG **Bad Segeberg** 95.83 324 *e*P **P** 09 18 58.7 +0.3
baz=91,slow=4.6
KEST **Kesra** 95.86 305 P **P** 09 19 00.1 +1.0
comp=Z,5.6nm,0.7s,baz=209,slow=0.5,SNR=5.1
KEST LR LR 10 04 50.5
comp=Z,1µm,19.6s,baz=8.5,slow=37
ANM **Nome** 95.90 26 IAMs_20 IAMs_20 10 07 14.2
comp=Z,2µm,20.0s
ANM **Nome** 95.90 26 P 09 18 59.1
baz=270
NRDL **Niedersach Rie** 95.92 322 *e*P **P** 09 18 59.2 +0.4
comp=Z,12nm,1.2s,baz=91,slow=4.6
GTTG **Gottingen** 95.98 321 *e*P **P** 09 18 59.8 +0.6
comp=Z,11nm,1.0s,baz=91,slow=4.6
TNS **Taunus Mts** 96.92 320 P **P** 09 19 04.6 +1.0
TNS pmax pmax
comp=Z,13nm,1.0s
TNS **Taunus Mts** 96.92 320 *e*P **P** 09 19 04.2 +0.6
comp=Z,10.0nm,1.2s,baz=91,slow=4.6
KASTN **Kahler Asten** 96.95 321 *e*P **P** 09 19 04.1 +0.4
comp=Z,10nm,1.2s,baz=91,slow=4.6
A21K **Barrow** 98.74 19 IAMs_20 IAMs_20 10 09 41.7
comp=Z,2µm,18.0s
NOR **Nord** 99.64 353 P **Pdif** 09 19 14.3 -0.8
NOR pmax pmax
comp=Z,8.0nm,1.0s
TOLK **Toolik Lake Re** 101.65 21 IAMs_20 IAMs_20 10 12 36.9
comp=Z,3µm,18.0s
TOLK **Toolik Lake Re** 101.65 21 P 09 19 24.6
baz=285
COLD **Coldfoot** 101.77 22 IAMs_20 IAMs_20 10 12 08.1
comp=Z,3µm,19.0s
TOC3 **Torodi Ar. Sit** 101.81 282 IAMs_20 IAMs_20 10 09 29.5
comp=Z,2µm,18.0s
TOC2 **Torodi Ar. Sit** 101.81 282 IAMs_20 IAMs_20 10 09 29.5
comp=Z,2µm,18.0s
TOB3 **Torodi Ar. Sit** 101.83 282 IAMs_20 IAMs_20 10 09 38.9
comp=Z,2µm,18.0s
TOA2 **Torodi Ar. Sit** 101.83 282 IAMs_20 IAMs_20 10 09 39.0
comp=Z,2µm,18.0s
TOC1 **Torodi Ar. Sit** 101.83 282 IAMs_20 IAMs_20 10 09 48.0
comp=Z,2µm,18.0s
TOC4 **Torodi Ar. Sit** 101.83 282 IAMs_20 IAMs_20 10 09 39.0
comp=Z,2µm,18.0s
TOA0 **Torodi Ar. Sit** 101.84 282 IAMs_20 IAMs_20 10 09 48.2
comp=Z,2µm,18.0s
TORD **Torodi Ar. Bea** 101.84 282 P **Pdif** 09 19 26.2 0.0
comp=Z,0.7nm,0.8s,baz=72,slow=5.1,SNR=2.8
TOA3 **Torodi Ar. Sit** 101.84 282 IAMs_20 IAMs_20 10 09 39.2
comp=Z,2µm,18.0s
TOB1 **Torodi Ar. Sit** 101.84 282 IAMs_20 IAMs_20 10 09 38.2
comp=Z,2µm,18.0s
TOB4 **Torodi Ar. Sit** 101.85 282 IAMs_20 IAMs_20 10 09 47.4
comp=Z,2µm,18.0s
TOB5 **Torodi Ar. Sit** 101.85 282 IAMs_20 IAMs_20 10 09 30.5
comp=Z,2µm,18.0s
TOC7 **Torodi Ar. Sit** 101.85 282 IAMs_20 IAMs_20 10 09 47.6
comp=Z,2µm,18.0s
TOC5 **Torodi Ar. Sit** 101.86 282 IAMs_20 IAMs_20 10 09 47.6
comp=Z,2µm,18.0s
MLY **Manley** 102.07 25 IAMs_20 IAMs_20 10 13 20.0
comp=Z,2µm,19.0s
I23K **Minto, Yukon-K** 102.61 24 P 09 19 29.0
baz=284
HOM **Homer** 102.76 30 P 09 19 29.9
baz=281
CAPN **Captain Cook N** 102.79 29 P 09 19 30.4
baz=282
BWN **Browne** 102.80 25 IAMs_20 IAMs_20 10 12 13.4
comp=Z,2µm,18.0s
ALE **Alert** 102.85 358 IAMs_20 IAMs_20 10 11 04.3
comp=Z,3µm,20.0s
MCK **McKinley** 103.14 26 P 09 19 31.1
baz=284
WRH **Wood River Hil** 103.31 25 IAMs_20 IAMs_20 10 14 17.8
comp=Z,2µm,19.0s
RC01 **Rabbit Creek A** 103.39 28 P 09 19 32.4
baz=283
ILAR **Eielson Array** 103.72 24 Pdiff **Pdif** 09 19 29.4 -4.1
comp=Z,0.4nm,0.7s,baz=302,slow=5.2,SNR=2.5
ILAR PP **PP** 09 23 46.7 -3.4
comp=Z,0.9nm,0.8s,baz=287,slow=9.0,SNR=4.3
PRP **Porcupine Dome** 104.05 23 IAMs_20 IAMs_20 10 14 52.5
comp=Z,3µm,19.0s
TBI **Tubuai** 104.11 116 *e*PP **PKiKP** 09 23 49.2 -4.2
comp=Z,168nm,26.2s
TBI *e*Sdif Sdif 09 31 21.1 -5.1
comp=Z,1µm,30.2s
TBI **Tubuai** 104.11 116 *e*PS PS 09 33 02.6 -3.8
comp=Z,342nm,28.0s
TBI *e*SS SS 09 38 42.5 +0.5
comp=Z,2µm,28.2s
TBI **Tubuai** 104.11 116 *e*LQ LQ 09 49 23.6
comp=Z,1µm,33.8s
TBI *e*LR LR 09 53 52.4
comp=Z,3µm,27.8s
PPT2 **Papeete2** 105.17 110 *e*PP **PKiKP** 09 23 56.5 +0.9
comp=Z,195nm,26.8s
PPT2 *e*Sdif Sdif 09 31 23.9 -12
comp=Z,1µm,26.5s
PPT2 **Papeete2** 105.17 110 *e*PS PS 09 33 16.5 -1.3
comp=Z,482nm,25.8s
PPT2 *e*SS SS 09 38 55.2 -1.8
comp=Z,1µm,26.0s
PPT2 **Papeete2** 105.17 110 *e*LQ LQ 09 49 55.8
comp=Z,3µm,33.2s
PPT2 *e*LR LR 09 54 14.0
comp=Z,3µm,22.8s
Q23K **Middleton Isla** 105.44 30 P 09 23 55.6
baz=286
EUNU **Eureka** 105.45 2 IAMs_20 IAMs_20 10 10 35.1
comp=Z,4µm,21.0s
BMRM **Bremner River** 105.84 28 P 09 23 56.4
baz=288
K27K **Chicken** 105.94 24 IAMs_20 IAMs_20 10 16 45.3
comp=Z,2µm,20.0s
EGAK **Eagle** 106.04 24 IAMs_20 IAMs_20 10 17 55.0
comp=Z,2µm,19.0s
ESDC **Sonseca Array** 106.29 310 PP **PKiKP** 09 23 57.0 -0.1
comp=Z,1.3nm,1.0s,baz=58,slow=3.6,SNR=5.2
SCO **Scoresbysund** 106.32 343 IAMs_20 IAMs_20 10 13 47.6
comp=Z,2µm,22.0s
DAWY **Dawson** 107.02 24 IAMs_20 IAMs_20 10 13 43.0
comp=Z,2µm,21.0s
EPYK **Eagle Plains** 107.07 21 IAMs_20 IAMs_20 10 15 08.1
comp=Z,2µm,20.0s
EPYK **Eagle Plains** 107.07 21 P 09 23 58.2
baz=296
INK **Inuvik** 107.24 19 Pdiff **Pdif** 09 19 48.4 -0.7
comp=Z,2.1nm,1.1s,baz=337,slow=5.9,SNR=4.1
INK PKiKP **PKiKP** 09 23 57.9 0.0
comp=Z,4.7nm,0.9s,baz=340,slow=5.2,SNR=9.6
INK **Inuvik** 107.24 19 IAMs_20 IAMs_20 10 13 53.4
comp=Z,3µm,22.0s
KOWA **Kowa** 107.43 283 IAMs_20 IAMs_20 10 12 47.4
comp=Z,2µm,18.0s
DBIC **Dimbokro** 107.91 275 PKKPbc PKKPbc 09 35 16.5 +3.3
comp=Z,3.3nm,0.9s,baz=264,slow=3.4,SNR=1.9
TULEG **Thule** 108.96 358 IAMs_20 IAMs_20 10 18 26.6
comp=Z,3µm,21.0s
SUMG **Summit** 109.01 348 *e*P PKiKP 09 24 15.0 +13
SUMG **Summit** 109.01 348 IAMs_20 IAMs_20 10 16 41.7
comp=Z,4µm,21.0s
C36M **Paulatuk** 109.45 16 IAMs_20 IAMs_20 10 13 45.7
comp=Z,2µm,22.0s
SKAG **Skagway** 110.69 28 IAMs_20 IAMs_20 10 18 46.4
comp=Z,1µm,19.0s
ANGG **Ammassalik, Gr** 113.94 343 IAMs_20 IAMs_20 10 19 48.0
comp=Z,3µm,19.0s
TAOE **Nuku Hiva Isla** 115.83 103 *e*PP PP 09 25 20.5 +1.1
comp=Z,240nm,26.5s
TAOE **Nuku Hiva Isla** 115.83 103 *e*SS SS 09 41 17.2 -3.1
comp=Z,2µm,27.1s
TAOE **Nuku Hiva Isla** 115.83 103 *e*LR LR 09 59 17.8
comp=Z,2µm,22.8s
SFJD **Sangerlussuaq** 116.00 349 IAMs_20 IAMs_20 10 20 51.5
comp=Z,2µm,20.0s
RKT **Rikitea** 116.98 119 *e*Sdif Sdif 09 33 08.6 -5.0
comp=Z,526nm,29.8s
RKT **Rikitea** 116.98 119 *e*PS PS 09 35 09.0 -2.0
comp=Z,641nm,27.2s
RKT *e*SS SS 09 41 32.3 -1.9
comp=Z,1µm,30.0s
RKT **Rikitea** 116.98 119 *e*LR LR 09 59 49.0
comp=Z,3µm,25.0s
YKA **Yellowknife Ar** 117.00 18 PKP **PKPdf** 09 24 16.1 -0.5
comp=Z,7.3nm,0.9s,baz=314,slow=1.6,SNR=72
YKA PP **PP** 09 25 26.7 +1.1
comp=Z,3.7nm,0.9s,baz=326,slow=6.1,SNR=5.4
YKA PKKPbc **PKKPab** 09 34 45.5 -0.6
comp=Z,0.7nm,0.8s,baz=131,slow=4.7,SNR=13
NRS **Narsarsuaq** 119.61 343 IAMs_20 IAMs_20 10 24 19.9
comp=Z,2µm,19.0s
MBO **M'Bour** 119.97 283 IAMs_20 IAMs_20 10 13 43.6
comp=Z,2µm,21.0s
PGC **Sidney** 122.06 34 IAMs_20 IAMs_20 10 27 49.6
comp=Z,2µm,22.0s
A04D **Lummi Island** 122.44 34 P 09 24 28.0
baz=303
A05A **Maple Falls** 122.63 33 IAMs_20 IAMs_20 10 27 51.5
comp=Z,1µm,20.0s
D03D **Eldon** 122.86 35 P 09 24 29.2
baz=302
B05A **Bryant** 123.03 34 P 09 24 29.5
baz=304
D04E **Lakebay** 123.23 35 P 09 24 30.0
baz=302
F04D **Rainier, OR** 123.67 37 P 09 24 31.0
baz=301
E04D **Cinebar** 123.68 36 P 09 24 31.0
baz=302
C06D **Leavenworth** 123.89 34 P 09 24 31.0
baz=304
G03D **McMinnville, O** 123.96 38 P 09 24 31.6
baz=301
I02D **Swisshome** 124.16 39 P 09 24 31.9
baz=300
LTY **Liberty** 124.39 34 IAMs_20 IAMs_20 10 29 03.3
comp=Z,2µm,20.0s
B08A **Colville Reser** 124.49 33 IAMs_20 IAMs_20 10 28 11.7
comp=Z,2µm,22.0s
J01E **Myrtle Point** 124.56 40 P 09 24 32.9
baz=299
H04D **Lebanon** 124.64 38 P 09 24 32.9
baz=301,SNR=8.8
I03D **Drain, OR** 124.67 39 P 09 24 32.3
baz=300,SNR=6.8
F05D **White Salmon** 124.69 36 P 09 24 32.7
baz=303
K02D **Willamette Mer** 124.95 41 P 09 24 33.3
baz=299
G05D **Wamic, OR** 125.12 37 P 09 24 33.4
baz=303
I04A **Tendick Farm,** 125.21 39 P 09 24 33.1
baz=301,SNR=11
C09A **Chrisman Ranch** 125.39 33 IAMs_20 IAMs_20 10 28 09.6
comp=Z,1µm,22.0s
FCC **Fort Churchill** 125.43 11 IAMs_20 IAMs_20 10 27 43.5
comp=Z,2µm,20.0s
I05D **Terrebonne, OR** 125.59 38 P 09 24 34.5
baz=302,SNR=8.7
J04D **Umpqua Nationa** 125.68 39 P 09 24 34.4
baz=301,SNR=19
NEW **Newport** 125.72 32 P 09 24 34.0
baz=309,SNR=15
E08A **Dider Farm, El** 125.73 34 IAMs_20 IAMs_20 10 29 42.8
comp=Z,1µm,20.0s
YBH **Yreka Blue Hor** 126.04 41 IAMs_20 IAMs_20 10 10 27.7
comp=Z,1µm,22.0s
L04D **Klamath Falls** 126.07 40 P 09 24 35.0
baz=300
M02C **Callahan** 126.11 42 P 09 24 34.7
baz=299,SNR=10.0
PINE **Pine Mountain** 126.12 38 IAMs_20 IAMs_20 10 31 13.5
comp=Z,2µm,21.0s
J05D **Fort Rock, OR** 126.20 39 P 09 24 36.0
baz=301,SNR=20
K04D **Chiloquin, OR** 126.22 40 P 09 24 35.6
baz=300
N02D **Trinity Center** 126.41 42 P 09 24 35.8
baz=299,SNR=7.1
M04C **Macdoel** 126.58 41 P 09 24 36.3
baz=300
K05A **Summer Lake** 126.71 39 IAMs_20 IAMs_20 10 31 36.2
comp=Z,1µm,20.0s
O02D **Mt. Diablo Mer** 126.73 43 P 09 24 36.8
baz=298,SNR=7.3
WALA **Waterton Lakes** 126.82 29 IAMs_20 IAMs_20 10 28 57.1
comp=Z,2µm,19.0s
I07A **Izee** 126.84 37 IAMs_20 IAMs_20 10 30 18.3
comp=Z,1µm,19.0s
FFC **Flin Flon** 127.17 18 PKIKP **PKiKP** 09 24 36.6 -0.3
FFC **Flin Flon** 127.17 18 PKPdf **PKiKP** 09 24 36.6 -0.3
FFC **Flin Flon** 127.17 18 IAMs_20 IAMs_20 10 24 53.0
comp=Z,2µm,21.0s
O03E **Paynes Creek** 127.34 42 P 09 24 37.4
baz=299,SNR=14
MOD **Modoc Plateau** 127.51 40 IAMs_20 IAMs_20 10 32 13.5
comp=Z,1µm,21.0s
JTMT **Jette** 127.51 31 IAMs_20 IAMs_20 10 29 16.5
comp=Z,2µm,20.0s
BMO **Blue Mountains** 127.69 35 IAMs_20 IAMs_20 10 30 58.6
comp=Z,1µm,20.0s
MSO **Missoula** 128.29 31 IAMs_20 IAMs_20 10 31 28.2
comp=Z,3µm,20.0s
MSO **Missoula** 128.29 31 P 09 24 38.5
baz=311,SNR=38
PNTR **Pine Nut** 129.41 43 IAMs_20 IAMs_20 10 12 39.0
comp=Z,1µm,22.0s
EGMT **Eagleton** 129.52 28 IAMs_20 IAMs_20 10 31 52.4
comp=Z,1µm,19.0s
EGMT **Eagleton** 129.52 28 P 09 24 41.4
baz=316
PMPB **Monarch Peak** 129.94 46 PKPdf **PKPdf** 09 24 41.6 -0.7
DLMT **Dillon** 129.96 32 IAMs_20 IAMs_20 10 33 22.5
comp=Z,2µm,21.0s
HLID **Hailey** 130.12 35 IAMs_20 IAMs_20 10 31 39.0
comp=Z,2µm,21.0s
HLID **Hailey** 130.12 35 P 09 24 43.0
baz=309
BOZ **Bozeman (W)** 130.31 31 IAMs_20 IAMs_20 10 28 42.6
comp=Z,2µm,21.0s
BOZ **Bozeman (W)** 130.31 31 P 09 24 43.4
baz=313,SNR=24
NVAR **Mina Array Bea** 130.62 43 PKP **PKiKP** 09 24 45.3 +0.7
comp=Z,5.1nm,0.6s,baz=266,slow=1.7,SNR=39
NVAR SKPbc **SKPab** 09 28 06.5 +0.1
comp=Z,8.0nm,0.8s,baz=272,slow=4.4,SNR=15
MLAC **Mammoth, Mammo** 130.66 44 P 09 24 44.0
baz=300
SMMC **Simmler** 130.93 47 P 09 24 44.6
baz=297
ELK **Elko** 131.33 38 IAMs_20 IAMs_20 10 30 24.4
comp=Z,1µm,21.0s
VES **Vestal, Richgr** 131.35 46 P 09 24 45.4
baz=298
SBC **Santa Barbara** 131.53 48 P 09 24 45.8
baz=297
H17A **Grant Village** 131.68 32 IAMs_20 IAMs_20 10 33 39.8
comp=Z,2µm,19.0s
H17A **Grant Village** 131.68 32 P 09 24 46.5
baz=313,SNR=8.8
CWC **Cottonwood Cre** 131.77 45 P 09 24 46.6
baz=300
FLWY **Flagg Ranch** 131.82 32 IAMs_20 IAMs_20 10 32 06.7
comp=Z,1µm,18.0s
RLMT **Red Lodge** 131.84 30 IAMs_20 IAMs_20 10 33 09.9
comp=Z,1µm,20.0s
RLMT **Red Lodge** 131.84 30 P 09 24 46.6
baz=315,SNR=9.5
ARVC **Arvin** 131.87 47 P 09 24 47.0
baz=298
ISA **Isabella, Lake** 131.87 46 P 09 24 46.8
baz=299
GRAC **Grapevine Rang** 131.99 44 P 09 24 47.0
baz=301
MOOW **Moose Ponds** 132.03 32 IAMs_20 IAMs_20 10 35 55.1
comp=Z,1µm,20.0s
LAO **LASA Array** 132.12 27 IAMs_20 IAMs_20 10 33 13.0
comp=Z,2µm,20.0s
LAO **LASA Array** 132.12 27 P 09 24 47.2
baz=320
SNCC **San Nicolas Is** 132.20 49 P 09 24 47.5
baz=296
SNOW **Snow King Moun** 132.22 33 IAMs_20 IAMs_20 10 34 36.1
comp=Z,2µm,21.0s
REDW **Red Top Meadow** 132.23 33 IAMs_20 IAMs_20 10 34 48.6
comp=Z,2µm,20.0s
R11A **Troy Canyon, C** 132.47 41 P 09 24 48.1
baz=304
AHID **Auburn Hatcher** 132.49 34 IAMs_20 IAMs_20 10 33 34.6
comp=Z,2µm,18.0s
LRMC **Laurel Mtn Rad** 132.52 46 P 09 24 48.3
baz=299,SNR=12
EDW2 **Edwards Air Fo** 132.59 47 P 09 24 48.1
baz=298,SNR=7.1
FURC **Furnace Creek,** 132.60 44 P 09 24 48.3
baz=301,SNR=12
TPNV **Topopah Spring** 132.78 43 P 09 24 48.6
baz=302,SNR=8.9
ULM **Lac du Bonnet** 132.88 16 PKP **PKPdf** 09 24 47.2 -0.2
comp=Z,28nm,0.9s,baz=332,slow=3.0,SNR=44
ULM SKPbc **SKPbc** 09 28 12.7 -1.1
comp=Z,4.5nm,0.9s,baz=297,slow=3.8,SNR=5.2
ULM **Lac du Bonnet** 132.88 16 IAMs_20 IAMs_20 10 30 09.0
comp=Z,2µm,20.0s
CIS **Catalina Islan** 132.96 49 P 09 24 49.0
baz=297
HWUT **Hardware Ranch** 132.99 35 IAMs_20 IAMs_20 10 34 20.0
comp=Z,1µm,20.0s
SCI2 **San Clemente I** 133.05 49 P 09 24 49.1
baz=296
DUG **Dugway, Tooele** 133.14 37 IAMs_20 IAMs_20 10 35 19.2
comp=Z,1µm,20.0s
DUG **Dugway, Tooele** 133.14 37 P 09 24 49.2
baz=308,SNR=20
SHOC **Shoshone, Teco** 133.30 44 P 09 24 49.4
baz=301,SNR=9.4
BW06 **Boulder Array** 133.33 33 IAMs_20 IAMs_20 10 33 26.6
comp=Z,1µm,20.0s
BW06 **Boulder Array** 133.33 33 P 09 24 49.3
baz=313
PDAR **Pinedale Array** 133.33 33 PKP **PKPdf** 09 24 48.8 0.0
comp=Z,2.8nm,0.5s,baz=146,slow=1.4,SNR=40
PDAR SKPbc **SKPbc** 09 28 15.9 +0.1
comp=Z,1.5nm,1.0s,baz=342,slow=4.7,SNR=2.0
PDAR **Pinedale Array** 133.33 33 PKPdf **PKPdf** 09 24 47.5 -1.2
DRLN **Deer Lake** 133.35 342 IAMs_20 IAMs_20 10 31 16.2
comp=Z,2µm,20.0s
PLCA **Paso Flores** 133.46 187 PKP **PKiKP** 09 24 50.1 0.0
comp=Z,1.9nm,0.9s,baz=282,slow=6.5,SNR=3.5
PLCA PP **PP** 09 27 17.0 +1.7
comp=Z,2.6nm,1.0s,baz=245,slow=20,SNR=2.3
PLCA **Paso Flores** 133.46 187 *e*P **PKiKP** 09 24 55.7 +5.5
BBRC **Big Bear Solar** 133.66 47 P 09 24 50.3
baz=299,SNR=5.9
MURC **Murrieta** 133.77 48 P 09 24 50.8
baz=298
TUQ **Turquoise Moun** 133.79 45 P 09 24 51.2
baz=301
HEC **Hector,Ludlow** 133.80 46 P 09 24 51.1
baz=300
MDND **Maddock** 133.82 21 IAMs_20 IAMs_20 10 34 10.4
comp=Z,2µm,20.0s
MDND **Maddock** 133.82 21 P 09 24 50.4
baz=329
109C **Camp Elliot, M** 134.17 49 P 09 24 51.7
baz=298
GMRC **Granite Mounta** 134.30 45 P 09 24 52.1
baz=301
PFO **Pinyon Flats O** 134.31 47 *i*PKIKP **PKPdf** 09 24 50.5 -0.2

PFO	Pinyon Flats O	134.31	47	PKPdf	PKiKP	09 24 52.2	+0.1			
PFO	Pinyon Flats O baz=299,SNR=8.3	134.31	47	P		09 24 52.0				
TPFO	Pinon Flats baz=299	134.31	47	P		09 24 51.6				
BELC	Belle Mtn. Jos baz=300,SNR=12	134.45	47	P		09 24 52.0				
E28A	Huff comp=Z,2μm,22.0s	134.50	22	IAMs_20	IAMs_20	10 28 33.5				
AGMN	Agassiz Nation baz=334	134.64	17	P		09 24 51.5				
IRM	Iron Mountain baz=301,SNR=14	134.99	46	P		09 24 53.0				
K22A	Casper comp=Z,2μm,20.0s	134.99	30	IAMs_20	IAMs_20	10 35 49.4				
K22A	Casper baz=317,SNR=10	134.99	30	P		09 24 52.3				
BC3	Big Chuckawall baz=300,SNR=12	135.02	47	P		09 24 53.1				
IKP	In-Ko-Pah, Jac baz=298	135.03	48	P		09 24 52.9				
RSSD	Black Hills	135.08	27	PKIKP	PKPdf	09 24 52.0	0.0			
RSSD	Black Hills	135.08	27	PKPdf	PKPdf	09 24 52.0	0.0			
RSSD	Black Hills comp=Z,2μm,19.0s	135.08	27	IAMs_20	IAMs_20	10 33 37.4				
RSSD	Black Hills baz=321	135.08	27	P		09 24 52.7				
SWSC	Sam W. Stewart baz=299	135.11	48	P		09 24 53.0				
B35A	Bob, Littlefor comp=Z,3μm,21.0s	135.18	15	IAMs_20	IAMs_20	10 32 01.9				
D32A	Dogwood Acres, comp=Z,2μm,22.0s	135.32	19	IAMs_20	IAMs_20	10 30 03.7				
RWWY	Rawlins comp=Z,2μm,20.0s	135.33	32	IAMs_20	IAMs_20	10 34 59.5				
NBRF	Rio Formoso -	135.51	252	eP	PKiKP	09 24 58.6	+3.8			
ALF01	Guarapari-ES	135.53	233	eP	PKiKP	09 24 58.9	+4.2			
CAM01	Campos-RJ	135.61	231	eP	PKiKP	09 24 59.2	+4.3			
PDMCI	Parker Dam,Lak baz=302	135.63	45	P		09 24 54.3				
CHGQ	Chibougamau baz=4.5,SNR=11	135.77	357	P		09 24 53.3				
O20A	White River Ci baz=313	135.85	34	P		09 24 54.7				
RIB01	Linhares ES	135.94	235	eP	PKiKP	09 25 00.3	+4.7			
DUB01	Friburgo-RJ	136.02	230	eP	PKiKP	09 25 00.0	+4.2			
EYMN	Ely baz=340	136.12	14	P		09 24 54.9				
NBAN	Anadia - AL	136.29	250	eP	PKiKP	09 24 59.7	+3.2			
NBPV	Pedro Velho	136.29	255	eP	PKiKP	09 25 00.8	+4.3			
NAN01	Guarapari, ES	136.44	237	eP	PKiKP	09 25 00.6	+3.9			
PLTB	Pedras Altas	136.45	210	eP	PKiKP	09 25 00.6	+4.1			
TER01	Tubaro-SC	136.48	217	eP	PKiKP	09 25 01.1	+4.6			
PHWY	Pilot Hill comp=Z,1μm,22.0s	136.52	31	IAMs_20	IAMs_20	10 33 35.9				
BSFB	Barra de Sao F	136.55	235	eP	PKiKP	09 25 00.8	+4.0			
N23A	Red Feather La baz=316	136.56	32	P		09 24 55.8				
PV14	Lion Creek, Pa comp=Z,2μm,22.0s	136.57	37	IAMs_20	IAMs_20	10 29 03.9				
LSQQ	Lebel-sur-Quev baz=0.8	136.70	360	P		09 24 55.9				
PV05	Paradox Valley comp=Z,2μm,22.0s	136.72	37	IAMs_20	IAMs_20	10 27 48.7				
PV18	Skein Mesa, Pa comp=Z,1μm,19.0s	136.72	37	IAMs_20	IAMs_20	10 39 17.9				
PV07	Paradox Valley comp=Z,1μm,18.0s	136.75	36	IAMs_20	IAMs_20	10 29 26.6				
PV03	Paradox Valley comp=Z,1μm,18.0s	136.75	37	IAMs_20	IAMs_20	10 38 00.7				
GUA01	Guaratinga, BA	136.77	239	eP	PKiKP	09 25 01.6	+4.3			
WUAZ	Wupatki baz=306,SNR=8.7	136.85	42	P		09 24 56.2				
SJMB	Sao Joao De Ma	136.89	235	eP	PKiKP	09 25 01.6	+4.0			
CNLB	Canela	136.91	215	eP	PKiKP	09 25 02.1	+4.7			
SUSD	Miller comp=Z,2μm,22.0s	136.96	23	IAMs_20	IAMs_20	10 30 56.5				
SUSD	Miller baz=328	136.96	23	P		09 24 56.3				
PV01	Paradox Valley comp=Z,1μm,21.0s	137.00	37	IAMs_20	IAMs_20	10 36 29.2				
RCBR	Riachuelo comp=Z,2μm,20.0s	137.03	255	IAMs_20	IAMs_20	10 17 34.0				
RCBR	Riachuelo	137.03	255	eP	PKiKP	09 25 01.4	+3.3			
CMC01	Camacan, BA	137.07	240	eP	PKiKP	09 25 01.7	+3.7			
SMCO	Snowmass comp=Z,2μm,19.0s	137.22	34	IAMs_20	IAMs_20	10 37 51.7				
BATG	Bathurst New B BATG comp=Z,2μm,21.0s	137.35	349	PKPdf IAMs_20	PKPdf IAMs_20	09 24 56.4 10 31 58.9	+0.6			
E38A	The Farm, Brul comp=Z,2μm,20.0s	137.36	14	IAMs_20	IAMs_20	10 38 44.5				
CPSB	Cacapava Do Su	137.46	211	eP	PKiKP	09 25 02.9	+4.5			
F36A	Milaca comp=Z,2μm,20.0s	137.53	17	IAMs_20	IAMs_20	10 32 40.0				
ISCO	Idaho Springs comp=Z,1μm,20.0s	137.53	33	IAMs_20	IAMs_20	10 36 48.7				
ISCO	Idaho Springs baz=316	137.53	33	P		09 24 57.7				
D41A	Chassel comp=Z,3μm,22.0s	137.59	11	IAMs_20	IAMs_20	10 30 57.4				
NBLI	Livramento-PB	137.62	253	eP	PKiKP	09 25 02.7	+3.4			
MVCO	Mesa Verde comp=Z,2μm,22.0s	137.64	38	IAMs_20	IAMs_20	10 36 26.3				
MVCO	Mesa Verde baz=310,SNR=6.2	137.64	38	P		09 24 57.8				
VLDQ	Val d'Or comp=Z,2μm,21.0s	137.65	0	IAMs_20	IAMs_20	10 31 57.0				
PARB	Paraibuna	137.68	226	eP	PKiKP	09 25 02.9	+3.8			
214A	Organ Pipe Nat baz=301	137.79	47	P		09 24 58.4				
D63A	Stockholm baz=14	137.95	350	P		09 24 58.3				
GBN	Guysborough GBN comp=Z,2μm,20.0s	138.00	343	PKPdf IAMs_20	PKPdf IAMs_20	09 24 56.4 10 35 03.2	-0.6			
NBTA	Tacaratu-PE	138.14	250	eP	PKiKP	09 25 03.5	+3.2			
W18A	Petrified Fore comp=Z,1μm,18.0s	138.16	41	IAMs_20	IAMs_20	10 38 56.6				
W18A	Petrified Fore baz=307	138.16	41	P		09 24 59.3				
LATQ	La Tuque baz=7.1	138.19	355	P		09 24 59.0				
S22A	4UR Ranch, Cre baz=313,SNR=13	138.28	36	P		09 24 59.4				
SPMN	Marine on St. comp=Z,2μm,20.0s	138.31	16	IAMs_20	IAMs_20	10 35 41.8				
SPMN	Marine on St. baz=337	138.31	16	P		09 24 59.2				
Q24A	Divide baz=316	138.38	33	P		09 24 59.1				
ECSD	EROS Data Cent comp=Z,2μm,19.0s	138.43	21	IAMs_20	IAMs_20	10 34 35.4				
ECSD	EROS Data Cent baz=331	138.43	21	P		09 24 59.6				
D60A	Saint Jean D'O baz=9.9	138.47	353	P		09 24 59.3				
D59A	Saint-Raymond baz=8.5	138.47	354	P		09 24 59.1				
D58A	Chemin du LacG baz=7.0	138.48	355	P		09 24 59.4				
E64A	Bridgewater baz=15	138.50	350	P		09 24 59.7				
E43A	Lone Tree Farm comp=Z,2μm,21.0s	138.54	10	IAMs_20	IAMs_20	10 32 11.4				
E63A	Oxbow baz=14	138.60	351	P		09 24 59.3				
D56A	ZEC Mazanza, M baz=4.2	138.65	357	P		09 24 59.8				
D55A	Sainte-Anne-du baz=3.1,SNR=8.7	138.71	358	P		09 24 59.0				
SPB	Sao Paulo comp=Z,2μm,20.0s	138.79	224	IAMs_20	IAMs_20	10 14 22.8				
VAO	Valinhos	138.84	225	eP	PKiKP	09 25 05.2	+3.6			
E61A	Lac Etchemin baz=11	138.89	353	P		09 25 00.1				
F42A	Maple Grove Fa comp=Z,2μm,22.0s	138.93	11	IAMs_20	IAMs_20	10 30 24.7				
G40A	Rib Lake comp=Z,1μm,20.0s	138.95	14	IAMs_20	IAMs_20	10 33 45.3				
E46A	Sault Ste Mari comp=Z,2μm,20.0s	138.96	7	IAMs_20	IAMs_20	10 36 29.1				
E60A	Ste Agathe de baz=9.2	139.06	354	P		09 25 01.0				
TUC	Tucson	139.06	45	PKHKP	PKPpre	09 24 52.6				
TUC	Tucson	139.06	45		PKPpre	09 24 52.6				
TUC	Tucson comp=Z,1μm,22.0s	139.06	45	IAMs_20	IAMs_20	10 37 30.3				
TUC	Tucson baz=303	139.06	45	P		09 25 01.0				
F64A	Sherman baz=14	139.13	350	P		09 25 00.6				
E56A	St. Veronique baz=3.8,SNR=14	139.16	357	P		09 25 00.2				
E58A	La Victoria baz=6.5	139.23	356	P		09 25 01.0				
HAL	Halifax comp=Z,2μm,20.0s	139.28	345	IAMs_20	IAMs_20	10 34 43.1				
F61A	St Evariste baz=10.0	139.40	353	P		09 25 01.2				
F63A	Nahmakanta, Br comp=Z,2μm,19.0s	139.41	351	IAMs_20	IAMs_20	10 35 57.4				
F63A	Nahmakanta, Br baz=13	139.41	351	P		09 25 01.1				
F60A	Warwick baz=8.5	139.51	354	P		09 25 01.3				
GGN	Saint George comp=Z,1μm,20.0s	139.57	348	IAMs_20	IAMs_20	10 34 36.7				
G65A	Princeton baz=15	139.63	349	P		09 25 01.8				
KSCO	Kaye Shedlock' comp=Z,2μm,21.0s	139.67	31	IAMs_20	IAMs_20	10 36 46.3				
KSCO	Kaye Shedlock' baz=319	139.67	31	P		09 25 01.9				
F59A	Saint Guilaume baz=7.3	139.71	355	P		09 25 01.5				
G64A	Maxfield baz=14	139.79	351	P		09 25 01.8				
BGNE	Belgrade comp=Z,2μm,20.0s	139.83	24	IAMs_20	IAMs_20	10 36 03.6				
BGNE	Belgrade baz=327	139.83	24	P		09 25 02.2				
PKME	Peaks-Kenny Pk comp=Z,2μm,20.0s	139.87	351	IAMs_20	IAMs_20	10 35 14.5				
PKME	Peaks-Kenny Pk baz=13	139.87	351	P		09 25 02.0				
H66A	Whiting baz=16	139.99	349	P		09 25 02.3				
G63A	Kingsbury baz=12	140.06	351	P		09 25 02.3				
T25A	Trinidad comp=Z,1μm,22.0s	140.09	34	IAMs_20	IAMs_20	10 38 09.7				
T25A	Trinidad baz=315,SNR=17	140.09	34	P		09 25 02.4				
G62A	West of Eustis baz=11	140.09	352	P		09 25 02.6				
I40A	Norwalk comp=Z,2μm,19.0s	140.14	15	IAMs_20	IAMs_20	10 36 27.9				
G61A	St-Isidore-de- baz=9.3	140.15	354	P		09 25 02.7				
H65A	Eastbrook baz=14	140.25	350	P		09 25 02.8				
G54A	Lake Saint Pet baz=359	140.36	1	P		09 25 03.3				
ANMO	Albuquerque ANMO	140.37	39	‖ eP i	PKiKP	PKPdf	09 24 56.3 09 25 03.1	-5.7		
ANMO	Albuquerque comp=Z,2μm,19.0s	140.37	39	IAMs_20	IAMs_20	10 40 53.6				
ANMO	Albuquerque baz=311	140.37	39	P		09 25 03.7				
G60A	Masonville baz=8.1	140.41	354	P		09 25 03.5				
GLMI	Grayling comp=Z,2μm,20.0s	140.43	8	IAMs_20	IAMs_20	10 37 25.1				
G58A	Ormstown baz=5.4	140.50	356	P		09 25 03.2				
G57A	Newington baz=4.0	140.60	357	P		09 25 03.9				
WVL	Waterville comp=Z,2μm,20.0s	140.60	351	IAMs_20	IAMs_20	10 34 06.1				
Y22D	IRIS PASSCAL I comp=Z,2μm,20.0s	140.63	40	IAMs_20	IAMs_20	10 40 17.8				
N33A	J Bar K, Exete comp=Z,2μm,21.0s	140.68	24	IAMs_20	IAMs_20	10 36 26.1				
K38A	Parkersburg comp=Z,2μm,19.0s	140.68	18	IAMs_20	IAMs_20	10 38 07.5				
PLVO	Plevna comp=Z,2μm,19.0s	140.72	360	IAMs_20	IAMs_20	10 34 40.3				
H62A	Milan comp=Z,2μm,22.0s	140.80	353	IAMs_20	IAMs_20	10 32 38.3				
H62A	Milan baz=10.0	140.80	353	P		09 25 04.1				
PEL	Peldehue comp=Z,2μm,19.0s	140.94	189	IAMs_20	IAMs_20	10 26 17.0				
I45A	Fountain comp=Z,2μm,21.0s	140.94	10	IAMs_20	IAMs_20	10 31 20.9				
H59A	Cadyville baz=8.0	140.98	356	P		09 25 04.3				
121A	Cookes Peak, D baz=307	141.01	43	P		09 25 05.1				
PTGB	Pitanga	141.05	218	eP	PKiKP	09 25 09.0	+2.9			
JFWS	Jewell Farm comp=Z,2μm,20.0s	141.15	15	IAMs_20	IAMs_20	10 34 31.6				
JFWS	Jewell Farm baz=340	141.15	15	P		09 25 04.6				
H53A	Bobcaygeon baz=358	141.17	1	P		09 25 05.1				
BB19B	Bebedouro	141.19	226	eP	PKiKP	09 25 09.0	+2.6			
SCIA	State Center comp=Z,2μm,20.0s	141.21	19	IAMs_20	IAMs_20	10 41 15.6				
VT1	Waterbury comp=Z,2μm,20.0s	141.21	355	IAMs_20	IAMs_20	10 34 55.5				
LBNH	Lisbon comp=Z,2μm,21.0s	141.22	354	IAMs_20	IAMs_20	10 33 30.4				
LBNH	Lisbon baz=8.9	141.22	354	P		09 25 05.4				
I64A	Boothbay baz=13	141.23	351	P		09 25 05.2				
H58A	Gabriels baz=5.3	141.24	356	P		09 25 04.6				
I63A	Otisfield comp=Z,2μm,19.0s	141.24	352	IAMs_20	IAMs_20	10 34 20.9				
I63A	Otisfield baz=11	141.24	352	P		09 25 05.4				
CBKS	Cedar Bluff comp=Z,2μm,22.0s	141.25	28	IAMs_20	IAMs_20	10 34 34.6				
CBKS	Cedar Bluff baz=323	141.25	28	P		09 25 05.3				
JANB	Januaria	141.30	238	eP	PKiKP	09 25 09.5	+2.8			
I62A	Tamworth comp=Z,2μm,20.0s	141.51	353	IAMs_20	IAMs_20	10 38 24.1				
I62A	Tamworth baz=9.9	141.51	353	P		09 25 05.5				
I61A	Oroboro, Fairl baz=8.5	141.55	354	P		09 25 05.4				
NCB	Newcomb comp=Z,2μm,20.0s	141.69	356	IAMs_20	IAMs_20	10 37 37.7				
I60A	Shoreham baz=6.8	141.74	355	P		09 25 06.0				
HNH	Hanover comp=Z,2μm,21.0s	141.79	354	IAMs_20	IAMs_20	10 33 47.4				
I57A	Carthage baz=3.0	141.79	358	P		09 25 06.2				
K43A	Burlington comp=Z,2μm,22.0s	141.81	13	IAMs_20	IAMs_20	10 34 13.9				
I51A	Listowel baz=354	141.82	4	P		09 25 06.3				
PECO	Prince Edward comp=Z,2μm,22.0s	141.82	360	IAMs_20	IAMs_20	10 32 24.6				
I59A	Olmsteadville baz=5.9	141.84	356	P		09 25 06.1				
FFD	Franklin Falls comp=Z,2μm,20.0s	141.95	353	IAMs_20	IAMs_20	10 38 36.7				
I58A	Old Forge baz=4.1	142.01	357	P		09 25 06.7				
R32A	Long Quarter, comp=Z,2μm,21.0s	142.04	28	IAMs_20	IAMs_20	10 34 36.5				
J63A	Strafford baz=10	142.06	352	P		09 25 06.7				
L42A	Oliver, Polo comp=Z,2μm,21.0s	142.15	15	IAMs_20	IAMs_20	10 35 11.1				
J61A	Chester baz=8.1	142.17	354	P		09 25 07.1				
N38A	Joes South For comp=Z,2μm,22.0s	142.20	20	IAMs_20	IAMs_20	10 34 06.0				
J59A	Piesco baz=4.9	142.21	357	P		09 25 07.2				
J62A	Henniker baz=9.3	142.21	353	P		09 25 06.7				
J57A	Williamstown comp=Z,2μm,20.0s	142.33	358	IAMs_20	IAMs_20	10 35 35.9				
J57A	Williamstown baz=2.5	142.33	358	P		09 25 07.2				
J60A	Lant Hill Farm baz=6.7	142.35	355	P		09 25 07.4				
KSU1	Kansas State U comp=Z,2μm,20.0s	142.40	25	IAMs_20	IAMs_20	10 38 45.9				
L44A	Lake County Fo baz=343	142.40	13	P		09 25 07.4				
K50A	Casco comp=Z,2μm,19.0s	142.70	6	IAMs_20	IAMs_20	10 36 48.0				
K63A	Dunstable comp=Z,1μm,21.0s	142.70	353	IAMs_20	IAMs_20	10 33 45.7				
PCMB	Pacaembu	142.74	223	eP	PKiKP	09 25 12.0	+2.5			
CPUP	Villa Florida comp=Z,3.6nm,0.9s,baz=152,slow=3.7,SNR=7.3	142.76	211	PKhKP	PKPpre	09 25 01.8				
CPUP	Villa Florida	142.76	211	eP	PKiKP	09 25 12.2	+2.8			
TRCB	Terra Rica	142.80	220	eP	PKiKP	09 25 12.5	+2.9			
K62A	Royalston comp=Z,2μm,19.0s	142.81	354	IAMs_20	IAMs_20	10 39 04.5				
TRY	Troy comp=Z,1μm,20.0s	142.88	355	IAMs_20	IAMs_20	10 38 23.4				
HRV	Adam Dziewonsk comp=Z,1μm,19.0s	142.89	353	IAMs_20	IAMs_20	10 36 11.5				
L46A	Eue Claire comp=Z,2μm,20.0s	142.89	11	IAMs_20	IAMs_20	10 34 54.5				
K58A	Earlville baz=3.1	142.96	358	P		09 25 08.1				
WES	Weston comp=Z,2μm,20.0s	142.98	352	IAMs_20	IAMs_20	10 36 31.9				
K57A	Scipio Center baz=1.6	143.02	359	P		09 25 09.3				
AAM	Ann Arbor comp=Z,2μm,22.0s	143.04	8	IAMs_20	IAMs_20	10 32 16.1				
AAM	Ann Arbor baz=350	143.04	8	P		09 25 08.8				
SDBA	SAO DESIDERIO	143.06	241	eP	PKiKP	09 25 12.8	+2.4			
K56A	Middlesex baz=0.3	143.06	360	P		09 25 09.0				
MNTX	Cornudas Mount comp=Z,2μm,21.0s	143.13	42	IAMs_20	IAMs_20	10 41 03.2				
P38A	Dawn comp=Z,2μm,22.0s	143.14	21	IAMs_20	IAMs_20	10 32 50.0				
AMTX	Amarillo comp=Z,2μm,20.0s	143.24	34	IAMs_20	IAMs_20	10 39 36.2				
MSTX	Muleshoe comp=Z,2μm,19.0s	143.26	37	IAMs_20	IAMs_20	10 38 07.1				
MSTX	Muleshoe baz=315	143.26	37	P		09 25 09.8				
L64A	Middleborough comp=Z,2μm,18.0s	143.35	352	IAMs_20	IAMs_20	10 36 09.8				
L64A	Middleborough baz=11	143.35	352	P		09 25 09.6				
ITRB	Iturama	143.38	226	eP	PKiKP	09 25 13.6	+2.7			
BRYW	Bryant College comp=Z,2μm,20.0s	143.46	353	IAMs_20	IAMs_20	10 34 19.8				
L62A	Suffield comp=Z,2μm,19.0s	143.48	354	IAMs_20	IAMs_20	10 39 14.2				
L59A	Walton comp=Z,2μm,21.0s	143.51	357	IAMs_20	IAMs_20	10 33 58.0				
L59A	Walton baz=4.1	143.51	357	P		09 25 10.0				
L63A	North Scituate comp=Z,1μm,20.0s	143.53	353	IAMs_20	IAMs_20	10 40 32.3				
BINY	Binghamton baz=2.6	143.54	358	P		09 25 10.0				
ERPA	Erie comp=Z,2μm,21.0s	143.57	3	IAMs_20	IAMs_20	10 35 02.9				
ERPA	Erie baz=356	143.57	3	P		09 25 10.1				
OK032	Salt Plains WL comp=Z,2μm,20.0s	143.58	29	IAMs_20	IAMs_20	10 38 57.4				
HDIL	Hopedale baz=340	143.60	15	P		09 25 10.0				
L56A	Greenwood comp=Z,2μm,18.0s	143.62	0	IAMs_20	IAMs_20	10 36 19.2				
L56A	Greenwood baz=360	143.62	0	P		09 25 09.8				
L60A	Shokan baz=5.5	143.66	356	P		09 25 10.1				
UCCT	U. Connecticut comp=Z,1μm,22.0s	143.67	353	IAMs_20	IAMs_20	10 34 54.2				
L58A	Harry Jones Me baz=2.8	143.69	358	P		09 25 10.3				
L53A	Girard baz=355	143.72	4	P		09 25 10.8				
P40A	Paris comp=Z,2μm,20.0s	143.73	19	IAMs_20	IAMs_20	10 36 50.5				
M64A	Tiverton comp=Z,2μm,20.0s	143.78	352	IAMs_20	IAMs_20	10 39 13.2				
M50A	Fremont comp=Z,2μm,22.0s	144.00	7	IAMs_20	IAMs_20	10 35 20.6				
M63A	Gales Ferry comp=Z,2μm,20.0s	144.03	353	IAMs_20	IAMs_20	10 37 03.9				
BDFB	Brasilia comp=Z,4.8nm,0.5s,baz=76,slow=4.0,SNR=10	144.04	234	PKP	PKPbc	09 25 07.5	+0.7			
M52A	Chesterland comp=Z,2μm,20.0s	144.04	5	IAMs_20	IAMs_20	10 36 38.6				
N47A	Urbana comp=Z,2μm,22.0s	144.10	11	IAMs_20	IAMs_20	10 33 27.5				
M59A	Waymart baz=3.5	144.17	357	P		09 25 11.3				
M54A	Oil Creek Stat comp=Z,2μm,20.0s	144.19	3	IAMs_20	IAMs_20	10 35 51.4				
M53A	WI Miller and comp=Z,2μm,21.0s	144.20	4	IAMs_20	IAMs_20	10 35 13.7				
M56A	Emporium comp=Z,2μm,20.0s	144.27	1	IAMs_20	IAMs_20	10 35 07.3				
M56A	Emporium baz=359	144.27	1	P		09 25 11.5				
N49A	Columbus Grove comp=Z,2μm,20.0s	144.32	9	IAMs_20	IAMs_20	10 35 39.0				
M60A	Port Jervis baz=4.9,SNR=5.3	144.34	356	P		09 25 06.0				
P43A	Skaggs, Pawnee comp=Z,2μm,20.0s	144.40	16	IAMs_20	IAMs_20	10 39 32.8				
WSPT	Westport, CT comp=Z,2μm,20.0s	144.40	355	IAMs_20	IAMs_20	10 36 58.6				
M57A	Sunshine Farm, baz=0.7,SNR=9.9	144.42	360	P		09 25 06.1				
N51A	Ashland comp=Z,2μm,19.0s	144.56	6	IAMs_20	IAMs_20	10 39 16.3				
PAL	Palisades baz=6.2,SNR=5.4	144.61	355	P		09 25 06.7				
N54A	Moraine State baz=356	144.72	3	P		09 25 07.0				
N59A	State Game Lan comp=Z,2μm,20.0s	144.81	358	IAMs_20	IAMs_20	10 37 20.5				
N59A	State Game Lan baz=3.0,SNR=7.2	144.81	358	P		09 25 07.4				
N53A	Lisbon comp=Z,2μm,21.0s	144.82	5	IAMs_20	IAMs_20	10 38 02.0				
N60A	Cedar Hill Far baz=4.2,SNR=6.6	144.83	357	P		09 25 07.6				
N56A	West Decatur baz=359,SNR=10	144.83	1	P		09 25 08.1				
N61A	South Mountain baz=5.6	144.90	356	P		09 25 07.8				
N58A	Sunbury comp=Z,2μm,21.0s	144.91	359	IAMs_20	IAMs_20	10 34 19.3				
N58A	Sunbury baz=1.4,SNR=20	144.91	359	P		09 25 08.1				
WMOK	Wichita Mounta comp=Z,2μm,22.0s	144.92	31	IAMs_20	IAMs_20	10 36 53.3				
WMOK	Wichita Mounta baz=321,SNR=58	144.92	31	P		09 25 08.2				
S39A	Bolivar comp=Z,2μm,22.0s	144.92	22	IAMs_20	IAMs_20	10 36 08.3				
BRNJ	Basking Ridge comp=Z,2μm,20.0s	144.98	356	IAMs_20	IAMs_20	10 36 44.0				
LCO	Las Campanas	144.98	190	PKIKP	PKPbc	09 25 09.9	+0.2			
LCO	Las Campanas	144.98	190	PKPdf	PKPbc	09 25 09.9	+0.3			
LCO	Las Campanas comp=Z,2μm,20.0s	144.98	190	IAMs_20	IAMs_20	10 24 47.1				
N57A	Milroy baz=360,SNR=17	145.00	0	P		09 25 08.4				
SSPA	Standing Stone	145.12	1		PKPbc	09 25 07.8	-1.6			
SSPA	Standing Stone comp=Z,2μm,18.0s	145.12	1	IAMs_20	IAMs_20	10 37 22.8				
SSPA	Standing Stone baz=359	145.12	1	P		09 25 08.8				
ACSO	Alum Creek Sta comp=Z,2μm,20.0s	145.16	7	IAMs_20	IAMs_20	10 38 38.3				
ACSO	Alum Creek Sta baz=350,SNR=26	145.16	7	P		09 25 08.9				
Q44A	Meyer Farm, Va comp=Z,2μm,20.0s	145.22

O53A	**New Philadelph**	145.34	5	IAMs_20	IAMs_20	10 40 22.9		
	comp=Z,2µm,21.0s							
O53A	**New Philadelph**	145.34	5	P		09 25 09.3		
	baz=354,SNR=19							
O60A	**Telford**	145.39	357	P		09 25 10.0		
	baz=3.7,SNR=9.4							
O52A	**Adamsville**	145.41	6	IAMs_20	IAMs_20	10 35 24.8		
	comp=Z,2µm,21.0s							
TUL1	**Leonard**	145.43	27	P		09 25 10.2		
	baz=327,SNR=21							
O59A	**Robesonia**	145.43	358	P		09 25 09.8		
	baz=2.3,SNR=19							
O56A	**Blue Knob Stat**	145.47	2	IAMs_20	IAMs_20	10 35 34.2		
	comp=Z,2µm,21.0s							
O56A	**Blue Knob Stat**	145.47	2	P		09 25 10.1		
	baz=358,SNR=33							
P48A	**Milroy**	145.53	11	IAMs_20	IAMs_20	10 37 02.2		
	comp=Z,2µm,20.0s							
O57A	**Amberson**	145.55	0	P		09 25 09.9		
	baz=360,SNR=26							
O61A	**Allentown**	145.57	356	P		09 25 10.3		
	baz=5.2,SNR=7.0							
P49A	**Miami Univ. Ec**	145.58	10	P		09 25 09.8		
	baz=347,SNR=25							
O58A	**Lewisberry**	145.63	359	P		09 25 10.6		
	baz=1.0,SNR=27							
TXAR	**Lajitas Array**	145.76	43	PKPbc	**PKPab**	**09 25 13.0**	**+0.7**	
	comp=Z,107nm,0.8s,baz=291,slow=1.5,SNR=520							
TXAR				SKPbc	**SKiKP**	**09 28 55.1**	**+4.3**	
	comp=Z,2.4nm,1.1s,baz=264,slow=1.8,SNR=1.4							
TXAR	**Lajitas Array**	145.76	43	PKIKP	**PKPdf**	**09 25 11.5**	**-0.1**	
TXAR	**Lajitas Array**	145.76	43	PKPdf	**PKPdf**	**09 25 11.4**	**-0.1**	
WUPA	**West Chester U**	145.78	358	IAMs_20	IAMs_20	10 37 53.3		
	comp=Z,1µm,19.0s							
P52A	**Corning**	145.86	6	IAMs_20	IAMs_20	10 37 29.6		
	comp=Z,2µm,20.0s							
P52A	**Corning**	145.86	6	P		09 25 10.8		
	baz=352,SNR=24							
HHAR	**Hobbs**	145.91	24	IAMs_20	IAMs_20	10 34 10.6		
	comp=Z,2µm,22.0s							
P60A	**Greenville**	145.91	358	P		09 25 11.5		
	baz=3.3,SNR=22							
MCWV	**Mont Chateau**	146.03	3	IAMs_20	IAMs_20	10 36 38.0		
	comp=Z,976nm,20.0s							
MCWV	**Mont Chateau**	146.03	3	P		09 25 12.0		
	baz=356,SNR=28							
ABTX	**Abilene, Hawle**	146.05	35	P		09 25 12.3		
	baz=318,SNR=23							
P53A	**Whipple**	146.08	6	IAMs_20	IAMs_20	10 34 25.5		
	comp=Z,2µm,21.0s							
PEXB	**Peixe**	146.12	239	*e*P	**PKiKP**	**09 25 17.4**	**+0.7**	
P59A	**Jarrettsville**	146.13	359	P		09 25 12.3		
	baz=1.9,SNR=16							
P56A	**Dayton Farm, R**	146.23	2	P		09 25 12.4		
	baz=358,SNR=30							
P57A	**Homestead Farm**	146.27	1	IAMs_20	IAMs_20	10 38 06.2		
	comp=Z,2µm,19.0s							
P57A	**Homestead Farm**	146.27	1	P		09 25 12.5		
	baz=359,SNR=28							
U40A	**Yellville**	146.27	23	IAMs_20	IAMs_20	10 34 50.1		
	comp=Z,2µm,22.0s							
U40A	**Yellville**	146.27	23	P		09 25 12.7		
	baz=332,SNR=71							
Q51A	**Peebles**	146.30	8	IAMs_20	IAMs_20	10 39 13.5		
	comp=Z,2µm,20.0s							
AQDB	**Aquidauana**	146.43	219	*e*P	**PKiKP**	**09 25 17.9**	**+0.8**	
Q52A	**Bidwell**	146.50	7	IAMs_20	IAMs_20	10 37 59.8		
	comp=Z,2µm,21.0s							
WCI	**Wyandotte Cave**	146.54	13	PKP2	**PKPdf**	**09 25 12.1**	**-0.4**	
WCI	**Wyandotte Cave**	146.54	13	PKPdf	**PKPdf**	**09 25 12.1**	**-0.4**	
WCI				IAMs_20	IAMs_20	10 35 00.1		
	comp=Z,2µm,22.0s							
WCI	**Wyandotte Cave**	146.54	13	P		09 25 13.2		
	baz=344							
Q54A	**Coxs Mills**	146.63	5	IAMs_20	IAMs_20	10 35 22.0		
	comp=Z,2µm,22.0s							
Q56A	**Snyder Ridge,**	146.68	3	IAMs_20	IAMs_20	10 36 12.1		
	comp=Z,2µm,21.0s							
Q56A	**Snyder Ridge,**	146.68	3	P		09 25 13.9		
	baz=357,SNR=20							
Q53A	**Leroy**	146.69	6	P		09 25 14.1		
	baz=353,SNR=20							
R49A	**Shelbyville**	146.71	11	IAMs_20	IAMs_20	10 37 57.5		
	comp=Z,2µm,21.0s							
Q57A	**Strasburg**	146.71	1	P		09 25 14.0		
	baz=358,SNR=34							
Z35A	**Perchaven, San**	146.81	31	IAMs_20	IAMs_20	10 40 21.3		
	comp=Z,2µm,21.0s							
Q58A	**Fox Den Farm,**	146.81	0	P		09 25 14.2		
	baz=360,SNR=17							
Q61A	**Milford**	146.82	357	P		09 25 14.5		
	baz=4.0							
Q59A	**Harwood**	146.88	359	P		09 25 14.6		
	baz=1.6							
W39A	**Magazine**	146.90	25	IAMs_20	IAMs_20	10 41 31.1		
	comp=Z,2µm,19.0s							
W39A	**Magazine**	146.91	25	P		09 25 14.4		
	baz=329,SNR=15							
PARMO	**Parma**	147.08	18	IAMs_20	IAMs_20	10 41 01.1		
	comp=Z,2µm,19.0s							
LCAR	**Lake Charles**	147.16	21	IAMs_20	IAMs_20	10 38 40.2		
	comp=Z,2µm,20.0s							
R53A	**Hurricane**	147.16	7	IAMs_20	IAMs_20	10 41 03.2		
	comp=Z,2µm,20.0s							
R56A	**Bull Pasture M**	147.30	3	P		09 25 15.3		
	baz=356,SNR=27							
PENMO	**Penman**	147.32	18	IAMs_20	IAMs_20	10 38 22.4		
	comp=Z,2µm,21.0s							
R55A	**Marlinton**	147.38	4	IAMs_20	IAMs_20	10 36 06.8		
	comp=Z,2µm,21.0s							
R55A	**Marlinton**	147.38	4	P		09 25 16.0		
	baz=355,SNR=9.8							
R54A	**Victor**	147.41	5	P		09 25 15.7		
	baz=354							
WHAR	**Wooly Hollow**	147.43	23	IAMs_20	IAMs_20	10 39 28.7		
	comp=Z,2µm,21.0s							
R57A	**Stanardsville**	147.44	2	P		09 25 16.3		
	baz=358,SNR=23							
R60A	**Leonardtown, M**	147.48	359	P		09 25 16.4		
	baz=1.7							
JCT	**Junction City**	147.50	38	IAMs_20	IAMs_20	10 41 01.5		
	comp=Z,2µm,20.0s							
JCT	**Junction City**	147.50	38	P		09 25 17.1		
	baz=315							
W41B	**Gary Mavity, V**	147.55	23	P		09 25 16.2		
	baz=332,SNR=22							
MIAR	**Mount Ida**	147.55	25	IAMs_20	IAMs_20	10 40 18.2		
	comp=Z,2µm,21.0s							
MIAR	**Mount Ida**	147.55	25	P		09 25 16.7		
	baz=329,SNR=48							
CBN	**Corbin Frederi**	147.55	360	P		09 25 16.4		
	baz=0.3,SNR=6.9							
PEBM	**Pemiscott Bayo**	147.55	19	IAMs_20	IAMs_20	10 36 12.6		
	comp=Z,2µm,22.0s							
R59A	**King George, V**	147.55	360	P		09 25 16.3		
	baz=0.7,SNR=11							
GNAR	**Gosnell**	147.64	19	IAMs_20	IAMs_20	10 38 44.9		
	comp=Z,2µm,21.0s							
WHTX	**Lake Whitney,**	147.74	33	P		09 25 17.5		
	baz=320,SNR=8.6							
S54A	**Dingess, Beckl**	147.76	6	IAMs_20	IAMs_20	10 37 05.9		
	comp=Z,2µm,20.0s							
S54A	**Dingess, Beckl**	147.76	6	P		09 25 16.7		
	baz=353,SNR=13							
R58B	**Mineral**	147.79	1	P		09 25 17.0		
	baz=359,SNR=14							
HBAR	**Harrisburg**	147.79	21	IAMs_20	IAMs_20	10 44 23.1		
	comp=Z,2µm,20.0s							
HALT	**Halls**	147.91	18	IAMs_20	IAMs_20	10 40 53.9		
	comp=Z,2µm,19.0s							
X40A	**Basin Creek Fa**	147.91	24	IAMs_20	IAMs_20	10 42 37.6		
	comp=Z,2µm,20.0s							
X40A	**Basin Creek Fa**	147.91	24	P		09 25 17.5		
	baz=330,SNR=20							
S57A	**Dark Hollow, R**	147.96	2	P		09 25 17.7		
	baz=357,SNR=20							
S59A	**Mechanicsville**	147.99	360	P		09 25 17.9		
	baz=0.4,SNR=27							
S56A	**Natural Bridge**	148.02	3	P		09 25 17.7		
	baz=356,SNR=8.5							
S60A	**Water View**	148.04	359	P		09 25 17.8		
	baz=1.6,SNR=6.7							
S58A	**Poland Farm, P**	148.14	1	P		09 25 18.1		
	baz=359,SNR=28							
WVT	**Waverly**	148.15	16	PKIKP	**PKPdf**	**09 25 15.3**	**+0.1**	
WVT	**Waverly**	148.15	16	PKPdf	**PKPdf**	**09 25 15.3**	**+0.1**	
WVT	**Waverly**	148.15	16	P		09 25 18.2		
	baz=340							

U49A	**Red Boiling Sp**	148.29	13	IAMs_20	IAMs_20	10 36 03.7		
	comp=Z,2µm,22.0s							
BLA	**Blacksburg**	148.42	5	IAMs_20	IAMs_20	10 36 50.4		
	comp=Z,2µm,22.0s							
BLA	**Blacksburg**	148.42	5	P		09 25 18.3		
	baz=354,SNR=8.8							
CLTN	**Cedars of Leba**	148.57	14	IAMs_20	IAMs_20	10 37 50.1		
	comp=Z,2µm,21.0s							
435B	**Jarrell**	148.59	35	IAMs_20	IAMs_20	10 47 16.8		
	comp=Z,2µm,20.0s							
435B	**Jarrell**	148.59	35	P		09 25 19.8		
	baz=319							
237A	**Washetta, Mont**	148.60	31	IAMs_20	IAMs_20	10 41 24.7		
	comp=Z,2µm,20.0s							
T60A	**Surry**	148.61	359	P		09 25 19.8		
	baz=1.5,SNR=8.9							
X43A	**Marvell**	148.64	22	P		09 25 19.8		
	baz=334,SNR=7.2							
W45A	**Hickory Valley**	148.65	19	IAMs_20	IAMs_20	10 37 04.6		
	comp=Z,2µm,22.0s							
CCAR	**Cane Creek**	148.84	23	IAMs_20	IAMs_20	10 40 32.0		
	comp=Z,2µm,20.0s							
Z41A	**Richland Creek**	148.98	26	P		09 25 20.8		
	baz=329,SNR=14							
OXF	**Oxford**	149.17	20	IAMs_20	IAMs_20	10 41 37.1		
	comp=Z,2µm,19.0s							
PB14	**IPOC Station P**	149.19	193	IAMs_20	IAMs_20	10 25 04.5		
	comp=Z,2µm,22.0s							
833A	**Chaparral WMA,**	149.26	40	P		09 25 22.2		
	baz=313,SNR=22							
NATX	**Nacogdoches**	149.38	30	P		09 25 22.2		
	baz=325,SNR=9.3							
SWET	**Sewanee**	149.50	14	IAMs_20	IAMs_20	10 38 48.7		
	comp=Z,2µm,20.0s							
CPCT	**Cooper Cave**	149.59	12	IAMs_20	IAMs_20	10 38 58.7		
	comp=Z,2µm,21.0s							
W50A	**Signal Mountai**	149.66	13	IAMs_20	IAMs_20	10 37 06.8		
	comp=Z,2µm,22.0s							
Y45A	**Yeager Farm, C**	149.71	20	IAMs_20	IAMs_20	10 37 19.8		
	comp=Z,2µm,22.0s							
X48A	**Hartselle**	149.94	16	IAMs_20	IAMs_20	10 37 15.5		
	comp=Z,2µm,21.0s							
HKT	**Hockley**	150.20	33	PKIKP	**PKPdf**	**09 25 20.0**	**+1.4**	
HKT	**Hockley**	150.20	33	PKPdf	**PKPdf**	**09 25 20.0**	**+1.4**	
FPAL	**Fort Paine**	150.22	14	IAMs_20	IAMs_20	10 41 10.8		
	comp=Z,2µm,20.0s							
PB10	**IPOC Station P**	150.29	193	IAMs_20	IAMs_20	10 30 37.8		
	comp=Z,1µm,19.0s							
PB15	**IPOC Station P**	150.33	195	IAMs_20	IAMs_20	10 30 31.8		
	comp=Z,1µm,20.0s							
KMSC	**Kings Mountain**	150.38	7	P		09 25 23.8		
	baz=352,SNR=34							
CNNC	**Cliffs of the**	150.51	1	P		09 25 24.5		
	baz=359,SNR=9.9							
PAULI	**Pauline**	150.64	7	IAMs_20	IAMs_20	10 39 09.4		
	comp=Z,2µm,20.0s							
LVC	**Limon Verde**	150.75	196		**PKPbc**	**09 25 25.1**	**-0.7**	
LVC	**Limon Verde**	150.75	196	IAMs_20	IAMs_20	10 32 35.0		
	comp=Z,1µm,19.0s							
VBMS	**Vicksburg**	150.83	23	P		09 25 25.3		
	baz=333,SNR=24							
PB06	**IPOC Station P**	150.84	195	IAMs_20	IAMs_20	10 31 06.3		
	comp=Z,2µm,20.0s							
BBSR	**BB Station**	150.84	338		**PKiKP**	**09 25 25.9**	**+0.1**	
BBSR	**BB Station**	150.84	338	IAMs_20	IAMs_20	10 39 47.2		
	comp=Z,2µm,21.0s							
BIRD	**Birdtown, Kers**	150.97	5	IAMs_20	IAMs_20	10 44 31.8		
	comp=Z,1µm,18.0s							
146A	**Union**	150.99	21	IAMs_20	IAMs_20	10 38 53.8		
	comp=Z,2µm,22.0s							
X58A	**Rowland**	151.14	3	IAMs_20	IAMs_20	10 43 58.2		
	comp=Z,2µm,20.0s							
HODGE	**Hodges**	151.16	8	IAMs_20	IAMs_20	10 38 44.2		
	comp=Z,2µm,22.0s							
JSC	**Jenkinsville**	151.24	7	IAMs_20	IAMs_20	10 41 36.2		
	comp=Z,1µm,20.0s							
LRAL	**Lakeview Retre**	151.28	17	P		09 25 26.0		
	baz=340,SNR=12							
PB04	**IPOC Station P**	151.34	194	IAMs_20	IAMs_20	10 28 59.5		
	comp=Z,1µm,20.0s							
Y57A	**Sumter**	151.59	5	IAMs_20	IAMs_20	10 40 04.5		
	comp=Z,2µm,22.0s							
PB09	**IPOC Station P**	151.62	196	IAMs_20	IAMs_20	10 32 05.9		
	comp=Z,2µm,20.0s							
Y59A	**Loris**	151.72	3	IAMs_20	IAMs_20	10 40 37.7		
	comp=Z,2µm,21.0s							
GOGA	**Godfrey**	151.77	11	P		09 25 27.1		
	baz=347,SNR=12							
PB07	**IPOC Station P**	151.85	195	IAMs_20	IAMs_20	10 29 17.2		
	comp=Z,1µm,21.0s							
346A	**Big Creek Wild**	151.97	22	IAMs_20	IAMs_20	10 40 43.9		
	comp=Z,2µm,20.0s							
PB01	**IPOC Station P**	152.40	196	IAMs_20	IAMs_20	10 30 22.7		
	comp=Z,2µm,21.0s							
NHSC	**New Hope**	152.52	5	IAMs_20	IAMs_20	10 40 40.8		
	comp=Z,2µm,20.0s							
NHSC	**New Hope**	152.52	5	P		09 25 28.8		
	baz=354							
BRAL	**Brewton**	153.01	18	IAMs_20	IAMs_20	10 40 39.9		
	comp=Z,2µm,21.0s							
BRAL	**Brewton**	153.01	18	P		09 25 29.9		
	baz=339,SNR=12							
PB08	**IPOC Station P**	153.16	197	IAMs_20	IAMs_20	10 30 18.8		
	comp=Z,1µm,21.0s							
257A	**Skidaway Islan**	153.55	7	IAMs_20	IAMs_20	10 41 36.3		
	comp=Z,2µm,20.0s							
TIGA	**Tifton**	153.66	12	P		09 25 30.9		
	baz=346,SNR=7.3							
PB11	**IPOC Station P**	153.66	197	IAMs_20	IAMs_20	10 25 39.2		
	comp=Z,1µm,22.0s							
PSGCX	**Pisagua**	153.95	196	IAMs_20	IAMs_20	10 31 14.7		
	comp=Z,1µm,20.0s							
MNMC	**Minye Minye**	154.24	197	IAMs_20	IAMs_20	10 29 14.6		
	comp=Z,2µm,21.0s							
456A	**Hilliard**	154.64	9	IAMs_20	IAMs_20	10 47 54.3		
	comp=Z,2µm,19.0s							
UNM	**Universidad Na**	154.79	55	IAMs_20	IAMs_20	10 50 19.4		
	comp=Z,1µm,22.0s							
656A	**Willston**	155.87	11	IAMs_20	IAMs_20	10 47 46.1		
	comp=Z,2µm,20.0s							
LPAZ	**La Paz**	156.39	203	PKP	**PKPdf**	**09 25 28.4**	**-0.4**	
	comp=Z,4.2nm,1.1s,baz=95,slow=0.6,SNR=8.4							
LPAZ				PKPab	**PKPab**	**09 25 57.8**	**+1.0**	
	comp=Z,4.6nm,0.9s,baz=360,slow=6.4,SNR=9.1							
LPAZ	**La Paz**	156.39	203	*e*P	**PKPdf**	**09 25 25.0**	**-3.7**	
060A	**Indiantown**	158.50	7	IAMs_20	IAMs_20	10 47 11.5		
	comp=Z,1µm,19.0s							
061Z	**Ochoppi**	159.58	9	IAMs_20	IAMs_20	10 40 55.1		
	comp=Z,2µm,22.0s							
SDDR	**Press de Saban**	165.42	336	*e*P	**PKPab**	**09 26 32.9**	**-2.5**	
OTAV	**Otavalo**	174.57	169	PKIKP	**PKPdf**	**09 25 43.5**	**-0.1**	
OTAV	**Otavalo**	174.57	169		**PKPdf**	**09 25 43.5**	**-0.1**	
OCAC	**Ocana**	175.17	303	*e*P	**PKPdf**	**09 25 38.6**	**-4.8**	
ZARC	**Zaragoza, Cauc**	176.84	307	*e*P	PKPdf	09 25 34.5	-9.1	
UREC	**San Jos de Ur**	177.16	319	*e*P	**PKPdf**	**09 25 41.3**	**-2.3**	
TOLC	**Tolima**	177.68	244	*e*P	**PKPdf**	**09 25 42.7**	**-1.5**	
YOTC	**Yotoco, Valle**	178.07	214	*e*P	**PKPdf**	**09 25 41.3**	**-2.6**	

*IDC **20** 09:26:06.5±1.5,27.99N×52.56E,h0km,mb3.8/7,*
mb1 3.9/9,mb1mx3.6/38,mbtmp3.8/9,ML3.8/2,MS4.7/1,
Ms1 4.7/1,ms1mx3.4/46 Error ellipse: s-maj=31.69km
s-min=26.3km az=174.0
*TEH **20** 09:26:10.1,28.15N×52.60E,h22km,ML3.9*
*THR **20** 09:26:11.8±0.3,28.29N×52.62E,h18km±9km,ML3.4*
*OMAN **20** 09:26:13.4,27.72N×52.57E,h10km,ml3.9/4,ms4.2/1*
ISC 20 09:26:09.5±0.7,28.06N±0.05×52.57E±0.06,h15km,n67,
σ1$47/76,mb3.8/7,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	0.59	45	*e*Pg	**Pg**	**09 26 19.6**	**-1.5**
LMD1	**Lamerd**	0.89	144	*e*Pg	**Pb**	**09 26 27.9**	**+1.2**
LMD1				*e*Sg	**Sn**	**09 26 42.5**	**+2.3**
JHRM	**Jahrom**	0.99	63	*e*Pg	**Pb**	**09 26 28.6**	**+0.2**
AHBU	**AHRAM**	1.38	306	*e*Pn	**Pn**	**09 26 35.3**	**+1.1**
SHI	**Shiraz**	1.57	358	*e*Pg	**Pn**	**09 26 37.9**	**+0.8**
LAR1	**LAR**	1.65	103	*e*Pg	**Pn**	**09 26 39.8**	**+1.9**
KAZ1	**Kazerun**	1.76	333	*e*Pg	**Pn**	**09 26 40.9**	**+1.4**
KLNJ	**Kolanjah**	3.06	344	*e*Pn	**Pn**	**09 26 57.7**	**+0.1**
IRAM	**Ramesheh**	3.74	358	*e*Pn	**Pn**	**09 27 07.5**	**+0.7**
IMEH	**Mehriz**	3.76	28	*e*Pn	**Pn**	**09 27 09.1**	**+1.9**
SHME	**Shamm**	3.76	121	*e*Pn	**Pn**	**09 27 06.6**	**-0.4**
BANOM	**Banah**	3.95	122	*e*Pn	**Pn**	**09 27 10.4**	**+0.8**
BANOM	**Banah**	3.95	122	P	**Pn**	**09 27 10.7**	**+1.1**
BANOM				S	**Sn**	**09 27 57.5**	**+1.8**

ISAD	**Sadrabad**	3.96	14	*e*Pn		**Pn**	**09 27 11.4**	**+1.5**
NGRK	**Negar Kerman**	3.98	66	*e*Pn		**Pn**	**09 27 11.6**	**+1.3**
KHGB	**Koh Gabri**	4.12	55	*e*Pn		**Pn**	**09 27 13.8**	**+1.7**
NAZ	**Nazwa, Dubai**	4.13	137	*e*Pn		**Pn**	**09 27 13.2**	**+1.2**
NAZ	**Nazwa, Dubai**	4.13	137	P		**Pn**	**09 27 13.5**	**+1.5**
NAZ				S		**Sn**	**09 28 01.1**	**+1.1**
KRBR	**Kerman**	4.14	61	*e*Pn		**Pn**	**09 27 14.6**	**+2.2**
KRBR				IAML			09 28 28.5	
	comp=N,41nm,0.4s							
KRBR	**Kerman**	4.14	61	*e*Pn		**Pn**	**09 27 14.6**	**+2.2**
TVBK	**TV Kerman**	4.14	61	*e*Pn		**Pn**	**09 27 13.1**	**+0.6**
MASF	**Masafi**	4.18	129	P		**Pn**	**09 27 14.3**	**+1.5**
MASF				S		**Sn**	**09 28 01.4**	**-0.1**
ASUD	**Al Ashush, Dub**	4.22	143	*e*Pn		**Pn**	**09 27 13.9**	**+0.6**
FAQ	**Al Faqa, Dubai**	4.27	140	*e*Pn		**Pn**	**09 27 14.7**	**+0.7**
FAQ	**Al Faqa, Dubai**	4.27	140	P		**Pn**	**09 27 15.5**	**+1.5**
FAQ				S		**Sn**	**09 28 04.0**	**+0.4**
MDH	**Madha**	4.32	129	*e*Pn		**Pn**	**09 27 13.9**	**-0.8**
IGAR	**Gharneh**	4.35	354	*e*Pn		**Pn**	**09 27 16.3**	**+1.0**
IBAF	**Bafgh**	4.38	36	*e*Pn		**Pn**	**09 27 17.0**	**+1.4**
ICHK	**Chekchek**	4.46	20	*e*Pn		**Pn**	**09 27 18.6**	**+1.8**
UOSS	**Minazif**	4.50	133	P		**Pn**	**09 27 17.7**	**+0.6**
UOSS				S		**Sn**	**09 28 08.7**	**-0.5**
HATD	**Hatta, Dubai**	4.54	134	*e*Pn		**Pn**	**09 27 18.5**	**+0.8**
YZKH	**Yazd**	4.66	22	*e*Pn		**Pn**	**09 27 20.5**	**+1.2**
YZKH	**Yazd**	4.66	22	*e*Pn		**Pn**	**09 27 20.5**	**+1.2**
CHMN	**Cheshme madani**	4.71	66	*e*Pn		**Pn**	**09 27 22.5**	**+2.2**
NASN	**Na'in**	4.73	2	*e*Pn		**Pn**	**09 27 21.5**	**+1.0**
NASN	**Na'in**	4.73	2	*e*Pn		**Pn**	**09 27 21.5**	**+1.0**
IZEF	**Zefreh**	4.82	358	*e*Pn		**Pn**	**09 27 23.0**	**+1.2**
IPIR	**Pirpir**	4.83	343	*e*Pn		**Pn**	**09 27 22.9**	**+1.0**
ANAR	**Anarak**	5.21	11	*e*Pn		**Pn**	**09 27 27.3**	**+0.3**
SOHO	**SOHO**	5.29	137	*e*Pn		**Pn**	**09 27 28.6**	**+0.6**
UMZA	**Um Al Zommool**	5.82	156	P		**Pn**	**09 27 35.6**	**+0.4**
UMZA				S		**Sn**	**09 28 39.8**	**-1.9**
ARQ	**Araqi**	5.90	142	P		**Pn**	**09 27 38.8**	**+2.3**
ARQ				S		**Sn**	**09 28 43.8**	**-0.1**
TPRV	**Parvadeh(Tabas**	6.09	35	*e*Pn		**Pn**	**09 27 40.3**	**+1.2**
ISFB	**Sefidab**	6.28	358	*e*Pn		**Pn**	**09 27 41.9**	**+0.3**
TKDS	**Koohdasht(Taba**	6.78	34	*e*Pn		**Pn**	**09 27 48.5**	**0.0**
ASAO	**Ashtian**	6.82	342	*e*Pn		**Pn**	**09 27 51.0**	**+1.7**
ASAO	**Ashtian**	6.82	342	*e*Pn		**Pn**	**09 27 51.0**	**+1.7**
TNSJ	**Nastanj**	6.83	30	*e*Pn		**Pn**	**09 27 50.0**	**+0.8**
BSRN	**Basiran**	6.89	54	*e*Pn		**Pn**	**09 27 52.1**	**+2.0**
BSRN	**Basiran**	6.89	54	*e*Pn		**Pn**	**09 27 52.1**	**+2.0**
IVRN	**Varamin**	6.95	354	*e*Pn		**Pn**	**09 27 50.5**	**-0.3**
WSAR	**Wadi Sarin**	7.28	130	Pn		**Pn**	**09 27 54.8**	**-0.5**
	comp=N,2.8nm,0.3s,baz=318,slow=8.4,SNR=8.4							
WSAR				Sn		**Sn**	**09 29 12.9**	**-4.8**
	comp=N,1.2nm,0.3s,baz=153,slow=19,SNR=6.0							
ZHSF	**Zahedan**	7.36	76	*e*P		**Pn**	**09 27 59.6**	**+3.0**
ZHSF	**Zahedan**	7.36	76	*e*Pn		**Pn**	**09 27 59.6**	**+3.0**
WBK	**Wadi Bani Khal**	7.94	132	P		**Pn**	**09 28 04.3**	**-0.1**
WBK				S		**Sn**	**09 29 32.2**	**-1.7**
SHRT	**Shahrakht**	8.66	48	*e*Pn		**Pn**	**09 28 16.2**	**+1.9**
SHRT	**Shahrakht**	8.66	48	*e*Pn		**Pn**	**09 28 16.2**	**+1.9**
SRVN	**Saravan**	8.73	92	*e*Pn		**Pn**	**09 28 16.9**	**+1.5**
BRTR	**Keskin Array B**	19.51	311	P		**P**	**09 30 37.2**	**+0.9**
	comp=N,0.2nm,0.3s,baz=120,slow=12,SNR=2.4							
AKTO	**Aktyubinsk**	22.73	9	P		**P**	**09 31 11.9**	**+1.2**
	comp=N,2.4nm,0.7s,baz=192,slow=11,SNR=7.5							
BVAR	**Borovoye Array**	28.22	23	P		**P**	**09 32 01.5**	**0.0**
	comp=N,0.8nm,0.6s,baz=173,slow=13,SNR=5.6							
A

	baz=53								
CHMS	**Chumysh**	**1.36**	**53**	⇑P		**Pb**	**09 29 12.6**	**-0.1**
	7.1nm,0.1s,SNR=13								
USP	**Ospenovka**	**1.41**	**40**	⇓*i*P		**Pn**	**09 29 13.1**	**0.0**
	baz=40								
USP				⇓*i*S		**Sg**	**09 29 32.0**	**+0.1**
	baz=40								
USP	**Ospenovka**	**1.41**	**40**	⇑P		**Pb**	**09 29 13.4**	**-0.1**
	10nm,0.2s,SNR=44								
SGDS	**Sogindy**	**1.61**	**38**	P		**Pb**	**09 29 17.1**	**+0.1**
	9.5nm,0.2s								
SGDS				S		**Sg**	**09 29 39.2**	**+0.8**
	20nm,0.2s								
OHH	**Osh**	**1.71**	**192**	⇑*i*P		**Pn**	**09 29 17.3**	**+0.1**
	baz=92								
OHH				⇑*i*S		**Sb**	**09 29 39.6**	**-0.9**
	baz=92								
TRKS	**Terek-Say**	**1.72**	**248**	⇓*i*P		**Pn**	**09 29 17.7**	**+0.2**
	baz=46								
TRKS				⇓*i*S		**Sb**	**09 29 40.3**	**-0.6**
	baz=46								
TKM2	**Tokmak 2**	**1.87**	**66**	⇑*i*P		**Pb**	**09 29 21.2**	**-0.3**
	baz=66								
TKM2				⇑*i*S		**Sg**	**09 29 46.5**	**-0.3**
	baz=66								
TKM2	**Tokmak 2**	**1.87**	**66**	⇑P		**Pb**	**09 29 21.3**	**-0.2**
	9.1nm,0.1s,SNR=18								
TKM2	**Tokmak 2**	**1.87**	**66**	⇑Pn		**Pb**	**09 29 21.2**	**-0.3**
	8.1nm,0.4s								
TKM2				⇑Lg		Lg	09 29 47.4		
	33nm,0.7s								
BOOM	**Boomskoye usch**	**2.00**	**81**	⇑*i*P		**Pb**	**09 29 23.1**	**-0.7**
	baz=80								
BOOM				⇑*i*S		**Sb**	**09 29 49.8**	**+0.7**
	baz=80								
KST	**Kastek**	**2.16**	**66**	*e*P		**Pb**	**09 29 27.5**	**+1.1**
	15nm,0.2s								
KST				*e*S		**Sg**	**09 29 57.3**	**+1.0**
	18nm,0.4s								
KST	**Kastek**	**2.16**	**66**	Pg		**Pb**	**09 29 27.5**	**+1.1**
	15nm,0.2s								
KST				Lg		Lg	09 29 57.3		
	18nm,0.4s								
SFK	**Sufi-Kurgan**	**2.19**	**175**	⇑*i*P		**Pn**	**09 29 25.0**	**+1.0**
	baz=74								
SFK				⇑*i*S		**Sb**	**09 29 53.1**	**-1.3**
	baz=74								
ULHL	**Ulahol**	**2.21**	**88**	⇓*i*P		**Pb**	**09 29 26.0**	**-1.3**
	baz=87								
ULHL				⇓*i*S		**Sb**	**09 29 54.8**	**-0.3**
	baz=87								
KK31	**Karatay Array**	**2.23**	**295**	⇓Pn		**Pb**	**09 29 26.9**	**-0.5**
	4.3nm,0.5s,baz=118,slow=14,SNR=50								
KK31				⇑Lg		Lg	09 29 57.6		
	11nm,0.4s,baz=116,slow=26,SNR=16								
IUG	**Iuzhnay**	**2.40**	**270**	*e*P		**Pb**	**09 29 31.8**	**+1.2**
	30nm,0.5s								
IUG				*e*S		**Sg**	**09 30 04.1**	**+0.1**
	50nm,0.4s								
IUG	**Iuzhnay**	**2.40**	**270**	Pg		**Pb**	**09 29 31.7**	**+1.2**
	30nm,0.5s								
IUG				Lg		Lg	09 30 04.1		
	50nm,0.4s								
IZV	**Izvestkoviy**	**2.61**	**70**	*e*P		**Pb**	**09 29 34.5**	**+0.4**
	25nm,0.4s								
IZV				*e*S		**Sg**	**09 30 09.6**	**-1.0**
	21nm,0.6s								
IZV	**Izvestkoviy**	**2.61**	**70**	Pg		**Pb**	**09 29 34.5**	**+0.4**
	25nm,0.4s								
IZV				Lg		Lg	09 30 09.6		
	21nm,0.6s								
BRLS	**Borolday**	**2.67**	**289**	*e*P		**Pb**	**09 29 36.0**	**+1.0**
	18nm,0.3s								
BRLS				*e*S		**Sg**	**09 30 11.5**	**-0.8**
	24nm,0.8s								
BRLS	**Borolday**	**2.67**	**289**	Pg		**Pb**	**09 29 35.9**	**+1.0**
	18nm,0.3s								
BRLS				Lg		Lg	09 30 11.5		
	24nm,0.8s								
BTK	**Batken**	**2.82**	**222**	⇓*i*P		**Pn**	**09 29 33.6**	**+1.0**
	baz=21								
BTK				⇓*i*S		**Sn**	**09 30 08.2**	**+1.2**
	baz=21								
TNSS	**Tian-Shan**	**2.84**	**72**	*e*P		**Pb**	**09 29 39.9**	**+1.7**
	8.1nm,0.3s								
TNSS				*e*S		**Sg**	**09 30 18.2**	**0.0**
	10.0nm,0.4s								
TNSS	**Tian-Shan**	**2.84**	**72**	Pg		**Pb**	**09 29 39.9**	**+1.7**
	8.1nm,0.3s								
TNSS				Lg		Lg	09 30 18.2		
	10.0nm,0.4s								
BTLS	**Baital**	**2.90**	**11**	*e*P		**Pb**	**09 29 39.9**	**+0.9**
	1.2nm,0.2s								
BTLS				*e*S		**Sg**	**09 30 17.9**	**-2.0**
	20nm,0.4s								
BTLS	**Baital**	**2.90**	**11**	Pg		**Pb**	**09 29 39.9**	**+0.9**
	1.2nm,0.2s								
BTLS				Lg		Lg	09 30 17.9		
	20nm,0.4s								
KDJ	**Kajisay**	**2.91**	**90**	⇑*i*P		**Pn**	**09 29 35.8**	**+1.9**
	baz=90								
KDJ				⇑*i*S		**Sb**	**09 30 11.8**	**-3.4**
	baz=90								
DRK	**Karamyk**	**2.93**	**203**	⇑*i*P		**Pn**	**09 29 35.0**	**+0.7**
	baz=2.0								
DRK				⇑*i*S		**Sn**	**09 30 10.8**	**+0.8**
	baz=2.0								
KTBS	**Karatobe**	**2.93**	**58**	*e*P		**Pb**	**09 29 39.9**	**+0.4**
	4.7nm,0.2s								
KTBS				*e*S		**Sg**	**09 30 18.8**	**-2.1**
	20nm,0.6s								
KTBS	**Karatobe**	**2.93**	**58**	Pg		**Pb**	**09 29 39.9**	**+0.4**
	4.7nm,0.2s								
KTBS				Lg		Lg	09 30 18.8		
	20nm,0.6s								
MDOK	**Medeo**	**2.95**	**70**	*e*P		**Pb**	**09 29 41.0**	**+1.0**
	6.6nm,0.4s								
MDOK				*e*S		**Sg**	**09 30 20.3**	**-1.2**
	14nm,0.5s								
MDOK	**Medeo**	**2.95**	**70**	Pg		**Pb**	**09 29 39.8**	**-0.1**
	5.4nm,0.5s								
MDOK				⇑Lg		Lg	09 30 20.8		
	14nm,0.6s								
MDOK	**Medeo**	**2.95**	**70**	Pg		**Pb**	**09 29 41.0**	**+1.0**
	6.6nm,0.4s								
MDOK				Lg		Lg	09 30 20.3		
	14nm,0.5s								
KOTS	**Kotyrbulak**	**3.02**	**69**	*e*P		**Pg**	**09 29 43.4**	**-1.2**
	16nm,0.2s								
KOTS				*e*S		**Sg**	**09 30 24.0**	**+0.3**
	14nm,0.3s								
KOTS	**Kotyrbulak**	**3.02**	**69**	Pg		**Pg**	**09 29 43.4**	**-1.2**
	16nm,0.2s								
KOTS				Lg		Lg	09 30 24.0		
	14nm,0.3s								
PDGK	**Podgornoye**	**4.72**	**74**	⇑Pg		**Pg**	**09 30 14.6**	**-2.6**
	2.1nm,0.6s								
PDGK				⇓Lg		Lg	09 31 17.0		
	5.7nm,0.8s								

*IDC **20** 09:44:59.8±15.0, 13°.24N×86°.69W, h0km, mb3.1/4, mb1 3.6/4, mb1mx3.4/22, mbtmp3.2/4, Error ellipse: s-maj=315.1km s-min=95.6km az=3.0*
*GCG **20** 09:45:00.7±0.8, 12°.03N×87°.88W, h162km±94km, MD4.2*
*INET **20** 09:45:13.8, 12°.82N×88°.36W, h51km, ML4.1*
*SNET **20** 09:45:13.8±0.8, 12°.87N×88°.37W, h58km±9km, ML4.0*
*UCR **20** 09:45:14.3±1.4, 12°.88N×88°.39W, h53km±16km, ML4.0*

ISC 20 09:45:14.6±1.1, 12°.88N±0°.07×88°.37W±0°.05, h55km±12km, n66, σ0°79/74, mb3.2/4, 1C-23D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.48**	**336**	⇓*i*P	**Pn**	**09 45 25.7**	**-0.4**
ALJI				IAML		09 45 37.5	
	comp=Z,14μm,0.2s						
ALJI	**Alcalda de J**	**0.48**	**336**	⇓*i*P	**Pn**	**09 45 25.7**	**-0.4**
ALJI				IAML		09 45 37.5	
	comp=Z,14μm,0.2s						
LCY	**Lacayo**	**0.54**	**8**	⇓*i*P	**Pn**	**09 45 26.7**	**-0.2**
LCY	**Lacayo**	**0.54**	**8**	⇓*i*P	**Pn**	**09 45 26.7**	**-0.2**
CNRM	**Centro Naciona**	**0.62**	**18**	*e*P	**Pn**	**09 45 27.4**	**-0.3**
CNRM	**Centro Naciona**	**0.62**	**18**	*e*P	**Pn**	**09 45 27.4**	**-0.3**
TECA	**Tecapa**	**0.62**	**348**	⇓*i*P	**Pn**	**09 45 27.5**	**-0.4**
TECA	**Tecapa**	**0.62**	**348**	⇓*i*P	**Pn**	**09 45 27.5**	**-0.4**
LCND	**La Caada**	**0.63**	**48**	⇓*e*P	**Pn**	**09 45 27.1**	**-0.7**
LCND				*e*S	**Sn**	**09 45 37.9**	**+0.6**
LCND				IAML		09 45 39.9	
	comp=Z,8μm,0.3s						
LCND	**La Caada**	**0.63**	**48**	⇓*e*P	**Pn**	**09 45 27.1**	**-0.7**
LCND				*e*S	**Sn**	**09 45 37.9**	**+0.6**
LCND				IAML		09 45 39.9	
	comp=Z,8μm,0.3s						
COEB	**Comit de Eme**	**0.63**	**346**	⇓*i*P	**Pn**	**09 45 27.4**	**-0.6**
COEB				*e*S	**Sn**	**09 45 38.5**	**+1.0**
COEB				IAML		09 45 45.4	
	comp=Z,3μm,0.3s						
COEB	**Comit de Eme**	**0.63**	**346**	⇓*i*P	**Pn**	**09 45 27.4**	**-0.6**
COEB				*e*S	**Sn**	**09 45 38.5**	**+1.0**
COEB				IAML		09 45 45.4	
	comp=Z,3μm,0.3s						
CNCH	**Conchagua**	**0.65**	**53**	*e*P	**Pn**	**09 45 27.4**	**-0.8**
CNCH				*e*S	**Sn**	**09 45 38.8**	**+0.8**
CNCH	**Conchagua**	**0.65**	**53**	*e*P	**Pn**	**09 45 27.4**	**-0.8**
CNCH				*e*S	**Sn**	**09 45 38.8**	**+0.8**
PQSS	**Presa 15 de Se**	**0.76**	**346**	⇓*e*P	**Pn**	**09 45 29.1**	**-0.3**
FAGO	**Alcalda de S**	**0.85**	**17**	⇓*i*P	**Pn**	**09 45 30.0**	**-0.5**
FAGO				*e*S	**Sn**	**09 45 42.6**	**+0.4**
FAGO	**Alcalda de S**	**0.85**	**17**	⇓*i*P	**Pn**	**09 45 30.0**	**-0.5**
FAGO				*e*S	**Sn**	**09 45 42.6**	**+0.4**
UESV	**Universidad de**	**0.85**	**331**	*e*P	**Pn**	**09 45 30.2**	**-0.4**
UESV	**Universidad de**	**0.85**	**331**	*e*P	**Pn**	**09 45 30.2**	**-0.4**
COEG	**Centro de Oper**	**0.89**	**326**	⇓*e*P	**Pn**	**09 45 30.4**	**-0.7**
COEG				IAML		09 45 49.5	
	comp=Z,3μm,0.2s						
COEG	**Centro de Oper**	**0.89**	**326**	⇓*e*P	**Pn**	**09 45 30.4**	**-0.7**
COEG				IAML		09 45 49.5	
	comp=Z,3μm,0.2s						
PAVA	**Las Pavas**	**0.99**	**326**	⇓*e*P	**Pn**	**09 45 32.1**	**-0.4**
PAVA	**Las Pavas**	**0.99**	**326**	⇓*e*P	**Pn**	**09 45 32.1**	**-0.4**
LFRS	**El Faro**	**1.00**	**318**	⇓*e*P	**Pn**	**09 45 32.1**	**-0.5**
LFRS	**El Faro**	**1.00**	**318**	⇓*e*P	**Pn**	**09 45 32.1**	**-0.5**
LBRS	**Las Brisas**	**1.07**	**322**	*e*P	**Pn**	**09 45 33.5**	**-0.1**
LBRS	**Las Brisas**	**1.07**	**322**	*e*P	**Pn**	**09 45 33.5**	**-0.1**
AEIL	**Aeropuerto Ilo**	**1.09**	**318**	*e*P	**Pn**	**09 45 33.9**	**+0.1**
AEIL	**Aeropuerto Ilo**	**1.09**	**318**	*e*P	**Pn**	**09 45 33.9**	**+0.1**
LALI	**Alcalda de L**	**1.11**	**303**	*e*P	**Pn**	**09 45 33.0**	**-0.9**
LALI	**Alcalda de L**	**1.11**	**303**	*e*P	**Pn**	**09 45 33.0**	**-0.9**
UDBS	**Universidad Do**	**1.13**	**317**	*e*P	**Pn**	**09 45 34.2**	**-0.1**
UDBS	**Universidad Do**	**1.13**	**317**	*e*P	**Pn**	**09 45 34.2**	**-0.1**
SNET	**Serv Nac Est T**	**1.16**	**314**	*e*P	**Pn**	**09 45 34.4**	**-0.3**
SNET				*e*S	**Sn**	**09 45 49.9**	**+0.3**
SNET				IAML		09 45 51.1	
	comp=Z,3μm,0.3s						
SNET	**Serv Nac Est T**	**1.16**	**314**	*e*P	**Pn**	**09 45 34.4**	**-0.3**
SNET				*e*S	**Sn**	**09 45 49.9**	**+0.3**
SNET				IAML		09 45 51.1	
	comp=Z,3μm,0.3s						
UEES	**Universidad Ev**	**1.19**	**314**	*e*P	**Pn**	**09 45 34.6**	**-0.5**
UEES	**Universidad Ev**	**1.19**	**314**	*e*P	**Pn**	**09 45 34.6**	**-0.5**
BOQS	**Boqueron**	**1.23**	**314**	*e*P	**Pn**	**09 45 35.5**	**-0.2**
BOQS	**Boqueron**	**1.23**	**314**	*e*P	**Pn**	**09 45 35.5**	**-0.2**
LLGN	**La Laguna**	**1.39**	**336**	⇓*e*P	**Pn**	**09 45 37.4**	**-0.5**
LLGN	**La Laguna**	**1.39**	**336**	⇓*e*P	**Pn**	**09 45 37.4**	**-0.5**
SBLS	**San Blas**	**1.55**	**308**	*e*P	**Pn**	**09 45 40.2**	**0.0**
SBLS	**San Blas**	**1.55**	**308**	*e*P	**Pn**	**09 45 40.2**	**0.0**
RTR	**El Retiro**	**1.60**	**309**	*e*P	**Pn**	**09 45 41.1**	**+0.3**
RTR	**El Retiro**	**1.60**	**309**	*e*P	**Pn**	**09 45 41.1**	**+0.3**
MTO3	**Montecristo**	**1.79**	**327**	⇓*i*P	**Pn**	**09 45 43.0**	**-0.4**
MTO3	**Montecristo**	**1.79**	**327**	⇓*i*P	**Pn**	**09 45 43.0**	**-0.4**
ESQI	**Esquipulas**	**1.92**	**331**	⇓*i*P	**Pn**	**09 45 45.1**	**+0.1**
MRL	**Marmol**	**2.53**	**330**	*e*P	**Pn**	**09 45 57.0**	**+3.5**
MRL				*e*S	Sn	09 46 40.1	+17
NBG	**Las Nubes**	**2.56**	**312**	*e*P	**Pn**	**09 45 55.3**	**+1.3**
NBG				*e*S	Sn	09 46 40.7	+17
PCG	**Pacaya**	**2.64**	**305**	*e*P	**Pn**	**09 45 57.0**	**+1.9**
PCG				*e*S	Sn	09 46 41.8	+16
FUG	**Fuego 3**	**2.86**	**303**	*e*P	**Pn**	**09 45 59.8**	**+1.7**
FUG				*e*S	Sn	09 46 45.2	+14
ERG	**Entre ros, C**	**3.48**	**297**	*e*P	**Pn**	**09 46 06.6**	**+0.4**
ERG				*e*S	Sn	09 46 58.2	+12
SAJU	**San Juanillo,**	**3.82**	**137**	*e*P	**Pn**	**09 46 10.2**	**-0.8**
CUI	**Cuipilapa**	**3.84**	**125**	*e*P	**Pn**	**09 46 10.9**	**-0.4**
PLVR	**Palo Verde**	**3.88**	**130**	*e*P	**Pn**	**09 46 11.3**	**-0.8**
GRZA	**Playa Garza**	**3.98**	**137**	*e*P	**Pn**	**09 46 12.3**	**-0.9**
LAFE	**Finca La Fe, P**	**4.56**	**132**	*e*P	**Pn**	**09 46 20.9**	**-0.3**
RIMA	**Rio Macho**	**5.39**	**125**	*e*P	**Pn**	**09 46 33.9**	**+1.1**
CDM	**Cerro de Muert**	**5.60**	**126**	*e*P	**Pn**	**09 46 37.0**	**+1.2**
LPLA	**Las Palmas La**	**6.51**	**126**	*e*P	**Pn**	**09 46 48.5**	**+0.4**
BRU2	**Volcan**	**6.90**	**126**	*e*P	**Pn**	**09 46 54.9**	**+1.6**
TXAR	**Lajitas Array**	**21.68**	**321**	P	**P**	**09 50 00.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=144,slow=11,SNR=8.5						
PDAR	**Pinedale Array**	**34.97**	**332**	P	P	09 51 58.6	-3.3
	comp=Z,0.2nm,0.5s,baz=141,slow=9.0,SNR=2.3						
NVAR	**Mina Array Bea**	**36.79**	**319**	P	**P**	**09 52 17.1**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=131,slow=9.7,SNR=2.1						
YKA	**Yellowknife Ar**	**52.96**	**345**	P	P	09 54 18.2	-7.0
	comp=Z,0.2nm,0.5s,baz=138,slow=6.7,SNR=8.5						

IDC 20 09:49:01.3±1.8, 2°.15N×124°.33E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/35, mbtmp3.6/4, Error ellipse: s-maj=180.5km s-min=26.4km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.05**	**156**	P	P	09 54 18.1	-0.3
	0.9nm,0.5s,baz=334,slow=11,SNR=26						
ASAR	**Alice Springs**	**27.30**	**161**	P	P	09 54 49.0	+1.0
	0.5nm,0.5s,baz=340,slow=7.9,SNR=13						
STKA	**Stephens Creek**	**37.60**	**156**	P	P	09 56 17.5	-0.4
	0.6nm,0.4s,baz=340,slow=8.7,SNR=5.8						
MKAR	**Makanchi Array**	**57.52**	**327**	P	P	09 58 52.0	-0.6
	0.1nm,0.4s,baz=123,slow=8.8,SNR=1.9						

*IDC **20** 10:05:20.9±2.0, 59°.93N×153°.34W, h90km±31km, mb3.7/2, mb1 3.8/7, mb1mx3.3/53, mbtmp3.9/7, Error ellipse: s-maj=34.1km s-min=15.5km az=111.0*
*ANF **20** 10:05:21.8±0.3, 59°.85N×152°.77W, h123km±5km, ML3.7/29, ML3.7/28, Error ellipse: s-maj=5.1km s-min=2.1km az=119.0, Hypocentre not reviewed by the ISC*
*NEIC **20** 10:05:22.5±1.1, 59°.89N±0°.04×153°.01W±0°.10, h115km±1km, Error ellipse: s-maj=7.4km s-min=4.9km az=111.0*
*AEIC **20** 10:05:23±1.4, 59°.90N±0°.03×152°.96W±0°.09, h109km±4km, ML3.4, ML3.7/85(NEIC), Error ellipse: s-maj=7.2km s-min=3.0km az=120.0*

ISC 20 10:05:22.4±0.9, 59°.89N±0°.04×152°.92W±0°.04, h117km±6km, n129, σ0°87/138, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILS	**Iliamna Low So**	**0.10**	**310**		**Pn**	**10 05 38.5**	**-0.1**
IVE	**Iliamna Volcan**	**0.13**	**338**		**Pn**	**10 05 38.6**	**-0.1**
IVE					**Sn**	**10 05 50.5**	**-0.4**
OPT	**Oil Point**	**0.29**	**214**		**Pn**	**10 05 39.1**	**+0.1**
RED	**Redoubt Volcan**	**0.53**	**8**		**Pn**	**10 05 40.4**	**+0.1**
RED					**Sn**	**10 05 53.3**	**-0.6**
AU22	**Augustine Moun**	**0.57**	**203**		**Pn**	**10 05 40.5**	**0.0**
AU22					**Sn**	**10 05 53.9**	**-0.1**
AUL	**Augustine Lava**	**0.58**	**207**		**Pn**	**10 05 40.7**	**+0.2**
AUL					**Sn**	**10 05 54.3**	**+0.1**
RSO	**Redoubt South**	**0.58**	**8**		**Pn**	**10 05 40.8**	**+0.1**
NCT	**North Crescent**	**0.67**	**359**		**Pn**	**10 05 41.5**	**+0.1**
NCT					**Sn**	**10 05 55.0**	**-0.7**
HOM	**Homer**	**0.69**	**110**		**Pn**	**10 05 41.8**	**+0.5**
HOM				IAML		10 05 58.2	
	comp=N,1μm,0.3s						
HOM				IAML		10 06 01.5	
	comp=E,1μm,0.4s						
HOM	**Homer**	**0.69**	**110**	P		10 05 41.8	
	baz=291,SNR=8.5						
HOM				S		10 05 56.2	
	baz=291						
DFR	**Drift River**	**0.71**	**9**		**Pn**	**10 05 41.8**	**+0.1**
CNPM	**China Poot**	**0.93**	**113**		**Pn**	**10 05 43.7**	**+0.2**
CNPM					**Sn**	**10 05 59.4**	**0.0**
CNPM	**China Poot**	**0.93**	**113**	IAML		10 05 59.9	
	comp=N,1μm,0.5s						
CNPM				IAML		10 06 00.0	
	comp=E,1μm,0.7s						
BRLK	**Bradley Lake**	**1.03**	**96**		**Pn**	**10 05 44.6**	**+0.1**
BRLK				IAML		10 06 01.3	
	comp=N,708nm,0.4s						
BRLK				IAML		10 06 01.5	
	comp=E,930nm,0.3s						
BRSE	**Bradley Lake S**	**1.11**	**97**		**Pn**	**10 05 45.6**	**+0.3**
BRSE					**Sn**	**10 06 02.3**	**-0.3**
BRSE	**Bradley Lake S**	**1.11**	**97**	P		10 05 45.5	
	baz=279						
BRSE				S		10 06 02.1	
	baz=279						
CAPN	**Captain Cook N**	**1.24**	**44**	Pn	**Pn**	**10 05 48.9**	**+2.3**
CAPN					**Sn**	**10 06 05.8**	**+0.8**
CAPN	**Captain Cook N**	**1.24**	**44**	P		10 05 48.8	
	baz=227						
CAPN				S		10 06 06.1	
	baz=227						
SPCR	**Spurr Chakacha**	**1.36**	**15**		**Pn**	**10 05 48.4**	**+0.3**
SPCR					**Sn**	**10 06 07.2**	**-0.3**
SPCR	**Spurr Chakacha**	**1.36**	**15**	P		10 05 48.4	
	baz=196,SNR=44						
SPCR				S		10 06 06.9	
	baz=196						
SPCN	**Chakachatna No**	**1.39**	**15**		**Pn**	**10 05 48.8**	**+0.5**
SPCN					**Sn**	**10 06 09.2**	**+1.1**
SPCP	**Crater Peak Br**	**1.43**	**15**		**Pn**	**10 05 49.5**	**+0.6**
SPCP					**Sn**	**10 06 09.6**	**+0.5**
SLKM	**Skilak Lake**	**1.48**	**64**		**Pn**	**10 05 49.7**	**+0.3**
SLKM					**Sn**	**10 06 09.4**	**-0.6**
KAHC	**Katmai Hardscr**	**1.65**	**222**		**Pn**	**10 05 51.6**	**+0.2**
STLK	**Strandline Lak**	**1.70**	**18**		**Pn**	**10 05 52.5**	**+0.5**
O22K	**Cooper Landing**	**1.70**	**68**		**Pn**	**10 05 52.6**	**+0.7**
O22K					**Sn**	**10 06 14.2**	**-0.3**
O22K	**Cooper Landing**	**1.70**	**68**	P		10 05 52.4	
	baz=252,SNR=7.6						
O22K				S		10 06 13.5	
	baz=252						
SVW2	**Sparrevohn**	**1.79**	**314**	Pn	**Pn**	**10 05 53.0**	**-0.1**
SVW2	**Sparrevohn**	**1.79**	**314**		**Sn**	**10 06 15.6**	**-0.8**
SUA	**Susitna One**	**1.90**	**33**		**Pn**	**10 05 55.3**	**+0.7**
SUA					**Sn**	**10 06 19.8**	**+0.7**
SUA	**Susitna One**	**1.90**	**33**	IAML		10 06 20.6	
	comp=N,482nm,0.9s						
SUA	**Susitna One**	**1.90**	**33**	P		10 05 55.2	
	baz=216,SNR=58						
SUA				S		10 06 19.6	
	baz=216						
KVTA	**Katmai Vly 10**	**1.95**	**220**		**Pn**	**10 05 55.5**	**+0.5**
RC01	**Rabbit Creek A**	**1.98**	**51**	Pn	**Pn**	**10 05 55.9**	**+0.5**
RC01				IAML		10 06 20.8	
	comp=E,708nm,0.3s						
RC01				IAML		10 06 22.8	
	comp=N,689nm,0.3s						
RC01	**Rabbit Creek A**	**1.98**	**51**	P		10 05 55.6	
	baz=235,SNR=5.9						
RC01				S		10 06 19.9	
	baz=235						
KBM	**Katmai Bkd Mtn**	**2.01**	**217**		**Pn**	**10 05 56.1**	**+0.4**
KELA	**Mount Kelaz**	**2.06**	**226**		**Pn**	**10 05 56.7**	**+0.2**
KABR	**Katmai Barrier**	**2.06**	**212**		**Pn**	**10 05 56.7**	**+0.2**
KDAK	**Kodiak Island**	**2.12**	**175**	P	**Pn**	**10 05 56.5**	**-0.7**
	comp=N,43nm,0.3s,baz=345,slow=12,SNR=398						
KDAK				S	**Sn**	**10 06 22.4**	**-1.4**
	comp=N,62nm,0.3s,baz=322,slow=23,SNR=62						
KDAK	**Kodiak Island**	**2.12**	**175**	IAML		10 06 24.1	
	comp=N,657nm,0.3s						
KDAK	**Kodiak Island**	**2.12**	**175**	P		10 05 56.5	
	baz=355						
KDAK				S		10 06 22.5	
	baz=355						
SKT	**Skwentna**	**2.20**	**17**		**Pn**	**10 05 58.5**	**+0.3**
SKT	**Skwentna**	**2.20**	**17**		**Sn**	**10 06 27.5**	**+1.8**
SKT	**Skwentna**	**2.20**	**17**	P		10 05 58.4	
	baz=199,SNR=9.8						
SKT				S		10 06 26.4	
	baz=199						
CAHL	**Cahill**	**2.22**	**215**		**Pn**	**10 05 59.1**	**+0.6**
KJL	**Kejulik**	**2.30**	**218**		**Pn**	**10 06 00.5**	**+1.0**
PWL	**Port Wells**	**2.47**	**65**		**Pn**	**10 06 02.5**	**+0.8**
PWL				IAML		10 06 32.0	
	comp=N,395nm,0.5s						
PWL				IAML		10 06 34.2	
	comp=E,233nm,0.4s						
PMR	**Palmer**	**2.52**	**46**		**Pn**	**10 06 01.7**	**-0.6**
PMR					**Sn**	**10 06 30.7**	**-2.1**
PMR	**Palmer**	**2.52**	**46**	IAML		10 06 36.5	
	comp=E,159nm,0.4s						
PMR	**Palmer**	**2.52**	**46**	P		10 06 01.6	
	baz=230						
PMR				S		10 06 30.8	
	baz=230						
KNK	**Knik Glacier**	**2.67**	**53**	Pn	**Pn**	**10 06 04.4**	**+0.2**
KNK	**Knik Glacier**	**2.67**	**53**	S		10 06 34.6	
	baz=238						
OHAK	**Old Harbor**	**2.69**	**184**		**Pn**	**10 06 03.4**	**-1.0**
OHAK				IAML		10 06 35.4	
	comp=E,239nm,0.7s						
OHAK	**Old Harbor**	**2.69**	**184**	P		10 06 03.4	
	baz=3.5,SNR=6.7						
OHAK				S		10 06 34.2	
	baz=3.5						
GHO	**Glory Hole Cre**	**2.72**	**44**		**Pn**	**10 06 04.5**	**-0.4**
GHO					**Sn**	**10 06 36.0**	**-1.5**
GHO	**Glory Hole Cre**	**2.72**	**44**	IAML		10 06 37.3	
	comp=N,222nm,0.2s						
GHO				IAML		10 06 43.

DIV	Divide	3.74	68			Pn	10 06 19.3 +0.9
TRF	Thorofare Moun	3.78	18			Pn	10 06 19.5 +0.5
TRF	Thorofare Moun	3.78	18	P			10 06 19.0
	baz=201,SNR=29						
KLU	Klutina	3.79	62			Pn	10 06 18.5 -0.6
KLU	Klutina	3.79	62		IAML		10 07 02.9
	comp=E,135nm,0.4s						
KLU	Klutina	3.79	62	P			10 06 18.5
	baz=248						
KLU				S			10 07 00.4
	baz=248						
KTH	Kantishna Hill	3.79	14	Pn		Pn	10 06 19.1 0.0
KTH					IAML		10 08 22.4
	comp=E,59nm,0.8s						
M24K	Tolsona, Glenn	3.96	53			Pn	10 06 21.6 +0.3
M24K	Tolsona, Glenn	3.96	53		IAML		10 07 08.5
	comp=E,122nm,0.9s						
M24K	Tolsona, Glenn	3.96	53	P			10 06 21.3
	baz=239,SNR=8.3						
M24K				S			10 07 06.3
	baz=239						
CHUM	Lake Minchumin	4.01	4	P			10 06 22.1
	baz=185,SNR=12						
RND	Reindeer	4.02	27			Pn	10 06 22.1 0.0
GOAT	Goat Mountain	4.14	77			Pn	10 06 24.4 +0.7
RAGM	Ragged Mountai	4.15	80	Pn		Pn	10 06 25.0 +1.2
RAGM					IAML		10 07 15.5
	comp=E,149nm,0.5s						
PS11	TAPS Pump St11	4.24	56			Pn	10 06 25.2 +0.3
BMRM	Bremner River	4.26	72	Pn		Pn	10 06 25.9 +0.7
BMRM					IAML		10 07 13.8
	comp=E,94nm,0.4s						
BMRM					IAML		10 07 14.1
	comp=N,88nm,0.4s						
BMRM	Bremner River	4.26	72	P			10 06 24.7
	baz=259						
BMRM				S			10 07 11.8
	baz=259						
KAIM	Kayak Island	4.28	86	Pn		Pn	10 06 26.6 +1.2
KAIM	Kayak Island	4.28	86	P			10 06 24.7
	baz=273						
MCK	McKinley	4.29	24			Pn	10 06 26.2 +0.6
MCK	McKinley	4.29	24	P			10 06 26.0
	baz=208,SNR=41						
BPAW	Bear Paw Mtn.	4.32	11			Pn	10 06 25.8 -0.3
BPAW	Bear Paw Mtn.	4.32	11	P			10 06 25.2
	baz=193,SNR=12						
CHIR	Chirikof Islan	4.33	201	P			10 06 24.8
	baz=18						
HMT	Hamilton	4.35	80	Pn		Pn	10 06 28.2 +1.7
N25K	Chitina, Valde	4.43	64			Pn	10 06 27.5 0.0
N25K					IAML		10 07 17.8
	comp=N,42nm,1.5s						
N25K					IAML		10 07 20.8
	comp=E,55nm,0.5s						
N25K	Chitina, Valde	4.43	64	P			10 06 27.1
	baz=251,SNR=11						
BWN	Browne	4.59	19			Pn	10 06 30.4 +0.8
BWN	Browne	4.59	19		IAML		10 07 12.2
	comp=E,41nm,4.3s						
BWN					IAML		10 09 29.3
	comp=N,58nm,3.4s						
SUCK	Suckling Hills	4.59	84	Pn		Pn	10 06 31.9 +2.2
PAX	Paxson	4.72	46			Pn	10 06 31.4 -0.1
PAX	Paxson	4.72	46	P			10 06 31.3
	baz=233,SNR=8.9						
GLB	Gilahina Butte	4.74	67			Pn	10 06 31.5 -0.2
GLB					IAML		10 07 26.0
	comp=E,35nm,0.4s						
GLB					IAML		10 07 27.4
	comp=N,47nm,0.3s						
KHIT	Khitrov Hills	4.86	79			Pn	10 06 33.8 +0.5
NEA2	Nenana	5.05	19			Pn	10 06 35.5 -0.3
NEA2	Nenana	5.05	19	P			10 06 35.4
	baz=203,SNR=60						
MCARA	McCarthy VSAT	5.09	69	Pn		Pn	10 06 37.1 +0.6
MCARA					IAML		10 07 39.5
	comp=N,57nm,0.6s						
MCARA					IAML		10 07 57.9
	comp=E,61nm,2.0s						
KULT	Kultieth River	5.12	82			Pn	10 06 37.2 +0.4
WRH	Wood River Hil	5.12	24			Pn	10 06 36.7 -0.1
MLY	Manley	5.25	10			Pn	10 06 38.1 -0.5
MLY	Manley	5.25	10	P			10 06 38.1
	baz=192,SNR=38						
PTPK	Patty Peak	5.32	71			Pn	10 06 40.4 +0.7
HDA	Harding Lake	5.33	29	P			10 06 39.3
	baz=215,SNR=17						
HDA				P			10 06 39.3
	baz=215,SNR=17						
CCB	Clear Creek Bu	5.33	24			Pn	10 06 38.8 -0.8
BALM	Baldy	5.36	73			Pn	10 06 40.2 +0.1
MENT	Mentasta	5.37	51			Pn	10 06 39.7 -0.5
TCOL	CIGO, UAF Yank	5.52	23			Pn	10 06 42.2 +0.1
TCOL	CIGO, UAF Yank	5.52	23	P			10 06 41.9
	baz=208,SNR=33						
COLA	College	5.53	23			Pn	10 06 41.8 -0.4
COLA	College	5.53	23	P			10 06 41.9
	baz=208						
I23K	Minto, Yukon-K	5.53	16			Pn	10 06 42.2 0.0
I23K	Minto, Yukon-K	5.53	16	P			10 06 42.2
	baz=199,SNR=52						
MDM	Murphy Dome	5.53	21			Pn	10 06 41.7 -0.6
YAH	Yahtse	5.61	80			Pn	10 06 44.2 +0.7
DOT	Dot Lake	5.64	44			Pn	10 06 43.0 -0.8
IL31		5.64	27			Pn	10 06 43.3 -0.5
ILAR	Eielson Array	5.64	27	P		Pn	10 06 43.3 -0.5
	comp=E,4.7nm,0.3s,baz=218,slow=13,SNR=131						
ILAR				S		Sn	10 07 43.6 -3.7
	comp=E,2.0nm,0.3s,baz=216,slow=25,SNR=4.1						
ILAR	Eielson Array	5.64	27			Pn	10 06 42.0 -1.8
BARN	Barnard Glacie	5.69	73			Pn	10 06 45.3 +0.7
POKR	Poker Plat Res	5.82	23			Pn	10 06 45.0 -1.3
POKR	Poker Plat Res	5.82	23	P			10 06 46.1
	baz=209						
CTG	Chitna Glacier	5.83	74	P			10 06 47.5
	baz=265						
SCRK	Sand Creek	5.88	42			Pn	10 06 46.3 -0.7
SCRK	Sand Creek	5.88	42	P			10 06 46.3
	baz=230,SNR=5.6						
LOGN	Logan Glacier	5.99	76			Pn	10 06 48.9 +0.3
SDPT	Sand Point	6.10	225	P			10 06 49.3
	baz=38						
IM03		6.13	357			Pn	10 06 50.6 +0.3
IMAR	Indian Mountai	6.13	357			Pn	10 06 49.8 -0.5
L27K	Beaver Creek,	6.19	54			Pn	10 06 51.2 0.0
L27K	Beaver Creek,	6.19	54	P			10 06 50.9
	baz=244,SNR=5.3						
YUK2	White River	6.20	67			Pn	10 06 52.0 +0.5
BC03		6.21	54			Pn	10 06 51.4 +0.1
BCAR	Beaver Creek A	6.21	54			Pn	10 06 50.7 -0.8
PCA	Pinnacle	6.36	83			Pn	10 06 54.2 +0.6
BVCY	Beaver Creek	6.36	61			Pn	10 06 53.3 -0.2
YUK3	Moose Creek	6.38	67			Pn	10 06 54.4 +0.5
K27K	Chicken	6.58	46	P			10 06 56.3
	baz=236						
PRP	Porcupine Dome	6.58	28			Pn	10 06 57.3 +0.6
EGAK	Eagle	7.34	43			Pn	10 07 06.0 -0.7
EGAK	Eagle	7.34	43	P			10 07 06.0
	baz=234						
COLD	Coldfoot	7.46	8			Pn	10 07 08.4 +0.1
COLD	Coldfoot	7.46	8	P			10 07 08.2
	baz=191,SNR=16						
FYU	Fort Yukon	7.54	24	Pn		Pn	10 07 08.6 -0.8
DAWY	Dawson	7.62	51			Pn	10 07 10.8 +0.3
BM03	Burnt Mountain	8.40	22			Pn	10 07 20.4 -0.7
TOLK	Toolik Lake Re	8.90	8	Pn		Pn	10 07 27.8 -0.1
TOLK	Toolik Lake Re	8.90	8	P			10 07 28.0
	baz=191,SNR=10						
DLBC	Dease Lake	11.82	87	P		Pn	10 08 10.4 +3.4
	comp=E,1.0nm,0.3s,baz=240,slow=5.9,SNR=21						
DLBC				S		Sn	10 10 14.3 -2.7
	comp=E,0.1nm,0.3s,baz=325,slow=27,SNR=1.6						
INK	Inuvik	11.90	37	P		Pn	10 08 07.1 -0.8
	comp=E,0.1nm,0.3s,baz=233,slow=18,SNR=10						
YKA	Yellowknife Ar	18.46	65	P		P	10 09 30.1 +1.6
	comp=E,0.4nm,0.3s,baz=276,slow=9.6,SNR=35						
ZALV	Zalesovo Beam	57.49	324	P		P	10 14 59.5 +0.9
	comp=E,1.7nm,0.4s,baz=48,slow=8.8,SNR=6.6						
MKAR	Makanchi Array	64.54	321	P		P	10 15 46.6 +0.2
	comp=E,0.4nm,0.5s,baz=44,slow=6.8,SNR=7.0						

*RSNC **20** 10:06:19.6±1.1, 7.°05N×72.°17W, h4km±5km, ML3.1, Mw3.3*

*IDC **20** 10:06:23.0±1.6, 7.°56N×75.°01W, h0km, mb3.2/1, mb1 3.5/2, mb1mx3.2/33, mbtmp3.3/2, ML1.8/1, Error ellipse: s-maj=84.2km s-min=18.4km az=74.0*

ISC 20 10:06:17.9±1.6, 7.°05N±0.°03×72.°17W±0.°03, h6km±11km, n27, σ1§45/43, 1C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	Barichara	1.10	246	⇓	eP		Pg	10 06 39.0	-0.1
BARC					eS		Sg	10 06 53.0	-0.5
BARC					i			10 06 59.8	
	comp=Z,314nm,0.6s								
RUSC	La Rusia	1.47	218	⇓	eP		Pn	10 06 45.6	+0.3
RUSC					eS		Sn	10 07 04.7	-0.4
RUSC					i			10 07 08.4	
	comp=Z,159nm,0.5s								
BRRC	Barranca, Sant	1.53	272	⇓	iP		Pn	10 06 46.9	+1.1
BRRC					eS		Sn	10 07 06.7	+0.7
BRRC					i			10 07 11.1	
	comp=Z,151nm,0.4s								
OCAC	Ocana	1.64	316	⇓	iP		Pn	10 06 47.9	+0.5
OCAC					eS		Sn	10 07 09.3	+0.4
OCAC					i			10 07 15.8	
	comp=Z,1μm,0.5s								
SOCV	Socops	1.79	47		eP		Pn	10 06 49.5	+0.2
SOCV					eS		Sn	10 07 13.1	+0.7
PTBC	PUERTO BERRIO,	2.33	257		eP		Pn	10 06 57.0	+0.2
PTBC					eS		Sb	10 07 29.3	0.0
PTBC					i			10 07 32.4	
	comp=Z,125nm,0.6s								
SPBC	San Pablo de B	2.35	234		eS		Sn	10 07 29.0	+2.7
SPBC					i			10 07 36.1	
	comp=Z,88nm,0.2s								
SMLC	San Martn de	2.56	313		eP		Pn	10 06 59.7	-0.3
SMLC					eS		Sb	10 07 35.1	-1.0
SMLC					i			10 07 38.1	
	comp=Z,89nm,0.6s								
ELOV	Elorza	2.67	91		eP		Pb	10 07 06.0	0.0
ELOV					eS		Sb	10 07 41.8	+2.7
ZARC	Zaragoza, Cauc	2.70	279	⇑	eP		Pn	10 07 03.0	+1.1
ZARC					eS		Sn	10 07 36.1	+1.1
ZARC					i			10 07 43.6	
	comp=Z,122nm,0.4s								
PTGC	Puerto Gaitan,	2.83	179		eP		Pn	10 07 04.7	+1.0
PTGC					eS		Sn	10 07 39.0	+0.8
PTGC					i			10 07 52.1	
	comp=Z,86nm,0.4s								
LL3C	La Loma 3 Cana	2.93	335		eS		Sb	10 07 48.6	+2.0
LL3C					i			10 07 53.9	
	comp=Z,106nm,0.3s								
NORC	Norcasia	3.06	241		eP		Pn	10 07 08.3	+1.4
ROSC	El Rosal	3.07	224	Pn			Pn	10 07 08.3	+1.1
	comp=Z,3.1nm,0.3s,baz=324,slow=19,SNR=2.6								
ROSC						Lg	Lg	10 07 52.9	
	comp=Z,6.0nm,0.3s,baz=347,slow=24,SNR=4.3								
ROSC	El Rosal	3.07	224		eP		Pn	10 07 10.1	+2.9
VILC	Villavicencio,	3.29	208		eP		Pn	10 07 10.7	+0.6
VILC					eS		Sb	10 07 56.0	-1.3
VILC					e			10 08 01.1	
VILC					i			10 08 13.3	
	comp=Z,76nm,0.5s								
HELC	Santa Helena	3.45	256		eP		Pn	10 07 13.7	+1.2
GUY2C	Guyana, Caldas	3.66	240		eP		Pn	10 07 17.2	+1.7
GUY2C					eS		Sn	10 07 58.1	-1.1
GUY2C					i			10 08 10.9	
	comp=Z,22nm,0.5s								
TOLC	Tolima	3.98	232		eP		Pn	10 07 21.6	+1.8
TOLC					eS		Sn	10 08 08.7	+1.8
TOLC					i			10 08 28.7	
	comp=Z,16nm,0.5s								
CBOC	Ciudad Bolivar	4.00	253		eP		Pn	10 07 22.9	+3.0
CRJC	Cerrejon, Guaj	4.00	350		eS		Sn	10 08 07.6	+0.4
CRJC					i			10 08 26.6	
	comp=Z,41nm,0.3s								
ANIL	Santa Ana	4.10	232		eP		Pn	10 07 23.1	+1.7
ANIL					eS		Sn	10 08 11.0	+1.1
ANIL					i			10 08 29.0	
	comp=Z,35nm,0.4s								
SJCC	San Jacinto, C	4.11	314		eP		Pn	10 07 22.7	+1.5
SJCC					eS		Sn	10 08 11.7	+2.0
SJCC					i			10 08 21.1	
	comp=Z,11nm,0.4s								
ORTC	Ortega, Tolima	4.37	225		eP		Pn	10 07 25.5	+0.5
ORTC					eS		Sn	10 08 16.9	+0.6
ORTC					i			10 08 38.1	
	comp=Z,15nm,0.6s								
MACC	Macarena, Meta	5.15	199		eP		Pn	10 07 35.4	-0.3
YKA	Yellowknife Ar	63.38	339	P			P	10 16 44.7	-3.1
	comp=E,0.2nm,0.7s,baz=130,slow=7.6,SNR=8.2								
ASAR	Alice Springs	150.01	234	PKPbc			PKPbc	10 26 10.0	-0.3
	comp=Z,0.3nm,0.7s,baz=124,slow=4.3,SNR=4.2								

*GCG **20** 10:30:55.1±0.7, 12.°52N×88.°39W, h66km±226km, MD4.2*
*SNET **20** 10:31:06.4±0.9, 13.°04N×89.°04W, h46km±10km, ML4.3*
*INET **20** 10:31:06.4, 13.°02N×89.°02W, h46km, ML4.1*
*UCR **20** 10:31:07.0±1.2, 13.°09N×89.°03W, h48km±10km, ML4.3*
*IDC **20** 10:31:08.5±1.4, 13.°23N×88.°80W, h88km±11km, mb3.3/7, mb1 3.6/11, mb1mx3.4/39, mbtmp3.7/11, Error ellipse: s-maj=42.2km s-min=10.5km az=43.0*

ISC 20 10:31:05.8±1.0, 13.°08N±0.°07×89.°02W±0.°04, h58km±7km, n82, σ1§41/102, mb3.6/7, 4C-45D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ALJI	Alcalda de J	0.50	60	⇓	eP		Pn	10 31 18.2	+0.6
ALJI					IAML			10 31 28.0	
	comp=Z,13μm,0.1s								
ALJI	Alcalda de J	0.50	60	⇓	eP		Pn	10 31 18.2	+0.6
ALJI					IAML			10 31 28.0	
	comp=Z,13μm,0.1s								
LALI	Alcalda de L	0.50	324	⇓	eP		Pn	10 31 17.9	+0.3
LALI					eS		Sn	10 31 26.3	0.0
LALI	Alcalda de L	0.50	324	⇓	eP		Pn	10 31 17.9	+0.3
LALI					eS		Sn	10 31 26.3	0.0
LFRS	El Faro	0.55	356	⇓	iP		Pn	10 31 18.6	+0.4
LFRS	El Faro	0.55	356	⇓	iP		Pn	10 31 18.6	+0.4
COEG	Centro de Oper	0.56	14	⇓	iP		Pn	10 31 18.8	+0.4
COEG					IAML			10 31 32.7	
	comp=Z,21μm,0.5s								
COEG	Centro de Oper	0.56	14	⇓	iP		Pn	10 31 18.8	+0.4
COEG					IAML			10 31 32.7	
	comp=Z,21μm,0.5s								
UESV	Universidad de	0.60	22	⇓	iP		Pn	10 31 19.4	+0.6
UESV					eS		Sn	10 31 29.6	+1.3
UESV	Universidad de	0.60	22	⇓	iP		Pn	10 31 19.4	+0.6
UESV					eS		Sn	10 31 29.6	+1.3
AEIL	Aeropuerto Ilo	0.62	351	⇓	eP		Pn	10 31 19.9	+0.8
AEIL					IAML			10 31 32.8	
	comp=Z,15μm,0.2s								
AEIL	Aeropuerto Ilo	0.62	351	⇓	eP		Pn	10 31 19.9	+0.8
AEIL					IAML			10 31 32.8	
	comp=Z,15μm,0.2s								
COEB	Comit de Eme	0.64	49	⇓	iP		Pn	10 31 19.8	+0.5
COEB					eS		Sn	10 31 30.2	+1.1
COEB					IAML			10 31 32.8	
	comp=Z,17μm,0.4s								
COEB	Comit de Eme	0.64	49	⇓	iP		Pn	10 31 19.8	+0.5
COEB					eS		Sn	10 31 30.2	+1.1
COEB					IAML			10 31 32.8	
	comp=Z,17μm,0.4s								
PAVA	Las Pavas	0.64	7	⇓	iP		Pn	10 31 20.1	+0.7
PAVA					eS		Sn	10 31 30.5	+1.4
PAVA	Las Pavas	0.64	7	⇓	iP		Pn	10 31 20.1	+0.7
PAVA					eS		Sn	10 31 30.5	+1.4
SNET	Serv Nac Est T	0.64	341	⇓	iP		Pn	10 31 19.9	+0.5
SNET					eS		Sn	10 31 29.6	+0.4
SNET					IAML			10 31 31.3	
	comp=Z,10μm,0.3s								
SNET	Serv Nac Est T	0.64	341	⇓	iP		Pn	10 31 19.9	+0.5
SNET					eS		Sn	10 31 29.6	+0.4
SNET					IAML			10 31 31.3	
	comp=Z,10μm,0.3s								
CPRS	Casa Presidenc	0.64	341	⇑	eP		Pn	10 31 19.9	+0.6
ITCA	Escuela Especi	0.65	337	⇓	iP		Pn	10 31 19.9	+0.5
ITCA					eS		Sn	10 31 29.9	+0.7
ITCA	Escuela Especi	0.65	337	⇓	iP		Pn	10 31 19.9	+0.5
ITCA					eS		Sn	10 31 29.9	+0.7
TECA	Tecapa	0.65	50	⇓	iP		Pn	10 31 20.1	+0.6
TECA	Tecapa	0.65	50	⇓	iP		Pn	10 31 20.1	+0.6
LBRS	Las Brisas	0.66	358	⇓	iP		Pn	10 31 20.4	+0.9
LBRS	Las Brisas	0.66	358	⇓	iP		Pn	10 31 20.4	+0.9
MAGS	Ministerio de	0.66	337		eP		Pn	10 31 20.1	+0.6
UEES	Universidad Ev	0.67	341	⇓	iP		Pn	10 31 20.3	+0.6
UEES	Universidad Ev	0.67	341	⇓	iP		Pn	10 31 20.3	+0.6
LFU	La Fuente	0.68	352	⇑	iP		Pn	10 31 20.6	+0.8
LFU	La Fuente	0.68	352	⇑	iP		Pn	10 31 20.6	+0.8
BOQS	Boqueron	0.70	339	⇓	iP		Pn	10 31 21.0	+0.8
BOQS	Boqueron	0.70	339	⇓	iP		Pn	10 31 21.0	+0.8
PQSS	Presa 15 de Se	0.70	39	⇑	eP		Pn	10 31 20.9	+0.9
PQSS					eS		Sn	10 31 32.2	+1.9
LCY	Lacayo	0.79	64	⇓	eP		Pn	10 31 21.8	+0.6
LCY	Lacayo	0.79	64	⇓	eP		Pn	10 31 21.8	+0.6
SBLS	San Blas	0.96	322		eP		Pn	10 31 24.6	+1.1
SBLS	San Blas	0.96	322		eP		Pn	10 31 24.6	+1.1
SNJE	San Jose	0.97	324	⇓	iP		Pn	10 31 24.6	+0.9
SNJE	San Jose	0.97	324	⇓	iP		Pn	10 31 24.6	+0.9
RTR	El Retiro	1.02	323		eP		Pn	10 31 25.4	+1.2
RTR	El Retiro	1.02	323		eP		Pn	10 31 25.4	+1.2
UNIC	Universidad Ca	1.04	330	⇓	eP		Pn	10 31 25.4	+1.1
UNIC	Universidad Ca	1.04	330	⇓	eP		Pn	10 31 25.4	+1.1
FAGO	Alcalda de S	1.08	55	⇓	iP		Pn	10 31 25.3	+0.5
FAGO	Alcalda de S	1.08	55	⇓	iP		Pn	10 31 25.3	+0.5
LLGN	La Laguna	1.08	4	⇓	iP		Pn	10 31 25.9	+0.9
LLGN	La Laguna	1.08	4	⇓	iP		Pn	10 31 25.9	+0.9
LCND	La Caada	1.12	78	⇓	iP		Pn	10 31 25.8	+0.3
LCND					eS		Sn	10 31 41.4	+1.4
LCND					IAML			10 31 43.1	
	comp=Z,4μm,0.3s								
LCND	La Caada	1.12	78	⇓	iP		Pn	10 31 25.8	+0.3
LCND					eS		Sn	10 31 41.4	+1.4
LCND					IAML			10 31 43.1	
	comp=Z,4μm,0.3s								
CNCH	Conchagua	1.17	80	⇓	eP		Pn	10 31 26.4	+0.3
CNCH	Conchagua	1.17	80	⇓	eP		Pn	10 31 26.4	+0.3
MTO3	Montecristo	1.36	346	⇓	iP		Pn	10 31 29.7	+1.0
MTO3	Montecristo	1.36	346	⇓	iP		Pn	10 31 29.7	+1.0
ESQI	Esquipulas	1.51	348	⇓	iP		Pn	10 31 32.1	+1.5
NBG	Las Nubes	1.98	320		eP		Pn	10 31 39.8	+2.6
NBG					eS		Sn	10 32 13.2	+12
PCG	Pacaya	2.02	310		eP		Pn	10 31 39.2	+1.5
PCG					eS		Sn	10 32 14.0	+12
MRL	Marmol	2.09	342		eP		Pn	10 31 41.3	+2.5
MRL					eS		Sn	10 32 13.6	+10
FUG	Fuego 3	2.23	308		eP		Pn	10 31 42.2	+1.6
FUG					eS		Sn	10 32 19.0	+12
APG	El Apazote	2.37	324	P			Pn	10 31 44.2	+1.7
	comp=Z,4.3nm,0.3s,baz=144,slow=15,SNR=59								
APG				S			Sn	10 32 16.0	+5.3
	comp=Z,11nm,0.3s,baz=1.2,slow=20,SNR=2.3								
ERG	Entre ros, C	2.82	299		eP		Pn	10 31 48.0	-0.5
ERG					eS		Sn	10 32 31.8	+11
SAJU	San Juanillo,	4.41	132		eP		Pn	10 32 11.3	+1.0
GRZA	Playa Garza	4.57	133		eP		Pn	10 32 13.9	+1.5
JTS	Las Juntas de	4.85	124	P			Pn	10 32 18.2	+1.9
	comp=Z,1.8nm,0.3s,baz=174,slow=23,SNR=16								
JTS				S			Sn	10 33 12.7	+1.5
	comp=Z,1.9nm,0.3s,baz=38,slow=20,SNR=1.3								
JTS	Las Juntas de	4.85	124		eP		Pn	10 32 18.9	+2.6
LAFE	Finca La Fe, P	5.17	128		eP		Pn	10 32 22.0	+1.2
RIMA	Rio Macho	6.03	123		eP		Pn	10 32 35.5	+2.8
CDM	Cerro de Muert	6.23	124		eP		Pn	10 32 38.4	+2.8
PEZE	Perez Zeledon,	6.40	124		eP		Pn	10 32 41.0	+3.4
DRK0	Durika	6.82	123		eP		Pn	10 32 46.6	+3.2
CMIG	Matias Romero	6.93	306	P			Pn	10 32 47.0	+2.3
	comp=Z,1.0nm,0.3s,baz=142,slow=9.1,SNR=9.1								
CMIG				S			Sn	10 34 01.9	-0.4
	comp=Z,1.6nm,0.3s,baz=243,slow=24,SNR=6.9								
LPLA	Las Palmas La	7.14	124		eP		Pn	10 32 50.9	+3.0
TEIG	Tepich	7.15	6	P			Pn	10 32 50.1	+2.4
	comp=Z,5.8nm,0.3s,baz=312,slow=1.4,SNR=38								
TXAR	Lajitas Array	21.13	322	P			P	10 35 47.9	+1.8
	comp=Z,1.3nm,0.7s,baz=143,slow=11,SNR=9.1								
PDAR	Pinedale Array	34.51	333	P			P	10 37 48.5	-0.2
	comp=Z,0.2nm,0.6s,baz=127,slow=11,SNR=2.4								
PDAR				PcP			PcP	10 40 21.9	-0.9
	comp=Z,0.3nm,0.5s,baz=152,slow=3.6,SNR=4.8								
NVAR	Mina Array Bea	36.23	319	P			P	10 38 05.0	+1.4
	comp=Z,0.2nm,0.5s,baz=115,slow=8.0,SNR=2.5								
NVAR				PcP			PcP	10 40 27.7	-0.2
	comp=Z,0.6nm,0.7s,baz=132,slow=4.2,SNR=7.0								
ULM	Lac du Bonnet	37.49	353	P			P	10 38 11.1	-2.7
	comp=Z,1.1nm,0.5s,baz=176,slow=8.7,SNR=2.5								
YKA	Yellowknife Ar	52.62	345	P			P	10 40 12.4	-1.2
	comp=Z,1.5nm,0.7s,baz=142,slow=7.9,SNR=36								
INK	Inuvik	62.16	343	P			P	10 41 19.2	-1.4
	comp=Z,1.0nm,0.7s,baz=133,slow=6.7,SNR=8.9								
ILAR	Eielson Array	64.83	336	P			P	10 41 36.7	-1.7
	comp=Z,0.4nm,0.6s,baz=165,slow=4.6,SNR=4.4								
WRA	Warramunga Arr	137.96	255	PKP			PKPdf	10 50 25.3	+0.4
	comp=Z,0.4nm,0.7s,baz=89,slow=2.4,SNR=1.9								
ASAR	Alice Springs	138.07	249	PKP			PKPdf	10 50 24.9	-0.1
	comp=Z,0.9nm

comp=Z,22nm,1.2s
MHMT Maesarieng 24.16 350 P P 10 38 50.0 -0.3
comp=Z,1μmcomp=Z,22nm,0.8s
CM04 Chiang Mai Arr 24.21 352 P P 10 38 51.5 +0.7
comp=Z,196nmcomp=Z,26nm,0.8s
CM05 Chiang Mai Arr 24.22 352 P P 10 38 51.5 +0.7
comp=Z,143nmcomp=Z,15nm,0.8s
LAMP Lampang 24.25 354 P P 10 38 51.9 +0.8
comp=Z,24nm,0.7s
CM15 Chiang Mai Arr 24.27 352 P P 10 38 52.0 +0.7
comp=Z,184nmcomp=Z,22nm,0.8s
CM31 Chiang Mai Arr 24.28 352 P P 10 38 52.1 +0.8
comp=Z,595nm,0.8s
CMAR Chiang Mai Arr 24.28 352 P P 10 38 51.5 +0.2
comp=Z,13nm,0.7s,baz=184,slow=8.8,SNR=79
CMAR Chiang Mai Arr 24.28 352 P P 10 38 51.9 +0.6
CM36 Chiang Mai Arr 24.32 352 P P 10 38 51.0 -0.7
CM32 Chiang Mai Arr 24.48 352 P P 10 38 54.0 +0.8
CMMT Chiang Mai 24.62 352 P P 10 38 53.0 -1.5
comp=Z,6.2nm,0.7s
CHTO Chiang Mai 24.63 352 P P 10 38 54.4 -0.1
CM33 Chiang Mai Arr 24.63 352 P P 10 38 54.0 -0.6
CM34 Chiang Mai Arr 24.64 353 P P 10 38 55.0 +0.4
FITZ Fitzroy Crossi 25.80 120 P P 10 39 04.8 -0.4
comp=Z,11nm,1.2s,baz=248,slow=5.9,SNR=2.2
KNRA Kununurra 27.68 113 P P 10 39 20.4 -1.9
KNRA IAmb IAmb 10 39 41.5
comp=Z,32nm,1.2s
H08S2 Diego Garcia H 29.77 265 T T 11 10 59.0
baz=88,slow=76,SNR=280
H08S3 Diego Garcia H 29.78 265 T T 11 10 59.6
baz=88,slow=76,SNR=250
H08S1 Diego Carcia H 29.79 265 T T 11 10 55.7
baz=88,slow=76,SNR=268
H01W3 Cape Leeuwin H 30.97 161 T T 11 12 21.6
baz=339,slow=76,SNR=72
H01W2 Cape Leeuwin H 30.98 161 T T 11 12 15.5
baz=339,slow=76,SNR=109
H01W1 Cape Leeuwin H 30.98 161 T T 11 12 16.4
baz=339,slow=76,SNR=117
SHL Shillong 32.75 342 P P 10 40 06.3 -0.7
WB0 Warramunga Arr 34.08 117 P P 10 40 18.7 0.0
WB0 IAmb IAmb 10 40 27.9
comp=Z,6.6nm,0.9s
WRA Warramunga Arr 34.10 117 P P 10 40 18.6 -0.2
comp=Z,1.9nm,0.5s,baz=302,slow=9.0,SNR=16
WB2 Warramunga Arr 34.11 117 P P 10 40 18.5 -0.4
WB2 IAmb IAmb 10 40 29.1
comp=Z,19nm,1.5s
WR0 Warramunga Arr 34.28 117 P P 10 40 20.2 -0.1
WR0 IAmb IAmb 10 40 22.5
comp=Z,9.0nm,1.1s
ASAR Alice Springs 35.16 124 P P 10 40 28.1 +0.1
comp=Z,1.3nm,0.5s,baz=302,slow=8.2,SNR=19
AS31 Alice Springs 35.16 124 P P 10 40 28.4 +0.4
CD2 Chengdu 36.46 2 eP P 10 40 38.6 -0.3
XAN Xi'an 40.03 8 P P 10 41 08.0 -1.0
XAN pP pP 10 41 17.3 -1.6
XAN sP sP 10 41 22.6 +0.4
XAN pmax pmax
comp=Z,15nm,0.8s
XAN Xi'an 40.03 8 P P 10 41 08.3 -0.7
XAN IAmb IAmb 10 41 09.7
comp=Z,9.5nm,0.7s
CTA Charters Tower 44.90 113 P P 10 41 48.8 +0.1
comp=Z,7.5nm,0.9s,baz=335,slow=3.7,SNR=4.0
CTAO Charters Tower 44.90 113 P P 10 41 48.9 +0.1
STKA Stephens Creek 44.91 130 P P 10 41 49.6 +1.0
comp=Z,4.5nm,0.6s,baz=304,slow=6.8,SNR=16
STKA Stephens Creek 44.91 130 P P 10 41 49.0 +0.3
GTA Gaotai 44.98 357 eP P 10 41 49.9 +0.7
GTA pP pP 10 41 53.9 -5.3
GTA sP sP 10 41 57.3 -5.3
GTA pmax pmax
comp=Z,5.0nm,1.0s
KSRS Korea Array 49.11 27 P P 10 42 21.2 -0.1
comp=Z,1.7nm,0.5s,baz=220,slow=7.7,SNR=8.3
SONM Songino Array 53.45 3 P P 10 42 54.9 +1.0
comp=Z,17nm,0.8s,baz=182,slow=9.0,SNR=28
SONM Songino Array 53.45 3 P P 10 42 54.3 +0.5
ULN Ulaanbaatar 53.52 4 P P 10 42 54.7 +0.3
MK31 Makanchi Array 55.26 343 P P 10 43 07.1 +0.2
MK31 IAmb IAmb 10 43 09.1
comp=Z,5.7nm,0.7s
MKAR Makanchi Array 55.26 343 P P 10 43 07.6 +0.7
comp=Z,7.7nm,0.6s,baz=150,slow=8.3,SNR=69
MKAR Makanchi Array 55.26 343 P P 10 43 07.1 +0.2
USA0B Ussuriysk Arra 56.39 25 P P 10 43 13.9 -1.1
USRK Ussuriysk Ar. 56.39 25 P P 10 43 14.6 -0.5
comp=Z,11nm,0.9s,baz=216,slow=6.2,SNR=21
ZALV Zalesovo Beam 61.27 348 P P 10 43 48.9 +0.1
comp=Z,4.7nm,0.4s,baz=168,slow=5.0,SNR=24
BRVK Borovoye 64.56 339 P P 10 44 10.5 -0.1
BRVK IAmb IAmb 10 44 11.2
comp=Z,3.6nm,0.6s
ABKAR Akbulak array 66.04 331 P P 10 44 20.6 +0.2
ABKAR IAmb IAmb 10 44 38.6
comp=Z,6.1nm,0.7s
ABKAR Akbulak array 66.04 331 P P 10 44 20.9 +0.5
TIXI Tiksi 79.16 8 P P 10 45 37.2 -0.7
TIXI IAmb IAmb 10 45 37.5
comp=Z,8.0nm,1.3s
FINES FINESS Array B 88.51 332 P P 10 46 25.6 -0.2
comp=Z,2.3nm,0.9s,baz=55,slow=10,SNR=2.1
YKA Yellowknife Ar 117.18 18 PKP PKPdf 10 52 18.2 -0.2
comp=Z,0.2nm,0.8s,baz=328,slow=0.7,SNR=5.3
NVAR Mina Array Bea 130.83 43 PKP PKiKP 10 52 47.6 +1.1
comp=Z,0.3nm,0.6s,baz=304,slow=1.7,SNR=5.4
PDAR Pinedale Array 133.53 33 PKP PKiKP 10 52 51.9 0.0
comp=Z,0.3nm,0.5s,baz=217,slow=0.7,SNR=4.6
TXAR Lajitas Array 145.97 43 PKPbc PKPab 10 53 15.2 +0.7
comp=Z,5.9nm,0.8s,baz=297,slow=1.4,SNR=36

*NEIC **20** 10:54:17.9±0.9, 18°.3N±0°.3×68°.56W±0°.07, h185km±10km, Error ellipse: s-maj=43.8km s-min=9.3km az=184.0*
*RSPR **20** 10:54:18.0, 18°.27N×68°.43W, h196km±2km, MD3.8/12*
ISC 20 10:54:16.3±1.4, 18°.2N±0°.2×68°.57W±0°.06, h200km, n61, σ0s71/67, 14C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**1.41**	**79**	**⇑eP**		**Pn**	**10 54 49.5**	**+0.3**
AGPR	**Aguadilla, PR**	**1.41**	**79**	*eS*		**Sn**	**10 55 14.5**	**-0.2**
AGPR	**Aguadilla, PR**	**1.41**	**79**			**Pn**	**10 54 49.5**	**+0.3**
AGPR						**Sn**	**10 55 14.5**	**-0.2**
AGPR	**Aguadilla, PR**	**1.41**	**79**	IAML			10 55 17.1	
	comp=E,283nm,0.7s							
AGPR				IAML			10 55 17.5	
	comp=N,292nm,0.7s							
MLPR	**Magueyes Islan**	**1.47**	**99**	**⇑eP**		**Pn**	**10 54 49.6**	**-0.2**
MLPR	**Magueyes Islan**	**1.47**	**99**	*eS*		**Sn**	**10 55 13.9**	**-1.7**
MLPR	**Magueyes Islan**	**1.47**	**99**			**Pn**	**10 54 49.6**	**-0.2**
MLPR						**Sn**	**10 55 13.9**	**-1.7**
MLPR	**Magueyes Islan**	**1.47**	**99**	IAML			10 55 16.0	
	comp=N,112nm,0.4s							
GBPR	**Guanica, Bosqu**	**1.63**	**98**	**⇑eP**		**Pn**	**10 54 51.7**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.63**	**98**	*eS*		**Sn**	**10 55 17.4**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.63**	**98**			**Pn**	**10 54 51.7**	**+0.5**
GBPR						**Sn**	**10 55 17.4**	**-0.7**
BANI	**BANI**	**1.71**	**277**	Pn		**Pn**	**10 54 52.8**	**+0.8**
AOPR	**Arecibo Observ**	**1.73**	**85**	**⇑eP**		**Pn**	**10 54 52.0**	**-0.2**
AOPR	**Arecibo Observ**	**1.73**	**85**	*eS*		**Sn**	**10 55 19.3**	**-0.7**
AOPR	**Arecibo Observ**	**1.73**	**85**			**Pn**	**10 54 52.0**	**-0.2**
AOPR						**Sn**	**10 55 19.3**	**-0.7**
OBIP	**Obispado Ponce**	**1.88**	**95**	**⇑eP**		**Pn**	**10 54 54.1**	**+0.5**
OBIP	**Obispado Ponce**	**1.88**	**95**	*eS*		**Sn**	**10 55 22.2**	**-0.2**
OBIP	**Obispado Ponce**	**1.88**	**95**			**Pn**	**10 54 54.1**	**+0.5**
OBIP						**Sn**	**10 55 22.2**	**-0.2**
OBIP	**Obispado Ponce**	**1.88**	**95**	IAML			10 55 25.0	
	comp=E,78nm,0.6s							
CELP	**Cerrillos**	**1.90**	**94**	**⇑eP**		**Pn**	**10 54 54.1**	**+0.3**
CELP	**Cerrillos**	**1.90**	**94**	*eS*		**Sn**	**10 55 23.0**	**+0.1**
CELP	**Cerrillos**	**1.90**	**94**			**Pn**	**10 54 54.1**	**+0.3**
CELP						**Sn**	**10 55 23.0**	**+0.1**
EMPR	**Esperanza - Ma**	**1.96**	**82**	**⇑eP**		**Pn**	**10 54 54.7**	**+0.4**
EMPR	**Esperanza - Ma**	**1.96**	**82**	*eS*		**Sn**	**10 55 22.5**	**-1.4**
EMPR	**Esperanza - Ma**	**1.96**	**82**			**Sn**	**10 54 54.7**	**+0.4**
EMPR						**Sn**	**10 55 22.5**	**-1.4**
EMPR	**Esperanza - Ma**	**1.96**	**82**	IAML			10 55 40.0	
	comp=N,200nm,0.9s							
ICMP	**Isla Caja de M**	**1.97**	**99**	**⇑eP**		**Pn**	**10 54 54.5**	**0.0**
ICMP	**Isla Caja de M**	**1.97**	**99**	*eS*		**Sn**	**10 55 23.6**	**-0.5**
ICMP	**Isla Caja de M**	**1.97**	**99**			**Pn**	**10 54 54.5**	**0.0**
ICMP						**Sn**	**10 55 23.6**	**-0.5**
ICMP	**Isla Caja de M**	**1.97**	**99**	IAML			10 55 24.7	
	comp=E,121nm,0.5s							
ICMP				IAML			10 55 28.7	
	comp=N,96nm,0.4s							
SJG	**San Juan**	**2.31**	**92**			**Sn**	**10 55 30.7**	**+0.2**
IGPR	**InterUniversit**	**2.36**	**95**	**⇓eP**		**Pn**	**10 54 59.4**	**+0.8**
IGPR	**InterUniversit**	**2.36**	**95**	*eS*		**Sn**	**10 55 30.8**	**-0.8**
IGPR	**InterUniversit**	**2.36**	**95**			**Sn**	**10 55 30.8**	**-0.8**
GCPR	**Guaynabo City**	**2.37**	**87**	*eS*		**Sn**	**10 55 30.8**	**-1.0**
GCPR	**Guaynabo City**	**2.37**	**87**			**Sn**	**10 55 30.8**	**-1.0**
GCPR	**Guaynabo City**	**2.37**	**87**	Pn		**Pn**	**10 54 58.4**	**-0.3**
GCPR				IAML			10 55 33.7	
	comp=E,68nm,0.5s							
PDPR	**Patillas Dam,**	**2.43**	**94**	Pn		**Pn**	**10 55 00.1**	**+0.7**
PDPR						**Sn**	**10 55 32.2**	**-0.8**
PDPR				IAML			10 55 34.0	
	comp=E,77nm,0.8s							
CBYP	**Canovanas**	**2.58**	**88**	**⇑eP**		**Pn**	**10 55 01.5**	**+0.3**
CBYP	**Canovanas**	**2.58**	**88**	*eS*		**Sn**	**10 55 36.1**	**0.0**
CBYP	**Canovanas**	**2.58**	**88**			**Pn**	**10 55 01.5**	**+0.3**
CBYP						**Sn**	**10 55 36.1**	**0.0**
HUMP	**Col San Antoni**	**2.59**	**91**	**⇑eP**		**Pn**	**10 55 02.4**	**+1.2**
HUMP	**Col San Antoni**	**2.59**	**91**	*eS*		**Sn**	**10 55 36.2**	**0.0**
HUMP	**Col San Antoni**	**2.59**	**91**			**Pn**	**10 55 02.4**	**+1.2**
HUMP						**Sn**	**10 55 36.2**	**0.0**
HUMP	**Col San Antoni**	**2.59**	**91**	IAML			10 55 41.2	
	comp=N,94nm,0.2s							
SDDR	**Presa de Saban**	**2.69**	**287**	Pn		**Pn**	**10 55 02.5**	**+0.2**
MTP	**Monte Pirata**	**2.87**	**92**	**⇑eP**		**Pn**	**10 55 05.5**	**+1.1**
MTP	**Monte Pirata**	**2.87**	**92**	*eS*		**Sn**	**10 55 41.8**	**-0.2**
MTP	**Monte Pirata**	**2.87**	**92**			**Pn**	**10 55 05.5**	**+1.1**
MTP						**Sn**	**10 55 41.8**	**-0.2**
MTP	**Monte Pirata**	**2.87**	**92**	IAML			10 55 47.1	
	comp=E,47nm,0.2s							
MTP				IAML			10 55 49.2	
	comp=N,41nm,0.4s							
CUPR	**Culebra, Puert**	**3.13**	**88**	**⇑eP**		**Pn**	**10 55 08.0**	**+0.5**
CUPR	**Culebra, Puert**	**3.13**	**88**	*eS*		**Sn**	**10 55 47.4**	**0.0**
CUPR	**Culebra, Puert**	**3.13**	**88**			**Pn**	**10 55 08.0**	**+0.5**
CUPR						**Sn**	**10 55 47.4**	**0.0**
STVI	**Saint Thomas**	**3.44**	**87**	**⇑eP**		**Pn**	**10 55 12.1**	**+0.9**
STVI	**Saint Thomas**	**3.44**	**87**	*eS*		**Sn**	**10 55 53.1**	**-1.1**
STVI	**Saint Thomas**	**3.44**	**87**			**Pn**	**10 55 12.1**	**+0.9**
STVI						**Sn**	**10 55 53.1**	**-1.1**
STVI	**Saint Thomas**	**3.44**	**87**	IAML			10 55 57.8	
	comp=N,49nm,0.4s							
STVI				IAML			10 55 58.2	
	comp=E,45nm,0.3s							
TBVI	**Tortola**	**3.76**	**86**	*eS*		**Sn**	**10 56 01.2**	**-0.1**
VGBI	**Virgin Gorda,**	**3.97**	**85**	**⇑eP**		**Pn**	**10 55 18.5**	**+0.8**
VGBI	**Virgin Gorda,**	**3.97**	**85**	*eS*		**Sn**	**10 56 05.6**	**-0.3**
VGBI	**Virgin Gorda,**	**3.97**	**85**			**Pn**	**10 55 18.5**	**+0.8**

*BGR **20** 11:20:44.4±0.0, 23°.12N×121°.84E, h33km, mb5.1*
*NIED **20** 11:20:46.3, 23°.66N×121°.65E, h40km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr0.03; Mθθ1.55; Mϕϕ-1.58; Mrθ-0.72; Mθϕ0.31; Mϕr-1.01; Fault plane solution: M0 2.02000×10^16^ NP1:φs39.00000°, δ90.00000°, λ-142.00000°. NP2:φs309.00000°, δ52.00000°, λ0.00000°.*
*ASIES **20** 11:20:46.8, 23°.63N×121°.75E, h41km, MW4.8*
*JMA **20** 11:20:46.2±0.1, 23°.65N×121°.65E, h40km±4km, M5.1*
*BJI **20** 11:20:46.4±0.0, 23°.68N×121°.61E, h30km, mB4.9/43, mb4.7/69, ML5.1/9, Ms4.7/73, Ms7 4.4/68*
*NEIC **20** 11:20:47.5, 23°.62N×121°.64E, h42km, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr2.09; Mθθ0.48; Mϕϕ-2.57; Mrθ-1.46; Mθϕ-0.57; Mϕr0.74; Fault plane solution: M0 2.94000×10^16^ NP1:φs344.7000°, δ40.03000°, λ45.94000°. NP2:φs216.39000°, δ62.47000°, λ120.29000°. Principal axes: T 2.9751, Plg60.0000°, Azm172.0000°; N -0.0809, Plg27.0000°, Azm21.0000°; P -2.8942, Plg12.0000°, Azm285.0000°;*
*TAP **20** 11:20:47.2, 23°.66N×121°.66E, h38km, ML5.5, B*
*GCMT **20** 11:20:47.5±0.4, 23°.65N±0°.02×121°.59E±0°.02, h38km±1km, MW5.0/62, Moment Tensor Solution. s22,c24; s62,c87; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.63±.28; Mθθ0.77±.16; Mϕϕ-3.39±.16; Mrθ-1.47±.14; Mθϕ-0.05±.10; Mϕr-1.06±.15; Best double couple: Mw3.57600×10^16^ NP1:φs336.00000°, δ41.00000°, λ48.00000°. NP2: φs206.00000°, δ61.00000°, λ120.00000°. Principal axes: T 3.5580, Plg61.0000°, Azm164.0000°; N 0.0430, Plg26.0000°, Azm10.0000°; P -3.5930, Plg11.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **20** 11:20:47.6±1.0, 23°.63N×121°.70E, h57km, mb5.3/84 Error ellipse: s-maj=6.5km s-min=3.8km az=118.0*
*NEIC **20** 11:20:47.6±1.7, 23°.64N±0°.04×121°.64E±0°.05, h37km±4km, mb5.2/230, Mwr4.9/31, ML5.5(TAP), Error ellipse: s-maj=7.9km s-min=4.8km az=132.0*
*IDC **20** 11:20:49.9±1.9, 23°.66N×121°.75E, h66km±17km, mb4.6/36, mb1 4.6/40, mb1mx4.5/48, mbtmp4.8/40, MS4.0/9, Ms1 4.0/9, ms1mx3.9/45, Error ellipse: s-maj=11.7km s-min=7.7km az=66.0*
ISC 20 11:20:47.0±0.3, 23°.64N±0°.02×121°.71E±0°.02, h37km, n904, σ1s46/1086, mb5.1/305, MS4.4/16, 94C-154D, Fault plane solution: NP1:φs196.11844°, δ48.01468°, λ134.74190°. NP2:φs320.13757°, δ58.13185°, λ51.96823°. Principal axes: T Plg57.8159°, Azm175.2625°; N Plg31.5492°, Azm342.5764°; P Plg5.7209°, Azm76.1030°; **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGFH	**Guangfu**	**0.26**	**276**	**⇑iP**		**Pn**	**11 20 54.5**	**-0.7**
	baz=272							
EGFH				*i*	S	**Sn**	**11 20 59.8**	**-3.1**
	baz=272							
HGSD	**Ruisui**	**0.30**	**240**	**⇑iP**		**Pn**	**11 20 55.2**	**+0.1**
	baz=232							
HGSD				*eS*		**Sn**	**11 21 01.7**	**-0.5**
	baz=232							
ESL	**Shilin**	**0.31**	**304**	**⇑iP**		**Pn**	**11 20 54.6**	**-0.6**
	baz=307							
ESL				*i*	S	**Sn**	**11 20 59.9**	**-2.3**
	baz=307							
HWA	**Hwalien**	**0.35**	**344**	**⇑iP**		**Pn**	**11 20 55.7**	**+0.3**
	baz=352							
HWA				*eS*		**Sn**	**11 21 02.7**	**+0.5**
	baz=352							
TWD	**Chiawan**	**0.45**	**347**	**⇑iP**		**Pn**	**11 20 56.6**	**-0.2**
	baz=353							
TWD				*i*	S	**Sn**	**11 21 03.9**	**+0.2**
	baz=353							
YULB	**Yu-li**	**0.45**	**237**	**⇓iP**		**Pn**	**11 20 56.6**	**-0.2**
	baz=231							
YULB				*eS*		**Sn**	**11 21 03.2**	**-0.7**
	baz=231							
YULB	**Yu-li**	**0.45**	**237**			**Pn**	**11 20 55.9**	**-1.0**
EYUL	**Yuli**	**0.46**	**231**	**⇓iP**		**Pn**	**11 20 57.3**	**+0.3**
	baz=225							
EYUL				*eS*		**Sn**	**11 21 04.4**	**+0.3**
	baz=225							
VWDT	**VWDT**	**0.53**	**282**	**⇑iP**		**Pn**	**11 20 57.9**	**-0.3**
	baz=281							
VWDT				*eS*		**Sn**	**11 21 04.7**	**-1.2**
	baz=281							
NACB	**Ninganchiao**	**0.54**	**349**	**⇑iP**		**Pn**	**11 20 57.7**	**-0.6**
	baz=353							
NACB				*eS*		**Sn**	**11 21 05.3**	**-0.8**
	baz=353							
NACB	**Ninganchiao**	**0.54**	**349**			**Pn**	**11 20 57.8**	**-0.6**
OWD	**Renai**	**0.58**	**303**	**⇑iP**		**Pn**	**11 20 58.3**	**-0.7**
	baz=304							
OWD				*i*	S	**Sn**	**11 21 05.7**	**-1.6**
	baz=304							
FULB	**Fuli**	**0.58**	**221**	**⇑iP**		**Pn**	**11 20 59.0**	**0.0**
	baz=216							
FULB				*eS*		**Sn**	**11 21 08.8**	**+1.6**
	baz=216							
ETLH	**Xiulin Townshi**	**0.60**	**340**	**⇑iP**		**Pn**	**11 20 58.5**	**-0.8**
	baz=343							
ETLH				S		**Sn**	**11 21 06.2**	**-1.5**
	baz=343							
CHKT	**Chengkung**	**0.63**	**210**	*i*	P	**Pn**	**11 20 59.2**	**-0.3**
	baz=205							
CHKT				S		**Sn**	**11 21 07.9**	**-0.3**
	baz=205							
CHGB	**Renai**	**0.64**	**310**	**⇑iP**		**Pn**	**11 20 59.5**	**-0.5**
	baz=312							
CHGB				*eS*		**Sn**	**11 21 08.0**	**-1.0**
	baz=312							
WHF	**Hehuan Shan**	**0.65**	**321**	**⇑iP**		**Pn**	**11 20 59.1**	**-1.0**
	baz=324							
WHF				*i*	S	**Sn**	**11 21 07.7**	**-1.6**
	baz=324							
SSLB	**Suanglung**	**0.71**	**282**	**⇓iP**		**Pn**	**11 21 00.0**	**-0.6**
	baz=281							
SSLB				*eS*		**Sn**	**11 21 08.9**	**-1.4**
	baz=281							
SSLB	**Suanglung**	**0.71**	**282**			**Pn**	**11 20 59.9**	**-0.6**
FUSS	**Fushou**	**0.74**	**325**	**⇑iP**		**Pn**	**11 21 00.9**	**-0.2**
	baz=327							
FUSS				S		**Sn**	**11 21 10.3**	**-1.0**
	baz=327							
EDH	**Donghe**	**0.76**	**209**	**⇑P**		**Pn**	**11 21 01.1**	**-0.1**
	baz=205							
EDH				*eS*		**Sn**	**11 21 11.4**	**-0.1**
	baz=205							
SMLT	**Sun Moon Lake**	**0.78**	**288**	**⇓iP**		**Pn**	**11 21 01.4**	**-0.2**
	baz=288							
SMLT				*eS*		**Sn**	**11 21 12.2**	**0.0**
	baz=288							
TWT	**Tachien**	**0.78**	**321**	**⇑eP**		**Pn**	**11 21 01.7**	**+0.1**
	baz=322							
TWT				*eS*		**Sn**	**11 21 11.2**	**-1.0**
	baz=322							
WPL	**Puli Township**	**0.78**	**298**	**⇓iP**		**Pn**	**11 21 01.4**	**-0.1**
	baz=299							
WPL				*eS*		**Sn**	**11 21 10.7**	**-1.3**
	baz=299							
ENA	**Nanau**	**0.78**	**2**	**⇑P**		**Pn**	**11 21 01.6**	**0.0**
	baz=6.0							
ENA				*eS*		**Sn**	**11 21 12.0**	**0.0**
	baz=6.0							
WHYT	**Xinyi Township**	**0.79**	**274**	**⇓iP**		**Pn**	**11 21 01.8**	**+0.1**
	baz=273							
WHYT				*i*	S	**Sn**	**11 21 11.8**	**-0.4**
	baz=273							
TDCB	**Techi**	**0.79**	**320**	**⇑iP**		**Pn**	**11 21 01.8**	**0.0**
	baz=322							
TDCB				*eS*		**Sn**	**11 21 11.2**	**-1.3**
	baz=322							
EWUT	**Wuta**	**0.80**	**4**	P		**Pn**	**11 21 02.1**	**+0.3**
	baz=8.0							
EWUT				*eS*		**Sn**	**11 21 12.6**	**+0.1**
	baz=8.0							
DPDB	**Guoxing**	**0.82**	**299**	**⇓iP**		**Pn**	**11 21 02.0**	**0.0**
	baz=299							
DPDB				*eS*		**Sn**	**11 21 13.1**	**+0.1**
	baz=299							
TYC	**Yuchr**	**0.82**	**289**	**⇓iP**		**Pn**	**11 21 02.0**	**-0.1**
	baz=289							
TYC				*eS*		**Sn**	**11 21 13.2**	**+0.2**
	baz=289							
NNSB	**Datong**	**0.84**	**339**	**⇑iP**		**Pn**	**11 21 02.1**	**-0.3**
	baz=342							
NNSB				*eS*		**Sn**	**11 21 12.5**	**-1.2**
	baz=342							
NNSH	**Datong**	**0.84**	**339**	**⇑iP**		**Pn**	**11 21 02.1**	**-0.3**
	baz=341							
NNSH				S		**Sn**	**11 21 12.4**	**-1.2**
	baz=341							
WCS	**Beigang Elemen**	**0.84**	**300**	**⇓eP**		**Pn**	**11 21 02.4**	**+0.1**
	baz=300							
WCS				*eS*		**Sn**	**11 21 12.6**	**-0.9**
	baz=300							
ALS	**Alishan**	**0.84**	**261**	**⇓iP**		**Pn**	**11 21 02.9**	**+0.3**
	baz=259							
ALS				S		**Sn**	**11 21 13.7**	**-0.2**
	baz=259							
NNS	**Nan Shan**	**0.85**	**339**	**⇑iP**		**Pn**	**11 21 02.3**	**-0.3**
	baz=342							
NNS				*eS*		**Sn**	**11 21 12.9**	**-1.0**
	baz=342							
LONT	**Longtian**	**0.91**	**216**	*eP*		**Pn**	**11 21 02.5**	**-0.7**
	baz=213							
LONT				*eS*		**Sn**	**11 21 14.7**	**-0.4**
	baz=213							
WJS	**Zhushan**	**0.92**	**281**	**⇓iP**		**Pn**	**11 21 04.1**	**+0.8**
	baz=281							
WJS				*eS*		**Sn**	**11 21 15.9**	**+0.5**
	baz=281							
WHP	**Taichung City**	**0.94**	**312**	**⇓iP**		**Pn**	**11 21 04.1**	**+0.3**
	baz=308							
WHP				*eS*		**Sn**	**11 21 15.5**	**-0.6**
	baz=308							
CHN5	**Tsauling**	**0.95**	**267**	**⇓iP**		**Pn**	**11 21 04.5**	**+0.7**
	baz=266							
CHN5				*eS*		**Sn**	**11 21 17.2**	**+1.0**
	baz=266							
WNT	**Mingjian**	**0.97**	**284**	**⇓iP**		**Pn**	**11 21 05.0**	**+0.9**
	baz=284							
WNT				*eS*		**Sn**	**11 21 17.8**	**+1.2**
	baz=284							
TWC	**Suao**	**0.97**	**7**	**⇑P**		**Pn**	**11 21 04.6**	**+0.5**
	baz=11							
TWC				*eS*		**Sn**	**11 21 17.3**	**+0.7**
	baz=11							
NDT	**Datong Townshi**	**0.97**	**349**	**⇑iP**		**Pn**	**11 21 04.2**	**+0.1**
	baz=352							
NDT				*eS*		**Sn**	**11 21 16.2**	**-0.5**
	baz=352							
STYH	**Taoyuan**	**0.98**	**242**	**⇓iP**		**Pn**	**11 21 04.8**	**+0.6**
	baz=239							
STYH				*eS*		**Sn**	**11 21 17.1**	**+0.3**
	baz=239							
WNT1	**Nantou City**	**0.98**	**286**	**⇓P**		**Pn**	**11 21 05.3**	**+1.1**
	baz=285							
WNT1				*eS*		**Sn**	**11 21 18.4**	**+1.5**
	baz=285							
NDS	**Dongshan**	**0.99**	**0**	*eP*		**Pn**	**11 21 04.2**	**-0.1**
	baz=3.0							
NDS				*eS*		**Sn**	**11 21 17.3**	**+0.3**
	baz=3.0							
LDUT	**Ludao**	**0.99**	**193**	**⇑iP**		**Pn**	**11 21 03.7**	**-0.6**
	baz=190							
LDUT				*eS*		**Sn**	**11 21 15.9**	**-1.1**
	baz=190							
STYT	**Tauyuan**	**1.00**	**242**	**⇓P**		**Pn**	**11 21 05.2**	**+0.6**
	baz=239							
STYT				*eS*		**Sn**	**11 21 17.8**	**+0.4**
	baz=239							
ENTT	**Nioudou**	**1.00**	**352**	**⇑P**		**Pn**	**11 21 04.7**	**+0.1**
	baz=355							
ENTT				*eS*		**Sn**	**11 21 16.5**	**-1.0**
	baz=355							
TWGBT	**Beinan**	**1.00**	**215**	**⇓eP**		**Pn**	**11 21 03.7**	**-0.8**
	baz=212							
TWGBT				*eS*		**Sn**	**11 21 15.2**	**-2.2**
	baz=212							
TWG	**Pinlang**	**1.01**	**216**	**⇓eP**		**Pn**	**11 21 03.7**	**-0.8**
	baz=212							
TWG	**Pinlang**	**1.01**	**216**			**Pn**	**11 21 03.8**

TWE	**Neicheng**	**1.07 358**⇑	*e*P	**Pn**	**11 21 05.8 +0.3**	
	baz=1.0					
TWE			*e*S	**Sn**	**11 21 18.9 -0.3**	
	baz=1.0					
WDLH	**Douliu**	**1.08 273**⇓	*e*P	**Pn**	**11 21 06.4 +0.9**	
	baz=272					
WDLH			*e*S	**Sn**	**11 21 21.1 +1.9**	
	baz=272					
NSK	**Sanguang**	**1.08 343** ⇑	P	**Pn**	**11 21 06.0 +0.3**	
	baz=345					
NSK			*e*S	**Sn**	**11 21 18.5 -0.8**	
	baz=345					
WTP	**Ta-pu**	**1.08 249** ⇓	P	**Pn**	**11 21 06.7 +1.1**	
	baz=246					
WTP			*e*S	**Sn**	**11 21 21.1 +1.7**	
	baz=246					
TWQ1	**Liyutan**	**1.11 310** ⇓	P	**Pn**	**11 21 07.3 +1.3**	
	baz=310					
TWQ1			*e*S	**Sn**	**11 21 21.5 +1.5**	
	baz=310					
ILA	**Ilan**	**1.12 2**	*e*P	**Pn**	**11 21 07.0 +0.9**	
	baz=5.0					
CHN2	**Minshiung**	**1.14 265**	*e*P	**Pn**	**11 21 07.6 +1.2**	
	baz=263					
CHN2			*e*S	**Sn**	**11 21 22.2 +1.5**	
	baz=263					
WCHH	**Zhanghua**	**1.14 293** ⇓	P	**Pn**	**11 21 07.8 +1.3**	
	baz=293					
WCHH			*e*S	**Sn**	**11 21 22.6 +1.8**	
	baz=293					
NWLT	**Wulai**	**1.15 351** ⇑	P	**Pn**	**11 21 06.8 +0.2**	
	baz=353					
NWLT			*e*S	**Sn**	**11 21 19.8 -1.2**	
	baz=353					
NSY	**Sanyi**	**1.16 312** ⇓	P	**Pn**	**11 21 08.1 +1.4**	
	baz=313					
NSY			*e*S	**Sn**	**11 21 23.3 +1.9**	
	baz=313					
SLGT	**Liugui**	**1.17 237**⇓	*e*P	**Pn**	**11 21 08.1 +1.3**	
	baz=235					
SLGT			*e*S	**Sn**	**11 21 23.2 +1.6**	
	baz=235					
SGST	**Jiashian**	**1.18 242**⇓	*e*P	**Pn**	**11 21 07.3 +0.3**	
	baz=240					
SGST			*e*S	**Sn**	**11 21 22.9 +1.2**	
	baz=240					
CHN1	**Nanshi**	**1.18 248**⇓	*e*P	**Pn**	**11 21 08.1 +1.1**	
	baz=246					
CHN1			*e*S	**Sn**	**11 21 23.8 +2.1**	
	baz=246					
NSTT	**Nanjuang**	**1.18 327** ⇓	P	**Pn**	**11 21 08.3 +1.4**	
	baz=328					
NSTT			*e*S	**Sn**	**11 21 21.9 +0.1**	
	baz=328					
TWK	**Hsinying**	**1.18 252** ⇓	P	**Pn**	**11 21 07.9 +0.9**	
	baz=250					
TWK			*e*S	**Sn**	**11 21 23.8 +1.8**	
	baz=250					
LIOB	**Emei**	**1.18 328** ⇓	P	**Pn**	**11 21 08.5 +1.5**	
	baz=329					
LIOB			*e*S	**Sn**	**11 21 22.8 +0.9**	
	baz=329					
CHY	**Chiayi**	**1.19 263**⇓	*e*P	**Pn**	**11 21 08.3 +1.3**	
	baz=262					
CHY			*e*S	**Sn**	**11 21 24.1 +2.1**	
	baz=262					
SNST	**Tainan City**	**1.19 250**⇓	*e*P	**Pn**	**11 21 08.2 +1.0**	
	baz=248					
SNST			*e*S	**Sn**	**11 21 23.6 +1.6**	
	baz=248					
WDJ	**Dajia District**	**1.21 306**⇓	*e*P	**Pn**	**11 21 08.6 +1.3**	
	baz=306					
WDJ			*e*S	**Sn**	**11 21 24.3 +1.9**	
	baz=306					
NTC	**Toucheng**	**1.21 5**	*e*P	**Pn**	**11 21 08.3 +0.9**	
	baz=7.0					
NTC			*e*S	**Sn**	**11 21 24.0 +1.5**	
	baz=7.0					
WTK	**Tuku**	**1.21 272**⇓	*e*P	**Pn**	**11 21 08.1 +0.7**	
	baz=271					
WTK			*e*S	**Sn**	**11 21 24.2 +1.7**	
	baz=271					
NJD	**Zhudong**	**1.23 333**	*e*P	**Pn**	**11 21 09.9 +2.2**	
	baz=334					
NJD			*e*S	**Sn**	**11 21 24.9 +1.9**	
	baz=334					
WRL	**Guolierlin Hig**	**1.25 282**	*e*P	**Pn**	**11 21 06.5 -1.4**	
	baz=282					
WRL			*e*S	**Sn**	**11 21 23.1 -0.3**	
	baz=282					
ECL	**Taimali**	**1.25 214**	*e*P	**Pn**	**11 21 06.8 -1.1**	
	baz=211					
ECL			*e*S	**Sn**	**11 21 20.9 -2.6**	
	baz=211					
NJN	**Zhunan**	**1.29 324**	*e*P	**Pn**	**11 21 09.5 +1.1**	
	baz=325					
NJN			*e*S	**Sn**	**11 21 26.5 +2.1**	
	baz=325					
HSN1	**Hsinchu**	**1.30 331**	*e*P	**Pn**	**11 21 10.1 +1.5**	
	baz=332					
HSN1			*e*S	**Sn**	**11 21 27.2 +2.5**	
	baz=332					
SBCB	**Hsinchu**	**1.32 330**⇓	*e*P	**Pn**	**11 21 10.3 +1.4**	
	baz=331					
SBCB			*e*S	**Sn**	**11 21 28.2 +2.8**	
	baz=331					
NHDH	**Xindian Distri**	**1.33 353**	*e*P	**Pn**	**11 21 10.1 +1.1**	
	baz=355					
NHDH			*e*S	**Sn**	**11 21 25.9 +0.5**	
	baz=355					
TIPB	**Shuangxi**	**1.33 5**	*e*P	**Pn**	**11 21 10.1 +1.1**	
	baz=7.0					
TIPB			*e*S	**Sn**	**11 21 27.3 +1.8**	
	baz=7.0					
WTCT	**Ta-ch'eng**	**1.33 280**	*e*P	**Pn**	**11 21 09.6 +0.6**	
	baz=279					
WTCT			*e*S	**Sn**	**11 21 27.4 +2.0**	
	baz=279					
SSD	**Sandimen**	**1.33 228**	*e*P	**Pn**	**11 21 09.5 +0.5**	
	baz=226					
SSD			*e*S	**Sn**	**11 21 27.6 +2.0**	
	baz=226					
TWA	**Mucha**	**1.34 355**	*e*P	**Pn**	**11 21 10.0 +0.9**	
	baz=357					
TWA			*e*S	**Sn**	**11 21 24.6 -1.1**	
	baz=357					
HSN	**Hsinchu**	**1.34 330**	*e*P	**Pn**	**11 21 10.2 +1.0**	
	baz=333					
HSN			*e*S	**Sn**	**11 21 27.9 +2.2**	
	baz=333					
ICHU	**Yijhu**	**1.34 258**⇓	*e*P	**Pn**	**11 21 10.5 +1.3**	
	baz=257					
ICHU			*e*S	**Sn**	**11 21 26.9 +1.1**	
	baz=257					
TATO	**Taipei**	**1.34 351**	*e*P	**Pn**	**11 21 09.9 +0.7**	
	baz=353					
TATO			*e*S	**Sn**	**11 21 26.1 +0.3**	
	baz=353					
TATO	**Taipei**	**1.34 351**		**Pn**	**11 21 10.4 +1.2**	
SCST	**Cishan**	**1.35 236**⇓	*e*P	**Pn**	**11 21 11.2 +1.9**	
	baz=234					
SCST			*e*S	**Sn**	**11 21 29.0 +3.0**	
	baz=234					
TSMG	**Majia**	**1.35 227**⇓	*e*P	**Pn**	**11 21 09.7 +0.4**	
	baz=224					
TSMG			*e*S	**Sn**	**11 21 27.5 +1.4**	
	baz=224					
CHN3	**Shinhua**	**1.36 246**⇓	*e*P	**Pn**	**11 21 11.6 +2.2**	
	baz=244					
CHN3			*e*S	**Sn**	**11 21 30.4 +4.2**	
	baz=244					
WSF	**Szhu**	**1.36 270**	*e*P	**Pn**	**11 21 10.1 +0.6**	
	baz=269					
WSF			*e*S	**Sn**	**11 21 27.8 +1.4**	
	baz=269					
BACT	**New Taipei Cit**	**1.37 350**	*e*P	**Pn**	**11 21 11.0 +1.4**	
	baz=352					
BACT			*e*S	**Sn**	**11 21 28.5 +2.0**	
	baz=352					
WMLT	**Mailiao**	**1.37 277**	*e*P	**Pn**	**11 21 10.7 +1.1**	
	baz=276					
WMLT			*e*S	**Sn**	**11 21 28.7 +2.1**	
	baz=276					
TWB1	**Santiao Chiao**	**1.38 10**	*e*P	**Pn**	**11 21 11.2 +1.4**	
	baz=13					
TWB1			*e*S	**Sn**	**11 21 26.1 -0.7**	
	baz=13					
JYNG	**Yonagunijimaku**	**1.39 54** P		**Pn**	**11 21 11.4 +1.6**	
JYNG			S	**Sn**	**11 21 28.5 +1.6**	
TAP1	**Taipei**	**1.40 353**	*e*P	**Pn**	**11 21 11.3 +1.3**	
	baz=355					
TAP1			*e*S	**Sn**	**11 21 28.4 +1.2**	
	baz=355					
NTY	**Taoyuan**	**1.40 345**	*e*P	**Pn**	**11 21 11.7 +1.7**	
	baz=346					
NTY			*e*S	**Sn**	**11 21 29.6 +2.3**	
	baz=346					
TAP	**Taipei**	**1.40 352**	*e*P	**Pn**	**11 21 11.0 +1.0**	
	baz=354					
TAP			*e*S	**Sn**	**11 21 27.9 +0.7**	
	baz=354					
NCUH	**Zhongli**	**1.40 340**	*e*P	**Pn**	**11 21 11.6 +1.5**	
	baz=342					
NCUH			*e*S	**Sn**	**11 21 29.4 +2.1**	
	baz=342					
NCU	**National Centr**	**1.41 340**	*e*P	**Pn**	**11 21 11.6 +1.6**	
	baz=342					
NCU			*e*S	**Sn**	**11 21 29.8 +2.4**	
	baz=342					
CHN8	**Yiju**	**1.41 258**⇓	*e*P	**Pn**	**11 21 11.1 +1.0**	
	baz=257					
CHN8			*e*S	**Sn**	**11 21 29.1 +1.7**	
	baz=257					
WFSB	**Wu-fen Shan**	**1.42 3**	*e*P	**Pn**	**11 21 11.8 +1.5**	
	baz=5.0					
WFSB			*e*S	**Sn**	**11 21 29.4 +1.6**	
	baz=5.0					
MASBT	**Mashibuluo**	**1.43 224**⇓	*e*P	**Pn**	**11 21 10.8 +0.4**	
	baz=222					
MASBT			*e*S	**Sn**	**11 21 30.1 +2.2**	
	baz=222					
TWM1	**Shoushan**	**1.44 236**⇓	*e*P	**Pn**	**11 21 13.1 +2.6**	
	baz=234					
TWM1			*e*S	**Sn**	**11 21 33.6 +5.4**	
	baz=234					
YOJ	**Yonaguni jima**	**1.44 55** P		**Pn**	**11 21 12.1 +1.6**	
YOJ			*e*S	**Sn**	**11 21 30.2 +2.0**	
YOJ	**Yonaguni jima**	**1.44 55**⇓	*i*P	**Pn**	**11 21 12.2 +1.6**	
	baz=57					
YOJ			*e*S	**Sn**	**11 21 30.1 +1.8**	
	baz=57					
YOJ	**Yonaguni jima**	**1.44 55** P		**Pn**	**11 21 12.2 +1.6**	
YOJ	**Yonaguni jima**	**1.44 55**		**Pn**	**11 21 12.2 +1.6**	
SGLT	**Jiouru**	**1.45 231**⇓	*e*P	**Pn**	**11 21 13.3 +2.7**	
	baz=229					
SGLT			*e*S	**Sn**	**11 21 34.0 +5.7**	
	baz=229					
SCLT	**Jiali**	**1.47 252**⇓	*e*P	**Pn**	**11 21 12.3 +1.4**	
	baz=250					
SCLT			*e*S	**Sn**	**11 21 31.6 +2.7**	
	baz=250					
TSPT	**Pingtung City**	**1.47 230**	*e*P	**Pn**	**11 21 13.8 +2.8**	
	baz=228					
TSPT			*e*S	**Sn**	**11 21 34.1 +5.1**	
	baz=228					
TWS1	**Kuangyinshan**	**1.48 350**	*e*P	**Pn**	**11 21 12.2 +1.1**	
	baz=351					
TWS1			*e*S	**Sn**	**11 21 31.0 +1.9**	
	baz=351					
TAW	**Tawu**	**1.48 211**	*e*P	**Pn**	**11 21 10.8 -0.3**	
	baz=208					
TAW			*e*S	**Sn**	**11 21 28.3 -0.9**	
	baz=208					
EAST	**Anshuo**	**1.48 213**	*e*P	**Pn**	**11 21 10.7 -0.5**	
	baz=210					
EAST			*e*S	**Sn**	**11 21 34.3 +5.0**	
	baz=210					
NHW	**Xinwu Township**	**1.49 336**	*e*P	**Pn**	**11 21 12.4 +1.2**	
	baz=337					
NHW			*e*S	**Sn**	**11 21 31.5 +2.1**	
	baz=337					
TAI1	**Yung-k'ang**	**1.49 247**	*e*P	**Pn**	**11 21 12.6 +1.4**	
	baz=245					
TAI1			*e*S	**Sn**	**11 21 32.5 +3.1**	
	baz=245					
TNOU	**National Taiwa**	**1.50 2**	*e*P	**Pn**	**11 21 12.0 +0.6**	
	baz=4.0					
YM01	**YM01**	**1.50 355**	*e*P	**Pn**	**11 21 11.2 -0.3**	
	baz=357					
YM04	**YM04**	**1.51 354**	*e*P	**Pn**	**11 21 12.0 +0.4**	
	baz=356					
YM10	**YM10**	**1.51 355**	*e*P	**Pn**	**11 21 12.2 +0.5**	
	baz=357					
YM05	**YM05**	**1.52 355**	*e*P	**Pn**	**11 21 12.1 +0.4**	
	baz=357					
YM11	**YM11**	**1.52 355**	*e*P	**Pn**	**11 21 12.4 +0.7**	
	baz=357					
YM11			*e*S	**Sn**	**11 21 30.0 -0.3**	
	baz=357					
TAI	**Tainan**	**1.53 245**	*e*P	**Pn**	**11 21 13.7 +1.9**	
	baz=244					
NTST	**Danshui**	**1.53 351**	*e*P	**Pn**	**11 21 12.8 +1.0**	
	baz=353					
NTST			*e*S	**Sn**	**11 21 31.4 +0.9**	
	baz=353					
YM08	**YM08**	**1.54 356**	*e*P	**Pn**	**11 21 12.2 +0.2**	
	baz=358					
SNJT	**Kaohsiung City**	**1.54 235**⇓	*e*P	**Pn**	**11 21 14.4 +2.5**	
	baz=233					
SNJT			*e*S	**Sn**	**11 21 34.7 +3.9**	
	baz=233					
ANP	**Anpu**	**1.55 354**	*e*P	**Pn**	**11 21 12.6 +0.5**	
	baz=356					
NWRT	**Kuosheng**	**1.55 358**	*e*P	**Pn**	**11 21 14.4 +2.3**	
SSPT	**Xinbi**	**1.56 223**	*e*P	**Pn**	**11 21 13.8 +1.7**	
	baz=221					
SSPT			*e*S	**Sn**	**11 21 34.6 +3.4**	
	baz=221					
LAY	**Lan-yu**	**1.60 185**⇑	*e*P	**Pn**	**11 21 12.3 -0.5**	
	baz=183					
LAY			*e*S	**Sn**	**11 21 27.6 -4.7**	
	baz=183					
SCZT	**Fangliau**	**1.61 219**	*e*P	**Pn**	**11 21 13.7 +0.7**	
	baz=216					
SCZT			*e*S	**Sn**	**11 21 35.6 +3.1**	
	baz=216					
TWY	**Chenhua**	**1.63 356**	*e*P	**Pn**	**11 21 13.8 +0.7**	
	baz=358					
SLIU	**Shizi**	**1.65 211**	*e*P	**Pn**	**11 21 13.0 -0.5**	
	baz=209					
SLIU			*e*S	**Sn**	**11 21 36.4 +3.0**	
	baz=209					
KAU	**Kaohsiung**	**1.68 231**	*e*P	**Pn**	**11 21 16.2 +2.5**	
	baz=229					
WLCH	**Liuqiu**	**1.78 224**	*e*P	**Pn**	**11 21 18.3 +3.2**	
	baz=222					
WLCH			*e*S	**Sn**	**11 21 42.1 +5.6**	
	baz=222					
TWP	**Hsiaoliuchiu**	**1.79 224**⇓	*e*P	**Pn**	**11 21 18.3 +2.9**	
	baz=222					
TWP			*e*S	**Sn**	**11 21 42.1 +5.3**	
	baz=222					
HEN	**Hengchun**	**1.86 209**	*e*P	**Pn**	**11 21 18.4 +2.1**	
	baz=207					
HEN			*e*S	**Sn**	**11 21 41.2 +2.6**	
	baz=207					
TWKBT	**Hengchun**	**1.89 206**	*e*P	**Pn**	**11 21 17.1 +0.5**	
	baz=205					
TWKBT			*e*S	**Sn**	**11 21 38.7 -0.5**	
	baz=205					
TWK1	**Hengchun**	**1.89 206**	*e*P	**Pn**	**11 21 17.5 +0.8**	
	baz=204					
TWK1			*e*S	**Sn**	**11 21 39.9 +0.7**	
	baz=204					
TSEB	**Hengchuen, Pin**	**1.89 203**	*e*P	**Pn**	**11 21 17.8 +1.1**	
	baz=203					
TSEB			*e*S	**Sn**	**11 21 40.6 +1.4**	
	baz=203					
SNW	**Nanwan**	**1.90 208**	*e*P	**Pn**	**11 21 19.1 +2.3**	
	baz=206					
SNW			*e*S	**Sn**	**11 21 42.1 +2.7**	
	baz=206					
WDGT	**Dungji**	**1.92 259**⇓	*e*P	**Pn**	**11 21 17.5 +0.3**	
	baz=258					
WDGT			*e*S	**Sn**	**11 21 39.1 -1.0**	
	baz=258					
HATJ	**Hateruma jima**	**1.96 77** P		**Pn**	**11 21 19.4 +1.7**	
HATJ			*e*S	**Sn**	**11 21 43.2 +2.1**	
PHUB	**P'eng-hu**	**1.97 267**⇓	*e*P	**Pn**	**11 21 18.0 +0.3**	
	baz=266					
PHUB			*e*S	**Sn**	**11 21 40.5 -0.7**	
	baz=266					
PNG	**Penghu**	**1.98 268**⇓	*e*P	**Pn**	**11 21 18.2 +0.3**	
	baz=267					
PNG			*e*S	**Sn**	**11 21 41.0 -0.4**	
	baz=267					
PCYT	**Pengchaiyu**	**2.01 9**	*e*P	**Pn**	**11 21 19.7 +1.4**	
	baz=11					
VCHM	**Qimei**	**2.14 259**⇓	*e*P	**Pn**	**11 21 20.4 +0.2**	
	baz=258					
VCHM			*e*S	**Sn**	**11 21 43.9 -1.6**	
	baz=258					
JKRS	**Kuro-shima**	**2.19 74**	P	**Pn**	**11 21 22.7 +1.9**	
JKRS			S	**Sn**	**11 21 49.7 +3.1**	
JIJ	**Ishigaki jima**	**2.34 72**	P	**Pn**	**11 21 24.2 +1.3**	
JIJ			S	**Sn**	**11 21 51.9 +1.6**	
VWUC	**VWUC**	**2.46 304**⇓	*e*P	**Pn**	**11 21 24.0 -0.5**	
	baz=303					
VWUC			*e*S	**Sn**	**11 21 51.0 -2.4**	
	baz=303					
JISG	**Ishigakijimahi**	**2.56 68**	P	**Pn**	**11 21 27.2 +1.3**	
JISG			S	**Sn**	**11 21 56.4 +0.7**	
PTMZ	**Houxiangcun**	**2.74 301**⇓	*e*P	**Pn**	**11 21 27.9 -0.5**	
	baz=301					
PTMZ			*e*S	**Sn**	**11 21 57.7 -2.6**	
	baz=301					
JTJ	**Tarama**	**2.91 69**	P	**Pn**	**11 21 32.2 +1.5**	
JTJ			S	**Sn**	**11 22 06.0 +1.6**	
MATB	**Ma-tsu**	**2.97 328**⇓	*e*P	**Pn**	**11 21 30.9 -0.6**	
	baz=328					
MATB			*e*S	**Sn**	**11 22 03.3 -2.6**	
	baz=328					
MSUT	**Lienchiang**	**2.99 328**	*e*P	**Pn**	**11 21 31.3 -0.7**	
	baz=328					
MSUT			*e*S	**Sn**	**11 22 04.3 -2.2**	
	baz=328					
KNM	**Kinmen**	**3.09 285**⇓	*e*P	**Pn**	**11 21 34.6 +1.3**	
	baz=284					
KNM			*e*S	**Sn**	**11 22 09.8 +0.8**	
	baz=284					
KNMB	**Chin-men Tao**	**3.15 286**⇓	*e*P	**Pn**	**11 21 33.6 -0.4**	
	baz=285					
KNMB			*e*S	**Sn**	**11 22 08.0 -2.3**	
	baz=285					
KNMB	**Chin-men Tao**	**3.15 286**		**Pn**	**11 21 33.3 -0.6**	
BBP	**Basco**	**3.19 176**	*e*P	**Pn**	**11 21 35.0 +0.4**	
JIRB	**Irabujima**	**3.37 69**	P	**Pn**	**11 21 38.4 +1.3**	
JIRB			S	**Sn**	**11 22 17.6 +1.7**	
LYJJ	**Jianjiangzhen**	**3.39 329**⇓	*e*P	**Pn**	**11 21 36.7 -0.7**	
	baz=329					
LYJJ			*e*S	**Sn**	**11 22 14.2 -2.2**	
	baz=329					
MHZQ	**Yeshan**	**3.45 316**⇓	*e*P	**Pn**	**11 21 37.5 -0.6**	
	baz=315					
MHZQ			*e*S	**Sn**	**11 22 15.6 -2.3**	
	baz=315					
JIKM	**Ikemajima**	**3.47 68**	P	**Pn**	**11 21 39.7 +1.2**	
JIKM			S	**Sn**	**11 22 19.8 +1.5**	
JMJ	**Miyako jima 2**	**3.47 70**	*e*P	**Pn**	**11 21 40.2 +1.8**	
	baz=71					
JMJ2	**Miyako jima3**	**3.48 71**	P	**Pn**	**11 21 40.3 +1.7**	
JMJ2			S	**Sn**	**11 22 20.9 +2.4**	
XPSS	**Dashiqiu**	**3.55 338**⇓	*e*P	**Pn**	**11 21 39.1 -0.4**	
	baz=338					
JOGS	**Gusukube**	**3.55 71**	P	**Pn**	**11 21 41.5 +1.9**	
JOGS			S	**Sn**	**11 22 23.1 +2.7**	
AXDP	**Jialang**	**3.64 291**⇓	*e*P	**Pn**	**11 21 40.5 -0.2**	
	baz=290					
ZPLA	**Ao Xicun**	**3.64 275**⇓	*e*P	**Pn**	**11 21 40.5 -0.3**	
	baz=274					
JKE	**Kume jima 2**	**5.32 59**	P	**Pn**	**11 22 04.7 +0.8**	
VDOS	**Pratas Island**	**5.46 239**⇓	*e*P	**Pn**	**11 22 07.2 +1.3**	
	baz=237					
APYP	**Conner**	**5.77 184**	*e*P	**Pn**	**11 22 11.9 +1.9**	
CVP	**Callao Caves**	**5.91 179**⇓	*e*P	**Pn**	**11 22 13.4 +1.3**	
SZP	**Santa**	**6.17 191**		**Pn**	**11 22 16.1 +0.4**	
JNTH	**Nagotoyohara**	**6.40 62**	P	**Pn**	**11 22 18.8 +0.1**	
JIH	**Iheya**	**6.59 58**	P	**Pn**	**11 22 21.4 +0.1**	
JOW	**Kunigami**	**6.74 61**	P	**Pn**	**11 22 22.9 -0.5**	
JOW	**Kunigami**	**6.74 61**	Pn	**Pn**	**11 22 23.2 -0.2**	
GZH	**Guangzhou**	**7.71 268**	Pn	**Pn**	**11 22 32.5 -4.2**	
GZH			Sn	**Sn**	**11 23 54.5 -8.2**	
GZH			smax	smax		
	comp=N,670nm,0.9s					
GZH			smax	smax		
	comp=E,690nm,1.0s					
NJ2	**Nanjing**	**8.75 344**⇑	*i*P	**Pn**	**11 22 51.4 +0.4**	
NJ2			S	**Sn**	**11 24 25.6 -2.7**	
NJ2			pmax	pmax		
	comp=Z,38nm,0.6s					
NJ2			smax	smax		
	comp=N,440nm,1.1s					
NJ2			smax	smax		
	comp=E,470nm,1.1s					
NJ2			LR	LR		
	comp=N,2μm,13.1s					
NJ2			LR	LR		
	comp=E,2μm,7.3s					
NJ2			LR	LR		
	comp=Z,3μm,13.2s					
JMZ	**Minamidaito 2**	**8.91 74**	P	**Pn**	**11 22 50.2 -3.0**	
JMZ	**Minamidaito 2**	**8.91 74**	Pn	**Pn**	**11 22 52.2 -1.0**	
JKDJ	**Kitadaitoujima**	**9.01 73**	P	**Pn**	**11 22 51.6 -2.9**	
JCNP	**Jose Panganiba**	**9.35 174**	*e*P	**Pn**	**11 22 59.5 +0.2**	
MACP	**Maragondon, Ca**	**9.38 186**	*e*P	**Pn**	**11 22 59.5 -0.1**	
LQP	**Lukban**	**9.48 181**⇑	*e*P	**Pn**	**11 23 02.6 +1.3**	
WHN	**Wuhan**	**9.50 318** ⇑	P	**Pn**	**11 22 59.9 -1.3**	
WHN			pP		11 23 05.4	
WHN			LR	LR		
	comp=N,5μm,6.8s					
WHN			LR	LR		
	comp=E,6μm,5.0s					
WHN			LR	LR		
	comp=Z,5μm,12.4s					
TGY	**Tagaytay City**	**9.52 185**	P	**Pn**	**11 23 06.0 +4.4**	
	baz=301,slow=5.9,SNR=0.9					
TGY			LR	LR	11 27 42.4	
	comp=Z,461nm,18.2s,baz=99,slow=43					
TGY	**Tagaytay City**	**9.52 185**	P	**Pn**	**11 23 06.0 +4.4**	
LUBP	**Lubang**	**9.95 188**	*e*P	**Pn**	**11 23 10.9 +3.4**	
SJMP	**San Jose**	**11.13 183**	*e*P	**Pn**	**11 23 26.9 +3.2**	
QIZ	**Qiongzhong**	**11.97 250**	P	**Pn**	**11 23 35.5 +0.3**	
QIZ			S	**Sn**	**11 25 46.5 -1.0**	
QIZ			pmax	pmax		
	comp=Z,22nm,1.3s					
QIZ			LR	LR		
	comp=N,790nm,14.1s					
QIZ			LR	LR		
	comp=E,800nm,15.3s					
QIZ			LR	LR		
	comp=Z,1μm,16.3s					
QIZ	**Qiongzhong**	**11.97 250**	Pn	**Pn**	**11 23 34.7 -0.5**	
JNU	**Nakatsue**	**12.42 38**	P	**Pn**	**11 23 44.4 +3.2**	
	1.0nm,0.3s,baz=223,slow=9.9,SNR=4.1					
JNU	**Nakatsue**	**12.42 38**		**Pn**	**11 23 42.8 +1.5**	
ENPP	**El Nido**	**12.56 190**	*e*P	**Pn**	**11 23 44.2 +1.0**	
ENH	**Enshi**	**12.74 304**	Pn	**Pn**	**11 23 46.0 +0.3**	
TIA	**Tai'an**	**13.14 343**	P	**Pn**	**11 23 59.5 -1.1**	
TIA			LR	LR		
	comp=N,1μm,18.0s					
TIA			LR	LR		
	comp=E,1μm,12.9s					
TIA			LR	LR		
	comp=Z,2μm,16.1s					
CNOP	**Candoni, Negro**	**13.77 176**	*e*P	**Pn**	**11 23 59.6 -0.1**	
MSLP	**Maasin**	**13.77 167**	*e*P	**P**	**11 24 09.9 +2.2**	
GYA	**Guiyang**	**13.92 285** ⇓	P	**Pn**	**11 24 02.3 +0.4**	
GYA			pP	P	11 24 08.9 -0.6	
GYA			S	**Sn**	**11 26 34.8 -0.5**	
GYA			sS	S	11 26 44.5 -12	
GYA			pmax	pmax		
	comp=Z,47nm,1.3s					
GYA			pmax	pmax		
	comp=Z,270nm,4.3s					
GYA			LR	LR		
	comp=Z,930nm,7.1s					
GYA			LR	LR		
	comp=Z,2μm,11.9s					
GYA			LR	LR		
	comp=Z,3μm,13.3s					
GLSP	**General Luna,**	**14.41 162**	*e*P	**P**	**11 24 15.7 +0.8**	
KSAR	**Wonju Array Be**	**14.74 20**	P	**P**	**11 24 18.2 -0.2**	
KSAR	**Wonju Array Be**	**14.74 20**	P	**P**	**11 24 18.2 -0.2**	
KSRS	**Korea Array**	**14.76 20**	P	**Pn**	**11 24 15.8 +2.7**	
	comp=Z,1.5nm,0.3s,baz=196,slow=12,SNR=21					
KSRS			LR	LR	11 30 39.6	
	comp=Z,559nm,19.4s,baz=199,slow=40					
KS19	**Wonju Array Si**	**14.79 20**	P	**P**	**11 24 19.2 +0.2**	
DL2	**Dalian**	**15.22 360**	*e*P	**P**	**11 24 22.8 -0.9**	
DL2			*e*S	**S**	**11 27 15.8 -6.5**	
DL2			pmax	pmax		

comp=Z,43nm,1.1s
DL2 LR LR
comp=Z,880nm,17.7s
DL2 LR LR
comp=Z,540nm,16.6s
DL2 LR LR
comp=Z,960nm,19.7s
BATP Bataraza 15.23 195 *eP* **P 11 24 25.7 +1.8**
XAN Xi'an 15.25 316 P **Pn 11 24 19.8 +0.2**
XAN pP P 11 24 28.5 +4.4
XAN sP pP 11 24 32.5 -1.1
XAN S **S 11 27 17.0 -6.1**
XAN pmax pmax
comp=Z,77nm,1.2s
XAN pmax pmax
comp=Z,370nm,3.9s
XAN LR LR
comp=Z,3μm,5.5s
XAN LR LR
comp=Z,2μm,5.3s
XAN LR LR
comp=Z,2μm,17.7s
XAN Xi'an 15.25 316 P **Pn 11 24 19.9 +0.3**
XAN pmax pmax
comp=Z,57nm,0.9s
XAN Xi'an 15.25 316 Pn **Pn 11 24 19.9 +0.3**
PAGZ Pagadian 15.79 174 *eP* **P 11 24 29.5 -0.7**
BUKP Musuan 16.00 168 *eP* **P 11 24 35.8 +3.2**
TIY Taiyuan 16.12 333 *eP* **P 11 24 34.3 +0.5**
TIY S **S 11 27 35.9 -5.1**
TIY pmax pmax
comp=Z,28nm,0.6s
TIY LR LR
comp=Z,1μm,7.9s
TIY LR LR
comp=Z,820nm,7.4s
TIY LR LR
comp=Z,1μm,11.4s
DAV Davao City (W) 16.89 167 LR LR 11 30 42.3
comp=Z,662nm,22.0s,baz=343,slow=35
BJT Baijiatuau 16.99 345 P **P 11 24 44.2 +0.9**
BJT pmax pmax
comp=Z,16nm,0.8s
BJT Baijiatuau 16.99 345 P **P 11 24 44.1 +0.9**
BJI Beijing 17.00 345 P **P 11 24 45.9 +2.4**
BJI S **Sn 11 27 51.5 +1.7**
BJI pmax pmax
comp=Z,17nm,0.8s
BJI pmax pmax
comp=Z,130nm,9.1s
BJI LR LR
comp=Z,800nm,17.1s
BJI LR LR
comp=Z,390nm,15.6s
BJI LR LR
comp=Z,550nm,19.0s
DLV T Lat 17.13 229 P **Pn 11 24 43.5 -0.3**
SKMP Bagumbayan, Su 17.24 170 *eP* **P 11 24 46.9 +0.6**
KMI Kunming 17.35 279 ⇑P **P 11 24 50.6 +3.0**
KMI pP pP 11 24 57.8 +0.1
KMI PP **sP 11 25 03.5 +1.8**
KMI pmax pmax
comp=Z,23nm,1.4s
KMI pmax pmax
comp=Z,270nm,4.1s
KMI LR LR
comp=Z,880nm,11.2s
KMI LR LR
comp=Z,2μm,15.4s
KMI LR LR
comp=Z,2μm,14.0s
UBPT Khong Chiam 17.41 244 P **P 11 24 51.5 +3.3**
comp=Z,18nm,1.2s
UBPT Khong Chiam 17.41 244 P **Pn 11 24 47.6 +0.3**
CD2 Chengdu 17.51 298 P **Pn 11 24 48.8 +0.4**
CD2 sP pP 11 25 00.8 +1.8
CD2 S **Sn 11 28 00.9 -1.5**
CD2 pmax pmax
comp=Z,130nm,0.9s
CD2 pmax pmax
comp=Z,200nm,5.5s
CD2 LR LR
comp=Z,3μm,8.4s
CD2 LR LR
comp=Z,3μm,11.0s
CD2 LR LR
comp=Z,3μm,11.2s
NONG Nongkai 18.21 256 P **Pn 11 25 00.0 +3.0**
comp=Z,48nm,0.9s
KKM Kota Kinabalu 18.28 198 P **Pn 11 24 58.3 +0.4**
KKM lAmb lAmb 11 25 03.7
comp=Z,222nm,1.3s
JHJ Hachijo jima 2 18.47 55 P **Pn 11 25 00.9 +0.8**
baz=251,slow=19,SNR=2.3
MYLDM Lahad Datu 18.61 190 P **P 11 25 01.1 -0.3**
JCJ Chichijima 18.82 75 LR LR 11 31 21.1
comp=Z,340nm,21.9s,baz=94,slow=34
HHC Hu-ho-hao-te 19.16 336 *eP* **Pn 11 25 09.6 +1.2**
HHC S **Sn 11 28 37.8 -4.3**
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,160nm,4.1s
HHC LR LR
comp=Z,940nm,12.8s
HHC LR LR
comp=Z,680nm,13.5s
HHC LR LR
comp=Z,1μm,17.7s
KHON Khomkaen 19.17 251 P **Pn 11 25 10.0 +1.4**
comp=Z,59nm,0.9s
MAT Matsushiro 19.17 44 P **Pn 11 25 08.2 -0.4**
MAT eS **Sn 11 28 40.8 -1.6**
MJAR Matsushiro Arr 19.18 44 P **P 11 25 06.6 -0.8**
comp=Z,0.1nm,0.3s,baz=228,slow=9.2,SNR=8.8
MJAR LR LR 11 32 45.2
comp=Z,264nm,20.6s,baz=210,slow=37
LZH Lanzhou 19.81 313 *eP* **Pn 11 25 17.0 +0.7**
LZH pP pP 11 25 23.9 -0.2
LZH sP sP 11 25 29.3 +0.6
LZH *e*S **S 11 28 56.1 +0.3**
LZH sS sS 11 29 08.3 -0.3
LZH SS **SnSn 11 29 19.1 +6.6**
LZH pmax pmax
comp=Z,43nm,1.1s
LZH pmax pmax
comp=Z,320nm,4.6s
LZH LR LR
comp=Z,1μm,13.0s
LZH LR LR
comp=Z,1μm,12.5s
LZH LR LR
comp=Z,1μm,16.0s
CHAI Chaiyaphum 20.08 251 P Pn 11 25 19.8 +0.3
comp=Z,458nmcomp=Z,46nm,0.8s
CN2 Changchun 20.34 8 *eP* Pn 11 25 23.3 +1.0
CN2 *e*S **S 11 29 04.3 -1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,300nm,14.0s
CN2 LR LR
comp=Z,600nm,14.0s
CN2 LR LR
comp=Z,800nm,14.0s
UTTA Uttaradit 20.63 257 P Pn 11 25 25.4 -0.5
comp=Z,458nmcomp=Z,26nm,0.7s
SRAK Srakaew 20.91 246 P **P 11 25 23.9 -2.5**
comp=Z,4μmcomp=Z,400nm,1.1s
PHIT Phitsanulok 20.95 256 P Pn 11 25 29.0 -0.6
comp=Z,2μmcomp=Z,207nm,0.9s
LAMP Lampang 21.21 260 P **P 11 25 32.0 +2.3**
comp=Z,645nmcomp=Z,70nm,1.1s
SUKH Sukhothai 21.55 258 P **P 11 25 35.5 +2.2**
comp=Z,41nm,0.6s
CM34 Chiang Mai Arr 21.55 262 P **P 11 25 35.0 +1.6**
CM35 Chiang Mai Arr 21.60 261 P **P 11 25 35.0 +1.1**
CM36 Chiang Mai Arr 21.70 261 P **P 11 25 36.0 +1.1**
CM33 Chiang Mai Arr 21.75 262 P **P 11 25 36.0 +0.5**
CMMT Chiang Mai 21.75 262 P **P 11 25 36.0 +0.5**
comp=Z,249nmcomp=Z,20nm,1.1s
CHTO Chiang Mai 21.75 262 P **P 11 25 34.7 -0.8**
CHTO pmax pmax
comp=Z,36nm,1.0s
CHTO Chiang Mai 21.75 262 P **P 11 25 34.7 -0.8**
CM09 Chiang Mai Arr 21.82 261 P **P 11 25 38.4 +2.2**
comp=Z,261nmcomp=Z,28nm,1.1s
CM04 Chiang Mai Arr 21.84 260 P **P 11 25 38.6 +2.1**
comp=Z,270nmcomp=Z,31nm,1.0s
CM01 Chiang Mai Arr 21.85 261 P **P 11 25 38.9 +2.3**
comp=Z,250nmcomp=Z,33nm,1.1s
CM31 Chiang Mai Arr 21.86 261 P **P 11 25 38.0 +1.4**
comp=Z,600nm,0.9s
CM31 Chiang Mai Arr 21.86 261 P **P 11 25 36.5 -0.2**
CMAR Chiang Mai Arr 21.86 261 P **P 11 25 37.9 +1.3**
comp=Z,18nm,0.9s,baz=61,slow=8.4,SNR=98
CMAR PcP **PcP 11 29 35.3 -0.2**
comp=Z,2.1nm,0.5s,baz=24,slow=0.5,SNR=9.9
CMAR LR LR 11 35 01.6
comp=Z,592nm,18.1s,baz=123,slow=39
CMAR Chiang Mai Arr 21.86 261 *ce*P **P 11 25 38.5 +1.9**
CMAR pmax pmax
comp=Z,18nm,0.9s
CMAR Chiang Mai Arr 21.86 261 P **P 11 25 37.1 +0.5**
CM02 Chiang Mai Arr 21.86 261 P **P 11 25 38.0 +1.3**
comp=Z,213nmcomp=Z,28nm,1.1s
CM05 Chiang Mai Arr 21.87 261 P **P 11 25 38.9 +2.1**
comp=Z,180nmcomp=Z,20nm,1.1s
CM15 Chiang Mai Arr 21.87 261 P **P 11 25 38.9 +2.0**
comp=Z,234nmcomp=Z,29nm,1.0s
CM32 Chiang Mai Arr 21.89 261 P **P 11 25 39.0 +2.1**
MDJ Mudanjiang 21.89 15 P **P 11 25 37.5 +0.7**
MDJ S **S 11 29 41.3 +4.7**
MDJ sS Sn 11 29 45.9 -1.7
MDJ SS **SnSn 11 30 06.8 +3.4**
MDJ ScP **ScP 11 33 13.3 +3.6**
MDJ ScS **ScS 11 36 59.3 +5.2**
MDJ pmax pmax
comp=Z,10.0nm,0.6s
MDJ pmax pmax
comp=Z,110nm,4.7s
MDJ LR LR
comp=Z,470nm,15.1s
MDJ LR LR
comp=Z,530nm,15.1s
MDJ LR LR
comp=Z,860nm,14.2s
MDJ Mudanjiang 21.89 15 P **P 11 25 36.6 -0.2**
CM13 Chiang Mai Arr 21.90 261 P **P 11 25 39.0 +2.0**
comp=Z,188nmcomp=Z,18nm,0.8s
USRK Ussuriysk Ar. 22.17 20 P **P 11 25 39.6 -0.2**
comp=Z,3.2nm,0.6s,baz=199,slow=10,SNR=9.0
USRK LR LR 11 35 10.8
comp=Z,213nm,19.3s,baz=183,slow=39
TOLI2 Tolitoli 22.41 182 P **P 11 25 41.2 -1.4**
TOLI2 lAmb lAmb 11 25 44.8
comp=Z,83nm,0.9s
UTHA Uthaitani 22.44 253 P **P 11 25 48.0 +5.1**
comp=Z,395nmcomp=Z,19nm,0.9s
UMPA Umpang Tak 22.70 255 P **P 11 25 50.3 +4.6**
comp=Z,1μmcomp=Z,46nm,1.1s
MHMT Maesarieng 22.86 261 P **P 11 25 48.4 +1.1**
comp=Z,1μmcomp=Z,40nm,0.9s
GTOI Gorontalo 22.90 177 P **P 11 25 46.7 -1.1**
comp=Z,417nmcomp=Z,54nm,0.8s
GTOI pP **pP 11 25 53.1 -3.8**
comp=Z,417nmcomp=Z,54nm,0.8s
SBUM Sibu 22.98 205 P **P 11 25 48.1 -0.5**
SBUM Sibu 22.98 205 P **P 11 25 48.0 -0.6**
MRSI Marisa 23.03 179 P **P 11 25 49.4 +0.4**
comp=Z,1μmcomp=Z,99nm,1.0s
TNTI Ternate 23.39 166 P **P 11 25 53.1 +0.5**
comp=Z,43nm,1.1s
PHET Kaeng Krachan 23.49 247 P **P 11 25 58.0 +4.3**
KHLT Khaolaem Dam 23.51 252 P **P 11 25 56.0 +2.2**
comp=Z,17nm,1.3s
GTA Gaotai 24.31 315 P **P 11 26 02.6 +1.3**
GTA pP pP 11 26 12.1 0.0
GTA sP sP 11 26 16.4 -0.6
GTA S **S 11 30 22.3 +4.3**
GTA sS sS 11 30 31.1 -2.3
GTA pmax pmax
comp=Z,24nm,1.4s
GTA pmax pmax
comp=Z,110nm,10.0s
GTA LR LR
comp=Z,460nm,14.3s
GTA LR LR
comp=Z,890nm,16.7s
GTA LR LR
comp=Z,1μm,17.9s
APSI Ampana 24.41 180 P **P 11 26 02.5 +0.4**
comp=Z,949nmcomp=Z,102nm,1.2s
LUWI Luwuk 24.56 177 P **P 11 26 03.9 +0.4**
LUWI Luwuk 24.56 177 P **P 11 26 03.6 +0.1**
comp=Z,2μmcomp=Z,136nm,1.3s
KSM Kuching 24.65 208 P **P 11 26 04.2 -0.3**
KSM Kuching 24.65 208 P **P 11 26 05.0 +0.6**
BKB Balikpapan 25.19 191 P **P 11 26 08.7 -0.5**
BKB Balikpapan 25.19 191 P **P 11 26 09.0 -0.3**
comp=Z,4μmcomp=Z,317nm,1.1s
MTKI Muara Teweh, K 25.32 196 P **P 11 26 10.4 0.0**
comp=Z,145nm,0.6s
STKI Sintang 25.46 204 P **P 11 26 14.5 +2.8**
HIA Hailar 25.62 357 P **P 11 26 13.2 +0.2**
HIA pmax pmax
comp=Z,33nm,1.2s
HIA Hailar 25.62 357 P **P 11 26 13.2 +0.2**
SANI Sanana 25.87 170 P **P 11 26 13.1 -2.4**
SIJI Sorong 26.07 158 P **P 11 26 17.2 -0.1**
comp=Z,5.1nm,0.5s,baz=357,slow=18,SNR=2.7
TTSI Tana Toraja 26.59 184 P **P 11 26 21.2 -0.7**
comp=Z,40nm,0.8s
ASAJ Asahikawa 26.65 35 P **P 11 26 21.8 -0.5**
comp=Z,6.1nm,0.6s,baz=242,slow=11,SNR=10
JKA Kamikawa-asahi 26.66 35 P **P 11 26 22.5 +0.2**
JKA lAmb lAmb 11 26 36.3
comp=Z,59nm,1.5s
KLR Kul'dur 26.74 15⇓ *eP* **P 11 26 22.8 -0.2**
KLR pmax pmax
comp=Z,6.0nm,0.6s
ULN Ulaanbaatar 26.85 338 *ce*P **P 11 26 23.9 -0.3**
ULN pmax pmax
comp=Z,20nm,0.8s
ULN Ulaanbaatar 26.85 338 P **P 11 26 24.0 -0.2**
SONM Songino Array 27.05 337 P **P 11 26 25.6 -0.4**
comp=Z,8.5nm,0.8s,baz=152,slow=9.5,SNR=22
SONM PcP **PcP 11 29 45.7 -0.9**
comp=Z,0.8nm,0.4s,baz=177,slow=4.5,SNR=4.3
SONM LR LR 11 38 22.9
comp=Z,1μm,18.2s,baz=148,slow=39
SONM Songino Array 27.05 337 P **P 11 26 25.3 -0.7**
SHL Shillong 27.16 280 P **P 11 26 27.8 +0.5**
SHL pmax pmax
comp=Z,69nm,1.2s
SHL Shillong 27.16 280 P **P 11 26 27.8 +0.5**
SHL lAmb lAmb 11 26 48.3
comp=Z,69nm,1.2s
NLAI Namlea 27.23 168 P **P 11 26 29.0 +1.3**
comp=Z,2μmcomp=Z,76nm,0.8s
KBKI Kotabaru 27.32 192 P **P 11 26 28.5 0.0**
comp=Z,37nm,1.0s
SPSI Sidrap Palu 27.50 184 P **P 11 26 29.4 -0.7**
comp=Z,30nm,0.8s
IPM Ipoh 27.59 229 P **P 11 26 30.6 -0.4**
IPM Ipoh 27.59 229 P **P 11 26 32.0 +1.0**
BBKI Banjar Baru 27.76 195 P **P 11 26 32.5 +0.1**
comp=Z,60nm,1.3s
MYKOM Kota Tinggi 27.77 221 P **P 11 26 32.5 0.0**
MYKOM lAmb lAmb 11 26 37.7
comp=Z,26nm,0.7s
MYKOM Kota Tinggi 27.77 221 P **P 11 26 34.0 +1.4**
BNSI Bone 27.92 183 P **P 11 26 33.3 -0.5**
comp=Z,26nm,1.2s
LSA Lhasa 27.92 289 P **P 11 26 35.8 +1.5**
LSA S **S 11 31 19.0 +2.9**
LSA LR LR
comp=Z,1μm,18.5s
LSA LR LR
comp=Z,4μm,17.1s
LSA LR LR
comp=Z,5μm,17.1s
KAPI Kappang 28.55 184 P **P 11 26 37.5 -2.0**
comp=Z,14nm,0.7s,baz=8.5,slow=7.5,SNR=12
KAPI Kappang 28.55 184 P **P 11 26 38.5 -0.9**
KAPI pmax pmax
comp=Z,17nm,0.8s
KAPI Kappang 28.55 184 P **P 11 26 38.5 -0.9**
YSS Yuzh-Sakhalins 28.74 31⇑ *i*P **P 11 26 44.2 +3.3**
YSS *e*S **S 11 31 31.9 +4.2**
YSS MLR MLR
comp=Z,200nm,14.0s
YSS MLR MLR
comp=N,100nm,13.0s
PPBI Pangkal Pinang 29.79 213 P **P 11 26 51.2 +0.7**
PSI Prapat 30.25 230 P **P 11 26 55.0 +0.3**
comp=N,6.4nm,0.7s,baz=360,slow=3.2,SNR=8.8
PSI LR LR 11 38 51.5
comp=N,325nm,19.0s,baz=88,slow=36
PSI Prapat 30.25 230 P **P 11 26 55.3 +0.6**
PSI pmax pmax
comp=Z,29nm,1.3s
ZAK Zakamensk 30.31 336 *e*P **P 11 26 52.6 -2.3**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
RPSI Rantau Prapat 30.32 230 P **P 11 26 55.3 0.0**
ZEA Zeya 30.34 7 *e*P **P 11 26 54.7 -0.3**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
ZEA MLR MLR
comp=Z,300nm,16.0s
SMPI Sarmi 30.38 145 P **P 11 26 56.1 +0.4**
comp=Z,41nm,1.1s
TAPN Taplejung 30.86 284 *e*P **P 11 27 01.6 +1.4**
ODAN Odare 31.15 283 *e*P **P 11 27 03.8 +1.0**
comp=Z,85nm,1.2s
ODAN Odare 31.15 283 *e*P **PcP 11 29 57.6 +0.2**
comp=Z,29nm,0.8s
MNSI Mandailing Nat 31.25 227 P **P 11 27 03.5 +0.1**
comp=Z,1μmcomp=Z,48nm,0.8s
TLY Talaya 31.26 338 *ce*P **P 11 27 02.7 -0.5**
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY Talaya 31.26 338 P **P 11 27 02.6 -0.5**
KMMI Kalianget 31.43 195 P **P 11 27 06.0 +1.1**
comp=Z,61nm,1.2s
GENI Genyem 31.67 143 P **P 11 27 08.0 +0.9**
comp=Z,58nm,1.2s
RAMN Ramite 31.85 283 *e*P **P 11 27 09.9 +0.9**
comp=Z,56nm,0.9s
RAMN Ramite 31.85 283 *e*P **PcP 11 29 59.2 -0.1**
comp=Z,14nm,0.6s
MMRI Maumere 32.08 179 P **P 11 27 09.5 -1.2**
MMRI Maumere 32.08 179 P **P 11 27 09.3 -1.4**
comp=Z,131nm,1.3s
SRBI Singaraja 32.17 192 P **P 11 27 11.0 -0.4**
comp=Z,31nm,0.9s
JIRN Jiri 32.20 285 *e*P **P 11 27 13.1 +0.9**
comp=Z,59nm,0.9s
JIRN Jiri 32.20 285 *e*P **PcP 11 30 00.3 -0.1**
GSI Gunungsitoli 32.25 230 P **P 11 27 10.8 -1.5**
GUN Gumba 32.47 285 *e*P **P 11 27 15.4 +0.9**
comp=Z,90nm,1.0s
GUN Gumba 32.47 285 *e*P **PcP 11 30 00.7 -0.4**
comp=Z,14nm,0.6s
PLAI Plampang 32.50 187 P **P 11 27 12.7 -1.6**
comp=Z,61nm,0.9s
TWSI Taliwang, Sumb 32.53 189 P **P 11 27 12.9 -1.7**
comp=Z,22nm,1.1s
LHSI Lahat 32.55 215 P **P 11 27 15.9 +1.0**
comp=Z,1μmcomp=Z,77nm,0.5s
PKI Pulchoki 32.90 285 *e*P **P 11 27 18.4 +0.2**
comp=Z,53nm,1.2s
PKI Pulchoki 32.90 285 *e*P **PcP 11 30 01.6 -0.7**
comp=Z,20nm,0.6s
PKIN Phulchoki 32.91 285 *e*P **P 11 27 18.3 +0.1**
PKIN Phulchoki 32.91 285 *e*P **PcP 11 30 01.4 -0.8**
comp=Z,28nm,0.8s
BLSI Bandar Lampung 33.01 211 P **P 11 27 20.1 +1.2**
DMN Daman 33.16 285 *e*P **P 11 27 20.9 +0.4**
comp=Z,70nm,1.1s
UGM Wanagama 33.21 201 P **P 11 27 20.4 -0.2**
LEM Lembang 33.27 206 P **P 11 27 22.2 +0.9**
comp=Z,82nm,0.7s,baz=30,slow=3.9,SNR=16
SOEI Soe 33.29 175 P **P 11 27 20.5 -0.9**
SOEI lAmb lAmb 11 27 32.2
comp=Z,40nm,0.8s
SOEI Soe 33.29 175 P **P 11 27 20.5 -0.9**
comp=Z,50nm,0.8s
LWLI Liwa 33.29 213 P **P 11 27 21.9 +0.5**
comp=Z,196nm,0.9s
KASI Kota Agung 33.51 212 P **P 11 27 22.9 -0.3**
comp=Z,133nm,0.7s
GKN Gorkha 33.57 285 *e*P **P 11 27 24.1 +0.2**
BATI Baumata 33.70 177 P **P 11 27 22.4 -2.4**
comp=Z,82nm,0.7s,baz=358,slow=1.0,SNR=15
BATI Baumata 33.70 177 P **P 11 27 22.4 -2.4**
WMQ Urumqi 34.38 314 *e*P **P 11 27 32.0 +1.4**
WMQ pP pP 11 27 39.5 -1.6
WMQ pmax pmax
comp=Z,21nm,0.8s
WMQ pmax pmax
comp=Z,260nm,4.7s
WMQ LR LR
comp=Z,650nm,13.5s
WMQ LR LR
comp=Z,610nm,17.3s
WMQ LR LR
comp=Z,940nm,17.3s
WMQ Urumqi 34.38 314 P **P 11 27 29.3 -1.3**
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ Urumqi 34.38 314 P **P 11 27 29.3 -1.3**
KOLN Koldanda 34.49 285 *e*P **P 11 27 32.3 +0.3**
comp=Z,65nm,1.0s
MANU Manus Island 35.71 132 P **P 11 27 43.5 +1.3**
MANU lAmb lAmb 11 27 45.5
comp=Z,34nm,0.7s
DGZ Jazzator, Alta 37.32 323⇑ *i*P **P 11 27 56.8 +1.0**
DGZ pmax pmax
comp=Z,7.0nm,0.9s
MTN Manton Dam 37.41 165 P **P 11 27 56.0 -0.7**
MTN lAmb lAmb 11 28 10.3
comp=Z,49nm,1.2s
ZSN Zaisan 37.73 318 *e*P **P 11 27 59.4 +0.2**
baz=318
ZSN Zaisan 37.73 318 *e*P **P 11 27 59.3 +0.2**
YAK Yakutsk 38.75 6⇑ *e*P **P 11 28 06.7 -0.8**
YAK pmax pmax
comp=Z,12nm,0.4s
MK31 Makanchi Array 39.06 316 *i* P **P 11 28 10.7 +0.3**
MK31 Makanchi Array 39.06 316 P **P 11 28 11.1 +0.7**
MKAR Makanchi Array 39.06 316 P **P 11 28 10.6 +0.2**
comp=Z,20nm,0.9s,baz=108,slow=9.8,SNR=90
MKAR PcP **PcP 11 30 19.1 -0.8**
comp=Z,4.9nm,0.8s,baz=90,slow=3.6,SNR=4.0
MKAR ScP **ScP 11 34 01.6 -3.9**
comp=Z,1.1nm,0.8s,baz=104,slow=4.6,SNR=4.3
MKAR Makanchi Array 39.06 316 P **P 11 28 10.8 +0.4**
MKAR Makanchi Array 39.06 316 P **P 11 28 10.8 +0.4**
MAKZ Makanchi 39.27 316 P **P 11 28 12.2 +0.1**
MAKZ Makanchi 39.27 316 P **P 11 28 12.1 +0.1**
MAKZ lAmb lAmb 11 28 14.6
comp=Z,24nm,0.9s
SHLS Shalkode 39.78 310 *e*P **P 11 28 15.0 -1.5**
comp=Z,7.7nm,0.8s,baz=310
SHLS Shalkode 39.78 310 *e*P **P 11 28 15.0 -1.5**
SHLS pmax pmax
comp=Z,8.0nm,0.8s
PDGK Podgornoye 39.80 310 P **P 11 28 17.0 +0.2**
UZB Uzynbulak 40.09 310 *e*P **P 11 28 20.0 +0.9**
comp=Z,4.6nm,0.7s,baz=309
UZB *e*S **S 11 34 24.9 +1.9**
baz=309
UZB Uzynbulak 40.09 310 *e*P **P 11 28 20.0 +0.9**
UZB *e*S **S 11 34 24.9 +1.9**
UZB pmax pmax
comp=Z,5.0nm,0.7s
KPKS Kokpek 40.41 310 *e*P **P 11 28 22.5 +0.7**
comp=Z,13nm,1.2s,baz=310
KPKS Kokpek 40.41 310 *e*P **P 11 28 22.4 +0.7**
KPKS pmax pmax
comp=Z,13nm,1.2s
SATY Saty 40.50 309 *e*P **P 11 28 23.7 +1.1**
comp=Z,9.4nm,1.1s,baz=309
SATY *e*S **S 11 34 31.5 +2.4**
baz=309
SATY Saty 40.50 309 *e*P **P 11 28 23.6 +1.1**
SATY *e*S **S 11 34 31.5 +2.4**
SATY pmax pmax
comp=Z,9.0nm,1.1s
RABL Rabaul 40.58 129 P **P 11 28 24.9 +1.5**
HYB Hyderabad 40.77 270 *i* P **P 11 28 25.0 0.0**
ZALV Zalesovo Beam 40.96 327 P **P 11 28 25.4 -0.6**
comp=Z,5.0nm,0.4s,baz=111,slow=8.1,SNR=38
ZALV PcP **PcP 11 30 24.2 -1.5**

comp=Z,2.7nm,0.7s,baz=112,slow=4.7,SNR=2.2
TDK Taldyqorghan 41.02 312 *e*P **P 11 28 27.7 +1.0**
comp=Z,30nm,1.0s,baz=312
TDK Taldyqorghan 41.02 312 *e*P **P 11 28 27.6 +1.0**
TDK pmax pmax
comp=Z,30nm,1.0s
PMG Port Moresby 41.21 140 P **P 11 28 28.7 +0.3**
comp=Z,61nm,0.9s,baz=359,slow=4.4,SNR=14
PMG Port Moresby 41.21 140*c i*P **P 11 28 29.2 +0.8**
PMG pmax pmax
comp=Z,59nm,1.0s
PMG Port Moresby 41.21 140 P **P 11 28 29.0 +0.6**
PMG lAmb lAmb 11 28 30.6
comp=Z,77nm,0.9s
MA2 Magadan 41.30 22|| *e*P **P 11 28 29.1 +0.4**
MA2 pmax pmax
comp=Z,7.0nm,1.3s
MA2 Magadan 41.30 22 P **P 11 28 29.4 +0.7**
MDOK Medeo 41.49 309 *e*P **P 11 28 31.6 +0.9**
baz=309
MDOK *e*S **S 11 34 45.9 +1.9**
baz=309
MDOK Medeo 41.49 309 *e*P **P 11 28 31.6 +0.9**
MDOK *e*S **S 11 34 45.8 +1.9**
TNSS Tian-Shan 41.53 309 *e*P **P 11 28 32.1 +0.7**
baz=308
TNSS Tian-Shan 41.53 309 *e*P **P 11 28 32.1 +0.7**
AAA Alma-Ata 41.59 309 *e*P **P 11 28 32.1 +0.6**
baz=309
AAA Alma-Ata 41.59 309 *e*P **P 11 28 32.0 +0.6**
KSH Kashi 41.60 303 P **P 11 28 34.6 +3.0**
KSH pmax pmax
comp=Z,7.0nm,1.2s
KSH pmax pmax
comp=Z,73nm,3.1s
KSH LR LR
comp=Z,1μm,12.8s
KSH LR LR
comp=Z,880nm,10.0s
KSH LR LR
comp=Z,1μm,10.4s
FITZ Fitzroy Crossi 41.66 174 P **P 11 28 30.3 -1.7**
comp=Z,13nm,1.0s,baz=360,slow=8.7,SNR=12
FITZ PcP **PcP 11 30 27.1 -1.4**
comp=Z,7.3nm,0.8s,baz=200,slow=2.1,SNR=5.2
FITZ Fitzroy Crossi 41.66 174 P **P 11 28 30.9 -1.1**
ULHL Ulahol 41.87 308 P **P 11 28 35.5 +1.5**
SNR=10.0
H11N1 WAKE ISLAND Hy 42.04 86 T T 12 13 42.9
baz=283,slow=74,SNR=94
H11N2 WAKE ISLAND Hy 42.04 86 T T 12 13 43.3
baz=283,slow=74,SNR=83
H11N3 WAKE ISLAND Hy 42.05 86 T T 12 13 42.5
baz=283,slow=74,SNR=108
H11S3 WAKE ISLAND Hy 42.15 88 T T 12 13 53.6
baz=284,slow=75,SNR=116
H11S1 WAKE ISLAND Hy 42.16 88 T T 12 14 00.6
baz=284,slow=75,SNR=93
H11S2 WAKE ISLAND Hy 42.17 88 T T 12 13 58.1
baz=284,slow=75,SNR=97
TKM2 Tokmak 2 42.48 308 P **P 11 28 40.1 +1.2**
SNR=26
TKM2 Tokmak 2 42.48 308 *i*P **P 11 28 40.0 +1.2**
TKM2 pmax pmax
comp=Z,26nm,0.8s
PALK Pallekele 42.55 254 PcP **PcP 11 30 31.5 -0.2**
comp=Z,2.6nm,0.6s,baz=142,slow=4.2,SNR=4.2
KURK Kurchatov 42.81 320 P **P 11 28 41.5 +0.3**
KURBB Kurchatov Arra 42.83 320 P **P 11 28 41.5 +0.2**
comp=Z,5.8nm,0.5s,baz=114,slow=7.2,SNR=30
COEN Coen 42.86 149 P **P 11 28 43.0 +1.1**
COEN lAmb lAmb 11 28 44.4
comp=Z,22nm,0.8s
KBK Karagaybulak 42.89 308 P **P 11 28 44.0 +1.8**
SNR=10
CHMS Chumysh 43.10 308 P **P 11 28 44.9 +1.2**
SNR=6.3
UCH Uchtor 43.13 307 P **P 11 28 46.5 +2.1**
SNR=31
COCO West Island 43.13 217 P **P 11 28 44.8 +0.7**
COCO pmax pmax
comp=Z,218nm,1.2s
COCO West Island 43.13 217 P **P 11 28 44.8 +0.7**
AAK Ala-Archa 43.22 308 P **P 11 28 45.7 +0.8**
comp=Z,9.3nm,0.8s,baz=138,slow=5.5,SNR=24
AAK PcP **PcP 11 30 32.4 -1.2**
comp=Z,3.1nm,0.6s,baz=183,slow=4.7,SNR=4.0
AAK Ala-Archa 43.22 308 P **P 11 28 46.1 +1.3**
SNR=10
AAK Ala-Archa 43.22 308*ce*P **P 11 28 46.0 +1.2**
AAK pmax pmax
comp=Z,48nm,1.3s
AAK Ala-Archa 43.22 308 P **P 11 28 45.6 +0.8**
SGDS Sogindy 43.28 309 *e*P **P 11 28 45.8 +0.6**
comp=Z,4.6nm,0.8s,baz=309
SGDS Sogindy 43.28 309 *e*P **P 11 28 45.7 +0.6**
SGDS pmax pmax
comp=Z,5.0nm,0.8s
USP Ospenovka 43.33 309 P **P 11 28 46.7 +1.1**
SNR=12
NIL Nilore 43.35 295 P **P 11 28 46.2 +0.4**
NIL pmax pmax
comp=Z,14nm,0.9s
NIL Nilore 43.35 295 P **P 11 28 46.2 +0.4**
AML Almayashu 43.71 307 P **P 11 28 50.8 +1.7**
SNR=34
EKS2 Erkin-Say 43.74 308 P **P 11 28 50.4 +1.4**
SNR=8.9
BTLS Baital 44.02 311 *e*P **P 11 28 51.5 +0.4**
comp=Z,7.4nm,0.9s,baz=311
BTLS Baital 44.02 311 *e*P **P 11 28 51.4 +0.4**
BTLS pmax pmax
comp=Z,7.0nm,0.9s
SEY Seymchan 44.32 20↑ *e*P **P 11 28 55.1 +2.0**
POO Poona 44.79 273 *ex* x 11 28 54.0
WB0 Warramunga Arr 44.88 163 P **P 11 28 57.0 -1.1**
WB0 lAmb lAmb 11 28 58.0
comp=Z,22nm,0.8s
PSA00 Pilbara Seismi 44.98 182 P **P 11 28 57.2 -1.6**
PSA00 lAmb lAmb 11 28 58.1
comp=Z,45nm,0.8s
PSA00 Pilbara Seismi 44.98 182 P **P 11 28 57.2 -1.6**
PSA00 lAmb lAmb 11 28 58.4
comp=Z,24nm,0.8s
WRAB Tennant Creek 45.03 163*ce*P **P 11 28 58.2 -1.1**
WRAB pmax pmax
comp=Z,53nm,1.3s
WRAB Tennant Creek 45.03 163 P **P 11 28 58.4 -0.9**
WRAB lAmb lAmb 11 28 59.2
comp=Z,31nm,0.8s
WRA Warramunga Arr 45.04 163 P **P 11 28 58.1 -1.2**
comp=Z,23nm,0.8s,baz=345,slow=8.6,SNR=71
WRA Warramunga Arr 45.04 163 P **P 11 28 58.3 -1.1**
WB2 Warramunga Arr 45.04 163 P **P 11 28 58.2 -1.2**
WB2 lAmb lAmb 11 28 59.3
comp=Z,34nm,0.8s
WR0 Warramunga Arr 45.11 163 P **P 11 28 59.2 -0.7**
WR0 lAmb lAmb 11 28 59.8
comp=Z,32nm,0.8s
DZA Taraz 45.56 308 *e*P **P 11 29 03.8 +0.5**
baz=307
DZA Taraz 45.56 308 *e*P **P 11 29 03.8 +0.5**
GAR Garm 45.91 302 P **P 11 29 06.7 +0.4**
GAR lAmb lAmb 11 29 08.5
comp=Z,27nm,0.9s
KK31 Karatay Array 46.18 308 *i*P **P 11 29 09.4 +1.2**
KK31 Karatay Array 46.18 308 P **P 11 29 08.8 +0.6**
KKAR Karatay Array 46.18 308 P **P 11 29 08.7 +0.4**
KKAR pmax pmax
comp=Z,13nm,0.8s
KKAR Karatay Array 46.18 308 P **P 11 29 09.1 +0.8**
KKAR Karatay Array 46.18 308 P **P 11 29 08.7 +0.4**
IUG luzhnay 46.41 306 *e*P **P 11 29 10.9 +0.7**
IUG pmax pmax
comp=Z,12nm,0.9s
GIRL Giralia 46.58 190 P **P 11 29 11.5 +0.1**
KBL Kabul 46.83 296 P **P 11 29 14.1 +0.4**
KBL pmax pmax
comp=Z,26nm,1.1s
KBL Kabul 46.83 296 P **P 11 29 14.1 +0.4**
KBL lAmb lAmb 11 29 35.6
comp=Z,26nm,1.1s
TIXI Tiksi 48.21 3*d i*P **P 11 29 22.6 -0.9**
TIXI pmax pmax
comp=Z,95nm,1.3s
TIXI Tiksi 48.21 3 P **P 11 29 22.7 -0.9**
TIXI lAmb lAmb 11 29 36.1
comp=Z,20nm,1.0s
BRVK Borovoye 48.47 321 P **P 11 29 26.0 +0.2**
BRVK Borovoye 48.47 321 P **P 11 29 25.6 -0.2**
BRVK lAmb lAmb 11 29 27.4
comp=Z,13nm,0.8s
AS31 Alice Springs 48.49 165 P **P 11 29 25.6 -0.7**
ASAR Alice Springs 48.49 165 P **P 11 29 25.5 -0.9**
comp=Z,18nm,0.8s,baz=338,slow=7.1,SNR=4.1
ASAR PcP **PcP 11 30 50.4 -1.7**
comp=Z,4.3nm,0.7s,baz=334,slow=2.9,SNR=5.3
CTA Charters Tower 49.62 149 P **P 11 29 35.9 +0.9**
comp=Z,19nm,0.7s,baz=327,slow=9.5,SNR=26
CTAO Charters Tower 49.62 149 P **P 11 29 37.3 +2.3**
BILL Bilibino 52.03 20*ce*P **P 11 29 52.7 +0.1**
BILL pmax pmax
comp=Z,18nm,1.3s
BILL Bilibino 52.03 20 P **P 11 29 52.9 +0.3**
MORW Morawa 52.69 186 P **P 11 29 56.3 -1.5**
MORW lAmb lAmb 11 29 57.3
comp=Z,13nm,0.7s
AB31 Akbulak array 54.16 315 *i*P **P 11 30 08.7 +0.1**
ABKAR Akbulak array 54.16 315 P **P 11 30 08.8 +0.2**
ABKAR lAmb lAmb 11 30 10.3
comp=Z,19nm,0.8s
ABKAR Akbulak array 54.16 315 P **P 11 30 08.3 -0.2**
FORT Forrest 54.45 173 P **P 11 30 10.1 -0.7**
SVE Sverdlovsk 54.76 324 *e*P **P 11 30 13.2 +0.4**
SVE pmax pmax
comp=Z,25nm,1.0s
GEYT Alibeck 55.49 301 P **P 11 30 19.4 +1.0**
comp=Z,8.3nm,0.8s,baz=149,slow=3.5,SNR=11
GEYT Alibeck 55.49 301 P **P 11 30 18.8 +0.4**
GYA0B ALIBECK ARRAY 55.49 301 P **P 11 30 18.2 -0.2**
GYA0B lAmb lAmb 11 30 38.0
comp=Z,16nm,0.8s
AKTO Aktyubinsk 55.50 316 P **P 11 30 18.4 +0.2**
ARU Arti 55.83 323*c i*P **P 11 30 19.7 -0.8**
ARU 11 31 16.3
ARU PPP PPP 11 33 40.6
ARU S **S 11 38 05.9 +0.9**
ARU SS **SS 11 41 46.9 -3.8**
ARU pmax pmax
comp=Z,18nm,0.9s
ARU MLR MLR
comp=Z,813nm,19.0s
ARU Arti 55.83 323 P **P 11 30 19.6 -0.9**
ARU lAmb lAmb 11 30 21.3
comp=Z,18nm,1.0s
NWAO Narrogin (SRO) 56.41 185 P **P 11 30 23.8 -1.0**
NWAO pmax pmax
comp=Z,53nm,1.3s
NWAO Narrogin (SRO) 56.41 185 P **P 11 30 23.8 -1.0**
NWAO Narrogin (SRO) 56.41 185 P **P 11 30 23.8 -1.0**
NWAO lAmb lAmb 11 30 25.1
comp=Z,53nm,1.3s
EIDS Eidsvold 56.42 148 P **P 11 30 24.9 -0.1**
EIDS lAmb lAmb 11 30 26.6
comp=Z,19nm,0.7s
BBOO Buckleboo 57.78 166 P **P 11 30 34.1 -0.5**
STKA Stephens Creek 58.39 160 P **P 11 30 38.4 -0.4**
comp=Z,28nm,0.8s,baz=336,slow=7.4,SNR=56
STKA Stephens Creek 58.39 160 P **P 11 30 38.7 -0.1**
STKA pmax pmax
comp=Z,7.0nm,0.8s
STKA Stephens Creek 58.39 160 P **P 11 30 38.7 -0.1**
SPIA Saint Paul Isl 58.59 36 P 11 30 39.3
baz=265
GAMB Gambell 58.73 28 P **P 11 30 41.7 +1.0**
GAMB lAmb lAmb 11 30 43.6
comp=Z,39nm,1.2s
GAMB Gambell 58.73 28 P 11 30 41.7
baz=260
NIKH Nikolski High 59.18 41 P 11 30 44.2
baz=269
TNA Tin City 60.61 27 P 11 30 54.7
baz=262
ANM Nome 61.58 28 P **P 11 31 01.3 +1.0**
ANM pmax pmax
comp=Z,29nm,0.9s
ANM Nome 61.58 28 P **P 11 31 01.3 +1.0**
ANM lAmb lAmb 11 31 03.5
comp=Z,30nm,0.9s
ANM Nome 61.58 28 P 11 31 01.4
baz=265
BELG Belogornoye 62.02 318|| *i*P **P 11 31 03.1 -0.3**
BELG pmax pmax
comp=Z,7.0nm,1.1s
RDOG Red Dog Mine 62.84 24 P **P 11 31 09.2 +0.5**
RDOG Red Dog Mine 62.84 24 P 11 31 09.1
baz=266
PRGR Permogore 62.89 329 *e*P **P 11 31 06.9 -2.2**
PRGR pmax pmax
comp=Z,17nm,0.8s
DZM Mont Dzumac 62.91 133 *e*P **P 11 31 10.4 +0.4**
comp=Z,70nm,1.1s
DZM Mont Dzumac 62.91 133 *e*LR LR 11 49 37.6
comp=Z,502nm,23.2s
DZM Mont Dzumac 62.91 133 P **P 11 31 10.6 +0.7**
comp=Z,16nm,0.7s,baz=330,slow=7.8,SNR=14
DZM Mont Dzumac 62.91 133 P **P 11 31 10.5 +0.6**
DZM lAmb lAmb 11 31 11.8
comp=Z,23nm,0.8s
SDPT Sand Point 64.03 38 P 11 31 17.4
baz=274
LGD Lagodekhi 64.09 306 P **P 11 31 19.4 +1.9**
DDFL Dedoflistskaro 64.25 306 P **P 11 31 22.6 +4.0**
TOO Toolangi 64.87 159 P **P 11 31 22.7 +0.3**
TOO pmax pmax
comp=Z,18nm,0.8s
TOO Toolangi 64.87 159 P **P 11 31 22.7 +0.3**
TOO lAmb lAmb 11 31 23.8
comp=Z,18nm,0.8s
SOCY Socotra 64.94 273 P **P 11 31 22.0 -1.5**
SOCY lAmb lAmb 11 31 25.2
comp=Z,14nm,1.0s
A21K Barrow 65.15 21 P 11 31 24.4
baz=270
GUDG Gudauri 65.28 307 P **P 11 31 27.2 +1.7**
KZRT Kazreti 65.53 306 P **P 11 31 28.1 +1.2**
ZEI Tsey 65.64 308 *e*P **P 11 31 27.1 -0.7**
ZEI pmax pmax
comp=Z,21nm,1.3s
VRH Novokhopyorsk 65.78 317 *e*P **P 11 31 27.8 -0.4**
VRH pmax pmax
comp=Z,30nm,0.8s
KLMR Klimovskoe 65.88 328 *e*P **P 11 31 26.4 -2.2**
KLMR *e* 11 33 51.4
KLMR pmax pmax
comp=Z,28nm,1.2s
KLMR Klimovskoe 65.88 328 *e*P **P 11 31 26.5 -2.2**
KLMR AMP 11 31 30.5
comp=Z,28nm,1.2s
KLMR *e*PP **PP 11 33 51.4 -2.2**
ONI Oni 66.00 308 P **P 11 31 32.1 +2.1**
KBZ Khabaz 66.19 309 P **P 11 31 31.6 +0.5**
comp=Z,9.4nm,0.9s,baz=116,slow=5.1,SNR=11
AKH Akhalkalaki 66.20 306 P **P 11 31 33.3 +1.9**
KIV Kislovodsk 66.30 309 *e*P **P 11 31 32.6 +0.7**
KIV pmax pmax
comp=Z,49nm,1.0s
KIV Kislovodsk 66.30 309 P **P 11 31 32.2 +0.3**
KIV lAmb lAmb 11 31 33.4
comp=Z,16nm,0.9s
IMAR Indian Mountai 66.45 26 P **P 11 31 32.9 +0.6**
LPSR Galich'ya Gora 67.28 319 *e*P **P 11 31 35.9 -1.9**
LPSR pmax pmax
comp=Z,20nm,1.0s
CHUM Lake Minchumin 67.29 29 P 11 31 39.2
baz=278,SNR=16
VORD Divnogorie 67.33 317 *e*P **P 11 31 37.3 -0.8**
VORD pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 67.36 317 *e*P **P 11 31 37.6 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.7s
SII Sitkinak Islan 67.41 37 P 11 31 39.8
baz=279
PPLA Purkeypile 67.48 30 P **P 11 31 39.7 +0.7**
PPLA Purkeypile 67.48 30 P 11 31 40.5
baz=278,SNR=7.9
RSO Redoubt South 67.56 32 P **P 11 31 40.8 +1.1**
SPCR Spurr Chakacha 67.71 31 P 11 31 41.2
baz=279,SNR=11
COLD Coldfoot 67.72 25 P **P 11 31 41.2 +0.9**
COLD lAmb lAmb 11 31 43.9
comp=Z,20nm,0.9s
COLD Coldfoot 67.72 25 P 11 31 41.5
baz=278,SNR=22
APA Apatity 67.75 336|| *i*P **P 11 31 39.3 -1.2**
APA pmax pmax
comp=Z,9.0nm,1.1s
APA MLR MLR
comp=Z,1μm,13.0s
TOLK Toolik Lake Re 67.75 23 P **P 11 31 41.3 +0.7**
TOLK Toolik Lake Re 67.76 23 P 11 31 41.7
baz=278,SNR=34
OHAK Old Harbor 67.79 36 P 11 31 41.0
baz=279
MLY Manley 67.81 27 P **P 11 31 41.8 +0.8**
MLY Manley 67.81 27 P 11 31 42.2
baz=278,SNR=45
BPAW Bear Paw Mtn. 67.84 28 P **P 11 31 42.0 +0.8**
BPAW Bear Paw Mtn. 67.84 28 P 11 31 42.3
baz=278,SNR=22
SKT Skwentna 67.91 31 P **P 11 31 42.1 +0.4**
SKT lAmb lAmb 11 31 43.0
comp=Z,23nm,0.9s
SKT Skwentna 67.92 31 P 11 31 41.7
baz=279,SNR=5.5
KTH Kantishna Hill 67.95 29 P **P 11 31 42.9 +1.0**
KTH lAmb lAmb 11 31 43.9
comp=Z,29nm,0.8s
KDAK Kodiak Island 68.07 35 P 11 31 43.2
baz=280
OBN Obninsk 68.22 322 *e*P **P 11 31 42.9 -0.8**
OBN *e* 11 32 07.7
OBN pmax pmax
comp=Z,12nm,0.4s
HOM Homer 68.24 33 P 11 31 44.0
baz=280
TRF Thorofare Moun 68.25 29 P **P 11 31 44.4 +0.4**
TRF lAmb lAmb 11 31 47.1
comp=Z,22nm,0.8s
TRF Thorofare Moun 68.25 29 P 11 31 44.1
baz=279,SNR=8.5
CAPN Captain Cook N 68.29 32 P 11 31 43.7
baz=280
SUA Susitna One 68.37 31 P **P 11 31 45.3 +0.7**
I23K Minto, Yukon-K 68.37 27 P **P 11 31 45.3 +0.9**
I23K lAmb lAmb 11 31 46.7
comp=Z,48nm,1.3s
I23K Minto, Yukon-K 68.37 27 P 11 31 45.3
baz=280,SNR=22
SUA Susitna One 68.37 31 P 11 31 44.7
baz=280,SNR=13
CUT Chulitna 68.43 30 P **P 11 31 45.1 +0.3**
CUT Chulitna 68.43 30 P 11 31 45.0
baz=280,SNR=5.5
BWN Browne 68.49 28 P **P 11 31 46.5 +1.3**
NEA2 Nenana 68.58 28 P **P 11 31 46.2 +0.4**
NEA2 Nenana 68.58 28 P 11 31 46.8
baz=280,SNR=44
MSVF Nonsavu 68.67 122 P **P 11 31 47.9 +0.7**
comp=Z,20nm,0.9s,baz=313,slow=5.9,SNR=5.4
MSVF Nonsavu 68.67 122 P **P 11 31 48.2 +1.1**
MSVF pmax pmax
comp=Z,73nm,1.4s
MSVF Nonsavu 68.67 122 P **P 11 31 48.2 +1.1**
BRSE Bradley Lake S 68.67 33 P 11 31 46.9
baz=280
MCK McKinley 68.80 29 P **P 11 31 47.6 +0.4**
MCK pmax pmax
comp=Z,46nm,0.9s
MCK McKinley 68.80 29 P **P 11 31 47.6 +0.4**
MCK McKinley 68.80 29 P 11 31 47.3
baz=280,SNR=13
MDM Murphy Dome 68.87 27 P **P 11 31 48.2 +0.6**
RND Reindeer 68.89 29 P **P 11 31 47.5 -0.3**
RND pmax pmax
comp=Z,110nm,0.8s
RND Reindeer 68.89 29 P **P 11 31 47.5 -0.3**
RC01 Rabbit Creek A 68.91 31 P 11 31 47.9
baz=281
RAYN Ar Rayn 68.97 287 P **P 11 31 48.3 -0.7**
RAYN pmax pmax
comp=Z,8.0nm,0.9s
RAYN Ar Rayn 68.97 287 P **P 11 31 48.3 -0.7**
WRH Wood River Hil 69.02 28 P **P 11 31 49.5 +0.9**
WRH lAmb lAmb 11 31 51.6
comp=Z,33nm,1.0s
O22K Cooper Landing 69.03 32 P **P 11 31 49.1 +0.4**
O22K Cooper Landing 69.03 32 P 11 31 48.3
baz=281
TCOL CIGO, UAF Yank 69.04 27 P **P 11 31 49.1 +0.5**
TCOL lAmb lAmb 11 31 51.5
comp=Z,30nm,0.8s
TCOL CIGO, UAF Yank 69.04 27 P 11 31 49.1
baz=281,SNR=13
COLA College 69.05 27|| *e*P **P 11 31 48.5 -0.1**
COLA pmax pmax
comp=Z,28nm,0.8s
COLA College 69.05 27 P **P 11 31 48.9 +0.2**
COLA lAmb lAmb 11 31 51.5
comp=Z,30nm,0.8s
COLA College 69.05 27 P 11 31 48.8
baz=281
WAT2 Susitna Watana 69.09 29 P 11 31 48.8
baz=281
PMR Palmer 69.11 31 P **P 11 31 49.3 +0.2**
PMR pmax pmax
comp=Z,27nm,0.7s
PMR Palmer 69.11 31 P **P 11 31 49.3 +0.2**
PMR lAmb lAmb 11 31 50.2
comp=Z,27nm,0.7s
PMR Palmer 69.11 31 P 11 31 49.1
baz=281,SNR=7.6
CCB Clear Creek Bu 69.11 27 P **P 11 31 49.1 0.0**
MARD Mardin 69.15 303 P **P 11 31 50.1 +0.1**
MARD lAmb lAmb 11 31 51.3
comp=Z,20nm,0.7s
GHO Glory Hole Cre 69.17 31 P **P 11 31 49.7 +0.1**
GHO lAmb lAmb 11 31 51.4
comp=Z,44nm,1.2s
POKR Poker Plat Res 69.17 27 P **P 11 31 50.3 +0.8**
POKR Poker Plat Res 69.17 27 P 11 31 50.0
baz=281,SNR=39
SML Sawmill 69.44 30 P **P 11 31 51.3 +0.1**
SML pmax pmax
comp=Z,41nm,0.8s
SML Sawmill 69.44 30 P 11 31 51.5
baz=282,SNR=10
KNK Knik Glacier 69.46 31 P 11 31 51.8
baz=282
IL31 69.47 27 P **P 11 31 50.9 -0.3**
IL31 lAmb lAmb 11 31 54.3
comp=Z,12nm,0.7s
ILAR Eielson Array 69.47 27 P **P 11 31 50.6 -0.7**
comp=Z,7.9nm,0.7s,baz=264,slow=6.3,SNR=82
ILAR Eielson Array 69.47 27 P **P 11 31 50.9 -0.4**
ILAR Eielson Array 69.47 27 P **P 11 31 50.9 -0.4**
HDA Harding Lake 69.52 28 P 11 31 51.1
baz=282,SNR=17
HDA P 11 31 51.1
baz=282,SNR=17
WAT6 Susitna Watana 69.55 30 P 11 31 52.1
baz=282,SNR=14
PWL Port Wells 69.63 31 P **P 11 31 52.3 -0.1**
FYU Fort Yukon 69.76 25 P **P 11 31 54.1 +1.0**
FYU lAmb lAmb 11 31 55.5
comp=Z,33nm,0.9s
BMAR Burnt Mountain 69.82 24 P **P 11 31 55.0 +1.5**
PRP Porcupine Dome 69.88 26 P **P 11 31 54.2 +0.2**
PRP lAmb lAmb 11 31 56.0
comp=Z,29nm,1.2s
PRP Porcupine Dome 69.88 26 P 11 31 54.6
baz=283
SCM Sheep Creek Mo 69.90 30 P **P 11 31 54.2 +0.1**
SCM pmax pmax
comp=Z,139nm,1.1s
SCM Sheep Creek Mo 69.90 30 P **P 11 31 54.2 +0.1**
GLI Glacier Island 70.22 31 P **P 11 31 57.0 +1.0**
GLI Glacier Island 70.22 31 P 11 31 55.7
baz=283
ARCES ARCESS Array B 70.22 338 P **P 11 31 55.0 -0.9**
comp=Z,2.1nm,0.7s,baz=76,slow=7.6,SNR=7.1
ARCES ARCESS Array B 70.22 338 P **P 11 31 55.0 -0.9**
ARCES ARCESS Array B 70.22 338 P **P 11 31 54.6 -1.3**
TAU Tasmania Unive 70.30 160 P **P 11 31 56.7 +0.2**

TAU pmax pmax
comp=Z,77nm,1.5s
TAU Tasmania Unive 70.30 160 P **P** **11 31 56.7 +0.2**
M24K Tolsona, Glenn 70.37 30 P **P** **11 31 57.9 +1.0**
M24K Tolsona, Glenn 70.37 30 P 11 31 57.9
baz=283,SNR=9.1
PAX Paxson 70.48 29 P **P** **11 31 58.2 +0.5**
PAX pmax pmax
comp=Z,25nm,1.0s
PAX Paxson 70.48 29 P **P** **11 31 58.2 +0.5**
PAX IAmb IAmb 11 31 59.3
comp=Z,25nm,1.0s
PAX Paxson 70.48 29 P 11 31 58.1
baz=284,SNR=14
KLU Klutina 70.63 31 P **P** **11 31 59.3 +0.7**
KLU IAmb IAmb 11 32 00.3
comp=Z,25nm,0.6s
KLU Klutina 70.63 31 P 11 31 59.1
baz=284,SNR=9.6
MALT Malatya 70.70 304 P **P** **11 32 00.7 +1.2**
SCRK Sand Creek 70.88 28 P **P** **11 31 59.8 -0.3**
SCRK IAmb IAmb 11 32 02.8
comp=Z,25nm,0.9s
SCRK Sand Creek 70.88 28 P 11 32 00.1
baz=285,SNR=26
Q23K Middleton Isla 70.92 33 P 11 32 01.0
baz=284
DOT Dot Lake 70.93 28 P **P** **11 32 00.5 +0.1**
DOT IAmb IAmb 11 32 02.0
comp=Z,25nm,0.9s
N25K Chitina, Valde 71.21 30 P **P** **11 32 03.3 +1.1**
N25K IAmb IAmb 11 32 04.3
comp=Z,28nm,1.1s
N25K Chitina, Valde 71.22 30 P 11 32 03.0
baz=285,SNR=5.8
MENT Mentasta 71.27 29 P **P** **11 32 02.9 +0.5**
MENT IAmb IAmb 11 32 04.5
comp=Z,30nm,0.8s
BMRM Bremner River 71.38 31 P **P** **11 32 03.4 +0.3**
BMRM IAmb IAmb 11 32 05.3
comp=Z,41nm,1.0s
BMRM Bremner River 71.38 31 P 11 32 03.8
baz=285,SNR=6.6
GLB Gilahina Butte 71.62 30 P **P** **11 32 05.3 +0.7**
GLB IAmb IAmb 11 32 08.3
comp=Z,46nm,1.1s
K27K Chicken 71.68 27 P **P** **11 32 05.9 +1.1**
K27K Chicken 71.68 27 P 11 32 05.9
baz=286
KAIM Kayak Island 71.74 32 P **P** **11 32 06.7 +1.5**
KAIM Kayak Island 71.74 32 P 11 32 05.7
baz=286
VRDI Verde Repeater 71.85 30 P **P** **11 32 06.6 +0.5**
VRDI IAmb IAmb 11 32 07.8
comp=Z,27nm,0.9s
EGAK Eagle 71.85 27 P **P** **11 32 05.7 -0.1**
EGAK IAmb IAmb 11 32 07.6
comp=Z,33nm,0.8s
EGAK Eagle 71.85 27 P 11 32 06.1
baz=287,SNR=28
MCARA McCarthy VSAT 72.00 30 P **P** **11 32 07.4 +0.6**
MCARA McCarthy VSAT 72.00 30 P 11 32 07.7
baz=286
L27K Beaver Creek, 72.06 28 P **P** **11 32 08.0 +0.8**
L27K IAmb IAmb 11 32 09.7
comp=Z,42nm,0.9s
L27K Beaver Creek, 72.06 28 P 11 32 08.5
baz=287,SNR=42
CRQM Cirque 72.12 31 P **P** **11 32 08.8 +1.1**
FINES FINESS Array B 72.15 330 P **P** **11 32 06.8 -0.9**
comp=Z,4.4nm,0.6s,baz=41,slow=5.4,SNR=13
FINES FINESS Array B 72.15 330 *i* P **P** **11 32 06.9 -0.7**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 72.15 330 P **P** **11 32 06.6 -1.1**
BARN Barnard Glacie 72.73 30 P **P** **11 32 12.1 +0.7**
BARN IAmb IAmb 11 32 13.8
comp=Z,30nm,0.9s
DAWY Dawson 72.80 27 P **P** **11 32 11.6 0.0**
DAWY IAmb IAmb 11 32 13.7
comp=Z,40nm,0.9s
CTG Chitna Glacier 72.91 30 P 11 32 13.0
baz=288
CTGM Chitina Glacie 72.91 30 P **P** **11 32 13.1 +0.7**
EPYK Eagle Plains 73.09 24 P **P** **11 32 12.9 -0.4**
EPYK IAmb IAmb 11 32 14.8
comp=Z,30nm,0.9s
EPYK Eagle Plains 73.09 24 P 11 32 13.2
baz=290
LOGN Logan Glacier 73.11 31 P **P** **11 32 14.6 +1.0**
LOGN IAmb IAmb 11 32 15.7
comp=Z,27nm,0.8s
TABL Table Mountain 73.16 31 P **P** **11 32 14.1 +0.1**
TABL IAmb IAmb 11 32 15.9
comp=Z,25nm,0.9s
INK Inuvik 73.54 22 P **P** **11 32 16.0 +0.2**
INK pmax pmax
comp=Z,23nm,0.9s
INK Inuvik 73.54 22 P **P** **11 32 16.0 +0.2**
INK IAmb IAmb 11 32 17.5
comp=Z,23nm,0.9s
AKASG Malin Array Be 73.59 319 P **P** **11 32 15.2 -1.2**
comp=Z,2.4nm,0.6s,baz=60,slow=6.3,SNR=14
AKASG Malin Array Be 73.59 319 P **P** **11 32 15.3 -1.1**
AKASG pmax pmax
comp=Z,4.0nm,1.0s
AKASG Malin Array Be 73.59 319 P **P** **11 32 15.3 -1.1**
AKBB Malin Array Si 73.59 319 ⇓*i* P **P** **11 32 15.4 -1.0**
AKBB pmax pmax
comp=Z,11nm,1.0s
AKBB Malin Array Si 73.59 319 P **P** **11 32 15.2 -1.1**
PCA Pinnacle 73.69 31 P **P** **11 32 17.9 +1.0**
PINM Pinnacle 73.69 31 P 11 32 18.1
baz=289,SNR=6.6
NACGM Naroch 73.74 323 *i* P **P** **11 32 14.2 -3.0**
NACGM *i* P **P** **11 32 14.2 -3.0**
NACGM *i* P **P** **11 32 14.2 -3.0**
NACGM *i* PcP **sP** **11 32 33.4 -0.1**
NACGM *i* PP **PP** **11 35 07.9 +6.4**
NACGM *i* PPP PPP 11 37 22.6
NACGM *i* S **S** **11 41 48.0 +2.6**
NACGM *i* PS **PnS** **11 42 19.4 -2.1**
NACGM *i* SS SS 11 46 09.6 -19
NACGM *i* SSS SSS 11 49 59.3
NACGM *i* LQ LQ 11 57 08.2
NACGM *i* LR LR 12 05 53.5
BR131 Keskin Array S 73.88 307 *c i* P **P** **11 32 18.8 +0.2**
BR131 Keskin Array S 73.88 307 P **P** **11 32 17.8 -0.7**
BR131 IAmb IAmb 11 32 19.8
comp=Z,15nm,0.7s
BRTR Keskin Array B 73.88 307 P **P** **11 32 18.3 -0.2**
comp=Z,7.7nm,0.7s,baz=116,slow=3.3,SNR=23
BRTR Keskin Array B 73.88 307 *c e* P **P** **11 32 18.7 +0.2**
BRTR pmax pmax
comp=Z,8.0nm,0.7s
HYT Haines Junctio 74.72 30 P **P** **11 32 24.2 +1.3**
HYT IAmb IAmb 11 32 25.9
comp=Z,30nm,1.0s
SORM Soroca 74.92 316 ⇑P **P** **11 32 23.6 -0.6**
SORM Soroca 74.92 316 P **P** **11 32 23.6 -0.6**
KIS Kishinev 74.99 315 *e* P **P** **11 32 29.0 +4.4**
KIS Kishinev 74.99 315 *e* PP PP 11 35 05.0 -7.3
KIS Kishinev 74.99 315 *e* P **P** **11 32 29.0 +4.4**
MDUB Mudurnu 75.43 308 P **P** **11 32 26.2 -1.2**
TLCR 75.57 313 ⇓P **P** **11 32 28.4 +0.5**
TLCR 75.57 313 P **P** **11 32 28.4 +0.5**
CSS Mathiatis 75.59 302 P **P** **11 32 27.7 -0.7**
CSS IAmb IAmb 11 32 29.4
comp=Z,28nm,0.8s
TPGR Topolog 75.94 313 ⇑P **P** **11 32 30.1 -0.1**
WHY Whitehorse 75.98 30 P **P** **11 32 31.5 +1.3**
WHY IAmb IAmb 11 32 32.5
comp=Z,28nm,1.1s
SUW Suwalki 76.02 323 P **P** **11 32 29.5 -0.9**
SUW pmax pmax
comp=Z,94nm,1.0s
SUW Suwalki 76.02 323 P **P** **11 32 29.5 -0.9**
CFR Carcaliu 76.03 313 ⇓P **P** **11 32 30.5 -0.1**
CFR Carcaliu 76.03 313 P **P** **11 32 30.5 -0.1**
C36M Paulatuk 76.15 19 P **P** **11 32 30.1 -0.7**
C36M Paulatuk 76.15 19 P 11 32 30.0
baz=301
SKAG Skagway 76.24 31 P **P** **11 32 32.6 +1.1**
SKAG IAmb IAmb 11 32 34.5
comp=Z,23nm,0.9s
SKAG Skagway 76.24 31 P 11 32 31.5
baz=293
TESR Tescani 76.56 315 ⇑P **P** **11 32 33.8 +0.2**
VRI Vrincioaia 76.73 314 ⇓P **P** **11 32 34.3 -0.4**
VRI Vrincioaia 76.73 314 P **P** **11 32 34.2 -0.4**
BIZ Bicaz 76.76 316 ⇑P **P** **11 32 35.0 +0.3**
BESE Bessie Mountai 76.82 32 P **P** **11 32 35.2 +0.3**
BESE IAmb IAmb 11 32 37.4
comp=Z,29nm,1.0s
BUR08 Bucovina Ar. S 77.09 316 P **P** **11 32 36.1 -0.6**
BURAR Bucovina Array 77.09 316 ⇑P **P** **11 32 37.0 +0.2**
BURAR Bucovina Array 77.09 316 P **P** **11 32 36.9 +0.2**
BURAR Bucovina Array 77.09 316 P **P** **11 32 35.3 -1.4**
JIS Juneau Island 77.17 32 P **P** **11 32 38.2 +1.4**
JIS IAmb IAmb 11 32 39.2
comp=Z,44nm,1.2s
SIT Sitka 77.20 33 P 11 32 37.6
baz=294
MLR Muntele Rosu 77.37 314 ⇑P **P** **11 32 38.7 +0.3**
MLR Muntele Rosu 77.37 314 P **P** **11 32 37.2 -1.2**
MLR pmax pmax
comp=Z,15nm,0.9s
MLR Muntele Rosu 77.37 314 P **P** **11 32 37.2 -1.2**
MLR IAmb IAmb 11 32 39.6
comp=Z,15nm,0.9s
VOIR 77.98 314 ⇑P **P** **11 32 41.5 -0.1**
HUMR Humele 78.36 314 ⇑P **P** **11 32 43.5 -0.2**
UZH Uzhgorod 78.53 318 *e* P **P** **11 32 47.0 +2.5**
UZH *e* 11 32 54.6
UZH *i* 11 33 07.5
NC405 NORSAR Array S 78.68 332 P **P** **11 32 43.8 -1.4**
NC303 NORSAR Array S 78.77 332 P **P** **11 32 44.5 -1.1**
NB201 NORSAR Array S 78.89 332 P **P** **11 32 45.0 -1.4**
NB201 IAmb IAmb 11 33 03.8
comp=Z,57nm,1.4s
NOA NORSAR Array B 78.93 332 P **P** **11 32 45.4 -1.2**
comp=Z,7.5nm,0.8s,baz=59,slow=5.6,SNR=27
WRAK Wrangell Islan 78.96 33 P 11 32 47.8
baz=296
CRAG Craig 78.98 34 P 11 32 47.0
baz=296
DRGR 78.98 316 ⇑P **P** **11 32 46.9 -0.3**
DRGR 78.98 316 P **P** **11 32 46.8 -0.3**
NC204 NORSAR Array S 79.00 333 P **P** **11 32 45.8 -1.2**
NC204 IAmb IAmb 11 32 46.7
comp=Z,12nm,0.7s
RES Resolute Bay 79.12 9 P **P** **11 32 46.4 -0.9**
RES pmax pmax
comp=Z,6.0nm,1.0s
RES Resolute Bay 79.12 9 P **P** **11 32 46.4 -0.9**
DLBC Dease Lake 79.16 31 P **P** **11 32 49.1 +1.1**
DLBC IAmb IAmb 11 33 04.1
comp=Z,16nm,0.9s
HIZ Hauiti 79.38 140 P **P** **11 32 49.5 +0.3**
OJC Ojcow 79.40 320 *e* P **P** **11 32 49.3 0.0**
OJC Ojcow 79.40 320 P **P** **11 32 48.4 -0.9**
OJC pmax pmax
comp=Z,25nm,0.8s
OJC Ojcow 79.40 320 P **P** **11 32 48.4 -0.9**
OJC IAmb IAmb 11 32 50.4
comp=Z,24nm,0.8s
NIE Niedzica 79.43 319 *e* P **P** **11 32 50.1 +0.6**
GZR Gura Zlata 79.48 315 ⇑P **P** **11 32 49.1 -0.8**
LANS Liptovska Anna 80.03 319 *e* P **P** **11 32 53.8 +1.0**
LANS Liptovska Anna 80.03 319 *e* P **P** **11 32 53.8 +1.0**
VTS Vitosha 80.25 312 ⇓P **P** **11 32 55.1 +0.8**
VTS Vitosha 80.25 312 P **P** **11 32 54.1 -0.2**
VTS pmax pmax
comp=Z,35nm,1.0s
VTS Vitosha 80.25 312 P **P** **11 32 54.1 -0.2**
VTS IAmb IAmb 11 32 56.0
comp=Z,35nm,1.0s
PSZ Piszkesteto 80.28 318 P **P** **11 32 53.8 -0.4**
PSZ pmax pmax
comp=Z,16nm,1.2s
PSZ Piszkesteto 80.28 318 P **P** **11 32 53.8 -0.4**
MDVR Moldovita 80.41 315 ⇓P **P** **11 32 54.6 -0.4**
URZ Urewera 80.56 139 P **P** **11 32 54.4 -1.1**
comp=Z,9.2nm,0.7s,baz=300,slow=24,SNR=5.0
VYHS Vyhne 80.69 319 *e* P **P** **11 32 56.4 +0.1**
VYHS pmax pmax
comp=Z,33nm,1.2s
VYHS Vyhne 80.69 319 *e* P **P** **11 32 56.4 +0.1**
RPZ Rata Peaks 80.87 146 P **P** **11 32 56.1 -1.0**
comp=Z,19nm,0.9s,baz=286,slow=4.3,SNR=5.9
MORC Moravsky Berou 80.90 320 *e* P **P** **11 32 57.0 -0.5**
MORC Moravsky Berou 80.90 320 P **P** **11 32 56.9 -0.5**
MORC pmax pmax
comp=Z,13nm,1.3s
MORC Moravsky Berou 80.90 320 P **P** **11 32 56.9 -0.6**
KOLL Kolacno 80.91 319 *e* P **P** **11 32 58.2 +0.7**
KSP Ksiaz 81.15 322 *e* P **P** **11 32 58.9 +0.2**
KSP Ksiaz 81.15 322 P **P** **11 32 58.7 0.0**
KRLC Kraliky 81.21 321 *e* P **P** **11 32 59.0 -0.1**
KRLC Kraliky 81.21 321 ⇑*e* P **P** **11 32 59.0 -0.1**
JAVC Velka Javorina 81.23 320 *e* P **P** **11 33 00.5 +1.3**
DPC Dobruska-Polom 81.36 321 ⇑*e* P **P** **11 32 59.8 -0.1**
DPC Dobruska-Polom 81.36 321 ⇑*e* P **P** **11 32 59.8 -0.1**
UPC Upice 81.46 322 *e* P **P** **11 33 00.8 +0.4**
UPC Upice 81.46 322 ⇑*e* P **P** **11 33 00.8 +0.4**
FRGS Fruska Gora 81.49 316 ⇑P **P** **11 33 00.9 +0.3**
SMOL Smolenice 81.52 319 *e* P **P** **11 33 01.6 +0.9**
SMOL Smolenice 81.52 319 *e* P **P** **11 33 01.6 +0.9**
VRAC Vranov 81.67 320 *e* P **P** **11 33 01.4 -0.1**
MODS Modra-Piesok 81.67 319 *e* P **P** **11 33 01.3 -0.3**
MODS pmax pmax
comp=Z,11nm,1.2s
MODS Modra-Piesok 81.67 319 *e* P **P** **11 33 01.3 -0.3**
LIT Litokhoron 81.77 310 P **P** **11 33 01.2 -1.1**
LIT pmax pmax
comp=Z,10.0nm,0.8s
LIT Litokhoron 81.77 310 P **P** **11 33 01.2 -1.1**
MORH Mrgy, Hungar 81.78 317 ⇑P **P** **11 33 02.3 +0.2**
KRUC Moravsky 81.89 320 *e* P **P** **11 33 02.0 -0.7**
AGG Agios Georgios 82.32 309 P **P** **11 33 03.5 -1.7**
AGG pmax pmax
comp=Z,12nm,0.8s
AGG Agios Georgios 82.32 309 P **P** **11 33 03.5 -1.7**
AGG IAmb IAmb 11 33 03.9
comp=Z,12nm,0.8s
BRG Berggiesshubel 82.46 323 *e* P **P** **11 33 05.1 -0.5**
comp=Z,4.5nm,0.9s,baz=60,slow=5.0
PLE Pljevlja 82.54 314 P **P** **11 33 09.7 +3.4**
CONA Conrad Observa 82.72 319 *e* P **P** **11 33 07.3 +0.2**
comp=Z,11nm,1.1s
FBE Freiberg 82.77 323 *e* P **P** **11 33 06.8 -0.4**
comp=Z,20nm,1.0s,baz=60,slow=5.0
CLL Collm 82.77 323 *i* P **P** **11 33 06.8 -0.4**
comp=Z,13nm,0.7s
CLL Collm 82.77 323 *i* P **P** **11 33 06.8 -0.4**
CLL pmax pmax
comp=Z,13nm,0.7s
CLL Collm 82.77 323 P **P** **11 33 05.9 -1.3**
CLL IAmb IAmb 11 33 07.3
comp=Z,12nm,0.6s
CLL Collm 82.77 323 *e* P **P** **11 33 06.5 -0.7**
comp=Z,13nm,0.7s,baz=60,slow=5.0
BSEG Bad Segeberg 82.89 326 *e* P **P** **11 33 07.0 -0.8**
comp=Z,8.2nm,0.9s,baz=60,slow=5.0
FLTG Flechtingen 83.22 325 *e* P **P** **11 33 09.0 -0.5**
comp=Z,15nm,1.1s,baz=60,slow=5.0
CKRC Cesky Krumlov 83.22 321 ⇑*e* P **P** **11 33 09.9 +0.2**
ARSA Arzberg 83.24 319 *e* P **P** **11 33 08.8 -1.0**
comp=Z,6.7nm,1.0s
YKA Yellowknife Ar 83.28 23 P **P** **11 33 09.1 -0.5**
comp=Z,6.7nm,0.6s,baz=314,slow=4.6,SNR=98
YKA PKKPbc **PKKPbc** **11 51 25.8 -5.0**
comp=Z,0.3nm,0.7s,baz=126,slow=2.6,SNR=5.3
ITM Ithomi 83.37 308 P **P** **11 33 09.4 -1.3**
NEUB Neuenburg 83.49 323 *e* P **P** **11 33 10.6 -0.4**
comp=Z,25nm,1.0s,baz=60,slow=5.0
KHC Kasperske Hory 83.50 321 *c e* P **P** **11 33 10.7 -0.4**
KHC pmax pmax
comp=Z,22nm,0.8s
KHC Kasperske Hory 83.50 321 ⇑*e* P **P** **11 33 10.7 -0.4**
KHC Kasperske Hory 83.50 321 P **P** **11 33 10.3 -0.8**
TANN Tannenbergstha 83.51 323 *e* P **P** **11 33 10.7 -0.4**
comp=Z,6.9nm,1.0s,baz=60,slow=5.0
GEC2 GERESS Array S 83.56 321 P **P** **11 33 10.9 -0.6**
GEC2 IAmb IAmb 11 33 12.4
comp=Z,19nm,1.0s
GEC2 GERESS Array S 83.56 321 *e* P **P** **11 33 11.0 -0.5**
comp=Z,18nm,0.9s,baz=60,slow=5.0
GERES GERESS Array B 83.56 321 P **P** **11 33 11.3 -0.2**
comp=Z,12nm,0.8s,baz=57,slow=4.9,SNR=63
GERES GERESS Array B 83.56 321 P **P** **11 33 10.4 -1.1**
WERD Werda 83.58 323 *e* P **P** **11 33 11.3 -0.2**
comp=Z,14nm,1.2s,baz=60,slow=5.0
GUNZ Gunzen 83.61 323 *e* P **P** **11 33 11.2 -0.4**
comp=Z,15nm,1.0s,baz=60,slow=5.0
WERN Wernitzgruen 83.62 322 *e* P **P** **11 33 11.4 -0.3**
comp=Z,15nm,1.2s,baz=60,slow=5.0
ASSE Asse, Remlinge 83.62 325 *e* P **P** **11 33 11.9 +0.4**
comp=Z,12nm,1.1s,baz=60,slow=5.0
PLN Plauen 83.64 323 *e* P **P** **11 33 11.6 -0.1**
comp=Z,9.2nm,0.9s,baz=60,slow=5.0
MOA Molln 83.71 320 *i* P **P** **11 33 12.1 -0.1**
comp=Z,12nm,0.8s,SNR=8.0
NRDL Niedersach Rie 83.74 325 *e* P **P** **11 33 12.4 +0.3**
comp=Z,12nm,1.2s,baz=60,slow=5.0
SOKA Soboth 83.80 318 *i* P **P** **11 33 12.2 -0.6**
comp=Z,10nm,0.6s,SNR=8.9
MOX Moxa 83.86 323 *e* P **P** **11 33 12.4 -0.4**
comp=Z,9.5nm,1.0s,baz=60,slow=5.0
WET Wettzell 83.89 321 P **P** **11 33 13.2 +0.1**
WET Wettzell 83.89 321 *e* P **P** **11 33 12.6 -0.5**
comp=Z,11nm,1.3s,baz=60,slow=5.0
MANZ Manzenberg 83.92 322 *e* P **P** **11 33 12.9 -0.3**
comp=Z,11nm,1.1s,baz=60,slow=5.0
CLZ Clausthal 83.93 324 *e* P **P** **11 33 13.1 -0.1**
comp=Z,25nm,1.2s,baz=60,slow=5.0
ROTZ Rotzenmuhle 83.97 322 *e* P **P** **11 33 13.0 -0.4**
comp=Z,14nm,1.0s,baz=60,slow=5.0
ABPO Ambohimpanom 84.09 246 P **P** **11 33 14.6 -0.1**
ABPO pmax pmax
comp=Z,26nm,0.9s
ABPO Ambohimpanom 84.09 246 P **P** **11 33 14.6 -0.1**
ABPO IAmb IAmb 11 33 16.0
comp=Z,26nm,0.8s
OBKA Obir 84.17 318 *e* P **P** **11 33 14.0 -0.6**
comp=Z,13nm,0.8s
GTTG Gottingen 84.30 324 *e* P **P** **11 33 15.2 +0.2**
comp=Z,17nm,0.8s,baz=60,slow=5.0
GRF Grafenberg Arr 84.56 322 *e* P **P** **11 33 16.2 -0.3**
comp=Z,20nm,0.7s,baz=60,slow=5.0
KBA Koelnbreinsper 84.63 319 *i* P **P** **11 33 16.2 -0.9**
comp=Z,5.9nm,0.6s,SNR=7.7
KBA Koelnbreinsper 84.63 319 P **P** **11 33 16.4 -0.7**
RJOB Jochberg 84.63 320 *e* P **P** **11 33 16.5 -0.4**
comp=Z,53nm,1.0s,baz=60,slow=5.0
UBBA Unterbreitbach 84.66 324 *e* P **P** **11 33 16.6 -0.1**
comp=Z,4.6nm,0.4s,baz=60,slow=5.0
MYKA Terra Mystica 84.67 319 *e* P **P** **11 33 15.9 -1.2**
comp=Z,6.0nm,1.0s
IBBN Ibbenburen 85.06 326 *e* P **P** **11 33 18.6 -0.2**
comp=Z,21nm,0.7s,baz=60,slow=5.0
ZOU Zoufplan 85.11 319 P **P** **11 33 18.6 -0.8**
ZOU IAmb IAmb 11 33 18.7
comp=Z,7.3nm,0.6s
ABTA Abfaltersbach 85.29 319 *i* P **P** **11 33 18.6 -1.7**
comp=Z,10nm,0.7s,SNR=5.4
FUR Furstenfeldbru 85.30 321 *e* P **P** **11 33 20.0 -0.2**
comp=Z,31nm,0.7s,baz=60,slow=5.0
KASTN Kahler Asten 85.31 325 *e* P **P** **11 33 19.5 -0.6**
comp=Z,6.5nm,0.8s,baz=60,slow=5.0
KMBO Kilima Mbogo 85.37 267 P **P** **11 33 22.2 +0.8**
comp=Z,9.4nm,0.9s,baz=55,slow=6.5,SNR=15
STAL STALIGIAL 85.41 319 P **P** **11 33 19.8 -1.0**
STAL IAmb IAmb 11 33 20.6
comp=Z,13nm,0.9s
WATA Walderalm 85.55 320 *e* P **P** **11 33 20.9 -0.7**
comp=Z,9.1nm,0.9s
WTTA Wattenberg 85.55 320 *i* P **P** **11 33 20.5 -1.1**
comp=Z,14nm,0.7s,SNR=6.3
WTTA Wattenberg 85.55 320 P **P** **11 33 20.7 -1.0**
MILB Miltenberg 85.56 323 *e* P **P** **11 33 20.6 -0.9**
comp=Z,14nm,0.8s,baz=60,slow=5.0
BUG Bochum--Univer 85.78 325 *e* P **P** **11 33 21.9 -0.6**
comp=Z,31nm,1.1s,baz=60,slow=5.0
TNS Taunus Mts 85.82 324 *e* P **P** **11 33 22.3 -0.5**
comp=Z,6.1nm,0.7s,baz=60,slow=5.0
MOTA Moosalm 85.82 320 *e* P **P** **11 33 22.0 -1.0**
comp=Z,13nm,1.2s
SQTA Sankt Quirin 85.82 320 *e* P **P** **11 33 21.8 -1.1**
comp=Z,11nm,0.8s
RETA Reutte 85.95 321 *e* P **P** **11 33 21.8 -1.7**
comp=Z,5.1nm,0.9s
FETA Feichten 86.21 320 *e* P **P** **11 33 23.8 -1.1**
comp=Z,10nm,1.0s
UBR Ueberruh 86.23 321 *e* P **P** **11 33 24.1 -0.8**
comp=Z,14nm,1.1s,baz=60,slow=5.0
AHRW Bad Neuenahr-A 86.38 324 *e* P **P** **11 33 25.3 -0.1**
comp=Z,16nm,1.1s,baz=60,slow=5.0
DAVA Damuels 86.56 321 *e* P **P** **11 33 26.1 -0.6**
comp=Z,4.8nm,0.6s
NRCA Norcia 86.85 316 P **P** **11 33 27.5 -0.6**
NRCA IAmb IAmb 11 33 29.5
comp=Z,25nm,1.1s
BTNL Ternell 86.86 325 *d* P **P** **11 33 26.6 -1.3**
AQU L'Aquila 86.90 315 P **P** **11 33 30.2 +2.0**
BFO Black Forest 86.90 322 *e* P **P** **11 33 27.2 -0.9**
comp=Z,7.3nm,1.1s,baz=60,slow=5.0
MURB Monte Urbino 87.01 316 P **P** **11 33 28.5 -0.3**
TUE Stuetta 87.30 320 P **P** **11 33 29.2 -1.1**
TUE IAmb IAmb 11 33 31.7
comp=Z,6.7nm,0.7s
WLF Walferdange 87.36 324 *d* PcP **P** **11 33 30.3 +0.1**
WLF Walferdange 87.36 324 *e* P **P** **11 33 30.1 -0.1**
comp=Z,29nm,0.9s,baz=60,slow=5.0
CDF Champ du Feu 87.44 323 *e* P **P** **11 33 30.4 -0.4**
CDF pmax pmax
comp=Z,9.0nm,1.0s
PGC Sidney 87.53 37 P **P** **11 33 30.9 -0.2**
PGC IAmb IAmb 11 33 33.1
comp=Z,14nm,0.8s
BMRD Maredsous 87.73 325 *d* P **P** **11 33 30.6 -1.4**
GIVF Givet 87.82 325 *e* P **P** **11 33 31.1 -1.4**
GIVF pmax pmax
comp=Z,6.0nm,0.6s
A04D Lummi Island 87.91 37 P 11 33 33.7
baz=304
NLWA Neilton Lookou 88.00 38 P **P** **11 33 34.8 +1.4**
A05A Maple Falls 88.09 36 P **P** **11 33 34.1 +0.4**
A05A IAmb IAmb 11 33 35.4
comp=Z,15nm,1.0s
HAU Haudompre 88.18 323 *e* P **P** **11 33 32.6 -1.7**
HAU pmax pmax
comp=Z,6.0nm,0.7s
D03D Eldon 88.36 38 P 11 33 36.3
baz=304
B05A Bryant 88.50 37 P 11 33 36.2
baz=305
SENIN Lac Senin/Sane 88.56 321 P **P** **11 33 35.1 -1.2**
E03A Lebam 88.64 39 P **P** **11 33 37.4 +1.0**
B06A Marblemount 88.69 36 P **P** **11 33 36.5 0.0**
D04E Lakebay 88.74 38 P 11 33 37.9
baz=304
D05A Enumclaw 89.17 38 P **P** **11 33 40.3 +1.4**
E04D Cinebar 89.20 38 P 11 33 40.7
baz=304
F04D Rainier, OR 89.21 39 P 11 33 39.3
baz=304
LPG La Plagne 89.35 320 *e* P **P** **11 33 39.0 -1.2**
LPG pmax pmax
comp=Z,16nm,0.7s
LPL La Plagne 89.35 320 *e* P **P** **11 33 39.0 -1.1**
LPL pmax pmax
comp=Z,10.0nm,0.5s
LON Longmire 89.52 38 P **P** **11 33 41.1 +0.5**
LON pmax pmax
comp=Z,14nm,1.0s
LON Longmire 89.52 38 P **P** **11 33 41.1 +0.5**
LON IAmb IAmb 11 33 43.1
comp=Z,14nm,1.0s
PGF Pioggiola 89.60 317 *e* P **P** **11 33 40.1 -1.0**
PGF pmax pmax
comp=Z,15nm,0.7s
BNI Bardonecchia 89.64 320 P **P** **11 33 40.2 -1.2**
BNI pmax pmax
comp=Z,17nm,1.2s
BNI Bardonecchia 89.64 320 P **P** **11 33 40.2 -1.2**
BNI IAmb IAmb 11 33 41.3
comp=Z,17nm,1.2s
LTY Liberty 89.86 37 P **P** **11 33 42.7 +0.5**
LTY IAmb IAmb 11 33 44.0
comp=Z,14nm,1.0s
B08A Colville Reser 89.94 36 P **P** **11 33 42.8 +0.3**
LOR Lormes 89.99 323 *e* P **P** **11 33 41.1 -1.7**
LOR pmax pmax
comp=Z,11nm,1.0s

CASY	**Casey**	**90.04**	**184**	P	**P**	**11 33 41.5**	**-0.7**
CASY				lAmb	lAmb	11 33 42.1	
	comp=Z,17nm,0.8s						
ORIF	**Oris-en-Rattie**	**90.19**	**320**	*e*P	**P**	**11 33 42.5**	**-1.3**
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
F05D	**White Salmon**	**90.22**	**39**	P		11 33 45.0	
	baz=305						
H04D	**Lebanon**	**90.25**	**40**	P		11 33 44.9	
	baz=304						
J01E	**Myrtle Point**	**90.28**	**42**	P		11 33 45.6	
	baz=304						
I03D	**Drain, OR**	**90.34**	**41**	P		11 33 45.7	
	baz=304						
H04A	**Detroit Lake**	**90.48**	**40**	P	**P**	**11 33 46.1**	**+1.0**
AVF	**Avril sur Loir**	**90.55**	**323**	*e*P	**P**	**11 33 43.8**	**-1.5**
AVF				pmax	pmax		
	comp=Z,27nm,1.1s						
G05D	**Wamic, OR**	**90.67**	**39**	P		11 33 46.8	
	baz=305						
K02D	**Willamette Mer**	**90.70**	**42**	P		11 33 46.4	
	baz=304						
E07A	**Sunnyside**	**90.73**	**37**	P	**P**	**11 33 47.3**	**+1.0**
C09A	**Chrisman Ranch**	**90.85**	**36**	P	**P**	**11 33 47.1**	**+0.4**
C09A				lAmb	lAmb	11 33 49.4	
	comp=Z,18nm,1.2s						
I04A	**Tendick Farm,**	**90.85**	**41**	P		11 33 47.1	
	baz=304						
D08A	**Wollman Farm,**	**90.94**	**37**	P	**P**	**11 33 47.8**	**+0.6**
D08A				lAmb	lAmb	11 33 49.9	
	comp=Z,11nm,0.9s						
VSL	**Villasalto**	**90.97**	**314**	P	**P**	**11 33 46.3**	**-1.2**
VSL				lAmb	lAmb	11 33 48.7	
	comp=Z,19nm,1.0s						
HAWA	**Hanford**	**91.01**	**37**	P	**P**	**11 33 48.1**	**+0.6**
HAWA				lAmb	lAmb	11 33 50.4	
	comp=Z,11nm,1.0s						
L02E	**Cave Junction**	**91.04**	**43**	P		11 33 48.5	
	baz=304						
F07A	**Phinny Hill Vi**	**91.08**	**38**	P	**P**	**11 33 48.9**	**+1.1**
F07A				lAmb	lAmb	11 33 50.9	
	comp=Z,15nm,1.0s						
NEW	**Newport**	**91.17**	**35**	P	**P**	**11 33 49.1**	**+0.8**
NEW				pmax	pmax		
	comp=Z,13nm,1.4s						
NEW	**Newport**	**91.17**	**35**	P	**P**	**11 33 49.1**	**+0.8**
NEW				lAmb	lAmb	11 33 50.1	
	comp=Z,13nm,1.4s						
NEW	**Newport**	**91.17**	**35**	P		11 33 48.9	
	baz=308						
I05D	**Terrebonne, OR**	**91.17**	**40**	P		11 33 48.6	
	baz=305						
J04D	**Umpqua Nationa**	**91.35**	**41**	P		11 33 49.9	
	baz=305						
TCF	**Toulx Ste Croi**	**91.48**	**323**	*e*P	**P**	**11 33 48.5**	**-1.2**
TCF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PINE	**Pine Mountain**	**91.72**	**40**	P	**P**	**11 33 51.2**	**0.0**
L04D	**Klamath Falls**	**91.81**	**42**	P		11 33 51.2	
	baz=305						
J05D	**Fort Rock, OR**	**91.84**	**41**	P		11 33 52.3	
	baz=305						
K04D	**Chiloquin, OR**	**91.91**	**41**	P		11 33 52.4	
	baz=305						
M02C	**Callahan**	**91.93**	**43**	P		11 33 52.4	
	baz=304						
G08A	**Pilot Rock**	**91.98**	**38**	P	**P**	**11 33 52.9**	**+0.7**
N02D	**Trinity Center**	**92.26**	**43**	P		11 33 53.8	
	baz=304						
WALA	**Waterton Lakes**	**92.31**	**33**	P	**P**	**11 33 54.5**	**+0.9**
WALA				lAmb	lAmb	11 33 56.2	
	comp=Z,13nm,1.1s						
K05A	**Summer Lake**	**92.37**	**41**	P	**P**	**11 33 55.3**	**+1.2**
I07A	**Izee**	**92.39**	**39**	P	**P**	**11 33 54.1**	**0.0**
I07A				lAmb	lAmb	11 33 56.5	
	comp=Z,9.7nm,1.2s						
RJF	**Les Rejaudoux**	**92.46**	**322**	*e*P	**P**	**11 33 53.5**	**-0.8**
RJF				pmax	pmax		
	comp=Z,30nm,1.0s						
F10A	**Beach Ranch, E**	**92.53**	**37**	P	**P**	**11 33 54.9**	**+0.2**
O02D	**Mt. Diablo Mer**	**92.65**	**44**	P		11 33 55.7	
	baz=304						
FCC	**Fort Churchill**	**92.71**	**18**	P	**P**	**11 33 53.9**	**-1.1**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FCC	**Fort Churchill**	**92.71**	**18**	P	**P**	**11 33 53.9**	**-1.1**
JTMT	**Jette**	**92.97**	**34**	P	**P**	**11 33 57.2**	**+0.4**
JTMT				lAmb	lAmb	11 34 11.9	
	comp=Z,5.7nm,1.0s						
KEST	**Kesra**	**92.98**	**311**	P	**P**	**11 33 56.9**	**-0.1**
	comp=Z,7.7nm,0.9s,baz=295,slow=5.7,SNR=5.3						
KEST	**Kesra**	**92.98**	**311**	P	**P**	**11 33 56.7**	**-0.3**
KEST				lAmb	lAmb	11 33 58.1	
	comp=Z,14nm,1.1s						
BMO	**Blue Mountains**	**93.18**	**38**	P	**P**	**11 33 58.0**	**+0.3**
BMO				pmax	pmax		
	comp=Z,12nm,1.5s						
BMO	**Blue Mountains**	**93.18**	**38**	P	**P**	**11 33 58.0**	**+0.3**
BMO				lAmb	lAmb	11 33 59.3	
	comp=Z,12nm,1.4s						
MOD	**Modoc Plateau**	**93.21**	**41**	P	**P**	**11 33 57.9**	**-0.1**
MOD				lAmb	lAmb	11 34 00.6	
	comp=Z,15nm,1.1s						
O03E	**Paynes Creek**	**93.21**	**43**	P		11 33 57.7	
	baz=305						
J08A	**Circle Bar Ran**	**93.43**	**39**	P	**P**	**11 33 59.5**	**+0.7**
J08A				lAmb	lAmb	11 34 01.7	
	comp=Z,9.2nm,1.0s						
FFC	**Flin Flon**	**93.43**	**24**	P	**P**	**11 33 57.7**	**-0.8**
FFC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FFC	**Flin Flon**	**93.43**	**24**	P	**P**	**11 33 57.7**	**-0.8**
FFC				lAmb	lAmb	11 34 16.8	
	comp=Z,5.4nm,0.8s						
MSO	**Missoula**	**93.75**	**35**	P	**P**	**11 34 01.0**	**+0.7**
MSO	**Missoula**	**93.75**	**35**	P		11 34 00.1	
	baz=311						
ORV	**Oroville**	**93.82**	**44**	P	**P**	**11 33 59.8**	**-0.8**
ORV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ORV	**Oroville**	**93.82**	**44**	P	**P**	**11 33 59.8**	**-0.8**
WVOR	**Wild Horse Val**	**93.89**	**40**	P	**P**	**11 34 01.6**	**+0.6**
WVOR				pmax	pmax		
	comp=Z,14nm,1.5s						
WVOR	**Wild Horse Val**	**93.89**	**40**	P	**P**	**11 34 01.6**	**+0.6**
WVOR				lAmb	lAmb	11 34 03.1	
	comp=Z,14nm,1.4s						
BEKR	**Beckworth**	**94.36**	**43**	P	**P**	**11 34 03.1**	**-0.3**
BEKR				lAmb	lAmb	11 34 18.2	
	comp=Z,5.4nm,0.9s						
AFDM	**Forest Hills D**	**94.50**	**44**	P	**P**	**11 34 04.1**	**+0.3**
MFID	**Camas Ranch**	**94.91**	**38**	P	**P**	**11 34 06.5**	**+0.8**
HRY	**Holter Researc**	**94.91**	**34**	P	**P**	**11 34 06.5**	**+0.8**
RUBR	**Rubicon Trail**	**94.96**	**44**	P	**P**	**11 34 06.8**	**+0.6**
RUBR				lAmb	lAmb	11 34 08.9	
	comp=Z,7.6nm,0.8s						
EGMT	**Eagleton**	**95.05**	**32**	P		11 34 06.2	
	baz=314						
PAHR	**Pah Rah Range**	**95.06**	**43**	P	**P**	**11 34 06.4**	**-0.1**
PAHR				lAmb	lAmb	11 34 09.2	
	comp=Z,6.6nm,0.9s						
VCNR	**Virginia City**	**95.14**	**43**	P	**P**	**11 34 08.0**	**+1.1**
LRM	**Limekiln Ridge**	**95.19**	**35**	P	**P**	**11 34 07.8**	**+0.7**
PNTR	**Pine Nut**	**95.29**	**43**	P	**P**	**11 34 08.7**	**+1.0**
PNTR				lAmb	lAmb	11 34 10.7	
	comp=Z,5.4nm,0.8s						
CMB	**Columbia Colle**	**95.41**	**45**	P	**P**	**11 34 07.8**	**-0.2**
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMB	**Columbia Colle**	**95.41**	**45**	P	**P**	**11 34 07.8**	**-0.2**
DLMT	**Dillon**	**95.42**	**35**	P	**P**	**11 34 08.6**	**+0.6**
DLMT				lAmb	lAmb	11 34 10.3	
	comp=Z,8.3nm,1.1s						
YERR	**Yerington**	**95.58**	**43**	P	**P**	**11 34 09.8**	**+0.9**
YERR				lAmb	lAmb	11 34 11.2	
	comp=Z,12nm,1.5s						
HLID	**Hailey**	**95.61**	**37**	P	**P**	**11 34 09.9**	**+1.0**
HLID	**Hailey**	**95.61**	**37**	P		11 34 09.3	
	baz=310						
WAKR	**Walker**	**95.74**	**44**	P	**P**	**11 34 10.5**	**+0.8**
WAKR				lAmb	lAmb	11 34 23.6	
	comp=Z,12nm,1.5s						
PPT2	**Papeete2**	**95.75**	**107**	*e*LR	LR	12 04 58.1	
	comp=Z,187nm,21.5s						
BOZ	**Bozeman (W)**	**95.77**	**34**	P		11 34 09.4	
	baz=312						
RYN	**Ryan**	**96.24**	**43**	P	**P**	**11 34 11.8**	**-0.2**
KVN	**Kaiserville**	**96.25**	**43**	P	**P**	**11 34 12.6**	**+0.6**
KVN				pmax	pmax		
	comp=Z,11nm,1.3s						
KVN	**Kaiserville**	**96.25**	**43**	P	**P**	**11 34 12.6**	**+0.6**
KVN				lAmb	lAmb	11 34 14.3	
	comp=Z,11nm,1.3s						
LHV	**Little Huntoon**	**96.48**	**43**	P	**P**	**11 34 14.6**	**+1.8**
LHV				lAmb	lAmb	11 34 15.8	
	comp=Z,10nm,1.3s						
NVAR	**Mina Array Bea**	**96.50**	**43**	P	**P**	**11 34 12.7**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=283,slow=4.3,SNR=16						
NVAR	**Mina Array Bea**	**96.50**	**43**	P	**P**	**11 34 12.4**	**-0.7**
YHL	**Hebgen Lake**	**96.50**	**35**	P	**P**	**11 34 13.6**	**+0.4**
NV11	**Mina Array Sit**	**96.59**	**43**	P	**P**	**11 34 14.3**	**+0.8**
RLMT	**Red Lodge**	**97.31**	**34**	P		11 34 17.4	
	baz=314						
TPH	**Tonopah**	**97.39**	**43**	P	Pdif	11 34 17.8	+0.5
TPH				pmax	pmax		
	comp=Z,16nm,0.9s						
TPH	**Tonopah**	**97.39**	**43**	P	Pdif	11 34 17.8	+0.5
R11A	**Troy Canyon, C**	**98.23**	**42**	P		11 34 21.1	
	baz=309						
FURC	**Furnace Creek,**	**98.60**	**44**	P		11 34 21.7	
	baz=308						
LRMC	**Laurel Mtn Rad**	**98.67**	**45**	P		11 34 22.5	
	baz=307						
PDAR	**Pinedale Array**	**98.79**	**36**	P	**P**	**11 34 23.4**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=270,slow=3.6,SNR=2.4						
LSZ	**Lusaka**	**99.14**	**257**	P	**Pdif**	**11 34 23.2**	**-2.0**
LSZ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
LSZ	**Lusaka**	**99.14**	**257**	P	**Pdif**	**11 34 23.2**	**-2.0**
LSZ				lAmb	lAmb	11 34 24.7	
	comp=Z,9.5nm,1.3s						
ULM	**Lac du Bonnet**	**99.25**	**23**	P	**Pdif**	**11 34 26.0**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=344,slow=7.4,SNR=3.7						
H57A	**Richville**	**110.44**	**13**	P		11 39 15.3	
	baz=343						
G62A	**West of Eustis**	**110.57**	**9**	P		11 39 16.4	
	baz=348						
H58A	**Gabriels**	**110.73**	**12**	P		11 39 15.8	
	baz=345						
G64A	**Maxfield**	**110.78**	**8**	P		11 39 15.6	
	baz=350						
M63A	**Gales Ferry**	**114.04**	**11**	P		11 39 22.5	
	baz=346						
P60A	**Greenville**	**114.83**	**15**	P		11 39 24.2	
	baz=343						
R55A	**Marlinton**	**115.08**	**19**	P		11 39 24.0	
	baz=338						
SNAA	**Sanae**	**122.88**	**198**	PKPdf	**PKPdf**	**11 39 37.2**	**-1.3**
VNA2	**Neumayer--Watz**	**124.52**	**198**	PKPdf	**PKPdf**	**11 39 40.9**	**-0.7**
VNA1	**Neumayer--Stat**	**124.91**	**198**	PKPdf	**PKPdf**	**11 39 41.7**	**-0.6**
VNA3	**Neumayer Olymp**	**124.99**	**197**	PKPdf	**PKPdf**	**11 39 41.5**	**-1.0**
SMLC	**San Martn de**	**144.25**	**27**	*e*P	**PKPab**	**11 40 17.1**	**-0.7**
UREC	**San Jos de Ur**	**144.54**	**30**	*e*P	**PKPab**	**11 40 17.7**	**-1.2**
DBBC	**Dabeiba**	**144.86**	**32**	*e*P	**PKPab**	**11 40 18.7**	**-1.4**
ZARC	**Zaragoza, Cauc**	**145.08**	**30**	*e*P	**PKPbc**	**11 40 19.6**	**-1.3**
BRRC	**Barranca, Sant**	**145.93**	**28**	*e*P	**PKPdf**	**11 40 21.6**	**-1.3**
CBOC	**Ciudad Bolivar**	**145.95**	**33**	*e*P	**PKPdf**	**11 40 22.6**	**-0.6**
PTBC	**PUERTO BERRIO**	**146.10**	**30**	*e*P	**PKPdf**	**11 40 21.7**	**-1.5**
BARC	**Barichara**	**146.62**	**28**	*e*P	**PKPbc**	**11 40 25.1**	**-0.8**
NORC	**Norcasia**	**146.77**	**31**	*e*P	**PKPbc**	**11 40 25.7**	**-0.4**
GUY2C	**Guyana, Caldas**	**146.82**	**32**	*e*P	**PKPdf**	**11 40 25.8**	**+0.8**
MALC	**Bahia Malaga**	**146.83**	**37**	*e*P	**PKPbc**	**11 40 26.8**	**+0.6**
SPBC	**San Pablo de B**	**147.06**	**30**	*e*P	**PKPbc**	**11 40 26.0**	**-1.0**
RUSC	**La Rusia**	**147.28**	**28**	*e*P	**PKPbc**	**11 40 28.2**	**+0.1**
YOTC	**Yotoco, Valle**	**147.38**	**35**	*e*P	**PKPdf**	**11 40 24.7**	**-0.8**
TOLC	**Tolima**	**147.40**	**33**	*e*P	**PKPbc**	**11 40 27.3**	**-0.9**
ANIL	**Santa Ana**	**147.44**	**33**	*e*P	**PKPbc**	**11 40 27.4**	**-0.8**
ORTC	**Ortega, Tolima**	**148.01**	**33**	*e*P	**PKPdf**	**11 40 27.8**	**+1.3**
VILC	**Villavicencio,**	**148.59**	**31**	*e*P	**PKPbc**	**11 40 29.9**	**-1.3**
SOTA	**Rioblanco**	**148.78**	**37**	*e*P	**PKPbc**	**11 40 31.2**	**-0.9**
GCUF	**Volcan Galeras**	**149.11**	**39**	*e*P	**PKPbc**	**11 40 33.1**	**+0.1**
GO09	**Cerro Castillo**	**150.36**	**162**		**PKPbc**	**11 40 34.0**	**-0.2**
MDP	**Montagnes des**	**150.91**	**348**	PKPbc	**PKPbc**	**11 40 36.1**	**-0.5**
	comp=Z,11nm,0.9s,baz=61,slow=2.5,SNR=4.5						
ATAH	**Atahualpa**	**154.66**	**53**	PKPbc	**PKiKP**	**11 40 45.6**	**+0.1**
	comp=Z,4.6nm,0.6s,baz=305,slow=6.0,SNR=3.8						
PLCA	**Paso Flores**	**160.08**	**152**	PKPab	**PKPab**	**11 41 21.8**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=214,slow=5.1,SNR=9.0						
BDFB	**Brasilia**	**167.47**	**308**	PKP	**PKPdf**	**11 40 48.3**	**-1.8**
	comp=Z,1.6nm,0.4s,baz=23,slow=6.1,SNR=3.9						
BDFB				PKPab	**PKPab**	**11 41 54.8**	**-0.8**
	comp=Z,5.0nm,0.7s,baz=39,slow=5.4,SNR=6.5						
LPAZ	**La Paz**	**168.21**	**53**	PKP	**PKPdf**	**11 40 50.0**	**-1.3**
	comp=Z,3.0nm,1.0s,baz=27,slow=5.3,SNR=7.0						
LPAZ				PKPab	**PKPab**	**11 41 58.0**	**-1.5**
	comp=Z,2.5nm,0.8s,baz=36,slow=5.2,SNR=4.9						
LPAZ	**La Paz**	**168.21**	**53**	PKIKP	**PKPdf**	**11 40 51.0**	**-0.3**
LPAZ						11 41 58.9	
LPAZ	**La Paz**	**168.21**	**53**		**PKPdf**	**11 40 51.0**	**-0.3**
LPAZ				PKPab	**PKPab**	**11 41 58.9**	**-0.6**
SIV	**San Ignacio**	**171.95**	**19**	PKP	**PKPdf**	**11 40 51.5**	**-1.2**
	comp=Z,3.3nm,0.9s,baz=160,slow=1.7,SNR=10						
CPUP	**Villa Florida**	**177.19**	**198**	PKP	**PKPdf**	**11 40 53.0**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=305,slow=4.0,SNR=4.0						
CPUP				PKPab	PKPab	11 42 36.6	-1.5
	comp=Z,1.8nm,0.8s,baz=188,slow=7.1,SNR=4.1						
CPUP	**Villa Florida**	**177.19**	**198**	PKIKP	**PKPdf**	**11 40 53.0**	**-1.0**

IDC ***20*** *11:26:02.2±11.0, 23.°18S×179.°83W, h396km±103km, mb3.7/5, mb1 3.9/6, mb1mx3.4/39, mbtmp4.5/6 Error ellipse: s-maj=95.7km s-min=20.7km az=45.0*

NEIC ***20*** *11:26:10.7±0.8, 23.°7S±0.°2×179.°9E±0.°2, h503km±15km, mb4.3/19, Error ellipse: s-maj=33.3km s-min=22.0km az=71.0*

ISC 20 11:26:14.6±1.4, 24.°0S±0.°1×179.°7E±0.°2, h537km, n28, σ1§10/28, mb4.1/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.38**	**188**	P		**P**	**11 29 16.6**	**-1.1**
	2.3nm,0.3s,baz=122,slow=24,SNR=24							
URZ				S		**S**	**11 31 46.3**	**-2.3**
	0.4nm,0.3s,baz=301,slow=23,SNR=2.0							
URZ	**Urewera**	**14.38**	**188**	P		**P**	**11 29 17.1**	**-0.5**
BKZ	**Black Stump Fm**	**15.35**	**190**	P		**P**	**11 29 27.5**	**-0.4**
BKZ				lAmb		lAmb	11 29 31.7	
	comp=Z,22nm,1.4s							
QRZ	**Quartz Range**	**17.82**	**198**	P		**P**	**11 29 52.4**	**+1.1**
THZ	**Tophouse**	**18.59**	**196**	P		**P**	**11 29 59.1**	**+0.7**
LTZ	**Lake Taylor**	**19.71**	**196**	P		**P**	**11 30 09.1**	**+0.5**
LTZ				lAmb		lAmb	11 30 17.1	
	comp=Z,15nm,1.3s							
ARMA	**Armidale**	**25.75**	**249**	P		**P**	**11 31 02.6**	**-0.2**
ARMA				lAmb		lAmb	11 31 09.4	
	comp=Z,21nm,1.2s							
CTA	**Charters Tower**	**31.22**	**271**	P		**P**	**11 31 52.3**	**+1.8**
	comp=Z,5.6nm,0.5s,baz=94,slow=11,SNR=13							
CTAO	**Charters Tower**	**31.22**	**271**	P		**P**	**11 31 49.5**	**-1.0**
CTAO				lAmb		lAmb	11 31 55.8	
	comp=Z,18nm,1.3s							
AS31	**Alice Springs**	**41.76**	**261**	P		**P**	**11 33 18.0**	**+0.6**
ASAR	**Alice Springs**	**41.77**	**261**	P		**P**	**11 33 18.2**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=100,slow=6.9,SNR=9.1							
WR0	**Warramunga Arr**	**41.96**	**266**	P		**P**	**11 33 19.2**	**+0.3**
WR0				lAmb		lAmb	11 33 22.5	
	comp=Z,6.8nm,1.3s							
WB2	**Warramunga Arr**	**42.13**	**266**	P		**P**	**11 33 20.4**	**+0.1**
WB2				lAmb		lAmb	11 33 26.5	
	comp=Z,5.3nm,1.1s							
WB0	**Warramunga Arr**	**42.14**	**267**	P		**P**	**11 33 20.0**	**-0.3**
WB0				lAmb		lAmb	11 33 21.4	
	comp=Z,5.9nm,0.8s							
WRA	**Warramunga Arr**	**42.15**	**266**	P		**P**	**11 33 20.9**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=97,slow=8.4,SNR=23							
WRA	**Warramunga Arr**	**42.15**	**266**	P		**P**	**11 33 19.8**	**-0.5**
MTN	**Manton Dam**	**47.21**	**275**	P		**P**	**11 33 58.7**	**-0.7**
MTN				lAmb		lAmb	11 34 11.3	
	comp=Z,20nm,1.1s							
KNRA	**Kununurra**	**48.43**	**270**	P		**P**	**11 34 07.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**50.57**	**266**	P		**P**	**11 34 24.1**	**0.0**
FITZ				lAmb		lAmb	11 34 28.1	
	comp=Z,16nm,1.3s							
VNDA	**Vanda**	**54.25**	**185**	P		P	11 34 54.6	+5.1
	comp=Z,6.5nm,0.2s,baz=43,slow=1.7,SNR=127							
VNDA	**Vanda**	**54.25**	**185**	P		**P**	**11 34 50.7**	**+1.1**
SBA	**Scott Base**	**54.25**	**183**	P		**P**	**11 34 50.8**	**+1.2**
MORW	**Morawa**	**56.60**	**250**	P		**P**	**11 35 06.9**	**+0.1**
MORW				lAmb		lAmb	11 35 22.9	
	comp=Z,12nm,1.4s							
QSPA	**South Pole Qui**	**66.07**	**180**	P		**P**	**11 36 09.3**	**+1.0**
USA0B	**Ussuriysk Arra**	**80.72**	**327**	P		**P**	**11 37 29.7**	**-2.1**
USA0B				lAmb		lAmb	11 37 30.0	
	comp=Z,8.6nm,1.5s							
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P		**P**	**11 38 16.4**	**+2.1**
	comp=Z,0.5nm,0.7s,baz=96,slow=2.9,SNR=4.2							
CMAR	**Chiang Mai Arr**	**89.33**	**290**	P		**P**	**11 38 12.7**	**-1.6**
AKASG	**Malin Array Be**	**144.93**	**327**	PKP		**PKPdf**	**11 44 50.4**	**0.0**
	comp=Z,0.6nm,0.4s,baz=45,slow=4.4,SNR=4.4							

MEX 20 11:41:05.1±0.3, 14.°15N×92.°24W, h54km±118km, MD3.7, Near coast of Chiapas

BJI ***20*** *11:45:12.1±0.0, 24.°10N×122.°47E, h20km, mB5.9/66, mb5.6/62, ML5.8/7, Ms6.1/92, Ms7 6.1/85*

NEIC ***20*** *11:45:13.4±1.4, 24.°09N±0.°03×122.°45E±0.°06, h29km±1km, mb5.5/343, Ms_20 5.9/692, Mwb5.8/70, Mwr5.8/36, Mww6.0, ML5.8(TAP), Mwc5.9(GCMT), Error ellipse: s-maj=8.8km s-min=4.8km az=83.0*

TAP ***20*** *11:45:13.8, 24.°04N×122.°51E, h34km, ML6.2, C*

IDC ***20*** *11:45:13.1±1.9, 24.°19N×122.°58E, h28km±12km, mb5.1/36, mb1 5.2/38, mb1mx5.2/41, mbtmp5.3/38, ML4.7/2, MS5.7/9, Ms1 5.7/9, ms1mx5.3/39, Error ellipse: s-maj=12.7km s-min=8.7km az=79.0*

BGR ***20*** *11:45:13.9±0.0, 24.°11N×122.°79E, h33km, mb5.4*

JMA ***20*** *11:45:13.0±0.1, 23.°96N×122.°48E, h21km±2km, M6.0*

JMA Felt III J1.

MOS ***20*** *11:45:13.5±1.0, 24.°21N×122.°56E, h45km, mb5.7/137, MS5.9/71, Error ellipse: s-maj=5.9km s-min=3.8km az=110.9*

NIED ***20*** *11:45:13.1, 23.°96N×122.°48E, h21km, MW5.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}4.24; $M_{\theta\theta}$-6.06; $M_{\phi\phi}$ 1.82; $M_{r\theta}$5.63; $M_{\theta\phi}$ 1.58; $M_{r\phi}$2.39; Fault plane solution: $M_0$8.29000×10^{17} NP1:ϕ_s74.00000°, δ72.00000°, λ65.00000°. NP2:ϕ_s311.00000°, δ30.00000°, λ143.00000°.*

NEIC ***20*** *11:45:15, 24.°09N×122.°46E, h19km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.62; $M_{\theta\theta}$-4.81; $M_{\phi\phi}$ 0.19; $M_{r\theta}$5.25; $M_{\theta\phi}$ 1.36; $M_{r\phi}$1.60; Fault plane solution: $M_0$7.36000×10^{17} NP1:ϕ_s304.27000°, δ26.00000°, λ129.16000°. NP2:ϕ_s82.09000°, δ70.13000°, λ72.88000°. Principal axes: T 7.5168, Plg61.0000°, Azm327.0000°; N -0.3160, Plg16.0000°, Azm88.0000°; P -7.2008, Plg23.0000°, Azm185.0000°;*

NEIC ***20*** *11:45:15, 24.°09N×122.°46E, h28km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.44; $M_{\theta\theta}$-4.17; $M_{\phi\phi}$ -0.27; $M_{r\theta}$4.24; $M_{\theta\phi}$-0.71; $M_{r\phi}$1.31; Fault plane solution: $M_0$6.22000×10^{17} NP1:ϕ_s264.61000°, δ22.52000°, λ98.89000°. NP2:ϕ_s75.00000°, δ67.76000°, λ86.33000°. Principal axes: T 6.3113, Plg67.0000°, Azm338.0000°; N -0.1830, Plg3.0000°, Azm76.0000°; P -6.1283, Plg23.0000°, Azm168.0000°;*

GCMT ***20*** *11:45:15.4±0.1, 23.°88N±0.°01×122.°40E±0.°01, h36km, MW5.9/155, Moment Tensor Solution. s151,c317; s155,c436; Duration: 2s2 Moment tensor: Scale 10^{18} Nm; M_{rr}0.65±.01; $M_{\theta\theta}$-0.70±.01; $M_{\phi\phi}$0.04±.01; $M_{r\theta}$0.51±.01; $M_{\theta\phi}$0.06±.01; $M_{r\phi}$0.15±.01; Best double couple: $M_0$0.86500×10^{18} NP1:ϕ_s288.00000°, δ28.00000°, λ113.00000°. NP2:ϕ_s82.00000°, δ64.00000°, λ78.00000°. Principal axes: T 0.8550, Plg68.0000°, Azm328.0000°; N 0.0180, Plg11.0000°, Azm87.0000°; P -0.8740, Plg19.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ASIES ***20*** *11:45:15.5, 24.°12N×122.°41E, h24km, MW5.7*

NEIC ***20*** *11:45:16, 23.°90N×122.°48E, h35km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.97; $M_{\theta\theta}$-7.04; $M_{\phi\phi}$ 1.07; $M_{r\theta}$5.60; $M_{\theta\phi}$ 0.79; $M_{r\phi}$1.70; Fault plane solution: $M_0$8.83000×10^{17} NP1:ϕ_s293.00000°, δ27.00000°, λ120.00000°. NP2:ϕ_s80.00000°, δ67.00000°, λ75.00000°. Principal axes: T 8.5174, Plg65.0000°, Azm324.0000°; N 0.6033, Plg13.0000°, Azm86.0000°; P -9.1206, Plg20.0000°, Azm181.0000°;*

NEIC ***20*** *11:45:21, 23.°87N×122.°57E, h30km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.61; $M_{\theta\theta}$-0.58; $M_{\phi\phi}$ -0.03; $M_{r\theta}$1.07; $M_{\theta\phi}$0.09; $M_{r\phi}$0.14; Fault plane solution: $M_0$1.24000×10^{18} NP1:ϕ_s291.00000°, δ16.00000°, λ115.00000°. NP2:ϕ_s85.00000°, δ76.00000°, λ83.00000°. Principal axes: T 1.2662, Plg59.0000°, Azm345.0000°; N -0.0516, Plg7.0000°, Azm86.0000°; P -1.2146, Plg30.0000°, Azm180.0000°;*

**ISC 20 11:45:13.7±0.4, 24.°06N±0.°02×122.°49E±0.°01, h31km±2km, h32km:pP-P, n1814, σ1§33/1820, mb5.5/441, MS5.9/413, 269C-123D, Fault plane solution: NP1:ϕ_s313.50205°, δ20.

ENTT	**Nioudou**	**1.02 305**⇑*iP*	**Pb**	**11 45 33.0 +0.1**
	baz=305			
ENTT		*eS*	**Sb**	**11 45 46.8 +0.9**
	baz=305			
NDT	**Datong Townshi**	**1.04 301** ⇑P	**Pb**	**11 45 33.2 +0.1**
	baz=302			
NDT		*eS*	**Sb**	**11 45 47.9 +1.4**
	baz=302			
TWB1	**Santiao Chiao**	**1.04 334**⇑*iP*	**Pb**	**11 45 33.3 0.0**
	baz=334			
TWB1		*eS*	**Sb**	**11 45 47.5 +0.8**
	baz=334			
EGFH	**Guangfu**	**1.05 248**⇓*eP*	**Pn**	**11 45 31.7 -0.7**
	baz=250			
EGFH		*eS*	**Sn**	**11 45 45.2 -0.7**
	baz=250			
NNSB	**Datong**	**1.07 290**⇑*eP*	**Pn**	**11 45 33.4 +0.6**
	baz=291			
NNSB		*eS*	**Sn**	**11 45 46.7 0.0**
	baz=291			
NNSH	**Datong**	**1.07 290**⇑*eP*	**Pn**	**11 45 33.3 +0.6**
	baz=291			
NNSH		*eS*	**Sb**	**11 45 47.7 +0.2**
	baz=291			
NNS	**Nan Shan**	**1.08 290** ⇑P	**Pn**	**11 45 33.5 +0.6**
	baz=291			
NNS		*eS*	**Sb**	**11 45 48.1 +0.2**
	baz=291			
TIPB	**Shuangxi**	**1.09 326**⇑*eP*	**Pb**	**11 45 33.9 -0.1**
	baz=326			
TIPB		*eS*	**Sb**	**11 45 48.7 +0.8**
	baz=326			
WHF	**Hehuan Shan**	**1.12 274**⇑*iP*	**Pn**	**11 45 33.7 0.0**
	baz=275			
WHF		*eS*	**Sn**	**11 45 47.6 -0.7**
	baz=275			
HGSD	**Ruisui**	**1.13 240**⇓*iP*	**Pn**	**11 45 32.7 -0.7**
	baz=241			
HGSD		*eS*	**Sn**	**11 45 47.4 -0.5**
	baz=241			
NWLT	**Wulai**	**1.15 309**⇑*eP*	**Pb**	**11 45 35.0 +0.1**
	baz=309			
NWLT		*eS*	**Sb**	**11 45 49.8 +0.2**
	baz=309			
FUSS	**Fushou**	**1.15 279**⇑*eP*	**Pn**	**11 45 34.4 +0.4**
	baz=280			
FUSS		*eS*	**Sb**	**11 45 49.8 -0.1**
	baz=280			
YHNB	**Yeheng**	**1.18 301**⇑*eP*	**Pb**	**11 45 35.3 -0.3**
	baz=301			
YHNB	**Yeheng**	**1.18 301** Pn	**Pn**	**11 45 34.9 +0.7**
WFSB	**Wu-fen Shan**	**1.19 327**⇑*eP*	**Pb**	**11 45 35.5 -0.3**
	baz=327			
WFSB		*eS*	**Sb**	**11 45 50.7 -0.1**
	baz=327			
NSK	**Sanguang**	**1.20 301**⇑*iP*	**Pb**	**11 45 35.5 -0.4**
	baz=301			
CHGB	**Renai**	**1.20 270**⇑*iP*	**Pn**	**11 45 35.0 +0.3**
	baz=271			
CHGB		*eS*	**Sn**	**11 45 50.2 +0.2**
	baz=271			
OWD	**Renai**	**1.20 265**⇑*eP*	**Pn**	**11 45 34.6 0.0**
	baz=266			
HATJ	**Hateruma jima**	**1.21 90** P	**Pb**	**11 45 35.3 -0.6**
HATJ		S	**Sb**	**11 45 51.4 +0.2**
TWT	**Tachien**	**1.21 279** ⇑P	**Pb**	**11 45 35.7 -0.5**
	baz=280			
TWT		*eS*	**Sn**	**11 45 49.4 -0.9**
	baz=280			
TDCB	**Techi**	**1.23 279** ⇑P	**Pn**	**11 45 35.7 +0.8**
	baz=280			
TDCB		*eS*	**Sn**	**11 45 51.2 +0.6**
	baz=280			
TWA	**Mucha**	**1.23 318** ⇑P	**Pb**	**11 45 36.4 0.0**
	baz=318			
TWA		*eS*	**Sb**	**11 45 53.7 +1.8**
	baz=318			
NHDH	**Xindian Distri**	**1.25 316**⇑*eP*	**Pb**	**11 45 36.8 0.0**
	baz=316			
NHDH		*eS*	**Sb**	**11 45 54.4 +1.9**
	baz=316			
TNOU	**National Taiwa**	**1.26 329**⇑*eP*	**Pn**	**11 45 36.1 +0.9**
	baz=329			
TNOU		*eS*	**Sb**	**11 45 52.7 -0.1**
	baz=329			
VWDT	**VWDT**	**1.27 256** P	**Pn**	**11 45 35.8 +0.4**
	baz=257			
VWDT		*eS*	**Sn**	**11 45 51.4 0.0**
	baz=257			
YULB	**Yu-li**	**1.28 239** ⇓P	**Pn**	**11 45 35.1 -0.4**
	baz=240			
YULB		*eS*	**Sn**	**11 45 50.3 -1.3**
	baz=240			
YULB	**Yu-li**	**1.28 239**	**Pn**	**11 45 35.0 -0.6**
TATO	**Taipei**	**1.28 315**⇑*eP*	**Pb**	**11 45 37.1 -0.3**
	baz=315			
TATO		*eS*	**Sb**	**11 45 54.7 +1.2**
	baz=315			
TATO	**Taipei**	**1.28 315** Pn	**Pn**	**11 45 34.2 -1.4**
TATO	**Taipei**	**1.28 315** P	**Pb**	**11 45 37.9 +0.6**
EYUL	**Yuli**	**1.29 237**⇓*eP*	**Pn**	**11 45 35.4 -0.2**
	baz=238			
EYUL		*eS*	**Sn**	**11 45 51.9 0.0**
	baz=238			
TAP1	**Taipei**	**1.31 318** *eP*	**Pb**	**11 45 37.4 -0.3**
	baz=318			
TAP	**Taipei**	**1.32 318** *eP*	**Pb**	**11 45 37.5 -0.4**
	baz=318			
TAP		*eS*	**Sb**	**11 45 56.8 +2.3**
	baz=318			
BACT	**New Taipei Cit**	**1.33 315** *eP*	**Pb**	**11 45 37.3 -0.7**
	baz=315			
BACT		*eS*	**Sb**	**11 45 57.1 +2.4**
	baz=315			
NWRT	**Kuosheng**	**1.36 327** *eP*	**Pn**	**11 45 37.5 +0.9**
	baz=326			
NWRT		*eS*	**Sb**	**11 45 55.6 0.0**
	baz=326			
YM01	**YM01**	**1.36 322**⇑*eP*	**Pn**	**11 45 37.6 +0.9**
	baz=322			
YM01		*eS*	**Sb**	**11 45 56.8 +1.0**
	baz=322			
YM10	**YM10**	**1.38 322**⇑*eP*	**Pn**	**11 45 37.9 +0.9**
	baz=322			
YM11	**YM11**	**1.38 323** *eP*	**Pn**	**11 45 37.8 +0.9**
	baz=323			
YM05	**YM05**	**1.38 323**⇑*eP*	**Pn**	**11 45 37.8 +0.8**
	baz=323			
YM05		*eS*	**Sb**	**11 45 57.1 +0.8**
	baz=323			
YM08	**YM08**	**1.39 324**⇑*eP*	**Pn**	**11 45 37.6 +0.6**
	baz=324			
YM08		*eS*	**Sn**	**11 45 55.3 +1.0**
	baz=324			
YM04	**YM04**	**1.39 322**⇑*eP*	**Pn**	**11 45 37.9 +0.8**
	baz=322			
YM04		*eS*	**Sb**	**11 45 56.8 +0.4**
	baz=322			
FULB	**Fuli**	**1.39 232**⇓*eP*	**Pn**	**11 45 36.2 -0.9**
	baz=233			
FULB		*eS*	**Sn**	**11 45 54.0 -0.5**
	baz=233			
WPL	**Puli Township**	**1.40 268**⇑*eP*	**Pn**	**11 45 38.0 +0.8**
	baz=269			
JKRS	**Kuro-shima**	**1.40 83** P	**Pb**	**11 45 38.2 -1.1**
JKRS		S	**Sb**	**11 45 57.8 +1.0**
CHKT	**Chengkung**	**1.41 227** ⇓P	**Pn**	**11 45 36.2 -1.1**
	baz=228			
CHKT		*eS*	**Sn**	**11 45 52.4 -2.4**
	baz=228			
TWS1	**Kuangyinshan**	**1.42 317** ⇑P	**Pb**	**11 45 38.9 -0.7**
	baz=317			
TWS1		*eS*	**Sb**	**11 45 57.7 +0.4**
	baz=317			
ANP	**Anpu**	**1.42 322**⇑*eP*	**Pn**	**11 45 38.2 +0.6**
	baz=322			
WHP	**Taichung City**	**1.42 279**⇑*eP*	**Pb**	**11 45 38.9 -0.9**
	baz=278			
WHP		*eS*	**Sn**	**11 45 54.5 -0.9**
	baz=278			
DPDB	**Guoxing**	**1.43 269**⇑*eP*	**Pn**	**11 45 38.6 +1.0**
	baz=270			
DPDB		*eS*	**Sn**	**11 45 56.3 +1.0**
	baz=270			
NTY	**Taoyuan**	**1.43 311** *eP*	**Pb**	**11 45 39.5 -0.2**
	baz=311			
SSLB	**Suanglung**	**1.43 259**⇑*eP*	**Pn**	**11 45 38.1 +0.5**
	baz=260			
SSLB		*eS*	**Sn**	**11 45 55.1 -0.3**
	baz=260			
SSLB	**Suanglung**	**1.43 259**	**Pn**	**11 45 37.2 -0.4**
NJD	**Zhudong**	**1.44 298** *eP*	**Pb**	**11 45 40.4 +0.4**
	baz=298			
WCS	**Beigang Elemen**	**1.44 270**⇑*eP*	**Pn**	**11 45 38.9 +1.1**
	baz=271			
WCS		*eS*	**Sn**	**11 45 56.3 +0.7**
	baz=271			
NTST	**Danshui**	**1.45 319** *eP*	**Pb**	**11 45 39.3 -0.7**
	baz=319			
TWY	**Chenhua**	**1.45 326** *eP*	**Pb**	**11 45 39.3 -0.8**
	baz=326			
TWY		*eS*	**Sb**	**11 45 57.6 -0.6**
	baz=326			
LIOB	**Emei**	**1.46 294**⇑*eP*	**Pb**	**11 45 40.1 -0.2**
	baz=294			
LIOB		*eS*	**Sb**	**11 45 58.7 +0.2**
	baz=294			
SMLT	**Sun Moon Lake**	**1.46 263**⇑*eP*	**Pn**	**11 45 39.0 +0.8**
	baz=264			
SMLT		*eS*	**Sn**	**11 45 56.6 +0.2**
	baz=264			
NSTT	**Nanjuang**	**1.47 293**⇑*eP*	**Pb**	**11 45 40.1 -0.4**
	baz=293			
NSTT		*eS*	**Sb**	**11 45 58.6 -0.1**
	baz=293			
NCU	**National Centr**	**1.49 308**⇑*eP*	**Pb**	**11 45 40.2 -0.5**
	baz=308			
NCU		*eS*	**Sb**	**11 46 01.7 +2.4**
	baz=308			
NCUH	**Zhongli**	**1.49 307**⇑*eP*	**Pb**	**11 45 40.0 -0.8**
	baz=308			
TYC	**Yuchr**	**1.50 264**⇑*eP*	**Pn**	**11 45 39.4 +0.8**
	baz=265			
TYC		*eS*	**Sn**	**11 45 56.8 -0.3**
	baz=265			
HSN1	**Hsinchu**	**1.52 298**⇑*eP*	**Pb**	**11 45 40.8 -0.4**
	baz=299			
YUS	**Yu-Shan**	**1.52 248** *eP*	**Pn**	**11 45 39.3 +0.1**
	baz=249			
YUS		*eS*	**Sn**	**11 45 56.0 -2.2**
	baz=249			
EDH	**Donghe**	**1.54 225**⇓*eP*	**Pn**	**11 45 38.0 -1.1**
	baz=226			
EDH		*eS*	**Sn**	**11 45 56.3 -1.7**
	baz=226			
WHYT	**Xinyi Township**	**1.54 257** *eP*	**Pb**	**11 45 40.6 -1.0**
	baz=257			
JIJ	**Ishigaki jima**	**1.54 78** P	**Pn**	**11 45 40.0 +0.9**
JIJ		S	**Sb**	**11 45 59.6 -1.2**
SBCB	**Hsinchu**	**1.55 298** *eP*	**Pb**	**11 45 41.2 -0.6**
	baz=299			
HSN	**Hsinchu**	**1.57 298**⇑*eP*	**Pb**	**11 45 41.1 -1.0**
	baz=300			
HSN		*eS*	**Sb**	**11 46 02.0 +0.5**
	baz=300			
TWQ1	**Liyutan**	**1.59 281**⇑*eP*	**Pb**	**11 45 42.0 -0.5**
	baz=281			
TWQ1		*eS*	**Sb**	**11 46 03.2 +1.0**
	baz=281			
NJN	**Zhunan**	**1.60 293** *eP*	**Pb**	**11 45 41.5 -1.2**
	baz=293			
PCYT	**Pengchaiyu**	**1.60 346**⇑*iP*	**Pn**	**11 45 41.4 +1.4**
	baz=346			
PCYT		*eS*	**Sn**	**11 46 01.2 +1.5**
	baz=346			
NHW	**Xinwu Township**	**1.61 306** *eP*	**Pn**	**11 45 41.2 +1.1**
	baz=306			
NHW		*eS*	**Sb**	**11 46 03.2 +0.4**
	baz=306			
NSY	**Sanyi**	**1.61 283**⇑*eP*	**Pb**	**11 45 42.6 -0.3**
	baz=283			
NSY		*eS*	**Sb**	**11 46 04.1 +1.2**
	baz=283			
WJS	**Zhushan**	**1.63 262**⇑*eP*	**Pb**	**11 45 42.2 -0.9**
	baz=263			
WJS		*eS*	**Sb**	**11 46 03.8 +0.5**
	baz=263			
WWF	**Wufeng**	**1.64 270** *eP*	**Pb**	**11 45 42.9 -0.4**
	baz=270			
WWF		*eS*	**Sb**	**11 46 05.4 +1.9**
	baz=270			
ALS	**Alishan**	**1.64 251**⇓*iP*	**Pn**	**11 45 41.7 +1.0**
	baz=251			
ALS		*eS*	**Sn**	**11 46 01.7 +0.9**
	baz=251			
TCU	**Taichung**	**1.66 273**⇑*eP*	**Pb**	**11 45 43.1 -0.6**
	baz=274			
TCU		*eS*	**Sb**	**11 46 03.8 -0.3**
	baz=274			
WNT	**Mingjian**	**1.66 264** *eP*	**Pb**	**11 45 42.9 -0.7**
	baz=265			
WNT		*eS*	**Sb**	**11 46 04.4 +0.2**
	baz=265			
WNT1	**Nantou City**	**1.66 265** *eP*	**Pb**	**11 45 43.1 -0.6**
	baz=266			
WNT1		*eS*	**Sb**	**11 46 05.7 +1.5**
	baz=266			
LDUT	**Ludao**	**1.67 214**⇓*iP*	**Pn**	**11 45 39.7 -1.2**
	baz=215			
LDUT		S	**Sn**	**11 45 59.1 -2.1**
	baz=215			
LONT	**Longtian**	**1.70 228**⇓*eP*	**Pn**	**11 45 40.7 -0.5**
	baz=228			
LONT		*eS*	**Sn**	**11 46 01.4 -0.6**
	baz=228			
WDJ	**Dajia District**	**1.71 280**⇑*eP*	**Pb**	**11 45 43.5 -1.0**
	baz=280			
WDJ		*eS*	**Sb**	**11 46 05.3 -0.3**
	baz=280			
CHN5	**Tsauling**	**1.72 255** *eP*	**Pn**	**11 45 43.3 +1.6**
	baz=255			
CHN5		*eS*	**Sb**	**11 46 05.4 -0.6**
	baz=255			
JISG	**Ishigakijimahi**	**1.74 72** ⇑P	**Pn**	**11 45 42.7 +0.8**
JISG		*eS*	**Sb**	**11 46 04.9 -1.7**
WCHH	**Zhanghua**	**1.76 271**⇑*eP*	**Pb**	**11 45 44.3 -1.1**
	baz=271			
WCHH		*eS*	**Sb**	**11 46 06.7 -0.4**
	baz=271			
TWGBT	**Beinan**	**1.79 226**⇓*eP*	**Pn**	**11 45 41.7 -0.9**
	baz=227			
TWGBT		*eS*	**Sn**	**11 46 03.2 -1.1**
	baz=227			
TTN	**Taitung**	**1.79 224** *eP*	**Pn**	**11 45 42.5 -0.1**
	baz=224			
TTN		*eS*	**Sn**	**11 46 03.3 -1.0**
	baz=224			
TWG	**Pinlang**	**1.79 227** ⇓P	**Pn**	**11 45 41.8 -0.8**
	baz=227			
TWG		*eS*	**Sn**	**11 46 03.2 -1.2**
	baz=227			
TWG	**Pinlang**	**1.79 227**	**Pn**	**11 45 41.0 -1.6**
WGK	**Gukeng**	**1.80 258** *eP*	**Pb**	**11 45 44.9 -1.2**
	baz=259			
WGK		*eS*	**Sb**	**11 46 09.0 +0.7**
	baz=259			
STYH	**Taoyuan**	**1.80 241**⇓*eP*	**Pn**	**11 45 43.4 +0.7**
	baz=242			
STYH		*eS*	**Sn**	**11 46 04.8 +0.2**
	baz=242			
STYT	**Tauyuan**	**1.82 241** ⇓P	**Pn**	**11 45 43.8 +0.8**
	baz=241			
STYT		*eS*	**Sn**	**11 46 06.6 +1.4**
	baz=241			
WDLH	**Douliu**	**1.82 259** *eP*	**Pb**	**11 45 44.9 -1.5**
	baz=259			
WDLH		*eS*	**Sb**	**11 46 08.9 +0.1**
	baz=259			
TPUB	**Ta-pu**	**1.86 246**⇓*eP*	**Pn**	**11 45 45.1 +1.5**
	baz=247			
TPUB		*eS*	**Sb**	**11 46 08.7 -1.4**
	baz=247			
TPUB	**Ta-pu**	**1.86 246**	**Pn**	**11 45 43.8 +0.2**
CHN4	**Tsaushan**	**1.88 248**⇓*eP*	**Pn**	**11 45 45.5 +1.8**
	baz=249			
CHN4		*eS*	**Sn**	**11 46 08.4 +2.1**
	baz=249			
WTP	**Ta-pu**	**1.90 245**⇓*eP*	**Pn**	**11 45 45.7 +1.6**
	baz=245			
WTP		*eS*	**Sn**	**11 46 09.1 +2.1**
	baz=245			
CHN2	**Minshiung**	**1.92 254** *eP*	**Pb**	**11 45 47.3 -0.8**
	baz=255			
CHN2		*eS*	**Sb**	**11 46 11.6 +0.1**
	baz=255			
WRL	**Guolierlin Hig**	**1.94 266** *eP*	**Pn**	**11 45 44.6 +0.1**
	baz=266			
WTK	**Tuku**	**1.96 259** *eP*	**Pb**	**11 45 47.3 -1.4**
	baz=260			
WTK		*eS*	**Sb**	**11 46 11.7 -1.0**
	baz=260			
CHY	**Chiayi**	**1.97 254** *eP*	**Pb**	**11 45 47.4 -1.6**
	baz=254			
CHY		*eS*	**Sn**	**11 46 08.5 -0.2**
	baz=254			
SLGT	**Liugui**	**2.00 238** *eP*	**Pn**	**11 45 46.7 +1.3**
	baz=239			
SLGT		*eS*	**Sb**	**11 46 12.2 -1.7**
	baz=239			
TWK	**Hsinying**	**2.00 247**⇓*eP*	**Pn**	**11 45 47.2 +1.7**
	baz=247			
TWK		*eS*	**Sb**	**11 46 12.6 -1.4**
	baz=247			
CHN1	**Nanshi**	**2.00 244** *eP*	**Pn**	**11 45 47.3 +1.9**
	baz=245			
CHN1		*eS*	**Sb**	**11 46 12.0 -2.0**
	baz=245			
SGST	**Jiashian**	**2.00 241**⇓*eP*	**Pn**	**11 45 46.2 +0.7**
	baz=242			
SGST		*eS*	**Sn**	**11 46 11.4 +1.9**
	baz=242			
SNST	**Tainan City**	**2.01 246** *eP*	**Pn**	**11 45 47.5 +2.0**
	baz=246			
WTCT	**Ta-ch'eng**	**2.03 265** *eP*	**Pn**	**11 45 48.0 +2.1**
	baz=265			
WTCT		*eS*	**Sb**	**11 46 13.6 -1.1**
	baz=265			
ECL	**Taimali**	**2.03 224**⇓*eP*	**Pn**	**11 45 44.8 -1.0**
	baz=225			
ECL		*eS*	**Sn**	**11 46 08.6 -1.5**
	baz=225			
WMLT	**Mailiao**	**2.09 263** *eP*	**Pb**	**11 45 48.9 -2.0**
	baz=264			
WMLT		*eS*	**Sb**	**11 46 15.5 -0.9**
	baz=264			
JTJ	**Tarama**	**2.10 74** P	**Pn**	**11 45 48.2 +1.4**
JTJ		*eS*	**Sb**	**11 46 14.7 -2.1**
WSF	**Szhu**	**2.12 259** *eP*	**Pn**	**11 45 49.1 +2.1**
	baz=259			
WSF		*eS*	**Sb**	**11 46 16.2 -1.1**
	baz=259			
ICHU	**Yijhu**	**2.14 251** *eP*	**Pn**	**11 45 49.4 +2.0**
	baz=252			
ICHU		*eS*	**Sn**	**11 46 15.2 +2.3**
	baz=252			
SSD	**Sandimen**	**2.15 233** *eP*	**Pn**	**11 45 47.7 +0.2**
	baz=233			
SSD		*eS*	**Sb**	**11 46 16.4 -1.9**
	baz=233			
TSMG	**Majia**	**2.17 232** *eP*	**Pn**	**11 45 47.7 0.0**
	baz=232			
TSMG		*eS*	**Sn**	**11 46 14.4 +0.8**
	baz=232			
SCST	**Cishan**	**2.17 238**⇓*eP*	**Pn**	**11 45 49.8 +2.0**
	baz=238			
SCST		*eS*	**Sb**	**11 46 17.4 -1.5**
	baz=238			
CHN3	**Shinhua**	**2.18 244** *eP*	**Pb**	**11 45 50.9 -1.6**
	baz=244			
CHN3		*eS*	**Sb**	**11 46 18.8 -0.4**
	baz=244			
LAY	**Lan-yu**	**2.19 203** P	**Pn**	**11 45 46.5 -1.6**
	baz=204			
LAY		*eS*	**Sn**	**11 46 11.7 -2.6**
	baz=204			
CHN8	**Yiju**	**2.21 252** *eP*	**Pn**	**11 45 50.2 +2.0**
	baz=252			
CHN8		*eS*	**Sn**	**11 46 17.2 +2.7**
	baz=252			
MASBT	**Mashibuluo**	**2.23 230**⇓*eP*	**Pn**	**11 45 48.9 +0.3**
	baz=231			
MASBT		*eS*	**Sb**	**11 46 19.6 -1.1**
	baz=231			
TAW	**Tawu**	**2.24 221**⇓*eP*	**Pn**	**11 45 48.2 -0.6**
	baz=221			
TAW		*eS*	**Sn**	**11 46 14.9 -0.5**
	baz=221			
EAST	**Anshuo**	**2.25 222**⇓*eP*	**Pn**	**11 45 48.3 -0.6**
	baz=223			
EAST		*eS*	**Sn**	**11 46 14.9 -0.8**
	baz=223			
TWM1	**Shoushan**	**2.26 237** *eP*	**Pb**	**11 45 52.1 -1.9**
	baz=238			
TWM1		*eS*	**Sb**	**11 46 22.3 +0.8**
	baz=238			
SGLT	**Jiouru**	**2.27 234** *eP*	**Pb**	**11 45 52.5 -1.5**
	baz=235			
SGLT		*eS*	**Sb**	**11 46 22.4 +0.8**
	baz=235			
SCLT	**Jiali**	**2.28 248** *eP*	**Pn**	**11 45 51.6 +2.3**
	baz=248			
SCLT		*eS*	**Sb**	**11 46 19.6 -2.4**
	baz=248			
TSPT	**Pingtung City**	**2.29 233** *eP*	**Pb**	**11 45 52.5 -1.9**
	baz=234			
TSPT		*eS*	**Sb**	**11 46 23.7 +1.4**
	baz=234			
TAI1	**Yung-k'ang**	**2.31 244** *eP*	**Pn**	**11 45 52.1 +2.4**
	baz=245			
TAI1		*eS*	**Sb**	**11 46 20.6 -2.2**
	baz=245			
SSPT	**Xinbi**	**2.36 229** *eP*	**Pn**	**11 45 51.7 +1.3**
	baz=229			
SSPT		*eS*	**Sb**	**11 46 23.1 -1.3**
	baz=229			
SNJT	**Kaohsiung City**	**2.37 237** *eP*	**Pb**	**11 45 53.4 -2.3**
	baz=237			
SNJT		*eS*	**Sn**	**11 46 20.9 +2.3**
	baz=237			
SCZT	**Fangliau**	**2.41 226**⇓*eP*	**Pn**	**11 45 51.5 +0.5**
	baz=226			
SCZT		*eS*	**Sb**	**11 46 23.0 -2.6**
	baz=226			
SLIU	**Shizi**	**2.41 221** ⇓P	**Pn**	**11 45 50.5 -0.5**
	baz=221			
SLIU		*eS*	**Sn**	**11 46 18.6 -0.9**
	baz=221			
KAU	**Kaohsiung**	**2.50 234** *eP*	**Pb**	**11 45 55.3 -2.6**
	baz=234			
JIRB	**Irabujima**	**2.56 72** P	**Pn**	**11 45 54.7 +1.5**
JIRB		*eS*	**Sn**	**11 46 26.1 +2.8**
WLCH	**Liuqiu**	**2.58 229**⇓*eP*	**Pb**	**11 45 57.2 -2.2**
	baz=229			
TWP	**Hsiaoliuchiu**	**2.60 229** *eP*	**Pn**	**11 45 56.0 +2.3**
	baz=229			
TWP		*eS*	**Sb**	**11 46 30.9 -0.2**
	baz=229			
TSEB	**Hengchuen, Pin**	**2.60 214** *eP*	**Pn**	**11 45 54.2 +0.5**
	baz=216			
TSEB		*eS*	**Sn**	**11 46 25.7 +1.3**
	baz=216			
HEN	**Hengchun**	**2.61 219** *eP*	**Pn**	**11 45 53.6 -0.2**
	baz=219			
HEN		*eS*	**Sn**	**11 46 23.9 -0.5**
	baz=219			
TWKBT	**Hengchun**	**2.62 216**⇓*eP*	**Pn**	**11 45 53.9 0.0**
	baz=217			
TWKBT		*eS*	**Sn**	**11 46 25.5 +0.8**
	baz=217			
TWK1	**Hengchun**	**2.62 217** *eP*	**Pn**	**11 45 53.9 0.0**
	baz=217			
TWK1		*eS*	**Sn**	**11 46 25.7 +1.0**
	baz=217			
SNW	**Nanwan**	**2.64 218** *eP*	**Pn**	**11 45 55.4 +1.2**
	baz=218			
SNW		*eS*	**Sn**	**11 46 27.9 +2.8**
	baz=218			
JIKM	**Ikemajima**	**2.66 71** P	**Pn**	**11 45 56.8 +2.3**
JIKM		S	**Sn**	**11 46 28.1 +2.5**
JMJ	**Miyako jima 2**	**2.67 73** *eP*	**Pn**	**11 45 56.6 +2.0**
	baz=73			
JMJ		*eS*	**Sn**	**11 46 24.9 -1.0**
	baz=73			
JMJ2	**Miyako jima3**	**2.68 75** P	**Pn**	**11 45 56.7 +2.0**
JMJ2		S	**Sn**	**11 46 29.3 +3.2**
WDGT	**Dungji**	**2.71 253** *eP*	**Pn**	**11 45 56.4 +1.2**
	baz=253			
WDGT		*eS*	**Sn**	**11 46 27.5 +0.5**
	baz=253			
PHUB	**P'eng-hu**	**2.73 259**⇑*eP*	**Pn**	**11 45 56.5 +1.1**
	baz=259			
PHUB		*eS*	**Sn**	**11 46 28.5 +1.1**
	baz=259			
PNG	**Penghu**	**2.73 260**⇑*eP*	**Pn**	**11 45 56.5 +1.1**

baz=260
PNG eS Sn 11 46 28.9 +1.4
baz=260
JOGS Gusukube 2.75 75 P Pn 11 45 58.3 +2.6
JOGS eS Sn 11 46 30.8 +2.9
VWUC VWUC 2.92 289⇑ eP Pn 11 45 58.6 +0.5
baz=289
VWUC eS Sn 11 46 31.3 -0.8
baz=289
VCHM Qimei 2.93 254 eP Pn 11 45 59.4 +1.1
baz=254
VCHM eS Sn 11 46 31.9 -0.5
baz=254
MATB Ma-tsu 3.10 313⇑ eP Pn 11 46 01.0 +0.4
baz=312
MATB eS Sn 11 46 37.6 +0.9
baz=312
MSUT Lienchiang 3.13 313 eP Pn 11 46 01.5 +0.6
baz=312
MSUT eS Sn 11 46 38.0 +0.7
baz=312
PTMZ Houxiangcun 3.22 288⇑ eP Pn 11 46 02.6 +0.5
baz=288
PTMZ eS Sn 11 46 38.6 -0.8
baz=288
LYJJ Jianjiangzhen 3.50 316⇑ eP Pn 11 46 06.5 +0.5
baz=315
LYJJ eS Sn 11 46 47.0 +0.6
baz=315
XPSS Dashiqiu 3.53 324 eP Pn 11 46 06.6 +0.1
baz=324
XPSS eS Sn 11 46 48.1 +0.9
baz=324
BBP Basco 3.64 188 eP Pn 11 46 05.3 -2.6
KNM Kinmen 3.72 276⇓ eP Pn 11 46 11.2 +2.1
baz=275
KNM eS Sn 11 46 53.3 +1.5
baz=275
MHZQ Yeshan 3.73 304⇑ eP Pn 11 46 09.2 -0.1
baz=303
MHZQ eS Sn 11 46 50.4 -1.8
baz=303
KNMB Chin-men Tao 3.76 277⇑ eP Pn 11 46 10.0 +0.3
baz=276
KNMB eS Sn 11 46 52.5 -0.4
baz=276
KNMB Chin-men Tao 3.76 277 Pn 11 46 10.1 +0.3
AXDP Jialang 4.20 282⇑ eP Pn 11 46 16.2 +0.5
baz=282
AXDP eS Sn 11 47 02.3 -1.4
baz=282
ZPLA Ao Xicun 4.33 269⇑ eP Pn 11 46 18.1 +0.6
baz=269
ZPLA eS Sn 11 47 05.5 -1.6
baz=269
JOW Kunigami 5.91 61 eP Pn 11 46 38.9 -0.4
baz=62
JOW Kunigami 5.91 61 Pn Pn 11 46 39.3 0.0
APYP Conner 6.28 191 eP Pn 11 46 42.8 -1.5
VDOS Pratas Island 6.29 239 eP Pn 11 46 47.0 +2.5
baz=238
CVP Callao Caves 6.36 186⇓ eP Pn 11 46 45.3 -0.1
SZP Santa 6.75 197⇓ eP Pn 11 46 52.2 +1.4
baz=197
SZP Santa 6.75 197 Pn 11 46 51.3 +0.5
SSE Sheshan 7.10 351 Pn Pn 11 46 56.3 +0.8
SSE Sn Sn 11 48 22.5 +7.4
SSE LR LR
comp=N,3μm,17.0s
SSE LR LR
comp=E,1μm,17.0s
SSE Sheshan 7.10 351 Pn 11 46 56.1 +0.6
BCP Baguio City 7.81 193⇓ eP Pn 11 47 07.0 +1.5
HKC Hong Kong Obse 7.85 259 ⇑P Pn 11 47 08.0 +2.2
GZH Guangzhou 8.44 265 P Pn 11 47 10.4 -3.6
GZH S Sn 11 48 41.9 -6.4
GZH smax smax
comp=N,3μm,1.1s
GZH smax smax
comp=E,2μm,1.6s
MCO Taipa Grande 8.44 259 P Pn 11 47 15.0 +1.0
NJ2 Nanjing 8.58 339⇑ iP Pn 11 47 15.3 -0.5
NJ2 S Sn 11 48 56.3 +4.7
NJ2 pmax pmax
comp=Z,100nm,0.5s
NJ2 smax smax
comp=N,2μm,0.9s
NJ2 smax smax
comp=E,2μm,1.2s
NJ2 LR LR
comp=N,123μm,12.9s
NJ2 LR LR
comp=E,66μm,13.2s
NJ2 LR LR
comp=Z,139μm,13.2s
QVP Quezon City--P 9.49 189 eP Pn 11 47 32.5 +4.0
WHN Wuhan 9.69 314 ⇓P Pn 11 47 30.9 -0.2
WHN pP 11 47 36.8
WHN sP 11 47 42.4
WHN S Sn 11 49 20.0 +1.0
WHN LR LR
comp=N,171μm,15.6s
WHN LR LR
comp=E,121μm,14.8s
WHN LR LR
comp=Z,201μm,14.7s
JCNP Jose Panganiba 9.72 179 eP Pn 11 47 32.8 +1.2
MACP Maragondon, Ca 9.89 190 eP Pn 11 47 36.6 +2.7
LQP Lukban 9.94 185 eP Pn 11 47 34.1 -0.7
TGY Tagaytay City 10.02 189 Pn Pn 11 47 38.9 +3.2
41nm,0.3s,baz=140,slow=4.4,SNR=8.6
TGY LR LR 11 51 38.4
comp=Z,40μm,21.1s,baz=324,slow=38
TGY Tagaytay City 10.02 189 eP Pn 11 47 40.5 +4.8
JSU Suzuyama 10.23 42 Pn Pn 11 47 39.1 +0.6
SCSP San Jose Seism 10.40 174 eP Pn 11 47 42.6 +1.7
LUBP Lubang 10.49 192 eP Pn 11 47 41.9 -0.3
PGP Puerto Galera 10.61 188⇑ eP Pn 11 47 43.0 -0.7
SJMP San Jose 11.61 187 eP Pn 11 47 59.8 +2.3
JNU Nakatsue 11.65 37 Pn Pn 11 47 59.9 +2.0
1.3nm,0.3s,baz=161,slow=6.9,SNR=9.7
JNU LR LR 11 52 50.5
comp=Z,39μm,18.9s,baz=220,slow=40
JNU Nakatsue 11.65 37 Pn Pn 11 47 57.9 0.0
JTU Tsushima 12.04 28 Pn 11 48 02.9 -0.3
RCP Roxas 12.44 179⇓ eP Pn 11 48 12.1 +3.4
QIZ Qiongzhong 12.79 249 P Pn 11 48 13.8 +0.3
QIZ S Sn 11 50 35.4 +0.6
QIZ LR LR
comp=N,27μm,15.7s
QIZ LR LR
comp=E,14μm,19.8s
QIZ LR LR
comp=Z,22μm,17.8s
TIA Tai'an 12.96 340 P P 11 48 21.1 -4.9
TIA pmax pmax
comp=Z,140nm,1.1s
TIA LR LR
comp=N,55μm,16.2s
TIA LR LR
comp=E,35μm,11.3s
TIA LR LR
comp=Z,94μm,14.2s
OCLP Ormoc 13.10 171 eP P 11 48 31.6 +4.0
ENPP El Nido 13.12 193 eP Pn 11 48 17.6 -0.4
ENH Enshi 13.12 301 Pn Pn 11 48 18.2 +0.2
INCN Inchon 13.84 14 P Pn 11 48 28.1 +0.3
INCN Inchon 13.84 14 Pn Pn 11 48 28.1 +0.3
MSLP Maasin 14.04 170 eP Pn 11 48 33.2 +2.6
KSAR Wonju Array Be 14.12 18 P Pn 11 48 31.9 +0.4
KSAR Wonju Array Be 14.12 18 Pn 11 48 31.9 +0.4
KSRS Korea Array 14.14 18 Pn P 11 48 35.7 -3.3
13nm,0.3s,baz=198,slow=12,SNR=133
KSRS LR LR 11 54 34.5
comp=Z,41μm,19.3s,baz=196,slow=40
CNOP Candoni, Negro 14.16 179 eP Pn 11 48 33.2 +1.0
KS19 Wonju Array Si 14.17 18 Pn 11 48 31.9 -0.4
JHS Saijyo 14.28 38 Pn 11 48 34.4 +0.5
GYA Guiyang 14.52 283 ⇑P Pn 11 48 38.3 +1.1
GYA sP P 11 48 49.4 +5.9
GYA S Sn 11 51 19.3 +2.1
GYA pmax pmax
comp=Z,2μm,8.0s
GYA LR LR
comp=N,21μm,10.1s
GYA LR LR
comp=E,44μm,16.9s
GYA LR LR
comp=Z,59μm,16.4s
GLSP General Luna, 14.62 166 eP Pn 11 48 37.6 -0.9
DL2 Dalian 14.81 357⇑ iP Pn 11 48 41.9 +0.9
DL2 pP P 11 48 49.3 +2.7
DL2 S Sn 11 51 27.9 +3.8
DL2 pmax pmax
comp=Z,130nm,1.1s
DL2 pmax pmax
comp=Z,6μm,7.4s
DL2 LR LR
comp=N,50μm,13.9s
DL2 LR LR
comp=E,15μm,13.8s
DL2 LR LR
comp=Z,64μm,13.7s
BUTP Butuan 15.31 168 eP Pn 11 48 49.3 +1.6
XAN Xi'an 15.46 313 P Pn 11 48 50.5 +0.8
XAN pP pP 11 49 00.8 -0.6
XAN sP pwP 11 49 04.8 +0.6
XAN pmax pmax
comp=Z,200nm,1.4s
XAN pmax pmax
comp=Z,4μm,4.9s
XAN LR LR
comp=N,30μm,16.7s
XAN LR LR
comp=E,53μm,16.7s
XAN LR LR
comp=Z,78μm,18.4s
XAN Xi'an 15.46 313 P Pn 11 48 50.0 +0.3
XAN pmax pmax
comp=Z,249nm,1.1s
XAN Xi'an 15.46 313 Pn 11 48 50.0 +0.3
XAN IAmb IAmb 11 49 05.5
comp=Z,249nm,1.1s
CGP Cagayan de Oro 15.66 172⇓ eP P 11 48 55.2 -0.9
JWT Wachi 15.82 42 P P 11 48 56.9 -0.9
BATP Bataraza 15.83 197 eP Pn 11 48 54.5 +0.1
TIY Taiyuan 16.09 330 eP P 11 49 01.6 +0.7
TIY S Sn 11 51 56.1 +0.7
TIY pmax pmax
comp=Z,5μm,5.2s
TIY LR LR
comp=Z,64μm,12.6s
TIY LR LR
comp=Z,47μm,15.5s
TIY LR LR
comp=Z,76μm,13.9s
PAGZ Pagadian 16.15 177 eP Pn 11 48 58.4 -0.2
BUKP Musuan 16.28 171 eP P 11 49 01.9 -1.1
BJT Baijiatuau 16.78 343 P P 11 49 08.6 +0.3
BJT pmax pmax
comp=Z,369nm,1.7s
BJT Baijiatuau 16.78 343 P P 11 49 08.6 +0.3
BJI Beijing 16.80 343 P P 11 49 08.8 +0.3
BJI S S 11 52 20.8 -1.5
BJI pmax pmax
comp=Z,6μm,6.7s
BJI LR LR
comp=Z,24μm,22.7s
BJI LR LR
comp=Z,16μm,19.2s
BJI LR LR
comp=Z,25μm,20.9s
KCP Kidapawan 17.14 171⇑ iP P 11 49 14.4 +1.8
MATI Mati 17.40 167 eP Pn 11 49 13.4 -1.0
SKMP Bagumbayan, Su 17.56 173 eP P 11 49 17.1 0.0
JHJ Hachijo jima 2 17.65 55 P P 11 49 20.4 +2.4
comp=Z,47nm,0.3s,baz=225,slow=6.9,SNR=13
JHJ2 Mitsune 17.67 55 P P 11 49 17.9 -0.3
SNY Shenyang 17.74 3 ⇑P P 11 49 20.1 +1.1
SNY S S 11 52 39.3 -2.2
SNY pmax pmax
comp=Z,110nm,0.7s
SNY pmax pmax
comp=Z,5μm,7.0s
SNY LR LR
comp=Z,29μm,19.0s
SNY LR LR
comp=Z,17μm,13.9s
SNY LR LR
comp=Z,46μm,17.1s
DLV T Lat 17.94 230 Pn 11 49 20.1 -1.1
CD2 Chengdu 17.95 296 P P 11 49 21.6 +0.1
CD2 S Sn 11 52 37.8 -2.7
CD2 pmax pmax
comp=Z,220nm,1.0s
CD2 pmax pmax
comp=Z,9μm,8.4s
CD2 LR LR
comp=Z,44μm,9.1s
CD2 LR LR
comp=Z,65μm,16.0s
CD2 LR LR
comp=Z,73μm,15.5s
KMI Kunming 17.99 277 ⇑P P 11 49 25.4 +3.2
KMI pP pP 11 49 31.1 +1.5
KMI sP sP 11 49 34.3 +1.1
KMI PP PnPn 11 49 37.3 +4.3
KMI S Sn 11 52 41.3 -0.5
KMI SS S 11 53 03.8 +17
KMI pmax pmax
comp=Z,5μm,11.8s
KMI LR LR
comp=Z,17μm,10.7s
KMI LR LR
comp=Z,52μm,13.8s
KMI LR LR
comp=Z,55μm,13.1s
KMI Kunming 17.99 277 P Pn 11 49 21.8 0.0
KMI pmax pmax
comp=Z,295nm,1.7s
KMI Kunming 17.99 277 P Pn 11 49 21.8 0.0
JCJ Chichijima 18.02 76 P P 11 49 25.6 +3.4
comp=Z,20nm,0.3s,baz=299,slow=20,SNR=10
JCJ Chichijima 18.02 76 P P 11 49 22.1 -0.2
JCJ IAmb IAmb 11 49 35.6
comp=Z,322nm,0.8s
DDMP Don Marcelino, 18.12 170 eP Pn 11 49 22.7 -0.5
UBPT Khong Chiam 18.24 244 P Pn 11 49 28.3 +3.6
comp=Z,3μmcomp=Z,67nm,2.9s
UBPT Khong Chiam 18.24 244 P Pn 11 49 25.0 +0.4
MAJO Matsushiro 18.38 44 deP Pn 11 49 26.4 +0.1
MAJO MLR MLR
comp=Z,18μm,23.0s
MAJO Matsushiro 18.38 44 P Pn 11 49 26.8 +0.5
MAT Matsushiro 18.38 44 P P 11 49 23.8 -2.3
MAT S S 11 52 53.6 -0.9
MJB9 Matsu-Tunnel 18.38 44 P Pn 11 49 27.1 +0.8
MJAR Matsushiro Arr 18.38 44 P P 11 49 24.4 -1.7
comp=Z,0.4nm,0.3s,baz=244,slow=11,SNR=24
MJAR PcP PcP 11 53 56.6 +0.1
baz=200,slow=2.4,SNR=4.1
MJAR LR LR 11 56 58.1
comp=Z,12μm,20.1s,baz=230,slow=39
MJAR ScP ScP 11 57 29.5 -0.4
baz=212,slow=3.4,SNR=5.5
MJAR Matsushiro Arr 18.38 44 P P 11 49 24.7 -1.4
KKM Kota Kinabalu 18.90 200 P Pn 11 49 32.9 +0.1
KKM IAmb IAmb 11 49 40.9
comp=Z,354nm,1.3s
NONG Nongkai 19.00 255 P Pn 11 49 37.1 +3.2
comp=Z,7μmcomp=Z,212nm,0.8s
HHC Hu-ho-hao-te 19.08 334 eP Pn 11 49 35.8 +1.0
HHC PP PnPn 11 49 50.3 +2.5
HHC S Sn 11 53 02.9 -4.8
HHC pmax pmax
comp=Z,6μm,5.3s
HHC LR LR
comp=Z,74μm,14.2s
HHC LR LR
comp=Z,36μm,14.9s
HHC LR LR
comp=Z,81μm,14.9s
MYLDM Lahad Datu 19.16 192 P Pn 11 49 35.9 0.0
MYLDM IAmb IAmb 11 50 13.4
comp=Z,638nm,1.3s
JSD Sado 19.37 40 P Pn 11 49 37.5 -0.7
JYT Yasato 19.49 47 P P 11 49 38.2 -0.1
BTO Baotou 19.54 331 P Pn 11 49 41.9 +1.6
MSHR Mys Shultsa 19.82 19 dP P 11 49 41.9 +0.2
MSHR pmax pmax
comp=Z,299nm,1.0s
MSHR MLR MLR
comp=Z,36μm,16.0s
CN2 Changchun 19.84 6 ⇑P P 11 49 41.8 -0.2
CN2 esP sP 11 49 58.3 +5.0
CN2 eS S 11 53 17.0 -6.8
CN2 pmax pmax
comp=Z,2μm,8.0s
CN2 LR LR
comp=Z,63μm,16.0s
CN2 LR LR
comp=Z,21μm,16.0s
CN2 LR LR
comp=Z,72μm,16.0s
KHON Khomkaen 19.98 251 P Pn 11 49 47.0 +1.4
comp=Z,3μmcomp=Z,238nm,1.1s
LZH Lanzhou 20.06 311 eP Pn 11 49 46.9 +0.3
LZH pP pP 11 49 53.0 +0.8
LZH sP pwP 11 49 55.0 0.0
LZH PP sP 11 50 02.8 +6.5
LZH pmax pmax
comp=Z,210nm,1.1s
LZH pmax pmax
comp=Z,5μm,5.2s
LZH LR LR
comp=Z,21μm,10.8s
LZH LR LR
comp=Z,52μm,13.8s
LZH LR LR
comp=Z,49μm,14.1s
JMM Marumori 20.82 44 P P 11 49 52.2 -0.5
CHAI Chaiyaphum 20.89 251 P P 11 49 55.0 +1.4
comp=Z,1μmcomp=Z,158nm,0.9s
MDJ Mudanjiang 21.31 14 P P 11 49 57.6 -0.3
MDJ pP pP 11 50 04.4 -1.6
MDJ S S 11 53 54.1 +1.1
MDJ sS pS 11 54 07.5 +2.3
MDJ SS SnSn 11 54 19.3 +2.8
MDJ ScS ScS 12 01 19.0 -1.2
MDJ pmax pmax
comp=Z,2μm,6.7s
MDJ LR LR
comp=Z,28μm,20.4s
MDJ LR LR
comp=Z,36μm,16.4s
MDJ LR LR
comp=Z,42μm,19.4s
MDJ Mudanjiang 21.31 14 P P 11 49 57.5 -0.3
MDJ IAMs_20 IAMs_20 11 58 39.3
comp=Z,34μm,20.0s
UTTA Uttaradit 21.42 257 P P 11 50 02.0 +2.7
comp=Z,645nmcomp=Z,75nm,1.2s
USA0B Ussuriysk Arra 21.54 19 P P 11 49 59.1 -1.3
USA0B pmax pmax
comp=Z,90nm,0.9s
USA0B Ussuriysk Arra 21.54 19 P P 11 49 59.1 -1.3
USRK Ussuriysk Ar. 21.54 19 P P 11 49 59.0 -1.4
comp=Z,88nm,0.8s,baz=205,slow=9.8,SNR=133
USRK LR LR 11 59 06.1
comp=Z,29μm,18.2s,baz=187,slow=39
SRAK Srakaew 21.73 246 P P 11 50 00.0 -2.7
comp=Z,11μmcomp=Z,1μm,0.9s
PHIT Phitsanulok 21.74 256 P P 11 50 05.5 +2.7
comp=Z,3μmcomp=Z,479nm,0.9s
LAMP Lampang 21.98 260 P P 11 50 07.0 +1.6
comp=Z,1μmcomp=Z,125nm,0.9s
CM34 Chiang Mai Arr 22.32 261 P P 11 50 10.0 +1.0
SUKH Sukhothai 22.34 257 P P 11 50 11.0 +1.8
comp=Z,79nm,1.0s
CM35 Chiang Mai Arr 22.37 261 P P 11 50 11.0 +1.5
CM36 Chiang Mai Arr 22.47 260 P P 11 50 12.0 +1.4
CM33 Chiang Mai Arr 22.51 261 P P 11 50 12.0 +0.9
CMMT Chiang Mai 22.51 261 P P 11 50 11.9 +0.8
comp=Z,2μmcomp=Z,69nm,1.6s
CHTO Chiang Mai 22.52 261 P P 11 50 10.5 -0.6
CHTO pmax pmax
comp=Z,280nm,1.6s
CHTO MLR MLR
comp=Z,16μm,18.0s
CHTO Chiang Mai 22.52 261 P P 11 50 10.5 -0.6
CHTO IAmb IAmb 11 50 25.7
comp=Z,280nm,1.6s
CHTO Chiang Mai 22.52 261 P P 11 50 13.1 +1.9
CHTO P P 11 50 13.1 +1.9
CHTO P P 11 50 13.1 +1.9
CM09 Chiang Mai Arr 22.59 260 P P 11 50 14.0 +2.1
comp=Z,744nmcomp=Z,64nm,1.0s
CM04 Chiang Mai Arr 22.61 260 P P 11 50 14.0 +1.8
comp=Z,757nmcomp=Z,73nm,1.2s
CM01 Chiang Mai Arr 22.62 260 P P 11 50 14.5 +2.2
comp=Z,731nmcomp=Z,67nm,1.3s
CM31 Chiang Mai Arr 22.63 260 P P 11 50 14.7 +2.4
comp=Z,18μmcomp=Z,968nm,1.5s
CM31 Chiang Mai Arr 22.63 260 P P 11 50 12.2 -0.1
CM31 IAmb IAmb 11 50 29.5
comp=Z,299nm,1.9s
CMAR Chiang Mai Arr 22.63 260 P P 11 50 14.1 +1.8
comp=Z,29nm,0.9s,baz=62,slow=8.7,SNR=67
CMAR PcP PcP 11 54 05.8 +1.1
comp=Z,11nm,0.9s,baz=54,slow=1.0,SNR=12
CMAR LR LR 12 00 24.6
comp=Z,12μm,18.2s,baz=106,slow=40
CMAR Chiang Mai Arr 22.63 260 P P 11 50 13.0 +0.7
CM02 Chiang Mai Arr 22.63 260 P P 11 50 14.0 +1.7
comp=Z,606nmcomp=Z,54nm,1.6s
CM05 Chiang Mai Arr 22.64 260 P P 11 50 14.3 +1.9
comp=Z,498nmcomp=Z,41nm,1.2s
CM15 Chiang Mai Arr 22.64 260 P P 11 50 14.0 +1.5
comp=Z,454nmcomp=Z,46nm,0.8s
CM32 Chiang Mai Arr 22.65 261 P P 11 50 14.0 +1.4
CM13 Chiang Mai Arr 22.67 260 P P 11 50 14.7 +1.9
comp=Z,484nmcomp=Z,47nm,0.9s
JTM Tenmabayashi 22.82 39 P P 11 50 11.0 -3.1
JTM IAmb IAmb 11 50 13.2
comp=Z,124nm,1.1s
TOLI2 Tolitoli 22.88 184 P P 11 50 14.7 -0.2
TOLI2 IAmb IAmb 11 50 25.1
comp=Z,220nm,1.2s
UTHA Uthaitani 23.25 253 P P 11 50 20.8 +2.1
comp=Z,686nmcomp=Z,50nm,0.9s
GTOI Gorontalo 23.30 179 P P 11 50 18.6 -0.5
comp=Z,3μmcomp=Z,187nm,1.3s
KMSI Cibinong 23.39 176 P P 11 50 19.4 -0.7
comp=Z,3μmcomp=Z,189nm,1.2s
MRSI Marisa 23.45 181 P P 11 50 22.4 +1.7
comp=Z,15μmcomp=Z,6μmcomp=Z,228nm,1.6s
UMPA Umpang Tak 23.50 255 P P 11 50 24.5 +3.3
comp=Z,4μmcomp=Z,82nm,0.8s
MHMT Maesarieng 23.63 260 P P 11 50 24.2 +1.8
comp=Z,4μmcomp=Z,94nm,0.8s
TNTI Ternate 23.63 168 P P 11 50 22.7 +0.3
TNTI Ternate 23.63 168 P P 11 50 24.1 +1.7
comp=Z,8μmcomp=Z,6μmcomp=Z,490nm,1.1s
SBUM Sibu 23.67 206 P P 11 50 22.7 -0.1
SBUM IAmb IAmb 11 50 40.1
comp=Z,96nm,0.8s
TEY Ternei 23.87 25⇑ eP P 11 50 21.3 -3.1
TEY e 11 50 38.3
TEY e 11 54 27.9
TEY pmax pmax
comp=N,20nm,0.8s
TEY pmax pmax
comp=Z,20nm,0.7s
TEY MLR MLR
comp=E,300nm,16.0s
LKP Lekhapani 24.21 283⇑ eP P 11 50 28.5 +0.7
PHET Kaeng Krachan 24.31 247 P P 11 50 31.0 +2.2
comp=E,749nmcomp=E,80nm,0.8s
KHLT Khaolaem Dam 24.32 252 P P 11 50 31.4 +2.6
comp=E,25nm,0.9s
JEW Eniwo 24.42 35 P P 11 50 28.0 -1.5
GTA Gaotai 24.52 314 ⇑P P 11 50 30.8 +0.1
GTA pP pP 11 50 39.8 +0.6
GTA sP sP 11 50 44.0 +2.0
GTA PcP PcP 11 54 09.6 +1.1
GTA S S 11 54 51.8 +2.4
GTA sS sS 11 55 02.4 -0.4
GTA ScP ScP 11 57 45.4 +0.3
GTA PcS PcS 11 57 47.4 -1.2
GTA pmax pmax
comp=E,74nm,1.0s
GTA pmax pmax
comp=E,3μm,9.2s
GTA LR LR
comp=E,10μm,13.9s
GTA LR LR

comp=E,32µm,15.5s
GTA LR LR
comp=E,38µm,15.1s
ERM Erimo 24.81 39⇑ *e*P **P 11 50 31.6 -1.4**
ERM pmax pmax
comp=Z,96nm,0.8s
ERM MLR MLR
comp=Z,12µm,16.0s
ERM Erimo 24.81 39 P **P 11 50 32.6 -0.4**
ERM IAmb IAmb 11 50 34.7
comp=Z,94nm,0.8s
APSI Ampana 24.84 182 P **P 11 50 35.1 +1.6**
comp=Z,7µmcomp=Z,3µmcomp=Z,216nm,1.3s
LUWI Luwuk 24.96 179 P **P 11 50 36.5 +1.9**
comp=Z,11µmcomp=Z,6µmcomp=Z,407nm,1.2s
HIA Hailar 25.25 356⇓ *e*P **P 11 50 35.0 -2.0**
HIA pmax pmax
comp=Z,79nm,1.0s
HIA MLR MLR
comp=Z,25µm,16.0s
HIA Hailar 25.25 356 P **P 11 50 35.5 -1.5**
HIA Hailar 25.25 356 IAMs_20 IAMs_20 12 01 58.4
comp=Z,26µm,18.0s
KSM Kuching 25.36 209 P **P 11 50 38.5 +0.2**
KSM IAmb IAmb 11 51 04.9
comp=Z,125nm,1.0s
MOKO MOKOCHONG 25.39 281⇑ *e*P **P 11 50 38.8 +0.1**
MOKO IAmb IAmb 11 50 53.4
comp=Z,98nm,1.2s
BKB Balikpapan 25.75 193 P **P 11 50 41.8 0.0**
comp=Z,13µmcomp=Z,8µmcomp=Z,472nm,1.4s
ASAJ Asahikawa 25.90 35 P **P 11 50 41.6 -1.4**
comp=Z,25nm,0.5s,baz=234,slow=10,SNR=69
ASAJ LR LR 12 00 47.5
comp=Z,22µm,21.4s,baz=226,slow=36
ASAJ Asahikawa 25.90 35 P **P 11 50 41.6 -1.4**
ASAJ pmax pmax
comp=Z,42nm,0.8s
ASAJ MLR MLR
comp=Z,21µm,21.0s
JKA Kamikawa-asahi 25.91 35 P **P 11 50 41.6 -1.4**
MTKI Muara Teweh, K 25.93 198 P **P 11 50 44.6 +1.2**
comp=Z,6µmcomp=Z,11µmcomp=Z,228nm,0.8s
IMP Imphal 25.98 278 *e*P **P 11 50 45.6 +1.7**
ZIRO ZIRO 25.99 284 *e*P **P 11 50 45.3 +1.1**
ZIRO IAmb IAmb 11 50 52.7
comp=Z,91nm,0.6s
ITAN ITANAGAR 26.10 283 *e*P **P 11 50 46.2 +1.3**
ITAN IAmb IAmb 11 51 01.0
comp=Z,422nm,1.1s
KLR Kul'dur 26.15 14*c i*P **P 11 50 44.6 -0.6**
KLR pmax pmax
comp=Z,43nm,0.9s
KLR MLR MLR
comp=Z,37µm,15.0s
SANI Sanana 26.18 172 P **P 11 50 45.6 -0.1**
comp=Z,10µmcomp=Z,4µmcomp=Z,213nm,0.9s
SWI Sorong 26.20 160 P **P 11 50 47.5 +1.6**
SWI pmax pmax
comp=Z,141nm,1.0s
SWI Sorong 26.20 160 P **P 11 50 48.2 +2.3**
comp=Z,10µmcomp=Z,2µmcomp=Z,141nm,1.1s
SIJI Sorong 26.21 160 P **P 11 50 46.9 +0.9**
comp=Z,56nm,0.8s,baz=7.0,slow=5.6,SNR=17
ULN Ulaanbaatar 26.74 337*c i*P **P 11 50 49.8 -0.9**
ULN pmax pmax
comp=Z,58nm,1.0s
ULN MLR MLR
comp=Z,51µm,16.0s
ULN Ulaanbaatar 26.74 337 P **P 11 50 49.5 -1.2**
ULN Ulaanbaatar 26.74 337 IAMs_20 IAMs_20 12 02 29.6
comp=Z,43µm,19.0s
ULN Ulaanbaatar 26.74 337 P **P 11 50 50.2 -0.5**
SONM Songino Array 26.95 336 P **P 11 50 51.9 -0.7**
comp=Z,85nm,0.9s,baz=150,slow=8.8,SNR=142
SONM PcP **PcP 11 54 14.6 +0.7**
comp=Z,4.8nm,0.4s,baz=171,slow=2.0,SNR=8.4
SONM ScP **ScP 11 57 51.1 -0.9**
comp=Z,2.8nm,0.8s,baz=124,slow=0.5,SNR=4.0
SONM LR LR 12 02 47.6
comp=Z,46µm,19.8s,baz=176,slow=39
SONM Songino Array 26.95 336 P **P 11 50 51.8 -0.7**
SONM IAmb IAmb 11 51 08.6
comp=Z,103nm,1.1s
TTSI Tana Toraja 27.07 186 P **P 11 50 56.2 +2.5**
comp=Z,8µmcomp=Z,3µmcomp=Z,69nm,1.3s
SAIH SAIHA 27.12 273 *e*P **P 11 50 54.6 +0.2**
SAIH IAmb IAmb 11 50 59.3
comp=Z,33nm,0.7s
TRTT Trang 27.14 237 P **P 11 50 57.2 +2.8**
comp=Z,3µmcomp=Z,30nm,1.5s
KRAB Krabi 27.29 239 P **P 11 50 55.6 -0.1**
NLAI Namlea 27.51 170 P **P 11 50 59.6 +2.0**
comp=Z,4µmcomp=Z,545nm,0.9s
YUK Yuzh-Kuril'sk 27.62 38 *e*P **P 11 50 58.1 -0.3**
YUK *e* 11 51 43.1
YUK *e*PPP PPP 11 51 51.3
YUK *e*S **S 11 55 38.4 +0.3**
YUK *e*SS **SnSn 11 56 51.4 +0.7**
YUK *e*SSS SSS 11 57 06.8
YUK pmax pmax
comp=Z,180nm,0.6s
YUK pmax pmax
comp=Z,426nm,1.4s
SHL Shillong 27.79 280 *e*P **P 11 51 01.4 +1.0**
SHL Shillong 27.79 280 P **P 11 51 00.7 +0.3**
SNR=43
KBKI Kotabaru 27.89 194 P **P 11 51 01.9 +0.9**
comp=Z,63nm,1.1s
GUWA GUWAHATI 27.93 281 *e*P **P 11 51 02.3 +0.9**
GUWA IAmb IAmb 11 51 06.3
comp=Z,124nm,1.1s
SPSI Sidrap Palu 27.98 186 P **P 11 51 02.9 +1.0**
comp=Z,6µmcomp=Z,1µmcomp=Z,50nm,1.2s
YSS Yuzh-Sakhalins 28.02 30*oe*P **P 11 50 59.3 -2.6**
YSS *e**SP **sP 11 51 13.8 -0.2**
YSS *e* 11 51 20.0
YSS *e* 11 51 52.6
YSS *e*S **S 11 55 37.2 -7.1**
YSS *e*SSS SSS 11 57 15.2
YSS pmax pmax
comp=Z,700nm,9.4s
YSS pmax pmax
comp=N,400nm,11.0s
YSS pmax pmax
comp=E,300nm,11.0s
YSS pmax pmax
comp=Z,110nm,0.9s
YSS MLR MLR
comp=Z,15µm,15.0s
YSS Yuzh-Sakhalins 28.02 30 P **P 11 51 02.0 0.0**
YSS IAmb IAmb 11 51 07.1
comp=Z,110nm,1.0s
KULM Kulim 28.11 232 P **P 11 51 02.5 -0.5**
BBKI Banjar Baru 28.36 196 P **P 11 51 07.0 +1.8**
comp=Z,4µmcomp=Z,3µmcomp=Z,154nm,1.2s
BNSI Bone 28.39 185 P **P 11 51 05.8 +0.3**
comp=Z,2µmcomp=Z,57nm,1.4s
IPM Ipoh 28.40 230 P **P 11 51 05.8 +0.1**
BELO BELONIA 28.42 275⇑ *e*P **P 11 51 07.1 +1.4**
FAKI Fak Fak 28.45 159 P **P 11 51 05.8 -0.3**
FAKI IAmb IAmb 11 51 18.5
comp=Z,260nm,1.5s
FAKI Fak Fak 28.45 159 P **P 11 51 07.0 +0.9**
comp=Z,6µmcomp=Z,2µmcomp=Z,110nm,0.9s
LSA Lhasa 28.46 288 P **P 11 51 08.4 +1.8**
LSA S **S 11 55 54.6 +2.0**
LSA pmax pmax
comp=Z,130nm,0.8s
LSA LR LR
comp=Z,18µm,18.5s
LSA LR LR
comp=Z,28µm,17.8s
LSA LR LR
comp=Z,24µm,21.4s
LSA Lhasa 28.46 288 P **P 11 51 08.3 +1.7**
LSA Lhasa 28.46 288 P **P 11 51 07.5 +0.9**
LSA pmax pmax
comp=Z,43nm,0.8s
LSA MLR MLR
comp=Z,19µm,18.0s
LSA Lhasa 28.46 288 P **P 11 51 07.5 +0.9**
LSA IAMs_20 IAMs_20 12 03 29.1
comp=Z,19µm,18.0s
AGT Agartala 28.52 276 *e*P **P 11 51 09.0 +2.3**
MYKOM Kota Tinggi 28.56 222 P **P 11 51 07.3 +0.3**
MYKOM IAmb IAmb 11 51 29.6
comp=Z,84nm,1.0s
CIT Chita 28.74 348 *e*P P 11 51 24.0 +16
CIT *e* 11 51 36.8
CIT *e* 11 51 59.8
CIT pmax pmax
comp=Z,105nm,2.4s
GRNR Gornyy 28.77 19⇑ *i*P **P 11 51 06.8 -1.8**
GRNR *e*S **S 11 55 55.0 -1.1**
GRNR pmax pmax
comp=N,6.0nm,1.0s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR smax smax
comp=N,4.0nm,0.9s
GRNR MLR MLR
comp=N,13µm,16.0s
GRNR MLR MLR
comp=E,4µm,16.0s
KAPI Kappang 29.02 186 P **P 11 51 10.6 -0.5**
comp=E,7.7nm,0.8s,baz=23,slow=6.0,SNR=7.7
KAPI LR LR 12 02 41.4
comp=E,6µm,21.6s,baz=14,slow=36
KAPI Kappang 29.02 186 P **P 11 51 10.6 -0.5**
KAPI pmax pmax
comp=Z,136nm,1.5s
KAPI MLR MLR
comp=Z,7µm,22.0s
KAPI Kappang 29.02 186 P **P 11 51 10.6 -0.5**
KAPI IAmb IAmb 11 51 35.3
comp=Z,136nm,1.5s
BNDI Bandanaira 29.32 165 P **P 11 51 15.3 +1.5**
comp=Z,9µmcomp=Z,227nm,0.8s
KUR Kuril'sk 29.48 38 P **P 11 51 17.6 +2.6**
KUR *i* SS SS 11 57 30.3 -43
KUR *e*SSS SSS 11 58 04.1
KUR pmax pmax
comp=Z,685nm,4.1s
KUR MLR MLR
comp=Z,12µm,17.0s
KUR MLR MLR
comp=N,15µm,16.0s
KUR MLR MLR
comp=E,5µm,16.0s
ZEA Zeya 29.85 6 *e*P **P 11 51 16.6 -1.5**
ZEA *e*S **S 11 56 04.4 -8.6**
ZEA pmax pmax
comp=N,30nm,1.3s
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=Z,60nm,0.9s
ZEA pmax pmax
comp=Z,1µm,13.7s
ZEA MLR MLR
comp=E,5µm,16.0s
ZEA MLR MLR
comp=N,15µm,15.0s
ZEA MLR MLR
comp=Z,14µm,15.0s
DGPR DIGLIPUR 29.96 254 *e*P **P 11 51 21.8 +2.3**
ZAK Zakamensk 30.22 335 *e*P **P 11 51 18.9 -2.7**
ZAK pmax pmax
comp=Z,21nm,1.1s
SMPI Sarmi 30.32 146 P **P 11 51 23.8 +1.1**
comp=Z,3µmcomp=Z,2µmcomp=Z,25nm,0.8s
PPBI Pangkal Pinang 30.53 214 P **P 11 51 25.7 +1.1**
GTK Tadong 30.65 283 *e*P **P 11 51 27.4 +1.7**
GTK IAmb IAmb 11 51 35.0
comp=Z,64nm,0.7s
TSI Tuntungan 30.84 232 P **P 11 51 29.1 +1.8**
comp=Z,4µmcomp=Z,90nm,0.9s
TYV Tymovskoe 30.97 25 *e*P P 11 51 41.0 +13
TYV pmax pmax
comp=Z,17nm,0.7s
TYV pmax pmax
comp=Z,800nm,6.4s
PSI Prapat 31.07 231 P **P 11 51 30.5 +1.1**
PSI pmax pmax
comp=Z,144nm,1.6s
PSI MLR MLR
comp=Z,11µm,19.0s
TLY Talaya 31.14 337 *e*P **P 11 51 29.4 -0.2**
TLY *e* 11 52 39.6
TLY pmax pmax
comp=Z,154nm,1.4s
TLY MLR MLR
comp=Z,94µm,14.0s
TLY Talaya 31.14 337 P **P 11 51 28.6 -1.0**
TLY IAMs_20 IAMs_20 12 05 12.1
comp=Z,33µm,21.0s
TLY Talaya 31.14 337 P **P 11 51 29.1 -0.5**
TLY P **P 11 51 29.1 -0.5**
RPSI Rantau Prapat 31.14 231 P **P 11 51 30.5 +0.6**
RPSI IAmb IAmb 11 52 11.3
comp=Z,144nm,1.6s
IRK Irkutsk 31.39 338 *e*P **P 11 51 30.2 -1.6**
IRK *e* 12 02 01.3
IRK pmax pmax
comp=Z,120nm,2.6s
TAPN Taplejung 31.45 283 *e*P **P 11 51 34.5 +1.6**
comp=Z,294nm,1.0s
BKNI Bangkinang 31.45 224 P **P 11 51 34.3 +1.6**
comp=Z,4µmcomp=Z,111nm,0.8s
ODAN Odare 31.75 283 *e*P **P 11 51 36.8 +1.3**
comp=Z,262nm,1.1s
KMMI Kalianget 32.02 196 P **P 11 51 39.1 +1.5**
comp=Z,6µmcomp=Z,64nm,1.0s
MNSI Mandailing Nat 32.06 227 P **P 11 51 38.9 +0.9**
comp=Z,90nm,0.9s
MOY Mondy 32.12 335 *e*P **P 11 51 36.8 -1.5**
MOY pmax pmax
comp=Z,10.0nm,1.4s
NKL Nikolayevsk 32.14 21 *e*P **P 11 51 40.6 +2.3**
NKL *e* 11 53 02.3
NKL pmax pmax
comp=E,61nm,1.1s
NKL pmax pmax
comp=Z,19nm,1.0s
NKL pmax pmax
comp=Z,67nm,5.2s
NKL MLR MLR
comp=E,2µm,12.0s
NKL MLR MLR
comp=Z,23µm,16.0s
RAMN Ramite 32.45 283 *e*P **P 11 51 43.0 +1.3**
comp=Z,197nm,1.0s
MMRI Maumere 32.50 180 P **P 11 51 41.9 +0.1**
MMRI Maumere 32.50 180 P **P 11 51 43.1 +1.3**
comp=Z,6µmcomp=Z,4µmcomp=Z,239nm,1.6s
SRBI Singaraja 32.73 193 P **P 11 51 44.0 +0.1**
comp=Z,4µmcomp=Z,1µmcomp=Z,51nm,0.8s
JIRN Jiri 32.78 284 *e*P **P 11 51 45.9 +1.1**
comp=Z,94nm,0.8s
PLAI Plampang 33.01 189 P **P 11 51 46.3 0.0**
comp=Z,6µmcomp=Z,1µmcomp=Z,57nm,1.1s
GUN Gumba 33.05 285 *e*P **P 11 51 48.1 +1.0**
comp=Z,180nm,1.0s
TWSI Taliwang, Sumb 33.06 190 P **P 11 51 46.3 -0.4**
comp=Z,4µmcomp=Z,706nmcomp=Z,36nm,1.0s
GSI Gunungsitoli 33.07 231 P **P 11 51 46.2 -0.7**
GSI Gunungsitoli 33.07 231 P **P 11 51 46.7 -0.2**
comp=Z,42nm,1.1s
SMRI Semarang 33.08 202 P **P 11 51 48.5 +1.5**
comp=Z,7µmcomp=Z,4µmcomp=Z,111nm,0.8s
DNP Denpasar 33.31 193 P **P 11 51 50.8 +1.9**
DNP pmax pmax
comp=Z,298nm,1.0s
DNP Denpasar 33.31 193 P **P 11 51 50.2 +1.3**
comp=Z,423nm,0.9s
LHSI Lahat 33.31 216 P **P 11 51 50.3 +1.4**
comp=Z,34nm,0.9s
BOK Bokaro 33.40 277 *e*P **P 11 51 51.1 +1.4**
BOK IAmb IAmb 11 51 54.6
comp=Z,74nm,1.2s
PKI Pulchoki 33.48 284 *e*P **P 11 51 51.3 +0.5**
comp=Z,156nm,1.3s
PKIN Phulchoki 33.49 284 *e*P **P 11 51 51.3 +0.5**
comp=Z,53nm,0.6s
KKN Kakani 33.59 284 *e*P **P 11 51 52.5 +0.9**
SOEI Soe 33.66 177 P **P 11 51 52.9 +0.9**
SOEI IAmb IAmb 11 52 16.1
comp=Z,91nm,0.9s
SOEI Soe 33.66 177 P **P 11 51 54.2 +2.1**
comp=Z,6µmcomp=Z,1µmcomp=Z,82nm,0.8s
DMN Daman 33.75 284 *e*P **P 11 51 53.7 +0.7**
comp=Z,178nm,1.0s
UGM Wanagama 33.86 202 P **P 11 51 52.4 -1.3**
UGM Wanagama 33.86 202 P **P 11 51 55.4 +1.6**
comp=Z,5µmcomp=Z,262nm,1.3s
LEM Lembang 33.96 207 P **P 11 51 58.5 +3.7**
LEM pmax pmax
comp=Z,80nm,0.8s
LWLI Liwa 34.03 214 P **P 11 51 55.9 +0.5**
comp=Z,6µmcomp=Z,84nm,0.9s
BATI Baumata 34.08 178 P **P 11 51 56.7 +1.1**
comp=Z,3µmcomp=Z,61nm,0.9s
GKN Gorkha 34.15 285 *e*P **P 11 51 56.9 +0.5**
KASI Kota Agung 34.24 213 P **P 11 51 57.9 +0.9**
comp=Z,1µmcomp=Z,58nm,1.0s
BOD Bodaibo 34.27 352 *e*P **P 11 51 54.1 -2.8**
BOD pmax pmax
comp=Z,10.0nm,1.2s
WMQ Urumqi 34.60 313 P **P 11 52 01.1 +1.1**
WMQ pP pP 11 52 07.4 -0.7
WMQ sP pwP 11 52 13.9 +1.9
WMQ PcP **PcP 11 54 32.6 -1.5**
WMQ S **S 11 57 28.0 +0.6**
WMQ sS sS 11 57 41.5 +0.5
WMQ pmax pmax
comp=Z,120nm,0.9s
WMQ pmax pmax
comp=Z,2µm,5.5s
WMQ LR LR
comp=Z,19µm,14.7s
WMQ LR LR
comp=Z,23µm,12.7s
WMQ LR LR
comp=Z,19µm,15.7s
WMQ Urumqi 34.60 313 P **P 11 52 00.6 +0.6**
WMQ pmax pmax
comp=Z,68nm,0.7s
WMQ MLR MLR
comp=Z,9µm,19.0s
WMQ Urumqi 34.60 313 P **P 11 52 00.6 +0.6**
WMQ IAmb IAmb 11 52 05.1
comp=Z,68nm,0.7s
KOLN Koldanda 35.07 285 *e*P **P 11 52 05.2 +0.7**
comp=Z,140nm,0.8s
MANU Manus Island 35.47 134 P **P 11 52 08.8 +1.1**
MANU IAmb IAmb 11 52 11.9
comp=Z,26nm,0.7s
SKR Severo-Kuril's 37.15 36 *e*P **P 11 52 18.1 -3.5**
SKR *e*S **S 11 58 07.0 +0.9**
SKR pmax pmax
comp=Z,300nm,3.0s
SKR pmax pmax
comp=Z,91nm,0.9s
DGZ Jazzator, Alta 37.42 322*c i*P **P 11 52 23.8 -0.3**
DGZ pmax pmax
comp=Z,59nm,1.1s
DGZ MLR MLR
comp=Z,28µm,17.0s
MTN Manton Dam 37.64 166 P **P 11 52 25.2 -0.9**
YAK Yakutsk 38.27 5*c i*P **P 11 52 28.3 -2.6**
YAK *e**PP **pP 11 52 37.9 -1.6**
YAK *e* 11 53 58.1
YAK *e* 11 54 43.6
YAK *e*S **S 11 58 22.1 -0.6**
YAK *e**SS **sS 11 58 37.8 +0.5**
YAK *e* 12 02 35.8
YAK pmax pmax
comp=Z,244nm,0.9s
YAK pmax pmax
comp=E,29nm,1.1s
YAK pmax pmax
comp=N,94nm,1.0s
YAK pmax pmax
comp=Z,22nm,0.4s
YAK smax smax
comp=N,695nm,6.5s
YAK MLR MLR
comp=Z,26µm,18.0s
YAK MLR MLR
comp=N,13µm,18.0s
YAK MLR MLR
comp=E,4µm,14.0s
YAK Yakutsk 38.27 5 P **P 11 52 29.0 -1.9**
YAK IAMs_20 IAMs_20 12 09 49.6
comp=Z,17µm,19.0s
PATS Pohnpei 38.38 111 P **P 11 52 33.8 +1.4**
PATS IAMs_20 IAMs_20 12 08 57.0
comp=Z,16µm,18.0s
MK31 Makanchi Array 39.26 316 *i* P **P 11 52 39.3 -0.2**
MK31 pmax pmax
comp=Z,55nm,0.6s
MK31 Makanchi Array 39.26 316 P **P 11 52 38.7 -0.8**
MK31 IAmb IAmb 11 52 40.7
comp=Z,117nm,1.1s
MKAR Makanchi Array 39.26 316 P **P 11 52 39.5 -0.1**
comp=Z,62nm,0.5s,baz=103,slow=10,SNR=521
MKAR PcP **PcP 11 54 47.6 -0.4**
comp=Z,24nm,0.8s,baz=93,slow=4.9,SNR=5.0
MKAR ScP **ScP 11 58 34.6 +0.1**
comp=Z,10nm,1.1s,baz=107,slow=4.1,SNR=6.2
MKAR Makanchi Array 39.26 316 P **P 11 52 38.6 -0.9**
MKAR **PcP 11 54 47.2 -0.9**
MAKZ Makanchi 39.46 315 P **P 11 52 41.0 -0.2**
MAKZ Makanchi 39.46 315 P **P 11 52 40.8 -0.4**
MAKZ IAmb IAmb 11 52 44.7
comp=Z,150nm,1.0s
MAKZ IAMs_20 IAMs_20 12 10 14.3
comp=Z,20µm,19.0s
PET Petropavlovsk 39.74 34 *e*P P 11 52 38.0 -5.4
PET *e**SP sP 11 52 53.9 -1.8
PET *e* 11 54 47.8
PET *e*S **S 11 58 38.8 -6.4**
PET *e*SS **SS 12 01 27.6 -14**
PET pmax pmax
comp=Z,600nm,13.2s
PET pmax pmax
comp=Z,900nm,20.0s
PET pmax pmax
comp=Z,75nm,1.3s
PET MLR MLR
comp=Z,11µm,19.0s
PET Petropavlovsk 39.74 34 P **P 11 52 41.8 -1.6**
PET IAmb IAmb 11 52 45.8
comp=Z,90nm,1.3s
DDI Dehra Dun 39.82 289 *e*P **P 11 52 45.5 +1.1**
DDI IAmb IAmb 11 52 48.0
comp=Z,174nm,0.8s
KNRA Kununurra 39.97 171 P **P 11 52 45.6 0.0**
KNRA IAmb IAmb 11 53 01.4
comp=Z,147nm,0.8s
SHLS Shalkode 40.06 309 *e*P **P 11 52 42.1 -4.3**
comp=Z,72nm,0.8s,baz=309
SHLS Shalkode 40.06 309 *e*P **P 11 52 42.0 -4.3**
SHLS pmax pmax
comp=Z,72nm,0.8s
PDGK Podgornoye 40.08 309 P **P 11 52 47.1 +0.5**
RABL Rabaul 40.30 130 P **P 11 52 48.0 -0.5**
RABL IAmb IAmb 11 53 13.3
comp=Z,134nm,0.9s
UZB Uzynbulak 40.37 309 *e*P **P 11 52 47.2 -1.9**
comp=Z,69nm,1.1s,baz=309
UZB *e*S **S 11 58 53.8 -1.5**
baz=309
UZB Uzynbulak 40.37 309 *e*P **P 11 52 47.1 -1.9**
UZB *e*S **S 11 58 53.7 -1.5**
UZB pmax pmax
comp=Z,69nm,1.1s
SMLA Simla 40.56 290 *e*P **P 11 52 51.3 +0.9**
SMLA IAmb IAmb 11 52 54.8
comp=Z,286nm,1.2s
MA2 Magadan 40.65 22⇓ *e*P **P 11 52 48.0 -2.8**
MA2 pmax pmax
comp=Z,12nm,0.9s
MA2 MLR MLR
comp=Z,17µm,18.0s
MA2 Magadan 40.65 22 IAMs_20 IAMs_20 12 10 23.9
comp=Z,20µm,20.0s
KPKS Kokpek 40.69 309 *e*P **P 11 52 49.7 -1.9**
comp=Z,50nm,0.6s,baz=309
KPKS Kokpek 40.69 309 *e*P **P 11 52 49.6 -1.9**
KPKS pmax pmax
comp=Z,50nm,0.6s
SATY Saty 40.79 309 *e*P **P 11 52 50.6 -1.9**
comp=Z,56nm,1.0s,baz=308
SATY Saty 40.79 309 *e*P **P 11 52 50.5 -1.9**
SATY pmax pmax
comp=Z,57nm,1.0s

ZALV	**Zalesovo Beam**	**41.00 327**	P	**P**	**11 52 52.3**	**-1.4**
	comp=Z,61nm,0.6s,baz=111,slow=8.1,SNR=192						
ZALV			PcP	**PcP**	**11 54 52.2**	**-1.2**
	comp=Z,15nm,0.7s,baz=100,slow=3.8,SNR=4.9						
ZALV			ScP	**ScP**	**11 58 42.7**	**+1.7**
	comp=Z,3.6nm,0.8s,baz=122,slow=5.2,SNR=2.6						
PMG	**Port Moresby**	**41.08 141**	*d* P	**P**	**11 52 56.1**	**+1.2**
PMG			pmax	pmax			
	comp=Z,61nm,1.0s						
PMG			MLR	MLR			
	comp=Z,9μm,19.0s						
PMG	**Port Moresby**	**41.08 141**	P	**P**	**11 52 55.9**	**+1.1**
PMG			IAmb	IAmb	11 53 12.8		
	comp=Z,73nm,0.9s						
BHPL	**Bhopal**	**41.15 278**	*e*P	**P**	**11 52 54.8**	**-0.8**
BHPL			IAmb	IAmb	11 53 01.7		
	comp=Z,32nm,1.1s						
TDK	**Taldyqorghan**	**41.27 312**	*e*P	**P**	**11 52 55.0**	**-1.3**
	comp=Z,151nm,0.7s,baz=311						
TDK			*e*S	**S**	**11 59 07.3**	**-1.0**
	baz=311						
TDK			LR	LR	12 10 34.8		
	comp=Z,8μm,14.5s,baz=311						
TDK	**Taldyqorghan**	**41.27 312**	*e*P	**P**	**11 52 54.9**	**-1.3**
TDK			*e*S	**S**	**11 59 07.3**	**-1.0**
TDK			pmax	pmax			
	comp=Z,151nm,0.7s						
TDK			MLR	MLR			
	comp=Z,8μm,15.0s						
DHRM	**DHARAMSHALA**	**41.27 292**	*e*P	**P**	**11 52 56.3**	**-0.4**
DHRM			IAmb	IAmb	11 52 59.2		
	comp=Z,207nm,1.2s						
MDRS	**Chennai**	**41.36 262**	*e*P	**P**	**11 52 58.8**	**+1.5**
HYB	**Hyderabad**	**41.49 269**	*i* P	**P**	**11 52 59.0**	**+0.7**
HYB			*e*PcP	**PcP**	**11 54 56.0**	**+0.2**
HYB	**Hyderabad**	**41.49 269**	*e*P	**P**	**11 52 58.3**	**0.0**
MDOK	**Medeo**	**41.78 309**	*e*P	**P**	**11 52 59.2**	**-1.5**
	baz=308						
MDOK			*e*S	**S**	**11 59 14.8**	**-1.4**
	baz=308						
MDOK			LR	LR	12 12 12.9		
	comp=Z,5μm,13.3s,baz=308						
MDOK	**Medeo**	**41.78 309**	*e*P	**P**	**11 52 59.1**	**-1.5**
MDOK			*e*S	**S**	**11 59 14.8**	**-1.4**
MDOK			MLR	MLR			
	comp=Z,5μm,13.0s						
TNSS	**Tian-Shan**	**41.83 308**	*e*P	**P**	**11 52 59.8**	**-1.5**
	baz=308						
TNSS	**Tian-Shan**	**41.83 308**	*e*P	**P**	**11 52 59.7**	**-1.5**
AAA	**Alma-Ata**	**41.89 309**	*e*P	**P**	**11 53 00.2**	**-1.1**
	comp=Z,72nm,1.5s,baz=308						
AAA			*e*S	**S**	**11 59 16.7**	**-0.9**
	baz=308						
AAA			LR	LR	12 12 17.8		
	comp=Z,5μm,13.1s,baz=308						
AAA	**Alma-Ata**	**41.89 309**	*e*P	**P**	**11 53 00.2**	**-1.1**
AAA			*e*S	**S**	**11 59 16.6**	**-0.9**
AAA			pmax	pmax			
	comp=Z,72nm,1.5s						
AAA			MLR	MLR			
	comp=Z,5μm,13.0s						
KSH	**Kashi**	**41.96 303**	P	**P**	**11 53 05.8**	**+3.7**
KSH			sP	pwP	11 53 17.3	+3.5	
KSH			PP	**PnPn**	**11 54 45.9**	**+1.3**
KSH			pmax	pmax			
	comp=Z,97nm,0.6s						
KSH			pmax	pmax			
	comp=Z,2μm,3.7s						
KSH			LR	LR			
	comp=Z,8μm,9.5s						
KSH			LR	LR			
	comp=Z,24μm,12.1s						
KSH			LR	LR			
	comp=Z,27μm,10.3s						
FITZ	**Fitzroy Crossi**	**42.02 176**	P	**P**	**11 53 02.4**	**-0.1**
ULHL	**Ulahol**	**42.18 307**	P	**P**	**11 53 05.6**	**+1.6**
	SNR=19						
TKM2	**Tokmak 2**	**42.78 308**	P	**P**	**11 53 09.9**	**+1.2**
	SNR=165						
TKM2	**Tokmak 2**	**42.78 308**	*i* P	**P**	**11 53 10.0**	**+1.2**
TKM2			pmax	pmax			
	comp=Z,129nm,0.7s						
COEN	**Coen**	**42.86 150**	P	**P**	**11 53 10.5**	**+1.1**
COEN			IAmb	IAmb	11 53 12.9		
	comp=Z,59nm,0.8s						
KURBB	**Kurchatov Arra**	**42.97 320**	P	**P**	**11 53 09.2**	**-0.7**
KBK	**Karagaybulak**	**43.20 307**	P	**P**	**11 53 13.7**	**+1.6**
	SNR=45						
PALK	**Pallekele**	**43.35 254**	*de*P	**P**	**11 53 14.1**	**+0.6**
PALK			MLR	MLR			
	comp=Z,7μm,20.0s						
PALK	**Pallekele**	**43.35 254**	P	**P**	**11 53 14.2**	**+0.6**
PALK	**Pallekele**	**43.35 254**	P	**P**	**11 53 15.7**	**+2.2**
PALK			P	**P**	**11 53 15.7**	**+2.2**
CHMS	**Chumysh**	**43.40 308**	P	**P**	**11 53 14.7**	**+1.0**
	SNR=39						
UCH	**Uchtor**	**43.45 307**	P	**P**	**11 53 16.4**	**+1.9**
	SNR=419						
AAK	**Ala-Archa**	**43.53 307**	P	**P**	**11 53 16.0**	**+1.2**
	SNR=51						
AAK	**Ala-Archa**	**43.53 307**	*i* P	**P**	**11 53 15.5**	**+0.7**
	SNR=63						
AAK	**Ala-Archa**	**43.53 307**	*c i* P	**P**	**11 53 15.8**	**+1.0**
AAK			pmax	pmax			
	comp=Z,229nm,1.1s						
AAK			MLR	MLR			
	comp=Z,55μm,17.0s						
AAK	**Ala-Archa**	**43.53 307**	P	**P**	**11 53 15.7**	**+0.9**
AAK			IAmb	IAmb	11 53 17.1		
	comp=Z,78nm,1.1s						
AAK	**Ala-Archa**	**43.53 307**	IAMs_20	IAMs_20	12 14 13.0		
	comp=Z,19μm,18.0s						
AAK	**Ala-Archa**	**43.53 307**	P	**P**	**11 53 15.8**	**+1.0**
AAK			P	**P**	**11 53 15.8**	**+1.0**
AAK			P	**P**	**11 53 15.8**	**+1.0**
USP	**Ospenovka**	**43.63 308**	P	**P**	**11 53 16.3**	**+0.8**
	SNR=31						
SEY	**Seymchan**	**43.69 19**	‖ *e*P	**P**	**11 53 14.1**	**-1.5**
NIL	**Nilore**	**43.82 294**	P	**P**	**11 53 17.7**	**+0.6**
NIL			pmax	pmax			
	comp=Z,112nm,0.9s						
NIL			MLR	MLR			
	comp=Z,9μm,18.0s						
NIL	**Nilore**	**43.82 294**	P	**P**	**11 53 17.7**	**+0.6**
NIL			IAmb	IAmb	11 53 19.1		
	comp=Z,112nm,0.8s						
NIL	**Nilore**	**43.82 294**	IAMs_20	IAMs_20	12 13 53.8		
	comp=Z,9μm,18.0s						
AML	**Almayashu**	**44.03 306**	P	**P**	**11 53 20.8**	**+1.7**
	SNR=242						
EKS2	**Erkin-Say**	**44.05 307**	P	**P**	**11 53 20.1**	**+1.2**
	SNR=35						
BTLS	**Baital**	**44.28 311**	*e*P	**P**	**11 53 19.0**	**-1.7**
	comp=Z,41nm,1.3s,baz=310						
BTLS			*e*S	**S**	**11 59 51.3**	**-1.3**
	baz=310						
BTLS	**Baital**	**44.28 311**	*e*P	**P**	**11 53 18.9**	**-1.7**
BTLS			*e*S	**S**	**11 59 51.2**	**-1.3**
BTLS			pmax	pmax			
	comp=Z,41nm,1.3s						
WB0	**Warramunga Arr**	**45.08 164**	P	**P**	**11 53 27.6**	**+0.4**
WB0			IAmb	IAmb	11 54 01.6		
	comp=Z,47nm,0.9s						
WRAB	**Tennant Creek**	**45.23 164**	*d i* P	**P**	**11 53 28.9**	**+0.6**
WRAB			pmax	pmax			
	comp=Z,54nm,0.7s						
WRAB			MLR	MLR			
	comp=Z,5μm,19.0s						
WRAB	**Tennant Creek**	**45.23 164**	P	**P**	**11 53 28.9**	**+0.6**
WRAB			IAmb	IAmb	11 53 31.3		
	comp=Z,59nm,0.7s						
WRA	**Warramunga Arr**	**45.24 164**	P	**P**	**11 53 28.9**	**+0.5**
	comp=Z,61nm,0.7s,baz=346,slow=8.6,SNR=162						
WRA			S	**S**	**12 00 07.4**	**+0.7**
	comp=Z,5.2nm,1.2s,baz=343,slow=14,SNR=4.5						
WRA	**Warramunga Arr**	**45.24 164**	*i* P	**P**	**11 53 28.8**	**+0.4**
WRA			pmax	pmax			
	comp=Z,61nm,0.7s						
WRA	**Warramunga Arr**	**45.24 164**	P	**P**	**11 53 28.5**	**0.0**
WB2	**Warramunga Arr**	**45.24 164**	P	**P**	**11 53 28.8**	**+0.3**
WB2			IAmb	IAmb	11 53 32.4		
	comp=Z,77nm,0.8s						
WR0	**Warramunga Arr**	**45.31 164**	P	**P**	**11 53 29.6**	**+0.7**
PSA00	**Pilbara Seismi**	**45.44 183**	P	**P**	**11 53 29.8**	**-0.1**
PSA00			IAmb	IAmb	11 54 15.3		
	comp=Z,66nm,1.0s						
PSA00	**Pilbara Seismi**	**45.44 183**	P	**P**	**11 53 29.2**	**-0.7**
PSA00			IAmb	IAmb	11 54 02.2		
	comp=Z,39nm,1.2s						
POO	**Poona**	**45.48 273**	*e*P	**P**	**11 53 31.1**	**+0.5**
POO			IAmb	IAmb	11 53 35.4		
	comp=Z,54nm,1.0s						
DZA	**Taraz**	**45.87 307**	*e*P	**P**	**11 53 32.2**	**-1.1**
	baz=307						
DZA	**Taraz**	**45.87 307**	*e*P	**P**	**11 53 32.2**	**-1.1**
GAR	**Garm**	**46.29 302**	P	**P**	**11 53 37.3**	**+0.5**
BRZS	**Berezniki**	**46.33 317**	*e*P	**P**	**11 53 35.5**	**-1.4**
	comp=Z,22nm,0.7s,baz=317						
BRZS	**Berezniki**	**46.33 317**	*e*P	**P**	**11 53 35.4**	**-1.4**
BRZS			pmax	pmax			
	comp=Z,22nm,0.7s						
KK31	**Karatay Array**	**46.49 307**	*i* P	**P**	**11 53 38.4**	**+0.2**
KK31	**Karatay Array**	**46.49 307**	P	**P**	**11 53 38.5**	**+0.4**
KK31			IAmb	IAmb	11 53 40.3		
	comp=Z,72nm,1.1s						
KKAR	**Karatay Array**	**46.49 307**	P	**P**	**11 53 37.9**	**-0.3**
KKAR			pmax	pmax			
	comp=Z,72nm,1.2s						
KKAR	**Karatay Array**	**46.49 307**	P	**P**	**11 53 37.9**	**-0.3**
KKAR	**Karatay Array**	**46.49 307**	P	**P**	**11 53 38.3**	**+0.2**
KKAR			IAmb	IAmb	11 53 40.3		
	comp=Z,72nm,1.1s						
IUG	**Iuzhnay**	**46.74 306**	*e*P	**P**	**11 53 39.2**	**-1.0**
	comp=Z,102nm,0.9s,baz=306						
IUG	**Iuzhnay**	**46.74 306**	*e*P	**P**	**11 53 39.2**	**-1.0**
IUG			pmax	pmax			
	comp=Z,102nm,0.9s						
BRLS	**Borolday**	**46.97 307**	*e*P	**P**	**11 53 42.0**	**0.0**
	comp=Z,72nm,1.1s,baz=306						
BRLS	**Borolday**	**46.97 307**	*e*P	**P**	**11 53 41.9**	**0.0**
BRLS			pmax	pmax			
	comp=Z,71nm,1.1s						
KBL	**Kabul**	**47.29 296**	P	**P**	**11 53 45.5**	**+0.7**
KBL			pmax	pmax			
	comp=Z,258nm,1.1s						
KBL	**Kabul**	**47.29 296**	P	**P**	**11 53 45.5**	**+0.7**
KBL	**Kabul**	**47.29 296**	P	**P**	**11 53 46.1**	**+1.3**
	SNR=119						
KBL			P	**P**	**11 53 46.1**	**+1.3**
	SNR=119						
TIXI	**Tiksi**	**47.75**	**3***c i* P	**P**	**11 53 44.9**	**-2.6**
TIXI			pmax	pmax			
	comp=Z,224nm,1.0s						
BHUJ	**Bhuj**	**48.16 280**	*e*P	**P**	**11 53 52.9**	**+1.5**
BHUJ			IAmb	IAmb	11 53 55.9		
	comp=Z,127nm,0.9s						
BRVK	**Borovoye**	**48.59 321**	*c i* P	**P**	**11 53 53.7**	**-0.6**
BRVK			pmax	pmax			
	comp=Z,71nm,1.1s						
BRVK			MLR	MLR			
	comp=Z,7μm,17.0s						
BRVK	**Borovoye**	**48.59 321**	P	**P**	**11 53 53.2**	**-1.1**
BRVK			IAmb	IAmb	11 53 56.6		
	comp=Z,75nm,1.1s						
BRVK	**Borovoye**	**48.59 321**	P	**P**	**11 53 54.2**	**-0.1**
BRVK			P	**P**	**11 53 54.2**	**-0.1**
BRVK			P	**P**	**11 53 54.2**	**-0.1**
AS31	**Alice Springs**	**48.72 166**	P	**P**	**11 53 56.5**	**+0.9**
ASAR	**Alice Springs**	**48.72 166**	P	**P**	**11 53 56.6**	**+1.0**
	comp=Z,19nm,0.8s,baz=351,slow=6.9,SNR=136						
ASAR			S	**S**	**12 00 58.6**	**+2.2**
	comp=Z,3.0nm,1.1s,baz=357,slow=22,SNR=5.3						
ASAR	**Alice Springs**	**48.72 166**	P	**P**	**11 53 56.7**	**+1.1**
CTAO	**Charters Tower**	**49.62 150**	P	**P**	**11 54 02.2**	**-0.3**
CTAO	**Charters Tower**	**49.62 150**	P	**P**	**11 54 02.2**	**-0.3**
CTAO			IAmb	IAmb	11 54 19.9		
	comp=Z,90nm,1.2s						
CTAO	**Charters Tower**	**49.62 150**	IAMs_20	IAMs_20	12 16 15.3		
	comp=Z,7μm,19.0s						
MNCI	**Minicoy**	**49.73 260**	P	**P**	**11 54 04.3**	**+0.9**
MNCY	**Minicoy**	**49.76 260**	*e*P	**P**	**11 54 04.5**	**+0.8**
NRIK	**Noril'sk**	**49.83 345**	P	**P**	**11 54 01.3**	**-2.2**
	comp=Z,27nm,1.0s,baz=124,slow=8.1,SNR=20						
NRIK			PcP	**PcP**	**11 55 23.4**	**-0.4**
	comp=Z,60nm,1.1s,baz=96,slow=4.9,SNR=4.6						
NRIK	**Noril'sk**	**49.83 345**	P	**P**	**11 54 01.4**	**-2.1**
NRIK			pmax	pmax			
	comp=Z,34nm,0.8s						
NRIK	**Noril'sk**	**49.83 345**	P	**P**	**11 54 01.4**	**-2.1**
NRIK			IAmb	IAmb	11 55 25.1		
	comp=Z,34nm,0.8s						
BILL	**Bilibino**	**51.40 19**	*ce*P	**P**	**11 54 14.3**	**-1.1**
BILL			pmax	pmax			
	comp=Z,32nm,1.1s						
BILL			MLR	MLR			
	comp=Z,13μm,18.0s						
BILL	**Bilibino**	**51.40 19**	IAMs_20	IAMs_20	12 18 00.8		
	comp=Z,14μm,19.0s						
HRA	**Herat**	**52.90 296**	P	**P**	**11 54 27.4**	**0.0**
MORW	**Morawa**	**53.19 187**	P	**P**	**11 54 28.6**	**-0.5**
MORW			IAmb	IAmb	11 54 43.9		
	comp=Z,60nm,1.4s						
AB31	**Akbulak array**	**54.38 314**	*i* P	**P**	**11 54 37.5**	**-0.1**
ABKAR	**Akbulak array**	**54.38 314**	P	**P**	**11 54 37.2**	**-0.4**
ABKAR			IAmb	IAmb	11 54 41.6		
	comp=Z,78nm,0.9s						
ABKAR	**Akbulak array**	**54.38 314**	P	**P**	**11 54 36.5**	**-1.1**
FORT	**Forrest**	**54.79 174**	P	**P**	**11 54 40.3**	**-0.4**
SVE	**Sverdlovsk**	**54.84 324**	*de*P	**P**	**11 54 40.1**	**-0.8**
SVE			*e*S	**S**	**12 02 20.9**	**+1.0**
SVE			pmax	pmax			
	comp=Z,67nm,0.9s						
SVE			MLR	MLR			
	comp=E,13μm,16.0s						
SVE			MLR	MLR			
	comp=Z,17μm,16.0s						
AKTO	**Aktyubinsk**	**55.69 316**	P	**P**	**11 54 46.5**	**-0.6**
GEYT	**Alibeck**	**55.88 301**	P	**P**	**11 54 50.2**	**+1.5**
	comp=Z,137nm,0.7s,baz=106,slow=2.2,SNR=157						
GEYT	**Alibeck**	**55.88 301**	P	**P**	**11 54 48.1**	**-0.7**
GYA0	**ALIBECK ARRAY**	**55.88 301**	P	**P**	**11 54 50.2**	**+1.4**
GYA0B	**ALIBECK ARRAY**	**55.88 301**	P	**P**	**11 54 48.2**	**-0.6**
ARU	**Arti**	**55.92 323**	*ce*P	**P**	**11 54 47.3**	**-1.4**
ARU			pmax	pmax			
	comp=Z,22nm,0.8s						
ARU			MLR	MLR			
	comp=Z,8μm,17.0s						
ARU	**Arti**	**55.92 323**	P	**P**	**11 54 47.9**	**-0.8**
ARU			IAmb	IAmb	11 54 50.1		
	comp=Z,79nm,0.9s						
ARU			IAMs_20	IAMs_20	12 22 21.5		
	comp=Z,9μm,18.0s						
EIDS	**Eidsvold**	**56.40 149**	P	**P**	**11 54 53.5**	**+1.0**
EIDS			IAMs_20	IAMs_20	12 19 16.2		
	comp=Z,7μm,20.0s						
NWAO	**Narrogin (SRO)**	**56.89 185**	P	**P**	**11 55 00.2**	**+4.4**
JLN	**Jalan Bani Buh**	**57.61 282**	P	**P**	**11 55 02.4**	**+1.2**
WBK	**Wadi Bani Khal**	**57.88 282**	P	**P**	**11 55 04.7**	**+1.5**
WBK			P	**P**	**11 55 04.7**	**+1.5**
GAMB	**Gambell**	**58.02 29**	P	**P**	**11 55 03.6**	**+0.2**
GAMB			IAMs_20	IAMs_20	12 22 08.2		
	comp=Z,6μm,19.0s						
GAMB	**Gambell**	**58.02 29**	P		11 55 02.2		
	baz=260						
BBOO	**Buckleboo**	**58.02 167**	P	**P**	**11 55 04.9**	**+1.2**
NIKH	**Nikolski High**	**58.39 41**	P		11 55 05.0		
	baz=269						
NIKH			S		12 03 06.9		
	baz=269						
BIDO	**Bidbid**	**58.40 284**	P	**P**	**11 55 08.4**	**+1.7**
BIDO			P	**P**	**11 55 08.4**	**+1.7**
STKA	**Stephens Creek**	**58.55 161**	P	**P**	**11 55 08.2**	**+0.8**
	comp=Z,24nm,0.8s,baz=335,slow=7.3,SNR=35						
STKA	**Stephens Creek**	**58.55 161**	‖ *e*P	**P**	**11 55 08.9**	**+1.5**
STKA	**Stephens Creek**	**58.55 161**	P	**P**	**11 55 08.5**	**+1.1**
SMDO	**Samad**	**58.59 283**	P	**P**	**11 55 09.4**	**+1.3**
SMDO			P	**P**	**11 55 09.4**	**+1.3**
JMDO	**Jabal Madar**	**58.72 282**	P	**P**	**11 55 10.0**	**+1.0**
HOQ	**Hoqain**	**59.11 284**	P	**P**	**11 55 13.0**	**+1.3**
	SNR=5.6						
HOQ			P	**P**	**11 55 13.0**	**+1.3**
	SNR=5.6						
MHTO	**MHTO**	**59.21 281**	P	**P**	**11 55 12.8**	**+0.4**
	SNR=7.7						
MHTO			P	**P**	**11 55 12.8**	**+0.4**
	SNR=7.7						
BSY	**Bisya**	**59.42 283**	P	**P**	**11 55 14.9**	**+1.0**
	SNR=5.8						
BSY			P	**P**	**11 55 14.9**	**+1.0**
	SNR=5.8						
BANOM	**Banah**	**59.43 287**	*i* P	**P**	**11 55 15.0**	**+1.2**
	SNR=7.9						
BANOM	**Banah**	**59.43 287**	P	**P**	**11 55 15.6**	**+1.8**
SHME	**Shamm**	**59.53 287**	P	**P**	**11 55 15.8**	**+1.2**
SHME	**Shamm**	**59.53 287**	P	**P**	**11 55 16.4**	**+1.8**
MDH	**Madha**	**59.58 286**	P	**P**	**11 55 15.4**	**+0.5**
MDH	**Madha**	**59.58 286**	P	**P**	**11 55 15.1**	**+0.3**
MDH			P	**P**	**11 55 15.1**	**+0.3**
SOHO	**SOHO**	**59.66 285**	*i* P	**P**	**11 55 16.1**	**+0.7**
	SNR=18						
SOHO	**SOHO**	**59.66 285**	P	**P**	**11 55 16.6**	**+1.1**
MASF	**Masafi**	**59.68 286**	P	**P**	**11 55 17.4**	**+1.8**
MASF			P	**P**	**11 55 17.4**	**+1.8**
MSFE	**Esma-Masafi**	**59.68 286**	P	**P**	**11 55 16.7**	**+1.0**
UOSS	**Minazif**	**59.75 286**	P	**P**	**11 55 17.1**	**+1.1**
UOSS	**Minazif**	**59.75 286**	P	**P**	**11 55 15.8**	**-0.2**
UOSS			IAmb	IAmb	11 55 24.4		
	comp=Z,21nm,0.7s						
UOSS	**Minazif**	**59.75 286**	P	**P**	**11 55 16.6**	**+0.6**
UOSS			P	**P**	**11 55 16.6**	**+0.6**
HATD	**Hatta, Dubai**	**59.84 286**	*i* P	**P**	**11 55 17.6**	**+0.9**
	SNR=16						
HATD	**Hatta, Dubai**	**59.84 286**	P	**P**	**11 55 18.5**	**+1.7**
	SNR=5.8						
ARQ	**Aragi**	**59.87 284**	P	**P**	**11 55 18.1**	**+1.2**
	SNR=5.2						
ARQ			P	**P**	**11 55 18.1**	**+1.2**
	SNR=5.2						
DQM	**DQM**	**59.90 280**	P	**P**	**11 55 17.5**	**+0.4**
	SNR=6.5						
TNA	**Tin City**	**59.91 27**	P		11 55 15.3		
	baz=262						
TNA			S		12 03 24.4		
	baz=262						
NAZ	**Nazwa, Dubai**	**60.21 286**	*i* P	**P**	**11 55 20.2**	**+1.0**
	SNR=6.5						
NAZ	**Nazwa, Dubai**	**60.21 286**	P	**P**	**11 55 20.7**	**+1.5**
NAZ			P	**P**	**11 55 20.7**	**+1.5**
FAQ	**Al Faqa, Dubai**	**60.33 286**	*i* P	**P**	**11 55 20.7**	**+0.6**
	SNR=11						
ALNE	**Al Ain**	**60.37 285**	*i* P	**P**	**11 55 21.2**	**+0.8**
	SNR=12						
ALNE	**Al Ain**	**60.37 285**	P	**P**	**11 55 21.7**	**+1.4**
	SNR=14						
ALNE			P	**P**	**11 55 21.7**	**+1.4**
	SNR=14						
ASUD	**Al Ashush, Dub**	**60.60 286**	*i* P	**P**	**11 55 22.8**	**+0.9**
	SNR=5.8						
ASUD	**Al Ashush, Dub**	**60.60 286**	P	**P**	**11 55 23.5**	**+1.7**
ANM	**Nome**	**60.87 28**	P	**P**	**11 55 22.7**	**-0.4**
ANM			pmax	pmax			
	comp=Z,17nm,0.9s						
ANM			MLR	MLR			
	comp=Z,6μm,20.0s						
ANM	**Nome**	**60.87 28**	P	**P**	**11 55 22.7**	**-0.4**
ANM			IAMs_20	IAMs_20	12 24 20.6		
	comp=Z,6μm,20.0s						
ANM	**Nome**	**60.87 28**	P		11 55 21.9		
	baz=265						
ANM			S		12 03 34.5		
	baz=265						
AJN	**Ajban**	**60.91 286**	P	**P**	**11 55 25.3**	**+1.2**
ARMA	**Armidale**	**60.96 151**	P	**P**	**11 55 25.1**	**+0.9**
ARMA			IAmb	IAmb	11 55 39.3		
	comp=Z,98nm,1.4s						
ARMA			IAMs_20	IAMs_20	12 19 44.7		
	comp=Z,7μm,22.0s						
UMZA	**Um Al Zommool**	**61.25 284**	P	**P**	**11 55 26.8**	**+0.5**
RDOG	**Red Dog Mine**	**62.16 24**	P	**P**	**11 55 32.2**	**+0.5**
RDOG	**Red Dog Mine**	**62.16 24**	P		11 55 30.3		
	baz=265						
RDOG			S		12 03 55.1		
	baz=265						
BELG	**Belogornoye**	**62.18 318**	*ce*P	**P**	**11 55 31.3**	**-0.8**
BELG			pmax	pmax			
	comp=Z,18nm,0.9s						
BELG			MLR	MLR			
	comp=Z,654nm,17.0s						
SHAO	**Shalim**	**62.19 278**	P	**P**	**11 55 32.3**	**-0.5**
DZM	**Mont Dzumac**	**62.68 134**	*e*P	**P**	**11 55 40.6**	**+4.7**
	comp=Z,68nm,1.2s						
DZM			*e*S	**S**	**12 04 09.5**	**+6.8**
	comp=Z,11μm,28.0s						
DZM			*e*SS	**SS**	**12 08 15.9**	**+7.8**
	comp=Z,4μm,24.4s						
DZM			*e*LR	LR	12 14 23.7		
	comp=Z,20μm,24.4s						
DZM	**Mont Dzumac**	**62.68 134**	P	**P**	**11 55 35.9**	**-0.1**
DZM			IAmb	IAmb	11 55 47.9		
	comp=Z,30nm,1.1s						
DZM			IAMs_20	IAMs_20	12 17 42.3		
	comp=Z,9μm,22.0s						
DMTO	**DMTO**	**62.90 278**	P	**P**	**11 55 37.9**	**+0.4**
PRGR	**Permogore**	**62.90 329**	‖ *i* P	**P**	**11 55 35.3**	**-1.5**
PRGR			*e*		11 56 13.8		
PRGR			pmax	pmax			
	comp=Z,90nm,0.9s						
SDPT	**Sand Point**	**63.26 39**	P		11 55 38.2		
	baz=274						
SDPT			S		12 04 09.4		
	baz=274						
MAK	**Makhachkala**	**63.31 307**	*d i* P	**P**	**11 55 42.6**	**+2.8**
MAK			*e*		11 58 02.8		
MAK			*e*PPP	PPP	11 59 30.9		
MAK			*e*S	**S**	**12 04 12.7**	**+2.8**
MAK			pmax	pmax			
	comp=Z,169nm,1.0s						
DOK	**Doka**	**63.36 280**	P	**P**	**11 55 40.4**	**-0.1**
	SNR=9.2						
DOK			P	**P**	**11 55 40.4**	**-0.1**
	SNR=9.2						
RBK	**Rabkut**	**63.64 278**	P	**P**	**11 55 43.0**	**+0.5**
	SNR=13						
RBK			P	**P**	**11 55 43.0**	**+0.5**
	SNR=13						
WHFO	**Wadi Hawf**	**63.90 279**	P	**P**	**11 55 44.0**	**-0.1**
	SNR=8.2						
SLWR	**Sila**	**63.94 286**	P	**P**	**11 55 45.1**	**+0.9**
CAN	**Canberra**	**64.18 156**	IAMs_20	IAMs_20	12 26 23.8		
	comp=Z,5μm,20.0s						
LGD	**Lagodekhi**	**64.41 306**	P	**P**	**11 55 47.6**	**+0.5**
A21K	**Barrow**	**64.50 21**	P		11 55 46.0		
	baz=270						
A21K			S		12 04 26.0		
	baz=270						
ABTO	**Aybut**	**64.51 278**	P	**P**	**11 55 48.4**	**+0.2**
	SNR=12						
DDFL	**Dedoflistskaro**	**64.58 306**	P	**P**	**11 55 50.7**	**+2.4**
TOO	**Toolangi**	**65.02 160**	P	**P**	**11 55 52.2**	**+1.3**
TOO			pmax	pmax			
	comp=Z,129nm,1.7s						
TOO	**Toolangi**	**65.02 160**	P	**P**	**11 55 52.2**	**+1.3**
GUDG	**Gudauri**	**65.59 307**	P	**P**	**11 55 56.5**	**+1.5**
SOCY	**Socotra**	**65.63 273**	P	**P**	**11 55 53.8**	**-1.8**
SOCY			IAmb	IAmb	11 55 59.7		
	comp=Z,48nm,1.1s						
SOCY	**Socotra**	**65.63 273**	P	**P**	**11 55 54.7**	**-0.8**
	SNR=14						
IMAR	**Indian Mountai**	**65.76 27**	P	**P**	**11 55 54.5**

KLMR LQ LQ 12 19 31.2
KLMR LQ LQ 12 19 31.2
KLMR LR LR 12 24 07.5
KLMR AMP 12 27 11.0
comp=Z,13µm,15.9s
ZEI Tsey 65.95 308 *e*P **P 11 55 56.5 -0.8**
ZEI pmax pmax
comp=Z,93nm,0.9s
VRH Novokhopyorsk 65.95 317 *e*P **P 11 55 55.8 -1.1**
VRH pmax pmax
comp=Z,30nm,0.8s
VRH MLR MLR
comp=Z,5µm,17.0s
GOF Gofitskoye 66.13 310⇑ *e*P **P 11 55 57.2 -1.0**
GOF pmax pmax
comp=Z,63nm,0.9s
ONI Oni 66.31 308 P **P 11 56 00.9 +1.4**
KBZ Khabaz 66.48 309 P **P 11 56 00.8 +0.4**
comp=Z,46nm,0.8s,baz=97,slow=4.0,SNR=45
AKH Akhalkalaki 66.52 306 ⇑P **P 11 56 02.3 +1.3**
AKH Akhalkalaki 66.52 306 *e*P **P 11 56 02.8 +1.8**
AKH Akhalkalaki 66.52 306 P **P 11 56 02.3 +1.3**
CHUM Lake Minchumin 66.58 29 P 11 56 00.1
baz=277
KIV Kislovodsk 66.59 309 ⇓P **P 11 56 02.3 +1.1**
KIV Kislovodsk 66.59 309 *i* P **P 11 56 01.5 +0.2**
SNR=22
KIV Kislovodsk 66.59 309 *e*P **P 11 56 02.1 +0.8**
KIV Kislovodsk 66.59 309 *e*P **P 11 56 01.6 +0.3**
KIV *e* 11 58 28.8
KIV *e*S **S 12 04 51.0 +0.5**
KIV *e*SS **SS 12 09 10.2 +2.5**
KIV pmax pmax
comp=Z,366nm,1.0s
KIV pmax pmax
comp=Z,1µm,4.7s
KIV MLR MLR
comp=Z,11µm,17.0s
KIV Kislovodsk 66.59 309 P **P 11 56 00.8 -0.5**
KIV IAms_20 IAms_20 12 28 23.2
comp=Z,5µm,20.0s
KIV Kislovodsk 66.59 309 P **P 11 56 02.4 +1.1**
KIV P **P 11 56 02.4 +1.1**
NEY Neytrino 66.70 308⇓ *e*P **P 11 56 03.0 +0.9**
NEY pmax pmax
comp=Z,8.0nm,1.0s
NEY MLR MLR
comp=Z,2µm,16.0s
PPLA Purkeypile 66.76 30 P **P 11 56 02.3 +0.2**
PPLA IAmb IAmb 11 57 03.4
comp=Z,32nm,1.1s
PPLA IAms_20 IAms_20 12 29 53.4
comp=Z,5µm,18.0s
PPLA Purkeypile 66.76 30 P 11 56 00.4
baz=278
RSO Redoubt South 66.82 32 P **P 11 56 02.4 -0.2**
SPCR Spurr Chakacha 66.98 32 P 11 56 02.6
baz=278,SNR=10.0
OHAK Old Harbor 67.03 36 IAms_20 IAms_20 12 23 47.8
comp=Z,5µm,21.0s
OHAK Old Harbor 67.03 36 P 11 56 02.0
baz=279
COLD Coldfoot 67.03 25 P **P 11 56 03.1 -0.5**
COLD Coldfoot 67.03 25 P 11 56 03.0
baz=277
COLD S 12 04 53.5
baz=277
TOLK Toolik Lake Re 67.09 23 P **P 11 56 02.6 -1.3**
TOLK IAmb IAmb 11 56 34.4
comp=Z,44nm,0.9s
TOLK IAms_20 IAms_20 12 27 33.8
comp=Z,9µm,19.0s
TOLK Toolik Lake Re 67.09 23 P 11 56 02.6
baz=277
TOLK S 12 04 57.3
baz=277
MLY Manley 67.11 27 P **P 11 56 03.9 -0.3**
MLY IAmb IAmb 11 56 07.4
comp=Z,22nm,0.7s
MLY Manley 67.11 27 P 11 56 03.3
baz=278,SNR=32
MLY S 12 04 53.2
baz=278
BPAW Bear Paw Mtn. 67.13 28 P **P 11 56 04.2 0.0**
BPAW IAmb IAmb 11 56 57.7
comp=Z,61nm,1.6s
BPAW Bear Paw Mtn. 67.13 28 P 11 56 03.8
baz=278,SNR=12
BPAW S 12 04 56.2
baz=278
LVZ Lovozero 67.15 336 P **P 11 56 03.9 -0.4**
LVZ pmax pmax
comp=Z,118nm,1.4s
LVZ MLR MLR
comp=Z,9µm,18.0s
LVZ Lovozero 67.15 336 P **P 11 56 03.9 -0.4**
LVZ IAms_20 IAms_20 12 29 16.9
comp=Z,9µm,18.0s
SKT Skwentna 67.19 31 P **P 11 56 05.0 +0.4**
SKT IAmb IAmb 11 56 53.1
comp=Z,37nm,1.3s
SKT Skwentna 67.19 31 P 11 56 03.1
baz=278
KTH Kantishna Hill 67.24 29 P **P 11 56 04.8 -0.3**
KTH IAmb IAmb 11 56 30.5
comp=Z,26nm,1.0s
CHVG Ch'k'valeri 67.27 308 ⇓P **P 11 56 06.2 +0.7**
KDAK Kodiak Island 67.31 35 P **P 11 56 04.8 -0.7**
KDAK pmax pmax
comp=Z,135nm,1.3s
KDAK MLR MLR
comp=Z,4µm,22.0s
KDAK Kodiak Island 67.31 35 P **P 11 56 04.8 -0.7**
KDAK Kodiak Island 67.32 35 P 11 56 04.9
baz=279
VORR Voronezh 67.43 318 *e*P **P 11 56 05.0 -1.3**
VORR pmax pmax
comp=Z,250nm,1.4s
LPSR Galich'ya Gora 67.43 319 *e*P **P 11 56 05.1 -1.2**
LPSR pmax pmax
comp=Z,50nm,1.0s
LPSR MLR MLR
comp=Z,3µm,14.0s
HOM Homer 67.50 33 P 11 56 05.7
baz=279
VORD Divnogorie 67.50 317 *e*P **P 11 56 05.7 -1.1**
VORD pmax pmax
comp=Z,20nm,1.1s
GEVA Gevas 67.53 303 P **P 11 56 07.3 -0.2**
TRF Thorofare Moun 67.53 29 P **P 11 56 07.4 +0.4**
TRF IAmb IAmb 11 56 23.9
comp=Z,35nm,1.2s
TRF Thorofare Moun 67.53 29 P 11 56 05.4
baz=279
VSR Storozhevoye 67.54 317 *e*P **P 11 56 05.5 -1.5**
VSR pmax pmax
comp=Z,50nm,1.3s
VSR MLR MLR
comp=Z,5µm,16.0s
CAPN Captain Cook N 67.56 32 P 11 56 05.2
baz=279
AKDM Akdamar-Van 67.58 303 *i* P **P 11 56 09.2 +1.4**
MOS Moscow 67.62 322 *e*P **P 11 56 06.0 -1.4**
MOS *e* 11 56 15.0
MOS pmax pmax
comp=Z,61nm,0.7s
MOS MLR MLR
comp=E,5µm,16.0s
MOS MLR MLR
comp=Z,7µm,16.0s
SUA Susitna One 67.64 31 P **P 11 56 07.5 -0.1**
SUA IAmb IAmb 11 56 21.0
comp=Z,64nm,0.9s
SUA Susitna One 67.64 31 P 11 56 06.8
baz=279,SNR=9.1
APA Apatity 67.66 335⇓ *i*P **P 11 56 06.1 -1.4**
APA *i* 11 56 26.0
APA *i* S **S 12 04 57.0 -5.5**
APA *i* 12 06 03.0
APA pmax pmax
comp=Z,40nm,1.0s
I23K Minto, Yukon-K 67.67 27 P **P 11 56 08.1 +0.5**
I23K IAmb IAmb 11 56 37.4
comp=Z,31nm,1.1s
I23K IAms_20 IAms_20 12 28 18.3
comp=Z,5µm,18.0s

I23K Minto, Yukon-K 67.67 27 P 11 56 07.5
baz=279,SNR=24
CUT Chulitna 67.71 30 P **P 11 56 08.3 +0.5**
CUT IAmb IAmb 11 56 20.7
comp=Z,68nm,1.0s
CUT IAMs_20 IAMs_20 12 30 02.6
comp=Z,5µm,19.0s
CUT Chulitna 67.71 30 S 12 04 59.2
baz=279
BRLK Bradley Lake 67.86 33 P **P 11 56 09.6 +0.7**
NEA2 Nenana 67.88 28 P **P 11 56 08.4 -0.6**
NEA2 IAmb IAmb 11 56 22.5
comp=Z,46nm,0.9s
NEA2 IAMs_20 IAMs_20 12 29 49.0
comp=Z,5µm,19.0s
NEA2 Nenana 67.88 28 P 11 56 07.9
baz=280,SNR=22
NEA2 S 12 05 05.8
baz=280
BRSE Bradley Lake S 67.93 33 P 11 56 08.4
baz=280
MCK McKinley 68.09 29 P **P 11 56 10.3 0.0**
MCK pmax pmax
comp=Z,26nm,0.8s
MCK MLR MLR
comp=Z,4µm,19.0s
MCK McKinley 68.09 29 P **P 11 56 10.3 0.0**
MCK IAmb IAmb 11 56 41.2
comp=Z,26nm,0.8s
MCK McKinley 68.09 29 P 11 56 09.4
baz=280,SNR=12
MCK S 12 05 07.8
baz=280
MDM Murphy Dome 68.17 27 P **P 11 56 10.2 -0.7**
MDM IAmb IAmb 11 56 14.3
comp=Z,61nm,1.1s
MDM IAMs_20 IAMs_20 12 30 07.6
comp=Z,4µm,18.0s
RND Reindeer 68.18 29 P **P 11 56 10.4 -0.6**
RND pmax pmax
comp=Z,58nm,0.8s
RND MLR MLR
comp=Z,5µm,22.0s
RND Reindeer 68.18 29 P **P 11 56 10.4 -0.6**
RND IAmb IAmb 11 56 26.3
comp=Z,58nm,0.8s
RC01 Rabbit Creek A 68.19 32 P **P 11 56 09.9 -1.1**
RC01 IAmb IAmb 11 56 50.8
comp=Z,59nm,1.4s
RC01 Rabbit Creek A 68.19 32 P 11 56 10.6
baz=280
GURO Guroymak-BITLI 68.25 304 *e*P **P 11 56 13.4 +1.4**
O22K Cooper Landing 68.30 32 P **P 11 56 11.6 0.0**
O22K Cooper Landing 68.30 32 P 11 56 10.4
baz=281
WRH Wood River Hil 68.32 28 P **P 11 56 12.8 +1.1**
WRH IAmb IAmb 11 56 39.1
comp=Z,50nm,1.1s
OBN Obninsk 68.33 322⇑ *e*P **P 11 56 12.8 +0.9**
OBN *e* 11 56 36.8
OBN *e*PPP PPP 12 00 22.8
OBN *e*S **S 12 05 11.1 +0.3**
OBN *e*SS **SS 12 09 35.5 +1.6**
OBN pmax pmax
comp=Z,30nm,0.4s
OBN MLR MLR
comp=Z,8µm,18.0s
OBN Obninsk 68.33 322 IAMs_20 IAMs_20 12 29 35.4
comp=Z,8µm,19.0s
TCOL CIGO, UAF Yank 68.34 27 P **P 11 56 11.3 -0.5**
TCOL CIGO, UAF Yank 68.34 27 P 11 56 11.4
baz=280,SNR=6.6
TCOL S 12 05 13.6
baz=280
COLA College 68.35 27⇑ *e*P **P 11 56 11.9 +0.1**
COLA pmax pmax
comp=Z,12nm,0.7s
COLA MLR MLR
comp=Z,4µm,17.0s
COLA College 68.35 27 P **P 11 56 12.4 +0.6**
COLA IAmb IAmb 11 56 22.8
comp=Z,25nm,0.9s
COLA College 68.35 27 P 11 56 10.5
baz=280
WAT2 Susitna Watana 68.38 29 P 11 56 11.1
baz=281
WAT2 S 12 05 15.3
baz=281
PMR Palmer 68.38 31 P 11 56 10.4
baz=281
CCB Clear Creek Bu 68.41 28 P **P 11 56 12.1 -0.2**
CCB IAmb IAmb 11 56 43.0
comp=Z,50nm,1.8s
CCB IAMs_20 IAMs_20 12 30 14.9
comp=Z,5µm,19.0s
GHO Glory Hole Cre 68.44 31 P **P 11 56 12.5 -0.1**
GHO IAmb IAmb 11 56 53.8
comp=Z,71nm,1.3s
POKR Poker Plat Res 68.48 27 P **P 11 56 12.5 -0.2**
POKR IAmb IAmb 11 56 16.2
comp=Z,38nm,1.1s
POKR Poker Plat Res 68.48 27 P 11 56 11.4
baz=281,SNR=6.1
POKR S 12 05 12.4
baz=281
HOPEN Hopen 68.52 346 *e*P **P 11 56 12.9 +0.1**
SML Sawmill 68.71 31 P **P 11 56 14.6 +0.3**
SML Sawmill 68.71 31 P 11 56 13.4
baz=281
KNK Knik Glacier 68.73 31 P 11 56 12.1
baz=281
SOC Sochi 68.77 309 *i* P **P 11 56 13.5 -1.4**
SOC *e* 11 58 44.3
SOC *e*PPP PPP 12 00 26.9
SOC *e*S **S 12 05 16.8 +0.4**
SOC pmax pmax
comp=Z,37nm,0.6s
SOC MLR MLR
comp=Z,6µm,16.0s
IL31 68.77 27 P **P 11 56 14.1 -0.3**
ILAR Eielson Array 68.77 27 P **P 11 56 12.7 -1.9**
comp=Z,4.2nm,0.4s,baz=257,slow=4.5,SNR=39
ILAR Eielson Array 68.77 27 P **P 11 56 13.3 -1.3**
ILAR Eielson Array 68.77 27 P **P 11 56 13.2 -1.3**
HDA Harding Lake 68.82 28 IAMs_20 IAMs_20 12 30 27.5
comp=Z,4µm,18.0s
HDA Harding Lake 68.82 28 P 11 56 13.0
baz=281,SNR=17
HDA P 11 56 13.0
baz=281,SNR=17
WAT6 Susitna Watana 68.83 30 P 11 56 13.7
baz=282,SNR=6.7
PWL Port Wells 68.90 32 P **P 11 56 15.6 +0.2**
PWL IAmb IAmb 11 56 17.2
comp=Z,66nm,1.0s
KOPT Kop Dagi 69.05 305 P **P 11 56 17.1 +0.1**
FYU Fort Yukon 69.08 25 P **P 11 56 16.4 +0.1**
BMAR Burnt Mountain 69.15 24 P **P 11 56 16.5 -0.4**
YEDI Yedisu-Bingol 69.16 305 *i* P **P 11 56 20.5 +2.9**
BNGB Bingl 69.17 304 *e*P **P 11 56 19.0 +1.4**
SCM Sheep Creek Mo 69.17 31 P **P 11 56 17.1 -0.1**
SCM pmax pmax
comp=Z,50nm,0.8s
SCM MLR MLR
comp=Z,3µm,18.0s
SCM Sheep Creek Mo 69.17 31 P **P 11 56 17.1 -0.1**
SCM IAmb IAmb 11 56 55.2
comp=Z,50nm,0.8s
PRP Porcupine Dome 69.18 26 P **P 11 56 17.5 +0.3**
RAYN Ar Rayn 69.52 287 *i* P **P 11 56 20.0 0.0**
SNR=37
RAYN Ar Rayn 69.52 287 P **P 11 56 19.8 -0.1**
RAYN pmax pmax
comp=Z,45nm,1.0s
RAYN Ar Rayn 69.52 287 P **P 11 56 19.8 -0.1**
RAYN IAmb IAmb 11 56 21.5
comp=Z,45nm,1.0s
MARD Mardin 69.52 303 P **P 11 56 20.2 +0.4**
KEV Kevo 69.53 338 P **P 11 56 18.8 -0.3**
KEV pmax pmax
comp=Z,61nm,1.1s
KEV MLR MLR
comp=Z,8µm,19.0s
KEV Kevo 69.53 338 P **P 11 56 18.8 -0.3**
KEV IAmb IAmb 11 56 22.1
comp=Z,60nm,1.1s

KEV IAMs_20 IAMs_20 12 30 10.9
comp=Z,8µm,19.0s
M24K Tolsona, Glenn 69.65 30 P **P 11 56 20.2 +0.1**
M24K Tolsona, Glenn 69.65 30 P 11 56 19.1
baz=283
PAX Paxson 69.77 29 P **P 11 56 20.5 -0.3**
PAX pmax pmax
comp=Z,29nm,1.2s
PAX MLR MLR
comp=Z,4µm,22.0s
PAX Paxson 69.77 29 P **P 11 56 20.5 -0.3**
PAX Paxson 69.77 29 P 11 56 20.0
baz=283
FID Port Fidalgo 69.81 32 IAMs_20 IAMs_20 12 31 38.8
comp=Z,4µm,18.0s
SPA0 Spitsbergen Ar 69.85 348 P **P 11 56 19.7 -1.4**
SPA0 IAmb IAmb 11 56 25.1
comp=Z,92nm,1.2s
SPA0 Spitsbergen Ar 69.85 348 *e*P **P 11 56 20.1 -0.9**
KLU Klutina 69.90 31 P **P 11 56 21.6 -0.1**
KLU IAmb IAmb 11 56 27.6
comp=Z,22nm,0.7s
KLU Klutina 69.91 31 P 11 56 20.7
baz=283
VALR Valaam 69.94 329 *e*P **P 11 56 21.4 -0.4**
VALR pmax pmax
comp=Z,47nm,0.9s
VALR MLR MLR
comp=Z,10µm,15.4s
ANN Anapa 70.07 311 *e*P **P 11 56 22.5 -0.4**
ANN *e*S **S 12 05 29.5 -2.2**
ANN pmax pmax
comp=Z,163nm,1.0s
ARA0 ARCESS Array S 70.09 338 *e*P **P 11 56 22.4 -0.2**
ARCES ARCESS Array B 70.09 338 P **P 11 56 21.7 -1.0**
comp=Z,27nm,0.9s,baz=63,slow=4.7,SNR=27
ARCES ARCESS Array B 70.09 338 P **P 11 56 21.6 -1.0**
ARCES IAmb IAmb 11 56 24.7
comp=Z,24nm,0.9s
SCRK Sand Creek 70.18 28 P **P 11 56 22.6 -0.8**
SCRK IAmb IAmb 11 56 46.7
comp=Z,32nm,1.0s
SCRK Sand Creek 70.18 28 P 11 56 22.3
baz=284,SNR=19
EYAK Cordova Ski Ar 70.21 32 P 11 56 22.5
baz=284
DOT Dot Lake 70.23 28 P **P 11 56 22.9 -0.7**
KBS Kingsbay 70.38 349 *e*P **P 11 56 23.6 -0.6**
HAMF Hammerfest 70.39 340 *e*P **P 11 56 24.4 0.0**
HSPB Hornsund (broa 70.45 347 *e*P **P 11 56 24.0 -0.7**
HSPB Hornsund (broa 70.45 347 *e*P **P 11 56 24.6 -0.1**
TAU Tasmania Unive 70.46 161 P **P 11 56 25.8 +0.7**
TAU pmax pmax
comp=Z,231nm,1.6s
TAU MLR MLR
comp=Z,5µm,21.0s
TAU Tasmania Unive 70.46 161 P **P 11 56 25.8 +0.7**
TAU IAMs_20 IAMs_20 12 28 14.1
comp=Z,5µm,21.0s
N25K Chitina, Valde 70.49 30 IAMs_20 IAMs_20 12 31 16.1
comp=Z,4µm,18.0s
N25K Chitina, Valde 70.49 30 P 11 56 24.0
baz=284
MENT Mentasta 70.55 29 P **P 11 56 25.5 -0.1**
MENT IAmb IAmb 11 56 53.5
comp=Z,33nm,0.9s
MENT IAMs_20 IAMs_20 12 27 47.7
comp=Z,4µm,20.0s
BMRM Bremner River 70.65 31 P **P 11 56 26.3 +0.1**
BMRM IAmb IAmb 11 56 35.1
comp=Z,31nm,0.8s
BMRM Bremner River 70.65 31 P 11 56 24.7
baz=285
RAGM Ragged Mountai 70.76 32 IAMs_20 IAMs_20 12 27 45.1
comp=Z,5µm,21.0s
GLB Gilahina Butte 70.90 30 P **P 11 56 27.7 0.0**
GLB IAmb IAmb 11 56 37.8
comp=Z,27nm,0.9s
HMT Hamilton 70.98 32 IAMs_20 IAMs_20 12 27 49.7
comp=Z,5µm,20.0s
K27K Chicken 70.98 28 P **P 11 56 27.5 -0.6**
K27K IAmb IAmb 11 56 53.8
comp=Z,26nm,0.8s
K27K IAMs_20 IAMs_20 12 32 55.6
comp=Z,5µm,19.0s
K27K Chicken 70.98 28 P 11 56 26.5
baz=286
K27K S 12 05 34.7
baz=286
URFA Urfa 70.99 303 *e*P **P 11 56 28.9 +0.1**
KAIM Kayak Island 71.01 32 IAMs_20 IAMs_20 12 32 32.6
comp=Z,6µm,18.0s
KAIM Kayak Island 71.01 32 P 11 56 26.8
baz=285
KTK1 Kautokeino 71.02 338 *e*P **P 11 56 27.9 -0.3**
MALT Malatya 71.05 304 *e*P **P 11 56 30.6 +1.4**
MALT Malatya 71.05 304 P **P 11 56 30.1 +0.9**
EGAK Eagle 71.16 27 P **P 11 56 28.0 -1.2**
EGAK Eagle 71.16 27 P 11 56 28.0
baz=286,SNR=15
MCARA McCarthy VSAT 71.28 30 P **P 11 56 29.5 -0.5**
MCARA IAmb IAmb 11 57 09.0
comp=Z,32nm,0.8s
MCARA McCarthy VSAT 71.28 30 P 11 56 28.5
baz=286
SUCK Suckling Hills 71.28 32 IAMs_20 IAMs_20 12 32 32.7
comp=Z,7µm,18.0s
L27K Beaver Creek, 71.35 29 P **P 11 56 30.2 -0.3**
L27K IAmb IAmb 11 56 38.4
comp=Z,26nm,0.9s
L27K IAMs_20 IAMs_20 12 30 30.5
comp=Z,4µm,18.0s
L27K Beaver Creek, 71.35 29 P 11 56 30.4
baz=286,SNR=13
L27K S 12 05 48.2
baz=286
BCAR Beaver Creek A 71.37 29 P **P 11 56 29.7 -0.9**
CRQM Cirque 71.40 31 P **P 11 56 31.2 +0.3**
CRQM IAmb IAmb 11 56 45.8
comp=Z,57nm,1.1s
CRQM IAMs_20 IAMs_20 12 27 24.8
comp=Z,6µm,22.0s
SVSK Karacayir 71.67 306 *e*P **P 11 56 33.9 +1.2**
JETT Jettan, Norway 71.80 339 *e*P **P 11 56 32.8 -0.2**
TOKT Tokat 71.89 307 P **P 11 56 34.8 +0.7**
TOKA Tokat 71.94 307 P **P 11 56 34.4 0.0**
BARN Barnard Glacie 72.00 31 P **P 11 56 34.5 -0.1**
KVT Kavak 72.04 308 *i* P **P 11 56 35.9 +0.9**
KVT Kavak 72.04 308 P **P 11 56 35.8 +0.8**
DAWY Dawson 72.10 27 P **P 11 56 34.2 -0.7**
DAWY IAmb IAmb 11 57 24.2
comp=Z,39nm,1.1s
DAWY IAMs_20 IAMs_20 12 31 13.2
comp=Z,4µm,19.0s
MESA MESA 72.13 32 IAMs_20 IAMs_20 12 33 22.5
comp=Z,6µm,19.0s
FIA1 FINESS Array S 72.15 330 P **P 11 56 34.6 -0.5**
FIA1 IAmb IAmb 11 56 56.2
comp=Z,44nm,0.9s
FINES FINESS Array B 72.15 330 P **P 11 56 34.7 -0.5**
comp=Z,22nm,0.4s,baz=50,slow=5.7,SNR=63
FINES FINESS Array B 72.15 330 *i* P **P 11 56 35.2 0.0**
FINES pmax pmax
comp=Z,22nm,0.4s
FINES FINESS Array B 72.15 330 P **P 11 56 34.3 -0.9**
YAH Yahtse 72.17 31 IAMs_20 IAMs_20 12 26 55.5
comp=Z,5µm,22.0s
CTG Chitna Glacier 72.18 31 P 11 56 34.9
baz=287
CTGM Chitina Glacie 72.19 31 P **P 11 56 35.4 -0.2**
CTGM IAmb IAmb 11 56 42.6
comp=Z,38nm,0.8s
TRO Tromso 72.25 339 *e*P **P 11 56 35.8 +0.2**
GAZ Gaziantep 72.30 303 *e*P **P 11 56 37.5 +0.8**
GAZ Gaziantep 72.30 303 P **P 11 56 36.6 0.0**
SIM Simferopol' 72.31 312 *e*P **P 11 56 35.3 -1.1**
SIM pmax pmax
comp=Z,60nm,0.7s
LOGN Logan Glacier 72.38 31 P **P 11 56 36.8 0.0**
LOGN IAmb IAmb 11 56 44.6
comp=Z,31nm,0.8s
EPYK Eagle Plains 72.42 25 P **P 11 56 37.0 +0.2**
EPYK IAmb IAmb 11 56 39.6
comp=Z,54nm,1.1s
EPYK IAMs_20 IAMs_20 12 31 15.7
comp=Z,6µm,20.0s

	baz=293									
EPYK	**Eagle Plains**	**72.42**	**25**	P			11 56 34.5			
	baz=290									
EPYK				S			12 05 54.6			
	baz=290									
TABL	**Table Mountain**	**72.43**	**31**	P		**P**	**11 56 36.3**	**-0.9**		
TABL				IAmb		IAmb	11 57 44.3			
	comp=Z,52nm,0.8s									
KMRS	**Kahramanmaras**	**72.44**	**304**	*i* P		**P**	**11 56 38.4**	**+1.0**		
DIKM	**Dikmen**	**72.45**	**308**	⇑P		**P**	**11 56 38.2**	**+0.8**		
SARI	**SarD1z-Kayseri**	**72.54**	**305**	*i* P		**P**	**11 56 38.2**	**0.0**		
NOR	**Nord**	**72.58**	**354**	*i* P		**P**	**11 56 36.2**	**-1.2**		
NOR				IAMs_20		IAMs_20	12 31 31.9			
	comp=Z,6µm,15.9s									
NOR	**Nord**	**72.58**	**354**	*i* P		**P**	**11 56 36.2**	**-1.2**		
NOR				MLR		MLR				
	comp=Z,6µm,16.0s									
VSU	**Vasula**	**72.73**	**327**	*e*P		**P**	**11 56 38.8**	**0.0**		
BNN	**Bunyan**	**72.83**	**305**	P		**P**	**11 56 39.5**	**-0.4**		
INK	**Inuvik**	**72.89**	**22**	P		**P**	**11 56 38.1**	**-1.3**		
INK				pmax		pmax				
	comp=Z,49nm,1.0s									
INK				MLR		MLR				
	comp=Z,8µm,19.0s									
INK	**Inuvik**	**72.89**	**22**	P		**P**	**11 56 38.1**	**-1.3**		
INK				IAmb		IAmb	11 56 41.5			
	comp=Z,49nm,0.9s									
INK				IAMs_20		IAMs_20	12 32 02.8			
	comp=Z,8µm,19.0s									
PCA	**Pinnacle**	**72.96**	**31**	P		**P**	**11 56 40.2**	**+0.1**		
PCA				IAmb		IAmb	11 56 43.5			
	comp=Z,73nm,1.1s									
PINM	**Pinnacle**	**72.96**	**31**	P			11 56 38.6			
	baz=289									
PINM				S			12 06 02.8			
	baz=289									
KOZT	**Kozan**	**73.26**	**304**	*i* P		**P**	**11 56 42.9**	**+0.6**		
BCPM	**Bancas Point**	**73.30**	**31**	IAMs_20		IAMs_20	12 33 42.2			
	comp=Z,4µm,18.0s									
MNK	**Minsk**	**73.35**	**323**	*e*P		**P**	**11 56 44.0**	**+1.6**		
MNK				*e*S		**S**	**12 06 10.0**	**+0.9**		
MNK				MLR		MLR				
	comp=Z,9µm,16.0s									
MNK				MLR		MLR				
	comp=E,5µm,14.0s									
MNK	**Minsk**	**73.35**	**323**	*i* P		**P**	**11 56 42.9**	**+0.5**		
	comp=E,5.0nm,1.0s									
MNK				*i* P		**P**	**11 56 42.9**	**+0.5**		
	comp=N,13nm,1.1s									
MNK				*i* P		**P**	**11 56 42.9**	**+0.5**		
	comp=Z,71nm,1.4s									
MNK				*i* PcP		**PcP**	**11 56 59.2**	**+0.6**		
MNK				*i* PP		**PP**	**11 59 27.7**	**+2.0**		
MNK				*i* PPP		PPP	12 01 08.0			
MNK				*i* S		**S**	**12 06 08.1**	**-1.0**		
MNK				*i* SS		**SS**	**12 10 51.9**	**+1.0**		
MNK				*i* SSS		SSS	12 14 13.9			
MNK				*i* LQ		LQ	12 24 23.3			
MNK				*i* LR		LR	12 30 06.0			
MNK				*i* LRM		MLR	12 32 38.7			
	comp=N,3µm,19.5s									
MNK				*i* LRM		MLR	12 32 51.7			
	comp=Z,5µm,18.1s									
MNK				*i* LRM		MLR	12 32 53.9			
	comp=E,719nm,19.3s									
CEYT	**Ceyhan**	**73.46**	**304**	*e*P		**P**	**11 56 44.6**	**+1.2**		
ALE	**Alert**	**73.60**	**1**	IAMs_20		IAMs_20	12 32 06.6			
	comp=Z,6µm,20.0s									
IDID	**Didziasalis**	**73.72**	**324**	*e*P		**P**	**11 56 44.7**	**+0.1**		
ILGA	**Ilgaz**	**73.73**	**308**	P		**P**	**11 56 45.2**	**0.0**		
ILGA				IAmb		IAmb	11 57 02.0			
	comp=Z,54nm,1.1s									
AKASG	**Malin Array Be**	**73.75**	**319**	P		**P**	**11 56 43.5**	**-1.4**		
	comp=Z,17nm,0.7s,baz=59,slow=6.5,SNR=36									
AKBB	**Malin Array Si**	**73.75**	**319**	*c*e P		**P**	**11 56 43.6**	**-1.3**		
AKBB				pmax		pmax				
	comp=Z,21nm,0.9s									
AKBB				MLR		MLR				
	comp=Z,5µm,17.0s									
AKBB	**Malin Array Si**	**73.75**	**319**	P		**P**	**11 56 43.3**	**-1.6**		
NACGM	**Naroch**	**73.83**	**323**	*i* P		**P**	**11 56 45.6**	**+0.3**		
NACGM				*i* P		**P**	**11 56 45.6**	**+0.3**		
NACGM				*i* P		**P**	**11 56 45.6**	**+0.3**		
NACGM				*i* PcP		**pwP**	**11 56 57.7**	**-0.1**		
NACGM				*i* PP		PP	11 59 16.4	-13		
NACGM				*i* PPP		PPP	12 01 22.2			
NACGM				*i* S		S	12 06 24.7	+10		
NACGM				*i* SS		SS	12 11 18.3	+20		
NACGM				*i* PS			12 11 33.8			
NACGM				*i* SSS		SSS	12 14 57.2			
NACGM				*i* LQ		LQ	12 24 24.1			
NACGM				*i* LR		LR	12 29 34.6			
CMRD	**Camardi-Nigde**	**73.84**	**304**	*e*P		**P**	**11 56 46.7**	**+0.9**		
N2IH	**Innhavet**	**73.90**	**338**	*e*P		**P**	**11 56 45.0**	**-0.4**		
KARA	**Karaisali**	**73.91**	**304**	P		**P**	**11 56 46.7**	**+0.6**		
ISAL	**Salakas**	**73.97**	**324**	*e*P		**P**	**11 56 45.8**	**-0.3**		
IIGN	**Ignalina**	**73.99**	**324**	*e*P		**P**	**11 56 46.5**	**+0.3**		
HYT	**Haines Junctio**	**74.00**	**30**	P		**P**	**11 56 47.0**	**+0.7**		
HYT				IAmb		IAmb	11 56 49.8			
	comp=Z,33nm,1.0s									
MTSE	**Matsula**	**74.10**	**328**	*e*P		**P**	**11 56 44.1**	**-2.6**		
STEI	**Steigen**	**74.16**	**338**	*e*P		**P**	**11 56 46.4**	**-0.6**		
BR131	**Keskin Array S**	**74.20**	**307**	*c* i P		**P**	**11 56 47.8**	**-0.1**		
BR131	**Keskin Array S**	**74.20**	**307**	P		**P**	**11 56 47.9**	**-0.1**		
BRTR	**Keskin Array B**	**74.20**	**307**	P		**P**	**11 56 47.9**	**-0.1**		
	comp=Z,57nm,0.9s,baz=104,slow=5.2,SNR=99									
BRTR	**Keskin Array B**	**74.20**	**307**	*e*P		**P**	**11 56 47.8**	**-0.1**		
BRTR	**Keskin Array B**	**74.20**	**307**	P		**P**	**11 56 47.6**	**-0.4**		
N2ST	**Straumen**	**74.28**	**337**	*e*P		**P**	**11 56 47.5**	**-0.1**		
N2TV	**TΨrnvik**	**74.35**	**338**	*e*P		**P**	**11 56 47.8**	**-0.3**		
MERS	**Mersin**	**74.44**	**304**	*i* P		**P**	**11 56 49.5**	**+0.2**		
NBB08	**Skaug oppvekst**	**74.60**	**338**	*e*P		**P**	**11 56 49.0**	**-0.5**		
LOF	**Lofoten**	**74.65**	**338**	*e*P		**P**	**11 56 49.5**	**-0.3**		
YESY	**Yesilyurt**	**74.74**	**305**	*e*P		**P**	**11 56 51.7**	**+0.7**		
ANTO	**Ankara**	**74.77**	**307**	*e*P		**P**	**11 56 51.3**	**+0.1**		
ANTO	**Ankara**	**74.77**	**307**	P		**P**	**11 56 50.6**	**-0.6**		
ANTO	**Ankara**	**74.77**	**307**	P		**P**	**11 56 50.6**	**-0.6**		
LOD	**Lodumlu**	**74.79**	**307**	*e*P		**P**	**11 56 50.7**	**-0.6**		
BR231	**Keskin MP Arra**	**74.79**	**307**	P		**P**	**11 56 51.1**	**-0.2**		
BR231				IAmb		IAmb	11 56 54.2			
	comp=Z,64nm,0.9s									
KIZK	**Mersin**	**74.85**	**303**	*e*P		**P**	**11 56 51.4**	**-0.2**		
KULU	**Kulu**	**74.88**	**306**	*e*P		**P**	**11 56 51.9**	**0.0**		
EUNU	**Eureka**	**74.92**	**5**	P		**P**	**11 56 50.1**	**-1.2**		
EUNU				IAMs_20		IAMs_20	12 30 55.9			
	comp=Z,7µm,21.0s									
N2SV	**S¸rvΨgen**	**74.94**	**338**	*e*P		**P**	**11 56 50.6**	**-0.9**		
NBB05	**Inndyr**	**74.97**	**337**	*e*P		**P**	**11 56 50.7**	**-0.9**		
SILI	**Silifke-Mersin**	**75.06**	**303**	*e*P		**P**	**11 56 52.6**	**-0.1**		
NBB30	**Finnes**	**75.10**	**337**	*e*P		**P**	**11 56 50.8**	**-1.6**		
SORM	**Soroca**	**75.11**	**316**	⇑P		**P**	**11 56 52.2**	**-0.7**		
SORM	**Soroca**	**75.11**	**316**	P		**P**	**11 56 52.1**	**-0.7**		
CHBY	**Cihanbeyli**	**75.12**	**306**	P		**P**	**11 56 53.0**	**-0.2**		
PABE	**Paberze**	**75.14**	**324**	*e*P		**P**	**11 56 52.9**	**0.0**		
MMLI	**Mount Malkishu**	**75.17**	**299**	*i* P		**P**	**11 56 54.4**	**+0.9**		
KIS	**Kishinev**	**75.19**	**315**	⇓*i* P		**P**	**11 56 54.5**	**+1.2**		
	comp=Z,310nm,6.4s									
KIS	**Kishinev**	**75.19**	**315**	*i* PP		PP	11 59 47.0	+5.5		
KIS	**Kishinev**	**75.19**	**315**	*d i* P		**P**	**11 56 54.5**	**+1.2**		
KIS				*i*			11 59 47.0			
KIS				*e*PPP		PPP	12 01 29.0			
KIS				pmax		pmax				
	comp=Z,310nm,6.4s									
MOR8	**Moi Rana**	**75.20**	**336**	*e*P		**P**	**11 56 50.8**	**-2.3**		
SLIT	**Slitere, Latvi**	**75.24**	**327**	*e*P		**P**	**11 56 53.2**	**-0.1**		
WHY	**Whitehorse**	**75.26**	**30**	P		**P**	**11 56 53.4**	**-0.2**		
WHY				IAmb		IAmb	11 56 56.5			
	comp=Z,34nm,1.0s									
IKL	**Isikli**	**75.28**	**303**	*i* P		**P**	**11 56 53.9**	**-0.1**		
AAL	**Aland**	**75.38**	**330**	*e*P		**P**	**11 56 54.0**	**-0.1**		
TEVE	**Tevekalti-Mers**	**75.40**	**304**	*e*P		**P**	**11 56 54.6**	**-0.2**		
YUVA	**Yuva-Kibriscik**	**75.41**	**308**	P		**P**	**11 56 55.3**	**+0.5**		
N2RO	**R¸st**	**75.41**	**338**	*e*P		**P**	**11 56 54.2**	**0.0**		
HATHI	**Halema'uma'u T**	**75.50**	**75**	IAMs_20		IAMs_20	12 22 16.6			
	comp=Z,4µm,21.0s									
BYL	**Byron's Ledge**	**75.51**	**75**	IAMs_20		IAMs_20	12 26 43.7			
	comp=Z,4µm,19.0s									
SKAG	**Skagway**	**75.52**	**31**	P		**P**	**11 56 55.3**	**+0.4**		
SKAG				IAmb		IAmb	11 56 58.4			
	comp=Z,38nm,1.0s									
C36M	**Paulatuk**	**75.52**	**20**	P		**P**	**11 56 53.1**	**-1.6**		
C36M				IAmb		IAmb	11 56 55.8			
	comp=Z,52nm,0.8s									
SKAG	**Skagway**	**75.52**	**31**	P			11 56 53.5			
	baz=293									
C36M	**Paulatuk**	**75.52**	**20**	P			11 56 53.1			
	baz=300									
C36M				S			12 06 30.2			
	baz=300									
KONS	**Konsvik**	**75.53**	**337**	*e*P		**P**	**11 56 55.4**	**+0.5**		
NBB40	**Tonnes**	**75.56**	**337**	*e*P		**P**	**11 56 54.5**	**-0.6**		
BERE	**Bereket-Mersin**	**75.60**	**304**	P		**P**	**11 56 56.1**	**0.0**		
LADK	**Ladik-KONYA**	**75.63**	**306**	*i* P		**P**	**11 56 54.8**	**-1.4**		
STOK	**Stokkvaagen**	**75.64**	**337**	*e*P		**P**	**11 56 55.7**	**+0.2**		
JCUZ	**Jacuzzi**	**75.66**	**75**	IAMs_20		IAMs_20	12 26 26.6			
	comp=Z,4µm,21.0s									
LFK	**Lefkose**	**75.71**	**302**	*e*P		**P**	**11 56 56.3**	**-0.3**		
MDUB	**Mudurnu**	**75.73**	**308**	P		**P**	**11 56 55.8**	**-0.9**		
TLCR		**75.80**	**313**	⇑P		**P**	**11 56 56.1**	**-0.8**		
TLCR		**75.80**	**313**	P		**P**	**11 56 56.0**	**-0.8**		
AUSIV	**SIVRIHISAR**	**75.83**	**307**	*e*P		**P**	**11 56 57.9**	**+0.6**		
SVRH	**Sivrihisar-ESK**	**75.84**	**307**	*i* P		**P**	**11 56 56.8**	**-0.5**		
IAS	**Iasi**	**75.94**	**316**	P		**P**	**11 56 58.5**	**+0.9**		
CSS	**Mathiatis**	**75.97**	**302**	*e*P		**P**	**11 56 58.0**	**-0.1**		
CSS	**Mathiatis**	**75.97**	**302**	P		**P**	**11 56 57.9**	**-0.2**		
ATD	**Arta Tunnel**	**76.02**	**277**	P		**P**	**11 56 59.2**	**+0.6**		
ATD				IAmb		IAmb	11 57 01.3			
	comp=Z,36nm,1.0s									
PBUR	**Paburge**	**76.03**	**325**	*e*P		**P**	**11 56 56.9**	**-1.0**		
BESE	**Bessie Mountai**	**76.09**	**32**	P		**P**	**11 56 58.6**	**+0.3**		
BESE				IAmb		IAmb	11 57 01.3			
	comp=Z,47nm,1.0s									
SUW	**Suwalki**	**76.11**	**323**	*e*P		**P**	**11 56 57.9**	**-0.5**		
SUW	**Suwalki**	**76.11**	**323**	*e*P		**P**	**11 56 58.4**	**0.0**		
SUW	**Suwalki**	**76.11**	**323**	P		**P**	**11 56 57.6**	**-0.8**		
SUW				pmax		pmax				
	comp=Z,172nm,1.1s									
SUW				MLR		MLR				
	comp=Z,11µm,18.0s									
SUW	**Suwalki**	**76.11**	**323**	P		**P**	**11 56 57.5**	**-0.8**		
TPGR	**Topolog**	**76.18**	**313**	⇑P		**P**	**11 56 58.7**	**-0.3**		
CFR	**Carcaliu**	**76.26**	**313**	⇓P		**P**	**11 56 59.3**	**-0.2**		
CFR	**Carcaliu**	**76.26**	**313**	P		**P**	**11 56 59.2**	**-0.2**		
LEF	**Lefka**	**76.26**	**302**	*e*P		**P**	**11 56 59.9**	**+0.2**		
HRFI	**Mount Harif**	**76.28**	**297**	*i* P		**P**	**11 57 00.7**	**+0.8**		
OUZ	**Omahuta**	**76.28**	**139**	IAMs_20		IAMs_20	12 26 12.5			
	comp=Z,6µm,20.0s									
JIS	**Juneau Island**	**76.44**	**32**	P		**P**	**11 57 01.1**	**+0.9**		
JIS				IAmb		IAmb	11 57 03.3			
	comp=Z,63nm,1.0s									
JIS				IAMs_20		IAMs_20	12 37 15.1			
	comp=Z,4µm,18.0s									
SIT	**Sitka**	**76.46**	**33**	P		**P**	**11 57 00.9**	**+0.6**		
SIT				pmax		pmax				
	comp=Z,156nm,1.0s									
SIT	**Sitka**	**76.46**	**33**	P		**P**	**11 57 00.9**	**+0.6**		
SIT	**Sitka**	**76.46**	**33**	P			11 57 00.2			
	baz=293									
BORA	**Eskisehir**	**76.47**	**308**	*e*P		**P**	**11 57 00.3**	**-0.6**		
EIL	**Elat**	**76.47**	**297**	*i* P		**P**	**11 57 01.9**	**+0.9**		
HARR	**Harsova**	**76.56**	**313**	⇑P		**P**	**11 57 01.8**	**+0.6**		
HARR	**Harsova**	**76.56**	**313**	P		**P**	**11 57 01.7**	**+0.6**		
UPP	**Uppsala**	**76.60**	**330**	*e*P		**P**	**11 57 01.0**	**-0.1**		
AUBOZ	**BOZOYUK**	**76.76**	**308**	*e*P		**P**	**11 57 00.5**	**-2.0**		
ADVT	**Abdulvahap**	**76.79**	**308**	*e*P		**P**	**11 57 02.5**	**-0.3**		
CAVI	**Cavuskoy**	**76.80**	**308**	*e*P		**P**	**11 57 01.7**	**-1.0**		
SHUT	**Suhut-Afyon**	**76.85**	**306**	*i* P		**P**	**11 57 03.5**	**+0.4**		
NSS	**Namsos**	**76.88**	**335**	*e*P		**P**	**11 57 02.2**	**-0.3**		
VRI	**Vrincioaia**	**76.94**	**314**	⇓P		**P**	**11 57 04.2**	**+0.9**		
VRI	**Vrincioaia**	**76.94**	**314**	*e*P		**P**	**11 57 02.9**	**-0.4**		
VRI	**Vrincioaia**	**76.94**	**314**	P		**P**	**11 57 04.2**	**+0.9**		
BIZ	**Bicaz**	**76.96**	**316**	⇓P		**P**	**11 57 03.5**	**+0.1**		
PLOR	**Plostina**	**77.00**	**314**	⇓P		**P**	**11 57 04.1**	**+0.4**		
PLOR	**Plostina**	**77.00**	**314**	P		**P**	**11 57 04.1**	**+0.4**		
YLV	**Yalova**	**77.01**	**309**	*i* P		**P**	**11 57 03.6**	**-0.3**		
ISK	**Istanbul-Kandi**	**77.06**	**309**	*e*P		**P**	**11 57 03.6**	**-0.4**		
ISP	**Isparta**	**77.13**	**306**	P		**P**	**11 57 04.3**	**-0.4**		
ISP	**Isparta**	**77.13**	**306**	P		**P**	**11 57 03.8**	**-0.9**		
ISP				pmax		pmax				
	comp=Z,95nm,1.0s									
ISP	**Isparta**	**77.13**	**306**	P		**P**	**11 57 03.8**	**-0.9**		
LVV	**L'vov**	**77.18**	**319**	*e*P		**P**	**11 57 04.1**	**-0.5**		
LVV				*e*S		**S**	**12 06 52.2**	**+0.3**		
LVV				*e*			12 07 34.6			
LVV				*e*			12 11 48.7			
LVV				pmax		pmax				
	comp=Z,550nm,4.7s									
LVV				MLR		MLR				
	comp=N,4µm,20.0s									
LVV				MLR		MLR				
	comp=Z,500nm,20.0s									
LVV				MLR		MLR				
	comp=E,2µm,19.0s									
BUR08	**Bucovina Ar. S**	**77.27**	**317**	P		**P**	**11 57 04.8**	**-0.5**		
BURAR	**Bucovina Array**	**77.27**	**317**	⇓P		**P**	**11 57 05.2**	**-0.1**		
BURAR	**Bucovina Array**	**77.27**	**317**	P		**P**	**11 57 05.2**	**-0.1**		
TVSB	**Tavsanli**	**77.33**	**308**	*i* P		**P**	**11 57 05.1**	**-0.7**		
CTYL	**Yalikoy Yolu**	**77.45**	**310**	*e*P		**P**	**11 57 05.6**	**-0.6**		
KORT	**Korkueli**	**77.54**	**305**	*e*P		**P**	**11 57 07.2**	**+0.1**		
MLR	**Muntele Rosu**	**77.59**	**314**	⇓P		**P**	**11 57 07.3**	**+0.2**		
MLR	**Muntele Rosu**	**77.59**	**314**	P		**P**	**11 57 07.0**	**-0.1**		
MLR				pmax		pmax				
	comp=Z,21nm,0.8s									
MLR				MLR		MLR				
	comp=Z,6µm,21.0s									
MLR	**Muntele Rosu**	**77.59**	**314**	P		**P**	**11 57 07.0**	**-0.1**		
MLR				IAMs_20		IAMs_20	12 35 20.0			
	comp=Z,6µm,21.0s									
DOPR	**Dopca**	**77.77**	**315**	⇓P		**P**	**11 57 08.5**	**+0.5**		
KCTX	**Karacabey (Bur**	**77.84**	**309**	*e*P		**P**	**11 57 07.8**	**-0.7**		
ELL	**Elmali**	**77.97**	**305**	P		**P**	**11 57 09.3**	**-0.1**		
ELL	**Elmali**	**77.97**	**305**	P		**P**	**11 57 08.1**	**-1.3**		
ELL				pmax		pmax				
	comp=Z,329nm,1.0s									
ELL	**Elmali**	**77.97**	**305**	P		**P**	**11 57 08.1**	**-1.3**		
ARCR	**ARCALIA**	**78.02**	**316**	⇑P		**P**	**11 57 09.8**	**+0.5**		
VOIR		**78.19**	**314**	⇑P		**P**	**11 57 10.4**	**0.0**		
VOIR		**78.19**	**314**	P		**P**	**11 57 10.4**	**0.0**		
WRAK	**Wrangell Islan**	**78.22**	**33**	P		**P**	**11 57 10.6**	**+0.4**		
WRAK	**Wrangell Islan**	**78.22**	**33**	P			11 57 10.2			
	baz=296,SNR=7.5									
CRAG	**Craig**	**78.23**	**34**	P		**P**	**11 57 10.9**	**+0.6**		
CRAG				IAmb		IAmb	11 57 13.6			
	comp=Z,96nm,1.1s									
CRAG	**Craig**	**78.23**	**34**	P			11 57 09.8			
	baz=295									
MRMT	**Marmara Adasi**	**78.26**	**309**	*e*P		**P**	**11 57 10.2**	**-0.7**		
BEL	**Belsk**	**78.29**	**322**	*e*P		**P**	**11 57 11.3**	**+0.6**		
MANT	**Manisa**	**78.34**	**307**	P		**P**	**11 57 11.1**	**-0.4**		
AKAS	**Kas**	**78.38**	**304**	P		**P**	**11 57 09.3**	**-2.4**		
AKAS				IAmb		IAmb	11 57 16.0			
	comp=Z,39nm,1.0s									
BALB	**Balikesir**	**78.41**	**308**	*i* P		**P**	**11 57 11.4**	**-0.2**		
DLBC	**Dease Lake**	**78.44**	**31**	P		**P**	**11 57 12.2**	**+0.7**		
DLBC				IAmb		IAmb	11 57 14.7			
	comp=Z,47nm,0.9s									
DLBC				IAMs_20		IAMs_20	12 32 49.1			
	comp=Z,4µm,21.0s									
ARR	**Arges**	**78.49**	**315**	⇑P		**P**	**11 57 12.9**	**+0.8**		
KRBG	**Karabiga-Canak**	**78.55**	**309**	*e*P		**P**	**11 57 12.0**	**-0.3**		
HUMR	**Humele**	**78.58**	**314**	⇑P		**P**	**11 57 12.6**	**+0.1**		
RES	**Resolute Bay**	**78.59**	**9**	P		**P**	**11 57 10.1**	**-1.8**		
	comp=Z,16nm,0.9s,baz=319,slow=5.7,SNR=4.2									
RES	**Resolute Bay**	**78.59**	**9**	P		**P**	**11 57 10.6**	**-1.3**		
RES				pmax		pmax				
	comp=Z,18nm,0.9s									
RES				MLR		MLR				
	comp=Z,6µm,20.0s									
RES	**Resolute Bay**	**78.59**	**9**	P		**P**	**11 57 10.6**	**-1.3**		
RES				IAMs_20		IAMs_20	12 35 00.8			
	comp=Z,6µm,20.0s									
NC405	**NORSAR Array S**	**78.64**	**332**	P		**P**	**11 57 11.5**	**-1.0**		
NEEM	**North Greenlan**	**78.64**	**359**	*i* P		**P**	**11 57 11.9**	**-0.7**		
NEEM				IAmb		IAmb	11 57 13.1			
	comp=Z,20nm,0.7s									
NEEM				IAMs_20		IAMs_20	12 35 07.8			
	comp=Z,5µm,18.0s									
UZH	**Uzhgorod**	**78.69**	**318**	*c i* P		**P**	**11 57 13.0**	**0.0**		
UZH				*e*			11 57 21.5			
UZH				*e*			12 00 14.0			
UZH				*e*PPP		PPP	12 02 04.2			
UZH				*e*S		**S**	**12 07 05.2**	**-3.0**		
UZH				*e*PS		**PnS**	**12 07 43.4**	**-9.1**		
UZH				*e*SS		**SS**	**12 12 15.0**	**+3.0**		
NC303	**NORSAR Array S**	**78.73**	**333**	P		**P**	**11 57 11.7**	**-1.2**		
NC303				IAmb		IAmb	11 57 13.6			
	comp=Z,63nm,1.1s									
NB201	**NORSAR Array S**	**78.84**	**332**	P		**P**	**11 57 12.2**	**-1.4**		
NB201				IAmb		IAmb	11 57 15.2			
	comp=Z,106nm,1.1s									
NB2	**NORSAR Subarra**	**78.88**	**332**	P		**P**	**11 57 12.4**	**-1.5**		
	baz=62,slow=5.6									
NOA	**NORSAR Array B**	**78.88**	**332**	P		**P**	**11 57 12.3**	**-1.6**		
	comp=Z,20nm,0.9s,baz=58,slow=5.4,SNR=42									
NC602	**NORSAR Array S**	**78.90**	**332**	P		**P**	**11 57 12.9**	**-0.9**		
NC602				IAmb		IAmb	11 57 15.3			
	comp=Z,58nm,1.1s									
NC602	**NORSAR Array S**	**78.90**	**332**	*e*P		**P**	**11 57 13.0**	**-0.9**		
NORES	**NORESS Array B**	**78.90**	**332**	P		**P**	**11 57 12.6**	**-1.3**		
DBG	**Daneborg**	**78.92**	**350**	*i* P		**P**	**11 57 13.2**	**-0.5**		
DBG				IAmb		IAmb	11 57 15.7			
	comp=Z,14nm,0.9s									
DBG				IAMs_20		IAMs_20	12 37 12.4			
	comp=Z,5µm,17.4s									
NC204	**NORSAR Array S**	**78.95**	**333**	P		**P**	**11 57 13.5**	**-0.8**		
AYDB	**Zeytinkoy-Aydi**	**79.03**	**307**	*i* P		**P**	**11 57 15.6**	**+0.4**		
YER	**Yerkesik**	**79.04**	**306**	P		**P**	**11 57 15.2**	**0.0**		
YER	**Yerkesik**	**79.04**	**306**	*i* P		**P**	**11 57 15.5**	**+0.3**		
YER	**Yerkesik**	**79.04**	**306**	P		**P**	**11 57 15.7**	**+0.5**		
NBO00	**NORSAR Array S**	**79.07**	**333**	P		**P**	**11 57 13.8**	**-1.1**		
NBO00				IAmb		IAmb	11 57 14.9			
	comp=Z,80nm,1.4s									
CRVS	**Cervenica-Dubn**	**79.09**	**319**	*e*P		**P**	**11 57 15.5**	**+0.3**		
CRVS				pmax		pmax				
	comp=Z,39nm,1.2s									
CRVS	**Cervenica-Dubn**	**79.09**	**319**	*e*P		**P**	**11 57 15.5**	**+0.3**		
NAO01	**NORSAR Array S**	**79.12**	**332**	P		**P**	**11 57 13.7**	**-1.4**		
NAO01				IAmb		IAmb	11 57 46.9			
	comp=Z,59nm,1.2s									
GELI	**Tayfur-Gelibol**	**79.13**	**309**	*e*P		**P**	**11 57 14.8**	**-0.7**		
DRGR		**79.17**	**316**	⇑P		**P**	**11 57 15.5**	**-0.2**		
DRGR		**79.17**	**316**	P		**P**	**11 57 15.5**	**-0.2**		
DRGR				pmax		pmax				
	comp=Z,18nm,1.1s									
TURN	**Turunc**	**79.20**	**305**	*e*P		**P**	**11 57 15.7**	**-0.3**		
ENEZ	**Enez**	**79.22**	**310**	P		**P**	**11 57 15.6**	**-0.5**		
ENEZ	**Enez**	**79.22**	**310**	*e*P		**P**	**11 57 16.0**	**-0.1**		
ALN	**Alexandroupoli**	**79.24**	**310**	*e*P		**P**	**11 57 15.1**	**-1.0**		
ALN	**Alexandroupoli**	**79.24**	**310**	P		**P**	**11 57 15.4**	**-0.7**		
ALN				pmax		pmax				
	comp=Z,26nm,1.1s									
ALN	**Alexandroupoli**	**79.24**	**310**	P		**P**	**11 57 15.4**	**-0.7**		
JMIC	**Jan Mayen**	**79.25**	**345**	*e*P		**P**	**11 57 15.5**	**-0.1**		
HIZ	**Haui

KHZ	**Kahutara**	**81.20**	**144**	P	**P**	**11 57 27.4**	**+1.0**
KHZ				IAmb	IAmb	11 57 42.9	
	comp=Z,73nm,1.2s						
KHZ				IAMs_20	IAMs_20	12 32 48.7	
	comp=Z,4µm,19.0s						
KSP	**Ksiaz**	**81.26**	**322**	*e*P	P	11 57 21.7	-5.2
KSP	**Ksiaz**	**81.26**	**322**	P	**P**	**11 57 27.1**	**+0.2**
PLG	**Polygyros**	**81.26**	**310**	P	**P**	**11 57 26.1**	**-1.0**
PAIG	**Paliouri**	**81.28**	**310**	P	**P**	**11 57 25.9**	**-1.3**
PAIG	**Paliouri**	**81.28**	**310**	P	**P**	**11 57 28.0**	**+0.8**
KNT	**Kendrikon**	**81.32**	**311**	P	**P**	**11 57 26.1**	**-1.3**
KNT	**Kendrikon**	**81.32**	**311**	P	**P**	**11 57 26.9**	**-0.5**
KRLC	**Kraliky**	**81.33**	**321**	⇑AMS	AMS	12 37 20.0	
	comp=Z,6µm,14.5s						
JAVC	**Velka Javorina**	**81.37**	**320**	*e*P	**P**	**11 57 28.5**	**+0.9**
ODD1	**Odda**	**81.41**	**333**	*e*P	**P**	**11 57 27.1**	**-0.4**
HORT	**Hortiatis**	**81.41**	**311**	P	**P**	**11 57 26.1**	**-1.9**
SANT	**Santorini**	**81.42**	**306**	P	**P**	**11 57 26.4**	**-1.7**
OSTC	**Ostas**	**81.44**	**322**	⇑*e*P	**P**	**11 57 28.0**	**+0.2**
OSTC				AMS	AMS	12 37 00.0	
	comp=Z,8µm,21.6s						
DPC	**Dobruska-Polom**	**81.47**	**322**	⇑*e*P	**P**	**11 57 25.2**	**-2.9**
DPC				MLR	MLR		
	comp=Z,7µm,16.3s						
DPC	**Dobruska-Polom**	**81.47**	**322**	⇑*e*P	**P**	**11 57 25.2**	**-2.9**
DPC				AMS	AMS	12 37 10.0	
	comp=Z,7µm,16.3s						
VAY	**Valandovo**	**81.48**	**311**	P	**P**	**11 57 29.2**	**+1.0**
VAY				pmax	pmax		
	comp=Z,40nm,1.2s						
VAY	**Valandovo**	**81.48**	**311**	*i* P	**P**	**11 57 27.5**	**-0.7**
HOMB	**Homborsund**	**81.50**	**331**	*e*P	**P**	**11 57 27.9**	**0.0**
BFZ	**Birch Farm**	**81.51**	**142**	IAMs_20	IAMs_20	12 32 18.9	
	comp=Z,5µm,19.0s						
KYMI	**Kymi, Euboea I**	**81.51**	**308**	P	**P**	**11 57 28.8**	**+0.4**
CHVC	**Chvalec**	**81.51**	**322**	*e*P	**P**	**11 57 28.5**	**+0.3**
CHVC				AMS	AMS	12 37 00.0	
	comp=Z,8µm,20.7s						
SUE	**Sulen**	**81.52**	**334**	*e*P	**P**	**11 57 28.0**	**0.0**
PLWZ	**Palliser**	**81.55**	**143**	P	**P**	**11 57 29.0**	**+0.6**
UPC	**Upice**	**81.58**	**322**	⇑AMS	AMS	12 37 10.0	
	comp=Z,9µm,21.8s						
ODZ	**Otahua Downs**	**81.59**	**148**	IAMs_20	IAMs_20	12 29 17.9	
	comp=Z,3µm,20.0s						
STIP	**Stip**	**81.59**	**312**	*i* P	**P**	**11 57 27.2**	**-1.6**
SMOL	**Smolenice**	**81.67**	**320**	*e*P	**P**	**11 57 29.2**	**+0.1**
SMOL				pmax	pmax		
	comp=Z,12nm,1.2s						
SMOL	**Smolenice**	**81.67**	**320**	*e*P	**P**	**11 57 29.2**	**+0.1**
ASK	**Askoy**	**81.68**	**334**	*e*P	**P**	**11 57 28.4**	**-0.4**
BER	**Bergen**	**81.68**	**333**	*e*P	**P**	**11 57 29.2**	**+0.3**
FRGS	**Fruska Gora**	**81.69**	**316**	*e*P	**P**	**11 57 28.5**	**-0.8**
GRG	**Griva**	**81.75**	**311**	P	**P**	**11 57 27.0**	**-2.7**
GRG	**Griva**	**81.75**	**311**	P	**P**	**11 57 28.5**	**-1.1**
GRG	**Griva**	**81.75**	**311**	P	**P**	**11 57 28.6**	**-1.1**
BLS5	**Blasjo**	**81.76**	**332**	*e*P	**P**	**11 57 29.1**	**-0.2**
VRAC	**Vranov**	**81.80**	**321**	⇓P	**P**	**11 57 30.3**	**+0.5**
VRAC	**Vranov**	**81.80**	**321**	*e*P	**P**	**11 57 29.5**	**-0.2**
VRAC	**Vranov**	**81.80**	**321**	P	**P**	**11 57 30.2**	**+0.5**
MODS	**Modra-Piesok**	**81.82**	**319**	*e*P	**P**	**11 57 29.0**	**-0.9**
MODS				pmax	pmax		
	comp=Z,34nm,1.4s						
MODS	**Modra-Piesok**	**81.82**	**319**	*e*P	**P**	**11 57 29.0**	**-0.9**
GOET	**G??ttrup**	**81.83**	**330**	*i* P	**P**	**11 57 30.5**	**+0.8**
GOET				IAMs_20	IAMs_20	12 37 10.4	
	comp=Z,20µm,16.7s						
NEO	**Neokhori**	**81.86**	**309**	P	**P**	**11 57 28.6**	**-1.7**
RUE	**Ruedersdorf**	**81.87**	**324**	*e*P	**P**	**11 57 29.6**	**-0.4**
	comp=Z,42nm,1.0s,baz=58,slow=5.0						
MORH	**Mrgy, Hungar**	**81.96**	**317**	⇑P	**P**	**11 57 30.4**	**-0.2**
MORH	**Mrgy, Hungar**	**81.96**	**317**	*e*P	**P**	**11 57 29.8**	**-0.8**
SKO	**Skopje**	**81.98**	**312**	*i* P	**P**	**11 57 31.0**	**+0.2**
ZST	**Bratislava**	**82.00**	**319**	*e*P	**P**	**11 57 31.3**	**+0.5**
ZST	**Bratislava**	**82.00**	**319**	*e*P	**P**	**11 57 31.3**	**+0.5**
KRUC	**Moravsky**	**82.02**	**320**	*e*P	**P**	**11 57 30.5**	**-0.4**
DIVS	**Divibare**	**82.03**	**315**	*e*P	**P**	**11 57 29.9**	**-1.3**
DIVS	**Divibare**	**82.03**	**315**	P	**P**	**11 57 30.1**	**-1.1**
DIVS				IAmb	IAmb	11 57 33.4	
	comp=Z,34nm,1.1s						
SNART	**Snartemo**	**82.03**	**331**	*e*P	**P**	**11 57 30.4**	**-0.3**
LIT	**Litokhoron**	**82.04**	**310**	P	**P**	**11 57 30.0**	**-1.2**
LIT	**Litokhoron**	**82.04**	**310**	P	**P**	**11 57 30.1**	**-1.2**
LIT				pmax	pmax		
	comp=Z,28nm,0.8s						
LIT	**Litokhoron**	**82.04**	**310**	P	**P**	**11 57 30.1**	**-1.2**
LIT				IAmb	IAmb	11 57 34.9	
	comp=Z,28nm,0.8s						
TEKS	**Tekeris**	**82.13**	**315**	*e*P	**P**	**11 57 28.3**	**-3.3**
MUD	**Monsted U'grnd**	**82.16**	**329**	*i* P	**P**	**11 57 30.5**	**-0.9**
MUD				IAMs_20	IAMs_20	12 37 11.3	
	comp=Z,23µm,17.8s						
MUD	**Monsted U'grnd**	**82.16**	**329**	*i* P	**P**	**11 57 30.5**	**-0.9**
MUD				MLR	MLR		
	comp=Z,23µm,18.0s						
ATAL	**Atalanti**	**82.25**	**309**	P	**P**	**11 57 30.0**	**-2.3**
IDI	**Anoyia**	**82.28**	**305**	P	**P**	**11 57 30.6**	**-2.0**
IDI	**Anoyia**	**82.28**	**305**	P	**P**	**11 57 32.4**	**-0.3**
IDI				IAmb	IAmb	11 57 40.2	
	comp=Z,48nm,0.8s						
LKR	**Lokris**	**82.29**	**309**	P	**P**	**11 57 29.6**	**-2.9**
PVCC	**Panska Ves**	**82.38**	**322**	⇑AMS	AMS	12 38 50.0	
	comp=Z,10µm,17.5s						
BBB	**Bella Bella**	**82.38**	**36**	P	**P**	**11 57 31.3**	**-1.4**
	comp=Z,14nm,0.7s,baz=313,slow=6.6,SNR=14						
BBB	**Bella Bella**	**82.38**	**36**	P	**P**	**11 57 31.7**	**-1.0**
BBB				IAmb	IAmb	11 57 39.5	
	comp=Z,25nm,0.8s						
KMY	**Karmoy**	**82.39**	**333**	*e*P	**P**	**11 57 31.8**	**-0.7**
SCO	**Scoresbysund**	**82.42**	**349**	IAMs_20	IAMs_20	12 35 56.9	
	comp=Z,6µm,22.0s						
TREC	**Trest**	**82.44**	**321**	*e*P	**P**	**11 57 32.6**	**-0.5**
TREC				MLR	MLR		
	comp=Z,8µm,15.0s						
TREC	**Trest**	**82.44**	**321**	⇑*e*P	**P**	**11 57 32.6**	**-0.5**
TREC				AMS	AMS	12 38 00.0	
	comp=Z,8µm,15.0s						
SIVA	**Sivas**	**82.45**	**305**	P	**P**	**11 57 32.8**	**-0.6**
KZN	**Kozani**	**82.46**	**311**	P	**P**	**11 57 31.8**	**-1.7**
BBLS	**Lazići**	**82.51**	**315**	*e*P	**P**	**11 57 31.6**	**-2.1**
FNA	**Florina**	**82.53**	**311**	P	**P**	**11 57 32.1**	**-1.7**
FNA				pmax	pmax		
	comp=Z,14nm,0.8s						
FNA	**Florina**	**82.53**	**311**	P	**P**	**11 57 32.1**	**-1.7**
BRG	**Berggiesshubel**	**82.56**	**323**	P	**P**	**11 57 33.3**	**-0.4**
BRG	**Berggiesshubel**	**82.56**	**323**	*e*P	**P**	**11 57 33.3**	**-0.4**
BRG				Amp		11 57 38.1	
	comp=Z,18nm,1.1s						
BRG				*ex*	x	11 57 43.1	
BRG				Amp		11 57 44.3	
	comp=Z,18nm,1.1s						
BRG				*ex*	x	11 57 59.6	
BRG				Amp		11 58 02.8	
	comp=Z,14nm,1.2s						
BRG	**Berggiesshubel**	**82.56**	**323**	S	S	12 08 03.0	+14
BRG	**Berggiesshubel**	**82.56**	**323**	*e*P	**P**	**11 57 33.3**	**-0.4**
	comp=Z,18nm,1.1s,baz=58,slow=5.0						
AGG	**Agios Georgios**	**82.61**	**309**	P	**P**	**11 57 32.0**	**-2.2**
AGG	**Agios Georgios**	**82.61**	**309**	*e*P	**P**	**11 57 32.4**	**-1.8**
AGG	**Agios Georgios**	**82.61**	**309**	P	**P**	**11 57 32.1**	**-2.2**
AGG				pmax	pmax		
	comp=Z,47nm,0.8s						
AGG	**Agios Georgios**	**82.61**	**309**	P	**P**	**11 57 32.1**	**-2.1**
AGG				IAmb	IAmb	11 57 36.5	
	comp=Z,47nm,0.8s						
YKA	**Yellowknife Ar**	**82.61**	**23**	P	**P**	**11 57 32.6**	**-1.1**
	comp=Z,32nm,0.8s,baz=315,slow=4.6,SNR=497						
PRU	**Pruhonice**	**82.65**	**322**	⇑*e*P	**P**	**11 57 32.4**	**-1.8**
PRU				MLR	MLR		
	comp=Z,7µm,18.2s						
PRU	**Pruhonice**	**82.65**	**322**	⇑*e*P	**P**	**11 57 32.4**	**-1.8**
PRU				*ex*	x	12 08 01.3	
PRU				AMS	AMS	12 37 50.0	
	comp=Z,7µm,18.2s						
PRA	**Prague**	**82.67**	**322**	*e*P	**P**	**11 57 34.2**	**-0.1**
PRA				MLR	MLR		
	comp=Z,7µm,18.9s						
PRA	**Prague**	**82.67**	**322**	⇑*e*P	**P**	**11 57 34.2**	**-0.1**
PRA				AMS	AMS	12 37 50.0	
	comp=Z,7µm,18.9s						
SUMG	**Summit**	**82.74**	**354**	*i* P	**P**	**11 57 34.0**	**-0.7**
SUMG				IAmb	IAmb	11 57 38.6	
	comp=Z,34nm,1.0s						
SUMG	**Summit**	**82.74**	**354**	P	**P**	**11 57 33.5**	**-1.2**
SUMG				pmax	pmax		
	comp=Z,43nm,0.9s						
SUMG	**Summit**	**82.74**	**354**	P	**P**	**11 57 33.5**	**-1.2**
SUMG				IAmb	IAmb	11 57 39.1	
	comp=Z,43nm,0.9s						
SUMG				IAMs_20	IAMs_20	12 40 51.4	
	comp=Z,4µm,21.0s						
MAKR	**Makrakomi, Fth**	**82.75**	**309**	P	**P**	**11 57 33.0**	**-2.0**
PHP	**Peshkopia**	**82.78**	**312**	P	**P**	**11 57 33.6**	**-1.5**
FBE	**Freiberg**	**82.86**	**323**	*e*P	**P**	**11 57 34.9**	**-0.4**
	comp=Z,34nm,1.1s,baz=58,slow=5.0						
CLL	**Collm**	**82.86**	**323**	*e*P	**P**	**11 57 35.0**	**-0.2**
	comp=Z,31nm,1.3s						
CLL				*e*Plp		11 57 36.0	
CLL				*e*PP	**PP**	**12 00 45.0**	**-0.2**
CLL				*e*PPP	PPP	12 02 30.0	
CLL				*e*S	**S**	**12 07 57.0**	**+5.4**
CLL				*e*PS	**PnS**	**12 08 48.0**	**+3.7**
CLL				*e*SS	**SS**	**12 13 12.0**	**-2.0**
CLL				*e*		12 17 42.0	
CLL				Lm	MLR	12 38 00.0	
	comp=N,5µm,18.6s						
CLL				Lm	MLR	12 38 00.0	
	comp=E,6µm,19.8s						
CLL				Lm	MLR	12 38 00.0	
	comp=Z,12µm,18.1s						
CLL	**Collm**	**82.86**	**323**	*e*P	**P**	**11 57 35.0**	**-0.2**
CLL				pmax	pmax		
	comp=Z,31nm,1.3s						
CLL				MLR	MLR		
	comp=Z,12µm,18.1s						
CLL				pmax	pmax		
	comp=Z,83nm,1.5s						
CLL	**Collm**	**82.86**	**323**	P	**P**	**11 57 33.9**	**-1.3**
CLL	**Collm**	**82.86**	**323**	*e*P	**P**	**11 57 34.6**	**-0.6**
	comp=Z,31nm,1.2s,baz=58,slow=5.0						
CONA	**Conrad Observa**	**82.87**	**320**	*i* P	**P**	**11 57 35.8**	**+0.3**
	comp=Z,28nm,1.7s,SNR=9.4						
BSEG	**Bad Segeberg**	**82.93**	**327**	P	**P**	**11 57 34.8**	**-0.7**
BSEG	**Bad Segeberg**	**82.93**	**327**	*e*P	**P**	**11 57 34.9**	**-0.7**
	comp=Z,41nm,1.2s,baz=58,slow=5.0						
BEHE	**Becsehely**	**83.00**	**318**	*e*P	**P**	**11 57 39.2**	**+3.2**
TRIZ	**Trizonia**	**83.07**	**309**	P	**P**	**11 57 32.5**	**-4.0**
ANX	**Ano Chora**	**83.08**	**309**	P	**P**	**11 57 33.6**	**-3.2**
UPM	**Unac-Piva**	**83.13**	**314**	*e*P	**P**	**11 57 35.7**	**-1.4**
KLV	**Kalavryta, Ach**	**83.15**	**309**	P	**P**	**11 57 36.3**	**-0.8**
PDG	**Podgorica**	**83.24**	**313**	*e*P	**P**	**11 57 35.7**	**-1.7**
PDG	**Podgorica**	**83.24**	**313**	IAMs_20	IAMs_20	12 40 22.6	
	comp=Z,3µm,20.0s						
VLX	**Vlachokerasia**	**83.27**	**308**	P	**P**	**11 57 39.6**	**+1.8**
FLTG	**Flechtingen**	**83.29**	**325**	*e*P	**P**	**11 57 36.3**	**-1.1**
	comp=Z,20nm,1.0s,baz=58,slow=5.0						
TIR	**Tirane**	**83.31**	**312**	IAMs_20	IAMs_20	12 38 24.6	
	comp=Z,4µm,22.0s						
CKRC	**Cesky Krumlov**	**83.35**	**321**	*e*P	**P**	**11 57 38.3**	**+0.4**
CKRC				*e*SKS	**S**	**12 08 01.4**	**+4.6**
CKRC				AMS	AMS	12 38 30.0	
	comp=Z,7µm,15.7s						
ARSA	**Arzberg**	**83.39**	**319**	*e*P	**P**	**11 57 37.3**	**-0.8**
	comp=Z,16nm,1.1s						
DRME	**Dracevica, Mon**	**83.40**	**313**	*e*P	**P**	**11 57 36.9**	**-1.3**
UPNV	**Upernavik**	**83.40**	**360**	*i* P	**P**	**11 57 36.9**	**-0.7**
UPNV				IAmb	IAmb	11 57 40.7	
	comp=Z,17nm,0.9s						
UPNV				IAMs_20	IAMs_20	12 43 14.6	
	comp=Z,4µm,17.6s						
BRY	**Bratogost**	**83.50**	**314**	P	**P**	**11 57 39.2**	**+0.3**
BRY	**Bratogost**	**83.50**	**314**	*e*P	**P**	**11 57 37.8**	**-1.1**
BLY	**Banja Luka**	**83.54**	**316**	*e*P	**P**	**11 57 36.6**	**-2.3**
NEUB	**Neuenburg**	**83.58**	**324**	*e*P	**P**	**11 57 38.4**	**-0.5**
	comp=Z,33nm,1.1s,baz=58,slow=5.0						
MRAK	**Mrakovica**	**83.59**	**317**	*e*P	P	11 57 45.0	+5.8
TANN	**Tannenbergstha**	**83.61**	**323**	*e*P	**P**	**11 57 38.6**	**-0.6**
	comp=Z,37nm,1.7s,baz=58,slow=5.0						
KHC	**Kasperske Hory**	**83.62**	**321**	*ce*P	**P**	**11 57 38.7**	**-0.6**
KHC				pmax	pmax		
	comp=Z,47nm,1.1s						
KHC				MLR	MLR		
	comp=Z,12µm,19.0s						
KHC	**Kasperske Hory**	**83.62**	**321**	⇑*e*P	**P**	**11 57 39.3**	**0.0**
KHC				*ex*	x	12 08 13.5	
KHC				AMS	AMS	12 38 30.0	
	comp=Z,7µm,16.8s						
KHC	**Kasperske Hory**	**83.62**	**321**	P	**P**	**11 57 39.0**	**-0.2**
ITM	**Ithomi**	**83.67**	**308**	P	**P**	**11 57 38.3**	**-1.5**
ITM	**Ithomi**	**83.67**	**308**	*e*P	**P**	**11 57 38.4**	**-1.4**
ITM	**Ithomi**	**83.67**	**308**	P	**P**	**11 57 38.3**	**-1.4**
WERD	**Werda**	**83.67**	**323**	*e*P	**P**	**11 57 38.8**	**-0.7**
	comp=Z,19nm,1.2s,baz=58,slow=5.0						
GEC2	**GERESS Array S**	**83.69**	**321**	*e*P	**P**	**11 57 39.0**	**-0.7**
	comp=Z,37nm,1.2s,baz=58,slow=5.0						
GERES	**GERESS Array B**	**83.69**	**321**	P	**P**	**11 57 39.0**	**-0.7**
	comp=Z,18nm,0.8s,baz=288,slow=26,SNR=11						
GERES	**GERESS Array B**	**83.69**	**321**	P	**P**	**11 57 38.6**	**-1.1**
ASSE	**Asse, Remlinge**	**83.69**	**325**	*e*P	**P**	**11 57 39.0**	**-0.4**
	comp=Z,17nm,1.1s,baz=58,slow=5.0						
GUNZ	**Gunzen**	**83.70**	**323**	*e*P	**P**	**11 57 39.1**	**-0.6**
	comp=Z,30nm,0.9s,baz=58,slow=5.0						
NKC	**Novy Kostel**	**83.70**	**323**	*e*P	**P**	**11 57 38.6**	**-1.1**
NKC				MLR	MLR		
	comp=Z,11µm,16.1s						
NKC	**Novy Kostel**	**83.70**	**323**	⇑*e*P	**P**	**11 57 38.6**	**-1.1**
NKC				AMS	AMS	12 39 30.0	
	comp=Z,11µm,16.1s						
WERN	**Wernitzgruen**	**83.72**	**323**	*e*P	**P**	**11 57 39.2**	**-0.6**
	comp=Z,25nm,0.9s,baz=58,slow=5.0						
PLN	**Plauen**	**83.74**	**323**	*e*P	**P**	**11 57 39.2**	**-0.6**
	comp=Z,16nm,1.1s,baz=58,slow=5.0						
HCY	**Herceg Novi**	**83.74**	**314**	*e*P	**P**	**11 57 38.4**	**-1.6**
MGRS	**Mrkonjic Grad**	**83.75**	**316**	*e*P	**P**	**11 57 40.4**	**+0.4**
IGT	**Igoumenitsa**	**83.79**	**310**	P	**P**	**11 57 40.9**	**+0.6**
IGT				pmax	pmax		
	comp=Z,33nm,1.3s						
NRDL	**Niedersach Rie**	**83.80**	**325**	*e*P	**P**	**11 57 40.0**	**+0.1**
	comp=Z,32nm,1.5s,baz=58,slow=5.0						
MOA	**Molln**	**83.85**	**320**	*i* P	**P**	**11 57 40.5**	**+0.1**
	comp=Z,24nm,0.8s,SNR=6.8						
PERS	**Pernice**	**83.93**	**319**	*e*P	**P**	**11 57 40.3**	**-0.6**
MOX	**Moxa**	**83.95**	**323**	P	**P**	**11 57 40.3**	**-0.6**
MOX	**Moxa**	**83.95**	**323**	*e*P	**P**	**11 57 40.3**	**-0.6**
	comp=Z,12nm,1.0s,baz=58,slow=5.0						
SOKA	**Soboth**	**83.96**	**319**	*i* P	**P**	**11 57 40.9**	**-0.2**
	comp=Z,27nm,1.3s,SNR=16						
CLZ	**Clausthal**	**84.00**	**325**	*e*P	**P**	**11 57 41.0**	**-0.2**
	comp=Z,38nm,1.2s,baz=58,slow=5.0						
WET	**Wettzell**	**84.01**	**322**	P	**P**	**11 57 41.0**	**-0.2**
WET	**Wettzell**	**84.01**	**322**	*e*P	**P**	**11 57 41.0**	**-0.2**
	comp=Z,24nm,1.4s,baz=58,slow=5.0						
MANZ	**Manzenberg**	**84.02**	**323**	*e*P	**P**	**11 57 40.9**	**-0.3**
	comp=Z,28nm,1.4s,baz=58,slow=5.0						
ROTZ	**Rotzenmuhle**	**84.08**	**322**	*e*P	**P**	**11 57 41.3**	**-0.3**
	comp=Z,32nm,1.4s,baz=58,slow=5.0						
CRES	**Cresnjev**	**84.11**	**318**	*e*P	**P**	**11 57 41.0**	**-0.8**
VLS	**Valsamata**	**84.20**	**309**	P	**P**	**11 57 40.8**	**-1.6**
PDKS	**Podkum**	**84.28**	**318**	*e*P	**P**	**11 57 42.2**	**-0.5**
OBKA	**Obir**	**84.33**	**319**	*i* P	**P**	**11 57 42.6**	**-0.5**
	comp=Z,25nm,1.0s,SNR=8.2						
GTTG	**Gottingen**	**84.37**	**325**	*e*P	**P**	**11 57 42.6**	**-0.4**
	comp=Z,20nm,1.0s,baz=58,slow=5.0						
VNDS	**Vrh nad Dolski**	**84.44**	**318**	*e*P	**P**	**11 57 42.9**	**-0.6**
LJU	**Ljubljana**	**84.57**	**318**	*i* P	**P**	**11 57 43.6**	**-0.5**
GRF	**Grafenberg Arr**	**84.66**	**323**	P	**P**	**11 57 44.2**	**-0.3**
GRF	**Grafenberg Arr**	**84.66**	**323**	*e*P	**P**	**11 57 44.3**	**-0.3**
	comp=Z,54nm,1.5s,baz=58,slow=5.0						
OPO	**Ambohidratompo**	**84.74**	**247**	P	**P**	**11 57 45.5**	**0.0**
	comp=Z,17nm,0.8s,baz=64,slow=4.6,SNR=16						
UBBA	**Unterbreizbach**	**84.74**	**324**	*e*P	**P**	**11 57 44.4**	**-0.3**
	comp=Z,22nm,1.3s,baz=58,slow=5.0						
RJOB	**Jochberg**	**84.76**	**320**	*e*P	**P**	**11 57 44.9**	**-0.2**
	comp=Z,136nm,1.0s,baz=58,slow=5.0						
KBA	**Koelnbreinsper**	**84.77**	**320**	*i* P	**P**	**11 57 44.5**	**-0.9**
	comp=Z,23nm,1.0s,SNR=15						
KBA	**Koelnbreinsper**	**84.77**	**320**	P	**P**	**11 57 44.4**	**-0.9**
CEY	**Cerknica**	**84.78**	**318**	*e*P	**P**	**11 57 44.3**	**-0.9**
MYKA	**Terra Mystica**	**84.82**	**319**	*e*P	**P**	**11 57 44.6**	**-0.8**
	comp=Z,15nm,1.3s						
ABPO	**Ambohimpanom**	**84.91**	**247**	P	**P**	**11 57 46.9**	**+0.5**
ABPO				pmax	pmax		
	comp=Z,24nm,0.8s						
ABPO				MLR	MLR		
	comp=Z,2µm,19.0s						
ABPO	**Ambohimpanom**	**84.91**	**247**	P	**P**	**11 57 46.9**	**+0.5**
ABPO				IAmb	IAmb	11 58 00.5	
	comp=Z,24nm,0.8s						
IBBN	**Ibbenburen**	**85.11**	**326**	*e*P	**P**	**11 57 46.2**	**-0.4**
	comp=Z,34nm,1.1s,baz=58,slow=5.0						
ZOU	**Zoufplan**	**85.25**	**319**	P	**P**	**11 57 46.4**	**-1.4**
ZOU				IAmb	IAmb	11 57 57.3	
	comp=Z,24nm,1.0s						
KASTN	**Kahler Asten**	**85.38**	**325**	*e*P	**P**	**11 57 47.7**	**-0.4**
	comp=Z,20nm,1.3s,baz=58,slow=5.0						
FUR	**Furstenfeldbru**	**85.42**	**321**	P	**P**	**11 57 48.1**	**-0.3**
FUR	**Furstenfeldbru**	**85.42**	**321**	*e*P	**P**	**11 57 48.1**	**-0.3**
	comp=Z,91nm,1.0s,baz=58,slow=5.0						
ABTA	**Abfaltersbach**	**85.43**	**320**	*i* P	**P**	**11 57 47.4**	**-1.1**
	comp=Z,38nm,1.0s,SNR=15						
STAL	**STALIGIAL**	**85.56**	**319**	P	**P**	**11 57 47.7**	**-1.4**
STAL				IAmb	IAmb	11 57 50.4	
	comp=Z,41nm,1.1s						
MILB	**Miltenberg**	**85.65**	**323**	*e*P	**P**	**11 57 48.8**	**-0.7**
	comp=Z,27nm,1.3s,baz=58,slow=5.0						
WATA	**Walderalm**	**85.68**	**320**	*i* P	**P**	**11 57 49.4**	**-0.4**
	comp=Z,28nm,1.2s,SNR=5.8						
WTTA	**Wattenberg**	**85.68**	**320**	*i* P	**P**	**11 57 49.4**	**-0.5**
	comp=Z,35nm,1.0s,SNR=12						
WTTA	**Wattenberg**	**85.68**	**320**	P	**P**	**11 57 49.0**	**-0.9**
BUG	**Bochum--Univer**	**85.84**	**325**	P	**P**	**11 57 49.7**	**-0.6**
BUG	**Bochum--Univer**	**85.84**	**325**	*e*P	**P**	**11 57 49.8**	**-0.6**
	comp=Z,35nm,1.0s,baz=58,slow=5.0						
KIBK	**Kibwezi**	**85.87**	**266**	P	**P**	**11 57 53.0**	**+1.8**
	SNR=10						
TNS	**Taunus Mts**	**85.90**	**324**	P	**P**	**11 57 50.3**	**-0.4**
TNS	**Taunus Mts**	**85.90**	**324**	*e*P	**P**	**11 57 50.3**	**-0.4**
	comp=Z,19nm,1.1s,baz=58,slow=5.0						
MOTA	**Moosalm**	**85.95**	**321**	*i* P	**P**	**11 57 50.3**	**-0.9**
	comp=Z,20nm,1.1s,SNR=7.2						
SQTA	**Sankt Quirin**	**85.95**	**320**	*i* P	**P**	**11 57 50.3**	**-0.9**
	comp=Z,29nm,1.1s,SNR=7.5						
LODK	**Lodwar**	**86.00**	**272**	P	**P**	**11 57 53.5**	**+1.6**
	SNR=20						
RETA	**Reutte**	**86.07**	**321**	*e*P	**P**	**11 57 50.8**	**-0.9**
	comp=Z,12nm,1.3s						
KMBO	**Kilima Mbogo**	**86.10**	**267**	P	**P**	**11 57 53.2**	**+0.6**
	comp=Z,25nm,1.0s,baz=39,slow=6.9,SNR=33						
ICESG	**Greenland Ices**	**86.21**	**354**	*i* P	**P**	**11 57 51.4**	**-0.9**
ICESG				IAmb	IAmb	11 57 53.9	
	comp=Z,25nm,0.9s						
STU	**Stuttgart**	**86.28**	**322**	P	**P**	**11 57 51.8**	**-0.7**
STU	**Stuttgart**	**86.28**	**322**	*e*P	**P**	**11 57 51.9**	**-0.7**
	comp=Z,14nm,0.7s,baz=58,slow=5.0						
CTI	**Castel Tesino**	**86.30**	**319**	P	**P**	**11 57 51.9**	**-1.0**
CTI				pmax	pmax		
	comp=Z,20nm,1.1s						
CTI	**Castel Tesino**	**86.30**	**319**	P	**P**	**11 57 51.9**	**-1.0**
FETA	**Feichten**	**86.34**	**320**	*i* P	**P**	**11 57 52.4**	**-0.7**
	comp=Z,19nm,1.0s,SNR=12						
UBR	**Ueberruh**	**86.35**	**321**	*e*P	**P**	**11 57 52.1**	**-0.9**
	comp=Z,28nm,1.3s,baz=58,slow=5.0						
TIP	**Timpagrande**	**86.42**	**311**	⇑P	**P**	**11 57 53.4**	**-0.1**
TIP	**Timpagrande**	**86.42**	**311**	P	**P**	**11 57 52.9**	**-0.6**
TIP				IAmb	IAmb	11 57 54.6	
	comp=Z,41nm,1.2s						
TIP				IAMs_20	IAMs_20	12 41 26.8	
	comp=Z,3µm,21.0s						
AHRW	**Bad Neuenahr-A**	**86.45**	**325**	*e*P	**P**	**11 57 52.9**	**-0.4**
	comp=Z,24nm,1.1s,baz=58,slow=5.0						
VOI	**Vohitsoka**	**86.60**	**244**	P	**P**	**11 57 55.2**	**+0.6**
DAVA	**Damuels**	**86.69**	**321**	*e*P	**P**	**11 57 54.9**	**0.0**
	comp=Z,15nm,1.0s		

LON pmax pmax
comp=Z,89nm,1.0s
LON MLR MLR
comp=Z,2µm,21.0s
LON Longmire 88.75 38 P **P** **11 58 04.5 -0.1**
G03D McMinnville, O 88.77 40 P 11 58 02.4
baz=304
G03D S 12 08 53.9
baz=304
I02D Swisshome 89.03 41 P 11 58 04.7
baz=303
I02D S 12 08 50.3
baz=303
SFJD Kangerlussuaq 89.07 357 *i* P **P** **11 58 04.1 -1.5**
SFJD IAMs_20 IAMs_20 12 45 22.2
comp=Z,2µm,16.3s
SFJD Kangerlussuaq 89.07 357 *i* P **P** **11 58 04.0 -1.5**
SFJD MLR MLR
comp=Z,2µm,16.0s
SFJD Kangerlussuaq 89.07 357 P **P** **11 58 03.8 -1.7**
SFJD IAmb IAmb 11 58 08.4
comp=Z,52nm,1.5s
SFJD Kangerlussuaq 89.07 357 IAMs_20 IAMs_20 12 44 02.7
comp=Z,3µm,21.0s
COR Corvallis 89.09 41 P **P** **11 58 04.7 -1.4**
COR pmax pmax
comp=Z,141nm,1.1s
COR Corvallis 89.09 41 P **P** **11 58 04.7 -1.4**
LTY Liberty 89.10 37 P **P** **11 58 06.0 -0.3**
LTY IAMs_20 IAMs_20 12 46 02.6
comp=Z,3µm,22.0s
B08A Colville Reser 89.19 36 P **P** **11 58 06.6 0.0**
B08A IAMs_20 IAMs_20 12 44 27.6
comp=Z,3µm,20.0s
ANGG Ammassalik, Gr 89.31 352 P **P** **11 58 06.0 -0.7**
ANGG IAmb IAmb 11 58 07.7
comp=Z,35nm,1.0s
ANGG IAMs_20 IAMs_20 12 43 39.7
comp=Z,6µm,19.0s
DY2G Dye2 89.34 356 *i* P **P** **11 58 06.3 -0.8**
DY2G IAmb IAmb 11 58 08.3
comp=Z,23nm,0.7s
DY2G IAMs_20 IAMs_20 12 42 22.3
comp=Z,4µm,18.9s
F05D White Salmon 89.44 39 P 11 58 07.7
baz=305,SNR=9.8
F05D S 12 08 59.2
baz=305
H04D Lebanon 89.47 41 P 11 58 07.5
baz=304,SNR=11
LPG La Plagne 89.48 321 *e*P **P** **11 58 08.4 +0.1**
LPG pmax pmax
comp=Z,44nm,1.0s
LPL La Plagne 89.48 321 *e*P **P** **11 58 07.4 -0.9**
LPL pmax pmax
comp=Z,49nm,1.0s
J01E Myrtle Point 89.50 42 P 11 58 06.2
baz=303
J01E S 12 09 00.2
baz=303
I03D Drain, OR 89.56 41 P 11 58 08.6
baz=304,SNR=7.1
I03D S 12 09 04.0
baz=304
H04A Detroit Lake 89.70 40 P **P** **11 58 09.3 +0.2**
H04A IAmb IAmb 11 58 11.1
comp=Z,32nm,1.0s
PGF Pioggiola 89.77 317 *e*P **P** **11 58 09.6 +0.1**
PGF pmax pmax
comp=Z,60nm,1.0s
BNI Bardonecchia 89.78 320 P **P** **11 58 08.6 -0.9**
BNI pmax pmax
comp=Z,30nm,1.0s
BNI Bardonecchia 89.78 320 P **P** **11 58 08.6 -0.9**
BNI IAmb IAmb 11 58 11.6
comp=Z,30nm,1.0s
G05D Wamic, OR 89.89 39 P 11 58 09.8
baz=305,SNR=11
MBDF Montbardon 89.91 320 *e*P **P** **11 58 10.3 +0.1**
MBDF pmax pmax
comp=Z,17nm,0.9s
K02D Willamette Mer 89.92 42 P 11 58 08.7
baz=303
K02D S 12 09 14.1
baz=303
E07A Sunnyside 89.96 38 P **P** **11 58 10.6 +0.4**
SBF Sospel 90.00 319 *e*P **P** **11 58 10.0 -0.5**
SBF pmax pmax
comp=Z,43nm,1.0s
I04A Tendick Farm, 90.07 41 P 11 58 10.3
baz=304,SNR=17
LOR Lormes 90.08 323 *e*P **P** **11 58 09.2 -1.5**
LOR pmax pmax
comp=Z,19nm,1.0s
C09A Chrisman Ranch 90.09 36 P **P** **11 58 10.6 -0.2**
D08A Wollman Farm, 90.18 37 P **P** **11 58 11.6 +0.4**
HAWA Hanford 90.24 38 P **P** **11 58 11.9 +0.4**
L02E Cave Junction 90.25 43 P 11 58 10.1
baz=303
L02E S 12 08 53.9
baz=303
F07A Phinny Hill Vi 90.31 38 P **P** **11 58 12.2 +0.4**
ORIF Oris-en-Rattie 90.32 321 *e*P **P** **11 58 11.9 -0.1**
ORIF pmax pmax
comp=Z,30nm,1.1s
SSF Saint Saulge 90.39 323 *e*P **P** **11 58 11.9 -0.3**
SSF pmax pmax
comp=Z,20nm,1.0s
I05D Terrebonne, OR 90.40 40 P 11 58 11.6
baz=305,SNR=16
I05D S 12 08 55.9
baz=305
HUMO Hull Mountain 90.40 42 P **P** **11 58 13.1 +0.7**
HUMO IAmb IAmb 11 58 15.8
comp=Z,16nm,0.8s
NEW Newport 90.42 35 P **P** **11 58 12.9 +0.6**
comp=Z,145nm,1.0s,baz=301,slow=4.1,SNR=140
NEW Newport 90.42 35 P **P** **11 58 12.5 +0.1**
NEW pmax pmax
comp=Z,147nm,1.0s
NEW Newport 90.42 35 P **P** **11 58 12.5 +0.1**
NEW Newport 90.42 35 IAMs_20 IAMs_20 12 45 38.2
comp=Z,4µm,19.0s
NEW Newport 90.42 35 P 11 58 10.8
baz=308
E08A Dider Farm, El 90.44 37 P **P** **11 58 12.2 -0.2**
SMF Signal de Mont 90.46 323 *e*P **P** **11 58 11.2 -1.3**
SMF pmax pmax
comp=Z,73nm,1.0s
J04D Umpqua Nationa 90.56 41 P 11 58 12.7
baz=304,SNR=21
J04D S 12 08 58.8
baz=304
AVF Avril sur Loir 90.64 323 *e*P **P** **11 58 11.0 -2.3**
AVF pmax pmax
comp=Z,42nm,1.0s
FRF La Foret Royal 90.64 319 *e*P **P** **11 58 12.0 -1.4**
FRF pmax pmax
comp=Z,23nm,1.0s
LMR La Mourre 90.85 319 *e*P **P** **11 58 14.3 -0.1**
LMR pmax pmax
comp=Z,33nm,1.1s
SSB Saint Sauveur 90.88 321 P **P** **11 58 13.6 -0.9**
SSB pmax pmax
comp=Z,24nm,1.0s
SSB Saint Sauveur 90.88 321 P **P** **11 58 13.6 -0.9**
SSB IAmb IAmb 11 58 16.6
comp=Z,24nm,1.0s
E09A Wood Farm, Sta 90.94 37 P **P** **11 58 14.7 0.0**
PINE Pine Mountain 90.94 40 P **P** **11 58 15.6 +0.5**
L04D Klamath Falls 91.02 42 P 11 58 14.6
baz=304,SNR=11
YBH Yreka Blue Hor 91.04 43 P **P** **11 58 16.0 +0.6**
comp=Z,15nm,1.0s,baz=309,slow=1.7,SNR=16
YBH Yreka Blue Hor 91.04 43 P **P** **11 58 15.2 -0.2**
YBH pmax pmax
comp=Z,19nm,1.1s
YBH Yreka Blue Hor 91.04 43 P **P** **11 58 15.2 -0.2**
YBH IAmb IAmb 11 58 18.6
comp=Z,19nm,1.1s
VIVF Saint-Julien-l 91.05 321 *e*P **P** **11 58 15.2 -0.1**
VIVF pmax pmax
comp=Z,32nm,1.1s
J05D Fort Rock, OR 91.06 41 P 11 58 15.0
baz=305,SNR=25
K04D Chiloquin, OR 91.12 42 P 11 58 15.1
baz=305,SNR=9.8
K04D S 12 09 16.9
baz=305
M02C Callahan 91.14 43 P 11 58 15.9
baz=304,SNR=6.9
M02C S 12 09 21.2
baz=304
VSL Villasalto 91.19 315 P **P** **11 58 15.4 -0.7**
G08A Pilot Rock 91.22 38 P **P** **11 58 16.5 +0.3**
G08A IAmb IAmb 11 58 22.2
comp=Z,32nm,1.0s
N02D Trinity Center 91.47 43 P 11 58 16.2
baz=304
N02D S 12 09 26.2
baz=304
WALA Waterton Lakes 91.57 33 P **P** **11 58 18.1 +0.3**
WALA IAMs_20 IAMs_20 12 47 01.4
comp=Z,5µm,19.0s
TCF Toulx Ste Croi 91.57 323 *e*P **P** **11 58 17.8 +0.1**
TCF pmax pmax
comp=Z,36nm,1.4s
K05A Summer Lake 91.59 41 P **P** **11 58 18.8 +0.7**
I07A Izee 91.62 40 P **P** **11 58 18.6 +0.4**
I07A IAmb IAmb 11 58 21.7
comp=Z,22nm,1.0s
F10A Beach Ranch, E 91.77 37 P **P** **11 58 19.2 +0.5**
F10A IAmb IAmb 11 58 33.8
comp=Z,24nm,0.9s
MBAR Mbarara 91.84 270 P **P** **11 58 19.7 0.0**
comp=Z,7.8nm,0.7s,baz=76,slow=4.8,SNR=9.3
MBAR Mbarara 91.84 270 P **P** **11 58 20.4 +0.7**
MBAR IAmb IAmb 11 58 23.1
comp=Z,20nm,1.1s
O02D Mt. Diablo Mer 91.86 44 P 11 58 18.5
baz=304
O02D S 12 09 32.9
baz=304
FRB Frobisher Bay 92.06 5 P **P** **11 58 18.2 -1.2**
comp=Z,37nm,0.9s,baz=338,slow=5.5,SNR=58
FRB PP **PP** **12 01 59.7 +1.2**
comp=Z,4.0nm,0.9s,baz=335,slow=6.6,SNR=3.1
FCC Fort Churchill 92.09 18 P **P** **11 58 18.8 -1.0**
FCC pmax pmax
comp=Z,91nm,1.0s
FCC Fort Churchill 92.09 18 P **P** **11 58 18.8 -1.0**
FCC IAMs_20 IAMs_20 12 45 34.4
comp=Z,6µm,21.0s
JTMT Jette 92.23 34 P **P** **11 58 20.7 -0.2**
JTMT IAMs_20 IAMs_20 12 47 49.9
comp=Z,4µm,20.0s
BMO Blue Mountains 92.41 38 P **P** **11 58 20.9 -0.8**
BMO pmax pmax
comp=Z,38nm,0.9s
BMO Blue Mountains 92.41 38 P **P** **11 58 20.9 -0.8**
O03E Paynes Creek 92.42 44 P 11 58 20.3
baz=305
O03E S 12 09 33.4
baz=305
MOD Modoc Plateau 92.42 42 P **P** **11 58 21.8 -0.1**
MOD IAmb IAmb 11 58 24.5
comp=Z,31nm,0.9s
CAF Calviac 92.49 322 *e*P **P** **11 58 21.5 -0.5**
CAF pmax pmax
comp=Z,55nm,1.0s
RJF Les Rejaudoux 92.56 323 *e*P **P** **11 58 21.8 -0.5**
RJF pmax pmax
comp=Z,55nm,1.0s
GDXM Geysers 92.61 45 P **P** **11 58 22.6 -0.2**
GDXM IAmb IAmb 11 58 28.0
comp=Z,20nm,1.2s
J08A Circle Bar Ran 92.65 40 P **P** **11 58 23.1 +0.2**
FFC Flin Flon 92.76 24 P **P** **11 58 22.1 -0.9**
FFC pmax pmax
comp=Z,108nm,1.0s
FFC Flin Flon 92.76 24 P **P** **11 58 22.1 -0.9**
FFC Flin Flon 92.76 24 IAMs_20 IAMs_20 12 45 42.4
comp=Z,3µm,18.0s
MSO Missoula 93.00 35 P **P** **11 58 23.8 -0.6**
MSO IAMs_20 IAMs_20 12 46 31.4
comp=Z,3µm,20.0s
MSO Missoula 93.00 35 P 11 58 22.7
baz=310
ORV Oroville 93.02 44 P **P** **11 58 24.2 -0.3**
ORV pmax pmax
comp=Z,12nm,0.9s
ORV Oroville 93.02 44 P **P** **11 58 24.2 -0.3**
ORV IAmb IAmb 11 58 28.6
comp=Z,12nm,0.8s
WVOR Wild Horse Val 93.11 40 P **P** **11 58 25.2 +0.2**
WVOR pmax pmax
comp=Z,23nm,1.2s
WVOR Wild Horse Val 93.11 40 P **P** **11 58 25.2 +0.2**
WVOR IAmb IAmb 11 58 26.8
comp=Z,23nm,1.1s
KEST Kesra 93.24 311 P **P** **11 58 24.9 -0.8**
comp=Z,27nm,0.9s,baz=276,slow=3.0,SNR=23
KEST Kesra 93.24 311 P **P** **11 58 25.7 0.0**
KEST IAmb IAmb 11 58 29.0
comp=Z,31nm,0.9s
QUIF Quistinic 93.35 327 *e*P **P** **11 58 24.9 -0.9**
QUIF pmax pmax
comp=Z,47nm,1.6s
MTLF Montolieu 93.38 321 *e*P **P** **11 58 26.3 +0.2**
MTLF pmax pmax
comp=Z,37nm,1.4s
BEKR Beckworth 93.57 43 P **P** **11 58 26.9 -0.4**
BEKR IAmb IAmb 11 58 29.5
comp=Z,15nm,0.8s
AFDM Forest Hills D 93.71 44 P **P** **11 58 27.4 -0.4**
MFID Camas Ranch 94.14 38 P **P** **11 58 30.0 +0.2**
MFID IAmb IAmb 11 58 33.1
comp=Z,34nm,1.1s
RUBR Rubicon Trail 94.17 44 P **P** **11 58 29.7 -0.4**
RUBR IAmb IAmb 11 58 35.2
comp=Z,28nm,0.8s
HRY Holter Researc 94.17 34 P **P** **11 58 30.1 +0.3**
PAHR Pah Rah Range 94.27 43 P **P** **11 58 30.1 -0.4**
PAHR IAmb IAmb 11 58 32.0
comp=Z,18nm,1.0s
EGMT Eagleton 94.31 32 P **P** **11 58 29.7 -0.7**
EGMT IAMs_20 IAMs_20 12 44 25.2
comp=Z,3µm,20.0s
EGMT Eagleton 94.31 32 P 11 58 29.9
baz=314,SNR=42
VCNR Virginia City 94.34 43 P **P** **11 58 30.9 0.0**
VCNR IAmb IAmb 11 58 33.4
comp=Z,16nm,0.8s
LRM Limekiln Ridge 94.44 35 P **P** **11 58 31.8 +0.5**
PNTR Pine Nut 94.50 44 P **P** **11 58 31.9 +0.2**
PNTR IAmb IAmb 11 58 41.7
comp=Z,20nm,0.9s
PNTR IAMs_20 IAMs_20 12 49 35.0
comp=Z,3µm,21.0s
CMB Columbia Colle 94.61 45 P **P** **11 58 31.5 -0.4**
CMB pmax pmax
comp=Z,15nm,0.9s
CMB Columbia Colle 94.61 45 P **P** **11 58 31.5 -0.4**
CMB IAmb IAmb 11 58 34.1
comp=Z,15nm,0.9s
SAO San Andreas Ge 94.64 46 IAMs_20 IAMs_20 12 49 34.8
comp=Z,3µm,21.0s
EPF Esparros 94.64 321 *e*P **P** **11 58 33.1 +1.1**
EPF pmax pmax
comp=Z,19nm,1.5s
DLMT Dillon 94.66 35 P **P** **11 58 32.1 0.0**
DLMT IAMs_20 IAMs_20 12 49 23.7
comp=Z,4µm,20.0s
YERR Yerington 94.78 44 P **P** **11 58 32.0 -0.8**
HLID Hailey 94.84 38 P **P** **11 58 33.4 +0.3**
HLID IAmb IAmb 11 58 36.6
comp=Z,24nm,0.9s
HLID IAMs_20 IAMs_20 12 48 35.7
comp=Z,4µm,20.0s
HLID Hailey 94.84 38 P 11 58 33.5
baz=310
MCMT McKenzie Canyo 94.88 36 P **P** **11 58 33.4 +0.1**
BCYI Bear Canyon 94.92 37 P **P** **11 58 33.5 +0.1**
WAKR Walker 94.94 44 P **P** **11 58 34.1 +0.4**
BOZ Bozeman (W) 95.02 35 P **P** **11 58 33.2 -0.6**
BOZ pmax pmax
comp=Z,10.0nm,1.0s
BOZ Bozeman (W) 95.02 35 P **P** **11 58 33.2 -0.6**
BOZ IAMs_20 IAMs_20 12 49 23.0
comp=Z,3µm,19.0s
BOZ Bozeman (W) 95.02 35 P 11 58 33.2
baz=312,SNR=20
PPT2 Papeete2 95.19 107 *e*S **S** **12 09 50.4 +1.9**
comp=Z,4µm,26.8s
PPT2 Papeete2 95.19 107 *e*PS PS 12 11 15.0 +5.5
comp=Z,917nm,29.0s
PPT2 *e*SS SS 12 16 20.2 +4.5
comp=Z,717nm,25.5s
PPT2 *e*LQ LQ 12 25 04.8
comp=Z,6µm,26.2s
PPT2 *e*LR LR 12 29 30.3
comp=Z,6µm,23.2s,baz=284
ETSF Etsaut 95.24 322 *e*P **P** **11 58 35.2 +0.5**
ETSF pmax pmax
comp=Z,8.0nm,0.8s
PMPB Monarch Peak 95.38 47 P **P** **11 58 35.6 +0.1**
PMPB IAmb IAmb 11 58 42.4
comp=Z,20nm,0.9s
RYN Ryan 95.45 43 P **P** **11 58 36.0 +0.1**
RYN IAmb IAmb 11 58 47.1
comp=Z,15nm,0.9s
RYN IAMs_20 IAMs_20 12 50 16.2
comp=Z,3µm,21.0s
KVN Kaiserville 95.46 43 P **P** **11 58 35.6 -0.4**
KVN pmax pmax
comp=Z,12nm,0.9s
KVN Kaiserville 95.46 43 P **P** **11 58 35.6 -0.4**
KVN IAmb IAmb 11 58 37.2
comp=Z,12nm,0.9s
QLMT Earthquake Lak 95.64 35 P **P** **11 58 36.9 +0.2**
LHV Little Huntoon 95.68 44 P **P** **11 58 37.2 +0.5**
LHV IAmb IAmb 11 58 53.9
comp=Z,25nm,1.1s
LHV IAMs_20 IAMs_20 12 50 09.4
comp=Z,3µm,22.0s
NVAR Mina Array Bea 95.70 44 P **P** **11 58 36.7 -0.4**
comp=Z,8.0nm,0.8s,baz=290,slow=4.7,SNR=77
NVAR Mina Array Bea 95.70 44 P **P** **11 58 36.9 -0.2**
YHL Hebgen Lake 95.75 35 P **P** **11 58 37.3 0.0**
YHL IAmb IAmb 11 58 40.0
comp=Z,16nm,1.0s
NV11 Mina Array Sit 95.80 43 P **P** **11 58 36.2 -1.2**
YHB Horse Butte 95.81 35 P **P** **11 58 38.2 +0.7**
YHB IAmb IAmb 11 58 39.7
comp=Z,22nm,1.0s
MLAC Mammoth, Mammo 95.84 44 P 11 58 37.6
baz=306
GCMT Greycliff 95.90 34 P **P** **11 58 37.6 -0.2**
YHH Holmes Hill 95.97 35 P **P** **11 58 38.5 +0.2**
YMR Madison River 95.99 35 P **P** **11 58 38.8 +0.5**
PAGB Antelope Grade 96.02 47 P **P** **11 58 38.6 +0.2**
PAGB IAmb IAmb 11 58 41.0
comp=Z,22nm,0.8s
PAGB IAMs_20 IAMs_20 12 48 09.8
comp=Z,3µm,22.0s
YNR Norris Junctio 96.11 35 P **P** **11 58 38.0 -0.8**
YNR IAmb IAmb 11 58 48.9
comp=Z,16nm,1.3s
ELK Elko 96.16 40 P **P** **11 58 39.4 +0.2**
comp=Z,2.9nm,0.9s,baz=307,slow=3.4,SNR=12
ELK Elko 96.16 40 P **P** **11 58 39.0 -0.2**
ELK pmax pmax
comp=Z,6.0nm,1.1s
ELK Elko 96.16 40 P **P** **11 58 39.0 -0.2**
YNE Yellowstone No 96.26 34 P **P** **11 58 39.6 +0.1**
YPP Pitchstone Pla 96.34 35 P **P** **11 58 40.2 +0.2**
LKWY Lake 96.36 35 P **P** **11 58 39.2 -0.8**
LKWY Lake 96.36 35 P **P** **11 58 39.2 -0.8**
LKWY IAmb IAmb 11 58 44.4
comp=Z,17nm,0.9s
YMP Mirror Lake Pl 96.36 35 P **P** **11 58 40.5 +0.4**
H17A Grant Village 96.38 35 P **P** **11 58 38.5 -1.7**
H17A IAMs_20 IAMs_20 12 50 17.1
comp=Z,4µm,19.0s
H17A Grant Village 96.38 35 P 11 58 39.9
baz=313,SNR=12
SMMC Simmler 96.43 47 P 11 58 39.6
baz=306
FLWY Flagg Ranch 96.53 36 P **P** **11 58 41.5 +0.7**
FLWY IAmb IAmb 11 58 43.3
comp=Z,13nm,0.9s
RLMT Red Lodge 96.56 34 P **P** **11 58 41.0 +0.1**
RLMT IAmb IAmb 11 58 46.1
comp=Z,26nm,1.4s
RLMT IAMs_20 IAMs_20 12 47 51.8
comp=Z,3µm,19.0s
RLMT Red Lodge 96.56 34 P 11 58 40.1
baz=314,SNR=13
DGMT Dagmar 96.59 29 IAMs_20 IAMs_20 12 46 12.6
comp=Z,4µm,20.0s
TPH Tonopah 96.60 43 P **P** **11 58 41.2 0.0**
TPH pmax pmax
comp=Z,52nm,0.8s
TPH Tonopah 96.60 43 P **P** **11 58 41.2 0.0**
MOOW Moose Ponds 96.73 36 P **P** **11 58 42.0 +0.3**
VES Vestal, Richgr 96.73 46 P 11 58 40.8
baz=306,SNR=6.1
PKM Mcpherson Peak 96.80 47 P 11 58 41.6
baz=306
LOHW Long Hollow 96.89 36 P **P** **11 58 42.5 +0.1**
SNOW Snow King Moun 96.91 36 P **P** **11 58 43.2 +0.7**
SNOW IAMs_20 IAMs_20 12 48 18.3
comp=Z,3µm,20.0s
HVU Hansel Valley 96.92 38 P **P** **11 58 43.1 +0.6**
HVU pmax pmax
comp=Z,11nm,1.0s
HVU Hansel Valley 96.92 38 P **P** **11 58 43.0 +0.6**
HVU IAmb IAmb 11 58 46.9
comp=Z,11nm,1.0s
REDW Red Top Meadow 96.93 36 IAMs_20 IAMs_20 12 48 08.7
comp=Z,3µm,20.0s
LAO LASA Array 96.96 31 P **P** **11 58 41.9 -0.5**
LAO IAMs_20 IAMs_20 12 48 26.0
comp=Z,3µm,19.0s
LAO LASA Array 96.96 31 P 11 58 42.1
baz=316
CWC Cottonwood Cre 97.03 45 P 11 58 42.2
baz=307
AHID Auburn Hatcher 97.20 37 IAMs_20 IAMs_20 12 48 22.8
comp=Z,3µm,19.0s
ISA Isabella, Lake 97.24 46 P 11 58 42.7
baz=306,SNR=5.5
R11A Troy Canyon, C 97.44 42 P Pdif 11 58 45.2 +0.2
R11A Troy Canyon, C 97.44 42 P 11 58 43.3
baz=309,SNR=14
TBI Tubuai 97.54 112 *e*PP PKiKP 12 02 44.0 -36
comp=Z,184nm,28.8s
TBI *e*S **S** **12 10 10.2 +1.7**
comp=Z,2µm,27.8s
TBI Tubuai 97.54 112 *e*PS PS 12 11 36.5 +1.6
comp=Z,637nm,41.0s
TBI *e*SS SS 12 16 54.7 +5.9
comp=Z,1µm,29.2s
TBI *e*LQ LQ 12 25 15.3
comp=Z,4µm,26.8s
TBI *e*LR LR 12 30 28.7
comp=Z,4µm,24.5s,baz=301
OSI Osito Audit: C 97.69 47 IAMs_20 IAMs_20 12 51 58.9
comp=Z,3µm,21.0s
HWUT Hardware Ranch 97.71 38 P Pdif 11 58 46.5 +0.3
HWUT IAmb IAmb 11 58 52.3
comp=Z,14nm,1.0s
HWUT IAMs_20 IAMs_20 12 49 18.2
comp=Z,3µm,19.0s
FURC Furnace Creek, 97.80 44 P 11 58 45.8
baz=308,SNR=9.8
LRMC Laurel Mtn Rad 97.86 46 P 11 58 46.1
baz=307,SNR=6.8
TPNV Topopah Spring 97.89 44 P **P** **11 58 46.8 -0.2**
TPNV pmax pmax
comp=Z,8.0nm,0.9s
TPNV Topopah Spring 97.89 44 P **P** **11 58 46.8 -0.2**
TPNV Topopah Spring 97.90 44 P 11 58 46.3
baz=308,SNR=15
DUG Dugway, Tooele 97.93 39 P Pdif 11 58 47.6 +0.5
DUG pmax pmax
comp=Z,5.0nm,1.0s
DUG Dugway, Tooele 97.93 39 P Pdif 11 58 47.6 +0.5
DUG Dugway, Tooele 97.93 39 P 11 58 46.8
baz=311
EDW2 Edwards Air Fo 98.02 46 P 11 58 46.8
baz=307
BW06 Boulder Array 98.03 36 P **P** **11 58 47.2 -0.4**
BW06 IAMs_20 IAMs_20 12 51 15.8
comp=Z,3µm,20.0s
PD31 Pinedale Array 98.03 36 P **P** **11 58 47.3 -0.3**
PDAR Pinedale Array 98.03 36 P **P** **11 58 46.1 -1.5**
comp=Z,1.4nm,0.7s,baz=354,slow=1.5,SNR=9.1

PDAR	Pinedale Array	98.03	36	P	P	11 58 46.6	-1.0		
BW06	Boulder Array baz=313	98.03	36	P		11 58 46.5			
TCUT	Toone Canyon	98.13	38	P	P	11 58 47.6	-0.5		
PASC	Pasadena Art C comp=Z,4µm,22.0s	98.31	47	IAMs_20	IAMs_20	12 49 17.0			
PRN	Pahroc Range	98.36	43	P	Pdif	11 58 49.5	+0.4		
PRN				IAMs_20	IAMs_20	12 52 03.3			
	comp=Z,3µm,21.0s								
MWC	Mount Wilson comp=Z,5µm,22.0s	98.36	47	IAMs_20	IAMs_20	12 49 19.7			
PSUT	Pine Spring	98.38	41	P	Pdif	11 58 49.3	+0.1		
ULM	Lac du Bonnet comp=Z,14nm,1.0s,baz=326,slow=4.6,SNR=17	98.58	24	P	P	11 58 47.6	-1.9		
ULM	Lac du Bonnet	98.58	24	P	P	11 58 48.0	-1.6		
ULM				pmax	pmax				
	comp=Z,13nm,1.0s								
ULM	Lac du Bonnet	98.58	24	P	P	11 58 48.0	-1.6		
ULM				IAmb	IAmb	11 58 50.4			
	comp=Z,13nm,0.9s								
ULM				IAMs_20	IAMs_20	12 51 01.4			
	comp=Z,4µm,20.0s								
SHPR	Sheep Range	98.86	44		Pdif	11 58 51.6	+0.2		
SHPR				IAMs_20	IAMs_20	12 52 32.5			
	comp=Z,3µm,20.0s								
CART	Cartagena comp=Z,4µm,20.0s	98.88	318	IAMs_20	IAMs_20	12 50 54.2			
TUQ	Turquoise Moun baz=308	99.03	45	P		11 58 51.5			
HEC	Hector Ludlow baz=308	99.14	45	P		11 58 51.6			
ESDC	Sonseca Array	99.28	321	P	Pdif	11 58 51.8	-1.3		
	comp=Z,0.9nm,0.8s,baz=34,slow=5.2,SNR=6.7								
ESDC	Sonseca Array	99.28	321	P	Pdif	11 58 52.7	-0.4		
MURC	Murrieta baz=307	99.31	47	P		11 58 52.8			
MSU	Marysvale	99.40	40	P	Pdif	11 58 54.1	+0.3		
MSU	Marysvale	99.40	40		Pdif	11 58 54.0	+0.3		
RDMU	Red Mountain	99.52	38	P	Pdif	11 58 54.3	0.0		
E28A	Huff comp=Z,5µm,20.0s	99.57	29	IAMs_20	IAMs_20	12 48 59.0			
PAB	San Pablo comp=Z,5µm,18.0s	99.59	321	IAMs_20	IAMs_20	12 49 17.7			
GMRC	Granite Mounta baz=308	99.60	45	P		11 58 54.4			
K22A	Casper baz=316	99.71	34	P		11 58 53.9			
PFO	Pinyon Flats O comp=Z,5.8nm,1.1s,baz=332,slow=4.8,SNR=5.1	99.79	47	P	Pdif	11 58 55.3	-0.2		
PFO	Pinyon Flats O	99.79	47	Pdif	Pdif	11 58 55.7	+0.1		
PFO	Pinyon Flats O comp=Z,4µm,22.0s	99.79	47	IAMs_20	IAMs_20	12 50 01.6			
PFO	Pinyon Flats O baz=308	99.79	47	P		11 58 54.4			
TPFO	Pinon Flats baz=308	99.80	47	P		11 58 54.8			
BELC	Belle Mtn. Jos baz=308	99.86	46	P		11 58 54.7			
RSSD	Black Hills	99.89	32	P	Pdif	11 58 56.0	+0.2		
RSSD				pmax	pmax				
	comp=Z,5.0nm,0.7s								
RSSD	Black Hills	99.89	32	Pdif	Pdif	11 58 56.0	+0.2		
RSSD	Black Hills comp=Z,3µm,20.0s	99.89	32	IAMs_20	IAMs_20	12 49 05.6			
RSSD	Black Hills baz=318	99.89	32	P		11 58 55.3			
LSZ	Lusaka comp=Z,7.8nm,1.1s,baz=87,slow=5.5,SNR=5.6	99.92	258	P	Pdif	11 58 54.8	-1.5		
LSZ	Lusaka	99.92	258	Pdif	Pdif	11 58 54.7	-1.5		
LSZ				IAmb	IAmb	11 59 14.5			
	comp=Z,31nm,1.8s								
SRU	San Rafael Swe	99.97	39	P	Pdif	11 58 55.8	-0.5		
SRU				pmax	pmax				
	comp=Z,6.0nm,0.8s								
SRU	San Rafael Swe	99.97	39	Pdif	Pdif	11 58 55.8	-0.5		
KNB	Kanab	99.98	42	P	Pdif	11 58 56.7	+0.3		
KNB				pmax	pmax				
	comp=Z,8.0nm,1.0s								
KNB	Kanab	99.98	42	Pdif	Pdif	11 58 56.7	+0.3		
RWWY	Rawlins	100.03	35	Pdif	Pdif	11 58 56.3	-0.3		
RWWY				IAMs_20	IAMs_20	12 49 49.7			
	comp=Z,3µm,19.0s								
AGMN	Agassiz Nation comp=Z,4µm,19.0s	100.19	25	IAMs_20	IAMs_20	12 52 29.0			
TAOE	Nuku Hiva Isla comp=Z,3µm,20.0s	100.24	95	IAMs_20	IAMs_20	12 53 15.1			
BC3	Big Chuckawall baz=308	100.43	46	P		11 58 57.6			
O20A	White River Ci	100.56	37	Pdif	Pdif	11 58 59.1	+0.2		
O20A	White River Ci baz=314	100.56	37	P		11 58 58.3			
B35A	Bob, Littlefor comp=Z,3µm,19.0s	100.94	24	IAMs_20	IAMs_20	12 52 42.7			
GLA	Glamis comp=Z,4µm,22.0s	101.22	46	IAMs_20	IAMs_20	12 51 11.2			
N23A	Red Feather La baz=316	101.27	35	P		11 59 01.7			
PV22	Blue Mesa, Par comp=Z,3µm,20.0s	101.36	39	IAMs_20	IAMs_20	12 53 41.1			
PV19	Morning Glory comp=Z,4µm,20.0s	101.40	39	IAMs_20	IAMs_20	12 54 10.3			
PV16	Nyswonger Mesa comp=Z,5µm,19.0s	101.44	39	IAMs_20	IAMs_20	12 54 01.3			
PV07	Paradox Valley comp=Z,3µm,19.0s	101.50	39	IAMs_20	IAMs_20	12 53 33.0			
PV03	Paradox Valley comp=Z,5µm,19.0s	101.51	39	IAMs_20	IAMs_20	12 54 13.3			
MATP	Matopo comp=Z,3.5nm,1.0s,baz=5.0,slow=1.4,SNR=3.6	101.55	253	P	Pdif	11 59 02.9	-0.6		
PV01	Paradox Valley comp=Z,3µm,20.0s	101.76	39	IAMs_20	IAMs_20	12 54 19.7			
WUAZ	Wupatki baz=311	101.85	42	P		11 59 04.7			
PESTR	Estremoz comp=Z,4µm,18.0s	101.89	322	IAMs_20	IAMs_20	12 52 09.5			
SMCO	Snowmass comp=Z,3µm,19.0s	101.93	37	IAMs_20	IAMs_20	12 54 14.1			
SUSD	Miller comp=Z,3µm,19.0s	102.00	29	IAMs_20	IAMs_20	12 50 35.2			
EYMN	Ely comp=Z,6µm,21.0s	102.09	23	IAMs_20	IAMs_20	12 51 14.1			
ISCO	Idaho Springs comp=Z,3µm,21.0s	102.23	36	IAMs_20	IAMs_20	12 53 12.9			
ISCO	Idaho Springs baz=316	102.23	36	P		11 59 06.0			
MVCO	Mesa Verde comp=Z,3µm,22.0s	102.43	39	IAMs_20	IAMs_20	12 51 54.6			
S22A	4UR Ranch, Cre baz=315	103.02	38	P		11 59 10.0			
F36A	Milaca comp=Z,3µm,20.0s	103.10	25	IAMs_20	IAMs_20	12 50 33.3			
E38A	The Farm, Brul comp=Z,4µm,21.0s	103.21	23	IAMs_20	IAMs_20	12 50 15.0			
OGNE	Ogallala comp=Z,3µm,20.0s	103.24	33	IAMs_20	IAMs_20	12 52 55.1			
K31A	O'Neill comp=Z,5µm,21.0s	103.52	30	IAMs_20	IAMs_20	12 54 21.7			
ECSD	EROS Data Cent baz=324	103.59	28	P		11 59 10.5			
D41A	Chassel comp=Z,4µm,21.0s	103.86	21	IAMs_20	IAMs_20	12 48 35.0			
SPMN	Marine on St. comp=Z,3µm,20.0s	103.91	25	IAMs_20	IAMs_20	12 56 04.7			
TUC	Tucson comp=Z,2µm,20.0s	104.31	44	IAMs_20	IAMs_20	12 53 26.2			
KSCO	Kaye Shedlock' comp=Z,4µm,20.0s	104.38	35	IAMs_20	IAMs_20	12 52 11.0			
I37A	Lemond, Waseca comp=Z,4µm,20.0s	104.69	26	IAMs_20	IAMs_20	12 51 09.3			
BGNE	Belgrade comp=Z,4µm,21.0s	104.75	30	IAMs_20	IAMs_20	12 55 11.4			
T25A	Trinidad comp=Z,3µm,19.0s	104.80	37	IAMs_20	IAMs_20	12 56 16.3			
T25A	Trinidad baz=316	104.80	37	P		11 59 16.6			
L34A	Svendsen Farm, comp=Z,5µm,21.0s	105.11	29	IAMs_20	IAMs_20	12 55 01.8			
F42A	Maple Grove Fa comp=Z,4µm,19.0s	105.14	22	IAMs_20	IAMs_20	12 55 31.0			
N33A	J Bar K, Exete comp=Z,4µm,20.0s	105.60	30	IAMs_20	IAMs_20	12 52 43.0			
E46A	Sault Ste Mari comp=Z,4µm,19.0s	105.81	19	IAMs_20	IAMs_20	12 55 09.6			
I40A	Norwalk comp=Z,4µm,19.0s	105.87	24	IAMs_20	IAMs_20	12 53 33.5			
CBKS	Cedar Bluff comp=Z,4µm,21.0s	106.00	33	IAMs_20	IAMs_20	12 55 17.9			
H43A	Windswept, Lux comp=Z,3µm,18.0s	106.39	22	IAMs_20	IAMs_20	12 56 20.2			
SCIA	State Center comp=Z,4µm,21.0s	106.52	27	IAMs_20	IAMs_20	12 51 17.8			
G45A	Suttons Bay comp=Z,5µm,21.0s	106.59	20	IAMs_20	IAMs_20	12 55 31.2			
R32A	Long Quarter, comp=Z,4µm,19.0s	106.82	33	IAMs_20	IAMs_20	12 56 25.3			
JFWS	Jewell Farm comp=Z,4µm,20.0s	106.85	25	IAMs_20	IAMs_20	12 52 32.3			
DRLN	Deer Lake comp=Z,4µm,20.0s	107.01	360	IAMs_20	IAMs_20	12 50 32.5			
GLMI	Grayling comp=Z,4µm,22.0s	107.11	20	IAMs_20	IAMs_20	12 56 03.9			
L40A	Anamosa comp=Z,4µm,18.0s	107.19	26	IAMs_20	IAMs_20	12 57 25.6			
I45A	Fountain comp=Z,5µm,21.0s	107.30	21	IAMs_20	IAMs_20	12 56 07.0			
KSU1	Kansas State U comp=Z,5µm,19.0s	107.30	31	IAMs_20	IAMs_20	12 58 22.8			
N38A	Joes South For comp=Z,4µm,21.0s	107.43	28	IAMs_20	IAMs_20	12 51 49.1			
K43A	Burlington comp=Z,4µm,19.0s	107.74	23	IAMs_20	IAMs_20	12 56 48.8			
L42A	Oliver, Polo comp=Z,3µm,18.0s	107.85	25	IAMs_20	IAMs_20	12 56 31.8			
AMTX	Amarillo comp=Z,3µm,19.0s	107.95	37	IAMs_20	IAMs_20	12 56 33.8			
MSTX	Muleshoe comp=Z,3µm,22.0s	108.01	38	IAMs_20	IAMs_20	12 55 18.6			
MSTX	Muleshoe baz=317	108.01	38	P		12 03 39.0			
MNTX	Cornudas Mount comp=Z,4µm,19.0s	108.10	42	IAMs_20	IAMs_20	12 58 28.2			
MNTX	Cornudas Mount baz=315	108.10	42	P		12 03 38.9			
U32A	Winter Ranch, comp=Z,4µm,20.0s	108.25	34	IAMs_20	IAMs_20	12 54 23.4			
P38A	Dawn comp=Z,4µm,20.0s	108.27	29	IAMs_20	IAMs_20	12 56 02.3			
OK032	Salt Plains WL comp=Z,4µm,19.0s	108.32	33	IAMs_20	IAMs_20	12 54 57.3			
L44A	Lake County Fo comp=Z,4µm,19.0s	108.35	23	IAMs_20	IAMs_20	12 56 31.0			
J47A	Sumner comp=Z,3µm,19.0s	108.47	21	IAMs_20	IAMs_20	12 56 30.0			
N41A	Harden Midland comp=Z,4µm,19.0s	108.49	26	IAMs_20	IAMs_20	12 58 16.9			
BATG	Bathurst New B comp=Z,4µm,19.0s	108.58	6	IAMs_20	IAMs_20	12 54 01.0			
SADO	Sadowa comp=Z,4µm,21.0s	108.70	16	IAMs_20	IAMs_20	12 52 28.9			
P40A	Paris comp=Z,4µm,20.0s	108.99	28	IAMs_20	IAMs_20	12 54 31.2			
M44A	Midewin, Midew comp=Z,4µm,19.0s	108.99	24	IAMs_20	IAMs_20	12 58 05.0			
L46A	Eue Claire comp=Z,4µm,20.0s	109.07	22	IAMs_20	IAMs_20	12 56 08.9			
T35A	Sooner Cattle comp=Z,3µm,20.0s	109.08	32	IAMs_20	IAMs_20	12 58 30.1			
HDIL	Hopedale comp=Z,4µm,20.0s	109.23	25	IAMs_20	IAMs_20	12 54 07.6			
G57A	Newington baz=343	109.34	13	P		12 03 40.2			
OK029	Liberty Lake comp=Z,4µm,20.0s	109.49	34	IAMs_20	IAMs_20	12 59 48.2			
K50A	Casco comp=Z,4µm,19.0s	109.58	19	IAMs_20	IAMs_20	12 56 37.2			
WMOK	Wichita Mounta comp=Z,4µm,19.0s	109.62	35	IAMs_20	IAMs_20	12 59 18.9			
OK025	Westminster Rd comp=Z,4µm,18.0s	109.72	34	IAMs_20	IAMs_20	12 58 42.2			
OK030	Oly Creek RV comp=Z,4µm,21.0s	109.72	33	IAMs_20	IAMs_20	12 54 53.3			
G60A	Masonville baz=346	109.86	11	P		12 03 41.9			
FRNY	Flat Rock comp=Z,3µm,18.0s	109.88	12	IAMs_20	IAMs_20	12 59 06.7			
R40A	Maddies Statio comp=Z,4µm,21.0s	109.92	28	IAMs_20	IAMs_20	12 55 11.1			
P43A	Skaggs, Pawnee comp=Z,4µm,18.0s	109.93	26	IAMs_20	IAMs_20	12 58 48.1			
RKT	Rikitea	109.94	107	eSS	SS	12 19 46.6	+7.2		
	comp=Z,1µm,29.5s								
RKT	Rikitea	109.94	107	eLR	LR	12 36 19.4			
	comp=Z,4µm,23.2s								
S39A	Bolivar comp=Z,4µm,20.0s	109.95	30	IAMs_20	IAMs_20	12 58 23.0			
G62A	West of Eustis comp=Z,4µm,19.0s	110.04	10	IAMs_20	IAMs_20	12 56 54.8			
SFIN	Lafayette comp=Z,4µm,18.0s	110.22	24	IAMs_20	IAMs_20	12 57 48.5			
J54A	Appleton comp=Z,4µm,18.0s	110.23	16	IAMs_20	IAMs_20	12 57 43.3			
N47A	Urbana comp=Z,4µm,20.0s	110.28	22	IAMs_20	IAMs_20	12 53 36.0			
MEDO	Medina comp=Z,4µm,19.0s	110.38	16	IAMs_20	IAMs_20	12 57 15.3			
G65A	Princeton baz=350	110.47	8	P		12 03 42.8			
H61A	Lyndonville baz=346	110.47	11	P		12 03 42.0			
SLM	Saint Louis comp=Z,3µm,18.0s	110.50	27	IAMs_20	IAMs_20	13 00 07.2			
VT1	Waterbury comp=Z,5µm,21.0s	110.52	12	IAMs_20	IAMs_20	12 54 29.0			
CCM	Cathedral Cave comp=Z,4µm,21.0s	110.56	28	IAMs_20	IAMs_20	12 55 39.0			
CCM	Cathedral Cave baz=327	110.56	28	P		12 03 42.6			
NCB	Newcomb comp=Z,4µm,20.0s	110.58	13	IAMs_20	IAMs_20	12 57 11.4			
GGN	Saint George comp=Z,5µm,21.0s	110.63	7	IAMs_20	IAMs_20	12 55 40.4			
J57A	Williamstown comp=Z,5µm,21.0s	110.74	14	IAMs_20	IAMs_20	12 56 29.2			
ABTX	Abilene, Hawle comp=Z,5µm,20.0s	110.76	37	IAMs_20	IAMs_20	13 00 16.3			
ABTX	Abilene, Hawle baz=319	110.77	37	P		12 03 43.4			
WVL	Waterville comp=Z,4µm,21.0s	110.81	9	IAMs_20	IAMs_20	12 55 45.2			
TXAR	Lajitas Array	110.81	42	Pdiff	Pdif	11 59 45.8	+1.3		
	comp=Z,0.4nm,0.9s,baz=307,slow=7.5,SNR=2.4								
TXAR				PKiKP	PKiKP	12 03 43.4	-1.0		
	comp=Z,4.2nm,0.9s,baz=222,slow=1.7,SNR=12								
TXAR	Lajitas Array	110.81	42	PKiKP	PKiKP	12 03 43.8	-0.5		
P46A	Rosedale comp=Z,4µm,18.0s	110.84	24	IAMs_20	IAMs_20	12 59 13.1			
H65A	Eastbrook baz=350	110.88	8	P		12 03 43.7			
ERPA	Erie comp=Z,5µm,22.0s	110.95	18	IAMs_20	IAMs_20	12 53 27.3			
J59A	Piesco comp=Z,4µm,20.0s	111.01	13	IAMs_20	IAMs_20	12 56 21.8			
WVNY	West Valley, N comp=Z,3µm,22.0s	111.05	17	IAMs_20	IAMs_20	12 54 25.0			
M52A	Chesterland comp=Z,4µm,19.0s	111.09	19	IAMs_20	IAMs_20	12 56 56.1			
K56A	Middlesex baz=341	111.10	16	P		12 03 42.8			
HNH	Hanover comp=Z,4µm,19.0s	111.21	11	IAMs_20	IAMs_20	12 55 18.0			
U40A	Yellville baz=326	111.26	30	P		12 03 43.8			
TOC2	Torodi Ar. Sit comp=Z,2µm,22.0s	111.33	296	IAMs_20	IAMs_20	12 56 39.9			
TOC1	Torodi Ar. Sit comp=Z,3µm,22.0s	111.34	296	IAMs_20	IAMs_20	12 56 40.1			
TOC3	Torodi Ar. Sit comp=Z,2µm,21.0s	111.34	296	IAMs_20	IAMs_20	12 56 41.2			
TOA2	Torodi Ar. Sit comp=Z,2µm,22.0s	111.35	296	IAMs_20	IAMs_20	12 56 40.5			
TOB3	Torodi Ar. Sit comp=Z,2µm,21.0s	111.36	296	IAMs_20	IAMs_20	12 56 40.5			
TORD	Torodi Ar. Bea comp=Z,5.3nm,0.8s,baz=17,slow=2.3,SNR=12	111.36	296	PKiKP	PKiKP	12 03 44.0	-1.6		
TORD	Torodi Ar. Bea	111.36	296		PKiKP	12 03 45.0	-0.6		
TOB5	Torodi Ar. Sit comp=Z,2µm,22.0s	111.37	296	IAMs_20	IAMs_20	12 56 40.8			
TOC4	Torodi Ar. Sit comp=Z,2µm,22.0s	111.37	296	IAMs_20	IAMs_20	12 56 40.8			
M53A	WI Miller and comp=Z,4µm,22.0s	111.38	19	IAMs_20	IAMs_20	12 53 11.8			
TOC5	Torodi Ar. Sit comp=Z,2µm,22.0s	111.39	296	IAMs_20	IAMs_20	12 56 40.3			
K58A	Earlville comp=Z,4µm,21.0s	111.43	14	IAMs_20	IAMs_20	12 56 48.0			
K58A	Earlville baz=342	111.44	14	P		12 03 43.5			
I64A	Boothbay baz=348	111.44	9	P		12 03 44.4			
X37A	Clayton comp=Z,3µm,20.0s	111.49	33	IAMs_20	IAMs_20	13 00 49.0			
BLO	Bloomington comp=Z,3µm,20.0s	111.49	24	IAMs_20	IAMs_20	12 58 03.2			
Z35A	Perchaven, San comp=Z,4µm,20.0s	111.51	35	IAMs_20	IAMs_20	12 56 30.9			
M54A	Oil Creek Stat comp=Z,4µm,22.0s	111.60	18	IAMs_20	IAMs_20	12 53 47.7			
P48A	Milroy comp=Z,4µm,20.0s	111.63	23	IAMs_20	IAMs_20	12 57 39.9			
J62A	Henniker baz=346	111.76	11	P		12 03 44.8			
ACSO	Alum Creek Sta comp=Z,5µm,22.0s	111.77	21	IAMs_20	IAMs_20	12 56 23.4			
ACSO	Alum Creek Sta baz=335	111.78	21	P		12 03 44.9			
P49A	Miami Univ. Ec comp=Z,4µm,19.0s	111.82	22	IAMs_20	IAMs_20	12 59 26.7			
SUR	Sutherland comp=Z,3µm,19.0s	111.88	243	IAMs_20	IAMs_20	13 01 29.3			
TRY	Troy comp=Z,4µm,19.0s	111.89	13	IAMs_20	IAMs_20	12 56 19.9			
N53A	Lisbon comp=Z,3µm,19.0s	111.91	19	IAMs_20	IAMs_20	12 57 47.0			
FCAR	Ozark Folk Cen comp=Z,4µm,22.0s	111.98	30	IAMs_20	IAMs_20	13 00 11.6			
M56A	Emporium comp=Z,4µm,20.0s	112.03	17	IAMs_20	IAMs_20	12 55 24.8			
M56A	Emporium baz=340	112.03	17	P		12 03 45.0			
L58A	Harry Jones Me baz=342	112.07	15	P		12 03 44.8			
L59A	Walton comp=Z,3µm,20.0s	112.11	14	IAMs_20	IAMs_20	12 55 46.0			
K62A	Royalston comp=Z,4µm,20.0s	112.23	12	IAMs_20	IAMs_20	12 55 21.9			
O52A	Adamsville comp=Z,4µm,21.0s	112.24	20	IAMs_20	IAMs_20	12 58 59.8			
LCAR	Lake Charles comp=Z,3µm,21.0s	112.26	29	IAMs_20	IAMs_20	12 59 15.1			
JCT	Junction City comp=Z,3µm,21.0s	112.28	39	IAMs_20	IAMs_20	13 00 42.6			
JCT	Junction City baz=318	112.28	39	P		12 03 46.3			
PARMO	Parma comp=Z,4µm,20.0s	112.37	28	IAMs_20	IAMs_20	12 57 09.9			
MIAR	Mount Ida baz=325	112.40	32	P		12 03 45.9			
WCI	Wyandotte Cave comp=Z,3µm,19.0s	112.40	24	IAMs_20	IAMs_20	12 58 42.4			
P51A	Williamsport comp=Z,3µm,22.0s	112.43	21	IAMs_20	IAMs_20	12 54 36.7			
M57A	Sunshine Farm, baz=341	112.44	16	P		12 03 45.4			
WHTX	Lake Whitney, comp=Z,3µm,19.0s	112.44	36	IAMs_20	IAMs_20	13 00 45.6			
HRV	Adam Dziewonsk comp=Z,4µm,20.0s	112.50	11	IAMs_20	IAMs_20	12 55 45.2			
W41B	Gary Mavity, V baz=326	112.51	30	P		12 03 45.9			
PENMO	Penman comp=Z,5µm,21.0s	112.61	28	IAMs_20	IAMs_20	12 57 17.1			
PVMO	Portageville comp=Z,4µm,21.0s	112.61	28	IAMs_20	IAMs_20	12 57 17.1			
O54A	Avella comp=Z,4µm,21.0s	112.62	19	IAMs_20	IAMs_20	12 53 50.8			
Z38A	Mt. Pleasant comp=Z,5µm,21.0s	112.74	34	IAMs_20	IAMs_20	12 56 37.2			
L62A	Suffield comp=Z,4µm,20.0s	112.76	12	IAMs_20	IAMs_20	12 58 27.9			
R49A	Shelbyville comp=Z,3µm,20.0s	112.76	23	IAMs_20	IAMs_20	12 58 25.3			
PEBM	Pemiscott Bayo comp=Z,3µm,19.0s	112.79	28	IAMs_20	IAMs_20	13 01 33.0			
X40A	Basin Creek Fa baz=325	112.80	31	P		12 03 47.1			
GNAR	Gosnell comp=Z,3µm,21.0s	112.85	28	IAMs_20	IAMs_20	12 57 39.6			
KSCT	Kent School, K comp=Z,4µm,19.0s	112.89	13	IAMs_20	IAMs_20	12 55 48.5			
HBAR	Harrisburg comp=Z,3µm,18.0s	112.92	29	IAMs_20	IAMs_20	13 00 07.4			
LPAR	Lepanto comp=Z,3µm,19.0s	113.03	29	IAMs_20	IAMs_20	13 00 09.5			
M60A	Port Jervis baz=343	113.03	14	P		12 03 48.0			
BRYW	Bryant College comp=Z,4µm,21.0s	113.08	11	IAMs_20	IAMs_20	12 54 25.4			
L63A	North Scituate comp=Z,4µm,21.0s	113.12	11	IAMs_20	IAMs_20	12 54 27.5			
Q52A	Bidwell comp=Z,4µm,21.0s	113.16	21	IAMs_20	IAMs_20	13 01 24.0			
T47A	Sharon Grove comp=Z,4µm,20.0s	113.17	25	IAMs_20	IAMs_20	12 56 30.9			
HALT	Halls comp=Z,4µm,20.0s	113.19	28	IAMs_20	IAMs_20	13 01 51.4			
MCWV	Mont Chateau comp=Z,3µm,22.0s	113.27	19	IAMs_20	IAMs_20	12 55 12.7			
M62A	Hamden baz=345	113.28	13	P		12 03 47.9			
WSPT	Westport, CT comp=Z,3µm,19.0s	113.46	13	IAMs_20	IAMs_20	12 56 04.5			
M63A	Gales Ferry comp=Z,4µm,20.0s	113.48	12	IAMs_20	IAMs_20	12 56 08.1			
Q54A	Coxs Mill comp=Z,5µm,22.0s	113.59	20	IAMs_20	IAMs_20	12 59 01.4			
MET	Memphis--Engin comp=Z,3µm,19.0s	113.60	29	IAMs_20	IAMs_20	13 00 26.4			
WVT	Waverly comp=Z,4µm,19.0s	113.63	26	IAMs_20	IAMs_20	13 00 51.0			
WVT	Waverly baz=330	113.63	26	P		12 03 48.1			
QSPA	South Pole Qui comp=Z,2µm,21.0s	113.85	180	IAMs_20	IAMs_20	12 53 37.2			
P57A	Homestead Farm baz=340	113.94	17	P		12 03 48.6			
T50A	Nancy comp=Z,4µm,21.0s	114.01	24	IAMs_20	IAMs_20	12 59 16.9			
Q56A	Snyder Ridge, comp=Z,4µm,20.0s	114.03	18	IAMs_20	IAMs_20	12 56 05.6			
NATX	Nacogdoches comp=Z,4µm,20.0s	114.10	34	IAMs_20	IAMs_20	13 02 06.2			
WUPA	West Chester U comp=Z,3µm,20.0s	114.14	15	IAMs_20	IAMs_20	12 58 25.5			
O61A	Allentown baz=343	114.23	14	P		12 03 50.1			
CLTN	Cedars of Leba comp=Z,4µm,20.0s	114.26	25	IAMs_20	IAMs_20	12 57 03.7			
V48A	Smith Brothers comp=Z,4µm,20.0s	114.37	26	IAMs_20	IAMs_20	13 02 38.7			
R55A	Marlinton comp=Z,3µm,20.0s	114.45	19	IAMs_20	IAMs_20	12 59 25.8			
S54A	Dingess, Beckl baz=336	114.53	21	P		12 03 49.8			
Q58A	Fox Den Farm, baz=340	114.54	17	P		12

FPAL	**Fort Paine**	115.90	26	IAMs_20	IAMs_20	12 57 53.1		
	comp=Z,4µm,21.0s							
V53A	**Saluda**	115.95	23	IAMs_20	IAMs_20	12 57 46.1		
	comp=Z,4µm,20.0s							
W52A	**Murphy**	116.06	24	IAMs_20	IAMs_20	12 55 25.0		
	comp=Z,3µm,22.0s							
X51A	**Calhoun**	116.17	25	IAMs_20	IAMs_20	13 01 01.1		
	comp=Z,3µm,19.0s							
Y49A	**Blount Mountai**	116.17	27	IAMs_20	IAMs_20	12 57 14.3		
	comp=Z,4µm,20.0s							
V55A	**Taylorsville**	116.33	21	IAMs_20	IAMs_20	12 59 07.0		
	comp=Z,4µm,21.0s							
T60A	**Surry**	116.49	17	P		12 03 54.2		
	baz=340							
BG3	**Lake Jocassee**	116.51	23	IAMs_20	IAMs_20	13 02 03.0		
	comp=Z,3µm,19.0s							
LRAL	**Lakeview Retre**	116.64	28	IAMs_20	IAMs_20	13 00 26.8		
	comp=Z,3µm,20.0s							
LRAL	**Lakeview Retre**	116.64	28	P		12 03 54.3		
	baz=330							
KMSC	**Kings Mountain**	116.94	22	IAMs_20	IAMs_20	13 02 36.0		
	comp=Z,4µm,22.0s							
V58A	**Windy Hill, Pi**	117.06	20	IAMs_20	IAMs_20	12 58 05.0		
	comp=Z,4µm,22.0s							
Y52A	**Lilburn**	117.10	25	IAMs_20	IAMs_20	13 00 28.6		
	comp=Z,4µm,20.0s							
Z51A	**Franklin**	117.15	26	IAMs_20	IAMs_20	13 02 29.0		
	comp=Z,4µm,20.0s							
HODGE	**Hodges**	117.44	23	IAMs_20	IAMs_20	12 57 50.4		
	comp=Z,5µm,22.0s							
BIRD	**Birdtown, Kers**	117.68	21	IAMs_20	IAMs_20	13 02 09.7		
	comp=Z,5µm,22.0s							
GOGA	**Godfrey**	117.73	24	IAMs_20	IAMs_20	13 00 35.2		
	comp=Z,4µm,20.0s							
GOGA	**Godfrey**	117.73	24	P		12 03 56.8		
	baz=333							
JSC	**Jenkinsville**	117.74	22	IAMs_20	IAMs_20	13 04 20.4		
	comp=Z,2µm,22.0s							
250A	**Grady**	117.86	28	IAMs_20	IAMs_20	13 01 24.8		
	comp=Z,4µm,20.0s							
152A	**Waverly Hall**	117.90	26	IAMs_20	IAMs_20	12 59 06.5		
	comp=Z,4µm,21.0s							
Y57A	**Sumter**	118.28	22	IAMs_20	IAMs_20	13 04 22.2		
	comp=Z,4µm,22.0s							
NHSC	**New Hope**	119.18	22	IAMs_20	IAMs_20	12 56 52.1		
	comp=Z,4µm,22.0s							
NVL	**N'lazarevskaya**	119.30	201	*e*PKIKP	PKiKP	12 04 08.4	+9.2	
NVL				pmax	pmax			
	comp=Z,22nm,1.2s							
255A	**Hazlehurst**	119.42	24	IAMs_20	IAMs_20	12 57 51.8		
	comp=Z,3µm,21.0s							
TIGA	**Tifton**	119.43	26	IAMs_20	IAMs_20	13 02 13.0		
	comp=Z,3µm,20.0s							
DBIC	**Dimbokro**	120.27	294	PKP	**PKPdf**	12 04 01.6	-1.1	
	comp=Z,4.4nm,0.4s,baz=22,slow=1.3,SNR=12							
DBIC	**Dimbokro**	120.27	294	PKPdf	**PKPdf**	12 04 02.2	-0.5	
456A	**Hilliard**	120.67	25	IAMs_20	IAMs_20	12 58 27.8		
	comp=Z,4µm,21.0s							
UNM	**Universidad Na**	120.76	47	IAMs_20	IAMs_20	13 06 05.8		
	comp=Z,3µm,21.0s							
656A	**Willston**	121.68	26	IAMs_20	IAMs_20	13 03 19.7		
	comp=Z,3µm,20.0s							
TLIG	**Tlapa**	122.41	48		**PKPdf**	12 04 06.9	0.0	
BBSR	**BB Station**	123.46	7	IAMs_20	IAMs_20	13 03 34.6		
	comp=Z,3µm,21.0s							
SNAA	**Sanae**	123.50	198	PKPdf	**PKiKP**	12 04 08.2	+0.6	
SNAA	**Sanae**	123.50	198	PKP	**PKPdf**	12 04 06.1	-1.2	
	comp=Z,3.1nm,1.0s,baz=176,slow=5.5,SNR=6.8							
SNAA	**Sanae**	123.50	198		**PKiKP**	12 04 07.8	+0.3	
SNAA				IAMs_20	IAMs_20	13 05 06.1		
	comp=Z,2µm,22.0s							
060A	**Indiantown**	124.61	25	IAMs_20	IAMs_20	13 06 11.2		
	comp=Z,3µm,22.0s							
BELA	**Belgrano 2**	125.05	186		**PKPdf**	12 04 09.1	-0.9	
VNA2	**Neumayer--Watz**	125.14	198	PKPdf	**PKPdf**	12 04 10.4	+0.1	
CMIG	**Matias Romero**	125.19	45	PKP	**PKPdf**	12 04 10.9	-1.2	
	comp=Z,12nm,0.9s,baz=301,slow=2.2,SNR=17							
VNA1	**Neumayer--Stat**	125.53	198	PKPdf	**PKiKP**	12 04 11.4	0.0	
VNA3	**Neumayer Olymp**	125.60	197	PKPdf	**PKiKP**	12 04 12.1	+0.5	
TEIG	**Tepich**	126.75	37	IAMs_20	IAMs_20	13 08 33.1		
	comp=Z,2µm,21.0s							
CCIG	**Comitan**	127.55	43	IAMs_20	IAMs_20	13 09 35.2		
	comp=Z,2µm,20.0s							
PETF	**Flores**	128.46	41	IAMs_20	IAMs_20	13 09 02.9		
	comp=Z,3µm,21.0s							
HUEH	**Huehuetenango**	128.67	44	IAMs_20	IAMs_20	13 11 45.0		
	comp=Z,3µm,21.0s							
APG	**El Apazote**	129.56	43	PKP	**PKPdf**	12 04 20.0	-0.8	
	comp=Z,3.6nm,0.4s,baz=312,slow=2.1,SNR=5.5							
MTO3	**Montecristo**	130.71	42	IAMs_20	IAMs_20	13 13 25.8		
	comp=Z,2µm,22.0s							
GTBY	**Guantanamo Bay**	133.03	23	IAMs_20	IAMs_20	13 07 08.1		
	comp=Z,3µm,22.0s							
MTDJ	**Mount Denham**	133.65	27	IAMs_20	IAMs_20	13 11 08.8		
	comp=Z,2µm,22.0s							
BOAB	**BOACO BROADBA**	134.46	40		**PKPdf**	12 04 28.7	-1.0	
ACON	**Acoyapa**	135.13	40		**PKPdf**	12 04 31.2	+0.3	
ESPN	**Las Esperanzas**	135.46	39	IAMs_20	IAMs_20	13 17 16.1		
	comp=Z,2µm,20.0s							
JTS	**Las Juntas de**	136.59	41	PKIKP	**PKPdf**	12 04 33.9	+0.2	
JTS	**Las Juntas de**	136.59	41		**PKPdf**	12 04 33.9	+0.2	
JTS	**Las Juntas de**	136.59	41	IAMs_20	IAMs_20	13 18 46.4		
	comp=Z,2µm,22.0s							
CAO2	**Cobano, Puntar**	136.97	42	IAMs_20	IAMs_20	13 16 37.5		
	comp=Z,2µm,19.0s							
SJG	**San Juan**	137.24	12	IAMs_20	IAMs_20	13 13 30.9		
	comp=Z,3µm,22.0s							
HDC	**Heredia**	137.32	41	IAMs_20	IAMs_20	13 18 25.7		
	comp=Z,3µm,20.0s							
ANWB	**Willy Bob**	138.31	6	IAMs_20	IAMs_20	13 15 49.9		
	comp=Z,3µm,22.0s							
SEUS	**St. Eustatius**	138.35	8	IAMs_20	IAMs_20	13 10 24.0		
	comp=Z,3µm,21.0s							
BCIP	**Isla Barro Col**	140.42	36	IAMs_20	IAMs_20	13 16 10.4		
	comp=Z,3µm,21.0s							
PAYG	**Puerto Ayora**	140.65	59	IAMs_20	IAMs_20	13 19 51.2		
	comp=Z,2µm,19.0s							
CRJC	**Cerrejon, Guaj**	142.03	25	*e*P	**PKPdf**	12 04 40.9	-2.9	
SMLC	**San Martn de**	143.55	28	*e*P	PKPab	12 04 42.8	+0.1	
GRGR	**Grenville**	143.80	7	IAMs_20	IAMs_20	13 18 53.3		
	comp=Z,1µm,21.0s							
ZARC	**Zaragoza, Cauc**	144.36	30	*e*P	**PKPab**	12 04 44.0	-1.7	
OCAC	**Ocana**	144.38	28	*e*P	PKPbc	12 04 46.4	+0.1	
TOSP	**Speyside**	144.73	5	IAMs_20	IAMs_20	13 09 39.9		
	comp=Z,2µm,21.0s							
SDV	**Santo Domingo**	144.83	23		**PKPab**	12 04 47.6	-0.1	
SDV	**Santo Domingo**	144.83	23	IAMs_20	IAMs_20	13 12 36.0		
	comp=Z,3µm,21.0s							
HELC	**Santa Helena**	145.17	33	*e*P	**PKPbc**	12 04 48.0	-1.2	
CBOC	**Ciudad Bolivar**	145.21	34	*e*P	**PKPbc**	12 04 47.8	-1.3	
BRRC	**Barranca, Sant**	145.22	29	*e*P	**PKPbc**	12 04 48.1	-0.8	
PCRV	**Puerto La Cruz**	145.26	12	PKPbc	**PKPbc**	12 04 48.0	-1.0	
	comp=Z,44nm,0.4s,baz=332,slow=1.3,SNR=23							
PLCV	**Puerto La Cruz**	145.29	12		**PKPbc**	12 04 48.0	-1.0	
PTBC	**PUERTO BERRIO**	145.38	31	*e*P	**PKPbc**	12 04 47.6	-1.8	
BARC	**Barichara**	145.91	29	*e*P	**PKPdf**	12 04 50.4	-0.4	
NORC	**Norcasia**	146.03	32	*e*P	**PKPdf**	12 04 50.1	-0.6	
MALC	**Bahia Malaga**	146.07	37	*e*P	**PKPab**	12 04 52.6	+0.5	
GUY2C	**Guyana, Caldas**	146.08	33	*e*P	**PKPdf**	12 04 51.0	-0.3	
SPBC	**San Pablo de B**	146.34	31	*e*P	**PKPdf**	12 04 51.8	+0.5	
RUSC	**La Rusia**	146.58	29	*e*P	**PKPbc**	12 04 53.0	-0.7	
YOTC	**Yotoco, Valle**	146.63	36	*e*P	**PKPdf**	12 04 52.4	+0.5	
TOLC	**Tolima**	146.65	34	*e*P	**PKPbc**	12 04 52.9	-0.8	
ROSC	**El Rosal**	146.93	32	PKPbc	**PKPdf**	12 04 53.2	+0.5	
	comp=Z,87nm,0.8s,baz=14,slow=6.0,SNR=12							
ROSC	**El Rosal**	146.93	32		**PKPbc**	12 04 53.6	-0.9	
ROSC				IAMs_20	IAMs_20	13 17 16.3		
	comp=Z,3µm,21.0s							
ROSC	**El Rosal**	146.93	32	*e*P	**PKPbc**	12 04 54.7	+0.1	
ORTC	**Ortega, Tolima**	147.27	34	*e*P	**PKPdf**	12 04 53.2	+0.4	
VILC	**Villavicencio,**	147.86	32	*e*P	**PKPbc**	12 04 56.4	-0.4	
PCON	**Cinco Dias**	147.98	38	*e*P	**PKPdf**	12 04 54.7	+0.1	
SOTA	**Rioblanco**	148.02	38	*e*P	**PKPbc**	12 04 56.7	-1.0	
BETC	**Betania**	148.21	36	*e*P	**PKPbc**	12 04 56.1	-1.6	
CRUC	**La Cruz**	148.28	39	*e*P	**PKPbc**	12 04 57.8	-0.5	
GCUF	**Volcan Galeras**	148.33	40	*e*P	**PKPdf**	12 04 55.3	+0.2	
OTAV	**Otavalo**	148.44	43	PKIKP	**PKPdf**	12 04 54.8	-0.5	
OTAV	**Otavalo**	148.44	43		**PKPdf**	12 04 54.8	-0.5	
OTAV	**Otavalo**	148.44	43	IAMs_20	IAMs_20	13 21 48.3		
	comp=Z,2µm,21.0s							
GARC	**Garzon, Huila**	148.59	36	*e*P	**PKPbc**	12 04 57.5	-1.4	
MACC	**Macarena, Meta**	149.49	34	*e*P	**PKPdf**	12 04 56.5	+0.1	
MG05	**Puerto Natales**	150.12	161		**PKPbc**	12 05 01.0	-0.2	
GO09	**Cerro Castillo**	150.53	161		**PKPbc**	12 05 02.5	+0.3	
MDP	**Montagnes des**	150.62	350	PKPbc	**PKPbc**	12 05 02.7	-0.9	
	comp=Z,49nm,0.9s,baz=340,slow=2.4,SNR=11							
PTLC	**Puerto Leguiza**	150.65	37	*e*P	**PKPbc**	12 05 03.7	0.0	
PTLC				*e*P	**sPKPdf**	12 05 09.4	-0.8	
RCBR	**Riachuelo**	152.43	308	PKIKP	**PKPdf**	12 05 01.2	+0.3	
RCBR						12 05 17.6		
RCBR	**Riachuelo**	152.43	308	PKPdf	**PKPdf**	12 05 01.2	+0.3	
RCBR				PKPab	**PKPab**	12 05 17.6	-0.3	
RCBR	**Riachuelo**	152.43	308	IAMs_20	IAMs_20	13 28 21.0		
	comp=Z,3µm,22.0s							
RCBR	**Riachuelo**	152.43	308	*e*P	**PKPdf**	12 05 01.6	+0.7	
NBCL	**Cascavel-CE**	152.94	314	*e*P	**PKPdf**	12 05 03.7	+2.1	
NBPA	**Parau_RN**	153.24	310	*e*P	**PKPdf**	12 05 03.2	+1.2	
NBMO	**Morrinhos-CE**	153.35	318	*e*P	**PKPdf**	12 05 01.8	-0.4	
BOAV	**Boa Vista**	153.54	7	*e*P	**PKPdf**	12 05 03.1	+0.6	
NBRF	**Rio Formoso -**	153.70	302	*e*P	**PKPdf**	12 05 03.9	+1.3	
ATAH	**Atahualpa**	153.84	53	PKP	**PKPdf**	12 05 03.2	-0.2	
	comp=Z,16nm,0.9s,baz=327,slow=4.8,SNR=6.5							
NBLI	**Livramento-PB**	154.23	307	*e*P	**PKPdf**	12 05 04.9	+1.4	
NBPB	**Pedra_Branca-C**	154.77	314	*e*P	**PKPdf**	12 05 04.6	+0.4	
NBAN	**Anadia - AL**	155.19	302	*e*P	**PKPdf**	12 05 07.1	+2.3	
NBMA	**Muriti-CE**	155.53	310	*e*P	**PKPdf**	12 05 06.1	+0.8	
MCPB	**Macapa, AP**	155.85	347	*e*P	**PKPdf**	12 05 06.4	+0.7	
MCPB	**Macapa, AP**	155.85	347	*e*P	**PKPdf**	12 05 06.2	+0.5	
NBTA	**Tacaratu-PE**	156.21	305	*e*P	**PKPdf**	12 05 06.2	+0.1	
TMAB	**Tom-Au,PA,Br**	156.59	336	*e*P	**PKPdf**	12 05 07.8	+1.1	
TMAB	**Tom-Au,PA,Br**	156.59	336	*e*P	**PKPdf**	12 05 07.9	+1.2	
PTGA	**Pitinga**	156.68	6	PKP	**PKPdf**	12 05 06.1	-0.7	
	comp=Z,6.9nm,0.9s,baz=52,slow=2.3,SNR=7.8							
PTGA				PKPab	**PKPab**	12 05 33.8	-2.0	
	comp=Z,21nm,0.8s,baz=9.3,slow=7.5,SNR=12							
PTGA	**Pitinga**	156.68	6	PKPdf	**PKPdf**	12 05 05.7	-1.1	
PTGA	**Pitinga**	156.68	6	*e*P	**PKPdf**	12 05 06.7	-0.1	
LL02	**Futaleuf**	157.56	152	PKPdf	**PKPdf**	12 05 06.8	-0.2	
LL02				PKPab	**PKPab**	12 05 39.5	+0.6	
MALB	**Monte Alegre**	157.70	351	*e*P	**PKPdf**	12 05 08.1	+0.1	
LL01	**San Ignacio de**	157.95	150	IAMs_20	IAMs_20	13 28 43.8		
	comp=Z,2µm,21.0s							
NBPN	**Ponto Novo - B**	158.93	306	*e*P	**PKPdf**	12 05 08.9	-0.6	
PLCA	**Paso Flores**	160.10	150	PKP	**PKPdf**	12 05 10.9	+0.7	
	comp=Z,1.8nm,0.8s,baz=231,slow=23,SNR=2.9							
PLCA				PKPab	**PKPab**	12 05 47.9	-2.3	
	comp=Z,4.4nm,1.0s,baz=143,slow=1.8,SNR=3.6							
PLCA	**Paso Flores**	160.10	150		**PKPab**	12 05 51.3	+1.1	
GDU01	**Guandu, BA**	160.18	298	*e*P	**PKPdf**	12 05 11.8	+0.8	
ITTB	**Itaituba**	160.34	355	*e*P	**PKPdf**	12 05 11.4	+0.2	
NBIT	**Itapeh - BA**	160.71	295	*e*P	**PKPdf**	12 05 12.3	+0.9	
PRPB	**Parauapebas**	160.73	336	*e*P	**PKPdf**	12 05 11.8	+0.1	
CMC01	**Camacan, BA**	160.99	294	*e*P	**PKPdf**	12 05 10.9	-0.9	
GUA01	**Guaratinga, BA**	161.81	291	*e*P	**PKPdf**	12 05 13.1	+0.5	
SMTB	**Santa Maria do**	162.15	326	*e*P	**PKPdf**	12 05 13.5	+0.4	
NAN01	**Guarapari, ES**	162.63	288	*e*P	**PKPdf**	12 05 13.8	+0.4	
BI02	**San Fabin de**	162.74	140		**PKPdf**	12 05 13.0	-0.1	
NPGB	**Novo Progresso**	162.95	353	*e*P	**PKPdf**	12 05 14.0	+0.1	
SDBA	**SAO DESIDERIO**	163.35	312	*e*P	**PKPdf**	12 05 14.2	0.0	
MT01	**Popeta**	164.53	132	PKPdf	**PKPdf**	12 05 14.7	-0.1	
MT01					**PKPab**	12 06 10.4	+0.8	
JANB	**Januaria**	164.68	303	*e*P	**PKPdf**	12 05 15.7	+0.2	
PEXB	**Peixe**	165.24	322	*e*P	**PKPdf**	12 05 16.7	+0.8	
PEXB	**Peixe**	165.24	322	*e*P	**PKPdf**	12 05 16.3	+0.4	
DUB01	**Friburgo-RJ**	165.93	275	*e*P	**PKPdf**	12 05 17.0	+0.7	
CO03	**El Pedregal**	166.50	123	PKPdf	**PKPdf**	12 05 16.1	-0.5	
CO03					**PKPab**	12 06 19.6	+0.9	
SNDB	**Serra Nova Dou**	166.60	333	*e*P	**PKPdf**	12 05 16.9	-0.1	
CLDB	**Colider**	166.78	353	*e*P	**PKPdf**	12 05 17.6	+0.4	
VAS01	**Vassouras-RJ**	166.94	275	*e*P	**PKPdf**	12 05 17.9	+0.9	
LCO	**Las Campanas**	167.21	115	PKIKP	**PKPdf**	12 05 17.8	+0.4	
LCO	**Las Campanas**	167.21	115		**PKPdf**	12 05 17.8	+0.4	
LPAZ	**La Paz**	167.39	54	PKP	**PKPdf**	12 05 18.4	+0.1	
	comp=Z,23nm,1.0s,baz=9.7,slow=2.6,SNR=50							
LPAZ				PKPab	**PKPab**	12 06 21.5	-2.0	
	comp=Z,13nm,0.9s,baz=360,slow=6.3,SNR=5.6							
LPAZ	**La Paz**	167.39	54		**PKPdf**	12 05 18.7	+0.4	
LPAZ	**La Paz**	167.39	54	*e*P	**PKPdf**	12 05 19.0	+0.8	
MAN01	**Angra dos Reis**	167.51	273	*e*P	**PKPdf**	12 05 18.3	+0.8	
MNMC	**Minye Minye**	167.74	69		**PKPdf**	12 05 18.9	+0.9	
BDFB	**Brasilia**	167.75	311	PKP	**PKPdf**	12 05 17.4	-0.5	
	comp=Z,17nm,1.0s,baz=138,slow=2.9,SNR=14							
BDFB				PKPab	**PKPab**	12 06 22.5	-1.9	
	comp=Z,17nm,0.8s,baz=63,slow=3.0,SNR=9.4							
BDFB	**Brasilia**	167.75	311		**PKPdf**	12 05 17.6	-0.3	
BDFB				PKPab	**PKPab**	12 06 24.3	-0.1	
PB11	**IPOC Station P**	167.94	72		**PKPdf**	12 05 18.6	+0.6	
PB11					**PKPab**	12 05 25.1	-0.3	
PB10	**IPOC Station P**	168.04	90		**PKPdf**	12 05 17.9	+0.1	
PB14	**IPOC Station P**	168.23	95		**PKPdf**	12 05 18.9	+0.5	
PB07	**IPOC Station P**	168.36	81		**PKPdf**	12 05 19.1	+0.9	
PB08	**IPOC Station P**	168.53	72		**PKPdf**	12 05 19.5	+0.8	
PB08					**PKPab**	12 06 28.9	+0.6	
PB01	**IPOC Station P**	168.53	77		**PKPdf**	12 05 19.3	+1.0	
PB01					**PKPab**	12 06 28.3	+0.3	
PB06	**IPOC Station P**	168.84	85		**PKPdf**	12 05 19.0	+0.5	
GO02	**Mina Guanaco**	168.96	98		**PKPdf**	12 05 19.8	+1.0	
PB09	**IPOC Station P**	168.96	81		**PKPdf**	12 05 19.8	+1.1	
PB15	**IPOC Station P**	169.00	88		**PKPdf**	12 05 19.1	+0.4	
PARB	**Paraibuna**	169.08	271	*e*P	**PKPdf**	12 05 17.6	-1.0	
AC02	**Maricunga**	169.15	107		**PKPdf**	12 05 19.9	+0.8	
AC02				PKPab	**PKPab**	12 06 30.4	-0.7	
LPA	**La Plata**	169.19	178	PKIKP	**PKPdf**	12 05 23.9	+5.7	
IPMB	**Ipameri, GO**	169.42	303	*e*P	**PKPdf**	12 05 21.1	+2.2	
LVC	**Limon Verde**	169.43	84	PKIKP	**PKPdf**	12 05 20.0	+0.8	
LVC	**Limon Verde**	169.43	84		**PKPdf**	12 05 20.8	+0.8	
LVC				PKPab	**PKPab**	12 06 33.1	+0.9	
ARAG	**Araguaiana, MT**	170.11	326	*e*P	**PKPdf**	12 05 20.5	+1.2	
SIV	**San Ignacio**	171.30	23	PKP	**PKPdf**	12 05 19.7	-0.3	
	comp=Z,27nm,1.0s,baz=137,slow=0.4,SNR=18							
SIV				PKPab	**PKPab**	12 06 37.9	-2.0	
	comp=Z,16nm,1.0s,baz=3.1,slow=3.3,SNR=6.8							
AQDB	**Aquidauana**	176.05	334	*e*P	**PKPdf**	12 05 23.2	+1.6	
CPUP	**Villa Florida**	177.74	184	PKP	**PKPdf**	12 05 20.7	-1.0	
	comp=Z,3.2nm,0.9s,baz=182,slow=1.7,SNR=5.3							
CPUP	**Villa Florida**	177.74	184		**PKPdf**	12 05 21.8	+0.1	
CPUP				PKPab	PKPab	12 07 07.5	-0.6	

*IDC **20** 11:53:08.6±6.5, 23.94N×122.19E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/37, mbtmp3.7/3 Error ellipse: s-maj=455.4km s-min=28.6km az=60.0*
*TAP **20** 11:53:11.7, 23.97N×122.51E, h38km, ML4.1, D*
*JMA **20** 11:53:11.5±0.2, 23.92N×122.50E, h25km±4km, M3.1*
ISC 20 11:53:11.6±0.8, 23.93N±0.03×122.50E±0.03, h22km±6km, n106, σ1§25/201, mb3.8/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	0.66	39	P	**Pb**	11 53 24.2	-0.2
JYNG				*e*S	**Sb**	11 53 33.0	-0.2
YOJ	**Yonaguni jima**	0.71	42	P	**Pb**	11 53 25.0	-0.2
YOJ				*e*S	**Sb**	11 53 34.4	-0.1
YOJ	**Yonaguni jima**	0.71	42	P	**Pb**	11 53 24.6	-0.6
	baz=42						
YOJ				*e*S	**Sb**	11 53 35.7	+1.2
	baz=42						
HWA	**Hwalien**	0.81	273	P	**Pn**	11 53 27.7	-0.1
	baz=260						
HWA				*i* S	**Sn**	11 53 38.4	-0.7
	baz=260						
EWUT	**Wuta**	0.83	308	*i* P	**Pn**	11 53 26.6	-1.3
	baz=305						
EWUT				*i* S	**Sn**	11 53 37.5	-2.1
	baz=305						
TWD	**Chiawan**	0.83	280	*i* P	**Pn**	11 53 27.3	-0.7
	baz=277						
TWD				S	**Sn**	11 53 37.5	-2.1
	baz=277						
NACB	**Ninganchiao**	0.86	286	P	**Pn**	11 53 27.5	-0.9
	baz=272						
NACB				S	**Sn**	11 53 38.5	-1.7
	baz=272						
TWC	**Suao**	0.89	319	*i* P	**Pn**	11 53 27.1	-1.7
	baz=308						
TWC				S	**Sn**	11 53 38.2	-2.9
	baz=308						
ETLH	**Xiulin Townshi**	0.96	287	P	**Pn**	11 53 29.9	-0.1
	baz=275						
ETLH				S	**Sn**	11 53 41.8	-1.3
	baz=275						
ESL	**Shilin**	0.98	263	*i* P	**Pn**	11 53 28.3	-1.8
	baz=254						
ESL				S	**Sn**	11 53 42.5	-0.7
	baz=254						
NDS	**Dongshan**	0.99	315	*i* P	**Pn**	11 53 29.6	-0.7
	baz=312						
NDS				S	**Sn**	11 53 42.8	-0.8
	baz=312						
EGFH	**Guangfu**	1.01	255	*i* P	**Pn**	11 53 29.4	-1.0
	baz=243						
EGFH				*e*S	**Sn**	11 53 42.1	-1.9
	baz=243						
ILA	**Ilan**	1.07	321	P	**Pn**	11 53 31.3	0.0
	baz=309						
ILA				S	**Sn**	11 53 46.2	+0.7
	baz=309						
HGSD	**Ruisui**	1.08	246	P	**Pn**	11 53 30.2	-1.1
	baz=244						
HGSD				S	**Sn**	11 53 43.1	-2.5
	baz=244						
TWE	**Neicheng**	1.09	316	*i* P	**Pn**	11 53 30.9	-0.6
	baz=314						
TWE				S	**Sn**	11 53 46.2	+0.3
	baz=314						
NTC	**Toucheng**	1.10	327	*i* P	**Pn**	11 53 31.7	0.0
	baz=324						
NTC				S	**Sn**	11 53 45.8	-0.4
	baz=324						
ENTT	**Nioudou**	1.10	310	*i* P	**Pn**	11 53 31.2	-0.5
	baz=296						
ENTT				S	**Sn**	11 53 44.5	-1.8
	baz=296						
NDT	**Datong Townshi**	1.12	307	P	**Pn**	11 53 32.0	+0.1
	baz=294						
NDT				S	**Sn**	11 53 45.4	-1.3
	baz=294						
NNSB	**Datong**	1.13	296	P	**Pn**	11 53 31.7	-0.5
	baz=284						
NNSB				S	**Sn**	11 53 46.2	-0.9
	baz=284						
NNSH	**Datong**	1.13	296	*i* P	**Pn**	11 53 31.6	-0.6
	baz=285						
NNSH				S	**Sn**	11 53 46.1	-1.0
	baz=285						
NNS	**Nan Shan**	1.14	296	*i* P	**Pn**	11 53 31.8	-0.6
	baz=285						
NNS				S	**Sn**	11 53 46.2	-1.3
	baz=285						
WHF	**Hehuan Shan**	1.14	281	*i* P	**Pn**	11 53 32.0	-0.6
	baz=278						
WHF				S	**Sn**	11 53 46.7	-1.2
	baz=278						
TWB1	**Santiao Chiao**	1.17	337	*i* P	**Pn**	11 53 31.6	-0.9
	baz=349						
TWB1				S	**Sn**	11 53 47.2	-0.6
	baz=349						
FUSS	**Fushou**	1.19	286	*i* P	**P

YM11				*e*S	**Sn**	**11 53 54.4**	**-1.5**
	baz=324								
YM05	**YM05**	**1.49 326**	P		**Pn**	**11 53 36.5**	**-0.6**
	baz=324								
YM05				*e*S	**Sn**	**11 53 54.5**	**-1.4**
	baz=324								
YM04	**YM04**	**1.50 324**	P		**Pn**	**11 53 37.1**	**-0.1**
	baz=336								
YM04				*e*S	**Sn**	**11 53 53.9**	**-2.2**
	baz=336								
YM08	**YM08**	**1.50 327**	P		**Pn**	**11 53 35.8**	**-1.4**
	baz=325								
YM08				*e*S	**Sn**	**11 53 54.8**	**-1.2**
	baz=325								
TYC	**Yuchr**	**1.50 269**	*i* P		**Pn**	**11 53 37.6**	**+0.5**
	baz=267								
TYC				S	**Sn**	**11 53 55.8**	**-0.2**
	baz=267								
NJD	**Zhudong**	**1.51 302**	P		**Pn**	**11 53 36.6**	**-0.7**
	baz=300								
NJD				S	**Sn**	**11 53 58.4**	**+2.0**
	baz=300								
TWS1	**Kuangyinshan**	**1.52 320**	*i* P		**Pn**	**11 53 38.1**	**+0.6**
	baz=332								
TWS1				S	**Sn**	**11 53 58.2**	**+1.6**
	baz=332								
NTY	**Taoyuan**	**1.52 314**	*e*S		**Sn**	**11 53 58.3**	**+1.7**
	baz=313								
WHYT	**Xinyi Township**	**1.52 261**	P		**Pn**	**11 53 37.5**	**0.0**
	baz=249								
WHYT				S	**Sn**	**11 53 57.5**	**+0.8**
	baz=249								
LIOB	**Emei**	**1.52 298**	*i* P		**Pn**	**11 53 38.2**	**+0.6**
	baz=295								
LIOB				S	**Sn**	**11 53 56.5**	**-0.2**
	baz=295								
ANP	**Anpu**	**1.53 325**	*i* P		**Pn**	**11 53 37.1**	**-0.6**
	baz=323								
NSTT	**Nanjuang**	**1.53 297**	*i* P		**Pn**	**11 53 37.7**	**+0.1**
	baz=295								
NSTT				*i* S	**Sn**	**11 53 57.0**	**+0.1**
	baz=295								
NTST	**Danshui**	**1.55 322**	*e*S		**Sn**	**11 53 56.3**	**-1.0**
	baz=334								
JIJ	**Ishigaki jima**	**1.56 74**	P		**Pn**	**11 53 38.6**	**+0.5**
JIJ				*e*S	**Sn**	**11 53 57.9**	**+0.2**
TWY	**Chenhua**	**1.56 329**	P		**Pn**	**11 53 38.3**	**+0.2**
	baz=327								
TWY				*e*S	**Sn**	**11 53 56.7**	**-1.0**
	baz=327								
LDUT	**Ludao**	**1.57 217**	*i* P		**Pn**	**11 53 37.2**	**-0.9**
	baz=216								
LDUT				*i* S	**Sn**	**11 53 56.1**	**-1.7**
	baz=216								
NCU	**National Centr**	**1.58 311**	*e*S		**Sn**	**11 53 57.8**	**-0.1**
	baz=309								
NCUH	**Zhongli**	**1.58 311**	P		**Pn**	**11 53 38.7**	**+0.5**
	baz=309								
NCUH				*e*S	**Sn**	**11 53 59.0**	**+1.0**
	baz=309								
HSN1	**Hsinchu**	**1.59 302**	P		**Pn**	**11 53 39.9**	**+1.5**
	baz=300								
HSN1				S	**Sn**	**11 53 59.7**	**+1.4**
	baz=300								
ALS	**Alishan**	**1.60 255**	*i* P		**Pn**	**11 53 38.9**	**0.0**
	baz=253								
ALS				S	**Sn**	**11 53 59.5**	**+0.4**
	baz=253								
LONT	**Longtian**	**1.62 231**	P		**Pn**	**11 53 38.2**	**-0.6**
	baz=242								
LONT				S	**Sn**	**11 53 58.5**	**-0.5**
	baz=242								
SBCB	**Hsinchu**	**1.62 302**	P		**Pn**	**11 53 39.0**	**+0.2**
	baz=300								
SBCB				S	**Sn**	**11 54 01.3**	**+2.2**
	baz=300								
WJS	**Zhushan**	**1.62 266**	*i* P		**Pn**	**11 53 39.9**	**+1.0**
	baz=264								
WJS				S	**Sn**	**11 54 01.2**	**+2.1**
	baz=264								
TWQ1	**Liyutan**	**1.63 285**	*i* P		**Pn**	**11 53 40.6**	**+1.7**
	baz=282								
TWQ1				*i* S	**Sn**	**11 54 01.3**	**+2.0**
	baz=282								
HSN	**Hsinchu**	**1.64 302**	S		**Sn**	**11 53 59.9**	**+0.4**
	baz=301								
WWF	**Wufeng**	**1.65 274**	P		**Pn**	**11 53 39.9**	**+0.7**
	baz=271								
WWF				S	**Sn**	**11 54 02.2**	**+2.5**
	baz=271								
NSY	**Sanyi**	**1.66 287**	*i* P		**Pn**	**11 53 40.6**	**+1.3**
	baz=284								
NSY				S	**Sn**	**11 54 01.5**	**+1.5**
	baz=284								
WNT	**Mingjian**	**1.66 268**	*i* P		**Pn**	**11 53 40.6**	**+1.3**
	baz=266								
WNT				*i* S	**Sn**	**11 54 01.5**	**+1.5**
	baz=266								
NJN	**Zhunan**	**1.66 297**	S		**Sn**	**11 54 01.1**	**+1.1**
	baz=294								
TCU	**Taichung**	**1.68 278**	P		**Pn**	**11 53 42.0**	**+2.4**
	baz=275								
TCU				S	**Sn**	**11 54 02.4**	**+1.9**
	baz=275								
CHN5	**Tsauling**	**1.70 259**	*i* P		**Pn**	**11 53 41.1**	**+1.1**
	baz=249								
CHN5				*i* S	**Sn**	**11 54 02.1**	**+1.0**
	baz=249								
TWGBT	**Beinan**	**1.71 230**	P		**Pn**	**11 53 39.4**	**-0.7**
	baz=240								
TWGBT				S	**Sn**	**11 53 59.7**	**-1.6**
	baz=240								
TWG	**Pinlang**	**1.71 230**	*i* P		**Pn**	**11 53 39.2**	**-0.9**
	baz=240								
TWG				*i* S	**Sn**	**11 54 00.1**	**-1.3**
	baz=240								
PCYT	**Pengchaiyu**	**1.73 347**	P		**Pn**	**11 53 39.5**	**-0.9**
	baz=347								
WDJ	**Dajia District**	**1.74 284**	P		**Pn**	**11 53 42.6**	**+2.0**
	baz=281								
WDJ				S	**Sn**	**11 54 03.4**	**+1.3**
	baz=281								
STYH	**Taoyuan**	**1.75 245**	*i* P		**Pn**	**11 53 40.3**	**-0.3**
	baz=236								
STYH				S	**Sn**	**11 54 02.9**	**+0.6**
	baz=236								
STYT	**Tauyuan**	**1.77 245**	*i* P		**Pn**	**11 53 41.3**	**+0.3**
	baz=236								
STYT				*e*S	**Sn**	**11 54 02.4**	**-0.5**
	baz=236								
WCHH	**Zhanghua**	**1.78 275**	P		**Pn**	**11 53 42.7**	**+1.7**
	baz=285								
WCHH				*i* S	**Sn**	**11 54 04.9**	**+2.0**
	baz=285								
JISG	**Ishigakijimahi**	**1.78 68**	P		**Pn**	**11 53 42.1**	**+1.1**
WGK	**Gukeng**	**1.79 262**	P		**Pn**	**11 53 42.7**	**+1.5**
	baz=260								
WGK				*e*S	**Sn**	**11 54 03.9**	**+0.7**
	baz=260								
WDLH	**Douliu**	**1.81 263**	*i* P		**Pn**	**11 53 42.7**	**+1.2**
	baz=260								
WDLH				*i* S	**Sn**	**11 54 06.5**	**+2.8**
	baz=260								
TPUB	**Ta-pu**	**1.82 250**	P		**Pn**	**11 53 42.6**	**+0.9**
	baz=248								
TPUB				S	**Sn**	**11 54 06.2**	**+2.1**
	baz=248								
CHN4	**Tsaushan**	**1.84 252**	*i* P		**Pn**	**11 53 43.2**	**+1.4**
	baz=250								
CHN4				*i* S	**Sn**	**11 54 07.2**	**+2.7**
	baz=250								
WTP	**Ta-pu**	**1.86 249**	*i* P		**Pn**	**11 53 43.0**	**+0.9**
	baz=237								
WTP				*i* S	**Sn**	**11 54 06.5**	**+1.6**
	baz=237								
CHN2	**Minshiung**	**1.89 258**	*e*P		**Pn**	**11 53 43.9**	**+1.3**
	baz=256								
CHN2				*e*S	**Sn**	**11 54 07.7**	**+1.9**
	baz=256								
WRL	**Guolierlin Hig**	**1.94 269**	P		**Pn**	**11 53 45.0**	**+1.8**
	baz=279								
WRL				*i* S	**Sn**	**11 54 09.3**	**+2.4**
	baz=279								
SLGT	**Liugui**	**1.94 241**	*i* P		**Pn**	**11 53 44.0**	**+0.7**
	baz=233								
SLGT				S	**Sn**	**11 54 07.2**	**+0.3**
	baz=233								
WTK	**Tuku**	**1.94 263**	*i* P		**Pn**	**11 53 45.2**	**+1.9**
	baz=261								
WTK				*i* S	**Sn**	**11 54 08.9**	**+1.9**
	baz=261								
CHY	**Chiayi**	**1.95 258**	P		**Pn**	**11 53 45.8**	**+2.5**
	baz=255								
CHY				*i* S	**Sn**	**11 54 09.3**	**+2.2**
	baz=255								
TWK	**Hsinying**	**1.96 251**	*i* P		**Pn**	**11 53 45.2**	**+1.6**
	baz=248								
TWK				*i* S	**Sn**	**11 54 09.5**	**+2.0**
	baz=248								
MKAR	**Makanchi Array**	**39.35 316**	P		**P**	**12 00 38.0**	**-1.4**
	0.6nm,0.4s,baz=100,slow=9.1,SNR=6.4								
WRA	**Warramunga Arr**	**45.11 164**	P		**P**	**12 01 26.6**	**+0.2**
	1.1nm,0.7s,baz=344,slow=9.4,SNR=2.7								
ASAR	**Alice Springs**	**48.60 166**	P		**P**	**12 01 55.4**	**+1.8**
	1.0nm,1.1s,baz=353,slow=12,SNR=1.7								

NEIC ***20*** *11:59:58.9,24.˙08N×122.˙50E,h18km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.73; Mθθ-0.80; Mφφ0.06; Mrθ0.94; Mrφ0.19; Mθφ0.15; Fault plane solution: M₀1.23000×10¹⁸ NP1:φs299.41000°, δ22.71000°,λ121.78000°. NP2:φs85.53000°,δ70.85000°, λ77.57000°. Principal axes: T 1.2196, Plg62.0000°, Azm337.0000°; N 0.0288, Plg12.0000°, Azm90.0000°; P -1.2484, Plg25.0000°, Azm185.0000°;*

NIED ***20*** *11:59:58.6,23.˙93N×122.˙49E,h21km,MW6.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁸Nm; Mrr0.55; Mθθ-0.80; Mφφ0.25; Mrθ1.27; Mθφ0.33; Mφr0.46; Fault plane solution: M₀1.56000×10¹⁸ NP1:φs75.00000°, δ79.00000°,λ69.00000°. NP2:φs318.00000°,δ24.00000°, λ151.00000°.*

JMA ***20*** *11:59:58.6±0.2,23.˙93N×122.˙49E,h21km±3km,M6.4*

JMA Felt II J1.

MOS ***20*** *11:59:59.9±1.1,24.˙15N×122.˙57E,h42km,mb5.8/120, MS5.9/65,Error ellipse: s-maj=5.9km s-min=3.9km az=117.5*

TAP ***20*** *11:59:59.0,23.˙96N×122.˙51E,h29km,ML6.0,D*

BJI ***20*** *11:59:59.2±0.0,24.˙05N×122.˙48E,h20km,mB6.2/59, mb5.5/49,ML5.9/5,Ms6.3/90,Ms7 6.3/82*

NEIC ***20*** *12:00:00.1±1.6,24.˙05N±0.˙04×122.˙45E±0.˙06,h29km±1km, mb5.7/341,Ms_20 6.1/314,Mwc6.0/39,Mwr6.0/29,Mww6.1, ML5.7(TAP),Mwc6.0(GCMT),Error ellipse: s-maj=9.6km s-min=7.3km az=111.0*

IDC ***20*** *12:00:00.3±1.8,24.˙12N×122.˙55E,h32km±12km,mb5.1/42, mb1 5.1/48,mb1mx5.1/54,mbtmp5.3/48,ML4.2/4,MS5.9/38, Ms1 5.9/38,ms1mx5.9/40,Error ellipse: s-maj=11.5km s-min=8.3km az=76.0*

ASIES ***20*** *12:00:01.2,24.˙01N×122.˙39E,h18km,MW5.8*

NEIC ***20*** *12:00:02,23.˙84N×122.˙47E,h35km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.97; Mθθ-1.15; Mφφ0.18; Mrθ0.83; Mθφ0.11; Mφr0.21; Fault plane solution: M₀1.37000×10¹⁸ NP1:φs290.00000°, δ28.00000°,λ116.00000°. NP2:φs82.00000°,δ65.00000°, λ77.00000°. Principal axes: T 1.3050, Plg68.0000°, Azm327.0000°; N 0.1300, Plg12.0000°, Azm87.0000°; P -1.4350, Plg19.0000°, Azm181.0000°;*

BGR ***20*** *12:00:02.1±0.0,24.˙21N×122.˙44E,h33km,mb5.7*

GCMT ***20*** *12:00:02.1±0.1,23.˙84N×122.˙44E,h35km,MW6.0/165, Moment Tensor Solution. s153,c305; s165,c544; Duration: 2≥5 Moment tensor: Scale 10¹⁸Nm; Mrr1.05±.01; Mθθ-1.14±.01; Mφφ0.09±.01; Mrθ0.83±.01; Mθφ0.12±.01; Mφr0.19±.01; Best double couple: M₀1.39200×10¹⁸ NP1:φs288.00000°,δ28.00000°, λ111.00000°. NP2:φs84.00000°,δ64.00000°,λ79.00000°. Principal axes: T 1.3640, Plg69.0000°, Azm332.0000°; N 0.0600, Plg10.0000°, Azm89.0000°; P -1.4190, Plg18.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***20*** *12:00:08,23.˙85N×122.˙73E,h22km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.08; Mθθ-1.01; Mφφ-0.06; Mrθ1.29; Mθφ0.10; Mφr0.17; Fault plane solution: M₀1.67000×10¹⁸ NP1:φs285.00000°, δ20.00000°,λ108.00000°. NP2:φs86.00000°,δ71.00000°, λ84.00000°. Principal axes: T 1.7149, Plg64.0000°, Azm346.0000°; N -0.0855, Plg6.0000°, Azm88.0000°; P -1.6294, Plg25.0000°, Azm181.0000°;*

NEIC ***20*** *12:00:13.2,23.˙57N×123.˙05E,h41km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.12; Mθθ-1.14; Mφφ0.02; Mrθ0.81; Mθφ0.17; Mφr0.31; Fault plane solution: M₀1.44000×10¹⁸ NP1:φs293.66000°, δ30.07000°,λ118.26000°. NP2:φs81.82000°,δ63.81000°, λ74.67000°. Principal axes: T 1.4643, Plg68.0000°, Azm323.0000°; N -0.0553, Plg14.0000°, Azm89.0000°; P -1.4090, Plg17.0000°, Azm183.0000°;*

ISC 20 12:00:00.3±0.5,23.˙98N±0.˙02×122.˙52E±0.˙02,h31km±3km, h31km:pP-P,n1815,σ1s52/1980,mb5.6/443,MS6.1/279, 302C-151D,Fault plane solution: NP1:φs338.79663°, δ52.08921°,λ163.70851°. NP2:φs78.97696°,δ77.21315°, λ39.05449°. Principal axes: T Plg36.2259°, Azm306.0800°; N Plg49.2258°, Azm94.2350°; P Plg16.1391°, Azm203.8409°; Fault plane solution: NP1:φs287.71280°,δ33.83140°,λ87.72829°. NP2: φs110.44692°,δ56.19877°,λ91.52183°. Principal axes: T Plg78.7403°, Azm25.9660°; N Plg1.2646°, Azm289.6002°; P Plg11.1867°, Azm199.3501°; Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.61**	**40**	⇓P		**Pb**	**12 00 11.2**	**-1.3**
JYNG				S		**Sb**	**12 00 20.2**	**-0.7**
YOJ	**Yonaguni jima**	**0.66**	**43**	⇓P		**Pn**	**12 00 12.2**	**-1.2**
YOJ				S		**Sb**	**12 00 21.7**	**-0.5**
YOJ	**Yonaguni jima**	**0.66**	**43**	⇓*i*P		**Pn**	**12 00 12.2**	**-1.2**
	baz=42							
YOJ				S		**Sb**	**12 00 21.5**	**-0.7**
	baz=42							
YOJ	**Yonaguni jima**	**0.66**	**43**	P		**Pn**	**12 00 12.8**	**-0.6**
YOJ	**Yonaguni jima**	**0.66**	**43**	Pn		**Pn**	**12 00 12.8**	**-0.6**
EWUT	**Wuta**	**0.82**	**304**	⇓*i*P		**Pn**	**12 00 14.4**	**-1.2**
	baz=306							
EWUT				*e*S		**Sb**	**12 00 27.1**	**+0.3**
	baz=306							
HWA	**Hwalien**	**0.84**	**270**	*e*P		**Pn**	**12 00 14.8**	**-1.0**
	baz=271							
HWA				*e*S		**Sb**	**12 00 27.2**	**-0.1**
	baz=271							
ENA	**Nanau**	**0.84**	**302**	⇓P		**Pn**	**12 00 14.8**	**-1.2**
	baz=303							
ENA				*e*S		**Sb**	**12 00 28.5**	**+1.2**
	baz=303							
TWD	**Chiawan**	**0.85**	**277**	⇑*i*P		**Pn**	**12 00 14.4**	**-1.7**
	baz=278							
TWD				*e*S		**Sn**	**12 00 26.6**	**-0.9**
	baz=278							
NACB	**Ninganchiao**	**0.87**	**283**	⇑*i*P		**Pn**	**12 00 14.8**	**-1.5**
	baz=284							
NACB				*e*S		**Sn**	**12 00 27.7**	**-0.2**
	baz=284							
NACB	**Ninganchiao**	**0.87**	**283**			**Pn**	**12 00 15.8**	**-0.5**
TWC	**Suao**	**0.88**	**316**	⇓*i*P		**Pn**	**12 00 15.1**	**-1.4**
	baz=317							
TWC				*i* S		**Sn**	**12 00 27.9**	**-0.1**
	baz=317							
ETLH	**Xiulin Townshi**	**0.97**	**283**	⇑*i*P		**Pn**	**12 00 16.5**	**-1.4**
	baz=284							
ETLH				*e*S		**Sn**	**12 00 30.4**	**-0.3**
	baz=284							
NDS	**Dongshan**	**0.98**	**312**	⇑*i*P		**Pn**	**12 00 17.2**	**-0.6**
	baz=313							
NDS				*e*S		**Sb**	**12 00 31.6**	**+0.3**
	baz=313							
ESL	**Shilin**	**1.01**	**261**	P		**Pn**	**12 00 16.3**	**-2.0**
	baz=261							
ESL				*e*S		**Sn**	**12 00 29.3**	**-2.1**
	baz=261							
EGS		**1.01**	**328**	⇓*i*P		**Pn**	**12 00 18.0**	**-0.3**
	baz=329							
EGS				*i* S		**Sb**	**12 00 33.1**	**+0.8**
	baz=329							
EGFH	**Guangfu**	**1.05**	**253**	*e*P		**Pn**	**12 00 17.6**	**-1.2**
	baz=254							
EGFH				*e*S		**Sn**	**12 00 31.0**	**-1.3**
	baz=254							
ILA	**Ilan**	**1.05**	**318**	⇑*e*P		**Pn**	**12 00 18.6**	**-0.2**
	baz=319							
ILA				*e*S		**Sb**	**12 00 34.6**	**+1.2**
	baz=319							
TWE	**Neicheng**	**1.07**	**314**	⇑*i*P		**Pn**	**12 00 18.7**	**-0.4**
	baz=315							
TWE				*e*S		**Sb**	**12 00 34.2**	**+0.3**
	baz=315							
NTC	**Toucheng**	**1.07**	**324**	⇑*i*P		**Pn**	**12 00 18.6**	**-0.5**
	baz=325							
NTC				*e*S		**Sb**	**12 00 34.4**	**+0.4**
	baz=325							
ENTT	**Nioudou**	**1.09**	**307**	⇑P		**Pn**	**12 00 19.0**	**-0.4**
	baz=308							
ENTT				*e*S		**Sb**	**12 00 35.5**	**+1.0**
	baz=308							
NDT	**Datong Townshi**	**1.11**	**304**	⇑P		**Pn**	**12 00 19.2**	**-0.4**
	baz=305							
NDT				*e*S		**Sb**	**12 00 35.9**	**+0.9**
	baz=305							
HGSD	**Ruisui**	**1.12**	**244**	⇓*i*P		**Pn**	**12 00 18.0**	**-1.8**
	baz=245							
HGSD				*e*S		**Sn**	**12 00 33.5**	**-0.6**
	baz=245							
NNSB	**Datong**	**1.13**	**293**	⇑P		**Pn**	**12 00 19.3**	**-0.8**
	baz=294							
NNSB				*e*S		**Sb**	**12 00 35.9**	**+0.1**
	baz=294							
NNSH	**Datong**	**1.13**	**293**	⇑*e*P		**Pn**	**12 00 19.2**	**-0.9**
	baz=294							
NNSH				*e*S		**Sb**	**12 00 36.0**	**+0.2**
	baz=294							
TWB1	**Santiao Chiao**	**1.13**	**335**	⇑*i*P		**Pn**	**12 00 19.2**	**-0.7**
	baz=336							
TWB1				*e*S		**Sb**	**12 00 36.7**	**+1.1**
	baz=336							
NNS	**Nan Shan**	**1.14**	**294**	⇑*i*P		**Pn**	**12 00 19.4**	**-0.9**
	baz=295							
NNS				*e*S		**Sb**	**12 00 36.1**	**0.0**
	baz=295							
WHF	**Hehuan Shan**	**1.16**	**278**	⇑P		**Pn**	**12 00 19.4**	**-1.3**
	baz=279							
WHF				*e*S		**Sn**	**12 00 35.9**	**+0.2**
	baz=279							
TIPB	**Shuangxi**	**1.17**	**327**	⇑*i*P		**Pn**	**12 00 19.9**	**-0.7**
	baz=328							
TIPB				*e*S		**Sb**	**12 00 37.2**	**+0.3**
	baz=328							
HATJ	**Hateruma jima**	**1.18**	**86**	P		**Pn**	**12 00 20.8**	**+0.2**
HATJ				*e*S		**Sb**	**12 00 36.5**	**-0.4**
FUSS	**Fushou**	**1.20**	**283**	⇑*i*P		**Pn**	**12 00 20.2**	**-0.9**
	baz=284							
FUSS				*e*S		**Sb**	**12 00 37.6**	**-0.1**
	baz=284							
NWLT	**Wulai**	**1.22**	**311**	⇑P		**Pn**	**12 00 21.0**	**-0.2**
	baz=311							
NWLT				*e*S		**Sb**	**12 00 39.0**	**+0.7**
	baz=311							
OWD	**Renai**	**1.23**	**269**	⇑*e*P		**Pn**	**12 00 20.2**	**-1.3**
	baz=270							
OWD				*e*S		**Sn**	**12 00 34.0**	**-3.0**
	baz=270							
CHGB	**Renai**	**1.23**	**274**	⇑P		**Pn**	**12 00 20.6**	**-0.9**
	baz=275							
CHGB				*e*S		**Sb**	**12 00 38.2**	**-0.6**
	baz=275							
YHNB	**Yeheng**	**1.25**	**303**	⇑P		**Pn**	**12 00 21.2**	**-0.4**
	baz=304							
YHNB				*e*S		**Sb**	**12 00 39.2**	**+0.1**
	baz=304							
YHNB	**Yeheng**	**1.25**	**303**	Pn		**Pn**	**12 00 21.2**	**-0.4**
TWT	**Tachien**	**1.26**	**283**	*e*P		**Pn**	**12 00 21.4**	**-0.4**
	baz=283							
TWT				*e*S		**Sb**	**12 00 39.9**	**+0.5**
	baz=283							
NSK	**Sanguang**	**1.27**	**303**	⇑*i*P		**Pn**	**12 00 21.4**	**-0.4**
	baz=304							
NSK				*e*S		**Sb**	**12 00 41.2**	**+1.7**
	baz=304							
YULB	**Yu-li**	**1.27**	**243**	*e*P		**Pn**	**12 00 20.4**	**-1.4**
	baz=243							
YULB				*e*S		**Sn**	**12 00 36.5**	**-1.3**
	baz=243							
YULB	**Yu-li**	**1.27**	**243**			**Pn**	**12 00 20.9**	**-1.0**
EYUL	**Yuli**	**1.27**	**240**	⇓P		**Pn**	**12 00 20.6**	**-1.2**
	baz=241							
EYUL				*e*S		**Sn**	**12 00 36.9**	**-0.9**
	baz=241							
TDCB	**Techi**	**1.27**	**283**	*e*P		**Pn**	**12 00 21.4**	**-0.6**
	baz=283							
TDCB				*e*S		**Sb**	**12 00 39.6**	**-0.3**
	baz=283							
NWF	**Wu-fen Shan**	**1.28**	**328**	⇑P		**Pn**	**12 00 21.6**	**-0.4**
	baz=329							
NWF				*e*S		**Sb**	**12 00 40.6**	**+0.7**
	baz=329							
WFSB	**Wu-fen Shan**	**1.28**	**328**	⇑*e*P		**Pn**	**12 00 21.6**	**-0.3**
	baz=329							
WFSB				*e*S		**Sb**	**12 00 40.7**	**+0.9**
	baz=329							
VWDT	**VWDT**	**1.28**	**260**	*e*P		**Pn**	**12 00 21.3**	**-0.8**
	baz=261							
VWDT				*e*S		**Sn**	**12 00 35.5**	**-2.7**
	baz=261							
TWA	**Mucha**	**1.31**	**320**	⇑*e*P		**Pn**	**12 00 22.3**	**-0.1**
	baz=320							
TWA				*e*S		**Sb**	**12 00 41.5**	**+0.7**
	baz=320							
NHDH	**Xindian Distri**	**1.33**	**317**	*e*P		**Pn**	**12 00 22.8**	**+0.1**
	baz=318							
NHDH				*e*S		**Sb**	**12 00 43.3**	**+1.8**
	baz=318							
TNOU	**National Taiwa**	**1.35**	**330**	*e*P		**Pn**	**12 00 22.2**	**-0.7**
	baz=330							
TNOU				*e*S		**Sb**	**12 00 41.3**	**-0.5**
	baz=330							
TATO	**Taipei**	**1.36**	**317**	⇑*e*P		**Pn**	**12 00 23.6**	**+0.5**
	baz=317							
TATO				*e*S		**Sb**	**12 00 43.9**	**+1.6**
	baz=317							
TATO	**Taipei**	**1.36**	**317**	Pn		**Pn**	**12 00 23.5**	**+0.3**
TATO	**Taipei**	**1.36**	**317**	P		**Pn**	**12 00 24.2**	**+1.0**
FULB	**Fuli**	**1.37**	**236**	*e*P		**Pn**	**12 00 21.2**	**-2.0**
	baz=236							
FULB				*e*S		**Sn**	**12 00 39.5**	**-0.9**
	baz=236							
CHKT	**Chengkung**	**1.38**	**231**	*e*P		**Pn**	**12 00 21.3**	**-2.0**
	baz=231							
CHKT				*e*S		**Sn**	**12 00 38.3**	**-2.2**
	baz=231							
JKRS	**Kuro-shima**	**1.38**	**79**	P		**Pn**	**12 00 24.0**	**+0.6**
JKRS				S		**Sb**	**12 00 42.4**	**-0.4**
TAP1	**Taipei**	**1.39**	**319**	*e*P		**Pn**	**12 00 24.3**	**+0.8**
	baz=320							
TAP	**Taipei**	**1.40**	**319**	*e*P		**Pn**	**12 00 24.2**	**+0.5**
	baz=320							
TAP				*e*S		**Sb**	**12 00 44.6**	**+1.3**
	baz=320							
BACT	**New Taipei Cit**	**1.41**	**316**	*e*P		**Pn**	**12 00 23.7**	**-0.1**
	baz=317							
WPL	**Puli Township**	**1.43**	**272**	*e*P		**Pn**	**12 00 23.6**	**-0.4**
	baz=272							
WPL				*e*S		**Sn**	**12 00 42.4**	**+0.5**
	baz=272							
NWRT	**Kuosheng**	**1.45**	**327**	*e*P		**Pn**	**12 00 24.8**	**+0.5**
	baz=328							
SSLB	**Suanglung**	**1.45**	**263**	*e*P		**Pn**	**12 00 23.6**	**-0.7**
	baz=263							
SSLB				*e*S		**Sn**	**12 00 42.6**	**+0.4**
	baz=263							
SSLB	**Suanglung**	**1.45**	**263**	Pn		**Pn**	**12 00 24.9**	**+0.6**
YM01	**YM01**	**1.45**	**323**	*e*P		**Pn**	**12 00 23.7**	**-0.7**
	baz=324							
YM01				*e*S		**Sb**	**12 00 46.2**	**+1.4**
	baz=324							
DPDB	**Guoxing**	**1.46**	**272**	⇑*e*P		**Pn**	**12 00 24.3**	**-0.2**
	baz=273							
DPDB				*e*S		**Sn**	**12 00 43.7**	**+1.1**
	baz=273							
YM10	**YM10**	**1.46**	**323**	*e*P		**

baz=280
WHP eS Sb 12 00 45.6 +0.2
baz=280
YM08 YM08 1.47 325 eP Pn 12 00 24.6 -0.1
baz=325
YM04 YM04 1.47 323 eP Pn 12 00 23.9 -0.7
baz=323
WCS Beigang Elemen 1.47 273⇑eP Pn 12 00 24.6 -0.1
WCS eS Sb 12 00 46.5 +1.1
baz=274
SMLT Sun Moon Lake 1.49 267⇑eP Pn 12 00 24.5 -0.4
baz=267
SMLT eS Sn 12 00 44.2 +0.9
baz=267
TWS1 Kuangyinshan 1.50 318 eP Pn 12 00 25.0 0.0
baz=319
TWS1 eS Sb 12 00 48.6 +2.4
baz=319
EDH Donghe 1.50 228⇓eP Pn 12 00 23.1 -1.9
baz=228
ANP Anpu 1.51 323 eP Pn 12 00 24.7 -0.5
baz=324
NTY Taoyuan 1.51 313 eP Pn 12 00 25.5 +0.4
baz=313
NJD Zhudong 1.51 300 eP Pn 12 00 26.3 +1.2
baz=301
LIOB Emei 1.52 296⇑eP Pn 12 00 26.1 +0.8
baz=297
LIOB eS Sb 12 00 47.6 +0.7
baz=297
TYC Yuchr 1.52 267⇑eP Pn 12 00 24.9 -0.4
baz=268
TYC eS Sn 12 00 42.3 -1.8
baz=268
NTST Danshui 1.53 321 eP Pn 12 00 25.2 -0.2
baz=321
JIJ Ishigaki jima 1.53 75 P Pn 12 00 25.3 -0.1
JIJ S Sb 12 00 45.7 -1.3
NSTT Nanjuang 1.53 295⇑eP Pn 12 00 26.0 +0.6
baz=296
NSTT eS Sb 12 00 46.9 -0.2
baz=296
TWY Chenhua 1.54 327 eP Pn 12 00 26.0 +0.5
baz=328
TWY eS Sb 12 00 48.7 +1.5
baz=328
WHYT Xinyi Township 1.55 260 eP Pn 12 00 25.7 -0.1
baz=260
WHYT eS Sb 12 00 46.5 -1.3
baz=260
NCU National Centr 1.56 309 eP Pn 12 00 26.1 +0.3
baz=310
NCU eS Sb 12 00 49.1 +1.1
baz=310
NCUH Zhongli 1.56 309 eP Pn 12 00 25.7 -0.2
baz=310
NCUH eS Sb 12 00 50.2 +2.2
baz=310
HSN1 Hsinchu 1.58 300 eP Pn 12 00 26.4 +0.2
baz=301
SBCB Hsinchu 1.62 300 eP Pn 12 00 27.1 +0.5
baz=301
LDUT Ludao 1.62 217⇓iP Pn 12 00 24.7 -2.0
baz=217
LDUT eS Sn 12 00 44.7 -1.8
baz=217
HSN Hsinchu 1.63 300 eP Pn 12 00 26.4 -0.4
baz=302
HSN eS Sn 12 00 48.0 +1.2
baz=302
TWQ1 Liyutan 1.64 283⇑eP Pn 12 00 27.9 +0.9
baz=284
TWQ1 eS Sb 12 00 49.7 -0.5
baz=284
ALS Alishan 1.64 254⇓eP Pn 12 00 27.1 -0.1
baz=254
ALS eS Sb 12 00 49.1 -1.4
baz=254
WJS Zhushan 1.65 265 eP Pn 12 00 27.9 +0.9
baz=265
WJS eS Sb 12 00 50.4 0.0
baz=265
NJN Zhunan 1.66 295 eP Pn 12 00 27.8 +0.6
baz=296
NJN eS Sb 12 00 50.3 -0.4
baz=296
NSY Sanyi 1.66 285 eP Pn 12 00 28.3 +1.0
baz=286
NSY eS Sb 12 00 51.5 +0.6
baz=286
LONT Longtian 1.67 230⇓eP Pn 12 00 26.1 -1.3
baz=230
WWF Wufeng 1.67 272 eP Pn 12 00 28.7 +1.4
baz=273
WWF eS Sb 12 00 52.3 +1.3
baz=273
WNT Mingjian 1.68 267 eP Pn 12 00 28.7 +1.2
baz=267
WNT eS Sb 12 00 51.1 -0.3
baz=267
NHW Xinwu Township 1.69 308 eP Pn 12 00 27.6 +0.1
baz=308
WNT1 Nantou City 1.69 268 eP Pn 12 00 29.1 +1.5
baz=268
WNT1 eS Sb 12 00 51.2 -0.3
baz=268
PCYT Pengchaiyu 1.69 346⇑iP Pn 12 00 27.4 -0.3
baz=347
PCYT eS Sn 12 00 48.4 +0.1
baz=347
TCU Taichung 1.69 276⇑eP Pn 12 00 28.9 +1.2
baz=276
TCU eS Sb 12 00 51.9 +0.1
baz=276
TCU Taichung 1.69 276 P Pb 12 00 31.1 +0.3
TCU S Sb 12 00 51.6 -0.1
CHN5 Tsauling 1.73 258⇑eP Pn 12 00 28.9 +0.6
baz=258
JISG Ishigakijimahi 1.74 69 P Pn 12 00 27.9 -0.4
JISG S Sn 12 00 50.3 +0.8
WDJ Dajia District 1.76 282 eP Pn 12 00 29.3 +0.8
baz=283
WDJ eS Sb 12 00 52.5 -1.0
baz=283
TTN Taitung 1.76 226 eP Pn 12 00 27.1 -1.4
baz=226
TTN eS Sn 12 00 51.5 +1.7
baz=226
TWGBT Beinan 1.76 229⇓eP Pn 12 00 27.0 -1.6
baz=229
TWGBT eS Sn 12 00 49.1 -0.9
baz=229
TWG Pinlang 1.76 229 eP Pn 12 00 27.0 -1.6
baz=229
TWG eS Sn 12 00 49.2 -0.9
baz=229
TWG Pinlang 1.76 229 Pn 12 00 28.8 +0.1
STYH Taoyuan 1.79 244⇓eP Pn 12 00 28.8 -0.3
baz=244
STYH eS Sn 12 00 51.5 +0.8
baz=244
WCHH Zhanghua 1.80 273⇑eP Pn 12 00 30.0 +0.9
baz=274
WCHH eS Sb 12 00 53.2 -1.5
baz=274
STYT Tauyuan 1.81 244 eP Pn 12 00 29.1 -0.3
baz=244
STYT eS Sn 12 00 52.8 +1.5
baz=244
WGK Gukeng 1.82 261 eP Pn 12 00 30.1 +0.8
baz=261
WGK eS Sb 12 00 55.3 0.0
baz=261
WDLH Douliu 1.84 261⇑eP Pn 12 00 30.8 +1.1
baz=261
WDLH eS Sb 12 00 54.8 -1.1
baz=261
TPUB Ta-pu 1.86 249 eP Pn 12 00 30.6 +0.6
baz=249
TPUB eS Sb 12 00 54.6 -2.0
baz=249
TPUB Ta-pu 1.86 249 Pn 12 00 30.4 +0.4
CHN4 Tsaushan 1.88 251 eP Pn 12 00 31.2 +1.0
baz=251
CHN4 eS Sb 12 00 56.4 -0.5
baz=251
WTP Ta-pu 1.90 248⇓eP Pn 12 00 31.0 +0.5
baz=248
WTP eS Sb 12 00 56.1 -1.5
baz=248
CHN2 Minshiung 1.93 257 eP Pn 12 00 32.7 +1.8
baz=257
CHN2 eS Sb 12 00 57.7 -0.7
baz=257
WRL Guolierlin Hig 1.96 268 eP Pn 12 00 31.3 -0.1
baz=268
WTK Tuku 1.97 262 eP Pn 12 00 32.7 +1.2
baz=262
CHY Chiayi 1.98 256 eP Pn 12 00 32.9 +1.3
baz=256
CHY eS Sb 12 00 58.2 -1.8
baz=256
SLGT Liugui 1.98 241 eP Pn 12 00 31.9 +0.2
baz=241
SLGT eS Sb 12 00 58.6 -1.4
baz=241
SGST Jiashian 1.99 244 eP Pn 12 00 31.4 -0.4
baz=244
SGST eS Sn 12 00 57.6 +2.0
baz=244
CHN1 Nanshi 1.99 247 eP Pn 12 00 32.8 +1.0
baz=247
CHN1 eS Sb 12 00 58.6 -1.7
baz=247
ECL Taimali 1.99 227⇓eP Pn 12 00 30.0 -1.8
baz=226
ECL eS Sn 12 00 54.0 -1.7
baz=226
TWK Hsinying 2.00 250 eP Pn 12 00 32.7 +0.8
baz=249
TWK eS Sb 12 00 59.0 -1.4
baz=249
SNST Tainan City 2.00 248 eP Pn 12 00 32.9 +1.0
baz=248
WTCT Ta-ch'eng 2.05 267 eP Pn 12 00 33.2 +0.6
baz=267
WTCT eS Sn 12 00 59.4 +2.3
baz=267
JTJ Tarama 2.10 71 P Pn 12 00 33.4 +0.2
WMLT Mailiao 2.11 266 eP Pn 12 00 32.9 -0.5
baz=266
WMLT eS Sb 12 01 01.8 -1.9
baz=266
SSD Sandimen 2.13 235 eP Pn 12 00 33.1 -0.6
baz=235
SSD eS Sb 12 01 02.2 -2.0
baz=235
LAY Lan-yu 2.13 205⇓eP Pn 12 00 31.4 -2.3
baz=205
LAY eS Sn 12 00 55.2 -3.9
baz=205
WSF Szhu 2.13 261 eP Pn 12 00 34.9 +1.2
baz=261
WSF eS Sb 12 01 02.2 -2.1
baz=261
TSMG Majia 2.14 234 eP Pn 12 00 33.5 -0.3
baz=234
TSMG eS Sb 12 01 02.0 -2.5
baz=234
ICHU Yijhu 2.15 254 eP Pn 12 00 34.8 +0.9
baz=254
SCST Cishan 2.16 240 eP Pn 12 00 35.3 +1.3
baz=240
SCST eS Sb 12 01 02.9 -2.1
baz=240
CHN3 Shinhua 2.17 246 eP Pn 12 00 36.5 +2.2
baz=246
CHN3 eS Sb 12 01 05.5 0.0
baz=246
TAW Tawu 2.20 223 eP Pn 12 00 33.3 -1.4
baz=223
TAW eS Sn 12 00 59.5 -1.4
baz=223
MASBT Mashibuluo 2.21 232 eP Pn 12 00 34.2 -0.5
baz=232
MASBT eS Sb 12 01 04.9 -1.6
baz=232
CHN8 Yiju 2.21 254 eP Pn 12 00 35.7 +1.0
baz=254
CHN8 eS Sn 12 01 02.7 +1.7
baz=254
EAST Anshuo 2.21 224⇓eP Pn 12 00 33.5 -1.4
baz=224
EAST eS Sn 12 00 59.2 -2.0
baz=224
SGLT Jiouru 2.25 237 eP Pn 12 00 36.8 +1.5
baz=236
TWM1 Shoushan 2.25 240 eP Pb 12 00 37.8 -2.4
baz=239
TSPT Pingtung City 2.27 235 eP Pb 12 00 38.7 -1.8
baz=235
TSPT eS Sb 12 01 06.7 -1.5
baz=235
SCLT Jiali 2.28 250 eP Pn 12 00 37.0 +1.3
baz=250
TAI1 Yung-k'ang 2.30 246 eP Pn 12 00 37.3 +1.3
baz=246
TAI1 eS Sb 12 01 07.2 -2.0
baz=246
SSPT Xinbi 2.33 231 eP Pn 12 00 36.8 +0.3
baz=231
SNJT Kaohsiung City 2.35 239 eP Pn 12 00 39.2 +2.5
baz=239
SNJT eS Sb 12 01 09.7 -0.9
baz=239
SLIU Shizi 2.37 222 eP Pn 12 00 35.6 -1.3
baz=222
SCZT Fangliau 2.37 228 eP Pn 12 00 36.6 -0.4
baz=228
SCZT eS Sb 12 01 09.2 -2.0
baz=228
KAU Kaohsiung 2.47 236 eP Pb 12 00 41.9 -2.1
baz=235
TSEB Hengchuen, Pin 2.55 216 eP Pn 12 00 39.3 -0.2
baz=217
TSEB eS Sn 12 01 11.9 +2.4
baz=217
WLCH Liuqiu 2.55 231 eP Pb 12 00 42.7 -2.7
baz=231
WLCH eS Sb 12 01 16.7 +0.3
baz=231
JIRB Irabujima 2.56 70 P Pn 12 00 40.3 +0.7
HEN Hengchun 2.56 220 eP Pn 12 00 39.7 +0.1
baz=220
HEN eS Sn 12 01 12.6 +2.8
baz=220
TWP Hsiaoliuchiu 2.57 231 eP Pb 12 00 42.9 -2.7
baz=231
TWKBT Hengchun 2.57 218 eP Pn 12 00 38.7 -1.0
baz=218
TWK1 Hengchun 2.57 218 eP Pn 12 00 38.9 -0.9
baz=218
TWK1 eS Sn 12 01 12.0 +2.0
baz=218
SNW Nanwan 2.59 219 eP Pn 12 00 42.0 +1.9
baz=219
SNW eS Sb 12 01 14.8 -2.7
baz=219
JIKM Ikemajima 2.66 69 P Pn 12 00 42.8 +1.9
JMJ Miyako jima 2 2.66 71 eP Pn 12 00 42.5 +1.6
baz=71
JMJ eS Sn 12 01 15.6 +3.4
baz=71
JMJ2 Miyako jima3 2.67 73 P Pn 12 00 42.5 +1.4
WDGT Dungji 2.72 255 eP Pn 12 00 42.0 +0.2
baz=255
WDGT eS Sn 12 01 13.5 -0.2
baz=255
PHUB P'eng-hu 2.74 261 eP Pn 12 00 42.1 0.0
baz=261
PHUB eS Sn 12 01 14.2 +0.1
baz=261
JOGS Gusukube 2.74 73 P Pn 12 00 43.7 +1.6
JOGS eS Sn 12 01 16.0 +1.8
PNG Penghu 2.75 262 eP Pn 12 00 42.2 0.0
baz=262
PNG eS Sn 12 01 14.5 +0.2
baz=262
VCHM Qimei 2.94 255 eP Pn 12 00 45.0 +0.2
baz=255
VCHM eS Sn 12 01 19.3 +0.2
baz=255
VWUC VWUC 2.97 290⇑eP Pn 12 00 44.4 -0.9
baz=290
VWUC eS Sn 12 01 17.8 -2.0
baz=290
MATB Ma-tsu 3.18 313 eP Pn 12 00 47.0 -1.1
baz=313
MSUT Lienchiang 3.21 313 eP Pn 12 00 47.1 -1.4
baz=313
MSUT eS Sn 12 01 25.4 -0.2
baz=313
PTMZ Houxiangcun 3.27 289⇑eP Pn 12 00 48.5 -0.9
baz=289
PTMZ eS Sn 12 01 25.2 -2.0
baz=289
BBP Basco 3.56 188 eP Pn 12 00 50.6 -2.7
LYJJ Jianjiangzhen 3.58 316 eP Pn 12 00 52.4 -1.2
baz=316
XPSS Dashiqiu 3.61 325 eP Pn 12 00 53.0 -1.1
baz=325
KNMB Chin-men Tao 3.80 278⇑eP Pn 12 00 55.8 -1.0
baz=278
KNMB eS Sn 12 01 38.7 -1.7
baz=278
KNMB Chin-men Tao 3.80 278 Pn 12 00 55.7 -1.0
MHZQ Yeshan 3.80 304 eP Pn 12 00 55.3 -1.4
baz=304
AXDP Jialang 4.25 283 eP Pn 12 01 02.0 -0.8
baz=283
ZPLA Ao Xicun 4.37 270⇑eP Pn 12 01 03.8 -0.6
baz=270
SGCP Mt. Cagua 5.73 185 eP Pn 12 01 24.5 +1.3
JOW Kunigami 5.93 60 eP Pn 12 01 24.3 -1.6
baz=61
JOW Kunigami 5.93 60 Pn Pn 12 01 27.2 +1.3
APYP Conner 6.21 191 eP Pn 12 01 29.2 -0.5
CVP Callao Caves 6.28 186⇓eP Pn 12 01 30.6 -0.1
CVP iS Sn 12 02 47.2 +5.7
SZP Santa 6.68 197 Pn 12 01 36.9 +0.5
SSE Sheshan 7.18 351 Pn Pn 12 01 43.4 +0.3
SSE Sn Sn 12 03 07.6 +3.9
SSE LR LR
comp=N,5μm,15.3s
SSE LR LR
comp=E,6μm,15.6s
SSE Sheshan 7.18 351 Pn 12 01 43.0 -0.2
BCP Baguio City 7.74 194⇓eP Pn 12 01 53.0 +2.1
HKC Hong Kong Obse 7.86 259 ⇑P Pn 12 01 56.0 +3.5
MCO Taipa Grande 8.46 259 P Pn 12 02 03.0 +2.3
GZH Guangzhou 8.47 266 P Pn 12 02 00.0 -0.8
GZH S Sn 12 03 32.0 -3.3
GZH smax smax
comp=N,2μm,2.3s
GZH smax smax
comp=E,1μm,1.0s
NJ2 Nanjing 8.67 339⇓iP Pn 12 02 02.8 -0.7
NJ2 S Sn 12 03 37.3 -2.8
NJ2 pmax pmax
comp=Z,120nm,0.5s
NJ2 smax smax
comp=N,2μm,1.4s
NJ2 smax smax
comp=E,3μm,1.4s
NJ2 LR LR
comp=N,207μm,13.7s
NJ2 LR LR
comp=E,96μm,12.2s
NJ2 LR LR
comp=Z,228μm,13.2s
QVP Quezon City--P 9.42 189 eP Pn 12 02 15.1 +1.2
JCNP Jose Panganiba 9.64 179 eP Pn 12 02 16.9 -0.1
WHN Wuhan 9.77 314 ⇑P Pn 12 02 19.9 +1.3
WHN pP 12 02 24.5
WHN S Sn 12 04 11.0 +3.7
WHN LR LR
comp=N,169μm,8.8s
WHN LR LR
comp=E,129μm,12.4s
WHN LR LR
comp=Z,333μm,15.8s
MACP Maragondon, Ca 9.82 190 eP Pn 12 02 20.6 +1.3
LQP Lukban 9.86 186 eP Pn 12 02 20.2 +0.1
TGY Tagaytay City 9.94 189 Pn Pn 12 02 23.7 +2.6
72nm,0.3s,baz=307,slow=2.9,SNR=10
TGY LR LR 12 06 22.2
comp=Z,66μm,20.8s,baz=337,slow=38
TGY Tagaytay City 9.94 189⇓eP Pn 12 02 21.3 +0.2
JSU Suzuyama 10.27 41 Pn Pn 12 02 25.4 -0.2
SCSP San Jose Seism 10.32 175 eP Pn 12 02 29.9 +3.7
LUBP Lubang 10.42 192 eP Pn 12 02 28.5 +0.9
SJMP San Jose 11.54 187 eP Pn 12 02 45.5 +2.6
JNU Nakatsue 11.69 37 Pn Pn 12 02 43.5 -1.5
1.0nm,0.3s,baz=236,slow=7.3,SNR=3.7
JNU LR LR 12 07 27.5
comp=Z,69μm,19.9s,baz=220,slow=39
JNU Nakatsue 11.69 37 Pn 12 02 45.8 +0.8
JTU Tsushima 12.10 28 Pn Pn 12 02 49.5 -0.9
RCP Roxas 12.36 179⇑eP Pn 12 02 57.6 +3.5
QIZ Qiongzhong 12.79 250 P Pn 12 03 00.4 +0.4
QIZ S Sn 12 05 23.4 +2.1
QIZ LR LR
comp=N,49μm,16.1s
QIZ LR LR
comp=E,21μm,12.4s
QIZ LR LR
comp=Z,32μm,17.1s
OCLP Ormoc 13.01 171 eP Pn 12 03 06.5 +3.4
ENPP El Nido 13.04 194 eP Pn 12 03 03.2 -0.3
TIA Tai'an 13.05 340 P P 12 03 10.3 -3.1
TIA pmax pmax
comp=Z,92nm,2.1s
TIA LR LR
comp=N,87μm,19.7s
TIA LR LR
comp=E,65μm,17.8s
TIA LR LR
comp=Z,152μm,12.9s
ENH Enshi 13.18 301 Pn Pn 12 03 04.5 -0.9
GUIM Jordan 13.28 180 eP Pn 12 03 08.0 +1.2
INCN Inchon 13.91 14 P Pn 12 03 16.1 +0.8
INCN Inchon 13.91 14 Pn Pn 12 03 16.1 +0.8
INCN Inchon 13.91 14 P Pn 12 03 18.5 +3.2
MSLP Maasin 13.95 170 eP Pn 12 03 18.1 +2.2
CNOP Candoni, Negro 14.08 180 eP Pn 12 03 18.8 +1.2
KSRS Korea Array 14.21 18 Pn Pn 12 03 20.0 +0.8
comp=Z,4.4nm,0.3s,baz=198,slow=12,SNR=74
KSRS LR LR 12 09 40.6
comp=Z,70μm,18.6s,baz=198,slow=41
KS19 Wonju Array Si 14.23 18 P P 12 03 25.0 -1.6
GLSP General Luna, 14.53 166 eP Pn 12 03 21.2 -2.6
GYA Guiyang 14.56 283 ⇓P Pn 12 03 26.1 +1.8
GYA sP P 12 03 35.1 +4.6
GYA S Sn 12 06 07.1 +2.3
GYA sS S 12 06 19.9 -3.5
GYA pmax pmax
comp=Z,31nm,0.9s
GYA pmax pmax
comp=Z,4μm,8.9s
GYA LR LR
comp=Z,44μm,8.8s
GYA LR LR
comp=Z,82μm,13.8s
GYA LR LR
comp=Z,99μm,14.7s
DL2 Dalian 14.90 357 P Pn 12 03 31.1 +2.5
DL2 sP P 12 03 43.1 +9.2
DL2 S Sn 12 06 18.0 +5.4
DL2 pmax pmax
comp=Z,160nm,1.1s
DL2 pmax pmax
comp=Z,10μm,6.5s
DL2 LR LR
comp=Z,89μm,13.0s
DL2 LR LR
comp=Z,30μm,14.9s
DL2 LR LR
comp=Z,115μm,13.5s
BUTP Butuan 15.22 168 eP Pn 12 03 34.4 +1.4
XAN Xi'an 15.54 313 P P 12 03 43.3 +2.1
XAN pmax pmax
comp=Z,300nm,1.5s
XAN pmax pmax
comp=Z,9μm,8.6s
XAN LR LR
comp=Z,44μm,17.2s
XAN LR LR
comp=Z,85μm,15.1s
XAN LR LR
comp=Z,137μm,16.3s

XAN	**Xi'an**	**15.54**	**313**		P	**P**	**12 03 40.0**	**-0.1**
XAN					pmax	pmax			
	comp=Z,526nm,1.4s								
XAN	**Xi'an**	**15.54**	**313**		P	**P**	**12 03 40.0**	**-0.1**
XAN					IAmb	IAmb	12 03 45.2		
	comp=Z,526nm,1.4s								
CGP	**Cagayan de Oro**	**15.58**	**172**	⇓	*e*P	**P**	**12 03 43.3**	**+1.6**
BATP	**Bataraza**	**15.76**	**197**		*e*P	**Pn**	**12 03 41.2**	**+1.2**
JWT	**Wachi**	**15.86**	**42**		P	**P**	**12 03 43.5**	**-1.2**
PAGZ	**Pagadian**	**16.06**	**177**		*e*P	**Pn**	**12 03 44.1**	**+0.1**
TIY	**Taiyuan**	**16.18**	**330**		*e*P	**P**	**12 03 49.9**	**+1.6**
TIY					S	**Sn**	**12 06 47.8**	**+3.9**
TIY					pmax	pmax			
	comp=Z,10μm,5.8s								
TIY					LR	LR			
	comp=Z,107μm,13.4s								
TIY					LR	LR			
	comp=Z,76μm,14.5s								
TIY					LR	LR			
	comp=Z,128μm,14.1s								
BUKP	**Musuan**	**16.20**	**171**		*e*P	**P**	**12 03 47.8**	**-0.8**
BJT	**Baijiatuau**	**16.86**	**343**		P	**Pn**	**12 03 54.7**	**+0.8**
BJT					pmax	pmax			
	comp=Z,308nm,1.4s								
BJT	**Baijiatuau**	**16.86**	**343**		P	**Pn**	**12 03 54.7**	**+0.8**
BJI	**Beijing**	**16.88**	**343**		P	**P**	**12 03 57.1**	**+1.2**
BJI					LR	LR			
	comp=Z,41μm,18.3s								
BJI					LR	LR			
	comp=Z,24μm,18.6s								
BJI					LR	LR			
	comp=Z,39μm,21.0s								
KCP	**Kidapawan**	**17.06**	**171**	⇑	*i*P	**P**	**12 03 58.4**	**+0.3**
DAV	**Davao City (W)**	**17.07**	**170**		P	**P**	**12 03 59.3**	**+1.1**
	comp=Z,78nm,0.3s,baz=86,slow=6.9,SNR=4.8								
DAV	**Davao City (W)**	**17.07**	**170**		P	**P**	**12 03 59.1**	**+0.9**
MATI	**Mati**	**17.32**	**167**		*e*P	**Pn**	**12 03 58.4**	**-1.4**
SLVN	**Son La**	**17.38**	**265**			**Pn**	**12 04 00.5**	**-0.2**
JHJ	**Hachijo jima 2**	**17.67**	**55**		P	**Pn**	**12 04 03.5**	**-0.5**
	comp=Z,19nm,0.3s,baz=82,slow=10.0,SNR=3.4								
JHJ2	**Mitsune**	**17.69**	**55**		P	**P**	**12 04 06.1**	**+1.2**
SNY	**Shenyang**	**17.82**	**3**	⇑	P	**Pn**	**12 04 05.8**	**0.0**
SNY					S	**Sn**	**12 07 22.3**	**-1.1**
SNY					pmax	pmax			
	comp=Z,14μm,7.0s								
SNY					LR	LR			
	comp=Z,56μm,15.9s								
SNY					LR	LR			
	comp=Z,39μm,14.5s								
SNY					LR	LR			
	comp=Z,87μm,15.7s								
JCJ	**Chichijima**	**18.01**	**76**		P	**Pn**	**12 04 08.4**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=280,slow=20,SNR=2.9								
JCJ					LR	LR	12 09 37.6		
	comp=Z,3μm,19.2s,baz=251,slow=32								
JCJ	**Chichijima**	**18.01**	**76**		P	**P**	**12 04 10.0**	**+1.4**
JCJ					IAmb	IAmb	12 04 22.4		
	comp=Z,1μm,1.6s								
CD2	**Chengdu**	**18.02**	**297**		P	**P**	**12 04 08.9**	**+0.3**
CD2					S	**Sn**	**12 07 26.5**	**-2.0**
CD2					pmax	pmax			
	comp=Z,440nm,1.2s								
CD2					pmax	pmax			
	comp=Z,15μm,10.2s								
CD2					LR	LR			
	comp=Z,59μm,13.9s								
CD2					LR	LR			
	comp=Z,86μm,15.7s								
CD2					LR	LR			
	comp=Z,115μm,16.3s								
KMI	**Kunming**	**18.03**	**278**	⇓	P	**P**	**12 04 12.3**	**+3.2**
KMI					pP	sP	12 04 18.8	-1.3	
KMI					sP	pwP	12 04 22.5	+1.9	
KMI					PP	pP	12 04 27.8	+11	
KMI					S	**Sn**	**12 07 31.8**	**+2.6**
KMI					sS	sS	12 07 42.9	-3.2	
KMI					SS	**SnSn**	**12 07 54.8**	**+12**	
KMI					pmax	pmax			
	comp=Z,10μm,12.1s								
KMI					LR	LR			
	comp=Z,27μm,12.2s								
KMI					LR	LR			
	comp=Z,65μm,14.0s								
KMI					LR	LR			
	comp=Z,66μm,13.4s								
KMI	**Kunming**	**18.03**	**278**		P	**Pn**	**12 04 07.9**	**-0.9**
KMI					pmax	pmax			
	comp=Z,378nm,1.5s								
KMI	**Kunming**	**18.03**	**278**		P	**Pn**	**12 04 07.8**	**-0.9**
DDMP	**Don Marcelino,**	**18.04**	**170**		*e*P	**Pn**	**12 04 08.1**	**-0.6**
UBPT	**Khong Chiam**	**18.23**	**245**		P	**Pn**	**12 04 16.0**	**+5.0**
	comp=Z,4μmcomp=Z,77nm,2.4s								
UBPT	**Khong Chiam**	**18.23**	**245**		P	**P**	**12 04 10.8**	**-0.2**
MAJO	**Matsushiro**	**18.42**	**44**	⇑	*i*P	**P**	**12 04 12.5**	**-0.5**
MAJO					MLR	MLR			
	comp=Z,31μm,23.0s								
MAJO	**Matsushiro**	**18.42**	**44**		P	**P**	**12 04 12.2**	**-0.8**
MAT	**Matsushiro**	**18.42**	**44**		P	**P**	**12 04 12.6**	**-0.4**
MAT					*e*S	**S**	**12 07 43.6**	**+2.0**
MJAR	**Matsushiro Arr**	**18.42**	**44**		P	**P**	**12 04 11.3**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=241,slow=10,SNR=20								
MJAR					ScP	**ScP**	**12 12 16.8**	**+0.5**	
	baz=207,slow=2.5,SNR=5.1								
MJAR					LR	LR	12 12 19.7		
	comp=Z,22μm,19.3s,baz=230,slow=40								
MJAR	**Matsushiro Arr**	**18.42**	**44**		P	**P**	**12 04 12.2**	**-0.8**
MJAR					pmax	pmax			
	comp=Z,53nm,1.5s								
MJAR	**Matsushiro Arr**	**18.42**	**44**		P	**P**	**12 04 12.2**	**-0.8**
KKM	**Kota Kinabalu**	**18.84**	**200**		P	**Pn**	**12 04 19.7**	**+1.2**
KKM					IAmb	IAmb	12 04 43.1		
	comp=Z,964nm,1.6s								
NONG	**Nongkai**	**19.01**	**256**		P	**Pn**	**12 04 25.0**	**+4.5**
	comp=Z,166nm,0.9s								
MYLDM	**Lahad Datu**	**19.09**	**192**		P	**P**	**12 04 20.5**	**0.0**
HHC	**Hu-ho-hao-te**	**19.17**	**334**		*e*P	**Pn**	**12 04 23.1**	**+0.8**
HHC					PP	**PnPn**	**12 04 36.5**	**+1.1**
HHC					S	Sn	12 07 45.1	-11	
HHC					SS	**SnSn**	**12 08 18.4**	**+7.8**
HHC					pmax	pmax			
	comp=Z,10μm,5.2s								
HHC					LR	LR			
	comp=Z,113μm,14.2s								
HHC					LR	LR			
	comp=Z,64μm,13.5s								
HHC					LR	LR			
	comp=Z,135μm,14.2s								
MSHR	**Mys Shultsa**	**19.88**	**19**	⇑	*i*P	**P**	**12 04 28.4**	**-0.5**
MSHR					MLR	MLR			
	comp=Z,66μm,17.0s								
CN2	**Changchun**	**19.92**	**6**	⇑	P	**P**	**12 04 28.3**	**-1.0**
CN2					*e*sP	sP	12 04 41.5	+1.0	
CN2					*e*S	**S**	**12 08 03.6**	**-8.1**
CN2					pmax	pmax			
	comp=Z,10μm,8.0s								
CN2					LR	LR			
	comp=Z,108μm,15.0s								
CN2					LR	LR			
	comp=Z,39μm,15.0s								
CN2					LR	LR			
	comp=Z,123μm,15.0s								
KHON	**Khomkaen**	**19.98**	**251**		P	**Pn**	**12 04 35.0**	**+3.0**
	comp=Z,5μmcomp=Z,206nm,1.3s								
SPMM	**Sapulut**	**20.03**	**198**		P	Pn	12 04 34.0	+1.3	
LZH	**Lanzhou**	**20.13**	**311**		*e*P	Pn	12 04 34.4	+0.5	
LZH					pP	pP	12 04 38.3	-1.4	
LZH					PP	sP	12 04 51.0	+7.5	
LZH					PcP	**PcP**	**12 08 47.8**	**+1.6**	
LZH					pmax	pmax			
	comp=Z,260nm,1.1s								
LZH					pmax	pmax			
	comp=Z,14μm,5.7s								
LZH					LR	LR			
	comp=Z,53μm,11.4s								
LZH					LR	LR			
	comp=Z,74μm,16.0s								
LZH					LR	LR			
	comp=Z,85μm,16.3s								
SGSI	**Sangihe**	**20.39**	**171**		P	Pn	12 04 36.4	-0.4	
	comp=Z,4μmcomp=Z,231nm,0.9s								
SGSI					pP	pP	12 04 38.6	-3.4	
	comp=Z,4μmcomp=Z,231nm,0.9s								
JMM	**Marumori**	**20.86**	**44**		P	**P**	**12 04 38.2**	**-1.4**
CHAI	**Chaiyaphum**	**20.89**	**251**		P	Pn	12 04 43.1	+0.4	
	comp=Z,2μmcomp=Z,152nm,1.1s								
MDJ	**Mudanjiang**	**21.38**	**14**		P	**P**	**12 04 45.0**	**-0.1**
MDJ					S	Sn	12 08 45.3	-3.9	
MDJ					SS	**SnSn**	**12 09 13.5**	**+8.8**
MDJ					pmax	pmax			
	comp=Z,10μm,11.5s								
MDJ					LR	LR			
	comp=Z,79μm,16.4s								
MDJ					LR	LR			
	comp=Z,42μm,12.3s								
MDJ					LR	LR			
	comp=Z,108μm,15.4s								
MDJ	**Mudanjiang**	**21.38**	**14**		P	**P**	**12 04 43.5**	**-1.6**
MDJ					IAMs_20	IAMs_20	12 13 36.0		
	comp=Z,62μm,20.0s								
UTTA	**Uttaradit**	**21.43**	**257**		P	**P**	**12 04 50.8**	**+5.0**
	comp=Z,728nmcomp=Z,72nm,1.0s								
USRK	**Ussuriysk Ar.**	**21.61**	**19**		P	**P**	**12 04 45.9**	**-1.7**
	comp=Z,28nm,0.7s,baz=204,slow=10.0,SNR=64								
USRK					LR	LR	12 13 53.0		
	comp=Z,53μm,18.3s,baz=184,slow=39								
SRAK	**Srakaew**	**21.73**	**247**		P	**P**	**12 04 47.3**	**-1.8**
	comp=Z,16μmcomp=Z,2μm,1.0s								
LAMP	**Lampang**	**22.00**	**260**		P	**P**	**12 04 54.0**	**+2.0**
	comp=Z,2μmcomp=Z,265nm,1.2s								
CM34	**Chiang Mai Arr**	**22.34**	**261**		P	**P**	**12 04 58.0**	**+2.4**
SUKH	**Sukhothai**	**22.35**	**258**		P	**P**	**12 04 59.6**	**+3.9**
	comp=Z,2μmcomp=Z,130nm,1.3s								
CM35	**Chiang Mai Arr**	**22.39**	**261**		P	**P**	**12 04 58.0**	**+1.8**
CM36	**Chiang Mai Arr**	**22.49**	**260**		P	**P**	**12 05 00.0**	**+2.7**
CM33	**Chiang Mai Arr**	**22.53**	**261**		P	**P**	**12 05 00.0**	**+2.3**
CMMT	**Chiang Mai**	**22.53**	**261**		P	**P**	**12 04 59.8**	**+2.1**
	comp=Z,67nm,1.6s								
CHTO	**Chiang Mai**	**22.53**	**261**		P	**P**	**12 04 56.2**	**-1.5**
CHTO					pmax	pmax			
	comp=Z,190nm,1.3s								
CHTO					MLR	MLR			
	comp=Z,19μm,20.0s								
CHTO	**Chiang Mai**	**22.53**	**261**		P	**P**	**12 04 56.2**	**-1.5**
CHTO	**Chiang Mai**	**22.53**	**261**		P	**P**	**12 05 01.1**	**+3.3**
CM09	**Chiang Mai Arr**	**22.60**	**260**		P	**P**	**12 05 01.8**	**+3.2**
	comp=Z,618nmcomp=Z,64nm,1.3s								
CM04	**Chiang Mai Arr**	**22.63**	**260**		P	**P**	**12 05 02.0**	**+3.3**
	comp=Z,603nmcomp=Z,58nm,1.0s								
CM01	**Chiang Mai Arr**	**22.64**	**260**		P	**P**	**12 05 02.2**	**+3.4**
	comp=Z,790nmcomp=Z,69nm,1.1s								
CM31	**Chiang Mai Arr**	**22.64**	**260**		P	**P**	**12 05 02.1**	**+3.2**
	comp=Z,22μmcomp=Z,1μm,0.9s								
CM31	**Chiang Mai Arr**	**22.64**	**260**		P	**P**	**12 04 57.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**22.64**	**260**		P	**P**	**12 05 01.0**	**+2.1**
	comp=Z,26nm,0.9s,baz=64,slow=8.7,SNR=74								
CMAR					PcP	**PcP**	**12 08 51.7**	**+0.6**	
	comp=Z,7.3nm,0.9s,baz=81,slow=0.9,SNR=5.4								
CMAR					LR	LR	12 15 39.1		
	comp=Z,14μm,18.7s,baz=109,slow=41								
CMAR	**Chiang Mai Arr**	**22.64**	**260**		P	**P**	**12 04 59.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**22.64**	**260**		P	**P**	**12 04 59.6**	**+0.8**
CM02	**Chiang Mai Arr**	**22.65**	**260**		P	**P**	**12 05 02.1**	**+3.2**
	comp=Z,653nmcomp=Z,58nm,1.1s								
CM05	**Chiang Mai Arr**	**22.66**	**260**		P	**P**	**12 05 02.0**	**+2.9**
	comp=Z,570nmcomp=Z,51nm,1.1s								
CM15	**Chiang Mai Arr**	**22.66**	**260**		P	**P**	**12 05 01.9**	**+2.8**
	comp=Z,588nmcomp=Z,57nm,0.9s								
CM32	**Chiang Mai Arr**	**22.67**	**261**		P	**P**	**12 05 02.0**	**+2.8**
CM13	**Chiang Mai Arr**	**22.69**	**260**		P	**P**	**12 05 02.0**	**+2.6**
	comp=Z,506nmcomp=Z,43nm,0.9s								
TOLI2	**Tolitoli**	**22.80**	**184**		P	**P**	**12 05 00.8**	**+0.3**
JTM	**Tenmabayashi**	**22.86**	**38**		P	**P**	**12 04 58.8**	**-2.2**
GTOI	**Gorontalo**	**23.21**	**179**		P	**P**	**12 05 03.8**	**-0.9**
	comp=Z,7μmcomp=Z,333nm,1.6s								
GTOI					pP	**pP**	**12 05 08.5**	**-3.9**	
	comp=Z,7μmcomp=Z,333nm,1.6s								
UTHA	**Uthaitani**	**23.25**	**253**		P	**P**	**12 05 08.9**	**+3.7**
	comp=Z,1μmcomp=Z,56nm,1.0s								
PATY	**Pattaya**	**23.27**	**246**		P	P	12 05 14.7	+9.5	
KMSI	**Cibinong**	**23.31**	**176**		P	**P**	**12 05 06.4**	**+0.7**
	comp=Z,795nmcomp=Z,5μmcomp=Z,345nm,1.0s								
MRSI	**Marisa**	**23.37**	**181**		P	**P**	**12 05 07.1**	**+0.8**
	comp=Z,11μmcomp=Z,366nm,1.5s								
MRSI					pP	**pP**	**12 05 10.6**	**-3.5**	
	comp=Z,11μmcomp=Z,366nm,1.5s								
UMPA	**Umpang Tak**	**23.50**	**255**		P	**P**	**12 05 12.0**	**+4.3**
	comp=Z,146nm,1.1s								
GUMO	**Guam**	**23.51**	**112**		P	**P**	**12 05 09.6**	**+1.9**
GUMO					pmax	pmax			
	comp=Z,2μm,1.4s								
GUMO					MLR	MLR			
	comp=Z,29μm,19.0s								
GUMO	**Guam**	**23.51**	**112**		P	**P**	**12 05 09.6**	**+1.9**
TNTI	**Ternate**	**23.55**	**168**		P	**P**	**12 05 09.3**	**+1.3**
TNTI	**Ternate**	**23.55**	**168**		P	**P**	**12 05 08.9**	**+0.9**
	comp=Z,26μmcomp=Z,1μm,1.0s								
TNTI					pP	**pP**	**12 05 12.6**	**-3.3**	
	comp=Z,26μmcomp=Z,1μm,1.0s								
SBUM	**Sibu**	**23.61**	**206**		P	**P**	**12 05 08.4**	**-0.2**
SBUM					IAmb	IAmb	12 05 11.8		
	comp=Z,259nm,1.0s								
SBUM	**Sibu**	**23.61**	**206**		P	**P**	**12 05 10.0**	**+1.4**
MHMT	**Maesariang**	**23.64**	**261**		P	**P**	**12 05 12.1**	**+3.1**
	comp=Z,5μmcomp=Z,112nm,1.5s								
TEY	**Ternei**	**23.93**	**25**	⇓	*e*P	**P**	**12 05 09.8**	**-1.6**
TEY					*e*		12 05 26.6		
TEY					pmax	pmax			
	comp=Z,20nm,0.5s								
PHET	**Kaeng Krachan**	**24.31**	**247**		P	**P**	**12 05 19.0**	**+3.8**
	comp=Z,1μmcomp=Z,131nm,1.1s								
KHLT	**Khaolaem Dam**	**24.32**	**252**		P	**P**	**12 05 19.1**	**+3.7**
	comp=Z,2μmcomp=Z,49nm,1.2s								
GTA	**Gaotai**	**24.60**	**314**		*e*P	**P**	**12 05 17.8**	**0.0**
GTA					pP	pwP	12 05 28.3	-0.7	
GTA					sP	sP	12 05 32.4	+3.2	
GTA					S	**S**	**12 09 40.0**	**+3.0**
GTA					sS	pS	12 09 47.0	+1.0	
GTA					pmax	pmax			
	comp=Z,85nm,0.9s								
GTA					pmax	pmax			
	comp=Z,6μm,8.8s								
GTA					LR	LR			
	comp=Z,21μm,11.9s								
GTA					LR	LR			
	comp=Z,48μm,14.3s								
GTA					LR	LR			
	comp=Z,58μm,14.7s								
APSI	**Ampana**	**24.76**	**182**		P	**P**	**12 05 20.1**	**+0.9**
	comp=Z,7μmcomp=Z,339nm,1.3s								
ERM	**Erimo**	**24.85**	**39**		*i* P	**P**	**12 05 16.1**	**-3.8**
ERM					MLR	MLR			
	comp=Z,24μm,16.0s								
LUWI	**Luwuk**	**24.88**	**179**		P	**P**	**12 05 21.1**	**+0.8**
LUWI	**Luwuk**	**24.88**	**179**		P	**P**	**12 05 20.9**	**+0.6**
	comp=Z,14μmcomp=Z,576nm,1.1s								
KSM	**Kuching**	**25.31**	**210**		P	**P**	**12 05 25.2**	**+1.0**
KSM	**Kuching**	**25.31**	**210**		P	**P**	**12 05 27.0**	**+2.8**
HIA	**Hailar**	**25.33**	**356**		P	**P**	**12 05 22.7**	**-1.5**
HIA					pmax	pmax			
	comp=Z,127nm,1.3s								
HIA					MLR	MLR			
	comp=Z,41μm,18.0s								
HIA	**Hailar**	**25.33**	**356**		P	**P**	**12 05 22.7**	**-1.5**
HIA	**Hailar**	**25.33**	**356**		IAMs_20	IAMs_20	12 16 45.0		
	comp=Z,41μm,18.0s								
MOKO	**MOKOCHONG**	**25.44**	**281**	⇑	*e*P	**P**	**12 05 26.3**	**+0.8**
BKB	**Balikpapan**	**25.68**	**193**		P	**P**	**12 05 27.3**	**-0.3**
BKB	**Balikpapan**	**25.68**	**193**		P	**P**	**12 05 28.9**	**+1.3**
	comp=Z,19μmcomp=Z,648nm,1.1s								
KOHI	**KOHIMA**	**25.82**	**280**		*e*P	**P**	**12 05 31.3**	**+2.3**
KOHI					IAmb	IAmb	12 05 41.6		
	comp=Z,134nm,1.4s								
MTKI	**Muara Teweh, K**	**25.86**	**198**		P	**P**	**12 05 31.5**	**+2.3**
	comp=Z,10μmcomp=Z,275nm,1.6s								
ASAJ	**Asahikawa**	**25.95**	**34**		P	**P**	**12 05 26.2**	**-3.6**
	comp=Z,27nm,0.5s,baz=239,slow=12,SNR=27								
ASAJ	**Asahikawa**	**25.95**	**34**		P	**P**	**12 05 28.9**	**-1.0**
ASAJ					pmax	pmax			
	comp=Z,288nm,1.9s								
ASAJ					MLR	MLR			
	comp=Z,36μm,21.0s								
JKA	**Kamikawa-asahi**	**25.95**	**34**		P	**P**	**12 05 28.9**	**-1.0**
JKA					IAmb	IAmb	12 06 21.6		
	comp=Z,288nm,1.9s								
IMP	**Imphal**	**26.02**	**278**		*e*P	**P**	**12 05 31.7**	**+1.0**
STKI	**Sintang**	**26.08**	**206**		P	**P**	**12 05 33.8**	**+2.6**
SANI	**Sanana**	**26.09**	**172**		P	**P**	**12 05 32.1**	**+0.8**
	comp=Z,11μmcomp=Z,566nm,1.1s								
SWI	**Sorong**	**26.11**	**160**		P	**P**	**12 05 33.0**	**+1.5**
	comp=Z,218nm,1.1s								
SIJI	**Sorong**	**26.12**	**160**		P	**P**	**12 05 32.5**	**+0.9**
	comp=Z,118nm,0.9s,baz=346,slow=8.2,SNR=21								
ITAN	**ITANAGAR**	**26.14**	**283**		*e*P	**P**	**12 05 34.8**	**+3.0**
ITAN					IAmb	IAmb	12 05 39.3		
	comp=Z,299nm,0.9s								
KLR	**Kul'dur**	**26.23**	**14**	⇓	*i*P	**P**	**12 05 31.4**	**-0.9**
KLR					pmax	pmax			
	comp=Z,85nm,1.6s								
KLR					MLR	MLR			
	comp=Z,63μm,15.0s								
ULN	**Ulaanbaatar**	**26.82**	**337**	⇑	*i*P	**P**	**12 05 36.9**	**-1.0**
ULN					pmax	pmax			
	comp=Z,59nm,1.0s								
ULN					MLR	MLR			
	comp=Z,82μm,16.0s								
ULN	**Ulaanbaatar**	**26.82**	**337**		P	**P**	**12 05 37.2**	**-0.6**
ULN					IAmb	IAmb	12 06 07.3		
	comp=Z,189nm,1.4s								
ULN	**Ulaanbaatar**	**26.82**	**337**		IAMs_20	IAMs_20	12 17 17.6		
	comp=Z,67μm,20.0s								
TTSI	**Tana Toraja**	**26.99**	**186**		P	**P**	**12 05 41.0**	**+1.6**
	comp=Z,4μmcomp=Z,110nm,0.9s								
SONM	**Songino Array**	**27.04**	**336**		P	**P**	**12 05 38.1**	**-1.7**
	comp=Z,91nm,1.1s,baz=148,slow=8.7,SNR=54								
SONM					PcP	**PcP**	**12 09 00.4**	**-0.1**	
	comp=Z,4.0nm,0.4s,baz=176,slow=3.3,SNR=8.8								
SONM					ScP	**ScP**	**12 12 38.0**	**-0.6**	
	comp=Z,17nm,1.2s,baz=152,slow=2.3,SNR=8.7								
SONM					LR	LR	12 17 35.2		
	comp=Z,73μm,20.1s,baz=154,slow=39								
SONM	**Songino Array**	**27.04**	**336**		P	**P**	**12 05 38.7**	**-1.1**
SONM					pmax	pmax			
	comp=Z,120nm,1.2s								
SONM	**Songino Array**	**27.04**	**336**		P	**P**	**12 05 38.6**	**-1.1**
TRTT	**Trang**	**27.13**	**237**		P	**P**	**12 05 43.2**	**+2.5**
	comp=Z,48nm,1.2s								
SAIH	**SAIHA**	**27.16**	**273**		*e*P	**P**	**12 05 42.1**	**+1.0**
KRAB	**Krabi**	**27.27**	**239**		P	**P**	**12 05 46.0**	**+4.0**
NLAI	**Namlea**	**27.42**	**170**		P	**P**	**12 05 45.2**	**+1.9**
	comp=Z,13μmcomp=Z,2μm,0.9s								
YUK	**Yuzh-Kuril'sk**	**27.66**	**38**		*e*P	**P**	**12 05 44.4**	**-0.8**
YUK					*e*S	**S**	**12 10 24.4**	**-0.8**
KBKI	**Kotabaru**	**27.81**	**194**		P	**P**	**12 05 47.7**	**+0.9**
	comp=Z,1μmcomp=Z,60nm,1.3s								
SHL	**Shillong**	**27.84**	**280**		P	**P**	**12 05 48.3**	**+1.1**
SHL					pmax	pmax			
	comp=Z,318nm,1.3s								
SHL					MLR	MLR			
	comp=Z,19μm,19.0s								
SHL	**Shillong**	**27.84**	**280**		*e*P	**P**	**12 05 49.1**	**+1.9**
SHL					IAmb	IAmb	12 05 55.9		
	comp=Z,74nm,0.9s								
SHL	**Shillong**	**27.84**	**280**		P	**P**	**12 05 48.3**	**+1.1**
SHL					IAmb	IAmb	12 06 36.6		
	comp=Z,318nm,1.3s								
SHL	**Shillong**	**27.84**	**280**		P	**P**	**12 05 50.9**	**+3.7**
	SNR=48								
MSAI	**Masohi**	**27.87**	**166**		P	**P**	**12 05 48.3**	**+1.0**
SPSI	**Sidrap Palu**	**27.91**	**186**		P	**P**	**12 05 47.9**	**+0.3**
	comp=Z,4μmcomp=Z,105nm,0.9s								
GUWA	**GUWAHATI**	**27.98**	**281**		*e*P	**P**	**12 05 50.3**	**+2.1**
GUWA					IAmb	IAmb	12 05 53.0		
	comp=Z,110nm,1.0s								
YSS	**Yuzh-Sakhalins**	**28.07**	**30**	⇓	*e*P	**P**	**12 05 49.3**	**+0.5**
YSS					*e*		12 06 08.3		
YSS					pmax	pmax			
	comp=Z,70nm,1.1s								
YSS	**Yuzh-Sakhalins**	**28.07**	**30**		P	**P**	**12 05 49.5**	**+0.7**
YSS					IAmb	IAmb	12 06 28.1		
	comp=Z,142nm,1.3s								
YSS					IAMs_20	IAMs_20	12 17 27.5		
	comp=Z,31μm,19.0s								
KULM	**Kulim**	**28.08**	**232**		P	**P**	**12 05 50.3**	**+1.1**
KULM					IAmb	IAmb	12 05 54.1		
	comp=Z,195nm,1.3s								
KULM	**Kulim**	**28.08**	**232**		P	**P**	**12 05 52.0**	**+2.8**
BBKI	**Banjar Baru**	**28.29**	**196**		P	**P**	**12 05 53.2**	**+2.2**
	comp=Z,6μmcomp=Z,213nm,1.0s								
BNSI	**Bone**	**28.31**	**185**		P	**P**	**12 05 51.0**	**-0.2**
	comp=Z,4μmcomp=Z,104nm,1.6s								
FAKI	**Fak Fak**	**28.37**	**159**		P	**P**	**12 05 52.5**	**+0.7**
FAKI	**Fak Fak**	**28.37**	**159**		P	**P**	**12 05 52.3**	**+0.5**
	comp=Z,254nm,1.0s								
IPM	**Ipoh**	**28.38**	**230**		P	**P**	**12 05 52.8**	**+0.9**
IPM					IAmb	IAmb	12 05 55.9		
	comp=Z,243nm,1.3s								
IPM	**Ipoh**	**28.38**	**230**		P	**P**	**12 05 54.0**	**+2.1**
LSA	**Lhasa**	**28.51**	**288**		P	**P**	**12 05 55.3**	**+1.8**
LSA					pmax	pmax			
	comp=Z,180nm,1.0s								
LSA					LR	LR			
	comp=Z,20μm,15.7s								
LSA					LR	LR			
	comp=Z,22μm,17.8s								
LSA					LR	LR			
	comp=Z,46μm,15.0s								
LSA	**Lhasa**	**28.51**	**288**		P	**P**	**12 05 54.8**	**+1.3**
LSA					pmax	pmax			
	comp=Z,69nm,0.9s								

PSI **Prapat** 31.04 231 P **P** 12 06 17.4 +1.8
PSI pmax pmax
comp=Z,244nm,1.2s
PSI MLR MLR
comp=Z,19µm,19.0s
RPSI **Rantau Prapat** 31.11 231 P **P** 12 06 17.4 +1.3
RPSI IAmb IAmb 12 06 20.2
comp=Z,244nm,1.2s
TLY **Talaya** 31.23 337 *e*P **P** 12 06 16.0 -0.8
TLY *e*S **S** 12 11 24.6 +3.6
TLY pmax pmax
comp=Z,151nm,1.1s
TLY MLR MLR
comp=Z,168µm,15.0s
TLY **Talaya** 31.23 337 P **P** 12 06 15.8 -1.0
TLY IAMs_20 IAMs_20 12 19 59.1
comp=Z,49µm,21.0s
BKNI **Bangkinang** 31.41 225 P **P** 12 06 20.2 +1.5
BKNI IAmb IAmb 12 06 23.6
comp=Z,189nm,1.1s
BKNI **Bangkinang** 31.41 225 P **P** 12 06 20.3 +1.5
comp=Z,167nm,1.4s
IRK **Irkutsk** 31.48 338 *e*P **P** 12 06 14.9 -4.1
IRK *e* 12 16 52.9
IRK pmax pmax
comp=Z,208nm,3.2s
TAPN **Taplejung** 31.49 284 *e*P **P** 12 06 21.4 +1.6
comp=Z,219nm,1.0s
GENI **Genyem** 31.50 145 P **P** 12 06 23.1 +3.5
ODAN **Odare** 31.80 283 *e*P **P** 12 06 24.4 +2.0
comp=Z,540nm,1.3s
KMMI **Kalianget** 31.95 196 P **P** 12 06 24.6 +1.1
comp=Z,156nm,1.4s
MNSI **Mandailing Nat** 32.02 227 P **P** 12 06 26.1 +2.0
comp=Z,180nm,1.3s
MOY **Mondy** 32.21 335 *e*P **P** 12 06 25.9 +0.4
MOY pmax pmax
comp=Z,120nm,1.8s
MMRI **Maumere** 32.42 181 P **P** 12 06 28.7 +1.1
MMRI **Maumere** 32.42 181 P **P** 12 06 29.1 +1.5
comp=Z,7µmcomp=Z,344nm,1.4s
RAMN **Ramite** 32.50 283 *e*P **P** 12 06 29.9 +1.3
comp=Z,342nm,1.3s
ABJI **Asem Bagus** 32.60 195 P **P** 12 06 30.4 +1.2
comp=Z,123nm,1.9s
SRBI **Singaraja** 32.66 193 P **P** 12 06 30.0 +0.3
comp=Z,3µmcomp=Z,109nm,1.2s
JIRN **Jiri** 32.83 284 *e*P **P** 12 06 32.7 +1.1
PLAI **Plampang** 32.94 189 P **P** 12 06 32.5 +0.4
comp=Z,125nm,0.9s
TWSI **Taliwang, Sumb** 32.98 190 P **P** 12 06 32.3 -0.2
comp=Z,2µmcomp=Z,48nm,1.7s
SMRI **Semarang** 33.02 202 P **P** 12 06 31.9 -1.0
SMRI **Semarang** 33.02 202 P **P** 12 06 35.4 +2.6
comp=Z,10µmcomp=Z,409nm,2.0s
GSI **Gunungsitoli** 33.04 231 P **P** 12 06 33.7 +0.6
GSI IAmb IAmb 12 06 56.9
comp=Z,270nm,1.6s
GSI **Gunungsitoli** 33.04 231 P **P** 12 06 34.1 +1.0
comp=Z,84nm,2.0s
GUN **Gumba** 33.10 285 *e*P **P** 12 06 35.3 +1.4
comp=Z,270nm,1.1s
DNP **Denpasar** 33.24 193 P **P** 12 06 36.8 +2.1
comp=Z,1µm,1.6s
LHSI **Lahat** 33.26 216 P **P** 12 06 37.0 +2.0
comp=Z,77nm,1.9s
BOK **Bokaro** 33.44 277 *e*P **P** 12 06 39.5 +3.0
BOK IAmb IAmb 12 06 41.3
comp=Z,160nm,1.5s
PKI **Pulchoki** 33.53 284 *e*P **P** 12 06 38.4 +0.7
comp=Z,161nm,1.2s
PKIN **Phulchoki** 33.54 284 *e*P **P** 12 06 39.1 +1.4
WBSI **Waikabubak, Su** 33.56 186 P **P** 12 06 38.2 +0.7
comp=Z,2µmcomp=Z,74nm,1.4s
SOEI **Soe** 33.57 177 P **P** 12 06 37.2 -0.6
SOEI **Soe** 33.57 177 P **P** 12 06 37.0 -0.8
comp=Z,4µmcomp=Z,205nm,0.9s
KKN **Kakani** 33.63 285 *e*P **P** 12 06 39.9 +1.5
UGM **Wanagama** 33.80 202 P **P** 12 06 40.5 +0.8
UGM **Wanagama** 33.80 202 P **P** 12 06 40.4 +0.8
comp=Z,15µmcomp=Z,787nm,1.5s
DMN **Daman** 33.80 284 *e*P **P** 12 06 40.7 +0.8
comp=Z,150nm,1.0s
BATI **Baumata** 34.00 178 P **P** 12 06 41.1 -0.3
KASI **Kota Agung** 34.19 213 P **P** 12 06 44.1 +1.1
comp=Z,148nm,1.4s
GKN **Gorkha** 34.20 285 *e*P **P** 12 06 44.0 +0.7
comp=Z,327nm,1.2s
BOD **Bodaibo** 34.36 352 *e*P **P** 12 06 41.3 -2.7
BOD pmax pmax
comp=Z,30nm,1.8s
WMQ **Urumqi** 34.68 313 P **P** 12 06 47.8 +0.7
WMQ pP pP 12 06 56.0 +0.4
WMQ sP sP 12 06 58.9 +0.3
WMQ *e*S **S** 12 12 15.0 0.0
WMQ ScP **ScP** 12 13 04.6 +0.7
WMQ ScS **ScS** 12 17 06.3 -0.7
WMQ pmax pmax
comp=Z,170nm,1.3s
WMQ pmax pmax
comp=Z,12µm,10.9s
WMQ LR LR
comp=Z,28µm,14.5s
WMQ LR LR
comp=Z,35µm,12.9s
WMQ LR LR
comp=Z,25µm,15.9s
WMQ **Urumqi** 34.68 313 P **P** 12 06 46.4 -0.7
WMQ pmax pmax
comp=Z,144nm,1.2s
WMQ MLR MLR
comp=Z,18µm,20.0s
WMQ **Urumqi** 34.68 313 P **P** 12 06 46.4 -0.7
WMQ IAmb IAmb 12 06 51.4
comp=Z,144nm,1.2s
KOLN **Koldanda** 35.12 285 *e*P **P** 12 06 52.2 +0.9
comp=Z,186nm,1.0s
MANU **Manus Island** 35.39 134 P **P** 12 06 55.6 +2.1
SKR **Severo-Kuril's** 37.20 36⇓ *e*P **P** 12 07 08.1 -0.4
DGZ **Jazzator, Alta** 37.50 322⇓ *i*P **P** 12 07 10.9 -0.4
DGZ pmax pmax
comp=Z,69nm,1.3s
DGZ MLR MLR
comp=Z,49µm,17.0s
MTN **Manton Dam** 37.56 166 P **P** 12 07 11.8 -0.1
ZSN **Zaisan** 37.97 318 *e*P **P** 12 07 14.1 -1.0
baz=318
ZSN **Zaisan** 37.97 318 *e*P **P** 12 07 14.1 -1.0
PATS **Pohnpei** 38.32 111 P **P** 12 07 19.5 +1.0
PATS IAMs_20 IAMs_20 12 23 22.8
comp=Z,26µm,19.0s
YAK **Yakutsk** 38.34 5 *e*P **P** 12 07 15.5 -2.5
YAK *e*'PP **pwP** 12 07 31.4 +1.4
YAK *e*S **S** 12 13 07.6 -2.6
YAK *e* 12 17 23.3
YAK pmax pmax
comp=Z,148nm,0.9s
YAK pmax pmax
comp=N,74nm,1.1s
YAK pmax pmax
comp=E,17nm,1.1s
YAK smax smax
comp=N,635nm,5.6s
YAK smax smax
comp=E,1µm,8.4s
YAK MLR MLR
comp=Z,36µm,17.0s
YAK MLR MLR
comp=N,20µm,14.0s
YAK MLR MLR
comp=E,7µm,15.0s
YAK **Yakutsk** 38.34 5 P **P** 12 07 15.8 -2.2
YAK IAmb IAmb 12 07 18.2
comp=Z,124nm,0.7s
YAK IAMs_20 IAMs_20 12 24 46.3
comp=Z,30µm,18.0s
MK31 **Makanchi Array** 39.33 316⇑ *i*P **P** 12 07 25.6 -1.0
MK31 **Makanchi Array** 39.33 316 P **P** 12 07 25.4 -1.2
MK31 IAmb IAmb 12 07 28.8
comp=Z,132nm,1.2s
MKAR **Makanchi Array** 39.33 316 P **P** 12 07 25.5 -1.1
comp=Z,64nm,0.8s,baz=103,slow=10,SNR=114
MKAR PcP **PcP** 12 09 34.3 -0.5
comp=Z,22nm,1.0s,baz=94,slow=4.9,SNR=3.7
MKAR ScP **ScP** 12 13 21.0 -0.1
comp=Z,14nm,1.2s,baz=114,slow=3.0,SNR=6.7
MKAR LR LR 12 25 05.0
comp=Z,25µm,19.1s,baz=96,slow=38
MKAR **Makanchi Array** 39.33 316 P **P** 12 07 25.2 -1.4
MKAR **Makanchi Array** 39.33 316 P **P** 12 07 25.2 -1.4
PETK **Petropavlovsk-** 39.36 33 LR LR 12 24 32.0
comp=Z,18µm,18.9s,baz=228,slow=38
MAKZ **Makanchi** 39.54 315 P **P** 12 07 27.7 -0.6
MAKZ pmax pmax
comp=Z,204nm,1.3s
MAKZ MLR MLR
comp=Z,32µm,19.0s
MAKZ **Makanchi** 39.54 315 P **P** 12 07 27.7 -0.6
MAKZ IAmb IAmb 12 07 30.6
comp=Z,204nm,1.2s
MAKZ IAMs_20 IAMs_20 12 25 01.7
comp=Z,32µm,19.0s
PET **Petropavlovsk** 39.79 34⇑ *i*P **P** 12 07 28.5 -1.7
PET pmax pmax
comp=Z,63nm,1.2s
PET MLR MLR
comp=Z,13µm,19.0s
PET **Petropavlovsk** 39.79 34 P **P** 12 07 29.7 -0.6
KNRA **Kununurra** 39.88 171 P **P** 12 07 31.8 +0.5
SHLS **Shalkode** 40.14 309 *e*P **P** 12 07 30.0 -3.4
comp=Z,156nm,1.4s,baz=309
SHLS **Shalkode** 40.14 309 *e*P **P** 12 07 30.0 -3.4
SHLS pmax pmax
comp=Z,156nm,1.4s
PDGK **Podgornoye** 40.16 309 P **P** 12 07 33.1 -0.5
RABL **Rabaul** 40.22 130 IAMs_20 IAMs_20 12 20 40.8
comp=Z,18µm,21.0s
UZB **Uzynbulak** 40.45 309 *e*P **P** 12 07 35.1 -1.0
comp=Z,158nm,1.4s,baz=309
UZB *e*S **S** 12 13 41.3 -1.5
baz=309
UZB **Uzynbulak** 40.45 309 *e*P **P** 12 07 35.0 -1.0
UZB *e*S **S** 12 13 41.2 -1.5
UZB pmax pmax
comp=Z,158nm,1.4s
SMLA **Simla** 40.61 290 *e*P **P** 12 07 38.7 +1.3
SMLA IAmb IAmb 12 07 42.9
comp=Z,203nm,1.1s
MA2 **Magadan** 40.71 22⇓ *i*P **P** 12 07 36.1 -1.7
MA2 pmax pmax
comp=Z,11nm,1.2s
MA2 MLR MLR
comp=Z,29µm,18.0s
MA2 **Magadan** 40.71 22 P **P** 12 07 36.3 -1.5
MA2 IAMs_20 IAMs_20 12 25 21.4
comp=Z,34µm,19.0s
KPKS **Kokpek** 40.76 309 *e*P **P** 12 07 37.6 -1.0
comp=Z,204nm,1.4s,baz=309
KPKS *e*S **S** 12 13 45.9 -1.4
baz=309
KPKS **Kokpek** 40.76 309 *e*P **P** 12 07 37.5 -1.0
KPKS *e*S **S** 12 13 45.9 -1.4
KPKS pmax pmax
comp=Z,204nm,1.4s
SATY **Saty** 40.86 309 *e*P **P** 12 07 38.6 -0.8
comp=Z,138nm,1.4s,baz=309
SATY *e*S **S** 12 13 47.6 -1.3
baz=309
SATY **Saty** 40.86 309 *e*P **P** 12 07 38.6 -0.8
SATY *e*S **S** 12 13 47.6 -1.3
SATY pmax pmax
comp=Z,138nm,1.4s
PMG **Port Moresby** 41.00 141 LR LR 12 22 12.8
comp=Z,13µm,21.4s,baz=320,slow=32
PMG **Port Moresby** 41.00 141 *d i*P **P** 12 07 42.6 +2.0
PMG pmax pmax
comp=Z,223nm,1.0s
PMG MLR MLR
comp=Z,17µm,19.0s
PMG **Port Moresby** 41.00 141 P **P** 12 07 41.3 +0.7
PMG IAmb IAmb 12 07 44.0
comp=Z,189nm,0.9s
PMG **Port Moresby** 41.00 141 IAMs_20 IAMs_20 12 24 14.6
comp=Z,18µm,20.0s
ZALV **Zalesovo Beam** 41.08 327 P **P** 12 07 38.9 -2.0
comp=Z,64nm,0.8s,baz=111,slow=8.1,SNR=64
ZALV PcP **PcP** 12 09 39.4 -0.8
comp=Z,12nm,0.6s,baz=103,slow=4.7,SNR=5.0
ZALV ScP **ScP** 12 13 28.0 +0.3
comp=Z,1.8nm,0.3s,baz=129,slow=44,SNR=2.1
ZALV LR LR 12 25 29.4
comp=Z,20µm,21.6s,baz=126,slow=37
BHPL **Bhopal** 41.19 278 *e*P **P** 12 07 42.9 +0.6
DHRM **DHARAMSHALA** 41.33 292 *e*P **P** 12 07 43.6 0.0
DHRM IAmb IAmb 12 07 46.0
comp=Z,161nm,1.2s
TDK **Taldyqorghan** 41.35 312 *e*P **P** 12 07 42.9 -0.4
baz=312
TDK *e*S **S** 12 13 55.2 -0.6
baz=312
TDK LR LR 12 25 20.3
comp=Z,13µm,15.1s,baz=312
TDK **Taldyqorghan** 41.35 312 *e*P **P** 12 07 42.8 -0.4
TDK *e*S **S** 12 13 55.2 -0.6
TDK MLR MLR
comp=Z,13µm,15.0s
MDRS **Chennai** 41.38 263 *e*P **P** 12 07 45.9 +2.0
MDRS IAmb IAmb 12 08 10.8
comp=Z,83nm,1.2s
HYB **Hyderabad** 41.52 270 *i* P **P** 12 07 46.0 +1.0
HYB *e*PcP **PcP** 12 09 43.0 +0.7
HYB *e*S **S** 12 14 03.0 +4.1
HYB **Hyderabad** 41.52 270 *e*P **P** 12 07 46.2 +1.2
MDOK **Medeo** 41.86 309 *e*P **P** 12 07 46.9 -0.8
baz=308
MDOK LR LR 12 26 40.0
comp=Z,8µm,12.9s,baz=308
MDOK **Medeo** 41.86 309 *e*P **P** 12 07 46.8 -0.8
MDOK MLR MLR
comp=Z,8µm,13.0s
FITZ **Fitzroy Crossi** 41.94 176 P **P** 12 07 48.1 -0.1
FITZ IAmb IAmb 12 07 50.2
comp=Z,172nm,1.2s
AAA **Alma-Ata** 41.96 309 *e*P **P** 12 07 48.5 +0.1
comp=Z,72nm,1.0s,baz=308
AAA LR LR 12 26 46.2
comp=Z,7µm,12.6s,baz=308
AAA **Alma-Ata** 41.96 309 *e*P **P** 12 07 48.5 +0.1
AAA pmax pmax
comp=Z,72nm,1.0s
AAA MLR MLR
comp=Z,7µm,13.0s
ULHL **Ulahol** 42.26 307 P **P** 12 07 51.5 +0.5
SNR=68
COEN **Coen** 42.77 150 P **P** 12 07 57.0 +1.9
COEN IAmb IAmb 12 07 58.7
comp=Z,119nm,0.8s
TKM2 **Tokmak 2** 42.85 308 P **P** 12 07 56.2 +0.4
SNR=277
TKM2 **Tokmak 2** 42.85 308 P **P** 12 07 55.6 -0.2
KURBB **Kurchatov Arra** 43.05 320 P **P** 12 07 55.3 -1.7
KBK **Karagaybulak** 43.27 307 P **P** 12 08 01.4 +2.2
SNR=37
PALK **Pallekele** 43.36 254 *c i*P **P** 12 08 01.4 +1.4
PALK MLR MLR
comp=Z,11µm,20.0s
PALK **Pallekele** 43.36 254 P **P** 12 07 59.0 -1.0
PALK **Pallekele** 43.36 254 P **P** 12 08 01.8 +1.8
PALK P **P** 12 08 01.8 +1.8
PALK P **P** 12 08 01.8 +1.8
CHMS **Chumysh** 43.48 308 P **P** 12 08 01.8 +1.2
SNR=73
UCH **Uchtor** 43.52 307 P **P** 12 08 02.4 +0.9
SNR=439
AAK **Ala-Archa** 43.60 307 LR LR 12 29 13.2
comp=Z,30µm,18.7s,baz=92,slow=40
AAK **Ala-Archa** 43.60 307 P **P** 12 08 02.1 +0.3
SNR=63
AAK **Ala-Archa** 43.60 307 *i* P **P** 12 08 03.0 +1.2
SNR=25
AAK **Ala-Archa** 43.60 307 *i* P **P** 12 08 01.9 +0.1
AAK pmax pmax
comp=Z,342nm,1.1s
AAK MLR MLR
comp=Z,83µm,17.0s
AAK **Ala-Archa** 43.60 307 P **P** 12 08 02.3 +0.5
AAK IAmb IAmb 12 08 05.2
comp=Z,92nm,1.0s
AAK **Ala-Archa** 43.60 307 IAMs_20 IAMs_20 12 29 00.4
comp=Z,29µm,18.0s
AAK **Ala-Archa** 43.60 307 P **P** 12 08 03.2 +1.4
AAK P **P** 12 08 03.2 +1.4
SGDS **Sogindy** 43.64 308 *e*P **P** 12 08 01.2 -0.9
comp=Z,83nm,1.4s,baz=308
SGDS **Sogindy** 43.64 308 *e*P **P** 12 08 01.1 -0.9
SGDS pmax pmax
comp=Z,83nm,1.4s
USP **Ospenovka** 43.70 308 P **P** 12 08 04.1 +1.6
SNR=54
COCO **West Island** 43.85 218 P **P** 12 08 04.4 +0.6
COCO pmax pmax
comp=Z,705nm,1.7s
COCO **West Island** 43.85 218 P **P** 12 08 04.3 +0.6
NIL **Nilore** 43.88 294 P **P** 12 08 04.6 +0.6
NIL pmax pmax
comp=Z,144nm,1.0s
NIL **Nilore** 43.88 294 P **P** 12 08 04.6 +0.6
NIL IAmb IAmb 12 08 07.0
comp=Z,144nm,0.9s
AML **Almayashu** 44.11 306 P **P** 12 08 08.1 +1.9
SNR=308
EKS2 **Erkin-Say** 44.12 307 P **P** 12 08 07.8 +1.9
SNR=38
BTLS **Baital** 44.36 311 *e*P **P** 12 08 06.7 -1.0
comp=Z,110nm,1.6s,baz=310
BTLS **Baital** 44.36 311 *e*P **P** 12 08 06.6 -1.0
BTLS pmax pmax
comp=Z,109nm,1.6s
MBWA **Marble Bar** 44.95 184 P **P** 12 08 13.5 +1.0
MBWA P **P** 12 08 13.5 +1.0
WB0 **Warramunga Arr** 45.00 164 P **P** 12 08 13.1 +0.2
WRAB **Tennant Creek** 45.15 164 P **P** 12 08 15.0 +0.9
WRAB pmax pmax
comp=Z,275nm,0.9s
WRAB **Tennant Creek** 45.15 164 P **P** 12 08 15.0 +0.9
WRA **Warramunga Arr** 45.15 164 P **P** 12 08 14.2 0.0
comp=Z,204nm,0.8s,baz=347,slow=8.4,SNR=300
WRA S **S** 12 14 50.8 -1.0
comp=Z,4.1nm,1.2s,baz=343,slow=15,SNR=5.6
WB2 **Warramunga Arr** 45.16 164 P **P** 12 08 14.4 +0.3
WR0 **Warramunga Arr** 45.22 164 P **P** 12 08 15.2 +0.5
PSA00 **Pilbara Seismi** 45.35 184 P **P** 12 08 15.9 +0.2
POO **Poona** 45.51 273⇑ *e*P **P** 12 08 18.5 +1.3
POO IAmb IAmb 12 08 19.8
comp=Z,59nm,0.8s
DZA **Taraz** 45.94 307 *e*P **P** 12 08 19.5 -0.9
comp=Z,45nm,1.0s,baz=307
DZA **Taraz** 45.94 307 *e*P **P** 12 08 19.4 -0.9
DZA pmax pmax
comp=Z,45nm,1.0s
GAR **Garm** 46.36 302 P **P** 12 08 23.9 +0.1
BRZS **Berezniki** 46.41 317 *e*P **P** 12 08 22.2 -1.7
comp=Z,45nm,1.2s,baz=317
BRZS **Berezniki** 46.41 317 *e*P **P** 12 08 22.1 -1.7
BRZS pmax pmax
comp=Z,45nm,1.2s
KK31 **Karatay Array** 46.56 307 *i* P **P** 12 08 25.3 +0.1
KK31 **Karatay Array** 46.56 307 P **P** 12 08 25.6 +0.5
KK31 IAmb IAmb 12 08 28.3
comp=Z,118nm,1.2s
KKAR **Karatay Array** 46.56 307 P **P** 12 08 25.5 +0.3
KKAR pmax pmax
comp=Z,118nm,1.2s
KKAR **Karatay Array** 46.56 307 P **P** 12 08 25.4 +0.3
KKAR **Karatay Array** 46.56 307 P **P** 12 08 25.5 +0.3
KKAR IAmb IAmb 12 08 28.3
comp=Z,118nm,1.2s
IUG **Iuzhnay** 46.81 306 *e*P **P** 12 08 26.5 -0.7
comp=Z,172nm,1.1s,baz=306
IUG **Iuzhnay** 46.81 306 *e*P **P** 12 08 26.5 -0.7
IUG pmax pmax
comp=Z,172nm,1.1s
KBL **Kabul** 47.35 296 P **P** 12 08 32.8 +1.1
KBL pmax pmax
comp=Z,323nm,1.2s
KBL **Kabul** 47.35 296 P **P** 12 08 32.8 +1.1
KBL **Kabul** 47.35 296 P **P** 12 08 33.7 +2.0
SNR=120
KBL P **P** 12 08 33.7 +2.0
SNR=120
TIXI **Tiksi** 47.83 3⇑ *i*P **P** 12 08 32.0 -2.6
TIXI **Tiksi** 47.83 3 P **P** 12 08 32.3 -2.3
TIXI IAmb IAmb 12 08 58.5
comp=Z,129nm,1.4s
BHUJ **Bhuj** 48.20 280 *e*P **P** 12 08 38.4 +0.2
BHUJ IAmb IAmb 12 08 41.5
comp=Z,82nm,0.7s
AS31 **Alice Springs** 48.64 166 P **P** 12 08 42.3 +0.9
AS31 IAmb IAmb 12 08 45.3
comp=Z,56nm,1.1s
ASAR **Alice Springs** 48.64 166 P **P** 12 08 42.1 +0.8
comp=Z,134nm,0.9s,baz=346,slow=6.0,SNR=288
ASAR LR LR 12 29 34.7
comp=Z,6µm,19.8s,baz=350,slow=36
ASAR P4KPbc 12 46 22.0
comp=Z,1.5nm,0.9s,baz=344,slow=4.1,SNR=12
ASAR **Alice Springs** 48.64 166 P **P** 12 08 42.9 +1.5
ASAR **Alice Springs** 48.64 166 P **P** 12 08 42.9 +1.5
BRVK **Borovoye** 48.67 321 *c i*P **P** 12 08 40.8 -0.6
BRVK pmax pmax
comp=Z,70nm,1.2s
BRVK MLR MLR
comp=Z,11µm,16.0s
BRVK **Borovoye** 48.67 321 P **P** 12 08 40.1 -1.3
BRVK IAmb IAmb 12 08 50.2
comp=Z,45nm,0.9s
BRVK **Borovoye** 48.67 321 P **P** 12 08 41.2 -0.1
HNR **Honiara** 49.39 128 LR LR 12 28 03.8
comp=Z,9µm,20.6s,baz=296,slow=34
CTAO **Charters Tower** 49.53 150 P **P** 12 08 49.5 +1.2
CTAO pmax pmax
comp=Z,218nm,1.3s
CTAO **Charters Tower** 49.53 150 P **P** 12 08 49.5 +1.2
CTAO **Charters Tower** 49.53 150 IAMs_20 IAMs_20 12 27 09.0
comp=Z,16µm,22.0s
MNCI **Minicoy** 49.74 260 P **P** 12 08 49.7 -0.4
MNCY **Minicoy** 49.77 260 *e*P **P** 12 08 52.6 +2.4
MNCY IAmb IAmb 12 09 01.8
comp=Z,70nm,1.1s
NRIK **Noril'sk** 49.92 345 P **P** 12 08 48.8 -1.8
comp=Z,12nm,0.6s,baz=124,slow=7.8,SNR=18
NRIK PcP **PcP** 12 10 10.3 -0.2
comp=Z,26nm,0.9s,baz=100,slow=4.4,SNR=3.6
NRIK LR LR 12 32 07.7
comp=Z,32µm,18.7s,baz=138,slow=39
NRIK **Noril'sk** 49.92 345 P **P** 12 08 49.0 -1.6
NRIK pmax pmax
comp=Z,54nm,1.1s
NRIK **Noril'sk** 49.92 345 P **P** 12 08 49.0 -1.6
NRIK IAmb IAmb 12 09 09.9
comp=Z,54nm,1.1s
AMKA **Amchitka** 51.02 42 P **P** 12 08 59.1 -0.1
BILL **Bilibino** 51.46 19⇑ *i*P **P** 12 09 02.2 -0.1
BILL pmax pmax
comp=Z,8.0nm,0.7s
BILL MLR MLR
comp=Z,21µm,18.0s
BILL **Bilibino** 51.46 19 P **P** 12 09 01.9 -0.3
BILL IAMs_20 IAMs_20 12 32 57.3
comp=Z,22µm,19.0s
HRA **Herat** 52.97 296 P **P** 12 09 14.9 +0.7
HRA IAmb IAmb 12 09 17.4
comp=Z,92nm,1.4s
MORW **Morawa** 53.11 187 P **P** 12 09 15.2 +0.3
MORW IAmb IAmb 12 09 17.0
comp=Z,76nm,1.2s
AB31 **Akbulak array** 54.45 314 *i* P **P** 12 09 22.1 -2.5
ABKAR **Akbulak array** 54.45 314 P **P** 12 09 23.4 -1.2
ABKAR IAmb IAmb 12 09 33.4
comp=Z,87nm,1.1s
ABKAR **Akbulak array** 54.45 314 P **P** 12 09 23.9 -0.8
FORT **Forrest** 54.71 174 P **P** 12 09 28.0 +1.4
SVE **Sverdlovsk** 54.93 324 *de*P **P** 12 09 27.0 -0.9
SVE pmax pmax
comp=Z,102nm,1.4s
SVE MLR MLR
comp=E,20µm,16.0s
SVE MLR MLR
comp=Z,26µm,16.0s
ATKA **Atka Island** 55.13 42 P **P** 12 09 30.3 +0.8
GEYT **Alibeck** 55.95 301 P **P** 12 09 35.7 0.0
comp=Z,135nm,0.9s,baz=90,slow=3.0,SNR=76
GEYT LR LR 12 37 59.5
comp=Z,14µm,19.5s,baz=105,slow=41
GEYT **Alibeck** 55.95 301 P **P** 12 09 36.1 +0.4
GYA0B **ALIBECK ARRAY** 55.95 301 P **P** 12 09 36.7 +1.0

ARU Arti 56.00 323 d iP P 12 09 33.9 -1.8
ARU 12 11 41.0
ARU PPP PPP 12 12 53.1
ARU S S 12 17 19.7 -2.1
ARU pmax pmax
comp=Z,71nm,1.2s
ARU MLR MLR
comp=Z,11μm,16.0s
ARU Arti 56.00 323 P P 12 09 34.2 -1.4
ARU IAmb IAmb 12 10 02.7
comp=Z,106nm,1.2s
ARU IAMs_20 IAMs_20 12 35 03.7
comp=Z,13μm,20.0s
EIDS Eidsvold 56.32 149 P P 12 09 39.0 +0.7
EIDS IAmb IAmb 12 09 41.5
comp=Z,42nm,0.8s
EIDS IAMs_20 IAMs_20 12 33 52.2
comp=Z,11μm,19.0s
NWAO Narrogin (SRO) 56.81 185 P P 12 09 42.6 +1.0
NWAO pmax pmax
comp=Z,138nm,1.4s
NWAO Narrogin (SRO) 56.81 185 P P 12 09 42.6 +1.0
NWAO IAmb IAmb 12 09 44.4
comp=Z,172nm,1.4s
NWAO Narrogin (SRO) 56.81 185 P P 12 09 43.0 +1.3
NWAO IAmb IAmb 12 09 44.4
comp=Z,138nm,1.4s
NWAO Narrogin (SRO) 56.81 185 P P 12 09 43.5 +1.8
NWAO P P 12 09 43.5 +1.8
JLN Jalan Bani Buh 57.65 282 P P 12 09 50.2 +2.3
SPIA Saint Paul Isl 57.88 36 P 12 09 47.7
baz=265
WBK Wadi Bani Khal 57.93 282 P P 12 09 51.9 +2.0
WBK P P 12 09 51.9 +2.0
BBOO Buckleboo 57.93 172 P P 12 09 50.5 +1.0
GAMB Gambell 58.07 29 P P 12 09 50.9 +0.7
GAMB Gambell 58.07 29 P 12 09 49.1
baz=259
NIKH Nikolski High 58.43 41 P 12 09 50.7
baz=269
BIDO Bidbid 58.45 284 P P 12 09 55.2 +1.7
SNR=6.9
BIDO P P 12 09 55.2 +1.7
SNR=6.9
BIDO P P 12 09 55.2 +1.7
SNR=6.9
STKA Stephens Creek 58.46 161 P P 12 09 54.1 +0.9
comp=Z,43nm,0.8s,baz=343,slow=6.8,SNR=62
STKA PcP PcP 12 10 45.0 +1.4
comp=Z,29nm,0.8s,baz=304,slow=7.9,SNR=2.8
STKA LR LR 12 36 12.3
comp=Z,7μm,20.1s,baz=342,slow=37
STKA Stephens Creek 58.46 161 d iP P 12 09 55.0 +1.7
STKA Stephens Creek 58.46 161 P P 12 09 55.1 +1.9
SMDO Samad 58.64 283 P P 12 09 56.9 +1.9
SNR=6.0
SMDO P P 12 09 56.9 +1.9
SNR=6.0
SANVU Saraoutou 58.66 127 P P 12 09 54.6 -0.3
JMDO Jabal Madar 58.77 282 P P 12 09 57.7 +2.0
JMDO P P 12 09 57.7 +2.0
HOQ Hoqain 59.16 284 P P 12 09 59.9 +1.4
SNR=7.8
HOQ P P 12 09 59.9 +1.4
SNR=7.8
MHTO MHTO 59.26 281 P P 12 09 59.4 +0.3
SNR=9.4
MHTO P P 12 09 59.4 +0.3
SNR=9.4
MHTO P P 12 09 59.4 +0.3
SNR=9.4
BSY Bisya 59.47 283 P P 12 10 02.3 +1.6
SNR=9.0
BSY P P 12 10 02.3 +1.6
SNR=9.0
BANOM Banah 59.48 287 i P P 12 10 01.3 +0.6
SNR=9.2
BANOM Banah 59.48 287 P P 12 10 02.9 +2.2
SHME Shamm 59.59 287 P P 12 10 02.7 +1.3
MDH Madha 59.63 286 P P 12 10 02.1 +0.5
MDH Madha 59.63 286 P P 12 10 02.7 +1.0
MDH P P 12 10 02.7 +1.0
MDH P P 12 10 02.7 +1.0
SOHO SOHO 59.71 285 i P P 12 10 03.0 +0.8
SNR=16
SOHO SOHO 59.71 285 P P 12 10 03.3 +1.1
SOHO P P 12 10 03.3 +1.1
MSFE Esma-Masafi 59.74 286 i P P 12 10 03.5 +1.1
SNR=6.6
UOSS Minazif 59.80 286 P P 12 10 02.6 -0.3
UOSS Minazif 59.80 286 P P 12 10 03.5 +0.6
UOSS IAmb IAmb 12 10 13.1
comp=Z,80nm,1.7s
UOSS Minazif 59.80 286 P P 12 10 04.9 +2.1
UOSS P P 12 10 04.9 +2.1
HATD Hatta, Dubai 59.89 286 i P P 12 10 04.4 +0.9
SNR=8.9
HATD Hatta, Dubai 59.89 286 P P 12 10 05.0 +1.5
HATD P P 12 10 05.0 +1.5
ARQ Araqi 59.92 284 P P 12 10 05.2 +1.4
SNR=8.0
ARQ P P 12 10 05.2 +1.4
SNR=8.0
DQM DQM 59.94 280 P P 12 10 04.6 +0.8
SNR=11
DQM P P 12 10 04.6 +0.8
SNR=11
TNA Tin City 59.97 27 P 12 10 02.2
baz=262
TNA S 12 18 15.2
baz=262
NAZ Nazwa, Dubai 60.26 286 i P P 12 10 07.1 +1.1
SNR=6.0
NAZ Nazwa, Dubai 60.26 286 P P 12 10 08.2 +2.1
NAZ P P 12 10 08.2 +2.1
NAZ P P 12 10 08.2 +2.1
FAQ Al Faqa, Dubai 60.38 286 i P P 12 10 07.7 +0.8
SNR=7.3
FAQ Al Faqa, Dubai 60.38 286 P P 12 10 08.3 +1.4
FAQ P P 12 10 08.3 +1.4
ALNE Al Ain 60.42 285 i P P 12 10 07.8 +0.6
SNR=10.0
ALNE Al Ain 60.42 285 P P 12 10 08.6 +1.5
SNR=7.9
ALNE P P 12 10 08.6 +1.5
SNR=7.9
ASUD Al Ashush, Dub 60.65 286 P P 12 10 09.2 +0.6
ASUD Al Ashush, Dub 60.65 286 P P 12 10 10.4 +1.8
ASUD P P 12 10 10.4 +1.8
ASUD P P 12 10 10.4 +1.8
ARMA Armidale 60.88 151 P P 12 10 10.1 +0.1
ARMA IAMs_20 IAMs_20 12 34 27.1
comp=Z,12μm,22.0s
ANM Nome 60.93 28 P P 12 10 08.2 -1.7
ANM pmax pmax
comp=Z,30nm,1.0s
ANM Nome 60.93 28 P P 12 10 08.2 -1.7
ANM Nome 60.93 28 P 12 10 09.0
baz=265
ANM S 12 18 32.3
baz=265
AJN Ajban 60.97 286 P P 12 10 11.3 +0.5
UMZA Um Al Zommool 61.30 284 P P 12 10 12.7 -0.4
RDOG Red Dog Mine 62.23 24 P 12 10 17.2
baz=265
SHAO Shalim 62.24 278 P P 12 10 19.9 +0.4
SHAO Shalim 62.24 278 P P 12 10 21.4 +1.9
SHAO P P 12 10 21.4 +1.9
BELG Belogornoye 62.26 318 c iP P 12 10 17.9 -1.1
BELG pmax pmax
comp=Z,20nm,1.3s
BELG MLR MLR
comp=Z,1μm,17.0s
DZM Mont Dzumac 62.60 134 eP P 12 10 23.8 +1.9
comp=Z,142nm,1.4s
DZM Mont Dzumac 62.60 134 eLR LR 12 29 08.3
comp=Z,36μm,24.2s
DZM Mont Dzumac 62.60 134 LR LR 12 33 10.6
comp=Z,10μm,21.4s,baz=326,slow=32
DZM Mont Dzumac 62.60 134 P P 12 10 23.6 +1.7
DZM IAmb IAmb 12 10 44.2
comp=Z,69nm,1.1s
DZM IAMs_20 IAMs_20 12 32 26.7
comp=Z,15μm,22.0s
DMTO DMTO 62.94 278 P P 12 10 26.1 +1.9
DMTO P P 12 10 26.1 +1.9
DMTO P P 12 10 26.1 +1.9
PRGR Permogore 62.99 329 eP P 12 10 22.8 -0.9
PRGR e 12 11 01.1
PRGR pmax pmax
comp=Z,29nm,0.7s
SDPT Sand Point 63.30 39 P 12 10 24.1
baz=274
MAK Makhachkala 63.38 308 eP P 12 10 24.8 -1.9
MAK e 12 12 41.8
MAK ePPP PPP 12 14 14.2
MAK eS S 12 18 53.6 -3.6
MAK eSS SS 12 23 03.6 -0.3
MAK pmax pmax
comp=Z,146nm,1.0s
MAK MLR MLR
comp=Z,5μm,12.0s
DOK Doka 63.41 280 P P 12 10 27.0 -0.2
SNR=14
DOK P P 12 10 27.0 -0.2
SNR=14
RBK Rabkut 63.68 278 P P 12 10 30.1 +0.9
SNR=15
RBK P P 12 10 30.1 +0.9
SNR=15
RBK P P 12 10 30.1 +0.9
SNR=15
WHFO Wadi Hawf 63.95 279 P P 12 10 31.1 +0.2
SNR=12
WHFO P P 12 10 31.1 +0.2
SNR=12
WHFO P P 12 10 31.1 +0.2
SNR=12
SLWR Sila 63.99 286 P P 12 10 32.2 +1.2
LGD Lagodekhi 64.49 306 P P 12 10 34.9 +0.9
ABTO Aybut 64.55 279 P P 12 10 35.6 +0.7
SNR=16
ABTO P P 12 10 35.6 +0.7
SNR=16
ABTO P P 12 10 35.6 +0.7
SNR=16
A21K Barrow 64.57 21 P 12 10 32.9
baz=270
TOO Toolangi 64.93 160 P P 12 10 38.5 +1.7
TOO pmax pmax
comp=Z,110nm,1.3s
TOO Toolangi 64.93 160 P P 12 10 38.5 +1.7
TOO IAmb IAmb 12 10 55.0
comp=Z,110nm,1.3s
GUDG Gudauri 65.66 307 P P 12 10 43.7 +1.8
SOCY Socotra 65.67 273 P P 12 10 41.5 -0.7
SOCY IAmb IAmb 12 11 16.9
comp=Z,102nm,1.3s
SOCY Socotra 65.67 273 P P 12 10 41.0 -1.2
SNR=18
IMAR Indian Mountai 65.82 26 P P 12 10 41.4 -0.8
GNI Garni 65.92 305 P P 12 10 44.7 +1.2
GNI Garni 65.92 305 eP P 12 10 44.1 +0.5
GNI Garni 65.92 305 c iP P 12 10 45.1 +1.5
GNI pmax pmax
comp=Z,221nm,1.4s
GNI MLR MLR
comp=Z,6μm,17.0s
GNI Garni 65.92 305 P P 12 10 44.0 +0.5
GNI Garni 65.92 305 P P 12 10 45.6 +2.0
GNI P P 12 10 45.6 +2.0
KZRT Kazreti 65.93 306 P P 12 10 44.7 +1.2
KLMR Klimovskoe 65.98 328 eP P 12 10 40.6 -2.7
KLMR e 12 13 04.3
KLMR pmax pmax
comp=Z,75nm,1.4s
KLMR MLR MLR
comp=Z,22μm,16.0s
KLMR Klimovskoe 65.98 328 eP P 12 10 40.7 -2.6
KLMR AMP 12 10 52.9
comp=Z,75nm,1.4s
KLMR ePP PP 12 13 04.4 -4.1
KLMR LQ LQ 12 34 17.6
KLMR LQ LQ 12 34 17.6
KLMR LR LR 12 38 42.3
KLMR AMP 12 41 59.2
comp=Z,22μm,16.4s
QRN Al-Qurain 66.01 292 eP 12 10 44.0
ZEI Tsey 66.02 308 eP P 12 10 43.6 -0.6
ZEI pmax pmax
comp=Z,121nm,1.4s
VRH Novokhopyorsk 66.03 317 eP P 12 10 43.3 -0.5
VRH pmax pmax
comp=Z,140nm,1.2s
VRH MLR MLR
comp=Z,9μm,16.0s
GOF Gofitskoye 66.20 310 ⇑eP P 12 10 45.9 +0.8
GOF pmax pmax
comp=Z,135nm,0.9s
RDF Al-Radifah 66.27 292 eP 12 10 45.3
ONI Oni 66.38 308 P P 12 10 48.0 +1.6
KBZ Khabaz 66.56 309 P P 12 10 47.4 +0.1
comp=Z,60nm,1.0s,baz=119,slow=4.4,SNR=50
KBZ LR LR 12 43 32.8
comp=Z,9μm,18.8s,baz=68,slow=39
AKH Akhalkalaki 66.59 306 ⇑P P 12 10 49.2 +1.3
AKH Akhalkalaki 66.59 306 eP P 12 10 48.6 +0.7
AKH Akhalkalaki 66.59 306 P P 12 10 49.2 +1.3
CHUM Lake Minchumin 66.64 29 P 12 10 45.7
baz=277,SNR=16
CHUM S 12 19 36.5
baz=277
KIV Kislovodsk 66.66 309 ⇑P P 12 10 49.0 +0.8
KIV Kislovodsk 66.66 309 i P P 12 10 48.0 -0.2
SNR=21
KIV Kislovodsk 66.66 309 i P P 12 10 47.4 -0.8
KIV Kislovodsk 66.66 309 eP P 12 10 48.8 +0.6
KIV e 12 13 14.5
KIV eS S 12 19 38.0 +0.2
KIV pmax pmax
comp=Z,527nm,1.1s
KIV pmax pmax
comp=Z,2μm,4.3s
KIV MLR MLR
comp=Z,22μm,17.0s
KIV Kislovodsk 66.66 309 P P 12 10 48.5 +0.3
KIV Kislovodsk 66.66 309 P P 12 10 49.6 +1.4
KIV P P 12 10 49.6 +1.4
SII Sitkinak Islan 66.69 37 P 12 10 45.3
baz=279
CLDR Caldiran 66.76 304 eP P 12 10 48.4 -0.6
CAST Castle Rocks 66.80 29 P 12 10 46.8
baz=277
PPLA Purkeypile 66.82 30 P P 12 10 49.7 +0.8
PPLA Purkeypile 66.82 30 P 12 10 47.7
baz=278,SNR=6.5
PPLA S 12 19 40.4
baz=278
RSO Redoubt South 66.88 32 P P 12 10 50.5 +1.2
SPCR Spurr Chakacha 67.04 32 P 12 10 49.4
baz=278,SNR=12
OHAK Old Harbor 67.08 36 P 12 10 49.4
baz=279
COLD Coldfoot 67.09 25 P P 12 10 50.5 +0.1
COLD Coldfoot 67.10 25 P 12 10 49.6
baz=277,SNR=17
COLD S 12 19 53.4
baz=277
TOLK Toolik Lake Re 67.15 23 P P 12 10 50.0 -0.7
TOLK IAMs_20 IAMs_20 12 42 20.3
comp=Z,14μm,19.0s
TOLK Toolik Lake Re 67.15 23 P 12 10 49.9
baz=277,SNR=26
MLY Manley 67.17 27 P P 12 10 51.1 +0.2
MLY Manley 67.17 27 P 12 10 49.9
baz=278,SNR=37
MLY S 12 19 43.3
baz=278
BPAW Bear Paw Mtn. 67.19 28 P P 12 10 50.3 -0.8
BPAW IAmb IAmb 12 11 15.3
comp=Z,71nm,1.3s
BPAW Bear Paw Mtn. 67.19 28 P 12 10 49.4
baz=278,SNR=19
BPAW S 12 19 44.9
baz=278
SKT Skwentna 67.25 31 P P 12 10 51.3 -0.1
SKT IAMs_20 IAMs_20 12 39 53.3
comp=Z,8μm,20.0s
SKT Skwentna 67.25 31 P 12 10 49.8
baz=278
VANB Van 67.28 303 eP P 12 10 53.2 +1.0
KTH Kantishna Hill 67.30 29 P P 12 10 51.8 0.0
KTH IAmb IAmb 12 11 15.8
comp=Z,55nm,1.1s
CHVG Ch'k'valeri 67.34 308 ⇓P P 12 10 53.7 +1.3
AGRB Hanur-Agry 67.36 305 eP P 12 10 53.6 +0.8
KDAK Kodiak Island 67.36 35 P P 12 10 51.3 -0.9
comp=Z,55nm,1.0s
KDAK Kodiak Island 67.36 35 P 12 10 50.7
baz=279
CUKT Cukurca 67.42 302 eP P 12 10 51.6 -1.6
LPSR Galich'ya Gora 67.51 319 eP P 12 10 53.1 -0.1
LPSR pmax pmax
comp=Z,100nm,1.2s
LPSR MLR MLR
comp=Z,7μm,15.0s
HOM Homer 67.55 33 P 12 10 52.0
baz=279
VORD Divnogorie 67.58 317 eP P 12 10 53.0 -0.7
VORD pmax pmax
comp=Z,40nm,1.2s
TRF Thorofare Moun 67.59 29 P P 12 10 53.9 +0.1
TRF Thorofare Moun 67.59 29 P 12 10 52.4
baz=279
GEVA Gevas 67.60 303 P P 12 10 54.8 +0.5
CAPN Captain Cook N 67.61 32 P 12 10 51.5
baz=279
VSR Storozhevoye 67.62 317 eP P 12 10 53.4 -0.5
VSR pmax pmax
comp=Z,80nm,1.2s
VSR MLR MLR
comp=Z,7μm,14.0s
SENK Senkaya-Erzuru 67.62 306 eP P 12 10 55.2 +0.8
AKDM Akdamar-Van 67.65 303 eP P 12 10 55.0 +0.3
SUA Susitna One 67.69 31 P P 12 10 53.9 -0.5
SUA IAmb IAmb 12 11 19.8
comp=Z,61nm,1.0s
SUA Susitna One 67.69 31 P 12 10 52.7
baz=279,SNR=11
MOS Moscow 67.71 322 eP P 12 10 52.8 -1.6
MOS e 12 11 19.3
MOS eS S 12 19 45.9 -3.8
MOS e 12 20 46.7
MOS pmax pmax
comp=Z,88nm,0.7s
MOS MLR MLR
comp=N,7μm,16.0s
MOS MLR MLR
comp=E,10μm,16.0s
MOS MLR MLR
comp=Z,14μm,16.0s
I23K Minto, Yukon-K 67.73 27 P P 12 10 53.3 -1.1
I23K IAmb IAmb 12 11 41.4
comp=Z,59nm,1.4s
I23K Minto, Yukon-K 67.73 27 P 12 10 52.9
baz=279,SNR=16
I23K S 12 19 57.4
baz=279
APA Apatity 67.75 336 ⇓iP P 12 10 53.1 -1.4
APA i 12 11 27.0
APA i PPP PPP 12 15 00.0
APA i S S 12 19 46.0 -3.9
APA i 12 20 23.0
APA pmax pmax
comp=Z,30nm,0.8s
APA MLR MLR
comp=Z,24μm,16.0s
CUT Chulitna 67.77 30 P P 12 10 54.0 -0.6
CUT IAmb IAmb 12 12 05.4
comp=Z,85nm,1.0s
CUT Chulitna 67.77 30 P 12 10 53.2
baz=279
MLAZ Malazgirt-MUS 67.79 304 eP P 12 10 56.9 +1.4
BRLK Bradley Lake 67.91 33 P P 12 10 55.5 -0.2
BRLK IAmb IAmb 12 11 18.0
comp=Z,108nm,1.2s
NEA2 Nenana 67.94 28 P P 12 10 55.5 -0.3
NEA2 IAmb IAmb 12 11 17.8
comp=Z,60nm,1.0s
NEA2 Nenana 67.94 28 P 12 10 54.4
baz=280,SNR=23
NEA2 S 12 20 02.3
baz=280
BRSE Bradley Lake S 67.98 33 P 12 10 54.8
baz=280
KOPR Koprukoy-ERZUR 68.12 305 eP P 12 10 57.1 -0.5
MCK McKinley 68.14 29 P P 12 10 56.3 -0.8
MCK pmax pmax
comp=Z,84nm,1.3s
MCK McKinley 68.14 29 P P 12 10 56.3 -0.8
MCK IAmb IAmb 12 11 21.9
comp=Z,84nm,1.3s
MCK McKinley 68.14 29 P 12 10 55.5
baz=280,SNR=15
MSVF Nonsavu 68.22 122 P P 12 10 59.3 +1.1
comp=Z,26nm,1.0s,baz=218,slow=4.7,SNR=6.6
MSVF LR LR 12 37 33.0
comp=Z,7μm,20.2s,baz=304,slow=33
MSVF Nonsavu 68.22 122 ⇑iP P 12 10 59.1 +0.8
MSVF pmax pmax
comp=Z,51nm,1.1s
MSVF MLR MLR
comp=Z,4μm,17.0s
MSVF Nonsavu 68.22 122 P P 12 10 59.2 +0.9
MSVF IAmb IAmb 12 11 34.4
comp=Z,130nm,1.5s
MDM Murphy Dome 68.23 27 P P 12 10 57.4 -0.3
MDM IAmb IAmb 12 11 19.8
comp=Z,82nm,1.1s
RND Reindeer 68.24 29 P P 12 10 57.1 -0.6
RND pmax pmax
comp=Z,117nm,1.1s
RND Reindeer 68.24 29 P P 12 10 57.1 -0.6
RND IAmb IAmb 12 11 18.9
comp=Z,117nm,1.1s
RC01 Rabbit Creek A 68.24 32 P 12 10 55.2
baz=280
RC01 S 12 19 56.4
baz=280
SIRT Sirnak 68.27 303 eP P 12 10 59.2 +0.8
GURO Guroymak-BITLI 68.32 304 eP P 12 10 59.7 +0.9
O22K Cooper Landing 68.35 32 P P 12 10 57.9 -0.5
O22K IAMs_20 IAMs_20 12 43 28.7
comp=Z,7μm,19.0s
O22K Cooper Landing 68.35 32 P 12 10 57.1
baz=281
WRH Wood River Hil 68.38 28 P P 12 10 58.6 +0.2
WRH IAmb IAmb 12 11 27.1
comp=Z,49nm,1.2s
TCOL CIGO, UAF Yank 68.40 27 P P 12 10 58.8 +0.2
TCOL CIGO, UAF Yank 68.40 27 P 12 10 57.4
baz=280,SNR=6.0
TCOL S 12 19 58.8
baz=280
COLA College 68.41 27 i P P 12 10 57.3 -1.3
COLA pmax pmax
comp=Z,9.0nm,1.2s
COLA MLR MLR
comp=Z,6μm,18.0s
COLA College 68.41 27 P P 12 10 58.8 +0.2
COLA College 68.41 27 P 12 10 57.1
baz=280
OBN Obninsk 68.41 322 c iP P 12 10 56.8 -2.0
OBN e 12 11 23.6
OBN e 12 13 25.5
OBN ePPP PPP 12 15 08.3
OBN eS S 12 19 57.6 -0.5
OBN eSS SS 12 24 22.1 +0.6
OBN pmax pmax
comp=Z,41nm,0.7s
OBN MLR MLR
comp=Z,14μm,18.0s
PMR Palmer 68.43 31 P P 12 10 58.6 -0.3
PMR pmax pmax
comp=Z,60nm,1.3s
PMR Palmer 68.43 31 P P 12 10 58.6 -0.3
PMR IAmb IAmb 12 11 22.1
comp=Z,60nm,1.3s
PMR Palmer 68.44 31 P 12 10 57.0
baz=281,SNR=7.7
WAT2 Susitna Watana 68.44 29 P 12 10 56.9
baz=281
CCB Clear Creek Bu 68.47 28 P P 12 10 59.4 +0.4
POKR Poker Flat Res 68.54 27 P P 12 10 59.5 0.0
POKR IAmb IAmb 12 11 50.7

comp=Z,40nm,0.9s
POKR Poker Plat Res 68.54 27 P 12 10 58.3
baz=281
POKR S 12 19 56.9
baz=281
HOPEN Hopen 68.60 346 *e*P **P 12 10 58.1 -1.6**
HOPEN *e*S **S 12 20 01.2 +1.4**
HOPEN IVMs_BB IVMs_BB 12 31 52.4
comp=Z,12µm,18.6s
VRTB Varto-Mus 68.61 304 *e*P **P 12 11 02.1 +1.5**
CHOM Cayeli-Rize 68.67 307 *e*P **P 12 11 00.7 -0.1**
SML Sawmill 68.77 31 P **P 12 11 00.2 -0.9**
SML Sawmill 68.77 31 P 12 10 59.6
baz=281
IL31 68.83 27 P **P 12 11 00.1 -1.2**
ILAR Eielson Array 68.83 27 P **P 12 10 59.6 -1.7**
comp=Z,3.4nm,0.6s,baz=268,slow=5.0,SNR=42
ILAR PKPPKP **P'P'df 12 39 16.1 -2.9**
comp=Z,1.3nm,1.2s,baz=40,slow=0.6,SNR=4.5
ILAR LR LR 12 43 58.8
comp=Z,4µm,18.1s,baz=312,slow=38
ILAR Eielson Array 68.83 27 P **P 12 11 00.0 -1.3**
ILAR Eielson Array 68.83 27 P **P 12 11 00.0 -1.3**
SOC Sochi 68.84 309*c* *i*P **P 12 11 00.1 -1.7**
SOC *e* 12 13 30.9
SOC *e*PPP PPP 12 15 09.6
SOC *e*S **S 12 20 01.2 -2.5**
SOC *e*SSS SSS 12 27 31.2
SOC pmax pmax
comp=Z,73nm,1.0s
SOC MLR MLR
comp=Z,12µm,19.0s
HDA Harding Lake 68.88 28 P 12 10 59.5
baz=281,SNR=12
HDA P 12 10 59.5
baz=281,SNR=12
HDA S 12 20 10.2
baz=281
HDA S 12 20 10.2
baz=281
WAT6 Susitna Watana 68.89 30 P 12 11 00.5
baz=281,SNR=12
WAT6 S 12 20 01.9
baz=281
PWL Port Wells 68.95 32 P **P 12 11 01.1 -1.1**
PWL IAmb IAmb 12 11 47.3
comp=Z,72nm,1.0s
KOPT Kop Dagi 69.12 306 P **P 12 11 04.1 +0.2**
FYU Fort Yukon 69.14 25 P **P 12 11 04.2 +1.0**
FYU IAmb IAmb 12 12 03.1
comp=Z,144nm,1.8s
SCM Sheep Creek Mo 69.23 30 P **P 12 11 04.3 +0.4**
SCM pmax pmax
comp=Z,186nm,1.2s
SCM Sheep Creek Mo 69.23 30 P **P 12 11 04.3 +0.4**
YEDI Yedisu-Bingol 69.23 305 *e*P **P 12 11 03.9 -0.6**
BNGB Bingl 69.24 304 *e*P **P 12 11 04.9 +0.4**
PRP Porcupine Dome 69.24 26 P 12 11 02.7
baz=282
PRP S 12 20 04.1
baz=282
KTUT Trabzon 69.43 307 *e*P **P 12 11 05.8 +0.4**
GLI Glacier Island 69.54 31 P 12 11 04.5
baz=283
RAYN Ar Rayn 69.57 287 *i* P **P 12 11 06.5 -0.2**
SNR=21
RAYN Ar Rayn 69.57 287 P **P 12 11 06.6 -0.2**
RAYN pmax pmax
comp=Z,68nm,1.1s
RAYN Ar Rayn 69.57 287 P **P 12 11 06.5 -0.2**
RAYN IAmb IAmb 12 11 09.3
comp=Z,68nm,1.1s
MARD Mardin 69.59 303 P **P 12 11 06.7 0.0**
KEV Kevo 69.62 338 P **P 12 11 06.4 +0.3**
M24K Tolsona, Glenn 69.70 30 P **P 12 11 06.1 -0.8**
M24K Tolsona, Glenn 69.70 30 P 12 11 07.0
baz=283,SNR=6.3
M24K S 12 20 06.2
baz=283
PAX Paxson 69.83 29 P **P 12 11 07.4 -0.3**
PAX pmax pmax
comp=Z,30nm,1.0s
PAX Paxson 69.83 29 P **P 12 11 07.3 -0.3**
PAX Paxson 69.83 29 P 12 11 06.7
baz=283,SNR=9.3
SPA0 Spitsbergen Ar 69.94 348 *e*P **P 12 11 07.5 -0.5**
SPA0 *e*S **S 12 20 11.3 -4.3**
KLU Klutina 69.96 31 P **P 12 11 08.3 -0.1**
KLU IAmb IAmb 12 11 20.7
comp=Z,70nm,1.3s
KLU IAMs_20 IAMs_20 12 39 57.0
comp=Z,9µm,22.0s
KLU Klutina 69.96 31 P 12 11 07.6
baz=283,SNR=6.5
KLU S 12 20 15.5
baz=283
VALR Valaam 70.03 329 *i* P **P 12 11 08.6 -0.1**
VALR pmax pmax
comp=Z,94nm,1.3s
VALR MLR MLR
comp=Z,14µm,15.1s
ANN Anapa 70.15 311 *e*P P 12 11 04.7 -5.1
ANN *e**PP pP 12 11 17.6 -0.8
ANN *e* 12 11 27.1
ANN *e*S **S 12 20 11.5 -7.5**
ANN pmax pmax
comp=Z,197nm,1.0s
ANN MLR MLR
comp=E,5µm,17.0s
ANN MLR MLR
comp=N,3µm,16.0s
ANN MLR MLR
comp=Z,8µm,18.0s
ARA0 ARCESS Array S 70.18 338 *e*P **P 12 11 09.7 +0.1**
ARCES ARCESS Array B 70.18 338 P **P 12 11 07.7 -1.9**
comp=Z,18nm,0.9s,baz=54,slow=6.2,SNR=20
ARCES LR LR 12 47 10.6
comp=Z,10µm,18.6s,baz=80,slow=40
ARCES ARCESS Array B 70.18 338 P **P 12 11 08.8 -0.8**
ARCES pmax pmax
comp=Z,34nm,1.2s
ARCES ARCESS Array B 70.18 338 P **P 12 11 08.8 -0.8**
Q23K Middleton Isla 70.23 33 P 12 11 09.5
baz=284
SCRK Sand Creek 70.24 28 P **P 12 11 09.6 -0.6**
SCRK Sand Creek 70.24 28 P 12 11 08.7
baz=284,SNR=10.0
SCRK S 12 20 17.9
baz=284
EYAK Cordova Ski Ar 70.26 32 P 12 11 08.7
baz=284
EYAK S 12 20 21.6
baz=284
DOT Dot Lake 70.28 28 P **P 12 11 09.7 -0.7**
TAU Tasmania Unive 70.38 161 P **P 12 11 12.7 +1.7**
TAU pmax pmax
comp=Z,202nm,1.3s
TAU Tasmania Unive 70.38 161 P **P 12 11 12.7 +1.7**
KBS Kingsbay 70.47 349 *e*P **P 12 11 11.7 +0.5**
KBS *e*S **S 12 20 22.8 +1.2**
KBS IVMs_BB IVMs_BB 12 30 42.8
comp=Z,6µm,20.4s
HAMF Hammerfest 70.48 340 *e*P **P 12 11 09.4 -2.0**
HAMF IVmB_BB 12 11 16.2
comp=Z,3µm,3.9s
HAMF IVMs_BB IVMs_BB 12 34 14.5
comp=Z,4µm,18.5s
HSPB Hornsund (broa 70.54 347 *e*P **P 12 11 09.4 -2.2**
HSPB *e*L L 12 46 31.5
comp=Z,40µm,18.8s
HSPB Hornsund (broa 70.54 347 *e*P **P 12 11 11.9 +0.3**
HSPB IVmB_BB 12 11 12.1
comp=Z,2µm,3.5s
HSPB *e*S **S 12 20 23.9 +1.4**
HSPB IVMs_BB IVMs_BB 12 32 04.3
comp=Z,9µm,18.5s
N25K Chitina, Valde 70.55 30 P **P 12 11 12.7 +0.6**
N25K IAmb IAmb 12 11 54.3
comp=Z,63nm,1.3s
N25K IAMs_20 IAMs_20 12 42 49.6
comp=Z,7µm,20.0s
N25K Chitina, Valde 70.55 30 P 12 11 11.0
baz=284,SNR=5.6
N25K S 12 20 25.4
baz=284
MENT Mentasta 70.61 29 P **P 12 11 13.1 +0.7**
MENT IAmb IAmb 12 11 40.9
comp=Z,51nm,0.9s
BJO1 Bjornoya 70.62 344⇑ *i*P **P 12 11 12.5 +0.3**
BJO1 *e*S **S 12 20 20.0 -3.6**
BJO1 IVMs_BB IVMs_BB 12 33 44.6
comp=Z,6µm,16.6s
BMRM Bremner River 70.70 31 P **P 12 11 13.0 0.0**
BMRM IAmb IAmb 12 11 54.7
comp=Z,51nm,1.0s
BMRM Bremner River 70.70 31 P 12 11 11.6
baz=285
BMRM S 12 20 27.1
baz=285
ILIC ilic-Erzincan 70.71 305 *e*P **P 12 11 14.1 +0.6**
GLB Gilahina Butte 70.95 30 P **P 12 11 14.9 +0.4**
GLB IAmb IAmb 12 11 38.5
comp=Z,43nm,0.9s
HMT Hamilton 71.03 32 IAMs_20 IAMs_20 12 44 20.4
comp=Z,10µm,20.0s
K27K Chicken 71.04 28 P **P 12 11 14.6 -0.3**
K27K IAmb IAmb 12 11 48.6
comp=Z,50nm,1.1s
K27K Chicken 71.04 28 P 12 11 13.8
baz=286
K27K S 12 20 27.7
baz=286
KAIM Kayak Island 71.06 32 IAMs_20 IAMs_20 12 47 37.3
comp=Z,8µm,18.0s
KAIM Kayak Island 71.06 32 P 12 11 13.4
baz=285
KAIM S 12 20 37.0
baz=285
KTK1 Kautokeino 71.10 338 *e*P **P 12 11 14.5 -0.7**
KTK1 *e*S **S 12 20 30.6 +1.2**
MALT Malatya 71.12 304 *e*P **P 12 11 16.5 +0.5**
MALT Malatya 71.12 304 P **P 12 11 17.0 +1.0**
VRDI Verde Repeater 71.18 31 P **P 12 11 15.2 -0.9**
VRDI IAmb IAmb 12 11 44.2
comp=Z,79nm,1.2s
EGAK Eagle 71.21 27 P **P 12 11 16.1 +0.1**
EGAK Eagle 71.21 27 P 12 11 15.3
baz=286,SNR=14
MCARA McCarthy VSAT 71.33 30 P **P 12 11 17.2 +0.5**
MCARA IAmb IAmb 12 12 12.1
comp=Z,86nm,1.3s
MCARA McCarthy VSAT 71.33 30 P 12 11 15.9
baz=286
MCARA S 12 20 32.3
baz=286
RSDY Resadiye-TOKAT 71.37 307 *e*P **P 12 11 17.5 +0.1**
L27K Beaver Creek, 71.41 29 P **P 12 11 17.9 +0.6**
L27K IAmb IAmb 12 11 60.0
comp=Z,57nm,1.2s
L27K Beaver Creek, 71.41 29 P 12 11 16.7
baz=286,SNR=19
L27K S 12 20 32.7
baz=286
BCAR Beaver Creek A 71.43 29 P **P 12 11 16.8 -0.5**
CRQM Cirque 71.45 31 P **P 12 11 17.6 -0.1**
CRQM IAmb IAmb 12 11 40.1
comp=Z,70nm,1.1s
CRQM IAMs_20 IAMs_20 12 43 42.2
comp=Z,7µm,19.0s
CRQE Cirque 71.48 31 S 12 20 38.1
baz=286
SVSK Karacayir 71.75 306 *e*P **P 12 11 20.7 +1.1**
JETT Jettan, Norway 71.88 339 *e*P **P 12 11 19.4 -0.5**
TOKT Tokat 71.97 307 *e*P **P 12 11 20.7 -0.3**
TOKA Tokat 72.01 307 P **P 12 11 21.1 -0.1**
TOKA IAmb IAmb 12 11 24.1
comp=Z,58nm,0.9s
BARN Barnard Glacie 72.06 31 P **P 12 11 21.1 -0.2**
BARN IAmb IAmb 12 12 08.9
comp=Z,138nm,1.8s
BARN IAMs_20 IAMs_20 12 41 04.5
comp=Z,8µm,22.0s
KVT Kavak 72.12 308 P **P 12 11 20.4 -1.5**
KVT Kavak 72.12 308 P **P 12 11 23.2 +1.3**
DAWY Dawson 72.16 27 P **P 12 11 21.1 -0.6**
MESA MESA 72.18 32 IAMs_20 IAMs_20 12 42 56.6
comp=Z,7µm,20.0s
FIA1 FINESS Array S 72.23 330 P **P 12 11 21.6 -0.5**
FIA1 IAmb IAmb 12 11 24.1
comp=Z,88nm,1.2s
FINES FINESS Array B 72.23 330 P **P 12 11 21.3 -0.8**
comp=Z,14nm,0.5s,baz=65,slow=5.3,SNR=43
FINES LR LR 12 46 35.0
comp=Z,36µm,18.7s,baz=72,slow=39
FINES FINESS Array B 72.23 330 P **P 12 11 21.2 -0.9**
FINES FINESS Array B 72.23 330 P **P 12 11 21.2 -0.9**
CTG Chitna Glacier 72.24 31 P 12 11 21.2
baz=287
CTG S 12 20 36.3
baz=287
CTGM Chitina Glacie 72.24 31 P **P 12 11 22.2 -0.2**
CTGM IAMs_20 IAMs_20 12 44 18.3
comp=Z,7µm,20.0s
TRO Tromso 72.34 339 *e*P **P 12 11 21.8 -0.7**
TRO IVmB_BB 12 11 28.4
comp=Z,2µm,6.6s
TRO *e*S **S 12 20 40.9 -2.6**
TRO IVMs_BB IVMs_BB 12 31 49.1
comp=Z,3µm,19.2s
GAZ Gaziantep 72.37 303 P **P 12 11 23.2 -0.3**
GAZ Gaziantep 72.37 303 P **P 12 11 23.7 +0.2**
SIM Simferopol' 72.38 312 *e*P **P 12 11 23.0 -0.3**
SIM pmax pmax
comp=Z,91µm,0.9s
LOGN Logan Glacier 72.44 31 P **P 12 11 23.4 -0.2**
LOGN IAmb IAmb 12 12 12.4
comp=Z,54nm,1.1s
LOGN IAMs_20 IAMs_20 12 44 34.5
comp=Z,7µm,19.0s
EPYK Eagle Plains 72.48 25 P **P 12 11 22.6 -1.0**
EPYK Eagle Plains 72.48 25 P 12 11 22.1
baz=290
EPYK S 12 20 50.3
baz=290
TABL Table Mountain 72.49 31 P **P 12 11 25.2 +1.3**
TABL IAmb IAmb 12 12 05.3
comp=Z,90nm,1.3s
KMRS Kahramanmaras 72.51 304 *e*P **P 12 11 23.7 -0.6**
DIKM Dikmen 72.52 308⇑P **P 12 11 24.8 +0.5**
SARI SarD1z-Kayseri 72.61 305 P **P 12 11 24.1 -0.9**
NOR Nord 72.67 354 *i* P **P 12 11 21.1 -3.3**
NOR IAmb IAmb 12 11 28.8
comp=Z,5.0nm,1.0s
NOR IAMs_20 IAMs_20 12 46 19.1
comp=Z,9µm,15.4s
NOR Nord 72.67 354 *i* P **P 12 11 21.1 -3.3**
NOR pmax pmax
comp=Z,5.0nm,1.0s
NOR MLR MLR
comp=Z,10µm,15.0s
VSU Vasula 72.82 327 *e*P **P 12 11 26.5 +0.9**
BNN Bunyan 72.91 305 *i* P **P 12 11 24.8 -1.9**
INK Inuvik 72.95 22 P **P 12 11 24.4 -1.8**
comp=Z,18nm,0.7s,baz=302,slow=5.3,SNR=85
INK Inuvik 72.95 22 P **P 12 11 25.5 -0.7**
INK pmax pmax
comp=Z,55nm,1.2s
INK Inuvik 72.95 22 P **P 12 11 25.5 -0.7**
PCA Pinnacle 73.01 31 P **P 12 11 27.0 +0.1**
PCA IAmb IAmb 12 11 49.5
comp=Z,94nm,1.0s
PINM Pinnacle 73.02 31 P 12 11 24.7
baz=288,SNR=7.5
PINM S 12 20 49.4
baz=288
BZK Bozkurt 73.33 309 *e*P **P 12 11 29.2 +0.2**
KOZT Kozan 73.33 304 *e*P **P 12 11 28.9 -0.2**
BCPM Bancas Point 73.36 31 P **P 12 11 28.5 -0.3**
BCPM IAmb IAmb 12 14 04.5
comp=Z,60nm,0.8s
CORM Corum 73.41 307 *e*P **P 12 11 29.1 -0.6**
MNK Minsk 73.43 323 *e*P **P 12 11 30.0 +0.7**
MNK *e* 12 14 17.0
MNK *e*PPP PPP 12 15 55.0
MNK *e*S **S 12 20 56.0 -0.4**
MNK *e*SS **SS 12 25 41.0 +2.5**
MNK *e*SSS SSS 12 28 52.0
MNK Minsk 73.43 323 *i* P **P 12 11 29.0 -0.4**
comp=E,8.0nm,1.1s
MNK *i* P **P 12 11 29.0 -0.4**
comp=N,25nm,1.0s
MNK *i* P **P 12 11 29.0 -0.4**
comp=Z,18nm,0.5s
MNK *i* PcP **PcP 12 11 46.3 +0.9**
MNK *i* PP **PP 12 14 12.8 0.0**
MNK *i* PPP PPP 12 15 55.8
MNK *i* S **S 12 20 54.8 -1.7**
MNK *i* SS **SS 12 25 42.6 +4.1**
MNK *i* SSS SSS 12 29 02.8
MNK *i* LQ LQ 12 38 50.9
MNK *i* LR LR 12 45 21.3
MNK *i* LRM MLR 12 47 28.5
comp=E,787nm,15.1s
MNK *i* LRM MLR 12 47 29.2
comp=N,8µm,17.6s
MNK *i* LRM MLR 12 47 33.1
comp=Z,7µm,17.5s
CEYT Ceyhan 73.53 304 *e*P **P 12 11 30.5 +0.2**
IDID Didziasalis 73.80 324 *e*P **P 12 11 32.9 +1.4**
ILGA Ilgaz 73.81 308 P **P 12 11 33.2 +1.1**
ILGA IAmb IAmb 12 11 41.4
comp=Z,76nm,1.1s
AKASG Malin Array Be 73.83 319 P **P 12 11 30.2 -1.5**
comp=Z,8.8nm,0.6s,baz=59,slow=6.1,SNR=28
AKASG LR LR 12 47 10.1
comp=Z,8µm,18.3s,baz=80,slow=38
AKASG Malin Array Be 73.83 319 P **P 12 11 31.7 0.0**
AKASG Malin Array Be 73.83 319 P **P 12 11 31.7 0.0**
AKBB Malin Array Si 73.83 319*c* *i*P **P 12 11 30.7 -1.1**
AKBB pmax pmax
comp=Z,55nm,1.5s
AKBB MLR MLR
comp=Z,8µm,17.0s
CMRD Camardi-Nigde 73.91 304 *i* P **P 12 11 33.4 +0.8**
NACGM Naroch 73.91 323 *i* P **P 12 11 32.2 0.0**
NACGM *i* P **P 12 11 32.2 0.0**
NACGM *i* P **P 12 11 32.2 0.0**
NACGM *i* PcP PcP 12 11 55.6 +8.2
NACGM *i* PP **PP 12 14 18.2 +1.3**
NACGM *i* PPP PPP 12 16 11.8
NACGM *i* S S 12 21 14.0 +12
NACGM *i* PS **PnS 12 21 30.4 -7.0**
NACGM *i* SS SS 12 24 52.3 -53
NACGM *i* SSS SSS 12 28 54.1
NACGM *i* LQ LQ 12 39 23.9
NACGM *i* LR LR 12 45 03.0
KRTS Karatas 73.95 303 *e*P **P 12 11 33.9 +1.2**
KARA Karaisali 73.98 304 *i* P **P 12 11 32.8 -0.2**
N2IH Innhavet 73.99 338 IVmB_BB 12 11 32.2
comp=Z,3µm,4.7s
N2IH *e*P **P 12 11 32.4 0.0**
N2IH IVMs_BB IVMs_BB 12 21 21.4
comp=Z,1µm,3.9s
ISAL Salakas 74.05 324 *e*P **P 12 11 35.1 +2.1**
HYT Haines Junctio 74.06 30 P **P 12 11 33.6 +0.6**
HYT IAmb IAmb 12 11 36.9
comp=Z,62nm,1.2s
IIGN Ignalina 74.07 324 *e*P **P 12 11 34.3 +1.2**
N2HS Hamsund 74.08 338 *e*P **P 12 11 33.7 +0.8**
MTSE Matsula 74.19 328 *e*P **P 12 11 33.5 -0.1**
STEI Steigen 74.25 338 *e*P **P 12 11 33.5 -0.3**
STEI IVmB_BB 12 11 38.6
comp=Z,1µm,2.8s
STEI *e*S **S 12 21 05.6 +0.5**
STEI IVMs_BB IVMs_BB 12 37 18.2
comp=Z,4µm,20.1s
GULA Gulagac 74.26 305 *e*P **P 12 11 34.7 0.0**
BR131 Keskin Array S 74.27 307*c* *i*P **P 12 11 35.0 +0.2**
BR131 Keskin Array S 74.27 307 P **P 12 11 34.1 -0.7**
BRTR Keskin Array B 74.27 307 P **P 12 11 34.3 -0.5**
comp=Z,51nm,0.9s,baz=103,slow=5.5,SNR=78
BRTR LR LR 12 49 29.6
comp=Z,5µm,19.0s,baz=85,slow=40
BRTR Keskin Array B 74.27 307 *e*P **P 12 11 34.9 +0.2**
BRTR Keskin Array B 74.27 307 P **P 12 11 34.4 -0.4**
KAMT Kaman 74.33 306 *e*P **P 12 11 34.2 -0.9**
N2TV TVrnvik 74.44 338 *e*P **P 12 11 34.8 -0.2**
N2TV IVMs_BB IVMs_BB 12 21 23.7
comp=Z,904nm,5.5s
MERS Mersin 74.51 304 *e*P **P 12 11 35.3 -0.8**
RCY Rachaya 74.56 300 *e*P **P 12 11 37.5 +0.9**
SERE Sereflikochisa 74.57 306 *e*P **P 12 11 35.4 -1.1**
BHL Bhannes 74.57 301 *e*P **P 12 11 36.8 +0.2**
DQRL Deir Qamar 74.70 300 *e*P **P 12 11 37.8 +0.5**
LOF Lofoten 74.73 338⇑ *i*P **P 12 11 37.1 +0.4**
LOF *e*S **S 12 21 07.3 -3.3**
LOF IVMs_BB IVMs_BB 12 36 55.6
comp=Z,3µm,19.2s
AFSR Afar-Bala (An 74.78 307 *i* P **P 12 11 36.6 -1.0**
YESY Yesilyurt 74.81 305 *e*P **P 12 11 37.7 -0.2**
NBB28 Valnes 74.83 337 IVmB_BB 12 11 52.9
comp=Z,2µm,4.6s
ANTO Ankara 74.85 307 *e*P **P 12 11 38.3 +0.3**
ANTO Ankara 74.85 307 P **P 12 11 38.0 0.0**
ANTO Ankara 74.85 307 P **P 12 11 38.0 0.0**
LOD Lodumlu 74.86 307 *e*P **P 12 11 37.3 -0.8**
BR231 Keskin MP Arra 74.87 307 P **P 12 11 38.7 +0.6**
BR231 IAmb IAmb 12 11 40.6
comp=Z,126nm,1.2s
KIZK Mersin 74.92 303 *e*P **P 12 11 38.2 -0.2**
KULU Kulu 74.96 306 *e*P **P 12 11 38.9 +0.2**
EUNU Eureka 75.00 5 P **P 12 11 37.7 -0.9**
N2SV S,rVgen 75.02 338 *e*P **P 12 11 38.9 +0.6**
N2SV IVmBBB 12 11 42.9
comp=Z,2µm,5.1s
NBB05 Inndyr 75.05 337 IVmB_BB 12 11 39.4
comp=Z,2µm,2.6s
NBB05 *e*P **P 12 11 39.4 +0.9**
NBB05 IVMs_BB IVMs_BB 12 21 29.3
comp=Z,1µm,3.9s
NBB17 Glomfjord BVr 75.17 337 *e*P **P 12 11 39.9 +0.7**
NBB17 Glomfjord BVr 75.17 337 IVmB_BB 12 11 40.2
comp=Z,1µm,2.6s
NBB17 Glomfjord BVr 75.17 337 IVMs_BB IVMs_BB 12 21 32.2
comp=Z,1µm,3.7s
NBB17 *e*ScS **SKSac 12 21 50.0 +4.0**
NBB30 Finnes 75.18 337 *e*P **P 12 11 39.8 +0.5**
NBB30 *e*PP **PP 12 14 27.9 +0.6**
NBB30 *e*S **S 12 21 17.2 +1.6**
SORM Soroca 75.19 316⇑P **P 12 11 39.4 -0.4**
SORM Soroca 75.19 316 P **P 12 11 39.3 -0.4**
EREN Erenkoy 75.21 303 *e*P **P 12 11 39.3 -0.8**
PABE Paberze 75.23 324 *e*P **P 12 11 40.6 +0.8**
MMLI Mount Malkishu 75.23 299 *e*P **P 12 11 40.8 +0.5**
KEBE Keben-Mersin 75.26 304 *e*P **P 12 11 40.6 +0.1**
KIS Kishinev 75.27 315⇑ *i*P **P 12 11 38.6 -1.6**
comp=Z,560nm,5.6s
KIS Kishinev 75.27 315 *i* PcP **PcP 12 11 48.0 -5.5**
KIS Kishinev 75.27 315*c* *i*P **P 12 11 38.9 -1.3**
KIS *i* 12 11 48.0
KIS pmax pmax
comp=Z,560nm,5.6s
MOR8 Moi Rana 75.29 336 *e*P **P 12 11 38.8 -1.2**
MOR8 IVmB_BB 12 11 38.9
comp=Z,1µm,2.6s
MOR8 *e*S **S 12 21 15.9 -1.0**
MOR8 IVMs_BB IVMs_BB 12 33 60.0
comp=Z,4µm,14.3s
WHY Whitehorse 75.31 30 P **P 12 11 40.6 +0.2**
WHY IAmb IAmb 12 11 42.9
comp=Z,82nm,1.3s
NBB15 Halsa Church 75.34 337 IVmB_BB 12 11 40.0
comp=Z,2µm,4.5s
NBB15 Halsa Church 75.34 337 *e*P **P 12 11 40.4 +0.2**
NBB15 ⇑*e* 12 21 22.0
NBB15 IVMsBB 12 21 22.3
comp=Z,1µm,3.7s
IKL Isikli 75.35 303 *e*P **P 12 11 40.2 -0.7**
TEVE Tevekalti-Mers 75.47 304 *e*P **P 12 11 40.7 -1.0**
AKUU Akkuyu-Mersin 75.48 303 *e*P **P 12 11 40.1 -1.5**
SKAG Skagway 75.57 31 P **P 12 11 42.5 +0.9**
SKAG Skagway 75.57 31 P 12 11 39.9
baz=293
C36M Paulatuk 75.58 20 P **P 12 11 40.3 -1.3**
C36M IAmb IAmb 12 12 30.7
comp=Z,60nm,1.2s
C36M Paulatuk 75.58 20 P 12 11 39.7
baz=300
C36M S 12 21 14.0
baz=300
KONS Konsvik 75.62 337 *e*P **P 12 11 42.3 +0.5**
BERE Bereket-Mersin 75.67 304 *e*P **P 12 11 42.9 0.0**
LADK Ladik-KONYA 75.70 306 *e*P **P 12 11 40.3 -2.7**
STOK Stokkvaagen 75.73 337 *e*P **P 12 11 42.4 -0.1**

LFK Lefkose 75.78 302 eP P 12 11 42.5 -1.0
KONT Konya--Tatoy 75.79 305 eP P 12 11 42.4 -1.0
MDUB Mudurnu 75.81 308 i P P 12 11 41.5 -2.1
MDUB Mudurnu 75.81 308 P P 12 11 42.6 -0.9
AUSIV SIVRIHISAR 75.90 307 eP P 12 11 43.4 -0.7
SVRH Sivrihisar-ESK 75.91 307 eP P 12 11 43.0 -1.2
CSS Mathiatis 76.04 302 eP P 12 11 44.1 -0.8
CSS Mathiatis 76.04 302 P P 12 11 44.2 -0.7
ATD Arta Tunnel 76.06 277 P P 12 11 44.6 -0.7
ATD IAmb IAmb 12 12 14.0
comp=Z,78nm,1.3s
BESE Bessie Mountai 76.14 32 P P 12 11 45.2 +0.2
BESE IAmb IAmb 12 11 48.3
comp=Z,90nm,1.3s
SUW Suwalki 76.19 323 eP P 12 11 42.2 -3.1
SUW eL L 12 48 16.2
comp=Z,20µm,17.5s
SUW Suwalki 76.19 323 eP P 12 11 45.8 +0.5
SUW Suwalki 76.19 323 P P 12 11 45.0 -0.3
SUW pmax pmax
comp=Z,117nm,0.9s
SUW MLR MLR
comp=Z,16µm,20.0s
SUW Suwalki 76.19 323 P P 12 11 45.0 -0.3
SUW IAmb IAmb 12 12 12.6
comp=Z,117nm,0.9s
OUZ Omahuta 76.20 139 IAMs_20 IAMs_20 12 41 37.8
comp=Z,10µm,20.0s
TPGR Topolog 76.26 313 ⇓P P 12 11 46.2 +0.3
CIFT Cifteler, Eski 76.28 307 eP P 12 11 45.0 -1.2
GULT Gulveren 76.31 308 eP P 12 11 46.2 -0.2
CFR Carcaliu 76.33 313 ⇑P P 12 11 46.0 -0.3
CFR Carcaliu 76.33 313 P P 12 11 45.9 -0.3
SAUV Serdivan-Sakar 76.34 309 eP P 12 11 45.4 -1.0
HRFI Mount Harif 76.34 297 eP P 12 11 46.6 -0.1
SRCK Saricakaya, Es 76.36 308 eP P 12 11 45.7 -0.9
GAZI Gazipasa 76.40 304 eP P 12 11 44.8 -2.1
TIRR Tirgusor 76.40 313 P P 12 11 47.2 +0.5
TIRR pmax pmax
comp=Z,111nm,1.2s
TIRR Tirgusor 76.40 313 P P 12 11 47.2 +0.5
TIRR IAmb IAmb 12 11 55.7
comp=Z,111nm,1.2s
JIS Juneau Island 76.49 32 P P 12 11 47.6 +0.7
JIS IAmb IAmb 12 11 50.9
comp=Z,99nm,1.3s
SIT Sitka 76.51 33 P P 12 11 47.1 +0.1
SIT pmax pmax
comp=Z,110nm,1.0s
SIT Sitka 76.51 33 P P 12 11 47.1 +0.1
SIT IAmb IAmb 12 11 50.3
comp=Z,110nm,1.0s
SIT Sitka 76.51 33 P 12 11 47.2
baz=293,SNR=7.0
BORA Eskisehir 76.54 308 eP P 12 11 46.8 -0.9
HARR Harsova 76.64 313 ⇑P P 12 11 48.2 +0.1
HARR Harsova 76.64 313 P P 12 11 48.1 +0.1
SILT Sile 76.69 309 eP P 12 11 48.2 -0.2
UPP Uppsala 76.69 330 eP P 12 11 48.6 +0.6
HRT Hereke 76.78 309 eP P 12 11 48.4 -0.6
AUBOZ BOZOYUK 76.84 308 eP P 12 11 47.3 -2.1
TESR Tescani 76.84 315 ⇓P P 12 11 49.3 +0.1
ADVT Abdulvahap 76.87 308 eP P 12 11 48.8 -0.6
CAVI Cavuskoy 76.87 308 eP P 12 11 45.9 -3.6
SHUT Suhut-Afyon 76.93 306 eP P 12 11 49.6 -0.4
NSS Namsos 76.96 335 eP P 12 11 48.8 -0.7
NSS IVmB_BB 12 11 51.6
comp=Z,2µm,5.0s
NSS eS S 12 21 36.5 +1.2
NSS IVMs_BB IVMs_BB 12 35 11.6
comp=Z,5µm,14.6s
VRI Vrincioaia 77.02 314 ⇑P P 12 11 51.5 +1.2
VRI Vrincioaia 77.02 314 eP P 12 11 47.4 -2.8
VRI Vrincioaia 77.02 314 P P 12 11 51.4 +1.2
BIZ Bicaz 77.04 316 ⇓P P 12 11 50.5 +0.3
PLOR Plostina 77.08 314 ⇑P P 12 11 51.8 +1.2
PLOR Plostina 77.08 314 P P 12 11 51.7 +1.2
KLYT Kilyos 77.08 309 eP P 12 11 49.9 -0.7
YLV Yalova 77.08 309 eP P 12 11 49.9 -0.8
ISK Istanbul-Kandi 77.13 309 P P 12 11 49.5 -1.3
ISK Istanbul-Kandi 77.13 309 eP P 12 11 49.6 -1.3
KAVV Kandilli-Istan 77.13 309 eP P 12 11 49.6 -1.3
BISRR Bisoca 77.14 314 ⇑P P 12 11 51.7 +0.7
ISP Isparta 77.20 306 eP P 12 11 50.3 -1.2
ISP Isparta 77.20 306 P P 12 11 50.3 -1.2
ISP pmax pmax
comp=Z,110nm,1.0s
ISP Isparta 77.20 306 P P 12 11 50.3 -1.2
ISP IAmb IAmb 12 11 53.7
comp=Z,110nm,1.0s
LVV L'vov 77.26 319 eP P 12 11 52.6 +1.1
LVV eS S 12 21 39.2 +0.1
LVV e 12 22 31.0
LVV e 12 26 30.1
LVV MLR MLR
comp=Z,8µm,19.0s
LVV MLR MLR
comp=N,5µm,20.0s
LVV MLR MLR
comp=E,3µm,19.0s
BCK Bucak 77.28 305 eP P 12 11 50.3 -1.6
BUR08 Bucovina Ar. S 77.35 317 P P 12 11 51.3 -0.9
BURAR Bucovina Array 77.35 317 ⇑P P 12 11 52.2 0.0
BURAR Bucovina Array 77.35 317 P P 12 11 52.2 0.0
BURAR Bucovina Array 77.35 317 P P 12 11 51.2 -0.9
TVSB Tavsanli 77.41 308 eP P 12 11 51.1 -1.5
CTKS Kestanelik-??a 77.46 310 eP P 12 11 51.4 -1.3
CTYL Yalikoy Yolu 77.53 310 eP P 12 11 52.3 -0.8
KORT Korkueli 77.62 305 eP P 12 11 53.2 -0.7
MLR Muntele Rosu 77.67 314 ⇑P P 12 11 54.3 +0.3
MLR Muntele Rosu 77.67 314 P P 12 11 53.9 -0.1
MLR pmax pmax
comp=Z,97nm,1.3s
MLR Muntele Rosu 77.67 314 P P 12 11 53.9 -0.1
MLR IAmb IAmb 12 12 21.4
comp=Z,97nm,1.3s
SLVT Silivri 77.67 310 eP P 12 11 53.0 -0.9
DOPR Dopca 77.85 315 ⇓P P 12 11 55.6 +0.7
SIMA Simav-Kutahya 77.89 307 eP P 12 11 53.0 -2.3
ELL Elmali 78.04 305 eP P 12 11 54.9 -1.3
ELL Elmali 78.04 305 P P 12 11 55.4 -0.8
ELL pmax pmax
comp=Z,561nm,1.3s
ELL Elmali 78.04 305 P P 12 11 55.4 -0.8
ARCR ARCALIA 78.09 316 ⇑P P 12 11 57.6 +1.5
EDC Edincik 78.24 309 eP P 12 11 56.1 -1.0
EDC Edincik 78.24 309 P P 12 11 58.8 +1.7
TBLU Trondheim 78.25 335 eP P 12 11 55.8 -0.9
TBLU eS S 12 21 39.4 -10
TBLU IVMs_BB IVMs_BB 12 35 23.3
comp=Z,6µm,12.0s
MAR9 Marsite Statio 78.25 309 eP P 12 11 55.8 -1.3
WRAK Wrangell Islan 78.27 33 P P 12 11 56.5 -0.4
WRAK IAmb IAmb 12 12 00.5
comp=Z,128nm,1.4s
WRAK Wrangell Islan 78.27 33 P 12 11 56.7
baz=296
VOIR 78.27 315 ⇓P P 12 11 58.1 +0.8
CRAG Craig 78.28 34 P P 12 11 57.7 +0.7
CRAG IAmb IAmb 12 12 00.1
comp=Z,52nm,0.8s
CRAG Craig 78.28 34 P 12 11 56.8
baz=295
MRMT Marmara Adasi 78.33 309 eP P 12 11 56.5 -1.2
BEL Belsk 78.37 322 eP P 12 11 56.3 -1.2
BEL eL L 12 50 31.7
comp=Z,9µm,20.5s
MANT Manisa 78.41 307 P P 12 11 57.8 -0.6
GZKV Gazikoy-Tekird 78.47 309 eP P 12 11 57.8 -0.5
EDRB Edirne 78.47 311 eP P 12 11 57.2 -1.1
MAR4 Marsite Statio 78.47 309 eP P 12 11 57.6 -0.9
DLBC Dease Lake 78.50 31 P P 12 11 58.2 0.0
comp=Z,37nm,0.9s,baz=290,slow=5.9,SNR=35
DLBC Dease Lake 78.50 31 P P 12 11 58.8 +0.6
DLBC IAmb IAmb 12 12 01.1
comp=Z,101nm,1.4s
ARR Arges 78.57 315 ⇓P P 12 11 59.5 +0.5
RKY Sarkoy-Tekirda 78.60 309 eP P 12 11 58.2 -0.9
KRBG Karabiga-Canak 78.62 309 eP P 12 11 58.1 -1.1
RES Resolute Bay 78.66 9 P P 12 11 57.2 -1.5
comp=Z,8.7nm,0.8s,baz=323,slow=5.7,SNR=19
RES Resolute Bay 78.66 9 P P 12 11 57.8 -1.0
RES pmax pmax
comp=Z,36nm,1.3s
RES Resolute Bay 78.66 9 P P 12 11 57.8 -1.0
FETY Fethiye 78.69 305 P P 12 11 57.1 -2.6
NC405 NORSAR Array S 78.72 332 P P 12 11 58.0 -1.4
NEEM North Greenlan 78.72 359 ⇑iP P 12 11 57.7 -1.8
NEEM IAmb IAmb 12 12 01.7
comp=Z,22nm,0.6s
NEEM IAMs_20 IAMs_20 12 49 55.0
comp=Z,7µm,18.2s
UZH Uzhgorod 78.77 318 eP P 12 12 00.8 +0.9
UZH i 12 14 59.0
UZH iS S 12 21 53.0 -2.4
NC303 NORSAR Array S 78.81 333 P P 12 11 59.5 -0.3
NC303 IAmb IAmb 12 12 01.7
comp=Z,100nm,1.1s
NB201 NORSAR Array S 78.93 332 P P 12 11 59.3 -1.2
NB201 IAmb IAmb 12 12 01.7
comp=Z,103nm,1.1s
DALY Dalyan (Mula) 78.95 305 eP P 12 12 00.6 -0.5
NB2 NORSAR Subarra 78.97 332 P P 12 11 59.0 -1.8
baz=60,slow=5.6
NOA NORSAR Array B 78.97 332 P P 12 11 59.0 -1.8
comp=Z,34nm,1.0s,baz=59,slow=5.5,SNR=44
NOA LR LR 12 51 06.2
comp=Z,16µm,18.7s,baz=65,slow=39
NC602 NORSAR Array S 78.98 332 P P 12 12 00.0 -0.7
NC602 IAmb IAmb 12 12 01.8
comp=Z,79nm,1.2s
NC602 NORSAR Array S 78.98 332 eP P 12 12 00.2 -0.5
NC602 eSKSac SKSac 12 22 13.5 -0.6
NORES NORESS Array B 78.98 332 P P 12 12 03.7 +2.9
DBG Daneborg 79.00 350 ⇑iP P 12 11 59.2 -1.4
DBG IAmb IAmb 12 12 02.1
comp=Z,11nm,1.1s
DBG IAMs_20 IAMs_20 12 52 00.7
comp=Z,9µm,17.5s
LPK Lapseki 79.01 309 eP P 12 12 00.0 -1.3
NC204 NORSAR Array S 79.04 333 P P 12 12 00.8 -0.4
NC204 IAmb IAmb 12 12 02.4
comp=Z,126nm,1.2s
ERIK Erikli-Kesan 79.07 310 eP P 12 11 59.9 -1.7
AYDB Zeytinkoy-Aydi 79.10 307 eP P 12 12 02.2 +0.2
YER Yerkesik 79.11 306 P P 12 12 01.4 -0.6
YER Yerkesik 79.11 306 eP P 12 12 01.6 -0.4
YER Yerkesik 79.11 306 P P 12 12 03.5 +1.5
CRVS Cervenica-Dubn 79.17 319 eP P 12 12 04.1 +2.0
CRVS pmax pmax
comp=Z,170nm,1.6s
CRVS Cervenica-Dubn 79.17 319 eP P 12 12 04.1 +2.0
HIZ Hauiti 79.17 141 P P 12 12 01.3 -0.8
HIZ IAmb IAmb 12 12 27.1
comp=Z,150nm,1.1s
HIZ IAMs_20 IAMs_20 12 41 53.5
comp=Z,7µm,22.0s
GELI Tayfur-Gelibol 79.20 309 eP P 12 12 02.0 -0.4
NAO01 NORSAR Array S 79.21 332 P P 12 12 01.4 -0.6
NAO01 IAmb IAmb 12 12 02.9
comp=Z,82nm,1.2s
DRGR 79.25 316 ⇑P P 12 12 02.5 -0.1
DRGR 79.25 316 P P 12 12 03.0 +0.4
DRGR pmax pmax
comp=Z,29nm,1.5s
TURN Turunc 79.27 305 eP P 12 12 01.9 -0.9
ENEZ Enez 79.30 310 P P 12 12 01.6 -1.3
ENEZ Enez 79.30 310 eP P 12 12 01.1 -1.8
ALN Alexandroupoli 79.31 310 P P 12 12 01.8 -1.2
ALN Alexandroupoli 79.31 310 eP P 12 12 00.6 -2.4
ALN Alexandroupoli 79.31 310 P P 12 12 02.9 -0.1
ALN pmax pmax
comp=Z,81nm,1.4s
ALN Alexandroupoli 79.31 310 P P 12 12 02.9 -0.1
ALN IAmb IAmb 12 12 06.9
comp=Z,81nm,1.4s
JMIC Jan Mayen 79.33 345 eP P 12 11 59.4 -3.1
JMIC eS S 12 22 05.6 +5.0
JMIC IVMs_BB IVMs_BB 12 37 32.3
comp=Z,3µm,15.7s
DOMB Dombas 79.35 334 eP P 12 12 01.8 -1.0
DOMB IVmB_BB 12 12 03.2
comp=Z,829nm,1.2s
DKL Dikili 79.39 308 eP P 12 12 02.3 -1.1
QRZ Quartz Range 79.46 144 P P 12 12 05.5 +2.0
QRZ IAmb IAmb 12 12 24.7
comp=Z,161nm,1.5s
KDZ Kurdzhali 79.47 311 eP P 12 12 01.5 -2.3
TULEG Thule 79.47 3 ⇑iP P 12 12 01.5 -1.6
TULEG IAmb IAmb 12 12 06.0
comp=Z,6.3nm,0.9s
TULEG IAMs_20 IAMs_20 12 49 27.2
comp=Z,9µm,19.1s
TULEG Thule 79.47 3 P P 12 12 02.6 -0.5
TULEG IAmb IAmb 12 13 18.0
comp=Z,83nm,1.5s
EZN Ezine 79.53 309 P P 12 12 03.5 -0.6
EZN Ezine 79.53 309 P P 12 12 04.5 +0.4
ARG Arkhangelos 79.57 305 P P 12 12 03.9 -0.6
RDO Rodhopi 79.58 310 P P 12 11 56.8 -7.6
DIB Dawson Inlet, 79.61 36 P P 12 12 03.9 -0.4
DIB IAmb IAmb 12 12 06.8
comp=Z,49nm,0.8s
OJC Ojcow 79.61 320 eP P 12 12 03.5 -1.0
OJC eL L 12 50 30.5
comp=Z,11µm,16.2s
OJC Ojcow 79.61 320 P P 12 12 04.3 -0.1
OJC pmax pmax
comp=Z,171nm,1.5s
OJC Ojcow 79.61 320 P P 12 12 04.3 -0.1
OJC IAmb IAmb 12 12 13.9
comp=Z,171nm,1.5s
NIE Niedzica 79.65 320 eP P 12 12 03.5 -1.3
NIE eL L 12 48 27.8
comp=Z,4µm,22.3s
NIE Niedzica 79.65 320 P P 12 12 07.2 +2.5
NIE pmax pmax
comp=Z,19nm,1.6s
MOL Molde 79.67 335 eP P 12 12 03.8 -0.7
MOL IVmB_BB 12 12 08.5
comp=Z,1µm,3.5s
MOL eS S 12 22 00.1 -4.3
MOL IVMs_BB IVMs_BB 12 36 12.1
comp=Z,7µm,15.2s
GCAM G?zelcaml? 79.67 307 eP P 12 12 05.1 +0.1
GADA Gvkgeada 79.69 309 P P 12 12 04.2 -0.8
BOZC Bozcaada 79.71 309 P P 12 12 03.8 -1.4
GKP Gorka Klasztor 79.73 324 eP P 12 12 02.9 -2.1
GKP eL L 12 51 19.3
comp=Z,25µm,18.8s
OSL Oslo 79.73 332 eP P 12 12 05.4 +0.5
OSL eS S 12 22 06.3 +1.1
OSL IVMs_BB IVMs_BB 12 36 07.6
comp=Z,14µm,15.3s
GZR Gura Zlata 79.76 315 ⇓P P 12 12 05.8 +0.3
PLD Plovdiv 79.78 311 eP P 12 12 05.3 -0.2
PLD Plovdiv 79.78 311 P P 12 12 07.1 +1.6
PLD pmax pmax
comp=Z,204nm,1.6s
PRK Paraskevi 79.78 308 P P 12 12 05.5 -0.1
SMTH Samothraki Isl 79.84 310 P P 12 12 04.6 -1.3
BODT Bodrum 79.86 306 P P 12 12 04.8 -1.3
BODT Bodrum 79.86 306 eP P 12 12 04.5 -1.6
URLA Izmir 79.89 307 P P 12 12 03.3 -2.9
KECS Kecovo 79.93 319 eP P 12 12 08.5 +2.3
KECS pmax pmax
comp=Z,34nm,1.4s
KECS Kecovo 79.93 319 eP P 12 12 08.5 +2.3
SMG Samos 79.96 307 P P 12 12 05.0 -1.6
AKN Aaknes 80.09 335 eP P 12 12 07.2 +0.4
SIGR SIGRI 80.10 308 P P 12 12 05.5 -1.7
SIGR SIGRI 80.10 308 eP P 12 12 05.3 -1.9
BSD Bornholm Skovb 80.10 326 eP P 12 12 06.8 -0.1
BSD Bornholm Skovb 80.10 326 ⇑iP P 12 12 06.0 -0.9
BSD IAmb IAmb 12 12 08.3
comp=Z,21nm,1.0s
BSD IAMs_20 IAMs_20 12 50 40.0
comp=Z,27µm,15.4s
BSD Bornholm Skovb 80.10 326 ⇑iP P 12 12 06.0 -0.9
BSD pmax pmax
comp=Z,21nm,1.0s
BSD MLR MLR
comp=Z,27µm,15.0s
DCZ Deep Cove 80.16 150 IAMs_20 IAMs_20 12 46 14.5
comp=Z,6µm,20.0s
LANS Liptovska Anna 80.26 320 eP P 12 12 10.5 +2.5
LANS pmax pmax
comp=Z,45nm,1.9s
LANS Liptovska Anna 80.26 320 eP P 12 12 10.5 +2.5
CHOS Chios island 80.27 308 P P 12 12 07.0 -1.3
LIA Limnos Island 80.31 309 P P 12 12 07.4 -1.0
THZ Tophouse 80.32 144 P P 12 12 08.7 +0.5
THZ IAmb IAmb 12 12 24.1
comp=Z,226nm,1.8s
THZ IAMs_20 IAMs_20 12 47 06.8
comp=Z,7µm,20.0s
URZ Urewera 80.33 139 P P 12 12 08.1 -0.2
comp=Z,17nm,0.9s,baz=124,slow=23,SNR=10
URZ LR LR 12 42 16.3
comp=Z,5µm,21.5s,baz=31,slow=32
URZ Urewera 80.33 139 P P 12 12 09.0 +0.7
KAVA Kavala 80.35 311 P P 12 12 07.6 -1.0
THAS Thassos island 80.36 310 P P 12 12 06.9 -1.7
KONO Kongsberg 80.37 332 ci P P 12 12 05.4 -2.9
KONO pmax pmax
comp=Z,34nm,2.7s
KONO MLR MLR
comp=Z,42µm,16.0s
KONO Kongsberg 80.37 332 P P 12 12 07.6 -0.8
KONO Kongsberg 80.37 332 eP P 12 12 07.5 -0.9
KONO IVmB_BB 12 12 10.8
comp=Z,1µm,5.8s
KONO eS S 12 22 10.1 -1.8
SKAR Skarslia 80.38 333 eP P 12 12 08.4 0.0
SKAR IVmB_BB 12 12 11.6
comp=Z,2µm,6.2s
SKAR eSKSac SKSac 12 22 23.0 -1.0
SKAR IVMs_BB IVMs_BB 12 36 35.1
comp=Z,8µm,15.4s
BZS Buzias 80.42 316 P P 12 12 10.9 +2.0
BZS pmax pmax
comp=Z,27nm,1.6s
ONAU Onsala 80.47 329 i P P 12 12 07.1 -1.7
PSZ Piszkesteto 80.53 318 ⇑P P 12 12 10.5 +1.0
PSZ Piszkesteto 80.53 318 P P 12 12 09.6 +0.1
PSZ pmax pmax
comp=Z,92nm,1.4s
PSZ MLR MLR
comp=Z,8µm,19.0s
PSZ Piszkesteto 80.53 318 P P 12 12 09.6 +0.1
PSZ IAmb IAmb 12 12 13.0
comp=Z,92nm,1.4s
PSZ IAMs_20 IAMs_20 12 51 31.9
comp=Z,8µm,19.0s
KARP Karpathos 80.55 305 P P 12 12 09.2 -0.6
KARP Karpathos 80.55 305 eP P 12 12 08.6 -1.2
KARP Karpathos 80.55 305 P P 12 12 10.0 +0.2
BKZ Black Stump Fm 80.56 140 P P 12 12 10.4 +0.7
BKZ IAmb IAmb 12 12 26.6
comp=Z,123nm,1.3s
BKZ IAMs_20 IAMs_20 12 43 51.2
comp=Z,7µm,22.0s
VTS Vitosha 80.58 312 ⇓P P 12 12 10.5 +0.5
VTS Vitosha 80.58 312 P P 12 12 09.8 -0.2
VTS pmax pmax
comp=Z,118nm,1.3s
VTS Vitosha 80.58 312 P P 12 12 09.8 -0.2
VTS IAmb IAmb 12 12 14.9
comp=Z,118nm,1.3s
MXZ Matakaoa Point 80.60 138 IAMs_20 IAMs_20 12 42 25.2
comp=Z,7µm,21.0s
NVR Nevrokopi 80.66 311 P P 12 12 08.0 -2.3
MDVR Moldovita 80.70 315 ⇑P P 12 12 10.3 -0.1
LTZ Lake Taylor 80.70 145 P P 12 12 11.6 +1.3
LTZ IAMs_20 IAMs_20 12 44 33.9
comp=Z,7µm,20.0s
OKC Ostrava-Krasne 80.74 321 eP P 12 12 10.7 +0.2
OKC MLR MLR
comp=Z,8µm,15.1s
OKC Ostrava-Krasne 80.74 321 ⇑eP P 12 12 10.7 +0.2
OKC AMS AMS 12 53 20.0
comp=Z,8µm,15.1s
RPZ Rata Peaks 80.74 147 LR LR 12 45 02.3
comp=Z,6µm,21.0s,baz=328,slow=33
RPZ Rata Peaks 80.74 147 P P 12 12 10.9 +0.5
RPZ IAmb IAmb 12 12 28.1
comp=Z,141nm,1.1s
RPZ IAMs_20 IAMs_20 12 45 02.0
comp=Z,7µm,21.0s
LBZ Lake Benmore 80.80 148 P P 12 12 11.5 +0.8
VYHS Vyhne 80.92 319 eP P 12 12 12.7 +1.2
VYHS pmax pmax
comp=Z,131nm,1.4s
VYHS Vyhne 80.92 319 eP P 12 12 12.7 +1.2
SRS Serrai 80.94 311 P P 12 12 10.6 -1.2
HYA Hoyanger 80.98 334 eP P 12 12 10.9 -0.6
HYA eSKSac SKSac 12 22 27.9 0.0
OUR Ouranopolis 80.98 310 P P 12 12 11.3 -0.7
OUR Ouranopolis 80.98 310 eP P 12 12 11.2 -0.7
KHZ Kahutara 81.11 144 P P 12 12 13.0 +0.6
KHZ IAmb IAmb 12 12 14.5
comp=Z,71nm,0.9s
MORC Moravsky Berou 81.11 321 ⇑iP P 12 12 12.0 -0.6
MORC Moravsky Berou 81.11 321 eS S 12 22 17.2 -3.0
MORC Moravsky Berou 81.11 321 P P 12 12 12.7 +0.1
MORC pmax pmax
comp=Z,60nm,1.5s
MORC MLR MLR
comp=Z,8µm,19.0s
MORC Moravsky Berou 81.11 321 P P 12 12 12.7 +0.1
MORC IAMs_20 IAMs_20 12 51 27.1
comp=Z,8µm,19.0s
KOLL Kolacno 81.14 319 eP P 12 12 14.8 +2.1
SKY Skiros Island 81.16 309 P P 12 12 11.9 -1.1
BOVS Bovan 81.18 314 ⇑P P 12 12 13.2 +0.2
RGN Rugen 81.19 326 eP P 12 12 13.1 +0.4
comp=Z,91nm,1.0s,baz=59,slow=5.1
FOO Floro 81.19 335 eP P 12 12 13.2 +0.6
FOO IVmB_BB 12 12 18.1
comp=Z,2µm,5.4s
FOO eS S 12 22 21.1 +0.8
SOH Sokhos 81.22 311 P P 12 12 11.2 -2.1
SOH Sokhos 81.22 311 P P 12 12 14.4 +1.1
LNIZ Loecknitz 81.23 325 eP P 12 12 13.6 +0.5
comp=Z,80nm,0.7s,baz=59,slow=5.1
BUD Budapest 81.25 318 P P 12 12 15.9 +2.7
BUD pmax pmax
comp=Z,42nm,1.3s
PLG Polygyros 81.34 310 P P 12 12 12.3 -1.7
KSP Ksiaz 81.34 322 eP P 12 12 12.0 -1.7
KSP eL L 12 51 45.0
comp=Z,12µm,20.6s
KSP Ksiaz 81.34 322 P P 12 12 15.0 +1.3
KSP pmax pmax
comp=Z,54nm,1.4s
PAIG Paliouri 81.36 310 P P 12 12 12.4 -1.6
PAIG Paliouri 81.36 310 P P 12 12 15.3 +1.3
MSWZ Moikau Station 81.36 143 P P 12 12 14.6 +0.9
KNT Kendrikon 81.40 311 P P 12 12 12.8 -1.4
KNT Kendrikon 81.40 311 P P 12 12 12.5 -1.7
KRLC Kraliky 81.42 321 eP P 12 12 14.4 +0.2
KRLC MLR MLR
comp=Z,9µm,14.8s
KRLC Kraliky 81.42 321 ⇑eP P 12 12 14.4 +0.2
KRLC AMS AMS 12 52 00.0
comp=Z,9µm,14.8s
BFZ Birch Farm 81.42 142 P P 12 12 15.6 +1.5
BFZ IAMs_20 IAMs_20 12 47 12.3
comp=Z,7µm,20.0s
ZKR Zakros 81.42 305 P P 12 12 13.6 -0.9
JAVC Velka Javorina 81.45 320 ⇑iP P 12 12 15.5 +1.1
JAVC Velka Javorina 81.45 320 eS S 12 22 25.4 +1.7
PLWZ Palliser 81.47 143 P P 12 12 15.0 +0.7
STIA Sitia Lasithi 81.48 305 P P 12 12 14.2 -0.6
HORT Hortiatis 81.49 311 P P 12 12 13.1 -1.7
HORT Hortiatis 81.49 311 eP P 12 12 13.1 -1.7
SANT Santorini 81.50 306 P P 12 12 13.8 -1.1
ODD1 Odda 81.50 333 eP P 12 12 14.6 +0.2
ODD1 eS S 12 22 25.0 +1.2
OSTC Ostas 81.52 322 ⇑eP P 12 12 15.3 +0.6
OSTC ex x 12 12 23.8
OSTC AMS AMS 12 51 50.0
comp=Z,12µm,21.7s
MQZ McQueen's Vall 81.55 146 P P 12 12 15.9 +1.2
MQZ IAmb IAmb 12 12 32.1
comp=Z,84nm,1.1s
DPC Dobruska-Polom 81.55 322 ⇑eP P 12 12 15.7 +0.8
DPC MLR MLR
comp=Z,11µm,16.5s
DPC Dobruska-Polom 81.55 322 ⇑eP P 12 12 15.7 +0.8
DPC AMS AMS 12 52 10.0

comp=Z,11µm,16.5s
VAY Valandovo 81.56 311 *i* P P 12 12 14.6 -0.4
THE Thessaloniki 81.57 311 P P 12 12 13.0 -2.1
HOMB Homborsund 81.58 331 *eP* P 12 12 13.9 -0.9
HOMB IVmB_BB 12 12 17.3
comp=Z,2µm,5.4s
HOMB *ePP* PP 12 15 21.0 +0.1
HOMB *eS* S 12 22 25.3 +0.8
HOMB IVMs_BB IVMs_BB 12 37 12.9
comp=Z,12µm,16.0s
KYMI Kymi, Euboea I 81.58 308 P P 12 12 13.3 -1.9
CHVC Chvalec 81.60 322 *eP* P 12 12 15.3 +0.2
CHVC AMS AMS 12 51 50.0
comp=Z,12µm,20.4s
SUE Sulen 81.61 334 *eP* P 12 12 15.4 +0.6
SUE IVmB_BB 12 12 20.1
comp=Z,2µm,4.6s
SUE *eS* S 12 22 25.8 +1.0
SUE IVMs_BB IVMs_BB 12 37 28.6
comp=Z,8µm,15.0s
UPC Upice 81.66 322 *eP* P 12 12 15.1 -0.3
UPC MLR MLR
comp=Z,13µm,20.8s
UPC Upice 81.66 322⇑ *eP* P 12 12 15.1 -0.3
UPC AMS AMS 12 52 00.0
comp=Z,13µm,20.8s
STIP Stip 81.67 312 *i* P P 12 12 14.1 -1.5
SMOL Smolenice 81.75 320 *eP* P 12 12 17.0 +1.1
SMOL Smolenice 81.75 320 *eP* P 12 12 17.0 +1.1
FRGS Fruska Gora 81.77 316⇑ *iP* P 12 12 15.6 -0.5
ASK Askoy 81.77 334 *eP* P 12 12 15.2 -0.5
BER Bergen 81.77 333 *eP* P 12 12 15.7 0.0
BER *eS* S 12 22 27.6 +1.2
NPS Neapolis 81.82 305 P P 12 12 15.8 -0.8
GRG Griva 81.83 311 P P 12 12 14.6 -1.9
GRG Griva 81.83 311 *eP* P 12 12 14.3 -2.2
GRG Griva 81.83 311 P P 12 12 16.1 -0.4
BLS5 Blasjo 81.84 332 *eP* P 12 12 16.0 -0.2
BLS5 IVmB_BB 12 12 21.1
comp=Z,1µm,4.0s
BLS5 *eS* S 12 22 28.2 +0.9
BLS5 IVMs_BB IVMs_BB 12 37 26.1
comp=Z,9µm,15.5s
VRAC Vranov 81.88 321 ⇑P P 12 12 17.9 +1.3
VRAC Vranov 81.88 321⇑ *iP* P 12 12 16.5 -0.1
VRAC Vranov 81.88 321 *eS* S 12 22 28.5 +0.5
VRAC Vranov 81.88 321 P P 12 12 18.4 +1.8
VRAC pmax pmax
comp=Z,42nm,2.4s
MODS Modra-Piesok 81.90 319 *eP* P 12 12 16.7 -0.1
MODS pmax pmax
comp=Z,50nm,1.4s
MODS Modra-Piesok 81.90 319 *eP* P 12 12 16.7 -0.1
DION Dionisos Attik 81.93 308 P P 12 12 15.0 -2.1
XOR Xorichti 81.93 309 P P 12 12 15.0 -2.1
NEO Neokhori 81.93 309 P P 12 12 15.3 -1.8
RUE Ruedersdorf 81.95 324 *eP* P 12 12 17.2 +0.4
comp=Z,77nm,1.1s,baz=59,slow=5.1
PTL Penteli 81.99 308 P P 12 12 15.0 -2.4
MORH Mrgy, Hungar 82.04 317 ⇑P P 12 12 17.3 -0.2
MORH Mrgy, Hungar 82.04 317⇑ *iP* P 12 12 16.4 -1.0
SKO Skopje 82.06 312 P P 12 12 18.5 +0.8
SKO Skopje 82.06 312 *i* P P 12 12 17.7 0.0
ZST Bratislava 82.09 319 *eP* P 12 12 19.1 +1.4
ZST Bratislava 82.09 319 *eP* P 12 12 19.1 +1.4
KRUC Moravsky 82.11 320⇑ *iP* P 12 12 17.3 -0.5
KRUC Moravsky 82.11 320 *eS* S 12 22 29.6 -0.8
KRUC Moravsky 82.11 320 P P 12 12 20.1 +2.3
KRUC pmax pmax
comp=Z,31nm,2.7s
DIVS Divibare 82.11 315⇑ *iP* P 12 12 16.7 -1.3
DIVS Divibare 82.11 315 P P 12 12 17.6 -0.4
LIT Litokhoron 82.12 310 P P 12 12 16.1 -2.0
LIT Litokhoron 82.12 310 P P 12 12 17.0 -1.1
LIT pmax pmax
comp=Z,102nm,1.5s
LIT Litokhoron 82.12 310 P P 12 12 17.0 -1.1
LIT IAmb IAmb 12 12 44.1
comp=Z,102nm,1.5s
SNART Snartemo 82.12 331 *eP* P 12 12 17.3 -0.3
SNART *eS* S 12 22 30.3 +0.2
VLY Voula,Athens 82.12 308 P P 12 12 15.3 -2.8
ATH Athens Observa 82.13 308 P P 12 12 16.7 -1.4
TEKS Tekeris 82.21 315⇑ *iP* P 12 12 16.1 -2.3
MUD Monsted U'grnd 82.25 329 *i* P P 12 12 18.0 -0.3
MUD IAMs_20 IAMs_20 12 51 59.4
comp=Z,35µm,17.4s
MUD Monsted U'grnd 82.25 329 *i* P P 12 12 18.0 -0.3
MUD MLR MLR
comp=Z,35µm,17.0s
IDI Anoyia 82.35 305 P P 12 12 18.4 -1.0
IDI Anoyia 82.35 305 *eP* P 12 12 17.6 -1.8
IDI Anoyia 82.35 305 P P 12 12 18.6 -0.8
IDI IAmb IAmb 12 12 25.3
comp=Z,83nm,1.2s
LKR Lokris 82.36 309 P P 12 12 17.2 -2.1
BBB Bella Bella 82.43 36 P P 12 12 18.4 -1.0
comp=Z,14nm,0.8s,baz=308,slow=5.5,SNR=17
BBB Bella Bella 82.43 36 P P 12 12 20.0 +0.7
BBB IAmb IAmb 12 12 24.7
comp=Z,82nm,1.4s
PVCC Panska Ves 82.46 322⇑ *eP* P 12 12 19.6 0.0
PVCC MLR MLR
comp=Z,17µm,17.5s
PVCC Panska Ves 82.46 322⇑ *eP* P 12 12 19.6 0.0
PVCC AMS AMS 12 53 40.0
comp=Z,17µm,17.5s
KMY Karmoy 82.47 333 *eP* P 12 12 19.2 -0.2
SCO Scoresbysund 82.50 349⇑ *iP* P 12 12 18.2 -1.2
SCO IAMs_20 IAMs_20 12 54 17.3
comp=Z,12µm,16.9s
SCO Scoresbysund 82.50 349⇑ *iP* P 12 12 18.2 -1.2
SCO MLR MLR
comp=Z,12µm,17.0s
SIVA Sivas 82.52 305 P P 12 12 19.6 -0.6
TREC Trest 82.53 321 *eP* P 12 12 20.2 +0.2
TREC MLR MLR
comp=Z,12µm,16.5s
TREC Trest 82.53 321⇑ *eP* P 12 12 20.2 +0.2
TREC AMS AMS 12 52 10.0
comp=Z,12µm,16.5s
KZN Kozani 82.53 311 P P 12 12 18.8 -1.5
BBLS Lazići 82.59 315⇑ *iP* P 12 12 19.4 -1.1
FNA Florina 82.60 311 P P 12 12 18.8 -1.8
FNA Florina 82.60 311 *eP* P 12 12 19.1 -1.5
FNA Florina 82.60 311 P P 12 12 19.7 -0.9
FNA pmax pmax
comp=Z,45nm,1.3s
FNA Florina 82.60 311 P P 12 12 19.7 -0.9
BRG Berggiesshubel 82.64 323 P P 12 12 22.2 +1.7
BRG Berggiesshubel 82.64 323⇑ *iP* P 12 12 22.2 +1.7
BRG Amp 12 12 25.0
comp=Z,60nm,1.5s
BRG *ex* x 12 12 40.0
BRG Amp 12 12 42.7
comp=Z,63nm,1.8s
BRG *ex* x 12 12 50.5
BRG Amp 12 12 55.4
comp=Z,74nm,1.8s
BRG Berggiesshubel 82.64 323 S S 12 22 40.0 +4.2
BRG Amp 12 39 18.0
comp=N,6.0nm,16.7s
BRG Amp 12 39 27.0
comp=E,5.3nm,14.6s
BRG Amp 12 39 38.0
comp=Z,14nm,15.7s
BRG Amp 12 53 48.0
comp=N,12nm,17.0s
BRG Amp 12 54 04.0
comp=E,10.0nm,16.3s
BRG Amp 12 54 26.0
comp=Z,22nm,15.4s
BRG Berggiesshubel 82.64 323 *eP* P 12 12 21.1 +0.6
comp=Z,59nm,1.5s,baz=59,slow=5.1
THL Klokotos Trika 82.68 310 P P 12 12 18.6 -2.3
YKA Yellowknife Ar 82.68 23 P P 12 12 18.6 -1.8
comp=Z,17nm,0.6s,baz=313,slow=4.7,SNR=259
YKA PKKP PKKPdf 12 30 31.9 -3.6
comp=Z,0.3nm,0.9s,baz=64,slow=1.4,SNR=4.3
YKA PKKPbc PKKPbc 12 30 44.6 -1.5
comp=Z,0.3nm,0.6s,baz=121,slow=3.0,SNR=4.4
YKA PKPPKP P'P'df 12 38 55.5 +1.4
comp=Z,0.4nm,0.9s,baz=130,slow=3.0,SNR=5.5
YKA LR LR 12 53 10.5
comp=Z,4µm,19.2s,baz=0.0,slow=39
AGG Agios Georgios 82.68 309 P P 12 12 18.2 -2.8
AGG Agios Georgios 82.68 309 P P 12 12 19.5 -1.5
AGG pmax pmax
comp=Z,41nm,1.0s
AGG Agios Georgios 82.68 309 P P 12 12 19.5 -1.5
AGG IAmb IAmb 12 12 36.5
comp=Z,41nm,1.0s
PRU Pruhonice 82.73 322⇑ *eP* P 12 12 19.0 -2.0
PRU *e* 12 12 30.0
PRU MLR MLR
comp=Z,10µm,17.1s
PRU Pruhonice 82.73 322⇑ *eP* P 12 12 19.0 -2.0
PRU *epP* pP 12 12 30.0 +0.1
PRU AMS AMS 12 54 00.0
comp=Z,10µm,17.1s
PRA Prague 82.76 322⇑ *eP* P 12 12 21.7 +0.6
PRA MLR MLR
comp=Z,12µm,16.4s
PRA Prague 82.76 322⇑ *eP* P 12 12 21.7 +0.6
PRA AMS AMS 12 54 00.0
comp=Z,12µm,16.4s
KRND KRANIDI 82.78 308 P P 12 12 17.7 -3.8
VAM Vamos 82.82 305 P P 12 12 19.6 -2.2
SUMG Summit 82.83 354⇑ *iP* P 12 12 19.9 -1.8
SUMG IAmb IAmb 12 12 23.6
comp=Z,20nm,1.0s
SUMG IAMs_20 IAMs_20 12 55 23.2
comp=Z,6µm,16.9s
SUMG Summit 82.83 354⇑ *iP* P 12 12 19.8 -1.8
SUMG pmax pmax
comp=Z,20nm,1.0s
SUMG MLR MLR
comp=Z,6µm,17.0s
SUMG Summit 82.83 354 P P 12 12 20.7 -0.9
SUMG IAmb IAmb 12 12 23.0
comp=Z,58nm,1.2s
PHP Peshkopia 82.85 312 P P 12 12 19.7 -2.2
FBE Freiberg 82.94 323 *eP* P 12 12 22.8 +0.7
comp=Z,124nm,1.6s,baz=59,slow=5.1
CLL Collm 82.95 323 *eP* P 12 12 22.0 -0.1
comp=Z,83nm,1.5s
CLL *ePmax* 12 12 22.0
CLL *ePlp* 12 12 23.0
comp=Z,2µm,12.4s
CLL *ePP* PP 12 15 32.0 -0.4
CLL *eS* S 12 22 40.0 +1.2
CLL Lmax 12 53 00.0
CLL Lm MLR 12 53 00.0
comp=Z,19µm,19.2s
CLL Collm 82.95 323 *eP* P 12 12 22.0 -0.1
CLL pmax pmax
comp=Z,83nm,1.5s
CLL Collm 82.95 323 P P 12 12 22.4 +0.3
CLL Collm 82.95 323 *eP* P 12 12 22.1 0.0
comp=Z,83nm,1.6s,baz=59,slow=5.1
CONA Conrad Observa 82.95 320 *i* P P 12 12 23.1 +0.8
comp=Z,75nm,1.4s,SNR=29
IMMV Iera Moni Meta 82.96 306 P P 12 12 20.4 -2.1
KPRO Kipourio 82.97 311 P P 12 12 20.7 -1.8
BSEG Bad Segeberg 83.02 327 *eP* P 12 12 22.6 +0.2
comp=Z,73nm,1.2s,baz=59,slow=5.1
SKMB Sankelmark Bun 83.04 327 *eP* P 12 12 23.2 +0.7
comp=Z,90nm,0.5s,baz=59,slow=5.1
BEHE Beesehely 83.08 318⇑ *iP* P 12 12 24.2 +1.3
KBN Korca 83.08 311 P P 12 12 20.8 -2.3
EVR Evrytania 83.09 309 P P 12 12 20.3 -3.0
GVDS Gavdos 83.13 305 P P 12 12 21.0 -2.4
GVD Gavdhos 83.14 305 P P 12 12 22.8 -0.6
ANX Ano Chora 83.15 309 P P 12 12 21.6 -2.0
PBCC Pribram 83.19 322⇑ *eP* P 12 12 23.8 +0.4
PBCC AMS AMS 12 54 10.0
comp=Z,6µm,16.5s
UPM Unac-Piva 83.21 314 *eP* P 12 12 22.7 -1.2
VLI Veliai 83.21 307 P P 12 12 20.7 -3.1
KLV Kalavryta, Ach 83.22 309 P P 12 12 20.8 -3.1
ANKY Antikythira Is 83.30 306 P P 12 12 23.3 -0.9
PDG Podgorica 83.32 313 *eP* P 12 12 24.5 +0.3
VLX Vlachokerasia 83.34 308 P P 12 12 21.7 -2.9
KTHR Kythira 83.35 307 P P 12 12 22.8 -1.7
FLTG Fichtingen 83.38 325 *eP* P 12 12 24.0 -0.3
comp=Z,35nm,1.2s,baz=59,slow=5.1
TIR Tirane 83.39 312 P P 12 12 22.9 -1.7
TIR Tirane 83.39 312 P P 12 12 28.6 +4.0
PVO Paravola 83.42 309 P P 12 12 22.7 -2.1
CKRC Cesky Krumlov 83.43 321 *eP* P 12 12 24.5 -0.2
CKRC AMS AMS 12 52 40.0
comp=Z,12µm,16.7s
ARSA Arzberg 83.47 319 *i* P P 12 12 24.9 0.0
comp=Z,37nm,1.4s,SNR=10
DRME Dracevica, Mon 83.48 313⇑ *iP* P 12 12 23.9 -1.1
UPNV Upernavik 83.48 360⇑ *iP* P 12 12 22.8 -1.6
UPNV IAmb IAmb 12 12 27.1
comp=Z,23nm,0.8s
UPNV IAMs_20 IAMs_20 12 54 36.6
comp=Z,7µm,16.6s
DRO Drossia 83.57 309 P P 12 12 23.8 -1.9
BRY Bratogost 83.58 314 P P 12 12 26.7 +0.9
BRY Bratogost 83.58 314 *eP* P 12 12 24.9 -0.9
BLY Banja Luka 83.62 316⇑ *iP* P 12 12 24.9 -0.8
NEUB Neuenburg 83.66 324 *eP* P 12 12 26.0 +0.2
comp=Z,68nm,1.1s,baz=59,slow=5.1
MRAK Mrakovica 83.67 317 *eP* P 12 12 28.0 +1.9
TANN Tannenbergstha 83.69 323 *eP* P 12 12 26.3 +0.2
comp=Z,35nm,1.2s,baz=59,slow=5.1
KHC Kasperske Hory 83.70 321 *i* P P 12 12 26.1 0.0
KHC pmax pmax
comp=Z,138nm,1.5s
KHC Kasperske Hory 83.70 321⇑ *eP* P 12 12 24.8 -1.3
KHC *epP* pP 12 12 34.4 -0.5
KHC *eS* S 12 22 48.6 +1.9
KHC AMS AMS 12 53 10.0
comp=Z,11µm,17.1s
KHC Kasperske Hory 83.70 321 P P 12 12 26.2 +0.1
KHC IAmb IAmb 12 12 29.6
comp=Z,70nm,1.4s
KHC IAMs_20 IAMs_20 12 53 41.6
comp=Z,10µm,20.0s
RLS Riolos of Patr 83.70 309 P P 12 12 24.8 -1.5
AXS Araxos 83.71 309 P P 12 12 24.4 -1.9
ITM Ithomi 83.75 308 P P 12 12 24.4 -2.2
ITM Ithomi 83.75 308 P P 12 12 25.5 -1.0
AMT Artemida-Makis 83.75 308 P P 12 12 24.4 -2.2
WERD Werda 83.76 323 *eP* P 12 12 26.6 +0.2
comp=Z,32nm,1.2s,baz=59,slow=5.1
GEC2 GERESS Array S 83.77 321 P P 12 12 25.7 -0.8
GEC2 IAmb IAmb 12 12 29.1
comp=Z,61nm,1.1s
GEC2 GERESS Array S 83.77 321 *eP* P 12 12 26.7 +0.2
comp=Z,66nm,1.1s,baz=59,slow=5.1
GERES GERESS Array B 83.77 321 P P 12 12 25.7 -0.8
comp=Z,33nm,1.0s,baz=57,slow=4.9,SNR=83
GERES LR LR 12 53 24.3
comp=Z,12µm,18.5s,baz=64,slow=38
GERES GERESS Array B 83.77 321 P P 12 12 25.6 -1.0
GERES GERESS Array B 83.77 321 P P 12 12 25.6 -1.0
ASSE Asse, Remlinge 83.78 325 *eP* P 12 12 26.8 +0.5
comp=Z,107nm,2.0s,baz=59,slow=5.1
GUNZ Gunzen 83.79 323 *eP* P 12 12 26.8 +0.3
comp=Z,47nm,1.1s,baz=59,slow=5.1
NKC Novy Kostel 83.79 323 *eP* P 12 12 26.8 +0.3
NKC MLR MLR
comp=Z,16µm,16.6s
NKC Novy Kostel 83.79 323⇑ *eP* P 12 12 26.8 +0.3
NKC AMS AMS 12 54 20.0
comp=Z,16µm,16.6s
TREB Trebinje 83.79 314 *eP* P 12 12 25.8 -0.8
WERN Wernitzgruen 83.80 323 *eP* P 12 12 26.9 +0.3
comp=Z,49nm,1.2s,baz=59,slow=5.1
PLN Plauen 83.82 323 *eP* P 12 12 26.9 +0.2
comp=Z,43nm,1.3s,baz=59,slow=5.1
MGRS Mrkonjic Grad 83.83 316 *eP* P 12 12 28.0 +1.1
NRDL Niedersach Rie 83.88 325 *eP* P 12 12 28.0 +1.2
comp=Z,154nm,1.8s,baz=59,slow=5.1
MOA Molln 83.93 320 *i* P P 12 12 28.1 +0.8
comp=Z,55nm,1.1s,SNR=21
MOX Moxa 84.04 323 P P 12 12 29.3 +1.5
MOX Moxa 84.04 323 *eP* P 12 12 28.0 +0.2
comp=Z,37nm,1.2s,baz=59,slow=5.1
SOKA Soboth 84.04 319 *i* P P 12 12 27.8 -0.2
comp=Z,63nm,1.2s,SNR=32
CLZ Clausthal 84.08 325 *eP* P 12 12 28.7 +0.7
comp=Z,79nm,1.4s,baz=59,slow=5.1
WET Wettzell 84.09 322 *eP* P 12 12 28.7 +0.6
comp=Z,55nm,1.4s,baz=59,slow=5.1
MANZ Manzenberg 84.10 323 *eP* P 12 12 28.6 +0.4
comp=Z,45nm,1.3s,baz=59,slow=5.1
KEK Kerkira 84.16 311 P P 12 12 27.2 -1.4
ROTZ Rotzenmuhle 84.16 322 *eP* P 12 12 29.0 +0.6
comp=Z,61nm,1.2s,baz=59,slow=5.1
CRES Cresnjev 84.19 318⇑ *iP* P 12 12 27.9 -0.7
LTHK Lithakia 84.30 309 P P 12 12 27.6 -1.7
VLMS Volimes, Zakyn 84.35 309 P P 12 12 28.1 -1.5
PDKS Podkum 84.36 318 *eP* P 12 12 29.2 -0.3
OBKA Obir 84.41 319 *i* P P 12 12 29.7 -0.2
comp=Z,45nm,1.2s,SNR=14
GTTG Gottingen 84.46 325 *eP* P 12 12 30.5 +0.7
comp=Z,81nm,1.4s,baz=59,slow=5.1
VNDS Vrh nad Dolski 84.52 318 *eP* P 12 12 29.5 -0.8
VNDS *eS* S 12 22 43.1 -12
VISS Visnje 84.58 318 *eP* P 12 12 29.6 -1.0
LJU Ljubljana 84.65 318 *eP* P 12 12 30.0 -1.0
OPO Ambohidratompo 84.74 247 P P 12 12 32.1 +0.2
comp=Z,24nm,1.1s,baz=51,slow=6.3,SNR=14
GRF Grafenberg Arr 84.75 323 *eP* P 12 12 32.0 +0.6
comp=Z,103nm,1.3s,baz=59,slow=5.1
UBBA Unterbreizbach 84.82 324 *eP* P 12 12 32.3 +0.8
comp=Z,111nm,1.6s,baz=59,slow=5.1
GORS Gorjuse 84.84 319 *i* P P 12 12 31.1 -0.9
RJOB Jochberg 84.85 320 *eP* P 12 12 32.2 +0.2
comp=Z,223nm,1.1s,baz=59,slow=5.1
KBA Koelnbreinsper 84.85 320 *i* P P 12 12 31.7 -0.5
comp=Z,49nm,1.2s,SNR=21
KBA Koelnbreinsper 84.85 320 P P 12 12 32.0 -0.2
CEY Cerknica 84.86 318⇑ *iP* P 12 12 31.2 -0.9
MYKA Terra Mystica 84.90 319 *i* P P 12 12 32.3 +0.1
comp=Z,26nm,1.2s,SNR=8.3
ABPO Ambohimpanom 84.91 247 P P 12 12 33.2 +0.4
ABPO pmax pmax
comp=Z,235nm,1.8s
ABPO Ambohimpanom 84.91 247 P P 12 12 33.2 +0.4
GRC1 Grafenberg Arr 84.94 322 P P 12 12 34.0 +1.7
CADS Cadrg 85.04 319 *i* P P 12 12 31.9 -1.1
CADS *eS* S 12 22 50.8 -9.4
IBBN Ibbenburen 85.19 326 *eP* P 12 12 33.9 +0.4
comp=Z,100nm,1.3s,baz=59,slow=5.1
TRI Trieste 85.28 318 P P 12 12 37.1 +3.0
TRI pmax pmax
comp=Z,137nm,1.8s
TRI Trieste 85.28 318 IAMs_20 IAMs_20 12 54 50.7
comp=Z,9µm,19.0s
ZOU Zoufplan 85.33 319 P P 12 12 33.5 -1.1
ZOU IAmb IAmb 12 12 36.7
comp=Z,82nm,1.5s
KASTN Kahler Asten 85.46 325 *eP* P 12 12 35.5 +0.5
comp=Z,59nm,1.4s,baz=59,slow=5.1
FUR Furstenfeldbru 85.51 321 *eP* P 12 12 35.8 +0.5
comp=Z,144nm,1.1s,baz=59,slow=5.1
ABTA Abfaltersbach 85.51 320 *i* P P 12 12 34.5 -0.9
comp=Z,52nm,1.2s,SNR=18
STAL STALIGIAL 85.64 319 P P 12 12 34.6 -1.3
STAL IAmb IAmb 12 12 37.4
comp=Z,78nm,1.1s
STAL IAMs_20 IAMs_20 12 54 31.1
comp=Z,9µm,20.0s
MILB Miltenberg 85.74 323 *eP* P 12 12 36.5 +0.2
comp=Z,60nm,1.3s,baz=59,slow=5.1
WATA Walderalm 85.76 320 *i* P P 12 12 36.9 +0.3
comp=Z,40nm,1.0s,SNR=10
WTTA Wattenberg 85.76 320 *i* P P 12 12 36.6 -0.1
comp=Z,68nm,1.1s,SNR=22
WTTA Wattenberg 85.76 320 P P 12 12 36.6 -0.1
KIBK Kibwezi 85.89 266 P P 12 12 39.8 +2.0
SNR=16
BUG Bochum--Univer 85.93 325 *eP* P 12 12 37.4 +0.2
comp=Z,129nm,1.3s,baz=59,slow=5.1
TNS Taunus Mts 85.98 324 P P 12 12 39.7 +2.1
TNS Taunus Mts 85.98 324 *eP* P 12 12 38.0 +0.4
comp=Z,60nm,1.4s,baz=59,slow=5.1
LODK Lodwar 86.03 272 P P 12 12 40.2 +1.7
SNR=29
MOTA Moosalm 86.03 321 *i* P P 12 12 37.8 -0.3
comp=Z,35nm,1.1s,SNR=13
SQTA Sankt Quirin 86.04 320 *i* P P 12 12 37.6 -0.4
comp=Z,42nm,1.1s,SNR=12
KMBO Kilima Mbogo 86.13 267 P P 12 12 40.0 +0.8
comp=Z,24nm,0.9s,baz=46,slow=5.7,SNR=36
KMBO LR LR 12 53 22.6
comp=Z,2µm,18.6s,baz=76,slow=37
RETA Reutte 86.16 321 *eP* P 12 12 38.0 -0.5
comp=Z,15nm,1.3s
ICESG Greenland Ices 86.29 354 *i* P P 12 12 37.7 -1.4
ICESG IAmb IAmb 12 12 40.4
comp=Z,19nm,1.1s
ICESG IAMs_20 IAMs_20 12 54 09.5
comp=Z,5µm,16.7s
STU Stuttgart 86.36 323 P P 12 12 40.1 +0.7
STU Stuttgart 86.36 323 *eP* P 12 12 39.5 +0.1
comp=Z,82nm,1.5s,baz=59,slow=5.1
CTI Castel Tesino 86.38 319 P P 12 12 39.7 0.0
CTI pmax pmax
comp=Z,38nm,1.3s
CTI MLR MLR
comp=Z,6µm,21.0s
CTI Castel Tesino 86.38 319 P P 12 12 39.7 0.0
CTI IAmb IAmb 12 12 42.0
comp=Z,38nm,1.3s
CTI IAMs_20 IAMs_20 12 52 58.8
comp=Z,6µm,21.0s
FETA Feichten 86.42 320 *i* P P 12 12 39.7 -0.3
comp=Z,42nm,1.3s,SNR=16
UBR Ueberruh 86.43 321 *eP* P 12 12 39.9 0.0
comp=Z,84nm,1.5s,baz=59,slow=5.1
TIP Timpagrande 86.49 311 ⇓P P 12 12 40.7 +0.3
TIP Timpagrande 86.49 311 P P 12 12 39.9 -0.4
TIP IAmb IAmb 12 12 42.6
comp=Z,82nm,1.3s
AHRW Bad Neuenahr-A 86.53 325 *eP* P 12 12 40.6 +0.4
comp=Z,83nm,1.5s,baz=59,slow=5.1
VOI Vohitsoka 86.59 244 P P 12 12 43.2 +2.2
BIGH Upper Bighouse 86.64 335 *eP* P 12 12 38.3 -2.2
BIGH IAMs_20 IAMs_20 12 55 43.5
comp=Z,34µm,16.3s
KTD Kalmit 86.67 323 P P 12 12 42.9 +1.9
TEOL Teolo 86.73 319 P P 12 12 40.9 -0.3
TEOL IAMs_20 IAMs_20 12 56 30.8
comp=Z,7µm,18.0s
DAVA Damuels 86.77 321 *i* P P 12 12 41.7 +0.1
comp=Z,36nm,1.8s,SNR=6.2
PGC Sidney 86.82 37 P P 12 12 41.6 0.0
BTNL Ternell 87.01 325 *dP* P 12 12 41.1 -1.4
comp=Z,22nm,1.3s
BTNL *dPcP* PcP 12 12 43.5 -1.3
INTR Introdacqua 87.03 315 P P 12 12 43.3 +0.4
INTR IAMs_20 IAMs_20 12 57 02.2
comp=Z,6µm,19.0s
MEM Membach 87.06 325 *dP* P 12 12 42.7 0.0
MEM *dPcP* PcP 12 12 44.2 -0.7
MEM *dpP* pP 12 12 50.7 -1.0
MEM Membach 87.06 325 P P 12 12 43.2 +0.5
BFO Black Forest 87.08 322 P P 12 12 43.7 +0.7
BFO pmax pmax
comp=Z,49nm,1.4s
BFO Black Forest 87.08 322 P P 12 12 43.7 +0.7
BFO IAmb IAmb 12 12 46.1
comp=Z,49nm,1.4s
BFO Black Forest 87.08 322 *eP* P 12 12 42.9 -0.1
comp=Z,90nm,1.8s,baz=59,slow=5.1
BEBN Eben Emael 87.12 325 *dP* P 12 12 42.1 -0.9
BEBN *dPcP* PcP 12 12 44.4 -0.7
NRCA Norcia 87.12 316 P P 12 12 43.8 +0.5
DRUM Mains of Drumt 87.13 333 *eP* P 12 12 40.4 -2.5
DRUM IAMs_20 IAMs_20 12 56 01.9
comp=Z,27µm,16.5s
AQU L'Aquila 87.18 315 P P 12 12 44.5 +0.9
AQU pmax pmax
comp=Z,179nm,1.2s
AQU MLR MLR
comp=Z,5µm,20.0s
AQU L'Aquila 87.18 315⇑ *iP* P 12 12 43.1 -0.5
AQU L'Aquila 87.18 315 P P 12 12 44.5 +0.9
AQU IAMs_20 IAMs_20 12 55 05.1
comp=Z,5µm,20.0s
A04D Lummi Island 87.19 37 P 12 12 43.3
baz=304,SNR=13
BHOU Houvegnez 87.20 325 *dP* P 12 12 42.9 -0.6
BHOU *dPcP* PcP 12 12 45.2 -0.4
BHOU *dpP* pP 12 12 51.6 -0.8
NLWA Neilton Lookou 87.27 39 P P 12 12 44.6 +0.7
NLWA IAmb IAmb 12 12 47.8

comp=Z,68nm,1.2s
MURB Monte Urbino 87.28 317 P **P** **12 12 44.6 +0.5**
SALO Salr 87.28 319 P **P** **12 12 43.4 -0.6**
BSTI Sart Tilman 87.30 325 *d*PcP **PcP** **12 12 45.6 -0.4**
BSTI *d*pP **pP** **12 12 52.7 -0.1**
SLE Schleitheim 87.30 322 P **P** **12 12 45.2 +1.1**
A05A Maple Falls 87.38 37 P **P** **12 12 43.6 -0.7**
A05A IAmb IAmb 12 12 59.8
comp=Z,76nm,1.2s
TUE Stuetta 87.52 321 P **P** **12 12 45.9 +0.5**
WLF Walferdange 87.52 324 *d*P **P** **12 12 43.2 -1.8**
WLF *d*PcP **PcP** **12 12 46.0 -0.9**
WLF Walferdange 87.52 324 P **P** **12 12 44.7 -0.3**
WLF pmax pmax
comp=Z,112nm,1.1s
WLF Walferdange 87.52 324 P **P** **12 12 44.6 -0.3**
WLF Walferdange 87.52 324 *e*P **P** **12 12 45.5 +0.5**
comp=Z,151nm,1.2s,baz=59,slow=5.1
CEL Celeste 87.52 311 P **P** **12 12 45.7 +0.4**
BCLA Clavier 87.53 325 *d*P **P** **12 12 44.7 -0.4**
BCLA *d*PcP **PcP** **12 12 46.4 -0.6**
BCLA *d*pP **pP** **12 12 53.0 -1.0**
CDF Champ du Feu 87.62 323 *e*P **P** **12 12 44.4 -1.3**
CDF pmax pmax
comp=Z,104nm,1.3s
D03D Eldon 87.63 38 P 12 12 45.7
baz=304,SNR=38
BGES Gesves 87.67 325 *d*PcP **PcP** **12 12 46.6 -1.0**
ZCCA Zocca 87.67 318 P **P** **12 12 46.6 +0.7**
RCHB Rochefort 87.73 325 *d*PcP **PcP** **12 12 47.3 -0.5**
B05A Bryant 87.78 37 P 12 12 46.7
baz=304,SNR=13
ECH Echery 87.80 323 P **P** **12 12 45.7 -0.7**
ECH pmax pmax
comp=Z,52nm,1.3s
ECH MLR MLR
comp=Z,12µm,18.0s
ECH Echery 87.80 323 P **P** **12 12 45.7 -0.7**
ECH IAmb IAmb 12 12 49.2
comp=Z,52nm,1.3s
PRMA PARMA 87.86 319 IAMs_20 IAMs_20 12 56 36.8
comp=Z,9µm,18.0s
BMRD Maredsous 87.88 325 *d*P **P** **12 12 45.0 -1.7**
comp=Z,23nm,1.1s
BMRD *d*PcP **PcP** **12 12 47.9 -0.6**
BMRD *d*pP **pP** **12 12 54.5 -1.1**
E03A Lebam 87.91 39 P **P** **12 12 47.3 +0.4**
RAR Rarotonga 87.92 114 LR LR 12 46 58.3
comp=Z,3µm,20.1s,baz=290,slow=32
OSSC Osservatorio P 87.94 317 P **P** **12 12 47.0 -0.2**
OSSC IAmb IAmb 12 12 48.5
comp=Z,29nm,1.0s
OSSC IAMs_20 IAMs_20 12 57 06.2
comp=Z,8µm,20.0s
GIVF Givet 87.97 325 *e*P **P** **12 12 48.0 +0.8**
GIVF pmax pmax
comp=Z,76nm,1.4s
B06A Marblemount 87.97 37 P **P** **12 12 47.1 0.0**
SNF Seneffe 88.01 326 *d*PcP **P** **12 12 47.8 +0.5**
SNF *d*pP **pP** **12 12 55.1 -1.1**
D04E Lakebay 88.01 38 P 12 12 47.9
baz=304,SNR=8.9
MOF Molkenrain 88.02 322 P **P** **12 12 47.5 -0.1**
LATE Laterza 88.06 316 P **P** **12 12 47.0 -0.8**
LATE IAmb IAmb 12 12 50.5
comp=Z,48nm,1.6s
DOU Dourbes 88.09 325 *d*P **P** **12 12 46.5 -1.3**
comp=Z,16nm,1.1s
DOU *d*PcP **PcP** **12 12 49.0 -0.5**
VLC Villacollemand 88.14 318 IAMs_20 IAMs_20 12 58 48.2
comp=Z,9µm,18.0s
HINF Hinteralfeld 88.19 323 *e*P **P** **12 12 47.7 -0.6**
HINF pmax pmax
comp=Z,54nm,1.4s
EDMD Edmundbyers 88.28 332 *e*P **P** **12 12 47.1 -1.4**
EDMD IAMs_20 IAMs_20 12 57 21.0
comp=Z,19µm,15.4s
BAIF Baives 88.31 325 *e*P **P** **12 12 49.7 +0.9**
BAIF pmax pmax
comp=Z,37nm,1.2s
HAU Haudompre 88.36 323 *e*P **P** **12 12 48.5 -0.6**
HAU pmax pmax
comp=Z,53nm,1.3s
LMK Market Rasen 88.44 330 *e*P **P** **12 12 47.0 -2.3**
LMK IAMs_20 IAMs_20 12 56 54.1
comp=Z,35µm,17.4s
D05A Enumclaw 88.45 38 P **P** **12 12 49.8 +0.3**
WACR West Acre 88.46 329 *e*P **P** **12 12 47.7 -1.7**
WACR IAMs_20 IAMs_20 12 56 16.7
comp=Z,27µm,19.7s
EKA Eskdalemuir Ar 88.46 332 P **P** **12 12 48.2 -1.2**
E04D Cinebar 88.47 39 P 12 12 49.9
baz=304,SNR=14
F04D Rainier, OR 88.48 39 P 12 12 49.7
baz=304
ESK Eskdalemuir 88.49 332 P **P** **12 12 48.9 -0.6**
ESK pmax pmax
comp=Z,21nm,1.0s
ESK Eskdalemuir 88.49 332 P **P** **12 12 48.9 -0.6**
MSSA Maissana 88.58 319 P **P** **12 12 49.5 -0.8**
MSSA IAmb IAmb 12 12 51.1
comp=Z,42nm,1.3s
MSSA IAMs_20 IAMs_20 12 59 00.9
comp=Z,8µm,18.0s
C06D Leavenworth 88.64 37 P 12 12 50.5
baz=305
HPK Haverah Park 88.70 331 *e*P **P** **12 12 48.3 -2.2**
HPK IAMs_20 IAMs_20 12 57 52.5
comp=Z,16µm,15.7s
SENIN Lac Senin/Sane 88.76 321 P **P** **12 12 51.0 -0.3**
SENIN IAmb IAmb 12 12 52.8
comp=Z,38nm,1.2s
LON Longmire 88.80 38 P **P** **12 12 51.4 +0.2**
LON pmax pmax
comp=Z,54nm,1.1s
LON Longmire 88.80 38 P **P** **12 12 51.4 +0.2**
LON IAmb IAmb 12 12 54.9
comp=Z,54nm,1.1s
G03D McMinnville, O 88.81 40 P 12 12 51.5
baz=304
G03D S 12 23 34.3
baz=304
I02D Swisshome 89.07 41 P 12 12 52.3
baz=303
I02D S 12 23 32.1
baz=303
LBWR Ladybower, Pea 89.11 330 *e*P **P** **12 12 50.2 -2.3**
LBWR IAMs_20 IAMs_20 12 57 33.3
comp=Z,20µm,17.8s
LTY Liberty 89.15 37 P **P** **12 12 52.9 0.0**
LTY IAmb IAmb 12 12 56.5
comp=Z,89nm,1.4s
SFJD Kangerlussuaq 89.16 357 P **P** **12 12 51.6 -0.8**
comp=Z,14nm,0.8s,baz=39,slow=8.5,SNR=7.9
SFJD Kangerlussuaq 89.16 357 *i* P **P** **12 12 50.3 -2.1**
SFJD IAMs_20 IAMs_20 12 56 37.5
comp=Z,4µm,16.9s
SFJD Kangerlussuaq 89.16 357 *i* P **P** **12 12 50.2 -2.1**
SFJD MLR MLR
comp=Z,4µm,17.0s
SFJD Kangerlussuaq 89.16 357 P **P** **12 12 51.4 -1.0**
SFJD IAmb IAmb 12 12 54.5
comp=Z,46nm,1.2s
SFJD Kangerlussuaq 89.16 357 IAMs_20 IAMs_20 12 58 59.5
comp=Z,5µm,19.0s
B08A Colville Reser 89.23 36 P **P** **12 12 53.1 -0.1**
CWF Charnwood Fore 89.35 330 *e*P **P** **12 12 50.5 -3.1**
CWF IAMs_20 IAMs_20 12 57 21.6
comp=Z,32µm,17.5s
ANGG Ammassalik, Gr 89.40 352 *i* P **P** **12 12 53.1 -0.4**
ANGG IAmb IAmb 12 12 55.3
comp=Z,18nm,1.0s
ANGG IAMs_20 IAMs_20 12 58 57.4
comp=Z,10µm,16.4s
DY2G Dye2 89.43 356 *i* P **P** **12 12 53.2 -0.8**
DY2G IAmb IAmb 12 12 56.6
comp=Z,28nm,0.7s
DY2G IAMs_20 IAMs_20 12 57 00.6
comp=Z,7µm,18.2s
F05D White Salmon 89.49 39 P 12 12 54.6
baz=305
F05D S 12 23 37.5
baz=305
H04D Lebanon 89.51 41 P 12 12 54.8
baz=304
H04D S 12 23 40.4
baz=304
J01E Myrtle Point 89.54 42 P 12 12 54.9
baz=303
LPG La Plagne 89.56 321 *e*P **P** **12 12 55.1 0.0**
LPG pmax pmax
comp=Z,57nm,1.1s
LPL La Plagne 89.56 321 *e*P **P** **12 12 55.0 -0.1**
LPL pmax pmax
comp=Z,46nm,0.9s
I03D Drain, OR 89.60 41 P 12 12 55.2
baz=304
H04A Detroit Lake 89.74 40 P **P** **12 12 56.3 +0.6**
H04A IAmb IAmb 12 12 59.6
comp=Z,86nm,1.5s
IOMK Kirk Michael 89.79 332 *e*P **P** **12 12 53.4 -2.2**
IOMK IAMs_20 IAMs_20 12 58 16.5
comp=Z,49µm,16.2s
PGF Pioggiola 89.85 317 *e*P **P** **12 12 56.2 -0.1**
PGF pmax pmax
comp=Z,92nm,1.2s
BNI Bardonecchia 89.86 320 P **P** **12 12 56.3 0.0**
G05D Wamic, OR 89.94 39 P 12 12 57.0
baz=305
G05D S 12 23 41.0
baz=305
K02D Willamette Mer 89.95 42 P 12 12 57.0
baz=303
K02D S 12 23 48.2
baz=303
E07A Sunnyside 90.01 38 P **P** **12 12 57.4 +0.5**
E07A IAmb IAmb 12 13 00.6
comp=Z,80nm,1.0s
SBF Sospel 90.08 319 *e*P **P** **12 12 56.6 -0.7**
SBF pmax pmax
comp=Z,49nm,1.0s
SBF Sospel 90.08 319 *e*Sg **P** **12 12 56.4 -0.9**
comp=Z,3.6nm,0.2s
I04A Tendick Farm, 90.11 41 P 12 12 57.3
baz=304,SNR=7.8
I04A S 12 23 46.0
baz=304
FOEL Foel Wylfa 90.12 331 *e*P **P** **12 12 55.3 -1.9**
FOEL IAMs_20 IAMs_20 12 58 21.4
comp=Z,15µm,17.7s
C09A Chrisman Ranch 90.14 36 P **P** **12 12 57.0 -0.4**
C09A IAmb IAmb 12 13 00.9
comp=Z,66nm,0.9s
LOR Lormes 90.16 323 *e*P **P** **12 12 56.9 -0.7**
LOR pmax pmax
comp=Z,62nm,1.3s
D08A Wollman Farm, 90.23 37 P **P** **12 12 58.0 +0.1**
D08A IAmb IAmb 12 13 01.3
comp=Z,84nm,1.2s
HAWA Hanford 90.28 38 P **P** **12 12 58.4 +0.3**
L02E Cave Junction 90.29 43 P 12 12 58.4
baz=303
L02E S 12 23 48.3
baz=303
WPS Cemaes, Angles 90.35 331 *e*P **P** **12 12 55.8 -2.4**
WPS IAMs_20 IAMs_20 12 58 35.5
comp=Z,15µm,16.0s
LLW Llanuwchllyn 90.35 331 *e*P **P** **12 12 56.4 -1.9**
LLW IAMs_20 IAMs_20 12 58 38.3
comp=Z,8µm,15.7s
F07A Phinny Hill Vi 90.36 38 P **P** **12 12 59.0 +0.5**
WLF1 Llynfaes 90.38 331 *e*P **P** **12 12 56.2 -2.1**
WLF1 IAMs_20 IAMs_20 12 58 36.3
comp=Z,29µm,15.7s
ORIF Oris-en-Rattie 90.40 321 *e*P **P** **12 12 58.6 -0.2**
ORIF pmax pmax
comp=Z,42nm,1.2s
ORIF Oris-en-Rattie 90.40 321 *e*Sg **P** **12 12 58.7 -0.1**
comp=Z,1.4nm,0.2s
ORIF Oris-en-Rattie 90.40 321 Sg **P** **12 12 58.5 -0.2**
CASY Casey 90.44 185 P **P** **12 12 59.3 +1.3**
CASY IAmb IAmb 12 13 17.9
comp=Z,64nm,1.5s
HUMO Hull Mountain 90.44 42 P **P** **12 13 00.2 +1.3**
HUMO IAmb IAmb 12 13 33.2
comp=Z,46nm,1.6s
I05D Terrebonne, OR 90.44 40 P 12 12 58.9
baz=305,SNR=8.5
I05D S 12 23 48.2
baz=305
NEW Newport 90.47 35 P **P** **12 12 58.9 -0.1**
comp=Z,63nm,1.0s,baz=305,slow=4.2,SNR=61
NEW Newport 90.47 35 P **P** **12 12 58.7 -0.3**
NEW pmax pmax
comp=Z,116nm,1.2s
NEW Newport 90.47 35 P **P** **12 12 58.7 -0.3**
NEW Newport 90.47 35 IAMs_20 IAMs_20 13 00 32.8
comp=Z,6µm,18.0s
NEW Newport 90.47 35 P 12 12 58.9
baz=308,SNR=88
SSF Saint Saulge 90.48 323 *e*P **P** **12 12 58.6 -0.4**
SSF pmax pmax
comp=Z,37nm,1.2s
E08A Dider Farm, El 90.49 37 P **P** **12 12 59.6 +0.5**
E08A IAmb IAmb 12 13 02.7
comp=Z,87nm,1.3s
CLF Chambon-Foret 90.56 325 P **P** **12 12 60.0 +0.6**
CLF IAmb IAmb 12 13 01.5
comp=Z,90nm,1.4s
J04D Umpqua Nationa 90.60 41 P 12 12 60.0
baz=304,SNR=9.3
J04D S 12 23 50.4
baz=304
MCH1 Michaelchurch 90.62 330 *e*P **P** **12 12 57.2 -2.3**
MCH1 IAMs_20 IAMs_20 12 58 02.3
comp=Z,29µm,18.4s
FRF La Foret Royal 90.72 319 *e*P **P** **12 12 59.7 -0.5**
FRF pmax pmax
comp=Z,70nm,1.4s
AVF Avril sur Loir 90.72 323 *e*P **P** **12 12 58.7 -1.4**
AVF pmax pmax
comp=Z,105nm,1.3s
LMR La Mourre 90.94 319 *e*P **P** **12 13 02.0 +0.8**
LMR pmax pmax
comp=Z,88nm,1.4s
SSB Saint Sauveur 90.96 321 P **P** **12 13 01.0 -0.3**
SSB pmax pmax
comp=Z,56nm,1.3s
SSB Saint Sauveur 90.96 321 P **P** **12 13 01.0 -0.3**
SSB IAmb IAmb 12 13 03.0
comp=Z,56nm,1.3s
SSB Saint Sauveur 90.96 321 IAMs_20 IAMs_20 12 59 14.6
comp=Z,10µm,19.0s
E09A Wood Farm, Sta 90.98 37 P **P** **12 13 01.2 -0.1**
PINE Pine Mountain 90.99 40 P **P** **12 13 02.1 +0.4**
PINE IAmb IAmb 12 13 20.4
comp=Z,66nm,1.1s
L04D Klamath Falls 91.06 42 P 12 13 00.9
baz=304,SNR=9.0
L04D S 12 23 57.5
baz=304
YBH Yreka Blue Hor 91.08 43 P **P** **12 13 02.1 +0.1**
comp=Z,8.7nm,1.0s,baz=304,slow=2.2,SNR=9.1
YBH Yreka Blue Hor 91.08 43 P **P** **12 13 02.2 +0.1**
YBH pmax pmax
comp=Z,64nm,1.7s
YBH Yreka Blue Hor 91.08 43 P **P** **12 13 02.2 +0.2**
YBH IAmb IAmb 12 13 31.0
comp=Z,64nm,1.6s
J05D Fort Rock, OR 91.10 41 P 12 13 02.3
baz=305,SNR=18
J05D S 12 23 57.0
baz=305
VIVF Saint-Julien-l 91.13 321 *e*P **P** **12 13 01.9 -0.2**
VIVF pmax pmax
comp=Z,47nm,1.2s
VIVF Saint-Julien-l 91.13 321 *e*Pg **P** **12 13 02.2 +0.1**
BGF Bois d'Agland 91.14 323 *e*P **P** **12 13 01.7 -0.4**
BGF pmax pmax
comp=Z,56nm,1.4s
K04D Chiloquin, OR 91.17 42 P 12 13 01.7
baz=305
M02C Callahan 91.18 43 P 12 13 03.4
baz=304
M02C S 12 23 57.4
baz=304
G08A Pilot Rock 91.26 38 P **P** **12 13 03.1 +0.2**
G08A IAmb IAmb 12 13 07.1
comp=Z,29nm,1.3s
DSB Dublin 91.27 332 IAMs_20 IAMs_20 12 58 07.8
comp=Z,9µm,19.0s
VSL Villasalto 91.27 315 P **P** **12 13 02.2 -0.7**
N02D Trinity Center 91.50 43 P 12 13 04.9
baz=304
WALA Waterton Lakes 91.62 33 P **P** **12 13 04.4 -0.1**
K05A Summer Lake 91.63 41 P **P** **12 13 05.4 +0.7**
K05A IAmb IAmb 12 13 23.8
comp=Z,53nm,1.1s
TCF Toulx Ste Croi 91.66 323 *e*P **P** **12 13 04.5 0.0**
TCF pmax pmax
comp=Z,72nm,1.3s
I07A Izee 91.66 40 P **P** **12 13 04.9 +0.2**
I07A IAmb IAmb 12 13 19.5
comp=Z,57nm,1.6s
F10A Beach Ranch, E 91.82 37 P **P** **12 13 05.2 -0.2**
F10A IAmb IAmb 12 13 23.5
comp=Z,23nm,1.1s
WDC Whiskeytown Da 91.83 44 P **P** **12 13 06.7 +1.3**
WDC pmax pmax
comp=Z,22nm,1.3s
WDC Whiskeytown Da 91.83 44 P **P** **12 13 06.7 +1.3**
MBAR Mbarara 91.87 270 P **P** **12 13 07.3 +1.0**
comp=Z,4.9nm,0.2s,baz=63,slow=4.5,SNR=13
MBAR Mbarara 91.87 270 P **P** **12 13 06.6 +0.3**
MBAR pmax pmax
comp=Z,20nm,1.2s
MBAR Mbarara 91.87 270 P **P** **12 13 06.6 +0.3**
O02D Mt. Diablo Mer 91.89 44 P 12 13 06.6
baz=304
FRB Frobisher Bay 92.13 5 P **P** **12 13 04.9 -1.3**
comp=Z,24nm,1.0s,baz=342,slow=5.7,SNR=28
FCC Fort Churchill 92.16 18 P **P** **12 13 05.5 -1.0**
FCC pmax pmax
comp=Z,62nm,1.0s
FCC Fort Churchill 92.16 18 P **P** **12 13 05.5 -1.0**
JTMT Jette 92.28 34 P **P** **12 13 07.1 -0.4**
JTMT IAmb IAmb 12 13 10.3
comp=Z,29nm,0.9s
HOPS Hopland Field 92.36 45 IAMs_20 IAMs_20 12 48 03.0
comp=Z,3µm,20.0s
O03E Paynes Creek 92.45 44 P 12 13 08.1
baz=305
BMO Blue Mountains 92.46 38 P **P** **12 13 08.0 -0.4**
BMO pmax pmax
comp=Z,51nm,1.4s
BMO MLR MLR
comp=Z,3µm,21.0s
BMO Blue Mountains 92.46 38 P **P** **12 13 08.0 -0.4**
BMO IAmb IAmb 12 13 11.5
comp=Z,50nm,1.4s
MOD Modoc Plateau 92.46 42 P **P** **12 13 08.8 +0.3**
MOD IAmb IAmb 12 13 26.6
comp=Z,27nm,0.9s
CAF Calviac 92.57 322 *e*P **P** **12 13 08.2 -0.6**
CAF pmax pmax
comp=Z,112nm,1.2s
RJF Les Rejaudoux 92.64 323 *e*P **P** **12 13 08.5 -0.6**
RJF pmax pmax
comp=Z,185nm,1.3s
GDXM Geysers 92.65 45 P **P** **12 13 09.5 +0.2**
J08A Circle Bar Ran 92.69 40 P **P** **12 13 09.9 +0.4**
J08A IAmb IAmb 12 13 13.1
comp=Z,30nm,0.9s
FFC Flin Flon 92.82 24 P **P** **12 13 08.5 -1.2**
FFC pmax pmax
comp=Z,76nm,1.0s
FFC MLR MLR
comp=Z,6µm,19.0s
FFC Flin Flon 92.82 24 P **P** **12 13 08.5 -1.2**
FFC Flin Flon 92.82 24 IAMs_20 IAMs_20 12 58 46.0
comp=Z,6µm,19.0s
SGMF Saint Gilles 92.90 327 *e*P **P** **12 13 10.4 +0.2**
SGMF pmax pmax
comp=Z,45nm,1.2s
MSO Missoula 93.05 35 P **P** **12 13 10.8 -0.3**
MSO IAmb IAmb 12 13 14.4
comp=Z,38nm,1.2s
MSO IAMs_20 IAMs_20 13 00 03.0
comp=Z,5µm,20.0s
MSO Missoula 93.05 35 P 12 13 10.9
baz=310
ORV Oroville 93.06 44 P **P** **12 13 11.1 0.0**
ORV pmax pmax
comp=Z,30nm,1.4s
ORV MLR MLR
comp=Z,2µm,20.0s
ORV Oroville 93.06 44 P **P** **12 13 11.1 0.0**
ORV IAmb IAmb 12 13 27.5
comp=Z,30nm,1.4s
WVOR Wild Horse Val 93.15 40 P **P** **12 13 11.8 +0.2**
WVOR pmax pmax
comp=Z,18nm,1.0s
WVOR Wild Horse Val 93.15 40 P **P** **12 13 11.8 +0.2**
WVOR IAmb IAmb 12 13 29.9
comp=Z,18nm,0.9s
KEST Kesra 93.32 311 P **P** **12 13 12.5 0.0**
comp=Z,24nm,0.9s,baz=322,slow=3.2,SNR=20
KEST LR LR 13 02 27.7
comp=Z,5µm,19.2s,baz=331,slow=40
KEST Kesra 93.32 311 P **P** **12 13 11.9 -0.6**
KEST IAmb IAmb 12 13 14.8
comp=Z,41nm,1.1s
MTLF Montolieu 93.46 321 *e*P **P** **12 13 14.1 +1.2**
MTLF pmax pmax
comp=Z,66nm,1.4s
BEKR Beckworth 93.60 43 P **P** **12 13 13.3 -0.6**
AFDM Forest Hills D 93.74 44 P **P** **12 13 13.7 -0.6**
VAL Valentia 93.84 333 P **P** **12 13 17.5 +3.1**
MFID Camas Ranch 94.18 38 P **P** **12 13 16.8 +0.4**
MFID IAmb IAmb 12 13 32.4
comp=Z,30nm,1.3s
RUBR Rubicon Trail 94.20 44 P **P** **12 13 16.7 0.0**
RUBR IAmb IAmb 12 13 44.6
comp=Z,25nm,1.0s
HRY Holter Researc 94.22 34 P **P** **12 13 16.5 0.0**
PAHR Pah Rah Range 94.31 43 P **P** **12 13 16.7 -0.4**
EGMT Eagleton 94.37 32 P **P** **12 13 17.1 +0.1**
EGMT IAmb IAmb 12 13 20.4
comp=Z,67nm,1.6s
EGMT Eagleton 94.37 32 P 12 13 16.9
baz=314
VCNR Virginia City 94.38 43 P **P** **12 13 17.5 0.0**
LRM Limekiln Ridge 94.49 35 P **P** **12 13 17.9 +0.1**
PNTR Pine Nut 94.53 44 P **P** **12 13 18.5 +0.3**
CMB Columbia Colle 94.64 45 P **P** **12 13 18.3 -0.2**
CMB pmax pmax
comp=Z,14nm,1.1s
CMB Columbia Colle 94.64 45 P **P** **12 13 18.3 -0.2**
DLMT Dillon 94.71 35 P **P** **12 13 19.0 +0.2**
DLMT IAmb IAmb 12 13 33.0
comp=Z,28nm,1.1s
DLMT IAMs_20 IAMs_20 13 01 30.1
comp=Z,4µm,20.0s
EPF Esparros 94.73 321 *e*P **P** **12 13 19.7 +0.9**
EPF pmax pmax
comp=Z,22nm,1.4s
YERR Yerington 94.82 44 P **P** **12 13 19.8 +0.3**
YERR IAmb IAmb 12 13 48.9
comp=Z,48nm,1.8s
HLID Hailey 94.89 38 P **P** **12 13 19.4 -0.3**
HLID IAMs_20 IAMs_20 13 02 00.1
comp=Z,5µm,20.0s
HLID Hailey 94.89 38 P 12 13 19.8
baz=310
MCMT McKenzie Canyo 94.93 36 P **P** **12 13 20.2 +0.2**
WAKR Walker 94.98 44 P **P** **12 13 20.2 0.0**
BOZ Bozeman (W) 95.07 35 P **P** **12 13 20.0 -0.4**
BOZ pmax pmax
comp=Z,8.0nm,1.0s
BOZ Bozeman (W) 95.07 35 P **P** **12 13 20.0 -0.4**
BOZ IAMs_20 IAMs_20 13 04 18.4
comp=Z,6µm,18.0s
BOZ Bozeman (W) 95.07 35 P 12 13 20.4
baz=312
PPT Papeete 95.12 107 LR LR 12 48 15.1
comp=Z,4µm,21.9s,baz=279,slow=30
PPT2 Papeete2 95.13 107 *e*S **S** **12 24 30.5 -3.9**
comp=Z,6µm,25.8s
PPT2 Papeete2 95.13 107 *e*LR LR 12 44 14.9
comp=Z,12µm,23.5s,baz=293
ETSF Etsaut 95.32 322 *e*P **P** **12 13 21.9 +0.4**
ETSF pmax pmax
comp=Z,30nm,1.4s
PMPB Monarch Peak 95.41 47 P **P** **12 13 22.9 +0.8**
RYN Ryan 95.48 44 P **P** **12 13 22.5 +0.1**
KVN Kaiserville 95.50 43 P **P** **12 13 22.6 0.0**

KVN pmax pmax
comp=Z,12nm,1.0s
KVN Kaiserville 95.50 43 P **P** **12 13 22.6 0.0**
QLMT Earthquake Lak 95.68 35 P **P** **12 13 24.0 +0.7**
LHV Little Huntoon 95.72 44 P **P** **12 13 23.8 +0.5**
NVAR Mina Array Bea 95.74 44 P **P** **12 13 23.6 -0.2**
comp=Z,3.6nm,0.6s,baz=298,slow=5.0,SNR=42
NVAR PKKPbc **PKKPbc** **12 30 14.3 +0.7**
comp=Z,0.3nm,0.7s,baz=213,slow=4.9,SNR=3.6
NVAR LR LR 12 52 21.4
comp=Z,2µm,20.6s,baz=320,slow=33
YHL Hebgen Lake 95.80 35 P **P** **12 13 24.8 +0.8**
NV11 Mina Array Sit 95.83 43 P **P** **12 13 24.3 +0.3**
YHB Horse Butte 95.86 35 P **P** **12 13 24.0 -0.2**
MLAC Mammoth, Mammo 95.88 44 P 12 13 24.5
baz=306
GCMT Greycliff 95.95 34 P **P** **12 13 25.3 +0.8**
YHH Holmes Hill 96.02 35 P **P** **12 13 25.8 +0.8**
PAGB Antelope Grade 96.06 47 P **P** **12 13 25.8 +0.8**
PAGB IAmb IAmb 12 13 27.2
comp=Z,42nm,1.5s
ELK Elko 96.20 40 P **P** **12 13 26.2 +0.5**
comp=Z,1.7nm,0.9s,baz=215,slow=0.6,SNR=7.8
ELK Elko 96.20 40 P **P** **12 13 25.6 -0.2**
ELK pmax pmax
comp=Z,27nm,1.8s
ELK MLR MLR
comp=Z,4µm,20.0s
ELK Elko 96.20 40 P **P** **12 13 25.6 -0.2**
LKWY Lake 96.41 35 P **P** **12 13 26.9 +0.2**
LKWY pmax pmax
comp=Z,25nm,1.4s
LKWY Lake 96.41 35 P **P** **12 13 26.9 +0.2**
LKWY IAmb IAmb 12 13 57.0
comp=Z,25nm,1.4s
LKWY IAMs_20 IAMs_20 12 50 30.6
comp=Z,7µm,18.0s
H17A Grant Village 96.43 35 P **P** **12 13 26.2 -0.6**
H17A IAmb IAmb 12 13 44.1
comp=Z,23nm,1.3s
H17A Grant Village 96.43 35 P 12 13 27.2
baz=313
TIN Tinemaha, Big 96.61 45 P 12 13 27.4
baz=307
RLMT Red Lodge 96.61 34 P **P** **12 13 28.9 +1.4**
RLMT IAmb IAmb 12 15 05.8
comp=Z,18nm,0.8s
RLMT IAMs_20 IAMs_20 13 02 48.2
comp=Z,4µm,19.0s
RLMT Red Lodge 96.61 34 P 12 13 27.3
baz=314
TPH Tonopah 96.63 43 P **P** **12 13 27.8 0.0**
TPH pmax pmax
comp=Z,83nm,1.3s
TPH Tonopah 96.63 43 P **P** **12 13 27.8 0.0**
DGMT Dagmar 96.64 29 P **P** **12 13 26.5 -0.8**
VES Vestal, Richgr 96.77 46 P 12 13 27.7
baz=306
PKM Mcpherson Peak 96.83 47 P 12 13 28.5
baz=306
LAO LASA Array 97.01 31 P **P** **12 13 29.1 0.0**
LAO IAmb IAmb 12 14 55.8
comp=Z,23nm,0.8s
LAO LASA Array 97.01 31 P 12 13 28.3
baz=316
GRAC Grapevine Rang 97.19 44 P 12 13 29.5
baz=307
AHID Auburn Hatcher 97.24 37 IAMs_20 IAMs_20 13 05 03.2
comp=Z,5µm,18.0s
ISA Isabella, Lake 97.27 46 P **P** **12 13 30.0 -0.5**
ISA pmax pmax
comp=Z,11nm,1.5s
ISA Isabella, Lake 97.27 46 P **P** **12 13 30.0 -0.5**
ISA Isabella, Lake 97.27 46 P 12 13 29.3
baz=306
ARVC Arvin 97.35 46 P 12 13 29.8
baz=306
TBI Tubuai 97.48 112 *e*S **S** **12 24 50.6 -3.7**
comp=Z,4µm,26.8s
TBI Tubuai 97.48 112 *e*LR LR 12 45 13.3
comp=Z,5µm,24.5s,baz=297
R11A Troy Canyon, C 97.48 42 P Pdif 12 13 31.6 0.0
R11A Troy Canyon, C 97.48 42 P 12 13 31.0
baz=309
HWUT Hardware Ranch 97.76 38 IAMs_20 IAMs_20 13 04 14.0
comp=Z,5µm,20.0s
FURC Furnace Creek, 97.84 44 P 12 13 32.4
baz=308
LRMC Laurel Mtn Rad 97.90 46 P 12 13 32.9
baz=307
TPNV Topopah Spring 97.93 44 P **P** **12 13 33.4 -0.2**
TPNV pmax pmax
comp=Z,11nm,1.3s
TPNV Topopah Spring 97.93 44 P **P** **12 13 33.4 -0.2**
TPNV Topopah Spring 97.93 44 P 12 13 32.5
baz=308
EDW2 Edwards Air Fo 98.05 46 P 12 13 33.5
baz=307
BW06 Boulder Array 98.08 36 IAMs_20 IAMs_20 13 06 21.2
comp=Z,5µm,18.0s
PDAR Pinedale Array 98.08 36 P Pdif 12 13 35.1 +0.8
comp=Z,0.7nm,0.5s,baz=93,slow=18,SNR=2.1
PDAR LR LR 12 56 45.1
comp=Z,2µm,21.9s,baz=340,slow=35
PRN Pahroc Range 98.40 43 P Pdif 12 13 36.9 +1.2
PSUT Pine Spring 98.42 41 P Pdif 12 13 36.9 +1.0
FMP Fort Macarthur 98.54 47 P 12 13 35.4
baz=306
CIS Catalina Islan 98.64 48 P 12 13 35.9
baz=306
ULM Lac du Bonnet 98.65 24 P **P** **12 13 35.0 -1.3**
comp=Z,10nm,1.0s,baz=353,slow=5.9,SNR=6.4
ULM LR LR 13 02 31.6
comp=Z,5µm,19.1s,baz=336,slow=38
ULM Lac du Bonnet 98.65 24 P **P** **12 13 35.2 -1.1**
ULM pmax pmax
comp=Z,16nm,1.0s
ULM Lac du Bonnet 98.65 24 P **P** **12 13 35.2 -1.1**
ULM IAmb IAmb 12 15 46.0
comp=Z,16nm,0.9s
SHPR Sheep Range 98.89 44 P **P** **12 13 36.9 -1.0**
CART Cartagena 98.96 318 IAMs_20 IAMs_20 13 05 42.4
comp=Z,5µm,18.0s
ES10 SONSECA Array 99.34 321 IAMs_20 IAMs_20 13 04 35.1
comp=Z,9µm,21.0s
MURC Murrieta 99.34 47 P 12 13 39.2
baz=307
ES02 SONSECA Array 99.35 321 IAMs_20 IAMs_20 13 03 48.2
comp=Z,8µm,18.0s
ES07 SONSECA Array 99.35 321 IAMs_20 IAMs_20 13 03 48.3
comp=Z,8µm,19.0s
ES11 SONSECA Array 99.36 321 IAMs_20 IAMs_20 13 03 49.5
comp=Z,8µm,19.0s
ES01 SONSECA Array 99.36 321 IAMs_20 IAMs_20 13 03 49.5
comp=Z,8µm,19.0s
ESBB Sonseca Array 99.36 321 IAMs_20 IAMs_20 13 03 47.7
comp=Z,8µm,18.0s
ESDC Sonseca Array 99.37 321 P **Pdif** **12 13 38.7 -1.1**
comp=Z,1.0nm,0.9s,baz=27,slow=4.3,SNR=6.1
ESDC PP **PP** **12 17 35.6 -6.8**
comp=Z,2.5nm,1.1s,baz=42,slow=7.1,SNR=6.9
ESDC LR LR 13 03 59.0
comp=Z,7µm,18.2s,baz=40,slow=39
ESDC Sonseca Array 99.37 321 P **Pdif** **12 13 39.1 -0.8**
ES04 SONSECA Array 99.37 321 IAMs_20 IAMs_20 13 03 49.7
comp=Z,8µm,19.0s
ES12 SONSECA Array 99.38 321 IAMs_20 IAMs_20 13 03 50.0
comp=Z,7µm,18.0s
ES13 SONSECA Array 99.38 321 IAMs_20 IAMs_20 13 03 50.2
comp=Z,8µm,19.0s
GMRC Granite Mounta 99.64 45 P 12 13 40.8
baz=308
PFO Pinyon Flats O 99.83 47 P **Pdif** **12 13 41.4 -0.7**
comp=Z,3.5nm,1.0s,baz=151,slow=2.8,SNR=3.6
PFO Pinyon Flats O 99.83 47 P **Pdif** **12 13 42.4 +0.3**
PFO pmax pmax
comp=Z,9.0nm,1.2s
PFO Pinyon Flats O 99.83 47 **Pdif** **12 13 42.4 +0.3**
PFO Pinyon Flats O 99.83 47 P 12 13 41.1
baz=308
TPFO Pinon Flats 99.83 47 P 12 13 41.4
baz=308
LSZ Lusaka 99.93 258 P **Pdif** **12 13 41.9 -0.9**
comp=Z,6.0nm,0.9s,baz=86,slow=2.2,SNR=9.0
LSZ Lusaka 99.93 258 P **Pdif** **12 13 41.7 -1.1**
LSZ pmax pmax
comp=Z,32nm,1.7s
LSZ Lusaka 99.93 258 Pdif **Pdif** **12 13 41.7 -1.1**
LSZ IAmb IAmb 12 14 01.2
comp=Z,32nm,1.7s
SRU San Rafael Swe 100.01 39 P **Pdif** **12 13 42.7 -0.2**
SRU San Rafael Swe 100.01 39 Pdif **Pdif** **12 13 42.7 -0.2**
KNB Kanab 100.02 42 P **Pdif** **12 13 43.0 0.0**
KNB Kanab 100.02 42 Pdif **Pdif** **12 13 43.0 0.0**
TAOE Nuku Hiva Isla 100.20 95 *e*S **Sdif** **12 25 11.6 -6.3**
comp=Z,3µm,27.6s
TAOE Nuku Hiva Isla 100.20 95 *e*LR LR 12 46 36.2
comp=Z,4µm,22.4s
AGMN Agassiz Nation 100.25 25 IAMs_20 IAMs_20 13 03 24.5
comp=Z,6µm,20.0s
MATP Matopo 101.56 253 P **Pdif** **12 13 49.5 -0.4**
comp=Z,2.8nm,0.9s,baz=41,slow=6.1,SNR=5.8
PESTR Estremoz 101.97 322 IAMs_20 IAMs_20 13 06 56.6
comp=Z,6µm,18.0s
ISCO Idaho Springs 102.28 36 IAMs_20 IAMs_20 13 01 45.3
comp=Z,4µm,20.0s
MVCO Mesa Verde 102.47 39 IAMs_20 IAMs_20 13 06 13.0
comp=Z,4µm,20.0s
ECSD EROS Data Cent 103.64 28 IAMs_20 IAMs_20 13 09 03.6
comp=Z,7µm,19.0s
T25A Trinidad 104.84 37 IAMs_20 IAMs_20 13 03 48.4
comp=Z,4µm,21.0s
ANMO Albuquerque 105.23 40 IAMs_20 IAMs_20 12 56 54.9
comp=Z,3µm,20.0s
Y22D IRIS PASSCAL I 105.56 41 IAMs_20 IAMs_20 12 54 37.8
comp=Z,5µm,22.0s
CBKS Cedar Bluff 106.06 33 IAMs_20 IAMs_20 13 07 54.1
comp=Z,6µm,20.0s
JFWS Jewell Farm 106.91 25 IAMs_20 IAMs_20 13 07 18.7
comp=Z,7µm,19.0s
DRLN Deer Lake 107.09 0 IAMs_20 IAMs_20 13 05 20.7
comp=Z,6µm,21.0s
EPT El Paso 107.40 42 IAMs_20 IAMs_20 13 09 55.8
comp=Z,4µm,20.0s
D55A Sainte-Anne-du 107.49 13 P 12 18 24.0
baz=343
ALGO Algonquin Park 107.93 15 P 12 18 25.6
baz=340
AMTX Amarillo 108.00 37 IAMs_20 IAMs_20 13 11 20.0
comp=Z,4µm,19.0s
MNTX Cornudas Mount 108.14 42 IAMs_20 IAMs_20 13 10 52.3
comp=Z,5µm,21.0s
KS21 Milan North St 108.27 33 IAMs_20 IAMs_20 13 08 30.7
comp=Z,7µm,20.0s
U32A Winter Ranch, 108.30 34 IAMs_20 IAMs_20 13 09 09.6
comp=Z,5µm,20.0s
OK032 Salt Plains WL 108.38 33 IAMs_20 IAMs_20 13 09 26.5
comp=Z,7µm,19.0s
L44A Lake County Fo 108.41 23 IAMs_20 IAMs_20 13 11 19.4
comp=Z,7µm,18.0s
BATG Bathurst New B 108.65 6 IAMs_20 IAMs_20 13 08 48.0
comp=Z,7µm,19.0s
E61A Lac Etchemin 108.94 9 P 12 18 25.9
baz=348
OK029 Liberty Lake 109.54 34 IAMs_20 IAMs_20 13 08 46.4
comp=Z,5µm,21.0s
WMOK Wichita Mounta 109.67 35 IAMs_20 IAMs_20 13 14 15.1
comp=Z,7µm,18.0s
OK031 S. Brethren Rd 109.73 33 IAMs_20 IAMs_20 13 13 44.3
comp=Z,6µm,18.0s
OK025 Westminster Rd 109.77 34 IAMs_20 IAMs_20 13 09 04.4
comp=Z,5µm,21.0s
OK030 Coweta, RIV 109.78 33 IAMs_20 IAMs_20 13 09 30.5
comp=Z,6µm,20.0s
RKT Rikitea 109.89 107 *e*LR LR 12 51 03.4
comp=Z,8µm,23.0s
LONY Lake Ozonia 109.96 13 IAMs_20 IAMs_20 13 11 28.5
comp=Z,6µm,19.0s
G62A West of Eustis 110.11 10 IAMs_20 IAMs_20 13 07 57.8
comp=Z,7µm,20.0s
LMN Caledonia Moun 110.18 5 IAMs_20 IAMs_20 13 11 09.5
comp=Z,7µm,19.0s
PKME Peaks-Kenny Pk 110.25 9 IAMs_20 IAMs_20 13 09 05.4
comp=Z,7µm,20.0s
PKME Peaks-Kenny Pk 110.25 9 P 12 18 28.6
baz=349
G64A Maxfield 110.34 8 P 12 18 29.0
baz=349
G65A Princeton 110.54 8 P 12 18 29.3
baz=350
CCM Cathedral Cave 110.62 28 IAMs_20 IAMs_20 13 10 17.3
comp=Z,6µm,21.0s
H62A Milan 110.64 10 P 12 18 28.3
baz=347
GGN Saint George 110.70 7 IAMs_20 IAMs_20 13 10 37.5
comp=Z,7µm,19.0s
I58A Old Forge 110.77 13 P 12 18 29.5
baz=343
J57A Williamstown 110.81 14 IAMs_20 IAMs_20 13 10 00.1
comp=Z,6µm,20.0s
TXAR Lajitas Array 110.85 42 PKiKP **PKiKP** **12 18 30.0 -0.8**
comp=Z,2.3nm,0.9s,baz=236,slow=1.4,SNR=6.7
TXAR PKKP **PKKPdf** **12 29 43.5 -2.1**
comp=Z,0.6nm,0.9s,baz=174,slow=12,SNR=3.9
H64A Troy 110.87 9 P 12 18 29.6
baz=349
WVL Waterville 110.88 9 IAMs_20 IAMs_20 13 09 35.1
comp=Z,5µm,21.0s
H66A Whiting 110.98 7 P 12 18 30.1
baz=350
ERPA Erie 111.02 18 IAMs_20 IAMs_20 13 08 24.8
comp=Z,7µm,21.0s
J59A Piesco 111.08 13 IAMs_20 IAMs_20 13 09 47.3
comp=Z,6µm,19.0s
U40A Yellville 111.32 30 P 12 18 30.4
baz=326
TORD Torodi Ar. Bea 111.42 296 PKiKP **PKiKP** **12 18 30.6 -1.5**
comp=Z,2.9nm,0.9s,baz=19,slow=2.7,SNR=4.5
TORD PP PP 12 19 03.7 -8.8
comp=Z,3.7nm,0.7s,baz=46,slow=4.3,SNR=5.6
TORD PKKP **PKKPab** **12 29 38.4 +0.8**
comp=Z,3.7nm,0.8s,baz=258,slow=4.3,SNR=8.7
M53A WI Miller and 111.45 19 IAMs_20 IAMs_20 13 07 58.2
comp=Z,7µm,21.0s
K58A Earlville 111.51 14 IAMs_20 IAMs_20 13 07 30.5
comp=Z,5µm,20.0s
X37A Dayton 111.54 33 IAMs_20 IAMs_20 13 10 30.2
comp=Z,5µm,20.0s
CMLA Cha da Macela 111.63 333 IAMs_20 IAMs_20 13 07 45.0
comp=Z,4µm,20.0s
M54A Oil Creek Stat 111.67 18 IAMs_20 IAMs_20 13 09 06.1
comp=Z,7µm,21.0s
W39A Magazine 111.83 31 IAMs_20 IAMs_20 13 14 53.6
comp=Z,6µm,19.0s
P49A Miami Univ. Ec 111.88 22 IAMs_20 IAMs_20 13 09 20.1
comp=Z,5µm,20.0s
L57A Andrews Acres 111.95 15 P 12 18 31.2
baz=341
TRY Troy 111.96 13 IAMs_20 IAMs_20 13 09 53.4
comp=Z,6µm,21.0s
M56A Emporium 112.09 17 IAMs_20 IAMs_20 13 09 52.3
comp=Z,5µm,20.0s
JCT Junction City 112.32 39 IAMs_20 IAMs_20 13 16 18.8
comp=Z,4µm,19.0s
JCT Junction City 112.33 39 P 12 18 32.9
baz=318
O53A New Philadelph 112.38 19 IAMs_20 IAMs_20 13 12 39.0
comp=Z,6µm,19.0s
MIAR Mount Ida 112.45 32 IAMs_20 IAMs_20 13 15 24.3
comp=Z,5µm,19.0s
WCI Wyandotte Cave 112.46 24 IAMs_20 IAMs_20 13 07 47.7
comp=Z,5µm,20.0s
M57A Sunshine Farm, 112.50 16 P 12 18 33.0
baz=341
X40A Basin Creek Fa 112.86 31 IAMs_20 IAMs_20 13 12 11.8
comp=Z,6µm,20.0s
M60A Port Jervis 113.11 14 P 12 18 33.7
baz=343
BRYW Bryant College 113.15 11 IAMs_20 IAMs_20 13 09 54.9
comp=Z,7µm,20.0s
L63A North Scituate 113.19 11 IAMs_20 IAMs_20 13 09 56.0
comp=Z,6µm,19.0s
MCWV Mont Chateau 113.33 19 IAMs_20 IAMs_20 13 10 00.2
comp=Z,4µm,21.0s
435B Jarrell 113.34 37 IAMs_20 IAMs_20 13 16 48.6
comp=Z,6µm,18.0s
N60A Cedar Hill Far 113.43 14 P 12 18 35.0
baz=343
O57A Amberson 113.43 17 P 12 18 34.5
baz=340
WSPT Westport, CT 113.53 13 IAMs_20 IAMs_20 13 10 51.9
comp=Z,7µm,19.0s
M63A Gales Ferry 113.56 12 IAMs_20 IAMs_20 13 09 27.6
comp=Z,7µm,21.0s
PAL Palisades 113.57 14 IAMs_20 IAMs_20 13 11 15.0
comp=Z,6µm,20.0s
WVT Waverly 113.69 27 P 12 18 35.1
baz=330
Q56A Snyder Ridge, 114.09 18 IAMs_20 IAMs_20 13 10 11.3
comp=Z,7µm,20.0s
NATX Nacogdoches 114.15 34 IAMs_20 IAMs_20 13 17 47.4
comp=Z,6µm,18.0s
P60A Greenville 114.31 15 IAMs_20 IAMs_20 13 10 53.8
comp=Z,6µm,19.0s
QXF Oxford 114.40 29 IAMs_20 IAMs_20 13 13 00.7
comp=Z,6µm,20.0s
R55A Marlinton 114.52 19 IAMs_20 IAMs_20 13 12 55.7
comp=Z,5µm,19.0s
HKT Hockley 114.95 36 IAMs_20 IAMs_20 13 13 19.6
comp=Z,4µm,20.0s
KOWA Kowa 115.27 301 PKP **PKiKP** **12 18 38.7 -0.7**
comp=Z,1.7nm,0.4s,baz=195,slow=2.6,SNR=4.0
KOWA PP **PP** **12 19 39.7 0.0**
comp=Z,7.3nm,0.9s,baz=135,slow=4.5,SNR=4.5
KOWA PKKP **PKKPdf** **12 29 31.7 -5.6**
comp=Z,1.1nm,0.5s,baz=217,slow=5.9,SNR=3.7
KOWA Kowa 115.27 301 IAMs_20 IAMs_20 13 04 57.5
comp=Z,3µm,19.0s
VBMS Vicksburg 115.82 31 IAMs_20 IAMs_20 13 14 43.2
comp=Z,6µm,19.0s
LRAL Lakeview Retre 116.70 28 P 12 18 41.2
baz=330
KMSC Kings Mountain 117.00 22 P 12 18 41.2
baz=336
GOGA Godfrey 117.79 24 IAMs_20 IAMs_20 13 10 41.7
comp=Z,6µm,22.0s
GOGA Godfrey 117.79 24 P 12 18 43.2
baz=333
NVL N'lazarevskaya 119.24 201 *e*PKiKP PKiKP 12 18 57.8 +12
NVL pmax pmax
comp=Z,16nm,1.0s
DBIC Dimbokro 120.33 294 PKP **PKPdf** **12 18 48.4 -0.8**
comp=Z,2.3nm,0.4s,baz=342,slow=2.4,SNR=5.6
DBIC PP **PP** **12 20 13.2 -1.9**
comp=Z,7.2nm,1.0s,baz=321,slow=2.6,SNR=3.9
DBIC PKKPab **PKKPab** **12 28 58.6 +0.3**
comp=Z,3.2nm,0.8s,baz=189,slow=7.4,SNR=3.2
UNM Universidad Na 120.79 47 IAMs_20 IAMs_20 13 19 46.2
comp=Z,3µm,19.0s
DWPF Disney Wildern 123.30 25 IAMs_20 IAMs_20 13 16 04.6
comp=Z,5µm,19.0s
SNAA Sanae 123.43 198 PKPdf **PKPdf** **12 18 52.6 -0.9**
SNAA Sanae 123.43 198 PKP **PKPdf** **12 18 52.8 -0.8**
comp=Z,4.9nm,1.1s,baz=23,slow=3.9,SNR=3.1
SNAA PP **PP** **12 20 33.7 -1.4**
comp=Z,2.0nm,1.0s,baz=121,slow=9.2,SNR=3.0
BBSR BB Station 123.54 7 IAMs_20 IAMs_20 13 18 01.6
comp=Z,3µm,20.0s
BELA Belgrano 2 124.97 186 **PKPdf** **12 18 55.5 -0.8**
VNA2 Neumayer--Watz 125.08 198 PKPdf **PKiKP** **12 18 57.2 +0.2**
CMIG Matias Romero 125.23 45 PKP **PKPdf** **12 18 57.3 -1.3**
comp=Z,14nm,1.0s,baz=321,slow=1.3,SNR=15
VNA1 Neumayer--Stat 125.47 198 PKiKP **PKiKP** **12 18 59.6 +1.9**
VNA3 Neumayer Olymp 125.53 197 PKPdf **PKiKP** **12 18 57.9 0.0**
TEIG Tepich 126.79 37 IAMs_20 IAMs_20 13 23 06.7
comp=Z,3µm,19.0s
SACV Santiago Islan 129.07 316 IAMs_20 IAMs_20 13 22 07.5
comp=Z,4µm,19.0s
APG El Apazote 129.60 43 PKP **PKPdf** **12 19 06.5 -0.8**
comp=Z,12nm,1.2s,baz=259,slow=9.6,SNR=5.4
TGUH Tegucigalpa,Un 132.28 41 IAMs_20 IAMs_20 13 15 16.5
comp=Z,3µm,21.0s
GRTK Grand Turk 132.87 17 IAMs_20 IAMs_20 13 18 14.4
comp=Z,5µm,22.0s
GTBY Guantanamo Bay 133.10 23 IAMs_20 IAMs_20 13 22 33.0
comp=Z,4µm,20.0s
BOAB BOACO BROADBA 136.50 40 **PKPdf** **12 19 15.2 -1.0**
ACON Acoyapa 135.17 40 **PKPdf** **12 19 16.7 -0.8**
JTS Las Juntas de 136.63 41 PKP **PKPdf** **12 19 19.6 -0.6**
comp=Z,9.1nm,0.9s,baz=220,slow=3.2,SNR=5.2
JTS Las Juntas de 136.63 41 PKiKP **PKPdf** **12 19 19.8 -0.4**
JTS Las Juntas de 136.63 41 PKPdf **PKPdf** **12 19 19.8 -0.4**
JTS Las Juntas de 136.63 41 IAMs_20 IAMs_20 13 31 55.0
comp=Z,3µm,20.0s
SEUS St. Eustatius 138.43 8 IAMs_20 IAMs_20 13 24 41.5
comp=Z,3µm,20.0s
BCIP Isla Barro Col 140.47 36 IAMs_20 IAMs_20 13 33 22.2
comp=Z,3µm,19.0s
BCIP Isla Barro Col 140.47 36 *e*P **PKPdf** **12 19 21.9 -5.4**
FDF Fort de France 141.35 6 IAMs_20 IAMs_20 13 23 23.9
comp=Z,2µm,20.0s
AZU Azuero 141.36 38 *e*P **PKPdf** **12 19 29.8 +0.9**
URIC Uribia, Colomb 141.80 23 *e*P **PKPdf** **12 19 25.3 -4.3**
CRJC Cerrejon, Guaj 142.09 25 *e*P **PKPdf** **12 19 23.7 -6.5**
SJCC San Jacinto, C 142.15 29 *e*P **PKPdf** **12 19 24.0 -6.4**
DABV Dabajuro 143.00 22 *e*P PKPbc 12 19 28.9 +0.4
SMLC San Martn de 143.61 28 *e*P PKPab 12 19 26.5 -2.9
UREC San Jos de Ur 143.87 31 *e*P PKPab 12 19 25.7 -4.7
DBBC Dabeiba 144.17 33 *e*P PKPbc 12 19 31.9 -0.1
ZARC Zaragoza, Cauc 144.41 31 *e*P **PKPab** **12 19 30.2 -2.2**
OCAC Ocana 144.43 28 *e*P **PKPab** **12 19 31.1 -1.6**
HELC Santa Helena 145.22 33 *e*P **PKPbc** **12 19 34.1 -1.7**
CBOC Ciudad Bolivar 145.26 34 *e*P **PKPbc** **12 19 34.7 -1.0**
BRRC Barranca, Sant 145.27 29 *e*P **PKPbc** **12 19 33.6 -1.8**
PIZC Pizarro, Choco 145.31 37 *e*P **PKPbc** **12 19 35.3 -0.3**
PCRV Puerto La Cruz 145.34 12 PKPbc **PKPbc** **12 19 34.7 -1.0**
comp=Z,46nm,0.5s,baz=240,slow=1.7,SNR=29
SOCV Socops 145.37 24 *e*P **PKPbc** **12 19 34.0 -1.8**
PTBC PUERTO BERRIO 145.44 31 *e*P **PKPbc** **12 19 33.9 -2.1**
BARC Barichara 145.97 29 *e*P **PKPdf** **12 19 36.5 -0.8**
NORC Norcasia 146.09 32 *e*P **PKPdf** **12 19 36.2 -1.1**
MALC Bahia Malaga 146.11 37 *e*P **PKPab** **12 19 38.5 -0.2**
GUY2C Guyana, Caldas 146.13 33 *e*P **PKPdf** **12 19 36.9 -0.9**
SPBC San Pablo de B 146.39 31 *e*P **PKPdf** **12 19 37.1 -0.7**
RUSC La Rusia 146.63 29 *e*P **PKPdf** **12 19 38.6 -0.1**
YOTC Yotoco, Valle 146.68 36 *e*P **PKPdf** **12 19 37.9 -0.5**
TOLC Tolima 146.70 34 *e*P **PKPdf** **12 19 38.4 -0.2**
ANIL Santa Ana 146.74 34 *e*P **PKPdf** **12 19 37.9 -0.7**
ROSC El Rosal 146.98 32 PKPbc **PKPbc** **12 19 41.1 0.0**
comp=Z,55nm,0.8s,baz=69,slow=2.6,SNR=28
ROSC El Rosal 146.98 32 PKP2 **PKPbc** **12 19 41.7 +0.6**
ROSC El Rosal 146.98 32 **PKPbc** **12 19 41.7 +0.6**
ROSC El Rosal 146.98 32 *e*P **PKPdf** **12 19 39.3 +0.1**
ELOV Elorza 147.05 22 *e*P **PKPdf** **12 19 39.3 +0.5**
TUMC Tumaco 147.07 42 *e*P **PKPbc** **12 19 39.9 -1.0**
ORTC Ortega, Tolima 147.32 34 *e*P **PKPdf** **12 19 38.0 -1.3**
VILC Villavicencio, 147.92 32 *e*P **PKPdf** **12 19 41.6 +1.2**
PCON Cinco Dias 148.02 38 *e*P **PKPdf** **12 19 41.8 +0.7**
SOTA Rioblanco 148.06 38 *e*P **PKPdf** **12 19 40.7 -0.4**
USHA Ushuaia 148.13 168 PKPbc **PKPbc** **12 19 43.0 +0.5**
comp=Z,56nm,0.4s,baz=277,slow=0.1,SNR=5.7
BETC Betania 148.25 36 *e*P **PKPdf** **12 19 40.6 -0.3**
CRUC La Cruz 148.33 39 *e*P **PKPbc** **12 19 44.8 0.0**
GCUF Volcan Galeras 148.37 40 *e*P **PKPdf** **12 19 42.3 +0.7**
OTAV Otavalo 148.48 43 IAMs_20 IAMs_20 13 36 04.3
comp=Z,4µm,20.0s
PTGC Puerto Gaitan, 148.56 29 *e*P **PKPbc** **12 19 43.8 -1.1**
GARC Garzon, Huila 148.64 36 *e*P **PKPdf** **12 19 41.9 +0.1**
MACC Macarena, Meta 149.54 34 *e*P **PKPdf** **12 19 40.4 -2.5**
GO09 Cerro Castillo 150.44 161 **PKiKP** **12 19 49.3 +0.1**
PTLC Puerto Leguiza 150.69 37 *e*P **PKPdf** **12 19 43.9 -0.9**
MDP Montagnes des 150.71 350 PKPbc **PKPbc** **12 19 50.1 -0.1**
comp=Z,46nm,0.9s,baz=130,slow=0.3,SNR=9.6
RCBR Riachuelo 152.50 308 PKPbc **PKPbc** **12 19 53.8 -0.6**
comp=Z,62nm,1.2s,baz=7.7,slow=3.7,SNR=14
RCBR Riachuelo 152.50 308 IAMs_20 IAMs_20 13 31 02.0
comp=Z,3µm,20.0s
RCBR Riachuelo 152.50 308 *e*P **PKPdf** **12 19 50.2 +2.8**
NBCL Cascavel-CE 153.01 314 *e*P **PKPdf** **12 19 50.2 +2.1**
NBPA Parau_RN 153.31 310 *e*P **PKPdf** **12 19 50.4 +1.8**
BOAV Boa Vista 153.62 7 *e*P **PKPdf** **12 19 51.0 +1.9**
ATAH Atahualpa 153.87 54 PKP **PKPdf** **12 19 50.6 +0.7**
comp=Z,8.3nm,0.8s,baz=281,slow=3.3,SNR=7.3
ATAH PKPbc **PKiKP** **12 19 58.0 +0.1**
comp=Z,31nm,1.1s,baz=44,slow=2.8,SNR=9.7
NBLI Livramento-PB 154.30 307 *e*P **PKPdf** **12 19 50.8 +0.8**
NBPB Pedra_Branca-C 154.85 314 *e*P **PKPdf** **12 19 52.5 +1.7**
NBMA Muriti-CE 155.61 310 *e*P **PKPdf** **12 19 53.9 +2.1**
MCPB Macapa, AP 155.94 347 *e*P **PKPdf** **12 19 52.2 0.0**
NBTA Tacaratu-PE 156.28 305 *e*P **PKPdf** **12 19 52.7 0.0**
PTGA Pitinga 156.76 6 PKP **PKPdf** **12 19 53.2 -0.1**
comp=Z,2.3nm,0.4s,baz=324,slow=2.8,SNR=8.5
PTGA Pitinga 156.76 6 PKPdf **PKPdf** **12 19 54.7 +1.3**
PTGA PKPab **PKPab** **12 20 23.4 +0.9**
PTGA Pitinga 156.76 6 IAMs_20 IAMs_20 13 25 33.8
comp=Z,2.1nm,20.0s
PTGA Pitinga 156.76 6 *e*P **PKPdf** **12 19 53.4 0.0**
PTGA Pitinga 156.76 6 *e*P **PKPdf** **12 19 53.8 +0.5**
NBLA Lagarto - SE 157.25 301 *e*P **PKPdf** **12 19 54.2 +0.3**
LL02 Futaleuf 157.47 152 PKPab **PKPab** **12 20 26.4 +1.4**

MALB	Monte Alegre	157.78	351	eP	PKPdf	12 19 55.8	+1.2
LL01	San Ignacio de comp=Z,3μm,20.0s	157.86	150	IAMs_20	IAMs_20	13 46 22.1	
NNA	Nana comp=Z,2μm,19.0s	158.09	60	IAMs_20	IAMs_20	13 31 04.9	
CZSB	Cruzeiro do Su	158.23	45	eP	PKPdf	12 19 57.0	+1.9
LL04	Puerto Octay comp=Z,3μm,18.0s	158.99	147	IAMs_20	IAMs_20	13 47 44.2	
NBPN	Ponto Novo - B	159.00	305	eP	PKPdf	12 19 57.6	+1.6
MACA	Manacapuru-AM	159.07	9	eP	PKPdf	12 19 57.8	+1.6
PLCA	Paso Flores comp=Z,3.1nm,1.1s,baz=294,slow=6.7,SNR=2.9	160.02	150	PKP	PKPdf	12 19 57.2	+0.7
PLCA	Paso Flores	160.02	150	PKIKP	PKPdf	12 19 57.5	+1.0
PLCA						12 20 36.4	
PLCA	Paso Flores	160.02	150	PKPdf	PKPdf	12 19 57.5	+1.0
PLCA				PKPab	PKPab	12 20 36.4	+0.2
PLCA	Paso Flores	160.02	150	eP	PKPdf	12 20 01.2	+4.7
GDU01	Guandu, BA	160.24	298	eP	PKPdf	12 19 59.5	+2.1
ITTB	Itaituba	160.43	355	eP	PKPdf	12 19 58.0	+0.3
NBIT	Itapeh - BA	160.77	295	eP	PKPdf	12 20 01.1	+3.2
PRPB	Parauapebas	160.82	336	eP	PKPdf	12 19 58.8	+0.7
SMTB	Santa Maria do	162.24	326	eP	PKPdf	12 19 59.6	0.0
BI02	San Fabin de	162.66	140	PKPab	PKPab	12 20 48.6	+0.7
NAN01	Guarapari, ES	162.68	287	eP	PKPdf	12 20 00.8	+1.0
NPGB	Novo Progresso	163.04	353	eP	PKPdf	12 20 00.8	+0.4
MT01	Popeta	164.45	132		PKPab	12 20 56.9	+1.1
LPAZ	La Paz comp=Z,31nm,1.1s,baz=19,slow=2.9,SNR=44	167.41	55	PKP	PKPdf	12 20 05.9	+1.2
LPAZ				PP	PP	12 24 59.9	+1.8
	comp=Z,7.2nm,1.2s,baz=353,slow=3.9,SNR=4.9						
LPAZ	La Paz	167.41	55	PKIKP	PKPdf	12 20 05.7	+1.0
LPAZ	La Paz	167.41	55		PKPdf	12 20 05.7	+1.0
LPAZ	La Paz	167.41	55	eP	PKPdf	12 20 05.2	+0.4
PB16	IPOC Station P	167.45	66		PKPdf	12 20 06.2	+1.5
MNMC	Minye Minye	167.74	69		PKPdf	12 20 05.3	+0.9
BDFB	Brasilia comp=Z,12nm,1.0s,baz=18,slow=5.6,SNR=10	167.83	311	PKP	PKPdf	12 20 05.0	+0.7
BDFB	Brasilia	167.83	311	PKIKP	PKPdf	12 20 05.8	+1.4
BDFB	Brasilia	167.83	311		PKPdf	12 20 05.8	+1.4
PB11	IPOC Station P	167.94	72		PKPdf	12 20 04.2	-0.3
PB08	IPOC Station P	168.52	73		PKPdf	12 20 06.5	+1.4
PB09	IPOC Station P	168.94	81		PKPdf	12 20 05.5	+0.4
LVC	Limon Verde comp=Z,7.7nm,1.0s,baz=200,slow=3.1,SNR=8.8	169.41	85	PKP	PKPdf	12 20 06.5	+1.0
LVC				PP	PP	12 25 09.0	+0.3
	comp=Z,0.7nm,0.3s,baz=234,slow=3.5,SNR=3.3						
LVC	Limon Verde	169.41	85	PKIKP	PKPdf	12 20 06.7	+1.1
LVC	Limon Verde	169.41	85		PKPdf	12 20 06.7	+1.1
LVC	Limon Verde	169.41	85	eP	PKPdf	12 20 08.8	+3.2
ARAG	Araguaiana, MT	170.19	326	eP	PKPdf	12 20 06.7	+1.0
VAO	Valinhos	170.30	274	eP	PKPdf	12 20 06.5	+0.7
PET01	Itanhaem-SP	170.68	266	eP	PKPdf	12 20 07.5	+1.7
SPB	Sao Paulo	170.79	270	eP	PKPdf	12 20 07.3	+1.4
BB19B	Bebedouro	171.23	288	eP	PKPdf	12 20 08.1	+1.8
SIV	San Ignacio comp=Z,19nm,1.1s,baz=123,slow=0.5,SNR=30	171.36	24	PKP	PKPdf	12 20 06.9	+0.5
SIV				PP	PP	12 25 13.6	-2.5
	comp=Z,4.2nm,0.8s,baz=330,slow=5.0,SNR=5.2						
PTLB	Pontes e Lacer	171.37	11	eP	PKPdf	12 20 07.0	+0.7
CNLB	Canela	172.04	227	eP	PKPdf	12 20 10.1	+3.7
ITRB	Iturama	172.14	301	eP	PKPdf	12 20 08.6	+1.9
PP1B	Ponte de Pedra	173.20	339	eP	PKPdf	12 20 09.7	+2.6
ITQB	Itaqui	174.28	187	eP	PKPdf	12 20 09.8	+2.6
PTGB	Pitanga	175.01	260	eP	PKPdf	12 20 10.8	+3.1
TRCB	Terra Rica	175.39	284	eP	PKPdf	12 20 10.1	+2.3
CPUP	Villa Florida comp=Z,2.6nm,0.9s,baz=312,slow=1.1,SNR=5.0	177.66	183	PKP	PKPdf	12 20 07.4	-0.7
CPUP				PP	PP	12 25 57.5	+11
	comp=Z,1.1nm,0.9s,baz=185,slow=6.5,SNR=1.5						
CPUP	Villa Florida	177.66	183	PKIKP	PKPdf	12 20 07.8	-0.3
CPUP	Villa Florida	177.66	183		PKPdf	12 20 07.8	-0.3

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*NEIC **20** 12:08:31.6±1.4, 36°.82N±0°.01×97°.87W±0°.02, h2km±9km Error ellipse: s-maj=2.2km s-min=1.8km az=98.0*

*NEIC **20** 12:08:31.4, 36°.82N×97°.86W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.06; $M_{\theta\theta}$=1.21; $M_{\phi\phi}$=-1.14; $M_{r\theta}$=-0.27; $M_{\theta\phi}$=-0.71; $M_{\phi r}$=0.28; Fault plane solution: M_0=1.43000×10^{14} NP1:ϕ_s330.00000°, δ75.00000°, λ-5.00000°. NP2:ϕ_D61.00000°, δ85.00000°, λ-165.00000°. Principal axes: T 1.4296, Plg7.0000°, Azm195.0000°; N -0.0019, Plg74.0000°, Azm79.0000°; P -1.4277, Plg14.0000°, Azm287.0000°;*

*IDC **20** 12:08:31.2±1.0, 36°.98N×98°.02W, h0km, mb3.5/1, mb1 3.9/5, mb1mx3.6/60, mbtmp3.6/5, ML3.5/4 Error ellipse: s-maj=14.5km s-min=12.4km az=137.0*

*IASPEI **20** 12:08:31.4±0.9, 36°.83N±0°.02×97°.87W±0°.02, h7km±6km, Error ellipse: s-maj=3.2km s-min=2.9km az=93.6, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*ANF **20** 12:08:31.8±0.2, 36°.82N×97°.89W, h5km, ML4.4/18, Error ellipse: s-maj=2.6km s-min=2.5km az=161.0*

*TUL **20** 12:08:31.4±1.5, 36°.85N±0°.01×97°.88W±0°.02, h5km±7km, ML3.7, mb_Lg3.6/128(NEIC), Mwr3.4/12(SLM), Error ellipse: s-maj=2.3km s-min=1.9km az=101.0*

ISC 20 12:08:31.5±0.8, 36°.83N±0°.02×97°.87W±0°.02, h5km±5km, n218, σ0673/241, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GC02	Grant County #	0.02	22		Pg	12 08 32.7	+0.1
GC02				Sg	Sg	12 08 33.6	+0.2
KAN14	Manchester OK	0.15	330		Pg	12 08 34.6	0.0
KAN14				Sg	Sg	12 08 36.6	+0.1
KAN17	Caldwell West	0.23	22	Pg	Pg	12 08 36.2	+0.1
KAN17				Sg	Sg	12 08 39.5	+0.3
OK032	Salt Plains WL	0.27	265		Pg	12 08 36.9	+0.1
OK032				Sg	Sg	12 08 40.4	-0.1
KAN05	Bluff City Nor	0.28	360		Pg	12 08 37.0	0.0
KAN05				Sg	Sg	12 08 41.0	+0.3
CROK	Carrier	0.34	196		Pg	12 08 38.4	+0.3
CROK				Sg	Sg	12 08 43.0	+0.6
KAN01	Argonia South	0.34	15		Pg	12 08 38.1	0.0
KAN01				Sg	Sg	12 08 42.7	+0.2
KAN10	Anthony SW Sta	0.34	329		Pg	12 08 38.3	0.0
KAN10				Sg	Sg	12 08 42.3	-0.5
KAN13	South Haven SW	0.36	60		Pg	12 08 38.8	+0.1
KAN13				Sg	Sg	12 08 43.8	+0.4
KAN09	Caldwell North	0.37	33		Pg	12 08 38.8	+0.1
KAN09				Sg	Sg	12 08 42.9	-0.7
KAN08	Anthony NE Sta	0.41	349		Pg	12 08 39.4	0.0
KAN08				Sg	Sg	12 08 44.5	-0.2
KAN16	Harper SW Stat	0.42	339	Pg	Pg	12 08 39.6	-0.1
KAN16				Sg	Sg	12 08 45.5	+0.1
KS20	Mayfield South	0.47	32		Pg	12 08 40.6	-0.1
KS20				Sg	Sg	12 08 46.5	-0.3
KAN12	Harper NE Stat	0.48	348		Pg	12 08 40.6	-0.2
KAN12				Sg	Sg	12 08 47.0	-0.1
U32A	Winter Ranch,	1.01	244		Pg	12 08 50.5	-0.5
U32A				Sg	Sg	12 09 04.1	-0.1
U32A	Winter Ranch, baz=62,SNR=112	1.01	244	P	Pg	12 08 50.4	-0.5
U32A				S	Sg	12 09 04.5	+0.3
	baz=62						
U32A	Winter Ranch, baz=62,SNR=112	1.01	244	P		12 08 50.4	
U32A				S		12 09 04.5	
	baz=62						
OK029	Liberty Lake	1.08	162		Pg	12 08 52.0	-0.3
OK029				Sg	Sg	12 09 06.4	+0.1
T35A	Sooner Cattle	1.09	85		Pg	12 08 52.1	-0.4
T35A				Sg	Sg	12 09 06.0	-0.6
T35B	Sooner Cattle baz=267	1.09	85	P	Pg	12 08 52.1	-0.4
T35B				S	Sg	12 09 06.4	-0.3
	baz=267						
T35B	Sooner Cattle baz=267	1.09	85	P		12 08 52.1	
T35B				S		12 09 06.4	
	baz=267						
QUOK	Quay	1.14	125	Pg	Pg	12 08 53.0	-0.4
QUOK				Sg	Sg	12 09 08.0	-0.3
BCOK	Bluff Creek, N	1.19	170		Pg	12 08 53.6	-0.8
BCOK				Sg	Sg	12 09 10.3	+0.6
OK031	S. Brethren Rd	1.21	136		Pg	12 08 54.2	-0.4
OK031				Sg	Sg	12 09 10.1	-0.2
OK030	Cody Creek RV	1.26	135		Pg	12 08 55.2	-0.4
OK030					Sg	12 09 11.2	-0.7
OK005	Luther M Schoo	1.29	155		Pn	12 08 55.7	-0.5
OK005				Sg	Sg	12 09 13.6	+0.5
OK009	Oakdale Elemen	1.30	164		Pn	12 08 56.6	+0.3
OK009				Sg	Sb	12 09 14.1	+0.8
OK025	Westminster Rd	1.32	161		Pn	12 08 56.2	-0.4
OKCFA	Oklahoma City	1.45	166		Pn	12 08 58.2	-0.1
OKCFA	Oklahoma City baz=347,SNR=18	1.45	166	P	Pn	12 08 58.5	+0.2
OKCFA				S	Sb	12 09 18.6	+0.9
	baz=347						
OKCFA	Oklahoma City baz=347,SNR=18	1.45	166	P		12 08 58.5	
OKCFA				S		12 09 18.6	
	baz=347						
OKCSW	OKLAHOMA CITY	1.46	166		Pn	12 08 58.7	+0.1
FNO	Franklin	1.61	166		Pn	12 09 01.4	+0.8
R32A	Long Quarter,	1.73	337	Pn	Pn	12 09 02.5	+0.3
R32A				IAmb_Lg		12 09 26.6	
	comp=Z,547nm,0.8s						
R32A	Long Quarter, baz=157,SNR=175	1.73	337	P	Pn	12 09 02.7	+0.5
R32A				S	Sb	12 09 25.3	-0.3
	baz=157						
R32A	Long Quarter, baz=157,SNR=175	1.73	337	P		12 09 02.7	
R32A				S		12 09 25.3	
	baz=157						
TUL1	Leonard baz=300,SNR=116	1.91	118	P	Pn	12 09 05.7	+1.0
TUL1				S	Sb	12 09 31.6	+0.7
	baz=300						
TUL1	Leonard baz=300,SNR=113	1.91	118	P		12 09 05.2	
TUL1				S		12 09 31.2	
	baz=300						
TUL1	Leonard baz=300,SNR=116	1.91	118	P		12 09 05.7	
TUL1				S		12 09 31.6	
	baz=300						
WMOK	Wichita Mounta	2.21	200		Pn	12 09 08.9	0.0
WMOK				IAmb_Lg		12 09 43.3	
	comp=Z,186nm,0.7s						
WMOK	Wichita Mounta baz=19,SNR=126	2.21	200	P	Pn	12 09 09.2	+0.3
WMOK				S	Sn	12 09 38.2	+1.6
	baz=19						
WMOK	Wichita Mounta baz=19	2.21	200	P		12 09 08.7	
WMOK				S		12 09 37.7	
	baz=19						
WMOK	Wichita Mounta baz=19,SNR=126	2.21	200	P		12 09 09.2	
WMOK				S		12 09 38.2	
	baz=19						
CBKS	Cedar Bluff	2.47	324		Pn	12 09 13.7	+1.3
CBKS				IAmb_Lg		12 09 51.5	
	comp=Z,282nm,0.8s						
CBKS	Cedar Bluff baz=143,SNR=48	2.47	324	P	Pn	12 09 12.9	+0.5
CBKS				S	Sb	12 09 46.8	-0.4
	baz=143						
CBKS	Cedar Bluff baz=143,SNR=26	2.47	324	P		12 09 12.7	
CBKS				Sb		12 09 49.3	
	baz=143						
CBKS	Cedar Bluff baz=143,SNR=48	2.47	324	P		12 09 12.9	
CBKS				S		12 09 46.8	
	baz=143						
KSU1	Kansas State U	2.48	23	Pn	Pn	12 09 13.9	+1.4
KSU1				IAmb_Lg		12 09 49.2	
	comp=Z,386nm,1.1s						
KSU1	Kansas State U baz=204,SNR=18	2.48	23	P	Pn	12 09 13.1	+0.6
KSU1				S	Sb	12 09 47.3	0.0
	baz=204						
KSU1	Kansas State U baz=204,SNR=66	2.48	23	P		12 09 13.0	
KSU1				S		12 09 45.2	
	baz=204						
KSU1	Kansas State U baz=204,SNR=18	2.48	23	P		12 09 13.1	
KSU1				S		12 09 47.3	
	baz=204						
U38A	Gravette	2.83	97		Pn	12 09 18.3	+1.0
U38A	Gravette baz=279,SNR=64	2.83	97	P	Pn	12 09 18.3	+1.0
U38A	Gravette baz=279,SNR=64	2.83	97	P		12 09 18.3	
X37A	Clayton	3.02	137		Pn	12 09 21.1	+1.1
X37A				IAmb_Lg		12 10 13.3	
	comp=Z,233nm,0.8s						
X37A	Clayton baz=319,SNR=60	3.02	137	P	Pn	12 09 20.8	+0.9
X37A	Clayton baz=319,SNR=60	3.02	137	P		12 09 20.8	
HHAR	Hobbs	3.21	99		Pn	12 09 23.1	+0.6
HHAR				IAmb_Lg		12 10 13.5	
	comp=Z,148nm,0.8s						
HHAR	Hobbs baz=281,SNR=32	3.21	99	P	Pn	12 09 23.6	+1.0
HHAR	Hobbs baz=281,SNR=32	3.21	99	P		12 09 23.6	
Z35A	Perchaven, San	3.53	172		Pn	12 09 27.5	+0.6
Z35A				IAmb_Lg		12 10 29.4	
	comp=Z,103nm,0.9s						
Z35A	Perchaven, San baz=352,SNR=5.8	3.53	172	P	Pn	12 09 27.3	+0.4
Z35A	Perchaven, San baz=352,SNR=5.8	3.53	172	P		12 09 27.3	
AMTX	Amarillo	3.65	239	Pn	Pn	12 09 29.1	+0.3
AMTX				IAmb_Lg		12 10 30.5	
	comp=Z,189nm,0.9s						
AMTX	Amarillo baz=56	3.65	239	Sb		12 10 24.7	
W39A	Magazine	3.69	115		Pn	12 09 28.9	-0.2
W39A				IAmb_Lg		12 10 35.2	
	comp=Z,124nm,0.7s						
W39A	Magazine baz=298,SNR=27	3.69	115	P	Pn	12 09 29.8	+0.6
W39A	Magazine baz=298,SNR=12	3.69	115	P		12 09 29.6	
W39A				Sb		12 10 26.6	
	baz=298						
W39A	Magazine baz=298,SNR=27	3.69	115	P		12 09 29.8	
S39A	Bolivar	3.73	75		Pn	12 09 30.1	+0.4
S39A				IAmb_Lg		12 10 32.2	
	comp=Z,162nm,0.8s						
N33B	J Bar K, Exete baz=185,SNR=14	3.92	5	P	Pn	12 09 31.9	-0.4
N33B	J Bar K, Exete baz=185,SNR=14	3.92	5	P		12 09 31.9	
N33A	J Bar K, Exete	3.92	5		Pn	12 09 32.1	-0.2
N33A				IAmb_Lg		12 10 39.7	
	comp=Z,127nm,0.8s						
U40A	Yellville	4.07	95		Pn	12 09 35.2	+0.9
U40A	Yellville baz=278,SNR=52	4.07	95	P	Pn	12 09 35.2	+0.9
U40A	Yellville baz=278,SNR=26	4.07	95	P		12 09 35.1	
U40A				S		12 10 24.6	
	baz=278						
U40A	Yellville baz=278,SNR=52	4.07	95	P		12 09 35.2	
U40A				P		12 09 35.2	
	baz=278,SNR=52						
MIAR	Mount Ida	4.17	122	Pn	Pn	12 09 36.2	+0.4
MIAR				IAmb_Lg		12 10 46.3	
	comp=Z,105nm,0.7s						
MIAR	Mount Ida baz=305,SNR=10	4.17	122	P		12 09 36.9	
Z38A	Mt. Pleasant	4.28	146		Pn	12 09 38.1	+1.0
Z38A				IAmb_Lg		12 10 55.9	
	comp=Z,182nm,0.7s						
KSCO	Kaye Shedlock'	4.35	302		Pn	12 09 39.1	+0.8
KSCO				IAmb_Lg		12 10 59.8	
	comp=Z,190nm,0.7s						
KSCO	Kaye Shedlock' baz=118,SNR=13	4.35	302	P	Pn	12 09 38.4	+0.1
KSCO	Kaye Shedlock' baz=118	4.35	302	P		12 09 38.2	
KSCO	Kaye Shedlock' baz=118,SNR=13	4.35	302	P		12 09 38.4	
N35A	Tabor	4.39	23		Pn	12 09 39.7	+1.0
N35A	Tabor baz=204	4.39	23	S	Sn	12 10 32.9	+2.8
N35A	Tabor baz=204	4.39	23	S		12 10 32.9	
P38A	Dawn	4.41	49		Pn	12 09 40.3	+1.3
P38A	Dawn baz=232,SNR=18	4.41	49	P	Pn	12 09 39.5	+0.5
P38A	Dawn baz=232,SNR=18	4.41	49	P		12 09 39.5	
ABTX	Abilene, Hawle	4.44	200		Pn	12 09 39.7	+0.2
ABTX				IAmb_Lg		12 10 53.0	
	comp=Z,74nm,0.9s						
ABTX	Abilene, Hawle baz=18	4.44	200	S		12 10 32.2	
MGMO	Mountain Grove	4.50	84	Pn	Pn	12 09 41.3	+1.0
BGNE	Belgrade	4.58	357		Pn	12 09 41.4	0.0
BGNE				IAmb_Lg		12 11 04.5	
	comp=Z,159nm,0.8s						
BGNE	Belgrade baz=177	4.58	357	P		12 09 41.3	
R40A	Maddies Statio	4.68	70	Pn	Pn	12 09 42.7	-0.1
R40A				IAmb_Lg		12 10 59.9	
	comp=Z,185nm,0.8s						
X40A	Basin Creek Fa	4.72	118		Pn	12 09 43.4	+0.1
X40A				IAmb_Lg		12 11 00.3	
	comp=Z,92nm,0.9s						
X40A	Basin Creek Fa baz=301,SNR=7.3	4.72	118	P		12 09 43.7	
X40A				S		12 10 40.6	
	baz=301						
FCAR	Ozark Folk Cen	4.73	100		Pn	12 09 44.3	+0.9
FCAR				IAmb_Lg		12 11 00.4	
	comp=Z,118nm,1.0s						
WHAR	Wooly Hollow	4.78	107	Pn	Pn	12 09 45.4	+1.3
WHAR				IAmb_Lg		12 11 10.0	
	comp=Z,107nm,0.8s						
WHTX	Lake Whitney,	4.84	176		Pn	12 09 44.5	-0.4
WHTX	Lake Whitney, baz=356	4.84	176	P		12 09 45.0	
W41B	Gary Mavity, V baz=292,SNR=22	4.85	108	P	Pn	12 09 46.0	+0.9
W41B	Gary Mavity, V baz=292,SNR=11	4.85	108	P		12 09 45.7	
W41B				S		12 10 43.4	
	baz=292						
W41B	Gary Mavity, V baz=292,SNR=22	4.85	108	P		12 09 46.0	
MSTX	Muleshoe	4.92	236		Pn	12 09 46.5	+0.4
MSTX	Muleshoe baz=53,SNR=18	4.92	236	P		12 09 45.4	
237A	Washetta, Mont	5.11	160		Pn	12 09 48.1	-0.6
237A				IAmb_Lg		12 11 24.3	
	comp=Z,90nm,0.8s						
OGNE	Ogallala	5.24	323		Pn	12 09 50.9	+0.3
OGNE				IAmb_Lg		12 11 29.0	
	comp=Z,186nm,0.8s						
OGNE	Ogallala baz=140	5.24	323	P		12 09 49.9	
T25A	Trinidad	5.25	275		Pn	12 09 50.9	+0.2
T25A				IAmb_Lg		12 11 26.2	
	comp=Z,92nm,0.8s						
T25A	Trinidad baz=91,SNR=11	5.25	275	P		12 09 50.4	
L34A	Svendsen Farm,	5.26	12	Pn	Pn	12 09 51.6	+0.8
P40A	Paris	5.32	58		Pn	12 09 52.7	+1.2
P40A				IAmb_Lg		12 11 20.2	
	comp=Z,112nm,0.8s						
N38A	Joes South For	5.36	41		Pn	12 09 52.9	+0.8
N38A				IAmb_Lg		12 11 26.9	
	comp=Z,167nm,0.7s						
N38A	Joes South For baz=224,SNR=13	5.36	41	P	Pn	12 09 52.6	+0.4
N38A	Joes South For baz=224,SNR=13	5.36	41	P		12 09 52.6	
CCM	Cathedral Cave	5.41	75		Pn	12 09 54.2	+1.4
CCM				IAmb_Lg		12 11 27.0	
	comp=Z,119nm,0.7s						
CCM	Cathedral Cave baz=259	5.41	75	P		12 09 52.6	
LCAR	Lake Charles	5.47	96		Pn	12 09 53.5	-0.1
LCAR				IAmb_Lg		12 11 28.4	
	comp=Z,100nm,0.8s						
Z41A	Richland Creek baz=312	5.47	129	P		12 09 53.5	
NATX	Nacogdoches	5.71	151	Pn	Pn	12 09 58.1	+1.1
NATX				IAmb_Lg		12 11 45.2	
	comp=Z,67nm,0.8s						
CCAR	Cane Creek comp=Z,70nm,0.8s	5.77	118	IAmb_Lg		12 11 47.0	
K31A	O'Neill	5.83	354	Pn	Pn	12 09 59.9	+1.3
HBAR	Harrisburg	5.97	100	Pn	Pn	12 10 01.4	+1.0
HBAR				IAmb_Lg		12 11 50.8	
	comp=Z,158nm,0.8s						
435B	Jarrell	6.04	178		Pn	12 10 00.6	-0.8
435B				IAmb_Lg		12 11 52.2	
	comp=Z,105nm,0.8s						
435B	Jarrell baz=358	6.04	178	P		12 10 01.6	
Q24A	Divide baz=108,SNR=15	6.14	293	P		12 10 02.5	
SCIA	State Center	6.22	34		Pn	12 10 05.2	+1.2
SCIA				IAmb_Lg		12 11 55.5	
	comp=Z,108nm,0.7s						
LPAR	Lepanto comp=Z,159nm,0.9s	6.24	99	IAmb_Lg		12 11 51.7	
SLM	Saint Louis	6.31	71	Pn	Pn	12 10 06.3	+1.1
GNAR	Gosnell	6.39	95	Pn	Pn	12 10 05.9	-0.3
PEBM	Pemiscott Bayo	6.49	94	Pn	Pn	12 10 08.8	+1.2
PARMO	Parma	6.52	89	Pn	Pn	12 10 09.0	+0.9
JCT	Junction City	6.53	195		Pn	12 10 07.4	-0.9
JCT				IAmb_Lg		12 12 16.1	
	comp=Z,125nm,1.1s						
JCT	Junction City baz=14	6.53	195	P		12 10 07.6	
PVMO	Portageville	6.58	91	Pn	Pn	12 10 09.0	+0.1
N41A	Harden Midland	6.71	53		Pn	12 10 11.8	+1.1
143A	Socs Landing,	6.73	126	Pn	Pn	12 10 09.9	-1.0
143A				IAmb_Lg		12 12 22.0	
	comp=Z,48nm,0.7s						
HENM	Henderson Moun	6.74	88	Pn	Pn	12 10 10.5	-0.6
ISCO	Idaho Springs	6.77	298		Pn	12 10 11.2	-0.5
ISCO				IAmb_Lg		12 10 09.6	
	comp=Z,74nm,1.1s						
ISCO	Idaho Springs baz=114,SNR=10	6.77	298	P	Pn	12 10 11.6	-0.2
ISCO	Idaho Springs baz=114	6.77	298	P		12 10 10.6	
ISCO	Idaho Springs baz=114,SNR=10	6.77	298	P		12 10 11.6	
LNXT	Lenox	6.79	94	Pn	Pn	12 10 11.8	+0.1
S44A	Carbondale	6.92	80	Pn	Pn	12 10 14.9	+1.4
HALT	Halls	6.94	95	Pn	Pn	12 10 14.1	+0.3
ECSD	EROS Data Cent	6.96	8	Pn	Pn	12 10 13.6	-0.6
ECSD				IAmb_Lg		12 12 12.9	
	comp=Z,51nm,1.0s						
ECSD	EROS Data Cent baz=188	6.96	8	P		12 10 13.1	
K38A	Parkersburg	7.01	32	Pn	Pn	12 10 15.1	+0.3
P43A	Skaggs, Pawnee	7.15	64		Pn	12 10 16.2	-0.4
ANMO	Albuquerque comp=Z,0.3nm,0.3s,baz=63,slow=13,SNR=3.6	7.22	257	Pn	Pn	12 10 21.1	+3.3
ANMO				Lg	Lg	12 12 15.6	
	comp=Z,3.0nm,0.3s,baz=338,slow=22,SNR=9.6						
ANMO	Albuquerque	7.22	257		Pn	12 10 17.9	0.0
W45A	Hickory Valley	7.24	101	Pn	Pn	12 10 17.3	-0.6
OXF	Oxford	7.26	106		Pn	12 10 18.1	-0.1
OXF				IAmb_Lg		12 12 39.2	
	comp=Z,55nm,0.9s						
Q44A	Meyer Farm, Va	7.30	71	Pn	Pn	12 10 19.3	+0.5
L40A	Anamosa	7.33	42		Pn	12 10 19.1	0.0
L40A				IAmb_Lg		12 12 30.2	
	comp=Z,88nm,0.8s						
T45A	Paducah	7.39	86	Pn	Pn	12 10 21.1	+1.1
PHWY	Pilot Hill	7.40	309	Pn	Pn	12 10 19.9	-0.5
PHWY				IAmb_Lg		12 12 27.8	
	comp=Z,73nm,0.9s						
N23A	Red Feather La baz=120

I37A	**Lemond, Waseca**	**7.95**	**24**			**Pn**	**12 10 28.7**	**+1.1**
I37A				IAmb_Lg			12 12 55.9	
	comp=Z,47nm,0.7s							
735A	**Kenedy**	**7.95**	**180**	IAmb_Lg			12 13 05.9	
	comp=Z,58nm,0.8s							
MNTX	**Cornudas Mount**	**8.05**	**233**	Pn		**Pn**	**12 10 29.5**	**+0.4**
MNTX				IAmb_Lg			12 12 58.0	
	comp=Z,38nm,1.0s							
MNTX	**Cornudas Mount**	**8.05**	**233**	P			12 10 28.6	
	baz=48							
O44A	**Mansfield**	**8.09**	**63**	Pn		**Pn**	**12 10 30.0**	**+0.5**
WVT	**Waverly**	**8.12**	**92**			**Pn**	**12 10 29.2**	**-0.8**
WVT				IAmb_Lg			12 12 53.0	
	comp=Z,46nm,1.1s							
WVT	**Waverly**	**8.12**	**92**	P			12 10 29.9	
	baz=278							
PLAL	**Pickwick Lake**	**8.16**	**100**	Pn		**Pn**	**12 10 31.2**	**+0.7**
PLAL				IAmb_Lg			12 12 53.4	
	comp=Z,41nm,0.8s							
L42A	**Oliver, Polo**	**8.18**	**48**			**Pn**	**12 10 32.1**	**+1.3**
USIN	**University of**	**8.20**	**79**	Pn		**Pn**	**12 10 31.4**	**+0.3**
JFWS	**Jewell Farm**	**8.44**	**42**	Pn		**Pn**	**12 10 34.2**	**-0.2**
JFWS				IAmb_Lg			12 13 02.1	
	comp=Z,88nm,0.8s							
JFWS	**Jewell Farm**	**8.44**	**42**	P		**Pn**	**12 10 34.6**	**+0.2**
	baz=226,SNR=7.8							
JFWS	**Jewell Farm**	**8.44**	**42**	P			12 10 34.3	
	baz=226							
JFWS	**Jewell Farm**	**8.44**	**42**	P			12 10 34.6	
	baz=226,SNR=7.8							
MVCO	**Mesa Verde**	**8.51**	**276**			**Pn**	**12 10 35.4**	**-0.2**
T47A	**Sharon Grove**	**8.62**	**86**	Pn		**Pn**	**12 10 36.9**	**0.0**
T47A				IAmb_Lg			12 13 05.4	
	comp=Z,69nm,0.8s							
RSSD	**Black Hills**	**8.66**	**329**	Pn		**Pn**	**12 10 38.0**	**+0.3**
RSSD				IAmb_Lg			12 13 19.1	
	comp=Z,59nm,1.1s							
RSSD	**Black Hills**	**8.66**	**329**	P			12 10 38.2	
	baz=145							
PV07	**Paradox Valley**	**8.70**	**284**	Pn		**Pn**	**12 10 38.8**	**+0.7**
RWWY	**Rawlins**	**8.72**	**307**	Pn		**Pn**	**12 10 38.2**	**-0.2**
RWWY				IAmb_Lg			12 13 17.1	
	comp=Z,55nm,0.9s							
O20A	**White River Ci**	**8.78**	**295**	Pn		**Pn**	**12 10 38.9**	**-0.3**
Z47A	**Carrollton**	**8.82**	**111**	Pn		**Pn**	**12 10 40.8**	**+1.3**
K22A	**Casper**	**8.84**	**314**	Pn		**Pn**	**12 10 39.5**	**-0.5**
K22A				IAmb_Lg			12 13 30.9	
	comp=Z,87nm,1.0s							
M44A	**Midewin, Midew**	**8.89**	**56**	IAmb_Lg			12 13 18.4	
	comp=Z,96nm,0.9s							
TX31	**Lajitas Ar. Si**	**8.91**	**215**			**Pn**	**12 10 41.1**	**+0.1**
TX32	**Lajitas Array**	**8.91**	**215**			**Pn**	**12 10 40.7**	**-0.3**
TXAR	**Lajitas Array**	**8.91**	**215**	Pn		**Pn**	**12 10 40.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=40,slow=11,SNR=8.8							
TXAR				Pg		Pg	12 11 14.2	-8.1
	comp=Z,1.0nm,0.3s,baz=48,slow=14,SNR=6.5							
TXAR				Lg		Lg	12 13 09.4	
	comp=Z,1.0nm,0.3s,baz=303,slow=32,SNR=4.0							
TXAR	**Lajitas Array**	**8.91**	**215**			**Pn**	**12 10 40.5**	**-0.5**
I40A	**Norwalk**	**8.96**	**36**	Pn		**Pn**	**12 10 42.0**	**+0.5**
I40A	**Norwalk**	**8.96**	**36**	P		**Pn**	**12 10 41.6**	**+0.1**
	baz=221,SNR=6.1							
I40A	**Norwalk**	**8.96**	**36**	P			12 10 41.6	
	baz=221,SNR=6.1							
V48A	**Smith Brothers**	**8.99**	**94**	Pn		**Pn**	**12 10 42.7**	**+0.8**
V48A				IAmb_Lg			12 13 21.9	
	comp=Z,31nm,0.8s							
F33A	**5 Mile Ranch,**	**9.08**	**7**			**Pn**	**12 10 42.6**	**-0.6**
F33A				IAmb_Lg			12 13 29.5	
	comp=Z,30nm,0.9s							
SFIN	**Lafayette**	**9.15**	**64**	Pn		**Pn**	**12 10 45.6**	**+1.5**
SFIN				IAmb_Lg			12 13 19.0	
	comp=Z,78nm,0.8s							
SPMN	**Marine on St.**	**9.22**	**23**			**Pn**	**12 10 44.4**	**-0.6**
SPMN				IAmb_Lg			12 13 20.5	
	comp=Z,29nm,0.9s							
121A	**Cookes Peak, D**	**9.22**	**245**	Pn		**Pn**	**12 10 44.7**	**-0.6**
BLO	**Bloomington**	**9.26**	**72**	Pn		**Pn**	**12 10 46.0**	**+0.4**
WCI	**Wyandotte Cave**	**9.30**	**78**	Pn		**Pn**	**12 10 46.6**	**+0.4**
WCI				IAmb_Lg			12 13 23.2	
	comp=Z,73nm,0.9s							
CLTN	**Cedars of Leba**	**9.33**	**91**	Pn		**Pn**	**12 10 47.4**	**+0.8**
CLTN				IAmb_Lg			12 13 30.8	
	comp=Z,33nm,0.8s							
K43A	**Burlington**	**9.40**	**48**	Pn		**Pn**	**12 10 47.1**	**-0.4**
K43A				IAmb_Lg			12 13 32.7	
	comp=Z,98nm,0.8s							
F36A	**Milaca**	**9.60**	**19**	Pn		**Pn**	**12 10 49.4**	**-0.8**
LRAL	**Lakeview Retre**	**9.70**	**110**	Pn		**Pn**	**12 10 51.1**	**-0.5**
U49A	**Red Boiling Sp**	**9.72**	**88**	Pn		**Pn**	**12 10 53.2**	**+1.3**
U49A				IAmb_Lg			12 13 36.4	
	comp=Z,32nm,0.7s							
SWET	**Sewanee**	**9.80**	**96**	Pn		**Pn**	**12 10 52.6**	**-0.5**
SWET				IAmb_Lg			12 13 49.0	
	comp=Z,36nm,1.1s							
I42A	**Draeger Farm,**	**9.82**	**41**	Pn		**Pn**	**12 10 53.3**	**0.0**
I42A				IAmb_Lg			12 13 51.4	
	comp=Z,41nm,0.9s							
Y49A	**Blount Mountai**	**9.82**	**104**	IAmb_Lg			12 13 53.9	
	comp=Z,37nm,0.8s							
RDMU	**Red Mountain**	**9.88**	**296**	Pn		**Pn**	**12 10 55.2**	**+0.9**
E28A	**Huff**	**9.96**	**349**	Pn		**Pn**	**12 10 56.0**	**+0.7**
E28A				IAmb_Lg			12 14 07.4	
	comp=Z,54nm,0.8s							
P48A	**Milroy**	**10.15**	**71**	Pn		**Pn**	**12 10 58.2**	**+0.4**
R49A	**Shelbyville**	**10.19**	**78**	Pn		**Pn**	**12 10 57.5**	**-0.9**
G40A	**Rib Lake**	**10.22**	**32**			**Pn**	**12 10 59.7**	**+0.9**
W50A	**Signal Mountain**	**10.30**	**95**	Pn		**Pn**	**12 11 00.6**	**+0.6**
D32A	**Dogwood Acres,**	**10.32**	**3**	Pn		**Pn**	**12 11 00.2**	**+0.1**
N47A	**Urbana**	**10.32**	**63**	Pn		**Pn**	**12 11 01.0**	**+0.9**
T50A	**Nancy**	**10.44**	**85**	Pn		**Pn**	**12 11 02.4**	**+0.6**
P17A	**Butcher Ranch,**	**10.47**	**288**	Pn		**Pn**	**12 11 02.1**	**-0.3**
Q16A	**Castle Valley**	**10.72**	**285**	Pn		**Pn**	**12 11 05.3**	**-0.6**
BW06	**Boulder Array**	**10.77**	**307**	Pn		**Pn**	**12 11 06.3**	**-0.2**
PD31	**Pinedale Array**	**10.77**	**307**	Pn		**Pn**	**12 11 06.3**	**-0.1**
PDAR	**Pinedale Array**	**10.77**	**307**	Pn		**Pn**	**12 11 03.8**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=98,slow=17,SNR=4.2							
PDAR				Lg		Lg	12 14 08.8	
	comp=Z,1.0nm,0.3s,baz=112,slow=27,SNR=13							
PDAR	**Pinedale Array**	**10.77**	**307**			**Pn**	**12 11 06.3**	**-0.1**
TMUT	**Trail Mountain**	**10.80**	**287**	Pn		**Pn**	**12 11 06.6**	**-0.4**
H43A	**Windswept, Lux**	**10.81**	**42**	Pn		**Pn**	**12 11 07.4**	**+0.5**
X51A	**Calhoun**	**10.82**	**98**	Pn		**Pn**	**12 11 07.2**	**+0.2**
E38A	**The Farm, Brul**	**10.85**	**24**	Pn		**Pn**	**12 11 06.5**	**-0.8**
R50A	**Paris**	**10.85**	**78**	Pn		**Pn**	**12 11 07.6**	**-0.2**
CPCT	**Cooper Cave**	**10.88**	**93**	Pn		**Pn**	**12 11 08.3**	**+0.4**
V51A	**Loudon**	**10.96**	**91**	Pn		**Pn**	**12 11 09.7**	**+0.8**
WUAZ	**Wupatki**	**10.99**	**267**	Pn		**Pn**	**12 11 08.8**	**-0.8**
O49A	**Covington**	**11.12**	**68**	Pn		**Pn**	**12 11 11.4**	**+0.2**
COWI	**Conover**	**11.34**	**33**	Pn		**Pn**	**12 11 13.7**	**-0.4**
S51A	**Beattyville**	**11.41**	**82**			**Pn**	**12 11 15.9**	**+0.8**
N49A	**Columbus Grove**	**11.42**	**65**	Pn		**Pn**	**12 11 14.4**	**-0.8**
TKL	**Tuckaleechee C**	**11.45**	**92**	Pn		**Pn**	**12 11 16.0**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=238,slow=7.2,SNR=8.3							
TKL				Lg		Lg	12 14 27.8	
	comp=Z,1.3nm,0.3s,baz=168,slow=20,SNR=15							
TKL	**Tuckaleechee C**	**11.45**	**92**	Pn		**Pn**	**12 11 16.4**	**+0.8**
MTPU	**Mount Pierson**	**11.45**	**280**	Pn		**Pn**	**12 11 15.9**	**0.0**
MSU	**Marysvale**	**11.46**	**283**	Pn		**Pn**	**12 11 15.3**	**-0.7**
F42A	**Maple Grove Fa**	**11.53**	**36**	Pn		**Pn**	**12 11 16.4**	**-0.3**
AGMN	**Agassiz Nation**	**11.56**	**7**	Pn		**Pn**	**12 11 15.1**	**-2.0**
V52A	**Sevierville**	**11.56**	**91**	Pn		**Pn**	**12 11 17.5**	**+0.4**
L48A	**N Adams**	**11.58**	**60**	Pn		**Pn**	**12 11 18.1**	**+0.7**
Q51A	**Peebles**	**11.68**	**75**	Pn		**Pn**	**12 11 19.0**	**+0.2**
REDW	**Red Top Meadow**	**11.88**	**307**	Pn		**Pn**	**12 11 22.6**	**+0.8**
B35A	**Bob, Littlefor**	**11.92**	**13**	Pn		**Pn**	**12 11 21.7**	**-0.3**
P51A	**Williamsport**	**11.96**	**73**	Pn		**Pn**	**12 11 21.8**	**-0.8**
MOOW	**Moose Ponds**	**12.01**	**309**	Pn		**Pn**	**12 11 23.4**	**0.0**
EYMN	**Ely**	**12.06**	**21**	Pn		**Pn**	**12 11 24.2**	**+0.2**
DUG	**Dugway, Tooele**	**12.18**	**291**	Pn		**Pn**	**12 11 26.4**	**+0.7**
V53A	**Saluda**	**12.21**	**91**	Pn		**Pn**	**12 11 26.5**	**+0.3**
YNE	**Yellowstone No**	**12.28**	**315**	Pn		**Pn**	**12 11 28.2**	**+1.0**
G45A	**Suttons Bay**	**12.34**	**45**	Pn		**Pn**	**12 11 27.0**	**-0.8**
DGMT	**Dagmar**	**12.53**	**340**	Pn		**Pn**	**12 11 29.6**	**-0.7**
E43A	**Lone Tree Farm**	**12.53**	**37**	Pn		**Pn**	**12 11 30.2**	**-0.1**
R53A	**Hurricane**	**12.72**	**78**	Pn		**Pn**	**12 11 32.3**	**-0.7**
N51A	**Ashland**	**12.75**	**67**	Pn		**Pn**	**12 11 33.1**	**-0.2**
PSUT	**Pine Spring**	**12.78**	**282**	Pn		**Pn**	**12 11 33.1**	**-0.9**
S54A	**Dingess, Beckl**	**13.22**	**81**	Pn		**Pn**	**12 11 39.2**	**-0.7**
ULM	**Lac du Bonnet**	**13.49**	**5**	Pn		Pn	12 11 38.1	-5.4
	comp=Z,0.4nm,0.3s,baz=178,slow=9.2,SNR=9.0							
ULM				Lg		Lg	12 15 23.9	
	comp=Z,0.3nm,0.3s,baz=272,slow=18,SNR=2.2							
Q54A	**Coxs Mills**	**13.63**	**76**	Pn		**Pn**	**12 11 46.2**	**+0.9**
E46A	**Sault Ste Mari**	**13.90**	**43**	Pn		**Pn**	**12 11 48.4**	**-0.7**
MCWV	**Mont Chateau**	**14.45**	**73**	Pn		**Pn**	**12 11 56.5**	**0.0**
M54A	**Oil Creek Stat**	**14.87**	**66**	Pn		**Pn**	**12 12 02.5**	**+0.2**
T57A	**Hurt**	**14.90**	**84**	Pn		**Pn**	**12 12 02.2**	**-0.5**
SADO	**Sadowa**	**16.23**	**55**	Lg		Lg	12 16 52.7	
	comp=Z,0.5nm,0.3s,baz=290,slow=7.0,SNR=3.2							
ILAR	**Eielson Array**	**40.11**	**330**	P		**P**	**12 16 07.7**	**0.0**
	comp=Z,0.6nm,0.8s,baz=99,slow=7.5,SNR=3.7							

STR ***20*** *12:12:31.9±0.3, 44˚N±3˚×˚±˚, h2km, MLv1.5/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
GEN ***20*** *12:12:31.6, 44.˚48N×6.˚88E, h1km±1km, MI1.1*
LDG 20 12:12:32.0±0.0, 44˚51N×6˚89E, h2km, Md2.0/2, Ml2.0/5, Error ellipse: s-maj=1.0km s-min=0.6km az=60.0, France

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PZZ	**Stroppo**	**0.16**	**89**	P		Pg	12 12 35.5	+0.3
PZZ				S		Sg	12 12 37.7	+0.4
MBDF	**Montbardon**	**0.24**	**339**	*e*Pg		Pg	12 12 36.6	0.0
MBDF				*e*Sg		Sg	12 12 40.2	+0.5
	17nm,0.2s							
OGAG	**Argentiere**	**0.26**	**259**	Pg		Pb	12 12 39.4	0.0
OGAG				Sg		Sb	12 12 44.9	+0.6
ISO	**Isola**	**0.34**	**160**	Pg		Pg	12 12 38.3	-0.3
ISO				Sg		Sg	12 12 42.4	-0.6
STV	**Sant Anna di V**	**0.41**	**130**	P		Pg	12 12 40.0	+0.3
STV				S		Sg	12 12 45.3	+0.3
RRL	**Rocca Remolon**	**0.42**	**350**	P		Pg	12 12 40.1	-0.1
RRL				S		Sg	12 12 46.4	+0.8
BHB	**Bricherasio**	**0.43**	**38**	P		Pg	12 12 40.3	+0.1
BHB				S		Sg	12 12 46.2	+0.3
ENR	**Entracque**	**0.47**	**126**	P		Pg	12 12 41.1	0.0
TURF	**col de Turini**	**0.64**	**146**	Pg		Pg	12 12 44.6	+0.3
TURF				Sg		Sg	12 12 52.8	+0.2
RSP	**Reno Superiore**	**0.70**	**22**	P		Pg	12 12 45.3	0.0
SAOF	**Saorge**	**0.70**	**137**	Pg		Pg	12 12 45.6	+0.1
SAOF				Sg		Sg	12 12 54.5	-0.1
SBF	**Sospel**	**0.75**	**148**	*e*Pg		Pg	12 12 46.1	-0.3
CALF	**Calern**	**0.75**	**178**	Pg		Pg	12 12 45.5	-0.9
CALF				Sg		Sg	12 12 56.4	+0.2
ESCA	**l'Escarene**	**0.76**	**153**	Pg		Pg	12 12 46.4	-0.1
ESCA				Sg		Sg	12 12 56.9	+0.5
ORIF	**Oris-en-Rattie**	**0.83**	**300**	*e*Pg		Pg	12 12 47.8	-0.1
ORIF	**Oris-en-Rattie**	**0.83**	**300**	*e*P		Pb	12 12 49.4	+0.2
ORIF	**Oris-en-Rattie**	**0.83**	**300**	Pg		Pg	12 12 47.5	-0.4
FRF	**La Foret Royal**	**0.96**	**191**	*e*Pg		Pg	12 12 49.6	-0.8
FRF	**La Foret Royal**	**0.96**	**191**	*e*P		Pb	12 12 51.9	+0.5
FRF				*e*Sg		Sg	13 02.6	-0.2
	5.5nm,0.2s							
LPG	**La Plagne**	**1.00**	**354**	*e*Pg		Pg	12 12 50.9	-0.2
LPG				*e*Sg		Sg	12 13 04.0	-0.1
	1.6nm,0.2s							
SMRF	**Simiane la Rot**	**1.08**	**241**	*e*Pg		Pg	12 12 52.7	-0.1
SMRF	**Simiane la Rot**	**1.08**	**241**	*e*P		Pn	12 12 54.2	0.0
SMRF				*e*Sg		Sg	13 07.1	+0.3
	4.1nm,0.2s							
LMR	**La Mourre**	**1.20**	**193**	*e*Pg		Pg	12 12 54.5	-0.5
LMR	**La Mourre**	**1.20**	**193**	*e*P		Pn	12 12 55.7	-0.1
LMR				*e*Sg		Sg	13 10.1	-0.5
	4.9nm,0.2s							
VIVF	**Saint-Julien-l**	**1.62**	**283**	*e*Sg		Sn	12 13 23.3	+0.2
	1.3nm,0.3s							

KRSC 20 12:21:26.5±1.8, 51˚44N×156˚60E, h188km±15km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.13**	**79**	*e*P		Pn	12 21 51.8	+0.5
SKR	**Severo-Kuril's**	**0.82**	**202**	*e*P		Pn	12 21 54.4	+0.5
SKR				*e*S		Sn	12 22 15.7	+0.8
MIPR	**Malaya Ipel'ka**	**0.84**	**7**	*e*P		Pn	12 21 53.8	-0.2
ALID	**Alaid**	**0.88**	**230**	*e*P		Pn	12 21 54.4	0.0
KDTR	**Khodutka, Kamc**	**0.99**	**68**	*e*P		Pn	12 21 55.8	+0.9
KDTR				*e*S		Sn	12 22 17.6	+0.6
ASAK	**Asacha**	**1.24**	**40**	*e*P		Pn	12 21 57.9	+1.0
MTVR	**Mutnovka**	**1.43**	**43**	*e*P		Pn	12 21 59.7	+1.0
GRL	**Gorelyy**	**1.44**	**39**	*e*P		Pn	12 21 59.8	+1.1
APC	**Apacha**	**1.52**	**13**	*e*P		Pn	12 21 58.9	-0.4
APC				*e*S		Sn	12 22 23.4	-1.6
RUS	**Russkaya**	**1.54**	**49**	*e*P		Pn	12 22 00.8	+1.3
RUS				*e*S		Sn	12 22 26.2	+1.0
KRMR	**Karymshinskiy**	**1.68**	**33**	*e*P		Pn	12 22 02.3	+1.5
KRMR				*e*S		Sn	12 22 29.6	+2.0
DALK	**Dalny**	**2.07**	**39**	*e*P		Pn	12 22 05.7	+0.9
DALK				*e*S		Sn	12 22 35.2	+0.5
KOK	**Koryaka**	**2.23**	**33**	*e*P		Pn	12 22 08.8	+2.1
UGLR	**Uglovaya**	**2.23**	**37**	*e*P		Pn	12 22 08.8	+2.1
UGLR				*e*S		Sn	12 22 40.5	+2.3
AVH	**Avacha**	**2.25**	**35**	*e*P		Pn	12 22 09.5	+2.7
SMAR	**Somma**	**2.27**	**36**	*e*P		Pn	12 22 09.6	+2.4
KRX	**Arik**	**2.29**	**32**	*e*P		Pn	12 22 08.6	+1.2
SDLR	**Sedlovina**	**2.31**	**36**	*e*P		Pn	12 22 09.1	+1.5
SDLR				*e*S		Sn	12 22 40.4	+0.7
GNL	**Ganaly**	**2.40**	**19**	*e*P		Pn	12 22 09.5	+0.9
NLC	**Nalytchevo**	**2.42**	**43**	*e*S		Sn	12 22 41.5	0.0
SPN	**Mys Shipunski**	**2.68**	**50**	*e*P		Pn	12 22 12.7	+1.1
SPN				*e*S		Sn	12 22 46.2	-0.7
KZV	**Kizimen**	**4.29**	**30**	*e*P		Pn	12 22 33.9	+2.3
TUMR	**Tumrok**	**4.39**	**27**	*e*P		Pn	12 22 36.5	+3.6
MKZ	**Mys Kozlova**	**4.40**	**43**	*e*P		Pn	12 22 33.0	+0.3
MKZ				*e*S		Sn	12 23 21.9	-2.9
KBG	**Krutoberegovo**	**6.02**	**34**	*e*P		Pn	12 22 55.4	+1.7
KBTR	**Krutoberegovo**	**6.03**	**35**	*e*P		Pn	12 22 53.7	-0.1

TAP ***20*** *12:23:09.6, 23˚98N×122˚50E, h28km, ML4.3, D*
JMA ***20*** *12:23:09.4±0.2, 23˚95N×122˚49E, h22km±5km, M4.2*
NEIC ***20*** *12:23:09.4±1.5, 23˚96N±0˚05×122˚55E±0˚04, h29km±4km, mb4.2/25, Error ellipse: s-maj=7.6km s-min=4.9km az=156.0*
IDC ***20*** *12:23:12.1±3.1, 24˚09N×122˚62E, h50km±32km, mb3.7/12, mb1 3.8/14, mb1mx3.6/42, mbtmp4.0/14, ML3.6/2, MS4.7/1, Ms1 4.7/1, ms1mx4.0/42, Error ellipse: s-maj=25.4km s-min=14.1km az=62.0*
ISC 20 12:23:09.1±1.0, 23˚92N±0˚02×122˚48E±0˚02, h26km±8km, n208, σ0˚91/306, mb4.1/22, 13C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.68**	**39**	P		**Pb**	**12 23 21.9**	**-0.5**
JYNG				S		**Sb**	**12 23 29.8**	**-1.6**
YOJ	**Yonaguni jima**	**0.72**	**42**	P		**Pb**	**12 23 22.8**	**-0.3**
YOJ				S		**Sb**	**12 23 31.2**	**-1.5**
YOJ	**Yonaguni jima**	**0.72**	**42**	⇓P		**Pb**	**12 23 22.8**	**-0.3**
	baz=49							
YOJ				S		**Sb**	**12 23 31.4**	**-1.3**
	baz=49							
YOJ	**Yonaguni jima**	**0.72**	**42**			**Pb**	**12 23 22.8**	**-0.3**
HWA	**Hwalien**	**0.80**	**274**	*i* P		**Pn**	**12 23 25.0**	**+0.3**
	baz=257							
HWA				*e*S		**Sn**	**12 23 36.7**	**+0.9**
	baz=257							
TWD	**Chiawan**	**0.82**	**281**	⇑*i*P		**Pb**	**12 23 24.8**	**-0.1**
	baz=278							
TWD				*i* S		**Sb**	**12 23 36.0**	**+0.4**
	baz=278							
EWUT	**Wuta**	**0.83**	**309**	P		**Pb**	**12 23 24.6**	**-0.2**
	baz=305							
EWUT				S		**Sb**	**12 23 35.9**	**+0.2**
	baz=305							
NACB	**Ninganchiao**	**0.85**	**288**	⇑P		**Pb**	**12 23 25.2**	**0.0**
	baz=269							
NACB				S		**Sn**	**12 23 36.9**	**-0.1**
	baz=269							
NACB	**Ninganchiao**	**0.85**	**288**			**Pb**	**12 23 24.9**	**-0.4**
TWC	**Suao**	**0.90**	**320**	⇓*i*P		**Pn**	**12 23 25.3**	**-0.7**
	baz=317							
TWC				*e*S		**Sb**	**12 23 36.6**	**-1.0**
	baz=317							
ETLH	**Xiulin Townshi**	**0.96**	**288**	⇑P		**Pn**	**12 23 26.9**	**0.0**
	baz=273							
ETLH				S		**Sb**	**12 23 39.7**	**+0.3**
	baz=273							
ESL	**Shilin**	**0.96**	**264**	P		**Pn**	**12 23 26.5**	**-0.5**
	baz=251							
ESL				S		**Sb**	**12 23 39.1**	**-0.5**
	baz=251							
NDS	**Dongshan**	**1.00**	**316**	*i* P		**Pn**	**12 23 27.5**	**+0.1**
	baz=312							
NDS				S		**Sn**	**12 23 41.3**	**+0.7**
	baz=312							
EGFH	**Guangfu**	**1.00**	**256**	P		**Pn**	**12 23 27.6**	**+0.2**
	baz=253							
EGFH				S		**Sb**	**12 23 41.2**	**+0.7**
	baz=253							
HGSD	**Ruisui**	**1.06**	**247**	⇑P		**Pn**	**12 23 28.3**	**+0.1**
	baz=244							
HGSD				*e*S		**Sn**	**12 23 42.3**	**+0.2**
	baz=244							
ILA	**Ilan**	**1.07**	**322**	*i* P		**Pb**	**12 23 29.1**	**0.0**
	baz=308							
ILA				S		**Sb**	**12 23 43.7**	**+1.0**
	baz=308							
TWE	**Neicheng**	**1.09**	**317**	⇓P		**Pb**	**12 23 29.1**	**-0.2**
	baz=314							
TWE				*e*S		**Sb**	**12 23 44.8**	**+1.7**
	baz=314							
ENTT	**Nioudou**	**1.10**	**311**	*i* P		**Pb**	**12 23 29.4**	**-0.1**
	baz=294							
ENTT				*i* S		**Sb**	**12 23 45.2**	**+1.7**
	baz=294							
NTC	**Toucheng**	**1.10**	**328**	P		**Pb**	**12 23 29.9**	**+0.4**
	baz=325							
NTC				S		**Sb**	**12 23 44.7**	**+1.1**
	baz=325							
NDT	**Datong Townshi**	**1.11**	**308**	*i* P		**Pb**	**12 23 29.8**	**0.0**
	baz=305							
NDT				*e*S		**Sn**	**12 23 43.5**	**-0.1**
	baz=305							
NNSB	**Datong**	**1.12**	**297**	⇑P		**Pn**	**12 23 29.7**	**+0.4**
	baz=282							
NNSB				S		**Sb**	**12 23 44.3**	**0.0**
	baz=282							
NNSH	**Datong**	**1.12**	**297**	*i* P		**Pn**	**12 23 29.6**	**+0.4**
	baz=283							
NNSH				*i* S		**Sb**	**12 23 44.5**	**+0.3**
	baz=283							
WHF	**Hehuan Shan**	**1.13**	**282**	⇑*i*P		**Pn**	**12 23 29.8**	**+0.1**
	baz=279							
WHF				S		**Sb**	**12 23 44.9**	**+0.1**
	baz=279							
NNS	**Nan Shan**	**1.14**	**297**	⇑*i*P		**Pn**	**12 23 29.7**	**+0.3**
	baz=283							
NNS				*i* S		**Sb**	**12 23 45.0**	**+0.3**
	baz=283							
TWB1	**Santiao Chiao**	**1.17**	**338**	P		**Pn**	**12 23 30.1**	**+0.2**
	baz=351							
TWB1				S		**Sn**	**12 23 44.8**	**-0.2**
	baz=351							
FUSS	**Fushou**	**1.18**	**286**	*i* P		**Pb**	**12 23 30.8**	**-0.2**
	baz=284							
FUSS				S		**Sn**	**12 23 45.4**	**-0.1**
	baz=284							
OWD	**Renai**	**1.20**	**272**	*e*P		**Pn**	**12 23 30.5**	**+0.2**
	baz=269							
OWD				*e*S		**Sn**	**12 23 46.0**	**+0.3**
	baz=269							
CHGB	**Renai**	**1.20**	**277**	⇑P		**Pn**	**12 23 30.9**	**+0.4**
	baz=274							
CHGB				S		**Sn**	**12 23 45.6**	**-0.4**
	baz=274							
TIPB	**Shuangxi**	**1.21**	**330**	*i* P		**Pb**	**12 23 31.3**	**0.0**
	baz=328							
TIPB				S		**Sb**	**12 23 46.5**	**0.0**
	baz=328							
YULB	**Yu-li**	**1.21**	**244**	⇑P		**Pn**	**12 23 30.9**	**+0.6**
	baz=243							
YULB				S		**Sb**	**12 23 46.6**	**+0.2**
	baz=243							
YULB	**Yu-li**	**1.21**	**244**			**Pn**	**12 23 30.

TYC	**Yuchr**	**1.49 270**	*i* P	**Pb**	12 23 35.3	-0.7
	baz=268						
TYC			*i* S	**Sb**	12 23 54.3	-0.2
	baz=268						
YM10	**YM10**	**1.49 326**	*e*P	**Pn**	12 23 34.8	+0.6
	baz=324						
YM11	**YM11**	**1.49 327**	*e*P	**Pn**	12 23 35.2	+0.9
	baz=324						
YM04	**YM04**	**1.50 325**	*e*P	**Pn**	12 23 35.2	+0.8
	baz=323						
YM04			*e*S	**Sb**	12 23 55.0	0.0
	baz=323						
YM08	**YM08**	**1.50 327**	P	**Pn**	12 23 35.1	+0.7
	baz=325						
WHYT	**Xinyi Township**	**1.51 262**	*i* P	**Pb**	12 23 36.1	-0.3
	baz=248						
WHYT			S	**Sb**	12 23 55.1	-0.1
	baz=248						
NJD	**Zhudong**	**1.51 303**	*e*P	**Pb**	12 23 36.8	+0.4
	baz=300						
NJD			*e*S	**Sb**	12 23 56.6	+1.5
	baz=300						
LIOB	**Emei**	**1.52 299**	*i* P	**Pb**	12 23 36.5	-0.1
	baz=296						
LIOB			S	**Sb**	12 23 56.3	+0.8
	baz=296						
NTY	**Taoyuan**	**1.52 315**	*e*P	**Pb**	12 23 37.0	+0.3
	baz=328						
TWS1	**Kuangyinshan**	**1.52 321**	*i* P	**Pb**	12 23 36.3	-0.4
	baz=335						
TWS1			S	**Sb**	12 23 55.2	-0.3
	baz=335						
NSTT	**Nanjuang**	**1.52 298**	*i* P	**Pb**	12 23 36.5	-0.2
	baz=295						
ANP	**Anpu**	**1.54 325**	*e*P	**Pb**	12 23 36.1	-0.8
	baz=323						
LDUT	**Ludao**	**1.55 217**	P	**Pn**	12 23 35.1	+0.1
	baz=216						
LDUT			*e*S	**Sn**	12 23 53.0	-1.3
	baz=216						
TWY	**Chenhua**	**1.57 329**	P	**Pn**	12 23 36.3	+1.0
	baz=327						
NCU	**National Centr**	**1.58 312**	P	**Pb**	12 23 37.1	-0.5
	baz=309						
NCU			S	**Sb**	12 23 57.4	+0.3
	baz=309						
NCUH	**Zhongli**	**1.58 312**	*e*P	**Pb**	12 23 36.8	-0.8
	baz=309						
JIJ	**Ishigaki jima**	**1.58 73**	P	**Pn**	12 23 35.9	+0.5
JIJ			*e*S	**Sb**	12 23 56.3	-0.9
HSN1	**Hsinchu**	**1.58 303**	P	**Pb**	12 23 37.2	-0.5
	baz=300						
ALS	**Alishan**	**1.59 255**⇑	*i*P	**Pb**	12 23 37.4	-0.6
	baz=254						
ALS			*i* S	**Sb**	12 23 57.4	-0.4
	baz=254						
LONT	**Longtian**	**1.60 231**	*i* P	**Pn**	12 23 36.3	+0.6
	baz=221						
LONT			*i* S	**Sn**	12 23 56.3	+0.8
	baz=221						
WJS	**Zhushan**	**1.61 267**	P	**Pb**	12 23 38.3	+0.2
	baz=265						
WJS			*e*S	**Sb**	12 23 59.6	+1.6
	baz=265						
SBCB	**Hsinchu**	**1.62 303**	P	**Pb**	12 23 37.6	-0.7
	baz=300						
SBCB			*e*S	**Sb**	12 24 00.1	+1.8
	baz=300						
TWQ1	**Liyutan**	**1.62 286**	*i* P	**Pb**	12 23 38.0	-0.3
	baz=283						
TWQ1			*i* S	**Sb**	12 23 58.5	+0.2
	baz=283						
WWF	**Wufeng**	**1.64 275**	P	**Pb**	12 23 39.1	+0.5
	baz=266						
WWF			*e*S	**Sb**	12 24 01.7	+2.9
	baz=266						
WNT	**Mingjian**	**1.65 269**	*i* P	**Pb**	12 23 38.7	0.0
	baz=267						
WNT			*e*S	**Sb**	12 23 58.6	-0.4
	baz=267						
NSY	**Sanyi**	**1.65 288**	*i* P	**Pb**	12 23 39.0	+0.2
	baz=285						
NSY			*i* S	**Sb**	12 23 59.6	+0.4
	baz=285						
WNT1	**Nantou City**	**1.65 270**	P	**Pb**	12 23 39.3	+0.4
	baz=268						
WNT1			*e*S	**Sb**	12 24 02.4	+3.2
	baz=268						
TCU	**Taichung**	**1.67 278**	*i* P	**Pb**	12 23 39.4	+0.3
	baz=276						
TCU			*e*S	**Sb**	12 24 01.6	+1.9
	baz=276						
CHN5	**Tsauling**	**1.68 259**	*i* P	**Pb**	12 23 39.1	-0.3
	baz=248						
CHN5			S	**Sb**	12 23 59.3	-0.9
	baz=248						
TTN	**Taitung**	**1.69 227**	P	**Pb**	12 23 38.6	-0.9
	baz=216						
TWGBT	**Beinan**	**1.69 230**	P	**Pn**	12 23 37.0	0.0
	baz=242						
TWGBT			*e*S	**Sn**	12 23 58.1	+0.3
	baz=242						
TWG	**Pinlang**	**1.69 230**	P	**Pn**	12 23 37.5	+0.5
	baz=242						
TWG			*i* S	**Sn**	12 23 58.2	+0.4
	baz=242						
TWG	**Pinlang**	**1.69 230**		**Pn**	12 23 37.2	+0.2
STYH	**Taoyuan**	**1.73 245**	P	**Pn**	12 23 39.1	+1.6
	baz=235						
STYH			S	**Sb**	12 24 00.8	-0.8
	baz=235						
WDJ	**Dajia District**	**1.73 285**	P	**Pb**	12 23 39.3	-1.0
	baz=282						
WDJ			S	**Sb**	12 24 02.2	+0.5
	baz=282						
PCYT	**Pengchaiyu**	**1.74 348**	*e*P	**Pn**	12 23 37.4	-0.3
	baz=346						
STYT	**Tauyuan**	**1.75 245**	*i* P	**Pn**	12 23 39.1	+1.3
	baz=235						
STYT			S	**Sn**	12 24 00.5	+1.2
	baz=235						
WCHH	**Zhanghua**	**1.77 276**	P	**Pb**	12 23 40.9	+0.1
	baz=273						
WCHH			S	**Sb**	12 24 02.8	+0.3
	baz=273						
WDLH	**Douliu**	**1.79 263**	P	**Pb**	12 23 41.3	0.0
	baz=261						
WDLH			*e*S	**Sb**	12 24 04.5	+1.1
	baz=261						
JISG	**Ishigakijimahi**	**1.80 68**	P	**Pn**	12 23 38.7	+0.3
JISG			*e*S	**Sn**	12 24 00.6	+0.2
TPUB	**Ta-pu**	**1.81 250**	P	**Pb**	12 23 40.6	-0.9
	baz=238						
TPUB			S	**Sb**	12 24 04.2	+0.4
	baz=238						
TPUB	**Ta-pu**	**1.81 250**		**Pn**	12 23 40.2	+1.7
CHN4	**Tsaushan**	**1.82 252**	*i* P	**Pb**	12 23 41.3	-0.5
	baz=251						
CHN4			*i* S	**Sb**	12 24 05.2	+1.0
	baz=251						
WTP	**Ta-pu**	**1.84 249**	P	**Pb**	12 23 41.2	-0.9
	baz=238						
WTP			S	**Sb**	12 24 03.9	-0.8
	baz=238						
CHN2	**Minshiung**	**1.88 259**	P	**Pb**	12 23 42.8	+0.1
	baz=257						
CHN2			S	**Sb**	12 24 06.9	+1.1
	baz=257						
SLGT	**Liugui**	**1.92 242**	P	**Pb**	12 23 42.4	-1.1
	baz=233						
SLGT			S	**Sb**	12 24 07.2	+0.1
	baz=233						
ECL	**Taimali**	**1.93 227**	P	**Pn**	12 23 40.5	+0.3
	baz=237						
ECL			S	**Sn**	12 24 03.8	+0.3
	baz=237						
WRL	**Guolierlin Hig**	**1.93 270**	*e*P	**Pb**	12 23 42.9	-0.6
	baz=282						
WRL			*e*S	**Sb**	12 24 06.4	-0.8
	baz=282						
WTK	**Tuku**	**1.93 264**	P	**Pb**	12 23 43.3	-0.3
	baz=262						
WTK			*e*S	**Sb**	12 24 08.8	+1.5
	baz=262						
CHY	**Chiayi**	**1.93 258**	*e*P	**Pb**	12 23 42.8	-0.8
	baz=256						
SGST	**Jiashian**	**1.93 245**	P	**Pb**	12 23 42.4	-1.3
	baz=234						
SGST			S	**Sb**	12 24 07.2	-0.2
	baz=234						
CHN1	**Nanshi**	**1.94 248**	P	**Pb**	12 23 42.9	-0.8
	baz=247						
CHN1			S	**Sb**	12 24 07.9	+0.4
	baz=247						
TWK	**Hsinying**	**1.94 251**	P	**Pb**	12 23 43.3	-0.5
	baz=249						
TWK			S	**Sb**	12 24 08.1	+0.5
	baz=249						
SNST	**Tainan City**	**1.95 249**	P	**Pb**	12 23 43.2	-0.7
	baz=248						
WTCT	**Ta-ch'eng**	**2.01 269**	*i* P	**Pb**	12 23 44.1	-0.9
	baz=280						
WTCT			*i* S	**Sb**	12 24 09.6	-0.1
	baz=280						
LAY	**Lan-yu**	**2.06 205**	*e*P	**Pn**	12 23 41.7	-0.3
	baz=204						
LAY			*e*S	**Sn**	12 24 05.5	-1.3
	baz=204						
SSD	**Sandimen**	**2.06 236**	P	**Pn**	12 23 43.5	+1.4
	baz=227						
TSMG	**Majia**	**2.08 235**	*e*P	**Pn**	12 23 43.7	+1.5
	baz=226						
WSF	**Szhu**	**2.09 263**	P	**Pb**	12 23 45.2	-1.1
	baz=261						
WSF			S	**Sb**	12 24 11.7	-0.2
	baz=261						
ICHU	**Yijhu**	**2.09 255**	P	**Pb**	12 23 45.4	-1.0
	baz=253						
ICHU			*e*S	**Sb**	12 24 11.8	-0.2
	baz=253						
SCST	**Cishan**	**2.10 241**	*e*P	**Pb**	12 23 45.8	-0.7
	baz=239						
CHN3	**Shinhua**	**2.12 247**	P	**Pb**	12 23 46.9	+0.1
	baz=245						
CHN3			*e*S	**Sb**	12 24 13.6	+0.9
	baz=245						
TAW	**Tawu**	**2.13 223**	*e*P	**Pn**	12 23 43.9	+0.9
	baz=233						
MASBT	**Mashibuluo**	**2.14 233**	*e*P	**Pn**	12 23 44.8	+1.7
	baz=225						
EAST	**Anshuo**	**2.14 225**	*e*P	**Pn**	12 23 43.6	+0.4
	baz=223						
JTJ	**Tarama**	**2.15 70**	P	**Pn**	12 23 44.6	+1.3
CHN8	**Yiju**	**2.16 255**	P	**Pb**	12 23 46.0	-1.5
	baz=253						
CHN8			S	**Sb**	12 24 12.9	-1.0
	baz=253						
SGLT	**Jiouru**	**2.18 237**	*e*P	**Pb**	12 23 47.9	0.0
	baz=231						
TWM1	**Shoushan**	**2.18 240**	*e*P	**Pb**	12 23 47.5	-0.4
	baz=239						
SCLT	**Jiali**	**2.23 251**	*e*P	**Pb**	12 23 47.3	-1.4
	baz=249						
SCLT			*e*S	**Sb**	12 24 14.1	-1.7
	baz=249						
SSPT	**Xinbi**	**2.27 231**	*e*P	**Pn**	12 23 47.1	+2.2
	baz=225						
SLIU	**Shizi**	**2.30 223**	*e*P	**Pn**	12 23 46.0	+0.7
	baz=230						
SCZT	**Fangliau**	**2.30 228**	*e*P	**Pn**	12 23 47.4	+2.0
	baz=220						
TSEB	**Hengchuen, Pin**	**2.48 216**	*e*P	**Pn**	12 23 50.5	+2.6
	baz=216						
WLCH	**Liuqiu**	**2.49 232**	*e*P	**Pb**	12 23 52.5	-0.6
	baz=245						
HEN	**Hengchun**	**2.49 220**	*e*P	**Pn**	12 23 49.6	+1.6
	baz=219						
TWKBT	**Hengchun**	**2.50 218**	*e*P	**Pn**	12 23 49.4	+1.3
	baz=217						
TWK1	**Hengchun**	**2.50 218**	*e*P	**Pn**	12 23 49.3	+1.2
	baz=217						
JIRB	**Irabujima**	**2.62 69**	P	**Pn**	12 23 52.0	+2.3
JIRB			*e*S	**Sn**	12 24 22.5	+1.9
WDGT	**Dungji**	**2.67 256**	*e*P	**Pn**	12 23 52.3	+1.9
	baz=255						
PHUB	**P'eng-hu**	**2.70 262**	*e*P	**Pn**	12 23 52.3	+1.5
	baz=275						
PNG	**Penghu**	**2.70 263**	*e*P	**Pn**	12 23 52.4	+1.5
	baz=262						
JIKM	**Ikemajima**	**2.71 68**	P	**Pn**	12 23 53.6	+2.6
JIKM			*e*S	**Sn**	12 24 25.5	+2.5
JMJ	**Miyako jima 2**	**2.71 70**	*e*P	**Pn**	12 23 52.0	+1.0
	baz=71						
JMJ2	**Miyako jima3**	**2.72 72**	P	**Pn**	12 23 52.9	+1.8
JOGS	**Gusukube**	**2.80 72**	P	**Pn**	12 23 53.6	+1.4
VCHM	**Qimei**	**2.89 256**	*e*P	**Pn**	12 23 54.9	+1.4
	baz=255						
VWUC	**VWUC**	**2.96 292**	*e*P	**Pn**	12 23 54.6	+0.2
	baz=291						
MATB	**Ma-tsu**	**3.20 315**	*e*P	**Pn**	12 23 58.6	+1.0
	baz=300						
PTMZ	**Houxiangcun**	**3.26 291**⇑	*e*P	**Pn**	12 23 59.1	+0.6
	baz=290						
LYJJ	**Jianjiangzhen**	**3.60 317**	*e*P	**Pn**	12 24 03.0	-0.2
	baz=303						
XPSS	**Dashiqiu**	**3.64 326**	*e*P	**Pn**	12 24 03.9	+0.1
	baz=324						
KNM	**Kinmen**	**3.73 278**	*e*P	**Pn**	12 24 07.7	+2.7
	baz=278						
KNMB	**Chin-men Tao**	**3.78 279**	*e*P	**Pn**	12 24 05.8	+0.2
	baz=279						
KNMB	**Chin-men Tao**	**3.78 279**	Pn	**Pn**	12 24 06.0	+0.3
MHZQ	**Yeshan**	**3.81 305**	*e*P	**Pn**	12 24 06.0	-0.1
	baz=302						
AXDP	**Jialang**	**4.23 284**	*e*P	**Pn**	12 24 12.3	+0.5
	baz=284						
ZPLA	**Ao Xicun**	**4.33 271**	*e*P	**Pn**	12 24 14.1	+0.9
	baz=271						
JOW	**Kunigami**	**5.99 60**	P	**Pn**	12 24 35.0	-1.0
	4.5nm,0.3s,baz=132,slow=20,SNR=11						
JOW			S	Sn	12 25 32.8	-11
	baz=305,slow=22,SNR=1.0						
JOW	**Kunigami**	**5.99 60**		**Pn**	12 24 34.5	-1.6
SZP	**Santa**	**6.61 197**	Pn	**Pn**	12 24 45.4	+0.8
KSAR	**Wonju Array Be**	**14.25 18**	Pn	**Pn**	12 26 29.0	-0.2
KSRS	**Korea Array**	**14.28 18**	P	**Pn**	12 26 29.6	+0.1
	0.2nm,0.3s,baz=205,slow=14,SNR=3.0						
KSRS			LR	LR	12 32 10.6	
	comp=Z,3µm,20.1s,baz=151,slow=38						
KS19	**Wonju Array Si**	**14.30 18**	Pn	**Pn**	12 26 28.1	-1.8
CMAR	**Chiang Mai Arr**	**22.60 261**	P	**P**	12 28 10.2	+2.3
	0.6nm,0.3s,baz=60,slow=8.0,SNR=5.8						
SBUM	**Sibu**	**23.54 206**	P	**P**	12 28 18.0	+0.6
SBUM			IAmb	IAmb	12 28 20.0	
	comp=Z,7.0nm,0.9s						
SONM	**Songino Array**	**27.08 336**	P	**P**	12 28 50.1	+0.4
	comp=Z,1.1nm,0.5s,baz=155,slow=11,SNR=4.6						
SONM	**Songino Array**	**27.08 336**	P	**P**	12 28 49.2	-0.5
MK31	**Makanchi Array**	**39.35 316**	P	**P**	12 30 35.7	-0.6
MKAR	**Makanchi Array**	**39.35 316**	P	**P**	12 30 36.2	-0.1
	comp=Z,1.2nm,0.5s,baz=101,slow=10,SNR=21						
MKAR	**Makanchi Array**	**39.35 316**	P	**P**	12 30 35.8	-0.5
MAKZ	**Makanchi**	**39.56 316**	P	**P**	12 30 37.5	-0.5
MAKZ			IAmb	IAmb	12 30 38.4	
	comp=Z,5.1nm,1.2s						
KNRA	**Kununurra**	**39.83 171**	P	**P**	12 30 40.7	+0.3
ZALV	**Zalesovo Beam**	**41.11 327**	P	**P**	12 30 49.5	-1.1
	comp=Z,0.8nm,0.5s,baz=111,slow=8.3,SNR=4.7						
FITZ	**Fitzroy Crossi**	**41.88 175**	P	**P**	12 30 56.7	-0.5
FITZ			IAmb	IAmb	12 31 20.5	
	comp=Z,17nm,1.4s						
COEN	**Coen**	**42.74 150**	P	**P**	12 31 04.4	+0.1
COEN			IAmb	IAmb	12 31 06.6	
	comp=Z,6.7nm,0.9s						
KURBB	**Kurchatov Arra**	**43.08 320**	P	**P**	12 31 05.9	-0.8
	comp=Z,0.5nm,0.5s,baz=111,slow=8.5,SNR=5.0						
AAK	**Ala-Archa**	**43.61 307**	P	**P**	12 31 11.7	+0.3
	comp=Z,0.9nm,0.3s,baz=146,slow=7.0,SNR=4.0						
WB0	**Warramunga Arr**	**44.95 164**	P	**P**	12 31 23.0	+1.0
WRA	**Warramunga Arr**	**45.10 164**	P	**P**	12 31 24.3	+1.0
	comp=Z,4.7nm,0.7s,baz=346,slow=8.8,SNR=21						
WRA	**Warramunga Arr**	**45.10 164**	P	**P**	12 31 22.3	-1.0
WB2	**Warramunga Arr**	**45.11 164**	P	**P**	12 31 23.7	+0.3
WB2			IAmb	IAmb	12 31 25.6	
	comp=Z,5.9nm,0.8s						
WR0	**Warramunga Arr**	**45.17 164**	P	**P**	12 31 24.8	+1.0
GAR	**Garm**	**46.36 302**	P	**P**	12 31 33.2	-0.1
KK31	**Karatay Array**	**46.57 307**	P	**P**	12 31 35.2	+0.4
KK31			IAmb	IAmb	12 31 37.2	
	comp=Z,2.3nm,0.9s						
KKAR	**Karatay Array**	**46.57 307**	P	**P**	12 31 35.5	+0.7
CHGR	**Chuyangaron**	**47.25 301**	P	**P**	12 31 39.3	-0.9
AS31	**Alice Springs**	**48.58 166**	P	**P**	12 31 50.5	-0.1
AS31			IAmb	IAmb	12 31 55.1	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**48.59 166**	P	**P**	12 31 51.7	+1.2
	comp=Z,2.1nm,0.6s,baz=354,slow=14,SNR=21						
ASAR	**Alice Springs**	**48.59 166**	P	**P**	12 31 50.7	+0.1
HNR	**Honiara**	**49.38 128**	P	**P**	12 32 00.0	+3.2
ABKAR	**Akbulak array**	**54.47 314**	P	**P**	12 32 33.3	-1.0
ABKAR	**Akbulak array**	**54.47 314**	P	**P**	12 32 33.8	-0.6
ABKAR			IAmb	IAmb	12 32 35.9	
	comp=Z,1.5nm,0.8s						
GEYT	**Alibeck**	**55.95 301**	P	**P**	12 32 45.9	+0.6
	comp=Z,2.3nm,0.6s,baz=60,slow=5.8,SNR=3.6						
GEYT	**Alibeck**	**55.95 301**	P	**P**	12 32 44.8	-0.5
GEYT			IAmb	IAmb	12 32 47.8	
	comp=Z,2.5nm,0.8s						
STKA	**Stephens Creek**	**58.42 161**	P	**P**	12 33 03.9	+1.4
	comp=Z,2.0nm,0.7s,baz=326,slow=6.6,SNR=4.1						
STKA	**Stephens Creek**	**58.42 161**	P	**P**	12 33 01.6	-0.9
SOCY	**Socotra**	**65.63 273**	P	**P**	12 33 51.2	-0.4
MLY	**Manley**	**67.24 27**	P	**P**	12 34 00.5	-0.5
MLY			IAmb	IAmb	12 34 11.5	
	comp=Z,1.5nm,1.2s						
MDM	**Murphy Dome**	**68.30 27**	P	**P**	12 34 07.5	-0.2
MDM			IAmb	IAmb	12 34 19.2	
	comp=Z,4.1nm,1.4s						
RND	**Reindeer**	**68.31 29**	P	**P**	12 34 06.6	-1.2
BMAR	**Burnt Mountain**	**69.28 24**	P	**P**	12 34 12.7	-1.0
FINES	**FINESS Array B**	**72.27 330**	P	**P**	12 34 31.9	0.0
	comp=Z,0.7nm,0.4s,baz=56,slow=4.7,SNR=6.1						
FINES	**FINESS Array B**	**72.27 330**	P	**P**	12 34 31.0	-0.9
ANTO	**Ankara**	**74.85 307**	P	**P**	12 34 46.9	-0.7
BR231	**Keskin MP Arra**	**74.88 307**	P	**P**	12 34 47.0	-0.8
BESE	**Bessie Mountai**	**76.21 32**	P	**P**	12 34 53.5	-1.6
YKA	**Yellowknife Ar**	**82.75 23**	P	**P**	12 35 29.1	-1.3
	comp=Z,0.1nm,0.3s,baz=313,slow=7.5,SNR=12						

*IDC **20** 12:30:35.6±2.0, 48˚.26N×95˚.54E, h0km, mb1 3.2/3, mb1mx3.0/36, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=45.5km s-min=16.6km az=5.0*
*ASRS **20** 12:30:37.7±0.3, 48˚N±2˚×9˚6E±˚, h5km, MLh4.4/13, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
*NNC **20** 12:31:31.1±2.0, 48˚.05N×92˚.64E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=17.5km s-min=14.1km az=65.0*

ISC 20 12:30:40.6±1.1, 48˚36N±0˚.07×95˚.59E±0˚.04, h10km, n35, σ2≧90/62, 3C, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**2.57**	**29**	Pg	**Pb**	**Pb**	**12 31 27.4**	**+0.6**
KNGR				Sg	**Sg**	**Sg**	**12 32 06.5**	**+3.3**
KZLR	**Kyzyl**	**3.42**	**348**	Pg	**Pb**	**Pb**	**12 31 41.5**	**+0.1**
KZLR				Sg	**Sg**	**Sg**	**12 32 29.4**	**-1.1**
TEL	**Teeli**	**4.39**	**309**	Pg	**Pb**	**Pb**	**12 31 56.3**	**-1.5**
TEL				Sg	**Sg**	**Sg**	**12 32 57.3**	**-4.2**
ARDR	**Aradan**	**4.44**	**343**	Pn	**Pn**	**Pn**	**12 31 49.6**	**+1.6**
ARDR				Pg	**Pb**	**Pb**	**12 31 59.4**	**+0.8**
ARDR				Sg	**Sg**	**Sg**	**12 33 00.8**	**-2.3**
CUR	**Chagan-Uzun**	**5.05**	**293**	Pn	**Pn**	**Pn**	**12 31 55.0**	**-1.5**
CUR				Pg	**Pb**	**Pb**	**12 32 09.3**	**+0.2**
CUR				Sg	**Sb**	**Sb**	**12 33 14.8**	**+5.0**
BLRR	**Bol'shaya Rech**	**5.09**	**338**	Pn	**Pn**	**Pn**	**12 31 56.0**	**-0.9**
BLRR				Pg	**Pb**	**Pb**	**12 32 09.7**	**0.0**
DJOS	**Djoyskaya Sosn**	**5.18**	**331**	Pn	**Pn**	**Pn**	**12 31 58.6**	**+0.5**
DJOS				Pg	**Pb**	**Pb**	**12 32 14.4**	**+3.2**
DJOS				Sg	**Sg**	**Sg**	**12 33 23.0**	**-3.7**
CERR	**Cheremushki**	**5.22**	**331**	Pn	Pn	Pn	12 31 54.0	-4.7
CERR				Pg	**Pb**	**Pb**	**12 32 12.5**	**+0.6**
DJO	**Djoy, Khakassi**	**5.23**	**329**	Pn	**Pn**	**Pn**	**12 31 56.8**	**-1.9**
DJO				Pg	**Pb**	**Pb**	**12 32 11.4**	**-0.6**
DJO				Sg	**Sg**	**Sg**	**12 33 23.8**	**-4.4**
ZAK	**Zakamensk**	**5.42**	**65**	Pn	**Pn**	**Pn**	**12 32 00.7**	**-0.8**
ZAK				Pg	**Pb**	**Pb**	**12 32 16.8**	**+1.5**
ZAK				Sg	**Sg**	**Sg**	**12 33 31.1**	**-3.3**
ULGR	**Ulagan, Altay**	**5.46**	**297**	Pn	**Pn**	**Pn**	**12 32 02.1**	**0.0**
ULGR				Pg	**Pb**	**Pb**	**12 32 16.4**	**+0.3**
ULGR				Sg	**Sb**	**Sb**	**12 33 29.0**	**+7.4**
TBTR	**Tabat**	**5.52**	**328**	Pn	Pn	Pn	12 31 58.1	-4.7
TBTR				Pg	**Pb**	**Pb**	**12 32 19.1**	**+2.1**
TBTR				Sg	**Sg**	**Sg**	**12 33 33.8**	**-3.9**
DGZ	**Jazzator, Alta**	**5.53**	**287**	Pg	**Pb**	**Pb**	**12 32 18.5**	**+1.2**
DGZ				Sg	**Sb**	**Sb**	**12 33 26.6**	**+2.9**
CHBI	**Chibit, Altay**	**5.63**	**293**	Pn	Pn	Pn	12 31 58.4	-6.1
CHBI				Pg	**Pb**	**Pb**	**12 32 19.8**	**+0.8**
CHBI				Sg	**Sb**	**Sb**	**12 33 32.5**	**+5.9**
ABNR	**Abakan**	**5.97**	**336**	Sg	**Sg**	**Sg**	**12 33 55.8**	**+3.6**
TLY	**Talaya**	**6.16**	**54**	Pn	**Pn**	**Pn**	**12 32 11.0**	**-0.6**
TLY				Pg	**Pb**	**Pb**	**12 32 27.5**	**-0.4**
TLY				Sg	**Sg**	**Sg**	**12 33 55.8**	**-2.5**
ARTR	**Artybash**	**6.36**	**306**	Pg	**Pb**	**Pb**	**12 32 34.8**	**+3.6**
ARTR				Sg	**Sg**	**Sg**	**12 33 57.2**	**-7.2**
TASR	**Tashtagol**	**6.59**	**315**	Pg	**Pb**	**Pb**	**12 32 37.2**	**+2.3**
TASR				Sg	**Sg**	**Sg**	**12 34 06.6**	**-5.4**
ORY	**Orie**	**6.66**	**358**	Pg	**Pb**	**Pb**	**12 32 38.1**	**+1.8**
ORY				Sg	**Sg**	**Sg**	**12 34 10.5**	**-3.6**
LUZB	**Luzhba, Kemero**	**6.78**	**324**	Pn	**Pn**	**Pn**	**12 32 17.5**	**-2.6**
LUZB				Pg	**Pb**	**Pb**	**12 32 39.7**	**+1.3**
LUZB				Sg	**Sg**	**Sg**	**12 34 14.3**	**-3.6**
SHRR	**Shira**	**7.01**	**333**	Pg	**Pb**	**Pb**	**12 32 43.7**	**+1.3**
SHRR				Sg	**Sg**	**Sg**	**12 34 23.6**	**-1.8**
GALT	**Gorno-Altaysk,**	**7.16**	**304**	Sg	**Sg**	**Sg**	**12 34 30.1**	**-0.2**
SONM	**Songino Array**	**7.26**	**90**	Pn	**Pn**	**Pn**	**12 32 24.2**	**-2.6**
	0.6nm,0.3s,baz=275,slow=15,SNR=9.3							
SONM				Pg	**Pb**	**Pb**	**12 32 48.3**	**+1.6**
	1.2nm,0.3s,baz=276,slow=18,SNR=4.0							
SONM				Lg	Lg	Lg	12 34 24.2	
	5.8nm,0.3s,baz=286,slow=32,SNR=16							
UKR	**Ust'-Kan**	**7.48**	**294**	Pg	**Pb**	**Pb**	**12 32 53.8**	**+3.5**
UKR				Sg	**Sg**	**Sg**	**12 34 36.0**	**-4.4**
ELT	**Eltsovka**	**7.69**	**313**	Pg	**Pb**	**Pb**	**12 32 53.1**	**-0.8**
ELT				Sg	**Sg**	**Sg**	**12 34 47.9**	**+0.8**
ULN	**Ulaanbaatar**	**

comp=Z,1µm,0.3s
LFRS El Faro 1.75 74 *e*P **Pb 12 40 32.9 +0.5**
LFRS *e*S **Sb 12 40 53.0 -1.0**
LBRS Las Brisas 1.80 71 *e*P **Pb 12 40 33.3 +0.2**
MTO3 Montecristo 1.87 48 *e*P **Pn 12 40 32.0 +1.2**
ESQI Esquipulas 1.99 45 *e*P **Pb 12 40 34.7 -1.8**
ESQI *e*S **Sn 12 40 56.7 +0.3**
ESQI IAML 12 40 59.7
comp=Z,230nm,0.5s
MRL Marmol 2.21 29 *e*P **Pn 12 40 36.0 +0.5**
MRL *e*S **Sb 12 41 04.5 -2.7**

*IDC **20** 13:03:16.6±0.6, 10°.90S×161°.88E, h30km±3km, mb4.1/16, mb1 4.3/18, mb1mx4.2/25, mbtmp4.3/18, ML1.8/1, MS4.1/2, Ms1 4.1/2, ms1mx3.6/40, Error ellipse: s-maj=17.4km s-min=13.4km az=129.0*
*NEIC **20** 13:03:22.9±1.9, 11°.39S±0°.07×161°.91E±0°.08, h35km±1km, mb4.8/41, Error ellipse: s-maj=14.2km s-min=9.2km az=127.0*
*BJI **20** 13:03:27.4±0.0, 10°.87S×162°.08E, h69km, mB5.3/13, mb4.8/29, Ms5.0/2, Ms7 4.8/2*
ISC 20 13:03:17.7±0.4, 10°.79S±0°.06×162°.02E±0°.06, h36km, n108, σ1§69/76, mb4.7/51, 3C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.45**	**303**	Pn	**Pn**	**13 03 55.7**	**+0.6**
	155nm,0.3s,baz=162,slow=4.8,SNR=60						
HNR				Sn	**Sn**	**13 04 25.5**	**+1.7**
	146nm,0.3s,baz=161,slow=18,SNR=4.3						
HNR				LR	LR	13 05 02.9	
	comp=Z,3µm,18.6s,baz=190,slow=44						
HNR	**Honiara**	**2.45**	**303**		**Pn**	**13 03 55.9**	**+0.8**
HNR	**Honiara**	**2.45**	**303**	P	**Pn**	**13 03 56.5**	**+1.4**
SANVU	**Saraoutou**	**6.85**	**133**	Pn	**Pn**	**13 04 57.3**	**+1.6**
DVP	**Devils Point**	**9.12**	**140**	P	**Pn**	**13 05 28.9**	**+2.0**
	286µm,0.8s						
KOUNC	**Koumac, New Ca**	**9.95**	**168**	P	**Pn**	**13 05 40.3**	**+2.1**
DZM	**Mont Dzumac**	**11.99**	**160**	Pn	**Pn**	**13 06 07.7**	**+1.5**
	4.9nm,0.3s,baz=350,slow=19,SNR=46						
DZM				Sn	**Sn**	**13 08 15.7**	**-3.2**
	2.0nm,0.3s,baz=311,slow=20,SNR=3.5						
DZM	**Mont Dzumac**	**11.99**	**160**	Pn	**Pn**	**13 06 05.8**	**-0.5**
PMG	**Port Moresby**	**14.70**	**274**	Pn	**Pn**	**13 06 42.0**	**-1.1**
	0.2nm,0.3s,baz=333,slow=7.9,SNR=1.8						
PMG				LR	LR	13 11 57.2	
	comp=Z,1µm,21.0s,baz=90,slow=36						
PMG	**Port Moresby**	**14.70**	**274**	Pn	**P**	**13 06 49.3**	**+0.5**
MANU	**Manus Island**	**16.95**	**300**	P	**P**	13 07 22.7	+8.9
MSVF	**Nonsavu**	**16.99**	**116**	P	**P**	**13 07 17.8**	**+3.4**
CTA	**Charters Tower**	**17.77**	**237**	P	**P**	**13 07 23.8**	**+0.8**
	2.1nm,0.3s,baz=64,slow=13,SNR=37						
CTAO	**Charters Tower**	**17.77**	**237**		**P**	**13 07 23.8**	**+0.8**
CTAO				IAmb	IAmb	13 07 27.9	
	comp=Z,60nm,0.9s						
EIDS	**Eidsvold**	**17.82**	**214**		**P**	**13 07 24.0**	**+0.5**
PATS	**Pohnpei**	**17.90**	**348**	P	**P**	**13 07 25.2**	**+0.9**
PATS				IAmb	IAmb	13 07 34.1	
	comp=Z,73nm,1.0s						
COEN	**Coen**	**18.67**	**258**	P	**Pn**	**13 07 35.2**	**+1.8**
ARMA	**Armidale**	**21.79**	**205**	P	**P**	**13 08 08.1**	**+1.3**
ARMA				IAmb	IAmb	13 08 09.8	
	comp=Z,53nm,1.3s						
JAY	**Jayapura**	**22.69**	**290**	P	**P**	**13 08 21.6**	**+5.1**
	comp=Z,16nm,0.9s,baz=72,slow=13,SNR=3.8						
JAY	**Jayapura**	**22.69**	**290**	P	**P**	**13 08 17.9**	**+1.4**
	comp=Z,12nm,1.1s						
GENI	**Genyem**	**23.16**	**289**	P	**P**	**13 08 22.8**	**+1.5**
	comp=Z,39nm,1.1s						
WR0	**Warramunga Arr**	**27.98**	**248**	P	**P**	**13 09 04.9**	**-0.4**
WB0	**Warramunga Arr**	**28.07**	**248**	P	**P**	**13 09 05.1**	**-1.0**
WB2	**Warramunga Arr**	**28.15**	**248**	P	**P**	**13 09 06.2**	**-0.7**
WRA	**Warramunga Arr**	**28.16**	**248**	P	**P**	**13 09 04.4**	**-2.5**
	comp=Z,3.7nm,0.8s,baz=75,slow=9.0,SNR=8.9						
WRA	**Warramunga Arr**	**28.16**	**248**	P	**P**	**13 09 06.1**	**-0.8**
STKA	**Stephens Creek**	**28.22**	**219**	P	**P**	**13 09 04.1**	**-3.2**
	comp=Z,1.1nm,0.9s,baz=36,slow=14,SNR=2.0						
H11S2	**WAKE ISLAND Hy**	**29.46**	**9**	T	T	13 40 19.8	
	baz=189,slow=76,SNR=1256						
H11S3	**WAKE ISLAND Hy**	**29.46**	**9**	T	T	13 40 19.9	
	baz=189,slow=76,SNR=186						
H11S1	**WAKE ISLAND Hy**	**29.48**	**9**	T	T	13 40 21.2	
	baz=189,slow=76,SNR=220						
AS31	**Alice Springs**	**29.68**	**241**	P	**P**	**13 09 22.8**	**+2.5**
ASAR	**Alice Springs**	**29.68**	**241**	P	**P**	**13 09 18.3**	**-2.1**
	comp=Z,1.4nm,0.8s,baz=64,slow=10,0,SNR=11						
ASAR				pP	**pP**	**13 09 27.6**	**-2.8**
	comp=Z,5.2nm,0.8s,baz=63,slow=9.9,SNR=16						
ASAR	**Alice Springs**	**29.68**	**241**	P	**P**	**13 09 22.5**	**+2.1**
URZ	**Urewera**	**30.51**	**156**	P	**P**	**13 09 25.2**	**-2.3**
	comp=Z,8.2nm,1.1s,baz=307,slow=20,SNR=2.3						
URZ	**Urewera**	**30.51**	**156**	P	**P**	**13 09 28.4**	**+0.9**
URZ				IAmb	IAmb	13 09 39.0	
	comp=Z,25nm,1.3s						
TOO	**Toolangi**	**30.53**	**206**	P	**P**	**13 09 29.2**	**+1.5**
TOO				IAmb	IAmb	13 09 30.4	
	comp=Z,11nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**30.69**	**9**	T	T	13 41 52.0	
	baz=188,slow=76,SNR=15						
H11N3	**WAKE ISLAND Hy**	**30.70**	**9**	T	T	13 41 52.9	
	baz=188,slow=76,SNR=116						
H11N2	**WAKE ISLAND Hy**	**30.71**	**9**	T	T	13 41 53.4	
	baz=188,slow=76,SNR=101						
BKZ	**Black Stump Fm**	**31.07**	**158**	P	**P**	**13 09 33.5**	**+1.0**
BKZ				IAmb	IAmb	13 09 35.3	
	comp=Z,14nm,1.1s						
QRZ	**Quartz Range**	**31.32**	**165**	P	**P**	**13 09 34.4**	**-0.2**
QRZ				IAmb	IAmb	13 09 59.0	
	comp=Z,16nm,1.0s						
TUWZ	**Tuamarina**	**32.27**	**163**	P	**P**	**13 09 43.3**	**+0.4**
THZ	**Tophouse**	**32.30**	**165**	P	**P**	**13 09 43.0**	**-0.3**
THZ				IAmb	IAmb	13 10 10.7	
	comp=Z,12nm,1.0s						
BBOO	**Buckleboo**	**32.41**	**223**	P	**P**	**13 09 45.3**	**+1.0**
BBOO				IAmb	IAmb	13 10 02.6	
	comp=Z,11nm,1.0s						
BNDI	**Bandanaira**	**32.41**	**279**	P	**P**	**13 09 45.0**	**+0.5**
	comp=Z,86nm,1.0s						
KNRA	**Kununurra**	**32.71**	**258**	P	**P**	**13 09 46.2**	**-0.9**
RPZ	**Rata Peaks**	**33.73**	**168**	P	**P**	**13 09 54.4**	**-1.3**
	comp=Z,9.4nm,1.0s,baz=342,slow=18,SNR=2.2						
MQZ	**McQueen's Vall**	**34.07**	**166**	P	**P**	**13 09 58.4**	**-0.2**
MQZ				IAmb	IAmb	13 10 06.0	
	comp=Z,32nm,1.3s						
FITZ	**Fitzroy Crossi**	**35.92**	**254**	P	**P**	**13 10 13.4**	**-1.5**
	comp=Z,5.9nm,0.6s,baz=63,slow=8.6,SNR=20						
FITZ				pP	**pP**	**13 10 22.5**	**-2.3**
	comp=Z,3.3nm,0.5s,baz=101,slow=7.7,SNR=4.6						
FITZ	**Fitzroy Crossi**	**35.92**	**254**	P	**P**	**13 10 13.6**	**-1.3**
FITZ				IAmb	IAmb	13 10 22.9	
	comp=Z,9.6nm,0.9s						
SANI	**Sanana**	**36.80**	**281**	P	**P**	**13 10 21.5**	**-1.0**
	comp=Z,22nm,1.1s						
FORT	**Forrest**	**37.24**	**233**	P	**P**	**13 10 26.1**	**0.0**
BNSI	**Bone**	**41.99**	**275**	P	**P**	**13 11 06.0**	**+0.2**
	comp=Z,25nm,1.1s						
SPSI	**Sidrap Palu**	**42.41**	**276**	P	**P**	**13 11 10.6**	**+1.4**
	comp=Z,12nm,1.3s						
MYLDM	**Lahad Datu**	**46.14**	**288**	P	P	13 11 45.6	+6.5
MORW	**Morawa**	**46.55**	**240**	P	**P**	**13 11 42.5**	**+0.3**
MORW				IAmb	IAmb	13 11 52.8	
	comp=Z,9.4nm,0.9s						
KKM	**Kota Kinabalu**	**48.57**	**288**	P	P	13 12 04.1	+5.9
STKI	**Sintang**	**51.38**	**279**	P	P	**13 12 21.7**	**+2.3**
JGF	**Kuroka**	**51.69**	**334**	P	P	13 12 29.1	+7.7
MJAR	**Matsushiro Arr**	**52.15**	**336**	pP	pP	13 12 32.3	-3.3
	comp=Z,2.8nm,0.8s,baz=164,slow=8.1,SNR=3.2						
PPBI	**Pangkal Pinang**	**56.10**	**275**	P	P	13 13 04.0	+10
JKA	**Kamikawa-asahi**	**57.42**	**343**	P	P	13 13 11.7	+9.0
ASAJ	**Asahikawa**	**57.43**	**343**	P	P	13 13 10.9	+8.2
	comp=Z,10nm,0.7s,baz=246,slow=3.4,SNR=5.8						
KSRS	**Korea Array**	**57.66**	**328**	pP	pP	13 13 12.7	-2.9
	comp=Z,3.4nm,1.0s,baz=148,slow=7.4,SNR=4.7						
NJ2	**Nanjing**	**59.31**	**318**	*e*P	P	13 13 26.1	+10
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**61.14**	**336**	P	P	13 13 37.3	+8.9
USRK	**Ussuriysk Ar.**	**61.14**	**336**	pP	pP	13 13 37.9	-1.6
	comp=Z,5.2nm,0.7s,baz=152,slow=7.6,SNR=9.5						
USRK	**Ussuriysk Ar.**	**61.14**	**336**	P	P	13 13 37.1	+8.7
PEA0B	**Petropavlovsk-**	**63.75**	**357**	P	P	13 13 55.6	+10
PEA0B				IAmb	IAmb	13 14 04.3	
	comp=Z,12nm,1.1s						
PETK	**Petropavlovsk-**	**63.75**	**357**	P	**P**	**13 13 46.9**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=156,slow=7.3,SNR=2.5						
PETK				pP	**pP**	**13 13 55.7**	**-1.2**
	comp=Z,3.6nm,0.7s,baz=156,slow=6.4,SNR=7.8						
PETK	**Petropavlovsk-**	**63.75**	**357**	P	P	13 13 55.2	+9.5
VNDA	**Vanda**	**66.72**	**180**	P	P	**13 14 05.0**	**+0.3**
	comp=Z,5.5nm,0.7s,baz=348,slow=7.0,SNR=27						
VNDA	**Vanda**	**66.72**	**180**	P	**P**	**13 14 05.6**	**+1.0**
VNDA				IAmb	IAmb	13 14 06.5	
	comp=Z,8.3nm,0.8s						
SBA	**Scott Base**	**67.09**	**179**	P	**P**	**13 14 08.6**	**+1.6**
SBA				IAmb	IAmb	13 14 10.1	
	comp=Z,9.5nm,1.1s						
XAN	**Xi'an**	**67.28**	**314**	P	P	13 14 16.8	+7.8
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI	**Kunming**	**67.88**	**303**	⇑P	P	13 14 22.5	+9.3
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
KMI				pmax	pmax		
	comp=Z,460nm,8.8s						
KMI				LR	LR		
	comp=Z,290nm,21.4s						
KMI				LR	LR		
	comp=Z,330nm,16.3s						
KMI				LR	LR		
	comp=Z,460nm,20.1s						
CMAR	**Chiang Mai Arr**	**68.67**	**295**	P	**P**	**13 14 17.0**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=131,slow=5.3,SNR=1.5						
CMAR				pP	**pP**	**13 14 26.1**	**-3.1**
	comp=Z,3.6nm,0.9s,baz=121,slow=4.0,SNR=8.5						
CMAR	**Chiang Mai Arr**	**68.67**	**295**	P	P	13 14 23.2	+5.2
CHTO	**Chiang Mai**	**68.79**	**295**	P	P	13 14 24.3	+5.6
CHTO				IAmb	IAmb	13 14 29.0	
	comp=Z,8.1nm,1.2s						
HHC	**Hu-ho-hao-te**	**69.31**	**321**	*e*P	P	13 14 29.6	+8.0
CD2	**Chengdu**	**69.56**	**309**	P	P	13 14 31.6	+8.2
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
HIA	**Hailar**	**70.39**	**332**	P	P	13 14 36.1	+8.1
HIA				IAmb	IAmb	13 14 37.9	
	comp=Z,5.7nm,0.7s						
MA2	**Magadan**	**70.71**	**354**	P	P	13 14 38.6	+8.9
MA2				IAmb	IAmb	13 14 39.2	
	comp=Z,7.2nm,1.2s						
LZH	**Lanzhou**	**71.90**	**314**	*e*P	P	13 14 47.9	+10
LZH				pP	PcP	13 15 03.8	+7.5
LZH				sP	sP	13 15 10.3	+17
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
ULN	**Ulaanbaatar**	**75.98**	**325**	P	P	13 15 10.3	+9.1
ULN				IAmb	IAmb	13 15 11.7	
	comp=Z,16nm,1.1s						
GTA	**Gaotai**	**76.27**	**315**	*e*P	P	13 15 12.5	+9.5
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SONM	**Songino Array**	**76.33**	**325**	P	**P**	**13 15 02.8**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=146,slow=6.2,SNR=3.9						
SONM				pP	**pP**	**13 15 12.7**	**-1.9**
	comp=Z,8.8nm,0.9s,baz=133,slow=6.0,SNR=17						
SONM	**Songino Array**	**76.33**	**325**	P	P	13 15 11.1	+7.9
SONM				IAmb	IAmb	13 15 13.5	
	comp=Z,8.0nm,0.9s						
YAK	**Yakutsk**	**76.86**	**345**	P	P	13 15 14.8	+9.1
BILL	**Bilibino**	**78.68**	**2**	P	P	13 15 24.9	+9.2
BILL				IAmb	IAmb	13 15 27.6	
	comp=Z,20nm,1.0s						
MAW	**Mawson**	**83.57**	**202**	P	**P**	**13 15 41.3**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=110,slow=7.1,SNR=8.2						
MAW	**Mawson**	**83.57**	**202**	P	**P**	**13 15 41.9**	**+0.1**
ILAR	**Eielson Array**	**84.47**	**20**	P	**P**	**13 15 46.0**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=250,slow=5.2,SNR=17						
ILAR				pP	**pP**	**13 15 57.0**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=237,slow=5.1,SNR=12						
WMQ	**Urumqi**	**86.34**	**316**	*e*P	P	13 16 03.9	+7.6
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.9s						
NVAR	**Mina Array Bea**	**88.67**	**51**	P	**P**	**13 16 08.9**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=240,slow=7.5,SNR=7.6						
NVAR				pP	**pP**	**13 16 18.2**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=232,slow=6.8,SNR=7.0						
MKAR	**Makanchi Array**	**90.85**	**317**	P	**P**	**13 16 16.1**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=100,slow=4.9,SNR=2.4						
MKAR				pP	**pP**	**13 16 25.0**	**-4.2**
	comp=Z,2.8nm,0.7s,baz=102,slow=5.4,SNR=21						
MKAR	**Makanchi Array**	**90.85**	**317**	P	P	13 16 22.8	+5.2
SYO	**Syowa Base**	**90.94**	**198**	*e*PcP	**PcP**	**13 16 21.0**	**+2.5**
SYO	**Syowa Base**	**90.94**	**198**	*e*sP	sP	13 16 34.5	+3.4
ZALV	**Zalesovo Beam**	**91.22**	**325**	pP	pP	13 16 27.2	-3.5
	comp=Z,0.5nm,0.4s,baz=129,slow=5.7,SNR=2.1						
KURBB	**Kurchatov Arra**	**94.15**	**321**	pP	pP	13 16 40.1	-4.2
	comp=Z,1.5nm,0.8s,baz=108,slow=3.2,SNR=14						
C36M	**Paulatuk**	**94.43**	**20**	P	P	13 16 42.9	+9.4
PDAR	**Pinedale Array**	**96.08**	**48**	P	**P**	**13 16 43.2**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=282,slow=0.8,SNR=2.3						
YKA	**Yellowknife Ar**	**96.44**	**28**	P	**P**	**13 16 42.1**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=257,slow=4.4,SNR=13						
YKA				pP	**pP**	**13 16 52.7**	**-1.7**
	comp=Z,1.3nm,0.8s,baz=255,slow=4.4,SNR=11						
VNA3	**Neumayer Olymp**	**97.96**	**183**	P	**P**	**13 16 48.8**	**-0.9**
VNA2	**Neumayer--Watz**	**98.16**	**183**	P	**P**	**13 16 50.0**	**-0.6**
	baz=201,slow=1.6						
VNA1	**Neumayer--Stat**	**98.48**	**183**	P	Pdif	13 16 53.7	+1.7
BVAR	**Borovoye Array**	**99.50**	**322**	pP	pP	13 17 05.0	-3.5
	comp=Z,0.5nm,0.7s,baz=93,slow=8.9,SNR=3.8						

*IDC **20** 13:14:55.7±1.6, 3°.36S×135°.83E, h43km±17km, mb3.6/6, mb1 3.8/9, mb1mx3.5/42, mbtmp3.9/9, ML3.9/2, Error ellipse: s-maj=22.3km s-min=12.4km az=14.0*
*NEIC **20** 13:14:56.0±1.9, 3°.49S±0°.08×135°.89E±0°.06, h50km±8km, mb4.4/16, Error ellipse: s-maj=11.0km s-min=9.3km az=192.0*
ISC 20 13:14:54.8±0.5, 3°.52S±0°.07×135°.85E±0°.06, h37km, n36, σ1§73/36, mb4.0/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.65**	**279**		**Pn**	**13 15 50.5**	**+1.8**
JAY	**Jayapura**	**4.95**	**79**	P	**Pn**	**13 16 07.3**	**+0.7**
	2.9nm,0.3s,baz=211,slow=12,SNR=13						
JAY				S	**Sn**	**13 17 04.3**	**+1.8**
	1.8nm,0.3s,baz=187,slow=17,SNR=1.7						
SIJI	**Sorong**	**5.29**	**300**	P	**Pn**	**13 16 12.6**	**+1.4**
	32nm,0.3s,baz=188,slow=23,SNR=290						
SIJI				S	**Sn**	**13 17 09.1**	**-1.8**
	8.0nm,0.3s,baz=301,slow=23,SNR=9.0						
MTN	**Manton Dam**	**10.38**	**206**		**Pn**	**13 17 24.6**	**+3.5**
COEN	**Coen**	**12.64**	**146**	Pn	**Pn**	**13 17 52.1**	**0.0**
PMG	**Port Moresby**	**12.66**	**118**	P	**Pn**	**13 17 52.6**	**+0.2**
	0.4nm,0.3s,baz=322,slow=18,SNR=1.9						
SOEI	**Soe**	**13.07**	**241**	Pn	**Pn**	**13 18 01.8**	**+3.8**
LUWI	**Luwuk**	**13.30**	**280**	Pn	**Pn**	**13 18 03.2**	**+2.1**
BATI	**Baumata**	**13.80**	**241**	P	**P**	**13 18 12.9**	**-3.0**
	1.8nm,0.3s,baz=132,slow=19,SNR=1.7						
KNRA	**Kununurra**	**13.95**	**210**	Pn	**Pn**	**13 18 10.4**	**+0.4**
WB0	**Warramunga Arr**	**16.21**	**185**	Pn	**Pn**	**13 18 38.9**	**-1.0**
WRAB	**Tennant Creek**	**16.38**	**185**	P	P	**13 18 45.8**	**+1.3**
WRAB				IAmb	IAmb	13 18 49.5	
	comp=Z,38nm,0.8s						
WB2	**Warramunga Arr**	**16.39**	**185**	Pn	**Pn**	**13 18 42.2**	**0.0**
WB2				IAmb	IAmb	13 18 49.7	
	comp=Z,7.7nm,0.7s						
WRA	**Warramunga Arr**	**16.39**	**185**	P	**Pn**	**13 18 40.1**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=3.5,slow=13,SNR=3.6						
WRA				S	Sn	13 21 33.3	-10
	comp=Z,0.4nm,0.3s,baz=3.5,slow=23,SNR=4.1						
WR0	**Warramunga Arr**	**16.39**	**184**	Pn	**Pn**	**13 18 42.6**	**+0.4**
WR0				IAmb	IAmb	13 19 06.9	
	comp=Z,16nm,1.4s						
FITZ	**Fitzroy Crossi**	**17.61**	**214**	P	**P**	**13 18 59.2**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=38,slow=11,SNR=9.8						
FITZ				S	Sn	13 22 01.4	-11
	comp=Z,0.3nm,0.3s,baz=128,slow=19,SNR=2.2						
FITZ	**Fitzroy Crossi**	**17.61**	**214**	P	**P**	**13 18 59.4**	**+1.4**
AS31	**Alice Springs**	**20.12**	**185**	Pn	Pn	13 19 28.1	+0.5
ASAR	**Alice Springs**	**20.12**	**185**	P	Pn	13 19 28.1	+0.4
	comp=Z,3.6nm,0.4s,baz=7.5,slow=11,SNR=77						
ASAR				S	**S**	**13 23 05.2**	**-4.5**
	comp=Z,1.0nm,0.8s,baz=3.3,slow=27,SNR=4.4						
ASAR	**Alice Springs**	**20.12**	**185**	Pn	Pn	13 19 27.9	+0.2
PSA00	**Pilbara Seismi**	**23.75**	**220**	P	**P**	**13 20 05.0**	**+1.1**
PSA00				IAmb	IAmb	13 20 19.6	
	comp=Z,53nm,1.4s						
PATS	**Pohnpei**	**24.67**	**65**	P	**P**	**13 20 12.5**	**+0.2**
FORT	**Forrest**	**28.10**	**194**	P	**P**	**13 20 44.7**	**+1.6**
FORT				IAmb	IAmb	13 20 45.5	
	comp=Z,18nm,0.9s						
BBOO	**Buckleboo**	**29.14**	**180**	P	**P**	**13 20 53.2**	**+0.8**
BBOO				IAmb	IAmb	13 21 18.4	
	comp=Z,22nm,1.4s						
ARMA	**Armidale**	**30.63**	**153**	P	**P**	**13 21 04.5**	**-1.3**
TOO	**Toolangi**	**35.02**	**167**	P	**P**	**13 21 42.5**	**-1.4**
TOO				IAmb	IAmb	13 21 47.3	
	comp=Z,14nm,1.4s						
JTU	**Tsushima**	**38.32**	**351**	P	**P**	**13 22 12.4**	**+0.4**
SMY	**Shemya**	**64.64**	**25**	P	**P**	**13 25 27.3**	**-1.2**
MK31	**Makanchi Array**	**68.71**	**324**	P	**P**	**13 25 53.6**	**-1.1**
MK31				IAmb	IAmb	13 26 17.5	
	comp=Z,2.9nm,1.4s						
MKAR	**Makanchi Array**	**68.71**	**324**	P	**P**	**13 25 54.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=112,slow=7.8,SNR=12						
MKAR	**Makanchi Array**	**68.71**	**324**	P	**P**	**13 25 54.1**	**-0.6**
ZALV	**Zalesovo Beam**	**71.22**	**331**	P	**P**	**13 26 08.8**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=120,slow=5.5,SNR=1.9						
KURBB	**Kurchatov Arra**	**72.77**	**326**	P	**P**	**13 26 18.1**	**-1.1**
	comp=Z,0.7nm,0.8s,baz=120,slow=5.6,SNR=6.1						
VNDA	**Vanda**	**75.25**	**174**	P	**P**	**13 26 34.3**	**+1.0**
BVAR	**Borovoye Array**	**78.36**	**326**	P	**P**	**13 26 50.5**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=126,slow=7.3,SNR=5.9						
ILAR	**Eielson Array**	**87.75**	**25**	P	**P**	**13 27 39.0**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=243,slow=5.9,SNR=1.4						

*IDC **20** 13:33:17.6±4.0, 30°.12N×141°.50E, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.3/43, mbtmp3.6/4, ML2.8/2, MS3.8/1, Ms1 3.8/1, ms1mx2.9/36, Error ellipse: s-maj=191.5km s-min=28.3km az=74.0*
*NEIC **20** 13:33:21.8±0.9, 30°.19N±0°.08×141°.6E±0°.2, h38km±11km, mb4.5/8, Error ellipse: s-maj=25.3km s-min=11.1km az=80.0*
ISC 20 13:33:21.4±0.9, 30°.20N±0°.08×141°.6E±0°.2, h35km, n17, σ0§57/16, mb4.4/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.13**	**170**	Pn	**Pn**	**13 34 07.5**	**-0.9**
	2.4nm,0.3s,baz=306,slow=17,SNR=5.1						
JCJ				Sn	**Sn**	**13 34 44.6**	**+0.1**
	9.2nm,0.3s,baz=287,slow=19,SNR=5.7						
JCJ	**Chichijima**	**3.13**	**170**		**Pn**	**13 34 08.8**	**+0.5**
MJAR	**Matsushiro Arr**	**6.93**	**337**	Pn	**Pn**	**13 35 00.4**	**-0.1**
	0.1nm,0.3s,baz=159,slow=10,SNR=1.7						
MAJO	**Matsushiro**	**6.93**	**337**	Pn	**Pn**	**13 35 00.9**	**+0.4**
USRK	**Ussuriysk Ar.**	**15.91**	**334**	LR	LR	13 42 00.0	
	comp=Z,333nm,20.2s,baz=248,slow=33						
KAPI	**Kappang**	**40.78**	**215**	P	**P**	**13 40 59.0**	**-0.5**
KAPI				IAmb	IAmb	13 41 00.9	
	comp=Z,6.8nm,1.1s						
KNRA	**Kununurra**	**47.25**	**197**	P	**P**	**13 41 52.3**	**+1.1**
PBA	**Port Blair**	**48.80**	**259**	P	P	13 42 02.9	-0.5
WB0	**Warramunga Arr**	**50.15**	**189**	P	**P**	**13 42 13.4**	**-0.2**
WB0				IAmb	IAmb	13 42 32.4	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**50.32**	**189**	P	**P**	**13 42 15.1**	**+0.3**
WR0				IAmb	IAmb	13 42 17.1	
	comp=Z,10.0nm,1.4s						
WRA	**Warramunga Arr**	**50.33**	**189**	P	**P**	**13 42 15.6**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=7.4,slow=7.7,SNR=5.4						
WRA	**Warramunga Arr**	**50.33**	**189**	P	**P**	**13 42 15.4**	**+0.4**
RSO	**Redoubt South**	**52.30**	**35**	P	**P**	**13 42 29.7**	**+0.2**
AS31	**Alice Springs**	**54.06**	**189**	P	**P**	**13 42 42.5**	**-0.1**
ASAR	**Alice Springs**	**54.06**	**189**	P	**P**	**13 42 43.2**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=4.0,slow=5.8,SNR=18						
ASAR	**Alice Springs**	**54.06**	**189**	P	**P**	**13 42 42.9**	**+0.3**
MDM	**Murphy Dome**	**54.71**	**29**	P	**P**	**13 42 46.4**	**-0.5**
MDM				IAmb	IAmb	13 42 59.1	
	comp=Z,6.4nm,1.4s						

*NOU **20** 13:48:23.9, 17°.76S×178°.

comp=Z,57nm,0.6s,baz=191,slow=5.2,SNR=3.8
HNR Honiara 22.41 289 P **P** **13 52 42.5 -0.4**
BFZ Birch Farm 23.15 190 P **P** **13 52 47.9 -1.3**
SNZO South Karori 24.04 192 P **P** **13 52 57.2 +0.2**
QRZ Quartz Range 24.10 197 P **P** **13 52 57.2 -0.4**
QRZ IAmb IAmb 13 52 58.7
comp=Z,17nm,1.0s
BHW Baring Head 24.11 192 P **P** **13 52 57.0 -0.6**
NNZ Nelson 24.25 195 P **P** **13 52 57.3 -1.6**
TUWZ Tuamarina 24.32 194 P **P** **13 52 57.3 -2.2**
THZ Tophouse 24.88 195 P **P** **13 53 03.2 -1.4**
THZ IAmb IAmb 13 53 26.1
comp=Z,13nm,1.0s
KHZ Kahutara 25.35 194 P **P** **13 53 06.8 -1.7**
LTZ Lake Taylor 26.00 195 P **P** **13 53 12.4 -2.0**
LTZ IAmb IAmb 13 53 15.7
comp=Z,11nm,0.6s
OXZ Oxford 26.57 195 P **P** **13 53 17.7 -1.6**
OXZ IAmb IAmb 13 53 19.2
comp=Z,36nm,1.3s
MQZ McQueen's Vall 26.78 194 P **P** **13 53 19.8 -1.4**
RPZ Rata Peaks 27.19 196 P **P** **13 53 23.1 -1.7**
comp=Z,3.4nm,0.5s,baz=29,slow=10,SNR=1.6
FOZ Fox Glacier 27.38 198 P **P** **13 53 25.3 -1.1**
PPT Papeete 27.69 94 P **P** **13 53 29.2 -0.3**
comp=Z,32nm,0.6s,baz=253,slow=19,SNR=3.6
WKZ Wanaka 28.79 198 P **P** **13 53 37.4 -1.3**
EIDS Eidsvold 29.06 250 P **P** **13 53 40.5 -0.8**
EIDS IAmb IAmb 13 53 42.6
comp=Z,21nm,0.8s
ARMA Armidale 29.76 240 P **P** **13 53 48.1 +0.7**
KWAJ Kwajalein Atol 29.78 332 P **P** **13 53 46.7 -0.9**
DCZ Deep Cove 29.95 200 P **P** **13 53 48.4 -0.2**
CTAO Charters Tower 33.22 260 P **P** **13 54 15.9 -1.1**
CTAO IAmb IAmb 13 54 19.4
comp=Z,14nm,0.8s
PMG Port Moresby 34.23 280 P **P** **13 54 25.3 0.0**
PMG Port Moresby 34.23 280 P **P** **13 54 25.6 +0.2**
MANU Manus Island 36.87 291 P **P** **13 54 47.6 +0.3**
MANU IAmb IAmb 13 54 50.4
comp=Z,10nm,0.9s
COEN Coen 36.87 270 P **P** **13 54 47.3 +0.1**
COEN IAmb IAmb 13 54 48.1
comp=Z,13nm,0.7s
TOO Toolangi 37.01 231 P **P** **13 54 49.0 +0.9**
TAU Tasmania Unive 38.11 222 P **P** **13 54 57.3 +0.4**
TAU IAmb IAmb 13 55 24.3
comp=Z,33nm,1.2s
STKA Stephens Creek 38.44 241 P **P** **13 55 00.2 +0.4**
comp=Z,14nm,0.5s,baz=88,slow=9.7,SNR=70
STKA Stephens Creek 38.44 241 P **P** **13 55 00.7 +0.9**
WAKE Wake Island 39.65 338 P **P** **13 55 08.5 -1.0**
BBOO Buckleboo 43.22 241 P **P** **13 55 37.8 +0.1**
KHLU Kahalu`u 43.42 32 P **P** **13 55 38.7 -0.7**
HMH Humu'ula Sheep 43.64 33 P **P** **13 55 41.4 +0.1**
WR0 Warramunga Arr 44.22 260 P **P** **13 55 44.5 -1.1**
WB0 Warramunga Arr 44.38 260 P **P** **13 55 45.5 -1.2**
WB0 IAmb IAmb 13 56 04.6
comp=Z,23nm,1.5s
WB2 Warramunga Arr 44.40 260 P **P** **13 55 45.8 -1.1**
WB2 IAmb IAmb 13 55 47.8
comp=Z,15nm,1.0s
WRA Warramunga Arr 44.41 260 P **P** **13 55 46.3 -0.7**
comp=Z,7.2nm,0.5s,baz=96,slow=6.9,SNR=90
WRA PcP **PcP** **13 57 19.0 +0.9**
comp=Z,2.8nm,0.6s,baz=91,slow=3.4,SNR=5.8
WRA ScP **ScP** **14 00 19.0 +3.5**
comp=Z,1.1nm,1.1s,baz=95,slow=6.8,SNR=3.0
WRA S **S** **14 01 37.8 -2.8**
comp=Z,0.5nm,0.6s,baz=94,slow=14,SNR=2.5
WRA Warramunga Arr 44.41 260 P **P** **13 55 45.7 -1.3**
AS31 Alice Springs 44.58 254 P **P** **13 55 48.2 -0.1**
ASAR Alice Springs 44.58 254 P **P** **13 55 48.5 +0.2**
comp=Z,75nm,0.5s,baz=89,slow=8.0,SNR=2042
ASAR PcP **PcP** **13 57 19.4 +0.8**
comp=Z,2.9nm,0.4s,baz=100,slow=4.0,SNR=6.1
ASAR ScP **ScP** **14 00 20.3 +4.1**
comp=Z,1.1nm,0.8s,baz=98,slow=4.4,SNR=4.8
ASAR S **S** **14 01 42.0 -0.9**
comp=Z,4.0nm,0.9s,baz=89,slow=15,SNR=17
ASAR Alice Springs 44.58 254 P **P** **13 55 47.6 -0.7**
MTN Manton Dam 48.57 268 P **P** **13 56 17.8 -0.6**
MTN IAmb IAmb 13 56 25.1
comp=Z,19nm,1.0s
FORT Forrest 49.81 245 P **P** **13 56 26.9 -0.4**
KNRA Kununurra 50.26 264 P **P** **13 56 30.8 0.0**
KNRA IAmb IAmb 13 56 57.6
comp=Z,26nm,1.2s
FAKI Fak Fak 50.34 281 P **P** **13 56 31.0 -0.5**
FAKI IAmb IAmb 13 56 48.3
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 52.81 261 P **P** **13 56 49.5 +0.4**
SOEI Soe 55.84 270 P **P** **13 57 12.1 +1.6**
SOEI IAmb IAmb 13 57 20.6
comp=Z,20nm,0.9s
PSA00 Pilbara Seismi 57.69 255 P **P** **13 57 22.6 -0.5**
PSA00 IAmb IAmb 13 57 33.9
comp=Z,35nm,1.2s
PSA00 Pilbara Seismi 57.69 255 P **P** **13 57 21.2 -1.8**
PSA00 IAmb IAmb 13 57 23.1
comp=Z,13nm,0.8s
MORW Morawa 60.28 246 P **P** **13 57 40.1 -0.1**
MORW IAmb IAmb 13 57 43.2
comp=Z,29nm,1.4s
SBA Scott Base 60.44 184 P **P** **13 57 41.0 +0.7**
VNDA Vanda 60.46 185 P **P** **13 57 41.8 +1.3**
comp=Z,1.0nm,0.7s,baz=1.3,slow=6.1,SNR=4.8
VNDA Vanda 60.46 185 P **P** **13 57 42.0 +1.5**
TOLI2 Tolitoli 62.48 281 P **P** **13 57 55.1 +0.4**
GIRL Giralia 62.68 253 P **P** **13 57 57.3 +1.4**
CASY Casey 66.07 205 P **P** **13 58 17.6 +1.1**
MYLDM Lahad Datu 66.08 284 P **P** **13 58 19.3 +1.8**
MYLDM IAmb IAmb 13 58 36.1
comp=Z,23nm,1.4s
JMM Marumori 67.28 326 P **P** **13 58 24.5 +0.2**
JMM IAmb IAmb 13 58 26.5
comp=Z,32nm,1.0s
JGF Kuroka 67.57 322 P **P** **13 58 26.6 +0.3**
JGF IAmb IAmb 13 58 41.5
comp=Z,26nm,1.1s
MJAR Matsushiro Arr 67.74 323 P **P** **13 58 26.5 -0.7**
comp=Z,17nm,0.6s,baz=161,slow=6.1,SNR=36
MAJO Matsushiro 67.75 323 P **P** **13 58 26.8 -0.4**
MAT Matsushiro 67.75 323 P **P** **13 58 27.2 -0.1**
MJB9 Matsu-Tunnel 67.75 323 P **P** **13 58 26.9 -0.4**
KKM Kota Kinabalu 68.51 284 P **P** **13 58 32.0 -0.5**
KKM IAmb IAmb 13 58 33.4
comp=Z,32nm,1.5s
JWT Wachi 68.51 321 P **P** **13 58 32.2 +0.3**
JSD Sado 68.78 325 P **P** **13 58 33.8 +0.4**
AMKA Amchitka 68.98 359 P **P** **13 58 33.9 -0.4**
JSU Suzuyama 69.24 315 P **P** **13 58 37.0 +0.5**
JSU IAmb IAmb 13 58 54.6
comp=Z,47nm,1.3s
UGM Wanagama 69.42 268 P **P** **13 58 37.4 -0.5**
ADK Adak 69.48 1 P **P** **13 58 36.8 -0.5**
JHS Saijyo 69.72 319 P **P** **13 58 40.0 +0.8**
ATKA Atka Island 69.89 3 P **P** **13 58 38.9 -0.8**
SMY Shemya 70.59 355 P **P** **13 58 43.1 -0.8**
NIKH Nikolski High 71.06 6 P **P** **13 58 45.9**
baz=190
YULB Yu-li 71.56 303 P **P** **13 58 49.6 -0.6**
YULB IAmb IAmb 13 59 14.2
comp=Z,44nm,1.5s
SSLB Suanglung 72.03 303 P **P** **13 58 52.2 -0.7**
TPUB Ta-pu 72.05 303 P **P** **13 58 52.1 -0.9**
TPUB IAmb IAmb 13 58 56.7
comp=Z,15nm,0.7s
YHNB Yeheng 72.13 304 P **P** **13 58 53.7 +0.1**
KSM Kuching 72.45 277 P **P** **13 58 56.4 +0.8**
KSM IAmb IAmb 13 58 57.3
comp=Z,12nm,0.7s
YSS Yuzh-Sakhalins 73.28 334 P **P** **13 58 59.4 -0.1**
YSS IAmb IAmb 13 59 01.1
comp=Z,24nm,1.2s
PET Petropavlovsk 73.29 346 P **P** **13 58 58.7 -0.8**
PET IAmb IAmb 13 59 00.6
comp=Z,40nm,1.3s
PEA0B Petropavlovsk- 73.59 345 P **P** **13 59 01.1 -0.1**
PEA0B IAmb IAmb 13 59 01.9
comp=Z,24nm,0.8s
PETK Petropavlovsk- 73.59 345 P **P** **13 59 01.3 +0.1**
comp=Z,15nm,0.6s,baz=119,slow=7.9,SNR=105
PETK PKiKP **PKiKP** **14 04 50.4 -0.2**
comp=Z,1.2nm,0.8s,baz=134,slow=3.9,SNR=6.3
PETK Petropavlovsk- 73.59 345 P **P** **13 59 00.9 -0.3**
KSRS Korea Array 74.52 318 P **P** **13 59 08.0 +1.2**
comp=Z,2.9nm,0.6s,baz=129,slow=6.5,SNR=12
KSAR Wonju Array Be 74.54 318 P **P** **13 59 07.3 +0.4**
SDPT Sand Point 74.55 11 P 13 59 06.5
baz=198
SDPT Sand Point 74.55 11 P **P** **13 59 05.7 -0.8**
SCZ2 Santa Cruz Isl 76.26 47 P 13 59 16.7
baz=237
USA0B Ussuriysk Arra 76.46 326 P **P** **13 59 17.4 0.0**
USRK Ussuriysk Ar. 76.46 326 P **P** **13 59 18.4 +1.0**
comp=Z,4.7nm,0.6s,baz=121,slow=4.5,SNR=18
USRK Ussuriysk Ar. 76.46 326 P **P** **13 59 17.8 +0.4**
SCI2 San Clemente I 76.48 49 P 13 59 18.3
baz=238
SAO San Andreas Ge 76.56 44 P **P** **13 59 19.0 +0.9**
PKM Mcpherson Peak 76.62 46 P 13 59 19.6
baz=237
SMMC Simmler 76.73 46 P 13 59 20.3
baz=237
PAGB Antelope Grade 76.78 45 P **P** **13 59 18.3 -1.1**
PAGB IAmb IAmb 13 59 22.4
comp=Z,24nm,1.4s
CIS Catalina Islan 76.80 48 P 13 59 20.5
baz=238
KCPM Cahto Peak 76.89 41 P **P** **13 59 19.5 -0.5**
KCPM IAmb IAmb 13 59 19.6
comp=Z,28nm,1.3s
SII Sitkinak Islan 76.94 14 P 13 59 19.5
baz=204
SII Sitkinak Islan 76.95 14 P **P** **13 59 19.7 -0.1**
KMRM Mail Ridge 77.14 40 P **P** **13 59 22.6 +1.3**
KMRM IAmb IAmb 13 59 23.5
comp=Z,27nm,0.9s
ARVC Arvin 77.43 47 P 13 59 23.5
baz=237
MWC Mount Wilson 77.49 48 P **P** **13 59 24.1 +0.7**
MWC IAmb IAmb 13 59 24.9
comp=Z,10nm,0.6s
VES Vestal, Richgr 77.64 46 P 13 59 24.8
baz=237
O02D Mt. Diablo Mer 77.68 40 P 13 59 25.3
baz=234
NJ2 Nanjing 77.74 310 *e*P **P** **13 59 26.0 +1.4**
NJ2 pmax pmax
comp=Z,15nm,0.5s
OHAK Old Harbor 77.75 14 P 13 59 24.1
baz=205
OHAK Old Harbor 77.75 14 P **P** **13 59 24.2 +0.1**
MURC Murrieta 77.77 49 P 13 59 25.4
baz=239
KRMB Red Mountain 77.80 39 P **P** **13 59 27.1 +2.2**
KRMB IAmb IAmb 13 59 45.9
comp=Z,45nm,1.5s
EDW2 Edwards Air Fo 77.88 47 P 13 59 26.5
baz=238,SNR=12
ISA Isabella, Lake 77.96 46 P 13 59 26.9
baz=238,SNR=12
ISA Isabella, Lake 77.96 46 P **P** **13 59 27.0 +1.1**
MONP2 Monument Peak 77.97 50 P 13 59 26.8
baz=239,SNR=7.6
CMB Columbia Colle 77.97 43 P **P** **13 59 25.8 -0.1**
MDJ Mudanjiang 78.03 325 P **P** **13 59 27.1 +1.2**
MDJ pP pP 14 01 24.1 -2.4
MDJ S **S** **14 08 35.4 +2.4**
MDJ ScS **ScS** **14 08 56.5 +3.9**
MDJ Mudanjiang 78.03 325 sS sS 14 12 01.6 -7.6
MDJ pmax pmax
comp=Z,29nm,1.6s
MDJ pmax pmax
comp=Z,220nm,4.4s
MDJ Mudanjiang 78.03 325 P **P** **13 59 26.9 +1.0**
MDJ IAmb IAmb 13 59 28.4
comp=Z,17nm,0.8s
IKP In-Ko-Pah, Jac 78.07 50 P 13 59 27.6
baz=240
AFDM Forest Hills D 78.11 42 P **P** **13 59 26.8 +0.3**
ORV Oroville 78.12 42 P **P** **13 59 26.6 0.0**
N02D Trinity Center 78.20 40 P 13 59 27.7
baz=234
PFO Pinyon Flats O 78.31 49 P 13 59 27.8
baz=239
M02C Callahan 78.36 39 P 13 59 28.8
baz=233
O03E Paynes Creek 78.36 41 P 13 59 28.8
baz=234
L02E Cave Junction 78.36 38 P 13 59 29.5
baz=233
LRMC Laurel Mtn Rad 78.41 47 P 13 59 29.3
baz=238,SNR=5.4
KDAK Kodiak Island 78.42 14 P 13 59 27.5
baz=205
KDAK Kodiak Island 78.42 14 P **P** **13 59 27.9 +0.2**
KDAK IAmb IAmb 13 59 38.2
comp=Z,42nm,1.2s
SWSC Sam W. Stewart 78.45 50 P 13 59 29.2
baz=240
CWC Cottonwood Cre 78.64 46 P 13 59 30.8
baz=238
YBH Yreka Blue Hor 78.64 39 P **P** **13 59 29.2 -0.2**
K02D Willamette Mer 78.65 38 P 13 59 30.3
baz=233
MLAC Mammoth, Mammo 78.77 44 P 13 59 31.5
baz=237
J01E Myrtle Point 78.78 38 P 13 59 30.8
baz=232
BELC Belle Mtn. Jos 78.83 49 P 13 59 31.7
baz=239,SNR=6.2
WAKR Walker 78.86 43 P **P** **13 59 31.7 +0.9**
HEC Hector,Ludlow 79.02 48 P 13 59 32.2
baz=239,SNR=5.2
HUMO Hull Mountain 79.02 38 P **P** **13 59 32.4 +1.2**
BEKR Beckworth 79.02 42 P **P** **13 59 32.4 +0.9**
BEKR IAmb IAmb 13 59 33.1
comp=Z,8.9nm,0.6s
PNTR Pine Nut 79.07 43 P **P** **13 59 33.0 +1.1**
PNTR IAmb IAmb 13 59 35.1
comp=Z,24nm,0.8s
L04D Klamath Falls 79.17 39 P 13 59 33.2
baz=234
GLA Glamis 79.21 50 P 13 59 34.2
baz=240
YERR Yerington 79.25 43 P **P** **13 59 33.6 +0.8**
YERR IAmb IAmb 13 59 34.4
comp=Z,15nm,0.6s
LHV Little Huntoon 79.33 44 P **P** **13 59 34.2 +1.3**
LHV IAmb IAmb 13 59 36.7
comp=Z,24nm,1.2s
I02D Swisshome 79.41 37 P 13 59 34.2
baz=232
GRAC Grapevine Rang 79.42 46 P 13 59 34.9
baz=238,SNR=6.3
I03D Drain, OR 79.44 37 P 13 59 34.6
baz=233
GMRC Granite Mounta 79.47 48 P 13 59 35.0
baz=240,SNR=6.0
FURC Furnace Creek, 79.49 46 P 13 59 34.9
baz=238
RYN Ryan 79.52 44 P **P** **13 59 34.9 +0.7**
IRM Iron Mountain 79.53 49 P 13 59 35.5
baz=240,SNR=8.9
PAHR Pah Rah Range 79.55 42 P **P** **13 59 35.1 +0.8**
NVAR Mina Array Bea 79.56 44 P **P** **13 59 35.2 +0.7**
comp=Z,5.5nm,0.7s,baz=225,slow=8.7,SNR=49
SHOC Shoshone, Teco 79.61 47 P 13 59 35.5
baz=239
TUQ Turquoise Moun 79.61 48 P 13 59 35.4
baz=239
NV11 Mina Array Sit 79.66 44 P **P** **13 59 35.3 +0.4**
NV11 IAmb IAmb 13 59 37.5
comp=Z,36nm,1.5s
K04D Chiloquin, OR 79.74 39 P 13 59 35.7
baz=234
113A Mohawk Valley, 79.85 51 P **P** **13 59 36.5 +0.7**
J04D Umpqua Nationa 79.89 38 P 13 59 36.5
baz=234
KVN Kaiserville 80.03 44 P **P** **13 59 37.3 +0.4**
I04A Tendick Farm, 80.05 38 P 13 59 37.2
baz=233
TPH Tonopah 80.09 45 P **P** **13 59 38.0 +0.8**
TPH IAmb IAmb 13 59 39.0
comp=Z,55nm,1.2s
TPNV Topopah Spring 80.16 46 P 13 59 38.6
baz=239,SNR=11
TPNV Topopah Spring 80.16 46 P **P** **13 59 38.3 +0.7**
214A Organ Pipe Nat 80.17 52 P **P** **13 59 38.4 +0.8**
214A IAmb IAmb 13 59 41.6
comp=Z,20nm,1.4s
214A Organ Pipe Nat 80.17 52 P 13 59 39.3
baz=242
NEE2 Needles Airpor 80.20 49 P 13 59 39.0
baz=240
MOD Modoc Plateau 80.21 40 P **P** **13 59 38.4 +0.7**
MOD IAmb IAmb 13 59 39.3
comp=Z,11nm,0.7s
H04D Lebanon 80.29 37 P 13 59 38.3
baz=233
K05A Summer Lake 80.32 39 P **P** **13 59 39.4 +1.1**
K05A IAmb IAmb 13 59 40.3
comp=Z,15nm,0.7s
PDMCI Parker Dam,Lak 80.32 49 P 13 59 39.3
baz=241,SNR=5.3
G03D McMinnville, O 80.41 36 P 13 59 39.8
baz=232
BRSE Bradley Lake S 80.61 14 P 13 59 39.0
baz=207
SHPR Sheep Range 80.69 47 P **P** **13 59 41.3 +1.0**
H04A Detroit Lake 80.70 37 P **P** **13 59 40.2 +0.2**
H04A IAmb IAmb 13 59 42.0
comp=Z,8.9nm,0.6s
PINE Pine Mountain 80.91 38 P **P** **13 59 42.3 +1.0**
PINE IAmb IAmb 13 59 45.0
comp=Z,41nm,1.4s
Y14A Wickenburg 80.97 50 P **P** **13 59 42.5 +0.8**
I05D Terrebonne, OR 80.99 38 P 13 59 42.5
baz=234
MA2 Magadan 81.10 345 P **P** **13 59 40.8 -0.9**
MA2 IAmb IAmb 13 59 41.8
comp=Z,12nm,0.8s
PRN Pahroc Range 81.22 46 P **P** **13 59 43.9 +0.9**
PRN IAmb IAmb 13 59 46.7
comp=Z,20nm,1.1s
R11A Troy Canyon, C 81.33 45 P 13 59 44.5
baz=239,SNR=8.8
R11A Troy Canyon, C 81.33 45 P **P** **13 59 43.7 0.0**
CAPN Captain Cook N 81.44 13 P 13 59 44.3
baz=206
O22K Cooper Landing 81.50 14 P **P** **13 59 43.5 -0.2**
baz=208
O22K Cooper Landing 81.50 14 P **P** **13 59 43.5 -0.2**
WVOR Wild Horse Val 81.53 40 P **P** **13 59 45.2 +0.8**
WVOR IAmb IAmb 13 59 46.2
comp=Z,16nm,1.0s
G05D Wamic, OR 81.53 37 P 13 59 45.1
baz=234
GAMB Gambell 81.56 3 P 13 59 44.0
baz=187
GAMB Gambell 81.57 3 P **P** **13 59 44.5 +0.6**
GAMB IAmb IAmb 13 59 45.2
comp=Z,15nm,0.6s
SPCR Spurr Chakacha 81.60 13 P 13 59 43.9
baz=205
E04D Cinebar 81.61 35 P 13 59 46.1
baz=233
F05D White Salmon 81.83 36 P 13 59 46.6
baz=234
TUC Tucson 81.86 52 P 13 59 47.7
baz=243
TUC Tucson 81.86 52 P **P** **13 59 47.6 +1.3**
TUC IAmb IAmb 13 59 50.6
comp=Z,18nm,1.2s
D04E Lakebay 81.87 35 P 13 59 47.0
baz=233
D03D Eldon 81.92 34 P 13 59 46.6
baz=232
I07A Izee 81.92 39 P **P** **13 59 47.5 +1.0**
I07A IAmb IAmb 13 59 48.2
comp=Z,14nm,0.9s
RC01 Rabbit Creek A 82.04 14 P 13 59 46.1
baz=208
J08A Circle Bar Ran 82.14 40 P **P** **13 59 48.0 +0.5**
J08A IAmb IAmb 13 59 49.2
comp=Z,12nm,0.7s
SUA Susitna One 82.15 13 P 13 59 46.7
baz=207
SUA Susitna One 82.15 13 P **P** **13 59 46.7 -0.5**
SUA IAmb IAmb 13 59 48.4
comp=Z,18nm,0.7s
IPM Ipoh 82.19 277 P **P** **13 59 48.9 +0.6**
IPM IAmb IAmb 13 59 49.9
comp=Z,11nm,0.5s
BELA Belgrano 2 82.23 173 P **P** **13 59 47.8 +0.5**
BELA IAmb IAmb 13 59 48.5
comp=Z,12nm,0.5s
LCMT Little Creek M 82.28 47 P **P** **13 59 49.5 +1.1**
D05A Enumclaw 82.31 35 P **P** **13 59 48.9 +0.9**
X16A Lo Mia Camp, P 82.34 50 P **P** **13 59 49.9 +1.1**
KAIM Kayak Island 82.36 17 P 13 59 48.2
baz=213
SKT Skwentna 82.45 13 P 13 59 48.2
baz=206
CCUT Cedar City 82.46 47 P **P** **13 59 50.5 +1.1**
GLI Glacier Island 82.48 15 P 13 59 48.5
baz=210
EYAK Cordova Ski Ar 82.53 16 P 13 59 48.4
baz=211
KNB Kanab 82.58 47 P **P** **13 59 51.1 +1.2**
CRAG Craig 82.58 24 P 13 59 48.6
baz=223
319A Douglas 82.59 54 P **P** **13 59 51.7 +1.6**
319A IAmb IAmb 13 59 52.9
comp=Z,12nm,0.9s
PSUT Pine Spring 82.60 46 P **P** **13 59 50.5 +0.5**
KNK Knik Glacier 82.62 14 P 13 59 48.8
baz=209
KNK Knik Glacier 82.62 14 P **P** **13 59 49.5 +0.2**
KNK IAmb IAmb 13 59 49.8
comp=Z,16nm,0.8s
PMR Palmer 82.62 14 P 13 59 48.9
baz=208
PMR Palmer 82.62 14 P **P** **13 59 49.0 -0.3**
PMR IAmb IAmb 13 59 49.5
comp=Z,13nm,0.6s
ELK Elko 82.79 43 P **P** **13 59 50.6 -0.4**
GHO Glory Hole Cre 82.83 14 P **P** **13 59 50.1 -0.4**
A04D Lummi Island 82.84 34 P 13 59 52.0
baz=233
B05A Bryant 82.89 34 P 13 59 51.4
baz=233
WUAZ Wupatki 82.90 49 P 13 59 52.6
baz=242,SNR=7.5
G08A Pilot Rock 82.92 38 P **P** **13 59 51.3 -0.1**
SML Sawmill 83.00 14 P 13 59 50.9
baz=209
CUT Chulitna 83.10 13 P 13 59 51.6
baz=207
CUT Chulitna 83.10 13 P **P** **13 59 51.3 -0.4**
E07A Sunnyside 83.13 36 P **P** **13 59 52.5 +0.2**
E07A IAmb IAmb 13 59 53.9
comp=Z,11nm,0.7s
PPLA Purkeypile 83.15 12 P 13 59 51.5
baz=205
BMRM Bremner River 83.19 16 P 13 59 52.3
baz=212
HAWA Hanford 83.22 37 P **P** **13 59 52.8 +0.1**
HAWA IAmb IAmb 13 59 55.9
comp=Z,18nm,1.1s
SCM Sheep Creek Mo 83.25 14 P **P** **13 59 52.5 -0.1**
KLU Klutina 83.30 15 P 13 59 52.5
baz=211
YAH Yahtse 83.47 17 P **P** **13 59 54.0 +0.2**
YAH IAmb IAmb 13 59 55.0
comp=Z,24nm,0.8s
TNA Tin City 83.58 4 P 13 59 54.3
baz=190
BJI Beijing 83.60 315 P **P** **13 59 55.8 +1.1**
BJI PP **PP** **14 03 18.1 -0.4**
BJI pmax pmax
comp=Z,10.0nm,0.6s
BJI pmax pmax
comp=Z,190nm,3.9s
BMO Blue Mountains 83.66 39 P **P** **13 59 54.8 -0.2**
PINM Pinnacle 83.69 18 P 13 59 54.9
baz=216
N25K Chitina, Valde 83.73 16 P 13 59 54.9
baz=212,SNR=9.7
N25K Chitina, Valde 83.73 16 P **P** **13 59 55.0 0.0**
M24K Tolsona, Glenn 83.77 15 P 13 59 55.2
baz=211
M24K Tolsona, Glenn 83.77 15 P **P** **13 59 55.3 +0.2**
GLB Gilahina Butte 83.80 16 P **P** **13 59 55.1 -0.2**

MFID	**Camas Ranch**	**83.80**	**41**	P	**P**	**13 59 55.4**	**-0.4**	
MFID				IAmb	IAmb	13 59 58.9		
	comp=Z,17nm,1.2s							
WAT6	**Susitna Watana**	**83.81**	**14**	P		13 59 54.9		
	baz=209,SNR=13							
MAW	**Mawson**	**83.81**	**200**	P	**P**	**13 59 56.5**	**+1.2**	
	comp=Z,3.4nm,0.4s,baz=167,slow=3.1,SNR=25							
MAW	**Mawson**	**83.81**	**200**	P	**P**	**13 59 56.4**	**+1.1**	
W18A	**Petrified Fore**	**83.91**	**50**	P		13 59 57.1		
	baz=243							
D08A	**Wollman Farm,**	**83.94**	**36**	P	**P**	**13 59 56.8**	**+0.6**	
D08A				IAmb	IAmb	13 59 57.8		
	comp=Z,9.7nm,0.8s							
WAT2	**Susitna Watana**	**83.95**	**13**	P		13 59 55.6		
	baz=209							
MCARA	**McCarthy VSAT**	**83.96**	**16**	P		13 59 56.1		
	baz=214							
KTH	**Kantishna Hill**	**83.99**	**12**	P	**P**	**13 59 54.7**	**-1.5**	
KTH				IAmb	IAmb	13 59 56.2		
	comp=Z,14nm,0.9s							
CHUM	**Lake Minchumin**	**84.02**	**11**	P		13 59 55.3		
	baz=205,SNR=7.6							
TRF	**Thorofare Moun**	**84.03**	**12**	P		13 59 55.7		
	baz=207,SNR=18							
TRF	**Thorofare Moun**	**84.03**	**12**	P	**P**	**13 59 55.5**	**-1.0**	
LOGN	**Logan Glacier**	**84.06**	**18**	P	**P**	**13 59 56.7**	**0.0**	
LOGN				IAmb	IAmb	13 59 57.4		
	comp=Z,14nm,0.6s							
ENH	**Enshi**	**84.06**	**304**	P	**P**	**13 59 57.4**	**+0.1**	
ENH				IAmb	IAmb	13 59 59.3		
	comp=Z,19nm,0.8s							
BARN	**Barnard Glacie**	**84.06**	**17**	P	**P**	**13 59 56.8**	**0.0**	
BARN				IAmb	IAmb	13 59 57.7		
	comp=Z,15nm,0.7s							
CTG	**Chitna Glacier**	**84.08**	**17**	P		13 59 55.7		
	baz=215							
CTGM	**Chitina Glacie**	**84.08**	**17**	P	**P**	**13 59 56.9**	**+0.1**	
CTGM				IAmb	IAmb	13 59 59.0		
	comp=Z,33nm,1.4s							
E09A	**Wood Farm, Sta**	**84.08**	**37**	P	**P**	**13 59 57.1**	**+0.2**	
E09A				IAmb	IAmb	13 59 59.0		
	comp=Z,13nm,1.1s							
DUG	**Dugway, Tooele**	**84.12**	**45**	P		13 59 57.4		
	baz=241							
121A	**Cookes Peak, D**	**84.24**	**53**	P		13 59 58.7		
	baz=245							
RND	**Reindeer**	**84.29**	**13**	P	**P**	**13 59 57.1**	**-0.5**	
F10A	**Beach Ranch, E**	**84.31**	**38**	P	**P**	**13 59 58.2**	**0.0**	
F10A				IAmb	IAmb	13 59 59.4		
	comp=Z,17nm,1.1s							
B08A	**Colville Reser**	**84.44**	**35**	P	**P**	**13 59 58.5**	**-0.2**	
B08A				IAmb	IAmb	13 59 59.5		
	comp=Z,8.0nm,0.7s							
BPAW	**Bear Paw Mtn.**	**84.47**	**12**	P		13 59 57.3		
	baz=206							
BPAW	**Bear Paw Mtn.**	**84.47**	**12**	P	**P**	**13 59 57.0**	**-1.5**	
MCK	**McKinley**	**84.56**	**13**	P		13 59 58.3		
	baz=208,SNR=11							
MCK	**McKinley**	**84.56**	**13**	P	**P**	**13 59 57.9**	**-1.0**	
MCK				IAmb	IAmb	13 59 59.0		
	comp=Z,14nm,0.8s							
PAX	**Paxson**	**84.67**	**15**	P		13 59 58.9		
	baz=212							
PAX	**Paxson**	**84.68**	**15**	P	**P**	**13 59 58.8**	**-0.8**	
C09A	**Chrisman Ranch**	**84.72**	**36**	P	**P**	**13 59 59.7**	**-0.4**	
C09A				IAmb	IAmb	14 00 01.3		
	comp=Z,13nm,1.1s							
SKAG	**Skagway**	**84.75**	**21**	P		14 00 00.2		
	baz=221							
HLID	**Hailey**	**84.75**	**41**	P		14 00 00.9		
	baz=209,SNR=13							
HLID	**Hailey**	**84.76**	**41**	P	**P**	**14 00 00.9**	**+0.4**	
TMUT	**Trail Mountain**	**84.78**	**46**	P	**P**	**14 00 00.9**	**0.0**	
BWN	**Browne**	**84.84**	**12**	P	**P**	**13 59 59.4**	**-0.8**	
HVU	**Hansel Valley**	**84.92**	**43**	P	**P**	**14 00 02.0**	**+0.6**	
MENT	**Mentasta**	**85.08**	**15**	P	**P**	**14 00 01.4**	**-0.1**	
MENT				IAmb	IAmb	14 00 02.2		
	comp=Z,9.1nm,0.6s							
HYT	**Haines Junctio**	**85.10**	**19**	P	**P**	**14 00 01.6**	**-0.2**	
SRU	**San Rafael Swe**	**85.16**	**46**	P	**P**	**14 00 02.5**	**-0.2**	
NEA2	**Nenana**	**85.29**	**12**	P		14 00 01.7		
	baz=208							
NEA2	**Nenana**	**85.29**	**12**	P	**P**	**14 00 02.2**	**-0.2**	
MLY	**Manley**	**85.35**	**11**	P		14 00 01.9		
	baz=206,SNR=8.0							
MLY	**Manley**	**85.36**	**11**	P	**P**	**14 00 01.5**	**-1.3**	
MLY				IAmb	IAmb	14 00 03.3		
	comp=Z,13nm,1.3s							
WRH	**Wood River Hil**	**85.39**	**13**	P	**P**	**14 00 02.1**	**-0.8**	
WRH				IAmb	IAmb	14 00 03.0		
	comp=Z,14nm,1.0s							
HDA	**Harding Lake**	**85.58**	**13**	P		14 00 03.1		
	baz=210,SNR=8.3							
HDA				P		14 00 03.1		
	baz=210,SNR=8.3							
DOT	**Dot Lake**	**85.59**	**15**	P	**P**	**14 00 03.3**	**-0.6**	
DOT				IAmb	IAmb	14 00 04.9		
	comp=Z,9.8nm,0.7s							
CCB	**Clear Creek Bu**	**85.60**	**13**	P	**P**	**14 00 02.9**	**-1.0**	
CCB				IAmb	IAmb	14 00 05.1		
	comp=Z,11nm,0.9s							
NEW	**Newport**	**85.62**	**36**	P	**P**	**14 00 03.8**	**-0.6**	
NEW	**Newport**	**85.62**	**36**	P		14 00 03.9		
	baz=237							
L27K	**Beaver Creek,**	**85.66**	**16**	P		14 00 03.7		
	baz=215							
L27K	**Beaver Creek,**	**85.66**	**16**	P	**P**	**14 00 04.5**	**+0.3**	
I23K	**Minto, Yukon-K**	**85.73**	**12**	P		14 00 03.7		
	baz=208,SNR=6.0							
I23K	**Minto, Yukon-K**	**85.73**	**12**	P	**P**	**14 00 03.3**	**-1.1**	
MNTX	**Cornudas Mount**	**85.75**	**55**	P		14 00 05.6		
	baz=246							
BCYI	**Bear Canyon**	**85.76**	**41**	P	**P**	**14 00 04.8**	**-0.7**	
MDM	**Murphy Dome**	**85.79**	**12**	P	**P**	**14 00 03.5**	**-1.3**	
MDM				IAmb	IAmb	14 00 04.6		
	comp=Z,14nm,1.2s							
TCOL	**CIGO, UAF Yank**	**85.79**	**13**	P		14 00 03.9		
	baz=209,SNR=5.8							
TCOL	**CIGO, UAF Yank**	**85.79**	**13**	P	**P**	**14 00 03.3**	**-1.4**	
COLA	**College**	**85.79**	**13**	P		14 00 04.0		
	baz=209							
COLA	**College**	**85.79**	**13**	P	**P**	**14 00 03.1**	**-1.7**	
COLA				IAmb	IAmb	14 00 04.6		
	comp=Z,12nm,0.7s							
SCRK	**Sand Creek**	**85.89**	**15**	P		14 00 04.8		
	baz=213,SNR=5.8							
SCRK	**Sand Creek**	**85.89**	**15**	P	**P**	**14 00 04.9**	**-0.5**	
IL31		**85.91**	**13**	P	**P**	**14 00 04.5**	**-0.8**	
IL31				IAmb	IAmb	14 00 05.2		
	comp=Z,11nm,1.1s							
ILAR	**Eielson Array**	**85.91**	**13**	P	**P**	**14 00 04.6**	**-0.7**	
	comp=Z,4.2nm,0.4s,baz=221,slow=5.3,SNR=99							
ILAR	**Eielson Array**	**85.91**	**13**	P	**P**	**14 00 04.3**	**-1.0**	
XAN	**Xi'an**	**86.06**	**307**	P	**P**	**14 00 07.9**	**+1.1**	
XAN				pmax	pmax			
	comp=Z,35nm,1.6s							
XAN				pmax	pmax			
	comp=Z,200nm,3.9s							
XAN				LR	LR			
	comp=N,300nm,19.5s							
XAN	**Xi'an**	**86.06**	**307**	P	**P**	**14 00 06.9**	**+0.1**	
XAN				IAmb	IAmb	14 00 10.4		
	comp=Z,21nm,1.0s							
POKR	**Poker Flat Res**	**86.09**	**13**	P		14 00 05.4		
	baz=210							
TX31	**Lajitas Ar. Si**	**86.17**	**58**	P	**P**	**14 00 08.9**	**+1.3**	
TX32	**Lajitas Array**	**86.17**	**58**	P	**P**	**14 00 09.0**	**+1.4**	
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**14 00 09.8**	**+2.2**	
	comp=Z,5.3nm,0.7s,baz=215,slow=5.8,SNR=42							
TXAR	**Lajitas Array**	**86.17**	**58**	P	**P**	**14 00 09.0**	**+1.4**	
ANMO	**Albuquerque**	**86.26**	**52**	P		14 00 08.1		
	baz=245							
ANMO	**Albuquerque**	**86.26**	**52**	P	**P**	**14 00 08.6**	**+0.7**	
ANMO				IAmb	IAmb	14 00 10.4		
	comp=Z,16nm,1.5s							
MCMT	**McKenzie Canyo**	**86.36**	**41**	P	**P**	**14 00 08.9**	**+0.6**	
BILL	**Bilibino**	**86.38**	**354**	P	**P**	**14 00 07.7**	**+0.2**	
BILL				IAmb	IAmb	14 00 09.8		
	comp=Z,10.0nm,0.9s							
RDOG	**Red Dog Mine**	**86.45**	**6**	P		14 00 07.5		
	baz=195							
MSO	**Missoula**	**86.70**	**38**	P		14 00 09.5		
	baz=240							
JTMT	**Jette**	**86.97**	**38**	P	**P**	**14 00 09.7**	**-1.2**	
HHC	**Hu-ho-hao-te**	**87.08**	**315**	*e*P	**P**	**14 00 11.4**	**-0.2**	
HHC				pmax	pmax			
	comp=Z,11nm,0.8s							
HHC				pmax	pmax			
	comp=Z,97nm,4.4s							
DAWY	**Dawson**	**87.12**	**16**	P	**P**	**14 00 10.9**	**-0.2**	
S22A	**4UR Ranch, Cre**	**87.16**	**49**	P		14 00 13.1		
	baz=245							
O20A	**White River Ci**	**87.19**	**46**	P		14 00 13.0		
	baz=244							
LOHW	**Long Hollow**	**87.20**	**42**	P	**P**	**14 00 11.8**	**-0.4**	
LOHW				IAmb	IAmb	14 00 14.9		
	comp=Z,6.6nm,0.8s							
EGAK	**Eagle**	**87.24**	**15**	P		14 00 11.7		
	baz=215,SNR=8.2							
EGAK	**Eagle**	**87.24**	**15**	P	**P**	**14 00 11.4**	**-0.2**	
EGAK				IAmb	IAmb	14 00 13.2		
	comp=Z,8.3nm,0.8s							
YHB	**Horse Butte**	**87.36**	**41**	P	**P**	**14 00 12.4**	**-0.5**	
YHB				IAmb	IAmb	14 00 16.9		
	comp=Z,16nm,1.2s							
COLD	**Coldfoot**	**87.42**	**11**	P		14 00 12.2		
	baz=207							
COLD	**Coldfoot**	**87.42**	**11**	P	**P**	**14 00 12.5**	**0.0**	
COLD				IAmb	IAmb	14 00 13.5		
	comp=Z,7.8nm,0.6s							
YMR	**Madison River**	**87.46**	**41**	P	**P**	**14 00 12.3**	**-1.1**	
BW06	**Boulder Array**	**87.48**	**44**	P		14 00 13.8		
	baz=243,SNR=14							
PD31	**Pinedale Array**	**87.49**	**44**	P	**P**	**14 00 12.9**	**-0.7**	
PD31				IAmb	IAmb	14 00 14.8		
	comp=Z,5.6nm,0.7s							
PDAR	**Pinedale Array**	**87.49**	**44**	P	**P**	**14 00 14.2**	**+0.6**	
	comp=Z,3.3nm,0.5s,baz=214,slow=3.0,SNR=52							
PDAR	**Pinedale Array**	**87.49**	**44**	P	**P**	**14 00 13.1**	**-0.6**	
BOZ	**Bozeman (W)**	**87.49**	**40**	P		14 00 14.3		
	baz=241,SNR=10							
H17A	**Grant Village**	**87.58**	**42**	P		14 00 14.3		
	baz=242,SNR=9.0							
FYU	**Fort Yukon**	**87.81**	**13**	P	**P**	**14 00 13.2**	**-0.9**	
FYU				IAmb	IAmb	14 00 14.8		
	comp=Z,6.2nm,0.5s							
WALA	**Waterton Lakes**	**87.85**	**37**	P	**P**	**14 00 15.1**	**+0.1**	
WALA				IAmb	IAmb	14 00 17.8		
	comp=Z,15nm,1.4s							
HRY	**Holter Researc**	**87.90**	**39**	P	**P**	**14 00 15.2**	**-0.1**	
RWWY	**Rawlins**	**88.57**	**45**	P	**P**	**14 00 18.0**	**-0.8**	
CMAR	**Chiang Mai Arr**	**88.66**	**290**	P	**P**	**14 00 20.9**	**+1.6**	
	comp=Z,2.2nm,0.8s,baz=116,slow=2.6,SNR=13							
CMAR	**Chiang Mai Arr**	**88.66**	**290**	P	**P**	**14 00 19.2**	**-0.1**	
MSTX	**Muleshoe**	**88.66**	**54**	P		14 00 19.7		
	baz=247							
T25A	**Trinidad**	**88.66**	**50**	P		14 00 19.6		
	baz=246							
RLMT	**Red Lodge**	**88.74**	**42**	P	**P**	**14 00 18.4**	**-1.0**	
RLMT				IAmb	IAmb	14 00 22.8		
	comp=Z,6.5nm,0.9s							
RLMT	**Red Lodge**	**88.74**	**42**	P		14 00 19.0		
	baz=243,SNR=7.2							
CHTO	**Chiang Mai**	**88.77**	**290**	P	**P**	**14 00 19.8**	**0.0**	
TOLK	**Toolik Lake Re**	**88.79**	**10**	P		14 00 18.5		
	baz=208							
TOLK	**Toolik Lake Re**	**88.80**	**10**	P	**P**	**14 00 18.8**	**-0.1**	
TOLK				IAmb	IAmb	14 00 20.5		
	comp=Z,5.6nm,0.9s							
GCMT	**Greycliff**	**88.80**	**41**	P	**P**	**14 00 19.2**	**-0.3**	
Q24A	**Divide**	**88.87**	**48**	P		14 00 20.4		
	baz=246							
ISCO	**Idaho Springs**	**88.88**	**47**	P		14 00 20.5		
	baz=246							
N23A	**Red Feather La**	**89.10**	**46**	P		14 00 21.7		
	baz=245							
K22A	**Casper**	**89.44**	**45**	P		14 00 23.3		
	baz=245							
EPYK	**Eagle Plains**	**89.63**	**16**	P		14 00 22.8		
	baz=219,SNR=6.6							
EPYK	**Eagle Plains**	**89.63**	**16**	P	**P**	**14 00 22.1**	**-0.6**	
EPYK				IAmb	IAmb	14 00 23.4		
	comp=Z,11nm,1.1s							
JCT	**Junction City**	**89.71**	**58**	P		14 00 24.9		
	baz=249							
EGMT	**Eagleton**	**89.77**	**39**	P		14 00 24.5		
	baz=243							
AMTX	**Amarillo**	**89.84**	**53**	P		14 00 24.7		
	baz=248							
ABTX	**Abilene, Hawle**	**90.60**	**56**	P		14 00 28.6		
	baz=249							
SNAA	**Sanae**	**90.64**	**179**	P	**P**	**14 00 28.0**	**+0.4**	
VNA3	**Neumayer Olymp**	**90.79**	**176**	P	**P**	**14 00 29.2**	**+1.0**	
VNA2	**Neumayer--Watz**	**91.22**	**177**	P	**P**	**14 00 30.6**	**+0.4**	
	baz=200,slow=5.0							
LAO	**LASA Array**	**91.34**	**41**	P		14 00 31.8		
	baz=245,SNR=5.0							
VNA1	**Neumayer--Stat**	**91.45**	**177**	P	**P**	**14 00 32.9**	**+1.7**	
PLCA	**Paso Flores**	**91.52**	**134**	P	**P**	**14 00 34.4**	**+2.1**	
	comp=Z,7.5nm,1.4s,baz=258,slow=8.7,SNR=2.4							
RSSD	**Black Hills**	**91.70**	**44**	P		14 00 32.6		
	baz=247							
RSSD	**Black Hills**	**91.70**	**44**	P	**P**	**14 00 32.7**	**-0.4**	
RSSD				IAmb	IAmb	14 00 34.1		
	comp=Z,3.5nm,0.7s							
INK	**Inuvik**	**91.91**	**15**	P	**P**	**14 00 32.5**	**-0.6**	
INK				IAmb	IAmb	14 00 33.4		
	comp=Z,5.4nm,0.7s							
WMOK	**Wichita Mounta**	**92.01**	**54**	P		14 00 34.8		
	baz=250							
SONM	**Songino Array**	**93.38**	**319**	P	**P**	**14 00 41.0**	**+0.4**	
	comp=Z,1.1nm,0.6s,baz=138,slow=6.0,SNR=3.8							
SONM	**Songino Array**	**93.38**	**319**	P	**P**	**14 00 40.0**	**-0.6**	
YKA	**Yellowknife Ar**	**94.40**	**25**	P	**P**	**14 00 44.6**	**-0.1**	
	comp=Z,1.7nm,0.7s,baz=243,slow=4.3,SNR=34							
C36M	**Paulatuk**	**95.13**	**17**	P		14 00 47.7		
	baz=231							
C36M	**Paulatuk**	**95.13**	**17**	P	**P**	**14 00 47.1**	**-0.7**	
C36M				IAmb	IAmb	14 00 48.8		
	comp=Z,8.9nm,1.2s							
TIXI	**Tiksi**	**96.06**	**345**	P	**P**	**14 00 51.2**	**-0.8**	
TIXI				IAmb	IAmb	14 00 53.3		
	comp=Z,2.3nm,0.9s							
GOGA	**Godfrey**	**103.84**	**59**	P		14 01 27.0		
	baz=258							
ZALV	**Zalesovo Beam**	**108.06**	**322**	PKiKP	**PKiKP**	**14 05 48.5**	**-0.3**	
	comp=Z,1.9nm,0.6s,baz=160,slow=3.0,SNR=10							
ZALV	**Zalesovo Beam**	**108.06**	**322**		**PKiKP**	**14 05 48.1**	**-0.7**	
MKAR	**Makanchi Array**	**108.95**	**314**	Pdiff	**Pdif**	**14 01 52.0**	**+2.0**	
	comp=Z,0.2nm,0.6s,baz=74,slow=4.4,SNR=2.3							
MKAR				PKiKP	**PKiKP**	**14 05 50.6**	**-0.2**	
	comp=Z,2.0nm,0.5s,baz=147,slow=0.5,SNR=22							
MKAR	**Makanchi Array**	**108.95**	**314**		**PKiKP**	**14 05 50.1**	**-0.7**	
J56A	**Wolcott**	**110.52**	**50**	P		14 05 53.3		
	baz=264							
J57A	**Williamstown**	**111.16**	**50**	P		14 05 53.8		
	baz=265							
E60A	**Ste Agathe de**	**114.53**	**47**	P		14 06 00.9		
	baz=270							
PKME	**Peaks-Kenny Pk**	**116.04**	**48**	P		14 06 03.4		
	baz=270							
F63A	**Nahmakanta, Br**	**116.16**	**47**	P		14 06 04.2		
	baz=271							
F64A	**Sherman**	**116.69**	**47**	P		14 06 04.4		
	baz=272							
BRVK	**Borovoye**	**116.73**	**321**	PKPdf	**PKPdf**	**14 06 05.4**	**0.0**	
KKAR	**Karatay Array**	**117.12**	**310**	PKPdf	**PKPdf**	**14 06 06.1**	**-0.4**	
ARU	**Arti**	**122.69**	**326**	PKPdf	**PKiKP**	**14 06 17.0**	**0.0**	
ABKAR	**Akbulak array**	**123.75**	**318**		**PKiKP**	**14 06 19.4**	**0.0**	
ARCES	**ARCESS Array B**	**126.24**	**350**	PKP	**PKPdf**	**14 06 23.5**	**+0.2**	
	comp=Z,3.6nm,0.6s,baz=42,slow=1.0,SNR=28							
GEYT	**Alibeck**	**126.83**	**304**	PKP	**PKPdf**	**14 06 24.6**	**-0.8**	
	comp=Z,1.6nm,0.6s,baz=163,slow=5.7,SNR=3.9							
KLMR	**Klimovskoe**	**129.24**	**337**	*e*PKPdf	**PKPdf**	**14 06 28.5**	**-0.6**	
KLMR				AMP		14 06 32.4		
	comp=Z,17nm,1.4s							
KLMR				PP	**PP**	**14 08 52.5**	**+5.7**	
KLMR				*e*PKKP	**PKKPdf**	**14 16 43.6**	**+7.0**	
FINES	**FINESS Array B**	**133.09**	**344**	PKhKP	PKPpre	14 06 28.9		
	comp=Z,1.3nm,0.6s,baz=22,slow=2.1,SNR=7.2							
FINES				PKP	**PKPdf**	**14 06 36.5**	**+0.1**	
	comp=Z,2.6nm,0.5s,baz=80,slow=2.4,SNR=8.7							
FINES				PP	**PP**	**14 09 14.8**	**+3.6**	
	comp=Z,2.7nm,0.8s,baz=92,slow=5.7,SNR=4.9							
FINES	**FINESS Array B**	**133.09**	**344**	PKPdf	**PKPdf**	**14 06 36.3**	**-0.1**	
OBN	**Obninsk**	**134.16**	**332**	⇓P	PKiKP	14 07 03.4	+23	
NOA	**NORSAR Array B**	**136.31**	**353**	PKhKP	PKPpre	14 06 34.6		
	comp=Z,0.2nm,0.3s,baz=29,slow=3.6,SNR=3.9							
NOA				PKP	**PKPdf**	**14 06 42.7**	**+0.2**	
	comp=Z,1.6nm,0.7s,baz=13,slow=4.0,SNR=8.1							
KIV	**Kislovodsk**	**136.67**	**316**	⇑P	PKiKP	14 07 06.0	+20	
AKASG	**Malin Array Be**	**140.42**	**332**	PKhKP	PKPpre	14 06 43.8		
	comp=Z,2.2nm,0.3s,baz=39,slow=3.9,SNR=12							
AKASG				PKP	**PKPdf**	**14 06 51.5**	**+1.3**	
	comp=Z,2.5nm,0.4s,baz=39,slow=3.0,SNR=8.2							
SORM	**Soroca**	**142.65**	**330**	⇑P	**PKPdf**	**14 06 51.7**	**-2.5**	
GAZ	**Gaziantep**	**143.13**	**309**	PKPdf	**PKPdf**	**14 06 54.9**	**-0.7**	
BZK	**Bozkurt**	**143.25**	**318**	⇓P	**PKPdf**	**14 06 55.5**	**0.0**	
BSEG	**Bad Segeberg**	**143.34**	**351**	*e*PKPbc	PKPbc	14 06 54.2	+0.3	
	baz=16,slow=2.8							
ILGA	**Ilgaz**	**143.89**	**317**		**PKPdf**	**14 06 57.3**	**+0.3**	
VASR	**Vasilui**	**143.96**	**329**	⇑P	**PKPdf**	**14 06 56.9**	**+0.2**	
DSB	**Dublin**	**144.19**	**8**		PKPbc	14 06 56.6	0.0	
TLCR		**144.42**	**326**	⇑P	**PKPab**	**14 06 58.5**	**+0.4**	
BUR08	**Bucovina Ar. S**	**144.46**	**332**	PKPdf	**PKPab**	**14 06 59.1**	**+0.7**	
BURAR	**Bucovina Array**	**144.48**	**332**	⇓P	**PKPab**	**14 06 59.7**	**+1.3**	
BURAR	**Bucovina Array**	**144.48**	**332**	PKPdf	**PKPab**	**14 06 58.9**	**+0.5**	
OJC	**Ojcow**	**144.50**	**340**	*i* PKPc		14 06 58.4		
OJC	**Ojcow**	**144.50**	**340**	PKPdf	PKPbc	14 06 57.9	+0.3	
BIZ	**Bicaz**	**144.57**	**330**	⇑P	**PKPab**	**14 06 59.6**	**+1.0**	
BR131	**Keskin Array S**	**144.59**	**315**	PKPdf	PKPbc	14 06 58.5	+0.1	
BRTR	**Keskin Array B**	**144.59**	**315**	PKP	PKPbc	14 06 58.6	+0.1	
	comp=Z,6.7nm,0.5s,baz=96,slow=1.4,SNR=28							
TESR	**Tescani**	**144.61**	**329**	⇓P	**PKPab**	**14 06 58.8**	**0.0**	
FLTG	**Flechtingen**	**144.75**	**349**	*e*PKPbc	**PKPab**	**14 06 58.8**	**-0.3**	
	baz=16,slow=2.8							
NRDL	**Niedersach Rie**	**144.77**	**351**	*e*PKPbc	**PKPab**	**14 06 59.0**	**-0.1**	
	baz=16,slow=2.8							
CFR	**Carcaliu**	**144.78**	**326**	⇑P	**PKPab**	**14 06 59.6**	**+0.1**	
TPGR	**Topolog**	**144.84**	**326**	⇑P	**PKPab**	**14 07 00.1**	**+0.3**	
ODBI	**Odobesti**	**144.94**	**328**	⇑P	**PKPab**	**14 07 01.0**	**+0.9**	
NIE	**Niedzica**	**145.01**	**338**	*i* PKPc		14 07 00.7		
KSP	**Ksiaz**	**145.01**	**343**	*i* PKPc		14 07 00.4		
CRVS	**Cervenica-Dubn**	**145.02**	**337**	*e*PKP	**PKPab**	**14 07 00.3**	**0.0**	
VRI	**Vrincioaia**	**145.03**	**328**	⇑P	**PKPab**	**14 07 00.1**	**-0.4**	
ASSE	**Asse, Remlinge**	**145.04**	**350**	*e*PKPbc	**PKPab**	**14 06 59.9**	**-0.2**	
	baz=16,slow=2.8							
PLOP	**Plostina**	**145.08**	**329**	⇓P	**PKPbc**	**14 07 00.1**	**+0.5**	
HARR	**Harsova**	**145.22**	**326**	⇑P	**PKPab**	**14 07 01.0**	**-0.2**	
TLBR	**Topalu**	**145.25**	**326**	⇑P	**PKPab**	**14 07 01.0**	**-0.3**	
ARCR	**ARCALIA**	**145.26**	**332**	⇑P	**PKPab**	**14 07 01.5**	**+0.2**	
BISRR	**Bisoca**	**145.26**	**328**	⇓P	PKiKP	14 07 19.0	+16	
IBBN	**Ibbenburen**	**145.27**	**353**	*e*PKPbc	**PKPab**	**14 07 00.7**	**-0.4**	
	baz=16,slow=2.8							
OSTC	**Ostas**	**145.29**	**343**	*e*PKP	**PKPab**	**14 07 01.3**	**0.0**	
CHVC	**Chvalec**	**145.31**	**343**	*e*PKP	**PKPab**	**14 07 01.0**	**-0.4**	
CLZ	**Clausthal**	**145.36**	**350**	*e*PKPbc	**PKPab**	**14 07 01.2**	**-0.4**	
	baz=16,slow=2.8							
CLL	**Collm**	**145.38**	**347**	⇑ *i* PKPbc	**PKPab**	**14 07 01.0**	**-0.6**	
	comp=Z,44nm,0.6s							
CLL	**Collm**	**145.38**	**347**		**PKPbc**	**14 07 00.6**	**+0.4**	
CLL	**Collm**	**145.38**	**347**	*e*PKPbc	**PKPbc**	**14 07 00.9**	**+0.7**	
	baz=16,slow=2.8							
UPC	**Upice**	**145.39**	**343**	*e*PKP	**PKPab**	**14 07 01.3**	**-0.4**	
DPC	**Dobruska-Polom**	**145.45**	**343**	*e*PKP	**PKPab**	**14 07 01.9**	**-0.1**	
LANS	**Liptovska Anna**	**145.53**	**339**	*e*PKP	**PKPab**	**14 07 02.5**	**+0.2**	
NEHR	**Nehoiu**	**145.56**	**328**	⇑P	**PKPab**	**14 07 01.8**	**-0.7**	
KRLC	**Kraliky**	**145.57**	**342**	*e*PKP	**PKPab**	**14 07 01.7**	**-0.7**	
BRG	**Berggiesshubel**	**145.58**	**346**	*e*PKP	**PKPbc**	**14 07 00.3**	**-0.5**	
BRG				Amp		14 07 02.0		
	comp=Z,3.4nm,0.8s							
BRG				*i* x	x	14 07 02.0		
BRG				Amp		14 07 02.4		
	comp=Z,20nm,0.7s							
BRG				Amp		14 07 02.4		
	comp=Z,18nm,0.8s							
BRG				*i* x	x	14 07 04.3		
BRG	**Berggiesshubel**	**145.58**	**346**	*e*PKPbc	**PKPbc**	**14 07 01.5**	**+0.7**	
	baz=16,slow=2.8							
MORC	**Moravsky Berou**	**145.61**	**341**	*e*PKP	**PKPbc**	**14 07 01.8**	**+0.8**	
MORC	**Moravsky Berou**	**145.61**	**341**		**PKPbc**	**14 07 01.6**	**+0.6**	
DOPR	**Dopca**	**145.61**	**330**	⇑P	**PKPab**	**14 07 02.8**	**0.0**	
ISR	**Istrita**	**145.65**	**328**

BMRD	Maredsous	147.53	356	*d*PKiKP	PKPbc	14 07 06.8 +0.7
BZS	Buzias	147.60	333	⇓P	PKPbc	14 07 06.9 +0.5
TIM	Timisoara	147.67	334	⇓P	PKPdf	14 06 57.3 -5.6
DOU	Dourbes	147.75	356	*d*PKiKP	PKiKP	14 07 07.5 -0.6
CONA	Conrad Observa	147.76	342	*i* P	PKiKP	14 07 08.1 -0.3
	comp=Z,14nm,0.6s,SNR=19					
HERR	Herculane	147.82	331	⇑P	PKiKP	14 07 07.7 -0.7
PLVB	Pleven	147.84	327	⇑P	PKiKP	14 07 08.0 -0.5
BANR	Banloc	147.99	333	⇓P	PKiKP	14 07 08.1 -0.6
WLF	Walferdange	148.05	354	*d*PKiKP	PKiKP	14 07 08.8 +0.1
WLF	Walferdange	148.05	354		PKiKP	14 07 08.2 -0.5
WLF	Walferdange	148.05	354	*e*PKPbc	PKiKP	14 07 08.9 +0.2
	baz=16,slow=2.8					
MDVR	Moldovita	148.21	332	⇓P	PKPbc	14 07 08.7 +0.6
MOA	Molln	148.29	343	*i* P	PKiKP	14 07 08.8 -0.5
	comp=Z,8.3nm,0.8s,SNR=10.0					
MORH	Mrgy, Hungar	148.31	337	⇑P	PKiKP	14 07 08.8 -0.5
MORH	Mrgy, Hungar	148.31	337	⇑*i*P	PKPbc	14 07 08.5 +0.3
ARSA	Arzberg	148.47	341	*i* P	PKPbc	14 07 08.2 -0.5
	comp=Z,4.6nm,0.6s					
STU	Stuttgart	148.53	350	*e*PKPbc	PKiKP	14 07 09.7 0.0
	baz=16,slow=2.8					
MANT	Manisa	148.62	316		PKPbc	14 07 09.7 +0.1
FUR	Furstenfeldbru	148.72	347	*e*PKPbc	PKiKP	14 07 10.4 +0.2
	baz=16,slow=2.8					
FRGS	Fruska Gora	148.73	334	⇓P	PKiKP	14 07 10.2 -0.1
FRGS	Fruska Gora	148.73	334	⇑*i*P	PKiKP	14 07 09.9 -0.4
RJOB	Jochberg	148.77	345	*e*PKPbc	PKiKP	14 07 10.0 -0.4
	baz=16,slow=2.8					
RJOB				*e*PKPab	PKPab	14 07 15.3 -0.2
	baz=17,slow=3.8					
BFO	Black Forest	149.09	351		PKiKP	14 07 10.8 -0.2
BFO	Black Forest	149.09	351	*e*PKPbc	PKiKP	14 07 10.8 -0.2
	baz=16,slow=2.8					
BFO				*e*PKPab	PKPab	14 07 16.8 0.0
	baz=17,slow=3.8					
BOVS	Bovan	149.10	331	⇑P	PKPbc	14 07 10.3 +0.1
VTS	Vitosha	149.10	328	⇑P	PKiKP	14 07 11.2 -0.1
VTS	Vitosha	149.10	328		PKiKP	14 07 11.1 -0.3
SOKA	Soboth	149.13	341	*i* P	PKPbc	14 07 10.5 +0.2
	comp=Z,25nm,1.3s,SNR=13					
KBA	Koelnbreinsper	149.25	344	*i* P	PKPbc	14 07 10.7 0.0
	comp=Z,14nm,0.4s,SNR=14					
TEKS	Tekeris	149.34	334	⇑*i*P	PKPbc	14 07 11.1 +0.3
ECH	Echery	149.37	352		PKPbc	14 07 11.0 +0.3
UBR	Ueberruh	149.42	348	*e*PKPbc	PKPbc	14 07 11.3 +0.4
	baz=16,slow=2.8					
UBR				*e*PKPab	PKPab	14 07 18.2 0.0
	baz=17,slow=3.8					
OBKA	Obir	149.43	342	*i* P	PKPbc	14 07 11.1 0.0
	comp=Z,6.0nm,0.6s					
WATA	Walderalm	149.44	346	*i* P	PKiKP	14 07 11.5 -0.3
	comp=Z,11nm,0.4s,SNR=7.4					
RETA	Reutte	149.47	347	*i* P	PKiKP	14 07 11.7 -0.2
	comp=Z,8.4nm,0.5s,SNR=6.9					
WTTA	Wattenberg	149.49	346	*i* P	PKiKP	14 07 12.0 0.0
	comp=Z,23nm,0.4s,SNR=13					
DIVS	Divibare	149.51	333	⇑*i*P	PKiKP	14 07 11.9 -0.1
DIVS	Divibare	149.51	333		PKPbc	14 07 10.7 -0.6
MOTA	Moosalm	149.53	347	*i* P	PKiKP	14 07 11.8 -0.3
	comp=Z,8.2nm,0.4s,SNR=7.2					
MYKA	Terra Mystica	149.58	343	*i* P	PKPbc	14 07 11.3 -0.1
	comp=Z,15nm,0.4s,SNR=11					
SQTA	Sankt Quirin	149.63	347	*i* P	PKiKP	14 07 12.2 -0.1
	comp=Z,19nm,0.5s,SNR=9.0					
CRES	Cresnjev	149.76	340	⇑*i*P	PKiKP	14 07 12.1 -0.3
ABTA	Abfaltersbach	149.77	345	*i* P	PKPbc	14 07 11.9 +0.1
	comp=Z,23nm,0.6s,SNR=10					
ZOU	Zoufplan	149.82	344		PKPbc	14 07 11.6 -0.5
DAVA	Damuels	149.84	348	*i* P	PKiKP	14 07 12.7 0.0
	comp=Z,19nm,0.9s,SNR=9.0					
CLF	Chambon-Foret	149.92	359		PKPbc	14 07 12.1 +0.1
FETA	Feichten	149.92	347	*i* P	PKiKP	14 07 13.0 +0.1
	comp=Z,23nm,1.2s,SNR=7.2					
BBLS	Lazići	149.95	333	⇑*i*P	PKiKP	14 07 13.2 +0.3
HAPS	Han Pijesak,Bl	149.96	334	*e*P	PKPbc	14 07 12.3 -0.1
MRAK	Mrakovica	149.98	338	*e*P	PKPdf	14 07 05.3 -1.4
BLY	Banja Luka	150.10	337	⇑*i*P	PKiKP	14 07 13.2 +0.1
CEY	Cerknica	150.16	341	⇑*i*P	PKiKP	14 07 13.0 -0.3
RUDO	Rudo	150.16	333	⇑*i*P	PKiKP	14 07 13.1 -0.2
STAL	STALIGIAL	150.17	344		PKPbc	14 07 12.6 -0.1
MGRS	Mrkonjic Grad	150.42	337	*e*P	PKPab	14 07 23.3 +0.9
CTI	Castel Tesino	150.63	345		PKPbc	14 07 13.9 +0.1
UPM	Unac-Piva	150.70	333	⇑*i*P	PKPbc	14 07 14.1 -0.1
TUE	Stuetta	150.72	349	PKPbc	PKiKP	14 07 14.8 +0.2
BRY	Bratogost	151.10	333	⇑*i*P	PKPbc	14 07 15.0 -0.1
PDG	Podgorica	151.16	332	⇓P	PKiKP	14 07 15.5 +0.2
PDG	Podgorica	151.16	332	⇑*i*P	PKiKP	14 07 15.3 -0.1
SENIN	Lac Senin/Sane	151.17	351		PKPbc	14 07 15.2 0.0
LIT	Litokhoron	151.29	325		PKPbc	14 07 15.3 -0.2
TREB	Trebinje	151.33	333	*e*P	PKPbc	14 07 15.0 -0.4
DRME	Dracevica, Mon	151.39	332	⇑*i*P	PKiKP	14 07 15.9 0.0
FNA	Florina	151.39	327		PKPbc	14 07 15.7 0.0
SANT	Santorini	151.85	316	⇑P	PKPbc	14 07 16.8 0.0
AGG	Agios Georgios	152.12	323		PKPbc	14 07 16.9 -0.4
BNI	Bardonecchia	152.54	352		PKiKP	14 07 18.7 +0.4
SSB	Saint Sauveur	152.55	355		PKiKP	14 07 18.8 +0.6
NRCA	Norcia	153.19	341	PKPbc	PKiKP	14 07 20.0 +0.3
PCAB	Cabril	154.92	17	*e*PKPab	PKPab	14 07 42.4 +0.7
PBRG	Braganca	155.16	15	*e*PKPdf	PKPdf	14 07 13.9 -0.4
PBRG	Braganca	155.16	15	*e*PKPab	PKPab	14 07 43.5 +0.8
POLO	Lamas de Olo	155.30	17	*e*PKPab	PKPab	14 07 43.7 +0.3
MVO	Moncorvo	155.70	16	*e*PKPab	PKPab	14 07 45.9 +0.8
PVIS	Viseu	155.88	17	*e*PKPab	PKPab	14 07 46.6 +0.7
PCBR	Castelo Branco	156.81	17	*e*PKPab	PKPab	14 07 49.9 +0.1
PMTG	Montargil	157.30	20	*e*PKPab	PKPab	14 07 52.0 +0.1
PESTR	Estremoz	157.68	19	*e*PKPab	PKPab	14 07 53.8 +0.2
ESDC	Sonseca Array	157.79	11	PKPab	PKPab	14 07 54.0 -0.2
	comp=Z,1.4nm,0.6s,baz=329,slow=3.1,SNR=11					
PNCL	Nicolau / Gran	158.06	21	*e*PKPab	PKPab	14 07 55.6 +0.3
KEST	Kesra	160.85	340	PKPab	PKPab	14 08 08.4 +0.7
	comp=Z,3.1nm,0.6s,baz=82,slow=2.5,SNR=5.3					
TOA0	Torodi Ar. Sit	175.29	184		PKPdf	14 07 30.9 -0.5
TORD	Torodi Ar. Bea	175.29	184	PKP	PKPdf	14 07 32.4 +0.9
	comp=Z,3.5nm,1.2s,baz=168,slow=1.5,SNR=6.6					
TORD	Torodi Ar. Bea	175.29	184		PKPdf	14 07 30.4 -1.0

*IDC **20** 14:24:39.1±4.2,23°.87S×178°.01W,h480km±35km, mb2.9/2, mb1 3.2/3, mb1mx2.8/27, mbtmp4.0/3 Error ellipse: s-maj=47.6km s-min=43.3km az=109.0*

*NEIC **20** 14:24:44.8±2.0,24°.1S±0°.1×178°.2W±0°.2,h552km±4km, mb4.2/16, Error ellipse: s-maj=23.1km s-min=19.3km az=114.0*

ISC 20 14:24:44.4±0.7,24°09S±0°09×178°.2W±0°.1,h550km,n23, σ2$06/25,mb4.1/8,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	7.25	330	P	P	14 26 36.4	+1.4
NIUE	Niue	9.14	58	P	P	14 26 53.9	+0.2
URZ	Urewera	14.69	195	P	P	14 27 47.9	-2.6
	1.4nm,0.3s,baz=301,slow=19,SNR=15						
URZ				S	S	14 30 25.4	+1.6
	0.2nm,0.3s,baz=298,slow=23,SNR=2.2						
BKZ	Black Stump Fm	15.70	196	P	P	14 27 58.4	-2.5
BKZ				IAmb	IAmb	14 28 17.0	
	comp=Z,18nm,1.3s						
BFZ	Birch Farm	17.20	195	P	P	14 28 13.1	-1.7
SNZO	South Karori	18.18	197	P	P	14 28 22.4	-1.3
OXZ	Oxford	20.82	200	P	P	14 28 47.5	-0.2
OXZ				IAmb	IAmb	14 28 58.9	
	comp=Z,1.4nm,0.6s						
CTAO	Charters Tower	33.16	270	P	P	14 30 34.5	-1.5
CTAO				IAmb	IAmb	14 30 37.1	
	comp=Z,18nm,1.4s						
AS31	Alice Springs	43.66	260	P	P	14 32 01.2	+0.1
ASAR	Alice Springs	43.67	260	P	P	14 32 02.5	+1.4
ASAR	comp=Z,0.9nm,0.6s,baz=92,slow=8.2,SNR=22			ScP	ScP	14 36 42.6	+7.1
	comp=Z,0.2nm,0.4s,baz=108,slow=4.1,SNR=7.0						
ASAR	Alice Springs	43.67	260	P	P	14 32 01.8	+0.7
WR0	Warramunga Arr	43.89	266	P	P	14 32 02.4	-0.5
WR0				IAmb	IAmb	14 32 16.6	
	comp=Z,9.8nm,1.4s						
WB2	Warramunga Arr	44.06	266	P	P	14 32 03.8	-0.4
WB2				IAmb	IAmb	14 32 11.1	
	comp=Z,8.6nm,1.3s						
WB0	Warramunga Arr	44.07	266	P	P	14 32 03.6	-0.7
WB0				IAmb	IAmb	14 32 31.7	
	comp=Z,9.9nm,1.2s						
WRA	Warramunga Arr	44.08	266	P	P	14 32 04.0	-0.3
	comp=Z,1.1nm,0.8s,baz=94,slow=8.5,SNR=5.9						

KNRA	Kununurra	50.37	269	P	P	14 32 51.8 +0.2
KNRA				IAmb	IAmb	14 33 06.0
	comp=Z,48nm,1.4s					
FITZ	Fitzroy Crossi	52.49	265	P	P	14 33 08.4 +1.5
FITZ				IAmb	IAmb	14 33 26.2
	comp=Z,4.7nm,1.1s					
VNDA	Vanda	54.34	185	P	P	14 33 21.7 +2.7
QSPA	South Pole Qui	65.99	180	P	P	14 34 35.4 -1.1
BKB	Balikpapan	66.69	280	P	P	14 34 40.8 -0.7
DOT	Dot Lake	91.46	14	P	P	14 36 50.7 -1.1
ARCES	ARCESS Array B	132.41	349	PKP	PKiKP	14 42 56.0 -0.9
	comp=Z,6.5nm,1.1s,baz=11,slow=1.4,SNR=3.6					
AKASG	Malin Array Be	146.03	328	PKPbc	PKPab	14 43 23.7 -1.1
	comp=Z,0.2nm,0.4s,baz=39,slow=4.0,SNR=4.2					

IDC 20 14:30:33.3±39.0,20°24S×177°.63W,h433km±336km, mb3.5/3,mb1 3.6/3,mb1mx3.0/25,mbtmp4.3/3,Error ellipse: s-maj=252.3km s-min=76.9km az=99.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.86	264	P	P	14 36 38.6	+0.4
	baz=97,slow=11						
JAY	Jayapura	44.29	288	P	P	14 38 04.4	+1.1
	4.6nm,0.6s,baz=169,slow=16,SNR=1.7						
ASAR	Alice Springs	44.92	256	P	P	14 38 07.5	-0.5
	3.5nm,0.7s,baz=89,slow=8.3,SNR=53						
ASAR				PcP	PcP	14 39 41.3	+0.5
	0.4nm,0.5s,baz=104,slow=3.8,SNR=6.7						
WRA	Warramunga Arr	44.98	262	P	P	14 38 07.7	-0.8
	0.6nm,0.3s,baz=92,slow=7.5,SNR=11						
AKASG	Malin Array Be	142.95	332	PKP	PKPdf	14 49 14.7	-1.7
	0.2nm,0.3s,baz=49,slow=2.8,SNR=2.1						

WEL 20 14:31:43.2,39°S±3°×17°5E±°,h219km±4km,M2.8/43, MLv2.8/43,Error ellipse: s-maj=0.0km s-min=0.0km az=133.4,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.25	216	P	Pn	14 32 11.4	-0.5
TWVZ	Taurewa	0.41	111	P	Pn	14 32 12.1	-0.4
HIZ	Hauiti	0.41	350	P	Pn	14 32 12.1	-0.3
HIZ				S	S	14 32 34.3	-0.8
PKVZ	Pokaka	0.48	140	P	Pn	14 32 12.3	-0.2
PKVZ				S	S	14 32 33.7	-1.9
MHEZ	Mangahewa	0.51	252	P	Pn	14 32 12.7	+0.2
WTVZ	West Tongariro	0.54	111	P	Pn	14 32 12.8	-0.1
WTVZ				S	S	14 32 34.6	-1.4
NNVZ	North Ngauruho	0.56	112	P	Pn	14 32 12.8	-0.1
KRVZ	Karewarewa	0.57	108	P	Pn	14 32 12.9	-0.1
KRVZ				S	S	14 32 34.8	-2.4
NGZ	Ngauruhoe	0.57	117	P	Pn	14 32 12.9	-0.1
NGZ				S	S	14 32 35.2	-1.1
FWVZ	Far West T-bar	0.58	125	P	Pn	14 32 13.1	0.0
KATZ	Kakaramea	0.59	95	P	Pn	14 32 13.0	-0.1
KATZ				S	S	14 32 34.6	-1.7
NTVZ	North Tongarir	0.60	107	P	Pn	14 32 13.1	0.0
SNVZ	South Ngauruho	0.60	116	P	Pn	14 32 13.3	+0.1
OTVZ	Oturere	0.61	114	P	Pn	14 32 13.2	0.0
MTVZ	Mangateitei	0.62	139	P	Pn	14 32 12.9	-0.1
MTVZ				S	S	14 32 34.1	-2.4
TMVZ	Te Maari	0.62	108	P	Pn	14 32 13.4	+0.2
ETVZ	East Tongariro	0.63	110	P	Pn	14 32 13.4	+0.2
DREZ	Durham Road	0.64	245	P	Pn	14 32 13.0	-0.1
RATZ	Rangitukua	0.65	85	P	Pn	14 32 13.0	-0.2
WNVZ	Wahianoa	0.65	129	P	Pn	14 32 13.4	+0.1
TUVZ	Tukino	0.65	122	P	Pn	14 32 13.4	+0.1
WATZ	Wairara	0.65	71	P	Pn	14 32 13.3	+0.1
LREZ	Lake Rotokare	0.68	218	P	Pn	14 32 13.5	+0.3
RITZ	Rihia Road	0.71	95	P	Pn	14 32 13.5	0.0
PREZ	Palmer Road	0.74	235	P	Pn	14 32 13.6	0.0
NEZ	North Egmont	0.75	242	P	Pn	14 32 13.7	0.0
TLZ	Tolley Road	0.75	38	P	Pn	14 32 13.5	-0.3
MOVZ	Moawhango	0.79	128	P	Pn	14 32 13.5	-0.4
PKE	Pukeiti	0.79	250	P	Pn	14 32 13.7	-0.1
KUTZ	Kaahu Road	0.81	58	P	Pn	14 32 14.2	+0.2
KHEZ	Kahui Hut	0.81	243	P	Pn	14 32 13.8	-0.2
WHTZ	Whakaora	0.83	72	P	Pn	14 32 14.4	+0.2
WAZ	Wanganui	0.83	178	P	Pn	14 32 14.1	+0.1
NBEZ	Newall Road No	0.91	247	P	Pn	14 32 14.4	0.0
NMEZ	Namu Road	0.96	239	P	Pn	14 32 14.8	+0.1
BHHZ	Black Hill Sta	1.04	123	P	Pn	14 32 14.9	-0.4
ALRZ	Allen Road	1.15	72	P	Pn	14 32 15.5	-0.6
MRHZ	Matea Rd	1.15	86	P	Pn	14 32 15.5	-0.5
BKZ	Black Stump Fm	1.23	102	P	Pn	14 32 15.7	-0.3
KWHZ	Kaweka Forest	1.25	114	P	Pn	14 32 17.0	+0.2
TOZ	Tahuroa Road	1.27	20	P	Pn	14 32 16.9	0.0
OHWZ	Ohakea	1.31	168	P	Pn	14 32 17.4	+0.4
KRHZ	Kereru	1.32	124	P	Pn	14 32 17.2	0.0
TSZ	Takapari Road	1.38	146	P	Pn	14 32 17.7	0.0
OMRZ	Omania	1.38	54	P	Pn	14 32 16.0	-1.8
PNHZ	Pukenui	1.39	136	P	Pn	14 32 17.7	-0.1
MCHZ	McNeill Hill	1.46	112	P	Pn	14 32 19.0	+0.7
NMHZ	Naumai	1.46	97	P	Pn	14 32 19.2	+0.8
MTHZ	Maungataniwha	1.48	88	P	Pn	14 32 18.4	-0.1
MUGZ	Murupara	1.50	73	P	Pn	14 32 18.0	-0.6
POWZ	Post Office Ro	1.60	157	P	Pn	14 32 19.0	-0.4
RTZ	Ruatahuna	1.62	80	P	Pn	14 32 19.4	-0.4
WPHZ	Waipukurau	1.62	135	P	Pn	14 32 19.8	+0.1
ARHZ	Aropaoanui	1.63	103	P	Pn	14 32 20.2	+0.5
MARZ	Manawahe	1.65	56	P	Pn	14 32 17.9	-2.1
DVHZ	Dannevirke	1.67	146	P	Pn	14 32 19.7	-0.3
RAHZ	Arahi	1.67	90	P	Pn	14 32 20.5	+0.3
KAHZ	Kahuranaki	1.73	121	P	Pn	14 32 21.2	+0.5
WHHZ	Waihua	1.79	96	P	Pn	14 32 21.4	+0.2
MRZ	Mangatainoka R	1.80	165	P	Pn	14 32 20.6	-0.6
CKHZ	Cape Kidnapper	1.81	115	P	Pn	14 32 21.8	+0.5
PRWZ	Pori Road	1.81	154	P	Pn	14 32 21.2	-0.2
URZ	Urewera	1.82	69	P	Pn	14 32 20.8	-0.7
PXZ	Pawanui	1.85	127	P	Pn	14 32 21.8	+0.1
PRHZ	Porangahau	1.87	136	P	Pn	14 32 22.0	+0.1
SNGZ	Shannon Statio	1.88	86	P	Pn	14 32 22.1	0.0
OGWZ	Otaki Gorge	1.90	175	P	Pn	14 32 21.8	-0.4
ANWZ	Angora Road	1.94	143	P	Pn	14 32 22.5	0.0
KIW	Kapiti Island	1.94	181	P	Pn	14 32 21.7	-0.8
RAGZ	Rawiri	1.98	78	P	Pn	14 32 22.8	-0.3
TIWZ	Tintock	1.99	159	P	Pn	14 32 22.5	-0.6
HOWZ	Holdsworth Sta	2.02	168	P	Pn	14 32 22.5	-0.9
BFZ	Birch Farm	2.02	151	P	Pn	14 32 22.8	-0.6
DUWZ	D'Urville Isla	2.04	202	P	Pn	14 32 22.6	-0.9
MWZ	Matawai	2.11	75	P	Pn	14 32 23.7	-0.6
KNZ	Kokohu	2.13	94	P	Pn	14 32 24.3	-0.1
CAW	Cannon Point	2.19	178	P	Pn	14 32 24.1	-0.9
CPWZ	Castlepoint	2.21	154	P	Pn	14 32 25.1	-0.1
RIGZ	Rimuhau	2.21	85	P	Pn	14 32 25.3	-0.1
MTW	Mount Morrison	2.27	169	P	Pn	14 32 24.7	-1.2
PRGZ	Paritu Road	2.29	91	P	Pn	14 32 26.1	-0.1
TMWZ	Te Maipa	2.30	162	P	Pn	14 32 25.3	-0.9
MHGZ	Mahia Peninsul	2.32	97	P	Pn	14 32 26.6	+0.2
TKGZ	Te Karaka	2.32	79	P	Pn	14 32 26.4	0.0
TCW	Tory Channel	2.34	192	P	Pn	14 32 25.8	-0.8
RUGZ	Raukumara Rang	2.35	67	P	Pn	14 32 25.5	-1.4
WEL	Wellington	2.36	183	P	Pn	14 32 25.7	-1.1
BHW	Baring Head	2.48	181	P	Pn	14 32 26.7	-1.3
PAWZ	Paruwai Farm	2.48	172	P	Pn	14 32 26.9	-1.2
TWGZ	Tauwhareparae	2.49	74	P	Pn	14 32 28.4	0.0
MSWZ	Moikau Station	2.50	175	P	Pn	14 32 27.0	-1.3
HAZ	Te Kaha	2.52	63	P	Pn	14 32 27.2	-1.3
TRWZ	Traveller	2.54	167	P	Pn	14 32 27.6	-1.1
NNZ	Nelson	2.59	207	P	Pn	14 32 27.8	-1.4
CNGZ	Carnagh Statio	2.59	81	P	Pn	14 32 29.4	+0.1
TUWZ	Tuamarina	2.62	197		P	14 32 28.4	
TUWZ	Tuamarina	2.62	197	P	Pn	14 32 28.4	-1.2
PLWZ	Palliser	2.66	175	P	Pn	14 32 28.5	-1.5
QRZ	Quartz Range	2.66	224	P	Pn	14 32 28.1	-1.9
PKGZ	Pakihiroa	2.67	68	P	Pn	14 32 29.6	-0.7
PUZ	Puketiti	2.73	73	P	Pn	14 32 30.1	-0.8
CMWZ	Cape Campbell	2.88	191	P	Pn	14 32 31.9	-0.5
BSWZ	Blackbirch Sta	2.91	196	P	Pn	14 32 31.9	-0.8
MXZ	Matakaoa Point	2.97	64	P	Pn	14 32 33.3	-0.3
THZ	Tophouse	3.24	208	P	Pn	14 32 34.7	-1.9
KHZ	Kahutara	3.65	197	P	Pn	14 32 40.0	-1.4
DSZ	Denniston Nort	3.70	219	P	Pn	14 32 39.9	-2.2
GVZ	Greta Valley S	4.29	199	P	Pn	14 32 47.4	-1.9
LTZ	Lake Taylor	4.36	207	P	Pn	14 32 47.9	-2.1
AMCZ	Amberley	4.59	201	P	Pn	14 32 50.6	-2.2
INZ	Inchbonnie	4.63	214	P	Pn	14 32 51.0	-2.4
OXZ	Oxford	4.92	206	P	Pn	14 32 54.0	-2.9
OKCZ	Okains Bay	5.00	196	P	Pn	14 32 55.6	-2.5
MQZ	McQueen's Vall	5.08	199	P	Pn	14 32 55.7	-3.3
AKCZ	Akaroa Harbour	5.18	197	P	Pn	14 32 57.5	-2.7
RACZ	Rakaia	5.25	203	P	Pn	14 32 58.1	-3.0
WACZ	Wakanui South	5.53	204	P	Pn	14 33 01.9	-2.8
ARCZ	Arundel	5.76	208	P	Pn	14 33 04.5	-3.1
TMZ	Timaru	6.20	207	P	Pn	14 33 10.7	-2.5

*NEIC **20** 14:32:20.2±1.0,15°.34S±0°.04×173°.0W±0°.1,h10km±1km, mb4.7/10, Error ellipse: s-maj=23.0km s-min=4.2km az=103.0*

*IDC **20** 14:32:28.6±3.2,15°.85S×174°.37W,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.7/29,mbtmp3.8/4,Error ellipse: s-maj=172.9km s-min=34.5km az=142.0*

*NOU **20** 14:32:39.8,14°.12S×172°.17W,h57km,MLv3.3,Samoa Islands*

ISC 20 14:32:23.4±0.8,15°32S±0°09×173°.0W±0°.1,h29km,n26, σ2$06/19,mb4.4/8,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.85	41	P	Pn	14 32 52.0	-1.3
AFI	Afiamalu	1.85	41	P	Pn	14 32 52.5	-0.8
NIUE	Niue	4.78	142	Pn	Pn	14 33 31.8	-1.6
SANVU	Saraoutou	19.06	267	P	P	14 36 43.5	0.0
SANVU				IAmb	IAmb	14 36 51.8	
	comp=Z,48nm,1.1s						
LTZ	Lake Taylor	30.14	202	P	P	14 38 30.7	-0.1
H11S2	WAKE ISLAND Hy	39.07	329	T	T	15 21 28.0	
	baz=149,slow=76,SNR=9.7						
H11S3	WAKE ISLAND Hy	39.09	329	T	T	15 21 12.1	
	baz=149,slow=76,SNR=7.9						
H11S1	WAKE ISLAND Hy	39.09	329	T	T	15 21 14.9	
	baz=149,slow=76,SNR=6.9						
PMG	Port Moresby	39.28	274	P	P	14 39 49.3	-0.7
H11N3	WAKE ISLAND Hy	40.01	330	T	T	15 22 33.4	
	baz=149,slow=76,SNR=3.8						
H11N1	WAKE ISLAND Hy	40.02	330	T	T	15 22 24.5	
	baz=149,slow=76,SNR=4.0						
H11N2	WAKE ISLAND Hy	40.03	330	T	T	15 22 35.9	
	baz=149,slow=76,SNR=4.2						
STKA	Stephens Creek	44.38	240	P	P	14 40 30.8	-0.7
	comp=Z,0.9nm,0.6s,baz=90,slow=15,SNR=1.6						
STKA	Stephens Creek	44.38	240	IAmb	IAmb	14 40 32.8	
	comp=Z,1.3nm,1.4s						
BBOO	Buckleboo	49.16	240	P	P	14 41 08.8	-0.1
WR0	Warramunga Arr	50.02	257	P	P	14 41 15.6	-0.1
WR0				IAmb	IAmb	14 41 17.1	
	comp=Z,9.1nm,1.4s						
WB0	Warramunga Arr	50.17	257	P	P	14 41 16.4	-0.4
WB0				IAmb	IAmb	14 41 30.6	
	comp=Z,16nm,1.4s						
WB2	Warramunga Arr	50.19	257	P	P	14 41 17.4	+0.4
WB2				IAmb	IAmb	14 41 28.1	
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	50.20	257	P	P	14 41 15.3	-1.8
	comp=Z,1.2nm,1.0s,baz=92,slow=6.9,SNR=7.3						
AS31	Alice Springs	50.47	252	P	P	14 41 18.7	-0.4
ASAR	Alice Springs	50.47	252	P	P	14 41 18.3	-0.8
	comp=Z,2.3nm,0.6s,baz=86,slow=7.9,SNR=31						
ASAR				PcP	PcP	14 42 40.1	+3.0
	comp=Z,0.3nm,0.7s,baz=99,slow=5.8,SNR=0.9						
ASAR	Alice Spring

ESKU	**Eskilstuna**	**0.96**	**285**	*e*P		**Pg**	**14 41 54.4**	**-0.1**
FIBU	**Brunna**	**1.01**	**335**	P		**Pg**	**14 41 55.6**	**+0.2**
FIBU	**Brunna**	**1.01**	**335**	P		**Pg**	**14 41 55.6**	**+0.2**
FIBU	**Brunna**	**1.01**	**335**	*e*P		**Pg**	**14 41 55.6**	**+0.2**
BACU	**Backbrunna**	**1.03**	**328**	P		**Pg**	**14 41 55.8**	**+0.1**
BACU	**Backbrunna**	**1.03**	**328**	P		**Pg**	**14 41 55.8**	**+0.1**
BACU	**Backbrunna**	**1.03**	**328**	*e*P		**Pg**	**14 41 55.8**	**+0.1**
FLYU	**Flymyra**	**1.15**	**352**	P		**Pg**	**14 41 58.1**	**0.0**
FLYU	**Flymyra**	**1.15**	**352**	P		**Pg**	**14 41 58.1**	**0.0**
FLYU	**Flymyra**	**1.15**	**352**	*e*P		**Pg**	**14 41 58.1**	**0.0**
GOTU	**Gotland**	**1.32**	**171**	*e*P		**Pg**	**14 42 00.9**	**-0.5**
GOTU				*e*S		**Sg**	**14 42 18.3**	**-0.3**
OSTU	**Oestervaala**	**1.35**	**337**	P		**Pg**	**14 42 01.7**	**-0.3**
OSTU	**Oestervaala**	**1.35**	**337**	P		**Pg**	**14 42 01.7**	**-0.3**
OSTU	**Oestervaala**	**1.35**	**337**	*e*P		**Pg**	**14 42 01.7**	**-0.3**
GRAU	**Graesoe**	**1.36**	**7**	P		**Pg**	**14 42 01.9**	**-0.2**
GRAU	**Graesoe**	**1.36**	**7**	P		**Pg**	**14 42 01.9**	**-0.2**
GRAU	**Graesoe**	**1.36**	**7**	*e*P		**Pg**	**14 42 01.9**	**-0.2**
AAL	**Aland**	**1.50**	**37**	*e*P		**Pn**	**14 42 04.3**	**+0.1**
AAL				*e*S		**Sg**	**14 42 23.2**	**-1.0**
AAL	**Aland**	**1.50**	**37**	*e*P		**Pn**	**14 42 04.2**	**+0.1**
AAL				*e*S		**Sg**	**14 42 23.7**	**-0.4**
SLIT	**Slitere, Latvi**	**2.56**	**121**	*e*P		**Pn**	**14 42 18.9**	**+0.3**
SLIT	**Slitere, Latvi**	**2.56**	**121**	*e*P		**Pn**	**14 42 19.2**	**+0.6**
SLIT				*e*S		**Sn**	**14 42 51.1**	**+0.7**
HFC2	**Hagfors New Ar**	**2.56**	**298**	*e*P		**Pn**	**14 42 20.8**	**+1.9**
HFC2				*e*S		**Sn**	**14 42 52.7**	**+2.0**
RAF	**Rauma**	**2.71**	**40**	*e*P		**Pn**	**14 42 22.3**	**+1.5**
RAF				*e*S		**Sn**	**14 42 53.9**	**-0.4**
RAF				MSG			14 43 02.6	
	comp=Z,4.4nm,0.1s							
ARNU	**Arnoeviken**	**2.74**	**352**	*e*P		**Pn**	**14 42 21.8**	**+0.6**
ARNU				*e*S		**Sn**	**14 42 56.1**	**+1.1**
MTSE	**Matsula**	**2.93**	**93**	*e*P		**Pn**	**14 42 25.1**	**+1.2**
BLEU	**Blekinge**	**2.99**	**206**	*i*P		**Pn**	**14 42 26.2**	**+1.6**
BORU	**Boraas**	**3.17**	**247**	*i*P		**Pn**	**14 42 29.7**	**+2.5**
BORU				*i*S		**Sb**	**14 43 09.9**	**-2.5**
DEL	**Delary**	**3.43**	**224**	*e*		**Pn**	**14 42 31.1**	**+0.3**
	baz=33,slow=14							
DEL				*i*P		Pb	14 42 32.9	-4.8
DEL				IAML			14 43 33.8	
	comp=Z,1.0nm,0.3s							
TJOU	**Tjoern**	**3.58**	**257**	*i*P		**Pn**	**14 42 34.6**	**+1.8**
PBUR	**Paburge**	**3.59**	**144**	IAML			14 43 06.7	
	comp=Z,27nm,0.5s							
STRU	**Stroemstad**	**3.63**	**274**	*i*P		**Pn**	**14 42 35.3**	**+1.9**
STRU	**Stroemstad**	**3.63**	**274**	*e*P		**Pn**	**14 42 34.1**	**+0.7**
STRU				*e*S		**Sn**	**14 43 16.6**	**-0.3**
ONAU	**Onsala**	**3.69**	**247**	*i*P		**Pn**	**14 42 36.6**	**+2.3**
HEMU	**Hemsoen**	**3.70**	**359**	*e*P		**Pn**	**14 42 35.2**	**+0.9**
HEMU				*e*S		**Sn**	**14 43 19.5**	**+1.0**
NC602	**NORSAR Array S**	**3.79**	**300**	*e*P		**Pn**	**14 42 36.4**	**+0.8**
NC602				*e*S		**Sn**	**14 43 20.6**	**-0.2**
OSL	**Oslo**	**3.93**	**287**	*e*P		**Pn**	**14 42 38.5**	**+0.9**
OSL				IAML			14 44 04.7	
	comp=Z,14nm,0.3s							
NB201	**NORSAR Array S**	**4.03**	**304**	*e*P		**Pn**	**14 42 40.1**	**+1.1**
NB201				*e*S		**Sn**	**14 43 27.7**	**+0.7**
NB201				IAML			14 43 44.2	
	comp=Z,3.6nm,0.4s							
NOA	**NORSAR Array B**	**4.06**	**303**	Pn		**Pn**	**14 42 40.2**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=131,slow=4.7,SNR=5.8							
NOA				Pg		**Pb**	**14 42 48.6**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=111,slow=15,SNR=5.9							
NOA				Sn		**Sn**	**14 43 24.8**	**-2.9**
	comp=Z,0.0nm,0.3s,baz=204,slow=13,SNR=1.2							
NOA				Lg		Lg	14 43 44.5	
	comp=Z,0.1nm,0.3s,baz=112,slow=20,SNR=7.4							
NAO01	**NORSAR Array S**	**4.12**	**300**	*e*P		**Pn**	**14 42 40.8**	**+0.5**
NAO01				*e*S		**Sn**	**14 43 29.0**	**-0.1**
PVF	**Pernaja**	**4.17**	**65**	MSG			14 43 53.8	
	comp=Z,1.4nm,0.1s							
NBO00	**NORSAR Array S**	**4.25**	**302**	*e*P		**Pn**	**14 42 42.5**	**+0.5**
NBO00				*e*S		**Sn**	**14 43 32.6**	**+0.3**
BSD	**Bornholm Skovb**	**4.28**	**206**	*e*P		**Pn**	**14 42 42.4**	**0.0**
BSD	**Bornholm Skovb**	**4.28**	**206**	*i*P		**Pn**	**14 42 43.0**	**+0.6**
BSD				IAML			14 43 54.3	
	comp=Z,2.3nm,0.3s							
KONO	**Kongsberg**	**4.46**	**282**	*e*P		**Pn**	**14 42 45.6**	**+0.8**
KONO				IAML			14 43 57.0	
	comp=Z,2.6nm,0.6s							
KEF	**Keuruu**	**4.58**	**43**	MSG			14 44 02.9	
	comp=Z,1.2nm,0.1s							
VAF	**Ylistaro**	**4.61**	**26**	MSG			14 44 03.6	
	comp=Z,2.4nm,0.2s							
FINES	**FINESS Array B**	**4.63**	**55**	Pn		**Pn**	**14 42 49.0**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=248,slow=12,SNR=14							
FINES				Sn		**Sn**	**14 43 42.3**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=245,slow=21,SNR=11							
FINES				Lg		Lg	14 44 00.4	
	comp=Z,1.0nm,0.3s,baz=246,slow=24,SNR=8.0							
SKAR	**Skarslia**	**5.27**	**293**	*e*P		**Pn**	**14 42 56.4**	**+0.3**
SKAR				*e*S		**Sn**	**14 43 55.0**	**-2.5**
SKAR				IAML			14 44 28.4	
	comp=Z,1.2nm,0.5s							
DOMB	**Dombas**	**5.45**	**308**	*e*P		**Pn**	**14 42 59.4**	**+0.9**
DOMB				IAML			14 44 32.1	
	comp=Z,3.8nm,0.5s							
SNART	**Snartemo**	**5.78**	**268**	*e*P		**Pn**	**14 43 03.1**	**+0.2**
SNART				IAML			14 44 09.9	
	comp=Z,3.7nm,0.6s							
ODD1	**Odda**	**5.97**	**284**	*e*P		**Pn**	**14 43 06.8**	**+1.1**
ODD1				IAML			14 44 13.3	
	comp=Z,1.1nm,0.7s							
BLS5	**Blasjo**	**6.05**	**279**	*e*P		**Pn**	**14 43 06.9**	**+0.2**
BLS5				IAML			14 44 19.0	
	comp=Z,1.5nm,0.8s							
KMY	**Karmoy**	**6.68**	**277**	*e*P		**Pn**	**14 43 15.8**	**+0.5**
KMY				IAML			14 44 13.0	
	comp=Z,2.2nm,0.5s							
ASK	**Askoy**	**6.74**	**288**	*e*P		**Pn**	**14 43 16.4**	**+0.2**
ASK				IAML			14 44 38.3	
	comp=Z,4.3nm,0.8s							
ARCES	**ARCESS Array B**	**11.04**	**14**	Pn		**Pn**	**14 44 13.3**	**-1.7**
	baz=194,slow=14,SNR=7.6							
ARCES				Sn		Sn	14 46 07.5	-11
	baz=194,slow=25,SNR=1.2							

SKHL ***20*** *14:55:20.1±0.1,46.°10N×151.°80E,h101km±4km, mb4.9/8, mbv5.4/3, msh5.3/2, msha5.8/6*
MOS ***20*** *14:55:20.3±0.9,46.°30N×151.°57E,h99km, mb4.5/31, Error ellipse: s-maj=7.8km s-min=6.2km az=80.9*
IDC ***20*** *14:55:22.3±2.0,46.°56N×151.°28E,h100km±18km, mb3.7/20, mb1 3.8/24, mb1mx3.8/39, mbtmp4.0/24, MS3.7/3, Ms1 3.7/3, ms1mx3.0/43, Error ellipse: s-maj=16.9km s-min=11.1km az=138.0*
NEIC ***20*** *14:55:23.0±1.3,46.°5N±0.°1×151.°3E±0.°1,h104km±6km, mb4.4/40, Error ellipse: s-maj=18.1km s-min=12.0km az=147.0*
JMA ***20*** *14:55:24.7±0.7,45.°42N×151.°47E,h105km, M4.2*
ISC 20 14:55:21.1±0.4, 46.°19N±0.°05×151.°56E±0.°05, h100km, n226, σ1§56/234, mb4.4/79, 4C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.76**	**251**	*ce*PN		**Pn**	**14 56 04.5**	**+1.0**
KUR				*i* S		**Sn**	**14 56 37.8**	**+1.7**
KUR				pmax		pmax		
	comp=Z,302nm,0.4s							
KUR				pmax		pmax		
	comp=N,84nm,0.3s							
KUR				pmax		pmax		
	comp=E,32nm,0.2s							
KUR				smax		smax		
	comp=N,1μm,0.3s							
KUR				smax		smax		
	comp=E,579nm,0.4s							
KUR	**Kuril'sk**	**2.76**	**251**	*i*P		**Pn**	**14 56 04.5**	**+1.0**
KUR				AMB		AMB	14 56 05.0	
	comp=E,80nm,0.4s							
KUR				AMB		AMB	14 56 05.0	
	comp=E,30nm,0.4s							
KUR				AMB		AMB	14 56 05.0	
	comp=E,300nm,0.4s							
KUR				AMB		AMB	14 56 06.0	
	comp=E,500nm,1.1s							
KUR				*e*S		**Sn**	**14 56 37.8**	**+1.7**
KUR				A		A	14 56 40.0	
	comp=E,1μm,0.4s							
KUR				A		A	14 56 40.0	
	comp=E,580nm,0.4s							
KUR				A		A	14 56 46.0	
	comp=E,600nm,1.2s							
KUR				A		A	14 56 46.0	
	comp=E,900nm,1.2s							
YUK	**Yuzh-Kuril'sk**	**4.57**	**244**	*e*PN		**Pn**	**14 56 28.1**	**+0.2**
YUK				*e*S		**Sn**	**14 57 19.7**	**-0.1**
YUK				pmax		pmax		
	comp=Z,252nm,0.5s							
YUK				smax		smax		
	comp=E,565nm,0.3s							
YUK				smax		smax		
	comp=N,580nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**4.57**	**244**	*e*P		**Pn**	**14 56 28.6**	**+0.7**
YUK				AMB		AMB	14 56 29.2	
	comp=N,800nm,1.4s							
YUK				AMB		AMB	14 56 31.0	
	comp=N,250nm,0.5s							
YUK				*e*S		**Sn**	**14 57 20.0**	**+0.2**
YUK				A		A	14 57 22.0	
	comp=N,580nm,0.4s							
YUK				A		A	14 57 22.0	
	comp=N,570nm,0.4s							
YUK				A		A	14 57 22.8	
	comp=N,1μm,1.6s							
YUK				A		A	14 57 22.8	
	comp=N,2μm,1.6s							
GRPR	**Tuman**	**4.65**	**244**	*e*PN		**Pn**	**14 56 29.7**	**+0.8**
GRPR				*e*S		**Sn**	**14 57 20.8**	**-0.9**
GRPR				pmax		pmax		
	comp=Z,146nm,0.4s							
GRPR				smax		smax		
	comp=N,530nm,0.3s							
GRPR				smax		smax		
	comp=E,263nm,0.3s							
GRPR	**Tuman**	**4.65**	**244**	*e*P		**Pn**	**14 56 29.7**	**+0.8**
GRPR				AMB		AMB	14 56 30.0	
	comp=E,150nm,0.4s							
GRPR				*e*S		**Sn**	**14 57 21.5**	**-0.2**
GRPR				A		A	14 57 25.0	
	comp=E,530nm,0.3s							
GRPR				A		A	14 57 25.0	
	comp=E,260nm,0.3s							
RUSJ	**Misakicho**	**4.92**	**247**	*e*PN		**Pn**	**14 56 37.4**	**+4.7**
RUSJ				*e*S		**Sn**	**14 57 33.9**	**+5.5**
NEM2	**Nemuro 2**	**5.01**	**238**	P		**Pn**	**14 56 32.9**	**-0.9**
NEM2				*e*S		**Sn**	**14 57 25.9**	**-4.6**
NMR	**Nemuro--Hokkai**	**5.02**	**238**	*i*PN		**Pn**	**14 56 32.9**	**-1.0**
NMR				*i* S		**Sn**	**14 57 26.0**	**-4.6**
NMR	**Nemuro--Hokkai**	**5.02**	**238**	*i* P		**Pn**	**14 56 32.9**	**-1.0**
JRA	**Rausu**	**5.08**	**246**	P		**Pn**	**14 56 35.9**	**+1.1**
SKR	**Severo-Kuril's**	**5.42**	**32**	*e*PN		**Pn**	**14 56 38.3**	**-1.1**
SKR				*e*S		**Sn**	**14 57 35.3**	**-5.2**
SKR				pmax		pmax		
	comp=Z,31nm,0.8s							
SKR				smax		smax		
	comp=E,39nm,0.6s							
SKR				smax		smax		
	comp=N,50nm,0.9s							
SKR	**Severo-Kuril's**	**5.42**	**32**	*e*P		**Pn**	**14 56 38.6**	**-0.8**
SKR				AMB		AMB	14 56 40.7	
	comp=N,30nm,0.8s							
SKR				AMB		AMB	14 56 42.6	
	comp=N,300nm,3.0s							
SKR				*e*S		**Sn**	**14 57 37.3**	**-3.1**
SKR				A		A	14 57 41.5	
	comp=N,70nm,0.5s							
SKR				A		A	14 57 41.5	
	comp=N,40nm,0.5s							
JNK	**Nakash**	**5.51**	**244**	P		**Pn**	**14 56 41.2**	**+0.6**
JAK	**Akkeshi**	**5.85**	**239**	P		**Pn**	**14 56 44.0**	**-1.2**
JAK				*e*S		**Sn**	**14 57 46.3**	**-4.5**
JTKR	**Abashiri--Toko**	**5.85**	**250**	P		**Pn**	**14 56 46.5**	**+1.3**
YSS	**Yuzh-Sakhalins**	**6.12**	**280**	*i*PN		**Pn**	**14 56 50.6**	**+1.8**
YSS				*e*S		**Sn**	**14 57 57.2**	**-0.1**
YSS				pmax		pmax		
	comp=Z,30nm,1.2s							
YSS	**Yuzh-Sakhalins**	**6.12**	**280**	Pn		**Pn**	**14 56 48.3**	**-0.5**
YSS	**Yuzh-Sakhalins**	**6.12**	**280**	*e*P		**Pn**	**14 56 51.6**	**+2.8**
YSS				AMB		AMB	14 56 52.2	
	comp=Z,30nm,0.8s							
YSS				*e*S		**Sn**	**14 58 00.2**	**+2.9**
JMP	**Maruseppu**	**6.20**	**252**	P		**Pn**	**14 56 51.6**	**+1.6**
JAR	**Ashorobuto**	**6.25**	**245**	P		**Pn**	**14 56 51.3**	**+0.6**
JOB	**Onbets**	**6.42**	**242**	P		**Pn**	**14 56 52.6**	**-0.4**
JKK2	**Kamakawa 2**	**6.66**	**253**	P		**Pn**	**14 56 57.7**	**+1.5**
JKA	**Kamikawa-asahi**	**6.66**	**255**	Pn		**Pn**	**14 56 58.0**	**+1.7**
JKA	**Kamikawa-asahi**	**6.66**	**255**	*e*P		**Pn**	**14 56 58.0**	**+1.7**
ASAJ	**Asahikawa**	**6.67**	**255**	P		**Pn**	**14 56 57.3**	**+1.0**
	comp=Z,4.8nm,0.3s,baz=90,slow=14,SNR=40							
ASAJ				S		**Sn**	**14 58 06.8**	**-4.0**
	comp=Z,0.7nm,0.3s,baz=107,slow=14,SNR=1.5							
ASAJ	**Asahikawa**	**6.67**	**255**	P		**Pn**	**14 56 58.9**	**+2.6**
ASAJ	**Asahikawa**	**6.67**	**255**	PN		**Pn**	**14 56 58.0**	**+1.7**
JCH	**Churui**	**6.87**	**242**	P		**Pn**	**14 56 58.5**	**-0.6**
JCH				*e*S		**Sn**	**14 58 11.2**	**-4.5**
UGL	**Uglegorsk**	**7.03**	**298**	*e*PN		**Pn**	**14 57 01.4**	**+0.2**
UGL				*e*S		**Sn**	**14 58 16.0**	**-3.6**
UGL				pmax		pmax		
	comp=Z,59nm,0.8s							
UGL				smax		smax		
	comp=E,86nm,0.6s							
UGL	**Uglegorsk**	**7.03**	**298**	*e*P		**Pn**	**14 57 03.0**	**+1.8**
UGL				AMB		AMB	14 57 04.6	
	comp=E,60nm,0.7s							
UGL				*e*S		**Sn**	**14 58 21.4**	**+1.8**
UGL				A		A	14 58 24.0	
	comp=E,50nm,0.6s							
UGL				A		A	14 58 24.0	
	comp=E,90nm,0.6s							
JFR	**Furan**	**7.07**	**248**	P		**Pn**	**14 57 03.0**	**+1.2**
JAB	**Ashibetsu**	**7.16**	**251**	P		**Pn**	**14 57 05.0**	**+2.0**
ERM	**Erimo**	**7.34**	**238**	*i*PN		**Pn**	**14 57 05.8**	**+0.3**
ERM	**Erimo**	**7.34**	**238**	Pn		**Pn**	**14 57 05.6**	**0.0**
JHR	**Hokuryu**	**7.39**	**254**	P		**Pn**	**14 57 08.3**	**+2.1**
JBT2	**Biratori 2**	**7.41**	**246**	P		**Pn**	**14 57 06.4**	**0.0**
JNBK	**Urakawa-nobuka**	**7.43**	**241**	P		**Pn**	**14 57 05.3**	**-1.4**
TYV	**Tymovskoe**	**7.53**	**312**	*e*PN		**Pn**	**14 57 09.3**	**+1.2**
TYV				*e*S		**Sn**	**14 58 31.0**	**-0.8**
TYV				pmax		pmax		
	comp=Z,33nm,0.9s							
TYV				pmax		pmax		
	comp=Z,100nm,2.9s							
TYV				smax		smax		
	comp=N,10.0nm,1.0s							
TYV	**Tymovskoe**	**7.53**	**312**	*e*P		**Pn**	**14 57 09.6**	**+1.6**
TYV				AMB		AMB	14 57 10.3	
	comp=N,30nm,0.8s							
TYV				AMB		AMB	14 57 10.8	
	comp=N,100nm,3.0s							
TYV				*e*S		**Sn**	**14 58 33.2**	**+1.4**
TYV				A		A	14 58 35.5	
	comp=N,20nm,0.8s							
TYV				A		A	14 58 35.5	
	comp=N,50nm,0.8s							
JEW	**Eniwo**	**7.96**	**249**	Pn		**Pn**	**14 57 11.9**	**-2.1**
PEA0B	**Petropavlovsk-**	**7.99**	**28**	*i*PN		**Pn**	**14 57 13.2**	**-1.0**
PEA0B	**Petropavlovsk-**	**7.99**	**28**	Pn		**Pn**	**14 57 12.8**	**-1.4**
PETK	**Petropavlovsk-**	**7.99**	**28**	P		**Pn**	**14 57 12.8**	**-1.5**
	comp=N,0.2nm,0.3s,baz=173,slow=11,SNR=14							
JNB	**Noboribetsu**	**8.41**	**248**	P		**Pn**	**14 57 20.4**	**+0.4**
JNB				*e*S		**Sn**	**14 58 50.2**	**-2.9**
JKB	**Kayabe**	**8.71**	**244**	P		**Pn**	**14 57 22.1**	**-2.0**
JKB				*e*S		**Sn**	**14 58 53.5**	**-7.1**
JSH	**Shimam**	**8.97**	**251**	P		**Pn**	**14 57 28.0**	**+0.4**
JYM2	**Yakumo 2**	**9.01**	**247**	P		**Pn**	**14 57 27.1**	**-1.1**
JSR	**Shiriuchi**	**9.29**	**244**	P		**Pn**	**14 57 30.5**	**-1.5**
JTM	**Tenmabayashi**	**9.34**	**238**	*e*S		Sn	14 59 06.1	-10
JTM	**Tenmabayashi**	**9.34**	**238**			**Pn**	**14 57 29.4**	**-3.3**
JTH	**Tanohata**	**9.45**	**232**	*e*S		Sn	14 59 07.3	-11
JOSM	**Okushiri--Mats**	**9.61**	**249**	P		**Pn**	**14 57 34.9**	**-1.4**
JMM	**Marumori**	**11.53**	**228**	Pn		**Pn**	**14 58 00.8**	**-1.6**
MA2	**Magadan**	**13.42**	**358**	*i*PN		**Pn**	**14 58 27.1**	**-0.1**
MA2				pmax		pmax		
	comp=Z,6.0nm,1.4s							
MA2	**Magadan**	**13.42**	**358**	*e*P		**Pn**	**14 58 27.1**	**-0.1**
KLR	**Kul'dur**	**13.68**	**290**	P		**Pn**	**14 58 30.9**	**+0.3**
	baz=100,slow=17							
KLR	**Kul'dur**	**13.68**	**290**	*e*P		**Pn**	**14 58 31.9**	**+1.3**
KLR				pmax		pmax		
	comp=Z,9.0nm,1.5s							
KLR	**Kul'dur**	**13.68**	**290**	*e*P		**Pn**	**14 58 31.9**	**+1.3**
EKMR	**Ekimchan**	**13.86**	**307**	*e*P		**Pn**	**14 58 33.1**	**+0.1**
MAT	**Matsushiro**	**13.89**	**231**	P		**P**	**14 58 40.7**	**+2.3**
MJAR	**Matsushiro Arr**	**13.89**	**231**	P		**P**	**14 58 38.7**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=320,slow=8.4,SNR=9.1							
USA0B	**Ussuriysk Arra**	**13.94**	**269**	*ce*P		**Pn**	**14 58 35.1**	**+1.0**
USA0B	**Ussuriysk Arra**	**13.94**	**269**			**Pn**	**14 58 34.3**	**+0.2**
USRK	**Ussuriysk Ar.**	**13.94**	**269**	P		**Pn**	**14 58 34.0**	**0.0**
	baz=70,slow=13,SNR=21							
USRK	**Ussuriysk Ar.**	**13.94**	**269**	Pn		**Pn**	**14 58 33.2**	**-0.8**
MDJ	**Mudanjiang**	**15.50**	**272**	Pn		**Pn**	**14 58 53.9**	**-0.1**
BMKR	**Bomnak**	**16.73**	**309**	*e*P		**Pn**	**14 59 08.0**	**-1.1**
ZEA	**Zeya**	**17.31**	**305**	*e*P		**P**	**14 59 15.1**	**-0.9**
ZEA	**Zeya**	**17.31**	**305**	*e*P		**P**	**14 59 15.1**	**-0.9**
KROS	**Kirovskiy**	**17.66**	**307**	*e*P		**P**	**14 59 19.2**	**-0.8**
KROS				AMB		AMB	14 59 22.0	
	comp=Z,4.0nm,0.8s							
KSRS	**Korea Array**	**19.60**	**252**	P		**P**	**14 59 41.2**	**0.0**
	comp=Z,0.4nm,0.3s,baz=56,slow=11,SNR=18							
KSRS				LR		LR	15 07 24.8	
	comp=Z,95nm,19.4s,baz=45,slow=37							
KSRS	**Korea Array**	**19.60**	**252**	*e*P		**Pn**	**14 59 43.1**	**-0.4**
KSRS	**Korea Array**	**19.60**	**252**	*e*P		**Pn**	**14 59 43.1**	**-0.4**
KS19	**Wonju Array Si**	**19.61**	**252**			**P**	**14 59 42.4**	**+1.0**
KS19				IAmb		IAmb	14 59 48.0	
	comp=Z,39nm,1.5s							
YAK	**Yakutsk**	**20.23**	**329**	*e*P		Pn	14 59 50.0	-0.7
YAK				pmax		pmax		
	comp=Z,10.0nm,1.0s							
YAK	**Yakutsk**	**20.23**	**329**	*e*P		Pn	14 59 50.0	-0.7
JNU	**Nakatsue**	**20.51**	**238**	P		**P**	**14 59 53.0**	**+1.8**
	comp=Z,3.5nm,0.6s,baz=59,slow=19,SNR=1.0							
JNU	**Nakatsue**	**20.51**	**238**	IAmb		IAmb	15 00 12.7	
	comp=Z,65nm,1.5s							
BILL	**Bilibino**	**23.19**	**14**	*e*P		**P**	**15 00 19.0**	**+0.3**
BILL				pmax		pmax		
	comp=Z,1.0nm,1.2s							
BILL	**Bilibino**	**23.19**	**14**	*e*P		**P**	**15 00 19.0**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**29.25**	**149**	T		T	15 32 39.9	
	baz=338,slow=76,SNR=484							
HHC	**Hu-ho-hao-te**	**29.26**	**274**	*e*P		**P**	**15 01 15.4**	**+1.8**
H11N1	**WAKE ISLAND Hy**	**29.27**	**149**	T		T	15 32 58.9	
	baz=338,slow=76,SNR=554							
H11N3	**WAKE ISLAND Hy**	**29.27**	**149**	T		T	15 32 57.8	
	baz=338,slow=76,SNR=382							
H11S1	**WAKE ISLAND Hy**	**30.31**	**151**	T		T	15 34 15.7	
	baz=339,slow=76,SNR=348							
H11S3	**WAKE ISLAND Hy**	**30.32**	**151**	T		T	15 34 16.8	
	baz=339,slow=76,SNR=153							
H11S2	**WAKE ISLAND Hy**	**30.33**	**151**	T		T	15 34 17.1	
	baz=339,slow=76,SNR=200							
SONM	**Songino Array**	**30.51**	**290**	PcP		**PcP**	**15 04 21.5**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=13,slow=21,SNR=2.7							
TLY	**Talaya**	**31.48**	**298**	*ie*P		**P**	**15 01 33.0**	**0.0**
XAN	**Xi'an**	**34.39**	**265**	P		**P**	**15 01 58.8**	**+0.2**
XAN				pmax		pmax		
	comp=Z,19nm,0.9s							
XAN	**Xi'an**	**34.39**	**265**	P		**P**	**15 01 59.1**	**+0.5**
XAN				pmax		pmax		
	comp=Z,12nm,0.7s							
XAN	**Xi'an**	**34.39**	**265**	P		**P**	**15 01 59.1**	**+0.5**
WRH	**Wood River Hil**	**37.14**	**39**	P		**P**	**15 02 21.7**	**+0.1**
WRH				IAmb		IAmb	15 02 38.0	
	comp=Z,4.3nm,1.3s							
CCB	**Clear Creek Bu**	**37.26**	**38**	P		**P**	**15 02 22.8**	**+0.2**
CCB				IAmb		IAmb	15 02 45.9	
	comp=Z,3.7nm,1.3s							
POKR	**Poker Plat Res**	**37.42**	**38**	P		**P**	**15 02 24.8**	**+0.8**
POKR				IAmb		IAmb	15 02 26.0	
	comp=Z,2.5nm,0.8s							
IL31		**37.66**	**38**	P		**P**	**15 02 25.4**	**-0.5**
IL31				IAmb		IAmb	15 02 47.0	
	comp=Z,4.0nm,1.2s							
ILAR	**Eielson Array**	**37.66**	**38**	P		**P**	**15 02 25.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=264,slow=7.3,SNR=19							
ILAR	**Eielson Array**	**37.66**	**38**	*e*P		**P**	**15 02 25.9**	**-0.1**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ILAR	**Eielson Array**	**37.66**	**38**	P		**P**	**15 02 25.8**	**-0.2**
CD2	**Chengdu**	**39.76**	**265**	P		**P**	**15 02 45.0**	**+1.0**
CD2				pmax		pmax		
	comp=Z,40nm,0.8s							
L27K	**Beaver Creek,**	**40.01**	**41**	P		**P**	**15 02 46.8**	**+1.2**
EGAK	**Eagle**	**40.10**	**38**	P		**P**	**15 02 46.1**	**-0.2**
EGAK				IAmb		IAmb	15 03 07.5	
	comp=Z,6.7nm,1.4s							
ZALV	**Zalesovo Beam**	**42.07**	**306**	PcP		**PcP**	**15 04 56.0**	**+0

comp=Z,94nm,18.9s,baz=146,slow=38
FCC Fort Churchill 62.32 32 P **P** **15 05 32.2 0.0**
FCC pmax pmax
comp=Z,2.0nm,1.3s
FCC Fort Churchill 62.32 32 P **P** **15 05 32.2 0.0**
NVAR Mina Array Bea 63.65 61 P **P** **15 05 43.0 +1.3**
comp=Z,0.2nm,0.5s,baz=295,slow=6.9,SNR=1.9
FINES FINESS Array B 64.08 334 P **P** **15 05 41.5 -2.4**
comp=Z,1.2nm,0.4s,baz=38,slow=6.3,SNR=15
FINES FINESS Array B 64.08 334 *eP* **P** **15 05 41.9 -2.0**
FINES pmax pmax
comp=Z,1.0nm,0.4s
PDAR Pinedale Array 65.94 53 P **P** **15 05 57.8 +1.2**
comp=Z,0.3nm,0.6s,baz=311,slow=5.5,SNR=2.3
GEYT Alibeck 65.96 300 P **P** **15 05 56.2 -0.3**
comp=Z,1.6nm,0.5s,baz=39,slow=12,SNR=2.4
WRA Warramunga Arr 67.64 198 P **P** **15 06 08.8 +1.6**
comp=Z,0.6nm,0.5s,baz=11,slow=6.5,SNR=5.3
WRA Warramunga Arr 67.64 198 *eP* **P** **15 06 09.2 +2.0**
WRA pmax pmax
comp=Z,1.0nm,0.5s
NC405 NORSAR Array S 68.22 340 P **P** **15 06 09.0 -1.4**
NC405 IAmb IAmb 15 06 09.0
comp=Z,12nm,1.4s
NC204 NORSAR Array S 68.30 341 P **P** **15 06 10.2 -0.7**
NB201 NORSAR Array S 68.38 340 P **P** **15 06 09.9 -1.4**
NOA NORSAR Array B 68.40 340 P **P** **15 06 09.8 -1.7**
comp=Z,0.5nm,0.5s,baz=28,slow=6.5,SNR=13
NOA NORSAR Array B 68.40 340 *eP* **P** **15 06 10.2 -1.3**
NORES NORESS Array B 68.60 340 P **P** **15 06 11.4 -1.3**
KBZ Khabaz 70.47 313 P **P** **15 06 23.2 -1.2**
comp=Z,4.6nm,0.8s,baz=53,slow=4.0,SNR=8.6
KBZ Khabaz 70.47 313 *ceP* **P** **15 06 25.2 +0.8**
KBZ pmax pmax
comp=Z,5.0nm,1.0s
KBZ Khabaz 70.47 313 *eP* **P** **15 06 25.2 +0.8**
ASAR Alice Springs 71.35 197 P **P** **15 06 32.9 +3.0**
comp=Z,0.4nm,0.4s,baz=7.6,slow=5.5,SNR=16
AKASG Malin Array Be 71.41 325 P **P** **15 06 28.4 -1.6**
comp=Z,1.3nm,0.4s,baz=34,slow=6.4,SNR=5.6
AKASG Malin Array Be 71.41 325 *eP* **P** **15 06 30.8 +0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 71.41 325 IAmb IAmb 15 06 29.7
comp=Z,0.7nm,0.6s
AKBB Malin Array Si 71.41 325 P **P** **15 06 28.3 -1.7**
AKBB pmax pmax
comp=Z,3.0nm,1.0s
AKBB Malin Array Si 71.41 325 P **P** **15 06 28.3 -1.7**
BUR08 Bucovina Ar. S 75.44 326 P **P** **15 06 53.4 -0.4**
BURAR Bucovina Array 75.45 326 P **P** **15 06 53.3 -0.6**
BURAR Bucovina Array 75.45 326 P **P** **15 06 53.4 -0.6**
BURAR IAmb IAmb 15 06 54.9
comp=Z,7.4nm,0.7s
CRVS Cervenica-Dubn 75.80 329 *eP* **P** **15 06 55.8 0.0**
CRVS pmax pmax
comp=Z,8.0nm,1.0s
CRVS Cervenica-Dubn 75.80 329 *eP* **P** **15 06 55.8 0.0**
UOSS Minazif 75.94 291 P **P** **15 06 56.7 -0.3**
UOSS IAmb IAmb 15 07 19.1
comp=Z,10nm,1.1s
CLL Collm 76.52 335 *i* P **P** **15 06 59.3 -0.5**
comp=Z,4.0nm,0.5s
CLL Collm 76.52 335 *i* P **P** **15 06 59.3 -0.5**
CLL pmax pmax
comp=Z,4.0nm,0.5s
MLR Muntele Rosu 76.90 324 P **P** **15 07 02.7 +0.5**
MLR pmax pmax
comp=Z,6.0nm,0.8s
MLR Muntele Rosu 76.90 324 P **P** **15 07 02.7 +0.5**
MLR IAmb IAmb 15 07 03.8
comp=Z,5.5nm,0.8s
VYHS Vyhne 77.08 330 *eP* **P** **15 07 03.1 0.0**
VYHS pmax pmax
comp=Z,8.0nm,1.3s
VYHS Vyhne 77.08 330 *eP* **P** **15 07 03.0 0.0**
SMOL Smolenice 77.55 331 *eP* **P** **15 07 06.5 +0.9**
SMOL Smolenice 77.55 331 *eP* **P** **15 07 06.5 +0.9**
MODS Modra-Piesok 77.72 331 *eP* **P** **15 07 07.3 +0.6**
MODS Modra-Piesok 77.72 331 *eP* **P** **15 07 07.2 +0.6**
BRTR Keskin Array B 78.05 316 P **P** **15 07 08.2 -0.5**
comp=Z,2.0nm,0.8s,baz=87,slow=5.1,SNR=5.7
BRTR Keskin Array B 78.05 316 *eP* **P** **15 07 09.4 +0.6**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 78.05 316 P **P** **15 07 08.5 -0.3**
STKA Stephens Creek 78.22 189 P **P** **15 07 13.2 +3.9**
comp=Z,0.8nm,0.6s,baz=315,slow=20,SNR=1.5
STKA Stephens Creek 78.22 189 P **P** **15 07 13.2 +3.9**
STKA pmax pmax
comp=Z,2.0nm,1.4s
STKA Stephens Creek 78.22 189 IAmb IAmb 15 07 13.6
comp=Z,1.8nm,1.4s
KHC Kasperske Hory 78.27 333 P **P** **15 07 09.4 -0.2**
KHC pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 78.27 333 P **P** **15 07 09.4 -0.2**
KHC IAmb IAmb 15 07 10.6
comp=Z,3.9nm,0.8s
GERES GERESS Array B 78.48 333 P **P** **15 07 10.5 -0.3**
comp=Z,0.9nm,0.4s,baz=38,slow=6.8,SNR=8.3
GERES GERESS Array B 78.48 333 *eP* **P** **15 07 10.7 -0.2**
GERES pmax pmax
comp=Z,1.0nm,0.4s
CONA Conrad Observa 78.58 331 *i* P **P** **15 07 12.2 +0.8**
comp=Z,2.7nm,0.5s
TXAR Lajitas Array 78.70 59 P **P** **15 07 13.3 +0.8**
comp=Z,0.9nm,0.5s,baz=289,slow=4.2,SNR=4.6
VTS Vitosha 80.37 324 P **P** **15 07 21.4 0.0**
VTS pmax pmax
comp=Z,9.0nm,0.6s
VTS Vitosha 80.37 324 P **P** **15 07 21.4 0.0**
WATA Walderalm 80.48 334 *i* P **P** **15 07 21.5 -0.3**
comp=Z,5.9nm,0.8s
WTTA Wattenberg 80.52 334 *i* P **P** **15 07 22.7 +0.6**
comp=Z,6.4nm,0.5s
RETA Reutte 80.59 334 *i* P **P** **15 07 22.7 +0.4**
comp=Z,3.0nm,0.8s
MOTA Moosalm 80.61 334 *i* P **P** **15 07 23.0 +0.5**
comp=Z,3.8nm,0.6s
CDF Champ du Feu 80.76 337 *eP* **P** **15 07 22.5 -0.7**
CDF pmax pmax
comp=Z,2.0nm,0.7s
DAVA Damuels 81.03 335 *i* P **P** **15 07 25.1 +0.3**
comp=Z,5.5nm,0.7s
TUE Stuetta 81.93 335 P **P** **15 07 29.5 -0.1**
TUE IAmb IAmb 15 07 32.8
comp=Z,6.7nm,0.7s
FLN La Foliniere 82.34 342 *eP* **P** **15 07 31.1 -0.3**
FLN pmax pmax
comp=Z,37nm,1.5s
LDF La Druitiere 82.42 341 *eP* **P** **15 07 31.3 -0.5**
LDF pmax pmax
comp=Z,42nm,1.7s
LOR Lormes 82.71 338 *eP* **P** **15 07 32.8 -0.6**
LOR pmax pmax
comp=Z,5.0nm,0.7s
GRR Gorron 82.78 342 *eP* **P** **15 07 33.3 -0.4**
GRR pmax pmax
comp=Z,7.0nm,0.4s
SGMF Saint Gilles 83.26 343 *eP* **P** **15 07 36.2 0.0**
SGMF pmax pmax
comp=Z,33nm,1.4s
AVF Avril sur Loir 83.29 339 *eP* **P** **15 07 35.9 -0.4**
AVF pmax pmax
comp=Z,5.0nm,0.7s
SMF Signal de Mont 83.30 338 *eP* **P** **15 07 36.1 -0.3**
SMF pmax pmax
comp=Z,12nm,1.0s
LPG La Plagne 83.57 336 *eP* **P** **15 07 39.3 +1.1**
LPG pmax pmax
comp=Z,7.0nm,0.7s
RAYN Ar Rayn 83.73 297 P **P** **15 07 39.3 +0.2**
RAYN pmax pmax
comp=Z,4.0nm,0.9s
RAYN Ar Rayn 83.73 297 P **P** **15 07 39.2 +0.2**
RAYN IAmb IAmb 15 07 40.1
comp=Z,3.6nm,0.8s
TCF Toulx Ste Croi 84.04 339 *eP* **P** **15 07 40.2 -0.1**
TCF pmax pmax
comp=Z,6.0nm,0.9s
MBDF Montbardon 84.27 336 *eP* **P** **15 07 44.0 +2.4**
MBDF pmax pmax
comp=Z,7.0nm,1.1s
ORIF Oris-en-Rattie 84.34 336 *eP* **P** **15 07 42.7 +0.8**
ORIF pmax pmax
comp=Z,7.0nm,0.6s
VIVF Saint-Julien-l 84.73 337 *eP* **P** **15 07 43.9 +0.1**
VIVF pmax pmax
comp=Z,4.0nm,0.8s
CAF Calviac 85.35 339 *eP* **P** **15 07 47.3 +0.4**
CAF pmax pmax
comp=Z,5.0nm,0.6s
TIP Timpagrande 85.86 326 P **P** **15 07 49.3 -0.2**
MTLF Montolieu 86.79 338 *eP* **P** **15 07 54.5 +0.5**
MTLF pmax pmax
comp=Z,4.0nm,0.8s
ETSF Etsaut 87.90 340 *eP* **P** **15 08 00.2 +0.8**
ETSF pmax pmax
comp=Z,3.0nm,0.7s
KEST Kesra 91.63 330 P **P** **15 08 16.8 -0.1**
comp=Z,1.9nm,0.5s,baz=342,slow=3.2,SNR=4.2
H03N2 Juan Fernandez 139.83 90 T T 17 50 32.1
baz=308,slow=77,SNR=48
H03N1 Juan Fernandez 139.84 90 T T 17 50 33.4
baz=308,slow=77,SNR=56
H03N3 Juan Fernandez 139.84 90 T T 17 50 33.9
baz=308,slow=77,SNR=49
PLCA Paso Flores 149.23 95 PKPbc **PKiKP** **15 14 59.2 +0.6**
comp=Z,1.3nm,0.8s,baz=235,slow=2.2,SNR=5.0

MOS ***20*** *14:59:56.2±0.0, 41.66N×47.61E, h14km, MPVA4.2*
TIP ***20*** *14:59:57.7, 41.68N×47.59E, h15km±1km*
ISC 20 14:59:57.7±1.3, 41.62N±0.04×47.62E±0.05, h18km±10km, n14, σ0.84/25, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AKT	**Akhty**	**0.17**	**150**	*i* Pg		**Pb**	**15 00 02.3**	**-0.1**
AKT				*i* Sg		**Sb**	**15 00 05.4**	**0.0**
URKR	**Urkarakh**	**0.54**	**1**	*eP*g		**Pg**	**15 00 08.2**	**-0.4**
URKR				*eS*g		**Sg**	**15 00 15.6**	**-0.3**
KMKR	**Kumukh**	**0.64**	**323**	*i* Pg		**Pg**	**15 00 10.0**	**-0.4**
KMKR				*eS*g		**Sg**	**15 00 19.0**	**0.0**
GNBR	**Gunib**	**0.91**	**328**	*eP*g		**Pb**	**15 00 14.9**	**-0.1**
GNBR				*eS*g		**Sg**	**15 00 27.6**	**+0.2**
ARKR	**Arakani**	**1.08**	**335**	*eP*g		**Pb**	**15 00 17.9**	**-0.1**
ARKR				*eS*g		**Sb**	**15 00 32.5**	**+0.6**
DDFL	**Dedoflistskaro**	**1.14**	**262**	P		**Pg**	**15 00 21.9**	**+2.0**
XNZR	**Khunzakh**	**1.14**	**324**	*eP*g		**Pg**	**15 00 19.4**	**-0.5**
XNZR				*eS*g		**Sn**	**15 00 34.4**	**0.0**
BUJR	**Buynaksk**	**1.26**	**343**	*eP*g		**Pb**	**15 00 21.1**	**+0.1**
BUJR				*eS*g		**Sg**	**15 00 38.7**	**+0.2**
KRNR	**Karanay**	**1.31**	**336**	*eP*g		**Pb**	**15 00 21.7**	**-0.3**
KRNR				*eS*g		**Sg**	**15 00 40.9**	**+0.6**
DBC	**Dubki**	**1.51**	**338**	*eP*g		**Pb**	**15 00 25.5**	**+0.2**
DBC				*eS*g		**Sg**	**15 00 46.3**	**-0.4**
DLMR	**Dylym**	**1.62**	**333**	*eP*g		**Pg**	**15 00 30.4**	**+1.4**
DLMR				*eS*g		**Sg**	**15 00 49.6**	**-0.4**
PNSH	**Pansheti**	**2.45**	**295**	P		**Pb**	**15 00 42.4**	**+1.0**
GUDG	**Gudauri**	**2.49**	**291**	P		**Pg**	**15 00 45.2**	**-0.3**
DMNI	**Dmanisi**	**2.59**	**265**	P		**Pb**	**15 00 41.6**	**-2.2**
DMNI				S		**Sb**	**15 01 14.5**	**-0.9**

KRSC 20 15:01:01.2±2.1, 49.64N×156.93E, h48km±25km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.17**	**334**	*eP*		Pn	15 01 21.6	+0.5
SKR				*eS*		Sn	15 01 36.4	+0.5
ALID	**Alaid**	**1.52**	**325**	*eP*		Pn	15 01 26.0	0.0
ALID				*eS*		Sn	15 01 44.9	+0.3
PAU	**Pauzhetka**	**1.83**	**358**	*eP*		Pn	15 01 32.7	+2.6
PAU				*eS*		Sn	15 01 55.4	+3.3
KDTR	**Khodutka, Kamc**	**2.29**	**18**	*eP*		Pn	15 01 39.7	+3.3
KDTR				*eS*		Sn	15 02 07.5	+4.2
MIPR	**Malaya Ipel'ka**	**2.64**	**358**	*eP*		Pn	15 01 43.4	+2.2
ASAK	**Asacha**	**2.81**	**12**	*eP*		Pn	15 01 47.1	+3.4
MTVR	**Mutnovka**	**2.95**	**15**	*eP*		Pn	15 01 49.3	+3.7
MTVR				*eS*		Sn	15 02 24.3	+4.4
RUS	**Russkaya**	**2.97**	**19**	*eP*		Pn	15 01 48.6	+2.9
RUS				*eS*		Sn	15 02 23.0	+3.0
GRL	**Gorelyy**	**3.00**	**13**	*eP*		Pn	15 01 50.2	+3.9
GRL				*eS*		Sn	15 02 26.0	+4.9
KRMR	**Karymshinskiy**	**3.28**	**13**	*eP*		Pn	15 01 55.1	+5.1
DALK	**Dalny**	**3.58**	**18**	*eP*		Pn	15 01 57.7	+3.6
DALK				*eS*		Sn	15 02 39.1	+4.0
UGLR	**Uglovaya**	**3.76**	**18**	*eP*		Pn	15 02 00.6	+3.9
AVH	**Avacha**	**3.80**	**17**	*eP*		Pn	15 02 01.7	+4.5
KOK	**Koryaka**	**3.81**	**16**	*eP*		Pn	15 02 01.8	+4.5
SMAR	**Somma**	**3.81**	**17**	*eP*		Pn	15 02 02.0	+4.5
KRER	**Koryakskii**	**3.84**	**16**	*eP*		Pn	15 02 02.2	+4.3
SDLR	**Sedlovina**	**3.84**	**18**	*eP*		Pn	15 02 01.1	+3.3
SDLR				*eS*		Sn	15 02 46.4	+4.7
KRX	**Arik**	**3.87**	**15**	*eP*		Pn	15 02 02.4	+4.1
SPN	**Mys Shipunski**	**3.97**	**28**	*eP*		Pn	15 02 03.0	+3.6
SPN				*eS*		Sn	15 02 48.0	+3.4
GNL	**Ganaly**	**4.11**	**8**	*eP*		Pn	15 02 06.6	+5.1
MKZ	**Mys Kozlova**	**5.74**	**29**	*eP*		Pn	15 02 26.1	+2.4
KZV	**Kizimen**	**5.85**	**19**	*eP*		Pn	15 02 31.1	+5.7
KBTR	**Krutoberegovo**	**7.47**	**26**	*eP*		Pn	15 02 50.1	+2.6

TAP ***20*** *15:03:30.8, 23.97N×122.51E, h26km±1km, ML2.5, D*
JMA ***20*** *15:03:31.1±0.2, 24.01N×122.47E, h25km, M2.1*
ISC 20 15:03:30.1±1.8, 23.92N±0.03×122.48E±0.02, h20km±6km, n60, σ0.66/81, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.68**	**39**	P		**Pb**	**15 03 43.1**	**-0.2**
JYNG				*eS*		**Sb**	**15 03 51.0**	**-1.3**
YOJ	**Yonaguni jima**	**0.73**	**42**	P		**Pb**	**15 03 44.0**	**-0.1**
YOJ				S		**Sb**	**15 03 52.3**	**-1.4**
YOJ	**Yonaguni jima** baz=51	**0.73**	**42**	P		**Pb**	**15 03 44.0**	**-0.1**
YOJ	baz=51			S		**Sb**	**15 03 52.7**	**-1.0**
EWUT	**Wuta** baz=305	**0.83**	**310**	*eP*		**Pn**	**15 03 47.6**	**+0.9**
NACB	**Ninganchiao** baz=269	**0.85**	**288**	P		**Pb**	**15 03 46.1**	**-0.1**
NACB	baz=269			S		**Sb**	**15 03 57.5**	**+0.3**
TWC	**Suao** baz=310	**0.90**	**320**	P		**Pb**	**15 03 46.7**	**-0.4**
TWC	baz=310			*eS*		**Sb**	**15 03 57.9**	**-0.7**
ETLH	**Xiulin Townshi** baz=284	**0.96**	**288**	*eP*		**Pb**	**15 03 48.1**	**0.0**
NDS	**Dongshan** baz=312	**1.00**	**316**	*eP*		**Pb**	**15 03 48.8**	**+0.1**
NDS	baz=312			S		**Sn**	**15 04 02.4**	**-0.1**
HGSD	**Ruisui** baz=244	**1.06**	**247**	P		**Pb**	**15 03 49.4**	**-0.3**
HGSD	baz=244			S		**Sb**	**15 04 03.3**	**+0.1**
TWE	**Neicheng** baz=315	**1.09**	**317**	P		**Pn**	**15 03 50.7**	**+0.4**
TWE	baz=315			S		**Sn**	**15 04 05.0**	**+0.2**
ENTT	**Nioudou** baz=308	**1.10**	**311**	*eP*		**Pn**	**15 03 51.0**	**+0.5**
NTC	**Toucheng** baz=325	**1.10**	**328**	*eP*		**Pn**	**15 03 49.8**	**-0.7**
NDT	**Datong Townshi** baz=304	**1.11**	**308**	*eP*		**Pg**	**15 03 51.5**	**-0.3**
NNSH	**Datong** baz=282	**1.12**	**297**	*eP*		**Pn**	**15 03 50.8**	**-0.1**
NNSB	**Datong** baz=282	**1.12**	**297**	P		**Pn**	**15 03 51.1**	**+0.2**
WHF	**Hehuan Shan** baz=278	**1.13**	**282**	*eP*		**Pn**	**15 03 51.1**	**-0.2**
NNS	**Nan Shan** baz=282	**1.14**	**297**	*eP*		**Pn**	**15 03 50.9**	**-0.2**
TWB1	**Santiao Chiao** baz=336	**1.17**	**338**	P		**Pb**	**15 03 52.0**	**+0.2**
FUSS	**Fushou** baz=283	**1.18**	**286**	*eP*		**Pn**	**15 03 51.9**	**+0.2**
OWD	**Renai** baz=269	**1.19**	**272**	*eP*		**Pn**	**15 03 51.8**	**-0.1**
CHGB	**Renai** baz=262	**1.20**	**277**	P		**Pn**	**15 03 52.2**	**+0.1**
CHGB	baz=262			S		**Sb**	**15 04 07.8**	**+0.2**
YULB	**Yu-li** baz=242	**1.20**	**244**	P		**Pn**	**15 03 52.1**	**+0.2**
YULB	baz=242			*eS*		**Sb**	**15 04 07.6**	**+0.2**
EYUL	**Yuli** baz=228	**1.21**	**242**	*eP*		**Pn**	**15 03 52.3**	**+0.4**
TIPB	**Shuangxi** baz=328	**1.21**	**331**	P		**Pb**	**15 03 52.7**	**+0.3**
TIPB	baz=328			S		**Sb**	**15 04 06.9**	**-0.6**
IRIF	**Iriomote-Funau**	**1.22**	**70**	P		**Pb**	**15 03 52.9**	**+0.4**
IRIF				*eS*		**Sb**	**15 04 07.6**	**-0.2**
HATJ	**Hateruma jima**	**1.22**	**83**	S		**Sn**	**15 04 09.0**	**+0.9**
NWLT	**Wulai** baz=311	**1.23**	**314**	*eP*		**Pb**	**15 03 52.7**	**-0.1**
VWDT	**VWDT** baz=260	**1.24**	**263**	P		**Pn**	**15 03 52.8**	**+0.5**
VWDT	baz=260			S		**Sb**	**15 04 08.6**	**+0.3**
TWT	**Tachien** baz=271	**1.24**	**286**	*eP*		**Pb**	**15 03 53.4**	**+0.5**
YHNB	**Yeheng** baz=291	**1.25**	**307**	P		**Pn**	**15 03 53.0**	**+0.3**
YHNB	baz=291			*eS*		**Sn**	**15 04 09.8**	**+0.8**
NSK	**Sanguang** baz=304	**1.27**	**307**	*eP*		**Pb**	**15 03 53.7**	**+0.2**
FULB	**Fuli** baz=223	**1.30**	**237**	*eP*		**Pn**	**15 03 53.1**	**-0.1**
FULB	baz=223			*eS*		**Sn**	**15 04 09.3**	**-0.8**
WFSB	**Wu-fen Shan** baz=329	**1.31**	**331**	*eP*		**Pb**	**15 03 54.4**	**+0.2**
SSLB	**Suanglung** baz=262	**1.40**	**265**	*eP*		**Pb**	**15 03 56.0**	**+0.3**
DPDB	**Guoxing** baz=272	**1.43**	**275**	*eP*		**Pn**	**15 03 57.1**	**+1.0**
EDH	**Donghe** baz=217	**1.43**	**229**	*eP*		**Pn**	**15 03 54.7**	**-0.4**
EDH	baz=217			*eS*		**Sn**	**15 04 11.8**	**-1.5**
JKRS	**Kuro-shima**	**1.43**	**77**	P		**Pb**	**15 03 57.1**	**+0.9**
JKRS				*eS*		**Sb**	**15 04 14.6**	**+0.5**
SMLT	**Sun Moon Lake** baz=256	**1.45**	**269**	*eP*		**Pb**	**15 03 57.1**	**+0.6**
WHP	**Taichung City** baz=271	**1.45**	**285**	*eP*		**Pb**	**15 03 57.3**	**+0.8**
YUS	**Yu-Shan** baz=251	**1.46**	**253**	*eP*		**Pn**	**15 03 56.7**	**+0.8**
TYC	**Yuchr** baz=267	**1.48**	**270**	*eP*		**Pb**	**15 03 57.7**	**+0.6**
YM11	**YM11** baz=324	**1.49**	**327**	*eP*		**Pb**	**15 03 57.9**	**+0.7**
YM04	**YM04** baz=323	**1.50**	**325**	*eP*		**Pb**	**15 03 57.1**	**-0.3**
LIOB	**Emei** baz=296	**1.52**	**299**	*eP*		**Pb**	**15 03 57.5**	**-0.2**
LDUT	**Ludao** baz=216	**1.55**	**217**	P		**Pn**	**15 03 56.0**	**-0.6**
LDUT	baz=216			*eS*		**Sn**	**15 04 14.9**	**-1.2**
JIJ	**Ishigaki jima**	**1.58**	**73**	P		**Pb**	**15 03 58.6**	**-0.2**
JIJ				*eS*		**Sn**	**15 04 17.3**	**+0.3**
ALS	**Alishan** baz=253	**1.59**	**256**	*eP*		**Pn**	**15 03 58.5**	**+1.1**
CHN5	**Tsauling** baz=246	**1.68**	**259**	*eP*		**Pb**	**15 04 01.2**	**+0.7**
TWGBT	**Beinan** baz=240	**1.69**	**230**	*eP*		**Pn**	**15 03 59.7**	**+1.1**
TWG	**Pinlang** baz=239	**1.69**	**230**	*eP*		**Pn**	**15 03 59.7**	**+1.0**
STYH	**Taoyuan** baz=232	**1.73**	**245**	*eP*		**Pb**	**15 04 00.2**	**+1.1**
STYT	**Tauyuan** baz=232	**1.75**	**245**	*eP*		**Pb**	**15 04 01.4**	**-0.2**
JISG	**Ishigakijimahi**	**1.80**	**68**	P		**Pn**	**15 04 00.4**	**+0.3**
JISG				*eS*		**Sn**	**15 04 22.9**	**+0.5**
TPUB	**Ta-pu** baz=238	**1.80**	**250**	P		**Pb**	**15 04 02.2**	**-0.4**
TPUB	baz=238			S		**Sb**	**15 04 25.2**	**+0.4**
WTP	**Ta-pu** baz=236	**1.84**	**249**	*eP*		**Pb**	**15 04 02.5**	**-0.6**
TWK	**Hsinying** baz=248	**1.94**	**251**	*eP*		**Pb**	**15 04 04.2**	**-0.6**
SSD	**Sandimen** baz=226	**2.06**	**236**	*eP*		**Pn**	**15 04 05.3**	**+1.7**
MASBT	**Mashibuluo** baz=224	**2.14**	**233**	*eP*		**Pb**	**15 04 07.1**	**-1.1**
EAST	**Anshuo** baz=223	**2.14**	**225**	*eP*		**Pn**	**15 04 04.8**	**-0.1**
SLIU	**Shizi** baz=231	**2.29**	**223**	*eP*		**Pn**	**15 04 08.3**	**+1.4**

JMA ***20*** *15:06:17.1±0.3, 23.95N×122.48E, h16km±4km, M2.4*
TAP ***20*** *15:06:17.5, 24.00N×122.50E, h25km, ML3.0, D*
ISC 20 15:06:15.9±1.1, 23.94N±0.02×122.48E±0.02, h12km±9km, n87, σ0.72/126, 1C-2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.66**	**39**	P		**Pb**	**15 06 29.8**	**+0.4**
JYNG				*eS*		**Sb**	**15 06 37.8**	**-0.8**
YOJ	**Yonaguni jima**	**0.71**	**42**	P		**Pb**	**15 06 30.6**	**+0.3**
YOJ				S		**Sb**	**15 06 39.3**	**-0.7**
YOJ	**Yonaguni jima** baz=54	**0.71**	**42**	P		**Pb**	**15 06 30.3**	**+0.1**
YOJ	baz=54			S		**Sb**	**15 06 39.1**	**-0.8**
EWUT	**Wuta** baz=304	**0.82**	**308**	P		**Pn**	**15 06 32.8**	**-0.5**
EWUT	baz=304			S		**Sb**	**15 06 43.2**	**+0.1**
TWD	**Chiawan** baz=275	**0.82**	**280**	*eP*		**Pn**	**15 06 33.5**	**+0.1**
TWD	baz=275			*eS*		**Sb**	**15 06 43.8**	**+0.6**
NACB	**Ninganchiao** baz=267	**0.85**	**286**	P		**Pb**	**15 06 32.8**	**+0.2**
NACB	baz=267			S		**Sb**	**15 06 44.3**	**+0.4**
TWC	**Suao** baz=309	**0.89**	**319**	*iP*		**Pb**	**15 06 33.3**	**0.0**
TWC	baz=309			S		**Sb**	**15 06 44.2**	**-0.8**
ETLH	**Xiulin Townshi** baz=282	**0.95**	**287**	*eP*		**Pb**	**15 06 34.7**	**+0.2**
ESL	**Shilin** baz=248	**0.97**	**263**	P		**Pg**	**15 06 34.4**	**-0.2**
ESL	baz=248			*eS*		**Sg**	**15 06 46.1**	**-1.2**
NDS	**Dongshan** baz=311	**0.99**	**315**	P		**Pn**	**15 06 35.4**	**-0.2**
NDS	baz=311			*eS*		**Sb**	**15 06 47.5**	**-0.4**
EGFH	**Guangfu** baz=251	**1.00**	**255**	*eP*		**Pg**	**15 06 35.7**	**+0.5**
ILA	**Ilan** baz=309	**1.06**	**321**	*eP*		**Pn**	**15 06 36.8**	**+0.2**
ILA	baz=309			*eS*		**Sn**	**15 06 51.9**	**+0.5**
HGSD	**Ruisui** baz=242	**1.07**	**246**	P		**Pb**	**15 06 35.9**	**-0.4**
HGSD	baz=242			*eS*		**Sb**	**15 06 50.1**	**-0.2**
TWE	**Neicheng** baz=314	**1.08**	**317**	P		**Pn**	**15 06 36.9**	**0.0**
TWE	baz=314			S		**Sn**	**15 06 51.4**	**-0.4**
NTC	**Toucheng** baz=325	**1.09**	**327**	P		**Pn**	**15 06 37.1**	**+0.1**
NTC	baz=325			S		**Sn**	**15 06 51.7**	**-0.3**
ENTT	**Nioudou** baz=307	**1.09**	**310**	P		**Pn**	**15 06 37.6**	**+0.5**
NDT	**Datong Townshi** baz=303	**1.11**	**307**	P		**Pn**	**15 06 38.1**	**+0.8**
NDT	baz=303			*eS*		**Sg**	**15 06 51.4**	**-0.3**
NNSB	**Datong** baz=292	**1.12**	**296**	P		**Pg**	**15 06 37.4**	**-0.1**
NNSB	baz=292			*eS*		**Sg**	**15 06 51.5**	**-0.6**
NNSH	**Datong** baz=292	**1.12**	**296**	P		**Pg**	**15 06 37.3**	**-0.2**
NNSH	baz=292			S		**Sb**	**15 06 52.0**	**+0.1**

NNS	**Nan Shan**	**1.13 297**	P	**Pn**	**15 06 38.0**	**+0.3**
	baz=293					
NNS			*e*S	**Sb**	**15 06 52.1**	**-0.1**
	baz=293					
WHF	**Hehuan Shan**	**1.13 281**	P	**Pg**	**15 06 37.7**	**-0.1**
	baz=263					
WHF			S	**Sb**	**15 06 53.0**	**+0.4**
	baz=263					
TWB1	**Santiao Chiao**	**1.16 337**	P	**Pn**	**15 06 38.6**	**+0.7**
	baz=347					
TWB1			S	**Sn**	**15 06 52.8**	**-0.9**
	baz=347					
FUSS	**Fushou**	**1.18 286**	*e*P	**Pb**	**15 06 38.5**	**+0.2**
	baz=282					
TIPB	**Shuangxi**	**1.19 330**	*e*P	**Pg**	**15 06 39.5**	**+0.6**
	baz=328					
TIPB			S	**Sn**	**15 06 53.8**	**-0.8**
	baz=328					
OWD	**Renai**	**1.20 271**	*e*P	**Pb**	**15 06 38.2**	**-0.4**
	baz=268					
CHGB	**Renai**	**1.21 276**	P	**Pb**	**15 06 38.8**	**0.0**
	baz=261					
IRIF	**Iriomote-Funau**	**1.21 70**	P	**Pg**	**15 06 39.2**	**+0.1**
IRIF			*e*S	**Sn**	**15 06 54.9**	**0.0**
HATJ	**Hateruma jima**	**1.21 84**	P	**Pg**	**15 06 39.4**	**+0.1**
HATJ			*e*S	**Sn**	**15 06 55.3**	**+0.2**
YULB	**Yu-li**	**1.22 244**	⇑P	**Pn**	**15 06 38.7**	**0.0**
	baz=240					
YULB			*e*S	**Sb**	**15 06 54.1**	**-0.4**
	baz=240					
EYUL	**Yuli**	**1.22 242**	*e*P	**Pn**	**15 06 38.6**	**-0.1**
	baz=239					
NWLT	**Wulai**	**1.23 313**	*e*P	**Pg**	**15 06 39.9**	**+0.4**
	baz=310					
NWLT			*e*S	**Sn**	**15 06 55.4**	**-0.1**
	baz=310					
TWT	**Tachien**	**1.24 285**	P	**Pg**	**15 06 39.9**	**+0.1**
	baz=268					
TWT			S	**Sb**	**15 06 55.4**	**+0.1**
	baz=268					
VWDT	**VWDT**	**1.24 262**	⇓P	**Pn**	**15 06 39.5**	**+0.4**
	baz=258					
VWDT			S	**Sb**	**15 06 55.0**	**-0.3**
	baz=258					
YHNB	**Yeheng**	**1.25 306**	*e*P	**Pg**	**15 06 39.7**	**-0.2**
	baz=289					
YHNB			S	**Sn**	**15 06 56.3**	**+0.2**
	baz=289					
TDCB	**Techi**	**1.25 285**	*e*P	**Pb**	**15 06 39.9**	**+0.3**
	baz=270					
NSK	**Sanguang**	**1.27 306**	P	**Pg**	**15 06 40.7**	**+0.4**
	baz=289					
NSK			*e*S	**Sb**	**15 06 55.5**	**-0.6**
	baz=289					
WFSB	**Wu-fen Shan**	**1.30 331**	*e*P	**Pg**	**15 06 40.6**	**-0.4**
	baz=329					
WFSB			S	**Sg**	**15 06 57.9**	**+0.1**
	baz=329					
FULB	**Fuli**	**1.32 236**	*e*P	**Pn**	**15 06 40.9**	**+0.8**
	baz=234					
TWA	**Mucha**	**1.32 322**	P	**Pg**	**15 06 41.8**	**+0.4**
	baz=320					
TWA			S	**Sg**	**15 06 59.1**	**+0.5**
	baz=320					
NHDH	**Xindian Distri**	**1.35 320**	*e*P	**Pg**	**15 06 41.9**	**0.0**
	baz=332					
TATO	**Taipei**	**1.38 319**	P	**Pg**	**15 06 42.5**	**+0.1**
	baz=317					
TATO			S	**Sg**	**15 07 00.1**	**-0.2**
	baz=317					
WPL	**Puli Township**	**1.40 273**	*e*P	**Pn**	**15 06 41.6**	**+0.3**
	baz=270					
SSLB	**Suanglung**	**1.41 264**	*e*P	**Pn**	**15 06 42.1**	**+0.6**
	baz=261					
JKRS	**Kuro-shima**	**1.43 78**	P	**Pg**	**15 06 43.8**	**+0.5**
JKRS			*e*S	**Sg**	**15 07 01.9**	**0.0**
EDH	**Donghe**	**1.45 229**	*e*P	**Pn**	**15 06 41.5**	**-0.4**
	baz=216					
EDH			*e*S	**Sn**	**15 06 58.7**	**-2.1**
	baz=216					
WHP	**Taichung City**	**1.45 284**	*e*P	**Pg**	**15 06 43.9**	**+0.2**
	baz=270					
SMLT	**Sun Moon Lake**	**1.45 268**	*e*P	**Pn**	**15 06 42.1**	**0.0**
	baz=255					
YM01	**YM01**	**1.47 326**	*e*P	**Pg**	**15 06 43.9**	**-0.2**
	baz=323					
YM10	**YM10**	**1.48 325**	*e*P	**Pb**	**15 06 43.2**	**-0.1**
	baz=323					
YM11	**YM11**	**1.48 326**	*e*P	**Pg**	**15 06 44.6**	**+0.2**
	baz=324					
TYC	**Yuchr**	**1.49 269**	*e*P	**Pn**	**15 06 42.7**	**+0.2**
	baz=266					
YM04	**YM04**	**1.49 325**	*e*P	**Pb**	**15 06 43.1**	**-0.5**
	baz=323					
YM08	**YM08**	**1.49 327**	*e*P	**Pb**	**15 06 43.5**	**0.0**
	baz=325					
YM03	**YM03**	**1.51 325**	*e*P	**Pg**	**15 06 45.1**	**+0.2**
	baz=323					
WHYT	**Xinyi Township**	**1.51 261**	*e*P	**Pb**	**15 06 44.1**	**+0.2**
	baz=258					
LIOB	**Emei**	**1.52 298**	*e*P	**Pg**	**15 06 44.5**	**-0.5**
	baz=295					
NSTT	**Nanjuang**	**1.52 297**	*e*P	**Pg**	**15 06 45.1**	**-0.1**
	baz=294					
ANP	**Anpu**	**1.52 325**	*e*P	**Pg**	**15 06 45.1**	**-0.1**
	baz=323					
LDUT	**Ludao**	**1.56 217**	*e*P	**Pn**	**15 06 42.8**	**-0.7**
	baz=214					
LDUT			*e*S	**Sn**	**15 07 01.6**	**-2.2**
	baz=214					
JIJ	**Ishigaki jima**	**1.57 74**	P	**Pn**	**15 06 44.1**	**+0.4**
JIJ			S	**Sb**	**15 07 04.2**	**-0.6**
ALS	**Alishan**	**1.60 255**	*e*P	**Pn**	**15 06 45.2**	**+1.0**
	baz=251					
ALS			*e*S	**Sn**	**15 07 05.2**	**+0.2**
	baz=251					
WJS	**Zhushan**	**1.61 266**	*e*P	**Pb**	**15 06 46.4**	**+0.8**
	baz=257					
WNT	**Mingjian**	**1.65 268**	*e*P	**Pb**	**15 06 46.6**	**+0.3**
	baz=265					
CHN5	**Tsauling**	**1.69 259**	*e*P	**Pb**	**15 06 47.1**	**+0.1**
	baz=245					
TWGBT	**Beinan**	**1.70 230**	*e*P	**Pn**	**15 06 45.7**	**+0.2**
	baz=219					
TWGBT			*e*S	**Sn**	**15 07 05.8**	**-1.4**
	baz=219					
TWG	**Pinlang**	**1.71 230**	*e*P	**Pn**	**15 06 45.5**	**0.0**
	baz=239					
STYH	**Taoyuan**	**1.74 244**	*e*P	**Pn**	**15 06 46.7**	**+0.8**
	baz=231					
STYT	**Tauyuan**	**1.76 244**	*e*P	**Pn**	**15 06 47.2**	**+0.8**
	baz=231					
JISG	**Ishigakijimahi**	**1.79 68**	P	**Pn**	**15 06 47.2**	**+0.6**
WDLH	**Douliu**	**1.80 263**	*e*P	**Pb**	**15 06 48.5**	**-0.3**
	baz=260					
TPUB	**Ta-pu**	**1.81 250**	*e*P	**Pb**	**15 06 48.7**	**-0.4**
	baz=247					
TPUB			S	**Sb**	**15 07 12.3**	**+0.5**
	baz=247					
WTP	**Ta-pu**	**1.85 249**	*e*P	**Pb**	**15 06 49.3**	**-0.4**
	baz=235					
SLGT	**Liugui**	**1.93 241**	*e*P	**Pb**	**15 06 51.2**	**+0.1**
	baz=239					
WTK	**Tuku**	**1.94 263**	*e*P	**Pb**	**15 06 50.8**	**-0.3**
	baz=260					
ECL	**Taimali**	**1.94 227**	*e*P	**Pn**	**15 06 48.9**	**+0.2**
	baz=236					
SGST	**Jiashian**	**1.94 244**	*e*P	**Pb**	**15 06 50.8**	**-0.4**
	baz=232					
SGST			*e*S	**Sn**	**15 07 15.1**	**+2.0**
	baz=232					
CHN1	**Nanshi**	**1.94 248**	*e*P	**Pb**	**15 06 51.3**	**0.0**
	baz=245					
TWK	**Hsinying**	**1.95 250**	*e*P	**Pn**	**15 06 50.7**	**+1.8**
	baz=248					
SSD	**Sandimen**	**2.07 236**	*e*P	**Pn**	**15 06 52.7**	**+2.1**
	baz=225					
SCST	**Cishan**	**2.11 241**	*e*P	**Pn**	**15 06 53.1**	**+2.1**
	baz=238					
JTJ	**Tarama**	**2.14 70**	*e*S	**Sb**	**15 07 20.5**	**-0.7**
MASBT	**Mashibuluo**	**2.15 233**	*e*P	**Pn**	**15 06 52.9**	**+1.3**
	baz=223					
EAST	**Anshuo**	**2.16 225**	*e*P	**Pn**	**15 06 51.6**	**-0.2**
	baz=223					
SCZT	**Fangliau**	**2.32 228**	*e*P	**Pn**	**15 06 56.3**	**+2.5**
	baz=218					
TWKBT	**Hengchun**	**2.51 218**	*e*P	**Pn**	**15 06 57.7**	**+1.1**
	baz=216					
TWK1	**Hengchun**	**2.52 218**	*e*P	**Pn**	**15 06 58.7**	**+2.0**
	baz=216					
PHUB	**P'eng-hu**	**2.70 262**	*e*P	**Pn**	**15 07 00.7**	**+1.5**
	baz=259					

*IDC **20** 15:20:25.9±5.0, 36.°74N×71.°01E, h240km±30km, mb3.1/2, mb1 3.1/9, mb1mx2.8/47, mbtmp3.7/9, Error ellipse: s-maj=65.7km s-min=23.8km az=152.0*

ISC 20 15:20:21.4±1.0, 36.°56N±0.°09×70.°6E±0.°1, h204km, n17, σ1§12/18, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.76**	**25**	P	**Pn**	**15 22 00.9**	**+2.3**
	0.8nm,0.3s,baz=172,slow=3.2,SNR=8.0						
AAK				S	**S**	**15 23 14.6**	**-1.1**
	0.5nm,0.3s,baz=333,slow=23,SNR=16						
GEYT	**Alibeck**	**10.06**	**282**	P	**P**	**15 22 48.2**	**-1.0**
	0.1nm,0.3s,baz=93,slow=18,SNR=2.0						
MKAR	**Makanchi Array**	**13.42**	**37**	P	**Pn**	**15 23 23.4**	**-0.5**
	0.4nm,0.3s,baz=213,slow=12,SNR=18						
KOLN	**Koldanda**	**14.05**	**125**	*e*P	**Pn**	**15 23 32.4**	**+0.4**
GKN	**Gorkha**	**14.60**	**122**	*e*P	**Pn**	**15 23 38.2**	**-0.5**
	8.6nm,0.3s						
DMN	**Daman**	**15.16**	**122**	*e*P	**Pn**	**15 23 46.2**	**+0.5**
KURBB	**Kurchatov Arra**	**15.17**	**20**	P	**Pn**	**15 23 44.3**	**-0.9**
	0.1nm,0.3s,baz=209,slow=11,SNR=14						
PKIN	**Phulchoki**	**15.38**	**121**	*e*P	**Pn**	**15 23 48.9**	**+0.5**
	9.0nm,0.5s						
PKI	**Pulchoki**	**15.40**	**121**	*e*P	**Pn**	**15 23 49.1**	**+0.5**
GUN	**Gumba**	**15.51**	**119**	*e*P	**Pn**	**15 23 49.6**	**-0.4**
JIRN	**Jiri**	**15.88**	**120**	*e*P	**P**	**15 23 54.6**	**+0.4**
	9.5nm,0.3s						
BVAR	**Borovoye Array**	**16.46**	**360**	P	**P**	**15 23 59.4**	**-0.5**
	0.5nm,0.3s,baz=168,slow=13,SNR=7.4						
AKTO	**Aktyubinsk**	**16.58**	**331**	P	**Pn**	**15 24 04.8**	**+2.6**
	0.8nm,0.3s,baz=133,slow=9.9,SNR=12						
RAMN	**Ramite**	**16.61**	**121**	*e*P	**P**	**15 24 02.5**	**+0.5**
	6.6nm,0.4s						
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	**P**	**15 24 37.1**	**-0.9**
	0.6nm,0.3s,baz=210,slow=11,SNR=10						
INK	**Inuvik**	**73.89**	**9**	P	**P**	**15 31 33.2**	**-0.2**
	0.5nm,0.5s,baz=355,slow=9.7,SNR=3.5						
YKA	**Yellowknife Ar**	**81.20**	**2**	P	**P**	**15 32 13.2**	**-0.7**
	0.3nm,0.6s,baz=352,slow=4.8,SNR=6.2						

*IDC **20** 15:43:35.5±1.2, 24.°93N×123.°56E, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.3/50, mbtmp3.4/5, Error ellipse: s-maj=40.6km s-min=26.2km az=66.0*

*JMA **20** 15:43:36.0±0.2, 24.°93N×123.°35E, h23km, M2.9*

ISC 20 15:43:35.8±1.7, 24.°89N±0.°07×123.°44E±0.°04, h5km±11km, n14, σ0§87/22, mb3.4/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.58**	**222**	P	**Pg**	**15 43 46.8**	**-0.1**
YOJ				*e*S	**Sg**	**15 43 54.6**	**+0.2**
IRIF	**Iriomote-Funau**	**0.61**	**154**	P	**Pb**	**15 43 48.9**	**-0.2**
IRIF				S	**Sb**	**15 43 58.1**	**+0.1**
JYNG	**Yonagunijimaku**	**0.62**	**226**	P	**Pg**	**15 43 47.6**	**-0.2**
JYNG				*e*S	**Sg**	**15 43 55.1**	**-0.9**
JIJ	**Ishigaki jima**	**0.83**	**129**	P	**Pb**	**15 43 52.3**	**-0.5**
JIJ				S	**Sb**	**15 44 04.1**	**-0.2**
JKRS	**Kuro-shima**	**0.83**	**141**	P	**Pn**	**15 43 53.1**	**-1.2**
JKRS				S	**Sb**	**15 44 04.8**	**+0.5**
JISG	**Ishigakijimahi**	**0.85**	**111**	P	**Pb**	**15 43 52.7**	**-0.4**
JISG				*e*S	**Sn**	**15 44 05.3**	**-2.1**
HATJ	**Hateruma jima**	**0.90**	**158**	P	**Pg**	**15 43 53.6**	**+0.6**
HATJ				S	**Sg**	**15 44 05.6**	**+1.0**
JTJ	**Tarama**	**1.18**	**102**	P	**Pg**	**15 43 59.1**	**+0.7**
JTJ				*e*S	**Sn**	**15 44 15.3**	**-0.2**
JIKM	**Ikemajima**	**1.65**	**88**	P	**Pb**	**15 44 05.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**23.62**	**259**	P	**P**	**15 48 49.4**	**+1.3**
	0.6nm,0.8s,baz=41,slow=6.0,SNR=2.9						
MKAR	**Makanchi Array**	**39.28**	**314**	P	**P**	**15 51 06.7**	**+1.0**
	0.7nm,1.1s,baz=108,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**45.81**	**166**	P	**P**	**15 51 59.1**	**+0.2**
	0.7nm,0.6s,baz=347,slow=8.4,SNR=3.0						
ASAR	**Alice Springs**	**49.32**	**167**	P	**P**	**15 52 26.8**	**+0.6**
	0.2nm,0.5s,baz=350,slow=8.2,SNR=9.5						
YKA	**Yellowknife Ar**	**81.52**	**23**	P	**P**	**15 55 54.0**	**-0.1**
	0.2nm,0.6s,baz=313,slow=4.3,SNR=5.5						

*JMA **20** 15:55:18.3±0.1, 24.°84N×125.°42E, h48km±1km, M3.3*

*IDC **20** 15:55:19.2±4.5, 25.°71N×125.°08E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/72, mbtmp3.5/4, Error ellipse: s-maj=293.6km s-min=23.9km az=63.0*

ISC 20 15:55:18.5±1.5, 24.°9N±0.°1×125.°4E±0.°1, h44km±8km, n14, σ0§41/22, mb3.5/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.14**	**190**	P	**Pn**	**15 55 25.7**	**-0.2**
JOGS				S	**Sn**	**15 55 31.3**	**+0.3**
JIKM	**Ikemajima**	**0.17**	**278**	P	**Pn**	**15 55 26.3**	**+0.3**
JIKM				S	**Sn**	**15 55 31.9**	**+0.6**
JMJ2	**Miyako jima3**	**0.19**	**211**	P	**Pn**	**15 55 25.9**	**-0.3**
JMJ2				S	**Sn**	**15 55 31.5**	**0.0**
JIRB	**Irabujima**	**0.25**	**253**	P	**Pn**	**15 55 26.4**	**-0.2**
JIRB				S	**Sn**	**15 55 32.1**	**-0.2**
JTJ	**Tarama**	**0.71**	**249**	P	**Pn**	**15 55 31.9**	**-0.3**
JTJ				S	**Sn**	**15 55 41.9**	**-0.2**
JISG	**Ishigakijimahi**	**1.07**	**253**	P	**Pn**	**15 55 36.6**	**-0.5**
JISG				S	**Sn**	**15 55 50.5**	**-0.2**
JIJ	**Ishigaki jima**	**1.29**	**246**	P	**Pn**	**15 55 39.9**	**-0.2**
JIJ				S	**Sn**	**15 55 56.0**	**-0.2**
JKRS	**Kuro-shima**	**1.46**	**243**	P	**Pn**	**15 55 42.6**	**+0.2**
JKRS				*e*S	**Sn**	**15 56 01.3**	**+1.1**
IRIF	**Iriomote-Funau**	**1.65**	**250**	P	**Pn**	**15 55 45.1**	**+0.1**
IRIF				*e*S	**Sn**	**15 56 05.2**	**+0.2**
HATJ	**Hateruma jima**	**1.71**	**241**	P	**Pn**	**15 55 46.3**	**+0.5**
HATJ				*e*S	**Sn**	**15 56 06.7**	**+0.3**
MKAR	**Makanchi Array**	**40.58**	**314**	P	**P**	**16 02 53.4**	**-0.4**
	0.2nm,0.5s,baz=101,slow=9.9,SNR=5.4						
ZALV	**Zalesovo Beam**	**41.82**	**325**	P	**P**	**16 03 04.1**	**+0.3**
	0.4nm,0.4s,baz=116,slow=9.8,SNR=2.0						
WRA	**Warramunga Arr**	**45.41**	**168**	P	P	16 03 45.9	+13
	1.3nm,0.8s,baz=353,slow=9.0,SNR=4.4						
ASAR	**Alice Springs**	**48.97**	**170**	P	P	16 04 14.4	+14
	0.3nm,0.6s,baz=357,slow=8.1,SNR=6.2						

*IDC **20** 15:55:44.0±43.0, 14.°23S×170.°66W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/48, mbtmp4.1/3, MS3.3/2, Ms1 3.3/2, ms1mx2.8/43, Error ellipse: s-maj=859.1km s-min=184.5km az=78.0*

*NEIC **20** 15:56:04.2±1.1, 15.°34S±0.°04×173.°0W±0.°1, h10km±2km, mb4.5/10, Error ellipse: s-maj=24.3km s-min=4.7km az=101.0*

*NOU **20** 15:56:24.0, 14.°00S×172.°07W, h71km, MLv3.1, Samoa Islands*

ISC 20 15:56:05.9±0.8, 15.°3S±0.°1×172.°9W±0.°1, h29km, n30, σ0§82/18, mb4.5/7, MS3.4/5, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.75**	**39**	Pn	**Pb**	**15 56 36.5**	**-1.0**
AFI	**Afiamalu**	**1.75**	**39**	P	**Pb**	**15 56 36.8**	**-0.7**
NIUE	**Niue**	**4.73**	**143**		**Pn**	**15 57 16.0**	**+0.7**
RAO	**Raoul Island**	**14.65**	**198**	P	**P**	**15 59 35.5**	**-1.7**
SANVU	**Saraoutou**	**19.18**	**267**	P	**P**	**16 00 26.9**	**-0.6**
SANVU				IAmb	IAmb	16 00 43.5	
	comp=Z,37nm,0.9s						
DZM	**Mont Dzumac**	**20.68**	**248**	*e*LR	LR	16 06 03.5	
	comp=Z,155nm,23.9s						
DZM	**Mont Dzumac**	**20.68**	**248**	LR	LR	16 07 26.8	
	comp=Z,158nm,19.0s,baz=34,slow=30						
PPT2	**Papeete2**	**22.49**	**99**	*e*LR	LR	16 06 25.3	
	comp=Z,114nm,25.0s						
TBI	**Tubuai**	**23.51**	**114**	*e*LR	LR	16 06 56.0	
	comp=Z,176nm,27.5s						
TAOE	**Nuku Hiva Isla**	**32.64**	**83**	*e*LR	LR	16 11 03.6	
	comp=Z,88nm,23.8s						
KHU	**Kahuku**	**38.30**	**27**	P	**P**	**16 03 25.5**	**+1.1**
H11S2	**WAKE ISLAND Hy**	**39.11**	**328**	T	T	16 44 50.5	
	baz=149,slow=76,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	**39.12**	**328**	T	T	16 44 52.2	
	baz=149,slow=76,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**39.13**	**328**	T	T	16 45 04.2	
	baz=149,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**40.05**	**330**	T	T	16 46 12.9	
	baz=150,slow=76,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**40.05**	**330**	T	T	16 46 21.4	
	baz=150,slow=76,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**40.07**	**330**	T	T	16 46 19.1	
	baz=150,slow=76,SNR=3.7						
STKA	**Stephens Creek**	**44.50**	**240**	P	**P**	**16 04 15.8**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=76,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**44.50**	**240**	P	**P**	**16 04 15.8**	**+0.8**
BBOO	**Buckleboo**	**49.28**	**240**	P	**P**	**16 04 53.1**	**+0.7**
WR0	**Warramunga Arr**	**50.14**	**257**	P	**P**	**16 04 59.6**	**+0.5**
WR0				IAmb	IAmb	16 05 14.4	
	comp=Z,12nm,1.3s						
WB0	**Warramunga Arr**	**50.29**	**257**	P	**P**	**16 05 00.5**	**+0.2**
WB0				IAmb	IAmb	16 05 08.9	
	comp=Z,12nm,1.3s						
WB2	**Warramunga Arr**	**50.32**	**257**	P	**P**	**16 05 00.4**	**-0.1**
WB2				IAmb	IAmb	16 05 26.5	
	comp=Z,6.1nm,1.1s						
WRAB	**Tennant Creek**	**50.32**	**257**	P	**P**	**16 05 01.1**	**+0.6**
WRA	**Warramunga Arr**	**50.33**	**257**	P	**P**	**16 05 00.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=91,slow=6.8,SNR=19						
WRA	**Warramunga Arr**	**50.33**	**257**	P	**P**	**16 05 00.8**	**+0.3**
AS31	**Alice Springs**	**50.59**	**252**	P	**P**	**16 05 02.0**	**-0.6**
AS31				IAmb	IAmb	16 05 11.9	
	comp=Z,3.1nm,1.5s						
ASAR	**Alice Springs**	**50.59**	**252**	P	**P**	**16 05 03.1**	**+0.6**
	comp=Z,2.8nm,0.5s,baz=86,slow=8.0,SNR=125						
ASAR	**Alice Springs**	**50.59**	**252**	P	**P**	**16 05 01.8**	**-0.8**
KSRS	**Korea Array**	**76.41**	**315**	LR	LR	16 36 50.3	
	comp=Z,8.1nm,21.1s,baz=25,slow=32						

*IDC **20** 16:04:27.4±0.7, 28.°03N×52.°48E, h0km, mb4.2/32, mb1 4.3/36, mb1mx4.2/50, mbtmp4.2/36, ML4.0/4, MS2.7/2, Ms1 2.7/2, ms1mx2.5/42, Error ellipse: s-maj=15.6km s-min=11.9km az=8.0*

*NEIC **20** 16:04:28.6±1.4, 28.°00N±0.°08×52.°44E±0.°04, h10km±1km, mb4.5/52, mb_Lg4.2(TEH), Error ellipse: s-maj=13.6km s-min=5.9km az=169.0*

*MOS **20** 16:04:29.4±1.0, 27.°99N×52.°46E, h27km, mb4.6/37, Error ellipse: s-maj=6.9km s-min=4.5km az=106.3*

*THR **20** 16:04:29.0±0.4, 28.°02N×52.°59E, h17km±6km, ML4.3*

*TEH **20** 16:04:30.0, 28.°12N×52.°51E, h19km, ML4.2*

*DSN **20** 16:04:31.9±2.4, 27.°95N×52.°58E, h10km, ML4.2/9, Error ellipse: s-maj=36.3km s-min=9.2km az=5.0*

*OMAN **20** 16:04:35.6, 27.°79N×52.°57E, h170km, mb4.8/14, ml4.1/11*

ISC 20 16:04:29.6±0.3, 28.°04N±0.°03×52.°48E±0.°03, h15km, n319, σ1§48/346, mb4.4/82, 14C-19D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	**0.66**	**49**	*e*Pg	**Pg**	**16 04 41.0**	**-1.6**
LMD1	**Lamerd**	**0.93**	**139**	*e*Pg	**Pn**	**16 04 49.1**	**+1.0**
JHRM	**Jahrom**	**1.08**	**64**	*e*Pg	**Pb**	**16 04 49.6**	**-0.4**
AHBU	**AHRAM**	**1.32**	**309**	*e*Pg	**Pg**	**16 04 55.2**	**+0.1**
SHI	**Shiraz**	**1.59**	**1**	P	**Pb**	**16 04 59.2**	**+0.3**
SHI				S	**Sg**	**16 05 20.9**	**-0.2**
SHI	**Shiraz**	**1.59**	**1**	*e*Pg	**Pb**	**16 04 58.7**	**-0.2**
LAR1	**LAR**	**1.72**	**102**	*e*Pg	**Pb**	**16 05 01.6**	**+0.6**
KAZ1	**Kazerun**	**1.74**	**335**	*e*Pg	**Pb**	**16 05 00.8**	**-0.5**
KLNJ	**Kolanjah**	**3.06**	**346**	*e*Pn	**Pn**	**16 05 17.6**	**-0.1**
JRN	**Qarnain Island**	**3.10**	**174**	*e*Pn	**Pn**	**16 05 20.5**	**+2.5**
JRN	**Qarnain Island**	**3.10**	**174**	P	**Pn**	**16 05 21.0**	**+3.0**
ABEH	**Behbahan**	**3.20**	**323**	*e*Pn	**Pn**	**16 05 21.7**	**+2.3**
GENO	**Geno**	**3.34**	**100**	*e*Pn	**Pn**	**16 05 22.4**	**+1.0**
IRAM	**Ramesheh**	**3.76**	**359**	*e*Pn	**Pn**	**16 05 27.9**	**+0.7**
IMEH	**Mehriz**	**3.82**	**29**	*e*Pn	**Pn**	**16 05 29.8**	**+1.7**
SHME	**Shamm**	**3.82**	**120**	*i* P	**Pn**	**16 05 29.1**	**+1.1**
	SNR=12						
SHME				S	**Sn**	**16 06 12.1**	**-0.5**
SHME	**Shamm**	**3.82**	**120**	*e*Pn	**Pn**	**16 05 29.0**	**+1.1**
SHME	**Shamm**	**3.82**	**120**	P	**Pn**	**16 05 29.6**	**+1.7**
	SNR=12						
SHME				S	**Sn**	**16 06 16.5**	**+3.8**
ISAD	**Sadrabad**	**4.00**	**15**	*e*Pn	**Pn**	**16 05 32.1**	**+1.5**
BANOM	**Banah**	**4.01**	**121**	*i* P	**Pn**	**16 05 31.8**	**+1.2**
	SNR=44						
BANOM	**Banah**	**4.01**	**121**	*e*Pn	**Pn**	**16 05 31.6**	**+1.0**
BANOM	**Banah**	**4.01**	**121**	P	**Pn**	**16 05 31.9**	**+1.4**
	SNR=44						
BANOM				S	**Sn**	**16 06 18.0**	**+0.6**
SLWR	**Sila**	**4.02**	**190**	*e*Pn	**Pn**	**16 05 32.9**	**+2.3**
SLWR	**Sila**	**4.02**	**190**	P	**Pn**	**16 05 33.1**	**+2.5**
SLWR				S	**Sn**	**16 06 21.0**	**+3.6**
NGRK	**Negar Kerman**	**4.06**	**66**	*e*Pn	**Pn**	**16 05 32.3**	**+0.8**
QRN	**Al-Qurain**	**4.08**	**281**	*e*P		16 05 31.0	
AJN	**Ajban**	**4.13**	**146**	*e*Pn	**Pn**	**16 05 34.6**	**+2.4**
NAZ	**Nazwa, Dubai**	**4.17**	**136**	*i* P	**Pn**	**16 05 35.0**	**+2.3**
	SNR=8.9						
NAZ	**Nazwa, Dubai**	**4.17**	**136**	*e*Pn	**Pn**	**16 05 35.0**	**+2.3**
NAZ	**Nazwa, Dubai**	**4.17**	**136**	P	**Pn**	**16 05 36.0**	**+3.3**
	SNR=11						
NAZ				S	**Sn**	**16 06 23.0**	**+1.8**
KHGB	**Koh Gabri**	**4.20**	**55**	*e*Pn	**Pn**	**16 05 34.3**	**+1.0**
KRBR	**Kerman**	**4.22**	**62**	*e*Pn	**Pn**	**16 05 33.7**	**0.0**
KRBR	**Kerman**	**4.22**	**62**	*e*Pn	**Pn**	**16 05 33.7**	**0.0**
TVBK	**TV Kerman**	**4.22**	**62**	*e*Pn	**Pn**	**16 05 35.8**	**+2.0**
MASF	**Masafi**	**4.23**	**128**	P	**Pn**	**16 05 35.7**	**+2.1**
	SNR=23						
MASF				S	**Sn**	**16 06

QAM **Ghamsar** 5.77 351 *e*Pn Pn **16 05 56.0 +1.1**
UMZA **Um Al Zommool** 5.83 155 *e*Pn Pn **16 05 57.8 +2.2**
UMZA **Um Al Zommool** 5.83 155 P Pn **16 05 58.0 +2.4**
UMZA S Sn **16 07 02.1 -0.1**
KRSH **Karshahi** 5.92 357 *e*Pn Pn **16 05 56.9 0.0**
ARQ **Araqi** 5.94 141 P Pn **16 05 59.1 +2.1**
SNR=18
ARQ S Sn **16 07 04.4 -0.5**
TPRV **Parvadeh(Tabas** 6.16 35 *e*Pn Pn **16 06 01.4 +1.3**
HOQ **Hoqain** 6.22 134 P Pn **16 06 02.7 +1.8**
SNR=14
HOQ S Sn **16 07 12.5 +0.7**
ISFB **Sefidab** 6.29 358 *e*Pn Pn **16 06 01.4 -0.6**
IKFM **Kafar-mosalman** 6.76 325 *e*Pn Pn **16 06 09.4 +1.1**
BSY **Bisya** 6.79 140 P Pn **16 06 10.4 +1.7**
SNR=7.1
BSY S Sn **16 07 24.7 -1.1**
BIDO **Bidbid** 6.80 130 P Pn **16 06 09.6 +0.7**
BIDO S Sn **16 07 25.5 -0.4**
IDOB **Doab** 6.81 328 *e*Pn Pn **16 06 10.5 +1.3**
TKDS **Koohdasht(Taba** 6.84 35 *e*Pn Pn **16 06 10.1 +0.6**
IQOM **Qom** 6.89 350 *e*Pn Pn **16 06 09.6 -0.7**
TNSJ **Nastanj** 6.89 30 *e*Pn Pn **16 06 11.0 +0.9**
IVRN **Varamin** 6.96 355 *e*Pn Pn **16 06 11.3 +0.2**
HSAM **Samen** 6.99 333 *e*Pn Pn **16 06 11.0 -0.7**
SMDO **Samad** 7.07 133 P Pn **16 06 15.0 +2.4**
SNR=8.6
SMDO S Sn **16 07 31.0 -1.8**
IKOO **Kooshah** 7.14 51 *e*Pn Pn **16 06 14.4 +0.7**
ITEG **Tejag** 7.26 47 *e*Pn Pn **16 06 15.7 +0.4**
WSAR **Wadi Sarin** 7.33 129 Pn Pn **16 06 17.0 +0.8**
comp=N,1.4nm,0.3s,baz=320,slow=8.5,SNR=50
WSAR Sn Sn **16 07 36.5 -2.6**
comp=N,4.0nm,0.3s,baz=301,slow=14,SNR=5.7
NHDN **Nehbandan** 7.38 61 *e*Pn Pn **16 06 18.1 +1.1**
ZHDN **Zahedan** 7.44 78 *e*Pn Pn **16 06 19.5 +1.7**
JMDO **Jabal Madar** 7.61 137 P Pn **16 06 21.7 +1.8**
IRAZ **Razeghan** 7.65 344 *e*Pn Pn **16 06 22.2 +1.4**
RAYN **Ar Rayn** 7.73 236 *i* P Pn **16 06 22.6 +0.9**
SNR=13
RAYN **Ar Rayn** 7.73 236 P Pn **16 06 21.1 -0.6**
RAYN **Ar Rayn** 7.73 236 Pn **16 06 21.1 -0.6**
AFRZ **Afriz** 7.78 45 *e*Pn Pn **16 06 25.6 +3.2**
WBK **Wadi Bani Khal** 7.98 131 P Pn **16 06 25.4 +0.3**
SNR=11
WBK S Sn **16 07 53.3 -1.9**
QABG **Abgarm-Qazvin** 8.03 343 *e*Pn Pn **16 06 27.4 +1.5**
IGHG **Ghaleghazi** 8.05 323 *e*Pn Pn **16 06 26.0 -0.3**
IDHR **Dehrash** 8.43 323 *e*Pn Pn **16 06 31.7 +0.3**
JLN **Jalan Bani Buh** 8.60 131 P Pn **16 06 33.8 +0.3**
JLN S Sn **16 08 07.5 -2.7**
MHTO **MHTO** 8.62 143 P Pn **16 06 36.0 +2.1**
SNR=19
MHTO S Sn **16 08 07.0 -3.8**
SRVN **Saravan** 8.82 92 *e*Pn Pn **16 06 38.3 +1.6**
DQM **DQM** 9.31 149 P Pn **16 06 44.0 +0.8**
SBZV **Sabzevar** 9.39 26 *e*Pn Pn **16 06 46.0 +1.4**
DOK **Doka** 9.50 170 P Pn **16 06 47.0 +1.0**
SNR=23
DOK S Sn **16 08 29.4 -3.1**
ISFR **Sfrayin** 10.12 26 *e*Pn Pn **16 06 56.1 +1.5**
WHFO **Wadi Hawf** 10.14 173 P Pn **16 06 54.3 -0.5**
SNR=50
WHFO S Sn **16 08 44.3 -4.1**
SHAO **Shalim** 10.38 163 P Pn **16 06 59.0 +0.9**
SNR=9.9
SHAO S Sn **16 08 51.5 -2.7**
DMTO **DMTO** 10.53 167 P Pn **16 07 00.1 +0.1**
SNR=23
DMTO S Sn **16 08 54.5 -3.2**
RBK **Rabkut** 10.61 171 P Pn **16 07 01.5 +0.3**
RBK S Sn **16 08 55.1 -4.6**
ABTO **Aybut** 10.66 176 P Pn **16 07 01.2 -0.8**
ABTO S Sn **16 08 56.2 -5.0**
GEYT **Alibeck** 10.94 24 Pn Pn **16 07 07.9 +2.3**
comp=N,0.5nm,0.3s,baz=219,slow=14,SNR=3.4
GEYT **Alibeck** 10.94 24 Pn Pn **16 07 07.2 +1.6**
GYAOB **ALIBECK ARRAY** 10.94 24 Pn Pn **16 07 06.8 +1.3**
MARD **Mardin** 13.50 316 Pn Pn **16 07 38.9 -1.8**
EIL **Elat** 15.44 280 Pn P **16 08 10.0 -1.4**
comp=N,0.4nm,0.3s,baz=87,slow=5.2,SNR=7.0
EIL LR LR 16 13 56.2
comp=N,20nm,21.7s,baz=8.5,slow=37
MMAI **Mount Meron Ar** 15.52 293 Pn Pn **16 08 06.3 -1.7**
comp=N,2.5nm,0.3s,baz=339,slow=17,SNR=4.5
KBL **Kabul** 15.57 61 P P **16 08 11.4 -1.6**
KBL pmax pmax
comp=Z,10.0nm,1.2s
MALT **Malatya** 15.58 315 P P **16 08 15.4 +2.4**
GAZ **Gaziantep** 15.74 309 P P **16 08 15.8 +1.1**
GAZ IAmb IAmb 16 08 20.4
comp=Z,14nm,0.7s
SOCY **Socotra** 15.84 175 Pn Pn **16 08 06.6 -5.6**
ONI **Oni** 16.26 336 P P **16 08 23.5 +3.0**
ZEI **Tsey** 16.27 337 *e*P P **16 08 20.2 -0.6**
ZEI pmax pmax
comp=Z,11nm,1.0s
THW **Thamme Wali** 17.28 69 P P **16 08 32.4 +0.6**
KBZ **Khabaz** 17.45 336 P P **16 08 34.4 +0.9**
comp=Z,0.1nm,0.3s,baz=128,slow=6.1,SNR=3.8
KBZ **Khabaz** 17.45 336⇓ *e*P P **16 08 34.1 +0.6**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
CEP **Cherat** 17.63 66 P P **16 08 38.2 +2.4**
KIV **Kislovodsk** 17.72 336 *e*P P **16 08 36.5 -0.2**
KIV pmax pmax
comp=Z,29nm,1.0s
GAR **Garm** 18.43 49 Pn **16 08 44.9 +0.3**
GAR IAmb IAmb 16 08 51.4
comp=Z,23nm,0.9s
SOC **Sochi** 18.61 330 *e*P P **16 08 45.8 -0.5**
SOC *e* 16 12 15.7
SOC MLR MLR
comp=Z,62nm,16.0s
NIL **Nilore** 18.68 67 P P **16 08 47.5 +0.2**
NIL pmax pmax
comp=Z,38nm,1.3s
NIL **Nilore** 18.68 67 P P **16 08 47.5 +0.2**
NIL IAmb IAmb 16 08 49.6
comp=Z,38nm,1.2s
CHCP **Chirah Chowk** 18.70 67 P Pn **16 08 48.0 +0.2**
TAS **Tashkent** 19.11 42 P P **16 08 52.3 +0.4**
TAS pmax pmax
comp=Z,85nm,0.3s
TAS **Tashkent** 19.11 42 P P **16 08 52.2 +0.4**
BR131 **Keskin Array S** 19.46 312 P P **16 08 56.1 +0.3**
BR131 pmax pmax
comp=Z,16nm,1.0s
BR131 **Keskin Array S** 19.46 312 P P **16 08 56.1 +0.3**
BR131 IAmb IAmb 16 09 03.8
comp=Z,16nm,0.9s
BRTR **Keskin Array B** 19.46 312 P Pn **16 08 57.5 +0.4**
comp=Z,0.6nm,0.3s,baz=140,slow=13,SNR=8.3
BRTR **Keskin Array B** 19.46 312 P P **16 08 56.2 +0.3**
BRTR **Keskin Array B** 19.46 312 P P **16 08 56.2 +0.3**
ANTO **Ankara** 20.09 311 P P **16 09 03.2 +0.5**
ANTO pmax pmax
comp=Z,11nm,0.8s
ANTO **Ankara** 20.09 311 P P **16 09 03.2 +0.5**
ELL **Elmali** 20.90 300 P Pn **16 09 14.9 +0.8**
ELL pmax pmax
comp=Z,110nm,1.2s
ELL **Elmali** 20.90 300 Pn **16 09 14.8 +0.7**
KK31 **Karatay Array** 20.94 39 P P **16 09 11.7 -0.1**
KK31 pmax pmax
comp=Z,14nm,1.0s
KK31 **Karatay Array** 20.94 39 P P **16 09 11.7 -0.1**
KK31 IAmb IAmb 16 09 19.7
comp=Z,14nm,1.0s
KKAR **Karatay Array** 20.94 39 P P **16 09 11.6 -0.2**
KKAR pmax pmax
comp=Z,14nm,1.0s
KKAR **Karatay Array** 20.94 39 P **16 09 11.6 -0.2**
KKAR IAmb IAmb 16 09 19.7
comp=Z,14nm,1.0s
MDUB **Mudurnu** 21.45 311 P P **16 09 17.1 -0.3**
ABKAR **Akbulak array** 21.95 13 P **16 09 22.5 0.0**
AKTO **Aktyubinsk** 22.75 9 P P **16 09 32.4 +1.2**
comp=Z,3.4nm,0.4s,baz=193,slow=11,SNR=16
AKTO S S **16 13 39.6 +0.2**
comp=Z,0.6nm,0.6s,baz=27,slow=21,SNR=1.3
AAK **Ala-Archa** 23.03 45 P P **16 09 36.1 +1.8**
comp=Z,2.3nm,0.7s,baz=198,slow=12,SNR=7.7
AAK LR LR 16 19 19.2
comp=Z,30nm,21.9s,baz=280,slow=39
AAK **Ala-Archa** 23.03 45⇑ *e*P P **16 09 35.8 +1.5**
AAK pmax pmax
comp=Z,26nm,1.7s
AAK **Ala-Archa** 23.03 45 P P **16 09 34.8 +0.5**
SANT **Santorini** 24.26 297 P P **16 09 46.4 +0.1**
IDI **Anoyia** 24.52 294 P P **16 09 49.7 +1.1**
comp=Z,17nm,0.8s,baz=100,slow=6.4,SNR=6.6
IDI **Anoyia** 24.52 294 P P **16 09 48.8 +0.2**
IDI IAmb IAmb 16 10 28.0
comp=Z,39nm,1.2s
VRH **Novokhopyorsk** 24.52 344 *e*P P **16 09 48.2 -0.1**
VRH pmax pmax
comp=Z,60nm,0.7s
BELG **Belogornoye** 24.59 353 P P **16 09 48.9 -0.1**
comp=Z,19nm,0.7s,baz=311,slow=5.5,SNR=5.4
BELG **Belogornoye** 24.59 353 *c i*P P **16 09 48.4 -0.6**
BELG pmax pmax
comp=Z,3.0nm,0.7s
VORD **Divnogorie** 24.98 340 *e*P P **16 09 52.3 -0.1**
VORD pmax pmax
comp=Z,10.0nm,0.6s
ALN **Alexandroupoli** 25.18 308 P P **16 09 55.1 +0.7**
ALN pmax pmax
comp=Z,17nm,1.0s
ALN **Alexandroupoli** 25.18 308 P P **16 09 55.1 +0.7**
ALN IAmb IAmb 16 10 01.2
comp=Z,17nm,1.0s
VSR **Storozhevoye** 25.23 340 *e*P P **16 09 53.8 -1.0**
VSR pmax pmax
comp=Z,8.0nm,0.5s
CFR **Carcaliu** 25.82 318 ⇑P P **16 10 01.1 +1.0**
CFR **Carcaliu** 25.82 318 ⇑P P **16 10 01.1 +1.0**
LPSR **Galich'ya Gora** 26.53 341 *e*P P **16 10 06.1 -0.4**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
SRS **Serrai** 26.99 306 P P **16 10 11.6 +0.8**
SRS pmax pmax
comp=Z,22nm,0.8s
NEHR **Nehoiu** 27.05 317 ⇑P P **16 10 13.8 +2.4**
PLOR **Plostina** 27.06 318 ⇑P P **16 10 13.7 +2.3**
PLOR **Plostina** 27.06 318 ⇑P P **16 10 13.7 +2.3**
MLR **Muntele Rosu** 27.29 317 P P **16 10 15.1 +1.5**
comp=Z,4.6nm,0.8s,baz=38,slow=3.3,SNR=5.2
MLR **Muntele Rosu** 27.29 317 ⇓P P **16 10 15.6 +1.9**
MLR **Muntele Rosu** 27.29 317 P P **16 10 15.9 +2.3**
MLR IAmb IAmb 16 11 02.8
comp=Z,6.9nm,0.9s
TESR **Tescani** 27.42 319 ⇓P P **16 10 15.8 +1.2**
GRG **Griva** 27.79 305 P P **16 10 19.4 +1.4**
GRG pmax pmax
comp=Z,12nm,0.8s
VOIR 27.81 316 ⇓P P **16 10 20.0 +1.8**
VOIR 27.81 316 ⇓P P **16 10 20.0 +1.8**
BIZ 27.96 320 ⇑P P **16 10 19.9 +0.5**
BRVK **Borovoye** 28.26 23 ⇑ *i*P P **16 10 24.6 +2.6**
BRVK pmax pmax
comp=Z,5.0nm,1.6s
BRVK **Borovoye** 28.26 23 P P **16 10 22.1 +0.1**
BVAR **Borovoye Array** 28.27 23 P P **16 10 21.8 -0.3**
comp=Z,2.8nm,0.8s,baz=173,slow=16,SNR=10
AKASG **Malin Array Be** 28.68 328 P P **16 10 24.7 -1.1**
comp=Z,2.4nm,0.6s,baz=131,slow=7.7,SNR=4.2
AKASG **Malin Array Be** 28.68 328 *ce*P P **16 10 23.7 -2.0**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKBB **Malin Array Si** 28.68 328 ⇓ *i*P P **16 10 25.6 -0.1**
AKBB pmax pmax
comp=Z,16nm,1.4s
AKBB **Malin Array Si** 28.68 328 P P **16 10 25.0 -0.7**
AKBB IAmb IAmb 16 10 26.2
comp=Z,7.1nm,0.7s
ARU **Arti** 28.70 7 P P **16 10 26.1 +0.2**
comp=Z,0.4nm,0.3s,baz=151,slow=13,SNR=1.5
ARU **Arti** 28.70 7⇓ *e*P P **16 10 26.7 +0.8**
ARU pmax pmax
comp=Z,9.0nm,1.9s
ARU **Arti** 28.70 7 P P **16 10 26.1 +0.2**
ARU IAmb IAmb 16 11 25.4
comp=Z,24nm,1.9s
BURAR **Bucovina Array** 28.84 320 ⇓P P **16 10 28.7 +1.3**
BURAR **Bucovina Array** 28.84 320 ⇓P P **16 10 28.7 +1.3**
BURAR **Bucovina Array** 28.84 320 P P **16 10 28.0 +0.6**
BUR08 **Bucovina Ar. S** 28.86 320 P P **16 10 28.2 +0.6**
BUR08 IAmb IAmb 16 11 07.9
comp=Z,20nm,1.9s
OBN **Obninsk** 29.41 341 *e*P P **16 10 31.7 -0.5**
OBN *e* 16 11 26.8
OBN pmax pmax
comp=Z,25nm,1.7s
MAKZ **Makanchi** 29.74 43 P P **16 10 34.7 -0.6**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MAKZ **Makanchi** 29.74 43 P P **16 10 34.7 -0.6**
MAKZ IAmb IAmb 16 10 36.8
comp=Z,3.9nm,0.8s
DRGR 29.89 317 ⇓P P **16 10 37.9 +1.2**
DRGR 29.89 317 ⇓P P **16 10 37.9 +1.2**
MK31 **Makanchi Array** 29.92 43 *d*P P **16 10 37.5 +0.6**
MK31 **Makanchi Array** 29.92 43 P P **16 10 37.1 +0.2**
MKAR **Makanchi Array** 29.92 43 P P **16 10 37.6 +0.7**
comp=Z,1.5nm,0.8s,baz=231,slow=7.7,SNR=10
MKAR **Makanchi Array** 29.92 43 P P **16 10 36.8 -0.1**
KURBB **Kurchatov Arra** 29.97 34 P P **16 10 38.1 +0.9**
comp=Z,1.4nm,0.8s,baz=233,slow=9.2,SNR=10
KURK **Kurchatov** 30.07 34 P P **16 10 38.2 +0.1**
KURK **Kurchatov** 30.07 34 P P **16 10 38.1 +0.1**
KIRV **Kirov** 30.61 357 P P **16 10 43.7 +1.0**
comp=Z,15nm,0.6s,baz=101,slow=1.6,SNR=6.3
TIP **Timpagrande** 31.57 300 P P **16 10 51.7 +0.1**
TIP IAmb IAmb 16 10 58.2
comp=Z,18nm,1.3s
CRVS **Cervenica-Dubn** 31.65 320 *e*P P **16 10 53.6 +1.5**
CRVS pmax pmax
comp=Z,13nm,0.9s
CRVS **Cervenica-Dubn** 31.65 320 *e*P P **16 10 53.6 +1.5**
WMQ **Urumqi** 32.29 51 *e*P P **16 11 01.1 +3.2**
LANS **Liptovska Anna** 32.92 319 *e*P P **16 11 05.4 +2.1**
LANS pmax pmax
comp=Z,7.0nm,0.9s
LANS **Liptovska Anna** 32.92 319 *e*P P **16 11 05.3 +2.0**
VYHS **Vyhne** 33.00 317 *e*P P **16 11 04.9 +0.9**
VYHS pmax pmax
comp=Z,12nm,1.3s
VYHS **Vyhne** 33.00 317 *e*P P **16 11 04.9 +0.9**
OJC **Ojcow** 33.24 321 P P **16 11 06.4 +0.3**
OJC pmax pmax
comp=Z,14nm,0.8s
OJC **Ojcow** 33.24 321 P P **16 11 06.4 +0.3**
KLMR **Klimovskoe** 33.95 349 *e*P P **16 11 10.9 -1.1**
KLMR pmax pmax
comp=Z,19nm,1.0s
KLMR **Klimovskoe** 33.95 349 *e*P P **16 11 11.0 -1.1**
KLMR AMP **16 11 17.4**
comp=Z,19nm,1.0s
DGZ **Jazzator, Alta** 34.30 41 ⇓ *i*P P **16 11 16.5 +1.0**
DGZ pmax pmax
comp=Z,3.0nm,0.7s
MORC **Moravsky Berou** 34.33 319 P P **16 11 15.2 -0.3**
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC **Moravsky Berou** 34.33 319 P P **16 11 15.2 -0.3**
MORC IAmb IAmb 16 11 16.9
comp=Z,5.7nm,0.9s
VRAC **Vranov** 34.68 318 P P **16 11 18.0 -0.6**
comp=Z,1.3nm,0.4s,baz=86,slow=7.9,SNR=3.6
KRLC **Kraliky** 34.90 319 *e*P P **16 11 20.2 -0.3**
KRLC **Kraliky** 34.90 319 *e*P P **16 11 20.2 -0.3**
NRCA **Norcia** 34.97 306 P P **16 11 20.7 -0.5**
NRCA IAmb IAmb 16 11 28.6
comp=Z,13nm,1.1s
ZAA0 **Zalesovo Array** 35.05 33 P P **16 11 21.4 -0.3**
ZAA0 IAmb IAmb 16 11 22.4
comp=Z,4.9nm,0.7s
ZALV **Zalesovo Beam** 35.05 33 P P **16 11 21.3 -0.4**
comp=Z,2.3nm,0.4s,baz=241,slow=9.6,SNR=23
ZALV **Zalesovo Beam** 35.05 33 *i* P P **16 11 21.7 0.0**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV **Zalesovo Beam** 35.05 33 P P **16 11 21.0 -0.7**
DPC **Dobruska-Polom** 35.28 319 *e*P P **16 11 24.4 +0.6**
DPC **Dobruska-Polom** 35.28 319 *e*P P **16 11 24.4 +0.6**
CHVC **Chvalec** 35.54 319 *e*P P **16 11 26.3 +0.3**
MOA **Molln** 35.56 314 *e*P P **16 11 26.7 +0.5**
comp=Z,4.1nm,0.9s
KBA **Koelnbreinsper** 35.91 313 *e*P P **16 11 30.5 +1.2**
comp=Z,6.9nm,1.0s
GERES **GERESS Array B** 36.26 316 P P **16 11 32.4 +0.1**
comp=Z,0.8nm,0.6s,baz=106,slow=8.5,SNR=4.1
ABTA **Abfaltersbach** 36.35 312 *e*P P **16 11 32.4 -0.7**
comp=Z,3.4nm,0.9s
KHC **Kasperske Hory** 36.44 316 *d i*P P **16 11 34.0 +0.3**
KHC pmax pmax
comp=Z,8.0nm,0.8s
KHC **Kasperske Hory** 36.44 316 *e*P P **16 11 34.0 +0.3**
CTI **Castel Tesino** 36.73 310 P P **16 11 35.5 -0.9**
CTI pmax pmax
comp=Z,7.0nm,0.8s
CTI **Castel Tesino** 36.73 310 P P **16 11 35.5 -0.9**
CTI IAmb IAmb 16 11 37.6
comp=Z,6.6nm,0.8s
WTTA **Wattenberg** 37.07 312 *i* P P **16 11 39.3 0.0**
comp=Z,7.9nm,0.7s
WATA **Walderalm** 37.13 312 *e*P P **16 11 39.7 0.0**
comp=Z,8.8nm,1.0s
SQTA **Sankt Quirin** 37.34 312 *e*P P **16 11 41.0 -0.5**
comp=Z,7.0nm,0.6s
MOTA **Moosalm** 37.44 312 *e*P P **16 11 42.0 -0.5**
comp=Z,9.4nm,1.0s
CLL **Collm** 37.60 319 *i* P P **16 11 44.2 +0.7**
comp=Z,7.0nm,1.1s
CLL **Collm** 37.60 319 *i* P P **16 11 44.2 +0.7**
CLL pmax pmax
comp=Z,7.0nm,1.1s
FETA **Feichten** 37.60 312 *i* P P **16 11 43.9 +0.1**
comp=Z,10nm,1.0s
FIA1 **FINESS Array S** 37.76 340 P P **16 11 44.1 -0.6**
FIA1 IAmb IAmb 16 11 45.5
comp=Z,19nm,1.2s
FINES **FINESS Array B** 37.76 340 P P **16 11 44.2 -0.5**
comp=Z,3.5nm,0.6s,baz=142,slow=9.6,SNR=14
FINES **FINESS Array B** 37.76 340 *i* P P **16 11 44.5 -0.2**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES **FINESS Array B** 37.76 340 P P **16 11 44.0 -0.7**
DAVOX **Davos/Dischmat** 38.10 311 P P **16 11 48.2 +0.1**
comp=Z,4.7nm,0.7s,baz=118,slow=11,SNR=6.1
DAVA **Damuels** 38.23 312 *e*P P **16 11 48.7 -0.4**
comp=Z,22nm,0.7s
SENIN **Lac Senin/Sane** 39.75 310 P P **16 12 01.7 -0.2**
BNI **Bardonecchia** 39.94 308 P P **16 12 03.3 -0.1**
BNI pmax pmax
comp=Z,6.0nm,1.1s
BNI **Bardonecchia** 39.94 308 P P **16 12 03.3 -0.1**
ECH **Echery** 40.24 313 P P **16 12 05.0 -0.7**
ECH pmax pmax
comp=Z,6.0nm,0.9s
ECH **Echery** 40.24 313 P P **16 12 05.0 -0.7**
GTA **Gaotai** 40.56 61 P P **16 12 09.8 +1.2**
GTA pP sP 16 12 15.5 +0.2
GTA sP pP 16 12 18.4 +5.0
GTA pmax pmax
comp=Z,7.0nm,0.9s
HFS **Hagfors** 41.43 332 P P **16 12 15.2 -0.1**
comp=Z,1.9nm,0.3s,baz=135,slow=8.7,SNR=31
NC602 **NORSAR Array S** 42.66 332 P P **16 12 25.4 +0.1**
NORES **NORESS Array B** 42.66 332 P P **16 12 29.1 +3.8**
NC405 **NORSAR Array S** 42.78 332 P P **16 12 25.6 -0.8**
NB201 **NORSAR Array S** 42.92 332 P P **16 12 27.0 -0.5**
NOA **NORSAR Array B** 42.95 332 P P **16 12 27.2 -0.5**
comp=Z,0.8nm,0.6s,baz=121,slow=8.2,SNR=5.8
NC303 **NORSAR Array S** 42.99 332 P P **16 12 28.3 +0.3**
NBO00 **NORSAR Array S** 43.13 332 P P **16 12 29.3 +0.2**
CHTO **Chiang Mai** 43.40 92 P P **16 12 32.2 +0.3**
CHTO pmax pmax
comp=Z,3.0nm,0.8s
CHTO **Chiang Mai** 43.40 92 P P **16 12 32.2 +0.3**
CLF **Chambon-Foret** 43.42 311 P P **16 12 31.8 +0.1**
CMAR **Chiang Mai Arr** 43.53 92 P P **16 12 33.1 +0.2**
comp=Z,0.9nm,0.8s,baz=279,slow=9.6,SNR=9.2
LZH **Lanzhou** 43.84 66 *e*P P **16 12 36.3 +0.8**
LZH pP pP 16 12 40.4 +0.1
LZH sP sP 16 12 43.4 +1.2
LZH pmax pmax
comp=Z,18nm,1.3s
KEV **Kevo** 44.26 348 P P **16 12 38.6 +0.5**
KEV pmax pmax
comp=Z,74nm,1.6s
KEV **Kevo** 44.26 348 P P **16 12 38.6 +0.5**
ARCES **ARCESS Array B** 44.37 347 P P **16 12 39.1 +0.1**
comp=Z,1.1nm,0.4s,baz=150,slow=7.8,SNR=15
ARCES **ARCESS Array B** 44.37 347 P P **16 12 39.1 +0.1**
ARCES pmax pmax
comp=Z,27nm,1.5s
ARCES **ARCESS Array B** 44.37 347 IAmb IAmb 16 13 25.7
comp=Z,26nm,1.5s
KMI **Kunming** 44.79 82 ⇓P P **16 12 43.4 +0.1**
KMI pP pP 16 12 47.4 -0.7
KMI pmax pmax
comp=Z,13nm,0.7s
KMI pmax pmax
comp=Z,95nm,3.8s
KMI LR LR
comp=N,97nm,5.8s
KMI LR LR
comp=E,120nm,3.9s
KMI LR LR
comp=Z,100nm,5.0s
SONM **Songino Array** 45.87 49 P P **16 12 52.3 +0.9**
comp=Z,0.8nm,0.7s,baz=231,slow=11,SNR=2.0
SONM **Songino Array** 45.87 49 P P **16 12 52.0 +0.6**
NRIK **Noril'sk** 46.06 16 P P **16 12 53.0 +0.6**
comp=Z,1.3nm,0.4s,baz=198,slow=3.6,SNR=4.6
NRIK **Noril'sk** 46.06 16 ⇓ *i*P P **16 12 53.3 +0.9**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
NRIK **Noril'sk** 46.06 16 P P **16 12 53.0 +0.6**
NRIK IAmb IAmb 16 13 05.3
comp=Z,3.8nm,1.0s
ULN **Ulaanbaatar** 46.31 49 ⇓ *i*P P **16 12 55.7 +0.8**
ULN pmax pmax
comp=Z,1.0nm,0.4s
ESDC **Sonseca Array** 47.59 299 P P **16 13 05.7 +0.8**
comp=Z,1.3nm,1.2s,baz=80,slow=7.2,SNR=5.5
EKA **Eskdalemuir Ar** 48.02 321 P P **16 13 07.4 -0.5**
comp=Z,0.6nm,0.4s,baz=104,slow=8.0,SNR=8.8
TOA0 **Torodi Ar. Sit** 49.45 263 P P **16 13 18.9 -0.5**
TOA0 IAmb IAmb 16 13 23.4
comp=Z,22nm,1.8s
TORD **Torodi Ar. Bea** 49.45 263 P P **16 13 19.7 +0.3**
comp=Z,3.1nm,0.6s,baz=59,slow=7.8,SNR=12
TORD **Torodi Ar. Bea** 49.45 263 P P **16 13 18.9 -0.6**
TORD IAmb IAmb 16 13 22.9
comp=Z,3.1nm,0.8s
HHC **Hu-ho-hao-te** 49.52 59 *e*P P **16 13 20.6 +0.8**
NJ2 **Nanjing** 56.79 68 *e*P P **16 14 12.1 -1.2**
NJ2 pmax pmax
comp=Z,12nm,0.5s
DBIC **Dimbokro** 58.14 260 P P **16 14 23.5 +0.5**
comp=Z,2.8nm,0.8s,baz=50,slow=9.8,SNR=3.0
DBIC **Dimbokro** 58.14 260 P P **16 14 22.5 -0.5**
TIXI **Tiksi** 59.37 21 ⇓ *e*P P **16 14 32.3 +1.5**
TIXI **Tiksi** 59.37 21 P P **16 14 30.3 -0.5**
TIXI IAmb IAmb 16 15 00.9
comp=Z,6.6nm,1.5s
BOSA **Boshof** 62.08 207 P P **16 14 50.8 +0.9**
comp=Z,2.8nm,1.1s,baz=352,slow=7.1,SNR=2.3
KLR **Kul'dur** 62.55 47 ⇑ *e*P P **16 14 51.5 -1.3**
KSRS **Korea Array** 62.62 60 P P **16 14 52.3 -1.1**
comp=Z,3.0nm,0.7s,baz=279,slow=6.4,SNR=10
JOW **Kunigami** 66.19 71 LR LR 16 50 13.0
comp=Z,3µm,18.5s,baz=217,slow=42
TULEG **Thule** 69.69 348 P P **16 15 38.0 -0.2**
TULEG IAmb IAmb 16 15 38.8
comp=Z,6.5nm,1.0s
SEY **Seymchan** 69.74 29 ⇓ *i*P P **16 15 38.3 -0.4**
EUNU **Eureka** 69.83 353 P P **16 15 39.7 +0.6**
EUNU IAmb IAmb 16 15 40.7
comp=Z,3.7nm,0.9s
MA2 **Magadan** 70.27 32⇑ *e*P P **16 15 42.1 +0.1**
MA2 pmax pmax
comp=Z,2.0nm,1.3s
BILL **Bilibino** 72.59 21 ⇓ *e*P P **16 15 56.2 +0.3**
BILL pmax pmax
comp=Z,6.0nm,1.5s
JHJ **Hachijo jima 2** 73.19 61 LR LR 16 53 39.0
comp=Z,727nm,18.3s,baz=75,slow=40
ILAR **Eielson Array** 86.27 8 P P **16 17 09.8 -0.6**
comp=Z,0.8nm,0.7s,baz=332,slow=4.1,SNR=7.8
YKA **Yellowknife Ar** 89.19 354 P P **16 17 24.9 +0.5**

comp=Z,2.0nm,0.8s,baz=10,slow=4.7,SNR=32
YKA Yellowknife Ar 89.19 354 *ce* P **P 16 17 24.8 +0.4**
YKA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 92.34 111 P **P 16 17 39.5 -0.4**
comp=Z,1.3nm,0.9s,baz=308,slow=3.7,SNR=4.9
WRA Warramunga Arr 92.34 111 *i* P **P 16 17 40.9 +1.1**
WRA pmax pmax
comp=Z,1.0nm,0.9s
ASAR Alice Springs 93.78 115 P **P 16 17 45.9 -0.6**
comp=Z,0.9nm,0.6s,baz=304,slow=4.6,SNR=22

*NEIC **20** 16:18:30.6±2.9, 27.°57S±0.°07×70.°7W±0.°3, h105km±11km, Error ellipse: s-maj=34.5km s-min=8.6km az=98.0*
*GUC **20** 16:18:33.4±0.4, 27.°80S×70.°24W, h81km±4km, ML4.0*
ISC 20 16:18:30.4±1.1, 27.°61S±0.°05×70.°43W±0.°06, h100km, n40, σ1.°29/45, 5C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.17**	**84**	⇑*iP*		**Pn**		**16 18 44.6**	**0.0**
GO03				*i* S		**Sn**		**16 18 53.7**	**-1.6**
GO03				IAML				16 18 54.1	
	comp=N,16μm,0.2s								
GO03	**Copiap**	**0.17**	**84**			**Pn**		**16 18 44.7**	**0.0**
AC04	**Llanos de Chal**	**0.82**	**224**	⇑*iP*		**Pn**		**16 18 50.3**	**+1.3**
AC04				*i* S		**Sn**		**16 19 03.7**	**+0.7**
AC04				IAML				16 19 05.4	
	comp=E,7μm,0.1s								
AC04	**Llanos de Chal**	**0.82**	**224**			**Pn**		**16 18 50.2**	**+1.2**
AC02	**Maricunga**	**1.39**	**57**	⇓*iP*		**Pn**		**16 18 57.9**	**+2.0**
AC02				*i* S		**Sn**		**16 19 16.2**	**+1.1**
AC02				IAML				16 19 17.8	
	comp=E,4μm,0.2s								
AC02	**Maricunga**	**1.39**	**57**	Pn		**Pn**		**16 18 57.8**	**+1.9**
LCO	**Las Campanas**	**1.42**	**190**			**Pn**		**16 18 56.8**	**+0.9**
AC01	**Pan de Azucar**	**1.47**	**354**	⇑*iP*		**Pn**		**16 18 58.3**	**+2.0**
AC01				*i* S		**Sn**		**16 19 15.6**	**-0.3**
AC01				IAML				16 19 17.1	
	comp=E,1μm,0.2s								
AC01	**Pan de Azucar**	**1.47**	**354**	Pn		**Pn**		**16 18 58.3**	**+2.0**
GO02	**Mina Guanaco**	**2.55**	**17**	⇑*iP*		**Pn**		**16 19 12.6**	**+2.0**
GO02				IAML				16 19 48.9	
	comp=E,619nm,0.6s								
GO02	**Mina Guanaco**	**2.55**	**17**	Pn		**Pn**		**16 19 12.5**	**+1.9**
GO04	**Tololo Observa**	**2.57**	**187**	⇑*iP*		**Pn**		**16 19 11.7**	**+0.9**
GO04				IAML				16 19 48.8	
	comp=N,1μm,0.5s								
GO04	**Tololo Observa**	**2.57**	**187**			**Pn**		**16 19 11.7**	**+0.9**
PB14	**IPOC Station P**	**2.97**	**0**			**Pn**		**16 19 17.2**	**+1.0**
CO03	**El Pedregal**	**3.22**	**184**	*eP*		**Pn**		**16 19 20.5**	**+1.3**
CO03				IAML				16 20 18.7	
	comp=E,299nm,0.2s								
CO03	**El Pedregal**	**3.22**	**184**			**Pn**		**16 19 20.2**	**+0.9**
PB10	**IPOC Station P**	**4.08**	**358**	Pn		**Pn**		**16 19 31.4**	**+0.6**
CYA	**Choya**	**4.17**	**103**	⇑*eP*		**Pn**		**16 19 33.6**	**+1.6**
CYA				*i* S		**Sn**		**16 20 18.5**	**-1.3**
ZON	**Zonda**	**4.21**	**159**	Pn		**Pn**		**16 19 34.4**	**+1.9**
PB15	**IPOC Station P**	**4.47**	**11**			**Pn**		**16 19 37.7**	**+1.5**
PB06	**IPOC Station P**	**4.95**	**9**	Pn		**Pn**		**16 19 42.7**	**+0.1**
VA03	**San Esteban**	**5.14**	**181**	Pn		**Pn**		**16 19 46.1**	**+1.0**
LVC	**Limon Verde**	**5.17**	**16**	Pn		**Pn**		**16 19 46.6**	**+0.8**
PB04	**IPOC Station P**	**5.26**	**3**	Pn		**Pn**		**16 19 46.8**	**-0.1**
PEL	**Peldehue**	**5.52**	**182**	Pn		**Pn**		**16 19 51.9**	**+1.7**
MT02	**Curacav**	**5.66**	**186**	Pn		**Pn**		**16 19 51.4**	**-0.7**
PB07	**IPOC Station P**	**5.88**	**5**	Pn		**Pn**		**16 19 54.4**	**-0.9**
PB09	**IPOC Station P**	**5.89**	**11**	Pn		**Pn**		**16 19 56.2**	**+0.7**
VA05	**Santo Domingo**	**6.11**	**189**	Pn		**Pn**		**16 19 59.7**	**+1.5**
MT09	**Talagante**	**6.16**	**184**	Pn		**Pn**		**16 19 58.5**	**-0.6**
MT01	**Popeta**	**6.27**	**186**	Pn		**Pn**		**16 19 59.6**	**-0.8**
PB01	**IPOC Station P**	**6.60**	**8**			**Pn**		**16 20 04.0**	**-0.9**
BO01	**Tunca**	**6.78**	**185**	Pn		**Pn**		**16 20 05.8**	**-1.5**
TA01	**Diego Aracena**	**7.02**	**2**	Pn		**Pn**		**16 20 10.8**	**+0.2**
BO02	**Sierra Bellavi**	**7.17**	**182**	Pn		**Pn**		**16 20 12.2**	**-0.4**
PB08	**IPOC Station P**	**7.53**	**9**	Pn		**Pn**		**16 20 17.2**	**-0.8**
PB11	**IPOC Station P**	**7.85**	**5**	Pn		**Pn**		**16 20 20.5**	**-1.6**
PSGCX	**Pisagua**	**7.98**	**2**	Pn		**Pn**		**16 20 21.4**	**-2.4**
PB16	**IPOC Station P**	**9.27**	**5**	Pn		**Pn**		**16 20 41.8**	**0.0**
GO09	**Cerro Castillo**	**23.67**	**183**	P		**P**		**16 23 31.6**	**-1.1**

*IDC **20** 16:26:10.9±1.4, 40.°06N×106.°52E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.3/45, mbtmp3.4/4, ML3.1/2, MS3.9/2, Ms1 3.9/2, ms1mx2.7/49, Error ellipse: s-maj=48.6km s-min=20.2km az=72.0*
*NEIC **20** 16:26:15.3±0.9, 40.°1N±0.°1×106.°6E±0.°3, h29km±7km, mb4.5/6, Error ellipse: s-maj=36.4km s-min=14.3km az=73.0*
ISC 20 16:26:13.2±0.9, 40.°07N±0.°09×106.°5E±0.°2, h16km, n15, σ1.°06/13, mb4.4/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**6.31**	**162**		Pn		**Pn**	**16 27 47.1**	**+1.4**
SONM	**Songino Array**	**7.77**	**359**		Pn		**Pn**	**16 28 04.1**	**-1.6**
	0.3nm,0.3s,baz=185,slow=16,SNR=3.3								
SONM					Sn		**Sn**	**16 29 35.1**	**+1.8**
	0.9nm,0.3s,baz=182,slow=25,SNR=7.0								
SONM					Lg		Lg	16 30 18.9	
	0.4nm,0.3s,baz=180,slow=30,SNR=6.2								
TLY	**Talaya**	**11.79**	**351**		Pn		**Pn**	**16 29 00.4**	**-0.2**
MKAR	**Makanchi Array**	**18.80**	**299**		P		**P**	**16 30 31.2**	**-0.7**
	0.1nm,0.3s,baz=106,slow=11,SNR=2.8								
ZAA0	**Zalesovo Array**	**20.18**	**321**		P		**P**	**16 30 47.6**	**+0.7**
ZALV	**Zalesovo Beam**	**20.18**	**321**		P		**P**	**16 30 47.8**	**+0.9**
	0.4nm,0.4s,baz=116,slow=9.9,SNR=3.7								
YSS	**Yuzh-Sakhalins**	**26.98**	**63**		P		**P**	**16 31 54.1**	**0.0**
YSS					IAmb		IAmb	16 32 19.1	
	comp=Z,22nm,1.3s								
ARCES	**ARCESS Array B**	**50.03**	**333**		LR		LR	16 58 38.4	
	comp=Z,77nm,19.0s,baz=265,slow=39								
WB2	**Warramunga Arr**	**65.10**	**151**		P		**P**	**16 36 52.9**	**-0.2**
WR0	**Warramunga Arr**	**65.18**	**151**		P		**P**	**16 36 53.2**	**-0.5**
WR0					IAmb		IAmb	16 37 05.8	
	comp=Z,7.5nm,1.4s								
AS31	**Alice Springs**	**68.35**	**153**		P		**P**	**16 37 13.6**	**-0.2**
AS31					IAmb		IAmb	16 37 18.0	
	comp=Z,2.7nm,1.4s								
ASAR	**Alice Springs**	**68.35**	**153**		P		**P**	**16 37 14.1**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=339,slow=6.3,SNR=26								
HNR	**Honiara**	**69.70**	**122**		P		P	16 37 31.5	+9.1
CTA	**Charters Tower**	**70.38**	**140**		LR		LR	17 09 26.8	
	comp=Z,113nm,19.7s,baz=247,slow=37								
EIDS	**Eidsvold**	**77.20**	**139**		P		**P**	**16 38 05.2**	**-1.1**

*NEIC **20** 16:32:41.0±0.7, 19.°54N±0.°04×66.°07W±0.°05, h21km±2km, Error ellipse: s-maj=7.5km s-min=4.6km az=131.0*
*RSPR **20** 16:32:42.2, 19.°62N×66.°05W, h52km±7km, MD3.3/6*
ISC 20 16:32:41.0±2.0, 19.°51N±0.°10×66.°07W±0.°05, h14km, n41, σ0.°35/42, 6C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**1.11**	**203**	⇑*eP*			**Pb**	**16 33 02.1**	**+0.1**
EMPR	**Esperanza - Ma**	**1.11**	**203**	*eS*			**Sn**	**16 33 17.4**	**+0.2**
EMPR	**Esperanza - Ma**	**1.11**	**203**				**Pb**	**16 33 02.1**	**+0.1**
EMPR							**Sn**	**16 33 17.4**	**+0.2**
EMPR	**Esperanza - Ma**	**1.11**	**203**	IAML				16 33 18.9	
	comp=N,236nm,0.7s								
EMPR				IAML				16 33 20.4	
	comp=E,339nm,0.6s								
GCPR	**Guaynabo City**	**1.19**	**181**				**Pn**	**16 33 02.5**	**-0.7**
GCPR				IAML				16 33 20.8	
	comp=E,110nm,0.4s								
CBYP	**Canovanas**	**1.25**	**171**	⇑*eP*			**Pn**	**16 33 03.5**	**-0.5**
CBYP	**Canovanas**	**1.25**	**171**	*eS*			**Sb**	**16 33 20.6**	**+0.3**
CBYP	**Canovanas**	**1.25**	**171**				**Pn**	**16 33 03.5**	**-0.5**
CBYP							**Sb**	**16 33 20.6**	**+0.3**
AOPR	**Arecibo Observ**	**1.32**	**209**	⇑*eP*			**Pn**	**16 33 05.0**	**-0.1**
AOPR	**Arecibo Observ**	**1.32**	**209**	*eS*			**Sn**	**16 33 22.7**	**+0.2**
AOPR	**Arecibo Observ**	**1.32**	**209**				**Sn**	**16 33 22.7**	**+0.2**
AOPR	**Arecibo Observ**	**1.32**	**209**				**Pn**	**16 33 04.3**	**-0.7**
AOPR	**Arecibo Observ**	**1.32**	**209**	IAML				16 33 25.9	
	comp=N,413nm,0.5s								
AOPR				IAML				16 33 32.1	
	comp=E,657nm,0.4s								
HUMP	**Col San Antoni**	**1.37**	**171**	⇓*eP*			**Pn**	**16 33 05.5**	**-0.3**
HUMP	**Col San Antoni**	**1.37**	**171**	*eS*			**Sn**	**16 33 23.9**	**+0.2**
HUMP	**Col San Antoni**	**1.37**	**171**				**Pn**	**16 33 05.5**	**-0.3**
HUMP							**Sn**	**16 33 23.9**	**+0.2**
HUMP	**Col San Antoni**	**1.37**	**171**	IAML				16 33 28.1	
	comp=E,105nm,0.4s								
HUMP				IAML				16 33 35.3	
	comp=N,86nm,0.3s								
SJG	**San Juan**	**1.39**	**183**				**Pn**	**16 33 05.5**	**-0.4**
SJG				IAML				16 33 26.6	
	comp=N,150nm,0.4s								
SJG				IAML				16 33 26.8	
	comp=N,143nm,0.6s								
CUPR	**Culebra, Puert**	**1.41**	**148**	⇓*eP*			**Pn**	**16 33 05.7**	**-0.4**
CUPR	**Culebra, Puert**	**1.41**	**148**	*eS*			**Sn**	**16 33 24.3**	**-0.2**
CUPR	**Culebra, Puert**	**1.41**	**148**				**Pn**	**16 33 05.7**	**-0.4**
CUPR							**Sn**	**16 33 24.3**	**-0.2**
AGPR	**Aguadilla, PR**	**1.43**	**224**	Pn			**Pn**	**16 33 06.1**	**-0.4**
AGPR				IAML				16 33 29.4	
	comp=N,100nm,0.4s								
AGPR				IAML				16 33 44.6	
	comp=E,94nm,0.7s								
PDPR	**Patillas Dam,**	**1.48**	**178**				**Pn**	**16 33 07.0**	**-0.2**
PDPR				IAML				16 33 31.5	
	comp=E,111nm,0.6s								
MTP	**Monte Pirata**	**1.48**	**161**	⇑*eP*			**Pn**	**16 33 06.8**	**-0.4**
MTP	**Monte Pirata**	**1.48**	**161**	*eS*			**Sn**	**16 33 26.4**	**0.0**
MTP	**Monte Pirata**	**1.48**	**161**				**Pn**	**16 33 06.8**	**-0.4**
MTP							**Sn**	**16 33 26.4**	**0.0**
MTP	**Monte Pirata**	**1.48**	**161**	IAML				16 33 37.6	
	comp=E,65nm,0.2s								
CELP	**Cerrillos**	**1.50**	**199**	⇓*eP*			**Pn**	**16 33 07.4**	**-0.1**
CELP	**Cerrillos**	**1.50**	**199**	*eS*			**Sn**	**16 33 26.9**	**0.0**
CELP	**Cerrillos**	**1.50**	**199**				**Pn**	**16 33 07.4**	**-0.1**
CELP							**Sn**	**16 33 26.9**	**0.0**
IGPR	**InterUniversit**	**1.53**	**181**	⇑*eP*			**Pn**	**16 33 08.2**	**+0.2**
IGPR	**InterUniversit**	**1.53**	**181**	*eS*			**Sn**	**16 33 27.8**	**+0.1**
OBIP	**Obispado Ponce**	**1.54**	**199**				**Pn**	**16 33 07.8**	**-0.3**
OBIP				IAML				16 33 30.2	
	comp=E,90nm,0.6s								
OBIP				IAML				16 33 34.5	
	comp=N,103nm,0.9s								
STVI	**Saint Thomas**	**1.56**	**137**	⇑*eP*			**Pn**	**16 33 08.4**	**+0.1**
STVI	**Saint Thomas**	**1.56**	**137**				**Pn**	**16 33 08.4**	**+0.1**
STVI	**Saint Thomas**	**1.56**	**137**	IAML				16 33 35.2	
	comp=N,84nm,0.5s								
MPR	**Mayaguez**	**1.64**	**218**	Pn			**Pn**	**16 33 08.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.79**	**211**	Pn			**Pn**	**16 33 11.0**	**-0.4**
DR12	**Loma Pena Alta**	**3.21**	**258**	Pn			**Pn**	**16 33 30.3**	**-0.8**
BANI	**BANI**	**4.21**	**255**	Pn			**Pn**	**16 33 44.8**	**-0.1**
SDDR	**Presa de Saban**	**4.96**	**265**				**Pn**	**16 33 55.5**	**+0.4**

*JMA **20** 16:35:21.6±0.2, 23.°90N×122.°54E, h27km±5km, M2.5*
*TAP **20** 16:35:22.2, 23.°96N×122.°57E, h40km, ML3.0, D*
ISC 20 16:35:20.0±1.0, 23.°91N±0.°02×122.°56E±0.°02, h16km±9km, n91, σ0.°58/152, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.65**	**33**		P		**Pn**	**16 35 34.2**	**-0.4**
JYNG					*eS*		**Sb**	**16 35 42.7**	**+0.9**
YOJ	**Yonaguni jima**	**0.69**	**36**		P		**Pn**	**16 35 35.0**	**-0.2**
YOJ					*eS*		**Sb**	**16 35 43.8**	**+0.8**
YOJ	**Yonaguni jima**	**0.69**	**36**		P		**Pn**	**16 35 35.0**	**-0.2**
	baz=45								
YOJ					*eS*		**Sb**	**16 35 43.9**	**+0.9**
	baz=45								
HWA	**Hwalien**	**0.88**	**275**		*eP*		**Pn**	**16 35 37.9**	**+0.2**
	baz=260								
EWUT	**Wuta**	**0.90**	**307**		*eP*		**Pn**	**16 35 38.4**	**+0.3**
	baz=304								
EWUT					S		**Sn**	**16 35 50.0**	**-0.7**
	baz=304								
TWD	**Chiawan**	**0.90**	**281**		*eP*		**Pn**	**16 35 38.6**	**+0.5**
	baz=278								
NACB	**Ninganchiao**	**0.93**	**287**		P		**Pn**	**16 35 38.3**	**-0.1**
	baz=271								
NACB					S		**Sb**	**16 35 49.6**	**-0.2**
	baz=271								
TWC	**Suao**	**0.96**	**317**		P		**Pn**	**16 35 38.8**	**-0.1**
	baz=305								
TWC					*i* S		**Sg**	**16 35 51.3**	**+0.1**
	baz=305								
ETLH	**Xiulin Townshi**	**1.03**	**287**		P		**Pn**	**16 35 40.3**	**+0.3**
	baz=274								
ETLH					*eS*		**Sb**	**16 35 53.1**	**+0.1**
	baz=274								
ESL	**Shilin**	**1.04**	**265**		*eP*		**Pb**	**16 35 39.8**	**+0.1**
	baz=261								
ESL					*eS*		**Sb**	**16 35 52.7**	**-0.3**
	baz=261								
NDS	**Dongshan**	**1.06**	**313**		P		**Pg**	**16 35 40.8**	**+0.3**
	baz=311								
NDS					*eS*		**Sn**	**16 35 54.4**	**-0.3**
	baz=311								
EGFH	**Guangfu**	**1.07**	**258**		P		**Pn**	**16 35 40.5**	**+0.2**
	baz=243								
EGFH					S		**Sg**	**16 35 54.6**	**-0.1**
	baz=243								
HGSD	**Ruisui**	**1.12**	**249**		P		**Pb**	**16 35 41.1**	**0.0**
	baz=245								
HGSD					S		**Sb**	**16 35 55.5**	**0.0**
	baz=245								
ILA	**Ilan**	**1.14**	**319**		*eP*		**Pg**	**16 35 41.6**	**-0.4**
	baz=317								
HATJ	**Hateruma jima**	**1.15**	**82**		P		**Pg**	**16 35 42.5**	**+0.3**
HATJ					*eS*		**Sg**	**16 35 58.0**	**+0.9**
IRIF	**Iriomote-Funau**	**1.15**	**68**		P		**Pg**	**16 35 42.4**	**+0.2**
IRIF					S		**Sn**	**16 35 56.8**	**-0.1**
TWE	**Neicheng**	**1.15**	**315**		*i* P		**Pg**	**16 35 42.1**	**-0.2**
	baz=313								
TWE					S		**Sn**	**16 35 56.7**	**-0.3**
	baz=313								
NTC	**Toucheng**	**1.16**	**325**		*eP*		**Pg**	**16 35 42.3**	**-0.1**
	baz=323								
NTC					*eS*		**Sg**	**16 35 57.8**	**+0.3**
	baz=323								
ENTT	**Nioudou**	**1.17**	**309**		P		**Pg**	**16 35 42.9**	**+0.3**
	baz=294								
ENTT					S		**Sn**	**16 35 57.3**	**-0.1**
	baz=294								
NDT	**Datong Townshi**	**1.18**	**306**		*eP*		**Pg**	**16 35 43.1**	**+0.2**
	baz=293								
NDT					S		**Sg**	**16 35 58.1**	**-0.3**
	baz=293								
NNSB	**Datong**	**1.20**	**296**		P		**Pn**	**16 35 42.3**	**0.0**
	baz=284								
NNSB					S		**Sb**	**16 35 58.0**	**+0.2**
	baz=284								
NNSH	**Datong**	**1.20**	**296**		*eP*		**Pg**	**16 35 43.1**	**-0.1**
	baz=284								
NNSH					S		**Sb**	**16 35 58.0**	**+0.2**
	baz=284								
NNS	**Nan Shan**	**1.21**	**296**		P		**Pb**	**16 35 42.9**	**+0.2**
	baz=284								
NNS					S		**Sb**	**16 35 58.2**	**0.0**
	baz=284								
WHF	**Hehuan Shan**	**1.21**	**282**		P		**Pb**	**16 35 43.2**	**+0.3**
	baz=278								
WHF					S		**Sb**	**16 35 57.9**	**-0.6**
	baz=278								
TWB1	**Santiao Chiao**	**1.22**	**335**		P		**Pb**	**16 35 42.5**	**-0.2**
	baz=346								
TWB1					S		**Sb**	**16 35 57.8**	**-0.5**
	baz=346								
FUSS	**Fushou**	**1.25**	**286**		P		**Pg**	**16 35 44.1**	**-0.1**
	baz=283								
FUSS					*eS*		**Sb**	**16 35 59.2**	**-0.3**
	baz=283								
TIPB	**Shuangxi**	**1.26**	**328**		P		**Pb**	**16 35 43.3**	**-0.1**
	baz=326								
TIPB					*eS*		**Sn**	**16 35 59.4**	**-0.3**
	baz=326								
YULB	**Yu-li**	**1.27**	**247**		P		**Pn**	**16 35 43.5**	**+0.4**
	baz=234								
YULB					S		**Sb**	**16 35 59.2**	**-0.5**
	baz=234								
EYUL	**Yuli**	**1.27**	**244**		P		**Pb**	**16 35 43.9**	**+0.3**
	baz=241								
EYUL					S		**Sn**	**16 36 00.2**	**+0.3**
	baz=241								
OWD	**Renai**	**1.27**	**273**		P		**Pb**	**16 35 43.9**	**+0.2**
	baz=269								
OWD					S		**Sb**	**16 35 59.0**	**-0.9**
	baz=269								
CHGB	**Renai**	**1.28**	**277**		P		**Pb**	**16 35 44.1**	**+0.2**
	baz=274								
CHGB					S		**Sb**	**16 36 00.0**	**-0.2**
	baz=274								
NWLT	**Wulai**	**1.30**	**312**		*eP*		**Pb**	**16 35 44.3**	**+0.2**
	baz=310								
NWLT					*eS*		**Sn**	**16 36 01.0**	**+0.3**
	baz=310								
VWDT	**VWDT**	**1.31**	**264**		P		**Pb**	**16 35 44.3**	**0.0**
	baz=260								
VWDT					S		**Sb**	**16 36 00.6**	**-0.3**
	baz=260								
TWT	**Tachien**	**1.31**	**286**		P		**Pg**	**16 35 45.2**	**-0.3**
	baz=272								
TWT					S		**Sg**	**16 36 02.0**	**-0.6**
	baz=272								
YHNB	**Yeheng**	**1.32**	**305**		P		**Pb**	**16 35 44.8**	**+0.2**
	baz=303								
YHNB					*eS*		**Sn**	**16 36 01.4**	**0.0**
	baz=303								
TDCB	**Techi**	**1.33**	**285**		*eP*		**Pb**	**16 35 44.8**	**0.0**
	baz=273								
TDCB					*eS*		**Sn**	**16 36 01.8**	**+0.2**
	baz=273								
CHKT	**Chengkung**	**1.36**	**234**		P		**Pn**	**16 35 43.7**	**-0.7**
	baz=223								
CHKT					S		**Sn**	**16 36 00.0**	**-2.1**
	baz=223								
FULB	**Fuli**	**1.36**	**239**		P		**Pn**	**16 35 44.4**	**0.0**
	baz=228								
FULB					S		**Sb**	**16 36 03.1**	**+0.7**
	baz=228								
JKRS	**Kuro-shima**	**1.36**	**76**		P		**Pg**	**16 35 46.1**	**-0.2**
JKRS					*eS*		**Sg**	**16 36 03.5**	**-0.5**
WFSB	**Wu-fen Shan**	**1.36**	**329**		*eP*		**Pb**	**16 35 44.8**	**-0.4**
	baz=327								
TWA	**Mucha**	**1.40**	**320**		P		**Pb**	**16 35 45.2**	**-0.5**
	baz=334								
TWA					S		**Sb**	**16 36 03.1**	**-0.2**
	baz=334								
WPL	**Puli Township**	**1.47**	**274**		*eP*		**Pb**	**16 35 47.0**	**-0.1**
	baz=272								
SSLB	**Suanglung**	**1.48**	**266**		*eP*		**Pn**	**16 35 46.8**	**+0.7**
	baz=263								
EDH	**Donghe**	**1.48**	**232**		*eP*		**Pn**	**16 35 46.0**	**-0.1**
	baz=222								
EDH					S		**Sn**	**16 36 03.9**	**-1.3**
	baz=222								
DPDB	**Guoxing**	**1.50**	**275**		P		**Pb**	**16 35 47.4**	**-0.2**
	baz=273								
JIJ	**Ishigaki jima**	**1.51**	**72**		P		**Pb**	**16 35 47.3**	**-0.5**
JIJ					*eS*		**Sb**	**16 36 06.8**	**+0.1**
SMLT	**Sun Moon Lake**	**1.52**	**270**		P		**Pb**	**16 35 47.8**	**-0.2**
	baz=266								
SMLT					S		**Sn**	**16 36 06.1**	**-0.2**
	baz=266								
WHP	**Taichung City**	**1.52**	**284**		*eP*		**Pg**	**16 35 49.0**	**-0.4**
	baz=282								
WHP					S		**Sb**	**16 36 07.7**	**+0.6**
	baz=282								
YM01	**YM01**	**1.53**	**324**		*eP*		**Pn**	**16 35 47.0**	**+0.2**
	baz=322								
YM10	**YM10**	**1.54**	**324**		*eP*		**Pb**	**16 35 47.9**	**-0.4**
	baz=322								
YM10					*eS*		**Sn**	**16 36 05.8**	**-1.0**
	baz=322								
YM11	**YM11**	**1.55**	**325**		*eP*		**Pn**	**16 35 47.5**	**+0.4**
	baz=323								
YM08	**YM08**	**1.56**	**325**		*eP*		**Pn**	**16 35 47.2**	**+0.1**
	baz=324								
YM04	**YM04**	**1.56**	**323**		*eP*		**Pb**	**16 35 48.2**	**-0.3**
	baz=322								
TYC	**Yuchr**	**1.56**	**270**		P		**Pb**	**16 35 48.2**	**-0.4**
	baz=268								
YM03	**YM03**	**1.57**	**324**		*eP*		**Pn**	**16 35 47.7**	**+0.3**
	baz=322								
YM03					*eS*		**Sn**	**16 36 06.2**	**-1.3**
	baz=322								
NJD	**Zhudong**	**1.58**	**302**		*eP*		**Pn**	**16 35 47.8**	**+0.3**
	baz=300								
WHYT	**Xinyi Township**	**1.58**	**263**		P		**Pb**	**16 35 48.8**	**-0.1**
	baz=260								
LDUT	**Ludao**	**1.59**	**220**		*eP*		**Pn**	**16 35 47.2**	**-0.3**
	baz=217								
LDUT					*eS*		**Sn**	**16 36 06.1**	**-1.6**
	baz=217								
LIOB	**Emei**	**1.59**	**298**		P		**Pb**	**16 35 49.6**	**+0.5**
	baz=296								
LIOB					S		**Sb**	**16 36 09.1**	**+0.1**
	baz=296								
NSTT	**Nanjuang**	**1.60**	**297**		S		**Sb**	**16 36 08.9**	**-0.3**
	baz=295								
LONT	**Longtian**	**1.65**	**233**		*eP*		**Pn**	**16 35 48.8**	**+0.4**
	baz=225								
LONT					*eS*		**Sn**	**16 36 08.9**	**-0.3**
	baz=225								
ALS	**Alishan**	**1.66**	**257**		*i* P		**Pb**	**16 35 50.3**	**-0.1**
	baz=253								
ALS					S		**Sn**	**16 36 10.7**	**+0.8**
	baz=253								
WJS	**Zhushan**	**1.68**	**268**		*eP*		**Pb**	**16 35 51.2**	**+0.6**
	baz=264								
WJS					*eS*		**Sb**	**16 36 12.8**	**+1.2**
	baz=264								
TWQ1	**Liyutan**	**1.69**	**285**		S		**Sb**	**16 36 12.2**	**+0.2**
	baz=283								
WWF	**Wufe

SSD	**Sandimen**	**2.12**	**237**	*eP*	**Pb**	**16 35 57.4**	**-0.7**
	baz=229						
TSMG	**Majia**	**2.13**	**236**	*eP*	**Pb**	**16 35 57.7**	**-0.6**
	baz=228						
SCST	**Cishan**	**2.15**	**242**	*eP*	**Pb**	**16 35 59.2**	**+0.5**
	baz=240						
EAST	**Anshuo**	**2.19**	**227**	*eP*	**Pn**	**16 35 56.3**	**+0.5**
	baz=233						
MASBT	**Mashibuluo**	**2.19**	**234**	*eP*	**Pn**	**16 35 57.4**	**+1.5**
	baz=226						
WDGT	**Dungji**	**2.74**	**257**	*eP*	**Pn**	**16 36 05.3**	**+1.9**
	baz=254						

IDC ***20*** *16:40:18.0±3.2,14.˝27N×145.˝51E,h107km±28km, mb4.2/23,mb1 4.3/23,mb1mx4.2/33,mbtmp4.5/23,MS2.5/1, Ms1 2.5/1,ms1mx2.3/41,Error ellipse: s-maj=19.4km s-min=11.4km az=91.0*

BJI ***20*** *16:40:18.5±0.0,14.˝35N×145.˝49E,h124km,mB4.9/31, mb5.0/54*

DJA ***20*** *16:40:19.4±0.5,14.˚N±5.˚×14.˚5E±.˚,h111km±3km,M4.7/10, mb4.8/10,mB5.5/2,MLv4.6/1,Mw(mB)4.9/2,MwMwp5.6/1, Mwp5.7/1*

NEIC ***20*** *16:40:19.2±1.2,14.˝22N±0.˝06×145.˝3E±0.˝1,h119km±5km, mb4.8/154,Error ellipse: s-maj=14.6km s-min=8.8km az=85.0*

ISC 20 16:40:18.5±0.3,**14˝28N**±0˝.04×**145˝34E**±0˝.07,**h109**km, **n222**,σ1°**12**/216,**mb4.8**/114,**1C-1D**,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.82**	**214**		**Pn**	**16 40 39.5**	**+1.6**
GUMO				Sn	**Sn**	**16 40 53.5**	**+1.0**
AN2	**Anatahan**	**2.09**	**10**	**Pn**	**Pn**	**16 40 55.9**	**+3.3**
PATS	**Pohnpei**	**14.74**	**119**	**Pn**	**Pn**	**16 43 41.9**	**+0.2**
JAY	**Jayapura**	**17.30**	**196**	P	**Pn**	**16 44 18.9**	**+5.4**
	1.2nm,0.3s,baz=197,slow=2.9,SNR=5.9						
GENI	**Genyem**	**17.52**	**197**	P	**P**	**16 44 14.3**	**-1.4**
	39nm,0.9s						
WAMI	**Wamena**	**19.20**	**200**	P	**P**	**16 44 34.3**	**+0.3**
JOW	**Kunigami**	**20.25**	**311**		Pn	16 44 47.9	-0.4
JOW				IAmb	IAmb	16 44 51.9	
	comp=Z,74nm,1.0s						
H11S3	**WAKE ISLAND Hy**	**20.90**	**76**	T	T	17 06 28.8	
	baz=258,slow=74						
H11S1	**WAKE ISLAND Hy**	**20.92**	**76**	T	T	17 07 05.0	
	baz=258						
H11S2	**WAKE ISLAND Hy**	**20.92**	**76**	T	T	17 06 29.9	
	baz=258,slow=74						
H11N1	**WAKE ISLAND Hy**	**21.30**	**72**	T	T	17 08 05.7	
	baz=257,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**21.31**	**72**	T	T	17 08 04.8	
	baz=257,slow=75,SNR=7.3						
H11N3	**WAKE ISLAND Hy**	**21.32**	**72**	T	T	17 07 43.1	
	baz=257,slow=75,SNR=17						
FAKI	**Fak Fak**	**21.45**	**218**	P	**P**	**16 44 57.0**	**-1.3**
JSU	**Suzuyama**	**21.91**	**324**	P	**P**	**16 45 02.9**	**-0.2**
JSU				IAmb	IAmb	16 45 17.9	
	comp=Z,76nm,1.4s						
JMN	**Monobe**	**21.98**	**334**	P	**P**	**16 45 04.7**	**+0.9**
JMN				IAmb	IAmb	16 45 11.2	
	comp=Z,66nm,1.3s						
JWT	**Wachi**	**22.75**	**339**	P	**P**	**16 45 12.3**	**+0.7**
JNU	**Nakatsue**	**22.91**	**327**	P	**P**	**16 45 14.2**	**+1.0**
	comp=Z,14nm,0.5s,baz=108,slow=2.7,SNR=12						
JNU	**Nakatsue**	**22.91**	**327**	P	**P**	**16 45 14.1**	**+0.8**
JNU				IAmb	IAmb	16 45 17.3	
	comp=Z,23nm,0.6s						
MJAR	**Matsushiro Arr**	**23.07**	**345**	P	**P**	**16 45 14.5**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=236,slow=11,SNR=8.9						
MJAR				LR	LR	16 53 34.8	
	comp=Z,13nm,21.4s,baz=230,slow=34						
MJAR	**Matsushiro Arr**	**23.07**	**345**	IAmb	IAmb	16 45 18.5	
	comp=Z,5.9nm,1.2s						
MAJO	**Matsushiro**	**23.07**	**345**	P	**P**	**16 45 14.3**	**-0.5**
MAT	**Matsushiro**	**23.07**	**345**	P	**P**	**16 45 14.2**	**-0.5**
JHS	**Saijyo**	**23.39**	**334**	P	**P**	**16 45 18.0**	**+0.3**
JHS				IAmb	IAmb	16 45 19.1	
	comp=Z,21nm,0.8s						
PMG	**Port Moresby**	**23.60**	**176**	P	**P**	**16 45 18.5**	**-1.1**
PMG				IAmb	IAmb	16 45 20.3	
	comp=Z,32nm,1.1s						
JMM	**Marumori**	**23.84**	**351**	P	**P**	**16 45 21.7**	**0.0**
JMM				IAmb	IAmb	16 45 47.8	
	comp=Z,84nm,1.4s						
NACB	**Ninganchiao**	**24.45**	**297**	P	**P**	**16 45 27.5**	**+0.1**
NACB				IAmb	IAmb	16 45 50.9	
	comp=Z,22nm,0.9s						
YULB	**Yu-li**	**24.46**	**295**	P	**P**	**16 45 28.9**	**+1.4**
YULB				IAmb	IAmb	16 45 29.8	
	comp=Z,30nm,0.8s						
TWG	**Pinlang**	**24.50**	**294**	P	**P**	**16 45 27.5**	**-0.3**
TWG				IAmb	IAmb	16 45 43.4	
	comp=Z,46nm,1.3s						
JTU	**Tsushima**	**24.78**	**327**	P	**P**	**16 45 31.9**	**+1.8**
YHNB	**Yeheng**	**24.80**	**298**	P	**P**	**16 45 32.3**	**+1.6**
YHNB				IAmb	IAmb	16 45 58.6	
	comp=Z,76nm,1.4s						
SSLB	**Suanglung**	**24.88**	**296**	P	**P**	**16 45 31.8**	**+0.5**
SSLB				IAmb	IAmb	16 45 35.5	
	comp=Z,23nm,0.7s						
TPUB	**Ta-pu**	**25.02**	**295**	IAmb	IAmb	16 45 41.5	
	comp=Z,36nm,1.1s						
KNMB	**Chin-men Tao**	**27.32**	**296**	P	**P**	**16 45 53.9**	**+0.6**
KSRS	**Korea Array**	**27.80**	**329**	P	**P**	**16 45 57.8**	**+0.4**
	comp=Z,7.9nm,0.6s,baz=148,slow=9.0,SNR=39						
KSAR	**Wonju Array Be**	**27.81**	**329**	P	**P**	**16 45 57.6**	**+0.2**
KS19	**Wonju Array Si**	**27.87**	**329**	P	**P**	**16 45 58.0**	**0.0**
KS19				IAmb	IAmb	16 46 13.7	
	comp=Z,28nm,1.4s						
COEN	**Coen**	**28.13**	**184**	P	**P**	**16 45 59.8**	**-0.7**
COEN				IAmb	IAmb	16 46 12.3	
	comp=Z,24nm,1.5s						
JKA	**Kamikawa-asahi**	**29.83**	**356**	P	**P**	**16 46 16.1**	**+0.7**
JKA				IAmb	IAmb	16 46 25.8	
	comp=Z,25nm,1.2s						
NJ2	**Nanjing**	**29.97**	**311**	*eP*	**P**	**16 46 16.8**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MTN	**Manton Dam**	**30.40**	**208**	P	**P**	**16 46 19.9**	**-0.7**
MTN				IAmb	IAmb	16 46 44.2	
	comp=Z,34nm,1.2s						
USA0B	**Ussuriysk Arra**	**31.93**	**342**	P	**P**	**16 46 33.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**31.93**	**342**	P	**P**	**16 46 34.0**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=142,slow=8.9,SNR=11						
USRK	**Ussuriysk Ar.**	**31.93**	**342**	P	**P**	**16 46 33.9**	**+0.1**
KNRA	**Kununurra**	**33.97**	**209**	P	**P**	**16 46 51.5**	**-0.4**
CTAO	**Charters Tower**	**34.16**	**178**	P	**P**	**16 46 53.4**	**0.0**
WB0	**Warramunga Arr**	**35.50**	**198**	P	**P**	**16 47 04.4**	**-0.6**
WB0				IAmb	IAmb	16 47 05.3	
	comp=Z,11nm,0.6s						
WR0	**Warramunga Arr**	**35.64**	**198**	P	**P**	**16 47 05.6**	**-0.6**
WR0				IAmb	IAmb	16 47 06.3	
	comp=Z,7.9nm,0.6s						
WB2	**Warramunga Arr**	**35.68**	**198**	P	**P**	**16 47 06.2**	**-0.3**
WB2				IAmb	IAmb	16 47 07.2	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**35.68**	**198**	P	**P**	**16 47 06.3**	**-0.2**
	comp=Z,10nm,0.7s,baz=22,slow=9.6,SNR=51						
WRA	**Warramunga Arr**	**35.68**	**198**	P	**P**	**16 47 04.3**	**-2.3**
BJI	**Beijing**	**36.20**	**321**	P	**P**	**16 47 12.6**	**+1.9**
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
BJI				pmax	pmax		
	comp=Z,120nm,4.5s						
ENH	**Enshi**	**36.61**	**302**	P	**P**	**16 47 15.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**37.58**	**212**	P	**P**	**16 47 22.8**	**+0.2**
FITZ				IAmb	IAmb	16 47 42.7	
	comp=Z,18nm,1.4s						
GYA	**Guiyang**	**38.08**	**295**	⇓P	**P**	**16 47 29.4**	**+2.3**
GYA				pmax	pmax		
	comp=Z,15nm,0.8s						
XAN	**Xi'an**	**38.34**	**307**	⇑P	**P**	**16 47 29.8**	**+0.8**
XAN				pmax	pmax		
	comp=Z,39nm,0.7s						
XAN				pmax	pmax		
	comp=Z,170nm,5.1s						
XAN	**Xi'an**	**38.34**	**307**	P	**P**	**16 47 30.1**	**+1.1**
AS31	**Alice Springs**	**39.33**	**197**	P	**P**	**16 47 37.0**	**-0.3**
ASAR	**Alice Springs**	**39.33**	**197**	P	**P**	**16 47 37.0**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=22,slow=10,SNR=49						
ASAR				ScP	**ScP**	**16 53 22.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=21,slow=3.6,SNR=8.1						
ASAR	**Alice Springs**	**39.33**	**197**	P	**P**	**16 47 36.8**	**-0.6**

HHC	**Hu-ho-hao-te**	**39.56**	**319**	*eP*	**P**	**16 47 40.3**	**+1.2**
HHC				S	**S**	**16 53 33.3**	**-0.5**
HHC				SS	**SS**	**16 56 23.4**	**-9.5**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,52nm,4.4s						
HHC				LR	LR		
	comp=Z,130nm,13.6s						
HHC				LR	LR		
	comp=Z,140nm,13.6s						
HHC				LR	LR		
	comp=Z,140nm,12.8s						
EIDS	**Eidsvold**	**39.80**	**172**	P	**P**	**16 47 40.3**	**-0.8**
EIDS				IAmb	IAmb	16 47 42.5	
	comp=Z,34nm,1.4s						
PEA0B	**Petropavlovsk-**	**39.96**	**12**	P	**P**	**16 47 41.9**	**-0.3**
PEA0B				IAmb	IAmb	16 47 56.0	
	comp=Z,21nm,1.2s						
PETK	**Petropavlovsk-**	**39.96**	**12**	P	**P**	**16 47 42.0**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=160,slow=7.2,SNR=13						
PET	**Petropavlovsk**	**40.08**	**12**	P	**P**	**16 47 42.8**	**-0.3**
PET				IAmb	IAmb	16 47 45.4	
	comp=Z,22nm,1.2s						
HIA	**Hailar**	**40.72**	**334**	P	**P**	**16 47 49.3**	**+0.8**
HIA				IAmb	IAmb	16 47 50.4	
	comp=Z,19nm,1.0s						
CD2	**Chengdu**	**41.53**	**301**	P	**P**	**16 47 56.3**	**+0.8**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
DZM	**Mont Dzumac**	**41.63**	**150**		**P**	**16 47 57.4**	**+1.0**
LZH	**Lanzhou**	**42.95**	**308**	*eP*	**P**	**16 48 08.9**	**+1.8**
LZH				pP	pwP	16 48 37.9	+2.6
LZH				sP	sP	16 48 54.4	+11
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
CM31	**Chiang Mai Arr**	**44.62**	**282**	P	**P**	**16 48 20.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**44.62**	**282**	P	**P**	**16 48 21.9**	**+1.4**
	comp=Z,3.1nm,0.5s,baz=77,slow=6.9,SNR=34						
CMAR	**Chiang Mai Arr**	**44.62**	**282**	P	**P**	**16 48 20.7**	**+0.2**
SMY	**Shemya**	**44.65**	**25**	P	**P**	**16 48 21.1**	**+1.0**
MA2	**Magadan**	**45.40**	**4**	P	**P**	**16 48 25.0**	**-1.1**
MA2				IAmb	IAmb	16 48 26.4	
	comp=Z,20nm,0.7s						
AMKA	**Amchitka**	**45.98**	**29**	P	**P**	**16 48 31.2**	**+0.5**
STKA	**Stephens Creek**	**46.03**	**184**	P	**P**	**16 48 30.7**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=7.0,slow=8.6,SNR=10						
STKA	**Stephens Creek**	**46.03**	**184**	P	**P**	**16 48 30.7**	**-0.6**
ULN	**Ulaanbaatar**	**46.09**	**325**	P	**P**	**16 48 31.9**	**+0.2**
SONM	**Songino Array**	**46.44**	**324**	P	**P**	**16 48 35.6**	**+1.1**
	comp=Z,4.4nm,0.5s,baz=137,slow=8.4,SNR=16						
SONM	**Songino Array**	**46.44**	**324**	P	**P**	**16 48 34.9**	**+0.4**
GTA	**Gaotai**	**47.06**	**311**	P	**P**	**16 48 40.8**	**+1.2**
GTA				pP	pwP	16 49 06.4	-1.3
GTA				sP	sP	16 49 19.5	+3.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BBOO	**Buckleboo**	**47.65**	**191**	P	**P**	**16 48 43.5**	**-0.4**
BBOO				IAmb	IAmb	16 48 44.5	
	comp=Z,16nm,0.9s						
FORT	**Forrest**	**47.78**	**200**	P	**P**	**16 48 45.0**	**+0.1**
ADK	**Adak**	**48.24**	**31**	P	**P**	**16 48 48.7**	**+0.5**
GSI	**Gunungsitoli**	**48.92**	**259**	P	**P**	**16 48 51.9**	**-2.1**
GSI				IAmb	IAmb	16 48 52.6	
	comp=Z,9.1nm,0.9s						
YAK	**Yakutsk**	**48.99**	**350**	P	**P**	**16 48 52.6**	**-1.2**
YAK				IAmb	IAmb	16 48 53.9	
	comp=Z,17nm,1.0s						
CAN	**Canberra**	**49.45**	**176**	P	**P**	**16 48 56.3**	**-1.4**
ATKA	**Atka Island**	**49.68**	**32**	P	**P**	**16 48 59.3**	**+0.1**
TLY	**Talaya**	**50.02**	**327**	P	**P**	**16 49 02.2**	**+0.3**
TLY				IAmb	IAmb	16 49 03.8	
	comp=Z,11nm,0.8s						
MORW	**Morawa**	**51.56**	**213**	P	**P**	**16 49 12.7**	**-0.9**
MORW				IAmb	IAmb	16 49 14.0	
	comp=Z,20nm,1.4s						
TOO	**Toolangi**	**51.57**	**180**	P	**P**	**16 49 14.7**	**+1.1**
TOO				IAmb	IAmb	16 49 15.4	
	comp=Z,7.0nm,0.8s						
LSA	**Lhasa**	**52.09**	**297**	P	**P**	**16 49 17.5**	**-0.8**
LSA				IAmb	IAmb	16 49 20.9	
	comp=Z,12nm,0.6s						
NWAO	**Narrogin (SRO)**	**54.08**	**209**	P	**P**	**16 49 30.9**	**-1.2**
NWAO				IAmb	IAmb	16 49 46.9	
	comp=Z,21nm,1.4s						
SPIA	**Saint Paul Isl**	**54.36**	**28**	P	**P**	**16 49 34.1**	**+0.3**
TAPN	**Taplejung**	**54.99**	**293**	*eP*	**P**	**16 49 39.8**	**+0.5**
	comp=Z,9.6nm,0.5s						
ODAN	**Odare**	**55.27**	**293**	*eP*	**P**	**16 49 41.4**	**+0.2**
	comp=Z,28nm,1.2s						
BILL	**Bilibino**	**55.41**	**9**	P	**P**	**16 49 40.4**	**-0.8**
RAMN	**Ramite**	**55.97**	**293**	*eP*	**P**	**16 49 46.5**	**+0.2**
	comp=Z,8.5nm,0.6s						
JIRN	**Jiri**	**56.35**	**294**	*eP*	**P**	**16 49 49.6**	**+0.5**
	comp=Z,12nm,0.4s						
GUN	**Gumba**	**56.63**	**294**	*eP*	**P**	**16 49 51.4**	**+0.4**
	comp=Z,18nm,0.5s						
WMQ	**Urumqi**	**57.00**	**313**	*eP*	**P**	**16 49 54.8**	**+1.8**
WMQ				sP	sP	16 50 35.4	+4.9
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
PKI	**Pulchoki**	**57.04**	**294**	*eP*	**P**	**16 49 53.7**	**-0.2**
	comp=Z,5.2nm,0.4s						
PKIN	**Phulchoki**	**57.05**	**294**	*eP*	**P**	**16 49 53.8**	**-0.1**
	comp=Z,5.8nm,0.3s						
DMN	**Daman**	**57.31**	**294**	*eP*	**P**	**16 49 55.8**	**+0.1**
	comp=Z,9.2nm,0.4s						
GAMB	**Gambell**	**57.67**	**21**	P	**P**	**16 49 56.6**	**-0.7**
GAMB				IAmb	IAmb	16 49 58.1	
	comp=Z,5.9nm,0.8s						
GKN	**Gorkha**	**57.73**	**294**	*eP*	**P**	**16 49 58.6**	**+0.1**
	comp=Z,26nm,0.8s						
TIXI	**Tiksi**	**58.20**	**354**	P	**P**	**16 49 59.5**	**-1.4**
KOLN	**Koldanda**	**58.64**	**294**	*eP*	**P**	**16 50 05.1**	**+0.1**
	comp=Z,18nm,0.8s						
URZ	**Urewera**	**60.15**	**151**	P	**P**	**16 50 14.6**	**-0.2**
URZ				IAmb	IAmb	16 50 27.6	
	comp=Z,15nm,1.2s						
ANM	**Nome**	**60.39**	**22**	P	**P**	**16 50 15.8**	**-0.3**
ANM				IAmb	IAmb	16 50 32.0	
	comp=Z,12nm,1.1s						
BKZ	**Black Stump Fm**	**60.60**	**153**	P	**P**	**16 50 17.3**	**-0.6**
MK31	**Makanchi Array**	**61.32**	**316**	P	**P**	**16 50 23.2**	**+0.5**
MK31				IAmb	IAmb	16 50 24.3	
	comp=Z,8.9nm,1.1s						
MKAR	**Makanchi Array**	**61.32**	**316**	P	**P**	**16 50 23.4**	**+0.7**
	comp=Z,6.1nm,0.4s,baz=91,slow=8.6,SNR=155						
MKAR	**Makanchi Array**	**61.32**	**316**	P	**P**	**16 50 23.0**	**+0.3**
ZAA0	**Zalesovo Array**	**61.34**	**324**	P	**P**	**16 50 22.4**	**-0.2**
ZAA0				IAmb	IAmb	16 50 24.2	
	comp=Z,5.1nm,0.7s						
ZALV	**Zalesovo Beam**	**61.34**	**324**	P	**P**	**16 50 22.6**	**0.0**
	comp=Z,4.4nm,0.5s,baz=106,slow=7.4,SNR=22						
TUWZ	**Tuamarina**	**61.41**	**156**	P	**P**	**16 50 22.3**	**-0.9**
MAKZ	**Makanchi**	**61.53**	**316**	P	**P**	**16 50 24.2**	**+0.1**
SNZO	**South Karori**	**61.62**	**155**	P	**P**	**16 50 23.9**	**-0.6**
LTZ	**Lake Taylor**	**61.93**	**158**	P	**P**	**16 50 26.3**	**-0.5**
LTZ				IAmb	IAmb	16 50 38.9	
	comp=Z,20nm,1.5s						
KHZ	**Kahutara**	**62.09**	**157**	P	**P**	**16 50 27.1**	**-0.6**
KHZ				IAmb	IAmb	16 50 44.8	
	comp=Z,21nm,1.2s						
RSO	**Redoubt South**	**63.96**	**29**	P	**P**	**16 50 39.9**	**-0.3**
CNPM	**China Poot**	**64.41**	**30**	P	**P**	**16 50 42.7**	**-0.2**
BRLK	**Bradley Lake**	**64.65**	**30**	P	**P**	**16 50 43.8**	**-0.7**
PPLA	**Purkeypile**	**64.97**	**27**	P	**P**	**16 50 46.6**	**0.0**
PPLA				IAmb	IAmb	16 50 48.6	
	comp=Z,13nm,1.0s						
SKT	**Skwentna**	**64.98**	**28**	P	**P**	**16 50 45.9**	**-0.7**
SKT				IAmb	IAmb	16 50 46.6	
	comp=Z,22nm,1.4s						
SUA	**Susitna One**	**65.19**	**28**	P	**P**	**16 50 47.8**	**-0.3**
SUA				IAmb	IAmb	16 50 48.8	
	comp=Z,13nm,0.9s						
O22K	**Cooper Landing**	**65.40**	**30**	P	**P**	**16 50 50.1**	**+0.8**
RC01	**Rabbit Creek A**	**65.56**	**29**	P	**P**	**16 50 49.4**	**-1.0**
NRIK	**Noril'sk**	**65.64**	**341**	P	**P**	**16 50 50.6**	**-0.1**
	comp=Z,9.0nm,0.6s,baz=111,slow=8.0,SNR=24						
NRIK	**Noril'sk**	**65.64**	**341**	P	**P**	**16 50 48.8**	**-1.9**
NRIK				IAmb	IAmb	16 50 51.2	
	comp=Z,12nm,0.7s						
CUT	**Chulitna**	**65.67**	**27**	P	**P**	**16 50 50.0**	**-1.0**
KTH	**Kantishna Hill**	**65.72**	**26**	P	**P**	**16 50 50.8**	**-0.6**

KTH				IAmb	IAmb	16 50 51.8	
	comp=Z,15nm,1.1s						
BPAW	**Bear Paw Mtn.**	**65.86**	**26**	P	**P**	**16 50 51.8**	**-0.5**
BPAW				IAmb	IAmb	16 50 53.8	
	comp=Z,14nm,1.3s						
TRF	**Thorofare Moun**	**65.96**	**26**	P	**P**	**16 50 52.2**	**-0.9**
TRF				IAmb	IAmb	16 50 53.2	
	comp=Z,4.3nm,0.5s						
PMR	**Palmer**	**65.97**	**28**	P	**P**	**16 50 52.6**	**-0.3**
PMR				IAmb	IAmb	16 51 14.6	
	comp=Z,16nm,1.1s						
GHO	**Glory Hole Cre**	**66.11**	**28**	P	**P**	**16 50 53.2**	**-0.8**
PWL	**Port Wells**	**66.16**	**29**	P	**P**	**16 50 54.0**	**-0.3**
KNK	**Knik Glacier**	**66.24**	**29**	P	**P**	**16 50 54.4**	**-0.3**
MLY	**Manley**	**66.25**	**25**	P	**P**	**16 50 54.5**	**-0.2**
MLY				IAmb	IAmb	16 50 56.2	
	comp=Z,12nm,1.4s						
AAK	**Ala-Archa**	**66.41**	**310**	P	**P**	**16 50 56.1**	**-0.3**
BWN	**Browne**	**66.52**	**26**	P	**P**	**16 50 55.8**	**-0.6**
BWN				IAmb	IAmb	16 50 57.1	
	comp=Z,26nm,1.2s						
RND	**Reindeer**	**66.57**	**27**	P	**P**	**16 50 56.1**	**-0.8**
RND				IAmb	IAmb	16 50 57.4	
	comp=Z,14nm,1.2s						
A21K	**Barrow**	**66.59**	**17**	P	**P**	**16 50 56.0**	**-0.7**
MCK	**McKinley**	**66.62**	**26**	P	**P**	**16 50 56.8**	**-0.4**
MCK				IAmb	IAmb	16 51 17.1	
	comp=Z,13nm,1.5s						
GLI	**Glacier Island**	**66.75**	**29**	P	**P**	**16 50 57.8**	**-0.2**
NEA2	**Nenana**	**66.80**	**25**	P	**P**	**16 50 58.2**	**0.0**
I23K	**Minto, Yukon-K**	**66.84**	**25**	P	**P**	**16 50 58.3**	**-0.1**
SCM	**Sheep Creek Mo**	**66.86**	**28**	P	**P**	**16 50 58.5**	**-0.2**
FID	**Port Fidalgo**	**67.02**	**30**	P	**P**	**16 50 59.4**	**-0.2**
COLD	**Coldfoot**	**67.14**	**22**	P	**P**	**16 51 00.5**	**+0.2**
WRH	**Wood River Hil**	**67.18**	**26**	P	**P**	**16 50 59.2**	**-1.4**
MDM	**Murphy Dome**	**67.25**	**25**	P	**P**	**16 51 00.1**	**-1.0**
EYAK	**Cordova Ski Ar**	**67.33**	**30**	P	**P**	**16 51 01.8**	**+0.2**
CCB	**Clear Creek Bu**	**67.34**	**25**	P	**P**	**16 51 00.2**	**-1.4**
NIL	**Nilore**	**67.42**	**301**	P	**P**	**16 51 03.2**	**+0.4**
NIL				IAmb	IAmb	16 51 04.3	
	comp=Z,13nm,0.6s						
KLU	**Klutina**	**67.44**	**29**	P	**P**	**16 51 02.9**	**+0.5**
KLU				IAmb	IAmb	16 51 03.5	
	comp=Z,9.4nm,0.6s						
M24K	**Tolsona, Glenn**	**67.45**	**28**	P	**P**	**16 51 03.0**	**+0.5**
IL31		**67.76**	**25**	P	**P**	**16 51 02.7**	**-1.5**
IL31				IAmb	IAmb	16 51 04.1	
	comp=Z,5.1nm,0.4s						
ILAR	**Eielson Array**	**67.76**	**25**	P	**P**	**16 51 02.5**	**-1.8**
	comp=Z,2.4nm,0.3s,baz=254,slow=5.6,SNR=60						
TOLK	**Toolik Lake Re**	**67.82**	**21**	P	**P**	**16 51 04.4**	**-0.2**
TOLK				IAmb	IAmb	16 51 06.0	
	comp=Z,7.8nm,0.5s						
RAGM	**Ragged Mountai**	**67.82**	**30**	P	**P**	**16 51 04.9**	**+0.1**
PAX	**Paxson**	**67.96**	**27**	P	**P**	**16 51 05.3**	**-0.4**
PAX				IAmb	IAmb	16 51 07.2	
	comp=Z,22nm,1.5s						
BMRM	**Bremner River**	**67.96**	**30**	P	**P**	**16 51 05.9**	**+0.2**
BMRM				IAmb	IAmb	16 51 20.5	
	comp=Z,29nm,1.4s						
HMT	**Hamilton**	**68.02**	**30**	P	**P**	**16 51 06.2**	**+0.2**
N25K	**Chitina, Valde**	**68.08**	**29**	P	**P**	**16 51 06.7**	**+0.2**
N25K				IAmb	IAmb	16 51 07.7	
	comp=Z,6.6nm,0.7s						
SUCK	**Suckling Hills**	**68.21**	**31**	P	**P**	**16 51 07.8**	**+0.6**
GLB	**Gilahina Butte**	**68.43**	**29**	P	**P**	**16 51 08.1**	**-0.4**
GLB				IAmb	IAmb	16 51 09.6	
	comp=Z,18nm,1.3s						
DOT	**Dot Lake**	**68.72**	**27**	P	**P**	**16 51 09.4**	**-0.9**
MENT	**Mentasta**	**68.73**	**28**	P	**P**	**16 51 10.1**	**-0.4**
MENT				IAmb	IAmb	16 51 36.9	
	comp=Z,16nm,1.4s						
MCARA	**McCarthy VSAT**	**68.79**	**29**	P	**P**	**16 51 10.8**	**+0.1**
MCARA				IAmb	IAmb	16 51 21.8	
	comp=Z,11nm,0.8s						
SCRK	**Sand Creek**	**68.81**	**27**	P	**P**	**16 51 10.5**	**-0.5**
YAH	**Yahtse**	**69.26**	**31**	P	**P**	**16 51 14.4**	**+0.4**
KK31	**Karatay Array**	**69.35**	**311**	P	**P**	**16 51 14.1**	**-0.5**
KKAR	**Karatay Array**	**69.35**	**311**	P	**P**	**16 51 14.2**	**-0.4**
BARN	**Barnard Glacie**	**69.39**	**30**	P	**P**	**16 51 14.5**	**-0.2**
CTGM	**Chitina Glacie**	**69.54**	**30**	P	**P**	**16 51 15.7**	**+0.2**
CTGM				IAmb	IAmb	16 51 17.4	
	comp=Z,14nm,0.6s						
TABL	**Table Mountain**	**69.56**	**30**	P	**P**	**16 51 16.0**	**+0.2**
GAR	**Garm**	**69.58**	**307**	P	**P**	**16 51 15.5**	**-0.7**
L27K	**Beaver Creek,**	**69.61**	**28**	P	**P**	**16 51 15.6**	**-0.2**
K27K	**Chicken**	**69.65**	**27**	P	**P**	**16 51 16.2**	**+0.2**
LOGN	**

TAP 20 16:45:01.6,24°.03N×122°.56E,h27km±2km,ML2.0,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.60**	**44**	*i* P	Pb	16 45 13.5	0.0
	baz=50						
YOJ				S	Sb	16 45 20.7	-1.0
	baz=50						
ENA	**Nanau**	**0.85**	**298**	*e*P	Pn	16 45 17.9	+0.2
	baz=298						
TWC	**Suao**	**0.87**	**312**	P	Pn	16 45 17.9	-0.2
	baz=312						
TWC				S	Sn	16 45 30.0	+0.1
	baz=312						
HWA	**Hwalien**	**0.87**	**267**	*e*P	Pn	16 45 17.5	-0.6
	baz=252						
ETLH	**Xiulin Townshi**	**1.00**	**281**	P	Pb	16 45 20.7	+0.3
	baz=266						
ETLH				*e*S	Sb	16 45 32.5	-0.7
	baz=266						
ESL	**Shilin**	**1.05**	**259**	*e*P	Pn	16 45 19.9	-0.7
	baz=258						
NTC	**Toucheng**	**1.06**	**321**	*e*P	Pb	16 45 22.3	+1.0
	baz=322						
TWE	**Neicheng**	**1.07**	**311**	*e*P	Pb	16 45 21.6	+0.1
	baz=311						
ENTT	**Nioudou**	**1.09**	**304**	*e*P	Pn	16 45 21.3	+0.2
	baz=304						
NDT	**Datong Townshi**	**1.11**	**301**	*e*P	Pn	16 45 21.5	+0.1
	baz=301						
NNSB	**Datong**	**1.15**	**291**	*e*P	Pn	16 45 21.6	-0.3
	baz=291						
NNSH	**Datong**	**1.15**	**291**	*e*P	Pb	16 45 22.5	-0.4
	baz=291						
TIPB	**Shuangxi**	**1.15**	**325**	*e*P	Pb	16 45 22.5	-0.4
	baz=335						
NNS	**Nan Shan**	**1.16**	**291**	*e*P	Pb	16 45 23.5	+0.5
	baz=291						
HGSD	**Ruisui**	**1.17**	**243**	P	Pn	16 45 21.4	-0.8
	baz=243						
WHF	**Hehuan Shan**	**1.19**	**276**	*e*P	Pn	16 45 22.5	-0.4
	baz=262						
YHNB	**Yeheng**	**1.25**	**301**	*e*P	Pn	16 45 23.0	-0.5
	baz=287						
CHGB	**Renai**	**1.27**	**272**	*e*P	Pn	16 45 23.0	-0.7
	baz=260						
OWD	**Renai**	**1.27**	**267**	*e*P	Pn	16 45 23.6	-0.1
	baz=267						
YULB	**Yu-li**	**1.32**	**242**	*e*P	Pn	16 45 22.2	-2.1
	baz=241						
VWDT	**VWDT**	**1.33**	**258**	*e*P	Pn	16 45 23.1	-1.2
	baz=250						
FULB	**Fuli**	**1.42**	**235**	*e*P	Pn	16 45 24.9	-0.8
	baz=222						
WHP	**Taichung City**	**1.50**	**280**	*e*P	Pn	16 45 27.5	+0.7
	baz=269						
EDH	**Donghe**	**1.56**	**228**	*e*P	Pn	16 45 26.5	-1.0
	baz=216						
LONT	**Longtian**	**1.72**	**230**	*e*P	Pn	16 45 29.2	-0.6
	baz=219						
CHN5	**Tsauling**	**1.77**	**256**	*e*P	Pn	16 45 31.9	+1.3
	baz=246						
TPUB	**Ta-pu**	**1.91**	**248**	*e*P	Pn	16 45 32.5	+0.1
	baz=246						
TPUB				*e*S	Sn	16 45 56.8	+1.2
	baz=246						
TPUB	**Ta-pu**	**1.91**	**248**	P	Pn	16 45 32.6	+0.2

*NEIC **20** 16:48:42.2±2.1,54°.21N±0°.07×165°.24W±0°.08, h104km±4km,mb4.3/40,ML4.1(AEIC),Error ellipse: s-maj=11.8km s-min=4.7km az=152.0*

*IDC **20** 16:48:43.2±0.6,54°.42N×165°.41W,h103km±4km,mb3.9/30, mb1 4.0/31,mb1mx3.9/67,mbtmp4.2/31,Error ellipse: s-maj=15.1km s-min=10.8km az=10.0*

*AEIC **20** 16:48:43±4.9,54°.03N±0°.07×165°.02W±0°.08,h94km±4km, Error ellipse: s-maj=11.3km s-min=4.7km az=152.0*

ISC 20 16:48:42.8±0.5,54°.25N±0°.07×165°.25W±0°.05, h106km±3km,n187,σ1ŝ15/209,mb4.2/57,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.29**	**246**		**Pn**	**16 48 57.7**	**-0.3**
AKSA					**Sn**	**16 49 09.0**	**-0.4**
AKSA	**Akutan Strait**	**0.29**	**246**		**Pn**	**16 48 57.6**	**-0.4**
AKSA					**Sn**	**16 49 09.0**	**-0.4**
AKUT	**Akutan**	**0.33**	**249**	Pn	**Pn**	**16 48 57.7**	**-0.5**
AKUT	**Akutan**	**0.33**	**249**		**Sn**	**16 49 09.4**	**-0.3**
AHB	**Akutan Harbor**	**0.36**	**248**		**Pn**	**16 48 58.0**	**-0.4**
WECS	**Westdahl Cape**	**0.39**	**44**		**Pn**	**16 48 58.4**	**-0.2**
WESP	**Westdahl Peak**	**0.39**	**52**		**Pn**	**16 48 58.2**	**-0.4**
WESP					**Sn**	**16 49 10.1**	**-0.5**
HSB	**Akutan Spr's B**	**0.40**	**261**		**Pn**	**16 48 58.3**	**-0.3**
HSB					**Sn**	**16 49 10.6**	**+0.2**
AKLV	**Akutan Long Va**	**0.43**	**258**		**Pn**	**16 48 58.4**	**-0.3**
AKLV					**Sn**	**16 49 10.3**	**-0.4**
AKBBA	**Akutan Broad B**	**0.43**	**249**		**Pn**	**16 48 58.4**	**-0.4**
AKBBA					**Sn**	**16 49 10.1**	**-0.6**
AKGG	**Akutan Green G**	**0.44**	**263**		**Pn**	**16 48 58.7**	**-0.1**
WEBT	**Westdahl Beart**	**0.45**	**40**		**Pn**	**16 48 58.7**	**-0.2**
ZRO	**Akutan Zero**	**0.46**	**250**		**Pn**	**16 48 58.6**	**-0.3**
LVA	**Lava Point**	**0.47**	**259**		**Pn**	**16 48 58.8**	**-0.2**
AKMO	**Akutan Morgan**	**0.48**	**250**		**Pn**	**16 48 58.8**	**-0.2**
AKMO					**Sn**	**16 49 10.8**	**-0.5**
AKRB	**Akutan Reef Bi**	**0.50**	**256**		**Pn**	**16 48 59.0**	**-0.2**
AKRB					**Sn**	**16 49 11.8**	**+0.3**
SSBA	**Shishaldin**	**0.84**	**51**		**Pn**	**16 49 01.6**	**-0.4**
SSLW	**Shishaldin Wes**	**0.84**	**51**		**Pn**	**16 49 01.7**	**-0.4**
SSLS	**Shishaldin Sou**	**0.86**	**57**		**Pn**	**16 49 02.1**	**-0.2**
MTBL	**Makushin Table**	**0.89**	**252**		**Pn**	**16 49 02.6**	**0.0**
SSLN	**Shishaldin Nor**	**0.92**	**52**		**Pn**	**16 49 03.1**	**+0.2**
SSLN					**Sn**	**16 49 19.0**	**+1.0**
MNAT	**Makushin Natee**	**0.92**	**247**		**Pn**	**16 49 02.6**	**-0.2**
MNAT					**Sn**	**16 49 17.7**	**-0.3**
MSW	**Makushin Switc**	**0.97**	**250**		**Pn**	**16 49 03.4**	**+0.1**
MGOD	**Makushin Gods**	**1.06**	**245**		**Pn**	**16 49 04.3**	**-0.1**
MAPS	**Pakushin South**	**1.09**	**247**		**Pn**	**16 49 04.6**	**-0.1**
MAPS					**Sn**	**16 49 21.5**	**+0.4**
FALS	**False Pass**	**1.23**	**60**	Pn	**Pn**	**16 49 06.0**	**-0.1**
OKFG	**Magazine Ridge**	**1.79**	**243**		**Pn**	**16 49 12.9**	**0.0**
OKSO	**Okmok South**	**1.95**	**244**		**Pn**	**16 49 14.7**	**-0.2**
BLHA	**Black Hill**	**2.34**	**50**		**Pn**	**16 49 20.4**	**+0.4**
NIKH	**Nikolski High**	**2.50**	**241**	Pn	**Pn**	**16 49 22.2**	**+0.2**
SDPT	**Sand Point**	**2.97**	**66**	Pn	**Pn**	**16 49 28.1**	**-0.1**
VNSG	**Veniaminof 6**	**4.00**	**60**		**Pn**	**16 49 42.5**	**+0.4**
SPIA	**Saint Paul Isl**	**4.07**	**318**		**Pn**	**16 49 44.6**	**+1.7**
ATKA	**Atka Island**	**5.75**	**253**	Pn	**Pn**	**16 50 06.1**	**+0.4**
CHIR	**Chirikof Islan**	**5.75**	**70**	Pn	**Pn**	**16 50 04.0**	**-1.6**
SII	**Sitkinak Islan**	**6.71**	**65**	Pn	**Pn**	**16 50 17.3**	**-1.3**
ADK	**Adak**	**7.29**	**256**	Pn	**Pn**	**16 50 27.2**	**+0.7**
OHAK	**Old Harbor**	**7.38**	**61**	Pn	**Pn**	**16 50 25.3**	**-2.3**
KDAK	**Kodiak Island**	**7.93**	**58**	Pn	**Pn**	**16 50 32.9**	**-2.2**
RSO	**Redoubt South**	**9.17**	**42**	Pn	**Pn**	**16 50 54.3**	**+2.1**
CNPM	**China Poot**	**9.30**	**50**	Pn	**Pn**	**16 50 52.8**	**-1.0**
AMKA	**Amchitka**	**9.79**	**259**	Pn	**Pn**	**16 51 00.0**	**-0.4**
GAMB	**Gambell**	**10.11**	**343**	Pn	**Pn**	**16 51 06.5**	**+1.9**
SUA	**Susitna One**	**10.56**	**41**	Pn	**Pn**	**16 51 10.4**	**-0.5**
SKT	**Skwentna**	**10.59**	**38**	Pn	**Pn**	**16 51 12.3**	**+1.0**
RC01	**Rabbit Creek A**	**10.74**	**44**	Pn	**Pn**	**16 51 11.7**	**-1.6**
PWL	**Port Wells**	**11.22**	**47**		**Pn**	**16 51 16.9**	**-2.8**
CUT	**Chulitna**	**11.32**	**38**	Pn	**Pn**	**16 51 20.8**	**-0.2**
GHO	**Glory Hole Cre**	**11.45**	**42**	Pn	**Pn**	**16 51 20.1**	**-2.7**
Q23K	**Middleton Isla**	**11.55**	**56**	Pn	**Pn**	**16 51 22.1**	**-2.1**
MID	**Middleton Isla**	**11.56**	**56**	Pn	**Pn**	**16 51 22.0**	**-2.2**
GLI	**Glacier Island**	**11.76**	**48**	Pn	**Pn**	**16 51 24.1**	**-2.8**
KTH	**Kantishna Hill**	**11.87**	**33**	Pn	**Pn**	**16 51 29.5**	**+1.0**
FID	**Port Fidalgo**	**11.98**	**50**	Pn	**Pn**	**16 51 26.4**	**-3.4**
TRF	**Thorofare Moun**	**12.01**	**34**	Pn	**Pn**	**16 51 30.4**	**+0.2**
SCM	**Sheep Creek Mo**	**12.12**	**44**	Pn	**Pn**	**16 51 29.8**	**-2.0**
EYAK	**Cordova Ski Ar**	**12.23**	**51**	Pn	**Pn**	**16 51 30.0**	**-3.1**
BPAW	**Bear Paw Mtn.**	**12.25**	**31**		**Pn**	**16 51 34.2**	**+0.8**
RND	**Reindeer**	**12.46**	**36**	Pn	**Pn**	**16 51 36.0**	**-0.2**
KLU	**Klutina**	**12.55**	**47**	Pn	**Pn**	**16 51 34.8**	**-2.5**
RAGM	**Ragged Mountai**	**12.67**	**53**	Pn	**Pn**	**16 51 36.4**	**-2.5**
M24K	**Tolsona, Glenn**	**12.73**	**44**	Pn	**Pn**	**16 51 37.8**	**-1.9**
BWN	**Browne**	**12.77**	**33**	Pn	**Pn**	**16 51 41.1**	**+0.9**
HMT	**Hamilton**	**12.85**	**53**		**Pn**	**16 51 39.7**	**-1.5**
BMRM	**Bremner River**	**12.91**	**50**	Pn	**Pn**	**16 51 39.3**	**-2.8**
SUCK	**Suckling Hills**	**12.99**	**55**	Pn	**Pn**	**16 51 43.1**	**0.0**
MLY	**Manley**	**13.02**	**28**	Pn	**Pn**	**16 51 45.0**	**+1.5**
N25K	**Chitina, Valde**	**13.17**	**48**		**Pn**	**16 51 43.4**	**-2.0**
NEA2	**Nenana**	**13.19**	**32**	Pn	**Pn**	**16 51 45.7**	**+0.1**
WRH	**Wood River Hil**	**13.41**	**33**	Pn	**Pn**	**16 51 48.3**	**-0.2**
GLB	**Gilahina Butte**	**13.45**	**49**	Pn	**Pn**	**16 51 46.5**	**-2.6**
PAX	**Paxson**	**13.45**	**42**	Pn	**Pn**	**16 51 46.5**	**-2.7**
I23K	**Minto, Yukon-K**	**13.50**	**30**		**Pn**	**16 51 49.9**	**+0.3**
CCB	**Clear Creek Bu**	**13.62**	**33**	Pn	**Pn**	**16 51 50.2**	**-1.1**
MDM	**Murphy Dome**	**13.70**	**32**	Pn	**Pn**	**16 51 50.5**	**-1.8**
MCARA	**McCarthy VSAT**	**13.78**	**50**	Pn	**Pn**	**16 51 51.5**	**-1.8**
IL31		**14.00**	**34**	Pn	**Pn**	**16 51 56.6**	**+0.4**
ILAR	**Eielson Array**	**14.00**	**34**	P	**Pn**	**16 51 54.5**	**-1.7**
	0.2nm,0.3s,baz=226,slow=11,SNR=6.4						
ILAR	**Eielson Array**	**14.00**	**34**		**P**	**16 51 58.8**	**-1.9**
YAH	**Yahtse**	**14.05**	**55**	Pn	**Pn**	**16 51 55.7**	**-1.3**
MENT	**Mentasta**	**14.13**	**43**	Pn	**Pn**	**16 51 55.9**	**-2.0**
BARN	**Barnard Glacie**	**14.29**	**52**	Pn	**Pn**	**16 51 58.4**	**-1.7**
DOT	**Dot Lake**	**14.35**	**41**		**Pn**	**16 51 59.9**	**-0.8**
TABL	**Table Mountain**	**14.36**	**55**	Pn	**Pn**	**16 52 00.5**	**-0.5**
CTGM	**Chitina Glacie**	**14.41**	**53**		**Pn**	**16 52 00.4**	**-1.2**
LOGN	**Logan Glacier**	**14.53**	**53**	Pn	**Pn**	**16 52 02.9**	**-0.2**
SCRK	**Sand Creek**	**14.55**	**40**	Pn	**Pn**	**16 52 01.9**	**-1.4**
PCA	**Pinnacle**	**14.70**	**57**	Pn	**Pn**	**16 52 04.5**	**-0.8**
COLD	**Coldfoot**	**14.88**	**23**	Pn	**Pn**	**16 52 08.4**	**+1.1**
PRP	**Porcupine Dome**	**14.93**	**33**	Pn	**Pn**	**16 52 07.1**	**-1.0**
L27K	**Beaver Creek,**	**14.96**	**45**	Pn	**Pn**	**16 52 06.8**	**-1.6**
BCPM	**Bancas Point**	**14.98**	**57**	Pn	**Pn**	**16 52 08.0**	**-0.7**
K27K	**Chicken**	**15.30**	**41**	Pn	**Pn**	**16 52 12.6**	**-0.1**
EGAK	**Eagle**	**16.02**	**39**	Pn	**Pn**	**16 52 19.1**	**-2.5**
TOLK	**Toolik Lake Re**	**16.18**	**21**	P	**P**	**16 52 25.1**	**+0.3**
HYT	**Haines Junctio**	**16.19**	**55**	P	**P**	**16 52 25.0**	**-0.1**
HYT				IAmb	IAmb	16 52 28.9	
	comp=Z,19nm,0.8s						
DAWY	**Dawson**	**16.37**	**43**	Pn	**Pn**	**16 52 25.4**	**-0.7**
BESE	**Bessie Mountai**	**17.27**	**63**	P	**Pn**	**16 52 37.1**	**0.0**
BESE				IAmb	IAmb	16 52 50.1	
	comp=Z,14nm,1.0s						
WHY	**Whitehorse**	**17.43**	**56**	P	**P**	**16 52 38.7**	**-0.1**
WHY				IAmb	IAmb	16 52 44.4	
	comp=Z,9.6nm,0.8s						
A21K	**Barrow**	**17.55**	**9**	P	**P**	**16 52 40.1**	**+0.3**
A21K				IAmb	IAmb	16 53 01.8	
	comp=Z,24nm,0.9s						
EPYK	**Eagle Plains**	**18.40**	**38**	P	**P**	**16 52 47.6**	**-1.7**
EPYK				IAmb	IAmb	16 52 50.0	
	comp=Z,12nm,0.6s						
INK	**Inuvik**	**20.40**	**34**	P	**P**	**16 53 08.6**	**-2.3**
INK				IAmb	IAmb	16 53 14.0	
	comp=Z,9.5nm,0.6s						
PEA0B	**Petropavlovsk-**	**21.82**	**282**	P	**P**	**16 53 25.5**	**-0.7**
PEA0B				IAmb	IAmb	16 53 42.8	
	comp=Z,22nm,1.4s						
PETK	**Petropavlovsk-**	**21.82**	**282**	P	**P**	**16 53 25.7**	**-0.5**
	comp=Z,3.2nm,0.4s,baz=92,slow=13,SNR=90						
PETK				pP	**pP**	**16 53 47.1**	**+0.9**
	comp=Z,3.3nm,0.6s,baz=83,slow=14,SNR=4.6						
PETK	**Petropavlovsk-**	**21.82**	**282**	P	**P**	**16 53 25.4**	**-0.8**
C36M	**Paulatuk**	**23.97**	**35**	P	**P**	**16 53 46.1**	**-0.8**
C36M				IAmb	IAmb	16 53 47.6	
	comp=Z,11nm,0.4s						
YKA	**Yellowknife Ar**	**27.13**	**52**	P	**P**	**16 54 16.1**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=275,slow=10,SNR=22						
YKA				pP	**pP**	**16 54 39.5**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=276,slow=9.8,SNR=3.7						
YKA				PcP	**PcP**	**16 57 33.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=294,slow=1.9,SNR=3.9						
YKA				ScP	**ScP**	**17 01 04.1**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=274,slow=2.8,SNR=4.6						
RES	**Resolute Bay**	**33.59**	**27**	P	**P**	**16 55 11.7**	**-0.4**
RES				IAmb	IAmb	16 55 13.2	
	comp=Z,9.0nm,1.5s						
EUNU	**Eureka**	**35.20**	**17**	P	**P**	**16 55 26.4**	**+0.4**
NVAR	**Mina Array Bea**	**35.33**	**97**	P	**P**	**16 55 31.1**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=316,slow=7.8,SNR=2.1						
NVAR				pP	**pP**	**16 55 53.3**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=294,slow=8.2,SNR=6.1						
NVAR				sP	**sP**	**16 56 04.0**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=298,slow=8.6,SNR=6.6						
YHH	**Holmes Hill**	**35.73**	**82**	P	**P**	**16 55 29.3**	**-2.0**
YHH				IAmb	IAmb	16 55 38.4	
	comp=Z,2.5nm,0.7s						
PDAR	**Pinedale Array**	**37.68**	**84**	P	**P**	**16 55 48.5**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=293,slow=4.7,SNR=2.9						
PDAR				pP	**pP**	**16 56 12.4**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=331,slow=5.4,SNR=1.4						
PDAR	**Pinedale Array**	**37.68**	**84**	P	**P**	**16 55 46.8**	**-1.1**
FCC	**Fort Churchill**	**37.83**	**54**	P	**P**	**16 55 49.1**	**+0.5**
TULEG	**Thule**	**39.48**	**21**	P	**P**	**16 56 02.0**	**-0.2**
TULEG				IAmb	IAmb	16 56 02.6	
	comp=Z,3.2nm,0.6s						
USRK	**Ussuriysk Ar.**	**40.91**	**282**	P	**P**	**16 56 14.5**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=59,slow=6.6,SNR=2.3						
ULM	**Lac du Bonnet**	**41.10**	**66**	P	**P**	**16 56 17.6**	**+1.8**
	comp=Z,1.9nm,0.5s,baz=306,slow=8.7,SNR=1.7						
NRIK	**Noril'sk**	**45.94**	**332**	P	**P**	**16 56 53.9**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=45,slow=8.0,SNR=4.1						
SPA0	**Spitsbergen Ar**	**47.83**	**360**	P	**P**	**16 57 08.2**	**-0.7**
SUMG	**Summit**	**48.22**	**19**	P	**P**	**16 57 12.2**	**-0.2**
SUMG				IAmb	IAmb	16 57 14.0	
	comp=Z,6.3nm,0.7s						
TX31	**Lajitas Ar. Si**	**50.32**	**94**	P	**P**	**16 57 28.4**	**-0.2**
TX32	**Lajitas Array**	**50.32**	**94**	P	**P**	**16 57 28.9**	**+0.2**
TX32				IAmb	IAmb	16 57 33.0	
	comp=Z,3.2nm,1.4s						
TXAR	**Lajitas Array**	**50.32**	**94**	P	**P**	**16 57 29.1**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=297,slow=5.4,SNR=6.7						
TXAR				pP	**pP**	**16 57 53.8**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=308,slow=6.1,SNR=3.0						
TXAR	**Lajitas Array**	**50.32**	**94**	P	**P**	**16 57 28.8**	**+0.2**
HHC	**Hu-ho-hao-te**	**54.52**	**292**	*e*P	**P**	**16 57 59.0**	**-0.5**
ARCES	**ARCESS Array B**	**56.27**	**355**	P	**P**	**16 58 10.8**	**-0.7**
	comp=Z,5.5nm,1.1s,baz=10,slow=8.0,SNR=12						
ARCES				PcP	**PcP**	**16 59 07.6**	**-0.1**
	comp=Z,4.2nm,0.9s,baz=347,slow=5.0,SNR=3.8						
ZALV	**Zalesovo Beam**	**57.66**	**319**	P	**P**	**16 58 20.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=18,slow=5.7,SNR=2.0						
ZALV				PcP	**PcP**	**16 59 12.9**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=44,slow=4.2,SNR=4.8						
LMN	**Caledonia Moun**	**59.68**	**53**	P	**P**	**16 58 35.5**	**-0.2**
DRLN	**Deer Lake**	**60.36**	**46**	P	**P**	**16 58 39.9**	**-0.3**
BVAR	**Borovoye Array**	**63.56**	**326**	P	**P**	**16 59 00.8**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=96,slow=14,SNR=5.5						
BVAR				pP	**pP**	**16 59 26.4**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=307,slow=5.4,SNR=5.5						
ARU	**Arti**	**64.02**	**335**	P	**P**	**16 59 03.8**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=358,slow=5.0,SNR=5.0						
KIRV	**Kirov**	**64.09**	**341**	P	**P**	**16 59 04.2**	**-0.6**
	comp=Z,12nm,0.5s,baz=280,slow=1.7,SNR=4.8						
MK31	**Makanchi Array**	**64.26**	**315**	P	**P**	**16 59 04.4**	**-1.9**
MKAR	**Makanchi Array**	**64.26**	**315**	P	**P**	**16 59 05.0**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=44,slow=5.1,SNR=6.0						
MKAR	**Makanchi Array**	**64.26**	**315**	P	**P**	**16 59 04.5**	**-1.8**
WMQ	**Urumqi**	**64.27**	**310**	*e*P	**P**	**16 59 08.3**	**+1.8**
FIA1	**FINESS Array S**	**64.30**	**354**	P	**P**	**16 59 05.5**	**-0.7**
FIA1				IAmb	IAmb	16 59 06.4	
	comp=Z,8.3nm,1.0s						
FINES	**FINESS Array B**	**64.30**	**354**	P	**P**	**16 59 05.6**	**-0.6**
	comp=Z,2.8nm,0.4s,baz=22,slow=6.9,SNR=25						
MAKZ	**Makanchi**	**64.38**	**315**	P	**P**	**16 59 05.3**	**-1.8**
NC204	**NORSAR Array S**	**64.77**	**2**	P	**P**	**16 59 09.1**	**-0.4**
NC303	**NORSAR Array S**	**64.84**	**2**	P	**P**	**16 59 09.2**	**-0.5**
NC405	**NORSAR Array S**	**64.95**	**2**	P	**P**	**16 59 09.6**	**-1.0**
NOA	**NORSAR Array B**	**65.02**	**2**	P	**P**	**16 59 10.2**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=360,slow=6.6,SNR=7.0						
HFS	**Hagfors**	**65.96**	**1**	P	**P**	**16 59 16.4**	**-0.6**
	comp=Z,4.0nm,0.3s,baz=19,slow=3.6,SNR=61						
AKTO	**Aktyubinsk**	**69.56**	**332**	P	**P**	**16 59 39.4**	**-0.3**
	comp=Z,6.6nm,0.6s,baz=39,slow=6.0,SNR=28						
EKA	**Eskdalemuir Ar**	**69.79**	**11**	P	**P**	**16 59 41.3**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=344,slow=4.4,SNR=18						
ABKAR	**Akbulak array**	**70.08**	**330**	P	**P**	**16 59 42.1**	**-0.8**
BELG	**Belogornoye**	**70.25**	**339**	P	**P**	**16 59 43.0**	**-1.0**
	comp=Z,7.7nm,0.7s,baz=357,slow=3.9,SNR=5.5						
KK31	**Karatay Array**	**71.97**	**320**	P	**P**	**16 59 53.6**	**-0.9**
KK31				IAmb	IAmb	16 59 54.6	
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**71.97**	**320**	P	**P**	**16 59 53.9**	**-0.7**
AKASG	**Malin Array Be**	**74.72**	**351**	P	**P**	**17 00 09.4**	**-1.0**
	comp=Z,4.3nm,0.4s,baz=13,slow=6.0,SNR=26						
AKASG				pP	**pP**	**17 00 36.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=13,slow=5.3,SNR=1.7						
AKBB	**Malin Array Si**	**74.72**	**351**	P	**P**	**17 00 09.3**	**-1.1**
AKBB				IAmb	IAmb	17 00 10.2	
	comp=Z,6.5nm,0.7s						
PMG	**Port Moresby**	**74.99**	**229**	P	**P**	**17 00 12.9**	**+0.5**
	comp=Z,10nm,1.0s,baz=312,slow=19,SNR=2.0						
GAR	**Garm**	**75.58**	**318**	P	**P**	**17 00 15.3**	**-0.5**
GAR				IAmb	IAmb	17 00 15.9	
	comp=Z,5.8nm,0.7s						
MORC	**Moravsky Berou**	**76.32**	**358**	*e*P	**P**	**17 00 20.0**	**+0.3**
CHGR	**Chuyangaron**	**76.33**	**319**	P	**P**	**17 00 18.9**	**-1.1**
VRAC	**Vranov**	**76.80**	**359**	P	**P**	**17 00 22.8**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=351,slow=6.9,SNR=3.6						
VRAC	**Vranov**	**76.80**	**359**	*e*P	**P**	**17 00 20.9**	**-1.5**
KHC	**Kasperske Hory**	**76.98**	**1**	P	**P**	**17 00 23.2**	**-0.2**
KHC				IAmb	IAmb	17 00 24.7	
	comp=Z,2.3nm,0.6s						
GEC2	**GERESS Array S**	**77.27**	**1**	P	**P**	**17 00 24.9**	**-0.2**
GEC2				IAmb	IAmb	17 00 25.8	
	comp=Z,2.1nm,0.7s						
GERES	**GERESS Array B**	**77.27**	**1**	P	**P**	**17 00 25.2**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=15,slow=5.5,SNR=10						
CLF	**Chambon-Foret**	**77.55**	**9**	P	**P**	**17 00 26.9**	**+0.4**
ECH	**Echery**	**77.70**	**5**	P	**P**	**17 00 27.4**	**-0.1**
ECH				IAmb	IAmb	17 00 28.3	
	comp=Z,3.2nm,0.8s						
BUR08	**Bucovina Ar. S**	**78.09**	**353**	P	**P**	**17 00 29.3**	**-0.4**
BURAR	**Bucovina Array**	**78.12**	**353**	P	**P**	**17 00 29.6**	**-0.3**
CONA	**Conrad Observa**	**78.19**	**359**	*i* P	**P**	**17 00 31.2**	**+1.0**
	comp=Z,2.0nm,0.5s						
MOA	**Molln**	**78.27**	**0**	*i* P	**P**	**17 00 31.5**	**+0.9**
	comp=Z,2.5nm,1.0s						
CMAR	**Chiang Mai Arr**	**78.55**	**286**	P	**P**	**17 00 32.1**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=21,slow=6.7,SNR=8.4						
MOTA	**Moosalm**	**78.73**	**3**	*i* P	**P**	**17 00 33.8**	**+0.5**
	comp=Z,3.3nm,0.6s						
WATA	**Walderalm**	**78.75**	**2**	*i* P	**P**	**17 00 34.0**	**+0.7**
	comp=Z,3.3nm,0.4s						
WTTA	**Wattenberg**	**78.82**	**2**	*i* P	**P**	**17 00 34.7**	**+0.9**
	comp=Z,4.6nm,0.5s						
SQTA	**Sankt Quirin**	**78.86**	**2**	*i* P	**P**	**17 00 34.8**	**+0.8**
	comp=Z,4.6nm,0.5s						
ARSA	**Arzberg**	**78.87**	**359**	*i* P	**P**	**17 00 34.2**	**+0.3**
	comp=Z,2.2nm,0.5s						
KBA	**Koelnbreinsper**	**79.04**	**1**	*i* P	**P**	**17 00 36.3**	**+1.3**
	comp=Z,4.3nm,0.5s						
FETA	**Feichten**	**79.04**	**3**	*e*P	**P**	**17 00 35.9**	**+0.8**
	comp=Z,3.1nm,0.7s						
DAVOX	**Davos/Dischmat**	**79.26**	**3**	P	**P**	**17 00 37.1**	**+0.9**
	comp=Z,4.1nm,0.6s,baz=280,slow=3.2,SNR=10						
ABTA	**Abfaltersbach**	**79.36**	**2**	*i* P	**P**	**17 00 37.5**	**+0.9**
	comp=Z,1.9nm,0.5s						
SOKA	**Soboth**	**79.44**	**360**	*i* P	**P**	**17 00 38.2**

	baz=281								
NNS				S		Sb	16 53 47.2	-0.3	
	baz=281								
WHF	**Hehuan Shan**	**1.14**	**281**	⇑	*i*P	Pn	16 53 32.1	-0.2	
	baz=264								
WHF					*e*S	Sn	16 53 47.1	-0.2	
	baz=264								
TWB1	**Santiao Chiao**	**1.16**	**337**	⇓	P	Pb	16 53 32.5	-0.8	
	baz=354								
TWB1					S	Sb	16 53 48.0	+0.1	
	baz=354								
FUSS	**Fushou**	**1.19**	**285**	⇑	P	Pn	16 53 33.0	+0.3	
	baz=283								
FUSS					*e*S	Sb	16 53 48.8	0.0	
	baz=283								
IRIF	**Iriomote-Funau**	**1.20**	**70**		P	Pn	16 53 33.2	+0.6	
IRIF					S	Sb	16 53 48.6	-0.2	
TIPB	**Shuangxi**	**1.20**	**329**	⇑	*e*P	Pb	16 53 33.0	-0.8	
	baz=328								
TIPB					*e*S	Sb	16 53 49.0	+0.1	
	baz=328								
HATJ	**Hateruma jima**	**1.20**	**84**		P	Pb	16 53 33.5	-0.4	
HATJ					S	Sb	16 53 49.1	0.0	
OWD	**Renai**	**1.21**	**271**	⇑	*e*P	Pn	16 53 33.0	+0.1	
	baz=268								
OWD					S	Sn	16 53 48.6	+0.1	
	baz=268								
CHGB	**Renai**	**1.22**	**276**	⇑	P	Pn	16 53 33.3	+0.2	
	baz=261								
CHGB					S	Sn	16 53 48.9	+0.2	
	baz=261								
YULB	**Yu-li**	**1.23**	**244**	⇓	*e*P	Pn	16 53 33.0	-0.1	
	baz=241								
YULB					*e*S	Sn	16 53 48.6	-0.1	
	baz=241								
YULB	**Yu-li**	**1.23**	**244**		Pn	Pn	16 53 32.9	-0.2	
EYUL	**Yuli**	**1.23**	**242**	⇑	P	Pn	16 53 33.2	+0.1	
	baz=239								
EYUL					*e*S	Sn	16 53 49.4	+0.6	
	baz=239								
NWLT	**Wulai**	**1.23**	**313**		*e*P	Pb	16 53 34.0	-0.4	
	baz=311								
NWLT					*e*S	Sb	16 53 50.1	+0.1	
	baz=311								
TWT	**Tachien**	**1.25**	**285**		*e*P	Pn	16 53 34.1	+0.6	
	baz=269								
TWT					S	Sb	16 53 50.1	-0.4	
	baz=269								
VWDT	**VWDT**	**1.25**	**262**	⇑	P	Pn	16 53 33.8	+0.4	
	baz=259								
VWDT					S	Sn	16 53 49.3	-0.1	
	baz=259								
YHNB	**Yeheng**	**1.25**	**306**	⇑	P	Pb	16 53 34.1	-0.8	
	baz=290								
YHNB					S	Sb	16 53 50.0	-0.6	
	baz=290								
YHNB	**Yeheng**	**1.25**	**306**		Pn	Pb	16 53 34.1	-0.8	
TDCB	**Techi**	**1.26**	**285**	⇑	P	Pn	16 53 34.2	+0.5	
	baz=270								
TDCB					*e*S	Sb	16 53 50.4	-0.5	
	baz=270								
WFSB	**Wu-fen Shan**	**1.30**	**330**	⇑	P	Pb	16 53 34.6	-1.0	
	baz=329								
WFSB					*e*S	Sb	16 53 52.4	+0.5	
	baz=329								
FULB	**Fuli**	**1.33**	**237**		*e*P	Pn	16 53 33.9	-0.6	
	baz=222								
FULB					S	Sn	16 53 51.5	+0.2	
	baz=222								
TWA	**Mucha**	**1.33**	**321**	⇑	*e*P	Pb	16 53 35.4	-0.7	
	baz=320								
TWA					S	Sb	16 53 53.7	+1.0	
	baz=320								
CHKT	**Chengkung**	**1.33**	**231**		P	Pn	16 53 34.2	-0.3	
	baz=229								
CHKT					S	Sn	16 53 49.8	-1.5	
	baz=229								
NHDH	**Xindian Distri**	**1.35**	**319**		*e*P	Pb	16 53 36.0	-0.4	
	baz=318								
NHDH					*e*S	Sb	16 53 54.2	+0.9	
	baz=318								
TNOU	**National Taiwa**	**1.37**	**332**		P	Pb	16 53 35.6	-1.2	
	baz=331								
TNOU					S	Sb	16 53 53.0	-1.0	
	baz=331								
TATO	**Taipei**	**1.38**	**319**	⇑	P	Pb	16 53 36.6	-0.4	
	baz=300								
TATO					S	Sb	16 53 54.7	+0.5	
	baz=300								
TATO	**Taipei**	**1.38**	**319**			Pb	16 53 36.1	-0.8	
WPL	**Puli Township**	**1.41**	**273**		*e*P	Pn	16 53 36.2	+0.7	
	baz=271								
JKRS	**Kuro-shima**	**1.42**	**78**		P	Pn	16 53 36.6	+1.0	
JKRS					S	Sb	16 53 54.7	-0.5	
SSLB	**Suanglung**	**1.42**	**264**	⇑	P	Pn	16 53 36.0	+0.2	
	baz=262								
SSLB	**Suanglung**	**1.42**	**264**		Pn	Pn	16 53 36.3	+0.5	
TAP	**Taipei**	**1.42**	**321**		P	Pb	16 53 36.9	-0.7	
	baz=320								
TAP					*e*S	Sb	16 53 56.4	+1.1	
	baz=320								
BACT	**New Taipei Cit**	**1.43**	**318**		P	Pb	16 53 37.1	-0.6	
	baz=316								
DPDB	**Guoxing**	**1.44**	**274**	⇑	*e*P	Pn	16 53 36.8	+0.7	
	baz=272								
WCS	**Beigang Elemen**	**1.45**	**275**		*e*P	Pn	16 53 37.3	+1.1	
	baz=272								
WHP	**Taichung City**	**1.46**	**284**	⇑	P	Pb	16 53 37.4	-0.9	
	baz=270								
WHP					*e*S	Sb	16 53 55.5	-0.9	
	baz=270								
EDH	**Donghe**	**1.46**	**229**		P	Pn	16 53 36.1	-0.1	
	baz=217								
EDH					S	Sn	16 53 52.9	-1.5	
	baz=217								
SMLT	**Sun Moon Lake**	**1.46**	**268**	⇑	P	Pn	16 53 37.1	+0.7	
	baz=266								
SMLT					S	Sn	16 53 55.4	+0.7	
	baz=266								
YM01	**YM01**	**1.47**	**325**		*e*P	Pb	16 53 37.2	-1.2	
	baz=324								
NWRT	**Kuosheng**	**1.47**	**329**		*e*P	Pb	16 53 37.3	-1.2	
	baz=328								
YM10	**YM10**	**1.48**	**325**		*e*P	Pn	16 53 37.1	+0.4	
	baz=324								
YM11	**YM11**	**1.48**	**326**		*e*P	Pn	16 53 37.1	+0.4	
	baz=324								
YUS	**Yu-Shan**	**1.48**	**253**	⇑	P	Pn	16 53 37.5	+0.4	
	baz=250								
YUS					*i* S	Sn	16 53 55.6	-0.2	
	baz=250								
YM04	**YM04**	**1.49**	**324**	⇑	*e*P	Pn	16 53 37.0	+0.3	
	baz=323								
YM08	**YM08**	**1.49**	**327**		*e*P	Pn	16 53 37.3	+0.5	
	baz=325								
TYC	**Yuchr**	**1.50**	**269**	⇑	*i*P	Pn	16 53 37.6	+0.8	
	baz=267								
YM03	**YM03**	**1.51**	**325**		*e*P	Pb	16 53 38.0	-1.2	
	baz=324								
TWS1	**Kuangyinshan**	**1.52**	**320**		*e*P	Pb	16 53 38.1	-1.1	
	baz=337								
TWS1					*e*S	Sb	16 53 59.2	+1.1	
	baz=337								
NTY	**Taoyuan**	**1.52**	**314**		P	Pb	16 53 38.3	-1.0	
	baz=329								
LIOB	**Emei**	**1.52**	**298**	⇑	P	Pb	16 53 39.0	-0.4	
	baz=296								
LIOB					S	Sb	16 53 58.6	+0.3	
	baz=296								
WHYT	**Xinyi Township**	**1.52**	**261**		*e*P	Pn	16 53 38.0	+0.8	
	baz=259								
ANP	**Anpu**	**1.53**	**325**		*e*P	Pb	16 53 38.2	-1.3	
	baz=323								
NSTT	**Nanjuang**	**1.53**	**297**		P	Pb	16 53 39.0	-0.5	
	baz=295								
NTST	**Danshui**	**1.55**	**322**		*e*P	Pb	16 53 38.5	-1.3	
	baz=337								
TWY	**Chenhua**	**1.56**	**329**		*e*P	Pb	16 53 39.0	-1.0	
	baz=328								
JIJ	**Ishigaki jima**	**1.56**	**74**		P	Pn	16 53 38.1	+0.4	
JIJ					S	Sn	16 53 57.3	+0.3	
LDUT	**Ludao**	**1.57**	**217**		*e*P	Pn	16 53 37.1	-0.7	
	baz=215								
LDUT					*e*S	Sn	16 53 55.9	-1.4	
	baz=215								
NCU	**National Centr**	**1.57**	**311**		*e*P	Pb	16 53 39.0	-1.2	
	baz=309								
NCU					*e*S	Sb	16 53 59.9	+0.2	
	baz=309								
HSN1	**Hsinchu**	**1.59**	**302**		*e*P	Pb	16 53 39.5	-0.9	
	baz=300								
HSN1					*e*S	Sb	16 54 01.0	+0.9	
	baz=300								
ALS	**Alishan**	**1.61**	**255**	⇑	*i*P	Pn	16 53 39.6	+1.1	
	baz=252								
ALS					S	Sn	16 53 59.5	+1.0	
	baz=252								
SBCB	**Hsinchu**	**1.62**	**302**	⇑	P	Pb	16 53 40.0	-0.9	
	baz=300								
SBCB					*e*S	Sb	16 54 01.3	+0.3	
	baz=300								
LONT	**Longtian**	**1.62**	**231**		*e*P	Pn	16 53 38.5	0.0	
	baz=220								
WJS	**Zhushan**	**1.62**	**266**		*e*P	Pb	16 53 40.7	-0.3	
	baz=264								
WJS					*e*S	Sb	16 54 01.9	+0.7	
	baz=264								
TWQ1	**Liyutan**	**1.63**	**285**	⇑	*i*P	Pb	16 53 40.7	-0.4	
	baz=283								
TWQ1					S	Sb	16 54 01.4	+0.2	
	baz=283								
HSN	**Hsinchu**	**1.64**	**302**		*e*P	Pn	16 53 39.3	+0.6	
	baz=302								
HSN					*e*S	Sb	16 54 00.7	-0.8	
	baz=302								
WWF	**Wufeng**	**1.65**	**274**		*e*P	Pb	16 53 41.4	-0.1	
	baz=266								
WWF					*e*S	Sb	16 54 03.3	+1.4	
	baz=266								
NSY	**Sanyi**	**1.65**	**287**		P	Pb	16 53 41.0	-0.6	
	baz=285								
NSY					S	Sb	16 54 02.5	+0.5	
	baz=285								
NJN	**Zhunan**	**1.66**	**297**		*e*P	Pb	16 53 40.9	-0.8	
	baz=295								
NJN					*e*S	Sb	16 54 02.3	+0.2	
	baz=295								
WNT	**Mingjian**	**1.66**	**268**		*e*P	Pb	16 53 41.0	-0.6	
	baz=266								
WNT					S	Sb	16 54 02.7	+0.5	
	baz=266								
WNT1	**Nantou City**	**1.66**	**269**		*e*P	Pb	16 53 41.4	-0.3	
	baz=267								
WNT1					*e*S	Sb	16 54 03.4	+1.1	
	baz=267								
TCU	**Taichung**	**1.68**	**277**		*e*P	Pb	16 53 41.5	-0.4	
	baz=275								
TCU					S	Sb	16 54 03.0	+0.3	
	baz=275								
CHN5	**Tsauling**	**1.70**	**259**	⇑	P	Pn	16 53 41.3	+1.6	
	baz=246								
CHN5					*e*S	Sb	16 54 02.9	-0.5	
	baz=246								
TTN	**Taitung**	**1.71**	**227**		*e*P	Pn	16 53 40.6	+0.9	
	baz=224								
TTN					*e*S	Sn	16 54 00.7	+0.1	
	baz=224								
TWGBT	**Beinan**	**1.71**	**230**		*e*P	Pn	16 53 39.6	-0.2	
	baz=217								
TWGBT					*e*S	Sn	16 54 00.5	-0.3	
	baz=217								
TWG	**Pinlang**	**1.72**	**230**		*e*P	Pn	16 53 39.6	-0.2	
	baz=217								
TWG					*e*S	Sn	16 54 00.2	-0.6	
	baz=217								
TWG	**Pinlang**	**1.72**	**230**		Pn	Pn	16 53 39.4	-0.4	
PCYT	**Pengchaiyu**	**1.73**	**347**		*e*P	Pn	16 53 39.9	-0.1	
	baz=347								
WDJ	**Dajia District**	**1.74**	**284**	⇑	*e*P	Pb	16 53 42.1	-1.0	
	baz=282								
WDJ					*e*S	Sb	16 54 04.8	+0.2	
	baz=282								
STYH	**Taoyuan**	**1.75**	**244**	⇑	*e*P	Pn	16 53 41.3	+1.0	
	baz=233								
STYH					S	Sn	16 54 02.7	+1.0	
	baz=233								
STYT	**Tauyuan**	**1.77**	**245**	⇑	P	Pn	16 53 41.6	+1.0	
	baz=233								
STYT					S	Sn	16 54 03.4	+1.1	
	baz=233								
WCHH	**Zhanghua**	**1.78**	**275**		*e*P	Pb	16 53 42.9	-0.8	
	baz=272								
WCHH					*e*S	Sb	16 54 06.0	+0.5	
	baz=272								
JISG	**Ishigakijimahi**	**1.78**	**68**		P	Pn	16 53 40.8	+0.2	
JISG					*e*S	Sn	16 54 02.1	-0.2	
WGK	**Gukeng**	**1.79**	**262**		*e*P	Pb	16 53 42.7	-1.2	
	baz=260								
WDLH	**Douliu**	**1.81**	**263**		*e*P	Pb	16 53 43.0	-1.2	
	baz=260								
TPUB	**Ta-pu**	**1.83**	**250**	⇑	P	Pn	16 53 43.0	+1.6	
	baz=237								
TPUB					S	Sn	16 54 05.8	+2.2	
	baz=237								
TPUB	**Ta-pu**	**1.83**	**250**		Pn	Pn	16 53 42.7	+1.4	
WTP	**Ta-pu**	**1.86**	**249**	⇑	P	Pn	16 53 43.6	+1.8	
	baz=236								
WTP					S	Sb	16 54 07.1	-0.9	
	baz=236								
SLGT	**Liugui**	**1.94**	**241**		*e*P	Pn	16 53 45.1	+2.1	
	baz=239								
WTK	**Tuku**	**1.95**	**263**		*e*P	Pb	16 53 45.1	-1.4	
	baz=261								
WTK					*e*S	Sb	16 54 10.3	-0.2	
	baz=261								
ECL	**Taimali**	**1.95**	**227**		*e*P	Pn	16 53 42.4	-0.5	
	baz=237								
CHY	**Chiayi**	**1.95**	**257**		*e*P	Pb	16 53 45.1	-1.5	
	baz=255								
CHY					*e*S	Sb	16 54 09.8	-0.7	
	baz=255								
SGST	**Jiashian**	**1.95**	**244**		*e*P	Pn	16 53 44.1	+1.0	
	baz=242								
SGST					S	Sn	16 54 09.3	+2.6	
	baz=242								
CHN1	**Nanshi**	**1.96**	**248**		P	Pn	16 53 45.2	+2.1	
	baz=246								
CHN1					S	Sb	16 54 10.0	-0.7	
	baz=246								
TWK	**Hsinying**	**1.96**	**250**		P	Pn	16 53 45.1	+1.9	
	baz=248								
TWK					S	Sb	16 54 10.5	-0.4	
	baz=248								
SNST	**Tainan City**	**1.97**	**249**		*e*P	Pn	16 53 45.4	+2.1	
	baz=247								
SNST					S	Sb	16 54 10.4	-0.7	
	baz=247								
WTCT	**Ta-ch'eng**	**2.03**	**268**	⇑	P	Pn	16 53 46.1	+2.0	
	baz=266								
WTCT					S	Sb	16 54 12.4	-0.4	
	baz=266								
LAY	**Lan-yu**	**2.08**	**205**		*e*P	Pn	16 53 43.4	-1.5	
	baz=204								
SSD	**Sandimen**	**2.08**	**236**		*e*P	Pn	16 53 46.3	+1.4	
	baz=225								
TSMG	**Majia**	**2.10**	**235**		*e*P	Pn	16 53 47.0	+1.9	
	baz=225								
WSF	**Szhu**	**2.10**	**262**	⇓	P	Pn	16 53 47.3	+2.2	
	baz=260								
WSF					S	Sb	16 54 13.9	-1.1	
	baz=260								
ICHU	**Yijhu**	**2.11**	**255**		*e*P	Pn	16 53 47.3	+2.0	
	baz=253								
ICHU					S	Sb	16 54 14.1	-1.1	
	baz=253								
SCST	**Cishan**	**2.12**	**241**		*e*P	Pb	16 53 48.0	-1.4	
	baz=239								
JTJ	**Tarama**	**2.13**	**70**		P	Pn	16 53 46.5	+1.0	
CHN3	**Shinhua**	**2.14**	**247**		*e*P	Pb	16 53 48.5	-1.3	
	baz=245								
CHN3					*e*S	Sb	16 54 16.3	+0.4	
	baz=245								
MASBT	**Mashibuluo**	**2.16**	**233**		*e*P	Pn	16 53 46.9	+1.0	
	baz=225								
MASBT					*e*S	Sn	16 54 13.6	+1.7	
	baz=225								
EAST	**Anshuo**	**2.17**	**225**		*e*P	Pn	16 53 46.0	-0.1	
	baz=223								
CHN8	**Yiju**	**2.18**	**255**		P	Pn	16 53 47.8	+1.7	
	baz=253								
CHN8					S	Sb	16 54 15.1	-1.9	
	baz=253								
SGLT	**Jiouru**	**2.20**	**237**		*e*P	Pb	16 53 49.9	-1.0	
	baz=235								
SGLT					*e*S	Sb	16 54 16.8	-1.0	
	baz=235								
TWM1	**Shoushan**	**2.21**	**240**		*e*P	Pb	16 53 50.3	-0.7	
	baz=238								
TWM1					*e*S	Sb	16 54 17.6	-0.3	
	baz=238								
SCLT	**Jiali**	**2.25**	**251**		*e*P	Pn	16 53 49.1	+2.1	
	baz=249								
SCLT					*e*S	Sb	16 54 17.6	-1.4	
	baz=249								
SSPT	**Xinbi**	**2.29**	**231**		*e*P	Pn	16 53 49.9	+2.3	
	baz=223								
SNJT	**Kaohsiung City**	**2.31**	**240**		*e*P	Pb	16 53 51.5	-1.3	
	baz=238								
SLIU	**Shizi**	**2.32**	**223**		*e*P	Pn	16 53 48.7	+0.6	
	baz=230								
SCZT	**Fangliau**	**2.33**	**228**		*e*P	Pn	16 53 50.5	+2.3	
	baz=218								
TSEB	**Hengchuen, Pin**	**2.51**	**216**		*e*P	Pn	16 53 53.1	+2.4	
	baz=215								
WLCH	**Liuqiu**	**2.51**	**231**		*e*P	Pb	16 53 55.1	-1.0	
	baz=245								
HEN	**Hengchun**	**2.52**	**220**		*e*P	Pn	16 53 52.6	+1.8	
	baz=219								
HEN					*e*S	Sn	16 54 22.0	+1.4	
	baz=219								
TWKBT	**Hengchun**	**2.52**	**218**		*e*P	Pn	16 53 51.9	+1.0	
	baz=217								
TWKBT					*e*S	Sn	16 54 21.1	+0.4	
	baz=217								
TWP	**Hsiaoliuchiu**	**2.52**	**232**		*e*P	Pb	16 53 54.5	-1.9	
	baz=245								
TWK1	**Hengchun**	**2.52**	**218**		*e*P	Pn	16 53 51.9	+1.0	
	baz=217								
TWK1					*e*S	Sn	16 54 21.4	+0.6	
	baz=217								
JIRB	**Irabujima**	**2.60**	**70**		P	Pn	16 53 53.0	+1.1	
WDGT	**Dungji**	**2.69**	**256**	⇓	P	Pn	16 53 54.5	+1.4	
	baz=254								
WDGT					*e*S	Sn	16 54 25.2	+0.4	
	baz=254								
JIKM	**Ikemajima**	**2.69**	**68**		P	Pn	16 53 54.4	+1.2	
JIKM					S	Sn	16 54 27.8	+2.9	
JMJ	**Miyako jima 2**	**2.70**	**71**		*e*P	Pn	16 53 55.3	+2.0	
	baz=73								
JMJ					*e*S	Sn	16 54 26.1	+1.1	
	baz=73								
JMJ2	**Miyako jima3**	**2.70**	**72**		P	Pn	16 53 54.9	+1.5	
JMJ2					S	Sn	16 54 27.1	+1.9	
PHUB	**P'eng-hu**	**2.71**	**262**		P	Pn	16 53 54.9	+1.4	
	baz=259								
PHUB					*e*S	Sn	16 54 26.4	+1.0	
	baz=259								
PNG	**Penghu**	**2.72**	**263**	⇓	*e*P	Pn	16 53 54.9	+1.3	
	baz=260								
PNG					*e*S	Sn	16 54 26.9	+1.3	
	baz=260								
JOGS	**Gusukube**	**2.78**	**72**		P	Pn	16 53 56.4	+2.0	
VCHM	**Qimei**	**2.91**	**256**		*e*P	Pn	16 53 57.5	+1.4	
	baz=254								
VCHM					S	Sn	16 54 31.0	+0.9	
	baz=254								
VWUC	**VWUC**	**2.97**	**291**	⇑	*e*P	Pn	16 53 57.3	+0.3	
	baz=289								
MATB	**Ma-tsu**	**3.19**	**314**		*e*P	Pn	16 54 00.4	+0.2	
	baz=299								
MSUT	**Lienchiang**	**3.22**	**314**		*e*P	Pn	16 54 01.2	+0.7	
	baz=300								
PTMZ	**Houxiangcun**	**3.27**	**290**		*e*P	Pn	16 54 01.4	+0.3	
	baz=288								
PTMZ					*e*S	Sn	16 54 37.9	-1.2	
	baz=288								
LYJJ	**Jianjiangzhen**	**3.59**	**317**		*e*P	Pn	16 54 05.6	0.0	
	baz=302								
XPSS	**Dashiqiu**	**3.64**	**325**		*e*P	Pn	16 54 06.6	+0.4	
	baz=324								
KNM	**Kinmen**	**3.74**	**278**		*e*P	Pn	16 54 09.8	+2.1	
	baz=276								
KNMB	**Chin-men Tao**	**3.79**	**279**		*e*P	Pn	16 54 08.7	+0.4	
	baz=277								
KNMB	**Chin-men Tao**	**3.79**	**279**		Pn	Pn	16 54 08.4	+0.1	
MHZQ	**Yeshan**	**3.81**	**305**		*e*P	Pn	16 54 08.4	-0.2	
	baz=302								
AXDP	**Jialang**	**4.24**	**284**	⇑	*e*P	Pn	16 54 14.9	+0.5	
	baz=282								
ZPLA	**Ao Xicun**	**4.34**	**271**		*e*P	Pn	16 54 16.7	+0.8	
	baz=269								
JOW	**Kunigami**	**5.97**	**60**		P	Pn	16 54 37.2	-1.1	
	1.4nm,0.3s,baz=148,slow=28,SNR=8.1								
JOW					S	Sn	16 55 42.9	-2.8	
	0.5nm,0.3s,baz=123,slow=22,SNR=1.0								
JOW	**Kunigami**	**5.97**	**60**		*e*P	Pn	16 54 38.2	-0.1	
	baz=62								
JOW	**Kunigami**	**5.97**	**60**			Pn	16 54 36.8	-1.5	
SZP	**Santa**	**6.64**	**197**		Pn	Pn	16 54 50.1	+2.6	
SSE	**Sheshan**	**7.22**	**351**		Pn	Pn	16 54 55.0	-0.5	
KSRS	**Korea Array**	**14.25**	**18**		P	Pn	16 56 34.9	+3.2	
	1.5nm,0.3s,baz=198,slow=11,SNR=52								
KSRS					LR	LR	17 02 03.7		
	comp=Z,76nm,18.5s,baz=198,slow=38								
KS19	**Wonju Array Si**	**14.28**	**18**		P	P	16 56 37.8	-1.2	
DAV	**Davao City (W)**	**17.03**	**169**		LR	LR	17 03 22.6		
	comp=Z,46nm,20.0s,baz=349,slow=35								
USRK	**Ussuriysk Ar.**	**21.66**	**19**		P	P	16 57 58.4	-1.6	
	1.5nm,0.8s,baz=206,slow=9.6,SNR=4.0								
CMAR	**Chiang Mai Arr**	**22.61**	**261**		P	P	16 58 12.1	+1.6	
	0.5nm,0.9s,baz=66,slow=8.7,SNR=3.4								
KSM	**Kuching**	**25.26**	**210**		P	P	16 58 38.9	+3.1	
KSM					IAmb	IAmb	16 58 54.5		
	comp=Z,5.8nm,1.2s								
ASAJ	**Asahikawa**	**26.00**	**34**		LR	LR	17 08 24.6		
	comp=Z,50nm,20.3s,baz=199,slow=35								
KLR	**Kul'dur**	**26.27**	**14**		LR	LR	17 10 10.8		
	comp=Z,59nm,19.0s,baz=250,slow=39								
SONM	**Songino Array**	**27.07**	**336**		LR	LR	17 11 04.4		
	comp=Z,95nm,18.1s,baz=252,slow=40								
BATI	**Baumata**	**33.95**	**178**		LR	LR	17 14 12.9		
	comp=Z,65nm,21.6s,baz=172,slow=37								
WMQ	**Urumqi**	**34.69**	**313**		P	P	16 59 58.0	-1.2	
MK31	**Makanchi Array**	**39.35**	**316**		P	P	17 00 38.5	-0.2	
MKAR	**Makanchi Array**	**39.35**	**316**		P	P	17 00 38.5	-0.2	
	comp=Z,1.6nm,0.5s,baz=99,slow=10.0,SNR=40								
MKAR	**Makanchi Array**	**39.35**	**316**		P	P	17 00 38.3	-0.3	
MAKZ	**Makanchi**	**39.55**	**316**		P	P	17 00 40.2	-0.1	
MAKZ					IAmb	IAmb	17 00 41.4		
	comp=Z,7.1nm,1.2s								
KNRA	**Kununurra**	**39.85**	**171**		P	P	17 00 43.7	+0.7	
ZAAO	**Zalesovo Array**	**41.10**	**327**		P	P	17 00 51.2	-1.9	
ZALV	**Zalesovo Beam**	**41.10**	**327**		P	P	17 00 51.2	-1.8	
	comp=Z,1.9nm,0.6s,baz=114,slow=6.6,SNR=8.0								
ZALV					PcP	PcP	17 02 50.6	-1.6	
	comp=Z,0.6nm,0.5s,baz=95,slow=4.8,SNR=2.7								
ZALV	**Zalesovo Beam**	**41.10**	**327**		P	P	17 00 51.0	-2.0	
AAK	**Ala-Archa**	**43.61**	**307**		P	P

WRH	Wood River Hil	68.43	28	P	P	17 04 10.5	-0.3
WRH				IAmb	IAmb	17 04 18.6	
	comp=Z,2.3nm,1.1s						
ILAR	Eielson Array	68.88	27	P	P	17 04 11.4	-2.2
	comp=Z,0.2nm,0.4s,baz=288,slow=5.1,SNR=2.0						
SPITS	Spitsbergen Ar	69.98	348	P	P	17 04 18.9	-1.4
	comp=Z,4.7nm,0.9s,baz=125,slow=12,SNR=4.5						
ARCES	ARCESS Array B	70.21	339	P	P	17 04 21.5	-0.3
	comp=Z,2.0nm,0.9s,baz=67,slow=6.9,SNR=1.2						
GLB	Gilahina Butte	71.00	30	P	P	17 04 26.4	-0.4
GLB				IAmb	IAmb	17 04 41.0	
	comp=Z,9.7nm,1.3s						
FINES	FINESS Array B	72.26	330	P	P	17 04 33.9	-0.4
	comp=Z,0.8nm,0.3s,baz=51,slow=5.2,SNR=12						
AKASG	Malin Array Be	73.85	319	P	P	17 04 42.9	-1.0
	comp=Z,0.4nm,0.4s,baz=72,slow=6.6,SNR=2.9						
BRTR	Keskin Array B	74.28	307	P	P	17 04 47.4	+0.6
	comp=Z,1.4nm,0.6s,baz=110,slow=5.9,SNR=3.7						
BRTR	Keskin Array B	74.28	307	P	P	17 04 47.0	+0.1
NC405	NORSAR Array S	78.75	332	P	P	17 05 11.0	-0.5
NC405				IAmb	IAmb	17 05 32.8	
	comp=Z,18nm,1.5s						
NOA	NORSAR Array B	79.00	332	P	P	17 05 12.1	-0.8
	comp=Z,0.2nm,0.4s,baz=60,slow=4.7,SNR=1.9						
YKA	Yellowknife Ar	82.73	23	P	P	17 05 31.9	-0.8
	comp=Z,0.7nm,0.6s,baz=314,slow=4.7,SNR=20						
GERES	GERESS Array B	83.79	321	P	P	17 05 38.7	+0.1
	comp=Z,0.6nm,0.7s,baz=54,slow=5.0,SNR=2.7						

*IDC **20** 17:02:12.0±1.2,21°.93S×65°.81W,h258km±12km,mb3.8/12, mb1 3.8/18,mb1mx3.7/33,mbtmp4.4/18,Error ellipse: s-maj=12.1km s-min=11.8km az=67.0*

*NEIC **20** 17:02:11.8±2.1,22°.12S±0°.08×65°.90W±0°.08,h259km±7km, Error ellipse: s-maj=11.4km s-min=10.9km az=54.0*

*VAO **20** 17:02:12.2±0.5,21°.94S×66°.05W,h280km±5km,mb4.3*

*SJA **20** 17:02:13.4±0.7,22°.12S×66°.05W,h254km±6km,ML3.9, MW4.3*

ISC 20 17:02:11.7±0.5,22°.03S±0°.04×65°.96W±0°.04,h261km±5km, **n216,σ1§29/238,mb4.2**/45,**13C-1D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	0.43	109	eP		Pn	17 02 48.3 +2.1
YJA				eS		S	17 03 13.3 0.0
YJA				IAML			17 03 16.9
	comp=Z,835nm,0.8s						
AZAP	Zapla	2.33	160	eP		Pn	17 02 59.3 +1.0
AZAP				eS		S	17 03 34.1 -1.1
AZAP				IAML			17 03 36.2
	comp=Z,372nm,0.8s						
ASTB	Santa Barbara	2.36	144	eP		Pn	17 02 59.7 +1.3
ASTB				eS		S	17 03 34.4 -1.1
SLA	San Lorenzo	2.71	171	eP		Pn	17 03 03.5 +1.5
LVC	Limon Verde	2.80	258	P		Pn	17 03 03.7 +0.7
	comp=Z,52nm,0.3s,baz=78,slow=6.6,SNR=191						
LVC				S		S	17 03 43.0 -0.7
	comp=Z,42nm,0.3s,baz=260,slow=22,SNR=21						
LVC	Limon Verde	2.80	258	⇓iP		Pn	17 03 03.9 +0.9
LVC				*i* S		S	17 03 43.5 -0.2
LVC	Limon Verde	2.80	258	Pn		Pn	17 03 04.0 +0.9
LVC	Limon Verde	2.80	258	eP		Pn	17 03 04.0 +0.9
LVC	Limon Verde	2.80	258	eP		Pn	17 03 04.0 +0.9
LVC				eS		S	17 03 40.7 -3.0
LVC				IAML			17 03 49.6
	comp=Z,117nm,0.3s						
PB09	IPOC Station P	3.06	274	⇑iP		Pn	17 03 06.9 +1.2
PB09				IAML			17 03 54.2
	comp=N,702nm,0.2s						
PB09	IPOC Station P	3.06	274			Pn	17 03 06.9 +1.2
PB06	IPOC Station P	3.41	258	⇑iP		Pn	17 03 09.6 +0.2
PB06				*i* S		S	17 03 54.4 -1.0
PB06	IPOC Station P	3.41	258			Pn	17 03 09.7 +0.2
PB01	IPOC Station P	3.43	286	⇑iP		Pn	17 03 10.3 +0.7
PB01				*i* S		S	17 03 54.5 -1.1
PB01	IPOC Station P	3.43	286			Pn	17 03 10.4 +0.8
PB15	IPOC Station P	3.45	250	⇑iP		Pn	17 03 10.3 +0.4
PB15				*i* S		S	17 03 55.5 -0.7
PB15	IPOC Station P	3.45	250			Pn	17 03 10.2 +0.2
PB03	IPOC Station P	3.52	269	⇑iP		Pn	17 03 11.0 +0.3
PB03				*i* S		S	17 03 55.6 -1.9
PB08	IPOC Station P	3.53	302			Pn	17 03 11.8 +0.7
PB07	IPOC Station P	3.66	274	⇑iP		Pn	17 03 12.5 +0.2
PB07				*i* S		S	17 03 58.4 -2.0
PB07	IPOC Station P	3.66	274			Pn	17 03 12.4 +0.2
PB04	IPOC Station P	3.90	265	⇑iP		Pn	17 03 15.4 +0.4
PB04	IPOC Station P	3.90	265			Pn	17 03 14.8 -0.1
FSA	Cafayete	4.06	180	eP		Pn	17 03 17.6 +0.8
PB11	IPOC Station P	4.13	302	⇑iP		Pn	17 03 18.4 +0.7
PB11				*i* S		S	17 04 08.8 -1.4
PB11	IPOC Station P	4.13	302	Pn		Pn	17 03 18.1 +0.4
TA01	Diego Aracena	4.20	290	⇑iP		Pn	17 03 18.3 0.0
TA01				*i* S		S	17 04 08.3 -3.0
TA01	Diego Aracena	4.20	290	Pn		Pn	17 03 18.3 0.0
TA02	Huaiquique	4.27	293	eP		Pn	17 03 18.9 -0.2
TA02				*i* S		S	17 04 09.9 -3.0
TA02	Huaiquique	4.27	293			Pn	17 03 19.0 -0.2
MNMC	Minye Minye	4.47	310			Pn	17 03 22.8 +1.0
PB10	IPOC Station P	4.49	250	⇑iP		Pn	17 03 21.3 -0.5
PB10				*i* S		S	17 04 14.0 -3.6
PB10	IPOC Station P	4.49	250			Pn	17 03 21.1 -0.6
PB10	IPOC Station P	4.49	250	eP		Pn	17 03 21.3 -0.4
GO02	Mina Guanaco	4.56	226	⇑iP		Pn	17 03 22.8 -0.1
GO02				*i* S		S	17 04 17.2 -2.4
GO02	Mina Guanaco	4.56	226			Pn	17 03 22.8 -0.1
PSGC	Pisagua	4.59	301	⇑iP		Pn	17 03 22.5 -0.6
PSGC				*i* S		S	17 04 16.4 -3.5
PSGCX	Pisagua	4.59	301			Pn	17 03 22.4 -0.6
PB14	IPOC Station P	4.83	237			Pn	17 03 25.3 -0.8
PB16	IPOC Station P	4.96	317	⇑iP		Pn	17 03 29.8 +1.8
PB16				*i* S		S	17 04 29.2 +0.4
PB16	IPOC Station P	4.96	317			Pn	17 03 29.7 +1.7
AP01	Chacalluta	5.50	311			Pn	17 03 33.7 -0.2
AC02	Maricunga	5.59	211	Pn		Pn	17 03 35.0 -0.4
AC01	Pan de Azucar	5.90	225	Pn		Pn	17 03 37.1 -1.7
GO03	Copiap	6.76	214	Pn		Pn	17 03 47.5 -2.0
SIV	San Ignacio	7.58	38	P		Pn	17 03 59.4 -0.5
	comp=N,3.9nm,0.3s,baz=235,slow=9.7,SNR=56						
SIV				S		S	17 05 19.7 -7.3
	baz=266,slow=17,SNR=1.2						
AC04	Llanos de Chal	7.70	216	Pn		Pn	17 03 58.6 -2.6
LCO	Las Campanas	8.16	211	Pn		Pn	17 04 05.2 -2.1
CPUP	Villa Florida	8.96	120	P		Pn	17 04 15.6 -1.5
	comp=N,0.1nm,0.3s,baz=32,slow=5.4,SNR=1.7						
PTLB	Pontes e Lacer	9.20	46	eP		Pn	17 04 20.4 +0.3
GO04	Tololo Observa	9.20	207	Pn		Pn	17 04 18.3 -2.0
AQDB	Aquidauana	9.69	83	eP		Pn	17 04 27.4 +1.1
CO03	El Pedregal	9.74	205	Pn		Pn	17 04 25.7 -1.2
VILB	Vilhena	10.56	32	eP		Pn	17 04 37.6 +0.3
PP1B	Ponte de Pedra	11.32	69	eP		Pn	17 04 46.7 0.0
VA03	San Esteban	11.44	200			Pn	17 04 48.4 +0.2
MT05	Renca	12.08	199	P		P	17 04 59.7 +1.1
MT02	Curacav	12.09	201	P		P	17 04 59.1 +0.5
MT03	Universidad Ad	12.11	198	P		P	17 04 59.3 +0.4
TRCB	Terra Rica	12.35	96	eP		Pn	17 04 59.6 +0.2
MT09	Talagante	12.52	200	Pn		Pn	17 05 00.6 -0.8
MT09				P		P	17 05 03.8 +0.3
MT01	Popeta	12.68	200			Pn	17 05 02.8 -0.5
MT01				P		P	17 05 05.3 +0.2
RFA	San Rafael	12.88	189	eP		Pn	17 05 04.7 -1.2
PTGB	Pitanga	13.03	105	eP		P	17 05 09.2 0.0
BO01	Tunca	13.11	199			P	17 05 10.3 +0.3
BO02	Sierra Bellavi	13.40	197	P		P	17 05 12.8 -0.4
BO02	Sierra Bellavi	13.40	197	eP		P	17 05 14.2 +1.0
ITAB	Concordia	13.59	115	eP		P	17 05 16.2 +0.8
PCMB	Pacaembu	13.65	91	eP		P	17 05 16.8 +0.6
CPSB	Cacapava Do Su	13.98	129	eP		P	17 05 19.9 +0.3
NNA	Nana	14.42	312	P		Pn	17 05 26.2 +1.5
	comp=N,2.8nm,0.3s,baz=164,slow=9.6,SNR=6.7						
NNA	Nana	14.42	312	P		Pn	17 05 26.3 +1.6
ML02	Panimavida	14.49	198			P	17 05 24.9 -0.3
PLTB	Pedras Altas	14.66	134	eP		Pn	17 05 27.7 +0.2
ITRB	Iturama	14.76	84	eP		Pn	17 05 28.6 -0.1
ARAG	Araguaiana, MT	14.79	67	eP		Pn	17 05 29.0 0.0
FRTB	Fartura	15.19	98	eP		P	17 05 32.7 -0.4
BI02	San Fabin de	15.29	196	P		Pn	17 05 34.6 -0.4
BI02				IAmb		IAmb	17 05 42.3
	comp=Z,7.8nm,0.9s						
BB19B	Bebedouro	16.24	90	eP		P	17 05 45.1 +0.4
RCLB	Rio Claro- Sao	17.07	95	eP		P	17 05 54.1 +0.5
SPB	Sao Paulo	17.15	99	P		P	17 05 54.6 +0.1
IPMB	Ipameri, GO	17.15	80	eP		P	17 05 55.5 +0.8
PET01	Itanhaem-SP	17.32	101	eP		P	17 05 57.4 +1.0
VAO	Valinhos	17.57	97	eP		P	17 05 59.4 +0.2
NPGB	Novo Progresso	18.07	36	eP		P	17 06 03.5 -1.0
BDFB	Brasilia	18.12	73	P		P	17 06 04.7 -0.6
	comp=Z,1.6nm,0.3s,baz=250,slow=12,SNR=10						
BDFB	Brasilia	18.12	73	P		P	17 06 05.6 +0.3
PARB	Paraibuna	18.81	98	eP		P	17 06 13.0 +0.5
PLCA	Paso Flores	19.05	191	P		Pn	17 06 17.1 -1.9
	comp=Z,1.1nm,0.3s,baz=17,slow=11,SNR=14						
PLCA	Paso Flores	19.05	191	P		P	17 06 14.8 -0.1
PLCA				IAmb	IAmb	17 06 17.9	
	comp=Z,9.3nm,1.3s						
ATAH	Atahualpa	19.06	319	P		P	17 06 16.1 +0.5
	comp=Z,0.4nm,0.3s,baz=151,slow=23,SNR=1.6						
PEXB	Peixe	19.53	63	eP		P	17 06 20.1 -0.1
LL04	Puerto Octay	19.60	195	P		P	17 06 19.8 -0.8
LL04				IAmb	IAmb	17 06 23.1	
	comp=Z,16nm,1.1s						
BSCB	Bom Sucesso	19.73	91	eP		P	17 06 23.3 +0.9
LL03	Petrohue	19.81	194	P		P	17 06 22.7 -0.2
ITTB	Itatiuba	20.16	31	eP		P	17 06 25.9 -1.0
VAS01	Vassouras-RJ	20.85	95	eP		P	17 06 34.6 +0.4
LL01	San Ignacio de	21.00	193	P		P	17 06 33.8 -1.5
LL01				IAmb	IAmb	17 06 36.4	
	comp=Z,14nm,1.1s						
JANB	Januaria	21.65	75	eP		P	17 06 41.0 -0.8
LL02	Futaleuf	21.66	192	P		P	17 06 40.3 -1.3
LL02				IAmb	IAmb	17 06 42.9	
	comp=Z,10nm,1.1s						
PTGA	Pitinga	21.96	16	P		P	17 06 43.0 -1.6
	comp=Z,2.4nm,0.3s,baz=278,slow=22,SNR=5.2						
PTGA	Pitinga	21.96	16	P		P	17 06 43.0 -1.6
PTGA				IAmb	IAmb	17 06 46.0	
	comp=Z,12nm,1.4s						
SMTB	Santa Maria do	21.98	56	eP		P	17 06 44.0 -0.8
PRPB	Parauapebas	22.18	47	eP		P	17 06 45.4 -1.2
SDBA	SAO DESIDERIO	22.24	68	eP		P	17 06 46.6 -0.7
MALB	Monte Alegre	23.06	31	eP		P	17 06 53.1 -1.5
BSFB	Barra de Sao F	23.74	87	eP		P	17 07 00.5 -0.2
RIB01	Linhares ES	24.06	88	eP		P	17 07 03.2 -0.5
NAN01	Guarapari, ES	24.62	85	eP		P	17 07 08.2 -0.6
MCPB	Macapa, AP	25.45	34	eP		P	17 07 14.7 -1.5
NBIT	Itapeh - BA	26.10	79	eP		P	17 07 21.4 -0.7
GDU01	Guandu, BA	26.40	76	eP		P	17 07 23.5 -1.3
NBLA	Lagarto - SE	29.09	72	eP		P	17 07 47.1 -1.5
GO09	Cerro Castillo	29.61	188	P		P	17 07 52.8 +0.1
NBTA	Tacaratu-PE	29.71	69	eP		P	17 07 52.8 -1.3
MDP	Montagnes des	29.95	27	P		P	17 07 55.5 -0.7
	comp=Z,8.0nm,0.5s,baz=205,slow=10,SNR=10						
NBMA	Muriti-CE	29.99	65	eP		P	17 07 56.0 -0.6
NBPB	Pedra_Branca-C	30.32	61	eP		P	17 07 58.5 -0.9
NBAN	Anadia - AL	31.01	71	eP		P	17 08 04.3 -1.2
NBCL	Cascavel-CE	32.13	61	eP		P	17 08 14.8 -0.4
RCBR	Riachuelo	33.22	65	P		P	17 08 24.4 -0.3
	comp=Z,13nm,0.8s,baz=227,slow=12,SNR=7.7						
RCBR	Riachuelo	33.22	65	P		P	17 08 24.8 +0.1
NBPV	Pedro Velho	33.43	67	eP		P	17 08 25.9 -0.5
MTO3	Montecristo	42.87	326	P		P	17 09 45.9 +0.8
ESQI	Esquipulas	42.99	326	P		P	17 09 44.9 -1.1
ZAIG	Zacatecas	57.05	319	P		P	17 11 32.0 +0.6
ZAIG				IAmb	IAmb	17 11 34.2	
	comp=Z,4.7nm,0.8s						
VNA1	Neumayer--Stat	58.87	161	PcP		PcP	17 12 29.5 +0.2
VNA2	Neumayer--Watz	59.25	161	P		P	17 11 47.4 +1.8
	baz=289,slow=8.8						
VNA2	Neumayer--Watz	59.25	161	PcP		PcP	17 12 28.7 -2.1
V55A	Taylorsville	59.35	346	P		P	17 11 47.6 +1.0
V55A				IAmb	IAmb	17 12 06.3	
	comp=Z,8.0nm,0.8s						
V53A	Saluda	59.57	344	P		P	17 11 50.7 +2.5
TKL	Tuckaleechee C	59.81	343	P		P	17 11 52.3 +2.5
SNAA	Sanae	60.89	161	P		P	17 11 57.8 +1.2
SNAA	Sanae	60.89	161	PcP		PcP	17 12 38.0 +0.5
SNAA	Sanae	60.89	161	P		P	17 11 57.6 +0.9
	comp=Z,1.1nm,0.6s,baz=296,slow=16,SNR=7.0						
W45A	Hickory Valley	61.00	338	P		P	17 11 57.8 0.0
WVT	Waverly	61.44	340	P		P	17 12 00.1 -0.5
WVT				IAmb	IAmb	17 12 00.7	
	comp=Z,6.2nm,0.6s						
R49A	Shelbyville	62.66	343	P		P	17 12 09.0 +0.3
TXAR	Lajitas Array	62.67	323	P		P	17 12 09.7 +0.6
	comp=Z,0.5nm,0.5s,baz=158,slow=8.6,SNR=8.2						
TXAR	Lajitas Array	62.67	323	P		P	17 12 09.5 +0.4
TX31	Lajitas Ar. Si	62.67	323	P		P	17 12 09.7 +0.5
TX31				IAmb	IAmb	17 12 37.2	
	comp=Z,9.2nm,1.2s						
TX32	Lajitas Array	62.67	323	P		P	17 12 09.7 +0.5
CCM	Cathedral Cave	64.32	338	P		P	17 12 19.7 +0.1
S39A	Bolivar	64.75	336	P		P	17 12 22.5 +0.1
R40A	Maddies Statio	64.89	337	P		P	17 12 23.4 +0.1
R40A				IAmb	IAmb	17 12 25.4	
	comp=Z,5.2nm,0.7s						
MNTX	Cornudas Mount	65.42	323	P		P	17 12 27.1 +0.2
MSTX	Muleshoe	65.80	327	P		P	17 12 30.0 +0.7
DBIC	Dimbokro	66.27	72	P		P	17 12 31.1 -1.5
	comp=Z,3.0nm,0.5s,baz=188,slow=3.7,SNR=5.0						
DBIC	Dimbokro	66.27	72	IAmb	IAmb	17 12 32.5	
	comp=Z,7.3nm,0.9s						
P38A	Dawn	66.53	337	P		P	17 12 33.7 0.0
ANMO	Albuquerque	68.47	325	P		P	17 12 46.6 +0.4
KOWA	Kowa	70.73	65	P		P	17 12 59.2 -0.9
KOWA				IAmb	IAmb	17 13 00.1	
	comp=Z,4.8nm,0.7s						
X16A	Lo Mia Camp, P	70.86	321	P		P	17 13 01.5 +0.8
ECSD	EROS Data Cent	71.24	337	P		P	17 13 03.1 +0.6
ECSD				IAmb	IAmb	17 13 07.3	
	comp=Z,4.6nm,1.1s						
Y14A	Wickenburg	71.44	320	P		P	17 13 05.0 +1.0
Y14A				IAmb	IAmb	17 13 06.8	
	comp=Z,4.1nm,1.0s						
WUAZ	Wupatki	71.60	322	P		P	17 13 07.2 +2.1
WUAZ				IAmb	IAmb	17 13 07.8	
	comp=Z,3.1nm,0.7s						
SMCO	Snowmass	71.97	328	P		P	17 13 09.7 +2.2
SMCO				IAmb	IAmb	17 13 10.4	
	comp=Z,3.1nm,0.8s						
PV01	Paradox Valley	71.99	326	P		P	17 13 09.0 +1.5
PV13	Radium Mtn., P	72.14	326	P		P	17 13 09.6 +1.3
PV05	Paradox Valley	72.23	325	P		P	17 13 10.6 +1.7
PV05				IAmb	IAmb	17 13 35.0	
	comp=Z,4.9nm,0.6s						
PV12	Saucer Basin,	72.25	326	P		P	17 13 10.8 +1.8
PV12				IAmb	IAmb	17 13 11.6	
	comp=Z,4.0nm,0.9s						
PV11	David Mesa, Pa	72.28	326	P		P	17 13 08.4 -0.7
PV11				IAmb	IAmb	17 13 18.5	
	comp=Z,4.9nm,1.1s						
PV17	East Wray Mesa	72.31	326	P		P	17 13 09.8 +0.5
PV22	Blue Mesa, Par	72.41	326	P		P	17 13 11.8 +1.9
PV22				IAmb	IAmb	17 13 12.6	
	comp=Z,3.9nm,0.8s						
W13A	Hualapai Mount	72.77	320	P		P	17 13 14.3 +2.2
O20A	White River Ci	73.33	327	P		P	17 13 17.2 +2.0
O20A				IAmb	IAmb	17 13 18.1	
	comp=Z,5.6nm,0.8s						
KNB	Kanab	73.49	322	P		P	17 13 16.9 +0.7
KNB				IAmb	IAmb	17 13 19.7	
	comp=Z,5.6nm,0.9s						
LCMT	Little Creek M	73.73	322	P		P	17 13 17.8 +0.3
SRU	San Rafael Swe	73.74	325	P		P	17 13 19.0 +1.4
SRU				IAmb	IAmb	17 13 20.2	
	comp=Z,6.4nm,0.7s						
MTPU	Mount Pierson	73.86	324	P		P	17 13 20.0 +1.4
RWWY	Rawlins	74.02	329	P		P	17 13 20.1 +0.8
RWWY				IAmb	IAmb	17 13 20.6	
	comp=Z,3.8nm,0.7s						
SZCU	Shurtz Canyon	74.05	323	P		P	17 13 18.2 -1.3
P17A	Butcher Ranch,	74.12	325	P		P	17 13 21.5 +1.7
P17A				IAmb	IAmb	17 13 22.6	
	comp=Z,6.1nm,0.9s						
CCUT	Cedar City	74.17	323	P		P	17 13 22.6 +2.4
CCUT				IAmb	IAmb	17 13 23.8	
	comp=Z,4.3nm,0.8s						
MSU	Marysvale	74.20	324	P		P	17 13 21.8 +1.5
TMUT	Trail Mountain	74.24	325	P		P	17 13 22.3 +1.7
TOA0	Torodi Ar. Sit	74.97	69	P		P	17 13 23.5 -1.4
TORD	Torodi Ar. Bea	74.97	69	P		P	17 13 24.0 -0.9
	comp=Z,4.8nm,0.5s,baz=256,slow=5.5,SNR=57						
TORD				pP		pP	17 14 27.0 +0.7
	comp=Z,1.7nm,0.8s,baz=258,slow=5.5,SNR=2.7						
TORD	Torodi Ar. Bea	74.97	69	P		P	17 13 23.5 -1.4
TORD				IAmb	IAmb	17 13 24.7	
	comp=Z,7.9nm,1.1s						
NLU	North Lily Min	75.18	325	P		P	17 13 27.8 +1.9
TPNV	Topopah Spring	75.43	320	P		P	17 13 29.4 +2.2
TPNV				IAmb	IAmb	17 13 30.7	
	comp=Z,4.3nm,1.1s						
SPR3	Spring Creek 3	75.73	323	P		P	17 13 30.4 +1.2
ISA	Isabella, Lake	75.92	318	P		P	17 13 30.0 +0.1
BW06	Boulder Array	75.97	328	P		P	17 13 31.0 +0.7
BW06				IAmb	IAmb	17 13 41.7	
	comp=Z,6.1nm,1.5s						
PD31	Pinedale Array	75.97	328	P		P	17 13 30.5 +0.2
PDAR	Pinedale Array	75.97	328	P		P	17 13 31.6 +1.3
	comp=Z,0.7nm,0.5s,baz=124,slow=7.7,SNR=12						
PDAR	Pinedale Array	75.97	328	P		P	17 13 30.9 +0.6
HWUT	Hardware Ranch	76.11	326	P		P	17 13 31.0 -0.1
HWUT				IAmb	IAmb	17 13 33.0	
	comp=Z,2.9nm,0.6s						
BGU	Big Grassy Mou	76.38	325	P		P	17 13 33.5 +0.9
BGU				IAmb	IAmb	17 13 35.8	
	comp=Z,4.5nm,1.0s						
ULM	Lac du Bonnet	76.68	341	P		P	17 13 33.6 -0.2
	comp=Z,3.7nm,0.6s,baz=155,slow=5.1,SNR=8.6						
ULM	Lac du Bonnet	76.68	341	P		P	17 13 34.2 +0.4
ULM				IAmb	IAmb	17 13 34.9	
	comp=Z,4.2nm,0.7s						
AHID	Auburn Hatcher	76.73	328	P		P	17 13 34.9 +0.4
TPH	Tonopah	76.75	321	P		P	17 13 36.6 +1.9
REDW	Red Top Meadow	77.04	328	P		P	17 13 37.2 +0.9
REDW				IAmb	IAmb	17 13 54.7	
	comp=Z,5.4nm,1.1s						
LOHW	Long Hollow	77.11	328	P		P	17 13 38.4 +1.7
MOOW	Moose Ponds	77.28	328	P		P	17 13 37.9 +0.3
ELK	Elko	77.44	324	P		P	17 13 40.1 +1.5
RLMT	Red Lodge	77.61	330	P		P	17 13 41.1 +1.8
RLMT				IAmb	IAmb	17 13 41.5	
	comp=Z,2.4nm,0.6s						
NVAR	Mina Array Bea	77.63	320	P		P	17 13 39.9 +0.3
	comp=Z,1.9nm,0.9s,baz=152,slow=6.0,SNR=8.5						
NVAR	Mina Array Bea	77.63	320	P		P	17 13 40.6 +1.0
KVN	Kaiserville	77.92	321	P		P	17 13 43.0 +1.9
KVN				IAmb	IAmb	17 13 43.7	
	comp=Z,4.2nm,0.8s						
YHH	Holmes Hill	78.10	329	P		P	17 13 44.6 +2.5
YHH				IAmb	IAmb	17 13 45.4	
	comp=Z,3.5nm,0.8s						
YHL	Hebgen Lake	78.31	329	P		P	17 13 45.6 +2.3
YHL				IAmb	IAmb	17 13 46.1	
	comp=Z,2.7nm,0.6s						
WAKR	Walker	78.35	320	P		P	17 13 45.8 +2.3
YERR	Yerington	78.54	320	P		P	17 13 46.1 +1.5
YERR				IAmb	IAmb	17 13 47.5	
	comp=Z,3.5nm,0.6s						
PNTR	Pine Nut	78.82	320	P		P	17 13 47.0 +0.9
HLID	Hailey	78.98	326	P		P	17 13 49.2 +2.4
HLID				IAmb	IAmb	17 13 50.1	
	comp=Z,4.6nm,0.8s						
PAHR	Pah Rah Range	79.10	321	P		P	17 13 49.2 +1.7
PAHR				IAmb	IAmb	17 13 50.6	
	comp=Z,6.7nm,0.9s						
MCMT	McKenzie Canyo	79.10	328	P		P	17 13 48.8 +1.3
ESDC	Sonseca Array	84.31	43	P		P	17 14 14.8 +0.2
	comp=Z,1.5nm,0.9s,baz=245,slow=4.4,SNR=6.9						
YKA	Yellowknife Ar	92.62	340	P		P	17 14 54.1 +0.8
	comp=Z,0.8nm,0.6s,baz=128,slow=4.9,SNR=21						
YKA				pP		pP	17 15 59.4 +1.6
	comp=Z,0.3nm,0.7s,baz=126,slow=4.9,SNR=3.4						
ASAR	Alice Springs	130.64	204	PKP	PKiKP	PKiKP	17 20 52.8 -0.5
	comp=Z,0.7nm,0.5s,baz=130,slow=1.7,SNR=17						
WRA	Warramunga Arr	133.81	207	PKP	PKiKP	PKiKP	17 20 59.0 -0.7
	comp=Z,0.7nm,0.3s,baz=157,slow=1.8,SNR=11						
MKAR	Makanchi Array	144.40	38	PKP	PKPdf	PKPdf	17 21 16.8 0.0
	comp=Z,1.5nm,0.5s,baz=351,slow=2.4,SNR=32						
MKAR	Makanchi Array	144.40	38		PKPdf	PKPdf	17 21 16.6 -0.2
KLR	Kul'dur	149.44	337	PKPbc		PKPbc	17 21 30.0 +0.2

NNSB	**Datong** baz=283	**1.19 295**	P	**Pg**	**17 06 21.5**	**-0.4**
NNSB	baz=283		S	**Sb**	**17 06 35.9**	**-0.2**
NNSH	**Datong** baz=295	**1.19 295**	*i* P	**Pg**	**17 06 21.4**	**-0.4**
NNSH	baz=295		S	**Sb**	**17 06 36.4**	**+0.3**
TWB1	**Santiao Chiao** baz=351	**1.20 334**	P	**Pg**	**17 06 21.7**	**-0.1**
TWB1	baz=351		S	**Sg**	**17 06 36.5**	**-1.0**
NNS	**Nan Shan** baz=283	**1.21 295**	*i* P	**Pg**	**17 06 21.7**	**-0.4**
NNS	baz=283		*i* S	**Sb**	**17 06 36.5**	**+0.1**
WHF	**Hehuan Shan** baz=280	**1.22 280**	P	**Pn**	**17 06 21.2**	**-0.1**
WHF	baz=280		*i* S	**Sb**	**17 06 35.2**	**-1.8**
TIPB	**Shuangxi** baz=328	**1.24 327**	*i* P	**Pg**	**17 06 23.5**	**+0.8**
TIPB	baz=328		*i* S	**Sg**	**17 06 38.4**	**-0.5**
FUSS	**Fushou** baz=285	**1.25 285**	*i* P	**Pb**	**17 06 22.4**	**+0.3**
FUSS	baz=285		S	**Sb**	**17 06 38.1**	**+0.1**
OWD	**Renai** baz=271	**1.28 271**	P	**Pn**	**17 06 22.2**	**+0.3**
OWD	baz=271		*e*S	**Sn**	**17 06 37.6**	**-1.0**
CHGB	**Renai** baz=276	**1.29 276**	P	**Pn**	**17 06 22.4**	**+0.3**
CHGB	baz=276		S	**Sn**	**17 06 38.3**	**-0.6**
NWLT	**Wulai** baz=299	**1.29 311**	*i* P	**Pg**	**17 06 23.5**	**-0.1**
NWLT	baz=299		S	**Sg**	**17 06 39.6**	**-0.9**
YULB	**Yu-li** baz=245	**1.29 246**	P	**Pn**	**17 06 22.1**	**+0.2**
YULB	baz=245		S	**Sn**	**17 06 37.6**	**-1.1**
YULB	**Yu-li**	**1.29 246**		**Pn**	**17 06 21.7**	**-0.2**
EYUL	**Yuli** baz=243	**1.29 243**	*i* P	**Pn**	**17 06 22.1**	**+0.2**
EYUL	baz=243		*i* S	**Sn**	**17 06 39.3**	**+0.6**
TWT	**Tachien** baz=273	**1.32 284**	*i* P	**Pb**	**17 06 23.6**	**+0.5**
TWT	baz=273		S	**Sn**	**17 06 39.5**	**-0.2**
YHNB	**Yeheng** baz=305	**1.32 304**	P	**Pg**	**17 06 23.3**	**-0.8**
YHNB	baz=305		S	**Sn**	**17 06 38.6**	**-0.9**
YHNB	**Yeheng**	**1.32 304**		**Pb**	**17 06 23.1**	**+0.1**
VWDT	**VWDT** baz=262	**1.32 262**	P	**Pb**	**17 06 22.9**	**-0.1**
VWDT	baz=262		S	**Sn**	**17 06 39.1**	**-0.5**
TDCB	**Techi** baz=272	**1.33 284**	P	**Pb**	**17 06 23.3**	**0.0**
WFSB	**Wu-fen Shan** baz=329	**1.34 328**	P	**Pg**	**17 06 23.8**	**-0.8**
WFSB	baz=329		S	**Sg**	**17 06 42.5**	**+0.3**
JKRS	**Kuro-shima**	**1.35 77**	P	**Pg**	**17 06 25.8**	**+1.1**
JKRS			*e*S	**Sg**	**17 06 43.8**	**+1.5**
TWA	**Mucha** baz=321	**1.38 319**	*i* P	**Pg**	**17 06 25.7**	**+0.4**
TWA	baz=321		*i* S	**Sg**	**17 06 44.3**	**+1.0**
FULB	**Fuli** baz=225	**1.38 238**	P	**Pn**	**17 06 22.4**	**-0.8**
CHKT	**Chengkung** baz=221	**1.39 233**	P	**Pn**	**17 06 22.7**	**-0.5**
CHKT	baz=221		*e*S	**Sn**	**17 06 37.7**	**-3.4**
NHDH	**Xindian Distri** baz=335	**1.40 317**	*i* P	**Pg**	**17 06 25.5**	**-0.2**
NHDH	baz=335		*i* S	**Sg**	**17 06 44.0**	**-0.1**
TNOU	**National Taiwa** baz=330	**1.41 329**	P	**Pg**	**17 06 24.5**	**-1.5**
TNOU	baz=330		*e*S	**Sb**	**17 06 41.5**	**-0.8**
TATO	**Taipei** baz=318	**1.43 317**	P	**Pg**	**17 06 26.0**	**-0.4**
TATO	baz=318		S	**Sg**	**17 06 44.8**	**-0.3**
TATO	**Taipei**	**1.43 317**		**Pb**	**17 06 25.0**	**0.0**
BACT	**New Taipei Cit** baz=316	**1.48 316**	P	**Pb**	**17 06 25.3**	**-0.4**
WPL	**Puli Township** baz=272	**1.48 273**	P	**Pb**	**17 06 25.6**	**-0.1**
SSLB	**Suanglung** baz=264	**1.49 265**	*e*P	**Pn**	**17 06 25.4**	**+0.8**
SSLB	**Suanglung**	**1.49 265**		**Pn**	**17 06 25.0**	**+0.3**
JIJ	**Ishigaki jima**	**1.50 73**	P	**Pg**	**17 06 27.2**	**-0.4**
JIJ			*e*S	**Sg**	**17 06 46.3**	**-0.8**
EDH	**Donghe** baz=220	**1.51 231**	*e*P	**Pn**	**17 06 25.0**	**+0.1**
EDH	baz=220		S	**Sn**	**17 06 42.4**	**-1.7**
DPDB	**Guoxing** baz=273	**1.51 274**	P	**Pb**	**17 06 26.2**	**-0.1**
YM01	**YM01** baz=323	**1.51 323**	*e*P	**Pg**	**17 06 27.3**	**-0.6**
WHP	**Taichung City** baz=273	**1.53 283**	P	**Pb**	**17 06 27.3**	**+0.7**
WHP	baz=273		S	**Sn**	**17 06 44.9**	**+0.2**
YM10	**YM10** baz=323	**1.53 323**	*e*P	**Pb**	**17 06 26.2**	**-0.3**
YM11	**YM11** baz=324	**1.53 324**	*e*P	**Pg**	**17 06 26.7**	**-1.5**
SMLT	**Sun Moon Lake** baz=268	**1.53 268**	*e*P	**Pb**	**17 06 26.3**	**-0.3**
SMLT	baz=268		S	**Sn**	**17 06 45.2**	**+0.4**
YM08	**YM08** baz=325	**1.54 325**	*e*P	**Pb**	**17 06 26.1**	**-0.6**
YM04	**YM04** baz=322	**1.54 322**	*e*P	**Pb**	**17 06 25.9**	**-0.9**
YUS	**Yu-Shan** baz=253	**1.55 254**	*i* P	**Pn**	**17 06 26.8**	**+0.9**
YUS	baz=253		*i* S	**Sn**	**17 06 45.1**	**-0.7**
YM03	**YM03** baz=323	**1.56 323**	*e*P	**Pg**	**17 06 27.3**	**-1.5**
TWS1	**Kuangyinshan** baz=336	**1.57 318**	P	**Pb**	**17 06 27.3**	**+0.1**
TWS1	baz=336		*e*S	**Sb**	**17 06 46.1**	**-0.6**
TYC	**Yuchr** baz=268	**1.57 269**	P	**Pb**	**17 06 26.7**	**-0.5**
ANP	**Anpu** baz=323	**1.57 323**	P	**Pg**	**17 06 27.6**	**-1.5**
NJD	**Zhudong** baz=302	**1.57 301**	P	**Pg**	**17 06 28.4**	**-0.7**
NJD	baz=302		S	**Sg**	**17 06 48.4**	**-1.2**
NTY	**Taoyuan** baz=314	**1.57 313**	P	**Pb**	**17 06 27.5**	**+0.2**
NTY	baz=314		*e*S	**Sb**	**17 06 47.5**	**+0.6**
LIOB	**Emei** baz=297	**1.59 297**	*i* P	**Pg**	**17 06 28.3**	**-1.0**
LIOB	baz=297		*i* S	**Sb**	**17 06 48.1**	**+0.8**
WHYT	**Xinyi Township** baz=261	**1.59 262**	P	**Pb**	**17 06 28.6**	**+0.9**
NSTT	**Nanjuang** baz=297	**1.59 296**			*i* P	**Pg**	**17 06 28.4**	**-1.0**
NSTT	baz=297		*i* S	**Sb**	**17 06 47.9**	**+0.3**
NTST	**Danshui** baz=336	**1.60 320**	P	**Pg**	**17 06 28.1**	**-1.4**
TWY	**Chenhua** baz=327	**1.60 327**	P	**Pg**	**17 06 28.4**	**-1.2**
LDUT	**Ludao** baz=218	**1.61 219**	P	**Pn**	**17 06 25.9**	**-0.5**
LDUT	baz=218		S	**Sn**	**17 06 45.5**	**-1.2**
NCU	**National Centr** baz=311	**1.63 310**	P	**Pb**	**17 06 28.2**	**-0.1**
NCU	baz=311		*e*S	**Sb**	**17 06 48.9**	**+0.3**
HSN1	**Hsinchu** baz=302	**1.65 301**	P	**Pb**	**17 06 28.9**	**+0.3**
HSN1	baz=302		S	**Sg**	**17 06 50.9**	**-1.1**
ALS	**Alishan** baz=255	**1.68 256**	*i* P	**Pb**	**17 06 28.7**	**-0.5**
ALS	baz=255		S	**Sn**	**17 06 48.3**	**-0.3**
LONT	**Longtian** baz=222	**1.68 233**	*e*P	**Pn**	**17 06 27.3**	**+0.1**
SBCB	**Hsinchu** baz=302	**1.68 301**	P	**Pb**	**17 06 29.3**	**+0.1**
SBCB	baz=302		S	**Sb**	**17 06 50.9**	**+0.9**
WJS	**Zhushan** baz=266	**1.69 267**	P	**Pb**	**17 06 30.4**	**+1.0**
TWQ1	**Liyutan** baz=285	**1.70 284**	*i* P	**Pb**	**17 06 29.9**	**+0.4**
TWQ1	baz=285		S	**Sn**	**17 06 49.2**	**+0.4**
HSN	**Hsinchu** baz=303	**1.70 301**	*e*P	**Pb**	**17 06 28.7**	**-0.8**
HSN	baz=303		S	**Sb**	**17 06 50.9**	**+0.4**
JISG	**Ishigakijimahi**	**1.71 67**	P	**Pg**	**17 06 30.1**	**-1.6**
JISG			*e*S	**Sg**	**17 06 52.0**	**-2.0**
WWF	**Wufeng** baz=274	**1.72 274**	P	**Pb**	**17 06 30.8**	**+1.0**
WWF	baz=274		S	**Sb**	**17 06 52.7**	**+1.6**
NJN	**Zhunan** baz=297	**1.72 296**	P	**Pb**	**17 06 29.8**	**0.0**
NJN	baz=297		S	**Sb**	**17 06 50.6**	**-0.6**
NSY	**Sanyi** baz=287	**1.72 287**	*i* P	**Pb**	**17 06 30.4**	**+0.6**
NSY	baz=287		*i* S	**Sb**	**17 06 51.9**	**+0.7**
WNT	**Mingjian** baz=268	**1.73 269**	P	**Pb**	**17 06 30.1**	**+0.1**
WNT	baz=268		S	**Sb**	**17 06 52.9**	**+1.5**
WNT1	**Nantou City** baz=269	**1.73 269**	P	**Pb**	**17 06 30.1**	**0.0**
WNT1	baz=269		*e*S	**Sn**	**17 06 50.8**	**+1.1**
TCU	**Taichung** baz=277	**1.75 277**	*i* P	**Pb**	**17 06 30.7**	**+0.4**
TCU	baz=277		*i* S	**Sb**	**17 06 52.9**	**+1.0**
TWGBT	**Beinan** baz=221	**1.77 231**	*e*P	**Pn**	**17 06 28.1**	**-0.3**
TWGBT	baz=221		*e*S	**Sn**	**17 06 48.9**	**-1.6**
CHN5	**Tsauling** baz=250	**1.77 259**	P	**Pb**	**17 06 30.6**	**-0.1**
CHN5	baz=250		S	**Sn**	**17 06 52.0**	**+1.3**
TWG	**Pinlang** baz=221	**1.77 232**	P	**Pn**	**17 06 28.1**	**-0.4**
TWG	baz=221		S	**Sn**	**17 06 48.9**	**-1.7**
TWG	**Pinlang**	**1.77 232**		**Pn**	**17 06 28.0**	**-0.4**
WDJ	**Dajia District** baz=284	**1.81 284**	P	**Pb**	**17 06 31.0**	**-0.4**
WDJ	baz=284		*e*S	**Sn**	**17 06 52.9**	**+1.2**
STYH	**Taoyuan** baz=237	**1.82 246**	*e*P	**Pn**	**17 06 30.1**	**+1.0**
STYH	baz=237		S	**Sn**	**17 06 51.5**	**-0.2**
STYT	**Tauyuan** baz=237	**1.83 246**	P	**Pn**	**17 06 30.4**	**+1.0**
STYT	baz=237		*e*S	**Sn**	**17 06 52.3**	**0.0**
WCHH	**Zhanghua** baz=275	**1.85 275**	*i* P	**Pb**	**17 06 32.4**	**+0.3**
WCHH	baz=275		*i* S	**Sb**	**17 06 56.0**	**+1.1**
WGK	**Gukeng** baz=262	**1.86 263**	P	**Pb**	**17 06 32.1**	**-0.1**
WDLH	**Douliu** baz=263	**1.88 263**	*e*P	**Pb**	**17 06 32.1**	**-0.4**
WDLH	baz=263		S	**Sb**	**17 06 57.4**	**+1.7**
TPUB	**Ta-pu** baz=240	**1.89 251**	P	**Pb**	**17 06 32.1**	**-0.6**
TPUB	baz=240		*e*S	**Sn**	**17 06 55.2**	**+1.6**
TPUB	**Ta-pu**	**1.89 251**		**Pb**	**17 06 32.5**	**-0.3**
WTP	**Ta-pu** baz=240	**1.92 250**	P	**Pn**	**17 06 31.5**	**+0.9**
WTP	baz=240		S	**Sn**	**17 06 56.3**	**+1.9**
CHN2	**Minshiung** baz=258	**1.96 259**	P	**Pb**	**17 06 34.4**	**+0.4**
ECL	**Taimali** baz=240	**2.00 229**	*e*P	**Pn**	**17 06 30.4**	**-1.2**
ECL	baz=240		*e*S	**Sn**	**17 06 54.3**	**-1.9**
SLGT	**Liugui** baz=233	**2.00 243**	P	**Pb**	**17 06 33.8**	**-0.8**
WRL	**Guolierlin Hig** baz=269	**2.01 270**	*e*P	**Pb**	**17 06 35.0**	**+0.2**
WRL	baz=269		*e*S	**Sb**	**17 06 59.4**	**0.0**
SGST	**Jiashian** baz=236	**2.02 245**	P	**Pb**	**17 06 33.8**	**-1.0**
SGST	baz=236		*e*S	**Sb**	**17 06 59.4**	**-0.2**
WTK	**Tuku** baz=263	**2.02 263**	P	**Pb**	**17 06 35.0**	**+0.1**
WTK	baz=263		S	**Sb**	**17 07 00.6**	**+0.9**
CHY	**Chiayi** baz=258	**2.02 258**	*e*P	**Pb**	**17 06 35.0**	**+0.1**
CHY	baz=258		*e*S	**Sb**	**17 06 59.4**	**-0.2**
CHN1	**Nanshi** baz=249	**2.02 249**	P	**Pb**	**17 06 34.7**	**-0.3**
CHN1	baz=249		S	**Sb**	**17 06 59.4**	**-0.4**
SNST	**Tainan City** baz=250	**2.03 250**	*e*P	**Pb**	**17 06 34.1**	**-1.1**
SNST	baz=250		*e*S	**Sn**	**17 06 59.4**	**+2.4**
JTJ	**Tarama**	**2.07 70**	P	**Pg**	**17 06 35.5**	**-2.9**
JTJ			*e*S	**Sg**	**17 07 01.5**	**-3.8**
WTCT	**Ta-ch'eng** baz=268	**2.10 269**	P	**Pb**	**17 06 35.0**	**-1.3**
WTCT	baz=268		S	**Sn**	**17 07 01.1**	**+2.5**
LAY	**Lan-yu** baz=206	**2.11 207**	P	**Pn**	**17 06 31.8**	**-1.4**
LAY	baz=206		*e*S	**Sn**	**17 06 56.0**	**-3.0**
SSD	**Sandimen** baz=231	**2.14 237**	P	**Pn**	**17 06 35.5**	**+1.9**
SSD	baz=231		*e*S	**Sn**	**17 07 01.4**	**+1.7**
TSMG	**Majia** baz=227	**2.15 236**	*e*P	**Pn**	**17 06 35.8**	**+2.0**
WSF	**Szhu** baz=262	**2.17 263**	P	**Pb**	**17 06 37.0**	**-0.6**
WSF	baz=262		S	**Sb**	**17 07 03.7**	**-0.5**
SCST	**Cishan** baz=232	**2.18 242**	*e*P	**Pb**	**17 06 37.5**	**-0.1**
SCST	baz=232		*e*S	**Sb**	**17 07 05.1**	**+0.8**
EAST	**Anshuo** baz=224	**2.21 226**	*e*P	**Pn**	**17 06 34.7**	**0.0**
MASBT	**Mashibuluo** baz=226	**2.22 234**	*e*P	**Pn**	**17 06 36.1**	**+1.4**
CHN8	**Yiju** baz=255	**2.24 255**	P	**Pb**	**17 06 37.2**	**-1.5**
CHN8	baz=255		*e*S	**Sn**	**17 07 04.3**	**+2.0**
TWM1	**Shoushan** baz=240	**2.27 241**	*e*P	**Pb**	**17 06 38.9**	**-0.2**
SCLT	**Jiali** baz=251	**2.31 251**	*e*P	**Pb**	**17 06 38.9**	**-0.9**
SCLT	baz=251		*e*S	**Sn**	**17 07 06.0**	**+2.1**
SLIU	**Shizi** baz=231	**2.37 224**	*e*P	**Pn**	**17 06 37.0**	**+0.3**
SCZT	**Fangliau** baz=221	**2.38 230**	P	**Pb**	**17 06 39.5**	**-1.5**
TSEB	**Hengchuen, Pin** baz=217	**2.54 218**	*e*P	**Pn**	**17 06 39.8**	**+0.6**
HEN	**Hengchun** baz=220	**2.56 222**	*e*P	**Pn**	**17 06 40.6**	**+1.3**
WLCH	**Liuqiu** baz=227	**2.56 232**	*e*P	**Pb**	**17 06 44.9**	**+0.7**
TWKBT	**Hengchun** baz=218	**2.56 220**	*e*P	**Pn**	**17 06 41.2**	**+1.8**
TWK1	**Hengchun** baz=218	**2.57 220**	*e*P	**Pn**	**17 06 40.9**	**+1.5**
WDGT	**Dungji** baz=256	**2.76 256**	P	**Pn**	**17 06 43.5**	**+1.5**
WDGT	baz=256		S	**Sn**	**17 07 13.9**	**-1.0**
PHUB	**P'eng-hu** baz=275	**2.78 262**	*e*P	**Pn**	**17 06 43.5**	**+1.1**
PNG	**Penghu** baz=262	**2.79 263**	P	**Pn**	**17 06 43.2**	**+0.7**
PNG	baz=262		S	**Sn**	**17 07 15.9**	**+0.2**
VCHM	**Qimei** baz=255	**2.97 257**	*e*P	**Pn**	**17 06 46.6**	**+1.6**
VWUC	**VWUC** baz=291	**3.04 291**	*e*P	**Pn**	**17 06 46.0**	**+0.2**
VWUC	baz=291		*e*S	**Sn**	**17 07 18.5**	**-3.3**
MATB	**Ma-tsu** baz=300	**3.25 313**	*e*P	**Pn**	**17 06 49.8**	**+0.9**
PTMZ	**Houxiangcun** baz=290	**3.33 290**	*e*P	**Pn**	**17 06 50.3**	**+0.3**
LYJJ	**Jianjiangzhen** baz=303	**3.64 316**	*e*P	**Pn**	**17 06 54.3**	**+0.1**
XPSS	**Dashiqiu** baz=324	**3.68 325**	*e*P	**Pn**	**17 06 55.4**	**+0.7**
KNM	**Kinmen** baz=278	**3.81 278**	*e*P	**Pn**	**17 06 58.6**	**+2.0**
KNMB	**Chin-men Tao** baz=279	**3.86 279**	*e*P	**Pn**	**17 06 57.7**	**+0.5**
KNMB	**Chin-men Tao**	**3.86 279**	Pn	**Pn**	**17 06 57.5**	**+0.3**
MHZQ	**Yeshan** baz=303	**3.87 305**	*e*P	**Pn**	**17 06 57.7**	**+0.3**
AXDP	**Jialang** baz=284	**4.30 284**	*e*P	**Pn**	**17 07 04.0**	**+0.6**
JOW	**Kunigami** 1.1nm,0.3s,baz=118,slow=29,SNR=6.8	**5.91 60**	Pn	**Pn**	**17 07 24.1**	**-1.3**
JOW	baz=100,slow=29,SNR=1.0		Sn	**Sn**	**17 08 33.8**	**+1.1**
JOW	**Kunigami**	**5.91 60**		**Pn**	**17 07 26.2**	**+0.8**
KSRS	**Korea Array** 0.1nm,0.3s,baz=196,slow=11,SNR=1.7	**14.23 18**	Pn	**Pn**	**17 09 18.6**	**-0.8**
DAV	**Davao City (W)** comp=Z,26nm,20.3s,baz=314,slow=36	**17.02 170**	LR	LR	17 16 23.7	
SONM	**Songino Array** 0.8nm,0.6s,baz=139,slow=7.1,SNR=1.9	**27.10 336**	P	**P**	**17 11 40.6**	**-0.1**
SONM	comp=Z,63nm,20.6s,baz=110,slow=39		LR	LR	17 23 36.6	
MKAR	**Makanchi Array** 0.5nm,0.4s,baz=111,slow=8.0,SNR=14	**39.40 316**	P	**P**	**17 13 27.7**	**+0.2**
MAKZ	**Makanchi** comp=Z,2.6nm,1.1s	**39.61 315**	P	**P**	**17 13 29.5**	**+0.3**
MAKZ			IAmb	IAmb	17 13 30.8	
ZALV	**Zalesovo Beam** comp=Z,0.9nm,0.6s,baz=118,slow=8.3,SNR=2.7	**41.15 327**	P	**P**	**17 13 40.3**	**-1.5**
KURBB	**Kurchatov Arra** comp=Z,0.4nm,0.2s,baz=123,slow=6.8,SNR=2.3	**43.12 320**	P	**P**	**17 13 57.9**	**0.0**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.7s,baz=344,slow=8.4,SNR=2.2	**45.09 164**	P	**P**	**17 14 15.7**	**+1.6**
GAR	**Garm** comp=Z,4.2nm,0.7s	**46.43 302**	P	**P**	**17 14 26.6**	**+2.0**
GAR			IAmb	IAmb	17 14 26.7	
TIXI	**Tiksi** comp=Z,0.6nm,0.3s,baz=49,slow=1.2,SNR=1.8	**47.88 3**	P	**P**	**17 14 33.4**	**-1.8**
ASAR	**Alice Springs** comp=Z,0.4nm,0.5s,baz=348,slow=8.2,SNR=8.1	**48.58 166**	P	**P**	**17 14 43.5**	**+2.2**
ABKAR	**Akbulak array**	**54.52 314**	P	**P**	**17 15 25.7**	**+0.2**
ABKAR	comp=Z,8.4nm,1.9s		IAmb	IAmb	17 15 48.0	
FINES	**FINESS Array B** comp=Z,2.4nm,1.0s,baz=44,slow=6.1,SNR=4.1	**72.30 330**	P	**P**	**17 17 22.8**	**-0.2**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.6s,baz=315,slow=4.8,SNR=7.1	**82.70 23**	P	**P**	**17 18 20.3**	**-0.8**

IDC ***20*** *17:13:46.7±0.7, 30°.42N×142°.95E, h0km, mb3.8/19, mb1 4.0/23, mb1mx3.8/72, mbtmp3.9/23, ML3.6/4, Error ellipse: s-maj=20.7km s-min=14.8km az=88.0*
JMA ***20*** *17:13:46.6±0.2, 30°.52N×143°.12E, h59km, M4.4*
NEIC ***20*** *17:13:48.0±1.2, 30°.41N±0°.06×143°.04E±0°.05, h10km±1km, mb4.4/14, Error ellipse: s-maj=10.9km s-min=7.5km az=172.0*

ISC 20 17:13:48.1±0.6, 30°.53N±0°.07×142°.97E±0°.10, h10km, n57, σ1§61/59, mb4.1/25, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.49**	**192**	P	**Pn**	**Pn**	**17 14 40.1**	**-2.3**
JCJ	**Chichijima** 18nm,0.3s,baz=340,slow=24,SNR=11	**3.49**	**192**	P	**Pn**	**Pn**	**17 14 40.0**	**-2.3**
JCJ	**Chichijima**	**3.49**	**192**			**Pn**	**17 14 39.8**	**-2.6**
JHJ2	**Mitsune**	**3.72**	**315**	P	**Pn**	**Pn**	**17 14 45.2**	**-0.4**
JHJ	**Hachijo jima 2** 8.7nm,0.3s,baz=88,slow=16,SNR=2.2	**3.74**	**314**	P	**Pn**	**Pn**	**17 14 45.0**	**-0.9**
BSO1	**Boso 1**	**4.44**	**338**	P	**Pn**	**Pn**	**17 14 54.0**	**-1.0**
JSGW	**Sagamiharawaka**	**5.96**	**329**	P	**Pn**	**Pn**	**17 15 15.6**	**-0.8**
JYT	**Yasato**	**6.14**	**339**	Pn	**Pn**	**Pn**	**17 15 19.8**	**+1.0**
JHU	**Hanno**	**6.14**	**331**	P	**Pn**	**Pn**	**17 15 18.1**	**-0.8**
JHU				*e*S	**Sn**	**Sn**	**17 16 25.3**	**-3.9**
JHO	**Hitachi**	**6.39**	**342**	P	**Pn**	**Pn**	**17 15 20.9**	**-1.3**
JRY	**Ryogami san**	**6.45**	**329**	P	**Pn**	**Pn**	**17 15 22.3**	**-0.8**
JRY				*e*S	**Sn**	**Sn**	**17 16 34.8**	**-1.9**
JAG	**Ashikaga**	**6.57**	**334**	P	**Pn**	**Pn**	**17 15 24.1**	**-0.7**
MJAR	**Matsushiro Arr** 0.4nm,0.3s,baz=160,slow=12,SNR=18	**7.19**	**328**	Pn	**Pn**	**Pn**	**17 15 33.4**	**+0.1**
MJAR	0.3nm,0.3s,baz=144,slow=15,SNR=4.5			Sn	**Sn**	**Sn**	**17 16 52.1**	**-3.0**
MJAR	**Matsushiro Arr**	**7.19**	**328**			**Pn**	**17 15 32.4**	**-0.9**
MAJO	**Matsushiro**	**7.20**	**328**			**Pn**	**17 15 33.7**	**+0.4**
MAT	**Matsushiro**	**7.20**	**328**	P		**Pn**	**17 15 33.3**	**0.0**
MAT				S		**Sn**	**17 16 49.0**	**-6.1**
JMM	**Marumori**	**7.54**	**347**	Pn		**Pn**	**17 15 36.7**	**-1.3**
JWT	**Wachi**	**7.93**	**309**	Pn		**Pn**	**17 15 45.0**	**+1.6**
JKMT	**Kesennumamotoy**	**8.35**	**352**	P		**Pn**	**17 15 47.4**	**-1.8**
JKA	**Kamikawa-asahi**	**13.57**	**359**	Pn		**Pn**	**17 16 57.2**	**-3.3**
ASAJ	**Asahikawa** 0.5nm,0.3s,baz=192,slow=9.9,SNR=7.0	**13.57**	**359**	Pn		**Pn**	**17 16 58.5**	**-2.1**
KSRS	**Korea Array** 0.2nm,0.3s,baz=111,slow=12,SNR=8.1	**14.26**	**303**	Pn		**Pn**	**17 17 12.4**	**+2.4**
KSAR	**Wonju Array Be**	**14.28**	**303**			**Pn**	**17 17 11.9**	**+1.6**
KLR	**Kul'dur** 1.4nm,0.6s,baz=161,slow=7.1,SNR=3.8	**20.52**	**339**	P		Pn	17 18 28.1	-0.5
SONM	**Songino Array** 1.5nm,0.6s,baz=120,slow=9.4,SNR=5.2	**32.82**	**312**	P		**P**	**17 20 23.2**	**+1.4**
SEY	**Seymchan** 0.7nm,0.6s,baz=86,slow=22,SNR=9.0	**32.98**	**8**	P		**P**	**17 20 23.8**	**+1.0**
CMAR	**Chiang Mai Arr** 0.4nm,0.7s,baz=50,slow=6.9,SNR=4.7	**41.59**	**264**	P		**P**	**17 21 35.2**	**-1.2**
TIXI	**Tiksi** 0.5nm,0.3s,baz=93,slow=1.7,SNR=3.6	**41.89**	**353**	P		**P**	**17 21 39.4**	**+1.3**
TIXI	**Tiksi** comp=Z,1.7nm,1.1s	**41.89**	**353**	IAmb		IAmb	17 21 43.4	
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.5s,baz=91,slow=5.8,SNR=1.9	**47.40**	**317**	P		**P**	**17 22 23.2**	**+0.8**
MK31	**Makanchi Array** comp=Z,2.1nm,0.8s	**48.88**	**307**	P		**P**	**17 22 35.0**	**+1.0**
MK31				IAmb		IAmb	17 22 38.2	
MKAR	**Makanchi Array** comp=Z,2.2nm,0.8s,baz=92,slow=9.7,SNR=12	**48.88**	**307**	P		**P**	**17 22 34.0**	**0.0**
MKAR	**Makanchi Array**	**48.88**	**307**	P		**P**	**17 22 34.9**	**+0.9**
MAKZ	**Makanchi**	**49.10**	**307**	P		**P**	**17 22 36.1**	**+0.5**
MAKZ	comp=Z,2.0nm,0.8s			IAmb		IAmb	17 22 37.0	
WB0	**Warramunga Arr**	**50.68**	**190**	P		**P**	**17 22 47.5**	**-0.3**
WR0	**Warramunga Arr**	**50.85**	**190**	P		**P**	**17 22 48.3**	**-0.7**
WR0	comp=Z,7.6nm,0.9s			IAmb		IAmb	17 22 49.4	
WB2	**Warramunga Arr**	**50.86**	**190**	P		**P**	**17 22 49.2**	**0.0**
WB2	comp=Z,13nm,1.4s			IAmb		IAmb	17 23 10.9	
WRA	**Warramunga Arr** comp=Z,4.4nm,0.7s,baz=11,slow=8.0,SNR=15	**50.86**	**190**	P		**P**	**17 22 48.5**	**-0.7**
WRA	**Warramunga Arr**	**50.86**	**190**	P		**P**	**17 22 48.1**	**-1.0**
SANVU	**Saraoutou**	**51.32**	**150**	P		**P**	**17 22 50.8**	**-1.8**
ILAR	**Eielson Array**	**54.39**	**30**	P		**P**	**17 23 15.1**	**+0.2**

comp=Z,0.4nm,0.8s,baz=268,slow=6.4,SNR=2.6
AS31 Alice Springs 54.58 190 P P 17 23 16.6 0.0
AS31 IAmb IAmb 17 23 20.0
comp=Z,1.3nm,0.6s
ASAR Alice Springs 54.58 190 P **P 17 23 16.4 -0.3**
comp=Z,1.8nm,0.5s,baz=2.9,slow=6.0,SNR=64
ASAR Alice Springs 54.58 190 P P 17 23 16.2 -0.5
BVAR Borovoye Array 56.02 316 P P 17 23 27.6 +0.8
comp=Z,1.0nm,0.6s,baz=129,slow=4.0,SNR=4.9
KKAR Karatay Array 57.68 304 P **P 17 23 39.5 +0.7**
NIL Nilore 58.11 293 P **P 17 23 42.4 +0.5**
NIL IAmb IAmb 17 23 44.0
comp=Z,5.7nm,0.8s
GAR Garm 58.85 300 P P 17 23 46.9 -0.2
ABKAR Akbulak array 63.23 313 P P 17 24 17.2 +0.7
ABKAR IAmb IAmb 17 24 17.7
comp=Z,1.5nm,0.9s
YKA Yellowknife Ar 68.81 29 P P 17 24 53.0 +0.8
comp=Z,0.6nm,0.8s,baz=294,slow=5.9,SNR=8.4
FINES FINESS Array B 75.18 334 P P 17 25 31.1 +0.7
comp=Z,0.8nm,0.5s,baz=71,slow=6.0,SNR=1.8
KBZ Khabaz 76.19 313 P P 17 25 37.9 +1.4
comp=Z,1.7nm,0.8s,baz=188,slow=10.0,SNR=2.6
NVAR Mina Array Bea 77.88 53 P P 17 25 46.6 +0.1
comp=Z,0.3nm,0.5s,baz=284,slow=6.3,SNR=4.3
AKASG Malin Array Be 80.26 324 P P 17 25 59.6 +0.7
comp=Z,0.8nm,0.5s,baz=47,slow=5.4,SNR=4.4
NOA NORSAR Array B 80.68 338 P P 17 26 01.9 +0.8
comp=Z,0.3nm,0.4s,baz=40,slow=5.2,SNR=2.4
PDAR Pinedale Array 81.31 45 P P 17 26 06.5 +1.5
comp=Z,0.2nm,0.6s,baz=317,slow=6.4,SNR=2.4
BRTR Keskin Array B 84.18 313 P P 17 26 20.5 +0.6
comp=Z,1.0nm,0.6s,baz=64,slow=9.8,SNR=2.6

*IDC **20** 17:14:22.3±0.6,30˚.44N×142˚.83E,h0km,mb4.1/26, mb1 4.3/31,mb1mx4.1/73,mbtmp4.1/31,ML3.9/4,Error ellipse: s-maj=17.7km s-min=12.8km az=96.0*
*NEIC **20** 17:14:24.0±1.4,30˚.44N±0˚.02×142˚.8E±0˚.2,h11km±5km, mb4.1/8,Error ellipse: s-maj=20.0km s-min=3.5km az=92.0*
*JMA **20** 17:14:23.9±0.2,30˚.48N×142˚.65E,h52km,M4.6*
ISC 20 17:14:25.8±0.5,30˚.44N±0˚.05×142˚.72E±0˚.09,h24km,n55, σ1§57/58,mb4.1/28,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.37**	**188**	Pn	**Pn**	**17 15 15.9**	**-0.9**
JCJ	40nm,0.3s,baz=270,slow=23,SNR=8.0			Sn	**Sn**	**17 15 51.9**	**-4.1**
	32nm,0.3s,baz=81,slow=21,SNR=4.9						
JCJ	**Chichijima**	**3.37**	**188**		**Pn**	**17 15 15.2**	**-1.7**
JHJ2	**Mitsune**	**3.63**	**318**	*e*S	**Sn**	**17 15 59.6**	**-3.0**
JHJ2	**Mitsune**	**3.63**	**318**	Pn	**Pn**	**17 15 19.4**	**-1.1**
JHJ	**Hachijo jima 2**	**3.66**	**318**	Pn	**Pn**	**17 15 20.3**	**-0.6**
JHJ	22nm,0.3s,baz=100,slow=21,SNR=2.0			Sn	**Sn**	**17 15 58.8**	**-4.5**
	77nm,0.3s,baz=83,slow=20,SNR=6.1						
JHH2	**Haha-jima-NKT2**	**3.82**	**187**	P	**Pn**	**17 15 22.2**	**-0.9**
JHU	**Hanno**	**6.12**	**333**	*e*S	**Sn**	**17 17 00.3**	**-3.6**
JYT	**Yasato**	**6.15**	**341**	Pn	**Pn**	**17 15 53.9**	**-1.1**
JRY	**Ryogami san**	**6.42**	**331**	*e*S	**Sn**	**17 17 08.8**	**-2.4**
JAG	**Ashikaga**	**6.56**	**336**	P	**Pn**	**17 15 59.7**	**-1.1**
JGF	**Kuroka**	**6.84**	**320**	Pn	**Pn**	**17 16 04.7**	**+0.1**
MJAR	**Matsushiro Arr**	**7.16**	**329**	Pn	**Pn**	**17 16 08.8**	**-0.2**
MJAR	1.3nm,0.3s,baz=159,slow=9.9,SNR=18			Sn	**Sn**	**17 17 25.5**	**-4.0**
	0.3nm,0.3s,baz=143,slow=38,SNR=2.7						
MJAR	**Matsushiro Arr**	**7.16**	**329**		**Pn**	**17 16 08.7**	**-0.3**
MAJO	**Matsushiro**	**7.16**	**329**		**Pn**	**17 16 08.9**	**-0.1**
MAT	**Matsushiro**	**7.16**	**329**	S	**Sn**	**17 17 27.6**	**-1.9**
MAT	**Matsushiro**	**7.16**	**329**	P	**Pn**	**17 16 08.6**	**-0.4**
JMM	**Marumori**	**7.58**	**348**	Pn	**Pn**	**17 16 13.1**	**-1.6**
ASAJ	**Asahikawa**	**13.65**	**360**	Pn	**Pn**	**17 17 34.0**	**-3.8**
	1.1nm,0.3s,baz=242,slow=4.7,SNR=5.4						
KSRS	**Korea Array**	**14.13**	**304**	Pn	**Pn**	**17 17 46.6**	**+2.3**
	0.2nm,0.3s,baz=107,slow=13,SNR=6.7						
USRK	**Ussuriysk Ar.**	**16.15**	**331**	Pn	**Pn**	**17 18 09.6**	**-1.5**
	baz=146,slow=12,SNR=2.5						
KLR	**Kul'dur**	**20.53**	**339**	P	**P**	**17 19 03.2**	**+0.9**
	3.7nm,0.6s,baz=169,slow=3.8,SNR=8.9						
MA2	**Magadan**	**29.64**	**8**	P	**P**	**17 20 28.4**	**-0.6**
	1.0nm,0.3s,baz=191,slow=9.0,SNR=6.3						
MA2	**Magadan**	**29.64**	**8**	P	**P**	**17 20 28.7**	**-0.4**
MA2				IAmb	IAmb	17 20 29.7	
	comp=Z,2.2nm,0.7s						
SONM	**Songino Array**	**32.72**	**312**	P	**P**	**17 20 57.7**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=115,slow=7.9,SNR=5.0						
SIJI	**Sorong**	**32.99**	**201**	P	**P**	**17 20 58.9**	**-0.2**
	comp=Z,8.7nm,0.6s,baz=7.9,slow=22,SNR=6.1						
SEY	**Seymchan**	**33.10**	**8**	P	**P**	**17 20 59.9**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=186,slow=6.0,SNR=14						
BILL	**Bilibino**	**40.10**	**13**	P	**P**	**17 21 58.4**	**-0.7**
BILL				IAmb	IAmb	17 22 00.2	
	comp=Z,3.5nm,0.8s						
CM31	**Chiang Mai Arr**	**41.36**	**264**	P	**P**	**17 22 10.0**	**-0.1**
CM31				IAmb	IAmb	17 22 38.9	
	comp=Z,3.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**41.36**	**264**	P	**P**	**17 22 11.0**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=61,slow=5.8,SNR=8.3						
CMAR	**Chiang Mai Arr**	**41.36**	**264**	P	**P**	**17 22 10.9**	**+0.8**
TIXI	**Tiksi**	**41.95**	**353**	P	**P**	**17 22 14.3**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=129,slow=6.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**47.32**	**317**	P	**P**	**17 22 57.0**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=107,slow=7.7,SNR=1.9						
MK31	**Makanchi Array**	**48.77**	**307**	P	**P**	**17 23 10.5**	**+1.8**
MKAR	**Makanchi Array**	**48.77**	**307**	P	**P**	**17 23 10.1**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=89,slow=8.6,SNR=5.3						
WRA	**Warramunga Arr**	**50.74**	**190**	P	**P**	**17 23 24.3**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=6.8,slow=7.7,SNR=19						
WRA	**Warramunga Arr**	**50.74**	**190**	P	**P**	**17 23 24.6**	**+0.8**
AS31	**Alice Springs**	**54.46**	**190**	P	**P**	**17 23 52.0**	**+0.6**
AS31				IAmb	IAmb	17 23 54.1	
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**54.46**	**190**	P	**P**	**17 23 51.8**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=2.3,slow=5.6,SNR=13						
ASAR	**Alice Springs**	**54.46**	**190**	P	**P**	**17 23 51.6**	**+0.2**
ILAR	**Eielson Array**	**54.57**	**30**	P	**P**	**17 23 51.4**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=255,slow=6.1,SNR=9.6						
BVAR	**Borovoye Array**	**55.94**	**316**	P	**P**	**17 24 02.9**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=113,slow=6.8,SNR=2.4						
KKAR	**Karatay Array**	**57.55**	**304**	P	**P**	**17 24 13.6**	**+0.2**
INK	**Inuvik**	**59.81**	**25**	P	**P**	**17 24 28.8**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=298,slow=6.2,SNR=5.0						
AKTO	**Aktyubinsk**	**63.99**	**315**	P	**P**	**17 24 57.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=124,slow=3.6,SNR=2.2						
SPITS	**Spitsbergen Ar**	**67.19**	**350**	P	**P**	**17 25 18.0**	**+0.7**
	comp=Z,4.9nm,0.9s,baz=137,slow=10,SNR=4.3						
YKA	**Yellowknife Ar**	**68.99**	**29**	P	**P**	**17 25 28.7**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=293,slow=6.1,SNR=17						
ARCES	**ARCESS Array B**	**75.55**	**341**	P	**P**	**17 25 39.0**	**+0.7**
	comp=Z,2.3nm,0.9s,baz=69,slow=5.0,SNR=1.2						
FINES	**FINESS Array B**	**75.17**	**334**	P	**P**	**17 26 06.5**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=85,slow=6.5,SNR=5.4						
NVAR	**Mina Array Bea**	**78.10**	**52**	P	**P**	**17 26 23.7**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=286,slow=5.9,SNR=13						
AKASG	**Malin Array Be**	**80.21**	**324**	P	**P**	**17 26 34.8**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=51,slow=6.0,SNR=1.6						
HFS	**Hagfors**	**80.55**	**337**	P	**P**	**17 26 36.1**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=8.0,SNR=1.8						
NOA	**NORSAR Array B**	**80.69**	**338**	P	**P**	**17 26 37.1**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=41,slow=5.3,SNR=5.5						
PDAR	**Pinedale Array**	**81.52**	**45**	P	**P**	**17 26 41.5**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=239,slow=0.6,SNR=5.3						
BRTR	**Keskin Array B**	**84.08**	**313**	P	**P**	**17 26 55.5**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=77,slow=6.5,SNR=2.6						
TXAR	**Lajitas Array**	**93.23**	**53**	P	**P**	**17 27 39.3**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=318,slow=1.7,SNR=4.9						

*IDC **20** 17:20:39.8±1.2, 12˚.78N×88˚.27W,h0km,mb4.1/9, mb1 4.3/11,mb1mx4.0/42,mbtmp4.1/11,ML3.4/3,MS3.2/8, Ms1 3.2/8,ms1mx3.0/33,Error ellipse: s-maj=43.4km s-min=19.9km az=42.0*
*NEIC **20** 17:20:44.0±2.4, 12˚.42N±0˚.06×88˚.75W±0˚.07,h35km±1km, mb4.4/90,Md4.3(SNET), Error ellipse: s-maj=14.4km s-min=6.7km az=233.0*
*INET **20** 17:20:45.9, 12˚.64N×88˚.74W,h20km,MW3.7*
*UCR **20** 17:20:47.5±0.9, 12˚.77N×88˚.74W,h43km±22km,ML4.3, mb4.4(NEIC)*
*GCG **20** 17:20:47.6±0.4, 12˚.82N×88˚.91W,h143km±128km,MD4.2*
*SNET **20** 17:20:47.4±0.9, 12˚.77N×88˚.75W,h45km±20km,ML4.3*
ISC 20 17:20:46.9±1.2,12˚.70N±0˚.07×88˚.70W±0˚.04,h51km±9km,
n187,σ1§19/197,mb4.3/50,MS3.1/5,12D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.64**	**11**	*e*P	**Pn**	**17 20 59.6**	**-0.3**
ALJI				*e*S	**Sn**	**17 21 09.0**	**-0.2**
ALJI	**Alcalda de J**	**0.64**	**11**	*e*P	**Pn**	**17 20 59.6**	**-0.3**
ALJI				*e*S	**Sn**	**17 21 09.0**	**-0.2**
JUCU	**Jucuarįn**	**0.70**	**38**	*e*P	**Pn**	**17 21 00.7**	**-0.2**
JUCU				*e*S	**Sn**	**17 21 11.0**	**+0.1**
JUCU	**Jucuarįn**	**0.70**	**38**	*e*P	**Pn**	**17 21 00.7**	**-0.2**
JUCU				*e*S	**Sn**	**17 21 11.0**	**+0.1**
COEB	**Comit de Eme**	**0.81**	**12**	*e*P	**Pn**	**17 21 02.0**	**-0.3**
COEB	**Comit de Eme**	**0.81**	**12**	*e*P	**Pn**	**17 21 02.0**	**-0.3**
TECA	**Tecapa**	**0.81**	**14**	*e*P	**Pn**	**17 21 02.2**	**-0.1**
TECA	**Tecapa**	**0.81**	**14**	*e*P	**Pn**	**17 21 02.2**	**-0.1**
LCY	**Lacayo**	**0.82**	**29**	*e*P	**Pn**	**17 21 02.4**	**+0.1**
LCY	**Lacayo**	**0.82**	**29**	*e*P	**Pn**	**17 21 02.4**	**+0.1**
VSM	**San Miguel**	**0.83**	**30**	*e*P	**Pn**	**17 21 02.9**	**+0.2**
VSM	**San Miguel**	**0.83**	**30**	*e*P	**Pn**	**17 21 02.9**	**+0.2**
PACA	**Pacayal**	**0.85**	**25**	*e*P	**Pn**	**17 21 03.2**	**+0.4**
PACA	**Pacayal**	**0.85**	**25**	*e*P	**Pn**	**17 21 03.2**	**+0.4**
PQSS	**Presa 15 de Se**	**0.93**	**8**	*e*P	**Pn**	**17 21 03.9**	**+0.2**
COEG	**Centro de Oper**	**0.93**	**349**	*e*P	**Pn**	**17 21 03.3**	**-0.5**
COEG				*e*S	**Sn**	**17 21 15.5**	**-0.8**
COEG				IAML		17 21 22.8	
	comp=Z,10µm,0.3s						
COEG	**Centro de Oper**	**0.93**	**349**	*e*P	**Pn**	**17 21 03.3**	**-0.5**
COEG				*e*S	**Sn**	**17 21 15.5**	**-0.8**
COEG				IAML		17 21 22.8	
	comp=Z,10µm,0.3s						
LFRS	**El Faro**	**0.98**	**339**	*e*P	**Pn**	**17 21 03.8**	**-0.8**
LFRS	**El Faro**	**0.98**	**339**	*e*P	**Pn**	**17 21 03.8**	**-0.8**
LALI	**Alcalda de L**	**0.99**	**322**	*e*P	**Pn**	**17 21 03.5**	**-1.0**
LALI				IAML		17 21 16.2	
	comp=Z,5µm,0.3s						
LALI	**Alcalda de L**	**0.99**	**322**	*e*P	**Pn**	**17 21 03.5**	**-1.0**
LALI				IAML		17 21 16.2	
	comp=Z,5µm,0.3s						
LCND	**La Caada**	**0.99**	**52**	*e*P	**Pn**	**17 21 04.4**	**-0.2**
LCND	**La Caada**	**0.99**	**52**	*e*P	**Pn**	**17 21 04.4**	**-0.2**
CNCH	**Conchagua**	**1.02**	**56**	*e*P	**Pn**	**17 21 05.2**	**+0.2**
CNCH	**Conchagua**	**1.02**	**56**	*e*P	**Pn**	**17 21 05.2**	**+0.2**
PAVA	**Las Pavas**	**1.03**	**347**	*e*P	**Pn**	**17 21 05.1**	**-0.1**
PAVA				*e*S	**Sn**	**17 21 18.0**	**-0.8**
PAVA				IAML		17 21 19.9	
	comp=Z,9µm,0.4s						
PAVA	**Las Pavas**	**1.03**	**347**	*e*P	**Pn**	**17 21 05.1**	**-0.1**
PAVA				*e*S	**Sn**	**17 21 18.0**	**-0.8**
PAVA				IAML		17 21 19.9	
	comp=Z,9µm,0.4s						
LBRS	**Las Brisas**	**1.09**	**342**	*e*P	**Pn**	**17 21 05.6**	**-0.3**
LBRS	**Las Brisas**	**1.09**	**342**	*e*P	**Pn**	**17 21 05.6**	**-0.3**
SNET	**Serv Nac Est T**	**1.11**	**332**	*e*P	**Pn**	**17 21 05.4**	**-0.9**
SNET				IAML		17 21 21.6	
	comp=Z,7µm,0.2s						
SNET	**Serv Nac Est T**	**1.11**	**332**	*e*P	**Pn**	**17 21 05.4**	**-0.9**
SNET				IAML		17 21 21.6	
	comp=Z,7µm,0.2s						
SNET	**Serv Nac Est T**	**1.11**	**332**		**Pn**	**17 21 05.5**	**-0.7**
LFU	**La Fuente**	**1.12**	**339**	*e*P	**Pn**	**17 21 05.8**	**-0.6**
LFU				*e*S	**Sn**	**17 21 20.2**	**-0.5**
LFU	**La Fuente**	**1.12**	**339**	*e*P	**Pn**	**17 21 05.8**	**-0.6**
LFU				*e*S	**Sn**	**17 21 20.2**	**-0.5**
UEES	**Universidad Ev**	**1.14**	**333**	*e*P	**Pn**	**17 21 06.1**	**-0.6**
UEES	**Universidad Ev**	**1.14**	**333**	*e*P	**Pn**	**17 21 06.1**	**-0.6**
FAGO	**Alcalda de S**	**1.15**	**30**	*e*P	**Pn**	**17 21 07.0**	**+0.4**
FAGO	**Alcalda de S**	**1.15**	**30**	*e*P	**Pn**	**17 21 07.0**	**+0.4**
BOQS	**Boqueron**	**1.18**	**331**	*e*P	**Pn**	**17 21 06.9**	**-0.4**
BOQS				*e*S	**Sn**	**17 21 21.6**	**-0.8**
BOQS	**Boqueron**	**1.18**	**331**	*e*P	**Pn**	**17 21 06.9**	**-0.4**
BOQS				*e*S	**Sn**	**17 21 21.6**	**-0.8**
CEVE	**Cerro Verde**	**1.44**	**321**	*e*P	**Pn**	**17 21 10.6**	**-0.2**
CEVE				IAML		17 21 36.7	
	comp=Z,10µm,0.4s						
CEVE	**Cerro Verde**	**1.44**	**321**	*e*P	**Pn**	**17 21 10.6**	**-0.2**
CEVE				IAML		17 21 36.7	
	comp=Z,10µm,0.4s						
SBLS	**San Blas**	**1.45**	**322**	*e*P	**Pn**	**17 21 10.7**	**-0.3**
SBLS	**San Blas**	**1.45**	**322**	*e*P	**Pn**	**17 21 10.7**	**-0.3**
SNJE	**San Jose**	**1.46**	**323**	*e*P	**Pn**	**17 21 10.9**	**-0.2**
SNJE				*e*S	**Sn**	**17 21 28.9**	**-0.3**
SNJE	**San Jose**	**1.46**	**323**	*e*P	**Pn**	**17 21 10.9**	**-0.2**
SNJE				*e*S	**Sn**	**17 21 28.9**	**-0.3**
RTR	**El Retiro**	**1.51**	**322**	*e*P	**Pn**	**17 21 11.7**	**0.0**
RTR	**El Retiro**	**1.51**	**322**	*e*P	**Pn**	**17 21 11.7**	**0.0**
CRIN	**San Cristobal**	**1.61**	**90**		**Pn**	**17 21 13.4**	**+0.4**
MTO3	**Montecristo**	**1.81**	**339**	*e*P	**Pn**	**17 21 16.4**	**+0.5**
MTO3	**Montecristo**	**1.81**	**339**	*e*P	**Pn**	**17 21 16.4**	**+0.5**
MTO3	**Montecristo**	**1.81**	**339**		**Pn**	**17 21 16.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.94**	**46**		**Pn**	**17 21 18.4**	**+0.9**
ESQI	**Esquipulas**	**1.95**	**341**		**Pn**	**17 21 18.7**	**+1.0**
CNGN	**Cerro Negro**	**1.96**	**96**	*i* Pn	Pn	17 21 06.4	-11
NBG	**Las Nubes**	**2.47**	**320**	*e*P	**Pn**	**17 21 26.9**	**+1.9**
PCG	**Pacaya**	**2.50**	**312**	*e*P	**Pn**	**17 21 26.8**	**+1.4**
PCG				*e*S	**Sn**	**17 21 57.7**	**+2.7**
MRL	**Marmol**	**2.55**	**338**	*e*P	**Pn**	**17 21 28.0**	**+1.9**
FUG	**Fuego 3**	**2.71**	**310**	*e*P	**Pn**	**17 21 29.2**	**+1.0**
FUG				*e*S	**Sn**	**17 22 00.1**	**+0.1**
MATN	**Matagalpa**	**2.71**	**85**		**Pn**	**17 21 30.0**	**+1.9**
APG	**El Apazote**	**2.86**	**323**	Pn	**Pn**	**17 21 31.1**	**+0.8**
	comp=Z,3.5nm,0.3s,baz=123,slow=8.6,SNR=23						
APG				Sn	**Sn**	**17 22 07.2**	**+3.6**
	comp=Z,17nm,0.3s,baz=46,slow=23,SNR=3.6						
BOAB	**BOACO BROADBAN**	**2.97**	**94**		**Pn**	**17 21 30.2**	**-1.4**
RTAL	**Retalhuleu**	**3.43**	**302**	Pn	**Pn**	**17 21 40.2**	**+2.3**
ACON	**Acoyapa**	**3.52**	**102**		**Pn**	**17 21 41.1**	**+2.0**
PETF	**Flores**	**4.34**	**345**		**Pn**	**17 21 52.2**	**+1.8**
JTS	**Las Juntas de**	**4.38**	**123**	Pn	Pn	17 21 45.6	-5.4
	comp=Z,1.2nm,0.3s,baz=353,slow=23,SNR=3.3						
JTS				Lg	Lg	17 22 55.9	
	comp=Z,1.9nm,0.3s,baz=200,slow=22,SNR=5.2						
JTS				LR	LR	17 23 24.6	
	comp=Z,123nm,21.9s,baz=20,slow=40						
JTS	**Las Juntas de**	**4.38**	**123**	Pn	**Pn**	**17 21 47.2**	**-3.8**
CAO2	**Cobano, Puntar**	**4.62**	**130**	Pn	**Pn**	**17 21 50.0**	**-4.3**
CCIG	**Comitan**	**4.88**	**317**	Pn	**Pn**	**17 21 59.8**	**+1.9**
PEZE	**Perez Zeledon,**	**5.93**	**123**		**Pn**	**17 22 15.9**	**+3.6**
RIOS	**Rincon, Osa**	**6.46**	**127**		**Pn**	**17 22 22.8**	**+3.2**
CMIG	**Matias Romero**	**7.40**	**307**	Pn	**Pn**	**17 22 33.5**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=100,slow=11,SNR=11						
CMIG				Sn	**Sn**	**17 23 55.4**	**+0.3**
	comp=Z,2.1nm,0.3s,baz=96,slow=14,SNR=2.3						
TEIG	**Tepich**	**7.50**	**3**	Pn	**Pn**	**17 22 35.8**	**+2.2**
	comp=Z,4.7nm,0.3s,baz=233,slow=0.5,SNR=22						
TEIG				LR	LR	17 26 02.6	
	comp=Z,328nm,18.4s,baz=196,slow=44						
TEIG	**Tepich**	**7.50**	**3**	Pn	**Pn**	**17 22 36.5**	**+2.8**
TLIG	**Tlapa**	**10.68**	**298**	Pn	**Pn**	**17 23 17.8**	**+0.3**
ROSC	**El Rosal**	**16.20**	**118**	LR	LR	17 30 52.9	
	comp=Z,126nm,20.7s,baz=175,slow=39						
833A	**Chaparral WMA,**	**18.47**	**329**	P		17 25 01.0	
	baz=145						
344A	**Westbrook Farm**	**18.76**	**355**	P	**P**	**17 25 00.9**	**-0.9**
VBMS	**Vicksburg**	**19.50**	**355**	P		17 25 12.2	
	baz=175						
435B	**Jarrell**	**19.78**	**337**	P		17 25 15.0	
	baz=154						
435B	**Jarrell**	**19.78**	**337**	P	**P**	**17 25 13.7**	**+0.7**
435B				IAmb	IAmb	17 25 21.7	
	comp=Z,14nm,0.6s						
152A	**Waverly Hall**	**20.21**	**10**	P	Pn	17 25 18.9	-1.0
152A				IAmb	IAmb	17 25 23.3	
	comp=Z,14nm,0.7s						
LRAL	**Lakeview Retre**	**20.30**	**4**	P		17 25 21.6	
	baz=185						
JCT	**Junction City**	**20.46**	**332**	P	**P**	**17 25 21.3**	**+0.9**
JCT	**Junction City**	**20.46**	**332**	P		17 25 22.1	
	baz=147						
WHTX	**Lake Whitney,**	**20.82**	**339**	P		17 25 26.9	
	baz=155						
GOGA	**Godfrey**	**21.16**	**12**	P	**P**	**17 25 30.2**	**+2.3**
GOGA				IAmb	IAmb	17 25 32.0	
	comp=Z,9.2nm,0.7s						
GOGA	**Godfrey**	**21.16**	**12**	P		17 25 31.4	
	baz=194						
Y52A	**Lilburn**	**21.49**	**11**	P	**P**	**17 25 33.0**	**+1.6**
Y52A				IAmb	IAmb	17 25 36.9	
	comp=Z,7.7nm,0.8s						
TXAR	**Lajitas Array**	**21.62**	**322**	P	**P**	**17 25 34.8**	**+1.8**
	comp=Z,4.0nm,0.7s,baz=145,slow=11,SNR=34						
TXAR				LR	LR	17 33 57.7	
	comp=Z,33nm,21.8s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**21.62**	**322**	P	**P**	**17 25 34.5**	**+1.5**
TX31	**Lajitas Ar. Si**	**21.62**	**322**	P	**P**	**17 25 34.1**	**+1.1**
TX31				IAmb	IAmb	17 25 37.2	
	comp=Z,10nm,0.7s						
TX32	**Lajitas Array**	**21.62**	**322**	P	**P**	**17 25 34.9**	**+1.9**
PLAL	**Pickwick Lake**	**22.19**	**1**	P	**P**	**17 25 39.7**	**+0.8**
MIAR	**Mount Ida**	**22.20**	**349**	P	**P**	**17 25 40.1**	**+1.1**
MIAR				IAmb	IAmb	17 25 44.5	
	comp=Z,9.0nm,0.7s						
MIAR	**Mount Ida**	**22.20**	**349**	P		17 25 40.1	
	baz=167						
ATAH	**Atahualpa**	**22.21**	**152**	LR	LR	17 33 20.1	
	comp=Z,82nm,19.9s,baz=357,slow=34						
ABTX	**Abilene, Hawle**	**22.22**	**335**	P	**P**	**17 25 40.5**	**+1.2**
ABTX				IAmb	IAmb	17 25 43.3	
	comp=Z,9.2nm,0.6s						
ABTX	**Abilene, Hawle**	**22.22**	**335**	P		17 25 40.8	
	baz=151						
W41B	**Gary Mavity, V**	**22.60**	**352**	P		17 25 44.8	
	baz=171						
W39A	**Magazine**	**22.87**	**349**	P	**P**	**17 25 47.9**	**+1.8**
W39A				IAmb	IAmb	17 26 16.3	
	comp=Z,14nm,1.4s						
W39A	**Magazine**	**22.87**	**349**	P		17 25 46.7	
	baz=167						
V48A	**Smith Brothers**	**23.00**	**4**	P	**P**	**17 25 48.1**	**+0.7**
V48A				IAmb	IAmb	17 25 49.8	
	comp=Z,5.2nm,0.7s						
BIRD	**Birdtown, Kers**	**23.09**	**18**	P	**P**	**17 25 48.9**	**+0.5**
BIRD				IAmb	IAmb	17 25 51.2	
	comp=Z,13nm,0.8s						
GNAR	**Gosnell**	**23.20**	**357**	P	**P**	**17 25 49.6**	**+0.3**
TKL	**Tuckaleechee C**	**23.29**	**10**	P	**P**	**17 25 51.1**	**+0.9**
	comp=Z,8.5nm,0.8s,baz=192,slow=12,SNR=7.6						
TKL	**Tuckaleechee C**	**23.29**	**10**	P	**P**	**17 25 51.0**	**+0.7**
TKL				IAmb	IAmb	17 25 52.5	
	comp=Z,8.6nm,0.8s						
FCAR	**Ozark Folk Cen**	**23.30**	**353**	P	**P**	**17 25 51.4**	**+1.0**
FCAR				IAmb	IAmb	17 25 52.2	
	comp=Z,8.3nm,0.7s						
KMSC	**Kings Mountain**	**23.32**	**15**	P		17 25 52.0	
	baz=198						
WVT	**Waverly**	**23.34**	**2**	P		17 25 51.7	
	baz=182						
X58A	**Rowland**	**23.36**	**20**	P	**P**	**17 25 51.0**	**0.0**
LCAR	**Lake Charles**	**23.37**	**355**	P	**P**	**17 25 51.8**	**+0.8**
V53A	**Saluda**	**23.48**	**12**	P	**P**	**17 25 52.8**	**+0.6**
V53A				IAmb	IAmb	17 25 55.8	
	comp=Z,15nm,1.1s						
WMOK	**Wichita Mounta**	**23.77**	**339**	P	**P**	**17 25 55.6**	**+0.7**
WMOK				IAmb	IAmb	17 25 56.4	
	comp=Z,4.9nm,0.7s						
WMOK	**Wichita Mounta**	**23.77**	**339**	P		17 25 55.4	
	baz=155,SNR=6.7						
FNO	**Franklin**	**23.80**	**342**	P	**P**	**17 25 54.9**	**-0.2**
U40A	**Yellville**	**23.85**	**352**	P	**P**	**17 25 56.7**	**+1.1**
U40A	**Yellville**	**23.85**	**352**	P		17 25 56.7	
	baz=170,SNR=8.3						
HHAR	**Hobbs**	**23.95**	**350**	P	**P**	**17 25 58.1**	**+1.6**
HHAR				IAmb	IAmb	17 26 00.6	
	comp=Z,9.2nm,0.6s						
TUL1

SWSC	Sam W. Stewart	31.93	314	P			17 27 10.4	
	baz=123							
IKP	In-Ko-Pah, Jac	31.99	313	P			17 27 11.0	
	baz=122							
K58A	Earlville	32.02	18	P			17 27 12.7	
	baz=204							
MONP2	Monument Peak	32.34	313	P			17 27 14.4	
	baz=122							
SPMN	Marine on St.	32.60	355	P			17 27 13.5	
	baz=172							
MTPU	Mount Pierson	32.78	324	P	P		17 27 14.7	-1.0
109C	Camp Elliot, M	32.83	312	P			17 27 18.2	
	baz=121							
SUSD	Miller	32.83	346	P	P		17 27 15.4	-0.3
SUSD	Miller	32.83	346	P			17 27 16.6	
	baz=161							
GMRC	Granite Mounta	32.86	317	P			17 27 18.4	
	baz=125							
SADO	Sadowa	32.99	13	P	P		17 27 16.6	-0.4
	comp=Z,4.3nm,0.6s,baz=234,slow=3.7,SNR=1.6							
J59A	Piesco	33.01	19	P			17 27 19.9	
	baz=206							
RWWY	Rawlins	33.09	334	P	P		17 27 18.6	+0.3
I59A	Olmsteadville	33.51	20	P			17 27 23.9	
	baz=207							
J61A	Chester	33.57	22	P			17 27 25.0	
	baz=209							
K22A	Casper	33.61	336	P			17 27 24.0	
	baz=147							
RSSD	Black Hills	33.97	340	P			17 27 27.3	
	baz=152							
TPNV	Topopah Spring	34.53	319	P			17 27 32.8	
	baz=127							
LRMC	Laurel Mtn Rad	34.62	316	P			17 27 32.8	
	baz=124							
R11A	Troy Canyon, C	34.98	322	P			17 27 36.2	
	baz=130							
BW06	Boulder Array	34.99	333	P			17 27 36.8	
	baz=143							
PD31	Pinedale Array	34.99	333	P	P		17 27 33.9	-0.8
PDAR	Pinedale Array	34.99	333	P	P		17 27 34.8	+0.2
	comp=Z,0.8nm,0.6s,baz=132,slow=11,SNR=8.0							
PDAR				PcP	PcP		17 30 06.7	+0.6
	comp=Z,0.8nm,0.5s,baz=154,slow=5.0,SNR=8.5							
PDAR	Pinedale Array	34.99	333	P	P		17 27 34.3	-0.4
HWUT	Hardware Ranch	35.03	329	P	P		17 27 36.6	+1.6
HWUT				IAmb	IAmb		17 27 37.7	
	comp=Z,2.8nm,0.8s							
E56A	St. Veronique	35.65	16	P			17 27 40.8	
	baz=203							
AHID	Auburn Hatcher	35.69	331	P	P		17 27 42.1	+1.4
AHID				IAmb	IAmb		17 27 44.0	
	comp=Z,4.4nm,0.7s							
AGMN	Agassiz Nation	35.99	352	P	P		17 27 42.5	-0.4
AGMN				IAmb	IAmb		17 27 43.3	
	comp=Z,5.3nm,0.8s							
AGMN	Agassiz Nation	35.99	352	P			17 27 43.0	
	baz=168							
REDW	Red Top Meadow	36.04	332	P	P		17 27 45.1	+1.4
LOHW	Long Hollow	36.12	333	P	P		17 27 45.1	+0.7
LOHW				IAmb	IAmb		17 27 49.5	
	comp=Z,2.4nm,0.7s							
MOOW	Moose Ponds	36.29	333	P	P		17 27 47.1	+1.3
ELK	Elko	36.36	325	P	P		17 27 48.4	+1.9
NV11	Mina Array Sit	36.63	320	P	P		17 27 49.7	+1.0
NVAR	Mina Array Bea	36.72	320	P	P		17 27 51.2	+1.7
	comp=Z,1.3nm,0.7s,baz=119,slow=7.3,SNR=8.0							
NVAR				PcP	PcP		17 30 12.4	+1.1
	comp=Z,1.4nm,0.7s,baz=131,slow=3.7,SNR=10							
H17A	Grant Village	36.73	333	P	P		17 27 48.1	-1.5
RLMT	Red Lodge	36.76	335	P	P		17 27 50.8	+0.9
RLMT				IAmb	IAmb		17 27 51.9	
	comp=Z,4.8nm,0.8s							
RLMT	Red Lodge	36.76	335	P			17 27 50.0	
	baz=145,SNR=5.5							
YMP	Mirror Lake Pl	36.82	334	P	P		17 27 53.3	+2.9
YMP				IAmb	IAmb		17 28 04.2	
	comp=Z,4.6nm,0.8s							
YNE	Yellowstone No	36.98	335	P	P		17 27 52.4	+0.7
D60A	Saint Jean D'O	37.24	20	P			17 27 55.2	
	baz=209							
YHL	Hebgen Lake	37.35	333	P	P		17 27 57.0	+2.0
HLID	Hailey	37.90	329	P	P		17 27 59.9	+0.5
HLID	Hailey	37.90	329	P			17 28 00.5	
	baz=136							
ULM	Lac du Bonnet	37.90	352	P	P		17 27 58.2	-0.9
	comp=Z,4.5nm,0.6s,baz=160,slow=9.7,SNR=9.2							
ULM	Lac du Bonnet	37.90	352	P	P		17 27 57.2	-1.9
ULM				IAmb	IAmb		17 27 58.8	
	comp=Z,5.5nm,0.6s							
DGMT	Dagmar	37.92	343	P			17 28 00.4	
	baz=155,SNR=6.8							
DGMT	Dagmar	37.92	343	P	P		17 28 00.2	+0.8
PNTR	Pine Nut	37.92	319	P	P		17 27 57.4	-2.4
PNTR				IAmb	IAmb		17 27 58.6	
	comp=Z,3.8nm,1.0s							
MATQ	Matagami	38.06	12	P			17 27 59.6	
	baz=198							
MCMT	McKenzie Canyo	38.08	332	P	P		17 28 02.9	+1.8
BOZ	Bozeman (W)	38.14	334	P	P		17 28 02.5	+1.1
BOZ	Bozeman (W)	38.14	334	P			17 28 01.9	
	baz=142							
EGMT	Eagleton	39.35	338	P	P		17 28 12.6	+1.1
EGMT	Eagleton	39.35	338	P			17 28 12.6	
	baz=146,SNR=11							
F10A	Beach Ranch, E	41.02	330	P	P		17 28 24.3	-1.0
PINE	Pine Mountain	41.55	324	P	P		17 28 29.0	-0.8
WALA	Waterton Lakes	41.82	335	P	P		17 28 31.8	0.0
FFC	Flin Flon	43.21	349	P	P		17 28 42.9	+0.1
FFC				IAmb	IAmb		17 28 43.8	
	comp=Z,6.8nm,0.6s							
A04D	Lummi Island	45.62	329	P			17 29 03.3	
	baz=130							
FCC	Fort Churchill	46.15	356	P	P		17 29 05.5	-0.7
H03N2	Juan Fernandez	46.82	169	T	T		18 19 29.2	
	baz=348							
H03N1	Juan Fernandez	46.82	169	T	T		18 19 41.2	
	baz=348							
H03N3	Juan Fernandez	46.83	169	T	T		18 19 34.1	
	baz=348							
YKA	Yellowknife Ar	53.06	345	P	P		17 29 58.5	-0.3
	comp=Z,6.3nm,0.6s,baz=138,slow=8.1,SNR=129							
YKA				PcP	PcP		17 31 06.3	-0.3
	comp=Z,0.4nm,0.6s,baz=146,slow=4.2,SNR=4.2							
CRAG	Craig	54.80	331	P			17 30 12.2	
	baz=123							
SIT	Sitka	56.69	332	P			17 30 25.5	
	baz=122							
PINM	Pinnacle	60.46	333	P			17 30 51.3	
	baz=118							
PCA	Pinnacle	60.46	333	P	P		17 30 50.3	-1.0
CTG	Chitna Glacier	61.34	334	P			17 30 57.7	
	baz=118							
CRQE	Cirque	62.01	333	P			17 31 02.8	
	baz=116							
RES	Resolute Bay	62.07	358	P	P		17 31 00.7	-1.1
RES				IAmb	IAmb		17 31 01.5	
	comp=Z,2.5nm,0.8s							
L27K	Beaver Creek,	62.54	336	P			17 31 05.5	
	baz=118							
INK	Inuvik	62.61	343	P	P		17 31 05.2	-0.4
EGAK	Eagle	63.12	338	P			17 31 09.0	
	baz=120							
PRP	Porcupine Dome	65.10	337	P	P		17 31 22.1	-0.2
PRP				IAmb	IAmb		17 31 23.6	
	comp=Z,2.4nm,0.9s							
PRP	Porcupine Dome	65.10	337	P			17 31 22.5	
	baz=116							
HDA	Harding Lake	65.18	336	P			17 31 22.6	
	baz=114							
HDA				P			17 31 22.6	
	baz=114							
ILAR	Eielson Array	65.30	336	P	P		17 31 23.2	-0.2
	comp=Z,1.2nm,0.9s,baz=107,slow=4.8,SNR=9.9							
I23K	Minto, Yukon-K	66.42	336	P			17 31 30.6	
	baz=112							
MLY	Manley	66.92	336	P			17 31 33.6	
	baz=110							
EUNU	Eureka	67.38	0	P	P		17 31 35.7	-0.8
EUNU				IAmb	IAmb		17 31 36.7	
	comp=Z,1.6nm,0.7s							
TOLK	Toolik Lake Re	67.84	340	P	P		17 31 40.0	+0.4
TOLK				IAmb	IAmb		17 31 40.3	
	comp=Z,2.0nm,0.7s							
TOLK	Toolik Lake Re	67.84	340	P			17 31 39.6	
	baz=113							

EKA	Eskdalemuir Ar	77.14	36	P	P		17 32 33.0	-2.0
	comp=Z,0.5nm,0.6s,baz=287,slow=5.0,SNR=1.6							
NOA	NORSAR Array B	83.74	29	LR	LR		18 11 11.8	
	comp=Z,18nm,18.0s,baz=0.0,slow=36							
KURK	Kurchatov	115.89	9		PKPdf		17 39 24.4	+0.4
KURBB	Kurchatov Arra	115.96	9	PKP	PKiKP		17 39 24.4	+0.2
	comp=Z,0.2nm,0.6s,baz=13,slow=1.7,SNR=4.0							
MKAR	Makanchi Array	120.23	7	PKP	PKPdf		17 39 32.3	-0.3
	comp=Z,0.2nm,0.7s,baz=273,slow=1.8,SNR=2.6							
WRA	Warramunga Arr	138.17	254	PKP	PKiKP		17 40 08.8	-0.6
	comp=Z,0.6nm,0.5s,baz=90,slow=2.2,SNR=7.4							
ASAR	Alice Springs	138.23	249	PKhKP	PKPpre		17 39 58.4	
	comp=Z,0.6nm,1.0s,baz=97,slow=2.4,SNR=2.8							
ASAR				PKP	PKPdf		17 40 08.2	+0.9
	comp=Z,0.6nm,0.9s,baz=99,slow=2.5,SNR=2.9							
CMAR	Chiang Mai Arr	148.14	346	PKPbc	PKPbc		17 40 27.3	-0.8
	comp=Z,1.9nm,0.6s,baz=339,slow=3.7,SNR=20							

*SOME **20** 17:43:08.1, 39˚.20N×70˚.40E, h5km*
*NNC **20** 17:43:13.1±6.3, 39˚.13N×70˚.04E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=47.6km s-min=32.4km az=32.0*
ISC 20 17:43:16.3±3.5, **39˚.2N**±0˚.2×**70˚.3E**±0˚.1, **h13**km, **n15, σ2°38/20, 3C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IUG	luzhnay	2.95	357	*e*P		Pn	17 44 04.5	+1.5
	4.3nm,0.4s							
IUG				*e*S		Sb	17 44 44.9	0.0
	65nm,0.3s							
IUG	luzhnay	2.95	357	Pg		Pb	17 44 06.7	-2.1
	8.0nm,0.2s							
IUG				Lg		Lg	17 44 45.6	
	65nm,0.3s							
BRLS	Borolday	3.84	356	*e*P		Pn	17 44 15.0	-0.2
	6.0nm,0.4s							
BRLS				*e*S		Sn	17 45 03.0	+2.8
	16nm,0.4s							
BRLS	Borolday	3.84	356	Pg		Pn	17 44 17.2	+2.0
	6.0nm,0.4s							
BRLS				Lg		Lg	17 45 03.1	
	16nm,0.4s							
KK31	Karatay Array	3.91	3	Pn		Pn	17 44 17.3	+1.3
	0.5nm,0.3s,baz=181,slow=13,SNR=23							
KK31				⇓Sn		Sb	17 45 06.8	-5.5
	4.3nm,0.4s							
AML	Almayashu	3.93	41	P		Pn	17 44 16.3	-0.4
	SNR=13							
UCH	Uchtor	4.43	46	P		Pn	17 44 22.6	-1.1
	SNR=14							
AAK	Ala-Archa	4.71	42	P		Pn	17 44 27.1	-0.1
	SNR=8.4							
AAK	Ala-Archa	4.71	42	⇓P		Pn	17 44 26.8	-0.4
	4.7nm,0.8s							
AAK				⇑Sn		Sn	17 45 25.9	+4.2
	7.0nm,0.7s							
KBK	Karagaybulak	4.96	44	P		Pn	17 44 30.6	-0.1
	SNR=17							
CHMS	Chumysh	5.10	40	P		Pn	17 44 32.2	-0.3
	SNR=5.5							
USP	Ospenovka	5.18	37	P		Pn	17 44 33.2	-0.3
	SNR=11							
SGDS	Sogindy	5.38	36	Pg		Pn	17 44 39.8	+3.4
	3.2nm,0.4s							
SGDS				Lg		Lg	17 45 42.1	
	8.1nm,0.7s							
TKM2	Tokmak 2	5.49	46	P		Pn	17 44 37.1	-0.9
	SNR=8.4							
TKM2	Tokmak 2	5.49	46	⇑Pn		Pn	17 44 37.4	-0.6
	3.0nm,0.5s							
TKM2				⇑Sn		Sn	17 45 44.9	+3.7
	5.5nm,0.8s							

*TIF **20** 17:50:06.7, 43˚.67N×45˚.51E, h12km±3km*
*MOS **20** 17:50:06.4±0.0, 43˚.61N×45˚.64E, h7km, MPVA3.8*
*NORS **20** 17:50:07.1±0.0, 43˚.60N×45˚.66E, h14km, MPVA3.9*
ISC 20 17:50:09.7±1.1, **43˚.57N**±0˚.04×**45˚.63E**±0˚.03, **h15**km±9km, **n33, σ0°97/62, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GROC	Groznyy	0.39	162	*e*Pg		Pg	17 50 16.9	-0.7
GROC				*e*Sg		Sb	17 50 24.2	+0.2
TRKR	Terskaya	0.67	283	*e*Pg		Pg	17 50 22.1	-0.8
TRKR				*e*Sg		Sb	17 50 33.0	+0.8
VLKR	Vladikavkaz	0.87	233	*e*Pg		Pb	17 50 26.0	-0.5
VLKR				*e*Sg		Sn	17 50 40.5	+0.7
PRTR	Priterechnaya	1.00	281	*e*Pg		Pb	17 50 27.9	-0.7
PRTR				*e*Sg		Sn	17 50 43.3	+0.4
DBC	Dubki	1.03	122	*e*Pg		Pb	17 50 27.8	-1.5
DBC				*e*Sg		Sn	17 50 44.5	+0.7
ARNR	Ardon	1.06	249	*e*Pg		Pb	17 50 29.3	-0.4
ARNR				*e*Sg		Sg	17 50 45.9	+1.9
STDR	Stavd-Durt	1.16	261	*e*Pg		Pn	17 50 31.2	-0.1
STDR				*e*Sg		Sg	17 50 49.5	+2.3
KRNR	Karanay	1.19	128	*e*Pg		Pn	17 50 30.9	-1.0
KRNR				*e*Sg		Sg	17 50 49.7	+1.5
PNSH	Pansheti	1.20	219	P		Pn	17 50 30.1	-1.9
PNSH				S		Sb	17 50 47.5	+0.1
LACR	Lac	1.23	233	*e*Pg		Pn	17 50 31.1	-1.3
LACR				*e*Sg		Sn	17 50 49.5	+0.8
KORR	Kora	1.24	248	*e*Pg		Pn	17 50 31.7	-0.7
KORR				*e*Sg		Sg	17 50 51.1	+1.3
BUJR	Buynaksk	1.31	124	*e*Pg		Pb	17 50 33.5	-0.5
BUJR				*e*Sg		Sg	17 50 53.7	+1.7
LSNR	Lesken	1.35	258	*e*Pg		Pn	17 50 33.7	-0.2
LSNR				*e*Sg		Sg	17 50 53.8	+0.6
ARKR	Arakani	1.39	134	*e*Pg		Pn	17 50 34.0	-0.5
ARKR				*e*Sg		Sg	17 50 54.8	+0.3
GUDG	Gudauri	1.39	218	P		Pn	17 50 33.9	-0.8
GUDG				S		Sn	17 50 53.1	+0.1
NCK	Nalchik	1.48	268	*e*Pg		Pn	17 50 35.7	-0.1
NCK				*e*Sg		Sb	17 50 56.4	+0.9
ZEI	Tsey	1.49	239	*e*Pg		Pn	17 50 34.4	-1.7
ZEI				*e*Sg		Sn	17 50 55.4	+0.1
GNBR	Gunib	1.53	140	*i* Pg		Pb	17 50 36.9	-0.9
GNBR				*e*Sg		Sg	17 50 58.9	-0.2
KBTC	Kuba-Taba	1.63	279	*e*Pg		Pb	17 50 38.6	-0.9
KBTC				*e*Sg		Sb	17 51 00.6	+0.8
DIGR	Digorskoe uzhe	1.64	247	*e*Pg		Pn	17 50 37.1	-1.1
DIGR				*e*Sg		Sn	17 50 58.5	-0.6
LGD	Lagodekhi	1.79	165	P		Pb	17 50 41.3	-0.8
LGD				S		Sb	17 51 04.4	0.0
ONI	Oni	1.88	239	P		Pn	17 50 41.2	0.0
ONI				S		Sn	17 51 05.6	+1.0
ONI	Oni	1.88	239	*e*Pg		Pn	17 50 41.2	0.0
ONI				*e*Sg		Sb	17 51 06.8	-0.1
PYA1	Pyatigorsk	1.90	286	*e*Pg		Pn	17 50 41.7	+0.1
PYA1				*e*Sg		Sb	17 51 06.5	-1.1
BTNK	Botanikuri	1.98	198	P		Pn	17 50 43.0	+0.3
KBZ	Khabaz	1.99	275	*e*Pg		Pn	17 50 42.2	-0.5
KBZ				*e*Sg		Sn	17 51 08.7	+1.4
NEY	Neytrino	2.15	262	*e*Pg		Pn	17 50 45.7	+0.7
NEY				*e*Sg		Sb	17 51 14.2	-0.6
DDFL	Dedoflistskaro	2.15	170	P		Pb	17 50 47.8	-0.5
SHA1	Shidzhatmaz	2.17	275	*e*Pg		Pn	17 50 44.9	-0.5
SHA1				*e*Sg		Sb	17 51 14.4	-1.0
KIV	Kislovodsk	2.17	281	*e*Pg		Pn	17 50 46.1	+0.8
KIV				*e*Sg		Sn	17 51 11.1	-0.9
BKRG	Bakuriani	2.39	221	P		Pn	17 50 48.2	-0.1
DMNI	Dmanisi	2.48	206	P		Pn	17 50 49.2	-0.4
AKT	Akhty	2.60	143	*e*Pn		Pn	17 50 52.8	+1.6
AKT				*e*Sn		Sn	17 51 24.8	+2.2

*IDC **20** 17:52:03.2±0.9, 16˚.80S×173˚.59W, h0km, mb3.9/9, mb1 4.3/9, mb1mx4.1/25, mbtmp3.9/9, MS3.0/4, Ms1 3.0/4, ms1mx2.8/26, Error ellipse: s-maj=54.6km s-min=20.0km az=150.0*
*NEIC **20** 17:52:04.1±1.5, 16˚.75S±0˚.08×173˚.7W±0˚.1, h10km±1km, mb4.6/7, Error ellipse: s-maj=19.4km s-min=11.2km az=241.0*
ISC 20 17:52:09.9±0.6, **16˚.80S**±0˚.08×**173˚.6W**±0˚.1, **h52**km, **n41, σ1°53/26, mb4.1/13, MS3.0/4, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	Afiamalu	3.36	32			Pn	17 52 56.6	-3.4
NIUE	Niue	4.17	124			Pn	17 53 08.3	-2.6
NIUE				Sn		Sn	17 53 49.2	-9.1
RAR	Rarotonga	13.79	111	LR		LR	17 59 33.7	

	comp=Z,48nm,20.8s,baz=270,slow=33							
KNTN	Kanton	14.06	8	Pn		Pn	17 55 26.6	+0.3
SANVU	Saraoutou	18.50	271	P		P	17 56 18.5	-3.3
SANVU				IAmb		IAmb	17 56 25.9	
	comp=Z,57nm,1.1s							
DZM	Mont Dzumac	19.53	251	*e*LR		LR	18 01 53.7	
	comp=Z,162nm,26.4s							
DZM	Mont Dzumac	19.53	251	LR		LR	18 02 42.2	
	comp=Z,195nm,18.3s,baz=18,slow=33							
URZ	Urewera	22.89	199	P		P	17 57 08.1	-1.0
URZ				IAmb		IAmb	17 57 32.6	
	comp=Z,22nm,1.3s							
PPT2	Papeete2	22.96	96	*e*LR		LR	18 02 23.2	
	comp=Z,117nm,27.5s							
PPT	Papeete	22.96	95	LR		LR	18 04 26.6	
	comp=Z,22nm,18.3s,baz=275,slow=32							
TBI	Tubuai	23.57	110	*e*LR		LR	18 02 47.0	
	comp=Z,156nm,33.8s							
BKZ	Black Stump Fm	23.91	199	P		P	17 57 19.4	+0.5
BKZ				IAmb		IAmb	17 57 19.9	
	comp=Z,17nm,1.5s							
HNR	Honiara	26.76	283	LR		LR	18 07 30.0	
	comp=Z,25nm,22.0s,baz=122,slow=35							
H11S2	WAKE ISLAND Hy	40.07	330	T		T	18 41 54.9	
	baz=149,slow=75,SNR=8.8							
H11S3	WAKE ISLAND Hy	40.08	330	T		T	18 41 56.8	
	baz=149,slow=75,SNR=5.1							
H11S1	WAKE ISLAND Hy	40.08	330	T		T	18 42 01.9	
	baz=149,slow=75,SNR=4.2							
H11N3	WAKE ISLAND Hy	41.03	331	T		T	18 43 09.1	
	baz=149,slow=76,SNR=3.0							
H11N1	WAKE ISLAND Hy	41.04	331	T		T	18 43 09.6	
	baz=149,slow=76,SNR=3.8							
H11N2	WAKE ISLAND Hy	41.05	331	T		T	18 43 10.5	
	baz=149,slow=76,SNR=3.3							
STKA	Stephens Creek	43.19	241	P		P	18 00 06.3	+0.5
	comp=Z,1.5nm,0.9s,baz=108,slow=6.4,SNR=1.4							
WR0	Warramunga Arr	49.16	258	P		P	18 00 50.9	-2.1
WB0	Warramunga Arr	49.32	258	P		P	18 00 53.0	-1.2
WB0				IAmb		IAmb	18 00 55.5	
	comp=Z,8.6nm,1.2s							
WRA	Warramunga Arr	49.35	258	P		P	18 00 54.2	-0.3
	comp=Z,0.5nm,0.6s,baz=94,slow=6.8,SNR=2.0							
AS31	Alice Springs	49.51	253	P		P	18 00 55.7	0.0
ASAR	Alice Springs	49.51	253	P		P	18 00 55.8	+0.1
	comp=Z,4.5nm,0.6s,baz=86,slow=9.4,SNR=108							
ASAR				PcP		PcP	18 02 18.3	+1.2
	comp=Z,0.5nm,0.9s,baz=111,slow=4.1,SNR=1.3							
ASAR	Alice Springs	49.51	253	P		P	18 00 55.0	-0.6
NVAR	Mina Array Bea	75.49	42	P		P	18 03 50.1	+1.2
	comp=Z,1.5nm,0.9s,baz=226,slow=8.6,SNR=7.1							
TXAR	Lajitas Array	81.54	56	P		P	18 04 22.1	-0.3
	comp=Z,0.6nm,0.9s,baz=235,slow=4.4,SNR=5.3							
PDAR	Pinedale Array	83.43	42	P		P	18 04 33.4	+1.3
	comp=Z,1.8nm,0.9s,baz=220,slow=3.8,SNR=10							
PDAR	Pinedale Array	83.43	42	P		P	18 04 32.8	+0.7
YHL	Hebgen Lake	83.47	39	P		P	18 04 34.8	+2.4
YHL				IAmb		IAmb	18 04 35.9	
	comp=Z,4.9nm,0.9s							
ILAR	Eielson Array	83.84	11	P		P	18 04 34.1	+0.7
	comp=Z,0.8nm,0.7s,baz=223,slow=5.7,SNR=8.8							
H03N2	Juan Fernandez	84.70	123	T		T	19 38 19.9	
	baz=250							
H03N3	Juan Fernandez	84.70	123	T		T	19 38 35.5	
	baz=250							
H03N1	Juan Fernandez	84.72	123	T		T	19 38 23.8	
	baz=250							
YKA	Yellowknife Ar	91.45	23	P		P	18 05 10.7	+0.7
	comp=Z,0.2nm,0.8s,baz=220,slow=3.7,SNR=3.1							
CMAR	Chiang Mai Arr	92.87	288	P		P	18 05 18.8	+1.1
	comp=Z,0.6nm,0.8s,baz=85,slow=3.7,SNR=2.9							
ARCES	ARCESS Array B	125.96	352	PKP		PKiKP	18 11 07.0	+1.1
	comp=Z,3.2nm,0.9s,baz=11,slow=1.8,SNR=3.7							
BRTR	Keskin Array B	147.10	319	PKPbc		PKPbc	18 11 47.7	+0.2
	comp=Z,0.9nm,0.7s,baz=350,slow=1.8,SNR=2.9							
GERES	GERESS Array B	147.49	351	PKPbc		PKPbc	18 11 49.5	+1.2
	comp=Z,0.2nm,0.4s,baz=30,slow=2.4,SNR=1.9							
TORD	Torodi Ar. Bea	174.18	128	PKPab		PKPab	18 13 47.2	+0.7
	comp=Z,0.2nm,0.3s,baz=250,slow=5.4,SNR=4.1							

*TAP **20** 18:00:08.8, 24˚.08N×122˚.41E, h33km, ML2.6, D*
*JMA **20** 18:00:08.1±0.1, 23˚.99N×122˚.41E, h20km±3km, M2.3*
ISC 20 18:00:08.5±1.0, **24˚.05N**±0˚.03×**122˚.41E**±0˚.02, **h30**km±12km, **n84, σ0°85/142, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	Yonagunijimaku	0.63	51	P		Pb	18 00 20.8	-0.3
JYNG				S		Sn	18 00 29.9	-0.5
YOJ	Yonaguni jima	0.68	53	P		Pn	18 00 21.8	-0.3
YOJ				*e*S		Sn	18 00 31.3	-0.4
YOJ	Yonaguni jima	0.68	53	⇑P		Pn	18 00 21.9	-0.2
	baz=54							
YOJ				S		Sn	18 00 31.9	+0.2
	baz=54							
EWUT	Wuta	0.70	304	*e*P		Pb	18 00 22.8	+0.5
	baz=302							
EWUT				*e*S		Sb	18 00 31.5	-0.1
	baz=302							
TWD	Chiawan	0.75	272	P		Pn	18 00 23.1	+0.1
	baz=270							
TWD				S		Sn	18 00 32.7	-0.6
	baz=270							
TWC	Suao	0.76	317	P		Pn	18 00 22.7	-0.5
	baz=316							
TWC				*e*S		Sn	18 00 31.6	-2.0
	baz=316							
NACB	Ninganchiao	0.76	279	P		Pn	18 00 22.7	-0.5
	baz=263							
NACB				S	

FUSS	**Fushou**	**1.09 281**	P	**Pn**	**18 00 28.2**	**+0.3**
	baz=279						
NWLT	**Wulai**	**1.10 311**	*eP*	**Pb**	**18 00 28.7**	**-0.3**
	baz=309						
NWLT			S	**Sb**	**18 00 43.5**	**+0.4**
	baz=309						
YHNB	**Yeheng**	**1.13 303**	P	**Pn**	**18 00 28.9**	**+0.5**
	baz=290						
YHNB			*eS*	**Sb**	**18 00 43.9**	**0.0**
	baz=290						
CHGB	**Renai**	**1.13 271**	P	**Pn**	**18 00 28.7**	**+0.2**
	baz=257						
CHGB			*eS*	**Sn**	**18 00 43.0**	**-0.2**
	baz=257						
OWD	**Renai**	**1.14 265**	*eP*	**Pn**	**18 00 28.6**	**+0.1**
	baz=263						
OWD			S	**Sn**	**18 00 42.8**	**-0.3**
	baz=263						
TWT	**Tachien**	**1.15 280**	*eP*	**Pn**	**18 00 29.4**	**+0.7**
	baz=268						
TWT			*eS*	**Sn**	**18 00 43.8**	**+0.3**
	baz=268						
TDCB	**Techi**	**1.16 280**	P	**Pn**	**18 00 29.4**	**+0.5**
	baz=268						
TDCB			*eS*	**Sn**	**18 00 43.7**	**-0.2**
	baz=268						
WFSB	**Wu-fen Shan**	**1.17 331**	P	**Pb**	**18 00 29.8**	**-0.3**
	baz=329						
WFSB			S	**Sb**	**18 00 45.4**	**+0.6**
	baz=329						
VWDT	**VWDT**	**1.20 256**	*eP*	**Pn**	**18 00 29.1**	**-0.1**
	baz=254						
VWDT			*eS*	**Sn**	**18 00 44.7**	**+0.2**
	baz=254						
NHDH	**Xindian Distri**	**1.22 318**	*eP*	**Pb**	**18 00 30.2**	**-0.7**
	baz=316						
NHDH			S	**Sb**	**18 00 47.0**	**+0.7**
	baz=316						
YULB	**Yu-li**	**1.22 237**	P	**Pn**	**18 00 29.4**	**-0.2**
	baz=251						
YULB			*eS*	**Sn**	**18 00 44.8**	**-0.2**
	baz=251						
EYUL	**Yuli**	**1.22 235**	P	**Pn**	**18 00 29.6**	**0.0**
	baz=223						
EYUL			S	**Sn**	**18 00 45.3**	**+0.1**
	baz=223						
IRIF	**Iriomote-Funau**	**1.23 77**	P	**Pn**	**18 00 30.6**	**+0.9**
IRIF			*eS*	**Sb**	**18 00 47.4**	**+0.6**
TATO	**Taipei**	**1.25 318**	*eP*	**Pb**	**18 00 31.9**	**+0.5**
	baz=315						
TATO			S	**Sb**	**18 00 47.7**	**+0.5**
	baz=315						
HATJ	**Hateruma jima**	**1.27 90**	P	**Pb**	**18 00 31.3**	**-0.6**
WPL	**Puli Township**	**1.33 269**	*eP*	**Pn**	**18 00 31.6**	**+0.5**
	baz=267						
YM01	**YM01**	**1.33 325**	P	**Pb**	**18 00 32.4**	**-0.5**
	baz=322						
FULB	**Fuli**	**1.33 231**	*eP*	**Pn**	**18 00 31.6**	**+0.5**
	baz=229						
YM10	**YM10**	**1.34 325**	P	**Pn**	**18 00 31.9**	**+0.5**
	baz=323						
CHKT	**Chengkung**	**1.35 226**	*eP*	**Pn**	**18 00 31.4**	**+0.1**
	baz=224						
CHKT			*eS*	**Sn**	**18 00 46.7**	**-1.6**
	baz=224						
YM04	**YM04**	**1.36 324**	*eP*	**Pn**	**18 00 32.1**	**+0.7**
	baz=337						
YM04			*eS*	**Sb**	**18 00 49.1**	**-1.3**
	baz=337						
YM08	**YM08**	**1.36 327**	*eP*	**Pn**	**18 00 31.6**	**+0.1**
	baz=324						
DPDB	**Guoxing**	**1.36 269**	*eP*	**Pn**	**18 00 32.0**	**+0.5**
	baz=268						
WHP	**Taichung City**	**1.36 280**	*eP*	**Pb**	**18 00 33.2**	**-0.2**
	baz=268						
WHP			*eS*	**Sb**	**18 00 51.0**	**+0.6**
	baz=268						
SSLB	**Suanglung**	**1.36 259**	*eP*	**Pn**	**18 00 31.9**	**+0.4**
	baz=257						
SSLB			*eS*	**Sn**	**18 00 48.3**	**-0.2**
	baz=257						
WCS	**Beigang Elemen**	**1.37 270**	*eP*	**Pn**	**18 00 32.6**	**+1.0**
	baz=269						
YM03	**YM03**	**1.37 325**	*eP*	**Pn**	**18 00 31.9**	**+0.1**
	baz=322						
ANP	**Anpu**	**1.39 324**	*eP*	**Pn**	**18 00 32.7**	**+0.7**
	baz=322						
SMLT	**Sun Moon Lake**	**1.40 263**	P	**Pn**	**18 00 32.5**	**+0.5**
	baz=253						
SMLT			*eS*	**Sn**	**18 00 50.1**	**+0.6**
	baz=253						
LIOB	**Emei**	**1.41 295**	*eP*	**Pb**	**18 00 33.8**	**-0.3**
	baz=293						
LIOB			*eS*	**Sb**	**18 00 51.4**	**-0.3**
	baz=293						
NSTT	**Nanjuang**	**1.41 294**	*eP*	**Pb**	**18 00 34.7**	**+0.4**
	baz=292						
TWY	**Chenhua**	**1.43 329**	*eP*	**Pn**	**18 00 32.0**	**-0.3**
	baz=326						
TYC	**Yuchr**	**1.43 264**	*eP*	**Pn**	**18 00 33.2**	**+0.7**
	baz=262						
JKRS	**Kuro-shima**	**1.47 82**	P	**Pb**	**18 00 34.7**	**-0.5**
JKRS			S	**Sb**	**18 00 53.8**	**+0.3**
WHYT	**Xinyi Township**	**1.47 256**	*eP*	**Pn**	**18 00 34.3**	**+1.2**
	baz=247						
EDH	**Donghe**	**1.48 224**	*eP*	**Pn**	**18 00 33.1**	**0.0**
	baz=214						
EDH			*eS*	**Sn**	**18 00 49.7**	**-1.7**
	baz=214						
TWQ1	**Liyutan**	**1.53 281**	*eP*	**Pb**	**18 00 35.3**	**-0.9**
	baz=279						
WJS	**Zhushan**	**1.56 262**	*eP*	**Pb**	**18 00 36.4**	**-0.4**
	baz=260						
ALS	**Alishan**	**1.57 250**	P	**Pn**	**18 00 35.5**	**+0.9**
	baz=249						
ALS			S	**Sn**	**18 00 54.9**	**+0.8**
	baz=249						
WNT	**Mingjian**	**1.59 264**	*eP*	**Pb**	**18 00 36.4**	**-0.9**
	baz=262						
JIJ	**Ishigaki jima**	**1.61 79**	P	**Pn**	**18 00 35.8**	**+0.9**
JIJ			*eS*	**Sn**	**18 00 55.5**	**+0.9**
LDUT	**Ludao**	**1.62 212**	*eP*	**Pn**	**18 00 34.9**	**-0.2**
	baz=211						
LONT	**Longtian**	**1.64 226**	*eP*	**Pn**	**18 00 35.7**	**+0.3**
	baz=236						
CHN5	**Tsauling**	**1.65 254**	*eP*	**Pn**	**18 00 37.2**	**+1.6**
	baz=244						
CHN5			*eS*	**Sb**	**18 00 57.9**	**-1.0**
	baz=244						
TWGBT	**Beinan**	**1.73 225**	P	**Pn**	**18 00 36.3**	**-0.3**
	baz=235						
TWGBT			*eS*	**Sn**	**18 00 56.5**	**-1.3**
	baz=235						
TWG	**Pinlang**	**1.74 225**	*eP*	**Pn**	**18 00 36.8**	**+0.1**
	baz=235						
TWG			*eS*	**Sn**	**18 00 56.6**	**-1.2**
	baz=235						
STYH	**Taoyuan**	**1.74 240**	*eP*	**Pn**	**18 00 37.6**	**+0.9**
	baz=230						
STYH			*eS*	**Sn**	**18 00 58.8**	**+1.0**
	baz=230						
STYT	**Tauyuan**	**1.76 240**	*eP*	**Pn**	**18 00 38.1**	**+1.1**
	baz=230						
STYT			S	**Sn**	**18 00 59.7**	**+1.3**
	baz=230						
TPUB	**Ta-pu**	**1.80 246**	*eP*	**Pn**	**18 00 39.5**	**+1.9**
	baz=245						
TPUB			*eS*	**Sb**	**18 01 02.2**	**-0.8**
	baz=245						
JISG	**Ishigakijimahi**	**1.81 73**	P	**Pn**	**18 00 38.4**	**+0.7**
JISG			*eS*	**Sn**	**18 01 00.7**	**+1.1**
WTP	**Ta-pu**	**1.83 244**	*eP*	**Pn**	**18 00 40.1**	**+2.0**
	baz=243						
WTP			*eS*	**Sb**	**18 01 03.1**	**-1.0**
	baz=243						
WTK	**Tuku**	**1.89 259**	*eP*	**Pb**	**18 00 41.6**	**-0.8**
	baz=246						
TWK	**Hsinying**	**1.93 246**	*eP*	**Pn**	**18 00 41.4**	**+2.0**
	baz=245						
TWK			S	**Sb**	**18 01 05.6**	**-1.3**
	baz=245						
CHN1	**Nanshi**	**1.93 244**	*eP*	**Pn**	**18 00 40.8**	**+1.5**
	baz=243						
CHN1			*eS*	**Sb**	**18 01 06.0**	**-0.9**
	baz=243						
SLGT	**Liugui**	**1.94 237**	*eP*	**Pn**	**18 00 41.2**	**+1.8**
	baz=228						
SLGT			*eS*	**Sb**	**18 01 06.0**	**-1.0**
	baz=228						
SGST	**Jiashian**	**1.94 240**	*eP*	**Pn**	**18 00 41.1**	**+1.7**
	baz=228						
SGST			*eS*	**Sn**	**18 01 04.8**	**+2.0**
	baz=228						
ECL	**Taimali**	**1.98 223**	*eP*	**Pn**	**18 00 41.1**	**+1.1**
	baz=231						
SSD	**Sandimen**	**2.09 232**	*eP*	**Pn**	**18 00 43.3**	**+1.8**
	baz=225						
SSD			*eS*	**Sn**	**18 01 08.1**	**+1.5**
	baz=225						
JTJ	**Tarama**	**2.17 74**	*eS*	**Sb**	**18 01 11.5**	**-2.1**
MASBT	**Mashibuluo**	**2.18 229**	*eP*	**Pn**	**18 00 44.6**	**+1.9**
	baz=224						
MASBT			*eS*	**Sn**	**18 01 08.7**	**+0.1**
	baz=224						
EAST	**Anshuo**	**2.20 221**	*eP*	**Pn**	**18 00 44.7**	**+1.6**
	baz=220						
SLIU	**Shizi**	**2.36 219**	*eP*	**Pn**	**18 00 47.4**	**+2.2**
	baz=218						
TWKBT	**Hengchun**	**2.57 215**	*eP*	**Pn**	**18 00 48.8**	**+0.7**
	baz=214						

*IDC **20** 18:19:51.3±0.7, 62˙21S×161˙02E, h0km, mb4.3/8, mb1 4.4/9, mb1mx4.3/16, mbtmp4.3/9, ML4.2/1, MS4.7/23, Ms1 4.7/23, ms1mx4.7/26, Error ellipse: s-maj=35.3km s-min=20.6km az=66.0*

*NEIC **20** 18:19:53.2±2.1, 62˙06S±0˙10×161˙00E±0˙08, h10km±1km, mb5.0/41, Error ellipse: s-maj=17.1km s-min=6.2km az=11.0*

*GCMT **20** 18:19:58.2±0.1, 61˙94S±0˙01×161˙50E±0˙02, h12km, MW5.3/125, Moment Tensor Solution. s83,c129; s125,c219; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.04±.02; $M_{\theta\theta}$ 1.10±.01; $M_{\phi\phi}$ -1.07±.02; $M_{r\theta}$ -0.20±.04; $M_{r\phi}$ -0.30±.01; $M_{\theta\phi}$ 0.03±.04; Best double couple: $M_0$1.14200×10^{17} NP1:ϕ_s232.00000°, δ83.00000°, λ174.00000°. NP2:ϕ_s323.00000°, δ84.00000°, λ7.00000°. Principal axes: T 1.1740, Plg9.0000°, Azm188.0000°; N -0.0680, Plg81.0000°, Azm5.0000°; P -1.1100, Plg0.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 18:19:53.5±0.3, 62˙00S±0˙06×161˙10E±0˙08, h10km, n131, σ1§48/98, mb5.0/27, MS4.7/28, 1C-1D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.61**	**351**	Pn	**Pn**	**18 21 40.1**	**-4.1**
VNDA	**Vanda**	**15.59**	**179**	Pn	**Pn**	**18 23 30.3**	**-2.6**
	0.9nm,0.3s,baz=350,slow=14,SNR=30						
VNDA				LR	LR	18 28 42.0	
	comp=Z,9μm,18.4s,baz=5.5,slow=34						
VNDA	**Vanda**	**15.59**	**179**	Pn	**Pn**	**18 23 30.6**	**-2.3**
SBA	**Scott Base**	**16.03**	**176**	P	**Pn**	**18 23 39.1**	**+0.6**
WHZ	**Wether Hill Ro**	**16.62**	**17**	P	**Pn**	**18 23 46.1**	**-0.2**
DCZ	**Deep Cove**	**16.94**	**15**	P	**Pn**	**18 23 50.9**	**+0.6**
LBZ	**Lake Benmore**	**18.44**	**21**	P	**Pn**	**18 24 11.3**	**+2.4**
LBZ				IAmb	IAmb	18 24 31.3	
	comp=Z,208nm,1.8s						
RPZ	**Rata Peaks**	**19.24**	**22**	LR	LR	18 31 02.6	
	comp=Z,5μm,18.3s,baz=204,slow=34						
MQZ	**McQueen's Vall**	**19.55**	**26**	P	**Pn**	**18 24 22.3**	**0.0**
MQZ				IAmb	IAmb	18 24 35.2	
	comp=Z,184nm,1.9s						
OXZ	**Oxford**	**19.80**	**24**	P	**Pn**	**18 24 25.6**	**+0.3**
LTZ	**Lake Taylor**	**20.37**	**24**	P	Pn	18 24 31.7	-0.4
KHZ	**Kahutara**	**20.98**	**26**	P	**P**	**18 24 38.5**	**+2.0**
KHZ				IAmb	IAmb	18 24 46.5	
	comp=Z,103nm,1.2s						
THZ	**Tophouse**	**21.48**	**25**	P	**P**	**18 24 42.3**	**+0.3**
THZ				IAmb	IAmb	18 25 03.5	
	comp=Z,90nm,1.4s						
BSWZ	**Blackbirch Sta**	**21.72**	**27**	P	**P**	**18 24 45.7**	**+1.2**
CASY	**Casey**	**21.94**	**237**	P	**P**	**18 24 51.6**	**+4.9**
BKZ	**Black Stump Fm**	**24.74**	**30**	P	**P**	**18 25 16.0**	**+1.1**
BKZ				IAmb	IAmb	18 25 39.1	
	comp=Z,75nm,1.4s						
URZ	**Urewera**	**25.75**	**30**	P	**P**	**18 25 25.2**	**+1.4**
	comp=Z,10nm,1.0s,baz=300,slow=23,SNR=3.7						
URZ				LR	LR	18 34 30.8	
	comp=Z,5μm,18.9s,baz=211,slow=34						
URZ	**Urewera**	**25.75**	**30**	P	**P**	**18 25 26.1**	**+2.2**
URZ				IAmb	IAmb	18 25 44.3	
	comp=Z,39nm,1.2s						
STKA	**Stephens Creek**	**32.67**	**328**	P	**P**	**18 26 27.0**	**+1.5**
	comp=Z,2.8nm,0.9s,baz=143,slow=13,SNR=2.9						
STKA				LR	LR	18 36 36.8	
	comp=Z,1μm,20.2s,baz=159,slow=31						
STKA	**Stephens Creek**	**32.67**	**328**	P	**P**	**18 26 28.0**	**+2.5**
MAW	**Mawson**	**37.95**	**218**	LR	LR	18 43 12.4	
	comp=Z,4μm,18.1s,baz=122,slow=37						
MAW	**Mawson**	**37.95**	**218**	P	P	18 27 16.9	+6.3
H01W1	**Cape Leeuwin H**	**39.92**	**291**	T	T	19 10 19.6	
	baz=147,slow=75,SNR=832						
H01W2	**Cape Leeuwin H**	**39.93**	**291**	T	T	19 10 19.8	
	baz=147,slow=75,SNR=725						
H01W3	**Cape Leeuwin H**	**39.94**	**291**	T	T	19 10 20.8	
	baz=147,slow=75,SNR=771						
BELA	**Belgrano 2**	**40.03**	**175**	P	**P**	**18 27 28.0**	**+0.2**
DZM	**Mont Dzumac**	**40.08**	**8**	*eS*	**S**	**18 33 36.3**	**+1.5**
	comp=Z,160nm,28.5s						
DZM				*eLQ*	LQ	18 36 44.4	
	comp=Z,2μm,29.8s						
DZM				*eLR*	LR	18 38 35.7	
	comp=Z,2μm,28.4s						
DZM	**Mont Dzumac**	**40.08**	**8**	LR	LR	18 41 14.3	
	comp=Z,1μm,19.1s,baz=208,slow=32						
ASAR	**Alice Springs**	**42.54**	**322**	P	**P**	**18 27 50.5**	**+1.3**
	comp=Z,6.7nm,0.8s,baz=162,slow=8.3,SNR=34						
ASAR				PcP	**PcP**	**18 29 41.0**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=154,slow=3.9,SNR=2.3						
ASAR				LR	LR	18 45 08.1	
	comp=Z,332nm,18.4s,baz=152,slow=36						
ASAR	**Alice Springs**	**42.54**	**322**	P	**P**	**18 27 49.6**	**+0.5**
AS31	**Alice Springs**	**42.55**	**322**	P	**P**	**18 27 48.5**	**-0.6**
SYO	**Syowa Base**	**42.81**	**207**	*eP*	**P**	**18 27 49.0**	**-1.7**
CTA	**Charters Tower**	**43.13**	**339**	LR	LR	18 43 21.3	
	comp=Z,1μm,18.6s,baz=166,slow=32						
CTAO	**Charters Tower**	**43.13**	**339**	P	**P**	**18 27 53.3**	**-0.6**
CTAO				IAmb	IAmb	18 28 11.7	
	comp=Z,44nm,1.3s						
MORW	**Morawa**	**44.11**	**297**	P	**P**	**18 28 00.6**	**-1.1**
MORW				IAmb	IAmb	18 28 19.3	
	comp=Z,36nm,1.4s						
MSVF	**Nonsavu**	**45.81**	**23**	LR	LR	18 43 59.5	
	comp=Z,2μm,21.8s,baz=186,slow=32						
MSVF	**Nonsavu**	**45.81**	**23**	P	**P**	**18 28 14.7**	**-0.6**
WR0	**Warramunga Arr**	**45.88**	**324**	P	**P**	**18 28 15.2**	**-0.6**
WR0				IAmb	IAmb	18 28 32.7	
	comp=Z,24nm,1.2s						
WB2	**Warramunga Arr**	**45.94**	**324**	P	**P**	**18 28 16.0**	**-0.4**
WB2				IAmb	IAmb	18 28 33.2	
	comp=Z,23nm,1.2s						
WRA	**Warramunga Arr**	**45.95**	**324**	P	**P**	**18 28 15.7**	**-0.7**
	comp=Z,5.2nm,1.1s,baz=164,slow=6.0,SNR=6.7						
WRA				PcP	**PcP**	**18 29 52.7**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=154,slow=3.0,SNR=2.5						
WRA	**Warramunga Arr**	**45.95**	**324**	P	**P**	**18 28 16.1**	**-0.2**
WB0	**Warramunga Arr**	**46.10**	**324**	P	**P**	**18 28 14.9**	**-2.7**
WB0				IAmb	IAmb	18 28 33.5	
	comp=Z,52nm,1.9s						
SNAA	**Sanae**	**46.14**	**187**	P	**P**	**18 28 19.1**	**+1.7**
SNAA	**Sanae**	**46.14**	**187**	P	**P**	**18 28 18.5**	**+1.1**
SNAA				IAmb	IAmb	18 28 25.7	
	comp=Z,19nm,1.2s						
VNA3	**Neumayer Olymp**	**46.88**	**184**	P	**P**	**18 28 24.2**	**+1.1**
VNA2	**Neumayer--Watz**	**47.11**	**185**	P	**P**	**18 28 23.6**	**-1.2**
	baz=158,slow=6.9						
VNA1	**Neumayer--Stat**	**47.42**	**185**	P	**P**	**18 28 28.7**	**+1.5**
RAR	**Rarotonga**	**48.80**	**52**	LR	LR	18 43 40.9	
	comp=Z,412nm,22.0s,baz=213,slow=29						
FITZ	**Fitzroy Crossi**	**50.37**	**314**	LR	LR	18 48 15.8	
	comp=Z,577nm,18.7s,baz=169,slow=34						
TBI	**Tubuai**	**50.99**	**64**	*eS*	**S**	**18 36 11.8**	**-0.2**
	comp=Z,509nm,29.2s						
TBI				*eLQ*	LQ	18 40 41.0	
	comp=Z,2μm,27.5s						
TBI				*eLR*	LR	18 43 32.9	
	comp=Z,637nm,23.0s,baz=212						
TBI	**Tubuai**	**50.99**	**64**	*eT*	T	19 23 22.2	
	comp=Z,36nm,0.3s						
KNRA	**Kununurra**	**51.62**	**319**	P	**P**	**18 29 01.0**	**+1.0**
HNR	**Honiara**	**52.48**	**359**	LR	LR	18 47 07.6	
	comp=Z,2μm,20.1s,baz=224,slow=31						
PMG	**Port Moresby**	**53.48**	**343**	LR	LR	18 49 42.2	
	comp=Z,1μm,18.4s,baz=178,slow=33						
PAE	**Paea**	**56.01**	**61**	*eT*	T	19 29 37.8	
	comp=Z,4.5nm,0.2s						
PPT2	**Papeete2**	**56.07**	**61**	*eS*	**S**	**18 37 24.2**	**+3.0**
	comp=Z,453nm,25.0s						
PPT2				*eLQ*	LQ	18 42 48.0	
	comp=Z,746nm,23.2s						
PPT2				*eLR*	LR	18 45 33.5	
	comp=Z,367nm,26.5s						
PPT2	**Papeete2**	**56.07**	**61**	*eT*	T	19 29 39.8	
	comp=Z,9.8nm,0.3s						
PPT	**Papeete**	**56.09**	**61**	LR	LR	18 50 02.2	
	comp=Z,224nm,18.3s,baz=204,slow=32						
MEH	**Mehetia**	**56.44**	**62**	*eT*	T	19 30 10.9	
	comp=Z,25nm,0.3s						
RKT	**Rikitea**	**57.65**	**78**	*eS*	**S**	**18 37 41.8**	**+0.1**
	comp=Z,548nm,28.5s						
RKT				*eLQ*	LQ	18 43 57.3	
	comp=Z,676nm,27.0s						
RKT				*eLR*	LR	18 46 26.7	
	comp=Z,1μm,27.0s						
RKT	**Rikitea**	**57.65**	**78**	*eT*	T	19 31 40.3	
	comp=Z,24nm,0.2s						
MG04	**Isla Riesco**	**58.16**	**145**	P	P	18 29 53.0	+6.2
BATI	**Baumata**	**58.40**	**315**	LR	LR	18 53 35.2	
	comp=Z,363nm,18.8s,baz=202,slow=35						
MMRI	**Maumere**	**60.34**	**314**	P	**P**	**18 30 02.4**	**0.0**
JAY	**Jayapura**	**61.29**	**337**	LR	LR	18 56 05.1	
	comp=Z,442nm,19.6s,baz=148,slow=35						
LL01	**San Ignacio de**	**67.41**	**140**	P	**P**	**18 30 48.7**	**+0.1**
LL01				IAmb	IAmb	18 31 04.9	
	comp=Z,13nm,1.1s						
TAOE	**Nuku Hiva Isla**	**67.87**	**66**	*eLR*	LR	18 51 12.2	
	comp=Z,374nm,22.6s						
PLCA	**Paso Flores**	**69.48**	**140**	P	**P**	**18 31 00.5**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=357,slow=12,SNR=2.2						
PLCA				LR	LR	18 57 42.7	
	comp=Z,438nm,19.1s,baz=210,slow=33						
PLCA	**Paso Flores**	**69.48**	**140**	P	**P**	**18 31 02.7**	**+1.0**
BI02	**San Fabin de**	**72.99**	**138**	P	**P**	**18 31 23.4**	**+0.4**
BI02				IAmb	IAmb	18 31 34.2	
	comp=Z,37nm,1.7s						
H03S2	**Juan Fernandez**	**73.00**	**131**	T	T	19 51 41.2	
	baz=203,slow=74,SNR=333						
H03S1	**Juan Fernandez**	**73.00**	**131**	T	T	19 51 44.5	
	baz=203,slow=74,SNR=363						
H03S3	**Juan Fernandez**	**73.01**	**131**	T	T	19 51 42.1	
	baz=203,slow=74,SNR=299						
KSM	**Kuching**	**74.00**	**306**	P	**P**	**18 31 29.6**	**+0.6**
KSM				IAmb	IAmb	18 31 41.7	
	comp=Z,19nm,1.1s						
SBUM	**Sibu**	**74.18**	**309**	P	**P**	**18 31 30.9**	**+0.8**
SBUM				IAmb	IAmb	18 31 47.0	
	comp=Z,23nm,1.3s						
KKM	**Kota Kinabalu**	**76.10**	**314**	P	**P**	**18 31 40.8**	**-0.4**
KKM				IAmb	IAmb	18 31 57.0	
	comp=Z,17nm,1.2s						
MT03	**Universidad Ad**	**76.15**	**138**	P	**P**	**18 31 43.8**	**+2.4**
MYKOM	**Kota Tinggi**	**76.83**	**300**	P	**P**	**18 31 47.3**	**+2.1**
MYKOM				IAmb	IAmb	18 32 02.4	
	comp=Z,25nm,1.3s						
GSI	**Gunungsitoli**	**79.02**	**294**	P	**P**	**18 31 57.1**	**-0.4**
RPSI	**Rantau Prapat**	**79.70**	**296**	P	**P**	**18 32 00.6**	**-0.6**
RPSI				IAmb	IAmb	18 32 16.9	
	comp=Z,19nm,1.2s						
KULM	**Kulim**	**81.31**	**299**	P	**P**	**18 32 10.6**	**+0.8**
TGY	**Tagaytay City**	**82.16**	**321**	LR	LR	19 08 04.0	
	comp=Z,165nm,21.4s,baz=108,slow=35						
H08S2	**Diego Garcia H**	**82.65**	**268**	T	T	20 04 06.6	
	baz=151,slow=76,SNR=52						
H08S1	**Diego Carcia H**	**82.66**	**268**	T	T	20 03 57.3	
	baz=151,slow=76,SNR=54						
H08S3	**Diego Garcia H**	**82.67**	**268**	T	T	20 03 56.6	
	baz=151,slow=76,SNR=83						
AC02	**Maricunga**	**82.75**	**136**	P	**P**	**18 32 17.6**	**-0.4**
AC02				IAmb	IAmb	18 32 28.9	
	comp=Z,15nm,1.3s						
BOSA	**Boshof**	**82.97**	**218**	P	**P**	**18 32 17.6**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=152,slow=4.7,SNR=5.7						
BOSA				LR	LR	19 07 35.5	
	comp=Z,527nm,18.8s,baz=160,slow=35						
BOSA	**Boshof**	**82.97**	**218**	P	**P**	**18 32 18.3**	**-0.4**
CPUP	**Villa Florida**	**86.72**	**146**	P	**P**	**18 32 36.2**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=42,slow=12,SNR=1.6						
CPUP				LR	LR	19 07 51.4	
	comp=Z,745nm,18.8s,baz=198,slow=33						
JCJ	**Chichijima**	**90.08**	**343**	LR	LR	19 09 13.0	
	comp=Z,252nm,20.1s,baz=234,slow=33						
CMAR	**Chiang Mai Arr**	**93.91**	**303**	P	**P**	**18 33 10.9**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=183,slow=5.3,SNR=6.7						
CMAR				LR	LR	19 13 12.5	
	comp=Z,292nm,19.3s,baz=198,slow=34						
CMAR	**Chiang Mai Arr**	**93.91**	**303**	P	**P**	**18 33 12.1**	**+1.1**
CHTO	**Chiang Mai**	**94.23**	**303**	P	**P**	**18 33 13.7**	**+1.3**
CHTO				IAmb	IAmb	18 33 25.1	
	comp=Z,12nm,1.4s						
KMI	**Kunming**	**98.50**	**309**	⇑P	**P**	**18 33 30.4**	**-1.6**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s						
KMI				pmax	pmax		
	comp=Z,95nm,3.8s						
KMI				LR	LR		
	comp=Z,210nm,18.9s						
KMI				LR	LR		
	comp=Z,190nm,25.2s						
KMI				LR	LR		
	comp=Z,300nm,23.8s						
BDFB	**Brasilia**	**99.26**	**152**	LR	LR	19 16 23.1	
	comp=Z,232nm,18.9s,baz=135,slow=34						
NJ2	**Nanjing**	**99.73**	**325**	*eP*	**Pdif**	**18 33 38.4**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	**Hu-ho-hao-te**	**110.01**	**322**	*ePKP*	**PKiKP**	**18 38 26.1**	**+1.9**
NVAR	**Mina Array Bea**	**119.03**	**62**	PKP	**PKiKP**	**18 38 41.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=194,slow=2.2,SNR=1.4						
MNTX	**Cornudas Mount**	**119.06**	**77**		**PKiKP**	**18 38 42.0**	**+0.2**
WMQ	**Urumqi**	**120.72**	**306**	*ePKP*	**PKiKP**	**18 38 45.5**	**+0.8**
WMQ				LR	LR		
	comp=Z,360nm,21.1s						
WMQ				LR	LR		
	comp=Z,260nm,27.9s						
WMQ				LR	LR		
	comp=Z,280nm,21.1s						
MKAR	**Makanchi Array**	**125.29**	**304**	PKP	**PKPdf**	**18 38 52.6**

comp=Z,31nm,1.3s
CLL Collm 159.68 253 *e*(PKPab) **PKPab** 18 40 35.0 **+5.1**
CLL *e* 18 40 47.0
CLL *e*SS SS 19 04 24.0 +4.6
CLL *e* 19 06 18.0
CLL *e*SSS SSS 19 10 48.0
CLL L L 19 55 00.0
comp=Z,300nm,20.7s

*IDC **20** 18:36:41.9±0.7, 9˚32S×158˚57E, h0km, mb4.1/15, mb1 4.3/18, mb1mx4.1/42, mbtmp4.1/18, ML4.1/3, Error ellipse: s-maj=18.4km s-min=15.4km az=146.0*
*NEIC **20** 18:36:45.6±1.5, 9˚36S±0˚10×158˚63E±0˚06, h27km±4km, mb4.5/14, Error ellipse: s-maj=14.4km s-min=8.7km az=176.0*
ISC 20 18:36:46.1±0.5, 9˚34S±0˚09×158˚60E±0˚07, h30km, n35, σ0s95/35, mb4.2/21, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HNR	**Honiara**	**1.33**	**94**	Pn	**Pn**		**18 37 07.5**	**-1.3**
	493nm,0.3s,baz=232,slow=5.3,SNR=281							
HNR				Sn	**Sn**		**18 37 24.2**	**-1.3**
	2µm,0.3s,baz=343,slow=20,SNR=20							
SANVU	**Saraoutou**	**10.37**	**127**	Pn	**Pn**		**18 39 13.7**	**+0.8**
DZM	**Mont Dzumac**	**14.73**	**150**	Pn	**Pn**		**18 40 13.5**	**+0.9**
	0.2nm,0.3s,baz=354,slow=16,SNR=1.5							
COEN	**Coen**	**15.79**	**252**	Pn	**Pn**		**18 40 25.2**	**-1.2**
CTA	**Charters Tower**	**16.01**	**227**	Pn	**Pn**		**18 40 28.4**	**-0.8**
	0.7nm,0.3s,baz=40,slow=14,SNR=5.7							
CTAO	**Charters Tower**	**16.01**	**227**	Pn	**Pn**		**18 40 26.6**	**-2.7**
CTAO				IAmb	IAmb		18 40 35.5	
	comp=Z,30nm,1.4s							
PATS	**Pohnpei**	**16.07**	**359**	Pn	**Pn**		**18 40 28.4**	**-1.6**
JAY	**Jayapura**	**19.03**	**290**	P	**Pn**		**18 41 07.0**	**+0.2**
	comp=Z,1.6nm,0.3s,baz=67,slow=6.1,SNR=6.6							
WR0	**Warramunga Arr**	**25.52**	**243**	P	**P**		**18 42 12.6**	**+0.3**
WR0				IAmb	IAmb		18 42 27.0	
	comp=Z,7.1nm,0.8s							
WB0	**Warramunga Arr**	**25.58**	**243**	P	**P**		**18 42 13.0**	**+0.2**
WB0				IAmb	IAmb		18 42 32.1	
	comp=Z,16nm,1.2s							
WB2	**Warramunga Arr**	**25.68**	**243**	P	**P**		**18 42 12.5**	**-1.2**
WB2				IAmb	IAmb		18 42 15.4	
	comp=Z,21nm,1.4s							
WRA	**Warramunga Arr**	**25.69**	**243**	P	**P**		**18 42 14.0**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=72,slow=9.7,SNR=12							
STKA	**Stephens Creek**	**27.42**	**213**	P	**P**		**18 42 29.3**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=45,slow=15,SNR=7.0							
STKA	**Stephens Creek**	**27.42**	**213**	IAmb	IAmb		18 42 37.4	
	comp=Z,2.3nm,1.3s							
ASAR	**Alice Springs**	**27.56**	**236**	P	**P**		**18 42 29.9**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=59,slow=10.0,SNR=9.3							
ASAR				PcP	**PcP**		**18 45 48.8**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=81,slow=2.8,SNR=5.7							
FITZ	**Fitzroy Crossi**	**33.13**	**251**	P	**P**		**18 43 19.6**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=67,slow=11,SNR=1.3							
KKM	**Kota Kinabalu**	**44.92**	**288**	P	**P**		**18 44 59.1**	**+0.4**
KKM				IAmb	IAmb		18 45 00.0	
	comp=Z,15nm,1.2s							
TPUB	**Ta-pu**	**49.31**	**312**	P	**P**		**18 45 32.8**	**0.0**
MJAR	**Matsushiro Arr**	**49.50**	**338**	P	**P**		**18 45 32.3**	**-1.7**
	comp=Z,2.3nm,0.9s,baz=159,slow=6.4,SNR=2.2							
JHS	**Saijyo**	**50.25**	**333**	P	**P**		**18 45 40.0**	**+0.3**
LEM	**Lembang**	**50.50**	**269**	P	**P**		**18 45 42.0**	**-0.1**
	comp=Z,16nm,0.9s,baz=70,slow=5.3,SNR=5.5							
KSRS	**Korea Array**	**54.70**	**330**	P	**P**		**18 46 12.8**	**+0.2**
	comp=Z,2.6nm,1.0s,baz=148,slow=7.2,SNR=6.5							
PETK	**Petropavlovsk-**	**62.20**	**359**	P	**P**		**18 47 05.1**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=154,slow=5.9,SNR=5.9							
CM31	**Chiang Mai Arr**	**65.00**	**295**	P	**P**		**18 47 23.3**	**-0.6**
CM31				IAmb	IAmb		18 47 26.1	
	comp=Z,5.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**65.00**	**295**	P	**P**		**18 47 24.5**	**+0.6**
	comp=Z,3.8nm,0.9s,baz=116,slow=5.2,SNR=24							
CHTO	**Chiang Mai**	**65.12**	**296**	P	**P**		**18 47 24.8**	**+0.2**
CHTO				IAmb	IAmb		18 47 26.5	
	comp=Z,5.5nm,0.9s							
VNDA	**Vanda**	**68.18**	**179**	P	**P**		**18 47 43.9**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=9.5,slow=6.1,SNR=1.4							
ULN	**Ulaanbaatar**	**72.90**	**327**	P	**P**		**18 48 13.2**	**+0.7**
ULN				IAmb	IAmb		18 48 15.1	
	comp=Z,3.7nm,1.1s							
SONM	**Songino Array**	**73.24**	**326**	P	**P**		**18 48 14.9**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=138,slow=6.4,SNR=8.7							
SONM	**Songino Array**	**73.24**	**326**	P	**P**		**18 48 15.4**	**+0.8**
ILAR	**Eielson Array**	**84.27**	**21**	P	**P**		**18 49 14.8**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=344,slow=5.0,SNR=17							
MKAR	**Makanchi Array**	**87.51**	**318**	P	**P**		**18 49 31.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=98,slow=6.1,SNR=13							
MKAR	**Makanchi Array**	**87.51**	**318**	P	**P**		**18 49 31.3**	**+0.2**
NVAR	**Mina Array Bea**	**90.38**	**51**	P	**P**		**18 49 46.9**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=248,slow=5.9,SNR=3.6							
PDAR	**Pinedale Array**	**97.61**	**48**	P	Pdif		18 50 19.4	+1.1
	comp=Z,0.2nm,0.5s,baz=276,slow=2.6,SNR=1.5							

IDC 20 18:45:10.6±2.4, 2˚66N×127˚06E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/43, mbtmp3.4/3, MS3.9/1, Ms1 3.8/1, ms1mx2.9/26, Error ellipse: s-maj=218.3km s-min=24.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**23.57**	**163**	P	P		18 50 22.6	-0.4
	0.4nm,0.3s,baz=341,slow=9.7,SNR=5.7							
ASAR	**Alice Springs**	**27.00**	**166**	P	P		18 50 53.5	-0.9
	0.2nm,0.8s,baz=334,slow=8.8,SNR=4.4							
STKA	**Stephens Creek**	**37.01**	**159**	LR	LR		19 11 02.3	
	comp=Z,148nm,18.4s,baz=16,slow=42							
MKAR	**Makanchi Array**	**58.62**	**325**	P	P		18 55 10.3	+0.7
	0.3nm,0.3s,baz=128,slow=8.3,SNR=11							

IDC 20 19:11:04.5±8.7, 30˚02S×176˚55W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/25, mbtmp3.4/2, MS3.2/1, Ms1 3.2/1, ms1mx2.7/13, Error ellipse: s-maj=369.0km s-min=61.4km az=154.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RPZ	**Rata Peaks**	**16.86**	**212**	LR	LR		19 22 11.9	
	comp=Z,81nm,18.1s,baz=316,slow=40							
ASAR	**Alice Springs**	**44.38**	**266**	P	P		19 19 16.7	-0.4
	0.1nm,0.4s,baz=106,slow=7.4,SNR=4.5							
WRA	**Warramunga Arr**	**45.34**	**271**	P	P		19 19 24.7	0.0
	1.0nm,0.7s,baz=111,slow=7.0,SNR=4.8							
FINES	**FINESS Array B**	**145.21**	**341**	PKPbc	PKPbc		19 30 42.3	-0.7
	1.6nm,0.8s,baz=42,slow=4.3,SNR=4.3							

*IDC **20** 19:25:17.8±1.1, 56˚51S×142˚24W, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.2/27, mbtmp4.3/6, MS3.9/6, Ms1 3.8/6, ms1mx3.6/26, Error ellipse: s-maj=35.0km s-min=33.0km az=174.0*
*NEIC **20** 19:25:18.5±1.5, 56˚4S±0˚2×142˚1W±0˚2, h10km±1km, mb4.4/9, Error ellipse: s-maj=28.7km s-min=22.6km az=176.0*
ISC 20 19:25:18.8±0.8, 56˚4S±0˚2×142˚1W±0˚2, h10km, n52, σ0s63/28, mb4.6/9, MS3.9/9, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
VNDA	**Vanda**	**28.47**	**202**	P	**P**		**19 31 12.5**	**-1.0**
	0.3nm,0.4s,baz=132,slow=4.4,SNR=1.9							
VNDA				LR	LR		19 39 56.4	
	comp=Z,111nm,18.2s,baz=70,slow=31							
RPZ	**Rata Peaks**	**32.00**	**273**	LR	LR		19 41 51.8	
	comp=Z,195nm,18.7s,baz=145,slow=31							
URZ	**Urewera**	**32.45**	**287**	LR	LR		19 41 33.4	
	comp=Z,203nm,21.3s,baz=212,slow=30							
TBI	**Tubuai**	**33.48**	**348**	eLR	LR		19 40 41.5	
	comp=Z,350nm,26.8s							
TBI	**Tubuai**	**33.48**	**348**	*e*T	T		20 07 13.9	
	53nm,0.3s							
RKT	**Rikitea**	**33.68**	**12**	*e*T	T		20 07 23.3	
	5.8nm,0.3s							
QSPA	**South Pole Qui**	**33.73**	**180**	P	**P**		**19 32 01.4**	**+1.4**
QSPA				IAmb	IAmb		19 32 10.8	
	comp=Z,18nm,1.5s							
MEH	**Mehetia**	**38.75**	**351**	*e*T	T		20 13 54.3	
	comp=Z,62nm,0.3s							
BELA	**Belgrano 2**	**38.97**	**161**	P	**P**		**19 32 44.9**	**+0.4**
BELA				IAmb	IAmb		19 32 46.9	
	comp=Z,7.8nm,0.9s							
PPT2	**Papeete2**	**39.18**	**349**	*e*LR	LR		19 43 30.5	
	comp=Z,327nm,25.5s							
PPT	**Papeete**	**39.20**	**349**	LR	LR		19 46 19.6	
	comp=Z,168nm,19.0s,baz=184,slow=32							
TAOE	**Nuku Hiva Isla**	**47.48**	**3**	*e*LR	LR		19 47 14.6	
	comp=Z,239nm,27.0s							
H03S2	**Juan Fernandez**	**47.96**	**90**	T	T		20 25 41.3	
	baz=220,slow=74,SNR=22							
H03S1	**Juan Fernandez**	**47.97**	**90**	T	T		20 25 42.6	
	baz=220,slow=74,SNR=21							
H03S3	**Juan Fernandez**	**47.98**	**90**	T	T		20 25 41.8	
	baz=220,slow=74,SNR=21							
H03N3	**Juan Fernandez**	**48.25**	**89**	T	T		20 26 07.9	
	baz=223,slow=72,SNR=78							
H03N2	**Juan Fernandez**	**48.26**	**89**	T	T		20 26 06.8	
	baz=223,slow=72,SNR=71							
H03N1	**Juan Fernandez**	**48.27**	**89**	T	T		20 26 05.1	
	baz=223,slow=72,SNR=106							
VNA3	**Neumayer Olymp**	**48.28**	**161**	P	**P**		**19 33 58.7**	**-0.7**
VNA2	**Neumayer--Watz**	**48.95**	**162**	P	**P**		**19 34 04.1**	**-0.4**
	baz=208,slow=7.6							
VNA1	**Neumayer--Stat**	**49.03**	**161**	P	**P**		**19 34 04.8**	**-0.3**
SNAA	**Sanae**	**49.03**	**164**	P	**P**		**19 34 04.8**	**-0.5**
SNAA	**Sanae**	**49.03**	**164**	P	**P**		**19 34 04.5**	**-0.7**
SNAA				IAmb	IAmb		19 34 06.8	
	comp=Z,8.9nm,1.0s							
MAW	**Mawson**	**54.90**	**191**	P	**P**		**19 34 49.0**	**+0.1**
	comp=Z,4.4nm,0.8s,baz=174,slow=4.3,SNR=5.6							
MAW				LR	LR		19 55 06.3	
	comp=Z,111nm,20.9s,baz=184,slow=33							
MAW	**Mawson**	**54.90**	**191**	IAmb	IAmb		19 34 51.7	
	comp=Z,1.7nm,1.1s							
ZON	**Zonda**	**55.37**	**96**	P	**P**		**19 34 52.3**	**-0.6**
STKA	**Stephens Creek**	**56.72**	**261**	P	**P**		**19 35 02.4**	**0.0**
	comp=Z,4.3nm,0.9s,baz=116,slow=2.7,SNR=5.6							
STKA	**Stephens Creek**	**56.72**	**261**	IAmb	IAmb		19 35 13.5	
	comp=Z,1.9nm,1.1s							
CTA	**Charters Tower**	**63.37**	**274**	P	**P**		**19 35 48.8**	**+0.6**
	comp=Z,5.9nm,0.8s,baz=187,slow=8.1,SNR=2.4							
ASAR	**Alice Springs**	**67.35**	**261**	P	**P**		**19 36 14.1**	**0.0**
	comp=Z,4.2nm,0.9s,baz=142,slow=6.3,SNR=20							
ASAR	**Alice Springs**	**67.35**	**261**	P	**P**		**19 36 12.8**	**-1.2**
H01W1	**Cape Leeuwin H**	**68.60**	**239**	T	T		20 51 40.0	
	baz=143,slow=76,SNR=141							
H01W2	**Cape Leeuwin H**	**68.60**	**239**	T	T		20 51 41.1	
	baz=143,slow=76,SNR=179							
H01W3	**Cape Leeuwin H**	**68.61**	**239**	T	T		20 51 41.4	
	baz=143,slow=76,SNR=131							
WRA	**Warramunga Arr**	**70.10**	**264**	P	**P**		**19 36 31.2**	**+0.1**
	comp=Z,4.1nm,0.9s,baz=146,slow=5.2,SNR=11							
WRA	**Warramunga Arr**	**70.10**	**264**	P	**P**		**19 36 30.1**	**-1.1**
WB0	**Warramunga Arr**	**70.21**	**264**	P	**P**		**19 36 32.1**	**+0.3**
BOSA	**Boshof**	**94.61**	**169**	LR	LR		20 18 20.1	
	comp=Z,74nm,18.4s,baz=199,slow=34							
H10S3	**ASCENSION HYDR**	**101.83**	**127**	T	T		21 33 23.0	
	baz=207,slow=74,SNR=7.7							
H10S2	**ASCENSION HYDR**	**101.83**	**127**	T	T		21 33 29.9	
	baz=13,slow=74,SNR=3.7							
H10N3	**ASCENSION HYDR**	**102.89**	**126**	T	T		21 34 42.6	
	baz=206,slow=74,SNR=6.6							
H10N1	**ASCENSION HYDR**	**102.89**	**126**	T	T		21 34 43.1	
	baz=206,slow=74,SNR=13							
H10N2	**ASCENSION HYDR**	**102.91**	**126**	T	T		21 34 43.9	
	baz=206,slow=74,SNR=10							
PETK	**Petropavlovsk-**	**119.80**	**323**	PKP	**PKiKP**		**19 44 08.5**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=165,slow=6.6,SNR=5.4							
ILAR	**Eielson Array**	**120.93**	**358**	PKP	**PKiKP**		**19 44 10.4**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=233,slow=1.0,SNR=10							
ILAR	**Eielson Array**	**120.93**	**358**		**PKiKP**		**19 44 09.9**	**0.0**
ESDC	**Sonseca Array**	**148.00**	**104**	PKPbc	**PKPbc**		**19 45 04.0**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=232,slow=2.1,SNR=7.0							
ESDC	**Sonseca Array**	**148.00**	**104**		**PKPbc**		**19 45 04.0**	**+0.3**
MKAR	**Makanchi Array**	**151.28**	**269**	PKPbc	**PKiKP**		**19 45 11.6**	**-0.4**
	comp=Z,2.5nm,0.8s,baz=107,slow=4.1,SNR=27							
MKAR	**Makanchi Array**	**151.28**	**269**		**PKPbc**		**19 45 11.0**	**-0.5**
ZALV	**Zalesovo Beam**	**153.51**	**285**	PKPbc	**PKiKP**		**19 45 16.8**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=108,slow=4.8,SNR=2.9							
ZALV				PKPab	**PKPab**		**19 45 28.4**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=123,slow=4.9,SNR=7.8							
ZALV	**Zalesovo Beam**	**153.51**	**285**	PKPdf	**PKPdf**		**19 45 08.9**	**+0.4**
ZALV				PKPab	**PKPab**		**19 45 28.4**	**-0.4**

*IDC **20** 19:31:52.0±5.0, 14˚84S×167˚55E, h85km±33km, mb4.0/3, mb1 4.1/4, mb1mx3.5/30, mbtmp4.3/4, Error ellipse: s-maj=55.6km s-min=49.3km az=172.0*
*NEIC **20** 19:31:57.5±1.9, 15˚2S±0˚1×167˚5E±0˚1, h129km±6km, mb4.4/11, Error ellipse: s-maj=22.4km s-min=17.2km az=140.0*
*NOU **20** 19:32:16.3, 16˚59S×167˚31E, h26km, MLv4.2, Vanuatu Islands*
ISC 20 19:31:57.6±0.7, 15˚21S±0˚07×167˚4E±0˚1, h129km, n28, σ1s55/29, mb4.2/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SANVU	**Saraoutou**	**0.30**	**218**	Pn	**Pn**		**19 32 15.6**	**0.0**
DVP	**Devils Point**	**2.62**	**163**	P	**Pn**		**19 32 40.2**	**+1.0**
MARNC	**Mare, Loyalty**	**6.27**	**175**	P	**Pn**		**19 33 28.3**	**+0.6**
YATNC	**Mamie plateau,**	**6.83**	**184**	P	**Pn**		**19 33 35.6**	**+0.3**
DZM	**Mont Dzumac**	**6.89**	**187**	P	**Pn**		**19 33 35.8**	**-0.3**
	2.6nm,0.3s,baz=38,slow=17,SNR=27							
DZM				S	**Sn**		**19 34 48.9**	**-4.3**
	0.5nm,0.3s,baz=275,slow=17,SNR=1.1							
DZM	**Mont Dzumac**	**6.89**	**187**		**Pn**		**19 33 35.3**	**-0.8**
DZM	**Mont Dzumac**	**6.89**	**187**	P	**Pn**		**19 33 36.1**	**0.0**
NOUC	**Port Laguerre**	**6.94**	**188**	P	**Pn**		**19 33 37.7**	**+1.0**
ONTNC	**Ouen Toro**	**7.12**	**187**	P	**Pn**		**19 33 39.9**	**+0.7**
OUENC	**Ouen Island, N**	**7.19**	**184**	P	**Pn**		**19 33 41.1**	**+0.9**
PINNC	**Pines Island,**	**7.37**	**180**	P	**Pn**		**19 33 43.4**	**+0.9**
HNR	**Honiara**	**9.27**	**307**	Pn	**Pn**		**19 34 06.6**	**-1.6**
EIDS	**Eidsvold**	**18.32**	**234**	P	**Pn**		**19 36 03.5**	**0.0**
EIDS				IAmb	IAmb		19 36 06.0	
	comp=Z,36nm,1.4s							
STKA	**Stephens Creek**	**28.78**	**230**	P	**P**		**19 37 44.6**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=38,slow=9.8,SNR=6.2							
WRA	**Warramunga Arr**	**31.83**	**257**	P	**P**		**19 38 11.1**	**+0.7**
	comp=Z,2.0nm,0.9s,baz=87,slow=9.2,SNR=7.2							
WRA	**Warramunga Arr**	**31.83**	**257**	IAmb	IAmb		19 38 20.3	
	comp=Z,0.3nm,1.4s							
AS31	**Alice Springs**	**32.62**	**250**	P	**P**		**19 38 17.5**	**+0.2**
AS31				IAmb	IAmb		19 38 19.2	
	comp=Z,2.1nm,0.9s							
ASAR	**Alice Springs**	**32.62**	**250**	P	**P**		**19 38 18.6**	**+1.2**
	comp=Z,3.4nm,0.4s,baz=77,slow=9.0,SNR=39							
ASAR				ScP	**ScP**		**19 44 37.6**	**+4.8**
	comp=Z,0.8nm,0.9s,baz=92,slow=2.2,SNR=5.2							
BBOO	**Buckleboo**	**33.38**	**233**	P	**P**		**19 38 24.5**	**+0.7**
JOHN	**Johnston Islan**	**39.06**	**37**	P	**P**		**19 39 12.7**	**+0.5**
FORT	**Forrest**	**39.16**	**240**	P	**P**		**19 39 12.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**40.05**	**260**	P	**P**		**19 39 21.3**	**+0.9**
FITZ				IAmb	IAmb		19 39 39.1	
	comp=Z,20nm,1.4s							
QSPA	**South Pole Qui**	**74.82**	**180**	P	**P**		**19 43 24.7**	**+1.0**
E03A	**Lebam**	**87.15**	**40**	P	**P**		**19 44 28.8**	**-0.3**
BW06	**Boulder Array**	**95.18**	**47**	P	**P**		**19 45 06.1**	**-0.7**
PD31	**Pinedale Array**	**95.18**	**47**	P	**P**		**19 45 04.7**	**-2.1**
PD31				IAmb	IAmb		19 45 07.6	
	comp=Z,2.6nm,0.8s							
R55A	**Marlinton**	**116.83**	**55**		**PKPdf**		**19 50 26.2**	**-1.1**
ARCES	**ARCESS Array B**	**120.74**	**345**	PKP	**PKPdf**		**19 50 32.8**	**-1.0**
	comp=Z,2.4nm,0.9s,baz=59,slow=2.3,SNR=3.6							

*NNC **20** 19:55:18.0±2.8, 36˚75N×71˚23E, h43km±70km, mb4.0, mpv3.6, Error ellipse: s-maj=24.3km s-min=20.4km az=63.0*
*IDC **20** 19:55:25.9±6.1, 37˚43N×71˚55E, h64km±30km, mb3.4/5, mb1 3.5/12, mb1mx3.2/67, mbtmp3.7/12, ML3.2/7, MS3.7/1, Ms1 3.7/1, ms1mx2.6/40, Error ellipse: s-maj=81.4km s-min=26.1km az=162.0*
ISC 20 19:55:21.6±1.4, 37˚0N±0˚1×71˚48E±0˚0, h50km, n26, σ2s07/29, mb3.7/5, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AML	**Almayashu**	**5.39**	**18**	P	**Pn**		**19 56 40.4**	**+0.5**
	SNR=40							
UCH	**Uchtor**	**5.71**	**23**	P	**Pn**		**19 56 45.2**	**+0.9**
	SNR=8.3							
EKS2	**Erkin-Say**	**5.92**	**17**	P	**Pn**		**19 56 48.2**	**+1.4**
	SNR=15							
AAK	**Ala-Archa**	**6.08**	**22**	P	**Pn**		**19 56 49.3**	**+0.3**
	0.6nm,0.3s,baz=195,slow=7.5,SNR=16							
AAK				S	Sn		19 57 46.3	-11
	0.3nm,0.3s,baz=187,slow=20,SNR=1.9							
AAK	**Ala-Archa**	**6.08**	**22**	⇑P	**Pn**		**19 56 49.9**	**+0.9**
	4.0nm,0.8s							
AAK				⇑S	**Sn**		**19 58 01.7**	**+4.3**
	12nm,0.9s							
KK31	**Karatay Array**	**6.13**	**353**	⇑P	**Pn**		**19 56 49.8**	**+0.1**
	1.6nm,0.3s,baz=181,slow=13,SNR=62							
KK31				⇑S	**Sn**		**19 58 01.7**	**+3.3**
	1.7nm,0.4s,baz=176,slow=30,SNR=3.7							
CHMS	**Chumysh**	**6.49**	**22**	P	**Pn**		**19 56 55.5**	**+1.0**
	SNR=6.1							
USP	**Ospenovka**	**6.67**	**19**	P	**Pn**		**19 56 57.4**	**+0.4**
	SNR=6.9							
TKM2	**Tokmak 2**	**6.70**	**27**	P	**Pn**		**19 56 58.3**	**+0.7**
	SNR=6.2							
TKM2	**Tokmak 2**	**6.70**	**27**	⇑P	**Pn**		**19 56 58.0**	**+0.4**
	2.8nm,0.6s							
GEYT	**Alibeck**	**10.66**	**279**	P	**Pn**		**19 57 56.0**	**+4.3**
	0.6nm,0.3s,baz=104,slow=12,SNR=3.7							
GEYT				S	**Sn**		**19 59 47.0**	**-2.5**
	0.6nm,0.3s,baz=98,slow=32,SNR=3.1							
MK31	**Makanchi Array**	**12.65**	**36**	P	**Pn**		**19 58 18.1**	**-0.8**
	0.8nm,0.7s,baz=221,slow=14,SNR=8.0							
MKAR	**Makanchi Array**	**12.65**	**36**	P	**Pn**		**19 58 17.2**	**-1.6**
	0.1nm,0.3s,baz=218,slow=14,SNR=9.7							
KURBB	**Kurchatov Arra**	**14.52**	**18**	P	**Pn**		**19 58 41.3**	**-2.7**
	0.0nm,0.3s,baz=207,slow=10,SNR=4.2							
KURBB	**Kurchatov Arra**	**14.52**	**18**	⇓P	**P**		**19 58 47.0**	**-2.4**
	3.2nm,0.9s							
AB31	**Akbulak array**	**14.83**	**329**	P	**Pn**		**19 58 44.1**	**-4.0**
	1.3nm,0.5s,baz=143,slow=13,SNR=39							
AB31				S	**Sn**		**20 01 28.9**	**-2.2**
	1.2nm,0.5s,baz=150,slow=22,SNR=4.5							
BVAR	**Borovoye Array**	**16.03**	**358**	P	**Pn**		**19 59 01.3**	**-2.3**
	0.1nm,0.3s,baz=146,slow=22,SNR=5.1							
AKTO	**Aktyubinsk**	**16.54**	**328**	P	**Pn**		**19 59 07.9**	**-2.1**
	0.7nm,0.3s,baz=137,slow=9.3,SNR=17							
AKTO	**Aktyubinsk**	**16.54**	**328**	⇑P	**Pn**		**19 59 09.3**	**-0.7**
	5.2nm,0.6s							
ZALV	**Zalesovo Beam**	**19.29**	**24**	P	**P**		**19 59 40.5**	**-1.6**
	0.6nm,0.3s,baz=218,slow=10,SNR=24							
FINES	**FINESS Array B**	**37.28**	**326**	P	**P**		**20 02 28.9**	**+0.6**
	1.5nm,0.8s,baz=128,slow=9.0,SNR=3.2							
ARCES	**ARCESS Array B**	**40.82**	**337**	P	**P**		**20 02 58.6**	**+0.8**
	3.5nm,1.0s,baz=113,slow=9.1,SNR=4.3							
NOA	**NORSAR Array B**	**44.20**	**323**	P	**P**		**20 03 25.3**	**-0.1**
	0.4nm,0.7s,baz=94,slow=8.0,SNR=3.6							
TIXI	**Tiksi**	**45.16**	**22**	P	**P**		**20 03 32.7**	**-0.2**
	0.6nm,0.5s,baz=278,slow=8.8,SNR=4.0							
MBAR	**Mbarara**	**53.11**	**235**	LR	LR		20 29 03.3	
	comp=Z,72nm,20.0s,baz=204,slow=38							
YKA	**Yellowknife Ar**	**80.72**	**3**	P	**P**		**20 07 29.0**	**0.0**
	0.1nm,0.5s,baz=358,slow=5.4,SNR=1.9							

*BJI **20** 20:02:02.1±0.0, 6˚30S×151˚05E, h65km, mB5.0/29, mb4.5/39, Ms4.6/16, Ms7 4.4/17*
*IDC **20** 20:02:02.8±2.4, 6˚08S×150˚68E, h27km±15km, mb4.6/29, mb1 4.7/32, mb1mx4.6/47, mbtmp4.8/32, ML3.6/3, MS3.8/27, Ms1 3.8/27, ms1mx3.7/44, Error ellipse: s-maj=13.4km s-min=9.6km az=117.0*
*GCMT **20** 20:02:05.9±0.4, 6˚32S±0˚02×150˚70E±0˚03, h41km±1km, MW4.9/61, Moment Tensor Solution. s47,c54; s61,c71; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.27±.17; Mθθ0.13±.10; Mϕϕ-2.40±.11; Mrθ0.78±.14; Mθϕ-0.97±.10; Mϕr-0.78±.14; Best double couple: Mo2.76100×10^16 NP1:ϕs41.00000°, δ44.00000°, λ124.00000°. NP2: ϕs177.00000°, δ55.00000°, λ61.00000°. Principal axes: T 2.7440, Plg66.0000°, Azm30.0000°; N 0.0320, Plg23.0000°, Azm194.0000°; P -2.7780, Plg6.0000°, Azm287.0000°; nsta1 refers to body waves

DZM eLR LR 20 12 21.6
comp=Z,988nm,23.8s
DZM Mont Dzumac 22.08 138 P **P** **20 06 56.4 -0.2**
comp=Z,9.5nm,0.7s,baz=144,slow=23,SNR=17
DZM Mont Dzumac 22.08 138 P **P** **20 06 56.5 0.0**
DZM IAmb IAmb 20 07 12.5
comp=Z,27nm,0.9s
KNRA Kununurra 23.43 244 P **P** **20 07 09.0 -1.4**
NLAI Namlea 23.57 276 P **P** **20 07 12.3 +0.5**
comp=Z,29nm,0.8s
AS31 Alice Springs 23.73 221 P **P** **20 07 13.4 +0.2**
ASAR Alice Springs 23.73 221 P **P** **20 07 13.4 +0.2**
comp=Z,15nm,0.7s,baz=56,slow=8.8,SNR=110
ASAR S **S** **20 11 29.9 +4.6**
comp=Z,0.7nm,0.6s,baz=31,slow=47,SNR=4.6
ASAR ScP **ScP** **20 14 33.9 +2.9**
comp=Z,1.8nm,0.5s,baz=29,slow=2.5,SNR=8.7
ASAR LR LR 20 18 07.3
comp=Z,178nm,18.6s,baz=56,slow=40
ASAR Alice Springs 23.73 221 P **P** **20 07 12.8 -0.4**
SANI Sanana 24.85 278 P **P** **20 07 22.5 -1.0**
comp=Z,24nm,1.2s
CMSA Cobar Meteorol 25.73 190 P **P** **20 07 30.5 -0.9**
baz=26,SNR=16
SOEI Soe 26.31 260 P **P** **20 07 37.2 +0.3**
SOEI Soe 26.31 260 P **P** **20 07 37.8 +0.9**
comp=Z,2µmcomp=Z,150nm,0.8s
BATI Baumata 26.95 259 P **P** **20 07 43.2 +0.7**
comp=Z,102nm,0.9s,baz=115,slow=3.0,SNR=13
BATI LR LR 20 20 60.0
comp=Z,478nm,19.1s,baz=95,slow=42
BATI Baumata 26.95 259 P **P** **20 07 43.7 +1.1**
comp=Z,919nmcomp=Z,83nm,0.8s
STKA Stephens Creek 27.00 197 P **P** **20 07 42.0 -0.8**
comp=Z,18nm,0.7s,baz=4.4,slow=9.5,SNR=18
STKA LR LR 20 18 11.9
comp=Z,224nm,20.1s,baz=23,slow=36
STKA Stephens Creek 27.00 197 P **P** **20 07 42.1 -0.7**
baz=27,SNR=9.6
STKA Stephens Creek 27.00 197 P **P** **20 07 42.0 -0.8**
FITZ Fitzroy Crossi 27.11 242 P **P** **20 07 43.8 -0.1**
comp=Z,16nm,0.5s,baz=49,slow=7.7,SNR=40
FITZ LR LR 20 19 29.8
comp=Z,239nm,19.2s,baz=72,slow=38
FITZ Fitzroy Crossi 27.11 242 P **P** **20 07 43.8 -0.1**
baz=27,SNR=14
FITZ Fitzroy Crossi 27.11 242 P **P** **20 07 43.5 -0.4**
DAV Davao City (W) 28.16 297 LR LR 20 19 03.5
comp=Z,99nm,18.4s,baz=142,slow=36
MMRI Maumere 28.22 263 P **P** **20 07 52.5 -1.4**
MMRI Maumere 28.22 263 P **P** **20 07 53.1 -0.8**
comp=Z,2µmcomp=Z,209nm,1.0s
WRKA Warakurna 28.48 226 P **P** **20 07 55.8 -0.3**
baz=28,SNR=6.4
MSVF Nonsavu 29.21 116 LR LR 20 17 52.2
comp=Z,143nm,21.3s,baz=190,slow=33
HTT Hallett 29.29 200 P **P** **20 08 03.6 +0.4**
baz=29,SNR=3.7
BBOO Buckleboo 29.84 205 P **P** **20 08 07.2 -0.9**
baz=30,SNR=5.0
BASI Baing, Sumba 29.97 260 P **P** **20 08 10.7 +1.2**
comp=Z,2µmcomp=Z,147nm,1.1s
KAPI Kappang 30.70 270 P **P** **20 08 16.1 +0.2**
comp=Z,14nm,0.6s,baz=105,slow=5.2,SNR=15
KAPI Kappang 30.70 270 P **P** **20 08 15.7 -0.3**
KAPI IAmb IAmb 20 08 23.5
comp=Z,27nm,0.9s
WBSI Waikabubak, Su 31.09 261 P **P** **20 08 20.5 +1.1**
comp=Z,1µmcomp=Z,65nm,0.6s
ARPS Mount Arapiles 31.57 193 P **P** **20 08 23.0 -0.3**
baz=32,SNR=7.3
PLAI Plampang 32.63 263 P **P** **20 08 31.0 -1.9**
comp=Z,2µmcomp=Z,227nm,0.7s
TWSI Taliwang, Sumb 33.51 263 P **P** **20 08 39.2 -1.4**
comp=Z,511nmcomp=Z,54nm,0.6s
SRBI Singaraja 35.15 265 P **P** **20 08 52.8 -1.9**
comp=Z,46nm,0.7s
DNP Denpasar 35.16 264 P **P** **20 08 54.4 -0.5**
comp=Z,288nm,0.8s
TGY Tagaytay City 35.60 304 LR LR 20 24 34.4
comp=Z,63nm,18.1s,baz=137,slow=38
BBKI Banjar Baru 35.71 273 P **P** **20 09 00.2 +0.6**
comp=Z,20nm,0.8s
ABJI Asem Bagus 36.11 265 P **P** **20 09 02.4 -0.6**
comp=Z,46nm,0.8s
JAGI Jajag, Banyuwa 36.20 264 P **P** **20 09 01.5 -2.3**
comp=Z,2µmcomp=Z,213nm,0.9s
KMBL Kambalda 36.80 223 P **P** **20 09 08.7 0.0**
baz=37,SNR=5.7
GIRL Giralia 38.72 241 P **P** **20 09 25.5 +0.5**
baz=39,SNR=4.0
SBUM Sibu 39.23 281 P **P** **20 09 28.9 -0.6**
MORW Morawa 39.83 231 P **P** **20 09 34.1 -0.1**
baz=40,SNR=4.1
JCJI Jatiwangi 42.05 267 P **P** **20 09 53.6 +0.9**
comp=Z,4µmcomp=Z,224nm,0.8s
JNU Nakatsue 43.25 336 P **P** **20 10 03.1 +1.0**
comp=Z,19nm,0.7s,baz=20,slow=2.2,SNR=6.5
CBJI Citeko 43.46 267 P **P** **20 10 02.9 -1.2**
comp=Z,142nm,0.8s
DBJI Dramaga 43.56 267 P **P** **20 10 04.3 -0.6**
JWT Wachi 43.56 342 P **P** **20 10 05.9 +1.4**
JWT IAmb IAmb 20 10 06.3
comp=Z,31nm,0.8s
MJAR Matsushiro Arr 43.96 346 P **P** **20 10 08.2 +0.4**
comp=Z,0.8nm,0.4s,baz=179,slow=5.4,SNR=2.4
MJAR LR LR 20 28 01.8
comp=Z,86nm,19.2s,baz=160,slow=36
XMIS Christmas Isla 44.65 261 P **P** **20 10 15.0 +1.4**
KASI Kota Agung 45.84 268 P **P** **20 10 21.8 -1.3**
comp=Z,37nm,0.8s
LWLI Liwa 46.31 269 P **P** **20 10 25.8 -1.1**
comp=Z,4µmcomp=Z,48nm,0.6s
KSI Kapahiang 47.86 271 P P 20 10 48.8 +10
KSRS Korea Array 48.20 336 P **P** **20 10 42.5 +1.4**
comp=Z,7.5nm,0.6s,baz=155,slow=8.3,SNR=27
KSRS LR LR 20 28 58.2
comp=Z,62nm,21.9s,baz=140,slow=34
NJ2 Nanjing 48.50 323 eP **P** **20 10 45.0 +1.5**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
RAR Rarotonga 50.31 112 LR LR 20 32 16.8
comp=Z,53nm,18.4s,baz=254,slow=36
ASAJ Asahikawa 50.49 353 LR LR 20 31 42.4
comp=Z,52nm,21.3s,baz=205,slow=35
IPM Ipoh 50.58 281 P **P** **20 10 59.1 -0.7**
USRK Ussuriysk Ar. 52.79 343 P **P** **20 11 16.7 +1.1**
comp=Z,3.2nm,0.7s,baz=160,slow=6.9,SNR=9.0
USRK Ussuriysk Ar. 52.79 343 P **P** **20 11 15.9 +0.4**
XAN Xi'an 56.06 318 P **P** **20 11 41.0 +1.3**
XAN pP sP 20 11 58.0 -0.9
XAN sP pP 20 12 06.6 +13
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN pmax pmax
comp=Z,180nm,5.1s
XAN LR LR
comp=Z,260nm,15.2s
XAN LR LR
comp=Z,320nm,20.6s
CMAR Chiang Mai Arr 56.45 297 P **P** **20 11 44.5 +1.8**
comp=Z,0.7nm,0.6s,baz=122,slow=5.6,SNR=4.9
CMAR LR LR 20 33 30.5
comp=Z,33nm,21.8s,baz=130,slow=33
KLR Kul'dur 57.49 345 P **P** **20 11 49.4 0.0**
comp=Z,1.6nm,0.9s,baz=141,slow=9.4,SNR=5.1
CD2 Chengdu 57.93 312 P **P** **20 11 54.1 +1.2**
HHC Hu-ho-hao-te 58.83 326 eP **P** **20 12 00.0 +0.8**
HHC S **S** **20 19 54.5 -6.9**
HHC LR LR
comp=Z,130nm,15.3s
HHC LR LR
comp=Z,160nm,15.3s
HHC LR LR
comp=Z,190nm,15.3s
PETK Petropavlovsk- 59.27 5 P **P** **20 12 00.8 -1.1**
comp=Z,3.0nm,0.5s,baz=165,slow=8.2,SNR=10
PETK LR LR 20 32 52.6
comp=Z,119nm,21.9s,baz=197,slow=31
PETK Petropavlovsk- 59.27 5 P **P** **20 12 01.0 -0.8**
GTA Gaotai 65.12 319 eP **P** **20 12 41.8 +0.3**
GTA pP sP 20 12 58.8 -2.0
GTA sP PcP 20 13 05.6 -8.3
GTA pmax pmax
comp=Z,3.0nm,1.0s
MA2 Magadan 65.45 0 P **P** **20 12 42.0 -1.0**
ULN Ulaanbaatar 65.94 329 **P** **20 12 47.0 +0.4**

SONM Songino Array 66.26 329 P **P** **20 12 49.9 +1.3**
comp=Z,1.8nm,0.5s,baz=144,slow=5.2,SNR=20
SONM Songino Array 66.26 329 **P** **20 12 48.7 +0.1**
TAOE Nuku Hiva Isla 68.66 97 eLR LR 20 34 00.1
comp=Z,84nm,24.5s
TLY Talaya 70.10 331 LR LR 20 42 51.4
comp=Z,91nm,21.0s,baz=72,slow=35
PALK Pallekele 70.97 280 LR LR 20 46 08.0
comp=Z,32nm,21.3s,baz=230,slow=37
VNDA Vanda 71.64 177 P **P** **20 13 21.9 +0.5**
comp=Z,10nm,0.7s,baz=330,slow=6.7,SNR=51
VNDA Vanda 71.64 177 P **P** **20 13 21.8 +0.3**
VNDA IAmb IAmb 20 13 22.8
comp=Z,11nm,0.8s
SBA Scott Base 72.23 176 P **P** **20 13 26.1 +1.2**
BILL Bilibino 74.78 6 P **P** **20 13 39.4 -0.6**
WMQ Urumqi 75.20 318 eP **P** **20 13 43.9 +0.9**
WMQ pmax pmax
comp=Z,35nm,0.9s
WMQ pmax pmax
comp=Z,130nm,4.5s
CHIR Chirikof Islan 75.84 28 P 20 13 45.3
baz=236
OHAK Old Harbor 77.69 28 P 20 13 56.2
baz=238
KDAK Kodiak Island 78.32 27 P **P** **20 14 01.2 +1.1**
comp=Z,8.4nm,0.8s
TIXI Tiksi 78.89 353 P **P** **20 14 01.8 -1.2**
MK31 Makanchi Array 79.85 320 P **P** **20 14 08.5 -0.3**
MKAR Makanchi Array 79.85 320 P **P** **20 14 08.0 -0.9**
comp=Z,1.3nm,0.6s,baz=104,slow=6.9,SNR=17
MKAR LR LR 20 48 50.0
comp=Z,92nm,19.9s,baz=54,slow=35
MKAR Makanchi Array 79.85 320 P **P** **20 14 08.5 -0.4**
MAKZ Makanchi 80.06 320 P **P** **20 14 09.2 -0.7**
RDOG Red Dog Mine 80.81 16 P 20 14 14.1
baz=227
RDOG Red Dog Mine 80.81 16 P **P** **20 14 13.1 -0.4**
ZAA0 Zalesovo Array 81.00 327 P **P** **20 14 13.0 -1.8**
ZALV Zalesovo Beam 81.00 327 P **P** **20 14 13.4 -1.4**
comp=Z,3.6nm,0.6s,baz=112,slow=5.4,SNR=16
ZALV LR LR 20 50 06.4
comp=Z,67nm,20.0s,baz=102,slow=36
SUA Susitna One 81.03 25 P 20 14 14.7
baz=239
PPLA Purkeypile 81.20 23 P 20 14 15.1
baz=238
RC01 Rabbit Creek A 81.26 25 P 20 14 16.0
baz=240
SML Sawmill 82.20 25 P 20 14 21.1
baz=241
TRF Thorofare Moun 82.23 23 P 20 14 21.0
baz=239
GLI Glacier Island 82.29 26 P 20 14 20.8
baz=243
BPAW Bear Paw Mtn. 82.30 22 P 20 14 20.8
baz=239
WAT2 Susitna Watana 82.66 24 P 20 14 22.4
baz=241
RND Reindeer 82.77 23 P **P** **20 14 22.5 -1.5**
RND IAmb IAmb 20 14 27.1
comp=Z,9.6nm,0.9s
WAT6 Susitna Watana 82.81 24 P 20 14 24.0
baz=242
MLY Manley 82.87 21 P 20 14 23.5
baz=239
MLY Manley 82.87 21 P **P** **20 14 23.3 -1.2**
MLY IAmb IAmb 20 14 25.6
comp=Z,6.2nm,0.6s
NIL Nilore 82.88 305 P **P** **20 14 25.2 0.0**
NIL IAmb IAmb 20 14 27.7
comp=Z,7.6nm,0.7s
MCK McKinley 82.89 23 P 20 14 24.1
baz=241
MCK McKinley 82.89 23 P **P** **20 14 23.0 -1.6**
MCK IAmb IAmb 20 14 25.7
comp=Z,11nm,0.8s
BWN Browne 82.91 22 P **P** **20 14 23.5 -1.1**
KLU Klutina 83.08 26 P 20 14 24.7
baz=244
KLU Klutina 83.08 26 P **P** **20 14 24.9 -0.8**
KLU IAmb IAmb 20 14 28.4
comp=Z,14nm,1.1s
M24K Tolsona, Glenn 83.24 25 P 20 14 25.4
baz=243
NEA2 Nenana 83.27 22 P 20 14 25.6
baz=240
NEA2 Nenana 83.27 22 P **P** **20 14 24.8 -1.7**
NEA2 IAmb IAmb 20 14 27.5
comp=Z,11nm,1.3s
BMRM Bremner River 83.42 26 P 20 14 27.1
baz=245
I23K Minto, Yukon-K 83.43 22 P 20 14 27.2
baz=240
MAW Mawson 83.54 203 P **P** **20 14 27.9 +0.1**
comp=Z,6.4nm,0.7s,baz=104,slow=6.2,SNR=19
MAW LR LR 20 50 26.6
comp=Z,49nm,19.2s,baz=59,slow=35
MAW Mawson 83.54 203 P **P** **20 14 28.1 +0.3**
baz=83,SNR=15
MAW Mawson 83.54 203 P **P** **20 14 28.0 +0.1**
WRH Wood River Hil 83.58 22 P **P** **20 14 27.0 -1.1**
WRH IAmb IAmb 20 14 29.6
comp=Z,15nm,1.3s
N25K Chitina, Valde 83.70 26 P 20 14 28.8
baz=245
CCB Clear Creek Bu 83.77 22 P **P** **20 14 27.0 -2.0**
CCB IAmb IAmb 20 14 30.4
comp=Z,13nm,1.4s
TCOL CIGO, UAF Yank 83.86 22 P 20 14 29.6
baz=242
TCOL CIGO, UAF Yank 83.86 22 P **P** **20 14 28.3 -1.2**
TCOL IAmb IAmb 20 14 31.4
comp=Z,14nm,1.1s
COLA College 83.86 22 P 20 14 29.6
baz=242
COLA College 83.86 22 P **P** **20 14 28.4 -1.1**
COLA IAmb IAmb 20 14 30.6
comp=Z,22nm,1.3s
QSPA South Pole Qui 83.88 180 P **P** **20 14 29.6 -0.2**
PAX Paxson 83.92 24 P 20 14 29.3
baz=244
AAK Ala-Archa 83.95 314 LR LR 20 51 40.0
comp=Z,145nm,20.8s,baz=84,slow=35
AAK Ala-Archa 83.95 314 P **P** **20 14 29.6 -1.1**
GLB Gilahina Butte 83.97 26 P **P** **20 14 29.3 -0.9**
GLB IAmb IAmb 20 14 31.8
comp=Z,8.5nm,1.0s
HDA Harding Lake 83.98 23 P 20 14 30.0
baz=242
HDA P 20 14 30.0
baz=242
IL31 84.18 22 P **P** **20 14 28.9 -2.2**
IL31 IAmb IAmb 20 14 32.1
comp=Z,20nm,1.5s
ILAR Eielson Array 84.18 22 P **P** **20 14 29.2 -2.0**
comp=Z,4.2nm,0.7s,baz=249,slow=4.8,SNR=34
ILAR LR LR 20 47 46.0
comp=Z,40nm,19.9s,baz=278,slow=33
ILAR Eielson Array 84.18 22 P **P** **20 14 28.9 -2.2**
COLD Coldfoot 84.19 20 P **P** **20 14 31.3 +0.1**
COLD Coldfoot 84.19 20 P 20 14 31.3
baz=239
MCARA McCarthy VSAT 84.29 26 P 20 14 31.7
baz=246
BARN Barnard Glacie 84.77 27 P **P** **20 14 34.4 -0.1**
BARN IAmb IAmb 20 14 37.5
comp=Z,10.0nm,0.7s
DOT Dot Lake 84.79 24 P **P** **20 14 33.5 -0.8**
DOT IAmb IAmb 20 14 35.6
comp=Z,6.7nm,0.8s
CTG Chitna Glacier 84.88 27 P 20 14 34.7
baz=248
SCRK Sand Creek 84.96 24 P 20 14 35.0
baz=245
PRP Porcupine Dome 85.03 22 P 20 14 34.4
baz=244
TOLK Toolik Lake Re 85.12 19 P **P** **20 14 35.6 -0.3**
TOLK IAmb IAmb 20 14 38.2
comp=Z,6.3nm,0.9s
TOLK Toolik Lake Re 85.12 19 P 20 14 35.9
baz=240
L27K Beaver Creek, 85.47 25 P **P** **20 14 37.5 -0.2**
L27K IAmb IAmb 20 14 40.3
comp=Z,16nm,1.4s
L27K Beaver Creek, 85.47 25 P 20 14 37.9
baz=247

FYU Fort Yukon 85.60 21 P **P** **20 14 37.8 -0.4**
FYU IAmb IAmb 20 14 39.9
comp=Z,8.0nm,0.8s
BMAR Burnt Mountain 86.21 20 P **P** **20 14 40.5 -0.8**
EGAK Eagle 86.41 24 P 20 14 42.2
baz=248
EGAK Eagle 86.41 24 P **P** **20 14 42.3 +0.1**
EGAK IAmb IAmb 20 14 44.4
comp=Z,12nm,1.0s
NRIK Noril'sk 86.47 342 P **P** **20 14 43.6 +1.1**
comp=Z,3.1nm,0.6s,baz=134,slow=5.1,SNR=6.9
NRIK LR LR 20 54 50.8
comp=Z,75nm,18.1s,baz=56,slow=37
NRIK Noril'sk 86.47 342 P **P** **20 14 42.8 +0.3**
HYT Haines Junctio 86.59 28 P **P** **20 14 43.7 +0.3**
HYT IAmb IAmb 20 14 46.7
comp=Z,18nm,1.2s
DAWY Dawson 86.86 24 P **P** **20 14 44.5 0.0**
KK31 Karatay Array 86.91 314 P **P** **20 14 44.3 -0.9**
KKAR Karatay Array 86.91 314 P **P** **20 14 44.3 -0.9**
EPYK Eagle Plains 88.69 23 P 20 14 53.3
baz=252
EPYK Eagle Plains 88.69 23 P **P** **20 14 52.7 -0.6**
EPYK IAmb IAmb 20 14 54.8
comp=Z,8.3nm,0.8s
DLBC Dease Lake 89.61 31 P **P** **20 14 57.1 -0.7**
comp=Z,1.8nm,0.6s,baz=330,slow=14,SNR=2.7
DLBC Dease Lake 89.61 31 IAmb IAmb 20 15 01.2
comp=Z,3.2nm,0.8s
INK Inuvik 90.44 21 P **P** **20 15 00.4 -0.9**
comp=Z,6.2nm,0.9s,baz=239,slow=5.3,SNR=16
INK Inuvik 90.44 21 P **P** **20 15 00.2 -1.1**
INK IAmb IAmb 20 15 02.1
comp=Z,8.3nm,1.1s
J01E Myrtle Point 90.83 47 P 20 15 02.9
baz=262
L02E Cave Junction 90.94 48 P 20 15 03.1
baz=263
K02D Willamette Mer 90.97 47 P 20 15 03.9
baz=263
GDXM Geysers 91.14 51 P **P** **20 15 06.1 +0.7**
GDXM IAmb IAmb 20 15 07.3
comp=Z,4.9nm,0.8s
O02D Mt. Diablo Mer 91.31 50 P 20 15 05.2
baz=263
I03D Drain, OR 91.32 46 P 20 15 04.8
baz=263
M02C Callahan 91.41 49 P 20 15 05.6
baz=263
N02D Trinity Center 91.47 49 P 20 15 06.5
baz=263
HUMO Hull Mountain 91.47 47 P **P** **20 15 07.9 +1.1**
YBH Yreka Blue Hor 91.55 48 P **P** **20 15 07.6 +0.3**
comp=Z,8.5nm,1.1s,baz=225,slow=2.9,SNR=12
YBH Yreka Blue Hor 91.55 48 P **P** **20 15 07.5 +0.3**
YBH IAmb IAmb 20 15 09.2
comp=Z,9.9nm,1.0s
G03D McMinnville, O 91.57 45 P 20 15 06.6
baz=263
L04D Klamath Falls 91.91 48 P 20 15 08.2
baz=264
D03D Eldon 91.97 43 P 20 15 08.7
baz=263
I04A Tendick Farm, 92.01 46 P 20 15 09.0
baz=264
O03E Paynes Creek 92.07 50 P 20 15 09.5
baz=264
J04D Umpqua Nationa 92.16 47 P 20 15 10.6
baz=264,SNR=7.7
ORV Oroville 92.23 51 P **P** **20 15 10.5 +0.2**
ORV IAmb IAmb 20 15 11.7
comp=Z,12nm,1.4s
A04D Lummi Island 92.36 41 P 20 15 11.1
baz=264
AFDM Forest Hills D 92.57 51 P **P** **20 15 12.1 +0.2**
J05D Fort Rock, OR 92.80 47 P 20 15 12.9
baz=264,SNR=8.5
K05A Summer Lake 93.00 48 P **P** **20 15 15.1 +1.1**
SMMC Simmler 93.00 55 P 20 15 13.9
baz=265
PINE Pine Mountain 93.07 46 P **P** **20 15 14.8 +0.5**
PKM Mcpherson Peak 93.11 55 P 20 15 14.2
baz=265
BEKR Beckworth 93.13 50 P **P** **20 15 14.9 +0.2**
SCZ2 Santa Cruz Isl 93.18 56 P 20 15 15.6
baz=265
SNCC San Nicolas Is 93.20 57 P 20 15 15.4
baz=265
MOD Modoc Plateau 93.36 48 P **P** **20 15 16.2 +0.5**
PNTR Pine Nut 93.65 51 P **P** **20 15 15.9 -1.2**
WAKR Walker 93.73 52 P **P** **20 15 18.1 +0.6**
VES Vestal, Richgr 93.79 55 P 20 15 17.8
baz=265
PAHR Pah Rah Range 93.87 51 P **P** **20 15 18.4 +0.4**
PAHR IAmb IAmb 20 15 19.7
comp=Z,7.5nm,1.0s
YERR Yerington 93.92 51 P **P** **20 15 19.2 +0.9**
YERR IAmb IAmb 20 15 20.0
comp=Z,7.4nm,0.8s
SCI2 San Clemente I 94.00 57 P 20 15 18.8
baz=265
C36M Paulatuk 94.00 21 P 20 15 18.7
baz=264
CIS Catalina Islan 94.14 57 P 20 15 19.2
baz=265
ISA Isabella, Lake 94.27 55 P **P** **20 15 20.4 +0.5**
ISA IAmb IAmb 20 15 21.6
comp=Z,11nm,1.3s
ISA Isabella, Lake 94.27 55 P 20 15 20.4
baz=266
LHV Little Huntoon 94.44 52 P **P** **20 15 21.6 +1.1**
RYN Ryan 94.45 52 P **P** **20 15 21.7 +0.9**
RYN IAmb IAmb 20 15 22.6
comp=Z,8.9nm,0.9s
MWC Mount Wilson 94.50 56 P **P** **20 15 22.1 +0.9**
EDW2 Edwards Air Fo 94.60 56 P 20 15 21.4
baz=266,SNR=13
NVAR Mina Array Bea 94.61 52 P **P** **20 15 22.8 +1.2**
comp=Z,11nm,0.8s,baz=254,slow=6.4,SNR=73
NVAR LR LR 20 50 47.1
comp=Z,141nm,21.1s,baz=277,slow=31
NVAR Mina Array Bea 94.61 52 P **P** **20 15 22.0 +0.4**
CWC Cottonwood Cre 94.65 54 P 20 15 21.6
baz=266
NV11 Mina Array Sit 94.73 52 P **P** **20 15 22.4 +0.4**
KVN Kaiserville 94.81 51 P **P** **20 15 22.9 +0.4**
KVN IAmb IAmb 20 15 24.1
comp=Z,8.2nm,0.9s
LRMC Laurel Mtn Rad 94.90 55 P 20 15 22.7
baz=266,SNR=11
MURC Murrieta 95.17 57 P 20 15 24.4
baz=266
GRAC Grapevine Rang 95.26 53 P 20 15 25.3
baz=266
TPH Tonopah 95.44 52 P **P** **20 15 25.6 +0.3**
BAR Barrett 95.55 58 P **P** **20 15 27.2 +1.5**
FURC Furnace Creek, 95.63 54 P 20 15 26.2
baz=267
GEYT Alibeck 95.64 307 LR LR 21 00 39.0
comp=Z,73nm,20.3s,baz=30,slow=37
MONP2 Monument Peak 95.78 58 P 20 15 27.4
baz=266,SNR=8.3
PFO Pinyon Flats O 95.79 57 P **P** **20 15 27.6 +0.7**
comp=Z,10nm,0.8s,baz=260,slow=5.2,SNR=15
PFO Pinyon Flats O 95.79 57 P **P** **20 15 28.0 +1.0**
PFO Pinyon Flats O 95.79 57 P 20 15 27.2
baz=266,SNR=8.3
TPFO Pinon Flats 95.79 57 P 20 15 27.8
baz=266
HEC Hector,Ludlow 95.96 56 P 20 15 28.3
baz=267
IKP In-Ko-Pah, Jac 96.03 58 P 20 15 29.0
baz=267
ARU Arti 96.14 326 LR LR 20 59 17.4
comp=Z,133nm,18.5s,baz=122,slow=36
TPNV Topopah Spring 96.15 54 P **P** **20 15 29.1 +0.6**
TPNV Topopah Spring 96.15 54 P 20 15 29.3
baz=267,SNR=15
BELC Belle Mtn. Jos 96.19 57 P 20 15 29.5
baz=267,SNR=5.4
SWSC Sam W. Stewart 96.30 58 P 20 15 30.0
baz=267
GMRC Granite Mounta 96.51 56 P 20 15 30.8
baz=267,SNR=9.3
BC3 Big Chuckawall 96.63 57 P 20 15 30.9
baz=267

R11A	Troy Canyon, C	96.74	52	P		P		20 15 32.0	+0.7
R11A				IAmb		IAmb		20 15 33.5	
	comp=Z,2.4nm,1.0s								
R11A	Troy Canyon, C	96.74	52	P				20 15 32.5	
	baz=268								
IRM	Iron Mountain	96.91	56	P				20 15 32.6	
	baz=267,SNR=6.9								
ELK	Elko	97.10	50	P		P		20 15 32.6	-0.2
	comp=Z,1.4nm,0.8s,baz=256,slow=5.1,SNR=4.6								
ELK	Elko	97.10	50	P		Pdif		20 15 33.0	+0.1
ELK				IAmb		IAmb		20 15 37.5	
	comp=Z,3.2nm,1.1s								
PRN	Pahroc Range	97.12	53	P		Pdif		20 15 34.9	+1.8
PRN				IAmb		IAmb		20 15 35.2	
	comp=Z,4.9nm,0.8s								
YKA	Yellowknife Ar	97.58	28	P		P		20 15 33.7	-0.5
	comp=Z,1.5nm,0.6s,baz=269,slow=4.4,SNR=20								
YKA				PKiKP		PKiKP		20 20 09.1	+0.7
	comp=Z,0.6nm,0.6s,baz=278,slow=1.2,SNR=13								
YKA				LR		LR		20 58 10.4	
	comp=Z,24nm,19.2s,baz=0.0,slow=34								
SPR3	Spring Creek 3	97.74	52	P		Pdif		20 15 36.9	+0.9
PDMCI	Parker Dam,Lak	97.75	56	P				20 15 36.2	
	baz=268								
HLID	Hailey	97.78	47	P				20 15 36.4	
	baz=269								
PSUT	Pine Spring	98.10	52	P		Pdif		20 15 38.1	+0.6
PSUT				IAmb		IAmb		20 15 43.4	
	comp=Z,3.0nm,0.8s								
CCUT	Cedar City	98.47	53	P		Pdif		20 15 40.6	+1.4
CCUT				IAmb		IAmb		20 15 43.3	
	comp=Z,2.9nm,0.9s								
214A	Organ Pipe Nat	98.78	59	P				20 15 41.1	
	baz=268								
HVU	Hansel Valley	98.97	49	P		Pdif		20 15 42.1	+1.0
HVU				IAmb		IAmb		20 15 43.0	
	comp=Z,4.0nm,0.8s								
BOZ	Bozeman (W)	99.76	45	P				20 15 44.6	
	baz=271								
WUAZ	Wupatki	100.05	55	P				20 15 46.8	
	baz=270								
EGMT	Eagleton	100.96	42	P				20 15 50.2	
	baz=273								
PDAR	Pinedale Array	101.34	48	P		Pdif		20 15 51.6	-0.2
	comp=Z,1.4nm,0.5s,baz=212,slow=2.1,SNR=10								
PDAR	Pinedale Array	101.34	48			Pdif		20 15 50.7	-1.1
VNA3	Neumayer Olymp	101.72	186	Pdiff		Pdif		20 15 51.9	-0.7
VNA2	Neumayer--Watz	101.75	187	Pdiff		Pdif		20 15 52.2	-0.5
MVCO	Mesa Verde	102.34	53	P				20 15 56.6	
	baz=272								
O20A	White River Ci	102.44	50	P				20 15 57.2	
	baz=272								
121A	Cookes Peak, D	103.05	58	P				20 15 59.6	
	baz=271								
ANMO	Albuquerque	104.08	56	Pdiff		Pdif		20 16 05.6	+1.5
	comp=Z,0.9nm,0.5s,baz=133,slow=3.4,SNR=4.1								
ANMO	Albuquerque	104.08	56	P				20 16 04.0	
	baz=272								
N23A	Red Feather La	104.14	49	P				20 16 04.1	
	baz=274								
ARCES	ARCESS Array B	107.43	342	PKiKP		PKiKP		20 20 26.0	-0.1
	comp=Z,1.3nm,0.6s,baz=355,slow=2.8,SNR=5.6								
MDND	Maddock	107.75	42	P				20 20 27.6	
	baz=281								
ULM	Lac du Bonnet	109.62	39	PKiKP		PKiKP		20 20 30.0	-0.8
	comp=Z,5.1nm,0.8s,baz=220,slow=3.5,SNR=5.4								
ECSD	EROS Data Cent	110.61	46	P				20 20 32.1	
	baz=282								
FINES	FINESS Array B	111.28	335	PKiKP		PKiKP		20 20 33.4	-0.2
	comp=Z,1.4nm,0.7s,baz=85,slow=4.0,SNR=6.5								
AKASG	Malin Array Be	114.22	323	PKP		PKPdf		20 20 38.9	-0.6
	comp=Z,3.4nm,0.5s,baz=62,slow=2.3,SNR=21								
W39A	Magazine	114.38	54	P				20 20 39.9	
	baz=280								
BRTR	Keskin Array B	114.49	311	PKP		PKPdf		20 20 40.1	-0.5
	comp=Z,1.5nm,0.7s,baz=101,slow=3.9,SNR=5.3								
U40A	Yellville	114.91	53	P				20 20 40.4	
	baz=281								
W41B	Gary Mavity, V	115.62	54	P				20 20 42.1	
	baz=281								
MDUB	Mudurnu	116.12	312			PKPdf		20 20 42.2	-1.4
BOSA	Boshof	117.09	234	PKP		PKPdf		20 20 44.5	-1.4
	comp=Z,2.7nm,0.9s,baz=18,slow=4.4,SNR=3.2								
NOA	NORSAR Array B	117.34	339	PKP		PKPdf		20 20 43.9	-1.4
	comp=Z,1.7nm,0.7s,baz=48,slow=1.9,SNR=10.0								
BUR08	Bucovina Ar. S	117.83	321			PKiKP		20 20 46.9	+0.1
BURAR	Bucovina Array	117.84	321			PKiKP		20 20 47.0	+0.2
MLR	Muntele Rosu	118.19	319			PKPdf		20 20 47.1	-0.4
SFIN	Lafayette	118.30	47	P				20 20 47.1	
	baz=287								
WVT	Waverly	118.92	52	P				20 20 47.6	
	baz=285								
WCI	Wyandotte Cave	119.53	49	PKPdf		PKPdf		20 20 46.5	-3.6
L48A	N Adams	119.70	45			PKPdf		20 20 49.8	-0.6
PLCA	Paso Flores	120.05	145	PKP		PKPdf		20 20 51.2	0.0
	comp=Z,3.4nm,0.9s,baz=282,slow=1.5,SNR=7.1								
N49A	Columbus Grove	120.23	46			PKPdf		20 20 51.4	0.0
P49A	Miami Univ. Ec	120.30	47	P				20 20 50.4	
	baz=289								
LRAL	Lakeview Retre	120.33	55	P				20 20 50.2	
	baz=284								
LANS	Liptovska Anna	120.58	325	*e*PKP		PKiKP		20 20 53.1	+1.1
MATQ	Matagami	120.65	34	P				20 20 51.1	
	baz=300								
VTS	Vitosha	121.09	317			PKPdf		20 20 52.7	-0.5
I51A	Listowel	121.32	42	P				20 20 51.9	
	baz=294								
ACSO	Alum Creek Sta	121.33	46	P				20 20 52.4	
	baz=291								
MORC	Moravsky Berou	121.34	326	*e*PKP		PKiKP		20 20 53.5	0.0
LSQQ	Lebel-sur-Quev	121.38	35	P				20 20 53.2	
	baz=301								
VLDQ	Val d'Or	121.59	36			PKPdf		20 20 52.5	-1.2
KRLC	Kraliky	121.60	327	*e*PKPDF		PKPdf		20 20 53.8	0.0
OSTC	Ostas	121.64	328	*e*PKPDF		PKiKP		20 20 54.5	+0.5
DPC	Dobruska-Polom	121.70	327	*e*PKPDF		PKiKP		20 20 54.1	-0.1
CHVC	Chvalec	121.71	328	*e*PKPDF		PKiKP		20 20 54.3	+0.2
JAVC	Velka Javorina	121.75	325	*e*PKP		PKiKP		20 20 55.4	+1.1
VRAC	Vranov	122.12	326	*e*PKP		PKiKP		20 20 55.1	+0.1
SADO	Sadowa	122.13	40	PKP		PKPdf		20 20 54.8	-0.2
	comp=Z,10.0nm,0.6s,baz=350,slow=2.1,SNR=7.7								
P52A	Corning	122.15	47	P				20 20 54.7	
	baz=291								
TKL	Tuckaleechee C	122.21	51	PKP		PKPdf		20 20 54.9	-0.5
	comp=Z,6.4nm,0.9s,baz=170,slow=4.9,SNR=3.5								
MODS	Modra-Piesok	122.22	325	*e*PKP		PKPdf		20 20 54.8	-0.2
ALGO	Algonquin Park	122.27	38	P				20 20 54.9	
	baz=298								
IDI	Anoyia	122.36	308			PKPdf		20 20 55.5	-0.2
KRUC	Moravsky	122.36	326	*e*PKP		PKPdf		20 20 55.1	-0.1
CHGQ	Chibougamau	122.36	33	P				20 20 54.1	
	baz=304								
M53A	WI Miller and	122.50	44	P				20 20 55.4	
	baz=293								
G54A	Lake Saint Pet	122.51	39	P				20 20 55.6	
	baz=298								
PVCC	Panska Ves	122.53	328	*e*PKPDF		PKiKP		20 20 56.1	+0.4
H53A	Bobcaygeon	122.57	40	P				20 20 55.5	
	baz=297								
O53A	New Philadelph	122.58	46	P				20 20 55.3	
	baz=292								
L53A	Girard	122.58	43	P				20 20 55.6	
	baz=294								
DIVS	Divibare	122.63	319			PKPdf		20 20 55.8	-0.2
N53A	Lisbon	122.64	45			PKiKP		20 20 56.2	-0.1
BRG	Berggiesshubel	122.65	329	*e*PKPdf		PKPdf		20 20 55.4	-0.3
	baz=52,slow=1.9								
ERPA	Erie	122.70	43	P				20 20 55.0	
	baz=294								
TREC	Trest	122.73	327	*e*PKPDF		PKiKP		20 20 56.2	0.0
P53A	Whipple	122.74	46			PKPdf		20 20 56.2	0.0
PRU	Pruhonice	122.85	328	*e*PKPDF		PKPdf		20 20 56.1	-0.1
Q53A	Leroy	122.86	47	P				20 20 55.6	
	baz=291								
CLL	Collm	122.87	330	⇓*i*PKPdf		PKiKP		20 20 56.3	0.0
CLL	comp=Z,8.0nm,0.8s			L		L		21 14 00.0	
	comp=Z,100nm,20.4s								
CLL	Collm	122.87	330			PKPdf		20 20 55.6	-0.5
CLL	Collm	122.87	330	*e*PKPdf		PKPdf		20 20 55.7	-0.5
	baz=52,slow=1.9								
FBE	Freiberg	122.92	329	*e*PKPdf		PKPdf		20 20 56.2	0.0
	baz=52,slow=1.9								
FNA	Florina	123.08	315			PKPdf		20 20 56.1	-0.8
GOGA	Godfrey	123.10	54	P				20 20 56.1	
	baz=286								
FLTG	Flechtingen	123.10	331	*e*PKPdf		PKPdf		20 20 56.1	-0.4
	baz=52,slow=1.9								
N54A	Moraine State	123.17	44	P				20 20 56.1	
	baz=294								
M54A	Oil Creek Stat	123.17	44			PKPdf		20 20 56.7	-0.4
M54A	Oil Creek Stat	123.17	44	P				20 20 56.5	
	baz=294,SNR=5.3								
O54A	Avella	123.20	45			PKiKP		20 20 57.4	0.0
E55A	Montcerf-Lytto	123.24	37	P				20 20 56.0	
	baz=300								
CONA	Conrad Observa	123.27	325	*e*P		PKPdf		20 20 57.2	+0.1
	comp=Z,4.3nm,0.6s								
D55A	Sainte-Anne-du	123.30	36	P				20 20 56.1	
	baz=301								
PLVO	Plevna	123.31	39			PKPdf		20 20 56.8	-0.4
PBCC	Pribram	123.31	328	*e*PKPDF		PKiKP		20 20 57.3	0.0
Q54A	Coxs Mills	123.32	47			PKPdf		20 20 57.0	-0.4
S54A	Dingess, Beckl	123.39	48	P				20 20 56.8	
	baz=290								
R54A	Victor	123.50	48	P				20 20 57.5	
	baz=291								
WVNY	West Valley, N	123.51	42			PKPdf		20 20 57.3	-0.4
CKRC	Cesky Krumlov	123.64	327	*e*PKPDF		PKiKP		20 20 58.2	+0.2
TANN	Tannenbergstha	123.68	329	*e*PKPdf		PKPdf		20 20 57.4	-0.5
	baz=52,slow=1.9								
D56A	ZEC Mazanza, M	123.70	36	P				20 20 56.9	
	baz=302								
WERD	Werda	123.74	329	*e*PKPdf		PKPdf		20 20 57.7	-0.2
	baz=52,slow=1.9								
MCWV	Mont Chateau	123.78	46	P				20 20 57.5	
	baz=293								
GUNZ	Gunzen	123.78	329	*e*PKPdf		PKPdf		20 20 57.8	-0.2
	baz=52,slow=1.9								
PLN	Plauen	123.80	329	*e*PKPdf		PKPdf		20 20 57.6	-0.4
	baz=52,slow=1.9								
NKC	Novy Kostel	123.80	329	*e*PKPDF		PKiKP		20 20 58.4	+0.1
E56A	St. Veronique	123.80	36	P				20 20 57.3	
	baz=301								
WERN	Wernitzgruen	123.80	329	*e*PKPdf		PKPdf		20 20 57.8	-0.3
	baz=52,slow=1.9								
CLZ	Clausthal	123.82	331	*e*PKPdf		PKPdf		20 20 58.1	+0.1
	baz=52,slow=1.9								
KHC	Kasperske Hory	123.86	327	*e*PKPDF		PKiKP		20 20 58.4	0.0
KHC	Kasperske Hory	123.86	327			PKPdf		20 20 57.7	-0.4
GEC2	GERESS Array S	123.95	327			PKPdf		20 20 57.9	-0.5
GEC2	GERESS Array S	123.95	327	*e*PKPdf		PKPdf		20 20 57.9	-0.5
	baz=52,slow=1.9								
GERES	GERESS Array B	123.95	327	PKP		PKPdf		20 20 58.5	0.0
	comp=Z,5.5nm,0.6s,baz=91,slow=2.0,SNR=30								
MOX	Moxa	123.97	330	*e*PKPdf		PKPdf		20 20 58.0	-0.3
	baz=52,slow=1.9								
R55A	Marlinton	124.10	47			PKPdf		20 20 59.0	-0.1
R55A	Marlinton	124.10	47	P				20 20 58.4	
	baz=292								
MANZ	Manzenberg	124.12	329	*e*PKPdf		PKPdf		20 20 58.5	-0.2
	baz=52,slow=1.9								
M56A	Emporium	124.19	43			PKPdf		20 20 58.9	-0.2
M56A	Emporium	124.19	43	P				20 20 58.3	
	baz=295								
WET	Wettzell	124.22	328	*e*PKPdf		PKPdf		20 20 58.7	-0.2
	baz=52,slow=1.9								
K56A	Middlesex	124.23	41	P				20 20 58.2	
	baz=297								
BLA	Blacksburg	124.27	49	P				20 20 59.3	
	baz=291								
KMSC	Kings Mountain	124.27	51	P				20 20 59.0	
	baz=289								
J56A	Wolcott	124.28	41	P				20 20 58.2	
	baz=298								
L56A	Grenwood	124.33	42			PKPdf		20 20 58.6	-0.7
L56A	Greenwood	124.33	42	P				20 20 58.9	
	baz=296								
N56A	West Decatur	124.36	44	P				20 20 58.9	
	baz=295								
SOKA	Soboth	124.41	324	*e*P		PKPdf		20 20 59.0	-0.4
	comp=Z,8.2nm,1.1s								
O56A	Blue Knob Stat	124.44	45			PKPdf		20 20 59.3	-0.3
O56A	Blue Knob Stat	124.44	45	P				20 20 59.0	
	baz=294								
Q56A	Snyder Ridge,	124.49	46	P				20 20 59.2	
	baz=293								
P56A	Dayton Farm, R	124.56	46	P				20 20 59.6	
	baz=294								
G57A	Newington	124.57	38	P				20 20 59.3	
	baz=300								
R56A	Bull Pasture M	124.58	47	P				20 20 58.9	
	baz=292								
H57A	Richville	124.64	39	P				20 20 59.0	
	baz=300								
I57A	Carthage	124.73	39	P				20 20 58.9	
	baz=299								
K57A	Scipio Center	124.75	41	P				20 21 00.0	
	baz=298								
D58A	Chemin du LacG	124.75	35	P				20 20 59.8	
	baz=304								
SSPA	Standing Stone	124.76	44			PKPdf		20 20 59.8	-0.3
SSPA	Standing Stone	124.76	44	P				20 20 59.7	
	baz=295								
GRF	Grafenberg Arr	124.76	329	*e*PKPdf		PKPdf		20 20 59.6	-0.2
	baz=52,slow=1.9								
J57A	Williamstown	124.77	40	P				20 20 59.4	
	baz=298								
OBKA	Obir	124.78	324	*e*P		PKPdf		20 20 59.7	-0.4
	comp=Z,3.7nm,1.0s								
L57A	Andrews Acres	124.86	42	P				20 20 59.6	
	baz=297								
E58A	La Victoria	124.92	36	P				20 20 59.6	
	baz=303								
N57A	Milroy	124.94	44	P				20 20 59.8	
	baz=295								
M57A	Sunshine Farm,	124.97	43	P				20 20 59.9	
	baz=296								
Q57A	Strasburg	125.05	46	P				20 20 59.7	
	baz=294								
LONY	Lake Ozonia	125.06	38			PKPdf		20 21 00.1	-0.5
LONY	Lake Ozonia	125.06	38	P				20 20 60.0	
	baz=301								
RJOB	Jochberg	125.09	326	*e*PKPdf		PKPdf		20 20 59.6	-1.0
	baz=52,slow=1.9								
G58A	Ormstown	125.11	37	P				20 20 59.6	
	baz=301								
O57A	Amberson	125.11	44	P				20 21 00.6	
	baz=295								
P57A	Homestead Farm	125.15	45	P				20 21 00.4	
	baz=294								
KBA	Koelnbreinsper	125.16	325	*i* P		PKPdf		20 21 00.1	-0.9
	comp=Z,4.4nm,0.7s								
KASTN	Kahler Asten	125.17	332	*e*PKPdf		PKPdf		20 21 00.6	0.0
	baz=52,slow=1.9								
MYKA	Terra Mystica	125.24	325	*i* P		PKPdf		20 21 00.1	-0.8
	comp=Z,3.3nm,0.5s								
R57A	Stanardsville	125.26	47	P				20 21 00.3	
	baz=293								
I58A	Old Forge	125.28	39	P				20 21 00.7	
	baz=300								
K58A	Earlville	125.30	41	P				20 21 01.0	
	baz=298								
BINY	Binghamton	125.34	41	P				20 21 00.5	
	baz=298								
D59A	Saint-Raymond	125.39	34	P				20 21 00.9	
	baz=305								
H58A	Gabriels	125.41	38	P				20 21 01.3	
	baz=301,SNR=6.6								
N58A	Sunbury	125.47	43			PKPdf		20 21 01.2	-0.3
N58A	Sunbury	125.47	43	P				20 21 01.0	
	baz=296								
L58A	Harry Jones Me	125.50	42	P				20 21 01.3	
	baz=298								
BUG	Bochum--Univer	125.54	333	*e*PKPdf		PKPdf		20 21 01.0	-0.2
	baz=52,slow=1.9								
H59A	Cadyville	125.59	38	P				20 21 00.7	
	baz=301								
Q58A	Fox Den Farm,	125.60	46	P				20 21 01.5	
	baz=294								
O58A	Lewisberry	125.64	44	P				20 21 01.9	
	baz=296								
MILB	Miltenberg	125.64	330	*e*PKPdf		PKPdf		20 21 01.2	-0.4
	baz=52,slow=1.9								
J59A	Piesco	125.69	39			PKPdf		20 21 00.8	-1.1
J59A	Piesco	125.69	39	P				20 21 01.6	
	baz=300								
PAGS	Pennsylvania G	125.73	44			PKPdf		20 21 01.9	0.0
TNS	Taunus Mts	125.80	331	*e*PKPdf		PKPdf		20 21 01.7	-0.2
	baz=52,slow=1.9								
K59A	Cooperstown	125.81	40	P				20 21 01.5	
	baz=299								
ABTA	Abfaltersbach	125.82	325	*e*P		PKPdf		20 21 01.4	-0.7
	comp=Z,8.0nm,0.6s,SNR=6.3								
R58B	Mineral	125.86	47	P				20 21 01.6	
	baz=293								
S58A	Poland Farm, P	125.87	47	P				20 21 01.8	
	baz=293								
F60A	Warwick	125.91	36	P				20 21 02.1	
	baz=304								
I59A	Olmsteadville	125.92	39	P				20 21 02.0	
	baz=301,SNR=5.1								
L59A	Walton	125.97	41	P				20 21 01.8	
	baz=299								
STAL	STALIGIAL	125.98	325			PKPdf		20 21 01.8	-0.5
WATA	Walderalm	125.99	327	*i* P		PKPdf		20 21 02.2	-0.2
	comp=Z,5.4nm,0.6s								
WTTA	Wattenberg	126.00	326	*e*P		PKPdf		20 21 02.5	0.0
	comp=Z,18nm,1.0s,SNR=6.4								
M59A	Waymart	126.02	42	P				20 21 01.6	
	baz=298								
O59A	Robesonia	126.07	44	P				20 21 02.2	
	baz=296								
N59A	State Game Lan	126.08	43	P				20 21 02.2	
	baz=297								
G60A	Masonville	126.17	37	P				20 21 02.3	
	baz=303								
D61A	St Aubert, Com	126.20	33	P				20 21 02.4	
	baz=306								
H60A	Morristown	126.24	37	P				20 21 02.7	
	baz=302								
MOTA	Moosalm	126.25	327	*e*P		PKPdf		20 21 02.8	-0.2
	comp=Z,9.5nm,0.6s,SNR=7.3								
I60A	Shoreham	126.25	38	P				20 21 02.6	
	baz=301,SNR=7.2								
SQTA	Sankt Quirin	126.26	327	*i* P		PKPdf		20 21 02.9	-0.1
	comp=Z,9.1nm,0.8s								
RETA	Reutte	126.35	327	*e*P		PKPdf		20 21 03.2	+0.2
	comp=Z,2.9nm,0.5s								
F61A	St Evariste	126.46	35	P				20 21 02.9	
	baz=305								
E61A	Lac Etchemin	126.48	34	P				20 21 03.2	
	baz=306,SNR=6.0								
J60A	Lant Hill Farm	126.48	39	P				20 21 02.7	
	baz=301								
K60A	Five Rivers En	126.50	40	P				20 21 03.1	
	baz=300								
G61A	St-Isidore-de-	126.54	36	P				20 21 02.7	
	baz=304								
N60A	Cedar Hill Far	126.55	42	P				20 21 02.6	
	baz=298								
UBR	Ueberruh	126.58	328	*e*PKPdf		PKPdf		20 21 02.8	-0.7
	baz=52,slow=1.9								
O60A	Telford	126.60	43	P				20 21 03.4	
	baz=297								
L60A	Shokan	126.60	41	P				20 21 03.4	
	baz=299								
FETA	Feichten	126.64	327	*i* P		PKPdf		20 21 03.9	+0.2
	comp=Z,8.4nm,0.8s,SNR=5.8								
P60A	Greenville	126.67	44	P				20 21 03.6	
	baz=296								
MEM	Membach	126.69	333	*d*PKiKP		PKiKP		20 21 03.8	-0.1
CTI	Castel Tesino	126.71	325			PKPdf		20 21 03.9	+0.1
H61A	Lyndonville	126.72	37	P				20 21 03.7	
	baz=303								
I61A	Oroboro, Fairl	126.87	38	P				20 21 03.6	
	baz=302								
K61A	Williamstown	126.87	40	P				20 21 03.8	
	baz=301								
LBNH	Lisbon	126.88	37	P				20 21 03.9	
	baz=303								
DAVA	Damuels	126.94	327	*i* P		PKPdf		20 21 04.4	+0.1
	comp=Z,5.8nm,0.6s								
J61A	Chester	126.97	39	P				20 21 04.4	
	baz=302								
TIP	Timpagrande	126.97	315			PKPdf		20 21 04.4	-0.1
T60A	Surry	127.02	47	P				20 21 03.9	
	baz=294								
LCO	Las Campanas	127.14	134			PKPdf		20 21 05.3	-0.1
H62A	Milan	127.16	37	P				20 21 04.4	
	baz=304								
G62A	West of Eustis	127.16	36	P				20 21 04.5	
	baz=305								
M61A	Granite Spring	127.23	41	P				20 21 03.9	
	baz=299								
PAL	Palisades	127.28	42	P				20 21 04.2	
	baz=299								
L61B	Northampton	127.36	40	P				20 21 04.6	
	baz=301								
D63A	Stockholm	127.43	33	P				20 21 04.4	
	baz=309								
I62A	Tamworth	127.44	37	P				20 21 04.2	
	baz=303								
BMRD	Maredsous	127.47	333	*d*PKiKP		PKiKP		20 21 05.4	-0.2
J62A	Henniker	127.49	38	P				20 21 04.3	
	baz=302								
K62A	Royalston	127.53	39	P				20 21 04.7	
	baz=302								
INTR	Introdacqua	127.54	320			PKPdf		20 21 05.3	-0.2
NRCA	Norcia	127.62	321			PKPdf		20 21 04.7	-1.0
E63A	Oxbow	127.64	33	P				20 21 04.8	
	baz=308								
F63A	Nahmakanta, Br	127.69	34	P				20 21 05.1	
	baz=307								
PQI	Presque Isle	127.70	33			PKPdf		20 21 05.2	-0.4
TUE	Stuetta	127.73	327			PKPdf		20 21 05.0	-0.9
G63A	Kingsbury	127.75	35	P				20 21 05.6	
	baz=306								
H63A	New Sharon	127.77	36	P				20 21 05.0	
	baz=305								
PKME	Peaks-Kenny Pk	127.85	35	P				20 21 06.0	
	baz=306								
J63A	Strafford	127.92	38	P				20 21 05.7	
	baz=303								
E64A	Bridgewater	127.96	33	P				20 21 05.8	
	baz=308								
F64A	Sherman	128.02	34	P				20 21 05.8	
	baz=308								
G64A	Maxfield	128.16	35	P				20 21 06.3	
	baz=307								
H64A	Troy	128.25	36	P				20 21 06.5	
	baz=306								
L63A	North Scituate	128.34	40	P			

YOJ				*e*S		**Sb**	**20 06 56.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.68**	**50**	P		**Pb**	**20 06 47.7**	**0.0**
	baz=59							
YOJ				S		**Sb**	**20 06 56.6**	**-0.1**
	baz=59							
EWUT	**Wuta**	**0.73**	**305**	*i* P		**Pb**	**20 06 48.5**	**-0.1**
	baz=301							
EWUT				*e*S		**Sb**	**20 06 58.1**	**-0.1**
	baz=301							
ENA	**Nanau**	**0.75**	**302**	*e*S		**Sb**	**20 06 58.6**	**-0.1**
	baz=299							
TWD	**Chiawan**	**0.77**	**274**	S		**Sb**	**20 06 59.6**	**+0.3**
	baz=270							
NACB	**Ninganchiao**	**0.79**	**281**	P		**Pb**	**20 06 49.1**	**-0.4**
	baz=262							
NACB				S		**Sb**	**20 06 59.0**	**-0.6**
	baz=262							
TWC	**Suao**	**0.79**	**317**	*i* P		**Pb**	**20 06 49.3**	**-0.2**
	baz=315							
TWC				*e*S		**Sb**	**20 06 59.9**	**0.0**
	baz=315							
ETLH	**Xiulin Townshi**	**0.89**	**282**	*e*P		**Pb**	**20 06 51.2**	**-0.1**
	baz=278							
NDS	**Dongshan**	**0.90**	**313**	*e*P		**Pb**	**20 06 51.4**	**+0.1**
	baz=310							
NDS				*e*S		**Sb**	**20 07 02.8**	**-0.1**
	baz=310							
ESL	**Shilin**	**0.94**	**257**	*e*P		**Pb**	**20 06 52.0**	**-0.1**
	baz=244							
TWE	**Neicheng**	**0.99**	**315**	*e*P		**Pn**	**20 06 53.4**	**+0.3**
	baz=313							
TWE				*e*S		**Sb**	**20 07 05.4**	**-0.1**
	baz=313							
EGFH	**Guangfu**	**0.99**	**249**	*e*P		**Pn**	**20 06 53.7**	**+0.5**
	baz=246							
NTC	**Toucheng**	**0.99**	**326**	P		**Pn**	**20 06 53.3**	**+0.1**
	baz=324							
ENTT	**Nioudou**	**1.00**	**308**	*e*P		**Pb**	**20 06 53.5**	**+0.2**
	baz=305							
ENTT				*e*S		**Sn**	**20 07 07.0**	**+0.1**
	baz=305							
NDT	**Datong Townshi**	**1.02**	**304**	*e*P		**Pb**	**20 06 54.2**	**+0.7**
	baz=302							
NDT				*e*S		**Sb**	**20 07 06.2**	**-0.3**
	baz=302							
NNSB	**Datong**	**1.04**	**293**	P		**Pn**	**20 06 53.7**	**-0.3**
	baz=290							
NNSB				*e*S		**Sb**	**20 07 07.3**	**+0.1**
	baz=290							
NNSH	**Datong**	**1.04**	**293**	*e*P		**Pn**	**20 06 53.7**	**-0.3**
	baz=290							
NNSH				*e*S		**Sn**	**20 07 07.7**	**-0.4**
	baz=290							
NNS	**Nan Shan**	**1.06**	**293**	*e*P		**Pn**	**20 06 54.0**	**-0.2**
	baz=290							
NNS				*e*S		**Sb**	**20 07 07.3**	**-0.3**
	baz=290							
TWB1	**Santiao Chiao**	**1.06**	**337**	*e*P		**Pb**	**20 06 54.1**	**0.0**
	baz=336							
WHF	**Hehuan Shan**	**1.08**	**277**	*e*P		**Pn**	**20 06 54.4**	**-0.4**
	baz=273							
WHF				*e*S		**Sb**	**20 07 08.4**	**-0.1**
	baz=273							
TIPB	**Shuangxi**	**1.09**	**329**	*e*P		**Pb**	**20 06 55.3**	**+0.6**
	baz=328							
TIPB				*e*S		**Sn**	**20 07 09.4**	**+0.2**
	baz=328							
FUSS	**Fushou**	**1.11**	**282**	P		**Pn**	**20 06 54.8**	**-0.3**
	baz=279							
FUSS				*e*S		**Sb**	**20 07 09.3**	**-0.1**
	baz=279							
NWLT	**Wulai**	**1.14**	**311**	P		**Pb**	**20 06 55.5**	**0.0**
	baz=309							
NWLT				*e*S		**Sb**	**20 07 09.8**	**0.0**
	baz=309							
CHGB	**Renai**	**1.16**	**272**	*e*P		**Pb**	**20 06 56.1**	**+0.2**
	baz=257							
CHGB				*e*S		**Sb**	**20 07 10.3**	**-0.2**
	baz=257							
OWD	**Renai**	**1.16**	**267**	*e*P		**Pn**	**20 06 55.6**	**+0.1**
	baz=264							
YHNB	**Yeheng**	**1.16**	**304**	*e*P		**Pn**	**20 06 55.7**	**+0.1**
	baz=288							
NSK	**Sanguang**	**1.18**	**304**	P		**Pn**	**20 06 55.9**	**+0.1**
	baz=289							
NSK				*e*S		**Sn**	**20 07 10.6**	**-0.7**
	baz=289							
TDCB	**Techi**	**1.19**	**281**	*e*P		**Pb**	**20 06 57.0**	**+0.5**
	baz=268							
VWDT	**VWDT**	**1.22**	**257**	*e*P		**Pb**	**20 06 56.6**	**-0.3**
	baz=247							
IRIF	**Iriomote-Funau**	**1.22**	**75**	P		**Pn**	**20 06 56.5**	**+0.2**
IRIF				S		**Sb**	**20 07 12.9**	**+0.8**
EYUL	**Yuli**	**1.23**	**237**	*e*P		**Pb**	**20 06 57.3**	**+0.3**
	baz=235							
HATJ	**Hateruma jima**	**1.25**	**88**	P		**Pn**	**20 06 56.7**	**0.0**
HATJ				S		**Sb**	**20 07 13.3**	**+0.3**
NHDH	**Xindian Distri**	**1.25**	**318**	*e*P		**Pn**	**20 06 56.2**	**-0.6**
	baz=331							
YM10	**YM10**	**1.38**	**325**	*e*P		**Pn**	**20 06 58.7**	**+0.1**
	baz=323							
DPDB	**Guoxing**	**1.38**	**271**	*e*P		**Pn**	**20 06 58.7**	**+0.1**
	baz=268							
WHP	**Taichung City**	**1.39**	**281**	*e*P		**Pb**	**20 07 00.2**	**+0.5**
	baz=268							
YM04	**YM04**	**1.39**	**324**	*e*P		**Pn**	**20 06 58.7**	**0.0**
	baz=322							
WCS	**Beigang Elemen**	**1.40**	**272**	*e*P		**Pn**	**20 06 59.9**	**0.0**
	baz=269							
SMLT	**Sun Moon Lake**	**1.42**	**265**	*e*P		**Pn**	**20 06 59.6**	**+0.5**
	baz=262							
LIOB	**Emei**	**1.44**	**296**	*e*P		**Pb**	**20 07 00.6**	**0.0**
	baz=293							
JKRS	**Kuro-shima**	**1.45**	**81**	P		**Pb**	**20 07 00.4**	**-0.4**
JKRS				*e*S		**Sb**	**20 07 19.2**	**+0.4**
TYC	**Yuchr**	**1.45**	**266**	*e*P		**Pn**	**20 06 59.9**	**+0.4**
	baz=263							
JIJ	**Ishigaki jima**	**1.59**	**77**	P		**Pn**	**20 07 01.1**	**-0.3**
JIJ				*e*S		**Sn**	**20 07 20.9**	**-0.5**
JISG	**Ishigakijimahi**	**1.80**	**72**	P		**Pn**	**20 07 04.1**	**-0.1**
JISG				*e*S		**Sn**	**20 07 25.4**	**-1.0**
EAST	**Anshuo**	**2.19**	**222**	*e*P		**Pb**	**20 07 12.3**	**-1.2**
	baz=220							
EAST				*e*S		**Sn**	**20 07 38.1**	**+1.8**
	baz=220							

TAP 20 20:06:44.9, 23.26N×121.07E, h10km±1km, ML1.4, 4C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FULB	**Fuli**	**0.21**	**106⇑**	*i*P	Pg	20 06 49.7	+0.3
	baz=107						
FULB				*i* S	Sg	20 06 53.2	+0.8
	baz=107						
EYUL	**Yuli**	**0.24**	**69⇑**	*i*P	Pg	20 06 50.0	+0.1
	baz=69						
EYUL				*i* S	Sg	20 06 53.5	+0.2
	baz=69						
YULB	**Yu-li**	**0.25**	**58⇑**	*i*P	Pg	20 06 49.8	-0.1
	baz=59						
YULB				S	Sg	20 06 53.0	-0.4
	baz=59						
YUS	**Yu-Shan**	**0.25**	**335**	*e*P	Pg	20 06 51.0	+0.7
	baz=336						
YUS				*e*S	Sg	20 06 54.5	+0.6
	baz=336						
STYH	**Taoyuan**	**0.28**	**252**	*i*P	Pg	20 06 51.0	+0.4
	baz=247						
STYH				*i* S	Sg	20 06 54.9	+0.4
	baz=247						
STYT	**Tauyuan**	**0.30**	**252⇑**	*i*P	Pg	20 06 51.4	+0.4
	baz=250						
STYT				*i* S	Sg	20 06 55.7	+0.6
	baz=250						
ALS	**Alishan**	**0.35**	**316**	*e*P	Pb	20 06 53.1	-0.2
	baz=317						
LONT	**Longtian**	**0.36**	**171**	*e*P	Pg	20 06 51.4	-0.6
	baz=170						
LONT				*e*S	Sg	20 06 56.1	-0.6
	baz=170						
EDH	**Donghe**	**0.36**	**143**	*e*P	Pb	20 06 52.7	-0.6
	baz=149						
EDH				*e*S	Sg	20 06 57.5	+0.8
	baz=149						
HGSD	**Ruisui**	**0.40**	**55**	*e*P	Pb	20 06 54.0	0.0
	baz=238						
HGSD	**Ruisui**	**0.40**	**55**	*e*P	Pb	20 06 54.0	0.0
	baz=52						
TPUB	**Ta-pu**	**0.41**	**276**	*e*P	Pb	20 06 54.2	0.0
	baz=282						
TPUB				*e*S	Sb	20 07 00.5	0.0
	baz=282						
WTP	**Ta-pu**	**0.42**	**268**	*e*P	Pb	20 06 53.9	-0.5
	baz=268						
WTP				*e*S	Sb	20 07 00.6	-0.2
	baz=268						
TWG	**Pinlang**	**0.44**	**180**	*e*P	Pg	20 06 53.0	-0.5
	baz=171						
TWG				S	Sg	20 06 59.0	-0.3
	baz=171						
TWGBT	**Beinan**	**0.44**	**179**	*e*P	Pg	20 06 52.9	-0.6
	baz=171						
TWGBT				*e*S	Sg	20 06 58.4	-0.9
	baz=171						
SLGT	**Liugui**	**0.47**	**236**	*e*P	Pg	20 06 54.7	+0.6
	baz=232						
SLGT				*e*S	Sg	20 07 00.6	+0.3
	baz=232						
VWDT	**VWDT**	**0.50**	**8**	*e*P	Pg	20 06 54.9	+0.3
	baz=13						
CHN1	**Nanshi**	**0.50**	**262**	*e*S	Sb	20 07 03.9	+0.6
	baz=262						
ECL	**Taimali**	**0.67**	**189**	*e*P	Pg	20 06 56.9	-0.9
	baz=178						
LDUT	**Ludao**	**0.69**	**148**	*e*P	Pb	20 06 59.6	+0.6
	baz=147						

NOU ***20*** *20:25:37.9, 18.51S×175.17W, h402km, mb4.4, Tonga Islands*
NEIC ***20*** *20:26:13.2±1.5, 20.8S±0.1°×178.0W±0.1, h536km±6km, mb4.6/68, Error ellipse: s-maj=18.8km s-min=14.0km az=139.0*
IDC ***20*** *20:26:14.3±1.6, 20.84S×178.06W, h544km±16km, mb3.8/17, mb1 4.0/20, mb1mx3.8/37, mbtmp4.7/20, Error ellipse: s-maj=18.1km s-min=12.1km az=128.0*
BGR ***20*** *20:26:20.1±0.0, 20.72S×177.13W, h600km*
ISC 20 20:26:14.3±0.4, 20.84S±0.09×178.00W±0.08, h550km, n215, n0 78/223, mb4.6/58, 8C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.84**	**309**	P	**P**	**20 27 41.2**	**-1.8**
	70nm,0.3s,baz=140,slow=4.1,SNR=181						
MSVF	**Nonsavu**	**4.84**	**309**		**P**	**20 27 41.1**	**-1.9**
NIUE	**Niue**	**7.79**	**78**	P	**P**	**20 28 07.9**	**-2.1**
YATNC	**Mamie plateau,**	**14.12**	**262**	P	**P**	**20 29 14.0**	**-0.8**
	29nm,0.6s						
DZM	**Mont Dzumac**	**14.54**	**262**	P	**P**	**20 29 18.1**	**-1.0**
	1.2nm,0.3s,baz=91,slow=15,SNR=4.3						
DZM	**Mont Dzumac**	**14.54**	**262**	P	**P**	**20 29 18.5**	**-0.7**
NOUC	**Port Laguerre**	**14.67**	**262**	P	**P**	**20 29 19.6**	**-0.8**
URZ	**Urewera**	**17.87**	**193**	P	**P**	**20 29 50.0**	**-0.7**
	2.9nm,0.3s,baz=121,slow=24,SNR=11						
URZ	**Urewera**	**17.87**	**193**	IAmb	IAmb	20 29 57.3	
	comp=Z,14nm,1.0s						
BKZ	**Black Stump Fm**	**18.87**	**193**	P	**P**	**20 29 59.1**	**-0.9**
MSWZ	**Moikau Station**	**21.30**	**194**	P	**P**	**20 30 20.9**	**-1.0**
THZ	**Tophouse**	**22.23**	**198**	P	**P**	**20 30 30.2**	**-0.2**
THZ				IAmb	IAmb	20 30 55.7	
	comp=Z,18nm,1.3s						
RPZ	**Rata Peaks**	**24.57**	**199**	P	**P**	**20 30 51.9**	**+0.8**
	comp=Z,2.3nm,0.5s,baz=32,slow=21,SNR=1.0						
RPZ	**Rata Peaks**	**24.57**	**199**	IAmb	IAmb	20 31 12.8	
	comp=Z,31nm,1.2s						
EIDS	**Eidsvold**	**28.76**	**255**	P	**P**	**20 31 27.8**	**-0.3**
EIDS				IAmb	IAmb	20 31 28.4	
	comp=Z,11nm,0.8s						
ARMA	**Armidale**	**28.92**	**245**	P	**P**	**20 31 30.6**	**+1.0**
ARMA				IAmb	IAmb	20 31 31.4	
	comp=Z,18nm,0.8s						
CTAO	**Charters Tower**	**33.46**	**265**	P	**P**	**20 32 08.3**	**-0.1**
PMG	**Port Moresby**	**35.42**	**283**	P	**P**	**20 32 24.6**	**-0.2**
PMG				IAmb	IAmb	20 32 26.0	
	comp=Z,34nm,1.1s						
TOO	**Toolangi**	**35.70**	**234**	P	**P**	**20 32 26.9**	**0.0**
TOO				IAmb	IAmb	20 32 35.8	
	comp=Z,18nm,1.4s						
PATS	**Pohnpei**	**36.03**	**317**	P	**P**	**20 32 29.5**	**-0.3**
COEN	**Coen**	**37.61**	**274**	P	**P**	**20 32 43.1**	**+0.3**
COEN				IAmb	IAmb	20 32 43.9	
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**37.65**	**245**	P	**P**	**20 32 43.5**	**+0.6**
	comp=Z,13nm,0.8s,baz=91,slow=10,SNR=33						
STKA	**Stephens Creek**	**37.65**	**245**	P	**P**	**20 32 43.6**	**+0.6**
BBOO	**Buckleboo**	**42.40**	**244**	P	**P**	**20 33 21.1**	**+0.2**
BBOO				IAmb	IAmb	20 33 21.8	
	comp=Z,23nm,0.7s						
JAY	**Jayapura**	**44.15**	**289**	P	**P**	**20 33 35.3**	**+0.4**
	comp=Z,359nmcomp=Z,38nm,0.8s						
WR0	**Warramunga Arr**	**44.37**	**262**	P	**P**	**20 33 35.7**	**-0.7**
WR0				IAmb	IAmb	20 33 37.4	
	comp=Z,15nm,0.9s						
AS31	**Alice Springs**	**44.44**	**257**	P	**P**	**20 33 36.2**	**-0.8**
ASAR	**Alice Springs**	**44.45**	**257**	P	**P**	**20 33 36.9**	**-0.2**
	comp=Z,30nm,0.9s,baz=100,slow=7.6,SNR=225						
ASAR				PcP	**PcP**	**20 35 09.2**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=101,slow=4.4,SNR=7.0						
ASAR				S	**S**	**20 39 31.2**	**-1.2**
	comp=Z,1.0nm,1.0s,baz=86,slow=17,SNR=5.0						
WB0	**Warramunga Arr**	**44.54**	**263**	P	**P**	**20 33 37.2**	**-0.5**
WB2	**Warramunga Arr**	**44.55**	**262**	P	**P**	**20 33 37.3**	**-0.5**
WB2				IAmb	IAmb	20 33 38.1	
	comp=Z,27nm,0.9s						
WRA	**Warramunga Arr**	**44.56**	**262**	P	**P**	**20 33 37.4**	**-0.5**
	comp=Z,17nm,0.7s,baz=94,slow=5.0,SNR=85						
WRA	**Warramunga Arr**	**44.56**	**262**	P	**P**	**20 33 37.1**	**-0.8**
FORT	**Forrest**	**49.16**	**247**	P	**P**	**20 34 12.2**	**-0.2**
MTN	**Manton Dam**	**49.17**	**271**	P	**P**	**20 34 12.2**	**-0.4**
KNRA	**Kununurra**	**50.64**	**266**	P	**P**	**20 34 23.3**	**-0.1**
KNRA				IAmb	IAmb	20 34 24.2	
	comp=Z,22nm,0.7s						
FAKI	**Fak Fak**	**51.58**	**283**	P	**P**	**20 34 29.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**52.99**	**263**	P	**P**	**20 34 40.5**	**+0.2**
SWI	**Sorong**	**53.34**	**285**	P	**P**	**20 34 42.7**	**-0.1**
	comp=Z,1μmcomp=Z,167nm,0.8s						
NLAI	**Namlea**	**56.16**	**280**	P	**P**	**20 35 03.9**	**+1.3**
	comp=Z,1μmcomp=Z,23nm,1.0s						
SOEI	**Soe**	**56.51**	**272**	P	**P**	**20 35 06.7**	**+1.5**
SOEI	**Soe**	**56.51**	**272**	P	**P**	**20 35 07.1**	**+1.9**
	comp=Z,80nm,0.8s						
PSA00	**Pilbara Seismi**	**57.59**	**257**	P	**P**	**20 35 11.9**	**-0.4**
PSA00				IAmb	IAmb	20 35 39.9	
	comp=Z,51nm,1.3s						
SANI	**Sanana**	**57.65**	**281**	P	**P**	**20 35 12.4**	**-0.4**
	comp=Z,33nm,1.1s						
NWAO	**Narrogin (SRO)**	**58.22**	**244**	P	**P**	**20 35 16.5**	**+0.1**
NWAO				IAmb	IAmb	20 35 39.5	
	comp=Z,27nm,1.2s						
NWAO	**Narrogin (SRO)**	**58.22**	**244**	P	**P**	**20 35 16.5**	**+0.1**
NWAO				IAmb	IAmb	20 35 39.5	
	comp=Z,22nm,1.2s						
MORW	**Morawa**	**59.70**	**248**	P	**P**	**20 35 26.5**	**+0.1**
MORW				IAmb	IAmb	20 35 38.3	
	comp=Z,38nm,1.4s						
GTOI	**Gorontalo**	**61.45**	**283**	P	**P**	**20 35 39.7**	**+1.6**
	comp=Z,18nm,0.7s						
BNSI	**Bone**	**62.21**	**276**	P	**P**	**20 35 44.0**	**+1.0**
	comp=Z,20nm,0.8s						
GIRL	**Giralia**	**62.46**	**255**	P	**P**	**20 35 45.6**	**+1.0**
PLAI	**Plampang**	**62.88**	**271**	P	**P**	**20 35 48.4**	**+1.0**
	comp=Z,37nm,0.8s						
CASY	**Casey**	**63.66**	**205**	P	**P**	**20 35 52.7**	**+1.3**
TOLI2	**Tolitoli**	**63.68**	**282**	P	**P**	**20 35 52.6**	**+0.1**
TOLI2				IAmb	IAmb	20 35 53.2	
	comp=Z,13nm,0.9s						
TWSI	**Taliwang, Sumb**	**63.74**	**270**	P	**P**	**20 35 53.2**	**+0.3**
	comp=Z,20nm,1.0s						
JAGI	**Jajag, Banyuwa**	**66.38**	**270**	P	**P**	**20 36 08.7**	**-0.8**
JAGI				IAmb	IAmb	20 36 09.2	
	comp=Z,24nm,1.0s						
JYT	**Yasato**	**69.17**	**325**	P	**P**	**20 36 26.4**	**+0.4**
KKM	**Kota Kinabalu**	**69.85**	**285**	P	**P**	**20 36 31.0**	**+0.4**
KKM				IAmb	IAmb	20 36 32.0	
	comp=Z,13nm,0.9s						
UGM	**Wanagama**	**69.96**	**269**	P	**P**	**20 36 31.2**	**-0.1**
MJAR	**Matsushiro Arr**	**70.48**	**324**	P	**P**	**20 36 33.5**	**-0.4**
	comp=Z,7.5nm,0.6s,baz=160,slow=6.2,SNR=22						
MJAR	**Matsushiro Arr**	**70.48**	**324**	P	**P**	**20 36 33.3**	**-0.5**
MAJO	**Matsushiro**	**70.48**	**324**	P	**P**	**20 36 33.5**	**-0.3**
MAJO				IAmb	IAmb	20 36 34.7	
	comp=Z,10.0nm,0.7s						
JSU	**Suzuyama**	**71.76**	**315**	P	**P**	**20 36 41.0**	**-0.5**
JSU				IAmb	IAmb	20 36 42.2	
	comp=Z,37nm,1.0s						
JTM	**Tenmabayashi**	**72.16**	**328**	P	**P**	**20 36 43.2**	**-0.3**
JHS	**Saijyo**	**72.36**	**320**	P	**P**	**20 36 44.2**	**-0.6**
ADK	**Adak**	**72.42**	**1**	P	**P**	**20 36 44.6**	**-0.1**
JNU	**Nakatsue**	**72.52**	**317**	P	**P**	**20 36 45.6**	**-0.2**
	comp=Z,20nm,0.9s,baz=182,slow=16,SNR=5.3						
JNU	**Nakatsue**	**72.52**	**317**	IAmb	IAmb	20 36 46.9	
	comp=Z,34nm,1.1s						
KSM	**Kuching**	**73.46**	**278**	P	**P**	**20 36 52.4**	**+0.8**
KSM				IAmb	IAmb	20 36 53.2	
	comp=Z,16nm,0.7s						
TWG	**Pinlang**	**73.56**	**303**	P	**P**	**20 36 50.0**	**-2.0**
JKA	**Kamikawa-asahi**	**74.02**	**332**	P	**P**	**20 36 54.4**	**+0.3**
JKA				IAmb	IAmb	20 36 56.2	
	comp=Z,30nm,1.0s						
ASAJ	**Asahikawa**	**74.02**	**332**	P	**P**	**20 36 55.6**	**+1.5**
	comp=Z,21nm,0.8s,baz=210,slow=6.8,SNR=9.1						
SSLB	**Suanglung**	**74.16**	**304**	P	**P**	**20 36 53.8**	**-1.6**
TPUB	**Ta-pu**	**74.16**	**303**	P	**P**	**20 36 54.3**	**-1.0**
KASI	**Kota Agung**	**76.39**	**269**	P	**P**	**20 37 08.5**	**+0.5**
	comp=Z,26nm,1.0s						
PEA0B	**Petropavlovsk-**	**76.60**	**345**	P	**P**	**20 37 08.6**	**+0.4**
PEA0B				IAmb	IAmb	20 37 09.9	
	comp=Z,41nm,1.5s						
PETK	**Petropavlovsk-**	**76.60**	**345**	P	**P**	**20 37 08.3**	**+0.1**
	comp=Z,7.1nm,0.9s,baz=130,slow=4.9,SNR=8.0						
LWLI	**Liwa**	**76.98**	**270**	P	P	20 37 17.7	+6.3
KSRS	**Korea Array**	**77.14**	**319**	P	**P**	**20 37 12.5**	**+1.0**
	comp=Z,3.8nm,0.6s,baz=130,slow=6.0,SNR=14						
KSAR	**Wonju Array Be**	**77.16**	**319**	P	**P**	**20 37 12.0**	**+0.4**
USA0B	**Ussuriysk Arra**	**79.24**	**326**	P	**P**	**20 37 24.1**	**+1.5**
USRK	**Ussuriysk Ar.**	**79.24**	**326**	P	**P**	**20 37 23.8**	**+1.2**
	comp=Z,8.9nm,0.8s,baz=124,slow=3.6,SNR=15						
USRK	**Ussuriysk Ar.**	**79.24**	**326**	P	**P**	**20 37 23.6**	**+0.9**
MYKOM	**Kota Tinggi**	**79.57**	**276**	P	**P**	**20 37 25.9**	**+0.8**
MYKOM				IAmb	IAmb	20 37 26.9	
	comp=Z,14nm,0.8s						
MDJ	**Mudanjiang**	**80.80**	**325**	P	**P**	**20 37 32.0**	**+1.3**
MDJ				IAmb	IAmb	20 37 33.0	
	comp=Z,21nm,1.1s						
NVAR	**Mina Array Bea**	**81.27**	**43**	P	**P**	**20 37 35.0**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=225,slow=9.7,SNR=6.3						
NVAR	**Mina Array Bea**	**81.27**	**43**	P	**P**	**20 37 34.5**	**+0.8**
NV11	**Mina Array Sit**	**81.36**	**43**	P	**P**	**20 37 34.9**	**+0.9**
KLR	**Kul'dur**	**82.82**	**329**	P	**P**	**20 37 42.0**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=57,slow=0.1,SNR=6.7						
PINE	**Pine Mountain**	**82.85**	**38**	P	**P**	**20 37 41.7**	**+0.2**
MA2	**Magadan**	**84.11**	**345**	P	**P**	**20 37 46.7**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=152,slow=8.0,SNR=5.9						
MA2	**Magadan**	**84.11**	**345**	P	**P**	**20 37 46.9**	**-0.2**
GSI	**Gunungsitoli**	**85.25**	**273**	P	**P**	**20 37 54.4**	**+0.7**
GSI				IAmb	IAmb	20 37 56.2	
	comp=Z,24nm,0.9s						
GSI	**Gunungsitoli**	**85.25**	**273**	P	**P**	**20 37 55.8**	**+2.0**
	comp=Z,33nm,1.0s						
ENH	**Enshi**	**86.23**	**304**	P	**P**	**20 37 58.9**	**+0.7**
ENH				IAmb	IAmb	20 38 00.1	
	comp=Z,17nm,0.9s						
F10A	**Beach Ranch, E**	**86.27**	**38**	P	**P**	**20 37 59.2**	**+1.2**
SEY	**Seymchan**	**86.70**	**347**	P	**P**	**20 37 59.6**	**+0.1**
	comp=Z,5.1nm,0.7s,baz=135,slow=6.0,SNR=37						
RND	**Reindeer**	**87.03**	**13**	P	**P**	**20 38 01.5**	**+0.4**
RND				IAmb	IAmb	20 38 02.0	
	comp=Z,9.1nm,0.8s						
TXAR	**Lajitas Array**	**87.23**	**57**	P	**P**	**20 38 04.8**	**+1.9**
	comp=Z,0.8nm,1.0s,baz=218,slow=5.9,SNR=4.0						
TXAR	**Lajitas Array**	**87.23**	**57**	P	**P**	**20 38 04.6**	**+1.6**
MCK	**McKinley**	**87.30**	**12**	P	**P**	**20 38 00.7**	**-1.6**
MLY	**Manley**	**88.12**	**11**	P	**P**	**20 38 05.7**	**-0.5**
WRH	**Wood River Hil**	**88.13**	**12**	P	**P**	**20 38 05.5**	**-0.6**
WRH				IAmb	IAmb	20 38 07.2	
	comp=Z,11nm,1.2s						
XAN	**Xi'an**	**88.34**	**307**	P	**P**	**20 38 08.9**	**+1.0**
XAN				pmax	pmax		
	comp=Z,17nm,1.0s						
XAN				LR	LR		
	comp=E,240nm,16.3s						
XAN	**Xi'an**	**88.34**	**307**	P	**P**	**20 38 08.6**	**+0.6**
XAN				IAmb	IAmb	20 38 10.1	
	comp=Z,12nm,0.9s						
CCB	**Clear Creek Bu**	**88.34**	**13**	P	**P**	**20 38 06.3**	**-0.9**
BCAR	**Beaver Creek A**	**88.35**	**16**	P	**P**	**20 38 06.0**	**-1.3**
IMAR	**Indian Mountai**	**88.49**	**10**	P	**P**	**20 38 07.2**	**-0.6**
MDM	**Murphy Dome**	**88.54**	**12**	P	**P**	**20 38 07.4**	**-0.6**
MDM				IAmb	IAmb	20 38 08.9	
	comp=Z,5.9nm,1.0s						
ILAR	**Eielson Array**	**88.64**	**13**	P	**P**	**20 38 08.1**	**-0.5**
	comp=Z,2.5nm,1.0s,baz=227,slow=5.4,SNR=11						
ILAR	**Eielson Array**	**88.64**	**13**	P	**P**	**20 38 07.1**	**-1.4**
REDW	**Red Top Meadow**	**88.68**	**42**	P	**P**	**20 38 09.3**	**-0.3**
EGAK	**Eagle**	**89.93**	**15**	P	**P**	**20 38 14.4**	**-0.1**
EGAK				IAmb	IAmb	20 38 15.8	
	comp=Z,6.6nm,1.0s						
COLD	**Coldfoot**	**90.21**	**10**	P	**P**	**20 38 16.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**90.23**	**290**	P	**P**	**20 38 18.8**	**+1.8**
	comp=Z,6.2nm,0.9s,baz=124,slow=2.8,SNR=31						
CMAR	**Chiang Mai Arr**	**90.23**	**290**	P	**P**	**20 38 17.8**	**+0.8**
CHTO	**Chiang Mai**	**90.36**	**290**	P	**P**	**20 38 18.7**	**+1.1**
CHTO				IAmb	IAmb	20 38 20.0	
	comp=Z,8.3nm,0.8s						
ZALV	**Zalesovo Beam**	**110.76**	**321**	PKiKP	**PKiKP**	**

	baz=14,slow=4.3						
CLL	**Collm**	**148.39 347**	*i* PKPdf	**PKPdf**	**20 44 56.5 +1.9**		
CLL	**Collm**	**148.39 347**	*i* PKPbc	**PKPbc**	**20 44 59.2 +0.4**		
	comp=Z,16nm,0.9s						
DPC	**Dobruska-Polom**	**148.45 342**⇑	*e*PKP	**PKiKP**	**20 45 00.0 -0.2**		
DPC			*e*PKPAB	**PKPab**	**20 45 05.4 +0.9**		
LANS	**Liptovska Anna**	**148.49 338**	*e*PKP	**PKiKP**	**20 45 00.8 +0.4**		
LANS			*e*		20 45 06.2		
MLR	**Muntele Rosu**	**148.51 327**	PKPbc	**PKPbc**	**20 44 59.7 +0.1**		
	comp=Z,3.1nm,0.6s,baz=156,slow=5.2,SNR=5.1						
KRLC	**Kraliky**	**148.56 342**⇑	*e*PKP	**PKiKP**	**20 45 00.2 -0.3**		
KRLC			*e*PKPAB	**PKPab**	**20 45 05.7 +0.7**		
BRG	**Berggiesshubel**	**148.59 345**	Amp		20 45 06.4		
	comp=Z,4.7nm,0.8s						
BRG	**Berggiesshubel**	**148.59 345**	*e*PKPbc	**PKiKP**	**20 45 00.0 -0.4**		
	baz=16,slow=2.4						
BRG			*e*PKPab	**PKPab**	**20 45 05.2 +0.2**		
	baz=14,slow=4.3						
BRG	**Berggiesshubel**	**148.59 345**	*e*P	**PKiKP**	**20 45 00.0 -0.4**		
BRG	**Berggiesshubel**	**148.59 345**	Amp		20 45 01.0		
	comp=Z,7.5nm,0.8s						
BRG	**Berggiesshubel**	**148.59 345**	*ex*	**PKPab**	**20 45 05.2 +0.2**		
MORC	**Moravsky Berou**	**148.59 341**	*e*PKP	**PKiKP**	**20 45 00.3 -0.3**		
FBE	**Freiberg**	**148.68 346**	*e*PKPbc	**PKiKP**	**20 45 00.6 0.0**		
	baz=16,slow=2.4						
FBE			*e*PKPab	**PKPab**	**20 45 06.0 +0.7**		
	baz=14,slow=4.3						
GTTG	**Gottingen**	**148.73 350**	*e*PKPbc	**PKiKP**	**20 45 00.4 -0.3**		
	baz=16,slow=2.4						
PVCC	**Panska Ves**	**148.75 344**⇑	*e*PKP	**PKiKP**	**20 45 00.8 0.0**		
EIL	**Elat**	**149.02 293**	PKPbc	**PKiKP**	**20 45 01.6 -0.3**		
	comp=Z,4.5nm,0.8s,baz=3.6,slow=15,SNR=5.8						
PRU	**Pruhonice**	**149.26 344**⇑	*e*PKP	**PKiKP**	**20 45 01.7 -0.1**		
PRU			*e*PKPAB	**PKPab**	**20 45 08.5 +0.7**		
VYHS	**Vyhne**	**149.27 338**	*e*PKP	**PKiKP**	**20 45 02.0 0.0**		
VYHS			*e*		20 45 08.9		
KASTN	**Kahler Asten**	**149.28 352**	*e*PKPbc	**PKiKP**	**20 45 01.7 -0.2**		
	baz=16,slow=2.4						
VRAC	**Vranov**	**149.30 341**	*e*PKP	**PKiKP**	**20 45 01.9 -0.1**		
MOX	**Moxa**	**149.30 348**	*e*PKPbc	**PKiKP**	**20 45 01.5 +0.4**		
	baz=16,slow=2.4						
PLN	**Plauen**	**149.35 347**	*e*PKPbc	**PKPbc**	**20 45 01.6 +0.4**		
	baz=16,slow=2.4						
TANN	**Tannenbergstha**	**149.35 347**	*e*PKPbc	**PKiKP**	**20 45 01.9 -0.2**		
	baz=16,slow=2.4						
WERD	**Werda**	**149.35 347**	*e*PKPbc	**PKPbc**	**20 45 01.6 +0.4**		
	baz=16,slow=2.4						
KOLL	**Kolacno**	**149.35 338**	*e*PKP	**PKiKP**	**20 45 02.4 +0.3**		
JAVC	**Velka Javorina**	**149.35 340**	*e*PKP	**PKiKP**	**20 45 03.3 +1.1**		
GUNZ	**Gunzen**	**149.42 347**	*e*PKPbc	**PKiKP**	**20 45 02.2 0.0**		
	baz=16,slow=2.4						
GUNZ			*e*PKPab	**PKPab**	**20 45 08.8 +0.3**		
	baz=14,slow=4.3						
UBBA	**Unterbreizbach**	**149.42 350**	*e*PKPbc	**PKiKP**	**20 45 01.9 -0.1**		
	baz=16,slow=2.4						
WERN	**Wernitzgruen**	**149.49 347**	*e*PKPbc	**PKiKP**	**20 45 02.6 +0.2**		
	baz=16,slow=2.4						
WERN			*e*PKPab	**PKPab**	**20 45 09.2 +0.4**		
	baz=14,slow=4.3						
KRUC	**Moravsky**	**149.58 341**	*e*PKP	**PKiKP**	**20 45 02.4 -0.1**		
MANZ	**Manzenberg**	**149.83 347**	*e*PKPbc	**PKiKP**	**20 45 02.9 -0.2**		
	baz=16,slow=2.4						
MODS	**Modra-Piesok**	**149.91 339**	*e*PKP	**PKPbc**	**20 45 02.9 +0.3**		
ROTZ	**Rotzenmuhle**	**150.01 347**	*e*PKPbc	**PKiKP**	**20 45 03.4 0.0**		
	baz=16,slow=2.4						
TNS	**Taunus Mts**	**150.24 352**	*e*PKPbc	**PKiKP**	**20 45 03.8 -0.1**		
	baz=16,slow=2.4						
GRF	**Grafenberg Arr**	**150.29 348**	*e*PKPbc	**PKiKP**	**20 45 04.2 +0.2**		
	baz=16,slow=2.4						
GRF			*e*PKPab	**PKPab**	**20 45 12.2 0.0**		
	baz=14,slow=4.3						
KHC	**Kasperske Hory**	**150.29 345**	*e*PKPDF	**PKPdf**	**20 44 58.1 +0.4**		
KHC			⇑*e*PKP	**PKiKP**	**20 45 04.0 -0.1**		
KHC			*e*PKPAB	**PKPab**	**20 45 13.2 +1.0**		
KHC	**Kasperske Hory**	**150.29 345**		**PKPdf**	**20 44 57.9 +0.2**		
KHC			PKPbc	**PKPbc**	**20 45 03.7 +0.2**		
KHC			PKPab	**PKPab**	**20 45 12.8 +0.5**		
CKRC	**Cesky Krumlov**	**150.39 343**⇑	*e*PKP	**PKiKP**	**20 45 04.6 +0.3**		
CKRC			*e*PKPAB	**PKPab**	**20 45 13.3 +0.7**		
WET	**Wettzell**	**150.45 345**	*e*PKPab	**PKPab**	**20 45 13.5 +0.6**		
	baz=14,slow=4.3						
MILB	**Miltenberg**	**150.50 350**	*e*PKPbc	**PKiKP**	**20 45 04.4 0.0**		
	baz=16,slow=2.4						
MILB			*e*PKPab	**PKPab**	**20 45 13.0 0.0**		
	baz=14,slow=4.3						
GEC2	**GERESS Array S**	**150.53 344**		**PKiKP**	**20 45 04.6 0.0**		
GEC2	**GERESS Array S**	**150.53 344**	*e*PKPbc	**PKiKP**	**20 45 04.5 -0.1**		
	baz=16,slow=2.4						
GERES	**GERESS Array B**	**150.53 344**	PKPbc	**PKiKP**	**20 45 04.5 -0.1**		
	comp=Z,2.7nm,0.7s,baz=46,slow=3.9,SNR=12						
GERES	**GERESS Array B**	**150.53 344**		**PKPdf**	**20 44 58.5 +0.3**		
GERES				**PKPbc**	**20 45 04.2 +0.1**		
CONA	**Conrad Observa**	**150.75 341**	*i* P	**PKiKP**	**20 45 05.3 +0.2**		
WLF	**Walferdange**	**151.05 354**	*e*PKPbc	**PKiKP**	**20 45 06.3 +0.7**		
	baz=16,slow=2.4						
FUR	**Furstenfeldbru**	**151.73 347**	*e*PKPbc	**PKiKP**	**20 45 07.3 +0.2**		
	baz=16,slow=2.4						
FUR			*e*PKPab	**PKPab**	**20 45 19.0 +0.7**		
	baz=14,slow=4.3						
RJOB	**Jochberg**	**151.78 344**	*e*PKPab	**PKPab**	**20 45 19.5 +0.9**		
	baz=14,slow=4.3						
BFO	**Black Forest**	**152.10 351**	*e*PKPbc	**PKiKP**	**20 45 08.0 +0.2**		
	baz=16,slow=2.4						
SOKA	**Soboth**	**152.12 341**	*i* P	**PKPbc**	**20 45 07.6 -0.2**		
	comp=Z,2.8nm,1.0s						
KBA	**Koelnbreinsper**	**152.25 343**	*i* P	**PKiKP**	**20 45 08.4 +0.1**		
	comp=Z,2.3nm,0.6s						
DIVS	**Divibare**	**152.40 331**		**PKiKP**	**20 45 08.9 +0.2**		
UBR	**Ueberruh**	**152.43 348**	*e*PKPbc	**PKiKP**	**20 45 08.8 +0.3**		
	baz=16,slow=2.4						
WTTA	**Wattenberg**	**152.50 346**	*i* P	**PKiKP**	**20 45 08.9 0.0**		
	comp=Z,3.2nm,0.5s						
MOTA	**Moosalm**	**152.54 347**	*e*P	**PKPbc**	**20 45 07.5 -1.3**		
	comp=Z,3.7nm,1.0s						
SQTA	**Sankt Quirin**	**152.64 346**	*e*P	**PKPbc**	**20 45 06.9 -2.1**		
	comp=Z,1.9nm,0.5s						
ABTA	**Abfaltersbach**	**152.77 344**	*e*P	**PKPbc**	**20 45 08.4 -0.9**		
	comp=Z,4.5nm,0.6s						
FETA	**Feichten**	**152.93 347**	*e*P	**PKiKP**	**20 45 09.8 0.0**		
	comp=Z,4.0nm,1.0s						
LIT	**Litokhoron**	**154.03 322**		**PKPab**	**20 45 28.6 +0.2**		
TORD	**Torodi Ar. Bea**	**172.35 178**	PKP	**PKPdf**	**20 45 19.2 -1.9**		
	comp=Z,1.0nm,0.7s,baz=342,slow=3.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**172.35 178**		**PKPdf**	**20 45 20.4 -0.7**		

*NEIC **20** 20:35:29.7±1.1, 19°.4S±0°.1×177°.7W±0°.2, h571^{km}±10^{km}, mb4.5/22, Error ellipse: s-maj=24.6km s-min=20.0km az=55.0*

*IDC **20** 20:35:31.9±5.2, 19°.28S×177°.94W, h568^{km}±33^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.0/41, mbtmp4.2/5, Error ellipse: s-maj=127.7km s-min=29.7km az=138.0*

ISC 20 20:35:28.5±1.0, 19°.5S±0°.1×177°.6W±0°.2, h550^{km}, n30, σ1^{s}01/30, mb4.4/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MSVF	**Nonsavu**	**4.51**	**293**	P		**P**	**20 36 56.0**	**+1.5**
	3.6nm,0.3s,baz=81,slow=22,SNR=11							
QRZ	**Quartz Range**	**22.84**	**200**	P		**P**	**20 39 49.1**	**-0.8**
NNZ	**Nelson**	**22.95**	**198**	P		**P**	**20 39 50.1**	**-0.7**
NNZ				IAmb		IAmb	20 40 15.3	
	comp=Z,24nm,1.0s							
TUWZ	**Tuamarina**	**22.99**	**196**	P		**P**	**20 39 50.5**	**-0.6**
BSWZ	**Blackbirch Sta**	**23.27**	**196**	P		**P**	**20 39 53.1**	**-0.6**
THZ	**Tophouse**	**23.59**	**198**	P		**P**	**20 39 55.6**	**-0.9**
THZ				IAmb		IAmb	20 40 12.8	
	comp=Z,28nm,1.5s							
KHZ	**Kahutara**	**24.02**	**196**	P		**P**	**20 39 58.9**	**-1.4**
KHZ				IAmb		IAmb	20 40 07.7	
	comp=Z,22nm,1.2s							
LTZ	**Lake Taylor**	**24.71**	**198**	P		**P**	**20 40 04.3**	**-2.2**
LTZ				IAmb		IAmb	20 40 30.8	
	comp=Z,25nm,1.4s							
OXZ	**Oxford**	**25.27**	**198**	P		**P**	**20 40 09.5**	**-2.0**
WHZ	**Wether Hill Ro**	**28.87**	**201**	P		**P**	**20 40 43.8**	**+0.9**
STKA	**Stephens Creek**	**38.56**	**243**	P		**P**	**20 42 05.2**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=69,slow=8.6,SNR=4.5							
STKA	**Stephens Creek**	**38.56**	**243**	IAmb		IAmb	20 42 06.0	
	comp=Z,2.6nm,1.3s							
BBOO	**Buckleboo**	**43.33**	**243**	P		**P**	**20 42 42.4**	**0.0**
BBOO				IAmb		IAmb	20 43 08.8	
	comp=Z,20nm,1.2s							
WR0	**Warramunga Arr**	**44.94**	**261**	P		**P**	**20 42 54.6**	**-0.4**
WR0				IAmb		IAmb	20 43 03.7	
	comp=Z,16nm,1.4s							
WB0	**Warramunga Arr**	**45.10**	**261**	P		**P**	**20 42 55.9**	**-0.4**
WB0				IAmb		IAmb	20 43 04.2	
	comp=Z,14nm,1.4s							
WB2	**Warramunga Arr**	**45.12**	**261**	P		**P**	**20 42 56.1**	**-0.3**
WB2				IAmb		IAmb	20 43 12.4	
	comp=Z,13nm,1.3s							
AS31	**Alice Springs**	**45.13**	**256**	P		**P**	**20 42 56.5**	**0.0**
ASAR	**Alice Springs**	**45.13**	**256**	P		**P**	**20 42 56.4**	**0.0**
	comp=Z,7.3nm,0.7s,baz=88,slow=8.2,SNR=74							
ASAR				PcP		**PcP**	**20 44 25.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=108,slow=4.3,SNR=4.1							
ASAR	**Alice Springs**	**45.13**	**256**	P		**P**	**20 42 55.7**	**-0.7**
WRA	**Warramunga Arr**	**45.13**	**261**	P		**P**	**20 42 56.2**	**-0.2**
	comp=Z,2.4nm,0.3s,baz=97,slow=8.5,SNR=44							
WRA	**Warramunga Arr**	**45.13**	**261**	P		**P**	**20 42 55.0**	**-1.5**
KNRA	**Kununurra**	**51.12**	**265**	P		**P**	**20 43 41.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**53.55**	**262**	P		**P**	**20 43 58.7**	**+0.2**
MMRI	**Maumere**	**59.11**	**272**	P		**P**	**20 44 35.8**	**-1.0**
MMRI				IAmb		IAmb	20 44 52.7	
	comp=Z,36nm,1.5s							
NWAO	**Narrogin (SRO)**	**59.15**	**243**	P		**P**	**20 44 36.3**	**-0.6**
NWAO				IAmb		IAmb	20 44 37.8	
	comp=Z,36nm,1.5s							
NWAO	**Narrogin (SRO)**	**59.15**	**243**	P		**P**	**20 44 36.2**	**-0.6**
NWAO				IAmb		IAmb	20 44 45.1	
	comp=Z,29nm,1.5s							
CASY	**Casey**	**65.00**	**205**	P		**P**	**20 45 14.6**	**+0.5**
CASY				IAmb		IAmb	20 45 28.5	
	comp=Z,17nm,1.4s							
QSPA	**South Pole Qui**	**70.53**	**180**	P		**P**	**20 45 49.3**	**+1.4**
SDPT	**Sand Point**	**76.00**	**10**	P		**P**	**20 46 17.5**	**-1.5**
ILAR	**Eielson Array**	**87.29**	**13**	P		**P**	**20 47 17.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=218,slow=5.7,SNR=4.6							

*DSN **20** 20:37:32.9±1.2, 28°.57N×56°.86E, h10^{km}, ML4.1/10, Error ellipse: s-maj=17.7km s-min=10.1km az=94.0*

*TEH **20** 20:37:33.5, 28°.48N×57°.18E, h17^{km}, ML3.9*

*IDC **20** 20:37:35.4±2.9, 28°.42N×57°.14E, h42^{km}±33^{km}, mb3.5/14, mb1 3.6/17, mb1mx3.4/64, mbtmp3.7/17, ML4.0/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/29, Error ellipse: s-maj=20.1km s-min=16.3km az=40.0*

*NEIC **20** 20:37:35.3±1.8, 28°.38N±0°.08×57°.1E±0°.1, h39^{km}±10^{km}, Error ellipse: s-maj=16.3km s-min=11.4km az=107.0*

*THR **20** 20:37:36.2±0.4, 28°.66N×57°.16E, h14^{km}±6^{km}, ML3.7*

*OMAN **20** 20:37:37.5±0.5, 28°.51N×57°.03E, h33^{km}, mb4.9/6, ml3.8/14, Error ellipse: s-maj=14.4km s-min=7.4km az=283.0*

*SGS **20** 20:37:37.6, 28°.28N×57°.05E, h7^{km}, Ml3.9*

ISC 20 20:37:32.1±0.5, 28°.49N±0°.03×57°.14E±0°.05, h10^{km}, n98, σ2^{s}28/101, mb3.7/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KHNJ	**Kahnooj**	**0.73**	**137**	*e*Pg		**Pg**	**20 37 46.8**	**+0.5**
NGRK	**Negar Kerman**	**1.21**	**343**	*e*Pg		**Pb**	**20 37 55.5**	**+0.3**
KBAM	**BAM**	**1.32**	**60**	*e*Pg		**Pn**	**20 37 56.4**	**-0.3**
GENO	**Geno**	**1.38**	**219**	*e*Pg		**Pb**	**20 37 59.8**	**+1.7**
CHMN	**Cheshme madani**	**1.41**	**14**	*e*Pg		**Pn**	**20 37 59.1**	**+0.9**
KRBR	**Kerman**	**1.52**	**347**	*e*Pg		**Pn**	**20 38 01.3**	**+1.6**
KRBR				*e*Sg		**Sn**	**20 38 20.0**	**+0.2**
KRBR				IAML			20 38 30.7	
	comp=E,949nm,0.3s							
KRBR	**Kerman**	**1.52**	**347**	*e*Pg		**Pn**	**20 38 01.3**	**+1.6**
TVBK	**TV Kerman**	**1.53**	**348**	*e*Pg		**Pn**	**20 38 01.1**	**+1.3**
KHGB	**Koh Gabri**	**1.97**	**343**	*e*Pn		**Pn**	**20 38 08.2**	**+2.5**
LAR1	**LAR**	**2.58**	**252**	*e*Pn		**Pn**	**20 38 16.0**	**+2.0**
SHME	**Shamm**	**2.59**	**200**	*e*P		**Pn**	**20 38 14.5**	**+0.5**
	SNR=19							
SHME	**Shamm**	**2.59**	**200**	*e*Pn		**Pn**	**20 38 15.8**	**+1.8**
BANOM	**Banah**	**2.66**	**197**	*e*P		**Pn**	**20 38 16.0**	**+0.9**
	SNR=64							
BANOM				S		**Sn**	**20 38 49.4**	**+1.9**
BANOM	**Banah**	**2.66**	**197**	*e*Pn		**Pn**	**20 38 16.8**	**+1.7**
JSK1	**Jask**	**2.90**	**169**	*e*Pn		**Pn**	**20 38 20.6**	**+2.4**
JHRM	**Jahrom**	**3.14**	**271**	*e*Pn		**Pn**	**20 38 25.5**	**+3.8**
MSFE	**Esma-Masafi**	**3.24**	**196**	P		**Pn**	**20 38 25.0**	**+2.0**
MSFE	**Esma-Masafi**	**3.24**	**196**	*e*Pn		**Pn**	**20 38 25.7**	**+2.7**
MDH	**Madha**	**3.27**	**194**	P		**Pn**	**20 38 23.6**	**+0.2**
MDH	**Madha**	**3.27**	**194**	*e*Pn		**Pn**	**20 38 25.5**	**+2.1**
ZHDN	**Zahedan**	**3.34**	**73**	*e*Pn		**Pn**	**20 38 26.6**	**+2.1**
QIR1	**Qir**	**3.61**	**271**	*e*Pn		**Pn**	**20 38 30.9**	**+2.8**
UOSS	**Minazif**	**3.63**	**194**	P		**Pn**	**20 38 30.0**	**+1.6**
UOSS	**Minazif**	**3.63**	**194**			**Pn**	**20 38 27.6**	**-0.8**
UOSS	**Minazif**	**3.63**	**194**	*e*Pn		**Pn**	**20 38 30.4**	**+2.0**
IMEH	**Mehriz**	**3.63**	**323**	*e*Pn		**Pn**	**20 38 31.9**	**+3.3**
LMD1	**Lamerd**	**3.70**	**253**	*e*Pn		**Pn**	**20 38 32.1**	**+2.7**
NAZ	**Nazwa, Dubai**	**3.73**	**201**	*i* P		**Pn**	**20 38 31.3**	**+1.6**
	SNR=7.4							
NAZ	**Nazwa, Dubai**	**3.73**	**201**	*e*Pn		**Pn**	**20 38 32.0**	**+2.3**
HATD	**Hatta, Dubai**	**3.76**	**194**	P		**Pn**	**20 38 32.4**	**+2.2**
HATD	**Hatta, Dubai**	**3.76**	**194**	*e*Pn		**Pn**	**20 38 32.2**	**+2.0**
NHDN	**Nehbandan**	**3.84**	**40**	*e*Pn		**Pn**	**20 38 33.3**	**+1.9**
BSRN	**Basiran**	**3.87**	**26**	*e*Pn		**Pn**	**20 38 35.1**	**+3.4**
BSRN				*e*Sg		**Sb**	**20 39 31.5**	**+4.0**
BSRN	**Basiran**	**3.87**	**26**	*e*Pn		**Pn**	**20 38 35.2**	**+3.4**
FAQ	**Al Faqa, Dubai**	**3.98**	**201**	*i* P		**Pn**	**20 38 34.7**	**+1.6**
	SNR=10							
FAQ	**Al Faqa, Dubai**	**3.98**	**201**	*e*Pn		**Pn**	**20 38 35.5**	**+2.3**
ASUD	**Al Ashush, Dub**	**4.18**	**203**	*i* P		**Pn**	**20 38 37.8**	**+1.9**
	SNR=59							
ASUD				S		**Sn**	**20 39 26.9**	**+2.1**
ASUD	**Al Ashush, Dub**	**4.18**	**203**	*e*Pn		**Pn**	**20 38 38.7**	**+2.8**
IKOO	**Kooshah**	**4.24**	**22**	*e*Pn		**Pn**	**20 38 38.5**	**+1.5**
AJN	**Ajban**	**4.36**	**207**	*i* P		**Pn**	**20 38 39.9**	**+1.5**
	SNR=7.1							
AJN	**Ajban**	**4.36**	**207**	*e*Pn		**Pn**	**20 38 41.1**	**+2.7**
SOHO	**SOHO**	**4.37**	**187**	*i* P		**Pn**	**20 38 39.0**	**+0.4**
	SNR=6.8							
SOHO	**SOHO**	**4.37**	**187**	*e*Pn		**Pn**	**20 38 39.4**	**+0.8**
ICHK	**Chekchek**	**4.42**	**328**	*e*Pn		**Pn**	**20 38 43.0**	**+3.5**
YZKH	**Yazd**	**4.47**	**331**	*e*Pn		**Pn**	**20 38 44.0**	**+4.0**
YZKH	**Yazd**	**4.47**	**331**	*e*Pn		**Pn**	**20 38 44.0**	**+4.0**
ISAD	**Sadrabad**	**4.54**	**320**	*e*Pn		**Pn**	**20 38 44.6**	**+3.5**
TPRV	**Parvadeh(Tabas**	**4.54**	**355**	*e*Pn		**Pn**	**20 38 45.0**	**+4.0**
ALNE	**Al Ain**	**4.59**	**196**	*e*Pn		**Pn**	**20 38 43.8**	**+2.2**
ITEG	**Tejag**	**4.61**	**17**	*e*Pn		**Pn**	**20 38 44.8**	**+2.8**
SRVN	**Saravan**	**4.78**	**102**	*e*Pn		**Pn**	**20 38 47.2**	**+3.0**
IDAH	**Dahanechah**	**4.84**	**28**	*e*Pn		**Pn**	**20 38 49.0**	**+3.7**
BIDO	**Bidbid**	**5.03**	**170**	*e*Pn		**Pn**	**20 38 47.8**	**+0.2**
TKDS	**Koohdasht(Taba**	**5.11**	**360**	*e*Pn		**Pn**	**20 38 52.4**	**+3.6**
IMON	**Monand**	**5.17**	**24**	*e*Pn		**Pn**	**20 38 52.8**	**+3.1**
AFRZ	**Afriz**	**5.18**	**18**	*e*Pn		**Pn**	**20 38 53.2**	**+3.4**
IRAM	**Ramesheh**	**5.29**	**310**	*e*Pn		**Pn**	**20 38 54.2**	**+2.9**
WSAR	**Wadi Sarin**	**5.40**	**165**	P		**Pn**	**20 38 53.5**	**+0.8**
	comp=E,11nm,0.3s,baz=351,slow=7.2,SNR=214							
WSAR				S		**Sn**	**20 39 52.6**	**-2.3**
	comp=E,13nm,0.3s,baz=62,slow=23,SNR=14							
KLNJ	**Kolanjah**	**5.44**	**299**	*e*Pn		**Pn**	**20 38 56.2**	**+2.6**
TNSJ	**Nastanj**	**5.48**	**355**	*e*Pn		**Pn**	**20 38 57.1**	**+3.3**
ANAR	**Anarak**	**5.53**	**329**	*e*Pn		**Pn**	**20 38 57.8**	**+3.2**
MZWR	**Madinat Zayed**	**5.55**	**213**	*e*Pn		**Pn**	**20 38 56.3**	**+1.6**
BSY	**Bisya**	**5.72**	**179**	S		**Sn**	**20 40 06.9**	**+3.9**
IGAR	**Gharneh**	**5.88**	**313**	*e*Pn		**Pn**	**20 39 02.6**	**+3.1**
UMZA	**Um Al Zommool**	**6.02**	**198**	*e*Pn		**Pn**	**20 39 03.0**	**+1.7**
UMZA	**Um Al Zommool**	**6.02**	**198**	S		**Sn**	**20 40 12.7**	**+2.4**
IZEF	**Zefreh**	**6.04**	**318**	*e*Pn		**Pn**	**20 39 03.8**	**+2.1**
IPIR	**Pirpir**	**6.82**	**309**	*e*Pn		**Pn**	**20 39 15.2**	**+2.7**
SLWS		**6.88**	**239**	S		**Sn**	**20 40 26.1**	**-5.2**
SLWS		**6.88**	**239**	P		**Pn**	**20 39 14.5**	**+1.5**
ISFB	**Sefidab**	**7.19**	**326**	*e*Pn		**Pn**	**20 39 20.8**	**+3.5**
HRA	**Herat**	**7.32**	**35**			**Pn**	**20 39 21.2**	**+1.9**
QRN	**Al-Qurain**	**8.11**	**274**	*e*P			20 39 29.5	
UMR	**Umm Al-Rimmam**	**8.32**	**280**	*e*P			20 39 32.8	
RDF	**Al-Radifah**	**8.43**	**275**	*e*P			20 39 34.4	
QYSM	**Um Kedad**	**9.08**	**268**	P		**Pn**	**20 39 44.1**	**+0.8**
RQBS	**RQBS**	**9.96**	**266**	P		**Pn**	**20 39 54.5**	**-0.8**
DOK	**Doka**	**10.21**	**196**	P		**Pn**	**20 39 59.9**	**+1.1**
RAYN	**Ar Rayn**	**11.57**	**247**	*i* P		Pn	20 40 14.5	-2.9
	SNR=14							
RAYN	**Ar Rayn**	**11.57**	**247**			Pn	20 40 13.9	-3.6
MMAI	**Mount Meron Ar**	**19.21**	**289**	P		**P**	**20 41 57.8**	**+1.4**
	comp=E,0.4nm,0.3s,baz=102,slow=14,SNR=4.3							
EIL	**Elat**	**19.43**	**279**	P		**P**	**20 41 56.5**	**-2.2**
	comp=E,0.2nm,0.3s,baz=46,slow=16,SNR=1.8							
ABKAR	**Akbulak array**	**20.85**	**5**	P		**P**	**20 42 15.4**	**+1.5**
ABKAR				IAmb		IAmb	20 42 19.4	
	comp=Z,5.7nm,1.3s							
ABKAR	**Akbulak array**	**20.85**	**5**	P		**P**	**20 42 15.0**	**+1.1**
AKTO	**Aktyubinsk**	**21.93**	**1**	P		**P**	**20 42 24.1**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=197,slow=10,SNR=3.5							
BR131	**Keskin Array S**	**22.39**	**306**	P		**P**	**20 42 30.8**	**+0.1**
BR131				IAmb		IAmb	20 42 35.3	
	comp=Z,8.2nm,1.0s							
BRTR	**Keskin Array B**	**22.39**	**306**	P		**P**	**20 42 31.1**	**+0.3**
	comp=Z,2.8nm,0.7s,baz=126,slow=12,SNR=10							
BRTR				LR		LR	20 51 27.5	
	comp=Z,37nm,19.2s,baz=129,slow=37							
BVAR	**Borovoye Array**	**26.40**	**18**	P		**P**	**20 43 08.6**	**0.0**
	comp=Z,0.6nm,0.7s,baz=166,slow=16,SNR=4.7							
MKAR	**Makanchi Array**	**26.84**	**40**	P		**P**	**20 43 12.6**	**-0.2**
	comp=Z,0.5nm,1.0s,baz=1.4,slow=4.9,SNR=3.6							
OJC	**Ojcow**	**35.59**	**318**	P		**P**	**20 44 28.9**	**-0.8**
OJC				IAmb		IAmb	20 44 57.9	
	comp=Z,8.1nm,1.0s							
MURB	**Monte Urbino**	**38.58**	**305**	P		**P**	**20 44 56.1**	**+0.9**
FINES	**FINESS Array B**	**38.88**	**337**	P		**P**	**20 44 56.6**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=126,slow=9.1,SNR=4.3							
GERES	**GERESS Array B**	**38.88**	**314**	P		**P**	**20 44 56.7**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=126,slow=10.0,SNR=3.8							
ARCES	**ARCESS Array B**	**44.95**	**345**	P		**P**	**20 45 46.2**	**-0.6**
	comp=Z,3.1nm,1.0s,baz=139,slow=7.7,SNR=5.4							
ESDC	**Sonseca Array**	**50.95**	**300**	P		**P**	**20 46 33.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=70,slow=7.2,SNR=6.0							
TORD	**Torodi Ar. Bea**	**53.59**	**265**	P		**P**	**20 46 52.1**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=61,slow=7.1,SNR=5.4							
TIXI	**Tiksi**	**57.48**	**21**	P		**P**	**20 47 20.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=118,slow=5.5,SNR=2.7							
SEY	**Seymchan**	**67.34**	**30**	P		**P**	**20 48 26.3**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=304,slow=8.5,SNR=7.7							
ILAR	**Eielson Array**	**85.17**	**10**	P		**P**	**20 50 06.3**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=320,slow=5.0,SNR=4.2							
YKA	**Yellowknife Ar

baz=270
TDCB eS Sb 20 43 11.8 +0.2
baz=270
YHNB Yeheng 1.25 307 P Pn 20 42 55.6 +0.5
baz=291
YHNB eS Sb 20 43 11.5 -0.1
baz=291
NSK Sanguang 1.26 307 P Pn 20 42 55.8 +0.4
baz=291
NSK eS Sb 20 43 12.0 -0.1
baz=291
FULB Fuli 1.30 237 P Pn 20 42 56.5 +0.7
baz=223
FULB eS Sn 20 43 11.5 -1.0
baz=223
CHKT Chengkung 1.30 231 eP Pn 20 42 55.5 -0.3
baz=217
CHKT eS Sn 20 43 11.0 -1.5
baz=217
NWF Wu-fen Shan 1.31 331 eP Pn 20 42 56.1 +0.1
baz=329
WFSB Wu-fen Shan 1.31 331 eP Pn 20 42 55.9 0.0
baz=329
TWA Mucha 1.33 323 P Pb 20 42 57.1 -0.2
baz=321
TWA eS Sb 20 43 15.9 +2.0
baz=321
NHDH Xindian Distri 1.35 320 P Pb 20 42 57.7 0.0
baz=333
TNOU National Taiwa 1.38 333 eP Pn 20 42 57.4 +0.5
baz=331
TATO Taipei 1.38 320 eP Pn 20 42 57.4 +0.5
baz=317
WPL Puli Township 1.39 274 eP Pn 20 42 57.7 +0.7
baz=271
SSLB Suanglung 1.40 265 eP Pn 20 42 57.2 +0.1
baz=262
DPDB Guoxing 1.42 275 P Pb 20 42 58.4 -0.5
baz=272
TAP Taipei 1.42 322 eP Pb 20 42 58.9 0.0
baz=319
EDH Donghe 1.43 229 eP Pn 20 42 58.5 +0.9
baz=218
EDH eS Sn 20 43 14.6 -1.1
baz=218
SMLT Sun Moon Lake 1.44 269 eP Pn 20 42 58.4 +0.5
baz=266
SMLT eS Sn 20 43 16.1 +0.1
baz=266
WHP Taichung City 1.44 285 eP Pb 20 42 59.0 -0.2
baz=271
JKRS Kuro-shima 1.44 77 P Pb 20 42 58.9 -0.3
JKRS S Sb 20 43 18.4 +1.3
YUS Yu-Shan 1.46 253 eP Pn 20 42 59.1 +0.7
baz=251
YUS eS Sn 20 43 16.4 -0.7
baz=251
YM01 YM01 1.47 326 eP Pn 20 42 58.6 +0.4
baz=325
YM01 eS Sb 20 43 18.7 +0.7
baz=325
TYC Yuchr 1.48 270 eP Pn 20 42 59.0 +0.7
baz=267
TYC eS Sn 20 43 15.6 -1.3
baz=267
YM10 YM10 1.48 326 eP Pn 20 42 58.5 +0.1
baz=324
YM11 YM11 1.48 327 eP Pb 20 42 59.4 -0.6
baz=324
YM04 YM04 1.49 325 eP Pn 20 42 58.5 -0.1
baz=324
YM04 eS Sb 20 43 19.5 +0.8
baz=324
YM08 YM08 1.50 328 eP Pn 20 42 58.5 0.0
baz=325
WHYT Xinyi Township 1.50 262 eP Pb 20 42 59.9 -0.4
baz=247
WHYT eS Sn 20 43 18.2 +0.7
baz=247
NJD Zhudong 1.50 303 eP Pb 20 43 00.5 +0.2
baz=300
LIOB Emei 1.51 299 P Pb 20 43 00.6 +0.1
baz=296
YM03 YM03 1.51 326 P Pn 20 42 59.6 +0.7
baz=324
NTY Taoyuan 1.52 315 eP Pb 20 42 59.9 -0.6
baz=329
NSTT Nanjuang 1.52 298 eP Pb 20 43 00.5 0.0
baz=296
NSTT eS Sb 20 43 19.8 +0.5
baz=296
TWS1 Kuangyinshan 1.52 321 eP Pb 20 42 59.7 -0.8
baz=337
TWS1 eS Sb 20 43 20.2 +0.9
baz=337
ANP Anpu 1.53 326 eP Pb 20 43 00.0 -0.8
baz=323
LDUT Ludao 1.55 217 P Pn 20 42 58.6 -0.5
baz=216
LDUT eS Sn 20 43 17.4 -1.2
baz=216
TWY Chenhua 1.56 330 eP Pb 20 43 01.0 -0.3
baz=328
NCUH Zhongli 1.57 312 eP Pb 20 43 00.7 -0.7
baz=309
ALS Alishan 1.58 255 eP Pb 20 43 01.1 -0.7
baz=253
ALS eS Sb 20 43 21.1 -0.4
baz=253
JIJ Ishigaki jima 1.59 74 P Pn 20 43 00.0 +0.2
JIJ S Sn 20 43 19.8 +0.2
LONT Longtian 1.59 231 eP Pn 20 43 00.1 +0.3
baz=221
LONT eS Sn 20 43 20.0 +0.2
baz=221
WJS Zhushan 1.60 267 P Pb 20 43 02.0 +0.1
baz=264
WJS eS Sb 20 43 22.2 +0.5
baz=264
TWQ1 Liyutan 1.61 286 eP Pb 20 43 01.6 -0.5
baz=283
TWQ1 eS Sn 20 43 20.9 +0.7
baz=283
WWF Wufeng 1.63 275 eP Pb 20 43 03.0 +0.6
baz=272
WNT Mingjian 1.64 269 eP Pb 20 43 02.0 -0.5
baz=266
WNT eS Sb 20 43 24.3 +1.5
baz=266
NSY Sanyi 1.64 288 eP Pb 20 43 02.6 0.0
baz=285
WNT1 Nantou City 1.64 270 P Pb 20 43 03.1 +0.5
baz=267
TCU Taichung 1.66 278 eP Pb 20 43 03.0 +0.1
baz=276
TCU eS Sb 20 43 24.8 +1.4
baz=276
CHN5 Tsauling 1.68 259 eP Pb 20 43 02.6 -0.6
baz=246
CHN5 eS Sb 20 43 25.2 +1.3
baz=246
TWGBT Beinan 1.69 230 eP Pn 20 43 01.1 -0.1
baz=242
TWGBT eS Sn 20 43 21.2 -0.8
baz=242
TWG Pinlang 1.69 230 eP Pn 20 43 01.4 +0.2
baz=242
TWG eS Sn 20 43 21.3 -0.9
baz=242
WDJ Dajia District 1.73 285 eP Pb 20 43 03.5 -0.6
baz=282
WDJ eS Sn 20 43 24.2 +1.2
baz=282
STYH Taoyuan 1.73 245 eP Pn 20 43 02.0 +0.3
baz=233
STYH eS Sn 20 43 23.9 +0.9
baz=233
PCYT Pengchaiyu 1.74 348 eP Pn 20 43 01.9 0.0
baz=347
STYT Tauyuan 1.75 245 P Pb 20 43 03.5 -1.0
baz=233
STYT eS Sn 20 43 23.4 -0.2
baz=233
WCHH Zhanghua 1.76 276 eP Pb 20 43 04.0 -0.6
baz=273
WCHH eS Sb 20 43 28.1 +1.8
baz=273
WGK Gukeng 1.77 263 eP Pb 20 43 04.6 -0.2
baz=260
WDLH Douliu 1.79 263 eP Pb 20 43 04.6 -0.5
baz=261
WDLH eS Sb 20 43 27.2 +0.1
baz=261
TPUB Ta-pu 1.80 250 P Pb 20 43 04.6 -0.7
baz=238
TPUB eS Sb 20 43 27.5 0.0
baz=238
JISG Ishigakijimahi 1.80 68 P Pn 20 43 03.1 +0.4
JISG eS Sn 20 43 24.2 -0.7
CHN4 Tsaushan 1.81 252 P Pb 20 43 05.0 -0.6
baz=250
CHN4 eS Sb 20 43 29.5 +1.6
baz=250
WTP Ta-pu 1.83 249 P Pb 20 43 05.2 -0.7
baz=236
WTP eS Sn 20 43 26.6 +0.8
baz=236
CHN2 Minshiung 1.87 258 eP Pb 20 43 06.7 +0.1
baz=256
SLGT Liugui 1.91 242 eP Pb 20 43 06.2 -1.1
baz=231
SLGT eS Sb 20 43 31.0 +0.3
baz=231
WRL Guolierlin Hig 1.92 270 eP Pb 20 43 06.5 -0.8
baz=267
ECL Taimali 1.92 227 eP Pn 20 43 04.5 +0.1
baz=237
WTK Tuku 1.92 263 eP Pn 20 43 05.7 +1.3
baz=261
WTK eS Sb 20 43 32.7 +1.7
baz=261
CHY Chiayi 1.92 258 eP Pb 20 43 07.0 -0.4
baz=255
SGST Jiashian 1.93 245 eP Pb 20 43 06.2 -1.3
baz=243
SGST eS Sb 20 43 30.8 -0.3
baz=243
CHN1 Nanshi 1.93 248 eP Pb 20 43 07.2 -0.3
baz=246
CHN1 eS Sb 20 43 32.3 +1.1
baz=246
TWK Hsinying 1.93 251 eP Pb 20 43 06.8 -0.9
baz=249
TWK eS Sb 20 43 31.9 +0.6
baz=249
SNST Tainan City 1.94 249 eP Pb 20 43 08.1 +0.4
baz=247
SSD Sandimen 2.06 236 eP Pn 20 43 07.8 +1.6
baz=228
SSD eS Sn 20 43 30.7 -0.5
baz=228
LAY Lan-yu 2.06 205 eP Pn 20 43 05.4 -0.9
baz=204
LAY eS Sn 20 43 29.3 -1.9
baz=204
TSMG Majia 2.07 235 eP Pn 20 43 08.1 +1.7
baz=225
WSF Szhu 2.08 263 eP Pb 20 43 08.7 -1.4
baz=260
ICHU Yijhu 2.09 255 eP Pb 20 43 08.9 -1.3
baz=253
ICHU eS Sb 20 43 34.7 -1.0
baz=253
SCST Cishan 2.09 241 eP Pb 20 43 09.9 -0.4
baz=228
SCST eS Sb 20 43 38.6 +2.8
baz=228
TAW Tawu 2.13 223 eP Pn 20 43 06.3 -0.8
baz=232
MASBT Mashibuluo 2.13 233 eP Pn 20 43 08.3 +1.0
baz=224
EAST Anshuo 2.14 225 eP Pn 20 43 07.7 +0.3
baz=223
CHN8 Yiju 2.15 255 eP Pn 20 43 09.3 +1.8
baz=253
JTJ Tarama 2.16 70 P Pn 20 43 08.7 +1.1
JTJ eS Sb 20 43 36.1 -1.6
TWM1 Shoushan 2.18 240 eP Pb 20 43 12.4 +0.6
baz=239
SSPT Xinbi 2.26 231 eP Pn 20 43 10.9 +1.9
baz=223
SLIU Shizi 2.29 223 eP Pn 20 43 09.4 0.0
baz=230
SCZT Fangliau 2.30 228 eP Pn 20 43 11.1 +1.5
baz=219
TSEB Hengchuen, Pin 2.48 216 eP Pn 20 43 13.6 +1.6
baz=216
WLCH Liuqiu 2.48 231 eP Pb 20 43 17.5 +0.6
baz=244
HEN Hengchun 2.49 220 eP Pn 20 43 13.4 +1.2
baz=219
TWKBT Hengchun 2.50 218 eP Pn 20 43 13.2 +1.0
baz=217
TWK1 Hengchun 2.50 218 eP Pn 20 43 13.4 +1.1
baz=217
JIRB Irabujima 2.62 69 P Pn 20 43 15.2 +1.2
JIRB eS Sn 20 43 45.3 +0.2
PNG Penghu 2.70 263 eP Pn 20 43 15.9 +0.9
baz=261
PNG eS Sn 20 43 48.8 +1.9
baz=261
JIKM Ikemajima 2.72 68 eS Sn 20 43 48.6 +1.1
JMJ Miyako jima 2 2.72 70 eP Pn 20 43 17.0 +1.6
baz=71
JMJ2 Miyako jima3 2.73 72 P Pn 20 43 17.3 +1.8
JMJ2 eS Sn 20 43 49.5 +1.7
VWUC VWUC 2.95 292 eP Pn 20 43 18.5 -0.1
baz=290
MATB Ma-tsu 3.19 315 eP Pn 20 43 21.4 -0.4
baz=299
PTMZ Houxiangcun 3.25 291 eP Pn 20 43 22.9 +0.3
baz=289
LYJJ Jianjiangzhen 3.59 317 eP Pn 20 43 27.4 +0.1
baz=302
XPSS Dashiqiu 3.64 326 eP Pn 20 43 27.8 -0.2
baz=324
KNM Kinmen 3.72 278 eP Pn 20 43 31.1 +2.0
baz=277
KNMB Chin-men Tao 3.77 279 eP Pn 20 43 29.5 -0.2
baz=278
MHZQ Yeshan 3.80 306 eP Pn 20 43 29.8 -0.4
baz=302
AXDP Jialang 4.22 284 eP Pn 20 43 35.5 -0.5
baz=283
JOW Kunigami 6.00 60 Pn Pn 20 44 00.1 -0.3
2.0nm,0.3s,baz=138,slow=26,SNR=7.4
JOW Sn Sn 20 44 55.5 -13
1.8nm,0.3s,baz=148,slow=13,SNR=1.4
KSRS Korea Array 14.28 18 Pn P 20 45 59.6 -1.2
0.4nm,0.3s,baz=198,slow=11,SNR=13
SONM Songino Array 27.08 336 P P 20 48 12.4 -1.6
0.7nm,0.7s,baz=140,slow=7.6,SNR=3.5
MKAR Makanchi Array 39.35 316 P P 20 50 00.3 -0.3
0.9nm,0.5s,baz=100,slow=9.9,SNR=24
KURBB Kurchatov Arra 43.07 320 P P 20 50 30.4 -0.7
0.3nm,0.3s,baz=107,slow=8.4,SNR=2.5
AAK Ala-Archa 43.60 307 P P 20 50 36.4 +0.6
1.3nm,1.0s,baz=150,slow=18,SNR=5.4
ASAR Alice Springs 48.59 166 P P 20 51 17.1 +2.1
0.3nm,0.5s,baz=347,slow=6.9,SNR=4.5
BVAR Borovoye Array 48.62 321 P P 20 51 14.2 -0.7
0.6nm,0.6s,baz=186,slow=9.7,SNR=2.6
GEYT Alibeck 55.94 301 P P 20 52 10.7 +1.0
1.6nm,0.6s,baz=177,slow=3.0,SNR=3.9
YKA Yellowknife Ar 82.75 23 P P 20 54 53.4 -1.5
0.1nm,0.5s,baz=310,slow=4.6,SNR=3.3

*DDA **20** 20:44:32.8,37.°23N×30.°47E,h7km±1km,ML2.3*
*ISK **20** 20:44:32.9,37.°24N×30.°42E,h7km,ML2.8/8*
ISC 20 20:44:33.1±1.1,37.°23N±0.°03×30.°46E±0.°06,h9km±10km,
n11,σ0°51/16,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
BUCA	**Burdur, Bucak-**	**0.12**	**41**	*i* P		**Pg**		**20 44 35.6**	**-0.5**
BUCA				*i* S		**Sg**		**20 44 37.8**	**-0.3**
BUCA	comp=N,1μm,0.1s				IAML			20 44 39.0	
BUCA	comp=E,1μm,0.3s				IAML			20 44 40.0	
KORT	**Korkueli**	**0.25**	**200**	*i* P		**Pg**		**20 44 38.0**	**-0.2**
KORT				*i* S		**Sg**		**20 44 42.0**	**+0.4**
KORT	comp=N,565nm,0.2s				IAML			20 44 44.0	
KORT					IAML			20 44 46.0	
KORT	comp=E,1μm,0.4s								
KORT	**Korkueli**	**0.25**	**200**		PG	**Pg**		**20 44 38.0**	**-0.2**
KORT					SG	**Sg**		**20 44 42.5**	**+0.9**
BCK	**Bucak**	**0.25**	**25**		PG	**Pg**		**20 44 38.3**	**+0.1**
BCK					SG	**Sg**		**20 44 42.6**	**+0.9**
ANTB	**Antalya**	**0.37**	**154**		PG	**Pg**		**20 44 40.8**	**+0.4**
ANTB					SG	**Sb**		**20 44 47.1**	**-0.6**
ISP	**Isparta**	**0.59**	**5**		PG	**Pg**		**20 44 44.9**	**+0.3**
ELL	**Elmali**	**0.65**	**222**		PG	**Pg**		**20 44 45.4**	**-0.4**
BASM	**Basmaki-Afyon**	**0.76**	**335**		PG	**Pg**		**20 44 47.8**	**0.0**
AKAS	**Kas**	**1.21**	**215**		PN	**Pn**		**20 44 56.3**	**-0.1**
FETY	**Fethiye**	**1.25**	**242**		PN	**Pg**		**20 44 57.1**	**-0.1**
SHUT	**Suhut-Afyon**	**1.32**	**3**		PN	**Pg**		**20 44 58.3**	**-0.2**

TAP 20 20:46:02.5,24.°49N×121.°82E,h11km**,ML1.1,D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
EWUT	**Wuta**	**0.06**	**215**	*i* P			Pg	20 46 05.4	+0.7
EWUT	baz=215			*i* S			Sg	20 46 07.0	+0.6
TWC	**Suao**	**0.12**	**15**	*i* P			Pb	20 46 06.3	-0.5
TWC	baz=19			*i* S			Sg	20 46 08.4	+0.8
NDS	**Dongshan**	**0.17**	**327**	P			Pb	20 46 07.3	-0.3
NDS	baz=327			S			Sg	20 46 10.3	+1.5
TWE	**Neicheng**	**0.26**	**329**	P			Pb	20 46 09.0	-0.4
TWE	baz=331			S			Sb	20 46 12.9	-1.0
ENTT	**Nioudou**	**0.27**	**303**	P			Pb	20 46 09.3	-0.1
ENTT	baz=303			S			Sb	20 46 13.5	-0.6
NDT	**Datong Townshi**	**0.30**	**292**	P			Pb	20 46 10.1	+0.2
NDT	baz=291			S			Sb	20 46 14.4	-0.4
NACB	**Ninganchiao**	**0.38**	**212**	*e*P			Pg	20 46 10.3	+0.4
NACB	baz=212			*e*S			Sg	20 46 15.7	+0.7
NNSB	**Datong**	**0.40**	**261**	P			Pb	20 46 11.4	-0.3
NWLT	**Wulai**	**0.40**	**315**	*e*P			Pb	20 46 11.5	-0.2
NNS	**Nan Shan**	**0.41**	**263**	*e*P			Pg	20 46 11.1	+0.5
ETLH	**Xiulin Townshi**	**0.42**	**227**	*e*P			Pb	20 46 11.4	-0.6
YHNB	**Yeheng**	**0.44**	**294**	*e*P			Pg	20 46 11.5	+0.3
YHNB	baz=293			S			Sb	20 46 18.6	-0.4
FUSS	**Fushou**	**0.57**	**245**	*e*P			Pb	20 46 14.5	-0.3
	baz=244								

*MOS **20** 20:46:06.6±0.8,56.°06N×113.°79E,h9km,mb4.1/5,*
MS3.2/4,Error ellipse: s-maj=8.8km s-min=6.0km az=69.3
*IDC **20** 20:46:07.0±1.1,56.°07N×113.°70E,h0km,mb3.6/8,*
mb1 3.8/13,mb1mx3.5/51,mbtmp3.7/13,ML2.9/4,MS2.7/2,
Ms1 2.7/2,ms1mx2.4/42,Error ellipse: s-maj=32.0km
s-min=12.7km az=150.0
*BYKL **20** 20:46:07.4±0.1,56.°08N×113.°75E,h4km±2km*
ISC 20 20:46:07.2±0.9,56.°10N±0.°02×113.°73E±0.°02,h6km±6km,
n88,σ2°90/169,mb3.7/11,11C-12D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
SVKR	**Severomuysk**	**0.10**	**281**	⇑*i*	Pg		**Pg**	**20 46 09.4**	**0.0**
SVKR					Pmax			20 46 09.9	
SVKR	11μm,0.2s			*e*	Sg		**Sg**	**20 46 11.6**	**+0.7**
SVKR					Smax			20 46 17.4	
SVKR	64μm,0.5s **Severomuysk**	**0.10**	**281**	⇑*i*	PG		**Pg**	**20 46 09.4**	**0.0**
SVKR					pmax	pmax			
UKT	comp=Z,11μm,0.5s **Uakit**	**0.61**	**185**	⇑*i*	Pg		**Pg**	**20 46 18.2**	**-0.7**
UKT					Pmax			20 46 21.0	
UKT	comp=Z,184nm,0.3s			*e*	Sg		**Sg**	**20 46 26.1**	**-0.8**
UKT					Smax			20 46 33.1	
UKT	comp=Z,3μm,1.4s **Uakit**	**0.61**	**185**	⇑*i*	PG		**Pg**	**20 46 18.3**	**-0.7**
UKT				*e*	S		**Sg**	**20 46 27.8**	**+0.9**
YOA	**Uoyan**	**1.12**	**273**	*e*	Pg		**Pg**	**20 46 28.3**	**-0.4**
YOA					Pmax			20 46 34.1	
YOA	comp=Z,806nm,0.5s			*e*	Sg		**Sg**	**20 46 43.5**	**+0.2**
YOA					Smax			20 47 00.7	
YOA	comp=Z,4μm,1.3s **Uoyan**	**1.12**	**273**	*e*	PG		**Pg**	**20 46 28.5**	**-0.2**
YOA				*e*				20 46 44.3	
YOA	comp=Z,360nm,0.3s				pmax	pmax			
YOA	comp=E,4μm,0.8s				smax	smax			
NLYR	**Nelyaty**	**1.17**	**69**	⇑*i*	Pg		**Pg**	**20 46 28.6**	**-1.0**
NLYR				*e*	Pb		**Pb**	**20 46 30.8**	**+1.0**
NLYR					max			20 46 31.2	
NLYR	comp=E,1μm,0.3s			*e*	Sg		**Sg**	**20 46 44.1**	**-0.6**
NLYR				*e*	Sb		**Sn**	**20 46 48.1**	**+1.8**
NLYR					max			20 46 51.1	
NLYR	comp=E,4μm,0.9s **Nelyaty**	**1.17**	**69**	⇑*i*	PG		**Pg**	**20 46 28.4**	**-1.2**
NLYR				*e*				20 46 44.7	
NLYR					pmax	pmax			
NLYR	comp=Z,1μm,0.7s				smax	smax			
KMO	comp=N,4μm,0.9s **Kumora**	**1.44**	**263**	⇓*i*	Pg		**Pn**	**20 46 33.4**	**-0.3**
KMO				*e*				20 46 35.8	
KMO					max			20 46 36.3	
KMO	comp=N,672nm,0.3s			*e*	Sg		**Sb**	**20 46 52.7**	**-0.1**
KMO				*e*				20 46 55.8	
KMO					max			20 46 59.0	
KMO	comp=N,2μm,0.7s **Kumora**	**1.44**	**263**	⇓*i*	PG		**Pn**	**20 46 33.4**	**-0.3**
KMO				*e*				20 46 52.7	
KMO					pmax	pmax			
KMO	comp=Z,497nm,0.4s				smax	smax			
BOD	comp=E,2μm,0.6s **Bodaibo**	**1.73**	**5**	*e*	Pg		**Pn**	**20 46 38.6**	**+0.8**
BOD					Pmax			20 46 40.9	
BOD	comp=E,820nm,1.1s			*e*	Sg		**Sn**	**20 47 01.1**	**+0.9**
BOD					Smax			20 47 03.5	
BOD	comp=E,2μm,1.5s **Bodaibo**	**1.73**	**5**	*e*	PN		**Pn**	**20 46 38.8**	**+1.0**
BOD				*e*				20 47 01.1	
BOD					pmax	pmax			
BOD	comp=Z,824nm,1.7s				smax	smax			
YLYR	comp=E,2μm,1.5s **Ulyunkhan**	**1.91**	**231**	⇓*i*	Pg		**Pn**	**20 46 41.7**	**+1.5**
YLYR					Pmax			20 46 44.0	
YLYR	comp=E,399nm,0.5s			*e*	Sg		**Sb**	**20 47 07.1**	**+0.7**
YLYR					Smax			20 47 12.6	
NIZ	comp=E,2μm,1.1s **Nizh Angarsk**	**2.38**	**264**	*e*	Pn		**Pn**	**20 46 48.3**	**+1.6**
NIZ				*e*	Pg		**Pb**	**20 46 50.9**	**+0.5**
NIZ					Pmax			20 46 53.8	
NIZ	comp=E,257nm,1.2s			*e*	Sn		**Sn**	**20 47 17.4**	**+1.3**
NIZ				*e*	Sg		**Sb**	**20 47 22.0**	**+2.1**
NIZ					Smax			20 47 26.2	
NIZ	comp=E,1μm,0.8s **Nizh Angarsk**	**2.38**	**264**	*e*	PN		**Pn**	**20 46 48.6**	**+1.9**
NIZ				*e*				20 47 22.4	
NIZ					pmax	pmax			
NIZ	comp=Z,257nm,1.2s				smax	smax			
CRS	comp=N,1μm,1.3s **Chara**	**2.64**	**70**	⇓*i*	Pn		**Pn**	**20 46 51.4**	**+1.1**

CRS ⇑*i*Pg **Pb** **20 46 55.8 +0.9**
CRS Pmax 20 46 56.2
comp=N,1μm,1.0s
CRS *e*Sg **Sb** **20 47 29.9 +2.3**
CRS Smax 20 47 40.2
comp=N,2μm,1.7s
CRS Chara 2.64 70 *e*Pn **Pn** **20 46 51.3 +1.0**
CRS *e* 20 46 55.3
CRS *e* 20 47 30.1
CRS pmax pmax
comp=Z,1μm,0.7s
CRS smax smax
comp=E,1μm,1.6s
SYVR Suvo 3.26 223 *e*Pn **Pn** **20 46 59.7 +0.9**
SYVR *e*Pg **Pb** **20 47 06.5 +1.1**
SYVR Pmax 20 47 10.8
comp=E,206nm,1.0s
SYVR *e* 20 47 33.5
SYVR *e*Sg **Sb** **20 47 48.4 +3.1**
SYVR *e*SgSg **Sg** **20 47 54.5 +2.8**
SYVR max 20 47 59.9
comp=E,1μm,1.6s
SYVR Suvo 3.26 223 *e*PN **Pn** **20 46 59.9 +1.1**
SYVR *e* 20 47 07.2
SYVR *e* 20 47 48.5
SYVR pmax pmax
comp=Z,210nm,0.9s
SYVR smax smax
comp=N,1μm,1.4s
VTMR Vitim 3.41 350 *e*Pn **Pn** **20 47 01.4 +0.6**
VTMR *e*Pg **Pb** **20 47 08.6 +0.7**
VTMR *e*Sn **Sn** **20 47 42.2 +0.7**
VTMR *e*Sg **Sb** **20 47 54.0 +4.4**
KHNR Khani 3.56 74 *e*Pn **Pn** **20 47 03.2 +0.3**
KHNR *e*Pg **Pb** **20 47 10.7 +0.2**
KHNR *e*Sn **Sn** **20 47 44.8 -0.5**
KHNR *e*Sg **Sb** **20 47 57.0 +3.0**
TUP Tupik 3.94 113⇓ *i*Pn **Pn** **20 47 08.7 +0.6**
TUP *e* 20 47 10.3
TUP *e*Pg **Pb** **20 47 17.6 +0.7**
TUP Pmax 20 47 21.1
comp=N,45nm,0.3s
TUP *e* 20 47 42.0
TUP *e*Sn **Sn** **20 47 54.0 -0.5**
TUP *e*Sg **Sb** **20 48 09.0 +4.2**
TUP Smax 20 48 14.7
comp=N,807nm,1.3s
TUP Tupik 3.94 113 *e*PN **Pn** **20 47 08.7 +0.6**
TUP *e* 20 47 18.4
TUP *e*S **Sn** **20 47 54.1 -0.5**
TUP *e* 20 48 09.0
TUP pmax pmax
comp=Z,46nm,0.3s
TUP smax smax
comp=N,810nm,0.9s
MXMB Maximikha 4.05 228 *e*Pn **Pn** **20 47 10.7 +1.0**
MXMB *e*Pg **Pb** **20 47 19.6 +0.7**
MXMB *e*PgPg **PbPb** **20 47 21.1 -0.9**
MXMB *e* 20 47 47.6
MXMB *e*Sg **Sb** **20 48 12.7 +4.6**
CIT Chita 4.09 182 *e*Pn **Pn** **20 47 10.5 +0.3**
CIT *e*Pg **Pb** **20 47 19.8 +0.3**
CIT Pmax 20 47 23.9
comp=N,111nm,0.8s
CIT *e*Sg **Sb** **20 48 12.3 +3.2**
CIT Smax 20 48 30.3
comp=N,775nm,1.8s
CIT Chita 4.09 182 *e*Pn **Pn** **20 47 09.6 -0.6**
CIT *e* 20 47 20.5
CIT *e*S **Sn** **20 47 58.2 -0.1**
CIT *e* 20 48 14.2
CIT pmax pmax
comp=Z,110nm,0.7s
CIT smax smax
comp=E,774nm,1.7s
OGRR Ongureny 4.31 238 *e*Pn **Pn** **20 47 15.0 +1.8**
OGRR *e*Pg **Pb** **20 47 25.2 +1.9**
OGRR Pmax 20 47 28.5
comp=E,103nm,1.7s
OGRR *e* 20 47 49.8
OGRR *e*Sg **Sg** **20 48 21.2 -4.4**
OGRR Smax 20 48 32.2
comp=E,227nm,1.4s
OGRR Ongureny 4.31 238 *e*PN **Pn** **20 47 15.7 +2.5**
OGRR *e* 20 47 26.3
OGRR *e* 20 48 19.8
OGRR pmax pmax
comp=Z,102nm,1.6s
OGRR smax smax
comp=N,227nm,2.2s
YKLR Yuktali 4.44 80 *e*Pn **Pn** **20 47 15.7 +0.8**
YKLR *e*Pg **Pb** **20 47 26.1 +0.7**
YKLR *e* 20 47 29.5
YKLR *e* 20 47 51.0
YKLR *e*Sg **Sb** **20 48 24.4 +5.3**
KELR Kotokel 4.70 227 *e*Pg **Pb** **20 47 31.7 +1.8**
KELR *e*Sg **Sg** **20 48 32.9 -5.0**
ZRHB Zarechye 5.24 230 *e*Pn **Pn** **20 47 27.5 +1.6**
ZRHB *e*Pg **Pb** **20 47 41.4 +2.4**
ZRHB Pmax 20 47 47.3
comp=N,128nm,1.1s
ZRHB *e*Sg **Sb** **20 48 48.8 +6.7**
ZRHB Smax 20 49 12.8
comp=N,1μm,1.4s
TRG Tyrgan 5.45 235 *e*Pn **Pn** **20 47 30.1 +1.2**
TRG *e* 20 47 40.2
TRG *e*Pg **Pb** **20 47 45.3 +2.5**
TRG Pmax 20 47 52.0
comp=N,36nm,1.4s
TRG *e* 20 48 13.0
TRG *e*Sg **Sb** **20 48 55.4 +7.0**
TRG Smax 20 49 10.3
comp=N,174nm,1.4s
TRG Tyrgan 5.45 235 *e*PN **Pn** **20 47 30.6 +1.7**
TRG *e* 20 47 45.3
TRG *e*S **Sn** **20 48 31.2 -0.7**
TRG *e* 20 48 55.5
TRG pmax pmax
comp=Z,36nm,1.1s
TRG smax smax
comp=E,173nm,1.2s
UUDB Ulan-Yde 5.55 223 *e*Pn **Pn** **20 47 31.6 +1.4**
UUDB *e*Pg **Pb** **20 47 47.1 +2.8**
UUDB Pmax 20 47 54.6
comp=E,55nm,1.0s
UUDB *e*Sg **Sg** **20 48 59.3 -5.8**
UUDB Smax 20 49 06.4
comp=E,1μm,1.4s
FFNB Fofonovo 5.77 228 *e*Pn **Pn** **20 47 34.5 +1.3**
FFNB *e*Pg **Pb** **20 47 50.9 +2.8**
FFNB *e*Sn **Sn** **20 48 38.1 -1.6**
FFNB *e*Sg **Sb** **20 49 04.9 +7.5**
KAB Kabansk 5.81 229 Pn **Pn** **20 47 33.9 +0.1**
KAB *e*Pg **Pb** **20 47 51.9 +3.1**
KAB Pmax 20 48 07.8
comp=E,93nm,1.1s
KAB *e*Sg **Sg** **20 49 07.0 -6.6**
KAB Smax 20 49 39.9
comp=E,953nm,1.4s
STDB Stepnoy Dvoret 5.85 231 *e*Pg **Pb** **20 47 52.4 +2.9**
STDB *e*Sg **Sg** **20 49 08.5 -6.3**
HRMR Khuramsha 6.01 225 *e*Pn **Pn** **20 47 37.1 +0.6**
HRMR *e* 20 47 49.5
HRMR *e*Pg **Pb** **20 47 55.4 +3.2**
HRMR *e* 20 47 58.3
HRMR max 20 48 04.7
comp=E,67nm,0.8s
HRMR *e*Sn **Sn** **20 48 43.2 -2.4**
HRMR *e*Sg **Sg** **20 49 12.7 -7.2**
HRMR Smax 20 49 27.4
comp=E,813nm,1.0s
IENR lengra 6.22 84 *e*Pn **Pn** **20 47 39.8 +0.3**
IENR *e*Pg **Pb** **20 47 59.0 +3.2**
IENR *e*Sn **Sn** **20 48 47.9 -2.9**
IENR *e* 20 49 04.8
IENR *e*Sg Sb 20 49 19.7 +9.3
CLNS Chul'man 6.23 79 *e*Pn **Pn** **20 47 41.1 +1.5**
CLNS *e* 20 47 56.1
CLNS *e*Pg **Pb** **20 47 59.3 +3.3**
CLNS *e*Sn **Sn** **20 48 49.1 -2.0**
CLNS *e*Sg **Sg** **20 49 20.2 -6.9**
BGT Bolshoye Golou 6.36 234 *e*Pn **Pn** **20 47 42.7 +1.4**
BGT *e*Pg **Pb** **20 48 02.0 +3.8**
BGT Pmax 20 48 05.4
comp=E,70nm,1.6s
BGT *e*Sn **Sn** **20 48 51.5 -2.7**
BGT *e*Sg **Sg** **20 49 24.5 -6.7**
BGT Smax 20 49 33.1
comp=E,123nm,1.3s
KPC Khapcheranga 6.46 188 *e*Pn **Pn** **20 47 42.4 -0.3**
KPC *e* 20 47 52.5
KPC *e*Pg **Pb** **20 48 03.6 +3.7**
KPC Pmax 20 48 15.2
comp=E,14nm,1.3s
KPC *e*Sn **Sn** **20 48 54.6 -2.1**
KPC *e*Sg **Sg** **20 49 27.1 -7.2**
KPC Smax 20 49 44.9
comp=E,372nm,1.4s
KPC Khapcheranga 6.46 188 *e*PN **Pn** **20 47 42.4 -0.3**
KPC *e* 20 48 02.2
KPC *e* 20 49 27.1
KPC pmax pmax
comp=Z,11nm,1.0s
KPC smax smax
comp=E,371nm,2.0s
LSTR Listvyanka 6.74 235 *e*Pn **Pn** **20 47 48.2 +1.6**
LSTR *e*Pg **Pb** **20 48 09.3 +4.6**
LSTR Pmax 20 48 11.2
comp=E,16nm,1.1s
LSTR *e*Sn **Sn** **20 49 02.4 -1.2**
LSTR *e*Sg **Sg** **20 49 36.5 -6.9**
LSTR Smax 20 49 43.4
comp=E,123nm,1.6s
IRK Irkutsk 6.76 239 *e*Sg **Sg** **20 49 36.5 -7.6**
IRK Smax 20 49 50.0
comp=E,225nm,0.9s
IRK Irkutsk 6.76 239 *e*PN **Pn** **20 47 48.2 +1.3**
IRK *e* 20 48 08.7
IRK *e*S **Sn** **20 49 03.3 -0.8**
IRK *e* 20 49 36.7
IRK pmax pmax
comp=Z,31nm,0.2s
IRK smax smax
comp=N,225nm,0.8s
IVK Ivanovka 6.98 236 *e*Pn **Pn** **20 47 51.7 +1.9**
IVK *e*Pg **Pb** **20 48 13.1 +4.4**
IVK Pmax 20 48 27.0
comp=N,17nm,1.8s
IVK *e*Sn **Sn** **20 49 07.3 -2.2**
IVK *e*Sg **Sg** **20 49 42.9 -8.2**
IVK Smax 20 49 58.1
comp=N,118nm,1.6s
TLY Talaya 7.42 238 Pn **Pn** **20 47 55.0 -0.9**
comp=N,0.0nm,0.3s,baz=284,slow=19,SNR=1.5
TLY Lg Lg 20 49 54.5
comp=N,0.1nm,0.3s,baz=292,slow=2.6,SNR=13
TLY LR LR 20 51 21.5
comp=N,39nm,19.5s,baz=27,slow=42
TLY Talaya 7.42 238 *e*Pn **Pn** **20 47 57.7 +1.9**
TLY *e* 20 48 07.5
TLY *e*Pg Pb 20 48 21.6 +5.4
TLY Pmax 20 48 25.5
comp=N,12nm,0.7s
TLY *e*Sn **Sn** **20 49 18.2 -2.1**
TLY *e* 20 49 49.9
TLY *e*Sg **Sg** **20 49 57.0 -8.2**
TLY Smax 20 50 07.7
comp=N,63nm,1.9s
TLY Talaya 7.42 238⇓ *e*PN **Pn** **20 47 57.8 +1.9**
TLY MLR MLR
comp=Z,134nm,12.0s
HIA Hailar 7.75 149⇑ *e*PN **Pn** **20 48 01.5 +1.0**
HIA pmax pmax
comp=Z,3.0nm,0.6s
ARS Arshan 7.86 243 *e*Pn **Pn** **20 48 03.8 +1.8**
ARS *e* 20 48 12.9
ARS *e*Pg **Pb** **20 48 28.4 +4.6**
ARS Pmax 20 48 31.4
comp=Z,26nm,1.1s
ARS *e*Sn **Sn** **20 49 29.0 -2.3**
ARS *e*Sg Sg 20 50 09.6 -10
ARS Smax 20 50 28.8
comp=Z,288nm,1.4s
ZEA Zeya 8.14 101 *e*PN **Pn** **20 48 06.0 +0.3**
ZEA *e*S **Sn** **20 49 32.6 -5.4**
ZEA smax smax
comp=N,10.0nm,0.5s
ZEA smax smax
comp=E,20nm,0.7s
ZEA MLR MLR
comp=Z,200nm,4.0s
ZAK Zakamensk 8.48 232 *e*Pn **Pn** **20 48 11.8 +1.3**
ZAK *e*Pg Pb 20 48 41.0 +6.7
ZAK Pmax 20 49 25.3
comp=Z,14nm,1.8s
ZAK *e*Sn **Sn** **20 49 43.3 -3.3**
ZAK *e*Sg Sg 20 50 29.6 -10
ZAK Smax 20 50 50.2
comp=Z,117nm,1.4s
ZAK Zakamensk 8.48 232 *e*PN **Pn** **20 48 14.5 +4.0**
ZAK pmax pmax
comp=Z,4.0nm,1.5s
MOY Mondy 8.73 245 *e*Pn **Pn** **20 48 15.3 +1.3**
MOY *e* 20 48 28.5
MOY max 20 48 29.8
comp=Z,29nm,1.3s
MOY *e*Sn **Sn** **20 49 48.9 -3.8**
MOY *e* 20 50 07.7
MOY *e*Sg Sg 20 50 38.0 -9.2
MOY Smax 20 51 01.5
comp=Z,154nm,1.8s
MOY Mondy 8.73 245 *e*PN **Pn** **20 48 15.5 +1.5**
MOY *e* 20 48 45.0
MOY *e*S **Sn** **20 49 51.3 -1.4**
ORL Orlik 8.88 252 *e*Pn **Pn** **20 48 17.4 +1.4**
ORL *e*Pg Pg 20 48 47.9 -9.2
ORL Pmax 20 48 51.4
comp=Z,22nm,1.7s
ORL *e*Sn **Sn** **20 49 53.0 -3.3**
ORL *e*Sg Sg 20 50 42.3 -10
ORL Smax 20 50 58.8
comp=Z,71nm,1.7s
ORL Orlik 8.88 252 *e*PN **Pn** **20 48 18.0 +2.0**
ORL *e* 20 48 49.0
ORL *e*S **Sn** **20 49 55.2 -1.1**
ORL *e* 20 50 43.1
ORL pmax pmax
comp=Z,24nm,1.0s
ORL smax smax
comp=E,72nm,1.7s
ULN Ulaanbaatar 9.21 209⇓ *e*P **Pn** **20 48 22.4 +1.8**
ULN pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 9.43 212 Pn **Pn** **20 48 24.2 +0.7**
comp=Z,0.2nm,0.3s,baz=39,slow=14,SNR=3.7
SONM Lg Lg 20 51 01.2
comp=Z,1.3nm,0.3s,baz=20,slow=22,SNR=14
YAK Yakutsk 10.12 48 Pn **Pn** **20 48 30.1 -2.7**
baz=68,slow=1.9,SNR=1.5
YAK Lg Lg 20 51 18.6
comp=Z,0.0nm,0.3s,baz=335,slow=23,SNR=8.3
YAK LR LR 20 52 26.8
comp=Z,68nm,19.1s,baz=243,slow=37
YAK Yakutsk 10.12 48⇓ *e*P **Pn** **20 48 32.3 -0.5**
YAK pmax pmax
comp=Z,5.0nm,0.6s
KLR Kul'dur 12.90 115 Pn **Pn** **20 49 11.8 +1.0**
comp=Z,0.3nm,0.3s,baz=307,slow=11,SNR=4.4
KLR Lg Lg 20 52 48.9
comp=Z,0.2nm,0.3s,baz=304,slow=16,SNR=4.1
KLR Kul'dur 12.90 115⇑ *e*P **Pn** **20 49 13.6 +2.8**
KLR pmax pmax
comp=Z,6.0nm,1.8s
KLR MLR MLR
comp=Z,63nm,10.0s
USRK Ussuriysk Ar. 16.63 128 Lg Lg 20 54 43.4
baz=326,slow=25,SNR=1.6
ZALV Zalesovo Beam 16.66 275 Pn **Pn** **20 49 59.5 -1.5**
comp=Z,0.1nm,0.3s,baz=70,slow=17,SNR=3.9
ZALV Lg Lg 20 54 52.5
comp=Z,0.1nm,0.3s,baz=81,slow=19,SNR=3.9
ZALV Zalesovo Beam 16.66 275 *i*P **P** **20 50 03.2 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
TIXI Tiksi 16.88 17 Pn **Pn** **20 49 59.2 -4.4**
comp=Z,0.7nm,0.3s,baz=198,slow=7.3,SNR=25
TIXI Sn Sn 20 52 50.4 -21
comp=Z,0.3nm,0.3s,baz=328,slow=10,SNR=1.8
TIXI Lg Lg 20 54 57.6
comp=Z,0.1nm,0.3s,baz=132,slow=22,SNR=4.0
TIXI Tiksi 16.88 17⇓ *e*P **Pn** **20 50 00.0 -3.6**
TIXI MLR MLR
comp=Z,252nm,10.0s
DGZ Jazzator, Alta 17.04 259⇓ *e*P **Pn** **20 50 06.6 +0.6**
DGZ pmax pmax
comp=Z,2.0nm,0.9s
NRIK Noril'sk 17.67 329 P **Pn** **20 50 09.9 -3.6**
comp=Z,0.3nm,0.3s,baz=112,slow=9.1,SNR=2.7
NRIK S Sn 20 53 14.8 -16
comp=Z,0.6nm,0.3s,baz=8.9,slow=15,SNR=2.2
NRIK Lg Lg 20 55 26.4
baz=219,slow=21,SNR=2.0
NRIK Noril'sk 17.67 329⇓ *e*P **Pn** **20 50 13.6 +0.1**
SEY Seymchan 20.50 55 P Pn 20 50 47.8 +0.2
comp=Z,1.0nm,0.6s,baz=269,slow=14,SNR=7.0
SEY Lg Lg 20 56 55.8
comp=Z,0.5nm,0.5s,baz=332,slow=22,SNR=3.6
KURK Kurchatov 21.45 270 P **P** **20 50 58.6 +2.8**
MK31 Makanchi Array 21.52 258 *ce*P **P** **20 50 58.0 +1.3**
MKAR Makanchi Array 21.52 258 P **P** **20 50 58.2 +1.5**
comp=Z,1.8nm,0.8s,baz=58,slow=9.3,SNR=14
KURBB Kurchatov Arra 21.54 270 P **P** **20 50 58.6 +1.8**
comp=Z,7.7nm,1.0s,baz=67,slow=12,SNR=15
BVAR Borovoye Array 25.01 281 P **P** **20 51 32.5 +1.0**
comp=Z,0.8nm,0.7s,baz=92,slow=10,SNR=5.0
BRVK Borovoye 25.05 281⇑ *e*P **P** **20 51 34.0 +2.2**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BILL Bilibino 26.41 42 *e*P **P** **20 51 44.6 +0.6**
BILL *e* 20 52 23.9
BILL pmax pmax
comp=Z,1.0nm,1.2s
AAK Ala-Archa 28.45 258⇓ *e*P **P** **20 52 05.5 +2.8**
AAK pmax pmax
comp=Z,7.0nm,1.5s
OBN Obninsk 41.46 302 *e*P **P** **20 53 54.1 -0.1**
OBN *i* 20 55 31.4
OBN pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 42.49 315 P **P** **20 54 03.6 +1.0**
comp=Z,0.8nm,0.6s,baz=74,slow=10,SNR=1.8
ILAR Eielson Array 44.83 37 P **P** **20 54 22.0 +0.6**
comp=Z,0.6nm,0.7s,baz=304,slow=9.6,SNR=6.9
YKA Yellowknife Ar 55.90 25 P **P** **20 55 44.9 -0.2**
comp=Z,1.1nm,0.7s,baz=332,slow=6.8,SNR=13
YKA Yellowknife Ar 55.90 25 *i*P **P** **20 55 47.2 +2.1**
YKA pmax pmax
comp=Z,1.0nm,0.7s
ESDC Soneca Array 70.99 314 P **P** **20 57 26.4 +1.0**
comp=Z,0.5nm,0.9s,baz=26,slow=7.6,SNR=3.2

JMA 20 20:46:45.2±0.1, 24°.94N×122°.91E, h22km±2km, M2.1, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.48**	**169**	P	Pb	20 46 54.8	-0.3
YOJ				*e*S	Sb	20 47 01.6	-0.1
JYNG	**Yonagunijimaku**	**0.49**	**176**	P	Pb	20 46 54.9	-0.2
JYNG				S	Sb	20 47 01.9	+0.1
IRIF	**Iriomote-Funau**	**0.96**	**129**	P	Pb	20 47 02.9	-0.2
JIJ	**Ishigaki jima**	**1.26**	**117**	P	Pn	20 47 07.6	+0.1

*TAP **20** 20:59:32.2, 23°.93N×122°.60E, h33km±1km, ML2.7, D*
*JMA **20** 20:59:32.5±0.1, 23°.96N×122°.54E, h28km, M2.3*
ISC 20 20:59:31.8±1.1, 23°.90N±0°.03×122°.58E±0°.02, h28km±12km, n53, σ0°82/88, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.64**	**31**	P	**Pb**	**20 59 44.5**	**-0.1**
JYNG				*e*S	**Sb**	**20 59 52.6**	**-0.6**
YOJ	**Yonaguni jima**	**0.69**	**35**	P	**Pb**	**20 59 45.3**	**0.0**
YOJ				*e*S	**Sb**	**20 59 53.9**	**-0.5**
YOJ	**Yonaguni jima**	**0.69**	**35**	P	**Pn**	**20 59 45.1**	**-0.7**
	baz=34						
YOJ				*e*S	**Sn**	**20 59 55.0**	**-0.5**
	baz=34						
NACB	**Ninganchiao**	**0.94**	**287**	P	**Pn**	**20 59 49.0**	**-0.2**
	baz=272						
NACB				*e*S	**Sn**	**21 00 00.9**	**-0.8**
	baz=272						
TWC	**Suao**	**0.97**	**317**	P	**Pn**	**20 59 49.7**	**0.0**
	baz=304						
TWC				*e*S	**Sb**	**21 00 02.6**	**+0.1**
	baz=304						
ETLH	**Xiulin Townshi**	**1.05**	**287**	*e*P	**Pb**	**20 59 51.7**	**+0.3**
	baz=274						
ETLH				*e*S	**Sn**	**21 00 03.7**	**-0.8**
	baz=274						
NDS	**Dongshan**	**1.07**	**313**	*e*P	**Pn**	**20 59 51.2**	**+0.1**
	baz=311						
NDS				*e*S	**Sb**	**21 00 05.5**	**+0.1**
	baz=311						
HATJ	**Hateruma jima**	**1.13**	**82**	P	**Pb**	**20 59 53.3**	**+0.5**
HATJ				*e*S	**Sb**	**21 00 07.3**	**+0.2**
HGSD	**Ruisui**	**1.13**	**249**	*i*P	**Pn**	**20 59 50.7**	**-1.1**
	baz=248						
HGSD				*e*S	**Sn**	**21 00 05.5**	**-1.0**
	baz=248						
IRIF	**Iriomote-Funau**	**1.14**	**67**	P	**Pb**	**20 59 52.9**	**0.0**
IRIF				S	**Sb**	**21 00 07.9**	**+0.6**
TWE	**Neicheng**	**1.17**	**315**	P	**Pn**	**20 59 52.9**	**+0.5**
	baz=303						
TWE				*e*S	**Sb**	**21 00 08.4**	**+0.3**
	baz=303						
NTC	**Toucheng**	**1.17**	**324**	*e*P	**Pn**	**20 59 52.3**	**-0.1**
	baz=323						
ENTT	**Nioudou**	**1.18**	**309**	P	**Pb**	**20 59 53.5**	**-0.1**
	baz=294						
ENTT				*e*S	**Sb**	**21 00 08.9**	**+0.3**
	baz=294						
NDT	**Datong Townshi**	**1.20**	**306**	*e*P	**Pb**	**20 59 54.1**	**+0.1**
	baz=292						
NNSB	**Datong**	**1.21**	**296**	*e*P	**Pn**	**20 59 53.3**	**+0.2**
	baz=283						
NNSB				*e*S	**Sn**	**21 00 08.6**	**-0.1**
	baz=283						
NNSH	**Datong**	**1.21**	**296**	*e*P	**Pn**	**20 59 53.6**	**+0.5**
	baz=283						
NNSH				*e*S	**Sn**	**21 00 08.7**	**+0.1**
	baz=283						
NNS	**Nan Shan**	**1.23**	**296**	*e*P	**Pn**	**20 59 53.7**	**+0.4**
	baz=284						
NNS				*e*S	**Sb**	**21 00 09.9**	**0.0**
	baz=284						
WHF	**Hehuan Shan**	**1.23**	**282**	*e*P	**Pn**	**20 59 53.1**	**-0.5**
	baz=280						
WHF				*e*S	**Sn**	**21 00 08.8**	**-0.6**
	baz=280						
FUSS	**Fushou**	**1.27**	**286**	*e*P	**Pn**	**20 59 54.9**	**+0.9**
	baz=284						
FUSS				*e*S	**Sn**	**21 00 10.6**	**+0.4**
	baz=284						
TIPB	**Shuangxi**	**1.27**	**327**	*e*P	**Pn**	**20 59 53.5**	**-0.3**
	baz=326						
TIPB				*e*S	**Sb**	**21 00 10.6**	**-0.5**
	baz=326						
YULB	**Yu-li**	**1.28**	**247**	P	**Pn**	**20 59 53.8**	**-0.1**
	baz=235						
YULB				*e*S	**Sn**	**21 00 09.8**	**-0.4**
	baz=235						
EYUL	**Yuli**	**1.28**	**245**	*e*P	**Pn**	**20 59 54.1**	**+0.2**
	baz=243						
EYUL				*e*S	**Sn**	**21 00 10.3**	**+0.2**
	baz=243						
OWD	**Renai**	**1.28**	**273**	*e*P	**Pn**	**20 59 54.7**	**+0.6**
	baz=271						
OWD				*e*S	**Sn**	**21 00 10.2**	**-0.3**
	baz=271						
CHGB	**Renai**	**1.29**	**277**	*e*P	**Pn**	**20 59 54.2**	**-0.1**
	baz=266						
CHGB				*e*S	**Sn**	**21 00 10.5**	**-0.3**
	baz=266						
NWLT	**Wulai**	**1.31**	**312**	*e*P	**Pn**	**20 59 55.2**	**+0.8**
	baz=310						
VWDT	**VWDT**	**1.32**	**264**	*i*P	**Pn**	**20 59 54.7**	**+0.2**
	baz=262						
VWDT				S	**Sn**	**21 00 11.3**	**+0.1**
	baz=262						
YHNB	**Yeheng**	**1.34**	**305**	*e*P	**Pn**	**20 59 55.0**	**+0.2**
	baz=291						
JKRS	**Kuro-shima**	**1.35**	**75**	P	**Pb**	**20 59 57.6**	**+1.1**

JKRS			eS	Sb	21 00 13.6	+0.2
FULB	**Fuli**	**1.37 240**	eP	Pn	20 59 54.8	-0.4
	baz=229					
FULB			eS	Sn	21 00 11.7	-0.7
	baz=229					
WFSB	**Wu-fen Shan**	**1.37 328**	eP	Pn	20 59 55.9	+0.6
	baz=327					
EDH	**Donghe**	**1.49 232**	eP	Pn	20 59 56.5	-0.3
	baz=223					
EDH			eS	Sn	21 00 14.2	-1.1
	baz=223					
SSLB	**Suanglung**	**1.49 266**	eP	Pn	20 59 58.1	+1.2
	baz=264					
SSLB			eS	Sn	21 00 15.1	-0.3
	baz=264					
JIJ	**Ishigaki jima**	**1.50 72**	P	Pb	20 59 57.8	-1.3
JIJ			eS	Sn	21 00 16.0	+0.3
SMLT	**Sun Moon Lake**	**1.54 270**	eP	Pn	20 59 58.5	+1.0
	baz=259					
LDUT	**Ludao**	**1.59 220**	eP	Pn	20 59 57.1	-1.0
	baz=219					
LIOB	**Emei**	**1.61 298**	eP	Pn	20 59 59.1	+0.7
	baz=296					
ALS	**Alishan**	**1.67 257**	eP	Pn	21 00 00.6	+1.1
	baz=255					
ALS			eS	Sn	21 00 20.9	+0.7
	baz=255					
JISG	**Ishigakijimahi**	**1.72 66**	P	Pb	21 00 01.3	-1.5
JISG			eS	Sn	21 00 21.6	+0.5
TWGBT	**Beinan**	**1.75 232**	eP	Pn	21 00 00.2	-0.1
	baz=222					
TWGBT			eS	Sn	21 00 21.3	-0.5
	baz=222					
TWG	**Pinlang**	**1.75 232**	eP	Pn	21 00 00.8	+0.4
	baz=222					
TWG			eS	Sn	21 00 21.6	-0.2
	baz=222					
TPUB	**Ta-pu**	**1.88 252**	eP	Pn	21 00 04.2	+2.0
	baz=243					
TPUB			eS	Sb	21 00 27.9	-0.9
	baz=243					
CHN4	**Tsaushan**	**1.90 254**	eP	Pb	21 00 05.2	-0.7
	baz=242					
CHN4			eS	Sb	21 00 29.1	-0.1
	baz=242					
WTP	**Ta-pu**	**1.92 251**	eP	Pb	21 00 05.4	-0.7
	baz=239					
ECL	**Taimali**	**1.98 229**	eP	Pn	21 00 03.3	-0.2
	baz=239					
SGST	**Jiashian**	**2.00 246**	eP	Pn	21 00 06.3	+2.4
	baz=245					
CHN1	**Nanshi**	**2.01 250**	eP	Pb	21 00 06.6	-1.2
	baz=248					
TWK	**Hsinying**	**2.02 252**	eP	Pn	21 00 06.3	+2.2
	baz=250					
TWK			eS	Sn	21 00 29.5	+1.0
	baz=250					
SSD	**Sandimen**	**2.12 238**	eP	Pn	21 00 06.2	+0.6
	baz=230					
TSMG	**Majia**	**2.14 237**	eP	Pn	21 00 07.9	+2.2
	baz=229					
EAST	**Anshuo**	**2.19 227**	eP	Pn	21 00 06.9	+0.4
	baz=235					
MASBT	**Mashibuluo**	**2.20 235**	eP	Pn	21 00 07.8	+1.2
	baz=227					
SCZT	**Fangliau**	**2.36 230**	eP	Pn	21 00 10.8	+2.1
	baz=223					
TWK1	**Hengchun**	**2.54 220**	eP	Pn	21 00 13.1	+1.8
	baz=219					

*TRN **20** 21:11:03.9, 14°.95N×61°.23W, h145km, MD4.1*
*NEIC **20** 21:11:05.0±1.3, 14°.95N±0°.07×61°.30W±0°.08, h148km±5km, mb4.3/59, Error ellipse: s-maj=12.7km s-min=9.4km az=57.0*
*IDC **20** 21:11:05.0±2.0, 14°.83N×61°.32W, h160km±20km, mb3.6/10, mb1 3.8/14, mb1mx3.6/38, mbtmp4.1/14, Error ellipse: s-maj=23.4km s-min=13.3km az=32.0*

ISC 20 21:11:04.6±0.6, **14°.93N**±0°.03×**61°.26W**±0°.05, **h148**km±4km, **n146**, σ0s**83**/171, **mb4.3**/40, **5C-2D**, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCM	**Pelee Case Pet**	**0.12**	**157**	eP	**Pn**	**21 11 24.6**	**0.0**
PCM	**Pelee Case Pet**	**0.12**	**157**	eP	**Pn**	**21 11 25.6**	**+1.0**
CXM	**Morne La Croix**	**0.15**	**143**	eP	**Pn**	**21 11 25.1**	**+0.3**
BAMF	**Morne Balai**	**0.16**	**137**	eP	**Pn**	**21 11 25.2**	**+0.5**
GBMF	**Grand Be**	**0.16**	**145**	eP	**Pn**	**21 11 24.9**	**+0.2**
PML	**Morne Lenard**	**0.17**	**154**	eP	**Pn**	**21 11 24.8**	**+0.2**
FDF	**Fort de France**	**0.22**	**152**	⇑iP	**Pn**	**21 11 25.1**	**+0.3**
FDF				eS	**Sn**	**21 11 38.6**	**-1.5**
FDF	**Fort de France**	**0.22**	**152**		**Pn**	**21 11 25.0**	**+0.2**
FDF				Sn	**Sn**	**21 11 41.1**	**+1.0**
DLPL	**La Plaine**	**0.40**	**2**	eP	**Pn**	**21 11 25.8**	**+0.5**
DLPL				eS	**Sn**	**21 11 41.0**	**-0.2**
DLPL	**La Plaine**	**0.40**	**2**	Pn	**Pn**	**21 11 25.7**	**+0.3**
ILAM	**Ilet Lapin Mar**	**0.40**	**112**	⇑iP	**Pn**	**21 11 25.2**	**-0.1**
ILAM				eS	**Sn**	**21 11 40.5**	**-0.5**
ZAM	**Aeronautique**	**0.42**	**148**	eP	**Pn**	**21 11 25.4**	**0.0**
TRMF	**Trois Ilets**	**0.44**	**153**	eP	**Pn**	**21 11 25.6**	**+0.2**
BIM	**Bigot**	**0.45**	**156**	⇑iP	**Pn**	**21 11 25.8**	**+0.2**
BIM				eS	**Sn**	**21 11 39.1**	**-2.4**
LPMF	**Morne Lapointe**	**0.45**	**141**	eP	**Pn**	**21 11 25.4**	**-0.1**
MVM	**Montagne Vaucl**	**0.51**	**137**	eP	**Pn**	**21 11 25.8**	**0.0**
DSLB	**Salisbury**	**0.53**	**343**	eP	**Pn**	**21 11 26.1**	**+0.2**
DSLB				eS	**Sn**	**21 11 41.9**	**-0.4**
MPOM	**Morne Pois Mar**	**0.62**	**141**	⇑iP	**Pn**	**21 11 26.3**	**-0.1**
MPOM				eS	**Sn**	**21 11 42.3**	**-0.6**
H05S1	**Guadeloupe/Mar**	**0.65**	**141**	P	**Pn**	**21 11 27.4**	**+0.8**
H05S1				S	**Sn**	**21 11 43.6**	**+0.3**
SLBI	**Saint Lucia, B**	**0.94**	**163**	eP	**Pn**	**21 11 28.6**	**-0.1**
SLBI				eS	**Sn**	**21 11 46.5**	**-0.7**
SLCP	**Castries, St.**	**0.95**	**164**	eP	**Pn**	**21 11 29.1**	**+0.2**
SLCP				eS	**Sn**	**21 11 46.9**	**-0.3**
TBG	**Guadaloupe-3**	**0.99**	**338**	eP	**Pn**	**21 11 29.1**	**0.0**
TBG				eS	**Sn**	**21 11 47.5**	**-0.4**
MAGL	**Barre de l'ile**	**1.01**	**359**	eP	**Pn**	**21 11 29.1**	**-0.2**
MAGL				eS	**Sn**	**21 11 46.9**	**-1.4**
SLB	**Belfond**	**1.12**	**169**	eP	**Pn**	**21 11 31.4**	**+1.1**
SLB				eS	**Sn**	**21 11 51.2**	**+1.3**
CBE	**Ff, Capester**	**1.18**	**344**	⇓iP	**Pn**	**21 11 30.8**	**0.0**
CBE				eS	**Sn**	**21 11 50.9**	**-0.1**
MCLT	**Moule a Chique**	**1.25**	**166**	eP	**Pn**	**21 11 31.7**	**+0.1**
MCLT				eS	**Sn**	**21 11 52.4**	**+0.3**
MCLT	**Moule a Chique**	**1.25**	**166**	Pn	**Pn**	**21 11 31.5**	**0.0**
H05N1	**Guadeloupe/Mar**	**1.39**	**8**	P	**Pn**	**21 11 32.6**	**-0.3**
H05N1				S	**Sn**	**21 11 52.9**	**-1.7**
	SNR=1646						
SFAN	**Fancy Village**	**1.54**	**177**	eP	**Pn**	**21 11 35.5**	**+1.0**
SFAN				eS	**Sn**	**21 11 58.0**	**+0.6**
ABD	**La Joyeuse, An**	**1.55**	**352**	⇓iP	**Pn**	**21 11 34.3**	**-0.3**
ABD				eS	**Sn**	**21 11 56.1**	**-1.5**
SVV	**Soufriere Volc**	**1.60**	**178**	*i* P	**Pn**	**21 11 36.7**	**+1.5**
SVB	**Belmont**	**1.65**	**180**	*i* P	**Pn**	**21 11 36.1**	**+0.4**
SVB				eS	**Sn**	**21 11 58.9**	**-0.6**
SVB	**Belmont**	**1.65**	**180**	Pn	**Pn**	**21 11 35.9**	**+0.2**
SVOC	**Richmond Hill,**	**1.77**	**179**	eP	**Pn**	**21 11 36.7**	**-0.2**
MLYT	**Lee's Yard**	**1.99**	**333**	eP	**Pn**	**21 11 40.5**	**+1.0**
MLYT				eS	**Sn**	**21 12 07.3**	**+0.8**
ANBD	**Bethesda, Anti**	**2.16**	**347**	eP	**Pn**	**21 11 40.8**	**-0.7**
ANBD				eS	**Sn**	**21 12 08.3**	**-1.7**
BPA	**Boggy Peak**	**2.18**	**345**	eP	**Pn**	**21 11 41.0**	**-0.7**
BPA				eS	**Sn**	**21 12 09.4**	**-1.1**
BCHC	**Barbados, Cave**	**2.38**	**138**	eP	**Pn**	**21 11 45.0**	**+0.8**
BCHC				eS	**Sn**	**21 12 13.6**	**-1.1**
BBGH	**Gun Hill**	**2.42**	**137**	eP	**Pn**	**21 11 46.0**	**+1.2**
BBGH				eS	**Sn**	**21 12 15.7**	**+0.1**
BBGH	**Gun Hill**	**2.42**	**137**	Pn	**Pn**	**21 11 45.9**	**+1.2**
GCMP	**Grenada, Carri**	**2.44**	**184**	*i* P	**Pn**	**21 11 44.5**	**-0.3**
GCMP				eS	**Sn**	**21 12 16.0**	**+0.1**
SKOC	**St. Kitts, UWI**	**2.74**	**329**	eS	**Sn**	**21 12 22.2**	**-0.4**
ANWB	**Willy Bob**	**2.77**	**350**	eP	**Pn**	**21 11 47.9**	**-1.1**
ANWB				eS	**Sn**	**21 12 23.7**	**+0.4**
ANWB	**Willy Bob**	**2.77**	**350**	Pn	**Pn**	**21 11 47.9**	**-1.1**
SKI	**Saint Kitts**	**2.78**	**329**	eP	**Pn**	**21 11 48.9**	**-0.3**
SKI				eS	**Sn**	**21 12 22.3**	**-1.2**
GRGR	**Grenville**	**2.81**	**188**	eP	**Pn**	**21 11 49.7**	**+0.2**
GRGR				eS	**Sn**	**21 12 24.1**	**-0.1**
GRGR	**Grenville**	**2.81**	**188**	Pn	**Pn**	**21 11 49.8**	**+0.2**
TOSP	**Speyside**	**3.68**	**169**	eP	**Pn**	**21 12 00.7**	**0.0**
TOSP				eS	**Sn**	**21 12 42.5**	**-1.6**
TOSP	**Speyside**	**3.68**	**169**	Pn	**Pn**	**21 12 00.1**	**-0.6**
TRN	**Trinidad (W)**	**4.26**	**182**	eP	**Pn**	**21 12 08.3**	**0.0**
TRN	**Trinidad (W)**	**4.26**	**182**	eS	**Sn**	**21 12 55.1**	**-2.6**
STVI	**Saint Thomas**	**4.91**	**314**	Pn	**Pn**	**21 12 16.6**	**-0.2**
CUPR	**Culebra, Puert**	**5.11**	**312**	Pn	**Pn**	**21 12 20.2**	**+0.7**
MTP	**Monte Pirata**	**5.18**	**308**	Pn	**Pn**	**21 12 19.6**	**-0.8**
HUMP	**Col San Antoni**	**5.44**	**307**	Pn	**Pn**	**21 12 23.6**	**-0.2**
PDPR	**Patillas Dam,**	**5.50**	**305**	Pn	**Pn**	**21 12 23.6**	**-1.0**
CBYP	**Canovanas**	**5.52**	**308**	Pn	**Pn**	**21 12 25.2**	**+0.2**
SJG	**San Juan**	**5.66**	**305**	P	**Pn**	**21 12 26.8**	**+0.1**
	3.4nm,0.3s,baz=123,slow=9.6,SNR=6.2						
SJG				S	**Sn**	**21 13 34.3**	**+3.4**
	1.8nm,0.3s,baz=278,slow=20,SNR=1.7						
SJG	**San Juan**	**5.66**	**305**		**Pn**	**21 12 26.9**	**+0.2**
GCPR	**Guaynabo City**	**5.72**	**307**		**Pn**	**21 12 27.7**	**+0.2**
PLCV	**Puerto La Cruz**	**5.75**	**215**		**Pn**	**21 12 26.6**	**-1.4**
PCRV	**Puerto La Cruz**	**5.76**	**215**	P	**Pn**	**21 12 26.6**	**-1.6**
	1.6nm,0.3s,baz=45,slow=10,SNR=3.5						
AOPR	**Arecibo Observ**	**6.27**	**304**		**Pn**	**21 12 35.2**	**+0.3**
MLPR	**Magueyes Islan**	**6.32**	**299**	Pn	**Pn**	**21 12 35.1**	**-0.4**
AGPR	**Aguadilla, PR**	**6.62**	**303**	Pn	**Pn**	**21 12 40.1**	**+0.5**
DR12	**Loma Pena Alta**	**8.67**	**297**	Pn	**Pn**	**21 13 09.3**	**+2.3**
SDDR	**Presa de Saban**	**10.41**	**294**	Pn	**Pn**	**21 13 29.9**	**-0.2**
MDP	**Montagnes des**	**12.93**	**138**	P	**Pn**	**21 14 01.2**	**-1.9**
	1.7nm,0.3s,baz=325,slow=16,SNR=10						
MDP				S	Sn	21 16 14.7	-11
	9.2nm,0.3s,baz=60,slow=23,SNR=21						
PTGA	**Pitinga**	**15.61**	**175**	P	**Pn**	**21 14 35.6**	**-1.2**
	0.7nm,0.3s,baz=358,slow=12,SNR=4.5						
PTGA				S	Sn	21 17 20.0	-11
	2.5nm,0.3s,baz=265,slow=23,SNR=6.5						
BIRD	**Birdtown, Kers**	**26.16**	**322**	P	**P**	**21 16 25.4**	**+0.2**
MTO3	**Montecristo**	**27.18**	**273**	P	**P**	**21 16 35.2**	**+0.4**
MTO3				IAmb	IAmb	21 16 36.9	
	comp=Z,6.1nm,0.6s						
APG	**El Apazote**	**28.21**	**274**	P	**P**	**21 16 44.2**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=219,slow=16,SNR=5.2						
M56A	**Emporium**	**30.25**	**334**	P	**P**	**21 17 02.6**	**+1.1**
M56A				IAmb	IAmb	21 17 04.5	
	comp=Z,13nm,1.4s						
Z47A	**Carrollton**	**30.36**	**312**	P	**P**	**21 17 03.0**	**+0.5**
M55A	**Ridgway**	**30.49**	**334**	P	**P**	**21 17 04.2**	**+0.6**
LMN	**Caledonia Moun**	**30.97**	**355**	P	**P**	**21 17 08.6**	**+0.9**
LMN				IAmb	IAmb	21 17 15.9	
	comp=Z,13nm,1.4s						
PLAL	**Pickwick Lake**	**31.29**	**315**	P	**P**	**21 17 10.8**	**+0.2**
WVT	**Waverly**	**31.76**	**317**	P	**P**	**21 17 14.4**	**-0.4**
WVT				IAmb	IAmb	21 17 15.1	
	comp=Z,5.2nm,0.7s						
OXF	**Oxford**	**31.98**	**313**	P	**P**	**21 17 17.1**	**+0.4**
S44A	**Carbondale**	**33.59**	**318**	P	**P**	**21 17 30.9**	**+0.2**
DRLN	**Deer Lake**	**34.37**	**4**	P	**P**	**21 17 37.6**	**+0.4**
WHAR	**Wooly Hollow**	**34.42**	**312**	P	**P**	**21 17 37.9**	**0.0**
WHAR				IAmb	IAmb	21 17 44.9	
	comp=Z,13nm,1.4s						
X40A	**Basin Creek Fa**	**34.45**	**310**	P	**P**	**21 17 39.3**	**+1.2**
X40A				IAmb	IAmb	21 17 47.3	
	comp=Z,8.4nm,1.5s						
FCAR	**Ozark Folk Cen**	**34.59**	**313**	P	**P**	**21 17 39.4**	**0.0**
CCM	**Cathedral Cave**	**35.10**	**317**	P	**P**	**21 17 43.7**	**0.0**
CCM				IAmb	IAmb	21 17 44.1	
	comp=Z,7.1nm,0.7s						
MGMO	**Mountain Grove**	**35.32**	**315**	P	**P**	**21 17 45.1**	**-0.5**
W39A	**Magazine**	**35.47**	**311**	P	**P**	**21 17 47.9**	**+1.0**
W39A				IAmb	IAmb	21 17 49.3	
	comp=Z,4.1nm,0.8s						
R40A	**Maddies Statio**	**35.91**	**316**	P	**P**	**21 17 49.9**	**-0.7**
R40A				IAmb	IAmb	21 17 50.3	
	comp=Z,5.6nm,0.6s						
HHAR	**Hobbs**	**36.07**	**312**	P	**P**	**21 17 52.3**	**+0.2**
HHAR				IAmb	IAmb	21 17 52.4	
	comp=Z,3.4nm,0.6s						
S39A	**Bolivar**	**36.32**	**315**	P	**P**	**21 17 54.1**	**0.0**
S39A				IAmb	IAmb	21 17 54.4	
	comp=Z,3.9nm,0.9s						
P38A	**Dawn**	**37.45**	**317**	P	**P**	**21 18 03.2**	**-0.4**
WMOK	**Wichita Mounta**	**39.05**	**307**	P	**P**	**21 18 15.9**	**-1.2**
WMOK				IAmb	IAmb	21 18 16.3	
	comp=Z,4.4nm,0.6s						
EYMN	**Ely**	**41.32**	**329**	P	**P**	**21 18 35.5**	**-0.1**
EYMN				IAmb	IAmb	21 18 43.3	
	comp=Z,14nm,1.2s						
TX31	**Lajitas Ar. Si**	**41.58**	**297**	P	**P**	**21 18 38.4**	**+0.2**
TX32	**Lajitas Array**	**41.58**	**297**	P	**P**	**21 18 38.1**	**0.0**
TXAR	**Lajitas Array**	**41.58**	**297**	P	**P**	**21 18 36.6**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=103,slow=7.4,SNR=12						
TXAR	**Lajitas Array**	**41.58**	**297**	P	**P**	**21 18 37.1**	**-1.0**
TXAR				PcP	**PcP**	**21 20 33.4**	**+0.7**
ECSD	**EROS Data Cent**	**41.59**	**321**	P	**P**	**21 18 37.4**	**-0.5**
ECSD				IAmb	IAmb	21 18 38.0	
	comp=Z,3.0nm,0.6s						
MSTX	**Muleshoe**	**41.93**	**304**	P	**P**	**21 18 39.7**	**-1.2**
B35A	**Bob, Littlefor**	**42.72**	**328**	P	**P**	**21 18 46.5**	**-0.4**
B35A				IAmb	IAmb	21 18 46.6	
	comp=Z,4.9nm,0.6s						
MNTX	**Cornudas Mount**	**43.50**	**300**	P	**P**	**21 18 53.1**	**-0.3**
AGMN	**Agassiz Nation**	**43.79**	**327**	P	**P**	**21 18 54.9**	**-0.6**
ULM	**Lac du Bonnet**	**45.01**	**329**	P	**P**	**21 19 03.9**	**-1.2**
	comp=Z,5.3nm,0.4s,baz=127,slow=8.6,SNR=11						
ULM	**Lac du Bonnet**	**45.01**	**329**	IAmb	IAmb	21 19 04.5	
	comp=Z,5.6nm,0.7s						
PD31	**Pinedale Array**	**49.70**	**314**	P	**P**	**21 19 40.9**	**-0.9**
PDAR	**Pinedale Array**	**49.70**	**314**	P	**P**	**21 19 41.1**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=119,slow=9.4,SNR=21						
TMUT	**Trail Mountain**	**49.90**	**309**	P	**P**	**21 19 43.8**	**+0.3**
TMUT				IAmb	IAmb	21 19 44.1	
	comp=Z,4.2nm,0.7s						
FCC	**Fort Churchill**	**50.07**	**338**	P	**P**	**21 19 43.4**	**-0.6**
YHH	**Holmes Hill**	**51.25**	**316**	P	**P**	**21 19 54.5**	**+0.9**
H10N3	**ASCENSION HYDR**	**51.58**	**113**	T	T	22 15 35.1	
	baz=296,slow=75,SNR=13						
H10N2	**ASCENSION HYDR**	**51.59**	**113**	T	T	22 15 35.3	
	baz=296,slow=75,SNR=12						
H10N1	**ASCENSION HYDR**	**51.60**	**113**	T	T	22 15 36.4	
	baz=296,slow=75,SNR=12						
BGU	**Big Grassy Mou**	**51.66**	**311**	P	**P**	**21 19 56.4**	**-0.1**
BGU				IAmb	IAmb	21 19 56.9	
	comp=Z,4.7nm,0.8s						
HVU	**Hansel Valley**	**51.69**	**312**	P	**P**	**21 19 56.0**	**-0.7**
HVU				IAmb	IAmb	21 19 56.7	
	comp=Z,4.1nm,1.0s						
PSUT	**Pine Spring**	**51.73**	**307**	P	**P**	**21 19 57.4**	**+0.3**
H10S3	**ASCENSION HYDR**	**51.93**	**114**	T	T	22 16 05.8	
	baz=288,slow=74,SNR=13						
H10S2	**ASCENSION HYDR**	**51.95**	**114**	T	T	22 16 05.1	
	baz=292,slow=74,SNR=5.4						
NVAR	**Mina Array Bea**	**55.15**	**307**	P	**P**	**21 20 22.0**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=104,slow=7.1,SNR=6.1						
NVAR	**Mina Array Bea**	**55.15**	**307**	P	**P**	**21 20 22.9**	**+0.9**
KOWA	**Kowa**	**55.23**	**83**	P	**P**	**21 20 23.9**	**+1.2**
KOWA				IAmb	IAmb	21 20 24.4	
	comp=Z,4.1nm,0.8s						
ESDC	**Sonseca Array**	**55.53**	**52**	P	**P**	**21 20 24.7**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=259,slow=7.2,SNR=4.6						
YKA	**Yellowknife Ar**	**60.35**	**335**	P	**P**	**21 20 56.6**	**-1.0**
	comp=Z,1.9nm,0.6s,baz=107,slow=7.7,SNR=37						
TOA0	**Torodi Ar. Sit**	**60.92**	**83**	P	**P**	**21 21 03.1**	**+0.7**
TOA0				IAmb	IAmb	21 21 03.5	
	comp=Z,2.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**60.92**	**83**	P	**P**	**21 21 02.6**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=283,slow=6.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**60.92**	**83**	P	**P**	**21 21 02.7**	**+0.4**
EUNU	**Eureka**	**66.16**	**355**	P	**P**	**21 21 36.9**	**+1.2**
DLBC	**Dease Lake**	**66.30**	**328**	P	**P**	**21 21 37.5**	**+0.5**
DLBC				IAmb	IAmb	21 21 38.0	
	comp=Z,1.9nm,0.7s						
INK	**Inuvik**	**69.69**	**338**	P	**P**	**21 21 57.2**	**-0.6**
INK				IAmb	IAmb	21 21 57.7	
	comp=Z,2.9nm,0.8s						
DAWY	**Dawson**	**71.50**	**333**	P	**P**	**21 22 09.2**	**+0.2**
DAWY				IAmb	IAmb	21 22 10.1	
	comp=Z,12nm,1.4s						
CTGM	**Chitina Glacie**	**72.25**	**330**	P	**P**	**21 22 14.7**	**+1.0**
CTGM				IAmb	IAmb	21 22 15.3	
	comp=Z,7.5nm,1.0s						
EGAK	**Eagle**	**72.30**	**334**	P	**P**	**21 22 13.7**	**0.0**
BCAR	**Beaver Creek A**	**72.52**	**332**	P	**P**	**21 22 15.6**	**+0.5**
L27K	**Beaver Creek,**	**72.54**	**332**	P	**P**	**21 22 15.8**	**+0.6**
K27K	**Chicken**	**72.67**	**333**	P	**P**	**21 22 16.5**	**+0.6**
K27K				IAmb	IAmb	21 22 17.2	
	comp=Z,8.5nm,1.3s						
MCARA	**McCarthy VSAT**	**73.08**	**330**	P	**P**	**21 22 19.5**	**+1.2**
MENT	**Mentasta**	**73.40**	**332**	P	**P**	**21 22 20.8**	**+0.6**
MENT				IAmb	IAmb	21 22 22.1	
	comp=Z,3.4nm,0.8s						
SCRK	**Sand Creek**	**73.52**	**333**	P	**P**	**21 22 21.3**	**+0.3**
BMRM	**Bremner River**	**73.85**	**330**	P	**P**	**21 22 23.2**	**+0.3**
BMRM				IAmb	IAmb	21 22 28.9	
	comp=Z,13nm,1.3s						
PRP	**Porcupine Dome**	**74.16**	**334**	P	**P**	**21 22 24.6**	**-0.1**
PRP				IAmb	IAmb	21 22 25.1	
	comp=Z,7.3nm,1.3s						
ILAR	**Eielson Array**	**74.76**	**334**	P	**P**	**21 22 27.4**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=85,slow=4.8,SNR=11						
WRH	**Wood River Hil**	**75.29**	**333**	P	**P**	**21 22 31.0**	**-0.1**
MDM	**Murphy Dome**	**75.32**	**334**	P	**P**	**21 22 30.9**	**-0.4**
MDM				IAmb	IAmb	21 22 31.7	
	comp=Z,6.7nm,1.2s						
FINES	**FINESS Array B**	**75.75**	**30**	P	**P**	**21 22 34.3**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=269,slow=4.5,SNR=11						
I23K	**Minto, Yukon-K**	**75.78**	**334**	P	**P**	**21 22 33.2**	**-0.6**
I23K				IAmb	IAmb	21 22 51.6	
	comp=Z,8.7nm,1.5s						
IMAR	**Indian Mountai**	**77.50**	**335**	P	**P**	**21 22 43.2**	**-0.3**
KDAK	**Kodiak Island**	**78.22**	**327**	P	**P**	**21 22 48.2**	**+0.6**

*TAP **20** 21:13:14.6, 24°.02N×122°.45E, h28km±1km, ML3.0, D*
*JMA **20** 21:13:14.3±0.2, 23°.97N×122°.45E, h25km±4km, M2.7*

ISC 20 21:13:14.1±1.1, **23°.97N**±0°.02×**122°.44E**±0°.02, **h24**km±13km, **n97**, σ0s**78**/146, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.66**	**44**	P	**Pb**	**21 13 27.0**	**-0.1**
JYNG				eS	**Sb**	**21 13 35.3**	**-0.6**
YOJ	**Yonaguni jima**	**0.71**	**47**	P	**Pb**	**21 13 27.9**	**0.0**
YOJ				eS	**Sb**	**21 13 36.5**	**-0.8**
YOJ	**Yonaguni jima**	**0.71**	**47**	P	**Pb**	**21 13 27.9**	**0.0**
	baz=56						
YOJ				eS	**Sb**	**21 13 36.7**	**-0.6**
	baz=56						
EWUT	**Wuta**	**0.77**	**308**	P	**Pb**	**21 13 28.7**	**-0.1**
	baz=304						
EWUT				eS	**Sb**	**21 13 38.9**	**+0.1**
	baz=304						
TWD	**Chiawan**	**0.78**	**278**	eP	**Pb**	**21 13 29.1**	**+0.1**
	baz=274						
TWD				eS	**Sb**	**21 13 39.0**	**-0.1**
	baz=274						
NACB	**Ninganchiao**	**0.80**	**285**	P	**Pb**	**21 13 29.3**	**0.0**
	baz=266						
NACB				eS	**Sb**	**21 13 38.7**	**-1.0**
	baz=266						
TWC	**Suao**	**0.83**	**320**	P	**Pb**	**21 13 29.4**	**-0.5**
	baz=317						
TWC				eS	**Sb**	**21 13 40.6**	**-0.1**
	baz=317						
ETLH	**Xiulin Townshi**	**0.91**	**285**	eP	**Pn**	**21 13 31.4**	**0.0**
	baz=269						
ETLH				eS	**Sn**	**21 13 43.9**	**+0.1**
	baz=269						
NDS	**Dongshan**	**0.93**	**315**	P	**Pb**	**21 13 31.7**	**+0.1**
	baz=312						
NDS				eS	**Sb**	**21 13 42.8**	**-0.8**
	baz=312						
ESL	**Shilin**	**0.93**	**261**	eP	**Pn**	**21 13 31.4**	**-0.3**
	baz=247						
ESL				eS	**Sb**	**21 13 43.3**	**-0.3**
	baz=247						
EGFH	**Guangfu**	**0.97**	**252**	eP	**Pb**	**21 13 33.6**	**+1.3**
	baz=249						
EGFH				eS	**Sn**	**21 13 45.2**	**-0.1**
	baz=249						
TWE	**Neicheng**	**1.03**	**317**	P	**Pb**	**21 13 33.1**	**-0.1**
	baz=315						
TWE				eS	**Sb**	**21 13 47.2**	**+0.9**
	baz=315						
ENTT	**Nioudou**	**1.04**	**310**	P	**Pb**	**21 13 33.3**	**-0.1**
	baz=292						
ENTT				eS	**Sb**	**21 13 47.1**	**+0.5**
	baz=292						
NTC	**Toucheng**	**1.04**	**328**	P	**Pb**	**21 13 33.8**	**+0.4**
	baz=326						
NTC				eS	**Sb**	**21 13 46.4**	**-0.2**
	baz=326						
HGSD	**Ruisui**	**1.05**	**243**	P	**Pn**	**21 13 32.6**	**-0.6**
	baz=240						
HGSD				eS	**Sn**	**21 13 46.6**	**-0.5**
	baz=240						
NDT	**Datong Townshi**	**1.05**	**307**	P	**Pb**	**21 13 34.0**	**+0.3**
	baz=304						

	baz=227							
TNOU	**National Taiwa**	**1.32 333**	*e*P		**Pn**	**21 13 36.5**	**-0.5**	
	baz=331							
TATO	**Taipei**	**1.32 319**	*e*P		**Pb**	**21 13 37.9**	**-0.4**	
	baz=317							
WPL	**Puli Township**	**1.36 272**	*e*P		**Pn**	**21 13 37.5**	**0.0**	
	baz=269							
SSLB	**Suanglung**	**1.37 263**	*e*P		**Pn**	**21 13 38.3**	**+0.6**	
	baz=260							
DPDB	**Guoxing**	**1.39 273**	*e*P		**Pb**	**21 13 39.3**	**-0.1**	
	baz=270							
WHP	**Taichung City**	**1.40 283**	*e*P		**Pb**	**21 13 39.9**	**+0.3**	
	baz=270							
SMLT	**Sun Moon Lake**	**1.41 267**	*e*P		**Pn**	**21 13 39.0**	**+0.6**	
	baz=254							
YM01	**YM01**	**1.41 326**	*e*P		**Pb**	**21 13 39.2**	**-0.6**	
	baz=324							
YM10	**YM10**	**1.42 326**	*e*P		**Pn**	**21 13 38.5**	**-0.1**	
	baz=324							
YM11	**YM11**	**1.43 327**	*e*P		**Pn**	**21 13 38.4**	**-0.2**	
	baz=325							
YM04	**YM04**	**1.44 325**	*e*P		**Pn**	**21 13 38.5**	**-0.2**	
	baz=323							
YM08	**YM08**	**1.44 328**	*e*P		**Pn**	**21 13 37.6**	**-1.0**	
	baz=326							
EDH	**Donghe**	**1.44 227**	*e*P		**Pn**	**21 13 37.4**	**-1.3**	
	baz=215							
EDH			*e*S		**Sn**	**21 13 54.4**	**-2.4**	
	baz=215							
YUS	**Yu-Shan**	**1.45 251**	P		**Pn**	**21 13 40.1**	**+0.9**	
	baz=248							
YUS			*e*S		**Sn**	**21 13 57.4**	**-0.2**	
	baz=248							
TYC	**Yuchr**	**1.45 268**	*e*P		**Pb**	**21 13 40.6**	**+0.2**	
	baz=265							
YM03	**YM03**	**1.45 326**	*e*P		**Pn**	**21 13 39.2**	**+0.3**	
	baz=324							
JKRS	**Kuro-shima**	**1.46 79**	P		**Pb**	**21 13 40.1**	**-0.5**	
JKRS			S		**Sb**	**21 13 58.9**	**+0.2**	
LIOB	**Emei**	**1.46 298**	*e*P		**Pb**	**21 13 40.6**	**0.0**	
	baz=295							
NSTT	**Nanjuang**	**1.47 297**	*e*P		**Pb**	**21 13 41.4**	**+0.7**	
	baz=294							
ANP	**Anpu**	**1.47 325**	*e*P		**Pn**	**21 13 39.7**	**+0.5**	
	baz=324							
WHYT	**Xinyi Township**	**1.48 260**	*e*P		**Pb**	**21 13 41.3**	**+0.4**	
	baz=257							
ALS	**Alishan**	**1.57 253**	*e*P		**Pb**	**21 13 41.6**	**+0.9**	
	baz=251							
TWQ1	**Liyutan**	**1.57 284**	*e*P		**Pb**	**21 13 42.4**	**0.0**	
	baz=281							
LDUT	**Ludao**	**1.57 215**	*e*P		**Pn**	**21 13 39.3**	**-1.2**	
	baz=213							
LDUT			*e*S		**Sn**	**21 13 57.6**	**-2.4**	
	baz=213							
JIJ	**Ishigaki jima**	**1.60 76**	P		**Pn**	**21 13 41.5**	**+0.6**	
JIJ			*e*S		**Sn**	**21 14 01.2**	**+0.3**	
LONT	**Longtian**	**1.60 229**	*e*P		**Pn**	**21 13 40.8**	**-0.1**	
	baz=219							
LONT			*e*S		**Sn**	**21 14 00.4**	**-0.5**	
	baz=219							
CHN5	**Tsauling**	**1.66 257**	*e*P		**Pb**	**21 13 43.8**	**-0.2**	
	baz=244							
CHN5			*e*S		**Sb**	**21 14 04.6**	**+0.2**	
	baz=244							
TWGBT	**Beinan**	**1.70 228**	*e*P		**Pn**	**21 13 42.0**	**-0.2**	
	baz=237							
TWG	**Pinlang**	**1.70 228**	*e*P		**Pn**	**21 13 42.0**	**-0.2**	
	baz=238							
STYH	**Taoyuan**	**1.72 243**	*e*P		**Pn**	**21 13 43.5**	**+1.0**	
	baz=231							
STYH			*e*S		**Sn**	**21 14 03.9**	**+0.1**	
	baz=231							
STYT	**Tauyuan**	**1.74 243**	*e*P		**Pn**	**21 13 43.0**	**+0.1**	
	baz=230							
WDLH	**Douliu**	**1.76 261**	*e*P		**Pb**	**21 13 45.3**	**-0.4**	
	baz=259							
TPUB	**Ta-pu**	**1.79 248**	*e*P		**Pn**	**21 13 45.3**	**+1.7**	
	baz=246							
TPUB			*e*S		**Sn**	**21 14 07.7**	**+2.1**	
	baz=246							
CHN4	**Tsaushan**	**1.80 250**	*e*P		**Pb**	**21 13 46.7**	**+0.2**	
	baz=248							
CHN4			*e*S		**Sb**	**21 14 08.2**	**-0.3**	
	baz=248							
JISG	**Ishigakijimahi**	**1.81 70**	P		**Pn**	**21 13 44.1**	**+0.3**	
JISG			*e*S		**Sn**	**21 14 05.8**	**-0.3**	
WTP	**Ta-pu**	**1.82 247**	*e*P		**Pn**	**21 13 45.8**	**+1.8**	
	baz=244							
WTP			*e*S		**Sb**	**21 14 09.0**	**-0.2**	
	baz=244							
WTK	**Tuku**	**1.90 262**	*e*P		**Pn**	**21 13 46.1**	**+1.1**	
	baz=249							
SLGT	**Liugui**	**1.91 240**	*e*P		**Pb**	**21 13 48.0**	**-0.3**	
	baz=229							
SGST	**Jiashian**	**1.92 243**	*e*P		**Pn**	**21 13 46.4**	**+1.1**	
	baz=231							
SGST			*e*S		**Sb**	**21 14 12.1**	**+0.1**	
	baz=231							
CHN1	**Nanshi**	**1.92 246**	*e*P		**Pb**	**21 13 48.1**	**-0.3**	
	baz=244							
CHN1			*e*S		**Sb**	**21 14 12.0**	**0.0**	
	baz=244							
TWK	**Hsinying**	**1.92 249**	*e*P		**Pn**	**21 13 47.3**	**+1.9**	
	baz=246							
TWK			*e*S		**Sb**	**21 14 12.0**	**-0.1**	
	baz=246							
ECL	**Taimali**	**1.93 225**	*e*P		**Pn**	**21 13 44.7**	**-0.8**	
	baz=234							
SSD	**Sandimen**	**2.06 234**	*e*P		**Pn**	**21 13 48.0**	**+0.8**	
	baz=225							
TSMG	**Majia**	**2.08 233**	*e*P		**Pn**	**21 13 49.1**	**+1.6**	
	baz=223							
LAY	**Lan-yu**	**2.09 203**	*e*P		**Pn**	**21 13 47.4**	**-0.3**	
	baz=202							
CHN8	**Yiju**	**2.14 253**	*e*P		**Pn**	**21 13 50.2**	**+1.9**	
	baz=252							
MASBT	**Mashibuluo**	**2.14 231**	*e*P		**Pn**	**21 13 49.2**	**+0.8**	
	baz=222							
EAST	**Anshuo**	**2.15 223**	*e*P		**Pn**	**21 13 48.2**	**-0.3**	
	baz=222							
JTJ	**Tarama**	**2.17 72**	P		**Pn**	**21 13 50.1**	**+1.4**	
JTJ			*e*S		**Sn**	**21 14 16.0**	**+1.2**	
SSPT	**Xinbi**	**2.27 230**	*e*P		**Pb**	**21 13 53.3**	**-1.1**	
	baz=222							
SLIU	**Shizi**	**2.31 221**	*e*P		**Pn**	**21 13 53.6**	**+3.0**	
	baz=220							
SCZT	**Fangliau**	**2.31 227**	*e*P		**Pn**	**21 13 52.6**	**+2.0**	
	baz=225							
TWKBT	**Hengchun**	**2.52 217**	*e*P		**Pn**	**21 13 54.3**	**+0.8**	
	baz=216							
VWUC	**VWUC**	**2.91 291**	*e*P		**Pn**	**21 13 58.2**	**-0.6**	
	baz=288							
PTMZ	**Houxiangcun**	**3.21 290**	*e*P		**Pn**	**21 14 02.8**	**-0.1**	
	baz=287							
XPSS	**Dashiqiu**	**3.58 326**	*e*P		**Pn**	**21 14 08.1**	**0.0**	
	baz=322							

ROM 20 21:19:49.1±0.1, 42°.563N±0°.006×13°.167E±0°.006, h12km±1km, ML0.8/2,1C, Error ellipse: s-maj=0.6km s-min=0.4km az=2.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.07**	**147**	P	Pg	21 19 51.9	+0.2
RM33				S	Sg	21 19 53.5	0.0
RM33				AML	AML		
	comp=N,97μm,0.3s						
RM33				AML	AML		
	comp=E,55μm,0.3s						
LNSS	**Leonessa**	**0.10**	**293**	⇑P	Pg	21 19 52.4	+0.4
LNSS				S	Sg	21 19 54.6	+0.4
LNSS				AML	AML		
	comp=N,70μm,0.1s						
LNSS				AML	AML		
	comp=E,78μm,0.2s						
SMA1	**SAN MARTINO**	**0.14**	**62**	P	Pg	21 19 53.1	+0.5
SMA1				S	Sg	21 19 55.8	+0.7
NRCA	**Norcia**	**0.27**	**352**	P	Pg	21 19 55.1	+0.3
NRCA				S	Sg	21 19 59.5	+0.9
ARRO	**Arrone**	**0.30**	**273**	P	Pg	21 19 55.6	+0.4

*IPEC **20** 21:21:32.5±0.2, 49°.84N×18°.56E, h0km±3km, ML0.9/3, Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
PRU 20 21:21:33.5±0.0, 49°.85N×18°.52E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.24**	**267**	*e*PG	Pg	21 21 38.0	-0.1
OKC				*e*SG	Sg	21 21 42.5	+1.3
	comp=Z,16nm,0.7s						
MORC	**Moravsky Berou**	**0.64**	**264**	*e*PG	Pg	21 21 45.3	-0.4
MORC				*e*SG	Sg	21 21 53.2	-0.8
MORC	**Moravsky Berou**	**0.64**	**264**	*e*Pg	Pg	21 21 45.2	-0.5
	baz=84						
MORC				*e*Sg	Sg	21 21 53.2	-0.8
	2.6nm,0.3s,baz=84						
LANS	**Liptovska Anna**	**0.93**	**138**	*e*PG	Pg	21 21 51.0	-0.4
LANS				*e*SG	Sb	21 22 06.2	+0.7
LANS				*e*LG	Lg	21 22 09.1	
KRLC	**Kraliky**	**1.15**	**282**	*e*PG	Pg	21 21 53.5	-1.9
KRLC				*e*SG	Sg	21 22 10.3	0.0
	comp=Z,4.1nm,0.3s						
VRAC	**Vranov**	**1.37**	**247**	*e*PG	Pg	21 21 58.3	-1.4
VRAC				*e*SG	Sg	21 22 16.0	-1.4
VRAC	**Vranov**	**1.37**	**247**	*e*Pg	Pg	21 21 58.3	-1.4
	baz=66						
VRAC				*e*Sg	Sg	21 22 15.9	-1.5
	1.6nm,0.2s,baz=66						
VYHS	**Vyhne**	**1.37**	**171**	*e*PG	Pg	21 21 58.3	-1.5
VYHS				*e*SG	Sg	21 22 17.8	+0.2
DPC	**Dobruska-Polom**	**1.50**	**290**	*e*PG	Pn	21 22 00.1	-1.6
DPC				*e*SG	Sg	21 22 20.2	-1.5
	comp=Z,2.4nm,0.4s						
KRUC	**Moravsky**	**1.59**	**241**	*e*PG	Pn	21 22 01.6	-1.4
KRUC				*e*SG	Sn	21 22 23.0	-1.3
KRUC	**Moravsky**	**1.59**	**241**	*e*Pg	Pn	21 22 01.6	-1.4
	baz=60						
KRUC				*e*Sg	Sn	21 22 23.0	-1.3
	0.8nm,0.2s,baz=60						
OSTC	**Ostas**	**1.64**	**296**	*e*PG	Pn	21 22 03.0	-0.6
OSTC				*e*SG	Sb	21 22 25.8	-0.1
CHVC	**Chvalec**	**1.75**	**296**	*e*PG	Pn	21 22 05.0	-0.1
CHVC				*e*SG	Sn	21 22 28.2	+0.1

IDC 20 21:45:02.8±5.7, 21°.42S×176°.96W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/29, mbtmp3.7/2, Error ellipse: s-maj=325.8km s-min=77.3km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.26**	**257**	P	P	21 53 21.7	-0.8
	0.3nm,0.4s,baz=94,slow=7.8,SNR=5.9						
WRA	**Warramunga Arr**	**45.44**	**263**	P	P	21 53 24.4	+0.5
	0.7nm,0.3s,baz=100,slow=8.4,SNR=7.6						
FINES	**FINESS Array B**	**136.92**	**344**	PKP	PKPdf	22 04 26.6	-0.5
	0.9nm,0.7s,baz=45,slow=4.1,SNR=6.9						

*IDC **20** 21:46:46.2±0.9, 22°.71N×143°.24E, h80km±7km, mb3.6/14, mb1 3.8/15, mb1mx3.6/44, mbtmp4.0/15, Error ellipse: s-maj=22.4km s-min=10.9km az=83.0*
*NEIC **20** 21:46:47.3±1.2, 22°.67N±0°.09×143°.2E±0°.2, h86km±5km, mb4.2/23, Error ellipse: s-maj=23.6km s-min=12.5km az=78.0*
*JMA **20** 21:46:49.1±0.1, 22°.94N×142°.95E, h165km, M5.0*
ISC 20 21:46:48.6±0.6, 22°.76N±0°.07×143°.3E±0°.1, h100km, n56, σ1$31/55, mb4.0/25, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**3.98**	**346**	P	**Pn**	**21 47 47.1**	**-0.3**
JHH2				*e*S	**Sn**	**21 48 31.5**	**-1.6**
CBIJ	**Chichi jima**	**4.42**	**347**	P	**Pn**	**21 47 53.0**	**-0.5**
CBIJ				*e*S	**Sn**	**21 48 41.9**	**-2.0**
JCJ	**Chichijima**	**4.42**	**347**	P	**Pn**	**21 47 53.1**	**-0.4**
	18nm,0.3s,baz=342,slow=21,SNR=13						
JCJ				S	**Sn**	**21 48 41.8**	**-2.1**
	94nm,0.3s,baz=290,slow=21,SNR=21						
JCJ	**Chichijima**	**4.42**	**347**		**Pn**	**21 47 52.7**	**-0.8**
JAG	**Ashikaga**	**14.01**	**347**	P	Pn	21 49 58.6	-4.0
JAG				*e*S	Sn	21 52 26.1	-11
JOW	**Kunigami**	**14.20**	**290**	P	**P**	**21 50 10.4**	**+0.9**
KS19	**Wonju Array Si**	**19.79**	**321**	P	**P**	**21 51 12.1**	**+1.2**
KS19				IAmb	IAmb	21 51 12.7	
	comp=Z,7.6nm,0.7s						
H11N1	**WAKE ISLAND Hy**	**22.23**	**93**	T	T	22 15 37.1	
	baz=282,slow=75,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**22.23**	**93**	T	T	22 15 36.4	
	baz=282,slow=75,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	**22.24**	**93**	T	T	22 15 36.9	
	baz=282,slow=75,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**22.32**	**97**	T	T	22 15 17.1	
	baz=284,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**22.33**	**97**	T	T	22 15 30.1	
	baz=284,slow=75,SNR=3.6						
H11S2	**WAKE ISLAND Hy**	**22.34**	**97**	T	T	22 15 18.4	
	baz=284,slow=75,SNR=4.5						
KLR	**Kul'dur**	**27.94**	**344**	P	**P**	**21 52 30.6**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=166,slow=4.3,SNR=7.1						
SONM	**Songino Array**	**38.57**	**320**	P	**P**	**21 54 01.9**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=137,slow=8.1,SNR=10						
SONM	**Songino Array**	**38.57**	**320**	P	**P**	**21 54 01.9**	**+0.2**
SEY	**Seymchan**	**40.62**	**6**	P	**P**	**21 54 19.2**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=174,slow=6.1,SNR=4.4						
WB0	**Warramunga Arr**	**43.15**	**192**	P	**P**	**21 54 39.5**	**+0.1**
WB0				IAmb	IAmb	21 54 58.3	
	comp=Z,10nm,1.5s						
WR0	**Warramunga Arr**	**43.31**	**192**	P	**P**	**21 54 39.2**	**-1.5**
WB2	**Warramunga Arr**	**43.33**	**192**	P	**P**	**21 54 41.0**	**+0.1**
WB2				IAmb	IAmb	21 54 48.5	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**43.33**	**192**	P	**P**	**21 54 39.0**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=15,slow=9.4,SNR=15						
WRA	**Warramunga Arr**	**43.33**	**192**	P	**P**	**21 54 40.2**	**-0.7**
ASAR	**Alice Springs**	**47.04**	**192**	P	**P**	**21 55 09.0**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=15,slow=9.8,SNR=9.4						
GAMB	**Gambell**	**50.62**	**24**	P	**P**	**21 55 39.0**	**+2.0**
ZALV	**Zalesovo Beam**	**53.43**	**321**	P	**P**	**21 55 58.5**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=91,slow=6.5,SNR=2.6						
MK31	**Makanchi Array**	**54.04**	**312**	P	**P**	**21 56 03.0**	**+0.4**
MK31				IAmb	IAmb	21 56 13.7	
	comp=Z,1.9nm,1.5s						
MKAR	**Makanchi Array**	**54.04**	**312**	P	**P**	**21 56 02.7**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=86,slow=9.2,SNR=22						
MAKZ	**Makanchi**	**54.25**	**312**	P	**P**	**21 56 04.9**	**+0.7**
MAKZ				IAmb	IAmb	21 56 05.4	
	comp=Z,3.2nm,1.4s						
STKA	**Stephens Creek**	**54.35**	**182**	P	**P**	**21 56 04.6**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=25,slow=7.7,SNR=11						
STKA	**Stephens Creek**	**54.35**	**182**	P	**P**	**21 56 04.6**	**-0.4**
RSO	**Redoubt South**	**57.67**	**32**	P	**P**	**21 56 29.0**	**+0.4**
IMAR	**Indian Mountai**	**58.49**	**25**	P	**P**	**21 56 35.6**	**+1.6**
BPAW	**Bear Paw Mtn.**	**59.19**	**28**	P	**P**	**21 56 40.3**	**+1.5**
BPAW				IAmb	IAmb	21 56 44.9	
	comp=Z,1.1nm,0.8s						
AAK	**Ala-Archa**	**59.58**	**307**	P	**P**	**21 56 42.5**	**+0.4**
SML	**Sawmill**	**60.01**	**31**	P	**P**	**21 56 45.4**	**+0.9**
I23K	**Minto, Yukon-K**	**60.08**	**27**	P	**P**	**21 56 46.7**	**+1.8**
I23K				IAmb	IAmb	21 57 03.4	
	comp=Z,3.8nm,1.2s						
MDM	**Murphy Dome**	**60.52**	**27**	P	**P**	**21 56 49.7**	**+1.8**
MDM				IAmb	IAmb	21 56 51.1	
	comp=Z,1.4nm,0.8s						
TOLK	**Toolik Lake Re**	**60.71**	**23**	P	**P**	**21 56 51.1**	**+1.9**
TOLK				IAmb	IAmb	21 56 51.7	
	comp=Z,4.6nm,1.2s						
ILAR	**Eielson Array**	**61.06**	**27**	P	**P**	**21 56 50.1**	**-1.5**
	comp=Z,0.8nm,0.7s,baz=257,slow=5.6,SNR=7.9						
ILAR				pP	**pP**	**21 57 13.0**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=248,slow=4.8,SNR=1.9						
ILAR	**Eielson Array**	**61.06**	**27**	P	**P**	**21 56 51.8**	**+0.2**
SCRK	**Sand Creek**	**62.22**	**28**	P	**P**	**21 57 00.4**	**+0.9**
SCRK				IAmb	IAmb	21 57 09.7	
	comp=Z,1.4nm,1.0s						
BMAR	**Burnt Mountain**	**62.35**	**25**	P	**P**	**21 57 02.4**	**+2.2**
KKAR	**Karatay Array**	**62.46**	**308**	P	**P**	**21 57 01.7**	**+0.4**
INK	**Inuvik**	**66.56**	**24**	P	**P**	**21 57 27.0**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=306,slow=8.3,SNR=4.6						
INK	**Inuvik**	**66.56**	**24**	P	**P**	**21 57 28.4**	**+0.9**
INK				IAmb	IAmb	21 57 37.7	
	comp=Z,3.9nm,1.4s						
ARU	**Arti**	**68.45**	**324**	P	**P**	**21 57 41.6**	**+1.9**
ARU				IAmb	IAmb	21 57 57.5	
	comp=Z,2.6nm,1.2s						
ABKAR	**Akbulak array**	**68.84**	**316**	P	**P**	**21 57 42.0**	**-0.2**
BKZ	**Black Stump Fm**	**69.01**	**153**	P	**P**	**21 57 42.8**	**-0.5**
LTZ	**Lake Taylor**	**70.49**	**158**	P	**P**	**21 57 52.2**	**-0.2**
YKA	**Yellowknife Ar**	**75.48**	**28**	P	**P**	**21 58 22.0**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=294,slow=5.4,SNR=12						
YKA				pP	**pP**	**21 58 43.3**	**-2.3**
	comp=Z,0.1nm,0.4s,baz=296,slow=5.2,SNR=2.3						
KBZ	**Khabaz**	**81.69**	**314**	P	**P**	**21 58 56.2**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=26,slow=1.0,SNR=2.2						
FIA1	**FINESS Array S**	**82.25**	**334**	P	**P**	**21 58 58.1**	**-0.5**
FIA1				IAmb	IAmb	21 59 06.5	
	comp=Z,7.6nm,1.2s						
FINES	**FINESS Array B**	**82.25**	**334**	P	**P**	**21 58 57.4**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=68,slow=5.4,SNR=8.0						
FINES				pP	**pP**	**21 59 19.0**	**-4.2**
	comp=Z,2.1nm,1.0s,baz=67,slow=5.0,SNR=1.9						
FINES	**FINESS Array B**	**82.25**	**334**	P	**P**	**21 58 57.2**	**-1.4**
NVAR	**Mina Array Bea**	**82.42**	**52**	P	**P**	**21 59 01.2**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=289,slow=5.7,SNR=4.6						
PLCA	**Paso Flores**	**146.39**	**130**	PKPbc	**PKPbc**	**22 06 18.4**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=243,slow=7.4,SNR=7.5						

*JMA **20** 22:01:39.7±0.4, 33°.44N×139°.29E, h201km±4km, M4.3*
*NIED **20** 22:01:39.8, 33°.44N×139.29E, h201km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.35; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$1.35; $M_{r\theta}$-0.33; $M_{\theta\phi}$-1.00; $M_{\phi r}$-1.94; Fault plane solution: $M_0$2.58000×10^{15} NP1: ϕ_s0.00000°, δ73.00000°, λ-66.00000°. NP2:ϕ_s124.00000°, δ29.00000°, λ-143.00000°.*
*NEIC **20** 22:01:40.4±1.8, 33°.34N±0°.07×139°.20E±0°.09, h199km±6km, mb4.3/42 Error ellipse: s-maj=11.1km s-min=9.7km az=76.0*
*IDC **20** 22:01:40.2±0.4, 33°.30N×139°.11E, h193km±4km, mb3.8/20, mb1 3.8/24, mb1mx3.7/39, mbtmp4.2/24, Error ellipse: s-maj=13.8km s-min=9.2km az=71.0*
ISC 20 22:01:40.0±0.5, 33°.30N±0°.05×139°.24E±0°.05, h196km±4km, n141, σ1$22/155, mb4.2/46, 2C-4D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**0.49**	**111**	P	**Pn**	**22 02 07.2**	**+0.6**
	458nm,0.3s,baz=27,slow=18,SNR=80						
JHJ				S	**Sn**	**22 02 28.6**	**+1.5**
	118nm,0.3s,baz=198,slow=20,SNR=6.5						
JHJ2	**Mitsune**	**0.52**	**111**	⇓P	**Pn**	**22 02 07.2**	**+0.5**
JHJ2	**Mitsune**	**0.52**	**111**	Pn	**Pn**	**22 02 07.1**	**+0.4**
JMKN	**Mikurajimanish**	**0.66**	**26**	⇓P	**Pn**	**22 02 07.7**	**-0.2**
JKO	**Kozu shima**	**0.89**	**355**	P	**Pn**	**22 02 08.3**	**-0.3**
JAOM	**Aogashimamukai**	**0.94**	**152**	P	**Pn**	**22 02 10.3**	**+1.3**
TK02	**Tokai 2**	**1.40**	**298**	⇑P	**Pn**	**22 02 12.3**	**+0.1**
TK02				S	**Sn**	**22 02 37.8**	**+0.6**
JIM2	**Oshima 2**	**1.43**	**6**	P	**Pn**	**22 02 12.2**	**-0.5**
JIZS	**Izushimoda**	**1.45**	**348**	⇓P	**Pn**	**22 02 12.3**	**-0.6**
JIZS				S	**Sn**	**22 02 37.5**	**-1.1**
TK04	**Tokai 4**	**1.57**	**314**	P	**Pn**	**22 02 14.1**	**+0.3**
TK04				S	**Sn**	**22 02 40.2**	**0.0**
JSG	**Sagara**	**1.63**	**328**	Pn	**Pn**	**22 02 14.2**	**-0.3**
BSO3	**Boso 3**	**1.83**	**35**	P	**Pn**	**22 02 15.6**	**-0.6**
BSO3				S	**Sn**	**22 02 43.3**	**-1.2**
JOD2	**Odawara 2**	**1.97**	**356**	P	**Pn**	**22 02 17.2**	**-0.7**
JOD2				S	**Sn**	**22 02 46.1**	**-1.4**
BSO1	**Boso 1**	**1.98**	**46**	P	**Pn**	**22 02 16.6**	**-0.8**
BSO1				S	**Sn**	**22 02 45.4**	**-1.2**
TTO1	**TONANKAI O.B.S**	**2.08**	**280**	⇑P	**Pn**	**22 02 18.8**	**+0.1**
JYN	**Shimob**	**2.27**	**346**	⇓P	**Pn**	**22 02 20.7**	**-0.4**
JGF	**Kuroka**	**2.77**	**326**	Pn	**Pn**	**22 02 26.4**	**-0.5**
JYT	**Yasato**	**3.03**	**15**	Pn	**Pn**	**22 02 27.7**	**-2.0**
MJAR	**Matsushiro Arr**	**3.35**	**346**	P	**Pn**	**22 02 32.5**	**-1.0**
	0.7nm,0.3s,baz=179,slow=12,SNR=23						
MJAR	**Matsushiro Arr**	**3.35**	**346**		**Pn**	**22 02 32.0**	**-1.6**
MAJO	**Matsushiro**	**3.35**	**346**	Pn	**Pn**	**22 02 32.7**	**-0.9**
MAT	**Matsushiro**	**3.35**	**346**	P	**Pn**	**22 02 32.5**	**-1.1**
MAT				*e*S	**Sn**	**22 03 10.2**	**-5.5**
JWT	**Wachi**	**3.74**	**303**		**Pn**	**22 02 37.6**	**-0.8**
JMN	**Monobe**	**4.50**	**277**		**Pn**	**22 02 47.6**	**-0.3**
JMM	**Marumori**	**4.73**	**15**		**Pn**	**22 02 49.0**	**-1.9**
JSD	**Sado**	**4.80**	**351**	Pn	**Pn**	**22 02 50.7**	**-0.9**
JHS	**Saijyo**	**5.35**	**290**	Pn	**Pn**	**22 02 58.3**	**-0.5**
JCJ	**Chichijima**	**6.69**	**157**	P	**Pn**	**22 03 13.4**	**-2.8**
	25nm,0.3s,baz=2.6,slow=18,SNR=17						
JCJ				S	**Sn**	**22 04 25.8**	**-6.5**
	30nm,0.3s,baz=70,slow=23,SNR=9.5						
JCJ	**Chichijima**	**6.69**	**157**	Pn	**Pn**	**22 03 13.2**	**-2.9**
JNU	**Nakatsue**	**7.01**	**271**	P	**Pn**	**22 03 21.0**	**+0.6**
	0.7nm,0.3s,baz=126,slow=12,SNR=4.2						
JNU	**Nakatsue**	**7.01**	**271**	Pn	**Pn**	**22 03 20.3**	**0.0**
JTM	**Tenmabayashi**	**7.62**	**11**	Pn	**Pn**	**22 03 25.9**	**-2.3**
ERM	**Erimo**	**9.24**	**18**	Pn	**Pn**	**22 03 47.8**	**-1.5**
KSRS	**Korea Array**	**10.13**	**297**	P	**Pn**	**22 04 01.7**	**+0.9**
	0.4nm,0.3s,baz=103,slow=13,SNR=15						
ASAJ	**Asahikawa**	**11.12**	**13**	P	**Pn**	**22 04 10.9**	**-2.6**
	1.3nm,0.3s,baz=209,slow=13,SNR=13						
ASAJ				S	Sn

WR0					IAmb	IAmb	22 10 45.8	
	comp=Z,5.4nm,1.2s							
WRA	**Warramunga Arr**	**53.15 186**		P		**P**	**22 10 37.4**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=0.2,slow=7.5,SNR=18							
WRA				PcP		**sP**	**22 11 43.7**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=3.9,slow=7.5,SNR=1.5							
WRA	**Warramunga Arr**	**53.15 186**		P		**P**	**22 10 37.7**	**-0.1**
KK31	**Karatay Array**	**53.52 302**		P		**P**	**22 10 40.6**	**+0.2**
KKAR	**Karatay Array**	**53.52 302**		P		**P**	**22 10 40.1**	**-0.2**
KKAR					IAmb	IAmb	22 10 40.5	
	comp=Z,4.6nm,0.8s							
KKAR	**Karatay Array**	**53.52 302**		P		**P**	**22 10 39.7**	**-0.6**
ILAR	**Eielson Array**	**53.60 31**		P		**P**	**22 10 41.0**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=280,slow=5.4,SNR=2.2							
NIL	**Nilore**	**54.15 290**		P		**P**	**22 10 44.7**	**-0.4**
NIL					IAmb	IAmb	22 10 45.6	
	comp=Z,4.8nm,0.7s							
GAR	**Garm**	**54.75 297**		P		**P**	**22 10 48.9**	**-0.5**
GAR					IAmb	IAmb	22 10 49.4	
	comp=Z,5.7nm,0.9s							
GAR				PcP		**PcP**	**22 11 51.6**	**+2.1**
AS31	**Alice Springs**	**56.87 186**		P		**P**	**22 11 05.9**	**+1.5**
ASAR	**Alice Springs**	**56.87 186**		P		**P**	**22 11 04.8**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=15,slow=11,SNR=17							
ASAR	**Alice Springs**	**56.87 186**		P		**P**	**22 11 04.3**	**-0.1**
ARU	**Arti**	**58.02 320**		P		**P**	**22 11 11.8**	**-0.2**
ARU					IAmb	IAmb	22 11 12.2	
	comp=Z,6.5nm,0.7s							
INK	**Inuvik**	**58.52 26**		P		**P**	**22 11 16.7**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=314,slow=7.8,SNR=4.0							
INK	**Inuvik**	**58.52 26**		P		**P**	**22 11 16.6**	**+1.4**
ABKAR	**Akbullak array**	**59.02 311**		P		**P**	**22 11 18.8**	**-0.3**
GEYT	**Alibeck**	**64.11 300**		P		**P**	**22 11 53.3**	**0.0**
	comp=Z,1.1nm,0.4s,baz=30,slow=12,SNR=2.6							
FORT	**Forrest**	**64.60 191**		P		**P**	**22 11 57.9**	**+1.5**
STKA	**Stephens Creek**	**64.86 178**		P		**P**	**22 11 59.0**	**+0.9**
	comp=Z,4.5nm,0.8s,baz=341,slow=7.2,SNR=8.7							
STKA	**Stephens Creek**	**64.86 178**		P		**P**	**22 11 59.3**	**+1.2**
BBOO	**Buckleboo**	**65.82 183**		P		**P**	**22 12 04.9**	**+0.7**
KLMR	**Klimovskoe**	**65.97 328**	*eP*			**P**	**22 12 02.9**	**-2.0**
KLMR					AMP		22 12 04.9	
	comp=Z,8.0nm,0.8s							
ARCES	**ARCESS Array B**	**66.86 340**		P		**P**	**22 12 10.6**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=72,slow=9.1,SNR=10							
ARCES	**ARCESS Array B**	**66.86 340**		P		**P**	**22 12 11.0**	**+0.6**
YKA	**Yellowknife Ar**	**67.93 29**		P		**P**	**22 12 18.0**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=299,slow=5.9,SNR=3.4							
FIA1	**FINESS Array S**	**71.28 332**		P		**P**	**22 12 37.8**	**+0.1**
FINES	**FINESS Array B**	**71.28 332**		P		**P**	**22 12 37.7**	**0.0**
	comp=Z,3.4nm,0.4s,baz=60,slow=6.0,SNR=62							
KBZ	**Khabaz**	**71.98 311**		P		**P**	**22 12 42.8**	**+0.6**
	comp=Z,11nm,0.8s,baz=90,slow=3.7,SNR=31							
KIV	**Kislovodsk**	**72.01 311**		P		**P**	**22 12 43.1**	**+0.6**
AKASG	**Malin Array Be**	**76.15 322**		P		**P**	**22 13 05.8**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=50,slow=6.3,SNR=13							
AKASG	**Malin Array Be**	**76.15 322**		P		**P**	**22 13 06.2**	**0.0**
AKBB	**Malin Array Si**	**76.15 322**		P		**P**	**22 13 06.3**	**+0.2**
AKBB					IAmb	IAmb	22 13 06.7	
	comp=Z,8.7nm,1.4s							
NC405	**NORSAR Array S**	**76.71 337**		P		**P**	**22 13 09.3**	**+0.2**
NC405					IAmb	IAmb	22 13 17.7	
	comp=Z,15nm,1.3s							
NC204	**NORSAR Array S**	**76.90 337**		P		**P**	**22 13 10.7**	**+0.4**
NOA	**NORSAR Array B**	**76.92 337**		P		**P**	**22 13 10.3**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=43,slow=5.5,SNR=15							
NVAR	**Mina Array Bea**	**78.68 51**		P		**P**	**22 13 22.6**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=282,slow=5.2,SNR=6.1							
SOCY	**Socotra**	**79.49 278**		P		**P**	**22 13 23.3**	**-2.0**
SOCY					IAmb	IAmb	22 13 23.9	
	comp=Z,4.5nm,0.9s							
BRTR	**Keskin Array B**	**79.97 311**		P		**P**	**22 13 28.1**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=96,slow=6.3,SNR=9.0							
BRTR	**Keskin Array B**	**79.97 311**		P		**P**	**22 13 28.4**	**+0.7**
BUR08	**Bucovina Ar. S**	**80.11 321**		P		**P**	**22 13 29.0**	**+0.9**
BUR08					IAmb	IAmb	22 13 29.9	
	comp=Z,7.8nm,1.4s							
BURAR	**Bucovina Array**	**80.11 321**		P		**P**	**22 13 28.9**	**+0.7**
RAYN	**Ar Rayn**	**80.40 292**		P		**P**	**22 13 30.0**	**0.0**
RAYN					IAmb	IAmb	22 13 30.7	
	comp=Z,5.4nm,0.8s							
CRVS	**Cervenica-Dubn**	**81.20 324**	*e*	P		**P**	**22 13 34.6**	**+0.8**
LANS	**Liptovska Anna**	**82.01 325**	*e*	P		**P**	**22 13 39.4**	**+1.3**
MORC	**Moravsky Berou**	**82.49 326**	*e*	P		**P**	**22 13 40.9**	**+0.4**
MORC	**Moravsky Berou**	**82.49 326**		P		**P**	**22 13 41.4**	**+0.9**
MORC					IAmb	IAmb	22 13 42.0	
	comp=Z,5.4nm,1.2s							
CHVC	**Chvalec**	**82.60 327**	*e*	P		**P**	**22 13 41.8**	**+0.7**
KRLC	**Kraliky**	**82.63 327**	*e*	P		**P**	**22 13 41.9**	**+0.6**
DPC	**Dobruska-Polom**	**82.65 327**	*e*	P		**P**	**22 13 42.0**	**+0.6**
VYHS	**Vyhne**	**82.76 325**	*e*	P		**P**	**22 13 42.9**	**+1.0**
JAVC	**Velka Javorina**	**83.07 325**	*e*	P		**P**	**22 13 45.4**	**+1.8**
VRAC	**Vranov**	**83.26 326**	*e*	P		**P**	**22 13 45.1**	**+0.6**
PVCC	**Panska Ves**	**83.31 328**	*e*	P		**P**	**22 13 45.6**	**+0.9**
CLL	**Collm**	**83.42 329**	*i*	P		**P**	**22 13 45.6**	**+0.4**
	comp=Z,6.0nm,0.8s							
CLL	**Collm**	**83.42 329**		P		**P**	**22 13 45.1**	**-0.1**
CLL					IAmb	IAmb	22 13 46.6	
	comp=Z,6.3nm,0.8s							
SMOL	**Smolenice**	**83.42 325**	*e*	P		**P**	**22 13 46.6**	**+1.3**
KRUC	**Moravsky**	**83.52 326**	*e*	P		**P**	**22 13 46.2**	**+0.4**
MODS	**Modra-Piesok**	**83.59 325**	*e*	P		**P**	**22 13 46.3**	**+0.1**
PRU	**Pruhonice**	**83.71 328**	*e*	P		**P**	**22 13 47.2**	**+0.5**
TREC	**Trest**	**83.78 327**	*e*	P		**P**	**22 13 47.3**	**+0.2**
CONA	**Conrad Observa**	**84.58 326**	*i*	P		**P**	**22 13 52.4**	**+1.1**
	comp=Z,3.6nm,0.7s							
CKRC	**Cesky Krumlov**	**84.66 327**	*e*	P		**P**	**22 13 51.9**	**+0.3**
KHC	**Kasperske Hory**	**84.76 328**	*e*	P		**P**	**22 13 52.2**	**+0.1**
KHC	**Kasperske Hory**	**84.76 328**		P		**P**	**22 13 52.7**	**+0.6**
KHC					IAmb	IAmb	22 13 53.3	
	comp=Z,3.8nm,0.7s							
GEC2	**GERESS Array S**	**84.92 327**		P		**P**	**22 13 53.0**	**0.0**
GEC2					IAmb	IAmb	22 13 53.7	
	comp=Z,2.7nm,0.8s							
GERES	**GERESS Array B**	**84.92 327**		P		**P**	**22 13 53.1**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=46,slow=5.8,SNR=21							
SOKA	**Soboth**	**85.87 325**	*e*	P		**P**	**22 13 57.8**	**+0.1**
	comp=Z,2.2nm,0.5s							
KBA	**Koelnbreinsper**	**86.37 326**	*i*	P		**P**	**22 13 60.0**	**-0.3**
	comp=Z,1.1nm,0.5s							
ABTA	**Abfaltersbach**	**87.00 327**	*e*	P		**P**	**22 14 01.1**	**-2.1**
	comp=Z,4.2nm,1.4s							
FETA	**Feichten**	**87.61 328**	*i*	P		**P**	**22 14 06.2**	**0.0**
	comp=Z,2.3nm,0.8s							
DAVA	**Damuels**	**87.79 328**	*e*	P		**P**	**22 14 06.8**	**-0.2**
	comp=Z,3.4nm,0.8s							
TXAR	**Lajitas Array**	**93.83 51**		P		**P**	**22 14 37.6**	**+2.3**
	comp=Z,0.5nm,0.9s,baz=286,slow=2.4,SNR=4.1							
TORD	**Torodi Ar. Bea**	**118.58 312**		PKP		**PKPdf**	**22 20 04.4**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=4.4,slow=1.9,SNR=2.5							

*RSNC **20** 22:11:30.7±1.2,6°.82N×73°.15W,h150km±5km, ML3.6, Mw3.8*
*UPA **20** 22:11:30.8±0.6, 7°.04N×73°.22W, h2km±9km, MW4.3*
*IDC **20** 22:11:31.4±6.3, 6°.66N×73°.12W, h176km±91km, mb3.2/4, mb1 3.5/5, mb1mx3.1/27, mbtmp3.7/5, Error ellipse: s-maj=123.3km s-min=28.7km az=29.0*
ISC 20 22:11:29.8±0.8,**6°.86N**±0°.03×**73°.11W**±0°.05,**h155**km±6km, **n34**,σ1°**26**/64,**mb3.5**/4,**2C-2D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BARC	**Barichara**	**0.27**	**195**	⇓*iP*		**Pn**	**22 11 51.0**	**-0.1**
BARC				*eS*		**Sn**	**22 12 06.5**	**-0.9**
BARC				*i*			22 12 08.7	
	comp=Z,711nm,0.3s							
PAMC	**Pamplona, Colo**	**0.63**	**40**	⇑*iP*		**Pn**	**22 11 53.9**	**+0.9**
PAMC				*eS*		**Sn**	**22 12 11.3**	**+0.6**
PAMC				*i*			22 12 13.4	
	comp=Z,548nm,0.4s							
PAMC				*i*			22 12 14.2	
	comp=Z,539nm,0.5s							
BRRC	**Barranca, Sant**	**0.65**	**293**	*eP*		**Pn**	**22 11 52.8**	**+0.4**
BRRC				*eS*		**Sn**	**22 12 09.7**	**-0.1**
BRRC				*i*			22 12 13.0	
	comp=Z,651nm,0.3s							
BRRC				*i*			22 12 13.0	
	comp=Z,576nm,0.3s							
RUSC	**La Rusia**	**0.96**	**178**	⇓*iP*		**Pn**	**22 11 55.0**	**-0.3**
RUSC				*eS*		**Sn**	**22 12 13.8**	**-0.9**
RUSC				*i*			22 12 14.8	
	comp=Z,366nm,0.7s							
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	*eP*		**Pn**	**22 11 57.6**	**-0.9**
PTBC				*eS*		**Sn**	**22 12 18.7**	**-1.7**
PTBC				*i*			22 12 25.4	
	comp=Z,456nm,0.3s							
OCAC	**Ocana**	**1.39**	**351**	*eP*		**Pn**	**22 11 59.1**	**+0.4**
OCAC				*eS*		**Sn**	**22 12 20.8**	**-0.2**
OCAC				*i*			22 12 29.3	
	comp=Z,1μm,0.4s							
SPBC	**San Pablo de B**	**1.53**	**219**	*eP*		**Pn**	**22 12 00.0**	**-0.1**
SPBC				*eS*		**Sn**	**22 12 21.9**	**-1.6**
SPBC				*i*			22 12 26.7	
	comp=Z,696nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.84**	**290**	*eP*		**Pn**	**22 12 03.4**	**-0.1**
ZARC				*eS*		**Sn**	**22 12 28.3**	**-1.0**
ZARC				*i*			22 12 33.9	
	comp=Z,519nm,0.5s							
SMLC	**San Martn de**	**2.15**	**334**	*eP*		**Pn**	**22 12 07.3**	**+0.3**
SMLC				*eS*		**Sn**	**22 12 35.4**	**-0.4**
SMLC				*i*			22 12 37.9	
	comp=Z,353nm,0.3s							
NORC	**Norcasia**	**2.17**	**234**	*eP*		**Pn**	**22 12 06.9**	**-0.4**
NORC				*eS*		**Sn**	**22 12 34.3**	**-1.8**
NORC				*i*			22 12 40.1	
	comp=Z,262nm,0.4s							
CHIC	**Chingaza**	**2.30**	**196**	*eP*		**Pn**	**22 12 09.1**	**-0.1**
CHIC				*eS*		**Sn**	**22 12 38.8**	**-0.7**
CHIC				*i*			22 12 41.8	
	comp=Z,309nm,0.4s							
CHIC				*i*			22 12 43.9	
	comp=Z,264nm,0.3s							
ROSC	**El Rosal**	**2.34**	**211**	P		**Pn**	**22 12 10.9**	**+1.3**
	comp=Z,47nm,0.3s,baz=58,slow=13,SNR=59							
ROSC				S		**Sn**	**22 12 41.0**	**+0.7**
	comp=Z,42nm,0.3s,baz=30,slow=20,SNR=7.0							
ROSC	**El Rosal**	**2.34**	**211**	*eP*		**Pn**	**22 12 10.7**	**+1.1**
ROSC				*eS*		**Sn**	**22 12 41.2**	**+0.9**
ROSC				*i*			22 12 45.5	
	comp=Z,780nm,0.4s							
HELC	**Santa Helena**	**2.49**	**255**	*eP*		**Pn**	**22 12 11.8**	**+0.4**
HELC				*eS*		**Sn**	**22 12 43.6**	**+0.1**
HELC	**Santa Helena**	**2.49**	**255**	*eP*		**Pn**	**22 12 11.7**	**+0.3**
HELC				*eS*		**Sn**	**22 12 43.4**	**-0.1**
HELC				*i*			22 12 49.3	
	comp=Z,273nm,0.4s							
UREC	**San Jos de Ur**	**2.56**	**290**	*eP*		**Pn**	**22 12 11.7**	**-0.2**
UREC				*eS*		**Sn**	**22 12 41.2**	**-3.3**
UREC				*i*			22 12 53.3	
	comp=Z,286nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*eP*		**Pn**	**22 12 15.2**	**+0.2**
GUY2C				*eS*		**Sn**	**22 12 51.7**	**+2.0**
GUY2C				*i*			22 12 57.1	
	comp=Z,283nm,0.4s							
VILC	**Villavicencio,**	**2.79**	**192**	*eP*		**Pn**	**22 12 13.9**	**-1.0**
VILC				*eS*		**Sn**	**22 12 48.8**	**-0.9**
VILC				*i*			22 12 52.4	
	comp=Z,318nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.81**	**160**	*eP*		**Pn**	**22 12 14.2**	**-0.8**
PTGC				*eS*		**Sn**	**22 12 47.9**	**-2.2**
PTGC				*i*			22 12 50.6	
	comp=Z,111nm,0.2s							
PTGC				*i*			22 12 53.9	
	comp=Z,96nm,0.3s							
CBOC	**Ciudad Bolivar**	**3.05**	**251**	*eP*		**Pn**	**22 12 18.7**	**+0.6**
CBOC				*eS*		**Sn**	**22 12 55.9**	**+0.4**
CBOC				*i*			22 13 06.5	
	comp=Z,76nm,0.6s							
CBOC				*i*			22 13 07.5	
	comp=Z,67nm,0.4s							
DBBC	**Dabeiba**	**3.08**	**273**	*eP*		**Pn**	**22 12 18.4**	**0.0**
DBBC				*eS*		**Sn**	**22 12 53.7**	**-2.4**
DBBC				*i*			22 13 03.0	
	comp=Z,584nm,0.4s							
TOLC	**Tolima**	**3.15**	**224**	*eP*		**Pn**	**22 12 19.8**	**+0.2**
TOLC				*eS*		**Sn**	**22 12 59.0**	**+0.9**
TOLC				*i*			22 13 05.4	
	comp=Z,211nm,0.4s							
MONA	**Monteria**	**3.16**	**307**	*eP*		**Pn**	**22 12 18.8**	**-0.7**
MONA				*eS*		**Sn**	**22 12 54.6**	**-3.3**
MOTC	**Monteria, Cord**	**3.17**	**307**	*eP*		**Pn**	**22 12 18.1**	**-1.4**
MOTC				*eS*		**Sn**	**22 12 56.2**	**-1.9**
MOTC				*i*			22 12 58.6	
	comp=Z,112nm,0.4s							
ANIL	**Santa Ana**	**3.27**	**224**	*eP*		**Pn**	**22 12 22.2**	**+1.1**
ANIL				*eS*		**Sn**	**22 13 01.3**	**+0.4**
ORTC	**Ortega, Tolima**	**3.62**	**216**	*eP*		**Pn**	**22 12 25.3**	**0.0**
ORTC				*eS*		**Sn**	**22 13 08.6**	**+0.2**
ORTC				*i*			22 13 12.7	
	comp=Z,130nm,0.7s							
ORTC				*i*			22 13 14.8	
	comp=Z,108nm,0.4s							
SJCC	**San Jacinto, C**	**3.65**	**326**	⇑*iP*		**Pn**	**22 12 25.3**	**-0.4**
SJCC				*eS*		**Sn**	**22 13 06.5**	**-2.6**
CAP2	**Capurgana**	**4.57**	**293**	*eP*		**Pn**	**22 12 38.8**	**+1.1**
CAP2				*eS*		**Sn**	**22 13 30.0**	**-0.6**
UPD2	**Meteti**	**5.14**	**289**	*eP*		**Pn**	**22 12 46.1**	**+0.9**
UPD2				*eS*		**Sn**	**22 13 43.8**	**-0.2**
GARC	**Garzon, Huila**	**5.21**	**207**	*eP*		**Pn**	**22 12 45.0**	**-1.4**
GARC				*eS*		**Sn**	**22 13 42.1**	**-4.1**
GARC				*i*			22 13 46.9	
	comp=Z,47nm,0.3s							
TXAR	**Lajitas Array**	**36.45**	**312**	P		**P**	**22 18 20.8**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=125,slow=8.0,SNR=5.0							
PDAR	**Pinedale Array**	**48.05**	**324**	P		**P**	**22 19 54.8**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=125,slow=8.9,SNR=2.2							
YKA	**Yellowknife Ar**	**63.23**	**340**	P		**P**	**22 21 41.7**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=131,slow=7.0,SNR=16							
DBIC	**Dimbokro**	**67.72**	**86**	P		**P**	**22 22 10.8**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=270,slow=5.1,SNR=1.3							

*IDC **20** 22:28:23.1±1.5, 40°.54N×109°.50W, h0km, mb2.8/1, mb1 3.0/4, mb1mx3.0/36, mbtmp2.7/4, ML3.1/3, Error ellipse: s-maj=16.0km s-min=9.1km az=120.0*
*NEIC **20** 22:28:26.7±1.7, 40°.65N±0°.04×109°.42W±0°.05, h0km±2km, ML3.5/50, Error ellipse: s-maj=7.0km s-min=6.4km az=35.0*
ISC 20 22:28:26.1±0.9,**40°.67N**±0°.04×**109°.48W**±0°.04,**h0**km,**n34**, σ1°**40**/36,**Utah**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RDMU	**Red Mountain**	**0.12**	**215**			**Pg**	**22 28 27.2**	**-1.2**
RDMU					IAML		22 28 31.8	
	comp=N,14μm,0.7s							
RDMU					IAML		22 28 31.8	
	comp=E,9μm,0.8s							
O20A	**White River Ci**	**1.08**	**119**			**Pg**	**22 28 45.5**	**-1.4**
O20A					IAML		22 29 05.6	
	comp=E,518nm,0.6s							
O20A					IAML		22 29 14.8	
	comp=N,588nm,1.0s							
JLU	**Jordanelle**	**1.50**	**268**	Pn		**Pn**	**22 28 55.4**	**+0.8**
JLU					IAML		22 29 22.2	
	comp=E,195nm,0.8s							
JLU					IAML		22 29 23.7	
	comp=N,252nm,0.8s							
TCUT	**Toone Canyon**	**1.53**	**288**	Pn		**Pn**	**22 28 55.4**	**+0.5**
TCUT					IAML		22 29 20.0	
	comp=E,776nm,0.8s							
TCUT					IAML		22 29 20.2	
	comp=N,676nm,0.8s							
P17A	**Butcher Ranch,**	**1.54**	**219**	Pn		**Pn**	**22 28 53.8**	**-1.2**
CTU	**Camp Tracy**	**1.73**	**272**	Pn		**Pn**	**22 28 57.9**	**+0.2**
SRU	**San Rafael Swe**	**1.75**	**208**	Pn		**Pn**	**22 28 58.1**	**+0.2**
SRU				Sn		**Sn**	**22 29 20.9**	**-0.2**
SRU					IAML		22 29 24.8	
	comp=E,308nm,0.9s							
SRU					IAML		22 29 25.5	
	comp=N,492nm,0.6s							
MPU	**Maple Canyon**	**1.77**	**249**	Pn		**Pn**	**22 28 59.2**	**+1.0**
MPU					IAML		22 29 27.7	
	comp=E,145nm,1.0s							
HWUT	**Hardware Ranch**	**1.83**	**301**	Pn		**Pn**	**22 29 00.3**	**+1.3**
HWUT					IAML		22 29 27.6	
	comp=E,214nm,0.9s							
HWUT					IAML		22 29 33.6	
	comp=E,198nm,1.0s							
TMUT	**Trail Mountain**	**1.91**	**225**	Pn		**Pn**	**22 29 01.4**	**+1.2**
TMUT					IAML		22 29 30.5	
	comp=E,368nm,1.0s							
RWWY	**Rawlins**	**1.99**	**58**	Pn		**Pn**	**22 29 00.8**	**-0.5**
RWWY					IAML		22 29 33.2	
	comp=E,442nm,0.8s							
RWWY					IAML		22 29 36.7	
	comp=E,482nm,0.9s							
BW06	**Boulder Array**	**2.10**	**358**			**Pn**	**22 29 03.7**	**+1.0**
BW06					IAML		22 29 35.5	
	comp=E,159nm,1.1s							
PD31	**Pinedale Array**	**2.10**	**358**			**Pn**	**22 29 03.0**	**+0.2**
PDAR	**Pinedale Array**	**2.10**	**358**	Pn		**Pn**	**22 29 04.0**	**+1.2**
	comp=E,2.8nm,0.3s,baz=165,slow=18,SNR=38							
PDAR				Pg		**Pb**	**22 29 06.2**	**+1.0**
	comp=E,3.2nm,0.3s,baz=159,slow=15,SNR=32							
PDAR				Lg		Lg	22 29 34.1	
	comp=E,14nm,0.3s,baz=164,slow=27,SNR=4.6							
PDAR	**Pinedale Array**	**2.10**	**358**	Pn		**Pn**	**22 29 03.8**	**+1.0**
NLU	**North Lily Min**	**2.11**	**251**	Pn		**Pn**	**22 29 04.6**	**+1.7**
Q16A	**Castle Valley**	**2.18**	**217**			**Pn**	**22 29 05.5**	**+1.6**
Q16A					IAML		22 29 35.4	
	comp=N,172nm,0.9s							
Q16A					IAML		22 29 35.4	
	comp=E,250nm,0.9s							
PV04	**Paradox Valley**	**2.31**	**169**			**Pn**	**22 29 06.2**	**+0.6**
PV07	**Paradox Valley**	**2.32**	**164**			**Pn**	**22 29 06.5**	**+0.8**
PV07					IAML		22 29 40.8	
	comp=N,268nm,0.7s							
PV14	**Lion Creek, Pa**	**2.32**	**171**			**Pn**	**22 29 05.8**	**0.0**
PV19	**Morning Glory**	**2.39**	**171**			**Pn**	**22 29 07.4**	**+0.7**
PV19					IAML		22 29 46.9	
	comp=E,214nm,0.7s							
PV19					IAML		22 29 55.7	
	comp=N,254nm,0.9s							
TCRU	**Three Creeks R**	**3.08**	**229**	Pn		**Pn**	**22 29 19.2**	**+2.9**
TCRU					IAML		22 30 03.8	
	comp=E,61nm,1.1s							
TCRU					IAML		22 30 20.1	
	comp=N,70nm,1.1s							
MVCO	**Mesa Verde**	**3.54**	**167**	Pn		**Pn**	**22 29 23.1**	**+0.6**
PKCU	**Pink Cliffs**	**3.90**	**215**	Pn		**Pn**	**22 29 29.6**	**+2.0**
PKCU					IAML		22 30 34.9	
	comp=N,98nm,1.0s							
PSUT	**Pine Spring**	**4.00**	**239**	Pn		**Pn**	**22 29 30.3**	**+1.5**
SDCO	**Great Sand Dun**	**4.25**	**132**	Pn		**Pn**	**22 29 34.1**	**+1.7**
ELK	**Elko**	**4.38**	**273**	Pn		**Pn**	**22 29 31.4**	**-2.7**
	comp=N,0.2nm,0.3s,baz=213,slow=17,SNR=1.7							
ELK				Lg		Lg	22 30 40.8	
	comp=N,0.1nm,0.3s,baz=37,slow=20,SNR=3.3							
RSSD	**Black Hills**	**5.30**	**48**	Pn		**Pn**	**22 29 46.9**	**+0.1**
RSSD					IAML		22 31 15.9	
	comp=N,31nm,0.8s							
WUAZ	**Wupatki**	**5.36**	**197**	Pn		**Pn**	**22 29 50.1**	**+2.6**
W18A	**Petrified Fore**	**5.54**	**182**	Pn		**Pn**	**22 29 51.7**	**+1.6**
ANMO	**Albuquerque**	**6.19**	**156**	Pg		**Pb**	**22 30 14.5**	**-0.4**
	comp=N,0.2nm,0.3s,baz=338,slow=11,SNR=4.5							
ANMO				Lg		Lg	22 31 36.3	
	comp=N,0.3nm,0.3s,baz=270,slow=17,SNR=2.2							
X16A	**Lo Mia Camp, P**	**6.43**	**195**	Pn		**Pn**	**22 30 04.8**	**+2.6**
NVAR	**Mina Array Bea**	**7.18**	**255**	Pn		**Pn**	**22 30 11.3**	**-1.2**
	comp=N,0.1nm,0.3s,baz=79,slow=11,SNR=3.1							
NVAR				Lg		Lg	22 32 07.8	
	comp=N,0.0nm,0.3s,baz=62,slow=38,SNR=1.5							
YKA	**Yellowknife Ar**	**22.07**	**354**	P		**P**	**22 33 22.6**	**+0.2**
	comp=N,0.5nm,0.9s,baz=167,slow=10,SNR=5.1							

*IDC **20** 22:36:58.6±1.8, 1°.05S×120°.44E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/25, mbtmp3.4/4, Error ellipse: s-maj=200.6km s-min=24.3km az=63.0*
*DJA **20** 22:37:00.4±0.3, 1°.S±3°×120°.0E±°, h10km, M3.9/8, mb4.2/1, mB4.8/1, MLv3.8/8, Mw(mB)4.1/1*
ISC 20 22:37:00.3±0.9,**1°.22S**±0°.05×**119°.62E**±0°.06,**h10**km,**n13**, σ1°**54**/15,**mb3.3**/4,**Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TTSI	**Tana Toraja**	**1.82**	**174**	P		**Pn**	**22 37 31.5**	**-0.3**
TTSI				S		**Sb**	**22 37 56.9**	**+0.1**
APSI	**Ampana**	**2.05**	**81**	P		**Pn**	**22 37 34.8**	**-0.1**
APSI				S		**Sn**	**22 38 02.4**	**+1.9**
BKB	**Balikpapan**	**2.72**	**269**	P		**Pn**	**22 37 44.1**	**0.0**
SPSI	**Sidrap Palu**	**2.73**	**177**	P		**Pn**	**22 37 44.3**	**0.0**
MRSI	**Marisa**	**2.87**	**54**	P		Pn	22 37 41.0	-5.1
LUWI	**Luwuk**	**3.15**	**87**

HRA						IAmb	IAmb	23 09 01.8	
	comp=Z,6.0nm,1.1s								
PALK	**Pallekele**	**23.73**	**102**		LR	LR	23 16 41.8		
	comp=Z,45nm,19.0s,baz=38,slow=32								
KBL	**Kabul**	**23.76**	**25**		P	**P**	**23 09 21.2**	**+0.4**	
KBL					IAmb	IAmb	23 09 23.8		
	comp=Z,5.8nm,1.2s								
KMBO	**Kilima Mbogo**	**24.47**	**236**		P	**P**	**23 09 31.0**	**+3.3**	
	comp=Z,2.7nm,0.7s,baz=50,slow=13,SNR=8.6								
KMBO					LR	LR	23 19 32.2		
	comp=Z,61nm,20.1s,baz=83,slow=38								
GEYT	**Alibeck**	**24.64**	**1**		P	**P**	**23 09 28.5**	**-0.2**	
	comp=Z,0.6nm,0.4s,baz=190,slow=13,SNR=1.6								
GEYT					LR	LR	23 19 13.2		
	comp=Z,41nm,19.2s,baz=45,slow=37								
GEYT	**Alibeck**	**24.64**	**1**		P	**P**	**23 09 29.5**	**+0.8**	
GEYT					IAmb	IAmb	23 09 36.3		
	comp=Z,4.9nm,1.5s								
GYA0B	**ALIBECK ARRAY**	**24.64**	**1**		P	**P**	**23 09 29.7**	**+1.0**	
GYA0B					IAmb	IAmb	23 09 41.9		
	comp=Z,4.0nm,0.6s								
NIL	**Nilore**	**24.99**	**33**		P	**P**	**23 09 31.7**	**-0.2**	
NIL					IAmb	IAmb	23 09 41.9		
	comp=Z,5.9nm,1.0s								
EIL	**Elat**	**26.42**	**312**		LR	LR	23 20 40.6		
	comp=Z,45nm,18.7s,baz=140,slow=38								
MMAI	**Mount Meron Ar**	**28.10**	**318**		LR	LR	23 21 38.2		
	comp=Z,37nm,19.6s,baz=315,slow=37								
GNI	**Garni**	**29.04**	**340**		LR	LR	23 23 15.4		
	comp=Z,35nm,21.5s,baz=157,slow=40								
KBZ	**Khabaz**	**32.86**	**341**		P	**P**	**23 10 41.3**	**-0.5**	
	comp=Z,2.6nm,1.0s,baz=165,slow=4.4,SNR=3.8								
KBZ					LR	LR	23 25 30.7		
	comp=Z,40nm,18.2s,baz=168,slow=39								
AAK	**Ala-Archa**	**32.88**	**24**		P	**P**	**23 10 43.5**	**+1.2**	
	comp=Z,2.3nm,0.9s,baz=216,slow=9.4,SNR=6.5								
AAK	**Ala-Archa**	**32.88**	**24**		P	**P**	**23 10 43.7**	**+1.4**	
AAK					IAmb	IAmb	23 10 46.2		
	comp=Z,4.3nm,1.1s								
BRTR	**Keskin Array B**	**33.67**	**326**		LR	LR	23 26 12.3		
	comp=Z,47nm,20.7s,baz=100,slow=39								
ISP	**Isparta**	**34.22**	**321**		P	**P**	**23 10 55.8**	**+1.9**	
ANTO	**Ankara**	**34.23**	**325**		P	**P**	**23 10 55.7**	**+1.7**	
ABKAR	**Akbulak array**	**36.02**	**3**		P	**P**	**23 11 10.0**	**+0.9**	
ABKAR	**Akbulak array**	**36.02**	**3**		P	**P**	**23 11 10.4**	**+1.3**	
ABKAR					IAmb	IAmb	23 11 23.1		
	comp=Z,3.3nm,1.3s								
MK31	**Makanchi Array**	**39.51**	**27**		P	**P**	**23 11 39.1**	**+0.3**	
MKAR	**Makanchi Array**	**39.51**	**27**		P	**P**	**23 11 39.4**	**+0.6**	
	comp=Z,0.3nm,0.5s,baz=218,slow=9.2,SNR=5.7								
MKAR					LR	LR	23 29 36.6		
	comp=Z,41nm,18.8s,baz=230,slow=39								
CMAR	**Chiang Mai Arr**	**40.31**	**77**		P	**P**	**23 11 45.5**	**-0.3**	
	comp=Z,1.2nm,0.8s,baz=276,slow=9.9,SNR=8.2								
CMAR					LR	LR	23 28 10.6		
	comp=Z,21nm,19.1s,baz=351,slow=36								
BVAR	**Borovoye Array**	**41.07**	**12**		PcP	**PcP**	**23 13 50.8**	**-0.3**	
	comp=Z,0.4nm,0.7s,baz=252,slow=8.5,SNR=4.8								
VTS	**Vitosha**	**41.55**	**321**		P	**P**	**23 11 56.2**	**+0.4**	
VTS					IAmb	IAmb	23 12 05.5		
	comp=Z,4.2nm,1.1s								
ZALV	**Zalesovo Beam**	**46.08**	**22**		P	**P**	**23 12 32.3**	**+0.4**	
	comp=Z,0.6nm,0.5s,baz=202,slow=7.3,SNR=2.9								
GERES	**GERESS Array B**	**50.50**	**324**		PcP	**PcP**	**23 14 23.9**	**-0.2**	
	comp=Z,0.4nm,0.6s,baz=145,slow=4.9,SNR=4.4								
BOSA	**Boshof**	**51.86**	**216**		LR	LR	23 34 03.5		
	comp=Z,56nm,19.3s,baz=40,slow=35								
FINES	**FINESS Array B**	**59.20**	**342**		P	**P**	**23 13 25.9**	**-0.1**	
	comp=Z,1.8nm,1.0s,baz=125,slow=23,SNR=3.3								
SONM	**Songino Array**	**53.30**	**39**		P	**P**	**23 13 27.8**	**+0.5**	
	comp=Z,0.8nm,1.1s,baz=251,slow=9.2,SNR=5.3								
NRIK	**Noril'sk**	**59.29**	**12**		LR	LR	23 43 42.8		
	comp=Z,68nm,18.0s,baz=340,slow=40								
ESDC	**Sonseca Array**	**59.65**	**308**		P	**P**	**23 14 12.5**	**0.0**	
	comp=Z,0.6nm,0.9s,baz=90,slow=4.7,SNR=3.1								
ESDC	**Sonseca Array**	**59.65**	**308**		P	**P**	**23 14 12.4**	**0.0**	
ESDC					IAmb	IAmb	23 16 16.9		
	comp=Z,2.1nm,1.6s								
ARCES	**ARCESS Array B**	**59.77**	**348**		P	**P**	**23 14 11.7**	**-1.0**	
	comp=Z,1.3nm,0.7s,baz=161,slow=5.7,SNR=4.0								
KSRS	**Korea Array**	**66.74**	**55**		P	**P**	**23 14 57.7**	**-1.8**	
	comp=Z,1.0nm,0.7s,baz=247,slow=6.3,SNR=2.8								
JOW	**Kunigami**	**67.30**	**66**		LR	LR	23 47 22.8		
	comp=Z,34nm,18.1s,baz=297,slow=39								
H01W3	**Cape Leeuwin H**	**71.99**	**134**		T	T	00 33 54.5		
	baz=302,slow=75,SNR=32								
H01W2	**Cape Leeuwin H**	**72.00**	**134**		T	T	00 33 55.3		
	baz=302,slow=75,SNR=27								
H01W1	**Cape Leeuwin H**	**72.01**	**134**		T	T	00 33 56.2		
	baz=302,slow=75,SNR=25								
SEY	**Seymchan**	**80.65**	**28**		LR	LR	23 54 48.1		
	comp=Z,258nm,21.1s,baz=347,slow=38								
MAW	**Mawson**	**80.68**	**178**		P	**P**	**23 16 22.7**	**+2.2**	
	comp=Z,4.0nm,1.0s,baz=7.3,slow=13,SNR=3.6								
WRA	**Warramunga Arr**	**82.59**	**112**		P	**P**	**23 16 29.7**	**-2.1**	
	comp=Z,0.9nm,0.7s,baz=300,slow=4.0,SNR=4.7								
WRA	**Warramunga Arr**	**82.59**	**112**		P	**P**	**23 16 30.7**	**-1.1**	
ASAR	**Alice Springs**	**83.30**	**116**		P	**P**	**23 16 33.1**	**-2.2**	
	comp=Z,0.9nm,0.5s,baz=290,slow=4.8,SNR=9.7								

NNC ***20*** *23:13:39.0±2.5, 37.°07N×71.°37E, h174km±48km, mb2.7, mpv3.6, Error ellipse: s-maj=26.5km s-min=11.9km az=19.0*

ISC 20 23:13:32.7±1.6**, 36.°67N**±0.°10×**71.°3E**±0.°2**, h150**km**, n14, σ1.9/20/16, 5C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.44**	**21**	⇑P	**Pn**	**23 15 06.9**	**+1.6**
	3.8nm,0.5s						
AAK				⇑S	**Sn**	**23 16 16.7**	**-1.2**
	5.4nm,0.6s						
KK31	**Karatay Array**	**6.46**	**355**	⇑P	**Pn**	**23 15 06.9**	**+1.5**
	3.1nm,0.4s,baz=173,slow=12,SNR=61						
KK31				S	**Sn**	**23 16 15.8**	**-2.3**
	15nm,0.8s,baz=181,slow=19,SNR=30						
TKM2	**Tokmak 2**	**7.05**	**26**	⇑P	**Pn**	**23 15 15.0**	**+1.5**
	1.9nm,0.7s						
PDGK	**Podgornoye**	**9.13**	**41**	⇑P	**Pn**	**23 15 42.3**	**+1.1**
	2.9nm,0.8s						
KOLN	**Koldanda**	**13.64**	**127**	*e*P	**Pn**	**23 16 39.1**	**-1.2**
GKN	**Gorkha**	**14.17**	**124**	*e*P	**Pn**	**23 16 47.1**	**+0.3**
	6.4nm,0.3s						
KKN	**Kakani**	**14.74**	**123**	*e*P	**Pn**	**23 16 54.0**	**0.0**
PKIN	**Phulchoki**	**14.95**	**123**	*e*P	**Pn**	**23 16 56.2**	**-0.6**
PKI	**Pulchoki**	**14.97**	**123**	*e*P	**Pn**	**23 16 56.6**	**-0.4**
GUN	**Gumba**	**15.07**	**121**	*e*P	**Pn**	**23 16 58.5**	**+0.2**
	6.0nm,0.3s						
AB31	**Akbulak array**	**15.07**	**330**	P	**P**	**23 16 59.4**	**0.0**
	0.3nm,0.4s,baz=144,slow=13,SNR=14						
JIRN	**Jiri**	**15.44**	**121**	*e*P	**Pn**	**23 17 03.2**	**+0.3**
	19nm,0.5s						
RAMN	**Ramite**	**16.17**	**122**	*e*P	**Pn**	**23 17 10.4**	**-1.4**
	4.8nm,0.3s						
TAPN	**Taplejung**	**16.69**	**119**	*e*P	**P**	**23 17 17.7**	**-0.1**

IDC ***20*** *23:31:46.8±0.9, 53.°38N×108.°55E, h0km, mb3.6/6, mb1 3.7/12, mb1mx3.5/51, mbtmp3.6/12, ML3.1/6, MS3.4/9, Ms1 3.4/9, ms1mx3.1/40, Error ellipse: s-maj=19.4km s-min=11.0km az=135.0*

MOS ***20*** *23:31:46.9±1.1, 53.°36N×108.°48E, h9km, mb4.2/3, Error ellipse: s-maj=9.4km s-min=6.2km az=63.6*

BYKL ***20*** *23:31:48.5±0.1, 53.°30N×108.°49E, h12km±2km*

ISC 20 23:31:47.2±1.1**, 53.°33N**±0.°02×**108.°45E**±0.°02**, h0**km±8km**, n85, σ2.9/04/147, mb3.6/6, MS3.5/6, 7C-12D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXMB	**Maximikha**	**0.19**	**112**	⇑*i*Pg	**Pg**	**23 31 51.8**	**+1.0**
MXMB				*e*Sg	**Sg**	**23 31 54.2**	**+1.0**
OGRR	**Ongureny**	**0.60**	**302**	⇑*i*Pg	**Pb**	**23 32 01.4**	**+0.9**
	372nm,0.4s						
OGRR				⇓*i*Pg	**Pb**	**23 32 01.4**	**+0.9**
	348nm,0.4s						
OGRR				⇑*i*Pg	**Pb**	**23 32 01.4**	**+0.9**
	604nm,0.4s						
OGRR				Pmax		23 32 01.8	
	960nm,0.2s						
OGRR				*e*Sg	**Sb**	**23 32 09.9**	**+0.3**
OGRR				Smax		23 32 10.7	
	2μm,0.3s						
OGRR	**Ongureny**	**0.60**	**302**	⇑*i*PG	**Pb**	**23 32 01.4**	**+0.9**
OGRR				*e*		23 32 10.1	
OGRR				pmax	pmax		
	comp=Z,950nm,0.3s						
OGRR				smax	smax		
	comp=N,2μm,0.4s						
KELR	**Kotokel**	**0.62**	**202**	⇓*i*Pg	**Pg**	**23 31 59.2**	**+0.2**
KELR				*e*Sg	**Sg**	**23 32 07.6**	**+0.6**
SYVR	**Suvo**	**0.98**	**70**	*e*Pg	**Pg**	**23 32 06.2**	**+0.3**
SYVR				*e*Pb	**Pn**	**23 32 08.6**	**+0.4**
SYVR				*e*		23 32 11.4	
SYVR				max		23 32 12.3	
	comp=N,835nm,0.3s						
SYVR				*e*Sg	**Sg**	**23 32 19.4**	**+0.8**
SYVR				*e*Sb	**Sn**	**23 32 23.8**	**+1.1**
SYVR				max		23 32 24.1	
	comp=N,6μm,0.4s						
SYVR	**Suvo**	**0.98**	**70**	*e*PG	**Pg**	**23 32 06.2**	**+0.3**
SYVR				*e*		23 32 19.2	
SYVR				pmax	pmax		
	comp=Z,838nm,0.3s						
SYVR				smax	smax		
	comp=N,6μm,0.4s						
ZRHB	**Zarechye**	**1.11**	**226**	*e*Pg	**Pb**	**23 32 08.4**	**-0.8**
ZRHB				Pmax		23 32 11.7	
	comp=N,574nm,0.3s						
ZRHB				*e*Sg	**Sb**	**23 32 23.5**	**-0.7**
ZRHB				*e*Sb	**Sn**	**23 32 27.0**	**+1.1**
ZRHB				max		23 32 27.3	
	comp=N,13μm,0.6s						
TRG	**Tyrgan**	**1.40**	**247**	*e*Pg	**Pn**	**23 32 13.1**	**-0.8**
TRG				*e*Pb	**Pb**	**23 32 14.4**	**+0.3**
TRG				max		23 32 15.0	
	comp=N,508nm,0.3s						
TRG				*e*Sg	**Sn**	**23 32 32.3**	**-0.7**
TRG				Smax		23 32 34.5	
	comp=N,5μm,0.3s						
TRG	**Tyrgan**	**1.40**	**247**	*e*PG	**Pn**	**23 32 13.1**	**-0.8**
TRG				*e*		23 32 31.7	
TRG				pmax	pmax		
	comp=Z,503nm,0.3s						
TRG				smax	smax		
	comp=N,5μm,0.3s						
UUDB	**Ulan-Yde**	**1.55**	**198**	⇓*i*Pg	**Pn**	**23 32 15.8**	**-0.2**
UUDB				Pmax		23 32 17.3	
	comp=N,705nm,0.5s						
UUDB				*e*Sg	**Sb**	**23 32 36.2**	**-0.6**
UUDB				*e*Sb	**Sg**	**23 32 38.5**	**+1.7**
UUDB				max		23 32 39.3	
	comp=N,4μm,0.3s						
FFNB	**Fofonovo**	**1.65**	**219**	*e*Pg	**Pb**	**23 32 18.2**	**-0.2**
FFNB				*e*Sg	**Sg**	**23 32 40.4**	**+0.3**
KAB	**Kabansk**	**1.69**	**221**	*e*Pg	**Pb**	**23 32 19.5**	**+0.4**
KAB				Pmax		23 32 32.2	
	comp=N,600nm,0.5s						
KAB				*e*Sg	**Sg**	**23 32 42.4**	**+1.0**
KAB				Smax		23 32 43.8	
	comp=N,7μm,0.7s						
KAB	**Kabansk**	**1.69**	**221**	*e*PN	**Pb**	**23 32 19.4**	**+0.4**
KAB				*e*		23 32 42.4	
KAB				pmax	pmax		
	comp=Z,522nm,0.7s						
KAB				smax	smax		
	comp=N,7μm,1.1s						
HRMR	**Khuramsha**	**1.94**	**209**	*e*Pn	**Pn**	**23 32 21.8**	**+0.4**
HRMR				*e*Pg	**Pb**	**23 32 23.0**	**-0.4**
HRMR				Pmax		23 32 27.0	
	comp=N,2μm,0.5s						
HRMR				*e*Sg	**Sg**	**23 32 49.0**	**-0.4**
HRMR				Smax		23 32 52.3	
	comp=N,8μm,0.3s						
YLYR	**Ulyunkhan**	**2.22**	**45**	⇓*i*Pn	**Pn**	**23 32 26.0**	**+0.8**
YLYR				*e*Pg	**Pb**	**23 32 28.1**	**-0.1**
YLYR				Pmax		23 32 28.4	
	comp=N,546nm,0.6s						
YLYR				*e*Sn	**Sn**	**23 32 54.0**	**+0.7**
YLYR				*e*Sg	**Sg**	**23 32 58.2**	**-0.3**
YLYR				Smax		23 32 59.8	
	comp=N,2μm,0.6s						
YLYR	**Ulyunkhan**	**2.22**	**45**	⇑*i*PN	**Pn**	**23 32 26.1**	**+0.8**
YLYR				*e*		23 32 29.0	
YLYR				*e*S	**Sn**	**23 32 54.3**	**+1.0**
YLYR				pmax	pmax		
	comp=Z,307nm,0.4s						
YLYR				smax	smax		
	comp=N,2μm,0.5s						
BGT	**Bolshoye Golou**	**2.26**	**236**	*e*Pn	**Pn**	**23 32 25.8**	**0.0**
BGT				*e*Pg	**Pb**	**23 32 29.1**	**+0.3**
BGT				Pmax		23 32 29.5	
	comp=N,106nm,0.3s						
BGT				*e*Sg	**Sb**	**23 32 58.4**	**+1.1**
BGT				Smax		23 33 02.8	
	comp=N,1μm,0.6s						
BGT	**Bolshoye Golou**	**2.26**	**236**	*e*PN	**Pn**	**23 32 25.7**	**0.0**
BGT				*e*		23 32 29.4	
BGT				*e*		23 32 58.7	
BGT				pmax	pmax		
	comp=Z,146nm,0.5s						
BGT				smax	smax		
	comp=E,1μm,0.6s						
NIZ	**Nizh Angarsk**	**2.53**	**14**	⇓*i*Pn	**Pn**	**23 32 30.8**	**+1.4**
NIZ				*e*Pg	**Pb**	**23 32 34.7**	**+1.3**
NIZ				Pmax		23 32 35.3	
	comp=E,327nm,0.6s						
NIZ				*e*Sn	**Sn**	**23 33 01.2**	**+0.3**
NIZ				*e*Sg	**Sb**	**23 33 07.3**	**+2.3**
NIZ				Smax		23 33 12.1	
	comp=E,1μm,0.5s						
NIZ	**Nizh Angarsk**	**2.53**	**14**	⇓*i*PN	**Pn**	**23 32 30.8**	**+1.4**
NIZ				*e*		23 32 34.9	
NIZ				*e*S	**Sn**	**23 33 02.2**	**+1.3**
NIZ				*e*		23 33 08.0	
NIZ				pmax	pmax		
	comp=Z,326nm,0.6s						
NIZ				smax	smax		
	comp=N,1μm,1.2s						
LSTR	**Listvyanka**	**2.65**	**238**	*e*Pn	**Pn**	**23 32 31.4**	**+0.3**
LSTR				*e*Pg	**Pb**	**23 32 35.9**	**+0.4**
LSTR				Pmax		23 32 36.6	
	comp=N,49nm,0.3s						
LSTR				*e*Sn	**Sn**	**23 33 02.4**	**-1.6**
LSTR				*e*Sg	**Sb**	**23 33 09.5**	**+0.9**
LSTR				Smax		23 33 13.8	
	comp=N,972nm,1.2s						
LSTR	**Listvyanka**	**2.65**	**238**	*e*PN	**Pn**	**23 32 31.2**	**+0.1**
LSTR				*e*		23 32 35.8	
LSTR				*e*		23 33 09.5	
LSTR				pmax	pmax		
	comp=Z,48nm,0.3s						
LSTR				smax	smax		
	comp=N,968nm,1.3s						
IRK	**Irkutsk**	**2.77**	**248**	Smax		23 32 20.5	
	comp=N,2μm,1.1s						
IRK				*e*Sg	**Sb**	**23 33 13.3**	**+1.5**
IRK	**Irkutsk**	**2.77**	**248**	*e*PN	**Pb**	**23 32 37.6**	**+0.2**
IRK				*e*		23 33 12.5	
IRK				pmax	pmax		
	comp=Z,287nm,0.7s						
IRK				smax	smax		
	comp=N,8μm,1.3s						
IVK	**Ivanovka**	**2.90**	**240**	*e*Pn	**Pn**	**23 32 34.9**	**+0.3**
IVK				*e*Pg	**Pb**	**23 32 40.3**	**+0.5**
IVK				Pmax		23 32 41.2	
	comp=N,66nm,0.4s						
IVK				*e*		23 32 43.4	
IVK				*e*Sg	**Sb**	**23 33 18.5**	**+2.7**
IVK				Smax		23 33 19.9	
	comp=N,1μm,1.4s						
KMO	**Kumora**	**3.02**	**31**	⇓*i*Pn	**Pn**	**23 32 37.3**	**+1.1**
KMO				*e*Pg	**Pb**	**23 32 42.2**	**+0.5**
KMO				Pmax		23 32 43.3	
	comp=N,629nm,0.8s						
KMO				*e*Sn	**Sn**	**23 33 12.4**	**-0.5**
KMO				*e*Sg	**Sg**	**23 33 22.8**	**-1.2**
KMO				Smax		23 33 36.0	
	comp=N,1μm,1.3s						
KMO	**Kumora**	**3.02**	**31**	*e*PN	**Pn**	**23 32 37.4**	**+1.2**
KMO				*e*		23 32 42.5	
KMO				*e*S	**Sn**	**23 33 11.2**	**-1.7**
CIT	**Chita**	**3.37**	**111**	*e*	**Pn**	**23 32 40.8**	**-0.2**
CIT				*e*Pg	**Pb**	**23 32 47.9**	**+0.1**
CIT				Pmax		23 32 51.1	
	comp=N,220nm,0.2s						
CIT				*e*Sg	**Sb**	**23 33 31.7**	**+2.4**
CIT				Smax		23 33 39.7	
	comp=N,2μm,0.4s						
CIT	**Chita**	**3.37**	**111**	*e*PN	**Pn**	**23 32 43.4**	**+2.4**
CIT				*e*		23 32 49.5	
CIT				*e*S	**Sn**	**23 33 21.9**	**+0.2**
CIT				*e*		23 33 31.1	
CIT				pmax	pmax		
	comp=Z,370nm,0.6s						
CIT				smax	smax		
	comp=E,2μm,0.4s						
TLY	**Talaya**	**3.37**	**243**	Pn	**Pn**	**23 32 41.5**	**+0.4**
	comp=E,0.1nm,0.3s,baz=70,slow=7.2,SNR=18						
TLY				Pg	**Pb**	**23 32 48.0**	**+0.2**
	comp=E,0.2nm,0.3s,baz=38,slow=11,SNR=22						
TLY				Sn	**Sn**	**23 33 15.2**	**-6.6**
	comp=E,0.3nm,0.3s,baz=38,slow=14,SNR=6.2						
TLY				Lg	Lg	23 33 32.0	
	comp=E,0.6nm,0.3s,baz=285,slow=20,SNR=20						
TLY	**Talaya**	**3.37**	**243**	*e*Pn	**Pn**	**23 32 41.4**	**+0.3**
TLY				*e*Pg	**Pb**	**23 32 49.1**	**+1.3**
TLY				Pmax		23 32 56.6	
	comp=E,43nm,0.3s						
TLY				*e*Sg	**Sb**	**23 33 32.6**	**+3.3**
TLY				*e*		23 33 37.5	
TLY				max		23 33 38.9	
	comp=E,495nm,0.5s						
TLY	**Talaya**	**3.37**	**243**	*e*PN	**Pn**	**23 32 41.4**	**+0.3**
TLY				*e*		23 32 48.1	
TLY				*e*		23 33 31.3	
TLY				pmax	pmax		
	comp=Z,91nm,0.5s						
TLY				smax	smax		
	comp=N,1.0nm,18.9s						
YOA	**Uoyan**	**3.38**	**33**	*e*Pg	**Pb**	**23 32 49.5**	**+1.5**
YOA				Pmax		23 33 02.5	
	comp=N,935nm,1.3s						
YOA				*e*Sg	**Sg**	**23 33 34.6**	**-1.3**
YOA				Smax		23 33 51.8	
	comp=N,3μm,1.6s						
YOA	**Uoyan**	**3.38**	**33**	*e*PN	**Pb**	**23 32 48.6**	**+0.6**
YOA				*i*		23 33 36.3	
YOA				pmax	pmax		
	comp=Z,177nm,0.4s						
YOA				smax	smax		
	comp=E,3μm,1.2s						
UKT	**Uakit**	**3.71**	**52**	⇓*i*Pn	**Pn**	**23 32 46.6**	**+0.8**
UKT				*e*Pg	**Pb**	**23 32 55.3**	**+1.6**
UKT				Pmax		23 32 57.5	
	comp=E,228nm,1.2s						
UKT				*e*Sg	**Sg**	**23 33 43.9**	**-2.5**
UKT				Smax		23 33 52.4	
	comp=E,636nm,0.7s						
ARS	**Arshan**	**3.94**	**251**	*e*Pn	**Pn**	**23 32 50.1**	**+1.2**
ARS				*e*Pg	**Pb**	**23 32 59.9**	**+2.5**
ARS				Pmax		23 33 01.6	
	comp=E,124nm,0.7s						
ARS				*e*		23 33 48.0	
ARS				*e*Sg	**Sg**	**23 33 51.4**	**-2.2**
ARS				Smax		23 33 55.3	
	comp=E,2μm,0.5s						
ARS	**Arshan**	**3.94**	**251**	*e*PN	**Pn**	**23 32 50.0**	**+1.2**
ARS				*e*		23 33 00.0	
ARS				*e*		23 33 48.2	
ARS				pmax	pmax		
	comp=Z,119nm,0.4s						
ARS				smax	smax		
	comp=E,2μm,0.5s						
ZAK	**Zakamensk**	**4.36**	**229**	*e*Pn	**Pn**	**23 32 57.1**	**+2.4**
ZAK				*e*Pg	**Pb**	**23 33 06.7**	**+2.0**
ZAK				Pmax		23 33 09.7	
	comp=E,59nm,1.1s						
ZAK				*e*Sg	**Sg**	**23 34 03.3**	**-3.9**
ZAK				Smax		23 34 10.6	
	comp=E,626nm,1.7s						
ZAK	**Zakamensk**	**4.36**	**229**	*e*PN	**Pn**	**23 32 59.2**	**+4.5**
ZAK				*e*		23 33 07.2	
ZAK				*e*		23 34 03.9	
ZAK				pmax	pmax		
	comp=Z,35nm,0.6s						
ZAK				smax	smax		
	comp=N,518nm,0.7s						
KPC	**Khapcheranga**	**4.38**	**144**	*e*Pn	**Pn**	**23 32 54.0**	**-1.0**
KPC				*e*Pg	**Pb**	**23 33 06.1**	**+1.1**
KPC				Pmax		23 33 09.0	
	comp=N,61nm,0.5s						
KPC				*e*Sn	**Sn**	**23 33 43.8**	**-2.9**
KPC				*e*Sg	**Sb**	**23 34 01.7**	**+3.3**
KPC				Smax		23 34 06.9	
	comp=N,1μm,1.2s						
KPC	**Khapcheranga**	**4.38**	**144**	*e*PN	**Pn**	**23 32 54.2**	**-0.8**
KPC				*e*		23 33 06.1	
KPC				*e*S	**Sn**	**23 33 43.4**	**-3.3**
KPC				*e*		23 34 01.5	
KPC				pmax	pmax		
	comp=Z,75nm,0.9s						
KPC				smax	smax		
	comp=E,1μm,1.4s						
MOY	**Mondy**	**4.85**	**253**	*e*Pn	**Pn**	**23 33 03.9**	**+2.4**
MOY				*e*		23 33 14.7	
MOY				max		23 33 28.1	
	comp=E,68nm,1.0s						
MOY				*e*		23 33 59.3	
MOY				*e*Sg	**Sb**	**23 34 18.1**	**+6.1**
MOY				*e*		23 34 28.0	
MOY				max		23 34 29.5	
	comp=E,1μm,2.0s						
MOY	**Mondy**	**4.85**	**253**	*e*PN	**Pn**	**23 33 04.1**	**+2.6**
MOY				*e*		23 33 17.4	
MOY				*e*S	**Sn**	**23 33 58.9**	**+0.5**
MOY				*e*		23 34 17.9	
MOY				pmax	pmax		
	comp=Z,67nm,0.7s						
MOY				smax	smax		
	comp=E,1μm,1.6s						
NLYR	**Nelyaty**	**5.24**	**50**	*e*Pn	**Pn**	**23 33 07.5**	**+0.7**
NLYR				*e*Pg	**Pb**	**23 33 22.5**	**+2.9**
NLYR				Pmax		23 33 28.3	
	comp=E,91nm,0.7s						
NLYR				*e*Sg	**Sg**	**23 34 30.4**	**-5.1**
NLYR				Smax		23 34 36.4	
	comp=E,1μm,1.4s						
NLYR	**Nelyaty**	**5.24**	**50**	*e*PN	**Pn**	**23 33 07.4**	**+0.7**
NLYR				*e*		23 33 22.0	
NLYR				*e*		23 34 31.7	
NLYR				pmax	pmax		
	comp=Z,97nm,1.7s						
NLYR				smax	smax		
	comp=N,1μm,1.5s						
ORL	**Orlik**	**5.29**	**265**	*e*Pn	**Pn**	**23 33 09.7**	**+2.2**
ORL				max		23 33 18.7	
	comp=N,48nm,0.7s						
ORL				Pg	**Pb**	**23 33 23.5**	**+3.0**
ORL				*e*Sn	**Sn**	**23 34 05.6**	**-3.5**

comp=E,25nm,0.3s,baz=16,slow=28,SNR=6.9
CRS Chara 6.67 54 *e*Pn **Pn 23 33 27.1 +0.8**
CRS *e* 23 33 35.9
CRS *e*Pg Pb 23 33 49.1 +5.2
CRS Pmax 23 33 55.9
comp=E,124nm,1.1s
CRS *e*Sg **Sg 23 35 15.7 -5.4**
CRS Smax 23 35 33.3
comp=E,613nm,1.4s
CRS Chara 6.67 54 *e*PG Pb 23 33 49.6 +5.7
CRS *e* 23 35 14.3
CRS pmax pmax
comp=Z,125nm,1.0s
CRS smax smax
comp=E,319nm,1.1s
TUP Tupik 6.89 76 *e*Pn **Pn 23 33 29.4 +0.1**
TUP Smax 23 33 51.8
comp=E,2µm,1.7s
TUP *e*Pg **Pb 23 33 52.0 +4.4**
TUP Pmax 23 33 55.0
comp=E,27nm,0.7s
TUP *e*Sg **Sg 23 35 21.4 -6.8**
TUP Tupik 6.89 76 *e*PN **Pn 23 33 29.1 -0.2**
TUP *e* 23 33 51.2
TUP *e*S **Sn 23 34 46.4 -1.9**
TUP *e* 23 35 21.1
TUP pmax pmax
comp=Z,25nm,0.6s
TUP smax smax
comp=N,1µm,1.1s
KHNR Khani 7.52 57 *e*Pn **Pn 23 33 37.3 -0.7**
KHNR *e*Pg Pb 23 34 03.9 +5.5
KHNR *e*Sg **Sg 23 35 41.7 -6.7**
HIA Hailar 8.16 115‖ *e*PN **Pn 23 33 48.0 +1.2**
HIA pmax pmax
comp=Z,4.0nm,0.6s
ARDR Aradan 9.10 271 *e* Pn 23 34 12.9 +13
ARDR *e*Pg 23 34 32.9
ARDR *e* 23 36 07.0
ARDR *e*Sg Sn 23 36 30.7 +48
DGZ Jazzator, Alta 13.57 263‖ *e*P **Pn 23 35 01.2 +0.3**
DGZ pmax pmax
comp=Z,3.0nm,1.2s
ZALV Zalesovo Beam 14.02 282 Pn **Pn 23 35 08.2 +1.4**
comp=Z,0.1nm,0.3s,baz=90,slow=8.8,SNR=3.5
ZALV Lg Lg 23 39 02.0
comp=Z,0.1nm,0.3s,baz=90,slow=23,SNR=12
YAK Yakutsk 14.24 44 Lg Lg 23 39 08.7
comp=Z,0.3nm,0.3s,baz=310,slow=1.8,SNR=1.6
KLR Kul'dur 15.12 96 Sn **Sn 23 38 09.3 -0.5**
comp=Z,0.1nm,0.3s,baz=134,slow=1.0,SNR=5.5
KLR Lg Lg 23 39 40.4
comp=Z,0.3nm,0.3s,baz=197,slow=22,SNR=7.5
KLR LR LR 23 40 48.4
comp=Z,62nm,19.0s,baz=289,slow=36
USRK Ussuriysk Ar. 17.93 111 Lg Lg 23 41 11.5
baz=318,slow=25,SNR=3.2
USRK LR LR 23 43 08.3
comp=Z,79nm,20.1s,baz=250,slow=38
MK31 Makanchi Array 17.96 259‖ *e*P **P 23 35 59.4 +0.6**
MKAR Makanchi Array 17.96 259 P **Pn 23 35 57.4 -0.8**
comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=5.5
MKAR Lg Lg 23 41 05.1
comp=Z,0.0nm,0.3s,baz=238,slow=47,SNR=3.4
MKAR LR LR 23 43 12.7
comp=Z,100nm,20.1s,baz=54,slow=38
MKAR Makanchi Array 17.96 259 *ce*P **P 23 35 58.5 -0.3**
KURK Kurchatov 18.48 274 P **P 23 36 03.8 -0.6**
KURBB Kurchatov Arra 18.57 274 P **P 23 36 03.8 -1.6**
comp=Z,0.0nm,0.3s,baz=74,slow=12,SNR=5.2
KURBB Lg Lg 23 41 28.7
baz=74,slow=31,SNR=5.1
NRIK Noril'sk 18.75 337 P **P 23 36 05.6 -1.6**
comp=Z,0.2nm,0.3s,baz=134,slow=7.6,SNR=2.6
NRIK S Sn 23 39 18.9 -19
comp=Z,0.1nm,0.3s,baz=211,slow=13,SNR=1.9
NRIK Lg Lg 23 41 31.9
comp=Z,0.2nm,0.3s,baz=234,slow=23,SNR=1.4
NRIK Noril'sk 18.75 337‖ *e*P **P 23 36 06.2 -1.0**
TIXI Tiksi 20.44 18 P **P 23 36 25.3 -0.3**
comp=Z,5.0nm,0.7s,baz=220,slow=4.5,SNR=9.1
TIXI Lg Lg 23 42 21.4
comp=Z,1.8nm,0.3s,baz=289,slow=11,SNR=4.1
BVAR Borovoye Array 22.64 285 P **P 23 36 49.2 -0.3**
comp=Z,0.7nm,0.4s,baz=76,slow=12,SNR=3.8
AAK Ala-Archa 24.89 258 LR LR 23 48 23.9
comp=Z,42nm,19.5s,baz=44,slow=40
BILL Bilibino 30.50 39 *e*P **P 23 38 02.3 +0.9**
BILL *e* 23 39 01.3
BILL pmax pmax
comp=Z,1.0nm,1.0s
GEYT Alibeck 37.58 267 LR LR 23 55 35.5
comp=Z,91nm,18.3s,baz=340,slow=38
ARCES ARCESS Array B 39.20 326 LR LR 23 59 57.5
comp=Z,31nm,20.8s,baz=270,slow=43
FINES FINESS Array B 42.27 315 LR LR 23 58 35.0
comp=Z,64nm,18.5s,baz=56,slow=38
AKASG Malin Array Be 46.46 300 LR LR 00 01 21.8
comp=Z,45nm,18.9s,baz=0.0,slow=38
AKASG Malin Array Be 46.46 300 *i* P **P 23 40 15.1 -0.3**
AKASG pmax pmax
comp=Z,1.0nm,0.2s
ILAR Eielson Array 48.86 33 P **P 23 40 33.2 -0.6**
comp=Z,0.8nm,0.9s,baz=300,slow=6.7,SNR=5.9
YKA Yellowknife Ar 59.65 22 P **P 23 41 51.1 -1.4**
comp=Z,0.4nm,0.8s,baz=332,slow=6.3,SNR=6.9
YKA Yellowknife Ar 59.65 22 *i* P **P 23 41 51.7 -0.8**
YKA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 76.33 155 P **P 23 43 37.4 -0.4**
comp=Z,0.5nm,0.6s,baz=347,slow=5.8,SNR=1.6
ASAR Alice Springs 79.80 156 P **P 23 43 57.6 +0.7**
comp=Z,0.3nm,0.6s,baz=353,slow=4.8,SNR=2.2
NVAR Mina Array Bea 80.06 36 LR LR 00 23 32.2
comp=Z,60nm,20.3s,baz=312,slow=39

*TAP **20** 23:49:09.2,23.91N×122.59E,h33km±1km,ML3.0,D*
*JMA **20** 23:49:10.0±0.3,23.94N×122.47E,h20km±5km,M2.4*
ISC 20 23:49:09.3±1.0,**23.87N**±0.03×**122.50E**±0.02,**h31**km±12km,
n72,σ0s**78**/118,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.71**	**35**	P		**23 49 23.0**	**-0.2**
JYNG				*e*S		**23 49 30.8**	**-1.8**
YOJ	**Yonaguni jima**	**0.75**	**39**	P		**23 49 23.7**	**-0.1**
YOJ				*e*S		**23 49 32.8**	**-1.0**
YOJ	**Yonaguni jima**	**0.75**	**39**	P		**23 49 22.0**	**-1.8**
	baz=34						
YOJ				*e*S		**23 49 32.3**	**-1.5**
	baz=34						
TWD	**Chiawan**	**0.85**	**284**	*e*P		**23 49 26.8**	**+1.2**
	baz=281						
TWD				*e*S		**23 49 36.0**	**-0.6**
	baz=281						
EWUT	**Wuta**	**0.87**	**311**	P		**23 49 25.9**	**0.0**
	baz=306						
EWUT				*e*S		**23 49 37.6**	**+0.4**
	baz=306						
NACB	**Ninganchiao**	**0.88**	**290**	*i* P		**23 49 25.6**	**-0.4**
	baz=273						
NACB				*e*S		**23 49 36.5**	**-0.8**
	baz=273						
TWC	**Suao**	**0.94**	**321**	P		**23 49 26.7**	**-0.4**
	baz=306						
TWC				S		**23 49 39.6**	**+0.4**
	baz=306						
ESL	**Shilin**	**0.98**	**267**	P		**23 49 26.8**	**-0.1**
	baz=255						
ESL				S		**23 49 39.6**	**-0.6**
	baz=255						
ETLH	**Xiulin Townshi**	**0.99**	**290**	P		**23 49 27.8**	**-0.1**
	baz=276						
ETLH				*e*S		**23 49 40.6**	**0.0**
	baz=276						
EGFH	**Guangfu**	**1.00**	**259**	*e*P		**23 49 28.2**	**+0.1**
	baz=257						
EGFH				*e*S		**23 49 41.6**	**+0.7**
	baz=257						
NDS	**Dongshan**	**1.04**	**317**	P		**23 49 28.6**	**-0.2**
	baz=312						
NDS				*e*S		**23 49 43.0**	**+0.9**
	baz=312						
HGSD	**Ruisui**	**1.05**	**249**	*e*P		**23 49 27.6**	**-0.4**
	baz=248						
HGSD				*e*S		**23 49 42.3**	**-0.2**
	baz=248						
TWE	**Neicheng**	**1.14**	**318**	P		**23 49 30.6**	**+0.3**
	baz=314						
ENTT	**Nioudou**	**1.14**	**312**	P		**23 49 30.4**	**-0.1**
	baz=295						
ENTT				*e*S		**23 49 45.9**	**+0.8**
	baz=295						
NTC	**Toucheng**	**1.15**	**328**	P		**23 49 30.6**	**0.0**
	baz=323						
NDT	**Datong Townshi**	**1.16**	**309**	P		**23 49 30.6**	**-0.1**
	baz=305						
NDT				*e*S		**23 49 45.9**	**+0.6**
	baz=305						
NNSB	**Datong**	**1.16**	**299**	P		**23 49 30.6**	**-0.3**
	baz=284						
NNSB				*e*S		**23 49 45.8**	**+0.2**
	baz=284						
NNSH	**Datong**	**1.16**	**299**	P		**23 49 30.5**	**-0.3**
	baz=285						
NNSH				*e*S		**23 49 46.0**	**+0.4**
	baz=285						
WHF	**Hehuan Shan**	**1.16**	**284**	P		**23 49 30.4**	**-0.7**
	baz=281						
WHF				*e*S		**23 49 46.6**	**+0.7**
	baz=281						
NNS	**Nan Shan**	**1.17**	**299**	P		**23 49 31.0**	**0.0**
	baz=285						
NNS				*e*S		**23 49 45.5**	**-0.5**
	baz=285						
YULB	**Yu-li**	**1.20**	**247**	P		**23 49 31.1**	**-0.4**
	baz=246						
YULB				*e*S		**23 49 46.4**	**-0.3**
	baz=246						
EYUL	**Yuli**	**1.20**	**244**	P		**23 49 30.2**	**+0.2**
	baz=244						
EYUL				*e*S		**23 49 46.2**	**-0.4**
	baz=244						
FUSS	**Fushou**	**1.21**	**288**	P		**23 49 31.6**	**-0.1**
	baz=285						
FUSS				*e*S		**23 49 47.3**	**+0.3**
	baz=285						
HATJ	**Hateruma jima**	**1.21**	**81**	*e*S		**23 49 47.5**	**+0.6**
OWD	**Renai**	**1.21**	**274**	P		**23 49 30.9**	**-0.8**
	baz=272						
OWD				*e*S		**23 49 46.1**	**-1.0**
	baz=272						
IRIF	**Iriomote-Funau**	**1.22**	**68**	P		**23 49 32.2**	**+0.5**
IRIF				*e*S		**23 49 48.8**	**+1.7**
TWB1	**Santiao Chiao**	**1.22**	**338**	*e*P		**23 49 30.4**	**+0.1**
	baz=333						
CHGB	**Renai**	**1.23**	**279**	P		**23 49 31.6**	**-0.4**
	baz=267						
CHGB				*e*S		**23 49 45.9**	**-0.2**
	baz=267						
VWDT	**VWDT**	**1.25**	**265**	P		**23 49 31.6**	**-0.6**
	baz=263						
VWDT				*e*S		**23 49 47.7**	**-0.3**
	baz=263						
TIPB	**Shuangxi**	**1.25**	**331**	P		**23 49 32.2**	**-0.1**
	baz=326						
TIPB				*e*S		**23 49 48.2**	**0.0**
	baz=326						
NWLT	**Wulai**	**1.28**	**315**	P		**23 49 32.3**	**-0.5**
	baz=299						
NWLT				*e*S		**23 49 49.2**	**+0.4**
	baz=299						
TDCB	**Techi**	**1.28**	**287**	P		**23 49 32.4**	**-0.5**
	baz=275						
TDCB				*e*S		**23 49 49.0**	**-0.1**
	baz=275						
FULB	**Fuli**	**1.29**	**239**	*e*P		**23 49 31.3**	**0.0**
	baz=229						
FULB				*e*S		**23 49 47.8**	**+0.2**
	baz=229						
CHKT	**Chengkung**	**1.29**	**234**	*e*P		**23 49 32.8**	**-0.3**
	baz=224						
CHKT				*e*S		**23 49 47.3**	**-0.2**
	baz=224						
YHNB	**Yeheng**	**1.29**	**308**	P		**23 49 32.7**	**-0.4**
	baz=293						
YHNB				*e*S		**23 49 50.4**	**+1.0**
	baz=293						
NSK	**Sanguang**	**1.31**	**308**	P		**23 49 32.6**	**-0.8**
	baz=304						
NSK				*e*S		**23 49 48.3**	**+0.2**
	baz=304						
WFSB	**Wu-fen Shan**	**1.36**	**331**	*e*P		**23 49 33.0**	**-1.1**
	baz=327						
EDH	**Donghe**	**1.42**	**231**	*e*P		**23 49 33.9**	**-1.2**
	baz=223						
EDH				*e*S		**23 49 50.3**	**-0.2**
	baz=223						
SSLB	**Suanglung**	**1.42**	**267**	*e*P		**23 49 34.3**	**-0.8**
	baz=265						
JKRS	**Kuro-shima**	**1.43**	**75**	P		**23 49 37.5**	**+2.2**
JKRS				*e*S		**23 49 54.6**	**+1.5**
TATO	**Taipei**	**1.43**	**320**	*e*P		**23 49 35.0**	**-0.4**
	baz=332						
DPDB	**Guoxing**	**1.45**	**277**	*e*P		**23 49 35.1**	**-0.6**
	baz=275						
SMLT	**Sun Moon Lake**	**1.46**	**271**	*e*P		**23 49 35.3**	**-0.6**
	baz=269						
SMLT				*e*S		**23 49 53.9**	**-0.3**
	baz=269						
WHP	**Taichung City**	**1.48**	**286**	*e*P		**23 49 36.4**	**+0.2**
	baz=283						
WHP				*e*S		**23 49 54.9**	**+0.3**
	baz=283						
TYC	**Yuchr**	**1.50**	**272**	*e*P		**23 49 35.5**	**-1.1**
	baz=270						
LDUT	**Ludao**	**1.52**	**219**	*e*P		**23 49 34.9**	**+0.5**
	baz=219						
LDUT				*e*S		**23 49 52.5**	**-0.7**
	baz=219						
YM01	**YM01**	**1.52**	**327**	*e*P		**23 49 36.1**	**-0.8**
	baz=323						
YM10	**YM10**	**1.54**	**326**	*e*P		**23 49 36.8**	**-0.3**
	baz=323						
YM11	**YM11**	**1.54**	**327**	*e*P		**23 49 36.9**	**-0.3**
	baz=323						
YM05	**YM05**	**1.54**	**327**	*e*P		**23 49 37.2**	**-0.1**
	baz=323						
YM04	**YM04**	**1.55**	**326**	*e*P		**23 49 36.6**	**-0.7**
	baz=322						
EMEI	**Emei**	**1.56**	**300**	P		**23 49 37.4**	**-0.1**
	baz=297						
LIOB				*e*S		**23 49 57.5**	**+0.7**
	baz=297						
NSTT	**Nanjuang**	**1.56**	**299**	*e*P		**23 49 37.6**	**0.0**
	baz=296						
JIJ	**Ishigaki jima**	**1.58**	**72**	P		**23 49 37.6**	**-0.3**
JIJ				*e*S		**23 49 57.4**	**-0.1**
LONT	**Longtian**	**1.58**	**233**	*e*P		**23 49 36.2**	**+0.9**
	baz=225						
LONT				*e*S		**23 49 56.1**	**-1.5**
	baz=225						
ALS	**Alishan**	**1.59**	**257**	P		**23 49 37.8**	**-0.5**
	baz=255						
ALS				*e*S		**23 49 57.4**	**-0.8**
	baz=255						
WWF	**Wufeng**	**1.66**	**276**	*e*P		**23 49 40.1**	**+0.9**
	baz=266						
TWGBT	**Beinan**	**1.67**	**231**	*e*P		**23 49 36.8**	**+0.3**
	baz=242						
TWG	**Pinlang**	**1.68**	**232**	*e*P		**23 49 38.0**	**-1.5**
	baz=222						
TWG				*e*S		**23 49 57.3**	**+0.3**
	baz=222						
JISG	**Ishigakijimahi**	**1.80**	**66**	P		**23 49 41.0**	**-0.6**
JISG				*e*S		**23 50 02.6**	**-1.2**
WDLH	**Douliu**	**1.81**	**265**	*e*P		**23 49 41.4**	**-0.3**
	baz=263						
TPUB	**Ta-pu**	**1.81**	**252**	*e*P		**23 49 38.9**	**+0.5**
	baz=242						
WTP	**Ta-pu**	**1.84**	**251**	*e*P		**23 49 41.5**	**-0.8**
	baz=242						
WTP				*e*S		**23 50 05.8**	**+0.9**
	baz=242						
CHN1	**Nanshi**	**1.93**	**250**	*e*P		**23 49 43.8**	**-0.1**
	baz=248						
CHN1				*e*S		**23 50 08.9**	**+1.3**
	baz=248						
TWK	**Hsinying**	**1.94**	**252**	*e*P		**23 49 42.5**	**-1.5**
	baz=250						
TWK				*e*S		**23 50 07.8**	**0.0**
	baz=250						
LAY	**Lan-yu**	**2.02**	**206**	*e*P		**23 49 42.6**	**+1.3**
	baz=207						
CHN3	**Shinhua**	**2.11**	**248**	*e*P		**23 49 47.0**	**+0.1**
	baz=247						
MASBT	**Mashibuluo**	**2.13**	**234**	*e*P		**23 49 45.0**	**-2.1**
	baz=228						
SLIU	**Shizi**	**2.27**	**224**	*e*P		**23 49 46.0**	**+1.2**
	baz=232						
WDGT	**Dungji**	**2.67**	**257**	*e*P		**23 49 52.3**	**+2.1**
	baz=256						
PTMZ	**Houxiangcun**	**3.29**	**291**	*e*P		**23 49 59.9**	**+1.2**
	baz=290						
XPSS	**Dashiqiu**	**3.69**	**326**	*e*P		**23 50 04.4**	**+0.2**
	baz=324						

*IDC **20** 23:51:03.7±33.0,23.93N×123.17E,h0km,mb3.7/3,*
mb1 3.6/4,mb1mx3.3/33,mbtmp3.6/4,ML3.4/1,MS3.0/3,
Ms1 3.0/3,ms1mx2.6/42,Error ellipse: s-maj=574.7km
s-min=73.3km az=142.0
*JMA **20** 23:51:12.5±0.2,23.97N×122.44E,h21km±4km,M3.5*
*TAP **20** 23:51:13.0,24.02N×122.46E,h33km±1km,ML3.7,D*
ISC 20 23:51:12.6±1.0,**23.98N**±0.02×**122.44E**±0.02,**h32**km±9km,
n118,σ1s**03**/182,**mb3.7**/3,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.65**	**44**	P		**23 51 25.3**	**-0.3**
JYNG				*e*S		**23 51 33.6**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**47**	P		**23 51 26.2**	**-0.1**
YOJ				*e*S		**23 51 35.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**47**	*i* P		**23 51 26.3**	**-0.1**
	baz=48						
YOJ				*i* S		**23 51 34.9**	**-1.1**
	baz=48						
EWUT	**Wuta**	**0.76**	**307**	*e*P		**23 51 26.9**	**-0.2**
	baz=304						
EWUT				*e*S		**23 51 37.2**	**-0.3**
	baz=304						
HWA	**Hwalien**	**0.77**	**270**	*e*P		**23 51 28.1**	**+0.6**
	baz=255						
TWD	**Chiawan**	**0.78**	**277**	*e*P		**23 51 27.9**	**+0.6**
	baz=274						
TWD				*e*S		**23 51 39.3**	**+1.3**
	baz=274						
NACB	**Ninganchiao**	**0.80**	**284**	*e*P		**23 51 27.5**	**-0.1**
	baz=268						
NACB				*e*S		**23 51 38.7**	**+0.3**
	baz=268						
TWC	**Suao**	**0.83**	**319**	P		**23 51 27.6**	**-0.4**
	baz=317						
TWC				*e*S		**23 51 38.6**	**-0.5**
	baz=317						
ETLH	**Xiulin Townshi**	**0.91**	**284**	P		**23 51 29.4**	**+0.2**
	baz=270						
ETLH				*e*S		**23 51 41.6**	**+0.3**
	baz=270						
NDS	**Dongshan**	**0.93**	**314**	*e*P		**23 51 30.1**	**-0.1**
	baz=312						
NDS				*e*S		**23 51 43.7**	**+1.5**
	baz=312						
ESL	**Shilin**	**0.94**	**260**	*e*P		**23 51 28.9**	**-0.7**
	baz=248						
ESL				*e*S		**23 51 40.9**	**-1.0**
	baz=248						
EGFH	**Guangfu**	**0.98**	**252**	P		**23 51 30.1**	**-0.1**
	baz=249						
EGFH				*e*S		**23 51 43.9**	**+0.9**
	baz=249						
TWE	**Neicheng**	**1.02**	**316**	*e*P		**23 51 31.4**	**-0.3**
	baz=315						
TWE				*e*S		**23 51 45.0**	**+0.1**
	baz=315						
NTC	**Toucheng**	**1.03**	**327**	P		**23 51 31.7**	**-0.2**
	baz=325						
NTC				*e*S		**23 51 45.9**	**+0.7**
	baz=325						
ENTT	**Nioudou**	**1.03**	**309**	P		**23 51 31.6**	**+0.7**
	baz=294						
ENTT				*e*S		**23 51 44.2**	**0.0**
	baz=294						
NDT	**Datong Townshi**	**1.05**	**306**	P		**23 51 31.9**	**+0.8**
	baz=292						
NDT				*e*S		**23 51 46.0**	**+0.3**
	baz=292						
HGSD	**Ruisui**	**1.05**	**243**	P		**23 51 30.9**	**-0.2**
	baz=240						
HGSD				*e*S		**23 51 45.0**	**+0.2**
	baz=240						
NNSB	**Datong**	**1.06**	**295**	P		**23 51 31.9**	**+0.5**
	baz=282						
NNSB				*e*S		**23 51 45.8**	**+0.6**
	baz=282						
NNSH	**Datong**	**1.06**	**295**	*i* P		**23 51 31.9**	**+0.5**
	baz=282						
NNSH				*e*S		**23 51 46.0**	**+0.8**
	baz=282						
NNS	**Nan Shan**	**1.08**	**295**	P		**23 51 32.3**	**+0.7**
	baz=282						
NNS				*e*S		**23 51 46.0**	**+0.4**
	baz=282						
WHF	**Hehuan Shan**	**1.09**	**279**	*e*P		**23 51 32.5**	**+0.5**
	baz=265						
WHF				*e*S		**23 51 45.4**	**-0.8**
	baz=265						
TWB1	**Santiao Chiao**	**1.10**	**338**	P		**23 51 32.4**	**+0.6**
	baz=352						
TWB1				*e*S		**23 51 46.6**	**-0.6**
	baz=352						
FUSS	**Fushou**	**1.13**	**284**	P		**23 51 33.2**	**+0.8**
	baz=281						
FUSS				*e*S		**23 51 48.2**	**+0.1**
	baz=281						
TIPB	**Shuangxi**	**1.13**	**330**	P		**23 51 33.1**	**-0.6**
	baz=329						
TIPB				*e*S		**23 51 48.4**	**+0.3**
	baz=329						
OWD	**Renai**	**1.16**	**269**	P		**23 51 33.3**	**+0.6**
	baz=266						
OWD				*e*S		**23 51 47.8**	**+0.3**
	baz=266						
CHGB	**Renai**	**1.16**	**274**	P		**23 51 33.1**	**+0.2**
	baz=262						
CHGB				*e*S		**23 51 48.7**	**+0.9**
	baz=262						
NWLT	**Wulai**	**1.17**	**313**	P		**23 51 33.8**	**-0.4**
	baz=311						
YHNB	**Yeheng**	**1.19**	**305**	*i* P		**23 51 34.2**	**-0.4**
	baz=292						
YHNB				*e*S		**23 51 51.0**	**+1.2**
	baz=292						
TDCB	**Techi**	**1.20**	**283**	P		**23 51 34.3**	**+0.9**
	baz=270						
TDCB				*e*S		**23 51 50.0**	**-0.3**
	baz=270						
YULB	**Yu-li**	**1.20**	**241**	P		**23 51 33.5**	**+0.2**
	baz=228						
YULB				*e*S		**23 51 48.6**	**+0.1**
	baz=228						
NSK	**Sanguang**	**1.21**	**305**	P		**23 51 34.3**	**+1.0**
	baz=292						
NSK				*e*S		**23 51 48.6**	**0.0**
	baz=292						
EYUL	**Yuli**	**1.21**	**239**	*e*P		**23 51 33.5**	**+0.2**
	baz=237						
EYUL				*e*S		**23 51 48.7**	**+0.1**
	baz=237						
VWDT	**VWDT**	**1.21**	**259**	P		**23 51 33.9**	**+0.6**
	baz=257						
VWDT				*e*S		**23 51 49.2**	**+0.5**
	baz=257						
IRIF	**Iriomote-Funau**	**1.23**	**73**	P		**23 51 34.8**	**-0.4**
IRIF				S		**23 51 51.3**	**+0.6**
NWF	**Wu-fen Shan**	**1.24**	**331**	*e*P		**23 51 34.4**	**+0.7**
	baz=329						
WFSB	**Wu-fen Shan**	**1.24**	**331**	P		**23 51 34.4**	**+0.7**
	baz=330						
WFSB				*e*S		**23 51 50.1**	**-1.0**
	baz=330						
HATJ	**Hateruma jima**	**1.25**	**86**	P		**23 51 35.3**	**-0.3**
HATJ				*e*S		**23 51 51.5**	**+0.2**
NHDH	**Xindian Distri**	**1.28**	**320**	*e*P		**23 51 36.0**	**-0.2**
	baz=318						
NHDH				*e*S		**23 51 54.1**	**+1.7**
	baz=318						
FULB	**Fuli**	**1.31**	**234**	*e*P		**23 51 34.6**	**-0.1**
	baz=221						
FULB				*e*S		**23 51 50.8**	**-0.3**

	baz=221							
TNOU	**National Taiwa**	**1.31**	**332**	*e*P	**Pn**	**23 51 35.0**	**+0.4**	
	baz=331							
TNOU				S	**Sb**	**23 51 52.8**	**-0.4**	
	baz=331							
TATO	**Taipei**	**1.32**	**319**	*e*P	**Pb**	**23 51 36.4**	**-0.3**	
	baz=317							
TATO				*e*S	**Sb**	**23 51 53.3**	**0.0**	
	baz=317							
CHKT	**Chengkung**	**1.32**	**229**	*e*P	**Pn**	**23 51 34.6**	**-0.2**	
	baz=217							
CHKT				*e*S	**Sn**	**23 51 50.4**	**-1.0**	
	baz=217							
WPL	**Puli Township**	**1.36**	**271**	*e*P	**Pn**	**23 51 36.3**	**+1.0**	
	baz=269							
SSLB	**Suanglung**	**1.38**	**262**	*e*P	**Pb**	**23 51 37.5**	**-0.3**	
	baz=260							
DPDB	**Guoxing**	**1.39**	**272**	*e*P	**Pb**	**23 51 37.5**	**-0.5**	
	baz=262							
DPDB				*e*S	**Sn**	**23 51 54.0**	**+0.9**	
	baz=262							
WHP	**Taichung City**	**1.40**	**282**	*e*P	**Pb**	**23 51 37.9**	**-0.3**	
	baz=269							
WHP				*e*S	**Sn**	**23 51 54.9**	**+1.6**	
	baz=269							
WCS	**Beigang Elemen**	**1.40**	**273**	*e*P	**Pn**	**23 51 37.2**	**+1.3**	
	baz=263							
WCS				*e*S	**Sn**	**23 51 55.0**	**+1.6**	
	baz=263							
YM01	**YM01**	**1.40**	**326**	*e*P	**Pb**	**23 51 37.6**	**-0.7**	
	baz=324							
YM01				*e*S	**Sb**	**23 51 55.8**	**0.0**	
	baz=324							
SMLT	**Sun Moon Lake**	**1.42**	**266**	*e*P	**Pn**	**23 51 37.3**	**+1.1**	
	baz=264							
SMLT				*e*S	**Sn**	**23 51 55.3**	**+1.5**	
	baz=264							
YM10	**YM10**	**1.42**	**326**	*e*P	**Pn**	**23 51 36.7**	**+0.5**	
	baz=324							
YM11	**YM11**	**1.42**	**326**	*e*P	**Pn**	**23 51 37.1**	**+0.9**	
	baz=324							
YM04	**YM04**	**1.43**	**325**	*e*P	**Pn**	**23 51 35.7**	**-0.6**	
	baz=323							
YM08	**YM08**	**1.43**	**327**	*e*P	**Pn**	**23 51 36.1**	**-0.2**	
	baz=325							
YM03	**YM03**	**1.45**	**326**	*e*P	**Pn**	**23 51 35.6**	**-1.0**	
	baz=324							
EDH	**Donghe**	**1.45**	**226**	P	**Pn**	**23 51 36.6**	**0.0**	
	baz=216							
EDH				*e*S	**Sn**	**23 51 53.2**	**-1.3**	
	baz=216							
TWS1	**Kuangyinshan**	**1.45**	**320**	*e*P	**Pn**	**23 51 37.3**	**+0.7**	
	baz=335							
JKRS	**Kuro-shima**	**1.45**	**80**	P	**Pb**	**23 51 38.4**	**-0.6**	
JKRS				S	**Sb**	**23 51 56.8**	**-0.4**	
TYC	**Yuchr**	**1.45**	**267**	P	**Pn**	**23 51 37.9**	**+1.3**	
	baz=265							
TYC				*e*S	**Sn**	**23 51 55.5**	**+0.9**	
	baz=265							
LIOB	**Emei**	**1.46**	**297**	*e*P	**Pb**	**23 51 38.7**	**-0.5**	
	baz=295							
ANP	**Anpu**	**1.46**	**325**	*e*P	**Pb**	**23 51 38.2**	**-1.1**	
	baz=324							
NSTT	**Nanjuang**	**1.47**	**296**	*e*P	**Pn**	**23 51 38.0**	**+1.2**	
	baz=294							
TWY	**Chenhua**	**1.50**	**329**	*e*P	**Pb**	**23 51 39.1**	**-0.7**	
	baz=328							
NCUH	**Zhongli**	**1.51**	**311**	*e*P	**Pn**	**23 51 37.8**	**+0.4**	
	baz=308							
ALS	**Alishan**	**1.57**	**253**	*e*P	**Pn**	**23 51 39.6**	**+1.1**	
	baz=250							
ALS				*e*S	**Sn**	**23 51 58.7**	**+0.7**	
	baz=250							
LDUT	**Ludao**	**1.58**	**215**	*e*P	**Pn**	**23 51 38.2**	**-0.2**	
	baz=213							
LDUT				*e*S	**Sn**	**23 51 56.0**	**-1.7**	
	baz=213							
WWF	**Wufeng**	**1.60**	**272**	*e*P	**Pb**	**23 51 41.2**	**-0.2**	
	baz=270							
WWF				*e*S	**Sb**	**23 52 02.6**	**+1.3**	
	baz=270							
JIJ	**Ishigaki jima**	**1.60**	**76**	P	**Pn**	**23 51 39.8**	**+1.2**	
JIJ				*e*S	**Sb**	**23 51 59.6**	**-1.7**	
WNT	**Mingjian**	**1.61**	**267**	*e*P	**Pb**	**23 51 41.9**	**+0.1**	
	baz=264							
WNT				*e*S	**Sb**	**23 52 02.4**	**+0.6**	
	baz=264							
LONT	**Longtian**	**1.61**	**229**	*e*P	**Pn**	**23 51 39.2**	**+0.4**	
	baz=219							
LONT				*e*S	**Sn**	**23 51 58.6**	**+0.1**	
	baz=219							
WNT1	**Nantou City**	**1.61**	**268**	*e*P	**Pn**	**23 51 40.1**	**+1.3**	
	baz=266							
TCU	**Taichung**	**1.62**	**276**	*e*P	**Pb**	**23 51 41.4**	**-0.5**	
	baz=273							
TCU				*e*S	**Sb**	**23 52 03.0**	**+0.9**	
	baz=273							
CHN5	**Tsauling**	**1.66**	**257**	*e*P	**Pb**	**23 51 42.2**	**-0.4**	
	baz=245							
CHN5				*e*S	**Sb**	**23 52 03.0**	**-0.2**	
	baz=245							
TWGBT	**Beinan**	**1.71**	**227**	*e*P	**Pn**	**23 51 40.1**	**-0.1**	
	baz=238							
TWGBT				*e*S	**Sn**	**23 52 00.7**	**-0.2**	
	baz=238							
TWG	**Pinlang**	**1.71**	**228**	*e*P	**Pn**	**23 51 40.1**	**0.0**	
	baz=238							
TWG				*e*S	**Sn**	**23 52 00.6**	**-0.3**	
	baz=238							
STYH	**Taoyuan**	**1.73**	**242**	*e*P	**Pn**	**23 51 41.9**	**+1.5**	
	baz=231							
STYT	**Tauyuan**	**1.75**	**243**	*e*P	**Pn**	**23 51 42.2**	**+1.4**	
	baz=232							
STYT				*e*S	**Sn**	**23 52 03.9**	**+1.9**	
	baz=232							
WDLH	**Douliu**	**1.77**	**261**	*e*P	**Pb**	**23 51 44.6**	**+0.2**	
	baz=259							
TPUB	**Ta-pu**	**1.80**	**248**	*e*P	**Pn**	**23 51 43.3**	**+1.9**	
	baz=246							
TPUB				*e*S	**Sn**	**23 52 05.7**	**+2.6**	
	baz=246							
JISG	**Ishigakijimahi**	**1.81**	**70**	P	**Pn**	**23 51 42.5**	**+1.0**	
JISG				*e*S	**Sn**	**23 52 04.3**	**+1.0**	
WTP	**Ta-pu**	**1.83**	**247**	*e*P	**Pn**	**23 51 43.6**	**+1.7**	
	baz=244							
WTP				*e*S	**Sn**	**23 52 05.8**	**+1.8**	
	baz=244							
WTK	**Tuku**	**1.90**	**262**	*e*P	**Pb**	**23 51 45.6**	**-1.1**	
	baz=260							
SLGT	**Liugui**	**1.92**	**240**	*e*P	**Pb**	**23 51 45.9**	**-1.1**	
	baz=230							
CHN1	**Nanshi**	**1.93**	**246**	P	**Pb**	**23 51 46.4**	**-0.8**	
	baz=244							
CHN1				*e*S	**Sb**	**23 52 10.3**	**-0.5**	
	baz=244							
SGST	**Jiashian**	**1.93**	**243**	*e*P	**Pn**	**23 51 45.3**	**+2.1**	
	baz=232							
SGST				*e*S	**Sn**	**23 52 09.6**	**+3.2**	
	baz=232							
TWK	**Hsinying**	**1.93**	**249**	P	**Pn**	**23 51 45.9**	**+2.6**	
	baz=246							
TWK				*e*S	**Sb**	**23 52 10.2**	**-0.7**	
	baz=246							
ECL	**Taimali**	**1.94**	**225**	*e*P	**Pn**	**23 51 43.2**	**-0.2**	
	baz=234							
SSD	**Sandimen**	**2.07**	**234**	*e*P	**Pn**	**23 51 46.2**	**+1.0**	
	baz=226							
TSMG	**Majia**	**2.09**	**233**	*e*P	**Pn**	**23 51 47.8**	**+2.4**	
	baz=225							
SCST	**Cishan**	**2.10**	**239**	*e*P	**Pb**	**23 51 49.2**	**-0.7**	
	baz=238							
LAY	**Lan-yu**	**2.10**	**203**	*e*P	**Pn**	**23 51 45.9**	**+0.3**	
	baz=202							
MASBT	**Mashibuluo**	**2.15**	**231**	*e*P	**Pn**	**23 51 47.4**	**+1.1**	
	baz=225							
MASBT				*e*S	**Sn**	**23 52 12.6**	**+0.7**	
	baz=225							
JTJ	**Tarama**	**2.16**	**72**	P	**Pn**	**23 51 48.4**	**+2.0**	
JTJ				S	**Sn**	**23 52 13.9**	**+1.8**	
EAST	**Anshuo**	**2.17**	**223**	*e*P	**Pn**	**23 51 46.8**	**+0.3**	
	baz=222							
SSPT	**Xinbi**	**2.28**	**229**	*e*P	**Pn**	**23 51 51.3**	**+3.3**	
	baz=223							
SCZT	**Fangliau**	**2.32**	**227**	*e*P	**Pn**	**23 51 50.8**	**+2.2**	
	baz=225							
SLIU	**Shizi**	**2.32**	**221**	*e*P	**Pn**	**23 51 49.0**	**+0.4**	
	baz=228							
TWKBT	**Hengchun**	**2.53**	**217**	*e*P	**Pn**	**23 51 51.3**	**-0.1**	
	baz=215							
TWK1	**Hengchun**	**2.53**	**217**	*e*P	**Pn**	**23 51 52.2**	**+0.8**	
	baz=215							
JIRB	**Irabujima**	**2.63**	**71**	P	**Pn**	**23 51 55.0**	**+2.2**	
JIRB				*e*S	**Sn**	**23 52 24.4**	**+0.8**	
WDGT	**Dungji**	**2.65**	**255**	*e*P	**Pn**	**23 51 55.0**	**+1.9**	
	baz=241							
WDGT				*e*S	**Sn**	**23 52 25.4**	**+1.2**	
	baz=241							
PNG	**Penghu**	**2.68**	**262**	*e*P	**Pn**	**23 51 54.0**	**+0.5**	
	baz=261							
JIKM	**Ikemajima**	**2.72**	**69**	P	**Pn**	**23 51 57.0**	**+2.9**	
JMJ2	**Miyako jima3**	**2.74**	**73**	*e*S	**Sn**	**23 52 28.7**	**+2.4**	
VWUC	**VWUC**	**2.91**	**291**	*e*P	**Pn**	**23 51 56.9**	**+0.3**	
	baz=288							
MATB	**Ma-tsu**	**3.13**	**314**	*e*P	**Pn**	**23 52 00.6**	**+0.9**	
	baz=299							
PTMZ	**Houxiangcun**	**3.20**	**290**	*e*P	**Pn**	**23 52 01.1**	**+0.4**	
	baz=287							
LYJJ	**Jianjiangzhen**	**3.53**	**317**	*e*P	**Pn**	**23 52 05.3**	**+0.2**	
	baz=314							
XPSS	**Dashiqiu**	**3.57**	**326**	*e*P	**Pn**	**23 52 06.1**	**+0.4**	
	baz=323							
KNMB	**Chin-men Tao**	**3.73**	**278**	*e*P	**Pn**	**23 52 08.3**	**+0.3**	
	baz=277							
MHZQ	**Yeshan**	**3.75**	**305**	*e*P	**Pn**	**23 52 08.0**	**-0.1**	
	baz=302							
AXDP	**Jialang**	**4.18**	**284**	*e*P	**Pn**	**23 52 14.5**	**+0.4**	
	baz=280							
KSRS	**Korea Array**	**14.22**	**18**	Pn	Pn	23 54 25.4	-6.3	
	0.2nm,0.3s,baz=191,slow=14,SNR=1.8							
MJAR	**Matsushiro Arr**	**18.46**	**44**	LR	LR	00 02 46.6		
	comp=Z,27nm,19.0s,baz=20,slow=39							
KLR	**Kul'dur**	**26.24**	**14**	LR	LR	00 06 22.9		
	comp=Z,18nm,19.2s,baz=209,slow=35							
SONM	**Songino Array**	**27.01**	**336**	P	**P**	**23 56 49.3**	**-2.4**	
	0.5nm,0.7s,baz=148,slow=8.5,SNR=2.3							
MKAR	**Makanchi Array**	**39.28**	**316**	P	**P**	**23 58 38.7**	**+0.3**	
	0.8nm,0.5s,baz=102,slow=9.8,SNR=16							
ZALV	**Zalesovo Beam**	**41.04**	**327**	P	**P**	**23 58 52.1**	**-0.6**	
	0.9nm,0.6s,baz=115,slow=9.0,SNR=3.9							
PDAR	**Pinedale Array**	**98.12**	**36**	LR	LR	00 51 43.4		
	comp=Z,20nm,18.3s,baz=151,slow=37							

*KRNET **20** 23:53:36.7±0.1, 42.˚85N×78.˚99E, h26km, mb2.3*
*SOME **20** 23:53:36.0, 42.˚77N×79.˚00E, h10km*
*NNC **20** 23:53:36.2±0.5, 42.˚80N×79.˚02E, h3km±2km, mb2.7, mpv2.4, Error ellipse: s-maj=3.8km s-min=1.7km az=172.0*

ISC 20 23:53:37.5±1.3, 42.˚83N±0.˚04×78.˚89E±0.˚03, h6km±10km, n23, σ1§36/44, 10C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
UZB	**Uzynbulak**	**0.33**	**17**	*e*P		**Pg**	**23 53 43.5**	**-0.6**
	baz=5.0							
UZB				*e*S		**Sg**	**23 53 48.8**	**+0.3**
	baz=5.0							
UZB	**Uzynbulak**	**0.33**	**17**	*e*P		**Pg**	**23 53 43.5**	**-0.6**
	7.9nm,0.1s							
UZB				*e*S		**Sg**	**23 53 48.8**	**+0.3**
	9.0nm,0.2s							
UZB	**Uzynbulak**	**0.33**	**17**	P		**Pg**	**23 53 43.4**	**-0.6**
	7.9nm,0.1s							
UZB				S		**Sg**	**23 53 48.9**	**+0.3**
	9.0nm,0.2s							
SATY	**Saty**	**0.42**	**303**	*e*P		**Pg**	**23 53 46.5**	**+0.8**
	baz=97							
SATY				*e*S		**Sb**	**23 53 54.2**	**0.0**
	baz=97							
SATY	**Saty**	**0.42**	**303**	*e*P		**Pg**	**23 53 46.5**	**+0.8**
	0.4nm,0.1s							
SATY				*e*S		**Sb**	**23 53 54.2**	**0.0**
	9.0nm,0.1s							
SATY	**Saty**	**0.42**	**303**	P		**Pg**	**23 53 46.5**	**+0.8**
	0.4nm,0.1s							
SATY				S		**Sb**	**23 53 54.2**	**0.0**
	9.0nm,0.1s							
PRZ	**Przheval'sk**	**0.50**	**226**	⇑*i*P		**Pb**	**23 53 48.5**	**-0.3**
	baz=31							
PRZ				⇑*i*S		**Sb**	**23 53 56.4**	**0.0**
	baz=31							
SHLS	**Shalkode**	**0.53**	**52**	*e*P		**Pn**	**23 53 50.7**	**-1.1**
	baz=65							
SHLS				*e*S		**Sb**	**23 54 01.6**	**+4.2**
	baz=65							
SHLS	**Shalkode**	**0.53**	**52**	*e*P		**Pn**	**23 53 50.6**	**-1.1**
	4.5nm,0.1s							
SHLS				*e*S		**Sb**	**23 54 01.6**	**+4.2**
	6.0nm,0.3s							
SHLS	**Shalkode**	**0.53**	**52**	P		**Pn**	**23 53 51.0**	**-0.8**
	4.5nm,0.1s							
SHLS				S		**Sb**	**23 54 01.7**	**+4.2**
	6.0nm,0.3s							
KPKS	**Kokpek**	**0.65**	**347**	*e*P		**Pg**	**23 53 49.8**	**-0.3**
	baz=40							
KPKS				*e*S		**Sb**	**23 53 59.9**	**-0.9**
	baz=40							
KPKS	**Kokpek**	**0.65**	**347**	*e*P		**Pg**	**23 53 49.8**	**-0.3**
	4.5nm,0.1s							
KPKS				*e*S		**Sb**	**23 53 59.9**	**-0.9**
	6.6nm,0.2s							
PDGK	**Podgornoye**	**0.67**	**41**	⇑P		**Pg**	**23 53 48.5**	**-1.9**
	0.9nm,0.4s							
PDGK				⇑S		**Sg**	**23 53 57.5**	**-1.6**
	1.7nm,0.5s							
ANVS	**Anan'yevo**	**0.90**	**267**	⇑*e*P		**Pg**	**23 53 55.2**	**+0.4**
	baz=67							
ANVS				⇑*i*S		**Sb**	**23 54 08.3**	**+0.3**
	baz=67							
KDJ	**Kajisay**	**1.44**	**242**	⇑*i*P		**Pb**	**23 54 03.9**	**-1.0**
	baz=42							
KDJ				⇑*i*S		**Sn**	**23 54 23.1**	**-0.6**
	baz=42							
ARXS	**Arharly**	**1.58**	**331**	*e*P		**Pb**	**23 54 06.9**	**-0.3**
	1.6nm,0.2s							
ARXS				*e*S		**Sg**	**23 54 29.3**	**+0.9**
	3.4nm,0.4s							
ARXS	**Arharly**	**1.58**	**331**	P		**Pb**	**23 54 06.9**	**-0.3**
	1.6nm,0.2s							
ARXS				S		**Sg**	**23 54 29.3**	**+0.9**
	3.4nm,0.4s							
KTBS	**Karatobe**	**1.84**	**299**	*e*P		**Pb**	**23 54 11.7**	**+0.1**
	0.3nm,0.2s							
KTBS				*e*S		**Sg**	**23 54 37.6**	**+1.0**
	4.6nm,0.4s							
KTBS	**Karatobe**	**1.84**	**299**	Pg		**Pb**	**23 54 11.7**	**+0.1**
	0.3nm,0.2s							
KTBS				Lg		Lg	23 54 37.6	
	4.6nm,0.4s							
ULHL	**Ulahol**	**2.04**	**254**	⇓*i*P		**Pn**	**23 54 12.4**	**-0.2**
	baz=54							
ULHL				⇓*i*S		**Sn**	**23 54 38.5**	**0.0**
	baz=54							
BOOM	**Boomskoye usch**	**2.20**	**262**	⇓*e*P		**Pn**	**23 54 14.3**	**-0.5**
	baz=62							
BOOM				⇓*i*S		**Sn**	**23 54 42.1**	**-0.3**
	baz=62							
TKM2	**Tokmak 2**	**2.42**	**273**	⇑*i*P		**Pn**	**23 54 17.2**	**-0.6**
	baz=73							
TKM2				⇑*i*S		**Sn**	**23 54 47.6**	**-0.3**
	baz=73							
TKM2	**Tokmak 2**	**2.42**	**273**	⇓Pg		**Pb**	**23 54 22.4**	**+0.8**
	2.1nm,1.2s							
TKM2				⇓Lg		Lg	23 54 56.1	
	1.3nm,0.6s							

*UPP **21** 00:02:01.4±0.0, 67.˚85N×20.˚19E, h0km, ML2.5, Explosion*
*HEL **21** 00:02:02.0±0.0, 67.˚85N×20.˚19E, h0km, ML1.8, ML1.9(UPP), Explosion*

ISC 21 00:02:00.7±0.8, 67.˚81N±0.˚02×20.˚30E±0.˚03, h0km, n35, σ0§58/54, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
KUA	**Kurravaara**	**0.15**	**5**	P		**Pg**	**00 02 03.9**	**+0.4**
KUA				S		**Sg**	**00 02 05.3**	**-0.1**
KUA	**Kurravaara**	**0.15**	**5**	P		**Pg**	**00 02 03.9**	**+0.4**
KUA				S		**Sg**	**00 02 05.6**	**+0.2**
KUA	**Kurravaara**	**0.15**	**5**	*i* P		**Pg**	**00 02 03.9**	**+0.4**
KUA				*i* S		**Sg**	**00 02 05.6**	**+0.2**
RATU	**Laukkuluspa**	**0.27**	**274**	P		**Pg**	**00 02 05.9**	**+0.2**
RATU				S		**Sg**	**00 02 08.7**	**-0.6**
RATU	**Laukkuluspa**	**0.27**	**274**	P		**Pg**	**00 02 06.0**	**+0.2**
RATU				S		**Sg**	**00 02 09.2**	**-0.1**
RATU	**Laukkuluspa**	**0.27**	**274**	*i* P		**Pg**	**00 02 06.0**	**+0.2**
RATU				*i* S		**Sg**	**00 02 09.2**	**-0.1**
KOVU	**Salmi**	**0.42**	**353**	P		**Pg**	**00 02 08.7**	**-0.1**
KOVU				S		**Sg**	**00 02 13.8**	**-0.4**
KOVU	**Salmi**	**0.42**	**353**	P		**Pg**	**00 02 08.6**	**-0.1**
KOVU				S		**Sg**	**00 02 13.7**	**-0.4**
KOVU	**Salmi**	**0.42**	**353**	*i* P		**Pg**	**00 02 08.6**	**-0.1**
KOVU				*i* S		**Sg**	**00 02 13.7**	**-0.4**
LANU	**Lannavaara**	**0.68**	**68**	P		**Pb**	**00 02 14.7**	**-0.8**
LANU	**Lannavaara**	**0.68**	**68**	P		**Pb**	**00 02 14.6**	**-0.8**
LANU				S		**Sb**	**00 02 24.1**	**-1.3**
LANU	**Lannavaara**	**0.68**	**68**	*i* P		**Pb**	**00 02 14.6**	**-0.8**
LANU				*i* S		**Sb**	**00 02 24.1**	**-1.3**
DUNU	**Dundret**	**0.70**	**171**	P		**Pb**	**00 02 15.6**	**0.0**
DUNU	**Dundret**	**0.70**	**171**	P		**Pb**	**00 02 15.2**	**-0.5**
DUNU				S		**Sb**	**00 02 25.3**	**-0.5**
DUNU	**Dundret**	**0.70**	**171**	*i* P		**Pb**	**00 02 15.2**	**-0.5**
DUNU				*i* S		**Sb**	**00 02 25.3**	**-0.5**
MASU	**Masugnsbyn**	**0.74**	**118**	P		**Pb**	**00 02 16.3**	**-0.1**
MASU	**Masugnsbyn**	**0.74**	**118**	P		**Pb**	**00 02 16.3**	**-0.1**
MASU	**Masugnsbyn**	**0.74**	**118**	*i* P		**Pb**	**00 02 16.3**	**-0.1**
SALU	**Saltoluokta**	**0.81**	**239**	*e*P		**Pg**	**00 02 16.0**	**-0.1**
KIF	**Kilpisjarvi**	**1.22**	**9**	*e*P		**Pn**	**00 02 25.0**	**+0.1**
KIF	**Kilpisjarvi**	**1.22**	**9**	*e*PB		**Pg**	**00 02 24.2**	**+0.2**
	baz=188							
KIF				MSG			00 02 39.4	
	comp=Z,11nm,0.2s							
KIF				*e*S		**Sg**	**00 02 39.7**	**0.0**
PAJU	**Pajala**	**1.34**	**125**	P		**Pb**	**00 02 26.8**	**+0.2**
PAJU	**Pajala**	**1.34**	**125**	P		**Pb**	**00 02 26.8**	**+0.2**
PAJU	**Pajala**	**1.34**	**125**	*e*P		**Pb**	**00 02 26.8**	**+0.2**
PAJU				*e*SB		**Sn**	**00 02 45.6**	**+0.5**
HEF	**Hetta**	**1.40**	**63**	*e*P		**Pn**	**00 02 27.2**	**-0.1**
	baz=248							
HEF				MSG			00 02 44.3	
	comp=Z,8.2nm,0.2s							
HEF				*e*SB		**Sb**	**00 02 45.9**	**0.0**
HARU	**Harads**	**1.67**	**171**	P		**Pg**	**00 02 32.6**	**0.0**
HARU	**Harads**	**1.67**	**171**	P		**Pg**	**00 02 32.5**	**-0.2**
HARU	**Harads**	**1.67**	**171**	*e*P		**Pg**	**00 02 32.5**	**-0.2**
TOF	**Tornio**	**2.35**	**136**	*e*PB		**Pb**	**00 02 43.3**	**-0.4**
	baz=320							
TOF				MSG			00 03 12.8	
	comp=Z,5.1nm,0.2s							
TOF				*e*SB		**Sg**	**00 03 14.6**	**-1.4**
SGF	**Sodankyl**	**2.41**	**96**	*e*PB		**Pb**	**00 02 44.6**	**-0.2**
SGF				*e*SB		**Sb**	**00 03 14.7**	**-0.3**
RNF	**Rovaniemi**	**2.53**	**116**	*e*PB		**Pb**	**00 02 46.3**	**-0.5**
RNF				*e*SB		**Sb**	**00 03 19.8**	**+1.4**
ARA0	**ARCESS Array S**	**2.58**	**45**	*e*SG		**Sg**	**00 03 23.1**	**-0.2**
KEV	**Kevo**	**3.13**	**48**	*e*S		**Sn**	**00 03 30.4**	**+1.3**
KEV				MSG			00 03 33.8	
	comp=Z,2.4nm,0.2s							
OLKF	**Oulanka, Finla**	**3.86**	**108**	*e*SG		**Sg**	**00 04 05.0**	**+0.5**
UMAU	**Umeaa**	**3.94**	**178**	*e*S		**Sn**	**00 03 50.8**	**+1.7**

*IDC **21** 00:11:29.2±60.0, 15.˚65S×172.˚99W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/35, mbtmp4.1/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/26, Error ellipse: s-maj=1154.0km s-min=204.9km az=79.0*
*NEIC **21** 00:11:41.4±0.6, 15.˚9S±0.˚2×174.˚50W±0.˚06, h10km±2km, mb4.1/8, Error ellipse: s-maj=41.5km s-min=8.1km az=9.0*

ISC 21 00:11:43.1±2.4, 15.˚8S±0.˚6×174.˚8W±0.˚4, h10km, n17, σ0§37/15, mb4.0/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
NIUE	**Niue**	**5.70**	**126**	Pn		Pn	00 12 59.6	-8.3
MSVF	**Nonsavu**	**7.13**	**253**	Pn		**Pn**	**00 13 27.1**	**-0.5**
DZM	**Mont Dzumac**	**18.82**	**248**	P		**Pn**	**00 16 03.9**	**+0.3**
DZM				IAmb		IAmb	00 16 05.4	
	comp=Z,16nm,0.9s							
URZ	**Urewera**	**23.52**	**196**	LR		LR	00 25 22.2	
	comp=Z,91nm,18.6s,baz=31,slow=34							
COEN	**Coen**	**40.62**	**267**	P		**P**	**00 19 23.8**	**+0.2**
COEN				IAmb		IAmb	00 19 42.3	
	comp=Z,1.2nm,0.7s							
STKA	**Stephens Creek**	**42.69**	**240**	P		**P**	**00 19 40.9**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=78,slow=9.3,SNR=4.4							
STKA	**Stephens Creek**	**42.69**	**240**	P		**P**	**00 19 40.1**	**-0.3**
BBOO	**Buckleboo**	**47.47**	**240**	P		**P**	**00 20 18.3**	**-0.1**
WR0	**Warramunga Arr**	**48.26**	**257**	P		**P**	**00 20 25.1**	**+0.3**
WR0				IAmb		IAmb	00 20 41.4	
	comp=Z,4.7nm,1.1s							
WB0	**Warramunga Arr**	**48.41**	**257**	P		**P**	**00 20 26.1**	**+0.2**
WB2	**Warramunga Arr**	**48.44**	**257**	P		**P**	**00 20 26.3**	**+0.2**
WRA	**Warramunga Arr**	**48.45**	**257**	P		**P**	**00 20 26.8**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=89,slow=6.9,SNR=5.1							
WRA	**Warramunga Arr**	**48.45**	**257**	P		**P**	**00 20 26.6**	**+0.4**
AS31	**Alice Springs**	**48.72**	**252**	P		**P**	**00 20 28.5**	**+0.2**
AS31				IAmb		IAmb	00 20 29.2	
	comp=Z,1.5nm,0.7s							
ASAR	**Alice Springs**	**48.72**	**252**	P		**P**	**00 20 28.7**	**+0.4**
	comp=Z,4.6nm,0.5s,baz=89,slow=8.3,SNR=73							
ASAR	**Alice Springs**	**48.72**	**252**	P		**P**	**00 20 28.1**	**-0.2**
CLL	**Collm**	**143.99**	**352**	*e*PKiKP		**PKiKP**	**00 31 22.0**	**-0.4**

*BJI **21** 00:17:25.1±0.0, 13.˚79N×92.˚83E, h29km, mB4.9/44, mb4.9/62, Ms4.2/41, Ms7 4.0/41*
*BGR **21** 00:17:27.7±0.0, 13.˚71N×93.˚29E, h38km, mb5.2*
*MOS **21** 00:17:27.1±0.9, 14.˚08N×92.˚89E, h28km, mb5.2/79, MS4.4/5, Error ellipse: s-maj=6.9km s-min=3.7km az=112.5*
*NDI **21** 00:17:27.7±2.6, 14.˚16N×92.˚92E, h10km, mb5.1, ML5.0, mb5.1(NEIC)*
*DJA **21** 00:17:27.2±0.2, 14.˚N±2.˚×9.˚3E±.˚, h10km, M5.0/39, mB5.3/12, mb5.0/39, MLv5.3/2, Mw(mB)4.8/12*
*NEIC **21** 00:17:28.9±1.5, 14.˚12N±0.˚07×92.˚95E±0.˚

comp=E,18nmcomp=E,16µmcomp=E,1µm,0.7s
CM31 Chiang Mai Arr 7.29 53 Pn 00 19 14.6 +0.9
CM31 Sn **Sn 00 20 32.8 -2.8**
CMAR Chiang Mai Arr 7.29 53 Pn **Pn 00 19 12.6 -1.0**
comp=E,1.2nm,0.3s,baz=242,slow=15,SNR=27
CMAR Sn **Sn 00 20 31.1 -4.5**
comp=E,9.3nm,0.3s,baz=244,slow=27,SNR=14
CMAR LR LR 00 22 48.5
comp=E,1µm,19.1s,baz=274,slow=44
CMAR Chiang Mai Arr 7.29 53 P **Pn 00 19 11.2 -2.4**
CMAR 00 20 32.1
CMAR Chiang Mai Arr 7.29 53 Pn 00 19 11.2 -2.4
CMAR Sn **Sn 00 20 32.1 -3.5**
CM09 Chiang Mai Arr 7.32 53 P **Pn 00 19 15.0 +1.0**
comp=E,0.5nmcomp=E,510nmcomp=E,75nm,0.8s
CM32 Chiang Mai Arr 7.33 51 P **Pn 00 19 17.0 +2.8**
SUKH Sukhothai 7.36 62 P **Pn 00 19 15.3 +0.8**
comp=E,0.5nmcomp=E,120nm,0.7s
CM36 Chiang Mai Arr 7.44 53 P **Pn 00 19 17.0 +1.3**
CM36 P Pb 00 19 21.0 -16
CHTO Chiang Mai 7.50 51 P **Pn 00 19 15.9 -0.6**
CHTO 00 20 35.6
CHTO Chiang Mai 7.50 51 Pn **Pn 00 19 15.9 -0.6**
CHTO Sn **Sn 00 20 35.6 -5.3**
CM33 Chiang Mai Arr 7.51 51 P **Pn 00 19 17.0 +0.4**
CM35 Chiang Mai Arr 7.58 52 P **Pn 00 19 18.0 +0.4**
CM34 Chiang Mai Arr 7.68 51 P **Pn 00 19 21.0 +2.0**
LAMP Lampang 7.87 55 P **Pn 00 19 23.0 +1.5**
comp=E,0.8nmcomp=E,874nmcomp=E,103nm,0.8s
PATY Pattaya 7.90 98 P **Pn 00 19 23.6 +1.6**
comp=E,0.8nmcomp=E,11µmcomp=E,51nm,0.5s
PHIT Phitsanulok 7.92 66 P **Pn 00 19 24.3 +2.0**
comp=E,1.5nmcomp=E,3µmcomp=E,345nm,0.7s
UTTA Uttaradit 8.26 63 P Pn 00 19 35.1 +8.2
SAIH SAIHA 8.35 1 *eP* **Pn 00 19 27.2 -1.0**
SAIH *eS* **Sn 00 20 55.9 -5.9**
SAIH IAML 00 21 02.5
comp=E,360nm,0.5s
SAIH IAML 00 21 03.4
comp=N,367nm,0.7s
SRIT Nakonsritamara 8.60 129 Pn **Pn 00 19 30.9 -0.6**
SRAK Srakaew 8.94 89 P Pn 00 19 46.6 +10
CHAI Chaiyaphum 9.02 77 P **Pn 00 19 41.0 +3.6**
comp=N,333nmcomp=N,39nm,0.7s
BELO BELONIA 9.19 352 *eS* **Sn 00 21 16.0 -6.4**
BELO IAML 00 21 21.3
comp=E,30µm,0.4s
BELO IAML 00 21 21.7
comp=N,34µm,0.4s
LHMI Lhok Sumawe 9.70 155 Pn **Pn 00 19 47.7 +1.0**
LHMI Lhok Sumawe 9.70 155 P **Pn 00 19 46.8 +0.1**
comp=N,127nm,0.9s
AGT Agartala 9.85 351 *eS* **Sn 00 21 31.9 -6.5**
SHL Shillong 11.44 356 P **Pn 00 20 11.8 +1.1**
SHL Shillong 11.44 356 *eP* **Pn 00 20 11.0 +0.3**
SHL *eS* Sn 00 22 06.4 -11
SHL Shillong 11.44 356 Pn **Pn 00 20 11.8 +1.1**
TPTI 11.59 158 P **Pn 00 20 12.8 +0.2**
comp=N,7.1nm,1.1s
KOHI KOHIMA 11.62 6 *eP* **Pn 00 20 12.4 -0.7**
KOHI *eS* Sn 00 22 12.0 -10
KOHI IAML 00 22 19.9
comp=N,162nm,0.5s
KOHI IAML 00 22 25.5
comp=E,162nm,0.5s
KULM Kulim 11.66 138 Pn 00 20 15.4 +1.9
BOK Bokaro 11.67 327⇓ *eP* **Pn 00 20 12.9 -0.7**
BOK IAmb IAmb 00 20 14.5
comp=Z,40nm,0.3s
BOK *eS* Sn 00 22 13.8 -9.3
TSI Tuntungan 11.95 151 P **Pn 00 20 17.7 +0.1**
GUWA GUWAHATI 12.08 355 *eP* **Pn 00 20 15.9 -3.3**
GUWA *eS* Sn 00 22 21.1 -12
GUWA IAML 00 22 27.6
comp=E,117nm,0.4s
GUWA IAML 00 22 27.9
comp=N,88nm,0.3s
IPM Ipoh 12.51 139 Pn **Pn 00 20 25.5 +0.2**
PSI Prapat 12.74 151 Pn **Pn 00 20 30.8 +2.4**
comp=N,0.9nm,0.3s,baz=360,slow=13,SNR=25
PSI LR LR 00 26 16.9
comp=N,423nm,19.5s,baz=276,slow=41
PSI Prapat 12.74 151 P **Pn 00 20 30.9 +2.5**
RPSI Rantau Prapat 12.83 152 Pn **Pn 00 20 30.9 +1.3**
ITAN ITANAGAR 13.01 4 *eS* Sn 00 22 44.6 -11
ITAN IAML 00 22 53.3
comp=N,419nm,0.6s
ITAN IAML 00 22 53.9
comp=E,391nm,0.2s
ZIRO ZIRO 13.39 4 *eP* **Pn 00 20 34.5 -2.8**
ODAN Odare 13.68 339 *eP* **Pn 00 20 38.4 -2.9**
PALK Pallekele 13.71 242 Pn **Pn 00 20 41.0 -0.7**
comp=E,1.0nm,0.3s,baz=172,slow=13,SNR=18
PALK Sn Sn 00 22 59.9 -13
comp=E,5.3nm,0.3s,baz=220,slow=19,SNR=12
PALK LR LR 00 25 37.7
comp=E,689nm,19.5s,baz=159,slow=36
PALK Pallekele 13.71 242 Pn **Pn 00 20 42.4 +0.8**
GTK Tadong 13.73 344 *eP* **Pn 00 20 40.4 -1.6**
GTK *eS* Sn 00 23 04.4 -9.5
GTK IAML 00 23 05.3
comp=E,104nm,0.4s
GTK IAML 00 23 07.8
comp=N,77nm,0.2s
TAPN Taplejung 14.02 341 *eP* **Pn 00 20 43.0 -3.1**
RAMN Ramite 14.05 336 *eP* **Pn 00 20 43.1 -3.3**
HYB Hyderabad 14.14 285 *i* P **Pn 00 20 43.0 -4.4**
HYB *eS* **Sn 00 23 24.0 +0.4**
HYB Hyderabad 14.14 285 *eP* **Pn 00 20 46.7 -0.8**
KMI Kunming 14.39 39⇑⇑ P **P 00 20 55.1 -2.7**
KMI pP Pn 00 21 00.1 +9.1
KMI sP 00 21 02.6
KMI S **Sn 00 23 31.5 +1.5**
KMI pmax pmax
comp=N,9.0nm,0.8s
KMI pmax pmax
comp=N,59nm,3.5s
KMI LR LR
comp=N,510nm,16.1s
KMI LR LR
comp=N,240nm,19.2s
KMI LR LR
comp=N,360nm,19.9s
MNSI Mandailing Nat 14.81 153 P **Pn 00 20 54.4 -2.1**
comp=N,2µmcomp=N,20nm,1.0s
JIRN Jiri 14.85 336 *eP* **Pn 00 20 54.3 -3.1**
PKI Pulchoki 15.09 334 *eP* **Pn 00 20 57.2 -3.3**
PKIN Phulchoki 15.10 334 *eP* **Pn 00 20 57.7 -2.9**
GUN Gumba 15.19 336 *eP* **Pn 00 20 58.8 -3.2**
DMN Daman 15.25 333 *eP* **Pn 00 20 59.7 -2.9**
KKN Kakani 15.33 334 *eP* **Pn 00 21 01.3 -2.4**
LSA Lhasa 15.60 355 P **Pn 00 21 08.3 +0.9**
LSA Lhasa 15.60 355 P **Pn 00 21 08.0 +0.6**
LSA pmax pmax
comp=Z,21nm,0.7s
LSA Lhasa 15.60 355 P **Pn 00 21 08.0 +0.6**
GKN Gorkha 15.80 332 *eP* **Pn 00 21 06.6 -3.1**
BKNI Bangkinang 15.91 149 Pn **Pn 00 21 09.6 -1.4**
BKNI Bangkinang 15.91 149 P **Pn 00 21 10.1 -1.0**
comp=Z,8µmcomp=Z,66nm,0.8s
KOLN Koldanda 16.09 329 *eP* **Pn 00 21 11.5 -2.0**
MYKOM Kota Tinggi 16.38 137 P 00 21 18.4 -1.2
PYUN Piuthan 16.67 328 *eP* **Pn 00 21 20.1 -0.8**
QIZ Qiongzhong 17.02 71 P **Pn 00 21 24.8 -0.3**
QIZ S **Sn 00 24 32.8 -0.9**
QIZ pmax pmax
comp=Z,500nm,2.9s
QIZ LR LR
comp=Z,400nm,17.1s
QIZ LR LR
comp=Z,650nm,13.9s
QIZ LR LR
comp=Z,530nm,14.7s
BHPL Bhopal 17.19 304 *eP* **P 00 21 28.7 +0.1**
BHPL IAmb IAmb 00 21 31.0
comp=Z,61nm,0.9s
BHPL *eS* Sn 00 24 24.3 -13
GYA Guiyang 17.85 44 *eP* **P 00 21 37.3 +1.2**
GYA S **Sn 00 24 52.9 -1.1**
GYA sS sS 00 25 07.5 -3.0
GYA LR LR
comp=Z,58nm,17.5s
DSRI Dabo 18.57 140 P **Pn 00 21 44.4 +0.1**
comp=Z,3µmcomp=Z,54nm,1.3s

JMBI JAMBI 18.95 145 P **Pn 00 21 48.5 -0.3**
CD2 Chengdu 19.51 29⇑ P **Pn 00 21 55.4 -0.2**
CD2 S **Sn 00 25 34.3 +0.3**
CD2 pmax pmax
comp=Z,50nm,0.6s
CD2 pmax pmax
comp=Z,110nm,4.9s
CD2 LR LR
comp=Z,600nm,15.1s
CD2 LR LR
comp=Z,530nm,10.8s
CD2 LR LR
comp=Z,290nm,9.2s
KSM Kuching 21.35 124 P **P 00 22 14.3 +0.1**
ENH Enshi 22.24 41 P **P 00 22 23.2 -0.5**
ENH IAmb IAmb 00 22 26.6
comp=Z,61nm,0.8s
TPI Tanjungpandan 22.28 138 P **P 00 22 24.2 0.0**
comp=Z,16nm,1.1s
SBUM Sibu 22.38 119 P **P 00 22 24.7 -0.5**
DHRM DHARAMSHALA 23.55 323 IAmb IAmb 00 22 49.6
comp=Z,130nm,0.8s
LZH Lanzhou 24.02 22⇓ P **P 00 22 42.8 +1.0**
LZH sP sP 00 22 52.5 +0.7
LZH S **S 00 27 00.4 +2.8**
LZH sS sS 00 27 11.3 +2.3
LZH SS **SnSn 00 27 49.3 +10**
LZH pmax pmax
comp=Z,69nm,1.0s
LZH pmax pmax
comp=Z,120nm,7.0s
LZH LR LR
comp=Z,430nm,17.3s
LZH LR LR
comp=Z,270nm,16.3s
LZH LR LR
comp=Z,280nm,16.8s
KKM Kota Kinabalu 24.35 107 P **P 00 22 44.3 -0.6**
XAN Xi'an 24.63 34 P **P 00 22 46.6 -0.6**
XAN pP sP 00 22 57.8 +0.5
XAN PP **PnPn 00 23 18.9 -0.3**
XAN S **S 00 27 08.9 +1.7**
XAN pmax pmax
comp=Z,80nm,1.0s
XAN LR LR
comp=Z,230nm,22.8s
XAN LR LR
comp=Z,280nm,24.9s
XAN LR LR
comp=Z,340nm,24.0s
XAN Xi'an 24.63 34 IAmb IAmb 00 22 48.2
comp=Z,71nm,1.0s
LEM Lembang 25.45 144 LR LR 00 34 32.4
comp=Z,418nm,20.1s,baz=325,slow=40
GTA Gaotai 25.95 12⇓ P **P 00 23 00.4 +1.1**
GTA pP sP 00 23 08.0 -1.3
GTA sP pP 00 23 11.8 +5.4
GTA PcP **PcP 00 26 28.8 +1.2**
GTA S **S 00 27 34.8 +6.5**
GTA sS sS 00 27 45.5 +5.8
GTA pmax pmax
comp=Z,32nm,1.1s
GTA pmax pmax
comp=Z,74nm,6.9s
GTA LR LR
comp=Z,230nm,17.8s
GTA LR LR
comp=Z,160nm,17.8s
GTA LR LR
comp=Z,210nm,18.2s
NIL Nilore 26.36 321 P **P 00 23 03.7 +0.8**
NIL pmax pmax
comp=Z,38nm,0.8s
NIL Nilore 26.36 321 P **P 00 23 03.7 +0.8**
NIL IAmb IAmb 00 23 17.4
comp=Z,38nm,0.8s
SMRI Semarang 27.33 139 P **P 00 23 11.8 +0.1**
SMRI IAmb IAmb 00 23 13.8
comp=Z,53nm,1.2s
BBKI Banjar Baru 27.94 127 P **P 00 23 17.8 +0.5**
comp=Z,3µmcomp=Z,34nm,1.0s
YHNB Yeheng 28.84 64 P **P 00 23 24.3 -1.0**
YHNB IAmb IAmb 00 23 26.5
comp=Z,48nm,1.2s
KSH Kashi 29.35 333 P **P 00 23 29.3 -0.4**
KSH pP sP 00 23 38.8 -1.0
KSH pmax pmax
comp=Z,13nm,0.7s
KSH pmax pmax
comp=Z,120nm,4.0s
KSH LR LR
comp=Z,200nm,11.1s
KSH LR LR
comp=Z,270nm,14.0s
KSH LR LR
comp=Z,360nm,20.0s
H08S3 Diego Garcia H 29.56 224 T T 00 54 30.2
baz=42,slow=76
H08S2 Diego Garcia H 29.57 224 T T 00 54 24.4
baz=42,slow=76
H08S1 Diego Carcia H 29.58 224 T T 00 54 34.0
baz=42,slow=76
KBL Kabul 29.60 318 P **P 00 23 32.7 +0.6**
KBL pmax pmax
comp=Z,12nm,0.9s
KBL Kabul 29.60 318 P **P 00 23 32.6 +0.6**
NJ2 Nanjing 29.74 49 *eP* **P 00 23 34.0 +0.9**
NJ2 pmax pmax
comp=Z,12nm,0.5s
WMQ Urumqi 29.95 353 *eP* **P 00 23 36.4 +1.5**
WMQ pP sP 00 23 45.0 +0.1
WMQ sP pP 00 23 48.1 +6.1
WMQ pmax pmax
comp=Z,17nm,1.3s
WMQ pmax pmax
comp=Z,160nm,4.7s
WMQ LR LR
comp=Z,360nm,19.9s
WMQ LR LR
comp=Z,340nm,19.9s
WMQ LR LR
comp=Z,610nm,24.5s
WMQ Urumqi 29.95 353 P **P 00 23 35.4 +0.6**
WMQ pmax pmax
comp=Z,25nm,1.4s
WMQ Urumqi 29.95 353 P **P 00 23 35.4 +0.6**
TIA Tai'an 30.95 40 P **P 00 23 44.0 +0.2**
TIA pmax pmax
comp=Z,15nm,0.8s
TIA LR LR
comp=Z,340nm,20.1s
SHLS Shalkode 31.16 341 *eP* **P 00 23 45.7 0.0**
comp=Z,14nm,1.1s,baz=341
SHLS Shalkode 31.16 341 *eP* **P 00 23 45.6 0.0**
SHLS pmax pmax
comp=Z,14nm,1.1s
HHC Hu-ho-hao-te 31.26 28 *eP* **P 00 23 47.6 +1.0**
HHC pmax pmax
comp=Z,140nm,8.3s
HHC LR LR
comp=Z,140nm,11.9s
HHC LR LR
comp=Z,230nm,12.8s
HHC LR LR
comp=Z,200nm,12.8s
UZB Uzynbulak 31.29 340 *eP* **P 00 23 48.0 +1.1**
baz=340
UZB Uzynbulak 31.29 340 *eP* **P 00 23 47.9 +1.1**
PDGK Podgornoye 31.30 341 P **P 00 23 48.0 +1.1**
SATY Saty 31.42 339 *eP* **P 00 23 49.1 +1.1**
comp=Z,6.5nm,0.8s,baz=339
SATY *eS* **S 00 28 55.8 +1.5**
baz=339
SATY Saty 31.42 339 *eP* **P 00 23 49.0 +1.1**
SATY *eS* **S 00 28 55.8 +1.5**
SATY pmax pmax
comp=Z,6.0nm,0.8s
KPKS Kokpek 31.69 340 *eP* **P 00 23 51.2 +0.9**
comp=Z,8.4nm,1.1s,baz=340
KPKS Kokpek 31.69 340 *eP* **P 00 23 51.2 +0.9**
KPKS pmax pmax
comp=Z,8.0nm,1.1s
GAR Garm 31.78 325 P **P 00 23 52.1 +0.9**
TNSS Tian-Shan 31.91 338 *eP* **P 00 23 53.4 +0.7**
baz=338
TNSS Tian-Shan 31.91 338 *eP* **P 00 23 53.3 +0.7**

MDOK Medeo 31.99 338 *eP* **P 00 23 53.7 +0.6**
baz=338
MDOK Medeo 31.99 338 *eP* **P 00 23 53.6 +0.6**
AAA Alma-Ata 32.08 338 *eP* **P 00 23 55.5 +1.8**
comp=Z,12nm,0.8s,baz=338
AAA Alma-Ata 32.08 338 *eP* **P 00 23 55.4 +1.8**
AAA pmax pmax
comp=Z,12nm,0.8s
SPSI Sidrap Palu 32.18 122 P **P 00 23 55.4 +0.6**
comp=Z,11nm,0.6s
APSI Ampana 32.20 115 P **P 00 23 55.5 +0.5**
comp=Z,426nmcomp=Z,39nm,1.1s
UCH Uchtor 32.20 334 P **P 00 23 56.6 +1.4**
SNR=10
TKM2 Tokmak 2 32.33 336 P **P 00 23 54.8 -1.3**
SNR=8.9
TKM2 Tokmak 2 32.33 336 P **P 00 23 57.0 +0.9**
AML Almayashu 32.48 333 P **P 00 23 59.0 +1.5**
SNR=18
AAK Ala-Archa 32.54 334 P **P 00 23 59.7 +1.8**
SNR=9.7
AAK Ala-Archa 32.54 334*d i*P **P 00 23 59.4 +1.5**
AAK pmax pmax
comp=Z,39nm,1.3s
AAK Ala-Archa 32.54 334 P **P 00 23 59.7 +1.8**
BNSI Bone 32.71 122 P **P 00 24 00.0 +0.6**
comp=Z,17nm,1.0s
KAPI Kappang 32.77 124 P **P 00 23 59.3 -0.6**
KAPI pmax pmax
comp=Z,27nm,1.5s
KAPI Kappang 32.77 124 P **P 00 23 59.3 -0.6**
KAPI IAmb IAmb 00 24 01.1
comp=Z,27nm,1.4s
EKS2 Erkin-Say 32.87 334 P **P 00 24 02.4 +1.7**
SNR=18
BJT Baijiatuau 32.94 34 P **P 00 24 01.9 +0.7**
BJT pmax pmax
comp=Z,14nm,0.7s
BJT Baijiatuau 32.94 34 P **P 00 24 01.9 +0.7**
BJT IAmb IAmb 00 24 03.2
comp=Z,14nm,0.7s
BJI Beijing 32.96 34 P **P 00 24 02.8 +1.5**
BJI pmax pmax
comp=Z,18nm,0.7s
USP Ospenovka 33.06 335 P **P 00 24 03.6 +1.3**
SNR=26
TDK Taldyqorghan 33.15 341 *eP* **P 00 24 03.8 +0.8**
comp=Z,11nm,0.6s,baz=341
TDK Taldyqorghan 33.15 341 *eP* **P 00 24 03.7 +0.8**
TDK pmax pmax
comp=Z,11nm,0.6s
SGDS Sogindy 33.16 335 *eP* **P 00 24 03.8 +0.6**
baz=335
SGDS Sogindy 33.16 335 *eP* **P 00 24 03.8 +0.6**
LUWI Luwuk 33.25 114 P **P 00 24 03.4 -0.8**
MK31 Makanchi Array 33.77 347*d i*P **P 00 24 09.2 +0.8**
MK31 Makanchi Array 33.77 347 P **P 00 24 08.8 +0.5**
MK31 IAmb IAmb 00 24 10.3
comp=Z,25nm,0.8s
MKAR Makanchi Array 33.77 347 P **P 00 24 09.3 +0.9**
comp=Z,29nm,0.7s,baz=164,slow=8.7,SNR=288
MKAR pP **sP 00 24 19.0 +0.5**
comp=Z,4.9nm,0.6s,baz=159,slow=8.5,SNR=6.1
MKAR PcP **PcP 00 26 47.3 -0.1**
comp=Z,1.6nm,0.8s,baz=160,slow=2.3,SNR=3.1
MKAR LR LR 00 41 55.3
comp=Z,172nm,18.4s,baz=160,slow=43
MKAR Makanchi Array 33.77 347 P **P 00 24 08.2 -0.1**
MAKZ Makanchi 33.85 347 P **P 00 24 09.2 +0.1**
MAKZ pmax pmax
comp=Z,23nm,0.9s
MAKZ Makanchi 33.85 347 P **P 00 24 09.2 +0.1**
MAKZ IAmb IAmb 00 24 10.8
comp=Z,23nm,0.8s
ZSN Zaisan 33.91 350 *eP* **P 00 24 10.5 +1.0**
comp=Z,9.1nm,1.0s,baz=350
ZSN Zaisan 33.91 350 *eP* **P 00 24 10.5 +1.0**
ZSN pmax pmax
comp=Z,9.0nm,1.0s
TAS Tashkent 33.98 327 P **P 00 24 10.9 +0.6**
TAS pmax pmax
comp=Z,65nm,1.1s
TAS Tashkent 33.98 327 P **P 00 24 10.9 +0.6**
DZA Taraz 34.15 331 *eP* **P 00 24 12.6 +0.9**
comp=Z,10nm,1.3s,baz=331
DZA Taraz 34.15 331 *eP* **P 00 24 12.6 +0.9**
DZA pmax pmax
comp=Z,10.0nm,1.3s
IUG Iuzhnay 34.21 329 *eP* **P 00 24 13.7 +1.3**
baz=329
IUG Iuzhnay 34.21 329 *eP* **P 00 24 13.7 +1.3**
HRA Herat 34.23 312 P **P 00 24 13.3 +0.5**
KK31 Karatay Array 34.70 331 *i* P **P 00 24 17.1 +0.6**
KK31 Karatay Array 34.70 331 P **P 00 24 17.1 +0.6**
KKAR Karatay Array 34.70 331 P **P 00 24 17.4 +0.9**
KKAR Karatay Array 34.70 331 P **P 00 24 17.4 +0.9**
KKAR Karatay Array 34.70 331 IAmb IAmb 00 24 18.5
comp=Z,9.6nm,0.9s
BTLS Baital 34.72 336 *eP* **P 00 24 17.3 +0.6**
comp=Z,6.6nm,0.6s,baz=336
BTLS Baital 34.72 336 *eP* **P 00 24 17.2 +0.6**
BTLS pmax pmax
comp=Z,7.0nm,0.6s
JOW Kunigami 35.41 63 P **P 00 24 23.4 +0.5**
JOW IAmb IAmb 00 24 24.2
comp=Z,49nm,1.2s
SONM Songino Array 35.48 16 P **P 00 24 24.2 +0.9**
comp=Z,16nm,0.7s,baz=201,slow=8.2,SNR=73
SONM PcP **PcP 00 26 52.7 +0.3**
comp=Z,5.5nm,0.8s,baz=215,slow=3.0,SNR=10
SONM LR LR 00 41 10.9
comp=Z,80nm,20.8s,baz=208,slow=40
SONM Songino Array 35.48 16 P **P 00 24 24.1 +0.9**
SONM pmax pmax
comp=Z,18nm,0.9s
SONM Songino Array 35.48 16 P **P 00 24 24.1 +0.9**
SONM IAmb IAmb 00 24 25.9
comp=Z,18nm,0.9s
ULN Ulaanbaatar 35.68 16*d i*P **P 00 24 25.6 +0.6**
ULN pmax pmax
comp=Z,23nm,1.3s
ULN Ulaanbaatar 35.68 16 P **P 00 24 25.4 +0.4**
ULN IAmb IAmb 00 24 26.7
comp=Z,35nm,1.4s
DGZ Jazzator, Alta 35.78 354⇓ *eP* **P 00 24 26.7 +0.9**
DGZ pmax pmax
comp=Z,11nm,0.8s
ZAK Zakamensk 37.17 11 *eP* **P 00 24 38.5 +0.9**
ZAK pmax pmax
comp=Z,10.0nm,1.1s
SEM Semipalatinsk 37.63 347 *eP* **P 00 24 41.3 -0.4**
comp=Z,15nm,1.0s,baz=347
SEM Semipalatinsk 37.63 347 *eP* **P 00 24 41.3 -0.4**
SEM pmax pmax
comp=Z,15nm,1.0s
SOCY Socotra 37.85 272 P **P 00 24 44.5 +0.6**
TJN Taejon 38.00 48⇓ *eP* **P 00 24 45.4 +0.7**
MOY Mondy 38.04 8 *eP* **P 00 24 46.4 +1.4**
MOY pmax pmax
comp=Z,13nm,1.6s
KURBB Kurchatov Arra 38.23 345 P **P 00 24 47.0 +0.5**
TLY Talaya 38.48 11 LR LR 00 43 29.6
comp=Z,179nm,18.8s,baz=173,slow=40
TLY Talaya 38.48 11⇑⇑ *eP* **P 00 24 48.9 +0.3**
TLY pmax pmax
comp=Z,15nm,0.8s
TLY Talaya 38.48 11 P **P 00 24 49.2 +0.6**
GEYT Alibeck 38.85 314 P **P 00 24 53.7 +1.8**
comp=Z,31nm,0.8s,baz=148,slow=8.7,SNR=69
GEYT pP **sP 00 25 02.6 +0.6**
comp=Z,11nm,0.9s,baz=147,slow=8.8,SNR=6.0
GEYT PcP **PcP 00 27 03.4 +0.6**
comp=Z,7.5nm,0.9s,baz=90,slow=1.5,SNR=5.4
GEYT LR LR 00 42 52.2
comp=Z,183nm,18.6s,baz=130,slow=39
GEYT Alibeck 38.85 314 P **P 00 24 53.7 +1.8**
GEYT IAmb IAmb 00 24 54.6
comp=Z,26nm,0.8s
GYA0 ALIBECK ARRAY 38.85 314 P **P 00 24 53.5 +1.6**
GYA0B ALIBECK ARRAY 38.85 314 P **P 00 24 53.4 +1.5**
GYA0B IAmb IAmb 00 24 54.6
comp=Z,39nm,0.8s
KSAR Wonju Array Be 38.85 47 P **P 00 24 51.7 -0.2**
KSAR Wonju Array Be 38.85 47 P **P 00 24 51.7 -0.2**
KSRS Korea Array 38.88 47 P **P 00 24 51.5 -0.6**
comp=Z,4.1nm,0.7s,baz=242,slow=8.7,SNR=17

KSRS pP **sP** **00 25 02.4 +0.1**
comp=Z,4.4nm,0.7s,baz=242,slow=8.3,SNR=6.1
KSRS LR LR 00 43 35.9
comp=Z,388nm,18.0s,baz=240,slow=40
BRZS Berezniki 39.39 339 *e*P **P** **00 24 56.9 +0.6**
comp=Z,8.8nm,0.8s,baz=339
BRZS Berezniki 39.39 339 *e*P **P** **00 24 56.8 +0.6**
BRZS pmax pmax
comp=Z,9.0nm,0.8s
ZAA0 Zalesovo Array 40.26 353 IAmb IAmb 00 25 04.7
comp=Z,36nm,0.8s
ZALV Zalesovo Beam 40.26 353 P **P** **00 25 03.6 +0.4**
comp=Z,32nm,0.7s,baz=175,slow=8.6,SNR=157
ZALV pP **sP** **00 25 13.9 +0.4**
comp=Z,10nm,0.7s,baz=179,slow=8.3,SNR=7.9
ZALV LR LR 00 44 07.0
comp=Z,132nm,19.2s,baz=155,slow=40
ZALV Zalesovo Beam 40.26 353 *i*P **P** **00 25 03.7 +0.4**
ZALV pmax pmax
comp=Z,33nm,0.7s
ZALV Zalesovo Beam 40.26 353 P **P** **00 25 03.5 +0.2**
CN2 Changchun 40.65 37 *e*P **P** **00 25 06.8 +0.1**
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,110nm,3.7s
CN2 LR LR
comp=Z,200nm,17.0s
CN2 LR LR
comp=Z,180nm,17.0s
CN2 LR LR
comp=Z,350nm,16.0s
HIA Hailar 41.44 27 *de*P **P** **00 25 13.7 +0.5**
HIA pmax pmax
comp=Z,8.0nm,0.8s
HIA Hailar 41.44 27 P **P** **00 25 12.6 -0.7**
BRVK Borovoye 42.79 340 *d i*P **P** **00 25 24.2 +0.1**
BRVK pmax pmax
comp=Z,21nm,1.3s
BRVK Borovoye 42.79 340 P **P** **00 25 24.4 +0.3**
AB31 Akbulak array 44.22 329 *i*P **P** **00 25 36.6 +0.9**
ABKAR Akbulak array 44.22 329 P **P** **00 25 35.9 +0.2**
ABKAR Akbulak array 44.22 329 IAmb IAmb 00 25 37.8
comp=Z,31nm,0.9s
USA0B Ussuriysk Arra 44.82 40⇑ *e*P **P** **00 25 39.7 -0.9**
USA0B Ussuriysk Arra 44.82 40 P **P** **00 25 40.2 -0.4**
USRK Ussuriysk Ar. 44.82 40 P **P** **00 25 40.2 -0.3**
comp=Z,4.8nm,0.8s,baz=237,slow=6.3,SNR=9.9
USRK pP **sP** **00 25 50.7 -0.1**
comp=Z,4.4nm,0.8s,baz=238,slow=6.7,SNR=6.0
USRK LR LR 00 47 05.0
comp=Z,130nm,19.2s,baz=228,slow=40
FITZ Fitzroy Crossi 45.50 134 P **P** **00 25 45.7 -0.5**
FITZ IAmb IAmb 00 25 52.3
comp=Z,27nm,1.3s
RAYN Ar Rayn 45.60 289 P **P** **00 25 48.1 +0.9**
RAYN pmax pmax
comp=Z,11nm,1.1s
RAYN Ar Rayn 45.60 289 P **P** **00 25 48.1 +0.9**
AKTO Aktyubinsk 45.93 329 P **P** **00 25 49.4 +0.1**
MJAR Matsushiro Arr 46.18 53 P **P** **00 25 50.9 -0.6**
comp=Z,2.8nm,0.6s,baz=259,slow=9.9,SNR=5.2
MJAR pP **sP** **00 26 02.9 +1.0**
comp=Z,6.2nm,0.8s,baz=266,slow=11,SNR=6.1
MJAR PcP **PcP** **00 27 27.2 0.0**
comp=Z,4.5nm,0.7s,baz=227,slow=2.5,SNR=7.6
MJAR LR LR 00 47 17.2
comp=Z,173nm,19.8s,baz=250,slow=39
BOD Bodaibo 46.47 15 *e*P **P** **00 25 54.0 +0.6**
BOD pmax pmax
comp=Z,22nm,1.3s
KLR Kul'dur 47.34 34 LR LR 00 47 13.0
comp=Z,91nm,21.8s,baz=234,slow=38
KLR Kul'dur 47.34 34⇑ *e*P **P** **00 26 00.5 +0.2**
KLR pmax pmax
comp=Z,8.0nm,1.4s
MORW Morawa 48.42 153 P **P** **00 26 08.8 -0.1**
MORW IAmb IAmb 00 26 10.1
comp=Z,17nm,0.9s
ATD Arta Tunnel 48.74 273 P **P** **00 26 12.6 +0.8**
SVE Sverdlovsk 49.19 337⇑ *e*P **P** **00 26 15.3 +0.8**
SVE pmax pmax
comp=Z,85nm,1.0s
GNI Garni 49.29 311 *d i*P **P** **00 26 17.7 +1.9**
GNI pmax pmax
comp=Z,81nm,1.3s
GNI Garni 49.29 311 P **P** **00 26 17.6 +1.7**
CUKT Cukurca 49.34 307 *e*P **P** **00 26 15.9 -0.3**
GROC Groznyy 49.56 315 *e*P **P** **00 26 18.7 +1.1**
GROC *e* 00 27 35.3
GROC *e* 00 28 13.0
GROC pmax pmax
comp=Z,32nm,0.8s
CLDR Caldiran 49.61 310 *e*P **P** **00 26 18.7 +0.4**
ARU Arti 49.71 336 *d i*P **P** **00 26 18.7 +0.2**
ARU 00 27 38.6
ARU 00 28 11.9
ARU S **S** **00 33 28.2 +2.4**
ARU SS **SS** **00 37 00.9 +2.7**
ARU pmax pmax
comp=Z,29nm,0.9s
ARU MLR MLR
comp=Z,185nm,23.0s
ARU Arti 49.71 336 P **P** **00 26 18.7 +0.2**
ARU IAmb IAmb 00 26 19.9
comp=Z,26nm,0.9s
ZEI Tsey 50.72 314 *e*P **P** **00 26 27.5 +0.8**
ZEI pmax pmax
comp=Z,16nm,0.8s
GURO Guroymak-BITLI 50.87 308 *e*P **P** **00 26 29.8 +2.0**
NCK Nalchik 51.17 315⇓ *e*P **P** **00 26 31.0 +1.2**
NCK pmax pmax
comp=Z,13nm,0.8s
KOPR Koprukoy-ERZUR 51.37 310 *e*P **P** **00 26 32.2 +0.6**
VRTB Varto-Mus 51.46 309 *e*P **P** **00 26 34.3 +2.1**
MARD Mardin 51.55 307 P **P** **00 26 32.9 0.0**
MARD IAmb IAmb 00 26 34.4
comp=Z,18nm,0.9s
KBZ Khabaz 51.72 315 P **P** **00 26 34.2 +0.4**
comp=Z,7.5nm,0.8s,baz=122,slow=7.0,SNR=22
KBZ LR LR 00 52 53.7
comp=Z,89nm,20.0s,baz=115,slow=41
KBZ Khabaz 51.72 315 *d i*P **P** **00 26 34.5 +0.6**
KBZ pmax pmax
comp=Z,11nm,0.9s
KIV Kislovodsk 51.94 315 *e*P **P** **00 26 36.7 +1.0**
KIV pmax pmax
comp=Z,165nm,1.0s
KIV MLR MLR
comp=Z,275nm,16.0s
KIV Kislovodsk 51.94 315 P **P** **00 26 35.8 +0.1**
GOF Gofitskoye 52.07 317⇑ *e*P **P** **00 26 37.7 +1.2**
GOF pmax pmax
comp=Z,44nm,0.8s
NWAO Narrogin (SRO) 52.25 154 P **P** **00 26 37.8 -0.1**
NWAO pmax pmax
comp=Z,18nm,0.8s
NWAO Narrogin (SRO) 52.25 154 P **P** **00 26 37.8 -0.1**
NWAO IAmb IAmb 00 26 38.2
comp=Z,18nm,0.8s
NWAO Narrogin (SRO) 52.25 154 P **P** **00 26 37.7 -0.1**
NWAO IAmb IAmb 00 26 38.2
comp=Z,23nm,0.8s
KOPT Kop Dagi 52.39 310 P **P** **00 26 39.6 +0.3**
BELG Belogornoye 52.40 327 *de*P **P** **00 26 38.4 -0.3**
BELG pmax pmax
comp=Z,8.0nm,1.0s
CHOM Cayeli-Rize 52.47 311 *e*P **P** **00 26 41.0 +1.5**
YSS Yuzh-Sakhalins 52.82 41⇓ *e*P **P** **00 26 42.1 +0.1**
YSS *e* 00 26 52.6
YSS pmax pmax
comp=Z,40nm,0.6s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 52.82 41 P **P** **00 26 41.7 -0.3**
YSS IAmb IAmb 00 26 43.5
comp=Z,30nm,0.8s
WB0 Warramunga Arr 52.96 128 P **P** **00 26 42.8 -0.6**
WRA Warramunga Arr 53.02 129 P **P** **00 26 42.9 -1.0**
comp=Z,14nm,0.9s,baz=310,slow=8.2,SNR=40
WRA pP **sP** **00 26 53.0 -1.3**
comp=Z,9.1nm,0.8s,baz=308,slow=8.4,SNR=11
WRA PcP **PcP** **00 27 51.6 -0.7**
comp=Z,2.4nm,0.5s,baz=314,slow=3.7,SNR=9.7
WRA Warramunga Arr 53.02 129 *i*P **P** **00 26 43.2 -0.7**
WRA pmax pmax
comp=Z,15nm,0.9s
WRA Warramunga Arr 53.02 129 P **P** **00 26 42.8 -1.1**
WRAB Tennant Creek 53.02 129 *ce*P **P** **00 26 42.8 -1.1**
WRAB pmax pmax
comp=Z,26nm,1.0s
WB2 Warramunga Arr 53.03 129 P **P** **00 26 43.2 -0.7**
WB2 IAmb IAmb 00 26 44.1
comp=Z,20nm,1.0s
WR0 Warramunga Arr 53.18 129 P **P** **00 26 43.8 -1.3**
WR0 IAmb IAmb 00 26 45.8
comp=Z,23nm,1.1s
FURI Furi 53.23 271 P **P** **00 26 48.9 +2.9**
FURI IAmb IAmb 00 26 50.7
comp=Z,18nm,0.8s
MALT Malatya 53.58 307 *e*P **P** **00 26 45.7 -2.2**
SOC Sochi 53.88 314 *e*P **P** **00 26 46.0 -3.9**
SOC *e* 00 28 57.0
SOC *e*PPP PPP 00 29 57.6
SOC *e*S **S** **00 34 20.3 -3.3**
SOC *e*SS **SKiKP** **00 37 58.7 -3.3**
SOC *e*SSS SSS 00 39 59.9
SOC MLR MLR
comp=Z,73nm,21.0s
GAZ Gaziantep 54.32 306 *e*P **P** **00 26 54.2 +0.9**
YAK Yakutsk 54.58 20 P **P** **00 26 54.2 -0.4**
comp=Z,18nm,0.5s,baz=126,slow=1.1,SNR=2.4
YAK Yakutsk 54.58 20 *e*P **P** **00 26 54.1 -0.5**
YAK pmax pmax
comp=Z,27nm,0.6s
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK Yakutsk 54.58 20 P **P** **00 26 53.8 -0.8**
KMRS Kahramanmaras 54.62 306 *e*P **P** **00 26 56.3 +0.9**
KIRV Kirov 54.88 334 *d i*P **P** **00 26 56.9 +0.1**
GHAJ Ghor Haditha 54.95 298 P **P** **00 26 58.0 +0.1**
AS31 Alice Springs 54.97 133 P **P** **00 26 57.7 -0.3**
ASAR Alice Springs 54.97 133 P **P** **00 26 57.2 -0.8**
comp=E,11nm,0.8s,baz=310,slow=7.1,SNR=73
ASAR pP **sP** **00 27 07.8 -0.6**
comp=E,5.5nm,0.6s,baz=310,slow=6.9,SNR=9.5
ASAR PcP **PcP** **00 27 59.5 -0.2**
comp=E,2.4nm,0.8s,baz=309,slow=4.4,SNR=2.0
ASAR ScP **ScP** **00 31 54.4 -2.6**
comp=E,0.5nm,0.9s,baz=264,slow=3.7,SNR=4.7
SARI SarD1z-Kayseri 55.15 307 *e*P **P** **00 26 59.0 -0.4**
VRH Novokhopyorsk 55.15 323 *e*P **P** **00 26 58.5 -0.4**
VRH pmax pmax
comp=Z,30nm,0.6s
NRIK Noril'sk 55.30 358 P **P** **00 26 59.5 -0.2**
comp=Z,11nm,0.6s,baz=156,slow=5.5,SNR=31
NRIK Noril'sk 55.30 358 *d i*P **P** **00 27 00.1 +0.4**
NRIK pmax pmax
comp=Z,14nm,0.8s
NRIK Noril'sk 55.30 358 IAmb IAmb 00 27 00.6
comp=Z,13nm,0.8s
TOKT Tokat 55.41 309 *e*P **P** **00 27 02.0 +0.9**
TOKA Tokat 55.46 309 P **P** **00 27 01.8 +0.3**
TOKA IAmb IAmb 00 27 03.5
comp=Z,22nm,1.0s
ANN Anapa 55.79 315 *e*P **P** **00 26 59.7 -3.9**
ANN *e**PP **pP** **00 27 09.2 -2.0**
ANN *e* 00 29 05.6
ANN *e*S **S** **00 34 43.4 -5.8**
ANN *e*SSS SSS 00 40 49.6
ANN pmax pmax
comp=Z,171nm,1.3s
VSR Storozhevoye 56.65 323 *e*P **P** **00 27 08.8 -0.9**
VSR pmax pmax
comp=Z,10.0nm,0.6s
KIZK Mersin 56.66 304 *e*P P 00 27 20.1 +10
KIBK Kibwezi 56.69 258 P **P** **00 27 11.1 +0.4**
KMBO Kilima Mbogo 57.07 259 P **P** **00 27 14.2 +0.6**
comp=Z,3.9nm,0.9s,baz=48,slow=10,SNR=10
KMBO LR LR 00 50 38.6
comp=Z,103nm,18.6s,baz=93,slow=35
KMBO Kilima Mbogo 57.07 259 *i*P **P** **00 27 14.8 +1.2**
KMBO pmax pmax
comp=Z,4.0nm,0.9s
LPSR Galich'ya Gora 57.28 324 *e*P **P** **00 27 12.3 -1.8**
LPSR pmax pmax
comp=Z,20nm,1.0s
BR131 Keskin Array S 57.50 308 *d i*P **P** **00 27 15.7 -0.4**
BRTR Keskin Array B 57.50 308 P **P** **00 27 15.9 -0.2**
comp=Z,21nm,0.8s,baz=121,slow=7.3,SNR=58
BRTR pP **sP** **00 27 26.9 +0.3**
comp=Z,8.0nm,0.8s,baz=138,slow=5.9,SNR=7.3
BRTR PcP **PcP** **00 28 09.2 -0.3**
comp=Z,1.9nm,0.7s,baz=130,slow=4.8,SNR=1.3
BRTR LR LR 00 55 21.2
comp=Z,166nm,19.8s,baz=106,slow=40
BRTR Keskin Array B 57.50 308 *ce*P **P** **00 27 15.8 -0.4**
BRTR pmax pmax
comp=Z,21nm,0.8s
BRTR Keskin Array B 57.50 308 P **P** **00 27 15.2 -0.9**
LODK Lodwar 57.65 265 P **P** **00 27 18.2 +0.7**
CANT Cankiri 57.65 309 *e*P **P** **00 27 18.3 +1.2**
ILGA Ilgaz 57.66 310 P **P** **00 27 17.6 +0.4**
ILGA IAmb IAmb 00 27 18.9
comp=Z,29nm,1.0s
AFSR Afar-Bala (An 57.89 308 *e*P **P** **00 27 18.7 -0.1**
SIM Simferopol' 58.12 314 *c i*P **P** **00 27 20.0 -0.2**
SIM pmax pmax
comp=Z,30nm,0.8s
ANTO Ankara 58.17 308 P **P** **00 27 21.1 +0.4**
ANTO pmax pmax
comp=Z,26nm,1.1s
ANTO Ankara 58.17 308 P **P** **00 27 21.1 +0.4**
ANTO IAmb IAmb 00 27 21.6
comp=Z,26nm,1.1s
PRGR Permogore 58.17 336⇓ *i*P **P** **00 27 19.8 -0.4**
PRGR *e**PP **pP** **00 27 28.7 +1.1**
PRGR *e* 00 28 05.5
PRGR pmax pmax
comp=Z,45nm,0.6s
BR231 Keskin MP Arra 58.17 308 P **P** **00 27 20.5 -0.3**
BR231 IAmb IAmb 00 27 21.8
comp=Z,29nm,1.1s
KONT Konya--Tatoy 58.25 306 *e*P **P** **00 27 21.7 +0.5**
PMG Port Moresby 58.73 110⇑ *e*P **P** **00 27 25.3 +0.4**
PMG pmax pmax
comp=Z,21nm,1.0s
PMG Port Moresby 58.73 110 P **P** **00 27 24.7 -0.2**
SVRH Sivrihisar-ESK 59.08 308 *e*P **P** **00 27 26.7 -0.4**
MOS Moscow 59.15 327 *e*P **P** **00 27 25.5 -1.6**
MOS pmax pmax
comp=Z,42nm,1.2s
MDUB Mudurnu 59.46 309 P **P** **00 27 28.3 -1.4**
OBN Obninsk 59.49 326 *d i*P **P** **00 27 29.2 -0.2**
OBN *i* 00 28 16.1
OBN *e* 00 29 41.3
OBN *e*S S 00 35 57.9 +21
OBN pmax pmax
comp=Z,40nm,1.3s
OBN Obninsk 59.49 326 P **P** **00 27 29.2 -0.2**
ISP Isparta 59.68 306 P **P** **00 27 30.2 -1.1**
ISP pmax pmax
comp=Z,24nm,0.8s
ISP Isparta 59.68 306 P **P** **00 27 30.2 -1.1**
SRCK Saricakaya, Es 59.84 308 *e*P **P** **00 27 31.8 -0.4**
KLMR Klimovskoe 60.34 333 *e*P **P** **00 27 33.8 -1.4**
KLMR pmax pmax
comp=Z,38nm,1.1s
KLMR Klimovskoe 60.34 333 *e*P **P** **00 27 33.8 -1.4**
KLMR AMP 00 27 36.1
comp=Z,38nm,1.1s
YLV Yalova 60.85 309 *e*P **P** **00 27 38.8 -0.4**
ISK Istanbul-Kandi 61.14 309 *e*P **P** **00 27 40.9 -0.2**
TIXI Tiksi 61.44 12 P **P** **00 27 41.6 -0.9**
comp=Z,10nm,0.5s,baz=217,slow=3.7,SNR=14
TIXI pP **sP** **00 27 52.8 -0.1**
comp=Z,7.3nm,0.5s,baz=197,slow=3.4,SNR=5.6
TIXI Tiksi 61.44 12 *ce*P **P** **00 27 41.9 -0.6**
TIXI Tiksi 61.44 12 P **P** **00 27 41.7 -0.9**
TIXI IAmb IAmb 00 27 58.8
comp=Z,14nm,0.9s
TLCR 61.85 314⇓ P **P** **00 27 46.5 +0.7**
MA2 Magadan 61.93 29 P **P** **00 27 45.1 -1.0**
comp=Z,8.5nm,0.6s,baz=217,slow=7.3,SNR=4.3
MA2 Magadan 61.93 29 *ce*P **P** **00 27 45.6 -0.5**
MA2 pmax pmax
comp=Z,15nm,1.0s
MA2 Magadan 61.93 29 P **P** **00 27 45.4 -0.6**
MA2 IAmb IAmb 00 27 46.6
comp=Z,14nm,0.9s
TPGR Topolog 62.08 313⇓ P **P** **00 27 47.8 +0.4**
CFR Carcaliu 62.33 314⇑ P **P** **00 27 49.7 +0.7**
AKASG Malin Array Be 62.54 320 P **P** **00 27 49.5 -0.8**
comp=Z,10nm,0.7s,baz=86,slow=4.7,SNR=31
AKASG PcP **PcP** **00 28 28.7 -0.6**
comp=Z,1.2nm,0.6s,baz=86,slow=4.5,SNR=4.5
AKASG Malin Array Be 62.54 320 *ce*P **P** **00 27 49.7 -0.7**
AKASG pmax pmax
comp=Z,10.0nm,0.7s
AKASG Malin Array Be 62.54 320 P **P** **00 27 49.6 -0.7**
AKBB Malin Array Si 62.54 320 *ce*P **P** **00 27 49.5 -0.8**
AKBB pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 62.54 320 P **P** **00 27 49.6 -0.8**
AKBB IAmb IAmb 00 27 50.0
comp=Z,9.7nm,0.7s
SORM Soroca 62.63 317⇑ P **P** **00 27 50.9 -0.1**
URLA Izmir 62.81 306 *e*P **P** **00 27 50.9 -1.5**
LPK Lapseki 62.82 308 *e*P **P** **00 27 51.7 -0.7**
BIR Birlad 62.83 315⇓ P **P** **00 27 53.0 +0.7**
MBAR Mbarara 63.16 262 P **P** **00 27 55.8 +0.5**
MBAR pmax pmax
comp=Z,13nm,1.0s
MBAR Mbarara 63.16 262 P **P** **00 27 55.8 +0.5**
MBAR IAmb IAmb 00 27 58.0
comp=Z,13nm,0.9s
ALN Alexandroupoli 63.40 309 P **P** **00 27 56.0 -0.2**
ALN pmax pmax
comp=Z,10.0nm,0.8s
ALN Alexandroupoli 63.40 309 P **P** **00 27 56.0 -0.2**
ALN IAmb IAmb 00 27 57.2
comp=Z,10nm,0.8s
VRI Vrincioaia 63.40 314⇑ P **P** **00 27 57.5 +1.3**
ISR Istrita 63.44 314⇑ P **P** **00 27 58.1 +1.6**
PLOR Plostina 63.45 314⇑ P **P** **00 27 58.0 +1.4**
TESR Tescani 63.54 315⇑ P **P** **00 27 57.7 +0.7**
SANT Santorini 63.63 304 P **P** **00 27 57.0 -0.8**
SGRR Singureni 63.74 313⇑ P **P** **00 27 59.3 +0.9**
PETK Petropavlovsk- 63.79 37 P **P** **00 27 57.9 -0.7**
comp=Z,1.7nm,0.6s,baz=238,slow=4.8,SNR=2.3
PETK LR LR 00 56 58.9
comp=Z,87nm,21.5s,baz=252,slow=37
SEY Seymchan 63.88 26 P **P** **00 27 58.0 -0.9**
comp=Z,1.7nm,0.3s,baz=224,slow=8.2,SNR=6.1
MLR Muntele Rosu 63.90 314⇑ P **P** **00 28 00.9 +1.3**
BIZ Bicaz 63.96 316⇑ P **P** **00 27 59.9 0.0**
IDI Anoyia 64.07 303⇑ P **P** **00 28 00.6 -0.3**
MNK Minsk 64.14 324 *i*P **P** **00 28 01.1 +0.3**
comp=E,6.0nm,1.2s
MNK *i* P **P** **00 28 01.1 +0.3**
comp=N,9.0nm,0.9s
MNK *i* P **P** **00 28 01.1 +0.3**
comp=Z,51nm,0.9s
MNK *i* PcP **PcP** **00 28 34.1 -1.6**
MNK *i* PP PP 00 30 12.7 -9.2
MNK *i* PPP PPP 00 31 56.0
MNK *i* S **S** **00 36 38.1 +1.9**
MNK *i* SS **SS** **00 40 53.1 +7.8**
MNK *i* SSS SSS 00 44 12.5
MNK *i* LQ LQ 00 51 44.8
MNK *i* LR LR 00 56 40.9
MNK *i* LRM MLR 00 58 48.7
comp=E,16nm,20.6s
MNK *i* LRM MLR 00 58 48.7
comp=N,305nm,30.1s
MNK *i* LRM MLR 00 58 48.7
comp=Z,98nm,16.5s
DOPR Dopca 64.34 314⇑ P **P** **00 28 02.3 -0.1**
HUMR Humele 64.48 313⇓ P **P** **00 28 03.7 +0.5**
VOIR 64.52 314⇑ P **P** **00 28 04.9 +1.3**
PATS Pohnpei 64.63 89 P **P** **00 28 03.1 -1.6**
BURAR Bucovina Array 64.64 316⇓ P **P** **00 28 05.3 +0.9**
BURAR Bucovina Array 64.64 316 P **P** **00 28 04.8 +0.4**
BURAR IAmb IAmb 00 28 06.2
comp=Z,13nm,0.8s
PLVB Pleven 64.64 311⇓ P **P** **00 28 04.8 +0.4**
BUR08 Bucovina Ar. S 64.66 316 IAmb IAmb 00 28 06.0
comp=Z,12nm,0.9s
ARR Arges 64.81 314⇓ P **P** **00 28 05.7 +0.2**
NACGM Naroch 64.84 324 *i*P **P** **00 28 04.2 -1.2**
NACGM *i* P **P** **00 28 04.2 -1.2**
NACGM *i* P **P** **00 28 04.2 -1.2**
NACGM *i* PP PP 00 30 15.7 -12
NACGM *i* PPP PPP 00 31 56.6
NACGM *i* S **S** **00 36 41.2 -3.7**
NACGM *i* SS **SS** **00 41 05.1 +8.7**
NACGM *i* SSS SSS 00 44 42.4
NACGM *i* LQ LQ 00 51 39.9
NACGM *i* LR LR 00 54 52.0
IDID Didziasalis 64.95 325 *e*P **P** **00 28 06.9 +0.8**
ARCR ARCALIA 65.17 316⇓ P **P** **00 28 08.9 +1.1**
IIGN Ignalina 65.25 325 *e*P **P** **00 28 09.0 +1.0**
ISAL Salakas 65.35 325 *e*P **P** **00 28 09.4 +0.7**
STKA Stephens Creek 65.36 135 P **P** **00 28 08.8 -0.3**
comp=Z,4.7nm,0.7s,baz=337,slow=7.4,SNR=9.0
STKA LR LR 00 57 20.7
comp=Z,74nm,21.4s,baz=356,slow=37
LOT Lotru 65.42 314⇑ P **P** **00 28 09.6 +0.1**
VTS Vitosha 65.61 311⇓ P **P** **00 28 10.8 -0.1**
VTS Vitosha 65.61 311 IAmb IAmb 00 28 11.9
comp=Z,14nm,0.8s
APA Apatity 65.61 339⇓ *i*P **P** **00 28 09.1 -1.1**
APA pmax pmax
comp=Z,21nm,0.8s
APA MLR MLR
comp=Z,400nm,13.0s
BAIL Bailesti 65.61 312⇑ P **P** **00 28 11.9 +1.3**
VSU Vasula 65.64 328 *e*P **P** **00 28 10.9 +0.5**
LVV L'vov 65.69 318 *e*P **P** **00 28 10.8 -0.2**
BMR Baia Mare 65.81 316⇓ P **P** **00 28 12.4 +0.5**
DEV Deva 66.06 314⇑ P **P** **00 28 14.6 +1.1**
LIT Litokhoron 66.07 308 IAmb IAmb 00 28 13.6
comp=Z,12nm,0.7s
GZR Gura Zlata 66.11 314⇑ P **P** **00 28 13.8 -0.2**
AGG Agios Georgios 66.17 307 IAmb IAmb 00 28 13.4
comp=Z,11nm,0.8s
DRGR 66.26 315⇓ P **P** **00 28 15.3 +0.5**
HERR Herculane 66.33 313⇓ P **P** **00 28 16.0 +0.7**
TRPA Tarpa 66.49 317⇓ P **P** **00 28 16.9 +0.7**
PABE Paberze 66.54 325 *e*P **P** **00 28 16.6 +0.3**
FINES FINESS Array B 66.65 331 P **P** **00 28 16.9 0.0**
comp=Z,28nm,0.7s,baz=98,slow=6.1,SNR=116
FINES pP **sP** **00 28 27.1 -0.2**
comp=Z,3.2nm,0.5s,baz=96,slow=10,SNR=3.1
FINES LR LR 01 00 42.4
comp=Z,154nm,19.2s,baz=104,slow=39
FINES FINESS Array B 66.65 331 *i*P **P** **00 28 16.8 -0.2**
FINES pmax pmax
comp=Z,28nm,0.7s
SUW Suwalki 66.76 323 *e*P **P** **00 28 17.4 -0.3**
SUW Suwalki 66.76 323 *e*P **P** **00 28 17.9 +0.1**
SUW Suwalki 66.76 323 P **P** **00 28 17.5 -0.3**
SUW pmax pmax
comp=Z,91nm,1.1s
SUW Suwalki 66.76 323 P **P** **00 28 17.4 -0.3**
BOVS Bovan 66.78 312⇓ P **P** **00 28 17.6 -0.5**
MDVR Moldovita 66.83 313⇑ P **P** **00 28 18.9 +0.5**
FNA Florina 66.93 309 IAmb IAmb 00 28 18.9
comp=Z,11nm,0.8s
BZS Buzias 66.94 314⇑ P **P** **00 28 18.9 -0.3**
MTSE Matsula 67.18 328 *e*P **P** **00 28 20.0 -0.3**
BANR Banloc 67.27 313⇑ P **P** **00 28 21.7 +0.6**
CRVS Cervenica-Dubn 67.27 317 *e*P **P** **00 28 22.2 +1.0**
CRVS pmax pmax
comp=Z,56nm,1.1s
CRVS Cervenica-Dubn 67.27 317 *e*P **P** **00 28 22.2 +1.0**
PBUR Paburge 67.76 325 *e*P **P** **00 28 24.6 +0.5**
KECS Kecovo 67.89 317 *e*P **P** **00 28 25.6 +0.6**
KECS Kecovo 67.89 317 *e*P **P** **00 28 25.6 +0.6**
BEL Belsk 67.95 320 *e*P **P** **00 28 25.0 -0.3**
NIE Niedzica 68.07 318 *e*P **P** **00 28 27.4 +1.1**
FRGS Fruska Gora 68.19 313⇓ P **P** **00 28 26.4 -0.7**
PSZ Piszkesteto 68.25 316 P **P** **00 28 26.9 -0.6**
PSZ pmax pmax
comp=Z,13nm,0.9s
PSZ Piszkesteto 68.25 316 P **P** **00 28 26.9 -0.6**
PSZ IAmb IAmb 00 28 28.7
comp=Z,13nm,0.9s
OJC Ojcow 68.45 319 *e*P **P** **00 28 28.9 +0.3**
OJC Ojcow 68.45 319 IAmb IAmb 00 28 29.7

comp=Z,20nm,0.9s
LANS Liptovska Anna 68.60 317 *e*P **P 00 28 30.2 +0.7**
LANS pmax pmax
comp=Z,5.0nm,0.8s
LANS Liptovska Anna 68.60 317 *e*P **P 00 28 30.2 +0.7**
VYHS Vyhne 68.98 317 *e*P **P 00 28 32.2 +0.3**
VYHS pmax pmax
comp=Z,11nm,0.8s
VYHS Vyhne 68.98 317 *e*P **P 00 28 32.2 +0.3**
ARA0 ARCESS Array S 69.01 340 *e*P **P 00 28 32.2 +0.5**
ARCES ARCESS Array B 69.01 340 P **P 00 28 31.9 +0.2**
comp=Z,17nm,0.6s,baz=91,slow=6.8,SNR=115
ARCES pP **sP 00 28 42.4 +0.3**
comp=Z,3.5nm,0.5s,baz=104,slow=4.1,SNR=3.7
ARCES LR LR 01 02 10.5
comp=Z,251nm,18.2s,baz=250,slow=39
MORH Mrgy, Hungar 69.04 314 ⇓P **P 00 28 32.3 0.0**
SRO2 Moca 69.25 316 *e*P **P 00 28 33.2 -0.4**
SRO2 pmax pmax
comp=Z,34nm,0.8s
SRO2 Moca 69.25 316 *e*P **P 00 28 33.2 -0.4**
SRO Srobarova 69.31 316 *e*P **P 00 28 34.7 +0.8**
SRO pmax pmax
comp=Z,24nm,0.9s
SRO Srobarova 69.31 316 *e*P **P 00 28 34.7 +0.8**
KTK1 Kautokeino 69.65 339 *e*P **P 00 28 36.0 +0.3**
JAVC Velka Javorina 69.77 317 *e*P **P 00 28 37.9 +1.1**
MORC Moravsky Berou 69.88 318 *e*P **P 00 28 38.0 +0.5**
MORC Moravsky Berou 69.88 318 IAmb IAmb 00 28 39.1
comp=Z,25nm,1.0s
HAMF Hammerfest 69.92 341 *e*P **P 00 28 37.8 +0.6**
SMOL Smolenice 69.92 317 *e*P **P 00 28 38.1 +0.4**
SMOL pmax pmax
comp=Z,4.0nm,1.2s
SMOL Smolenice 69.92 317 *e*P **P 00 28 38.1 +0.4**
MODS Modra-Piesok 70.02 317 *e*P **P 00 28 37.7 -0.6**
MODS pmax pmax
comp=Z,16nm,1.3s
MODS Modra-Piesok 70.02 317 *e*P **P 00 28 37.6 -0.7**
ZST Bratislava 70.13 316 *e*P **P 00 28 39.6 +0.6**
ZST pmax pmax
comp=Z,46nm,1.0s
ZST Bratislava 70.13 316 *e*P **P 00 28 39.6 +0.6**
GKP Gorka Klasztor 70.22 322 *e*P **P 00 28 39.3 -0.1**
LSZ Lusaka 70.27 248 P **P 00 28 41.3 +0.8**
LSZ pmax pmax
comp=Z,24nm,0.9s
LSZ Lusaka 70.27 248 P **P 00 28 41.3 +0.8**
LSZ IAmb IAmb 00 28 42.7
comp=Z,24nm,0.9s
KRLC Kraliky 70.38 318 *e*P **P 00 28 40.2 -0.3**
KRLC *e* 00 28 51.2
KRLC Kraliky 70.38 318 *e*P **P 00 28 40.2 -0.3**
KRLC *ep*P **sP 00 28 51.2 +0.1**
VRAC Vranov 70.48 318 ⇓P **P 00 28 41.6 +0.4**
VRAC Vranov 70.48 318 *e*P **P 00 28 41.2 0.0**
TIP Timpagrande 70.50 307 P **P 00 28 40.5 -1.1**
TIP IAmb IAmb 00 28 42.3
comp=Z,25nm,1.5s
KRUC Moravsky 70.61 317 *e*P **P 00 28 41.9 0.0**
DPC Dobruska-Polom 70.68 319 *e*P **P 00 28 42.9 +0.5**
DPC *e* 00 28 52.3
DPC Dobruska-Polom 70.68 319 *e*P **P 00 28 42.9 +0.5**
DPC *ep*P **sP 00 28 52.3 -0.7**
KOGS Kog 70.70 315 *i*P **P 00 28 42.7 +0.2**
comp=Z,64nm,0.9s
KSP Ksiaz 70.71 319 *e*P **P 00 28 43.3 +0.8**
OSTC Ostas 70.75 319 *e*P **P 00 28 43.1 +0.3**
JETT Jettan, Norway 70.76 339 *e*P **P 00 28 43.0 +0.5**
BILL Bilibino 70.83 22 *ce*P **P 00 28 42.4 -0.5**
BILL *e* 00 31 21.1
BILL pmax pmax
comp=Z,19nm,1.3s
BILL Bilibino 70.83 22 P **P 00 28 42.0 -0.9**
BILL IAmb IAmb 00 28 43.4
comp=Z,11nm,0.8s
CHVC Chvalec 70.86 319 *e*P **P 00 28 43.6 +0.2**
UPC Upice 70.88 319 *e*P **P 00 28 44.2 +0.7**
UPC Upice 70.88 319 *e*P **P 00 28 44.2 +0.7**
CONA Conrad Observa 70.96 316 *i*P **P 00 28 44.1 -0.1**
comp=Z,6.1nm,0.9s,SNR=6.4
ARSA Arzberg 71.19 315 *i*P **P 00 28 45.9 +0.4**
comp=Z,7.8nm,0.9s
TREC Trest 71.21 318 *e*P **P 00 28 45.8 +0.2**
TREC Trest 71.21 318 *e*P **P 00 28 45.8 +0.2**
CEL Celeste 71.22 306 P **P 00 28 46.0 0.0**
HOPEN Hopen 71.26 347 *e*P **P 00 28 46.2 +0.9**
TRO Tromso 71.28 339 *e*P **P 00 28 45.3 -0.3**
BOJS Bojanci 71.41 314 *i*P **P 00 28 46.9 0.0**
comp=Z,34nm,1.2s
SOKA Soboth 71.54 315 *i*P **P 00 28 47.9 +0.2**
comp=Z,15nm,1.1s,SNR=10
PVCC Panska Ves 71.80 319 *e*P **P 00 28 49.1 0.0**
PVCC Panska Ves 71.80 319 *e*P **P 00 28 49.1 0.0**
PRU Pruhonice 71.82 318 *e*P **P 00 28 49.5 +0.3**
PRU Pruhonice 71.82 318 *e*P **P 00 28 49.5 +0.3**
OBKA Obir 71.87 315 *i*P **P 00 28 50.0 +0.3**
comp=Z,16nm,0.8s,SNR=7.0
PRA Prague 71.89 318 *e*P **P 00 28 50.1 +0.5**
PRA Prague 71.89 318 *e*P **P 00 28 50.1 +0.5**
LJU Ljubljana 71.90 314 *i*P **P 00 28 50.3 +0.5**
CKRC Cesky Krumlov 71.99 317 *e*P **P 00 28 50.1 -0.2**
LNIZ Loecknitz 72.03 322 *e*P **P 00 28 50.4 0.0**
comp=Z,47nm,0.7s,baz=87,slow=5.8
MOA Molln 72.03 316 *i*P **P 00 28 50.3 -0.3**
comp=Z,9.5nm,0.9s,SNR=6.6
N2IH Innhavet 72.11 337 *e*P **P 00 28 50.8 +0.2**
PBCC Pribram 72.18 318 *e*P **P 00 28 51.6 +0.2**
BJO1 Bjornoya 72.19 344 *e*P **P 00 28 51.2 +0.2**
BRG Berggiesshubel 72.20 319⇑ *i*P **P 00 28 52.3 +0.8**
BRG Amp 00 28 53.1
comp=Z,20nm,0.9s
BRG *ex* x 00 29 02.5
BRG Amp 00 29 04.1
comp=Z,9.2nm,1.1s
BRG Berggiesshubel 72.20 319 *e*P **P 00 28 51.6 +0.1**
comp=Z,20nm,0.9s,baz=87,slow=5.8
RUE Ruedersdorf 72.29 321 *e*P **P 00 28 52.0 0.0**
comp=Z,56nm,0.9s,baz=87,slow=5.8
STEI Steigen 72.37 337 *e*P **P 00 28 52.2 +0.1**
N2TV TVrnvik 72.37 337 *e*P **P 00 28 52.3 +0.2**
GEC2 GERESS Array S 72.39 317 IAmb IAmb 00 28 54.0
comp=Z,21nm,0.8s
GEC2 GERESS Array S 72.39 317 *e*P **P 00 28 52.7 -0.1**
comp=Z,25nm,1.0s,baz=87,slow=5.8
GERES GERESS Array B 72.39 317 P **P 00 28 53.0 +0.2**
comp=Z,16nm,0.8s,baz=90,slow=6.7,SNR=112
GERES pP **sP 00 29 03.0 -0.4**
comp=Z,4.6nm,0.8s,baz=92,slow=5.6,SNR=6.0
GERES LR LR 01 06 49.6
comp=Z,60nm,18.2s,baz=102,slow=41
GERES GERESS Array B 72.39 317 P **P 00 28 52.9 +0.1**
GERES GERESS Array B 72.39 317 P **P 00 28 52.9 +0.1**
CADS Cadrg 72.44 314 *i*P **P 00 28 52.9 -0.2**
comp=Z,67nm,1.3s
TRI Trieste 72.45 314 IAmb IAmb 00 28 53.2
comp=Z,10nm,0.6s
KHC Kasperske Hory 72.46 317 *de*P **P 00 28 53.1 0.0**
KHC Kasperske Hory 72.46 317 *e*P **P 00 28 52.8 -0.3**
KHC *ep*P **sP 00 29 04.0 +0.3**
MYKA Terra Mystica 72.50 315 *e*P **P 00 28 53.3 -0.2**
comp=Z,3.7nm,0.9s
MOR8 Moi Rana 72.51 335 *e*P **P 00 28 52.7 -0.3**
NBB08 Skaug oppvekst 72.54 337 *e*P **P 00 28 53.4 +0.2**
FBE Freiberg 72.57 319 *e*P **P 00 28 54.1 +0.4**
comp=Z,45nm,1.1s,baz=87,slow=5.8
FBE *ep*P **sP 00 29 04.8 +0.5**
KBA Koelnbreinsper 72.68 315 *i*P **P 00 28 54.1 -0.5**
comp=Z,7.3nm,1.0s
NBB05 Inndyr 72.75 336 *e*P **P 00 28 54.5 +0.1**
NBB17 Glomfjord B¥r 72.76 336 *e*P **P 00 28 54.5 +0.1**
CLL Collm 72.78 320⇓ *i*P **P 00 28 54.8 -0.1**
comp=Z,15nm,1.0s
CLL LmV 01 05 00.0
comp=Z,100nm,19.3s
CLL Collm 72.78 320⇓ *i*P **P 00 28 54.8 -0.1**
CLL pmax pmax
comp=Z,15nm,1.0s
CLL MLR MLR
comp=Z,200nm,17.3s
CLL Collm 72.78 320 *e*P **P 00 28 54.7 -0.3**
comp=Z,15nm,1.0s,baz=87,slow=5.8
WET Wettzell 72.92 317 *e*P **P 00 28 56.0 +0.1**
comp=Z,25nm,1.3s,baz=87,slow=5.8

LOF Lofoten 73.02 337 *e*P **P 00 28 55.9 -0.1**
RJOB Jochberg 73.03 316 *e*P **P 00 28 56.3 -0.3**
comp=Z,48nm,0.9s,baz=87,slow=5.8
KONS Konsvik 73.07 336 *e*P **P 00 28 56.4 +0.1**
STOK Stokkvaagen 73.10 335 *e*P **P 00 28 56.9 +0.4**
TANN Tannenbergstha 73.15 319 *e*P **P 00 28 57.2 0.0**
comp=Z,14nm,1.1s,baz=87,slow=5.8
TANN *ep*P **sP 00 29 08.0 +0.1**
NKC Novy Kostel 73.17 319 *e*P **P 00 28 56.9 -0.4**
NKC *e* 00 29 08.5
NKC Novy Kostel 73.17 319 *e*P **P 00 28 56.9 -0.4**
NKC *ep*P **sP 00 29 08.5 +0.6**
N2SV S¸rvågen 73.20 337 *e*P **P 00 28 56.7 -0.4**
WERN Wernitzgruen 73.21 319 *e*P **P 00 28 57.7 +0.2**
comp=Z,15nm,1.2s,baz=87,slow=5.8
GUNZ Gunzen 73.23 319 *e*P **P 00 28 57.8 +0.1**
comp=Z,25nm,1.3s,baz=87,slow=5.8
WERD Werda 73.25 319 *e*P **P 00 28 57.7 -0.1**
comp=Z,20nm,1.0s,baz=87,slow=5.8
WERD *ep*P **sP 00 29 08.4 0.0**
ABTA Abfaltersbach 73.27 315 *i*P **P 00 28 57.3 -0.7**
comp=Z,12nm,1.3s,SNR=5.4
ROTZ Rotzenmuhle 73.34 318 *e*P **P 00 28 58.8 +0.5**
comp=Z,32nm,1.1s,baz=87,slow=5.8
ROTZ *ep*P **sP 00 29 09.6 +0.7**
PLN Plauen 73.34 319 *e*P **P 00 28 58.3 0.0**
comp=Z,25nm,1.4s,baz=87,slow=5.8
MANZ Manzenberg 73.39 318 *e*P **P 00 28 59.2 +0.5**
comp=Z,27nm,1.3s,baz=87,slow=5.8
MANZ *ep*P **sP 00 29 10.0 +0.8**
NSS Namsos 73.45 334 *e*P **P 00 28 58.5 -0.1**
HSPB Hornsund (broa 73.50 347 *e*P **P 00 28 59.2 +0.6**
SPA0 Spitsbergen Ar 73.52 348 *e*P **P 00 28 59.2 +0.4**
SPITS Spitsbergen Ar 73.52 348 P **P 00 28 58.6 -0.2**
comp=Z,12nm,0.8s,baz=134,slow=14,SNR=17
SPITS pP **sP 00 29 09.5 +0.2**
comp=Z,4.1nm,0.7s,baz=123,slow=15,SNR=3.0
NEUB Neuenburg 73.56 320 *e*P **P 00 28 59.4 -0.2**
comp=Z,29nm,1.2s,baz=87,slow=5.8
NC602 NORSAR Array S 73.56 330 *e*P **P 00 28 59.1 -0.3**
NC303 NORSAR Array S 73.65 330 P **P 00 28 59.5 -0.4**
MOX Moxa 73.68 319 *e*P **P 00 29 00.3 0.0**
comp=Z,13nm,0.9s,baz=87,slow=5.8
NB201 NORSAR Array S 73.68 330 P **P 00 28 59.1 -1.0**
NB2 NORSAR Subarra 73.72 330 P **P 00 28 59.4 -1.0**
baz=89,slow=5.9
NOA NORSAR Array B 73.72 330 P **P 00 28 59.7 -0.6**
comp=Z,10nm,0.7s,baz=90,slow=5.8,SNR=71
NOA pP **sP 00 29 10.3 -0.6**
comp=Z,2.6nm,0.7s,baz=90,slow=5.8,SNR=5.9
NOA LR LR 01 04 38.9
comp=Z,44nm,18.2s,baz=115,slow=38
WTTA Wattenberg 73.84 316 *i*P **P 00 29 00.8 -0.7**
comp=Z,13nm,0.7s,SNR=7.8
FLTG Flechtingen 73.85 321 *e*P **P 00 29 00.5 -0.7**
comp=Z,12nm,0.8s,baz=87,slow=5.8
CTI Castel Tesino 73.90 314 IAmb IAmb 00 29 02.8
comp=Z,21nm,0.8s
NC204 NORSAR Array S 73.94 330 IAmb IAmb 00 29 02.2
comp=Z,21nm,0.8s
OSL Oslo 73.97 329 *e*P **P 00 29 02.1 +0.4**
GRA1 Grafenberg Arr 73.98 318 IAmb IAmb 00 29 03.8
comp=Z,26nm,1.1s
GRF Grafenberg Arr 73.98 318 *e*P **P 00 29 02.5 +0.4**
comp=Z,29nm,1.2s,baz=87,slow=5.8
GRFO Grafenberg 73.98 318 P **P 00 29 02.2 +0.2**
GRFO pmax pmax
comp=Z,24nm,1.1s
GRFO Grafenberg 73.98 318 P **P 00 29 02.2 +0.2**
GRFO IAmb IAmb 00 29 03.8
comp=Z,24nm,1.1s
FUR Furstenfeldbru 74.03 316 *e*P **P 00 29 01.9 -0.5**
comp=Z,22nm,0.6s,baz=87,slow=5.8
SQTA Sankt Quirin 74.13 315 *i*P **P 00 29 02.4 -0.7**
comp=Z,12nm,0.6s,SNR=8.8
MOTA Moosalm 74.19 316 *i*P **P 00 29 02.6 -0.9**
comp=Z,14nm,0.9s,SNR=12
ASSE Asse, Remlinge 74.21 321 *e*P **P 00 29 03.1 -0.1**
comp=Z,24nm,1.4s,baz=87,slow=5.8
BSEG Bad Segeberg 74.34 322 *e*P **P 00 29 04.4 +0.4**
comp=Z,41nm,1.0s,baz=87,slow=5.8
BSEG *ep*P **sP 00 29 15.0 +0.4**
CLZ Clausthal 74.41 320 *e*P **P 00 29 04.6 0.0**
comp=Z,38nm,1.3s,baz=87,slow=5.8
RETA Reutte 74.42 316 *i*P **P 00 29 04.2 -0.5**
comp=Z,22nm,1.1s,SNR=11
FETA Feichten 74.47 315 *i*P **P 00 29 04.7 -0.5**
comp=Z,13nm,1.0s,SNR=9.3
ZCCA Zocca 74.50 313 IAmb IAmb 00 29 07.5
comp=Z,19nm,0.9s
KBS Kingsbay 74.50 349 *e*P **P 00 29 04.7 +0.1**
NRDL Niedersach Rie 74.53 321 *e*P **P 00 29 05.7 +0.6**
comp=Z,36nm,1.3s,baz=87,slow=5.8
KONO Kongsberg 74.54 328 *ce*P **P 00 29 06.0 +0.9**
KONO pmax pmax
comp=Z,20nm,1.7s
KONO Kongsberg 74.54 328 *e*P **P 00 29 05.1 0.0**
GTTG Gottingen 74.68 320 *e*P **P 00 29 06.1 0.0**
comp=Z,25nm,0.8s,baz=87,slow=5.8
UBBA Unterbreizbach 74.70 319 *e*P **P 00 29 06.2 +0.2**
comp=Z,5.0nm,1.0s,baz=87,slow=5.8
DOMB Dombas 74.74 331 *e*P **P 00 29 06.5 +0.3**
SKMB Sankelmark Bun 74.82 321 *e*P **P 00 29 07.5 +0.7**
comp=Z,20nm,0.6s,baz=87,slow=5.8
UBR Ueberruh 74.84 316 *e*P **P 00 29 06.4 -0.8**
comp=Z,18nm,1.0s,baz=87,slow=5.8
MUD Monsted U'grnd 74.88 325 *i*P **P 00 29 07.0 -0.1**
MUD Monsted U'grnd 74.88 325 *i*P **P 00 29 07.0 -0.1**
DAVA Damuels 75.03 316 *i*P **P 00 29 08.1 -0.3**
comp=Z,21nm,0.7s,SNR=12
SKAR Skarslia 75.15 330 *e*P **P 00 29 09.1 +0.4**
MILB Miltenberg 75.22 318 *e*P **P 00 29 09.0 -0.2**
comp=Z,15nm,1.0s,baz=87,slow=5.8
STU Stuttgart 75.37 317 *e*P **P 00 29 10.1 0.0**
comp=Z,14nm,0.2s,baz=87,slow=5.8
MOL Molde 75.44 332 *e*P **P 00 29 10.2 0.0**
TUE Stuetta 75.46 315 P **P 00 29 11.0 +0.1**
KASTN Kahler Asten 75.67 320 *e*P **P 00 29 11.8 -0.1**
comp=Z,15nm,1.4s,baz=87,slow=5.8
TNS Taunus Mts 75.73 319 *e*P **P 00 29 12.2 -0.1**
comp=Z,12nm,0.9s,baz=87,slow=5.8
BFO Black Forest 75.98 317 P **P 00 29 13.2 -0.4**
BFO pmax pmax
comp=Z,11nm,1.3s
BFO Black Forest 75.98 317 P **P 00 29 13.2 -0.4**
BFO Black Forest 75.98 317 *e*P **P 00 29 13.2 -0.4**
comp=Z,14nm,1.4s,baz=87,slow=5.8
IBBN Ibbenburen 75.98 321 *e*P **P 00 29 13.7 +0.1**
comp=Z,87nm,1.9s,baz=87,slow=5.8
LBTB Lobatse 76.19 239 P **P 00 29 16.3 +1.0**
LBTB pmax pmax
comp=Z,22nm,0.9s
LBTB Lobatse 76.19 239 P **P 00 29 16.3 +1.0**
LBTB IAmb IAmb 00 29 17.3
comp=Z,22nm,0.9s
BUG Bochum-Univer 76.36 320 *e*P **P 00 29 15.7 0.0**
comp=Z,29nm,1.1s,baz=87,slow=5.8
AHRW Bad Neuenahr-A 76.58 319 *e*P **P 00 29 17.2 +0.3**
comp=Z,16nm,1.1s,baz=87,slow=5.8
KEST Kesra 76.69 304 P **P 00 29 17.9 -0.1**
comp=Z,16nm,0.9s,baz=260,slow=2.3,SNR=16
KEST Kesra 76.69 304 IAmb IAmb 00 29 19.0
comp=Z,19nm,0.9s
MEM Membach 77.25 319 *d*P **P 00 29 21.1 +0.4**
WLF Walferdange 77.26 318 *d*P **P 00 29 21.1 +0.3**
WLF *dp*P **pP 00 29 28.4 -0.2**
WLF Walferdange 77.26 318 *e*P **P 00 29 21.3 +0.4**
comp=Z,11nm,1.0s,baz=87,slow=5.8
BNI Bardonecchia 77.48 314 IAmb IAmb 00 29 26.4
comp=Z,17nm,0.9s
BSTI Sart Tilman 77.53 319 *d*P **P 00 29 22.8 +0.5**
BSTI *dp*P **pP 00 29 29.8 -0.3**
BSTI *d*PcP **PcP 00 29 31.5 -1.0**
BGES Gesves 77.86 319 *b*P **P 00 29 24.3 +0.2**
comp=Z,7.1nm,1.0s
BGES *dp*P **pP 00 29 31.4 -0.6**
BOSA Boshof 77.88 236 P **P 00 29 25.2 +0.5**
comp=Z,27nm,0.8s,baz=77,slow=4.3,SNR=55
BOSA pP **sP 00 29 36.5 +1.1**
comp=Z,6.3nm,0.6s,baz=88,slow=5.7,SNR=4.4
BOSA LR LR 00 58 51.3
comp=Z,61nm,19.7s,baz=34,slow=32
BOSA Boshof 77.88 236 P **P 00 29 25.4 +0.7**
BOSA pmax pmax
comp=Z,32nm,0.9s
BOSA Boshof 77.88 236 P **P 00 29 25.4 +0.7**

BMRD Maredsous 78.07 319 *b*P **P 00 29 25.5 +0.2**
comp=Z,5.7nm,1.0s
BMRD *dp*P **pP 00 29 32.5 -0.6**
BMRD *ds*P **sP 00 29 36.5 +0.6**
DOU Dourbes 78.21 319 *d*P **P 00 29 25.8 -0.3**
SNF Seneffe 78.35 319 *d*P **P 00 29 26.7 -0.1**
SSB Saint Sauveur 78.94 314 IAmb IAmb 00 29 31.2
comp=Z,15nm,1.0s
NOR Nord 78.94 352⇓ *i*P **P 00 29 29.2 -0.5**
NOR IAmb IAmb 00 29 30.1
comp=Z,9.3nm,1.0s
NOR Nord 78.94 352⇓ *i*P **P 00 29 29.1 -0.5**
NOR pmax pmax
comp=Z,9.0nm,1.0s
CLF Chambon-Foret 80.04 317 IAmb IAmb 00 29 37.3
comp=Z,18nm,0.9s
TNA Tin City 81.06 25 P 00 29 41.3
baz=284
ESK Eskdalemuir 81.94 325 P **P 00 29 46.6 +0.5**
ESK pmax pmax
comp=Z,16nm,0.9s
ESK Eskdalemuir 81.94 325 P **P 00 29 46.6 +0.5**
ESK IAmb IAmb 00 29 47.3
comp=Z,16nm,0.8s
RDOG Red Dog Mine 82.27 22 P 00 29 48.0
baz=288
ANM Nome 82.37 25 P 00 29 48.7
baz=286
DBG Daneborg 82.56 345 *i*P **P 00 29 49.1 +0.1**
DBG IAmb IAmb 00 29 49.8
comp=Z,3.2nm,1.0s
DBG AMP 00 29 49.8
comp=Z,3.2nm,1.0s
A21K Barrow 83.14 18 P 00 29 52.7
baz=294
NIKH Nikolski High 83.80 37 P 00 29 55.9
baz=285
MAW Mawson 84.35 191 P **P 00 29 58.4 +0.3**
comp=Z,1.8nm,0.7s,baz=323,slow=4.2,SNR=5.7
ESBB Sonseca Array 86.25 310 IAmb IAmb 00 30 09.4
comp=Z,11nm,0.9s
ESDC Sonseca Array 86.26 310 P **P 00 30 08.4 -0.2**
comp=Z,6.9nm,0.8s,baz=54,slow=4.7,SNR=48
ESDC pP **sP 00 30 18.3 -1.0**
comp=Z,3.1nm,1.0s,baz=60,slow=5.0,SNR=5.5
ESDC Sonseca Array 86.26 310 P **P 00 30 08.3 -0.2**
NEEM North Greenlan 86.29 353 *i*P **P 00 30 08.2 -0.1**
NEEM IAmb IAmb 00 30 11.1
comp=Z,7.1nm,0.9s
IMAR Indian Mountai 86.38 22 P **P 00 30 08.9 +0.3**
TOLK Toolik Lake Re 86.53 19 IAmb IAmb 00 30 10.4
comp=Z,10nm,0.7s
TOLK Toolik Lake Re 86.53 19 P 00 30 09.8
baz=300,SNR=14
PAB San Pablo 86.58 310 P **P 00 30 10.4 +0.2**
PAB pmax pmax
comp=Z,9.0nm,0.9s
PAB San Pablo 86.58 310 P **P 00 30 10.4 +0.2**
PAB IAmb IAmb 00 30 11.0
comp=Z,8.7nm,0.9s
COLD Coldfoot 87.04 20 P 00 30 12.3
baz=300
SUMG Summit 87.83 347⇓ *i*P **P 00 30 15.7 -0.3**
SUMG IAmb IAmb 00 30 16.9
comp=Z,8.2nm,1.1s
SUMG Summit 87.83 347⇓ *i*P **P 00 30 15.6 -0.3**
SUMG pmax pmax
comp=Z,8.0nm,1.1s
SUMG Summit 87.83 347 IAmb IAmb 00 30 16.9
comp=Z,15nm,1.0s
MLY Manley 87.94 22 IAmb IAmb 00 30 17.7
comp=Z,10nm,0.8s
MLY Manley 87.94 22 P 00 30 16.8
baz=300,SNR=12
TOA0 Torodi Ar. Sit 87.94 283 IAmb IAmb 00 30 18.4
comp=Z,16nm,0.9s
TORD Torodi Ar. Bea 87.94 283 P **P 00 30 17.3 +0.2**
comp=Z,14nm,0.8s,baz=80,slow=4.6,SNR=74
TORD pP **sP 00 30 28.1 +0.3**
comp=Z,3.2nm,0.9s,baz=75,slow=3.7,SNR=4.9
TORD PP **PP 00 33 43.6 +0.1**
comp=Z,1.9nm,1.1s,baz=67,slow=7.3,SNR=6.4
TORD LR LR 01 11 09.0
comp=Z,83nm,18.3s,baz=280,slow=37
TORD Torodi Ar. Bea 87.94 283 P **P 00 30 17.3 +0.2**
TORD IAmb IAmb 00 30 18.4
comp=Z,14nm,0.9s
MVO Moncorvo 88.09 312 *e*P **P 00 30 17.4 0.0**
BPAW Bear Paw Mtn. 88.31 23 P 00 30 18.4
baz=299,SNR=13
I23K Minto, Yukon-K 88.39 22 IAmb IAmb 00 30 20.9
comp=Z,6.8nm,0.7s
I23K Minto, Yukon-K 88.39 22 P 00 30 18.7
baz=301,SNR=7.5
PPLA Purkeypile 88.42 25 IAmb IAmb 00 30 20.1
comp=Z,13nm,0.8s
PPLA Purkeypile 88.42 25 P 00 30 19.0
baz=298
PCAB Cabril 88.65 313 *e*P **P 00 30 20.5 +0.5**
MTE Manteigas 88.69 311 *e*P **P 00 30 21.3 +1.0**
comp=Z,34nm,1.9s
MTE *ep*P **pP 00 30 29.1 +0.9**
PGAV Gavieira, Arco 88.75 313 *e*P **P 00 30 22.4 +1.9**
BMAR Burnt Mountain 88.76 19 P **P 00 30 20.3 +0.3**
NEA2 Nenana 88.78 22 IAmb IAmb 00 30 21.4
comp=Z,8.3nm,0.8s
NEA2 Nenana 88.78 22 P 00 30 20.0
baz=301,SNR=5.6
PCBR Castelo Branco 88.81 311 *e*P **P 00 30 21.1 +0.4**
comp=Z,20nm,2.0s
TULEG Thule 88.88 356⇓ *i*P **P 00 30 19.9 -0.4**
TULEG IAmb IAmb 00 30 20.9
comp=Z,11nm,0.9s
TRF Thorofare Moun 88.90 24 IAmb IAmb 00 30 22.5
comp=Z,10nm,0.8s
TRF Thorofare Moun 88.90 24 P 00 30 21.4
baz=300
PBAR Barrancos 88.98 309 *e*P **P 00 30 21.7 +0.1**
comp=Z,18nm,1.7s
FYU Fort Yukon 89.05 20 IAmb IAmb 00 30 23.3
comp=Z,15nm,1.2s
COLA College 89.08 22⇑ *e*P **P 00 30 22.7 +1.3**
COLA pmax pmax
comp=Z,22nm,3.4s
POKR Poker Plat Res 89.10 22 P 00 30 21.8
baz=302
SKT Skwentna 89.13 25 P 00 30 21.8
baz=299,SNR=6.2
SPCR Spurr Chakacha 89.22 26 P 00 30 23.1
baz=298
MCK McKinley 89.28 23 P 00 30 22.5
baz=301,SNR=10.0
RND Reindeer 89.48 23 IAmb IAmb 00 30 24.3
comp=Z,22nm,1.4s
ILAR Eielson Array 89.48 22 P **P 00 30 22.4 -1.0**
comp=Z,3.4nm,0.8s,baz=301,slow=4.5,SNR=30
ILAR pP **sP 00 30 34.0 0.0**
comp=Z,2.2nm,0.9s,baz=294,slow=4.6,SNR=5.6
ILAR Eielson Array 89.48 22 P **P 00 30 22.2 -1.2**
ILAR Eielson Array 89.48 22 P **P 00 30 22.2 -1.2**
PRP Porcupine Dome 89.54 21 IAmb IAmb 00 30 25.4
comp=Z,12nm,0.8s
PRP Porcupine Dome 89.55 21 P 00 30 24.3
baz=304
PMTG Montargil 89.60 310 *e*P **P 00 30 24.7 +0.3**
PMTG *ep*P **pP 00 30 33.3 +1.0**
SUA Susitna One 89.71 25 P 00 30 24.8
baz=300,SNR=8.7
WAT2 Susitna Watana 89.82 24 P 00 30 24.7
baz=302
PMR Palmer 90.31 25 IAmb IAmb 00 30 28.5
comp=Z,14nm,0.8s
PMR Palmer 90.31 25 P 00 30 27.5
baz=301,SNR=5.5
RC01 Rabbit Creek A 90.32 26 P 00 30 27.7
baz=300,SNR=8.0
WAT6 Susitna Watana 90.35 24 P 00 30 27.6
baz=302,SNR=6.8
PMAFR Mafra 90.41 310 *ep*P pP 00 30 35.8 -0.4
PTEO Sao Teotonio 90.44 309 *e*P **P 00 30 29.6 +1.2**
SML Sawmill 90.53 25 P 00 30 29.0
baz=302
ICESG Greenland Ices 90.53 345 *i*P **P 00 30 28.8 +0.2**
ICESG IAmb IAmb 00 30 29.8
comp=Z,9.2nm,0.8s
BRSE Bradley Lake S 90.57 27 P 00 30 28.4
baz=300

OHAK	Old Harbor	90.60	30	P			00 30 28.7	
	baz=297							
KDAK	Kodiak Island	90.68	29	P		P	00 30 28.7	-0.3
	comp=Z,10nm,0.8s,baz=280,slow=12,SNR=2.6							
KDAK	Kodiak Island	90.68	29	P			00 30 30.1	
	baz=298							
UPNV	Upernavik	90.95	351	*i* P		P	00 30 30.3	+0.3
UPNV				IAmb		IAmb	00 30 31.2	
	comp=Z,14nm,0.8s							
SCRK	Sand Creek	90.97	22	IAmb		IAmb	00 30 31.7	
	comp=Z,11nm,0.7s							
SCRK	Sand Creek	90.97	22	P			00 30 30.7	
	baz=306,SNR=15							
PAX	Paxson	91.01	23	P			00 30 31.0	
	baz=304							
DOT	Dot Lake	91.14	22	IAmb		IAmb	00 30 32.0	
	comp=Z,6.1nm,0.6s							
M24K	Tolsona, Glenn	91.22	24	P			00 30 32.3	
	baz=304							
RES	Resolute Bay	91.27	2	P		P	00 30 31.3	-0.2
	comp=Z,4.9nm,0.8s,baz=346,slow=6.2,SNR=13							
INK	Inuvik	91.39	16	P		P	00 30 32.0	-0.1
	comp=Z,5.0nm,0.8s,baz=333,slow=4.3,SNR=20							
EGAK	Eagle	91.47	20	IAmb		IAmb	00 30 49.9	
	comp=Z,7.2nm,1.1s							
EGAK	Eagle	91.47	20	P			00 30 32.5	
	baz=308							
K27K	Chicken	91.62	21	IAmb		IAmb	00 30 35.6	
	comp=Z,14nm,1.2s							
K27K	Chicken	91.62	21	P			00 30 34.1	
	baz=307,SNR=8.6							
KLU	Klutina	91.66	24	P			00 30 34.2	
	baz=304							
N25K	Chitina, Valde	92.12	24	IAmb		IAmb	00 30 37.9	
	comp=Z,11nm,0.8s							
N25K	Chitina, Valde	92.12	24	P			00 30 36.9	
	baz=305,SNR=5.7							
EYAK	Cordova Ski Ar	92.26	25	P			00 30 37.2	
	baz=304							
L27K	Beaver Creek,	92.30	22	IAmb		IAmb	00 30 38.3	
	comp=Z,6.2nm,1.0s							
L27K	Beaver Creek,	92.30	22	P			00 30 37.7	
	baz=308,SNR=8.8							
BCAR	Beaver Creek A	92.31	22	P		P	00 30 36.1	-0.5
BMRM	Bremner River	92.49	24	P			00 30 38.3	
	baz=305							
DAWY	Dawson	92.52	20	IAmb		IAmb	00 30 38.9	
	comp=Z,7.5nm,1.0s							
KHZ	Kahutara	92.67	133			pP	00 30 46.1	-0.3
KHZ	Kahutara	92.67	133	P		pP	00 30 46.1	-0.3
C36M	Paulatuk	92.80	12	IAmb		IAmb	00 30 38.7	
	comp=Z,7.3nm,0.7s							
MCARA	McCarthy VSAT	92.86	24	P			00 30 40.1	
	baz=306							
KOWA	Kowa	92.97	286	P		P	00 30 41.5	+0.9
BARN	Barnard Glacie	93.59	23	IAmb		IAmb	00 30 59.9	
	comp=Z,13nm,1.1s							
CTG	Chitna Glacier	93.77	23	P			00 30 44.3	
	baz=308							
DBIC	Dimbokro	95.80	278	P		P	00 30 53.8	+0.2
	comp=Z,2.6nm,0.9s,baz=76,slow=3.9,SNR=4.2							
DBIC				LR		LR	01 14 14.4	
	comp=Z,39nm,19.2s,baz=44,slow=36							
YKA	Yellowknife Ar	100.68	13	P		Pdif	00 31 14.1	-0.4
	comp=Z,0.6nm,0.7s,baz=332,slow=4.1,SNR=10							
YKA				pP		sPdif	00 31 25.1	0.0
	comp=Z,0.3nm,0.8s,baz=331,slow=4.0,SNR=3.0							
YKA				PP		PP	00 35 20.1	-1.0
	comp=Z,0.5nm,0.9s,baz=337,slow=7.3,SNR=6.2							
J05D	Fort Rock, OR	114.93	27	P			00 36 08.1	
	baz=323							
EGMT	Eagleton	114.96	17	P			00 36 07.7	
	baz=336							
BOZ	Bozeman (W)	116.59	19	P			00 36 11.1	
	baz=333							
D63A	Stockholm	116.79	346	P			00 36 11.8	
	baz=21							
LAO	LASA Array	117.11	15	P			00 36 12.5	
	baz=339							
HLID	Hailey	117.44	22	P			00 36 12.8	
	baz=330							
ELK	Elko	119.54	24	PKIKP		PKiKP	00 36 17.8	+0.8
ELK	Elko	119.54	24	PKPdf		PKiKP	00 36 17.8	+0.8
PDAR	Pinedale Array	119.79	19	PKP		PKPdf	00 36 16.9	-0.4
	comp=Z,1.7nm,0.6s,baz=90,slow=0.6,SNR=22							
PDAR	Pinedale Array	119.79	19	PKPdf		PKPdf	00 36 16.6	-0.7
NVAR	Mina Array Bea	120.16	28	PKP		PKiKP	00 36 18.8	+0.6
	comp=Z,3.0nm,0.7s,baz=323,slow=2.0,SNR=17							
NV11	Mina Array Sit	120.22	28	PKPdf		PKiKP	00 36 19.1	+0.9
K22A	Casper	120.79	17	P			00 36 18.4	
	baz=338							
DUG	Dugway, Tooele	120.95	23	P			00 36 19.8	
	baz=331,SNR=5.3							
J62A	Henniker	121.25	347	P			00 36 20.0	
	baz=17							
R11A	Troy Canyon, C	121.42	26	P			00 36 21.1	
	baz=327,SNR=10.0							
ECSD	EROS Data Cent	121.81	8	P			00 36 20.7	
	baz=349							
CWC	Cottonwood Cre	121.88	29	P			00 36 21.7	
	baz=324							
TPNV	Topopah Spring	122.30	27	P			00 36 21.7	
	baz=326							
O20A	White River Ci	122.59	19	P			00 36 22.5	
	baz=336,SNR=5.1							
K57A	Scipio Center	122.61	351	P			00 36 22.4	
	baz=12							
SCZ2	Santa Cruz Isl	123.05	32	P			00 36 22.8	
	baz=322							
OGNE	Ogallala	123.53	13	P			00 36 24.0	
	baz=343							
ISCO	Idaho Springs	123.69	17	P			00 36 24.5	
	baz=338							
O59A	Robesonia	124.92	350	P			00 36 26.8	
	baz=13							
PFO	Pinyon Flats O	124.94	30	P			00 36 26.6	
	baz=325							
TPFO	Pinon Flats	124.95	30	P			00 36 26.8	
	baz=325							
SDCO	Great Sand Dun	125.63	18	P			00 36 28.4	
	baz=338							
P57A	Homestead Farm	126.02	351	P			00 36 28.7	
	baz=11							
CBKS	Cedar Bluff	126.07	12	P			00 36 28.7	
	baz=345							
P52A	Corning	126.34	355	P			00 36 29.1	
	baz=5.9							
KSU1	Kansas State U	126.35	9	P			00 36 29.3	
	baz=348							
Q58A	Fox Den Farm,	126.50	351	P			00 36 29.9	
	baz=11							
T25A	Trinidad	126.51	17	P			00 36 30.3	
	baz=339							
Q56A	Snyder Ridge,	126.61	352	P			00 36 29.7	
	baz=9.5							
R57A	Stanardsville	127.25	351	P			00 36 31.5	
	baz=10							
R55A	Marlinton	127.48	353	P			00 36 31.9	
	baz=8.4							
R58B	Mineral	127.48	351	P			00 36 31.8	
	baz=11							
S57A	Dark Hollow, R	127.84	352	P			00 36 33.0	
	baz=9.9							
ANMO	Albuquerque	127.90	20	⇓*i* PKIKP		PKiKP	00 36 33.6	0.0
ANMO				pmax		pmax		
	comp=Z,7.0nm,1.3s							
ANMO	Albuquerque	127.90	20	PKPdf		PKiKP	00 36 34.3	+0.7
CCM	Cathedral Cave	127.98	4	P			00 36 32.4	
	baz=355							
U40A	Yellville	129.53	6	P			00 36 36.0	
	baz=353							
MSTX	Muleshoe	129.94	17	P			00 36 36.9	
	baz=340							
WVT	Waverly	130.04	1	P			00 36 37.1	
	baz=359							
WMOK	Wichita Mounta	130.19	13	P			00 36 37.6	
	baz=345							
MNTX	Cornudas Mount	131.22	21	P			00 36 39.9	
	baz=336							
MIAR	Mount Ida	131.24	7	P			00 36 39.8	
	baz=352							
GOGA	Godfrey	132.62	356	P			00 36 42.6	
	baz=4.7							
TXAR	Lajitas Array	133.97	20	PKP		PKiKP	00 36 45.2	-0.6
	comp=Z,1.5nm,0.6s,baz=54,slow=0.4,SNR=19							
TXAR	Lajitas Array	133.97	20	PKIKP		PKPdf	00 36 45.0	+0.4
TXAR	Lajitas Array	133.97	20	PKPdf		PKPdf	00 36 45.0	+0.4
JCT	Junction City	134.04	15	P			00 36 45.4	
	baz=343							
PEXB	Peixe	142.12	268	*e*P		PKPdf	00 36 59.2	-0.5
BDFB	Brasilia	142.16	263	PKP		PKPdf	00 37 00.1	+0.2
	comp=Z,4.6nm,0.7s,baz=193,slow=1.5,SNR=4.8							
ITRB	Iturama	144.40	256	*e*P		PKPab	00 37 00.1	-1.7
PLTB	Pedras Altas	144.64	234	*e*P		PKPab	00 37 00.9	-1.4
SNDB	Serra Nova Dou	145.01	269	*e*P		PKPbc	00 37 03.4	-0.8
PCMB	Pacaembu	145.08	252	*e*P		PKPbc	00 37 03.4	-0.8
MALB	Monte Alegre	145.29	288	*e*P		PKPbc	00 37 04.4	-0.6
PTGB	Pitanga	145.35	247	*e*P		PKPbc	00 37 04.3	-0.7
ARAG	Araguaiana, MT	145.82	263	*e*P		PKPbc	00 37 06.6	-0.1
TEIG	Tepich	145.87	2	PKPbc		PKPab	00 37 06.9	-0.1
	comp=Z,64nm,0.6s,baz=294,slow=0.4,SNR=40							
TEIG	Tepich	145.87	2			PKPab	00 37 07.2	+0.2
ITTB	Itaituba	147.55	284	*e*P		PKPdf	00 37 08.5	-0.6
ITQB	Itaqui	147.83	236	*e*P		PKPdf	00 37 08.9	-0.2
NPGB	Novo Progresso	147.99	279	*e*P		PKPdf	00 37 07.7	-2.1
LL02	Futaleuf	148.16	201			PKPbc	00 37 12.6	+0.1
BOAV	Boa Vista	148.92	300	*e*P		PKPdf	00 37 10.6	-0.8
CLDB	Colider	149.22	272	*e*P		PKPdf	00 37 11.7	-0.2
AQDB	Aquidauana	149.33	254	*e*P		PKPdf	00 37 10.9	-0.9
CCIG	Comitan	149.41	9			PKPdf	00 37 12.9	+0.6
CPUP	Villa Florida	149.56	242	PKPbc		PKPbc	00 37 15.7	-0.9
	comp=Z,10nm,0.7s,baz=115,slow=3.3,SNR=6.3							
CPUP	Villa Florida	149.56	242	PKHKP		PKPpre	00 37 12.5	
CPUP	Villa Florida	149.56	242			PKPdf	00 37 12.4	+0.4
PLCA	Paso Flores	149.76	206	PKPbc		PKPbc	00 37 16.8	0.0
	comp=Z,4.3nm,0.8s,baz=134,slow=2.0,SNR=9.0							
PLCA	Paso Flores	149.76	206	PKP2		PKiKP	00 37 17.3	-0.5
PLCA	Paso Flores	149.76	206			PKiKP	00 37 17.3	-0.5
PLCA	Paso Flores	149.76	206	*e*P		PKPdf	00 37 11.0	-1.0
PTGA	Pitinga	149.99	294			PKPbc	00 37 18.0	-0.1
MACA	Manacapuru-AM	151.69	290	*e*P		PKPdf	00 37 15.7	0.0
SDV	Santo Domingo	151.88	323			PKPbc	00 37 21.8	-0.9
TGUH	Tegucigalpa,Ún	152.02	0			PKiKP	00 37 23.9	+0.7
PTLB	Pontes e Lacer	152.87	264	*e*P		PKPdf	00 37 17.2	-0.1
RIOS	Rincon, Osa	157.06	351			PKPab	00 37 53.4	+0.1
ROSC	El Rosal	157.27	325	PKPab		PKPab	00 37 55.4	+0.6
	comp=Z,16nm,0.7s,baz=158,slow=4.0,SNR=7.0							
ROSC	El Rosal	157.27	325	PKP2		PKPab	00 37 56.1	+1.3
ROSC	El Rosal	157.27	325			PKPab	00 37 56.0	+1.3
AC02	Maricunga	158.91	230			PKPab	00 38 03.0	+1.1
PB16	IPOC Station P	162.53	254			PKPab	00 38 18.2	+0.2

WEL 21 00:30:43.3,42°S±2°×17°4E±°, h32km±7km, M2.6/16, ML2.7/14, MLv2.6/16, Error ellipse: s-maj=0.0km s-min=0.0km az=75.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVZ	Greta Valley S	0.71	227	P	Pb	00 30 58.1	+0.8
BSWZ	Blackbirch Sta	0.78	8	P	Pb	00 30 58.9	+0.5
THZ	Tophouse	0.95	319	P	Pb	00 31 01.1	-0.2
AMCZ	Amberley	1.06	229	P	Pb	00 31 02.8	-0.3
TUWZ	Tuamarina	1.06	8	P	Pb	00 31 03.8	+0.6
LTZ	Lake Taylor	1.12	254	P	Pb	00 31 04.4	+0.1
NNZ	Nelson	1.29	348	P	Pb	00 31 06.8	-0.2
TCW	Tory Channel	1.33	18	P	Pb	00 31 07.0	-0.8
OKCZ	Okains Bay	1.33	202	P	Pb	00 31 06.8	-1.0
MQZ	McQueen's Vall	1.46	213	P	Pn	00 31 07.8	+0.3
OXZ	Oxford	1.51	235	P	Pn	00 31 08.7	+0.6
AKCZ	Akaroa Harbour	1.51	203	P	Pn	00 31 09.1	+0.8
DSZ	Denniston Nort	1.62	297	P	Pb	00 31 11.7	-0.9
DUWZ	D'Urville Isla	1.69	5	P	Pb	00 31 13.0	-0.7
CAW	Cannon Point	1.70	36	P	Pn	00 31 12.0	+1.2
ORZ	Quartz Range	1.89	331	P	Pb	00 31 16.6	-0.6
WVZ	Waitaha Valley	2.29	254	P	Pn	00 31 20.7	+1.9
ARCZ	Arundel	2.38	231	P	Pn	00 31 20.9	+0.8
TSZ	Takapari Road	2.95	35	P	Pb	00 31 35.2	+0.1
TLZ	Tolley Road	4.37	19	P	Pn	00 31 48.3	+0.8
HAZ	Te Kaha	5.65	35	P	Pn	00 32 07.6	+2.5
WCZ	Waipu Caves	6.55	4	P	Pn	00 32 18.8	+1.3

*INET **21** 01:24:08.7, 10.32N×86.74W, h15km, MW3.9*
*IDC **21** 01:24:10.4±4.3, 11.62N×85.31W, h0km, mb3.5/4, mb1 4.0/4, mb1mx3.6/39, mbtmp3.5/4, Error ellipse: s-maj=123.4km s-min=81.5km az=45.0*
*UCR **21** 01:24:15.3±1.1, 10.58N×86.42W, h5km, MW4.4*
ISC 21 01:24:13.5±1.1, 10.6N±0.1×86.6W±0.1, h23km, n26, σ0.9/91/29, mb3.5/4,5C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HZTE	Horizontes, Gu	0.95	83	*e*P	Pn	01 24 31.4	-0.1
SAJU	San Juanillo,	0.98	122	*e*P	Pn	01 24 31.6	-0.4
SAJU				*e*S	Sn	01 24 44.7	-0.5
GBS3	Finca Las Img	1.10	80	⇑*i* P	Pn	01 24 33.2	-0.4
ORTG	Ortega, Santa	1.10	102	*e*P	Pn	01 24 33.7	0.0
ORTG				*e*S	Sn	01 24 48.5	+0.2
GRZA	Playa Garza	1.13	127	*e*P	Pb	01 24 33.8	-0.6
GRZA				*e*S	Sn	01 24 48.0	-0.8
BUEV	Buena Vista	1.15	80	⇑*i* P	Pn	01 24 34.0	-0.3
GB1A	Boringuen Arri	1.16	79	⇑*i* P	Pn	01 24 34.2	-0.3
GPS2	Hotel Rincn d	1.20	82	*i* P	Pn	01 24 35.0	0.0
PLVR	Palo Verde	1.21	102	*e*P	Pn	01 24 34.0	-1.3
BUAI	Buenos Aires	1.24	77	⇑*i* P	Pn	01 24 35.6	+0.2
LIM1	Limonal	1.29	85	*i* P	Pn	01 24 36.4	+0.2
COLC	Colonia	1.33	87	*i* P	Pn	01 24 37.3	+0.5
CUI	Cuipilapa	1.37	87	⇑*i* P	Pn	01 24 37.6	+0.3
ACAL	Aguas Claras	1.50	88	*i* P	Pn	01 24 39.8	+0.7
PTEN	Parque Tenorio	1.55	85	*i* P	Pn	01 24 40.6	+0.8
JTS	Las Juntas de	1.61	101	*e*P	Pn	01 24 41.1	+0.5
LAFE	Finca La Fe, P	1.80	116	*e*P	Pn	01 24 43.0	-0.2
ARE1	Arenal 1	1.81	94	*e*P	Pn	01 24 44.9	+1.5
CEDE	Laguna Cedeo	1.83	93	*e*P	Pn	01 24 44.9	+1.2
RIMA	Rio Macho	2.78	107	*e*P	Pn	01 24 58.9	+2.1
CDM	Cerro de Muert	2.94	110	*e*P	Pn	01 25 00.8	+1.6
DRK0	Durika	3.52	112	*e*P	Pn	01 25 08.9	+1.8
TXAR	Lajitas Array	24.56	322	P	P	01 29 32.0	+0.1
	1.6nm,0.7s,baz=134,slow=10,SNR=13						
PDAR	Pinedale Array	37.81	332	P	P	01 31 27.2	-1.4
	0.4nm,0.8s,baz=131,slow=11,SNR=2.9						
NVAR	Mina Array Bea	39.67	320	P	P	01 31 44.8	+0.6
	0.8nm,0.8s,baz=128,slow=7.3,SNR=5.1						
NVAR				PcP	PcP	01 33 51.4	+0.6
	0.1nm,0.3s,baz=141,slow=4.6,SNR=3.9						
YKA	Yellowknife Ar	55.62	345	P	P	01 33 42.6	-4.7
	0.5nm,1.0s,baz=142,slow=7.5,SNR=4.8						

*SOME **21** 01:30:54.4, 41.25N×78.23E, h15km*
*NNC **21** 01:30:55.2±2.3, 41.28N×78.17E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=15.0km s-min=10.6km az=0.0*
*KRNET **21** 01:30:56.2±0.1, 41.78N×78.64E, h35km, mb2.0*
ISC 21 01:30:50.9±2.2, 41.05N±0.09×78.15E±0.04, h16km±12km, n31, σ1.9/17/48, 11C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	1.31	326	⇑*i* P	Pg	01 31 16.9	+0.8
KDJ	baz=88			⇑*i* S	Sb	01 31 32.4	+0.6
	baz=88						
PRZ	Przheval'sk	1.45	7	⇑*i* P	Pn	01 31 10.9	-5.7
PRZ	baz=46			⇑*i* S	Sn	01 31 21.3	-14
	baz=46						
ANVS	Anan'yevo	1.77	348	⇓*i* P	Pn	01 31 18.6	-2.5
ANVS	baz=25			⇓*i* S	Sn	01 31 35.0	-8.4
	baz=25						
ULHL	Ulahol	1.87	311	⇓*i* P	Pg	01 31 27.4	+0.6
ULHL	baz=85			⇓*i* S	Sg	01 31 51.0	0.0
	baz=85						
SATY	Saty	2.02	5	*e*P	Pg	01 31 28.7	-1.0
	0.8nm,0.1s						
SATY				*e*S	Sb	01 31 53.2	+0.9
	5.3nm,0.1s						
SATY	Saty	2.02	5	P	Pg	01 31 28.7	-1.0
	0.8nm,0.1s						
SATY				S	Sb	01 31 53.2	+0.9
	5.3nm,0.1s						
TNSS	Tian-Shan	2.18	336	*e*P	Pb	01 31 31.0	+0.8
	1.1nm,0.3s						
TNSS				*e*S	Sb	01 31 57.4	+0.2
	2.3nm,0.4s						
TNSS	Tian-Shan	2.18	336	Pg	Pb	01 31 31.0	+0.8
	1.1nm,0.3s						
TNSS				Lg	Lg	01 31 57.4	
	2.3nm,0.4s						
BOOM	Boomskoye usch	2.19	312	⇑*i* P	Pb	01 31 31.0	+0.7
BOOM	baz=90			⇑*i* S	Sb	01 31 57.2	-0.2
	baz=90						
UZB	Uzunbulak	2.20	17	*e*P	Pb	01 31 30.8	+0.4
UZB	1.3nm,0.1s			*e*S	Sb	01 31 57.2	-0.2
	5.6nm,0.3s						
UZB	Uzunbulak	2.20	17	Pg	Pg	01 31 32.8	-0.3
	3.5nm,0.3s						
UZB				Lg	Lg	01 32 00.4	
	5.5nm,0.4s						
MDOK	Medeo	2.27	339	*e*P	Pg	01 31 33.2	-1.2
MDOK	2.1nm,0.5s			*e*S	Sb	01 32 01.3	+1.8
	5.3nm,0.8s						
MDOK	Medeo	2.27	339	Pg	Pg	01 31 33.3	-1.1
MDOK	1.6nm,0.5s			Lg	Lg	01 32 01.6	
	5.4nm,0.8s						
MDOK	Medeo	2.27	339	Pg	Pg	01 31 33.2	-1.2
MDOK	2.1nm,0.5s			Lg	Lg	01 32 01.3	
	5.3nm,0.8s						
IZV	Izvestkoviy	2.29	331	*e*P	Pg	01 31 33.6	-1.4
IZV	1.1nm,0.2s			*e*S	Sb	01 32 02.1	+1.9
	8.4nm,0.3s						
IZV	Izvestkoviy	2.29	331	Pg	Pg	01 31 33.5	-1.4
IZV	0.3nm,0.1s			Lg	Lg	01 32 02.1	
	8.4nm,0.3s						
KOTS	Kotyrbulak	2.32	341	*e*P	Pg	01 31 34.0	-1.3
KOTS	5.4nm,0.3s			*e*S	Sb	01 32 03.0	+2.0
	2.9nm,0.2s						
KOTS	Kotyrbulak	2.32	341	Pg	Pb	01 31 33.9	+1.4
KOTS	5.4nm,0.3s			Lg	Lg	01 32 03.0	
	2.9nm,0.2s						
SHLS	Shalkode	2.32	24	*e*P	Pg	01 31 36.3	+0.8
SHLS	2.9nm,0.2s			*e*S	Sg	01 32 06.5	+0.9
	7.2nm,0.3s						
KPKS	Kokpek	2.45	9	*e*P	Pb	01 31 35.2	+0.5
KPKS	2.0nm,0.2s			*e*S	Sb	01 32 04.7	+0.1
	4.6nm,0.5s						
PDGK	Podgornoye	2.49	23	Pg	Pb	01 31 35.5	+0.2
PDGK	0.8nm,0.3s			Lg	Lg	01 32 05.1	
	2.4nm,0.5s						
PDGK	Podgornoye	2.49	23	⇓Pg	Pb	01 31 36.7	+1.4
PDGK	0.9nm,0.5s			⇑Lg	Lg	01 32 05.9	
	3.9nm,0.6s						
TKM2	Tokmak 2	2.67	315	⇑*i* P	Pb	01 31 36.4	-2.1
TKM2	baz=98			⇑*i* S	Sn	01 32 06.4	+0.8
	baz=98						
KTBS	Karatobe	2.88	338	*e*P	Pb	01 31 43.2	+1.3
KTBS	0.6nm,0.3s			*e*S	Sb	01 32 18.4	+1.6
	4.4nm,0.6s						
KTBS	Karatobe	2.88	338	Pg	Pb	01 31 43.2	+1.3
KTBS	0.6nm,0.3s			Lg	Lg	01 32 18.5	
	4.4nm,0.6s						
KTMS	Ketmen	2.90	34	*e*P	Pb	01 31 43.2	+0.9
KTMS	0.3nm,0.1s			*e*S	Sb	01 32 18.4	+0.8
	6.7nm,0.3s						
KTMS	Ketmen	2.90	34	Pg	Pb	01 31 43.2	+0.9
KTMS	0.3nm,0.1s			Lg	Lg	01 32 18.5	
	6.7nm,0.3s						
UCH	Uchtor	2.97	295	⇓*i* P	Pb	01 31 45.4	+1.7
UCH	baz=80			⇓*i* S	Sb	01 32 21.6	+1.6
	baz=80						
ARXS	Arharly	3.17	356	*e*P	Pb	01 31 47.5	+0.6
ARXS	0.6nm,0.5s			*e*S	Sb	01 32 25.8	+0.4
	2.8nm,0.6s						
ARXS	Arharly	3.17	356	Pg	Pb	01 31 46.6	-0.3
ARXS	2.3nm,0.4s			Lg	Lg	01 32 24.5	
	2.8nm,0.6s						
AML	Almayashu	3.52	289	⇑*i* P	Pb	01 31 53.7	+0.8
AML	baz=77			⇑*i* S	Sb	01 32 35.5	0.0
	baz=77						

*DDA **21** 01:32:58.2, 35.26N×26.54E, h6km±3km, MW3.9*
*HLW **21** 01:32:59.9, 35.16N×26.99E, h23km±16km, Md4.1, Ml3.5*
*IDC **21** 01:33:01.7±2.2, 35.06N×26.80E, h32km±19km, mb3.6/10, mb1 3.7/17, mb1mx3.5/41, mbtmp3.7/17, ML3.5/7, MS2.8/5, Ms1 2.8/5, ms1mx2.6/37, Error ellipse: s-maj=21.6km s-min=14.1km az=178.0*
*THE **21** 01:33:01.3, 35.16N×26.78E, h0km, ML3.7/5, Error ellipse: s-maj=3.0km s-min=0.6km az=156.0*
*ATH **21** 01:33:02.5, 35.29N×26.73E, h12km±2km, ML3.9/7, Error ellipse: s-maj=4.3km s-min=1.0km az=156.0*
ISC 21 01:33:00.0±1.1, 35.06N±0.04×26.85E±0.03, h17km±7km, n81, σ1.5/05/98, mb3.6/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.52	277	P	Pg	01 33 10.6	+0.1
ZKR				S	Sb	01 33 18.3	+0.3
ZKR				AML	AML	01 33 20.7	
	comp=N,17836μm,0.4s						
ZKR				AML	AML	01 33 21.3	
	comp=E,39367μm,0.3s						
ZKR	Zakros	0.52	277	P	Pg	01 33 10.6	+0.1
ZKR				S	Sb	01 33 19.2	+1.1
	comp=E,14μm,0.3s						
KARP	Karpathos	0.55	27	P	Pg	01 33 10.9	-0.2
KARP				S	Sg	01 33 17.6	-0.9
KARP				AML	AML	01 33 20.5	
	comp=N,60455μm,0.4s						
KARP				AML	AML	01 33 22.6	
	comp=E,40900μm,0.3s						
KARP	Karpathos	0.55	27	P	Pg	01 33 10.8	-0.3
KARP				S	Sb	01 33 19.3	+0.4
	comp=E,26μm,0.3s						
STIA	Sitia Lasithi	0.64	283	P	Pg	01 33 12.4	-0.3
STIA				S	Sb	01 33 21.8	+0.4
NPS	Neapolis	1.04	282	P	Pb	01 33 20.2	+0.7
NPS				S	Sg	01 33 32.5	-1.2
NPS				AML	AML	01 33 37.3	
	comp=N,9008μm,0.5s						
NPS				AML	AML	01 33 39.4	
	comp=E,12267μm,0.8s						
NPS	Neapolis	1.04

IDI					LR	LR	01 33 56.7		
	comp=E,51nm,20.7s,baz=248,slow=35								
IDI	**Anoyia**	**1.62**	**279**		P	**Pb**	**01 33 30.4**	**+0.8**	
SIVA	**Sivas**	**1.68**	**269**		P	**Pg**	**01 33 31.9**	**-0.4**	
SIVA					AML	AML	01 34 02.0		
	comp=N,4523μm,0.6s								
SIVA					AML	AML	01 34 04.9		
	comp=E,7397μm,0.7s								
SANT	**Santorini**	**1.73**	**320**		P	**Pn**	**01 33 29.7**	**+0.3**	
SANT	**Santorini**	**1.73**	**320**		P	**Pn**	**01 33 29.7**	**+0.3**	
THR8	**Santorini-Mono**	**1.75**	**321**		P	**Pn**	**01 33 29.9**	**+0.3**	
THR8	**Santorini-Mono**	**1.75**	**321**		P	**Pn**	**01 33 29.9**	**+0.3**	
THR6	**Thira Island,**	**1.76**	**318**		P	**Pn**	**01 33 30.3**	**+0.6**	
THR6	**Thira Island,**	**1.76**	**318**		P	**Pn**	**01 33 30.3**	**+0.6**	
THR9	**Santorini-Faro**	**1.78**	**317**		P	**Pn**	**01 33 30.5**	**+0.5**	
THR9	**Santorini-Faro**	**1.78**	**317**		P	**Pn**	**01 33 30.5**	**+0.5**	
SNT1	**Gialos, Santor**	**1.78**	**320**		P	**Pn**	**01 33 30.5**	**+0.4**	
SNT1	**Gialos, Santor**	**1.78**	**320**		P	**Pn**	**01 33 30.4**	**+0.4**	
THR7	**Fira-Santorini**	**1.79**	**320**		P	**Pn**	**01 33 30.9**	**+0.7**	
THR7	**Fira-Santorini**	**1.79**	**320**		P	**Pn**	**01 33 30.9**	**+0.7**	
SNT5	**Nea Kammeni, S**	**1.79**	**319**		P	**Pn**	**01 33 30.6**	**+0.4**	
SNT5	**Nea Kammeni, S**	**1.79**	**319**		P	**Pn**	**01 33 30.6**	**+0.4**	
THR3	**Thira Island,**	**1.79**	**319**		P	**Pn**	**01 33 30.6**	**+0.4**	
THR3	**Thira Island,**	**1.79**	**319**		P	**Pn**	**01 33 30.6**	**+0.4**	
THT2	**Imerovigli**	**1.80**	**320**		P	**Pn**	**01 33 31.1**	**+0.8**	
THT2	**Imerovigli**	**1.80**	**320**		P	**Pn**	**01 33 31.1**	**+0.8**	
THR5	**Thira Island,**	**1.83**	**318**		P	**Pn**	**01 33 31.2**	**+0.5**	
THR5	**Thira Island,**	**1.83**	**318**		P	**Pn**	**01 33 31.2**	**+0.5**	
SAP3	**Santorini-Thir**	**1.84**	**319**		P	**Pn**	**01 33 31.2**	**+0.3**	
SAP3	**Santorini-Thir**	**1.84**	**319**		P	**Pn**	**01 33 31.2**	**+0.3**	
SAP4	**Santorini-Oia**	**1.86**	**320**		P	**Pn**	**01 33 31.6**	**+0.6**	
TURN	**Turunc**	**2.06**	**33**	*i*	P	**Pn**	**01 33 35.2**	**+1.4**	
TURN					S	**Sg**	**01 34 04.2**	**-2.0**	
TURN					IAML		01 34 10.0		
	comp=N,313nm,0.5s								
TURN					IAML		01 34 11.0		
	comp=E,274nm,0.4s								
BDRM	**Kayabasi**	**2.06**	**13**	*i*	P	**Pn**	**01 33 34.6**	**+0.7**	
BDRM					IAML		01 34 07.0		
	comp=E,121nm,0.6s								
BDRM					IAML		01 34 12.0		
	comp=N,177nm,0.5s								
VAM	**Vamos**	**2.20**	**280**		P	**Pn**	**01 33 38.0**	**+2.2**	
APE	**Apeiranthos**	**2.28**	**332**		P	**Pn**	**01 33 37.2**	**+0.3**	
APE	**Apeiranthos**	**2.28**	**332**		P	**Pn**	**01 33 37.2**	**+0.3**	
APE					S	**Sn**	**01 34 04.7**	**+0.1**	
	comp=N,520nm,0.4s								
DALY	**Dalyan (Mula)**	**2.29**	**39**	*i*	P	**Pn**	**01 33 39.1**	**+2.1**	
DALY					S	**Sg**	**01 34 16.1**	**+2.6**	
DALY					IAML		01 34 17.0		
	comp=E,224nm,0.8s								
DALY					IAML		01 34 25.0		
	comp=N,251nm,0.9s								
IMMV	**Iera Moni Meta**	**2.38**	**281**		P	**Pb**	**01 33 41.1**	**-1.4**	
MULA	**Mugla, Merkez-**	**2.50**	**28**	*i*	P	**Pn**	**01 33 42.1**	**+2.1**	
MULA					S	**Sb**	**01 34 14.1**	**-0.8**	
MULA					IAML		01 34 22.0		
	comp=E,176nm,0.4s								
MULA					IAML		01 34 32.0		
	comp=N,110nm,0.5s								
AKAS	**Kas**	**2.53**	**62**	*i*	P	**Pn**	**01 33 40.5**	**+0.1**	
MHLO	**Agia Marina, M**	**2.57**	**310**		P	**Pn**	**01 33 43.1**	**+2.2**	
MHLA	**Plaka, Milos I**	**2.59**	**311**		P	**Pn**	**01 33 43.1**	**+1.9**	
TAVA	**DENIZLI_Tavas**	**2.93**	**34**	*i*	P	**Pn**	**01 33 47.6**	**+1.7**	
TAVA					S	**Sb**	**01 34 27.0**	**-0.3**	
TAVA					IAML		01 34 40.0		
	comp=N,105nm,0.6s								
TAVA					IAML		01 34 42.0		
	comp=E,111nm,0.6s								
DGB	**zmir**	**2.99**	**0**	*i*	P	**Pn**	**01 33 47.3**	**+0.6**	
DGB					S	**Sg**	**01 34 36.5**	**+0.3**	
DGB					IAML		01 34 40.0		
	comp=N,87nm,0.7s								
DGB					IAML		01 34 45.0		
	comp=E,58nm,0.6s								
GOLH	**Golhisar**	**3.09**	**44**	*i*	P	**Pn**	**01 33 50.1**	**+2.0**	
GOLH					IAML		01 34 46.0		
	comp=N,159nm,0.8s								
AKUM	**Antalya-Kumluc**	**3.11**	**65**	*i*	P	**Pn**	**01 33 49.3**	**+1.0**	
MATC	**Matruh**	**3.71**	**175**		P	**Pn**	**01 33 56.5**	**-0.1**	
	baz=176								
SLUM	**Salum**	**3.81**	**202**		P	**Pn**	**01 33 59.3**	**+1.4**	
	baz=203								
SLUM					AMP		01 34 00.0		
	baz=203								
SLUM					S	**Sn**	**01 34 42.1**	**-0.2**	
	baz=203								
SWA2		**5.92**	**192**		P	**Pn**	**01 34 27.7**	**+0.8**	
	baz=193								
RYAN	**Fayoum**	**6.63**	**153**		P	**Pn**	**01 34 37.6**	**+0.9**	
	baz=154								
GLL	**Jalalah**	**6.83**	**142**		P	**Pn**	**01 34 38.8**	**-0.7**	
	baz=143								
BRTR	**Keskin Array B**	**7.13**	**47**		Pn	**Pn**	**01 34 45.7**	**+2.0**	
	comp=N,0.3nm,0.3s,baz=229,slow=15,SNR=3.5								
BRTR					Sn	**Sn**	**01 36 06.4**	**+2.0**	
	comp=N,0.1nm,0.3s,baz=314,slow=40,SNR=1.3								
BRTR					LR	LR	01 38 30.6		
	comp=N,77nm,19.6s,baz=188,slow=46								
SUZ	**Suez**	**7.25**	**134**		P	**Pn**	**01 34 45.0**	**-0.2**	
	baz=135								
MMAI	**Mount Meron Ar**	**7.38**	**104**		Pn	**Pn**	**01 34 46.3**	**-0.8**	
	comp=N,2.6nm,0.3s,baz=297,slow=11,SNR=20								
MMAI					Sn	**Sn**	**01 36 08.1**	**-2.5**	
	comp=N,2.4nm,0.3s,baz=302,slow=16,SNR=2.2								
MMAI					LR	LR	01 38 58.4		
	comp=N,32nm,19.8s,baz=335,slow=48								
HFRF	**Wahat Farafira**	**7.98**	**171**		P	**Pn**	**01 34 56.5**	**+1.3**	
	baz=171								
EIL	**Elat**	**8.70**	**126**		Pn	**Pn**	**01 35 04.8**	**-0.3**	
	comp=N,0.6nm,0.3s,baz=319,slow=2.7,SNR=15								
EIL					Sn	Sn	01 36 35.9	-7.0	
	comp=N,2.0nm,0.3s,baz=184,slow=4.7,SNR=6.2								
EIL					LR	LR	01 40 14.6		
	comp=N,29nm,20.2s,baz=10,slow=50								
HDK1	**Dakhla**	**9.73**	**166**		P	**Pn**	**01 35 20.6**	**+1.3**	
	baz=167								
MLR	**Muntele Rosu**	**10.45**	**356**		Pn	**Pn**	**01 35 30.1**	**+1.0**	
	comp=N,0.1nm,0.3s,baz=140,slow=17,SNR=1.7								
MLR					LR	LR	01 40 12.4		
	comp=N,71nm,20.6s,baz=178,slow=41								
KEST	**Kesra**	**14.30**	**278**		Pn	**Pn**	**01 36 22.1**	**+0.4**	
	comp=N,0.0nm,0.3s,baz=342,slow=13,SNR=1.5								
AKASG	**Malin Array Be**	**15.73**	**6**		Pn	**Pn**	**01 36 40.8**	**+0.1**	
	comp=N,0.5nm,0.3s,baz=193,slow=12,SNR=2.9								
GERES	**GERESS Array B**	**16.86**	**329**		Pn	**Pn**	**01 36 55.4**	**+0.2**	
	comp=N,0.1nm,0.3s,baz=147,slow=13,SNR=2.4								
ESDC	**Sonseca Array**	**24.86**	**290**		P	**P**	**01 38 20.2**	**-1.4**	
	comp=N,0.4nm,0.5s,baz=84,slow=9.7,SNR=3.8								
FINES	**FINESS Array B**	**26.41**	**359**		P	**P**	**01 38 35.0**	**-0.4**	
	comp=N,1.6nm,0.9s,baz=296,slow=16,SNR=3.7								
AKTO	**Aktyubinsk**	**27.31**	**46**		P	**P**	**01 38 44.2**	**+0.5**	
	comp=N,0.8nm,0.7s,baz=158,slow=5.4,SNR=1.5								
EKA	**Eskdalemuir Ar**	**28.93**	**324**		P	**P**	**01 38 57.5**	**-0.6**	
	comp=N,0.2nm,0.5s,baz=120,slow=11,SNR=2.4								
TORD	**Torodi Ar. Bea**	**31.50**	**232**		P	**P**	**01 39 21.2**	**+0.1**	
	comp=N,0.7nm,1.0s,baz=32,slow=8.7,SNR=4.2								
ARCES	**ARCESS Array B**	**34.54**	**359**		P	**P**	**01 39 45.6**	**-1.6**	
	comp=N,8.5nm,1.2s,baz=179,slow=7.2,SNR=2.0								
MKAR	**Makanchi Array**	**42.67**	**57**		P	**P**	**01 40 56.2**	**+0.5**	
	comp=N,1.1nm,0.7s,baz=245,slow=1.3,SNR=11								
ZALV	**Zalesovo Beam**	**44.08**	**46**		P	**P**	**01 41 06.6**	**-0.3**	
	comp=N,0.9nm,0.4s,baz=266,slow=10,SNR=5.7								
TLY	**Talaya**	**55.66**	**47**		LR	LR	02 09 26.9		
	comp=N,19nm,18.4s,baz=310,slow=39								
SONM	**Songino Array**	**58.48**	**51**		P	**P**	**01 42 56.3**	**+1.1**	
	comp=N,0.2nm,0.3s,baz=297,slow=7.8,SNR=2.9								
YKA	**Yellowknife Ar**	**77.97**	**343**		P	**P**	**01 44 54.9**	**-2.0**	
	comp=N,0.1nm,0.4s,baz=42,slow=6.0,SNR=4.3								

WEL 21 01:50:29.7, 45°S±3°×16°8E±°, h121km±3km, M3.5/8, MLv3.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=89.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	**Milford Sound**	**0.46**	**32**	P	Pn	01 50 47.7	+0.3
MSZ				S	Sn	01 51 00.6	-0.1
MLZ	**Mavora Lakes**	**0.48**	**129**	P	Pn	01 50 48.3	+0.6
MLZ				S	Sn	01 51 02.0	+0.7
DCZ	**Deep Cove**	**0.51**	**217**	P	Pn	01 50 47.6	-0.2
DCZ				S	Sn	01 51 01.3	-0.1
WHZ	**Wether Hill Ro**	**0.87**	**163**	P	Pn	01 50 51.3	+0.7
WHZ				S	Sn	01 51 07.2	+0.9
WKZ	**Wanaka**	**1.04**	**78**	P	Pn	01 50 52.9	+0.7
WKZ				S	Sn	01 51 09.8	+0.5
EAZ	**Earnscleugh**	**1.23**	**99**	P	Pn	01 50 54.8	+0.7
EAZ				S	Sn	01 51 12.3	-0.4
PYZ	**Puysegur Point**	**1.27**	**210**	P	Pn	01 50 54.8	+0.2
PYZ				S	Sn	01 51 13.5	-0.1
TUZ	**Tuapeka**	**1.69**	**123**	P	Pn	01 51 00.3	+0.9
TUZ				S	Sn	01 51 21.3	-0.8
APZ	**The Paps**	**1.79**	**171**	P	Pn	01 51 01.0	+0.4
SYZ	**Scrubby Hill**	**1.83**	**144**	P	Pn	01 51 02.1	+1.0
LBZ	**Lake Benmore**	**1.97**	**71**	P	Pn	01 51 01.9	-1.0
ODZ	**Otahua Downs**	**2.17**	**91**	P	Pn	01 51 05.0	-0.2
FOZ	**Fox Glacier**	**2.21**	**47**	P	Pn	01 51 04.1	-1.7
HHSZ	**Highcliff Hill**	**2.27**	**112**	P	Pn	01 51 07.3	+0.7
TMZ	**Timaru**	**2.53**	**76**	P	Pn	01 51 08.7	-1.2
GCSZ	**Gaunt Creek Bo**	**2.63**	**49**	P	Pn	01 51 09.0	-2.2
ARCZ	**Arundel**	**2.80**	**68**	P	Pn	01 51 11.5	-1.9
RPZ	**Rata Peaks**	**2.83**	**63**	P	Pn	01 51 11.9	-1.8
WVZ	**Waitaha Valley**	**3.02**	**50**	P	Pn	01 51 14.1	-2.1
WACZ	**Wakanui South**	**3.24**	**71**	P	Pn	01 51 17.6	-1.5
INZ	**Inchbonnie**	**3.64**	**51**	P	Pn	01 51 22.0	-2.4
OXZ	**Oxford**	**3.64**	**63**	P	Pn	01 51 22.8	-1.7
MQZ	**McQueen's Vall**	**3.88**	**71**	P	Pn	01 51 25.9	-1.7
LTZ	**Lake Taylor**	**4.08**	**58**	P	Pn	01 51 27.8	-2.6
AMCZ	**Amberley**	**4.11**	**64**	P	Pn	01 51 30.0	-0.7
OKCZ	**Okains Bay**	**4.14**	**73**	P	Pn	01 51 30.9	-0.3
GVZ	**Greta Valley S**	**4.45**	**64**	P	Pn	01 51 33.7	-1.6
DSZ	**Denniston Nort**	**4.52**	**44**	P	Pn	01 51 33.8	-2.5
QRZ	**Quartz Range**	**5.57**	**42**	P	Pn	01 51 48.3	-2.1
NNZ	**Nelson**	**5.72**	**50**	P	Pn	01 51 50.8	-1.5
TCW	**Tory Channel**	**6.22**	**54**	P	Pn	01 51 57.7	-1.4
DUWZ	**D'Urville Isla**	**6.30**	**50**	P	Pn	01 51 58.6	-1.7
BHW	**Baring Head**	**6.45**	**58**	P	Pn	01 52 00.8	-1.4
KIW	**Kapiti Island**	**6.82**	**55**	P	Pn	01 52 04.5	-2.6
MTW	**Mount Morrison**	**6.98**	**59**	P	Pn	01 52 07.0	-2.4
OGWZ	**Otaki Gorge**	**7.00**	**55**	P	Pn	01 52 06.8	-2.7
HOWZ	**Holdsworth Sta**	**7.15**	**57**	P	Pn	01 52 09.2	-2.4
MRZ	**Mangatainoka R**	**7.33**	**56**	P	Pn	01 52 10.9	-3.2
KHEZ	**Kahui Hut**	**7.48**	**42**	P	Pn	01 52 15.6	-0.6
PREZ	**Palmer Road**	**7.51**	**43**	P	Pn	01 52 14.8	-1.8
PKE	**Pukeiti**	**7.55**	**41**	P	Pn	01 52 16.4	-0.7

*DDA **21** 01:57:33.3, 34°.93N×26°.54E, h8km±4km, MW4.2*
*NIC **21** 01:57:37.5±0.0, 35°.03N×26°.91E, h4km±3km, Ml4.4/3*
*MED_RC **21** 01:57:38.0±1.0, 35°.16N×26°.78E, h23km±2km, MW4.5/12, Moment Tensor Solution.Mantle waves: s12,c18; Duration: 1ŝ0 Moment tensor: Scale 10^15^Nm; Mrr-1.63±.92; Mθθ-4.98±.55; Mφφ6.60±.56; Mrθ0.49±.61; Mθφ-1.10±.35; Mφr1.75±.53; Best double couple: M0 6.12000×10^15^ NP1:ϕs309.00000°, δ74.00000°, λ180.00000°. NP2:ϕs39.00000°, δ90.00000°, λ16.00000°. Principal axes: T 7.0400, Plg11.0000°, Azm265.0000°; N -1.8400, Plg74.0000°, Azm40.0000°; P -5.2100, Plg11.0000°, Azm173.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*THE **21** 01:57:38.7, 35°.08N×26°.85E, h0km±1km, ML4.2/4 Error ellipse: s-maj=5.1km s-min=0.9km az=156.0*
*ISK **21** 01:57:39.7, 35°.26N×26°.78E, h6km, ML4.0/23*
*ATH **21** 01:57:40.3, 35°.23N×26°.76E, h9km±2km, ML4.1/8, Error ellipse: s-maj=3.6km s-min=0.8km az=155.0*
*HLW **21** 01:57:40.1, 35°.06N×27°.02E, h30km±13km, Md4.4, Ml4.2*
*NEIC **21** 01:57:41.8±1.5, 35°.21N±0°.06×26°.81E±0°.06, h40km±8km, Error ellipse: s-maj=8.2km s-min=7.4km az=203.0*
*IDC **21** 01:57:46.3±1.3, 35°.25N×26°.71E, h83km±11km, mb3.8/28, mb1 3.8/36, mb1mx3.7/63, mbtmp4.0/36, MS3.4/18, Ms1 3.4/18, ms1mx3.2/47, Error ellipse: s-maj=15.4km s-min=9.3km az=150.0*

ISC 21 01:57:39.3±1.1, 35°.08N±0°.03×26°.82E±0°.02, h23km±8km, n267, σ1ŝ42/290, mb4.2/40, MS3.3/11, 4C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**274**	P	**Pb**	**01 57 48.7**	**-0.7**
ZKR				S	**Sb**	**01 57 55.4**	**-0.9**
ZKR				AML	AML	01 57 58.5	
	comp=N,38962μm,0.5s						
ZKR				AML	AML	01 57 59.2	
	comp=E,58806μm,0.4s						
ZKR	**Zakros**	**0.50**	**274**	P	**Pb**	**01 57 48.6**	**-0.8**
ZKR				S	**Sn**	**01 57 58.3**	**-0.6**
	comp=E,25μm,0.5s						
ZKR	**Zakros**	**0.50**	**274**	PG	**Pb**	**01 57 48.9**	**-0.5**
ZKR				SG	**Sb**	**01 57 56.8**	**+0.5**
ZKR	**Zakros**	**0.50**	**274**	P	**Pb**	**01 57 48.7**	**-0.7**
ZKR				AML	AML	01 57 58.0	
	comp=E,55nm,0.5s						
ZKR				AML	AML	01 57 58.0	
	comp=E,55nm,0.5s						
ZKR				S	**Sn**	**01 57 58.7**	**-0.3**
KARP	**Karpathos**	**0.54**	**31**	P	**Pb**	**01 57 49.0**	**-1.1**
KARP				S	**Sb**	**01 57 55.5**	**-2.0**
KARP				AML	AML	01 57 59.5	
	comp=N,50022μm,0.4s						
KARP				AML	AML	01 57 59.5	
	comp=E,69610μm,0.4s						
KARP	**Karpathos**	**0.54**	**31**	P	**Pb**	**01 57 48.8**	**-1.4**
KARP				S	**Sb**	**01 57 57.5**	**0.0**
	comp=E,31μm,0.4s						
KARP	**Karpathos**	**0.54**	**31**	PG	**Pb**	**01 57 48.7**	**-1.4**
KARP	**Karpathos**	**0.54**	**31**	⇑P	**Pb**	**01 57 48.7**	**-1.4**
KARP				S	**Sb**	**01 57 57.9**	**+0.3**
KARP				AML	AML	01 57 59.1	
	comp=E,87nm,0.5s						
KARP				AML	AML	01 57 59.1	
	comp=E,87nm,0.5s						
STIA	**Sitia Lasithi**	**0.61**	**281**	P	**Pb**	**01 57 50.5**	**-0.8**
STIA				S	**Sn**	**01 58 02.0**	**+0.3**
NPS	**Neapolis**	**1.01**	**281**	P	**Pn**	**01 57 58.7**	**+0.6**
NPS				S	**Sb**	**01 58 10.1**	**-0.8**
NPS				AML	AML	01 58 19.9	
	comp=N,24992μm,0.6s						
NPS				AML	AML	01 58 22.3	
	comp=E,31625μm,0.9s						
NPS	**Neapolis**	**1.01**	**281**	P	**Pn**	**01 57 58.1**	**+0.1**
NPS				S	**Sn**	**01 58 14.0**	**+2.5**
	comp=E,14μm,0.7s						
HRKL	**Herakleio**	**1.43**	**280**	PN	**Pb**	**01 58 06.3**	**+1.1**
IACM	**Heraklion**	**1.45**	**279**	P	**Pb**	**01 58 06.7**	**+1.1**
NIS1	**Nisyros Isl.**	**1.54**	**11**	P	**Pb**	**01 58 06.1**	**-1.1**
NIS1	**Nisyros Isl.**	**1.54**	**11**	P	**Pb**	**01 58 06.0**	**-1.2**
NIS1	**Nisyros Isl.**	**1.54**	**11**	PN	**Pb**	**01 58 06.1**	**-1.1**
NISR	**Nisiros**	**1.55**	**9**	P	**Pb**	**01 58 06.5**	**-0.7**
NISR	**Nisiros**	**1.55**	**9**	P	**Pb**	**01 58 06.5**	**-0.7**
ARG	**Arkhangelos**	**1.55**	**43**	P	**Pb**	**01 58 07.3**	**0.0**
ARG				S	**Sb**	**01 58 27.0**	**+0.5**
ARG				AML	AML	01 58 33.6	
	comp=N,5915μm,0.9s						
ARG				AML	AML	01 58 35.0	
	comp=E,12399μm,0.8s						
ARG	**Arkhangelos**	**1.55**	**43**	P	**Pb**	**01 58 06.7**	**-0.6**
ARG				S	**Sb**	**01 58 27.0**	**+0.5**
	comp=E,5μm,0.9s						
ARG	**Arkhangelos**	**1.55**	**43**	PN	**Pb**	**01 58 07.1**	**-0.2**
ARG	**Arkhangelos**	**1.55**	**43**	⇑P	**Pb**	**01 58 06.3**	**-1.0**
IDI	**Anoyia**	**1.60**	**278**	P	**Pb**	**01 58 09.7**	**+1.6**
	comp=E,100nm,0.3s,baz=102,slow=12,SNR=312						
IDI				S	**Sb**	**01 58 31.4**	**+3.5**
	comp=E,94nm,0.3s,baz=338,slow=22,SNR=6.8						
IDI	**Anoyia**	**1.60**	**278**	P	**Pb**	**01 58 08.9**	**+0.8**
IDI				AML	AML	01 58 36.9	
	comp=E,5429μm,0.7s						
IDI				AML	AML	01 58 39.3	
	comp=N,7349μm,0.7s						
IDI	**Anoyia**	**1.60**	**278**	P	**Pb**	**01 58 07.7**	**-0.4**
IDI	**Anoyia**	**1.60**	**278**	PN	**Pb**	**01 58 08.6**	**+0.5**
IDI	**Anoyia**	**1.60**	**278**	Pn	**Pb**	**01 58 07.8**	**-0.3**
IDI				Sn	**Sb**	**01 58 27.3**	**-0.6**
SIVA	**Sivas**	**1.65**	**268**	P	**Pb**	**01 58 10.0**	**+1.0**
SIVA				AML	AML	01 58 44.5	
	comp=E,21550μm,0.7s						
SIVA				AML	AML	01 58 45.1	
	comp=N,13053μm,0.7s						
KOSK	**Kos Island**	**1.67**	**4**	PN	**Pb**	**01 58 07.9**	**-1.4**
SANT	**Santorini**	**1.70**	**320**	P	**Pb**	**01 58 08.7**	**-1.2**
SANT	**Santorini**	**1.70**	**320**	P	**Pn**	**01 58 08.2**	**+0.6**
SANT	**Santorini**	**1.70**	**320**	PN	**Pb**	**01 58 08.5**	**-1.4**
SANT	**Santorini**	**1.70**	**320**	Pn	**Pn**	**01 58 07.9**	**+0.3**
SANT				Sn	**Sn**	**01 58 27.1**	**-1.5**
THR8	**Santorini-Mono**	**1.71**	**321**	P	**Pb**	**01 58 08.7**	**-1.4**
THR6	**Thira Island,**	**1.72**	**318**	P	**Pb**	**01 58 09.2**	**-1.0**
THR6	**Thira Island,**	**1.72**	**318**	P	**Pb**	**01 58 09.2**	**-1.0**
THR9	**Santorini-Faro**	**1.74**	**317**	P	**Pb**	**01 58 09.7**	**-0.9**
THR9	**Santorini-Faro**	**1.74**	**317**	P	**Pb**	**01 58 09.7**	**-0.9**
SNT1	**Gialos, Santor**	**1.75**	**320**	P	**Pb**	**01 58 09.1**	**-1.6**
SNT1	**Gialos, Santor**	**1.75**	**320**	P	**Pb**	**01 58 09.1**	**-1.6**
THR7	**Fira-Santorini**	**1.75**	**320**	P	**Pb**	**01 58 10.1**	**-0.7**
THR7	**Fira-Santorini**	**1.75**	**320**	P	**Pb**	**01 58 10.1**	**-0.7**
SNT5	**Nea Kammeni, S**	**1.76**	**319**	P	**Pb**	**01 58 09.3**	**-1.5**
SNT5	**Nea Kammeni, S**	**1.76**	**319**	P	**Pb**	**01 58 09.3**	**-1.5**
THR3	**Thira Island,**	**1.76**	**319**	P	**Pb**	**01 58 09.9**	**-1.0**
THR3	**Thira Island,**	**1.76**	**319**	P	**Pb**	**01 58 09.9**	**-1.0**
THT2	**Imerovigli**	**1.77**	**320**	P	**Pb**	**01 58 09.5**	**-1.5**
THT2	**Imerovigli**	**1.77**	**320**	P	**Pb**	**01 58 09.5**	**-1.5**
THT2	**Imerovigli**	**1.77**	**320**	PN	**Pb**	**01 58 09.5**	**-1.5**
SAP3	**Santorini-Thir**	**1.81**	**319**	P	**Pb**	**01 58 10.4**	**-1.3**
SAP3	**Santorini-Thir**	**1.81**	**319**	P	**Pb**	**01 58 10.4**	**-1.3**
BODT	**Bodrum**	**2.02**	**11**	PN	**Pn**	**01 58 12.1**	**+0.2**
BDRM	**Kayabasi**	**2.04**	**14**	*i* P	**Pn**	**01 58 13.2**	**+0.9**
BDRM				*i* S	**Sb**	**01 58 42.8**	**+2.1**
BDRM				IAML		01 58 44.0	
	comp=N,352nm,0.5s						
BDRM				IAML		01 58 44.0	
	comp=E,244nm,0.7s						
TURN	**Turunc**	**2.05**	**34**	*i* P	**Pb**	**01 58 13.8**	**-1.9**
TURN				*i* S	**Sb**	**01 58 44.5**	**+3.8**
TURN				IAML		01 58 47.0	
	comp=E,560nm,1.1s						
TURN				IAML		01 59 06.0	
	comp=N,359nm,1.1s						
TURN	**Turunc**	**2.05**	**34**	PN	**Pb**	**01 58 14.0**	**-1.7**
VAM	**Vamos**	**2.17**	**279**	P	**Pb**	**01 58 17.1**	**-0.8**
VAM				AML	AML	01 58 58.9	
	comp=E,5442μm,0.8s						
VAM				AML	AML	01 59 10.8	
	comp=N,5588μm,0.8s						
APE	**Apeiranthos**	**2.24**	**333**	P	**Pn**	**01 58 15.7**	**+0.7**
APE				AML	AML	01 58 46.9	
	comp=E,3087μm,0.9s						
APE				AML	AML	01 58 49.0	
	comp=N,7270μm,0.8s						
APE	**Apeiranthos**	**2.24**	**333**	P	**Pn**	**01 58 15.7**	**+0.7**
APE	**Apeiranthos**	**2.24**	**333**	PN	**Pn**	**01 58 16.1**	**+1.1**
APE	**Apeiranthos**	**2.24**	**333**	⇑P	**Pn**	**01 58 15.5**	**+0.5**
GVDS	**Gavdos**	**2.26**	**265**	PN	**Pb**	**01 58 18.7**	**-0.6**
GVD	**Gavdhos**	**2.26**	**265**	P	**Pb**	**01 58 18.7**	**-0.7**
GVD	**Gavdhos**	**2.26**	**265**	PN	**Pb**	**01 58 18.5**	**-0.9**
DALY	**Dalyan (Mula)**	**2.28**	**40**	*i* P	**Pb**	**01 58 17.8**	**-2.0**
DALY				*i* S	**Sb**	**01 58 53.0**	**+5.5**
DALY				IAML		01 59 06.0	
	comp=E,486nm,1.2s						
DALY				IAML		01 59 12.0	
	comp=N,486nm,1.2s						
DALY	**Dalyan (Mula)**	**2.28**	**40**	PN	**Pb**	**01 58 17.7**	**-2.0**
IMMV	**Iera Moni Meta**	**2.36**	**280**	P	**Pb**	**01 58 19.8**	**-1.3**
IMMV	**Iera Moni Meta**	**2.36**	**280**	PN	**Pb**	**01 58 19.2**	**-1.8**
YER	**Yerkesik**	**2.37**	**30**	PN	**Pn**	**01 58 18.5**	**+1.8**
DDIM	**Aydin, Didim**	**2.39**	**8**	*i* P	**Pb**	**01 58 20.7**	**-1.0**
DDIM				*i* S	**Sb**	**01 58 56.0**	**+5.2**
FETY	**Fethiye**	**2.40**	**49**	PN	**Pn**	**01 58 19.1**	**+1.9**
MULA	**Mugla, Merkez-**	**2.48**	**29**	*i* P	**Pb**	**01 58 20.9**	**-2.4**
MULA				*i* S	**Sb**	**01 58 56.1**	**+2.6**
MULA				IAML		01 58 59.0	
	comp=N,205nm,0.8s						
MULA				IAML		01 59 07.0	
	comp=E,402nm,

DURS IAML 01 59 53.0
comp=E,31nm,0.7s
DURS IAML 01 59 55.0
comp=N,30nm,0.8s
NATA Nata 4.73 92 P **Pn** **01 58 49.3 +0.1**
NATA S **Sn** **01 59 44.7 +1.3**
SZAC Souni 4.99 92 ⇑P **Pn** **01 58 53.2 +0.4**
ASGA Asgata 5.29 91 P **Pn** **01 58 56.8 -0.1**
AGG Agios Georgios 5.33 319 Pn **Pn** **01 58 58.3 +0.9**
CSS Mathiatis 5.34 89 P **Pn** **01 58 57.3 -0.3**
MVOU Mavrovouni 5.59 89 P **Pn** **01 59 01.3 +0.4**
KESN Edirne-Kesan 5.74 359 *i* P **Pn** **01 59 05.2 +1.9**
ALN Alexandroupoli 5.84 354 Pn **Pn** **01 59 03.5 -0.9**
SWA2 5.94 192 P **Pn** **01 59 06.2 +0.4**
baz=194
LIT Litokhoron 6.08 327 Pn **Pn** **01 59 07.6 -0.1**
KOT Kottamia 6.66 139 P **Pn** **01 59 13.8 -1.9**
baz=140
RYAN Fayoum 6.66 153 P **Pn** **01 59 15.4 -0.4**
baz=154
ANTO Ankara 6.73 43 **Pn** **01 59 17.4 +0.6**
HSAF As Saff 6.76 142 P **Pn** **01 59 16.3 -0.9**
baz=143
HHAG Hagoal 6.78 137 P **Pn** **01 59 15.9 -1.5**
baz=138
GLL Jalalah 6.87 142 P **Pn** **01 59 18.0 -0.7**
baz=142
BRTR Keskin Array B 7.13 47 P **Pn** **01 59 26.3 +4.0**
baz=270,slow=39,SNR=0.2
BRTR Keskin Array B 7.13 47 Pn **Pn** **01 59 22.6 +0.2**
FNA Florina 7.13 325 Pn **Pn** **01 59 22.1 -0.2**
SUZ Suez 7.29 134 P **Pn** **01 59 23.6 -0.8**
baz=135
MMAI Mount Meron Ar 7.41 104 **Pn** **01 59 25.9 -0.2**
comp=N,2.2nm,0.3s,baz=299,slow=12,SNR=7.3
MMAI S **Sn** **02 00 49.9 +0.3**
comp=N,9.7nm,0.3s,baz=300,slow=20,SNR=8.3
NBNS Bani Suef 7.48 148 P **Pn** **01 59 26.3 -0.7**
baz=149
ZAF Zafarana 7.55 138 P **Pn** **01 59 27.0 -0.9**
baz=139
HFRF Wahat Farafira 8.01 170 P **Pn** **01 59 33.9 -0.4**
baz=171
VTS Vitosha 8.03 341 Pn **Pn** **01 59 34.2 -0.4**
TAMRE El Minia 8.16 154 P **Pn** **01 59 36.2 -0.1**
baz=154
EIL Elat 8.74 126 P **Pn** **01 59 43.8 -0.5**
comp=N,1.4nm,0.3s,baz=310,slow=2.5,SNR=26
EIL S **Sn** **02 01 15.2 -6.8**
comp=N,4.7nm,0.3s,baz=50,slow=9.2,SNR=8.4
HBST Basata 8.89 129 P **Pn** **01 59 44.9 -1.5**
baz=129
HKAT Jabal Katrina 8.94 135 P **Pn** **01 59 46.3 -0.9**
baz=135
TIP Timpagrande 9.02 300 Pn **Pn** **01 59 47.5 -0.6**
RAFF Raffo Rosso 10.30 286 Pn **Pn** **02 00 05.7 0.0**
VAE Valguarnera 10.30 287 P **Pn** **02 00 08.9 +3.2**
comp=N,0.7nm,0.3s,baz=78,slow=20,SNR=2.5
VAE S **Sn** **02 01 58.9 -1.6**
comp=N,1.2nm,0.3s,baz=300,slow=20,SNR=2.1
MLR Muntele Rosu 10.42 357 P **Pn** **02 00 09.4 +2.0**
comp=N,0.1nm,0.3s,baz=204,slow=10.0,SNR=3.1
MLR LR LR 02 04 53.3
comp=N,444nm,20.2s,baz=195,slow=42
MLR Muntele Rosu 10.42 357 **Pn** **02 00 07.5 +0.2**
DIVS Divibare 10.43 332 Pn **Pn** **02 00 08.6 +1.1**
CORL Corleone 11.24 288 **Pn** **02 00 20.2 +1.7**
INTR Introdacqua 12.24 308 Pn **Pn** **02 00 32.5 +0.2**
NRCA Norcia 13.17 310 **Pn** **02 00 44.0 -0.9**
MURB Monte Urbino 13.76 311 **Pn** **02 00 54.1 +1.2**
KEST Kesra 14.27 278 P **Pn** **02 01 02.8 +2.8**
comp=N,0.2nm,0.3s,baz=41,slow=1.2,SNR=8.8
KEST S **Sn** **02 03 36.2 -1.4**
comp=N,0.1nm,0.3s,baz=54,slow=19,SNR=1.3
KEST Kesra 14.27 278 Pn **Pn** **02 01 00.8 +0.8**
SOKA Soboth 14.60 326 *e*Pn **Pn** **02 01 05.1 +0.6**
comp=N,1.6nm,0.6s
VYHS Vyhne 14.65 339 *e*PN **Pn** **02 01 02.0 -3.1**
OSSC Osservatorio P 14.70 310 Pn **Pn** **02 01 04.7 -1.0**
OBKA Obir 14.70 325 *i* Pn **Pn** **02 01 06.1 +0.3**
comp=N,3.1nm,0.9s
MODS Modra-Piesok 15.05 335 *e*P **P** **02 01 16.1 +0.5**
GNI Garni 15.07 65 LR LR 02 08 15.0
comp=N,137nm,20.4s,baz=283,slow=42
KIV Kislovodsk 15.09 49 Pn **Pn** **02 01 12.6 +1.5**
KIV IAmb IAmb 02 01 26.8
comp=Z,12nm,1.0s
KVAR Kislovodsk Arr 15.10 49 LR LR 02 08 42.6
comp=Z,192nm,18.2s,baz=88,slow=44
KBZ Khabaz 15.11 50 P **P** **02 01 18.5 +2.3**
comp=Z,0.1nm,0.3s,baz=255,slow=8.4,SNR=8.7
KBZ LR LR 02 07 09.1
comp=Z,90nm,21.4s,baz=239,slow=37
STAL STALIGIAL 15.44 321 Pn **Pn** **02 01 14.3 -1.3**
STAL IAmb IAmb 02 01 25.3
comp=Z,6.1nm,0.8s
ZOU Zoufplan 15.51 322 P **Pn** **02 01 16.5 -0.1**
ZOU IAmb IAmb 02 01 21.4
comp=Z,6.1nm,0.9s
KBA Koelnbreinsper 15.68 324 *e*Pn **Pn** **02 01 19.6 +0.7**
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 15.71 6 P **P** **02 01 21.9 -1.0**
comp=Z,1.3nm,0.3s,baz=194,slow=12,SNR=9.8
AKASG Malin Array Be 15.71 6 Pn **Pn** **02 01 18.3 -0.7**
MOA Molln 15.82 328 *i* Pn **Pn** **02 01 21.9 +1.3**
comp=Z,4.1nm,0.8s
ABTA Abfaltersbach 15.87 322 *i* Pn **Pn** **02 01 21.8 +0.6**
comp=Z,2.5nm,0.5s
CTI Castel Tesino 15.87 318 **Pn** **02 01 21.4 +0.2**
OJC Ojcow 15.97 343 Pn **Pn** **02 01 22.5 +0.1**
OKC Ostrava-Krasne 16.06 339 AMS AMS 02 08 50.0
comp=Z,400nm,11.4s
VRAC Vranov 16.09 335 P **P** **02 01 25.7 -1.4**
comp=Z,0.0nm,0.3s,baz=161,slow=7.6,SNR=4.2
VRAC LR LR 02 07 57.6
comp=Z,134nm,18.1s,baz=158,slow=38
MORC Moravsky Berou 16.18 338 Pn **Pn** **02 01 25.5 +0.3**
TREC Trest 16.47 333 AMS AMS 02 10 00.0
comp=Z,200nm,17.9s
CKRC Cesky Krumlov 16.55 330 *e*P **P** **02 01 31.9 -0.4**
WTTA Wattenberg 16.66 322 *e*Pn **Pn** **02 01 31.6 +0.2**
comp=Z,2.2nm,0.4s
KRLC Kraliky 16.68 337 *e*P **P** **02 01 33.2 -0.5**
KRLC AMS AMS 02 09 30.0
comp=Z,200nm,16.8s
WATA Walderalm 16.74 322 *i* Pn **Pn** **02 01 33.0 +0.7**
comp=Z,2.4nm,0.5s
GEC2 GERESS Array S 16.83 329 Pn **Pn** **02 01 32.6 -0.8**
GERES GERESS Array B 16.83 329 P **Pn** **02 01 34.0 +0.6**
comp=Z,0.2nm,0.3s,baz=141,slow=13,SNR=23
GERES LR LR 02 09 26.0
comp=Z,136nm,20.7s,baz=148,slow=42
FETA Feichten 16.98 319 *i* Pn **Pn** **02 01 36.1 +0.7**
comp=Z,3.0nm,0.7s
MOTA Moosalm 16.99 321 *i* Pn **P** **02 01 36.2 -1.0**
comp=Z,3.0nm,0.8s
DPC Dobruska-Polom 17.07 337 *e*P **Pn** **02 01 36.7 +0.3**
DPC AMS AMS 02 09 20.0
comp=Z,200nm,19.0s
KHC Kasperske Hory 17.10 329 *e*P **Pn** **02 01 36.5 -0.2**
KHC *ex* x 02 01 38.0
KHC AMS AMS 02 09 10.0
comp=Z,300nm,10.6s
KHC Kasperske Hory 17.10 329 **Pn** **02 01 36.0 -0.7**
RETA Reutte 17.26 321 *e*Pn **P** **02 01 39.5 -0.7**
comp=Z,1.0nm,0.4s
OSTC Ostas 17.28 337 *e*P **P** **02 01 40.9 +0.6**
OSTC AMS AMS 02 09 20.0
comp=Z,300nm,9.9s
DAVOX Davos/Dischmat 17.29 318 P **P** **02 01 41.6 +1.0**
comp=Z,0.2nm,0.3s,baz=115,slow=19,SNR=2.5
DAVOX LR LR 02 09 45.9
comp=Z,92nm,20.3s,baz=124,slow=42
CHVC Chvalec 17.36 336 *e*P P 02 01 49.6 +8.4
CHVC AMS AMS 02 09 20.0
comp=Z,300nm,17.8s
PRU Pruhonice 17.39 333 *e*P **Pn** **02 01 39.6 -0.7**
PRU AMS AMS 02 10 30.0
comp=Z,300nm,11.0s
TUE Stuetta 17.41 316 Pn **Pn** **02 01 40.0 -0.8**
TUE IAmb IAmb 02 01 47.6
comp=Z,16nm,1.1s
PRA Prague 17.50 333 *e*P **P** **02 01 42.7 0.0**
PRA AMS AMS 02 10 00.0
comp=Z,200nm,11.4s
DAVA Damuels 17.60 319 *i* Pn **P** **02 01 43.6 -0.3**
comp=Z,4.4nm,0.6s
BNI Bardonecchia 18.31 309 P **Pn** **02 01 51.1 -0.7**
BRG Berggiesshubel 18.34 333 *e*P **Pn** **02 01 51.5 -0.4**
BRG Amp 02 01 53.2
comp=Z,4.5nm,0.9s
BRG *ex* x 02 01 57.3
BRG Amp 02 01 58.4
comp=Z,4.6nm,1.2s
NKC Novy Kostel 18.41 330 *e*P **P** **02 01 50.7 -2.1**
NKC AMS AMS 02 10 00.0
comp=Z,300nm,14.3s
SENIN Lac Senin/Sane 18.55 313 P **P** **02 01 53.5 -1.0**
SENIN IAmb IAmb 02 02 03.1
comp=Z,9.7nm,0.7s
CLL Collm 19.04 333 *i* P **Pn** **02 02 00.0 -0.4**
comp=Z,5.0nm,0.8s
CLL *e*PP **PnPn** **02 02 13.0 -0.1**
CLL Collm 19.04 333 P **P** **02 01 58.6 -1.0**
BFO Black Forest 19.06 320 P **P** **02 01 59.0 -1.0**
SUW Suwalki 19.10 353 *e*P **P** **02 01 58.1 -2.2**
SUW Suwalki 19.10 353 P **P** **02 01 59.3 -0.9**
GKP Gorka Klasztor 19.41 342 *e*P **P** **02 02 03.7 +0.1**
SSB Saint Sauveur 19.78 308 P **P** **02 02 07.2 -0.6**
SSB IAmb IAmb 02 02 08.8
comp=Z,4.8nm,0.8s
RAYN Ar Rayn 19.91 120 **Pn** **02 02 13.0 +1.8**
RAYN IAmb IAmb 02 02 21.3
comp=Z,4.9nm,0.9s
IDID Didziasalis 20.23 360 *e*P Pn 02 02 13.5 -1.1
IIGN Ignalina 20.27 359 *e*P **P** **02 02 12.8 -0.3**
PABE Paberze 20.52 355 *e*P **P** **02 02 14.5 -1.2**
TAM Tamanrasset 22.25 242 P **P** **02 02 36.2 +1.5**
TAM IAmb IAmb 02 02 42.8
comp=Z,7.2nm,1.1s
CLF Chambon-Foret 22.36 313 P **P** **02 02 36.5 +1.0**
BELG Belogornoye 22.78 34 P **P** **02 02 41.2 +1.2**
comp=Z,8.3nm,0.8s,baz=205,slow=19,SNR=2.3
BELG LR LR 02 13 21.1
comp=Z,56nm,18.1s,baz=158,slow=41
ESBB Sonseca Array 24.82 290 P **P** **02 02 59.9 +0.1**
ESBB IAmb IAmb 02 03 07.1
comp=Z,7.2nm,1.1s
ESDC Sonseca Array 24.82 290 P **P** **02 02 59.5 -0.3**
comp=Z,3.6nm,0.8s,baz=81,slow=9.5,SNR=35
ESDC Sonseca Array 24.82 290 P **P** **02 02 59.5 -0.3**
ESDC IAmb IAmb 02 02 59.9
comp=Z,2.3nm,1.0s
GEYT Alibeck 25.25 74 P **P** **02 03 04.2 +0.5**
comp=Z,1.7nm,0.5s,baz=268,slow=13,SNR=4.2
GEYT Alibeck 25.25 74 P **P** **02 03 05.1 +1.4**
GEYT IAmb IAmb 02 03 18.2
comp=Z,2.4nm,0.9s
AAL Aland 25.50 352 *e*P **P** **02 03 04.5 -1.1**
MDT Midelt 26.12 274 P **P** **02 03 12.2 +0.6**
comp=Z,4.1nm,0.9s,baz=52,slow=12,SNR=5.1
FINES FINESS Array B 26.38 359 P **P** **02 03 13.2 -0.4**
comp=Z,0.8nm,0.6s,baz=161,slow=12,SNR=5.9
FINES FINESS Array B 26.38 359 P **P** **02 03 12.9 -0.7**
HFS Hagfors 26.48 345 P **P** **02 03 13.5 -1.0**
comp=Z,2.1nm,0.8s,baz=181,slow=13,SNR=2.8
HFS LR LR 02 15 27.3
comp=Z,266nm,18.2s,baz=167,slow=40
PBRG Braganca 27.01 294 *e*P **P** **02 03 19.3 -0.3**
comp=Z,23nm,1.6s
KLMR Klimovskoe 27.05 14 *e*P P 02 03 27.5 +7.9
KLMR AMP 02 03 40.3
comp=Z,14nm,1.2s
MVO Moncorvo 27.20 293 *e*P **P** **02 03 21.3 0.0**
PBAR Barrancos 27.26 287 *e*P **P** **02 03 22.0 +0.2**
AKTO Aktyubinsk 27.31 46 P **P** **02 03 22.0 -0.1**
comp=Z,1.0nm,0.7s,baz=256,slow=12,SNR=3.0
MTE Manteigas 27.58 291 *e*P **P** **02 03 26.4 +1.7**
comp=Z,27nm,1.7s
ATD Arta Tunnel 27.60 144 P **P** **02 03 25.9 +0.9**
ATD IAmb IAmb 02 03 43.7
comp=Z,5.0nm,0.9s
POLO Lamas de Olo 27.78 293 *e*P **P** **02 03 26.0 -0.5**
NOA NORSAR Array B 27.84 344 P **P** **02 03 24.7 -2.1**
comp=Z,0.3nm,0.7s,baz=151,slow=8.6,SNR=2.1
NOA LR LR 02 15 27.0
comp=Z,99nm,20.0s,baz=155,slow=38
PVIS Viseu 27.85 292 *e*P **P** **02 03 26.5 -0.6**
comp=Z,31nm,1.9s
PVAQ Vaqueiros 27.86 285 *e*P **P** **02 03 27.0 -0.2**
comp=Z,28nm,1.6s
KIRV Kirov 27.87 25 LR LR 02 15 23.9
comp=Z,66nm,18.8s,baz=223,slow=38
EVO Evora 28.00 287 *e*P **P** **02 03 29.4 +1.0**
comp=Z,26nm,1.9s
PMTG Montargil 28.14 289 *e*P **P** **02 03 29.9 +0.3**
EKA Eskdalemuir Ar 28.90 324 P **P** **02 03 35.0 -1.2**
comp=Z,0.6nm,0.5s,baz=125,slow=9.6,SNR=4.8
TOA0 Torodi Ar. Sit 31.50 232 P **P** **02 04 00.1 +0.6**
TORD Torodi Ar. Bea 31.50 232 P **P** **02 04 00.2 +0.6**
comp=Z,5.8nm,0.6s,baz=34,slow=9.0,SNR=42
TORD LR LR 02 20 24.7
comp=Z,121nm,18.3s,baz=25,slow=43
TORD Torodi Ar. Bea 31.50 232 P **P** **02 04 00.5 +0.9**
LODK Lodwar 32.48 164 P **P** **02 04 09.8 +1.5**
LODK IAmb IAmb 02 04 25.8
comp=Z,2.9nm,1.1s
SOCY Socotra 33.55 126 P **P** **02 04 16.3 -1.3**
SOCY IAmb IAmb 02 04 23.5
comp=Z,2.6nm,0.9s
CHGR Chuyangaron 33.84 71 P **P** **02 04 19.4 -0.5**
KOWA Kowa 34.48 241 P **P** **02 04 26.0 +0.5**
comp=Z,2.1nm,0.6s,baz=54,slow=11,SNR=9.1
ARCES ARCESS Array B 34.52 359 P **P** **02 04 23.4 -1.9**
comp=Z,2.5nm,0.8s,baz=190,slow=9.2,SNR=6.9
ARCES LR LR 02 19 25.0
comp=Z,60nm,19.0s,baz=270,slow=38
ARCES ARCESS Array B 34.52 359 P **P** **02 04 24.4 -1.0**
AAK Ala-Archa 37.47 64 P **P** **02 04 52.0 +0.8**
comp=Z,1.5nm,0.6s,baz=233,slow=7.2,SNR=5.6
AAK LR LR 02 21 13.1
comp=Z,44nm,18.7s,baz=290,slow=38
AAK Ala-Archa 37.47 64 P **P** **02 04 53.1 +1.9**
AAK IAmb IAmb 02 05 01.0
comp=Z,2.8nm,0.8s
KURBB Kurchatov Arra 40.11 51 P **P** **02 05 13.5 +0.5**
comp=Z,5.1nm,0.8s,baz=277,slow=8.8,SNR=25
KURK Kurchatov 40.17 51 P **P** **02 05 13.5 0.0**
DBIC Dimbokro 40.60 233 P **P** **02 05 17.8 +0.4**
comp=Z,1.3nm,0.5s,baz=44,slow=13,SNR=1.9
DBIC LR LR 02 23 56.3
comp=Z,45nm,19.7s,baz=28,slow=39
DBIC Dimbokro 40.60 233 P **P** **02 05 17.9 +0.5**
MAKZ Makanchi 42.46 57 P **P** **02 05 34.1 +1.7**
MAKZ IAmb IAmb 02 05 42.3
comp=Z,2.0nm,0.8s
MK31 Makanchi Array 42.68 57 P **P** **02 05 34.8 +0.6**
MK31 IAmb IAmb 02 05 49.9
comp=Z,2.8nm,0.7s
MKAR Makanchi Array 42.68 57 P **P** **02 05 35.2 +1.0**
comp=Z,2.2nm,0.5s,baz=277,slow=6.7,SNR=29
MKAR LR LR 02 27 59.5
comp=Z,34nm,18.0s,baz=272,slow=42
MKAR Makanchi Array 42.68 57 P **P** **02 05 35.3 +1.1**
SPITS Spitsbergen Ar 43.43 357 P **P** **02 05 39.4 -0.4**
comp=Z,13nm,1.3s,baz=160,slow=17,SNR=8.7
ZAA0 Zalesovo Array 44.07 46 P **P** **02 05 45.3 0.0**
ZALV Zalesovo Beam 44.07 46 P **P** **02 05 45.4 +0.1**
comp=Z,3.9nm,0.5s,baz=268,slow=10,SNR=18
ZALV LR LR 02 26 12.5
comp=Z,35nm,20.3s,baz=258,slow=39
NRIK Noril'sk 47.37 25 P **P** **02 06 11.6 +0.5**
comp=Z,2.0nm,0.4s,baz=266,slow=18,SNR=2.2
NRIK Noril'sk 47.37 25 P **P** **02 06 11.7 +0.5**
TLY Talaya 55.66 47 P **P** **02 07 14.2 +0.8**
comp=Z,2.3nm,0.6s,baz=258,slow=14,SNR=1.7
TLY LR LR 02 33 16.7
comp=Z,30nm,19.7s,baz=298,slow=38
SONM Songino Array 58.48 51 P **P** **02 07 33.7 +0.1**
comp=Z,0.8nm,0.5s,baz=292,slow=8.3,SNR=7.2
SONM Songino Array 58.48 51 P **P** **02 07 33.9 +0.3**
SONM IAmb IAmb 02 07 43.0
comp=Z,0.9nm,0.7s
BOSA Boshof 63.37 182 P **P** **02 08 08.2 +1.3**
comp=Z,1.7nm,0.8s,baz=7.5,slow=6.6,SNR=5.2
BOSA Boshof 63.37 182 P **P** **02 08 07.6 +0.8**
INK Inuvik 75.88 353 P **P** **02 09 22.8 -0.5**
comp=Z,0.4nm,0.5s,baz=36,slow=2.9,SNR=6.3
KSRS Korea Array 77.24 53 P **P** **02 09 33.2 +1.6**
comp=Z,0.6nm,0.3s,baz=301,slow=5.7,SNR=4.1
YKA Yellowknife Ar 77.93 343 P **P** **02 09 33.2 -1.8**
comp=Z,0.7nm,0.7s,baz=37,slow=5.4,SNR=16
ILAR Eielson Array 80.35 357 P **P** **02 09 46.6 -1.6**
comp=Z,0.3nm,0.6s,baz=344,slow=3.5,SNR=2.6
ULM Lac du Bonnet 81.13 327 P **P** **02 09 51.7 -0.9**
comp=Z,1.2nm,0.5s,baz=112,slow=7.6,SNR=4.3
PDAR Pinedale Array 92.87 329 P **P** **02 10 49.2 -1.4**
comp=Z,0.4nm,0.8s,baz=78,slow=5.6,SNR=2.3
PDAR Pinedale Array 92.87 329 P **P** **02 10 49.9 -0.7**

NEIC ***21*** *02:01:17.4±1.1, 15°.12S±0°.05×173°.2W±0°.1, h87km±19km, mb4.5/7, Error ellipse: s-maj=18.9km s-min=6.1km az=82.0*
IDC ***21*** *02:01:31.8±4.8, 15°.02S×173°.96W, h164km±43km, mb3.6/7, mb1 3.9/8, mb1mx3.5/44, mbtmp4.1/8, MS3.4/15, Ms1 3.5/15, ms1mx3.4/20, Error ellipse: s-maj=37.2km s-min=19.9km az=134.0*
ISC 21 02:01:15.5±0.6, 15°.18S±0°.07×173°.32W±0°.09, h30km, n39, σ2.9s63/21, mb4.4/12, MS3.5/13, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.95**	**50**		**Pn**		**02 01 47.5**	**+0.8**
AFI					**Sn**		**02 02 07.8**	**-2.5**
NIUE	**Niue**	**5.06**	**141**		**Pn**		**02 02 30.5**	**+1.2**
NIUE					**Sn**		**02 03 25.0**	**-1.8**
MSVF	**Nonsavu**	**8.66**	**252**	P	Pn		02 03 27.3	+8.4
	0.6nm,0.3s,baz=104,slow=16,SNR=5.4							
MSVF				LR	LR		02 06 18.3	
	comp=Z,352nm,19.7s,baz=147,slow=35							
MSVF	**Nonsavu**	**8.66**	**252**		**Pn**		**02 03 21.8**	**+2.8**
KNTN	**Kanton**	**12.42**	**7**		**Pn**		**02 04 09.0**	**-1.5**
RAR	**Rarotonga**	**14.20**	**117**	LR	LR		02 09 10.2	
	comp=Z,61nm,21.8s,baz=278,slow=31							
DZM	**Mont Dzumac**	**20.36**	**247**	*e*LR	LR		02 11 16.6	
	comp=Z,323nm,26.6s							
DZM	**Mont Dzumac**	**20.36**	**247**	LR	LR		02 12 19.5	
	comp=Z,224nm,19.3s,baz=41,slow=33							
PAE	**Paea**	**22.90**	**99**	*e*T	T		02 29 27.8	
	2.6nm,0.3s							
PPT	**Papeete**	**22.90**	**99**	LR	LR		02 14 38.7	
	comp=Z,22nm,18.6s,baz=342,slow=33							
TBI	**Tubuai**	**23.92**	**114**	*e*T	T		02 30 53.5	
	6.9nm,0.3s							
URZ	**Urewera**	**24.50**	**198**	LR	LR		02 14 42.8	
	comp=Z,246nm,21.6s,baz=31,slow=32							
HNR	**Honiara**	**26.72**	**279**	LR	LR		02 16 59.6	
	comp=Z,54nm,18.5s,baz=158,slow=36							
QRZ	**Quartz Range**	**28.37**	**203**	P	**P**		**02 07 04.0**	**-3.0**
LTZ	**Lake Taylor**	**30.17**	**201**	P	**P**		**02 07 20.1**	**-2.9**
LTZ					IAmb	IAmb	02 07 20.6	
	comp=Z,13nm,1.2s							
RKT	**Rikitea**	**36.99**	**108**	*e*T	T		02 47 09.4	
	comp=Z,4.3nm,0.4s							
H11N3	**WAKE ISLAND Hy**	**39.76**	**330**	T	T		02 50 56.8	
	baz=149,slow=76,SNR=8.5							
H11N1	**WAKE ISLAND Hy**	**39.76**	**330**	T	T		02 50 55.0	
	baz=149,slow=76,SNR=11							
H11N2	**WAKE ISLAND Hy**	**39.77**	**330**	T	T		02 50 54.8	
	baz=149,slow=76,SNR=9.4							
STKA	**Stephens Creek**	**44.22**	**240**	LR	LR		02 25 42.1	
	comp=Z,49nm,19.5s,baz=25,slow=33							
WR0	**Warramunga Arr**	**49.78**	**257**	P	**P**		**02 10 02.6**	**-3.3**
WR0					IAmb	IAmb	02 10 04.5	
	comp=Z,6.2nm,1.1s							
WB0	**Warramunga Arr**	**49.93**	**257**	P	**P**		**02 10 03.2**	**-3.8**
WB0					IAmb	IAmb	02 10 11.7	
	comp=Z,3.9nm,1.0s							
WB2	**Warramunga Arr**	**49.96**	**257**	P	**P**		**02 10 03.4**	**-3.8**
WB2					IAmb	IAmb	02 10 17.2	
	comp=Z,5.5nm,1.1s							
WRA	**Warramunga Arr**	**49.97**	**257**	P	**P**		**02 10 05.2**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=94,slow=6.3,SNR=18							
WRA	**Warramunga Arr**	**49.97**	**257**	P	**P**		**02 10 04.3**	**-3.0**
AS31	**Alice Springs**	**50.25**	**252**	P	**P**		**02 10 06.9**	**-2.5**
AS31					IAmb	IAmb	02 10 09.7	
	comp=Z,1.4nm,0.8s							
ASAR	**Alice Springs**	**50.26**	**252**	P	**P**		**02 10 07.4**	**-2.0**
	comp=Z,5.1nm,0.7s,baz=87,slow=8.2,SNR=45							
ASAR	**Alice Springs**	**50.26**	**252**	P	**P**		**02 10 06.9**	**-2.6**
VNDA	**Vanda**	**63.61**	**186**	P	**P**		**02 11 45.4**	**+2.2**
	comp=Z,0.7nm,0.8s,baz=6.8,slow=7.0,SNR=5.4							
MJAR	**Matsushiro Arr**	**68.82**	**320**	LR	LR		02 36 57.1	
	comp=Z,31nm,21.4s,baz=130,slow=31							
PETK	**Petropavlovsk-**	**72.44**	**342**	LR	LR		02 36 56.3	
	comp=Z,20nm,21.9s,baz=110,slow=30							
NVAR	**Mina Array Bea**	**74.11**	**42**	P	**P**		**02 12 51.7**	**+2.4**
	comp=Z,1.6nm,0.9s,baz=227,slow=10,SNR=12							
NVAR				LR	LR		02 38 38.1	
	comp=Z,79nm,20.1s,baz=262,slow=30							
TXAR	**Lajitas Array**	**80.42**	**56**	LR	LR		02 43 02.0	
	comp=Z,25nm,18.6s,baz=0.0,slow=31							
PDAR	**Pinedale Array**	**82.05**	**42**	LR	LR		02 43 28.1	
	comp=Z,37nm,19.6s,baz=278,slow=31							
ILAR	**Eielson Array**	**82.21**	**11**	P	**P**		**02 13 34.7**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=220,slow=6.4,SNR=1.2							
MAW	**Mawson**	**88.03**	**199**	P	**P**		**02 14 03.1**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=146,slow=3.6,SNR=2.8							
MAW				LR	LR		02 50 33.4	
	comp=Z,35nm,21.0s,baz=72,slow=33							
YKA	**Yellowknife Ar**	**89.86**	**23**	P	**P**		**02 14 12.3**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=239,slow=4.3,SNR=6.5							
CMAR	**Chiang Mai Arr**	**92.62**	**288**	LR	LR		02 50 25.7	
	comp=Z,4.7nm,21.4s,baz=195,slow=32							
ULM	**Lac du Bonnet**	**93.71**	**39**	LR	LR		02 49 11.5	
	comp=Z,60nm,21.5s,baz=146,slow=30							

IDC 21 02:03:22.7±6.8, 30°.62N×142°.42E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/69, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=254.2km s-min=25.3km az=71.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.35**	**319**		Sn	Sn	02 04 57.7	+0.8
	10.0nm,0.3s,baz=69,slow=23,SNR=2.0							
JCJ	**Chichijima**	**3.52**	**183**	Pn	Pn		02 04 18.2	-0.4
	4.2nm,0.3s,baz=323,slow=21,SNR=1.2							
JCJ					Sn	Sn	02 04 53.8	-7.1
	8.3nm,0.3s,baz=271,slow=22,SNR=1.7							
MKAR	**Makanchi Array**	**48.45**	**307**	P	P		02 12 08.5	+1.6
	0.6nm,0.9s,baz=86,slow=7.9,SNR=2.9							
KURBB	**Kurchatov Arra**	**50.78**	**312**	P	P		02 12 22.8	-1.8
	0.2nm,0.5s,baz=77,slow=8.6,SNR=3.0							
WRA	**Warramunga Arr**	**50.87**	**190**	P	P		02 12 25.5	0.0
	1.0nm,0.5s,baz=6.9,slow=7.7,SNR=8.0							
ASAR	**Alice Springs**	**54.59**	**190**	P	P		02 12 52.9	-0.2
	0.8nm,0.5s,baz=8.1,slow=6.1,SNR=7.9							

JMA 21 02:03:56.9±0.1, 37°.24N×141°.42E, h17km±1km, M3.4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.45**	**286**	P	Pg		02 04 05.9	-0.2
JFK				S	Sg		02 04 12.4	+0.1
ONAJ	**Iwakimizuishiy**	**0.52**	**255**	P	Pg		02 04 07.1	-0.1
ONAJ				S	Sg		02 04 14.3	+0.1
JMST	**Minamisoumatoc**	**0.64**	**319**	P	Pg		02 04 09.1	-0.5
JMST				S	Sg		02 04 18.1	-0.1
JFFD	**Fukushimafurud**	**0.70**	**258**	P	Pg		02 04 10.3	-0.4
JFFD				S	Sg		02 04 19.8	-0.2
JMM	**Marumori**	**0.80**	**322**	P	Pb		02 04 11.8	-0.5
JMM				S	Sb		02 04 22.4	-0.5
JFT	**Otama**	**0.91**	**288**	P	Pb		02 04 14.1	-0.1
JFT				S	Sg		02 04 26.4	-0.1
JHO	**Hitachi**	**0.93**	**228**	P	Pb		02 04 13.8	-0.7
JHO				S	Sb		02 04 26.4	-0.1
MAT	**Matsushiro**	**2.67**	**256**	P	Pb		02 04 42.0	-2.2
MAT				*e*S	Sn		02 05 12.4	+1.3

IDC ***21*** *02:08:24.0±1.4, 28°.00N×52°.45E, h0km, mb3.6/9, mb1 3.7/10, mb1mx3.5/59, mbtmp3.6/10, ML3.2/1, Error ellipse: s-maj=32.6km s-min=24.6km az=151.0*
TEH ***21*** *02:08:26.8, 28°.13N×52°.58E, h17km, ML3.4*
THR ***21*** *02:08:27.8±0.3, 28°.18N×52°.65E, h17km±22km, ML3.3*
ISC 21 02:08:26.1±0.8, 28°.01N±0°.06×52°.53E±0°.05, h15km, n40, σ1.9s12/41, mb3.6/9, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
QIR1	**Qir**	**0.65**	**44**	*e*Pg	**Pg**		**02 08 36.8**	**

JHRM	**Jahrom**	**1.05**	**62**	*e*Pg		**Pg**	**02 08 46.2**	**-0.2**
AHBU	**AHRAM**	**1.38**	**308**	*e*Pg		**Pg**	**02 08 52.8**	**+0.1**
SHI	**Shiraz**	**1.62**	**359**	*e*Pg		**Pb**	**02 08 55.6**	**-0.3**
LAR1	**LAR**	**1.67**	**101**	*e*Pg		**Pg**	**02 08 57.2**	**-1.0**
KAZ1	**Kazerun**	**1.79**	**334**	*e*Pg		**Pb**	**02 08 57.4**	**-1.2**
KLNJ	**Kolanjah**	**3.10**	**345**	*e*Pn		**Pn**	**02 09 14.5**	**-0.3**
IRAM	**Ramesheh**	**3.79**	**358**	*e*Pn		**Pn**	**02 09 24.7**	**+0.5**
IMEH	**Mehriz**	**3.82**	**28**	*e*Pn		**Pn**	**02 09 25.9**	**+1.2**
ISAD	**Sadrabad**	**4.02**	**14**	*e*Pn		**Pn**	**02 09 28.9**	**+1.5**
NGRK	**Negar Kerman**	**4.03**	**65**	*e*Pn		**Pn**	**02 09 28.7**	**+1.1**
KHGB	**Koh Gabri**	**4.18**	**55**	*e*Pn		**Pn**	**02 09 30.2**	**+0.7**
KRBR	**Kerman**	**4.19**	**61**	*e*Pn		**Pn**	**02 09 31.1**	**+1.3**
KRBR	**Kerman**	**4.19**	**61**	*e*Pn		**Pn**	**02 09 31.1**	**+1.3**
TVBK	**TV Kerman**	**4.20**	**61**	*e*Pn		**Pn**	**02 09 31.4**	**+1.5**
IBAF	**Bafgh**	**4.44**	**36**	*e*Pn		**Pn**	**02 09 34.5**	**+1.5**
ICHK	**Chekchek**	**4.52**	**21**	*e*Pn		**Pn**	**02 09 35.9**	**+1.7**
KHNJ	**Kahnooj**	**4.58**	**90**	*e*Pn		**Pn**	**02 09 36.7**	**+1.9**
YZKH	**Yazd**	**4.71**	**22**	*e*Pn		**Pn**	**02 09 38.0**	**+1.2**
YZKH	**Yazd**	**4.71**	**22**	*e*Pn		**Pn**	**02 09 38.0**	**+1.2**
CHMN	**Cheshme madani**	**4.76**	**66**	*e*Pn		**Pn**	**02 09 39.3**	**+1.6**
IPIR	**Pirpir**	**4.87**	**343**	*e*Pn		**Pn**	**02 09 39.3**	**+0.2**
IZEF	**Zefreh**	**4.87**	**358**	*e*Pn		**Pn**	**02 09 38.7**	**-0.4**
ANAR	**Anarak**	**5.26**	**11**	*e*Pn		**Pn**	**02 09 44.5**	**+0.1**
IKLH	**Kolahrood**	**5.35**	**351**	*e*Pn		**Pn**	**02 09 45.7**	**0.0**
KRSH	**Karshahi**	**5.95**	**357**	*e*Pn		**Pn**	**02 09 54.1**	**+0.3**
TPRV	**Parvadeh(Tabas**	**6.15**	**35**	*e*Pn		**Pn**	**02 09 57.3**	**+0.8**
TKDS	**Koohdasht(Taba**	**6.84**	**34**	*e*Pn		**Pn**	**02 10 05.3**	**-0.7**
TNSJ	**Nastanj**	**6.89**	**30**	*e*Pn		**Pn**	**02 10 07.1**	**+0.4**
WSAR	**Wadi Sarin**	**7.27**	**129**	Pn		**Pn**	**02 10 12.3**	**+0.5**
	0.4nm,0.3s,baz=342,slow=5.5,SNR=15							
WSAR				Sn		**Sn**	**02 11 32.4**	**-1.8**
	0.2nm,0.3s,baz=119,slow=5.6,SNR=1.7							
AKTO	**Aktyubinsk**	**22.78**	**9**	P		**P**	**02 13 29.6**	**+1.6**
	2.7nm,0.9s,baz=173,slow=11,SNR=7.8							
AAK	**Ala-Archa**	**23.02**	**45**	P		**P**	**02 13 32.7**	**+2.0**
	1.2nm,0.6s,baz=232,slow=16,SNR=2.7							
BVAR	**Borovoye Array**	**28.28**	**23**	P		**P**	**02 14 18.0**	**-0.8**
	0.9nm,0.8s,baz=174,slow=14,SNR=4.2							
MKAR	**Makanchi Array**	**29.91**	**43**	P		**P**	**02 14 33.6**	**+0.3**
	0.8nm,0.9s,baz=224,slow=9.9,SNR=3.6							
KURBB	**Kurchatov Arra**	**29.96**	**34**	P		**P**	**02 14 34.6**	**+0.9**
	0.1nm,0.3s,baz=238,slow=8.6,SNR=1.9							
ZALV	**Zalesovo Beam**	**35.05**	**33**	P		**P**	**02 15 17.8**	**-0.4**
	0.5nm,0.4s,baz=238,slow=8.5,SNR=3.6							
FINES	**FINESS Array B**	**37.81**	**340**	P		**P**	**02 15 40.9**	**-0.7**
	0.8nm,0.7s,baz=140,slow=11,SNR=1.4							
TORD	**Torodi Ar. Bea**	**49.49**	**263**	P		**P**	**02 17 16.0**	**-0.3**
	0.8nm,0.8s,baz=59,slow=8.5,SNR=6.4							
YKA	**Yellowknife Ar**	**89.22**	**354**	P		**P**	**02 21 21.8**	**+0.8**
	0.3nm,0.7s,baz=8.2,slow=4.8,SNR=6.7							

*MOS **21** 02:19:51.4±0.4,42°.91N×144°.45E,h110km,mb4.1/1,Error ellipse: s-maj=23.2km s-min=14.2km az=67.4*
*SKHL **21** 02:19:52.9±0.2,43°.00N×144°.40E,h108km±2km,mb4.5/3,msha5.5/3*
*JMA **21** 02:19:53.2±0.1,43°.04N×144°.36E,h96km±1km,M3.1*
*IDC **21** 02:19:54.5±5.7,43°.12N×144°.34E,h108km±29km,mb3.2/5,mb1 3.3/5,mb1mx3.0/33,mbtmp3.6/5,Error ellipse: s-maj=74.8km s-min=33.2km az=176.0*

ISC 21 02:19:52.9±0.9,42°.99N±0°.05×144°.38E±0°.04,h98km±6km, n38,σ0°67/53,mb3.4/5,1C,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.23**	**89**	P	**Pn**	**02 20 07.2**	**+0.3**
JAK				*e*S	**Sn**	**02 20 18.0**	**+0.6**
JOB	**Onbets**	**0.41**	**258**	P	**Pn**	**02 20 08.3**	**+0.5**
JOB				*e*S	**Sn**	**02 20 19.5**	**+0.5**
JAR	**Ashorobuto**	**0.54**	**304**	P	**Pn**	**02 20 08.7**	**0.0**
JAR				*e*S	**Sn**	**02 20 20.1**	**-0.5**
JKHN	**Kushirohamanak**	**0.58**	**81**	P	**Pn**	**02 20 09.5**	**+0.5**
JKHN				*e*S	**Sn**	**02 20 21.4**	**+0.3**
JNK	**Nakash**	**0.64**	**23**	P	**Pn**	**02 20 09.3**	**-0.3**
JNK				*e*S	**Sn**	**02 20 21.9**	**-0.2**
JCH	**Churui**	**0.84**	**244**	P	**Pn**	**02 20 11.8**	**+0.4**
JCH				*e*S	**Sn**	**02 20 25.0**	**-0.3**
JTKR	**Abashiri--Toko**	**1.04**	**341**	P	**Pn**	**02 20 13.6**	**+0.1**
JTKR				*e*S	**Sn**	**02 20 28.4**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.06**	**69**	*i*PN	**Pn**	**02 20 13.3**	**-0.4**
NMR				*i*S	**Sn**	**02 20 28.7**	**-0.7**
NMR	**Nemuro--Hokkai**	**1.06**	**69**	*i*P	**Pn**	**02 20 13.7**	**0.0**
NMR				*i*S	**Sn**	**02 20 28.7**	**-0.7**
NEM2	**Nemuro 2**	**1.06**	**69**	P	**Pn**	**02 20 13.6**	**-0.2**
NEM2				*e*S	**Sn**	**02 20 28.5**	**-1.1**
JRA	**Rausu**	**1.09**	**30**	P	**Pn**	**02 20 14.5**	**+0.4**
GLVR	**Golovnino**	**1.12**	**48**	*e*PN	**Pn**	**02 20 14.7**	**+0.3**
GLVR				*e*S	**Sn**	**02 20 31.1**	**+0.5**
GLVR				pmax	pmax		
	comp=Z,273nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.2s						
GLVR				smax	smax		
	comp=E,871nm,0.2s						
GLVR	**Golovnino**	**1.12**	**48**	*e*P	**Pn**	**02 20 14.7**	**+0.3**
GLVR				AMB	AMB	02 20 15.0	
	comp=E,30nm,0.1s						
GLVR				*e*S	**Sn**	**02 20 30.6**	**0.0**
GLVR				A	A	02 20 32.0	
	comp=E,1μm,0.3s						
GLVR				A	A	02 20 32.0	
	comp=E,870nm,0.3s						
JMP	**Maruseppu**	**1.26**	**324**	P	**Pn**	**02 20 16.0**	**-0.1**
JMP				*e*S	**Sn**	**02 20 32.5**	**-1.1**
RUSJ	**Misakicho**	**1.28**	**29**	*e*PN	**Pn**	**02 20 16.6**	**+0.3**
RUSJ				*e*S	**Sn**	**02 20 36.6**	**+2.6**
JEM	**Erimo**	**1.33**	**223**	P	**Pn**	**02 20 18.6**	**+1.7**
JNBK	**Urakawa-nobuka**	**1.40**	**240**	P	**Pn**	**02 20 17.6**	**-0.1**
JNBK				*e*S	**Sn**	**02 20 35.5**	**-1.0**
GRPR	**Tuman**	**1.42**	**45**	*e*PN	**Pn**	**02 20 18.5**	**+0.5**
GRPR				*e*S	**Sn**	**02 20 37.2**	**+0.1**
GRPR				pmax	pmax		
	comp=Z,178nm,0.3s						
GRPR				smax	smax		
	comp=N,548nm,0.4s						
GRPR				smax	smax		
	comp=E,307nm,0.4s						
GRPR	**Tuman**	**1.42**	**45**	*e*P	**Pn**	**02 20 18.5**	**+0.5**
GRPR				AMB	AMB	02 20 19.0	
	comp=E,90nm,0.3s						
GRPR				*e*S	**Sn**	**02 20 37.2**	**+0.1**
GRPR				A	A	02 20 40.0	
	comp=E,550nm,0.4s						
GRPR				A	A	02 20 40.0	
	comp=E,310nm,0.4s						
JKK2	**Kamakawa 2**	**1.48**	**307**	P	**Pn**	**02 20 19.0**	**+0.3**
JBT2	**Biratori 2**	**1.50**	**262**	P	**Pn**	**02 20 19.3**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**1.50**	**45**	*e*PN	**Pn**	**02 20 19.5**	**+0.5**
YUK				*e*S	**Sn**	**02 20 39.3**	**+0.6**
YUK				pmax	pmax		
	comp=Z,568nm,0.2s						
YUK				smax	smax		
	comp=E,668nm,0.5s						
YUK				smax	smax		
	comp=N,657nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.50**	**45**	*e*P	**Pn**	**02 20 19.5**	**+0.5**
YUK				AMB	AMB	02 20 19.8	
	comp=N,60nm,0.2s						
YUK				*e*S	**Sn**	**02 20 39.3**	**+0.6**
YUK				A	A	02 20 40.0	
	comp=N,660nm,0.4s						
YUK				A	A	02 20 40.0	
	comp=N,670nm,0.4s						
JKA	**Kamikawa-asahi**	**1.71**	**312**	*e*P	**Pn**	**02 20 22.6**	**+0.9**
JKA				*e*S	**Sn**	**02 20 44.0**	**+0.4**
ASAJ	**Asahikawa**	**1.72**	**312**	P	**Pn**	**02 20 22.6**	**+0.9**
	comp=N,22nm,0.3s,baz=159,slow=12,SNR=58						
ASAJ				S	**Sn**	**02 20 44.0**	**+0.3**
	comp=N,3.7nm,0.3s,baz=269,slow=26,SNR=7.7						
SONM	**Songino Array**	**26.91**	**294**	P	**P**	**02 25 24.6**	**-0.1**
	comp=N,0.3nm,0.4s,baz=95,slow=9.3,SNR=3.6						
H11N2	**WAKE ISLAND Hy 29.95**	**134**		T	T	02 57 08.3	
	baz=327,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy 29.96**	**134**		T	T	02 57 12.3	
	baz=327,slow=76,SNR=27						
H11N3	**WAKE ISLAND Hy 29.96**	**134**		T	T	02 57 13.7	
	baz=327,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy 30.86**	**135**		T	T	02 58 20.0	
	baz=328,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy 30.86**	**135**		T	T	02 58 18.3	
	baz=328,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy 30.87**	**135**		T	T	02 58 21.8	
	baz=328,slow=76,SNR=13						

ILAR	**Eielson Array**	**43.29**	**36**	P		**P**	**02 27 43.8**	**-0.6**
	comp=N,0.2nm,0.5s,baz=281,slow=7.0,SNR=2.0							
KURK	**Kurchatov**	**44.28**	**304**	P		**P**	**02 27 52.6**	**+0.2**
KURK	**Kurchatov**	**44.28**	**304**	*e*P		**P**	**02 27 52.6**	**+0.2**
KURBB	**Kurchatov Arra**	**44.36**	**304**	P		**P**	**02 27 52.6**	**-0.5**
	comp=N,0.4nm,0.5s,baz=71,slow=8.5,SNR=4.6							
FINES	**FINESS Array B**	**64.61**	**332**	P		**P**	**02 30 19.1**	**-0.3**
	comp=N,0.7nm,0.5s,baz=46,slow=8.2,SNR=6.5							
NOA	**NORSAR Array B**	**69.56**	**338**	P		**P**	**02 30 51.1**	**+0.4**
	comp=N,0.3nm,0.5s,baz=34,slow=6.4,SNR=2.2							

*IDC **21** 02:45:55.7±1.1,35°.14N×26°.94E,h0km,mb3.7/7, mb1 3.7/10,mb1mx3.5/39,mbtmp3.6/10,ML3.7/3,Error ellipse: s-maj=27.0km s-min=11.4km az=2.0*
*ISK **21** 02:45:57.8,35°.18N×26°.82E,h5km,ML3.5/20*
*DDA **21** 02:45:58.1,35°.15N×27°.02E,h8km±3km,MW3.7*
*THE **21** 02:45:58.9,35°.08N×26°.78E,h0km±1km,ML3.7/4,Error ellipse: s-maj=5.0km s-min=0.8km az=159.0*
*ATH **21** 02:45:59.3,35°.11N×26°.76E,h33km±4km,ML3.6/9,Error ellipse: s-maj=5.9km s-min=1.5km az=153.0*
*HLW **21** 02:46:01.2,34°.86N×27°.04E,h31km±25km,Md4.1*

ISC 21 02:45:57.3±1.3,34°.96N±0°.04×26°.79E±0°.02,h17km±9km, n103,σ1§34/122,mb3.7/7,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.49**	**288**	P	**Pn**	**02 46 08.3**	**-1.3**
ZKR				S	**Sb**	**02 46 16.3**	**+1.9**
ZKR				AML	AML	02 46 16.5	
	comp=E,28212μm,0.3s						
ZKR				AML	AML	02 46 16.6	
	comp=N,21219μm,0.3s						
ZKR	**Zakros**	**0.49**	**288**	P	**Pn**	**02 46 08.3**	**-1.3**
ZKR				S	**Sb**	**02 46 16.3**	**+1.9**
	comp=N,12μm,0.3s						
ZKR	**Zakros**	**0.49**	**288**	PG	**Pb**	**02 46 08.1**	**+0.6**
ZKR				SG	**Sb**	**02 46 16.7**	**+2.2**
STIA	**Sitia Lasithi**	**0.62**	**293**	P	**Pb**	**02 46 10.1**	**+0.4**
STIA				S	**Sn**	**02 46 20.3**	**-0.6**
KARP	**Karpathos**	**0.66**	**27**	P	**Pg**	**02 46 09.8**	**-0.5**
KARP				S	**Sb**	**02 46 19.2**	**-0.1**
KARP				AML	AML	02 46 20.2	
KARP				AML	AML	02 46 20.4	
	comp=E,84066μm,0.4s						
KARP	**Karpathos**	**0.66**	**27**	P	**Pg**	**02 46 09.5**	**-0.8**
KARP				S	**Sb**	**02 46 19.2**	**-0.1**
	comp=E,51μm,0.4s						
NPS	**Neapolis**	**1.01**	**288**	P	**Pn**	**02 46 17.6**	**+0.9**
NPS				AML	AML	02 46 37.7	
NPS				AML	AML	02 46 38.4	
	comp=E,7966μm,0.5s						
	comp=N,6464μm,0.7s						
NPS	**Neapolis**	**1.01**	**288**	P	**Pn**	**02 46 17.6**	**+0.9**
NPS				S	**Sn**	**02 46 32.1**	**+1.6**
	comp=N,4μm,0.6s						
HRKL	**Herakleio**	**1.43**	**285**	PN	**Pg**	**02 46 25.8**	**+1.1**
IDI	**Anoyia**	**1.59**	**282**	Pg	**Pg**	**02 46 28.2**	**+0.3**
	comp=N,24nm,0.3s,baz=132,slow=5.5,SNR=36						
IDI				Lg	Lg	02 46 50.9	
	comp=N,90nm,0.3s,baz=346,slow=8.5,SNR=12						
IDI	**Anoyia**	**1.59**	**282**	P	**Pg**	**02 46 28.0**	**+0.1**
IDI				AML	AML	02 46 57.6	
	comp=E,1209μm,0.6s						
IDI				AML	AML	02 46 58.9	
	comp=N,1642μm,0.4s						
IDI	**Anoyia**	**1.59**	**282**	PN	**Pg**	**02 46 28.3**	**+0.4**
SIVA	**Sivas**	**1.63**	**273**	P	**Pg**	**02 46 28.2**	**-0.3**
SIVA				AML	AML	02 47 00.6	
	comp=E,4097μm,0.6s						
SIVA				AML	AML	02 47 06.2	
	comp=N,2640μm,0.8s						
ARG	**Arkhangelos**	**1.66**	**41**	P	**Pb**	**02 46 27.5**	**+0.1**
ARG				AML	AML	02 46 55.3	
	comp=E,2849μm,0.5s						
ARG				AML	AML	02 46 58.5	
	comp=N,1678μm,0.4s						
ARG	**Arkhangelos**	**1.66**	**41**	P	**Pb**	**02 46 27.5**	**+0.1**
ARG				S	**Sb**	**02 46 48.9**	**+0.9**
	comp=N,1μm,0.6s						
ARG	**Arkhangelos**	**1.66**	**41**	PN	**Pb**	**02 46 27.1**	**-0.3**
NIS1	**Nisyros Isl.**	**1.67**	**11**	P	**Pb**	**02 46 26.9**	**-0.7**
NIS1				AML	AML	02 46 56.9	
	comp=N,4872μm,0.4s						
NIS1				AML	AML	02 47 02.4	
	comp=E,4173μm,0.6s						
NIS1	**Nisyros Isl.**	**1.67**	**11**	P	**Pb**	**02 46 26.9**	**-0.7**
NIS1	**Nisyros Isl.**	**1.67**	**11**	PN	**Pn**	**02 46 26.3**	**+0.5**
SANT	**Santorini**	**1.77**	**323**	P	**Pb**	**02 46 28.4**	**-1.0**
SANT				AML	AML	02 46 54.5	
	comp=N,859μm,0.4s						
SANT				AML	AML	02 46 56.9	
	comp=E,2734μm,0.3s						
SANT	**Santorini**	**1.77**	**323**	P	**Pb**	**02 46 28.4**	**-1.0**
SANT	**Santorini**	**1.77**	**323**	PN	**Pb**	**02 46 28.7**	**-0.7**
KOSK	**Kos Island**	**1.79**	**5**	PN	**Pn**	**02 46 28.2**	**+0.8**
THR8	**Santorini-Mono**	**1.79**	**324**	P	**Pn**	**02 46 28.3**	**+0.8**
THR8	**Santorini-Mono**	**1.79**	**324**	P	**Pn**	**02 46 28.3**	**+0.8**
THR6	**Thira Island,**	**1.79**	**321**	P	**Pb**	**02 46 28.9**	**-0.8**
THR6	**Thira Island,**	**1.79**	**321**	P	**Pb**	**02 46 28.9**	**-0.8**
THR9	**Santorini-Faro**	**1.82**	**320**	P	**Pb**	**02 46 29.0**	**-0.2**
SNT1	**Gialos, Santor**	**1.83**	**323**	P	**Pb**	**02 46 29.4**	**-0.8**
SNT1	**Gialos, Santor**	**1.83**	**323**	P	**Pb**	**02 46 29.4**	**-0.8**
THR7	**Fira-Santorini**	**1.83**	**323**	P	**Pb**	**02 46 29.6**	**-0.7**
THR7	**Fira-Santorini**	**1.83**	**323**	P	**Pb**	**02 46 29.6**	**-0.7**
SNT5	**Nea Kammeni, S**	**1.83**	**322**	P	**Pb**	**02 46 29.4**	**-1.0**
SNT5	**Nea Kammeni, S**	**1.83**	**322**	P	**Pb**	**02 46 29.4**	**-1.0**
THR3	**Thira Island,**	**1.83**	**322**	P	**Pb**	**02 46 29.2**	**-1.2**
THR3	**Thira Island,**	**1.83**	**322**	P	**Pb**	**02 46 29.2**	**-1.2**
THT2	**Imerovigli**	**1.84**	**323**	P	**Pb**	**02 46 29.5**	**-1.0**
THT2	**Imerovigli**	**1.84**	**323**	P	**Pb**	**02 46 29.5**	**-1.0**
THT2	**Imerovigli**	**1.84**	**323**	PN	**Pb**	**02 46 29.9**	**-0.7**
THR5	**Thira Island,**	**1.87**	**321**	P	**Pb**	**02 46 29.7**	**-1.2**
THR5	**Thira Island,**	**1.87**	**321**	P	**Pb**	**02 46 29.7**	**-1.2**
SAP3	**Santorini-Thir**	**1.88**	**322**	P	**Pb**	**02 46 30.5**	**-0.7**
SAP3	**Santorini-Thir**	**1.88**	**322**	P	**Pb**	**02 46 30.5**	**-0.7**
DATC	**Datca-Mugla**	**1.93**	**21**	PN	**Pn**	**02 46 30.1**	**+0.8**
BODT	**Bodrum**	**2.14**	**11**	P	**Pn**	**02 46 32.3**	**+0.1**
BODT	**Bodrum**	**2.14**	**11**	PN	**Pn**	**02 46 32.7**	**+0.5**
TURN	**Turunc**	**2.16**	**33**	*i*P	**Pn**	**02 46 34.0**	**+1.5**
TURN				*i*S	**Sb**	**02 47 03.3**	**+0.8**
TURN				IAML		02 47 09.0	
	comp=E,149nm,0.4s						
TURN				IAML		02 47 10.0	
	comp=N,206nm,0.4s						
TURN	**Turunc**	**2.16**	**33**	PN	**Pn**	**02 46 33.7**	**+1.2**
BDRM	**Kayabasi**	**2.17**	**14**	*i*P	**Pn**	**02 46 33.9**	**+1.3**
BDRM				*i*S	**Sb**	**02 47 02.8**	**+0.2**
BDRM				IAML		02 47 10.0	
	comp=N,156nm,0.5s						
BDRM				IAML		02 47 12.0	
	comp=E,95nm,0.6s						
VAM	**Vamos**	**2.17**	**283**	P	**Pg**	**02 46 36.3**	**-2.5**
YKAV	**Yalikavak-Bodr**	**2.19**	**10**	PN	**Pn**	**02 46 33.8**	**+0.8**
GVDS	**Gavdos**	**2.22**	**268**	PN	**Pg**	**02 46 38.3**	**-1.6**
GVD	**Gavdhos**	**2.22**	**268**	PN	**Pg**	**02 46 38.0**	**-1.9**
APE	**Apeiranthos**	**2.34**	**334**	P	**Pn**	**02 46 35.7**	**+0.8**
APE	**Apeiranthos**	**2.34**	**334**	PN	**Pn**	**02 46 35.8**	**+0.8**
IMMV	**Iera Moni Meta**	**2.35**	**283**	P	**Pb**	**02 46 38.9**	**-0.3**
IMMV				AML	AML	02 47 19.5	
	comp=N,1105μm,0.5s						
IMMV				AML	AML	02 47 24.4	
	comp=E,1060μm,0.6s						
IMMV	**Iera Moni Meta**	**2.35**	**283**	PN	**Pb**	**02 46 39.1**	**-0.1**
DALY	**Dalyan (Mula)**	**2.39**	**39**	*i*P	**Pn**	**02 46 37.6**	**+1.9**
DALY				*i*S	**Sg**	**02 47 14.6**	**+0.4**
DALY				IAML		02 47 20.0	
	comp=N,271nm,0.6s						
DALY				IAML		02 47 22.0	
	comp=E,143nm,0.5s						
DALY	**Dalyan (Mula)**	**2.39**	**39**	PN	**Pn**	**02 46 37.4**	**+1.7**
YER	**Yerkesik**	**2.48**	**29**	PN	**Pn**	**02 46 38.3**	**+1.3**
FETY	**Fethiye**	**2.50**	**47**	*i*P	**Pn**	**02 46 37.5**	**+0.2**
FETY				IAML		02 47 22.0	
	comp=E,45nm,0.6s						
FETY				IAML		02 47 33.0	
	comp=N,63nm,0.7s						
FETY	**Fethiye**	**2.50**	**47**	PN	**Pn**	**02 46 37.6**	**+0.3**
AKAS	**Kas**	**2.62**	**60**	*i*P	**Pn**	**02 46 38.9**	**0.0**
AKAS				*i*S	**Sn**	**02 47 11.5**	**+1.0**
AKAS				IAML		02 47 12.0	
	comp=N,88nm,0.5s						
AKAS				IAML		02 47 20.0	
	comp=E,64nm,0.4s						
AKAS	**Kas**	**2.62**	**60**	PN	**Pn**	**02 46 39.4**	**+0.4**
GCAM	**G?zelcami?**	**2.76**	**7**	*i*P	**Pn**	**02 46 42.8**	**+2.1**
GCAM				IAML		02 47 17.0	
	comp=N,49nm,0.8s						
GCAM				IAML		02 47 34.0	
	comp=E,52nm,0.5s						
GCAM	**G?zelcami?**	**2.76**	**7**	PN	**Pn**	**02 46 41.9**	**+1.2**
AYDN	**Tasoluk**	**2.83**	**18**	*i*P	**Pn**	**02 46 43.5**	**+1.7**
AYDN				IAML		02 47 27.0	
	comp=E,36nm,0.6s						
AYDN				IAML		02 47 31.0	
	comp=N,42nm,0.8s						
CAEL	**Denizli, Camel**	**2.98**	**43**	*i*P	**Pn**	**02 46 45.8**	**+2.0**
TAVA	**DENIZLI_Tavas**	**3.03**	**34**	*i*P	**Pn**	**02 46 46.1**	**+1.5**
TAVA				*i*S	**Sb**	**02 47 26.7**	**-1.0**
TAVA				IAML		02 47 35.0	
	comp=N,87nm,0.6s						
TAVA				IAML		02 47 35.0	
	comp=E,79nm,0.5s						
ELL	**Elmali**	**3.10**	**54**	PN	**Pn**	**02 46 47.2**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**3.11**	**16**	PN	**Pn**	**02 46 46.9**	**+1.2**
GOLH	**Golhisar**	**3.19**	**44**	*i*P	**Pn**	**02 46 49.1**	**+2.3**
GOLH				IAML		02 47 45.0	
	comp=N,97nm,0.5s						
GOLH				IAML		02 47 47.0	
	comp=E,19nm,0.5s						
AKUM	**Antalya-Kumluc**	**3.20**	**64**	*i*P	**Pn**	**02 46 47.9**	**+1.1**
AKUM				IAML		02 47 33.0	
	comp=E,34nm,1.1s						
AKUM				IAML		02 48 15.0	
	comp=N,26nm,0.8s						
KTHA	**Kythira Island**	**3.30**	**294**	PN	**Pb**	**02 46 51.8**	**-3.6**
URLA	**Izmir**	**3.40**	**357**	PN	**Pn**	**02 46 49.3**	**-0.2**
CHOS	**Chios island**	**3.47**	**350**	PN	**Pn**	**02 46 51.1**	**+0.5**
KORT	**Korkueli**	**3.53**	**54**	PN	**Pn**	**02 46 54.1**	**+2.6**
ANTB	**Antalya**	**3.69**	**57**	PN	**Pn**	**02 46 56.2**	**+2.8**
SLUM	**Salum**	**3.70**	**201**	P	**Pn**	**02 46 56.0**	**+2.3**
SLUM	baz=206			S	**Sn**	**02 47 36.0**	**-0.9**
	baz=206						
MANT	**Manisa**	**3.80**	**21**	*i*P	**Pn**	**02 46 56.3**	**+1.0**
MANT				*i*S	**Sn**	**02 47 41.2**	**+1.6**
MANT				IAML		02 47 43.0	
	comp=N,14nm,0.5s						
MANT				IAML		02 48 03.0	
	comp=E,20nm,0.7s						
KULA	**Kula-Manisa**	**3.85**	**22**	PN	**Pn**	**02 46 57.2**	**+1.4**
DKL	**Dikili**	**4.10**	**1**	PN	**Pn**	**02 47 01.4**	**+2.2**
USAK	**Uak-Merkez**	**4.15**	**25**	*i*P	**Pn**	**02 47 01.0**	**+1.1**
USAK				*i*S	**Sn**	**02 47 48.3**	**+0.2**
USAK				IAML		02 49 17.0	
	comp=N,28nm,4.1s						
USAK				IAML		02 49 17.0	
	comp=E,36nm,5.4s						
DEMI	**Demirci**	**4.36**	**20**	*i*P	**Pn**	**02 47 04.3**	**+1.6**
DEMI				*i*S	**Sn**	**02 47 53.7**	**+0.5**
DEMI				IAML		02 48 01.0	
	comp=E,20nm,0.4s						
DEMI				IAML		02 48 02.0	
	comp=N,14nm,0.4s						
ITM	**Ithomi**	**4.52**	**301**	PN	**Pn**	**02 47 09.1**	**+4.2**
BUHA	**Balikesir, Bur**	**4.54**	**3**	*i*P	**Pn**	**02 47 06.7**	**+1.6**
BUHA				IAML		02 48 32.0	
	comp=E,16nm,0.6s						
BUHA				IAML		02 48 33.0	
	comp=N,14nm,0.9s						
BAYC	**CANAKKALE_Bayr**	**4.78**	**358**	*i*P	**Pn**	**02 47 07.1**	**-1.4**
SWA2		**5.81**	**192**	P	**Pn**	**02 47 24.8**	**+2.1**
	baz=194						
RYAN	**Fayoum**	**6.57**	**152**	P	**Pn**	**02 47 33.7**	**+0.6**
	baz=153						
GLL	**Jalalah**	**6.79**	**141**	P	**Pn**	**02 47 35.8**	**-0.4**
	baz=141						
SUZ	**Suez**	**7.22**	**133**	P	**Pn**	**02 47 42.6**	**+0.5**
	baz=134						
MMAI	**Mount Meron Ar**	**7.41**	**103**	Pn	**Pn**	**02 47 45.7**	**+0.9**
	comp=N,1.9nm,0.3s,baz=305,slow=12,SNR=6.6						
MMAI				Sn	**Sn**	**02 49 08.1

KTK1	**Kautokeino**	**2.12**	**27**	Pn		**Pn**	**03 03 44.2**	**+1.3**
KTK1				Sn		**Sb**	**03 04 11.9**	**-0.5**
KTK1	**Kautokeino**	**2.12**	**27**	*eP*		**Pn**	**03 03 44.4**	**+1.5**
KTK1				*eS*		**Sn**	**03 04 09.9**	**0.0**
KTK1				IAML			03 04 13.7	
	comp=Z,48nm,0.4s							
RNF	**Rovaniemi**	**2.20**	**102**	*eP*		**Pn**	**03 03 45.5**	**+1.6**
RNF				*eS*		**Sb**	**03 04 14.2**	**-0.4**
STEI	**Steigen**	**2.21**	**294**	*eP*		**Pn**	**03 03 45.8**	**+1.8**
STEI				IAML			03 04 22.3	
	comp=Z,18nm,0.5s							
SGF	**Sodankyl**	**2.32**	**80**	*eP*		**Pn**	**03 03 46.4**	**+0.9**
SGF				*eSG*		**Sb**	**03 04 18.4**	**+0.5**
JETT	**Jettan, Norway**	**2.43**	**358**	*eP*		**Pn**	**03 03 48.4**	**+1.3**
JETT				*eS*		**Sn**	**03 04 16.7**	**-0.8**
TRO	**Tromso**	**2.58**	**347**	*eP*		**Pn**	**03 03 50.6**	**+1.5**
TRO				*eS*		**Sn**	**03 04 20.9**	**-0.2**
TRO				IAML			03 04 27.5	
	comp=Z,26nm,0.7s							
BURU	**Burvik**	**2.59**	**173**	*eP*		**Pn**	**03 03 51.3**	**+2.1**
BURU				*eS*		**Sn**	**03 04 23.4**	**+2.0**
MOR8	**Moi Rana**	**2.64**	**251**	*eP*		**Pn**	**03 03 49.9**	**-0.1**
MOR8				IAML			03 04 27.3	
	comp=Z,18nm,0.5s							
LOF	**Lofoten**	**2.88**	**293**	*eP*		**Pn**	**03 03 54.6**	**+1.5**
OBF4	**Vikkela, Lumij**	**2.98**	**140**	*eP*		**Pn**	**03 03 56.3**	**+1.7**
OBF4				*eS*		**Sn**	**03 04 32.3**	**+1.5**
OUL	**Oulu**	**2.98**	**131**	*eP*		**Pn**	**03 03 56.5**	**+1.9**
ARA0	**ARCESS Array S**	**3.02**	**35**	Pn		**Pn**	**03 03 55.6**	**+0.5**
	baz=208,slow=16							
ARA0				Sn		**Sn**	**03 04 32.0**	**+0.1**
	baz=212,slow=28							
ARA0	**ARCESS Array S**	**3.02**	**35**	Pn		**Pn**	**03 03 55.6**	**+0.5**
	baz=208,slow=16							
ARA0				Sn		**Sn**	**03 04 32.0**	**+0.1**
	baz=212,slow=28							
ARA0				IAML			03 04 43.2	
	comp=Z,7.3nm,0.4s							
ARA0	**ARCESS Array S**	**3.02**	**35**	*eP*		**Pn**	**03 03 55.9**	**+0.7**
ARA0				*eS*		**Sn**	**03 04 32.2**	**+0.3**
ARCES	**ARCESS Array B**	**3.02**	**35**	Pn		**Pn**	**03 03 55.6**	**+0.5**
	baz=212,slow=13,SNR=36							
ARCES				Sn		**Sn**	**03 04 32.5**	**+0.6**
	baz=214,slow=27,SNR=10							
KONS	**Konsvik**	**3.03**	**261**	*eP*		**Pn**	**03 03 56.9**	**+1.7**
KONS				*eS*		**Sn**	**03 04 32.9**	**+0.7**
KONS				IAML			03 04 47.7	
	comp=Z,14nm,0.4s							
OBF0	**Syolatti, Pyha**	**3.05**	**149**	*eP*		**Pn**	**03 03 56.9**	**+1.4**
OBF0				MSG			03 04 45.2	
	comp=Z,7.8nm,0.2s							
STOK	**Stokkvaagen**	**3.12**	**258**	*eP*		**Pn**	**03 03 58.6**	**+2.2**
UMAU	**Umeaa**	**3.27**	**179**	*eP*		**Pn**	**03 04 00.1**	**+1.5**
UMAU				*eS*		**Sn**	**03 04 38.8**	**+0.6**
VRF	**Varrio**	**3.52**	**76**	*eP*		**Pn**	**03 04 02.7**	**+0.6**
VRF				*eS*		**Sn**	**03 04 43.7**	**-0.8**
KEV	**Kevo**	**3.53**	**39**	*eP*		**Pn**	**03 04 03.0**	**+0.7**
KEV				*eS*		**Sn**	**03 04 42.5**	**-2.1**
KEV	**Kevo**	**3.53**	**39**	*eP*		**Pn**	**03 04 02.9**	**+0.7**
KEV				*eS*		**Sn**	**03 04 43.1**	**-1.4**
OLKF	**Oulanka, Finla**	**3.59**	**99**	*eP*		**Pn**	**03 04 04.2**	**+1.2**
OLKF				*eS*		**Sn**	**03 04 46.8**	**+0.8**
MSF	**Maaselka**	**3.59**	**106**	*eP*		**Pn**	**03 04 04.2**	**+1.1**
MSF				*eSG*		**Sb**	**03 04 58.4**	**+3.7**
HAMF	**Hammerfest**	**3.69**	**16**	*eP*		**Pn**	**03 04 06.3**	**+1.9**
HAMF				*eS*		**Sn**	**03 04 47.7**	**-0.8**
HAMF				IAML			03 05 05.7	
	comp=Z,14nm,0.4s							
HUSU	**Husum**	**3.86**	**189**	*eP*		**Pn**	**03 04 09.0**	**+2.3**
HUSU				*eS*		**Sn**	**03 04 54.0**	**+1.3**
KU6	**Riekki**	**3.87**	**102**	*eP*		**Pn**	**03 04 07.8**	**+0.9**
KU6				*eSG*		**Sg**	**03 05 07.8**	**-2.7**
VAF	**Ylistaro**	**4.21**	**167**	*eP*		**Pn**	**03 04 13.7**	**+2.3**
VAF				*eSG*		**Sg**	**03 05 17.7**	**-3.5**
NSS	**Namsos**	**4.41**	**238**	*eP*		**Pn**	**03 04 15.5**	**+1.2**
NSS				IAML			03 05 11.8	
	comp=Z,3.4nm,0.3s							
HEMU	**Hemsoen**	**4.61**	**195**	*eS*		**Sn**	**03 05 12.7**	**+1.5**
APA0	**Apatity Array**	**4.81**	**79**	Pn		**Pn**	**03 04 19.3**	**-0.4**
	baz=263,slow=14							
APA0				Sn		**Sn**	**03 05 13.4**	**-2.6**
	baz=272,slow=28							
APA0				Lg		Lg	03 05 33.3	
	baz=270,slow=28							
APA0	**Apatity Array**	**4.81**	**79**	Pn		**Pn**	**03 04 19.3**	**-0.4**
	baz=263,slow=14							
APA0				Sn		**Sn**	**03 05 13.4**	**-2.6**
	baz=272,slow=28							
APA0				Sg		**Sb**	**03 05 33.3**	**+3.8**
	baz=270,slow=28							
FIA0	**FINESS Array S**	**6.19**	**155**	Pn		**Pn**	**03 04 40.4**	**+1.7**
	baz=344,slow=12							
FIA0				Sn		**Sn**	**03 05 49.9**	**-0.2**
	baz=346,slow=28							
FIA0				Lg		Lg	03 06 21.2	
	baz=345,slow=37							
FIA0	**FINESS Array S**	**6.19**	**155**	Pn		**Pn**	**03 04 40.4**	**+1.7**
	baz=344,slow=12							
FIA0				Sn		**Sn**	**03 05 49.9**	**-0.2**
	baz=346,slow=28							
FIA0				Sg		**Sg**	**03 06 21.2**	**-3.7**
	baz=345,slow=37							
FIA0	**FINESS Array S**	**6.19**	**155**	*eP*		**Pn**	**03 04 40.3**	**+1.7**
FIA0				*eS*		**Sn**	**03 05 48.5**	**-1.6**
FINES	**FINESS Array B**	**6.19**	**155**	Pn		**Pn**	**03 04 40.7**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=18							
FINES				Sn		**Sn**	**03 05 48.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=345,slow=22,SNR=6.4							
FINES				Lg		Lg	03 06 21.0	
	comp=Z,1.3nm,0.3s,baz=346,slow=29,SNR=8.4							
JOF	**Joensuu**	**6.20**	**128**	*eP*		**Pn**	**03 04 39.8**	**+0.9**
NB2	**NORSAR Subarra**	**7.37**	**218**	Pn		**Pn**	**03 04 55.9**	**+1.0**
	baz=29,slow=14							
NB2				Sn		**Sn**	**03 06 16.8**	**-2.3**
NB2	**NORSAR Subarra**	**7.37**	**218**	Pn		**Pn**	**03 04 55.9**	**+1.0**
	baz=29,slow=14							
NB2				Sn		**Sn**	**03 06 16.8**	**-2.3**
NOA	**NORSAR Array B**	**7.37**	**218**	Pn		**Pn**	**03 04 56.4**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=25,slow=12,SNR=2.0							
NOA				Sn		**Sn**	**03 06 15.0**	**-4.1**
	comp=Z,0.0nm,0.3s,baz=42,slow=21,SNR=1.6							
NOA				Lg		Lg	03 06 55.2	
	comp=Z,0.0nm,0.3s,baz=84,slow=14,SNR=4.1							
NRA0	**NORESS Array S**	**7.56**	**216**	Pn		**Pn**	**03 04 58.2**	**+0.7**
	baz=21,slow=14							
NRA0				Sn		**Sn**	**03 06 22.5**	**-1.3**
	baz=38,slow=22							
NRA0	**NORESS Array S**	**7.56**	**216**	Pn		**Pn**	**03 04 58.2**	**+0.7**
	baz=21,slow=14							
NRA0				Sn		**Sn**	**03 06 22.5**	**-1.3**
	baz=38,slow=22							
HFS	**Hagfors**	**7.67**	**207**	Pn		**Pn**	**03 04 59.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=26,slow=13,SNR=6.4							
HFS				Sn		**Sn**	**03 06 21.9**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=40,slow=16,SNR=1.4							
HFS				Lg		Lg	03 07 03.1	
	comp=Z,0.3nm,0.3s,baz=31,slow=24,SNR=2.0							
HFS	**Hagfors**	**7.67**	**207**	Pn		**Pn**	**03 04 59.5**	**+0.5**
	baz=18,slow=12							
HFS				Sn		**Sn**	**03 06 23.6**	**-2.9**
	baz=28,slow=28							
HFS	**Hagfors**	**7.67**	**207**	Pn		**Pn**	**03 04 59.5**	**+0.5**
	baz=18,slow=12							
HFS				Sn		**Sn**	**03 06 23.6**	**-2.9**
	baz=28,slow=28							
SPITS	**Spitsbergen Ar**	**11.16**	**355**	Pn		**Pn**	**03 05 46.2**	**-0.5**
	baz=178,slow=8.7,SNR=5.1							

*NNC **21** 03:21:49.5±3.6,36°.97N×70°.50E,h208km±74km, mb2.6, mpv3.6, Error ellipse: s-maj=40.7km s-min=17.8km az=1.0*
ISC 21 03:21:45.9±1.5,**36°.71N**±0°.09×**70°.5E**±0°.1,**h204**km,**n15,**
σ1§**10**/18,**3C-2D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**5.95**	**24**	P		**Pn**	**03 23 13.4**	**+0.7**
	SNR=30							
UCH	**Uchtor**	**6.32**	**28**	P		**Pn**	**03 23 18.1**	**+0.5**
	SNR=16							
KK31	**Karatay Array**	**6.38**	**0**	⇓P		**Pn**	**03 23 18.1**	**+0.1**
	2.0nm,0.4s,baz=177,slow=13,SNR=31							
KK31				⇓S		**S**	**03 24 28.7**	**-2.3**
	2.1nm,0.5s,baz=180,slow=31,SNR=5.8							
EKS2	**Erkin-Say**	**6.45**	**22**	P		**Pn**	**03 23 20.4**	**+1.4**
	SNR=5.3							
AAK	**Ala-Archa**	**6.67**	**26**	P		**Pn**	**03 23 23.1**	**+1.2**
	SNR=5.2							
AAK	**Ala-Archa**	**6.67**	**26**	⇑P		**Pn**	**03 23 23.0**	**+1.1**
	2.0nm,0.5s							
AAK				S		**S**	**03 24 37.4**	**-0.4**
	3.8nm,0.6s							
TKM2	**Tokmak 2**	**7.33**	**31**	P		**Pn**	**03 23 31.5**	**+1.0**
	SNR=5.5							
TKM2	**Tokmak 2**	**7.33**	**31**	⇑P		**Pn**	**03 23 31.1**	**+0.6**
	3.6nm,0.6s							
TKM2				⇑S		**S**	**03 24 53.0**	**-0.6**
	2.2nm,0.6s							
AB31	**Akbulak array**	**14.71**	**332**	P		**Pn**	**03 25 05.0**	**+0.8**
	0.9nm,0.6s,baz=152,slow=12,SNR=12							
PKIN	**Phulchoki**	**15.54**	**122**	*eP*		**P**	**03 25 14.9**	**+0.2**
	17nm,0.5s							
PKI	**Pulchoki**	**15.55**	**122**	*eP*		**P**	**03 25 15.1**	**+0.2**
	24nm,0.6s							
JIRN	**Jiri**	**16.04**	**120**	*eP*		**Pn**	**03 25 20.7**	**-0.1**
	27nm,0.6s							
RAMN	**Ramite**	**16.76**	**121**	*eP*		**P**	**03 25 26.1**	**-2.1**
	14nm,0.6s							
TAPN	**Taplejung**	**17.29**	**118**	*eP*		**P**	**03 25 33.6**	**-0.5**
	4.3nm,0.3s							
ODAN	**Odare**	**17.37**	**120**	*eP*		**P**	**03 25 34.1**	**-0.7**

TAP 21 03:34:18.9,24°.95N×122°.26E,h18km,ML2.0,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.25**	**284**	*eP*		Pg	03 34 24.5	-0.2
	baz=284							
TWB1				*eS*		Sg	03 34 28.6	-0.1
	baz=284							
TIPB	**Shuangxi**	**0.39**	**274**	P		Pg	03 34 27.2	+0.1
	baz=274							
TIPB				S		Sg	03 34 32.9	+0.2
	baz=274							
WFSB	**Wu-fen Shan**	**0.45**	**286**	*eP*		Pg	03 34 28.1	0.0
	baz=286							
WFSB				S		Sb	03 34 35.4	+0.6
	baz=286							
TWC	**Suao**	**0.50**	**228**	*eP*		Pb	03 34 29.2	0.0
	baz=223							
TWC				*eS*		Sg	03 34 35.2	-0.6
	baz=223							
NDS	**Dongshan**	**0.58**	**238**	*eP*		Pb	03 34 30.1	-0.4
	baz=231							
NDS				*eS*		Sb	03 34 38.9	+0.4
	baz=231							
TWA	**Mucha**	**0.61**	**273**	*eP*		Pb	03 34 31.1	0.0
	baz=273							
TWA				*eS*		Sg	03 34 39.9	+0.6
	baz=273							
YM08	**YM08**	**0.65**	**292**	*eP*		Pn	03 34 32.6	-0.7
	baz=291							
YM08				*eS*		Sb	03 34 40.2	-0.2
	baz=291							
EWUT	**Wuta**	**0.66**	**221**	P		Pb	03 34 31.6	-0.3
	baz=216							
EWUT				S		Sb	03 34 40.5	-0.2
	baz=216							
ENTT	**Nioudou**	**0.70**	**244**	*eP*		Pb	03 34 32.6	+0.1
	baz=254							
ENTT				*eS*		Sg	03 34 43.1	+1.1
	baz=254							
NWLT	**Wulai**	**0.71**	**256**	P		Pg	03 34 33.2	+0.4
	baz=256							
NWLT				S		Sg	03 34 42.4	+0.1
	baz=256							
NDT	**Datong Townshi**	**0.76**	**243**	*eP*		Pb	03 34 33.6	+0.1
	baz=253							
NDT				*eS*		Sg	03 34 43.8	-0.1
	baz=253							
YHNB	**Yeheng**	**0.85**	**251**	*eP*		Pb	03 34 35.2	0.0
	baz=266							
YHNB				*eS*		Sg	03 34 46.7	0.0
	baz=266							
NNSB	**Datong**	**0.95**	**237**	*eP*		Pb	03 34 36.8	-0.1
	baz=228							
NNSB				*eS*		Sb	03 34 49.4	+0.2
	baz=228							
NNSH	**Datong**	**0.95**	**237**	P		Pb	03 34 36.8	-0.1
	baz=230							
NNSH				S		Sg	03 34 49.6	-0.3
	baz=230							
NACB	**Ninganchiao**	**0.98**	**218**	*eP*		Pb	03 34 37.3	0.0
	baz=211							
NACB				*eS*		Sb	03 34 50.2	+0.3
	baz=211							
ETLH	**Xiulin Townshi**	**1.02**	**224**	*eP*		Pb	03 34 37.9	-0.2
	baz=232							
ETLH				*eS*		Sb	03 34 51.3	+0.1
	baz=232							
WHF	**Hehuan Shan**	**1.21**	**229**	*eP*		Pg	03 34 42.1	-0.2
	baz=229							
WHF				*eS*		Sb	03 34 57.0	+0.2
	baz=229							

IDC 21 03:35:24.5±1.3,**21°.24N×120°.38E,h0**km,**mb3.5/4,**
mb1 3.8/4,mb1mx3.4/39,mbtmp3.5/4,MS2.8/3,Ms1 2.9/3,
ms1mx2.6/28,Error ellipse: s-maj=75.3km
s-min=26.3km az=71.0,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSRS	**Korea Array**	**17.44**	**20**	LR		LR	03 45 37.6	
	comp=Z,12nm,20.5s,baz=215,slow=35							
CMAR	**Chiang Mai Arr**	**20.35**	**266**	LR		LR	03 48 57.7	
	comp=Z,22nm,18.7s,baz=10.0,slow=40							
LEM	**Lembang**	**30.57**	**206**	LR		LR	03 53 09.9	
	comp=Z,54nm,19.5s,baz=222,slow=35							
MKAR	**Makanchi Array**	**39.99**	**319**	P		P	03 43 00.7	-0.3
	0.1nm,0.5s,baz=111,slow=7.9,SNR=2.0							
WRA	**Warramunga Arr**	**43.14**	**161**	P		P	03 43 26.4	-0.6
	1.1nm,0.6s,baz=342,slow=9.5,SNR=8.7							
ASAR	**Alice Springs**	**46.53**	**163**	P		P	03 43 54.8	+0.7
	0.5nm,0.7s,baz=353,slow=8.0,SNR=3.1							
YKA	**Yellowknife Ar**	**85.96**	**22**	P		P	03 48 06.4	0.0
	0.3nm,0.7s,baz=314,slow=4.3,SNR=10							

*DNK **21** 04:29:49.2±2.0,80°.79N×1°.95W,h37km±170km, ML0.8*
BER 21 04:29:47.8±2.4,**80°.76N×2°.04W,h10**km,**ML1.1,**
ML0.8(DNK),**Confirmed Earthquake,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NOR	**Nord**	**2.41**	**298**	*e*		Pn	04 30 23.2	-3.9
	baz=112,slow=14							
NOR				*i* P		Pb	04 30 25.7	-5.4
NOR				*i* S		Sn	04 30 52.1	-4.5
NOR				IAML			04 30 56.4	
	comp=Z,0.9nm,0.4s							
NOR	**Nord**	**2.41**	**298**	*e*		Pn	04 30 23.2	-3.9
	baz=112,slow=14							
NOR				*i* P		Pb	04 30 25.7	-5.4
NOR				*i* S		Sn	04 30 52.1	-4.5
NOR				IAML			04 30 56.4	
	comp=Z,0.9nm,0.4s							
KBS	**Kingsbay**	**3.08**	**120**	*i* P		Pn	04 30 34.5	-1.9
KBS	**Kingsbay**	**3.08**	**120**	*eP*		Pn	04 30 35.0	-1.3
KBS				*eS*		Sn	04 31 07.5	-5.7
KBS				IAML			04 31 07.9	
	comp=Z,1.9nm,0.4s							
SPA0	**Spitsbergen Ar**	**4.24**	**118**	*eP*		Pn	04 30 51.6	-0.7
SPA0				*eS*		Sn	04 31 36.5	-5.1
SPA0				IAML			04 31 47.0	
	comp=Z,2.1nm,0.8s							
HSPB	**Hornsund (broa**	**5.05**	**129**	*eP*		Pn	04 31 02.4	-1.0
DBG	**Daneborg**	**7.52**	**220**	*i* P		Pn	04 31 35.1	-2.2
DBG				*i* S		Sn	04 32 52.6	-10
DBG	**Daneborg**	**7.52**	**220**	*i* P		Pn	04 31 35.1	-2.2
DBG				*i* S		Sn	04 32 52.6	-10

*IDC **21** 04:33:55.2±1.0,1°.44N×125°.88E,h0km, mb4.1/6, mb1 4.2/9, mb1mx3.9/38, mbtmp4.1/9, ML3.9/3, MS3.3/5, Ms1 3.3/5, ms1mx2.7/43, Error ellipse: s-maj=40.8km s-min=16.3km az=75.0*
*DJA **21** 04:33:57.9±0.9,2°.N±3°×12°.7E±°, h16km±8km, M4.4/12, mb4.5/6, mB5.1/3, MLv4.3/12, Mw(mB)4.4/3*

*NEIC **21** 04:34:00.6±1.1,1°.63N±0°.10×126°.56E±0°.08,h51km±11km, mb4.3/12, Error ellipse: s-maj=16.0km s-min=7.6km az=214.0*
ISC 21 04:34:00.2±0.7,**1°.71N**±0°.06×**126°.64E**±0°.06,**h47**km,**n49,**
σ1§**35**/45,**mb4.2**/11,**MS3.4**/5,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.18**	**142**			**Pn**	**04 34 20.4**	**0.0**
TNTI					Sn	**Sn**	**04 34 34.8**	**-0.6**
TNTI	**Ternate**	**1.18**	**142**	P		**Pn**	**04 34 20.7**	**+0.3**
TNTI				S		**Sn**	**04 34 35.8**	**+0.4**
SGSI	**Sangihe**	**2.25**	**331**	P		**Pn**	**04 34 33.1**	**-2.0**
SGSI				S		**Sn**	**04 35 01.7**	**0.0**
KMSI	**Cibinong**	**2.88**	**247**	P		**Pn**	**04 34 43.4**	**-0.3**
KMSI				S		**Sn**	**04 35 19.1**	**+1.9**
GTOI	**Gorontalo**	**3.78**	**254**	P		**Pn**	**04 34 57.0**	**+1.0**
GTOI				S		**Sn**	**04 35 42.9**	**+3.7**
SANI	**Sanana**	**3.79**	**190**	P		**Pn**	**04 34 56.0**	**-0.2**
LUWI	**Luwuk**	**4.73**	**235**	P		**Pn**	**04 35 09.3**	**+0.2**
MRSI	**Marisa**	**4.85**	**255**	P		**Pn**	**04 35 09.4**	**-1.3**
NLAI	**Namlea**	**4.94**	**175**	P		**Pn**	**04 35 12.0**	**+0.1**
	0.3nm7µm35nm,0.8s							
SWI	**Sorong**	**5.28**	**119**	P		**Pn**	**04 35 17.0**	**+0.3**
	0.1nm14nm,0.7s							
MSAI	**Masohi**	**5.52**	**155**	P		**Pn**	**04 35 20.4**	**+0.5**
	2.6nm684nm,0.7s							
APSI	**Ampana**	**5.62**	**242**	P		**Pn**	**04 35 21.0**	**-0.3**
	0.3nm916nm76nm,0.7s							
TOLI2	**Tolitoli**	**5.88**	**264**			**Pn**	**04 35 23.7**	**-1.2**
TOLI2					Sn	**Sn**	**04 36 27.6**	**-3.5**
MYLDM	**Lahad Datu**	**8.82**	**293**			**Pn**	**04 36 05.4**	**+0.2**
KAPI	**Kappang**	**9.59**	**226**	Pn		Pn	04 36 05.7	-10
	0.8nm,0.3s,baz=157,slow=15,SNR=1.8							
KAPI					Sn	Sn	04 37 44.9	-17
	0.4nm,0.3s,baz=305,slow=24,SNR=1.2							
KAPI	**Kappang**	**9.59**	**226**			**Pn**	**04 36 16.5**	**+0.8**
BKB	**Balikpapan**	**10.17**	**253**			**Pn**	**04 36 20.6**	**-3.2**
KKM	**Kota Kinabalu**	**11.25**	**293**			**Pn**	**04 36 39.1**	**+0.5**
BATI	**Baumata**	**12.20**	**194**	Pn		Pn	04 36 42.9	-8.6
	1.7nm,0.3s,baz=0.0,slow=8.1,SNR=1.1							
SZP	**Santa**	**16.87**	**339**			**P**	**04 37 55.6**	**+0.9**
KNRA	**Kununurra**	**17.40**	**173**	Pn		**Pn**	**04 37 58.0**	**-1.8**
KNRA				IAmb		IAmb	04 38 07.3	
	comp=Z,18nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.71**	**183**	P		**P**	**04 38 24.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=358,slow=7.9,SNR=2.2							
FITZ	**Fitzroy Crossi**	**19.71**	**183**	P		**P**	**04 38 25.3**	**-0.5**
LEM	**Lembang**	**20.79**	**246**	LR		LR	04 47 06.1	
	comp=Z,57nm,19.8s,baz=236,slow=40							
WB0	**Warramunga Arr**	**22.66**	**161**	P		**P**	**04 38 56.7**	**-1.0**
WB0				IAmb		IAmb	04 39 00.6	
	comp=Z,16nm,1.1s							
WRA	**Warramunga Arr**	**22.81**	**161**	P		**P**	**04 38 58.5**	**-0.8**
	comp=Z,7.5nm,0.4s,baz=338,slow=11,SNR=45							
WRA	**Warramunga Arr**	**22.81**	**161**	P		**P**	**04 38 59.0**	**-0.3**
WB2	**Warramunga Arr**	**22.81**	**161**	P		**P**	**04 38 58.4**	**-0.9**
WB2				IAmb		IAmb	04 39 02.6	
	comp=Z,13nm,0.8s							
WR0	**Warramunga Arr**	**22.89**	**161**	P		**P**	**04 38 59.4**	**-0.7**
WR0				IAmb		IAmb	04 39 03.4	
	comp=Z,9.6nm,0.6s							
AS31	**Alice Springs**	**26.20**	**165**	P		**P**	**04 39 32.5**	**+1.7**
AS31				IAmb		IAmb	04 39 37.8	
	comp=Z,2.8nm,0.5s							
ASAR	**Alice Springs**	**26.20**	**165**	P		**P**	**04 39 32.7**	**+2.0**
	comp=Z,2.8nm,0.4s,baz=348,slow=13,SNR=43							
ASAR	**Alice Springs**	**26.20**	**165**	P		**P**	**04 39 30.8**	**+0.1**
CMAR	**Chiang Mai Arr**	**31.85**	**303**	LR		LR	04 53 24.1	
	comp=Z,14nm,20.9s,baz=245,slow=37							
FORT	**Forrest**	**32.34**	**178**	P		**P**	**04 40 24.3**	**-0.8**
BBOO	**Buckleboo**	**35.47**	**166**	P		**P**	**04 40 52.4**	**+0.1**
STKA	**Stephens Creek**	**36.29**	**158**	P		**P**	**04 40 59.9**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=315,slow=11,SNR=2.3							
H11S3	**WAKE ISLAND Hy**	**42.66**	**64**	T		T	05 28 52.8	
	baz=255							
H11S2	**WAKE ISLAND Hy**	**42.67**	**64**	T		T	05 28 56.7	
	baz=255							
H11S1	**WAKE ISLAND Hy**	**42.67**	**64**	T		T	05 28 28.7	
	baz=255							
SONM	**Songino Array**	**49.17**	**342**	P		**P**	**04 42 46.0**	**+2.3**
	comp=Z,0.4nm,0.4s,baz=166,slow=7.0,SNR=2.7							
SONM	**Songino Array**	**49.17**	**342**	P		**P**	**04 42 43.9**	**+0.2**
MK31	**Makanchi Array**	**59.16**	**326**	P		**P**	**04 43 56.4**	**+0.1**
MK31				IAmb		IAmb	04 44 02.3	
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**04 43 56.0**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=119,slow=7.8,SNR=21							
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**04 43 56.4**	**+0.1**
AAK	**Ala-Archa**	**61.79**	**319**	LR		LR	05 12 05.4	
	comp=Z,49nm,21.1s,baz=211,slow=37							
ZALV	**Zalesovo Beam**	**62.34**	**334**	P		**P**	**04 44 18.7**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=137,slow=11,SNR=2.2							
KBL	**Kabul**	**62.68**	**308**	P		**P**	**04 44 18.8**	**-2.0**
AKTO	**Aktyubinsk**	**75.18**	**322**	LR		LR	05 20 09.7	
	comp=Z,20nm,19.3s,baz=241,slow=37							
ARU	**Arti**	**76.58**	**328**	LR		LR	05 21 41.3	
	comp=Z,43nm,

0.3nm,0.8s,baz=128,slow=10,SNR=2.4

*IDC **21** 04:47:29.5±1.4, 14°.01N×145°.01E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.4/4, Error ellipse: s-maj=67.1km s-min=26.4km az=101.0*
*NEIC **21** 04:47:47.5±1.4, 13°.87N±0°.08×144°.6E±0°.1, h158km±6km, mb4.2/8, Error ellipse: s-maj=20.8km s-min=11.0km az=103.0*

ISC 21 04:47:46.5±0.8, **13°.9N**±0°.1×**144°.4E**±0°.2, **h144**km, **n18**, σ1§**54**/16, **mb3.9**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.55**	**123**	Pn	**Pn**	**04 48 09.4**	**+2.0**
GUMO				Sn	**Sn**	**04 48 25.5**	**+2.3**
PATS	**Pohnpei**	**15.37**	**116**		**P**	**04 51 15.7**	**-1.7**
H11N1	**WAKE ISLAND Hy**	**22.29**	**72**	T	T	05 14 42.3	
	baz=268						
H11N2	**WAKE ISLAND Hy**	**22.30**	**72**	T	T	05 14 34.5	
	baz=268						
H11N3	**WAKE ISLAND Hy**	**22.31**	**72**	T	T	05 14 27.4	
	baz=268						
LUWI	**Luwuk**	**26.06**	**237**	P	**P**	**04 53 05.5**	**-1.2**
LUWI				IAmb	IAmb	04 53 22.8	
	comp=Z,11nm,0.8s						
YSS	**Yuzh-Sakhalins**	**32.99**	**358**	P	**P**	**04 54 07.2**	**-0.4**
CTAO	**Charters Tower**	**33.81**	**177**	P	**P**	**04 54 13.3**	**-1.7**
CTAO				IAmb	IAmb	04 54 14.6	
	comp=Z,4.6nm,1.1s						
WB0	**Warramunga Arr**	**34.87**	**197**	P	**P**	**04 54 24.3**	**+0.2**
WB0				IAmb	IAmb	04 54 28.8	
	comp=Z,6.3nm,1.1s						
WB2	**Warramunga Arr**	**35.04**	**197**	P	**P**	**04 54 27.2**	**+1.6**
WB2				IAmb	IAmb	04 54 27.4	
	comp=Z,3.7nm,0.9s						
WRA	**Warramunga Arr**	**35.05**	**197**	P	**P**	**04 54 27.4**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=25,slow=8.6,SNR=6.8						
WRA	**Warramunga Arr**	**35.05**	**197**	P	**P**	**04 54 25.6**	**0.0**
ASAR	**Alice Springs**	**38.71**	**195**	P	**P**	**04 54 56.8**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=18,slow=13,SNR=2.5						
MK31	**Makanchi Array**	**60.95**	**316**	P	**P**	**04 57 44.8**	**+0.4**
MKAR	**Makanchi Array**	**60.95**	**316**	P	**P**	**04 57 46.4**	**+2.0**
	comp=Z,0.1nm,0.4s,baz=86,slow=6.5,SNR=2.4						
ILAR	**Eielson Array**	**68.49**	**25**	P	**P**	**04 58 31.5**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=261,slow=5.3,SNR=4.9						
ILAR	**Eielson Array**	**68.49**	**25**	P	**P**	**04 58 31.1**	**-1.7**
TOLK	**Toolik Lake Re**	**68.50**	**21**	P	**P**	**04 58 32.8**	**-0.1**

*IDC **21** 05:40:50.6±0.8, 46°.77N×152°.94E, h38km±7km, mb3.8/15, mb1 4.0/19, mb1mx3.7/55, mbtmp4.0/19, ML2.9/4, MS3.4/7, Ms1 3.4/7, ms1mx2.9/44, Error ellipse: s-maj=24.0km s-min=15.8km az=156.0*
*NEIC **21** 05:40:50.6±2.0, 46°.8N±0°.2×152°.9E±0°.2, h42km±14km, mb4.2/8, Error ellipse: s-maj=30.9km s-min=11.8km az=141.0*

ISC 21 05:40:50.6±0.7, **46°.8N**±0°.1×**152°.88E**±0°.09, **h35**km, **n46**, σ1§**25**/35, **mb4.2**/23, **MS3.6**/5, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.05**	**24**	Pn	**Pn**	**05 42 30.8**	**-0.4**
	0.3nm,0.3s,baz=195,slow=16,SNR=2.4						
PETK				LR	LR	05 45 30.1	
	comp=Z,93nm,20.7s,baz=258,slow=40						
JKA	**Kamikawa-asahi**	**7.71**	**253**		**Pn**	**05 42 41.5**	**+1.2**
ASAJ	**Asahikawa**	**7.71**	**253**	Pn	**Pn**	**05 42 41.5**	**+1.2**
	0.5nm,0.3s,baz=74,slow=15,SNR=1.8						
ERM	**Erimo**	**8.44**	**239**	Pn	**Pn**	**05 42 48.8**	**-1.5**
MA2	**Magadan**	**12.87**	**355**	LR	LR	05 49 06.9	
	comp=Z,79nm,18.8s,baz=284,slow=38						
KLR	**Kul'dur**	**14.35**	**288**	Pn	**Pn**	**05 44 10.9**	**-0.2**
	0.1nm,0.3s,baz=79,slow=13,SNR=2.8						
USRK	**Ussuriysk Ar.**	**14.88**	**268**	Pn	**Pn**	**05 44 16.6**	**-1.6**
	baz=66,slow=12,SNR=4.7						
YAK	**Yakutsk**	**20.20**	**327**	LR	LR	05 53 23.5	
	comp=Z,83nm,18.4s,baz=88,slow=37						
KSRS	**Korea Array**	**20.66**	**252**	P	**P**	**05 45 27.0**	**-0.1**
	1.4nm,0.7s,baz=45,slow=10,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**29.32**	**152**	T	T	06 18 34.0	
	baz=342,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**29.34**	**152**	T	T	06 18 44.2	
	baz=342,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**29.34**	**152**	T	T	06 18 43.6	
	baz=342,slow=76,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	**30.41**	**153**	T	T	06 20 04.8	
	baz=342,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**30.42**	**153**	T	T	06 20 05.2	
	baz=342,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**30.43**	**153**	T	T	06 20 11.3	
	baz=342,slow=76,SNR=13						
ZALV	**Zalesovo Beam**	**42.46**	**306**	LR	LR	06 07 40.8	
	comp=Z,98nm,18.4s,baz=49,slow=38						
MK31	**Makanchi Array**	**46.78**	**297**	P	**P**	**05 49 15.2**	**-1.2**
MK31				IAmb	IAmb	05 49 16.4	
	comp=Z,1.6nm,0.8s						
MKAR	**Makanchi Array**	**46.78**	**297**	P	**P**	**05 49 15.2**	**-1.2**
	comp=Z,1.9nm,0.8s,baz=65,slow=7.7,SNR=17						
MKAR				LR	LR	06 10 14.7	
	comp=Z,66nm,18.8s,baz=46,slow=38						
MKAR	**Makanchi Array**	**46.78**	**297**	P	**P**	**05 49 14.8**	**-1.6**
BRVK	**Borovoye**	**50.75**	**309**	P	**P**	**05 49 46.0**	**-0.7**
BRVK				IAmb	IAmb	05 49 48.2	
	comp=Z,2.2nm,0.7s						
YKA	**Yellowknife Ar**	**50.99**	**37**	P	**P**	**05 49 47.5**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=297,slow=7.1,SNR=6.9						
AAK	**Ala-Archa**	**53.67**	**296**	P	**P**	**05 50 07.8**	**-1.0**
AAK				IAmb	IAmb	05 50 09.8	
	comp=Z,3.1nm,0.8s						
ARU	**Arti**	**54.88**	**317**	P	**P**	**05 50 16.3**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=148,slow=22,SNR=3.6						
ARU	**Arti**	**54.88**	**317**	IAmb	IAmb	05 50 17.2	
	comp=Z,2.9nm,0.6s						
NEEM	**North Greenlan**	**55.14**	**6**	*i* P	**P**	**05 50 19.9**	**+0.8**
NEEM				IAmb	IAmb	05 50 22.0	
	comp=Z,3.8nm,0.8s						
KKAR	**Karatay Array**	**55.84**	**299**	P	**P**	**05 50 22.9**	**-1.4**
KKAR				IAmb	IAmb	05 50 24.3	
	comp=Z,1.8nm,0.8s						
KKAR	**Karatay Array**	**55.84**	**299**	P	**P**	**05 50 22.3**	**-2.1**
ARCES	**ARCESS Array B**	**57.77**	**341**	LR	LR	06 17 36.0	
	comp=Z,42nm,18.4s,baz=255,slow=38						
ABKAR	**Akbulak array**	**58.28**	**310**	P	**P**	**05 50 40.0**	**-1.4**
ABKAR				IAmb	IAmb	05 50 41.6	
	comp=Z,1.5nm,0.6s						
NIL	**Nilore**	**59.74**	**288**	P	**P**	**05 50 52.7**	**+0.9**
SUMG	**Summit**	**60.67**	**4**	*i* P	**P**	**05 50 59.5**	**+1.4**
SUMG				IAmb	IAmb	05 51 02.2	
	comp=Z,3.1nm,0.8s						
BELG	**Belogornoye**	**62.40**	**318**	P	**P**	**05 51 09.4**	**0.0**
	comp=Z,6.0nm,0.6s,baz=150,slow=3.4,SNR=5.2						
NVAR	**Mina Array Bea**	**62.55**	**62**	P	**P**	**05 51 10.4**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=296,slow=7.6,SNR=3.9						
NVAR				pP	**pP**	**05 51 22.2**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=294,slow=5.0,SNR=5.8						
FINES	**FINESS Array B**	**63.94**	**335**	P	**P**	**05 51 19.0**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=48,slow=8.5,SNR=5.0						
ICESG	**Greenland Ices**	**64.07**	**5**	*i* P	**P**	**05 51 24.0**	**+3.2**
ICESG				IAmb	IAmb	05 51 26.5	
	comp=Z,6.3nm,0.8s						
NOA	**NORSAR Array B**	**68.14**	**341**	P	**P**	**05 51 46.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=29,slow=6.6,SNR=4.7						
HFS	**Hagfors**	**68.37**	**339**	P	**P**	**05 51 47.3**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=132,slow=2.2,SNR=4.9						
WRA	**Warramunga Arr**	**68.50**	**199**	P	**P**	**05 51 49.5**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=16,slow=6.2,SNR=3.9						
WRA				pP	**pP**	**05 51 59.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=16,slow=6.5,SNR=4.1						
KBZ	**Khabaz**	**70.72**	**314**	P	**P**	**05 52 04.0**	**+1.3**
	comp=Z,3.9nm,0.9s,baz=67,slow=3.4,SNR=6.5						
AKASG	**Malin Array Be**	**71.43**	**326**	P	**P**	**05 52 06.9**	**0.0**
	comp=Z,4.4nm,0.6s,baz=34,slow=6.1,SNR=11						
AKASG	**Malin Array Be**	**71.43**	**326**	IAmb	IAmb	05 52 07.9	
	comp=Z,1.5nm,0.9s						
ASAR	**Alice Springs**	**72.19**	**198**	pP	pP	05 52 23.1	+1.3
	comp=Z,0.8nm,0.7s,baz=13,slow=5.4,SNR=5.6						
MLR	**Muntele Rosu**	**76.94**	**325**	P	**P**	**05 52 40.0**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=160,slow=9.5,SNR=3.3						
TXAR	**Lajitas Array**	**77.61**	**60**	P	**P**	**05 52 41.8**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=299,slow=3.9,SNR=7.5						
TXAR				pP	**pP**	**05 52 55.1**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=298,slow=4.3,SNR=4.1						
GERES	**GERESS Array B**	**78.35**	**334**	P	**P**	**05 52 48.2**	**+1.1**
	comp=Z,0.3nm,0.2s,baz=46,slow=3.9,SNR=3.8						
PPT	**Papeete**	**82.31**	**126**	LR	LR	06 19 34.6	
	comp=Z,34nm,21.8s,baz=293,slow=28						

*SKHL **21** 05:45:29.8±0.8, 46°.30N×153°.00E, h49km±4km, mb4.9/3, mbv5.3/2, msh5.1/2*
*MOS **21** 05:45:30.0±1.4, 46°.50N×152°.71E, h38km, mb4.7/12, Error ellipse: s-maj=9.8km s-min=6.7km az=85.5*
*NEIC **21** 05:45:30.6±1.4, 46°.3N±0°.1×152°.9E±0°.2, h43km±10km, mb4.4/16, Error ellipse: s-maj=25.6km s-min=11.3km az=143.0*
*IDC **21** 05:45:31.9±0.7, 46°.52N×152°.90E, h39km±6km, mb3.9/23, mb1 4.1/28, mb1mx3.9/56, mbtmp4.1/28, ML3.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/41, Error ellipse: s-maj=19.2km s-min=13.3km az=158.0*

ISC 21 05:45:31.5±0.6, **46.42N**±0°.08×**152°.81E**±0°.07, **h40**km, **n102**, σ1§**16**/103, **mb4.3**/40, **1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.65**	**253**	*d* iPN	**Pn**	**05 46 25.8**	**+0.4**
KUR				*i* S	**Sn**	**05 47 09.1**	**+1.9**
KUR				pmax	pmax		
	comp=Z,214nm,0.4s						
KUR				pmax	pmax		
	comp=N,66nm,0.3s						
KUR				pmax	pmax		
	comp=E,23nm,0.3s						
KUR				smax	smax		
	comp=E,236nm,0.8s						
KUR				smax	smax		
	comp=N,170nm,0.4s						
KUR	**Kuril'sk**	**3.65**	**253**	*i* P	**Pn**	**05 46 25.8**	**+0.4**
KUR				AMB	AMB	05 46 26.0	
	comp=N,70nm,0.4s						
KUR				AMB	AMB	05 46 26.0	
	comp=N,20nm,0.4s						
KUR				AMB	AMB	05 46 26.0	
	comp=N,210nm,0.4s						
KUR				AMB	AMB	05 46 29.0	
	comp=N,400nm,3.0s						
KUR				*i* S	**Sn**	**05 47 07.1**	**-0.1**
KUR				A	A	05 47 20.0	
	comp=N,350nm,0.6s						
KUR				A	A	05 47 20.0	
	comp=N,530nm,0.6s						
KUR				A	A	05 47 21.3	
	comp=N,3μm,3.0s						
KUR				A	A	05 47 21.3	
	comp=N,6μm,3.0s						
SKR	**Severo-Kuril's**	**4.80**	**26**	*e*PN	**Pn**	**05 46 41.6**	**+0.5**
SKR				*e*S	**Sn**	**05 47 35.7**	**+0.3**
SKR				pmax	pmax		
	comp=Z,92nm,0.5s						
SKR				smax	smax		
	comp=N,26nm,0.4s						
SKR				smax	smax		
	comp=E,65nm,0.5s						
SKR	**Severo-Kuril's**	**4.80**	**26**	*e*P	**Pn**	**05 46 41.6**	**+0.5**
SKR				AMB	AMB	05 46 44.0	
	comp=E,90nm,0.5s						
SKR				*e*S	**Sn**	**05 47 35.7**	**+0.3**
SKR				A	A	05 47 39.0	
	comp=E,30nm,0.4s						
SKR				A	A	05 47 39.0	
	comp=E,70nm,0.4s						
PAU	**Pauzhetka**	**5.70**	**26**	*e*P	**Pn**	**05 46 54.2**	**+0.8**
PAU				AMB	AMB	05 46 56.6	
	comp=E,500nm,4.0s						
PAU				AMB	AMB	05 47 02.9	
	comp=E,50nm,0.5s						
PAU				*e*S	**Sn**	**05 47 57.9**	**+0.4**
PAU				A	A	05 47 58.9	
	comp=E,300nm,3.0s						
PAU				A	A	05 47 58.9	
	comp=E,500nm,3.0s						
PAU				A	A	05 48 04.7	
	comp=E,160nm,0.5s						
PAU				A	A	05 48 04.7	
	comp=E,110nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.94**	**278**	*e*PN	**Pn**	**05 47 06.8**	**-3.7**
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.94**	**278**	*e*P	**Pn**	**05 47 12.6**	**+2.1**
PEA0B	**Petropavlovsk-**	**7.40**	**24**	PN	**Pn**	**05 47 17.0**	**+0.1**
PEA0B	**Petropavlovsk-**	**7.40**	**24**	Pn	**Pn**	**05 47 17.0**	**+0.1**
PETK	**Petropavlovsk-**	**7.40**	**24**	Pn	**Pn**	**05 47 17.1**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=177,slow=12,SNR=14						
PETK	**Petropavlovsk-**	**7.40**	**24**		**Pn**	**05 47 16.7**	**-0.1**
JKA	**Kamikawa-asahi**	**7.56**	**256**		**Pn**	**05 47 20.2**	**+1.1**
JKA	**Kamikawa-asahi**	**7.56**	**256**	*e*P	**Pn**	**05 47 20.2**	**+1.1**
ASAJ	**Asahikawa**	**7.56**	**256**	Pn	**Pn**	**05 47 20.2**	**+1.1**
	comp=Z,2.3nm,0.3s,baz=329,slow=28,SNR=2.2						
PET	**Petropavlovsk**	**7.62**	**28**	*e*PN	**Pn**	**05 47 21.6**	**+1.8**
PET				MLR	MLR		
	comp=Z,100nm,13.0s						
PET	**Petropavlovsk**	**7.62**	**28**	*e*P	**Pn**	**05 47 21.6**	**+1.8**
PET				*e*S	**Sn**	**05 48 45.0**	**+0.3**
TYV	**Tymovskoe**	**8.06**	**307**	*e*P	**Pn**	**05 47 27.8**	**+1.9**
ERM	**Erimo**	**8.21**	**241**	*i* PN	**Pn**	**05 47 29.4**	**+1.4**
ERM	**Erimo**	**8.21**	**241**	Pn	**Pn**	**05 47 27.4**	**-0.5**
MA2	**Magadan**	**13.23**	**355**	Pn	**Pn**	**05 48 39.2**	**+2.6**
	comp=Z,1.4nm,0.3s,baz=164,slow=12,SNR=3.9						
KLR	**Kul'dur**	**14.42**	**289**	LR	LR	05 54 52.7	
	comp=Z,102nm,18.3s,baz=249,slow=39						
KLR	**Kul'dur**	**14.42**	**289**	*i* P	**Pn**	**05 48 53.1**	**+0.4**
KLR	**Kul'dur**	**14.42**	**289**	*i* P	**Pn**	**05 48 51.3**	**-1.4**
EKMR	**Ekimchan**	**14.44**	**305**	*e*P	**Pn**	**05 48 52.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**14.81**	**269**	Pn	**Pn**	**05 48 59.3**	**+1.3**
	baz=76,slow=15,SNR=6.3						
SEY	**Seymchan**	**16.55**	**359**	Pn	**Pn**	**05 49 19.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=47,slow=23,SNR=1.6						
BMKR	**Bomnak**	**17.27**	**307**	*e*P	**Pn**	**05 49 29.2**	**-0.2**
KSRS	**Korea Array**	**20.50**	**253**	P	Pn	05 50 08.3	0.0
	comp=Z,1.6nm,0.5s,baz=57,slow=11,SNR=6.5						
BILL	**Bilibino**	**22.76**	**13**	*e*P	**P**	**05 50 28.5**	**-1.4**
BILL				*e*		05 50 52.9	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,96nm,16.0s						
H11N2	**WAKE ISLAND Hy**	**29.02**	**152**	T	T	06 23 01.5	
	baz=340,slow=76,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**29.04**	**152**	T	T	06 22 43.3	
	baz=340,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**29.04**	**152**	T	T	06 22 44.1	
	baz=340,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**30.11**	**153**	T	T	06 23 57.3	
	baz=346,slow=76,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**30.11**	**153**	T	T	06 24 33.0	
	SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**30.12**	**153**	T	T	06 23 59.9	
	baz=344,slow=76,SNR=9.7						
IMAR	**Indian Mountai**	**34.16**	**36**	P	**P**	**05 52 11.6**	**-0.7**
ILAR	**Eielson Array**	**36.94**	**38**	P	**P**	**05 52 34.5**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=256,slow=8.8,SNR=4.2						
INK	**Inuvik**	**42.04**	**32**	P	**P**	**05 53 18.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=307,slow=7.9,SNR=5.3						
MK31	**Makanchi Array**	**46.91**	**298**	P	**P**	**05 53 57.4**	**-0.4**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	**Makanchi Array**	**46.91**	**298**	P	**P**	**05 53 57.4**	**-0.4**
MKAR	**Makanchi Array**	**46.91**	**298**	P	**P**	**05 53 56.6**	**-1.2**
	comp=Z,2.0nm,0.7s,baz=63,slow=7.1,SNR=11						
MKAR	**Makanchi Array**	**46.91**	**298**	P	**P**	**05 53 57.1**	**-0.6**
MKAR	**Makanchi Array**	**46.91**	**298**	P	**P**	**05 53 57.1**	**-0.6**
EUNU	**Eureka**	**49.49**	**11**	P	**P**	**05 54 18.8**	**+1.5**
EUNU				IAmb	IAmb	05 54 20.4	
	comp=Z,2.6nm,0.8s						
BVAR	**Borovoye Array**	**50.91**	**310**	P	**P**	**05 54 27.4**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=99,slow=9.2,SNR=9.1						
BRVK	**Borovoye**	**50.95**	**310**	P	**P**	**05 54 27.3**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRVK	**Borovoye**	**50.95**	**310**	P	**P**	**05 54 27.3**	**-1.2**
BRVK				IAmb	IAmb	05 54 29.7	
	comp=Z,6.1nm,1.2s						
YKA	**Yellowknife Ar**	**51.31**	**36**	P	**P**	**05 54 30.6**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=298,slow=7.1,SNR=11						
YKA	**Yellowknife Ar**	**51.31**	**36**	*e*P	**P**	**05 54 31.2**	**+0.1**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SHL	**Shillong**	**52.15**	**269**	P	**P**	**05 54 36.6**	**-1.5**
SHL				pmax	pmax		
	comp=Z,14nm,0.4s						
SHL	**Shillong**	**52.15**	**269**	P	**P**	**05 54 36.6**	**-1.5**
AAK	**Ala-Archa**	**53.79**	**296**	P	**P**	**05 54 49.7**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	**Ala-Archa**	**53.79**	**296**	P	**P**	**05 54 49.7**	**-0.3**
AAK				IAmb	IAmb	05 54 51.9	
	comp=Z,3.4nm,0.8s						
AAK	**Ala-Archa**	**53.79**	**296**	*e*P	**P**	**05 54 49.7**	**-0.3**
ARU	**Arti**	**55.11**	**318**	P	**P**	**05 54 58.5**	**-0.7**
	comp=Z,1.7nm,0.4s,baz=41,slow=5.6,SNR=6.7						
ARU	**Arti**	**55.11**	**318**	P	**P**	**05 54 57.2**	**-2.0**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ARU	**Arti**	**55.11**	**318**	P	**P**	**05 54 57.2**	**-2.0**
NEEM	**North Greenlan**	**55.51**	**6**	*i* P	**P**	**05 55 02.8**	**+0.7**
NEEM				IAmb	IAmb	05 55 04.1	
	comp=Z,5.3nm,0.7s						
KK31	**Karatay Array**	**55.98**	**299**	P	**P**	**05 55 04.9**	**-0.7**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	**Karatay Array**	**55.98**	**299**	P	**P**	**05 55 04.9**	**-0.7**
KK31				IAmb	IAmb	05 55 06.4	
	comp=Z,2.0nm,0.7s						
KKAR	**Karatay Array**	**55.98**	**299**	P	**P**	**05 55 04.9**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKAR	**Karatay Array**	**55.98**	**299**	P	**P**	**05 55 04.9**	**-0.7**
KKAR	**Karatay Array**	**55.98**	**299**	P	**P**	**05 55 05.2**	**-0.5**
ARCES	**ARCESS Array B**	**58.09**	**341**	P	**P**	**05 55 20.0**	**-0.2**
	comp=Z,3.7nm,1.0s,baz=30,slow=7.4,SNR=5.6						
GAR	**Garm**	**58.47**	**295**	P	**P**	**05 55 24.6**	**+1.2**
ABKAR	**Akbulak array**	**58.48**	**310**	P	**P**	**05 55 22.5**	**-0.6**
AKTO	**Aktyubinsk**	**58.79**	**312**	P	**P**	**05 55 24.9**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=82,slow=8.5,SNR=4.8						
NIL	**Nilore**	**59.81**	**288**	P	**P**	**05 55 33.3**	**+0.6**
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
NIL	**Nilore**	**59.81**	**288**	P	**P**	**05 55 33.3**	**+0.6**
KLMR	**Klimovskoe**	**60.28**	**329**	*e*P	**P**	**05 55 35.2**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
KLMR	**Klimovskoe**	**60.28**	**329**	*e*P	**P**	**05 55 35.3**	**-0.1**
KLMR				AMP		05 55 36.3	
	comp=Z,12nm,1.1s						
SUMG	**Summit**	**61.04**	**4**	*i* P	**P**	**05 55 43.0**	**+2.0**
SUMG				IAmb	IAmb	05 55 45.0	
	comp=Z,3.5nm,0.7s						
SUMG	**Summit**	**61.04**	**4**	*i* P	**P**	**05 55 42.9**	**+2.0**
SUMG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SUMG	**Summit**	**61.04**	**4**	P	**P**	**05 55 40.5**	**-0.4**
BELG	**Belogornoye**	**62.64**	**318**	P	**P**	**05 55 51.1**	**-0.3**
	comp=Z,8.3nm,0.6s,baz=188,slow=1.3,SNR=4.9						
NVAR	**Mina Array Bea**	**62.77**	**62**	P	**P**	**05 55 52.3**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=298,slow=8.3,SNR=4.8						
NVAR				pP	**pP**	**05 56 04.4**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=290,slow=6.8,SNR=8.7						
FINES	**FINESS Array B**	**64.25**	**335**	P	**P**	**05 56 02.0**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=41,slow=7.6,SNR=16						
PDAR	**Pinedale Array**	**65.11**	**54**	P	**P**	**05 56 07.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=153,slow=0.3,SNR=4.2						
PDAR				pP	**pP**	**05 56 19.8**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=349,slow=0.8,SNR=3.5						
WRA	**Warramunga Arr**	**68.13**	**199**	P	**P**	**05 56 28.7**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=20,slow=6.4,SNR=1.6						
WRA				pP	**pwP**	**05 56 40.7**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=18,slow=6.7,SNR=2.9						
NOA	**NORSAR Array B**	**68.47**	**341**	P	**P**	**05 56 29.5**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.4,SNR=10						
HFS	**Hagfors**	**68.69**	**339**	P	**P**	**05 56 30.4**	**+0.1**
	comp=Z,2.7nm,0.4s,baz=63,slow=6.8,SNR=16						
KIV	**Kislovodsk**	**70.88**	**314**	*e*P	**P**	**05 56 42.9**	**-1.3**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV				MLR	MLR		
	comp=Z,96nm,18.0s						
KIV	**Kislovodsk**	**70.88**	**314**	*e*P	**P**	**05 56 42.9**	**-1.3**
KBZ	**Khabaz**	**70.94**	**314**	P	**P**	**05 56 45.7**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=105,slow=4.4,SNR=7.3						
KBZ	**Khabaz**	**70.94**	**314**	*e*P	**P**	**05 56 47.4**	**+3.0**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**71.70**	**326**	P	**P**	**05 56 49.1**	**+0.2**
	comp=Z,5.6nm,0.5s,baz=33,slow=6.2,SNR=26						
AKBB	**Malin Array Si**	**71.70**	**326**	P	**P**	**05 56 48.0**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKBB	**Malin Array Si**	**71.70**	**326**	P	**P**	**05 56 48.0**	**-0.9**
ASAR	**Alice Springs**	**71.83**	**198**	pP	pP	05 57 01.8	+0

IDC ***21*** *06:46:50.4±1.1,8.°78S×122.°50E±1.°07,h187km±12km, mb3.4/1, mb1 3.4/5, mb1mx3.1/30, mbtmp3.8/5, Error ellipse: s-maj=65.4km s-min=15.2km az=58.0*
DJA ***21*** *06:46:51.8±0.5,9.°S±3.°×12.°3E±.°, h157km±5km, M3.6/9, mb3.6/1, MLv3.6/9*
ISC 21 06:46:49.6±1.0, 8.°68S±0.°07×122.°62E±0.°07, h187km±8km, n15, σ1§46/22, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.38**	**277**	P	**Pn**	**06 47 14.3**	**-0.5**
MMRI				S	**Sn**	**06 47 33.5**	**-0.6**
BATI	**Baumata**	**1.83**	**146**	P	**Pn**	**06 47 26.7**	**+1.3**
	72nm,0.3s,baz=340,slow=1.3,SNR=32						
BATI				S	**Sn**	**06 47 54.2**	**+0.8**
	61nm,0.3s,baz=98,slow=18,SNR=8.4						
BATI	**Baumata**	**1.83**	**146**	P	**Pn**	**06 47 26.7**	**+1.3**
BATI				S	**Sn**	**06 47 54.7**	**+1.4**
SOEI	**Soe**	**1.94**	**123**	P	**Pn**	**06 47 27.7**	**+1.0**
SOEI				S	**Sn**	**06 47 55.7**	**+0.2**
BASI	**Baing, Sumba**	**2.53**	**233**	P	**Pn**	**06 47 34.7**	**+1.7**
BASI				S	**Sn**	**06 48 06.2**	**-0.7**
BSSI	**Bau Bau, Buton**	**3.29**	**320**	P	**Pn**	**06 47 42.3**	**+0.2**
WBSI	**Waikabubak, Su**	**3.33**	**253**	P	**Pn**	**06 47 43.6**	**+1.0**
BKSI	**Bulukumba**	**4.16**	**323**	P	**Pn**	**06 47 52.9**	**-0.1**
KAPI	**Kappang**	**4.62**	**322**	P	**Pn**	**06 47 59.0**	**0.0**
	1.3nm,0.3s,baz=153,slow=13,SNR=4.1						
KAPI				S	Sn	06 48 43.9	-9.5
	11nm,0.3s,baz=173,slow=15,SNR=8.1						
PLAI	**Plampang**	**4.79**	**268**	P	**Pn**	**06 48 01.7**	**+0.7**
TWSI	**Taliwang, Sumb**	**5.67**	**269**	P	**Pn**	**06 48 14.1**	**+1.6**
FITZ	**Fitzroy Crossi**	**9.81**	**163**	P	**Pn**	**06 49 07.4**	**+0.8**
	0.9nm,0.3s,baz=0.2,slow=9.1,SNR=17						
FITZ				S	**Sn**	**06 50 51.5**	**-4.5**
	0.6nm,0.3s,baz=196,slow=12,SNR=6.8						
WRA	**Warramunga AR**	**15.93**	**136**	P	**Pn**	**06 50 24.1**	**+0.3**
	0.5nm,0.3s,baz=307,slow=12,SNR=15						
WRA				S	**S**	**06 53 19.3**	**-1.4**
	0.2nm,0.3s,baz=320,slow=24,SNR=3.3						
ASAR	**Alice Springs**	**18.40**	**145**	P	**Pn**	**06 50 52.8**	**-0.4**
	0.6nm,0.3s,baz=330,slow=13,SNR=41						
MKAR	**Makanchi Array**	**65.86**	**331**	P	**P**	**06 57 16.0**	**+0.8**
	0.7nm,0.6s,baz=129,slow=7.7,SNR=8.7						

IDC ***21*** *06:47:10.1±0.9,34.°13N×25.°13E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.3/30, mbtmp3.5/4, ML2.8/1, Error ellipse: s-maj=164.3km s-min=14.2km az=141.0*
ISK ***21*** *06:47:25.9,35.°11N×26.°83E, h5km, ML3.1/8*
ATH ***21*** *06:47:28.1,35.°23N×26.°81E, h15km±2km, ML2.9/7, Error ellipse: s-maj=5.2km s-min=1.2km az=153.0*
ISC 21 06:47:26.0±1.6, 35.°09N±0.°08×26.°85E±0.°04, h12km±10km, n28, σ0§78/35, mb3.4/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.52**	**273**	P	**Pb**	**06 47 36.6**	**-0.4**
ZKR				S	**Sb**	**06 47 44.6**	**+0.2**
ZKR				AML	AML	06 47 46.2	
	comp=N,1198μm,0.2s						
ZKR				AML	AML	06 47 49.5	
	comp=E,3033μm,0.4s						
ZKR	**Zakros**	**0.52**	**273**	PG	**Pb**	**06 47 36.6**	**-0.4**
ZKR				SG	**Sb**	**06 47 44.9**	**+0.5**
KARP	**Karpathos**	**0.52**	**29**	P	**Pb**	**06 47 36.9**	**-0.2**
KARP				S	**Sg**	**06 47 43.2**	**0.0**
KARP				AML	AML	06 47 46.1	
	comp=E,9684μm,0.2s						
KARP				AML	AML	06 47 46.2	
	comp=N,22769μm,0.5s						
KARP	**Karpathos**	**0.52**	**29**	PG	**Pb**	**06 47 36.9**	**-0.2**
KARP				SG	**Sb**	**06 47 45.1**	**+0.4**
NPS	**Neapolis**	**1.02**	**280**	P	**Pn**	**06 47 46.4**	**+0.3**
NPS				S	**Sb**	**06 47 59.1**	**0.0**
NPS				AML	AML	06 48 07.2	
	comp=E,1006μm,0.7s						
NPS				AML	AML	06 48 13.7	
	comp=N,1082μm,0.7s						
ARG	**Arkhangelos**	**1.53**	**42**	P	**Pn**	**06 47 53.4**	**+0.3**
ARG				S	**Sn**	**06 48 12.9**	**0.0**
ARG				AML	AML	06 48 20.2	
	comp=E,1069μm,0.6s						
ARG				AML	AML	06 48 20.6	
	comp=N,1084μm,1.0s						
ARG	**Arkhangelos**	**1.53**	**42**	PN	**Pg**	**06 47 55.5**	**+0.1**
ARG				SN	**Sg**	**06 48 16.9**	**+1.6**
IDI	**Anoyia**	**1.61**	**278**	P	**Pg**	**06 47 56.8**	**-0.2**
IDI				S	**Sg**	**06 48 17.5**	**-0.5**
IDI				AML	AML	06 48 27.6	
	comp=N,288μm,0.6s						
IDI				AML	AML	06 48 27.7	
	comp=E,495μm,0.5s						
IDI	**Anoyia**	**1.61**	**278**	PN	**Pg**	**06 47 56.7**	**-0.3**
IDI				SN	**Sg**	**06 48 18.9**	**+0.9**
SIVA	**Sivas**	**1.67**	**268**	P	**Pg**	**06 47 58.3**	**+0.2**
SIVA				AML	AML	06 48 36.0	
	comp=N,638μm,0.6s						
SIVA				AML	AML	06 48 36.2	
	comp=E,892μm,0.7s						
SANT	**Santorini**	**1.71**	**319**	P	**Pb**	**06 47 56.6**	**-0.7**
SANT	**Santorini**	**1.71**	**319**	PN	**Pg**	**06 47 57.9**	**-0.8**
THR6	**Thira Island,**	**1.73**	**317**	P	**Pn**	**06 47 56.3**	**+0.5**
SNT5	**Nea Kammeni, S**	**1.76**	**318**	P	**Pn**	**06 47 56.7**	**+0.4**
THR3	**Thira Island,**	**1.76**	**319**	P	**Pb**	**06 47 57.5**	**-0.7**
THR2	**Thira island,**	**1.77**	**320**	P	**Pb**	**06 47 57.7**	**-0.8**
THR5	**Thira Island,**	**1.80**	**318**	P	**Pn**	**06 47 57.7**	**+0.9**
BODT	**Bodrum**	**2.00**	**11**	PN	**Pb**	**06 48 02.1**	**-0.2**
APE	**Apeiranthos**	**2.24**	**332**	P	**Pn**	**06 48 03.7**	**+0.7**
APE				AML	AML	06 48 36.1	
	comp=N,191μm,0.7s						
APE				AML	AML	06 48 42.2	
	comp=E,140μm,0.5s						
DALY	**Dalyan (Mula)**	**2.26**	**40**	PN	**Pb**	**06 48 05.9**	**-0.8**
YER	**Yerkesik**	**2.35**	**29**	PN	**Pb**	**06 48 07.0**	**-1.3**
IMMV	**Iera Moni Meta**	**2.37**	**280**	PN	**Pb**	**06 48 07.3**	**-1.3**
FETY	**Fethiye**	**2.38**	**49**	PN	**Pb**	**06 48 07.7**	**-1.1**
KTHA	**Kythira Island**	**3.29**	**292**	PN	**Pn**	**06 48 19.5**	**+2.1**
BRTR	**Keskin Array B**	**7.11**	**47**	Pn	Pn	06 49 18.9	+8.9
	comp=E,0.1nm,0.3s,baz=240,slow=12,SNR=2.3						
TORD	**Torodi Ar. Bea**	**31.52**	**232**	P	P	06 53 19.1	-29
	comp=E,0.2nm,0.6s,baz=30,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**42.66**	**57**	P	**P**	**06 55 22.0**	**-0.3**
	comp=E,0.5nm,0.8s,baz=270,slow=7.7,SNR=6.6						
ZALV	**Zalesovo Beam**	**44.05**	**46**	P	**P**	**06 55 32.9**	**-0.5**
	comp=E,0.8nm,0.6s,baz=270,slow=8.6,SNR=2.3						

IDC ***21*** *07:00:56.1±3.3,32.°25S×178.°58W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/20, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=71.4km s-min=36.7km az=109.0*
WEL ***21*** *07:01:01.0±0.7,32.°S±16.°×17.°9W±4.°1, h33km, M4.1/10, mB4.5/5, ML4.6/10, MLv4.3/10, Mw(mB)3.7/5, Error ellipse: s-maj=0.1km s-min=0.0km az=110.8*
ISC 21 07:01:00.2±1.7, 32.°3S±0.°1×178.°4W±0.°3, h33km, n17, σ1§45/31, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.05**	**8**	P	**Pn**	**07 01 47.5**	**+1.4**
GLKZ				S	**Sn**	**07 02 19.8**	**-1.6**
MXZ	**Matakaoa Point**	**5.90**	**206**	P	**Pn**	**07 02 26.7**	**+1.4**
MXZ				S	**Sn**	**07 03 32.4**	**+0.6**
WMGZ	**Waiomatatini S**	**6.09**	**204**	P	**Pn**	**07 02 28.3**	**+0.4**
WMGZ				S	**Sn**	**07 03 37.3**	**+0.9**
HAZ	**Te Kaha**	**6.28**	**209**	P	**Pn**	**07 02 30.0**	**-0.4**
HAZ				S	**Sn**	**07 03 44.4**	**+3.5**
PUZ	**Puketiti**	**6.37**	**204**	P	**Pn**	**07 02 31.8**	**0.0**
PUZ				S	**Sn**	**07 03 42.9**	**-0.5**
RUGZ	**Raukumara Rang**	**6.50**	**208**	P	**Pn**	**07 02 34.4**	**+0.8**
RUGZ				S	**Sn**	**07 03 46.7**	**+0.1**
TWGZ	**Tauwhareparae**	**6.57**	**206**	P	**Pn**	**07 02 35.5**	**+1.1**
TWGZ				S	**Sn**	**07 03 47.4**	**-0.8**
MWZ	**Matawai**	**6.88**	**208**	P	**Pn**	**07 02 40.8**	**+2.1**
MWZ				S	**Sn**	**07 03 55.0**	**-0.8**
URZ	**Urewera**	**6.98**	**210**	Pn	**Pn**	**07 02 39.3**	**-0.8**
	1.5nm,0.3s,baz=121,slow=24,SNR=14						
URZ				Sn	**Sn**	**07 03 59.0**	**+0.7**
	2.4nm,0.3s,baz=73,slow=21,SNR=6.3						
URZ	**Urewera**	**6.98**	**210**	P	**Pn**	**07 02 40.8**	**+0.7**
URZ				S	**Sn**	**07 03 57.3**	**-1.1**
RAGZ	**Rawiri**	**7.06**	**208**	P	**Pn**	**07 02 41.9**	**+0.7**
RAGZ				S	**Sn**	**07 03 57.8**	**-2.6**
RIGZ	**Rimuhau**	**7.11**	**205**	P	**Pn**	**07 02 40.5**	**-1.5**
RIGZ				S	**Sn**	**07 03 59.6**	**-2.1**
MUGZ	**Murupara**	**7.31**	**211**	P	**Pn**	**07 02 47.1**	**+2.5**
MUGZ				S	**Sn**	**07 04 04.4**	**-2.1**
SNGZ	**Shannon Statio**	**7.34**	**207**	P	**Pn**	**07 02 46.5**	**+1.5**
SNGZ				S	**Sn**	**07 04 06.5**	**-0.6**
ASAR	**Alice Springs**	**42.68**	**269**	P	**P**	**07 08 53.9**	**-0.2**
	0.5nm,0.6s,baz=105,slow=7.8,SNR=8.5						
WRA	**Warramunga Arr**	**43.84**	**274**	P	**P**	**07 09 03.0**	**-0.5**
	1.2nm,0.5s,baz=115,slow=7.4,SNR=13						
FINES	**FINESS Array B**	**146.78**	**339**	PKPbc	**PKPab**	**07 20 38.2**	**-1.1**
	0.6nm,0.5s,baz=54,slow=3.3,SNR=3.6						

INET 21 07:09:12.3, 12.°08N×87.°01W, h53km, MW3.5, Near coast of Nicaragua

IDC ***21*** *07:18:34.1±0.4,35.°06N×26.°93E, h0km, mb3.8/3, mb1 3.6/5, mb1mx3.4/34, mbtmp3.6/5, ML2.9/2, MS4.2/1, Ms1 4.1/1, ms1mx2.3/49, Error ellipse: s-maj=15.2km s-min=1.6km az=177.0*
THE ***21*** *07:18:36.8,35.°16N×26.°79E, h1km±1km, ML3.3/5, Error ellipse: s-maj=4.2km s-min=0.7km az=156.0*
ISK ***21*** *07:18:36.6,35.°15N×26.°81E, h7km, ML3.5/6*
ATH ***21*** *07:18:38.4,35.°29N×26.°76E, h14km±3km, ML3.3/6, Error ellipse: s-maj=4.2km s-min=1.1km az=151.0*
DDA ***21*** *07:18:38.0,35.°31N×26.°79E, h123km±60km, MW3.6*
ISC 21 07:18:35.7±1.3, 35.°08N±0.°06×26.°85E±0.°03, h12km±9km, n60, σ0§96/78, mb3.8/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.52**	**275**	P	**Pb**	**07 18 46.8**	**0.0**
ZKR				S	**Sb**	**07 18 54.1**	**-0.2**
ZKR				AML	AML	07 18 56.0	
	comp=E,7965μm,0.3s						
ZKR				AML	AML	07 18 56.2	
	comp=N,3273μm,0.3s						
ZKR	**Zakros**	**0.52**	**275**	P	**Pb**	**07 18 46.8**	**0.0**
ZKR				S	**Sb**	**07 18 54.1**	**-0.2**
	comp=N,3μm,0.3s						
ZKR	**Zakros**	**0.52**	**275**	PG	**Pg**	**07 18 46.1**	**+0.2**
ZKR				SG	**Sb**	**07 18 53.9**	**-0.4**
KARP	**Karpathos**	**0.54**	**28**	P	**Pg**	**07 18 46.4**	**+0.3**
KARP				S	**Sg**	**07 18 53.2**	**0.0**
KARP				AML	AML	07 18 55.7	
	comp=N,53558μm,0.5s						
KARP				AML	AML	07 18 56.4	
	comp=E,27072μm,0.4s						
KARP	**Karpathos**	**0.54**	**28**	P	**Pg**	**07 18 46.4**	**+0.3**
KARP				S	**Sb**	**07 18 54.4**	**-0.4**
	comp=E,21μm,0.5s						
KARP	**Karpathos**	**0.54**	**28**	PG	**Pg**	**07 18 46.5**	**+0.3**
KARP				SG	**Sb**	**07 18 54.1**	**-0.7**
STIA	**Sitia Lasithi**	**0.64**	**282**	P	**Pg**	**07 18 47.9**	**-0.1**
STIA				S	**Sb**	**07 18 57.0**	**-0.6**
FRMA	**Ierapetra Chan**	**0.92**	**267**	P	**Pg**	**07 18 51.6**	**-1.8**
NPS	**Neapolis**	**1.03**	**281**	P	**Pb**	**07 18 55.8**	**+0.3**
NPS				S	**Sb**	**07 19 08.6**	**-0.4**
NPS	**Neapolis**	**1.03**	**281**	P	**Pb**	**07 18 55.8**	**+0.3**
NPS				S	**Sn**	**07 19 10.7**	**+0.3**
	comp=E,1μm,0.6s						
HRKL	**Herakleio**	**1.45**	**280**	PN	**Pb**	**07 19 03.3**	**+0.7**
HRKL				SN	**Sg**	**07 19 22.7**	**+0.3**
ARG	**Arkhangelos**	**1.54**	**42**	P	**Pn**	**07 19 04.5**	**+1.5**
ARG				S	**Sn**	**07 19 22.5**	**-0.5**
ARG				AML	AML	07 19 29.6	
	comp=E,2472μm,0.6s						
ARG				AML	AML	07 19 30.0	
	comp=N,2605μm,1.0s						
ARG	**Arkhangelos**	**1.54**	**42**	P	**Pn**	**07 19 04.1**	**+1.1**
ARG				S	**Sn**	**07 19 24.1**	**+1.1**
	comp=N,1μm,0.8s						
ARG	**Arkhangelos**	**1.54**	**42**	PN	**Pn**	**07 19 04.5**	**+1.5**
ARG				SN	**Sg**	**07 19 25.2**	**-0.1**
NIS1	**Nisyros Isl.**	**1.55**	**10**	PN	**Pb**	**07 19 04.3**	**0.0**
IDI	**Anoyia**	**1.62**	**278**	Pg	**Pn**	**07 19 04.8**	**+0.7**
	comp=N,19nm,0.3s,baz=76,slow=15,SNR=51						
IDI				Lg	Lg	07 19 26.8	
	comp=N,20nm,0.3s,baz=291,slow=19,SNR=6.1						
IDI	**Anoyia**	**1.62**	**278**	P	**Pb**	**07 19 05.7**	**+0.1**
IDI				AML	AML	07 19 36.9	
	comp=N,956μm,1.2s						
IDI				AML	AML	07 19 37.1	
	comp=E,1146μm,0.5s						
IDI	**Anoyia**	**1.62**	**278**	PN	**Pb**	**07 19 05.9**	**+0.3**
SIVA	**Sivas**	**1.68**	**269**	P	**Pg**	**07 19 08.0**	**+0.2**
SIVA				AML	AML	07 19 43.5	
	comp=N,1327μm,0.7s						
SIVA				AML	AML	07 19 49.1	
	comp=E,2230μm,0.6s						
KOSK	**Kos Island**	**1.68**	**4**	PN	**Pb**	**07 19 06.3**	**-0.2**
SANT	**Santorini**	**1.72**	**319**	P	**Pn**	**07 19 05.7**	**+0.2**
SANT	**Santorini**	**1.72**	**319**	P	**Pn**	**07 19 05.7**	**+0.2**
SANT	**Santorini**	**1.72**	**319**	PN	**Pn**	**07 19 06.1**	**+0.6**
THR8	**Santorini-Mono**	**1.73**	**320**	P	**Pn**	**07 19 05.0**	**-0.6**
THR8	**Santorini-Mono**	**1.73**	**320**	P	**Pn**	**07 19 05.0**	**-0.6**
THR9	**Santorini-Faro**	**1.77**	**317**	P	**Pn**	**07 19 06.8**	**+0.7**
SNT1	**Gialos, Santor**	**1.77**	**320**	P	**Pn**	**07 19 06.7**	**+0.5**
SNT5	**Nea Kammeni, S**	**1.78**	**319**	P	**Pn**	**07 19 06.6**	**+0.3**
SNT5	**Nea Kammeni, S**	**1.78**	**319**	P	**Pn**	**07 19 06.6**	**+0.3**
THR3	**Thira Island,**	**1.78**	**319**	P	**Pn**	**07 19 06.8**	**+0.6**
THT2	**Imerovigli**	**1.79**	**320**	PN	**Pn**	**07 19 07.2**	**+0.8**
THR2	**Thira island,**	**1.79**	**320**	P	**Pn**	**07 19 07.1**	**+0.6**
THR5	**Thira Island,**	**1.81**	**318**	P	**Pn**	**07 19 07.1**	**+0.3**
THR5	**Thira Island,**	**1.81**	**318**	P	**Pn**	**07 19 07.1**	**+0.3**
TURN	**Turunc**	**2.04**	**33**	*i* P	**Pb**	**07 19 12.5**	**-0.2**
TURN				*i* S	**Sn**	**07 19 36.9**	**+1.6**
BDRM	**Kayabasi**	**2.04**	**13**	*i* P	**Pn**	**07 19 11.0**	**+1.0**
BDRM				*i* S	**Sn**	**07 19 36.3**	**+0.9**
VAM	**Vamos**	**2.19**	**279**	P	**Pb**	**07 19 15.7**	**+0.4**
APE	**Apeiranthos**	**2.26**	**332**	P	**Pn**	**07 19 13.2**	**+0.3**
APE				S	**Sn**	**07 19 40.3**	**-0.5**
APE				AML	AML	07 19 43.6	
	comp=E,382μm,0.7s						
APE				AML	AML	07 19 44.8	
	comp=N,493μm,0.7s						
APE	**Apeiranthos**	**2.26**	**332**	P	**Pn**	**07 19 13.2**	**+0.3**
APE				S	**Sn**	**07 19 40.3**	**-0.5**
	comp=N,218nm,0.6s						
DALY	**Dalyan (Mula)**	**2.27**	**40**	*i* P	**Pn**	**07 19 15.0**	**+2.0**
DALY				*i* S	**Sb**	**07 19 44.0**	**-0.7**
GVDS	**Gavdos**	**2.28**	**265**	PN	**Pb**	**07 19 16.1**	**-0.7**
GVD	**Gavdhos**	**2.28**	**265**	PN	**Pn**	**07 19 15.5**	**+2.3**
IMMV	**Iera Moni Meta**	**2.38**	**280**	PN	**Pn**	**07 19 16.6**	**+2.1**
MULA	**Mugla, Merkez-**	**2.48**	**28**	*i* P	**Pn**	**07 19 18.6**	**+2.6**
MULA				IAML		07 20 00.0	
	comp=E,131nm,0.7s						
MULA				IAML		07 20 13.0	
	comp=N,50nm,0.9s						
AKAS	**Kas**	**2.52**	**62**	*i* P	**Pn**	**07 19 15.2**	**-1.4**
AYDN	**Tasoluk**	**2.71**	**18**	*i* P	**Pn**	**07 19 20.2**	**+1.1**
CAEL	**Denizli, Camel**	**2.86**	**44**	*i* P	**Pn**	**07 19 22.7**	**+1.4**
CAEL				IAML		07 20 24.0	
	comp=E,339nm,0.9s						
CAEL				IAML		07 20 33.0	
	comp=N,245nm,1.0s						
DGB	**zmir**	**2.97**	**0**	*i* P	**Pn**	**07 19 22.4**	**-0.3**
GOLH	**Golhisar**	**3.08**	**45**	*i* P	**Pn**	**07 19 25.8**	**+1.6**
GOLH				IAML		07 20 27.0	
	comp=N,71nm,1.2s						
URLA	**Izmir**	**3.29**	**357**	*i* P	**Pn**	**07 19 26.0**	**-1.1**
URLA				*i* S	**Sn**	**07 20 05.6**	**-0.5**
KTHA	**Kythira Island**	**3.30**	**292**	PN	**Pn**	**07 19 29.1**	**+1.9**
MANT	**Manisa**	**3.67**	**21**	*i* P	**Pn**	**07 19 32.2**	**-0.3**
USAK	**Uak-Merkez**	**4.03**	**25**	*i* P	**Pn**	**07 19 37.5**	**+0.3**
ITM	**Ithomi**	**4.50**	**299**	PN	**Pn**	**07 19 46.7**	**+2.9**
BRTR	**Keskin Array B**	**7.12**	**47**	Pn	**Pn**	**07 20 19.9**	**+0.1**
	comp=N,0.1nm,0.3s,baz=238,slow=16,SNR=1.8						
BRTR				LR	LR	07 23 18.8	
	comp=N,27nm,20.1s,baz=244,slow=40						
EIL	**Elat**	**8.71**	**126**	Pn	**Pn**	**07 20 40.3**	**-1.3**
	comp=N,0.3nm,0.3s,baz=355,slow=12,SNR=2.0						
TORD	**Torodi Ar. Bea**	**31.52**	**232**	P	**P**	**07 24 58.2**	**+0.4**
	comp=N,0.2nm,0.4s,baz=39,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	**42.66**	**57**	P	**P**	**07 26 31.9**	**-0.2**
	comp=N,1.1nm,0.6s,baz=278,slow=6.8,SNR=17						
ZALV	**Zalesovo Beam**	**44.06**	**46**	P	**P**	**07 26 42.1**	**-1.2**
	comp=N,1.4nm,0.6s,baz=269,slow=8.5,SNR=6.1						
YKA	**Yellowknife Ar**	**77.95**	**343**	LR	LR	08 08 45.5	
	comp=N,121nm,18.2s,baz=0.0,slow=39						

ATH ***21*** *07:25:42.3,41.°64N×20.°27E, h24km±11km, ML2.5/3, Error ellipse: s-maj=11.5km s-min=1.6km az=266.0*
SKO ***21*** *07:25:43.9,41.°45N×20.°30E, h15km*
TIR ***21*** *07:25:43.7,41.°52N×20.°28E, h13km±1km, Md2.5, Ml2.2*
PDG ***21*** *07:25:44.0±0.1,41.°48N×20.°25E, h3km, ML2.7/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*
ISC 21 07:25:44.1±0.9, 41.°50N±0.°02×20.°29E±0.°02, h14km±7km, n31, σ1§18/58, 7C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.21**	**31**	P	**Pg**	**07 25 48.7**	**-0.3**
	baz=37						
PHP				S	**Sg**	**07 25 52.0**	**-0.2**
	baz=37						
PHP				AMP			
	comp=N,5.1nm,0.2s,baz=37						
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**07 25 51.0**	**-0.4**
TIR				S	**Sb**	**07 25 57.2**	**-0.6**
TIR				AML	AML	07 25 58.3	
	comp=N,2524μm,0.4s						
TIR				AML	AML	07 26 02.2	
	comp=E,1796μm,0.5s						
TIR	**Tirane**	**0.36**	**245**	P	**Pg**	**07 25 51.0**	**-0.4**
	baz=241						
TIR				S	**Sb**	**07 25 57.0**	**-0.7**
	baz=241						
TIR				AMP			
	comp=E,1.3nm,0.2s,baz=241						
TIR	**Tirane**	**0.36**	**245**	*i* Pg	**Pg**	**07 25 51.2**	**-0.2**
OHR	**Ohrid**	**0.54**	**135**	*i* Pg	**Pg**	**07 25 54.4**	**-0.4**
OHR				*i* Sg	**Sb**	**07 26 03.3**	**+0.2**
OHR				*e*Lg	Lg	07 26 03.5	
	comp=N,80nm,0.4s						
OHR				*e*Lg	Lg	07 26 04.3	
	comp=E,89nm,0.6s						
PUK	**Puka**	**0.62**	**331**	P	**Pb**	**07 25 56.0**	**-0.8**
	baz=332						
PUK				S	**Sb**	**07 26 04.7**	**-0.7**
	baz=332						
PUK				AMP			
	comp=N,0.8nm,0.1s,baz=332						
PRZK	**Prizren**	**0.79**	**26**	*i* Pg	**Pg**	**07 25 59.0**	**-0.5**
BCI	**Bajram Curri**	**0.88**	**349**	P	**Pb**	**07 25 59.3**	**-1.9**
	baz=350						
BCI				S	**Sn**	**07 26 13.5**	**-1.3**
	baz=350						
BCI				AMP			
	comp=N,0.3nm,0.5s,baz=350						
ULC	**Ulcinj**	**0.91**	**301**	↑*i* Pg	**Pb**	**07 26 00.5**	**-1.2**
ULC				*i* Sg	**Sn**	**07 26 14.5**	**-1.0**
KBN	**Korca**	**0.95**	**157**	P	**Pn**	**07 26 03.7**	**+0.5**
	baz=156						
KBN				S	**Sn**	**07 26 17.3**	**+0.8**
	baz=156						
SKO	**Skopje**	**0.98**	**61**	*i* Pg	**Pn**	**07 26 03.5**	**+0.1**
SKO				*i* Sg	**Sg**	**07 26 16.2**	**+0.4**
DRME	**Dracevica, Mon**	**1.08**	**310**	↓*i* Pg	**Pb**	**07 26 03.6**	**-0.9**
DRME				*i* Sg	**Sn**	**07 26 20.4**	**+0.9**
FNA	**Florina**	**1.09**	**131**	P	**Pb**	**07 26 04.2**	**-0.5**
FNA				S	**Sb**	**07 26 19.3**	**+0.6**
FNA				AML	AML	07 26 23.1	
	comp=E,371μm,0.3s						
FNA				AML	AML	07 26 23.8	
	comp=N,492μm,0.5s						
FNA	**Florina**	**1.09**	**131**	P	**Pb**	**07 26 04.2**	**-0.5**
	baz=131						
FNA				S	**Sn**	**07 26 22.0**	**+2.2**
	baz=131						
FNA	**Florina**	**1.09**	**131**	*i* Pg	**Pb**	**07 26 04.2**	**-0.5**
FNA				*i* Sg	**Sn**	**07 26 20.3**	**+0.5**
PVY	**Plav**	**1.12**	**347**	*e*Pg	**Pn**	**07 26 05.0**	**-0.5**
PVY				*i* Sg	**Sn**	**07 26 22.8**	**+2.0**
PDG	**Podgorica**	**1.21**	**321**	*i* Pg	**Pb**	**07 26 06.4**	**-0.4**
PDG				*i* Sg	**Sg**	**07 26 25.1**	**+2.0**
TTG	**Podgorica**	**1.21**	**321**	↑*i* Pg	**Pb**	**07 26 06.2**	**-0.6**
TTG				*i* Sg	**Sg**	**07 26 25.2**	**+2.0**
NEST	**Nestorio**	**1.23**	**152**	P	**Pb**	**07 26 06.7**	**-0.2**
NEST				S	**Sg**	**07 26 24.2**	**+0.5**
NEST				AML	AML	07 26 30.5	
	comp=E,151μm,0.4s						
NEST				AML	AML	07 26 31.7	
	comp=N,104μm,0.3s						
BUM	**Brajici-Budva**	**1.32**	**308**	↓*i* Pg	**Pb**	**07 26 08.0**	**-0.7**
BUM				*i* Sg	**Sg**	**07 26 28.4**	**+1.8**
IVA	**Berane**	**1.40**	**348**	↑*i* Pg	**Pg**	**07 26 10.2**	**-0.9**
IVA				*i* Sg	**Sg**	**07 26 32.5**	**+3.1**
CEME	**Cevo**	**1.47**	**316**	↑*i* Pg	**Pb**	**07 26 10.8**	**-0.4**
CEME				*i* Sg	**Sg**	**07 26 33.7**	**+2.3**
KOME	**Kolasin**	**1.47**	**337**	↓*i* Pg	**Pg**	**07 26 11.2**	**-1.2**
KOME				*i* Sg	**Sg**	**07 26 34.4**	**+2.9**
NKME	**Niksic**	**1.61**	**322**	↑*i* Pn	**Pb**	**07 26 13.6**	**-0.1**
NKME				*i* Sn	**Sg**	**07 26 38.5**	**+2.4**
HCY	**Herceg Novi**	**1.64**

HGSD	**Ruisui**	**1.01**	**241**	*e*P	**Pb**	**07 29 26.4 +0.7**
	baz=238					
HGSD				*e*S	**Sb**	**07 29 39.2 +0.5**
	baz=238					
NNSB	**Datong**	**1.02**	**296**	*e*P	**Pn**	**07 29 24.8 -0.5**
	baz=292					
NNSB				*e*S	**Sn**	**07 29 38.8 -0.1**
	baz=292					
NNSH	**Datong**	**1.02**	**296**	*e*P	**Pn**	**07 29 25.5 +0.2**
	baz=292					
NNSH				*e*S	**Sb**	**07 29 39.7 +0.8**
	baz=292					
NNS	**Nan Shan**	**1.03**	**296**	*e*P	**Pb**	**07 29 26.3 +0.2**
	baz=293					
NNS				*e*S	**Sb**	**07 29 39.3 -0.1**
	baz=293					
WHF	**Hehuan Shan**	**1.04**	**279**	*e*P	**Pn**	**07 29 25.4 -0.6**
	baz=262					
WHF				*e*S	**Sb**	**07 29 40.0 +0.1**
	baz=262					
TWB1	**Santiao Chiao**	**1.08**	**340**	*e*P	**Pn**	**07 29 26.1 +0.1**
	baz=354					
TWB1				*e*S	**Sn**	**07 29 39.6 -0.5**
	baz=354					
FUSS	**Fushou**	**1.08**	**284**	*e*P	**Pn**	**07 29 26.7 +0.4**
	baz=281					
FUSS				*e*S	**Sb**	**07 29 41.1 +0.3**
	baz=281					
TIPB	**Shuangxi**	**1.10**	**332**	*i* P	**Pb**	**07 29 27.1 -0.3**
	baz=330					
TIPB				S	**Sn**	**07 29 40.7 -0.1**
	baz=330					
CHGB	**Renai**	**1.11**	**274**	*e*P	**Pn**	**07 29 27.2 +0.4**
	baz=271					
CHGB				*e*S	**Sb**	**07 29 42.7 +0.9**
	baz=271					
NWLT	**Wulai**	**1.13**	**314**	P	**Pb**	**07 29 28.0 +0.3**
	baz=311					
NWLT				S	**Sb**	**07 29 42.2 +0.2**
	baz=311					
TWT	**Tachien**	**1.14**	**283**	*e*P	**Pb**	**07 29 27.9 -0.1**
	baz=268					
TWT				*e*S	**Sb**	**07 29 43.6 +1.1**
	baz=268					
YHNB	**Yeheng**	**1.15**	**306**	*e*P	**Pn**	**07 29 27.1 +0.1**
	baz=291					
YHNB				*e*S	**Sb**	**07 29 42.7 +0.1**
	baz=291					
TDCB	**Techi**	**1.16**	**283**	*e*P	**Pb**	**07 29 28.3 +0.1**
	baz=268					
TDCB				*e*S	**Sn**	**07 29 42.5 +0.3**
	baz=268					
YULB	**Yu-li**	**1.17**	**239**	P	**Pn**	**07 29 27.2 -0.1**
	baz=226					
YULB				*e*S	**Sn**	**07 29 42.3 0.0**
	baz=226					
VWDT	**VWDT**	**1.17**	**259**	*e*P	**Pb**	**07 29 28.5 +0.1**
	baz=256					
VWDT				*e*S	**Sb**	**07 29 43.0 -0.1**
	baz=256					
NWF	**Wu-fen Shan**	**1.21**	**333**	*e*P	**Pn**	**07 29 28.3 +0.3**
	baz=330					
NWF				*e*S	**Sb**	**07 29 44.8 +0.3**
	baz=330					
WFSB	**Wu-fen Shan**	**1.21**	**333**	*e*P	**Pn**	**07 29 27.9 0.0**
	baz=330					
WFSB				*e*S	**Sb**	**07 29 44.2 -0.2**
	baz=330					
TWA	**Mucha**	**1.23**	**323**	*e*P	**Pn**	**07 29 28.1 -0.1**
	baz=320					
TWA				*e*S	**Sb**	**07 29 45.3 +0.4**
	baz=320					
IRIF	**Iriomote-Funau**	**1.27**	**74**	P	**Pn**	**07 29 29.4 +0.7**
TATO	**Taipei**	**1.28**	**320**	*e*P	**Pb**	**07 29 30.1 -0.2**
	baz=317					
TATO				*e*S	**Sb**	**07 29 46.5 +0.1**
	baz=317					
HATJ	**Hateruma jima**	**1.29**	**87**	P	**Pn**	**07 29 29.1 0.0**
SSLB	**Suanglung**	**1.33**	**262**	*e*P	**Pb**	**07 29 30.8 -0.3**
	baz=259					
SSLB				*e*S	**Sb**	**07 29 48.1 +0.3**
	baz=259					
WHP	**Taichung City**	**1.35**	**282**	*e*P	**Pb**	**07 29 31.0 -0.6**
	baz=269					
WHP				*e*S	**Sb**	**07 29 47.9 -0.6**
	baz=269					
SMLT	**Sun Moon Lake**	**1.37**	**266**	*e*P	**Pn**	**07 29 30.1 0.0**
	baz=263					
YM01	**YM01**	**1.37**	**327**	*e*P	**Pb**	**07 29 31.4 -0.5**
	baz=339					
YM01				*e*S	**Sb**	**07 29 48.8 -0.2**
	baz=339					
YM05	**YM05**	**1.39**	**327**	*e*P	**Pn**	**07 29 31.0 +0.5**
	baz=324					
YM05				*e*S	**Sn**	**07 29 47.4 -0.5**
	baz=324					
TYC	**Yuchr**	**1.41**	**267**	*e*P	**Pb**	**07 29 31.7 -0.7**
	baz=264					
TYC				*e*S	**Sn**	**07 29 49.0 +0.9**
	baz=264					
LIOB	**Emei**	**1.41**	**298**	*e*P	**Pn**	**07 29 31.6 +0.8**
	baz=295					
LIOB				*e*S	**Sb**	**07 29 49.6 -0.6**
	baz=295					
NSTT	**Nanjuang**	**1.42**	**297**	*e*P	**Pn**	**07 29 31.6 +0.8**
	baz=294					
NSTT				*e*S	**Sn**	**07 29 49.2 +0.6**
	baz=294					
EDH	**Donghe**	**1.42**	**225**	*e*P	**Pn**	**07 29 30.4 -0.5**
	baz=214					
EDH				*e*S	**Sn**	**07 29 48.2 -0.4**
	baz=214					
JKRS	**Kuro-shima**	**1.50**	**80**	P	**Pn**	**07 29 33.0 +1.1**
JKRS				*e*S	**Sb**	**07 29 52.3 -0.3**
ALS	**Alishan**	**1.53**	**252**	*e*P	**Pn**	**07 29 33.7 +1.1**
	baz=250					
LDUT	**Ludao**	**1.56**	**213**	*e*P	**Pb**	**07 29 34.7 -0.4**
	baz=211					
LDUT				*e*S	**Sn**	**07 29 50.5 -1.6**
	baz=211					
CHN5	**Tsauling**	**1.62**	**256**	*e*P	**Pb**	**07 29 35.8 -0.3**
	baz=244					
CHN5				*e*S	**Sb**	**07 29 55.7 -0.4**
	baz=244					
JIJ	**Ishigaki jima**	**1.64**	**77**	*e*S	**Sn**	**07 29 54.8 +0.7**
CHN4	**Tsaushan**	**1.77**	**249**	*e*P	**Pb**	**07 29 37.9 -0.6**
	baz=248					
CHN4				*e*S	**Sb**	**07 29 59.9 -0.5**
	baz=248					
WTP	**Ta-pu**	**1.79**	**246**	*e*P	**Pn**	**07 29 37.6 +1.6**
	baz=244					
WTP				*e*S	**Sb**	**07 29 59.8 -1.2**
	baz=244					
JISG	**Ishigakijimahi**	**1.85**	**71**	P	**Pn**	**07 29 36.9 +0.2**
JISG				*e*S	**Sn**	**07 29 59.0 -0.2**
CHN1	**Nanshi**	**1.89**	**245**	*e*P	**Pn**	**07 29 38.8 +1.6**
	baz=244					
CHN1				*e*S	**Sb**	**07 30 02.7 -1.1**
	baz=244					

*JMA **21** 07:32:56.6±0.8, 46˚.49N×152˚.86E, h30km, M5.0*
*BJI **21** 07:32:56.1±0.0, 46˚.33N×153˚.01E, h30km, mB5.1/51, mb4.9/63, Ms4.7/55, Ms7 4.4/53*
*MOS **21** 07:32:57.8±1.0, 46˚.24N×152˚.94E, h41km, mb5.0/71, MS4.4/15, Error ellipse: s-maj=5.3km s-min=4.3km az=92.6*
*IDC **21** 07:32:59.8±0.5, 46˚.27N×152˚.93E, h40km±4km, mb4.2/24, mb1 4.4/30, mb1mx4.3/46, mbtmp4.4/30, ML3.6/6, MS4.3/39, Ms1 4.3/39, ms1mx4.1/57, Error ellipse: s-maj=13.6km s-min=10.3km az=151.0*
*SKHL **21** 07:32:59.2±0.2, 46˚.10N×153˚.00E, h59km±5km, mb5.0/13, mbv5.4/6, ms4.7/8, msh5.4/1*
*NEIC **21** 07:33:00.6±1.1, 46˚.27N±0˚.09×152˚.9E±0˚.1, h49km±6km, mb4.8/232, Error ellipse: s-maj=13.8km s-min=9.6km az=141.0*
*GCMT **21** 07:33:01.6±0.3, 46˚.33N±0˚.02×153˚.16E±0˚.03, h17km, MW5.0/97, Moment Tensor Solution.. s38,c47; s97,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.31±.17; $M_{\theta\theta}$-1.55±.11; $M_{\phi\phi}$-1.76±.12; $M_{r\theta}$-0.26±.28; $M_{\theta\phi}$-2.06±.09; $M_{\phi r}$1.61±.33; Best double couple: M_o3.89000×10^{16} NP1:ϕ_s243.00000˚,δ41.00000˚,λ121.00000˚. NP2: ϕ_s24.00000˚,δ56.00000˚,λ66.00000˚. Principal axes: T 3.9180, Plg69.0000˚, Azm243.0000˚; N -0.0570,*

Plg20.0000˚, Azm38.0000˚; P -3.8610, Plg8.0000˚, Azm131.0000˚; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 21 07:32:59.3±0.5, 46˚.13N±0˚.04×152˚.98E±0˚.04, h42km±3km, h42km:pP-P, n728, σ1°21/756, mb4.8/251, MS4.5/66, 39C-26D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.69**	**258**	*d* iPN		**Pn**	**07 33 54.9**	**+1.2**
KUR				*e*S		**Sn**	**07 34 38.6**	**+2.6**
KUR				pmax		pmax		
	comp=N,172nm,0.3s							
KUR				pmax		pmax		
	comp=Z,579nm,0.3s							
KUR				pmax		pmax		
	comp=E,56nm,0.4s							
KUR				smax		smax		
	comp=N,844nm,0.5s							
KUR				smax		smax		
	comp=E,585nm,0.4s							
KUR	**Kuril'sk**	**3.69**	**258**	*i* P		**Pn**	**07 33 54.6**	**+0.9**
KUR				AMB		AMB	07 33 55.0	
	comp=E,170nm,0.4s							
KUR				AMB		AMB	07 33 55.0	
	comp=E,60nm,0.4s							
KUR				AMB		AMB	07 33 55.0	
	comp=E,580nm,0.4s							
KUR				AMB		AMB	07 34 00.3	
	comp=E,2μm,4.0s							
KUR				*i* S		**Sn**	**07 34 36.3**	**+0.3**
KUR				A		A	07 34 38.5	
	comp=E,8μm,4.0s							
KUR				A		A	07 34 38.5	
	comp=E,3μm,4.0s							
KUR				A		A	07 34 42.0	
	comp=E,890nm,0.4s							
KUR				A		A	07 34 42.0	
	comp=E,1μm,0.4s							
KUR				AMS		AMS	07 35 14.0	
	comp=E,10μm,14.0s							
KUR				AMS		AMS	07 35 14.0	
	comp=E,8μm,14.0s							
KUR				AMS		AMS	07 35 14.0	
	comp=E,6μm,14.0s							
SKR	**Severo-Kuril's**	**5.02**	**23**	*e*PN		**Pn**	**07 34 12.6**	**+0.7**
SKR				pmax		pmax		
	comp=Z,600nm,4.4s							
SKR				pmax		pmax		
	comp=Z,182nm,0.4s							
SKR				pmax		pmax		
	comp=Z,100nm,4.3s							
SKR				MLR		MLR		
	comp=Z,2μm,15.0s							
SKR				MLR		MLR		
	comp=N,2μm,12.0s							
SKR				MLR		MLR		
	comp=E,3μm,15.0s							
SKR				MLR		MLR		
	comp=Z,2μm,12.0s							
SKR				MLR		MLR		
	comp=N,2μm,13.0s							
SKR				MLR		MLR		
	comp=E,2μm,12.0s							
SKR	**Severo-Kuril's**	**5.02**	**23**	*e*P		**Pn**	**07 34 12.6**	**+0.7**
SKR				AMB		AMB	07 34 13.0	
	comp=E,600nm,4.4s							
SKR				AMB		AMB	07 34 13.0	
	comp=E,180nm,0.4s							
SKR				*e*S		**Sn**	**07 35 07.5**	**-1.0**
SKR				A		A	07 35 15.0	
	comp=E,200nm,0.7s							
SKR				A		A	07 35 15.0	
	comp=E,340nm,0.7s							
SKR				AMS		AMS	07 36 39.0	
	comp=E,2μm,15.0s							
SKR				AMS		AMS	07 36 39.0	
	comp=E,3μm,15.0s							
SKR				AMS		AMS	07 36 39.0	
	comp=E,2μm,15.0s							
YUK	**Yuzh-Kuril'sk**	**5.46**	**250**	*e*PN		**Pn**	**07 34 18.0**	**0.0**
YUK				pmax		pmax		
	comp=Z,411nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**5.46**	**250**	*e*P		**Pn**	**07 34 18.0**	**0.0**
YUK				AMB		AMB	07 34 26.0	
	comp=Z,410nm,0.5s							
YUK				*e*S		**Sn**	**07 35 18.5**	**-0.9**
YUK				A		A	07 35 24.0	
	comp=Z,660nm,0.4s							
YUK				A		A	07 35 24.0	
	comp=Z,400nm,0.4s							
GRPR	**Tuman**	**5.53**	**250**	*e*PN		**Pn**	**07 34 19.4**	**+0.4**
GRPR				pmax		pmax		
	comp=Z,352nm,0.5s							
GRPR	**Tuman**	**5.53**	**250**	*e*P		**Pn**	**07 34 19.4**	**+0.4**
GRPR				AMB		AMB	07 34 29.0	
	comp=Z,350nm,0.5s							
GRPR				*e*S		**Sn**	**07 35 21.7**	**+0.4**
GRPR				A		A	07 35 22.0	
	comp=Z,540nm,0.3s							
GRPR				A		A	07 35 22.0	
	comp=Z,60nm,0.3s							
RUSJ	**Misakicho**	**5.83**	**252**	*e*PN		**Pn**	**07 34 25.8**	**+2.7**
RUSJ				*e*S		**Sn**	**07 35 31.5**	**+2.9**
NEM2	**Nemuro 2**	**5.84**	**244**	P		**Pn**	**07 34 21.4**	**-1.9**
NEM2				*e*S		**Sn**	**07 35 24.7**	**-4.3**
NMR	**Nemuro--Hokkai**	**5.85**	**244**	↓ *i* PN		**Pn**	**07 34 21.8**	**-1.6**
NMR	**Nemuro--Hokkai**	**5.85**	**244**	*i* P		**Pn**	**07 34 21.8**	**-1.6**
NMR				*i* S		**Sn**	**07 35 25.2**	**-3.9**
PAU	**Pauzhetka**	**5.91**	**24**	*e*P		**Pn**	**07 34 23.8**	**-0.4**
PAU				AMB		AMB	07 34 24.9	
	comp=Z,190nm,0.6s							
PAU				*e*S		**Sn**	**07 35 28.0**	**-2.6**
PAU				AMS		AMS	07 36 36.1	
	comp=Z,6μm,15.0s							
PAU				AMS		AMS	07 36 36.1	
	comp=Z,5μm,15.0s							
JRA	**Rausu**	**5.98**	**251**	P		**Pn**	**07 34 26.4**	**+1.2**
JNK	**Nakash**	**6.39**	**250**	P		**Pn**	**07 34 30.7**	**-0.2**
JNK				*e*S		**Sn**	**07 35 39.9**	**-2.7**
JAK	**Akkeshi**	**6.69**	**245**	P		**Pn**	**07 34 33.0**	**-1.9**
JAK				*e*S		**Sn**	**07 35 44.8**	**-5.0**
JTKR	**Abashiri--Toko**	**6.78**	**255**	P		**Pn**	**07 34 36.2**	**+0.1**
YSS	**Yuzh-Sakhalins**	**7.10**	**280**	↓ *e*PN		**Pn**	**07 34 43.1**	**+2.6**
YSS				pmax		pmax		
	comp=Z,500nm,6.7s							
YSS				pmax		pmax		
	comp=E,400nm,7.7s							
YSS				pmax		pmax		
	comp=Z,60nm,0.8s							
YSS				MLR		MLR		
	comp=E,2μm,17.0s							
YSS				MLR		MLR		
	comp=Z,3μm,17.0s							
YSS	**Yuzh-Sakhalins**	**7.10**	**280**	Pn		**Pn**	**07 34 39.4**	**-1.1**
YSS	**Yuzh-Sakhalins**	**7.10**	**280**	*e*P		**Pn**	**07 34 42.3**	**+1.8**
YSS				AMB		AMB	07 34 44.0	
	comp=Z,400nm,6.5s							
YSS				AMB		AMB	07 34 44.0	
	comp=Z,500nm,6.5s							
YSS				AMB		AMB	07 34 44.0	
	comp=Z,60nm,0.6s							
YSS				*e*S		**Sn**	**07 35 59.0**	**-0.8**
YSS				AMS		AMS	07 37 12.4	
	comp=Z,2μm,17.0s							
YSS				AMS		AMS	07 37 12.4	
	comp=Z,3μm,17.0s							
JMP	**Maruseppu**	**7.13**	**256**	P		**Pn**	**07 34 42.4**	**+1.4**
JAR	**Ashorobuto**	**7.14**	**250**	*e*S		**Sn**	**07 35 59.2**	**-1.7**
JKK2	**Kamakawa 2**	**7.59**	**256**	P		**Pn**	**07 34 48.4**	**+1.1**
JKA	**Kamikawa-asahi**	**7.61**	**258**	Pn		**Pn**	**07 34 48.8**	**+1.3**
JKA	**Kamikawa-asahi**	**7.61**	**258**	*e*P		**Pn**	**07 34 48.8**	**+1.3**
ASAJ	**Asahikawa**	**7.61**	**258**	Pn		**Pn**	**07 34 48.1**	**+0.6**
	comp=Z,3.0nm,0.3s,baz=75,slow=30,SNR=10							
ASAJ				LR		LR	07 37 49.6	
	comp=Z,2μm,18.5s,baz=49,slow=38							
ASAJ	**Asahikawa**	**7.61**	**258**	P		**Pn**	**07 34 48.9**	**+1.3**
ASAJ	**Asahikawa**	**7.61**	**258**	PN		**Pn**	**07 34 48.8**	**+1.2**
PEA0B	**Petropavlovsk-**	**7.63**	**22**	*i* PN		**Pn**	**07 34 45.4**	**-2.4**
PEA0B	**Petropavlovsk-**	**7.63**	**22**	Pn		**Pn**	**07 34 46.6**	**-1.2**
PETK	**Petropavlovsk-**	**7.63**	**22**	Pn		**Pn**	**07 34 45.7**	**-2.1**
	comp=Z,1.6nm,0.3s,baz=183,slow=13,SNR=38							
PETK				LR		LR	07 37 41.6	
	comp=Z,1μm,20.7s,baz=239,slow=38							
PETK	**Petropavlovsk-**	**7.63**	**22**	PN		**Pn**	**07 34 46.4**	**-1.4**
PETK	**Petropavlovsk-**	**7.63**	**22**			**Pn**	**07 34 46.4**	**-1.4**
JCH	**Churui**	**7.73**	**246**	P		**Pn**	**07 34 48.0**	**-1.2**
JCH				*e*S		**Sn**	**07 36 10.7**	**-4.7**
PET	**Petropavlovsk**	**7.83**	**26**	*e*PN		**Pn**	**07 34 48.6**	**-1.8**
PET				MLR		MLR		
	comp=Z,2μm,13.0s							
PET				MLR		MLR		
	comp=Z,2μm,13.0s							
PET	**Petropavlovsk**	**7.83**	**26**			**Pn**	**07 34 50.6**	**+0.2**
PET	**Petropavlovsk**	**7.83**	**26**	*e*P		**Pn**	**07 34 52.0**	**+1.6**
PET				AMB		AMB	07 35 05.3	
	comp=Z,70nm,0.8s							
PET				*e*S		**Sn**	**07 36 14.5**	**-3.1**
PET				A		A	07 36 21.9	
	comp=Z,80nm,0.6s							
PET				A		A	07 36 21.9	
	comp=Z,210nm,0.6s							
PET				AMS		AMS	07 38 56.0	
	comp=Z,2μm,13.0s							
UGL	**Uglegorsk**	**7.94**	**296**	*e*PN		**Pn**	**07 34 55.3**	**+3.3**
UGL				pmax		pmax		
	comp=Z,118nm,1.0s							
UGL				MLR		MLR		
	comp=Z,2μm,17.0s							
UGL				MLR		MLR		
	comp=E,2μm,11.0s							
UGL	**Uglegorsk**	**7.94**	**296**	*e*P		**Pn**	**07 34 53.9**	**+1.9**
UGL				AMB		AMB	07 35 06.0	
	comp=E,120nm,1.0s							
UGL				*e*S		**Sn**	**07 36 19.9**	**-0.6**
UGL				A		A	07 36 32.0	
	comp=E,80nm,0.6s							
UGL				A		A	07 36 32.0	
	comp=E,120nm,0.6s							
UGL				AMS		AMS	07 39 33.5	
	comp=E,2μm,17.0s							
UGL				AMS		AMS	07 39 33.5	
	comp=E,2μm,11.0s							
JEM	**Erimo**	**8.18**	**243**	Pn		Pn	07 34 48.3	-7.0
ERM	**Erimo**	**8.18**	**243**	*i* PN		**Pn**	**07 34 57.8**	**+2.5**
ERM	**Erimo**	**8.18**	**243**	Pn		**Pn**	**07 34 56.4**	**+1.1**
JBT2	**Biratori 2**	**8.30**	**250**	P		**Pn**	**07 34 57.0**	**+0.1**
TYV	**Tymovskoe**	**8.33**	**308**	*e*PN		**Pn**	**07 35 00.5**	**+3.1**
TYV				*e*S		**Sn**	**07 36 36.1**	**+6.1**
TYV				pmax		pmax		
	comp=Z,34nm,0.6s							
TYV				pmax		pmax		
	comp=Z,300nm,2.5s							
TYV				smax		smax		
	comp=E,22nm,0.6s							
TYV				MLR		MLR		
	comp=Z,4μm,17.0s							
TYV				MLR		MLR		
	comp=E,4μm,16.0s							
TYV	**Tymovskoe**	**8.33**	**308**	*e*P		**Pn**	**07 35 00.4**	**+3.1**
TYV				AMB		AMB	07 35 01.0	
	comp=E,30nm,0.6s							
TYV				AMB		AMB	07 35 02.0	
	comp=E,300nm,2.5s							
TYV				*e*S		**Sn**	**07 36 29.0**	**-1.0**
TYV				A		A	07 36 37.2	
	comp=E,20nm,0.6s							
TYV				AMS		AMS	07 38 14.0	
	comp=E,4μm,17.0s							
TYV				AMS		AMS	07 38 14.0	
	comp=E,4μm,17.0s							
JEW	**Eniwo**	**8.87**	**252**	Pn		**Pn**	**07 35 05.0**	**+0.2**
JKB	**Kayabe**	**9.59**	**248**	*e*S		**Sn**	**07 36 53.4**	**-7.6**
OKH	**Okha**	**9.86**	**323**	*c i* PN		**Pn**	**07 35 21.2**	**+3.0**
OKH				*i* S		**Sn**	**07 37 12.8**	**+5.4**
OKH				pmax		pmax		
	comp=Z,300nm,5.7s							
OKH				smax		smax		
	comp=N,100nm,11.2s							
OKH				MLR		MLR		
	comp=E,3μm,14.0s							
OKH				MLR		MLR		
	comp=Z,2μm,14.0s							
OKH				MLR		MLR		
	comp=N,2μm,15.0s							
OKH	**Okha**	**9.86**	**323**	*i* P		**Pn**	**07 35 21.2**	**+3.0**
OKH				AMB		AMB	07 35 26.2	
	comp=N,300nm,5.7s							
OKH				*i* S		**Sn**	**07 37 08.8**	**+1.4**
OKH				AMS		AMS	07 40 07.0	
	comp=N,2μm,14.0s							
OKH				AMS		AMS	07 40 07.0	
	comp=N,3μm,14.0s							
OKH				AMS		AMS	07 40 07.0	
	comp=N,2μm,14.0s							
JANG	**Nango**	**10.14**	**240**	*e*S		Sn	07 37 03.4	-11
JTM	**Tenmabayashi**	**10.17**	**243**	*e*S		**Sn**	**07 37 06.5**	**-8.6**
JTH	**Tanohata**	**10.21**	**237**	*e*S		Sn	07 37 04.5	-12
OFUJ	**Ofunato**	**10.90**	**234**	*e*S		Sn	07 37 21.9	-11
TEY	**Ternei**	**11.53**	**270**	*e*P		**Pn**	**07 35 41.7**	**+0.6**
TEY				AMB		AMB	07 35 47.8	
	comp=N,10.0nm,1.0s							
GRNR	**Gornyy**	**11.93**	**299**	↓ *i* PN		Pn	07 35 51.8	+5.2
GRNR				pmax		pmax		
	comp=Z,9.0nm,0.6s							
GRNR				MLR		MLR		
	comp=E,1μm,16.0s							
GRNR				MLR		MLR		
	comp=N,600nm,15.0s							
GRNR				MLR		MLR		
	comp=Z,2μm,17.0s							
GRNR	**Gornyy**	**11.93**	**299**	*e*P		**Pn**	**07 35 47.1**	**+0.5**
GRNR				AMB		AMB	07 35 52.4	
	comp=Z,10.0nm,0.6s							
GRNR				AMS		AMS	07 40 35.4	
	comp=Z,600nm,16.0s							
GRNR				AMS		AMS	07 40 35.4	
	comp=Z,1μm,16.0s							
GRNR				AMS		AMS	07 40 35.4	
	comp=Z,2μm,16.0s							
JMM	**Marumori**	**12.25**	**232**	Pn		**Pn**	**07 35 52.3**	**+1.3**
MA2	**Magadan**	**13.54**	**355**	Pn		**Pn**	**07 36 06.7**	**-1.8**
	comp=Z,2.1nm,0.3s,baz=178,slow=10.0,SNR=23							
MA2				LR		LR	07 41 37.4	
	comp=Z,1μm,18.4s,baz=186,slow=39							
MA2	**Magadan**	**13.54**	**355**	*ce*PN		**Pn**	**07 36 08.2**	**-0.3**
MA2				pmax		pmax		
	comp=Z,18nm,0.7s							
MA2	**Magadan**	**13.54**	**355**	Pn		**Pn**	**07 36 07.6**	**-0.9**
MA2	**Magadan**	**13.54**	**355**	*e*P		**Pn**	**07 36 08.2**	**-0.3**
MA2				AMB		AMB	07 36 09.8	
	comp=Z,20nm,0.7s							
JSD	**Sado**	**13.58**	**239**	Pn		**Pn**	**07 36 10.5**	**+1.3**
KLR	**Kul'dur**	**14.62**	**290**	Pn		**Pn**	**07 36 22.6**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=98,slow=15,SNR=10							
KLR				LR		LR	07 42 22.6	
	comp=Z,2μm,18.1s,baz=94,slow=39							
KLR	**Kul'dur**	**14.62**	**290**	*ce*P		**Pn**	**07 36 23.7**	**+0.5**
KLR	**Kul'dur**	**14.62**	**290**	*e*P		**Pn**	**07 36 21.7**	**-1.5**
MAJO	**Matsushiro**	**14.63**	**234**	P		**Pn**	**07 36 23.9**	**+0.4**
MAJO	**Matsushiro**	**14.63**	**234**	Pn		**Pn**	**07 36 23.9**	**+0.4**
MAT	**Matsushiro**	**14.63**	**234**	P		**Pn**	**07 36 26.4**	**-2.6**
MJAR	**Matsushiro Arr**	**14.63**	**234**	Pn		**Pn**	**07 36 24.8**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=29,slow=12,SNR=7.2							
MJAR	**Matsushiro Arr**	**14.63**	**234**	P		**Pn**	**07 36 25.0**	**+1.5**
MJAR	**Matsushiro Arr**	**14.63**	**234**			**Pn**	**07 36 25.0**	**+1.5**
EKMR	**Ekimchan**	**14.70**	**305**	*e*P		**Pn**	**07 36 24.0**	**-0.2**
EKMR				AMB		AMB	07 36 33.2	
	comp=Z,10.0nm,0.8s							
USA0B	**Ussuriysk Arra**	**14.93**	**270**	P		**Pn**	**07 36 27.8**	**+0.5**
USA0B	**Ussuriysk Arra**	**14.93**	**270**	Pn		**Pn**	**07 36 27.8**	**+0.5**
USRK	**Ussuriysk Ar.**	**14.93**	**270**	Pn		**Pn**	**07 36 26.1**	**-1.2**
	baz=76,slow=13,SNR=21							
USRK				LR		LR	07 42 15.6	
	comp=Z,826nm,18.2s,baz=69,slow=37							
USRK	**Ussuriysk Ar.**	**14.93**	**270**	P		**Pn**	**07 36 27.2**	**-0.1**
USRK	**Ussuriysk Ar.**	**14.93**	**270**			**Pn**	**07 36 27.2**	**-0.1**
MDJ	**Mudanjiang**	**16.49**	**273**	P		**Pn**	**07 36 48.0**	**+0.6**
MDJ				pmax		pmax		
	comp=Z,28nm,1.0s							
MDJ				pmax		pmax		
	comp=

BMKR Bomnak 17.54 308 *e*P Pn 07 37 00.2 -0.2
BMKR AMB AMB 07 37 06.9
comp=Z,10.0nm,0.7s
BMKR AMB AMB 07 37 06.9
comp=Z,10.0nm,0.7s
ZEA Zeya 18.16 304 *e*P **Pn** **07 37 08.1 +0.2**
ZEA *e*S Sn 07 40 17.2 -12
ZEA pmax pmax
comp=E,300nm,4.2s
ZEA pmax pmax
comp=Z,300nm,5.0s
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.5s
ZEA smax smax
comp=N,100nm,9.3s
ZEA MLR MLR
comp=E,600nm,17.0s
ZEA MLR MLR
comp=Z,700nm,14.0s
ZEA Zeya 18.16 304 *e*P **Pn** **07 37 08.1 +0.2**
ZEA AMB AMB 07 37 13.1
comp=Z,300nm,4.5s
ZEA AMB AMB 07 37 13.1
comp=Z,300nm,4.5s
ZEA AMB AMB 07 37 14.0
comp=Z,10.0nm,1.0s
ZEA AMB AMB 07 37 14.0
comp=Z,20nm,1.0s
ZEA AMS AMS 07 44 23.0
comp=Z,600nm,17.0s
ZEA AMS AMS 07 44 23.0
comp=Z,700nm,14.0s
CN2 Changchun 19.58 273 *e*P **P** **07 37 23.8 +0.2**
CN2 *e*S S 07 40 50.3 -12
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,190nm,5.1s
CN2 LR LR
comp=Z,800nm,17.0s
CN2 LR LR
comp=Z,810nm,17.0s
CN2 LR LR
comp=Z,1μm,18.0s
KSRS Korea Array 20.53 254 P Pn 07 37 35.2 -1.1
comp=Z,11nm,1.0s,baz=56,slow=11,SNR=18
KSRS LR LR 07 44 40.0
comp=Z,529nm,20.1s,baz=55,slow=34
KS19 Wonju Array Si 20.54 254 P **P** **07 37 33.5 -0.5**
YAK Yakutsk 20.80 328 P **P** **07 37 35.7 -0.9**
comp=Z,57nm,0.5s,baz=339,slow=1.0,SNR=13
YAK LR LR 07 45 54.4
comp=Z,1μm,18.3s,baz=100,slow=38
YAK Yakutsk 20.80 328 *e*P **P** **07 37 36.3 -0.3**
YAK *e* 07 37 49.4
YAK *e*S **S** **07 41 26.4 +0.4**
YAK *e*SS **SnSn** **07 41 45.4 -2.4**
YAK *e*SSS SSS 07 41 57.6
YAK pmax pmax
comp=Z,48nm,0.6s
YAK pmax pmax
comp=N,3.0nm,0.5s
YAK pmax pmax
comp=E,5.0nm,0.6s
YAK smax smax
comp=N,65nm,2.2s
YAK smax smax
comp=E,57nm,2.2s
YAK MLR MLR
comp=Z,991nm,17.0s
YAK MLR MLR
comp=N,603nm,18.0s
YAK MLR MLR
comp=E,435nm,18.0s
YAK Yakutsk 20.80 328 P **P** **07 37 36.0 -0.5**
YAK Yakutsk 20.80 328 *e*P **P** **07 37 36.3 -0.3**
JCJ Chichijima 20.84 208 LR LR 07 47 48.8
comp=E,326nm,18.6s,baz=121,slow=42
JNU Nakatsue 21.32 240 LR LR 07 46 40.4
comp=E,384nm,19.9s,baz=36,slow=38
INCN Inchon 21.38 256 P **P** **07 37 42.6 -0.5**
INCN pmax pmax
comp=Z,42nm,1.2s
INCN Inchon 21.38 256 P **P** **07 37 42.6 -0.5**
INCN IAmb IAmb 07 38 05.5
comp=Z,42nm,1.1s
TJN Taejon 21.50 252 *ce*P **P** **07 37 47.3 +3.0**
BILL Bilibino 23.02 13 *d i*P **P** **07 37 59.0 -1.2**
BILL *e* 07 38 26.4
BILL pmax pmax
comp=Z,11nm,0.8s
BILL MLR MLR
comp=Z,661nm,15.0s
BILL Bilibino 23.02 13 P **P** **07 37 59.3 -0.9**
DL2 Dalian 24.09 264 P **P** **07 38 10.8 +0.1**
DL2 S **S** **07 42 25.6 +0.3**
DL2 sS **sS** **07 42 42.1 +0.1**
DL2 pmax pmax
comp=Z,43nm,1.0s
DL2 pmax pmax
comp=Z,460nm,5.6s
DL2 LR LR
comp=Z,430nm,17.9s
DL2 LR LR
comp=Z,280nm,14.3s
DL2 LR LR
comp=Z,520nm,15.1s
BOD Bodaibo 26.32 311 *e*P **P** **07 38 28.5 -2.2**
BOD pmax pmax
comp=Z,17nm,1.9s
GAMB Gambell 26.38 35 P **P** **07 38 30.0 -1.2**
GAMB Gambell 26.38 35 P 07 38 30.2
baz=245,SNR=5.8
BJI Beijing 27.38 270 P **P** **07 38 41.5 +1.1**
BJI pmax pmax
comp=Z,16nm,0.9s
BJI LR LR
comp=Z,400nm,13.2s
BJI LR LR
comp=Z,820nm,16.2s
BJI LR LR
comp=Z,640nm,17.1s
BJT Baijiatuau 27.39 270 P **P** **07 38 39.8 -0.8**
BJT pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuau 27.39 270 P **P** **07 38 39.8 -0.8**
TIXI Tiksi 28.04 344 P **P** **07 38 44.1 -1.9**
comp=Z,2.6nm,0.5s,baz=158,slow=7.5,SNR=8.0
TIXI LR LR 07 51 00.5
comp=Z,1μm,18.3s,baz=144,slow=39
TIXI Tiksi 28.04 344 P **P** **07 38 43.9 -2.1**
TIXI pmax pmax
comp=Z,4.0nm,0.9s
TIXI Tiksi 28.04 344 P **P** **07 38 43.9 -2.1**
TNA Tin City 28.60 33 **P** **07 38 50.9 -0.2**
SSE Sheshan 28.79 250 P **P** **07 38 54.0 +0.9**
SSE pmax pmax
comp=Z,22nm,0.6s
SSE pmax pmax
comp=Z,79nm,3.3s
SSE LR LR
comp=Z,340nm,19.2s
SSE LR LR
comp=Z,290nm,17.7s
NJ2 Nanjing 29.73 254 *e*P **P** **07 39 02.3 +0.9**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 LR LR
comp=Z,1μm,17.1s
NJ2 LR LR
comp=Z,800nm,14.2s
NJ2 LR LR
comp=Z,640nm,18.5s
H11S1 WAKE ISLAND Hy 29.79 153 T T 08 11 56.1
baz=341,slow=76,SNR=204
H11S3 WAKE ISLAND Hy 29.80 153 T T 08 12 04.6
baz=341,slow=76,SNR=102
H11S2 WAKE ISLAND Hy 29.81 153 T T 08 12 05.4
baz=341,slow=76,SNR=172
HHC Hu-ho-hao-te 30.25 275 *e*P **P** **07 39 07.0 +0.9**
HHC S **S** **07 44 04.8 +2.0**
HHC pmax pmax
comp=Z,38nm,0.8s
HHC pmax pmax
comp=Z,180nm,4.9s
HHC LR LR
comp=Z,800nm,16.2s
HHC LR LR
comp=Z,830nm,17.0s
HHC LR LR
comp=Z,1μm,16.2s
ULN Ulaanbaatar 31.02 290 *ce*P **P** **07 39 14.4 +1.6**
ULN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 31.02 290 P **P** **07 39 13.3 +0.4**
ULN Ulaanbaatar 31.02 290 *e*P **P** **07 39 14.4 +1.6**
RDOG Red Dog Mine 31.40 30 P **P** **07 39 14.7 -1.1**
SONM Songino Array 31.46 290 P **P** **07 39 15.7 -0.9**
comp=Z,1.6nm,0.5s,baz=81,slow=7.4,SNR=7.1
SONM LR LR 07 52 58.6
comp=Z,768nm,18.3s,baz=76,slow=38
SONM Songino Array 31.46 290 P **P** **07 39 15.3 -1.4**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 31.46 290 P **P** **07 39 15.3 -1.4**
TLY Talaya 32.38 298 LR LR 07 53 29.5
comp=Z,1μm,18.6s,baz=78,slow=38
TLY Talaya 32.38 298 *i* P **P** **07 39 23.2 -1.4**
TLY pmax pmax
comp=Z,2.0nm,0.4s
ZAK Zakamensk 32.86 296 *e*P **P** **07 39 26.9 -2.0**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
SVW2 Sparrevohn 33.00 44 P **P** **07 39 30.8 +0.9**
WHN Wuhan 33.69 256 ⇑P P 07 39 27.9 -8.2
OHAK Old Harbor 34.24 51 P 07 39 40.1
baz=275
IMAR Indian Mountai 34.33 36 P **P** **07 39 41.3 -0.1**
KDAK Kodiak Island 34.57 50 P **P** **07 39 43.1 -0.4**
KDAK pmax pmax
comp=Z,30nm,1.4s
KDAK Kodiak Island 34.57 50 P **P** **07 39 43.1 -0.4**
KDAK Kodiak Island 34.57 50 P 07 39 43.3
baz=275
A21K Barrow 34.61 26 P **P** **07 39 43.5 -0.2**
A21K Barrow 34.61 26 P 07 39 42.7
baz=251
PPLA Purkeypile 34.69 41 P **P** **07 39 45.5 +0.8**
PPLA Purkeypile 34.69 41 P 07 39 44.6
baz=268
CHUM Lake Minchumin 34.70 39 P 07 39 44.6
baz=266
SKT Skwentna 34.97 43 P 07 39 47.0
baz=270
CNPM China Poot 35.16 47 P **P** **07 39 49.9 +1.2**
BPAW Bear Paw Mtn. 35.30 39 P **P** **07 39 50.4 +0.6**
BPAW Bear Paw Mtn. 35.30 39 P 07 39 50.3
baz=267
KTH Kantishna Hill 35.30 40 P **P** **07 39 50.4 +0.6**
XAN Xi'an 35.37 266 P **P** **07 39 50.8 0.0**
XAN pmax pmax
comp=Z,12nm,1.0s
XAN pmax pmax
comp=Z,240nm,3.6s
XAN LR LR
comp=Z,350nm,16.3s
XAN LR LR
comp=Z,470nm,18.4s
XAN LR LR
comp=Z,610nm,18.4s
XAN Xi'an 35.37 266 P **P** **07 39 51.0 +0.2**
XAN pmax pmax
comp=Z,12nm,1.0s
XAN Xi'an 35.37 266 P **P** **07 39 51.0 +0.2**
XAN IAmb IAmb 07 40 02.0
comp=Z,12nm,1.0s
MLY Manley 35.47 37 P **P** **07 39 51.0 -0.3**
MLY Manley 35.47 37 P 07 39 51.2
baz=266,SNR=5.8
TRF Thorofare Moun 35.58 40 P **P** **07 39 52.2 -0.1**
TRF IAmb IAmb 07 40 07.2
comp=Z,6.6nm,0.7s
TRF Thorofare Moun 35.58 40 P 07 39 51.9
baz=268
COLD Coldfoot 35.90 34 P **P** **07 39 54.8 -0.1**
COLD Coldfoot 35.90 34 P 07 39 54.3
baz=263,SNR=7.9
BWN Browne 35.97 39 P **P** **07 39 56.8 +1.3**
I23K Minto, Yukon-K 36.06 37 P **P** **07 39 56.8 +0.6**
I23K IAmb IAmb 07 40 21.3
comp=Z,14nm,1.4s
I23K Minto, Yukon-K 36.06 37 P 07 39 56.1
baz=267
PMR Palmer 36.12 43 P **P** **07 39 56.3 -0.5**
PMR pmax pmax
comp=Z,13nm,1.3s
PMR Palmer 36.12 43 P **P** **07 39 56.3 -0.5**
PMR IAmb IAmb 07 40 05.8
comp=Z,12nm,1.3s
PMR Palmer 36.12 43 P 07 39 56.8
baz=272
NEA2 Nenana 36.15 38 P **P** **07 39 57.6 +0.5**
NEA2 IAmb IAmb 07 40 13.8
comp=Z,7.0nm,0.7s
NEA2 Nenana 36.15 38 P 07 39 57.3
baz=268
MCK McKinley 36.19 40 P **P** **07 39 58.3 +0.9**
MCK pmax pmax
comp=Z,12nm,1.2s
MCK McKinley 36.19 40 P **P** **07 39 58.3 +0.9**
MCK IAmb IAmb 07 40 21.6
comp=Z,12nm,1.2s
MCK McKinley 36.19 40 P 07 39 57.2
baz=269
GHO Glory Hole Cre 36.21 43 P **P** **07 39 58.3 +0.7**
GHO IAmb IAmb 07 40 09.1
comp=Z,25nm,1.5s
RND Reindeer 36.22 40 P **P** **07 39 56.9 -0.9**
RND pmax pmax
comp=Z,16nm,1.3s
RND Reindeer 36.22 40 P **P** **07 39 56.9 -0.9**
RND IAmb IAmb 07 40 21.7
comp=Z,16nm,1.3s
TOLK Toolik Lake Re 36.33 31 P **P** **07 39 58.4 -0.1**
TOLK IAmb IAmb 07 40 03.0
comp=Z,9.0nm,0.9s
TOLK Toolik Lake Re 36.33 31 P 07 39 58.4
baz=262,SNR=12
WAT2 Susitna Watana 36.34 41 P 07 39 58.7
baz=271
SML Sawmill 36.49 43 P **P** **07 39 59.6 -0.4**
SML Sawmill 36.49 43 P 07 39 59.6
baz=272,SNR=6.6
MDM Murphy Dome 36.53 38 P **P** **07 39 60.0 -0.3**
WRH Wood River Hil 36.57 39 P **P** **07 40 00.6 0.0**
TCOL CIGO, UAF Yank 36.68 38 P **P** **07 40 02.0 +0.4**
TCOL IAmb IAmb 07 40 25.7
comp=Z,12nm,0.8s
TCOL CIGO, UAF Yank 36.68 38 P 07 40 01.5
baz=269
COLA College 36.69 38 *i* P **P** **07 40 01.6 0.0**
COLA pmax pmax
comp=Z,7.0nm,0.7s
COLA College 36.69 38 P **P** **07 40 02.2 +0.6**
COLA IAmb IAmb 07 40 25.7
comp=Z,12nm,0.8s
COLA College 36.69 38 P 07 40 01.7
baz=269
CCB Clear Creek Bu 36.70 38 P **P** **07 40 01.7 0.0**
WAT6 Susitna Watana 36.74 42 P 07 40 02.2
baz=272
SCM Sheep Creek Mo 36.96 43 P **P** **07 40 04.5 +0.4**
SCM pmax pmax
comp=Z,19nm,1.0s
SCM Sheep Creek Mo 36.96 43 P **P** **07 40 04.5 +0.4**
SCM IAmb IAmb 07 40 32.4
comp=Z,19nm,1.0s
HDA Harding Lake 37.07 39 P 07 40 04.8
baz=270
HDA P 07 40 04.8
baz=270
IL31 37.10 38 P **P** **07 40 05.7 +0.7**
ILAR Eielson Array 37.10 38 P **P** **07 40 04.5 -0.6**
comp=Z,3.3nm,0.8s,baz=256,slow=7.7,SNR=18
ILAR LR LR 07 59 20.8
comp=Z,193nm,18.0s,baz=286,slow=43
GLI Glacier Island 37.14 45 P **P** **07 40 05.0 -0.5**
M24K Tolsona, Glenn 37.49 42 P **P** **07 40 09.5 +0.9**
M24K Tolsona, Glenn 37.49 42 P 07 40 09.0
baz=274
KLU Klutina 37.66 43 P 07 40 09.4
baz=275
PRP Porcupine Dome 37.68 37 P **P** **07 40 10.3 +0.1**
PRP Porcupine Dome 37.68 37 P 07 40 10.5
baz=270
FYU Fort Yukon 37.81 35 P **P** **07 40 11.9 +0.9**
FYU IAmb IAmb 07 40 24.3
comp=Z,18nm,1.0s
LZH Lanzhou 37.82 273 ⇓P **P** **07 40 13.6 +1.9**
LZH S **S** **07 45 57.4 -2.4**
LZH pmax pmax
comp=Z,64nm,1.0s
LZH pmax pmax
comp=Z,190nm,7.6s
LZH LR LR
comp=Z,510nm,16.3s
LZH LR LR
comp=Z,640nm,17.9s
LZH LR LR
comp=Z,470nm,15.7s
BMRM Bremner River 38.34 44 P 07 40 15.3
baz=277
DOT Dot Lake 38.36 40 P **P** **07 40 14.9 -0.9**
RAGM Ragged Mountai 38.38 45 P **P** **07 40 16.1 +0.1**
SCRK Sand Creek 38.38 39 P **P** **07 40 15.8 -0.3**
SCRK Sand Creek 38.38 39 P 07 40 15.6
baz=273
KAIM Kayak Island 38.56 46 P **P** **07 40 17.1 -0.5**
MENT Mentasta 38.57 41 P **P** **07 40 18.0 +0.5**
GLB Gilahina Butte 38.67 43 P **P** **07 40 18.9 +0.5**
VRDI Verde Repeater 38.87 44 P **P** **07 40 20.6 +0.3**
VRDI IAmb IAmb 07 40 35.8
comp=Z,10nm,0.8s
GTA Gaotai 38.98 280 ⇓P **P** **07 40 22.9 +1.5**
GTA pP pP 07 40 32.0 0.0
GTA sP pwP 07 40 35.9 -0.6
GTA PcP **PcP** **07 42 33.3 +2.2**
GTA sS sS 07 46 38.8 +4.4
GTA pmax pmax
comp=Z,18nm,0.9s
GTA pmax pmax
comp=Z,170nm,5.1s
GTA LR LR
comp=Z,460nm,16.4s
GTA LR LR
comp=Z,410nm,17.4s
GTA LR LR
comp=Z,400nm,17.8s
MCARA McCarthy VSAT 39.05 43 P **P** **07 40 22.6 +1.0**
MCARA IAmb IAmb 07 40 49.2
comp=Z,20nm,1.2s
CRQM Cirque 39.08 44 P **P** **07 40 23.0 +1.0**
K27K Chicken 39.21 39 P **P** **07 40 23.0 +0.1**
K27K IAmb IAmb 07 40 28.0
comp=Z,20nm,1.2s
K27K Chicken 39.21 39 P 07 40 22.9
baz=275
NRIK Noril'sk 39.25 329 P **P** **07 40 21.9 -1.3**
comp=Z,4.2nm,0.8s,baz=86,slow=9.9,SNR=13
NRIK LR LR 07 57 25.0
comp=Z,331nm,19.0s,baz=76,slow=38
NRIK Noril'sk 39.25 329 *ce*P **P** **07 40 21.1 -2.0**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
NRIK Noril'sk 39.25 329 P **P** **07 40 21.3 -1.8**
L27K Beaver Creek, 39.41 41 P **P** **07 40 25.3 +0.7**
L27K Beaver Creek, 39.41 41 P 07 40 25.1
baz=276,SNR=9.3
EGAK Eagle 39.55 38 P **P** **07 40 25.2 -0.4**
EGAK IAmb IAmb 07 40 45.2
comp=Z,9.0nm,0.8s
EGAK Eagle 39.55 38 P 07 40 24.9
baz=275,SNR=9.0
BARN Barnard Glacie 39.75 44 P **P** **07 40 28.3 +0.6**
BARN IAmb IAmb 07 40 42.9
comp=Z,14nm,0.8s
GRNC Granite Creek 39.76 44 P **P** **07 40 28.7 +0.9**
GRNC IAmb IAmb 07 40 43.2
comp=Z,19nm,0.8s
YAH Yahtse 39.82 45 P **P** **07 40 28.6 +0.3**
YAH IAmb IAmb 07 40 43.6
comp=Z,15nm,0.8s
CTG Chitna Glacier 39.92 44 P 07 40 28.9
baz=279
CTGM Chitina Glacie 39.92 44 P **P** **07 40 29.9 +0.9**
CTGM IAmb IAmb 07 40 44.6
comp=Z,20nm,0.8s
TABL Table Mountain 40.10 45 P **P** **07 40 31.1 +0.5**
TABL IAmb IAmb 07 40 43.9
comp=Z,31nm,1.2s
LOGN Logan Glacier 40.10 44 P **P** **07 40 30.9 +0.4**
DAWY Dawson 40.38 39 P **P** **07 40 33.4 +0.7**
CD2 Chengdu 40.73 266 P **P** **07 40 36.6 +0.6**
CD2 S **S** **07 46 44.0 +0.5**
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 pmax pmax
comp=Z,150nm,6.3s
CD2 LR LR
comp=Z,570nm,13.3s
CD2 LR LR
comp=Z,490nm,15.8s
CD2 LR LR
comp=Z,540nm,17.5s
EPYK Eagle Plains 41.23 35 P **P** **07 40 40.1 +0.5**
EPYK Eagle Plains 41.23 35 P 07 40 39.8
baz=277,SNR=5.2
GYA Guiyang 41.49 258 ⇓P **P** **07 40 43.3 +1.0**
GYA sP sP 07 40 57.6 +0.7
GYA S **S** **07 46 54.5 -0.4**
GYA pmax pmax
comp=Z,5.0nm,0.8s
HYT Haines Junctio 41.79 44 P **P** **07 40 45.7 +1.3**
INK Inuvik 42.23 32 P **P** **07 40 47.9 +0.2**
INK pmax pmax
comp=Z,11nm,0.8s
INK Inuvik 42.23 32 P **P** **07 40 47.9 +0.2**
INK IAmb IAmb 07 41 03.0
comp=Z,11nm,0.8s
DGZ Jazzator, Alta 42.83 300 *i* P **P** **07 40 52.7 -0.3**
DGZ pmax pmax
comp=Z,1.0nm,0.3s
ZAA0 Zalesovo Array 42.90 306 P **P** **07 40 51.4 -1.9**
ZALV Zalesovo Beam 42.90 306 P **P** **07 40 51.5 -1.8**
comp=Z,3.6nm,0.6s,baz=58,slow=7.6,SNR=12
ZALV PcP **PcP** **07 42 43.5 +0.1**
comp=Z,3.5nm,0.8s,baz=111,slow=3.3,SNR=6.1
ZALV LR LR 07 59 52.3
comp=Z,2μm,18.3s,baz=70,slow=38
WHY Whitehorse 43.08 43 P **P** **07 40 55.1 +0.2**
JIS Juneau Island 43.97 47 P **P** **07 41 02.7 +0.9**
JIS IAmb IAmb 07 41 18.3
comp=Z,16nm,1.1s
QIZ Qiongzhong 44.52 247 P **P** **07 41 07.8 +1.1**
QIZ S **S** **07 47 39.1 -0.1**
QIZ LR LR
comp=Z,530nm,16.1s
QIZ LR LR
comp=Z,430nm,21.6s
KMI Kunming 45.04 260 ⇑P **P** **07 41 12.3 +1.2**
KMI pP pP 07 41 23.4 +1.3
KMI sP sP 07 41 29.3 +2.6
KMI S **S** **07 47 45.1 -2.0**
KMI SS **ScS** **07 50 59.1 -5.7**
KMI pmax pmax
comp=Z,14nm,0.7s
KMI pmax pmax
comp=Z,120nm,3.8s
KMI LR LR
comp=Z,470nm,19.7s
KMI LR LR
comp=Z,190nm,24.7s
KMI LR LR
comp=Z,410nm,16.4s
WMQ Urumqi 45.07 292 *e*P **P** **07 41 11.5 +0.6**
WMQ pP pwP 07 41 23.9 -1.4
WMQ pmax pmax
comp=Z,46nm,0.7s
WMQ pmax pmax
comp=Z,240nm,5.1s
WMQ LR LR
comp=Z,550nm,18.3s
WMQ LR LR
comp=Z,420nm,15.9s
WMQ LR LR

comp=Z,370nm,22.1s
C36M Paulatuk 45.41 30 P **P** **07 41 13.4 +0.2**
C36M IAmb IAmb 07 41 28.3
comp=Z,13nm,0.8s
C36M Paulatuk 45.41 30 P 07 41 13.0
baz=284,SNR=5.5
DLBC Dease Lake 46.10 45 P **P** **07 41 19.1 +0.2**
MK31 Makanchi Array 47.15 298 P **P** **07 41 26.3 -0.9**
MK31 pmax pmax
comp=Z,10.0nm,0.7s
MK31 Makanchi Array 47.15 298 P **P** **07 41 26.2 -0.9**
MK31 IAmb IAmb 07 41 27.4
comp=Z,9.6nm,0.7s
MKAR Makanchi Array 47.15 298 P **P** **07 41 26.6 -0.6**
comp=Z,12nm,0.8s,baz=67,slow=7.8,SNR=101
MKAR PcP **PcP** **07 42 59.3 +1.0**
comp=Z,1.2nm,0.6s,baz=67,slow=3.7,SNR=2.0
MKAR LR LR 08 02 25.2
comp=Z,1µm,18.5s,baz=66,slow=38
MKAR Makanchi Array 47.15 298 P **P** **07 41 25.8 -1.4**
MAKZ Makanchi 47.33 298 P **P** **07 41 27.8 -0.9**
MAKZ pmax pmax
comp=Z,11nm,1.0s
MAKZ Makanchi 47.33 298 P **P** **07 41 27.8 -0.9**
MAKZ IAmb IAmb 07 41 28.9
comp=Z,11nm,1.0s
JAY Jayapura 49.64 196 LR LR 08 04 19.9
comp=Z,96nm,18.4s,baz=11,slow=38
EUNU Eureka 49.76 11 P **P** **07 41 46.8 -0.1**
LSA Lhasa 50.22 274 *e*P **P** **07 41 52.9 +1.4**
TDK Taldyqorghan 50.38 297 *e*P **P** **07 41 51.8 -0.3**
comp=Z,27nm,0.7s,baz=297
TDK Taldyqorghan 50.38 297 *e*P **P** **07 41 51.7 -0.3**
TDK pmax pmax
comp=Z,27nm,0.7s
SIJI Sorong 50.56 209 LR LR 08 04 01.9
comp=Z,118nm,18.3s,baz=44,slow=37
SHLS Shalkode 50.64 295 *e*P **P** **07 41 51.8 -2.4**
baz=294
SHLS Shalkode 50.64 295 *e*P **P** **07 41 51.7 -2.4**
UZB Uzynbulak 50.93 295 *e*P **P** **07 41 55.9 -0.5**
comp=Z,5.9nm,1.0s,baz=295
UZB Uzynbulak 50.93 295 *e*P **P** **07 41 55.8 -0.5**
UZB pmax pmax
comp=Z,6.0nm,1.0s
KPKS Kokpek 50.98 296 *e*P **P** **07 41 56.1 -0.6**
comp=Z,10.0nm,1.0s,baz=295
KPKS Kokpek 50.98 296 *e*P **P** **07 41 56.0 -0.6**
KPKS pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 51.22 310 *ce*P **P** **07 41 57.1 -1.1**
BRVK pmax pmax
comp=Z,13nm,0.6s
BRVK Borovoye 51.22 310 P **P** **07 41 57.3 -0.9**
SATY Saty 51.36 295 *e*P **P** **07 41 59.4 -0.2**
comp=Z,4.3nm,0.8s,baz=295
SATY Saty 51.36 295 *e*P **P** **07 41 59.3 -0.2**
SATY pmax pmax
comp=Z,4.0nm,0.8s
RES Resolute Bay 51.46 18 P **P** **07 42 00.1 +0.5**
RES pmax pmax
comp=Z,6.0nm,0.8s
RES Resolute Bay 51.46 18 P **P** **07 42 00.1 +0.5**
RES IAmb IAmb 07 42 01.1
comp=Z,6.3nm,0.8s
YKA Yellowknife Ar 51.48 36 P **P** **07 42 00.6 +0.6**
comp=Z,3.7nm,0.7s,baz=296,slow=7.0,SNR=47
CHTO Chiang Mai 51.88 257 P **P** **07 42 04.3 +0.7**
CHTO pmax pmax
comp=Z,10.0nm,0.9s
CHTO Chiang Mai 51.88 257 P **P** **07 42 04.3 +0.7**
CHTO IAmb IAmb 07 42 06.1
comp=Z,9.8nm,0.9s
CM31 Chiang Mai Arr 52.13 257 P **P** **07 42 05.5 +0.1**
CM31 IAmb IAmb 07 42 07.6
comp=Z,13nm,1.3s
CMAR Chiang Mai Arr 52.13 257 P **P** **07 42 07.4 +2.0**
comp=Z,3.5nm,0.8s,baz=35,slow=7.6,SNR=17
CMAR Chiang Mai Arr 52.13 257 P **P** **07 42 06.4 +1.0**
CMAR Chiang Mai Arr 52.13 257 P **P** **07 42 06.4 +1.0**
MDOK Medeo 52.16 296 *e*P **P** **07 42 05.1 -0.4**
baz=296
MDOK Medeo 52.16 296 *e*P **P** **07 42 05.1 -0.4**
AAA Alma-Ata 52.22 296 *e*P **P** **07 42 05.8 0.0**
baz=296
AAA Alma-Ata 52.22 296 *e*P **P** **07 42 05.8 0.0**
AAA Alma-Ata 52.22 296 *e*P **P** **07 42 05.8 0.0**
SHL Shillong 52.26 269 P **P** **07 42 06.4 -0.1**
SHL pmax pmax
comp=Z,24nm,0.9s
SHL Shillong 52.26 269 P **P** **07 42 06.4 -0.1**
TNSS Tian-Shan 52.28 296 *e*P **P** **07 42 06.6 -0.2**
baz=296
TNSS Tian-Shan 52.28 296 *e*P **P** **07 42 06.5 -0.2**
KBS Kingsbay 53.10 351 P **P** **07 42 11.6 -0.2**
KBS pmax pmax
comp=Z,15nm,1.0s
KBS Kingsbay 53.10 351 P **P** **07 42 11.6 -0.2**
KBS IAmb IAmb 07 42 26.7
comp=Z,15nm,0.9s
ULHL Ulahol 53.14 295 P **P** **07 42 13.3 +0.4**
SNR=7.6
TKM2 Tokmak 2 53.19 296 P **P** **07 42 14.0 +0.8**
SNR=6.0
SPA0 Spitsbergen Ar 53.21 350 *e*P **P** **07 42 12.5 -0.1**
SGDS Sogindy 53.51 297 *e*P **P** **07 42 15.0 -0.4**
comp=Z,6.2nm,0.8s,baz=297
SGDS Sogindy 53.51 297 *e*P **P** **07 42 14.9 -0.4**
SGDS pmax pmax
comp=Z,6.0nm,0.8s
SANI Sanana 53.57 214 P **P** **07 42 16.0 0.0**
comp=Z,17nm,1.7s
MSAI Masohi 53.67 210 P **P** **07 42 17.4 +0.7**
comp=Z,10µmcomp=Z,438nm,0.7s
USP Ospenovka 53.69 297 P **P** **07 42 17.1 +0.5**
SNR=28
KBK Karagaybulak 53.73 296 P **P** **07 42 17.6 +0.4**
SNR=6.1
LUWI Luwuk 53.99 218 P **P** **07 42 20.2 +1.2**
comp=Z,3µmcomp=Z,25nm,0.6s
AAK Ala-Archa 54.03 297 P **P** **07 42 19.9 +0.6**
SNR=16
AAK Ala-Archa 54.03 297 *ce*P **P** **07 42 19.5 +0.2**
AAK pmax pmax
comp=Z,37nm,0.7s
AAK Ala-Archa 54.03 297 P **P** **07 42 19.1 -0.1**
AAK Ala-Archa 54.03 297 *e*P **P** **07 42 19.5 +0.2**
TAPN Taplejung 54.04 274 *e*P **P** **07 42 21.2 +1.4**
comp=Z,14nm,0.4s
NLAI Namlea 54.24 212 P **P** **07 42 22.2 +1.4**
comp=Z,3µmcomp=Z,16nm,1.3s
APSI Ampana 54.36 220 P **P** **07 42 22.4 +0.7**
comp=Z,1µmcomp=Z,13nm,1.6s
BNDI Bandanaira 54.44 209 P **P** **07 42 22.1 -0.2**
comp=Z,53µmcomp=Z,90nm,0.6s
EKS2 Erkin-Say 54.46 297 P **P** **07 42 23.2 +0.8**
SNR=14
ODAN Odare 54.57 273 *e*P **P** **07 42 24.8 +1.3**
comp=Z,18nm,0.5s
TULEG Thule 54.76 11 P **P** **07 42 24.2 +0.3**
TULEG IAmb IAmb 07 42 25.6
comp=Z,8.8nm,0.7s
AML Almayashu 54.80 297 P **P** **07 42 26.3 +1.1**
SNR=17
KSH Kashi 54.80 293 P P 07 42 29.8 +4.9
KSH PcP **PcP** **07 43 28.8 +1.9**
KSH S **S** **07 50 05.9 +3.1**
KSH pmax pmax
comp=Z,11nm,0.5s
KSH pmax pmax
comp=Z,190nm,6.4s
KSH LR LR
comp=Z,530nm,13.9s
KSH LR LR
comp=Z,450nm,12.1s
KSH LR LR
comp=Z,360nm,18.6s
B05A Bryant 54.85 54 P 07 42 25.0
baz=302
JIRN Jiri 54.90 275 *e*P **P** **07 42 27.5 +1.4**
comp=Z,57nm,0.7s
GUN Gumba 54.96 275 *e*P **P** **07 42 27.4 +0.9**
comp=Z,29nm,0.5s
RAMN Ramite 55.06 274 *e*P **P** **07 42 28.0 +0.9**
comp=Z,32nm,0.4s
ARU Arti 55.41 318 *d i*P **P** **07 42 27.6 -1.3**
ARU *PP **pwP** **07 42 43.5 -0.1**
ARU 07 44 29.9
ARU S **S** **07 50 09.9 -0.2**
ARU SS **SS** **07 53 54.5 +0.1**
ARU pmax pmax
comp=Z,15nm,0.6s
ARU MLR MLR
comp=Z,762nm,17.0s
ARU Arti 55.41 318 P **P** **07 42 27.5 -1.4**
PKI Pulchoki 55.50 275 *e*P **P** **07 42 31.3 +1.0**
comp=Z,20nm,0.6s
PKIN Phulchoki 55.50 275 *e*P **P** **07 42 31.4 +1.1**
comp=Z,22nm,0.5s
PMG Port Moresby 55.52 187 LR LR 08 03 43.1
comp=Z,132nm,20.6s,baz=343,slow=33
DMN Daman 55.69 276 *e*P **P** **07 42 33.0 +1.4**
comp=Z,42nm,0.8s
GKN Gorkha 55.76 276 *e*P **P** **07 42 33.5 +1.5**
comp=Z,52nm,0.8s
NEEM North Greenlan 55.79 6 *i*P **P** **07 42 31.4 -0.3**
NEEM IAmb IAmb 07 42 33.6
comp=Z,30nm,0.8s
DZA Taraz 55.84 299 *e*P **P** **07 42 32.4 +0.2**
baz=298
DZA Taraz 55.84 299 *e*P **P** **07 42 32.4 +0.2**
LTY Liberty 56.21 55 P **P** **07 42 34.3 -0.5**
KK31 Karatay Array 56.22 299 P **P** **07 42 34.6 -0.3**
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KK31 Karatay Array 56.22 299 P **P** **07 42 34.6 -0.3**
KK31 IAmb IAmb 07 42 36.1
comp=Z,8.4nm,0.8s
KKAR Karatay Array 56.22 299 P **P** **07 42 34.2 -0.7**
KKAR pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 56.22 299 P **P** **07 42 34.2 -0.7**
KKAR IAmb IAmb 07 42 36.1
comp=Z,8.4nm,0.8s
B08A Colville Reser 56.35 53 P **P** **07 42 35.8 0.0**
B08A IAmb IAmb 07 42 48.7
comp=Z,6.4nm,0.8s
KOLN Koldanda 56.63 277 *e*P **P** **07 42 39.6 +1.4**
comp=Z,53nm,0.8s
H04A Detroit Lake 56.76 58 P **P** **07 42 40.3 +1.6**
IUG luzhnay 57.05 298 *e*P **P** **07 42 41.3 +0.4**
comp=Z,10nm,0.7s,baz=298
IUG luzhnay 57.05 298 *e*P **P** **07 42 41.3 +0.4**
IUG pmax pmax
comp=Z,10.0nm,0.7s
C09A Chrisman Ranch 57.25 53 P **P** **07 42 43.2 +1.0**
C09A IAmb IAmb 07 42 55.0
comp=Z,7.2nm,0.8s
F07A Phinny Hill Vi 57.39 56 **P** **07 42 43.4 +0.2**
F07A IAmb IAmb 07 42 56.8
comp=Z,11nm,0.9s
I05D Terrebonne, OR 57.45 58 P 07 42 43.7
baz=305
NEW Newport 57.63 52 P **P** **07 42 44.6 -0.2**
NEW pmax pmax
comp=Z,7.0nm,1.2s
NEW Newport 57.63 52 P **P** **07 42 44.6 -0.2**
NEW IAmb IAmb 07 42 57.9
comp=Z,7.0nm,1.1s
NEW Newport 57.63 52 P 07 42 44.9
baz=305
PRGR Permogore 57.84 327 *e*P **P** **07 42 44.7 -1.3**
PRGR pmax pmax
comp=Z,21nm,0.6s
KEV Kevo 57.90 341 P **P** **07 42 45.2 -1.1**
KEV pmax pmax
comp=Z,42nm,1.5s
KEV Kevo 57.90 341 P **P** **07 42 45.2 -1.1**
PINE Pine Mountain 58.00 58 P **P** **07 42 49.0 +1.2**
E09A Wood Farm, Sta 58.06 54 P **P** **07 42 48.0 +0.2**
E09A IAmb IAmb 07 43 01.0
comp=Z,10.0nm,0.9s
J05D Fort Rock, OR 58.12 59 P 07 42 47.5
baz=306,SNR=5.0
YBH Yreka Blue Hor 58.12 61 P **P** **07 42 49.5 +1.0**
YBH pmax pmax
comp=Z,9.0nm,1.2s
YBH Yreka Blue Hor 58.12 61 P **P** **07 42 49.5 +1.0**
YBH IAmb IAmb 07 43 02.7
comp=Z,8.9nm,1.1s
BNSI Bone 58.15 220 P **P** **07 42 49.4 +0.6**
comp=Z,12nm,0.6s
G08A Pilot Rock 58.30 56 P **P** **07 42 50.9 +1.2**
G08A IAmb IAmb 07 43 03.0
comp=Z,5.0nm,0.9s
ARA0 ARCESS Array S 58.41 341 *e*P **P** **07 42 49.9 0.0**
ARCES ARCESS Array B 58.41 341 P **P** **07 42 49.5 -0.5**
comp=Z,3.6nm,0.8s,baz=40,slow=7.5,SNR=14
ARCES LR LR 08 10 56.0
comp=Z,341nm,20.6s,baz=70,slow=39
K05A Summer Lake 58.65 59 P **P** **07 42 52.6 +0.4**
GAR Garm 58.70 295 P **P** **07 42 52.5 0.0**
ABKAR Akbulak array 58.75 310 P **P** **07 42 51.8 -0.8**
ABKAR Akbulak array 58.75 310 P **P** **07 42 52.0 -0.7**
KAPI Kappang 58.85 220 LR LR 08 06 58.1
comp=Z,38nm,21.8s,baz=61,slow=35
F10A Beach Ranch, E 58.89 55 P **P** **07 42 54.7 +0.9**
F10A IAmb IAmb 07 43 08.7
comp=Z,5.9nm,0.9s
WALA Waterton Lakes 58.91 50 P **P** **07 42 54.2 +0.3**
WALA IAmb IAmb 07 43 08.6
comp=Z,6.0nm,0.9s
KBKI Kotabaru 59.01 224 P **P** **07 42 55.1 +0.3**
comp=Z,2µmcomp=Z,12nm,0.9s
KTK1 Kautokeino 59.33 341 *e*P **P** **07 42 56.8 +0.5**
MOD Modoc Plateau 59.48 60 P **P** **07 42 57.9 -0.1**
MOD IAmb IAmb 07 43 11.6
comp=Z,7.3nm,0.9s
JTMT Jette 59.48 51 P **P** **07 42 58.2 +0.3**
JTMT IAmb IAmb 07 43 12.7
comp=Z,5.2nm,0.9s
BMO Blue Mountains 59.50 56 P **P** **07 42 58.5 +0.5**
BMO pmax pmax
comp=Z,7.0nm,1.0s
BMO Blue Mountains 59.50 56 P **P** **07 42 58.5 +0.5**
BMO IAmb IAmb 07 43 11.6
comp=Z,7.2nm,1.0s
JETT Jettan, Norway 59.51 343 *e*P **P** **07 42 58.2 +0.6**
UPNV Upernavik 59.67 10 *i*P **P** **07 42 57.6 -1.0**
UPNV IAmb IAmb 07 43 00.2
comp=Z,9.9nm,0.7s
J08A Circle Bar Ran 59.71 58 P **P** **07 43 00.8 +1.4**
J08A IAmb IAmb 07 43 13.3
comp=Z,7.6nm,1.0s
TRO Tromso 59.75 343 *e*P **P** **07 43 00.4 +1.2**
DBG Daneborg 59.77 358 *i*P **P** **07 42 59.3 0.0**
DBG IAmb IAmb 07 43 00.4
comp=Z,7.4nm,0.8s
BBKI Banjar Baru 59.80 225 P **P** **07 43 00.3 0.0**
comp=Z,11nm,0.8s
NIL Nilore 60.01 289 P **P** **07 43 01.7 +0.1**
NIL pmax pmax
comp=Z,52nm,0.9s
NIL Nilore 60.01 289 P **P** **07 43 01.6 +0.1**
ORV Oroville 60.15 63 P **P** **07 43 03.7 +1.3**
ORV pmax pmax
comp=Z,5.0nm,0.9s
ORV Oroville 60.15 63 P **P** **07 43 03.7 +1.3**
ORV IAmb IAmb 07 43 15.3
comp=Z,5.4nm,0.9s
WVOR Wild Horse Val 60.16 59 P **P** **07 43 03.0 +0.4**
WVOR pmax pmax
comp=Z,9.0nm,1.0s
WVOR Wild Horse Val 60.16 59 P **P** **07 43 03.0 +0.4**
WVOR IAmb IAmb 07 43 16.2
comp=Z,8.6nm,0.9s
MSO Missoula 60.22 52 P **P** **07 43 03.1 +0.1**
MSO IAmb IAmb 07 43 16.2
comp=Z,8.9nm,1.0s
MSO Missoula 60.22 52 P 07 43 02.9
baz=307,SNR=6.6
KLMR Klimovskoe 60.59 329 *e*P **P** **07 43 03.3 -1.8**
KLMR pmax pmax
comp=Z,20nm,0.8s
KLMR Klimovskoe 60.59 329 *e*P **P** **07 43 03.3 -1.8**
KLMR AMP 07 43 06.1
comp=Z,20nm,0.8s
BEKR Beckworth 60.66 62 **P** **07 43 06.6 +0.4**
BEKR IAmb IAmb 07 43 19.4
comp=Z,9.8nm,1.1s
AFDM Forest Hills D 60.84 63 P **P** **07 43 06.6 -0.6**
AFDM IAmb IAmb 07 43 20.5
comp=Z,8.3nm,1.2s
MFID Camas Ranch 61.22 56 P **P** **07 43 10.2 +0.5**
MFID IAmb IAmb 07 43 23.1
comp=Z,5.4nm,0.9s
FFC Flin Flon 61.28 40 P **P** **07 43 10.3 +0.4**
FFC pmax pmax
comp=Z,9.0nm,0.8s
FFC Flin Flon 61.28 40 P **P** **07 43 10.3 +0.4**
FFC IAmb IAmb 07 43 25.4
comp=Z,8.5nm,0.8s
SUMG Summit 61.33 4 *i*P **P** **07 43 11.1 +0.7**
SUMG IAmb IAmb 07 43 13.3
comp=Z,25nm,0.7s
SUMG Summit 61.33 4 P **P** **07 43 09.9 -0.5**
SUMG pmax pmax
comp=Z,26nm,0.7s
SUMG Summit 61.33 4 P **P** **07 43 09.9 -0.5**
PAHR Pah Rah Range 61.36 61 P **P** **07 43 10.6 -0.2**
PAHR IAmb IAmb 07 43 24.3
comp=Z,15nm,1.2s
HRY Holter Researc 61.44 51 P **P** **07 43 12.2 +0.9**
VCNR Virginia City 61.45 62 P **P** **07 43 12.6 +1.1**
VCNR IAmb IAmb 07 43 25.1
comp=Z,7.4nm,0.9s
PNTR Pine Nut 61.60 62 P **P** **07 43 13.4 +0.9**
LRM Limekiln Ridge 61.65 52 P **P** **07 43 13.2 +0.4**
EGMT Eagleton 61.74 49 P **P** **07 43 13.4 +0.3**
EGMT IAmb IAmb 07 43 28.8
comp=Z,7.4nm,0.8s
EGMT Eagleton 61.74 49 P 07 43 12.6
baz=309
N2IH Innhavet 61.75 343 *e*P **P** **07 43 13.0 +0.3**
FCC Fort Churchill 61.84 33 P **P** **07 43 13.1 -0.4**
FCC Fort Churchill 61.84 33 P **P** **07 43 13.1 -0.4**
YERR Yerington 61.89 62 P **P** **07 43 15.4 +0.9**
STEI Steigen 61.92 343 *e*P **P** **07 43 14.4 +0.6**
HLID Hailey 61.94 55 P **P** **07 43 15.0 +0.3**
HLID IAmb IAmb 07 43 28.3
comp=Z,6.5nm,1.0s
HLID Hailey 61.94 55 P 07 43 14.7
baz=308
MCMT McKenzie Canyo 62.04 53 P **P** **07 43 15.9 +0.4**
BCYI Bear Canyon 62.05 54 P **P** **07 43 15.8 +0.3**
LOF Lofoten 62.08 344 *e*P **P** **07 43 15.4 +0.4**
KBL Kabul 62.21 292 P **P** **07 43 16.3 -0.4**
KBL pmax pmax
comp=Z,23nm,0.8s
KBL Kabul 62.21 292 P **P** **07 43 16.2 -0.4**
BOZ Bozeman (W) 62.24 52 P **P** **07 43 16.7 0.0**
BOZ pmax pmax
comp=Z,5.0nm,0.8s
BOZ Bozeman (W) 62.24 52 P **P** **07 43 16.7 0.0**
BOZ IAmb IAmb 07 43 30.2
comp=Z,4.6nm,0.8s
BOZ Bozeman (W) 62.24 52 P 07 43 16.9
baz=309,SNR=6.6
N2TV TYrnvik 62.25 343 *e*P **P** **07 43 16.4 +0.3**
FAUS Fauske 62.38 343 *e*P **P** **07 43 17.2 +0.3**
N2SV S rvYgen 62.39 344 *e*P **P** **07 43 17.0 0.0**
NBB08 Skaug oppvekst 62.50 343 *e*P **P** **07 43 18.4 +0.6**
KVN Kaiserville 62.55 61 P **P** **07 43 19.4 +0.6**
KVN pmax pmax
comp=Z,14nm,1.0s
KVN Kaiserville 62.55 61 P **P** **07 43 19.4 +0.6**
RYN Ryan 62.55 62 P **P** **07 43 19.5 +0.6**
RYN IAmb IAmb 07 43 32.4
comp=Z,10nm,0.9s
N2VA Vr y 62.65 344 *e*P **P** **07 43 18.7 -0.1**
NBB28 Valnes 62.71 343 *e*P **P** **07 43 19.5 +0.3**
LHV Little Huntoon 62.80 62 P **P** **07 43 22.0 +1.8**
NVAR Mina Array Bea 62.81 62 P **P** **07 43 21.5 +0.9**
comp=Z,1.8nm,0.7s,baz=294,slow=6.9,SNR=19
NVAR pP **pP** **07 43 32.6 +1.4**
comp=Z,7.0nm,0.8s,baz=288,slow=7.3,SNR=18
QLMT Earthquake Lak 62.83 53 P **P** **07 43 20.6 -0.1**
N2RO R st 62.88 344 *e*P **P** **07 43 20.5 +0.1**
NV11 Mina Array Sit 62.90 62 P **P** **07 43 21.8 +0.6**
NV11 IAmb IAmb 07 43 34.8
comp=Z,8.6nm,1.0s
NBB05 Inndyr 62.93 343 *e*P **P** **07 43 20.9 +0.2**
BELG Belogornoye 62.94 318 *i*P **P** **07 43 20.9 0.0**
BELG pmax pmax
comp=Z,7.0nm,0.6s
YHL Hebgen Lake 62.95 53 P **P** **07 43 22.3 +0.7**
YHL IAmb IAmb 07 43 35.2
comp=Z,5.9nm,1.1s
YHB Horse Butte 63.01 53 P **P** **07 43 22.3 +0.4**
YHB IAmb IAmb 07 43 35.6
comp=Z,8.5nm,1.0s
NBB30 Finnes 63.04 343 *e*P **P** **07 43 21.9 +0.6**
PLAI Plampang 63.12 220 P **P** **07 43 23.3 +0.7**
comp=Z,19nm,0.9s
NBB17 Glomfjord BYr 63.13 343 *e*P **P** **07 43 22.5 +0.5**
WBSI Waikabubak, Su 63.14 218 P **P** **07 43 22.9 +0.1**
comp=Z,20nm,0.9s
YHH Holmes Hill 63.18 52 P **P** **07 43 23.5 +0.4**
GCMT Greycliff 63.19 51 P **P** **07 43 23.8 +0.8**
ELK Elko 63.21 58 P **P** **07 43 23.5 +0.2**
ELK pmax pmax
comp=Z,3.0nm,1.0s
ELK Elko 63.21 58 P **P** **07 43 23.5 +0.2**
YNE Yellowstone No 63.50 52 P **P** **07 43 25.0 -0.2**
LKWY Lake 63.57 52 P **P** **07 43 25.8 +0.2**
LKWY pmax pmax
comp=Z,8.0nm,1.1s
LKWY Lake 63.57 52 P **P** **07 43 25.8 +0.2**
LKWY IAmb IAmb 07 43 41.8
comp=Z,8.0nm,1.1s
KONS Konsvik 63.57 343 *e*P **P** **07 43 25.8 +0.9**
H17A Grant Village 63.58 53 P **P** **07 43 26.2 +0.5**
H17A IAmb IAmb 07 43 40.8
comp=Z,9.6nm,1.1s
NBB40 Tonnes 63.58 343 *e*P **P** **07 43 25.1 +0.1**
MOR8 Moi Rana 63.59 343 *e*P **P** **07 43 23.9 -1.2**
TPH Tonopah 63.69 62 P **P** **07 43 26.6 +0.1**
TPH pmax pmax
comp=Z,48nm,0.9s
TPH Tonopah 63.69 62 P **P** **07 43 26.6 +0.1**
PSI Prapat 63.73 244 LR LR 08 13 16.1
comp=Z,68nm,18.3s,baz=87,slow=38
STOK Stokkvaagen 63.74 343 *e*P **P** **07 43 26.6 +0.6**
RLMT Red Lodge 63.83 51 P **P** **07 43 27.8 +0.5**
RLMT Red Lodge 63.83 51 P 07 43 27.8
baz=310
ABJI Asem Bagus 63.85 224 P **P** **07 43 28.6 +1.2**
comp=Z,51nm,1.0s
MOOW Moose Ponds 63.90 53 P **P** **07 43 28.8 +1.0**
HVU Hansel Valley 64.00 56 P **P** **07 43 29.3 +0.9**
HVU pmax pmax
comp=Z,5.0nm,0.8s
HVU Hansel Valley 64.00 56 P **P** **07 43 29.3 +0.9**
LOHW Long Hollow 64.06 53 P **P** **07 43 29.4 +0.6**
SNOW Snow King Moun 64.07 54 P **P** **07 43 29.7 +0.7**
SNOW IAmb IAmb 07 43 43.2
comp=Z,7.3nm,0.9s
REDW Red Top Meadow 64.08 54 P **P** **07 43 30.1 +1.1**
REDW IAmb IAmb 07 43 43.1
comp=Z,9.6nm,0.9s
LAO LASA Array 64.44 49 P 07 43 31.4
baz=311
ISA Isabella, Lake 64.44 64 P **P** **07 43 32.0 +0.7**
ISA pmax pmax
comp=Z,5.0nm,1.0s
ISA Isabella, Lake 64.44 64 P **P** **07 43 32.0 +0.7**
SPUT South Promonto 64.49 56 P **P** **07 43 31.7 +0.1**
SPUT IAmb IAmb 07 43 45.3
comp=Z,8.4nm,1.1s
R11A Troy Canyon, C 64.52 61 P **P** **07 43 32.3 +0.4**
R11A IAmb IAmb 07 43 45.2
comp=Z,11nm,1.1s
R11A Troy Canyon, C 64.52 61 P 07 43 32.1
baz=310
FIA1 FINESS Array S 64.56 335 P **P** **07 43 30.9 -0.6**
FINES FINESS Array B 64.56 335 P **P** **07 43 31.3 -0.2**
comp=Z,13nm,0.6s,baz=37,slow=7.9,SNR=49
FINES LR LR 08 14 39.8
comp=Z,463nm,19.4s,baz=33,slow=39
ICESG Greenland Ices 64.72 5 *i*P **P** **07 43 33.8 +0.9**
ICESG IAmb IAmb 07 43 36.3
comp=Z,44nm,0.7s
HWUT Hardware Ranch 64.80 56 P **P** **07 43 34.2 +0.5**
HWUT IAmb IAmb 07 43 47.3
comp=Z,6.5nm,0.9s

SPR3 Spring Creek 3 64.86 59 P **P** **07 43 35.4 +1.2**
SPR3 lAmb lAmb 07 43 48.2
comp=Z,5.9nm,0.9s
FURC Furnace Creek, **64.94 63** P 07 43 34.7
baz=310
DUG Dugway, Tooele 64.99 57 P **P** **07 43 34.8 -0.1**
DUG pmax pmax
comp=Z,11nm,1.0s
DUG Dugway, Tooele 64.99 57 P **P** **07 43 34.8 -0.1**
DUG lAmb lAmb 07 43 48.5
comp=Z,11nm,1.0s
DUG Dugway, Tooele 64.99 57 P 07 43 35.0
baz=310
TPNV Topopah Spring 65.00 62 P **P** **07 43 35.5 +0.4**
TPNV pmax pmax
comp=Z,13nm,1.1s
TPNV Topopah Spring 65.00 62 P **P** **07 43 35.5 +0.4**
TPNV lAmb lAmb 07 43 48.5
comp=Z,13nm,1.1s
BW06 Boulder Array 65.19 54 P **P** **07 43 36.4 +0.1**
BW06 Boulder Array 65.19 54 P 07 43 36.1
baz=311
PD31 Pinedale Array 65.19 54 P **P** **07 43 36.3 0.0**
PDAR Pinedale Array 65.19 54 P **P** **07 43 36.6 +0.4**
comp=Z,2.0nm,0.8s,baz=274,slow=2.0,SNR=20
PDAR pP **pP** **07 43 48.4 +1.2**
comp=Z,4.6nm,0.9s,baz=336,slow=3.3,SNR=14
PDAR LR LR 08 09 40.7
comp=Z,57nm,21.2s,baz=345,slow=34
PDAR Pinedale Array 65.19 54 P **P** **07 43 36.0 -0.3**
EDW2 Edwards Air Fo 65.25 65 P 07 43 36.6
baz=310
PRN Pahroc Range 65.44 61 P **P** **07 43 39.0 +1.1**
NSS Namsos 65.53 343 *eP* **P** **07 43 38.5 +0.8**
NLU North Lily Min 65.58 57 P **P** **07 43 38.9 +0.2**
NLU lAmb lAmb 07 43 52.2
comp=Z,6.1nm,0.8s
OBN Obninsk 65.77 326⇑ *eP* **P** **07 43 38.4 -1.0**
OBN *i* 07 44 11.9
OBN *e* 07 46 06.9
OBN pmax pmax
comp=Z,26nm,0.6s
OBN MLR MLR
comp=Z,377nm,18.0s
OBN Obninsk 65.77 326 *eP* **P** **07 43 38.4 -1.0**
MPU Maple Canyon 65.79 57 P **P** **07 43 39.4 -0.8**
MPU lAmb lAmb 07 43 53.7
comp=Z,6.5nm,0.9s
SHPR Sheep Range 65.96 62 P **P** **07 43 42.0 +0.7**
SHPR lAmb lAmb 07 43 54.9
comp=Z,13nm,1.2s
CCUT Cedar City 66.37 60 P **P** **07 43 44.5 +0.6**
VRH Novokhopyorsk 66.43 320 *eP* **P** **07 43 42.9 -0.8**
VRH pmax pmax
comp=Z,40nm,0.7s
VRH MLR MLR
comp=Z,530nm,18.0s
MSU Marysvale 66.45 59 P **P** **07 43 44.4 -0.1**
MSU Marysvale 66.45 59 P **P** **07 43 44.4 -0.1**
SZCU Shurtz Canyon 66.51 60 P **P** **07 43 45.1 +0.3**
RDMU Red Mountain 66.62 55 P **P** **07 43 44.4 -1.1**
HRA Herat 66.63 296 P **P** **07 43 46.0 +0.4**
LPSR Galich'ya Gora 66.64 323 *eP* **P** **07 43 44.8 -0.2**
LPSR pmax pmax
comp=Z,30nm,0.7s
LPSR MLR MLR
comp=Z,450nm,20.0s
P17A Butcher Ranch, 66.67 57 P **P** **07 43 46.7 +1.0**
P17A lAmb lAmb 07 43 59.2
comp=Z,9.0nm,0.9s
VSU Vasula 66.72 333 *eP* **P** **07 43 46.0 +0.5**
MTPU Mount Pierson 66.76 59 P **P** **07 43 46.5 0.0**
DY2G Dye2 66.76 8 *i* P **P** **07 43 46.6 +0.7**
DY2G lAmb lAmb 07 43 49.6
comp=Z,10nm,0.8s
LCMT Little Creek M 66.80 60 P **P** **07 43 47.3 +0.7**
LCMT lAmb lAmb 07 44 00.3
comp=Z,8.4nm,0.9s
GEYT Alibeck 66.84 301 P **P** **07 43 47.9 +1.2**
comp=Z,5.4nm,0.5s,baz=42,slow=2.4,SNR=13
GEYT LR LR 08 14 56.4
comp=Z,369nm,18.7s,baz=205,slow=38
GEYT Alibeck 66.84 301 P **P** **07 43 47.4 +0.7**
GEYT lAmb lAmb 07 43 49.0
comp=Z,9.3nm,1.0s
GYA0B ALIBECK ARRAY 66.84 301 P **P** **07 43 46.8 +0.1**
GYA0B lAmb lAmb 07 43 52.5
comp=Z,15nm,0.9s
SRU San Rafael Swe 67.03 57 P **P** **07 43 48.8 +0.7**
SRU pmax pmax
comp=Z,12nm,0.8s
SRU San Rafael Swe 67.03 57 P **P** **07 43 48.8 +0.7**
SRU lAmb lAmb 07 44 01.3
comp=Z,12nm,0.8s
KNB Kanab 67.05 60 P **P** **07 43 49.5 +1.3**
KNB pmax pmax
comp=Z,15nm,1.1s
KNB Kanab 67.05 60 P **P** **07 43 49.5 +1.3**
KNB lAmb lAmb 07 44 02.1
comp=Z,16nm,1.1s
ULM Lac du Bonnet 67.06 41 P **P** **07 43 49.2 +1.5**
comp=Z,2.0nm,0.8s,baz=9.5,slow=6.1,SNR=2.5
RSSD Black Hills 67.30 50 P **P** **07 43 50.0 +0.3**
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 67.30 50 P **P** **07 43 50.0 +0.3**
RSSD lAmb lAmb 07 44 03.0
comp=Z,7.2nm,0.8s
AAL Aland 67.33 337 *eP* **P** **07 43 49.0 -0.3**
MTSE Matsula 67.43 334 *eP* **P** **07 43 47.1 -2.9**
VSR Storozhevoye 67.54 321 *eP* **P** **07 43 50.0 -0.8**
VSR pmax pmax
comp=Z,20nm,0.6s
VSR MLR MLR
comp=Z,810nm,17.0s
VORD Divnogorie 67.67 321 *eP* **P** **07 43 50.5 -1.1**
VORD pmax pmax
comp=Z,20nm,0.6s
WB0 Warramunga Arr 67.71 199 P **P** **07 43 52.6 +0.4**
WB0 lAmb lAmb 07 44 06.0
comp=Z,21nm,1.4s
U15A North Rim 67.76 60 P **P** **07 43 53.2 +0.4**
U15A lAmb lAmb 07 44 06.6
comp=Z,7.7nm,1.0s
WRAB Tennant Creek 67.88 199 *ceP* **P** **07 43 55.6 +2.4**
WRAB pmax pmax
comp=Z,35nm,2.5s
WRA Warramunga Arr 67.89 199 P **P** **07 43 53.0 -0.2**
comp=Z,2.3nm,1.1s,baz=19,slow=6.4,SNR=6.4
WRA pP **sP** **07 44 06.0 -1.8**
comp=Z,3.2nm,0.8s,baz=17,slow=6.7,SNR=6.8
WRA LR LR 08 10 00.4
comp=Z,88nm,21.9s,baz=255,slow=33
WRA Warramunga Arr 67.89 199 P **P** **07 43 53.7 +0.4**
WRA Warramunga Arr 67.89 199 P **P** **07 43 53.7 +0.4**
MOL Molde 68.18 344 *eP* **P** **07 43 55.0 +0.3**
UPP Uppsala 68.25 338 *eP* **P** **07 43 55.1 0.0**
DOMB Dombas 68.35 343 *eP* **P** **07 43 56.2 +0.4**
PV10 Paradox Valley 68.39 57 P **P** **07 43 56.8 +0.1**
PV14 Lion Creek, Pa 68.40 57 P **P** **07 43 56.9 +0.1**
PV14 lAmb lAmb 07 44 10.0
comp=Z,7.5nm,0.9s
PV22 Blue Mesa, Par 68.43 57 P **P** **07 43 57.4 +0.5**
PV22 lAmb lAmb 07 44 10.6
comp=Z,7.9nm,0.9s
N23A Red Feather La 68.45 53 P 07 43 57.0
baz=313
FITZ Fitzroy Crossi 68.55 208 LR LR 08 13 20.9
comp=Z,37nm,20.5s,baz=23,slow=35
NC303 NORSAR Array S 68.59 341 P **P** **07 43 56.3 -0.9**
NC303 lAmb lAmb 07 44 20.2
comp=Z,17nm,1.1s
NC405 NORSAR Array S 68.61 341 P **P** **07 43 57.2 -0.2**
AKN Aaknes 68.65 344 *eP* **P** **07 43 58.5 +0.9**
NC204 NORSAR Array S 68.68 341 P **P** **07 43 57.6 -0.2**
NB201 NORSAR Array S 68.76 341 P **P** **07 43 58.2 -0.1**
NB2 NORSAR Subarra 68.79 341 P **P** **07 43 58.4 -0.1**
baz=31,slow=6.5
NOA NORSAR Array B 68.79 341 P **P** **07 43 59.0 +0.4**
comp=Z,4.1nm,0.5s,baz=28,slow=6.4,SNR=43
NOA LR LR 08 18 32.9
comp=Z,404nm,18.8s,baz=25,slow=40
NOA NORSAR Array B 68.79 341 P **P** **07 43 59.0 +0.4**
DZM Mont Dzumac 68.97 167 LR LR 08 14 05.5
comp=Z,260nm,18.7s,baz=182,slow=36

DZM Mont Dzumac 68.97 167 P **P** **07 44 01.5 +1.5**
DZM lAmb lAmb 07 44 10.7
comp=Z,22nm,1.3s
NC602 NORSAR Array S 68.98 341 P **P** **07 43 58.8 -0.9**
NC602 NORSAR Array S 68.98 341 *eP* **P** **07 44 00.3 +0.7**
NAO01 NORSAR Array S 69.03 341 P **P** **07 43 59.5 -0.6**
SMCO Snowmass 69.04 55 P **P** **07 44 00.6 -0.3**
IDID Didziasalis 69.23 330 *eP* **P** **07 44 02.6 +1.3**
IIGN Ignalina 69.38 331 *eP* **P** **07 44 03.5 +1.3**
ISCO Idaho Springs 69.38 54 P **P** **07 44 03.2 +0.3**
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO Idaho Springs 69.38 54 P **P** **07 44 03.2 +0.3**
ISCO Idaho Springs 69.38 54 P 07 44 03.0
baz=314
MAK Makhachkala 69.41 311 *eP* **P** **07 44 02.8 +0.2**
MAK *e*PPP PPP 07 46 34.6
MAK *eS* **S** **07 53 07.4 +1.0**
MAK MLR MLR
comp=Z,833nm,18.0s
POO Poona 69.42 276 *ex* **P** **07 44 03.0 -0.1**
POO *ex* x 07 46 21.0
MNK Minsk 69.48 329 *eP* **P** **07 44 03.0 +0.1**
MNK Minsk 69.48 329 *i* P **P** **07 44 04.0 +1.1**
comp=E,1.0nm,0.5s
MNK *i* P **P** **07 44 04.0 +1.1**
comp=N,30nm,1.2s
MNK *i* P **P** **07 44 04.0 +1.1**
comp=Z,76nm,1.1s
MNK *i* PcP **PcP** **07 44 27.0 +1.1**
MNK *i* PP **PP** **07 46 37.5 +1.3**
MNK *i* PPP PPP 07 48 18.6
MNK *i* S **S** **07 53 06.8 -0.1**
MNK *i* ScS **SKSac** **07 53 59.5 0.0**
MNK *i* SS **SS** **07 57 36.5 +2.7**
MNK *i* SSS SSS 08 00 52.7
MNK *i* LQ LQ 08 09 44.5
MNK *i* LR LR 08 15 01.1
MNK *i* LRM MLR 08 17 20.2
comp=Z,262nm,17.1s
MNK *i* LRM MLR 08 17 23.1
comp=E,34nm,15.8s
MNK *i* LRM MLR 08 17 23.4
comp=N,227nm,20.6s
MVCO Mesa Verde 69.49 57 P **P** **07 44 03.7 +0.2**
MVCO Mesa Verde 69.49 57 P 07 44 03.7
baz=313
NACGM Naroch 69.55 330 *i* P **P** **07 44 03.2 0.0**
NACGM *i* P **P** **07 44 03.2 0.0**
NACGM *i* P **P** **07 44 03.3 0.0**
NACGM *i* PP **PP** **07 46 37.7 +1.0**
NACGM *i* PPP PPP 07 48 19.6
NACGM *i* S **S** **07 53 10.1 +2.4**
NACGM *i* PS PnS 07 54 19.1 +42
NACGM *i* PS 07 54 38.0
NACGM *i* SS SS 07 58 21.9 +47
NACGM *i* SSS SSS 08 01 03.2
NACGM *i* LQ LQ 08 09 52.2
NACGM *i* LR LR 08 13 38.2
FOO Floro 69.56 344 *eP* **P** **07 44 03.8 +0.6**
X16A Lo Mia Camp, P 69.61 61 P **P** **07 44 05.2 +1.0**
HYA Hoyanger 69.73 344 *eP* **P** **07 44 05.2 +1.0**
SKAR Skarslia 69.74 342 *eP* **P** **07 44 05.2 +0.7**
OSL Oslo 69.88 341 *eP* **P** **07 44 06.2 +1.0**
PABE Paberze 70.01 332 *eP* **P** **07 44 06.8 +0.7**
PABE Paberze 70.01 332 P **P** **07 44 05.7 -0.3**
S22A 4UR Ranch, Cre 70.10 56 P 07 44 07.4
baz=314
SUE Sulen 70.11 344 *eP* **P** **07 44 07.3 +0.7**
GOF Gofitskoye 70.19 315⇑ *eP* **P** **07 44 08.7 +1.3**
GOF pmax pmax
comp=Z,48nm,0.6s
KONO Kongsberg 70.39 341 *eP* **P** **07 44 09.2 +0.9**
X18A Snowflake 70.44 60 P **P** **07 44 09.4 0.0**
ASK Askoy 70.56 344 *eP* **P** **07 44 10.3 +1.0**
OGNE Ogallala 70.56 51 P 07 44 09.9
baz=315
STRU Stroemstad 70.58 340 *i* P **P** **07 44 10.3 +0.8**
BER Bergen 70.62 344 *eP* **P** **07 44 10.0 +0.3**
ODD1 Odda 70.79 343 *eP* **P** **07 44 11.7 +0.8**
KIV Kislovodsk 71.17 314 *eP* **P** **07 44 12.8 -0.7**
KIV pmax pmax
comp=Z,57nm,1.0s
KIV MLR MLR
comp=Z,1μm,18.0s
KIV Kislovodsk 71.17 314 P **P** **07 44 13.1 -0.4**
KBZ Khabaz 71.22 314 P **P** **07 44 14.4 +0.8**
comp=Z,17nm,0.7s,baz=106,slow=2.7,SNR=32
KBZ LR LR 08 20 04.0
comp=Z,421nm,18.4s,baz=36,slow=40
BLS5 Blasjo 71.28 343 *eP* **P** **07 44 14.5 +0.7**
TJOU Tjoern 71.37 339 *i* P **P** **07 44 14.7 +0.4**
ECSD EROS Data Cent 71.39 46 P **P** **07 44 14.1 -0.7**
ECSD EROS Data Cent 71.39 46 P 07 44 14.4
baz=317
ZEI Tsey 71.40 313 *eP* **P** **07 44 12.8 -2.2**
ZEI pmax pmax
comp=Z,4.0nm,0.5s
BORU Boraas 71.44 339 *i* P **P** **07 44 15.4 +0.7**
ASAR Alice Springs 71.59 198 P **P** **07 44 16.9 +1.0**
comp=Z,1.0nm,0.8s,baz=14,slow=5.5,SNR=7.7
ASAR pP **sP** **07 44 30.9 +0.4**
comp=Z,4.4nm,0.9s,baz=12,slow=5.2,SNR=8.0
ASAR LR LR 08 14 56.5
comp=Z,71nm,20.3s,baz=16,slow=35
ASAR Alice Springs 71.59 198 P **P** **07 44 17.0 +1.0**
ASAR *PP **sP** **07 44 31.0 +0.4**
KMY Karmoy 71.72 343 *eP* **P** **07 44 17.6 +1.2**
BLEU Blekinge 71.80 336 *eP* **P** **07 44 16.8 -0.1**
AKASG Malin Array Be 72.01 326 P **P** **07 44 18.0 -0.3**
comp=Z,26nm,0.5s,baz=34,slow=6.3,SNR=48
AKASG LR LR 08 18 06.2
comp=Z,395nm,20.1s,baz=30,slow=38
AKASG Malin Array Be 72.01 326 P **P** **07 44 17.9 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG Malin Array Be 72.01 326 P **P** **07 44 17.9 -0.4**
AKASG lAmb lAmb 07 44 19.4
comp=Z,5.7nm,0.5s
AKBB Malin Array Si 72.01 326 P **P** **07 44 17.5 -0.8**
AKBB pmax pmax
comp=Z,35nm,0.7s
AKBB Malin Array Si 72.01 326 P **P** **07 44 17.5 -0.8**
SNART Snartemo 72.11 342 *i* P **P** **07 44 20.0 +1.3**
SNART Snartemo 72.11 342 *eP* **P** **07 44 19.5 +0.8**
DEL Delary 72.18 338 *i* P **P** **07 44 19.4 +0.2**
ANMO Albuquerque 72.25 58 P **P** **07 44 20.7 +0.4**
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 72.25 58 P **P** **07 44 20.7 +0.4**
ANMO Albuquerque 72.25 58 P 07 44 20.6
baz=314
CHVG Ch'k'valeri 72.37 314⇑ P **P** **07 44 22.0 +1.4**
AKH Akhalkalaki 72.60 312⇑ P **P** **07 44 24.0 +1.8**
I37A Lemond, Waseca 72.75 44 P **P** **07 44 23.1 +0.2**
L34A Svendsen Farm, 72.79 47 P **P** **07 44 22.9 -0.2**
GNI Garni 72.86 310 P **P** **07 44 24.1 +0.3**
GNI pmax pmax
comp=Z,19nm,0.9s
GNI Garni 72.86 310 P **P** **07 44 24.1 +0.3**
SOC Sochi 72.90 316 *eP* **P** **07 44 20.2 -3.5**
SOC *e* 07 47 04.2
SOC *e*PPP PPP 07 48 47.1
SOC *eS* **S** **07 53 41.5 -5.4**
SOC *e*SS **SS** **07 58 26.1 -0.6**
SOC *e*SSS SSS 08 01 41.3
SOC MLR MLR
comp=Z,532nm,20.0s
319A Douglas 73.01 62 P **P** **07 44 25.7 +0.9**
319A lAmb lAmb 07 44 38.3
comp=Z,16nm,1.0s
BSD Bornholm Skovb 73.09 336 *i* P **P** **07 44 25.1 +0.4**
BSD Bornholm Skovb 73.09 336 *i* P **P** **07 44 25.0 +0.4**
SORM Soroca 74.41 325⇑ P **P** **07 44 33.2 +0.7**
LVV L'vov 74.68 329 *eP* **P** **07 44 34.2 +0.2**
KSU1 Kansas State U 74.78 49 P 07 44 34.0
baz=318
MNTX Cornudas Mount 75.16 60 P **P** **07 44 37.7 +0.5**
MNTX Cornudas Mount 75.16 60 P 07 44 37.3
baz=316
KAC Achnashellach 75.17 348 *eP* **P** **07 44 38.9 +2.2**
KPL Plockton 75.37 348 *eP* **P** **07 44 39.9 +2.0**
KPL lAmb lAmb 07 44 40.6
comp=Z,24nm,0.6s
BSEG Bad Segeberg 75.37 338 *eP* **P** **07 44 38.5 +0.6**
comp=Z,12nm,0.7s,baz=26,slow=5.7
LSQQ Lebel-sur-Quev 75.71 31 P 07 44 38.4
baz=327
OJC Ojcow 75.82 331 *eP* **P** **07 44 41.7 +1.1**
OJC Ojcow 75.82 331 P **P** **07 44 39.9 -0.7**
OJC pmax pmax
comp=Z,18nm,1.3s
OJC Ojcow 75.82 331 P **P** **07 44 39.9 -0.7**
OJC lAmb lAmb 07 44 45.7
comp=Z,18nm,1.3s
CHGQ Chibougamau 75.91 29 P 07 44 40.4
baz=328
BUR08 Bucovina Ar. S 76.04 327 P **P** **07 44 42.1 0.0**
BURAR Bucovina Array 76.06 327⇑ P **P** **07 44 42.6 +0.5**
BURAR Bucovina Array 76.06 327 P **P** **07 44 42.3 +0.2**
ESY Stoneypath 76.27 346 *eP* **P** **07 44 44.9 +1.8**
UZH Uzhgorod 76.30 329 *eP* **P** **07 44 43.0 -0.3**
NIE Niedzica 76.33 330 *eP* **P** **07 44 45.3 +1.7**
CRVS Cervenica-Dubn 76.36 329 *eP* **P** **07 44 45.0 +1.3**
CRVS pmax pmax
comp=Z,117nm,2.2s
CRVS Cervenica-Dubn 76.36 329 *eP* **P** **07 44 45.0 +1.3**
TESR Tescani 76.40 325⇑ P **P** **07 44 44.5 +0.5**
KSP Ksiaz 76.42 333 *eP* **P** **07 44 44.7 +0.7**
DIKM Dikmen 76.51 317⇑ P **P** **07 44 46.4 +1.7**
FLTG Flechtingen 76.57 337 *eP* **P** **07 44 44.8 0.0**
comp=Z,17nm,0.9s,baz=26,slow=5.7
TLCR 76.59 323⇑ P **P** **07 44 46.5 +1.4**
TRPA Tarpa 76.63 328⇑ P **P** **07 44 46.1 +0.9**
OSTC Ostas 76.69 333 *eP* **P** **07 44 46.0 +0.4**
OSTC AMS AMS 08 21 50.0
comp=Z,400nm,17.8s
OKC Ostrava-Krasne 76.70 332 AMS AMS 08 22 50.0
comp=Z,400nm,17.8s
CHVC Chvalec 76.71 333 *eP* **P** **07 44 46.0 +0.3**
UPC Upice 76.80 333 AMS AMS 08 23 00.0
comp=Z,500nm,18.4s
LANS Liptovska Anna 76.84 331 *eP* **P** **07 44 48.2 +1.7**
LANS pmax pmax
comp=Z,6.0nm,0.7s
LANS Liptovska Anna 76.84 331 *eP* **P** **07 44 48.1 +1.6**
CFR Carcaliu 76.88 323⇑ P **P** **07 44 47.4 +0.7**
UOSS Minazif 76.88 292 P **P** **07 44 46.5 -0.5**
UOSS lAmb lAmb 07 44 50.3
comp=Z,16nm,1.1s
VRI Vrincioaia 76.90 325⇑ P **P** **07 44 47.4 +0.6**
KRLC Kraliky 76.93 333 *eP* **P** **07 44 47.8 +0.8**
KRLC MLR MLR
comp=Z,400nm,17.9s
KRLC Kraliky 76.93 333 *eP* **P** **07 44 47.8 +0.8**
KRLC AMS AMS 08 24 20.0
comp=Z,400nm,17.9s
PLOR Plostina 76.94 325⇓ P **P** **07 44 49.0 +1.9**
ESK Eskdalemuir 76.94 346 *eP* **P** **07 44 48.9 +2.1**
ESK Eskdalemuir 76.94 346 P **P** **07 44 46.9 0.0**
ESK pmax pmax
comp=Z,9.0nm,0.6s
ESK Eskdalemuir 76.94 346 P **P** **07 44 46.9 0.0**
ESK lAmb lAmb 07 44 50.9
comp=Z,9.0nm,0.6s
MORC Moravsky Berou 76.95 332 *eP* **P** **07 44 47.3 +0.2**
MORC Moravsky Berou 76.95 332 P **P** **07 44 47.0 0.0**
MORC pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 76.95 332 P **P** **07 44 47.0 0.0**
MORC lAmb lAmb 07 44 49.5
comp=Z,7.1nm,0.8s
CLL Collm 76.99 336 *i* P **P** **07 44 47.3 +0.1**
comp=Z,15nm,0.7s
CLL *i* 07 44 50.7
CLL *i* pP **pP** **07 44 59.8 +1.1**
comp=Z,14nm,0.9s
CLL LmV 08 21 00.0
comp=Z,400nm,20.1s
CLL Collm 76.99 336 P **P** **07 44 47.1 -0.1**
CLL pmax pmax
comp=Z,15nm,0.8s
CLL Collm 76.99 336 P **P** **07 44 47.1 -0.1**
CLL Collm 76.99 336 *eP* **P** **07 44 47.3 +0.1**
comp=Z,15nm,0.8s,baz=26,slow=5.7
TPGR Topolog 77.03 323⇑ P **P** **07 44 48.4 +0.8**
MARD Mardin 77.04 311 P **P** **07 44 46.7 -1.2**
OZUR 77.08 325⇑ P **P** **07 44 48.9 +1.0**
BRG Berggiesshubel 77.10 335 *eP* **P** **07 44 48.2 +0.4**
BRG Amp 07 44 53.7
comp=Z,6.2nm,0.9s
BRG Berggiesshubel 77.10 335 *eP* **P** **07 44 48.0 +0.2**
comp=Z,6.2nm,0.9s,baz=26,slow=5.7
PVCC Panska Ves 77.22 334 AMS AMS 08 22 00.0
comp=Z,400nm,17.2s
FBE Freiberg 77.23 335 *eP* **P** **07 44 49.0 +0.4**
comp=Z,14nm,1.2s,baz=26,slow=5.7
CLZ Clausthal 77.25 337 *eP* **P** **07 44 49.5 +0.8**
comp=Z,13nm,1.0s,baz=26,slow=5.7
DOPR Dopca 77.35 325⇑ P **P** **07 44 50.7 +1.4**
GDLE Glaisdale, N Y 77.38 345 *eP* **P** **07 44 51.5 +2.2**
NEUB Neuenburg 77.43 336 *eP* **P** **07 44 50.2 +0.6**
comp=Z,11nm,0.9s,baz=26,slow=5.7
IBBN Ibbenburen 77.50 339 *eP* **P** **07 44 50.5 +0.5**
comp=Z,22nm,0.8s,baz=26,slow=5.7
MLR Muntele Rosu 77.52 325⇓ P **P** **07 44 51.9 +1.5**
MLR Muntele Rosu 77.52 325 P **P** **07 44 50.6 +0.1**
MLR pmax pmax
comp=Z,11nm,0.7s
MLR Muntele Rosu 77.52 325 P **P** **07 44 50.6 +0.1**
MLR lAmb lAmb 07 44 56.7
comp=Z,11nm,0.7s
ISR Istrita 77.58 324⇑ P **P** **07 44 52.6 +1.9**
GAL1 Galloway 77.62 347 *eP* **P** **07 44 51.0 +0.4**
VYHS Vyhne 77.62 331 *eP* **P** **07 44 52.4 +1.6**
VYHS Vyhne 77.62 331 *eP* **P** **07 44 52.4 +1.6**
GTTG Gottingen 77.62 337 *eP* **P** **07 44 51.4 +0.7**
comp=Z,14nm,1.1s,baz=26,slow=5.7
KESW Keswick, Cumbr 77.63 346 *eP* **P** **07 44 52.5 +1.8**
KESW lAmb lAmb 07 44 54.3
comp=Z,27nm,0.9s
VRAC Vranov 77.66 332⇑ P **P** **07 44 52.1 +1.0**
VRAC Vranov 77.66 332 *eP* **P** **07 44 51.9 +0.9**
DRGR 77.69 328⇑ P **P** **07 44 51.8 +0.5**
JAVC Velka Javorina 77.70 332 *eP* **P** **07 44 52.8 +1.5**
ILGA Ilgaz 77.70 318 P **P** **07 44 51.9 +0.2**
PRU Pruhonice 77.71 334 *eP* **P** **07 44 52.1 +0.9**
PRU MLR MLR
comp=Z,500nm,20.7s
PRU Pruhonice 77.71 334 *eP* **P** **07 44 52.1 +0.9**
PRU AMS AMS 08 22 30.0
comp=Z,500nm,20.7s
TX31 Lajitas Ar. Si 77.88 60 P **P** **07 44 52.3 -0.4**
TX32 Lajitas Array 77.88 60 P **P** **07 44 52.9 +0.2**
TX32 lAmb lAmb 07 45 05.9
comp=Z,5.4nm,0.8s
TXAR Lajitas Array 77.88 60 P **P** **07 44 53.1 +0.4**
comp=Z,3.0nm,0.7s,baz=302,slow=4.1,SNR=49
TXAR pP **pP** **07 45 05.6 +1.7**
comp=Z,3.9nm,0.7s,baz=300,slow=3.8,SNR=11
TXAR Lajitas Array 77.88 60 P **P** **07 44 52.4 -0.3**
VOIR 77.92 325⇑ P **P** **07 44 53.1 +0.5**
KRUC Moravsky 77.94 332 *eP* **P** **07 44 53.5 +0.9**
PLN Plauen 77.97 336 *eP* **P** **07 44 53.2 +0.5**
comp=Z,9.7nm,1.4s,baz=26,slow=5.7
HPK Haverah Park 77.97 345 *eP* **P** **07 44 55.1 +2.4**
HPK lAmb lAmb 07 44 55.8
comp=Z,66nm,0.6s
MOX Moxa 77.98 336 *eP* **P** **07 44 53.2 +0.4**
comp=Z,5.0nm,0.8s,baz=26,slow=5.7
MOX *eL* L 08 22 17.7
comp=Z,346nm,19.5s
TREC Trest 78.02 333 AMS AMS 08 23 40.0
comp=Z,500nm,16.2s
GUNZ Gunzen 78.03 335 *eP* **P** **07 44 53.6 +0.5**
comp=Z,10nm,1.0s,baz=26,slow=5.7
SMOL Smolenice 78.08 332 *eP* **P** **07 44 54.7 +1.4**
SMOL pmax pmax
comp=Z,4.0nm,0.8s
SMOL Smolenice 78.08 332 *eP* **P** **07 44 54.7 +1.4**
WERN Wernitzgruen 78.08 335 *eP* **P** **07 44 54.0 +0.6**
comp=Z,8.4nm,0.7s,baz=26,slow=5.7
NKC Novy Kostel 78.11 335 *eP* **P** **07 44 55.3 +1.8**
NKC MLR MLR
comp=Z,400nm,15.7s
NKC Novy Kostel 78.11 335 *eP* **P** **07 44 55.3 +1.8**
NKC AMS AMS 08 23 40.0
comp=Z,400nm,15.7s

ARR	Arges	78.14	326	⇑P		P	07 44 55.5	+1.7
MODS	Modra-Piesok	78.25	332	*e*P		P	07 44 55.3	+1.0
MODS					pmax	pmax		
	comp=Z,12nm,1.0s							
MODS	Modra-Piesok	78.25	332	*e*P		P	07 44 55.3	+1.0
STKA	Stephens Creek	78.32	190	LR		LR	08 19 32.8	
	comp=Z,119nm,20.5s,baz=26,slow=36							
KASTN	Kahler Asten	78.34	338	*e*P		P	07 44 55.6	+0.8
	comp=Z,29nm,1.1s,baz=26,slow=5.7							
G54A	Lake Saint Pet	78.35	34	P			07 44 54.4	
	baz=327							
ZST	Bratislava	78.46	332	*e*P		P	07 44 56.1	+0.7
ZST	Bratislava	78.46	332	*e*P		P	07 44 56.1	+0.7
SIRR	Siria	78.52	328	⇓P		P	07 44 55.8	-0.1
LBWR	Ladybower, Pea	78.52	345	*e*P		P	07 44 57.6	+1.9
LBWR					IAmb	IAmb	07 44 58.9	
	comp=Z,44nm,0.6s							
ROTZ	Rotzenmuhle	78.60	335	*e*P		P	07 44 57.0	+0.8
	comp=Z,9.5nm,1.0s,baz=26,slow=5.7							
KHC	Kasperske Hory	78.76	334	P		P	07 44 56.4	-0.7
KHC					pmax	pmax		
	comp=Z,12nm,1.0s							
KHC	Kasperske Hory	78.76	334	*e*P		P	07 44 57.7	+0.6
KHC				*ex*		x	07 45 01.7	
KHC					AMS	AMS	08 23 20.0	
	comp=Z,600nm,19.7s							
KHC	Kasperske Hory	78.76	334	P		P	07 44 56.4	-0.7
KHC					IAmb	IAmb	07 44 59.9	
	comp=Z,12nm,1.0s							
BR131	Keskin Array S	78.78	317	P		P	07 44 56.8	-0.7
BR131					pmax	pmax		
	comp=Z,11nm,1.1s							
BR131	Keskin Array S	78.78	317	P		P	07 44 56.8	-0.7
BR131					IAmb	IAmb	07 45 01.3	
	comp=Z,11nm,1.1s							
BRTR	Keskin Array B	78.78	317	P		P	07 44 58.5	+0.9
	comp=Z,4.7nm,0.9s,baz=64,slow=2.9,SNR=15							
BRTR					LR	LR	08 25 39.7	
	comp=Z,496nm,18.4s,baz=44,slow=40							
BRTR	Keskin Array B	78.78	317	P		P	07 44 57.2	-0.3
U40A	Yellville	78.80	49	P		P	07 44 56.9	-0.6
U40A					IAmb	IAmb	07 45 10.2	
	comp=Z,14nm,1.3s							
U40A	Yellville	78.80	49	P			07 44 56.6	
	baz=320							
CKRC	Cesky Krumlov	78.81	334	*e*P		P	07 44 58.5	+1.1
GZR	Gura Zlata	78.84	327	⇑P		P	07 44 57.1	-0.6
UMR	Umm Al-Rimmam	78.87	301	*e*P			07 44 58.9	
GRF	Grafenberg Arr	78.95	336	*e*P		P	07 44 59.2	+1.0
	comp=Z,19nm,0.8s,baz=26,slow=5.7							
GRF				*e*L		L	08 23 06.2	
	comp=Z,398nm,19.7s							
WET	Wettzell	78.96	335	*e*P		P	07 44 59.1	+0.9
	comp=Z,9.0nm,0.9s,baz=26,slow=5.7							
GEC2	GERESS Array S	78.97	334	P		P	07 44 57.8	-0.6
GEC2	GERESS Array S	78.97	334	*e*P		P	07 44 58.7	+0.3
	comp=Z,5.9nm,1.0s,baz=26,slow=5.7							
GERES	GERESS Array B	78.97	334	P		P	07 44 59.1	+0.7
	comp=Z,4.0nm,0.8s,baz=34,slow=5.3,SNR=21							
GERES					LR	LR	08 23 47.0	
	comp=Z,444nm,18.1s,baz=30,slow=39							
BZS	Buzias	79.09	328	⇑P		P	07 44 59.8	+0.9
CONA	Conrad Observa	79.10	332	*e*P		P	07 44 59.9	+0.8
	comp=Z,8.7nm,0.7s,SNR=5.6							
FOEL	Foel Wylfa	79.27	346	*e*P		P	07 44 59.9	+0.1
E58A	La Victoria	79.31	31	P			07 44 59.5	
	baz=330							
QRN	Al-Qurain	79.33	300	*e*P			07 45 02.1	
HERR	Herculane	79.41	327	⇓P		P	07 45 01.0	+0.3
RDF	Al-Radifah	79.42	301	*e*P			07 45 02.1	
BTNL	Ternell	79.49	339	*d*P		P	07 45 01.2	+0.2
BTNL				*dx*		x	07 45 02.6	
BTNL				*d*PcP		PcP	07 45 07.8	-1.2
MEM	Membach	79.50	339	*d*P		P	07 45 01.9	+0.8
BSTI	Sart Tilman	79.63	340	*d*P		P	07 45 03.5	+1.8
BSTI				*dx*		x	07 45 04.6	
MORH	Mrgy, Hungar	79.65	330	⇑P		P	07 45 02.7	+0.7
MOA	Molln	79.68	333	*i* P		P	07 45 03.6	+1.4
	comp=Z,8.5nm,1.0s							
MDVR	Moldovita	79.76	327	⇑P		P	07 45 02.9	+0.2
PLVB	Pleven	79.79	324	⇑P		P	07 45 04.1	+1.3
ARSA	Arzberg	79.81	332	*i* P		P	07 45 04.1	+1.2
	comp=Z,2.7nm,0.6s							
BCLA	Clavier	79.84	340	*d*P		P	07 45 04.0	+1.0
BGES	Gesves	79.93	340	*d*P		P	07 45 04.0	+0.6
SNF	Seneffe	80.00	340	*d*P		P	07 45 04.1	+0.3
SNF				*dx*		x	07 45 06.2	
BMRD	Maredsous	80.08	340	*d*P		P	07 45 05.1	+0.9
BMRD				*dx*		x	07 45 06.7	
F60A	Warwick	80.13	30	P			07 45 03.7	
	baz=330							
RJOB	Jochberg	80.24	334	*e*P		P	07 45 06.3	+1.1
	comp=Z,44nm,1.0s,baz=26,slow=5.7							
DOU	Dourbes	80.31	340	*d*P		P	07 45 07.9	+2.4
SOKA	Soboth	80.47	332	*e*P		P	07 45 07.0	+0.5
	comp=Z,12nm,1.0s,SNR=7.6							
KBA	Koelnbreinsper	80.65	333	*i* P		P	07 45 09.4	+1.8
	comp=Z,14nm,0.6s,SNR=14							
BOVS	Bovan	80.73	326	⇑P		P	07 45 07.8	-0.1
OBKA	Obir	80.78	332	*e*P		P	07 45 09.3	+1.1
	comp=Z,4.2nm,1.0s							
MYKA	Terra Mystica	80.96	333	*i* P		P	07 45 10.2	+1.0
	comp=Z,4.8nm,1.0s							
WATA	Walderalm	80.96	335	*i* P		P	07 45 10.7	+1.4
	comp=Z,15nm,0.5s							
DIVS	Divibare	80.99	328	P		P	07 45 08.9	-0.4
DIVS					IAmb	IAmb	07 45 11.3	
	comp=Z,11nm,1.0s							
BFO	Black Forest	80.99	337	P		P	07 45 08.7	-0.5
BFO					pmax	pmax		
	comp=Z,9.0nm,0.9s							
BFO	Black Forest	80.99	337	P		P	07 45 08.7	-0.5
BFO					IAmb	IAmb	07 45 12.2	
	comp=Z,8.6nm,0.9s							
BFO	Black Forest	80.99	337	*e*P		P	07 45 09.6	+0.4
	comp=Z,9.2nm,1.0s,baz=26,slow=5.7							
VTS	Vitosha	80.99	325	⇑P		P	07 45 10.2	+0.7
VTS	Vitosha	80.99	325	P		P	07 45 09.8	+0.3
VTS					pmax	pmax		
	comp=Z,16nm,0.7s							
VTS	Vitosha	80.99	325	P		P	07 45 09.8	+0.3
WTTA	Wattenberg	81.01	334	*e*P		P	07 45 11.1	+1.5
	comp=Z,27nm,0.6s,SNR=11							
RETA	Reutte	81.07	335	*i* P		P	07 45 11.4	+1.7
	comp=Z,5.7nm,0.7s							
MOTA	Moosalm	81.10	335	*i* P		P	07 45 11.2	+1.2
	comp=Z,25nm,1.2s,SNR=8.6							
SQTA	Sankt Quirin	81.18	335	*e*P		P	07 45 11.5	+1.2
	comp=Z,12nm,0.8s							
ABTA	Abfaltersbach	81.21	334	*i* P		P	07 45 11.3	+0.8
	comp=Z,8.7nm,1.5s							
ECH	Echery	81.41	338	P		P	07 45 10.9	-0.5
ECH					pmax	pmax		
	comp=Z,12nm,0.6s							
ECH	Echery	81.41	338	P		P	07 45 10.9	-0.5
ECH					IAmb	IAmb	07 45 14.5	
	comp=Z,12nm,0.6s							
FETA	Feichten	81.50	335	*i* P		P	07 45 13.4	+1.3
	comp=Z,13nm,1.1s							
DAVA	Damuels	81.51	336	*e*P		P	07 45 12.3	+0.2
	comp=Z,8.0nm,0.8s							
STAL	STALIGIAL	81.58	333	P		P	07 45 11.7	-0.7
STAL					IAmb	IAmb	07 45 19.7	
	comp=Z,7.4nm,0.7s							
PPT	Papeete	81.87	126	LR		LR	08 18 07.0	
	comp=Z,326nm,18.3s,baz=310,slow=33							
CTI	Castel Tesino	82.10	334	P		P	07 45 13.6	-1.6
CTI					pmax	pmax		
	comp=Z,6.0nm,0.7s							
CTI	Castel Tesino	82.10	334	P		P	07 45 13.6	-1.6
CTI					IAmb	IAmb	07 45 17.2	
	comp=Z,5.6nm,0.7s							
M57A	Sunshine Farm,	82.13	36	P			07 45 15.1	
	baz=328							
TUE	Stuetta	82.40	336	P		P	07 45 16.8	-0.1
TUE					IAmb	IAmb	07 45 22.9	
	comp=Z,14nm,0.8s							
PDG	Podgorica	82.69	327	⇑P		P	07 45 18.2	0.0
SENIN	Lac Senin/Sane	83.07	337	P		P	07 45 20.4	0.0
BNI	Bardonecchia	84.45	337	P		P	07 45 27.5	+0.1
BNI					pmax	pmax		
	comp=Z,16nm,1.5s							
BNI	Bardonecchia	84.45	337	P		P	07 45 27.5	+0.1
BNI					IAmb	IAmb	07 45 40.8	
	comp=Z,16nm,1.5s							
NRCA	Norcia	84.51	332	P		P	07 45 27.9	+0.3
RAYN	Ar Rayn	84.64	298	P		P	07 45 29.1	+0.5
RAYN					pmax	pmax		
	comp=Z,7.0nm,0.8s							
RAYN	Ar Rayn	84.64	298	P		P	07 45 29.1	+0.5
RAYN					IAmb	IAmb	07 45 32.5	
	comp=Z,6.5nm,0.8s							
SSB	Saint Sauveur	84.81	338	P		P	07 45 29.2	+0.1
SSB					pmax	pmax		
	comp=Z,7.0nm,0.7s							
SSB	Saint Sauveur	84.81	338	P		P	07 45 29.2	+0.1
SSB					IAmb	IAmb	07 45 33.4	
	comp=Z,6.7nm,0.7s							
URZ	Urewera	86.76	161	LR		LR	08 18 33.4	
	comp=Z,198nm,21.0s,baz=31,slow=32							
ESDC	Sonseca Array	92.12	342	P		P	07 46 05.3	+1.3
	comp=Z,0.9nm,0.8s,baz=360,slow=6.7,SNR=4.5							
ESDC					LR	LR	08 30 55.1	
	comp=Z,148nm,21.7s,baz=320,slow=38							
KEST	Kesra	92.17	331	LR		LR	08 33 03.0	
	comp=Z,223nm,18.6s,baz=322,slow=39							
TORD	Torodi Ar. Bea	115.58	329	PKP		PKPdf	07 51 37.3	+0.3
	comp=Z,0.2nm,0.5s,baz=14,slow=2.6,SNR=2.1							
DBIC	Dimbokro	123.84	333	PKP		PKPdf	07 51 52.9	0.0
	comp=Z,4.0nm,0.8s,baz=22,slow=0.3,SNR=4.4							
H03N2	Juan Fernandez	138.84	91	T		T	10 27 54.6	
	baz=308,slow=77,SNR=6.8							
H03N3	Juan Fernandez	138.85	91	T		T	10 28 04.0	
	baz=308,slow=77,SNR=8.0							
H03N1	Juan Fernandez	138.85	91	T		T	10 28 04.4	
	baz=308,slow=77,SNR=8.5							
BDFB	Brasilia	144.90	37	PKP		PKPab	07 52 30.8	-0.4
	comp=Z,2.6nm,0.8s,baz=221,slow=1.2,SNR=5.2							
PLCA	Paso Flores	148.24	96	PKPbc		PKPbc	07 52 40.4	+0.1
	comp=Z,4.0nm,0.9s,baz=301,slow=5.1,SNR=6.7							
PLCA	Paso Flores	148.24	96			PKPbc	07 52 40.9	+0.6
CPUP	Villa Florida	148.85	61	PKPbc		PKPbc	07 52 41.6	-0.6
	comp=Z,2.8nm,1.0s,baz=328,slow=2.7,SNR=7.3							
CPUP	Villa Florida	148.85	61			PKPbc	07 52 42.2	0.0
SNAA	Sanae	151.93	196	PKPdf		PKPbc	07 52 47.5	-0.7
VNA2	Neumayer--Watz	153.38	194	PKPdf		PKPbc	07 52 50.8	-0.6
VNA3	Neumayer Olymp	153.46	192	PKPdf		PKPbc	07 52 50.7	-0.8

*IDC **21** 07:36:07.4±1.1,14.°09N×144.°95E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/43, mbtmp3.7/6, Error ellipse: s-maj=47.3km s-min=25.1km az=101.0*
*NEIC **21** 07:36:29.6±0.8, 13.°95N±0.°08×145.°0E±0.°2, h204km±3km, mb4.1/16, Error ellipse: s-maj=23.9km s-min=8.5km az=109.0*

ISC 21 07:36:29.0±0.6, 13.°94N±0.°09×144.°8E±0.°2, h200km, n26, σ1$23/27, mb3.9/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.35	175			Pn	07 36 57.3	+1.6
GUMO						Sn	07 37 17.4	+1.0
FAKI	Fak Fak	20.89	218	P		P	07 40 56.8	+0.7
MJAR	Matsushiro Arr	23.28	346	P		P	07 41 16.3	-2.6
	3.2nm,0.8s,baz=171,slow=11,SNR=4.4							
WB0	Warramunga Arr	35.04	197	P		P	07 43 03.3	+0.3
WB0					IAmb	IAmb	07 43 24.9	
	comp=Z,3.6nm,1.1s							
WR0	Warramunga Arr	35.18	197	P		P	07 43 04.9	+0.8
WR0					IAmb	IAmb	07 43 25.0	
	comp=Z,3.2nm,1.1s							
WB2	Warramunga Arr	35.22	197	P		P	07 43 04.3	-0.2
WB2					IAmb	IAmb	07 43 17.5	
	comp=Z,7.0nm,1.1s							
WRA	Warramunga Arr	35.22	197	P		P	07 43 05.1	+0.6
	comp=Z,0.6nm,0.4s,baz=8.6,slow=8.5,SNR=14							
FITZ	Fitzroy Crossi	37.04	211	P		P	07 43 19.1	-0.8
FITZ					IAmb	IAmb	07 43 43.9	
	comp=Z,3.4nm,1.1s							
AS31	Alice Springs	38.88	196	P		P	07 43 35.2	0.0
ARMA	Armidale	44.58	172	P		P	07 44 21.2	-0.3
BBOO	Buckleboo	47.24	190	P		P	07 44 41.5	-0.6
BBOO					IAmb	IAmb	07 45 10.1	
	comp=Z,6.9nm,1.1s							
FORT	Forrest	47.30	200	P		P	07 44 42.6	0.0
NIUE	Niue	55.33	125	P		P	07 45 40.4	-2.0
MKAR	Makanchi Array	61.22	316	P		P	07 46 23.7	+0.8
	comp=Z,0.3nm,0.5s,baz=90,slow=7.2,SNR=3.2							
MKAR	Makanchi Array	61.22	316	P		P	07 46 23.5	+0.6
ZAA0	Zalesovo Array	61.32	324	P		P	07 46 21.7	-1.6
FOZ	Fox Glacier	61.59	160	P		P	07 46 24.0	-1.2
PWL	Port Wells	66.69	29	P		P	07 46 57.4	-0.8
ILAR	Eielson Array	68.26	25	P		P	07 47 08.2	+0.2
	comp=Z,0.3nm,0.4s,baz=261,slow=5.6,SNR=4.7							
ILAR	Eielson Array	68.26	25	P		P	07 47 06.5	-1.5
MCARA	McCarthy VSAT	69.32	29	P		P	07 47 14.5	0.0
MCARA					IAmb	IAmb	07 47 42.8	
	comp=Z,7.9nm,1.0s							
FYU	Fort Yukon	69.35	24	P		P	07 47 14.3	-0.3
FYU					IAmb	IAmb	07 47 16.5	
	comp=Z,1.7nm,0.7s							
LOGN	Logan Glacier	70.21	30	P		P	07 47 19.4	-0.8
LOGN					IAmb	IAmb	07 47 21.1	
	comp=Z,7.2nm,0.9s							
EUNU	Eureka	82.52	8	P		P	07 48 29.2	+0.2
YKA	Yellowknife Ar	82.56	27	P		P	07 48 30.4	+1.0
	comp=Z,0.2nm,0.5s,baz=286,slow=4.8,SNR=4.4							
NVAR	Mina Array Bea	86.72	51	P		P	07 48 54.1	+3.1
	comp=Z,0.5nm,0.7s,baz=255,slow=6.4,SNR=5.0							

*IDC **21** 07:42:22.9±7.3, 34.°94N×24.°95E, h0km, mb3.9/2, mb1 3.7/3, mb1mx3.3/38, mbtmp3.7/3, ML2.8/1, Error ellipse: s-maj=234.2km s-min=117.6km az=145.0*
*THE **21** 07:42:35.7, 35.°13N×26.°82E, h0km±1km, ML2.8/4, Error ellipse: s-maj=4.4km s-min=0.7km az=154.0*
*ATH **21** 07:42:35.1, 35.°03N×26.°90E, h9km±4km, ML3.1/3, Error ellipse: s-maj=8.0km s-min=1.5km az=336.0*
*ISK **21** 07:42:36.9, 35.°25N×26.°77E, h8km, ML2.8/11*

ISC 21 07:42:35.9±1.5, 35.°14N±0.°09×26.°82E±0.°05, h11km±10km, n31, σ0$77/40, Crete

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.49	268	P		Pg	07 42 45.6	0.0
ZKR				S		Sb	07 42 53.8	-0.1
ZKR				AML		AML	07 42 55.4	
	comp=E,3602μm,0.5s							
ZKR				AML		AML	07 42 58.7	
	comp=N,1736μm,0.3s							
ZKR	Zakros	0.49	268	P		Pg	07 42 45.6	0.0
ZKR				S		Sb	07 42 53.8	-0.1
	comp=N,1μm,0.4s							
ZKR	Zakros	0.49	268	PG		Pg	07 42 45.9	+0.3
ZKR				SG		Sb	07 42 54.0	+0.1
KARP	Karpathos	0.50	34	P		Pg	07 42 45.6	0.0
KARP				S		Sb	07 42 54.0	-0.1
KARP				AML		AML	07 42 55.8	
	comp=N,6148μm,0.4s							
KARP				AML		AML	07 42 56.9	
	comp=E,6422μm,0.3s							
KARP	Karpathos	0.50	34	P		Pg	07 42 45.5	-0.2
KARP				S		Sb	07 42 54.0	-0.1
	comp=E,3μm,0.3s							
KARP	Karpathos	0.50	34	PG		Pg	07 42 45.4	-0.2
KARP				SG		Sg	07 42 52.6	+0.3
STIA	Sitia Lasithi	0.60	277	P		Pg	07 42 47.7	+0.1
STIA				S		Sb	07 42 57.6	+0.6
FRMA	Ierapetra Chan	0.90	263	P		Pg	07 42 51.2	-2.0
FRMA				S		Sg	07 43 04.5	-0.5
	comp=E,315nm,0.4s							
NPS	Neapolis	1.00	278	P		Pb	07 42 55.5	+0.2
NPS				AML		AML	07 43 18.0	
	comp=E,1642μm,0.6s							
NPS				AML		AML	07 43 21.7	
	comp=N,1608μm,0.5s							
NPS	Neapolis	1.00	278	P		Pb	07 42 55.5	+0.2
HRKL	Herakleio	1.42	278	PN		Pg	07 43 03.2	+0.1
NIS1	Nisyros Isl.	1.49	11	PN		Pn	07 43 03.1	+0.3
ARG	Arkhangelos	1.52	44	P		Pn	07 43 03.1	+0.1
ARG	Arkhangelos	1.52	44	P		Pn	07 43 03.1	+0.1
ARG				S		Sb	07 43 23.5	+0.2
	comp=N,412nm,0.5s							
ARG	Arkhangelos	1.52	44	PN		Pb	07 43 04.4	+0.3
ARG				SN		Sg	07 43 24.4	-0.3
IDI	Anoyia	1.59	276	P		Pg	07 43 06.0	-0.4
IDI	Anoyia	1.59	276	PN		Pb	07 43 05.7	+0.3
SANT	Santorini	1.66	318	P		Pb	07 43 06.0	-0.5
SANT	Santorini	1.66	318	P		Pn	07 43 05.3	+0.3
SANT	Santorini	1.66	318	PN		Pn	07 43 05.5	+0.5
THT2	Imerovigli	1.73	319	PN		Pn	07 43 06.3	+0.4
BODT	Bodrum	1.96	12	PN		Pn	07 43 09.9	+0.7
APE	Apeiranthos	2.19	332	PN		Pn	07 43 12.9	+0.5
DALY	Dalyan (Mula)	2.24	41	PN		Pn	07 43 14.8	+1.8
YER	Yerkesik	2.32	30	PN		Pn	07 43 15.6	+1.4
IMMV	Iera Moni Meta	2.34	279	PN		Pn	07 43 16.2	+1.8
AYDB	Zeytinkoy-Aydi	2.94	17	PN		Pn	07 43 23.9	+1.2
KTHA	Kythira Island	3.26	291	PN		Pn	07 43 28.5	+1.5
BRTR	Keskin Array B	7.10	48	Pn		Pn	07 44 27.9	+8.0
	comp=N,0.1nm,0.3s,baz=240,slow=16,SNR=2.4							
MKAR	Makanchi Array	42.65	57	P		P	07 50 32.0	-0.5
	comp=N,0.9nm,0.6s,baz=278,slow=6.8,SNR=13							
ZALV	Zalesovo Beam	44.04	46	P		P	07 50 42.1	-1.4
	comp=N,1.0nm,0.6s,baz=283,slow=9.0,SNR=3.9							

*IDC **21** 07:46:56.8±1.5, 5.°65S×147.°36E, h238km±22km, mb3.2/4, mb1 3.3/6, mb1mx3.2/29, mbtmp3.8/6, Error ellipse: s-maj=56.7km s-min=13.1km az=110.0*

ISC 21 07:46:56.9±1.5, 5.°70S±0.°10×147.°6E±0.°3, h250km, n8, σ1$08/11, mb3.7/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.70	186	P		Pn	07 47 57.5	+0.3
	3.3nm,0.3s,baz=326,slow=14,SNR=14							
PMG				S		S	07 48 44.2	-0.9
	7.4nm,0.3s,baz=38,slow=22,SNR=7.7							
WRA	Warramunga Arr	19.11	221	P		P	07 51 02.0	+0.5
	0.6nm,0.3s,baz=45,slow=9.7,SNR=24							
WRA				S		S	07 54 23.6	-1.3
	0.1nm,0.3s,baz=35,slow=18,SNR=2.4							
ASAR	Alice Springs	22.17	215	P		P	07 51 33.4	+0.8
	2.2nm,0.8s,baz=41,slow=7.4,SNR=22							
ASAR				S		S	07 55 19.9	+1.6
	0.8nm,1.0s,baz=29,slow=16,SNR=2.9							
FITZ	Fitzroy Crossi	24.68	238	P		P	07 51 55.5	+0.1
	21nm,0.4s,baz=40,slow=7.2,SNR=101							
SONM	Songino Array	64.41	331	P		P	07 57 07.6	+1.0
	0.3nm,0.4s,baz=146,slow=6.7,SNR=2.2							
MKAR	Makanchi Array	77.62	320	P		P	07 58 25.2	-0.4
	0.3nm,0.4s,baz=102,slow=8.0,SNR=4.3							
ZALV	Zalesovo Beam	79.05	328	P		P	07 58 31.8	-1.4
	0.7nm,0.4s,baz=94,slow=6.3,SNR=1.8							
TORD	Torodi Ar. Bea	145.54	285	PKPbc		PKPab	08 06 07.1	-0.5
	0.7nm,0.4s,baz=65,slow=3.5,SNR=17							

*SOME **21** 07:52:57.2, 44.°70N×81.°93E, h10km*
*NNC **21** 07:52:59.2±0.7, 44.°71N×82.°02E, h0km, mb2.7, mpv2.2, Error ellipse: s-maj=11.1km s-min=2.1km az=118.0*

ISC 21 07:52:55.0±2.1, 44.°65N±0.°07×82.°2E±0.°1, h0km±21km, n10, σ0$79/20, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DJR	Jarkent	1.74	260	*e*P		Pn	07 53 27.1	+0.5
	2.3nm,0.2s							
DJR				*e*S		Sn	07 53 48.5	-1.0
	12nm,0.6s							
MK31	Makanchi Array	2.15	2	Pn		Pg	07 53 35.8	-0.3
	0.4nm,0.3s,baz=184,slow=15,SNR=40							
MK31				⇑Sn		Sg	07 54 03.9	0.0
	2.1nm,0.5s,baz=188,slow=32,SNR=3.8							
MAKZ	Makanchi	2.16	356	⇓Pn		Pb	07 53 35.4	+0.4
	0.6nm,0.5s							
MAKZ				⇓Sn		Sg	07 54 03.5	-1.0
	3.5nm,0.5s							
PDGK	Podgornoye	2.35	237	⇑Pn		Pb	07 53 38.3	+0.1
	2.8nm,0.6s							
PDGK				⇓Sn		Sb	07 54 08.4	+0.5
	9.6nm,0.7s							
SHLS	Shalkode	2.47	234	*e*P		Pn	07 53 37.2	+0.7
	8.8nm,0.7s							
SHLS				*e*S		Sn	07 54 05.9	-1.6
	11nm,0.7s							
TDK	Taldyqorghan	2.71	279	*e*P		Pb	07 53 44.9	+0.6
	63nm,0.3s							
TDK				*e*S		Sb	07 54 19.0	+0.8
	67nm,0.5s							
UZB	Uzymbulak	2.73	238	*e*P		Pb	07 53 45.3	+0.5
	2.6nm,0.3s							
UZB				*e*S		Sb	07 54 19.7	+0.8
	4.5nm,0.7s							
KPKS	Kokpek	2.79	246	*e*P		Pb	07 53 45.3	-0.4
	3.3nm,0.2s							
KPKS				*e*S		Sb	07 54 19.9	-0.5
	15nm,0.6s							
ARXS	Arharly	3.15	264	*e*P		Pb	07 53 51.5	-0.4
	3.2nm,0.3s							
ARXS				*e*S		Sb	07 54 30.6	-0.2
	8.8nm,0.5s							
KTBS	Karatobe	4.07	259	*e*P		Pb	07 54 07.8	+0.3
	0.9nm,0.4s							
KTBS				*e*S		Sb	07 54 58.5	+1.3
	6.9nm,0.6s							

ROM 21 08:08:46.7±0.3, 36.°46N±0.°02×14.°61E±0.°02, h11km±3km, ML2.4/7, Error ellipse: s-maj=2.0km s-min=1.4km az=202.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
HPAC	Pachino	0.47	59	P		Pg	08 08 55.5	-0.5
HPAC				S		Sg	08 09 02.0	-0.2
HPAC	

*IDC **21** 08:09:03.6s3.2,24°07N×122°59E,h44km▵32km,mb3.8/15, mb1 4.0/17,mb1mx3.7/57,mbtmp4.0/17,ML3.5/2,MS3.7/7, Ms1 3.7/7,ms1mx3.1/46,Error ellipse: s-maj=26.0km s-min=15.4km az=66.0*

ISC 21 08:09:01.1s1.0,**23°92N**s0°02×**122°53E**s0°02,**h29**km▵7km, **n207,**s0**96/287,mb4.3**/26,**MS3.6**/5,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.66**	**36**	P		**Pb**	**08 09 13.7**	**-0.3**
JYNG				*e*S		**Sb**	**08 09 21.4**	**-1.5**
YOJ	**Yonaguni jima**	**0.70**	**39**	P		**Pb**	**08 09 14.4**	**-0.4**
YOJ				S		**Sb**	**08 09 23.2**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**39**	P		**Pb**	**08 09 14.4**	**-0.4**
	baz=40							
YOJ				*e*S		**Sb**	**08 09 22.9**	**-1.3**
	baz=40							
YOJ	**Yonaguni jima**	**0.70**	**39**	Pn		**Pb**	**08 09 13.7**	**-1.1**
HWA	**Hwalien**	**0.84**	**274**	*e*P		**Pb**	**08 09 17.9**	**+0.7**
	baz=259							
HWA				*e*S		**Sn**	**08 09 29.6**	**+1.2**
	baz=259							
EWUT	**Wuta**	**0.86**	**308**	P		**Pn**	**08 09 17.2**	**0.0**
	baz=305							
EWUT				*e*S		**Sn**	**08 09 29.3**	**+0.4**
	baz=305							
TWD	**Chiawan**	**0.87**	**281**	P		**Pn**	**08 09 17.1**	**-0.2**
	baz=279							
TWD				*e*S		**Sn**	**08 09 29.3**	**+0.3**
	baz=279							
NACB	**Ninganchiao**	**0.89**	**287**	P		**Pn**	**08 09 17.5**	**0.0**
	baz=270							
NACB				*e*S		**Sb**	**08 09 29.7**	**+0.2**
	baz=270							
NACB	**Ninganchiao**	**0.89**	**287**	Pn		**Pn**	**08 09 17.6**	**0.0**
TWC	**Suao**	**0.93**	**318**	P		**Pn**	**08 09 18.0**	**-0.1**
	baz=316							
TWC				*e*S		**Sn**	**08 09 30.0**	**-0.4**
	baz=316							
ETLH	**Xiulin Townshi**	**1.00**	**287**	P		**Pn**	**08 09 19.2**	**0.0**
	baz=273							
ETLH				*e*S		**Sn**	**08 09 32.5**	**+0.2**
	baz=273							
ESL	**Shilin**	**1.01**	**264**	P		**Pn**	**08 09 18.8**	**-0.4**
	baz=262							
ESL				S		**Sn**	**08 09 32.1**	**-0.3**
	baz=262							
NDS	**Dongshan**	**1.03**	**314**	P		**Pb**	**08 09 20.2**	**-0.1**
	baz=312							
NDS				*e*S		**Sb**	**08 09 34.3**	**+0.9**
	baz=312							
EGFH	**Guangfu**	**1.04**	**256**	P		**Pn**	**08 09 19.8**	**+0.1**
	baz=255							
EGFH				*e*S		**Sn**	**08 09 32.6**	**-0.5**
	baz=255							
HGSD	**Ruisui**	**1.09**	**248**	P		**Pn**	**08 09 20.6**	**+0.2**
	baz=245							
ILA	**Ilan**	**1.10**	**320**	P		**Pb**	**08 09 22.0**	**+0.4**
	baz=318							
TWE	**Neicheng**	**1.12**	**316**	P		**Pb**	**08 09 21.6**	**-0.3**
	baz=314							
TWE				*e*S		**Sb**	**08 09 36.7**	**+0.6**
	baz=314							
NTC	**Toucheng**	**1.13**	**326**	P		**Pb**	**08 09 21.5**	**-0.5**
	baz=324							
NTC				S		**Sb**	**08 09 37.2**	**+0.9**
	baz=324							
ENTT	**Nioudou**	**1.13**	**310**	P		**Pb**	**08 09 21.9**	**-0.2**
	baz=295							
ENTT				*e*S		**Sb**	**08 09 36.4**	**-0.1**
	baz=295							
NDT	**Datong Townshi**	**1.15**	**307**	P		**Pb**	**08 09 22.3**	**0.0**
	baz=292							
NDT				S		**Sb**	**08 09 37.6**	**+0.7**
	baz=292							
NNSB	**Datong**	**1.16**	**296**	P		**Pb**	**08 09 22.1**	**-0.5**
	baz=294							
NNSH	**Datong**	**1.16**	**296**	P		**Pn**	**08 09 22.0**	**+0.5**
	baz=295							
NNSH				S		**Sb**	**08 09 37.4**	**0.0**
	baz=295							
NNS	**Nan Shan**	**1.18**	**297**	*i* P		**Pn**	**08 09 22.3**	**+0.6**
	baz=283							
NNS				S		**Sb**	**08 09 37.6**	**-0.2**
	baz=283							
WHF	**Hehuan Shan**	**1.18**	**281**	*i* P		**Pn**	**08 09 22.1**	**+0.1**
	baz=280							
WHF				S		**Sb**	**08 09 37.8**	**-0.2**
	baz=280							
IRIF	**Iriomote-Funau**	**1.18**	**69**	P		**Pb**	**08 09 23.3**	**+0.5**
IRIF				S		**Sb**	**08 09 39.2**	**+1.5**
HATJ	**Hateruma jima**	**1.18**	**83**	P		**Pb**	**08 09 22.5**	**-0.3**
HATJ				*e*S		**Sb**	**08 09 38.1**	**+0.4**
TWB1	**Santiao Chiao**	**1.19**	**336**	*e*P		**Pb**	**08 09 22.6**	**-0.5**
	baz=351							
TWB1				*e*S		**Sb**	**08 09 37.6**	**-0.5**
	baz=351							
FUSS	**Fushou**	**1.22**	**286**	P		**Pn**	**08 09 22.9**	**+0.5**
	baz=284							
FUSS				*e*S		**Sb**	**08 09 38.9**	**-0.2**
	baz=284							
TIPB	**Shuangxi**	**1.23**	**329**	*e*P		**Pn**	**08 09 23.0**	**+0.7**
	baz=327							
TIPB				*e*S		**Sb**	**08 09 39.1**	**-0.1**
	baz=327							
OWD	**Renai**	**1.24**	**272**	*e*P		**Pn**	**08 09 22.8**	**+0.2**
	baz=270							
YULB	**Yu-li**	**1.24**	**245**	*e*P		**Pn**	**08 09 22.9**	**+0.4**
	baz=244							
YULB				*e*S		**Sn**	**08 09 39.0**	**+0.8**
	baz=244							
YULB	**Yu-li**	**1.24**	**245**	Pn		**Pn**	**08 09 22.8**	**+0.4**
EYUL	**Yuli**	**1.24**	**243**	*e*P		**Pn**	**08 09 22.9**	**+0.4**
	baz=242							
EYUL				*e*S		**Sn**	**08 09 38.7**	**+0.4**
	baz=242							
CHGB	**Renai**	**1.25**	**277**	P		**Pn**	**08 09 23.3**	**+0.6**
	baz=275							
CHGB				*e*S		**Sb**	**08 09 40.3**	**+0.4**
	baz=275							
TWF1	**Yuli**	**1.26**	**244**	P		**Pn**	**08 09 23.4**	**+0.6**
	baz=242							
TWF1				*e*S		**Sn**	**08 09 39.3**	**+0.6**
	baz=242							
NWLT	**Wulai**	**1.27**	**313**	*e*P		**Pn**	**08 09 23.6**	**+0.7**
	baz=299							
NWLT				*e*S		**Sb**	**08 09 40.5**	**+0.2**
	baz=299							
VWDT	**VWDT**	**1.28**	**263**	P		**Pn**	**08 09 23.5**	**+0.6**
	baz=262							
VWDT				*e*S		**Sb**	**08 09 40.2**	**-0.3**
	baz=262							
TWT	**Tachien**	**1.28**	**286**	*e*P		**Pb**	**08 09 24.3**	**-0.4**
	baz=272							
TWT				*e*S		**Sb**	**08 09 41.2**	**+0.4**
	baz=272							
YHNB	**Yeheng**	**1.29**	**306**	P		**Pb**	**08 09 24.1**	**-0.7**
	baz=290							
YHNB	**Yeheng**	**1.29**	**306**	Pn		**Pb**	**08 09 24.2**	**-0.5**
TDCB	**Techi**	**1.29**	**285**	P		**Pn**	**08 09 24.1**	**+0.8**
	baz=273							
TDCB				*e*S		**Sb**	**08 09 41.0**	**-0.2**
	baz=273							
NWF	**Wu-fen Shan**	**1.33**	**330**	*e*P		**Pn**	**08 09 24.4**	**+0.6**
	baz=328							
WFSB	**Wu-fen Shan**	**1.33**	**330**	P		**Pn**	**08 09 24.5**	**+0.8**
	baz=328							
FULB	**Fuli**	**1.34**	**238**	*e*P		**Pn**	**08 09 23.8**	**0.0**
	baz=225							
FULB				*e*S		**Sb**	**08 09 42.2**	**0.0**
	baz=225							
CHKT	**Chengkung**	**1.34**	**233**	*e*P		**Pn**	**08 09 23.9**	**+0.1**
	baz=220							
CHKT				*e*S		**Sn**	**08 09 39.7**	**-0.9**
	baz=220							
TWA	**Mucha**	**1.36**	**321**	*e*P		**Pb**	**08 09 25.8**	**-0.2**
	baz=337							
NHDH	**Xindian Distri**	**1.39**	**319**	*e*P		**Pb**	**08 09 25.8**	**-0.5**
	baz=334							
NHDH				*e*S		**Sb**	**08 09 44.1**	**+0.5**
	baz=334							
JKRS	**Kuro-shima**	**1.39**	**76**	P		**Pb**	**08 09 26.0**	**-0.5**
TNOU	**National Taiwa**	**1.41**	**331**	*e*P		**Pn**	**08 09 25.5**	**+0.7**
	baz=329							
TATO	**Taipei**	**1.42**	**318**	*e*P		**Pb**	**08 09 26.3**	**-0.6**
	baz=317							
TATO				*e*S		**Sb**	**08 09 45.0**	**+0.4**
	baz=317							
TATO	**Taipei**	**1.42**	**318**			**Pb**	**08 09 26.2**	**-0.6**
WPL	**Puli Township**	**1.44**	**274**	*e*P		**Pn**	**08 09 26.3**	**+1.1**
	baz=272							
SSLB	**Suanglung**	**1.45**	**265**	*e*P		**Pn**	**08 09 26.1**	**+0.8**
	baz=264							
SSLB				*e*S		**Sb**	**08 09 45.0**	**-0.3**
	baz=264							
SSLB	**Suanglung**	**1.45**	**265**	Pn		**Pn**	**08 09 26.4**	**+1.1**
EDH	**Donghe**	**1.46**	**230**	*e*P		**Pn**	**08 09 25.3**	**-0.2**
	baz=220							
EDH				*e*S		**Sn**	**08 09 42.7**	**-1.0**
	baz=220							
DPDB	**Guoxing**	**1.47**	**275**	*e*P		**Pb**	**08 09 27.0**	**-0.7**
	baz=273							
WCS	**Beigang Elemen**	**1.48**	**276**	*e*P		**Pb**	**08 09 27.6**	**-0.4**
	baz=274							
SMLT	**Sun Moon Lake**	**1.49**	**269**	P		**Pn**	**08 09 27.0**	**+1.0**
	baz=268							
SMLT				*e*S		**Sb**	**08 09 45.9**	**-0.8**
	baz=268							
WHP	**Taichung City**	**1.49**	**284**	*e*P		**Pb**	**08 09 27.5**	**-0.6**
	baz=272							
YM01	**YM01**	**1.50**	**325**	*e*P		**Pb**	**08 09 27.6**	**-0.8**
	baz=323							
YUS	**Yu-Shan**	**1.50**	**254**	P		**Pn**	**08 09 27.5**	**+0.9**
	baz=253							
YUS				*e*S		**Sn**	**08 09 46.1**	**+0.7**
	baz=253							
YM10	**YM10**	**1.52**	**325**	*e*P		**Pb**	**08 09 27.7**	**-0.9**
	baz=323							
YM11	**YM11**	**1.52**	**325**	*e*P		**Pb**	**08 09 27.9**	**-0.8**
	baz=324							
YM05	**YM05**	**1.52**	**325**	*e*P		**Pn**	**08 09 27.0**	**+0.6**
	baz=323							
TYC	**Yuchr**	**1.53**	**270**	P		**Pn**	**08 09 27.6**	**+1.2**
	baz=269							
TYC				*e*S		**Sb**	**08 09 47.0**	**-0.7**
	baz=269							
YM04	**YM04**	**1.53**	**324**	*e*P		**Pb**	**08 09 27.5**	**+1.0**
	baz=322							
YM08	**YM08**	**1.53**	**326**	*e*P		**Pb**	**08 09 28.0**	**-0.8**
	baz=324							
JIJ	**Ishigaki jima**	**1.54**	**73**	P		**Pn**	**08 09 27.5**	**+0.9**
JIJ				S		**Sn**	**08 09 46.5**	**+0.8**
NJD	**Zhudong**	**1.54**	**302**	*e*P		**Pb**	**08 09 28.7**	**-0.3**
	baz=300							
YM03	**YM03**	**1.54**	**325**	*e*P		**Pb**	**08 09 28.2**	**-0.9**
	baz=323							
TWS1	**Kuangyinshan**	**1.55**	**320**	*e*P		**Pb**	**08 09 28.4**	**-0.7**
	baz=334							
LIOB	**Emei**	**1.56**	**298**	*e*P		**Pb**	**08 09 28.8**	**-0.5**
	baz=296							
ANP	**Anpu**	**1.56**	**324**	*e*P		**Pb**	**08 09 28.7**	**-0.7**
	baz=323							
NSTT	**Nanjuang**	**1.56**	**297**	*e*P		**Pb**	**08 09 28.9**	**-0.5**
	baz=296							
NSTT				*e*S		**Sb**	**08 09 48.2**	**-0.5**
	baz=296							
LDUT	**Ludao**	**1.57**	**218**	*e*P		**Pn**	**08 09 26.8**	**-0.2**
	baz=218							
LDUT				*e*S		**Sn**	**08 09 45.0**	**-1.4**
	baz=218							
NTST	**Danshui**	**1.58**	**322**	*e*P		**Pb**	**08 09 28.7**	**-1.0**
	baz=336							
TWY	**Chenhua**	**1.59**	**328**	*e*P		**Pb**	**08 09 29.1**	**-0.8**
	baz=327							
NCU	**National Centr**	**1.61**	**311**	*e*P		**Pb**	**08 09 29.1**	**-1.0**
	baz=309							
NCUH	**Zhongli**	**1.61**	**311**	*e*P		**Pb**	**08 09 29.1**	**-1.1**
	baz=309							
HSN1	**Hsinchu**	**1.62**	**302**	*e*P		**Pb**	**08 09 29.5**	**-0.9**
	baz=300							
ALS	**Alishan**	**1.63**	**256**	P		**Pb**	**08 09 29.6**	**-1.1**
	baz=255							
ALS				*e*S		**Sn**	**08 09 49.6**	**+1.4**
	baz=255							
LONT	**Longtian**	**1.63**	**232**	*e*P		**Pn**	**08 09 28.9**	**+1.1**
	baz=222							
LONT				*e*S		**Sn**	**08 09 48.9**	**+1.1**
	baz=222							
WJS	**Zhushan**	**1.65**	**267**	*e*P		**Pb**	**08 09 30.6**	**-0.3**
	baz=266							
WJS				*e*S		**Sb**	**08 09 50.8**	**-0.4**
	baz=266							
SBCB	**Hsinchu**	**1.65**	**302**	*e*P		**Pb**	**08 09 30.4**	**-0.5**
	baz=300							
TWQ1	**Liyutan**	**1.66**	**285**	*e*P		**Pb**	**08 09 30.6**	**-0.4**
	baz=284							
TWQ1				*e*S		**Sb**	**08 09 51.8**	**+0.3**
	baz=284							
HSN	**Hsinchu**	**1.67**	**302**	*e*P		**Pn**	**08 09 29.8**	**+1.5**
	baz=301							
WWF	**Wuneng**	**1.68**	**275**	*e*P		**Pb**	**08 09 31.5**	**+0.2**
	baz=273							
WNT	**Mingjian**	**1.69**	**269**	*e*P		**Pb**	**08 09 31.1**	**-0.4**
	baz=267							
NSY	**Sanyi**	**1.69**	**288**	*e*P		**Pb**	**08 09 31.1**	**-0.3**
	baz=286							
NSY				*e*S		**Sb**	**08 09 52.9**	**+0.5**
	baz=286							
WNT1	**Nantou City**	**1.69**	**270**	*e*P		**Pb**	**08 09 31.9**	**+0.4**
	baz=269							
WNT1				*e*S		**Sb**	**08 09 53.3**	**+0.9**
	baz=269							
NMLH	**Miaoli**	**1.70**	**292**	*e*P		**Pb**	**08 09 31.1**	**-0.5**
	baz=290							
TCU	**Taichung**	**1.71**	**278**	*e*P		**Pb**	**08 09 31.6**	**-0.2**
	baz=277							
TCU				*e*S		**Sb**	**08 09 53.7**	**+0.8**
	baz=277							
TWGBT	**Beinan**	**1.72**	**231**	*e*P		**Pn**	**08 09 29.5**	**+0.5**
	baz=241							
CHN5	**Tsauling**	**1.72**	**260**	*e*P		**Pb**	**08 09 31.4**	**-0.8**
	baz=258							
TWG	**Pinlang**	**1.72**	**231**	*e*P		**Pn**	**08 09 29.7**	**+0.6**
	baz=221							
TWG				*e*S		**Sn**	**08 09 50.1**	**0.0**
	baz=221							
TWG	**Pinlang**	**1.72**	**231**	Pn		**Pn**	**08 09 29.0**	**-0.1**
PCYT	**Pengchaiyu**	**1.75**	**346**	*e*P		**Pn**	**08 09 30.4**	**+0.8**
	baz=346							
JISG	**Ishigakijimahi**	**1.76**	**67**	P		**Pn**	**08 09 30.4**	**+0.8**
JISG				*e*S		**Sb**	**08 09 53.1**	**-1.3**
STYH	**Taoyuan**	**1.77**	**246**	*e*P		**Pb**	**08 09 31.6**	**-1.2**
	baz=236							
STYH				*e*S		**Sn**	**08 09 52.4**	**+1.1**
	baz=236							
WDJ	**Dajia District**	**1.77**	**284**	*e*P		**Pb**	**08 09 31.9**	**-1.1**
	baz=283							
WDJ				*e*S		**Sb**	**08 09 53.6**	**-1.2**
	baz=283							
STYT	**Tauyuan**	**1.79**	**246**	*e*P		**Pb**	**08 09 31.9**	**-1.3**
	baz=236							
STYT				*e*S		**Sn**	**08 09 53.6**	**+1.8**
	baz=236							
WCHH	**Zhanghua**	**1.81**	**276**	*e*P		**Pb**	**08 09 32.8**	**-0.7**
	baz=274							
WCHH				*e*S		**Sb**	**08 09 55.9**	**+0.2**
	baz=274							
WGK	**Gukeng**	**1.81**	**263**	*e*P		**Pb**	**08 09 32.6**	**-1.0**
	baz=261							
WDLH	**Douliu**	**1.83**	**263**	*e*P		**Pb**	**08 09 33.3**	**-0.7**
	baz=262							
WDLH				*e*S		**Sb**	**08 09 57.7**	**+1.2**
	baz=262							
TPUB	**Ta-pu**	**1.84**	**251**	*e*P		**Pb**	**08 09 33.3**	**-0.8**
	baz=240							
TPUB				*e*S		**Sb**	**08 09 56.5**	**-0.4**
	baz=240							
TPUB	**Ta-pu**	**1.84**	**251**	Pn		**Pn**	**08 09 32.4**	**+1.6**
CHN4	**Tsaushan**	**1.86**	**253**	*e*P		**Pb**	**08 09 33.5**	**-0.9**
	baz=252							
CHN4				*e*S		**Sb**	**08 09 57.8**	**+0.6**
	baz=252							
WTP	**Ta-pu**	**1.88**	**250**	*e*P		**Pb**	**08 09 33.4**	**-1.3**
	baz=239							
WTP				*e*S		**Sb**	**08 09 57.4**	**-0.4**
	baz=239							
CHN2	**Minshiung**	**1.92**	**259**	*e*P		**Pb**	**08 09 35.1**	**-0.3**
	baz=258							
CHN2				*e*S		**Sb**	**08 09 59.5**	**+0.6**
	baz=258							
ECL	**Taimali**	**1.95**	**228**	*e*P		**Pn**	**08 09 32.4**	**+0.1**
	baz=238							
SLGT	**Liugui**	**1.96**	**242**	*e*P		**Pb**	**08 09 34.9**	**-1.1**
	baz=233							
SLGT				*e*S		**Sb**	**08 10 00.7**	**+0.7**
	baz=233							
WRL	**Guolierlin Hig**	**1.97**	**270**	*e*P		**Pn**	**08 09 33.9**	**+1.4**
	baz=283							
WRL				*e*S		**Sn**	**08 09 57.7**	**+1.5**
	baz=283							
SGST	**Jiashian**	**1.97**	**245**	*e*P		**Pb**	**08 09 34.6**	**-1.7**
	baz=236							
SGST				*e*S		**Sb**	**08 09 59.2**	**-1.1**
	baz=236							
CHY	**Chiayi**	**1.97**	**258**	*e*P		**Pb**	**08 09 35.2**	**-1.1**
	baz=256							
WTK	**Tuku**	**1.97**	**264**	*e*P		**Pb**	**08 09 35.4**	**-0.9**
	baz=263							
WTK				*e*S		**Sb**	**08 10 01.2**	**+0.7**
	baz=263							
CHN1	**Nanshi**	**1.97**	**249**	*e*P		**Pb**	**08 09 35.6**	**-0.7**
	baz=248							
CHN1				*e*S		**Sb**	**08 10 00.7**	**+0.1**
	baz=248							
SNST	**Tainan City**	**1.99**	**250**	*e*P		**Pb**	**08 09 35.7**	**-0.9**
	baz=249							
SNST				*e*S		**Sb**	**08 10 01.1**	**+0.2**
	baz=249							
WTCT	**Ta-ch'eng**	**2.06**	**269**	*e*P		**Pb**	**08 09 36.3**	**-1.4**
	baz=268							
WTCT				*e*S		**Sb**	**08 10 02.5**	**-0.4**
	baz=268							
LAY	**Lan-yu**	**2.07**	**206**	*e*P		**Pn**	**08 09 33.2**	**-0.8**
	baz=205							
SSD	**Sandimen**	**2.09**	**237**	*e*P		**Pn**	**08 09 35.6**	**+1.4**
	baz=228							
TSMG	**Majia**	**2.11**	**236**	*e*P		**Pn**	**08 09 36.1**	**+1.7**
	baz=230							
TSMG				*e*S		**Sn**	**08 10 01.9**	**+2.2**
	baz=230							
JTJ	**Tarama**	**2.11**	**70**	P		**Pn**	**08 09 36.1**	**+1.7**
JTJ				S		**Sn**	**08 10 01.6**	**+1.9**
WSF	**Szhu**	**2.13**	**263**	*e*S		**Sb**	**08 10 05.0**	**0.0**
	baz=262							
SCST	**Cishan**	**2.13**	**242**	*e*P		**Pb**	**08 09 38.5**	**-0.5**
	baz=240							
ICHU	**Yijhu**	**2.13**	**255**	*e*P		**Pb**	**08 09 37.2**	**-1.8**
	baz=254							
ICHU				*e*S		**Sb**	**08 10 03.7**	**-1.4**
	baz=254							
CHN3	**Shinhua**	**2.15**	**248**	*e*S		**Sb**	**08 10 06.8**	**+1.1**
	baz=247							
EAST	**Anshuo**	**2.17**	**226**	*e*P		**Pn**	**08 09 35.8**	**+0.5**
	baz=224							
MASBT	**Mashibuluo**	**2.17**	**234**	*e*P		**Pn**	**08 09 37.0**	**+1.7**
	baz=225							
CHN8	**Yiju**	**2.20**	**256**	*e*S		**Sb**	**08 10 05.7**	**-1.2**
	baz=255							
SCLT	**Jiali**	**2.26**	**251**	*e*S		**Sb**	**08 10 08.1**	**-0.8**
	baz=251							
SSPT	**Xinbi**	**2.30**	**232**	*e*P		**Pb**	**08 09 40.5**	**-1.3**
	baz=226							
SSPT				*e*S		**Sb**	**08 10 08.2**	**-1.6**
	baz=226							
SLIU	**Shizi**	**2.32**	**224**	*e*P		**Pn**	**08 09 38.0**	**+0.7**
	baz=231							
SCZT	**Fangliau**	**2.33**	**229**	*e*P		**Pb**	**08 09 40.6**	**-1.8**
	baz=222							
SCZT				*e*S		**Sn**	**08 10 08.2**	**+3.1**
	baz=222							
TSEB	**Hengchuen, Pin**	**2.50**	**217**	*e*P		**Pn**	**08 09 42.5**	**+2.7**
	baz=227							
TSEB				*e*S		**Sn**	**08 10 12.7**	**+3.2**
	baz=227							
HEN	**Hengchun**	**2.52**	**221**	*e*P		**Pn**	**08 09 42.6**	**+2.6**
	baz=221							
HEN				*e*S		**Sn**	**08 10 11.8**	**+2.1**
	baz=221							
WLCH	**Liuqiu**	**2.52**	**232**	*e*P		**Pb**	**08 09 45.2**	**-0.4**
	baz=227							
TWKBT	**Hengchun**	**2.52**	**219**	*e*P		**Pn**	**08 09 41.7**	**+1.6**
	baz=219							
TWKBT				*e*S		**Sn**	**08 10 11.7**	**+1.8**
	baz=219							
TWK1	**Hengchun**	**2.52**	**219**	*e*P		**Pn**	**08 09 42.1**	**+2.0**
	baz=219							
TWK1				*e*S		**Sn**	**08 10 11.5**	**+1.6**
	baz=219							
JMJ	**Miyako jima 2**	**2.68**	**70**	*e*P		**Pn**	**08 09 43.5**	**+1.3**
	baz=71							
WDGT	**Dungji**	**2.71**	**257**	P		**Pn**	**08 09 44.6**	**+2.0**
	baz=256							
WDGT				*e*S		**Sn**	**08 10 16.2**	**+1.7**
	baz=256							
PNG	**Penghu**	**2.74**	**263**	P		**Pn**	**08 09 44.9**	**+1.8**
	baz=262							
PNG				*e*S		**Sn**	**08 10 17.0**	**+1.7**
	baz=262							
VCHM	**Qimei**	**2.93**	**257**	*e*P		**Pn**	**08 09 47.6**	**+2.0**
	baz=255							
VCHM				*e*S		**Sn**	**08 10 21.6**	**+1.8**
	baz=255							
VWUC	**VWUC**	**3.00**	**292**	*e*P		**Pn**	**08 09 47.1**	**+0.4**
	baz=290							
VWUC				*e*S		**Sn**	**08 10 20.7**	**-1.0**
	baz=290							
MATB	**Ma-tsu**	**3.23**	**314**	*e*P		**Pn**	**08 09 50.6**	**+0.7**
	baz=300							
MSUT	**Lienchiang**	**3.26**	**314**	*e*P		**Pn**	**08 09 51.6**	**+1.4**
	baz=300							
PTMZ	**Houxiangcun**	**3.30**	**291**	*e*P		**Pn**	**08 09 51.5**	**+0.8**
	baz=290							
LYJJ	**Jianjiangzhen**	**3.63**	**317**	*e*P		**Pn**	**08 09 55.4**	**+0.2**
	baz=303							
XPSS	**Dashiqiu**	**3.67**	**325**	*e*P		**Pn**	**08 09 56.5**	**+0.7**
	baz=324							
KNM	**Kinmen**	**3.77**	**278**	*e*P		**Pn**	**08 09 59.8**	**+2.5**
	baz=278							
KNMB	**Chin-men Tao**	**3.82**	**279**	*e*P		**Pn**	**08 09 58.7**	**+0.8**
	baz=279							
KNMB	**Chin-men Tao**	**3.82**	**279**	Pn		**Pn**	**08 09 58.8**	**+0.8**
MHZQ	**Yeshan**	**3.84**	**305**	*e*P		**Pn**	**08 09 58.6**	**+0.4**
	baz=303							
AXDP	**Jialang**	**4.27**	**284**	*e*P		**Pn**	**08 10 05.0**	**+0.9**
	baz=284							
ZPLA	**Ao Xicun**	**4.37**	**271**	*e*P		**Pn**	**08 10 06.5**	**+1.0**
	baz=271							
JOW	**Kunigami**	**5.96**	**60**	P		**Pn**	**08 10 27.1**	**-0.2**
	1.6nm,0.3s,baz=232,slow=12,SNR=4.5							
JOW	**Kunigami**	**5.96**	**60**	*e*P		**Pn**	**08 10 27.0**	**-0.3**
	baz=61							
JOW	**Kunigami**	**5.96**	**60**			**Pn**	**08 10 26.4**	**-0.9**
KSRS	**Korea Array**	**14.27**	**18**	P		**Pn**	**08 12 22.1**	**+1.1**
	0.6nm,0.3s,baz=196,slow=11,SNR=22							
KSRS						LR	LR	08 18 42.5
	comp=Z,149nm,18.9s,baz=174,slow=41							
KS19	**Wonju Array Si**	**14.29**	**17**			**Pn**	**08 12 20.8**	**-0.7**
JCJ	**Chichijima**	**18.02**	**76**	LR		LR	08 19 26.7	
	comp=Z,182nm,18.2s,baz=121,slow=35							
USRK	**Ussuriysk Ar.**	**21.67**	**19**	LR		LR	08 22 34.5	
	comp=Z,104nm,19.0s,baz=165,slow=38							
CMAR	**Chiang Mai Arr**	**22.64**	**261**	P		**P**	**08

KK31	Karatay Array	46.61	307	P		P	08 17 27.0	+0.3
KKAR	Karatay Array	46.61	307	P		P	08 17 27.4	+0.8
KBL	Kabul	47.38	296	P		P	08 17 34.4	+1.3
AS31	Alice Springs	48.57	166	P		P	08 17 42.3	+0.3
ASAR	Alice Springs	48.57	166	P		P	08 17 44.0	+2.0
	comp=Z,1.8nm,0.5s,baz=354,slow=14,SNR=28							
ASAR	Alice Springs	48.57	166	P		P	08 17 41.5	-0.5
BVAR	Borovoye Array	48.66	321	P		P	08 17 42.3	0.0
	comp=Z,0.8nm,0.5s,baz=192,slow=7,3,SNR=4.5							
NRIK	Noril'sk	49.38	345	P		P	08 17 50.7	-1.5
	comp=Z,2.0nm,0.7s,baz=326,slow=2.0,SNR=3.7							
ABKAR	Akbulak array	54.50	314	P		P	08 18 26.1	0.0
ABKAR				IAmb		IAmb	08 18 28.3	
	comp=Z,2.1nm,0.7s							
GEYT	Alibeck	55.99	301	P		P	08 18 38.9	+1.8
	comp=Z,3.6nm,0.6s,baz=149,slow=3.1,SNR=5.5							
GEYT	Alibeck	55.99	301	P		P	08 18 38.3	+1.2
GEYT				IAmb		IAmb	08 18 40.1	
	comp=Z,3.9nm,0.7s							
GYA0B	ALIBECK ARRAY	55.99	301	P		P	08 18 37.6	+0.6
SOCY	Socotra	65.67	273	P		P	08 19 42.4	-0.9
SOCY				IAmb		IAmb	08 20 02.0	
	comp=Z,3.0nm,1.0s							
IMAR	Indian Mountai	65.87	26	P		P	08 19 42.5	-1.2
KBZ	Khabaz	66.60	309	P		P	08 19 49.2	+0.5
	comp=Z,0.7nm,0.4s,baz=129,slow=4.0,SNR=3.6							
PPLA	Purkeypile	66.87	30	P		P	08 19 51.0	+0.7
TOLK	Toolik Lake Re	67.21	23	P		P	08 19 52.4	+0.1
TOLK				IAmb		IAmb	08 20 15.9	
	comp=Z,5.5nm,1.5s							
BPAW	Bear Paw Mtn.	67.25	28	P		P	08 19 53.0	+0.4
BPAW				IAmb		IAmb	08 19 57.9	
	comp=Z,4.2nm,1.4s							
KTH	Kantishna Hill	67.35	29	P		P	08 19 53.2	-0.1
KTH				IAmb		IAmb	08 19 55.2	
	comp=Z,2.2nm,0.9s							
RND	Reindeer	68.29	29	P		P	08 19 59.1	-0.1
RND				IAmb		IAmb	08 20 03.8	
	comp=Z,3.7nm,1.0s							
DAWY	Dawson	72.21	27	P		P	08 20 22.7	-0.4
DAWY				IAmb		IAmb	08 20 34.6	
	comp=Z,4.1nm,1.4s							
FINES	FINESS Array B	72.29	330	P		P	08 20 24.0	+0.4
	comp=Z,1.0nm,0.7s,baz=93,slow=4.0,SNR=4.8							
FINES				LR		LR	08 55 26.1	
	comp=Z,110nm,18.8s,baz=35,slow=38							
INK	Inuvik	73.01	22	P		P	08 20 26.8	-0.9
INK				IAmb		IAmb	08 20 45.5	
	comp=Z,6.1nm,1.5s							
BRTR	Keskin Array B	74.32	307	P		P	08 20 36.7	+0.5
	comp=Z,3.6nm,1.1s,baz=91,slow=5.2,SNR=6.3							
BRTR	Keskin Array B	74.32	307	P		P	08 20 35.9	-0.3
NOA	NORSAR Array B	79.03	332	P		P	08 21 02.1	-0.2
	comp=Z,0.2nm,0.5s,baz=58,slow=5.1,SNR=3.2							
NOA				LR		LR	08 59 40.7	
	comp=Z,56nm,18.0s,baz=355,slow=38							
YKA	Yellowknife Ar	82.74	23	P		P	08 21 21.7	-0.2
	comp=Z,0.9nm,0.7s,baz=314,slow=4.6,SNR=27							
GERES	GERESS Array B	83.83	321	P		P	08 21 28.2	+0.2
	comp=Z,0.4nm,0.2s,baz=3.8,slow=2.0,SNR=3.8							
SENIN	Lac Senin/Sane	88.81	321	P		P	08 21 51.4	-1.3

IDC 21 08:09:52.4±1.8, 1°27N×124°43E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.4/52, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=147.7km s-min=23.6km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.28	177	P	P	08 14 17.7	-1.2
	0.2nm,0.3s,baz=16,slow=9.5,SNR=1.3						
WRA	Warramunga Arr	23.21	156	P	P	08 15 00.7	-0.6
	0.6nm,0.5s,baz=336,slow=9.6,SNR=8.8						
ASAR	Alice Springs	26.44	160	P	P	08 15 31.5	+0.3
	0.2nm,0.4s,baz=350,slow=15,SNR=4.2						
MKAR	Makanchi Array	58.31	327	P	P	08 19 49.6	+0.5
	0.8nm,0.4s,baz=123,slow=8.6,SNR=7.6						

*TAP **21** 08:10:25.6, 23.96N×122.56E, h34km, ML4.0, D*
*JMA **21** 08:10:25.3±0.2, 23.94N×122.51E, h20km±4km, M3.3*
*IDC **21** 08:10:28.6±5.0, 24.09N×122.63E, h54km±49km, mb3.4/9, mb1 3.6/11, mb1mx3.4/57, mbtmp3.7/11, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/34, Error ellipse: s-maj=46.9km s-min=17.9km az=66.0*

ISC 21 08:10:24.7±1.1, 23°90N±0°02×122°53E±0°02, h24km±9km, n138, σ0879/214, mb3.6/9, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.66	34	P	Pn	08 10 37.8	-0.8
JYNG				S	Sb	08 10 46.0	-0.5
YOJ	Yonaguni jima	0.71	38	P	Pn	08 10 38.6	-0.6
YOJ				eS	Sb	08 10 47.3	-0.5
YOJ	Yonaguni jima	0.71	38	*i* P	Pn	08 10 38.5	-0.7
	baz=39						
YOJ				S	Sb	08 10 47.5	-0.2
	baz=39						
TWD	Chiawan	0.88	282	*e*P	Pb	08 10 41.1	-0.2
	baz=278						
TWD				*e*S	Sb	08 10 52.8	+0.2
	baz=278						
EWUT	Wuta	0.88	308	P	Pn	08 10 41.5	-0.1
	baz=304						
EWUT				*e*S	Sn	08 10 54.4	+0.9
	baz=304						
NACB	Ninganchiao	0.90	288	*i* P	Pb	08 10 41.4	-0.3
	baz=272						
NACB				*e*S	Sb	08 10 53.6	+0.3
	baz=272						
TWC	Suao	0.94	319	P	Pb	08 10 41.9	-0.6
	baz=305						
TWC				*i* S	Sb	08 10 54.6	+0.1
	baz=305						
ETLH	Xiulin Townshi	1.01	288	*e*P	Pb	08 10 43.4	-0.2
	baz=273						
ETLH				*e*S	Sb	08 10 56.4	-0.1
	baz=273						
ESL	Shilin	1.01	265	*e*P	Pb	08 10 42.8	-0.8
	baz=253						
ESL				*e*S	Sb	08 10 55.7	-0.8
	baz=253						
EGFH	Guangfu	1.04	257	*e*P	Pn	08 10 43.9	+0.1
	baz=254						
EGFH				*e*S	Sb	08 10 56.6	-0.7
	baz=254						
NDS	Dongshan	1.04	314	*i* P	Pn	08 10 44.2	+0.3
	baz=311						
NDS				S	Sn	08 10 58.1	+0.4
	baz=311						
HGSD	Ruisui	1.10	248	*e*P	Pb	08 10 44.8	-0.2
	baz=245						
HGSD				*e*S	Sn	08 10 59.1	+0.1
	baz=245						
ILA	Ilan	1.12	320	*e*P	Pb	08 10 46.5	+1.1
	baz=318						
TWE	Neicheng	1.14	316	*e*P	Pb	08 10 45.8	+0.1
	baz=314						
NTC	Toucheng	1.15	326	P	Pb	08 10 45.8	-0.1
	baz=324						
NTC				*e*S	Sb	08 11 00.2	-0.1
	baz=324						
ENTT	Nioudou	1.15	310	*e*P	Pb	08 10 46.3	+0.4
	baz=295						
ENTT				*e*S	Sb	08 11 00.5	0.0
	baz=295						
NDT	Datong Townshi	1.17	307	*e*P	Pb	08 10 46.4	+0.2
	baz=292						
NDT				*e*S	Sb	08 11 00.8	-0.1
	baz=292						
HATJ	Hateruma jima	1.17	82	P	Pb	08 10 46.7	+0.4
HATJ				*e*S	Sn	08 11 02.3	+1.5
IRIF	Iriomote-Funau	1.18	68	P	Pb	08 10 46.8	+0.4
NNSB	Datong	1.18	297	*i* P	Pn	08 10 46.0	+0.2
	baz=283						
NNSB				*i* S	Sb	08 11 01.2	-0.1
	baz=283						
NNSH	Datong	1.18	297	P	Pb	08 10 46.1	-0.3
	baz=283						
NNSH				*i* S	Sb	08 11 01.2	-0.1
	baz=283						
WHF	Hehuan Shan	1.19	282	P	Pn	08 10 46.0	-0.1
	baz=268						
WHF				*e*S	Sb	08 11 01.2	-0.7
	baz=268						
NNS	Nan Shan	1.19	297	P	Pn	08 10 46.2	+0.3
	baz=284						
NNS				S	Sb	08 11 01.4	-0.3
	baz=284						
TWB1	Santiao Chiao	1.21	336	*e*P	Pb	08 10 46.4	-0.5
	baz=348						
TWB1				*e*S	Sn	08 11 02.8	+1.1
	baz=348						
FUSS	Fushou	1.23	287	P	Pn	08 10 46.9	+0.3
	baz=284						
YULB	Yu-li	1.24	246	*e*P	Pb	08 10 47.0	-0.5
	baz=233						
YULB				*i* S	Sb	08 11 02.9	-0.2
	baz=233						
EYUL	Yuli	1.24	244	P	Pb	08 10 47.0	-0.5
	baz=241						
EYUL				*e*S	Sn	08 11 02.2	-0.3
	baz=241						
OWD	Renai	1.24	273	*e*P	Pn	08 10 47.0	+0.3
	baz=269						
OWD				*e*S	Sn	08 11 02.4	-0.4
	baz=269						
TIPB	Shuangxi	1.25	329	*e*P	Pb	08 10 47.6	0.0
	baz=327						
TIPB				*e*S	Sb	08 11 03.6	+0.3
	baz=327						
CHGB	Renai	1.25	278	P	Pn	08 10 47.2	+0.3
	baz=265						
CHGB				*e*S	Sn	08 11 02.9	-0.3
	baz=265						
TWF1	Yuli	1.26	245	*e*P	Pb	08 10 47.5	-0.3
	baz=241						
TWF1				*e*S	Sn	08 11 03.0	0.0
	baz=241						
NWLT	Wulai	1.28	313	*e*P	Pb	08 10 48.1	-0.1
	baz=299						
NWLT				*e*S	Sn	08 11 04.0	+0.4
	baz=299						
VWDT	VWDT	1.28	264	*e*P	Pb	08 10 47.8	-0.5
	baz=260						
VWDT				S	Sn	08 11 03.6	+0.1
	baz=260						
TWT	Tachien	1.29	286	*i* P	Pb	08 10 48.3	-0.1
	baz=272						
TWT				*e*S	Sn	08 11 04.1	+0.1
	baz=272						
TDCB	Techi	1.30	286	*e*P	Pb	08 10 48.2	-0.5
	baz=272						
TDCB				*i* S	Sn	08 11 04.5	+0.2
	baz=272						
YHNB	Yeheng	1.30	306	*e*P	Pb	08 10 48.2	-0.5
	baz=292						
FULB	Fuli	1.34	239	*e*P	Pn	08 10 47.7	-0.2
	baz=227						
CHKT	Chengkung	1.34	234	*e*P	Pb	08 10 48.3	-0.8
	baz=221						
CHKT				*e*S	Sn	08 11 03.6	-1.3
	baz=221						
WFSB	Wu-fen Shan	1.35	330	*e*P	Pb	08 10 48.7	-0.7
	baz=328						
WFSB				*e*S	Sb	08 11 07.0	+0.8
	baz=328						
TWA	Mucha	1.38	321	*e*P	Pb	08 10 50.1	+0.2
	baz=325						
JKRS	Kuro-shima	1.39	76	P	Pb	08 10 50.4	+0.4
JKRS				*e*S	Sb	08 11 08.6	+1.3
NHDH	Xindian Distri	1.40	319	*e*P	Pb	08 10 50.2	0.0
	baz=332						
TNOU	National Taiwa	1.42	331	*e*P	Pb	08 10 49.9	-0.8
	baz=329						
TNOU				*e*S	Sb	08 11 08.4	+0.1
	baz=329						
TATO	Taipei	1.43	318	*e*P	Pb	08 10 50.5	-0.3
	baz=333						
WPL	Puli Township	1.45	275	*e*P	Pb	08 10 50.9	-0.1
	baz=272						
SSLB	Suanglung	1.45	266	*e*P	Pb	08 10 50.3	-0.8
	baz=263						
EDH	Donghe	1.46	231	*e*P	Pb	08 10 50.1	-1.1
	baz=221						
EDH				*e*S	Sn	08 11 06.5	-1.4
	baz=221						
DPDB	Guoxing	1.48	275	*e*P	Pb	08 10 50.7	-0.8
	baz=273						
BACT	New Taipei Cit	1.48	318	*e*S	Sn	08 11 08.9	+0.6
	baz=332						
WCS	Beigang Elemen	1.49	276	*e*P	Pb	08 10 53.1	+1.4
	baz=266						
WCS				*e*S	Sb	08 11 14.1	+3.8
	baz=266						
SMLT	Sun Moon Lake	1.50	270	*e*P	Pb	08 10 51.6	-0.2
	baz=258						
WHP	Taichung City	1.50	285	*e*P	Pb	08 10 52.2	+0.3
	baz=273						
YUS	Yu-Shan	1.51	255	*e*P	Pb	08 10 51.5	-0.9
	baz=251						
YUS				*e*S	Sn	08 11 09.3	-0.5
	baz=251						
YM01	YM01	1.52	325	*e*P	Pb	08 10 51.8	-0.4
	baz=323						
YM01				*e*S	Sn	08 11 10.1	+0.7
	baz=323						
YM10	YM10	1.53	325	*e*P	Pb	08 10 52.3	-0.2
	baz=323						
YM11	YM11	1.53	325	*e*P	Pb	08 10 52.8	+0.3
	baz=324						
TYC	Yuchr	1.54	270	*e*P	Pb	08 10 51.7	-0.8
	baz=267						
TYC				*e*S	Sn	08 11 09.9	+0.1
	baz=267						
YM05	YM05	1.54	325	*e*P	Pb	08 10 52.3	-0.2
	baz=323						
JIJ	Ishigaki jima	1.54	72	P	Pb	08 10 52.1	-0.5
JIJ				*e*S	Sb	08 11 11.6	-0.1
YM04	YM04	1.54	324	*e*P	Pb	08 10 51.8	-0.8
	baz=322						
YM08	YM08	1.54	326	*e*P	Pb	08 10 52.2	-0.4
	baz=325						
YM03	YM03	1.56	325	*e*P	Pb	08 10 52.8	-0.2
	baz=323						
LDUT	Ludao	1.57	219	*e*P	Pn	08 10 50.7	-0.3
	baz=217						
LDUT				*e*S	Sn	08 11 09.2	-1.3
	baz=217						
TWS1	Kuangyinshan	1.57	320	*e*P	Pn	08 10 51.9	+0.9
	baz=334						
LIOB	Emei	1.57	298	*e*P	Pb	08 10 52.8	-0.3
	baz=296						
LIOB				*e*S	Sb	08 11 13.3	+0.7
	baz=296						
NSTT	Nanjuang	1.58	298	*e*P	Pb	08 10 53.0	-0.2
	baz=295						
NSTT				*e*S	Sn	08 11 11.7	+0.9
	baz=295						
ANP	Anpu	1.58	324	*e*P	Pb	08 10 54.1	+0.8
	baz=323						
TWY	Chenhua	1.61	328	*e*P	Pb	08 10 54.2	+0.4
	baz=327						
NCUH	Zhongli	1.62	311	*e*P	Pb	08 10 53.1	-0.9
	baz=309						
LONT	Longtian	1.63	233	*e*P	Pn	08 10 52.4	+0.5
	baz=224						
LONT				*e*S	Sn	08 11 12.6	+0.6
	baz=224						
ALS	Alishan	1.63	257	*e*P	Pb	08 10 53.8	-0.5
	baz=253						
ALS				*e*S	Sn	08 11 13.4	+0.8
	baz=253						
WJS	Zhushan	1.66	268	*e*P	Pb	08 10 54.5	0.0
	baz=264						
WJS				*e*S	Sb	08 11 15.3	+0.3
	baz=264						
TWQ1	Liyutan	1.67	286	*e*P	Pb	08 10 54.5	-0.3
	baz=282						
TWQ1				*e*S	Sb	08 11 16.1	+0.7
	baz=282						
WWF	Wufeng	1.69	275	*e*P	Pb	08 10 55.5	+0.5
	baz=273						
WNT	Mingjian	1.69	270	*e*P	Pb	08 10 55.2	0.0
	baz=266						
WNT				*e*S	Sb	08 11 16.2	+0.1
	baz=266						
WNT1	Nantou City	1.70	271	*e*P	Pb	08 10 55.5	+0.2
	baz=268						
NSY	Sanyi	1.70	288	*e*P	Pb	08 10 55.4	+0.1
	baz=285						
NSY				*e*S	Sb	08 11 16.4	+0.1
	baz=285						
NMLH	Miaoli	1.71	292	*e*P	Pb	08 10 55.0	-0.6
	baz=290						
TCU	Taichung	1.72	279	*e*P	Pb	08 10 55.5	-0.1
	baz=275						
TCU				*e*S	Sb	08 11 17.6	+0.8
	baz=275						
TWGBT	Beinan	1.72	231	*e*P	Pn	08 10 53.7	+0.6
	baz=242						
TWGBT				*e*S	Sn	08 11 14.1	-0.2
	baz=242						
TWG	Pinlang	1.72	232	*e*P	Pn	08 10 54.0	+0.8
	baz=242						
TWG				*e*S	Sn	08 11 13.8	-0.5
	baz=242						
CHN5	Tsauling	1.73	260	*e*P	Pb	08 10 55.4	-0.4
	baz=258						
JISG	Ishigakijimahi	1.76	67	S	Sb	08 11 16.7	-1.3
STYH	Taoyuan	1.77	246	*e*P	Pn	08 10 54.8	+1.0
	baz=237						
STYH				*e*S	Sn	08 11 16.1	+0.5
	baz=237						
PCYT	Pengchaiyu	1.77	346	*e*P	Pn	08 10 54.7	+0.9
	baz=346						
WDJ	Dajia District	1.79	285	*e*P	Pb	08 10 56.0	-0.8
	baz=281						
WDJ				*e*S	Sb	08 11 18.6	-0.2
	baz=281						
STYT	Tauyuan	1.79	246	*e*P	Pb	08 10 56.1	-0.7
	baz=235						
WCHH	Zhanghua	1.82	276	*e*P	Pb	08 10 56.6	-0.6
	baz=286						
WCHH				*e*S	Sb	08 11 20.0	+0.4
	baz=286						
WGK	Gukeng	1.82	264	*e*P	Pb	08 10 56.6	-0.7
	baz=260						
WGK				*e*S	Sb	08 11 21.7	+2.0
	baz=260						
WDLH	Douliu	1.84	264	*e*P	Pb	08 10 57.2	-0.5
	baz=260						
WDLH				*e*S	Sb	08 11 20.4	+0.1
	baz=260						
TPUB	Ta-pu	1.85	251	*e*P	Pb	08 10 57.1	-0.7
	baz=240						
TPUB				*e*S	Sb	08 11 20.0	-0.5
	baz=240						
CHN4	Tsaushan	1.86	253	*e*P	Pb	08 10 58.7	+0.6
	baz=250						
CHN4				*e*S	Sb	08 11 21.6	+0.7
	baz=250						
WTP	Ta-pu	1.88	250	*e*P	Pb	08 10 58.3	-0.1
	baz=239						
WTP				*e*S	Sb	08 11 21.4	0.0
	baz=239						
CHN2	Minshiung	1.92	259	*e*P	Pn	08 10 57.0	+1.1
	baz=257						
ECL	Taimali	1.95	229	*e*P	Pn	08 10 56.9	+0.6
	baz=237						
ECL				*e*S	Sn	08 11 20.1	+0.1
	baz=237						
SLGT	Liugui	1.96	243	*e*P	Pb	08 10 59.8	+0.1
	baz=234						
SLGT				*e*S	Sb	08 11 25.1	+1.5
	baz=234						
SGST	Jiashian	1.97	246	*e*P	Pb	08 10 59.1	-0.8
	baz=235						
SGST				*e*S	Sb	08 11 24.2	+0.2
	baz=235						
CHN1	Nanshi	1.97	249	*e*P	Pb	08 10 59.7	-0.3
	baz=246						
CHN1				*e*S	Sb	08 11 24.2	+0.1
	baz=246						
WRL	Guolierlin Hig	1.97	270	*e*S	Sb	08 11 23.5	-0.7
	baz=280						
CHY	Chiayi	1.98	259	*e*P	Pn	08 10 57.7	+1.0
	baz=257						
WTK	Tuku	1.98	264	*e*P	Pb	08 10 59.4	-0.6
	baz=261						
WTK				*e*S	Sb	08 11 24.6	+0.4
	baz=261						
SNST	Tainan City	1.99	250	*e*P	Pb	08 11 00.5	+0.3
	baz=247						
SNST				*e*S	Sb	08 11 25.0	+0.4
	baz=247						
LAY	Lan-yu	2.06	206	*e*P	Pn	08 10 57.5	-0.4
	baz=205						
SSD	Sandimen	2.09	237	*e*P	Pb	08 11 01.9	-0.1
	baz=228						
TSMG	Majia	2.11	236	*e*P	Pb	08 11 02.3	+0.1
	baz=227						
ICHU	Yijhu	2.14	256	*e*P	Pb	08 11 01.4	-1.4
	baz=252						
ICHU				*e*S	Sb	08 11 27.6	-1.2
	baz=252						
CHN3	Shinhua	2.15	248	*e*S	Sb	08 11 30.8	+1.5
	baz=245						
EAST	Anshuo	2.17	226	*e*P	Pn	08 11 00.5	+1.2
	baz=224						
MASBT	Mashibuluo	2.17	234	*e*P	Pb	08 11 01.7	-1.6
	baz=226						
CHN8	Yiju	2.20	256	*e*S	Sb	08 11 29.1	-1.6
	baz=253						
SSPT	Xinbi	2.29	232	*e*P	Pb	08 11 04.1	-1.4
	baz=226						
SLIU	Shizi	2.32	224	*e*P	Pn	08 11 02.5	+1.2
	baz=230						
SCZT	Fangliau	2.33	230	*e*P	Pb	08 11 05.5	-0.6
	baz=221						
TSEB	Hengchuen, Pin	2.50	217	*e*S	Sn	08 11 35.9	+2.3
	baz=224						
HEN	Hengchun	2.51	222	*e*S	Sn	08 11 35.0	+1.2
	baz=219						
TWKBT	Hengchun	2.52	219	*e*P	Pn	08 11 05.1	+1.0
	baz=217						
TWKBT				*e*S	Sn	08 11 34.8	+0.8
	baz=217						
TWK1	Hengchun	2.52	220	*e*P	Pn	08 11 05.3	+1.1
	baz=217						
TWK1				*e*S	Sn	08 11 35.4	+1.4
	baz=217						
WDGT	Dungji	2.71	257	*e*P	Pn	08 11 08.3	+1.5
	baz=253						
WDGT				*e*S	Sn	08 11 39.2	+0.4
	baz=253						
PNG	Penghu	2.75	264	*e*P	Pn	08 11 08.5	+1.2
	baz=260						
PNG				*e*S	Sn	08 11 40.8	+1.0
	baz=260						
VCHM	Qimei	2.93	257	*e*S	Sn	08 11 44.8	+0.5
	baz=253						
VWUC	VWUC	3.01	292	*e*P	Pn	08 11 11.4	+0.5
	baz=289						
VWUC				*e*S	Sn	08 11 44.9	-1.4
	baz=289						
PTMZ	Houxiangcun	3.31	291	*e*P	Pn	08 11 15.7	+0.7
	baz=287						
PTMZ				*e*S	Sn	08 11 51.8	-1.8
	baz=287						
XPSS	Dashiqiu	3.69	325	*e*P	Pn	08 11 20.6	+0.4
	baz=325						
KNM	Kinmen	3.78	279	*e*S	Sn	08 12 06.3	+1.1
	baz=275						
KNMB	Chin-men Tao	3.83	279	*e*P	Pn	08 11 23.3	+1.2
	baz=276						
KNMB				*e*S	Sn	08 12 05.7	-0.7
	baz=276						
AXDP	Jialang	4.28	284	*e*S	Sn	08 12 17.1	-0.3
	baz=281						
ZPLA	Ao Xicun	4.38	271	*e*P	Pn	08 11 30.6	+0.9
	baz=267						
ZPLA				*e*S	Sn	08 12 18.4	-1.5
	baz=267						
JOW	Kunigami	5.96	59	P	Pn	08 11 51.8	+0.4
	1.2nm,0.3s,baz=121,slow=19,SNR=2.1						
KSRS	Korea Array	14.28	18	P	Pn	08 13 45.5	+0.2
	baz=196,slow=11,SNR=1.6						
SONM	Songino Array	27.12	336	P	P	08 16 04.4	-1.5
	0.5nm,0.6s,baz=160,slow=9.0,SNR=1.5						
MKAR	Makanchi Array	39.40	316	P	P	08 17 52.2	-0.3
	0.5nm,0.4s,baz=101,slow=12,SNR=1.8						
ZALV	Zalesovo Beam	41.15	327	P	P	08 18 05.3	-1.6
	1.2nm,0.5s,baz=108,slow=7.7,SNR=2.6						
ZALV				LR	LR	08 35 02.5	
	comp=Z,56nm,18.4s,baz=88,slow=36						
KURBB	Kurchatov Arra	43.12	320	P	P	08 18 23.7	+0.8
	0.2nm,0.4s,baz=112,slow=9.7,SNR=2.5						
WRA	Warramunga Arr	45.07	164	P	P	08 18 40.0	+1.1
	1.0nm,0.6s,baz=345,slow=8.4,SNR=4.7						
ASAR	Alice Springs	48.56	166	P	P	08 19 08.0	+1.8

	0.6nm,0.5s,baz=348,slow=7.5,SNR=8.5								
FINES	**FINESS Array B**	**72.31**	**330**	P		**P**	**08 21 48.5**	**+0.5**
	0.9nm,0.7s,baz=67,slow=3.6,SNR=3.4								
NOA	**NORSAR Array B**	**79.05**	**332**	P		**P**	**08 22 25.9**	**-0.8**
	0.1nm,0.5s,baz=60,slow=6.2,SNR=1.4								
YKA	**Yellowknife Ar**	**82.75**	**23**	P		**P**	**08 22 45.2**	**-1.1**
	0.4nm,0.7s,baz=314,slow=4.4,SNR=4.6								

IDC ***21*** *08:14:29.2±1.2,4.°95S×152.°79E, h0km, mb4.2/8, mb1 4.5/8, mb1mx3.9/46, mbtmp4.2/8, MS3.2/6, Ms1 3.3/6, ms1mx2.9/34, Error ellipse: s-maj=54.5km s-min=19.5km az=130.0*

NEIC ***21*** *08:14:36.7±1.0,5.°00S±0.°08×152.°6E±0.°1, h55km±8km, mb4.5/35, Error ellipse: s-maj=17.8km s-min=11.9km az=83.0*

ISC 21 08:14:36.7±0.7,**4.°94S**±0.°08×**152.°7E**±0.°1,**h55**km,**n58, σ0s79/55, mb4.5/24, MS3.5/4, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.89**	**326**	Pn	**Pn**	**08 14 53.2**	**0.0**
PMG	**Port Moresby**	**7.04**	**231**	Pn	**Pn**	**08 16 18.4**	**+1.2**
	2.6nm,0.3s,baz=45,slow=16,SNR=2.7						
PMG				Sn	**Sn**	**08 17 38.3**	**+2.5**
	2.2nm,0.3s,baz=125,slow=23,SNR=2.0						
PMG				LR	LR	08 18 26.8	
	comp=Z,56nm,19.6s,baz=346,slow=33						
HNR	**Honiara**	**8.49**	**122**	LR	LR	08 20 06.5	
	comp=Z,196nm,20.8s,baz=298,slow=40						
COEN	**Coen**	**12.95**	**226**	Pn	**Pn**	**08 17 36.3**	**-1.8**
PATS	**Pohnpei**	**12.98**	**26**	Pn	**Pn**	**08 17 39.6**	**+1.1**
CTAO	**Charters Tower**	**16.30**	**202**	Pn	**Pn**	**08 18 19.9**	**-2.2**
DZM	**Mont Dzumac**	**21.64**	**143**	P	**P**	**08 19 22.5**	**-0.2**
DZM				IAmb	IAmb	08 19 29.3	
	comp=Z,38nm,1.5s						
MTN	**Manton Dam**	**22.66**	**248**	P	**P**	**08 19 33.0**	**-0.6**
MTN				IAmb	IAmb	08 19 37.7	
	comp=Z,40nm,1.4s						
WB0	**Warramunga Arr**	**23.11**	**229**	P	**P**	**08 19 37.5**	**-0.6**
WB0				IAmb	IAmb	08 19 55.4	
	comp=Z,23nm,1.5s						
WR0	**Warramunga Arr**	**23.11**	**228**	P	**P**	**08 19 37.6**	**-0.6**
WB2	**Warramunga Arr**	**23.24**	**229**	P	**P**	**08 19 39.2**	**-0.2**
WB2				IAmb	IAmb	08 19 56.7	
	comp=Z,22nm,1.4s						
WRA	**Warramunga Arr**	**23.25**	**229**	P	**P**	**08 19 39.6**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=52,slow=9.9,SNR=9.7						
WRA	**Warramunga Arr**	**23.25**	**229**	P	**P**	**08 19 39.1**	**-0.5**
KNRA	**Kununurra**	**25.79**	**244**	P	**P**	**08 20 02.4**	**-0.4**
AS31	**Alice Springs**	**25.95**	**222**	P	**P**	**08 20 03.7**	**-0.6**
ASAR	**Alice Springs**	**25.96**	**222**	P	**P**	**08 20 05.0**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=54,slow=9.3,SNR=7.1						
ASAR	**Alice Springs**	**25.96**	**222**	P	**P**	**08 20 04.1**	**-0.2**
STKA	**Stephens Creek**	**28.74**	**200**	P	**P**	**08 20 27.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**29.47**	**241**	P	**P**	**08 20 35.3**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=48,slow=6.8,SNR=8.9						
FITZ	**Fitzroy Crossi**	**29.47**	**241**	P	**P**	**08 20 35.0**	**-0.8**
FITZ				IAmb	IAmb	08 20 44.0	
	comp=Z,14nm,1.1s						
DAV	**Davao City (W)**	**29.55**	**294**	LR	LR	08 31 16.4	
	comp=Z,40nm,20.1s,baz=144,slow=34						
MJAR	**Matsushiro Arr**	**43.42**	**343**	LR	LR	08 39 55.5	
	comp=Z,32nm,18.1s,baz=205,slow=35						
USRK	**Ussuriysk Ar.**	**52.33**	**341**	P	**P**	**08 23 42.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**57.81**	**295**	P	**P**	**08 24 24.2**	**+1.2**
	comp=Z,2.2nm,0.7s,baz=102,slow=5.4,SNR=9.1						
CMAR	**Chiang Mai Arr**	**57.81**	**295**	P	**P**	**08 24 23.2**	**+0.2**
PETK	**Petropavlovsk-**	**57.98**	**4**	P	**P**	**08 24 23.6**	**0.0**
	comp=Z,5.2nm,1.0s,baz=142,slow=5.2,SNR=5.4						
PETK	**Petropavlovsk-**	**57.98**	**4**	P	**P**	**08 24 23.9**	**+0.3**
PWL	**Port Wells**	**79.83**	**25**	P	**P**	**08 26 39.3**	**+0.2**
KTH	**Kantishna Hill**	**80.19**	**22**	P	**P**	**08 26 41.2**	**+0.2**
KTH				IAmb	IAmb	08 26 45.2	
	comp=Z,10nm,1.2s						
MK31	**Makanchi Array**	**80.34**	**319**	P	**P**	**08 26 42.0**	**-0.1**
MKAR	**Makanchi Array**	**80.34**	**319**	P	**P**	**08 26 41.6**	**-0.5**
TRF	**Thorofare Moun**	**80.38**	**22**	P	**P**	**08 26 42.2**	**+0.1**
BPAW	**Bear Paw Mtn.**	**80.47**	**22**	P	**P**	**08 26 42.5**	**0.0**
IMAR	**Indian Mountai**	**80.56**	**20**	P	**P**	**08 26 43.6**	**+0.7**
RND	**Reindeer**	**80.91**	**23**	P	**P**	**08 26 44.8**	**0.0**
RND				IAmb	IAmb	08 26 46.0	
	comp=Z,6.1nm,0.8s						
MCK	**McKinley**	**81.04**	**23**	P	**P**	**08 26 45.5**	**0.0**
MLY	**Manley**	**81.06**	**21**	P	**P**	**08 26 46.4**	**+0.7**
I23K	**Minto, Yukon-K**	**81.62**	**21**	P	**P**	**08 26 49.0**	**+0.5**
I23K				IAmb	IAmb	08 26 50.3	
	comp=Z,9.3nm,1.5s						
WRH	**Wood River Hil**	**81.74**	**22**	P	**P**	**08 26 49.2**	**+0.1**
WRH				IAmb	IAmb	08 26 51.6	
	comp=Z,4.4nm,1.0s						
CCB	**Clear Creek Bu**	**81.93**	**22**	P	**P**	**08 26 49.8**	**-0.3**
CCB				IAmb	IAmb	08 26 51.9	
	comp=Z,7.5nm,1.4s						
COLA	**College**	**82.03**	**22**	P	**P**	**08 26 50.9**	**+0.3**
IL31		**82.34**	**22**	P	**P**	**08 26 52.4**	**+0.1**
IL31				IAmb	IAmb	08 26 52.9	
	comp=Z,3.4nm,0.8s						
ILAR	**Eielson Array**	**82.34**	**22**	P	**P**	**08 26 52.0**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=252,slow=5.3,SNR=26						
ILAR	**Eielson Array**	**82.34**	**22**	P	**P**	**08 26 52.5**	**+0.2**
SCRK	**Sand Creek**	**83.09**	**23**	P	**P**	**08 26 56.2**	**-0.1**
SCRK				IAmb	IAmb	08 26 58.3	
	comp=Z,6.2nm,1.1s						
TOLK	**Toolik Lake Re**	**83.39**	**18**	P	**P**	**08 26 58.6**	**+0.9**
TOLK				IAmb	IAmb	08 27 00.7	
	comp=Z,4.4nm,0.8s						
L27K	**Beaver Creek,**	**83.57**	**25**	P	**P**	**08 26 59.4**	**+0.6**
L27K				IAmb	IAmb	08 27 01.2	
	comp=Z,4.9nm,1.1s						
FYU	**Fort Yukon**	**83.80**	**21**	P	**P**	**08 27 00.7**	**+1.0**
FYU				IAmb	IAmb	08 27 22.5	
	comp=Z,5.5nm,1.2s						
K27K	**Chicken**	**83.87**	**24**	P	**P**	**08 27 01.1**	**+0.9**
K27K				IAmb	IAmb	08 27 03.3	
	comp=Z,6.3nm,1.1s						
EGAK	**Eagle**	**84.54**	**23**	P	**P**	**08 27 04.5**	**+0.9**
EGAK				IAmb	IAmb	08 27 06.4	
	comp=Z,3.5nm,0.8s						
HYT	**Haines Junctio**	**84.62**	**28**	P	**P**	**08 27 05.2**	**+0.9**
HYT				IAmb	IAmb	08 27 07.7	
	comp=Z,4.7nm,0.8s						
DAWY	**Dawson**	**84.97**	**24**	P	**P**	**08 27 06.4**	**+0.6**
EPYK	**Eagle Plains**	**86.84**	**22**	P	**P**	**08 27 15.9**	**+0.9**
INK	**Inuvik**	**88.63**	**21**	P	**P**	**08 27 24.0**	**+0.6**
NVAR	**Mina Array Bea**	**92.28**	**52**	LR	LR	09 03 33.4	
	comp=Z,23nm,18.5s,baz=338,slow=32						
YKA	**Yellowknife Ar**	**95.61**	**28**	P	**P**	**08 27 56.6**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=272,slow=4.7,SNR=8.8						
PDAR	**Pinedale Array**	**99.04**	**48**	P	**Pdif**	**08 28 12.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=224,slow=3.8,SNR=2.0						
PDAR				LR	LR	09 08 40.4	
	comp=Z,19nm,18.0s,baz=312,slow=33						
TORD	**Torodi Ar. Bea**	**150.22**	**288**	PKPbc	**PKPbc**	**08 34 22.6**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=63,slow=2.3,SNR=16						

IDC 21 08:23:07.7±0.4,**53.°66N**×**88.°09E, h0**km,**mb1 2.8**/2, **mb1mx2.8**/41,**mbtmp2.8**/2,**ML2.6**/2,**Error ellipse: s-maj=8.0km s-min=0.7km az=10.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.96**	**280**	*i*		08 35 26.2	
	baz=99,slow=319,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.96**	**280**	Pn	Pn	08 23 43.2	+1.0
	1.3nm,0.3s,baz=99,slow=15,SNR=10.0						
ZALV				Lg	Lg	08 24 09.6	
	2.7nm,0.3s,baz=98,slow=26,SNR=14						
KURBB	**Kurchatov Arra**	**6.62**	**246**	Pn	Pn	08 24 47.6	+1.4
	0.1nm,0.3s,baz=62,slow=14,SNR=4.6						
KURBB				Lg	Lg	08 26 36.4	
	0.1nm,0.3s,baz=63,slow=32,SNR=5.9						
MKAR	**Makanchi Array**	**7.82**	**211**	Pn	Pn	08 25 04.8	+2.2
	0.1nm,0.3s,baz=27,slow=11,SNR=5.7						

IDC ***21*** *08:34:07.0±0.9,35.°23N×26.°50E, h0km, mb3.6/3, mb1 3.6/3, mb1mx3.3/35, mbtmp3.6/3, Error ellipse: s-maj=210.6km s-min=14.7km az=142.0*

ISK ***21*** *08:34:10.1,34.°94N×26.°77E, h122km±1km, ML3.1/7*

THE ***21*** *08:34:11.2,35.°13N×26.°71E, h0km±1km, ML3.2/3, Error ellipse: s-maj=7.4km s-min=0.8km az=159.0*

ATH ***21*** *08:34:11.7,35.°15N×26.°74E, h10km±31km, ML3.0/5, Error ellipse: s-maj=31.6km s-min=2.0km az=0.0*

ISC 21 08:34:09.7±1.7,**35.°00N**±0.°09×**26.°80E**±0.°05,**h14**km±11km, **n22,σ0s80/28, mb3.4/3, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.49**	**284**	P	**Pg**	**08 34 19.4**	**0.0**
ZKR				S	**Sg**	**08 34 26.1**	**0.0**
ZKR				AML	AML	08 34 27.1	
	comp=E,7265μm,0.3s						
ZKR				AML	AML	08 34 27.4	
	comp=N,2338μm,0.2s						
ZKR	**Zakros**	**0.49**	**284**	P	**Pg**	**08 34 19.4**	**0.0**
ZKR				S	**Sg**	**08 34 26.1**	**0.0**
	comp=N,2μm,0.3s						
STIA	**Sitia Lasithi**	**0.62**	**289**	P	**Pg**	**08 34 21.4**	**-0.3**
STIA				S	**Sb**	**08 34 30.7**	**-0.1**
KARP	**Karpathos**	**0.62**	**28**	P	**Pg**	**08 34 20.9**	**-0.9**
KARP				AML	AML	08 34 40.0	
	comp=E,14955μm,0.4s						
KARP				AML	AML	08 34 40.2	
	comp=N,17715μm,0.4s						
KARP	**Karpathos**	**0.62**	**28**	P	**Pb**	**08 34 22.4**	**+0.1**
KARP				S	**Sb**	**08 34 31.2**	**+0.3**
	comp=N,8μm,0.4s						
NPS	**Neapolis**	**1.01**	**285**	P	**Pg**	**08 34 28.8**	**-0.3**
NPS				AML	AML	08 34 47.8	
	comp=N,1620μm,0.6s						
NPS				AML	AML	08 34 48.7	
	comp=E,2903μm,0.5s						
NPS	**Neapolis**	**1.01**	**285**	P	**Pb**	**08 34 29.2**	**+0.3**
IDI	**Anoyia**	**1.59**	**281**	P	**Pg**	**08 34 40.1**	**-0.2**
IDI				AML	AML	08 35 09.5	
	comp=N,396μm,0.3s						
IDI				AML	AML	08 35 20.3	
	comp=E,536μm,0.7s						
ARG	**Arkhangelos**	**1.62**	**41**	P	**Pg**	**08 34 40.4**	**-0.4**
ARG	**Arkhangelos**	**1.62**	**41**	P	**Pb**	**08 34 40.0**	**+0.6**
ARG				S	**Sg**	**08 35 01.4**	**-0.6**
	comp=E,520nm,1.0s						
ARG	**Arkhangelos**	**1.62**	**41**	PN	**Pg**	**08 34 40.6**	**-0.3**
ARG				SN	**Sg**	**08 35 02.9**	**+0.9**
NIS1	**Nisyros Isl.**	**1.63**	**11**	PN	**Pg**	**08 34 40.7**	**-0.2**
NIS1				SN	**Sg**	**08 35 03.0**	**+0.9**
BODT	**Bodrum**	**2.10**	**11**	P	**Pn**	**08 34 44.4**	**0.0**
BODT	**Bodrum**	**2.10**	**11**	PN	**Pb**	**08 34 46.5**	**-1.0**
TURN	**Turunc**	**2.12**	**33**	PN	**Pb**	**08 34 46.9**	**-1.0**
APE	**Apeiranthos**	**2.31**	**334**	AML	AML	08 35 21.6	
	comp=N,188μm,0.6s						
APE				AML	AML	08 35 27.5	
	comp=E,214μm,0.7s						
DALY	**Dalyan (Mula)**	**2.36**	**39**	PN	**Pn**	**08 34 49.8**	**+1.9**
YER	**Yerkesik**	**2.44**	**29**	PN	**Pn**	**08 34 50.9**	**+1.7**
AYDB	**Zeytinkoy-Aydi**	**3.07**	**16**	PN	**Pn**	**08 34 59.2**	**+1.3**
TORD	**Torodi Ar. Bea**	**31.44**	**232**	P	**P**	**08 40 29.6**	**-1.1**
	comp=E,0.2nm,0.4s,baz=31,slow=9.3,SNR=4.6						
MKAR	**Makanchi Array**	**42.74**	**57**	P	**P**	**08 42 06.4**	**0.0**
	comp=E,0.3nm,0.5s,baz=273,slow=7.1,SNR=5.4						
ZALV	**Zalesovo Beam**	**44.15**	**46**	P	**P**	**08 42 17.1**	**-0.4**
	comp=E,0.7nm,0.4s,baz=266,slow=9.5,SNR=2.2						

INET ***21*** *08:35:56.4,12.°63N×88.°17W, h31km, MW3.6*

SNET 21 08:35:56.4±1.2,**12.°66N**×**88.°21W, h48**km±27km,**ML3.5,1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.71**	**31**	*eP*	Pn	08 36 10.3	-0.1
LCND	**La Caada**	**0.72**	**25**	*eP*	Pn	08 36 10.1	-0.3
LCND				*eS*	Sn	08 36 20.8	+0.4
ALJI	**Alcalda de J**	**0.75**	**332**	*i*P	Pn	08 36 10.9	+0.1
ALJI				*eS*	Sn	08 36 22.7	+1.5
ALJI				IAML		08 36 24.0	
	comp=Z,2μm,0.3s						
LCY	**Lacayo**	**0.77**	**354**	*eP*	Pn	08 36 11.2	+0.1
VSM	**San Miguel**	**0.77**	**355**	*eP*	Pn	08 36 11.4	+0.1
TECA	**Tecapa**	**0.88**	**341**	*eP*	Pn	08 36 12.7	0.0
COEB	**Comit de Eme**	**0.89**	**339**	*eP*	Pn	08 36 12.6	-0.1
COEB				*eS*	Sn	08 36 25.5	+0.8
COEB				IAML		08 36 27.5	
	comp=Z,1μm,0.2s						
PQSS	**Presa 15 de Se**	**1.02**	**340**	*eP*	Pn	08 36 14.7	+0.3
PQSS				*eS*	Sn	08 36 29.1	+1.5
PQSS				IAML		08 36 32.7	
	comp=Z,424nm,0.2s						
FAGO	**Alcalda de S**	**1.04**	**5**	*eP*	Pn	08 36 14.6	0.0
FAGO				*eS*	Sn	08 36 28.8	+0.8
COEG	**Centro de Oper**	**1.16**	**326**	*eP*	Pn	08 36 16.3	0.0
COEG				*eS*	Sn	08 36 31.8	+0.7
COEG				IAML		08 36 35.8	
	comp=Z,1μm,0.3s						
PAVA	**Las Pavas**	**1.27**	**326**	*eP*	Pn	08 36 18.2	+0.3
PAVA				*eS*	Sn	08 36 35.4	+1.6
PAVA				IAML		08 36 40.6	
	comp=Z,864nm,0.4s						
LFRS	**El Faro**	**1.27**	**319**	*eP*	Pn	08 36 18.1	+0.2
LBRS	**Las Brisas**	**1.35**	**323**	*eP*	Pn	08 36 19.7	+0.8
LALI	**Alcalda de L**	**1.36**	**307**	*eP*	Pn	08 36 19.4	+0.3
LALI				*eS*	Sn	08 36 36.0	0.0
SNET	**Serv Nac Est T**	**1.43**	**316**	*eP*	Pn	08 36 20.3	+0.3
SNET				*eS*	Sn	08 36 37.9	+0.1
SNET				IAML		08 36 42.2	
	comp=Z,761nm,0.2s						
UEES	**Universidad Ev**	**1.46**	**316**	*eP*	Pn	08 36 20.9	+0.5
UEES				*eS*	Sn	08 36 39.1	+0.8
BOQS	**Boqueron**	**1.50**	**316**	*eP*	Pn	08 36 21.2	+0.2
SBLS	**San Blas**	**1.81**	**311**	*eP*	Pn	08 36 26.5	+1.1

IDC ***21*** *08:37:40.5±4.5, 30.°55N×142.°98E, h0km, mb3.6/3, mb1 3.7/6, mb1mx3.4/41, mbtmp3.6/6, ML3.0/3, Error ellipse: s-maj=151.6km s-min=22.2km az=70.0*

ISC 21 08:37:45.8±2.4,**30.°4N**±0.°2×**142.°3E**±0.°5,**h24**km,**n6, σ1s93/8, mb3.8/3, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.29**	**182**	Pn	**Pn**	**08 38 37.0**	**+1.3**
	3.3nm,0.3s,baz=276,slow=20,SNR=1.7						
JCJ				Sn	**Sn**	**08 39 11.8**	**-2.3**
	8.6nm,0.3s,baz=288,slow=22,SNR=1.5						
JHJ	**Hachijo jima 2**	**3.47**	**322**	Pn	**Pn**	**08 38 38.4**	**+0.1**
	2.4nm,0.3s,baz=64,slow=13,SNR=1.3						
JHJ				Sn	**Sn**	**08 39 17.5**	**-1.2**
	5.4nm,0.3s,baz=179,slow=20,SNR=1.8						
MJAR	**Matsushiro Arr**	**7.03**	**332**	Pn	**Pn**	**08 39 25.0**	**-2.2**
	0.1nm,0.3s,baz=161,slow=9.4,SNR=4.2						
MKAR	**Makanchi Array**	**48.52**	**307**	P	**P**	**08 46 29.2**	**+2.4**
	0.2nm,0.7s,baz=89,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**50.63**	**190**	P	**P**	**08 46 43.0**	**-0.1**
	1.1nm,0.8s,baz=7.7,slow=7.7,SNR=6.0						
ASAR	**Alice Springs**	**54.35**	**189**	P	**P**	**08 47 10.6**	**0.0**
	0.4nm,0.5s,baz=4.3,slow=6.5,SNR=11						

IDC ***21*** *08:54:41.2±2.3, 39.°45N×141.°99E, h58km±23km, mb3.4/8, mb1 3.7/12, mb1mx3.4/35, mbtmp3.8/12, ML3.6/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/23, Error ellipse: s-maj=33.9km s-min=13.0km az=102.0*

JMA ***21*** *08:54:41.6, 39.°60N×141.°97E, h61km, M3.8*

JMA Felt I J1.

ISC 21 08:54:41.7±0.8,**39.°57N**±0.°04×**142.°05E**±0.°07,**h60**km±6km, **n33,σ1s36/42, mb3.7/7, 8C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.18**	**271**	↑P	**Pn**	**08 54 51.0**	**+0.1**
MIYJ				S	**Sn**	**08 54 57.6**	**0.0**
JTH	**Tanohata**	**0.39**	**339**	↑P	**Pn**	**08 54 52.2**	**-0.3**
JTH				S	**Sn**	**08 54 59.8**	**-0.6**
OFUJ	**Ofunato**	**0.57**	**211**	↑P	**Pn**	**08 54 54.4**	**0.0**
OFUJ				S	**Sn**	**08 55 03.7**	**0.0**
JOM	**Ohasama**	**0.59**	**260**	↑P	**Pn**	**08 54 54.0**	**-0.6**
JOM				S	**Sn**	**08 55 03.2**	**-0.8**
JKZ	**Kuzumaki**	**0.69**	**307**	↑P	**Pn**	**08 54 55.2**	**-0.6**
JKZ				S	**Sn**	**08 55 05.1**	**-1.0**
JMK	**Ichinoseki**	**0.89**	**226**	↓P	**Pn**	**08 54 58.0**	**-0.3**
JMK				S	**Sn**	**08 55 10.4**	**-0.1**
JANG	**Nango**	**0.90**	**333**	↓P	**Pn**	**08 54 57.6**	**-0.8**
JANG				S	**Sn**	**08 55 09.6**	**-1.1**
JRG	**Rokugo**	**1.11**	**261**	↑P	**Pn**	**08 55 00.3**	**-0.8**
JRG				S	**Sn**	**08 55 14.4**	**-1.1**
JIO	**Ouri**	**1.24**	**206**	↓P	**Pn**	**08 55 02.8**	**-0.1**
JIO				S	**Sn**	**08 55 18.4**	**-0.3**
JAH	**Hinai**	**1.25**	**300**	↑P	**Pn**	**08 55 02.3**	**-0.6**
JAH				*e*S	**Sn**	**08 55 17.7**	**-1.1**
JTM	**Tenmabayashi**	**1.43**	**329**	↓P	**Pn**	**08 55 04.7**	**-0.6**
JTM				*e*S	**Sn**	**08 55 22.3**	**-0.8**
JYK	**Kaneyama**	**1.47**	**244**	↑P	**Pn**	**08 55 05.5**	**-0.4**
JYK				*e*S	**Sn**	**08 55 23.3**	**-0.8**
MAT	**Matsushiro**	**4.28**	**226**	P	**Pn**	**08 55 45.7**	**+1.4**
MAT				*e*S	**Sn**	**08 56 35.7**	**+2.7**
MJAR	**Matsushiro Arr**	**4.28**	**226**	P	**Pn**	**08 55 44.1**	**-0.3**
	0.6nm,0.3s,baz=31,slow=13,SNR=22						
ASAJ	**Asahikawa**	**4.56**	**5**	P	**Pn**	**08 55 48.0**	**-0.1**
	3.7nm,0.3s,baz=201,slow=16,SNR=18						
JHJ	**Hachijo jima 2**	**6.70**	**197**	P	**Pn**	**08 56 15.7**	**-1.7**
	8.0nm,0.3s,baz=139,slow=23,SNR=7.0						
JHJ				S	**Sn**	**08 57 27.1**	**-5.1**
	4.6nm,0.3s,baz=65,slow=20,SNR=1.6						
USRK	**Ussuriysk Ar.**	**6.81**	**305**	P	**Pn**	**08 56 47.8**	**+1.5**
	baz=113,slow=16,SNR=5.9						
KSRS	**Korea Array**	**11.27**	**264**	P	**Pn**	**08 57 23.3**	**+3.5**
	0.6nm,0.3s,baz=71,slow=14,SNR=5.5						
KSRS				LR	LR	09 01 40.0	
	comp=Z,18nm,19.2s,baz=10,slow=37						
MA2	**Magadan**	**20.77**	**13**	P	**P**	**08 59 17.8**	**+0.4**
	7.1nm,0.8s,baz=187,slow=12,SNR=5.2						
SEY	**Seymchan**	**24.21**	**12**	P	**P**	**08 59 53.4**	**+1.1**
	2.4nm,0.8s,baz=189,slow=7.4,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**29.12**	**126**	T	T	09 31 09.4	
	baz=318,slow=75,SNR=436						
H11N1	**WAKE ISLAND Hy**	**29.13**	**126**	T	T	09 31 12.5	
	baz=318,slow=75,SNR=514						
H11N3	**WAKE ISLAND Hy**	**29.14**	**126**	T	T	09 31 14.1	
	baz=318,slow=75,SNR=401						
H11S1	**WAKE ISLAND Hy**	**29.91**	**127**	T	T	09 32 09.3	
	baz=319,slow=76,SNR=37						
H11S3	**WAKE ISLAND Hy**	**29.92**	**128**	T	T	09 32 17.6	
	baz=319,slow=76,SNR=56						
H11S2	**WAKE ISLAND Hy**	**29.93**	**127**	T	T	09 32 16.4	
	baz=319,slow=76,SNR=33						
MKAR	**Makanchi Array**	**43.24**	**300**	P	**P**	**09 02 35.8**	**-1.2**
	0.7nm,0.8s,baz=80,slow=10.0,SNR=3.8						
MKAR				pP	**pP**	**09 02 51.6**	**-0.7**
	1.3nm,0.9s,baz=74,slow=8.9,SNR=5.6						
INK	**Inuvik**	**51.91**	**28**	P	**P**	**09 03 44.0**	**+0.2**
	0.5nm,0.6s,baz=230,slow=2.2,SNR=2.0						
WRA	**Warramunga Arr**	**59.64**	**188**	P	**P**	**09 04 38.0**	**-1.6**
	0.9nm,0.8s,baz=5.7,slow=7.2,SNR=7.6						
WRA				pP	**pP**	**09 04 55.5**	**-0.1**
	0.6nm,0.8s,baz=4.4,slow=7.1,SNR=5.4						
ASAR	**Alice Springs**	**63.37**	**188**	P	**P**	**09 05 04.0**	**-0.8**
	0.6nm,0.9s,baz=2.2,slow=6.7,SNR=5.5						
PDAR	**Pinedale Array**	**75.54**	**46**	P	**P**	**09 06 21.0**	**+1.0**
	0.2nm,0.5s,baz=270,slow=2.7,SNR=2.2						
MMAI	**Mount Meron Ar**	**80.90**	**305**	LR	LR	09 44 59.3	
	comp=Z,78nm,20.4s,baz=325,slow=37						
TXAR	**Lajitas Array**	**88.18**	**53**	P	**P**	**09 07 27.3**	**+0.8**
	0.1nm,0.5s,baz=294,slow=4.5,SNR=2.0						

IDC 21 09:09:43.1±1.7,**11.°70N**×**144.°20E, h0**km,**mb3.3**/3, **mb1 3.5**/3,**mb1mx3.3**/27,**mbtmp3.3**/3,**Error ellipse: s-maj=71.4km s-min=36.6km az=95.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.56**	**196**	P	P	09 16 50.8	-0.1
	0.1nm,0.5s,baz=19,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	**62.40**	**317**	P	P	09 20 07.9	-0.1
	0.3nm,0.5s,baz=96,slow=7.4,SNR=4.2						
YKA	**Yellowknife Ar**	**84.83**	**27**	P	P	09 22 19.4	0.0
	0.1nm,0.5s,baz=286,slow=4.7,SNR=4.5						

IDC ***21*** *09:24:34.2±1.1,24.°01N×122.°38E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.4/61, mbtmp3.7/7, ML3.0/2, MS3.2/4, Ms1 3.2/4, ms1mx2.7/45, Error ellipse: s-maj=38.4km s-min=20.2km az=67.0*

JMA ***21*** *09:24:37.7±0.3,23.°95N×122.°43E, h18km±5km, M3.6*

TAP ***21*** *09:24:38.2,24.°00N×122.°48E, h32km, ML3.8, D*

ISC 21 09:24:37.6±1.1,**23.°93N**±0.°02×**122.°45E**±0.°02,**h24**km±10km, **n118,σ0s80/201, mb3.7/5, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res

	baz=266							
WHF			*i* S	**Sb**	**09 25 12.2**	**-0.2**		
	baz=266							
NNS	**Nan Shan**	**1.10 298**	*i* P	**Pn**	**09 24 57.7**	**-0.1**		
	baz=283							
NNS			*e*S	**Sn**	**09 25 12.6**	**+0.3**		
	baz=283							
FUSS	**Fushou**	**1.15 286**	*i* P	**Pb**	**09 24 58.6**	**-0.3**		
	baz=282							
FUSS			*e*S	**Sn**	**09 25 12.9**	**-0.6**		
	baz=282							
TWB1	**Santiao Chiao**	**1.15 339**	*i* P	**Pn**	**09 24 58.1**	**-0.2**		
	baz=351							
TWB1			*e*S	**Sn**	**09 25 12.7**	**-0.6**		
	baz=351							
OWD	**Renai**	**1.16 271**	*i* P	**Pb**	**09 24 58.8**	**-0.4**		
	baz=267							
OWD			S	**Sb**	**09 25 14.5**	**+0.6**		
	baz=267							
CHGB	**Renai**	**1.17 277**	P	**Pn**	**09 24 58.9**	**+0.1**		
	baz=263							
CHGB			S	**Sb**	**09 25 15.0**	**+0.8**		
	baz=263							
YULB	**Yu-li**	**1.18 243**	P	**Pb**	**09 24 59.2**	**-0.2**		
	baz=231							
YULB			S	**Sb**	**09 25 14.3**	**0.0**		
	baz=231							
TIPB	**Shuangxi**	**1.18 331**	*i* P	**Pn**	**09 24 58.8**	**0.0**		
	baz=328							
TIPB			S	**Sn**	**09 25 14.0**	**-0.1**		
	baz=328							
EYUL	**Yuli**	**1.19 241**	*i* P	**Pb**	**09 24 59.4**	**-0.1**		
	baz=238							
EYUL			*i* S	**Sb**	**09 25 15.0**	**+0.7**		
	baz=238							
TWF1	**Yuli**	**1.20 242**	*i* P	**Pb**	**09 24 59.6**	**-0.1**		
	baz=238							
TWF1			S	**Sb**	**09 25 15.8**	**+1.0**		
	baz=238							
NWLT	**Wulai**	**1.21 315**	*i* P	**Pn**	**09 24 59.3**	**+0.2**		
	baz=311							
NWLT			*e*S	**Sb**	**09 25 15.5**	**+0.5**		
	baz=311							
TWT	**Tachien**	**1.21 286**	*i* P	**Pb**	**09 25 00.2**	**+0.3**		
	baz=272							
TWT			*e*S	**Sb**	**09 25 16.0**	**+0.8**		
	baz=272							
VWDT	**VWDT**	**1.21 262**	P	**Pb**	**09 24 59.8**	**0.0**		
	baz=258							
VWDT			S	**Sn**	**09 25 14.1**	**-0.6**		
	baz=258							
TDCB	**Techi**	**1.22 286**	P	**Pb**	**09 24 59.9**	**-0.2**		
	baz=273							
YHNB	**Yeheng**	**1.23 307**	P	**Pn**	**09 24 59.6**	**+0.3**		
	baz=292							
IRIF	**Iriomote-Funau**	**1.24 71**	P	**Pb**	**09 25 01.1**	**+0.8**		
IRIF			S	**Sb**	**09 25 16.7**	**+0.8**		
NSK	**Sanguang**	**1.24 307**	*i* P	**Pn**	**09 24 59.8**	**+0.2**		
	baz=303							
NSK			*e*S	**Sb**	**09 25 17.6**	**+1.5**		
	baz=303							
HATJ	**Hateruma jima**	**1.25 84**	P	**Pb**	**09 25 00.8**	**+0.3**		
HATJ			S	**Sb**	**09 25 16.8**	**+0.7**		
FULB	**Fuli**	**1.28 236**	*i* P	**Pn**	**09 25 00.4**	**+0.3**		
	baz=223							
FULB			*i* S	**Sn**	**09 25 16.3**	**-0.3**		
	baz=223							
NWF	**Wu-fen Shan**	**1.29 332**	*i* P	**Pn**	**09 25 00.1**	**-0.1**		
	baz=329							
WFSB	**Wu-fen Shan**	**1.29 332**	P	**Pn**	**09 25 00.2**	**0.0**		
	baz=329							
WFSB			*e*S	**Sb**	**09 25 17.4**	**+0.1**		
	baz=329							
CHKT	**Chengkung**	**1.29 230**	*i* P	**Pn**	**09 25 00.3**	**+0.1**		
	baz=218							
CHKT			*i* S	**Sn**	**09 25 15.8**	**-0.9**		
	baz=218							
TWA	**Mucha**	**1.31 323**	P	**Pb**	**09 25 01.7**	**+0.2**		
	baz=337							
TWA			S	**Sb**	**09 25 19.2**	**+1.3**		
	baz=337							
NHDH	**Xindian Distri**	**1.33 321**	*i* P	**Pb**	**09 25 01.9**	**0.0**		
	baz=333							
NHDH			*e*S	**Sb**	**09 25 20.2**	**+1.7**		
	baz=333							
TATO	**Taipei**	**1.36 320**	P	**Pb**	**09 25 01.8**	**-0.6**		
	baz=317							
TATO			S	**Sb**	**09 25 20.4**	**+1.0**		
	baz=317							
TNOU	**National Taiwa**	**1.36 333**	P	**Pn**	**09 25 01.3**	**+0.1**		
	baz=331							
WPL	**Puli Township**	**1.37 274**	P	**Pb**	**09 25 02.0**	**-0.5**		
	baz=270							
WPL			*e*S	**Sb**	**09 25 20.2**	**+0.7**		
	baz=270							
SSLB	**Suanglung**	**1.37 264**	P	**Pb**	**09 25 02.5**	**-0.2**		
	baz=261							
SSLB			*e*S	**Sb**	**09 25 19.4**	**-0.4**		
	baz=261							
DPDB	**Guoxing**	**1.40 275**	P	**Pb**	**09 25 02.8**	**-0.3**		
	baz=263							
DPDB			S	**Sb**	**09 25 20.7**	**+0.3**		
	baz=263							
WHP	**Taichung City**	**1.42 284**	*i* P	**Pb**	**09 25 03.4**	**0.0**		
	baz=271							
WHP			*e*S	**Sb**	**09 25 20.6**	**-0.4**		
	baz=271							
SMLT	**Sun Moon Lake**	**1.42 268**	*i* P	**Pb**	**09 25 02.8**	**-0.6**		
	baz=265							
SMLT			S	**Sb**	**09 25 20.7**	**-0.4**		
	baz=265							
EDH	**Donghe**	**1.42 228**	*i* P	**Pn**	**09 25 01.9**	**-0.1**		
	baz=218							
EDH			*i* S	**Sn**	**09 25 18.9**	**-0.9**		
	baz=218							
YUS	**Yu-Shan**	**1.44 253**	*i* P	**Pb**	**09 25 03.9**	**-0.1**		
	baz=249							
YUS			S	**Sn**	**09 25 21.3**	**+0.2**		
	baz=249							
YM01	**YM01**	**1.45 327**	P	**Pb**	**09 25 03.7**	**-0.3**		
	baz=324							
TYC	**Yuchr**	**1.46 269**	*i* P	**Pb**	**09 25 03.6**	**-0.4**		
	baz=266							
TYC			S	**Sb**	**09 25 22.4**	**+0.3**		
	baz=266							
JKRS	**Kuro-shima**	**1.46 78**	P	**Pb**	**09 25 03.9**	**-0.2**		
JKRS			S	**Sb**	**09 25 23.1**	**+0.9**		
YM10	**YM10**	**1.46 327**	P	**Pn**	**09 25 02.0**	**-0.6**		
	baz=324							
YM11	**YM11**	**1.47 327**	P	**Pb**	**09 25 04.3**	**0.0**		
	baz=324							
YM05	**YM05**	**1.47 327**	*e*P	**Pb**	**09 25 03.5**	**-0.9**		
	baz=324							
YM05			*e*S	**Sn**	**09 25 21.1**	**-0.1**		
	baz=324							
YM04	**YM04**	**1.48 326**	P	**Pb**	**09 25 03.8**	**-0.6**		
	baz=323							
LIOB	**Emei**	**1.49 299**	*i* P	**Pb**	**09 25 04.5**	**-0.1**		
	baz=295							
NSTT	**Nanjuang**	**1.49 298**	*i* P	**Pb**	**09 25 04.2**	**-0.4**		
	baz=294							
NSTT			S	**Sb**	**09 25 23.8**	**+0.6**		
	baz=294							
YM03	**YM03**	**1.49 327**	P	**Pb**	**09 25 04.4**	**-0.3**		
	baz=324							
TWS1	**Kuangyinshan**	**1.50 321**	*e*P	**Pb**	**09 25 03.8**	**-0.9**		
	baz=335							
TWS1			*e*S	**Sn**	**09 25 22.1**	**+0.3**		
	baz=335							
ANP	**Anpu**	**1.51 326**	*i* P	**Pn**	**09 25 04.0**	**+0.7**		
	baz=323							
LDUT	**Ludao**	**1.54 216**	*i* P	**Pn**	**09 25 03.7**	**+0.1**		
	baz=214							
LDUT			S	**Sn**	**09 25 21.4**	**-1.4**		
	baz=214							
NCUH	**Zhongli**	**1.55 312**	*e*P	**Pb**	**09 25 06.7**	**+1.1**		
	baz=309							
TWY	**Chenhua**	**1.55 330**	P	**Pb**	**09 25 05.8**	**+0.2**		
	baz=328							
ALS	**Alishan**	**1.56 255**	*i* P	**Pb**	**09 25 05.7**	**-0.4**		
	baz=251							
ALS			S	**Sb**	**09 25 24.9**	**-0.6**		
	baz=251							
WJS	**Zhushan**	**1.58 266**	*i* P	**Pb**	**09 25 06.9**	**+0.7**		
	baz=263							
WJS			*i* S	**Sb**	**09 25 28.7**	**+3.1**		
	baz=263							
LONT	**Longtian**	**1.58 230**	*i* P	**Pn**	**09 25 04.8**	**+0.6**		
	baz=240							
LONT			*i* S	**Sn**	**09 25 24.4**	**+0.5**		
	baz=240							
TWQ1	**Liyutan**	**1.58 286**	*i* P	**Pb**	**09 25 06.0**	**-0.2**		
	baz=282							
TWQ1			S	**Sb**	**09 25 27.1**	**+1.2**		
	baz=282							
WWF	**Wufeng**	**1.60 274**	P	**Pb**	**09 25 06.4**	**-0.1**		
	baz=271							
WWF			S	**Sb**	**09 25 29.8**	**+3.4**		
	baz=271							
JIJ	**Ishigaki jima**	**1.61 74**	P	**Pb**	**09 25 05.2**	**+0.7**		
JIJ			S	**Sn**	**09 25 25.1**	**+0.5**		
NSY	**Sanyi**	**1.61 288**	P	**Pb**	**09 25 05.8**	**-1.0**		
	baz=284							
NSY			S	**Sb**	**09 25 27.4**	**+0.7**		
	baz=284							
WNT	**Mingjian**	**1.61 269**	*i* P	**Pb**	**09 25 07.0**	**+0.3**		
	baz=265							
WNT			*i* S	**Sb**	**09 25 28.3**	**+1.6**		
	baz=265							
WNT1	**Nantou City**	**1.62 270**	S	**Sb**	**09 25 28.7**	**+1.9**		
	baz=266							
NMLH	**Miaoli**	**1.63 292**	P	**Pb**	**09 25 06.5**	**-0.5**		
	baz=288							
TCU	**Taichung**	**1.63 278**	P	**Pb**	**09 25 06.8**	**-0.3**		
	baz=274							
TCU			*i* S	**Sb**	**09 25 29.1**	**+1.8**		
	baz=274							
CHN5	**Tsauling**	**1.65 259**	*i* P	**Pb**	**09 25 07.3**	**-0.2**		
	baz=246							
CHN5			*i* S	**Sb**	**09 25 29.1**	**+1.1**		
	baz=246							
TWGBT	**Beinan**	**1.67 229**	P	**Pn**	**09 25 05.6**	**+0.2**		
	baz=239							
TWGBT			S	**Sn**	**09 25 26.1**	**-0.1**		
	baz=239							
TWG	**Pinlang**	**1.68 229**	*i* P	**Pn**	**09 25 05.7**	**+0.1**		
	baz=239							
TWG			*i* S	**Sn**	**09 25 25.1**	**-1.2**		
	baz=239							
WDJ	**Dajia District**	**1.70 285**	*e*S	**Sb**	**09 25 29.9**	**+0.7**		
	baz=281							
STYH	**Taoyuan**	**1.71 244**	*i* P	**Pb**	**09 25 07.6**	**-0.7**		
	baz=234							
STYH			*i* S	**Sb**	**09 25 28.6**	**-0.8**		
	baz=234							
PCYT	**Pengchaiyu**	**1.73 349**	P	**Pn**	**09 25 06.2**	**0.0**		
	baz=347							
STYT	**Tauyuan**	**1.73 244**	*i* P	**Pb**	**09 25 08.0**	**-0.7**		
	baz=233							
STYT			*i* S	**Sb**	**09 25 29.6**	**-0.4**		
	baz=233							
WCHH	**Zhanghua**	**1.73 275**	*i* P	**Pb**	**09 25 08.5**	**-0.3**		
	baz=271							
WCHH			*i* S	**Sb**	**09 25 30.8**	**+0.6**		
	baz=271							
WGK	**Gukeng**	**1.74 262**	S	**Sb**	**09 25 32.8**	**+2.4**		
	baz=259							
WDLH	**Douliu**	**1.77 263**	*i* P	**Pb**	**09 25 09.0**	**-0.3**		
	baz=259							
WDLH			*i* S	**Sb**	**09 25 32.5**	**+1.4**		
	baz=259							
TPUB	**Ta-pu**	**1.78 250**	P	**Pb**	**09 25 09.2**	**-0.4**		
	baz=246							
TPUB			S	**Sb**	**09 25 32.7**	**+1.2**		
	baz=246							
CHN4	**Tsaushan**	**1.79 252**	*i* P	**Pb**	**09 25 10.1**	**+0.3**		
	baz=248							
CHN4			*i* S	**Sb**	**09 25 32.2**	**+0.3**		
	baz=248							
WTP	**Ta-pu**	**1.81 248**	*i* P	**Pb**	**09 25 10.5**	**+0.3**		
	baz=245							
WTP			*i* S	**Sb**	**09 25 33.0**	**+0.4**		
	baz=245							
JISG	**Ishigakijimahi**	**1.82 69**	P	**Pn**	**09 25 08.1**	**+0.6**		
JISG			S	**Sn**	**09 25 29.9**	**+0.1**		
CHN2	**Minshiung**	**1.85 258**	S	**Sb**	**09 25 35.6**	**+2.1**		
	baz=255							
WRL	**Guolierlin Hig**	**1.90 270**	S	**Sb**	**09 25 34.8**	**0.0**		
	baz=280							
SLGT	**Liugui**	**1.90 241**	*i* P	**Pb**	**09 25 12.5**	**+0.9**		
	baz=232							
SLGT			*i* S	**Sb**	**09 25 35.2**	**+0.4**		
	baz=232							
WTK	**Tuku**	**1.90 263**	*i* P	**Pb**	**09 25 10.5**	**-1.1**		
	baz=260							
WTK			*i* S	**Sb**	**09 25 35.9**	**+1.0**		
	baz=260							
CHY	**Chiayi**	**1.90 257**	P	**Pb**	**09 25 10.5**	**-1.1**		
	baz=254							
CHY			*i* S	**Sb**	**09 25 35.5**	**+0.5**		
	baz=254							
SGST	**Jiashian**	**1.91 244**	*i* P	**Pb**	**09 25 10.9**	**-0.8**		
	baz=233							
SGST			*i* S	**Sb**	**09 25 35.8**	**+0.6**		
	baz=233							
ECL	**Taimali**	**1.91 226**	*i* P	**Pn**	**09 25 09.2**	**+0.5**		
	baz=234							
ECL			*i* S	**Sn**	**09 25 31.4**	**-0.6**		
	baz=234							
CHN1	**Nanshi**	**1.91 248**	*i* P	**Pb**	**09 25 12.0**	**+0.2**		
	baz=244							
CHN1			*i* S	**Sb**	**09 25 36.0**	**+0.8**		
	baz=244							
SNST	**Tainan City**	**1.92 249**	*i* P	**Pb**	**09 25 12.0**	**0.0**		
	baz=246							
SNST			*i* S	**Sb**	**09 25 36.1**	**+0.5**		
	baz=246							
WTCT	**Ta-ch'eng**	**1.98 269**	*e*S	**Sb**	**09 25 38.0**	**+0.6**		
	baz=278							
SSD	**Sandimen**	**2.04 235**	*i* P	**Pb**	**09 25 12.8**	**-1.2**		
	baz=228							
SSD			S	**Sn**	**09 25 36.9**	**+1.6**		
	baz=228							
TSMG	**Majia**	**2.06 234**	P	**Pb**	**09 25 12.7**	**-1.6**		
	baz=227							
TSMG			S	**Sn**	**09 25 36.4**	**+0.7**		
	baz=227							
ICHU	**Yijhu**	**2.07 255**	P	**Pn**	**09 25 12.4**	**+1.6**		
	baz=251							
ICHU			*i* S	**Sb**	**09 25 38.6**	**-1.1**		
	baz=251							
JTJ	**Tarama**	**2.18 71**	*e*S	**Sb**	**09 25 40.9**	**-1.9**		
JIRB	**Irabujima**	**2.64 70**	P	**Pn**	**09 25 21.1**	**+2.3**		
JIRB			*e*S	**Sn**	**09 25 50.8**	**+0.7**		
JOW	**Kunigami**	**6.01 60**	Pn	**Pn**	**09 26 04.4**	**-0.7**		
	0.7nm,0.3s,baz=94,slow=15,SNR=4.4							
KSRS	**Korea Array**	**14.28 18**	Pn	**Pn**	**09 27 57.9**	**-0.4**		
	0.1nm,0.3s,baz=201,slow=13,SNR=1.7							
KSRS			LR	LR	09 34 37.5			
	comp=Z,22nm,19.7s,baz=190,slow=42							
DAV	**Davao City (W)**	**17.03 169**	LR	LR	09 34 48.9			
	comp=Z,30nm,20.0s,baz=4.0,slow=36							
SONM	**Songino Array**	**27.06 336**	P	**P**	**09 30 17.5**	**-0.9**		
	0.5nm,0.4s,baz=148,slow=8.4,SNR=3.4							
MKAR	**Makanchi Array**	**39.33 316**	P	**P**	**09 32 04.6**	**-0.3**		
	1.0nm,0.6s,baz=102,slow=10,SNR=11							
ZALV	**Zalesovo Beam**	**41.09 327**	P	**P**	**09 32 18.1**	**-1.2**		
	0.8nm,0.3s,baz=101,slow=7.7,SNR=4.8							
WRA	**Warramunga Arr**	**45.12 164**	P	**P**	**09 32 53.1**	**+0.8**		
	1.0nm,0.8s,baz=342,slow=8.7,SNR=4.8							
ASAR	**Alice Springs**	**48.60 166**	P	**P**	**09 33 20.4**	**+0.9**		
	0.3nm,0.5s,baz=342,slow=7.1,SNR=5.7							
AKTO	**Aktyubinsk**	**55.76 316**	LR	LR	09 58 16.9			
	comp=Z,50nm,18.9s,baz=229,slow=36							
URZ	**Urewera**	**80.33 139**	LR	LR	10 08 58.1			
	comp=Z,93nm,21.9s,baz=212,slow=33							

*DDA **21** 09:37:29.8,35˚.21N±.26˚.70E,h11$^{km}_{\pm 5}$,ML3.8*
*NIC **21** 09:37:29.1±0.0,35˚.00N±.26˚.91E,h3$^{km}_{\pm 1}$,Ml4.7/4*
*NEIC **21** 09:37:30.7±2.1,35˚.06N±0˚.05×.26˚.83E±0˚.02,h10$^{km}_{\pm 1}$,*
Error ellipse: s-maj=8.2km s-min=3.9km az=353.0
*MOS **21** 09:37:31.8±1.2,35˚.05N×.26˚.85E,h33^{km},mb4.6/16,Error*
ellipse: s-maj=7.1km s-min=4.3km az=88.4
*THE **21** 09:37:31.8,35˚.17N×.26˚.80E,h0$^{km}_{\pm 1}$,ML3.9/6,Error*
ellipse: s-maj=4.4km s-min=0.7km az=153.0
*MED_RC **21** 09:37:31.0±0.9,34˚.92N×.26˚.81E,h12^{km},MW4.1/8,*
Moment Tensor Solution.Mantle waves: s8,c8; Duration:
1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.14±.27;
$M_{\theta\theta}$-0.32±.23; $M_{\phi\phi}$0.46±.11; $M_{r\theta}$0.95±.28; $M_{\theta\phi}$0.30±.31;
$M_{\phi r}$1.46±.25; Best double couple: $M_0$1.78000×10^{15}
NP1:ϕ_s336.00000°,δ10.00000°,λ-148.00000°. NP2:
ϕ_s215.00000°,δ85.00000°,λ-82.00000°. Principal axes:

T 1.9600, Plg39.0000°, Azm297.0000°; N -0.3600,
Plg8.0000°, Azm34.0000°; P -1.6000, Plg49.0000°,
Azm134.0000°; nsta1 refers to body waves. nsta2 refers
to surface waves, cutoff=30s.
*ISK **21** 09:37:31.8,35˚.18N×.26˚.84E,h10^{km},ML4.1/30*
*HLW **21** 09:37:31.5,35˚.02N×.27˚.09E,h10$^{km}_{\pm 12}$,Md3.9,Ml4.0*
*IDC **21** 09:37:33.1±1.8,35˚.19N×.26˚.74E,h33$^{km}_{\pm 15}$,mb4.0/23,*
mb1 4.1/31,mb1mx4.0/55,mbtmp4.2/31,ML4.1/8,MS3.3/10,
Ms1 3.3/10,ms1mx2.9/55,Error ellipse: s-maj=15.0km
s-min=10.6km az=170.0
*ATH **21** 09:37:33.6,35˚.19N×.26˚.80E,h13$^{km}_{\pm 3}$,ML4.2/7,Error*
ellipse: s-maj=7.7km s-min=1.3km az=148.0

ISC 21 09:37:30.7±0.8,35˚.08N±0˚.03×.26˚.85E±0˚.02,h12$^{km}_{\pm 4}$,
n308,σ1§58/349,mb4.2/42,MS3.3/7,18C-15D,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.52**	**274**	P	**Pg**	**09 37 42.1**	**+1.2**
ZKR				S	**Sb**	**09 37 50.3**	**+0.9**
ZKR				AML	AML	09 37 53.9	
	comp=E,19172μm,0.4s						
ZKR				AML	AML	09 37 56.2	
	comp=N,17862μm,0.6s						
ZKR	**Zakros**	**0.52**	**274**	P	**Pg**	**09 37 41.4**	**+0.5**
ZKR				S	**Sb**	**09 37 50.2**	**+0.9**
	comp=N,11μm,0.7s						
ZKR	**Zakros**	**0.52**	**274**	PG	**Pg**	**09 37 41.9**	**+1.0**
ZKR				SG	**Sb**	**09 37 50.0**	**+0.7**
ZKR	**Zakros**	**0.52**	**274**	P	**Pg**	**09 37 41.4**	**+0.5**
ZKR				S	**Sb**	**09 37 50.2**	**+0.9**
ZKR				AML	AML	09 37 55.0	
	comp=N,17nm,0.6s						
ZKR				AML	AML	09 37 55.0	
	comp=N,17nm,0.6s						
ZKR				AML	AML	09 37 56.7	
	comp=N,24nm,0.7s						
ZKR				AML	AML	09 37 56.7	
	comp=N,24nm,0.7s						
KARP	**Karpathos**	**0.53**	**29**	P	**Pb**	**09 37 41.7**	**-0.3**
KARP				S	**Sb**	**09 37 49.8**	**+0.2**
KARP				AML	AML	09 37 51.0	
KARP				AML	AML	09 37 51.2	
KARP	**Karpathos**	**0.53**	**29**	P	**Pg**	**09 37 41.4**	**+0.3**
KARP				S	**Sb**	**09 37 49.2**	**-0.4**
	comp=N,104μm,0.4s						
KARP	**Karpathos**	**0.53**	**29**	PG	**Pg**	**09 37 41.4**	**+0.3**
KARP				SG	**Sb**	**09 37 48.2**	**-1.4**
KARP	**Karpathos**	**0.53**	**29**	Pg	**Pg**	**09 37 41.5**	**+0.3**
KARP				Sg	**Sb**	**09 37 49.7**	**+0.2**
KARP	**Karpathos**	**0.53**	**29**	↑P	**Pg**	**09 37 41.3**	**+0.2**
KARP				S	**Sb**	**09 37 50.2**	**+0.6**
KARP				AML	AML	09 37 50.3	
	comp=N,153nm,0.6s						
KARP				AML	AML	09 37 50.3	
	comp=N,153nm,0.6s						
KARP				AML	AML	09 37 50.3	
	comp=N,266nm,0.5s						
KARP				AML	AML	09 37 50.3	
	comp=N,266nm,0.5s						
STIA	**Sitia Lasithi**	**0.63**	**281**	P	**Pg**	**09 37 43.1**	**+0.1**
STIA				S	**Sb**	**09 37 53.3**	**+0.7**
FRMA	**Ierapetra Chan**	**0.92**	**266**	P	**Pg**	**09 37 46.9**	**-1.5**
FRMA				S	**Sg**	**09 38 00.2**	**-0.2**
	comp=N,3μm,0.6s						
NPS	**Neapolis**	**1.03**	**280**	P	**Pn**	**09 37 51.6**	**+0.6**
NPS				AML	AML	09 38 15.0	
	comp=E,16674μm,0.6s						
NPS				AML	AML	09 38 15.6	
	comp=N,16638μm,0.7s						
NPS	**Neapolis**	**1.03**	**280**	P	**Pg**	**09 37 50.6**	**0.0**
NPS				S	**Sb**	**09 38 05.0**	**+1.0**
	comp=N,12μm,0.8s						
HRKL	**Herakleio**	**1.45**	**280**	PN	**Pg**	**09 37 58.7**	**+0.1**
IACM	**Heraklion**	**1.48**	**279**	P	**Pg**	**09 37 59.7**	**+0.7**
KSTL	**Kastelli Herak**	**1.48**	**279**	P	**Pn**	**09 37 54.6**	**-2.5**
KSTL				S	**Sn**	**09 38 11.1**	**-5.2**
ARG	**Arkhangelos**	**1.54**	**42**	P	**Pg**	**09 38 00.8**	**+0.7**
ARG				AML	AML	09 38 27.7	
	comp=N,11146μm,0.9s						
ARG				AML	AML	09 38 28.3	
	comp=E,18282μm,0.4s						
ARG	**Arkhangelos**	**1.54**	**42**	P	**Pb**	**09 37 59.5**	**+0.3**
ARG				S	**Sg**	**09 38 19.0**	**-1.1**
	comp=E,8μm,0.6s						
ARG	**Arkhangelos**	**1.54**	**42**	PN	**Pb**	**09 37 59.4**	**+0.3**
ARG				SN	**Sg**	**09 38 19.1**	**-1.1**
ARG	**Arkhangelos**	**1.54**	**42**	S	**Sg**	**09 38 20.5**	**+0.4**
NIS1	**Nisyros Isl.**	**1.54**	**10**	P	**Pb**	**09 37 59.3**	**+0.1**
NIS1	**Nisyros Isl.**	**1.54**	**10**	P	**Pn**	**09 37 58.5**	**+0.5**
NIS1	**Nisyros Isl.**	**1.54**	**10**	PN	**Pn**	**09 37 58.6**	**+0.5**
NISR	**Nisiros**	**1.54**	**8**	P	**Pb**	**09 37 59.3**	**+0.1**
NISR				AML	AML	09 38 25.2	
	comp=E,23067μm,0.4s						
NISR				AML	AML	09 38 25.2	
	comp=N,20747μm,0.5s						
NISR	**Nisiros**	**1.54**	**8**	P	**Pb**	**09 37 58.6**	**-0.6**
IDI	**Anoyia**	**1.62**	**278**	Pg	**Pb**	**09 38 01.6**	**+1.0**
	comp=N,84nm,0.3s,baz=78,slow=14,SNR=99						
IDI				Lg	Lg	09 38 22.0	
	comp=N,111nm,0.3s,baz=73,slow=11,SNR=7.2						
IDI	**Anoyia**	**1.62**	**278**	P	**Pg**	**09 38 01.9**	**+0.1**
IDI	**Anoyia**	**1.62**	**278**	PN	**Pb**	**09 38 01.2**	**+0.6**
IDI				SN	**Sg**	**09 38 22.4**	**-0.4**
IDI	**Anoyia**	**1.62**	**278**		**Pb**	**09 38 00.8**	**+0.2**
IDI				Sn	**Sn**	**09 38 19.2**	**-0.8**
KOSK	**Kos Island**	**1.67**	**4**	PN	**Pn**	**09 38 00.4**	**+0.6**
SIVA	**Sivas**	**1.68**	**268**	P	**Pg**	**09 38 03.6**	**+0.7**
SIVA				AML	AML	09 38 35.9	
	comp=N,8782μm,0.7s						
SIVA				AML	AML	09 38 40.3	
	comp=E,12218μm,0.6s						
SANT	**Santorini**	**1.71**	**319**	P	**Pb**	**09 38 01.7**	**-0.5**
SANT				AML	AML	09 38 29.5	
	comp=E,16732μm,0.5s						
SANT				AML	AML	09 38 31.3	
	comp=N,5002μm,0.5s						
SANT	**Santorini**	**1.71**	**319**	P	**Pn**	**09 38 00.3**	**-0.1**
SANT	**Santorini**	**1.71**	**319**	PN	**Pn**	**09 38 01.3**	**+0.9**
SANT	**Santorini**	**1.71**	**319**	Pn	**Pn**	**09 38 00.8**	**+0.4**
SANT				Sn	**Sn**	**09 38 21.7**	**-0.6**
THT2	**Imerovigli**	**1.78**	**320**	PN	**Pn**	**09 38 02.2**	**+0.9**
DATC	**Datca-Mugla**	**1.80**	**21**	PN	**Pn**	**09 38 02.5**	**+1.0**
BODT	**Bodrum**	**2.01**	**11**	PN	**Pn**	**09 38 05.5**	**+1.0**
TURN	**Turunc**	**2.03**	**33**	*i* P	**Pb**	**09 38 06.5**	**-1.1**
TURN				*i* S	**Sg**	**09 38 34.2**	**-1.8**
TURN				IAML		09 38 43.0	
	comp=N,998nm,0.4s						
TURN				IAML		09 38 43.0	
	comp=E,931nm,0.7s						
TURN	**Turunc**	**2.03**	**33**	PN	**Pn**	**09 38 06.2**	**+1.4**
BDRM	**Kayabasi**	**2.04**	**13**	*i* P	**Pn**	**09 38 05.6**	**+0.8**
BDRM		

MULA IAML 09 38 57.0
comp=E,919nm,0.7s
AKAS Kas 2.52 62 *i* P **Pn** **09 38 11.5 -0.1**
AKAS IAML 09 39 11.0
comp=N,456nm,1.0s
AKAS Kas 2.52 62 PN **Pn** **09 38 11.9 +0.3**
AKAS Kas 2.52 62 Pn **Pn** **09 38 12.1 +0.5**
GCAM G?zelcaml? 2.63 7 *i* P **Pn** **09 38 14.2 +1.2**
GCAM *i* S **Sn** **09 38 45.9 +1.1**
GCAM IAML 09 38 53.0
comp=N,381nm,0.7s
GCAM IAML 09 39 05.0
comp=E,520nm,0.6s
GCAM G?zelcaml? 2.63 7 PN **Pn** **09 38 14.3 +1.3**
AYDN Tasoluk 2.70 18 *i* P **Pn** **09 38 16.1 +2.0**
AYDN *i* S **Sn** **09 38 47.6 +0.9**
CAEL Denizli, Camel 2.85 44 *i* P **Pn** **09 38 18.1 +1.9**
DGB zmir 2.96 0 *i* P **Pn** **09 38 18.0 +0.4**
DGB IAML 09 39 13.0
comp=E,352nm,0.7s
DGB IAML 09 39 14.0
comp=N,440nm,0.7s
AYDB Zeytinkoy-Aydi 2.98 16 PN **Pn** **09 38 19.4 +1.5**
ELL Elmali 2.99 55 P **Pn** **09 38 20.0 +2.0**
ELL Elmali 2.99 55 PN **Pn** **09 38 20.1 +2.0**
ELL Elmali 2.99 55 Pn **Pn** **09 38 20.0 +2.0**
ELL Elmali 2.99 55 P **Pn** **09 38 18.2 +0.2**
GOLH Golhisar 3.07 45 *i* P **Pn** **09 38 21.4 +2.2**
GOLH *i* S **Sb** **09 39 02.0 -0.8**
GOLH IAML 09 39 29.0
comp=N,483nm,1.0s
AKUM Antalya-Kumluc 3.10 65 *i* P **Pn** **09 38 19.8 +0.3**
ZEYE Izmir, Urla-Ze 3.16 355 *i* P **Pn** **09 38 20.2 -0.1**
ZEYE IAML 09 39 18.0
comp=E,409nm,0.7s
ZEYE IAML 09 39 18.0
comp=N,419nm,0.8s
URLA Izmir 3.28 356 *i* P **Pn** **09 38 20.7 -1.2**
URLA IAML 09 39 23.0
comp=N,318nm,0.9s
URLA IAML 09 39 24.0
comp=E,294nm,1.5s
URLA Izmir 3.28 356 PN **Pn** **09 38 21.5 -0.4**
KTHA Kythira Island 3.30 292 PN **Pn** **09 38 24.2 +2.0**
CHOS Chios island 3.36 349 PN **Pn** **09 38 23.8 +0.7**
KORT Korkueli 3.42 55 *i* P **Pn** **09 38 26.1 +2.1**
KORT *i* S **Sb** **09 39 09.3 -3.6**
KORT IAML 09 39 16.0
comp=N,270nm,0.7s
KORT IAML 09 39 16.0
comp=E,419nm,0.5s
KORT Korkueli 3.42 55 PN **Pn** **09 38 26.3 +2.3**
ANTB Antalya 3.58 58 PN **Pn** **09 38 28.8 +2.8**
MANT Manisa 3.67 21 *i* P **Pn** **09 38 29.0 +1.6**
MANT *i* S **Sn** **09 39 11.2 +0.5**
MANT Manisa 3.67 21 Pn **Pn** **09 38 28.6 +1.1**
BRDR BURDUR-Merkez 3.68 44 *i* P **Pn** **09 38 29.8 +2.4**
BRDR IAML 09 39 30.0
comp=E,188nm,0.6s
BRDR IAML 09 39 34.0
comp=N,164nm,0.7s
KULA Kula-Manisa 3.72 22 PN **Pn** **09 38 29.8 +1.7**
BUCA Burdur, Bucak- 3.74 52 *i* P **Pn** **09 38 30.6 +2.3**
BUCA *i* S **Sn** **09 39 16.6 +4.2**
BUCA IAML 09 39 31.0
comp=E,136nm,0.5s
BUCA IAML 09 39 33.0
comp=N,109nm,0.6s
BASM Basmaki-Afyon 3.83 41 PN **Pn** **09 38 31.7 +2.2**
SLUM Salum 3.83 201 P **Pn** **09 38 30.6 +1.1**
baz=205
SLUM AMP 09 39 00.0
baz=205
BCK Bucak 3.84 51 PN **Pn** **09 38 32.3 +2.6**
AKHS Akhisar 3.87 11 *i* P **Pn** **09 38 31.0 +1.0**
ZEDA zmir-Bergama 3.88 3 *i* P **Pn** **09 38 31.2 +1.1**
ZEDA IAML 09 39 44.0
comp=N,147nm,1.2s
ZEDA IAML 09 39 48.0
comp=E,128nm,1.5s
OSC1 CSNet OBS 1 3.99 112 P **Pn** **09 38 30.6 -1.0**
OSC1 S **Sn** **09 39 18.6 +0.2**
USAK Uak-Merkez 4.02 25 *i* P **Pn** **09 38 32.8 +0.7**
ISP Isparta 4.03 46 P **Pn** **09 38 32.7 +0.4**
ISP Isparta 4.03 46 PN **Pn** **09 38 34.7 +2.4**
ISP Isparta 4.03 46 Pn **Pn** **09 38 32.7 +0.4**
KZIL AFYON_Kizioren 4.13 39 *i* P **Pn** **09 38 34.6 +0.9**
KZIL IAML 09 39 45.0
comp=N,105nm,0.7s
KZIL IAML 09 39 50.0
comp=E,123nm,1.1s
AYVA Ayvalik 4.22 358 *i* P **Pn** **09 38 38.8 +4.0**
AYVA IAML 09 39 55.0
comp=E,121nm,0.7s
AYVA IAML 09 39 55.0
comp=N,124nm,0.9s
KEPZ Antalya-Kepez 4.26 63 *i* P **Pn** **09 38 37.1 +1.6**
KEPZ IAML 09 39 38.0
comp=N,90nm,0.5s
KEPZ IAML 09 39 44.0
comp=E,112nm,1.1s
STEP BALIKESIR_Sava 4.34 9 *i* P **Pn** **09 38 39.3 +2.7**
KOCA Canakkale, Ayv 4.45 353 *i* P **Pn** **09 38 38.2 +0.2**
KOCA *i* S **Sn** **09 39 30.6 +0.9**
AKMS Akamas 4.50 89 P **Pn** **09 38 37.7 -1.0**
AKMS AML AML 09 39 33.0
comp=E,2.0nm,0.8s
AKMS AML AML 09 39 34.3
comp=E,2.6nm,0.4s
ITM Ithomi 4.50 299 PN **Pn** **09 38 41.6 +2.9**
ITM Ithomi 4.50 299 Pn **Pn** **09 38 40.7 +2.0**
SHUT Suhut-Afyon 4.56 40 PN **Pn** **09 38 41.9 +2.2**
BAYC CANAKKALE_Bayr 4.66 357 *i* P **Pn** **09 38 41.4 +0.5**
BALY Balya 4.69 7 *i* P **Pn** **09 38 41.7 +0.3**
NATA Nata 4.71 92 P **Pn** **09 38 41.5 -0.1**
NATA S **Sn** **09 39 36.0 -0.2**
YVAC Isparta, Yalva 4.75 47 *i* P **Pn** **09 38 43.3 +1.0**
YVAC *i* S **Sn** **09 39 40.8 +3.5**
DOGA KONYA_Doganhis 4.91 51 *i* P **Pn** **09 38 45.8 +1.3**
OSC2 CSNet OBS 4 4.92 112 P **Pn** **09 38 43.7 -0.8**
LEF Lefka 4.95 88 ⇓P Pn 09 38 50.4 +5.5
LEF Lefka 4.95 88 PN **Pn** **09 38 48.9 +4.0**
SZAC Souni 4.97 92 ⇑P **Pn** **09 38 44.5 -0.6**
SZAC AML AML 09 39 43.2
comp=E,1.5nm,0.4s
SZAC AML AML 09 39 44.8
comp=E,1.6nm,0.5s
ANDZ Kutahya, Merke 5.04 28 *i* P **Pn** **09 38 46.9 +0.7**
ASGA Asgata 5.26 91 P **Pn** **09 38 48.4 -0.8**
KONT Konya--Tatoy 5.28 56 PN **Pn** **09 38 51.7 +2.3**
CSS Mathiatis 5.32 89 Pn **Pn** **09 38 51.4 +1.4**
CSS Mathiatis 5.32 89 ⇑P **Pn** **09 38 50.0 0.0**
AGG Agios Georgios 5.34 319 P **Pn** **09 38 52.6 +2.3**
AGG Agios Georgios 5.34 319 Pn **Pn** **09 38 52.6 +2.3**
LADK Ladik-KONYA 5.42 53 PN **Pn** **09 38 52.9 +1.5**
ALN Alexandroupoli 5.84 354 P **Pn** **09 38 58.6 +1.5**
ALN Alexandroupoli 5.84 354 Pn **Pn** **09 38 58.6 +1.5**
SWA2 5.94 192 P **Pn** **09 38 59.1 +0.6**
baz=194
SWA2 S **Sn** **09 40 03.4 -3.1**
baz=194
LIT Litokhoron 6.09 327 P **Pn** **09 39 03.0 +2.4**
LIT Litokhoron 6.09 327 Pn **Pn** **09 39 03.0 +2.4**
HNAT Natroun 6.30 149 P **Pn** **09 39 02.7 -0.8**
baz=150
SOH Sokhos 6.36 335 P **Pn** **09 39 07.9 +3.6**
MDUB Mudurnu 6.38 31 Pn **Pn** **09 39 06.0 +1.3**
SRS Serrai 6.55 338 P **Pn** **09 39 11.1 +4.2**
KOT Kottamia 6.64 139 P **Pn** **09 39 07.0 -1.2**
baz=140
BR231 Keskin MP Arra 6.69 43 Pn **Pn** **09 39 11.3 +2.4**
ANTO Ankara 6.72 43 P **Pn** **09 39 11.8 +2.6**
ANTO Ankara 6.72 43 Pn **Pn** **09 39 11.8 +2.6**
HHAG Hagoal 6.77 138 P **Pn** **09 39 07.8 -2.1**
baz=138
GRG Griva 6.83 330 P **Pn** **09 39 14.4 +3.6**
GLL Jalalah 6.86 142 P **Pn** **09 39 10.0 -1.1**
baz=143
BR131 Keskin Array S 7.12 47 P **Pn** **09 39 16.8 +2.0**
BR131 Keskin Array S 7.12 47 Pn **Pn** **09 39 16.8 +2.0**
BRTR Keskin Array B 7.12 47 Pn **Pn** **09 39 15.4 +0.7**
comp=E,0.6nm,0.3s,baz=21,slow=25,SNR=12
BRTR Sn **Sn** **09 40 39.4 +3.8**
comp=E,0.5nm,0.3s,baz=210,slow=26,SNR=4.1
BRTR LR LR 09 43 02.2
comp=E,225nm,18.9s,baz=240,slow=46
BRTR Keskin Array B 7.12 47 Pn **Pn** **09 39 14.1 -0.7**
FNA Florina 7.15 324 P **Pn** **09 39 19.2 +4.1**
FNA Florina 7.15 324 Pn **Pn** **09 39 18.3 +3.2**
MMAI Mount Meron Ar 7.39 104 Pn **Pn** **09 39 18.1 -0.4**
comp=E,5.4nm,0.3s,baz=304,slow=12,SNR=8.5
MMAI Sn **Sn** **09 40 41.4 -0.9**
comp=E,11nm,0.3s,baz=298,slow=20,SNR=6.5
VTS Vitosha 8.04 341 ⇑P **Pn** **09 39 29.5 +2.1**
VTS Vitosha 8.04 341 P **Pn** **09 39 29.8 +2.4**
VTS Vitosha 8.04 341 Pn **Pn** **09 39 29.8 +2.4**
ILGA Ilgaz 8.05 40 Pn **Pn** **09 39 27.5 -0.1**
SCTE Santa Cesarea 8.31 309 Pn **Pn** **09 39 32.3 +1.3**
GRB Gharib 8.46 142 P **Pn** **09 39 32.2 -1.0**
baz=142
EIL Elat 8.72 126 Pn **Pn** **09 39 36.6 -0.1**
comp=E,2.3nm,0.3s,baz=339,slow=4.0,SNR=13
EIL Sn **Sn** 09 41 08.6 -6.3
comp=E,4.5nm,0.3s,baz=348,slow=7.2,SNR=6.5
TIP Timpagrande 9.04 300 ⇓P **Pn** **09 39 40.7 -0.4**
TIP Timpagrande 9.04 300 Pn **Pn** **09 39 41.1 +0.1**
CEL Celeste 9.36 293 Pn **Pn** **09 39 46.0 +0.6**
BOVS Bovan 9.42 337 ⇑P **Pn** **09 39 48.1 +1.8**
PDG Podgorica 9.43 323 ⇓P **Pn** **09 39 46.6 +0.3**
PDG Podgorica 9.43 323 Pn **Pn** **09 39 47.9 +1.5**
TIRR Tirgusor 9.44 7 P **Pn** **09 39 48.9 +2.5**
TIRR Tirgusor 9.44 7 **Pn** **09 39 48.9 +2.5**
TPGR Topolog 9.84 7 ⇓P **Pn** **09 39 55.4 +3.4**
CFR Carcaliu 10.13 5 ⇑P **Pn** **09 39 58.5 +2.6**
RAFF Raffo Rosso 10.32 286 Pn **Pn** **09 39 58.2 -0.4**
HERR Herculane 10.36 342 ⇓P **Pn** **09 39 59.9 +0.8**
ARR Arges 10.41 351 ⇓P **Pn** **09 40 01.0 +1.2**
MLR Muntele Rosu 10.42 356 Pn **Pn** **09 40 01.9 +1.9**
comp=E,0.3nm,0.3s,baz=150,slow=13,SNR=7.0
MLR LR LR 09 44 45.4
comp=E,264nm,21.9s,baz=172,slow=42
MLR Muntele Rosu 10.42 356 ⇑P **Pn** **09 40 01.9 +1.9**
MLR Muntele Rosu 10.42 356 P **Pn** **09 40 02.8 +2.8**
MLR Muntele Rosu 10.42 356 Pn **Pn** **09 40 02.8 +2.8**
VOIR 10.43 353 ⇓P **Pn** **09 40 02.1 +2.0**
DIVS Divibare 10.44 332 Pn **Pn** **09 40 00.9 +0.6**
GZR Gura Zlata 10.76 344 ⇑P **Pn** **09 40 06.0 +1.4**
PLOR Plostina 10.76 359 ⇑P **Pn** **09 40 06.7 +2.1**
VRI Vrincioaia 10.77 360 ⇑P **Pn** **09 40 07.2 +2.5**
BIZ Bicaz 11.86 358 ⇓P **Pn** **09 40 22.4 +2.8**
INTR Introdacqua 12.26 308 Pn **Pn** **09 40 26.2 +1.0**
BURAR Bucovina Array 12.58 355 ⇓P **Pn** **09 40 32.6 +3.1**
BUR08 Bucovina Ar. S 12.61 355 Pn **Pn** **09 40 33.1 +3.1**
ANN Anapa 12.64 37 *e*P **P** **09 40 37.7 -4.0**
ANN pmax pmax
comp=E,61nm,0.9s
MORH Mrgy, Hungar 12.74 333 ⇑P **Pn** **09 40 33.1 +1.5**
AQU L'Aquila 12.76 309 P **Pn** **09 40 32.4 +0.4**
AQU L'Aquila 12.76 309 Pn **Pn** **09 40 32.4 +0.4**
NRCA Norcia 13.19 310 **Pn** **09 40 40.3 +2.5**
GEVA Gevas 13.40 71 Pn **Pn** **09 40 41.3 +0.5**
KEST Kesra 14.30 278 Pn **Pn** **09 40 53.5 +0.5**
comp=E,0.2nm,0.3s,baz=111,slow=17,SNR=2.4
VSL Villasalto 14.59 293 Pn **Pn** **09 40 58.9 +1.9**
SOKA Soboth 14.61 326 *e*Pn **Pn** **09 40 59.0 +1.7**
comp=E,6.3nm,1.1s
CASP Castiglione de 14.62 307 Pn **Pn** **09 40 57.3 0.0**
VYHS Vyhne 14.66 339 *e*P **P** **09 41 08.0 +3.8**
VYHS Vyhne 14.66 339 *e*P **P** **09 41 08.0 +3.8**
OSSC Osservatorio P 14.71 310 Pn **Pn** **09 40 59.3 +0.7**
MODS Modra-Piesok 15.06 335 *e*P Pn 09 40 57.0 -6.3
MODS Modra-Piesok 15.06 335 *e*PN Pn 09 40 57.0 -6.3
MODS Modra-Piesok 15.06 335 *e*P **P** **09 41 07.7 -0.9**
KIV Kislovodsk 15.07 49 *e*P **Pn** **09 41 02.0 -1.6**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,71nm,13.0s
KBZ Khabaz 15.09 50 Pn **P** **09 41 08.1 -0.8**
comp=Z,0.2nm,0.3s,baz=205,slow=6.6,SNR=4.6
KBZ Khabaz 15.09 50 *i* P **Pn** **09 41 04.4 +0.7**
CONA Conrad Observa 15.23 331 *i* Pn **Pn** **09 41 07.8 +2.2**
comp=Z,7.5nm,1.1s
ZEI Tsey 15.32 55 *e*P **P** **09 41 12.9 +1.2**
ZEI pmax pmax
comp=Z,6.0nm,0.6s
ZOU Zoufplan 15.52 322 Pn **Pn** **09 41 10.1 +0.6**
ZOU IAmb IAmb 09 41 21.1
comp=Z,8.6nm,1.1s
KBA Koelnbreinsper 15.70 324 *e*Pn **Pn** **09 41 13.2 +1.4**
comp=Z,6.2nm,0.6s
AKASG Malin Array Be 15.71 6 Pn **Pn** **09 41 10.9 -0.8**
comp=Z,1.4nm,0.3s,baz=196,slow=11,SNR=14
AKBB Malin Array Si 15.71 6*c*e**P** **Pn** **09 41 13.9 +2.2**
AKBB Malin Array Si 15.71 6 Pn **Pn** **09 41 12.2 +0.5**
AKBB IAmb IAmb 09 41 19.0
comp=Z,8.0nm,0.7s
MOA Molln 15.84 327 *e*Pn **Pn** **09 41 13.3 -0.1**
comp=Z,9.6nm,1.0s
OJC Ojcow 15.98 343 P **Pn** **09 41 15.5 +0.3**
OJC pmax pmax
comp=Z,7.0nm,0.8s
OJC Ojcow 15.98 343 Pn **Pn** **09 41 15.5 +0.3**
VRAC Vranov 16.10 335 LR LR 09 48 00.3
comp=Z,92nm,18.8s,baz=119,slow=39
MSSA Maissana 16.19 310 Pn **Pn** **09 41 18.3 +0.2**
MORC Moravsky Berou 16.19 338 P **Pn** **09 41 19.0 +1.0**
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 16.19 338 Pn **Pn** **09 41 19.0 +1.0**
WTTA Wattenberg 16.68 321 *e*Pn **Pn** **09 41 25.3 +0.9**
comp=Z,3.1nm,0.4s
GEC2 GERESS Array S 16.84 329 Pn **P** **09 41 28.2 -0.2**
GEC2 IAmb IAmb 09 41 30.8
comp=Z,7.3nm,0.7s
GERES GERESS Array B 16.84 329 Pn **Pn** **09 41 26.4 +0.1**
comp=Z,1.1nm,0.3s,baz=141,slow=12,SNR=33
GERES LR LR 09 49 18.2
comp=Z,84nm,19.7s,baz=121,slow=42
SQTA Sankt Quirin 16.87 321 *e*Pn **P** **09 41 28.2 -0.6**
comp=Z,3.6nm,0.5s
FETA Feichten 16.99 319 Pn **Pn** **09 41 29.2 +0.9**
comp=Z,7.1nm,1.1s
KHC Kasperske Hory 17.11 329 *i* P **P** **09 41 30.8 -0.5**
KHC pmax pmax
comp=Z,19nm,0.6s
KHC Kasperske Hory 17.11 329 Pn **P** **09 41 31.4 0.0**
KHC IAmb IAmb 09 41 33.9
comp=Z,9.4nm,0.7s
DAVOX Davos/Dischmat 17.31 318 LR LR 09 50 49.3
comp=Z,43nm,21.1s,baz=258,slow=46
TUE Stuetta 17.43 316 Pn **Pn** **09 41 34.4 +0.6**
DAVA Damuels 17.61 319 *e*Pn **Pn** **09 41 36.1 +0.1**
comp=Z,1.5nm,0.3s
VORD Divnogorie 18.25 26 *e*P **P** **09 41 46.4 +2.5**
VORD pmax pmax
comp=Z,7.0nm,0.9s
BNI Bardonecchia 18.33 309 P **P** **09 41 45.5 +0.6**
BNI pmax pmax
comp=Z,12nm,1.2s
BNI Bardonecchia 18.33 309 P **P** **09 41 45.5 +0.6**
BRG Berggiesshubel 18.35 333 *e*P **Pn** **09 41 44.3 -0.6**
BRG Amp 09 41 45.2
comp=Z,4.3nm,0.7s
BRG Amp 09 41 46.6
comp=Z,7.8nm,0.6s
VSR Storozhevoye 18.42 25 *e*P **P** **09 41 46.3 +0.6**
VSR pmax pmax
comp=Z,10.0nm,1.7s
SENIN Lac Senin/Sane 18.56 313 P **P** **09 41 46.3 -1.3**
SENIN IAmb IAmb 09 41 51.7
comp=Z,7.6nm,0.7s
CLL Collm 19.05 333 *e*P **P** **09 41 52.0 -0.6**
comp=Z,4.0nm,0.5s
CLL *e*PP **PnPn** **09 42 07.0 +1.1**
CLL Collm 19.05 333 *e*P **P** **09 41 52.0 -0.6**
CLL pmax pmax
comp=Z,4.0nm,0.5s
BFO Black Forest 19.08 320 P **P** **09 41 53.6 +0.6**
BFO pmax pmax
comp=Z,11nm,1.3s
BFO Black Forest 19.08 320 P **P** **09 41 53.6 +0.6**
MNK Minsk 19.43 2 *i* P **P** **09 41 56.8 0.0**
comp=E,2.0nm,0.8s
MNK *i* P **P** **09 41 56.8 0.0**
comp=N,17nm,1.1s
MNK *i* P **P** **09 41 56.8 0.0**
comp=Z,4.0nm,0.8s
MNK *i* PP **PnPn** **09 42 11.2 0.0**
MNK *i* PPP PPP 09 42 19.0
MNK *i* S **S** **09 45 37.4 +1.2**
MNK *i* SS **SnSn** **09 45 53.0 +3.1**
MNK *i* SSS SSS 09 46 06.0
MNK *i* P*c*P **PcP** **09 46 17.2 -0.5**
MNK *i* LQ LQ 09 47 48.4
MNK *i* LR LR 09 49 17.3
MNK *i* LRM MLR 09 50 46.5
comp=E,8.0nm,12.9s
MNK *i* LRM MLR 09 50 57.2
comp=Z,61nm,12.8s
MNK *i* LRM MLR 09 51 01.1
comp=N,63nm,12.4s
MNK *i* ScS **ScS** **09 53 35.3 +0.2**
MNK *i* ScS **ScS** **09 53 35.3 +0.2**
MNK *i* ScS **ScS** **09 53 35.3 +0.2**
LPSR Galich'ya Gora 19.51 22 *e*P **Pn** **09 41 59.3 +0.4**
LPSR pmax pmax
comp=Z,5.0nm,0.9s
RAYN Ar Rayn 19.89 120 P **P** **09 42 03.7 +1.5**
RAYN pmax pmax
comp=Z,14nm,1.4s
RAYN Ar Rayn 19.89 120 **P** **09 42 03.7 +1.5**
RAYN IAmb IAmb 09 42 13.0
comp=Z,14nm,1.4s
OBN Obninsk 21.13 16 ⇑*e*P **P** **09 42 16.2 +1.0**
OBN *e* 09 42 34.9
OBN pmax pmax
comp=Z,5.0nm,0.5s
OBN MLR MLR
comp=Z,117nm,14.0s
MEM Membach 21.67 322 *d*P **P** **09 42 20.4 -0.6**
MEM *d*PnPn **PnPn** **09 42 41.7 0.0**
DOU Dourbes 22.10 320 *d*P **P** **09 42 26.3 +0.6**
DOU *d*pP **pP** **09 42 29.1 +0.7**
DOU *d*sP **pwP** **09 42 30.7 -0.8**
BMRD Maredsous 22.12 320 *d*pP pP 09 42 29.8 +1.2
TAM Tamanrasset 22.27 242 P **P** **09 42 29.2 +1.3**
TAM pmax pmax
comp=Z,3.0nm,0.7s
TAM Tamanrasset 22.27 242 P **P** **09 42 29.1 +1.3**
UCC Uccle 22.62 321 P **P** **09 42 30.6 -0.6**
UCC pmax pmax
comp=Z,19nm,0.6s
UCC Uccle 22.62 321 P **P** **09 42 30.6 -0.6**
BELG Belogornoye 22.77 34 P **P** **09 42 33.3 +0.5**
comp=Z,5.0nm,0.3s,baz=39,slow=21,SNR=8.3
ESBB Sonseca Array 24.84 290 P **P** **09 42 52.3 -0.7**
ESBB IAmb IAmb 09 42 55.6
comp=Z,4.8nm,0.7s
ESDC Sonseca Array 24.84 290 P **P** **09 42 52.1 -0.9**
comp=Z,3.9nm,0.7s,baz=82,slow=9.3,SNR=30
PAB San Pablo 25.14 289 P **P** **09 42 55.8 +0.1**
PAB pmax pmax
comp=Z,9.0nm,1.3s
PAB San Pablo 25.14 289 P **P** **09 42 55.8 +0.1**
PAB IAmb IAmb 09 43 13.7
comp=Z,9.0nm,1.3s
GEYT Alibeck 25.23 74 P **P** **09 42 57.1 +0.6**
comp=Z,3.3nm,0.5s,baz=284,slow=8.4,SNR=5.9
GEYT Alibeck 25.23 74 P **P** **09 42 57.3 +0.8**
GEYT IAmb IAmb 09 42 57.6
comp=Z,2.9nm,0.6s
GYA0B ALIBECK ARRAY 25.23 74 P **P** **09 42 57.2 +0.7**
MDT Midelt 26.14 274 P **P** **09 43 03.7 -1.2**
comp=Z,3.5nm,0.9s,baz=0.5,slow=7.4,SNR=5.0
MDT LR LR 09 55 56.6
comp=Z,84nm,18.1s,baz=130,slow=42
FINES FINESS Array B 26.39 359 P **P** **09 43 04.1 -2.6**
comp=Z,1.8nm,0.7s,baz=152,slow=14,SNR=4.3
HFS Hagfors 26.48 345 P **P** **09 43 05.2 -2.4**
comp=Z,1.7nm,0.7s,baz=158,slow=16,SNR=2.6
HFS LR LR 09 55 18.7
comp=Z,145nm,18.0s,baz=172,slow=40
PBRG Braganca 27.03 294 *e*P **P** **09 43 11.7 -1.1**
KLMR Klimovskoe 27.05 14 P **P** **09 43 17.4 +4.8**
KLMR pmax pmax
comp=Z,7.0nm,1.0s
KLMR Klimovskoe 27.05 14 P **P** **09 43 17.4 +4.8**
KLMR AMP 09 43 28.3
comp=Z,7.0nm,1.0s
MVO Moncorvo 27.22 293 *e*P **P** **09 43 13.8 -0.7**
PBAR Barrancos 27.29 287 *e*P **P** **09 43 13.5 -1.5**
AKTO Aktyubinsk 27.30 46 P **P** **09 43 14.3 -0.7**
comp=Z,1.8nm,0.6s,baz=248,slow=8.7,SNR=5.7
PMRV Marv??o 27.50 289 *e*P **P** **09 43 16.3 -0.7**
MTE Manteigas 27.60 291 *e*P **P** **09 43 15.2 -2.7**
comp=Z,35nm,1.9s
NOA NORSAR Array B 27.84 344 P **P** **09 43 17.3 -2.5**
comp=Z,0.2nm,0.5s,baz=144,slow=6.1,SNR=4.4
NOA LR LR 09 56 12.3
comp=Z,81nm,18.2s,baz=160,slow=40
KIRV Kirov 27.86 25 LR LR 09 56 08.2
comp=Z,50nm,18.4s,baz=260,slow=40
PVAQ Vaqueiros 27.89 285 *e*P **P** **09 43 19.2 -1.2**
ABKAR Akbulak array 28.06 50 P **P** **09 43 21.8 -0.1**
ABKAR IAmb IAmb 09 43 45.1
comp=Z,2.1nm,0.8s
PMTG Montargil 28.16 289 *e*P **P** **09 43 23.8 +1.0**
EKA Eskdalemuir Ar 28.91 324 P **P** **09 43 27.4 -2.0**
comp=Z,0.7nm,0.6s,baz=130,slow=12,SNR=3.0
TOA0 Torodi Ar. Sit 31.52 232 P **P** **09 43 54.0 +1.2**
TORD Torodi Ar. Bea 31.52 232 P **P** **09 43 52.4 -0.4**
comp=Z,2.2nm,0.6s,baz=33,slow=8.7,SNR=15
KK31 Karatay Array 34.50 63 P **P** **09 44 19.0 +0.4**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KK31 Karatay Array 34.50 63 P **P** **09 44 19.0 +0.4**
KK31 IAmb IAmb 09 44 21.2
comp=Z,2.1nm,0.7s
KKAR Karatay Array 34.50 63 P **P** **09 44 18.8 +0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 34.50 63 P **P** **09 44 18.8 +0.2**
KKAR IAmb IAmb 09 44 21.2
comp=Z,2.1nm,0.7s
ARCES ARCESS Array B 34.52 359 P **P** **09 44 16.5 -1.9**
comp=Z,2.7nm,0.8s,baz=175,slow=7.3,SNR=8.8
GAR Garm 34.67 70 P **P** **09 44 20.8 +0.5**
BRVK Borovoye 35.35 46 *i* P **P** **09 44 24.4 -1.4**
BRVK pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 35.35 46 P **P** **09 44 26.4 +0.6**
BRVK IAmb IAmb 09 44 35.8
comp=Z,3.4nm,1.1s
AAK Ala-Archa 37.45 64*c*e**P** **P** **09 44 44.9 +0.8**
AAK pmax pmax
comp=Z,11nm,0.8s
AAK Ala-Archa 37.45 64 P **P** **09 44 45.0 +0.9**
AAK IAmb IAmb 09 44 46.1
comp=Z,4.2nm,0.7s
NIL Nilore 38.06 78 P **P** **09 44 50.1 +0.9**
NIL pmax pmax
comp=Z,6.0nm,0.8s
NIL Nilore 38.06 78 P **P** **09 44 50.1 +0.9**
MAKZ Makanchi 42.44 57 P **P** **09 45 26.0 +0.6**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 42.44 57 P **P** **09 45 26.0 +0.6**
MAKZ IAmb IAmb 09 45 26.5
comp=Z,4.2nm,0.8s
MK31 Makanchi Array 42.66 57 P **P** **09 45 27.5 +0.4**
MK31 pmax pmax
comp=Z,6.0nm,0.7s
MK31 Makanchi Array 42.66 57 P **P** **09 45 27.5 +0.4**
MKAR Makanchi Array 42.66 57 P **P** **09 45 27.4 +0.3**
comp=Z,8.0nm,0.6s,baz=280,slow=6.6,SNR=111
MKAR Makanchi Array 42.66 57*c*e**P** **P** **09 45 27.3 +0.2**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 42.66 57 P **P** **09 45 27.3 +0.2**
SPITS Spitsbergen Ar 43.43 357 P **P** **09 45 31.1 -1.8**
comp=Z,1.1nm,0.5s,baz=138,slow=15,SNR=6.0
ZAA0 Zalesovo Array 44.06 46 P **P** **09 45 37.8 -0.5**
ZALV Zalesovo Beam 44.06 46 P **P** **09 45 37.9 -0.4**
comp=Z,8.4nm,0.5s,baz=270,slow=8.4,SNR=41
DGZ Jazzator, Alta 45.84 52 *i* P **P** **09 45 53.1 +0.4**
DGZ pmax pmax
comp=Z,6.0nm,0.4s
WMQ Urumqi 46.84 60 *e*P **P** **09 46 02.4 +1.8**
NRIK Noril'sk 47.36 25 P **P** **09 46 02.4 -1.8**
comp=Z,1.7nm,0.4s,baz=253,slow=4.9,SNR=4.2
NRIK Noril'sk 47.36 25*c*e**P** **P** **09 46 03.7 -0.4**

NRIK					pmax	pmax			
	comp=Z,2.0nm,0.4s								
ZAK	**Zakamensk**	**55.75**	**49**	*eP*	**P**	**09 47 07.3**	**0.0**		
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.1s								
SONM	**Songino Array**	**58.46**	**51**	P	**P**	**09 47 26.1**	**-0.4**		
	comp=Z,2.8nm,0.6s,baz=284,slow=8.4,SNR=12								
SONM	**Songino Array**	**58.46**	**51**	P	**P**	**09 47 27.4**	**+0.8**		
SONM	**Songino Array**	**58.46**	**51**	P	**P**	**09 47 27.4**	**+0.8**		
ULN	**Ulaanbaatar**	**58.87**	**51**	*ceP*	**P**	**09 47 29.7**	**+0.2**		
ULN					pmax	pmax			
	comp=Z,3.0nm,0.6s								
BOSA	**Boshof**	**63.37**	**182**	P	**P**	**09 48 00.4**	**+0.4**		
	comp=Z,0.9nm,0.3s,baz=8.8,slow=11,SNR=1.8								
HHC	**Hu-ho-hao-te**	**64.52**	**57**	*eP*	**P**	**09 48 06.0**	**-1.6**		
HHC					pmax	pmax			
	comp=Z,18nm,0.6s								
HHC					pmax	pmax			
	comp=Z,75nm,4.5s								
HHC					LR	LR			
	comp=N,170nm,16.2s								
HHC					LR	LR			
	comp=E,170nm,15.3s								
HHC					LR	LR			
	comp=Z,110nm,16.2s								
CMAR	**Chiang Mai Arr**	**65.20**	**84**	P	**P**	**09 48 12.0**	**-0.2**		
	comp=Z,1.3nm,0.5s,baz=295,slow=9.1,SNR=5.8								
INK	**Inuvik**	**75.88**	**353**	P	**P**	**09 49 13.9**	**-2.6**		
	comp=Z,0.5nm,0.6s,baz=13,slow=6.3,SNR=4.9								
INK	**Inuvik**	**75.88**	**353**	IAmb	IAmb	09 49 29.9			
	comp=Z,2.1nm,1.0s								
USRK	**Ussuriysk Ar.**	**75.91**	**46**	P	**P**	**09 49 16.1**	**-1.1**		
	comp=Z,3.9nm,0.6s,baz=308,slow=4.1,SNR=9.7								
KSRS	**Korea Array**	**77.22**	**53**	P	**P**	**09 49 24.6**	**-0.2**		
	comp=Z,2.3nm,0.7s,baz=308,slow=4.9,SNR=7.5								
KSRS					LR	LR	10 25 58.7		
	comp=Z,14nm,18.9s,baz=15,slow=38								
YKA	**Yellowknife Ar**	**77.94**	**343**	P	**P**	**09 49 26.4**	**-1.8**		
	comp=Z,0.7nm,0.8s,baz=33,slow=5.3,SNR=10								
ILAR	**Eielson Array**	**80.35**	**357**	P	**P**	**09 49 39.8**	**-1.7**		
	comp=Z,0.5nm,0.6s,baz=338,slow=3.8,SNR=7.1								

*IDC **21** 09:38:06.4±11.0, 7°.16S×155°.51E, h150km±78km, mb3.4/4, mb1 3.6/5, mb1mx3.3/34, mbtmp3.9/5, MS2.6/2, Ms1 2.6/2, ms1mx2.4/28, Error ellipse: s-maj=106.8km s-min=41.9km az=103.0*

*NEIC **21** 09:38:46.5±0.4, 8°.4S±0°.2×155°.3E±0°.2, h593km±16km, mb4.5/5, Error ellipse: s-maj=37.5km s-min=15.7km az=125.0*

ISC 21 09:38:06.3±2.0, 7°.1S±0°.4×155°.5E±0°.3, h150km, n15, σ0°.74/12, mb4.0/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.39**	**310**			09 40 20.8	
HNR	**Honiara**	**4.98**	**119**	LR	LR	09 41 02.6	
	comp=Z,49nm,21.7s,baz=2.5,slow=36						
HNR	**Honiara**	**4.98**	**119**			09 40 16.9	
PMG	**Port Moresby**	**8.59**	**254**	P	**Pn**	**09 40 07.5**	**-0.2**
	1.0nm,0.3s,baz=16,slow=6.4,SNR=4.6						
PMG				LR	LR	09 43 22.4	
	comp=Z,62nm,19.1s,baz=12,slow=37						
WR0	**Warramunga Arr**	**24.05**	**236**	P	**P**	**09 43 08.8**	**+1.0**
WB0	**Warramunga Arr**	**24.08**	**236**	P	**P**	**09 43 08.9**	**+0.8**
WB0				IAmb	IAmb	09 43 18.0	
	comp=Z,19nm,1.4s						
WB2	**Warramunga Arr**	**24.20**	**236**	P	**P**	**09 43 10.2**	**+1.0**
WB2				IAmb	IAmb	09 43 38.8	
	comp=Z,18nm,1.5s						
WRA	**Warramunga Arr**	**24.21**	**236**	P	**P**	**09 43 08.9**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=62,slow=9.2,SNR=3.4						
ASAR	**Alice Springs**	**26.52**	**229**	P	**P**	**09 43 29.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=58,slow=10,SNR=10						
ASAR				PcP	**PcP**	**09 46 51.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=54,slow=2.2,SNR=4.2						
FITZ	**Fitzroy Crossi**	**31.10**	**247**	P	**P**	**09 44 10.5**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=70,slow=8.0,SNR=5.8						
FITZ	**Fitzroy Crossi**	**31.10**	**247**	P	**P**	**09 44 11.7**	**+1.0**
FITZ				IAmb	IAmb	09 44 34.0	
	comp=Z,14nm,1.2s						
PEA0B	**Petropavlovsk-**	**59.96**	**2**	P	P	09 48 05.2	+8.5
MKAR	**Makanchi Array**	**83.79**	**319**	P	**P**	**09 50 19.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=113,slow=4.3,SNR=3.6						
MKAR	**Makanchi Array**	**83.79**	**319**	P	**P**	**09 50 18.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**153.54**	**285**	PKPbc	**PKPbc**	**09 57 47.7**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=85,slow=2.0,SNR=1.0						

*IDC **21** 09:51:09.0±1.0, 24°.59N×122°.45E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.5/51, mbtmp3.7/9, ML3.1/2, MS3.1/11, Ms1 3.1/11, ms1mx2.9/47, Error ellipse: s-maj=34.6km s-min=18.8km az=66.0*

*TAP **21** 09:51:11.2, 24°.62N×122°.71E, h20km, ML4.3, C*

*JMA **21** 09:51:11.5±0.1, 24°.58N×122°.69E, h21km±1km, M4.2*

JMA Felt I J1.

ISC 21 09:51:11.5±0.9, 24°.57N±0°.02×122°.69E±0°.01, h19km±2km, n156, σ0°.96/260, mb3.6/7, MS3.2/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.26**	**117**	P	**Pb**	**09 51 17.4**	**0.0**
JYNG				S	**Sg**	**09 51 21.6**	**+0.1**
YOJ	**Yonaguni jima**	**0.31**	**110**	P	**Pg**	**09 51 18.3**	**0.0**
YOJ				*eS*	**Sg**	**09 51 23.0**	**0.0**
YOJ	**Yonaguni jima**	**0.31**	**110**	P	**Pg**	**09 51 18.4**	**0.0**
	baz=114						
YOJ				S	**Sg**	**09 51 22.9**	**0.0**
	baz=114						
TWC	**Suao**	**0.77**	**273**	*i* P	**Pb**	**09 51 25.4**	**-1.0**
	baz=270						
TWC				*eS*	**Sb**	**09 51 34.5**	**-1.9**
	baz=270						
TWB1	**Santiao Chiao**	**0.78**	**304**	*i* P	**Pb**	**09 51 26.0**	**-0.5**
	baz=301						
TWB1				S	**Sb**	**09 51 36.0**	**-0.6**
	baz=301						
NTC	**Toucheng**	**0.84**	**290**	*i* P	**Pb**	**09 51 27.4**	**-0.1**
	baz=287						
NTC				*i* S	**Sg**	**09 51 38.7**	**-0.3**
	baz=287						
EWUT	**Wuta**	**0.84**	**262**	*i* P	**Pb**	**09 51 27.0**	**-0.5**
	baz=259						
EWUT				*eS*	**Sb**	**09 51 37.4**	**-1.1**
	baz=259						
ILA	**Ilan**	**0.88**	**283**	*i* P	**Pb**	**09 51 28.4**	**+0.1**
	baz=266						
ILA				*i* S	**Sg**	**09 51 40.7**	**+0.2**
	baz=266						
TIPB	**Shuangxi**	**0.89**	**297**	*i* P	**Pb**	**09 51 28.0**	**-0.4**
	baz=294						
TIPB				*eS*	**Sb**	**09 51 40.2**	**+0.4**
	baz=294						
NDS	**Dongshan**	**0.89**	**274**	*i* P	**Pb**	**09 51 28.3**	**-0.2**
	baz=271						
NDS				*i* S	**Sg**	**09 51 40.5**	**-0.3**
	baz=271						
TWE	**Neicheng**	**0.95**	**279**	*i* P	**Pb**	**09 51 28.9**	**-0.5**
	baz=263						
TWE				*i* S	**Sb**	**09 51 41.3**	**-0.2**
	baz=263						
NWF	**Wu-fen Shan**	**0.97**	**301**	*i* P	**Pb**	**09 51 29.4**	**-0.4**
	baz=279						
NWF				*i* S	**Sb**	**09 51 41.7**	**-0.5**
	baz=279						
WFSB	**Wu-fen Shan**	**0.97**	**301**	P	**Pb**	**09 51 29.3**	**-0.4**
	baz=280						
WFSB				S	**Sb**	**09 51 41.7**	**-0.4**
	baz=280						
IRIF	**Iriomote-Funau**	**0.97**	**104**	P	**Pb**	**09 51 29.5**	**-0.3**
IRIF				S	**Sg**	**09 51 42.8**	**-0.5**
TNOU	**National Taiwa**	**1.02**	**305**	P	**Pb**	**09 51 29.9**	**-0.6**
	baz=302						
TNOU				S	**Sb**	**09 51 42.6**	**-0.9**
	baz=302						
ENTT	**Nioudou**	**1.03**	**274**	*i* P	**Pb**	**09 51 30.4**	**-0.3**
	baz=272						
ENTT				*eS*	**Sg**	**09 51 45.4**	**+0.3**
	baz=272						
NDT	**Datong Townshi**	**1.08**	**272**	*i* P	**Pb**	**09 51 31.3**	**-0.3**
	baz=270						
NDT				*eS*	**Sn**	**09 51 46.2**	**+0.2**
	baz=270						
NACB	**Ninganchiao**	**1.08**	**249**	P	**Pb**	**09 51 31.1**	**-0.4**
	baz=247						
NACB				S	**Sg**	**09 51 46.6**	**-0.1**
	baz=247						
TWA	**Mucha**	**1.09**	**292**	*i* P	**Pb**	**09 51 31.5**	**-0.3**
	baz=290						
TWA				*i* S	**Sb**	**09 51 45.3**	**-0.4**
	baz=290						
NWLT	**Wulai**	**1.10**	**281**	*i* P	**Pn**	**09 51 31.6**	**-0.4**
	baz=279						
NWLT				*i* S	**Sb**	**09 51 45.7**	**-0.4**
	baz=279						
TWD	**Chiawan**	**1.11**	**244**	*i* P	**Pb**	**09 51 32.5**	**+0.3**
	baz=243						
TWD				*eS*	**Sg**	**09 51 49.0**	**+1.1**
	baz=243						
NWRT	**Kuosheng**	**1.13**	**304**	P	**Pn**	**09 51 32.2**	**-0.2**
	baz=285						
NWRT				S	**Sb**	**09 51 46.0**	**-0.9**
	baz=285						
NHDH	**Xindian Distri**	**1.13**	**290**	*i* P	**Pn**	**09 51 32.2**	**-0.1**
	baz=288						
NHDH				S	**Sb**	**09 51 46.5**	**-0.4**
	baz=288						
HATJ	**Hateruma jima**	**1.14**	**117**	P	**Pn**	**09 51 32.2**	**-0.2**
HATJ				S	**Sg**	**09 51 48.1**	**-0.4**
HWA	**Hwalien**	**1.16**	**240**	*i* P	**Pb**	**09 51 33.3**	**+0.4**
	baz=238						
HWA				*eS*	**Sg**	**09 51 49.9**	**+0.7**
	baz=238						
ETLH	**Xiulin Townshi**	**1.16**	**252**	P	**Pn**	**09 51 32.6**	**-0.3**
	baz=250						
ETLH				S	**Sn**	**09 51 48.9**	**+0.6**
	baz=250						
TATO	**Taipei**	**1.17**	**290**	P	**Pn**	**09 51 32.7**	**-0.2**
	baz=288						
TATO				S	**Sb**	**09 51 47.1**	**-0.8**
	baz=288						
YM01	**YM01**	**1.17**	**300**	P	**Pn**	**09 51 32.4**	**-0.6**
	baz=283						
YM01				S	**Sb**	**09 51 47.3**	**-0.7**
	baz=283						
TAP	**Taipei**	**1.18**	**294**	*i* P	**Pn**	**09 51 32.8**	**-0.2**
	baz=291						
TAP				*i* S	**Sb**	**09 51 47.7**	**-0.4**
	baz=291						
YM08	**YM08**	**1.18**	**302**	P	**Pn**	**09 51 32.3**	**-0.7**
	baz=285						
YM08				S	**Sb**	**09 51 47.0**	**-1.1**
	baz=285						
YM11	**YM11**	**1.18**	**300**	P	**Pn**	**09 51 33.0**	**-0.1**
	baz=282						
YM11				*eS*	**Sn**	**09 51 48.7**	**0.0**
	baz=282						
YM10	**YM10**	**1.18**	**300**	P	**Pn**	**09 51 32.6**	**-0.5**
	baz=283						
YM10				S	**Sb**	**09 51 47.7**	**-0.7**
	baz=283						
YM05	**YM05**	**1.18**	**300**	P	**Pn**	**09 51 32.3**	**-0.8**
	baz=282						
YM05				*eS*	**Sn**	**09 51 49.1**	**+0.3**
	baz=282						
PCYT	**Pengchaiyu**	**1.20**	**332**	*i* P	**Pn**	**09 51 32.6**	**-0.7**
	baz=315						
YM04	**YM04**	**1.20**	**299**	P	**Pn**	**09 51 32.7**	**-0.7**
	baz=296						
NNSB	**Datong**	**1.20**	**264**	P	**Pn**	**09 51 33.2**	**-0.2**
	baz=271						
NNSB				S	**Sn**	**09 51 49.4**	**+0.1**
	baz=271						
NNSH	**Datong**	**1.20**	**264**	*i* P	**Pn**	**09 51 33.3**	**-0.1**
	baz=270						
NNSH				S	**Sn**	**09 51 49.7**	**+0.4**
	baz=270						
YHNB	**Yeheng**	**1.20**	**275**	P	**Pn**	**09 51 33.5**	**0.0**
	baz=273						
YHNB				*eS*	**Sn**	**09 51 49.4**	**+0.1**
	baz=273						
NNS	**Nan Shan**	**1.21**	**264**	*i* P	**Pn**	**09 51 33.7**	**+0.1**
	baz=272						
NNS				*i* S	**Sn**	**09 51 49.8**	**+0.3**
	baz=272						
YM03	**YM03**	**1.21**	**300**	P	**Pn**	**09 51 33.7**	**+0.2**
	baz=297						
BACT	**New Taipei Cit**	**1.22**	**291**	*eS*	**Sg**	**09 51 50.7**	**-0.4**
	baz=288						
TWY	**Chenhua**	**1.22**	**306**	*i* P	**Pn**	**09 51 33.3**	**-0.2**
	baz=286						
TWY				S	**Sb**	**09 51 49.1**	**-0.2**
	baz=286						
ANP	**Anpu**	**1.23**	**300**	*i* P	**Pn**	**09 51 33.4**	**-0.4**
	baz=297						
JKRS	**Kuro-shima**	**1.24**	**105**	P	**Pn**	**09 51 33.8**	**-0.1**
JKRS				S	**Sn**	**09 51 50.3**	**+0.2**
TWS1	**Kuangyinshan**	**1.27**	**295**	*i* P	**Pn**	**09 51 34.1**	**-0.2**
	baz=293						
TWS1				S	**Sn**	**09 51 50.9**	**0.0**
	baz=293						
JIJ	**Ishigaki jima**	**1.34**	**99**	P	**Pn**	**09 51 34.5**	**-0.7**
JIJ				S	**Sn**	**09 51 51.9**	**-0.5**
NTY	**Taoyuan**	**1.34**	**289**	P	**Pn**	**09 51 35.5**	**+0.2**
	baz=287						
NTY				*eS*	**Sb**	**09 51 53.5**	**+0.7**
	baz=287						
FUSS	**Fushou**	**1.36**	**257**	*i* P	**Pb**	**09 51 36.5**	**0.0**
	baz=255						
FUSS				S	**Sb**	**09 51 53.9**	**+0.2**
	baz=255						
WHF	**Hehuan Shan**	**1.37**	**252**	*i* P	**Pb**	**09 51 36.8**	**0.0**
	baz=251						
WHF				S	**Sb**	**09 51 55.0**	**+0.9**
	baz=251						
ESL	**Shilin**	**1.38**	**237**	*i* P	**Pn**	**09 51 35.5**	**-0.2**
	baz=236						
ESL				S	**Sb**	**09 51 54.8**	**+0.9**
	baz=236						
TWT	**Tachien**	**1.42**	**258**	*i* P	**Pb**	**09 51 38.3**	**+0.8**
	baz=256						
TWT				S	**Sg**	**09 51 57.1**	**-0.5**
	baz=256						
NCUH	**Zhongli**	**1.43**	**286**	P	**Pn**	**09 51 36.9**	**+0.4**
	baz=283						
TDCB	**Techi**	**1.44**	**258**	P	**Pb**	**09 51 38.0**	**+0.3**
	baz=256						
TDCB				S	**Sb**	**09 51 56.3**	**+0.6**
	baz=256						
EGFH	**Guangfu**	**1.46**	**232**	*i* P	**Pn**	**09 51 37.1**	**+0.1**
	baz=232						
EGFH				S	**Sn**	**09 51 55.8**	**+0.2**
	baz=232						
NJD	**Zhudong**	**1.47**	**277**	*eP*	**Pg**	**09 51 39.5**	**-0.4**
	baz=275						
NJD				*eS*	**Sg**	**09 51 59.1**	**-0.1**
	baz=275						
JISG	**Ishigakijimahi**	**1.47**	**89**	P	**Pn**	**09 51 36.4**	**-0.6**
CHGB	**Renai**	**1.48**	**250**	P	**Pb**	**09 51 38.4**	**-0.1**
	baz=249						
CHGB				*eS*	**Sb**	**09 51 57.8**	**+0.8**
	baz=249						
OWD	**Renai**	**1.52**	**246**	*i* P	**Pn**	**09 51 38.4**	**+0.7**
	baz=245						
OWD				*eS*	**Sb**	**09 51 59.0**	**+1.0**
	baz=245						
LIOB	**Emei**	**1.53**	**273**	*eP*	**Pb**	**09 51 39.0**	**-0.3**
	baz=286						
HSN1	**Hsinchu**	**1.54**	**278**	*eP*	**Pb**	**09 51 39.9**	**+0.5**
	baz=292						
HSN1				*eS*	**Sb**	**09 51 59.5**	**+1.0**
	baz=292						
NSTT	**Nanjuang**	**1.54**	**273**	*eP*	**Pb**	**09 51 40.1**	**+0.5**
	baz=285						
SBCB	**Hsinchu**	**1.57**	**278**	*eP*	**Pn**	**09 51 39.1**	**+0.7**
	baz=293						
SBCB				*eS*	**Sg**	**09 52 01.1**	**-1.3**
	baz=293						
HGSD	**Ruisui**	**1.58**	**228**	P	**Pn**	**09 51 38.7**	**+0.1**
	baz=214						
HGSD				*eS*	**Sn**	**09 51 56.6**	**-1.9**
	baz=214						
HSN	**Hsinchu**	**1.59**	**279**	*eP*	**Pb**	**09 51 39.7**	**-0.5**
	baz=294						
HSN				*eS*	**Sn**	**09 51 59.1**	**+0.5**
	baz=294						
WHP	**Taichung City**	**1.62**	**260**	*eP*	**Pb**	**09 51 41.9**	**+1.0**
	baz=259						
WHP				S	**Sb**	**09 52 01.3**	**+0.3**
	baz=259						
VWDT	**VWDT**	**1.64**	**241**	P	**Pb**	**09 51 40.2**	**-0.8**
	baz=240						
VWDT				S	**Sb**	**09 52 00.7**	**-0.6**
	baz=240						
WPL	**Puli Township**	**1.68**	**251**	*eP*	**Pb**	**09 51 41.9**	**0.0**
	baz=250						
WPL				S	**Sb**	**09 52 02.5**	**-0.1**
	baz=250						
DPDB	**Guoxing**	**1.70**	**252**	*eP*	**Pb**	**09 51 42.2**	**-0.1**
	baz=237						
NMLH	**Miaoli**	**1.73**	**269**	*eP*	**Pb**	**09 51 42.3**	**-0.5**
	baz=284						
NMLH				*eS*	**Sb**	**09 52 05.2**	**+1.1**
	baz=284						
YULB	**Yu-li**	**1.73**	**228**	P	**Pn**	**09 51 40.6**	**0.0**
	baz=244						
YULB				S	**Sn**	**09 52 02.3**	**0.0**
	baz=244						
EYUL	**Yuli**	**1.75**	**226**	P	**Pb**	**09 51 42.1**	**-1.0**
	baz=243						
EYUL				S	**Sn**	**09 52 03.1**	**+0.5**
	baz=243						
TWF1	**Yuli**	**1.76**	**227**	*i* P	**Pn**	**09 51 41.2**	**+0.2**
	baz=243						
TWF1				S	**Sn**	**09 52 03.3**	**+0.4**
	baz=243						
TWQ1	**Liyutan**	**1.77**	**263**	*eP*	**Pb**	**09 51 44.3**	**+1.0**
	baz=260						
NSY	**Sanyi**	**1.77**	**265**	P	**Pb**	**09 51 43.4**	**+0.1**
	baz=264						
NSY				*eS*	**Sn**	**09 52 03.0**	**-0.1**
	baz=264						
SSLB	**Suanglung**	**1.77**	**244**	P	**Pb**	**09 51 42.5**	**-0.9**
	baz=243						
SSLB				S	**Sb**	**09 52 04.8**	**-0.5**
	baz=243						
SMLT	**Sun Moon Lake**	**1.77**	**248**	*eP*	**Pb**	**09 51 43.3**	**-0.2**
	baz=247						
SMLT				S	**Sb**	**09 52 05.6**	**+0.1**
	baz=247						
TYC	**Yuchr**	**1.80**	**249**	*i* P	**Pb**	**09 51 43.5**	**-0.5**
	baz=233						
JTJ	**Tarama**	**1.83**	**87**	P	**Pn**	**09 51 42.3**	**+0.4**
JTJ				*eS*	**Sb**	**09 52 05.9**	**-1.0**
FULB	**Fuli**	**1.87**	**223**	*i* P	**Pn**	**09 51 42.8**	**+0.2**
	baz=209						
FULB				*eS*	**Sn**	**09 52 05.9**	**+0.2**
	baz=209						
WDJ	**Dajia District**	**1.89**	**264**	P	**Pn**	**09 51 43.5**	**+0.8**
	baz=261						
TCU	**Taichung**	**1.89**	**258**	*eP*	**Pb**	**09 51 46.1**	**+0.7**
	baz=255						
WHYT	**Xinyi Township**	**1.89**	**243**	P	**Pb**	**09 51 44.8**	**-0.7**
	baz=242						
WHYT				*eS*	**Sb**	**09 52 09.7**	**+0.9**
	baz=242						
WWF	**Wufeng**	**1.90**	**254**	P	**Pb**	**09 51 44.9**	**-0.6**
	baz=253						
WWF				*eS*	**Sg**	**09 52 11.5**	**-1.2**
	baz=253						
CHKT	**Chengkung**	**1.90**	**220**	*eP*	**Pn**	**09 51 44.1**	**+1.1**
	baz=220						
CHKT				*eS*	**Sn**	**09 52 05.0**	**-1.5**
	baz=220						
YUS	**Yu-Shan**	**1.92**	**236**	*i* P	**Pn**	**09 51 44.7**	**+1.0**
	baz=236						
YUS				*eS*	**Sb**	**09 52 09.6**	**-0.5**
	baz=236						
WJS	**Zhushan**	**1.94**	**248**	*i* P	**Pb**	**09 51 46.3**	**-0.1**
	baz=247						
WJS				S	**Sg**	**09 52 12.8**	**-1.5**
	baz=247						
WNT1	**Nantou City**	**1.95**	**251**	*eP*	**Pb**	**09 51 47.2**	**+0.7**
	baz=250						
WNT1				*eS*	**Sg**	**09 52 13.3**	**-1.2**
	baz=250						
WNT	**Mingjian**	**1.96**	**250**	*eP*	**Pb**	**09 51 46.7**	**+0.1**
	baz=249						
WNT				*eS*	**Sg**	**09 52 13.3**	**-1.4**
	baz=249						
WCHH	**Zhanghua**	**2.01**	**256**	P	**Pb**	**09 51 46.4**	**-1.1**
	baz=254						
ALS	**Alishan**	**2.02**	**239**	*i* P	**Pb**	**09 51 46.8**	**-1.1**
	baz=238						
ALS				S	**Sb**	**09 52 12.4**	**-0.4**
	baz=238						
EDH	**Donghe**	**2.04**	**219**	*i* P	**Pn**	**09 51 44.6**	**-0.2**
	baz=219						
EDH				S	**Sn**	**09 52 08.4**	**-1.3**
	baz=219						
CHN5	**Tsauling**	**2.08**	**243**	*i* P	**Pb**	**09 51 47.8**	**-1.0**
	baz=242						
CHN5				*eS*	**Sb**	**09 52 15.3**	**+1.0**
	baz=242						
WDLH	**Douliu**	**2.16**	**246**	*i* P	**Pb**	**09 51 49.2**	**-0.8**
	baz=246						
WDLH				*eS*	**Sb**	**09 52 16.9**	**+0.6**
	baz=246						
LONT	**Longtian**	**2.19**	**221**	*i* P	**Pn**	**09 51 47.2**	**+0.2**
	baz=222						
LONT				S	**Sn**	**09 52 14.1**	**+0.6**
	baz=222						
LDUT	**Ludao**	**2.20**	**211**	*i* P	**Pn**	**09 51 46.6**	**-0.4**
	baz=212						
LDUT				*eS*	**Sn**	**09 52 11.1**	**-2.6**
	baz=212						
WRL	**Guolierlin Hig**	**2.22**	**253**	*i* P	**Pb**	**09 51 49.3**	**-1.7**
	baz=252						
WRL				*eS*	**Sb**	**09 52 18.0**	**-0.1**
	baz=252						
STYH	**Taoyuan**	**2.24**	**232**	*eP*	**Pb**	**09 51 49.8**	**-1.7**
	baz=222						
STYH				*eS*	**Sb**	**09 52 18.4**	**-0.4**
	baz=222						
STYT	**Tauyuan**	**2.26**	**232**	*i* P	**Pn**	**09 51 49.7**	**+1.8**
	baz=232						
STYT				S	**Sn**	**09 52 16.6**	**+1.3**
	baz=232						
JIRB	**Irabujima**	**2.27**	**83**	P	**Pn**	**09 51 48.5**	**+0.5**
CHN4	**Tsaushan**	**2.27**	**238**	*eP*	**Pb**	**09 51 51.0**	**-0.9**
	baz=238						
CHN4				*eS*	**Sb**	**09 52 21.0**	**+1.2**
	baz=238						
TPUB	**Ta-pu**	**2.27**	**237**	P	**Pn**	**09 51 50.0**	**+1.9**
	baz=236						
TPUB				S	**Sb**	**09 52 19.8**	**+0.1**
	baz=236						
CHN2	**Minshiung**	**2.28**	**243**	*eP*	**Pb**	**09 51 51.5**	**-0.5**
	baz=243						
CHN2				*eS*	**Sb**	**09 52 20.7**	**+0.9**
	baz=243						
WTK	**Tuku**	**2.28**	**248**	*i* P	**Pb**	**09 51 50.5**	**-1.7**
	baz=247						
WTK				S	**Sb**	**09 52 19.9**	**-0.1**
	baz=247						
TWGBT	**Beinan**	**2.29**	**221**	P	**Pn**	**09 51 48.2**	**-0.1**
	baz=221						
TWGBT				*eS*	**Sn**	**09 52 14.2**	**-1.8**
	baz=221						
TWG	**Pinlang**	**2.29**	**221**	*i* P	**Pn**	**09 51 48.8**	**+0.5**
	baz=221						
TWG				S	**Sn**	**09 52 15.1**	**-0.9**
	baz=221						
WTP	**Ta-pu**	**2.31**	**236**	*i* P	**Pb**	**09 51 51.1**	**-1.6**
	baz=235						
WTP				S	**Sb**	**09 52 21.2**	**+0.2**
	baz=235						
CHY	**Chiayi**	**2.33**	**243**	*eP*	**Pb**	**09 51 52.3**	**-0.7**
	baz=243						
CHY				S	**Sb**	**09 52 21.7**	**+0.3**
	baz=243						
JMJ	**Miyako jima 2**	**2.38**	**84**	*eP*	**Pn**	**09 51 51.5**	**+2.0**
	baz=84						
CHN1	**Nanshi**	**2.42**	**236**	*eP*	**Pb**	**09 51 53.1**	**-1.3**
	baz=236						
CHN1				S	**Sb**	**09 52 23.4**	**-0.5**
	baz=236						
SNST	**Tainan City**	**2.42**	**237**	*eP*	**Pb**	**09 51 53.1**	**-1.3**
	baz=237						
SNST				S	**Sb**	**09 52 23.6**	**-0.3**
	baz=237						
SGST	**Jiashian**	**2.44**	**233**	*i* P	**Pn**	**09 51 52.2**	**+1.9**
	baz=233						
SGST	

SLGT				S		**Sb**	**09 52 23.3**	**-1.4**
	baz=231							
ECL	**Taimali**	**2.53 219**	P		**Pn**	**09 51 51.8**	**+0.2**
	baz=220							
ECL				S		**Sn**	**09 52 20.7**	**-1.2**
	baz=220							
SSD	**Sandimen**	**2.62 227**	*e*P		**Pb**	**09 51 55.8**	**-2.1**
	baz=216							
SSD				*e*S		**Sn**	**09 52 26.2**	**+2.0**
	baz=216							
SCST	**Cishan**	**2.62 231**	*i* P		**Pb**	**09 51 56.4**	**-1.5**
	baz=245							
SCST				S		**Sb**	**09 52 29.3**	**-0.5**
	baz=245							
TSMG	**Majia**	**2.64 226**	*e*P		**Pb**	**09 51 55.8**	**-2.5**
	baz=216							
TSMG				S		**Sn**	**09 52 27.0**	**+2.4**
	baz=216							
MASBT	**Mashibuluo**	**2.71 225**	P		**Pn**	**09 51 55.8**	**+1.6**
	baz=218							
MASBT				*e*S		**Sb**	**09 52 31.3**	**-1.1**
	baz=218							
LAY	**Lan-yu**	**2.73 203**	*i* P		**Pn**	**09 51 53.3**	**-1.1**
	baz=204							
LAY				*e*S		**Sn**	**09 52 23.8**	**-3.1**
	baz=204							
EAST	**Anshuo**	**2.76 218**	*e*P		**Pn**	**09 51 56.8**	**+2.0**
	baz=218							
SCZT	**Fangliau**	**2.90 221**	*e*P		**Pb**	**09 52 00.5**	**-2.2**
	baz=216							
SCZT				*e*S		**Sb**	**09 52 35.2**	**-2.6**
	baz=216							
SLIU	**Shizi**	**2.92 217**	*e*P		**Pn**	**09 51 59.2**	**+2.3**
	baz=218							
SLIU				S		**Sn**	**09 52 32.1**	**+0.6**
	baz=218							
MATB	**Ma-tsu**	**2.94 303**	*e*P		**Pn**	**09 51 56.8**	**-0.5**
	baz=286							
VWUC	**VWUC**	**2.98 279**	*e*P		**Pn**	**09 51 56.8**	**-1.0**
	baz=276							
VWUC				S		**Sn**	**09 52 32.3**	**-0.6**
	baz=276							
PNG	**Penghu**	**3.04 251**	*e*P		**Pn**	**09 51 59.4**	**+0.9**
	baz=250							
PNG				*e*S		**Sn**	**09 52 35.4**	**+1.0**
	baz=250							
WLCH	**Liuqiu**	**3.07 224**	*e*P		**Pb**	**09 52 04.6**	**-0.9**
	baz=224							
WDGT	**Dungji**	**3.07 245**	P		**Pn**	**09 52 00.5**	**+1.5**
	baz=245							
WDGT				S		**Sn**	**09 52 35.6**	**+0.4**
	baz=245							
HEN	**Hengchun**	**3.12 216**	*e*P		**Pn**	**09 52 02.1**	**+2.4**
	baz=224							
HEN				S		**Sn**	**09 52 38.7**	**+2.1**
	baz=224							
TSEB	**Hengchuen, Pin**	**3.13 212**	P		**Pn**	**09 52 02.1**	**+2.3**
	baz=222							
TSEB				S		**Sn**	**09 52 38.5**	**+1.8**
	baz=222							
TWKBT	**Hengchun**	**3.14 214**	P		**Pn**	**09 52 01.9**	**+1.9**
	baz=223							
TWKBT				*e*S		**Sn**	**09 52 37.2**	**+0.3**
	baz=223							
TWK1	**Hengchun**	**3.14 214**	P		**Pn**	**09 52 01.5**	**+1.5**
	baz=223							
TWK1				S		**Sn**	**09 52 36.8**	**-0.1**
	baz=223							
XPSS	**Dashiqiu**	**3.26 317**	P		**Pn**	**09 52 02.3**	**+0.7**
	baz=315							
VCHM	**Qimei**	**3.28 246**	P		**Pn**	**09 52 03.1**	**+1.2**
	baz=246							
VCHM				*e*S		**Sn**	**09 52 40.9**	**+0.5**
	baz=246							
PTMZ	**Houxiangcun**	**3.28 279**	P		**Pn**	**09 52 02.3**	**+0.4**
	baz=275							
MHZQ	**Yeshan**	**3.65 295**	P		**Pn**	**09 52 07.4**	**+0.4**
	baz=290							
KNM	**Kinmen**	**3.88 269**	*e*P		**Pn**	**09 52 12.3**	**+2.1**
	baz=265							
KNMB	**Chin-men Tao**	**3.92 269**	P		**Pn**	**09 52 11.1**	**+0.3**
	baz=265							
AXDP	**Jialang**	**4.31 275**	*e*P		**Pn**	**09 52 16.6**	**+0.6**
	baz=271							
ZPLA	**Ao Xicun**	**4.56 263**	P		**Pn**	**09 52 20.1**	**+0.6**
	baz=259							
JOW	**Kunigami**	**5.51 65**	Pn		**Pn**	**09 52 34.0**	**+1.4**
	0.9nm,0.3s,baz=220,slow=16,SNR=4.6							
KSRS	**Korea Array**	**13.60 18**	Pn		**Pn**	**09 54 24.2**	**+0.9**
	0.2nm,0.3s,baz=198,slow=12,SNR=2.4							
KSRS				LR		LR	09 59 35.5	
	comp=Z,95nm,18.4s,baz=194,slow=37							
JHJ	**Hachijo jima 2**	**17.21 56**	LR		LR		10 01 04.3	
	comp=Z,38nm,19.8s,baz=244,slow=34							
DAV	**Davao City (W)**	**17.62 171**	LR		LR		10 01 09.9	
	comp=Z,63nm,20.5s,baz=326,slow=34							
CMAR	**Chiang Mai Arr**	**22.90 259**	LR		LR		10 05 13.7	
	comp=Z,15nm,20.0s,baz=210,slow=37							
KLR	**Kul'dur**	**25.62 14**	LR		LR		10 06 30.4	
	comp=Z,66nm,19.4s,baz=186,slow=36							
SONM	**Songimo Array**	**26.57 335**	P		**P**	**09 56 49.5**	**+1.0**
	1.7nm,0.8s,baz=149,slow=9.5,SNR=7.1							
SONM				LR		LR	10 08 15.3	
	comp=Z,44nm,19.3s,baz=100,slow=39							
KAPI	**Kappang**	**29.54 186**	LR		LR		10 09 37.2	
	comp=Z,13nm,18.5s,baz=337,slow=38							
PETK	**Petropavlovsk-**	**38.78 34**	LR		LR		10 14 25.2	
	comp=Z,34nm,18.3s,baz=237,slow=36							
MKAR	**Makanchi Array**	**39.03 315**	P		**P**	**09 58 34.6**	**-2.4**
	1.1nm,0.8s,baz=112,slow=10,SNR=6.8							
MA2	**Magadan**	**40.11 22**	LR		LR		10 16 29.4	
	comp=Z,42nm,18.4s,baz=257,slow=38							
ZALV	**Zalesovo Beam**	**40.68 326**	P		**P**	**09 58 49.5**	**-1.1**
	0.5nm,0.4s,baz=122,slow=11,SNR=2.3							
ZALV				LR		LR	10 16 52.1	
	comp=Z,33nm,19.2s,baz=104,slow=38							
KURBB	**Kurchatov Arra**	**42.71 319**	P		**P**	**09 59 06.0**	**-1.2**
	0.2nm,0.4s,baz=115,slow=6.3,SNR=1.9							
AAK	**Ala-Archa**	**43.37 307**	LR		LR		10 18 46.3	
	comp=Z,55nm,18.5s,baz=130,slow=38							
WRA	**Warramunga Arr**	**45.67 165**	P		**P**	**09 59 32.5**	**+1.2**
	2.0nm,0.8s,baz=346,slow=8.6,SNR=5.8							
ASAR	**Alice Springs**	**49.17 166**	P		**P**	**09 59 59.3**	**+0.9**
	0.6nm,0.6s,baz=344,slow=7.6,SNR=9.5							
YKA	**Yellowknife Ar**	**82.08 23**	P		**P**	**10 03 31.3**	**+0.9**
	0.1nm,0.7s,baz=312,slow=4.7,SNR=2.9							

*IDC **21** 10:00:05.2±0.2,53°.59N×88°.09E,h0km,mb1 2.9/2, mb1mx2.8/45,mbtmp2.9/2,ML2.6/2,Error ellipse: s-maj=4.0km s-min=0.6km az=13.0*
*NNC **21** 10:00:06.9±7.0,53°.47N×87°.94E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=57.3km s-min=30.3km az=67.0, Suspected Mining explosion.*
ISC 21 10:00:09.2±3.7,53°.6N±0°.1×87°.7E±0°.2,h0km,n7,σ2s22/11, 2C-5D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.75**	**284**	*i*			10 12 30.1	
	baz=99,slow=310,SNR=2.6							
ZAA0	**Zalesovo Array**	**1.75**	**284**	⇓P	n	**Pn**	**10 00 40.4**	**-0.4**
	0.7nm,0.5s							
ZAA0				⇑S	n	**Sb**	**10 01 07.5**	**+2.9**
	3.2nm,0.5s							
ZALV	**Zalesovo Beam**	**1.75**	**284**	P	n	**Pn**	**10 00 40.0**	**-0.7**
	3.3nm,0.3s,baz=101,slow=14,SNR=21							
ZALV				Lg		Lg	10 01 06.9	
	5.1nm,0.3s,baz=102,slow=26,SNR=14							
KURBB	**Kurchatov Arra**	**6.36**	**246**	P	n	**Pn**	**10 01 44.5**	**+0.5**
	0.1nm,0.3s,baz=60,slow=13,SNR=4.7							
KURBB				Sn		**Sn**	**10 02 57.3**	**0.0**
	0.0nm,0.3s,baz=58,slow=28,SNR=5.2							
KURBB				Lg		Lg	10 03 31.6	
	0.1nm,0.3s,baz=58,slow=30,SNR=5.3							
KURBB	**Kurchatov Arra**	**6.36**	**246**	⇓P	n	**Pn**	**10 01 39.4**	**-4.7**
	1.2nm,0.5s							
KURBB				⇑S	n	**Sn**	**10 02 56.1**	**-1.2**
	6.2nm,0.6s							
KURBB				⇓Lg		Lg	10 03 32.4	
	7.3nm,0.7s							
MK31	**Makanchi Array**	**7.60**	**209**	Pn		**Pn**	**10 02 01.9**	**+0.8**
	0.3nm,0.5s,baz=53,slow=6.2,SNR=15							
MK31				⇓Sn		**Sn**	**10 03 29.6**	**+1.7**
	0.4nm,0.5s							
MK31				⇓Lg		Lg	10 04 06.5	
	0.8nm,0.6s,baz=35,slow=32,SNR=3.8							
MKAR	**Makanchi Array**	**7.60**	**209**	Pn		**Pn**	**10 02 01.4**	**+0.2**
	0.1nm,0.3s,baz=29,slow=13,SNR=11							
MKAR				Sn		**Sn**	**10 03 26.2**	**-1.7**
	0.0nm,0.3s,baz=24,slow=25,SNR=2.6							
MKAR				Lg		Lg	10 04 10.3	
	0.2nm,0.3s,baz=30,slow=36,SNR=6.4							

*IDC **21** 10:11:24.7±1.0,35°.52N×26°.36E,h0km,mb3.5/3, mb1 3.5/3,mb1mx3.2/41,mbtmp3.5/3,Error ellipse: s-maj=196.0km s-min=16.8km az=143.0*
*ATH **21** 10:11:28.7,35°.14N×26°.83E,h10km±4km,ML2.9/3,Error ellipse: s-maj=6.6km s-min=1.4km az=335.0*
*ISK **21** 10:11:28.9,35°.25N×26°.74E,h7km,ML2.8/9*
*THE **21** 10:11:28.5,35°.21N×26°.78E,h0km±1km,ML2.8/5,Error ellipse: s-maj=7.0km s-min=0.8km az=154.0*
ISC 21 10:11:26.6±1.6,35°.12N±0°.08×26°.78E±0°.04,h14km±10km, n27,σ1s15/38,mb3.5/3,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ZKR	**Zakros**	**0.46**	**269**	P		**Pn**	**10 11 37.9**	**-1.0**
ZKR				S		**Sn**	**10 11 45.9**	**-1.0**
ZKR				AML		AML	10 11 47.8	
	comp=E,3099μm,0.3s							
ZKR				AML		AML	10 11 48.0	
	comp=N,1806μm,0.2s							
ZKR	**Zakros**	**0.46**	**269**	P		**Pn**	**10 11 37.8**	**-1.0**
ZKR				S		**Sn**	**10 11 45.9**	**-1.0**
	comp=N,1μm,0.3s							
ZKR	**Zakros**	**0.46**	**269**	PG		**Pn**	**10 11 37.9**	**-1.0**
ZKR				SG		**Sn**	**10 11 45.0**	**-1.9**
KARP	**Karpathos**	**0.53**	**36**	P		**Pb**	**10 11 37.9**	**+0.2**
KARP				S		**Sb**	**10 11 45.2**	**0.0**
KARP				AML		AML	10 11 47.2	
	comp=E,7529μm,0.5s							
KARP				AML		AML	10 11 47.4	
	comp=N,12970μm,0.4s							
KARP	**Karpathos**	**0.53**	**36**	P		**Pb**	**10 11 37.9**	**+0.2**
KARP				S		**Sb**	**10 11 45.0**	**-0.2**
	comp=N,5μm,0.4s							
KARP	**Karpathos**	**0.53**	**36**	PG		**Pb**	**10 11 38.2**	**+0.5**
KARP				SG		**Sb**	**10 11 45.2**	**0.0**
STIA	**Sitia Lasithi**	**0.57**	**278**	P		**Pn**	**10 11 39.6**	**-0.7**
STIA				S		**Sn**	**10 11 49.5**	**0.0**
FRMA	**Ierapetra Chan**	**0.86**	**263**	P		**Pb**	**10 11 43.2**	**-0.2**
FRMA				S		**Sn**	**10 11 56.4**	**-0.4**
	comp=N,362nm,0.4s							
NPS	**Neapolis**	**0.97**	**279**	P		**Pn**	**10 11 47.7**	**+1.9**
NPS				S		**Sn**	**10 12 01.5**	**+2.1**
NPS				AML		AML	10 12 06.7	
	comp=E,1450μm,0.3s							
NPS				AML		AML	10 12 07.4	
	comp=N,938μm,0.4s							
NPS	**Neapolis**	**0.97**	**279**	P		**Pn**	**10 11 47.7**	**+1.9**
NPS				S		**Sn**	**10 12 01.5**	**+2.1**
	comp=N,650nm,0.6s							
ARG	**Arkhangelos**	**1.55**	**45**	P		**Pg**	**10 11 55.9**	**-0.4**
ARG	**Arkhangelos**	**1.55**	**45**	P		**Pg**	**10 11 55.9**	**-0.4**
ARG				S		**Sg**	**10 12 16.3**	**-0.1**
	comp=N,388nm,1.1s							
ARG	**Arkhangelos**	**1.55**	**45**	PN		**Pg**	**10 11 56.7**	**+0.4**
IDI	**Anoyia**	**1.56**	**277**	P		**Pg**	**10 11 58.3**	**+1.8**
IDI	**Anoyia**	**1.56**	**277**	PN		**Pg**	**10 11 57.3**	**+0.8**
SANT	**Santorini**	**1.65**	**320**	PN		**Pb**	**10 11 57.2**	**+0.4**
SNT5	**Nea Kammeni, S**	**1.71**	**319**	P		**Pg**	**10 11 58.9**	**-0.4**
THT2	**Imerovigli**	**1.71**	**320**	PN		**Pb**	**10 11 58.4**	**+0.5**
TURN	**Turunc**	**2.03**	**35**	PN		**Pb**	**10 12 03.5**	**+0.2**
APE	**Apeiranthos**	**2.19**	**333**	PN		**Pb**	**10 12 05.0**	**-1.1**
DALY	**Dalyan (Mula)**	**2.27**	**41**	PN		**Pb**	**10 12 07.0**	**-0.4**
IMMV	**Iera Moni Meta**	**2.31**	**279**	PN		**Pb**	**10 12 07.9**	**-0.2**
YER	**Yerkesik**	**2.35**	**31**	PN		**Pb**	**10 12 07.7**	**-1.1**
KTHA	**Kythira Island**	**3.23**	**292**	PN		**Pb**	**10 12 20.5**	**-3.3**
TORD	**Torodi Ar. Bea**	**31.50**	**232**	P		**P**	**10 17 48.1**	**-0.1**
	comp=N,0.2nm,0.6s,baz=36,slow=9.2,SNR=1.8							
MKAR	**Makanchi Array**	**42.69**	**57**	P		**P**	**10 19 23.6**	**+0.7**
	comp=N,0.6nm,0.6s,baz=277,slow=7.5,SNR=7.4							
ZALV	**Zalesovo Beam**	**44.07**	**46**	P		**P**	**10 19 33.9**	**-0.1**
	comp=N,1.0nm,0.5s,baz=278,slow=9.8,SNR=2.6							

*ISK **21** 10:41:28.9,35°.30N×26°.73E,h5km,ML3.4/16*
*THE **21** 10:41:28.6,35°.11N×26°.82E,h1km±1km,ML3.4/6,Error ellipse: s-maj=5.0km s-min=0.8km az=154.0*
*ATH **21** 10:41:30.2,35°.24N×26°.78E,h6km±2km,ML3.5/6,Error ellipse: s-maj=4.8km s-min=0.9km az=154.0*
*IDC **21** 10:41:31.6±5.6,35°.16N×26°.71E,h37km±49km,mb3.4/5, mb1 3.4/7,mb1mx3.3/42,mbtmp3.5/7,ML3.4/2,Error ellipse: s-maj=44.3km s-min=21.6km az=151.0*
*DDA **21** 10:41:34.3,35°.48N×27°.13E,h9km±2km,ML3.0*
ISC 21 10:41:29.7±1.0,35°.20N±0°.05×26°.78E±0°.03,h15km±7km, n64,σ1s41/80,mb3.5/5,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KARP	**Karpathos**	**0.47**	**42**	P		**Pg**	**10 41 38.7**	**-0.3**
KARP				S		**Sg**	**10 41 44.8**	**-0.5**
KARP				AML		AML	10 41 48.2	
	comp=N,25595μm,0.5s							
KARP				AML		AML	10 41 49.4	
	comp=E,22772μm,0.5s							
KARP	**Karpathos**	**0.47**	**42**	P		**Pg**	**10 41 38.7**	**-0.3**
KARP				S		**Sb**	**10 41 47.2**	**+0.8**
	comp=E,12μm,0.4s							
KARP	**Karpathos**	**0.47**	**42**	PG		**Pg**	**10 41 38.5**	**-0.5**
KARP				SG		**Sg**	**10 41 45.8**	**+0.5**
ZKR	**Zakros**	**0.47**	**260**	P		**Pg**	**10 41 38.6**	**-0.5**
ZKR				S		**Sg**	**10 41 46.5**	**+1.1**
ZKR				AML		AML	10 41 49.3	
	comp=E,9840μm,0.6s							
ZKR				AML		AML	10 41 50.2	
	comp=N,5789μm,0.4s							
ZKR	**Zakros**	**0.47**	**260**	P		**Pg**	**10 41 38.6**	**-0.5**
ZKR				S		**Sg**	**10 41 46.5**	**+1.1**
	comp=N,4μm,0.6s							
ZKR	**Zakros**	**0.47**	**260**	PG		**Pg**	**10 41 38.6**	**-0.5**
ZKR				SG		**Sg**	**10 41 46.3**	**+0.9**
STIA	**Sitia Lasithi**	**0.57**	**270**	P		**Pg**	**10 41 40.5**	**-0.4**
STIA				S		**Sb**	**10 41 50.7**	**+1.5**
FRMA	**Ierapetra Chan**	**0.88**	**258**	P		**Pg**	**10 41 43.7**	**-3.1**
FRMA				S		**Sg**	**10 41 56.1**	**-2.2**
	comp=N,2μm,0.6s							
NPS	**Neapolis**	**0.96**	**274**	P		**Pg**	**10 41 48.4**	**+0.1**
NPS				AML		AML	10 42 12.1	
	comp=E,6979μm,0.7s							
NPS				AML		AML	10 42 13.2	
	comp=N,5572μm,0.5s							
NPS	**Neapolis**	**0.96**	**274**	P		**Pg**	**10 41 48.4**	**+0.1**
NPS				S		**Sn**	**10 42 03.8**	**+1.7**
	comp=N,4μm,0.7s							
HRKL	**Herakleio**	**1.38**	**275**	PN		**Pn**	**10 41 55.6**	**+1.2**
NIS1	**Nisyros Isl.**	**1.44**	**13**	P		**Pn**	**10 41 56.1**	**+0.8**
NIS1	**Nisyros Isl.**	**1.44**	**13**	P		**Pn**	**10 41 56.1**	**+0.8**
NIS1	**Nisyros Isl.**	**1.44**	**13**	PN		**Pn**	**10 41 55.9**	**+0.7**
ARG	**Arkhangelos**	**1.49**	**47**	P		**Pn**	**10 41 57.1**	**+1.2**
ARG				AML		AML	10 42 24.2	
	comp=E,3819μm,1.0s							
ARG				AML		AML	10 42 28.3	
	comp=N,2105μm,0.7s							
ARG	**Arkhangelos**	**1.49**	**47**	P		**Pn**	**10 41 56.8**	**+0.8**
ARG				S		**Sn**	**10 42 16.5**	**+1.3**
	comp=N,2μm,0.8s							
ARG	**Arkhangelos**	**1.49**	**47**	PN		**Pn**	**10 41 57.3**	**+1.3**
IDI	**Anoyia**	**1.55**	**274**	P		**Pn**	**10 41 58.8**	**+2.0**
IDI	**Anoyia**	**1.55**	**274**	PN		**Pn**	**10 41 58.2**	**+1.4**
KOSK	**Kos Island**	**1.56**	**6**	PN		**Pn**	**10 41 57.6**	**+0.7**
SANT	**Santorini**	**1.59**	**318**	PN		**Pn**	**10 41 57.9**	**+0.6**
THR8	**Santorini-Mono**	**1.60**	**319**	P		**Pn**	**10 41 58.8**	**+1.3**
THR6	**Thira Island,**	**1.61**	**316**	P		**Pn**	**10 41 58.8**	**+1.2**
THR6	**Thira Island,**	**1.61**	**316**	P		**Pn**	**10 41 58.4**	**+0.8**
SIVA	**Sivas**	**1.63**	**264**	P		**Pn**	**10 42 00.1**	**+2.3**
SIVA				AML		AML	10 42 27.9	
	comp=N,4141μm,0.7s							
SIVA				AML		AML	10 42 39.3	
	comp=E,4380μm,0.8s							
THR9	**Santorini-Faro**	**1.64**	**315**	P		**Pn**	**10 41 59.5**	**+1.6**
THT2	**Imerovigli**	**1.66**	**319**	PN		**Pn**	**10 41 58.9**	**+0.7**
SAP3	**Santorini-Thir**	**1.70**	**317**	P		**Pn**	**10 42 00.4**	**+1.6**
BODT	**Bodrum**	**1.91**	**13**	PN		**Pn**	**10 42 02.2**	**+0.5**
BDRM	**Kayabasi**	**1.94**	**16**	*i* P		**Pn**	**10 42 02.7**	**+0.5**
BDRM				*i* S		**Sn**	**10 42 26.8**	**+0.5**
BDRM				IAML			10 42 39.0	
	comp=N,110nm,0.7s							
TURN	**Turunc**	**1.97**	**37**	*i* P		**Pn**	**10 42 04.4**	**+1.8**
TURN				IAML			10 42 37.0	
	comp=E,205nm,1.1s							
TURN				IAML			10 42 44.0	
	comp=N,120nm,0.5s							
TURN	**Turunc**	**1.97**	**37**	PN		**Pn**	**10 42 04.3**	**+1.8**
VAM	**Vamos**	**2.12**	**276**	P		**Pb**	**10 42 08.7**	**+0.8**
APE	**Apeiranthos**	**2.12**	**332**	P		**Pn**	**10 42 05.5**	**+0.8**
APE				AML		AML	10 42 37.9	
	comp=N,959μm,0.9s							
APE				AML		AML	10 42 42.6	
	comp=E,657μm,0.5s							
APE	**Apeiranthos**	**2.12**	**332**	P		**Pn**	**10 42 05.5**	**+0.8**
APE				S		**Sn**	**10 42 33.1**	**+2.3**
	comp=E,400nm,0.7s							
APE	**Apeiranthos**	**2.12**	**332**	PN		**Pn**	**10 42 05.5**	**+0.8**
DALY	**Dalyan (Mula)**	**2.22**	**43**	*i* P		**Pb**	**10 42 09.2**	**-0.2**
DALY				IAML			10 42 51.0	
	comp=N,166nm,1.0s							
DALY				IAML			10 42 55.0	
	comp=E,169nm,1.3s							
DALY	**Dalyan (Mula)**	**2.22**	**43**	PN		**Pn**	**10 42 07.9**	**+2.0**
GVDS	**Gavdos**	**2.24**	**262**	PN		**Pn**	**10 42 08.4**	**+2.2**
GVD	**Gavdhos**	**2.24**	**262**	PN		**Pn**	**10 42 08.5**	**+2.2**
YER	**Yerkesik**	**2.28**	**32**	PN		**Pn**	**10 42 08.4**	**+1.5**
DDIM	**Aydin, Didim**	**2.28**	**9**	*i* P		**Pb**	**10 42 10.4**	**-0.3**
DDIM				*i* S		**Sb**	**10 42 38.9**	**+0.3**
DDIM				IAML			10 43 09.0	
	comp=N,163nm,1.5s							
DDIM				IAML			10 43 09.0	
	comp=E,195nm,0.9s							
IMMV	**Iera Moni Meta**	**2.31**	**277**	P		**Pb**	**10 42 11.1**	**+0.1**
IMMV	**Iera Moni Meta**	**2.31**	**277**	PN		**Pn**	**10 42 08.7**	**+1.6**
FETY	**Fethiye**	**2.35**	**52**	PN		**Pn**	**10 42 09.9**	**+2.0**
MHLO	**Agia Marina, M**	**2.44**	**308**	P		**Pb**	**10 42 12.6**	**-0.6**
AKAS	**Kas**	**2.52**	**65**	*i* S		**Sn**	**10 42 42.4**	**+1.7**
AYDN	**Tasoluk**	**2.61**	**19**	*i* P		**Pn**	**10 42 14.6**	**+3.1**
AYDN				*i* S		**Sn**	**10 42 44.3**	**+1.4**
TAVA	**DENIZLI_Tavas**	**2.84**	**37**	*i* P		**Pn**	**10 42 16.8**	**+2.1**
TAVA				IAML			10 43 02.0	
	comp=N,111nm,1.2s							
AYDB	**Zeytinkoy-Aydi**	**2.88**	**18**	PN		**Pn**	**10 42 16.8**	**+1.6**
GOLH	**Golhisar**	**3.03**	**47**	*i* P		**Pn**	**10 42 18.9**	**+1.7**
GOLH				IAML			10 43 20.0	
	comp=N,105nm,0.9s							
URLA	**Izmir**	**3.16**	**357**	PN		**Pn**	**10 42 18.7**	**-0.2**
KTHA	**Kythira Island**	**3.21**	**290**	PN		**Pn**	**10 42 21.3**	**+1.8**
CHOS	**Chios island**	**3.23**	**350**	PN		**Pn**	**10 42 21.0**	**+1.0**
KORT	**Korkueli**	**3.40**	**57**	*i* P		**Pn**	**10 42 23.1**	**+0.7**
KORT				*i* S		**Sn**	**10 43 02.5**	**-0.1**
KORT				IAML			10 43 09.0	
	comp=E,53nm,0.6s							
KORT				IAML			10 43 19.0	
	comp=N,54nm,0.7s							
BRDR	**BURDUR-Merkez**	**3.63**	**46**	*i* P		**Pn**	**10 42 29.4**	**+3.9**
BRDR				IAML			10 43 37.0	
	comp=E,41nm,0.8s							
KEPZ	**Antalya-Kepez**	**4.26**	**65**	*i* P		**Pn**	**10 42 35.2**	**+1.1**
KEPZ				*i* S		**Sn**	**10 43 24.5**	**+0.9**
KEPZ				IAML			10 43 37.0	
	comp=E,26nm,1.0s							
KEPZ				IAML			10 43 37.0	
	comp=N,20nm,1.7s							
BRTR	**Keskin Array B**	**7.08**	**48**	Pn		**Pn**	**10 43 14.7**	**+1.8**
	comp=N,0.1nm,0.3s,baz=232,slow=14,SNR=3.0							
AKASG	**Malin Array Be**	**15.60**	**6**	Pn		**Pn**	**10 45 09.4**	**+0.5**
	comp=N,0.7nm,0.3s,baz=193,slow=11,SNR=5.0							
ESDC	**Sonseca Array**	**24.75**	**290**	P		**P**	**10 46 48.7**	**-2.0**
	comp=N,0.7nm,0.7s,baz=88,slow=8.0,SNR=5.5							
TORD	**Torodi Ar. Bea**	**31.55**	**232**	P		**P**	**10 47 50.2**	**-1.3**
	comp=N,0.6nm,0.5s,baz=31,slow=9.0,SNR=6.7							
MKAR	**Makanchi Array**	**42.64**	**57**	P		**P**	**10 49 25.1**	**-0.4**
	comp=N,0.6nm,0.5s,baz=273,slow=7.0,SNR=7.7							
ZALV	**Zalesovo Beam**	**44.02**	**46**	P		**P**	**10 49 35.3**	**-1.1**
	comp=N,0.5nm,0.5s,baz=270,slow=7.2,SNR=2.3							
YKA	**Yellowknife Ar**	**77.81**	**343**	P		**P**	**10 53 24.8**	**-1.2**
	comp=N,0.2nm,0.8s,baz=40,slow=5.0,SNR=3.0							

*IDC **21** 10:47:26.2±1.1,37°.07N×142°.32E,h0km,mb3.3/5, mb1 3.6/8,mb1mx3.4/47,mbtmp3.4/8,ML3.0/3,MS2.7/2, Ms1 2.7/2,ms1mx2.2/32,Error ellipse: s-maj=30.1km s-min=18.5km az=118.0*
*JMA **21** 10:47:30.9±0.1,37°.33N×141°.89E,h40km±4km,M3.4*
ISC 21 10:47:27.3±2.0,37°.29N±0°.04×142°.01E±0°.07,h6km±11km, n20,σ1s57/31,mb3.6/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JFK	**Kawauchi**	**0.91**	**275**	P		**Pb**	**10 47 46.0**	**+0.5**
JFK				S		**Sg**	**10 47 56.4**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.99**	**259**	P		**Pg**	**10 47 47.2**	**+1.0**
ONAJ				S		**Sg**	**10 47 58.5**	**-0.5**
JMST	**Minamisoumatoc**	**0.99**	**296**	P		**Pg**	**10 47 47.0**	**+0.7**
JMST				S		**Sg**	**10 47 58.3**

NVAR	**Mina Array Bea**	**60.30**	**64**	P		**P**	**11 06 31.1**	**+0.9**
	0.3nm,0.7s,baz=297,slow=7.5,SNR=3.8							
FINES	**FINESS Array B**	**64.45**	**336**	P		**P**	**11 06 56.4**	**-1.0**
	0.6nm,0.5s,baz=18,slow=10,SNR=1.9							
WRA	**Warramunga Arr**	**69.75**	**202**	P		**P**	**11 07 31.2**	**-0.2**
	0.4nm,0.7s,baz=28,slow=4.7,SNR=2.1							
ASAR	**Alice Springs**	**73.42**	**201**	P		**P**	**11 07 54.5**	**+0.9**
	0.3nm,0.7s,baz=18,slow=5.5,SNR=4.3							
TXAR	**Lajitas Array**	**75.37**	**63**	P		**P**	**11 08 05.7**	**+0.5**
	0.6nm,0.6s,baz=305,slow=4.4,SNR=13							

*IDC **21** 11:03:55.7±1.9, 17°.54S×178°.78W, h616^{km}±19^{km}, mb3.1/9, mb1 3.5/10, mb1mx3.1/42, mbtmp4.0/10, Error ellipse: s-maj=73.8km s-min=14.9km az=151.0*

*NEIC **21** 11:03:55.7±0.9, 17°.5S±0°.1×178°.8W±0°.2, h617^{km}±9^{km}, mb4.2/11, Error ellipse: s-maj=26.1km s-min=19.1km az=120.0*

ISC 21 11:03:54.2±1.2,**17°.6S**±0°.4×**178°.7W**±0°.2,**h600^{km}, n28,** σ**0^{s}.85/28, mb3.8**/15,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.11**	**266**	P		**P**	**11 05 16.5**	**+2.5**
	7.2nm,0.3s,baz=74,slow=1.8,SNR=37							
MSVF	**Nonsavu**	**3.11**	**266**	P		**P**	**11 05 16.1**	**+2.1**
COEN	**Coen**	**36.83**	**270**	P		**P**	**11 10 13.0**	**-0.3**
STKA	**Stephens Creek**	**38.56**	**241**	P		**P**	**11 10 26.8**	**-0.4**
	2.1nm,0.9s,baz=56,slow=15,SNR=3.0							
STKA	**Stephens Creek**	**38.56**	**241**	P		**P**	**11 10 27.2**	**+0.1**
BBOO	**Buckleboo**	**43.34**	**241**	P		**P**	**11 11 04.3**	**-0.6**
BBOO				IAmb	IAmb	11 11 04.9		
	comp=Z,15nm,1.2s							
WR0	**Warramunga Arr**	**44.23**	**259**	P		**P**	**11 11 10.5**	**-1.4**
WR0				IAmb	IAmb	11 11 27.8		
	comp=Z,19nm,1.5s							
WB0	**Warramunga Arr**	**44.39**	**259**	P		**P**	**11 11 13.3**	**+0.1**
WB0				IAmb	IAmb	11 11 16.2		
	comp=Z,10nm,1.4s							
WB2	**Warramunga Arr**	**44.41**	**259**	P		**P**	**11 11 12.4**	**-0.9**
WRA	**Warramunga Arr**	**44.42**	**259**	P		**P**	**11 11 13.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=96,slow=6.9,SNR=14							
AS31	**Alice Springs**	**44.62**	**254**	P		**P**	**11 11 15.0**	**+0.1**
ASAR	**Alice Springs**	**44.62**	**254**	P		**P**	**11 11 14.8**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=87,slow=8.7,SNR=89							
ASAR				PcP		**PcP**	**11 12 43.7**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=103,slow=3.7,SNR=5.9							
ASAR	**Alice Springs**	**44.62**	**254**	P		**P**	**11 11 14.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**52.81**	**260**	P		**P**	**11 12 15.0**	**-0.3**
	comp=Z,3.1nm,1.0s,baz=96,slow=18,SNR=1.3							
FITZ	**Fitzroy Crossi**	**52.81**	**260**	IAmb	IAmb	11 12 31.2		
	comp=Z,26nm,1.4s							
NVAR	**Mina Array Bea**	**79.36**	**44**	P		**P**	**11 14 59.7**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=225,slow=8.8,SNR=14							
MOD	**Modoc Plateau**	**80.00**	**40**	P		**P**	**11 15 02.6**	**+0.1**
MOD				IAmb	IAmb	11 15 03.8		
	comp=Z,3.3nm,0.8s							
ILAR	**Eielson Array**	**85.61**	**13**	P		**P**	**11 15 29.4**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=219,slow=5.0,SNR=19							
TX31	**Lajitas Ar. Si**	**86.04**	**58**	P		**P**	**11 15 33.4**	**+0.6**
TX31				IAmb	IAmb	11 15 34.1		
	comp=Z,6.3nm,0.9s							
TX32	**Lajitas Array**	**86.04**	**58**	P		**P**	**11 15 33.2**	**+0.4**
TX32				IAmb	IAmb	11 15 34.0		
	comp=Z,2.1nm,0.9s							
TXAR	**Lajitas Array**	**86.04**	**58**	P		**P**	**11 15 33.6**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=220,slow=6.0,SNR=20							
TXAR	**Lajitas Array**	**86.04**	**58**	P		**P**	**11 15 33.2**	**+0.4**
PDAR	**Pinedale Array**	**87.29**	**44**	P		**P**	**11 15 38.5**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=224,slow=4.1,SNR=9.4							
YKA	**Yellowknife Ar**	**94.13**	**25**	P		**P**	**11 16 08.7**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=236,slow=4.4,SNR=6.1							
ARCES	**ARCESS Array B**	**125.92**	**350**	PKP		**PKPdf**	**11 21 47.3**	**-1.0**
	comp=Z,7.2nm,1.2s,baz=350,slow=6.3,SNR=3.7							
BRTR	**Keskin Array B**	**144.34**	**315**	PKP		**PKPdf**	**11 22 22.9**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=130,slow=3.0,SNR=3.7							
CLL	**Colln**	**145.06**	**347**	*e*PKPbc		**PKPbc**	**11 22 25.0**	**0.0**
GERES	**GERESS Array B**	**147.20**	**345**	PKPbc		**PKPbc**	**11 22 31.3**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=29,slow=3.0,SNR=8.0							

*BJI **21** 11:06:01.0±0.0, 23°.92N×122°.57E, h7^{km}, mB4.5/9, mb4.1/17, Ms3.8/4, Ms7 3.5/5*

*NEIC **21** 11:06:03.9±1.8, 23°.88N±0°.03×122°.55E±0°.04, h17^{km}±5^{km}, mb4.3/24, Error ellipse: s-maj=6.4km s-min=3.7km az=129.0*

*TAP **21** 11:06:05.4, 23°.96N×122°.53E, h27^{km}, ML4.3, D*

*JMA **21** 11:06:05.3±0.2, 23°.94N×122°.51E, h26^{km}±4^{km}, M3.7*

*NIED **21** 11:06:05.4, 23°.94N×122°.51E, h26^{km}, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.25; $M_{\theta\theta}$-0.37; $M_{\phi\phi}$0.12; $M_{r\theta}$1.03; $M_{\theta\phi}$0.06; $M_{r\phi}$0.49; Fault plane solution: $M_0$1.19000×10^{15} NP1:ϕ_s66.00000°, δ84.00000°, λ79.00000°. NP2:ϕ_s307.00000°, δ13.00000°, λ151.00000°.*

*IDC **21** 11:06:06.1±5.7, 24°.13N×122°.72E, h33^{km}±45^{km}, mb3.6/16, mb1 3.8/18, mb1mx3.7/49, mbtmp3.8/18, ML3.5/2, MS3.0/4, Ms1 3.1/4, ms1mx2.7/50 Error ellipse: s-maj=23.2km s-min=14.4km az=71.0*

ISC 21 11:06:04.7±1.1,**23°.90N**±0°.02×**122°.53E**±0°.02,**h23^{km}**±8^{km}, **n216,** σ**0^{s}.95/363, mb4.1**/28,**1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.67**	**35**	P	**Pb**	**11 06 17.7**	**-0.1**
JYNG				S	**Sb**	**11 06 25.9**	**-0.7**
YOJ	**Yonaguni jima**	**0.71**	**38**	P	**Pb**	**11 06 18.6**	**+0.1**
YOJ				S	**Sb**	**11 06 27.2**	**-0.7**
YOJ	**Yonaguni jima**	**0.71**	**38**	*i* P	**Pb**	**11 06 18.6**	**+0.1**
	baz=47						
YOJ				*i* S	**Sb**	**11 06 27.4**	**-0.6**
	baz=47						
YOJ	**Yonaguni jima**	**0.71**	**38**		**Pb**	**11 06 18.6**	**+0.1**
YOJ				Sg	**Sb**	**11 06 27.5**	**-0.4**
HWA	**Hwalien**	**0.84**	**275**	P	**Pb**	**11 06 21.1**	**+0.3**
	baz=259						
HWA				S	**Sn**	**11 06 32.9**	**0.0**
	baz=259						
TWD	**Chiawan**	**0.87**	**282**	P	**Pb**	**11 06 21.2**	**0.0**
	baz=279						
TWD				S	**Sb**	**11 06 32.6**	**+0.3**
	baz=279						
EWUT	**Wuta**	**0.87**	**309**	*i* P	**Pb**	**11 06 21.2**	**0.0**
	baz=306						
EWUT				S	**Sn**	**11 06 33.7**	**+0.2**
	baz=306						
NACB	**Ninganchiao**	**0.89**	**288**	*i* P	**Pb**	**11 06 21.5**	**0.0**
	baz=270						
NACB				S	**Sb**	**11 06 33.6**	**+0.4**
	baz=270						
NACB	**Ninganchiao**	**0.89**	**288**		**Pb**	**11 06 21.4**	**-0.2**
NACB				Sg	**Sb**	**11 06 33.5**	**+0.4**
TWC	**Suao**	**0.94**	**319**	*i* P	**Pb**	**11 06 22.1**	**-0.2**
	baz=317						
TWC				*i* S	**Sb**	**11 06 33.9**	**-0.5**
	baz=317						
ETLH	**Xiulin Townshi**	**1.00**	**288**	P	**Pn**	**11 06 23.4**	**-0.1**
	baz=272						
ETLH				S	**Sb**	**11 06 36.6**	**+0.3**
	baz=272						
ESL	**Shilin**	**1.00**	**265**	*i* P	**Pn**	**11 06 22.6**	**-0.8**
	baz=262						
ESL				S	**Sb**	**11 06 36.3**	**+0.1**
	baz=262						
EGFH	**Guangfu**	**1.03**	**257**	P	**Pn**	**11 06 23.8**	**0.0**
	baz=255						
EGFH				*e*S	**Sn**	**11 06 37.5**	**0.0**
	baz=255						
NDS	**Dongshan**	**1.04**	**315**	*i* P	**Pb**	**11 06 24.0**	**0.0**
	baz=313						
NDS				S	**Sb**	**11 06 36.8**	**-0.5**
	baz=313						
HGSD	**Ruisui**	**1.09**	**248**	P	**Pn**	**11 06 24.2**	**-0.3**
	baz=246						
HGSD				S	**Sb**	**11 06 37.8**	**-0.9**
	baz=246						
ILA	**Ilan**	**1.12**	**321**	*i* P	**Pb**	**11 06 25.7**	**+0.4**
	baz=308						
ILA				S	**Sn**	**11 06 40.9**	**+1.3**
	baz=308						
TWE	**Neicheng**	**1.13**	**316**	*i* P	**Pb**	**11 06 25.9**	**+0.2**
	baz=315						
TWE				S	**Sb**	**11 06 40.1**	**+0.2**
	baz=315						
NTC	**Toucheng**	**1.14**	**326**	P	**Pb**	**11 06 25.8**	**0.0**
	baz=325						
NTC				S	**Sb**	**11 06 40.9**	**+0.6**
	baz=325						
ENTT	**Nioudou**	**1.14**	**310**	*i* P	**Pb**	**11 06 26.0**	**+0.1**
	baz=294						
ENTT				S	**Sb**	**11 06 41.3**	**+1.0**
	baz=294						
NDT	**Datong Townshi**	**1.16**	**307**	P	**Pb**	**11 06 26.2**	**+0.1**
	baz=292						
NDT				S	**Sb**	**11 06 41.3**	**+0.6**
	baz=292						
NNSH	**Datong**	**1.17**	**297**	P	**Pb**	**11 06 26.4**	**0.0**
	baz=295						
NNSH				*i* S	**Sb**	**11 06 41.2**	**+0.1**
	baz=295						
NNSB	**Datong**	**1.17**	**297**	*i* P	**Pb**	**11 06 26.2**	**-0.1**
	baz=295						
NNSB				S	**Sb**	**11 06 41.1**	**0.0**
	baz=295						
WHF	**Hehuan Shan**	**1.18**	**282**	*i* P	**Pn**	**11 06 26.1**	**-0.1**
	baz=280						
WHF				S	**Sb**	**11 06 42.0**	**+0.3**
	baz=280						
HATJ	**Hateruma jima**	**1.18**	**82**	P	**Pb**	**11 06 26.7**	**+0.2**
HATJ				S	**Sb**	**11 06 41.9**	**+0.6**
NNS	**Nan Shan**	**1.18**	**297**	*i* P	**Pb**	**11 06 26.3**	**-0.2**
	baz=295						
NNS				S	**Sb**	**11 06 41.9**	**+0.4**
	baz=295						
IRIF	**Iriomote-Funau**	**1.18**	**68**	P	**Pb**	**11 06 27.0**	**+0.5**
TWB1	**Santiao Chiao**	**1.21**	**336**	P	**Pb**	**11 06 26.5**	**-0.4**
	baz=352						
TWB1				S	**Sb**	**11 06 42.3**	**+0.2**
	baz=352						
FUSS	**Fushou**	**1.22**	**287**	*i* P	**Pb**	**11 06 27.1**	**-0.2**
	baz=284						
FUSS				S	**Sb**	**11 06 43.1**	**+0.4**
	baz=284						
YULB	**Yu-li**	**1.23**	**246**	P	**Pn**	**11 06 26.8**	**+0.3**
	baz=244						
YULB				*e*S	**Sn**	**11 06 42.1**	**-0.4**
	baz=244						
YULB	**Yu-li**	**1.23**	**246**	Pn	**Pn**	**11 06 26.9**	**+0.3**
YULB				Sn	**Sn**	**11 06 42.6**	**+0.1**
EYUL	**Yuli**	**1.23**	**244**	*e*P	**Pn**	**11 06 26.8**	**+0.2**
	baz=242						
EYUL				S	**Sb**	**11 06 43.3**	**+0.4**
	baz=242						
OWD	**Renai**	**1.24**	**273**	P	**Pn**	**11 06 26.9**	**+0.1**
	baz=270						
OWD				S	**Sn**	**11 06 42.1**	**-0.6**
	baz=270						
TIPB	**Shuangxi**	**1.24**	**329**	*i* P	**Pb**	**11 06 27.3**	**-0.3**
	baz=328						
TIPB				S	**Sb**	**11 06 43.9**	**+0.7**
	baz=328						
CHGB	**Renai**	**1.25**	**278**	*i* P	**Pn**	**11 06 27.2**	**+0.3**
	baz=275						
CHGB				S	**Sn**	**11 06 43.1**	**-0.1**
	baz=275						
TWF1	**Yuli**	**1.25**	**244**	P	**Pn**	**11 06 27.1**	**+0.2**
	baz=242						
TWF1				*e*S	**Sn**	**11 06 42.7**	**-0.3**
	baz=242						
VWDT	**VWDT**	**1.28**	**264**	P	**Pn**	**11 06 27.7**	**+0.5**
	baz=261						
VWDT				*e*S	**Sn**	**11 06 43.8**	**+0.3**
	baz=261						
NWLT	**Wulai**	**1.28**	**313**	*i* P	**Pb**	**11 06 28.1**	**-0.1**
	baz=298						
NWLT				S	**Sb**	**11 06 44.6**	**+0.4**
	baz=298						
TWT	**Tachien**	**1.28**	**286**	*i* P	**Pb**	**11 06 28.2**	**-0.1**
	baz=271						
TWT				S	**Sb**	**11 06 44.6**	**+0.2**
	baz=271						
TDCB	**Techi**	**1.30**	**286**	*i* P	**Pn**	**11 06 28.1**	**+0.5**
	baz=272						
TDCB				S	**Sn**	**11 06 44.2**	**-0.1**
	baz=272						
YHNB	**Yeheng**	**1.30**	**306**	*i* P	**Pb**	**11 06 28.3**	**-0.2**
	baz=305						
YHNB				S	**Sn**	**11 06 44.5**	**+0.2**
	baz=305						
YHNB	**Yeheng**	**1.30**	**306**	Pn	**Pn**	**11 06 27.6**	**+0.1**
YHNB				Sn	**Sn**	**11 06 44.5**	**+0.2**
FULB	**Fuli**	**1.33**	**239**	*i* P	**Pn**	**11 06 27.6**	**-0.3**
	baz=225						
FULB				S	**Sn**	**11 06 44.6**	**-0.3**
	baz=225						
CHKT	**Chengkung**	**1.33**	**233**	P	**Pn**	**11 06 27.4**	**-0.4**
	baz=220						
CHKT				*i* S	**Sn**	**11 06 42.8**	**-2.1**
	baz=220						
NWF	**Wu-fen Shan**	**1.35**	**330**	*i* P	**Pn**	**11 06 28.6**	**+0.4**
	baz=328						
WFSB	**Wu-fen Shan**	**1.35**	**330**	*i* P	**Pn**	**11 06 28.7**	**+0.5**
	baz=329						
WFSB				S	**Sb**	**11 06 47.0**	**+0.8**
	baz=329						
TWA	**Mucha**	**1.38**	**322**	P	**Pb**	**11 06 29.6**	**-0.2**
	baz=321						
TWA				S	**Sb**	**11 06 48.5**	**+1.5**
	baz=321						
NHDH	**Xindian Distri**	**1.40**	**319**	P	**Pb**	**11 06 30.0**	**-0.1**
	baz=318						
NHDH				S	**Sb**	**11 06 48.3**	**+0.8**
	baz=318						
JKRS	**Kuro-shima**	**1.40**	**76**	P	**Pb**	**11 06 29.9**	**-0.2**
JKRS				S	**Sb**	**11 06 48.2**	**+0.7**
TNOU	**National Taiwa**	**1.42**	**331**	P	**Pn**	**11 06 29.2**	**0.0**
	baz=330						
TNOU				S	**Sb**	**11 06 47.8**	**-0.4**
	baz=330						
TATO	**Taipei**	**1.43**	**319**	P	**Pb**	**11 06 30.3**	**-0.4**
	baz=318						
TATO				S	**Sb**	**11 06 48.3**	**-0.1**
	baz=318						
TATO	**Taipei**	**1.43**	**319**	Pn	**Pb**	**11 06 30.3**	**-0.4**
TATO				Sn	**Sb**	**11 06 49.6**	**+1.2**
WPL	**Puli Township**	**1.44**	**275**	*e*P	**Pn**	**11 06 30.0**	**+0.6**
	baz=263						
WPL				*e*S	**Sn**	**11 06 48.0**	**+0.4**
	baz=263						
SSLB	**Suanglung**	**1.44**	**266**	P	**Pn**	**11 06 29.9**	**+0.4**
	baz=264						
SSLB				*e*S	**Sn**	**11 06 48.3**	**+0.5**
	baz=264						
SSLB	**Suanglung**	**1.44**	**266**	Pn	**Pn**	**11 06 29.5**	**0.0**
EDH	**Donghe**	**1.45**	**231**	*e*P	**Pn**	**11 06 29.2**	**-0.4**
	baz=219						
EDH				S	**Sn**	**11 06 46.5**	**-1.4**
	baz=219						
TAP	**Taipei**	**1.47**	**321**	P	**Pb**	**11 06 31.2**	**-0.1**
	baz=320						
TAP				S	**Sb**	**11 06 49.6**	**+0.1**
	baz=320						
DPDB	**Guoxing**	**1.47**	**276**	P	**Pn**	**11 06 30.5**	**+0.7**
	baz=265						
DPDB				*e*S	**Sb**	**11 06 49.8**	**+0.2**
	baz=265						
BACT	**New Taipei Cit**	**1.47**	**318**	*e*P	**Pb**	**11 06 30.8**	**-0.7**
	baz=317						
BACT				*e*S	**Sb**	**11 06 50.1**	**+0.3**
	baz=317						
SMLT	**Sun Moon Lake**	**1.49**	**270**	P	**Pn**	**11 06 31.0**	**+0.9**
	baz=268						
SMLT				S	**Sb**	**11 06 49.9**	**-0.3**
	baz=268						
WHP	**Taichung City**	**1.49**	**285**	P	**Pb**	**11 06 31.5**	**-0.3**
	baz=272						
WHP				S	**Sb**	**11 06 50.8**	**+0.5**
	baz=272						
YUS	**Yu-Shan**	**1.50**	**254**	P	**Pn**	**11 06 31.4**	**+0.8**
	baz=253						
YUS				S	**Sn**	**11 06 49.8**	**+0.1**
	baz=253						
YM01	**YM01**	**1.52**	**325**	*e*P	**Pn**	**11 06 30.9**	**+0.4**
	baz=324						
YM01				S	**Sn**	**11 06 49.7**	**+0.2**
	baz=324						
NWRT	**Kuosheng**	**1.52**	**329**	*e*P	**Pn**	**11 06 31.1**	**+0.6**
	baz=328						
NWRT				*e*S	**Sn**	**11 06 50.0**	**+0.4**
	baz=328						
TYC	**Yuchr**	**1.53**	**270**	P	**Pn**	**11 06 31.5**	**+1.0**
	baz=269						
TYC				S	**Sn**	**11 06 50.5**	**+0.7**
	baz=269						
YM10	**YM10**	**1.53**	**325**	*i* P	**Pn**	**11 06 31.0**	**+0.3**
	baz=324						
YM10				S	**Sb**	**11 06 51.6**	**+0.3**
	baz=324						
YM11	**YM11**	**1.53**	**326**	*e*P	**Pn**	**11 06 31.1**	**+0.4**
	baz=325						
YM11				*e*S	**Sb**	**11 06 50.6**	**-0.8**
	baz=325						
YM05	**YM05**	**1.53**	**325**	P	**Pn**	**11 06 30.9**	**+0.2**
	baz=323						
YM04	**YM04**	**1.54**	**324**	P	**Pn**	**11 06 31.1**	**+0.3**
	baz=323						
YM04				*i* S	**Sn**	**11 06 50.6**	**+0.5**
	baz=323						
YM08	**YM08**	**1.54**	**327**	*e*P	**Pn**	**11 06 31.4**	**+0.6**
	baz=326						
YM08				*e*S	**Sn**	**11 06 50.5**	**+0.4**
	baz=326						
WHYT	**Xinyi Township**	**1.54**	**263**	*e*P	**Pn**	**11 06 31.5**	**+0.6**
	baz=249						
WHYT				*e*S	**Sb**	**11 06 51.3**	**-0.5**
	baz=249						
JIJ	**Ishigaki jima**	**1.55**	**72**	P	**Pn**	**11 06 31.4**	**+0.5**
JIJ				*e*S	**Sn**	**11 06 50.6**	**+0.3**
NJD	**Zhudong**	**1.55**	**303**	P	**Pb**	**11 06 32.8**	**-0.1**
	baz=301						
NJD				S	**Sb**	**11 06 53.2**	**+1.2**
	baz=301						
YM03	**YM03**	**1.56**	**325**	P	**Pn**	**11 06 31.7**	**+0.6**
	baz=324						
YM03				*e*S	**Sn**	**11 06 51.0**	**+0.4**
	baz=324						
LDUT	**Ludao**	**1.56**	**219**	*e*P	**Pn**	**11 06 30.6**	**-0.5**
	baz=218						
LDUT				S	**Sn**	**11 06 49.1**	**-1.5**
	baz=218						
TWS1	**Kuangyinshan**	**1.56**	**320**	P	**Pb**	**11 06 32.1**	**-0.9**
	baz=336						
TWS1				S	**Sb**	**11 06 53.3**	**+1.0**
	baz=336						
LIOB	**Emei**	**1.56**	**299**	P	**Pb**	**11 06 33.1**	**+0.1**
	baz=297						
LIOB				S	**Sb**	**11 06 53.2**	**+0.8**
	baz=297						
NTY	**Taoyuan**	**1.56**	**315**	P	**Pb**	**11 06 32.4**	**-0.6**
	baz=313						
NTY				*e*S	**Sb**	**11 06 53.2**	**+0.8**
	baz=313						
NSTT	**Nanjuang**	**1.57**	**298**	P	**Pb**	**11 06 33.2**	**+0.1**
	baz=296						
NSTT				S	**Sb**	**11 06 52.2**	**-0.3**
	baz=296						
ANP	**Anpu**	**1.57**	**325**	*e*P	**Pn**	**11 06 31.8**	**+0.5**
	baz=324						
ANP				*e*S	**Sn**	**11 06 51.5**	**+0.4**
	baz=324						
TWY	**Chenhua**	**1.61**	**329**	P	**Pn**	**11 06 32.5**	**+0.8**
	baz=328						
TWY				*e*S	**Sb**	**11 06 52.7**	**-1.0**
	baz=328						
LONT	**Longtian**	**1.62**	**233**	P	**Pn**	**11 06 32.1**	**+0.2**
	baz=221						
LONT				S	**Sn**	**11 06 52.5**	**+0.4**
	baz=221						
NCU	**National Centr**	**1.62**	**311**	P	**Pn**	**11 06 32.8**	**+0.9**
	baz=310						
NCU				S	**Sb**	**11 06 54.1**	**+0.1**
	baz=310						
NCUH	**Zhongli**	**1.62**	**311**	*e*P	**Pb**	**11 06 33.0**	**-1.0**
	baz=310						
NCUH				*e*S	**Sb**	**11 06 54.7**	**+0.7**
	baz=310						
ALS	**Alishan**	**1.62**	**257**	P	**Pb**	**11 06 33.6**	**-0.6**
	baz=255						
ALS				S	**Sn**	**11 06 53.1**	**+0.6**
	baz=255						
HSN1	**Hsinchu**	**1.63**	**303**	*e*P	**Pb**	**11 06 33.8**	**-0.3**
	baz=301						
HSN1				*e*S	**Sb**	**11 06 54.2**	**0.0**
	baz=301						
WJS	**Zhushan**	**1.65**	**268**	P	**Pb**	**11 06 34.5**	**+0.1**
	baz=266						
WJS				S	**Sb**	**11 06 56.3**	**+1.6**
	baz=266						
SBCB	**Hsinchu**	**1.66**	**303**	P	**Pb**	**11 06 34.0**	**-0.7**
	baz=302						
SBCB				*e*S	**Sb**	**11 06 56.5**	**+1.3**
	baz=302						
TWQ1	**Liyutan**	**1.66**	**286**	P	**Pb**	**11 06 34.7**	**0.0**
	baz=284						
TWQ1				S	**Sb**	**11 06 55.9**	**+0.7**
	baz=284						
WWF	**Wufeng**	**1.68**	**275**	P	**Pb**	**11 06 35.5**	**+0.6**
	baz=264						
WWF				*e*S	**Sb**	**11 06 56.7**	**+1.1**
	baz=264						
HSN	**Hsinchu**	**1.68**	**303**	*e*P	**Pn**	**11 06 33.8**	**+1.1**
	baz=303						
HSN				*e*S	**Sb**	**11 06 56.0**	**+0.4**
	baz=303						
WNT	**Mingjian**	**1.69**	**270**	P	**Pb**	**11 06 35.1**	**0.0**
	baz=268						
WNT				*e*S	**Sb**	**11 06 56.4**	**+0.5**
	baz=268						
WNT1	**Nantou City**	**1.69**	**271**	P	**Pb**	**11 06 35.5**	**+0.4**
	baz=269						
WNT1				S	**Sb**	**11 06 57.2**	**+1.3**
	baz=269						
NSY	**Sanyi**	**1.69**	**288**	P	**Pb**	**11 06 35.3**	**+0.1**
	baz=287						
NSY				S	**Sb**	**11 06 56.9**	**+0.8**
	baz=287						
NJN	**Zhunan**	**1.70**	**298**	*e*P	**Pn**	**11 06 33.9**	**+0.9**
	baz=296						
NJN				*e*S	**Sb**	**11 06 56.6**	**+0.3**
	baz=296						
TTN	**Taitung**	**1.70**	**228**	*e*P	**Pn**	**11 06 33.5**	**+0.5**
	baz=227						
TTN				*e*S	**Sn**	**11 06 54.2**	**+0.1**
	baz=227						
NMLH	**Miaoli**	**1.71**	**292**	P	**Pb**	**11 06 35.1**	**-0.3**
	baz=291						
NMLH				*e*S	**Sb**	**11 06 56.9**	**+0.4**
	baz=291						
TCU	**Taichung**	**1.71**	**279**	P	**Pb**	**11 06 35.5**	**+0.1**
	baz=277						
TCU				S	**Sb**	**11 06 56.8**	**+0.3**
	baz=277						
TWGBT	**Beinan**	**1.71**	**231**	*e*P	**Pn**	**11 06 33.0**	**-0.1**
	baz=220						
TWGBT				*e*S	**Sn**	**11 06 54.9**	**+0.6**
	baz=220						
TWG	**Pinlang**	**1.71**	**231**	*e*P	**Pn**	**11 06 33.2**	**0.0**
	baz=220						
TWG				*e*S	**Sn**	**11 06 53.9**	**-0.5**
	baz=220						
TWG	**Pinlang**	**1.71**	**231**		**Pn**	**11 06 33.0**	**-0.2**
CHN5	**Tsauling**	**1.72**	**260**	P	**Pb**	**11 06 35.3**	**-0.4**
	baz=248						
CHN5				*e*S	**Sb**	**11 06 57.3**	**+0.4**
	baz=248						
STYH	**Taoyuan**	**1.76**	**246**	P	**Pn**	**11 06 35.1**	**+1.3**
	baz=235						
STYH				*e*S	**Sn**	**11 06 56.4**	**+0.9**
	baz=235						
JISG	**Ishigakijimahi**	**1.77**	**67**	P	**Pn**	**11 06 34.3**	**+0.4**
JISG				*e*S	**Sn**	**11 06 56.0**	**+0.3**
PCYT	**Pengchaiyu**	**1.77**

baz=262
WDLH eS Sb 11 07 00.5 +0.5
baz=262
TPUB Ta-pu 1.84 251 P Pb 11 06 37.1 -0.6
baz=240
TPUB S Sb 11 06 60.0 -0.3
baz=240
TPUB Ta-pu 1.84 251 Pb 11 06 37.0 -0.6
CHN4 Tsaushan 1.85 253 P Pb 11 06 37.5 -0.5
baz=252
CHN4 eS Sb 11 07 01.2 +0.5
baz=252
WTP Ta-pu 1.87 250 P Pb 11 06 37.5 -0.8
baz=238
WTP S Sb 11 07 01.9 +0.6
baz=238
CHN2 Minshiung 1.91 259 eP Pb 11 06 38.3 -0.7
baz=258
CHN2 eS Sb 11 07 02.9 +0.5
baz=258
ECL Taimali 1.94 228 eP Pn 11 06 36.2 -0.1
baz=228
ECL eS Sn 11 06 58.5 -1.5
baz=228
SLGT Liugui 1.95 243 eP Pb 11 06 38.5 -1.1
baz=233
SLGT eS Sb 11 07 02.6 -0.8
baz=233
SGST Jiashian 1.96 246 eP Pb 11 06 38.8 -1.0
baz=245
SGST eS Sb 11 07 03.1 -0.7
baz=245
CHN1 Nanshi 1.97 249 P Pb 11 06 39.2 -0.7
baz=248
CHN1 S Sb 11 07 04.8 +0.8
baz=248
WRL Guolierlin Hig 1.97 270 P Pb 11 06 39.0 -0.8
baz=269
WRL S Sb 11 07 04.3 +0.4
baz=269
CHY Chiayi 1.97 259 eP Pb 11 06 39.0 -0.8
baz=257
CHY eS Sb 11 07 03.8 -0.2
baz=257
WTK Tuku 1.97 264 eP Pb 11 06 39.3 -0.6
baz=263
WTK S Sb 11 07 04.8 +0.8
baz=263
SNST Tainan City 1.98 250 P Pb 11 06 39.6 -0.5
baz=249
SNST S Sb 11 07 04.7 +0.4
baz=249
WTCT Ta-ch'eng 2.05 269 eP Pb 11 06 40.3 -1.0
baz=268
WTCT S Sb 11 07 06.4 -0.1
baz=268
LAY Lan-yu 2.06 206 P Pn 11 06 37.0 -0.9
baz=206
LAY S Sn 11 07 00.9 -2.0
baz=206
SSD Sandimen 2.08 237 P Pn 11 06 39.6 +1.4
baz=230
SSD eS Sn 11 07 05.4 +1.9
baz=230
TSMG Majia 2.10 236 eP Pn 11 06 39.7 +1.2
baz=229
TSMG eS Sn 11 07 04.9 +1.0
baz=229
WMLT Mailiao 2.11 268 eS Sb 11 07 08.6 +0.6
baz=267
JTJ Tarama 2.12 69 P Pn 11 06 39.8 +1.1
SCST Cishan 2.12 242 eP Pb 11 06 42.2 -0.3
baz=231
SCST eS Sb 11 07 09.9 +1.5
baz=231
WSF Szhu 2.13 263 eP Pb 11 06 40.9 -1.7
baz=262
WSF eS Sb 11 07 07.7 -0.8
baz=262
CHN3 Shinhua 2.15 248 eP Pb 11 06 42.3 -0.6
baz=247
CHN3 eS Sb 11 07 10.0 +0.9
baz=247
TAW Tawu 2.15 225 eP Pn 11 06 39.7 +0.6
baz=234
TAW eS Sn 11 07 04.9 -0.1
baz=234
EAST Anshuo 2.16 226 P Pn 11 06 39.6 +0.2
baz=225
EAST eS Sn 11 07 05.4 -0.1
baz=225
MASBT Mashibuluo 2.16 234 eP Pn 11 06 40.5 +1.2
baz=226
MASBT eS Sn 11 07 05.6 +0.2
baz=226
CHN8 Yiju 2.19 256 eP Pb 11 06 42.4 -1.3
baz=255
CHN8 eS Sb 11 07 09.2 -1.3
baz=255
SGLT Jiouru 2.21 238 eP Pb 11 06 43.5 -0.4
baz=237
SGLT eS Sb 11 07 11.5 +0.7
baz=237
TSPT Pingtung City 2.23 237 eS Sb 11 07 12.7 +1.3
baz=232
SCLT Jiali 2.26 252 eS Sb 11 07 12.1 -0.2
baz=251
SSPT Xinbi 2.29 232 eP Pn 11 06 42.5 +1.4
baz=225
SSPT eS Sn 11 07 10.7 +2.1
baz=225
SLIU Shizi 2.31 224 eP Pn 11 06 43.0 +1.7
baz=232
SLIU eS Sn 11 07 11.2 +2.1
baz=232
SNJT Kaohsiung City 2.31 241 eP Pb 11 06 45.5 -0.3
baz=240
SNJT eS Sb 11 07 15.4 +1.5
baz=240
SCZT Fangliau 2.32 229 eP Pn 11 06 42.7 +1.1
baz=221
SCZT eS Sn 11 07 10.5 +1.1
baz=221
TSEB Hengchuen, Pin 2.49 217 eP Pn 11 06 46.2 +2.4
baz=227
TSEB eS Sn 11 07 15.8 +2.2
baz=227
HEN Hengchun 2.50 221 eP Pn 11 06 45.7 +1.6
baz=221
HEN eS Sn 11 07 15.9 +2.1
baz=221
WLCH Liuqiu 2.51 232 eP Pb 11 06 48.4 -0.7
baz=232
WLCH eS Sb 11 07 20.6 +1.2
baz=232
TWKBT Hengchun 2.51 219 eP Pn 11 06 45.0 +0.9
baz=219
TWKBT eS Sn 11 07 15.1 +1.1
baz=219
TWK1 Hengchun 2.51 219 eP Pn 11 06 45.3 +1.2
baz=219
TWK1 eS Sn 11 07 15.3 +1.2
baz=219
TWP Hsiaoliuchiu 2.52 233 eS Sb 11 07 21.1 +1.2
baz=232
SNW Nanwan 2.53 221 eS Sn 11 07 16.4 +1.8
baz=220
JIRB Irabujima 2.58 69 P Pn 11 06 47.1 +1.9
JIRB eS Sn 11 07 17.0 +1.1
JMJ Miyako jima 2 2.68 70 eP Pn 11 06 48.0 +1.5
baz=70
JMJ2 Miyako jima3 2.69 71 P Pn 11 06 48.5 +1.9
WDGT Dungji 2.71 257 P Pn 11 06 48.5 +1.7
baz=256
WDGT eS Sn 11 07 20.5 +1.6
baz=256
PNG Penghu 2.74 264 eP Pn 11 06 48.8 +1.5
baz=262
PNG eS Sn 11 07 21.4 +1.7
baz=262
VCHM Qimei 2.92 257 eP Pn 11 06 51.0 +1.2
baz=256
VCHM eS Sn 11 07 25.8 +1.6
baz=256
VWUC VWUC 3.01 292 eP Pn 11 06 52.2 +1.3
baz=291
VWUC eS Sn 11 07 27.0 +0.7
baz=291

MATB Ma-tsu 3.24 314 eP Pn 11 06 56.3 +2.1
baz=301
MATB eS Sn 11 07 34.4 +2.3
baz=301
MSUT Lienchiang 3.27 314 eP Pn 11 06 56.6 +2.1
baz=301
MSUT eS Sn 11 07 34.4 +1.6
baz=301
PTMZ Houxiangcun 3.30 291 eP Pn 11 06 56.7 +1.7
baz=289
PTMZ eS Sn 11 07 35.4 +1.8
baz=289
LYJJ Jianjiangzhen 3.64 317 eP Pn 11 07 00.6 +0.9
baz=302
XPSS Dashiqiu 3.68 326 eP Pn 11 07 00.7 +0.5
baz=324
QZH Quanzhou 3.73 287⇑i Pn Pn 11 07 01.3 +0.4
QZH Sn Sn 11 07 42.6 -1.6
QZH LR LR
comp=E,320nm,8.1s
QZH LR LR
comp=Z,410nm,11.7s
KNM Kinmen 3.77 279 eP Pn 11 07 04.3 +2.8
baz=277
KNM eS Sn 11 07 48.9 +3.7
baz=277
KNMB Chin-men Tao 3.82 279 eP Pn 11 07 03.8 +1.7
baz=278
KNMB eS Sn 11 07 46.9 +0.6
baz=278
KNMB Chin-men Tao 3.82 279 Pn Pn 11 07 02.7 +0.6
MHZQ Yeshan 3.85 305 eP Pn 11 07 02.9 +0.3
baz=303
AXDP Jialang 4.27 284 eP Pn 11 07 09.2 +0.9
baz=283
AXDP eS Sn 11 07 58.3 +0.9
baz=283
ZPLA Ao Xicun 4.37 271 eP Pn 11 07 10.7 +1.0
baz=270
ZPLA eS Sn 11 07 59.5 -0.4
baz=270
JOW Kunigami 5.96 59 Pn Pn 11 07 28.7 -3.0
4.1nm,0.3s,baz=156,slow=15,SNR=18
JOW Kunigami 5.96 59 eP Pn 11 07 33.5 +1.8
baz=62
JOW Kunigami 5.96 59 Pn Pn 11 07 30.9 -0.8
KSRS Korea Array 14.28 18 Pn Pn 11 09 22.9 -2.7
0.1nm,0.3s,baz=214,slow=15,SNR=2.1
KSRS LR LR 11 15 47.2
comp=Z,78nm,20.6s,baz=191,slow=42
KS19 Wonju Array Si 14.31 17 Pn Pn 11 09 26.0 +0.1
XAN Xi'an 15.60 313 Pn Pn 11 09 41.2 -2.1
DAV Davao City (W) 16.99 170 LR LR 11 16 24.8
comp=Z,62nm,19.5s,baz=360,slow=36
HHC Hu-ho-hao-te 19.24 334 eP Pn 11 10 28.3 -0.3
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,90nm,6.3s
HHC LR LR
comp=N,150nm,8.1s
HHC LR LR
comp=E,150nm,7.7s
HHC LR LR
comp=Z,200nm,9.5s
USRK Ussuriysk Ar. 21.68 19 P P 11 10 51.8 -2.0
0.9nm,0.7s,baz=180,slow=4.5,SNR=2.5
CMAR Chiang Mai Arr 22.63 261 P P 11 11 07.2 +2.9
0.5nm,0.4s,baz=61,slow=7.3,SNR=2.0
CMAR LR LR 11 20 38.5
comp=Z,15nm,21.6s,baz=295,slow=38
SONM Songino Array 27.12 336 P P 11 11 43.9 -2.2
0.6nm,0.4s,baz=150,slow=9.1,SNR=6.3
PSI Prapat 30.99 231 LR LR 11 25 22.2
comp=Z,59nm,20.2s,baz=85,slow=37
WMQ Urumqi 34.74 313 eP P 11 12 55.9 +2.7
MK31 Makanchi Array 39.40 316 P P 11 13 32.8 +0.1
MKAR Makanchi Array 39.40 316 P P 11 13 32.6 -0.1
1.0nm,0.3s,baz=99,slow=9.6,SNR=23
MKAR Makanchi Array 39.40 316 P P 11 13 32.5 -0.2
MAKZ Makanchi 39.60 316 P P 11 13 34.3 -0.1
KNRA Kununurra 39.80 171 P P 11 13 36.1 -0.1
ZAA0 Zalesovo Array 41.15 327 P P 11 13 46.2 -0.9
ZALV Zalesovo Beam 41.15 327 P P 11 13 45.8 -1.3
1.5nm,0.5s,baz=99,slow=8.6,SNR=6.6
WB0 Warramunga Arr 44.92 164 P P 11 14 19.0 +1.1
WB0 IAmb IAmb 11 14 35.7
comp=Z,9.9nm,1.4s
WRA Warramunga Arr 45.07 164 P P 11 14 19.6 +0.5
comp=Z,2.6nm,0.6s,baz=348,slow=9.3,SNR=23
WB2 Warramunga Arr 45.08 164 P P 11 14 20.4 +1.2
WB2 IAmb IAmb 11 14 20.6
comp=Z,4.3nm,0.8s
WR0 Warramunga Arr 45.14 164 P P 11 14 20.8 +1.2
WR0 IAmb IAmb 11 14 21.1
comp=Z,6.9nm,0.8s
GAR Garm 46.41 302 P P 11 14 30.9 +1.2
KK31 Karatay Array 46.62 307 P P 11 14 32.6 +1.4
KK31 IAmb IAmb 11 14 34.0
comp=Z,1.5nm,0.6s
KKAR Karatay Array 46.62 307 P P 11 14 32.5 +1.3
KKAR IAmb IAmb 11 14 34.0
comp=Z,1.5nm,0.6s
AS31 Alice Springs 48.55 166 P P 11 14 48.1 +1.8
ASAR Alice Springs 48.56 166 P P 11 14 48.1 +1.7
comp=Z,1.3nm,0.5s,baz=347,slow=7.8,SNR=61
ABKAR Akbulak array 54.52 314 P P 11 15 30.6 -0.1
ABKAR IAmb IAmb 11 15 31.9
comp=Z,1.9nm,0.7s
STKA Stephens Creek 58.38 161 P P 11 15 59.4 +1.1
comp=Z,1.0nm,0.7s,baz=331,slow=10,SNR=3.0
PPLA Purkeypile 66.89 30 P P 11 16 55.4 +0.5
TOLK Toolik Lake Re 67.22 23 P P 11 16 57.3 +0.5
TOLK IAmb IAmb 11 17 25.3
comp=Z,1.9nm,1.1s
BPAW Bear Paw Mtn. 67.26 28 P P 11 16 56.8 -0.4
BPAW IAmb IAmb 11 17 01.5
comp=Z,5.2nm,1.3s
I23K Minto, Yukon-K 67.80 27 P P 11 17 00.3 -0.2
I23K IAmb IAmb 11 17 09.8
comp=Z,3.6nm,1.3s
MCK McKinley 68.21 29 P P 11 17 02.7 -0.4
MCK IAmb IAmb 11 17 16.3
comp=Z,2.6nm,1.1s
MDM Murphy Dome 68.30 27 P P 11 17 03.9 +0.2
MDM IAmb IAmb 11 17 06.2
comp=Z,3.6nm,1.2s
KNK Knik Glacier 68.85 31 P P 11 17 08.6 +1.4
ILAR Eielson Array 68.90 27 P P 11 17 04.8 -2.7
comp=Z,0.1nm,0.3s,baz=299,slow=9.2,SNR=5.8
ARCES ARCESS Array B 70.26 338 P P 11 17 14.3 -1.4
comp=Z,1.4nm,0.9s,baz=50,slow=6.5,SNR=3.6
GLB Gilahina Butte 71.02 30 P P 11 17 20.3 -0.3
FINES FINESS Array B 72.31 330 P P 11 17 27.2 -0.9
comp=Z,0.5nm,0.4s,baz=62,slow=4.7,SNR=7.0
INK Inuvik 73.03 22 P P 11 17 31.8 -0.6
INK IAmb IAmb 11 17 43.6
comp=Z,2.5nm,1.4s
AKASG Malin Array Be 73.89 319 P P 11 17 38.7 +0.9
comp=Z,0.2nm,0.4s,baz=49,slow=4.7,SNR=11
BRTR Keskin Array B 74.33 307 P P 11 17 39.7 -1.0
comp=Z,0.8nm,0.5s,baz=349,slow=1.3,SNR=4.0
NOA NORSAR Array B 79.04 332 P P 11 18 05.4 -1.5
comp=Z,0.4nm,0.6s,baz=57,slow=5.8,SNR=2.6
YKA Yellowknife Ar 82.75 23 P P 11 18 25.8 -0.7
comp=Z,0.8nm,0.7s,baz=313,slow=4.7,SNR=20
GERES GERESS Array B 83.84 321 P P 11 18 33.0 +0.4
comp=Z,0.4nm,0.2s,baz=55,slow=5.1,SNR=3.5

IDC 21 11:10:42.8±1.2,2°.17N×128°.27E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/43,mbtmp3.6/4,Error ellipse: s-maj=110.5km s-min=14.3km az=70.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
WRA	**Warramunga Arr**	**22.77**	**165**	P		11 15 45.3	-1.7
	0.9nm,0.6s,baz=341,slow=12,SNR=7.1						
ASAR	**Alice Springs**	**26.26**	**168**	P		11 16 20.2	+0.3
	1.3nm,0.4s,baz=345,slow=12,SNR=15						
ASAR				PcP	PcP	11 19 45.4	-1.4
	0.3nm,0.5s,baz=360,slow=1.9,SNR=5.2						
STKA	**Stephens Creek**	**36.15**	**161**	P		11 17 48.0	+1.1
	0.5nm,0.3s,baz=333,slow=11,SNR=1.4						
MKAR	**Makanchi Array**	**59.70**	**325**	P		11 20 49.4	+0.2
	0.1nm,0.4s,baz=125,slow=8.7,SNR=2.2						

*IDC **21** 11:14:29.8±0.5,5°.93N×126°.57E,h44km±8km,mb3.4/4, mb1 3.7/4,mb1mx3.3/43,mbtmp3.6/4,Error ellipse: s-maj=19.8km s-min=4.3km az=54.0*

*MAN **21** 11:14:30.0,5°.80N×125°.30E,h50km,MS3.3*

ISC 21 11:14:30.4±1.2,5.74N±0.08×125°.31E±0.07,h65km±11km, n13,σ1s95/18,mb3.4/4,1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
DDMP	**Don Marcelino,**	**0.54**	**48**	eP		**11 14 43.6**	**+0.4**
DDMP				eS		**11 14 52.4**	**-0.2**
SKMP	**Bagumbayan, Su**	**1.09**	**315**	eP		**11 14 49.3**	**-0.5**
SKMP				eS		**11 15 03.1**	**-1.1**
KCP	**Kidapawan**	**1.28**	**350**⇑i	P		**11 14 51.4**	**-1.0**
KCP				i S		**11 15 06.3**	**-2.5**
DAV	**Davao City (W)**	**1.35**	**11**	P		**11 14 53.9**	**+0.7**
	280nm,0.3s,baz=244,slow=5.2,SNR=26						
DAV				S		**11 15 12.6**	**+2.3**
	140nm,0.3s,baz=77,slow=24,SNR=17						
MATI	**Mati**	**1.52**	**38**	eP		**11 14 52.8**	**-2.8**
BUKP	**Musuan**	**2.14**	**353**	eP		**11 15 03.3**	**-0.7**
BUKP				eS		**11 15 34.0**	**+4.5**
CGP	**Cagayan de Oro**	**2.77**	**347**⇓	eP		11 15 16.2	+3.8
CGP				eS		**11 15 46.0**	**+1.3**
PAGZ	**Pagadian**	**2.84**	**318**	eP		**11 15 12.9**	**-0.4**
GLSP	**General Luna,**	**4.10**	**11**	eP		**11 15 30.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.69**	**179**	P		**11 19 38.5**	**+2.1**
	5.5nm,1.0s,baz=0.0,slow=8.1,SNR=2.3						
WRA	**Warramunga Arr**	**27.02**	**161**	P		**11 20 07.0**	**+0.3**
	0.2nm,0.5s,baz=341,slow=9.8,SNR=1.7						
ASAR	**Alice Springs**	**30.41**	**164**	P		**11 20 37.4**	**+0.6**
	0.2nm,0.5s,baz=348,slow=7.7,SNR=4.1						
ILAR	**Eielson Array**	**83.91**	**26**	P		**11 26 51.1**	**-1.9**
	0.5nm,0.6s,baz=256,slow=4.3,SNR=10						

*BJI **21** 11:21:08.5±0.0,6°.04S×150°.28E,h49km,mB5.2/55, mb4.9/62,Ms5.1/64,Ms7 5.0/61*

*NEIC **21** 11:21:09.6±2.3,6°.10S±0°.06×149°.84E±0°.06,h35km±1km, mb5.3/103,Ms_20 5.1/188,Error ellipse: s-maj=11.5km s-min=8.4km az=133.0*

*IDC **21** 11:21:09.8±0.4,6°.10S×149°.96E,h36km±3km,mb4.5/23, mb1 4.6/26,mb1mx4.6/35,mbtmp4.7/26,ML4.1/4,MS4.7/30, Ms1 4.7/30,ms1mx4.6/38,Error ellipse: s-maj=11.4km s-min=9.0km az=99.0*

*MOS **21** 11:21:10.2±1.0,6°.01S×149°.72E,h48km,mb5.2/29, MS4.9/13,Error ellipse: s-maj=9.3km s-min=5.9km az=97.5*

*DJA **21** 11:21:13.5±0.3,6°.S±2°×15°.0E±°,h60km±3km,M5.3/74, mb5.4/74,mB5.7/36,MLv5.6/3,Mw(mB)5.2/36, MwMwp5.1/12,Mwp5.3/12*

*GCMT **21** 11:21:13.6±0.1,6°.41S±0°.01×149°.92E±0°.01,h41km, MW5.5/135,Moment Tensor Solution. s135,c244; s113,c189; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr1.56±.03; Mθθ-1.90±.02; Mφφ0.33±.02; Mrθ0.81±.03; Mθφ0.15±.02; Mrφ0.13±.03; Best double couple: M0 1.92200×10^17 NP1:φ282.00000°,δ33.00000°, λ102.00000°. NP2:φ87.00000°,δ58.00000°,λ82.00000°. Principal axes: T 1.7580, Plg76.0000°, Azm333.0000°; N 0.3260, Plg7.0000°, Azm91.0000°; P -2.0860, Plg12.0000°, Azm183.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 11:21:11.5±0.3,6°.19S±0°.03×149°.94E±0°.04,h50km±2km, h50km:pP-P,n581,σ1s77/551,mb5.1/132,MS5.1/149, 16C-8D,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
RABL	**Rabaul**	**2.98**	**48**	Pn		**11 21 57.4**	**+1.1**
RABL				Sn		**11 22 36.0**	**+5.2**
RABL	**Rabaul**	**2.98**	**48**	P		**11 21 58.2**	**+1.9**
PMG	**Port Moresby**	**4.22**	**221**	Pn		**11 22 14.4**	**+1.1**
	289nm,0.3s,baz=36,slow=6.9,SNR=697						
PMG				Sn		**11 23 01.5**	**+0.1**
	608nm,0.3s,baz=34,slow=22,SNR=14						
PMG	**Port Moresby**	**4.22**	**221**	P		**11 22 15.2**	**+1.9**
PMG						11 23 01.3	
PMG	**Port Moresby**	**4.22**	**221**	Pn		**11 22 15.2**	**+1.9**
PMG				Sn		**11 23 01.3**	**-0.1**
PMG	**Port Moresby**	**4.22**	**221**	P		**11 22 15.3**	**+1.9**
MANU	**Manus Island**	**4.85**	**328**			**11 22 22.5**	**+0.5**
JAY	**Jayapura**	**9.90**	**291**	Pn		**11 23 30.9**	**-0.4**
	0.4nm,0.3s,baz=126,slow=11,SNR=1.5						
JAY	**Jayapura**	**9.90**	**291**	P		**11 23 34.4**	**+3.1**
	1μm56nm,1.2s						
COEN	**Coen**	**10.19**	**220**	P		**11 23 35.1**	**-0.1**
	baz=10						
COEN	**Coen**	**10.19**	**220**	Pn		**11 23 34.5**	**-0.7**
GENI	**Genyem**	**10.37**	**290**	P		**11 23 41.6**	**+3.9**
	4μm5μm283nm,1.2s						
MTSU	**Mount Surprise**	**13.08**	**204**	P		**11 24 16.2**	**+1.4**
	baz=13,SNR=85						
CTA	**Charters Tower**	**14.28**	**194**	Pn		**11 24 31.8**	**+0.8**
	1.6nm,0.3s,baz=24,slow=16,SNR=17						
CTA				LR	LR	11 30 04.9	
	comp=Z,3μm,18.8s,baz=9.5,slow=37						
CTAO	**Charters Tower**	**14.28**	**194**	P		**11 24 32.2**	**+1.2**
CTAO	**Charters Tower**	**14.28**	**194**	Pn		**11 24 32.1**	**+1.2**
SRPI	**Serui, Papua**	**14.31**	**287**	P		**11 24 32.0**	**+0.5**
	7μm157nm,0.4s						
BAKI	**Biak**	**14.66**	**289**	P		**11 24 35.6**	**-0.5**
	2μm100nm,1.4s						
QIS	**Mount Isa**	**17.45**	**214**	P		**11 25 11.6**	**0.0**
	baz=18,SNR=66						
FAKI	**Fak Fak**	**17.93**	**280**	P		**11 25 19.4**	**+2.0**
FAKI	**Fak Fak**	**17.93**	**280**	P		**11 25 18.8**	**+1.4**
	3μm1μm57nm,1.4s						
KDU	**Kakadu**	**18.39**	**248**	P		**11 25 22.4**	**-0.1**
	baz=18,SNR=17						
SAUI	**Saumlaki**	**18.58**	**263**	P		**11 25 20.9**	**-3.7**
SAUI				IAmb	IAmb	11 26 14.5	
	comp=Z,267nm,0.8s						
SAUI	**Saumlaki**	**18.58**	**263**	P		**11 25 25.1**	**-0.2**
	comp=Z,7μmcomp=Z,271nm,0.9s						
EIDS	**Eidsvold**	**19.11**	**177**	P		**11 25 31.9**	**+0.3**
SANVU	**Saraoutou**	**19.28**	**120**	P		**11 25 33.8**	**+0.1**
SANVU				IAmb	IAmb	11 26 28.8	
	comp=Z,205nm,1.2s						
SIJI	**Sorong**	**19.36**	**285**	P		**11 25 33.7**	**+0.5**
	comp=Z,2.1nm,0.3s,baz=86,slow=8.7,SNR=9.3						
SWI	**Sorong**	**19.37**	**285**	P		**11 25 36.7**	**+1.9**
	comp=Z,3μmcomp=Z,1μmcomp=Z,110nm,1.0s						
MTN	**Manton Dam**	**19.68**	**249**	P		**11 25 36.8**	**+0.1**
	baz=20,SNR=29						
MTN	**Manton Dam**	**19.68**	**249**	P		**11 25 35.6**	**-1.0**
BNDI	**Bandanaira**	**20.01**	**274**	P		**11 25 39.9**	**-0.4**
	comp=Z,3μmcomp=Z,13μmcomp=Z,377nm,0.8s						
RMQ	**Roma**	**20.22**	**183**	P		11 25 44.9	+0.1
	baz=20,SNR=173						
WB0	**Warramunga Arr**	**20.26**	**227**	P		**11 25 43.8**	**+0.9**
WR0	**Warramunga Arr**	**20.28**	**226**	P		**11 25 43.9**	**+0.7**
GUMO	**Guam**	**20.28**	**346**	P		**11 25 41.3**	**-1.8**
GUMO				pmax	pmax		
	comp=Z,2μm,1.7s						
GUMO	**Guam**	**20.28**	**346**	P		**11 25 41.3**	**-1.8**
WC3	**Warramunga Arr**	**20.40**	**226**	P		**11 25 45.1**	**+0.7**
	baz=20						
WRAB	**Tennant Creek**	**20.40**	**226**	ceP		**11 25 44.1**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,189nm,1.3s						
WRAB	**Tennant Creek**	**20.40**	**226**	P		**11 25 45.5**	**+1.1**
WB2	**Warramunga Arr**	**20.40**	**226**	P		**11 25 44.6**	**0.0**
WRA	**Warramunga Arr**	**20.41**	**226**	P		**11 25 45.4**	**+0.7**
	comp=Z,83nm,0.7s,baz=51,slow=11,SNR=174						
WRA				S		**11 29 27.1**	**-3.6**
	comp=Z,46nm,1.1s,baz=51,slow=18,SNR=7.6						
WRA				LR	LR	11 34 47.5	
	comp=Z,4μm,19.1s,baz=50,slow=40						
WRA	**Warramunga Arr**	**20.41**	**226**	P		**11 25 44.6**	**0.0**
QLP	**Quilpie**	**21.00**	**194**	P		**11 25 52.4**	**+1.5**
	baz=21,SNR=113						
DZM	**Mont Dzumac**	**22.45**	**136**	eP		**11 26 09.2**	**+2.6**
	comp=Z,198nm,1.1s						
DZM				eS		**11 30 08.7**	**-1.3**
	comp=Z,3μm,24.4s						
DZM				eLQ	LQ	11 30 46.6	
	comp=Z,4μm,26.3s						
DZM				eLR	LR	11 31 45.5	
	comp=Z,9μm,23.1s						

DZM Mont Dzumac 22.45 136 P **P** **11 26 06.1 -0.4**
comp=Z,26nm,0.8s,baz=276,slow=7.4,SNR=15
DZM Mont Dzumac 22.45 136 P **P** **11 26 06.8 +0.2**
DZM IAmb IAmb 11 26 23.3
comp=Z,72nm,0.8s
KNRA Kununurra 22.80 244 P **P** **11 26 09.7 -0.6**
NLAI Namlea 22.94 276 P **P** **11 26 12.8 +1.1**
comp=Z,64nm,0.9s
AS31 Alice Springs 23.23 220 P **P** **11 26 15.1 +0.5**
ASAR Alice Springs 23.24 220 P **P** **11 26 14.8 +0.2**
comp=Z,22nm,0.9s,baz=57,slow=8.9,SNR=99
ASAR S **S** **11 30 25.1 +1.9**
comp=Z,33nm,1.0s,baz=30,slow=21,SNR=12
ASAR LR LR 11 35 34.1
comp=Z,3μm,20.8s,baz=22,slow=37
ASAR Alice Springs 23.24 220 P **P** **11 26 15.0 +0.4**
ASAR Alice Springs 23.24 220 P **P** **11 26 15.0 +0.4**
TNTI Ternate 23.57 286 P **P** **11 26 17.8 0.0**
comp=Z,1μmcomp=Z,30nm,0.8s
ARMA Armidale 24.16 176 P **P** **11 26 24.7 +1.5**
baz=24,SNR=9.1
ARMA Armidale 24.16 176 P **P** **11 26 24.9 +1.7**
ARMA IAmb IAmb 11 26 44.4
comp=Z,212nm,1.4s
SANI Sanana 24.23 279 P **P** **11 26 24.7 +0.8**
comp=Z,2μmcomp=Z,997nmcomp=Z,63nm,1.0s
CMSA Cobar Meteorol 25.53 188 P **P** **11 26 36.4 +0.8**
baz=26,SNR=8.7
SOEI Soe 25.66 260 P **P** **11 26 37.0 -0.1**
SOEI Soe 25.66 260 P **P** **11 26 36.9 -0.2**
comp=Z,3μmcomp=Z,5μmcomp=Z,242nm,1.5s
BATI Baumata 26.30 260 P **P** **11 26 43.5 +0.8**
comp=Z,186nm,0.7s,baz=110,slow=0.5,SNR=27
BATI Baumata 26.30 260 P **P** **11 26 43.6 +0.8**
comp=Z,1μmcomp=Z,2μmcomp=Z,152nm,0.9s
FITZ Fitzroy Crossi 26.50 241 P **P** **11 26 44.7 +0.2**
comp=Z,55nm,0.6s,baz=51,slow=8.2,SNR=118
FITZ LR LR 11 38 29.9
comp=Z,2μm,18.4s,baz=57,slow=39
FITZ Fitzroy Crossi 26.50 241 P **P** **11 26 44.6 +0.2**
baz=26,SNR=91
FITZ Fitzroy Crossi 26.50 241 P **P** **11 26 44.8 +0.3**
STKA Stephens Creek 26.72 196 P **P** **11 26 47.6 +1.3**
comp=Z,46nm,0.8s,baz=355,slow=9.5,SNR=32
STKA LR LR 11 38 09.2
comp=Z,3μm,19.2s,baz=33,slow=38
STKA Stephens Creek 26.72 196 P **P** **11 26 48.5 +2.2**
baz=27,SNR=54
STKA Stephens Creek 26.72 196 P **P** **11 26 48.6 +2.2**
STKA pmax pmax
comp=Z,37nm,1.3s
STKA Stephens Creek 26.72 196 P **P** **11 26 48.6 +2.2**
KMSI Cibinong 26.76 284 P **P** **11 26 47.3 +0.4**
comp=Z,72nm,1.1s
MMRI Maumere 27.57 263 P **P** **11 26 51.9 -2.3**
MMRI Maumere 27.57 263 P **P** **11 26 52.7 -1.5**
comp=Z,3μmcomp=Z,302nm,0.7s
LUWI Luwuk 27.58 280 P **P** **11 26 52.9 -1.3**
LUWI IAmb IAmb 11 27 37.4
comp=Z,113nm,1.0s
LUWI Luwuk 27.58 280 P **P** **11 26 54.2 0.0**
comp=Z,60nm,1.0s
DAV Davao City (W) 27.64 298 LR LR 11 37 36.8
comp=Z,529nm,20.1s,baz=133,slow=36
GTOI Gorontalo 27.72 283 P **P** **11 26 56.8 +1.3**
comp=Z,445nmcomp=Z,28nm,0.7s
WRKA Warakurna 27.95 226 P **P** **11 26 57.6 +0.1**
baz=28,SNR=65
APSI Ampana 28.70 279 P **P** **11 27 03.8 -0.5**
comp=Z,2μmcomp=Z,653nmcomp=Z,34nm,1.0s
HTT Hallett 28.98 199 P **P** **11 27 08.2 +1.7**
baz=29,SNR=12
CAN Canberra 29.01 182 IAMs_20 IAMs_20 11 38 59.3
comp=Z,5μm,19.0s
FUNA Funafuti 29.11 96 P **P** **11 27 06.5 -1.4**
FUNA IAmb IAmb 11 27 20.1
comp=Z,54nm,0.9s
BASI Baing, Sumba 29.32 260 P **P** **11 27 10.0 +0.2**
comp=Z,4μmcomp=Z,356nm,1.1s
BBOO Buckleboo 29.48 204 P **P** **11 27 11.6 +0.7**
baz=30,SNR=16
MSVF Nonsavu 29.75 115 P **P** **11 27 13.9 +0.3**
comp=Z,8.9nm,0.8s,baz=310,slow=13,SNR=3.9
MSVF LR LR 11 37 03.6
comp=Z,1μm,21.6s,baz=284,slow=32
MSVF Nonsavu 29.75 115 *i* P **P** **11 27 12.8 -0.8**
MSVF pmax pmax
comp=Z,31nm,0.8s
MSVF Nonsavu 29.75 115 P **P** **11 27 14.7 +1.1**
MSVF IAmb IAmb 11 27 51.2
comp=Z,85nm,1.1s
TOLI2 Tolitoli 29.99 283 P **P** **11 27 12.5 -3.2**
KAPI Kappang 30.06 271 LR LR 11 42 16.7
comp=Z,678nm,20.7s,baz=88,slow=42
WBSI Waikabubak, Su 30.44 262 P **P** **11 27 20.7 +1.0**
comp=Z,2μmcomp=Z,118nm,0.8s
ARPS Mount Arapiles 31.33 193 P **P** **11 27 28.5 +1.3**
baz=32,SNR=6.1
TOO Toolangi 31.50 187 P **P** **11 27 30.4 +1.6**
baz=32,SNR=4.5
TOO Toolangi 31.50 187 P **P** **11 27 29.4 +0.6**
TOO pmax pmax
comp=Z,64nm,1.4s
TOO Toolangi 31.50 187 P **P** **11 27 29.4 +0.6**
TOO IAmb IAmb 11 27 42.8
comp=Z,64nm,1.4s
FORT Forrest 31.94 217 P **P** **11 27 33.1 +0.5**
PLAI Plampang 31.98 263 P **P** **11 27 30.9 -2.4**
comp=Z,89nm,0.8s
TWSI Taliwang, Sumb 32.86 264 P P 11 27 47.7 +6.7
PSA00 Pilbara Seismi 32.88 239 P **P** **11 27 40.5 -0.4**
MYLDM Lahad Datu 33.35 289 P **P** **11 27 42.5 -2.8**
MYLDM IAmb IAmb 11 28 17.7
comp=Z,71nm,1.4s
JCJ Chichijima 33.92 348 LR LR 11 40 56.5
comp=Z,807nm,19.2s,baz=149,slow=35
DNP Denpasar 34.51 264 P **P** **11 27 56.3 +1.0**
comp=Z,197nm,0.5s
BBKI Banjar Baru 35.07 273 P **P** **11 28 02.8 +2.7**
comp=Z,20nm,0.9s
JAGI Jajag, Banyuwa 35.55 264 P **P** **11 28 01.7 -2.6**
JAGI Jajag, Banyuwa 35.55 264 P **P** **11 28 02.0 -2.3**
comp=Z,2μmcomp=Z,193nm,1.0s
KMMI Kalianget 35.73 267 P **P** **11 28 05.3 -0.5**
comp=Z,71nm,1.3s
OUZ Omahuta 36.19 146 P **P** **11 28 12.4 +3.0**
OUZ IAmb IAmb 11 28 22.9
comp=Z,34nm,0.9s
OUZ IAMs_20 IAMs_20 11 41 24.7
comp=Z,3μm,18.0s
KMBL Kambalda 36.29 223 P **P** **11 28 10.8 +0.4**
baz=36,SNR=15
TAU Tasmania Unive 36.65 183 P **P** **11 28 14.9 +1.7**
TAU pmax pmax
comp=Z,74nm,1.0s
TAU MLR MLR
comp=Z,7μm,20.0s
TAU Tasmania Unive 36.65 183 P **P** **11 28 14.9 +1.7**
TAU IAmb IAmb 11 28 25.7
comp=Z,74nm,1.0s
RAO Raoul Island 38.03 131 LR LR 11 41 55.5
comp=Z,413nm,19.2s,baz=157,slow=33
GIRL Giralia 38.10 241 P **P** **11 28 25.2 -0.7**
baz=38,SNR=9.1
GIRL Giralia 38.10 241 P **P** **11 28 27.2 +1.3**
SBUM Sibu 38.62 282 P **P** **11 28 29.3 -1.1**
JOW Kunigami 38.96 328 P **P** **11 28 32.6 -0.3**
UGM Wanagama 39.14 265 P **P** **11 28 34.4 -0.3**
comp=Z,111nm,1.0s
MORW Morawa 39.27 230 P **P** **11 28 35.7 +0.1**
baz=39,SNR=9.9
MORW Morawa 39.27 230 P **P** **11 28 35.7 +0.1**
MORW IAmb IAmb 11 28 46.4
comp=Z,69nm,1.1s
KLBR Kellerberrin 39.29 226 P **P** **11 28 35.7 0.0**
baz=39,SNR=12
MHEZ Mangahewa 39.46 150 P P 11 28 54.8 +18
BLDU Ballidu 39.53 228 P **P** **11 28 37.8 0.0**
baz=40,SNR=6.4
QRZ Quartz Range 39.98 153 P P 11 28 49.7 +8.4
KSM Kuching 40.29 280 P **P** **11 28 42.7 -1.5**
URZ Urewera 40.33 146 P **P** **11 28 44.7 +0.4**
comp=Z,3.9nm,0.6s,baz=301,slow=24,SNR=8.4
URZ pP **pP** **11 28 55.5 -1.6**
comp=Z,7.9nm,0.7s,baz=302,slow=23,SNR=5.1
URZ LR LR 11 43 47.5
comp=Z,2μm,19.6s,baz=31,slow=34

URZ Urewera 40.33 146 P **P** **11 28 45.9 +1.7**
URZ IAMs_20 IAMs_20 11 43 36.4
comp=Z,2μm,20.0s
NWAO Narrogin (SRO) 40.40 225 P **P** **11 28 45.2 +0.3**
comp=Z,15nm,0.8s,baz=65,slow=7.5,SNR=8.9
NWAO Narrogin (SRO) 40.40 225 P **P** **11 28 45.0 +0.1**
baz=40,SNR=6.3
NWAO Narrogin (SRO) 40.40 225 P **P** **11 28 45.0 +0.1**
NWAO pmax pmax
comp=Z,33nm,0.8s
NWAO MLR MLR
comp=Z,3μm,20.0s
NWAO Narrogin (SRO) 40.40 225 P **P** **11 28 45.1 +0.1**
NWAO IAmb IAmb 11 28 55.7
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 40.40 225 P **P** **11 28 45.0 +0.1**
NWAO IAmb IAmb 11 28 55.7
comp=Z,33nm,0.8s
NWAO Narrogin (SRO) 40.40 225 IAMs_20 IAMs_20 11 46 18.6
comp=Z,3μm,20.0s
MXZ Matakaoa Point 40.52 144 IAMs_20 IAMs_20 11 43 16.4
comp=Z,3μm,20.0s
YULB Yu-li 40.58 317 IAMs_20 IAMs_20 11 42 19.5
comp=Z,3μm,20.0s
DUWZ D'Urville Isla 40.60 152 P **P** **11 28 51.1 +4.7**
MUN Mundaring 40.61 226 P **P** **11 28 46.8 +0.1**
baz=41,SNR=14
BKZ Black Stump Fm 40.65 148 IAMs_20 IAMs_20 11 43 19.7
comp=Z,2μm,22.0s
THZ Tophouse 40.90 154 P **P** **11 28 49.3 +0.3**
THZ Tophouse 40.90 154 P **P** **11 28 51.1 +2.2**
NACB Ninganchiao 40.92 319 P **P** **11 28 49.2 -0.1**
NACB IAmb IAmb 11 29 06.8
comp=Z,115nm,1.4s
NACB IAMs_20 IAMs_20 11 42 00.4
comp=Z,3μm,21.0s
INZ Inchbonnie 41.06 156 P P 11 29 01.0 +11
SSLB Suanglung 41.08 318 IAMs_20 IAMs_20 11 42 24.7
comp=Z,3μm,20.0s
TCW Tory Channel 41.09 152 P P 11 28 58.1 +7.7
TUWZ Tuamarina 41.10 152 P **P** **11 28 52.1 +1.5**
TUWZ Tuamarina 41.10 152 P **P** **11 28 54.4 +3.9**
BSWZ Blackbirch Sta 41.30 153 P **P** **11 28 53.9 +1.8**
SNZO South Karori 41.37 151 IAMs_20 IAMs_20 11 46 28.6
comp=Z,2μm,18.0s
YHNB Yeheng 41.40 319 P **P** **11 28 55.6 +2.2**
YHNB IAMs_20 IAMs_20 11 42 28.3
comp=Z,3μm,22.0s
LTZ Lake Taylor 41.45 155 P **P** **11 28 52.2 -1.2**
LTZ IAmb IAmb 11 29 06.2
comp=Z,114nm,1.3s
LTZ IAMs_20 IAMs_20 11 45 14.8
comp=Z,3μm,19.0s
LTZ Lake Taylor 41.45 155 P P 11 28 59.9 +6.4
TATO Taipei 41.54 319 IAMs_20 IAMs_20 11 42 42.8
comp=Z,4μm,21.0s
ANWZ Angora Road 41.59 149 P P 11 29 02.9 +8.3
BFZ Birch Farm 41.64 150 P **P** **11 28 55.9 +0.8**
BFZ IAmb IAmb 11 29 16.1
comp=Z,136nm,1.8s
KHZ Kahutara 41.70 154 P **P** **11 28 56.6 +1.1**
KHZ IAmb IAmb 11 29 08.5
comp=Z,38nm,1.0s
KHZ IAMs_20 IAMs_20 11 44 42.5
comp=Z,2μm,18.0s
KHZ Kahutara 41.70 154 P **P** **11 28 56.5 +1.1**
MSWZ Moikau Station 41.71 151 P **P** **11 28 55.9 +0.4**
RPZ Rata Peaks 41.74 157 P **P** **11 28 55.9 +0.1**
comp=Z,11nm,0.7s,baz=108,slow=5.0,SNR=4.3
RPZ LR LR 11 44 21.2
comp=Z,2μm,20.8s,baz=328,slow=33
RPZ Rata Peaks 41.74 157 P **P** **11 28 56.2 +0.5**
RPZ IAmb IAmb 11 29 09.8
comp=Z,38nm,0.7s
RPZ Rata Peaks 41.74 157 P P 11 29 06.9 +11
OXZ Oxford 41.80 156 P **P** **11 28 57.6 +1.3**
OXZ IAmb IAmb 11 29 07.4
comp=Z,49nm,1.0s
OXZ IAMs_20 IAMs_20 11 44 25.1
comp=Z,2μm,19.0s
OXZ Oxford 41.80 156 P P 11 29 06.6 +10
PLWZ Palliser 41.83 151 P **P** **11 28 56.8 +0.2**
PLWZ Palliser 41.83 151 P **P** **11 28 57.5 +0.9**
GVZ Greta Valley S 41.93 154 P **P** **11 28 58.5 +1.2**
LEM Lembang 42.04 267 P **P** **11 28 58.9 +0.1**
comp=Z,123nm,0.8s,baz=50,slow=6.9,SNR=27
LEM LR LR 11 50 49.5
comp=Z,601nm,19.7s,baz=94,slow=42
LEM Lembang 42.04 267 P **P** **11 28 58.8 0.0**
comp=Z,1μmcomp=Z,94nm,0.9s
MLZ Mavora Lakes 42.11 161 P **P** **11 28 59.0 +0.1**
MLZ IAmb IAmb 11 29 11.6
comp=Z,115nm,1.3s
MQZ McQueen's Vall 42.37 155 P **P** **11 29 01.7 +0.8**
MQZ IAmb IAmb 11 29 12.6
comp=Z,64nm,1.2s
JMN Monobe 42.51 340 P **P** **11 29 02.0 -0.1**
JMN IAmb IAmb 11 29 22.7
comp=Z,77nm,1.1s
WHZ Wether Hill Ro 42.53 161 P **P** **11 29 04.3 +2.2**
WHZ IAmb IAmb 11 30 24.4
comp=Z,192nm,2.0s
JNU Nakatsue 43.08 336 LR LR 11 45 18.8
comp=Z,837nm,21.3s,baz=150,slow=34
JNU Nakatsue 43.08 336 P **P** **11 29 06.3 -0.5**
JNU IAmb IAmb 11 29 26.3
comp=Z,143nm,1.4s
JGF Kuroka 43.22 345 P **P** **11 29 06.5 -1.3**
JGF IAmb IAmb 11 29 22.6
comp=Z,163nm,1.8s
QZH Quanzhou 43.45 317 P **P** **11 29 09.3 -0.5**
QZH S **S** **11 35 34.6 -0.3**
QZH LR LR
comp=Z,680nm,19.0s
QZH LR LR
comp=Z,870nm,17.1s
QZH LR LR
comp=Z,2μm,24.9s
JWT Wachi 43.46 343 P **P** **11 29 09.4 -0.3**
JWT IAmb IAmb 11 29 28.6
comp=Z,59nm,1.0s
MJAR Matsushiro Arr 43.90 346 P **P** **11 29 12.1 -1.2**
comp=Z,7.3nm,0.8s,baz=161,slow=8.7,SNR=14
MJAR LR LR 11 45 49.2
comp=Z,664nm,18.5s,baz=170,slow=34
MAJO Matsushiro 43.90 346 *i* P **P** **11 29 11.0 -2.3**
MAJO pmax pmax
comp=Z,8.0nm,0.5s
MAJO Matsushiro 43.90 346 P **P** **11 29 11.8 -1.5**
MAJO IAmb IAmb 11 29 13.7
comp=Z,123nm,1.5s
MAT Matsushiro 43.90 346 P **P** **11 29 11.7 -1.6**
MAT S **S** **11 35 38.4 -2.9**
MJB9 Matsu-Tunnel 43.91 346 P **P** **11 29 12.5 -0.9**
XMIS Christmas Isla 43.99 261 P **P** **11 29 14.7 +0.2**
JMM Marumori 44.65 350 P **P** **11 29 17.8 -1.4**
JMM IAmb IAmb 11 29 38.7
comp=Z,102nm,1.3s
KASI Kota Agung 45.20 268 P **P** **11 29 22.5 -1.5**
comp=Z,100nm,0.9s
JSD Sado 45.32 347 P **P** **11 29 22.9 -1.7**
SSE Sheshan 46.15 325 P **P** **11 29 31.3 +0.1**
SSE S **S** **11 36 14.8 +0.9**
SSE pmax pmax
comp=Z,18nm,0.6s
SSE pmax pmax
comp=Z,130nm,3.0s
SSE LR LR
comp=Z,490nm,21.5s
SSE LR LR
comp=Z,670nm,21.1s
SSE Sheshan 46.15 325 IAMs_20 IAMs_20 11 45 17.9
comp=Z,2μm,22.0s
LHSI Lahat 46.28 271 P **P** **11 29 32.6 0.0**
QIZ Qiongzhong 46.77 303 P **P** **11 29 35.3 -1.1**
QIZ S **S** **11 36 22.4 -0.9**
QIZ pmax pmax
comp=Z,31nm,2.4s
QIZ LR LR
comp=Z,810nm,27.9s
QIZ LR LR
comp=Z,530nm,17.2s
QIZ LR LR
comp=Z,630nm,30.0s
KSRS Korea Array 48.03 336 P **P** **11 29 45.7 -0.1**
comp=Z,11nm,0.9s,baz=155,slow=8.1,SNR=20

KS19 Wonju Array Si 48.09 336 P **P** **11 29 44.3 -2.0**
KS19 IAmb IAmb 11 30 08.8
comp=Z,26nm,1.0s
NJ2 Nanjing 48.20 324 *e*P **P** **11 29 47.5 +0.3**
NJ2 pP **pP** **11 30 03.0 +2.0**
NJ2 S **S** **11 36 43.8 +0.7**
NJ2 sS **sS** **11 37 06.0 +0.2**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 pmax pmax
comp=Z,340nm,3.8s
NJ2 LR LR
comp=Z,1μm,18.5s
NJ2 LR LR
comp=Z,840nm,16.6s
NJ2 LR LR
comp=Z,2μm,22.3s
WHN Wuhan 49.95 319 ⇓P **P** **11 30 01.1 +0.5**
WHN pmax pmax
comp=Z,140nm,1.7s
WHN pmax pmax
comp=Z,530nm,4.4s
WHN LR LR
comp=Z,2μm,14.8s
WHN LR LR
comp=Z,3μm,18.5s
WHN LR LR
comp=Z,5μm,22.2s
YUK Yuzh-Kuril'sk 50.12 356 *i* P **P** **11 29 59.9 -1.8**
YUK *i* S **S** **11 37 08.6 -1.0**
YUK MLR MLR
comp=Z,996nm,19.0s
JKA Kamikawa-asahi 50.50 353 P **P** **11 30 05.7 +1.1**
ASAJ Asahikawa 50.51 353 LR LR 11 51 53.1
comp=Z,374nm,19.7s,baz=188,slow=37
ASAJ Asahikawa 50.51 353 P **P** **11 30 05.7 +1.1**
ASAJ pmax pmax
comp=Z,81nm,1.0s
MNSI Mandailing Nat 50.74 276 P **P** **11 30 07.0 +0.1**
comp=Z,35nm,0.8s
DL2 Dalian 51.97 332 eP P 11 30 10.5 -5.2
DL2 S S 11 37 25.1 -10
DL2 sS sS 11 37 53.8 -4.5
DL2 pmax pmax
comp=Z,26nm,0.9s
DL2 pmax pmax
comp=Z,300nm,4.8s
DL2 LR LR
comp=N,830nm,19.5s
DL2 LR LR
comp=E,580nm,20.5s
DL2 LR LR
comp=Z,1μm,20.2s
TIA Tai'an 52.20 326 P **P** **11 30 15.5 -2.0**
TIA pmax pmax
comp=Z,11nm,0.9s
TIA pmax pmax
comp=Z,180nm,10.6s
TIA LR LR
comp=Z,760nm,19.8s
TIA LR LR
comp=Z,920nm,20.0s
TIA LR LR
comp=Z,2μm,20.1s
CHAI Chaiyaphum 52.29 295 P **P** **11 30 22.6 +4.1**
comp=Z,17nm,0.8s
COCO West Island 52.69 259 P **P** **11 30 21.4 -0.1**
COCO pmax pmax
comp=Z,307nm,1.1s
COCO West Island 52.69 259 P **P** **11 30 21.4 -0.1**
USA0B Ussuriysk Arra 52.70 344 P **P** **11 30 19.4 -1.6**
USA0B pmax pmax
comp=Z,83nm,1.3s
USA0B Ussuriysk Arra 52.70 344 P **P** **11 30 19.4 -1.6**
USRK Ussuriysk Ar. 52.70 344 P **P** **11 30 21.2 +0.2**
comp=Z,4.7nm,0.7s,baz=156,slow=8.8,SNR=10
USRK Ussuriysk Ar. 52.70 344 P **P** **11 30 20.0 -1.0**
USRK Ussuriysk Ar. 52.70 344 P **P** **11 30 20.0 -1.0**
GSI Gunungsitoli 52.80 276 P **P** **11 30 21.4 -0.9**
GSI IAmb IAmb 11 30 23.4
comp=Z,41nm,0.9s
GSI Gunungsitoli 52.80 276 P **P** **11 30 21.8 -0.5**
comp=Z,56nm,0.9s
GYA Guiyang 53.02 310 *e*P P 11 30 32.8 +8.9
GYA pmax pmax
comp=Z,2.0nm,1.7s
ENH Enshi 53.07 315 IAMs_20 IAMs_20 11 49 29.1
comp=Z,1μm,21.0s
YSS Yuzh-Sakhalins 53.29 354 *oe*P **P** **11 30 25.0 -0.2**
YSS *e**PP **pP** **11 30 39.4 +0.3**
YSS *e**SP **sP** **11 30 45.6 +0.6**
YSS *e* 11 31 32.7
YSS *e* 11 32 28.3
YSS *e*S **S** **11 37 47.0 -6.1**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS MLR MLR
comp=Z,800nm,14.0s
YSS MLR MLR
comp=N,600nm,17.0s
YSS Yuzh-Sakhalins 53.29 354 P **P** **11 30 24.4 -0.9**
YSS IAmb IAmb 11 30 41.5
comp=Z,64nm,1.1s
YSS IAMs_20 IAMs_20 11 50 34.7
comp=Z,1μm,21.0s
SNY Shenyang 53.51 336 ⇑P **P** **11 30 24.5 -2.5**
SNY S **S** **11 38 02.3 +6.1**
SNY pmax pmax
comp=Z,230nm,11.2s
SNY LR LR
comp=Z,450nm,28.6s
SNY LR LR
comp=Z,400nm,19.8s
SNY LR LR
comp=Z,940nm,27.7s
MDJ Mudanjiang 53.78 342 P **P** **11 30 30.3 +1.4**
MDJ S **S** **11 38 05.8 +5.9**
MDJ pmax pmax
comp=Z,22nm,0.9s
MDJ pmax pmax
comp=Z,320nm,5.4s
MDJ LR LR
comp=Z,500nm,20.1s
MDJ LR LR
comp=Z,450nm,27.5s
MDJ LR LR
comp=Z,1μm,26.3s
MDJ Mudanjiang 53.78 342 P **P** **11 30 28.5 -0.5**
MDJ IAmb IAmb 11 30 46.5
comp=Z,34nm,1.0s
PHIT Phitsanulok 54.16 296 P P 11 30 37.2 +5.1
comp=Z,95nm,1.0s
UTTA Uttaradit 54.24 297 P **P** **11 30 33.1 +0.4**
comp=Z,21nm,0.9s
SUKH Sukhothai 54.96 296 P P 11 30 43.7 +5.7
comp=Z,18nm,0.9s
KMI Kunming 55.44 306 ⇑P **P** **11 30 44.5 +2.9**
KMI pP **sP** **11 30 58.6 -2.7**
KMI sP pP 11 31 05.3 +10
KMI S **S** **11 38 26.8 +3.4**
KMI sS **sS** **11 38 50.3 +3.7**
KMI SS **SS** **11 42 06.8 -2.1**
KMI pmax pmax
comp=Z,9.0nm,0.8s
KMI pmax pmax
comp=Z,93nm,5.5s
KMI LR LR
comp=Z,330nm,13.7s
KMI LR LR
comp=Z,280nm,21.6s
KMI LR LR
comp=Z,570nm,26.2s
BJI Beijing 55.53 329 P **P** **11 30 40.6 -1.1**
BJI S **S** **11 38 28.3 +4.8**
BJI SS **SS** **11 42 09.1 -0.2**
BJI pmax pmax
comp=Z,5.0nm,0.6s
BJI LR LR
comp=Z,690nm,22.4s
BJI LR LR
comp=Z,560nm,21.2s
BJI LR LR
comp=Z,1μm,25.5s
XAN Xi'an 55.71 319 P **P** **11 30 42.4 -0.8**
XAN pmax pmax
comp=Z,47nm,1.2s

XAN **Xi'an** 55.71 319 P **P** 11 30 42.4 -0.8
XAN IAmb IAmb 11 31 09.2
comp=Z,47nm,1.2s
CM04 Chiang Mai Arr 55.87 297 P **P** 11 30 46.0 +1.4
comp=Z,85nmcomp=Z,9.6nm,0.9s
CM09 Chiang Mai Arr 55.87 297 P **P** 11 30 46.0 +1.4
comp=Z,106nmcomp=Z,14nm,0.9s
CM01 Chiang Mai Arr 55.89 297 P P 11 30 50.2 +5.5
comp=Z,339nmcomp=Z,11nm,0.4s
CM05 Chiang Mai Arr 55.90 297 P P 11 30 49.7 +4.9
comp=Z,68nmcomp=Z,8.3nm,1.0s
CM02 Chiang Mai Arr 55.91 297 P **P** 11 30 47.0 +2.2
comp=Z,91nmcomp=Z,9.6nm,0.9s
CM31 Chiang Mai Arr 55.92 297 P **P** 11 30 41.6 -3.3
CMAR Chiang Mai Arr 55.92 297 P **P** 11 30 45.3 +0.4
comp=Z,4.5nm,0.9s,baz=116,slow=5.9,SNR=14
CMAR PKPPKP 12 00 45.8
comp=Z,0.4nm,0.3s,baz=261,slow=3.6,SNR=4.5
CMAR Chiang Mai Arr 55.92 297 P **P** 11 30 42.4 -2.5
CM15 Chiang Mai Arr 55.94 297 P P 11 30 50.3 +5.3
comp=Z,150nmcomp=Z,11nm,1.0s
CM13 Chiang Mai Arr 55.94 297 P **P** 11 30 46.8 +1.7
comp=Z,74nmcomp=Z,8.7nm,0.9s
CMMT Chiang Mai 56.05 297 P **P** 11 30 46.0 +0.2
comp=Z,229nmcomp=Z,2.9nm,1.7s
CHTO Chiang Mai 56.05 297 P **P** 11 30 43.3 -2.5
CHTO pmax pmax
comp=Z,15nm,1.2s
CHTO Chiang Mai 56.05 297 P **P** 11 30 43.3 -2.5
SKR Severo-Kuril's 56.89 5 *e*P P 11 31 05.9 +15
SKR MLR MLR
comp=Z,500nm,18.0s
SKR MLR MLR
comp=Z,600nm,18.0s
TYV Tymovskoe 57.17 355 *e*P **P** 11 30 53.3 +0.2
TYV *e* 11 38 46.2
TYV pmax pmax
comp=Z,17nm,1.8s
KLR Kul'dur 57.43 346 LR LR 11 54 35.6
comp=Z,501nm,19.2s,baz=170,slow=35
KLR Kul'dur 57.43 346 *ce*P **P** 11 30 54.1 -0.9
KLR pmax pmax
comp=Z,69nm,2.8s
CD2 Chengdu 57.52 313 P **P** 11 30 56.0 -0.1
CD2 S **S** 11 38 50.9 +0.5
CD2 SS **SS** 11 42 40.5 -0.6
CD2 pmax pmax
comp=Z,20nm,1.4s
CD2 pmax pmax
comp=Z,190nm,5.1s
CD2 LR LR
comp=Z,720nm,22.5s
CD2 LR LR
comp=Z,700nm,20.1s
CD2 LR LR
comp=Z,840nm,24.0s
GRNR Gornyy 57.91 350 ⇓ *i*P **P** 11 30 59.3 +0.9
GRNR pmax pmax
comp=Z,9.0nm,1.0s
HHC Hu-ho-hao-te 58.56 326 *e*P **P** 11 31 02.8 -0.5
HHC S **S** 11 38 59.3 -4.4
HHC sS **sS** 11 39 29.0 +2.0
HHC SS **SS** 11 42 54.8 -2.5
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,130nm,7.4s
HHC LR LR
comp=Z,830nm,18.7s
HHC LR LR
comp=Z,920nm,17.9s
HHC LR LR
comp=Z,1μm,18.7s
PETK Petropavlovsk- 59.43 5 P **P** 11 31 07.9 -1.0
comp=Z,4.2nm,0.5s,baz=154,slow=6.6,SNR=18
PETK PcP **PcP** 11 31 53.9 -2.3
comp=Z,17nm,1.1s,baz=57,slow=11,SNR=3.8
PETK LR LR 11 52 36.6
comp=Z,858nm,21.3s,baz=198,slow=32
PET Petropavlovsk 59.45 6 *e*P **P** 11 31 08.1 -0.9
PET *e*S **S** 11 39 09.9 -4.5
PET pmax pmax
comp=Z,300nm,14.7s
PET MLR MLR
comp=Z,700nm,18.0s
PET MLR MLR
comp=Z,500nm,20.0s
PPT2 Papeete2 60.05 107 *e*S **S** 11 39 22.9 -0.7
comp=Z,636nm,26.8s
PPT2 *e*LQ LQ 11 46 26.8
comp=Z,2μm,34.0s
LZH Lanzhou 60.28 318 *e*P **P** 11 31 16.3 +1.0
LZH pP **pP** 11 31 30.4 +1.1
LZH S **S** 11 39 27.6 +1.4
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,180nm,8.7s
LZH LR LR
comp=Z,520nm,20.1s
LZH LR LR
comp=Z,840nm,20.1s
LZH LR LR
comp=Z,650nm,19.0s
TBI Tubuai 60.61 113 *e*S **S** 11 39 30.0 -0.6
comp=Z,516nm,26.2s
TBI *e*LQ LQ 11 46 46.6
comp=Z,1μm,36.5s
ZEA Zeya 62.69 345 *e*P **P** 11 31 30.2 -0.8
ZEA *e**PP **pP** 11 31 46.7 +1.5
ZEA *e*S **S** 11 39 55.9 +0.2
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA smax smax
comp=E,100nm,10.9s
ZEA smax smax
comp=N,300nm,5.9s
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=N,300nm,15.0s
ZEA MLR MLR
comp=Z,300nm,16.0s
GTA Gaotai 64.77 319 P **P** 11 31 49.0 +3.8
GTA pP **pP** 11 31 59.0 -0.4
GTA sP **sP** 11 32 02.4 -2.7
GTA S **S** 11 40 30.0 +7.5
GTA sS **sS** 11 40 49.8 +3.7
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,89nm,5.8s
GTA LR LR
comp=Z,330nm,18.5s
GTA LR LR
comp=Z,300nm,18.5s
GTA LR LR
comp=Z,630nm,20.4s
MA2 Magadan 65.55 0 LR LR 12 00 27.3
comp=Z,537nm,19.0s,baz=182,slow=36
MA2 Magadan 65.55 0 *ce*P **P** 11 31 50.1 +0.4
MA2 pmax pmax
comp=Z,18nm,1.7s
ULN Ulaanbaatar 65.70 330 *ce*P **P** 11 31 52.1 +1.0
ULN pmax pmax
comp=Z,9.0nm,1.2s
ULN Ulaanbaatar 65.70 330 P **P** 11 31 50.4 -0.7
ULN IAmb IAmb 11 32 08.2
comp=Z,32nm,1.2s
CASY Casey 65.88 196 P **P** 11 31 50.4 -1.3
CASY IAmb IAmb 11 32 34.3
comp=Z,25nm,1.1s
CASY Casey 65.88 196 IAMs_20 IAMs_20 11 58 51.8
comp=Z,2μm,19.0s
SONM Songino Array 66.02 329 P **P** 11 31 52.7 -0.3
comp=Z,4.7nm,0.8s,baz=136,slow=5.3,SNR=25
SONM LR LR 12 00 06.2
comp=Z,711nm,21.0s,baz=132,slow=35
SONM PKPPKP P'P'df 12 00 35.8 +8.1
comp=Z,1.2nm,0.8s,baz=304,slow=2.9,SNR=9.0
SONM Songino Array 66.02 329 P **P** 11 31 50.8 -2.3
SONM pmax pmax
comp=Z,23nm,1.1s
SONM Songino Array 66.02 329 P **P** 11 31 50.8 -2.3
SONM IAmb IAmb 11 32 10.6
comp=Z,23nm,1.1s
TAPN Taplejung 68.70 302 *e*P **P** 11 32 13.2 +2.5
SEY Seymchan 68.95 1 LR LR 12 01 06.1
comp=Z,124nm,21.5s,baz=170,slow=35
SEY Seymchan 68.95 1 *i* P **P** 11 32 12.0 +0.9
ZAK Zakamensk 69.23 330 *e*P **P** 11 32 10.6 -2.6
ZAK pmax pmax
comp=Z,19nm,1.3s
TAOE Nuku Hiva Isla 69.28 97 *e*LR LR 11 53 19.2
comp=Z,502nm,23.5s
RAMN Ramite 69.51 302 *e*P **P** 11 32 18.1 +2.4
YAK Yakutsk 69.80 350 *e*P P 11 32 26.7 +10
YAK *e**PP **PcP** 11 32 41.2 +2.6
YAK *e**SS **SKiKP** 11 41 56.9 -2.5
YAK pmax pmax
comp=Z,58nm,1.3s
YAK pmax pmax
comp=N,26nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK MLR MLR
comp=E,317nm,20.0s
YAK Yakutsk 69.80 350 P **P** 11 32 15.9 -0.4
TLY Talaya 69.88 331 LR LR 12 01 05.3
comp=E,796nm,21.7s,baz=122,slow=34
TLY Talaya 69.88 331 P **P** 11 32 15.8 -1.3
TLY pmax pmax
comp=Z,33nm,1.5s
TLY Talaya 69.88 331 P **P** 11 32 15.8 -1.3
TLY IAmb IAmb 11 32 34.0
comp=Z,33nm,1.5s
BOD Bodaibo 70.10 340 *e*P **P** 11 32 20.1 +1.8
BOD pmax pmax
comp=Z,22nm,1.6s
GUN Gumba 70.42 302 *e*P **P** 11 32 21.6 +0.2
PKI Pulchoki 70.71 302 *e*P **P** 11 32 22.9 -0.2
PKIN Phulchoki 70.72 302 *e*P **P** 11 32 23.2 +0.1
KKN Kakani 70.89 302 *e*P **P** 11 32 25.1 +1.1
DMN Daman 70.98 302 *e*P **P** 11 32 24.8 +0.2
MOY Mondy 71.16 330 *e*P **P** 11 32 25.8 +0.8
MOY pmax pmax
comp=Z,167nm,1.8s
GKN Gorkha 71.49 302 *e*P **P** 11 32 26.6 -1.0
VNDA Vanda 71.57 177 P **P** 11 32 28.4 +1.5
comp=Z,8.3nm,0.8s,baz=331,slow=6.7,SNR=43
VNDA pP **pP** 11 32 38.5 -2.1
comp=Z,28nm,0.8s,baz=320,slow=6.5,SNR=39
VNDA LR LR 11 59 36.7
comp=Z,456nm,20.9s,baz=14,slow=32
VNDA Vanda 71.57 177 P **P** 11 32 28.1 +1.1
VNDA pmax pmax
comp=Z,37nm,0.9s
VNDA Vanda 71.57 177 P **P** 11 32 28.1 +1.1
VNDA IAmb IAmb 11 32 39.8
comp=Z,37nm,0.9s
SBA Scott Base 72.17 176 P **P** 11 32 32.8 +2.2
SBA pmax pmax
comp=Z,22nm,1.2s
SBA Scott Base 72.17 176 P **P** 11 32 32.8 +2.2
KOLN Koldanda 72.30 302 *e*P **P** 11 32 31.2 -1.3
RKT Rikitea 73.90 112 *e*S **S** 11 42 09.0 -1.4
comp=Z,240nm,26.0s
RKT Rikitea 73.90 112 *e*LQ LQ 11 52 21.5
comp=Z,598nm,40.5s
RKT *e*LR LR 11 55 35.2
comp=Z,654nm,30.2s
HYB Hyderabad 74.26 290 *i* P **P** 11 32 41.0 -3.1
WMQ Urumqi 74.85 318 *e*P **P** 11 32 48.4 +1.4
WMQ pP **pP** 11 33 02.8 +1.3
WMQ pmax pmax
comp=Z,43nm,1.3s
WMQ LR LR
comp=Z,560nm,24.1s
WMQ LR LR
comp=Z,510nm,21.7s
WMQ LR LR
comp=Z,1μm,24.1s
BILL Bilibino 74.95 6 *ce*P **P** 11 32 46.9 0.0
BILL *i* 11 33 00.8
BILL *e* 11 35 31.3
BILL *e*PPP PPP 11 37 18.3
BILL *i* S **S** 11 42 22.5 +2.1
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,481nm,19.0s
BILL Bilibino 74.95 6 P **P** 11 32 46.4 -0.6
ANM Nome 77.95 18 IAMs_20 IAMs_20 12 04 18.1
comp=Z,905nm,20.0s
ZSN Zaisan 78.12 321 *e*P **P** 11 33 04.5 -0.9
baz=321
ZSN Zaisan 78.12 321 *e*P **P** 11 33 04.5 -0.9
KDAK Kodiak Island 78.70 27 IAMs_20 IAMs_20 12 04 13.7
comp=Z,833nm,19.0s
TIXI Tiksi 78.91 353 *ce*P **P** 11 33 11.0 +1.9
TIXI Tiksi 78.91 353 P **P** 11 33 06.3 -2.8
MK31 Makanchi Array 79.51 320 P **P** 11 33 11.7 -1.3
MK31 pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 79.51 320 P **P** 11 33 11.7 -1.3
MKAR Makanchi Array 79.51 320 P **P** 11 33 12.6 -0.4
comp=Z,1.5nm,0.4s,baz=100,slow=8.0,SNR=17
MKAR PKKPbc **PKKPbc** 11 52 11.1 +7.4
comp=Z,1.9nm,0.8s,baz=282,slow=2.4,SNR=9.3
MKAR PKPPKP **P'P'df** 12 00 09.4 +4.6
comp=Z,0.6nm,1.0s,baz=266,slow=3.6,SNR=5.1
MKAR LR LR 12 08 46.8
comp=Z,493nm,18.4s,baz=88,slow=36
MKAR Makanchi Array 79.51 320 P **P** 11 33 12.0 -1.0
MKAR Makanchi Array 79.51 320 P **P** 11 33 12.0 -1.0
MAKZ Makanchi 79.72 320 P **P** 11 33 12.7 -1.4
MAKZ pmax pmax
comp=Z,27nm,1.5s
MAKZ MLR MLR
comp=Z,700nm,20.0s
MAKZ Makanchi 79.72 320 P **P** 11 33 12.7 -1.4
MAKZ IAMs_20 IAMs_20 12 08 07.5
comp=Z,679nm,20.0s
SHLS Shalkode 80.20 316 *e*P **P** 11 33 14.4 -2.5
baz=316
SHLS Shalkode 80.20 316 *e*P **P** 11 33 14.4 -2.5
UZB Uzynbulak 80.50 315 *e*P **P** 11 33 17.6 -1.0
baz=316
UZB Uzynbulak 80.50 315 *e*P **P** 11 33 17.6 -1.0
ZAA0 Zalesovo Array 80.74 327 P **P** 11 33 17.6 -1.8
ZALV Zalesovo Beam 80.74 327 P **P** 11 33 18.0 -1.4
comp=Z,2.5nm,0.4s,baz=90,slow=4.4,SNR=9.3
ZALV PKKPbc PKKPbc 11 52 10.1 +8.9
comp=Z,0.8nm,0.5s,baz=270,slow=1.5,SNR=5.2
ZALV PKPPKP P'P'df 12 00 15.8 +14
comp=Z,1.1nm,0.4s,baz=299,slow=3.1,SNR=6.2
ZALV LR LR 12 09 28.8
comp=Z,510nm,19.2s,baz=114,slow=36
ZALV Zalesovo Beam 80.74 327 P **P** 11 33 18.0 -1.4
KPKS Kokpek 80.83 316 *e*P **P** 11 33 19.2 -1.1
baz=316
KPKS Kokpek 80.83 316 *e*P **P** 11 33 19.2 -1.1
SATY Saty 80.91 315 *e*P **P** 11 33 19.8 -1.0
baz=315
SATY Saty 80.91 315 *e*P **P** 11 33 19.7 -1.0
O22K Cooper Landing 81.33 26 IAMs_20 IAMs_20 12 03 18.2
comp=Z,878nm,22.0s
SUA Susitna One 81.39 25 IAMs_20 IAMs_20 12 02 58.5
comp=Z,846nm,22.0s
RC01 Rabbit Creek A 81.63 25 IAMs_20 IAMs_20 12 02 53.8
comp=Z,688nm,21.0s
KSH Kashi 81.68 311 P **P** 11 33 25.4 +0.4
KSH pmax pmax
comp=Z,3.0nm,0.5s
KSH pmax pmax
comp=Z,89nm,4.5s
KSH LR LR
comp=Z,440nm,15.3s
KSH LR LR
comp=Z,570nm,20.7s
KSH LR LR
comp=Z,580nm,18.9s
MDOK Medeo 81.89 315 *e*P **P** 11 33 25.3 -0.7
baz=315
MDOK Medeo 81.89 315 *e*P **P** 11 33 25.3 -0.7
TNSS Tian-Shan 81.92 315 *e*P **P** 11 33 25.5 -1.0
baz=315
TNSS Tian-Shan 81.92 315 ⇓ *e*P **P** 11 33 25.5 -1.0
CHUM Lake Minchumin 82.02 22 P 11 33 25.9
baz=238
CUT Chulitna 82.06 24 P 11 33 25.7
baz=240
PMR Palmer 82.13 25 P 11 33 26.1
baz=241
KTH Kantishna Hill 82.38 23 IAMs_20 IAMs_20 12 07 39.5
comp=Z,916nm,21.0s
NIL Nilore 82.42 305 P **P** 11 33 27.6 -1.2
NIL pmax pmax
comp=Z,25nm,0.8s
NIL MLR MLR
comp=Z,400nm,22.0s
NIL Nilore 82.42 305 P **P** 11 33 27.6 -1.2
NIL IAmb IAmb 11 34 01.9
comp=Z,25nm,0.8s
SML Sawmill 82.56 25 P 11 33 28.0
baz=242
TRF Thorofare Moun 82.57 23 IAMs_20 IAMs_20 12 05 15.6
comp=Z,1μm,22.0s
BPAW Bear Paw Mtn. 82.63 22 IAMs_20 IAMs_20 12 08 04.2
comp=Z,743nm,20.0s
BPAW Bear Paw Mtn. 82.63 22 P 11 33 28.6
baz=239
IMAR Indian Mountai 82.64 20 P **P** 11 33 27.3 -1.9
WAT2 Susitna Watana 83.01 24 P 11 33 30.7
baz=242
RND Reindeer 83.11 23 P **P** 11 33 30.6 -1.2
RND pmax pmax
comp=Z,14nm,0.9s
RND Reindeer 83.11 23 P **P** 11 33 30.6 -1.2
RND IAmb IAmb 11 33 53.8
comp=Z,14nm,0.9s
MLY Manley 83.20 22 P 11 33 31.1
baz=240
MLY Manley 83.20 22 P **P** 11 33 30.8 -1.4
MAW Mawson 83.20 203 P **P** 11 33 32.5 +0.3
comp=Z,11nm,0.8s,baz=82,slow=5.6,SNR=12
MAW pP **pP** 11 33 43.4 -3.2
comp=Z,33nm,1.0s,baz=78,slow=4.6,SNR=14
MAW LR LR 12 08 50.2
comp=Z,845nm,20.4s,baz=69,slow=34
MAW Mawson 83.20 203 P **P** 11 33 32.6 +0.5
baz=83,SNR=8.2
MAW Mawson 83.20 203 P **P** 11 33 32.2 +0.1
MAW pmax pmax
comp=Z,9.0nm,1.0s
MAW Mawson 83.20 203 P **P** 11 33 32.2 +0.1
MCK McKinley 83.24 23 P 11 33 30.3
baz=241
MCK McKinley 83.24 23 P **P** 11 33 31.5 -0.9
MCK pmax pmax
comp=Z,27nm,1.0s
MCK McKinley 83.24 23 P **P** 11 33 31.5 -0.9
MCK IAmb IAmb 11 34 20.9
comp=Z,27nm,1.0s
KLU Klutina 83.45 26 P 11 33 32.2
baz=244
AAK Ala-Archa 83.56 314 *ce*P **P** 11 33 33.6 -1.0
AAK pmax pmax
comp=Z,14nm,0.9s
AAK Ala-Archa 83.56 314 P **P** 11 33 33.7 -1.0
AAK Ala-Archa 83.56 314 IAMs_20 IAMs_20 12 10 30.4
comp=Z,804nm,20.0s
NEA2 Nenana 83.60 22 P 11 33 33.9
baz=241
NEA2 Nenana 83.60 22 IAMs_20 IAMs_20 12 06 34.8
comp=Z,791nm,21.0s
M24K Tolsona, Glenn 83.61 25 IAMs_20 IAMs_20 12 06 27.2
comp=Z,1μm,21.0s
SGDS Sogindy 83.67 315 *e*P **P** 11 33 34.0 -1.1
baz=315
SGDS Sogindy 83.67 315 *e*P **P** 11 33 34.0 -1.1
I23K Minto, Yukon-K 83.77 22 P 11 33 34.5
baz=241
QSPA South Pole Qui 83.78 180 P **P** 11 33 36.2 +0.9
comp=Z,32nm,0.9s,baz=344,slow=1.6,SNR=63
QSPA South Pole Qui 83.78 180 P **P** 11 33 35.4 +0.1
QSPA IAMs_20 IAMs_20 12 10 34.6
comp=Z,794nm,20.0s
WRH Wood River Hil 83.92 23 P **P** 11 33 34.9 -0.9
MDM Murphy Dome 84.09 22 IAMs_20 IAMs_20 12 07 31.8
comp=Z,645nm,20.0s
CCB Clear Creek Bu 84.11 23 P **P** 11 33 35.9 -0.9
CCB IAmb IAmb 11 34 23.6
comp=Z,31nm,1.7s
TCOL CIGO, UAF Yank 84.19 22 P 11 33 36.0
baz=242
TCOL CIGO, UAF Yank 84.19 22 P **P** 11 33 35.7 -1.4
TCOL IAmb IAmb 11 34 24.9
comp=Z,19nm,1.1s
TCOL IAMs_20 IAMs_20 12 10 44.4
comp=Z,616nm,20.0s
COLA College 84.20 22 *i* P **P** 11 33 35.1 -2.1
COLA pmax pmax
comp=Z,3.0nm,0.7s
COLA College 84.20 22 P **P** 11 33 36.1 -1.1
COLA IAmb IAmb 11 34 24.9
comp=Z,18nm,1.1s
HDA Harding Lake 84.33 23 IAMs_20 IAMs_20 12 07 14.0
comp=Z,976nm,20.0s
HDA Harding Lake 84.33 23 P 11 33 37.0
baz=243
HDA P 11 33 37.0
baz=243
POKR Poker Plat Res 84.47 22 IAMs_20 IAMs_20 12 07 38.7
comp=Z,719nm,21.0s
BTLS Baital 84.47 316 *e*P **P** 11 33 38.3 -0.8
comp=Z,14nm,1.6s,baz=316
BTLS Baital 84.47 316 *e*P **P** 11 33 38.2 -0.8
BTLS pmax pmax
comp=Z,14nm,1.6s
COLD Coldfoot 84.51 20 P 11 33 38.8
baz=240
IL31 84.52 23 P **P** 11 33 37.8 -1.0
ILAR Eielson Array 84.52 23 P **P** 11 33 35.6 -3.2
comp=Z,2.3nm,0.7s,baz=250,slow=5.2,SNR=32
ILAR PKKPbc **PKKPbc** 11 52 00.0 +7.1
comp=Z,0.5nm,1.0s,baz=109,slow=1.2,SNR=4.3
ILAR LR LR 12 07 39.1
comp=Z,292nm,20.5s,baz=260,slow=33
A21K Barrow 84.87 15 IAMs_20 IAMs_20 12 07 48.6
comp=Z,1μm,21.0s
CTG Chitna Glacier 85.26 27 P 11 33 41.4
baz=248
SCRK Sand Creek 85.31 24 P 11 33 42.3
baz=246
TOLK Toolik Lake Re 85.42 19 P **P** 11 33 43.4 0.0
TOLK IAMs_20 IAMs_20 12 08 23.6
comp=Z,1μm,20.0s
TOLK Toolik Lake Re 85.42 19 P 11 33 43.1
baz=240
L27K Beaver Creek, 85.84 25 P **P** 11 33 46.3 +0.8
L27K IAMs_20 IAMs_20 12 09 34.1
comp=Z,794nm,20.0s
L27K Beaver Creek, 85.84 25 P 11 33 46.4
baz=248
GAR Garm 85.84 310 P **P** 11 33 44.4 -1.8
FYU Fort Yukon 85.93 21 IAMs_20 IAMs_20 12 08 48.2
comp=Z,655nm,20.0s
K27K Chicken 86.10 24 P 11 33 47.6
baz=248
K27K Chicken 86.10 24 IAMs_20 IAMs_20 12 07 38.1
comp=Z,1μm,22.0s
NRIK Noril'sk 86.36 342 P **P** 11 33 46.9 -1.0
comp=Z,3.3nm,0.6s,baz=93,slow=1.5,SNR=3.9
NRIK Noril'sk 86.36 342 *ce*P **P** 11 33 47.0 -1.0
NRIK pmax pmax
comp=Z,3.0nm,0.6s
NRIK Noril'sk 86.36 342 IAmb IAmb 11 34 12.0
comp=Z,10nm,0.8s
KK31 Karatay Array 86.52 314 P **P** 11 33 47.5 -1.8
KK31 pmax pmax
comp=Z,16nm,1.2s
KK31 Karatay Array 86.52 314 P **P** 11 33 47.5 -1.8
KK31 IAmb IAmb 11 34 35.2
comp=Z,16nm,1.2s
KKAR Karatay Array 86.52 314 P **P** 11 33 47.3 -2.0
KKAR pmax pmax
comp=Z,16nm,1.2s
KKAR Karatay Array 86.52 314 P **P** 11 33 47.3 -2.0
KKAR IAmb IAmb 11 34 35.2
comp=Z,16nm,1.2s
IUG Iuzhnay 86.67 313 *e*P **P** 11 33 49.4 -0.9
baz=313
IUG Iuzhnay 86.67 313 *e*P **P** 11 33 49.3 -0.9
EGAK Eagle 86.75 24 P **P** 11 33 48.8 -1.1
EGAK IAmb IAmb 11 34 25.1
comp=Z,12nm,1.0s

EGAK IAMs_20 IAMs_20 12 08 06.2
comp=Z,1µm,20.0s
HYT Haines Junctio 86.98 28 P **P 11 33 51.5 +0.2**
HYT IAmb IAmb 11 34 25.4
comp=Z,16nm,0.8s
DAWY Dawson 87.22 25 P **P 11 33 51.4 -0.9**
DAWY IAmb IAmb 11 34 14.4
comp=Z,18nm,1.4s
BRVK Borovoye 88.71 324 *ce*P **P 11 33 56.8 -2.8**
BRVK pmax pmax
comp=Z,5.0nm,1.7s
EPYK Eagle Plains 89.03 23 P **P 11 33 59.7 -1.2**
EPYK IAmb IAmb 11 34 31.5
comp=Z,14nm,1.1s
EPYK Eagle Plains 89.03 23 P 11 34 00.3
baz=252
INK Inuvik 90.76 21 P **P 11 34 08.3 -0.5**
INK pmax pmax
comp=Z,12nm,1.3s
INK Inuvik 90.76 21 P **P 11 34 08.3 -0.5**
INK IAmb IAmb 11 34 42.5
comp=Z,12nm,1.3s
SYO Syowa Base 91.42 200⇑ *e*P **P 11 34 12.0 +0.1**
SYO Syowa Base 91.42 200⇑ *i*pP pP 11 34 22.6 -3.9
SYO Syowa Base 91.42 200⇑ *es*P sP 11 34 26.2 -5.8
ORV Oroville 92.79 51 IAMs_20 IAMs_20 12 14 41.0
comp=Z,732nm,18.0s
NVAR Mina Array Bea 95.18 52 P **P 11 34 30.6 +0.4**
comp=Z,0.8nm,0.9s,baz=247,slow=8.1,SNR=6.5
NVAR pP **pP 11 34 41.7 -3.2**
comp=Z,0.9nm,0.7s,baz=253,slow=6.4,SNR=5.6
NVAR LR LR 12 10 07.0
comp=Z,441nm,21.5s,baz=264,slow=31
WVOR Wild Horse Val 95.18 48 IAMs_20 IAMs_20 12 10 41.0
comp=Z,863nm20.0s
GEYT Alibeck 95.19 307 LR LR 12 19 20.0
comp=Z,471nm,21.1s,baz=70,slow=37
NEW Newport 96.53 42 IAMs_20 IAMs_20 12 09 53.0
comp=Z,837nm,21.0s
ELK Elko 97.65 50 IAMs_20 IAMs_20 12 18 09.6
comp=Z,908nm,19.0s
YKA Yellowknife Ar 97.97 28 P **P 11 34 41.7 -0.3**
comp=Z,0.2nm,0.7s,baz=125,slow=27,SNR=2.6
YKA PKiKP **PKiKP 11 39 15.8 +0.7**
comp=Z,0.2nm,0.7s,baz=230,slow=1.3,SNR=2.0
YKA PKKPbc **PKKPdf 11 51 24.5 +3.8**
comp=Z,1.5nm,0.9s,baz=95,slow=3.3,SNR=9.3
YKA LR LR 12 15 15.3
comp=Z,736nm,21.4s,baz=0.0,slow=33
DUG Dugway, Tooele 99.49 50 IAMs_20 IAMs_20 12 15 20.5
comp=Z,531nm,19.0s
DLMT Dillon 99.61 45 IAMs_20 IAMs_20 12 16 57.0
comp=Z,915nm,20.0s
SNAA Sanae 100.26 188 Pdiff **Pdif 11 34 52.1 -0.1**
SNAA Sanae 100.26 188 P **Pdif 11 34 51.9 -0.3**
SNAA pP **pPdif 11 35 03.1 -3.7**
comp=Z,12nm,1.2s,baz=210,slow=8.1,SNR=8.9
BOZ Bozeman (W) 100.29 45 IAMs_20 IAMs_20 12 13 56.8
comp=Z,856nm,19.0s
HWUT Hardware Ranch 100.43 49 IAMs_20 IAMs_20 12 16 25.0
comp=Z,602nm,20.0s
WUAZ Wupatki 100.63 55 IAMs_20 IAMs_20 12 12 36.2
comp=Z,932nm,21.0s
TUC Tucson 101.11 58 IAMs_20 IAMs_20 12 12 08.4
comp=Z,806nm,22.0s
VNA3 Neumayer Olymp 101.55 187 Pdiff **Pdif 11 34 57.7 -0.2**
VNA2 Neumayer-Watz 101.57 187 Pdiff **Pdif 11 34 58.3 +0.3**
baz=145,slow=2.8
BW06 Boulder Array 101.88 48 IAMs_20 IAMs_20 12 17 04.4
comp=Z,729nm,20.0s
RLMT Red Lodge 101.97 45 IAMs_20 IAMs_20 12 14 51.4
comp=Z,716nm,20.0s
ALE Alert 102.50 4 IAMs_20 IAMs_20 12 21 46.7
comp=Z,592nm,20.0s
MVCO Mesa Verde 102.92 53 IAMs_20 IAMs_20 12 13 45.6
comp=Z,614nm,21.0s
LAO LASA Array 103.97 44 IAMs_20 IAMs_20 12 15 52.9
comp=Z,635nm,20.0s
SMCO Snowmass 104.03 51 IAMs_20 IAMs_20 12 19 13.6
comp=Z,778nm,19.0s
Y22D IRIS PASSCAL I 104.32 57 IAMs_20 IAMs_20 12 17 06.1
comp=Z,815nm,20.0s
PHWY Pilot Hill 105.03 49 IAMs_20 IAMs_20 12 19 25.8
comp=Z,651nm,20.0s
ISCO Idaho Springs 105.03 51 IAMs_20 IAMs_20 12 22 40.2
comp=Z,653nm,18.0s
SDCO Great Sand Dun 105.27 53 IAMs_20 IAMs_20 12 15 49.8
comp=Z,896nm,22.0s
APA Apatity 105.62 339⇓ *i*P **Pdif 11 35 16.6 +0.7**
APA pmax pmax
comp=Z,4.0nm,1.1s
APA MLR MLR
comp=Z,500nm,18.0s
MNTX Cornudas Mount 105.71 59 IAMs_20 IAMs_20 12 14 33.2
comp=Z,686nm,20.0s
T25A Trinidad 106.18 53 IAMs_20 IAMs_20 12 16 05.0
comp=Z,712nm,22.0s
TULEG Thule 106.60 9 IAMs_20 IAMs_20 12 19 43.3
comp=Z,593nm,22.0s
TXAR Lajitas Array 107.29 61 PKiKP **PKiKP 11 39 33.2 0.0**
comp=Z,0.5nm,0.9s,baz=232,slow=1.4,SNR=5.3
TXAR PKKPbc **PKKPbc 11 50 49.0 -0.7**
comp=Z,0.6nm,0.9s,baz=132,slow=1.9,SNR=4.8
ARCES ARCESS Array B 107.33 342 Pdiff **Pdif 11 35 23.0 -0.5**
comp=Z,2.8nm,1.0s,baz=69,slow=6.6,SNR=4.2
ARCES PKKPbc **PKKPbc 11 50 48.6 -2.1**
comp=Z,2.2nm,0.9s,baz=267,slow=2.4,SNR=4.9
ARCES ARCESS Array B 107.33 342 P **Pdif 11 35 23.0 -0.5**
OBN Obninsk 108.31 326 IAMs_20 IAMs_20 12 24 24.4
comp=Z,797nm,20.0s
AMTX Amarillo 108.59 55 IAMs_20 IAMs_20 12 16 55.9
comp=Z,733nm,21.0s
JCT Junction City 110.57 60 IAMs_20 IAMs_20 12 23 08.9
comp=Z,724nm,20.0s
WMOK Wichita Mounta 110.97 55 IAMs_20 IAMs_20 12 21 58.1
comp=Z,615nm,19.0s
KSU1 Kansas State U 112.03 50 IAMs_20 IAMs_20 12 30 55.4
comp=Z,657nm,19.0s
MNK Minsk 113.25 327 *i* PKP **PKiKP 11 39 42.0 -1.5**
comp=E,3.0nm,1.1s
MNK *i* PKP **PKiKP 11 39 42.0 -1.5**
comp=N,16nm,0.9s
MNK *i* PKP **PKiKP 11 39 42.0 -1.5**
comp=Z,4.0nm,1.2s
MNK *i* PP **PP 11 40 31.9 -2.0**
MNK *i* PPP PPP 11 42 55.3
MNK *i* PKS 11 43 18.2
MNK *i* SKS **SKSdf 11 46 49.2 -2.2**
MNK *i* PS PKKPbc 11 50 08.2 -23
MNK *i* SS **SS 11 56 14.8 -0.5**
MNK *i* SKKS **SKKSdf 11 57 54.6 -6.0**
MNK *i* SSS SSS 12 00 26.2
MNK *i* LQ LQ 12 21 06.4
MNK *i* LR LR 12 24 51.0
MNK *i* LRM MLR 12 28 13.9
comp=Z,586nm,20.4s
MNK *i* LRM MLR 12 28 48.2
comp=E,54nm,16.6s
MNK *i* LRM MLR 12 28 50.8
comp=N,223nm,20.4s
EYMN Ely 113.51 40 IAMs_20 IAMs_20 12 18 59.8
comp=Z,605nm,20.0s
NACGM Naroch 113.67 328 *i* PKP PKiKP 11 39 31.6 -13
NACGM *i* PKP PKiKP 11 39 31.6 -13
NACGM *i* PKP PKiKP 11 39 31.6 -13
NACGM *i* PP **PP 11 40 43.7 +6.8**
NACGM *i* PPP PPP 11 43 57.1
NACGM *i* SKS SKSdf 11 46 30.4 -22
NACGM *i* SKKS 11 48 54.2
NACGM *i* SS SKKSdf 11 57 15.2 -45
NACGM *i* SSS SSS 12 01 09.2
NACGM *i* LR LR 12 21 08.7
AKASG Malin Array Be 113.92 323 PKiKP **PKiKP 11 39 44.0 -0.9**
comp=Z,0.7nm,0.4s,baz=61,slow=1.3,SNR=6.6
AKASG PKKPbc **PKKPab 11 50 37.6 +3.8**
comp=Z,0.9nm,0.4s,baz=262,slow=3.7,SNR=5.8
AKASG Malin Array Be 113.92 323 *i* PKiKP **PKiKP 11 39 44.0 -0.9**
U40A Yellville 115.48 53 **PKiKP 11 39 48.0 -0.4**
U40A Yellville 115.48 53 P 11 39 47.7
baz=282
SCO Scoresbysund 115.57 357 IAMs_20 IAMs_20 12 27 43.6
comp=Z,494nm,20.0s
X40A Basin Creek Fa 115.86 55 IAMs_20 IAMs_20 12 22 23.3
comp=Z,752nm,21.0s
W41B Gary Mavity, V 116.20 54 P 11 39 49.6
baz=282
CCM Cathedral Cave 116.36 51 IAMs_20 IAMs_20 12 21 45.0
comp=Z,775nm,22.0s
BOSA Boshof 116.51 234 PKP **PKPdf 11 39 50.8 0.0**
comp=Z,2.3nm,0.8s,baz=150,slow=1.8,SNR=4.4
BOSA Boshof 116.51 234 PKiKP **PKPdf 11 39 49.0 -1.8**
BOSA Boshof 116.51 234 **PKPdf 11 39 49.0 -1.8**
MATP Matopo 116.69 244 PKP **PKPdf 11 39 51.0 -0.4**
comp=Z,4.3nm,0.7s,baz=23,slow=0.4,SNR=11
LCAR Lake Charles 116.88 53 **PKPdf 11 39 50.7 -0.3**
NOA NORSAR Array B 117.20 339 PKP **PKPdf 11 39 50.5 -0.5**
comp=Z,0.1nm,0.3s,baz=48,slow=1.8,SNR=2.0
NOA PKKPbc **PKKPab 11 50 26.0 +6.8**
comp=Z,1.0nm,0.8s,baz=217,slow=3.7,SNR=6.4
LBTB Lobatse 117.64 238 PKP **PKPdf 11 39 52.8 -0.3**
comp=Z,3.1nm,0.7s,baz=150,slow=4.0,SNR=4.4
MLR Muntele Rosu 117.84 319 PKP **PKPdf 11 39 52.6 -0.2**
comp=Z,4.1nm,0.8s,baz=271,slow=2.1,SNR=4.5
MLR Muntele Rosu 117.84 319 PKiKP **PKPdf 11 39 52.4 -0.4**
MLR Muntele Rosu 117.84 319 **PKPdf 11 39 52.4 -0.4**
MLR IAMs_20 IAMs_20 12 35 04.2
comp=Z,435nm,20.0s
LSZ Lusaka 118.48 249 PKiKP **PKPdf 11 39 54.0 -0.9**
LSZ MLR MLR
comp=Z,400nm,19.0s
LSZ Lusaka 118.48 249 **PKPdf 11 39 54.0 -0.9**
LSZ Lusaka 118.48 249 IAMs_20 IAMs_20 12 32 52.2
comp=Z,413nm,19.0s
OXF Oxford 118.62 54 IAMs_20 IAMs_20 12 23 18.3
comp=Z,674nm,22.0s
T47A Sharon Grove 119.82 51 **PKPdf 11 39 55.5 -1.2**
PSZ Piszkesteto 120.63 323 IAMs_20 IAMs_20 12 35 58.5
comp=Z,433nm,19.0s
CLTN Cedars of Leba 120.66 52 **PKPdf 11 39 56.1 -2.2**
P49A Miami Univ. Ec 120.84 47 P 11 39 58.2
baz=289
MODS Modra-Piesok 121.94 325 *e*PKiKP **PKPdf 11 39 59.9 -0.6**
MODS Modra-Piesok 121.94 325 *e*PKP **PKPdf 11 39 59.9 -0.6**
Z51A Franklin 122.33 54 **PKPdf 11 40 01.1 -0.6**
BRG Berggiesshubel 122.41 329 *e*PKP **PKPdf 11 40 01.2 0.0**
BRG Amp 11 40 03.3
comp=Z,9.4nm,1.0s
BI02 San Fabin de 122.53 141 PKPdf **PKiKP 11 40 02.8 +0.5**
CLL Collm 122.63 329 *i* PKPdf **PKPdf 11 40 01.6 -0.1**
comp=Z,7.0nm,0.5s
CLL *e*PP **PP 11 41 39.0 0.0**
CLL *e*PPS PPS 11 52 56.0
CLL *e* 12 04 06.0
CLL LmV 12 34 00.0
comp=Z,900nm,20.8s
CLL Collm 122.63 329 *i* PKiKP **PKPdf 11 40 01.6 -0.1**
CLL pmax pmax
comp=Z,7.0nm,0.5s
CLL MLR MLR
comp=Z,900nm,20.8s
P52A Corning 122.68 46 P 11 40 01.7
baz=292
FNA Florina 122.70 315 PKiKP **PKPdf 11 40 01.3 -0.9**
FNA Florina 122.70 315 **PKPdf 11 40 01.3 -0.9**
TKL Tuckaleechee C 122.78 51 PKP **PKPdf 11 40 01.5 -1.0**
comp=Z,8.9nm,0.8s,baz=186,slow=4.7,SNR=3.6
CONA Conrad Observa 122.98 325 *e*P **PKPdf 11 40 01.6 -1.0**
comp=Z,3.3nm,0.9s
G54A Lake Saint Pet 122.99 39 P 11 40 02.2
baz=298
M53A WI Miller and 123.02 44 P 11 40 02.0
baz=294
H53A Bobcaygeon 123.06 40 P 11 40 02.2
baz=298
O53A New Philadelph 123.11 45 P 11 40 02.7
baz=293
N53A Lisbon 123.16 45 **PKPdf 11 40 01.7 -1.3**
P53A Whipple 123.27 46 **PKPdf 11 40 02.6 -0.7**
CKRC Cesky Krumlov 123.37 326 *e*PKPDF **PKPdf 11 40 03.2 0.0**
CKRC *ep*PKP **PKiKP 11 40 10.8 +7.3**
Q53A Leroy 123.40 47 P 11 40 03.1
baz=292
KHC Kasperske Hory 123.59 327 *e*PKiKP **PKPdf 11 40 03.6 -0.1**
KHC *e* 11 40 14.2
KHC Kasperske Hory 123.59 327 *e*PKPDF **PKPdf 11 40 03.6 -0.1**
KHC *ep*PKP **pPKPdf 11 40 14.2 -4.7**
KHC Kasperske Hory 123.59 327 PKPdf **PKPdf 11 40 01.9 -1.8**
GOGA Godfrey 123.67 54 IAMs_20 IAMs_20 12 34 35.1
comp=Z,536nm,20.0s
M54A Oil Creek Stat 123.69 43 P 11 40 03.6
baz=295
N54A Moraine State 123.69 44 P 11 40 04.0
baz=294
GEC2 GERESS Array S 123.69 327 PKPdf **PKPdf 11 40 02.4 -1.6**
GERES GERESS Array B 123.69 327 PKP **PKPdf 11 40 03.6 -0.3**
comp=Z,2.9nm,0.7s,baz=86,slow=1.7,SNR=14
Q54A Coxs Mills 123.86 47 **PKPdf 11 40 04.2 -0.3**
MOA Molln 123.93 325 *i* P **PKPdf 11 40 04.0 -0.3**
comp=Z,2.0nm,0.5s
S54A Dingess, Beckl 123.94 48 P 11 40 04.1
baz=291
GROS Grobnik 123.95 323 *i* PKPdf **PKPdf 11 40 03.8 -0.7**
BO02 Sierra Bellavi 124.02 140 **PKiKP 11 40 06.2 +0.9**
R54A Victor 124.04 48 P 11 40 04.1
baz=292
SOKA Soboth 124.12 324 *e*P **PKPdf 11 40 03.2 -1.6**
comp=Z,9.0nm,1.2s,SNR=5.5
D56A ZEC Mazanza, M 124.16 36 P 11 40 04.2
baz=303
GCIS Gornji Cirnik 124.18 323 *i* PKPdf **PKPdf 11 40 04.8 0.0**
MT01 Popeta 124.28 138 **PKiKP 11 40 06.7 +0.9**
OBKA Obir 124.49 324 *i* P **PKPdf 11 40 03.6 -2.0**
comp=Z,2.5nm,0.6s
GRA1 Grafenberg Arr 124.51 329 IAMs_20 IAMs_20 12 33 02.8
comp=Z,674nm,22.0s
GRF Grafenberg Arr 124.51 329 *e*PKPdf **PKPdf 11 40 04.9 -0.5**
baz=53,slow=1.3
GRFO Grafenberg 124.51 329 IAMs_20 IAMs_20 12 33 37.8
comp=Z,676nm,22.0s
R55A Marlinton 124.64 47 **PKiKP 11 40 06.5 +0.1**
R55A Marlinton 124.64 47 P 11 40 05.6
baz=292
M56A Emporium 124.70 43 P 11 40 06.0
baz=296
LJU Ljubljana 124.75 323 *i* PKPdf **PKPdf 11 40 05.8 -0.1**
KMSC Kings Mountain 124.83 51 P 11 40 06.4
baz=289
L56A Greenwood 124.83 42 P 11 40 06.1
baz=297
N56A West Decatur 124.87 44 P 11 40 06.2
baz=296
KBA Koelnbreinsper 124.87 325 *i* P **PKPdf 11 40 05.6 -0.8**
comp=Z,6.6nm,1.1s
MYKA Terra Mystica 124.95 324 *i* P **PKPdf 11 40 05.7 -0.7**
comp=Z,2.0nm,0.4s
O56A Blue Knob Stat 124.96 44 P 11 40 06.2
baz=295
Q56A Snyder Ridge, 125.02 46 P 11 40 05.6
baz=294
G57A Newington 125.04 38 P 11 40 06.5
baz=291
ORTG Ortega, Santa 125.08 82 **PKiKP 11 40 08.0 +0.2**
P56A Dayton Farm, R 125.08 45 P 11 40 06.4
baz=294
K57A Scipio Center 125.25 41 P 11 40 06.0
baz=298
J57A Williamstown 125.26 40 P 11 40 06.2
baz=299
L57A Andrews Acres 125.37 42 P 11 40 07.1
baz=298
E58A La Victoria 125.38 36 P 11 40 06.4
baz=304
VA03 San Esteban 125.42 138 **PKPdf 11 40 06.1 -1.7**
N57A Milroy 125.45 43 P 11 40 06.6
baz=296
ABTA Abfaltersbach 125.53 325 *e*P **PKPdf 11 40 06.5 -1.0**
comp=Z,8.1nm,0.8s,SNR=5.3
JTS Las Juntas de 125.58 82 PKiKP **PKPdf 11 40 08.6 +0.2**
JTS Las Juntas de 125.58 82 **PKPdf 11 40 08.6 +0.2**
JTS Las Juntas de 125.58 82 *e*P **PKPdf 11 40 08.6 +0.2**
Q57A Strasburg 125.58 46 P 11 40 06.5
baz=294
O57A Amberson 125.63 44 P 11 40 06.6
baz=296
STAL STALIGIAL 125.69 325 PKPdf **PKPdf 11 40 06.5 -1.3**
WATA Walderalm 125.72 326 *i* P **PKPdf 11 40 07.4 -0.6**
comp=Z,10nm,1.0s
WTTA Wattenberg 125.73 326 *e*P **PKPdf 11 40 07.6 -0.4**
comp=Z,18nm,1.3s,SNR=5.8
H58A Gabriels 125.89 38 P 11 40 08.1
baz=302
MOTA Moosalm 125.98 326 *e*P **PKPdf 11 40 07.8 -0.6**
comp=Z,8.4nm,0.8s,SNR=5.1
N58A Sunbury 125.98 43 P 11 40 08.3
baz=297
SQTA Sankt Quirin 125.99 326 *i* P **PKPdf 11 40 07.9 -0.5**
comp=Z,9.0nm,0.8s
CO02 Combarbal 126.05 136 **PKiKP 11 40 09.5 0.0**
RETA Reutte 126.08 327 *e*P **PKPdf 11 40 07.9 -0.6**
comp=Z,2.6nm,0.7s
STU Stuttgart 126.12 329 IAMs_20 IAMs_20 12 36 16.4
comp=Z,605nm,21.0s
Q58A Fox Den Farm, 126.13 45 P 11 40 08.1
baz=295
J59A Piesco 126.17 39 P 11 40 09.0
baz=301
ESPN Las Esperanzas 126.20 79 IAMs_20 IAMs_20 12 25 52.4
comp=Z,287nm,19.0s
F60A Warwick 126.37 35 P 11 40 09.0
baz=305
FETA Feichten 126.37 326 *e*P **PKPdf 11 40 09.1 -0.2**
comp=Z,12nm,1.0s,SNR=6.7
BTNL Ternell 126.44 332 *d*PKiKP **PKPdf 11 40 09.0 -0.1**
EKA Eskdalemuir Ar 126.47 341 PKP **PKPdf 11 40 08.3 -0.6**
comp=Z,0.3nm,0.4s,baz=358,slow=3.2,SNR=4.2
MEM Membach 126.48 332 *d*PKiKP **PKiKP 11 40 09.5 0.0**
TIP Timpagrande 126.59 315 IAMs_20 IAMs_20 12 40 39.1
comp=Z,335nm,20.0s
DAVA Damuels 126.68 327 *i* P **PKPdf 11 40 09.5 -0.3**
comp=Z,7.3nm,0.9s
BFO Black Forest 126.85 329 IAMs_20 IAMs_20 12 36 25.6
comp=Z,556nm,21.0s
DAVOX Davos/Dischmat 126.98 326 PKP **PKPdf 11 40 09.9 -0.6**
comp=Z,5.8nm,0.8s,baz=210,slow=4.8,SNR=8.5
BMRD Maredsous 127.26 333 *d*PKiKP **PKiKP 11 40 11.0 -0.1**
BMRD *dp*PKiKP **pPKiKP 11 40 26.5 +0.2**
AQU L'Aquila 127.35 320 IAMs_20 IAMs_20 12 44 04.7
comp=Z,306nm,20.0s
ZON Zonda 127.41 138 PKiKP **PKiKP 11 40 12.9 +0.8**
ZON Zonda 127.41 138 **PKiKP 11 40 12.9 +0.8**
TUE Stuetta 127.46 326 PKPdf **PKPdf 11 40 10.3 -1.1**
LCO Las Campanas 127.53 134 PKiKP **PKiKP 11 40 13.2 +0.5**
LCO Las Campanas 127.53 134 PKPdf **PKiKP 11 40 13.2 +0.5**
CEL Celeste 127.60 314 IAMs_20 IAMs_20 12 40 20.8
comp=Z,388nm,21.0s
ZCCA Zocca 127.78 323 **PKiKP 11 40 13.1 +0.7**
GO03 Copiap 128.68 133 **PKPdf 11 40 14.2 +0.1**
DSB Dublin 129.25 342 IAMs_20 IAMs_20 12 27 50.3
comp=Z,496nm,22.0s
BNI Bardonecchia 129.81 326 PKiKP **PKPdf 11 40 15.8 0.0**
BNI MLR MLR
comp=Z,600nm,20.0s
BNI Bardonecchia 129.81 326 PKPdf **PKPdf 11 40 15.8 0.0**
AC02 Maricunga 129.92 133 PKPdf **PKPdf 11 40 17.0 0.0**
ATAH Atahualpa 130.00 105 PKP **PKPdf 11 40 17.4 0.0**
comp=Z,24nm,1.0s,baz=266,slow=2.4,SNR=13
NNA Nana 130.10 111 PKP **PKPdf 11 40 17.4 +0.4**
comp=Z,12nm,0.7s,baz=275,slow=6.9,SNR=4.2
NNA Nana 130.10 111 PKiKP **PKPdf 11 40 16.9 -0.2**
NNA Nana 130.10 111 **PKPdf 11 40 16.9 -0.2**
PB14 IPOC Station P 130.19 130 **PKiKP 11 40 18.2 0.0**
GO02 Mina Guanaco 130.52 131 PKPdf **PKPdf 11 40 18.1 +0.2**
BCIP Isla Barro Col 130.61 83 IAMs_20 IAMs_20 12 29 00.7
comp=Z,337nm,20.0s
OTAV Otavalo 131.35 95 PKiKP **PKPdf 11 40 19.2 -0.8**
OTAV Otavalo 131.35 95 **PKPdf 11 40 19.2 -0.8**
VSL Villasalto 131.45 319 IAMs_20 IAMs_20 12 43 52.2
comp=Z,290nm,20.0s
PB15 IPOC Station P 131.67 129 **PKPdf 11 40 15.5 -4.5**
PB06 IPOC Station P 131.86 128 **PKPdf 11 40 17.5 -2.8**
GCUF Volcan Galeras 132.58 94 *e*P **PKPdf 11 40 22.5 +0.1**
PB01 IPOC Station P 132.78 126 PKPdf **PKPdf 11 40 22.6 +0.5**
PB11 IPOC Station P 133.29 124 **PKPdf 11 40 22.4 -0.7**
KEST Kesra 133.41 315 PKP **PKiKP 11 40 23.6 -0.5**
comp=Z,4.7nm,0.9s,baz=296,slow=4.8,SNR=4.5
SOTA Rioblanco 133.42 93 *e*P **PKPdf 11 40 24.3 +0.3**
PCON Cinco Dias 133.65 93 *e*P **PKiKP 11 40 25.2 -0.5**
YOTC Yotoco, Valle 133.86 90 *e*P **PKPdf 11 40 24.0 -0.3**
DBBC Dabeiba 134.17 86 *e*P **PKiKP 11 40 26.0 -0.2**
CBOC Ciudad Bolivar 134.32 88 *e*P **PKPdf 11 40 25.0 -0.2**
HELC Santa Helena 134.81 87 *e*P **PKPdf 11 40 26.5 +0.1**
ANIL Santa Ana 134.84 90 *e*P **PKPdf 11 40 27.1 +0.7**
GUY2C Guyana, Caldas 134.92 89 *e*P **PKPdf 11 40 27.2 +0.5**
TOLC Tolima 134.93 90 *e*P **PKPdf 11 40 27.0 +0.4**
ORTC Ortega, Tolima 134.95 91 *e*P **PKPdf 11 40 26.1 -0.1**
PTLC Puerto Leguiza 134.96 96 *e*P **PKPdf 11 40 26.1 -0.2**
SJCC San Jacinto, C 135.20 82 *e*P **PKPdf 11 40 20.9 -5.9**
NORC Norcasia 135.44 88 *e*P **PKPdf 11 40 26.7 -0.5**
ZARC Zaragoza, Cauc 135.52 86 *e*P **PKPdf 11 40 26.9 -0.4**
PTBC PUERTO BERRIO 135.89 87 *e*P **PKPdf 11 40 27.1 -0.9**
ROSC El Rosal 135.94 89 PKP **PKPdf 11 40 28.5 0.0**
comp=Z,9.2nm,0.5s,baz=9.5,slow=6.1,SNR=5.6
ROSC El Rosal 135.94 89 *e*P **PKPdf 11 40 29.3 +0.7**
MACC Mararena, Meta 136.16 93 *e*P **PKPdf 11 40 28.3 -0.2**
SPBC San Pablo de B 136.23 88 *e*P **PKPdf 11 40 28.4 -0.3**
SMLC San Martn de 136.31 84 *e*P **PKPdf 11 40 21.9 -6.8**
CHIC Chingaza 136.51 90 *e*P **PKPdf 11 40 28.6 -1.0**
BRRC Barranca, Sant 136.65 86 *e*P **PKPdf 11 40 29.2 -0.1**
RUSC La Rusia 137.23 88 *e*P **PKPdf 11 40 30.6 -0.4**
CRJC Cerrejon, Guaj 137.42 80 *e*P **PKPdf 11 40 31.4 +0.5**
CPUP Villa Florida 138.24 142 PKP **PKPdf 11 40 32.5 +0.5**
comp=Z,5.0nm,0.9s,baz=190,slow=1.8,SNR=7.7
CPUP pPKP **pPKPdf 11 40 43.6 -3.6**
comp=Z,18nm,0.9s,baz=283,slow=0.9,SNR=15
SOCV Socops 139.49 85 *e*P **PKPdf 11 40 28.7 -5.9**
ELOV Elorza 140.84 87 *e*P **PKPdf 11 40 37.5 +0.5**
SIV San Ignacio 142.22 126 PKP **PKPdf 11 40 38.0 -1.4**
comp=Z,6.0nm,0.7s,baz=246,slow=3.1,SNR=9.2
SJG San Juan 142.87 68 PKP **PKPdf 11 40 39.4 -1.1**
comp=Z,8.7nm,0.2s,baz=318,slow=2.2,SNR=6.5
SJG San Juan 142.87 68 PKiKP **PKPdf 11 40 39.9 -0.6**
SJG San Juan 142.87 68 **PKPdf 11 40 39.9 -0.6**
MDT Midelt 144.46 321 PKP PKPbc 11 40 42.3 +0.7
comp=Z,3.1nm,0.6s,baz=360,slow=2.9,SNR=6.4
PCRV Puerto La Cruz 145.56 81 PKPbc **PKPdf 11 40 44.2 -1.1**
comp=Z,16nm,0.5s,baz=287,slow=2.5,SNR=9.3
PCRV pPKPbc **pPKPdf 11 40 55.7 -4.9**
comp=Z,31nm,0.5s,baz=139,slow=23,SNR=7.2
SPB Sao Paulo 145.89 151 **PKPdf 11 40 45.8 +0.1**
TOA0 Torodi Ar. Sit 147.96 285 PKPbc **PKPbc 11 40 51.3 -1.2**
TORD Torodi Ar. Bea 147.96 285 PKP **PKPdf 11 40 48.1 -1.2**
comp=Z,17nm,0.6s,baz=48,slow=0.7,SNR=68
TORD PKPbc **PKPbc 11 40 51.5 -0.9**
comp=Z,17nm,0.6s,baz=57,slow=2.7,SNR=61
FDF Fort de France 148.31 72 PKP2 **PKPbc 11 40 54.1 +0.8**
FDF Fort de France 148.31 72 **PKPbc 11 40 54.1 +0.8**
PTGA Pitinga 149.37 102 PKP **PKPdf 11 40 50.7 -1.0**
comp=Z,57nm,0.9s,baz=283,slow=5.5,SNR=9.4
PTGA PKPbc **PKPbc 11 40 56.1 -0.1**
comp=Z,57nm,0.9s,baz=251,slow=3.2,SNR=30
PTGA pPKPbc **pPKPdf 11 41 07.1 +0.2**
comp=Z,90nm,1.0s,baz=274,slow=3.2,SNR=17
PTGA Pitinga 149.37 102 PKPbc **PKPbc 11 40 56.4 +0.3**
PTGA Pitinga 149.37 102 *e*P **PKPbc 11 40 56.4 +0.3**
BDFB Brasilia 151.96 141 PKP **PKPdf 11 40 55.2 -0.6**
comp=Z,15nm,1.1s,baz=164,slow=2.2,SNR=13
BDFB PKPbc **PKPbc 11 41 01.9 -0.3**
comp=Z,39nm,0.9s,baz=96,slow=0.3,SNR=30
BDFB Brasilia 151.96 141 PKiKP **PKPdf 11 40 56.8 +1.0**
BDFB Brasilia 151.96 141 PKPdf **PKPdf 11 40 56.8 +1.0**
BDFB PKPbc **PKPbc 11 41 02.2 -0.1**
KOWA Kowa 153.10 290 PKP **PKPdf 11 40 56.4 -0.9**
comp=Z,4.2nm,0.9s,baz=319,slow=2.0,SNR=7.3
KOWA PKPbc **PKPbc 11 41 04.1 -0.6**
comp=Z,9.3nm,0.4s,baz=43,slow=3.0,SNR=28
KOWA Kowa 153.10 290 PKPdf **PKPdf 11 40 56.1 -1.2**
KOWA PKPbc **PKPbc 11 41 03.4 -1.4**
KOWA PKPab **PKPab 11 41 14.7 -1.6**
DBIC Dimbokro 154.95 273 PKP **PKPdf 11 40 58.8 -1.2**
comp=Z,5.8nm,1.0s,baz=153,slow=1.1,SNR=3.9
DBIC PKPbc **PKPbc 11 41 07.2 -1.6**
comp=Z,17nm,1.0s,baz=72,slow=2.2,SNR=12
DBIC Dimbokro 154.95 273 PKiKP **PKPdf 11 40 58.6 -1.3**
DBIC 11 41 08.3
DBIC Dimbokro 154.95 273 PKPdf **PKPdf 11 40 58.6 -1.3**
DBIC **PKPbc 11 41 08.3 -0.4**
DBIC PKPab **PKPab 11 41 24.5 +0.2**

*NEIC **21** 11:24:42.2±1.7,6.14S±0.09×149.88E±0.09,h35km±2km, mb4.9/9, Error ellipse: s-maj=19.0km s-min=11.5km az=136.0*
*IDC **21** 11:24:42.5±2.3,5.98S×149.77E,h47km±20km,mb4.0/6, mb1 4.3/7,mb1mx3.9/37,mbtmp4.3/7,ML2.1/1,Error*

ellipse: s-maj=21.2km s-min=16.0km az=145.0

ISC 21 11:24:42.8±0.6,**6°13'S**×0°07'×**149°89'E**±0°08,**h52**km,**n28,**
σ0°81/28,mb4.3/6,1C,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.97**	**50**	Pn	**Pn**	**11 25 28.7**	**+1.2**
PMG	**Port Moresby**	**4.24**	**220**	P	**Pn**	**11 25 45.6**	**+0.7**
	7.0nm,0.3s,baz=44,slow=19,SNR=0.8						
PMG				S	**Sn**	**11 26 33.7**	**+0.5**
	39nm,0.3s,baz=238,slow=23,SNR=2.5						
PMG	**Port Moresby**	**4.24**	**220**	Sn	**Sn**	**11 26 32.5**	**-0.6**
MANU	**Manus Island**	**4.77**	**328**	Pn	**Pn**	**11 25 53.7**	**+1.4**
FAKI	**Fak Fak**	**17.87**	**279**	P	**P**	**11 28 48.2**	**+0.2**
EIDS	**Eidsvold**	**19.17**	**177**	P	**P**	**11 29 01.7**	**-0.5**
EIDS				IAmb	IAmb	11 29 23.3	
	comp=Z,42nm,1.4s						
MTN	**Manton Dam**	**19.66**	**249**	P	**P**	**11 29 07.9**	**+0.2**
MTN				IAmb	IAmb	11 29 24.2	
	comp=Z,65nm,1.0s						
WB0	**Warramunga Arr**	**20.27**	**227**	P	**P**	**11 29 13.7**	**-0.6**
WB0				IAmb	IAmb	11 29 41.3	
	comp=Z,94nm,1.1s						
WRAB	**Tennant Creek**	**20.41**	**226**	P	**P**	**11 29 15.9**	**+0.2**
WRA	**Warramunga Arr**	**20.42**	**226**	P	**P**	**11 29 16.4**	**+0.5**
	comp=Z,9.2nm,0.6s,baz=52,slow=11,SNR=4.6						
DZM	**Mont Dzumac**	**22.52**	**136**	P	**P**	**11 29 39.3**	**+0.8**
KNRA	**Kununurra**	**22.79**	**244**	P	**P**	**11 29 42.0**	**+0.7**
ASAR	**Alice Springs**	**23.25**	**220**	P	**P**	**11 29 46.9**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=283,slow=28,SNR=1.0						
FITZ	**Fitzroy Crossi**	**26.48**	**241**	P	**P**	**11 30 15.0**	**-0.5**
	comp=Z,9.5nm,0.6s,baz=78,slow=12,SNR=1.4						
FITZ	**Fitzroy Crossi**	**26.48**	**241**	P	**P**	**11 30 15.5**	**+0.1**
FITZ				IAmb	IAmb	11 30 34.7	
	comp=Z,24nm,0.9s						
TAU	**Tasmania Unive**	**36.70**	**183**	P	**P**	**11 31 45.6**	**+0.8**
TAU				IAmb	IAmb	11 31 58.0	
	comp=Z,38nm,1.5s						
PETK	**Petropavlovsk-**	**59.38**	**5**	P	**P**	**11 34 39.3**	**-0.4**
	comp=Z,6.0nm,0.9s,baz=158,slow=6.6,SNR=2.4						
MKAR	**Makanchi Array**	**79.44**	**320**	P	**P**	**11 36 43.4**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=93,slow=5.1,SNR=1.4						
ILAR	**Eielson Array**	**84.48**	**23**	P	**P**	**11 37 08.4**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=248,slow=5.7,SNR=1.2						
SYO	**Syowa Base**	**91.46**	**200⇑**	*e*P	pP	11 37 58.8	+0.7
EKA	**Eskdalemuir Ar**	**126.40**	**341**	PKP	**PKiKP**	**11 43 41.4**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=36,slow=4.4,SNR=4.7						
CPUP	**Villa Florida**	**138.31**	**142**	PKP	**PKiKP**	**11 44 05.5**	**+0.2**
	comp=Z,4.3nm,1.0s,baz=60,slow=3.0,SNR=3.7						
CPUP	**Villa Florida**	**138.31**	**142**		**PKiKP**	**11 44 05.1**	**-0.1**
PCRV	**Puerto La Cruz**	**145.60**	**81**	PKPbc	**PKPdf**	**11 44 16.1**	**-0.5**
	comp=Z,6.3nm,0.5s,baz=354,slow=3.9,SNR=2.3						
TORD	**Torodi Ar. Bea**	**147.90**	**285**	PKPbc	**PKPbc**	**11 44 22.5**	**-0.9**
	comp=Z,3.8nm,0.5s,baz=82,slow=2.4,SNR=14						
PTGA	**Pitinga**	**149.43**	**102**	PKPbc	**PKPbc**	**11 44 27.2**	**-0.1**
	comp=Z,9.6nm,0.6s,baz=311,slow=23,SNR=9.2						
KOWA	**Kowa**	**153.04**	**290**	PKPbc	**PKPbc**	**11 44 34.7**	**-0.9**
	comp=Z,4.1nm,0.6s,baz=20,slow=4.9,SNR=5.6						
KOWA	**Kowa**	**153.04**	**290**		**PKPbc**	**11 44 33.9**	**-1.8**

HEL 21 11:32:09.1±0.3,**61°11N**×**28°61E,h0**km,**ML1.1,**
Explosion,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.77**	**223**	*e*P	Pg	11 32 23.2	-0.7
VJF				*e*S	Sg	11 32 32.7	-1.2
FIA0	**FINESS Array S**	**1.27**	**286**	*e*P	Pg	11 32 31.6	-1.8
FIA0				*e*S	Sg	11 32 48.1	-1.7
PVF	**Pernaja**	**1.46**	**248**	*e*P	Pn	11 32 34.8	-1.9
PVF				*e*S	Sg	11 32 54.2	-1.8
KAF	**Kangasniemi**	**1.49**	**313**	*e*P	Pn	11 32 35.7	-1.4
KAF				*e*S	Sg	11 32 55.1	-1.9
KEF	**Keuruu**	**2.08**	**302**	*e*S	Sn	11 33 12.2	+0.5
KEF				MSG		11 33 16.8	
	comp=Z,0.6nm,0.2s						

BER 21 11:32:32.0±0.8,**66°43N**×**14°76E,h0**km,**ML1.1,1C,**
Suspected explosion,Northern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOR8	**Moi Rana**	**0.29**	**206⇑**	*i*P	Pg	11 32 34.4	-3.0
MOR8				*e*S	Sg	11 32 36.4	-4.7
MOR8				IAML		11 32 38.2	
	comp=Z,51nm,0.5s						
KONS	**Konsvik**	**0.66**	**277**	*e*P	Pg	11 32 43.6	-1.1
KONS				*e*S	Sg	11 32 52.6	-0.6
STOK	**Stokkvaagen**	**0.71**	**263**	*e*P	Pg	11 32 45.0	-0.5
STOK				*e*S	Sg	11 32 54.0	-0.6
FAUS	**Fauske**	**0.98**	**12**	*e*P	Pg	11 32 49.3	-1.5
FAUS				*e*S	Sg	11 33 03.0	-0.5
STEI	**Steigen**	**1.52**	**7**	*e*Pg	Pn	11 32 59.9	-0.5
STEI				*e*Sg	Sg	11 33 18.8	-2.0

*IDC **21** 11:37:35.4*±0.9,*24°03N*×*122°51E,h0km,mb3.6/7,*
mb1 3.7/9,mb1mx3.5/58,mbtmp3.6/9,ML3.1/2,Error
ellipse: s-maj=33.6km s-min=18.1km az=67.0
*JMA **21** 11:37:39.1*±0.2,*23°92N*×*122°51E,h22km*±*4km,M3.4*
*TAP **21** 11:37:39.1,23°93N*×*122°55E,h30km,ML3.9,D*

ISC 21 11:37:38.7±1.1,**23°89N**±0°02×**122°52E**±0°02,**h24**km±9km,
n145,σ0°93/237,mb3.6/7,5C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.68**	**35**	P	**Pb**	**11 37 51.8**	**-0.1**
JYNG				S	**Sb**	**11 38 00.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.72**	**38**	P	**Pb**	**11 37 52.7**	**+0.1**
YOJ				S	**Sb**	**11 38 01.3**	**-0.9**
YOJ	**Yonaguni jima**	**0.72**	**38**	P	**Pb**	**11 37 52.5**	**-0.1**
	baz=45						
YOJ				S	**Sb**	**11 38 01.5**	**-0.7**
	baz=45						
HWA	**Hwalien**	**0.84**	**276**	P	**Pn**	**11 37 56.6**	**+1.7**
	baz=261						
HWA				S	**Sn**	**11 38 07.4**	**+0.9**
	baz=261						
TWD	**Chiawan**	**0.86**	**283**	*i* P	**Pb**	**11 37 54.4**	**-0.6**
	baz=280						
TWD				*i* S	**Sb**	**11 38 06.1**	**0.0**
	baz=280						
EWUT	**Wuta**	**0.87**	**309**	*e*P	**Pb**	**11 37 55.1**	**0.0**
	baz=306						
EWUT				*e*S	**Sb**	**11 38 06.4**	**0.0**
	baz=306						
NACB	**Ninganchiao**	**0.89**	**289**	⇑P	**Pb**	**11 37 55.3**	**-0.1**
	baz=273						
NACB				S	**Sn**	**11 38 07.7**	**-0.1**
	baz=273						
TWC	**Suao**	**0.94**	**320**	⇓*i*P	**Pb**	**11 37 55.7**	**-0.5**
	baz=317						
TWC				*i* S	**Sb**	**11 38 07.7**	**-0.6**
	baz=317						
ESL	**Shilin**	**0.99**	**266**	*i* P	**Pb**	**11 37 56.6**	**-0.6**
	baz=264						
ESL				*i* S	**Sb**	**11 38 10.0**	**+0.1**
	baz=264						
ETLH	**Xiulin Townshi**	**1.00**	**289**	P	**Pb**	**11 37 57.5**	**+0.2**
	baz=274						
ETLH				S	**Sn**	**11 38 11.2**	**+0.6**
	baz=274						
EGFH	**Guangfu**	**1.02**	**258**	P	**Pb**	**11 37 58.7**	**+1.0**
	baz=256						
EGFH				*e*S	**Sb**	**11 38 10.4**	**-0.2**
	baz=256						
NDS	**Dongshan**	**1.04**	**315**	P	**Pn**	**11 37 58.2**	**+0.5**
	baz=313						
NDS				*e*S	**Sn**	**11 38 13.4**	**+1.9**
	baz=313						
HGSD	**Ruisui**	**1.08**	**249**	P	**Pn**	**11 37 58.5**	**+0.2**
	baz=248						
HGSD				S	**Sn**	**11 38 13.4**	**+1.0**
	baz=248						
ILA	**Ilan**	**1.12**	**321**	P	**Pb**	**11 37 59.8**	**+0.5**
	baz=308						
ILA				*e*S	**Sn**	**11 38 14.8**	**+1.4**
	baz=308						
TWE	**Neicheng**	**1.13**	**317**	P	**Pb**	**11 37 59.9**	**+0.4**
	baz=315						
TWE				*e*S	**Sn**	**11 38 14.6**	**+0.8**
	baz=315						
ENTT	**Nioudou**	**1.14**	**311**	P	**Pb**	**11 37 60.0**	**+0.2**
	baz=295						
ENTT				*e*S	**Sn**	**11 38 14.4**	**+0.2**
	baz=295						
NTC	**Toucheng**	**1.14**	**327**	*e*P	**Pn**	**11 37 59.4**	**+0.2**
	baz=325						
NTC				*e*S	**Sn**	**11 38 15.7**	**+1.6**
	baz=325						
NDT	**Datong Townshi**	**1.16**	**308**	P	**Pb**	**11 38 00.2**	**+0.2**
	baz=306						
NDT				*e*S	**Sn**	**11 38 15.0**	**+0.5**
	baz=306						
NNSH	**Datong**	**1.16**	**298**	P	**Pn**	**11 37 59.8**	**+0.3**
	baz=284						
NNSH				S	**Sn**	**11 38 15.5**	**+0.7**
	baz=284						
NNSB	**Datong**	**1.17**	**298**	⇑P	**Pn**	**11 37 59.9**	**+0.4**
	baz=285						
NNSB				S	**Sn**	**11 38 15.1**	**+0.3**
	baz=285						
WHF	**Hehuan Shan**	**1.17**	**283**	*i* P	**Pn**	**11 37 59.9**	**0.0**
	baz=281						
WHF				*i* S	**Sn**	**11 38 15.9**	**+0.5**
	baz=281						
NNS	**Nan Shan**	**1.18**	**298**	⇑*i*P	**Pn**	**11 38 00.0**	**+0.2**
	baz=285						
NNS				*i* S	**Sn**	**11 38 15.8**	**+0.7**
	baz=285						
HATJ	**Hateruma jima**	**1.19**	**82**	P	**Pb**	**11 38 00.8**	**+0.2**
HATJ				S	**Sb**	**11 38 16.0**	**+0.5**
IRIF	**Iriomote-Funau**	**1.19**	**68**	P	**Pb**	**11 38 00.9**	**+0.3**
IRIF				*e*S	**Sn**	**11 38 16.5**	**+1.2**
TWB1	**Santiao Chiao**	**1.21**	**337**	P	**Pb**	**11 38 00.5**	**-0.4**
	baz=350						
TWB1				S	**Sn**	**11 38 16.0**	**+0.2**
	baz=350						
FUSS	**Fushou**	**1.22**	**287**	P	**Pn**	**11 38 00.9**	**+0.5**
	baz=285						
FUSS				S	**Sn**	**11 38 17.0**	**+0.8**
	baz=285						
YULB	**Yu-li**	**1.22**	**246**	P	**Pn**	**11 38 00.7**	**+0.5**
	baz=245						
YULB				*e*S	**Sn**	**11 38 15.2**	**-0.9**
	baz=245						
EYUL	**Yuli**	**1.22**	**244**	*e*P	**Pn**	**11 38 00.5**	**+0.2**
	baz=243						
EYUL				*e*S	**Sn**	**11 38 16.5**	**+0.4**
	baz=243						
OWD	**Renai**	**1.23**	**273**	*e*P	**Pn**	**11 38 00.9**	**+0.5**
	baz=272						
OWD				S	**Sn**	**11 38 14.9**	**-1.5**
	baz=272						
CHGB	**Renai**	**1.24**	**278**	⇑P	**Pn**	**11 38 00.9**	**+0.2**
	baz=276						
CHGB				S	**Sn**	**11 38 16.1**	**-0.6**
	baz=276						
TWF1	**Yuli**	**1.24**	**245**	P	**Pn**	**11 38 01.1**	**+0.5**
	baz=244						
TWF1				S	**Sn**	**11 38 16.9**	**+0.4**
	baz=244						
TIPB	**Shuangxi**	**1.25**	**330**	P	**Pb**	**11 38 01.9**	**+0.4**
	baz=328						
TIPB				S	**Sb**	**11 38 17.1**	**0.0**
	baz=328						
VWDT	**VWDT**	**1.27**	**264**	P	**Pn**	**11 38 01.4**	**+0.6**
	baz=263						
VWDT				S	**Sn**	**11 38 17.6**	**+0.5**
	baz=263						
NWLT	**Wulai**	**1.28**	**314**	*e*P	**Pb**	**11 38 02.1**	**+0.1**
	baz=300						
NWLT				*e*S	**Sb**	**11 38 19.0**	**+0.9**
	baz=300						
TWT	**Tachien**	**1.28**	**287**	*i* P	**Pb**	**11 38 02.3**	**+0.2**
	baz=274						
TWT				S	**Sn**	**11 38 17.0**	**-0.7**
	baz=274						
TDCB	**Techi**	**1.29**	**286**	P	**Pn**	**11 38 02.0**	**+0.6**
	baz=274						
TDCB				S	**Sb**	**11 38 18.8**	**+0.2**
	baz=274						
YHNB	**Yeheng**	**1.30**	**307**	⇑P	**Pn**	**11 38 01.8**	**+0.5**
	baz=305						
YHNB				*e*S	**Sb**	**11 38 19.8**	**+1.1**
	baz=305						
NSK	**Sanguang**	**1.31**	**307**	P	**Pn**	**11 38 02.1**	**+0.6**
	baz=305						
NSK				S	**Sb**	**11 38 18.7**	**-0.4**
	baz=305						
FULB	**Fuli**	**1.32**	**239**	P	**Pn**	**11 38 01.0**	**-0.6**
	baz=227						
FULB				S	**Sn**	**11 38 18.7**	**+0.3**
	baz=227						
CHKT	**Chengkung**	**1.32**	**233**	*e*P	**Pn**	**11 38 01.3**	**-0.3**
	baz=222						
CHKT				S	**Sn**	**11 38 17.1**	**-1.3**
	baz=222						
WFSB	**Wu-fen Shan**	**1.35**	**330**	*e*P	**Pb**	**11 38 02.6**	**-0.7**
	baz=328						
TWA	**Mucha**	**1.38**	**322**	P	**Pb**	**11 38 04.0**	**+0.2**
	baz=320						
TWA				*i* S	**Sb**	**11 38 23.1**	**+2.2**
	baz=320						
NHDH	**Xindian Distri**	**1.40**	**320**	P	**Pb**	**11 38 04.5**	**+0.4**
	baz=335						
NHDH				S	**Sb**	**11 38 23.6**	**+2.1**
	baz=335						
JKRS	**Kuro-shima**	**1.41**	**76**	P	**Pb**	**11 38 04.0**	**-0.3**
JKRS				S	**Sb**	**11 38 23.0**	**+1.2**
TNOU	**National Taiwa**	**1.42**	**332**	*e*P	**Pn**	**11 38 03.3**	**+0.3**
	baz=329						
TATO	**Taipei**	**1.43**	**319**	P	**Pb**	**11 38 04.9**	**+0.3**
	baz=334						
WPL	**Puli Township**	**1.43**	**275**	P	**Pb**	**11 38 04.8**	**+0.1**
	baz=274						
WPL				*e*S	**Sb**	**11 38 23.5**	**+1.0**
	baz=274						
SSLB	**Suanglung**	**1.43**	**266**	P	**Pn**	**11 38 03.8**	**+0.6**
	baz=265						
SSLB				S	**Sn**	**11 38 22.0**	**+0.6**
	baz=265						
EDH	**Donghe**	**1.44**	**231**	*e*P	**Pn**	**11 38 03.3**	**+0.1**
	baz=221						
EDH				*e*S	**Sn**	**11 38 20.5**	**-1.0**
	baz=221						
DPDB	**Guoxing**	**1.46**	**276**	P	**Pn**	**11 38 04.7**	**+1.1**
	baz=275						
DPDB				*e*S	**Sn**	**11 38 22.6**	**+0.6**
	baz=275						
TAP	**Taipei**	**1.47**	**321**	*e*S	**Sb**	**11 38 24.0**	**+0.5**
	baz=337						
WCS	**Beigang Elemen**	**1.48**	**277**	*e*P	**Pb**	**11 38 05.1**	**-0.3**
	baz=275						
WCS				*e*S	**Sn**	**11 38 22.9**	**+0.6**
	baz=275						
SMLT	**Sun Moon Lake**	**1.48**	**270**	P	**Pn**	**11 38 04.0**	**+0.1**
	baz=269						
SMLT				S	**Sn**	**11 38 23.3**	**+0.8**
	baz=269						
WHP	**Taichung City**	**1.48**	**285**	*e*P	**Pb**	**11 38 05.7**	**0.0**
	baz=274						
WHP				S	**Sb**	**11 38 25.2**	**+1.1**
	baz=274						
YM01	**YM01**	**1.52**	**326**	*e*P	**Pb**	**11 38 05.6**	**-0.6**
	baz=323						
TYC	**Yuchr**	**1.52**	**271**	P	**Pn**	**11 38 05.2**	**+0.8**
	baz=270						
TYC				S	**Sb**	**11 38 25.6**	**+0.7**
	baz=270						
YM10	**YM10**	**1.53**	**326**	*e*P	**Pb**	**11 38 05.6**	**-0.8**
	baz=323						
YM11	**YM11**	**1.53**	**326**	*e*P	**Pb**	**11 38 05.8**	**-0.6**
	baz=324						
YM05	**YM05**	**1.53**	**326**	*e*P	**Pb**	**11 38 06.3**	**-0.2**
	baz=323						
WHYT	**Xinyi Township**	**1.54**	**263**	*e*P	**Pb**	**11 38 06.5**	**+0.1**
	baz=251						
WHYT				*e*S	**Sn**	**11 38 24.9**	**+1.1**
	baz=251						
YM04	**YM04**	**1.54**	**325**	*e*P	**Pn**	**11 38 04.9**	**+0.2**
	baz=322						
YM08	**YM08**	**1.54**	**327**	*e*P	**Pb**	**11 38 05.6**	**-1.0**
	baz=325						
LDUT	**Ludao**	**1.55**	**219**	*e*P	**Pn**	**11 38 04.5**	**-0.3**
	baz=218						
LDUT				*e*S	**Sn**	**11 38 22.4**	**-1.7**
	baz=218						
NJD	**Zhudong**	**1.55**	**303**	*e*P	**Pb**	**11 38 07.4**	**+0.7**
	baz=301						
NJD				*e*S	**Sb**	**11 38 27.7**	**+1.8**
	baz=301						
JIJ	**Ishigaki jima**	**1.56**	**72**	P	**Pn**	**11 38 05.4**	**+0.5**
JIJ				*e*S	**Sn**	**11 38 25.1**	**+0.8**
YM03	**YM03**	**1.56**	**325**	*e*P	**Pb**	**11 38 06.1**	**-0.8**
	baz=323						
LIOB	**Emei**	**1.56**	**299**	P	**Pb**	**11 38 06.9**	**0.0**
	baz=297						
LIOB				*e*S	**Sb**	**11 38 26.8**	**+0.6**
	baz=297						
TWS1	**Kuangyinshan**	**1.56**	**320**	P	**Pb**	**11 38 06.5**	**-0.4**
	baz=335						
TWS1				S	**Sb**	**11 38 25.6**	**-0.7**
	baz=335						
NSTT	**Nanjuang**	**1.57**	**298**	*i* P	**Pb**	**11 38 07.0**	**0.0**
	baz=286						
NSTT				*i* S	**Sb**	**11 38 26.6**	**+0.2**
	baz=286						
ANP	**Anpu**	**1.58**	**325**	*e*P	**Pn**	**11 38 06.3**	**-0.9**
	baz=323						
LONT	**Longtian**	**1.61**	**233**	*e*P	**Pn**	**11 38 05.8**	**+0.3**
	baz=224						
LONT				*e*S	**Sn**	**11 38 26.1**	**+0.5**
	baz=224						
TWY	**Chenhua**	**1.61**	**329**	P	**Pb**	**11 38 07.7**	**0.0**
	baz=327						
ALS	**Alishan**	**1.61**	**257**	P	**Pn**	**11 38 07.0**	**+1.1**
	baz=255						
ALS				S	**Sn**	**11 38 26.8**	**+0.7**
	baz=255						
WJS	**Zhushan**	**1.64**	**268**	*e*P	**Pb**	**11 38 08.1**	**-0.1**
	baz=267						
WJS				*e*S	**Sb**	**11 38 29.6**	**+1.1**
	baz=267						
TWQ1	**Liyutan**	**1.66**	**286**	*i* P	**Pb**	**11 38 08.1**	**-0.4**
	baz=284						
TWQ1				*i* S	**Sb**	**11 38 30.2**	**+1.3**
	baz=284						
SBCB	**Hsinchu**	**1.66**	**303**	P	**Pb**	**11 38 08.1**	**-0.4**
	baz=301						
WWF	**Wufeng**	**1.67**	**276**	P	**Pb**	**11 38 09.3**	**+0.6**
	baz=268						
WWF				S	**Sb**	**11 38 30.9**	**+1.6**
	baz=268						
WNT	**Mingjian**	**1.68**	**270**	P	**Pb**	**11 38 09.1**	**+0.2**
	baz=268						
WNT				S	**Sb**	**11 38 29.8**	**+0.3**
	baz=268						
WNT1	**Nantou City**	**1.68**	**271**	*e*P	**Pb**	**11 38 08.6**	**-0.3**
	baz=269						
WNT1				S	**Sb**	**11 38 30.7**	**+1.1**
	baz=269						
NSY	**Sanyi**	**1.69**	**288**	P	**Pb**	**11 38 09.3**	**+0.3**
	baz=287						
NSY				*e*S	**Sb**	**11 38 31.6**	**+1.8**
	baz=287						
TTN	**Taitung**	**1.69**	**228**	*e*S	**Sn**	**11 38 28.4**	**+0.8**
	baz=228						
TWGBT	**Beinan**	**1.70**	**231**	*e*P	**Pn**	**11 38 07.0**	**+0.2**
	baz=221						
TWGBT				S	**Sn**	**11 38 27.7**	**-0.1**
	baz=221						
NMLH	**Miaoli**	**1.70**	**293**	P	**Pb**	**11 38 09.5**	**+0.3**
	baz=291						
NMLH				*e*S	**Sb**	**11 38 31.2**	**+0.9**
	baz=291						
TCU	**Taichung**	**1.70**	**279**	*e*P	**Pb**	**11 38 10.2**	**+0.9**
	baz=277						
TCU				S	**Sb**	**11 38 31.6**	**+1.4**
	baz=277						
TWG	**Pinlang**	**1.70**	**231**	P	**Pn**	**11 38 06.5**	**-0.3**
	baz=221						
TWG				*e*S	**Sn**	**11 38 26.1**	**-1.8**
	baz=221						
CHN5	**Tsauling**	**1.71**	**260**	P	**Pb**	**11 38 08.8**	**-0.6**
	baz=259						
CHN5				S	**Sn**	**11 38 29.8**	**+1.6**
	baz=259						
STYH	**Taoyuan**	**1.75**	**246**	*e*P	**Pb**	**11 38 09.8**	**-0.4**
	baz=237						
STYH				*e*S	**Sn**	**11 38 29.6**	**+0.5**
	baz=237						
STYT	**Tauyuan**	**1.77**	**246**	*e*P	**Pn**	**11 38 09.6**	**+1.7**
	baz=235						
WDJ	**Dajia District**	**1.77**	**285**	*e*P	**Pn**	**11 38 09.1**	**+1.2**
	baz=283						
WDJ				*e*S	**Sb**	**11 38 32.1**	**-0.2**
	baz=283						
JISG	**Ishigakijimahi**	**1.78**	**67**	P	**Pn**	**11 38 08.5**	**+0.6**
JISG				S	**Sn**	**11 38 30.6**	**+0.8**
WCHH	**Zhanghua**	**1.80**	**276**	*e*P	**Pb**	**11 38 10.7**	**-0.3**
	baz=289						
WCHH				S	**Sb**	**11 38 33.9**	**+0.9**
	baz=289						
WGK	**Gukeng**	**1.80**	**264**	P	**Pb**	**11 38 11.1**	**+0.2**
	baz=262						
WDLH	**Douliu**	**1.82**	**264**	*e*P	**Pb**	**11 38 11.4**	**0.0**
	baz=262						
TPUB	**Ta-pu**	**1.83**	**252**	P	**Pb**	**11 38 11.1**	**-0.3**
	baz=243						
TPUB				S	**Sb**	**11 38 33.7**	**-0.2**
	baz=243						
CHN4	**Tsaushan**	**1.84**	**253**	P	**Pb**	**11 38 11.8**	**+0.1**
	baz=252						
CHN4				S	**Sb**	**11 38 35.3**	**+1.0**
	baz=252						
WTP	**Ta-pu**	**1.86**	**250**	P	**Pb**	**11 38 11.6**	**-0.4**
	baz=241						
WTP				*e*S	**Sb**	**11 38 35.8**	**+0.9**
	baz=241						
CHN2	**Minshiung**	**1.91**	**260**	S	**Sb**	**11 38 37.2**	**+1.1**
	baz=258						
ECL	**Taimali**	**1.93**	**228**	*e*P	**Pn**	**11 38 10.2**	**+0.2**
	baz=239						
ECL				*e*S	**Sn**	**11 38 32.8**	**-0.7**
	baz=239						
SLGT	**Liugui**	**1.94**	**243**	*e*P	**Pb**	**11 38 12.8**	**-0.5**
	baz=234						
SGST	**Jiashian**	**1.95**	**246**	*e*P	**Pn**	**11 38 12.3**	**+2.0**
	baz=236						
SGST				*e*S	**Sn**	**11 38 36.2**	**+2.2**
	baz=236						
CHN1	**Nanshi**	**1.96**	**249**	P	**Pb**	**11 38 13.4**	**-0.2**
	baz=248						
CHN1				S	**Sb**	**11 38 38.3**	**+0.7**
	baz=248						
CHY	**Chiayi**	**1.96**	**259**	*e*P	**Pb**	**11 38 13.4**	**-0.2**
	baz=257						
CHY				*e*S	**Sb**	**11 38 39.2**	**+1.6**
	baz=257						
WRL	**Guolierlin Hig**	**1.96**	**271**	*e*S	**Sb**	**11 38 37.9**	**+0.2**
	baz=269						
WTK	**Tuku**	**1.96**	**264**	*e*P	**Pb**	**11 38 12.8**	**-0.9**
	baz=263						
WTK				*e*S	**Sb**	**11 38 37.9**	**+0.2**
	baz=263						
SNST	**Tainan City**	**1.97**	**251**	*e*P	**Pb**	**11 38 14.1**	**+0.3**
	baz=249						
SNST				*e*S	**Sb**	**11 38 39.0**	**+1.0**
	baz=249						
LAY	**Lan-yu**	**2.05**	**206**	P	**Pn**	**11 38 10.9**	**-0.7**
	baz=205						
LAY				S	**Sn**	**11 38 35.1**	**-1.4**
	baz=205						
SSD	**Sandimen**	**2.07**	**237**	*e*P	**Pn**	**11 38 14.1**	**+2.2**
	baz=229						
TSMG	**Majia**	**2.09**	**236**	*e*P	**Pn**	**11 38 14.6**	**+2.4**
	baz=228						
SCST	**Cishan**	**2.11**	**242**	*e*P	**Pb**	**11 38 15.5**	**-0.7**
	baz=241						
WSF	**Szhu**	**2.12**	**264**	S	**Sb**	**11 38 42.5**	**+0.3**
	baz=262						
ICHU	**Yijhu**	**2.12**	**256**	*e*P	**Pb**	**11 38 15.7**	**-0.6**
	baz=254						
ICHU				*e*S	**Sb**	**11 38

	baz=232							
SCZT	**Fangliau**	**2.31**	**229**	*e*P		**Pn**	**11 38 16.2**	**+1.0**
	baz=222							
TSEB	**Hengchuen, Pin**	**2.48**	**217**	*e*P		**Pn**	**11 38 20.1**	**+2.6**
	baz=226							
TSEB				*e*S		**Sn**	**11 38 48.7**	**+1.6**
	baz=226							
HEN	**Hengchun**	**2.49**	**221**	*e*P		**Pn**	**11 38 20.6**	**+2.9**
	baz=220							
HEN				*e*S		**Sn**	**11 38 48.7**	**+1.3**
	baz=220							
TWKBT	**Hengchun**	**2.50**	**219**	*e*P		**Pn**	**11 38 19.2**	**+1.4**
	baz=218							
TWKBT				*e*S		**Sn**	**11 38 47.8**	**+0.2**
	baz=218							
TWK1	**Hengchun**	**2.50**	**219**	P		**Pn**	**11 38 19.7**	**+1.8**
	baz=218							
TWK1				*e*S		**Sn**	**11 38 48.7**	**+1.1**
	baz=218							
JIRB	**Irabujima**	**2.60**	**68**	*e*S		**Sn**	**11 38 51.9**	**+2.0**
JMJ	**Miyako jima 2**	**2.69**	**70**	*e*P		**Pn**	**11 38 22.6**	**+2.1**
	baz=70							
WDGT	**Dungji**	**2.69**	**257**	*e*P		**Pn**	**11 38 21.7**	**+1.2**
	baz=255							
PNG	**Penghu**	**2.73**	**264**	*e*P		**Pn**	**11 38 23.1**	**+2.1**
	baz=262							
VCHM	**Qimei**	**2.91**	**257**	*e*S		**Sn**	**11 38 57.9**	**+0.1**
	baz=255							
VWUC	**VWUC**	**3.00**	**292**	*e*P		**Pn**	**11 38 25.2**	**+0.5**
	baz=291							
PTMZ	**Houxiangcun**	**3.30**	**291**	P		**Pn**	**11 38 29.3**	**+0.5**
	baz=289							
PTMZ				*e*S		**Sn**	**11 39 05.0**	**-2.2**
	baz=289							
LYJJ	**Jianjiangzhen**	**3.64**	**317**	*e*P		**Pn**	**11 38 33.7**	**+0.2**
	baz=304							
XPSS	**Dashiqiu**	**3.68**	**326**	*e*P		**Pn**	**11 38 34.2**	**+0.1**
	baz=324							
KNM	**Kinmen**	**3.77**	**279**	*e*P		**Pn**	**11 38 37.2**	**+1.9**
	baz=278							
KNMB	**Chin-men Tao**	**3.81**	**279**	*e*P		**Pn**	**11 38 36.2**	**+0.4**
	baz=279							
MHZQ	**Yeshan**	**3.85**	**306**	*e*P		**Pn**	**11 38 36.2**	**-0.2**
	baz=304							
AXDP	**Jialang**	**4.26**	**285**	*e*P		**Pn**	**11 38 42.5**	**+0.4**
	baz=284							
JOW	**Kunigami**	**5.97**	**59**	Pn		**Pn**	**11 39 04.9**	**-0.7**
	0.8nm,0.3s,baz=136,slow=24,SNR=7.3							
KSRS	**Korea Array**	**14.29**	**18**	Pn		**Pn**	**11 40 57.4**	**-2.1**
	0.2nm,0.3s,baz=176,slow=18,SNR=1.6							
SONM	**Songino Array**	**27.12**	**336**	P		**P**	**11 43 18.1**	**-1.8**
	0.3nm,0.5s,baz=152,slow=10,SNR=3.6							
MKAR	**Makanchi Array**	**39.40**	**316**	P		**P**	**11 45 05.7**	**-0.8**
	0.6nm,0.5s,baz=100,slow=11,SNR=12							
KURBB	**Kurchatov Arra**	**43.12**	**320**	P		**P**	**11 45 36.7**	**-0.3**
	0.2nm,0.3s,baz=112,slow=7.3,SNR=3.9							
WRA	**Warramunga Arr**	**45.07**	**164**	P		**P**	**11 45 53.8**	**+0.9**
	1.1nm,0.6s,baz=345,slow=9.0,SNR=11							
ASAR	**Alice Springs**	**48.55**	**166**	P		**P**	**11 46 21.9**	**+1.8**
	0.6nm,0.4s,baz=347,slow=7.5,SNR=28							
BVAR	**Borovoye Array**	**48.67**	**321**	P		**P**	**11 46 21.0**	**+0.3**
	0.5nm,0.6s,baz=184,slow=8.9,SNR=4.0							
YKA	**Yellowknife Ar**	**82.76**	**23**	P		**P**	**11 49 59.9**	**-0.5**
	0.3nm,0.6s,baz=314,slow=4.5,SNR=7.3							

*TAP **21** 11:46:56.8,23.°69N×122.°94E,h89km±1km,ML2.8,D*
*JMA **21** 11:46:56.1±0.2,23.°72N×122.°92E,h21km±3km,M2.5*
ISC 21 11:46:55.2±1.3**,23.°65N**±0.°03×**122.°98E**±0.°02**,h20**km±5km**,**
n80,σ**0.86/**134**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.80**	**357**	P		**Pb**	**11 47 10.0**	**-0.4**
JYNG				*e*S		**Sb**	**11 47 19.4**	**-1.4**
YOJ	**Yonaguni jima**	**0.81**	**2**	P		**Pb**	**11 47 10.2**	**-0.4**
YOJ				*e*S		**Sb**	**11 47 20.1**	**-1.0**
YOJ	**Yonaguni jima**	**0.81**	**2**	*e*P		**Pn**	**11 47 13.5**	**+2.0**
HATJ	**Hateruma jima**	**0.85**	**62**	P		**Pn**	**11 47 12.2**	**+0.1**
HATJ				S		**Sn**	**11 47 24.5**	**+0.4**
IRIF	**Iriomote-Funau**	**0.96**	**45**	P		**Pn**	**11 47 13.9**	**+0.3**
IRIF				*e*S		**Sg**	**11 47 26.4**	**-0.4**
JKRS	**Kuro-shima**	**1.11**	**58**	P		**Pg**	**11 47 16.9**	**+0.2**
JKRS				S		**Sg**	**11 47 31.1**	**-0.1**
JIJ	**Ishigaki jima**	**1.28**	**56**	P		**Pb**	**11 47 19.1**	**+0.5**
JIJ				S		**Sn**	**11 47 35.2**	**+0.7**
HWA	**Hwalien**	**1.30**	**285**	*e*P		**Pb**	**11 47 19.4**	**+0.3**
	baz=279							
HWA				*e*S		**Sg**	**11 47 37.1**	**-0.4**
	baz=279							
TWD	**Chiawan**	**1.34**	**289**	P		**Pb**	**11 47 19.7**	**0.0**
	baz=294							
TWD				*e*S		**Sb**	**11 47 37.2**	**+0.8**
	baz=294							
EWUT	**Wuta**	**1.36**	**306**	*e*S		**Sb**	**11 47 37.4**	**+0.5**
	baz=311							
NACB	**Ninganchiao**	**1.37**	**293**	*e*P		**Pn**	**11 47 19.4**	**+0.1**
	baz=292							
NACB				*e*S		**Sn**	**11 47 36.1**	**-0.8**
	baz=292							
TWC	**Suao**	**1.41**	**313**	P		**Pb**	**11 47 20.5**	**-0.4**
	baz=313							
TWC				S		**Sn**	**11 47 37.3**	**-0.5**
	baz=313							
EGFH	**Guangfu**	**1.43**	**271**	*e*P		**Pb**	**11 47 21.6**	**+0.5**
	baz=269							
ESL	**Shilin**	**1.43**	**277**	*e*P		**Pb**	**11 47 21.5**	**+0.3**
	baz=271							
ESL				S		**Sb**	**11 47 39.8**	**+0.8**
	baz=271							
HGSD	**Ruisui**	**1.44**	**264**	P		**Pn**	**11 47 19.4**	**-0.8**
	baz=257							
HGSD				*e*S		**Sn**	**11 47 37.9**	**-0.7**
	baz=257							
ETLH	**Xiulin Townshi**	**1.48**	**292**	P		**Pb**	**11 47 22.4**	**+0.3**
	baz=291							
ETLH				*e*S		**Sn**	**11 47 40.0**	**+0.3**
	baz=291							
NDS	**Dongshan**	**1.52**	**310**	*e*P		**Pb**	**11 47 22.4**	**-0.2**
	baz=310							
NDS				*e*S		**Sn**	**11 47 40.6**	**+0.2**
	baz=310							
JISG	**Ishigakijimahi**	**1.53**	**52**	P		**Pb**	**11 47 22.6**	**-0.3**
JISG				S		**Sb**	**11 47 42.4**	**+0.5**
EYUL	**Yuli**	**1.56**	**259**	*e*P		**Pn**	**11 47 21.8**	**0.0**
	baz=254							
EYUL				*e*S		**Sn**	**11 47 41.8**	**+0.3**
	baz=254							
YULB	**Yu-li**	**1.57**	**261**	P		**Pn**	**11 47 21.9**	**0.0**
	baz=256							
YULB				S		**Sn**	**11 47 41.6**	**-0.1**
	baz=256							
TWF1	**Yuli**	**1.58**	**259**	P		**Pn**	**11 47 22.6**	**+0.5**
	baz=254							
TWF1				S		**Sn**	**11 47 41.6**	**-0.3**
	baz=254							
NTC	**Toucheng**	**1.60**	**319**	*e*P		**Pn**	**11 47 22.6**	**+0.3**
	baz=319							
NTC				*e*S		**Sn**	**11 47 42.1**	**-0.3**
	baz=319							
TWE	**Neicheng**	**1.61**	**312**	P		**Pb**	**11 47 24.1**	**-0.1**
	baz=312							
TWE				*e*S		**Sn**	**11 47 42.8**	**+0.1**
	baz=312							
FULB	**Fuli**	**1.62**	**254**	P		**Pn**	**11 47 22.6**	**0.0**
	baz=249							
FULB				S		**Sn**	**11 47 42.3**	**-0.7**
	baz=249							
ENTT	**Nioudou**	**1.63**	**308**	P		**Pn**	**11 47 23.4**	**+0.6**
	baz=302							
ENTT				S		**Sn**	**11 47 43.1**	**-0.1**
	baz=302							
TWB1	**Santiao Chiao**	**1.63**	**326**	S		**Sn**	**11 47 42.8**	**-0.4**
	baz=327							
NDT	**Datong Townshi**	**1.64**	**305**	*e*P		**Pn**	**11 47 23.2**	**+0.2**
	baz=300							
NDT				*e*S		**Sn**	**11 47 43.4**	**-0.2**
	baz=300							
WHF	**Hehuan Shan**	**1.65**	**288**	P		**Pn**	**11 47 23.6**	**+0.1**
	baz=294							
WHF				S		**Sn**	**11 47 44.4**	**+0.1**
	baz=294							
NNSB	**Datong**	**1.66**	**298**	*e*P		**Pn**	**11 47 23.6**	**+0.3**
	baz=302							
NNSB				S		**Sn**	**11 47 43.4**	**-0.7**
	baz=302							
NNSH	**Datong**	**1.66**	**298**	P		**Pn**	**11 47 23.4**	**+0.1**
	baz=302							
NNSH				S		**Sn**	**11 47 43.6**	**-0.4**
	baz=302							
NNS	**Nan Shan**	**1.67**	**298**	P		**Pn**	**11 47 24.0**	**+0.5**
	baz=302							
NNS				S		**Sn**	**11 47 43.7**	**-0.7**
	baz=302							
OWD	**Renai**	**1.68**	**281**	*e*P		**Pn**	**11 47 23.6**	**-0.1**
	baz=279							
OWD				*e*S		**Sn**	**11 47 44.5**	**-0.2**
	baz=279							
EDH	**Donghe**	**1.69**	**247**	*e*P		**Pn**	**11 47 22.6**	**-1.0**
	baz=244							
EDH				*e*S		**Sn**	**11 47 42.6**	**-2.0**
	baz=244							
TIPB	**Shuangxi**	**1.69**	**321**	P		**Pn**	**11 47 24.2**	**+0.6**
	baz=322							
TIPB				S		**Sn**	**11 47 44.5**	**-0.2**
	baz=322							
VWDT	**VWDT**	**1.69**	**274**	P		**Pn**	**11 47 24.2**	**+0.6**
	baz=272							
VWDT				*e*S		**Sn**	**11 47 44.9**	**+0.1**
	baz=272							
FUSS	**Fushou**	**1.70**	**291**	*e*P		**Pn**	**11 47 23.4**	**-0.6**
	baz=296							
FUSS				*e*S		**Sn**	**11 47 45.5**	**+0.2**
	baz=296							
LDUT	**Ludao**	**1.70**	**235**	*e*P		**Pn**	**11 47 23.1**	**-0.7**
	baz=233							
LDUT				S		**Sn**	**11 47 43.9**	**-1.0**
	baz=233							
CHGB	**Renai**	**1.71**	**284**	*e*P		**Pn**	**11 47 23.6**	**-0.5**
	baz=283							
CHGB				*e*S		**Sn**	**11 47 45.9**	**+0.4**
	baz=283							
NWLT	**Wulai**	**1.76**	**310**	*e*P		**Pn**	**11 47 25.0**	**+0.4**
	baz=305							
NWLT				*e*S		**Sn**	**11 47 46.5**	**+0.1**
	baz=305							
TDCB	**Techi**	**1.77**	**290**	*e*S		**Sn**	**11 47 46.7**	**-0.4**
	baz=294							
YHNB	**Yeheng**	**1.79**	**305**	*e*P		**Pn**	**11 47 25.4**	**+0.3**
	baz=299							
WFSB	**Wu-fen Shan**	**1.79**	**322**	P		**Pb**	**11 47 26.2**	**-1.2**
	baz=323							
WFSB				*e*S		**Sn**	**11 47 47.0**	**-0.2**
	baz=323							
NSK	**Sanguang**	**1.80**	**305**	*e*P		**Pn**	**11 47 26.3**	**+1.1**
	baz=298							
NSK				S		**Sn**	**11 47 48.0**	**+0.4**
	baz=298							
TWA	**Mucha**	**1.84**	**316**	*e*S		**Sn**	**11 47 48.1**	**-0.3**
	baz=325							
LONT	**Longtian**	**1.86**	**247**	*e*S		**Sn**	**11 47 48.1**	**-0.8**
	baz=244							
NHDH	**Xindian Distri**	**1.86**	**315**	*e*S		**Sn**	**11 47 48.9**	**-0.1**
	baz=323							
SSLB	**Suanglung**	**1.86**	**275**	S		**Sn**	**11 47 48.5**	**-0.7**
	baz=268							
YUS	**Yu-Shan**	**1.87**	**265**	*i* P		**Pn**	**11 47 27.1**	**+0.5**
	baz=259							
YUS				S		**Sn**	**11 47 49.4**	**-0.5**
	baz=259							
WPL	**Puli Township**	**1.89**	**281**	*e*P		**Pn**	**11 47 27.8**	**+1.4**
	baz=276							
WPL				*e*S		**Sn**	**11 47 48.5**	**-1.2**
	baz=276							
SMLT	**Sun Moon Lake**	**1.92**	**277**	*e*S		**Sn**	**11 47 51.7**	**+1.1**
	baz=273							
TAP	**Taipei**	**1.93**	**316**	*e*S		**Sn**	**11 47 49.6**	**-1.1**
	baz=323							
TWGBT	**Beinan**	**1.94**	**245**	S		**Sn**	**11 47 51.0**	**+0.2**
	baz=241							
TWG	**Pinlang**	**1.94**	**245**	S		**Sn**	**11 47 50.6**	**-0.4**
	baz=241							
TYC	**Yuchr**	**1.96**	**278**	*e*S		**Sn**	**11 47 52.7**	**+1.2**
	baz=273							
WHP	**Taichung City**	**1.97**	**289**	*e*P		**Pb**	**11 47 29.3**	**-1.1**
	baz=293							
WHP				*e*S		**Sn**	**11 47 52.7**	**+1.0**
	baz=293							
YM11	**YM11**	**1.98**	**320**	*e*S		**Sn**	**11 47 51.9**	**-0.2**
	baz=320							
YM04	**YM04**	**2.00**	**319**	*e*S		**Sn**	**11 47 50.9**	**-1.4**
	baz=325							
ALS	**Alishan**	**2.00**	**266**	P		**Pn**	**11 47 29.8**	**+1.5**
	baz=262							
ALS				*e*S		**Sn**	**11 47 52.8**	**-0.1**
	baz=262							
NTY	**Taoyuan**	**2.04**	**311**	*e*P		**Pn**	**11 47 28.9**	**+0.5**
	baz=320							
TWY	**Chenhua**	**2.05**	**322**	*e*S		**Sn**	**11 47 53.0**	**-0.6**
	baz=317							
LIOB	**Emei**	**2.05**	**299**	*e*P		**Pn**	**11 47 29.4**	**+0.8**
	baz=299							
LIOB				*e*S		**Sn**	**11 47 53.3**	**-0.4**
	baz=299							
NTST	**Danshui**	**2.06**	**317**	*e*S		**Sn**	**11 47 53.3**	**-0.4**
	baz=324							
NSTT	**Nanjuang**	**2.06**	**299**	*e*S		**Sn**	**11 47 53.8**	**0.0**
	baz=298							
LAY	**Lan-yu**	**2.08**	**220**	*e*P		**Pb**	**11 47 31.2**	**-1.1**
	baz=223							
STYH	**Taoyuan**	**2.08**	**257**	*e*P		**Pn**	**11 47 30.6**	**+1.5**
	baz=254							
STYH				*e*S		**Sn**	**11 47 54.8**	**+0.4**
	baz=254							
NCU	**National Centr**	**2.10**	**309**	*e*S		**Sn**	**11 47 54.6**	**-0.2**
	baz=309							
STYT	**Tauyuan**	**2.10**	**257**	*e*P		**Pn**	**11 47 29.8**	**+0.4**
	baz=254							
STYT				*e*S		**Sn**	**11 47 54.6**	**-0.4**
	baz=254							
CHN5	**Tsauling**	**2.12**	**269**	P		**Pb**	**11 47 31.7**	**-1.2**
	baz=268							
CHN5				*e*S		**Sn**	**11 47 56.7**	**+1.4**
	baz=268							
TWQ1	**Liyutan**	**2.14**	**289**	*e*S		**Sn**	**11 47 56.6**	**+0.8**
	baz=289							
HSN	**Hsinchu**	**2.17**	**302**	*e*S		**Sn**	**11 47 56.1**	**-0.4**
	baz=303							
TPUB	**Ta-pu**	**2.19**	**261**	P		**Pb**	**11 47 32.8**	**-1.3**
	baz=259							
TPUB				*e*S		**Sn**	**11 47 59.2**	**+2.1**
	baz=259							
WTP	**Ta-pu**	**2.21**	**260**	*e*P		**Pn**	**11 47 32.5**	**+1.6**
	baz=258							
WTP				*e*S		**Sn**	**11 47 59.0**	**+1.3**
	baz=258							
CHN4	**Tsaushan**	**2.21**	**263**	P		**Pb**	**11 47 33.0**	**-1.6**
	baz=258							
CHN4				*e*S		**Sn**	**11 47 59.8**	**+2.1**
	baz=258							
SLGT	**Liugui**	**2.25**	**254**	*e*P		**Pb**	**11 47 34.3**	**-0.8**
	baz=252							
SLGT				*e*S		**Sn**	**11 48 00.5**	**+2.0**
	baz=252							
CHN1	**Nanshi**	**2.30**	**259**	P		**Pn**	**11 47 34.1**	**+2.0**
	baz=257							
CHN1				*e*S		**Sn**	**11 48 02.3**	**+2.4**
	baz=257							
EAST	**Anshuo**	**2.34**	**238**	*e*P		**Pn**	**11 47 33.3**	**+0.8**
	baz=236							
EAST				S		**Sn**	**11 48 00.8**	**0.0**
	baz=236							
CHY	**Chiayi**	**2.35**	**267**	*e*P		**Pn**	**11 47 34.0**	**+1.2**
	baz=265							
CHY				*e*S		**Sn**	**11 48 02.4**	**+1.3**
	baz=265							
MASBT	**Mashibuluo**	**2.40**	**245**	*e*P		**Pn**	**11 47 33.2**	**-0.2**
	baz=242							
MASBT				*e*S		**Sn**	**11 48 02.6**	**+0.4**
	baz=242							
JMJ	**Miyako jima 2**	**2.41**	**61**	*e*P		**Pb**	**11 47 36.6**	**-1.3**
	baz=62							
SLIU	**Shizi**	**2.47**	**235**	P		**Pn**	**11 47 36.4**	**+2.1**
	baz=233							
SLIU				S		**Sn**	**11 48 03.9**	**-0.1**
	baz=233							

IDC 21 11:55:03.7±1.5**,34.°74S**×**77.°82E,h0**km**,mb3.8**/6**,**
mb1 3.9/6**,mb1mx3.6**/48**,mbtmp3.8**/6**,MS3.9**/3**,Ms1 3.9**/3**,**
ms1mx3.3/37**,Error ellipse: s-maj=75.0km**
s-min=27.4km az=8.0,Mid-Indian Ridge

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

H08S2	**Diego Garcia H**	**27.41**	**348**	T		T	12 27 50.4	
	baz=170,slow=76,SNR=273							
H08S1	**Diego Garcia H**	**27.41**	**348**	T		T	12 27 43.3	
	baz=170,slow=76,SNR=276							
H08S3	**Diego Garcia H**	**27.43**	**348**	T		T	12 27 49.8	
	baz=170,slow=76,SNR=474							
H01W2	**Cape Leeuwin H**	**29.71**	**101**	T		T	12 32 38.6	
	baz=262,slow=74,SNR=28							
H01W3	**Cape Leeuwin H**	**29.72**	**101**	T		T	12 32 39.8	
	baz=262,slow=74,SNR=20							
H01W1	**Cape Leeuwin H**	**29.73**	**101**	T		T	12 32 38.6	
	baz=262,slow=74,SNR=29							
LSZ	**Lusaka**	**48.45**	**281**	P		P	12 03 48.5	**+0.2**
	2.0nm,0.7s,baz=97,slow=12,SNR=4.6							
ASAR	**Alice Springs**	**49.63**	**93**	P		P	12 03 57.3	**+0.1**
	0.7nm,1.0s,baz=258,slow=6.5,SNR=3.7							
ASAR				LR		LR	12 22 31.1	
	comp=Z,85nm,18.6s,baz=314,slow=33							
WRA	**Warramunga Arr**	**51.70**	**89**	P		P	12 04 12.8	**-0.1**
	0.8nm,0.9s,baz=243,slow=7.5,SNR=2.7							
CMAR	**Chiang Mai Arr**	**56.59**	**24**	LR		LR	12 25 29.6	
	comp=Z,55nm,20.0s,baz=189,slow=32							
MKAR	**Makanchi Array**	**81.27**	**3**	P		P	12 07 22.7	**+1.4**
	0.5nm,0.8s,baz=173,slow=8.3,SNR=4.4							
TORD	**Torodi Ar. Bea**	**86.32**	**289**	P		P	12 07 47.7	**-0.3**
	0.4nm,0.8s,baz=125,slow=4.2,SNR=2.3							
TORD				LR		LR	12 45 35.3	
	comp=Z,132nm,21.4s,baz=110,slow=35							
ZALV	**Zalesovo Beam**	**88.54**	**4**	P		P	12 07 55.8	**-1.9**
	0.9nm,0.6s,baz=180,slow=2.9,SNR=2.2							
YKA	**Yellowknife Ar**	**151.15**	**12**	PKPbc		PKPbc	12 14 57.6	**-0.4**
	0.4nm,0.8s,baz=346,slow=2.3,SNR=6.7							

IDC 21 12:11:32.4±414.0**,23.°61N**×**130.°10E,h0**km**,Error ellipse:**
s-maj=288.2km s-min=213.5km az=44.0,Southeast of
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I39PW	**PALAU INFRASON**	**16.54**	**164**	*i*			14 01 30.0	
	baz=342,slow=313,SNR=0.8							
I45RU	**USSURIYSK INFR**	**20.60**	**4**	*i*			14 14 50.0	
	baz=185,slow=329,SNR=0.9							
I34MN	**SONGINO INFRAS**	**30.64**	**328**	*i*			15 23 10.0	
	baz=133,slow=323,SNR=0.6							

*IDC **21** 12:33:27.2±3.6,38.°41N×141.°84E,h0km,mb3.7/2,*
mb1 3.6/5,mb1mx3.3/42,mbtmp3.7/5,ML2.9/3,Error
ellipse: s-maj=72.9km s-min=27.7km az=103.0
*JMA **21** 12:33:32.4±0.1,38.°32N×141.°85E,h47km±1km,M3.5*
JMA Felt I J1.
ISC 21 12:33:31.3±1.5**,38.°30N**±0.°04×**142.°0E**±0.°1**,h40**km±10km**,**
n19,σ**0.93/30,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.40**	**272**	P		**Pn**	**12 33 41.2**	**+0.5**
JIKH				*i* S		**Sn**	**12 33 47.3**	**0.0**
JIO	**Ouri**	**0.51**	**288**	P		**Pn**	**12 33 42.4**	**+0.2**
JIO				S		**Sn**	**12 33 49.3**	**-0.6**
JKMT	**Kesennumamotoy**	**0.65**	**323**	P		**Pn**	**12 33 44.4**	**+0.4**
JKMT				S		**Sn**	**12 33 52.6**	**-0.5**
OFUJ	**Ofunato**	**0.82**	**343**	P		**Pn**	**12 33 46.9**	**+0.5**
OFUJ				S		**Sn**	**12 33 57.1**	**-0.2**
JMK	**Ichinoseki**	**0.88**	**318**	P		**Pn**	**12 33 47.6**	**+0.4**
JMK				S		**Sn**	**12 33 58.1**	**-0.7**
JMM	**Marumori**	**1.02**	**246**	P		**Pn**	**12 33 48.8**	**-0.4**
JMM				*e*S		**Sn**	**12 34 00.7**	**-1.6**
JOU	**Okura**	**1.03**	**274**	P		**Pn**	**12 33 49.4**	**+0.1**
JOU				S		**Sn**	**12 34 02.0**	**-0.5**
JFK	**Kawauchi**	**1.27**	**223**	P		**Pn**	**12 33 52.6**	**0.0**
JFK				*e*S		**Sn**	**12 34 07.5**	**-1.0**
JOM	**Ohasama**	**1.29**	**336**	P		**Pn**	**12 33 53.5**	**+0.7**
JYK	**Kaneyama**	**1.41**	**297**	P		**Pn**	**12 33 54.6**	**+0.1**
JYS	**Shirataka**	**1.50**	**268**	P		**Pn**	**12 33 55.9**	**+0.1**
JFT	**Otama**	**1.51**	**239**	P		**Pn**	**12 33 56.3**	**+0.4**
JFT				*e*S		**Sn**	**12 34 14.2**	**-0.1**
JRG	**Rokugo**	**1.52**	**317**	P		**Pn**	**12 33 56.7**	**+0.7**
MJAR	**Matsushiro Arr**	**3.47**	**241**	Pn		**Pn**	**12 34 23.4**	**+0.6**
	0.1nm,0.3s,baz=53,slow=10,SNR=7.9							
MAT	**Matsushiro**	**3.47**	**241**	P		**Pn**	**12 34 24.8**	**+2.0**
MAT				*e*S		**Sn**	**12 35 05.7**	**+3.0**
JHJ	**Hachijo jima 2**	**5.46**	**200**	Pn		**Pn**	**12 34 50.0**	**-0.2**
	3.8nm,0.3s,baz=63,slow=14,SNR=3.0							
JHJ				Sn		**Sn**	**12 35 50.7**	**-1.1**
	2.9nm,0.3s,baz=92,slow=14,SNR=2.5							
ASAJ	**Asahikawa**	**5.83**	**4**	Pn		**Pn**	**12 34 54.5**	**-0.8**
	0.5nm,0.3s,baz=189,slow=17,SNR=6.5							
ZALV	**Zalesovo Beam**	**41.40**	**311**	P		**P**	**12 41 13.2**	**-0.3**
	0.6nm,0.3s,baz=79,slow=7.5,SNR=3.7							
MKAR	**Makanchi Array**	**43.84**	**301**	P		**P**	**12 41 33.3**	**-0.1**
	0.6nm,0.8s,baz=90,slow=7.2,SNR=5.9							

*TAP **21** 12:56:12.9,24.°63N×122.°72E,h20km,ML2.6,C*
*JMA **21** 12:56:13.2±0.1,24.°57N×122.°69E,h20km±1km,M2.2*
ISC 21 12:56:13.1±1.1**,24.°62N**±0.°04×**122.°71E**±0.°02**,h19**km±3km**,**
n53,σ**0.43/75,1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.27**	**127**	P		**Pg**	**12 56 19.0**	**-0.2**
JYNG				S		**Sg**	**12 56 23.2**	**-0.1**
YOJ	**Yonaguni jima**	**0.31**	**119**	P		**Pg**	**12 56 19.9**	**0.0**
YOJ				S		**Sg**	**12 56 24.5**	**0.0**
YOJ	**Yonaguni jima**	**0.31**	**119**	⇓*i* P		**Pg**	**12 56 19.8**	**0.0**
	baz=117							
YOJ				S		**Sb**	**12 56 24.8**	**0.0**
	baz=117							
TWB1	**Santiao Chiao**	**0.76**	**301**	P		**Pb**	**12 56 27.6**	**-0.1**
	baz=300							
TWB1				*e*S		**Sb**	**12 56 37.4**	**-0.4**
	baz=300							
TWC	**Suao**	**0.78**	**270**	*e*P		**Pb**	**12 56 27.0**	**-1.1**
	baz=257							
NTC	**Toucheng**	**0.83**	**287**	P		**Pb**	**12 56 29.0**	**0.0**
	baz=286							
NTC				*e*S		**Sg**	**12 56 40.7**	**+0.2**
	baz=286							
EWUT	**Wuta**	**0.86**	**259**	*e*P		**Pb

TWD	Chiawan	1.15 243	*e*P		Pn	12 56 34.1	0.0
	baz=250						
YM01	YM01	1.16 297	*e*P		Pn	12 56 34.1	-0.3
	baz=309						
TATO	Taipei	1.17 288	*e*P		Pn	12 56 34.4	0.0
	baz=287						
TATO			*e*S		Sb	12 56 49.1	-0.2
	baz=287						
YM08	YM08	1.17 300	*e*P		Pn	12 56 34.5	+0.1
	baz=312						
YM10	YM10	1.17 298	*e*P		Pn	12 56 34.3	-0.2
	baz=309						
YM05	YM05	1.17 298	*e*P		Pn	12 56 34.6	0.0
	baz=310						
ETLH	Xiulin Townshi	1.19 250	*e*P		Pn	12 56 34.5	-0.3
	baz=258						
ETLH			*e*S		Sn	12 56 50.9	+0.3
	baz=258						
YM04	YM04	1.19 297	*e*P		Pn	12 56 34.7	-0.1
	baz=309						
YHNB	Yeheng	1.21 273	*e*P		Pn	12 56 35.2	+0.1
	baz=273						
YHNB			*e*S		Sb	12 56 50.4	-0.5
	baz=273						
NNSB	Datong	1.22 262	*e*P		Pn	12 56 35.2	0.0
	baz=261						
NNSH	Datong	1.22 262	*e*P		Pn	12 56 35.3	0.0
	baz=271						
NNSH			*i* S		Sb	12 56 51.0	-0.1
	baz=271						
NNS	Nan Shan	1.23 262	*e*P		Pn	12 56 35.4	0.0
	baz=261						
JKRS	Kuro-shima	1.24 107	P		Pn	12 56 35.4	0.0
JKRS			S		Sn	12 56 52.0	+0.3
JIJ	Ishigaki jima	1.33 101	P		Pn	12 56 36.3	-0.3
JIJ			S		Sn	12 56 52.9	-1.0
FUSS	Fushou	1.39 255	*e*P		Pb	12 56 38.3	-0.2
	baz=262						
FUSS			*e*S		Sb	12 56 56.1	+0.2
	baz=262						
WHF	Hehuan Shan	1.40 251	*e*P		Pb	12 56 38.5	-0.4
	baz=250						
ESL	Shilin	1.41 236	*e*P		Pn	12 56 38.0	+0.2
	baz=235						
JISG	Ishigakijimahi	1.46 91	*e*S		Sb	12 56 58.4	+0.6
TDCB	Techi	1.46 256	*e*P		Pb	12 56 40.2	+0.5
	baz=250						
CHGB	Renai	1.50 249	*e*P		Pb	12 56 40.2	-0.3
	baz=248						
LIOB	Emei	1.54 271	*e*P		Pb	12 56 41.4	+0.4
	baz=285						
OWD	Renai	1.55 245	*e*P		Pn	12 56 40.2	+0.4
	baz=244						
NSTT	Nanjuang	1.56 271	*e*P		Pb	12 56 41.3	0.0
	baz=285						
HGSD	Ruisui	1.62 227	*e*P		Pn	12 56 41.0	+0.4
	baz=227						
WHP	Taichung City	1.64 259	*e*P		Pb	12 56 43.5	+0.7
	baz=244						
VWDT	VWDT	1.67 239	*e*P		Pb	12 56 42.4	-0.8
	baz=239						
YULB	Yu-li	1.77 227	*e*P		Pn	12 56 42.5	-0.3
	baz=217						
EYUL	Yuli	1.79 225	*e*P		Pn	12 56 43.4	+0.3
	baz=215						
SSLB	Suanglung	1.80 243	*e*P		Pn	12 56 43.7	+0.6
	baz=242						
TYC	Yuchr	1.83 248	*e*P		Pn	12 56 44.1	+0.6
	baz=232						
FULB	Fuli	1.92 223	*e*P		Pn	12 56 45.2	+0.5
	baz=223						
ALS	Alishan	2.06 238	*e*P		Pn	12 56 47.7	+0.7
	baz=237						
CHN5	Tsauling	2.12 242	*e*P		Pn	12 56 48.8	+1.2
	baz=241						

NEIC ***21*** *13:01:20.9±1.6, 16°.00N±0°.07×96°.72W±0°.06, h10km±1km, mb4.9/384, Mwr4.7/20, Md4.8/29(MEX), Error ellipse: s-maj=12.4km s-min=8.7km az=214.0*

IDC ***21*** *13:01:23.9±3.6, 15°.88N×96°.64W, h33km±25km, mb4.3/20, mb1 4.5/24, mb1mx4.4/39, mbtmp4.5/24, ML3.6/3, MS4.0/20, Ms1 4.1/20, ms1mx3.8/48, Error ellipse: s-maj=23.6km s-min=11.1km az=48.0*

MEX ***21*** *13:01:23.4±1.2, 15°.79N×96°.92W, h12km±5km, MD4.8*

GCMT ***21*** *13:01:24.9±0.3, 16°.07N±0°.02×96°.55W±0°.03, h27km, MW4.9/79, Moment Tensor Solution. s33,c40; s79,c99; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.44±.17; Mθθ-2.38±.10; Mφφ-0.05±.10; Mrθ0.26±.14; Mφθ0.50±.07; Mφr1.41±.20; Best double couple: M₀2.79600×10¹⁶ NP1:φs79.00000°, δ50.00000°, λ56.00000°. NP2: φs305.00000°, δ50.00000°, λ123.00000°. Principal axes: T 3.1110, Plg65.0000°, Azm281.0000°; N -0.6250, Plg25.0000°, Azm102.0000°; P -2.4820, Plg0.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***21*** *13:01:24.3, 16°.00N×96°.67W, h18km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.15; Mθθ-1.15; Mφφ-0.00; Mrθ0.65; Mφθ0.25; Mφr-0.19; Fault plane solution: M₀1.36000×10¹⁶ NP1:φs103.94000°, δ60.02000°, λ92.36000°. NP2:φs279.23000°, δ30.06000°, λ85.92000°. Principal axes: T 1.3335, Plg75.0000°, Azm20.0000°; N 0.0461, Plg2.0000°, Azm283.0000°; P -1.3796, Plg15.0000°, Azm192.0000°:*

ISC 21 13:01:22.2±0.8, 15°.88N±0°.04×96°.85W±0°.03, h27km±5km, n512, σ1‰50/535, mb4.9/191, MS4.0/19, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	Puerto Escondi	0.31	292	*e*P	Pb	13 01 28.9	-0.6
PEIG				*e*S	Sb	13 01 33.9	-0.6
PANG	Puerto Angel	0.42	121	*e*P	Pb	13 01 29.6	-1.6
PANG				*i* S	Sb	13 01 35.4	-2.0
PANG	Puerto Angel	0.42	121		Pb	13 01 29.6	-1.6
PANG					Sb	13 01 35.4	-2.0
YOIG	Yosondua	1.17	326	*e*P	Pn	13 01 42.7	-0.4
YOIG				*e*S	Sn	13 01 57.9	-0.4
VHO	Vista Hermosa	1.19	6	*e*P	Pn	13 01 43.1	-0.1
VHO				*e*S	Sb	13 01 58.8	-0.5
PNIG	Pinotepa	1.33	293	*e*P	Pn	13 01 43.9	-1.0
PNIG				*e*S	Sn	13 01 59.3	-2.4
PNIG	Pinotepa	1.33	293		Pn	13 01 43.9	-1.0
PNIG					Sn	13 01 59.3	-2.4
TXIG	Tlaxiaco	1.62	327	*e*P	Pn	13 01 49.5	+0.3
TXIG				*i* S	Sn	13 02 02.6	-6.8
HLIG	Huajuapan de L	2.14	335	*e*P	Pn	13 01 57.4	+1.1
HLIG				*e*S	Sn	13 02 22.8	+0.7
TOIG	Toxpalan	2.21	355	*e*P	Pn	13 01 58.7	+1.5
TOIG				*i* S	Sn	13 02 25.6	+1.9
CMIG	Matias Romero	2.24	57	Pn	Pn	13 01 56.0	-1.5
	32nm,0.3s,baz=235,slow=12,SNR=249						
CMIG				Pg	Pb	13 02 03.2	+1.2
	503nm,0.3s,baz=236,slow=15,SNR=252						
CMIG				Lg	Lg	13 02 30.4	
	1μm,0.3s,baz=175,slow=4.0,SNR=14						
TLIG	Tlapa	2.34	316	*e*P	Pn	13 02 00.0	+1.0
TLIG				*e*S	Sn	13 02 23.9	-3.1
TLIG				*e*S	Sn	13 02 24.9	-2.1
TLIG	Tlapa	2.34	316	Pn	Pn	13 02 00.0	+1.0
TLIG	Tlapa	2.34	316		Sn	13 02 23.9	-3.1
CRIG	Cruz Grande	2.35	291	*e*P	Pn	13 01 58.1	-0.8
CRIG				*i* S	Sn	13 02 25.7	-1.2
FTIG	Fresnillo de T	2.36	329	*e*P	Pn	13 02 00.5	+1.3
FTIG				*i* S	Sn	13 02 27.1	-0.2
FTIG				*e*S	Sb	13 02 30.1	-2.7
TPIG	Tehuac#an	2.57	349	*e*P	Pn	13 02 03.4	+1.3
TPIG				*e*S	Sb	13 02 38.0	-0.9
TPIG	Tehuac#an	2.57	349		Pn	13 02 03.4	+1.3
TPIG					Sb	13 02 38.0	-0.9
MEIG	Mezcala	3.34	308	*e*P	Pn	13 02 14.4	+1.8
MEIG				*i* S	Sn	13 02 51.6	+0.1
MEIG	Mezcala	3.34	308		Pn	13 02 14.4	+1.8
MEIG					Sb	13 03 02.3	+1.3
CAIG	El Cayaco	3.48	290	*i* P	Pn	13 02 14.3	-0.1
CAIG				*e*S	Sn	13 02 49.5	-5.3
CAIG	El Cayaco	3.48	290		Pn	13 02 14.3	-0.1
CAIG					Sn	13 02 49.5	-5.3
PLIG	Platanillo	3.56	315	*e*P	Pn	13 02 17.2	+1.5
PLIG				*e*S	Sn	13 02 57.1	+0.3
PLIG	Platanillo	3.56	315		Pb	13 02 21.7	-2.8
PLIG					LR	13 03 11.1	
YAIG	Yautepec	3.64	325	*e*P	Pn	13 02 16.5	-0.4
YAIG				*e*S	Sn	13 02 55.5	-3.5
YAIG	Yautepec	3.64	325		Pn	13 02 16.5	-0.4
YAIG					Sn	13 02 55.5	-3.5
UNM	Universidad Na	4.08	327		Pn	13 02 25.8	+2.7
CCIG	Comitan	4.55	84		Pn	13 02 29.7	+0.3
RTAL	Retalhuleu	5.16	105	Pn	Pn	13 02 38.9	+1.2
HUEH	Huehuetenango	5.18	96	Pn	Pn	13 02 39.8	+1.5
MOIG	Morelia	5.59	313		Pn	13 02 47.8	+3.9
APG	El Apazote	6.22	97	Pn	Pn	13 02 50.8	-1.7
	2.6nm,0.3s,baz=300,slow=8.3,SNR=24						
APG				Sn	Sn	13 04 03.2	+0.3
	16nm,0.3s,baz=267,slow=10,SNR=5.8						
APG				Lg	Lg	13 04 36.5	
	11nm,0.3s,baz=52,slow=20,SNR=3.9						
MTO3	Montecristo	7.38	101		Pn	13 03 08.3	-0.2
ZAIG	Zacatecas	8.72	323		Pn	13 03 29.5	+2.7
TEIG	Tepich	9.23	61	Pn	Pn	13 03 32.0	-1.5
	32nm,0.3s,baz=272,slow=1.3,SNR=94						
TEIG				Sn	Sn	13 05 11.3	-5.2
	13nm,0.3s,baz=71,slow=11,SNR=5.1						
TEIG				LR	LR	13 07 02.9	
	comp=Z,402nm,20.2s,baz=235,slow=38						
TEIG	Tepich	9.23	61	Pn	Pn	13 03 30.1	-3.5
TEIG	Tepich	9.23	61	*e*P	Pn	13 03 33.3	-0.2
MATN	Matagalpa	10.98	104	Pn	Pn	13 03 58.5	+0.8
ACON	Acoyapa	11.98	107	Pn	Pn	13 04 12.2	+0.9
ORTG	Ortega, Santa	12.38	115		Pn	13 04 19.5	+2.7
833A	Chaparral WMA,	12.60	350	P		13 04 22.0	
	baz=168						
JTS	Las Juntas de	12.85	114	Pn	Pn	13 04 24.9	+1.6
	2.4nm,0.3s,baz=8.1,slow=11,SNR=9.6						
JTS	Las Juntas de	12.85	114	Pn	Pn	13 04 25.6	+2.4
JTS	Las Juntas de	12.85	114	*e*P	Pn	13 04 26.9	+3.6
COVE	Coope Vega, Sa	13.16	111		Pn	13 04 29.0	+1.6
JCT	Junction City	14.78	350	Pn	Pn	13 04 50.7	+1.3
JCT	Junction City	14.78	350	P		13 04 51.4	
	baz=168						
TX31	Lajitas Ar. Si	14.79	336		Pn	13 04 51.6	+2.0
TX32	Lajitas Array	14.79	336		Pn	13 04 51.5	+1.9
TXAR	Lajitas Array	14.79	336	Pn	P	13 04 52.9	-2.4
	0.0nm,0.3s,baz=152,slow=16,SNR=11						
TXAR				Lg	Lg	13 09 14.9	
	0.0nm,0.3s,baz=152,slow=28,SNR=4.3						
TXAR				LR	LR	13 11 13.9	
	comp=Z,562nm,20.6s,baz=0.0,slow=40						
TXAR	Lajitas Array	14.79	336	Pn	Pn	13 04 51.4	+1.8
435B	Jarrell	14.85	358	Pn	Pn	13 04 51.9	+1.6
LPIG	La Paz	15.05	305	LR	LR	13 10 10.8	
	comp=Z,883nm,18.2s,baz=130,slow=35						
FSCY	Frank Sound, G	15.32	75	Pn	Pn	13 04 56.3	-0.4
NATX	Nacogdoches	15.93	7	P	P	13 05 08.0	+0.1
342A	Flagon Creek P	15.96	14	Pn	Pn	13 05 04.7	-0.3
342A				IAmb	IAmb	13 05 19.9	
	comp=Z,119nm,1.2s						
WHTX	Lake Whitney,	16.05	358	P	P	13 05 09.6	+0.4
WHTX				IAmb	IAmb	13 05 26.8	
	comp=Z,79nm,1.3s						
WHTX	Lake Whitney,	16.05	358	P		13 05 06.9	
	baz=177						
237A	Washetta, Mont	16.07	3	P	P	13 05 10.3	+0.8
237A				IAmb	IAmb	13 05 22.0	
	comp=Z,66nm,1.0s						
344A	Westbrook Farm	16.47	19		Pn	13 05 11.9	+0.5
344A				IAmb	IAmb	13 05 24.3	
	comp=Z,89nm,1.2s						
ABTX	Abilene, Hawle	16.86	352	Pn	Pn	13 05 16.3	0.0
ABTX				IAmb	IAmb	13 05 29.7	
	comp=Z,72nm,1.1s						
ABTX	Abilene, Hawle	16.86	352	P		13 05 17.6	
	baz=170						
VBMS	Vicksburg	17.25	18		Pn	13 05 21.3	+0.1
Z35A	Perchaven, San	17.38	359	P	P	13 05 24.9	+1.0
Z38A	Mt. Pleasant	17.38	5	P	P	13 05 24.0	+0.1
Z38A				IAmb	IAmb	13 05 46.8	
	comp=Z,51nm,0.8s						
143A	Socs Landing,	17.46	15	P	P	13 05 24.6	-0.2
143A				IAmb	IAmb	13 05 28.2	
	comp=Z,72nm,1.1s						
MNTX	Cornudas Mount	17.56	335		P	13 05 26.4	+0.4
MNTX	Cornudas Mount	17.56	335	P		13 05 27.1	
	baz=151,SNR=30						
GDL2	Guadalupe Moun	17.62	339	Pn	Pn	13 05 25.3	-0.6
Z41A	Richland Creek	17.68	11	P		13 05 27.7	
	baz=192						
553A	Crawfordville	18.24	37		Pn	13 05 32.6	-0.8
HSIG		18.43	318	P	Pn	13 05 38.0	+2.2
CCAR	Cane Creek	18.53	13	P	Pn	13 05 37.1	+0.2
CCAR				IAmb	IAmb	13 05 52.9	
	comp=Z,75nm,1.0s						
X37A	Clayton	18.67	4	P	P	13 05 37.6	-0.6
MSTX	Muleshoe	18.78	345	P	Pn	13 05 40.0	-0.1
MSTX				IAmb	IAmb	13 05 50.8	
	comp=Z,88nm,1.3s						
MSTX	Muleshoe	18.78	345	P		13 05 40.1	
	baz=162,SNR=22						
MIAR	Mount Ida	18.82	8	P	P	13 05 39.7	0.0
MIAR				IAmb	IAmb	13 06 00.2	
	comp=Z,58nm,0.9s						
MIAR	Mount Ida	18.82	8	P		13 05 40.5	
	baz=189,SNR=30						
WMOK	Wichita Mounta	18.86	355	P	P	13 05 39.5	-0.7
WMOK	Wichita Mounta	18.86	355	P		13 05 40.6	
	baz=174,SNR=7.6						
X40A	Basin Creek Fa	18.87	10	P	P	13 05 40.0	-0.4
X40A	Basin Creek Fa	18.87	10	P		13 05 40.9	
	baz=192						
Z47A	Carrollton	18.98	23	P	P	13 05 41.5	-0.1
Y45A	Yeager Farm, C	19.08	19	P	P	13 05 42.5	-0.2
Y45A				IAmb	IAmb	13 06 10.9	
	comp=Z,63nm,0.9s						
319A	Douglas	19.14	326	P	Pn	13 05 45.0	+0.5
LRAL	Lakeview Retre	19.27	26	P		13 05 44.1	
	baz=210						
LRAL	Lakeview Retre	19.27	26	P	P	13 05 44.1	-0.6
X43A	Marvell	19.32	15	P		13 05 45.5	
	baz=197						
121A	Cookes Peak, D	19.32	331	P	Pn	13 05 46.2	-0.4
121A	Cookes Peak, D	19.32	331	P		13 05 47.0	
	baz=146,SNR=11						
AMTX	Amarillo	19.41	348	P		13 05 47.3	
	baz=165						
AMTX	Amarillo	19.41	348	P	Pn	13 05 47.1	-0.6
W39A	Magazine	19.43	8	P	P	13 05 46.4	0.0
W41B	Gary Mavity, V	19.65	11	P		13 05 48.7	
	baz=193						
TIGA	Tifton	19.65	36	P		13 05 48.9	
	baz=221						
OXF	Oxford	19.72	18	P	P	13 05 49.4	-0.2
OXF				IAmb	IAmb	13 06 07.2	
	comp=Z,78nm,1.1s						
OXF	Oxford	19.72	18	P		13 05 49.5	
	baz=201						
WHAR	Wooly Hollow	19.75	11	P	P	13 05 50.4	+0.4
OK029	Liberty Lake	19.84	359	P	Pn	13 05 51.7	-0.9
OK030	Cody Creek RV	19.96	0	P	P	13 05 51.2	-1.1
OK030				IAmb	IAmb	13 05 56.3	
	comp=Z,38nm,0.9s						
TUL1	Leonard	19.97	3	P		13 05 53.1	
	baz=182						
OK031	S. Brethren Rd	19.99	0	P	P	13 05 52.9	+0.3
152A	Waverly Hall	20.01	31	P	P	13 05 52.1	-0.7
QUOK	Quay	20.21	0	P	P	13 05 55.8	+0.9
QUOK				IAmb	IAmb	13 06 06.8	
	comp=Z,64nm,1.2s						
BNM	Barren Site	20.21	336	P	Pn	13 05 57.3	0.0
Y49A	Blount Mountai	20.22	26	P	P	13 05 54.6	-0.6
LENM	Lemitar	20.36	335	P	Pn	13 05 58.9	0.0
FCAR	Ozark Folk Cen	20.37	11	P	P	13 05 56.8	+0.1
FCAR				IAmb	IAmb	13 06 07.3	
	comp=Z,36nm,0.8s						
HHAR	Hobbs	20.48	7	P	P	13 05 58.3	+0.3
X48A	Hartselle	20.49	24	P	P	13 05 57.1	-0.9
LPAR	Lepanto	20.49	15	P	P	13 05 58.1	+0.1
U32A	Winter Ranch,	20.50	355	P	P	13 05 58.6	+0.5
U32A				IAmb	IAmb	13 06 14.0	
	comp=Z,61nm,1.1s						
CROK	Carrier	20.56	357	P	Pn	13 05 59.9	-1.3
PLAL	Pickwick Lake	20.58	21	P	P	13 05 58.0	-1.1
U38A	Gravette	20.59	6	P	P	13 05 58.6	-0.5
255A	Hazlehurst	20.65	37	P	P	13 05 59.0	-0.8
255A				IAmb	IAmb	13 06 16.5	
	comp=Z,54nm,1.0s						
TUC	Tucson	20.68	325	P		13 06 03.7	
	baz=138						
TUC	Tucson	20.68	325	P	Pn	13 06 02.1	-0.5
U40A	Yellville	20.70	9	P		13 06 01.6	
	baz=190,SNR=24						
U40A	Yellville	20.70	9	P	P	13 06 00.9	+0.6
U40A				IAmb	IAmb	13 06 11.2	
	comp=Z,50nm,0.8s						
LCAR	Lake Charles	20.74	13	P	P	13 06 00.3	-0.3
ANMO	Albuquerque	20.85	337	P	Pn	13 06 04.6	-0.1
	comp=Z,8.0nm,0.9s,baz=137,slow=11,SNR=25						
ANMO	Albuquerque	20.85	337	P	P	13 06 03.1	+1.0
ANMO	Albuquerque	20.85	337	P		13 06 04.4	
	baz=153						
OK032	Salt Plains WL	20.87	357	P	P	13 06 03.2	+1.0
OK032				IAmb	IAmb	13 06 14.6	
	comp=Z,75nm,1.0s						
GNAR	Gosnell	20.91	16	P	P	13 06 02.9	+0.4
T35A	Sooner Cattle	20.95	1	P	P	13 06 03.8	+0.7
T35A				IAmb	IAmb	13 06 14.1	
	comp=Z,51nm,0.8s						
HALT	Halls	21.04	17	P	P	13 06 03.8	-0.2
GTBY	Guantanamo Bay	21.07	76	P	P	13 06 03.5	-0.9
GTBY				IAmb	IAmb	13 06 14.1	
	comp=Z,40nm,1.1s						
FPAL	Fort Paine	21.15	26	P	P	13 06 03.9	-1.3
KAN05	Bluff City Nor	21.16	358	P	P	13 06 05.7	+0.5
KAN05				IAmb	IAmb	13 06 10.4	
	comp=Z,36nm,0.8s						
KAN09	Caldwell North	21.18	358	P	P	13 06 06.0	+0.5
KAN09				IAmb	IAmb	13 06 19.7	
	comp=Z,49nm,1.1s						
GOGA	Godfrey	21.23	32	P	P	13 06 04.5	-1.6
GOGA	Godfrey	21.23	32	P		13 06 05.0	
	baz=218						
KS20	Mayfield South	21.27	358	P	P	13 06 06.8	+0.3
Y52A	Lilburn	21.30	30	P	P	13 06 04.9	-1.8
KAN12	Harper NE Stat	21.35	357	P	P	13 06 07.6	+0.2
KAN12				IAmb	IAmb	13 06 12.3	
	comp=Z,36nm,0.7s						
X51A	Calhoun	21.50	28	P	P	13 06 07.4	-1.5
X51A				IAmb	IAmb	13 06 28.7	
	comp=Z,80nm,1.5s						
MGMO	Mountain Grove	21.57	10	P	P	13 06 10.8	+1.0
MGMO				IAmb	IAmb	13 06 15.0	
	comp=Z,39nm,0.8s						
SWET	Sewanee	21.59	25	P	P	13 06 08.8	-1.2
SWET				IAmb	IAmb	13 06 31.6	
	comp=Z,30nm,0.9s						
214A	Organ Pipe Nat	21.61	321	P	P	13 06 12.4	+2.3
214A				IAmb	IAmb	13 06 16.7	
	comp=Z,47nm,1.4s						
214A	Organ Pipe Nat	21.61	321	P		13 06 13.0	
	baz=134,SNR=7.0						
PARMO	Parma	21.64	16	P	P	13 06 11.1	+0.7
WVT	Waverly	21.71	20	P	P	13 06 09.9	-1.3
WVT				IAmb	IAmb	13 06 21.2	
	comp=Z,67nm,1.2s						
WVT	Waverly	21.71	20	P		13 06 10.8	
	baz=204						
V48A	Smith Brothers	21.71	23	P	P	13 06 10.3	-0.9
V48A				IAmb	IAmb	13 06 21.4	
	comp=Z,37nm,0.8s						
W50A	Signal Mountai	21.84	26	P	P	13 06 11.5	-1.1
MOTC	Monteria, Cord	21.86	106	*e*P	P	13 06 13.8	+0.9
SJCC	San Jacinto, C	21.94	103	*e*P	P	13 06 17.1	+3.2
S39A	Bolivar	21.95	8	P	P	13 06 12.8	-0.8
S39A				IAmb	IAmb	13 06 30.5	
	comp=Z,29nm,0.9s						
X18A	Snowflake	21.98	330	P	P	13 06 16.8	+2.4
X18A				IAmb	IAmb	13 06 20.7	
	comp=Z,64nm,1.2s						
DBBC	Dabeiba	22.05	111	*e*P	P	13 06 16.3	+1.2
CLTN	Cedars of Leba	22.20	23	P	P	13 06 15.7	-0.7
T25A	Trinidad	22.21	344	P	P	13 06 18.0	+1.3
T25A				IAmb	IAmb	13 06 23.1	
	comp=Z,93nm,1.4s						
T25A	Trinidad	22.21	344	P		13 06 18.9	
	baz=160,SNR=26						
T45A	Paducah	22.28	18	P	P	13 06 16.4	-0.8
W52A	Murphy	22.36	29	P	P	13 06 17.5	-0.8
W18A	Petrified Fore	22.36	331	P	P	13 06 19.5	+1.1
W18A				IAmb	IAmb	13 06 23.3	
	comp=Z,34nm,1.1s						
W18A	Petrified Fore	22.36	331	P		13 06 21.4	
	baz=145,SNR=10						
CPCT	Cooper Cave	22.39	27	P	P	13 06 17.9	-0.6
HODGE	Hodges	22.50	33	P	P	13 06 18.0	-1.7
R32A	Long Quarter,	22.51	356	P	P	13 06 20.0	+0.2
R32A				IAmb	IAmb	13 06 32.1	
	comp=Z,74nm,1.3s						
CCM	Cathedral Cave	22.63	12	P	P	13 06 20.9	-0.1
CCM				IAmb	IAmb	13 06 22.9	
	comp=Z,26nm,0.7s						
CCM	Cathedral Cave	22.63	12	P		13 06 22.2	
	baz=194						
X16A	Lo Mia Camp, P	22.64	327	P	P	13 06 23.6	+2.2
X16A				IAmb	IAmb	13 06 27.4	
	comp=Z,32nm,0.9s						
R40A	Maddies Statio	22.68	9	P	P	13 06 21.4	-0.2
R40A				IAmb	IAmb	13 06 23.8	
	comp=Z,32nm,0.8s						
SPX	San Pedro Mart	22.73	315	P	P	13 06 24.4	+1.9
T47A	Sharon Grove	22.73	21	P	P	13 06 21.4	-0.7
T47A				IAmb	IAmb	13 06 31.5	
	comp=Z,52nm,0.9s						
CBOC	Ciudad Bolivar	22.73	114	*e*P	P	13 06 25.3	+2.8
S44A	Carbondale	22.74	16	P	P	13 06 21.2	-0.9
S44A				IAmb	IAmb	13 06 42.7	
	comp=Z,28nm,0.8s						
113A	Mohawk Valley,	22.75	321	P	P	13 06 24.4	+2.0
113A				IAmb	IAmb	13 06 27.3	
	comp=Z,54nm,1.4s						
BG3	Lake Jocassee	22.76	31	P	P	13 06 21.7	-0.7
V51A	Loudon	22.76	27	P	P	13 06 20.3	-2.1
V51A				IAmb	IAmb	13 06 25.3	
	comp=Z,27nm,0.8s						
SIUC	Southern Illin	22.77	16	P	P	13 06 21.2	-1.3
SIUC				IAmb	IAmb	13 06 42.5	
	comp=Z,31nm,0.8s						
U49A	Red Boiling Sp	22.79	24	P	P	13 06 21.4	-1.3
U49A				IAmb	IAmb	13 06 25.4	
	comp=Z,26nm,0.8s						
NHSC	New Hope	22.84	38	P		13 06 23.1	
	baz=225						
TKL	Tuckaleechee C	22.90	28	P	P	13 06 24.8	+0.9
	comp=Z,16nm,0.8s,baz=191,slow=8.0,SNR=18						
TKL				LR	LR	13 16 54.5	
	comp=Z,154nm,21.6s,baz=194,slow=41						
TKL	Tuckaleechee C	22.90

GLA **Glamis** 23.60 320 P P 13 06 32.9 +2.0
GLA **Glamis** 23.60 320 P 13 06 33.7
baz=132,SNR=20
T50A **Nancy** 23.60 25 P P 13 06 29.1 -1.8
GUY2C **Guyana, Caldas** 23.60 114 eP P 13 06 34.0 +2.4
MVCO **Mesa Verde** 23.62 336 P P 13 06 32.1 +0.8
MVCO IAmb IAmb 13 06 35.9
comp=Z,61nm,1.2s
MVCO **Mesa Verde** 23.62 336 P 13 06 33.2
baz=151,SNR=24
KMSC **Kings Mountain** 23.69 33 P P 13 06 30.2 -1.5
KMSC IAmb IAmb 13 06 32.9
comp=Z,18nm,0.7s
KMSC **Kings Mountain** 23.69 33 P 13 06 31.4
baz=220,SNR=5.6
PTBC **PUERTO BERRIO,** 23.83 110 eP P 13 06 33.0 -0.3
P38A **Dawn** 23.83 6 P P 13 06 32.7 -0.3
P38A IAmb IAmb 13 06 44.8
comp=Z,22nm,0.9s
NORC **Norcasia** 23.88 113 eP P 13 06 36.0 +2.2
P40A **Paris** 23.93 9 P P 13 06 33.6 -0.3
P40A IAmb IAmb 13 06 52.2
comp=Z,33nm,0.9s
Q44A **Meyer Farm, Va** 23.94 15 P P 13 06 33.7 -0.4
Q44A IAmb IAmb 13 06 52.6
comp=Z,37nm,0.8s
TOLC **Tolima** 23.95 116 eP P 13 06 38.2 +3.5
PDMCI **Parker Dam,Lak** 24.05 323 P 13 06 37.8
baz=135
Q24A **Divide** 24.12 344 P 13 06 37.6
baz=160,SNR=6.9
WCI **Wyandotte Cave** 24.13 21 P P 13 06 35.2 -0.6
WCI IAmb IAmb 13 06 54.7
comp=Z,35nm,0.8s
WCI **Wyandotte Cave** 24.13 21 P 13 06 36.4
baz=205
SWSC **Sam W. Stewart** 24.14 318 P 13 06 38.8
baz=130
IKP **In-Ko-Pah, Jac** 24.16 317 P 13 06 39.3
baz=129
SOTA **Rioblanco** 24.18 122 eP P 13 06 40.7 +3.7
PCON **Cinco Dias** 24.24 122 eP P 13 06 40.5 +2.9
V55A **Taylorsville** 24.30 32 P P 13 06 36.5 -0.9
V55A IAmb IAmb 13 07 00.3
comp=Z,33nm,1.1s
CBX **Cerro Bola** 24.32 316 P P 13 06 38.7 +0.9
ORTC **Ortega, Tolima** 24.35 117 eP P 13 06 40.8 +2.7
BC3 **Big Chuckawall** 24.39 320 P 13 06 41.4
baz=132,SNR=13
W57A **Gilead** 24.42 35 P P 13 06 37.4 -1.1
W57A IAmb IAmb 13 06 44.4
comp=Z,37nm,1.1s
TKX **Tecate** 24.43 316 P P 13 06 40.8 +2.1
TKX IAmb IAmb 13 06 43.6
comp=Z,35nm,1.1s
PV01 **Paradox Valley** 24.45 337 P P 13 06 40.6 +1.5
W13A **Hualapai Mount** 24.48 325 P P 13 06 40.8 +1.5
W13A IAmb IAmb 13 06 44.7
comp=Z,23nm,1.0s
MONP2 **Monument Peak** 24.51 317 P 13 06 42.5
baz=129,SNR=17
P43A **Skaggs, Pawnee** 24.52 14 P P 13 06 39.5 +0.1
P43A IAmb IAmb 13 06 41.4
comp=Z,44nm,1.3s
IRM **Iron Mountain** 24.54 321 P 13 06 42.8
baz=133,SNR=29
BAR **Barrett** 24.55 316 P P 13 06 41.3 +1.6
BAR IAmb IAmb 13 06 44.0
comp=Z,21nm,1.1s
PV13 **Radium Mtn., P** 24.57 337 P P 13 06 41.1 +1.0
PV13 IAmb IAmb 13 06 44.3
comp=Z,21nm,0.8s
R49A **Shelbyville** 24.58 23 P P 13 06 39.4 -0.6
R49A IAmb IAmb 13 06 43.4
comp=Z,43nm,1.1s
PV02 **Paradox Valley** 24.58 337 P P 13 06 40.9 +0.6
PV02 IAmb IAmb 13 06 44.7
comp=Z,51nm,1.2s
PV15 **Paradox Valley** 24.61 338 P P 13 06 42.0 +1.5
PV15 IAmb IAmb 13 06 45.3
comp=Z,47nm,1.0s
PV05 **Paradox Valley** 24.61 336 P P 13 06 41.4 +0.9
PV05 IAmb IAmb 13 06 55.5
comp=Z,18nm,0.9s
S51A **Beattyville** 24.64 26 P P 13 06 39.2 -1.3
S51A IAmb IAmb 13 06 43.5
comp=Z,28nm,0.9s
NEE2 **Needles Airpor** 24.65 323 P 13 06 43.4
baz=135
PV03 **Paradox Valley** 24.66 337 P P 13 06 42.1 +1.1
PV03 IAmb IAmb 13 06 46.0
comp=Z,52nm,1.2s
PV18 **Skein Mesa, Pa** 24.68 337 P P 13 06 42.2 +1.1
PV18 IAmb IAmb 13 06 46.2
comp=Z,60nm,1.4s
ROSC **El Rosal** 24.70 114 P P 13 06 42.7 +1.0
ROSC IAmb IAmb 13 06 54.2
comp=Z,49nm,1.2s
ROSC **El Rosal** 24.70 114 eP P 13 06 48.1 +6.4
PV12 **Saucer Basin,** 24.70 337 P P 13 06 42.6 +1.2
PV11 **David Mesa, Pa** 24.71 337 P P 13 06 42.5 +1.1
PV17 **East Wray Mesa** 24.73 337 P P 13 06 43.0 +1.4
PV17 IAmb IAmb 13 06 45.9
comp=Z,55nm,1.2s
PV16 **Nyswonger Mesa** 24.74 337 P P 13 06 42.8 +1.1
PV16 IAmb IAmb 13 06 46.1
comp=Z,66nm,1.3s
PV07 **Paradox Valley** 24.75 337 P P 13 06 42.4 +0.7
PV07 IAmb IAmb 13 06 46.6
comp=Z,45nm,1.0s
PV19 **Morning Glory** 24.76 337 P P 13 06 43.2 +1.3
PV19 IAmb IAmb 13 06 46.2
comp=Z,33nm,1.1s
PV20 **West Nyswonger** 24.79 337 P P 13 06 43.1 +1.0
PV20 IAmb IAmb 13 06 46.3
comp=Z,39nm,1.2s
PV04 **Paradox Valley** 24.81 337 P P 13 06 42.8 +0.6
PV14 **Lion Creek, Pa** 24.83 337 P P 13 06 43.0 +0.4
PV14 IAmb IAmb 13 06 46.9
comp=Z,35nm,1.1s
PV10 **Paradox Valley** 24.84 337 P P 13 06 43.4 +0.7
PV10 IAmb IAmb 13 06 46.2
comp=Z,44nm,1.1s
SMCO **Snowmass** 24.84 341 P P 13 06 42.7 -0.1
SMCO IAmb IAmb 13 06 58.1
comp=Z,28nm,1.2s
PV22 **Blue Mesa, Par** 24.89 337 P P 13 06 43.8 +0.8
R50A **Paris** 24.89 24 P P 13 06 42.1 -0.6
R50A IAmb IAmb 13 06 44.8
comp=Z,19nm,0.7s
BLO **Bloomington** 24.91 19 P P 13 06 42.3 -0.5
BELC **Belle Mtn. Jos** 24.96 320 P 13 06 46.4
baz=131,SNR=22
BARC **Barichara** 24.96 109 eP P 13 06 46.1 +2.2
109C **Camp Elliot, M** 24.96 316 P P 13 06 44.9 +1.4
109C IAmb IAmb 13 06 48.6
comp=Z,24nm,1.1s
109C **Camp Elliot, M** 24.96 316 P 13 06 46.5
baz=128
TPFO **Pinon Flats** 24.99 318 P 13 06 46.1
baz=130
PFO **Pinyon Flats O** 24.99 318 P P 13 06 46.4 +2.5
comp=Z,11nm,0.8s,baz=118,slow=5.5,SNR=9.1
PFO LR LR 13 17 47.3
comp=Z,313nm,18.5s,baz=146,slow=39
PFO **Pinyon Flats O** 24.99 318 P P 13 06 45.3 +1.4
PFO **Pinyon Flats O** 24.99 318 P 13 06 46.8
baz=130,SNR=6.9
N38A **Joes South For** 25.02 7 P P 13 06 43.2 -0.7
ISCO **Idaho Springs** 25.03 344 P P 13 06 44.9 +0.5
ISCO IAmb IAmb 13 07 03.4
comp=Z,27nm,1.2s
ISCO **Idaho Springs** 25.03 344 P 13 06 45.8
baz=159,SNR=14
P46A **Rosedale** 25.11 18 P P 13 06 43.8 -0.9
N41A **Harden Midland** 25.28 11 P P 13 06 45.8 -0.4
N41A IAmb IAmb 13 07 05.8
comp=Z,39nm,1.0s
GMRC **Granite Mounta** 25.28 322 P 13 06 49.3
baz=133,SNR=21
CHIC **Chingaza** 25.32 114 eP P 13 06 50.0 +2.7
RUSC **La Rusia** 25.34 110 eP P 13 06 49.2 +1.7
KNB **Kanab** 25.37 329 P P 13 06 47.8 +0.5
KNB IAmb IAmb 13 07 12.1
comp=Z,31nm,1.0s

OGNE **Ogallala** 25.37 351 P P 13 06 47.1 -0.1
OGNE **Ogallala** 25.37 351 P 13 06 49.3
baz=168
V58A **Windy Hill, Pi** 25.38 35 P P 13 06 46.4 -0.8
V58A IAmb IAmb 13 06 48.0
comp=Z,23nm,0.9s
BGNE **Belgrade** 25.46 358 P 13 06 49.5
baz=177
MURC **Murrieta** 25.46 318 P 13 06 51.1
baz=129
PKCU **Pink Cliffs** 25.46 330 P P 13 06 49.0 +0.7
PKCU IAmb IAmb 13 07 10.7
comp=Z,39nm,1.5s
P48A **Milroy** 25.53 21 P P 13 06 47.3 -1.2
LCMT **Little Creek M** 25.58 328 P P 13 06 50.5 +1.3
BBRC **Big Bear Solar** 25.71 319 P 13 06 52.5
baz=130
HEC **Hector,Ludlow** 25.72 321 P 13 06 52.3
baz=132,SNR=14
BLA **Blacksburg** 25.75 31 P 13 06 51.1
baz=218
BLA **Blacksburg** 25.75 31 P P 13 06 50.1 -0.5
BLA IAmb IAmb 13 06 53.7
comp=Z,44nm,1.1s
S54A **Dingess, Beckl** 25.79 29 P P 13 06 50.2 -0.7
S54A IAmb IAmb 13 06 52.2
comp=Z,27nm,0.7s
S54A **Dingess, Beckl** 25.79 29 P 13 06 50.8
baz=216,SNR=5.6
SFIN **Lafayette** 25.84 17 P P 13 06 50.0 -1.4
SFIN IAmb IAmb 13 07 13.9
comp=Z,20nm,0.8s
SFIN **Lafayette** 25.84 17 P 13 06 50.7
baz=202
P49A **Miami Univ. Ec** 25.84 22 P P 13 06 49.5 -1.8
P49A **Miami Univ. Ec** 25.84 22 P 13 06 50.1
baz=207,SNR=7.6
MTPU **Mount Pierson** 25.89 331 P P 13 06 53.6 +1.4
MTPU IAmb IAmb 13 07 07.6
comp=Z,20nm,0.8s
TUQ **Turquoise Moun** 25.89 322 P 13 06 53.9
baz=134,SNR=28
Q51A **Peebles** 25.92 25 P P 13 06 51.1 -1.0
Q51A IAmb IAmb 13 07 20.5
comp=Z,36nm,0.8s
R53A **Hurricane** 25.93 28 P P 13 06 51.4 -0.8
SZCU **Shurtz Canyon** 25.96 330 P P 13 06 53.4 +0.7
DABV **Dabajuro** 25.96 98 eP P 13 06 59.1 +6.4
CCUT **Cedar City** 26.06 329 P P 13 06 55.0 +1.4
SRU **San Rafael Swe** 26.06 335 P P 13 06 53.9 +0.3
O20A **White River Ci** 26.12 340 P P 13 06 55.7 +1.5
O20A IAmb IAmb 13 07 16.9
comp=Z,32nm,1.2s
O20A **White River Ci** 26.12 340 P 13 06 56.1
baz=154,SNR=9.9
SCIA **State Center** 26.12 6 P P 13 06 53.5 -0.4
SCIA **State Center** 26.12 6 P 13 06 54.3
baz=188
N23A **Red Feather La** 26.14 344 P 13 06 56.2
baz=159,SNR=6.6
CIS **Catalina Islan** 26.14 316 P 13 06 56.6
baz=126
Q16A **Castle Valley** 26.16 334 P P 13 06 55.7 +1.2
Q16A IAmb IAmb 13 07 09.2
comp=Z,20nm,0.8s
T57A **Hurt** 26.19 33 P P 13 06 53.4 -1.2
T57A IAmb IAmb 13 07 08.6
comp=Z,15nm,0.8s
SHPR **Sheep Range** 26.21 325 P P 13 06 56.7 +1.8
R54A **Victor** 26.24 29 P 13 06 55.2
baz=216
MSU **Marysvale** 26.27 332 P P 13 06 56.7 +1.2
Q52A **Bidwell** 26.31 26 P P 13 06 55.4 -0.2
PHWY **Pilot Hill** 26.40 345 P P 13 06 57.1 +0.4
P51A **Williamsport** 26.43 24 P P 13 06 56.1 -0.6
P51A IAmb IAmb 13 06 58.2
comp=Z,28nm,0.7s
P17A **Butcher Ranch,** 26.46 335 P P 13 06 57.8 +0.7
MACC **Macarena, Meta** 26.46 119 eP P 13 06 58.1 +0.9
PASC **Pasadena Art C** 26.46 317 P P 13 06 58.9 +1.8
SOCV **Socops** 26.50 104 eP P 13 06 59.4 +1.8
TMUT **Trail Mountain** 26.50 334 P P 13 06 57.3 -0.4
S56A **Natural Bridge** 26.54 32 P 13 06 57.3
baz=220
Q53A **Leroy** 26.55 27 P 13 06 58.4
baz=214,SNR=9.1
Q49A **Covington** 26.56 22 P P 13 06 56.5 -1.4
N47A **Urbana** 26.72 19 P P 13 06 58.0 -1.3
N47A IAmb IAmb 13 07 15.5
comp=Z,38nm,0.9s
R55A **Marlinton** 26.74 30 P P 13 06 58.2 -1.4
R55A IAmb IAmb 13 07 07.7
comp=Z,27nm,1.1s
R55A **Marlinton** 26.74 30 P 13 06 59.4
baz=218
L42A **Oliver, Polo** 26.76 12 P P 13 06 58.9 -0.7
L42A IAmb IAmb 13 07 00.3
comp=Z,24nm,0.8s
EDW2 **Edwards Air Fo** 26.78 319 P 13 07 02.1
baz=129
PRN **Pahroc Range** 26.81 327 P P 13 07 01.7 +1.3
K38A **Parkersburg** 26.90 7 P P 13 07 00.1 -0.8
K38A IAmb IAmb 13 07 01.6
comp=Z,28nm,0.7s
S57A **Dark Hollow, R** 26.92 33 P 13 07 01.2
baz=220
S57A **Dark Hollow, R** 26.92 33 P P 13 07 00.6 -0.6
P52A **Corning** 26.93 26 P 13 07 01.4
baz=212,SNR=5.2
P52A **Corning** 26.93 26 P P 13 07 00.4 -0.8
P52A IAmb IAmb 13 07 02.5
comp=Z,32nm,0.8s
Q54A **Coxs Mills** 26.96 28 P P 13 07 01.0 -0.5
Q54A IAmb IAmb 13 07 03.9
comp=Z,29nm,1.1s
RDMU **Red Mountain** 26.97 338 P P 13 07 02.4 +0.6
LRMC **Laurel Mtn Rad** 26.97 320 P 13 07 03.7
baz=131,SNR=6.9
PSUT **Pine Spring** 27.07 330 P P 13 07 03.7 +0.9
OSI **Osito Audit: C** 27.08 318 P 13 07 04.9
baz=128
ACSO **Alum Creek Sta** 27.10 24 P P 13 07 01.9 -0.9
ACSO IAmb IAmb 13 07 04.2
comp=Z,20nm,0.8s
ACSO **Alum Creek Sta** 27.10 24 P 13 07 02.6
baz=210
P53A **Whipple** 27.13 27 P P 13 07 02.4 -0.6
TPNV **Topopah Spring** 27.13 324 P P 13 07 04.8 +1.5
TPNV **Topopah Spring** 27.13 324 P 13 07 05.1
baz=335,SNR=15
FURC **Furnace Creek,** 27.15 323 P 13 07 04.3
baz=134
R56A **Bull Pasture M** 27.19 31 P 13 07 03.0
baz=219
RWWY **Rawlins** 27.23 343 P P 13 07 04.8 +0.7
S58A **Poland Farm, P** 27.29 34 P 13 07 04.6
baz=222
NLU **North Lily Min** 27.41 334 P P 13 07 06.8 +1.0
JSRW **J. Sargeant Re** 27.44 34 P P 13 07 04.9 -0.9
O52A **Adamsville** 27.46 26 P P 13 07 04.7 -1.3
ARVC **Arvin** 27.47 318 P 13 07 08.4
baz=128
JFWS **Jewell Farm** 27.53 11 P P 13 07 05.4 -1.1
JFWS **Jewell Farm** 27.53 11 P 13 07 06.7
baz=194
R57A **Stanardsville** 27.55 32 P 13 07 06.2
baz=221
ISA **Isabella, Lake** 27.58 320 P 13 07 09.2
baz=130,SNR=5.6
ISA **Isabella, Lake** 27.58 320 P P 13 07 08.6 +1.4
R58B **Mineral** 27.64 34 P P 13 07 06.6 -0.9
R58B IAmb IAmb 13 07 09.9
comp=Z,19nm,1.2s
R58B **Mineral** 27.64 34 P 13 07 07.8
baz=222
SPR3 **Spring Creek 3** 27.66 330 P P 13 07 07.5 -0.6
SPR3 PcP 13 10 26.3 +1.3
ECSD **EROS Data Cent** 27.76 0 P 13 07 09.7
baz=180
Q56A **Snyder Ridge,** 27.79 30 P P 13 07 08.2 -0.7
Q56A IAmb IAmb 13 07 12.8
comp=Z,15nm,0.9s
Q56A **Snyder Ridge,** 27.79 30 P 13 07 08.5
baz=218
R11A **Troy Canyon, C** 27.80 327 P P 13 07 10.6 +1.4

R11A **Troy Canyon, C** 27.80 327 P 13 07 12.2
baz=138,SNR=13
GRAC **Grapevine Rang** 27.80 323 P 13 07 11.4
baz=133
S59A **Mechanicsville** 27.81 35 P 13 07 09.2
baz=223
O53A **New Philadelph** 27.83 26 P P 13 07 08.0 -1.3
O53A **New Philadelph** 27.83 26 P 13 07 09.3
baz=213,SNR=5.4
CWC **Cottonwood Cre** 27.85 321 P 13 07 11.7
baz=131
DUG **Dugway, Tooele** 27.93 333 P 13 07 12.4
baz=145
DUG **Dugway, Tooele** 27.93 333 P P 13 07 10.1 -0.2
K22A **Casper** 27.94 345 P 13 07 11.8
baz=159
K22A **Casper** 27.94 345 P P 13 07 11.4 +1.0
K22A IAmb IAmb 13 07 24.3
comp=Z,28nm,1.4s
MCWV **Mont Chateau** 27.96 29 P 13 07 11.1
baz=217
PKM **Mcpherson Peak** 27.96 317 P 13 07 12.4
baz=126
VES **Vestal, Richgr** 28.08 319 P 13 07 13.8
baz=129
TCUT **Toone Canyon** 28.13 336 P P 13 07 13.3 +1.0
O54A **Avella** 28.14 27 P P 13 07 10.9 -1.2
I37A **Lemond, Waseca** 28.19 5 P P 13 07 11.8 -0.7
I37A IAmb IAmb 13 07 13.4
comp=Z,16nm,0.6s
TIN **Tinemaha, Big** 28.35 322 P 13 07 16.1
baz=132
N53A **Lisbon** 28.46 26 P P 13 07 14.5 -0.4
Q58A **Fox Den Farm,** 28.47 32 P 13 07 15.0
baz=221
TPH **Tonopah** 28.48 325 P P 13 07 16.4 +1.1
BGU **Big Grassy Mou** 28.62 334 P P 13 07 17.0 +0.5
SPUT **South Promonto** 28.70 335 P P 13 07 18.4 +1.1
RSSD **Black Hills** 28.80 349 P P 13 07 18.5 +0.4
RSSD **Black Hills** 28.80 349 P 13 07 19.3
baz=165
M52A **Chesterland** 28.86 25 P P 13 07 17.6 -0.8
M52A IAmb IAmb 13 07 34.2
comp=Z,30nm,0.9s
BW06 **Boulder Array** 28.92 340 P P 13 07 19.2 0.0
BW06 **Boulder Array** 28.92 340 P 13 07 20.8
baz=154,SNR=7.0
PD31 **Pinedale Array** 28.92 340 P P 13 07 19.9 +0.7
PDAR **Pinedale Array** 28.92 340 P P 13 07 20.8 +1.6
comp=Z,1.8nm,0.7s,baz=134,slow=10,SNR=19
PDAR PcP PcP 13 10 28.2 +0.2
comp=Z,1.3nm,0.8s,baz=154,slow=4.0,SNR=3.9
PDAR LR LR 13 20 57.6
comp=Z,348nm,18.2s,baz=171,slow=40
PDAR **Pinedale Array** 28.92 340 P P 13 07 19.9 +0.7
N54A **Moraine State** 28.95 27 P P 13 07 18.3 -1.0
N54A **Moraine State** 28.95 27 P 13 07 19.5
baz=215,SNR=8.8
M53A **WI Miller and** 29.05 26 P P 13 07 19.7 -0.5
M53A **WI Miller and** 29.05 26 P 13 07 20.3
baz=213
MLAC **Mammoth, Mammo** 29.09 322 P 13 07 22.9
baz=132
HVU **Hansel Valley** 29.23 335 P P 13 07 23.3 +1.4
HVU IAmb IAmb 13 07 25.8
comp=Z,13nm,0.9s
NV11 **Mina Array Sit** 29.25 324 P P 13 07 24.1 +2.0
NV11 IAmb IAmb 13 07 26.9
comp=Z,33nm,1.1s
ATAH **Atahualpa** 29.28 140 LR LR 13 16 48.3
comp=Z,304nm,20.1s,baz=321,slow=32
LHV **Little Huntoon** 29.32 324 P P 13 07 24.8 +2.3
LHV IAmb IAmb 13 07 27.6
comp=Z,16nm,0.9s
NVAR **Mina Array Bea** 29.33 324 P P 13 07 26.4 +3.5
comp=Z,18nm,0.9s,baz=147,slow=9.1,SNR=121
NVAR PcP PcP 13 10 30.8 +1.7
comp=Z,2.2nm,0.7s,baz=137,slow=2.3,SNR=6.5
NVAR LR LR 13 19 24.1
comp=Z,315nm,20.2s,baz=136,slow=37
PMPB **Monarch Peak** 29.40 318 P P 13 07 24.1 +0.7
PMPB IAmb IAmb 13 07 36.8
comp=Z,26nm,1.2s
SJG **San Juan** 29.43 81 LR LR 13 18 37.1
comp=Z,185nm,22.0s,baz=198,slow=35
AHID **Auburn Hatcher** 29.44 338 P P 13 07 25.1 +1.2
AHID IAmb IAmb 13 07 27.0
comp=Z,19nm,1.2s
ALLY **Alegheny Colle** 29.45 26 P P 13 07 23.3 -0.3
SPMN **Marine on St.** 29.45 6 P P 13 07 23.3 -0.3
SPMN **Marine on St.** 29.45 6 P 13 07 23.7
baz=188,SNR=7.2
ELK **Elko** 29.46 331 P P 13 07 26.8 +2.7
comp=Z,2.6nm,0.8s,baz=144,slow=6.9,SNR=14
ELK PcP PcP 13 10 30.7 +1.3
comp=Z,1.6nm,0.7s,baz=108,slow=4.9,SNR=3.9
ELK **Elko** 29.46 331 P P 13 07 23.9 -0.2
M54A **Oil Creek Stat** 29.54 27 P P 13 07 24.2 -0.3
M54A **Oil Creek Stat** 29.54 27 P 13 07 24.0
baz=215,SNR=6.0
RYN **Ryan** 29.59 324 P P 13 07 26.5 +1.3
RYN IAmb IAmb 13 07 29.8
comp=Z,14nm,1.0s
L53A **Girard** 29.65 26 P 13 07 25.2
baz=213,SNR=6.1
SSPA **Standing Stone** 29.65 30 P P 13 07 24.5 -1.0
SSPA IAmb IAmb 13 07 27.6
comp=Z,43nm,1.4s
SSPA **Standing Stone** 29.65 30 P 13 07 24.9
baz=219
KVN **Kaiserville** 29.66 325 P P 13 07 28.2 +2.4
KVN IAmb IAmb 13 07 30.1
comp=Z,20nm,1.0s
ECR **Eagle Creek** 29.79 338 P P 13 07 28.3 +1.4
REDW **Red Top Meadow** 29.88 339 P P 13 07 28.8 +1.1
REDW IAmb IAmb 13 07 31.2
comp=Z,29nm,1.1s
ERPA **Erie** 29.90 26 P 13 07 27.3
baz=214
SNOW **Snow King Moun** 29.94 339 P P 13 07 28.1 -0.2
F36A **Milaca** 30.02 5 P P 13 07 28.0 -0.7
LOHW **Long Hollow** 30.02 340 P P 13 07 29.7 +0.8
LOHW IAmb IAmb 13 07 32.3
comp=Z,22nm,1.0s
WAKR **Walker** 30.03 323 P P 13 07 31.5 +2.4
M56A **Emporium** 30.18 29 P P 13 07 29.7 -0.5
M56A **Emporium** 30.18 29 P 13 07 30.3
baz=218
MOOW **Moose Ponds** 30.19 340 P P 13 07 31.4 +0.9
YERR **Yerington** 30.25 324 P P 13 07 33.4 +2.4
YERR IAmb IAmb 13 07 35.4
comp=Z,21nm,1.1s
CMB **Columbia Colle** 30.28 321 P P 13 07 32.9 +1.8
N58A **Sunbury** 30.38 31 P P 13 07 31.1 -0.8
N58A IAmb IAmb 13 07 38.8
comp=Z,19nm,1.1s
N58A **Sunbury** 30.38 31 P 13 07 31.9
baz=221
PNTR **Pine Nut** 30.52 324 P P 13 07 35.8 +2.3
PNTR IAmb IAmb 13 07 38.1
comp=Z,24nm,0.9s
M57A **Sunshine Farm,** 30.56 30 P 13 07 33.9
baz=219
VCNR **Virginia City** 30.69 324 P P 13 07 35.2 +0.3
VCNR IAmb IAmb 13 07 39.6
comp=Z,22nm,1.4s
H17A **Grant Village** 30.71 341 P 13 07 36.4
baz=153
WVNY **West Valley, N** 30.73 27 P P 13 07 34.2 -0.8
LKWY **Lake** 30.80 341 P P 13 07 35.3 -0.6
RUBR **Rubicon Trail** 30.81 323 P P 13 07 38.2 +2.1
PAHR **Pah Rah Range** 30.82 325 P P 13 07 37.6 +1.6
PAHR IAmb IAmb 13 07 40.5
comp=Z,11nm,1.0s
I51A **Listowel** 30.91 23 P 13 07 35.6
baz=210
RLMT **Red Lodge** 30.97 343 P P 13 07 38.1 +0.8
RLMT IAmb IAmb 13 07 40.4
comp=Z,28nm,1.1s
RLMT **Red Lodge** 30.97 343 P 13 07 38.4
baz=156,SNR=22
L56A **Greenwood** 30.98 29 P P 13 07 35.9 -1.3
L56A IAmb IAmb 13 07 47.3
comp=Z,16nm,0.9s
L56A **Greenwood** 30.98 29 P 13 07 37.0
baz=218

YMR	Madison River	31.08	340	P		P		13 07 39.9	+1.6
YMR				IAmb		IAmb		13 07 42.2	
	comp=Z,17nm,0.9s								
YNE	Yellowstone No	31.08	342	P		P		13 07 38.8	+0.5
YHH	Holmes Hill	31.15	341	P		P		13 07 40.6	+1.6
AFDM	Forest Hills D	31.22	322	P		P		13 07 41.0	+1.5
YHB	Horse Butte	31.23	340	P		P		13 07 39.9	+0.3
YHL	Hebgen Lake	31.31	340	P		P		13 07 41.9	+1.4
YHL				IAmb		IAmb		13 07 46.0	
	comp=Z,29nm,1.3s								
HLID	Hailey	31.38	335	P				13 07 42.8	
	baz=146,SNR=18								
HLID	Hailey	31.38	335	P		P		13 07 41.6	+0.6
HLID				IAmb		IAmb		13 07 44.5	
	comp=Z,11nm,0.9s								
MEDO	Medina	31.41	26	P		P		13 07 39.9	-1.0
BEKR	Beckworth	31.48	324	P		P		13 07 43.4	+1.5
BEKR				IAmb		IAmb		13 07 46.3	
	comp=Z,18nm,1.1s								
E43A	Lone Tree Farm	31.50	13	P		P		13 07 40.4	-1.3
E43A				IAmb		IAmb		13 07 56.0	
	comp=Z,20nm,1.3s								
K56A	Middlesex	31.53	28	P				13 07 41.4	
	baz=218								
M59A	Waymart	31.55	32	P				13 07 42.0	
	baz=222								
BCYI	Bear Canyon	31.62	337	P		P		13 07 44.4	+1.3
GCMT	Greycliff	31.70	343	P		P		13 07 44.0	+0.4
J55A	Hilton	31.76	27	P		P		13 07 43.1	-0.9
BINY	Binghamton	31.77	30	P		P		13 07 44.1	0.0
BINY				IAmb		IAmb		13 07 45.7	
	comp=Z,17nm,0.9s								
BINY	Binghamton	31.77	30	P				13 07 44.0	
	baz=220								
MFID	Camas Ranch	31.86	333	P		P		13 07 45.2	+0.2
MCMT	McKenzie Canyo	31.86	338	P		P		13 07 46.8	+1.6
K57A	Scipio Center	31.93	29	P				13 07 45.6	
	baz=219								
ORV	Oroville	31.93	322	P		P		13 07 46.9	+1.3
ORV				IAmb		IAmb		13 07 50.3	
	comp=Z,12nm,1.1s								
BOZ	Bozeman (W)	32.12	340	P				13 07 48.4	
	baz=152,SNR=11								
BOZ	Bozeman (W)	32.12	340	P		P		13 07 48.4	+1.0
BOZ				IAmb		IAmb		13 07 51.9	
	comp=Z,16nm,1.2s								
J56A	Wolcott	32.19	28	P		P		13 07 46.8	-1.1
J56A	Wolcott	32.19	28	P				13 07 47.6	
	baz=218,SNR=6.5								
L59A	Walton	32.23	31	P				13 07 48.3	
	baz=222								
DLMT	Dillon	32.23	339	P		P		13 07 50.3	+1.9
AGMN	Agassiz Nation	32.33	1	P		P		13 07 48.6	-0.4
AGMN				IAmb		IAmb		13 07 52.2	
	comp=Z,14nm,1.0s								
AGMN	Agassiz Nation	32.33	1	P				13 07 49.5	
	baz=181								
WVOR	Wild Horse Val	32.40	329	P		P		13 07 51.1	+1.3
WVOR				IAmb		IAmb		13 07 54.3	
	comp=Z,35nm,1.4s								
SADO	Sadowa	32.45	24	LR		LR		13 25 45.7	
	comp=Z,169nm,18.0s,baz=157,slow=45								
SADO	Sadowa	32.45	24	P		P		13 07 49.6	-0.5
B35A	Bob, Littlefor	32.49	4	P		P		13 07 50.0	-0.4
H53A	Bobcaygeon	32.51	25	P				13 07 49.6	
	baz=214,SNR=13								
LRM	Limekiln Ridge	32.59	340	P		P		13 07 52.4	+0.8
O03E	Paynes Creek	32.59	323	P				13 07 52.7	
	baz=131								
PECO	Prince Edward	32.65	27	P		P		13 07 51.0	-0.8
J57A	Williamstown	32.69	29	P		P		13 07 51.7	-0.5
J57A	Williamstown	32.69	29	P				13 07 51.3	
	baz=219,SNR=5.9								
DELO	Deloro Mine	32.86	26	P		P		13 07 52.4	-1.3
MOD	Modoc Plateau	32.86	327	P		P		13 07 54.9	+1.0
MOD				IAmb		IAmb		13 07 58.2	
	comp=Z,10nm,0.7s								
J08A	Circle Bar Ran	33.01	330	P		P		13 07 56.5	+1.3
J08A				IAmb		IAmb		13 07 59.6	
	comp=Z,10nm,0.6s								
HRY	Holter Researc	33.17	341	P		P		13 07 57.6	+1.1
WDC	Whiskeytown Da	33.20	323	P		P		13 07 56.2	-0.6
I57A	Carthage	33.26	28	P				13 07 57.2	
	baz=219								
G54A	Lake Saint Pet	33.38	24	P				13 07 58.4	
	baz=214								
I58A	Old Forge	33.38	29	P				13 07 58.0	
	baz=220								
J59A	Piesco	33.44	30	P				13 07 59.0	
	baz=221								
PLVO	Plevna	33.51	26	P		P		13 07 58.9	-0.4
PLVO				IAmb		IAmb		13 08 00.4	
	comp=Z,21nm,0.9s								
N02D	Trinity Center	33.55	323	P				13 08 00.6	
	baz=130								
M04C	Macdoel	33.60	325	P				13 08 02.8	
	baz=132								
L61B	Northampton	33.62	33	P				13 08 00.2	
	baz=225								
BMO	Blue Mountains	33.64	333	P		P		13 08 01.2	+0.6
BMO						PcP		13 10 41.0	+0.6
K05A	Summer Lake	33.75	327	P		P		13 08 02.4	+0.7
K05A				IAmb		IAmb		13 08 04.7	
	comp=Z,20nm,1.5s								
EGMT	Eagleton	33.77	344	P		P		13 08 02.2	+0.6
EGMT				IAmb		IAmb		13 08 04.6	
	comp=Z,18nm,1.1s								
EGMT	Eagleton	33.77	344	P				13 08 02.5	
	baz=157,SNR=9.7								
H57A	Richville	33.78	28	P				13 08 01.1	
	baz=219,SNR=6.0								
L63A	North Scituate	33.80	35	P				13 08 01.2	
	baz=227								
ALGO	Algonquin Park	33.86	24	P				13 08 02.1	
	baz=214								
NCB	Newcomb	33.95	30	P		P		13 08 02.6	-0.6
NCB				IAmb		IAmb		13 08 05.3	
	comp=Z,17nm,1.1s								
MSO	Missoula	33.97	339	P				13 08 04.7	
	baz=149,SNR=11								
MSO	Missoula	33.97	339	P		P		13 08 04.2	+0.7
MSO				IAmb		IAmb		13 08 06.4	
	comp=Z,15nm,0.9s								
I07A	Izee	34.05	330	P		P		13 08 05.3	+1.1
YBH	Yreka Blue Hor	34.05	324	LR		LR		13 21 18.3	
	comp=Z,205nm,20.5s,baz=153,slow=35								
YBH	Yreka Blue Hor	34.05	324	P		P		13 08 04.5	+0.3
KHMM	Horse Mountain	34.09	322	P		P		13 08 06.7	+2.0
KHMM				IAmb		IAmb		13 08 08.5	
	comp=Z,20nm,0.8s								
K04D	Chiloquin, OR	34.13	326	P				13 08 06.8	
	baz=134								
L04D	Klamath Falls	34.15	325	P				13 08 06.8	
	baz=132								
LONY	Lake Ozonia	34.27	29	P		P		13 08 05.4	-0.6
LONY	Lake Ozonia	34.27	29	P				13 08 05.7	
	baz=220								
ULM	Lac du Bonnet	34.29	1	P		P		13 08 06.1	+0.1
	comp=Z,8nm,0.7s,baz=180,slow=12,SNR=5.6								
ULM	Lac du Bonnet	34.29	1	P		P		13 08 05.8	-0.3
H58A	Gabriels	34.31	29	P				13 08 06.0	
	baz=221								
I60A	Shoreham	34.31	31	P				13 08 06.1	
	baz=223								
J05D	Fort Rock, OR	34.32	328	P				13 08 08.6	
	baz=135								
G57A	Newington	34.46	28	P				13 08 07.6	
	baz=219								
F10A	Beach Ranch, E	34.51	335	P		P		13 08 08.8	+0.7
PINE	Pine Mountain	34.54	329	P		P		13 08 09.4	+0.8
PINE				IAmb		IAmb		13 08 17.3	
	comp=Z,15nm,1.4s								
KRMB	Red Mountain	34.60	323	P		P		13 08 10.1	+1.0
H59A	Cadyville	34.71	30	P				13 08 09.8	
	baz=221								
G08A	Pilot Rock	34.72	332	P		P		13 08 10.6	+0.6
G08A				IAmb		IAmb		13 08 12.8	
	comp=Z,12nm,1.1s								
G08A				PcP		PcP		13 10 44.7	+1.3
J04D	Umpqua Nationa	34.75	327	P				13 08 12.4	
	baz=134								
JTMT	Jette	34.88	339	P		P		13 08 11.9	+0.5
JTMT				IAmb		IAmb		13 08 14.3	
	comp=Z,22nm,1.1s								
JTMT				PcP		PcP		13 10 44.0	+0.1

I05D	Terrebonne, OR	35.13	329	P				13 08 15.8	
	baz=136								
K02D	Willamette Mer	35.22	325	P				13 08 16.4	
	baz=131								
KBO	Bosley Butte	35.22	324	P		P		13 08 16.4	+2.1
I04A	Tendick Farm,	35.29	327	P				13 08 16.3	
	baz=134								
E09A	Wood Farm, Sta	35.32	334	P		P		13 08 15.1	+0.1
E09A				IAmb		IAmb		13 08 17.7	
	comp=Z,20nm,1.2s								
H61A	Lyndonville	35.49	31	P				13 08 16.3	
	baz=224								
TRQ	Mont Tremblant	35.52	27	P		P		13 08 15.9	-0.9
E56A	St. Veronique	35.57	26	P				13 08 17.1	
	baz=218								
J01E	Myrtle Point	35.67	325	P				13 08 19.5	
	baz=131								
KEBM	Edson Butte	35.71	324	P		P		13 08 20.0	+1.5
I03D	Drain, OR	35.72	326	P				13 08 20.5	
	baz=132								
D55A	Sainte-Anne-du	35.76	25	P				13 08 18.8	
	baz=217,SNR=7.4								
G05D	Wamic, OR	35.78	330	P				13 08 20.6	
	baz=137								
H04A	Detroit Lake	35.80	329	P		P		13 08 19.8	+0.6
HAWA	Hanford	35.82	333	P		P		13 08 20.0	+0.7
WALA	Waterton Lakes	35.90	341	P		P		13 08 20.9	+0.7
WALA				IAmb		IAmb		13 08 23.3	
	comp=Z,17nm,1.1s								
H04D	Lebanon	35.97	328	P				13 08 21.9	
	baz=134								
D56A	ZEC Mazanza, M	36.08	26	P				13 08 21.5	
	baz=218								
E58A	La Victoria	36.20	28	P				13 08 22.8	
	baz=220								
F05D	White Salmon	36.32	331	P				13 08 25.0	
	baz=137,SNR=9.7								
NEW	Newport	36.34	337	P				13 08 25.2	
	baz=146,SNR=9.3								
NEW	Newport	36.34	337	PcP		PcP		13 10 48.4	+0.3
	comp=Z,2.1nm,0.8s,baz=180,slow=1.0,SNR=3.3								
NEW				LR		LR		13 25 14.4	
	comp=Z,363nm,18.6s,baz=156,slow=39								
NEW	Newport	36.34	337	P		P		13 08 24.9	+1.1
NEW				IAmb		IAmb		13 08 26.2	
	comp=Z,12nm,0.9s								
C09A	Chrisman Ranch	36.41	335	P		P		13 08 25.2	+0.8
C09A				IAmb		IAmb		13 08 28.2	
	comp=Z,21nm,0.8s								
LSQQ	Lebel-sur-Quev	36.85	22	P				13 08 28.0	
	baz=213								
D58A	Chemin du LacG	36.93	28	P				13 08 28.6	
	baz=220								
LTY	Liberty	36.99	333	P		P		13 08 30.5	+1.1
LTY				IAmb		IAmb		13 08 32.6	
	comp=Z,36nm,1.3s								
LON	Longmire	37.12	331	P		P		13 08 31.9	+1.4
LON				IAmb		IAmb		13 08 33.7	
	comp=Z,15nm,0.8s								
LATQ	La Tuque	37.19	27	P				13 08 30.9	
	baz=220								
LATQ	La Tuque	37.19	27	P		P		13 08 30.4	-0.6
MATQ	Matagami	37.22	21	P				13 08 31.4	
	baz=211								
B08A	Colville Reser	37.28	335	P		P		13 08 32.2	+0.5
E04D	Cinebar	37.33	330	P				13 08 33.7	
	baz=136								
D05A	Enumclaw	37.52	332	P		P		13 08 35.1	+1.3
D05A				IAmb		IAmb		13 08 37.6	
	comp=Z,34nm,0.9s								
G64A	Maxfield	37.61	33	P				13 08 34.5	
	baz=228								
D60A	Saint Jean D'O	37.69	29	P				13 08 35.3	
	baz=223								
E03A	Lebam	37.80	330	P		P		13 08 38.2	+2.1
D04E	Lakebay	37.88	331	P				13 08 38.6	
	baz=136								
D61A	St Aubert, Com	38.25	30	P				13 08 39.6	
	baz=224								
D03D	Eldon	38.29	331	P				13 08 41.8	
	baz=136,SNR=6.8								
B06A	Marblemount	38.30	333	P		P		13 08 41.0	+0.7
B06A				IAmb		IAmb		13 08 42.6	
	comp=Z,15nm,0.8s								
B05A	Bryant	38.38	333	P				13 08 42.0	
	baz=138								
CHGQ	Chibougamau	38.52	23	P				13 08 42.1	
	baz=216								
NLWA	Neiltsh Lookou	38.55	330	P		P		13 08 44.4	+1.8
FFC	Flin Flon	38.97	355	P		P		13 08 46.0	+0.2
A04D	Lummi Island	38.99	333	P				13 08 47.7	
	baz=138								
D63A	Stockholm	39.15	31	P				13 08 47.6	
	baz=227								
GBN	Guysborough	41.75	38	P		P		13 09 08.6	-0.5
GBN				IAmb		IAmb		13 09 35.3	
	comp=Z,38nm,1.3s								
FCC	Fort Churchill	42.86	2	P		P		13 09 18.0	+0.2
PB16	IPOC Station P	43.38	141	P		P		13 09 23.5	+0.3
PB11	IPOC Station P	44.38	142	P		P		13 09 31.6	+0.9
PB11				IAmb		IAmb		13 09 48.7	
	comp=Z,18nm,1.1s								
PB09	IPOC Station P	46.20	143	P		P		13 09 45.5	+0.3
PB09				IAmb		IAmb		13 09 48.1	
	comp=Z,13nm,1.0s								
YKA	Yellowknife Ar	48.21	349	P		P		13 10 00.7	+0.5
	comp=Z,5.4nm,0.8s,baz=154,slow=7.6,SNR=71								
YKA				PcP		PcP		13 11 27.7	+0.7
	comp=Z,2.3nm,0.9s,baz=141,slow=4.3,SNR=6.3								
YKA				LR		LR		13 33 28.5	
	comp=Z,208nm,18.3s,baz=0.0,slow=40								
CRAG	Craig	48.29	333	P				13 10 02.1	
	baz=130								
WRAK	Wrangell Islan	48.59	335	P				13 10 04.4	
	baz=132								
DLBC	Dease Lake	49.08	338	LR		LR		13 33 45.7	
	comp=Z,297nm,18.6s,baz=98,slow=40								
DLBC	Dease Lake	49.08	338	P		P		13 10 09.1	+2.1
TAOE	Nuku Hiva Isla	49.42	243	*e*T		T		14 02 52.3	
	comp=Z,85nm,0.2s								
AC02	Maricunga	50.28	147	P		P		13 10 18.0	+1.0
AC02				IAmb		IAmb		13 10 20.3	
	comp=Z,19nm,1.2s								
H03N2	Juan Fernandez	51.95	161	T		T		14 06 17.7	
	baz=332,slow=77,SNR=73								
H03N1	Juan Fernandez	51.95	161	T		T		14 06 14.8	
	baz=332,slow=77,SNR=103								
H03N3	Juan Fernandez	51.96	161	T		T		14 06 18.0	
	baz=332,slow=77,SNR=94								
WHY	Whitehorse	52.41	337	P		P		13 10 33.7	+1.6
WHY				IAmb		IAmb		13 10 35.5	
	comp=Z,10nm,1.1s								
CO03	El Pedregal	52.83	152	P		P		13 10 36.3	+0.7
CO03				IAmb		IAmb		13 10 37.8	
	comp=Z,8.6nm,0.8s								
HYT	Haines Junctio	53.50	337	P		P		13 10 41.7	+1.5
HYT				IAmb		IAmb		13 10 44.6	
	comp=Z,27nm,1.4s								
RKT	Rikitea	53.79	225	*e*T		T		14 08 22.8	
	comp=Z,51nm,0.3s								
VA03	San Esteban	54.52	153	P		P		13 10 49.0	+1.1
SDHH	Sand Hill	55.59	283	P		P		13 10 57.2	+1.2
CRQE	Cirque	55.68	335	P				13 10 57.4	
	baz=122								
MCARA	McCarthy VSAT	56.00	335	P		P		13 10 59.5	+1.3
MCARA				IAmb		IAmb		13 11 02.4	
	comp=Z,19nm,1.0s								
MCARA	McCarthy VSAT	56.00	335	P				13 11 00.5	
	baz=123								
C36M	Paulatuk	56.09	349	P				13 10 59.8	
	baz=148								
DAWY	Dawson	56.22	339	P		P		13 11 00.5	+0.8
GLB	Gilahina Butte	56.35	335	P		P		13 11 02.7	+2.0
BMRM	Bremner River	56.42	334	P		P		13 11 02.5	+1.3
BMRM				IAmb		IAmb		13 11 06.0	
	comp=Z,18nm,1.1s								
BMRM	Bremner River	56.42	334	P				13 11 02.8	
	baz=121								
L27K	Beaver Creek,	56.48	337	P		P		13 11 03.1	+1.5
L27K				IAmb		IAmb		13 11 05.0	
	comp=Z,14nm,0.9s								
L27K	Beaver Creek,	56.48	337	P				13 11 03.7	
	baz=125,SNR=16								
N25K	Chitina, Valde	56.76	335	P		P		13 11 05.9	+2.3
N25K				IAmb		IAmb		13 11 07.7	
	comp=Z,12nm,1.0s								

N25K	Chitina, Valde	56.76	335	P				13 11 05.3	
	baz=121								
EPYK	Eagle Plains	56.86	342	P		P		13 11 05.1	+0.9
EPYK				IAmb		IAmb		13 11 28.2	
	comp=Z,11nm,1.4s								
EPYK	Eagle Plains	56.86	342	P				13 11 05.8	
	baz=132								
CPUP	Villa Florida	56.90	137	P		P		13 11 04.5	-0.5
	comp=Z,3.9nm,1.0s,baz=328,slow=4.2,SNR=5.6								
FID	Port Fidalgo	57.11	334	P		P		13 11 07.9	+1.9
K27K	Chicken	57.14	338	P		P		13 11 07.7	+1.6
KLU	Klutina	57.24	334	P		P		13 11 08.6	+1.6
KLU				IAmb		IAmb		13 11 10.7	
	comp=Z,14nm,1.0s								
KLU	Klutina	57.24	334	P				13 11 08.6	
	baz=120								
EGAK	Eagle	57.26	339	P		P		13 11 07.8	+0.8
EGAK				IAmb		IAmb		13 11 09.1	
	comp=Z,15nm,0.8s								
EGAK	Eagle	57.26	339	P				13 11 08.2	
	baz=127,SNR=15								
INK	Inuvik	57.35	345	P		P		13 11 08.8	+1.2
	comp=Z,14nm,0.7s,baz=126,slow=6.6,SNR=85								
INK				LR		LR		13 36 16.3	
	comp=Z,812nm,20.2s,baz=288,slow=36								
INK	Inuvik	57.35	345	P		P		13 11 08.2	+0.6
BDFB	Brasilia	57.50	121	P		P		13 11 09.2	-0.3
	comp=Z,5.8nm,0.8s,baz=286,slow=6.9,SNR=9.4								
BDFB	Brasilia	57.50	121	P		P		13 11 08.9	-0.7
BDFB				IAmb		IAmb		13 11 11.0	
	comp=Z,9.7nm,1.0s								
BI02	San Fabin de	57.57	156	P		P		13 11 10.9	+1.2
BI02				IAmb		IAmb		13 11 12.5	
	comp=Z,15nm,1.2s								
DOT	Dot Lake	57.65	337	P		P		13 11 11.2	+1.4
M24K	Tolsona, Glenn	57.66	335	P		P		13 11 10.8	+0.8
M24K	Tolsona, Glenn	57.66	335	P				13 11 12.4	
	baz=120								
SCRK	Sand Creek	57.80	338	P		P		13 11 11.8	+0.8
SCRK				IAmb		IAmb		13 11 14.3	
	comp=Z,17nm,1.0s								
SCRK	Sand Creek	57.80	338	P				13 11 13.1	
	baz=123,SNR=17								
PAX	Paxson	57.82	336	P		P		13 11 11.6	+0.5
PAX				IAmb		IAmb		13 11 14.0	
	comp=Z,15nm,1.0s								
PAX	Paxson	57.82	336	P				13 11 12.9	
	baz=121,SNR=9.8								
PWL	Port Wells	57.96	333	P		P		13 11 12.3	+0.2
PWL				IAmb		IAmb		13 11 29.2	
	comp=Z,18nm,1.2s								
KNK	Knik Glacier	58.27	334	P				13 11 15.9	
	baz=117								
SML	Sawmill	58.40	334	P				13 11 16.0	
	baz=118								
WAT6	Susitna Watana	58.53	335	P				13 11 17.8	
	baz=119,SNR=12								
BRLK	Bradley Lake	58.63	331	P		P		13 11 17.8	+1.1
GHO	Glory Hole Cre	58.63	334	P		P		13 11 18.3	+1.5
PMR	Palmer	58.64	334	P		P		13 11 18.1	+1.4
PMR				IAmb		IAmb		13 11 19.0	
	comp=Z,10nm,0.8s								
PMR	Palmer	58.64	334	P				13 11 18.5	
	baz=117,SNR=5.6								
RC01	Rabbit Creek A	58.67	333	P		P		13 11 18.3	+1.3
RC01	Rabbit Creek A	58.67	333	P				13 11 18.9	
	baz=116								
CNPM	China Poot	58.69	331	P		P		13 11 18.8	+1.6
RES	Resolute Bay	58.82	1	LR		LR		13 38 08.9	
	comp=Z,192nm,19.5s,baz=134,slow=38								
RES	Resolute Bay	58.82	1	P		P		13 11 17.4	-0.4
WAT2	Susitna Watana	59.05	335	P				13 11 21.3	
	baz=118								
HDA	Harding Lake	59.13	337	P				13 11 21.2	
	baz=120,SNR=5.6								
HDA				P				13 11 21.2	
	baz=120,SNR=5.6								
PRP	Porcupine Dome	59.20	339	P		P		13 11 21.5	+0.8
PRP	Porcupine Dome	59.20	339	P				13 11 22.5	
	baz=122								
SFJD	Kangerlussuaq	59.22	19	P		P		13 11 20.8	+0.1
SFJD				IAmb		IAmb		13 11 22.0	
	comp=Z,6.5nm,0.8s								
SUA	Susitna One	59.28	333	P		P		13 11 22.8	+1.5
SUA	Susitna One	59.28	333	P				13 11 23.1	
	baz=115,SNR=5.2								
IL31		59.29	338	P		P		13 11 21.7	+0.6
ILAR	Eielson Array	59.29	338	P		P		13 11 22.4	+1.2
	comp=Z,21nm,1.1s,baz=133,slow=4.6,SNR=65								
ILAR				LR		LR		13 38 55.8	
	comp=Z,322nm,18.1s,baz=126,slow=38								
ILAR	Eielson Array	59.29	338	P		P		13 11 22.1	+0.8
RND	Reindeer	59.37	336	P		P		13 11 23.1	+1.2
CUT	Chulitna	59.48	334	P		P		13 11 23.6	+1.1
CUT	Chulitna	59.48	334	P				13 11 24.3	
	baz=116,SNR=5.2								
MCK	McKinley	59.55	336	P		P		13 11 24.0	+0.9
MCK	McKinley	59.55	336	P				13 11 24.7	
	baz=118,SNR=11								
CCB	Clear Creek Bu	59.57	337	P		P		13 11 23.7	+0.6
CCB				IAmb		IAmb		13 11 25.5	
	comp=Z,6.7nm,0.7s								
WRH	Wood River Hil	59.59	337	P		P		13 11 23.4	+0.1
WRH				IAmb		IAmb		13 11 25.3	
	comp=Z,7.3nm,0.9s								
POKR	Poker Plat Res	59.67	338	P		P		13 11 23.3	-0.5
POKR	Poker Plat Res	59.67	338	P				13 11 25.1	
	baz=120								
FYU	Fort Yukon	59.67	340	P		P		13 11 24.4	+0.6
COLA	College	59.70	337	P		P		13 11 23.9	-0.1
COLA	College	59.70	337	P				13 11 24.6	
	baz=120								
TCOL	CIGO, UAF Yank	59.70	337	P		P		13 11 23.9	-0.2
TCOL	CIGO, UAF Yank	59.70	337	P				13 11 24.9	
	baz=120,SNR=7.4								
RSO	Redoubt South	59.76	332	P		P		13 11 25.4	+0.6
SPCR	Spurr Chakacha	59.81	333	P				13 11 26.5	
	baz=114								
SKT	Skwentna	59.84	334	P		P		13 11 26.1	+1.0
SKT	Skwentna	59.84	334	P				13 11 26.5	
	baz=114,SNR=10								
MDM	Murphy Dome	59.88	337	P		P		13 11 26.0	+0.7
MDM				IAmb		IAmb		13 11 27.4	
	comp=Z,8.9nm,0.8s								
TRF	Thorofare Moun	59.96	335	P		P		13 11 26.6	+0.5
TRF	Thorofare Moun	59.96	335	P				13 11 27.4	
	baz=117,SNR=24								
NEA2	Nenana	60.02	337	P		P		13

SDPT	**Sand Point**	**62.13**	**325**	P	**P**	**13 11 41.4**	**+0.7**
TOLK	**Toolik Lake Re**	**62.19**	**341**	P	**P**	**13 11 42.0**	**+1.1**
TOLK				IAmb	IAmb	13 11 43.5	
	comp=Z,8.6nm,0.8s						
TOLK	**Toolik Lake Re**	**62.19**	**341**	P		13 11 42.4	
	baz=120,SNR=11						
LL01	**San Ignacio de**	**62.19**	**160**	P	**P**	**13 11 41.4**	**+0.2**
LL01				IAmb	IAmb	13 11 50.0	
	comp=Z,9.6nm,1.1s						
IMAR	**Indian Mountai**	**62.40**	**337**	P	**P**	**13 11 42.1**	**-0.3**
LL02	**Futaleuf**	**63.11**	**160**	P	**P**	**13 11 48.2**	**+0.9**
LL02				IAmb	IAmb	13 11 49.4	
	comp=Z,7.7nm,0.9s						
EUNU	**Eureka**	**64.38**	**2**	P	**P**	**13 11 55.4**	**+0.1**
EUNU				IAmb	IAmb	13 11 57.3	
	comp=Z,9.1nm,0.9s						
TBI	**Tubuai**	**64.54**	**234**	*e*T	T	14 21 47.5	
	comp=Z,6.9nm,0.2s						
A21K	**Barrow**	**65.57**	**342**	P	**P**	**13 12 03.4**	**+0.3**
A21K				IAmb	IAmb	13 12 05.3	
	comp=Z,11nm,1.0s						
A21K	**Barrow**	**65.57**	**342**	P		13 12 04.2	
	baz=114,SNR=5.5						
RDOG	**Red Dog Mine**	**66.49**	**338**	P	**P**	**13 12 09.9**	**+0.8**
ANM	**Nome**	**66.58**	**334**	P	**P**	**13 12 10.6**	**+0.9**
ANM				IAmb	IAmb	13 12 13.4	
	comp=Z,17nm,1.3s						
ANM	**Nome**	**66.58**	**334**	P		13 12 11.4	
	baz=102						
BILL	**Bilibino**	**77.95**	**338**	P	**P**	**13 13 17.8**	**+0.3**
PMTG	**Montargil**	**79.12**	**52**	*e*P	**P**	**13 13 25.1**	**+0.5**
	comp=Z,26nm,2.3s						
PMTG	**Montargil**	**79.12**	**52**	*e*PcP	**PcP**	**13 13 32.1**	**-0.8**
MTE	**Manteigas**	**79.37**	**51**	*e*P	**P**	**13 13 26.6**	**+0.6**
	comp=Z,27nm,1.8s						
MTE	**Manteigas**	**79.37**	**51**	*e*PcP	**PcP**	**13 13 33.4**	**-0.7**
PCBR	**Castelo Branco**	**79.53**	**52**	*e*P	**P**	**13 13 27.8**	**+1.0**
	comp=Z,22nm,1.9s						
PCBR	**Castelo Branco**	**79.53**	**52**	*e*PcP	**PcP**	**13 13 34.8**	**+0.1**
PMRV	**Marv??o**	**79.68**	**52**	*e*P	**P**	**13 13 28.0**	**+0.3**
	comp=Z,24nm,2.1s						
PAB	**San Pablo**	**81.95**	**51**	P	**P**	**13 13 38.3**	**-1.6**
PAB				IAmb	IAmb	13 13 41.7	
	comp=Z,16nm,1.3s						
ESDC	**Sonseca Array**	**82.21**	**51**	P	**P**	**13 13 41.2**	**+0.1**
	comp=Z,2.9nm,1.0s,baz=289,slow=4.4,SNR=10						
NOA	**NORSAR Array B**	**84.70**	**28**	P	**P**	**13 13 54.6**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=300,slow=5.1,SNR=7.0						
NOA				LR	LR	13 51 58.9	
	comp=Z,32nm,20.1s,baz=65,slow=36						
ARCES	**ARCESS Array B**	**85.79**	**17**	P	**P**	**13 13 58.9**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=294,slow=5.5,SNR=4.0						
ARCES				LR	LR	13 56 56.1	
	comp=Z,57nm,18.3s,baz=305,slow=39						
PETK	**Petropavlovsk-**	**86.42**	**324**	P	**P**	**13 14 03.3**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=104,slow=8.2,SNR=4.8						
MA2	**Magadan**	**87.27**	**332**	P	**P**	**13 14 07.5**	**+1.4**
	comp=Z,6.7nm,0.8s,baz=195,slow=2.3,SNR=4.5						
MA2	**Magadan**	**87.27**	**332**	IAmb	IAmb	13 14 08.3	
	comp=Z,17nm,1.1s						
TIXI	**Tiksi**	**87.41**	**347**	P	**P**	**13 14 06.2**	**-0.4**
TIXI				IAmb	IAmb	13 14 07.6	
	comp=Z,6.8nm,0.7s						
KOWA	**Kowa**	**88.77**	**75**	P	**P**	**13 14 12.7**	**-1.5**
KOWA				IAmb	IAmb	13 14 30.5	
	comp=Z,7.7nm,0.8s						
FINES	**FINESS Array B**	**90.73**	**24**	P	**P**	**13 14 22.5**	**0.0**
	comp=Z,0.9nm,0.6s,baz=316,slow=5.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**94.46**	**75**	P	**P**	**13 14 39.0**	**-1.6**
	comp=Z,1.0nm,1.0s,baz=293,slow=6.3,SNR=4.1						
TORD				PP	**PP**	**13 18 28.4**	**+0.1**
	comp=Z,1.2nm,1.2s,baz=219,slow=12,SNR=3.5						
TORD				PKKPbc	**PKKPbc**	**13 31 41.0**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=89,slow=2.7,SNR=5.1						
MNK	**Minsk**	**95.67**	**29**	*i* P	**P**	**13 14 41.8**	**-3.6**
	comp=E,1.0nm,0.8s						
MNK				*i* P	**P**	**13 14 41.8**	**-3.6**
	comp=N,4.0nm,0.8s						
MNK				*i* P	**P**	**13 14 41.8**	**-3.6**
	comp=Z,4.0nm,1.0s						
MNK				*i* PP	**PP**	**13 18 32.3**	**-4.0**
MNK				*i* PPP	PPP	13 20 34.5	
MNK				*i* S	**SKSac**	**13 25 17.6**	**-2.1**
MNK				*i* PS	**PS**	**13 27 17.7**	**-4.3**
MNK				*i* SS	**SS**	**13 32 22.2**	**-6.8**
MNK				*i* SSS	SSS	13 36 11.5	
MNK				*i* LQ	LQ	13 51 49.7	
MNK				*i* LR	LR	13 56 17.4	
MNK				*i* LRM	MLR	13 58 06.0	
	comp=Z,88nm,16.6s						
MNK				*i* LRM	MLR	13 58 13.0	
	comp=E,9.0nm,14.7s						
MNK				*i* LRM	MLR	13 58 13.0	
	comp=N,114nm,16.0s						
MKAR	**Makanchi Array**	**117.61**	**1**	PKP	**PKPdf**	**13 20 05.5**	**-0.5**
	comp=N,0.8nm,0.8s,baz=0.0,slow=1.2,SNR=6.3						
MKAR				PP	**PP**	**13 21 15.6**	**-1.5**
	comp=N,0.6nm,0.8s,baz=19,slow=4.5,SNR=5.2						
STKA	**Stephens Creek**	**124.84**	**242**	PKP	**PKiKP**	**13 20 20.4**	**0.0**
	comp=N,5.2nm,0.7s,baz=96,slow=3.9,SNR=12						
BOSA	**Boshof**	**125.40**	**114**	PKP	**PKPdf**	**13 20 21.4**	**0.0**
	comp=N,3.8nm,0.9s,baz=190,slow=6.3,SNR=4.2						
MAW	**Mawson**	**126.66**	**170**	PKP	**PKiKP**	**13 20 23.6**	**+0.7**
	comp=N,4.2nm,0.9s,baz=168,slow=4.3,SNR=4.3						
WRA	**Warramunga Arr**	**131.27**	**257**	PKP	**PKiKP**	**13 20 33.3**	**-0.4**
	comp=N,4.0nm,0.9s,baz=87,slow=2.4,SNR=19						
ASAR	**Alice Springs**	**131.82**	**252**	PKP	**PKPdf**	**13 20 34.0**	**+0.4**
	comp=N,2.1nm,0.8s,baz=86,slow=1.9,SNR=17						
CMAR	**Chiang Mai Arr**	**142.50**	**335**	PKhKP	PKPpre	13 20 50.4	
	comp=N,1.9nm,0.8s,baz=348,slow=3.7,SNR=11						

*IDC **21** 13:05:15.5±1.4, 14°.31N×55°.94E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.5/46, mbtmp3.7/7, MS3.5/2, Ms1 3.5/2, ms1mx2.8/48, Error ellipse: s-maj=42.5km s-min=25.5km az=39.0*

ISC 21 13:05:18.5±1.6, **14°.4N**±0°.3×**55°.9E**±0°.2, **h18**km, **n8,** σ0.8**41**/7, **mb3.8**/7, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**24.66**	**312**	LR		LR	LR	13 21 01.9	
	comp=Z,114nm,18.3s,baz=136,slow=38								
MKAR	**Makanchi Array**	**39.13**	**29**	P		**P**		**13 12 44.9**	**-0.2**
	0.6nm,0.8s,baz=216,slow=6.0,SNR=5.9								
CMAR	**Chiang Mai Arr**	**41.38**	**78**	P		**P**		**13 13 04.5**	**+0.5**
	0.7nm,0.4s,baz=263,slow=7.6,SNR=4.7								
AKASG	**Malin Array Be**	**42.22**	**335**	P		**P**		**13 13 10.3**	**-0.1**
	0.6nm,0.4s,baz=126,slow=8.7,SNR=6.2								
AKASG				LR		LR	LR	13 34 20.5	
	comp=Z,62nm,20.0s,baz=265,slow=41								
ZALV	**Zalesovo Beam**	**45.55**	**24**	P		**P**		**13 13 36.8**	**-0.3**
	1.3nm,0.9s,baz=236,slow=6.8,SNR=4.2								
ESDC	**Sonseca Array**	**57.88**	**308**	P		**P**		**13 15 09.9**	**+0.3**
	1.0nm,0.8s,baz=101,slow=8.2,SNR=4.5								
WRA	**Warramunga Arr**	**84.27**	**112**	P		**P**		**13 17 49.5**	**-0.2**
	0.8nm,1.0s,baz=303,slow=4.1,SNR=4.5								
ASAR	**Alice Springs**	**85.01**	**116**	P		**P**		**13 17 53.1**	**-0.4**
	0.5nm,0.7s,baz=300,slow=4.5,SNR=6.2								

*IDC **21** 13:06:43.0±0.8, 14°.32N×56°.21E, h0km, mb3.9/13, mb1 4.1/13, mb1mx3.8/46, mbtmp3.9/13, MS3.6/7, Ms1 3.6/7, ms1mx3.2/52, Error ellipse: s-maj=21.1km s-min=19.9km az=75.0*

*NEIC **21** 13:06:44.8±1.7, 14°.3N±0°.1×56°.2E±0°.1, h10km±1km, mb4.2/8, Error ellipse: s-maj=25.6km s-min=17.3km az=140.0*

ISC 21 13:06:45.3±0.7, **14°.3N**±0°.1×**56°.2E**±0°.1, **h18**km, **n28,** σ1.8**33**/19, **mb4.1**/15, **MS3.5**/7, **Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**2.96**	**226**	Pn		**Pn**		**13 07 29.4**	**-2.1**
WSAR	**Wadi Sarin**	**9.23**	**14**	LR		LR	LR	13 12 11.4	
	comp=Z,551nm,20.5s,baz=227,slow=36								
HRA	**Herat**	**20.78**	**14**	P		Pn		13 11 26.2	-2.0
HRA				IAmb		IAmb	IAmb	13 11 35.9	
	comp=Z,7.0nm,0.7s								
GEYT	**Alibeck**	**23.64**	**4**	P		**P**		**13 11 54.0**	**-1.7**
	comp=Z,1.6nm,0.5s,baz=198,slow=18,SNR=2.5								
GEYT				LR		LR	LR	13 21 25.6	
	comp=Z,115nm,21.6s,baz=50,slow=37								
GEYT	**Alibeck**	**23.64**	**4**	P		**P**		**13 11 54.0**	**-1.7**
GEYT				IAmb		IAmb	IAmb	13 12 01.6	
	comp=Z,5.2nm,0.8s								
PALK	**Pallekele**	**25.07**	**104**	LR		LR		13 19 24.5	
	comp=Z,73nm,21.6s,baz=67,slow=30								
MMAI	**Mount Meron Ar**	**26.56**	**318**	LR		LR		13 23 46.6	
	comp=Z,94nm,18.2s,baz=225,slow=39								
KBZ	**Khabaz**	**31.49**	**341**	P		**P**		**13 13 08.0**	**+2.0**
	comp=Z,3.2nm,0.9s,baz=161,slow=6.5,SNR=6.0								
AAK	**Ala-Archa**	**32.40**	**26**	LR		LR		13 27 09.3	
	comp=Z,111nm,20.6s,baz=220,slow=38								
AAK	**Ala-Archa**	**32.40**	**26**	P		**P**		**13 13 11.7**	**-2.6**
AAK				IAmb		IAmb	IAmb	13 13 22.5	
	comp=Z,2.8nm,0.8s								
MK31	**Makanchi Array**	**39.11**	**29**	P		**P**		**13 14 11.1**	**-0.5**
MKAR	**Makanchi Array**	**39.11**	**29**	P		**P**		**13 14 11.1**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=226,slow=6.4,SNR=5.2								
CMAR	**Chiang Mai Arr**	**41.19**	**78**	P		**P**		**13 14 29.9**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=277,slow=8.8,SNR=6.6								
ARU	**Arti**	**42.12**	**2**	LR		LR		13 32 46.0	
	comp=Z,75nm,19.6s,baz=187,slow=37								
AKASG	**Malin Array Be**	**42.39**	**335**	P		**P**		**13 14 38.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=134,slow=7.8,SNR=1.9								
MATP	**Matopo**	**43.91**	**219**	P		**P**		**13 14 53.2**	**+1.9**
	comp=Z,2.8nm,0.6s,baz=42,slow=8.5,SNR=7.7								
KIRV	**Kirov**	**44.53**	**355**	LR		LR		13 35 56.3	
	comp=Z,83nm,18.0s,baz=210,slow=39								
ZAA0	**Zalesovo Array**	**45.54**	**23**	P		**P**		**13 15 04.3**	**+0.4**
ZAA0				IAmb		IAmb	IAmb	13 15 09.8	
	comp=Z,3.6nm,0.8s								
ZALV	**Zalesovo Beam**	**45.54**	**23**	P		**P**		**13 15 03.6**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=232,slow=9.3,SNR=6.0								
INTR	**Introdacqua**	**45.74**	**316**	P		**P**		**13 15 06.5**	**+0.8**
FINES	**FINESS Array B**	**51.85**	**342**	P		**P**		**13 15 52.8**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=103,slow=8.6,SNR=6.2								
TORD	**Torodi Ar. Bea**	**52.83**	**276**	P		**P**		**13 16 00.8**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=100,slow=4.9,SNR=4.2								
ESDC	**Sonseca Array**	**58.11**	**308**	P		**P**		**13 16 37.2**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=73,slow=4.4,SNR=4.9								
NRIK	**Noril'sk**	**58.49**	**13**	P		**P**		**13 16 41.2**	**+1.1**
	comp=Z,3.1nm,0.5s,baz=128,slow=4.4,SNR=4.7								
NRIK	**Noril'sk**	**58.49**	**13**	IAmb		IAmb	IAmb	13 16 42.3	
	comp=Z,3.4nm,0.6s								
ASAJ	**Asahikawa**	**77.69**	**47**	LR		LR		13 54 31.7	
	comp=Z,786nm,20.9s,baz=185,slow=37								
WRA	**Warramunga Arr**	**84.03**	**112**	P		**P**		**13 19 15.1**	**-0.3**
	comp=Z,1.3nm,1.0s,baz=298,slow=4.4,SNR=6.4								
ASAR	**Alice Springs**	**84.77**	**116**	P		**P**		**13 19 19.3**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=296,slow=4.8,SNR=7.8								

*IDC **21** 13:18:53.9±3.2, 30°.97N×129°.66E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.4/55, mbtmp3.9/3, Error ellipse: s-maj=296.3km s-min=26.4km az=73.0*

*NEIC **21** 13:19:12.1±1.4, 30°.99N±0°.07×130°.1E±0°.1, h161km±6km, mb4.4/6, Error ellipse: s-maj=17.5km s-min=10.0km az=98.0*

*JMA **21** 13:19:13.2±0.1, 30°.94N×130°.26E, h155km±1km, M3.3*

ISC 21 13:19:12.2±0.8, **30°.95N**±0°.05×**130°.18E**±0°.08, **h159**km±6km, **n29,** σ0.9**67**/39, **mb4.2**/7, **Kyushu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKC	**Kuchinoerabu**	**0.49**	**178**	P		**P**	**Pn**	**13 19 35.1**	**+0.6**
JKC				*e*S		*e*S	**Sn**	**13 19 51.6**	**+0.1**
JSU	**Suzuyama**	**0.60**	**23**	P		**P**	**Pn**	**13 19 35.7**	**+0.6**
JSU				*e*S		*e*S	**Sn**	**13 19 52.6**	**-0.1**
JSU	**Suzuyama**	**0.60**	**23**	Pn		Pn	**Pn**	**13 19 35.7**	**+0.6**
JTSR	**Tashiro 2**	**0.67**	**71**	P		**P**	**Pn**	**13 19 35.5**	**0.0**
JTSR				S		S	**Sn**	**13 19 52.3**	**-1.0**
JTN	**Tanegashima 3**	**0.75**	**113**	P		**P**	**Pn**	**13 19 36.3**	**+0.3**
JTN				S		S	**Sn**	**13 19 54.1**	**0.0**
JYAK	**Yakushimahirau**	**0.77**	**158**	P		**P**	**Pn**	**13 19 36.4**	**+0.3**
JYAK				S		S	**Sn**	**13 19 53.9**	**-0.4**
JSJ	**Shimokoshiki**	**0.83**	**332**	P		**P**	**Pn**	**13 19 36.9**	**+0.4**
JSJ				*e*S		*e*S	**Sn**	**13 19 55.6**	**+0.4**
JMTN	**Minamitane**	**0.83**	**131**	P		**P**	**Pn**	**13 19 36.8**	**+0.3**
JMTN				S		S	**Sn**	**13 19 54.9**	**-0.2**
JNAR	**Kushima--Naru**	**1.10**	**58**	P		**P**	**Pn**	**13 19 39.2**	**+0.6**
JNAR				S		S	**Sn**	**13 19 58.5**	**-0.4**
JNN	**Nakanoshima**	**1.14**	**193**	P		**P**	**Pn**	**13 19 39.5**	**+0.5**
JTZ	**Takazaki**	**1.23**	**39**	P		**P**	**Pn**	**13 19 40.3**	**+0.5**
JTZ				S		S	**Sn**	**13 20 00.2**	**-0.8**
JIU3	**Izumi3**	**1.68**	**19**	P		**P**	**Pn**	**13 19 45.3**	**+1.0**
JIU3				*e*S		*e*S	**Sn**	**13 20 09.6**	**+0.4**
JNU	**Nakatsue**	**2.25**	**15**	Pn		**Pn**	**Pn**	**13 19 51.5**	**+0.8**
JTU	**Tsushima**	**3.62**	**350**	Pn		**Pn**	**Pn**	**13 20 08.6**	**+0.8**
JMN	**Monobe**	**4.18**	**48**			**Pn**	**Pn**	**13 20 14.7**	**-0.4**
JOW	**Kunigami**	**4.43**	**203**	Pn		**Pn**	**Pn**	**13 20 17.2**	**-1.1**
JHS	**Saijyo**	**4.73**	**31**	Pn		**Pn**	**Pn**	**13 20 21.0**	**-1.2**
JMZ	**Minamidaito 2**	**5.20**	**170**	Pn		**Pn**	**Pn**	**13 20 29.6**	**+1.2**
JWT	**Wachi**	**6.15**	**44**	Pn		**Pn**	**Pn**	**13 20 40.8**	**-0.2**
JGF	**Kuroka**	**7.59**	**50**	Pn		**Pn**	**Pn**	**13 21 01.3**	**+1.2**
WB0	**Warramunga Arr**	**50.59**	**175**	P		**P**	**P**	**13 27 54.6**	**-0.3**
WB0				IAmb		IAmb	IAmb	13 28 10.6	
	comp=Z,7.8nm,1.3s								
WRA	**Warramunga Arr**	**50.76**	**175**	P		**P**	**P**	**13 27 56.0**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=354,slow=8.0,SNR=7.9								
WB2	**Warramunga Arr**	**50.76**	**175**	P		**P**	**P**	**13 27 55.6**	**-0.5**
WB2				IAmb		IAmb	IAmb	13 28 20.2	
	comp=Z,6.8nm,1.1s								
WR0	**Warramunga Arr**	**50.79**	**175**	P		**P**	**P**	**13 27 56.0**	**-0.3**
WR0				IAmb		IAmb	IAmb	13 28 18.2	
	comp=Z,15nm,1.4s								
ASAR	**Alice Springs**	**54.42**	**176**	P		**P**	**P**	**13 28 23.5**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=5.6,slow=14,SNR=10								
STKA	**Stephens Creek**	**63.42**	**169**	P		**P**	**P**	**13 29 25.6**	**+0.8**
FIA1	**FINESS Array S**	**69.62**	**330**	P		**P**	**P**	**13 30 03.2**	**-0.7**
FIA1				IAmb		IAmb	IAmb	13 30 21.9	
	comp=Z,15nm,1.4s								
FINES	**FINESS Array B**	**69.62**	**330**	P		**P**	**P**	**13 30 03.2**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=65,slow=6.0,SNR=14								
NC405	**NORSAR Array S**	**75.61**	**334**	P		**P**	**P**	**13 30 38.3**	**-1.0**

*DNK **21** 13:28:46.6±1.9, 80°.94N×2°.09W, h57km±105km, ML0.8*

BER 21 13:28:45.1±2.0, **80°.83N×2°.39W, h10**km, **ML1.2, ML0.8**(DNK), **Confirmed Earthquake, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**2.32**	**296**	*e*		Pn		13 29 19.0	-4.3
	baz=97,slow=11								
NOR				*i* P		Pb		13 29 21.5	-5.4
NOR				*i* S		Sn		13 29 48.2	-3.6
NOR				IAML				13 29 55.7	
	comp=Z,0.9nm,0.3s								
NOR	**Nord**	**2.32**	**296**	*e*		Pn		13 29 19.0	-4.3
	baz=97,slow=11								
NOR				*i* P		Pb		13 29 21.5	-5.4
NOR				*i* S		Sn		13 29 48.2	-3.6
NOR				IAML				13 29 55.7	
	comp=Z,0.9nm,0.3s								
KBS	**Kingsbay**	**3.17**	**120**	*i* P		Pn		13 29 33.4	-1.4
KBS	**Kingsbay**	**3.17**	**120**	*e*P		Pn		13 29 34.0	-0.9
KBS				*e*S		Sn		13 30 07.1	-5.5
KBS				IAML				13 30 19.8	
	comp=Z,2.1nm,0.6s								
SPA0	**Spitsbergen Ar**	**4.32**	**118**	*e*P		Pn		13 29 50.3	-0.4
SPA0				*e*S		Sn		13 30 36.3	-4.8
SPA0				IAML				13 30 45.8	
	comp=Z,2.4nm,0.8s								
DBG	**Daneborg**	**7.54**	**219**	*i* P		Pn		13 30 34.2	-0.6
DBG				*i* S		Sn		13 31 50.4	-10
DBG	**Daneborg**	**7.54**	**219**	*i* P		Pn		13 30 34.2	-0.6
DBG				*i* S		Sn		13 31 50.4	-10

*NEIC **21** 13:28:46.2±1.5, 24°.82S±0°.08×179°.8E±0°.1, h489km±11km, mb4.5/30, Error ellipse: s-maj=19.1km s-min=7.8km az=117.0*

*IDC **21** 13:28:48.2±1.7, 24°.75S×179°.72E, h508km±19km, mb3.4/9, mb1 3.6/12, mb1mx3.3/40, mbtmp4.3/12, Error ellipse: s-maj=21.5km s-min=15.6km az=138.0*

ISC 21 13:28:47.0±0.5, **24°.84S**±0°.06×**179°.83E**±0°.08, **h501**km, **n78,** σ1.9**99**/92, **mb4.4**/16, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.84**	**156**	P		**P**	**P**	**13 30 15.3**	**+2.7**
GLKZ				S		S	**S**	**13 31 19.2**	**-3.3**
MSVF	**Nonsavu**	**7.26**	**346**	P		**P**	**P**	**13 30 37.5**	**+1.3**
	7.3nm,0.3s,baz=120,slow=23,SNR=34								
MSVF	**Nonsavu**	**7.26**	**346**	P		**P**		**13 30 37.0**	**+0.8**
NIUE	**Niue**	**11.10**	**61**	P		**P**		**13 31 15.8**	**-0.4**
OUZ	**Omahuta**	**11.67**	**206**	P		**P**		**13 31 25.2**	**+3.3**
DZM	**Mont Dzumac**	**12.59**	**280**	P		**P**		**13 31 33.5**	**+1.5**
	0.7nm,0.3s,baz=171,slow=22,SNR=6.8								
DZM	**Mont Dzumac**	**12.59**	**280**	P		**P**		**13 31 33.9**	**+1.8**
MXZ	**Matakaoa Point**	**12.75**	**185**	P		**P**		**13 31 36.1**	**+2.7**
MXZ				S		**S**		**13 33 51.3**	**+0.8**
HAZ	**Te Kaha**	**13.00**	**187**	P		**P**		**13 31 38.0**	**+2.1**
HAZ				S		**S**		**13 33 52.8**	**-2.5**
RUGZ	**Raukumara Rang**	**13.22**	**187**	P		**P**		**13 31 41.1**	**+2.7**
RUGZ				S		**S**		**13 34 02.4**	**+2.7**
PUZ	**Puketiti**	**13.26**	**185**	P		**P**		**13 31 42.1**	**+3.3**
PUZ				S		**S**		**13 34 01.2**	**+0.7**
TOZ	**Tahuroa Road**	**13.37**	**195**	P		P		13 31 45.2	+5.3
KMRZ	**Kaimai**	**13.38**	**193**	P		P		13 31 45.0	+4.8
TWGZ	**Tauwhareparae**	**13.39**	**186**	P		**P**		**13 31 42.4**	**+2.2**
TWGZ				S		**S**		**13 34 04.1**	**+1.1**
AFI	**Afiamalu**	**13.44**	**38**	P		**P**		**13 31 37.8**	**-3.3**
URZ	**Urewera**	**13.58**	**189**	P		**P**		**13 31 42.3**	**+0.2**
	2.6nm,0.3s,baz=301,slow=24,SNR=27								
URZ				S		**S**		**13 34 06.1**	**-0.3**
	1.1nm,0.3s,baz=127,slow=23,SNR=7.1								
URZ	**Urewera**	**13.58**	**189**			**P**		**13 31 42.1**	**0.0**
URZ	**Urewera**	**13.58**	**189**	P		**P**		**13 31 42.7**	**+0.6**
URZ				S		**S**		**13 34 01.8**	**-4.7**
MWZ	**Matawai**	**13.60**	**188**	P		**P**		**13 31 44.0**	**+1.7**
MWZ				S		**S**		**13 34 07.5**	**+0.5**
RAGZ	**Rawiri**	**13.77**	**188**	P		**P**		**13 31 46.0**	**+1.7**
RAGZ				S		**S**		**13 34 11.2**	**+0.8**
MUGZ	**Murupara**	**13.85**	**190**	P		**P**		**13 31 46.3**	**+1.4**
MUGZ				S		**S**		**13 34 10.7**	**-1.0**
TLZ	**Tolley Road**	**13.94**	**194**	P		**P**		**13 31 49.8**	**+3.9**
RIGZ	**Rimuhau**	**13.94**	**187**	P		**P**		**13 31 48.7**	**+2.7**
RIGZ				S		**S**		**13 34 10.4**	**-3.1**
RTZ	**Ruatahuna**	**13.95**	**189**	P		**P**		**13 31 47.4**	**+1.3**
RTZ				S		**S**		**13 34 09.5**	**-4.3**
HIZ	**Hauiti**	**14.27**	**196**	P		**P**		**13 31 50.2**	**+0.8**
HIZ	**Hauiti**	**14.27**	**196**	P		**P**		**13 31 54.2**	**+4.7**
BKZ	**Black Stump Fm**	**14.56**	**190**	P		**P**		**13 31 51.7**	**-0.8**
BKZ	**Black Stump Fm**	**14.56**	**190**	P		**P**		**13 31 52.7**	**+0.2**
BKZ				S		**S**		**13 34 18.4**	**-7.1**
TMVZ	**Te Maari**	**14.66**	**193**	P		**P**		**13 31 54.3**	**+0.7**
ETVZ	**East Tongariro**	**14.68**	**193**	P		**P**		**13 31 54.9**	**+1.1**
OTVZ	**Oturere**	**14.71**	**193**	P		**P**		**13 31 53.6**	**-0.6**
OTVZ				S		**S**		**13 34 25.3**	**-3.2**
VRZ	**Vera Road**	**14.88**	**196**	P		**P**		**13 31 59.8**	**+4.1**
BHHZ	**Black Hill Sta**	**14.95**	**191**	P		**P**		**13 31 56.4**	**-0.2**
BHHZ				S		**S**		**13 34 29.4**	**-3.5**
SANVU	**Saraoutou**	**15.08**	**306**	P		**P**		**13 31 56.8**	**-1.5**
NEZ	**North Egmont**	**15.18**	**197**	P		**P**		**13 32 03.9**	**+4.9**
BFZ	**Birch Farm**	**16.08**	**190**	P		**P**		**13 32 08.1**	**-0.3**
BFZ				IAmb		IAmb	IAmb	13 32 08.9	
	comp=Z,15nm,0.9s								
BFZ	**Birch Farm**	**16.08**	**190**	P		**P**		**13 32 08.0**	**-0.3**
MSWZ	**Moikau Station**	**16.97**	**192**	P		**P**		**13 32 16.6**	**-0.9**
BHW	**Baring Head**	**17.03**	**193**	P		**P**		**13 32 17.6**	**-0.5**
QRZ	**Quartz Range**	**17.07**	**199**	P		**P**		**13 32 18.1**	**-0.5**
QRZ				IAmb		IAmb	IAmb	13 32 19.9	
	comp=Z,19

MJAR				Sn	**Sn**	**13 42 22.7**	**-1.1**
	0.1nm,0.3s,baz=348,slow=22,SNR=4.5							
MAJO	**Matsushiro**	**7.11**	**330**	Pn	**Pn**	**13 41 04.9**	**+1.0**
JMM	**Marumori**	**7.56**	**349**	Pn	**Pn**	**13 41 08.0**	**-2.1**
KLR	**Kul'dur**	**20.50**	**339**	P	Pn	13 44 00.0	+0.3
	0.8nm,0.5s,baz=165,slow=6.2,SNR=3.9							
PMG	**Port Moresby**	**39.85**	**173**	LR	LR	14 02 39.9		
	comp=Z,417nm,19.2s,baz=340,slow=35							
ZALV	**Zalesovo Beam**	**47.24**	**317**	P	**P**	**13 47 53.1**	**+0.8**
	0.5nm,0.4s,baz=81,slow=9.1,SNR=3.0							
MKAR	**Makanchi Array**	**48.68**	**307**	P	**P**	**13 48 03.3**	**-0.3**
	0.4nm,0.7s,baz=103,slow=10,SNR=3.0							
WB0	**Warramunga Arr**	**50.52**	**190**	P	**P**	**13 48 18.1**	**+0.3**
WB0				IAmb	IAmb	13 48 41.7		
	comp=Z,17nm,1.4s							
WR0	**Warramunga Arr**	**50.69**	**190**	P	**P**	**13 48 19.9**	**+0.8**
WR0				IAmb	IAmb	13 48 20.8		
	comp=Z,6.1nm,1.2s							
WB2	**Warramunga Arr**	**50.70**	**190**	P	**P**	**13 48 18.7**	**-0.5**
WB2				IAmb	IAmb	13 48 22.4		
	comp=Z,6.0nm,1.1s							
WRA	**Warramunga Arr**	**50.70**	**190**	P	**P**	**13 48 19.7**	**+0.6**
	comp=Z,2.0nm,0.9s,baz=7.8,slow=7.8,SNR=7.4							
WRA	**Warramunga Arr**	**50.70**	**190**	IAmb	IAmb	13 48 23.0		
	comp=Z,0.2nm,0.9s							
FITZ	**Fitzroy Crossi**	**50.93**	**201**	LR	LR	14 08 18.7		
	comp=Z,118nm,19.7s,baz=296,slow=34							
ASAR	**Alice Springs**	**54.43**	**190**	P	**P**	**13 48 47.1**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=5.5,slow=6.2,SNR=19							
ILAR	**Eielson Array**	**54.64**	**30**	P	**P**	**13 48 50.1**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=281,slow=5.4,SNR=3.4							
M24K	**Tolsona, Glenn**	**54.88**	**33**	P	**P**	**13 48 48.9**	**-0.8**
BBB	**Bella Bella**	**66.20**	**42**	P	**P**	**13 50 06.0**	**-1.0**
EUNU	**Eureka**	**66.56**	**8**	P	**P**	**13 50 09.4**	**+0.4**
EUNU				IAmb	IAmb	13 50 09.7		
	comp=Z,2.6nm,1.3s							
YKA	**Yellowknife Ar**	**69.06**	**29**	P	**P**	**13 50 24.7**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=300,slow=5.8,SNR=4.1							
NVAR	**Mina Array Bea**	**78.20**	**52**	P	**P**	**13 51 20.1**	**+0.8**
	comp=Z,3nm,0.6s,baz=278,slow=6.9,SNR=3.4							
TXAR	**Lajitas Array**	**93.34**	**53**	LR	LR	14 31 08.6		
	comp=Z,52nm,19.9s,baz=0.0,slow=33							

*IDC **21** 13:42:02.5±5.3,4.92S×152.24E,h74km±45km,mb3.4/4, mb1 3.6/5,mb1mx3.2/42,mbtmp3.7/5,ML1.7/1,Error ellipse: s-maj=105.7km s-min=28.9km az=132.0*

ISC 21 13:42:01.7±2.3,4.8S±0.7×152.2E±0.8,h70km,n6,σ0.59/7, mb3.5/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.80**	**227**	P	**Pn**	**13 43 39.6**	**+0.7**
	0.8nm,0.3s,baz=30,slow=14,SNR=3.6						
PMG				S	**Sn**	**13 44 54.7**	**-0.1**
	1.0nm,0.3s,baz=324,slow=19,SNR=2.7						
WRA	**Warramunga Arr**	**23.02**	**228**	P	**P**	**13 47 01.0**	**-0.1**
	0.4nm,0.5s,baz=52,slow=9.8,SNR=6.8						
ASAR	**Alice Springs**	**25.77**	**222**	P	**P**	**13 47 25.4**	**-0.7**
	0.3nm,0.6s,baz=56,slow=9.2,SNR=5.0						
FITZ	**Fitzroy Crossi**	**29.15**	**241**	P	**P**	**13 47 56.0**	**-0.5**
	4.2nm,1.1s,baz=79,slow=5.2,SNR=3.9						
ILAR	**Eielson Array**	**82.37**	**22**	P	**P**	**13 54 16.0**	**+0.2**
	1.1nm,0.8s,baz=245,slow=5.4,SNR=6.6						
TORD	**Torodi Ar. Bea**	**149.75**	**288**	PKPbc	**PKiKP**	**14 01 45.8**	**0.0**
	0.4nm,0.6s,baz=77,slow=3.8,SNR=2.7						

*IDC **21** 13:46:28.1±0.5,18.26S×178.14W,h466km±5km,mb4.7/37, mb1 4.8/40,mb1mx4.7/47,mbtmp5.5/40,Error ellipse: s-maj=8.1km s-min=6.9km az=157.0*

*NOU **21** 13:46:29.0,18.32S×178.05W,h481km,ML4.9,Fiji Islands Region*

*BJI **21** 13:46:29.6±0.0,17.84S×177.95W,h486km,mB5.0/36, mb4.9/61*

*NEIC **21** 13:46:30.8±1.3,18.24S±0.08×178.20W±0.09, h506km±4km,mb5.1/374,Error ellipse: s-maj=12.5km s-min=11.3km az=117.0*

*MOS **21** 13:46:31.1±1.4,18.05S×178.20W,h502km,mb5.1/54, Error ellipse: s-maj=7.4km s-min=6.3km az=65.7*

*GCMT **21** 13:46:34.8±0.1,18.32S±0.02×178.08W±0.01, h500km,MW5.8/148,Moment Tensor Solution. s148,c268; Duration: 18 Moment tensor: Scale 10^17 Nm; Mrr2.63±.05; Mθθ0.21±.09; Mφφ-2.84±.08; Mrθ-4.45±.08; Mθφ1.79±.07; Mφr-0.23±.08; Best double couple: M○5.29600×10^17 NP1:φ179.00000°,δ35.00000°, λ151.00000°. NP2:φ293.00000°,δ74.00000°,λ58.00000°. Principal axes: T 6.2150, Plg51.0000°, Azm167.0000°; N -1.8340, Plg30.0000°, Azm303.0000°; P -4.3780, Plg22.0000°, Azm47.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 21 13:46:30.0±0.2,18.18S±0.03×178.07W±0.03, h494km±2km,h495km:pP-P,n1366,σ1.940/1505,mb5.1/286, 120C-93D,Fault plane solution: NP1:φ137.46045°, δ26.96528°,λ100.00253°. **NP2:φ**306.26700°,δ63.47693°, λ84.95002°. **Principal axes:** T Plg71.0841°, Azm205.1974°; N Plg4.5173°, Azm308.5268°; P Plg18.3286°, Azm40.0265°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.72**	**276**	P	**P**	**13 47 45.9**	**0.0**
	174nm,0.3s,baz=123,slow=10.0,SNR=497						
MSVF				S	**S**	**13 48 49.8**	**+2.1**
	baz=307,slow=20,SNR=12						
MSVF	**Nonsavu**	**3.72**	**276**	*c iP*	**P**	**13 47 46.8**	**+0.8**
MSVF	**Nonsavu**	**3.72**	**276**	P	**P**	**13 47 46.8**	**+0.8**
MSVF	**Nonsavu**	**3.72**	**276**	P	**P**	**13 47 46.9**	**+0.9**
AFI	**Afiamalu**	**7.39**	**56**	P	**P**	**13 48 17.4**	**-2.8**
	181nm,0.3s,baz=334,slow=7.0,SNR=5.5						
AFI				S	**S**	**13 49 43.2**	**-7.1**
	26nm,0.3s,baz=37,slow=20,SNR=5.0						
AFI	**Afiamalu**	**7.39**	**56**		**P**	**13 48 16.4**	**-3.8**
AFI	**Afiamalu**	**7.39**	**56**	P	**P**	**13 48 17.6**	**-2.5**
NIUE	**Niue**	**7.77**	**98**	P	**P**	**13 48 23.0**	**-0.9**
	baz=7.8						
NIUE				S	**S**	**13 49 56.4**	**-0.9**
	baz=7.8						
NIUE	**Niue**	**7.77**	**98**		**P**	**13 48 23.5**	**-0.4**
NIUE	**Niue**	**7.77**	**98**	P	**P**	**13 48 23.9**	**0.0**
FUNA	**Funafuti**	**9.96**	**344**	P	**P**	**13 48 45.8**	**-1.2**
RIZ	**Raoul Island**	**11.02**	**179**	P	**P**	**13 48 59.2**	**+1.1**
RIZ				S	**S**	**13 51 00.5**	**+0.5**
RAO	**Raoul Island**	**11.02**	**179**	S	**S**	**13 50 57.3**	**-2.8**
	233nm,0.3s,baz=270,slow=20,SNR=8.1						
RAO	**Raoul Island**	**11.02**	**179**	P	**P**	**13 48 56.8**	**-1.3**
RAO	**Raoul Island**	**11.02**	**179**	P	**P**	**13 48 56.8**	**-1.3**
RAO	**Raoul Island**	**11.02**	**179**	P	**P**	**13 48 55.4**	**-2.7**
GLKZ	**Green Lake**	**11.03**	**179**	P	**P**	**13 48 58.1**	**-0.1**
GLKZ				S	**S**	**13 50 58.8**	**-1.4**
DVP	**Devils Point**	**13.09**	**270**	P	**P**	**13 49 20.7**	**+0.5**
MARNC	**Mare, Loyalty**	**13.49**	**254**	P	**P**	**13 49 23.6**	**-0.8**
LIFNC	**LIFOU**	**14.10**	**257**	P	**P**	**13 49 29.7**	**-1.1**
PINNC	**Pines Island,**	**14.28**	**250**	P	**P**	**13 49 31.7**	**-1.1**
SANVU	**Saraoutou**	**14.36**	**279**		**P**	**13 49 31.5**	**-2.2**
SANVU	**Saraoutou**	**14.36**	**279**	P	**P**	**13 49 34.6**	**+0.9**
YATNC	**Mamie plateau,**	**14.64**	**252**	P	**P**	**13 49 36.4**	**-0.3**
OUENC	**Ouen Island, N**	**14.77**	**251**	P	**P**	**13 49 36.5**	**-1.5**
DZM	**Mont Dzumac**	**15.05**	**253**	P	**P**	**13 49 39.6**	**-1.4**
	11nm,0.3s,baz=84,slow=19,SNR=69						
DZM				S	**S**	**13 52 17.6**	**-1.0**
	baz=89,slow=17,SNR=5.5						
DZM	**Mont Dzumac**	**15.05**	**253**		**P**	**13 49 39.0**	**-2.0**
DZM	**Mont Dzumac**	**15.05**	**253**	P	**P**	**13 49 39.5**	**-1.5**
ONTNC	**Ouen Toro**	**15.10**	**252**	P	**P**	**13 49 39.9**	**-1.5**
NOUC	**Port Laguerre**	**15.19**	**253**	P	**P**	**13 49 42.4**	**+0.1**
KNTN	**Kanton**	**16.52**	**23**	P	**P**	**13 49 55.3**	**-1.2**
KNTN	**Kanton**	**16.52**	**23**	P	**P**	**13 49 56.9**	**+0.4**
NFK	**Norfolk Island**	**16.76**	**227**	P	**P**	**13 49 59.2**	**+0.4**
	baz=17						
KOUNC	**Koumac, New Ca**	**16.82**	**259**	P	**P**	**13 49 58.1**	**-1.3**
RAR	**Rarotonga**	**17.49**	**103**	P	**P**	**13 50 05.6**	**-0.4**
	3.3nm,0.3s,baz=251,slow=8.0,SNR=10						
RAR	**Rarotonga**	**17.49**	**103**	P	**P**	**13 50 06.1**	**+0.1**
RAR				pmax	pmax		
	comp=Z,168nm,1.1s						
RAR	**Rarotonga**	**17.49**	**103**	P	**P**	**13 50 06.0**	**+0.1**
RAR	**Rarotonga**	**17.49**	**103**	P	**P**	**13 50 06.5**	**+0.5**
OUZ	**Omahuta**	**18.52**	**202**		**P**	**13 50 14.8**	**-0.6**
OUZ	**Omahuta**	**18.52**	**202**	P	**P**	**13 50 15.9**	**+0.5**
WCZ	**Waipu Caves**	**18.92**	**199**	P	**P**	**13 50 18.5**	**-0.5**
KUZ	**Kuaotunu**	**19.29**	**195**	P	**P**	**13 50 21.7**	**-0.7**
MXZ	**Matakaoa Point**	**19.57**	**189**		**P**	**13 50 22.7**	**-2.2**
MXZ	**Matakaoa Point**	**19.57**	**189**	S	**S**	**13 53 30.2**	**-5.8**
HAZ	**Te Kaha**	**19.84**	**190**	P	**P**	**13 50 26.8**	**-0.5**
PKGZ	**Pakihiroa**	**19.93**	**189**	P	**P**	**13 50 26.3**	**-1.9**
RUGZ	**Raukumara Rang**	**20.06**	**190**	P	**P**	**13 50 27.4**	**-2.2**
RUGZ				S	**S**	**13 53 41.9**	**-2.3**
TGRZ	**Tauranga**	**20.10**	**193**	P	**P**	**13 50 31.1**	**+1.4**
OPRZ	**Ohinepanea**	**20.15**	**192**	P	**P**	**13 50 30.0**	**-0.1**
TWGZ	**Tauwhareparae**	**20.22**	**189**	P	**P**	**13 50 29.7**	**-1.2**
OMRZ	**Omania**	**20.44**	**193**	P	**P**	**13 50 27.4**	**-5.5**
URZ	**Urewera**	**20.45**	**191**	P	**P**	**13 50 29.8**	**-3.0**
	comp=Z,158nm,0.8s,baz=303,slow=24,SNR=86						
URZ				S	**S**	**13 53 49.0**	**-1.1**
	comp=Z,135nm,0.7s,baz=49,slow=20,SNR=5.6						
URZ	**Urewera**	**20.45**	**191**	P	**P**	**13 50 29.3**	**-3.6**
URZ	**Urewera**	**20.45**	**191**	P	**P**	**13 50 29.6**	**-3.2**
MWZ	**Matawai**	**20.45**	**190**	P	**P**	**13 50 29.9**	**-3.1**
MWZ				S	**S**	**13 53 41.9**	**-8.3**
UTU	**Utuhina**	**20.55**	**193**	P	**P**	**13 50 35.5**	**+1.7**
HLRZ	**Highlands Stat**	**20.59**	**193**	P	**P**	**13 50 34.9**	**+0.7**
RAGZ	**Rawiri**	**20.62**	**190**	P	**P**	**13 50 33.7**	**-0.9**
RRRZ	**Republican Roa**	**20.64**	**192**	P	**P**	**13 50 34.4**	**-0.2**
MUGZ	**Murupara**	**20.72**	**192**	P	**P**	**13 50 32.9**	**-2.5**
RIGZ	**Rimuhau**	**20.77**	**189**	P	**P**	**13 50 33.9**	**-2.0**
PRRZ	**Plateau Road**	**20.82**	**192**	P	**P**	**13 50 35.6**	**-0.7**
SNGZ	**Shannon Statio**	**20.91**	**190**	P	**P**	**13 50 35.6**	**-1.6**
KUTZ	**Kaahu Road**	**20.93**	**194**	P	**P**	**13 50 34.1**	**-3.1**
HIZ	**Hauiti**	**21.18**	**196**	P	**P**	**13 50 39.3**	**-0.2**
HIZ	**Hauiti**	**21.18**	**196**	P	**P**	**13 50 41.2**	**+1.6**
RATZ	**Rangitukua**	**21.30**	**193**	P	**P**	**13 50 39.4**	**-1.3**
KATZ	**Kakaramea**	**21.42**	**193**	P	**P**	**13 50 42.8**	**+0.9**
BKZ	**Black Stump Fm**	**21.44**	**192**	P	**P**	**13 50 38.3**	**-3.7**
BKZ				IAmb	IAmb	13 50 48.8	
	comp=Z,63nm,0.7s						
BKZ	**Black Stump Fm**	**21.44**	**192**	P	**P**	**13 50 38.6**	**-3.3**
NTVZ	**North Tongarir**	**21.54**	**193**	P	**P**	**13 50 42.6**	**-0.4**
KRVZ	**Karewarewa**	**21.55**	**193**	P	**P**	**13 50 42.2**	**-0.8**
TMVZ	**Te Maari**	**21.55**	**193**	P	**P**	**13 50 41.3**	**-1.7**
TWVZ	**Taurewa**	**21.57**	**194**	P	**P**	**13 50 41.8**	**-1.3**
ETVZ	**East Tongariro**	**21.57**	**193**	P	**P**	**13 50 41.3**	**-2.0**
WTVZ	**West Tongariro**	**21.58**	**194**	P	**P**	**13 50 42.1**	**-1.2**
NNVZ	**North Ngauruho**	**21.59**	**193**	P	**P**	**13 50 42.3**	**-1.1**
OTVZ	**Oturere**	**21.61**	**193**	P	**P**	**13 50 41.2**	**-2.4**
NGZ	**Ngauruhoe**	**21.63**	**193**	P	**P**	**13 50 43.3**	**-0.5**
SNVZ	**South Ngauruho**	**21.64**	**193**	P	**P**	**13 50 42.5**	**-1.4**
MCHZ	**McNeill Hill**	**21.67**	**191**	P	**P**	**13 50 41.8**	**-2.2**
TUVZ	**Tukino**	**21.71**	**193**	P	**P**	**13 50 43.2**	**-1.2**
FWVZ	**Far West T-bar**	**21.72**	**193**	P	**P**	**13 50 44.1**	**-0.6**
WNVZ	**Wahianoa**	**21.78**	**193**	P	**P**	**13 50 43.7**	**-1.4**
MOVZ	**Moawhango**	**21.82**	**193**	P	**P**	**13 50 43.5**	**-1.9**
BHHZ	**Black Hill Sta**	**21.84**	**192**	P	**P**	**13 50 42.6**	**-3.0**
MTVZ	**Mangateitei**	**21.86**	**194**	P	**P**	**13 50 45.5**	**-0.2**
KAHZ	**Kahuranaki**	**21.98**	**190**	P	**P**	**13 50 45.6**	**-1.2**
PKE	**Pukeiti**	**22.05**	**197**	P	**P**	**13 50 49.9**	**+2.5**
NEZ	**North Egmont**	**22.09**	**196**	P	**P**	**13 50 49.3**	**+1.4**
KHEZ	**Kahui Hut**	**22.14**	**196**	P	**P**	**13 50 50.4**	**+2.1**
NBEZ	**Newall Road No**	**22.15**	**197**	P	**P**	**13 50 51.4**	**+3.1**
PXZ	**Pawanui**	**22.21**	**190**	P	**P**	**13 50 46.7**	**-2.1**
PNHZ	**Pukenui**	**22.22**	**192**	P	**P**	**13 50 47.2**	**-1.8**
NMEZ	**Namu Road**	**22.29**	**197**	P	**P**	**13 50 51.3**	**+1.8**
WPHZ	**Waipukurau**	**22.32**	**191**	P	**P**	**13 50 51.6**	**+1.8**
WAZ	**Wanganui**	**22.33**	**194**	P	**P**	**13 50 50.5**	**+0.6**
TSZ	**Takapari Road**	**22.41**	**192**	P	**P**	**13 50 50.3**	**-0.3**
PRHZ	**Porangahau**	**22.48**	**191**	P	**P**	**13 50 50.8**	**-0.4**
DVHZ	**Dannevirke**	**22.60**	**192**	P	**P**	**13 50 50.6**	**-1.8**
ANWZ	**Angora Road**	**22.70**	**191**	P	**P**	**13 50 52.0**	**-1.2**
BFZ	**Birch Farm**	**22.95**	**191**	P	**P**	**13 50 52.2**	**-3.3**
BFZ				IAmb	IAmb	13 50 57.6	
	comp=Z,63nm,0.7s						
BFZ	**Birch Farm**	**22.95**	**191**	P	**P**	**13 50 53.0**	**-2.5**
HNR	**Honiara**	**23.03**	**289**	P	**P**	**13 50 54.1**	**-2.4**
	comp=Z,138nm,0.7s,baz=172,slow=4.2,SNR=14						
HNR	**Honiara**	**23.03**	**289**	P	**P**	**13 50 52.3**	**-4.2**
HNR	**Honiara**	**23.03**	**289**	P	**P**	**13 50 58.0**	**+1.5**
MSWZ	**Moikau Station**	**23.86**	**192**	P	**P**	**13 51 00.3**	**-3.2**
SNZO	**South Karori**	**23.87**	**194**	P	**P**	**13 51 00.4**	**-3.2**
BHW	**Baring Head**	**23.93**	**193**	P	**P**	**13 51 01.2**	**-2.9**
QRZ	**Quartz Range**	**23.98**	**198**	P	**P**	**13 51 03.2**	**-1.4**
PLWZ	**Palliser**	**24.00**	**192**	P	**P**	**13 51 01.6**	**-3.3**
NNZ	**Nelson**	**24.11**	**196**	P	**P**	**13 51 03.0**	**-2.8**
TUWZ	**Tuamarina**	**24.16**	**195**	P	**P**	**13 51 03.4**	**-2.9**
BSWZ	**Blackbirch Sta**	**24.45**	**195**	P	**P**	**13 51 05.7**	**-3.1**
THZ	**Tophouse**	**24.74**	**196**	P	**P**	**13 51 08.3**	**-3.2**
THZ				IAmb	IAmb	13 51 12.1	
	comp=Z,78nm,0.9s						
KHZ	**Kahutara**	**25.20**	**195**	P	**P**	**13 51 12.3**	**-3.1**
LTZ	**Lake Taylor**	**25.86**	**196**	P	**P**	**13 51 17.8**	**-3.5**
OXZ	**Oxford**	**26.43**	**196**	P	**P**	**13 51 22.9**	**-3.4**
MQZ	**McQueen's Vall**	**26.63**	**195**	P	**P**	**13 51 25.0**	**-3.0**
MQZ				IAmb	IAmb	13 51 37.0	
	comp=Z,37nm,0.9s						
RPZ	**Rata Peaks**	**27.06**	**198**	P	**P**	**13 51 29.8**	**-2.1**
	comp=Z,20nm,0.3s,baz=23,slow=2.7,SNR=28						
RPZ				S	**S**	**13 55 34.8**	**+0.5**
	comp=Z,57nm,1.1s,baz=229,slow=20,SNR=6.3						
RPZ	**Rata Peaks**	**27.06**	**198**	P	**P**	**13 51 29.3**	**-2.6**
RPZ				IAmb	IAmb	13 51 36.1	
	comp=Z,71nm,1.1s						
PAE	**Paea**	**27.10**	**93**	*e*P	**P**	**13 51 33.9**	**+1.4**
	comp=Z,38nm,1.0s						
PPT2	**Papeete2**	**27.11**	**93**	*e*P	**P**	**13 51 34.5**	**+1.8**
	comp=Z,232nm,1.2s						
PPT	**Papeete**	**27.11**	**93**	*e*P	**P**	**13 51 32.5**	**-0.2**
	comp=Z,195nm,1.0s,baz=76,slow=5.2,SNR=8.8						
PPTF	**Pamatai, Papee**	**27.12**	**93**	P	**P**	**13 51 31.7**	**-1.2**
TBI	**Tubuai**	**27.21**	**106**	*e*P	**P**	**13 51 36.2**	**+2.7**
	comp=Z,126nm,0.7s						
FOZ	**Fox Glacier**	**27.27**	**199**	P	**P**	**13 51 31.3**	**-2.3**
TIAR	**Tiarei**	**27.33**	**93**	*e*P	**P**	**13 51 36.0**	**+1.4**
LBZ	**Lake Benmore**	**27.93**	**198**	P	**P**	**13 51 36.2**	**-3.3**
LBZ				IAmb	IAmb	13 51 41.2	
	comp=Z,108nm,0.9s						
ODZ	**Otahua Downs**	**28.40**	**197**	P	**P**	**13 51 40.2**	**-3.3**
XMAS	**Kiritimati**	**28.57**	**47**	P	**P**	**13 51 45.9**	**+0.4**
WKZ	**Wanaka**	**28.68**	**199**	P	**P**	**13 51 43.9**	**-2.2**
MLZ	**Mavora Lakes**	**29.45**	**200**	P	**P**	**13 51 51.5**	**-1.3**
DCZ	**Deep Cove**	**29.86**	**201**	P	**P**	**13 51 54.5**	**-1.8**
WHZ	**Wether Hill Ro**	**29.98**	**200**	P	**P**	**13 51 55.9**	**-1.4**
ARMA	**Armidale**	**30.09**	**240**	P	**P**	**13 51 58.6**	**0.0**
	baz=30,SNR=74						
ARMA	**Armidale**	**30.09**	**240**	P	**P**	**13 51 57.9**	**-0.8**
ARMA				IAmb	IAmb	13 52 01.2	
	comp=Z,59nm,0.8s						
KWAJ	**Kwajalein Atol**	**30.31**	**331**	P	**P**	**13 51 59.7**	**-0.9**
KWAJ				pmax	pmax		
	comp=Z,991nm,1.0s						
KWAJ	**Kwajalein Atol**	**30.31**	**331**	P	**P**	**13 51 59.7**	**-0.9**
KWAJ	**Kwajalein Atol**	**30.31**	**331**	P	**P**	**13 52 02.0**	**+1.4**
RMQ	**Roma**	**31.71**	**249**	P	**P**	**13 52 12.3**	**-0.3**
	baz=32,SNR=44						
RABL	**Rabaul**	**32.27**	**292**	P	**P**	**13 52 14.9**	**-2.6**
RABL				IAmb	IAmb	13 52 24.5	
	comp=Z,63nm,0.6s						
CNB	**Canberra Magne**	**33.52**	**233**	P	**P**	**13 52 27.9**	**0.0**
	baz=34,SNR=29						
CTA	**Charters Tower**	**33.72**	**261**	P	**P**	**13 52 28.9**	**-0.9**
	comp=Z,77nm,0.7s,baz=90,slow=11,SNR=57						
CTA				S	**S**	**13 57 18.6**	**+0.8**
	comp=Z,13nm,1.0s,baz=259,slow=19,SNR=6.6						
CTA				ScP	**ScP**	**13 57 56.8**	**+3.8**
	comp=Z,23nm,1.0s,baz=63,slow=4.5,SNR=4.7						
CTAO	**Charters Tower**	**33.72**	**261**	P	**P**	**13 52 28.5**	**-1.3**
CTAO				pmax	pmax		
	comp=Z,134nm,0.9s						
CTAO	**Charters Tower**	**33.72**	**261**	P	**P**	**13 52 28.5**	**-1.3**
CAN	**Canberra**	**33.80**	**233**	P	**P**	**13 52 28.6**	**-1.7**
CAN				pmax	pmax		
	comp=Z,65nm,0.8s						
CAN	**Canberra**	**33.80**	**233**	P	**P**	**13 52 28.6**	**-1.7**
CAN				IAmb	IAmb	13 52 33.0	
	comp=Z,65nm,0.8s						
YNG	**Young**	**33.90**	**235**	P	**P**	**13 52 31.2**	**+0.1**
	baz=34,SNR=5.5						
PATS	**Pohnpei**	**34.08**	**315**	P	**P**	**13 52 31.6**	**-1.2**
	baz=34,SNR=4.4						
PMG	**Port Moresby**	**34.83**	**280**	P	**P**	**13 52 38.6**	**-0.5**
	comp=Z,42nm,0.6s,baz=116,slow=7.5,SNR=25						
PMG				S	**S**	**13 57 35.3**	**+0.9**
	comp=Z,9.7nm,1.0s,baz=294,slow=20,SNR=7.4						
PMG				ScP	**ScP**	**13 58 00.6**	**+3.6**
	comp=Z,15nm,1.0s,baz=127,slow=5.1,SNR=4.2						
PMG	**Port Moresby**	**34.83**	**280**	P	**P**	**13 52 38.4**	**-0.7**
PMG	**Port Moresby**	**34.83**	**280**	P	**P**	**13 52 41.2**	**+2.1**
CMSA	**Cobar Meteorol**	**35.30**	**241**	P	**P**	**13 52 42.1**	**-0.7**
	baz=35,SNR=164						
JOHN	**Johnston Islan**	**35.70**	**14**	P	**P**	**13 52 45.8**	**-0.4**
MTSU	**Mount Surprise**	**35.70**	**264**	P	**P**	**13 52 45.4**	**-1.0**
	baz=36,SNR=40						
QLP	**Quilpie**	**35.74**	**250**	P	**P**	**13 52 45.6**	**-1.0**
	baz=36,SNR=40						
TOO	**Toolangi**	**37.25**	**231**	P	**P**	**13 52 58.6**	**-0.4**
	baz=37,SNR=81						
TOO	**Toolangi**	**37.25**	**231**	P	**P**	**13 52 58.3**	**-0.7**
TOO				pmax	pmax		
	comp=Z,167nm,0.9s						
TOO	**Toolangi**	**37.25**	**231**	P	**P**	**13 52 58.3**	**-0.7**
COEN	**Coen**	**37.43**	**271**	P	**P**	**13 53 00.1**	**-0.7**
COEN				IAmb	IAmb	13 53 02.9	
	comp=Z,101nm,0.9s						
MANU	**Manus Island**	**37.50**	**291**	P	**P**	**13 53 00.8**	**-0.5**
TAOE	**Nuku Hiva Isla**	**37.95**	**81**	P	**P**	**13 53 06.0**	**+1.0**
TAOE	**Nuku Hiva Isla**	**37.95**	**81**	P	**P**	**13 53 03.7**	**-1.3**
MOO	**Moorlands**	**38.12**	**223**	P	**P**	**13 53 06.3**	**+0.4**
	baz=38						
TAU	**Tasmania Unive**	**38.26**	**222**	P	**P**	**13 53 06.0**	**-1.1**
TAU				pmax	pmax		
	comp=Z,39nm,0.9s						
TAU	**Tasmania Unive**	**38.26**	**222**	P	**P**	**13 53 06.0**	**-1.1**
TAU				IAmb	IAmb	13 53 07.0	
	comp=Z,39nm,0.9s						
STKA	**Stephens Creek**	**38.79**	**242**	P	**P**	**13 53 11.4**	**-0.2**
	comp=Z,130nm,0.9s,baz=92,slow=10.0,SNR=173						
STKA				PP	**pwP**	**13 54 49.1**	**+5.4**
	comp=Z,19nm,0.9s,baz=76,slow=8.3,SNR=4.0						
STKA				S	**S**	**13 58 32.8**	**-0.4**
	comp=Z,19nm,1.0s,baz=342,slow=20,SNR=5.3						
STKA	**Stephens Creek**	**38.79**	**242**	P	**P**	**13 53 11.3**	**-0.2**
	baz=39,SNR=77						
STKA	**Stephens Creek**	**38.79**	**242**	P	**P**	**13 53 10.7**	**-0.9**
ARPS	**Mount Arapiles**	**39.75**	**234**	P	**P**	**13 53 18.9**	**-0.4**
	baz=40,SNR=22						
QIS	**Mount Isa**	**39.92**	**259**	P	**P**	**13 53 19.6**	**-1.4**
	baz=40,SNR=19						
WAKE	**Wake Island**	**40.14**	**337**	P	**P**	**13 53 22.0**	**-0.5**
MCQ	**Macquarie Isla**	**40.32**	**201**	P	**P**	**13 53 23.4**	**-0.1**
MCQ				pmax	pmax		
	comp=Z,358nm,1.3s						
MCQ	**Macquarie Isla**	**40.32**	**201**	P	**P**	**13 53 23.4**	**-0.1**
H11N3	**WAKE ISLAND Hy**	**40.45**	**338**	P	**P**	**13 53 26.0**	**+1.2**
	baz=175,slow=10,SNR=21						
H11N1	**WAKE ISLAND Hy**	**40.45**	**338**	P	**P**	**13 53 25.2**	**+0.4**
	baz=175,slow=10,SNR=22						
H11N2	**WAKE ISLAND Hy**	**40.46**	**338**	P	**P**	**13 53 24.9**	**+0.1**
	baz=175,slow=10,SNR=13						
RKT	**Rikitea**	**40.52**	**105**	*e*P	**P**	**13 53 28.3**	**+2.7**
	comp=Z,197nm,1.1s						
HTT	**Hallett**	**41.29**	**240**	P	**P**	**13 53 31.3**	**-0.4**
	baz=41,SNR=131						
KHU	**Kahuku**	**43.24**	**32**	P	**P**	**13 53 48.1**	**+0.7**
KHU				pmax	pmax		
	comp

SOEI	Soe	56.40	270	P		P		13 55 24.9	+0.5
SOEI	Soe	56.40	270	P		P		13 55 26.1	+1.6
	comp=Z,3µmcomp=Z,232nm,0.7s								
BATI	Baumata	56.85	270	P		P		13 55 28.2	+0.7
	comp=Z,84nm,0.7s,baz=152,slow=2.8,SNR=19								
BATI	Baumata	56.85	270	P		P		13 55 28.1	+0.6
	comp=Z,58nm,1.0s								
SANI	Sanana	57.11	280	P		P		13 55 28.5	-0.7
	comp=Z,633nmcomp=Z,82nm,0.8s								
PSA00	Pilbara Seismi	58.16	256	P		P		13 55 35.1	-1.2
PSA00				IAmb		IAmb		13 55 37.7	
	comp=Z,109nm,0.6s								
PSA00	Pilbara Seismi	58.16	256	P		P		13 55 34.2	-2.1
PSA00				IAmb		IAmb		13 55 36.9	
	comp=Z,53nm,0.7s								
MMRI	Maumere	58.63	271	P		P		13 55 38.4	-1.1
MMRI				IAmb		IAmb		13 55 40.9	
	comp=Z,59nm,0.7s								
MMRI	Maumere	58.63	271	P		P		13 55 40.5	+0.9
	comp=Z,89nm,0.7s								
KLBR	Kellerberrin	59.00	244	P		P		13 55 40.8	-1.1
	baz=59,SNR=104								
NWAO	Narrogin (SRO)	59.37	242	P		P		13 55 43.5	-0.8
	baz=59,SNR=29								
NWAO	Narrogin (SRO)	59.37	242	P		P		13 55 42.8	-1.5
NWAO				pmax		pmax			
	comp=Z,42nm,0.8s								
NWAO	Narrogin (SRO)	59.37	242	P		P		13 55 42.8	-1.5
NWAO				IAmb		IAmb		13 55 45.5	
	comp=Z,42nm,0.8s								
BASI	Baing, Sumba	59.78	269	P		P		13 55 48.0	+0.7
	comp=Z,65nm,1.0s								
KMSI	Cibinong	59.91	282	P		P		13 55 49.7	+1.5
	comp=Z,109nm,0.9s								
BLDU	Ballidu	59.96	245	P		P		13 55 47.2	-1.1
	baz=60,SNR=61								
SBA	Scott Base	60.17	184	P		P		13 55 50.4	+1.6
SBA				pmax		pmax			
	comp=Z,208nm,1.1s								
SBA	Scott Base	60.17	184	P		P		13 55 50.4	+1.6
VNDA	Vanda	60.20	185	P		P		13 55 50.1	+1.1
	comp=Z,42nm,0.8s,baz=355,slow=7.8,SNR=82								
VNDA	Vanda	60.20	185	P		P		13 55 49.5	+0.4
VNDA				IAmb		IAmb		13 55 52.9	
	comp=Z,201nm,1.4s								
MUN	Mundaring	60.29	243	P		P		13 55 49.9	-0.5
	baz=60,SNR=22								
LUWI	Luwuk	60.47	279	P		P		13 55 50.7	-1.2
LUWI				IAmb		IAmb		13 55 55.0	
	comp=Z,76nm,1.0s								
LUWI	Luwuk	60.47	279	P		P		13 55 52.8	+0.9
	comp=Z,93nm,1.1s								
MORW	Morawa	60.67	246	P		P		13 55 52.2	-0.8
	baz=61,SNR=24								
MORW	Morawa	60.67	246	P		P		13 55 51.2	-1.9
MORW				IAmb		IAmb		13 55 54.0	
	comp=Z,33nm,0.6s								
WBSI	Waikabubak, Su	61.06	269	P		P		13 55 56.5	+0.6
	comp=Z,50nm,0.8s								
APSI	Ampana	61.57	279	P		P		13 56 00.0	+0.9
	comp=Z,1µmcomp=Z,94nm,0.7s								
MRSI	Marisa	61.78	281	P		P		13 56 00.8	+0.3
	comp=Z,40nm,0.9s								
H01W1	Cape Leeuwin H	61.83	240	P		P		13 56 00.5	+0.3
	baz=106,slow=6.8,SNR=9.3								
H01W3	Cape Leeuwin H	61.84	240	P		P		13 56 01.3	+0.9
	baz=106,slow=6.8,SNR=7.9								
H01W2	Cape Leeuwin H	61.84	240	P		P		13 56 00.5	+0.1
	baz=106,slow=6.8,SNR=5.1								
BNSI	Bone	61.89	275	P		P		13 56 03.0	+1.8
	comp=Z,39nm,1.0s								
SPSI	Sidrap Palu	62.34	275	P		P		13 56 04.9	+0.7
	comp=Z,598nmcomp=Z,29nm,0.7s								
PLAI	Plampang	62.82	269	P		P		13 56 06.6	-0.7
	comp=Z,1µmcomp=Z,150nm,0.8s								
TOLI2	Tolitoli	63.09	281	P		P		13 56 07.8	-1.2
TOLI2				IAmb		IAmb		13 56 12.5	
	comp=Z,25nm,0.6s								
GIRL	Giralia	63.13	253	P		P		13 56 09.8	+0.6
	baz=63,SNR=32								
GIRL	Giralia	63.13	253	P		P		13 56 09.2	+0.1
TWSI	Taliwang, Sumb	63.69	269	P		P		13 56 13.7	+0.8
	comp=Z,861nmcomp=Z,86nm,0.9s								
JHJ2	Mitsune	64.96	322	P		P		13 56 20.1	-0.4
JHJ	Hachijo jima 2	64.98	322	P		P		13 56 21.1	+0.4
	comp=Z,70nm,0.3s,baz=212,slow=5.4,SNR=12								
SRBI	Singaraja	65.46	269	P		P		13 56 25.9	+1.8
	comp=Z,76nm,0.9s								
KBKI	Kotabaru	65.96	275	P		P		13 56 29.2	+1.9
	comp=Z,2µmcomp=Z,30nm,0.7s								
CASY	Casey	66.03	205	P		P		13 56 26.4	-0.4
JAGI	Jajag, Banyuwa	66.36	269	P		P		13 56 27.5	-2.3
JAGI	Jajag, Banyuwa	66.36	269	P		P		13 56 29.6	-0.2
	comp=Z,152nm,0.8s								
MYLDM	Lahad Datu	66.69	284	P		P		13 56 32.3	+0.5
KMMI	Kalianget	66.93	270	P		P		13 56 34.5	+1.2
	comp=Z,57nm,0.7s								
JYT	Yasato	66.97	324	P		P		13 56 33.1	+0.1
BBKI	Banjar Baru	67.17	274	P		P		13 56 37.0	+2.2
	comp=Z,1µmcomp=Z,50nm,0.8s								
JMM	Marumori	67.84	326	P		P		13 56 38.8	+0.4
JMM				IAmb		IAmb		13 56 41.6	
	comp=Z,34nm,0.9s								
MTKI	Muara Teweh, K	67.92	277	P		P		13 56 41.4	+2.0
JGF	Kuroka	68.15	322	P		P		13 56 39.8	-0.5
JGF				IAmb		IAmb		13 56 48.1	
	comp=Z,29nm,0.9s								
MJAR	Matsushiro Arr	68.32	323	P		P		13 56 40.6	-0.7
	comp=Z,34nm,0.7s,baz=157,slow=5.8,SNR=43								
MJAR				PKPPKP		P'P'df		14 24 53.2	+1.8
	comp=Z,4.3nm,1.1s,baz=293,slow=1.9,SNR=5.7								
MAJO	Matsushiro	68.32	323⇑	*i*P		P		13 56 40.8	-0.5
MAJO				pmax		pmax			
	comp=Z,38nm,0.6s								
MAJO	Matsushiro	68.32	323	P		P		13 56 40.9	-0.4
MAJO				IAmb		IAmb		13 56 44.5	
	comp=Z,51nm,0.9s								
MAT	Matsushiro	68.32	323	P		P		13 56 41.0	-0.3
MAT				S		S		14 04 58.8	-4.0
JOW	Kunigami	68.64	309	P		P		13 56 44.6	+1.1
	comp=Z,19nm,0.8s,baz=130,slow=6.0,SNR=6.7								
JOW	Kunigami	68.64	309	P		P		13 56 42.5	-1.0
JMN	Monobe	69.01	318	P		P		13 56 44.6	-1.0
JMN				IAmb		IAmb		13 56 50.0	
	comp=Z,86nm,1.2s								
JWT	Wachi	69.10	321	P		P		13 56 46.0	-0.1
JWT				IAmb		IAmb		13 56 49.7	
	comp=Z,28nm,0.9s								
KKM	Kota Kinabalu	69.12	284	P		P		13 56 45.8	-1.0
KKM				IAmb		IAmb		13 56 49.0	
	comp=Z,54nm,1.4s								
AMKA	Amchitka	69.29	358	P		P		13 56 47.0	+0.1
JSD	Sado	69.35	324	P		P		13 56 47.6	+0.1
ADK	Adak	69.77	1	P		P		13 56 49.3	-0.4
ADK				pmax		pmax			
	comp=Z,94nm,0.8s								
ADK	Adak	69.77	1	P		P		13 56 49.3	-0.4
JTM	Tenmabayashi	69.87	328	P		P		13 56 51.2	+0.7
JTM				IAmb		IAmb		13 56 58.2	
	comp=Z,120nm,1.3s								
UGM	Wanagama	69.96	268	P		P		13 56 50.6	-1.2
UGM	Wanagama	69.96	268	P		P		13 56 53.1	+1.3
	comp=Z,265nm,0.6s								
GSTR	Great Sitkin T	69.99	1	P		P		13 56 50.6	-0.5
ATKA	Atka Island	70.16	3	P		P		13 56 51.9	-0.1
JHS	Saijyo	70.31	319	P		P		13 56 53.8	+0.4
JHS				IAmb		IAmb		13 56 57.5	
	comp=Z,79nm,0.8s								
JNU	Nakatsue	70.56	316	P		P		13 56 54.6	-0.2
JNU				IAmb		IAmb		13 56 59.7	
	comp=Z,70nm,1.5s								
SMY	Shemya	70.94	355	P		P		13 56 56.5	-0.1
SMY				pmax		pmax			
	comp=Z,361nm,1.4s								
SMY	Shemya	70.94	355	P		P		13 56 56.5	-0.1
NIKH	Nikolski High	71.30	6	P				13 56 57.8	
	baz=189								
NIKH	Nikolski High	71.30	6	P		P		13 56 58.4	-0.3
SBUM	Sibu	71.57	279	P		P		13 57 00.5	-0.7
JKA	Kamikawa-asahi	71.67	331	P		P		13 57 03.2	+2.1
ASAJ	Asahikawa	71.67	331	P		P		13 57 02.7	+1.6
	comp=Z,98nm,0.8s,baz=211,slow=5.3,SNR=42								
ASAJ	Asahikawa	71.67	331	P		P		13 57 03.2	+2.1
ASAJ				pmax		pmax			
	comp=Z,116nm,0.8s								
YULB	Yu-li	72.19	303	P		P		13 57 02.0	-2.6
NACB	Ninganchiao	72.34	304	P		P		13 57 04.8	-0.7
NACB				IAmb		IAmb		13 57 07.0	
	comp=Z,41nm,0.9s								
JTU	Tsushima	72.39	317	P		P		13 57 05.1	-0.4
JTU				IAmb		IAmb		13 57 16.6	
	comp=Z,45nm,1.2s								
SSLB	Suanglung	72.66	303	P		P		13 57 06.2	-1.2
SSLB				IAmb		IAmb		13 57 08.9	
	comp=Z,36nm,0.4s								
TPUB	Ta-pu	72.68	302	P		P		13 57 05.8	-1.6
TPUB				IAmb		IAmb		13 57 09.3	
	comp=Z,96nm,1.2s								
YHNB	Yeheng	72.76	304	P		P		13 57 06.7	-1.3
YHNB				IAmb		IAmb		13 57 12.5	
	comp=Z,69nm,1.2s								
AKUT	Akutan	72.79	8	P		P		13 57 06.7	-0.7
LEM	Lembang	73.03	268	P		P		13 57 10.7	+0.8
	comp=Z,1µmcomp=Z,147nm,0.8s								
KSM	Kuching	73.04	277	P		P		13 57 09.4	-0.4
KSM				IAmb		IAmb		13 57 12.7	
	comp=Z,96nm,0.8s								
PET	Petropavlovsk	73.72	346⇓	*i*P		P		13 57 12.7	0.0
PET				*e**PP		pwP		13 58 58.9	-1.6
PET				*e*S		S		14 06 04.2	+1.1
PET				pmax		pmax			
	comp=Z,106nm,0.7s								
PET	Petropavlovsk	73.72	346	P		P		13 57 12.2	-0.5
PET				IAmb		IAmb		13 57 13.4	
	comp=Z,54nm,0.8s								
YSS	Yuzh-Sakhalins	73.80	333⇓	*i*P		P		13 57 14.8	+1.5
YSS				*e**PP		pP		13 58 59.2	+0.7
YSS				*e**SP		sP		13 59 51.1	+1.1
YSS				*e*				14 00 02.3	
YSS				*e*S		S		14 06 05.1	+0.8
YSS				*e*				14 06 32.7	
YSS				*e*				14 06 37.7	
YSS				*e*SS		SS		14 11 00.1	-1.8
YSS				pmax		pmax			
	comp=Z,90nm,0.9s								
YSS				pmax		pmax			
	comp=Z,500nm,3.6s								
YSS	Yuzh-Sakhalins	73.80	333	P		P		13 57 14.1	+0.8
YSS				IAmb		IAmb		13 57 15.9	
	comp=Z,96nm,1.0s								
FALS	False Pass	73.81	9	P				13 57 12.9	
	baz=195								
FALS	False Pass	73.81	9	P		P		13 57 11.9	-1.2
FALS				IAmb		IAmb		13 57 15.1	
	comp=Z,49nm,0.9s								
DBJI	Dramaga	73.94	268	P		P		13 57 15.9	+1.0
	comp=Z,113nm,0.7s								
PEA0B	Petropavlovsk-	74.02	345	*ce*P		P		13 57 14.8	+0.3
PEA0B	Petropavlovsk-	74.02	345	P		P		13 57 14.7	+0.2
PETK	Petropavlovsk-	74.02	345	P		P		13 57 15.1	+0.6
	comp=Z,94nm,0.7s,baz=106,slow=9.5,SNR=124								
SDPT	Sand Point	74.75	10	P				13 57 18.1	
	baz=197								
SDPT	Sand Point	74.75	10	P		P		13 57 18.0	-0.5
SDPT				IAmb		IAmb		13 57 20.4	
	comp=Z,108nm,1.2s								
KSRS	Korea Array	75.12	318	P		P		13 57 21.8	+0.8
	comp=Z,5.2nm,0.6s,baz=127,slow=6.1,SNR=28								
KSRS				pP		pP		13 59 03.0	-3.6
	comp=Z,0.7nm,0.7s,baz=94,slow=5.1,SNR=2.8								
KS19	Wonju Array Si	75.18	318	P		P		13 57 19.7	-1.7
SPIA	Saint Paul Isl	75.35	4	P				13 57 23.0	
	baz=188								
PPBI	Pangkal Pinang	75.83	272	P		P		13 57 27.5	+1.9
	comp=Z,4µmcomp=Z,78nm,0.7s								
SCZ2	Santa Cruz Isl	76.06	47	P				13 57 26.0	
	baz=236								
CHIR	Chirikof Islan	76.12	13	P		P		13 57 25.9	-0.2
SSE	Sheshan	76.16	310	P		P		13 57 29.3	+2.3
SSE				S		S		14 06 36.6	+6.0
SSE				pmax		pmax			
	comp=Z,20nm,0.7s								
SSE				pmax		pmax			
	comp=Z,150nm,3.7s								
SBC	Santa Barbara	76.25	46	P				13 57 28.2	
	baz=236								
SCI2	San Clemente I	76.27	48	P				13 57 29.0	
	baz=237								
MCCM	Marconi Confer	76.28	42	P		P		13 57 28.9	+1.5
MCCM				IAmb		IAmb		13 57 58.0	
	comp=Z,118nm,1.4s								
KASI	Kota Agung	76.38	269	P		P		13 57 28.7	+0.1
	comp=Z,1µmcomp=Z,148nm,0.8s								
SAO	San Andreas Ge	76.39	44	P		P		13 57 27.8	-0.4
SAO				pmax		pmax			
	comp=Z,42nm,1.0s								
SAO	San Andreas Ge	76.39	44	P		P		13 57 27.8	-0.4
SAO				IAmb		IAmb		13 57 32.2	
	comp=Z,42nm,0.9s								
MSHR	Mys Shultsa	76.41	324	*i*P		P		13 57 29.4	+1.4
MSHR				pmax		pmax			
	comp=Z,56nm,0.7s								
PKM	Mcpherson Peak	76.43	46	P				13 57 30.2	
	baz=236,SNR=12								
PMPB	Monarch Peak	76.51	44	P		P		13 57 30.1	+1.3
PMPB				IAmb		IAmb		13 57 33.3	
	comp=Z,128nm,1.4s								
SMMC	Simmler	76.54	46	P				13 57 30.9	
	baz=236,SNR=6.0								
CIS	Catalina Islan	76.59	48	P				13 57 30.7	
	baz=237								
PAGB	Antelope Grade	76.60	45	P		P		13 57 30.7	+1.4
HOPS	Hopland Field	76.66	41	P		P		13 57 30.7	+1.2
GDXM	Geysers	76.73	41	P		P		13 57 31.8	+1.8
FMP	Fort Macarthur	76.84	48	P				13 57 31.8	
	baz=238								
TYV	Tymovskoe	76.91	336	*e*P		P		13 57 31.9	+1.3
TYV				pmax		pmax			
	comp=Z,113nm,1.1s								
LWLI	Liwa	76.94	269	P		P		13 57 32.3	+0.5
	comp=Z,115nm,0.9s								
KMRM	Mail Ridge	77.01	40	P		P		13 57 32.9	+1.3
KMRM				IAmb		IAmb		13 57 36.0	
	comp=Z,105nm,0.8s								
USA0B	Ussuriysk Arra	77.02	326	*i*P		P		13 57 32.6	+1.2
USA0B	Ussuriysk Arra	77.02	326	P		P		13 57 31.6	+0.2
USA0B				IAmb		IAmb		13 57 36.9	
	comp=Z,85nm,1.4s								
USRK	Ussuriysk Ar.	77.02	326	P		P		13 57 32.6	+1.3
	comp=Z,10nm,0.6s,baz=148,slow=3.3,SNR=27								
USRK	Ussuriysk Ar.	77.02	326	P		P		13 57 31.3	-0.1
OSI	Osito Audit: C	77.03	47	P				13 57 33.2	
	baz=237								
CCX	Cicese	77.04	50	P		P		13 57 33.4	+1.6
DECC	Green Verdugo	77.10	47	P				13 57 32.6	
	baz=237								
SII	Sitkinak Islan	77.11	13	P		P		13 57 32.4	+0.8
PASC	Pasadena Art C	77.16	47	P		P		13 57 32.5	0.0
ARVC	Arvin	77.23	46	P				13 57 34.0	
	baz=237								
109C	Camp Elliot, M	77.25	49	P				13 57 34.2	
	baz=238								
CBX	Cerro Bola	77.27	50	P		P		13 57 34.2	+1.0
MWC	Mount Wilson	77.28	47	P		P		13 57 34.2	+0.9
MWC				pmax		pmax			
	comp=Z,46nm,0.6s								
MWC	Mount Wilson	77.28	47	P		P		13 57 34.2	+0.9
MWC				IAmb		IAmb		13 57 38.1	
	comp=Z,46nm,0.6s								
KHMM	Horse Mountain	77.40	39	P		P		13 57 35.6	+1.9
KHMM				IAmb		IAmb		13 57 37.6	
	comp=Z,73nm,1.3s								
VES	Vestal, Richgr	77.45	46	P				13 57 35.6	
	baz=236,SNR=8.8								
BAR	Barrett	77.45	49	P		P		13 57 34.7	+0.7
SPX	San Pedro Mart	77.50	51	P		P		13 57 36.3	+1.6
VOG	Valley Oaks Go	77.51	45	P				13 57 35.1	
	baz=236								
O02D	Mt. Diablo Mer	77.55	40	P				13 57 36.5	
	baz=233,SNR=9.8								
MURC	Murrieta	77.56	48	P				13 57 36.2	
	baz=238,SNR=9.4								
EDW2	Edwards Air Fo	77.68	47	P				13 57 36.8	
	baz=237,SNR=31								
KRMB	Red Mountain	77.69	39	P		P		13 57 36.8	+1.5
MONP2	Monument Peak	77.74	49	P				13 57 37.7	
	baz=239,SNR=42								
ISA	Isabella, Lake	77.77	46	P				13 57 37.4	
	baz=237,SNR=36								
ISA	Isabella, Lake	77.77	46	P		P		13 57 37.0	+1.2
ISA				pmax		pmax			
	comp=Z,59nm,1.2s								
ISA	Isabella, Lake	77.77	46	P		P		13 57 37.0	+1.2
ISA				IAmb		IAmb		13 57 39.3	
	comp=Z,59nm,1.2s								
CMB	Columbia Colle	77.81	43	P		P		13 57 36.9	+1.0
CMB				pmax		pmax			
	comp=Z,34nm,1.0s								
CMB	Columbia Colle	77.81	43	P		P		13 57 36.9	+1.0
RMX	La Rumorosa	77.84	50	P		P		13 57 37.7	+1.4
RMX				IAmb		IAmb		13 57 41.9	
	comp=Z,56nm,0.8s								
IKP	In-Ko-Pah, Jac	77.84	50	P				13 57 38.4	
	baz=239,SNR=16								
OHAK	Old Harbor	77.92	13	P		P		13 57 36.5	+0.6
OHAK				IAmb		IAmb		13 57 39.0	
	comp=Z,91nm,1.3s								
WDC	Whiskeytown Da	77.94	40	P		P		13 57 37.0	+0.5
WDC				pmax		pmax			
	comp=Z,65nm,1.4s								
WDC	Whiskeytown Da	77.94	40	P		P		13 57 37.0	+0.5
WDC				IAmb		IAmb		13 57 40.0	
	comp=Z,65nm,1.4s								
SFX	San Felipe	77.96	52	P		P		13 57 37.4	+0.6
AFDM	Forest Hills D	77.96	42	P		P		13 57 37.0	+0.3
ORV	Oroville	77.98	41	P		P		13 57 37.1	+0.4
ORV				pmax		pmax			
	comp=Z,35nm,1.2s								
ORV	Oroville	77.98	41	P		P		13 57 37.1	+0.4
N02D	Trinity Center	78.08	40	P				13 57 39.4	
	baz=233,SNR=13								
PFO	Pinyon Flats O	78.09	49	P				13 57 39.2	
	baz=239,SNR=12								
PFO	Pinyon Flats O	78.09	49	P		P		13 57 39.0	+1.4
	comp=Z,17nm,1.1s,baz=272,slow=3.1,SNR=15								
PFO	Pinyon Flats O	78.09	49	P		P		13 57 39.0	+1.4
PFO	Pinyon Flats O	78.09	49	P		P		13 57 38.4	+0.8
BBRC	Big Bear Solar	78.10	48	P				13 57 39.8	
	baz=238								
LRMC	Laurel Mtn Rad	78.21	46	P				13 57 39.7	
	baz=238,SNR=14								
SWSC	Sam W. Stewart	78.22	49	P				13 57 39.8	
	baz=239,SNR=7.8								
O03E	Paynes Creek	78.22	41	P				13 57 39.4	
	baz=234,SNR=13								
M02C	Callahan	78.24	39	P				13 57 40.1	
	baz=233,SNR=15								
L02E	Cave Junction	78.26	38	P				13 57 40.8	
	baz=232								
NJ2	Nanjing	78.36	309	*e*P		P		13 57 40.0	+1.1
NJ2				pP		pP		13 59 29.6	+3.8
NJ2				S		S		14 06 57.6	+3.8
NJ2				pmax		pmax			
	comp=Z,18nm,0.5s								
NJ2				pmax		pmax			
	comp=Z,170nm,3.5s								
RRX	Edison Barstow	78.37	47	P				13 57 41.3	
	baz=238								
CWC	Cottonwood Cre	78.46	45	P				13 57 40.7	
	baz=237								
YBH	Yreka Blue Hor	78.53	39	P		P		13 57 40.6	+0.8
YBH				pmax		pmax			
	comp=Z,37nm,1.0s								
YBH	Yreka Blue Hor	78.53	39	P		P		13 57 40.5	+0.8
RUBR	Rubicon Trail	78.54	42	P		P		13 57 39.2	-0.9
K02D	Willamette Mer	78.55	38	P				13 57 41.4	
	baz=232,SNR=5.7								
KDAK	Kodiak Island	78.58	14	P				13 57 40.3	
	baz=205								
KDAK	Kodiak Island	78.59	14	P		P		13 57 40.3	+0.8
	comp=Z,38nm,0.7s,baz=166,slow=2.1,SNR=39								
KDAK	Kodiak Island	78.59	14	*i*P		P		13 57 40.9	+1.4
KDAK				pmax		pmax			
	comp=Z,134nm,1.0s								
KDAK	Kodiak Island	78.59	14	P		P		13 57 40.1	+0.6
KDAK				IAmb		IAmb		13 57 42.2	
	comp=Z,62nm,0.9s								
MDJ	Mudanjiang	78.59	325	P		P		13 57 41.8	+1.9
MDJ				S		S		14 06 59.8	+4.0
MDJ				ScS		ScS		14 07 16.0	+0.9
MDJ				pmax		pmax			
	comp=Z,83nm,1.7s								
MDJ				pmax		pmax			
	comp=Z,360nm,4.7s								
MDJ	Mudanjiang	78.59	325	P		P		13 57 39.5	-0.4
MDJ				IAmb		IAmb		13 57 44.5	
	comp=Z,85nm,1.0s								
BELC	Belle Mtn. Jos	78.62	48	P				13 57 42.1	
	baz=239,SNR=26								
J01E	Myrtle Point	78.68	37	P				13 57 42.0	
	baz=232								
TIN	Tinemaha, Big	78.69	45	P				13 57 42.4	
	baz=237,SNR=7.8								
WAKR	Walker	78.69	43	P		P		13 57 42.1	+1.2
WAKR				IAmb		IAmb		13 57 44.5	
	comp=Z,47nm,1.0s								
HEC	Hector,Ludlow	78.81	48	P				13 57 42.4	
	baz=238,SNR=22								
BC3	Big Chuckawall	78.83	49	P				13 57 43.5	
	baz=239,SNR=12								
BEKR	Beckworth	78.88	42	P		P		13 57 42.8	+1.1
BEKR				IAmb		IAmb		13 57 46.7	
	comp=Z,98nm,1.5s								
HUMO	Hull Mountain	78.91	38	P		P		13 57 43.0	+1.3
PNTR	Pine Nut	78.92	43	P		P		13 57 43.0	+0.9
PNTR				IAmb		IAmb		13 57 46.1	
	comp=Z,68nm,0.8s								
GLA	Glamis	78.98	50	P				13 57 44.6	
	baz=240,SNR=10								
GLA	Glamis	78.98	50	P		P		13 57 43.5	+1.2
GLA				pmax		pmax			
	comp=Z,70nm,1.2s								
GLA	Glamis	78.98	50	P		P		13 57 43.5	+1.2
GLA				IAmb		IAmb		13 57 46.9	
	comp=Z,70nm,1.1s								
VCNR	Virginia City	79.00	42	P		P		13 57 42.9	+0.5
L04D	Klamath Falls	79.06	39

comp=Z,286nm,14.0s
NV11 Mina Array Sit 79.49 44 P **P** 13 57 46.2 +1.1
113A Mohawk Valley, 79.61 51 P **P** 13 57 47.1 +1.5
K04D Chiloquin, OR 79.63 39 P 13 57 47.1
baz=234,SNR=6.8
J04D Umpqua Nationa 79.79 38 P 13 57 48.0
baz=233,SNR=38
KVN Kaiserville 79.87 43 P **P** 13 57 47.3 +0.3
KVN pmax pmax
comp=Z,32nm,0.9s
KVN Kaiserville 79.87 43 P **P** 13 57 47.3 +0.3
TPH Tonopah 79.92 44 P **P** 13 57 47.5 +0.2
TPH pmax pmax
comp=Z,151nm,1.1s
TPH Tonopah 79.92 44 P **P** 13 57 47.5 +0.2
TPH IAmb IAmb 13 57 50.7
comp=Z,152nm,1.1s
214A Organ Pipe Nat 79.92 52 P 13 57 49.4
baz=241,SNR=11
214A Organ Pipe Nat 79.92 52 P **P** 13 57 48.5 +1.2
I04A Tendick Farm, 79.95 37 P 13 57 48.3
baz=233,SNR=8.4
HSIG 79.97 55 P **P** 13 57 47.6 +0.1
TPNV Topopah Spring 79.97 46 P **P** 13 57 48.0 +0.4
TPNV pmax pmax
comp=Z,20nm,0.8s
TPNV Topopah Spring 79.97 46 P **P** 13 57 48.0 +0.4
TPNV Topopah Spring 79.97 46 P 13 57 48.9
baz=238,SNR=31
DL2 Dalian 80.01 317 P **P** 13 57 50.6 +3.1
DL2 pP **pP** 13 59 39.1 +4.2
DL2 sP **sP** 14 00 27.4 +1.6
DL2 S **S** 14 07 15.8 +5.2
DL2 pmax pmax
comp=Z,66nm,1.3s
MOD Modoc Plateau 80.08 40 P **P** 13 57 48.7 +0.6
MOD IAmb IAmb 13 57 51.4
comp=Z,39nm,0.8s
PDMCI Parker Dam,Lak 80.10 49 P 13 57 49.7
baz=240,SNR=8.9
H04D Lebanon 80.20 37 P 13 57 49.7
baz=232,SNR=7.7
K05A Summer Lake 80.20 39 P **P** 13 57 50.0 +1.3
K05A IAmb IAmb 13 57 52.4
comp=Z,77nm,1.0s
G03D McMinnville, O 80.33 36 P 13 57 50.2
baz=232,SNR=5.7
J05D Fort Rock, OR 80.33 38 P 13 57 50.9
baz=234,SNR=77
CN2 Changchun 80.43 322 *e*P **P** 13 57 51.3 +1.7
CN2 pP pP 13 59 39.5 +2.4
CN2 *e*S **S** 14 07 18.8 +4.0
CN2 pmax pmax
comp=Z,80nm,1.5s
CNPM China Poot 80.47 13 P **P** 13 57 49.7 +0.2
CNPM IAmb IAmb 13 57 52.6
comp=Z,76nm,1.1s
SHPR Sheep Range 80.49 47 P **P** 13 57 51.5 +1.2
SHPR pP **pwP** 13 59 39.5 -1.0
KLR Kul'dur 80.51 329 P **P** 13 57 51.0 +1.1
comp=Z,9.0nm,0.9s,baz=97,slow=3.7,SNR=20
KLR Kul'dur 80.51 329*ce*P **P** 13 57 50.9 +1.0
KLR pmax pmax
comp=Z,41nm,1.4s
H04A Detroit Lake 80.61 37 P **P** 13 57 51.2 +0.6
H04A IAmb IAmb 13 57 53.5
comp=Z,40nm,0.9s
BRLK Bradley Lake 80.76 14 P **P** 13 57 51.3 +0.2
BRLK IAmb IAmb 13 57 53.9
comp=Z,104nm,1.2s
BRSE Bradley Lake S 80.77 14 P 13 57 51.7
baz=206
PINE Pine Mountain 80.80 38 P **P** 13 57 53.2 +1.4
PINE IAmb IAmb 13 57 55.5
comp=Z,75nm,1.0s
I05D Terrebonne, OR 80.89 37 P 13 57 53.5
baz=234,SNR=14
E03A Lebam 80.99 35 P **P** 13 57 53.3 +0.8
E03A IAmb IAmb 13 57 55.8
comp=Z,54nm,0.9s
RSO Redoubt South 81.00 12 P **P** 13 57 52.1 -0.3
F04D Rainier, OR 81.00 35 P 13 57 54.1
baz=232
WHN Wuhan 81.03 306 ⇓P **P** 13 57 56.3 +3.3
WHN pP **pP** 13 59 42.5 +1.6
WHN S **S** 14 07 23.4 +2.0
WHN pmax pmax
comp=Z,200nm,1.9s
PRN Pahroc Range 81.03 46 P **P** 13 57 54.1 +1.0
PRN IAmb IAmb 13 57 58.6
comp=Z,41nm,0.9s
SVW2 Sparrevohn 81.04 11 P **P** 13 57 52.4 0.0
R11A Troy Canyon, C 81.15 45 P 13 57 54.8
baz=238,SNR=32
R11A Troy Canyon, C 81.15 45 P **P** 13 57 54.5 +0.7
NLWA Neilton Lookou 81.35 34 P **P** 13 57 55.8 +1.4
NLWA IAmb IAmb 13 57 57.8
comp=Z,40nm,1.0s
WVOR Wild Horse Val 81.40 40 P **P** 13 57 56.1 +1.2
WVOR pmax pmax
comp=Z,58nm,1.1s
WVOR Wild Horse Val 81.40 40 P **P** 13 57 56.1 +1.2
WVOR IAmb IAmb 13 57 58.3
comp=Z,58nm,1.1s
G05D Wamic, OR 81.44 37 P 13 57 56.2
baz=234,SNR=9.4
E04D Cinebar 81.54 35 P 13 57 56.8
baz=232,SNR=12
MA2 Magadan 81.54 345 P **P** 13 57 55.1 +0.1
comp=Z,55nm,0.8s,baz=148,slow=5.9,SNR=33
MA2 Magadan 81.54 345*ce*P **P** 13 57 53.9 -1.1
MA2 pmax pmax
comp=Z,48nm,0.8s
MA2 Magadan 81.54 345 P **P** 13 57 54.8 -0.2
MA2 IAmb IAmb 13 57 56.0
comp=Z,69nm,0.9s
TUC Tucson 81.61 52 P **P** 13 57 57.9 +1.8
TUC pmax pmax
comp=Z,55nm,1.2s
TUC Tucson 81.61 52 P **P** 13 57 57.9 +1.8
TUC IAmb IAmb 13 58 00.4
comp=Z,55nm,1.1s
TUC Tucson 81.61 52 P 13 57 58.3
baz=242
O22K Cooper Landing 81.67 14 P **P** 13 57 56.6 +1.0
O22K IAmb IAmb 13 58 10.6
comp=Z,59nm,0.8s
F05D White Salmon 81.74 36 P 13 57 57.9
baz=233,SNR=11
SPCR Spurr Chakacha 81.78 12 P 13 57 55.5
baz=205,SNR=9.4
D04E Lakebay 81.81 35 P 13 57 59.3
baz=232
I07A Izee 81.81 38 P **P** 13 57 58.0 +1.1
I07A IAmb IAmb 13 58 02.0
comp=Z,54nm,0.8s
GAMB Gambell 81.84 3 P 13 57 57.5
baz=186,SNR=27
GAMB Gambell 81.84 3 P **P** 13 57 57.2 +0.8
GAMB IAmb IAmb 13 58 00.5
comp=Z,37nm,0.7s
D03D Eldon 81.86 34 P 13 57 58.3
baz=232,SNR=18
J08A Circle Bar Ran 82.02 39 P **P** 13 57 59.0 +0.9
J08A IAmb IAmb 13 58 01.4
comp=Z,46nm,0.9s
LON Longmire 82.07 35 P **P** 13 57 58.1 0.0
LON pmax pmax
comp=Z,15nm,1.0s
LON Longmire 82.07 35 P **P** 13 57 58.1 0.0
LCMT Little Creek M 82.08 47 P **P** 13 57 59.5 +1.0
X16A Lo Mia Camp, P 82.11 50 P **P** 13 58 00.3 +1.5
X16A IAmb IAmb 13 58 02.8
comp=Z,46nm,1.2s
RC01 Rabbit Creek A 82.20 13 P 13 57 58.4
baz=207,SNR=5.7
RC01 Rabbit Creek A 82.20 13 P **P** 13 57 58.4 +0.1
RC01 IAmb IAmb 13 58 01.2
comp=Z,55nm,1.1s
CCUT Cedar City 82.26 46 P **P** 13 58 01.0 +1.5
PWL Port Wells 82.32 14 P **P** 13 57 59.1 +0.1
PWL IAmb IAmb 13 58 01.6
comp=Z,82nm,1.2s
SUA Susitna One 82.32 13 P 13 57 59.2
baz=206,SNR=14
SUA Susitna One 82.32 13 P **P** 13 57 59.0 -0.1
SUA IAmb IAmb 13 58 02.9
comp=Z,42nm,0.8s
319A Douglas 82.32 54 P **P** 13 58 01.4 +1.6
319A IAmb IAmb 13 58 05.9
comp=Z,63nm,0.9s
SPR3 Spring Creek 3 82.33 45 P **P** 13 57 60.0 0.0
PGC Sidney 82.36 33 P **P** 13 58 00.3 +0.9
PGC IAmb IAmb 13 58 04.0
comp=Z,57nm,1.1s
KNB Kanab 82.37 47 P **P** 13 58 00.0 -0.1
KNB pmax pmax
comp=Z,47nm,0.9s
KNB Kanab 82.37 47 P **P** 13 57 60.0 -0.1
KNB IAmb IAmb 13 58 05.4
comp=Z,47nm,0.9s
PSUT Pine Spring 82.42 45 P **P** 13 58 01.2 +0.9
SZCU Shurtz Canyon 82.47 47 P **P** 13 58 01.9 +1.3
F07A Phinny Hill Vi 82.61 37 P **P** 13 58 01.9 +1.1
F07A IAmb IAmb 13 58 05.5
comp=Z,33nm,0.7s
SKT Skwentna 82.63 12 P 13 58 00.2
baz=205,SNR=13
SKT Skwentna 82.63 12 P **P** 13 57 59.8 -0.7
CRAG Craig 82.63 24 P 13 58 02.3
baz=223
GLI Glacier Island 82.63 15 P 13 58 00.2
baz=210,SNR=7.7
GLI Glacier Island 82.63 15 P **P** 13 58 00.4 -0.1
GLI IAmb IAmb 13 58 03.0
comp=Z,140nm,1.3s
ELK Elko 82.63 43 P **P** 13 58 02.2 +0.8
ELK pmax pmax
comp=Z,27nm,1.0s
ELK Elko 82.63 43 P **P** 13 58 02.2 +0.8
WUAZ Wupatki 82.67 49 P 13 58 02.9
baz=242,SNR=20
WUAZ Wupatki 82.67 49 P **P** 13 58 02.1 +0.5
WUAZ IAmb IAmb 13 58 06.0
comp=Z,45nm,1.1s
IPM Ipoh 82.78 277 P **P** 13 58 02.1 -0.3
IPM IAmb IAmb 13 58 05.1
comp=Z,43nm,0.7s
KNK Knik Glacier 82.78 14 P 13 58 01.8
baz=208
KNK Knik Glacier 82.78 14 P **P** 13 58 01.7 +0.4
KNK IAmb IAmb 13 58 05.5
comp=Z,53nm,1.3s
PMR Palmer 82.79 13 P 13 58 01.2
baz=208,SNR=17
PMR Palmer 82.79 13 P **P** 13 58 01.2 -0.1
PMR pmax pmax
comp=Z,71nm,1.2s
PMR Palmer 82.79 13 P **P** 13 58 01.2 -0.1
PMR IAmb IAmb 13 58 03.4
comp=Z,71nm,1.2s
A04D Lummi Island 82.79 33 P 13 58 02.9
baz=232
RAGM Ragged Mountai 82.81 16 P **P** 13 58 02.1 +0.6
RAGM IAmb IAmb 13 58 03.9
comp=Z,63nm,1.2s
G08A Pilot Rock 82.82 38 P **P** 13 58 02.5 +0.5
G08A IAmb IAmb 13 58 05.3
comp=Z,42nm,0.9s
B05A Bryant 82.83 34 P 13 58 03.2
baz=233,SNR=14
MNSI Mandailing Nat 82.98 273 P **P** 13 58 04.6 +1.2
comp=Z,29nm,0.8s
GHO Glory Hole Cre 82.99 13 P **P** 13 58 02.6 +0.2
GHO IAmb IAmb 13 58 05.1
comp=Z,113nm,1.2s
LTY Liberty 83.00 35 P **P** 13 58 03.1 +0.3
E07A Sunnyside 83.04 36 P **P** 13 58 03.3 +0.3
E07A IAmb IAmb 13 58 07.8
comp=Z,42nm,0.7s
ANM Nome 83.06 5 P 13 58 04.0
baz=192
ANM Nome 83.06 5 P **P** 13 58 03.1 +0.5
ANM pmax pmax
comp=Z,28nm,1.2s
ANM Nome 83.06 5 P **P** 13 58 03.1 +0.5
HAWA Hanford 83.13 36 P **P** 13 58 04.2 +0.8
HAWA IAmb IAmb 13 58 08.2
comp=Z,48nm,0.8s
SML Sawmill 83.16 14 P 13 58 03.6
baz=208,SNR=6.1
CUT Chulitna 83.27 13 P 13 58 03.7
baz=207,SNR=23
CUT Chulitna 83.27 13 P **P** 13 58 03.4 -0.3
A05A Maple Falls 83.28 33 P **P** 13 58 04.8 +0.7
HPIG 83.29 59 P **P** 13 58 06.1 +1.2
HPIG IAmb IAmb 13 58 10.2
comp=Z,23nm,0.6s
B06A Marblemount 83.31 34 P **P** 13 58 04.9 +0.7
MTPU Mount Pierson 83.31 47 P **P** 13 58 06.7 +1.7
MTPU IAmb IAmb 13 58 10.8
comp=Z,49nm,1.0s
BMRM Bremner River 83.33 16 P 13 58 04.5
baz=212,SNR=14
BMRM Bremner River 83.33 16 P **P** 13 58 04.0 -0.1
BMRM IAmb IAmb 13 58 07.2
comp=Z,122nm,1.3s
PPLA Purkeypile 83.33 12 P 13 58 04.4
baz=205
PPLA Purkeypile 83.33 12 P **P** 13 58 03.5 -0.7
SCM Sheep Creek Mo 83.41 14 P **P** 13 58 04.9 +0.4
SCM pmax pmax
comp=Z,61nm,0.5s
SCM Sheep Creek Mo 83.41 14 P **P** 13 58 04.9 +0.4
KLU Klutina 83.45 15 P 13 58 05.0
baz=211,SNR=9.2
KLU Klutina 83.45 15 P **P** 13 58 04.8 +0.1
KLU IAmb IAmb 13 58 07.7
comp=Z,50nm,1.3s
MSU Marysvale 83.55 46 P **P** 13 58 06.8 +0.8
MSU Marysvale 83.55 46 P **P** 13 58 06.8 +0.8
BMO Blue Mountains 83.55 39 P **P** 13 58 06.0 +0.3
BMO pmax pmax
comp=Z,20nm,1.0s
BMO Blue Mountains 83.55 39 P **P** 13 58 06.0 +0.3
YAH Yahtse 83.59 17 P **P** 13 58 06.5 +0.8
WRAK Wrangell Islan 83.62 24 P 13 58 07.5
baz=223
WRAK Wrangell Islan 83.62 24 P **P** 13 58 06.6 +1.0
MFID Camas Ranch 83.67 40 P **P** 13 58 07.0 +0.7
MFID IAmb IAmb 13 58 09.6
comp=Z,42nm,1.1s
W18A Petrified Fore 83.67 50 P 13 58 09.0
baz=243
MAW Mawson 83.72 200 P **P** 13 58 06.1 0.0
comp=Z,22nm,0.6s,baz=131,slow=5.7,SNR=55
MAW Mawson 83.72 200 P **P** 13 58 06.0 0.0
baz=84,SNR=35
MAW Mawson 83.72 200 P **P** 13 58 05.4 -0.6
PINM Pinnacle 83.80 18 P 13 58 06.8
baz=216
TABL Table Mountain 83.83 17 P **P** 13 58 07.3 +0.5
TNA Tin City 83.83 4 P 13 58 07.2
baz=190,SNR=14
TNA Tin City 83.84 4 P **P** 13 58 07.1 +0.7
TNA IAmb IAmb 13 58 09.3
comp=Z,149nm,1.5s
TNA **pwP** 13 59 56.9 -0.1
VRDI Verde Repeater 83.85 16 P **P** 13 58 07.0 +0.2
VRDI IAmb IAmb 13 58 09.9
comp=Z,86nm,1.3s
D08A Wollman Farm, 83.85 36 P **P** 13 58 07.6 +0.7
D08A IAmb IAmb 13 58 11.8
comp=Z,48nm,1.0s
N25K Chitina, Valde 83.87 15 P 13 58 07.5
baz=212,SNR=19
M24K Tolsona, Glenn 83.92 14 P 13 58 08.2
baz=210,SNR=14
M24K Tolsona, Glenn 83.92 14 P **P** 13 58 07.9 +0.8
GLB Gilahina Butte 83.94 16 P **P** 13 58 07.3 +0.2
GLB IAmb IAmb 13 58 10.2
comp=Z,104nm,1.3s
DUG Dugway, Tooele 83.94 44 P 13 58 09.8
baz=240,SNR=7.2
DUG Dugway, Tooele 83.94 44 P **P** 13 58 08.6 +0.8
DUG pmax pmax
comp=Z,20nm,1.3s
DUG Dugway, Tooele 83.94 44 P **P** 13 58 08.6 +0.8
WAT6 Susitna Watana 83.97 14 P 13 58 07.6
baz=209,SNR=46
121A Cookes Peak, D 83.97 53 P 13 58 10.2
baz=244,SNR=17
121A Cookes Peak, D 83.97 53 P **P** 13 58 08.5 +0.3
121A **pP** 13 59 57.7 +1.6
E09A Wood Farm, Sta 83.98 37 P **P** 13 58 07.7 +0.1
MCARA McCarthy VSAT 84.09 16 P 13 58 08.3
baz=213
MCARA McCarthy VSAT 84.09 16 P **P** 13 58 08.4 +0.6
MCARA IAmb IAmb 13 58 11.0
comp=Z,83nm,1.3s
SEY Seymchan 84.11 347 P **P** 13 58 08.4 +0.5
comp=Z,103nm,0.7s,baz=143,slow=7.2,SNR=19
WAT2 Susitna Watana 84.12 13 P 13 58 08.3
baz=208
BGU Big Grassy Mou 84.16 44 P **P** 13 58 08.3 -0.6
KTH Kantishna Hill 84.17 12 P **P** 13 58 07.3 -1.0
KTH IAmb IAmb 13 58 11.3
comp=Z,60nm,1.0s
LOGN Logan Glacier 84.18 17 P **P** 13 58 08.1 -0.3
LOGN IAmb IAmb 13 58 11.6
comp=Z,81nm,1.2s
BARN Barnard Glacie 84.19 17 P **P** 13 58 08.4 -0.2
BJT Baijiatuau 84.20 315 P **P** 13 58 08.4 -0.5
BJT pmax pmax
comp=Z,19nm,0.9s
BJT Baijiatuau 84.20 315 P **P** 13 58 08.4 -0.5
CTG Chitna Glacier 84.20 17 P 13 58 09.2
baz=215
CTGM Chitina Glacie 84.20 17 P **P** 13 58 08.8 +0.2
CTGM IAmb IAmb 13 58 11.8
comp=Z,70nm,1.2s
TRF Thorofare Moun 84.20 12 P 13 58 08.3
baz=206,SNR=58
TRF Thorofare Moun 84.20 12 P **P** 13 58 08.1 -0.4
TRF IAmb IAmb 13 58 11.4
comp=Z,81nm,0.8s
BJI Beijing 84.20 315 P **P** 13 58 10.8 +1.9
BJI SKS **S** 14 07 44.5 -8.1
BJI S **SKKSac** 14 07 54.6 +2.9
BJI pmax pmax
comp=Z,27nm,1.6s
CHUM Lake Minchumin 84.21 11 P 13 58 08.0
baz=205,SNR=22
F10A Beach Ranch, E 84.21 38 P **P** 13 58 08.9 0.0
F10A IAmb IAmb 13 58 13.3
comp=Z,65nm,1.0s
NLU North Lily Min 84.32 45 P **P** 13 58 09.7 -0.1
BESE Bessie Mountai 84.33 21 P **P** 13 58 10.0 +0.9
BESE IAmb IAmb 13 58 12.2
comp=Z,72nm,1.3s
B08A Colville Reser 84.37 35 P **P** 13 58 09.8 +0.3
B08A IAmb IAmb 13 58 13.5
comp=Z,34nm,0.8s
RND Reindeer 84.46 13 P **P** 13 58 09.6 -0.1
RND pmax pmax
comp=Z,173nm,1.1s
RND Reindeer 84.46 13 P **P** 13 58 09.6 -0.1
HLID Hailey 84.62 41 P **P** 13 58 12.2 +1.1
HLID IAmb IAmb 13 58 16.2
comp=Z,26nm,0.8s
HLID Hailey 84.62 41 P 13 58 12.8
baz=239,SNR=52
C09A Chrisman Ranch 84.64 36 P **P** 13 58 10.9 +0.1
C09A IAmb IAmb 13 58 13.7
comp=Z,30nm,0.9s
MPU Maple Canyon 84.64 45 P **P** 13 58 11.5 +0.2
BPAW Bear Paw Mtn. 84.65 12 P 13 58 09.8
baz=206,SNR=18
BPAW Bear Paw Mtn. 84.65 12 P **P** 13 58 09.6 -1.0
BPAW IAmb IAmb 13 58 13.4
comp=Z,52nm,1.4s
ENH Enshi 84.69 304 P **P** 13 58 10.1 -1.4
ENH IAmb IAmb 13 58 16.3
comp=Z,54nm,1.0s
MCK McKinley 84.73 13 P 13 58 10.9
baz=208,SNR=43
MCK McKinley 84.73 13 P **P** 13 58 10.8 -0.2
MCK pmax pmax
comp=Z,70nm,1.0s
MCK McKinley 84.73 13 P **P** 13 58 10.8 -0.2
MCK IAmb IAmb 13 58 13.5
comp=Z,70nm,1.0s
SPUT South Promonto 84.73 44 P **P** 13 58 11.2 -0.5
HVU Hansel Valley 84.76 43 P **P** 13 58 12.3 +0.5
HVU pmax pmax
comp=Z,23nm,1.1s
HVU Hansel Valley 84.76 43 P **P** 13 58 12.2 +0.5
PAX Paxson 84.83 14 P 13 58 11.4
baz=211,SNR=16
PAX Paxson 84.83 14 P **P** 13 58 10.5 -1.0
PAX pmax pmax
comp=Z,65nm,1.5s
PAX Paxson 84.83 14 P **P** 13 58 10.5 -1.0
PAX IAmb IAmb 13 58 13.3
comp=Z,65nm,1.5s
SKAG Skagway 84.84 20 P 13 58 13.0
baz=220,SNR=6.7
SKAG Skagway 84.84 20 P **P** 13 58 11.7 +0.2
SKAG IAmb IAmb 13 58 15.8
comp=Z,46nm,1.2s
P17A Butcher Ranch, 84.99 46 P **P** 13 58 12.6 -0.4
BWN Browne 85.02 12 P **P** 13 58 12.1 -0.2
GSI Gunungsitoli 85.04 273 P **P** 13 58 11.7 -1.9
GSI IAmb IAmb 13 58 16.9
comp=Z,63nm,0.9s
JLU Jordanelle 85.05 45 P **P** 13 58 12.5 -0.9
MG05 Puerto Natales 85.19 143 P **P** 13 58 12.3 -1.3
HYT Haines Junctio 85.21 19 P **P** 13 58 13.2 -0.3
HYT IAmb IAmb 13 58 17.1
comp=Z,48nm,1.3s
MENT Mentasta 85.22 15 P **P** 13 58 13.5 +0.1
MENT IAmb IAmb 13 58 16.6
comp=Z,32nm,1.0s
LENM Lemitar 85.29 52 P **P** 13 58 14.9 +0.3
TCUT Toone Canyon 85.33 44 P **P** 13 58 15.5 +0.8
TCUT IAmb IAmb 13 58 19.6
comp=Z,51nm,0.8s
GYA Guiyang 85.45 300 *e*P **P** 13 58 16.4 +0.9
GYA pP pwP 14 00 09.1 +2.5
GYA S **S** 14 07 58.6 -6.9
GYA pmax pmax
comp=Z,35nm,3.5s
HWUT Hardware Ranch 85.46 44 P **P** 13 58 15.8 +0.6
MNTX Cornudas Mount 85.47 55 P 13 58 17.0
baz=246
MNTX Cornudas Mount 85.47 55 P **P** 13 58 15.0 -0.3
MNTX IAmb IAmb 13 58 20.6
comp=Z,45nm,1.3s
NEA2 Nenana 85.47 12 P 13 58 13.9
baz=208,SNR=10
NEA2 Nenana 85.47 12 P **P** 13 58 13.8 -0.8
PV05 Paradox Valley 85.48 48 P **P** 13 58 16.2 +0.8
MVCO Mesa Verde 85.51 49 P 13 58 17.6
baz=243
NEW Newport 85.54 36 P 13 58 16.2
baz=236,SNR=17
NEW Newport 85.54 36 P **P** 13 58 15.3 0.0
NEW pmax pmax
comp=Z,17nm,0.9s
NEW Newport 85.54 36 P **P** 13 58 15.3 0.0
MLY Manley 85.54 11 P 13 58 14.5
baz=206,SNR=30
MLY Manley 85.54 11 P **P** 13 58 14.2 -0.7
MLY IAmb IAmb 13 58 16.9
comp=Z,61nm,1.4s
BNM Barren Site 85.54 52 P **P** 13 58 16.3 +0.4
WRH Wood River Hil 85.56 13 P **P** 13 58 14.9 0.0
ZEA Zeya 85.58 331⇑ *e*P **P** 13 58 17.2 +1.9
ZEA *e* 14 00 05.2
ZEA pmax pmax
comp=N,100nm,2.4s
ZEA pmax pmax
comp=Z,200nm,2.0s
ZEA pmax pmax
comp=N,40nm,0.9s
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=Z,70nm,0.9s
BCYI Bear Canyon 85.63 41 P **P** 13 58 16.8 +0.7
PV10 Paradox Valley 85.66 47 P **P** 13 58 16.0 -0.3
PV10 IAmb IAmb 13 58 20.5
comp=Z,22nm,0.7s
PV14 Lion Creek, Pa 85.67 47 P **P** 13 58 16.7 +0.3
PV19 Morning Glory 85.67 47 P **P** 13 58 17.1 +0.7

PV17 East Way Mesa 85.67 48 P **P** 13 58 16.6 +0.2
PV20 West Nyswonger 85.69 47 P **P** 13 58 16.5 0.0
PV13 Radium Mtn., P 85.71 48 P **P** 13 58 16.2 -0.4
PV16 Nyswonger Mesa 85.71 47 P **P** 13 58 16.1 -0.5
PV16 IAmb IAmb 13 58 20.3
comp=Z,34nm,1.5s
DOT Dot Lake 85.74 14 P **P** 13 58 15.9 0.0
DOT IAmb IAmb 13 58 18.7
comp=Z,50nm,1.1s
HDA Harding Lake 85.75 13 P 13 58 15.9
baz=210,SNR=29
HDA P 13 58 15.9
baz=210,SNR=29
CCB Clear Creek Bu 85.78 13 P **P** 13 58 15.3 -0.7
CCB IAmb IAmb 13 58 18.2
comp=Z,70nm,1.0s
PV02 Paradox Valley 85.79 48 P **P** 13 58 16.5 -0.5
PV12 Saucer Basin, 85.80 48 P **P** 13 58 17.0 0.0
PV12 IAmb IAmb 13 58 22.7
comp=Z,18nm,0.7s
L27K Beaver Creek, 85.80 16 P 13 58 16.8
baz=214,SNR=14
L27K Beaver Creek, 85.80 16 P **P** 13 58 16.5 +0.3
TXAR Lajitas Array 85.86 57 P **P** 13 58 20.0 +2.6
comp=Z,34nm,0.7s,baz=220,slow=5.7,SNR=102
TXAR pP **pP** 14 00 04.0 -1.9
comp=Z,1.4nm,0.8s,baz=233,slow=5.5,SNR=1.5
TXAR PKKPbc **PKKPbc** 14 16 15.8 +0.1
comp=Z,0.4nm,0.5s,baz=129,slow=2.2,SNR=8.5
TXAR Lajitas Array 85.86 57 P **P** 13 58 20.0 +2.6
TXAR Lajitas Array 85.86 57 P **P** 13 58 18.2 +0.8
PV01 Paradox Valley 85.88 48 P **P** 13 58 18.0 +0.6
WHY Whitehorse 85.90 20 P **P** 13 58 17.2 +0.4
PV22 Blue Mesa, Par 85.91 47 P **P** 13 58 18.5 +1.0
I23K Minto, Yukon-K 85.91 12 P 13 58 16.5
baz=207,SNR=22
I23K Minto, Yukon-K 85.91 12 P **P** 13 58 16.6 +0.1
I23K IAmb IAmb 13 58 19.0
comp=Z,37nm,1.1s
DLBC Dease Lake 85.95 23 P **P** 13 58 16.4 -0.7
DLBC IAmb IAmb 13 58 21.0
comp=Z,24nm,1.0s
PV07 Paradox Valley 85.96 47 P **P** 13 58 18.2 +0.5
TCOL CIGO, UAF Yank 85.96 12 P 13 58 16.7
baz=209,SNR=15
TCOL CIGO, UAF Yank 85.96 12 P **P** 13 58 16.3 -0.6
TCOL IAmb IAmb 13 58 18.4
comp=Z,80nm,1.1s
MDM Murphy Dome 85.96 12 P **P** 13 58 16.1 -0.8
MDM IAmb IAmb 13 58 19.1
comp=Z,95nm,1.2s
COLA College 85.97 12 P 13 58 16.6
baz=209
COLA College 85.97 12*d i* P **P** 13 58 16.2 -0.6
COLA pmax pmax
comp=Z,91nm,1.2s
COLA College 85.97 12 P **P** 13 58 16.0 -0.8
COLA IAmb IAmb 13 58 18.4
comp=Z,79nm,1.1s
ANMO Albuquerque 86.01 51 P 13 58 18.7
baz=245
ANMO Albuquerque 86.01 51*ce* P **P** 13 58 19.1 +1.0
ANMO pmax pmax
comp=Z,12nm,1.2s
ANMO Albuquerque 86.01 51 P **P** 13 58 18.0 -0.1
SCRK Sand Creek 86.04 14 P 13 58 17.9
baz=212,SNR=21
SCRK Sand Creek 86.04 14 P **P** 13 58 17.7 +0.3
SCRK IAmb IAmb 13 58 21.8
comp=Z,54nm,1.5s
IL31 86.08 13 P **P** 13 58 17.0 -0.4
IL31 IAmb IAmb 13 58 19.7
comp=Z,106nm,1.4s
ILAR Eielson Array 86.08 13 P **P** 13 58 17.1 -0.3
comp=Z,16nm,0.4s,baz=223,slow=4.4,SNR=141
ILAR pP **pP** 14 00 04.5 -1.6
comp=Z,4.1nm,1.1s,baz=234,slow=4.3,SNR=4.2
ILAR PKiKP **PKiKP** 14 03 22.9 +1.1
comp=Z,0.9nm,0.6s,baz=279,slow=1.9,SNR=12
ILAR S **S** 14 08 04.3 -5.2
comp=Z,0.9nm,1.0s,baz=198,slow=12,SNR=5.7
ILAR PKKPbc **PKKPbc** 14 16 14.2 -2.6
comp=Z,0.8nm,0.5s,baz=330,slow=2.7,SNR=4.9
MCMT McKenzie Canyo 86.23 40 P **P** 13 58 17.5 -1.4
POKR Poker Plat Res 86.26 12 P 13 58 17.7
baz=209,SNR=8.9
POKR Poker Plat Res 86.27 12 P **P** 13 58 17.8 -0.6
POKR IAmb IAmb 13 58 19.9
comp=Z,60nm,1.3s
RDMU Red Mountain 86.30 45 P **P** 13 58 19.7 +0.4
K27K Chicken 86.55 15 P **P** 13 58 20.4 +0.7
K27K IAmb IAmb 13 58 23.4
comp=Z,48nm,1.2s
K27K **pwP** 14 00 10.5 -0.7
MSO Missoula 86.59 38 P **P** 13 58 20.7 +0.3
MSO Missoula 86.59 38 P 13 58 21.9
baz=239,SNR=13
DLMT Dillon 86.66 40 P **P** 13 58 21.5 +0.7
DLMT IAmb IAmb 13 58 24.2
comp=Z,27nm,0.8s
XAN Xi'an 86.68 307 P **P** 13 58 22.3 +1.2
XAN pmax pmax
comp=Z,45nm,1.1s
XAN Xi'an 86.68 307 P **P** 13 58 21.3 +0.2
XAN pmax pmax
comp=Z,38nm,1.0s
XAN Xi'an 86.68 307 P **P** 13 58 21.3 +0.2
XAN IAmb IAmb 13 58 25.8
comp=Z,38nm,1.0s
RDOG Red Dog Mine 86.70 6 P 13 58 22.0
baz=194
BILL Bilibino 86.73 354*c i* P **P** 13 58 20.5 +0.1
BILL *e** PP **pwP** 14 00 12.1 -0.5
BILL *e* 14 01 54.6
BILL *e* PPP PPP 14 03 56.0
BILL *i* S S 14 07 59.7 -16
BILL pmax pmax
comp=Z,64nm,1.0s
BILL Bilibino 86.73 354 P **P** 13 58 20.6 +0.1
BILL IAmb IAmb 13 58 22.8
comp=Z,50nm,0.9s
REDW Red Top Meadow 86.77 42 P **P** 13 58 21.4 -0.2
REDW IAmb IAmb 13 58 26.4
comp=Z,59nm,1.1s
HIA Hailar 86.78 325 P **P** 13 58 21.3 +0.2
HIA pmax pmax
comp=Z,49nm,1.4s
HIA Hailar 86.78 325 P **P** 13 58 21.3 +0.2
HIA IAmb IAmb 13 58 24.3
comp=Z,49nm,1.4s
JTMT Jette 86.87 37 P **P** 13 58 22.2 +0.4
S22A 4UR Ranch, Cre 86.94 49 P 13 58 24.1
baz=244,SNR=31
LRM Limekiln Ridge 86.97 40 P **P** 13 58 22.2 -0.3
O20A White River Ci 87.00 46 P 13 58 24.0
baz=243,SNR=11
PRP Porcupine Dome 87.01 13 P 13 58 21.9
baz=211
PRP Porcupine Dome 87.01 13 P **P** 13 58 21.9 -0.1
PRP IAmb IAmb 13 58 24.7
comp=Z,54nm,1.5s
MOOW Moose Ponds 87.02 42 pP pP 14 00 13.2 +1.7
LOHW Long Hollow 87.05 42 P **P** 13 58 23.1 +0.4
QLMT Earthquake Lak 87.11 41 P **P** 13 58 24.0 +0.9
QLMT **pwP** 14 00 14.2 -1.2
FLWY Flagg Ranch 87.21 42 P **P** 13 58 24.4 +0.9
FLWY IAmb IAmb 13 58 28.9
comp=Z,66nm,1.1s
FLWY **pwP** 14 00 14.3 -1.7
YHB Horse Butte 87.22 41 P **P** 13 58 24.9 +1.3
YHB IAmb IAmb 13 58 29.1
comp=Z,52nm,1.0s
YHB **pP** 14 00 14.1 +1.5
YPP Pitchstone Pla 87.23 42 P **P** 13 58 24.1 +0.3
DAWY Dawson 87.26 16 P **P** 13 58 23.6 +0.6
DAWY IAmb IAmb 13 58 26.4
comp=Z,30nm,1.0s
YHL Hebgen Lake 87.28 41 P **P** 13 58 25.5 +1.6
YHL IAmb IAmb 13 58 29.4
comp=Z,60nm,0.9s
BW06 Boulder Array 87.32 43 P **P** 13 58 24.8 +0.7
BW06 IAmb IAmb 13 58 28.3
comp=Z,21nm,0.7s
BW06 Boulder Array 87.32 43 P 13 58 24.8
baz=242

PD31 Pinedale Array 87.32 43 P **P** 13 58 24.6 +0.5
PD31 IAmb IAmb 13 58 28.3
comp=Z,19nm,0.7s
PDAR Pinedale Array 87.32 43 P **P** 13 58 24.7 +0.5
comp=Z,18nm,0.7s,baz=217,slow=2.7,SNR=82
PDAR pP **pP** 14 00 11.1 -2.1
comp=Z,0.9nm,0.8s,baz=216,slow=4.5,SNR=2.0
PDAR PP **PP** 14 01 57.6 0.0
comp=Z,4.3nm,1.1s,baz=242,slow=5.9,SNR=7.0
PDAR PKKPbc **PKKPbc** 14 16 13.1 +0.1
comp=Z,0.6nm,0.5s,baz=92,slow=5.0,SNR=6.9
PDAR Pinedale Array 87.32 43 P **P** 13 58 24.8 +0.7
PDAR PP **PP** 14 01 56.0 -1.6
BOZ Bozeman (W) 87.36 40 P 13 58 25.6
baz=241,SNR=35
EGAK Eagle 87.39 15 P 13 58 24.1
baz=215,SNR=25
EGAK Eagle 87.39 15 P **P** 13 58 24.2 +0.6
EGAK IAmb IAmb 13 58 26.7
comp=Z,42nm,1.1s
H17A Grant Village 87.44 42 P 13 58 27.6
baz=242
YHH Holmes Hill 87.45 41 pP 14 00 16.0 +2.2
SMCO Snowmass 87.46 47 P **P** 13 58 25.7 +0.7
PHIT Phitsanulok 87.54 289 P **P** 13 58 28.5 +3.1
UTTA Uttaradit 87.60 289 P **P** 13 58 28.0 +2.4
COLD Coldfoot 87.62 10 P 13 58 25.5
baz=206,SNR=53
COLD Coldfoot 87.62 10 P **P** 13 58 24.9 +0.3
COLD IAmb IAmb 13 58 27.9
comp=Z,40nm,1.1s
COLD pP **pwP** 14 00 15.5 -0.9
LKWY Lake 87.63 41 P **P** 13 58 25.2 -0.4
LKWY pmax pmax
comp=Z,29nm,0.8s
LKWY Lake 87.63 41 P **P** 13 58 25.2 -0.4
LKWY IAmb IAmb 13 58 31.7
comp=Z,29nm,0.8s
HHC Hu-ho-hao-te 87.69 314*eP* **P** 13 58 28.4 +2.7
HHC SKS **SKSac** 14 08 06.4 0.0
HHC S **S** 14 08 25.9 -0.2
HHC SS **SS** 14 14 31.1 +3.7
HHC pmax pmax
comp=Z,29nm,1.2s
HHC pmax pmax
comp=Z,190nm,5.6s
WALA Waterton Lakes 87.76 36 P **P** 13 58 26.2 +0.3
WALA IAmb IAmb 13 58 30.2
comp=Z,26nm,0.9s
HRY Holter Researc 87.79 39 P **P** 13 58 26.9 +0.8
HRY **pP** 14 00 16.6 +1.4
YMP Mirror Lake Pl 87.86 41 P **P** 13 58 26.7 0.0
YMP IAmb IAmb 13 58 46.5
comp=Z,39nm,1.3s
SDCO Great Sand Dun 87.89 49 P **P** 13 58 27.2 +0.2
SDCO Great Sand Dun 87.89 49 P 13 58 29.1
baz=245,SNR=20
LL07 Hotel Espejo d 88.06 135 P **P** 13 58 26.6 -0.8
YNE Yellowstone No 88.08 41 P **P** 13 58 28.0 +0.3
YNE IAmb IAmb 13 58 32.9
comp=Z,29nm,0.9s
YNE **pwP** 14 00 18.7 -1.7
KMI Kunming 88.24 297 ⇑P **P** 13 58 29.1 +0.3
KMI pP pwP 14 00 22.1 +1.4
KMI SKS **SKSac** 14 08 13.5 +2.9
KMI S **S** 14 08 29.3 -2.8
KMI pmax pmax
comp=Z,21nm,0.7s
KMI pmax pmax
comp=Z,110nm,5.7s
SUKH Sukhothai 88.34 289 P **P** 13 58 32.0 +2.9
MSTX Muleshoe 88.39 54 P **P** 13 58 29.3 +0.1
MSTX Muleshoe 88.39 54 P 13 58 30.3
baz=247
RWWY Rawlins 88.39 45 P **P** 13 58 29.1 -0.1
RWWY IAmb IAmb 13 58 32.6
comp=Z,81nm,1.4s
T25A Trinidad 88.43 50 P **P** 13 58 29.0 -0.4
T25A Trinidad 88.43 50 P 13 58 31.2
baz=246,SNR=8.7
RLMT Red Lodge 88.60 41 P **P** 13 58 31.0 +0.9
RLMT IAmb IAmb 13 58 35.1
comp=Z,28nm,0.9s
RLMT Red Lodge 88.60 41 P 13 58 31.9
baz=242,SNR=28
LL05 Los Muermos 88.62 133 P **P** 13 58 29.2 -0.8
Q24A Divide 88.65 48 P 13 58 32.8
baz=245,SNR=8.1
GCMT Greycliff 88.66 41 P **P** 13 58 29.8 -0.4
ISCO Idaho Springs 88.67 47 P 13 58 33.2
baz=245,SNR=6.6
ISCO Idaho Springs 88.68 47 P **P** 13 58 30.3 -0.3
ISCO pmax pmax
comp=Z,10.0nm,1.2s
ISCO Idaho Springs 88.68 47 P **P** 13 58 30.3 -0.3
LAMP Lampang 88.69 290 P **P** 13 58 33.6 +2.9
N23A Red Feather La 88.91 46 P 13 58 34.1
baz=245,SNR=11
833A Chaparral WMA, 88.95 60 P 13 58 34.0
baz=249
LL01 San Ignacio de 88.96 134 P **P** 13 58 30.9 -0.7
SYO Syowa Base 88.97 193‖*eP* **P** 13 58 29.7 -1.3
SYO Syowa Base 88.97 193‖*ePcP* **P** 13 58 30.6 -0.4
TOLK Toolik Lake Re 88.99 10 P 13 58 31.7
baz=207,SNR=21
TOLK Toolik Lake Re 88.99 10 P **P** 13 58 31.2 +0.1
TOLK IAmb IAmb 13 58 33.6
comp=Z,42nm,1.4s
LL02 Futaleuf 89.01 135 P **P** 13 58 31.4 -0.5
CM36 Chiang Mai Arr 89.17 290 P **P** 13 58 35.0 +2.0
CM35 Chiang Mai Arr 89.17 290 P **P** 13 58 34.0 +1.0
CM34 Chiang Mai Arr 89.23 290 P **P** 13 58 35.0 +1.8
CM04 Chiang Mai Arr 89.23 290 P **P** 13 58 35.9 +2.6
CM09 Chiang Mai Arr 89.23 290 P **P** 13 58 36.0 +2.7
CM01 Chiang Mai Arr 89.25 290 P **P** 13 58 36.0 +2.6
CM05 Chiang Mai Arr 89.26 290 P **P** 13 58 36.0 +2.6
K22A Casper 89.27 44 P 13 58 34.7
baz=244,SNR=12
CM02 Chiang Mai Arr 89.27 290 P **P** 13 58 36.4 +2.9
K22A Casper 89.27 44 P **P** 13 58 33.8 +0.6
K22A IAmb IAmb 13 58 37.7
comp=Z,63nm,1.4s
CM31 Chiang Mai Arr 89.28 290 P **P** 13 58 36.4 +2.9
CMAR Chiang Mai Arr 89.28 290 P **P** 13 58 34.8 +1.3
comp=Z,15nm,0.9s,baz=112,slow=2.8,SNR=65
CMAR PKiKP **PKiKP** 14 03 30.4 +1.9
comp=Z,0.7nm,0.5s,baz=182,slow=1.6,SNR=4.0
CMAR PKKPbc **PKKPbc** 14 16 08.5 +1.7
comp=Z,5.1nm,0.6s,baz=280,slow=4.3,SNR=22
CMAR PKPPKP **P'P'df** 14 24 13.5 -2.6
comp=Z,0.5nm,0.7s,baz=300,slow=4.2,SNR=5.4
CMAR Chiang Mai Arr 89.28 290 P **P** 13 58 32.6 -0.9
CMAR Chiang Mai Arr 89.28 290 P **P** 13 58 32.6 -0.9
CM15 Chiang Mai Arr 89.30 290 P **P** 13 58 36.4 +2.8
CM13 Chiang Mai Arr 89.30 290 P **P** 13 58 36.4 +2.7
CMMT Chiang Mai 89.39 290 P **P** 13 58 35.3 +1.2
CM33 Chiang Mai Arr 89.40 290 P **P** 13 58 35.0 +0.9
CHTO Chiang Mai 89.40 290 P **P** 13 58 33.2 -0.9
CHTO pmax pmax
comp=Z,19nm,0.8s
CHTO Chiang Mai 89.40 290 P **P** 13 58 33.1 -0.9
CHTO IAmb IAmb 13 58 37.4
comp=Z,19nm,0.8s
JCT Junction City 89.40 58 P **P** 13 58 33.6 -0.3
JCT pmax pmax
comp=Z,26nm,0.7s
JCT Junction City 89.40 58 P **P** 13 58 33.6 -0.3
JCT IAmb IAmb 13 58 38.4
comp=Z,26nm,0.7s
JCT Junction City 89.40 58 P 13 58 35.3
baz=248
PHWY Pilot Hill 89.42 46 P **P** 13 58 33.9 -0.1
CM32 Chiang Mai Arr 89.43 290 P **P** 13 58 37.0 +2.8
CD2 Chengdu 89.49 303*eP* **P** 13 58 33.8 -0.5
CD2 pP pwP 14 00 25.3 -1.1
CD2 SKS **SKSac** 14 08 15.8 -1.4
CD2 S **ScS** 14 08 45.3 -0.5
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,100nm,7.1s
LL04 Puerto Octay 89.55 133 P **P** 13 58 34.4 0.0
AMTX Amarillo 89.57 53 P **P** 13 58 34.8 +0.2
AMTX IAmb IAmb 13 58 38.9
comp=Z,25nm,0.8s
AMTX Amarillo 89.57 53 P 13 58 36.3
baz=248
EGMT Eagleton 89.65 39 P 13 58 36.2
baz=242,SNR=11
EPYK Eagle Plains 89.78 15 P 13 58 35.3
baz=219,SNR=23
EPYK Eagle Plains 89.78 15 P **P** 13 58 34.8 0.0
YAK Yakutsk 89.95 338*eP* **P** 13 58 35.2 -0.3
YAK *eS* **SKSac** 14 08 18.5 +0.2
YAK *e* 14 08 38.0
YAK pmax pmax
comp=Z,32nm,0.8s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=Z,48nm,1.7s
YAK pmax pmax
comp=N,24nm,1.5s
YAK pmax pmax
comp=E,21nm,1.5s
YAK smax smax
comp=E,179nm,2.0s
YAK smax smax
comp=N,242nm,1.7s
YAK Yakutsk 89.95 338 P **P** 13 58 34.3 -1.3
ABTX Abilene, Hawle 90.31 56 P **P** 13 58 38.6 +0.6
SNAA Sanae 90.32 178 P **P** 13 58 36.9 -0.5
SNAA Sanae 90.32 178 PKKP 14 16 03.5
SNAA Sanae 90.32 178*ceP* **P** 13 58 36.6 -0.8
SNAA pmax pmax
comp=Z,99nm,1.7s
SNAA Sanae 90.32 178 P **P** 13 58 36.0 -1.4
VNA3 Neumayer Olymp 90.45 176 P **P** 13 58 37.7 -0.2
VNA3 Neumayer Olymp 90.45 176 PKKP 14 16 02.9
KSCO Kaye Shedlock' 90.47 49 P **P** 13 58 38.6 -0.1
KSCO IAmb IAmb 13 58 44.4
comp=Z,24nm,0.8s
KSCO Kaye Shedlock' 90.47 49 P 13 58 41.0
baz=247
A21K Barrow 90.48 7 P 13 58 38.2
baz=200
A21K Barrow 90.48 7 P **P** 13 58 38.1 +0.3
A21K IAmb IAmb 13 58 40.1
comp=Z,30nm,1.1s
VNA2 Neumayer--Watz 90.89 177 P **P** 13 58 39.8 -0.2
baz=187,slow=4.4
VNA2 Neumayer--Watz 90.89 177 PKKP 14 16 03.1
PLCA Paso Flores 90.91 134 P **P** 13 58 42.6 +1.8
comp=Z,42nm,0.9s,baz=233,slow=4.9,SNR=61
PLCA PKKPbc **PKKPbc** 14 16 04.1 +0.5
comp=Z,1.2nm,0.8s,baz=240,slow=4.1,SNR=3.4
PLCA Paso Flores 90.91 134 P **P** 13 58 41.4 +0.6
PLCA pmax pmax
comp=Z,182nm,1.4s
PLCA Paso Flores 90.91 134 P **P** 13 58 41.4 +0.6
NVL N'lazarevskaya 91.02 183*eP* **P** 13 58 39.2 -1.3
NVL pmax pmax
comp=Z,147nm,1.3s
VNA1 Neumayer--Stat 91.12 177 P **P** 13 58 41.0 0.0
VNA1 Neumayer--Stat 91.12 177 PKKP 14 16 01.5
LAO LASA Array 91.20 41 P 13 58 44.2
baz=245,SNR=8.0
LAO LASA Array 91.20 41 P **P** 13 58 42.8 +1.0
435B Jarrell 91.30 58 P 13 58 44.6
baz=250
LZH Lanzhou 91.31 308 ⇑P **P** 13 58 44.5 +1.8
LZH pP pwP 14 00 37.1 +2.2
LZH SKS **SKSac** 14 08 27.1 -0.5
LZH S **S** 14 08 59.5 +0.3
LZH pmax pmax
comp=Z,40nm,1.1s
LZH pmax pmax
comp=Z,75nm,8.1s
RSSD Black Hills 91.53 44 P 13 58 44.9
baz=246
RSSD Black Hills 91.53 44 P **P** 13 58 43.7 +0.1
RSSD pmax pmax
comp=Z,42nm,1.2s
RSSD Black Hills 91.53 44 P **P** 13 58 43.7 +0.1
RSSD IAmb IAmb 13 58 47.7
comp=Z,42nm,1.2s
OGNE Ogallala 91.64 47 P 13 58 45.2
baz=247
WMOK Wichita Mounta 91.74 54 P **P** 13 58 44.9 +0.4
WMOK pmax pmax
comp=Z,14nm,1.4s
WMOK Wichita Mounta 91.74 54 P **P** 13 58 44.9 +0.4
WMOK Wichita Mounta 91.74 54 P 13 58 45.9
baz=249
WHTX Lake Whitney, 91.82 57 P **P** 13 58 45.0 +0.1
WHTX IAmb IAmb 13 58 49.3
comp=Z,16nm,0.7s
WHTX Lake Whitney, 91.82 57 P 13 58 46.6
baz=250
INK Inuvik 92.06 15 P **P** 13 58 45.4 +0.2
INK pmax pmax
comp=Z,59nm,1.2s
INK Inuvik 92.06 15 P **P** 13 58 45.4 +0.2
BI02 San Fabin de 92.09 130 P **P** 13 58 46.1 -0.3
BI02 IAmb IAmb 13 58 50.0
comp=Z,48nm,1.2s
Z35A Perchaven, San 92.44 56 P **P** 13 58 48.5 +0.7
Z35A IAmb IAmb 13 58 52.1
comp=Z,24nm,0.8s
CBKS Cedar Bluff 92.48 50 P 13 58 49.2
baz=249
CBKS Cedar Bluff 92.48 50 P **P** 13 58 48.7 +0.8
CBKS pmax pmax
comp=Z,34nm,1.0s
CBKS Cedar Bluff 92.48 50 P **P** 13 58 48.7 +0.8
CBKS IAmb IAmb 13 58 52.3
comp=Z,34nm,1.0s
EFI East Falkland 93.06 147*ceP* **P** 13 58 52.7 +2.4
EFI pmax pmax
comp=Z,198nm,2.5s
EFI East Falkland 93.06 147 P **P** 13 58 50.7 +0.4
R32A Long Quarter, 93.09 51 P **P** 13 58 51.7 +1.0
KAN10 Anthony SW Sta 93.10 52 P **P** 13 58 51.1 +0.4
BO01 Tunca 93.17 128 P **P** 13 58 51.4 +0.2
BO01 IAmb IAmb 13 58 54.6
comp=Z,21nm,1.2s
MT01 Popeta 93.26 127 P **P** 13 58 52.0 +0.3
MT09 Talagante 93.49 127 P **P** 13 58 53.2 +0.3
KS20 Mayfield South 93.54 52 P **P** 13 58 52.9 +0.1
ULN Ulaanbaatar 93.57 319*ceP* **P** 13 58 53.7 +0.9
ULN pmax pmax
comp=Z,18nm,0.9s
ULN Ulaanbaatar 93.57 319 P **P** 13 58 51.4 -1.4
ULN IAmb IAmb 13 58 56.2
comp=Z,14nm,0.8s
SONM Songino Array 93.97 319 P **P** 13 58 55.2 +0.6
comp=Z,3.5nm,0.6s,baz=121,slow=3.6,SNR=23
SONM PKKPbc **PKKPbc** 14 15 55.8 -0.6
comp=Z,2.0nm,0.9s,baz=263,slow=2.1,SNR=6.5
SONM Songino Array 93.97 319 P **P** 13 58 53.3 -1.3
SONM 14 15 55.8
SONM pmax pmax
comp=Z,5.0nm,0.8s
SONM Songino Array 93.97 319 P **P** 13 58 53.3 -1.3
BOD Bodaibo 94.06 330*eP* **P** 13 58 54.3 -0.3
BOD pmax pmax
comp=Z,23nm,1.7s
T35A Sooner Cattle 94.22 53 P **P** 13 58 56.5 +0.7
YKA Yellowknife Ar 94.44 25 P **P** 13 58 56.5 +0.3
comp=Z,4.2nm,0.5s,baz=236,slow=4.3,SNR=103
YKA pP **pP** 14 00 43.8 -2.7
comp=Z,2.1nm,1.1s,baz=221,slow=4.6,SNR=2.5
YKA PP **PP** 14 02 48.8 -3.5
comp=Z,1.6nm,1.0s,baz=239,slow=7.3,SNR=5.0
YKA PKiKP **PKiKP** 14 03 37.1 +1.1
comp=Z,0.9nm,0.6s,baz=252,slow=1.2,SNR=12
YKA PKPPKP **P'P'df** 14 24 08.7 +5.3
comp=Z,0.5nm,0.8s,baz=70,slow=2.9,SNR=6.5
BGNE Belgrade 94.54 48 P 13 58 58.8
baz=250
KSU1 Kansas State U 94.87 51 P 13 59 00.7
baz=251
KSU1 Kansas State U 94.87 51 P **P** 13 59 00.2 +1.4
CO03 El Pedregal 94.94 125 P **P** 13 58 59.7 +0.2
C36M Paulatuk 95.26 17 P 13 59 00.8
baz=231
C36M Paulatuk 95.26 17 P **P** 13 59 00.1 +0.4

GTA	**Gaotai**	**95.46**	**310**		P		**P**	**13 59 02.8**	**+1.2**
GTA					pP		pP	14 00 54.9	+3.0
GTA					sP		sP	14 01 44.0	+2.2
GTA					SKS		**SKSac**	**14 08 48.6**	**-1.2**
GTA					S		**ScS**	**14 09 39.6**	**+4.3**
GTA					pmax		pmax		
	comp=Z,5.0nm,1.0s								
MIAR	**Mount Ida**	**95.72**	**56**		P		**P**	**13 59 03.7**	**+1.0**
MIAR					pmax		pmax		
	comp=Z,7.0nm,1.0s								
MIAR	**Mount Ida**	**95.72**	**56**		P		**P**	**13 59 03.7**	**+1.0**
MIAR	**Mount Ida**	**95.72**	**56**		P			13 59 03.7	
	baz=252								
W39A	**Magazine**	**95.76**	**55**		P			13 59 03.6	
	baz=252								
ECSD	**EROS Data Cent**	**96.38**	**46**		P			13 59 06.7	
	baz=251								
ECSD	**EROS Data Cent**	**96.38**	**46**		P		**P**	**13 59 05.8**	**+0.3**
ECSD					IAmb		IAmb	13 59 07.6	
	comp=Z,6.8nm,0.8s								
TIXI	**Tiksi**	**96.50**	**345**		P		**P**	**13 59 04.9**	**-0.4**
	comp=Z,8.9nm,0.7s,baz=139,slow=5.4,SNR=14								
TIXI					PP		**PP**	**14 03 03.9**	**-3.9**
	comp=Z,3.7nm,0.8s,baz=125,slow=8.9,SNR=6.7								
TIXI	**Tiksi**	**96.50**	**345**	‖	*e*P		**P**	**13 59 04.8**	**-0.5**
TIXI	**Tiksi**	**96.50**	**345**		P		**P**	**13 59 04.3**	**-1.0**
TIXI					IAmb		IAmb	13 59 05.9	
	comp=Z,13nm,0.9s								
ZAK	**Zakamensk**	**96.80**	**321**		*e*P		**P**	**13 59 07.5**	**+0.2**
ZAK					pmax		pmax		
	comp=Z,6.0nm,1.5s								
U40A	**Yellville**	**96.83**	**54**		P			13 59 09.1	
	baz=253								
W41B	**Gary Mavity, V**	**96.95**	**55**		P			13 59 09.7	
	baz=253								
P38A	**Dawn**	**97.30**	**51**		P		Pdif	13 59 10.4	+0.7
P38A					IAmb		IAmb	13 59 13.9	
	comp=Z,9.6nm,0.7s								
MGMO	**Mountain Grove**	**97.52**	**53**		P		**P**	**13 59 11.3**	**+0.6**
MGMO					IAmb		IAmb	13 59 15.2	
	comp=Z,12nm,0.8s								
ULM	**Lac du Bonnet**	**98.91**	**40**		P		**P**	**13 59 18.4**	**+1.8**
	comp=Z,2.3nm,0.5s,baz=285,slow=5.4,SNR=5.6								
ZALV	**Zalesovo Beam**	**108.65**	**322**		PKiKP		**PKiKP**	**14 04 01.4**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=112,slow=1.1,SNR=16								
ZALV					PP		**PP**	**14 04 36.6**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=100,slow=6.5,SNR=4.1								
ZALV					PKKPbc		**PKKPbc**	**14 15 13.9**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=248,slow=3.1,SNR=7.0								
MKAR	**Makanchi Array**	**109.56**	**314**		Pdiff		**Pdif**	**14 00 05.8**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=88,slow=4.7,SNR=6.3								
MKAR					PKiKP		**PKiKP**	**14 04 03.6**	**-0.4**
	comp=Z,3.9nm,0.5s,baz=107,slow=0.7,SNR=42								
MKAR					PKKPbc		**PKKPbc**	**14 15 10.9**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=283,slow=2.8,SNR=12								
MKAR					SKKPbc		SKKPbc	14 18 09.6	+1.2
	comp=Z,0.7nm,0.6s,baz=273,slow=3.2,SNR=4.7								
G54A	**Lake Saint Pet**	**109.64**	**47**		P			14 04 04.9	
	baz=264								
L56A	**Greenwood**	**109.65**	**51**		P			14 04 04.0	
	baz=263								
ALGO	**Algonquin Park**	**109.72**	**47**		P			14 04 04.6	
	baz=264								
N58A	**Sunbury**	**110.12**	**52**		P			14 04 06.0	
	baz=263								
L57A	**Andrews Acres**	**110.16**	**51**		P			14 04 05.8	
	baz=263								
MATQ	**Matagami**	**110.34**	**43**		P			14 04 05.7	
	baz=266								
LSQQ	**Lebel-sur-Quev**	**110.72**	**44**		P			14 04 06.7	
	baz=266								
BINY	**Binghamton**	**110.82**	**51**		P			14 04 07.4	
	baz=264								
L58A	**Harry Jones Me**	**110.90**	**51**		P			14 04 07.7	
	baz=264								
J57A	**Williamstown**	**110.93**	**50**		P			14 04 07.3	
	baz=264								
SHLS	**Shalkode**	**111.20**	**310**		*e*PKiKP		**PKiKP**	**14 04 06.6**	**-0.8**
	baz=310								
SHLS	**Shalkode**	**111.20**	**310**		*i* PKIKP		**PKiKP**	**14 04 06.5**	**-0.8**
I57A	**Carthage**	**111.22**	**49**		P			14 04 08.1	
	baz=265								
N60A	**Cedar Hill Far**	**111.34**	**53**		P			14 04 08.0	
	baz=264								
UZB	**Uzynbulak**	**111.52**	**310**		*e*PKiKP		**PKiKP**	**14 04 08.4**	**+0.3**
	baz=310								
UZB	**Uzynbulak**	**111.52**	**310**		*i* PKIKP		**PKiKP**	**14 04 08.3**	**+0.3**
D55A	**Sainte-Anne-du**	**111.59**	**46**		P			14 04 08.6	
	baz=266								
KPKS	**Kokpek**	**111.79**	**310**		*e*PKiKP		**PKiKP**	**14 04 08.4**	**-0.1**
	baz=310								
KPKS	**Kokpek**	**111.79**	**310**		*i* PKIKP		**PKiKP**	**14 04 08.3**	**-0.1**
N61A	**South Mountain**	**111.94**	**53**		P			14 04 09.6	
	baz=265								
SATY	**Saty**	**111.96**	**310**		*e*PKiKP		**PKiKP**	**14 04 09.0**	**+0.1**
	baz=310								
SATY	**Saty**	**111.96**	**310**		*i* PKIKP		**PKiKP**	**14 04 08.9**	**+0.1**
TULEG	**Thule**	**112.02**	**14**		*i* P		**PKiKP**	**14 04 08.5**	**+0.7**
TULEG					IAmb		IAmb	14 04 09.8	
	comp=Z,3.9nm,0.7s								
D56A	**ZEC Mazanza, M**	**112.08**	**46**		P			14 04 09.5	
	baz=267								
TDK	**Taldyqorghan**	**112.11**	**312**		*e*PKiKP		**PKiKP**	**14 04 08.8**	**-0.1**
	baz=312								
TDK	**Taldyqorghan**	**112.11**	**312**		*i* PKIKP		**PKiKP**	**14 04 08.8**	**-0.1**
KURK	**Kurchatov**	**112.24**	**318**		*i* PKIKP		**PKiKP**	**14 04 08.4**	**-0.5**
KURK	**Kurchatov**	**112.24**	**318**				**PKiKP**	**14 04 08.3**	**-0.5**
KURK							**PKKPbc**	**14 15 02.7**	**+0.3**
KURBB	**Kurchatov Arra**	**112.30**	**318**		PKiKP		**PKiKP**	**14 04 08.3**	**-0.7**
	comp=Z,3.3nm,0.5s,baz=98,slow=1.7,SNR=54								
KURBB					PP		**PP**	**14 05 07.2**	**+3.4**
	comp=Z,2.2nm,0.8s,baz=83,slow=6.2,SNR=5.1								
KURBB					PKKPbc		**PKKPbc**	**14 15 02.7**	**+0.4**
	comp=Z,3.5nm,0.5s,baz=277,slow=4.1,SNR=19								
KURBB					SKKPbc		SKKPbc	14 18 01.0	+0.5
	comp=Z,0.4nm,0.3s,baz=278,slow=3.7,SNR=4.6								
I60A	**Shoreham**	**112.92**	**49**		P			14 04 11.7	
	baz=266								
MDOK	**Medeo**	**112.96**	**310**		*e*PKiKP		**PKiKP**	**14 04 10.7**	**-0.1**
	baz=310								
MDOK	**Medeo**	**112.96**	**310**		*i* PKIKP		**PKiKP**	**14 04 10.7**	**-0.1**
TNSS	**Tian-Shan**	**113.02**	**310**		*e*PKiKP		**PKiKP**	**14 04 10.2**	**-1.1**
	baz=310								
TNSS	**Tian-Shan**	**113.02**	**310**		*i* PKIKP		**PKiKP**	**14 04 10.1**	**-1.1**
E58A	**La Victoria**	**113.06**	**47**		P			14 04 11.2	
	baz=268								
L61B	**Northampton**	**113.28**	**51**		P			14 04 11.2	
	baz=266								
D58A	**Chemin du LacG**	**113.36**	**46**		P			14 04 11.5	
	baz=268								
J61A	**Chester**	**113.43**	**50**		P			14 04 12.2	
	baz=267								
K62A	**Royalston**	**113.62**	**51**		P			14 04 12.5	
	baz=267								
F60A	**Warwick**	**113.97**	**47**		P			14 04 13.2	
	baz=268								
TKM2	**Tokmak 2**	**114.01**	**309**		P		**PKiKP**	**14 04 13.9**	**+1.0**
	SNR=14								
E60A	**Ste Agathe de**	**114.33**	**47**		P			14 04 14.3	
	baz=269								
CHMS	**Chumysh**	**114.63**	**310**		P		PKPdf	14 04 13.5	-0.4
	SNR=5.1								
SGDS	**Sogindy**	**114.74**	**310**		*e*PKP		PKPdf	14 04 13.9	-0.1
	baz=310								
SGDS	**Sogindy**	**114.74**	**310**		*e*PKiKP		PKPdf	14 04 13.9	-0.2
UCH	**Uchtor**	**114.77**	**309**		P		**PKiKP**	**14 04 16.5**	**+1.8**
	SNR=11								
AAK	**Ala-Archa**	**114.81**	**309**		PKP		**PKiKP**	**14 04 14.5**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=133,slow=3.7,SNR=9.7								
AAK					PKKPbc		**SKKPbc**	**14 14 54.3**	**+0.4**
	comp=Z,4.1nm,0.8s,baz=216,slow=6.1,SNR=5.3								
AAK					SKKPbc		SKKPbc	14 17 54.4	+1.7
	comp=Z,1.7nm,0.8s,baz=262,slow=3.3,SNR=3.6								
AAK	**Ala-Archa**	**114.81**	**309**	*c*	*i* PKIKP		**PKiKP**	**14 04 15.5**	**+1.2**
AAK					pmax		pmax		
	comp=Z,23nm,1.7s								
AAK	**Ala-Archa**	**114.81**	**309**				PKPdf	14 04 14.1	-0.2
USP	**Ospenovka**	**114.83**	**310**		P		**PKiKP**	**14 04 15.0**	**+0.8**
	SNR=16								
E61A	**Lac Etchemin**	**115.00**	**47**		P			14 04 15.2	
	baz=270								
BTLS	**Baital**	**115.20**	**312**		*e*PKP		**PKiKP**	**14 04 15.0**	**+0.2**
	baz=312								
BTLS	**Baital**	**115.20**	**312**		*e*PKiKP		**PKiKP**	**14 04 15.0**	**+0.2**
NEEM	**North Greenlan**	**115.33**	**11**		*i* P		**PKiKP**	**14 04 15.3**	**+0.8**
NEEM					IAmb		IAmb	14 04 16.6	
	comp=Z,16nm,0.6s								
EKS2	**Erkin-Say**	**115.33**	**309**		P		**PKiKP**	**14 04 16.8**	**+1.5**
	SNR=7.5								
AML	**Almayashu**	**115.38**	**309**		P		**PKiKP**	**14 04 17.1**	**+1.3**
	SNR=12								
G63A	**Kingsbury**	**115.59**	**48**		P			14 04 16.7	
	baz=270								
SJG	**San Juan**	**115.68**	**78**		PKiKP		**PKPdf**	**14 04 16.1**	**-0.4**
SJG	**San Juan**	**115.68**	**78**				**PKPdf**	**14 04 16.1**	**-0.4**
PDPR	**Patillas Dam,**	**115.78**	**78**				**PKPdf**	**14 04 16.3**	**-0.4**
GCPR	**Guaynabo City**	**115.78**	**78**				**PKPdf**	**14 04 16.2**	**-0.4**
PKME	**Peaks-Kenny Pk**	**115.83**	**48**		P			14 04 16.9	
	baz=270								
H64A	**Troy**	**115.87**	**49**		P			14 04 16.9	
	baz=270								
F63A	**Nahmakanta, Br**	**115.96**	**47**		P			14 04 17.3	
	baz=270								
HUMP	**Col San Antoni**	**115.96**	**78**				**PKiKP**	**14 04 17.1**	**+0.1**
NOR	**Nord**	**116.05**	**3**	*e*			**Pdif**	**14 00 30.0**	**-2.2**
	baz=291,slow=4.8								
NOR					*i* P		**Pdif**	**14 00 31.1**	**-1.1**
NOR					IAML			14 00 59.8	
	comp=Z,0.9nm,0.4s								
NOR	**Nord**	**116.05**	**3**		*i* P		**PKPdf**	**14 04 15.0**	**-0.5**
BRZS	**Berezniki**	**116.05**	**317**		*e*PKP		**PKPdf**	**14 04 16.0**	**-0.4**
	baz=317								
BRZS	**Berezniki**	**116.05**	**317**		*e*PKIKP		**PKPdf**	**14 04 15.9**	**-0.4**
G64A	**Maxfield**	**116.20**	**48**		P			14 04 17.6	
	baz=270								
E63A	**Oxbow**	**116.42**	**47**		P			14 04 18.1	
	baz=271								
UPNV	**Upernavik**	**116.47**	**16**		*i* P		**PKiKP**	**14 04 17.3**	**+0.9**
UPNV					IAmb		IAmb	14 04 18.3	
	comp=Z,13nm,0.6s								
F64A	**Sherman**	**116.48**	**47**		P			14 04 18.2	
	baz=271								
D63A	**Stockholm**	**116.63**	**46**		P			14 04 17.9	
	baz=272								
E64A	**Bridgewater**	**116.83**	**47**		P			14 04 18.5	
	baz=272								
BVAR	**Borovoye Array**	**117.26**	**321**		PKP		**PKPdf**	**14 04 17.3**	**-1.2**
	comp=Z,6.2nm,0.5s,baz=212,slow=7.6,SNR=46								
BVAR					PKKPbc		**PKKPbc**	**14 14 46.2**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=316,slow=4.1,SNR=6.3								
BRVK	**Borovoye**	**117.32**	**321**		PKiKP		**PKPdf**	**14 04 18.0**	**-0.6**
BRVK	**Borovoye**	**117.32**	**321**		PKPdf		**PKPdf**	**14 04 18.0**	**-0.6**
KK31	**Karatay Array**	**117.74**	**310**		PKiKP		**PKPdf**	**14 04 19.1**	**-0.7**
KK31	**Karatay Array**	**117.74**	**310**		PKPdf		**PKPdf**	**14 04 19.1**	**-0.7**
KKAR	**Karatay Array**	**117.74**	**310**		PKiKP		**PKPdf**	**14 04 19.1**	**-0.7**
KKAR	**Karatay Array**	**117.74**	**310**		PKPdf		**PKPdf**	**14 04 19.1**	**-0.7**
GAR	**Garm**	**117.86**	**305**		PKPdf		**PKPdf**	**14 04 19.8**	**-0.5**
IUG	**luzhnay**	**118.10**	**309**		*e*PKP		**PKPdf**	**14 04 20.4**	**-0.2**
	baz=309								
IUG	**luzhnay**	**118.10**	**309**		*e*PKIKP		**PKPdf**	**14 04 20.3**	**-0.3**
KBL	**Kabul**	**118.70**	**300**		PKiKP		**PKPdf**	**14 04 21.7**	**-0.5**
KBL	**Kabul**	**118.70**	**300**		PKPdf		**PKPdf**	**14 04 21.7**	**-0.5**
KBS	**Kingsbay**	**119.03**	**358**		*i* P		**PKiKP**	**14 04 23.4**	**+2.1**
SPA0	**Spitsbergen Ar**	**119.56**	**357**		*e*PKPdf		**PKiKP**	**14 04 23.0**	**+0.6**
VAS01	**Vassouras-RJ**	**120.11**	**130**		*e*P		**PKiKP**	**14 04 26.5**	**+1.3**
BDFB	**Brasilia**	**120.42**	**121**		PKP		**PKPdf**	**14 04 25.2**	**-0.6**
	comp=Z,7.5nm,0.5s,baz=300,slow=2.2,SNR=13								
BDFB	**Brasilia**	**120.42**	**121**		PKiKP		**PKPdf**	**14 04 24.9**	**-1.0**
BDFB	**Brasilia**	**120.42**	**121**		PKPdf		**PKPdf**	**14 04 24.9**	**-1.0**
SFJD	**Kangerlussuaq**	**120.82**	**21**		*i* P		**PKiKP**	**14 04 25.7**	**+0.7**
SFJD					IAmb		IAmb	14 04 26.5	
	comp=Z,7.6nm,0.5s								
SFJD	**Kangerlussuaq**	**120.82**	**21**		*i* PKIKP		**PKiKP**	**14 04 25.7**	**+0.7**
SFJD					pmax		pmax		
	comp=Z,8.0nm,0.5s								
SFJD	**Kangerlussuaq**	**120.82**	**21**		PKPdf		**PKiKP**	**14 04 25.0**	**-0.1**
SUMG	**Summit**	**120.92**	**13**		*i* P		**PKiKP**	**14 04 27.1**	**+1.4**
SUMG					IAmb		IAmb	14 04 29.1	
	comp=Z,10nm,0.8s								
SUMG	**Summit**	**120.92**	**13**		*i* PKIKP		**PKiKP**	**14 04 27.0**	**+1.4**
SUMG					pmax		pmax		
	comp=Z,10.0nm,0.8s								
SUMG	**Summit**	**120.92**	**13**		PKPdf		**PKiKP**	**14 04 25.7**	**+0.1**
DUB01	**Friburgo-RJ**	**121.01**	**131**		*e*P		**PKiKP**	**14 04 27.4**	**+0.5**
MALB	**Monte Alegre**	**121.24**	**104**		*e*P		**PKiKP**	**14 04 28.3**	**+0.8**
GBN	**Guysborough**	**121.30**	**48**		PKPdf		**PKiKP**	**14 04 26.7**	**+0.1**
CAM01	**Campos-RJ**	**121.68**	**131**		*e*P		**PKiKP**	**14 04 30.0**	**+1.9**
NUUK	**Nuuk**	**121.70**	**24**		*i* P		**PKiKP**	**14 04 27.6**	**+0.7**
NUUK					IAmb		IAmb	14 04 29.1	
	comp=Z,25nm,0.7s								
PEXB	**Peixe**	**122.02**	**118**		*e*P		**PKiKP**	**14 04 29.5**	**+0.5**
DBG	**Daneborg**	**122.55**	**7**		*i* P		**PKPdf**	**14 04 28.2**	**+0.1**
DBG					IAmb		IAmb	14 04 30.0	
	comp=Z,16nm,0.7s								
DY2G	**Dye2**	**122.58**	**21**		*i* P		**PKiKP**	**14 04 29.6**	**+0.8**
DY2G					IAmb		IAmb	14 04 30.6	
	comp=Z,44nm,0.7s								
ICESG	**Greenland Ices**	**123.00**	**17**		*i* P		**PKiKP**	**14 04 30.1**	**+0.3**
ICESG					IAmb		IAmb	14 04 31.3	
	comp=Z,14nm,0.6s								
ALF01	**Guarapari-ES**	**123.12**	**131**		*e*P		**PKiKP**	**14 04 33.0**	**+1.9**
ARU	**Arti**	**123.25**	**326**		*i* PKIKP		**PKiKP**	**14 04 30.2**	**0.0**
ARU								14 06 16.3	
ARU								14 10 53.7	
ARU					SP		SP	14 15 25.6	+0.6
ARU	**Arti**	**123.25**	**326**		PKPdf		**PKPdf**	**14 04 29.2**	**-0.7**
PRPB	**Parauapebas**	**123.51**	**111**		*e*P		**PKiKP**	**14 04 32.8**	**+0.7**
JANB	**Januaria**	**123.72**	**123**		*e*P		**PKiKP**	**14 04 33.0**	**+0.6**
MCPB	**Macapa, AP**	**123.85**	**103**		*e*P		**PKiKP**	**14 04 33.1**	**+0.5**
SJMB	**Sao Joao De Ma**	**123.98**	**129**		*e*P		**PKiKP**	**14 04 33.4**	**+0.6**
BSFB	**Barra de Sao F**	**124.15**	**129**		*e*P		**PKiKP**	**14 04 34.0**	**+0.9**
RIB01	**Linhares ES**	**124.18**	**130**		*e*P		**PKiKP**	**14 04 33.4**	**+0.2**
SMTB	**Santa Maria do**	**124.22**	**115**		*e*P		**PKiKP**	**14 04 35.7**	**+2.3**
HRA	**Herat**	**124.32**	**300**		PKPdf		**PKPdf**	**14 04 31.7**	**-1.3**
ABKAR	**Akbulak array**	**124.35**	**318**		PKPdf		**PKPdf**	**14 04 31.7**	**-0.5**
SDBA	**SAO DESIDERIO**	**124.69**	**120**		*e*P		**PKiKP**	**14 04 34.9**	**+0.5**
AKTO	**Aktyubinsk**	**125.28**	**319**		PKP		**PKiKP**	**14 04 35.0**	**+0.6**
	comp=Z,6.5nm,0.8s,baz=56,slow=3.8,SNR=19								
AKTO	**Aktyubinsk**	**125.28**	**319**		PKIKP		**PKiKP**	**14 04 35.0**	**+0.6**
NAN01	**Guarapari, ES**	**125.30**	**129**		*e*P		**PKiKP**	**14 04 35.8**	**+0.4**
ISOG	**Isortoq, Green**	**125.52**	**20**		*i* P		**PKiKP**	**14 04 34.9**	**+0.5**
ISOG					IAmb		IAmb	14 04 36.1	
	comp=Z,16nm,0.7s								
NRS	**Narsarsuaq**	**125.70**	**26**		*i* P		**PKiKP**	**14 04 35.3**	**+0.5**
NRS					IAmb		IAmb	14 04 36.6	
	comp=Z,34nm,0.8s								
NRS	**Narsarsuaq**	**125.70**	**26**		PKIKP		**PKiKP**	**14 04 34.7**	**-0.2**
NRS	**Narsarsuaq**	**125.70**	**26**				**PKiKP**	**14 04 34.7**	**-0.2**
SCO	**Scoresbysund**	**125.75**	**10**	‖	*i* P		**PKiKP**	**14 04 36.3**	**+1.5**
SCO					IAmb		IAmb	14 04 37.2	
	comp=Z,22nm,0.8s								
SCO	**Scoresbysund**	**125.75**	**10**	‖	*i* PKIKP		**PKiKP**	**14 04 36.2**	**+1.5**
SCO					pmax		pmax		
	comp=Z,22nm,0.8s								
ANGG	**Ammassalik, Gr**	**125.90**	**19**		*i* P		**PKPdf**	**14 04 34.4**	**-0.3**
HAMF	**Hammerfest**	**125.93**	**351**		*e*PKPdf		**PKiKP**	**14 04 35.7**	**+0.6**
SUR	**Sutherland**	**126.58**	**200**		P		**PKiKP**	**14 04 38.3**	**+0.4**
ARA0	**ARCESS Array S**	**126.64**	**350**		*e*PKPdf		**PKiKP**	**14 04 36.8**	**+0.2**
ARCES	**ARCESS Array B**	**126.64**	**350**		PKHKP		PKPpre	14 04 29.3	
	comp=Z,1.5nm,0.6s,baz=146,slow=0.4,SNR=4.9								
ARCES					PKP		**PKPdf**	**14 04 36.2**	**+0.1**
	comp=Z,26nm,0.7s,baz=318,slow=1.6,SNR=11								
TMAB	**Tom-Au,PA,Br**	**126.69**	**107**		*e*P		**PKiKP**	**14 04 39.1**	**+0.8**
PRGR	**Permogore**	**126.92**	**336**		*e*PKIKP		**PKPdf**	**14 04 36.1**	**-0.6**
PRGR					pmax		pmax		
	comp=Z,18nm,0.6s								
WSAR	**Wadi Sarin**	**127.00**	**286**		PKP		**PKiKP**	**14 04 39.2**	**+0.5**
	comp=Z,2.4nm,0.6s,baz=86,slow=3.3,SNR=4.2								
JETT	**Jettan, Norway**	**127.38**	**352**		*e*PKPdf		**PKiKP**	**14 04 38.3**	**+0.2**
GEYT	**Alibeck**	**127.46**	**304**		PKP		**PKiKP**	**14 04 39.8**	**+0.5**
	comp=Z,12nm,0.8s,baz=205,slow=2.8,SNR=18								
GYA0B	**ALIBECK ARRAY**	**127.46**	**304**		PKPdf		**PKPdf**	**14 04 38.0**	**-0.7**
KTK1	**Kautokeino**	**127.47**	**351**		*e*PKPdf		**PKPdf**	**14 04 37.5**	**-0.1**
TRO	**Tromso**	**127.50**	**353**		*e*PKPdf		**PKiKP**	**14 04 38.7**	**+0.4**
NBIT	**Itapeh - BA**	**127.61**	**126**		*e*P		**PKiKP**	**14 04 40.1**	**0.0**
GDU01	**Guandu, BA**	**128.23**	**125**		*e*P		**PKiKP**	**14 04 41.4**	**+0.1**
HOQ	**Hoqain**	**128.24**	**286**		P		**PKiKP**	**14 04 42.5**	**+1.3**
BSY	**Bisya**	**128.26**	**285**		P		**PKPdf**	**14 04 40.3**	**-0.3**
BOSA	**Boshof**	**128.30**	**206**		PKP		**PKiKP**	**14 04 41.2**	**-0.2**
	comp=Z,10.0nm,0.8s,baz=324,slow=0.7,SNR=11								
BOSA	**Boshof**	**128.30**	**206**		PKiKP		**PKPdf**	**14 04 40.2**	**-0.5**
BOSA	**Boshof**	**128.30**	**206**		PKPdf		**PKPdf**	**14 04 40.1**	**-0.5**
SOHO	**SOHO**	**128.99**	**287**		P		**PKiKP**	**14 04 42.1**	**+0.2**
SHAO	**Shalim**	**129.13**	**279**		P		**PKiKP**	**14 04 43.7**	**+0.7**
UOSS	**Minazif**	**129.35**	**288**		P		**PKiKP**	**14 04 43.8**	**+0.5**
HATD	**Hatta, Dubai**	**129.41**	**287**		P		**PKiKP**	**14 04 43.5**	**0.0**
MASF	**Masafi**	**129.41**	**288**		P		**PKiKP**	**14 04 43.9**	**+0.4**
SHME	**Shamm**	**129.47**	**289**		P		**PKiKP**	**14 04 43.6**	**+0.1**
LOF	**Lofoten**	**129.52**	**354**		*e*PKPdf		**PKPdf**	**14 04 40.2**	**-1.4**
SOCY	**Socotra**	**129.54**	**271**		PKPdf		**PKPdf**	**14 04 42.7**	**-0.5**
STEI	**Steigen**	**129.55**	**354**		*e*PKPdf		**PKiKP**	**14 04 42.9**	**+0.5**
ALNE	**Al Ain**	**129.70**	**286**		P		**PKiKP**	**14 04 46.5**	**+2.5**
	SNR=5.7								
DMTO	**DMTO**	**129.72**	**278**		P		**PKiKP**	**14 04 44.2**	**0.0**
KLMR	**Klimovskoe**	**129.73**	**337**		*e*PKIKP		**PKPdf**	**14 04 40.5**	**-1.6**
KLMR					*e*			14 17 21.3	
KLMR					pmax		pmax		
	comp=Z,43nm,1.1s								
KLMR	**Klimovskoe**	**129.73**	**337**		*e*PKPdf		**PKPdf**	**14 04 40.6**	**-1.6**
KLMR					AMP			14 04 45.1	
	comp=Z,43nm,1.1s								
KLMR					*e*PP		**PP**	**14 06 55.6**	**-4.8**
KLMR					*e*PKKP			14 17 21.3	
FAQ	**Al Faqa, Dubai**	**129.89**	**287**		P		**PKiKP**	**14 04 44.9**	**+0.5**
FAUS	**Fauske**	**130.07**	**353**		*e*PKPdf		**PKiKP**	**14 04 43.4**	**-0.1**
ASUD	**Al Ashush, Dub**	**130.12**	**287**		P		**PKiKP**	**14 04 46.1**	**+1.2**
RBK	**Rabkut**	**130.38**	**278**		P		**PKPdf**	**14 04 45.0**	**+0.3**
	SNR=8.3								
DOK	**Doka**	**130.62**	**279**		P		**PKiKP**	**14 04 46.0**	**0.0**
	SNR=6.1								
WHFO	**Wadi Hawf**	**130.85**	**278**		P		**PKiKP**	**14 04 47.4**	**+0.8**
	SNR=5.3								
NBB40	**Tonnes**	**131.15**	**354**		*e*SKPdf		**SKiKP**	**14 07 31.7**	**-2.7**
KONS	**Konsvik**	**131.15**	**354**		*e*PKPdf		**PKPdf**	**14 04 44.5**	**-0.2**
NBLA	**Lagarto - SE**	**131.24**	**123**		*e*P		**PKiKP**	**14 04 47.5**	**0.0**
MOR8	**Moi Rana**	**131.33**	**353**		*e*PKPdf		**PKPdf**	**14 04 45.1**	**0.0**
NBTA	**Tacaratu-PE**	**132.10**	**121**		*e*P		**PKPdf**	**14 04 48.0**	**-0.1**
NBMA	**Muriti-CE**	**132.49**	**119**		*e*P		**PKiKP**	**14 04 49.9**	**-0.2**
NBPB	**Pedra_Branca-C**	**132.75**	**116**		*e*P		**PKiKP**	**14 04 50.2**	**-0.4**
NSS	**Namsos**	**133.19**	**354**		*e*PKPdf		**PKPdf**	**14 04 47.8**	**-0.8**
NBAN	**Anadia - AL**	**133.22**	**123**		*e*P		**PKiKP**	**14 04 51.5**	**0.0**
NBMO	**Morrinhos-CE**	**133.46**	**113**		*e*P		**PKiKP**	**14 04 51.9**	**-0.1**
FINES	**FINESS Array B**	**133.54**	**344**

BSD	**Bornholm Skovb**	**141.82**	**348**	*i*	P		**PKPdf**	14 05 01.0	**-3.7**
BSD	comp=Z,24nm,0.7s				IAmb	IAmb		14 05 01.8	
BSD	**Bornholm Skovb**	**141.82**	**348**	*i*	PKHKP	PKPpre		14 05 01.0	
BSD	comp=Z,24nm,0.7s				pmax	pmax			
EBL	**Broad Law**	**142.28**	**5**	*e*	P		**PKPdf**	14 05 02.2	**-3.3**
RSDY	**Resadiye-TOKAT**	**142.38**	**314**		P		**PKPdf**	14 05 05.1	**-1.1**
MALT	**Malatya**	**142.44**	**310**		P		**PKPdf**	14 05 04.7	**-1.8**
CLGH	**Cloghs, Cushen**	**142.65**	**8**	*e*	P		**PKPdf**	14 05 04.2	**-2.0**
EKA	**Eskdalemuir Ar**	**142.71**	**5**		PP			14 08 19.2	-1.0
	comp=Z,5.3nm,0.9s,baz=358,slow=2.5,SNR=5.2								
ESK	**Eskdalemuir**	**142.72**	**5**	*e*	P		**PKPdf**	14 05 03.5	**-2.7**
SVSK	**Karacayir**	**142.81**	**313**		P		**PKPdf**	14 05 06.9	**0.0**
NEWG	**New Galloway**	**142.83**	**6**	*e*	P		**PKPdf**	14 05 03.9	**-2.6**
KVT	**Kavak**	**142.94**	**315**		P		**PKPdf**	14 05 07.2	**0.0**
TOKT	**Tokat**	**142.95**	**314**		P		**PKPdf**	14 05 06.8	**-0.5**
GKP	**Gorka Klasztor**	**143.01**	**345**	*e*	PKP	PKPab		14 05 02.9	-1.2
GKP	**Gorka Klasztor**	**143.01**	**345**	*e*	P	PKPab		14 05 03.0	-1.1
DARE	**Darende-Malaty**	**143.02**	**311**		P		**PKPdf**	14 05 07.7	**+0.2**
SNOP	**Sinop**	**143.04**	**317**		P		**PKPdf**	14 05 06.4	**-0.9**
SORM	**Soroca**	**143.19**	**330**	⇑	P	PKPbc		14 05 06.0	+0.7
SORM	**Soroca**	**143.19**	**330**	⇑	PKIKP	PKPbc		14 05 06.0	+0.6
DIKM	**Dikmen**	**143.19**	**317**	⇑	P		**PKPdf**	14 05 08.4	**+0.9**
BEL	**Belsk**	**143.27**	**340**	*e*	PKP		**PKPdf**	14 05 07.2	**-0.1**
EDMD	**Edmundbyers**	**143.29**	**4**	*e*	P	PKPbc		14 05 05.5	0.0
KESW	**Keswick, Cumbr**	**143.45**	**5**	*e*	P	PKPab		14 05 05.6	-0.1
IOMK	**Kirk Michael**	**143.64**	**6**	*e*	P	PKPab		14 05 06.1	-0.4
BSEG	**Bad Segeberg**	**143.73**	**352**	*e*	PKPbc		**PKPdf**	14 05 07.7	**-0.4**
	baz=6.9,slow=2.8								
WIM	**Isle of Man**	**143.74**	**7**	*e*	P	PKPbc		14 05 07.0	+0.1
IGLA	**Glengowla, Co**	**143.75**	**11**	*e*	P		**PKPdf**	14 05 07.5	**-0.6**
GAZ	**Gaziantep**	**143.76**	**309**		P		**PKPdf**	14 05 09.6	**+0.8**
GAZ	**Gaziantep**	**143.76**	**309**		PKPdf	PKPbc		14 05 08.0	+0.4
LVV	**L'vov**	**143.79**	**336**	*e*	PKIKP		**PKPdf**	14 05 08.2	**-0.1**
BZK	**Bozkurt**	**143.85**	**318**		P		**PKPdf**	14 05 09.2	**+0.5**
SARI	**SarD1z-Kayseri**	**143.85**	**311**		P		**PKPdf**	14 05 09.1	**0.0**
KMRS	**Kahramanmaras**	**143.86**	**309**		P		**PKPdf**	14 05 09.9	**+1.0**
BNN	**Bunyan**	**144.07**	**312**		P		**PKPdf**	14 05 09.7	**+0.3**
HPK	**Haverah Park**	**144.18**	**4**	*e*	P		**PKPdf**	14 05 08.9	**0.0**
IAS	**Iasi**	**144.23**	**330**	⇓	P		**PKPdf**	14 05 09.8	**+0.6**
IAS	**Iasi**	**144.23**	**330**	⇓	PKIKP		**PKPdf**	14 05 09.8	**+0.6**
CORM	**Corum**	**144.32**	**315**		P		**PKPdf**	14 05 10.9	**+1.2**
DSB	**Dublin**	**144.41**	**9**				**PKPab**	14 05 09.5	**+0.1**
KWP	**Kalwaria Pacla**	**144.45**	**337**	*e*	PKP		**PKPab**	14 05 10.2	**+0.5**
KWP	**Kalwaria Pacla**	**144.45**	**337**		PKIKP		**PKPdf**	14 05 09.5	**0.0**
KWP	**Kalwaria Pacla**	**144.45**	**337**				**PKPdf**	14 05 09.5	**0.0**
WPS	**Cemaes, Angles**	**144.49**	**7**	*e*	P		**PKPdf**	14 05 09.4	**0.0**
VASR	**Vaslui**	**144.51**	**329**	⇑	P		**PKPab**	14 05 11.5	**+1.5**
WME	**Myndd Eilian**	**144.52**	**6**	*e*	P		**PKPab**	14 05 09.7	**-0.1**
RUE	**Ruedersdorf**	**144.53**	**348**	*e*	PKPbc		**PKPab**	14 05 10.4	**+0.6**
	baz=6.9,slow=2.8								
WLF1	**Llynfaes**	**144.61**	**7**	*e*	P		**PKPab**	14 05 10.1	**-0.1**
YRC	**Rhoscolyn**	**144.63**	**7**	*e*	P	PKPbc		14 05 09.9	+0.2
KOZT	**Kozan**	**144.66**	**310**		P		**PKPab**	14 05 12.1	**+1.2**
LBWR	**Ladybower, Pea**	**144.73**	**4**	*e*	P		**PKPab**	14 05 10.7	**+0.1**
PRAR	**RASCA**	**144.74**	**331**	⇓	P		**PKPab**	14 05 11.7	**+0.8**
LMK	**Market Rasen**	**144.75**	**2**	*e*	P		**PKPab**	14 05 10.7	**0.0**
CANT	**Cankiri**	**144.78**	**316**		P		**PKiKP**	14 05 12.9	**-1.5**
YLL	**Llanberis**	**144.79**	**6**	*e*	P		**PKPab**	14 05 11.0	**+0.2**
TAHT	**Tahtakopru-Hat**	**144.82**	**308**		P		**PKiKP**	14 05 13.5	**-1.0**
BIR	**Birlad**	**144.85**	**329**	⇑	P		**PKiKP**	14 05 14.7	**+0.4**
BIR	**Birlad**	**144.85**	**329**	⇑	PKIKP		**PKiKP**	14 05 14.7	**+0.4**
OJC	**Ojcow**	**144.98**	**340**	*e*	PKP		**PKPab**	14 05 11.6	**-0.1**
OJC	**Ojcow**	**144.98**	**340**		PKIKP		**PKPdf**	14 05 10.5	**+0.1**
OJC	**Ojcow**	**144.98**	**340**		PKPdf		**PKPdf**	14 05 10.5	**+0.1**
TLCR		**144.98**	**326**	⇑	P		**PKPab**	14 05 12.6	**+0.8**
TLCR		**144.98**	**326**	⇑	PKIKP		**PKPab**	14 05 12.6	**+0.8**
BUR08	**Bucovina Ar. S**	**144.99**	**332**			PKPbc		14 05 11.5	+0.3
VARL	**Varlezi**	**145.00**	**328**	⇓	P		**PKiKP**	14 05 14.6	**+0.1**
BURAR	**Bucovina Array**	**145.00**	**332**	⇑	P		**PKPab**	14 05 12.9	**+0.9**
BURAR	**Bucovina Array**	**145.00**	**332**	⇑	PKIKP		**PKPab**	14 05 12.9	**+0.9**
BURAR	**Bucovina Array**	**145.00**	**332**				**PKPab**	14 05 12.1	**+0.1**
STNC	**Stoke**	**145.01**	**4**	*e*	P		**PKPab**	14 05 12.2	**+0.6**
BIZ	**Bicaz**	**145.10**	**331**	⇓	P		**PKPab**	14 05 13.1	**+0.8**
GHRR		**145.10**	**328**	⇑	P		**PKiKP**	14 05 13.9	**-0.9**
FOEL	**Foel Wylfa**	**145.13**	**5**	*e*	P		**PKPbc**	14 05 11.0	**-0.3**
FLTG	**Flechtingen**	**145.14**	**350**	*e*	PKPbc		**PKPab**	14 05 11.9	**-0.3**
	baz=6.9,slow=2.8								
TESR	**Tescani**	**145.16**	**330**	⇓	P		**PKPab**	14 05 12.8	**+0.3**
NRDL	**Niedersach Rie**	**145.16**	**351**	*e*	PKPbc		**PKPab**	14 05 12.3	**+0.1**
	baz=6.9,slow=2.8								
CMRD	**Camardi-Nigde**	**145.19**	**311**		P		**PKPab**	14 05 12.8	**-0.3**
BR131	**Keskin Array S**	**145.20**	**315**		PKIKP		**PKPdf**	14 05 11.2	**-0.1**
BR131	**Keskin Array S**	**145.20**	**315**				**PKPdf**	14 05 11.2	**-0.1**
BRTR	**Keskin Array B**	**145.20**	**315**		PKPbc		**PKPbc**	14 05 12.4	**+0.2**
	comp=Z,31nm,0.8s,baz=137,slow=4.0,SNR=73								
BRTR					SKKPbc	SKKPbc		14 16 05.8	+1.3
	comp=Z,1.5nm,0.8s,baz=208,slow=7.0,SNR=4.7								
BRTR	**Keskin Array B**	**145.20**	**315**		P		**PKPbc**	14 05 12.2	**0.0**
SHEL	**Horse Pasture**	**145.25**	**167**		PKIKP		**PKPbc**	14 05 12.8	**0.0**
SHEL	**Horse Pasture**	**145.25**	**167**		PKPbc		**PKPbc**	14 05 12.8	**0.0**
SCHL	**Schela**	**145.28**	**327**	⇑	P		**PKiKP**	14 05 15.5	**+0.4**
KAMT	**Kaman**	**145.32**	**314**		P		**PKPbc**	14 05 12.5	**0.0**
CFR	**Carcaliu**	**145.34**	**327**	⇓	P		**PKPab**	14 05 13.8	**+0.6**
CFR	**Carcaliu**	**145.34**	**327**	⇓	PKP2		**PKPab**	14 05 13.8	**+0.6**
TPGR	**Topolog**	**145.41**	**326**	⇑	P		**PKPab**	14 05 14.5	**+1.0**
CWF	**Charnwood Fore**	**145.42**	**3**	*e*	P		**PKPbc**	14 05 11.7	**-0.5**
UZH	**Uzhgorod**	**145.42**	**336**	*e*	PKIKP		**PKPdf**	14 05 09.8	**-1.4**
UZH				*i*				14 05 13.5	
UZH				*e*				14 07 05.0	
UZH				*e*				14 07 57.8	
ASSE	**Asse, Remlinge**	**145.43**	**350**	*e*	PKPbc		**PKPbc**	14 05 12.5	**+0.4**
	baz=6.9,slow=2.8								
KSP	**Ksiaz**	**145.46**	**344**	*e*	PKP		**PKPab**	14 05 13.4	**-0.1**
ODBI	**Odobesti**	**145.49**	**328**	⇑	P		**PKiKP**	14 05 16.9	**+1.3**
NIE	**Niedzica**	**145.50**	**339**	*e*	PKP		**PKPbc**	14 05 13.1	**+0.5**
WACR	**West Acre**	**145.51**	**1**	*e*	P		**PKPab**	14 05 12.8	**+0.4**
CRVS	**Cervenica-Dubn**	**145.51**	**337**	*e*	PKP2		**PKPab**	14 05 14.1	**+0.3**
CRVS	**Cervenica-Dubn**	**145.51**	**337**	*e*	PKP		**PKPab**	14 05 14.1	**+0.3**
VRI	**Vrincioaia**	**145.58**	**329**	⇑	P		**PKPab**	14 05 14.3	**+0.1**
VRI	**Vrincioaia**	**145.58**	**329**		P		**PKPab**	14 05 14.3	**+0.1**
VRI	**Vrincioaia**	**145.58**	**329**	⇑	PKP2		**PKPab**	14 05 14.3	**+0.1**
PLOR	**Plostina**	**145.63**	**329**	⇑	P		**PKPab**	14 05 14.6	**+0.2**
PLOR	**Plostina**	**145.63**	**329**	⇑	PKP2		**PKPab**	14 05 14.6	**+0.2**
IBBN	**Ibbenburen**	**145.64**	**354**	*e*	PKPbc		**PKPbc**	14 05 13.0	**+0.2**
	baz=6.9,slow=2.8								
ANTO	**Ankara**	**145.70**	**316**		P		**PKPab**	14 05 14.6	**-0.3**
ANTO	**Ankara**	**145.70**	**316**		PKIKP		**PKPbc**	14 05 12.9	**-0.6**
ANTO	**Ankara**	**145.70**	**316**				**PKPbc**	14 05 12.9	**-0.6**
BMR	**Baia Mare**	**145.70**	**334**	⇓	P		**PKPab**	14 05 14.7	**+0.2**
BMR	**Baia Mare**	**145.70**	**334**	⇓	PKP2		**PKPab**	14 05 14.7	**+0.2**
AFSR	**Afar-Bala (An**	**145.72**	**315**		P		**PKPab**	14 05 14.7	**-0.4**
TRPA	**Tarpa**	**145.73**	**335**	⇑	P		**PKPab**	14 05 14.7	**+0.1**
OSTC	**Ostas**	**145.74**	**344**	*e*	PKP		**PKPab**	14 05 14.9	**+0.2**
CHVC	**Chvalec**	**145.75**	**344**	*e*	PKP		**PKPab**	14 05 14.5	**-0.2**
CLZ	**Clausthal**	**145.75**	**351**	*e*	PKPbc		**PKPbc**	14 05 13.6	**+0.4**
	baz=6.9,slow=2.8								
HARR	**Harsova**	**145.78**	**326**	⇑	P		**PKPab**	14 05 15.2	**+0.2**
HARR	**Harsova**	**145.78**	**326**	⇑	PKP2		**PKPab**	14 05 15.2	**+0.2**
ARCR	**ARCALIA**	**145.79**	**332**	⇑	P		**PKPab**	14 05 15.4	**+0.4**
CLL	**Collm**	**145.80**	**348**	*i*	PKPbc		**PKPbc**	14 05 14.0	**+0.7**
	comp=Z,235nm,0.8s								
CLL				*e*	PKPdf	pPKPab		14 07 06.0	-1.5
CLL				*e*	SKPdf		**SKPdf**	14 07 59.0	**+0.2**
CLL				*es*	PKiKP		**sPKiKP**	14 08 07.0	**+6.3**
CLL				*e*	PP		**PP**	14 08 36.0	**-2.6**
CLL				*i*	PKSdf		**PKSdf**	14 08 43.3	**-3.6**
CLL				*e*	PP			14 10 26.0	
CLL				*es*	PP			14 11 15.0	
CLL				*e*	SKSP			14 18 06.0	
CLL				*e*	SKSP			14 20 40.0	
CLL	**Collm**	**145.80**	**348**	*i*	PKP2		**PKPbc**	14 05 14.0	**+0.7**
CLL					pmax	pmax			
	comp=Z,235nm,0.8s								
CLL	**Collm**	**145.80**	**348**				**PKPbc**	14 05 13.5	**+0.2**
CLL	**Collm**	**145.80**	**348**	*e*	PKPbc		**PKPab**	14 05 14.3	**-0.5**
	baz=6.9,slow=2.8								
TLBR	**Topalu**	**145.81**	**326**	⇑	P		**PKPab**	14 05 15.1	**0.0**
OKC	**Ostrava-Krasne**	**145.83**	**341**	*e*	PKP2		**PKPab**	14 05 14.8	**-0.2**
OKC	**Ostrava-Krasne**	**145.83**	**341**	*e*	PKP		**PKPab**	14 05 14.8	**-0.2**
UPC	**Upice**	**145.84**	**344**	*e*	PKP2		**PKPab**	14 05 14.5	**-0.5**
UPC	**Upice**	**145.84**	**344**	*e*	PKP		**PKPab**	14 05 14.5	**-0.5**
MERS	**Mersin**	**145.86**	**310**		P		**PKPab**	14 05 15.6	**-0.1**
RSBS	**Rosebush, Pemb**	**145.89**	**7**	*e*	P		**PKPbc**	14 05 13.7	**+0.2**
DPC	**Dobruska-Polom**	**145.90**	**344**	*e*	PKP2		**PKPab**	14 05 15.1	**-0.2**
DPC	**Dobruska-Polom**	**145.90**	**344**	*e*	PKP		**PKPab**	14 05 15.1	**-0.2**
KULU	**Kulu**	**145.96**	**314**		P		**PKPab**	14 05 16.2	**+0.1**
BRG	**Berggiesshubel**	**146.00**	**346**	*e*	PKP		**PKPbc**	14 05 13.6	**-0.3**
BRG				*i*	x	x		14 05 15.4	
BRG					Amp			14 05 15.8	
	comp=Z,58nm,0.8s								
BRG				*i*	x	x		14 05 17.5	
BRG					Amp			14 05 18.1	
	comp=Z,68nm,0.8s								
BRG				*ex*	x	x		14 05 22.4	
BRG					Amp			14 05 24.6	
	comp=Z,28nm,0.9s								
BRG					pPKP		**pPKPdf**	14 07 09.5	**+0.5**
BRG					Amp			14 07 14.4	
	comp=Z,96nm,2.2s								
BRG					SKP			14 08 08.9	
BRG					Amp			14 08 16.3	
	comp=Z,29nm,1.4s								
BRG	**Berggiesshubel**	**146.00**	**346**	*e*	PKPbc		**PKPbc**	14 05 14.4	**+0.5**
	baz=6.9,slow=2.8								
LANS	**Liptovska Anna**	**146.01**	**339**	*e*	PKP2		**PKPab**	14 05 16.2	**+0.4**
LANS	**Liptovska Anna**	**146.01**	**339**	*e*	PKP		**PKPab**	14 05 16.2	**+0.4**
KRLC	**Kraliky**	**146.02**	**343**	*e*	PKP2		**PKPab**	14 05 15.6	**-0.2**
KRLC	**Kraliky**	**146.02**	**343**	*e*	PKP		**PKPab**	14 05 15.6	**-0.2**
MCH1	**Michaelchurch**	**146.03**	**5**	*e*	P		**PKPbc**	14 05 14.5	**+0.6**
MORC	**Moravsky Berou**	**146.07**	**342**	*e*	PKP		**PKPbc**	14 05 14.9	**+0.7**
MORC				*e*				14 07 11.0	
MORC	**Moravsky Berou**	**146.07**	**342**		PKIKP		**PKPbc**	14 05 13.7	**-0.5**
MORC	**Moravsky Berou**	**146.07**	**342**		PKPdf		**PKPbc**	14 05 13.7	**-0.5**
MBAR	**Mbarara**	**146.08**	**240**		PKPbc		**PKPbc**	14 05 15.6	**+0.1**
	comp=Z,34nm,0.6s,baz=145,slow=3.4,SNR=40								
FBE	**Freiberg**	**146.09**	**347**	*e*	PKPbc		**PKPbc**	14 05 14.5	**+0.4**
	baz=6.9,slow=2.8								
FBE				*e*	PKPbc		**pPKPdf**	14 07 10.9	**+1.8**
NEHR	**Nehoiu**	**146.10**	**329**	⇓	P		**PKPab**	14 05 15.8	**-0.5**
GTTG	**Gottingen**	**146.10**	**351**	*e*	PKPbc		**PKPbc**	14 05 14.8	**+0.6**
	baz=6.9,slow=2.8								
NEUB	**Neuenburg**	**146.13**	**349**	*e*	PKPbc		**PKPbc**	14 05 14.5	**+0.3**
	baz=6.9,slow=2.8								
DOPR	**Dopca**	**146.15**	**330**	⇑	P		**PKiKP**	14 05 16.8	**-0.2**
YUVA	**Yuva-Kibriscik**	**146.16**	**317**		P		**PKPab**	14 05 16.2	**-0.6**
PVCC	**Panska Ves**	**146.18**	**345**	*e*	PKP2		**PKPab**	14 05 15.9	**-0.5**
PVCC	**Panska Ves**	**146.18**	**345**	*e*	PKP		**PKPab**	14 05 15.9	**-0.5**
ISR	**Istrita**	**146.20**	**328**	⇑	P		**PKPab**	14 05 16.1	**-0.6**
ISR	**Istrita**	**146.20**	**328**	⇑	PKP2		**PKPab**	14 05 16.1	**-0.6**
MONM	**Monmouth**	**146.20**	**5**	*e*	P		**PKPbc**	14 05 15.1	**+0.7**
KECS	**Kecovo**	**146.22**	**338**	*e*	PKP2		**PKPab**	14 05 16.3	**-0.3**
KECS	**Kecovo**	**146.22**	**338**	*e*	PKP		**PKPab**	14 05 16.3	**-0.3**
MLR	**Muntele Rosu**	**146.23**	**329**	⇑	P		**PKPbc**	14 05 15.8	**+0.9**
MLR	**Muntele Rosu**	**146.23**	**329**	⇑	PKP2		**PKPbc**	14 05 15.8	**+0.9**
MLR	**Muntele Rosu**	**146.23**	**329**		PKPbc		**PKPdf**	14 05 13.4	**+0.5**
CHBY	**Cihanbeyli**	**146.26**	**313**		P		**PKPab**	14 05 16.3	**-0.9**
KIZK	**Mersin**	**146.29**	**309**		P		**PKPab**	14 05 16.7	**-0.6**
OLDB	**Oldbury-Upon-S**	**146.40**	**5**	*e*	P		**PKPab**	14 05 16.8	**-0.3**
CJR	**Cluj-Napoca**	**146.41**	**333**	⇓	P		**PKPab**	14 05 17.0	**-0.5**
CJR	**Cluj-Napoca**	**146.41**	**333**	⇓	PKP2		**PKPab**	14 05 17.0	**-0.5**
MDUB	**Mudurnu**	**146.43**	**318**		P		**PKPbc**	14 05 16.1	**+0.5**
MDUB	**Mudurnu**	**146.43**	**318**				**PKPdf**	14 05 14.0	**+0.7**
MDB	**Medias**	**146.49**	**331**	⇑	P		**PKPab**	14 05 18.4	**+0.7**
MDB	**Medias**	**146.49**	**331**	⇑	PKP2		**PKPab**	14 05 18.4	**+0.7**
SECR		**146.50**	**328**	⇑	P		**PKiKP**	14 05 16.6	**-1.1**
BUG	**Bochum--Univer**	**146.54**	**354**	*e*	PKPbc		**PKPbc**	14 05 15.2	**-0.1**
	baz=6.9,slow=2.8								
MMAI	**Mount Meron Ar**	**146.56**	**303**		PKPbc		**PKPbc**	14 07 10.7	**+0.9**
	comp=Z,54nm,0.5s,baz=68,slow=5.4,SNR=55								
LTVH	**Ltavrtes, Hu**	**146.59**	**335**	⇓	P		**PKPab**	14 05 18.0	**0.0**
PLAR	**PLOIESTI**	**146.60**	**328**	⇑	P		**PKiKP**	14 05 16.9	**-1.0**
PRA	**Prague**	**146.64**	**345**	*e*	PKP2		**PKiKP**	14 05 17.4	**-0.4**
PRA	**Prague**	**146.64**	**345**	*e*	PKP		**PKiKP**	14 05 17.4	**-0.4**
KASTN	**Kahler Asten**	**146.65**	**353**	*e*	PKPbc		**PKPbc**	14 05 15.2	**-0.5**
	baz=6.9,slow=2.8								
PRU	**Pruhonice**	**146.69**	**345**	*e*	PKP2		**PKiKP**	14 05 16.9	**-1.1**
PRU	**Pruhonice**	**146.69**	**345**	*e*	PKP		**PKiKP**	14 05 16.9	**-1.1**
PRU				*ex*	x	x		14 07 06.0	
MOX	**Moxa**	**146.70**	**349**	*e*	PKPbc		**PKPbc**	14 05 15.3	**-0.6**
	baz=6.9,slow=2.8								
MOX				*e*	PKPbc	pPKPab		14 07 12.5	+1.5
VOIR		**146.70**	**330**	⇓	P		**PKPbc**	14 05 16.6	**+0.4**
VOIR		**146.70**	**330**	⇓	PKP2		**PKPbc**	14 05 16.6	**+0.4**
MMLI	**Mount Malkishu**	**146.72**	**302**		P		**PKiKP**	14 05 18.8	**+0.2**
DRGR		**146.72**	**334**		P		**PKiKP**	14 05 17.6	**-0.6**
DRGR		**146.72**	**334**	⇑	PKP2		**PKiKP**	14 05 17.6	**-0.6**
IKL	**Isikli**	**146.73**	**309**		P		**PKiKP**	14 05 17.7	**-0.8**
PLN	**Plauen**	**146.75**	**348**	*e*	PKPbc		**PKPbc**	14 05 15.5	**-0.5**
	baz=6.9,slow=2.8								
TANN	**Tannenbergstha**	**146.75**	**348**	*e*	PKPbc		**PKPbc**	14 05 15.3	**-0.7**
	baz=6.9,slow=2.8								
TANN				*e*	PKPbc	pPKPab		14 07 12.0	+0.7
WERD	**Werda**	**146.75**	**348**	*e*	PKPbc		**PKPbc**	14 05 15.8	**-0.2**
	baz=6.9,slow=2.8								
WERD				*e*	PKPbc	pPKPab		14 07 12.9	+1.7
VRAC	**Vranov**	**146.76**	**342**	⇓	P		**PKiKP**	14 05 17.4	**-0.8**
VRAC	**Vranov**	**146.76**	**342**	*e*	PKP		**PKiKP**	14 05 17.3	**-0.8**
VRAC				*e*				14 07 12.2	
VRAC	**Vranov**	**146.76**	**342**	⇓	PKP2		**PKiKP**	14 05 17.4	**-0.8**
VYHS	**Vyhne**	**146.78**	**339**	*e*	PKP2		**PKiKP**	14 05 17.8	**-0.4**
VYHS	**Vyhne**	**146.78**	**339**	*e*	PKP		**PKiKP**	14 05 17.8	**-0.4**
LADK	**Ladik-KONYA**	**146.81**	**313**		P		**PKPbc**	14 05 16.7	**0.0**
UBBA	**Unterbreizbach**	**146.81**	**351**	*e*	PKPbc		**PKPbc**	14 05 15.7	**-0.3**
	baz=6.9,slow=2.8								
TEVE	**Tevekalti-Mers**	**146.82**	**310**		P		**PKiKP**	14 05 18.3	**-0.5**
GUNZ	**Gunzen**	**146.83**	**348**	*e*	PKPbc		**PKPbc**	14 05 15.8	**-0.4**
	baz=6.9,slow=2.8								
GUNZ				*e*	PKPbc	pPKPab		14 07 12.7	+1.1
JAVC	**Velka Javorina**	**146.84**	**341**	*e*	PKP		**PKiKP**	14 05 18.7	**+0.3**
JAVC				*e*				14 07 13.3	
MTUR	**Matau**	**146.85**	**329**	⇑	P		**PKPab**	14 05 20.7	**+1.4**
MTUR	**Matau**	**146.85**	**329**	⇑	PKP2		**PKPab**	14 05 20.7	**+1.4**
KOLL	**Kolacno**	**146.85**	**340**	*e*	PKP		**PKiKP**	14 05 18.3	**0.0**
HTL	**Hartland**	**146.86**	**7**	*e*	P		**PKiKP**	14 05 17.6	**-0.7**
WERN	**Wernitzgruen**	**146.89**	**348**	*e*	PKPbc		**PKPbc**	14 05 15.8	**-0.6**
	baz=6.9,slow=2.8								
PSZ	**Piszkesteto**	**146.91**	**338**	⇓	P		**PKiKP**	14 05 18.0	**-0.6**
PSZ	**Piszkesteto**	**146.91**	**338**	⇓	PKP2		**PKiKP**	14 05 18.0	**-0.6**
PSZ	**Piszkesteto**	**146.91**	**338**		PKPbc		**PKPdf**	14 05 14.8	**+1.0**
KONT	**Konya--Tatoy**	**146.93**	**313**		P		**PKPbc**	14 05 17.9	**+1.0**
NKC	**Novy Kostel**	**146.93**	**348**	*e*	PKP2		**PKPbc**	14 05 16.5	**0.0**
NKC	**Novy Kostel**	**146.93**	**348**	*e*	PKP		**PKPbc**	14 05 16.5	**0.0**
NKC				*e*	PKP	pPKPab		14 07 11.7	-0.2
ARR	**Arges**	**146.95**	**330**	⇓	P		**PKPbc**	14 05 15.7	**-1.1**
BERE	**Bereket-Mersin**	**147.02**	**310**		P		**PKiKP**	14 05 18.9	**-0.4**
KRUC	**Moravsky**	**147.04**	**342**	*e*	PKP		**PKiKP**	14 05 17.8	**-0.9**
KRUC				*e*				14 07 12.8	
TREC	**Trest**	**147.09**	**344**	*e*	PKP2		**PKPbc**	14 05 17.9	**+0.9**
TREC	**Trest**	**147.09**	**344**	*e*	PKP		**PKPbc**	14 05 17.9	**+0.9**
CIFT	**Ciftele, Eski**	**147.11**	**316**		P		**PKiKP**	14 05 18.6	**-0.7**
SGRR	**Singureni**	**147.12**	**327**	⇑	P		**PKiKP**	14 05 19.2	**+0.2**
SMOL	**Smolenice**	**147.22**	**341**	*e*	PKP2		**PKiKP**	14 05 19.4	**+0.3**
SMOL	**Smolenice**	**147.22**	**341**	*e*	PKP		**PKiKP**	14 05 19.4	**+0.3**
LFK	**Lefkose**	**147.23**	**308**		P		**PKiKP**	14 05 19.3	**-0.3**
MANZ	**Manzenberg**	**147.23**	**348**	*e*	PKPbc		**PKPbc**	14 05 16.4	**-0.9**
	baz=6.9,slow=2.8								
LOT	**Lotru**	**147.30**	**331**	⇑	P		**PKPbc**	14 05 18.2	**+0.4**
BEBN	**Eben Emael**	**147.32**	**356**	*d*	PKP		**PKiKP**	14 05 18.5	**-0.7**
BEBN				*dx*	x	x		14 05 20.5	
BEBN				*dx*	x	x		14 05 35.2	
ADVT	**Abdulvahap**	**147.38**	**319**		P		**PKiKP**	14 05 19.2	**-0.5**
MODS	**Modra-Piesok**	**147.40**	**341**	*e*	PKP2		**PKiKP**	14 05 18.7	**-0.8**
MODS	**Modra-Piesok**	**147.40**	**341**	*e*	PKP		**PKiKP**	14 05 18.7	**-0.8**
HUMR	**Humele**	**147.40**	**329**	⇑	P		**PKiKP**	14 05 19.0	**-0.6**
UCC	**Uccle**	**147.40**	**357**		PKP2		**PKPbc**	14 05 17.8	**+0.1**
UCC	**Uccle**	**147.40**	**357**				**PKPbc**	14 05 17.8	**+0.1**
ROTZ	**Rotzenmuhle**	**147.42**	**348**	*e*	PKPbc		**PKPbc**	14 05 16.4	**-1.4**
	baz=6.9,slow=2.8								
ROTZ				*e*	PKPbc		**pPKPab**	14 07 15.4	**+1.7**
AHRW	**Bad Neuenahr-A**	**147.45**	**354**	*e*	PKPbc		**PKPbc**	14 05 16.8	**-1.0**
	baz=6.9,slow=2.8								
MEM	**

SQTA			*i* P		**PKiKP**	**14 05 25.1**	**0.0**
	comp=Z,87nm,0.7s						
KAVA	**Kavala**	**150.12 324**	P		**PKiKP**	**14 05 25.7**	**+0.4**
YER	**Yerkesik**	**150.14 315**	P		**PKiKP**	**14 05 26.4**	**+0.8**
ABTA	**Abfaltersbach**	**150.20 345**	*i* P		**PKPdf**	**14 05 19.0**	**-0.2**
	comp=Z,31nm,1.2s,SNR=31						
ABTA			*i* P		**PKiKP**	**14 05 25.2**	**-0.3**
	comp=Z,106nm,0.7s						
PRK	**Paraskevi**	**150.23 320**	P		**PKiKP**	**14 05 27.6**	**+2.0**
CRES	**Cresnjev**	**150.23 341** ⇑	*i* P		**PKPbc**	**14 05 24.9**	**+0.1**
NVR	**Nevrokopi**	**150.24 326**	P		**PKiKP**	**14 05 26.0**	**+0.4**
DAVA	**Damuels**	**150.24 349**	*i* P		**PKPdf**	**14 05 20.9**	**+1.6**
	comp=Z,11nm,1.1s,SNR=20						
DAVA			*i* P		**PKiKP**	**14 05 25.5**	**-0.1**
	comp=Z,171nm,1.4s						
ZOU	**Zoufplan**	**150.27 345**			**PKPdf**	**14 05 18.9**	**-0.6**
THAS	**Thassos island**	**150.27 324**	P		**PKiKP**	**14 05 26.5**	**+0.9**
LJU	**Ljubljana**	**150.31 342**	*i* PKPdf		**PKPdf**	**14 05 20.8**	**+1.6**
LJU			*i* PKPbc		**PKiKP**	**14 05 25.4**	**-0.2**
LJU			*i*			14 05 26.9	
LJU			*i* PKPab		**PKPab**	**14 05 34.9**	**+1.5**
LJU			*ep*PKPbc		**pPKPbc**	**14 07 23.2**	**+2.0**
LJU			*i*			14 08 07.0	
FETA	**Feichten**	**150.34 348**	*i* P		**PKPdf**	**14 05 19.7**	**+0.2**
	comp=Z,18nm,0.8s,SNR=16						
FETA			*i* P		**PKiKP**	**14 05 25.8**	**0.0**
	comp=Z,84nm,1.0s						
TURN	**Turunc**	**150.35 314**	P		**PKiKP**	**14 05 27.1**	**+1.2**
BBLS	**Lazići**	**150.46 334** ⇑	*i* P		**PKiKP**	**14 05 27.1**	**+1.1**
HAPS	**Han Pijesak,BI**	**150.47 335**	*eP*		**PKPbc**	**14 05 25.8**	**+0.2**
GCAM	**G?zelcaml?**	**150.53 316**	P		**PKiKP**	**14 05 27.4**	**+1.2**
SRS	**Serrai**	**150.54 325**	P		**PKPbc**	**14 05 25.8**	**+0.1**
URLA	**Izmir**	**150.56 318**	P		**PKPbc**	**14 05 25.8**	**-0.1**
BLY	**Banja Luka**	**150.59 338**	*eP*		**PKiKP**	**14 05 26.5**	**+0.3**
STAL	**STALIGIAL**	**150.61 345**	PKPdf		**PKPdf**	**14 05 19.7**	**-0.1**
STAL			PKPbc		**PKPbc**	**14 05 26.0**	**+0.2**
RUDO	**Rudo**	**150.68 334**	*eP*		**PKPbc**	**14 05 25.9**	**-0.1**
SMG	**Samos**	**150.78 317**	P		**PKiKP**	**14 05 27.2**	**+0.4**
BODT	**Bodrum**	**150.83 315**	P		**PKiKP**	**14 05 26.9**	**0.0**
BODT	**Bodrum**	**150.83 315**	P		**PKPbc**	**14 05 26.3**	**-0.2**
TRI	**Trieste**	**150.84 343**	PKIKP		**PKiKP**	**14 05 26.6**	**0.0**
TRI	**Trieste**	**150.84 343**			**PKiKP**	**14 05 26.6**	**0.0**
CHOS	**Chios island**	**150.88 319**	P		**PKiKP**	**14 05 27.8**	**+0.7**
CHOS	**Chios island**	**150.88 319**	P		**PKiKP**	**14 05 27.4**	**+0.3**
CTI	**Castel Tesino**	**151.06 346**	PKIKP		**PKPdf**	**14 05 20.3**	**-0.2**
CTI	**Castel Tesino**	**151.06 346**	PKPdf		**PKPdf**	**14 05 20.3**	**-0.2**
CTI			PKPbc		**PKPbc**	**14 05 26.9**	**+0.1**
TUE	**Stuetta**	**151.13 349**			**PKPdf**	**14 05 20.9**	**+0.1**
TUE			PKPbc		**PKiKP**	**14 05 27.8**	**+0.3**
UPM	**Unac-Piva**	**151.22 334**	*eP*		**PKPbc**	**14 05 26.9**	**-0.5**
SENIN	**Lac Senin/Sane**	**151.54 352**	PKPbc		**PKiKP**	**14 05 28.7**	**+0.4**
BRY	**Bratogost**	**151.62 334**	*eP*		**PKPbc**	**14 05 28.0**	**-0.3**
PDG	**Podgorica**	**151.69 332** ⇑⇑	P		**PKiKP**	**14 05 29.6**	**+1.1**
PDG	**Podgorica**	**151.69 332** ⇑	*i* P		**PKiKP**	**14 05 28.1**	**+0.6**
PDG	**Podgorica**	**151.69 332**			**PKiKP**	**14 05 28.5**	**0.0**
TEOL	**Teolo**	**151.71 345**			**PKiKP**	**14 05 28.7**	**+0.2**
SALO	**Salr**	**151.72 347**			**PKiKP**	**14 05 28.6**	**+0.1**
TREB	**Trebinje**	**151.85 334**	*eP*		**PKPbc**	**14 05 28.3**	**-0.3**
LIT	**Litokhoron**	**151.85 325**	PKIKP		**PKPbc**	**14 05 28.7**	**-0.1**
LIT	**Litokhoron**	**151.85 325**			**PKPbc**	**14 05 28.7**	**-0.1**
DRME	**Dracevica, Mon**	**151.92 332** ⇑	*i* P		**PKPbc**	**14 05 27.8**	**-1.0**
FNA	**Florina**	**151.95 327**	P		**PKPbc**	**14 05 28.9**	**-0.1**
FNA	**Florina**	**151.95 327**	PKIKP		**PKPdf**	**14 05 20.9**	**-1.1**
FNA						14 05 28.8	
FNA	**Florina**	**151.95 327**	PKPdf		**PKPdf**	**14 05 20.9**	**-1.1**
FNA			PKPbc		**PKPbc**	**14 05 28.8**	**-0.2**
HCY	**Herceg Novi**	**152.01 333**	*eP*		**PKPbc**	**14 05 28.5**	**-0.5**
TIR	**Tirane**	**152.26 330** ⇑⇑	P		**PKiKP**	**14 05 31.6**	**+1.9**
DION	**Dionisos Attik**	**152.39 320**	P		**PKPbc**	**14 05 29.6**	**-0.4**
SANT	**Santorini**	**152.45 316** ⇑⇑			**PKiKP**	**14 05 30.8**	**+0.5**
SANT	**Santorini**	**152.45 316**			**PKPbc**	**14 05 29.6**	**-0.6**
KPRO	**Kipourio**	**152.56 326**	P		**PKiKP**	**14 05 32.0**	**+1.5**
AXAR	**Agios Charalam**	**152.68 323**	P		**PKiKP**	**14 05 31.1**	**+0.4**
AGG	**Agios Georgios**	**152.70 324**	PKIKP		**PKPbc**	**14 05 30.1**	**-0.5**
AGG	**Agios Georgios**	**152.70 324**			**PKPbc**	**14 05 30.1**	**-0.5**
ZCCA	**Zocca**	**152.82 346**	PKPdf		**PKPdf**	**14 05 22.7**	**-0.4**
ZCCA			PKPbc		**PKiKP**	**14 05 31.4**	**+0.5**
SSB	**Saint Sauveur**	**152.89 356**			**PKiKP**	**14 05 31.5**	**+0.5**
BNI	**Bardonecchia**	**152.91 353**	PKIKP		**PKPdf**	**14 05 23.7**	**+0.3**
BNI	**Bardonecchia**	**152.91 353**	PKPdf		**PKPdf**	**14 05 23.7**	**+0.3**
BNI			PKPbc		**PKiKP**	**14 05 31.7**	**+0.6**
LTK	**Loutraki**	**153.00 321**	P		**PKPbc**	**14 05 31.2**	**-0.1**
EVR	**Evrytania**	**153.06 324**	P		**PKiKP**	**14 05 33.1**	**+1.5**
VLC	**Villacollemand**	**153.14 346**			**PKPbc**	**14 05 31.1**	**-0.3**
MSSA	**Maissana**	**153.17 348**			**PKiKP**	**14 05 31.9**	**+0.3**
ANX	**Ano Chora**	**153.22 324**	P		**PKiKP**	**14 05 33.5**	**+1.6**
TRIZ	**Trizonia**	**153.29 323**	P		**PKPbc**	**14 05 31.8**	**-0.1**
MURB	**Monte Urbino**	**153.44 343**	PKPbc		**PKiKP**	**14 05 33.3**	**+1.1**
IDI	**Anoyia**	**153.44 314** ⇑	PKPbc		**PKPbc**	**14 05 32.2**	**-0.3**
	comp=Z,21nm,0.5s,baz=26,slow=14,SNR=26						
IDI	**Anoyia**	**153.44 314** ⇑	P		**PKiKP**	**14 05 36.2**	**+3.7**
KLV	**Kalavryta, Ach**	**153.47 322**	P		**PKiKP**	**14 05 33.3**	**+0.9**
OSSC	**Osservatorio P**	**153.54 345**			**PKiKP**	**14 05 32.4**	**+0.1**
NRCA	**Norcia**	**153.65 341**			**PKiKP**	**14 05 32.9**	**+0.3**
NRCA			PKPab		**PKPab**	**14 05 48.2**	**+0.5**
SGRT	**San Giovanni R**	**153.70 336**	PKPbc		**PKiKP**	**14 05 33.3**	**+0.5**
SGRT			PKPab		**PKPab**	**14 05 48.1**	**+0.1**
INTR	**Introdacqua**	**154.14 339**	PKPdf		**PKPdf**	**14 05 23.2**	**-1.9**
INTR					**PKiKP**	**14 05 33.9**	**+0.2**
INTR			PKPab		**PKPab**	**14 05 49.4**	**-0.4**
LATE	**Laterza**	**154.24 343**			**PKPab**	**14 05 50.1**	**-0.1**
PGAV	**Gavieira, Arco**	**154.74 18**	*e*PKPdf		**PKPdf**	**14 05 28.3**	**+2.4**
PCAB	**Cabril**	**155.05 18**	*e*PKPab		**PKPab**	**14 05 56.0**	**+2.4**
PBRG	**Braganca**	**155.31 16**	*e*PKPab		**PKPab**	**14 05 55.6**	**+0.8**
POLO	**Lamas de Olo**	**155.42 18**	*e*PKPdf		**PKPdf**	**14 05 26.4**	**-0.5**
POLO	**Lamas de Olo**	**155.42 18**	*e*PKPab		**PKPab**	**14 05 57.1**	**+1.7**
TIP	**Timpagrande**	**155.43 331**			**PKPdf**	**14 05 27.3**	**+0.4**
PVRL	**Vila Real**	**155.54 18**	*e*PKPdf		**PKPdf**	**14 05 30.1**	**+3.1**
PVRL	**Vila Real**	**155.54 18**	*e*PKPab		**PKPab**	**14 05 57.8**	**+2.0**
MVO	**Moncorvo**	**155.83 17**	*e*PKPdf		**PKPdf**	**14 05 29.3**	**+1.9**
MVO	**Moncorvo**	**155.83 17**	*e*PKPab		**PKPab**	**14 05 58.3**	**+1.2**
PVIS	**Viseu**	**156.00 19**	*e*PKPdf		**PKPdf**	**14 05 28.2**	**+0.6**
PVIS	**Viseu**	**156.00 19**	*e*PKPab		**PKPab**	**14 06 00.8**	**+3.0**
MTE	**Manteigas**	**156.39 18**	*e*PKPdf		**PKPdf**	**14 05 29.6**	**+1.5**
MTE	**Manteigas**	**156.39 18**	*e*PKPab		**PKPab**	**14 06 02.0**	**+2.5**
PCAS	**Casmilo, Conde**	**156.41 20**	*e*PKPab		**PKPab**	**14 06 02.4**	**+2.9**
PCBR	**Castelo Branco**	**156.93 19**	*e*PKPdf		**PKPdf**	**14 05 31.6**	**+2.9**
PCBR	**Castelo Branco**	**156.93 19**	*e*PKPab		**PKPab**	**14 06 04.3**	**+2.6**
PMAFR	**Mafra**	**157.11 23**	*e*PKPab		**PKPab**	**14 06 05.6**	**+3.0**
PMRV	**Marv??o**	**157.33 19**	*e*PKPdf		**PKPdf**	**14 05 30.9**	**+1.6**
PMRV	**Marv??o**	**157.33 19**	*e*PKPab		**PKPab**	**14 06 06.3**	**+2.8**
PMTG	**Montargil**	**157.39 21**	*e*PKPab		**PKPab**	**14 06 05.6**	**+1.8**
PESTR	**Estremoz**	**157.72 20**			**PKPab**	**14 06 04.7**	**-0.8**
ESBB	**Sonseca Array**	**157.98 12**	PKPab		**PKPab**	**14 06 06.7**	**+0.3**
ESDC	**Sonseca Array**	**157.98 12**	PKP		**PKPdf**	**14 05 30.4**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=342,slow=2.1,SNR=12						
ESDC			PKPab		**PKPab**	**14 06 06.8**	**+0.4**
	comp=Z,9.8nm,0.9s,baz=341,slow=4.0,SNR=18						
PBAR	**Barrancos**	**158.59 20**	*e*PKPdf		**PKPdf**	**14 05 30.5**	**-0.3**
PBAR	**Barrancos**	**158.59 20**	*e*PKPab		**PKPab**	**14 06 13.0**	**+4.0**
PCVE	**Castro Verde**	**158.74 22**	*e*PKPab		**PKPab**	**14 06 12.5**	**+2.8**
PVAQ	**Vaqueiros**	**159.06 22**	*e*PKPab		**PKPab**	**14 06 14.1**	**+3.0**
PBDV	**Barranco-do-Ve**	**159.12 23**	*e*PKPdf		**PKPdf**	**14 05 30.9**	**-0.6**
KEST	**Kesra**	**161.32 341**	PKPab		**PKPab**	**14 06 21.5**	**+0.3**
	comp=Z,19nm,0.8s,baz=312,slow=2.7,SNR=14						
KEST	**Kesra**	**161.32 341**	PKPab		**PKPab**	**14 06 21.6**	**+0.5**
MDT	**Midelt**	**164.28 21**	PKP		**PKPdf**	**14 05 37.8**	**+0.9**
	comp=Z,18nm,1.0s,baz=332,slow=1.5,SNR=16						
MDT			PKPab		**PKPab**	**14 06 35.5**	**+1.2**
	comp=Z,6.0nm,0.8s,baz=77,slow=3.9,SNR=4.6						
DBIC	**Dimbokro**	**166.78 149**	PKP		**PKPdf**	**14 05 39.0**	**-0.4**
	comp=Z,16nm,0.8s,baz=147,slow=0.4,SNR=19						
DBIC			PKPab		**PKPab**	**14 06 45.9**	**+0.3**
	comp=Z,20nm,1.1s,baz=206,slow=3.6,SNR=8.1						
DBIC			PP		**PP**	**14 10 37.0**	**+3.5**
	comp=Z,8.8nm,1.0s,baz=125,slow=4.2,SNR=4.5						
DBIC	**Dimbokro**	**166.78 149**			**PKPdf**	**14 05 38.8**	**-0.6**
DBIC			PKPab		**PKPab**	**14 06 45.7**	**+0.1**
KOWA	**Kowa**	**173.22 122**	PKP		**PKPdf**	**14 05 42.7**	**-0.2**
	comp=Z,15nm,0.7s,baz=284,slow=0.9,SNR=32						
KOWA			PKPab		**PKPab**	**14 07 14.7**	**+0.3**
	comp=Z,12nm,0.9s,baz=245,slow=4.8,SNR=11						
KOWA			PP		**PP**	**14 11 07.0**	**+0.4**
	comp=Z,5.0nm,1.0s,baz=270,slow=2.5,SNR=8.0						
KOWA	**Kowa**	**173.22 122**			**PKPdf**	**14 05 41.6**	**-1.4**
KOWA			PKPab		**PKPab**	**14 07 13.3**	**-1.0**
TOA0	**Torodi Ar. Sit**	**174.99 177**			**PKPdf**	**14 05 42.1**	**-1.5**
TOA0			PKPab		**PKPab**	**14 07 20.3**	**-1.6**
TORD	**Torodi Ar. Bea**	**174.99 177**	PKP		**PKPdf**	**14 05 43.1**	**-0.5**
	comp=Z,10nm,0.9s,baz=334,slow=1.3,SNR=36						
TORD			PKPab		**PKPab**	**14 07 21.6**	**-0.3**
	comp=Z,6.2nm,0.8s,baz=180,slow=2.6,SNR=11						
TORD			PP		**PP**	**14 11 13.9**	**+0.7**
	comp=Z,5.4nm,0.9s,baz=165,slow=4.1,SNR=8.7						

WEL 21 13:56:15.4±1.0, 31°S±6°×17°8E±1°0, h33km, M4.5/12, mB4.8/5, ML5.0/7, MLv4.7/12, Mw(mB)4.1/5 Error ellipse: s-maj=0.0km s-min=0.0km az=117.2, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**3.41**	**69**	S		Sn	13 57 46.7	+1.1
MXZ	**Matakaoa Point**	**7.01**	**181**	P		Pn	13 57 55.1	-0.6
MXZ				S		Sn	13 59 15.6	+1.4
HAZ	**Te Kaha**	**7.22**	**184**	P		Pn	13 57 59.5	+0.9
HAZ				S		Sn	13 59 22.6	+3.2
WMGZ	**Waiomatatini S**	**7.26**	**180**	P		Pn	13 57 59.3	+0.1
WMGZ				S		Sn	13 59 22.8	+2.3
PKGZ	**Pakihiroa**	**7.34**	**182**	P		Pn	13 58 01.7	+1.4
PKGZ				S		Sn	13 59 22.7	+0.2
RUGZ	**Raukumara Rang**	**7.44**	**185**	P		Pn	13 58 02.9	+1.3
RUGZ				S		Sn	13 59 25.6	+0.7
PUZ	**Puketiti**	**7.52**	**181**	P		Pn	13 58 03.5	+0.8
PUZ				S		Sn	13 59 24.9	-1.9
TWGZ	**Tauwhareparae**	**7.63**	**183**	P		Pn	13 58 02.3	-1.9
TWGZ				S		Sn	13 59 31.0	+1.4
URZ	**Urewera**	**7.78**	**188**	P		Pn	13 58 06.4	+0.1
URZ				S		Sn	13 59 36.8	+3.6
MWZ	**Matawai**	**7.81**	**185**	P		Pn	13 58 06.6	-0.2
MWZ				S		Sn	13 59 37.4	+3.3
RAGZ	**Rawiri**	**7.99**	**186**	S		Sn	13 59 38.5	+0.2
MUGZ	**Murupara**	**8.04**	**189**	P		Pn	13 58 09.8	0.0
TLZ	**Tolley Road**	**8.13**	**196**	P		Pn	13 58 14.6	+3.5
RTZ	**Ruatahuna**	**8.15**	**188**	P		Pn	13 58 11.0	-0.4
RTZ				S		Sn	13 59 41.8	-0.5
RIGZ	**Rimuhau**	**8.17**	**184**	P		Pn	13 58 09.4	-2.3
RIGZ				S		Sn	13 59 39.3	-3.5
SNGZ	**Shannon Statio**	**8.28**	**186**	P		Pn	13 58 13.0	-0.1
SNGZ				S		Sn	13 59 46.4	+1.0
MTHZ	**Maungataniwha**	**8.40**	**189**	P		Pn	13 58 16.0	+1.2
NMHZ	**Naumai**	**8.64**	**188**	P		Pn	13 58 16.8	-1.4
BKZ	**Black Stump Fm**	**8.76**	**190**	P		Pn	13 58 17.1	-2.6

*IDC **21** 14:02:13.9±0.3, 28°.85N×82°.45E, h0km, mb4.8/56, mb1 4.9/59, mb1mx4.8/76, mbtmp4.8/59, ML4.2/3, MS4.1/19, Ms1 4.1/19, ms1mx3.8/57, Error ellipse: s-maj=8.9km s-min=8.3km az=22.0*

*BJI **21** 14:02:15.9±0.0, 29°.02N×82°.42E, h10km, mB4.9/46, mb4.8/70, Ms4.7/65, Ms7 4.5/59*

*NEIC **21** 14:02:15.6±1.4, 28°.90N±0°.08×82°.39E±0°.07, h10km±1km, mb5.0/162, Error ellipse: s-maj=13.7km s-min=10.5km az=204.0*

*DMN **21** 14:02:15.7±0.3, 28°.80N×82°.02E, h10km, Ml5.3/6, Error ellipse: s-maj=14.0km s-min=4.7km az=21.0*

*MOS **21** 14:02:16.0±1.1, 28°.97N×82°.38E, h25km, mb5.2/49, MS4.1/12, Error ellipse: s-maj=5.9km s-min=3.5km az=106.1*

*GCMT **21** 14:02:16.6±0.4, 28°.65N±0°.03×82°.35E±0°.03, h26km±1km, MW5.0/62, Moment Tensor Solution. s20,c22; s62,c89; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.81±.37; Mθθ-1.97±.22; Mφφ-1.84±.21; Mrθ0.58±.34; Mrφ1.97±.08; Mθφ1.19±.30; Best double couple: Mo4.05600×10^16 NP1:φs118.00000°, δ44.00000°, λ66.00000°. NP2: φs330.00000°, δ50.00000°, λ112.00000°. Principal axes: T 4.2140, Plg73.0000°, Azm305.0000°; N -0.3150, Plg17.0000°, Azm136.0000°; P -3.8990, Plg3.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NDI **21** 14:02:17.6±4.4, 28°.77N×82°.41E, h5km, ML4.7, mb5.0(NEIC)*

ISC 21 14:02:17.2±0.7, 28°.86N±0°.03×82°.36E±0°.03, h23km±5km, n547, σ1?78/594, mb5.0/205, MS4.2/32, 32C-13D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PYUN	**Piuthan**	**0.94**	**143**	*e*Pn		**Pb**	**14 02 33.5**	**-1.3**
DANN	**Dangsing**	**1.33**	**112**	*e*Sn		**Sb**	**14 03 02.0**	**+3.6**
KOLN	**Koldanda**	**1.54**	**134**	*e*Pn		**Pb**	**14 02 44.7**	**-0.4**
KOLN				*e*Sn		**Sb**	**14 03 05.0**	**+0.7**
GKN	**Gorkha**	**2.18**	**112**	*e*Pn		**Pn**	**14 02 54.1**	**+1.9**
GKN				*e*Sn		**Sb**	**14 03 22.7**	**+0.1**
	4μm,0.3s							
DMN	**Daman**	**2.72**	**116**	*e*Pn		**Pn**	**14 03 01.6**	**+1.8**
DMN				*e*Sn		**Sn**	**14 03 34.9**	**+2.7**
	3μm,0.5s							
KKN	**Kakani**	**2.79**	**112**	*e*Pn		**Pn**	**14 03 02.1**	**+1.5**
KKN				*e*Sn		**Sb**	**14 03 37.2**	**-3.0**
PKIN	**Phulchoki**	**2.97**	**115**	*e*Pn		**Pn**	**14 03 04.6**	**+1.4**
PKI	**Pulchoki**	**2.98**	**115**	*e*Pn		**Pn**	**14 03 04.8**	**+1.4**
PKI				*e*Sn		**Sn**	**14 03 41.8**	**+3.2**
	1μm,0.3s							
GUN	**Gumba**	**3.24**	**106**	*e*Pn		**Pn**	**14 03 08.9**	**+1.9**
GUN				*e*Sn		**Sn**	**14 03 47.7**	**+2.6**
	3μm,0.4s							
JIRN	**Jiri**	**3.58**	**109**	*e*Pn		**Pn**	**14 03 13.4**	**+1.7**
DDI	**Dehra Dun**	**4.02**	**292**	*e*P		**Pn**	**14 03 20.6**	**+3.1**
DDI				*e*S		**Sn**	**14 04 08.0**	**+4.1**
RAMN	**Ramite**	**4.21**	**116**	*e*Pn		**Pn**	**14 03 21.5**	**+1.3**
NDI	**New Delhi**	**4.52**	**269**	*e*P		**Pb**	**14 03 32.0**	**-3.8**
NDI				*e*S		**Sn**	**14 04 21.0**	**+4.9**
ODAN	**Odare**	**4.88**	**113**	*e*Pn		**Pn**	**14 03 30.9**	**+1.5**
ODAN				*e*Sn		**Sn**	**14 04 26.3**	**+1.0**
	427nm,0.2s							
TAPN	**Taplejung**	**4.96**	**106**	*e*Pn		**Pn**	**14 03 32.4**	**+1.8**
TAPN				*e*Sn		**Sn**	**14 04 28.2**	**+0.8**
	1μm,0.4s							
SMLA	**Simla**	**5.04**	**298** ⇑	*e*P		Pn	14 03 36.6	+5.2
GTK	**Tadong**	**5.72**	**104**	*e*P		**Pn**	**14 03 43.2**	**+2.3**
GTK				*e*S		**Sn**	**14 04 44.0**	**-2.0**
GTK				IAML			14 04 49.7	
	comp=E,921nm,0.4s							
BHK	**Bhakra**	**5.75**	**298**	*e*P		**Pn**	**14 03 41.4**	**+0.3**
BHK				*e*S		**Sn**	**14 04 51.6**	**+5.3**
BOK	**Bokaro**	**5.95**	**147**	*e*P		**Pn**	**14 03 45.3**	**+1.4**
BOK				IAmb		IAmb	14 03 47.9	
	comp=Z,190nm,0.5s							
BOK				*e*S		**Sn**	**14 04 52.5**	**+1.0**
DHRM	**DHARAMSHALA**	**6.22**	**304**	*e*P		**Pn**	**14 03 49.0**	**+1.1**
DHRM				*e*S		**Sn**	**14 05 00.6**	**+2.2**
DHRM				IAML			14 05 01.8	
	comp=E,670nm,0.7s							
DHRM				IAML			14 05 08.3	
	comp=N,632nm,0.7s							
BHPL	**Bhopal**	**7.14**	**220**	*e*P		**Pn**	**14 03 59.8**	**-0.5**
BHPL				*e*S		**Sn**	**14 05 16.7**	**-4.0**
BHPL				IAML			14 05 21.0	
	comp=E,992nm,0.3s							
BHPL				IAML			14 05 21.9	
	comp=N,932nm,0.2s							
AJM	**Ajmer**	**7.24**	**253** ⇓	*i* P		**Pn**	**14 04 03.0**	**+1.3**
AJM				*i* S		**Sn**	**14 05 22.0**	**-1.2**
LSA	**Lhasa**	**7.72**	**82**	Pn		**Pn**	**14 04 10.8**	**+2.1**
LSA				Sn		**Sn**	**14 05 38.8**	**+3.1**
LSA				LR		LR		
	comp=N,9μm,7.1s							
LSA				LR		LR		
	comp=N,10μm,10.0s							
LSA				LR		LR		
	comp=N,10μm,10.0s							
LSA	**Lhasa**	**7.72**	**82**	P		**Pn**	**14 04 09.2**	**+0.5**
LSA	**Lhasa**	**7.72**	**82**			**Pn**	**14 04 09.2**	**+0.5**
SARP	**Sargodha**	**8.91**	**292**	P		Pn	14 04 24.3	-0.2
SHL	**Shillong**	**9.09**	**109**	P		**Pn**	**14 04 25.8**	**-1.4**
SHL	**Shillong**	**9.09**	**109**	*e*P		**Pn**	**14 04 26.2**	**-1.0**
SHL				*e*S		**Sn**	**14 06 02.2**	**-6.7**
SHL				IAML			14 06 11.6	
	comp=N,188nm,0.7s							
SHL	**Shillong**	**9.09**	**109**	Pn		**Pn**	**14 04 25.8**	**-1.4**
CHCP	**Chirah Chowk**	**9.14**	**304**	P		**Pn**	**14 04 28.6**	**+0.9**
NIL	**Nilore**	**9.14**	**304**	P		**Pn**	**14 04 28.0**	**+0.2**
NIL	**Nilore**	**9.14**	**304**	Pn		**Pn**	**14 04 28.0**	**+0.2**
AGT	**Agartala**	**9.38**	**120**	*e*P		**Pn**	**14 04 31.9**	**+0.9**
THW	**Thamme Wali**	**9.93**	**296**	P		**Pn**	**14 04 37.6**	**-1.0**
CEP	**Cherat**	**10.21**	**302**	P		**Pn**	**14 04 41.5**	**-1.0**
CEP				S		**Sn**	**14 06 29.0**	**-7.4**
KOHI	**KOHIMA**	**10.91**	**104**	*e*P		**Pn**	**14 04 50.5**	**-1.5**
KOHI				*e*S		**Sn**	**14 06 47.3**	**-6.2**
KOHI				IAML			14 06 53.4	
	comp=N,208nm,0.7s							
KOHI				IAML			14 06 55.5	
	comp=E,234nm,0.6s							
MOKO	**MOKOCHONG**	**11.08**	**100**	*e*P		**Pn**	**14 04 53.5**	**-0.9**
MOKO				*e*S		**Sn**	**14 06 49.6**	**-8.1**
MOKO				IAML			14 06 54.6	
	comp=N,270nm,0.6s							
MOKO				IAML			14 06 59.7	
	comp=E,417nm,0.6s							
SAIH	**SAIHA**	**11.49**	**121**	*e*P		**Pn**	**14 05 00.2**	**+0.2**
SAIH				*e*S		**Sn**	**14 07 00.8**	**-6.9**
SAIH				IAML			14 07 13.6	
	comp=E,143nm,0.7s							
SAIH				IAML			14 07 14.2	
	comp=N,112nm,0.7s							
KSH	**Kashi**	**11.87**	**335**	P		**Pn**	**14 05 01.8**	**-3.4**
KSH				S		**Sn**	**14 07 13.6**	**-3.4**
KSH				pmax		pmax		
	comp=N,30nm,0.6s							
KSH				LR		LR		
	comp=N,1μm,8.6s							
KSH				LR		LR		
	comp=N,2μm,8.1s							
KSH				LR		LR		
	comp=N,2μm,10.7s							
HYB	**Hyderabad**	**11.91**	**198**	*i* P		**Pn**	**14 05 04.0**	**-1.7**
	comp=N,210nm,1.0s							
HYB				*e*S		**Sn**	**14 07 22.0**	**+4.0**
HYB	**Hyderabad**	**11.91**	**198**	*e*P		**Pn**	**14 05 03.4**	**-2.3**
HYB				*e*S		**Sn**	**14 07 10.8**	**-7.2**
KBL	**Kabul**	**12.67**	**300**	P		**Pn**	**14 05 14.7**	**-1.5**
KBL	**Kabul**	**12.67**	**300**	Pn		**Pn**	**14 05 14.7**	**-1.5**
BHUJ	**Bhuj**	**12.71**	**247**	*e*P		**Pn**	**14 05 17.1**	**+0.6**
POO	**Poona**	**12.89**	**219**	*e*P		**Pn**	**14 05 15.0**	**-4.2**
	comp=N,20nm,1.0s							
POO				*i* S		Sn	14 07 30.0	-12
GAR	**Garm**	**14.21**	**319**	Pn		**Pn**	**14 05 35.3**	**-1.9**
ULHL	**Ulahol**	**14.25**	**341**	P		**Pn**	**14 05 36.2**	**-1.6**
	SNR=11							
SHLS	**Shalkode**	**14.46**	**351**	*e*P		**Pn**	**14 05 37.2**	**-3.3**
	comp=N,20nm,0.9s,baz=352							
SHLS	**Shalkode**	**14.46**	**351**	*e*P		**Pn**	**14 05 37.2**	**-3.3**
SHLS				pmax		pmax		
	comp=Z,20nm,0.9s							
UZB	**Uzunbulak**	**14.51**	**350**	*e*P		**Pn**	**14 05 38.6**	**-2.7**
	comp=Z,28nm,0.8s,baz=350							
UZB				LR		LR	14 11 24.1

HRA Herat 17.99 293 Pn Pn 14 06 24.0 -2.0
CHTO Chiang Mai 18.15 120 P Pn 14 06 25.6 -2.2
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 18.15 120 Pn 14 06 25.6 -2.2
CM33 Chiang Mai Arr 18.15 120 P P 14 06 29.0 +1.0
CMMT Chiang Mai 18.15 120 P P 14 06 28.2 +0.1
comp=Z,4.2nm,0.6s
CM32 Chiang Mai Arr 18.17 120 P P 14 06 31.0 +2.7
CM34 Chiang Mai Arr 18.28 119 P P 14 06 30.0 +0.5
CM15 Chiang Mai Arr 18.35 121 P Pn 14 06 32.0 +1.7
comp=Z,161nmcomp=Z,14nm,0.8s
CM13 Chiang Mai Arr 18.36 121 P Pn 14 06 31.0 +0.6
comp=Z,161nmcomp=Z,19nm,0.8s
CM31 Chiang Mai Arr 18.36 121 P Pn 14 06 33.0 +2.6
comp=Z,5µmcomp=Z,445nm,0.7s
CM31 Chiang Mai Arr 18.36 121 P P 14 06 28.9 -1.4
CMAR Chiang Mai Arr 18.36 121 P P 14 06 29.6 -0.8
comp=Z,0.2nm,0.3s,baz=302,slow=12,SNR=22
CMAR PcP PcP 14 11 02.4 +1.1
comp=Z,0.2nm,0.3s,baz=279,slow=1.7,SNR=11
CMAR LR LR 14 14 54.3
comp=Z,205nm,19.0s,baz=40,slow=42
CMAR Chiang Mai Arr 18.36 121 P P 14 06 29.4 -0.9
CM02 Chiang Mai Arr 18.38 121 P Pn 14 06 31.4 +0.8
comp=Z,183nmcomp=Z,24nm,0.8s
CM35 Chiang Mai Arr 18.39 120 P Pn 14 06 31.0 +0.2
CM01 Chiang Mai Arr 18.39 121 P Pn 14 06 32.2 +1.4
comp=Z,239nmcomp=Z,30nm,0.9s
CM05 Chiang Mai Arr 18.40 121 P Pn 14 06 31.6 +0.8
comp=Z,138nmcomp=Z,14nm,1.0s
CM09 Chiang Mai Arr 18.41 121 P Pn 14 06 32.0 +1.0
comp=Z,171nmcomp=Z,20nm,0.8s
CM04 Chiang Mai Arr 18.42 121 P Pn 14 06 32.5 +1.4
comp=Z,169nmcomp=Z,16nm,0.8s
CM36 Chiang Mai Arr 18.44 120 P Pn 14 06 32.0 +0.6
KMI Kunming 18.54 97 ⇑P Pn 14 06 34.6 +1.8
KMI pP sP 14 06 41.9 -0.8
KMI sP pP 14 06 47.1 +7.5
KMI S Sn 14 10 01.3 +1.8
KMI SS SnSn 14 10 23.1 +10
KMI pmax pmax
comp=Z,48nm,1.1s
KMI pmax pmax
comp=Z,150nm,3.5s
KMI LR LR
comp=Z,2µm,17.2s
KMI LR LR
comp=Z,590nm,17.3s
KMI LR LR
comp=Z,890nm,10.3s
KMI Kunming 18.54 97 P P 14 06 31.7 -0.8
KMI pmax pmax
comp=Z,46nm,0.6s
KMI Kunming 18.54 97 P P 14 06 31.7 -0.8
KMI IAmb IAmb 14 06 42.8
comp=Z,46nm,0.6s
ZSN Zaisan 18.67 5 eP P 14 06 31.4 -2.2
baz=5.2
ZSN LR LR 14 14 19.0
comp=Z,194nm,10.0s,baz=5.2
ZSN Zaisan 18.67 5 eP P 14 06 31.3 -2.2
ZSN MLR MLR
comp=Z,194nm,10.0s
CD2 Chengdu 18.67 78 P P 14 06 33.6 -0.1
CD2 S Sn 14 10 01.3 -1.1
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,300nm,5.9s
CD2 LR LR
comp=Z,6µm,13.8s
CD2 LR LR
comp=Z,2µm,10.6s
CD2 LR LR
comp=Z,2µm,10.4s
LAMP Lampang 18.85 119 P Pn 14 06 38.6 +2.2
comp=Z,354nmcomp=Z,39nm,1.0s
SUKH Sukhothai 19.47 122 P P 14 06 43.0 +0.5
comp=Z,291nmcomp=Z,27nm,0.7s
LZH Lanzhou 19.49 63 ⇑P P 14 06 42.4 -0.4
LZH pP sP 14 06 54.5 +1.5
LZH S S 14 10 15.5 -6.3
LZH sS Sn 14 10 26.5 +4.3
LZH pmax pmax
comp=Z,43nm,0.9s
LZH pmax pmax
comp=Z,200nm,7.6s
LZH LR LR
comp=Z,790nm,14.1s
LZH LR LR
comp=Z,3µm,11.9s
LZH LR LR
comp=Z,2µm,11.4s
NANT Nan 19.51 117 P Pn 14 06 46.0 +1.7
comp=Z,243nm,0.8s
UMPA Umpang Tak 19.74 126 P Pn 14 06 56.7 +10
UTTA Uttaradit 20.01 120 P Pn 14 06 51.1 +0.9
comp=Z,478nmcomp=Z,50nm,0.6s
PHIT Phitsanulok 20.24 121 P P 14 06 52.0 +1.1
comp=Z,105nm,0.7s
KHLT Khaolaem Dam 20.52 130 P Pn 14 07 03.8 +7.5
UTHA Uthaitani 20.59 126 P Pn 14 06 56.3 -0.8
comp=Z,499nmcomp=Z,60nm,0.9s
DGZ Jazzator, Alta 21.17 9 i P P 14 07 00.9 -0.1
DGZ pmax pmax
comp=Z,3.0nm,0.6s
SRDT SRDT 21.20 129 P P 14 07 05.3 +4.0
comp=Z,23nm,0.9s
PALK Pallekele 21.53 184 P P 14 07 06.0 +1.2
PALK pmax pmax
comp=Z,13nm,0.7s
PALK Pallekele 21.53 184 P P 14 07 06.0 +1.2
GYA Guiyang 21.65 91 ⇑P P 14 07 06.9 +0.6
GYA pP sP 14 07 18.3 +1.8
GYA S S 14 11 01.8 -3.4
GYA pmax pmax
comp=Z,13nm,1.2s
GYA pmax pmax
comp=Z,43nm,6.0s
GYA LR LR
comp=Z,110nm,11.1s
GYA LR LR
comp=Z,140nm,10.7s
GYA LR LR
comp=Z,150nm,11.2s
NONG Nongkai 21.85 115 P P 14 07 09.5 +1.2
comp=Z,36nm,0.9s
KURBB Kurchatov Arra 21.93 353 P P 14 07 08.7 -0.2
comp=Z,57nm,0.8s,baz=178,slow=10.0,SNR=230
KURBB PcP PcP 14 11 08.4 +1.1
comp=Z,3.9nm,0.6s,baz=188,slow=2.4,SNR=7.0
KURBB Kurchatov Arra 21.93 353 P P 14 07 07.4 -1.5
KURK Kurchatov 22.02 354 P P 14 07 08.7 -1.1
KURK 14 11 08.4
WSAR Wadi Sarin 22.02 261 P P 14 07 11.2 +1.0
comp=Z,12nm,0.7s,baz=114,slow=8.2,SNR=12
WSAR LR LR 14 18 08.2
comp=Z,329nm,18.6s,baz=92,slow=43
GEYT Alibeck 22.12 300 P P 14 07 12.2 +1.1
comp=Z,11nm,0.8s,baz=118,slow=12,SNR=9.2
GEYT LR LR 14 17 14.1
comp=Z,677nm,18.4s,baz=220,slow=41
GYA0B ALIBECK ARRAY 22.12 300 P P 14 07 11.6 +0.5
GYA0B IAmb IAmb 14 07 36.7
comp=Z,31nm,0.8s
CHAI Chaiyaphum 22.22 121 P P 14 07 14.7 +2.4
comp=Z,749nmcomp=Z,84nm,0.8s
MNCI Minicoy 22.26 205 P P 14 07 13.5 +0.8
MNCI IAmb IAmb 14 07 42.8
comp=Z,128nm,1.2s
BRZS Berezniki 22.35 343 eP P 14 07 11.8 -1.7
comp=Z,25nm,0.8s,baz=343
BRZS Berezniki 22.35 343 eP P 14 07 11.7 -1.7
BRZS pmax pmax
comp=Z,25nm,0.8s
PHET Kaeng Krachan 22.58 131 P P 14 07 23.0 +6.9
comp=Z,395nmcomp=Z,34nm,0.8s
KHON Khomkaen 22.59 119 P P 14 07 18.2 +2.0
comp=Z,132nm,0.8s
XAN Xi'an 23.21 70 P P 14 07 22.3 -0.3
XAN S S 14 11 28.8 -4.6
XAN pmax pmax
comp=Z,30nm,1.0s
XAN LR LR
comp=Z,2µm,16.1s
XAN LR LR
comp=Z,690nm,14.1s
XAN LR LR
comp=Z,2µm,10.4s
XAN Xi'an 23.21 70 P P 14 07 21.9 -0.8
XAN pmax pmax
comp=Z,22nm,0.9s
XAN Xi'an 23.21 70 P P 14 07 21.9 -0.8
SRAK Srakaew 23.48 125 P P 14 07 32.0 +6.7
comp=Z,192nm,0.8s
ENH Enshi 23.62 80 P P 14 07 26.1 -0.6
ENH IAmb IAmb 14 07 29.6
comp=Z,48nm,0.9s
ZAA0 Zalesovo Array 25.14 3 P P 14 07 40.4 0.0
ZAA0 IAmb IAmb 14 07 42.3
comp=Z,38nm,0.8s
ZALV Zalesovo Beam 25.14 3 P P 14 07 40.9 +0.5
comp=Z,37nm,0.8s,baz=191,slow=10,SNR=76
UBPT Khong Chiam 25.26 117 P P 14 07 44.0 +2.3
comp=Z,15nm,1.4s
UBPT Khong Chiam 25.26 117 P P 14 07 41.0 -0.8
UBPT IAmb IAmb 14 07 44.8
comp=Z,34nm,1.1s
BVAR Borovoye Array 25.71 343 P P 14 07 45.0 -0.6
comp=Z,13nm,0.8s,baz=135,slow=17,SNR=20
BVAR PcP PcP 14 11 16.5 +1.1
comp=Z,2.4nm,0.6s,baz=233,slow=6.9,SNR=4.7
BRVK Borovoye 25.77 343 i P P 14 07 46.1 0.0
BRVK pmax pmax
comp=Z,16nm,0.7s
BRVK Borovoye 25.77 343 P P 14 07 45.8 -0.3
BRVK IAmb IAmb 14 07 49.8
comp=Z,23nm,0.8s
TRTT Trang 26.53 139 P P 14 07 56.8 +3.4
SONM Songino Array 26.55 38 P P 14 07 54.9 +1.5
comp=Z,22nm,0.8s,baz=223,slow=9.4,SNR=31
SONM PcP PcP 14 11 18.0 +0.5
comp=Z,2.8nm,0.6s,baz=200,slow=3.6,SNR=6.4
SONM Songino Array 26.55 38 P P 14 07 53.5 +0.1
TIY Taiyuan 26.56 63 eP P 14 07 54.3 +0.8
TIY pmax pmax
comp=Z,22nm,0.9s
TIY LR LR
comp=Z,990nm,13.8s
TIY LR LR
comp=Z,380nm,11.7s
TIY LR LR
comp=Z,1µm,11.7s
AB31 Akbulak array 26.62 326 i P P 14 07 55.2 +1.4
ABKAR Akbulak array 26.62 326 P P 14 07 54.3 +0.5
HHC Hu-ho-hao-te 26.66 56 eP P 14 07 56.6 +2.1
HHC S S 14 12 25.8 -2.7
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,210nm,7.0s
HHC LR LR
comp=Z,480nm,13.6s
HHC LR LR
comp=Z,600nm,15.3s
HHC LR LR
comp=Z,620nm,13.6s
ZAK Zakamensk 26.70 31 eP P 14 07 56.0 +1.3
ZAK pmax pmax
comp=Z,22nm,0.9s
MOY Mondy 26.71 26 eP P 14 07 55.9 +1.2
MOY pmax pmax
comp=Z,38nm,1.7s
QIZ Qiongzhong 26.90 105 P P 14 07 57.2 +0.6
QIZ IAmb IAmb 14 08 02.7
comp=Z,65nm,1.5s
ULN Ulaanbaatar 26.92 38 ceP P 14 07 57.9 +1.1
ULN pmax pmax
comp=Z,29nm,1.6s
ULN Ulaanbaatar 26.92 38 P P 14 07 57.0 +0.2
ULN IAmb IAmb 14 08 11.0
comp=Z,24nm,0.8s
WHN Wuhan 27.79 79 P P 14 08 06.3 +1.7
WHN pmax pmax
comp=Z,39nm,0.6s
WHN LR LR
comp=Z,2µm,11.8s
WHN LR LR
comp=Z,1µm,11.4s
WHN LR LR
comp=Z,3µm,13.6s
TLY Talaya 27.80 29 P P 14 08 04.2 -0.2
comp=Z,3.1nm,0.7s,baz=247,slow=9.7,SNR=8.3
TLY Talaya 27.80 29 eP P 14 08 06.9 +2.5
TLY pmax pmax
comp=Z,29nm,1.4s
TLY MLR MLR
comp=Z,569nm,13.0s
TLY Talaya 27.80 29 P P 14 08 03.6 -0.8
AKTO Aktyubinsk 28.33 326 P P 14 08 10.0 +0.8
comp=Z,12nm,0.7s,baz=129,slow=8.3,SNR=22
AKTO LR LR 14 20 46.7
comp=Z,1µm,19.0s,baz=139,slow=39
BJT Baijiatuan 29.86 59 P P 14 08 23.1 +0.3
BJT pmax pmax
comp=Z,11nm,0.8s
BJT Baijiatuan 29.86 59 P P 14 08 23.1 +0.3
BJI Beijing 29.87 59 P P 14 08 24.8 +1.9
BJI S S 14 13 14.9 -3.8
BJI pmax pmax
comp=Z,14nm,0.7s
BJI LR LR
comp=Z,160nm,9.6s
BJI LR LR
comp=Z,590nm,11.8s
IPM Ipoh 30.02 140 P P 14 08 24.1 -0.4
GSI Gunungsitoli 31.01 149 P P 14 08 34.8 +1.6
GSI Gunungsitoli 31.01 149 P P 14 08 34.5 +1.3
comp=Z,66nm,0.7s
SOCY Socotra 31.20 244 P P 14 08 35.0 0.0
SOCY IAmb IAmb 14 08 37.2
comp=Z,22nm,0.6s
MAK Makhachkala 31.30 306 eP P 14 08 30.4 -5.1
MAK e 14 09 32.9
MAK eS S 14 13 36.0 -5.1
MAK eSS SnSn 14 15 20.2 -4.6
MAK pmax pmax
comp=Z,133nm,1.0s
MAK MLR MLR
comp=Z,436nm,15.0s
NJ2 Nanjing 31.53 75 eP P 14 08 38.4 +0.7
NJ2 pmax pmax
comp=Z,12nm,0.5s
SVE Sverdlovsk 31.89 337 eP P 14 08 41.7 +1.1
SVE pmax pmax
comp=Z,30nm,1.0s
SVE MLR MLR
comp=Z,663nm,14.0s
ARU Arti 32.32 335 ci P P 14 08 44.8 +0.5
ARU 14 09 53.4
ARU 14 11 26.7
ARU S S 14 14 00.9 +4.3
ARU SS SnSn 14 15 45.3 -3.9
ARU pmax pmax
comp=Z,32nm,0.7s
ARU MLR MLR
comp=Z,396nm,18.0s
ARU Arti 32.32 335 P P 14 08 44.2 -0.1
MNSI Mandailing Nat 32.39 146 P P 14 08 44.9 -0.4
RAYN Ar Rayn 33.41 270 P P 14 08 55.6 +1.3
RAYN pmax pmax
comp=Z,12nm,1.2s
RAYN Ar Rayn 33.41 270 P P 14 08 55.5 +1.3
BKNI Bangkinang 33.52 145 P P 14 08 55.4 +0.2
ZEI Tsey 33.84 305 eP P 14 08 59.3 +1.3
ZEI pmax pmax
comp=Z,22nm,1.4s
DL2 Dalian 33.88 62 P P 14 08 59.8 +1.6
DL2 S S 14 14 23.4 +2.0
DL2 pmax pmax
comp=Z,55nm,0.7s
DL2 LR LR
comp=Z,340nm,11.8s
DL2 LR LR
comp=Z,1µm,13.7s
DL2 LR LR
comp=Z,1µm,13.1s
TPUB Ta-pu 34.71 90 P P 14 09 06.2 +0.6
KBZ Khabaz 34.75 306 P P 14 09 07.3 +1.6
comp=Z,6.4nm,0.8s,baz=129,slow=8.8,SNR=6.5
KBZ Khabaz 34.75 306 ceP P 14 09 07.2 +1.6
KBZ pmax pmax
comp=Z,2.0nm,0.7s
BELG Belogornoye 34.80 322 LR LR 14 24 58.2
comp=Z,437nm,21.1s,baz=128,slow=39
KIV Kislovodsk 34.94 306 eP P 14 09 06.5 -1.0
KIV pmax pmax
comp=Z,27nm,1.0s
KIV MLR MLR
comp=Z,424nm,16.0s
TWG Pinlang 35.25 91 P P 14 09 10.1 -0.1
TWG IAmb IAmb 14 09 25.1
comp=Z,33nm,1.1s
YULB Yu-li 35.27 90 P P 14 09 09.5 -0.9
YULB IAmb IAmb 14 09 14.3
comp=Z,40nm,1.0s
BOD Bodaibo 36.37 28 eP P 14 09 20.2 +0.8
BOD pmax pmax
comp=Z,16nm,1.5s
SOC Sochi 36.99 305 eP P 14 09 23.8 -1.1
SOC e 14 10 46.4
SOC eS S 14 15 10.2 +1.2
SOC eSS SnSn 14 17 43.6 +0.9
SOC eSSS SSS 14 18 00.5
SOC MLR MLR
comp=Z,120nm,14.0s
KIRV Kirov 37.38 332 LR LR 14 26 20.4
comp=Z,359nm,19.7s,baz=141,slow=39
KIRV Kirov 37.38 332 ceP P 14 09 28.7 +0.7
VRH Novokhopyorsk 37.63 318 eP P 14 09 31.1 +1.0
VRH pmax pmax
comp=Z,30nm,0.7s
INCN Inchon 37.76 65 P P 14 09 31.3 -0.2
INCN pmax pmax
comp=Z,47nm,0.9s
INCN Inchon 37.76 65 P P 14 09 31.3 -0.2
TJN Taejon 38.37 67 i P P 14 09 35.6 -1.0
SBUM Sibu 38.70 127 P P 14 09 39.7 +0.1
KS19 Wonju Array Si 38.74 65 P P 14 09 39.6 -0.1
KSRS Korea Array 38.79 65 P P 14 09 39.7 -0.4
comp=Z,16nm,0.7s,baz=270,slow=8.6,SNR=48
KSRS PcP PcP 14 11 51.8 +0.5
comp=Z,2.4nm,0.7s,baz=265,slow=2.4,SNR=7.7
VORD Divnogorie 39.00 317 eP P 14 09 42.8 +1.1
VORD pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 39.15 317 eP P 14 09 42.2 -0.8
VSR pmax pmax
comp=Z,10.0nm,1.0s
KKM Kota Kinabalu 39.22 119 P P 14 09 44.1 0.0
KKM IAmb IAmb 14 09 48.4
comp=Z,33nm,1.4s
LPSR Galich'ya Gora 39.73 319 eP P 14 09 48.2 +0.4
LPSR pmax pmax
comp=Z,10.0nm,0.6s
MMAI Mount Meron Ar 40.23 288 PcP PcP 14 11 58.1 +2.1
comp=Z,3.1nm,0.6s,baz=104,slow=4.6,SNR=3.9
MDJ Mudanjiang 40.41 54 P P 14 09 53.6 0.0
JOW Kunigami 40.46 82 P P 14 09 54.0 -0.2
JOW IAmb IAmb 14 10 03.1
comp=Z,28nm,1.3s
NRIK Noril'sk 40.63 3 P P 14 09 56.2 +1.2
comp=Z,38nm,0.7s,baz=168,slow=6.2,SNR=33
NRIK Noril'sk 40.63 3 ceP P 14 09 55.1 +0.1
NRIK pmax pmax
comp=Z,49nm,0.8s
NRIK Noril'sk 40.63 3 P P 14 09 55.4 +0.3
NRIK IAmb IAmb 14 09 57.6
comp=Z,44nm,0.8s
ATD Arta Tunnel 40.66 253 P P 14 09 58.2 +2.2
comp=Z,16nm,0.8s,baz=38,slow=7.9,SNR=6.2
PRGR Permogore 40.75 334 eP P 14 09 55.8 -0.3
PRGR pmax pmax
comp=Z,35nm,0.7s
ZEA Zeya 40.94 40 eP P 14 09 59.4 +1.6
ZEA e 14 11 30.1
ZEA pmax pmax
comp=N,10.0nm,0.5s
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.7s
ZEA MLR MLR
comp=E,300nm,11.0s
ZEA MLR MLR
comp=Z,300nm,12.0s
BRTR Keskin Array B 41.24 298 P P 14 10 01.9 +1.2
comp=Z,8.2nm,1.2s,baz=122,slow=8.9,SNR=4.8
JNU Nakatsue 41.52 72 P P 14 10 02.6 -0.4
MOS Moscow 41.55 323 eP P 14 10 03.1 +0.4
MOS e 14 11 43.5
MOS eS S 14 16 17.0 -0.2
MOS pmax pmax
comp=Z,62nm,1.1s
OBN Obninsk 41.89 322 LR LR 14 29 09.9
comp=Z,130nm,20.6s,baz=360,slow=38
OBN Obninsk 41.89 322 ci P P 14 10 06.1 +0.6
OBN e 14 11 43.1
OBN eSS SS 14 19 16.2 -13
OBN pmax pmax
comp=Z,82nm,1.7s
OBN MLR MLR
comp=Z,464nm,19.0s
OBN Obninsk 41.89 322 P P 14 10 05.6 +0.1
OBN IAmb IAmb 14 10 07.9
comp=Z,38nm,0.8s
TNG Tangerang 41.95 142 P P 14 10 06.5 0.0
comp=Z,615nm,0.4s
USA0B Ussuriysk Arra 42.08 55 P P 14 10 07.5 +0.2
USA0B pmax pmax
comp=Z,7.0nm,0.8s
USA0B Ussuriysk Arra 42.08 55 P P 14 10 07.5 +0.2
USRK Ussuriysk Ar. 42.08 55 P P 14 10 07.3 +0.1
comp=Z,6.6nm,0.7s,baz=260,slow=7.5,SNR=22
USRK Ussuriysk Ar. 42.08 55 P P 14 10 07.7 +0.4
USRK Ussuriysk Ar. 42.08 55 P P 14 10 07.7 +0.4
KLR Kul'dur 42.54 47 P P 14 10 11.2 +0.3
comp=Z,8.6nm,0.8s,baz=277,slow=9.1,SNR=22
KLMR Klimovskoe 42.82 331 eP P 14 10 12.3 -0.7
KLMR e 14 11 52.4
KLMR pmax pmax
comp=Z,28nm,1.3s
KLMR Klimovskoe 42.82 331 eP P 14 10 12.3 -0.7
KLMR AMP 14 10 17.4
comp=Z,28nm,1.3s
KLMR ePP PP 14 11 52.5 +0.1
JHS Saijyo 43.14 68 P P 14 10 15.7 -0.3
JMN Monobe 43.92 70 P P 14 10 22.1 -0.3
JMN IAmb IAmb 14 10 24.8
comp=Z,38nm,0.8s
ELL Elmali 44.32 294 P P 14 10 26.0 +0.3
ELL pmax pmax
comp=Z,106nm,0.8s
ELL Elmali 44.32 294 P P 14 10 26.0 +0.3
TLCR 44.92 306 ⇑P P 14 10 32.3 +2.1
JWT Wachi 44.96 68 P P 14 10 31.3 +0.6
AKASG Malin Array Be 45.16 314 P P 14 10 32.5 +0.5
comp=Z,1.2nm,0.5s,baz=76,slow=6.9,SNR=14
AKBB Malin Array Si 45.16 314 ceP P 14 10 32.1 +0.2
AKBB Malin Array Si 45.16 314 P P 14 10 32.2 +0.2
AKBB IAmb IAmb 14 10 35.1
comp=Z,15nm,0.9s
TPGR Topolog 45.19 306 ⇑P P 14 10 34.1 +1.8
YAK Yakutsk 45.27 29 ceP P 14 10 32.9 +0.2
YAK pmax pmax
comp=Z,39nm,0.8s
YAK Yakutsk 45.27 29 P P 14 10 31.4 -1.3
CFR Carcaliu 45.40 306 ⇑P P 14 10 35.0 +1.1
SORM Soroca 45.43 310 ⇑P P 14 10 35.1 +0.9
HARR Harsova 45.53 306 ⇓P P 14 10 36.7 +1.7
VRI Vrincioaia 46.41 307 ⇑P P 14 10 44.6 +2.7
PLOR Plostina 46.47 307 ⇑P P 14 10 44.1 +1.7
MNK Minsk 46.59 319 i P P 14 10 42.6 -0.5
comp=E,4.0nm,1.1s
MNK i P P 14 10 42.6 -0.5
comp=N,5.0nm,0.8s
MNK i P P 14 10 42.6 -0.5
comp=Z,29nm,0.9s
MNK i PcP PcP 14 12 16.7 -0.3
MNK i PP PP 14 12 32.0 -0.7
MNK i PPP PPP 14 13 14.0
MNK i S S 14 17 31.2 +0.6
MNK i ScS ScS 14 20 37.8 +1.3
MNK i SS SS 14 20 59.6 +3.1
MNK i SSS SSS 14 21 54.5
MNK i LQ LQ 14 26 53.6

MNK *i* LR LR 14 30 26.3
MNK *i* LRM MLR 14 32 03.0
comp=Z,276nm,17.1s
MNK *i* LRM MLR 14 32 06.2
comp=E,18nm,11.6s
MNK *i* LRM MLR 14 32 26.2
comp=N,126nm,14.8s
KARP Karpathos 46.67 293 P **P 14 10 44.1 -0.1**
NEHR Nehoiu 46.71 307 ⇑P **P 14 10 46.3 +1.9**
JSD Sado 46.93 64 P **P 14 10 45.5 -0.6**
JSD IAmb IAmb 14 10 46.4
comp=Z,12nm,0.7s
MLR Muntele Rosu 46.95 307 P **P 14 10 49.0 +2.6**
comp=Z,30nm,0.8s,baz=87,slow=1.3,SNR=26
MLR Muntele Rosu 46.95 307 ⇓P **P 14 10 48.1 +1.7**
MLR Muntele Rosu 46.95 307 P **P 14 10 49.0 +2.6**
MLR Muntele Rosu 46.95 307 P **P 14 10 47.6 +1.2**
MAT Matsushiro 47.06 66 P **P 14 10 47.3 +0.1**
MJAR Matsushiro Arr 47.06 66 P **P 14 10 47.4 +0.2**
MJAR PcP **PcP 14 12 19.7 +0.7**
comp=Z,2.3nm,0.6s,baz=311,slow=2.1,SNR=5.2
NACGM Naroch 47.28 320 *i* P **P 14 10 46.0 -2.6**
NACGM *i* P **P 14 10 46.0 -2.6**
NACGM *i* P **P 14 10 46.0 -2.6**
NACGM *i* PP **PP 14 12 32.5 -7.2**
NACGM *i* PPP PPP 14 13 11.5
NACGM *i* S S 14 17 28.2 -12
NACGM *i* SS ScS 14 20 27.2 -14
NACGM *i* SSS SSS 14 22 51.0
NACGM *i* LQ LQ 14 25 44.7
NACGM *i* LR LR 14 29 58.5
DOPR Dopca 47.35 307 ⇑P **P 14 10 51.5 +2.2**
IDID Didziasalis 47.38 320 *eP* **P 14 10 49.9 +0.5**
BURAR Bucovina Array 47.50 310 ⇓P **P 14 10 51.7 +1.2**
BUR08 Bucovina Ar. S 47.52 310 P **P 14 10 51.3 +0.6**
VOIR 47.58 307 ⇑P **P 14 10 52.9 +1.7**
IIGN Ignalina 47.68 320 *eP* **P 14 10 52.5 +0.8**
ISAL Salakas 47.77 320 *eP* **P 14 10 52.8 +0.4**
ARR Arges 47.88 307 ⇑P **P 14 10 55.5 +2.0**
VSU Vasula 48.03 324 *eP* **P 14 10 54.8 +0.5**
LVZ Lovozero 48.10 338 *ceP* **P 14 10 54.6 -0.2**
LVZ pmax pmax
comp=Z,44nm,1.0s
LVZ Lovozero 48.10 338 P **P 14 10 54.3 -0.6**
IDI Anoyia 48.55 293 P **P 14 10 58.7 -0.1**
IDI IAmb IAmb 14 11 08.9
comp=Z,37nm,1.4s
KMSI Cibinong 48.66 118 P P 14 11 09.8 +10
JYT Yasato 48.69 66 P **P 14 10 59.4 -0.3**
PABE Paberze 48.97 320 *eP* **P 14 11 02.6 +1.0**
VTS Vitosha 48.99 303 ⇑P **P 14 11 04.4 +2.2**
FIA1 FINESS Array S 49.08 328 P **P 14 11 02.4 +0.1**
FIA1 IAmb IAmb 14 11 04.9
comp=Z,18nm,0.8s
FINES FINESS Array B 49.08 328 P **P 14 11 02.6 +0.3**
comp=Z,12nm,0.6s,baz=112,slow=8.3,SNR=33
FINES LR LR 14 33 19.1
comp=Z,686nm,19.3s,baz=104,slow=38
DRGR 49.20 308 ⇓P **P 14 11 05.0 +1.3**
KWP Kalwaria Pacla 49.23 312 P **P 14 11 04.4 +0.6**
KWP pmax pmax
comp=Z,486nm,1.5s
KWP Kalwaria Pacla 49.23 312 P **P 14 11 04.4 +0.6**
SUW Suwalki 49.24 318 *eP* **P 14 11 03.7 0.0**
KAPI Kappang 49.26 127 P **P 14 11 04.5 +0.2**
comp=Z,4.6nm,0.4s,baz=308,slow=8.6,SNR=5.1
KAPI LR LR 14 33 33.4
comp=Z,113nm,21.8s,baz=318,slow=38
KAPI Kappang 49.26 127 IAmb IAmb 14 11 06.2
comp=Z,23nm,1.1s
UZH Uzhgorod 49.48 311 *eP* **P 14 11 05.0 -0.7**
UZH *e* 14 11 13.5
MTSE Matsula 49.58 324 *eP* **P 14 11 06.3 +0.1**
ASAJ Asahikawa 49.71 55 P **P 14 11 07.2 -0.3**
comp=Z,5.2nm,0.6s,baz=250,slow=12,SNR=4.7
JKA Kamikawa-asahi 49.71 55 P **P 14 11 06.9 -0.5**
TIXI Tiksi 49.71 18 P **P 14 11 07.3 +0.2**
comp=Z,10nm,0.7s,baz=230,slow=3.3,SNR=9.4
TIXI Tiksi 49.71 18 *ceP* **P 14 11 06.6 -0.4**
TIXI Tiksi 49.71 18 P **P 14 11 06.3 -0.7**
TIXI IAmb IAmb 14 11 08.6
comp=Z,15nm,0.8s
YSS Yuzh-Sakhalins 49.71 51 *ceP* **P 14 11 07.9 +0.5**
YSS pmax pmax
comp=Z,44nm,2.5s
YSS Yuzh-Sakhalins 49.71 51 P **P 14 11 07.4 -0.1**
YSS IAmb IAmb 14 11 10.3
comp=Z,19nm,0.9s
MDVR Moldovita 49.96 306 ⇓P **P 14 11 11.2 +1.8**
BOVS Bovan 50.04 304 ⇓P **P 14 11 11.5 +1.5**
CRVS Cervenica-Dubn 50.04 311 *eP* **P 14 11 13.6 +3.7**
CRVS Cervenica-Dubn 50.04 311 *eP* **P 14 11 13.6 +3.7**
JEM Erimo 50.28 58 P P 14 11 06.7 -5.0
ITM Ithomi 50.61 296 P **P 14 11 13.8 -0.7**
ITM IAmb IAmb 14 11 17.8
comp=Z,27nm,1.2s
OJC Ojcow 51.12 313 P **P 14 11 18.1 0.0**
OJC pmax pmax
comp=Z,8.0nm,0.8s
OJC Ojcow 51.12 313 P **P 14 11 18.1 0.0**
LODK Lodwar 51.27 249 P **P 14 11 19.0 -0.7**
KEV Kevo 51.41 339 P **P 14 11 18.8 -1.1**
KEV pmax pmax
comp=Z,27nm,0.8s
KEV Kevo 51.41 339 P **P 14 11 18.8 -1.1**
KEV IAmb IAmb 14 11 21.9
comp=Z,27nm,0.8s
ARA0 ARCESS Array S 51.82 338 *eP* **P 14 11 23.0 0.0**
ARCES ARCESS Array B 51.82 338 P **P 14 11 23.4 +0.4**
comp=Z,27nm,0.8s,baz=99,slow=7.5,SNR=33
KTK1 Kautokeino 52.41 337 *eP* **P 14 11 27.6 +0.2**
KMBO Kilima Mbogo 52.44 243 P **P 14 11 29.7 +1.1**
comp=Z,4.1nm,0.8s,baz=40,slow=12,SNR=8.6
KMBO Kilima Mbogo 52.44 243 *i* P **P 14 11 31.5 +2.9**
KMBO pmax pmax
comp=Z,3.0nm,0.7s
MORC Moravsky Berou 52.59 312 *eP* **P 14 11 30.4 +1.3**
MORC Moravsky Berou 52.59 312 P **P 14 11 28.6 -0.4**
MORC pmax pmax
comp=Z,9.0nm,1.0s
MORC Moravsky Berou 52.59 312 P **P 14 11 28.6 -0.4**
HAMF Hammerfest 52.79 339 *eP* **P 14 11 31.1 +0.9**
UPP Uppsala 52.88 325 *eP* **P 14 11 31.5 +0.6**
KRLC Kraliky 53.07 313 *eP* **P 14 11 33.2 +0.6**
KRLC Kraliky 53.07 313 *eP* **P 14 11 33.2 +0.6**
VRAC Vranov 53.23 312 P **P 14 11 34.8 +1.1**
comp=Z,4.7nm,0.7s,baz=100,slow=11,SNR=4.1
DPC Dobruska-Polom 53.35 313 *eP* **P 14 11 36.1 +1.4**
DPC Dobruska-Polom 53.35 313 *eP* **P 14 11 36.1 +1.4**
JETT Jettan, Norway 53.53 337 *eP* **P 14 11 35.6 0.0**
CONA Conrad Observa 53.80 310 *eP* **P 14 11 38.8 +0.7**
comp=Z,8.7nm,0.9s
TRO Tromso 54.05 337 *eP* **P 14 11 39.7 +0.3**
ARSA Arzberg 54.09 309 *eP* **P 14 11 41.1 +1.0**
comp=Z,7.2nm,1.1s
GROS Grobnik 54.18 308 *i* P **P 14 11 42.2 +1.4**
CRES Cresnjev 54.28 308 *i* P **P 14 11 43.1 +1.6**
PERS Pernice 54.42 309 *i* P **P 14 11 44.4 +1.8**
SOKA Soboth 54.48 309 *eP* **P 14 11 43.8 +0.8**
comp=Z,11nm,1.1s
MA2 Magadan 54.72 35 P **P 14 11 44.4 -0.1**
comp=Z,8.3nm,0.8s,baz=281,slow=9.2,SNR=8.2
MA2 Magadan 54.72 35 IAmb IAmb 14 11 46.9
comp=Z,24nm,1.4s
OBKA Obir 54.83 309 *eP* **P 14 11 46.2 +0.6**
comp=Z,11nm,0.8s
BRG Berggiesshubel 54.84 314 *i* P **P 14 11 45.8 +0.4**
BRG Amp 14 11 48.6
comp=Z,6.9nm,0.8s
BRG *ex* x 14 12 01.1
BRG Amp 14 12 01.7
comp=Z,6.2nm,0.9s
BRG Berggiesshubel 54.84 314 *eP* **P 14 11 46.0 +0.6**
comp=Z,6.8nm,0.7s,baz=83,slow=5.8
HFS Hagfors 54.87 325 P **P 14 11 45.9 +0.3**
comp=Z,21nm,0.7s,baz=97,slow=9.4,SNR=42
MOA Molln 54.88 310 *eP* **P 14 11 46.1 +0.2**
comp=Z,3.6nm,0.7s
FAUS Fauske 54.91 334 *eP* **P 14 11 46.0 +0.3**
MOR8 Moi Rana 55.06 333 *eP* **P 14 11 46.2 -0.6**
GEC2 GERESS Array S 55.16 311 P **P 14 11 48.4 +0.4**
GERES GERESS Array B 55.16 311 P **P 14 11 47.9 0.0**
comp=Z,1.8nm,0.6s,baz=98,slow=9.6,SNR=5.8

FBE Freiberg 55.20 314 *eP* **P 14 11 49.9 +1.8**
comp=Z,15nm,1.1s,baz=83,slow=5.8
KHC Kasperske Hory 55.21 312 *eP* **P 14 11 49.2 +1.0**
KHC Kasperske Hory 55.21 312 *eP* **P 14 11 49.2 +1.0**
KHC Kasperske Hory 55.21 312 P **P 14 11 48.6 +0.3**
SIJI Sorong 55.30 114 P **P 14 11 48.6 -0.7**
comp=Z,12nm,0.8s,baz=324,slow=11,SNR=6.3
NBB17 Glomfjord BWr 55.34 333 *eP* **P 14 11 49.1 +0.4**
KONS Konsvik 55.63 333 *eP* **P 14 11 51.3 +0.4**
STOK Stokkvaagen 55.65 333 *eP* **P 14 11 51.1 0.0**
BATI Baumata 55.66 128 P **P 14 11 50.8 -1.0**
comp=Z,12nm,0.6s,baz=51,slow=1.9,SNR=3.6
SEY Seymchan 55.66 31 P **P 14 11 50.9 -0.3**
comp=Z,8.2nm,0.6s,baz=60,slow=23,SNR=53
SEY LR LR 14 37 38.9
comp=Z,204nm,21.4s,baz=144,slow=38
LOF Lofoten 55.67 335 *eP* **P 14 11 51.1 0.0**
SOEI Soe 55.76 127 P **P 14 11 51.1 -1.5**
NC405 NORSAR Array S 55.88 326 P **P 14 11 52.6 -0.2**
GUNZ Gunzen 55.90 313 *eP* **P 14 11 54.1 +0.9**
comp=Z,6.4nm,0.9s,baz=83,slow=5.8
WERD Werda 55.91 313 *eP* **P 14 11 54.2 +1.0**
comp=Z,6.0nm,0.9s,baz=83,slow=5.8
NSS Namsos 55.93 331 *eP* **P 14 11 53.3 +0.2**
NC602 NORSAR Array S 55.96 326 P **P 14 11 53.0 -0.4**
NC602 IAmb IAmb 14 12 20.2
comp=Z,38nm,1.5s
NC602 NORSAR Array S 55.96 326 *eP* **P 14 11 53.6 +0.2**
ROTZ Rotzenmuhle 56.04 313 *eP* **P 14 11 55.6 +1.5**
comp=Z,5.0nm,0.8s,baz=83,slow=5.8
NC303 NORSAR Array S 56.05 327 P **P 14 11 53.9 -0.2**
NC303 IAmb IAmb 14 11 55.9
comp=Z,12nm,0.9s
NB201 NORSAR Array S 56.09 326 P **P 14 11 53.9 -0.4**
NB201 IAmb IAmb 14 12 06.5
comp=Z,16nm,0.8s
STAL STALIGIAL 56.12 308 P **P 14 11 54.7 -0.2**
STAL IAmb IAmb 14 11 56.4
comp=Z,11nm,0.9s
NB2 NORSAR Subarra 56.12 326 P **P 14 11 54.1 -0.5**
baz=91,slow=6.9
NOA NORSAR Array B 56.12 326 P **P 14 11 54.4 -0.3**
comp=Z,7.2nm,0.7s,baz=91,slow=6.9,SNR=36
NOA PP **PP 14 13 56.3 -3.2**
comp=Z,1.5nm,0.8s,baz=91,slow=9.3,SNR=4.7
NOA LR LR 14 37 27.7
comp=Z,445nm,20.3s,baz=90,slow=38
ABTA Abfaltersbach 56.19 309 *eP* **P 14 11 54.9 -0.4**
comp=Z,2.2nm,0.7s
NAO01 NORSAR Array S 56.28 326 P **P 14 11 54.8 -0.9**
NAO01 IAmb IAmb 14 11 58.3
comp=Z,24nm,1.1s
MOX Moxa 56.33 314 *eP* **P 14 11 57.5 +1.3**
comp=Z,5.1nm,0.8s,baz=83,slow=5.8
NBO00 NORSAR Array S 56.34 326 P **P 14 11 55.6 -0.5**
NBO00 IAmb IAmb 14 12 18.2
comp=Z,30nm,1.2s
NC204 NORSAR Array S 56.35 327 P **P 14 11 55.6 -0.6**
OSL Oslo 56.36 325 *eP* **P 14 11 56.5 +0.3**
GRF Grafenberg Arr 56.68 313 *eP* **P 14 12 00.8 +2.0**
comp=Z,9.4nm,0.7s,baz=83,slow=5.8
MURB Monte Urbino 56.72 305 P **P 14 11 58.6 -0.6**
MURB IAmb IAmb 14 12 03.1
comp=Z,34nm,1.2s
WATA Walderalm 56.75 310 *eP* **P 14 11 59.5 +0.1**
comp=Z,5.9nm,0.6s
KONO Kongsberg 56.93 325 *ceP* **P 14 11 59.7 -0.6**
KONO pmax pmax
comp=Z,52nm,2.5s
KONO Kongsberg 56.93 325 P **P 14 11 59.6 -0.6**
KONO IAmb IAmb 14 12 01.9
comp=Z,16nm,0.8s
KONO Kongsberg 56.93 325 *eP* **P 14 12 00.1 -0.2**
CLZ Clausthal 56.99 315 *eP* **P 14 12 01.9 +1.0**
comp=Z,11nm,0.7s,baz=83,slow=5.8
SQTA Sankt Quirin 57.01 310 *i* P **P 14 12 00.9 -0.3**
comp=Z,5.2nm,0.6s
MOTA Moosalm 57.06 310 *eP* **P 14 12 01.1 -0.6**
comp=Z,6.6nm,0.7s
NRDL Niedersach Rie 57.08 316 *eP* **P 14 12 03.0 +1.6**
comp=Z,34nm,1.4s,baz=83,slow=5.8
SPA0 Spitsbergen Ar 57.08 347 P **P 14 12 01.6 +0.5**
SPITS Spitsbergen Ar 57.08 347 P **P 14 12 01.3 +0.2**
comp=Z,9.5nm,0.8s,baz=122,slow=11,SNR=6.4
DOMB Dombas 57.16 328 *eP* **P 14 12 01.7 -0.2**
GTTG Gottingen 57.27 315 *eP* **P 14 12 04.3 +1.4**
comp=Z,14nm,1.1s,baz=83,slow=5.8
RETA Reutte 57.27 310 *i* P **P 14 12 02.9 -0.1**
comp=Z,6.2nm,0.8s
MBAR Mbarara 57.34 249 P **P 14 12 05.0 +0.9**
comp=Z,5.2nm,0.4s,baz=34,slow=12,SNR=7.1
MBAR Mbarara 57.34 249 P **P 14 12 05.0 +0.9**
LATE Laterza 57.35 304 P **P 14 12 03.5 -0.2**
FETA Feichten 57.36 310 *eP* **P 14 12 01.7 -2.1**
comp=Z,5.0nm,1.0s
SKAR Skarslia 57.55 326 *eP* **P 14 12 05.0 +0.2**
UBR Ueberruh 57.68 310 *eP* **P 14 12 06.1 +0.2**
comp=Z,6.6nm,0.7s,baz=83,slow=5.8
MOL Molde 57.86 328 *eP* **P 14 12 06.9 +0.1**
DAVA Damuels 57.90 310 *eP* **P 14 12 05.5 -2.0**
comp=Z,8.0nm,0.7s
DAVOX Davos/Dischmat 57.98 309 P **P 14 12 08.3 +0.2**
comp=Z,2.0nm,0.5s,baz=4.1,slow=19,SNR=3.6
OPO Ambohidratompo 58.12 220 P **P 14 12 09.9 +0.6**
comp=Z,4.2nm,0.6s,baz=53,slow=4.2,SNR=8.7
ABPO Ambohimpanom 58.45 220 P **P 14 12 11.8 +0.1**
ABPO pmax pmax
comp=Z,13nm,1.2s
ABPO Ambohimpanom 58.45 220 P **P 14 12 11.8 +0.1**
ABPO IAmb IAmb 14 12 14.0
comp=Z,13nm,1.2s
MSSA Maissana 58.67 307 P **P 14 12 11.7 -1.2**
MSSA IAmb IAmb 14 12 37.1
comp=Z,10nm,1.1s
PEA0B Petropavlovsk- 58.88 43 *ceP* **P 14 12 15.5 +1.4**
PEA0B Petropavlovsk- 58.88 43 P **P 14 12 13.3 -0.8**
PETK Petropavlovsk- 58.88 43 P **P 14 12 13.4 -0.7**
comp=Z,8.0nm,0.8s,baz=242,slow=3.2,SNR=6.2
PETK LR LR 14 41 13.8
comp=Z,140nm,18.2s,baz=246,slow=40
SENIN Lac Senin/Sane 59.80 309 P **P 14 12 21.1 +0.2**
SENIN IAmb IAmb 14 12 22.7
comp=Z,7.6nm,0.8s
BNI Bardonecchia 60.50 308 P **P 14 12 25.6 0.0**
BNI pmax pmax
comp=Z,7.0nm,1.0s
BNI Bardonecchia 60.50 308 P **P 14 12 25.6 0.0**
BMRD Maredsous 60.71 314 *dP* **P 14 12 26.9 +0.2**
BMRD *dp* **sP 14 12 39.1 +1.6**
BMRD *dP* **PcP 14 13 08.8 -1.8**
VOI Vohitsoka 61.02 218 P **P 14 12 30.1 +0.8**
BILL Bilibino 61.32 25 *ciP* **P 14 12 31.4 +0.8**
BILL *e* 14 13 14.9
BILL *e* 14 14 50.2
BILL *eS* S 14 21 18.2 +29
BILL pmax pmax
comp=Z,13nm,0.7s
BILL MLR MLR
comp=Z,91nm,15.0s
BILL Bilibino 61.32 25 P **P 14 12 31.0 +0.4**
BILL IAmb IAmb 14 12 33.0
comp=Z,14nm,0.7s
PSA00 Pilbara Seismi 61.81 140 P **P 14 12 33.8 -0.6**
FITZ Fitzroy Crossi 62.67 133 P **P 14 12 40.0 -0.2**
comp=Z,6.1nm,0.8s,baz=327,slow=7.4,SNR=9.0
FITZ Fitzroy Crossi 62.67 133 P **P 14 12 39.0 -1.3**
FITZ IAmb IAmb 14 13 07.9
comp=Z,24nm,1.5s
KNRA Kununurra 63.02 128 P **P 14 12 41.6 -0.9**
EKA Eskdalemuir Ar 64.33 321 P **P 14 12 51.0 +0.2**
comp=Z,10nm,0.7s,baz=86,slow=7.3,SNR=37
EKA PP **PP 14 15 12.6 +0.5**
comp=Z,2.5nm,0.8s,baz=71,slow=10,SNR=5.3
EKA Eskdalemuir Ar 64.33 321 P **P 14 12 51.0 +0.2**
ESK Eskdalemuir 64.36 321 P **P 14 12 50.2 -0.8**
ESK pmax pmax
comp=Z,14nm,0.8s
ESK Eskdalemuir 64.36 321 P **P 14 12 50.2 -0.8**
ESK IAmb IAmb 14 12 52.5
comp=Z,14nm,0.8s
MORW Morawa 65.99 148 P **P 14 13 01.1 -0.7**
ESBB Sonseca Array 69.59 305 P **P 14 13 25.2 +0.6**
ESBB IAmb IAmb 14 13 26.7
comp=Z,8.2nm,0.9s
ESDC Sonseca Array 69.59 305 LR LR 14 50 10.0

comp=Z,72nm,18.6s,baz=230,slow=41
WB0 Warramunga Arr 69.71 128 P **P 14 13 24.9 -0.6**
WB0 IAmb IAmb 14 13 26.7
comp=Z,21nm,0.9s
NWAO Narrogin (SRO) 69.79 149 P **P 14 13 25.1 -0.6**
comp=Z,25nm,0.7s,baz=330,slow=5.6,SNR=16
NWAO Narrogin (SRO) 69.79 149 P **P 14 13 24.0 -1.7**
WRA Warramunga Arr 69.79 128 P **P 14 13 26.2 +0.2**
comp=Z,15nm,0.8s,baz=322,slow=6.3,SNR=92
WRAB Tennant Creek 69.79 128 *ceP* **P 14 13 26.2 +0.2**
WRAB pmax pmax
comp=Z,19nm,0.8s
WRAB Tennant Creek 69.79 128 P **P 14 13 25.1 -0.9**
WB2 Warramunga Arr 69.80 128 P **P 14 13 25.1 -0.9**
PAB San Pablo 69.91 305 P **P 14 13 26.7 0.0**
PAB pmax pmax
comp=Z,12nm,1.0s
PAB San Pablo 69.91 305 P **P 14 13 26.7 0.0**
PAB IAmb IAmb 14 13 28.7
comp=Z,12nm,1.0s
WR0 Warramunga Arr 69.94 128 P **P 14 13 26.7 -0.2**
WR0 IAmb IAmb 14 13 28.7
comp=Z,12nm,1.0s
NEEM North Greenlan 70.33 350 *i* P **P 14 13 29.1 +0.3**
NEEM IAmb IAmb 14 13 30.8
comp=Z,16nm,0.9s
PBRG Braganca 70.78 308 *eP* **P 14 13 32.3 +0.4**
EUNU Eureka 71.14 358 P **P 14 13 33.9 +0.5**
EUNU IAmb IAmb 14 13 35.7
comp=Z,17nm,0.8s
GAMB Gambell 71.15 27 P 14 13 33.3
baz=297
SUMG Summit 71.19 344 *i* P **P 14 13 35.0 +0.7**
SUMG IAmb IAmb 14 13 36.7
comp=Z,20nm,0.9s
SUMG Summit 71.19 344 P **P 14 13 34.4 +0.2**
SUMG pmax pmax
comp=Z,28nm,0.9s
SUMG Summit 71.19 344 P **P 14 13 34.4 +0.2**
MVO Moncorvo 71.22 307 *eP* **P 14 13 35.4 +0.8**
MATP Matopo 71.42 233 P **P 14 13 36.8 +0.8**
comp=Z,16nm,0.6s,baz=54,slow=6.6,SNR=39
POLO Lamas de Olo 71.68 308 *eP* **P 14 13 38.0 +0.6**
TNA Tin City 71.73 24 P **P 14 13 36.5 -0.6**
TNA IAmb IAmb 14 13 39.4
comp=Z,10nm,1.0s
TNA Tin City 71.73 24 P 14 13 36.3
baz=300
MTE Manteigas 71.88 307 *eP* **P 14 13 39.9 +1.3**
MTE Manteigas 71.88 307 P **P 14 13 38.4 -0.1**
MTE IAmb IAmb 14 13 41.0
comp=Z,17nm,0.9s
PVIS Viseu 72.00 307 *eP* **P 14 13 40.4 +1.1**
A21K Barrow 72.01 17 P **P 14 13 38.0 -0.6**
A21K IAmb IAmb 14 13 40.5
comp=Z,25nm,1.1s
A21K Barrow 72.01 17 P 14 13 38.0
baz=308
AS31 Alice Springs 72.03 131 P **P 14 13 38.9 -0.6**
ASAR Alice Springs 72.03 131 P **P 14 13 39.4 -0.2**
comp=Z,12nm,0.8s,baz=315,slow=5.7,SNR=107
ASAR LR LR 14 50 17.0
comp=Z,52nm,19.1s,baz=296,slow=40
PCBR Castelo Branco 72.04 306 *eP* **P 14 13 40.4 +0.9**
PBAR Barrancos 72.38 304 *eP* **P 14 13 42.5 +1.0**
MDT Midelt 72.66 298 P **P 14 13 43.9 +0.5**
comp=Z,6.9nm,1.1s,baz=69,slow=5.5,SNR=5.8
EVO Evora 72.94 305 *eP* **P 14 13 46.3 +1.5**
PMG Port Moresby 73.11 111 *ceP* **P 14 13 48.1 +2.0**
PMG pmax pmax
comp=Z,24nm,1.7s
PMG Port Moresby 73.11 111 P **P 14 13 45.0 -1.1**
PMG IAmb IAmb 14 13 48.0
comp=Z,17nm,0.8s
ANM Nome 73.17 25 P **P 14 13 45.3 -0.5**
ANM pmax pmax
comp=Z,19nm,0.8s
ANM Nome 73.17 25 P **P 14 13 45.2 -0.5**
ANM IAmb IAmb 14 13 48.5
comp=Z,19nm,0.8s
ANM Nome 73.17 25 P 14 13 45.1
baz=302
PVAQ Vaqueiros 73.17 304 P **P 14 13 44.9 -1.3**
TULEG Thule 73.34 353 *i* P **P 14 13 45.2 -1.3**
TULEG IAmb IAmb 14 13 47.6
comp=Z,8.3nm,0.7s
TULEG Thule 73.34 353 P **P 14 13 46.3 -0.2**
TULEG IAmb IAmb 14 13 47.6
comp=Z,14nm,0.9s
FORT Forrest 73.57 140 P **P 14 13 48.1 -0.4**
ICESG Greenland Ices 73.67 342 *i* P **P 14 13 50.0 +0.9**
ICESG IAmb IAmb 14 13 51.9
comp=Z,41nm,0.8s
PTEO Sao Teotonio 73.85 304 *eP* **P 14 13 51.9 +1.7**
ANGG Ammassalik, Gr 75.24 338 P **P 14 13 57.2 -0.5**
ANGG IAmb IAmb 14 14 25.6
comp=Z,18nm,0.7s
TOLK Toolik Lake Re 75.61 17 P **P 14 13 59.8 -0.1**
TOLK Toolik Lake Re 75.61 17 P 14 13 59.8
baz=314
TOA0 Torodi Ar. Sit 75.69 277 P **P 14 14 00.8 -0.4**
TORD Torodi Ar. Bea 75.69 277 P **P 14 14 01.4 +0.2**
comp=Z,27nm,0.7s,baz=54,slow=4.5,SNR=69
TORD Torodi Ar. Bea 75.69 277 P **P 14 14 00.8 -0.4**
COLD Coldfoot 76.43 19 P **P 14 13 03.9 -0.7**
COLD IAmb IAmb 14 14 07.4
comp=Z,15nm,0.9s
COLD Coldfoot 76.43 19 P 14 14 04.5
baz=314
LBTB Lobatse 76.45 231 P **P 14 14 06.4 +1.0**
comp=Z,22nm,0.6s,baz=55,slow=4.9,SNR=33
LBTB Lobatse 76.45 231 P **P 14 14 05.3 -0.1**
RES Resolute Bay 76.70 359 P **P 14 14 05.7 -0.2**
comp=Z,2.9nm,0.8s,baz=18,slow=11,SNR=11
RES Resolute Bay 76.70 359 P **P 14 14 05.6 -0.4**
RES pmax pmax
comp=Z,4.0nm,1.0s
RES Resolute Bay 76.70 359 P **P 14 14 05.6 -0.4**
DY2G Dye2 77.29 341 *i* P **P 14 14 10.4 +0.7**
DY2G IAmb IAmb 14 14 11.5
comp=Z,13nm,0.7s
MLY Manley 77.81 20 P **P 14 12 32.3 -0.1**
MLY IAmb IAmb 14 14 14.7
comp=Z,21nm,1.3s
MLY Manley 77.81 20 P 14 14 11.6
baz=314
SFJD Kangerlussuaq 78.09 343 P **P 14 14 14.3 +0.5**
comp=Z,19nm,0.8s,baz=47,slow=5.8,SNR=12
SFJD Kangerlussuaq 78.09 343 *i* P **P 14 14 13.7 -0.2**
SFJD IAmb IAmb 14 14 15.9
comp=Z,10nm,0.8s
SFJD Kangerlussuaq 78.09 343 *i* P **P 14 14 13.6 -0.2**
SFJD pmax pmax
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 78.09 343 P **P 14 14 13.6 -0.2**
SFJD IAmb IAmb 14 14 15.5
comp=Z,21nm,0.9s
CHUM Lake Minchumin 78.11 22 P 14 14 13.4
baz=313
I23K Minto, Yukon-K 78.14 20 P **P 14 14 14.1 -0.1**
I23K Minto, Yukon-K 78.14 20 P 14 14 14.6
baz=315
FYU Fort Yukon 78.26 18 P **P 14 14 13.8 -0.9**
FYU IAmb IAmb 14 14 17.7
comp=Z,17nm,0.9s
BPAW Bear Paw Mtn. 78.38 21 P **P 14 14 15.6 0.0**
BPAW IAmb IAmb 14 14 19.6
comp=Z,8.7nm,0.9s
BPAW Bear Paw Mtn. 78.39 21 P 14 14 15.6
baz=314
MDM Murphy Dome 78.61 20 P **P 14 14 16.7 -0.2**
MDM IAmb IAmb 14 14 18.9
comp=Z,20nm,1.2s
NEA2 Nenana 78.63 20 P **P 14 14 16.6 -0.3**
NEA2 IAmb IAmb 14 14 18.7
comp=Z,15nm,0.9s
NEA2 Nenana 78.63 20 P 14 14 17.1
baz=316
AKUT Akutan 78.70 34 P **P 14 14 16.9 -0.6**
POKR Poker Plat Res 78.73 19 P **P 14 14 17.6 +0.2**
POKR IAmb IAmb 14 14 19.6
comp=Z,23nm,1.2s
POKR Poker Plat Res 78.73 19 P 14 14 17.5
baz=317
TCOL CIGO, UAF Yank 78.78 20 P **P 14 14 17.3 -0.4**

TCOL					IAmb	IAmb	14 14 27.8	
	comp=Z,14nm,0.9s							
TCOL	**CIGO, UAF Yank**	**78.78**	**20**	P			14 14 17.7	
	baz=317							
COLA	**College**	**78.79**	**20**	P	**P**		**14 14 17.6**	**-0.1**
COLA				pmax	pmax			
	comp=Z,15nm,1.0s							
COLA	**College**	**78.79**	**20**	P	**P**		**14 14 17.6**	**-0.1**
COLA				IAmb	IAmb		14 14 27.8	
	comp=Z,15nm,0.9s							
PPLA	**Purkeypile**	**78.83**	**22**	P	**P**		**14 14 18.3**	**+0.1**
PPLA				IAmb	IAmb		14 14 30.1	
	comp=Z,20nm,1.2s							
SVW2	**Sparrevohn**	**78.85**	**25**	P	**P**		**14 14 18.1**	**0.0**
SVW2				IAmb	IAmb		14 14 28.6	
	comp=Z,13nm,1.2s							
CCB	**Clear Creek Bu**	**78.97**	**20**	P	**P**		**14 14 18.3**	**-0.4**
WRH	**Wood River Hil**	**79.01**	**20**	P	**P**		**14 14 18.2**	**-0.8**
BOSA	**Boshof**	**79.04**	**229**	P	**P**		**14 14 20.3**	**+0.5**
	comp=Z,15nm,0.8s,baz=49,slow=4.8,SNR=23							
BOSA	**Boshof**	**79.04**	**229**	P	**P**		**14 14 19.5**	**-0.3**
BOSA				IAmb	IAmb		14 14 21.5	
	comp=Z,17nm,0.8s							
IL31		**79.14**	**19**	P	**P**		**14 14 18.8**	**-0.9**
ILAR	**Eielson Array**	**79.14**	**19**	P	**P**		**14 14 19.1**	**-0.7**
	comp=Z,6.1nm,1.0s,baz=299,slow=4.3,SNR=40							
ILAR				PP	**PP**		**14 17 18.5**	**0.0**
	comp=Z,1.8nm,0.7s,baz=307,slow=6.6,SNR=8.3							
ILAR				LR	LR		14 52 08.7	
	comp=Z,139nm,19.8s,baz=314,slow=38							
MCK	**McKinley**	**79.29**	**21**	P	**P**		**14 14 20.5**	**0.0**
MCK				pmax	pmax			
	comp=Z,12nm,1.4s							
MCK	**McKinley**	**79.29**	**21**	P	**P**		**14 14 20.5**	**0.0**
MCK	**McKinley**	**79.29**	**21**	P			14 14 19.4	
	baz=316							
HDA	**Harding Lake**	**79.39**	**20**	P			14 14 20.2	
	baz=317							
HDA				P			14 14 20.2	
	baz=317							
INK	**Inuvik**	**79.55**	**13**	P	**P**		**14 14 21.6**	**-0.3**
	comp=Z,7.2nm,0.8s,baz=359,slow=6.7,SNR=25							
INK	**Inuvik**	**79.55**	**13**	P	**P**		**14 14 21.5**	**-0.3**
INK				IAmb	IAmb		14 14 23.6	
	comp=Z,9.9nm,0.9s							
RND	**Reindeer**	**79.55**	**21**	P	**P**		**14 14 21.8**	**-0.2**
RND				pmax	pmax			
	comp=Z,9.0nm,1.1s							
RND	**Reindeer**	**79.55**	**21**	P	**P**		**14 14 21.8**	**-0.2**
SKT	**Skwentna**	**79.68**	**23**	P	**P**		**14 14 22.2**	**-0.6**
SKT				IAmb	IAmb		14 14 25.1	
	comp=Z,17nm,1.0s							
SKT	**Skwentna**	**79.69**	**23**	P			14 14 22.5	
	baz=314							
BBOO	**Buckleboo**	**79.72**	**136**	P	**P**		**14 14 22.2**	**-1.1**
BBOO				IAmb	IAmb		14 14 24.1	
	comp=Z,16nm,1.1s							
WAT2	**Susitna Watana**	**79.95**	**21**	P			14 14 23.7	
	baz=316							
KOWA	**Kowa**	**80.03**	**281**	P	**P**		**14 14 25.9**	**+0.5**
	comp=Z,36nm,0.7s,baz=59,slow=5.2,SNR=69							
KOWA	**Kowa**	**80.03**	**281**	P	**P**		**14 14 25.8**	**+0.4**
C36M	**Paulatuk**	**80.20**	**9**	P	**P**		**14 14 24.5**	**-0.9**
C36M				IAmb	IAmb		14 14 26.4	
	comp=Z,15nm,0.8s							
C36M	**Paulatuk**	**80.20**	**9**	P			14 14 24.9	
	baz=337							
SUA	**Susitna One**	**80.31**	**23**	P	**P**		**14 14 26.2**	**-0.1**
SUA				IAmb	IAmb		14 14 28.7	
	comp=Z,14nm,0.8s							
SUA	**Susitna One**	**80.31**	**23**	P			14 14 26.1	
	baz=315							
WAT6	**Susitna Watana**	**80.50**	**21**	P			14 14 26.5	
	baz=317							
EPYK	**Eagle Plains**	**80.51**	**15**	P	**P**		**14 14 26.2**	**-0.9**
EPYK				IAmb	IAmb		14 14 28.5	
	comp=Z,11nm,1.0s							
EPYK	**Eagle Plains**	**80.51**	**15**	P			14 14 26.9	
	baz=326							
NUUK	**Nuuk**	**80.54**	**341**	*i* P	**P**		**14 14 27.2**	**0.0**
NUUK				IAmb	IAmb		14 14 29.1	
	comp=Z,19nm,0.8s							
SCRK	**Sand Creek**	**80.57**	**19**	P	**P**		**14 14 27.2**	**-0.4**
SCRK				IAmb	IAmb		14 14 29.5	
	comp=Z,12nm,1.0s							
SCRK	**Sand Creek**	**80.58**	**19**	P			14 14 27.3	
	baz=320							
EGAK	**Eagle**	**80.72**	**17**	P	**P**		**14 14 28.0**	**-0.2**
PMR	**Palmer**	**80.77**	**22**	P			14 14 27.9	
	baz=316							
DOT	**Dot Lake**	**80.81**	**19**	P	**P**		**14 14 28.8**	**0.0**
DOT				IAmb	IAmb		14 14 30.2	
	comp=Z,8.9nm,0.8s							
SML	**Sawmill**	**80.88**	**22**	P			14 14 28.9	
	baz=317							
PAX	**Paxson**	**80.91**	**20**	P			14 14 29.1	
	baz=319							
K27K	**Chicken**	**81.07**	**18**	P	**P**		**14 14 30.0**	**-0.1**
K27K				IAmb	IAmb		14 14 32.7	
	comp=Z,11nm,1.1s							
K27K	**Chicken**	**81.07**	**18**	P			14 14 30.1	
	baz=322							
KNK	**Knik Glacier**	**81.12**	**22**	P			14 14 30.8	
	baz=316							
SCM	**Sheep Creek Mo**	**81.18**	**21**	P	**P**		**14 14 31.3**	**+0.4**
SCM				pmax	pmax			
	comp=Z,17nm,0.8s							
SCM	**Sheep Creek Mo**	**81.18**	**21**	P	**P**		**14 14 31.3**	**+0.4**
SCM				IAmb	IAmb		14 14 33.9	
	comp=Z,17nm,0.8s							
M24K	**Tolsona, Glenn**	**81.34**	**21**	P			14 14 32.7	
	baz=318							
DAWY	**Dawson**	**81.75**	**17**	P	**P**		**14 14 33.3**	**-0.5**
KLU	**Klutina**	**81.88**	**21**	P			14 14 33.7	
	baz=319							
L27K	**Beaver Creek,**	**81.90**	**19**	P	**P**		**14 14 34.9**	**+0.3**
L27K	**Beaver Creek,**	**81.90**	**19**	P			14 14 34.3	
	baz=322							
N25K	**Chitina, Valde**	**82.21**	**21**	P	**P**		**14 14 36.7**	**+0.4**
N25K				IAmb	IAmb		14 14 38.9	
	comp=Z,22nm,1.2s							
KDAK	**Kodiak Island**	**82.21**	**26**	P	**P**		**14 14 36.3**	**0.0**
	comp=Z,18nm,0.8s,baz=306,slow=4.6,SNR=15							
KDAK	**Kodiak Island**	**82.21**	**26**	IAmb	IAmb		14 14 39.0	
	comp=Z,13nm,0.8s							
N25K	**Chitina, Valde**	**82.21**	**21**	P			14 14 36.9	
	baz=320							
STKA	**Stephens Creek**	**82.56**	**133**	P	**P**		**14 14 37.4**	**-1.0**
	comp=Z,4.0nm,0.7s,baz=307,slow=6.7,SNR=12							
STKA				LR	LR		14 57 51.5	
	comp=Z,76nm,18.5s,baz=333,slow=40							
MCARA	**McCarthy VSAT**	**82.86**	**20**	P	**P**		**14 14 39.5**	**-0.1**
MCARA	**McCarthy VSAT**	**82.87**	**20**	P			14 14 40.6	
	baz=321							
CRQE	**Cirque**	**83.34**	**21**	P			14 14 43.1	
	baz=321							
BARN	**Barnard Glacie**	**83.53**	**20**	P	**P**		**14 14 43.3**	**0.0**
BARN				IAmb	IAmb		14 14 45.9	
	comp=Z,15nm,1.0s							
DBIC	**Dimbokro**	**84.39**	**274**	P	**P**		**14 14 49.4**	**+1.1**
	comp=Z,15nm,0.7s,baz=40,slow=5.9,SNR=27							
DBIC	**Dimbokro**	**84.39**	**274**	P	**P**		**14 14 48.4**	**+0.2**
HYT	**Haines Junctio**	**84.92**	**18**	P	**P**		**14 14 50.3**	**0.0**
HYT				IAmb	IAmb		14 14 52.6	
	comp=Z,12nm,0.9s							
WHY	**Whitehorse**	**85.76**	**17**	P	**P**		**14 14 54.6**	**+0.1**
WHY				IAmb	IAmb		14 14 56.0	
	comp=Z,6.5nm,0.8s							
YKA	**Yellowknife Ar**	**87.96**	**8**	P	**P**		**14 15 04.6**	**-0.3**
	comp=Z,5.3nm,0.8s,baz=342,slow=4.5,SNR=75							
YKA				PKKPbc	**PKKPbc**		**14 32 49.4**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=153,slow=3.4,SNR=4.7							
DLBC	**Dease Lake**	**88.93**	**16**	P	**P**		**14 15 09.1**	**-0.6**
DLBC				IAmb	IAmb		14 15 12.1	
	comp=Z,6.4nm,0.8s							
MAW	**Mawson**	**97.27**	**187**	LR	LR		14 54 30.2	
	comp=Z,77nm,19.2s,baz=48,slow=32							
SYO	**Syowa Base**	**102.46**	**195**	*e*PP	**PKiKP**		**14 20 25.8**	**-6.1**
SYO	**Syowa Base**	**102.46**	**195**	*e*PKiKP	**PKiKP**		**14 20 37.4**	**+5.5**
NVAR	**Mina Array Bea**	**110.33**	**17**	PKiKP	**PKiKP**		**14 20 49.2**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=288,slow=1.3,SNR=10.0							
VNA2	**Neumayer--Watz**	**116.88**	**202**	PKPdf	**PKiKP**		**14 20 59.3**	**+0.3**
VNA1	**Neumayer--Stat**	**117.12**	**202**	PKPdf	**PKiKP**		**14 20 59.8**	**+0.4**
VNA3	**Neumayer Olymp**	**117.67**	**201**	PKPdf	**PKPdf**		**14 21 00.6**	**+0.1**
MNTX	**Cormudas Mount**	**119.33**	**8**		**PKPdf**		**14 21 03.8**	**-1.3**
JCT	**Junction City**	**120.96**	**2**	PKIKP	**PKPdf**		**14 21 07.2**	**-1.1**
JCT	**Junction City**	**120.96**	**2**		**PKPdf**		**14 21 07.2**	**-1.1**
TX31	**Lajitas Ar. Si**	**121.85**	**6**		**PKPdf**		**14 21 09.6**	**-0.5**
TX32	**Lajitas Array**	**121.85**	**6**		**PKPdf**		**14 21 09.7**	**-0.4**
TXAR	**Lajitas Array**	**121.85**	**6**	PKP	**PKiKP**		**14 21 10.8**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=350,slow=0.2,SNR=22							
TXAR	**Lajitas Array**	**121.85**	**6**	PKPdf	**PKPdf**		**14 21 10.2**	**+0.1**
CPUP	**Villa Florida**	**144.30**	**264**	PKP	PKPbc		14 21 50.6	+0.5
	comp=Z,23nm,0.7s,baz=75,slow=3.4,SNR=57							
CPUP	**Villa Florida**	**144.30**	**264**		PKPbc		14 21 50.3	+0.2
PLCA	**Paso Flores**	**154.90**	**235**	PKP	**PKPdf**		**14 22 09.4**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=306,slow=1.3,SNR=5.8							

DDA 21 14:02:43.4, 40.88N, 30.50E, h7km, 2km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAYN	**Sakarya, Kayna**	**0.15**	**305**	*i* P	Pg	14 02 47.0	+0.5
KAYN				*i* S	Sg	14 02 49.5	+0.8
SAHE	**Sakarya_HENDEK**	**0.27**	**96**	*i* P	Pg	14 02 49.5	+0.8
SAHE				IAML		14 02 52.0	
	comp=E,42nm,0.4s						
SAHE				*i* S	Sg	14 02 52.8	+0.6
SAHE				IAML		14 02 53.0	
	comp=N,58nm,0.5s						
KAND	**Kocaeli-Kandir**	**0.32**	**312**	*i* P	Pg	14 02 50.2	+0.5
KAND				*i* S	Sg	14 02 54.6	+0.7
KAND				IAML		14 02 55.0	
	comp=N,42nm,0.4s						
KAND				IAML		14 02 56.0	
	comp=E,34nm,0.6s						
YIGI	**Dzce**	**0.72**	**83**	*i* P	Pg	14 02 57.3	0.0

*IDC **21** 14:19:51.2±1.0, 13.10N×120.05E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/53, mbtmp3.5/6, Error ellipse: s-maj=20.1km s-min=14.3km az=115.0*
*MAN **21** 14:19:54.3, 13.24N×120.10E, h17km, mb4.4, ML3.3, MS3.0*

ISC 21 14:19:54.6±0.7, 13.20N±0.03×120.11E±0.07, h22km±5km, n17, σ1.9s17/24, mb3.6/6, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.55**	**14**	*e*P	**Pb**	**14 20 04.2**	**-1.4**
LUBP				*e*S	**Sb**	**14 20 12.6**	**-0.5**
PGP	**Puerto Galera**	**0.88**	**70**	*e*P	**Pb**	**14 20 10.4**	**-0.8**
PGP				*i* S	**Sb**	**14 20 22.2**	**-0.3**
BUSP	**Coron**	**1.19**	**176**	*e*P	**Pb**	**14 20 16.7**	**+0.3**
BUSP				*e*S	**Sn**	**14 20 30.5**	**-1.0**
TGY	**Tagaytay City**	**1.21**	**42**	Pg	**Pn**	**14 20 16.4**	**+0.2**
	834nm,0.3s,baz=231,slow=4.1,SNR=51						
TGY				Lg	Lg	14 20 33.9	
	479nm,0.3s,baz=180,slow=20,SNR=19						
TGY	**Tagaytay City**	**1.21**	**42**	*e*P	**Pb**	**14 20 16.9**	**+0.1**
MACP	**Maragondon, Ca**	**1.21**	**29**	*e*P	**Pn**	**14 20 15.4**	**-0.9**
MACP				*e*S	**Sb**	**14 20 32.2**	**+0.1**
SJMP	**San Jose**	**1.23**	**126**	*e*P	**Pb**	**14 20 16.8**	**-0.3**
SJMP				*e*S	**Sb**	**14 20 33.5**	**+1.0**
LQP	**Lukban**	**1.66**	**57**	*e*P	**Pn**	**14 20 23.3**	**+0.7**
LQP				*i* S	**Sb**	**14 20 46.2**	**+1.0**
ENPP	**El Nido**	**2.09**	**199**	*e*P	**Pn**	**14 20 28.7**	**+0.4**
ENPP				*e*S	**Sn**	**14 20 52.6**	**-1.1**
JCNP	**Jose Panganiba**	**2.74**	**66**	*e*P	**Pn**	**14 20 38.2**	**+1.0**
APYP	**Conner**	**4.76**	**13**	*e*P	**Pn**	**14 21 09.1**	**+3.9**
CMAR	**Chiang Mai Arr**	**21.02**	**287**	P	**P**	**14 24 37.8**	**+0.8**
	0.6nm,0.7s,baz=98,slow=9.8,SNR=4.7						
WRA	**Warramunga Arr**	**35.79**	**157**	P	**P**	**14 26 51.4**	**-1.0**
	0.6nm,0.4s,baz=332,slow=10,SNR=10						
SONM	**Songino Array**	**36.38**	**344**	P	**P**	**14 26 56.9**	**-0.5**
	0.4nm,0.6s,baz=166,slow=8.9,SNR=4.4						
ASAR	**Alice Springs**	**39.04**	**160**	P	**P**	**14 27 19.6**	**-0.5**
	0.9nm,0.6s,baz=338,slow=6.8,SNR=18						
MKAR	**Makanchi Array**	**46.10**	**324**	P	**P**	**14 28 17.6**	**+0.4**
	0.3nm,0.6s,baz=124,slow=6.5,SNR=4.1						
KURBB	**Kurchatov Arra**	**50.29**	**327**	P	**P**	**14 28 49.4**	**0.0**
	0.3nm,0.4s,baz=129,slow=8.6,SNR=5.9						

*IDC **21** 14:19:49.7±2.3, 43.73N×148.31E, h0km, mb3.7/3, mb1 4.1/5, mb1mx3.4/55, mbtmp3.8/5, ML3.2/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/48, Error ellipse: s-maj=86.0km s-min=34.0km az=169.0*
*MOS **21** 14:19:56.1±1.2, 44.23N×147.84E, h59km, mb3.8/3, Error ellipse: s-maj=13.3km s-min=10.1km az=137.5*
*NEIC **21** 14:19:57.1±1.0, 44.2N±0.1×148.0E±0.2, h49km±13km, mb4.1/12, Error ellipse: s-maj=20.5km s-min=15.4km az=132.0*
*JMA **21** 14:19:57.2±0.2, 43.97N×147.63E, h12km, M4.1*
*SKHL **21** 14:19:58.0±0.3, 44.20N×147.70E, h73km±3km, mb4.7/4*

ISC 21 14:19:56.7±1.2, 44.16N±0.06×147.82E±0.07, h51km±12km, n62, σ1.8s18/80, mb4.0/10, 2C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.07**	**2**	*d* iPN	**Pn**	**14 20 16.2**	**+0.8**
KUR				*i* S	**Sn**	**14 20 29.8**	**+0.5**
KUR				pmax	pmax		
	comp=E,49nm,0.1s						
KUR				pmax	pmax		
	comp=Z,87nm,0.1s						
KUR				smax	smax		
	comp=N,1μm,0.2s						
KUR				smax	smax		
	comp=E,390nm,0.2s						
KUR	**Kuril'sk**	**1.07**	**2**	*i* P	**Pn**	**14 20 16.2**	**+0.8**
KUR				AMB	AMB	14 20 17.0	
KUR				AMB	AMB	14 20 17.0	
	comp=E,50nm,0.2s						
	comp=E,90nm,0.2s						
KUR				*i* S	**Sn**	**14 20 29.8**	**+0.5**
KUR				A	A	14 20 30.0	
	comp=E,1μm,0.2s						
KUR				A	A	14 20 30.0	
	comp=E,390nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.42**	**266**	*c* iPN	**Pn**	**14 20 19.9**	**-0.1**
YUK				*i* S	**Sn**	**14 20 36.2**	**-1.4**
YUK				pmax	pmax		
	comp=N,46nm,0.1s						
YUK				pmax	pmax		
	comp=Z,298nm,0.1s						
YUK				smax	smax		
	comp=N,607nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.42**	**266**	*i* P	**Pn**	**14 20 20.0**	**-0.1**
YUK				AMB	AMB	14 20 21.0	
	comp=E,50nm,0.2s						
YUK				AMB	AMB	14 20 21.0	
	comp=E,300nm,0.2s						
YUK				*i* S	**Sn**	**14 20 36.7**	**-0.9**
YUK				A	A	14 20 38.0	
	comp=E,610nm,0.2s						
YUK				A	A	14 20 38.0	
	comp=E,2μm,0.2s						
GRPR	**Tuman**	**1.49**	**264**	*c* iPN	**Pn**	**14 20 21.3**	**+0.3**
GRPR				*i* S	**Sn**	**14 20 37.9**	**-1.4**
GRPR				pmax	pmax		
	comp=Z,104nm,0.1s						
GRPR				smax	smax		
	comp=N,579nm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.3s						
GRPR	**Tuman**	**1.49**	**264**	*i* P	**Pn**	**14 20 21.3**	**+0.3**
GRPR				AMB	AMB	14 20 22.0	
	comp=E,100nm,0.2s						
GRPR				*i* S	**Sn**	**14 20 38.9**	**-0.4**
GRPR				A	A	14 20 39.0	
	comp=E,580nm,0.3s						
GRPR				A	A	14 20 39.0	
	comp=E,1μm,0.3s						
NEM2	**Nemuro 2**	**1.70**	**243**	P	**Pn**	**14 20 24.2**	**+0.2**
NEM2				*e*S	**Sn**	**14 20 43.4**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.71**	**243**	*i* iPN	**Pn**	**14 20 24.2**	**+0.1**
NMR				*i* S	**Sn**	**14 20 43.5**	**-1.2**
NMR	**Nemuro--Hokkai**	**1.71**	**243**	*i* P	**Pn**	**14 20 24.2**	**+0.1**
NMR				*i* S	**Sn**	**14 20 43.5**	**-1.2**
GLVR	**Golovnino**	**1.71**	**257**	*i* iPN	**Pn**	**14 20 24.9**	**+0.8**
GLVR				*i* S	**Sn**	**14 20 44.5**	**-0.4**
GLVR				pmax	pmax		
	comp=E,154nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.2s						
GLVR				smax	smax		
	comp=E,558nm,0.1s						
GLVR	**Golovnino**	**1.71**	**257**	*i* P	**Pn**	**14 20 24.9**	**+0.8**
GLVR				AMB	AMB	14 20 25.0	
	comp=E,150nm,0.2s						
GLVR				*i* S	**Sn**	**14 20 44.5**	**-0.4**
GLVR				A	A	14 20 49.0	
	comp=E,2μm,0.3s						
GLVR				A	A	14 20 49.0	
	comp=E,560nm,0.3s						
RUSJ	**Misakicho**	**1.85**	**269**	*i* PN	**Pn**	**14 20 27.7**	**+1.7**
RUSJ				*i* S	**Sn**	**14 20 49.9**	**+1.6**
JRA	**Rausu**	**1.96**	**264**	P	**Pn**	**14 20 28.7**	**+1.3**
JRA				*e*S	**Sn**	**14 20 51.6**	**+0.8**
JNSB	**Nemuroshibetsu**	**2.07**	**260**	P	**Pn**	**14 20 30.1**	**+1.1**
JNSB				*e*S	**Sn**	**14 20 54.7**	**+1.1**
JKHN	**Kushirohamanak**	**2.21**	**242**	P	**Pn**	**14 20 31.6**	**+0.7**
JNK	**Nakash**	**2.32**	**257**	P	**Pn**	**14 20 33.4**	**+1.0**
JNK				*e*S	**Sn**	**14 20 59.8**	**+0.2**
JAK	**Akkeshi**	**2.55**	**244**	P	**Pn**	**14 20 36.3**	**+0.7**
JAK				*e*S	**Sn**	**14 21 04.1**	**-1.3**
JTKR	**Abashiri--Toko**	**2.83**	**267**	P	**Pn**	**14 20 40.4**	**+1.1**
JAR	**Ashorobuto**	**3.06**	**255**	P	**Pn**	**14 20 44.4**	**+1.8**
JAR				*e*S	**Sn**	**14 21 19.0**	**+1.1**
JOB	**Onbets**	**3.16**	**248**	P	**Pn**	**14 20 45.4**	**+1.5**
JOB				*e*S	**Sn**	**14 21 20.2**	**-0.1**
JCH	**Churui**	**3.60**	**246**	P	**Pn**	**14 20 50.8**	**+0.9**
JKA	**Kamikawa-asahi**	**3.76**	**271**		**Pn**	**14 20 54.5**	**+2.3**
JKA					Sn	14 21 48.5	+13
ASAJ	**Asahikawa**	**3.76**	**271**	Pn	**Pn**	**14 20 54.5**	**+2.3**
	comp=E,1.5nm,0.3s,baz=110,slow=27,SNR=12						
ASAJ				Sn	Sn	14 21 48.5	+13
	comp=E,1.0nm,0.3s,baz=9.0,slow=19,SNR=4.3						
ASAJ				LR	LR	14 22 34.6	
	comp=E,216nm,19.5s,baz=150,slow=40						
JEM	**Erimo**	**4.03**	**239**	Pn	**Pn**	**14 20 57.7**	**+1.8**
ERM	**Erimo**	**4.03**	**239**	*i* PN	**Pn**	**14 20 58.5**	**+2.6**
ERM	**Erimo**	**4.03**	**239**	Pn	**Pn**	**14 20 58.5**	**+2.6**
JNBK	**Urakawa-nobuka**	**4.15**	**245**	P	**Pn**	**14 20 58.4**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.52**	**310**	*e*PN	**Pn**	**14 21 02.9**	**+0.3**
YSS				*e*S	**Sn**	**14 21 51.6**	**-2.2**
YSS				smax	smax		
	comp=E,30nm,2.5s						
YSS	**Yuzh-Sakhalins**	**4.52**	**310**	Pn	**Pn**	**14 21 03.5**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.52**	**310**	*e*P	**Pn**	**14 21 03.5**	**+0.9**
YSS				*e*S	**Sn**	**14 21 51.9**	**-1.9**
YSS				A	A	14 21 53.8	
	comp=E,30nm,1.2s						
JTM	**Tenmabayashi**	**6.02**	**238**	Pn	**Pn**	**14 21 24.9**	**+1.7**
PEA0B	**Petropavlovsk-**	**11.07**	**33**	PN	**Pn**	**14 22 32.7**	**+0.4**
PEA0B	**Petropavlovsk-**	**11.07**	**33**	Pn	**Pn**	**14 22 32.7**	**+0.4**
PETK	**Petropavlovsk-**	**11.07**	**33**	Pn	**Pn**	**14 22 32.0**	**-0.2**
	comp=E,0.4nm,0.3s,baz=205,slow=16,SNR=11						
PETK	**Petropavlovsk-**	**11.07**	**33**		**Pn**	**14 22 31.0**	**-1.2**
KLR	**Kul'dur**	**12.14**	**300**	LR	LR	14 27 46.4	
	comp=E,160nm,19.0s,baz=177,slow=38						
KLR	**Kul'dur**	**12.14**	**300**	*i* PN	**Pn**	**14 22 46.8**	**0.0**
KLR	**Kul'dur**	**12.14**	**300**	*i* P	**Pn**	**14 22 46.8**	**0.0**
BMKR	**Bomnak**	**16.19**	**317**	*e*P	**Pn**	**14 23 38.6**	**-1.9**
BILL	**Bilibino**	**25.83**	**16**	*e*P	**P**	**14 25 25.1**	**+2.3**
BILL				*e*		14 26 07.5	
BILL				MLR	MLR		
	comp=Z,66nm,15.0s						
BILL	**Bilibino**	**25.83**	**16**	*e*P	**P**	**14 25 25.1**	**+2.3**
ULN	**Ulaanbaatar**	**28.32**	**292**	*i* P	**P**	**14 25 45.9**	**+0.3**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	**Ulaanbaatar**	**28.32**	**292**	*i* P	**P**	**14 25 45.9**	**+0.3**
TRF	**Thorofare Moun**	**39.41**	**39**	P	**P**	**14 27 21.2**	**-0.1**
SCRK	**Sand Creek**	**42.18**	**38**	P	**P**	**14 27 43.2**	**-0.9**
SCRK				IAmb	IAmb	14 27 45.0	
	comp=Z,3.1nm,1.2s						
K27K	**Chicken**	**43.01**	**37**	P	**P**	**14 27 50.8**	**+0.1**
L27K	**Beaver Creek,**	**43.26**	**39**	P	**P**	**14 27 52.4**	**-0.3**
L27K				IAmb	IAmb	14 28 02.1	
	comp=Z,6.3nm,1.5s						
EGAK	**Eagle**	**43.31**	**36**	P	**P**	**14 27 52.6**	**-0.5**
HYT	**Haines Junctio**	**45.70**	**41**	P	**P**	**14 28 13.9**	**+1.6**
HYT				IAmb	IAmb	14 28 14.8	
	comp=Z,2.8nm,0.8s						
INK	**Inuvik**	**45.80**	**31**	P	**P**	**14 28 11.7**	**-1.2**
INK				IAmb	IAmb	14 28 14.2	
	comp=Z,3.4nm,1.3s						
BESE	**Bessie Mountai**	**47.62**	**44**	P	**P**	**14 28 25.4**	**-1.8**
YKA	**Yellowknife Ar**	**55.19**	**34**	*i* P	**P**	**14 29 22.3**	**-1.4**
K05A	**Summer Lake**	**62.78**	**56**	P	**P**	**14 30 15.6**	**-1.3**
BOZ	**Bozeman (W)**	**66.31**	**49**	P	**P**	**14 30 39.9**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BOZ	**Bozeman (W)**	**66.31**	**49**	P	**P**	**14 30 39.9**	**+0.1**
BOZ				IAmb	IAmb	14 30 54.7	
	comp=Z,2.7nm,1.4s						
NVAR	**Mina Array Bea**	**66.95**	**58**	P	**P**	**14 30 44.6**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=308,slow=7.2,SNR=5.9						
PDAR	**Pinedale Array**	**69.27**	**50**	P	**P**	**14 30 58.1**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=304,slow=2.1,SNR=3.0						
ULM	**Lac du Bonnet**	**70.88**	**38**	LR	LR	15 06 21.4	
	comp=Z,85nm,18.2s,baz=56,slow=39						
TX31	**Lajitas Ar

*NEIC **21** 14:33:12.6±1.4, 30.44N±0.06×142.9E±0.1, h24km±5km, mb4.6/20, Error ellipse: s-maj=15.1km s-min=9.0km az=83.0*

ISC 21 14:33:15.2±0.5, 30.53N±0.06×142.77E±0.08, h45km, n67, σ1s78/68, mb4.1/28, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.46**	**189**	P	**Pn**	**14 34 03.0**	**-3.5**
JCJ	**Chichijima**	**3.46**	**189**	Pn	**Pn**	**14 34 03.1**	**-3.4**
	9.9nm,0.3s,baz=352,slow=23,SNR=19						
JCJ				Sn	Sn	14 34 39.0	-7.2
	31nm,0.3s,baz=74,slow=22,SNR=6.6						
JHJ2	**Mitsune**	**3.60**	**316**	P	**Pn**	**14 34 05.7**	**-2.7**
JHJ2	**Mitsune**	**3.60**	**316**	Pn	**Pn**	**14 34 07.0**	**-1.4**
JHJ	**Hachijo jima 2**	**3.62**	**316**	Pn	**Pn**	**14 34 06.7**	**-2.1**
	9.4nm,0.3s,baz=347,slow=21,SNR=9.2						
JHJ				Sn	**Sn**	**14 34 46.8**	**-3.5**
	44nm,0.3s,baz=266,slow=22,SNR=12						
BSO1	**Boso 1**	**4.38**	**340**	P	**Pn**	**14 34 16.1**	**-2.6**
JYT	**Yasato**	**6.08**	**340**	Pn	**Pn**	**14 34 41.4**	**-1.0**
JRY	**Ryogami san**	**6.36**	**330**	eS	**Sn**	**14 35 55.5**	**-2.2**
JAG	**Ashikaga**	**6.50**	**336**	P	**Pn**	**14 34 46.0**	**-2.3**
JGF	**Kuroka**	**6.80**	**320**	Pn	**Pn**	**14 34 54.1**	**+1.7**
MJAR	**Matsushiro Arr**	**7.10**	**329**	Pn	**Pn**	**14 34 55.0**	**-1.6**
	0.4nm,0.3s,baz=158,slow=9.9,SNR=20						
MJAR				Sn	**Sn**	**14 36 12.0**	**-4.0**
	0.2nm,0.3s,baz=157,slow=18,SNR=5.7						
MJAR	**Matsushiro Arr**	**7.10**	**329**		**Pn**	**14 34 54.7**	**-1.9**
MAJO	**Matsushiro**	**7.11**	**329**	Pn	**Pn**	**14 34 55.4**	**-1.1**
MAT	**Matsushiro**	**7.11**	**329**	P	**Pn**	**14 34 55.3**	**-1.3**
MAT				eS	**Sn**	**14 36 11.5**	**-4.5**
JMM	**Marumori**	**7.50**	**348**		**Pn**	**14 34 58.6**	**-3.4**
JWT	**Wachi**	**7.80**	**309**	Pn	**Pn**	**14 35 05.7**	**-0.4**
JSD	**Sado**	**8.37**	**335**	Pn	**Pn**	**14 35 11.4**	**-2.5**
JTM	**Tenmabayashi**	**10.33**	**353**	Pn	**Pn**	**14 35 38.3**	**-2.4**
JNU	**Nakatsue**	**10.44**	**287**	LR	LR	14 38 59.1	
	comp=Z,103nm,19.6s,baz=252,slow=33						
JKA	**Kamikawa-asahi**	**13.56**	**359**		**Pn**	**14 36 22.4**	**-2.5**
ASAJ	**Asahikawa**	**13.57**	**359**	Pn	**Pn**	**14 36 22.4**	**-2.5**
	0.6nm,0.3s,baz=212,slow=23,SNR=6.4						
KSRS	**Korea Array**	**14.11**	**303**	Pn	**Pn**	**14 36 33.6**	**+1.3**
	0.1nm,0.3s,baz=107,slow=11,SNR=2.6						
YULB	**Yu-li**	**20.40**	**255**	P	**P**	**14 37 48.2**	**-0.2**
YULB				IAmb	IAmb	14 38 12.5	
	comp=Z,19nm,0.9s						
KLR	**Kul'dur**	**20.46**	**339**	P	**P**	**14 37 49.5**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=161,slow=17,SNR=4.0						
SONM	**Songino Array**	**32.69**	**312**	P	**P**	**14 39 45.4**	**+2.1**
	comp=Z,2.6nm,0.8s,baz=84,slow=6.1,SNR=12						
SONM	**Songino Array**	**32.69**	**312**	P	**P**	**14 39 45.8**	**+2.5**
SEY	**Seymchan**	**33.01**	**8**	P	**P**	**14 39 46.0**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=178,slow=9.1,SNR=5.8						
DLV	**T Lat**	**36.71**	**247**	P	**P**	**14 40 18.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**41.41**	**264**	P	**P**	**14 40 59.0**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=81,slow=5.6,SNR=3.1						
CMAR				LR	LR	14 58 35.9	
	comp=Z,27nm,19.9s,baz=60,slow=37						
NIKH	**Nikolski High**	**41.48**	**43**	P	**P**	**14 40 56.4**	**-1.2**
COEN	**Coen**	**44.23**	**179**	P	**P**	**14 41 21.0**	**+0.8**
COEN				IAmb	IAmb	14 41 34.2	
	comp=Z,12nm,1.2s						
ZALV	**Zalesovo Beam**	**47.29**	**317**	P	**P**	**14 41 45.8**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=82,slow=11,SNR=3.8						
JAGI	**Jajag, Banyuwa**	**47.52**	**220**	P	**P**	**14 41 43.6**	**-2.5**
MK31	**Makanchi Array**	**48.75**	**307**	P	**P**	**14 41 56.2**	**+0.8**
MKAR	**Makanchi Array**	**48.75**	**307**	P	**P**	**14 41 57.0**	**+1.6**
	comp=Z,1.4nm,0.9s,baz=91,slow=10,SNR=10						
MKAR	**Makanchi Array**	**48.75**	**307**	P	**P**	**14 41 56.2**	**+0.8**
WB0	**Warramunga Arr**	**50.65**	**190**	P	**P**	**14 42 09.6**	**-0.4**
WB0				IAmb	IAmb	14 42 23.2	
	comp=Z,19nm,1.3s						
WR0	**Warramunga Arr**	**50.82**	**190**	P	**P**	**14 42 10.9**	**-0.4**
WR0				IAmb	IAmb	14 42 12.4	
	comp=Z,6.7nm,1.1s						
WB2	**Warramunga Arr**	**50.83**	**190**	P	**P**	**14 42 11.0**	**-0.4**
WB2				IAmb	IAmb	14 42 12.1	
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**50.83**	**190**	P	**P**	**14 42 11.2**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=9.0,slow=7.9,SNR=20						
KURK	**Kurchatov**	**51.00**	**313**	P	**P**	**14 42 13.8**	**+1.4**
KURBB	**Kurchatov Arra**	**51.06**	**312**	P	**P**	**14 42 13.8**	**+1.0**
	comp=Z,2.3nm,1.0s,baz=90,slow=6.9,SNR=8.8						
PPLA	**Purkeypile**	**51.97**	**32**	P	**P**	**14 42 20.8**	**+1.2**
PPLA				IAmb	IAmb	14 42 33.2	
	comp=Z,11nm,1.3s						
A21K	**Barrow**	**52.06**	**21**	P	**P**	**14 42 18.8**	**-1.2**
A21K				IAmb	IAmb	14 42 19.5	
	comp=Z,14nm,1.4s						
RND	**Reindeer**	**53.53**	**31**	P	**P**	**14 42 31.0**	**0.0**
ILAR	**Eielson Array**	**54.48**	**30**	P	**P**	**14 42 37.3**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=258,slow=6.8,SNR=4.8						
AS31	**Alice Springs**	**54.55**	**190**	P	**P**	**14 42 38.6**	**-0.2**
ASAR	**Alice Springs**	**54.55**	**190**	P	**P**	**14 42 38.8**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=5.2,slow=6.6,SNR=75						
ASAR	**Alice Springs**	**54.55**	**190**	P	**P**	**14 42 38.4**	**-0.4**
BVAR	**Borovoye Array**	**55.96**	**316**	P	**P**	**14 42 49.8**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=330,slow=4.4,SNR=5.6						
INK	**Inuvik**	**59.71**	**25**	P	**P**	**14 43 15.2**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=230,slow=8.9,SNR=3.1						
INK	**Inuvik**	**59.71**	**25**	IAmb	IAmb	14 43 40.9	
	comp=Z,4.7nm,1.4s						
FORT	**Forrest**	**62.55**	**194**	P	**P**	**14 43 34.5**	**+0.2**
ABKAR	**Akbulak array**	**63.10**	**313**	P	**P**	**14 43 38.7**	**+0.7**
LHI	**Lord Howe Isla**	**63.62**	**164**	P	**P**	**14 43 40.2**	**-1.2**
EUNU	**Eureka**	**66.44**	**8**	P	**P**	**14 44 00.3**	**+0.9**
YKA	**Yellowknife Ar**	**68.90**	**29**	P	**P**	**14 44 15.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=292,slow=6.0,SNR=12						
FINES	**FINESS Array B**	**75.11**	**334**	P	**P**	**14 44 53.0**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=152,slow=6.1,SNR=5.8						
KBZ	**Khabaz**	**76.06**	**313**	P	**P**	**14 44 59.9**	**+1.9**
	comp=Z,3.9nm,0.9s,baz=209,slow=1.2,SNR=5.5						
SUMG	**Summit**	**77.17**	**0**	P	**P**	**14 45 05.8**	**+1.6**
SUMG				IAmb	IAmb	14 45 10.2	
	comp=Z,8.3nm,1.5s						
NVAR	**Mina Array Bea**	**78.01**	**52**	P	**P**	**14 45 09.5**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=293,slow=5.9,SNR=8.3						
AKASG	**Malin Array Be**	**80.16**	**324**	P	**P**	**14 45 20.7**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=44,slow=5.9,SNR=4.9						
NOA	**NORSAR Array B**	**80.62**	**338**	P	**P**	**14 45 23.6**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=41,slow=5.3,SNR=3.3						
PDAR	**Pinedale Array**	**81.43**	**45**	P	**P**	**14 45 27.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=236,slow=1.0,SNR=3.5						
BRTR	**Keskin Array B**	**84.05**	**313**	P	**P**	**14 45 42.9**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=103,slow=3.9,SNR=4.4						
RAYN	**Ar Rayn**	**84.24**	**294**	P	**P**	**14 45 43.7**	**+1.3**
RAYN				IAmb	IAmb	14 45 56.3	
	comp=Z,4.0nm,0.8s						
TXAR	**Lajitas Array**	**93.15**	**53**	P	**P**	**14 46 25.2**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=293,slow=3.9,SNR=7.5						

IDC 21 14:37:00.4±2.8, 30.40S×177.76W, h64km±16km, mb3.1/2, mb1 3.4/3, mb1mx3.2/23, mbtmp3.5/3, Error ellipse: s-maj=58.4km s-min=15.9km az=101.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.15**	**353**	P	Pn	14 37 20.9	+0.3
	283nm,0.3s,baz=41,slow=15,SNR=12						
RAO				S	Sn	14 37 35.6	+0.1
	560nm,0.3s,baz=270,slow=22,SNR=9.7						
URZ	**Urewera**	**8.91**	**207**	P	Pn	14 39 04.5	-1.8
	0.5nm,0.3s,baz=300,slow=23,SNR=8.7						
URZ				S	Sn	14 40 46.9	+1.8
	1.1nm,0.3s,baz=302,slow=23,SNR=6.0						
ASAR	**Alice Springs**	**43.31**	**267**	P	P	14 44 56.6	+0.4
	0.2nm,0.6s,baz=106,slow=7.5,SNR=5.0						
WRA	**Warramunga Arr**	**44.30**	**272**	P	P	14 45 03.7	-0.5
	0.5nm,0.7s,baz=110,slow=8.0,SNR=5.9						
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc	PKPbc	14 56 28.7	-1.0
	1.6nm,0.8s,baz=67,slow=2.5,SNR=6.4						

*IDC **21** 14:43:45.2±9.3, 35.95N×69.59E, h90km±76km, mb3.4/4, mb1 3.4/8, mb1mx3.1/48, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=75.4km s-min=29.2km az=42.0*
*NNC **21** 14:43:49.1±5.5, 36.65N×69.40E, h0km, mb3.9, mpv3.7, Error ellipse: s-maj=48.2km s-min=36.2km az=155.0*

ISC 21 14:43:39.1±1.5, 35.9N±0.1×69.2E±0.1, h35km, n12, σ2s52/15, mb3.8/4, 4C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**7.31**	**8**	⇓P	**Pn**	**14 45 27.6**	**+4.3**
	1.5nm,0.3s,baz=177,slow=11,SNR=50						
KK31				⇑S	**Sn**	**14 46 42.0**	**-3.0**
	1.3nm,0.4s,baz=188,slow=24						
AAK	**Ala-Archa**	**7.93**	**30**	P	**Pn**	**14 45 34.5**	**+2.6**
	2.1nm,0.3s,baz=205,slow=3.1,SNR=28						
AAK	**Ala-Archa**	**7.93**	**30**	⇓P	**Pn**	**14 45 35.6**	**+3.7**
	2.3nm,0.3s						
AAK				⇑S	**Sn**	**14 46 57.5**	**-2.8**
	1.0nm,0.4s						
TKM2	**Tokmak 2**	**8.62**	**33**	⇑P	**Pn**	**14 45 44.5**	**+2.9**
	1.1nm,0.3s						
TKM2				⇓S	**Sn**	**14 47 17.3**	**-0.4**
	0.8nm,0.5s						
MKAR	**Makanchi Array**	**14.69**	**38**	P	**Pn**	**14 47 04.6**	**+0.4**
	0.0nm,0.3s,baz=224,slow=12,SNR=4.8						
AB31	**Akbulak array**	**15.00**	**336**	⇑P	**P**	**14 47 11.0**	**-2.3**
	0.4nm,0.4s,baz=152,slow=13,SNR=23						
KURBB	**Kurchatov Arra**	**16.23**	**22**	P	**P**	**14 47 26.3**	**-0.7**
	0.1nm,0.3s,baz=211,slow=10,SNR=12						
BVAR	**Borovoye Array**	**17.18**	**2**	P	**P**	**14 47 37.6**	**0.0**
	1.0nm,0.3s,baz=182,slow=14,SNR=22						
ZALV	**Zalesovo Beam**	**21.13**	**26**	P	**P**	**14 48 19.9**	**-0.7**
	2.6nm,0.4s,baz=222,slow=10,SNR=14						
FINES	**FINESS Array B**	**37.21**	**327**	P	**P**	**14 50 48.0**	**+1.3**
	0.8nm,0.7s,baz=114,slow=14,SNR=3.4						
ARCES	**ARCESS Array B**	**41.19**	**338**	P	**P**	**14 51 20.9**	**+1.1**
	2.4nm,1.0s,baz=107,slow=8.6,SNR=4.0						
ASAR	**Alice Springs**	**85.11**	**124**	P	**P**	**14 56 10.2**	**-1.3**
	0.2nm,0.7s,baz=308,slow=4.5,SNR=3.5						

IDC 21 15:11:17.7±2.1, 1.88N×126.43E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.2/42, mbtmp3.4/3, Error ellipse: s-maj=175.8km s-min=26.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.03**	**161**	P	P	15 16 24.4	-0.3
	0.7nm,0.3s,baz=339,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**26.41**	**164**	P	P	15 16 56.6	+0.3
	0.2nm,0.4s,baz=346,slow=12,SNR=8.9						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	15 21 18.6	-0.1
	0.2nm,0.4s,baz=120,slow=7.9,SNR=4.4						

*IDC **21** 15:16:09.4±2.2, 49.70N×177.04W, h0km, mb3.3/6, mb1 3.6/6, mb1mx3.4/55, mbtmp3.3/6, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=54.9km s-min=29.2km az=3.0*
*NEIC **21** 15:16:31.5±2.0, 50.4N±0.1×173.40W±0.08, h28km±11km, Error ellipse: s-maj=15.3km s-min=7.3km az=177.0*
*AEIC **21** 15:16:34±1.2, 50.59N±0.02×173.45W±0.09, h66km±8km, ML3.3, mb3.9/9(NEIC), Error ellipse: s-maj=8.2km s-min=2.5km az=82.0*

ISC 21 15:16:32.7±1.1, 50.49N±0.10×173.41W±0.04, h35km, n39, σ0s93/43, mb3.3/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.78**	**344**		**Pn**	**15 17 01.2**	**+0.2**
ATKA					**Sn**	**15 17 22.7**	**+0.4**
KOFP	**Korovin Flat P**	**1.83**	**347**		**Pn**	**15 17 02.3**	**+0.5**
KOKL	**Mount Kliuchef**	**1.90**	**345**		**Pn**	**15 17 03.0**	**+0.3**
KOKL					**Sn**	**15 17 26.1**	**+0.8**
KOWE	**Korovin West**	**1.95**	**345**		**Pn**	**15 17 04.2**	**+0.9**
GSMY	**Great Sitkin M**	**2.27**	**314**		**Pn**	**15 17 07.9**	**+0.2**
GSTR	**Great Sitkin T**	**2.31**	**315**		**Pn**	**15 17 08.5**	**+0.2**
GSTD	**Great Sitkin T**	**2.32**	**313**		**Pn**	**15 17 08.7**	**+0.2**
GSTD					**Sn**	**15 17 34.6**	**-1.2**
ADK	**Adak**	**2.49**	**305**		**Pn**	**15 17 10.7**	**0.0**
ADK					**Sn**	**15 17 38.1**	**-1.6**
ADAG	**Mount Adagdak**	**2.50**	**308**		**Pn**	**15 17 11.4**	**+0.6**
KIRH	**Kanaga Island**	**2.71**	**303**		**Pn**	**15 17 14.4**	**+0.7**
KIMD	**Kanaga Island**	**2.72**	**299**		**Pn**	**15 17 14.3**	**+0.4**
KIMD					**Sn**	**15 17 45.1**	**-0.5**
KIKV	**Kanaga Island**	**2.74**	**302**		**Pn**	**15 17 14.7**	**+0.4**
TAFP	**Tanaga Falls P**	**3.20**	**298**		**Pn**	**15 17 21.4**	**+0.8**
TAFP					**Sn**	**15 17 56.7**	**-0.8**
TASE	**Tanaga Southea**	**3.21**	**297**		**Pn**	**15 17 21.9**	**+1.3**
NIKH	**Nikolski High**	**3.77**	**47**		**Pn**	**15 17 28.4**	**+0.2**
NIKH					**Sn**	**15 18 09.1**	**-2.1**
OKFG	**Magazine Ridge**	**4.48**	**47**		**Pn**	**15 17 38.6**	**+0.5**
AMKA	**Amchitka**	**4.69**	**284**	Pn	**Pn**	**15 17 41.0**	**0.0**
MAPS	**Pakushin South**	**5.18**	**48**		**Pn**	**15 17 48.6**	**+0.8**
MGOD	**Makushin Gods**	**5.21**	**48**		**Pn**	**15 17 48.6**	**+0.5**
MSW	**Makushin Switc**	**5.32**	**47**		**Pn**	**15 17 50.3**	**+0.7**
MNAT	**Makushin Natee**	**5.35**	**48**		**Pn**	**15 17 50.8**	**+0.8**
CNPM	**China Poot**	**15.53**	**46**	Pn	**Pn**	**15 20 08.2**	**-0.7**
BRLK	**Bradley Lake**	**15.80**	**45**	Pn	**Pn**	**15 20 11.7**	**-0.6**
PPLA	**Purkeypile**	**16.92**	**35**	P	**Pn**	**15 20 26.7**	**+0.1**
PPLA				IAmb	IAmb	15 20 48.2	
	comp=Z,11nm,1.3s						
GHO	**Glory Hole Cre**	**17.58**	**41**		**Pn**	**15 20 33.4**	**-1.4**
GHO				IAmb	IAmb	15 20 48.2	
	comp=Z,8.8nm,1.2s						
SCM	**Sheep Creek Mo**	**18.28**	**42**	P	**P**	**15 20 42.3**	**-1.0**
SCM				IAmb	IAmb	15 20 47.3	
	comp=Z,8.9nm,1.0s						
BMRM	**Bremner River**	**19.14**	**46**	P	**P**	**15 20 50.6**	**-2.1**
BMRM				IAmb	IAmb	15 20 55.3	
	comp=Z,12nm,1.2s						
CCB	**Clear Creek Bu**	**19.53**	**34**	P	**P**	**15 20 55.9**	**-0.9**
ILAR	**Eielson Array**	**19.93**	**34**	P	**Pn**	**15 21 02.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=236,slow=9.5,SNR=11						
ILAR	**Eielson Array**	**19.93**	**34**		**Pn**	**15 21 02.2**	**-0.7**
DOT	**Dot Lake**	**20.44**	**39**	Pn	Pn	15 21 08.7	-0.3
DOT				IAmb	IAmb	15 21 34.3	
	comp=Z,4.9nm,1.3s						
SCRK	**Sand Creek**	**20.62**	**38**	P	**P**	**15 21 09.4**	**+0.6**
INK	**Inuvik**	**26.30**	**33**	P	**P**	**15 22 05.1**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=256,slow=10,SNR=4.8						
YKA	**Yellowknife Ar**	**33.38**	**46**	P	**P**	**15 23 08.4**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=274,slow=8.5,SNR=3.7						
YKA	**Yellowknife Ar**	**33.38**	**46**	P	**P**	**15 23 08.4**	**+1.2**
PDAR	**Pinedale Array**	**43.29**	**75**	P	**P**	**15 24 32.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=296,slow=4.4,SNR=4.6						
JNU	**Nakatsue**	**43.91**	**269**	LR	LR	15 37 19.7	
	comp=Z,59nm,21.7s,baz=0.0,slow=31						
TXAR	**Lajitas Array**	**55.38**	**85**	P	**P**	**15 26 02.4**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=299,slow=6.1,SNR=3.3						
MKAR	**Makanchi Array**	**63.21**	**312**	P	P	15 26 30.8	-26
	comp=Z,0.1nm,0.4s,baz=49,slow=4.8,SNR=2.9						

ISK 21 15:19:21.4, 41.15N×28.88E, h0km±1km, ML1.5/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGKT	**Bogazkoy**	**0.09**	**293**	PG	Pg	15 19 23.9	+0.8
BGKT				SG	Sg	15 19 25.6	+1.3
ISK	**Istanbul-Kandi**	**0.16**	**121**	PG	Pg	15 19 25.1	+0.7
ISK				SG	Sg	15 19 27.9	+1.5
KAVV	**Kandilli-Istan**	**0.16**	**121**	PG	Pg	15 19 25.1	+0.7
KAVV				SG	Sg	15 19 27.8	+1.3
KLYT	**Kilyos**	**0.16**	**49**	PG	Pg	15 19 25.2	+0.7
CTKS	**Kestanelik-??a**	**0.30**	**288**	PG	Pg	15 19 27.7	+0.6

DDA 21 15:19:49.1, 39.55N×28.12E, h7km±2km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.28**	**78**	*i* P	Pg	15 19 54.9	+0.3
DURS				*i* S	Sg	15 19 59.0	+0.7
DURS				IAML		15 20 08.0	
	comp=E,68nm,0.8s						
DURS				IAML		15 20 09.0	
	comp=N,59nm,0.5s						
STEP	**BALIKESIR_Sava**	**0.35**	**242**	*i* P	Pg	15 19 56.3	+0.2
STEP				*i* S	Sg	15 20 00.8	+0.1
STEP				IAML		15 20 04.0	
	comp=E,53nm,0.5s						
STEP				IAML		15 20 07.0	
	comp=N,67nm,0.8s						
BALY	**Balya**	**0.43**	**297**	*i* P	Pb	15 19 58.4	-0.7
BALY				*i* S	Sg	15 20 04.0	+0.8
MANT	**Manisa**	**1.11**	**162**	*i* P	Pb	15 20 10.7	-0.1
MANT				*i* S	Sg	15 20 20.0	-4.7
MANT				IAML		15 20 27.0	
	comp=N,9.4nm,0.7s						
MANT				IAML		15 20 56.0	

comp=E,14nm,1.3s

*IDC **21** 15:27:55.1±4.3, 14.13N×90.57W, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.6/22, mbtmp3.3/3, ML4.1/1, Error ellipse: s-maj=150.3km s-min=70.2km az=41.0*
*SNET **21** 15:28:01.6±1.1, 13.75N×91.42W, h29km±9km, ML3.8*
*UCR **21** 15:28:01.9±1.2, 13.76N×91.42W, h29km±9km, ML3.6*
*INET **21** 15:28:03.0, 13.90N×91.23W, h6km, MW3.7*
*GCG **21** 15:28:06.6±0.6, 14.02N×91.23W, h26km±4km, MD4.2*

ISC 21 15:28:00.1±1.9, 13.69N±0.08×91.34W±0.07, h31km±13km, n28, σ1s32/37, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.77**	**343**	*eP*	**Pn**	**15 28 17.1**	**+2.2**
ERG				*eS*	**Sn**	**15 28 25.4**	**-0.1**
FUG	**Fuego 3**	**0.89**	**33**	*eP*	**Pn**	**15 28 18.7**	**+2.0**
RTAL	**Retalhuleu**	**0.89**	**337**	*eP*	**Pb**	**15 28 16.8**	**-0.4**
RTAL				*eS*	**Sn**	**15 28 28.5**	**0.0**
PCG	**Pacaya**	**0.99**	**46**	*eP*	**Pn**	**15 28 20.7**	**+2.5**
NBG	**Las Nubes**	**1.31**	**47**	*eP*	**Pb**	**15 28 26.3**	**+1.9**
NBG				*eS*	**Sb**	**15 28 40.8**	**-0.2**
HUEH	**Huehuetenango**	**1.62**	**354**	*eP*	**Pb**	**15 28 28.9**	**-0.7**
HUEH				*eS*	**Sb**	**15 28 48.6**	**-1.2**
RTR	**El Retiro**	**1.66**	**83**	*eP*	**Pb**	**15 28 30.3**	**+0.1**
RTR	**El Retiro**	**1.66**	**83**	*eP*	**Pb**	**15 28 30.3**	**+0.1**
SBLS	**San Blas**	**1.68**	**85**	*eP*	**Pb**	**15 28 30.4**	**-0.1**
SBLS	**San Blas**	**1.68**	**85**	*eP*	**Pb**	**15 28 30.4**	**-0.1**
SNJE	**San Jose**	**1.69**	**84**	*eP*	**Pb**	**15 28 30.9**	**+0.1**
SNJE	**San Jose**	**1.69**	**84**	*eP*	**Pb**	**15 28 30.9**	**+0.1**
BOQS	**Boqueron**	**2.00**	**89**	*eP*	**Pb**	**15 28 35.5**	**-0.6**
BOQS	**Boqueron**	**2.00**	**89**	*eP*	**Pb**	**15 28 35.5**	**-0.6**
MTO3	**Montecristo**	**2.05**	**70**	*eP*	**Pb**	**15 28 34.9**	**-1.8**
MTO3				*eS*	**Sb**	**15 29 02.7**	**+0.8**
MTO3				IAML		15 29 04.0	
	comp=Z,339nm,0.6s						
MTO3	**Montecristo**	**2.05**	**70**	*eP*	**Pb**	**15 28 34.9**	**-1.8**
MTO3				*eS*	**Sb**	**15 29 02.7**	**+0.8**
MTO3				IAML		15 29 04.0	
	comp=Z,339nm,0.6s						
SNET	**Serv Nac Est T**	**2.05**	**90**	*eS*	**Sb**	**15 29 01.5**	**-0.4**
SNET				IAML		15 29 06.8	
	comp=Z,1μm,0.3s						
SNET	**Serv Nac Est T**	**2.05**	**90**	*eS*	**Sb**	**15 29 01.5**	**-0.4**
SNET				IAML		15 29 06.8	
	comp=Z,1μm,0.3s						
MRL	**Marmol**	**2.12**	**49**	*eP*	**Pb**	**15 28 36.9**	**-1.1**
MRL				*eS*	**Sb**	**15 29 01.1**	**-2.8**
ESQI	**Esquipulas**	**2.12**	**66**	*eP*	**Pb**	**15 28 36.0**	**-2.0**
LFRS	**El Faro**	**2.22**	**92**	*eP*	**Pb**	**15 28 38.5**	**-1.1**
LFRS	**El Faro**	**2.22**	**92**	*eP*	**Pb**	**15 28 38.5**	**-1.1**
LBRS	**Las Brisas**	**2.23**	**89**	*eP*	**Pb**	**15 28 38.3**	**-1.6**
LBRS				*eS*	**Sb**	**15 29 07.2**	**+0.1**
LBRS	**Las Brisas**	**2.23**	**89**	*eP*	**Pb**	**15 28 38.3**	**-1.6**
LBRS				*eS*	**Sb**	**15 29 07.2**	**+0.1**
TXAR	**Lajitas Array**	**19.31**	**326**	P	**P**	**15 32 23.7**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=4.1						
NVAR	**Mina Array Bea**	**34.31**	**321**	P	**P**	**15 34 44.5**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=132,slow=8.6,SNR=5.5						
YKA	**Yellowknife Ar**	**51.47**	**346**	P	**P**	**15 36 59.8**	**-2.5**
	comp=Z,0.2nm,0.5s,baz=148,slow=8.1,SNR=6.1						
CMAR	**Chiang Mai Arr**	**146.48**	**342**	PKPbc	**PKPdf**	**15 47 38.0**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=349,slow=3.9,SNR=4.9						

*IDC **21** 15:28:16.9±0.7, 1.61S×138.85E, h0km, mb3.9/8, mb1 4.3/13, mb1mx4.1/33, mbtmp4.1/13, ML4.3/5, MS3.2/11, Ms1 3.3/11, ms1mx3.0/48, Error ellipse: s-maj=19.1km s-min=12.3km az=42.0*
*DJA **21** 15:28:20.2±1.2, 1.1S±6.1×13.9E±9.1

STKA				LR	LR	15 48 01.1	
	comp=Z,122nm,18.2s,baz=358,slow=39						
STKA	**Stephens Creek**	**30.10 175**		P	**P**	**15 34 28.1**	**-0.5**
JOW	**Kunigami**	**30.13 341**		LR	LR	15 44 33.8	
	comp=Z,65nm,19.6s,baz=163,slow=32						
FORT	**Forrest**	**30.58 198**		P	**P**	**15 34 33.1**	**+0.3**
BBOO	**Buckleboo**	**31.00 184**		P	**P**	**15 34 37.4**	**+0.9**
BBOO				IAmb	IAmb	15 34 39.7	
	comp=Z,22nm,1.4s						
SANVU	**Saraoutou**	**31.26 117**		P	**P**	**15 34 39.7**	**+0.7**
MORW	**Morawa**	**34.69 216**		P	**P**	**15 35 08.1**	**-0.8**
MORW				IAmb	IAmb	15 35 09.9	
	comp=Z,4.7nm,0.8s						
IPM	**Ipoh**	**38.12 279**		P	**P**	**15 35 37.7**	**-0.7**
IPM				IAmb	IAmb	15 35 38.7	
	comp=Z,8.5nm,0.8s						
KSRS	**Korea Array**	**40.25 347**		LR	LR	15 49 36.5	
	comp=Z,24nm,21.0s,baz=148,slow=32						
GSI	**Gunungsitoli**	**41.20 274**		P	**P**	**15 36 02.8**	**-1.3**
GSI				IAmb	IAmb	15 36 09.4	
	comp=Z,14nm,1.0s						
TAU	**Tasmania Unive**	**41.71 170**		P	**P**	**15 36 08.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**43.93 299**		P	**P**	**15 36 26.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=121,slow=6.3,SNR=6.7						
CMAR				LR	LR	15 57 14.6	
	comp=Z,8.2nm,18.1s,baz=220,slow=40						
CMAR	**Chiang Mai Arr**	**43.93 299**		P	**P**	**15 36 25.1**	**-1.1**
OUZ	**Omahuta**	**46.50 140**		P	**P**	**15 36 48.0**	**+1.7**
SONM	**Songino Array**	**56.84 335**		P	**P**	**15 38 03.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=134,slow=8.3,SNR=3.0						
SONM				LR	LR	16 03 26.3	
	comp=Z,38nm,18.7s,baz=172,slow=37						
PETK	**Petropavlovsk-**	**56.94 14**		LR	LR	15 58 32.3	
	comp=Z,23nm,21.2s,baz=215,slow=32						
MK31	**Makanchi Array**	**69.01 322**		P	**P**	**15 39 23.4**	**-0.9**
MK31				IAmb	IAmb	15 39 30.3	
	comp=Z,3.2nm,1.4s						
MKAR	**Makanchi Array**	**69.01 322**		P	**P**	**15 39 24.0**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=114,slow=8.8,SNR=11						
MKAR	**Makanchi Array**	**69.01 322**		P	**P**	**15 39 23.6**	**-0.7**
MAKZ	**Makanchi**	**69.20 322**		P	**P**	**15 39 24.6**	**-1.0**
MAKZ				IAmb	IAmb	15 39 31.2	
	comp=Z,4.3nm,1.2s						
ZALV	**Zalesovo Beam**	**71.09 330**		P	**P**	**15 39 35.4**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=104,slow=6.4,SNR=4.5						
VNDA	**Vanda**	**76.74 175**		P	**P**	**15 40 09.9**	**+0.4**
BRVK	**Borovoye**	**78.58 325**		P	**P**	**15 40 19.9**	**-0.3**
BRVK				IAmb	IAmb	15 40 20.8	
	comp=Z,4.0nm,0.6s						
ILAR	**Eielson Array**	**84.97 24**		P	**P**	**15 40 53.5**	**-0.2**
	comp=Z,0.6nm,1.0s,baz=289,slow=2.8,SNR=3.2						
YKA	**Yellowknife Ar**	**99.22 27**		LR	LR	16 30 02.3	
	comp=Z,9.6nm,18.4s,baz=0.0,slow=37						
PLCA	**Paso Flores**	**130.03 151**		PKP	**PKiKP**	**15 47 28.7**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=21,slow=3.1,SNR=3.0						
PLCA	**Paso Flores**	**130.03 151**			**PKPdf**	**15 47 27.7**	**-1.3**
LPAZ	**La Paz**	**148.03 125**		PKPbc	**PKPab**	**15 48 07.2**	**-1.5**
	comp=Z,3.4nm,0.8s,baz=330,slow=2.0,SNR=5.1						
LPAZ	**La Paz**	**148.03 125**		PKPdf	**PKPdf**	**15 48 00.9**	**-1.9**
LPAZ					**PKPbc**	**15 48 05.6**	**-0.4**
CPUP	**Villa Florida**	**148.09 152**		PKPbc	**PKiKP**	**15 48 06.1**	**-0.8**
	comp=Z,5.9nm,1.0s,baz=240,slow=4.6,SNR=7.3						
CPUP	**Villa Florida**	**148.09 152**			**PKiKP**	**15 48 05.7**	**-1.1**

*IDC **21** 15:37:05.1±8.9, 6°.64S×129°.84E, h171km±92km, mb3.3/1, mb1 3.2/5, mb1mx3.0/37, mbtmp3.7/5, Error ellipse: s-maj=79.6km s-min=26.4km az=40.0*
ISC 21 15:37:03.6±1.6, 6°.8S±0°.1×130°.1E±0°.1, h146km, n5, σ2s 83/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumatra**	**7.17 241**		P	**Pn**	**15 38 47.5**	**+1.4**
	2.9nm,0.3s,baz=56,slow=4.7,SNR=5.5						
BATI				S	**Sn**	**15 40 06.8**	**+0.5**
	2.4nm,0.3s,baz=79,slow=22,SNR=6.0						
FITZ	**Fitzroy Crossi**	**12.02 201**		P	**Pn**	**15 39 50.7**	**+0.3**
	0.3nm,0.3s,baz=19,slow=7.9,SNR=25						
FITZ				S	**Sn**	**15 42 00.6**	**-2.8**
	0.3nm,0.3s,baz=30,slow=20,SNR=5.3						
WRA	**Warramunga Arr**	**13.71 163**		P	**Pn**	**15 40 14.2**	**+2.1**
	0.2nm,0.3s,baz=336,slow=14,SNR=5.5						
WRA				S	**Sn**	**15 42 42.9**	**-1.0**
	0.7nm,0.3s,baz=339,slow=22,SNR=8.4						
ASAR	**Alice Springs**	**17.17 168**		P	**P**	**15 40 57.4**	**+3.2**
	0.1nm,0.3s,baz=340,slow=10,SNR=7.6						
ASAR				S	**S**	**15 44 02.1**	**-3.7**
	0.1nm,0.3s,baz=355,slow=29,SNR=3.7						
MKAR	**Makanchi Array**	**68.09 327**		P	**P**	**15 47 44.8**	**-2.9**
	0.5nm,0.5s,baz=121,slow=8.4,SNR=9.2						

*IDC **21** 15:46:05.7±0.7, 57°.18S×25°.45W, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.1/26, mbtmp4.2/9, ML4.0/1, MS3.4/3, Ms1 3.3/3, ms1mx3.1/19, Error ellipse: s-maj=30.7km s-min=18.1km az=64.0*
*NEIC **21** 15:46:13.5±1.3, 57°.3S±0°.1×25°.71W±0°.10, h58km±5km, mb4.7/28, Error ellipse: s-maj=15.6km s-min=7.1km az=190.0*
ISC 21 15:46:11.9±0.5, 57°.27S±0°.10×25°.5W±0°.1, h43km, n55, σ0s 98/47, mb4.6/18, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.87 291**		Pn	**Pn**	**15 47 52.6**	**+2.7**
VNA1	**Neumayer--Stat**	**15.32 158**		P	**Pn**	**15 49 44.3**	**-0.4**
VNA3	**Neumayer Olymp**	**15.53 161**		P	**Pn**	**15 49 46.0**	**-1.5**
VNA2	**Neumayer--Watz**	**15.71 158**		P	**Pn**	**15 49 48.7**	**-1.2**
	baz=316,slow=14						
SNAA	**Sanae**	**17.25 156**		P	**Pn**	**15 50 09.8**	**+0.6**
SNAA	**Sanae**	**17.25 156**		P	**Pn**	**15 50 09.0**	**-0.2**
	0.5nm,0.3s,baz=316,slow=13,SNR=16						
SNAA				LR	LR	15 56 30.6	
	comp=Z,46nm,18.1s,baz=87,slow=36						
SNAA	**Sanae**	**17.25 156**		Pn	**Pn**	**15 50 09.2**	**-0.1**
EFI	**East Falkland**	**19.59 273**		Pn	**Pn**	**15 50 37.5**	**-0.2**
EFI				IAmb	IAmb	15 51 06.3	
	comp=Z,74nm,1.3s						
PMSA	**Palmer Station**	**19.83 232**		LR	LR	15 57 30.6	
	comp=Z,199nm,18.2s,baz=80,slow=34						
MG02	**Cerro Sombrero**	**25.11 261**		P	**P**	**15 51 32.8**	**+0.5**
GO09	**Cerro Castillo**	**27.53 262**		P	**P**	**15 51 52.2**	**-1.9**
QSPA	**South Pole Qui**	**32.98 180**		P	**P**	**15 52 42.7**	**+0.4**
	comp=Z,4.6nm,0.6s,baz=202,slow=2.9,SNR=46						
QSPA	**South Pole Qui**	**32.98 180**		P	**P**	**15 52 42.3**	**0.0**
QSPA				IAmb	IAmb	15 52 44.4	
	comp=Z,4.8nm,0.7s						
PLCA	**Paso Flores**	**33.12 280**		P	**P**	**15 52 42.5**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=329,slow=13,SNR=3.4						
PLCA				LR	LR	16 06 21.6	
	comp=Z,52nm,18.1s,baz=160,slow=37						
CPUP	**Villa Florida**	**38.31 310**		P	**P**	**15 53 27.6**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=156,slow=3.6,SNR=4.2						
CPUP	**Villa Florida**	**38.31 310**		IAmb	IAmb	15 53 32.5	
	comp=Z,7.2nm,1.3s						
MT02	**Curacav**	**39.04 288**		P	**P**	**15 53 32.0**	**-2.2**
CO02	**Combarbal**	**40.60 290**		P	**P**	**15 53 46.5**	**-0.8**
CO02				IAmb	IAmb	15 53 54.6	
	comp=Z,25nm,1.4s						
AC04	**Llanos de Chal**	**43.07 293**		P	**P**	**15 54 05.7**	**-1.7**
AC04				IAmb	IAmb	15 54 30.7	
	comp=Z,23nm,1.2s						
GO02	**Mina Guanaco**	**44.87 297**		P	**P**	**15 54 21.3**	**-0.9**
GO02				IAmb	IAmb	15 54 31.9	
	comp=Z,16nm,1.4s						
BDFB	**Brasilia**	**44.88 329**		P	**P**	**15 54 22.9**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=130,slow=7.9,SNR=3.2						
SBA	**Scott Base**	**44.92 184**		P	**P**	**15 54 23.2**	**+1.5**
VNDA	**Vanda**	**45.39 182**		P	**P**	**15 54 26.1**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=179,slow=6.5,SNR=7.6						
VNDA	**Vanda**	**45.39 182**		P	**P**	**15 54 25.6**	**+0.2**
CRZF	**Crozet Islands**	**46.49 111**		P	**P**	**15 54 35.4**	**+1.0**
LVC	**Limon Verde**	**46.71 299**		P	**P**	**15 54 37.2**	**+0.4**
LVC				IAmb	IAmb	15 54 40.5	
	comp=Z,3.9nm,0.6s						
PB07	**IPOC Station P**	**47.92 299**		P	**P**	**15 54 45.0**	**-1.1**
PB07				IAmb	IAmb	15 54 46.4	
	comp=Z,20nm,1.5s						
PB01	**IPOC Station P**	**48.32 300**		P	**P**	**15 54 48.1**	**-0.9**
PB01				IAmb	IAmb	15 54 50.5	
	comp=Z,6.7nm,1.1s						
PATCX	**Punta Patache**	**48.83 299**		P	**P**	**15 54 51.8**	**-1.1**
H10S2	**ASCENSION HYDR**	**48.93 14**		T	T	16 47 58.8	
	baz=188,slow=74,SNR=10.0						
H10S3	**ASCENSION HYDR**	**48.93 14**		T	T	16 48 02.1	
	baz=32,slow=74,SNR=20						
PB11	**IPOC Station P**	**49.50 300**		P	**P**	**15 54 58.0**	**-0.1**
PB11				IAmb	IAmb	15 55 19.3	
	comp=Z,13nm,1.2s						
PSGCX	**Pisagua**	**49.86 300**		P	**P**	**15 54 59.8**	**-1.0**
PSGCX				IAmb	IAmb	15 55 20.3	
	comp=Z,22nm,1.4s						
MNMC	**Minye Minye**	**50.02 301**		P	**P**	**15 55 01.6**	**-0.6**
MNMC				IAmb	IAmb	15 55 02.0	
	comp=Z,22nm,1.5s						
H10N1	**ASCENSION HYDR**	**50.05 14**		T	T	16 49 20.4	
	baz=188,slow=75,SNR=3.6						
H10N3	**ASCENSION HYDR**	**50.05 14**		T	T	16 49 12.9	
	baz=188,slow=75,SNR=19						
H10N2	**ASCENSION HYDR**	**50.06 14**		T	T	16 49 23.4	
	baz=188,slow=75,SNR=8.5						
PB16	**IPOC Station P**	**50.67 301**		P	**P**	**15 55 07.0**	**-0.5**
PB16				IAmb	IAmb	15 55 13.3	
	comp=Z,9.2nm,1.4s						
LPAZ	**La Paz**	**51.83 304**		P	**P**	**15 55 16.9**	**+0.7**
	comp=Z,7.2nm,0.5s,baz=119,slow=6.1,SNR=32						
LPAZ	**La Paz**	**51.83 304**		P	**P**	**15 55 16.3**	**0.0**
RCBR	**Riachuelo**	**51.95 347**		P	**P**	**15 55 16.5**	**+0.1**
CASY	**Casey**	**52.44 159**		P	**P**	**15 55 19.7**	**+0.2**
TOA0	**Torodi Ar. Sit**	**73.69 28**		P	**P**	**15 57 41.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**73.69 28**		P	**P**	**15 57 40.7**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=201,slow=6.9,SNR=7.5						
TORD	**Torodi Ar. Bea**	**73.69 28**		P	**P**	**15 57 41.1**	**+0.2**
ODZ	**Otahua Downs**	**77.16 192**		P	**P**	**15 58 01.2**	**+0.7**
ODZ				IAmb	IAmb	15 58 06.3	
	comp=Z,10.0nm,1.2s						
ASAR	**Alice Springs**	**97.54 161**		P	Pdif	15 59 43.6	+2.2
	comp=Z,0.3nm,0.5s,baz=183,slow=4.1,SNR=13						
CMAR	**Chiang Mai Arr**	**123.78 110**		PKP	**PKiKP**	**16 05 04.9**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=212,slow=3.2,SNR=3.4						
FINES	**FINESS Array B**	**125.04 27**		PKP	**PKPdf**	**16 05 05.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=160,slow=4.4,SNR=2.7						
YKA	**Yellowknife Ar**	**137.69 316**		PKP	**PKPdf**	**16 05 28.5**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=120,slow=2.8,SNR=8.1						
INK	**Inuvik**	**147.33 319**		PKPbc	**PKPbc**	**16 05 48.6**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=33,slow=2.8,SNR=5.9						
SONM	**Songino Array**	**149.87 87**		PKPbc	**PKPbc**	**16 05 56.0**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=217,slow=3.9,SNR=11						
SONM	**Songino Array**	**149.87 87**			**PKPbc**	**16 05 55.5**	**-0.9**
ILAR	**Eielson Array**	**151.61 310**		PKPbc	**PKPbc**	**16 05 58.1**	**-1.6**
	comp=Z,2.6nm,0.8s,baz=143,slow=4.9,SNR=15						
KDAK	**Kodiak Island**	**152.17 294**		PKPbc	**PKiKP**	**16 06 01.5**	**+0.1**
	comp=Z,5.0nm,0.6s,baz=87,slow=4.2,SNR=4.1						

*NAO **21** 15:57:56.8±1.1, 72°.82N×12°.30E, ML3.9*
*IDC **21** 15:57:57.5±0.7, 72°.73N×12°.00E, h0km, mb3.9/16, mb1 3.9/21, mb1mx3.7/64, mbtmp3.9/21, ML3.3/5, MS3.3/14, Ms1 3.3/14, ms1mx2.9/67, Error ellipse: s-maj=15.8km s-min=9.0km az=79.0*
*BER **21** 15:58:00.6±2.5, 72°.86N×12°.33E, h25km±14km, ML2.9, ML3.9(NAO), Confirmed Earthquake*
*NEIC **21** 15:58:00.1±2.1, 72°.73N±0°.07×12°.0E±0°.3, h15km±5km, mb4.2/26, Error ellipse: s-maj=14.0km s-min=9.3km az=73.0*
*DNK **21** 15:58:02.4±1.1, 72°.62N×13°.30E, h0km, ML3.1(UPP), Suspected explosion*
*IEPN **21** 15:58:04.0, 73°.23N×12°.66E, h10km*
*HEL **21** 15:58:06.5±0.3, 72°.44N×13°.47E, h10km, ML3.1, ML3.1(UPP), Confirmed Earthquake*
*KOLA **21** 15:58:07.2, 73°.13N×15°.25E, h0km, ML2.9, Norwegian sea*
*UPP **21** 15:58:08.1±3.2, 72°.25N×13°.33E, h0km, ML3.1, Suspected explosion*
ISC 21 15:57:59.2±0.4, 72°.72N±0°.03×12°.55E±0°.04, h10km, n208, σ2s 97/257, mb4.0/24, MS3.3/12, 1C-1D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BJO1	**Bjornoya**	**2.56**	**43**	Pn	**Pn**	**15 58 37.9**	**-2.7**
BJO1				Sn	**Sn**	**15 59 04.2**	**-7.6**
BJO1	**Bjornoya**	**2.56**	**43**	*eP*	**Pn**	**15 58 38.1**	**-2.5**
BJO1				eS	**Sn**	**15 59 04.0**	**-7.7**
BJO1				IAML		15 59 14.8	
	comp=Z,83nm,0.3s						
TRO	**Tromso**	**3.73**	**143**	*eP*	**Pn**	**15 58 57.5**	**+0.9**
TRO				eS	**Sn**	**15 59 38.4**	**-2.0**
TRO				IAML		15 59 43.5	
	comp=Z,68nm,0.2s						
JETT	**Jettan, Norway**	**4.07**	**137**	Pn	**Pn**	**15 59 03.2**	**+1.8**
JETT				Sn	**Sn**	**15 59 49.2**	**+0.1**
HAMF	**Hammerfest**	**4.08**	**115**	Pn	**Pn**	**15 59 01.4**	**-0.1**
HAMF				Sn	**Sn**	**15 59 45.7**	**-3.6**
HAMF	**Hammerfest**	**4.08**	**115**	*eP*	**Pn**	**15 59 00.7**	**-0.8**
HAMF				eS	**Sn**	**15 59 45.6**	**-3.6**
HAMF				IAML		15 59 48.4	
	comp=Z,89nm,0.3s						
N2SO	**Sortland**	**4.14**	**165**	*eP*	**Pn**	**15 59 02.3**	**+0.1**
N2SO				eS	**Sn**	**15 59 47.9**	**-2.7**
N2SO				IAML		15 59 51.8	
	comp=Z,37nm,0.3s						
N2HA	**Harstad**	**4.17**	**160**	*eP*	**Pn**	**15 59 03.2**	**+0.5**
N2HA				eS	**Sn**	**15 59 48.9**	**-2.5**
N2HA				IAML		15 59 49.5	
	comp=Z,86nm,0.5s						
HSPB	**Hornsund (broa**	**4.38**	**9**	Pn	Pn	15 59 01.6	-3.9
HSPB	**Hornsund (broa**	**4.38**	**9**	eP	Pn	15 59 00.9	-4.6
HSPB				eS	Sn	15 59 47.0	-9.4
HSPB				IAML		15 59 49.8	
	comp=Z,13nm,0.5s						
HSPB	**Hornsund (broa**	**4.38**	**9**	*eP*	Pn	15 59 00.8	-4.8
HSPB				eS	Sn	15 59 42.8	-14
N2LO	**L_dingen**	**4.49**	**164**	*eP*	**Pn**	**15 59 07.3**	**+0.3**
N2LO				eS	**Sn**	**15 59 56.6**	**-2.6**
N2LO				IAML		15 59 57.7	
	comp=Z,29nm,0.3s						
N2DI	**Digermulen**	**4.50**	**168**	*eP*	**Pn**	**15 59 06.9**	**-0.4**
N2DI				eS	**Sn**	**15 59 56.6**	**-2.9**
N2DI				IAML		15 59 57.4	
	comp=Z,93nm,0.3s						
KIF	**Kilpisjarvi**	**4.61**	**140**	Pn	**Pn**	**15 59 09.9**	**+1.2**
KIF				Sn	**Sn**	**16 00 01.3**	**-0.9**
KIF	**Kilpisjarvi**	**4.61**	**140**	*eP*	**Pn**	**15 59 10.3**	**+1.6**
KIF				eS	**Sn**	**16 00 01.0**	**-1.3**
KIF	**Kilpisjarvi**	**4.61**	**140**	*eP*	**Pn**	**15 59 10.5**	**+1.7**
KIF				MPN		15 59 11.5	
	comp=Z,6.6nm,0.2s						
KIF				eS	**Sn**	**15 59 58.5**	**-3.7**
LOF	**Lofoten**	**4.62**	**175**	*eP*	**Pn**	**15 59 07.6**	**-1.3**
LOF				eS	**Sn**	**15 59 59.2**	**-3.3**
LOF				IAML		16 00 00.3	
	comp=Z,56nm,0.2s						
N2HS	**Hamsund**	**4.74**	**166**	*eP*	**Pn**	**15 59 10.6**	**0.0**
N2HS				eS	**Sn**	**16 00 03.1**	**-2.4**
N2HS				IAML		16 00 06.2	
	comp=Z,34nm,0.4s						
N2SV	**S_rv¥gen**	**4.86**	**178**	*eP*	**Pn**	**15 59 10.4**	**-1.6**
N2SV				eS	**Sn**	**16 00 04.3**	**-3.9**
N2SV				IAML		16 00 05.8	
	comp=Z,30nm,0.1s						
STEI	**Steigen**	**4.90**	**168**	*eP*	**Pn**	**15 59 12.8**	**+0.1**
STEI				eS	**Sn**	**16 00 06.7**	**-2.6**
STEI				IAML		16 00 09.9	
	comp=Z,29nm,0.8s						
N2IH	**Innhavet**	**4.91**	**165**	*eP*	**Pn**	**15 59 13.3**	**+0.5**
N2IH				eS	**Sn**	**16 00 07.2**	**-2.4**
N2IH				IAML		16 00 07.9	
	comp=Z,41nm,0.2s						
HOPEN	**Hopen**	**5.04**	**35**	Pn	**Pn**	**15 59 12.3**	**-2.4**
HOPEN	**Hopen**	**5.04**	**35**	*eP*	**Pn**	**15 59 12.2**	**-2.5**
HOPEN				eS	Sn	16 00 04.0	-8.7
HOPEN				IAML		16 00 08.5	
	comp=Z,29nm,0.3s						
HOPEN	**Hopen**	**5.04**	**35**	*eP*	**Pn**	**15 59 12.1**	**-2.5**
HOPEN				eS	Sn	16 00 04.0	-8.8
N2NF	**Nordfold**	**5.06**	**168**	*eP*	**Pn**	**15 59 16.0**	**+1.0**
N2NF				eS	**Sn**	**16 00 10.8**	**-2.6**
N2NF				IAML		16 00 15.9	
	comp=Z,36nm,0.3s						
N2VA	**Vr_y**	**5.08**	**179**	*eP*	**Pn**	**15 59 13.6**	**-1.6**
N2VA				eS	**Sn**	**16 00 08.7**	**-5.1**
N2VA				IAML		16 00 11.7	
	comp=Z,38nm,0.4s						
KTK1	**Kautokeino**	**5.12**	**131**	*eP*	**Pn**	**15 59 16.6**	**+0.9**
KTK1				eS	**Sn**	**16 00 12.8**	**-1.9**
KTK1				IAML		16 00 31.3	
	comp=Z,16nm,0.5s						
KOVU	**Salmi**	**5.18**	**147**	P	**Pn**	**15 59 18.5**	**+1.8**
KOVU	**Salmi**	**5.18**	**147**	*eP*	**Pn**	**15 59 18.5**	**+1.8**
KOVU	**Salmi**	**5.18**	**147**	*eP*	**Pn**	**15 59 18.5**	**+1.8**
N2RO	**R_st**	**5.23**	**182**	*eP*	**Pn**	**15 59 15.6**	**-1.7**
N2RO				eS	**Sn**	**16 00 12.4**	**-5.1**
N2RO				IAML		16 00 22.8	
	comp=Z,24nm,0.4s						
N2TV	**T¥rnvik**	**5.25**	**169**	*eP*	**Pn**	**15 59 17.6**	**+0.1**
N2TV				eS	**Sn**	**16 00 14.2**	**-3.7**
N2TV				IAML		16 00 18.6	
	comp=Z,41nm,0.3s						
ARA0	**ARCESS Array S**	**5.28**	**121**	Pn	**Pn**	**15 59 18.0**	**+0.1**
	baz=322,slow=14						
ARA0				Sn	**Sn**	**16 00 16.9**	**-1.8**
	baz=319,slow=22						
ARA0	**ARCESS Array S**	**5.28**	**121**	Pn	**Pn**	**15 59 18.0**	**+0.1**
	baz=322,slow=14						
ARA0				Sn	**Sn**	**16 00 16.9**	**-1.8**
	baz=319,slow=22						
ARA0				IAML		16 00 18.9	
	comp=Z,33nm,0.5s						
ARA0	**ARCESS Array S**	**5.28**	**121**	*eP*	**Pn**	**15 59 20.1**	**+2.2**
ARA0				eS	**Sn**	**16 00 14.4**	**-4.3**
ARCES	**ARCESS Array B**	**5.28**	**121**	Pn	**Pn**	**15 59 18.3**	**+0.4**
	baz=315,slow=13,SNR=67						
ARCES				Sn	**Sn**	**16 00 17.2**	**-1.5**
	baz=320,slow=16,SNR=20						
ARCES	**ARCESS Array B**	**5.28**	**121**		**Pn**	**15 59 18.1**	**+0.2**
NIKU	**Nikkaluokta**	**5.34**	**153**	P	**Pn**	**15 59 20.4**	**+1.6**
NIKU	**Nikkaluokta**	**5.34**	**153**	P	**Pn**	**15 59 20.4**	**+1.6**
NIKU	**Nikkaluokta**	**5.34**	**153**	*eP*	**Pn**	**15 59 20.4**	**+1.6**
BRBA	**Barentsburg A**	**5.39**	**4**	Pn	**Pn**	**15 59 17.8**	**-1.6**
BRBA	**Barentsburg A**	**5.39**	**4**	*eP*	**Pn**	**15 59 17.9**	**-1.4**
BRBA				eS	Sn	16 00 12.8	-8.6
BRBA				IAML		16 00 15.6	
	comp=Z,7.6nm,0.5s						
NBB08	**Skaug oppvekst**	**5.41**	**171**	*eS*	**Sn**	**16 00 17.6**	**-4.2**
RATU	**Laukkuluspa**	**5.46**	**151**	P	**Pn**	**15 59 22.1**	**+1.7**
RATU	**Laukkuluspa**	**5.46**	**151**	P	**Pn**	**15 59 22.1**	**+1.7**
RATU	**Laukkuluspa**	**5.46**	**151**	*eP*	**Pn**	**15 59 22.1**	**+1.7**
KEV	**Kevo**	**5.53**	**116**	Pn	**Pn**	**15 59 21.4**	**+0.2**
KEV	**Kevo**	**5.53**	**116**	*eP*	**Pn**	**15 59 21.1**	**-0.2**
KEV				eS	**Sn**	**16 00 21.3**	**-3.4**
KEV	**Kevo**	**5.53**	**116**	*eP*	**Pn**	**15 59 23.3**	**+2.0**
KEV				eS	**Sn**	**16 00 19.8**	**-4.9**
SPA0	**Spitsbergen Ar**	**5.57**	**8**	Pn	**Pn**	**15 59 19.0**	**-3.0**
	baz=180,slow=28						
SPA0	**Spitsbergen Ar**	**5.57**	**8**	Pn	**Pn**	**15 59 18.6**	**-3.3**
SPA0	**Spitsbergen Ar**	**5.57**	**8**	Pn	**Pn**	**15 59 19.0**	**-3.0**
	baz=180,slow=28						
SPA0	**Spitsbergen Ar**	**5.57**	**8**	*iP*	**Pn**	**15 59 18.8**	**-3.2**
SPA0				eS	Sn	16 00 15.2	-11
SPITS	**Spitsbergen Ar**	**5.57**	**8**	Pn	**Pn**	**15 59 19.4**	**-2.5**
	baz=174,slow=24,SNR=63						
SPITS				Sn	**Sn**	**16 00 23.2**	**-2.7**
	baz=184,slow=26,SNR=5.4						
LANU	**Lannavaara**	**5.66**	**141**	P	**Pn**	**15 59 25.2**	**+2.0**
LANU				S	**Sn**	**16 00 25.1**	**-3.1**
LANU	**Lannavaara**	**5.66**	**141**	P	**Pn**	**15 59 25.2**	**+2.0**
LANU				S	**Sn**	**16 00 25.1**	**-3.1**
LANU	**Lannavaara**	**5.66**	**141**	*eP*	**Pn**	**15 59 25.0**	**+1.8**
LANU				eS	**Sn**	**16 00 24.7**	**-3.4**
HEF	**Hetta**	**5.69**	**134**	*eP*	**Pn**	**15 59 25.9**	**+2.3**
HEF				eS	**Sn**	**16 00 25.1**	**-3.8**
HEF	**Hetta**	**5.69**	**134**	*eP*	**Pn**	**15 59 26.0**	**+2.4**
HEF				MPN		15 59 27.5	
	comp=Z,1.6nm,0.2s						
HEF				eS	**Sn**	**16 00 23.6**	**-5.4**
NBB03	**Karbol**	**5.70**	**170**	*eP*	**Pn**	**15 59 23.4**	**-0.3**
NBB03	**Karbol**	**5.70**	**170**	eS	**Sn**	**16 00 26.1**	**-3.1**
SALU	**Saltoluokta**	**5.74**	**156**	*eP*	**Pn**	**15 59 25.7**	**+1.5**
SALU				eS	**Sn**	**16 00 28.8**	**-1.2**
NBB30	**Finnes**	**5.79**	**175**	*eP*	**Pn**	**15 59 23.9**	**-1.0**
NBB30				eS	**Sn**	**16 00 26.0**	**-5.2**
NBB30				IAML		16 00 33.8	
	comp=Z,16nm,0.3s						
NBB15	**Halsa Church**	**6.02**	**176**	*eP*	**Pn**	**15 59 27.5**	**-0.5**
NBB15	**Halsa Church**	**6.02**	**176**	eS

ODEU	**Stanfors**	**8.86**	**156**	S		**Sn**	**16 01 39.1**	**-7.5**
ODEU	**Stanfors**	**8.86**	**156**	*e*S		**Sn**	**16 01 39.1**	**-7.5**
MSF	**Maaselka**	**8.95**	**131**	*e*P		**Pn**	**16 00 09.0**	**+0.7**
MSF				*e*S		**Sn**	**16 01 41.8**	**-7.1**
OUL	**Oulu**	**9.02**	**141**	*e*S		**Sn**	**16 01 42.5**	**-8.1**
KU6	**Riekki**	**9.04**	**129**	*e*P		**Pn**	**16 00 11.0**	**+1.4**
KU6				MPN			16 00 13.1	
	comp=Z,1.4nm,0.2s							
KU6				*e*S		**Sn**	**16 01 43.6**	**-7.7**
OBF4	**Vikkela, Lumij**	**9.12**	**144**	*e*P		**Pn**	**16 00 12.3**	**+1.7**
OBF4				*e*S		**Sn**	**16 01 46.7**	**-6.5**
OBF0	**Syolatti, Pyha**	**9.27**	**147**	*e*P		**Pn**	**16 00 13.3**	**+0.7**
OBF0				*e*S		Sn	16 01 48.0	-8.8
NOD	**Norderasen**	**9.36**	**174**	*e*P		**Pn**	**16 00 14.4**	**+0.5**
NOD				*e*S		**Sn**	**16 01 53.2**	**-5.8**
UMAU	**Umeaa**	**9.36**	**157**	*e*P		**Pn**	**16 00 13.8**	**0.0**
UMAU				*e*S		**Sn**	**16 01 51.8**	**-7.2**
OUF	**Merijarvi**	**9.47**	**146**	*e*P		**Pn**	**16 00 16.4**	**+1.1**
OUF				*e*S		**Sn**	**16 01 53.9**	**-7.8**
VAF	**Ylistaro**	**10.42**	**154**	*e*P		**Pn**	**16 00 28.6**	**+0.3**
VAF				*e*S		**Sn**	**16 02 17.2**	**-7.7**
AKN	**Aaknes**	**10.79**	**194**	Pn		**Pn**	**16 00 33.0**	**-0.5**
AKN				Sn		Sn	16 02 24.4	-10
AKN	**Aaknes**	**10.79**	**194**	Pn		**Pn**	**16 00 33.0**	**-0.5**
AKN				Sn		Sn	16 02 24.4	-10
DOMB	**Dombas**	**10.81**	**189**	*e*P		**Pn**	**16 00 31.1**	**-2.6**
ZFI	**Zemlya Franca-**	**11.13**	**29**	*e*P		**Pn**	**16 00 36.4**	**-1.6**
	comp=Z,69nm,2.2s							
ZFI				*e*S		Sn	16 02 27.7	-15
SUF	**Sumiainen**	**11.24**	**146**	*e*P		**Pn**	**16 00 40.7**	**+1.1**
SUF				*e*S		Sn	16 02 36.6	-8.6
NC204	**NORSAR Array S**	**11.52**	**184**	Pn		**Pn**	**16 00 42.7**	**-0.7**
NC300	**NORSAR Array S**	**11.52**	**183**	Pn		**Pn**	**16 00 42.4**	**-1.0**
NC303	**NORSAR Array S**	**11.55**	**183**	Pn		**Pn**	**16 00 43.2**	**-0.7**
KEF	**Keuruu**	**11.56**	**150**	*e*P		**Pn**	**16 00 44.3**	**+0.3**
KEF				*e*S		Sn	16 02 42.8	-10
NC405	**NORSAR Array S**	**11.66**	**182**	Pn		**Pn**	**16 00 45.0**	**-0.4**
NB201	**NORSAR Array S**	**11.73**	**183**	Pn		**Pn**	**16 00 45.5**	**-0.8**
NB2	**NORSAR Subarra**	**11.74**	**183**	Pn		**Pn**	**16 00 45.8**	**-0.8**
	baz=2.9,slow=14							
NB2	**NORSAR Subarra**	**11.74**	**183**	Pn		**Pn**	**16 00 45.8**	**-0.8**
	baz=2.9,slow=14							
NOA	**NORSAR Subarra B**	**11.74**	**183**	Pn		**Pn**	**16 00 45.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=246,slow=19,SNR=7.0							
NOA				Sn		Sn	16 02 47.4	-10
	comp=Z,0.1nm,0.3s,baz=147,slow=9.0,SNR=4.7							
NBO00	**NORSAR Array S**	**11.76**	**184**	Pn		**Pn**	**16 00 46.8**	**0.0**
KAF	**Kangasniemi**	**11.84**	**147**	*e*P		**Pn**	**16 00 48.4**	**+0.7**
KAF				*e*S		Sn	16 02 50.3	-9.4
NAO01	**NORSAR Array S**	**11.95**	**184**	Pn		**Pn**	**16 00 49.2**	**-0.1**
JOF	**Joensuu**	**12.04**	**135**	*e*P		**Pn**	**16 00 49.8**	**-0.7**
JOF				*e*S		Sn	16 02 53.1	-11
NC602	**NORSAR Array S**	**12.04**	**182**	Pn		**Pn**	**16 00 49.9**	**-0.6**
NRA0	**NORESS Array S**	**12.04**	**182**	Pn		**Pn**	**16 00 49.9**	**-0.6**
	baz=358,slow=14							
NRA0	**NORESS Array S**	**12.04**	**182**			**Pn**	**16 00 49.9**	**-0.6**
	baz=358,slow=14							
RAF	**Rauma**	**12.27**	**158**	*e*P		**Pn**	**16 00 52.6**	**-1.0**
RAF				*e*S		Sn	16 03 00.9	-9.2
FIA1	**FINESS Array S**	**12.44**	**149**	Pn		**Pn**	**16 00 56.6**	**+0.7**
FIA0	**FINESS Array S**	**12.44**	**149**	Pn		**Pn**	**16 00 56.3**	**+0.4**
	baz=345,slow=12							
FIA0	**FINESS Array S**	**12.44**	**149**	Pn		**Pn**	**16 00 56.3**	**+0.4**
	baz=345,slow=12							
FIA0	**FINESS Array S**	**12.44**	**149**	*e*S		Sn	16 03 03.7	-11
FINES	**FINESS Array B**	**12.44**	**149**	Pn		**Pn**	**16 00 55.8**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=338,slow=11,SNR=13							
FINES				Sn		**Sn**	**16 03 08.7**	**-5.6**
	comp=Z,1.5nm,0.3s,baz=346,slow=24,SNR=10							
FINES	**FINESS Array B**	**12.44**	**149**	Pn		**Pn**	**16 00 56.7**	**+0.8**
HFS	**Hagfors**	**12.65**	**177**	Pn		**Pn**	**16 00 57.8**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=13,slow=10.0,SNR=13							
HFS				Sn		**Sn**	**16 03 15.4**	**-4.2**
	comp=Z,0.4nm,0.3s,baz=357,slow=24,SNR=4.5							
HFS	**Hagfors**	**12.65**	**177**	Pn		**Pn**	**16 00 58.6**	**-0.2**
	baz=5.6,slow=12							
HFS	**Hagfors**	**12.65**	**177**	Pn		**Pn**	**16 00 58.6**	**-0.2**
	baz=5.6,slow=12							
AAL	**Aland**	**12.92**	**163**	*e*P		**Pn**	**16 00 59.9**	**-2.7**
AAL				*e*S		Sn	16 03 16.4	-10
LSH	**Leshukonskoye**	**14.13**	**107**	P		**Pn**	**16 01 14.6**	**-4.3**
	comp=Z,34nm,2.0s							
LSH				*e*S		Sn	16 03 41.9	-14
BORG	**Borgarnes**	**14.42**	**254**	LR		LR	16 05 14.4	
	comp=Z,66nm,21.5s,baz=358,slow=31							
AMDE	**Amderma**	**15.70**	**77**	*e*P		**Pn**	**16 01 38.3**	**-1.6**
	comp=Z,1.9nm,0.6s							
AMDE				*e*S		Sn	16 04 20.1	-14
KLMR	**Klimovskoe**	**15.73**	**125**	*e*P		**P**	**16 01 43.8**	**-0.7**
	comp=Z,14nm,1.3s							
KLMR				*e*S		Sn	16 04 21.0	-14
KIRV	**Kirov**	**20.25**	**115**	P		Pn	16 02 35.6	-0.5
	comp=Z,8.0nm,0.5s,baz=314,slow=6.0,SNR=3.5							
KIRV				LR		LR	16 10 34.6	
	comp=Z,141nm,19.2s,baz=332,slow=37							
EUNU	**Eureka**	**21.31**	**332**	P		**P**	**16 02 45.8**	**+0.3**
SFJD	**Kangerlussuaq**	**21.48**	**287**	LR		LR	16 09 48.2	
	comp=Z,145nm,20.7s,baz=54,slow=33							
CLL	**Collm**	**21.49**	**179**	*e*P		**P**	**16 02 49.0**	**+1.4**
CLL				*i* P		**sP**	**16 02 52.2**	**+1.2**
OJC	**Ojcow**	**22.81**	**168**	P		**P**	**16 03 02.8**	**+1.1**
NRIK	**Noril'sk**	**23.13**	**61**	P		**P**	**16 03 07.2**	**+2.4**
	comp=Z,1.7nm,0.7s,baz=339,slow=5.4,SNR=3.5							
NRIK				LR		LR	16 14 34.2	
	comp=Z,59nm,18.1s,baz=295,slow=43							
NRIK	**Noril'sk**	**23.13**	**61**	IAmb		IAmb	16 03 20.3	
	comp=Z,16nm,1.5s							
AKASG	**Malin Array Be**	**23.28**	**153**	P		**P**	**16 03 07.1**	**+0.6**
	comp=Z,3.1nm,0.5s,baz=344,slow=9.6,SNR=7.1							
AKASG	**Malin Array Be**	**23.28**	**153**	P		**P**	**16 03 07.6**	**+1.1**
AKBB	**Malin Array Si**	**23.28**	**153**	P		**P**	**16 03 07.3**	**+0.7**
VRAC	**Vranov**	**23.56**	**173**	P		**P**	**16 03 10.5**	**+1.2**
	comp=Z,2.1nm,0.5s,baz=353,slow=5.1,SNR=3.9							
GERES	**GERESS Array B**	**23.96**	**178**	P		**P**	**16 03 14.8**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=13,slow=8.2,SNR=3.5							
GERES	**GERESS Array B**	**23.96**	**178**	P		**P**	**16 03 14.9**	**+1.6**
ARU	**Arti**	**24.66**	**107**	P		**P**	**16 03 21.9**	**+2.4**
	comp=Z,1.3nm,0.5s,baz=331,slow=6.8,SNR=7.1							
ARU				LR		LR	16 13 11.8	
	comp=Z,58nm,21.8s,baz=212,slow=37							
ARU	**Arti**	**24.66**	**107**	P		**P**	**16 03 21.4**	**+1.8**
ARU				IAmb		IAmb	16 03 29.4	
	comp=Z,5.5nm,0.7s							
BELG	**Belogornoye**	**25.31**	**125**	P		**P**	**16 03 27.2**	**+1.8**
	comp=Z,13nm,0.7s,baz=158,slow=2.0,SNR=8.3							
BELG				LR		LR	16 13 20.1	
	comp=Z,52nm,19.9s,baz=338,slow=36							
BURAR	**Bucovina Array**	**25.84**	**160**	P		**P**	**16 03 32.1**	**+1.7**
MLR	**Muntele Rosu**	**28.02**	**160**	LR		LR	16 14 39.4	
	comp=Z,68nm,19.8s,baz=357,slow=36							
FRB	**Frobisher Bay**	**28.92**	**295**	LR		LR	16 13 25.1	
	comp=Z,58nm,20.9s,baz=347,slow=32							
AKTO	**Aktyubinsk**	**29.81**	**114**	P		**P**	**16 04 07.4**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=307,slow=8.2,SNR=4.0							
AKTO				LR		LR	16 16 38.2	
	comp=Z,99nm,19.7s,baz=352,slow=37							
ABKAR	**Akbulak array**	**31.41**	**112**	P		**P**	**16 04 21.5**	**+1.7**
FNA	**Florina**	**32.30**	**167**	P		**P**	**16 04 29.6**	**+1.7**
ZALV	**Zalesovo Beam**	**34.56**	**83**	LR		LR	16 21 46.7	
	comp=Z,56nm,21.7s,baz=320,slow=41							
BRTR	**Keskin Array B**	**34.66**	**151**	P		**P**	**16 04 50.8**	**+2.3**
	comp=Z,0.6nm,0.5s,baz=327,slow=9.3,SNR=3.1							
INK	**Inuvik**	**37.47**	**340**	P		**P**	**16 05 12.1**	**0.0**
	comp=Z,1.9nm,0.9s,baz=339,slow=9.1,SNR=4.6							
INK	**Inuvik**	**37.47**	**340**	P		**P**	**16 05 12.0**	**0.0**
INK				IAmb		IAmb	16 05 29.9	
	comp=Z,5.5nm,1.3s							
BILL	**Bilibino**	**38.43**	**16**	P		**P**	**16 05 20.6**	**+0.5**
BILL				IAmb		IAmb	16 05 22.3	
	comp=Z,6.5nm,1.3s							
BMAR	**Burnt Mountain**	**39.28**	**346**	P		**P**	**16 05 27.6**	**+0.2**
RDOG	**Red Dog Mine**	**39.44**	**357**	P		**P**	**16 05 29.4**	**+0.7**
RDOG				IAmb		IAmb	16 05 30.2	
	comp=Z,4.5nm,0.8s							
KK31	**Karatay Array**	**40.02**	**105**	P		**P**	**16 05 36.0**	**+2.3**
KK31				IAmb		IAmb	16 05 37.5	
	comp=Z,5.3nm,1.4s							
KKAR	**Karatay Array**	**40.02**	**105**	P		**P**	**16 05 36.0**	**+2.3**
KKAR	**Karatay Array**	**40.02**	**105**	P		**P**	**16 05 36.2**	**+2.4**
KKAR				IAmb		IAmb	16 05 37.5	
	comp=Z,5.3nm,1.4s							
MAKZ	**Makanchi**	**40.03**	**91**	P		**P**	**16 05 35.8**	**+2.0**
MK31	**Makanchi Array**	**40.14**	**91**	P		**P**	**16 05 36.1**	**+1.4**
MKAR	**Makanchi Array**	**40.14**	**91**	P		**P**	**16 05 35.5**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=337,slow=6.5,SNR=8.5							
MKAR	**Makanchi Array**	**40.14**	**91**	P		**P**	**16 05 36.6**	**+1.9**
GEYT	**Alibeck**	**41.44**	**121**	P		**P**	**16 05 47.6**	**+2.0**
	comp=Z,4.2nm,0.5s,baz=327,slow=7.1,SNR=10.0							
GEYT	**Alibeck**	**41.44**	**121**	P		**P**	**16 05 48.4**	**+2.8**
GEYT				IAmb		IAmb	16 05 49.1	
	comp=Z,3.8nm,0.6s							
GYA0B	**ALIBECK ARRAY**	**41.44**	**121**	P		**P**	**16 05 48.2**	**+2.6**
IL31		**42.08**	**347**	P		**P**	**16 05 50.7**	**+0.4**
IL31				IAmb		IAmb	16 05 59.0	
	comp=Z,4.0nm,0.8s							
ILAR	**Eielson Array**	**42.08**	**347**	P		**P**	**16 05 50.7**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=0.8,slow=7.5,SNR=9.9							
DAWY	**Dawson**	**42.17**	**342**	P		**P**	**16 05 50.7**	**-0.6**
CCB	**Clear Creek Bu**	**42.26**	**348**	P		**P**	**16 05 52.1**	**+0.2**
CCB				IAmb		IAmb	16 06 00.3	
	comp=Z,4.4nm,1.2s							
K27K	**Chicken**	**42.45**	**344**	P		**P**	**16 05 53.8**	**+0.4**
K27K				IAmb		IAmb	16 06 14.4	
	comp=Z,5.2nm,1.1s							
SCRK	**Sand Creek**	**42.65**	**345**	P		**P**	**16 05 55.7**	**+0.4**
SCRK				IAmb		IAmb	16 06 12.4	
	comp=Z,5.3nm,1.1s							
DOT	**Dot Lake**	**42.98**	**345**	P		**P**	**16 05 56.9**	**-1.0**
DOT				IAmb		IAmb	16 06 06.5	
	comp=Z,4.3nm,0.8s							
SONM	**Songino Array**	**46.24**	**69**	P		**P**	**16 06 25.5**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=319,slow=5.9,SNR=4.2							
I62A	**Tamworth**	**46.99**	**280**	P		**P**	**16 06 28.7**	**-1.2**
ULM	**Lac du Bonnet**	**47.85**	**305**	P		**P**	**16 06 34.9**	**-1.6**
	comp=Z,3.1nm,0.8s,baz=17,slow=8.6,SNR=3.1							
ULM				LR		LR	16 26 42.6	
	comp=Z,46nm,18.7s,baz=18,slow=36							
NEW	**Newport**	**54.37**	**321**	LR		LR	16 30 52.3	
	comp=Z,28nm,20.4s,baz=6.5,slow=36							
TOA0	**Torodi Ar. Sit**	**59.89**	**192**	P		**P**	**16 08 04.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**59.89**	**192**	P		**P**	**16 08 04.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=14,slow=9.2,SNR=5.5							
TORD	**Torodi Ar. Bea**	**59.89**	**192**	IAmb		IAmb	16 08 07.2	
	comp=Z,1.7nm,1.2s							
YBH	**Yreka Blue Hor**	**61.71**	**323**	LR		LR	16 34 48.7	
	comp=Z,23nm,18.3s,baz=21,slow=36							
ASAR	**Alice Springs**	**121.57**	**67**	PKP		**PKPdf**	**16 16 51.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=9.8,slow=2.1,SNR=3.7							

*IDC **21** 16:07:03.4±0.9,27.93N×127.53E,h167km±8km,mb3.3/7, mb1 3.4/8,mb1mx3.1/67,mbtmp3.7/8,Error ellipse: s-maj=32.6km s-min=13.8km az=76.0*
*JMA **21** 16:07:04.6±0.2,27.95N×127.32E,h144km±5km,M3.8*
ISC 21 16:07:03.2±0.8,**27.87N**±0.07×**127.39E**±0.07,**h167**km±7km, **n23,σ0s98/38,mb3.6/7,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.98**	**148**	P	**Pn**	**16 07 30.0**	**+0.5**
JIH				S	**Sn**	**16 07 49.2**	**-0.4**
JOKE	**Okinoerabujima**	**1.16**	**116**	P	**Pn**	**16 07 31.5**	**+0.5**
JOKE				S	**Sn**	**16 07 52.1**	**-0.2**
JYRO	**Yoronjima**	**1.26**	**132**	P	**Pn**	**16 07 32.4**	**+0.6**
JYRO				S	**Sn**	**16 07 53.1**	**-0.8**
JAGN	**Aguni-jima**	**1.29**	**186**	P	**Pn**	**16 07 32.5**	**+0.4**
JAGN				S	**Sn**	**16 07 53.4**	**-0.9**
JOW	**Kunigami**	**1.30**	**143**	P	**Pn**	**16 07 33.0**	**+0.8**
	417nm,0.3s,baz=124,slow=20,SNR=1326						
JOW				S	**Sn**	**16 07 54.2**	**-0.3**
	170nm,0.3s,baz=128,slow=26,SNR=18						
JOW	**Kunigami**	**1.30**	**143**	P	**Pn**	**16 07 33.0**	**+0.8**
JOW				S	**Sn**	**16 07 54.0**	**-0.5**
JTK	**Tokunoshima**	**1.38**	**93**	P	**Pn**	**16 07 33.4**	**+0.5**
JTK				S	**Sn**	**16 07 55.2**	**-0.6**
JNTH	**Nagotoyohara**	**1.46**	**157**	P	**Pn**	**16 07 34.6**	**+0.9**
JNTH				S	**Sn**	**16 07 56.5**	**-0.7**
JAMN	**Amaminishikomi**	**1.62**	**76**	P	**Pn**	**16 07 35.5**	**+0.3**
JAMN				S	**Sn**	**16 07 59.7**	**-0.3**
JKE	**Kume jima 2**	**1.63**	**199**	P	**Pn**	**16 07 35.6**	**+0.1**
JKE				*e*S	**Sn**	**16 07 58.9**	**-1.4**
JJT3	**Tamagusuku3**	**1.76**	**168**	P	**Pn**	**16 07 38.3**	**+1.5**
JJT3				S	**Sn**	**16 08 03.3**	**+0.6**
JAM	**Amami Oshima**	**2.03**	**74**	P	**Pn**	**16 07 40.1**	**+0.5**
JAM				S	**Sn**	**16 08 07.5**	**-0.3**
JZK	**Kikaishima**	**2.32**	**78**	P	**Pn**	**16 07 44.6**	**+1.6**
JZK				S	**Sn**	**16 08 14.8**	**+0.9**
JKDJ	**Kitadaitoujima**	**3.98**	**118**	P	**Pn**	**16 08 04.3**	**+0.7**
JKDJ				S	**Sn**	**16 08 49.5**	**-1.2**
JMZ	**Minamidaito 2**	**3.98**	**120**	P	**Pn**	**16 08 04.1**	**+0.4**
JMZ				S	**Sn**	**16 08 48.5**	**-2.4**
MJAR	**Matsushiro Arr**	**12.59**	**44**	P	**Pn**	**16 09 55.6**	**-0.8**
	0.0nm,0.3s,baz=269,slow=11,SNR=2.8						
SONM	**Songino Array**	**25.77**	**326**	P	**P**	**16 12 20.6**	**+2.0**
	1.2nm,0.5s,baz=139,slow=11,SNR=9.3						
MKAR	**Makanchi Array**	**39.89**	**311**	P	**P**	**16 14 19.3**	**-1.4**
	0.2nm,0.4s,baz=116,slow=6.7,SNR=5.3						
FITZ	**Fitzroy Cross**	**45.73**	**182**	P	**P**	**16 15 08.3**	**+0.5**
	5.8nm,1.0s,baz=4.7,slow=11,SNR=4.6						
WRA	**Warramunga Arr**	**48.01**	**171**	P	**P**	**16 15 25.8**	**+0.4**
	0.6nm,0.4s,baz=353,slow=8.6,SNR=8.1						
ASAR	**Alice Springs**	**51.62**	**172**	P	**P**	**16 15 54.0**	**+1.3**
	0.6nm,0.5s,baz=0.3,slow=15,SNR=8.5						
STKA	**Stephens Creek**	**60.94**	**166**	P	**P**	**16 16 58.4**	**-0.1**
	1.0nm,0.5s,baz=353,slow=8.1,SNR=3.4						
YKA	**Yellowknife Ar**	**77.36**	**25**	P	**P**	**16 18 38.1**	**-1.1**
	0.2nm,0.6s,baz=302,slow=5.6,SNR=4.1						

*IDC **21** 16:10:35.5±0.5,14.41N×56.24E,h0km,mb4.3/29, mb1 4.4/30,mb1mx4.2/60,mbtmp4.3/30,ML3.8/1,MS4.0/32, Ms1 4.0/32,ms1mx3.9/63,Error ellipse: s-maj=14.2km s-min=11.3km az=118.0*
*GCMT **21** 16:10:35.5±0.2,14.54N±0.01×56.06E±0.02,h12km, MW5.0/106,Moment Tensor Solution. s46,c58; s106,c155; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-2.50±.06; Mθθ2.35±.05; Mϕϕ0.15±.06; Mrθ2.20±.17; Mθϕ-0.56±.05; Mϕr0.90±.21; Best double couple: M0 3.42400×10^16^ NP1:ϕs120.00000°,δ28.00000°, λ-55.00000°. NP2:ϕs261.00000°,δ67.00000°, λ-107.00000°. Principal axes: T 3.2130, Plg20.0000°, Azm4.0000°; N 0.4280, Plg16.0000°, Azm268.0000°; P -3.6360, Plg64.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **21** 16:10:36.5±1.7,14.43N±0.08×56.27E±0.10,h10km±1km, mb4.7/54 Error ellipse: s-maj=17.3km s-min=10.8km az=120.0*
*OMAN **21** 16:10:47.3,15.10N×56.20E,h30km,mb5.5/16,ml4.4/7, ms4.1/7,Mwp4.9/13*
ISC 21 16:10:38.5±0.4,**14.57N**±0.05×**56.30E**±0.05,**h19**km,**n204, σ1s65/222,mb4.5/74,MS4.0/37,13C-11D,Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**3.26**	**224**	Pn	Pn	16 11 21.3	-7.4
DMTO	**DMTO**	**3.39**	**338**	P	**Pn**	**16 11 29.3**	**-1.1**
DMTO				P	**Pn**	**16 11 29.8**	**-1.1**
DMTO				S	**Sn**	**16 12 06.3**	**-3.9**
DMTO				S	**Sn**	**16 12 06.3**	**-3.9**
SHAO	**Shalim**	**3.50**	**349**	P	**Pn**	**16 11 30.1**	**-1.8**
	SNR=6.3						
SHAO				P	**Pn**	**16 11 30.1**	**-1.8**
	SNR=6.3						
SHAO				S	**Sn**	**16 12 08.4**	**-4.4**
SHAO				S	**Sn**	**16 12 08.4**	**-4.4**
RBK	**Rabkut**	**3.55**	**326**	S	**Sn**	**16 12 12.2**	**-1.9**
ABTO	**Aybut**	**4.00**	**314**	S	**Sn**	**16 12 22.4**	**-2.9**
WHFO	**Wadi Hawf**	**4.12**	**324**	P	**Pn**	**16 11 40.5**	**0.0**
	SNR=38						
WHFO				S	**Sn**	**16 12 26.0**	**-2.3**
DOK	**Doka**	**4.53**	**333**	P	**Pn**	**16 11 47.1**	**+0.9**
	SNR=8.7						
DOK				P	**Pn**	**16 11 47.1**	**+0.9**
	SNR=8.7						
DQM	**DQM**	**5.46**	**12**	P	**Pn**	**16 11 59.6**	**+0.6**
	SNR=9.5						
DQM				P	**Pn**	**16 11 59.6**	**+0.6**
	SNR=9.5						
DQM				S	**Sn**	**16 12 56.7**	**-4.7**
DQM				S	**Sn**	**16 12 56.7**	**-4.7**
MHTO	**MHTO**	**6.58**	**14**	P	**Pn**	**16 12 15.4**	**+1.1**
	SNR=20						
MHTO				P	**Pn**	**16 12 15.4**	**+1.1**
	SNR=20						
MHTO				Sn	**Sn**	**16 13 23.6**	**-5.3**
MHTO				Sn	**Sn**	**16 13 23.6**	**-5.3**
JMDO	**Jabal Madar**	**7.95**	**12**	P	**Pn**	**16 12 34.8**	**+1.7**
	SNR=8.9						
JMDO				P	**Pn**	**16 12 34.8**	**+1.7**
	SNR=8.9						
JMDO				P	**Pn**	**16 12 34.8**	**+1.7**
	SNR=8.9						
BSY	**Bisya**	**8.18**	**6**	P	**Pn**	**16 12 36.5**	**+0.2**
	SNR=16						
BSY				P	**Pn**	**16 12 36.5**	**+0.2**
	SNR=16						
BSY				P	**Pn**	**16 12 36.5**	**+0.2**
	SNR=16						
WBK	**Wadi Bani Khal**	**8.39**	**17**	P	**Pn**	**16 12 41.3**	**+2.1**
	SNR=7.8						
WBK				P	**Pn**	**16 12 41.3**	**+2.1**
	SNR=7.8						
SMDO	**Samad**	**8.61**	**11**	P	**Pn**	**16 12 42.9**	**+0.6**
	SNR=12						
SMDO				P	**Pn**	**16 12 42.9**	**+0.6**
	SNR=12						
SMDO				P	**Pn**	**16 12 42.9**	**+0.6**
	SNR=12						
ARQ	**Araqi**	**8.73**	**1**	P	**Pn**	**16 12 44.9**	**+1.1**
	SNR=6.9						
ARQ				P	**Pn**	**16 12 44.9**	**+1.1**
	SNR=6.9						
WSAR	**Wadi Sarin**	**8.91**	**14**	Pn	**Pn**	**16 12 47.0**	**+0.8**
	0.9nm,0.3s,baz=242,slow=13,SNR=14						
WSAR				LR	LR	16 16 03.9	
	comp=Z,4μm,20.4s,baz=214,slow=36						
HOQ	**Hoqain**	**9.02**	**6**	P	**Pn**	**16 12 48.4**	**+0.6**
	SNR=8.1						
HOQ				P	**Pn**	**16 12 48.4**	**+0.6**
	SNR=8.1						
HOQ				P	**Pn**	**16 12 48.4**	**+0.6**
	SNR=8.1						
BIDO	**Bidbid**	**9.07**	**11**	P	**Pn**	**16 12 50.1**	**+1.5**
BIDO				P	**Pn**	**16 12 50.1**	**+1.5**
ALNE	**Al Ain**	**9.46**	**357**	P	**Pn**	**16 12 54.9**	**+1.1**
	SNR=6.1						
SOHO	**SOHO**	**9.52**	**1**	P	**Pn**	**16 12 56.2**	**+1.5**
SOHO				P	**Pn**	**16 12 56.2**	**+1.5**
FAQ	**Al Faqa, Dubai**	**10.15**	**356**	P	**Pn**	**16 13 04.2**	**+0.9**
FAQ				P	**Pn**	**16 13 04.2**	**+0.9**
HATD	**Hatta, Dubai**	**10.21**	**359**	P	**Pn**	**16 13 05.1**	**+1.0**
	SNR=6.7						
HATD				P	**Pn**	**16 13 05.1**	**+1.0**
	SNR=6.7						
UOSS	**Minazif**	**10.33**	**360**	Pn	**Pn**	**16 13 04.5**	**-1.3**
UOSS	**Minazif**	**10.33**	**360**	P	**Pn**	**16 13 06.0**	**+0.3**
UOSS				P	**Pn**	**16 13 06.0**	**+0.3**
SLWR	**Sila**	**10.40**	**336**	P	**Pn**	**16 13 08.8**	**+2.0**
MASF	**Masafi**	**10.75**	**359**	P	**Pn**	**16 13 12.0**	**+0.5**
	SNR=6.3						
BANOM	**Banah**	**11.30**	**0**	P	**Pn**	**16 13 20.4**	**+1.4**
SHME	**Shamm**	**11.43**	**359**	P	**Pn**	**16 13 20.9**	**+0.1**
ATD	**Arta Tunnel**	**13.45**	**259**	LR	LR	16 17 31.0	
	comp=Z,942nm,20.7s,baz=115,slow=31						
RAYN	**Ar Rayn**	**13.54**	**313**	Pn	**Pn**	**16 13 46.4**	**-3.3**
QRN	**Al-Qurain**	**16.11**	**333**	*e*P		16 14 23.6	
RDF	**Al-Radifah**	**16.43**	**332**	*e*P		16 14 25.5	
UMR	**Umm Al-Rimmam**	**16.89**	**333**	*e*P		16 14 31.5	
RST	**Umm Al-Ruwaisa**	**17.17**	**331**	*e*P		16 14 34.0	
HRA	**Herat**	**20.45**	**14**	P	Pn	16 15 17.4	0.0
HRA				IAmb	IAmb	16 15 32.4	
	comp=Z,29nm,0.9s						
KBL	**Kabul**	**22.98**	**28**	P	**P**	**16 15 43.0**	**+0.8**
KBL				IAmb	IAmb	16 15 55.7	
	comp=Z,22nm,

TESR	**Tescani**	**40.37**	**328**	⇓P		**P**	**16 18 16.5**	**+1.4**
VOIR		**40.51**	**326**	⇑P		**P**	**16 18 18.2**	**+1.8**
LSZ	**Lusaka**	**40.64**	**224**	P		**P**	**16 18 17.9**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=35,slow=7.4,SNR=8.7							
LSZ	**Lusaka**	**40.64**	**224**	P		**P**	**16 18 16.7**	**-1.1**
SORM	**Soroca**	**40.66**	**331**	⇑P		**P**	**16 18 18.0**	**+0.5**
DOPR	**Dopca**	**40.67**	**327**	⇑P		P	16 18 12.5	-5.1
ARR	**Arges**	**40.69**	**325**	⇑P		**P**	**16 18 18.7**	**+0.8**
BIZ	**Bicaz**	**40.93**	**328**	⇓P		**P**	**16 18 23.0**	**+3.2**
CMAR	**Chiang Mai Arr**	**41.00**	**79**	P		**P**	**16 18 22.4**	**+1.6**
	comp=Z,2.3nm,0.7s,baz=275,slow=9.0,SNR=17							
CMAR				LR		LR	16 33 53.3	
	comp=Z,53nm,21.7s,baz=336,slow=34							
CMAR	**Chiang Mai Arr**	**41.00**	**79**	P		**P**	**16 18 20.1**	**-0.6**
LOT	**Lotru**	**41.22**	**325**	⇑P		**P**	**16 18 22.8**	**+0.5**
MDB	**Medias**	**41.32**	**326**	⇓P		P	16 18 28.0	+5.0
HERR	**Herculane**	**41.65**	**323**	⇓P		**P**	**16 18 24.4**	**-1.2**
GZR	**Gura Zlata**	**41.74**	**324**	⇑P		**P**	**16 18 28.0**	**+1.5**
BURAR	**Bucovina Array**	**41.83**	**328**	⇑P		**P**	**16 18 29.5**	**+2.2**
BURAR	**Bucovina Array**	**41.83**	**328**	P		**P**	**16 18 27.6**	**+0.3**
BUR08	**Bucovina Ar. S**	**41.86**	**328**	P		**P**	**16 18 28.2**	**+0.7**
BUR08				IAmb		IAmb	16 18 44.4	
	comp=Z,12nm,1.4s							
MDVR	**Moldovita**	**42.00**	**323**	⇓P		**P**	**16 18 29.2**	**+0.6**
AKASG	**Malin Array Be**	**42.17**	**334**	P		**P**	**16 18 30.4**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=136,slow=7.7,SNR=13							
AKASG				LR		LR	16 39 20.0	
	comp=Z,304nm,20.8s,baz=135,slow=41							
AKASG	**Malin Array Be**	**42.17**	**334**	P		**P**	**16 18 29.1**	**-0.7**
AKBB	**Malin Array Si**	**42.17**	**334**	P		**P**	**16 18 29.4**	**-0.4**
AKBB				IAmb		IAmb	16 18 37.6	
	comp=Z,9.2nm,0.8s							
BZS	**Buzias**	**42.53**	**324**	⇑P		**P**	**16 18 33.4**	**+0.5**
DRGR		**42.62**	**326**	⇓P		**P**	**16 18 35.1**	**+1.4**
DIVS	**Divibare**	**42.65**	**321**	P		**P**	**16 18 34.1**	**+0.2**
DIVS				IAmb		IAmb	16 18 40.5	
	comp=Z,13nm,1.4s							
OBN	**Obninsk**	**43.27**	**344**	LR		LR	16 39 24.4	
	comp=Z,46nm,18.4s,baz=182,slow=40							
RAFF	**Raffo Rosso**	**43.49**	**309**	P		**P**	**16 18 41.4**	**+0.6**
RPSI	**Rantau Prapat**	**43.67**	**102**	P		**P**	**16 18 41.1**	**-1.4**
RPSI				IAmb		IAmb	16 18 58.1	
	comp=Z,10nm,1.3s							
MATP	**Matopo**	**44.22**	**219**	P		**P**	**16 18 45.9**	**-1.0**
	comp=Z,8.4nm,0.6s,baz=36,slow=8.5,SNR=22							
MATP				LR		LR	16 38 47.0	
	comp=Z,296nm,18.1s,baz=43,slow=38							
CORL	**Corleone**	**44.51**	**310**	P		**P**	**16 18 49.1**	**+0.1**
CRVS	**Cervenica-Dubn**	**44.59**	**328**	*eP*		**P**	**16 18 50.6**	**+1.2**
KMI	**Kunming**	**44.74**	**69**	⇑P		**P**	**16 18 52.6**	**+1.4**
KMI				pP		pP	16 18 55.1	-1.2
KMI				S		**S**	**16 25 27.3**	**-0.3**
KMI				sS		pS	16 25 32.3	-1.4
KMI				SS		**SS**	**16 28 41.8**	**-6.7**
KMI				pmax		pmax		
	comp=Z,5.0nm,0.9s							
KMI				pmax		pmax		
	comp=Z,68nm,3.5s							
KMI				LR		LR		
	comp=N,150nm,19.6s							
KMI				LR		LR		
	comp=E,200nm,25.9s							
KMI				LR		LR		
	comp=Z,300nm,32.4s							
ZAA0	**Zalesovo Array**	**45.22**	**23**	P		**P**	**16 18 54.6**	**+0.4**
ZAA0				IAmb		IAmb	16 19 03.2	
	comp=Z,8.7nm,0.8s							
ZALV	**Zalesovo Beam**	**45.22**	**23**	P		**P**	**16 18 55.3**	**+1.0**
	comp=Z,3.2nm,0.7s,baz=234,slow=7.0,SNR=13							
ZALV				LR		LR	16 40 18.7	
	comp=Z,296nm,18.4s,baz=227,slow=39							
ZALV	**Zalesovo Beam**	**45.22**	**23**	P		**P**	**16 18 54.6**	**+0.3**
GTA	**Gaotai**	**45.41**	**49**	*eP*		**P**	**16 18 57.5**	**+1.2**
GTA				pP		sP	16 19 03.6	+0.4
GTA				sP		pwP	16 19 06.8	+1.6
GTA				S		S	16 25 46.3	+9.4
GTA	**Gaotai**	**45.41**	**49**	SS		SS	16 29 08.0	+7.7
GTA				pmax		pmax		
	comp=Z,3.0nm,1.5s							
GTA				pmax		pmax		
	comp=Z,65nm,5.5s							
GTA				LR		LR		
	comp=N,140nm,16.7s							
GTA				LR		LR		
	comp=E,370nm,17.8s							
GTA				LR		LR		
	comp=Z,460nm,20.0s							
MNK	**Minsk**	**45.60**	**337**	*i* P		**P**	**16 18 56.8**	**-0.5**
	comp=E,4.0nm,1.5s							
MNK				*i* P		**P**	**16 18 56.8**	**-0.5**
	comp=N,9.0nm,0.9s							
MNK				*i* P		**P**	**16 18 56.8**	**-0.5**
	comp=Z,15nm,1.2s							
MNK				*i* PcP		**PcP**	**16 20 33.5**	**-2.0**
MNK				*i* PP		**PP**	**16 20 44.6**	**+0.4**
MNK				*i* PPP		PPP	16 21 25.0	
MNK				*i* S		**S**	**16 25 42.5**	**+3.8**
MNK				*i* ScS		**ScS**	**16 28 52.8**	**+0.2**
MNK				*i* SS		**SS**	**16 29 07.4**	**+4.8**
MNK				*i* SSS		SSS	16 29 58.7	
MNK				*i* LQ		LQ	16 34 53.3	
MNK				*i* LR		LR	16 38 23.1	
MNK				*i* LRM		MLR	16 40 54.1	
	comp=E,10.0nm,12.7s							
MNK				*i* LRM		MLR	16 40 57.9	
	comp=N,125nm,17.8s							
MNK				*i* LRM		MLR	16 40 59.2	
	comp=Z,147nm,21.0s							
VYHS	**Vyhne**	**45.74**	**326**	*e*P		P	16 19 04.0	+5.4
OJC	**Ojcow**	**46.25**	**328**	P		**P**	**16 19 02.1**	**-0.4**
OJC				IAmb		IAmb	16 19 24.6	
	comp=Z,6.7nm,1.0s							
NACGM	**Naroch**	**46.32**	**337**	*i* P		**P**	**16 19 04.1**	**+1.2**
NACGM				*i* P		**P**	**16 19 04.1**	**+1.2**
NACGM				*i* P		**P**	**16 19 04.1**	**+1.2**
NACGM				*i* PP		PcP	16 20 25.6	-12
NACGM				*i* PPP		PPP	16 21 31.3	
NACGM				*i* S		**S**	**16 25 48.4**	**-0.7**
NACGM				*i* PS		PKiKP	16 27 12.5	-21
NACGM				*i* SS		**SS**	**16 29 14.1**	**-0.6**
NACGM				*i* SSS		SSS	16 30 05.4	
NACGM				*i* LQ		LQ	16 34 56.3	
NACGM				*i* LR		LR	16 37 02.3	
NRCA	**Norcia**	**46.48**	**316**	P		**P**	**16 19 05.6**	**+1.0**
MODS	**Modra-Piesok**	**46.54**	**325**	*e*P		**P**	**16 19 08.5**	**+3.6**
IDID	**Didziasalis**	**46.64**	**337**	*e*P		**P**	**16 19 07.2**	**+1.7**
IIGN	**Ignalina**	**46.87**	**337**	*e*P		**P**	**16 19 09.2**	**+1.9**
KEST	**Kesra**	**46.92**	**306**	P		**P**	**16 19 08.7**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=136,slow=2.7,SNR=4.6							
KEST	**Kesra**	**46.92**	**306**	P		**P**	**16 19 08.2**	**+0.1**
KEST				IAmb		IAmb	16 19 11.1	
	comp=Z,7.6nm,0.9s							
ARSA	**Arzberg**	**46.96**	**323**	*i* P		**P**	**16 19 09.3**	**+1.0**
	comp=Z,4.8nm,1.1s							
SOKA	**Soboth**	**46.97**	**322**	*i* P		**P**	**16 19 09.4**	**+1.0**
	comp=Z,10nm,1.7s							
ISAL	**Salakas**	**47.07**	**337**	*e*P		**P**	**16 19 10.3**	**+1.4**
CONA	**Conrad Observa**	**47.11**	**323**	*e*P		**P**	**16 19 10.4**	**+1.0**
	comp=Z,10nm,1.2s							
MORC	**Moravsky Berou**	**47.17**	**326**	*e*P		**P**	**16 19 10.0**	**+0.2**
MORC	**Moravsky Berou**	**47.17**	**326**	P		**P**	**16 19 09.1**	**-0.8**
MORC				IAmb		IAmb	16 19 17.3	
	comp=Z,11nm,1.2s							
OBKA	**Obir**	**47.18**	**321**	*e*P		**P**	**16 19 11.2**	**+1.2**
	comp=Z,5.7nm,0.9s							
LATE	**Laterza**	**47.28**	**315**	P		**P**	**16 19 09.5**	**-1.3**
TRI	**Trieste**	**47.29**	**320**	P		**P**	**16 19 10.1**	**-0.7**
KRUC	**Moravsky**	**47.40**	**325**	*e*P		**P**	**16 19 12.0**	**+0.4**
VRAC	**Vranov**	**47.43**	**325**	LR		LR	16 42 00.8	
	comp=Z,117nm,19.4s,baz=112,slow=40							
VRAC	**Vranov**	**47.43**	**325**	*e*P		**P**	**16 19 11.9**	**+0.1**
LZH	**Lanzhou**	**47.47**	**54**	*e*P		**P**	**16 19 12.6**	**0.0**
LZH				pP		pP	16 19 17.6	0.0
LZH				S		**S**	**16 26 08.3**	**+1.8**
LZH				sS		sS	16 26 16.8	+1.6
LZH				pmax		pmax		
	comp=Z,22nm,1.1s							
LZH				pmax		pmax		
	comp=Z,100nm,7.1s							
LZH				LR		LR		
	comp=N,290nm,17.3s							
LZH				LR		LR		
	comp=E,200nm,17.9s							
LZH				LR		LR		

	comp=Z,180nm,19.0s							
KRLC	**Kraliky**	**47.75**	**326**	*e*P		**P**	**16 19 14.5**	**+0.2**
MYKA	**Terra Mystica**	**47.79**	**321**	*e*P		**P**	**16 19 15.8**	**+1.1**
	comp=Z,10.0nm,1.1s							
KLMR	**Klimovskoe**	**47.80**	**349**	*e*P		**P**	**16 19 14.0**	**-0.4**
KLMR					AMP		16 19 25.9	
	comp=Z,28nm,1.5s							
VSL	**Villasalto**	**47.93**	**310**	P		**P**	**16 19 15.8**	**-0.1**
MOA	**Molln**	**48.00**	**323**	*e*P		**P**	**16 19 17.2**	**+0.9**
	comp=Z,5.4nm,1.2s							
DPC	**Dobruska-Polom**	**48.15**	**326**	*e*P		**P**	**16 19 18.1**	**+0.7**
ZOU	**Zoufplan**	**48.17**	**321**	P		**P**	**16 19 17.9**	**+0.1**
ZOU				IAmb		IAmb	16 19 26.1	
	comp=Z,11nm,1.3s							
KBA	**Koelnbreinsper**	**48.18**	**321**	*e*P		**P**	**16 19 18.1**	**+0.3**
	comp=Z,6.0nm,1.2s							
STAL	**STALIGIAL**	**48.20**	**320**	P		**P**	**16 19 17.7**	**-0.1**
STAL				IAmb		IAmb	16 19 19.0	
	comp=Z,9.2nm,1.0s							
GYA	**Guiyang**	**48.36**	**67**	⇑P		**P**	**16 19 20.3**	**+0.8**
GYA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ZCCA	**Zocca**	**48.51**	**317**	P		**P**	**16 19 20.5**	**+0.2**
ABTA	**Abfaltersbach**	**48.54**	**321**	*e*P		**P**	**16 19 20.4**	**-0.1**
	comp=Z,3.9nm,1.1s							
CTI	**Castel Tesino**	**48.77**	**319**	P		**P**	**16 19 22.1**	**-0.3**
CTI				IAmb		IAmb	16 19 30.6	
	comp=Z,4.9nm,0.8s							
GERES	**GERESS Array B**	**48.81**	**324**	LR		LR	16 41 56.3	
	comp=Z,95nm,19.4s,baz=98,slow=38							
KHC	**Kasperske Hory**	**49.03**	**324**	*e*P		**P**	**16 19 23.9**	**-0.3**
KHC	**Kasperske Hory**	**49.03**	**324**	P		**P**	**16 19 23.8**	**-0.4**
VSU	**Vasula**	**49.06**	**340**	*e*P		**P**	**16 19 23.9**	**-0.2**
WTTA	**Wattenberg**	**49.30**	**321**	*e*P		**P**	**16 19 26.0**	**-0.5**
	comp=Z,9.3nm,1.0s							
GKP	**Gorka Klasztor**	**49.35**	**330**	*e*P		**P**	**16 19 27.5**	**+1.0**
WATA	**Walderalm**	**49.37**	**321**	*e*P		**P**	**16 19 26.7**	**-0.3**
	comp=Z,4.3nm,0.6s							
LBTB	**Lobatse**	**49.44**	**218**	P		**P**	**16 19 28.1**	**+0.5**
SQTA	**Sankt Quirin**	**49.55**	**321**	*e*P		**P**	**16 19 28.0**	**-0.3**
	comp=Z,2.9nm,0.5s							
MOTA	**Moosalm**	**49.66**	**321**	*e*P		**P**	**16 19 28.8**	**-0.5**
	comp=Z,10.0nm,1.1s							
FETA	**Feichten**	**49.76**	**320**	*e*P		**P**	**16 19 30.1**	**+0.1**
	comp=Z,3.8nm,1.1s							
DAVOX	**Davos/Dischmat**	**50.19**	**320**	LR		LR	16 43 11.1	
	comp=Z,103nm,19.8s,baz=84,slow=39							
MTSE	**Matsula**	**50.25**	**339**	*e*P		**P**	**16 19 36.0**	**+2.7**
DAVA	**Damuels**	**50.39**	**320**	*i* P		**P**	**16 19 34.5**	**-0.3**
	comp=Z,7.0nm,1.0s							
CLL	**Collm**	**50.44**	**326**	*i* P		**P**	**16 19 35.1**	**+0.3**
	comp=Z,10.0nm,1.3s							
XAN	**Xi'an**	**51.15**	**58**	P		**P**	**16 19 39.3**	**-1.2**
XAN				pP		pwP	16 20 04.9	+15
XAN				pmax		pmax		
	comp=Z,7.0nm,1.7s							
XAN	**Xi'an**	**51.15**	**58**	P		**P**	**16 19 39.5**	**-1.0**
FIA1	**FINESS Array S**	**51.60**	**342**	P		**P**	**16 19 43.3**	**0.0**
FIA1				IAmb		IAmb	16 19 49.9	
	comp=Z,11nm,0.9s							
FINES	**FINESS Array B**	**51.60**	**342**	P		**P**	**16 19 43.5**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=134,slow=7.2,SNR=12							
FINES				LR		LR	16 45 18.9	
	comp=Z,65nm,18.8s,baz=146,slow=40							
BNI	**Bardonecchia**	**51.62**	**316**	P		**P**	**16 19 44.0**	**0.0**
BNI				IAmb		IAmb	16 19 52.8	
	comp=Z,7.1nm,1.3s							
SENIN	**Lac Senin/Sane**	**51.67**	**318**	P		**P**	**16 19 43.3**	**-1.1**
BOSA	**Boshof**	**52.38**	**215**	P		**P**	**16 19 48.8**	**-1.0**
	comp=Z,6.1nm,0.9s,baz=42,slow=7.8,SNR=8.6							
BOSA				LR		LR	16 42 12.4	
	comp=Z,352nm,18.6s,baz=348,slow=36							
BOSA	**Boshof**	**52.38**	**215**	P		**P**	**16 19 49.0**	**-0.8**
BOSA				IAmb		IAmb	16 19 51.6	
	comp=Z,17nm,1.2s							
SONM	**Songino Array**	**52.91**	**40**	P		**P**	**16 19 55.5**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=241,slow=8.6,SNR=7.6							
SONM	**Songino Array**	**52.91**	**40**	P		**P**	**16 19 54.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**52.93**	**276**	P		**P**	**16 19 53.6**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=92,slow=6.3,SNR=9.7							
TORD				LR		LR	16 41 48.1	
	comp=Z,122nm,21.4s,baz=135,slow=35							
TORD	**Torodi Ar. Bea**	**52.93**	**276**	P		**P**	**16 19 53.2**	**-0.8**
HHC	**Hu-ho-hao-te**	**54.46**	**50**	*e*P		**P**	**16 20 05.8**	**+0.8**
HHC				S		**S**	**16 27 43.9**	**+0.9**
HHC				pmax		pmax		
	comp=Z,15nm,0.6s							
HHC				pmax		pmax		
	comp=Z,100nm,5.7s							
HHC				LR		LR		
	comp=N,260nm,17.9s							
HHC				LR		LR		
	comp=E,470nm,18.7s							
HHC				LR		LR		
	comp=Z,480nm,17.0s							
LEM	**Lembang**	**55.15**	**109**	LR		LR	16 40 16.7	
	comp=Z,149nm,19.6s,baz=284,slow=32							
NOA	**NORSAR Array B**	**56.56**	**336**	P		**P**	**16 20 19.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=117,slow=7.0,SNR=3.6							
NOA				LR		LR	16 47 29.5	
	comp=Z,116nm,19.1s,baz=150,slow=39							
ESDC	**Sonseca Array**	**58.02**	**308**	P		**P**	**16 20 29.1**	**-1.3**
	comp=Z,7.9nm,1.1s,baz=87,slow=6.4,SNR=20							
ESDC	**Sonseca Array**	**58.02**	**308**	P		**P**	**16 20 29.4**	**-1.0**
ESDC				IAmb		IAmb	16 20 38.0	
	comp=Z,6.4nm,1.1s							
ARCES	**ARCESS Array B**	**58.23**	**348**	P		**P**	**16 20 30.9**	**-0.4**
	comp=Z,2.6nm,0.9s,baz=123,slow=4.5,SNR=5.6							
ARCES				LR		LR	16 49 29.0	
	comp=Z,140nm,18.8s,baz=115,slow=40							
NJ2	**Nanjing**	**59.28**	**61**	*e*P		**P**	**16 20 38.8**	**-0.4**
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
NJ2				LR		LR		
	comp=N,750nm,16.6s							
NJ2				LR		LR		
	comp=E,690nm,18.0s							
NJ2				LR		LR		
	comp=Z,500nm,17.1s							
DBIC	**Dimbokro**	**60.47**	**269**	LR		LR	16 47 39.8	
	comp=Z,90nm,19.2s,baz=66,slow=37							
KAPI	**Kappang**	**65.83**	**102**	LR		LR	16 49 33.8	
	comp=Z,52nm,18.9s,baz=286,slow=36							
KSRS	**Korea Array**	**66.78**	**55**	P		**P**	**16 21 28.9**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=263,slow=8.0,SNR=3.8							
YAK	**Yakutsk**	**69.46**	**29**	P		**P**	**16 21 44.9**	**-0.3**
TIXI	**Tiksi**	**70.80**	**19**	P		**P**	**16 21 53.7**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=47,slow=0.5,SNR=8.1							
TIXI	**Tiksi**	**70.80**	**19**	P		**P**	**16 21 53.8**	**+0.5**
TIXI				IAmb		IAmb	16 21 54.9	
	comp=Z,8.2nm,1.4s							
BATI	**Baumata**	**71.17**	**106**	LR		LR	16 54 13.4	
	comp=Z,85nm,18.3s,baz=221,slow=37							
H01W3	**Cape Leeuwin H**	**73.65**	**134**	T		T	17 42 28.2	
	baz=302,slow=75,SNR=20							
H01W2	**Cape Leeuwin H**	**73.66**	**134**	T		T	17 42 28.0	
	baz=302,slow=75,SNR=29							
H01W1	**Cape Leeuwin H**	**73.67**	**134**	T		T	17 42 29.4	
	baz=302,slow=75,SNR=21							
NWAO	**Narrogin (SRO)**	**74.91**	**130**	P		**P**	**16 22 17.3**	**-1.1**
NWAO				IAmb		IAmb	16 22 44.0	
	comp=Z,13nm,1.2s							
SEY	**Seymchan**	**79.91**	**28**	P		**P**	**16 22 47.6**	**+1.7**
	comp=Z,3.6nm,0.8s,baz=269,slow=7.6,SNR=8.8							
MAW	**Mawson**	**82.08**	**177**	P		**P**	**16 22 57.2**	**0.0**
	comp=Z,3.3nm,0.8s,baz=296,slow=6.4,SNR=4.0							
MAW				LR		LR	16 50 11.9	
	comp=Z,128nm,21.1s,baz=45,slow=29							
BILL	**Bilibino**	**83.85**	**21**	P		**P**	**16 23 07.3**	**+0.7**
BILL				IAmb		IAmb	16 23 14.1	
	comp=Z,5.5nm,1.1s							
WRA	**Warramunga Arr**	**84.03**	**112**	P		**P**	**16 23 07.7**	**-0.7**
	comp=Z,2.8nm,0.7s,baz=298,slow=4.3,SNR=17							
WRA	**Warramunga Arr**	**84.03**	**112**	P		**P**	**16 23 07.0**	**-1.4**
SYO	**Syowa Base**	**84.20**	**186**	‖*e*PcP		**PcP**	**16 23 12.8**	**+1.0**
ASAR	**Alice Springs**	**84.79**	**116**	P		**P**	**16 23 11.3**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=291,slow=4.8,SNR=34							
ASAR	**Alice Springs**	**84.79**	**116**	P		**P**	**16 23 10.4**	**-1.8**
PETK	**Petropavlovsk-**	**85.18**	**36**	LR		LR	17 03 38.9	
	comp=Z,151nm,21.6s,baz=261,slow=37							
ILAR	**Eielson Array**	**98.96**	**10**	LR		LR	17 15 34.5	
	comp=Z,109nm,18.8s,baz=304,slow=39							
PDAR	**Pinedale Array**	**121.49**	**348**	PKP		**PKPdf**	**16 29 30.5**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=80,slow=1.4,SNR=5.2							
NVAR	**Mina Array Bea**	**127.04**	**355**	PKP		**PKPdf**	**16 29 42.5**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=12,slow=0.7,SNR=5.9							

*IDC **21** 16:13:10.9±1.5, 1°66S×138°88E, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.5/49, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=30.8km s-min=16.2km az=29.0*
*DJA **21** 16:13:13.2±0.5, 1°S×6°×13°9E±°, h62km±35km, M4.0/5, mb4.1/2, mB5.7/1, MLv3.9/5, Mw(mB)5.2/1*
ISC 21 16:13:09.8±2.0, 0°9S±0°1×138°97E±0°07, h35km, n10, σ1°99/13, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**2.05**	**144**	P		P	**Pn**	**16 13 43.0**	**+1.2**
GENI				S		S	**Sn**	**16 14 06.0**	**-0.2**
JAY	**Jayapura**	**2.35**	**133**	Pn		**Pn**	**Pn**	**16 13 47.6**	**+1.6**
	6.5nm,0.3s,baz=238,slow=12,SNR=21								
JAY				Lg		Lg		16 14 14.1	
	10.0nm,0.3s,baz=118,slow=22,SNR=9.1								
JAY	**Jayapura**	**2.35**	**133**	P		**Pn**		**16 13 47.5**	**+1.5**
JAY				S		**Sn**		**16 14 13.1**	**-0.6**
BAKI	**Biak**	**2.88**	**265**	P		**Pn**		**16 13 56.5**	**+3.3**
SRPI	**Serui, Papua**	**2.89**	**251**	P		**Pn**		**16 13 54.6**	**+1.3**
SRPI				S		**Sn**		**16 14 25.7**	**-1.2**
WAMI	**Wamena**	**2.96**	**185**	P		**Pn**		**16 13 57.0**	**+2.7**
WAMI				S		**Sn**		**16 14 29.3**	**+0.6**
FAKI	**Fak Fak**	**7.00**	**253**	P		**Pn**		**16 14 50.0**	**0.0**
	0.1nm28nm,1.0s								
WRA	**Warramunga Arr**	**19.45**	**193**	P		**P**		**16 17 30.6**	**-2.9**
	0.3nm,0.3s,baz=18,slow=12,SNR=12								
ASAR	**Alice Springs**	**23.14**	**192**	P		**P**		**16 18 11.6**	**-1.7**
	3.0nm,0.8s,baz=23,slow=10,SNR=23								
MKAR	**Makanchi Array**	**68.54**	**322**	P		P		16 24 18.4	+9.5
	0.2nm,0.7s,baz=127,slow=4.3,SNR=3.0								

*TAP **21** 16:20:51.7, 23°96N×122°53E, h31km±1km, ML2.7, D*
*JMA **21** 16:20:51.3±0.1, 23°89N×122°52E, h32km±3km, M2.2*
ISC 21 16:20:51.2±1.1, 23°91N±0°03×122°53E±0°02, h28km±12km, n79, σ0°87/139, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.66**	**35**	P		P	**Pb**	**16 21 04.1**	**-0.1**
JYNG				S		S	**Sn**	**16 21 13.2**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**38**	P		P	**Pn**	**16 21 05.0**	**-0.3**
YOJ				S		S	**Sn**	**16 21 14.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.70**	**38**	P		P	**Pn**	**16 21 05.0**	**-0.3**
	baz=46								
YOJ				S			**Sn**	**16 21 14.4**	**-0.8**
	baz=46								
EWUT	**Wuta**	**0.87**	**308**	*e*S			**Sb**	**16 21 20.4**	**+1.4**
	baz=306								
TWD	**Chiawan**	**0.87**	**282**	S			**Sn**	**16 21 18.8**	**-0.6**
	baz=279								
NACB	**Ninganchiao**	**0.90**	**287**	P			**Pn**	**16 21 07.4**	**-0.5**
	baz=270								
NACB				S			**Sn**	**16 21 19.4**	**-0.5**
	baz=270								
TWC	**Suao**	**0.94**	**318**	*i* P			**Pn**	**16 21 08.0**	**-0.4**
	baz=317								
TWC				*i* S			**Sn**	**16 21 19.8**	**-1.1**
	baz=317								
ETLH	**Xiulin Townshi**	**1.00**	**287**	P			**Pn**	**16 21 09.2**	**-0.3**
	baz=274								
ETLH				*e*S			**Sn**	**16 21 22.7**	**-0.1**
	baz=274								
ESL	**Shilin**	**1.01**	**265**	P			**Pn**	**16 21 08.9**	**-0.6**
	baz=262								
ESL				*i* S			**Sn**	**16 21 21.6**	**-1.2**
	baz=262								
NDS	**Dongshan**	**1.04**	**314**	*i* P			**Pb**	**16 21 10.3**	**-0.2**
	baz=312								
NDS				*i* S			**Sb**	**16 21 24.6**	**+0.9**
	baz=312								
EGFH	**Guangfu**	**1.04**	**257**	P			**Pn**	**16 21 10.2**	**+0.3**
	baz=254								
EGFH				*e*S			**Sn**	**16 21 23.1**	**-0.3**
	baz=254								
HGSD	**Ruisui**	**1.09**	**248**	P			**Pn**	**16 21 10.8**	**+0.1**
	baz=246								
HGSD				*e*S			**Sn**	**16 21 23.8**	**-1.1**
	baz=246								
TWE	**Neicheng**	**1.13**	**316**	*i* P			**Pn**	**16 21 11.5**	**+0.3**
	baz=315								
TWE				S			**Sb**	**16 21 27.1**	**+0.7**
	baz=315								
NTC	**Toucheng**	**1.14**	**326**	*e*S			**Sb**	**16 21 28.5**	**+1.9**
	baz=324					

FULB				*e*S		**Sn**	**16 21 30.8 -0.1**
	baz=226						
CHKT	**Chengkung**	**1.34 233**		P		**Pn**	**16 21 12.4 -1.6**
	baz=220						
CHKT				S		**Sn**	**16 21 29.2 -1.7**
	baz=220						
WFSB	**Wu-fen Shan**	**1.34 330**		*e*P		**Pn**	**16 21 14.4 +0.3**
	baz=328						
WFSB				*e*S		**Sb**	**16 21 31.5 -1.1**
	baz=328						
JKRS	**Kuro-shima**	**1.39 76**		P		**Pn**	**16 21 15.7 +1.0**
JKRS				S		**Sb**	**16 21 33.7 -0.2**
TATO	**Taipei**	**1.43 318**		*e*P		**Pb**	**16 21 16.8 -0.3**
	baz=317						
TATO				*e*S		**Sb**	**16 21 34.2 -0.7**
	baz=317						
SSLB	**Suanglung**	**1.45 266**		*e*P		**Pn**	**16 21 16.3 +0.8**
	baz=283						
EDH	**Donghe**	**1.46 231**		*e*P		**Pn**	**16 21 15.5 -0.2**
	baz=220						
EDH				S		**Sn**	**16 21 33.1 -0.8**
	baz=220						
DPDB	**Guoxing**	**1.47 275**		*e*P		**Pn**	**16 21 17.1 +1.2**
	baz=273						
DPDB				*e*S		**Sb**	**16 21 35.7 -0.6**
	baz=273						
SMLT	**Sun Moon Lake**	**1.49 269**		P		**Pn**	**16 21 17.5 +1.2**
	baz=267						
SMLT				S		**Sn**	**16 21 35.4 +0.5**
	baz=267						
WHP	**Taichung City**	**1.49 285**		*e*P		**Pn**	**16 21 17.0 +0.8**
	baz=273						
WHP				*e*S		**Sn**	**16 21 35.7 +0.8**
	baz=273						
YUS	**Yu-Shan**	**1.50 254**		P		**Pn**	**16 21 17.6 +0.9**
	baz=252						
YUS				S		**Sn**	**16 21 35.9 +0.2**
	baz=252						
YM01	**YM01**	**1.51 325**		P		**Pb**	**16 21 18.0 -0.7**
	baz=324						
YM01				S		**Sb**	**16 21 36.8 -0.6**
	baz=324						
YM10	**YM10**	**1.52 325**		*e*P		**Pb**	**16 21 18.3 -0.6**
	baz=324						
YM10				S		**Sb**	**16 21 36.7 -1.1**
	baz=324						
TYC	**Yuchr**	**1.53 270**		P		**Pn**	**16 21 17.8 +1.1**
	baz=268						
YM04	**YM04**	**1.54 324**		*e*P		**Pn**	**16 21 17.1 +0.4**
	baz=323						
JlJ	**Ishigaki jima**	**1.54 73**		P		**Pn**	**16 21 17.4 +0.6**
JlJ				S		**Sn**	**16 21 36.2 +0.3**
WHYT	**Xinyi Township**	**1.55 263**		*e*P		**Pb**	**16 21 18.8 -0.5**
	baz=260						
LIOB	**Emei**	**1.56 298**		P		**Pb**	**16 21 18.9 -0.6**
	baz=297						
LIOB				S		**Sb**	**16 21 38.3 -0.6**
	baz=297						
LDUT	**Ludao**	**1.57 219**		*e*P		**Pn**	**16 21 16.5 -0.7**
	baz=217						
LDUT				S		**Sn**	**16 21 35.5 -1.0**
	baz=217						
NSTT	**Nanjuang**	**1.57 298**		S		**Sb**	**16 21 38.1 -0.9**
	baz=296						
LONT	**Longtian**	**1.63 232**		*e*P		**Pn**	**16 21 18.3 +0.3**
	baz=223						
LONT				*e*S		**Sn**	**16 21 38.5 +0.4**
	baz=223						
ALS	**Alishan**	**1.63 256**		P		**Pn**	**16 21 19.9 +1.6**
	baz=254						
ALS				S		**Sn**	**16 21 40.0 +1.4**
	baz=254						
WJS	**Zhushan**	**1.65 267**		*e*S		**Sb**	**16 21 41.9 +0.5**
	baz=265						
TWQ1	**Liyutan**	**1.66 286**		S		**Sb**	**16 21 42.0 +0.3**
	baz=283						
WNT	**Mingjian**	**1.69 269**		*e*P		**Pb**	**16 21 21.1 -0.6**
	baz=267						
WNT				*e*S		**Sb**	**16 21 42.5 0.0**
	baz=267						
TWGBT	**Beinan**	**1.72 231**		*e*P		**Pn**	**16 21 18.1 -1.1**
	baz=240						
TWG	**Pinlang**	**1.72 231**		*e*P		**Pn**	**16 21 18.8 -0.5**
	baz=221						
TWG				*e*S		**Sn**	**16 21 39.1 -1.3**
	baz=221						
CHN5	**Tsauling**	**1.73 260**		P		**Pb**	**16 21 21.9 -0.4**
	baz=249						
CHN5				S		**Sb**	**16 21 43.8 +0.2**
	baz=249						
JISG	**Ishigakijimahi**	**1.76 67**		P		**Pn**	**16 21 20.1 +0.3**
JISG				S		**Sn**	**16 21 40.5 -0.8**
STYH	**Taoyuan**	**1.77 246**		*e*P		**Pn**	**16 21 21.4 +1.4**
	baz=236						
STYH				*e*S		**Sn**	**16 21 43.6 +2.1**
	baz=236						
STYT	**Tauyuan**	**1.79 246**		P		**Pn**	**16 21 21.9 +1.6**
	baz=234						
WDLH	**Douliu**	**1.84 264**		*e*P		**Pb**	**16 21 23.5 -0.6**
	baz=261						
WDLH				*e*S		**Sb**	**16 21 47.9 +1.2**
	baz=261						
TPUB	**Ta-pu**	**1.84 251**		P		**Pb**	**16 21 23.6 -0.6**
	baz=240						
TPUB				*e*S		**Sb**	**16 21 46.4 -0.6**
	baz=240						
WTP	**Ta-pu**	**1.88 250**		P		**Pn**	**16 21 23.5 +2.0**
	baz=237						
SLGT	**Liugui**	**1.96 243**		*e*P		**Pn**	**16 21 24.6 +2.1**
	baz=233						
SGST	**Jiashian**	**1.97 246**		P		**Pn**	**16 21 25.0 +2.3**
	baz=235						
SGST				*e*S		**Sb**	**16 21 50.2 -0.3**
	baz=235						
CHN1	**Nanshi**	**1.97 249**		P		**Pb**	**16 21 25.4 -1.0**
	baz=247						
CHN1				*e*S		**Sb**	**16 21 49.8 -0.8**
	baz=247						
WTK	**Tuku**	**1.97 264**		*e*P		**Pn**	**16 21 25.1 +2.4**
	baz=262						
WTK				*e*S		**Sb**	**16 21 51.5 +0.8**
	baz=262						
SNST	**Tainan City**	**1.99 250**		*e*P		**Pb**	**16 21 25.9 -0.8**
	baz=248						
SNST				*e*S		**Sb**	**16 21 51.1 +0.1**
	baz=248						
SSD	**Sandimen**	**2.09 237**		*e*P		**Pn**	**16 21 25.4 +1.0**
	baz=228						
JTJ	**Tarama**	**2.11 69**		P		**Pn**	**16 21 26.2 +1.5**
JTJ				*e*S		**Sn**	**16 21 51.0 +1.0**
SCST	**Cishan**	**2.13 242**		*e*P		**Pn**	**16 21 27.6 +2.7**
	baz=240						
EAST	**Anshuo**	**2.17 226**		*e*P		**Pn**	**16 21 25.9 +0.5**
	baz=224						
MASBT	**Mashibuluo**	**2.17 234**		*e*P		**Pn**	**16 21 26.6 +1.1**
	baz=226						

IDC ***21*** *16:35:30.3±0.8, 46.31N×152.97E, h0km, mb4.3/26, mb1 4.4/33, mb1mx4.3/61, mbtmp4.3/33, ML3.2/6, MS4.4/25, Ms1 4.4/25, ms1mx4.1/39, Error ellipse: s-maj=19.6km s-min=11.8km az=168.0*

BJI ***21*** *16:35:31.7±0.0, 46.50N×153.21E, h33km, mB5.1/44, mb4.6/61, Ms4.6/52, Ms7 4.4/50*

NIED ***21*** *16:35:32.1, 46.54N×152.90E, h30km, MW4.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr-0.39; Mθθ1.23; Mφφ-0.84; Mrθ0.74; Mrφ-0.74; Mθφ0.48; Fault plane solution: M0 1.58000×10¹⁶ NP1: φs247.00000°, δ79.00000°, λ-143.00000°. NP2: φs149.00000°, δ54.00000°, λ-13.00000°.*

SKHL ***21*** *16:35:33.7±0.6, 46.20N×153.20E, h47km±3km, mb4.9/10, mbv5.3/4, ms4.5/10, msh5.2/2*

MOS ***21*** *16:35:34.1±1.1, 46.21N×152.94E, h47km, mb5.0/18, MS4.2/16, Error ellipse: s-maj=6.0km s-min=4.8km az=96.7*

NEIC ***21*** *16:35:34.8±1.1, 46.25N±0.10×152.9E±0.1, h35km±6km, mb4.9/229, Error ellipse: s-maj=17.4km s-min=6.9km az=139.0*

GCMT ***21*** *16:35:36.8±0.3, 46.21N±0.02×153.20E±0.03, h16km, MW4.9/98, Moment Tensor Solution. s35,c45; s98,c155; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.74±.15; Mθθ-1.55±.10; Mφφ-1.20±.09; Mrθ0.43±.29; Mθφ-1.49±.05; Mφr1.13±.30; Best double couple: M0 3.05900×10¹⁶*

NP1:φs239.00000°, δ35.00000°, λ108.00000°. NP2: φs38.00000°, δ56.00000°, λ78.00000°. Principal axes: T 3.0410, Plg75.0000°, Azm272.0000°; N 0.0250, Plg10.0000°, Azm45.0000°; P -3.0770, Plg11.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

BGR ***21*** *16:35:42.1±0.0, 47.74N×152.27E, h33km, mb5.0*

ISC 21 16:35:33.6±0.4, 46.17N±0.05×153.05E±0.04, h31km, n615, σ1§46/631, mb4.9/232, MS4.6/58, 28C-28D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.75**	**257**	*i*	PN		**Pn**	**16 36 30.8**	**+1.6**
KUR						*e*S	**Sn**	**16 37 14.7**	**+2.5**
KUR					pmax		pmax		
	comp=N,125nm,0.3s								
KUR					pmax		pmax		
	comp=E,74nm,0.3s								
KUR					pmax		pmax		
	comp=Z,459nm,0.3s								
KUR					smax		smax		
	comp=E,497nm,0.7s								
KUR					smax		smax		
	comp=N,208nm,0.4s								
KUR	**Kuril'sk**	**3.75**	**257**	*i*	P		**Pn**	**16 36 30.8**	**+1.6**
KUR					AMB		AMB	16 36 32.0	
	comp=N,130nm,0.3s								
KUR					AMB		AMB	16 36 32.0	
	comp=N,70nm,0.3s								
KUR					AMB		AMB	16 36 32.0	
	comp=N,460nm,0.3s								
KUR					AMB		AMB	16 36 34.0	
	comp=N,800nm,2.0s								
KUR				*i*	S		**Sn**	**16 37 14.1**	**+1.9**
KUR					A		A	16 37 17.0	
	comp=N,950nm,0.6s								
KUR					A		A	16 37 17.0	
	comp=N,1μm,0.6s								
KUR					A		A	16 37 22.2	
	comp=N,2μm,2.0s								
KUR					A		A	16 37 22.2	
	comp=N,980nm,2.0s								
KUR					AMS		AMS	16 37 22.3	
	comp=N,5μm,14.0s								
KUR					AMS		AMS	16 37 22.3	
	comp=N,4μm,14.0s								
KUR					AMS		AMS	16 37 22.3	
	comp=N,4μm,14.0s								
SKR	**Severo-Kuril's**	**4.96**	**23**	*e*	PN		**Pn**	**16 36 45.2**	**-0.6**
SKR					pmax		pmax		
	comp=Z,112nm,0.5s								
SKR					MLR		MLR		
	comp=Z,2μm,14.0s								
SKR					MLR		MLR		
	comp=N,2μm,12.0s								
SKR					MLR		MLR		
	comp=E,2μm,17.0s								
SKR					MLR		MLR		
	comp=Z,1μm,14.0s								
SKR	**Severo-Kuril's**	**4.96**	**23**	*e*	P		**Pn**	**16 36 45.6**	**-0.2**
SKR					AMB		AMB	16 36 46.1	
	comp=Z,110nm,0.5s								
SKR						*e*S	**Sn**	**16 37 39.1**	**-3.0**
SKR					A		A	16 37 51.0	
	comp=Z,290nm,0.6s								
SKR					A		A	16 37 51.0	
	comp=Z,320nm,0.6s								
SKR					AMS		AMS	16 38 30.0	
	comp=Z,2μm,16.0s								
SKR					AMS		AMS	16 38 30.0	
	comp=Z,2μm,16.0s								
SKR					AMS		AMS	16 38 30.0	
	comp=Z,2μm,16.0s								
YUK	**Yuzh-Kuril'sk**	**5.51**	**250**	*e*	PN		**Pn**	**16 36 54.1**	**+0.6**
YUK						*e*S	**Sn**	**16 37 56.5**	**+0.7**
YUK					pmax		pmax		
	comp=N,110nm,0.5s								
YUK					pmax		pmax		
	comp=Z,194nm,0.5s								
YUK					smax		smax		
	comp=N,266nm,0.6s								
YUK					smax		smax		
	comp=E,126nm,0.3s								
YUK					smax		smax		
	comp=E,636nm,1.6s								
YUK					smax		smax		
	comp=N,933nm,1.2s								
YUK					MLR		MLR		
	comp=Z,2μm,14.0s								
YUK					MLR		MLR		
	comp=N,2μm,10.0s								
YUK					MLR		MLR		
	comp=E,2μm,9.0s								
YUK	**Yuzh-Kuril'sk**	**5.51**	**250**	*e*	P		**Pn**	**16 36 54.7**	**+1.2**
YUK					AMB		AMB	16 36 56.0	
	comp=E,110nm,0.5s								
YUK					AMB		AMB	16 36 56.0	
	comp=E,190nm,0.5s								
YUK						*e*S	**Sn**	**16 37 56.3**	**+0.5**
YUK					A		A	16 38 00.0	
	comp=E,270nm,0.3s								
YUK					A		A	16 38 00.0	
	comp=E,130nm,0.3s								
YUK					A		A	16 38 02.0	
	comp=E,900nm,2.0s								
YUK					A		A	16 38 02.0	
	comp=E,600nm,2.0s								
YUK					AMS		AMS	16 39 01.1	
	comp=E,2μm,10.0s								
YUK					AMS		AMS	16 39 01.1	
	comp=E,2μm,10.0s								
YUK					AMS		AMS	16 39 01.1	
	comp=E,2μm,10.0s								
GRPR	**Tuman**	**5.59**	**250**	*e*	PN		**Pn**	**16 36 55.2**	**+0.7**
GRPR					pmax		pmax		
	comp=Z,108nm,0.4s								
GRPR					pmax		pmax		
	comp=N,69nm,0.1s								
GRPR					pmax		pmax		
	comp=E,48nm,0.1s								
GRPR	**Tuman**	**5.59**	**250**	*e*	P		**Pn**	**16 36 55.0**	**+0.5**
GRPR					AMB		AMB	16 37 00.0	
	comp=E,110nm,0.4s								
GRPR						*e*S	**Sn**	**16 37 56.0**	**-1.7**
GRPR					A		A	16 38 01.0	
	comp=E,210nm,0.4s								
GRPR					A		A	16 38 01.0	
	comp=E,110nm,0.4s								
PAU	**Pauzhetka**	**5.86**	**24**	*e*	P		**Pn**	**16 36 59.5**	**+1.3**
PAU					AMB		AMB	16 37 00.5	
	comp=E,180nm,0.8s								
PAU						*e*S	**Sn**	**16 38 03.5**	**-0.7**
PAU					A		A	16 38 25.6	
	comp=E,810nm,1.0s								
PAU					A		A	16 38 25.6	
	comp=E,980nm,1.0s								
GLVR	**Golovnino**	**5.87**	**248**	*e*	PN		**Pn**	**16 36 58.1**	**-0.2**
GLVR	**Golovnino**	**5.87**	**248**	*e*	P		**Pn**	**16 36 58.8**	**+0.5**
GLVR						*e*S	**Sn**	**16 38 03.0**	**-1.5**
GLVR					A		A	16 38 09.0	
	comp=E,290nm,0.3s								
GLVR					A		A	16 38 09.0	
	comp=E,170nm,0.3s								
NEM2	**Nemuro 2**	**5.91**	**244**		P		**Pn**	**16 36 57.3**	**-1.6**
NEM2						*e*S	**Sn**	**16 38 00.9**	**-4.5**
NMR	**Nemuro--Hokkai**	**5.91**	**244**	*e*	PN		**Sn**	**16 38 03.7**	**-1.9**
JRA	**Rausu**	**6.04**	**251**		P		**Pn**	**16 37 01.9**	**+1.2**
JNK	**Nakash**	**6.45**	**249**		P		**Pn**	**16 37 06.6**	**+0.2**
JAK	**Akkeshi**	**6.75**	**245**		P		**Pn**	**16 37 08.9**	**-1.6**
JAK						*e*S	**Sn**	**16 38 21.6**	**-4.6**
JTKR	**Abashiri--Toko**	**6.83**	**255**		P		**Pn**	**16 37 12.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**7.14**	**280**	*e*	PN		**Pn**	**16 37 18.9**	**+3.1**
YSS						*e*S	**Sn**	**16 38 40.6**	**+4.8**
YSS					pmax		pmax		
	comp=Z,30nm,1.6s								
YSS					MLR		MLR		
	comp=Z,3μm,18.0s								
YSS					MLR		MLR		
	comp=E,2μm,17.0s								
YSS	**Yuzh-Sakhalins**	**7.14**	**280**		Pn		**Pn**	**16 37 19.5**	**+3.7**
YSS	**Yuzh-Sakhalins**	**7.14**	**280**	*e*	P		**Pn**	**16 37 19.1**	**+3.3**
YSS					AMB		AMB	16 37 20.2	
	comp=E,50nm,1.0s								
YSS						*e*S	**Sn**	**16 38 37.2**	**+1.4**
YSS					AMS		AMS	16 39 49.0	
	comp=E,2μm,18.0s								
YSS					AMS		AMS	16 39 49.0	
	comp=E,3μm,18.0s								
JAR	**Ashorobuto**	**7.20**	**250**		P		**Pn**	**16 37 16.2**	**-0.5**
JAR						*e*S	**Sn**	**16 38 37.0**	**-0.4**
PEA0B	**Petropavlovsk-**	**7.57**	**22**	*ce*	PN		**Pn**	**16 37 21.5**	**-0.3**
PEA0B	**Petropavlovsk-**	**7.57**	**22**				**Pn**	**16 37 21.7**	**-0.1**
PETK	**Petropavlovsk-**	**7.57**	**22**		Pn		**Pn**	**16 37 21.8**	**0.0**
	comp=E,1.1nm,0.3s,baz=178,slow=8.5,SNR=40								
PETK					LR		LR	16 40 17.1	
	comp=E,816nm,20.5s,baz=243,slow=38								
JKK2	**Kamakawa 2**	**7.65**	**256**		P		**Pn**	**16 37 24.6**	**+1.8**
JKA	**Kamikawa-asahi**	**7.67**	**258**				**Pn**	**16 37 22.7**	**-0.3**
JKA	**Kamikawa-asahi**	**7.67**	**258**	*e*	P		**Pn**	**16 37 24.3**	**+1.3**
ASAJ	**Asahikawa**	**7.67**	**258**		Pn		**Pn**	**16 37 24.6**	**+1.6**
	comp=E,1.3nm,0.3s,baz=104,slow=15,SNR=16								
ASAJ					LR		LR	16 40 26.2	
	comp=E,2μm,18.4s,baz=58,slow=39								
PET	**Petropavlovsk**	**7.77**	**26**	*e*	PN		**Pn**	**16 37 21.8**	**-2.6**
PET					MLR		MLR		
	comp=Z,2μm,14.0s								
PET					MLR		MLR		
	comp=Z,2μm,14.0s								
PET	**Petropavlovsk**	**7.77**	**26**		Pn		**Pn**	**16 37 24.1**	**-0.3**
PET	**Petropavlovsk**	**7.77**	**26**	*e*	P		**Pn**	**16 37 24.8**	**+0.4**
PET						*e*S	**Sn**	**16 38 47.7**	**-3.5**
PET					AMS		AMS	16 41 30.6	
	comp=Z,2μm,14.0s								
PET					AMS		AMS	16 41 30.6	
	comp=Z,2μm,14.0s								
JCH	**Churui**	**7.79**	**246**		P		**Pn**	**16 37 23.9**	**-0.8**
JCH						*e*S	**Sn**	**16 38 47.0**	**-4.8**
UGL	**Uglegorsk**	**7.97**	**295**	*e*	PN		Pn	16 37 33.0	+5.9
UGL						S	**Sn**	**16 39 01.9**	**+5.8**
UGL					pmax		pmax		
	comp=Z,95nm,1.0s								
UGL					MLR		MLR		
	comp=Z,2μm,17.0s								
UGL					MLR		MLR		
	comp=E,3μm,14.0s								
UGL	**Uglegorsk**	**7.97**	**295**	*e*	P		**Pn**	**16 37 29.8**	**+2.7**
UGL					AMB		AMB	16 37 47.0	
	comp=E,100nm,1.0s								
UGL						*e*S	**Sn**	**16 38 56.5**	**+0.4**
UGL					AMS		AMS	16 40 36.0	
	comp=E,3μm,17.0s								
UGL					AMS		AMS	16 40 36.0	
	comp=E,2μm,17.0s								
JFR	**Furan**	**8.03**	**252**		P		**Pn**	**16 37 30.1**	**+2.0**
ERM	**Erimo**	**8.24**	**243**	*i*	PN		**Pn**	**16 37 32.5**	**+1.6**
ERM	**Erimo**	**8.24**	**243**		Pn		**Pn**	**16 37 29.8**	**-1.0**
JEM	**Erimo**	**8.24**	**243**		Pn		**Pn**	**16 37 26.2**	**-4.6**
TYV	**Tymovskoe**	**8.34**	**308**	*e*	PN		**Pn**	**16 37 28.2**	**-4.1**
TYV					pmax		pmax		
	comp=Z,7.0nm,1.2s								
TYV					pmax		pmax		
	comp=Z,400nm,4.0s								
TYV					MLR		MLR		
	comp=E,3μm,16.0s								
TYV					MLR		MLR		
	comp=E,3μm,16.0s								
TYV	**Tymovskoe**	**8.34**	**308**	*e*	P		**Pn**	**16 37 33.9**	**+1.6**
TYV					AMB		AMB	16 37 37.7	
	comp=E,400nm,4.0s								
TYV						*e*S	**Sn**	**16 39 05.1**	**-0.2**
TYV					AMS		AMS	16 40 56.6	
	comp=E,2μm,15.0s								
TYV					AMS		AMS	16 40 56.6	
	comp=E,3μm,15.0s								
TYV					AMS		AMS	16 40 56.6	
	comp=E,4μm,15.0s								
JNBK	**Urakawa-nobuka**	**8.35**	**246**	*e*	S		**Sn**	**16 39 00.7**	**-4.9**
JBT2	**Biratori 2**	**8.36**	**250**		P		**Pn**	**16 37 33.5**	**+1.0**
JEW	**Eniwo**	**8.93**	**252**		Pn		**Pn**	**16 37 41.3**	**+1.0**
OKH	**Okha**	**9.85**	**322**	*de*	PN		**Pn**	**16 37 56.8**	**+3.9**
OKH					pmax		pmax		
	comp=Z,300nm,6.6s								
OKH					MLR		MLR		
	comp=E,3μm,16.0s								
OKH					MLR		MLR		
	comp=E,2μm,16.0s								
OKH					MLR		MLR		
	comp=N,2μm,15.0s								
OKH	**Okha**	**9.85**	**322**	*e*	P		**Pn**	**16 37 56.2**	**+3.3**
OKH					AMB		AMB	16 38 02.3	
	comp=N,300nm,6.6s								
OKH					AMS		AMS	16 42 20.3	
	comp=N,2μm,16.0s								
OKH					AMS		AMS	16 42 20.3	
	comp=N,3μm,16.0s								
OKH					AMS		AMS	16 42 20.3	
	comp=N,2μm,16.0s								
JANG	**Nango**	**10.20**	**240**		P		**Pn**	**16 37 54.3**	**-3.5**
JANG						*e*S	Sn	16 39 40.2	-11
JTM	**Tenmabayashi**	**10.23**	**243**			*e*S	Sn	16 39 42.5	-9.2
JTH	**Tanohata**	**10.28**	**237**			*e*S	Sn	16 39 41.3	-12
NKL	**Nikolayevsk**	**10.62**	**316**	*e*	PN		**Pn**	**16 38 06.2**	**+2.7**
NKL					pmax		pmax		
	comp=E,340nm,1.2s								
NKL					pmax		pmax		
	comp=N,10.0nm,0.8s								
NKL					pmax		pmax		
	comp=Z,26nm,1.5s								
NKL					MLR		MLR		
	comp=E,1μm,13.0s								
NKL					MLR		MLR		
	comp=Z,3μm,16.0s								
NKL	**Nikolayevsk**	**10.62**	**316**	*e*	P		**Pn**	**16 38 05.4**	**+1.9**
NKL					AMB		AMB	16 38 06.2	
	comp=Z,10.0nm,1.0s								
NKL					AMB		AMB	16 38 06.2	
	comp=Z,20nm,1.0s								
NKL					AMB		AMB	16 38 06.2	
	comp=Z,30nm,1.0s								
NKL					AMS		AMS	16 42 41.7	
	comp=Z,900nm,15.0s								
NKL					AMS		AMS	16 42 41.7	
	comp=Z,1μm,15.0s								
NKL					AMS		AMS	16 42 41.7	
	comp=Z,3μm,15.0s								
JRG	**Rokugo**	**11.35**	**238**			*e*S	Sn	16 40 09.6	-10
TEY	**Ternei**	**11.58**	**270**	*e*	P		**Pn**	**16 38 18.2**	**+1.6**
JIO	**Ouri**	**11.58**	**232**			*e*S	Sn	16 40 14.1	-11
GRNR	**Gornyy**	**11.95**	**299**	‖ *i*	PN		Pn	16 38 26.5	+4.8
GRNR					pmax		pmax		
	comp=E,2.0nm,0.7s								
GRNR					pmax		pmax		
	comp=Z,4.0nm,1.0s								
GRNR					MLR		MLR		
	comp=E,1μm,17.0s								
GRNR					MLR		MLR		
	comp=N,550nm,14.0s								
GRNR					MLR		MLR		
	comp=Z,1μm,17.0s								
GRNR	**Gornyy**	**11.95**	**299**	*e*	P		**Pn**	**16 38 23.5**	**+1.8**
GRNR					AMB		AMB	16 38 27.7	
	comp=Z,10.0nm,0.8s								
GRNR					AMS		AMS	16 42 12.0	
	comp=Z,600nm,16.0s								
GRNR					AMS		AMS	16 42 12.0	
	comp=Z,1μm,16.0s								
GRNR					AMS		AMS	16 42 12.0	
	comp=Z,1μm,16.0s								
JMM	**Marumori**	**12.31**	**232**		Pn		**Pn**	**16 38 23.2**	**-3.5**
MA2	**Magadan**	**13.50**	**355**		Pn		**Pn**	**16 38 44.3**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=176,slow=15,SNR=7.2								
MA2					LR		LR	16 44 22.0	
	comp=Z,1μm,18.1s,baz=178,slow=40								
MA2	**Magadan**	**13.50**	**355**		Pn		**Pn**	**16 38 44.2**	**+1.4**
JSD	**Sado**	**13.64**	**239**		Pn		**Pn**	**16 38 42.5**	**-2.3**
KLR	**Kul'dur**	**14.65**	**290**		Pn		**Pn**	**16 38 59.7**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=95,slow=13,SNR=8.3								
KLR					LR		LR	16 44 50.1	
	comp=Z,1μm,19.0s,baz=98,slow=38								
KLR	**Kul'dur**	**14.65**	**290**	*ce*	P		**Pn**	**16 39 00.4**	**+1.8**
KLR	**Kul'dur**	**14.65**	**290**	*e*	P		**Pn**	**16 38 57.4**	**-1.2**
MAJO	**Matsushiro**	**14.70**	**234**	*i*	P		**Pn**	**16 38 59.5**	**+0.3**
MAJO	**Matsushiro**	**14.70**	**234**		Pn		**Pn**	**16 38 57.5**	**-1.7**
MAT	**Matsushiro**	**14.70**	**234**		P		**Pn**	**16 38 57.5**	**-1.7**
MJAR	**Matsushiro Arr**	**14.70**	**234**		Pn		**Pn**	**16 38 57.7**	**-1.5**
	comp=Z,0.0nm,0.3s

USA0B	**Ussuriysk Arra**	**14.98**	**270**	Pn	**Pn**	**16 39 03.2**	**+0.3**		
USRK	**Ussuriysk Ar.**	**14.98**	**270**	Pn	**Pn**	**16 39 01.9**	**-1.0**		
	baz=70,slow=13,SNR=19								
USRK				LR	LR	16 44 52.5			
	comp=Z,667nm,18.4s,baz=68,slow=38								
USRK	**Ussuriysk Ar.**	**14.98**	**270**	P	**Pn**	**16 39 03.5**	**+0.6**		
USRK	**Ussuriysk Ar.**	**14.98**	**270**		**Pn**	**16 39 03.5**	**+0.6**		
MDJ	**Mudanjiang**	**16.54**	**273**	P	**P**	**16 39 24.8**	**-0.6**		
MDJ				pmax	pmax				
	comp=Z,23nm,1.3s								
MDJ				pmax	pmax				
	comp=Z,270nm,4.9s								
MDJ				LR	LR				
	comp=Z,750nm,14.6s								
MDJ				LR	LR				
	comp=Z,770nm,16.5s								
MDJ	**Mudanjiang**	**16.54**	**273**		**Pn**	**16 39 23.7**	**+0.6**		
SEY	**Seymchan**	**16.80**	**359**	Pn	**Pn**	**16 39 26.2**	**-0.1**		
	comp=Z,0.1nm,0.3s,baz=212,slow=12,SNR=6.2								
BMKR	**Bomnak**	**17.55**	**308**	*e*P	**Pn**	**16 39 35.0**	**-0.7**		
BMKR				AMB	AMB	16 39 39.0			
	comp=Z,30nm,1.0s								
ZEA	**Zeya**	**18.17**	**304**	*e*P	**P**	**16 39 44.3**	**+0.9**		
ZEA				pmax	pmax				
	comp=E,300nm,1.1s								
ZEA				pmax	pmax				
	comp=Z,300nm,5.2s								
ZEA				pmax	pmax				
	comp=N,10.0nm,1.9s								
ZEA				pmax	pmax				
	comp=E,10.0nm,1.6s								
ZEA				pmax	pmax				
	comp=Z,20nm,1.6s								
ZEA				MLR	MLR				
	comp=E,500nm,18.0s								
ZEA				MLR	MLR				
	comp=Z,600nm,17.0s								
ZEA	**Zeya**	**18.17**	**304**	*e*P	**P**	**16 39 44.3**	**+0.9**		
ZEA				AMB	AMB	16 39 49.5			
	comp=Z,300nm,5.0s								
ZEA				AMB	AMB	16 39 50.5			
	comp=Z,10.0nm,1.0s								
ZEA				AMB	AMB	16 39 50.5			
	comp=Z,20nm,1.0s								
ZEA				AMS	AMS	16 46 58.0			
	comp=Z,500nm,18.0s								
ZEA				AMS	AMS	16 46 58.0			
	comp=Z,600nm,18.0s								
KROS	**Kirovskiy**	**18.51**	**306**	*e*P	**Pn**	**16 39 48.4**	**+1.0**		
KROS				AMB	AMB	16 39 51.1			
	comp=Z,20nm,0.9s								
KROS				AMB	AMB	16 39 51.1			
	comp=Z,30nm,0.9s								
CN2	**Changchun**	**19.63**	**273**	*e*P	**P**	**16 39 59.9**	**+0.5**		
CN2				pmax	pmax				
	comp=Z,10.0nm,1.0s								
CN2				pmax	pmax				
	comp=Z,270nm,3.1s								
CN2				LR	LR				
	comp=Z,740nm,17.0s								
CN2				LR	LR				
	comp=Z,680nm,17.0s								
CN2				LR	LR				
	comp=Z,870nm,18.0s								
KSRS	**Korea Array**	**20.58**	**254**	P	Pn	16 40 12.2	0.0		
	comp=Z,6.5nm,1.1s,baz=65,slow=10.0,SNR=8.4								
KSAR	**Wonju Array Be**	**20.62**	**254**	P	**P**	**16 40 10.5**	**+0.3**		
KSAR	**Wonju Array Be**	**20.62**	**254**	P	**P**	**16 40 10.5**	**+0.3**		
KSAR	**Wonju Array Be**	**20.62**	**254**	*e*P	**P**	**16 40 10.5**	**+0.3**		
YAK	**Yakutsk**	**20.79**	**328**	P	**P**	**16 40 12.4**	**+0.6**		
	comp=Z,4.6nm,0.5s,baz=36,slow=1.8,SNR=13								
YAK				LR	LR	16 48 30.6			
	comp=Z,851nm,18.1s,baz=118,slow=38								
YAK	**Yakutsk**	**20.79**	**328**	*e*P	**P**	**16 40 12.2**	**+0.4**		
YAK				*e*PPP	PPP	16 40 43.2			
YAK				*e*S	**S**	**16 44 03.5**	**+1.6**		
YAK				*e*SS	**SnSn**	**16 44 17.0**	**-5.6**		
YAK				*e*SSS	SSS	16 44 34.9			
YAK				pmax	pmax				
	comp=Z,22nm,1.0s								
YAK				pmax	pmax				
	comp=N,5.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,8.0nm,1.1s								
YAK				smax	smax				
	comp=E,57nm,2.8s								
YAK				smax	smax				
	comp=N,48nm,2.7s								
YAK				MLR	MLR				
	comp=Z,745nm,17.0s								
YAK				MLR	MLR				
	comp=N,434nm,18.0s								
YAK				MLR	MLR				
	comp=E,364nm,17.0s								
YAK	**Yakutsk**	**20.79**	**328**	P	**P**	**16 40 11.6**	**-0.2**		
YAK				IAmb	IAmb	16 40 21.5			
	comp=Z,45nm,1.0s								
YAK	**Yakutsk**	**20.79**	**328**	*e*P	**P**	**16 40 12.2**	**+0.4**		
JCJ	**Chichijima**	**20.90**	**208**	LR	LR	16 50 34.5			
	comp=Z,297nm,18.5s,baz=118,slow=43								
BILL	**Bilibino**	**22.97**	**13**⇑	*e*P	**P**	**16 40 33.2**	**-1.9**		
BILL				*e*		16 40 58.6			
BILL				pmax	pmax				
	comp=Z,7.0nm,0.8s								
BILL				MLR	MLR				
	comp=Z,548nm,15.0s								
BILL	**Bilibino**	**22.97**	**13**	P	**P**	**16 40 34.0**	**-1.0**		
DL2	**Dalian**	**24.15**	**264**	P	**P**	**16 40 47.8**	**+1.1**		
DL2				S	**S**	**16 45 03.9**	**+1.3**		
DL2				sS	**sS**	**16 45 18.1**	**+2.6**		
DL2				pmax	pmax				
	comp=Z,310nm,5.9s								
DL2				LR	LR				
	comp=Z,340nm,15.7s								
DL2				LR	LR				
	comp=Z,440nm,15.2s								
DL2				LR	LR				
	comp=Z,400nm,14.2s								
NIKH	**Nikolski High**	**25.39**	**60**	P		16 41 01.5			
	baz=270								
GAMB	**Gambell**	**26.32**	**35**	P		16 41 05.6			
	baz=245								
BOD	**Bodaibo**	**26.33**	**311**	*e*P	**P**	**16 41 04.1**	**-2.2**		
BOD				pmax	pmax				
	comp=Z,20nm,1.5s								
BJI	**Beijing**	**27.43**	**270**	P	**P**	**16 41 17.8**	**+1.4**		
BJI				S	**S**	**16 45 48.4**	**-6.2**		
BJI				pmax	pmax				
	comp=Z,11nm,1.2s								
BJI				LR	LR				
	comp=Z,250nm,18.4s								
BJI				LR	LR				
	comp=Z,700nm,14.1s								
BJI				LR	LR				
	comp=Z,550nm,21.0s								
TIXI	**Tiksi**	**28.01**	**344**	P	**P**	**16 41 20.1**	**-1.2**		
	comp=Z,2.1nm,1.1s,baz=138,slow=8.1,SNR=3.7								
TIXI				LR	LR	16 53 27.4			
	comp=Z,656nm,19.1s,baz=159,slow=39								
TIXI	**Tiksi**	**28.01**	**344**	P	**P**	**16 41 19.1**	**-2.2**		
TIXI				pmax	pmax				
	comp=Z,9.0nm,1.5s								
TIXI	**Tiksi**	**28.01**	**344**	P	**P**	**16 41 19.1**	**-2.2**		
H11N2	**WAKE ISLAND Hy**	**28.73**	**152**	T	T	17 13 17.8			
	baz=340,slow=76,SNR=153								
H11N1	**WAKE ISLAND Hy**	**28.74**	**152**	T	T	17 13 18.8			
	baz=340,slow=76,SNR=79								
H11N3	**WAKE ISLAND Hy**	**28.74**	**152**	T	T	17 13 19.0			
	baz=340,slow=76,SNR=65								
SSE	**Sheshan**	**28.85**	**250**	P	**P**	**16 41 32.4**	**+3.3**		
SSE				S	**S**	**16 46 21.9**	**+4.8**		
SSE				pmax	pmax				
	comp=Z,14nm,0.7s								
SSE				pmax	pmax				
	comp=Z,41nm,3.6s								
SSE				LR	LR				
	comp=Z,180nm,20.5s								
SSE				LR	LR				
	comp=Z,230nm,15.2s								
NJ2	**Nanjing**	**29.79**	**254**	*e*P	**P**	**16 41 38.3**	**+0.9**		
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
NJ2				LR	LR				
	comp=Z,970nm,16.1s								
NJ2				LR	LR				
	comp=Z,670nm,15.6s								
NJ2				LR	LR				
	comp=Z,500nm,17.0s								
H11S1	**WAKE ISLAND Hy**	**29.81**	**153**	T	T	17 14 42.0			
	baz=341,slow=76,SNR=99								
H11S3	**WAKE ISLAND Hy**	**29.82**	**153**	T	T	17 14 44.2			
	baz=341,slow=76,SNR=78								
H11S2	**WAKE ISLAND Hy**	**29.82**	**153**	T	T	17 14 27.3			
	baz=341,slow=76,SNR=82								
SDPT	**Sand Point**	**30.28**	**55**	P		16 41 44.1			
	baz=272								
HHC	**Hu-ho-hao-te**	**30.29**	**275**	*e*P	**P**	**16 41 42.8**	**+0.8**		
HHC				pmax	pmax				
	comp=Z,19nm,1.1s								
HHC				pmax	pmax				
	comp=Z,200nm,6.1s								
HHC				LR	LR				
	comp=Z,490nm,15.3s								
HHC				LR	LR				
	comp=Z,670nm,17.9s								
HHC				LR	LR				
	comp=Z,960nm,16.2s								
ULN	**Ulaanbaatar**	**31.05**	**290**	*ce*P	**P**	**16 41 47.5**	**-1.2**		
ULN				pmax	pmax				
	comp=Z,3.0nm,1.3s								
RDOG	**Red Dog Mine**	**31.34**	**30**	P	**P**	**16 41 51.7**	**+0.9**		
RDOG	**Red Dog Mine**	**31.34**	**30**	P		16 41 52.0			
	baz=249								
SONM	**Songino Array**	**31.49**	**290**	P	**P**	**16 41 53.7**	**+1.2**		
	comp=Z,1.8nm,1.0s,baz=77,slow=6.8,SNR=7.1								
SONM				LR	LR	16 55 35.0			
	comp=Z,647nm,18.1s,baz=78,slow=38								
SONM	**Songino Array**	**31.49**	**290**	P	**P**	**16 41 51.4**	**-1.1**		
TLY	**Talaya**	**32.41**	**298**	LR	LR	16 56 05.8			
	comp=Z,1μm,18.3s,baz=76,slow=38								
ZAK	**Zakamensk**	**32.88**	**296**	*e*P	**P**	**16 42 03.4**	**-1.3**		
ZAK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
KDAK	**Kodiak Island**	**34.51**	**50**	P	**P**	**16 42 19.1**	**+0.5**		
KDAK				pmax	pmax				
	comp=Z,22nm,1.1s								
KDAK	**Kodiak Island**	**34.51**	**50**	P	**P**	**16 42 19.1**	**+0.5**		
KDAK				IAmb	IAmb	16 42 19.5			
	comp=Z,22nm,1.1s								
KDAK	**Kodiak Island**	**34.51**	**50**	P		16 42 20.2			
	baz=275								
A21K	**Barrow**	**34.55**	**26**	P	**P**	**16 42 19.4**	**+0.6**		
A21K	**Barrow**	**34.55**	**26**	P		16 42 19.8			
	baz=251								
SPCR	**Spurr Chakacha**	**34.58**	**44**	P		16 42 20.5			
	baz=270								
PPLA	**Purkeypile**	**34.63**	**41**	P	**P**	**16 42 19.4**	**-0.4**		
PPLA	**Purkeypile**	**34.63**	**41**	P		16 42 21.7			
	baz=268,SNR=9.8								
CHUM	**Lake Minchumin**	**34.64**	**39**	P		16 42 21.0			
	baz=266								
SKT	**Skwentna**	**34.91**	**43**	P	**P**	**16 42 22.4**	**+0.4**		
SKT				IAmb	IAmb	16 42 47.6			
	comp=Z,17nm,1.2s								
SKT	**Skwentna**	**34.91**	**43**	P		16 42 23.0			
	baz=270,SNR=5.7								
CNPM	**China Poot**	**35.10**	**47**	P	**P**	**16 42 25.2**	**+1.5**		
BPAW	**Bear Paw Mtn.**	**35.23**	**39**	P	**P**	**16 42 24.6**	**-0.2**		
BPAW	**Bear Paw Mtn.**	**35.23**	**39**	P		16 42 26.1			
	baz=267,SNR=9.4								
KTH	**Kantishna Hill**	**35.23**	**40**	P	**P**	**16 42 26.4**	**+1.6**		
BRLK	**Bradley Lake**	**35.27**	**47**	P	**P**	**16 42 25.5**	**+0.4**		
BRLK				IAmb	IAmb	16 42 26.4			
	comp=Z,15nm,1.0s								
SUA	**Susitna One**	**35.28**	**44**	P	**P**	**16 42 26.5**	**+1.2**		
SUA				IAmb	IAmb	16 42 32.1			
	comp=Z,23nm,1.1s								
SUA	**Susitna One**	**35.28**	**44**	P		16 42 25.8			
	baz=271								
MLY	**Manley**	**35.40**	**38**	P	**P**	**16 42 26.7**	**+0.4**		
MLY				IAmb	IAmb	16 42 32.5			
	comp=Z,14nm,1.2s								
MLY	**Manley**	**35.41**	**38**	P		16 42 27.2			
	baz=266,SNR=14								
XAN	**Xi'an**	**35.42**	**266**	P	**P**	**16 42 27.1**	**+0.3**		
XAN				pP	pwP	16 42 41.6	+1.1		
XAN				pmax	pmax				
	comp=Z,10.0nm,2.2s								
XAN				LR	LR				
	comp=Z,270nm,16.3s								
XAN				LR	LR				
	comp=Z,430nm,16.3s								
XAN				LR	LR				
	comp=Z,510nm,17.7s								
XAN	**Xi'an**	**35.42**	**266**	P	**P**	**16 42 26.6**	**-0.2**		
XAN				pmax	pmax				
	comp=Z,11nm,1.2s								
XAN	**Xi'an**	**35.42**	**266**	P	**P**	**16 42 26.6**	**-0.2**		
CUT	**Chulitna**	**35.51**	**42**	P		16 42 28.1			
	baz=270								
TRF	**Thorofare Moun**	**35.52**	**40**	P	**P**	**16 42 28.0**	**+0.6**		
TRF				IAmb	IAmb	16 42 54.0			
	comp=Z,16nm,1.2s								
TRF	**Thorofare Moun**	**35.52**	**40**	P		16 42 28.3			
	baz=269								
RC01	**Rabbit Creek A**	**35.78**	**44**	P	**P**	**16 42 30.6**	**+1.1**		
RC01				IAmb	IAmb	16 42 37.5			
	comp=Z,20nm,1.0s								
RC01	**Rabbit Creek A**	**35.78**	**44**	P		16 42 30.0			
	baz=272								
O22K	**Cooper Landing**	**35.81**	**45**	P	**P**	**16 42 30.7**	**+1.0**		
O22K	**Cooper Landing**	**35.81**	**45**	P		16 42 30.9			
	baz=273								
COLD	**Coldfoot**	**35.84**	**34**	P	**P**	**16 42 30.5**	**+0.6**		
COLD	**Coldfoot**	**35.84**	**34**	P		16 42 30.9			
	baz=263,SNR=8.7								
BWN	**Browne**	**35.90**	**39**	P	**P**	**16 42 32.3**	**+1.8**		
I23K	**Minto, Yukon-K**	**35.99**	**37**	P	**P**	**16 42 32.2**	**+1.0**		
I23K				IAmb	IAmb	16 42 46.3			
	comp=Z,24nm,1.4s								
I23K	**Minto, Yukon-K**	**36.00**	**37**	P		16 42 32.4			
	baz=267,SNR=9.7								
PMR	**Palmer**	**36.05**	**43**	P	**P**	**16 42 32.3**	**+0.5**		
PMR				pmax	pmax				
	comp=Z,25nm,1.4s								
PMR	**Palmer**	**36.05**	**43**	P	**P**	**16 42 32.2**	**+0.5**		
PMR				IAmb	IAmb	16 42 33.5			
	comp=Z,24nm,1.4s								
PMR	**Palmer**	**36.05**	**43**	P		16 42 32.0			
	baz=272								
NEA2	**Nenana**	**36.09**	**38**	P	**P**	**16 42 32.8**	**+0.7**		
NEA2	**Nenana**	**36.09**	**38**	P		16 42 32.8			
	baz=268,SNR=6.9								
MCK	**McKinley**	**36.13**	**40**	P	**P**	**16 42 31.3**	**-1.2**		
MCK				pmax	pmax				
	comp=Z,28nm,1.2s								
MCK	**McKinley**	**36.13**	**40**	P	**P**	**16 42 31.3**	**-1.2**		
MCK				IAmb	IAmb	16 42 38.1			
	comp=Z,28nm,1.2s								
MCK	**McKinley**	**36.13**	**40**	P		16 42 32.7			
	baz=269,SNR=12								
GHO	**Glory Hole Cre**	**36.15**	**43**	P	**P**	**16 42 33.7**	**+1.0**		
GHO				IAmb	IAmb	16 43 01.0			
	comp=Z,22nm,1.3s								
RND	**Reindeer**	**36.16**	**40**	P	**P**	**16 42 33.0**	**+0.2**		
RND				pmax	pmax				
	comp=Z,18nm,1.1s								
RND	**Reindeer**	**36.16**	**40**	P	**P**	**16 42 33.0**	**+0.2**		
RND				IAmb	IAmb	16 42 34.5			
	comp=Z,18nm,1.1s								
TOLK	**Toolik Lake Re**	**36.27**	**31**	P	**P**	**16 42 34.3**	**+0.7**		
TOLK	**Toolik Lake Re**	**36.27**	**31**	P		16 42 34.1			
	baz=262,SNR=9.3								
WAT2	**Susitna Watana**	**36.28**	**41**	P		16 42 33.5			
	baz=271								
KNK	**Knik Glacier**	**36.38**	**44**	P	**P**	**16 42 35.6**	**+1.0**		
KNK	**Knik Glacier**	**36.38**	**44**	P		16 42 35.0			
	baz=273								
SML	**Sawmill**	**36.43**	**43**	P		16 42 35.3			
	baz=273,SNR=9.0								
MDM	**Murphy Dome**	**36.47**	**38**	P	**P**	**16 42 36.4**	**+1.0**		
PWL	**Port Wells**	**36.47**	**45**	P	**P**	**16 42 36.7**	**+1.3**		
PWL				IAmb	IAmb	16 42 36.8			
	comp=Z,21nm,1.0s								
WRH	**Wood River Hil**	**36.51**	**39**	P	**P**	**16 42 37.0**	**+1.3**		
WRH				IAmb	IAmb	16 42 42.6			
	comp=Z,20nm,1.2s								
TCOL	**CIGO, UAF Yank**	**36.62**	**38**	P	**P**	**16 42 37.3**	**+0.7**		
TCOL				IAmb	IAmb	16 42 39.2			
	comp=Z,31nm,1.2s								
TCOL	**CIGO, UAF Yank**	**36.62**	**38**	P		16 42 37.1			
	baz=269								
COLA	**College**	**36.62**	**38**	*i* P	**P**	**16 42 37.8**	**+1.2**		
COLA				pmax	pmax				
	comp=Z,25nm,1.2s								
COLA	**College**	**36.62**	**38**	P	**P**	**16 42 37.1**	**+0.5**		
COLA	**College**	**36.62**	**38**	P		16 42 37.5			
	baz=269								
CCB	**Clear Creek Bu**	**36.64**	**38**	P	**P**	**16 42 36.5**	**-0.2**		
WAT6	**Susitna Watana**	**36.68**	**42**	P		16 42 37.3			
	baz=272								
POKR	**Poker Plat Res**	**36.81**	**37**	P	**P**	**16 42 39.5**	**+1.3**		
POKR				IAmb	IAmb	16 42 41.1			
	comp=Z,25nm,1.1s								
POKR	**Poker Plat Res**	**36.81**	**37**	P		16 42 39.1			
	baz=269								
SCM	**Sheep Creek Mo**	**36.90**	**43**	P	**P**	**16 42 39.9**	**+0.8**		
SCM				pmax	pmax				
	comp=Z,26nm,1.2s								
SCM	**Sheep Creek Mo**	**36.90**	**43**	P	**P**	**16 42 39.9**	**+0.8**		
SCM				IAmb	IAmb	16 43 08.8			
	comp=Z,26nm,1.2s								
HDA	**Harding Lake**	**37.01**	**39**	P		16 42 40.7			
	baz=270,SNR=7.1								
HDA				P		16 42 40.7			
	baz=270,SNR=7.1								
IL31		**37.03**	**38**	P	**P**	**16 42 39.8**	**-0.3**		
IL31				IAmb	IAmb	16 42 42.8			
	comp=Z,19nm,1.3s								
ILAR	**Eielson Array**	**37.03**	**38**	P	**P**	**16 42 41.0**	**+0.8**		
	comp=Z,12nm,1.2s,baz=263,slow=6.6,SNR=37								
ILAR	**Eielson Array**	**37.03**	**38**	P	**P**	**16 42 41.0**	**+0.8**		
ILAR	**Eielson Array**	**37.03**	**38**	P	**P**	**16 42 39.7**	**-0.4**		
GLI	**Glacier Island**	**37.08**	**45**	P	**P**	**16 42 41.4**	**+0.9**		
GLI	**Glacier Island**	**37.08**	**45**	P		16 42 41.6			
	baz=275								
KLU	**Klutina**	**37.59**	**43**	P	**P**	**16 42 45.7**	**+0.7**		
KLU				IAmb	IAmb	16 43 00.6			
	comp=Z,26nm,1.1s								
KLU	**Klutina**	**37.59**	**43**	P		16 42 45.8			
	baz=275								
PAX	**Paxson**	**37.70**	**41**	P		16 42 46.3			
	baz=274								
FYU	**Fort Yukon**	**37.75**	**35**	P	**P**	**16 42 45.7**	**-0.5**		
EYAK	**Cordova Ski Ar**	**37.77**	**45**	P		16 42 47.2			
	baz=276								
LZH	**Lanzhou**	**37.86**	**273**	*e*P	**P**	**16 42 49.5**	**+1.8**		
LZH				pP	pwP	16 42 59.6	-0.3		
LZH				sP	sP	16 43 04.1	+4.8		
LZH				pmax	pmax				
	comp=Z,38nm,1.2s								
LZH				pmax	pmax				
	comp=Z,210nm,7.6s								
LZH				LR	LR				
	comp=Z,510nm,16.8s								
LZH				LR	LR				
	comp=Z,430nm,16.8s								
LZH				LR	LR				
	comp=Z,410nm,16.8s								
N25K	**Chitina, Valde**	**38.21**	**43**	P	**P**	**16 42 51.1**	**+0.8**		
BMRM	**Bremner River**	**38.28**	**44**	P	**P**	**16 42 50.8**	**+0.1**		
BMRM				IAmb	IAmb	16 43 18.9			
	comp=Z,23nm,1.1s								
BMRM	**Bremner River**	**38.28**	**44**	P		16 42 51.7			
	baz=277								
DOT	**Dot Lake**	**38.30**	**40**	P	**P**	**16 42 50.7**	**-0.2**		
SCRK	**Sand Creek**	**38.31**	**39**	P	**P**	**16 42 51.4**	**+0.3**		
SCRK	**Sand Creek**	**38.31**	**39**	P		16 42 51.4			
	baz=274,SNR=7.9								
KAIM	**Kayak Island**	**38.50**	**46**	P		16 42 53.4			
	baz=278								
HMT	**Hamilton**	**38.52**	**45**	P	**P**	**16 42 54.3**	**+1.5**		
VRDI	**Verde Repeater**	**38.80**	**44**	P	**P**	**16 42 56.4**	**+1.1**		
GTA	**Gaotai**	**39.02**	**280**	⇑P	**P**	**16 42 58.3**	**+1.0**		
GTA				sS	sS	16 49 15.8	+7.7		
GTA				SS	**SS**	**16 51 36.9**	**-10**		
GTA				pmax	pmax				
	comp=Z,14nm,1.3s								
GTA				pmax	pmax				
	comp=Z,160nm,6.5s								
GTA				LR	LR				
	comp=Z,290nm,15.6s								
GTA				LR	LR				
	comp=Z,340nm,15.3s								
GTA				LR	LR				
	comp=Z,300nm,17.5s								
CRQE	**Cirque**	**39.04**	**44**	P		16 42 58.4			
	baz=278								
K27K	**Chicken**	**39.15**	**39**	P	**P**	**16 42 58.5**	**+0.5**		
K27K				IAmb	IAmb	16 43 12.2			
	comp=Z,39nm,1.2s								
K27K	**Chicken**	**39.15**	**39**	P		16 42 59.1			
	baz=275								
NRIK	**Noril'sk**	**39.23**	**329**	P	**P**	**16 42 57.9**	**-0.7**		
	comp=Z,3.7nm,1.0s,baz=107,slow=7.0,SNR=9.0								
NRIK				LR	LR	17 00 01.4			
	comp=Z,257nm,19.7s,baz=106,slow=38								
NRIK	**Noril'sk**	**39.23**	**329**	*ce*P	**P**	**16 42 56.7**	**-1.9**		
NRIK				pmax	pmax				
	comp=Z,4.0nm,1.0s								
NRIK	**Noril'sk**	**39.23**	**329**	P	**P**	**16 42 57.4**	**-1.2**		
L27K	**Beaver Creek,**	**39.35**	**41**	P	**P**	**16 43 00.8**	**+1.1**		
L27K	**Beaver Creek,**	**39.35**	**41**	P		16 43 01.2			
	baz=276								
BCAR	**Beaver Creek A**	**39.37**	**41**	P	**P**	**16 43 01.3**	**+1.4**		
EGAK	**Eagle**	**39.49**	**38**	P	**P**	**16 43 01.4**	**+0.7**		
EGAK				IAmb	IAmb	16 43 14.8			
	comp=Z,40nm,1.4s								
EGAK	**Eagle**	**39.49**	**38**	P		16 43 01.1			
	baz=275								
BARN	**Barnard Glacie**	**39.69**	**44**	P	**P**	**16 43 03.2**	**+0.5**		
BARN				IAmb	IAmb	16 43 19.5			
	comp=Z,24nm,1.1s								
YAH	**Yahtse**	**39.76**	**45**	P	**P**	**16 43 04.0**	**+0.7**		
CTG	**Chitna Glacier**	**39.86**	**44**	P		16 43 05.7			
	baz=279								
CTGM	**Chitina Glacie**	**39.86**	**44**	P	**P**	**16 43 05.0**	**+0.9**		
CTGM				IAmb	IAmb	16 43 26.6			
	comp=Z,35nm,1.2s								
TABL	**Table Mountain**	**40.04**	**45**	P	**P**	**16 43 06.0**	**+0.4**		
LOGN	**Logan Glacier**	**40.04**	**44**	P	**P**	**16 43 06.5**	**+0.9**		
LOGN				IAmb	IAmb	16 43 24.0			
	comp=Z,23nm,1.0s								
DAWY	**Dawson**	**40.32**	**39**	P	**P**	**16 43 08.1**	**+0.3**		
CD2	**Chengdu**	**40.79**	**266**	P	**P**	**16 43 13.6**	**+1.6**		
CD2				S	**S**	**16 49 18.3**	**-2.5**		
CD2				pmax	pmax				
	comp=Z,20nm,1.0s								
CD2				pmax	pmax				
	comp=Z,210nm,8.2s								
CD2				LR	LR				
	comp=Z,350nm,12.2s								
CD2				LR	LR				
	comp=Z,320nm,11.6s								
CD2				LR	LR				
	comp=Z,240nm,15.2s								
EPYK	**Eagle Plains**	**41.17**	**35**	P		16 43 16.0			
	baz=277								
GYA	**Guiyang**	**41.55**	**258**	⇓P	**P**	**16 43 19.4**

KMI pP pwP 16 44 03.8 +3.1
KMI S **S** **16 50 28.5 +4.1**
KMI SS **SS** **16 53 44.9 -2.0**
KMI pmax pmax
comp=Z,11nm,1.5s
KMI pmax pmax
comp=Z,97nm,4.1s
KMI LR LR
comp=Z,350nm,18.7s
KMI LR LR
comp=Z,170nm,17.1s
KMI LR LR
comp=Z,190nm,22.9s
WMQ Urumqi 45.09 292 *e*P **P** **16 43 48.3 +1.5**
WMQ pP pwP 16 44 01.9 +2.7
WMQ pmax pmax
comp=Z,13nm,0.7s
WMQ pmax pmax
comp=Z,140nm,5.9s
WMQ LR LR
comp=Z,700nm,16.9s
WMQ LR LR
comp=Z,350nm,16.9s
WMQ LR LR
comp=Z,690nm,18.5s
C36M Paulatuk 45.35 30 P **P** **16 43 49.0 +0.8**
C36M IAmb IAmb 16 43 56.4
comp=Z,18nm,1.2s
C36M Paulatuk 45.35 30 P 16 43 49.1
baz=284
DLBC Dease Lake 46.03 45 P **P** **16 43 56.0 +2.0**
DLBC IAmb IAmb 16 44 08.8
comp=Z,22nm,1.3s
SLVN Son La 46.85 255 P **P** **16 44 01.3 +0.6**
MK31 Makanchi Array 47.17 298 P **P** **16 44 02.1 -0.9**
MK31 pmax pmax
comp=Z,8.0nm,1.1s
MK31 Makanchi Array 47.17 298 P **P** **16 44 02.1 -0.9**
MKAR Makanchi Array 47.17 298 P **P** **16 44 02.7 -0.3**
comp=Z,3.3nm,0.8s,baz=67,slow=9.3,SNR=35
MKAR LR LR 17 05 01.5
comp=Z,905nm,18.4s,baz=66,slow=38
MKAR Makanchi Array 47.17 298 P **P** **16 44 02.1 -0.9**
MAKZ Makanchi 47.35 298 P **P** **16 44 03.5 -0.9**
MAKZ pmax pmax
comp=Z,12nm,1.3s
MAKZ Makanchi 47.35 298 P **P** **16 44 03.5 -0.9**
MAKZ IAmb IAmb 16 44 05.2
comp=Z,12nm,1.3s
KURK Kurchatov 47.65 304 P **P** **16 44 06.3 -0.3**
KURK Kurchatov 47.65 304 P **P** **16 44 06.3 -0.3**
KURK Kurchatov 47.65 304 *e*P **P** **16 44 06.3 -0.3**
KURBB Kurchatov Arra 47.74 304 P **P** **16 44 06.3 -1.0**
comp=Z,8.9nm,1.1s,baz=65,slow=7.6,SNR=20
EUNU Eureka 49.71 11 P **P** **16 44 22.5 +0.4**
EUNU IAmb IAmb 16 44 25.2
comp=Z,16nm,1.1s
LSA Lhasa 50.26 274 P **P** **16 44 28.5 +1.0**
LSA pmax pmax
comp=Z,13nm,1.3s
BVAR Borovoye Array 51.19 310 P **P** **16 44 33.4 -0.2**
comp=Z,0.7nm,0.3s,baz=90,slow=6.3,SNR=9.9
BRVK Borovoye 51.23 310 *c e*P **P** **16 44 33.3 -0.6**
BRVK pmax pmax
comp=Z,17nm,1.3s
BRVK Borovoye 51.23 310 P **P** **16 44 32.3 -1.7**
BRVK IAmb IAmb 16 44 34.7
comp=Z,16nm,1.2s
BRVK Borovoye 51.23 310 *e*P **P** **16 44 33.3 -0.6**
RES Resolute Bay 51.40 18 P **P** **16 44 34.7 -0.1**
RES pmax pmax
comp=Z,9.0nm,1.0s
RES Resolute Bay 51.40 18 P **P** **16 44 34.7 -0.1**
YKA Yellowknife Ar 51.42 36 P **P** **16 44 36.5 +1.4**
comp=Z,3.2nm,0.8s,baz=296,slow=7.0,SNR=32
CHTO Chiang Mai 51.94 257 P **P** **16 44 38.4 -1.2**
CHTO pmax pmax
comp=Z,11nm,1.3s
CHTO Chiang Mai 51.94 257 P **P** **16 44 38.4 -1.2**
CMAR Chiang Mai Arr 52.19 257 P **P** **16 44 43.0 +1.5**
comp=Z,1.1nm,0.8s,baz=30,slow=7.5,SNR=11
CMAR Chiang Mai Arr 52.19 257 P **P** **16 44 41.8 +0.4**
SHL Shillong 52.31 269 P **P** **16 44 42.5 0.0**
SHL pmax pmax
comp=Z,10.0nm,0.9s
SHL Shillong 52.31 269 P **P** **16 44 42.5 0.0**
SHL IAmb IAmb 16 44 50.3
comp=Z,10nm,0.9s
MRSI Marisa 53.06 220 P **P** **16 44 46.2 -1.7**
comp=Z,435nmcomp=Z,17nm,1.3s
SANI Sanana 53.63 214 P **P** **16 44 50.1 -2.0**
comp=Z,15nm,1.2s
AAK Ala-Archa 54.05 297 P **P** **16 44 55.5 +0.4**
comp=Z,3.0nm,0.8s,baz=115,slow=3.7,SNR=11
AAK Ala-Archa 54.05 297 *c e*P **P** **16 44 55.3 +0.2**
AAK pmax pmax
comp=Z,12nm,1.0s
AAK Ala-Archa 54.05 297 P **P** **16 44 55.0 -0.2**
AAK Ala-Archa 54.05 297 *e*P **P** **16 44 55.3 +0.2**
TAPN Taplejung 54.09 274 *e*P **P** **16 44 57.7 +2.0**
SVE Sverdlovsk 54.23 317 *e*P **P** **16 44 56.0 0.0**
SVE MLR MLR
comp=Z,701nm,17.0s
SVE Sverdlovsk 54.23 317 *e*P **P** **16 44 56.0 0.0**
D03D Eldon 54.61 56 P 16 44 57.1
baz=302
ODAN Odare 54.62 273 *e*P **P** **16 45 01.0 +1.5**
comp=Z,26nm,1.0s
KSH Kashi 54.83 293 P P 16 45 05.6 +4.8
KSH S **S** **16 52 41.8 +2.0**
KSH pmax pmax
comp=Z,9.0nm,1.2s
KSH pmax pmax
comp=Z,190nm,3.6s
KSH LR LR
comp=Z,250nm,11.8s
KSH LR LR
comp=Z,380nm,12.2s
KSH LR LR
comp=Z,130nm,7.7s
JIRN Jiri 54.95 275 *e*P **P** **16 45 03.5 +1.4**
GUN Gumba 55.01 275 *e*P **P** **16 45 03.9 +1.4**
RAMN Ramite 55.11 274 *e*P **P** **16 45 04.2 +1.1**
comp=Z,26nm,0.7s
ARU Arti 55.41 318 *c i*P **P** **16 45 03.1 -1.4**
ARU 16 46 02.6
ARU 16 47 05.5
ARU S **S** **16 52 47.4 +0.6**
ARU SS **SS** **16 56 29.4 -1.5**
ARU pmax pmax
comp=Z,13nm,1.2s
ARU MLR MLR
comp=Z,622nm,17.0s
ARU Arti 55.41 318 P **P** **16 45 03.3 -1.2**
ARU IAmb IAmb 16 45 05.0
comp=Z,17nm,1.3s
KKN Kakani 55.50 276 *e*P **P** **16 45 07.4 +1.6**
PKI Pulchoki 55.54 275 *e*P **P** **16 45 07.4 +1.1**
PKIN Phulchoki 55.55 275 *e*P **P** **16 45 07.9 +1.6**
DMN Daman 55.73 276 *e*P **P** **16 45 09.1 +1.5**
comp=Z,80nm,1.3s
NEEM North Greenlan 55.75 6 *i*P **P** **16 45 06.8 -0.2**
NEEM IAmb IAmb 16 45 09.5
comp=Z,16nm,1.0s
GKN Gorkha 55.81 276 *e*P **P** **16 45 09.4 +1.4**
comp=Z,21nm,0.7s
I02D Swisshome 56.03 60 P 16 45 10.9
baz=304
DANN Dangsing 56.20 277 *e*P **P** **16 45 12.8 +1.9**
comp=Z,33nm,0.6s
SBUM Sibu 56.22 232 P **P** **16 45 12.4 +1.5**
KK31 Karatay Array 56.24 299 P **P** **16 45 09.9 -0.8**
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KK31 Karatay Array 56.24 299 P **P** **16 45 09.9 -0.8**
KKAR Karatay Array 56.24 299 P **P** **16 45 10.2 -0.5**
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 56.24 299 P **P** **16 45 10.2 -0.5**
KKAR Karatay Array 56.24 299 P **P** **16 45 10.3 -0.5**
KKAR IAmb IAmb 16 45 31.5
comp=Z,2.7nm,0.8s
B08A Colville Reser 56.29 53 P **P** **16 45 12.1 +1.1**
B08A IAmb IAmb 16 45 24.8
comp=Z,12nm,1.2s

I03D Drain, OR 56.56 60 P 16 45 14.2
baz=304
KOLN Koldanda 56.67 277 *e*P **P** **16 45 15.4 +1.2**
H04A Detroit Lake 56.70 58 P **P** **16 45 13.8 -0.1**
PYUN Piuthan 56.88 277 *e*P **P** **16 45 15.8 +0.1**
K02D Willamette Mer 56.93 61 P 16 45 17.3
baz=305
I04A Tendick Farm, 57.06 59 P 16 45 17.9
baz=305
C09A Chrisman Ranch 57.19 53 P **P** **16 45 17.7 +0.3**
C09A IAmb IAmb 16 45 31.1
comp=Z,15nm,1.2s
L02E Cave Junction 57.27 61 P 16 45 19.6
baz=305
HAWA Hanford 57.27 55 P **P** **16 45 19.4 +1.4**
HAWA IAmb IAmb 16 45 32.2
comp=Z,18nm,1.4s
F07A Phinny Hill Vi 57.33 56 P **P** **16 45 20.0 +1.7**
F07A IAmb IAmb 16 45 32.9
comp=Z,12nm,1.0s
J04D Umpqua Nationa 57.56 60 P 16 45 22.2
baz=305
NEW Newport 57.57 52 P **P** **16 45 20.5 +0.4**
NEW pmax pmax
comp=Z,11nm,1.1s
NEW Newport 57.57 52 P **P** **16 45 20.5 +0.4**
NEW IAmb IAmb 16 45 33.8
comp=Z,11nm,1.1s
NEW Newport 57.57 52 P 16 45 21.2
baz=305
PINE Pine Mountain 57.94 58 P **P** **16 45 23.7 +0.8**
E09A Wood Farm, Sta 57.99 55 P **P** **16 45 24.2 +1.2**
E09A IAmb IAmb 16 45 37.0
comp=Z,15nm,1.2s
L04D Klamath Falls 58.03 61 P 16 45 24.8
baz=306
J05D Fort Rock, OR 58.06 59 P 16 45 25.2
baz=306
G08A Pilot Rock 58.23 56 P **P** **16 45 25.7 +0.8**
G08A IAmb IAmb 16 45 39.1
comp=Z,13nm,1.2s
ARCES ARCESS Array B 58.39 341 P **P** **16 45 25.4 0.0**
comp=Z,1.5nm,0.8s,baz=32,slow=7.3,SNR=5.6
ARCES LR LR 17 13 41.9
comp=Z,302nm,19.9s,baz=65,slow=39
K05A Summer Lake 58.58 59 P **P** **16 45 27.9 +0.5**
K05A IAmb IAmb 16 45 42.6
comp=Z,18nm,1.3s
I07A Izee 58.62 57 P **P** **16 45 28.9 +1.4**
I07A IAmb IAmb 16 45 42.2
comp=Z,15nm,1.4s
GAR Garm 58.72 295 P **P** **16 45 27.7 -0.7**
AB31 Akbulak array 58.76 310 *i*P **P** **16 45 27.4 -1.0**
ABKAR Akbulak array 58.76 310 P **P** **16 45 27.5 -0.9**
ABKAR Akbulak array 58.76 310 P **P** **16 45 27.4 -0.9**
ABKAR IAmb IAmb 16 45 43.7
comp=Z,6.2nm,0.9s
F10A Beach Ranch, E 58.83 55 P **P** **16 45 29.7 +0.7**
F10A IAmb IAmb 16 45 43.8
comp=Z,11nm,1.2s
WALA Waterton Lakes 58.85 50 P **P** **16 45 29.7 +0.6**
WALA IAmb IAmb 16 45 31.4
comp=Z,12nm,1.1s
AKTO Aktyubinsk 59.08 312 P **P** **16 45 30.8 +0.2**
comp=Z,1.5nm,0.5s,baz=135,slow=2.9,SNR=2.0
JTMT Jette 59.42 52 P **P** **16 45 33.4 +0.3**
MOD Modoc Plateau 59.42 60 P **P** **16 45 33.6 +0.3**
MOD IAmb IAmb 16 45 48.4
comp=Z,12nm,1.2s
BMO Blue Mountains 59.44 56 P **P** **16 45 34.2 +1.0**
BMO pmax pmax
comp=Z,12nm,1.3s
BMO Blue Mountains 59.44 56 P **P** **16 45 34.2 +1.0**
BMO IAmb IAmb 16 45 47.7
comp=Z,12nm,1.2s
O03E Paynes Creek 59.46 62 P 16 45 35.4
baz=307
J08A Circle Bar Ran 59.65 58 P **P** **16 45 36.4 +1.6**
CHGR Chuyangaron 59.65 296 P **P** **16 45 35.4 +0.6**
NIL Nilore 60.05 289 P **P** **16 45 37.9 +0.4**
NIL pmax pmax
comp=Z,48nm,1.2s
NIL Nilore 60.05 289 P **P** **16 45 37.9 +0.4**
WVOR Wild Horse Val 60.10 59 P **P** **16 45 39.2 +1.3**
WVOR pmax pmax
comp=Z,12nm,1.1s
WVOR Wild Horse Val 60.10 59 P **P** **16 45 39.2 +1.3**
WVOR IAmb IAmb 16 45 52.3
comp=Z,12nm,1.1s
MSO Missoula 60.16 52 P **P** **16 45 38.1 -0.1**
MSO Missoula 60.16 52 P 16 45 38.7
baz=307
KLMR Klimovskoe 60.58 329 *e*P **P** **16 45 37.8 -2.9**
KLMR pmax pmax
comp=Z,14nm,1.0s
KLMR Klimovskoe 60.58 329 *e*P **P** **16 45 37.8 -2.9**
KLMR AMP 16 45 49.3
comp=Z,14nm,1.0s
KLMR LQ LQ 17 08 40.9
KLMR LQ LQ 17 08 40.9
KLMR LR LR 17 09 55.7
BEKR Beckworth 60.60 62 P **P** **16 45 41.8 +0.4**
BEKR IAmb IAmb 16 45 56.2
comp=Z,12nm,1.2s
AFDM Forest Hills D 60.78 63 P **P** **16 45 42.7 +0.3**
AFDM IAmb IAmb 16 45 56.6
comp=Z,8.3nm,1.1s
MFID Camas Ranch 61.15 56 P **P** **16 45 45.6 +0.6**
MFID IAmb IAmb 16 45 59.3
comp=Z,9.1nm,1.2s
FFC Flin Flon 61.22 40 P **P** **16 45 45.4 +0.3**
FFC pmax pmax
comp=Z,9.0nm,1.0s
FFC Flin Flon 61.22 40 P **P** **16 45 45.4 +0.3**
FFC IAmb IAmb 16 45 47.4
comp=Z,9.4nm,1.0s
SUMG Summit 61.28 4 *i*P **P** **16 45 47.1 +1.3**
SUMG IAmb IAmb 16 45 49.7
comp=Z,15nm,1.0s
SUMG Summit 61.28 4 *i*P **P** **16 45 47.1 +1.3**
SUMG pmax pmax
comp=Z,15nm,1.0s
SUMG Summit 61.28 4 P **P** **16 45 45.5 -0.3**
PAHR Pah Rah Range 61.30 61 P **P** **16 45 46.8 +0.7**
PAHR IAmb IAmb 16 46 00.3
comp=Z,16nm,1.3s
HRY Holter Researc 61.38 51 P **P** **16 45 48.0 +1.5**
PNTR Pine Nut 61.54 62 P **P** **16 45 49.1 +1.2**
PNTR IAmb IAmb 16 46 08.8
comp=Z,9.6nm,0.9s
LRM Limekiln Ridge 61.59 52 P **P** **16 45 49.1 +1.0**
EGMT Eagleton 61.67 49 P **P** **16 45 49.0 +0.6**
EGMT Eagleton 61.68 49 P 16 45 49.0
baz=309
CMB Columbia Colle 61.70 64 P **P** **16 45 48.5 -0.2**
CMB pmax pmax
comp=Z,17nm,1.4s
CMB Columbia Colle 61.70 64 P **P** **16 45 48.5 -0.2**
CMB IAmb IAmb 16 46 03.1
comp=Z,17nm,1.4s
FCC Fort Churchill 61.78 33 P **P** **16 45 49.2 +0.5**
FCC pmax pmax
comp=Z,14nm,1.4s
FCC Fort Churchill 61.78 33 P **P** **16 45 49.2 +0.5**
FCC IAmb IAmb 16 45 50.6
comp=Z,14nm,1.4s
YERR Yerington 61.83 62 P **P** **16 45 50.5 +0.8**
HLID Hailey 61.88 55 P **P** **16 45 50.8 +0.8**
HLID IAmb IAmb 16 46 04.4
comp=Z,11nm,1.3s
HLID Hailey 61.88 55 P 16 45 50.8
baz=308
MCMT McKenzie Canyo 61.98 54 P **P** **16 45 51.6 +0.8**
BCYI Bear Canyon 61.99 54 P **P** **16 45 51.8 +1.0**
WAKR Walker 62.00 63 P **P** **16 45 51.9 +1.0**
WAKR IAmb IAmb 16 46 05.6
comp=Z,16nm,1.3s
BOZ Bozeman (W) 62.18 52 P **P** **16 45 52.8 +0.9**
BOZ pmax pmax
comp=Z,21nm,1.5s
BOZ Bozeman (W) 62.18 52 P **P** **16 45 52.8 +0.9**
BOZ IAmb IAmb 16 46 07.1
comp=Z,21nm,1.4s
BOZ Bozeman (W) 62.18 52 P 16 45 53.1
baz=309

KBL Kabul 62.24 292 P **P** **16 45 51.8 -0.8**
KBL pmax pmax
comp=Z,33nm,1.5s
KBL Kabul 62.24 292 P **P** **16 45 51.8 -0.8**
KVN Kaiserville 62.48 61 P **P** **16 45 54.9 +0.8**
KVN pmax pmax
comp=Z,17nm,1.2s
KVN Kaiserville 62.48 61 P **P** **16 45 54.9 +0.8**
KVN IAmb IAmb 16 46 08.6
comp=Z,17nm,1.2s
RYN Ryan 62.49 62 P **P** **16 45 54.8 +0.7**
RYN IAmb IAmb 16 46 09.1
comp=Z,12nm,1.2s
LHV Little Huntoon 62.73 62 P **P** **16 45 56.9 +1.4**
NVAR Mina Array Bea 62.75 62 P **P** **16 45 57.7 +1.8**
comp=Z,2.9nm,0.8s,baz=295,slow=6.4,SNR=19
NVAR Mina Array Bea 62.75 62 P **P** **16 45 56.4 +0.5**
QLMT Earthquake Lak 62.77 53 P **P** **16 45 56.2 +0.2**
NV11 Mina Array Sit 62.84 62 P **P** **16 45 56.9 +0.4**
NV11 IAmb IAmb 16 46 10.9
comp=Z,16nm,1.3s
YHL Hebgen Lake 62.89 53 P **P** **16 45 57.2 +0.3**
YHL IAmb IAmb 16 46 11.4
comp=Z,14nm,1.3s
BELG Belogornoye 62.94 318 *i*P **P** **16 45 56.6 0.0**
BELG pmax pmax
comp=Z,5.0nm,1.0s
YHB Horse Butte 62.95 53 P **P** **16 45 58.0 +0.8**
YHB IAmb IAmb 16 46 05.1
comp=Z,8.6nm,1.0s
YHH Holmes Hill 63.11 53 P **P** **16 45 59.4 +1.0**
YNE Yellowstone No 63.44 52 P **P** **16 46 01.3 +0.9**
YPP Pitchstone Pla 63.47 53 P **P** **16 46 01.4 +0.6**
H17A Grant Village 63.52 53 P **P** **16 46 03.5 +2.5**
H17A IAmb IAmb 16 46 16.9
comp=Z,18nm,1.2s
H17A Grant Village 63.52 53 P 16 46 03.1
baz=310
YMP Mirror Lake Pl 63.53 52 P **P** **16 46 02.6 +1.5**
YMP IAmb IAmb 16 46 21.9
comp=Z,14nm,1.5s
TPH Tonopah 63.63 62 P **P** **16 46 03.0 +1.2**
TPH pmax pmax
comp=Z,114nm,1.4s
TPH Tonopah 63.63 62 P **P** **16 46 03.0 +1.2**
RLMT Red Lodge 63.77 51 P **P** **16 46 03.3 +0.7**
RLMT IAmb IAmb 16 46 17.4
comp=Z,10nm,1.2s
RLMT Red Lodge 63.77 51 P 16 46 02.9
baz=310
MOOW Moose Ponds 63.83 53 P **P** **16 46 04.2 +1.1**
MOOW IAmb IAmb 16 46 17.8
comp=Z,11nm,1.3s
LOHW Long Hollow 64.00 53 P **P** **16 46 05.2 +1.1**
REDW Red Top Meadow 64.02 54 P **P** **16 46 04.7 +0.4**
PKM Mcpherson Peak 64.03 66 P 16 46 05.7
baz=310
CWC Cottonwood Cre 64.14 64 P 16 46 06.5
baz=310
GRAC Grapevine Rang 64.23 63 P 16 46 06.8
baz=310
BGU Big Grassy Mou 64.33 57 P **P** **16 46 07.0 +0.7**
LAO LASA Array 64.38 49 P **P** **16 46 07.2 +0.9**
LAO IAmb IAmb 16 46 25.0
comp=Z,9.0nm,0.9s
ISA Isabella, Lake 64.38 65 P 16 46 07.8
baz=310
SPUT South Promonto 64.42 56 P **P** **16 46 07.7 +0.8**
SPUT IAmb IAmb 16 46 21.4
comp=Z,18nm,1.3s
R11A Troy Canyon, C 64.45 61 P **P** **16 46 07.5 +0.4**
R11A IAmb IAmb 16 46 21.3
comp=Z,10nm,1.2s
R11A Troy Canyon, C 64.46 61 P 16 46 07.8
baz=310
JAGI Jajag, Banyuwa 64.54 223 P **P** **16 46 08.1 +0.5**
JAGI IAmb IAmb 16 46 26.8
comp=Z,13nm,0.9s
FIA1 FINESS Array S 64.55 335 P **P** **16 46 06.6 -0.5**
FINES FINESS Array B 64.55 335 P **P** **16 46 07.3 +0.2**
comp=Z,8.5nm,0.9s,baz=34,slow=7.1,SNR=22
FINES LR LR 17 17 05.9
comp=Z,356nm,20.3s,baz=33,slow=39
ICESG Greenland Ices 64.68 5 *i*P **P** **16 46 11.4 +3.2**
ICESG IAmb IAmb 16 46 12.7
comp=Z,20nm,0.9s
HWUT Hardware Ranch 64.74 56 P **P** **16 46 09.2 +0.2**
SPR3 Spring Creek 3 64.79 59 P **P** **16 46 10.4 +0.9**
SPR3 IAmb IAmb 16 46 24.3
comp=Z,12nm,1.3s
FURC Furnace Creek, 64.88 63 P 16 46 11.4
baz=310
DUG Dugway, Tooele 64.93 58 P **P** **16 46 11.1 +1.0**
DUG pmax pmax
comp=Z,15nm,1.1s
DUG Dugway, Tooele 64.93 58 P **P** **16 46 11.1 +1.0**
DUG IAmb IAmb 16 46 24.6
comp=Z,15nm,1.1s
DUG Dugway, Tooele 64.93 58 P 16 46 10.6
baz=310
TPNV Topopah Spring 64.94 62 P **P** **16 46 10.7 +0.4**
TPNV pmax pmax
comp=Z,27nm,1.4s
TPNV Topopah Spring 64.94 62 P **P** **16 46 10.7 +0.4**
TPNV Topopah Spring 64.94 62 P 16 46 11.2
baz=310
LRMC Laurel Mtn Rad 65.00 64 P 16 46 11.7
baz=310
BW06 Boulder Array 65.13 54 P **P** **16 46 11.4 -0.1**
BW06 IAmb IAmb 16 46 25.5
comp=Z,8.9nm,1.1s
PD31 Pinedale Array 65.13 54 P **P** **16 46 11.2 -0.3**
PDAR Pinedale Array 65.13 54 P **P** **16 46 12.8 +1.2**
comp=Z,2.5nm,0.8s,baz=277,slow=1.7,SNR=18
PDAR Pinedale Array 65.13 54 P **P** **16 46 11.8 +0.2**
BW06 Boulder Array 65.13 54 P 16 46 12.1
baz=311
EDW2 Edwards Air Fo 65.19 65 P 16 46 13.0
baz=310
PSUT Pine Spring 65.38 59 P **P** **16 46 13.8 +0.6**
PRN Pahroc Range 65.38 61 P **P** **16 46 14.6 +1.5**
PRN IAmb IAmb 16 46 28.5
comp=Z,12nm,1.3s
NLU North Lily Min 65.51 57 P **P** **16 46 14.7 +0.6**
MPU Maple Canyon 65.73 57 P **P** **16 46 16.6 +1.2**
SHPR Sheep Range 65.90 62 P **P** **16 46 17.0 +0.5**
SHPR IAmb IAmb 16 46 31.7
comp=Z,9.6nm,1.1s
HEC Hector,Ludlow 66.26 64 P 16 46 19.8
baz=311
MSU Marysvale 66.39 59 P **P** **16 46 20.9 +1.1**
MSU Marysvale 66.39 59 P **P** **16 46 20.9 +1.1**
VRH Novokhopyorsk 66.43 320 *e*P **P** **16 46 18.4 -1.0**
VRH pmax pmax
comp=Z,20nm,1.1s
VRH MLR MLR
comp=Z,470nm,20.0s
TMUT Trail Mountain 66.45 57 P **P** **16 46 20.9 +0.7**
RDMU Red Mountain 66.56 55 P **P** **16 46 21.9 +1.1**
P17A Butcher Ranch, 66.61 57 P **P** **16 46 21.9 +0.9**
P17A IAmb IAmb 16 46 35.3
comp=Z,12nm,1.1s
LPSR Galich'ya Gora 66.63 323 *e*P **P** **16 46 20.6 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
LPSR MLR MLR
comp=Z,350nm,18.0s
HRA Herat 66.66 296 P **P** **16 46 21.9 +0.5**
MTPU Mount Pierson 66.70 59 P **P** **16 46 22.3 +0.4**
MTPU IAmb IAmb 16 46 36.5
comp=Z,17nm,1.4s
GMRC Granite Mounta 66.71 64 P 16 46 23.3
baz=311
DY2G Dye2 66.72 8 *i*P **P** **16 46 22.2 +0.8**
DY2G IAmb IAmb 16 46 26.4
comp=Z,6.5nm,1.2s
Q16A Castle Valley 66.72 58 P **P** **16 46 22.9 +1.1**
LCMT Little Creek M 66.73 60 P **P** **16 46 22.9 +1.1**
LCMT IAmb IAmb 16 46 36.4
comp=Z,8.6nm,1.1s
GEYT Alibeck 66.86 301 P **P** **16 46 24.4 +1.9**
comp=Z,7.1nm,1.1s,baz=336,slow=3.3,SNR=12
GEYT LR LR 17 17 42.2
comp=Z,330nm,18.9s,baz=35,slow=38
GEYT Alibeck 66.86 301 P **P** **16 46 23.0 +0.5**

GYA0B **ALIBECK ARRAY** 66.86 301 P **P** **16 46 22.9 +0.4**
K22A **Casper** 66.89 52 P 16 46 23.1
baz=312
SRU **San Rafael Swe** 66.97 57 P **P** **16 46 24.0 +0.6**
SRU pmax pmax
comp=Z,9.0nm,0.9s
SRU **San Rafael Swe** 66.97 57 P **P** **16 46 24.0 +0.6**
SRU lAmb lAmb 16 46 44.7
comp=Z,9.2nm,0.9s
KNB **Kanab** 66.99 60 P **P** **16 46 24.7 +1.2**
KNB pmax pmax
comp=Z,16nm,1.1s
KNB **Kanab** 66.99 60 P **P** **16 46 24.7 +1.2**
KNB lAmb lAmb 16 46 38.2
comp=Z,16nm,1.1s
BELC **Belle Mtn. Jos** 67.01 64 P 16 46 25.1
baz=311
RWWY **Rawlins** 67.15 53 P **P** **16 46 23.9 -0.6**
RSSD **Black Hills** 67.24 50 P **P** **16 46 25.3 +0.3**
RSSD pmax pmax
comp=Z,15nm,1.3s
RSSD **Black Hills** 67.24 50 P **P** **16 46 25.3 +0.3**
RSSD lAmb lAmb 16 46 38.5
comp=Z,15nm,1.3s
RSSD **Black Hills** 67.24 50 P 16 46 25.5
baz=313
MTSE **Matsula** 67.42 334 *e*P **P** **16 46 22.5 -3.0**
IRM **Iron Mountain** 67.44 64 P 16 46 27.7
baz=312
VSR **Storozhevoye** 67.54 322 *e*P **P** **16 46 26.9 +0.4**
VSR pmax pmax
comp=Z,20nm,1.3s
VSR MLR MLR
comp=Z,610nm,17.0s
O20A **White River Ci** 67.61 55 P **P** **16 46 27.1 -0.3**
VORD **Divnogorie** 67.66 321 *e*P **P** **16 46 27.7 +0.4**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD MLR MLR
comp=Z,590nm,14.0s
PDMCI **Parker Dam,Lak** 67.97 63 P 16 46 31.5
baz=312
UPP **Uppsala** 68.23 338 *e*P **P** **16 46 30.9 +0.3**
PV14 **Lion Creek, Pa** 68.34 57 P **P** **16 46 31.4 -0.6**
PV14 lAmb lAmb 16 46 46.0
comp=Z,12nm,1.1s
N23A **Red Feather La** 68.39 53 P 16 46 33.4
baz=313
PV20 **West Nyswonger** 68.39 57 P **P** **16 46 32.7 +0.4**
PV20 lAmb lAmb 16 46 46.3
comp=Z,14nm,1.1s
PV04 **Paradox Valley** 68.39 57 P **P** **16 46 32.8 +0.4**
PV04 lAmb lAmb 16 46 58.0
comp=Z,18nm,1.4s
PV19 **Morning Glory** 68.40 57 P **P** **16 46 32.9 +0.4**
PV17 **East Wray Mesa** 68.44 57 P **P** **16 46 33.2 +0.6**
PV16 **Nyswonger Mesa** 68.44 57 P **P** **16 46 33.5 +0.8**
PV16 lAmb lAmb 16 46 46.7
comp=Z,13nm,1.1s
PV11 **David Mesa, Pa** 68.47 57 P **P** **16 46 33.7 +0.8**
PV11 lAmb lAmb 16 46 59.1
comp=Z,14nm,0.8s
PV18 **Skein Mesa, Pa** 68.49 57 P **P** **16 46 33.4 +0.4**
PV18 lAmb lAmb 16 46 53.9
comp=Z,12nm,0.9s
PV05 **Paradox Valley** 68.49 57 P **P** **16 46 33.5 +0.4**
PV12 **Saucer Basin,** 68.50 57 P **P** **16 46 33.8 +0.7**
PV12 lAmb lAmb 16 46 59.5
comp=Z,17nm,1.2s
PV07 **Paradox Valley** 68.51 57 P **P** **16 46 34.2 +1.0**
PV03 **Paradox Valley** 68.52 57 P **P** **16 46 33.7 +0.5**
PV03 lAmb lAmb 16 46 47.2
comp=Z,16nm,1.2s
NC303 **NORSAR Array S** 68.56 341 P **P** **16 46 31.8 -0.9**
NC405 **NORSAR Array S** 68.59 341 P **P** **16 46 31.9 -1.0**
PV13 **Radium Mtn., P** 68.60 57 P **P** **16 46 33.8 +0.1**
PV13 lAmb lAmb 16 46 53.7
comp=Z,12nm,0.9s
PV02 **Paradox Valley** 68.61 57 P **P** **16 46 34.2 +0.4**
NC204 **NORSAR Array S** 68.65 342 P **P** **16 46 33.0 -0.4**
NB201 **NORSAR Array S** 68.74 341 P **P** **16 46 34.0 +0.1**
NB2 **NORSAR Subarra** 68.76 341 P **P** **16 46 34.5 +0.4**
baz=30,slow=6.5
NOA **NORSAR Array B** 68.76 341 P **P** **16 46 34.5 +0.4**
comp=Z,5.7nm,1.0s,baz=28,slow=6.4,SNR=11
NOA LR LR 17 21 18.1
comp=Z,338nm,18.6s,baz=30,slow=40
WUAZ **Wupatki** 68.86 61 P 16 46 36.5
baz=312
SMCO **Snowmass** 68.97 55 P **P** **16 46 36.7 +0.5**
DZM **Mont Dzumac** 68.99 167 *e*LR LR 17 07 38.5
comp=Z,318nm,21.4s
IDID **Didziasalis** 69.22 330 *e*P **P** **16 46 36.7 -0.2**
ISCO **Idaho Springs** 69.32 54 P **P** **16 46 39.5 +1.3**
ISCO pmax pmax
comp=Z,10.0nm,1.5s
ISCO **Idaho Springs** 69.32 54 P **P** **16 46 39.5 +1.3**
ISCO **Idaho Springs** 69.32 54 P 16 46 39.2
baz=314
BORG **Borgarnes** 69.34 357 P **P** **16 46 37.9 +0.4**
BORG pmax pmax
comp=Z,107nm,1.3s
BORG **Borgarnes** 69.34 357 P **P** **16 46 37.9 +0.4**
IIGN **Ignalina** 69.37 331 *e*P **P** **16 46 38.5 +0.6**
MAK **Makhachkala** 69.42 311 *e*P **P** **16 46 36.5 -1.8**
MAK *e* 16 49 11.1
MAK *e*S **S** **16 55 40.0 -3.2**
MAK MLR MLR
comp=Z,586nm,16.0s
MVCO **Mesa Verde** 69.43 58 P **P** **16 46 39.3 +0.4**
MVCO **Mesa Verde** 69.43 58 P 16 46 40.0
baz=313
MNK **Minsk** 69.47 329 *i* P **P** **16 46 35.8 -2.7**
MNK comp=E,2.0nm,1.1s
MNK *i* P **P** **16 46 35.8 -2.7**
MNK comp=N,21nm,1.6s
MNK *i* P **P** **16 46 35.8 -2.7**
MNK comp=Z,23nm,0.8s
MNK *i* PcP **PcP** **16 46 58.8 -2.9**
MNK *i* PP **PP** **16 49 09.4 -2.2**
MNK *i* PPP PPP 16 50 50.5
MNK *i* S **S** **16 55 37.4 -6.1**
MNK *i* ScS **SKSac** **16 56 32.5 -3.8**
MNK *i* SS **SS** **17 00 08.3 -1.8**
MNK *i* SSS SSS 17 03 25.9
MNK *i* LQ LQ 17 12 17.4
MNK *i* LR LR 17 17 34.4
MNK *i* LRM MLR 17 19 32.8
MNK comp=N,314nm,21.1s
MNK *i* LRM MLR 17 19 55.8
MNK comp=Z,316nm,20.4s
MNK *i* LRM MLR 17 19 59.0
comp=E,36nm,23.0s
NACGM **Naroch** 69.54 330 *i* P **P** **16 46 39.2 +0.3**
NACGM *i* P **P** **16 46 39.2 +0.3**
NACGM *i* P **P** **16 46 39.2 +0.3**
NACGM *i* PcP **PcP** **16 47 02.8 +0.9**
NACGM *i* PP **PP** **16 49 17.2 +5.1**
NACGM *i* PPP PPP 16 51 07.4
NACGM *i* S **S** **16 55 42.8 -1.5**
NACGM *i* PS 16 57 19.9
NACGM *i* SS SS 16 59 42.2 -29
NACGM *i* SSS SSS 17 03 48.5
NACGM *i* LQ LQ 17 11 03.7
NACGM *i* LR LR 17 17 53.7
X16A **Lo Mia Camp, P** 69.55 61 P **P** **16 46 40.6 +1.0**
PABE **Paberze** 70.00 332 *e*P **P** **16 46 42.1 +0.4**
PABE **Paberze** 70.00 332 P **P** **16 46 41.6 0.0**
S22A **4UR Ranch, Cre** 70.03 56 P 16 46 43.8
baz=314
W18A **Petrified Fore** 70.11 60 P 16 46 44.1
baz=313
GOF **Gofitskoye** 70.20 315 *e*P **P** **16 46 44.8 +1.6**
GOF pmax pmax
comp=Z,31nm,0.9s
KONO **Kongsberg** 70.37 341 P **P** **16 46 44.0 +0.1**
KONO pmax pmax
comp=Z,33nm,1.5s
KONO **Kongsberg** 70.37 341 P **P** **16 46 44.0 +0.1**
OGNE **Ogallala** 70.50 51 P 16 46 45.8
baz=315
KIV **Kislovodsk** 71.17 314 *e*P **P** **16 46 49.8 +0.6**
KIV pmax pmax
comp=Z,40nm,1.1s
KIV MLR MLR
comp=Z,1μm,18.0s
KIV **Kislovodsk** 71.17 314 P **P** **16 46 49.6 +0.3**
KIV **Kislovodsk** 71.17 314 *e*P **P** **16 46 49.8 +0.6**
KBZ **Khabaz** 71.23 314 P **P** **16 46 51.1 +1.7**
comp=Z,11nm,1.1s,baz=57,slow=3.9,SNR=14
KBZ LR LR 17 22 40.1
comp=Z,316nm,18.8s,baz=32,slow=40
ECSD **EROS Data Cent** 71.33 46 P 16 46 50.1
baz=317
ZEI **Tsey** 71.40 313 *e*P **P** **16 46 49.1 -1.7**
ZEI pmax pmax
comp=Z,11nm,1.3s
SUW **Suwalki** 71.48 331 *e*P **P** **16 46 50.7 -0.1**
ASAR **Alice Springs** 71.64 198 LR LR 17 18 03.8
comp=Z,59nm,20.2s,baz=11,slow=36
AKASG **Malin Array Be** 72.00 326 P **P** **16 46 54.0 +0.1**
comp=Z,7.0nm,0.6s,baz=35,slow=6.5,SNR=50
AKASG LR LR 17 22 21.5
comp=Z,277nm,18.4s,baz=30,slow=39
AKASG **Malin Array Be** 72.00 326 P **P** **16 46 53.6 -0.4**
AKBB **Malin Array Si** 72.00 326 *ce*P **P** **16 46 54.3 +0.3**
AKBB **Malin Array Si** 72.00 326 P **P** **16 46 53.8 -0.2**
ANMO **Albuquerque** 72.18 58 P **P** **16 46 57.0 +1.4**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO **Albuquerque** 72.18 58 P **P** **16 46 57.0 +1.4**
ANMO **Albuquerque** 72.18 58 P 16 46 56.8
baz=314
AKH **Akhalkalaki** 72.61 312 ⇓P **P** **16 47 00.6 +2.6**
BNM **Barren Site** 72.64 59 P **P** **16 46 59.3 +0.9**
I37A **Lemond, Waseca** 72.69 44 P **P** **16 46 58.8 +0.6**
GNI **Garni** 72.87 310 P **P** **16 47 00.5 +0.9**
comp=Z,14nm,1.1s,baz=181,slow=10,SNR=6.9
GNI **Garni** 72.87 310 P **P** **16 46 57.9 -1.7**
319A **Douglas** 72.95 62 P **P** **16 47 00.4 +0.2**
319A lAmb lAmb 16 47 21.9
comp=Z,14nm,0.9s
121A **Cookes Peak, D** 73.06 61 P **P** **16 47 01.6 +0.8**
121A lAmb lAmb 16 47 15.6
comp=Z,17nm,1.4s
121A **Cookes Peak, D** 73.07 61 P 16 47 02.0
baz=315
RGN **Rugen** 74.01 337 *e*P **P** **16 47 06.4 +0.7**
comp=Z,98nm,1.2s,baz=26,slow=5.7
SORM **Soroca** 74.40 325 ⇑P **P** **16 47 08.4 +0.3**
SORM **Soroca** 74.40 325 ⇑P **P** **16 47 08.4 +0.3**
LVV **L'vov** 74.67 329 *e*P **P** **16 47 10.4 +0.7**
MATQ **Matagami** 74.83 31 P 16 47 10.4
baz=326
I42A **Draeger Farm,** 74.90 41 P **P** **16 47 11.1 0.0**
I42A lAmb lAmb 16 47 28.5
comp=Z,20nm,1.1s
AMTX **Amarillo** 75.00 55 P **P** **16 47 12.3 +0.3**
AMTX lAmb lAmb 16 47 25.9
comp=Z,16nm,1.1s
MNTX **Cornudas Mount** 75.10 60 P **P** **16 47 13.4 +0.8**
MNTX **Cornudas Mount** 75.10 60 P 16 47 13.8
baz=316
KWP **Kalwaria Pacla** 75.30 329 P **P** **16 47 13.4 +0.1**
KWP pmax pmax
comp=Z,67nm,1.2s
KWP **Kalwaria Pacla** 75.30 329 P **P** **16 47 13.4 +0.1**
BSEG **Bad Segeberg** 75.35 338 *e*P **P** **16 47 14.2 +0.7**
comp=Z,8nm,1.4s,baz=26,slow=5.7
G45A **Suttons Bay** 75.46 39 P **P** **16 47 14.2 -0.2**
KAN01 **Argonia South** 75.53 51 P **P** **16 47 15.6 +0.7**
RUE **Ruedersdorf** 75.71 336 *e*P **P** **16 47 16.1 +0.5**
comp=Z,17nm,0.6s,baz=26,slow=5.7
OJC **Ojcow** 75.81 331 P **P** **16 47 16.6 +0.3**
OJC pmax pmax
comp=Z,25nm,1.4s
OJC **Ojcow** 75.81 331 P **P** **16 47 16.6 +0.3**
OJC lAmb lAmb 16 47 19.3
comp=Z,25nm,1.4s
BUR08 **Bucovina Ar. S** 76.03 327 P **P** **16 47 18.1 +0.4**
BUR08 lAmb lAmb 16 47 20.0
comp=Z,15nm,1.1s
BURAR **Bucovina Array** 76.05 327 ⇑P **P** **16 47 18.6 +0.8**
BURAR **Bucovina Array** 76.05 327 ⇑P **P** **16 47 18.6 +0.8**
BURAR **Bucovina Array** 76.05 327 P **P** **16 47 17.9 +0.1**
BURAR lAmb lAmb 16 47 20.3
comp=Z,12nm,1.0s
BIZ **Bicaz** 76.26 326 ⇓P **P** **16 47 20.7 +1.8**
UZH **Uzhgorod** 76.29 329 *e*P **P** **16 47 16.6 -2.4**
CRVS **Cervenica-Dubn** 76.35 329 *e*P **P** **16 47 21.3 +1.9**
CRVS pmax pmax
comp=Z,65nm,1.9s
CRVS **Cervenica-Dubn** 76.35 329 *e*P **P** **16 47 21.3 +1.9**
TESR **Tescani** 76.40 325 ⇑P **P** **16 47 20.5 +0.8**
N41A **Harden Midland** 76.42 45 P **P** **16 47 20.2 +0.3**
DIKM **Dikmen** 76.51 317 ⇑P **P** **16 47 22.7 +2.3**
FLTG **Flechtingen** 76.55 337 *e*P **P** **16 47 20.4 0.0**
comp=Z,7.7nm,1.2s,baz=26,slow=5.7
TRPA **Tarpa** 76.62 328 ⇓P **P** **16 47 22.8 +1.9**
OSTC **Ostas** 76.67 333 AMS AMS 17 24 20.0
comp=Z,300nm,21.4s
OKC **Ostrava-Krasne** 76.68 332 AMS AMS 17 25 20.0
comp=Z,300nm,17.0s
CHVC **Chvalec** 76.70 333 AMS AMS 17 24 20.0
comp=Z,400nm,18.1s
NRDL **Niedersach Rie** 76.71 338 *e*P **P** **16 47 21.8 +0.6**
comp=Z,10nm,1.0s,baz=26,slow=5.7
UPC **Upice** 76.78 333 AMS AMS 17 25 50.0
comp=Z,400nm,18.7s
DPC **Dobruska-Polom** 76.82 333 *e*P **P** **16 47 22.9 +0.8**
DPC MLR MLR
comp=Z,400nm,18.5s
DPC **Dobruska-Polom** 76.82 333 *e*P **P** **16 47 22.9 +0.8**
DPC AMS AMS 17 25 50.0
comp=Z,400nm,18.5s
CFR **Carcaliu** 76.88 323 ⇑P **P** **16 47 24.1 +1.7**
CFR **Carcaliu** 76.88 323 ⇑P **P** **16 47 24.1 +1.7**
VRI **Vrincioaia** 76.89 325 ⇓P **P** **16 47 25.4 +2.9**
VRI **Vrincioaia** 76.89 325 ⇓P **P** **16 47 25.4 +2.9**
UOSS **Minazif** 76.91 292 P **P** **16 47 23.0 +0.1**
UOSS lAmb lAmb 16 47 27.3
comp=Z,19nm,1.1s
KRLC **Kraliky** 76.92 333 AMS AMS 17 27 00.0
comp=Z,400nm,18.2s
MORC **Moravsky Berou** 76.93 332 *e*P **P** **16 47 23.4 +0.7**
MORC **Moravsky Berou** 76.93 332 P **P** **16 47 22.6 -0.1**
MORC pmax pmax
comp=Z,17nm,1.2s
MORC **Moravsky Berou** 76.93 332 P **P** **16 47 22.6 -0.1**
MORC lAmb lAmb 16 47 46.9
comp=Z,17nm,1.2s
PLOR **Plostina** 76.94 325 ⇑P P 16 47 32.9 +10
CLL **Collm** 76.98 336 *i* P **P** **16 47 23.2 +0.4**
comp=Z,26nm,1.6s
CLL LmV 17 24 00.0
comp=Z,300nm,19.5s
CLL **Collm** 76.98 336 *i* P **P** **16 47 23.2 +0.4**
CLL pmax pmax
comp=Z,26nm,1.6s
CLL MLR MLR
comp=Z,300nm,19.5s
CLL **Collm** 76.98 336 P **P** **16 47 22.6 -0.2**
CLL lAmb lAmb 16 47 46.4
comp=Z,15nm,1.1s
CLL **Collm** 76.98 336 *e*P **P** **16 47 22.8 0.0**
comp=Z,11nm,1.2s,baz=26,slow=5.7
TPGR **Topolog** 77.02 323 ⇑P **P** **16 47 25.1 +1.9**
BRG **Berggiesshubel** 77.09 335 *e*P **P** **16 47 25.3 +1.9**
BRG Amp 16 47 29.8
comp=Z,7.6nm,1.3s
BRG **Berggiesshubel** 77.09 335 *e*P **P** **16 47 23.7 +0.3**
comp=Z,7.5nm,1.3s,baz=26,slow=5.7
PVCC **Panska Ves** 77.20 334 AMS AMS 17 24 40.0
comp=Z,400nm,19.5s
FBE **Freiberg** 77.22 335 *e*P **P** **16 47 24.8 +0.6**
comp=Z,7.5nm,0.9s,baz=26,slow=5.7
CLZ **Clausthal** 77.23 337 *e*P **P** **16 47 25.2 +0.9**
comp=Z,11nm,0.9s,baz=26,slow=5.7
HARR **Harsova** 77.36 323 ⇑P **P** **16 47 24.8 -0.3**
HARR **Harsova** 77.36 323 ⇑P **P** **16 47 24.8 -0.3**
NEUB **Neuenburg** 77.41 336 *e*P **P** **16 47 25.6 +0.4**
comp=Z,9.8nm,0.9s,baz=26,slow=5.7
NEHR **Nehoiu** 77.43 325 P **P** **16 47 30.2 +4.7**
IBBN **Ibbenburen** 77.48 339 *e*P **P** **16 47 26.2 +0.6**
comp=Z,11nm,0.9s,baz=26,slow=5.7
MLR **Muntele Rosu** 77.51 325 ⇑P **P** **16 47 28.4 +2.2**
MLR **Muntele Rosu** 77.51 325 P **P** **16 47 25.6 -0.5**
MLR pmax pmax
comp=Z,28nm,1.5s
MLR **Muntele Rosu** 77.51 325 P **P** **16 47 25.6 -0.5**
GTTG **Gottingen** 77.61 337 *e*P **P** **16 47 27.2 +0.8**
comp=Z,9.8nm,0.9s,baz=26,slow=5.7
VYHS **Vyhne** 77.61 331 *e*P **P** **16 47 28.7 +2.2**
VRAC **Vranov** 77.65 333 *e*P **P** **16 47 28.2 +1.5**
JAVC **Velka Javorina** 77.69 332 *e*P **P** **16 47 28.8 +1.8**
PRU **Pruhonice** 77.69 334 *ep*P **pP** **16 47 36.3 +0.8**
PRU AMS AMS 17 25 00.0
comp=Z,500nm,18.6s
PSZ **Piszkesteto** 77.74 330 ⇓P **P** **16 47 28.5 +1.2**
PSZ **Piszkesteto** 77.74 330 ⇓P **P** **16 47 28.5 +1.2**
PSZ **Piszkesteto** 77.74 330 P **P** **16 47 27.6 +0.3**
PSZ lAmb lAmb 16 47 51.1
comp=Z,12nm,1.1s
TX31 **Lajitas Ar. Si** 77.82 60 P **P** **16 47 28.4 +0.3**
TX32 **Lajitas Array** 77.82 60 P **P** **16 47 28.6 +0.5**
TX32 lAmb lAmb 16 47 49.0
comp=Z,10nm,1.1s
TXAR **Lajitas Array** 77.82 60 P **P** **16 47 29.3 +1.2**
comp=Z,1.6nm,0.6s,baz=300,slow=4.2,SNR=25
TXAR **Lajitas Array** 77.82 60 P **P** **16 47 28.5 +0.4**
VOIR 77.91 325 ⇓P **P** **16 47 30.0 +1.7**
VOIR 77.91 325 ⇓P **P** **16 47 30.0 +1.7**
KRUC **Moravsky** 77.92 333 *e*P **P** **16 47 28.6 +0.4**
TANN **Tannenbergstha** 77.93 335 *e*P **P** **16 47 29.0 +0.7**
comp=Z,25nm,2.0s,baz=26,slow=5.7
WERD **Werda** 77.94 336 *e*P **P** **16 47 28.9 +0.6**
comp=Z,12nm,1.1s,baz=26,slow=5.7
PLN **Plauen** 77.95 336 *e*P **P** **16 47 29.0 +0.7**
comp=Z,19nm,1.6s,baz=26,slow=5.7
MOX **Moxa** 77.96 336 *e*P **P** **16 47 29.0 +0.6**
comp=Z,16nm,1.6s,baz=26,slow=5.7
TREC **Trest** 78.01 333 AMS AMS 17 26 40.0
comp=Z,400nm,18.5s
GUNZ **Gunzen** 78.01 336 *e*P **P** **16 47 29.3 +0.6**
comp=Z,16nm,1.6s,baz=26,slow=5.7
WERN **Wernitzgruen** 78.07 335 *e*P **P** **16 47 29.7 +0.7**
comp=Z,11nm,1.5s,baz=26,slow=5.7
NKC **Novy Kostel** 78.09 335 AMS AMS 17 26 10.0
comp=Z,400nm,19.9s
ARR **Arges** 78.14 326 ⇓P **P** **16 47 31.7 +2.1**
MODS **Modra-Piesok** 78.24 332 *e*P **P** **16 47 30.0 0.0**
MODS **Modra-Piesok** 78.24 332 *e*P **P** **16 47 30.0 0.0**
UBBA **Unterbreizbach** 78.25 337 *e*P **P** **16 47 30.6 +0.8**
comp=Z,17nm,1.6s,baz=26,slow=5.7
KASTN **Kahler Asten** 78.32 338 *e*P **P** **16 47 31.1 +0.7**
comp=Z,11nm,1.3s,baz=26,slow=5.7
STKA **Stephens Creek** 78.37 190 LR LR 17 21 58.9
comp=Z,98nm,20.5s,baz=27,slow=36
BUG **Bochum--Univer** 78.40 339 *e*P **P** **16 47 31.2 +0.5**
comp=Z,16nm,1.1s,baz=26,slow=5.7
ROTZ **Rotzenmuhle** 78.58 335 *e*P **P** **16 47 32.8 +1.0**
comp=Z,13nm,1.3s,baz=26,slow=5.7
U40A **Yellville** 78.74 49 P **P** **16 47 32.8 -0.1**
KHC **Kasperske Hory** 78.74 334 P **P** **16 47 33.0 +0.2**
KHC pmax pmax
comp=Z,19nm,1.4s
KHC **Kasperske Hory** 78.74 334 *e*P **P** **16 47 33.8 +1.0**
KHC AMS AMS 17 25 40.0
comp=Z,500nm,15.6s
KHC **Kasperske Hory** 78.74 334 P **P** **16 47 33.0 +0.2**
KHC lAmb lAmb 16 47 39.6
comp=Z,19nm,1.4s
BR131 **Keskin Array S** 78.78 317 P **P** **16 47 33.3 0.0**
BR131 pmax pmax
comp=Z,16nm,1.2s
BR131 **Keskin Array S** 78.78 317 P **P** **16 47 33.3 0.0**
BR131 lAmb lAmb 16 47 36.1
comp=Z,16nm,1.1s
BRTR **Keskin Array B** 78.78 317 P **P** **16 47 35.1 +1.9**
comp=Z,7.7nm,1.1s,baz=72,slow=4.0,SNR=14
BRTR LR LR 17 28 15.9
comp=Z,394nm,18.1s,baz=40,slow=40
BRTR **Keskin Array B** 78.78 317 P **P** **16 47 33.6 +0.3**
BRTR **Keskin Array B** 78.78 317 P **P** **16 47 33.6 +0.3**
CKRC **Cesky Krumlov** 78.79 334 *e*P **P** **16 47 34.3 +1.3**
GZR **Gura Zlata** 78.83 327 ⇑P **P** **16 47 34.2 +0.8**
GZR **Gura Zlata** 78.83 327 ⇑P **P** **16 47 34.2 +0.8**
GRF **Grafenberg Arr** 78.93 336 *e*P **P** **16 47 34.8 +1.1**
comp=Z,19nm,1.2s,baz=26,slow=5.7
GRFO **Grafenberg** 78.93 336 P **P** **16 47 34.0 +0.3**
GRFO pmax pmax
comp=Z,15nm,1.0s
GRFO **Grafenberg** 78.93 336 P **P** **16 47 34.0 +0.3**
GRFO lAmb lAmb 16 47 40.8
comp=Z,15nm,1.0s
WET **Wettzell** 78.94 335 *e*P **P** **16 47 34.9 +1.0**
comp=Z,24nm,1.6s,baz=26,slow=5.7
GEC2 **GERESS Array S** 78.96 334 *e*P **P** **16 47 34.6 +0.6**
comp=Z,12nm,1.6s,baz=26,slow=5.7
GERES **GERESS Array B** 78.96 334 P **P** **16 47 35.2 +1.2**
comp=Z,1.7nm,0.8s,baz=48,slow=4.0,SNR=7.8
GERES LR LR 17 26 13.9
comp=Z,359nm,18.2s,baz=55,slow=39
GERES **GERESS Array B** 78.96 334 P **P** **16 47 33.9 -0.2**
BZS **Buzias** 79.08 328 ⇓P **P** **16 47 35.7 +1.1**
BZS **Buzias** 79.08 328 ⇓P **P** **16 47 35.7 +1.1**
CONA **Conrad Observa** 79.09 332 *i* P **P** **16 47 36.2 +1.5**
comp=Z,14nm,1.3s
TNS **Taunus Mts** 79.21 338 *e*P **P** **16 47 36.1 +0.8**
comp=Z,13nm,1.4s,baz=26,slow=5.7
AHRW **Bad Neuenahr-A** 79.27 339 *e*P **P** **16 47 36.5 +0.9**
comp=Z,12nm,1.1s,baz=26,slow=5.7
MILB **Miltenberg** 79.34 337 *e*P **P** **16 47 36.7 +0.7**
comp=Z,12nm,0.9s,baz=26,slow=5.7
HERR **Herculane** 79.40 327 ⇓P **P** **16 47 37.0 +0.6**
BTNL **Ternell** 79.47 339 *d*P **P** **16 47 37.8 +1.1**
BTNL *d*pP **pwP** **16 47 51.6 +1.6**
MEM **Membach** 79.47 339 *d*P **P** **16 47 38.3 +1.6**
MORH **Mrgy, Hungar** 79.64 330 ⇑P **P** **16 47 36.8 -0.9**
MOA **Molln** 79.67 333 *e*P **P** **16 47 39.2 +1.4**
comp=Z,2.2nm,0.5s
BHOU **Houvegnez** 79.71 339 *d*P **P** **16 47 39.6 +1.6**
BHOU *d*PcP **pP** **16 47 46.7 +0.4**
G57A **Newington** 79.72 32 P 16 47 38.0
baz=329
MIAR **Mount Ida** 79.73 50 P 16 47 38.7
baz=320
ARSA **Arzberg** 79.79 332 *e*P **P** **16 47 39.7 +1.2**
comp=Z,8.7nm,1.3s
BCLA **Clavier** 79.82 340 *d*P **P** **16 47 39.8 +1.2**
BGES **Gesves** 79.91 340 *d*P **P** **16 47 40.9 +1.9**
SNF **Seneffe** 79.98 340 *d*P **P** **16 47 41.5 +2.1**
BMRD **Maredsous** 80.06 340 *dx* x 16 47 34.4
BMRD *d*P **P** **16 47 41.5 +1.7**
FRGS **Fruska Gora** 80.14 328 ⇓P **P** **16 47 41.4 +1.0**
RJOB **Jochberg** 80.22 334 *e*P **P** **16 47 42.0 +1.1**
comp=Z,28nm,1.1s,baz=26,slow=5.7
STU **Stuttgart** 80.33 337 *e*P **P** **16 47 42.1 +0.8**
comp=Z,15nm,0.5s,baz=26,slow=5.7
SOKA **Soboth** 80.46 332 *e*P **P** **16 47 43.1 +0.9**
comp=Z,16nm,1.2s,SNR=9.3
GROS **Grobnik** 80.50 332 *i* P **P** **16 47 42.9 +0.5**
KBA **Koelnbreinsper** 80.64 333 *e*P **P** **16 47 44.5 +1.2**
comp=Z,19nm,1.0s,SNR=11
TAOE **Nuku Hiva Isla** 80.76 113 *e*LR LR 17 13 03.6
comp=Z,243nm,26.1s
MYKA **Terra Mystica** 80.94 333 *e*P **P** **16 47 46.0 +1.2**
comp=Z,3.8nm,1.0s
WATA **Walderalm** 80.95 335 *i* P **P** **16 47 45.9 +1.1**
comp=Z,15nm,1.0s
BFO **Black Forest** 80.97 337 P **P** **16 47 44.8 0.0**
BFO pmax pmax
comp=Z,11nm,1.1s
BFO **Black Forest** 80.97 337 P **P** **16 47 44.8 0.0**
BFO **Black Forest** 80.97 337 *e*P **P** **16 47 45.5 +0.7**
comp=Z,10nm,1.1s,baz=26,slow=5.7
DIVS **Divibare** 80.98 328 P **P** **16 47 44.8 -0.2**
DIVS lAmb lAmb 16 47 51.1
comp=Z,10.0nm,1.0s
VTS **Vitosha** 80.99 325 P **P** **16 47 45.9 +0.7**
VTS pmax pmax
comp=Z,22nm,1.3s
VTS **Vitosha** 80.99 325 P **P** **16 47 45.9 +0.7**
VTS lAmb lAmb 16 47 52.1
comp=Z,22nm,1.3s
WTTA **Wattenberg** 81.00 335 *e*P **P** **16 47 46.3 +1.1**
comp=Z,21nm,1.2s,SNR=8.2
RETA **Reutte** 81.05 335 *i* P **P** **16 47 46.6 +1.2**
comp=Z,7.1nm,0.9s
CRES **Cresnjev** 81.07 331 *i* P **P** **16 47 45.8 +0.4**
MOTA **Moosalm** 81.08 335 *e*P **P** **16 47 46.3 +0.7**
comp=Z,22nm,1.1s,SNR=6.8
SQTA **Sankt Quirin** 81.16 335 *e*P **P** **16 47 48.3 +2.3**
comp=Z,14nm,1.3s

ABTA	**Abfaltersbach**	**81.19 334**	*e*P		**P**	**16 47 47.6**	**+1.4**
	comp=Z,9.3nm,1.4s						
ECH	**Echery**	**81.39 338**	P		**P**	**16 47 47.2**	**+0.1**
ECH			pmax		pmax		
	comp=Z,18nm,1.3s						
ECH	**Echery**	**81.39 338**	P		**P**	**16 47 47.2**	**+0.1**
ECH			IAmb		IAmb	16 47 50.1	
	comp=Z,18nm,1.3s						
FETA	**Feichten**	**81.48 335**	*e*P		**P**	**16 47 48.5**	**+0.8**
	comp=Z,6.6nm,1.1s						
DAVA	**Damuels**	**81.49 336**	*i* P		**P**	**16 47 49.1**	**+1.3**
	comp=Z,8.4nm,1.1s						
PPT2	**Papeete2**	**81.87 126**	*e*LR		LR	17 13 35.1	
	comp=Z,275nm,23.8s,baz=328						
CTI	**Castel Tesino**	**82.08 334**	P		**P**	**16 47 49.6**	**-1.2**
CTI			pmax		pmax		
	comp=Z,7.0nm,1.0s						
CTI	**Castel Tesino**	**82.08 334**	P		**P**	**16 47 49.6**	**-1.2**
TUE	**Stuetta**	**82.38 336**	P		**P**	**16 47 52.9**	**+0.4**
TUE			IAmb		IAmb	16 47 56.1	
	comp=Z,17nm,1.2s						
N61A	**South Mountain**	**83.70 34**	P			16 47 59.3	
	baz=329						
L63A	**North Scituate**	**83.76 32**	P			16 47 59.1	
	baz=331						
R57A	**Stanardsville**	**84.04 38**	P			16 48 01.8	
	baz=327						
S57A	**Dark Hollow, R**	**84.30 39**	P			16 48 02.9	
	baz=327						
NRCA	**Norcia**	**84.50 332**	P		**P**	**16 48 03.9**	**+0.6**
RAYN	**Ar Rayn**	**84.66 298**	P		**P**	**16 48 04.1**	**-0.3**
RAYN			pmax		pmax		
	comp=Z,8.0nm,1.2s						
RAYN	**Ar Rayn**	**84.66 298**	P		**P**	**16 48 04.1**	**-0.3**
RAYN			IAmb		IAmb	16 48 09.3	
	comp=Z,8.2nm,1.1s						
SSB	**Saint Sauveur**	**84.79 338**	P		**P**	**16 48 04.5**	**-0.2**
SSB			pmax		pmax		
	comp=Z,10.0nm,1.1s						
SSB	**Saint Sauveur**	**84.79 338**	P		**P**	**16 48 04.5**	**-0.2**
SSB			IAmb		IAmb	16 48 07.4	
	comp=Z,10nm,1.1s						
INTR	**Introdacqua**	**84.97 331**	P		**P**	**16 48 05.7**	**0.0**
T60A	**Surry**	**85.78 38**	P			16 48 09.9	
	baz=328						
GOGA	**Godfrey**	**85.80 44**	P			16 48 10.4	
	baz=325						
ESDC	**Sonseca Array**	**92.09 342**	LR		LR	17 33 31.2	
	comp=Z,123nm,21.8s,baz=290,slow=38						
KEST	**Kesra**	**92.16 331**	LR		LR	17 35 38.6	
	comp=Z,207nm,18.2s,baz=302,slow=39						
PLCA	**Paso Flores**	**148.20 96**	PKPbc		**PKPbc**	**16 55 16.1**	**+0.1**
	comp=Z,6.7nm,1.1s,baz=306,slow=4.5,SNR=6.4						
PLCA	**Paso Flores**	**148.20 96**	PKP2		**PKPbc**	**16 55 16.2**	**+0.2**
PLCA	**Paso Flores**	**148.20 96**			**PKPbc**	**16 55 16.2**	**+0.2**
CPUP	**Villa Florida**	**148.79 61**	PKPbc		**PKPbc**	**16 55 18.6**	**+0.8**
	comp=Z,6.4nm,1.2s,baz=339,slow=2.5,SNR=4.8						
CPUP	**Villa Florida**	**148.79 61**			**PKPbc**	**16 55 18.1**	**+0.2**
VNA2	**Neumayer--Watz**	**153.43 194**	PKPdf		**PKPbc**	**16 55 27.1**	**-0.2**
	baz=134,slow=2.9						
VNA3	**Neumayer Olymp**	**153.51 192**	PKPdf		**PKPdf**	**16 55 21.1**	**+1.3**
VNA1	**Neumayer--Stat**	**153.81 194**	PKPdf		**PKPdf**	**16 55 22.0**	**+1.8**

*IDC **21** 16:40:18.8±0.8,1°.56S×138°.96E,h0km,mb4.0/7, mb1 4.3/11,mb1mx3.9/51,mbtmp4.2/11,ML4.3/4,MS3.6/6, Ms1 3.6/6,ms1mx3.2/31,Error ellipse: s-maj=21.7km s-min=12.4km az=41.0*
*DJA **21** 16:40:21.4±0.5,1°.5±.6°×13°.9E±°,h45km±66km,M4.3/7, mb4.2/4,mB5.5/1,MLv4.4/7,Mw(mB)5.0/1*
*NEIC **21** 16:40:24.0±1.7,1°.7S±0°.1×138°.8E±0°.1,h31km±6km, mb4.4/17,Error ellipse: s-maj=18.8km s-min=12.5km az=217.0*
ISC 21 16:40:24.2±0.8,1°.69S±0°.08×138°.75E±0°.05,h35km,n46, σ1s48/44,mb4.3/10,MS3.7/4,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.68**	**122**	P			**Pn**	**16 40 51.6**	**+0.5**
GENI				S			**Sn**	**16 41 16.3**	**+4.9**
JAY	**Jayapura**	**2.12**	**113**	Pn			**Pn**	**16 40 55.4**	**-1.8**
	13nm,0.3s,baz=262,slow=7.7,SNR=101								
JAY				Lg			Lg	16 41 20.4	
	26nm,0.3s,baz=121,slow=19,SNR=7.8								
JAY	**Jayapura**	**2.12**	**113**	P			**Pn**	**16 40 56.2**	**-1.0**
JAY				S			**Sn**	**16 41 21.2**	**-1.2**
SRPI	**Serui, Papua**	**2.51**	**266**	P			**Pn**	**16 41 03.0**	**+0.4**
SRPI				S			**Sn**	**16 41 33.7**	**+1.7**
BAKI	**Biak**	**2.69**	**281**	P			**Pn**	**16 41 03.1**	**-1.8**
FAKI	**Fak Fak**	**6.61**	**259**	Pn			**Pn**	**16 41 59.0**	**+0.1**
FAKI	**Fak Fak**	**6.61**	**259**	P			**Pn**	**16 41 58.8**	**-0.1**
	0.2nm30nm,0.9s								
SIJI	**Sorong**	**7.52**	**276**	Pn			**Pn**	**16 42 13.6**	**+2.1**
	0.7nm,0.3s,baz=24,slow=22,SNR=4.4								
SIJI				LR			LR	16 45 16.8	
	comp=Z,293nm,19.5s,baz=74,slow=39								
SWI	**Sorong**	**7.53**	**276**	P			**Pn**	**16 42 10.4**	**-1.2**
	0.1nm10.0nm,0.6s								
PMG	**Port Moresby**	**11.35**	**133**	LR			LR	16 48 33.6	
	comp=Z,309nm,19.3s,baz=337,slow=44								
COEN	**Coen**	**12.95**	**160**	Pn			**Pn**	**16 43 25.2**	**-0.7**
MTN	**Manton Dam**	**13.40**	**214**				**Pn**	**16 43 31.3**	**-0.7**
SOEI	**Soe**	**16.48**	**240**	P			**P**	**16 44 15.8**	**+0.5**
KNRA	**Kununurra**	**17.03**	**215**	Pn			**Pn**	**16 44 19.4**	**-0.4**
KNRA				IAmb			IAmb	16 44 28.4	
	comp=Z,36nm,1.0s								
BATI	**Baumata**	**17.21**	**240**	P			**P**	**16 44 24.2**	**+0.8**
	comp=Z,3.1nm,0.3s,baz=170,slow=3.1,SNR=6.1								
WB0	**Warramunga Arr**	**18.46**	**193**	P			**P**	**16 44 36.0**	**-1.1**
WB0				IAmb			IAmb	16 44 40.1	
	comp=Z,25nm,1.1s								
WR0	**Warramunga Arr**	**18.61**	**192**	P			**P**	**16 44 37.9**	**-0.9**
WR0				IAmb			IAmb	16 44 42.3	
	comp=Z,34nm,1.3s								
WB2	**Warramunga Arr**	**18.64**	**193**	P			**P**	**16 44 38.5**	**-0.5**
WB2				IAmb			IAmb	16 44 42.6	
	comp=Z,15nm,0.8s								
WRA	**Warramunga Arr**	**18.64**	**193**	P			**P**	**16 44 39.0**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=14,slow=12,SNR=39								
WRA	**Warramunga Arr**	**18.64**	**193**	P			**P**	**16 44 38.1**	**-1.0**
CTA	**Charters Tower**	**19.70**	**159**	P			**Pn**	**16 44 51.9**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=319,slow=9.3,SNR=2.1								
CTAO	**Charters Tower**	**19.70**	**159**	Pn			**Pn**	**16 44 52.9**	**+0.6**
FITZ	**Fitzroy Crossi**	**20.77**	**217**	P			Pn	16 45 05.2	+0.4
	comp=Z,2.7nm,0.4s,baz=3.7,slow=10,SNR=7.7								
FITZ				S			**S**	**16 48 47.1**	**-5.2**
	comp=Z,3.2nm,0.5s,baz=200,slow=14,SNR=6.7								
FITZ	**Fitzroy Crossi**	**20.77**	**217**	P			**P**	**16 45 01.3**	**-1.0**
FITZ				IAmb			IAmb	16 45 12.1	
	comp=Z,19nm,1.3s								
MYLDM	**Lahad Datu**	**21.35**	**289**	P			**P**	**16 45 09.2**	**+0.6**
MYLDM				IAmb			IAmb	16 45 37.5	
	comp=Z,26nm,1.4s								
AS31	**Alice Springs**	**22.34**	**192**	P			**P**	**16 45 19.0**	**-0.2**
ASAR	**Alice Springs**	**22.34**	**192**	P			**P**	**16 45 19.4**	**+0.2**
	comp=Z,13nm,0.8s,baz=24,slow=10,SNR=85								
ASAR				S			**S**	**16 49 25.1**	**+2.3**
	comp=Z,2.7nm,0.9s,baz=13,slow=25,SNR=5.1								
ASAR				LR			LR	16 54 16.9	
	comp=Z,194nm,20.3s,baz=358,slow=37								
ASAR	**Alice Springs**	**22.34**	**192**	P			**P**	**16 45 18.9**	**-0.3**
EIDS	**Eidsvold**	**26.37**	**154**	P			**P**	**16 45 57.8**	**+0.5**
EIDS				IAmb			IAmb	16 46 03.3	
	comp=Z,19nm,0.9s								
PSA00	**Pilbara Seismi**	**27.01**	**222**	P			**P**	**16 46 03.6**	**+0.5**
STKA	**Stephens Creek**	**30.14**	**175**	P			**P**	**16 46 30.1**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=341,slow=9.9,SNR=5.1								
STKA				LR			LR	16 59 55.6	
	comp=Z,154nm,18.1s,baz=326,slow=39								
FORT	**Forrest**	**30.65**	**198**	P			**P**	**16 46 36.9**	**+1.6**
H11S3	**WAKE ISLAND Hy**	**34.03**	**53**	T			T	17 23 12.7	
	baz=236,slow=76,SNR=81								
H11S2	**WAKE ISLAND Hy**	**34.04**	**53**	T			T	17 22 55.5	
	baz=236,slow=76,SNR=93								
H11S1	**WAKE ISLAND Hy**	**34.05**	**53**	T			T	17 22 55.3	
	baz=236,slow=76,SNR=74								
MORW	**Morawa**	**34.77**	**216**	P			**P**	**16 47 11.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**43.97**	**299**	P			**P**	**16 48 28.9**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=114,slow=5.5,SNR=7.6								
SONM	**Songino Array**	**56.82**	**334**	LR			LR	17 12 57.4	
	comp=Z,58nm,21.6s,baz=108,slow=34								
MKAR	**Makanchi Array**	**69.01**	**322**	P			**P**	**16 51 26.3**	**0.0**
	comp=Z,1.7nm,1.0s,baz=112,slow=8.5,SNR=5.7								
MAKZ	**Makanchi**	**69.21**	**322**	P			**P**	**16 51 27.1**	**-0.4**
MAKZ				IAmb			IAmb	16 51 33.9	
	comp=Z,9.6nm,1.4s								
KURBB	**Kurchatov Arra**	**72.92**	**325**	P			**P**	**16 51 49.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=113,slow=5.4,SNR=9.1								
TIXI	**Tiksi**	**73.50**	**357**	LR			LR	17 23 18.5	
	comp=Z,46nm,18.2s,baz=292,slow=35								
BVAR	**Borovoye Array**	**78.50**	**325**	P			**P**	**16 52 21.0**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=289,slow=4.5,SNR=10.0								
BRVK	**Borovoye**	**78.58**	**325**	P			**P**	**16 52 23.0**	**+0.8**
BRVK				IAmb			IAmb	16 52 32.2	
	comp=Z,3.3nm,0.8s								
LPAZ	**La Paz**	**148.00**	**125**	PKPbc			**PKPbc**	**17 00 08.7**	**+0.9**
	comp=Z,3.2nm,1.0s,baz=243,slow=4.5,SNR=3.5								
CPUP	**Villa Florida**	**148.10**	**152**	PKPbc			**PKiKP**	**17 00 08.0**	**-0.9**
	comp=Z,6.3nm,1.0s,baz=208,slow=1.7,SNR=6.0								

*NORS **21** 16:40:24.7±0.0,42°.73N×45°.98E,h10km,MPVA3.4*
*MOS **21** 16:40:25.4±0.0,42°.76N×45°.98E,h13km,MPVA3.4*
*TIF **21** 16:40:28.0,42°.65N×45°.87E,h13km±2km*
ISC 21 16:40:27.2±1.1,42°.76N±0°.03×45°.98E±0°.02,h2km±10km, n23,σ0s99/45,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BTLR	**Botlikh**	**0.21**	**119**	*i* P			**Pg**	**16 40 31.4**	**+0.3**
BTLR				*e*Sg			**Sg**	**16 40 35.0**	**+1.1**
DVE	**Vedeno**	**0.22**	**30**	*i* P			**Pg**	**16 40 31.5**	**0.0**
DVE				*e*Sg			**Sg**	**16 40 35.7**	**+1.3**
GROC	**Groznyy**	**0.46**	**343**	*e*P			**Pg**	**16 40 36.7**	**+0.7**
GROC				*e*Sg			**Sb**	**16 40 45.1**	**-0.2**
DLMR	**Dylym**	**0.57**	**57**	*e*P			**Pg**	**16 40 38.3**	**+0.2**
DLMR				*e*Sg			**Sb**	**16 40 47.2**	**-1.4**
UNCR	**Uncukul**	**0.60**	**94**	*e*P			**Pb**	**16 40 39.8**	**-0.8**
UNCR				*e*Sg			**Sb**	**16 40 48.8**	**-0.8**
DBC	**Dubki**	**0.68**	**67**	*e*P			**Pb**	**16 40 40.8**	**-1.0**
DBC				*e*Sg			**Sb**	**16 40 50.7**	**-1.0**
ARKR	**Arakani**	**0.77**	**102**	*e*P			**Pb**	**16 40 42.4**	**-0.9**
ARKR				*e*Sg			**Sb**	**16 40 53.9**	**-0.3**
GNBR	**Gunib**	**0.82**	**117**	*e*P			**Pg**	**16 40 42.9**	**+0.1**
GNBR				*e*Sg			**Sb**	**16 40 55.5**	**-0.3**
BUJR	**Buynaksk**	**0.83**	**85**	*e*P			**Pn**	**16 40 45.1**	**-0.9**
BUJR				*e*Sg			**Sb**	**16 40 56.4**	**+0.2**
LGD	**Lagodekhi**	**0.95**	**168**	P			**Pg**	**16 40 45.2**	**-0.2**
LGD				S			**Sg**	**16 40 56.4**	**-1.2**
PNSH	**Pansheti**	**1.01**	**263**	P			**Pg**	**16 40 45.4**	**-1.2**
PNSH				S			**Sg**	**16 40 58.3**	**-1.4**
KMKR	**Kumukh**	**1.04**	**127**	*e*Pg			**Pg**	**16 40 47.0**	**-0.2**
KMKR				*e*Sg			**Sg**	**16 41 03.0**	**+0.6**
GUDG	**Gudauri**	**1.15**	**255**	P			**Pg**	**16 40 48.5**	**-0.7**
GUDG				S			**Sg**	**16 41 02.0**	**-2.0**
LACR	**Lac**	**1.24**	**274**	*e*Pg			**Pg**	**16 40 49.9**	**-1.0**
LACR				*e*Sg			**Sg**	**16 41 07.6**	**+0.6**
DDFL	**Dedoflistskaro**	**1.32**	**175**	P			**Pb**	**16 40 54.7**	**+1.9**
STDR	**Stavd-Durt**	**1.53**	**294**	*e*Pg			**Pn**	**16 40 55.6**	**+0.1**
STDR				*e*Sg			**Sg**	**16 41 18.8**	**+2.6**
ZEI	**Tsey**	**1.53**	**272**	*e*Pg			**Pn**	**16 40 55.1**	**-0.6**
ZEI				*e*Sg			**Sn**	**16 41 15.6**	**-0.8**
DIGR	**Digorskoe uzhe**	**1.77**	**275**	*e*Pg			**Pn**	**16 40 59.2**	**+0.1**
DIGR				*e*Sg			**Sn**	**16 41 22.4**	**+0.2**
AKT	**Akhty**	**1.83**	**134**	*e*Pg			**Pn**	**16 40 59.9**	**+0.1**
AKT				*e*Sg			**Sg**	**16 41 26.6**	**+0.7**
ONI	**Oni**	**1.87**	**266**	P			**Pn**	**16 41 01.7**	**+1.4**
ONI				S			**Sn**	**16 41 25.8**	**+1.3**
DMNI	**Dmanisi**	**1.96**	**223**	P			**Pn**	**16 41 01.8**	**+0.2**
DMNI				S			**Sn**	**16 41 26.2**	**-0.5**
BKRG	**Bakuriani**	**2.08**	**242**	P			**Pn**	**16 41 03.9**	**+0.6**
BKRG				S			**Sn**	**16 41 31.5**	**+1.6**
KBTC	**Kuba-Taba**	**2.15**	**300**	*e*Pg			**Pn**	**16 41 04.6**	**+0.5**
KBTC				*e*Sg			**Sb**	**16 41 33.8**	**-0.3**

*IDC **21** 16:46:18.6±46.0,34°.22N×25°.85E,h0km,mb3.7/3, mb1 3.5/4,mb1mx3.2/46,mbtmp3.5/4,ML3.7/1,Error ellipse: s-maj=849.4km s-min=75.2km az=58.0*
*ISK **21** 16:46:30.5,35°.05N×26°.83E,h10km,ML3.3/12*
*THE **21** 16:46:30.4,35°.00N×26°.83E,h5km±2km,ML3.1/4,Error ellipse: s-maj=2.5km s-min=0.5km az=145.0*
*ATH **21** 16:46:33.5,35°.25N×26°.70E,h11km±3km,ML3.0/7,Error ellipse: s-maj=4.8km s-min=1.2km az=157.0*
ISC 21 16:46:30.2±1.5,35°.04N±0°.07×26°.82E±0°.04,h10km±11km, n50,σ0s87/61,mb3.4/3,1D,Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.50**	**279**	P			**Pg**	**16 46 40.8**	**+0.7**
ZKR				S			**Sb**	**16 46 48.1**	**-0.4**
ZKR				AML			AML	16 46 49.0	
	comp=E,9379μm,0.6s								
ZKR				AML			AML	16 46 49.1	
	comp=N,5294μm,0.2s								
ZKR	**Zakros**	**0.50**	**279**	P			**Pg**	**16 46 40.6**	**+0.5**
ZKR				S			**Sb**	**16 46 48.4**	**-0.1**
	comp=N,4μm,0.4s								
ZKR	**Zakros**	**0.50**	**279**	PG			**Pg**	**16 46 40.7**	**+0.7**
ZKR				SG			**Sb**	**16 46 48.4**	**-0.1**
KARP	**Karpathos**	**0.58**	**28**	P			**Pb**	**16 46 42.4**	**-0.1**
KARP				S			**Sb**	**16 46 50.3**	**-0.4**
KARP				AML			AML	16 46 52.6	
	comp=E,14566μm,0.5s								
KARP				AML			AML	16 46 52.9	
	comp=N,16068μm,0.5s								
KARP	**Karpathos**	**0.58**	**28**	P			**Pb**	**16 46 42.4**	**-0.1**
KARP				S			**Sb**	**16 46 51.7**	**+0.9**
	comp=N,8μm,0.6s								
KARP	**Karpathos**	**0.58**	**28**	PG			**Pg**	**16 46 41.9**	**+0.4**
KARP				SG			**Sb**	**16 46 50.4**	**-0.4**
STIA	**Sitia Lasithi**	**0.62**	**286**	P			**Pg**	**16 46 42.8**	**+0.5**
STIA				S			**Sb**	**16 46 52.9**	**+0.9**
FRMA	**Ierapetra Chan**	**0.90**	**269**	P			**Pg**	**16 46 45.6**	**-1.9**
FRMA				S			**Sg**	**16 46 57.7**	**-1.4**
	comp=N,368nm,0.3s								
NPS	**Neapolis**	**1.02**	**283**	P			**Pn**	**16 46 50.6**	**0.0**
NPS				S			**Sg**	**16 47 03.2**	**+0.2**
NPS				AML			AML	16 47 07.3	
	comp=N,1194μm,0.2s								
NPS				AML			AML	16 47 08.3	
	comp=E,2259μm,0.3s								
NPS	**Neapolis**	**1.02**	**283**	P			**Pg**	**16 46 50.0**	**+0.2**
NPS				S			**Sb**	**16 47 04.3**	**+0.9**
	comp=E,810nm,0.3s								
HRKL	**Herakleio**	**1.44**	**281**	PN			**Pb**	**16 46 57.3**	**+0.2**
ARG	**Arkhangelos**	**1.58**	**42**	P			**Pg**	**16 47 00.9**	**+0.3**
ARG	**Arkhangelos**	**1.58**	**42**	PN			**Pb**	**16 46 59.4**	**-0.2**
NIS1	**Nisyros Isl.**	**1.59**	**10**	P			**Pb**	**16 46 59.5**	**-0.2**
NIS1	**Nisyros Isl.**	**1.59**	**10**	PN			**Pb**	**16 46 59.3**	**-0.4**
IDI	**Anoyia**	**1.60**	**280**	P			**Pg**	**16 47 00.9**	**-0.1**
IDI				S			**Sb**	**16 47 20.1**	**-0.1**
IDI				AML			AML	16 47 29.0	
	comp=E,438μm,0.5s								
IDI				AML			AML	16 47 34.1	
	comp=N,419μm,0.5s								
IDI	**Anoyia**	**1.60**	**280**	↓P			**Pg**	**16 47 01.3**	**+0.3**
IDI	**Anoyia**	**1.60**	**280**	PN			**Pb**	**16 47 00.3**	**+0.3**
SIVA	**Sivas**	**1.65**	**270**	P			**Pg**	**16 47 02.5**	**+0.6**
SIVA				AML			AML	16 47 32.4	
	comp=N,750μm,0.6s								
SIVA				AML			AML	16 47 37.7	
	comp=E,906μm,0.6s								
KOSK	**Kos Island**	**1.72**	**4**	PN			**Pn**	**16 47 01.0**	**+0.9**
SANT	**Santorini**	**1.73**	**321**	P			**Pn**	**16 47 00.3**	**-0.1**
SANT	**Santorini**	**1.73**	**321**	PN			**Pn**	**16 47 01.4**	**+1.0**
THR8	**Santorini-Mono**	**1.75**	**322**	P			**Pn**	**16 47 00.6**	**0.0**
THR6	**Thira Island,**	**1.75**	**319**	P			**Pn**	**16 47 01.7**	**+1.0**
THR9	**Santorini-Faro**	**1.78**	**318**	P			**Pb**	**16 47 02.1**	**-0.7**
SNT1	**Gialos, Santor**	**1.78**	**321**	P			**Pn**	**16 47 01.8**	**+0.7**
SNT5	**Nea Kammeni, S**	**1.79**	**320**	P			**Pb**	**16 47 02.4**	**-0.8**
THR3	**Thira Island,**	**1.79**	**320**	P			**Pn**	**16 47 02.2**	**+1.1**
THT2	**Imerovigli**	**1.80**	**321**	P			**Pn**	**16 47 01.5**	**+0.1**
THT2	**Imerovigli**	**1.80**	**321**	PN			**Pb**	**16 47 02.5**	**-0.8**
THR2	**Thira island,**	**1.80**	**322**	P			**Pn**	**16 47 01.7**	**+0.3**
THR5	**Thira Island,**	**1.83**	**319**	P			**Pn**	**16 47 02.3**	**+0.7**
SAP3	**Santorini-Thir**	**1.84**	**320**	P			**Pn**	**16 47 01.9**	**0.0**
BODT	**Bodrum**	**2.08**	**11**	PN			**Pn**	**16 47 05.7**	**+0.8**
TURN	**Turunc**	**2.08**	**33**	PN			**Pn**	**16 47 06.6**	**+1.4**
VAM	**Vamos**	**2.18**	**281**	P			**Pb**	**16 47 09.8**	**+0.1**
VAM				AML			AML	16 47 47.5	
	comp=N,323μm,0.5s								
VAM				AML			AML	16 47 52.9	
	comp=E,320μm,1.0s								
APE	**Apeiranthos**	**2.28**	**333**	P			**Pn**	**16 47 08.5**	**+0.6**
APE	**Apeiranthos**	**2.28**	**333**	PN			**Pn**	**16 47 08.4**	**+0.4**
DALY	**Dalyan (Mula)**	**2.31**	**39**	PN			**Pn**	**16 47 09.5**	**+1.1**
IMMV	**Iera Moni Meta**	**2.37**	**281**	P			**Pb**	**16 47 12.2**	**-0.7**
IMMV				AML			AML	16 47 59.9	
	comp=E,234μm,0.5s								
IMMV				AML			AML	16 48 05.4	
	comp=N,296μm,1.1s								
IMMV	**Iera Moni Meta**	**2.37**	**281**	PN			**Pn**	**16 47 10.7**	**+1.6**
AKAS	**Kas**	**2.56**	**61**	PN			**Pn**	**16 47 11.9**	**0.0**
SMG	**Samos**	**2.67**	**0**	P			**Pb**	**16 47 16.2**	**-1.9**
KTHA	**Kythira Island**	**3.30**	**293**	PN			**Pn**	**16 47 23.7**	**+1.8**
URLA	**Izmir**	**3.32**	**357**	PN			**Pn**	**16 47 23.6**	**+1.3**
CHOS	**Chios island**	**3.40**	**350**	PN			**Pn**	**16 47 24.2**	**+0.8**
AKASG	**Malin Array Be**	**15.75**	**6**	Pn			**Pn**	**16 50 13.0**	**+1.0**
	comp=N,0.3nm,0.3s,baz=196,slow=11,SNR=3.3								
KURBB	**Kurchatov Arra**	**40.14**	**51**	P			**P**	**16 54 03.6**	**-2.5**
	comp=N,0.6nm,0.6s,baz=277,slow=8.4,SNR=5.1								
MKAR	**Makanchi Array**	**42.70**	**57**	P			**P**	**16 54 27.6**	**+0.3**
	comp=N,0.3nm,0.5s,baz=271,slow=6.1,SNR=4.4								
ZALV	**Zalesovo Beam**	**44.11**	**46**	P			**P**	**16 54 37.6**	**-0.7**
	comp=N,1.1nm,0.6s,baz=268,slow=9.7,SNR=5.9								

*JMA **21** 16:48:26.0±0.2,23°.93N×122°.51E,h32km±5km,M2.2*
*TAP **21** 16:48:26.4,23°.95N×122°.55E,h36km±1km,ML2.6,C*
ISC 21 16:48:26.4±2.0,23°.92N±0°.04×122°.55E±0°.02,h29km±20km, n76,σ0s94/107,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.64**	**34**	P			**Pn**	**16 48 38.5**	**-1.0**
JYNG				S			**Sn**	**16 48 47.0**	**-1.7**
YOJ	**Yonaguni jima**	**0.68**	**38**	P			**Pn**	**16 48 39.4**	**-0.7**
YOJ				S			**Sn**	**16 48 49.0**	**-0.8**
YOJ	**Yonaguni jima**	**0.68**	**38**	*i* P			**Pn**	**16 48 39.3**	**-0.7**
	baz=38								
EWUT	**Wuta**	**0.88**	**307**	*e*S			**Sn**	**16 48 53.6**	**-0.9**
	baz=305								
TWD	**Chiawan**	**0.89**	**280**	*e*P			**Pn**	**16 48 43.1**	**+0.2**
	baz=278								
NACB	**Ninganchiao**	**0.91**	**286**	*e*P			**Pn**	**16 48 42.2**	**-1.0**
	baz=272								
NACB				*e*S			**Sn**	**16 48 53.8**	**-1.6**
	baz=272								
TWC	**Suao**	**0.94**	**317**	P			**Pn**	**16 48 43.0**	**-0.6**
	baz=305								
TWC				*e*S			**Sn**	**16 48 54.7**	**-1.3**
	baz=305								
ETLH	**Xiulin Townshi**	**1.02**	**286**	*e*P			**Pn**	**16 48 43.8**	**-0.9**
	baz=274								
ETLH				*e*S			**Sn**	**16 48 57.0**	**-1.1**
	baz=274								
ESL	**Shilin**	**1.03**	**264**	*e*P			**Pn**	**16 48 43.5**	**-1.3**
	baz=262								
NDS	**Dongshan**	**1.04**	**313**	P			**Pn**	**16 48 44.9**	**-0.1**
	baz=311								
NDS				*e*S			**Sn**	**16 48 58.6**	**+0.1**
	baz=311								
EGFH	**Guangfu**	**1.06**	**256**	*e*P			**Pn**	**16 48 44.6**	**-0.6**
	baz=254								
EGFH				*e*S			**Sn**	**16 48 57.9**	**-1.2**
	baz=254								
ILA	**Ilan**	**1.11**	**319**	*e*P			**Pn**	**16 48 46.3**	**+0.3**
	baz=318								
HGSD	**Ruisui**	**1.12**	**248**	*e*P			**Pn**	**16 48 45.0**	**-1.1**
	baz=246								
TWE	**Neicheng**	**1.13**	**315**	*e*P			**Pn**	**16 48 46.2**	**-0.1**
	baz=314								
NTC	**Toucheng**	**1.14**	**325**	*e*S	

	baz=268							
LIOB	**Emei**	**1.57**	**298**	*e*P		**Pn**	**16 48 53.6**	**+1.2**
	baz=296							
NSTT	**Nanjuang**	**1.58**	**297**	*e*S		**Sn**	**16 49 11.9**	**0.0**
	baz=295							
LDUT	**Ludao**	**1.59**	**219**	*e*P		**Pn**	**16 48 51.5**	**-1.1**
	baz=217							
ALS	**Alishan**	**1.65**	**256**	*i* P		**Pn**	**16 48 54.3**	**+0.6**
	baz=253							
ALS				*e*S		**Sn**	**16 49 14.1**	**0.0**
	baz=253							
LONT	**Longtian**	**1.65**	**232**	*e*P		**Pn**	**16 48 52.9**	**-0.5**
	baz=223							
WJS	**Zhushan**	**1.67**	**267**	*e*P		**Pn**	**16 48 55.0**	**+1.3**
	baz=265							
TWQ1	**Liyutan**	**1.68**	**285**	*e*P		**Pn**	**16 48 54.3**	**+0.5**
	baz=284							
WNT	**Mingjian**	**1.71**	**269**	*e*P		**Pn**	**16 48 55.6**	**+1.4**
	baz=267							
JISG	**Ishigakijimahi**	**1.74**	**67**	P		**Pn**	**16 48 54.3**	**-0.3**
JISG				S		**Sn**	**16 49 14.9**	**-0.9**
TWGBT	**Beinan**	**1.74**	**231**	*e*P		**Pn**	**16 48 53.9**	**-0.8**
	baz=240							
CHN5	**Tsauling**	**1.75**	**260**	*e*P		**Pn**	**16 48 56.0**	**+1.1**
	baz=258							
TWG	**Pinlang**	**1.75**	**231**	*e*P		**Pn**	**16 48 54.6**	**-0.1**
	baz=240							
STYH	**Taoyuan**	**1.79**	**246**	*e*P		**Pn**	**16 48 55.8**	**+0.5**
	baz=235							
STYT	**Tauyuan**	**1.81**	**246**	*e*P		**Pn**	**16 48 56.5**	**+0.8**
	baz=235							
WDLH	**Douliu**	**1.86**	**263**	*e*P		**Pn**	**16 48 57.8**	**+1.6**
	baz=262							
TPUB	**Ta-pu**	**1.87**	**251**	*e*P		**Pn**	**16 48 57.6**	**+1.2**
	baz=240							
TPUB				*e*S		**Sn**	**16 49 20.5**	**+1.4**
	baz=240							
WTP	**Ta-pu**	**1.90**	**250**	*e*P		**Pn**	**16 48 58.2**	**+1.3**
	baz=238							
ECL	**Taimali**	**1.97**	**228**	*e*P		**Pn**	**16 48 57.7**	**-0.2**
	baz=237							
SLGT	**Liugui**	**1.98**	**242**	*e*P		**Pn**	**16 48 59.0**	**+1.1**
	baz=235							
SLGT				*e*S		**Sb**	**16 49 25.4**	**-0.6**
	baz=235							
SGST	**Jiashian**	**1.99**	**246**	*e*P		**Pn**	**16 48 59.5**	**+1.4**
	baz=235							
WTK	**Tuku**	**1.99**	**264**	*e*S		**Sn**	**16 49 24.4**	**+2.2**
	baz=261							
CHN1	**Nanshi**	**2.00**	**249**	*e*P		**Pn**	**16 48 60.0**	**+1.8**
	baz=246							
CHN1				*e*S		**Sn**	**16 49 25.0**	**+2.8**
	baz=246							
JTJ	**Tarama**	**2.09**	**70**	*e*S		**Sn**	**16 49 25.2**	**+0.7**
SSD	**Sandimen**	**2.12**	**237**	*e*P		**Pn**	**16 49 01.9**	**+2.1**
	baz=229							
TSMG	**Majia**	**2.13**	**236**	*e*P		**Pn**	**16 49 01.7**	**+1.7**
	baz=227							
EAST	**Anshuo**	**2.19**	**226**	*e*P		**Pn**	**16 49 00.7**	**-0.2**
	baz=224							
MASBT	**Mashibuluo**	**2.19**	**234**	*e*P		**Pn**	**16 49 01.5**	**+0.6**
	baz=226							

WEL 21 16:59:24.0±1.4**,34°S**±30″×**17°9W**±4″**4, h134**km±66**km, M3.6**/12**, mB4.2/1, ML3.7**/10**, MLv3.6**/12**, Mw(mB)3.3**/1**, Error ellipse: s-maj=0.1km s-min=0.0km az=122.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.62**	**210**	P	Pn	17 00 18.5	-0.2
MXZ				S	Sn	17 00 60.0	-1.2
WMGZ	**Waiomatatini S**	**3.79**	**207**	P	Pn	17 00 21.5	+0.4
HAZ	**Te Kaha**	**4.00**	**214**	P	Pn	17 00 23.7	-0.1
HAZ				S	Sn	17 01 11.1	+0.8
RUGZ	**Raukumara Rang**	**4.22**	**213**	P	Pn	17 00 25.5	-1.4
RUGZ				S	Sn	17 01 18.2	+2.5
CNGZ	**Carnagh Statio**	**4.46**	**205**	P	Pn	17 00 31.7	+1.8
MWZ	**Matawai**	**4.59**	**212**	P	Pn	17 00 31.6	-0.2
MWZ				S	Sn	17 01 25.9	+1.5
URZ	**Urewera**	**4.72**	**215**	P	Pn	17 00 33.3	-0.1
RAGZ	**Rawiri**	**4.78**	**211**	P	Pn	17 00 34.3	+0.1
RAGZ				S	Sn	17 01 29.4	+0.5
RIGZ	**Rimuhau**	**4.82**	**207**	P	Pn	17 00 35.5	+0.8
RIGZ				S	Sn	17 01 28.2	-1.6
SNGZ	**Shannon Statio**	**5.05**	**210**	P	Pn	17 00 38.7	+0.8
MUGZ	**Murupara**	**5.06**	**216**	P	Pn	17 00 37.5	-0.4
RTZ	**Ruatahuna**	**5.07**	**214**	P	Pn	17 00 37.7	-0.5
ARHZ	**Aropaoanui**	**5.60**	**210**	P	Pn	17 00 45.0	-0.2
BKZ	**Black Stump Fm**	**5.74**	**214**	P	Pn	17 00 45.7	-1.4

*IDC **21** 17:01:14.6±1.7, 53.6′64N×164.52W, h0km, mb3.6/6, mb1 3.8/9, mb1mx3.5/42, mbtmp3.6/9, ML3.4/2, Error ellipse: s-maj=39.9km s-min=19.1km az=169.0*
*AEIC **21** 17:01:19±1.7, 53.80N±0.10′×164.23W±0.06, h49km±4km, Error ellipse: s-maj=14.0km s-min=4.7km az=174.0*
*NEIC **21** 17:01:20.2±1.4, 53.76N±0.07′×164.25W±0.07, h40km±9km, mb3.7/9, ML3.6(AEIC), Error ellipse: s-maj=9.8km s-min=5.7km az=163.0*
ISC 21 17:01:20.0±1.8**, 53.79N**±0.09′×**164.24W**±0.05**, h31**km±12**km, n88**, σ1§16/95**, mb3.5**/5**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESP	**Westdahl Peak**	**0.76**	**338**		**Pn**	**17 01 34.5**	**-0.2**
WESP					**Sn**	**17 01 45.7**	**+0.5**
WEBT	**Westdahl Beart**	**0.86**	**340**		**Pb**	**17 01 36.1**	**-0.4**
AKSA	**Akutan Strait**	**0.93**	**293**		**Pn**	**17 01 36.7**	**-0.2**
AKSA					**Sb**	**17 01 50.3**	**+0.6**
AKUT	**Akutan**	**0.97**	**292**		**Pn**	**17 01 37.4**	**-0.1**
AKUT					**Sn**	**17 01 50.1**	**-0.1**
AHB	**Akutan Harbor**	**0.99**	**290**		**Pn**	**17 01 37.7**	**0.0**
SSLW	**Shishaldin Wes**	**0.99**	**4**		**Pn**	**17 01 37.6**	**-0.2**
HSB	**Akutan Spr's B**	**1.07**	**293**		**Pn**	**17 01 38.9**	**+0.1**
AKLV	**Akutan Long Va**	**1.08**	**291**		**Pn**	**17 01 39.1**	**0.0**
AKLV					**Sb**	**17 01 53.4**	**-0.7**
AKMO	**Akutan Morgan**	**1.09**	**287**		**Pn**	**17 01 39.1**	**0.0**
AKGG	**Akutan Green G**	**1.11**	**292**		**Pn**	**17 01 39.8**	**+0.3**
AKGG					**Sn**	**17 01 54.1**	**+0.3**
AKRB	**Akutan Reef Bi**	**1.14**	**288**		**Pn**	**17 01 39.9**	**+0.2**
AKRB					**Sb**	**17 01 54.9**	**-0.6**
FALS	**False Pass**	**1.17**	**24**		**Pn**	**17 01 39.8**	**-0.5**
FALS	**False Pass**	**1.17**	**24**		**Sb**	**17 01 55.6**	**-0.9**
MNAT	**Makushin Natee**	**1.45**	**275**		**Pn**	**17 01 44.0**	**-0.2**
MSW	**Makushin Switc**	**1.51**	**276**		**Pn**	**17 01 45.1**	**+0.2**
MGOD	**Makushin Gods**	**1.56**	**271**		**Pn**	**17 01 45.6**	**-0.1**
MAPS	**Pakushin South**	**1.60**	**272**		**Pn**	**17 01 46.1**	**-0.1**
MAPS					**Sn**	**17 02 06.0**	**+0.2**
PN6	**Pavlof North-6**	**2.14**	**38**		**Pn**	**17 01 53.6**	**-0.1**
OKFG	**Magazine Ridge**	**2.22**	**262**		**Pn**	**17 01 55.8**	**+1.1**
OKSO	**Okmok South**	**2.38**	**261**		**Pn**	**17 01 57.9**	**+1.0**
SDPT	**Sand Point**	**2.69**	**53**	Pn	**Pn**	**17 02 01.6**	**+0.5**
SDPT				Sn	**Sn**	**17 02 33.8**	**+1.2**
NIKH	**Nikolski High**	**2.88**	**255**	Pn	**Pn**	**17 02 05.1**	**+1.3**
VNHG	**Veniaminof 1**	**3.81**	**48**		**Pn**	**17 02 16.7**	**+0.2**
SPIA	**Saint Paul Isl**	**4.82**	**317**	Pn	**Pn**	**17 02 32.6**	**+2.3**
ATKA	**Atka Island**	**6.22**	**259**	Pn	**Pn**	**17 02 49.4**	**-0.1**
SII	**Sitkinak Islan**	**6.39**	**60**	Pn	**Pn**	**17 02 52.0**	**0.0**
OHAK	**Old Harbor**	**7.11**	**57**	Pn	**Pn**	**17 03 01.4**	**-0.3**
KDAK	**Kodiak Island**	**7.69**	**54**	Pn	**Pn**	**17 03 09.4**	**-0.3**
	0.7nm,0.3s,baz=234,slow=3.8,SNR=10.0						
KDAK	**Kodiak Island**	**7.69**	**54**	Pn	**Pn**	**17 03 08.8**	**-0.9**
ADK	**Adak**	**7.78**	**261**	Pn	**Pn**	**17 03 14.4**	**+3.4**
RSO	**Redoubt South**	**9.14**	**38**	Pn	**Pn**	**17 03 33.1**	**+3.3**
CNPM	**China Poot**	**9.17**	**46**	Pn	**Pn**	**17 03 30.3**	**+0.3**
BRLK	**Bradley Lake**	**9.45**	**45**	Pn	**Pn**	**17 03 33.3**	**-0.6**
O22K	**Cooper Landing**	**10.34**	**44**	Pn	**Pn**	**17 03 47.2**	**+1.3**
SUA	**Susitna One**	**10.54**	**38**	Pn	**Pn**	**17 03 49.4**	**+0.6**
SKT	**Skwentna**	**10.62**	**34**	Pn	**Pn**	**17 03 51.3**	**+1.4**
RC01	**Rabbit Creek A**	**10.69**	**41**	Pn	**Pn**	**17 03 51.1**	**+0.3**
GAMB	**Gambell**	**10.73**	**342**	Pn	**Pn**	**17 03 53.8**	**+2.5**
ANM	**Nome**	**10.83**	**357**	Pn	**Pn**	**17 03 55.4**	**+2.7**
PPLA	**Purkeypile**	**11.09**	**30**	Pn	**Pn**	**17 03 56.3**	**0.0**
PWL	**Port Wells**	**11.12**	**44**	Pn	**Pn**	**17 03 56.4**	**-0.2**
KNK	**Knik Glacier**	**11.38**	**42**	Pn	**Pn**	**17 04 00.1**	**-0.1**
GHO	**Glory Hole Cre**	**11.41**	**39**	Pn	**Pn**	**17 04 01.1**	**+0.4**
GLI	**Glacier Island**	**11.64**	**46**	Pn	**Pn**	**17 04 04.5**	**+0.6**
SML	**Sawmill**	**11.66**	**40**	Pn	**Pn**	**17 04 04.9**	**+0.9**
FID	**Port Fidalgo**	**11.85**	**47**	Pn	**Pn**	**17 04 04.8**	**-1.8**
TNA	**Tin City**	**11.95**	**353**	Pn	**Pn**	**17 04 10.2**	**+2.2**
KTH	**Kantishna Hill**	**11.96**	**30**	Pn	**Pn**	**17 04 08.1**	**-0.2**
SCM	**Sheep Creek Mo**	**12.06**	**41**	Pn	**Pn**	**17 04 09.5**	**-0.1**
TRF	**Thorofare Moun**	**12.08**	**31**	Pn	**Pn**	**17 04 12.4**	**+2.5**
BPAW	**Bear Paw Mtn.**	**12.36**	**28**		**Pn**	**17 04 12.5**	**-1.2**
KLU	**Klutina**	**12.45**	**44**		**Pn**	**17 04 13.4**	**-1.4**
RAGM	**Ragged Mountai**	**12.49**	**50**	Pn	**Pn**	**17 04 14.7**	**-0.8**
HMT	**Hamilton**	**12.66**	**51**	Pn	**Pn**	**17 04 16.9**	**-0.9**
M24K	**Tolsona, Glenn**	**12.67**	**42**	Pn	**Pn**	**17 04 17.7**	**-0.1**
BMRM	**Bremner River**	**12.76**	**48**	Pn	**Pn**	**17 04 16.1**	**-3.1**
N25K	**Chitina, Valde**	**13.05**	**45**	Pn	**Pn**	**17 04 22.5**	**-0.7**
MLY	**Manley**	**13.16**	**26**	Pn	**Pn**	**17 04 25.5**	**+0.9**
GLB	**Gilahina Butte**	**13.32**	**47**	Pn	**Pn**	**17 04 25.7**	**-1.0**
PAX	**Paxson**	**13.42**	**39**	Pn	**Pn**	**17 04 30.3**	**+2.2**
I23K	**Minto, Yukon-K**	**13.62**	**27**		**Pn**	**17 04 30.8**	**0.0**
MCARA	**McCarthy VSAT**	**13.63**	**48**	Pn	**Pn**	**17 04 30.7**	**-0.3**
CCB	**Clear Creek Bu**	**13.70**	**31**	Pn	**Pn**	**17 04 32.1**	**+0.3**
MDM	**Murphy Dome**	**13.80**	**29**		**Pn**	**17 04 33.0**	**-0.2**
IL31		**14.07**	**32**	Pn	**Pn**	**17 04 38.4**	**+1.6**
ILAR	**Eielson Array**	**14.07**	**32**	Pn	**Pn**	**17 04 37.2**	**+0.3**
	0.1nm,0.3s,baz=222,slow=13,SNR=11						
ILAR	**Eielson Array**	**14.07**	**32**	Pn	**Pn**	**17 04 38.0**	**+1.0**
BARN	**Barnard Glacie**	**14.12**	**50**	Pn	**Pn**	**17 04 38.2**	**+0.5**
TABL	**Table Mountain**	**14.15**	**53**	Pn	**Pn**	**17 04 38.9**	**+0.7**
CTGM	**Chitina Glacie**	**14.23**	**51**	Pn	**Pn**	**17 04 39.1**	**-0.2**
DOT	**Dot Lake**	**14.33**	**38**		**Pn**	**17 04 40.1**	**-0.3**
SCRK	**Sand Creek**	**14.54**	**37**	Pn	**Pn**	**17 04 41.5**	**-2.0**
L27K	**Beaver Creek,**	**14.88**	**43**	Pn	**Pn**	**17 04 47.1**	**-0.9**
BCAR	**Beaver Creek A**	**14.90**	**43**		**Pn**	**17 04 47.0**	**-1.2**
K27K	**Chicken**	**15.28**	**39**		**Pn**	**17 04 53.1**	**0.0**
K27K				IAmb	IAmb	17 05 01.2	
	comp=Z,6.4nm,1.2s						
HYT	**Haines Junctio**	**15.98**	**53**		**Pn**	**17 05 02.4**	**0.0**
HYT				IAmb	IAmb	17 05 17.3	
	comp=Z,4.1nm,0.7s						
EGAK	**Eagle**	**16.01**	**38**	P	**P**	**17 05 04.0**	**-1.8**
DAWY	**Dawson**	**16.32**	**41**		**P**	**17 05 08.3**	**-1.0**
DAWY				IAmb	IAmb	17 05 14.5	
	comp=Z,4.0nm,0.8s						
TOLK	**Toolik Lake Re**	**16.41**	**19**		**P**	**17 05 09.7**	**-0.5**
DLBC	**Dease Lake**	**19.49**	**62**	P	**Pn**	**17 05 46.1**	**+0.4**
	baz=274,slow=15,SNR=2.1						
INK	**Inuvik**	**20.46**	**33**	P	**P**	**17 05 55.0**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=248,slow=11,SNR=8.1						
INK	**Inuvik**	**20.46**	**33**	P	**P**	**17 05 53.0**	**-1.6**
INK				IAmb	IAmb	17 06 08.7	
	comp=Z,3.2nm,0.8s						
PETK	**Petropavlovsk-**	**22.50**	**284**	P	**P**	**17 06 14.6**	**-2.1**
	comp=Z,4.4nm,0.9s,baz=90,slow=13,SNR=18						
YKA	**Yellowknife Ar**	**26.96**	**51**	P	**P**	**17 06 60.0**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=277,slow=9.4,SNR=10						
NVAR	**Mina Array Bea**	**34.68**	**97**	P	**P**	**17 08 07.2**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=304,slow=8.4,SNR=3.5						
SONM	**Songino Array**	**53.19**	**303**	P	**P**	**17 10 34.2**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=46,slow=8.5,SNR=3.6						
SONM	**Songino Array**	**53.19**	**303**	IAmb	IAmb	17 10 35.3	
	comp=Z,0.8nm,1.1s						
AKASG	**Malin Array Be**	**75.27**	**351**	P	**P**	**17 12 58.0**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=12,slow=5.9,SNR=4.3						

*IDC **21** 17:02:12.4±1.1, 67.05N×20.73E, h0km, mb1 2.7/3, mb1mx2.6/42, mbtmp2.6/3, ML1.8/3, Error ellipse: s-maj=12.5km s-min=7.3km az=141.0*
*UPP **21** 17:02:12.7±0.1, 67.06N×20.91E, h0km, ML2.0, Explosion*
*NAO **21** 17:02:13.4±0.9, 67.07N×21.12E, ML2.4*
*HEL **21** 17:02:13.5±0.1, 67.06N×20.89E, h0km, ML1.9, ML2.0(UPP), Explosion*
*BER **21** 17:02:15.4±3.3, 67.04N×20.65E, h0km, ML1.7, ML2.4(NAO), Suspected explosion*
ISC 21 17:02:12.3±0.8**, 67.06N**±0.02×**20.85E**±0.03**, h0**km**, n53,** σ1§**06/74, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.60**	**48**	P	**Pg**	**17 02 23.8**	**+0.1**
MASU	**Masugnsbyn**	**0.60**	**48**	*i* P	**Pg**	**17 02 23.8**	**+0.1**
PAJU	**Pajala**	**0.89**	**91**	P	**Pg**	**17 02 28.6**	**-0.6**
PAJU				S	**Sg**	**17 02 40.0**	**-0.7**
PAJU	**Pajala**	**0.89**	**91**	*e*P	**Pg**	**17 02 28.6**	**-0.6**
HARU	**Harads**	**0.90**	**177**	P	**Pg**	**17 02 29.6**	**+0.1**
HARU	**Harads**	**0.90**	**177**	*e*P	**Pg**	**17 02 29.6**	**+0.1**
RATU	**Laukkuluspa**	**0.91**	**328**	P	**Pg**	**17 02 29.9**	**+0.2**
RATU	**Laukkuluspa**	**0.91**	**328**	*e*P	**Pg**	**17 02 29.9**	**+0.2**
LANU	**Lannavaara**	**1.09**	**23**	P	**Pg**	**17 02 32.3**	**-0.7**
LANU				S	**Sg**	**17 02 47.3**	**+0.2**
LANU	**Lannavaara**	**1.09**	**23**	*e*P	**Pg**	**17 02 32.1**	**-1.0**
LANU				*e*S	**Sg**	**17 02 47.1**	**0.0**
KOVU	**Salmi**	**1.20**	**348**	P	**Pg**	**17 02 35.0**	**-0.2**
KOVU				S	**Sb**	**17 02 51.7**	**-0.1**
KOVU	**Salmi**	**1.20**	**348**	*e*P	**Pg**	**17 02 35.0**	**-0.2**
KOVU				*e*S	**Sb**	**17 02 51.7**	**-0.1**
TOF	**Tornio**	**1.70**	**124**	*e*P	**Pn**	**17 02 43.4**	**+0.3**
TOF				MSG		17 03 09.7	
	comp=Z,9.6nm,0.2s						
HEF	**Hetta**	**1.73**	**37**	*e*P	**Pn**	**17 02 43.6**	**+0.1**
HEF	**Hetta**	**1.73**	**37**	*e*P	**Pn**	**17 02 43.6**	**+0.1**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn	**Pb**	**17 02 48.5**	**-0.2**
KIF				Sn	**Sg**	**17 03 15.5**	**+0.6**
KIF	**Kilpisjarvi**	**1.95**	**359**	Pn	**Pb**	**17 02 48.5**	**-0.2**
KIF				Sn	**Sg**	**17 03 15.5**	**+0.6**
KIF	**Kilpisjarvi**	**1.95**	**359**	*e*P	**Pb**	**17 02 48.5**	**-0.2**
KIF				*e*S	**Sg**	**17 03 14.6**	**-0.4**
RNF	**Rovaniemi**	**2.09**	**100**	*e*P	**Pn**	**17 02 49.5**	**+1.0**
KTK1	**Kautokeino**	**2.16**	**23**	Pn	**Pb**	**17 02 51.3**	**-0.8**
KTK1				Sn	**Sb**	**17 03 19.4**	**+0.1**
KTK1	**Kautokeino**	**2.16**	**23**	*e*P	**Pb**	**17 02 51.5**	**-0.7**
KTK1				*e*S	**Sb**	**17 03 20.1**	**+0.8**
KTK1				IAML		17 03 39.9	
	comp=Z,9.3nm,0.2s						
I37NO	**I37NO**	**2.19**	**338**	*i*		17 16 20.3	
	baz=158,slow=330,SNR=0.9						
SGF	**Sodankyl**	**2.24**	**78**	*e*P	**Pn**	**17 02 51.6**	**+1.1**
SGF				*e*SG	**Sb**	**17 03 22.6**	**+0.9**
BURU	**Burvik**	**2.50**	**175**	*e*P	**Pn**	**17 02 55.7**	**+1.6**
OBF4	**Vikkela, Lumij**	**2.85**	**140**	*e*P	**Pn**	**17 02 59.9**	**+1.0**
OUL	**Oulu**	**2.86**	**132**	*e*PB	**Pn**	**17 03 01.4**	**+2.4**
OBF0	**Syolatti, Pyha**	**2.93**	**150**	*e*P	**Pn**	**17 03 01.7**	**+1.7**
OBF0				MSG		17 03 44.0	
	comp=Z,3.8nm,0.2s						
ARA0	**ARCESS Array S**	**3.03**	**33**	Pn	**Pn**	**17 03 01.9**	**+0.5**
	baz=218,slow=16						
ARA0				Sn	**Sn**	**17 03 37.6**	**-0.8**
	baz=204,slow=22						
ARA0	**ARCESS Array S**	**3.03**	**33**	Pn	**Pn**	**17 03 01.9**	**+0.5**
	baz=218,slow=16						
ARA0				Sn	**Sn**	**17 03 37.6**	**-0.8**
	baz=204,slow=22						
ARA0	**ARCESS Array S**	**3.03**	**33**	*e*P	**Pn**	**17 03 01.9**	**+0.5**
ARCES	**ARCESS Array B**	**3.03**	**33**	Pn	**Pn**	**17 03 01.8**	**+0.4**
	baz=213,slow=13,SNR=36						
ARCES				Sn	**Sn**	**17 03 40.1**	**+1.8**
	baz=216,slow=23,SNR=8.3						
OUF	**Merijarvi**	**3.14**	**148**	*e*P	**Pn**	**17 03 04.4**	**+1.5**
UMAU	**Umeaa**	**3.19**	**181**	*e*P	**Pn**	**17 03 04.6**	**+1.1**
VRF	**Varrio**	**3.45**	**74**	*e*P	**Pn**	**17 03 08.9**	**+1.7**
KEV	**Kevo**	**3.54**	**37**	*e*P	**Pn**	**17 03 08.4**	**+0.1**
KU6	**Riekki**	**3.76**	**102**	*e*P	**Pn**	**17 03 13.4**	**+2.0**
HUSU	**Husuum**	**3.80**	**191**	*e*P	**Pn**	**17 03 13.3**	**+1.4**
VAF	**Ylistaro**	**4.11**	**168**	*e*P	**Pn**	**17 03 18.1**	**+2.0**
VAF				*e*S	**Sn**	**17 04 03.4**	**-1.4**
HEMU	**Hemsoen**	**4.56**	**197**	*e*P	**Pn**	**17 03 23.4**	**+1.0**
HEMU				*e*S	**Sn**	**17 04 15.8**	**-0.3**
SUF	**Sumiainen**	**4.91**	**150**	*e*P	**Pn**	**17 03 28.9**	**+1.8**
SUF				*e*S	**Sn**	**17 04 25.1**	**+0.5**
KEF	**Keuruu**	**5.21**	**159**	*e*P	**Pn**	**17 03 33.1**	**+1.8**
KEF				*e*S	**Sn**	**17 04 31.1**	**-0.9**
RAF	**Rauma**	**6.08**	**176**	*e*P	**Pn**	**17 03 43.0**	**-0.1**
RAF				*e*S	**Sn**	**17 04 51.5**	**-1.8**
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**17 03 44.5**	**+1.3**
	baz=347,slow=16						
FIA0				Sn	**Sn**	**17 04 53.2**	**-0.2**
	baz=342,slow=28						
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**17 03 44.5**	**+1.3**
	baz=347,slow=16						
FIA0				Sn	**Sn**	**17 04 53.2**	**-0.2**
	baz=342,slow=28						
FINES	**FINESS Array B**	**6.08**	**156**	Pn	**Pn**	**17 03 44.1**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=347,slow=14,SNR=7.5						
FINES				Sn	**Sn**	**17 04 51.7**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=345,slow=22,SNR=5.9						
NUR	**Nurmijrvi**	**6.79**	**164**	*e*S	**Sn**	**17 05 07.0**	**-3.8**
NB2	**NORSAR Subarra**	**7.37**	**219**	Pn	**Pn**	**17 04 00.8**	**-0.1**
	baz=24,slow=14						
NB2	**NORSAR Subarra**	**7.37**	**219**	Pn	**Pn**	**17 04 00.8**	**-0.1**
	baz=24,slow=14						
NOA	**NORSAR Array B**	**7.37**	**219**	Pn	**Pn**	**17 04 00.3**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=46,slow=23,SNR=1.7						
NRA0	**NORESS Array S**	**7.55**	**217**	Pn	**Pn**	**17 04 04.1**	**+0.7**
	baz=31,slow=12						
NRA0	**NORESS Array S**	**7.55**	**217**	Pn	**Pn**	**17 04 04.1**	**+0.7**
	baz=31,slow=12						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**17 04 05.2**	**+0.5**
	baz=16,slow=14						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**17 04 05.2**	**+0.5**
	baz=16,slow=14						

*SOME **21** 17:08:37.3, 41.30N×78.03E, h5km*
*KRNET **21** 17:08:37.8±0.1, 41.27N×78.11E, h12km, mb2.1*
*NNC **21** 17:08:38.4±1.2, 41.31N×78.18E, h0km, mb3.2, mpv2.7, Error ellipse: s-maj=8.1km s-min=5.1km az=175.0*
ISC 21 17:08:36.9±2.3**, 41.24N**±0.09×**78.03E**±0.04**, h8**km±12**km, n28,** σ1§**08/46, 8C-8D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.09**	**325**	⇑*i* P	**Pb**	**17 08 58.4**	**+0.2**
	baz=22						
KDJ				⇑*i* S	**Sn**	**17 09 14.0**	**-0.1**
	baz=22						
PRZ	**Przheval'sk**	**1.27**	**13**	⇓*i* P	**Pn**	**17 09 01.8**	**+0.6**
	baz=10.0						
PRZ				⇓*i* S	**Sn**	**17 09 19.4**	**+0.8**
	baz=10.0						
ANVS	**Anan'yevo**	**1.57**	**350**	⇑*i* P	**Pg**	**17 09 06.5**	**-0.4**
	baz=48						
ANVS				⇑*i* S	**Sg**	**17 09 28.5**	**+1.2**
	baz=48						
ULHL	**Ulahol**	**1.67**	**308**	⇑*i* P	**Pg**	**17 09 09.9**	**+1.0**
	baz=6.0						
ULHL				⇑*i* S	**Sg**	**17 09 33.5**	**+2.8**
	baz=6.0						
SATY	**Saty**	**1.84**	**9**	*e*P	**Pb**	**17 09 10.9**	**+0.1**
	1.3nm,0.4s						
SATY				*e*S	**Sg**	**17 09 35.0**	**-1.1**
	6.0nm,0.1s						
SATY	**Saty**	**1.84**	**9**	P	**Pb**	**17 09 11.0**	**+0.1**
	0.4nm,0.2s						
SATY				S	**Sg**	**17 09 35.0**	**-1.1**
	7.1nm,0.2s						
TNSS	**Tian-Shan**	**1.97**	**336**	*e*P	**Pg**	**17 09 14.0**	**-0.6**
	2.1nm,0.3s						
TNSS				*e*S	**Sg**	**17 09 40.5**	**+0.4**
	2.4nm,0.2s						
TNSS	**Tian-Shan**	**1.97**	**336**	Pg	**Pg**	**17 09 14.0**	**-0.6**
	1.6nm,0.4s						
TNSS				Lg	Lg	17 09 40.4	
	2.5nm,0.2s						
BOOM	**Boomskoye usch**	**2.00**	**309**	⇓*i* P	**Pg**	**17 09 15.0**	**-0.2**
	baz=8.0						
BOOM				⇓*i* S	**Sg**	**17 09 42.3**	**+1.2**
	baz=8.0						
UZB	**Uzynbulak**	**2.05**	**21**	*e*P	**Pb**	**17 09 13.7**	**-0.7**
	2.7nm,0.2s						
UZB				*e*S	**Sb**	**17 09 39.6**	**-0.4**
	11nm,0.5s						
UZB	**Uzynbulak**	**2.05**	**21**	Pg	**Pb**	**17 09 13.7**	**-0.7**
	2.7nm,0.2s						
UZB				Lg	Lg	17 09 39.6	
	11nm,0.5s						
MDOK	**Medeo**	**2.06**	**340**	*e*P	**Pg**	**

baz=277
TWD eS Sb 17 21 24.6 -0.3
baz=277
NACB Ninganchiao 0.91 285 P Pb 17 21 13.8 +0.1
baz=271
NACB eS Sb 17 21 24.1 -1.4
baz=271
TWC Suao 0.93 316 P Pg 17 21 14.2 -0.1
baz=306
TWC eS Sg 17 21 26.5 -0.1
baz=306
ETLH Xiulin Townshi 1.02 285 eP Pb 17 21 15.5 0.0
baz=274
ETLH eS Sb 17 21 28.5 -0.2
baz=274
NDS Dongshan 1.03 312 *i* P Pn 17 21 16.4 +0.4
baz=311
NDS eS Sn 17 21 30.3 +0.3
baz=311
ESL Shilin 1.04 263 eP Pb 17 21 15.2 -0.7
baz=261
ESL eS Sb 17 21 28.0 -1.2
baz=261
EGFH Guangfu 1.08 255 P Pb 17 21 16.2 -0.2
baz=253
EGFH eS Sb 17 21 29.7 -0.5
baz=253
ILA Ilan 1.10 318 eP Pn 17 21 17.3 +0.4
baz=318
NTC Toucheng 1.12 324 *i* P Pg 17 21 17.9 -0.2
baz=324
NTC eS Sn 17 21 32.2 -0.1
baz=324
TWE Neicheng 1.12 314 eP Pn 17 21 17.7 +0.5
baz=314
TWE eS Sn 17 21 32.9 +0.6
baz=314
IRIF Iriomote-Funau 1.13 70 P Pg 17 21 18.3 0.0
IRIF S Sn 17 21 33.8 +1.3
HGSD Ruisui 1.14 247 P Pn 17 21 16.6 -0.8
baz=245
HGSD eS Sb 17 21 33.7 +1.7
baz=245
HATJ Hateruma jima 1.14 84 P Pg 17 21 18.7 +0.3
HATJ eS Sn 17 21 33.3 +0.7
ENTT Nioudou 1.14 307 P Pn 17 21 17.9 +0.4
baz=295
ENTT eS Sn 17 21 33.1 +0.4
baz=295
NDT Datong Townshi 1.16 305 eP Pg 17 21 18.7 -0.1
baz=293
NDT eS Sb 17 21 32.9 +0.3
baz=293
NNSB Datong 1.18 294 *i* P Pn 17 21 18.4 +0.3
baz=283
NNSB eS Sb 17 21 33.2 -0.1
baz=283
NNSH Datong 1.18 294 eP Pn 17 21 18.4 +0.4
baz=284
NNSH eS Sb 17 21 33.1 -0.2
baz=284
TWB1 Santiao Chiao 1.18 334 eP Pn 17 21 18.2 +0.2
baz=348
TWB1 eS Sg 17 21 34.7 +0.1
baz=348
NNS Nan Shan 1.19 295 eP Pn 17 21 18.5 +0.2
baz=283
NNS eS Sb 17 21 33.6 -0.1
baz=283
WHF Hehuan Shan 1.20 280 eP Pn 17 21 18.5 -0.2
baz=278
WHF eS Sb 17 21 33.9 -0.4
baz=278
TIPB Shuangxi 1.22 327 eP Pn 17 21 18.8 +0.2
baz=327
TIPB eS Sg 17 21 35.6 -0.4
baz=327
FUSS Fushou 1.24 284 eP Pn 17 21 19.4 +0.4
baz=283
FUSS eS Sb 17 21 35.3 +0.1
baz=283
OWD Renai 1.27 271 eP Pn 17 21 20.0 +0.7
baz=269
OWD eS Sb 17 21 35.0 -0.9
baz=269
NWLT Wulai 1.27 311 eP Pb 17 21 20.0 +0.2
baz=299
NWLT eS Sn 17 21 36.1 +0.2
baz=299
CHGB Renai 1.27 275 eP Pn 17 21 19.6 +0.2
baz=274
CHGB eS Sb 17 21 35.8 -0.3
baz=274
YULB Yu-li 1.28 245 P Pn 17 21 19.4 -0.1
baz=234
YULB eS Sb 17 21 34.9 -1.3
baz=234
EYUL Yuli 1.29 243 P Pn 17 21 19.3 -0.2
baz=233
YHNB Yeheng 1.30 304 eP Pn 17 21 20.4 +0.7
baz=303
YHNB eS Sb 17 21 36.9 +0.1
baz=303
TWF1 Yuli 1.30 243 eP Pn 17 21 19.5 -0.1
baz=232
TWT Tachien 1.30 284 eP Pb 17 21 21.1 +0.7
baz=273
TWT eS Sb 17 21 37.5 +0.6
baz=273
VWDT VWDT 1.32 262 P Pn 17 21 20.1 +0.3
baz=260
VWDT eS Sn 17 21 36.1 -0.8
baz=260
TDCB Techi 1.32 284 eP Pn 17 21 20.7 +0.7
baz=273
TDCB eS Sb 17 21 37.2 -0.1
baz=273
NWF Wu-fen Shan 1.33 328 eP Pb 17 21 20.7 -0.1
baz=328
NWF eS Sg 17 21 39.2 -0.1
baz=328
WFSB Wu-fen Shan 1.33 328 eP Pb 17 21 20.5 -0.2
baz=328
WFSB eS Sg 17 21 39.6 +0.3
baz=328
JKRS Kuro-shima 1.35 77 P Pb 17 21 21.7 +0.5
JKRS S Sg 17 21 39.5 -0.6
TWA Mucha 1.36 319 eP Pb 17 21 21.5 +0.1
baz=335
TWA eS Sg 17 21 39.1 -1.3
baz=335
FULB Fuli 1.38 238 eP Pn 17 21 20.1 -0.6
baz=226
FULB eS Sn 17 21 37.0 -1.6
baz=226
CHKT Chengkung 1.39 233 eP Pn 17 21 20.0 -0.7
baz=221
CHKT eS Sn 17 21 36.0 -2.7
baz=221
NHDH Xindian Distri 1.39 317 eP Pg 17 21 22.5 -0.5
baz=331
TNOU National Taiwa 1.40 329 eP Pn 17 21 21.1 +0.1
baz=329
TNOU eS Sg 17 21 39.9 -1.7
baz=329
TATO Taipei 1.42 317 eP Pb 17 21 22.3 0.0
baz=332
TATO eS Sb 17 21 40.3 +0.3
baz=332
WPL Puli Township 1.47 273 eP Pn 17 21 22.8 +0.8
baz=271
WPL eS Sn 17 21 41.4 +0.6
baz=271
SSLB Suanglung 1.48 264 P Pn 17 21 22.6 +0.4
baz=262
SSLB eS Sn 17 21 41.4 +0.3
baz=262
YM01 YM01 1.50 323 eP Pb 17 21 23.9 +0.2
baz=323
DPDB Guoxing 1.50 274 eP Pn 17 21 23.4 +1.0
baz=273
JIJ Ishigaki jima 1.50 74 P Pn 17 21 23.1 +0.7
JIJ S Sn 17 21 41.8 +0.2
EDH Donghe 1.51 230 eP Pn 17 21 21.7 -0.8
baz=221
EDH eS Sn 17 21 38.8 -2.9
baz=221
YM10 YM10 1.51 323 eP Pn 17 21 23.2 +0.6
baz=323
YM11 YM11 1.51 324 eP Pb 17 21 24.3 +0.4
baz=324
WCS Beigang Elemen 1.51 275 eP Pn 17 21 23.5 +1.0
baz=274
WHP Taichung City 1.51 283 eP Pb 17 21 24.0 0.0
baz=272
WHP eS Sn 17 21 42.6 +0.6
baz=272
YM08 YM08 1.52 325 eP Pb 17 21 24.1 0.0
baz=325
SMLT Sun Moon Lake 1.52 268 P Pn 17 21 23.5 +0.7
baz=266
SMLT eS Sn 17 21 42.1 -0.1
baz=266
YM04 YM04 1.52 322 eP Pn 17 21 23.2 +0.5
baz=322
YM03 YM03 1.54 323 eP Pb 17 21 24.2 -0.2
baz=323
YUS Yu-Shan 1.54 253 eP Pn 17 21 23.9 +0.4
baz=251
YUS eS Sn 17 21 42.2 -1.1
baz=251
TWS1 Kuangyinshan 1.55 318 eP Pn 17 21 23.8 +0.7
baz=333
ANP Anpu 1.56 323 eP Pb 17 21 24.2 -0.5
baz=323
NJD Zhudong 1.56 301 eP Pb 17 21 25.1 +0.5
baz=300
TYC Yuchr 1.56 269 P Pn 17 21 23.9 +0.7
baz=268
LIOB Emei 1.57 297 eP Pb 17 21 25.2 +0.3
baz=296
LIOB eS Sb 17 21 44.6 +0.1
baz=296
NSTT Nanjuang 1.58 296 eP Pb 17 21 25.1 +0.1
baz=295
NSTT eS Sn 17 21 44.5 +1.0
baz=295
WHYT Xinyi Township 1.58 261 eP Pn 17 21 24.6 +1.1
baz=260
TWY Chenhua 1.59 327 eP Pn 17 21 24.0 +0.4
baz=327
NCUH Zhongli 1.62 309 eP Pn 17 21 24.9 +0.9
baz=309
LDUT Ludao 1.62 219 eP Pn 17 21 23.2 -0.7
baz=217
LDUT eS Sn 17 21 41.4 -3.0
baz=217
SBCB Hsinchu 1.67 301 eP Pb 17 21 26.3 -0.2
baz=300
ALS Alishan 1.67 255 eP Pn 17 21 26.0 +1.1
baz=253
ALS eS Sn 17 21 45.9 -0.2
baz=253
LONT Longtian 1.67 232 eP Pn 17 21 24.5 -0.2
baz=242
TWQ1 Liyutan 1.68 284 eP Pb 17 21 27.4 +0.6
baz=282
TWQ1 eS Sb 17 21 48.0 +0.3
baz=282
WJS Zhushan 1.68 266 eP Pn 17 21 26.7 +1.8
baz=264
WJS eS Sn 17 21 48.0 +1.9
baz=264
WWF Wufeng 1.71 274 eP Pb 17 21 27.8 +0.6
baz=271
WWF eS Sb 17 21 49.3 +0.9
baz=271
NSY Sanyi 1.71 286 eP Pn 17 21 26.3 +1.0
baz=285
JISG Ishigakijimahi 1.72 68 P Pn 17 21 26.0 +0.6
JISG S Sn 17 21 47.2 +0.3
NMLH Miaoli 1.72 290 eP Pb 17 21 27.3 -0.2
baz=289
NMLH eS Sb 17 21 48.9 +0.1
baz=289
WNT Mingjian 1.72 268 eP Pb 17 21 27.4 -0.1
baz=266
WNT eS Sn 17 21 48.4 +1.4
baz=266
WNT1 Nantou City 1.72 269 eP Pb 17 21 28.0 +0.5
baz=268
PCYT Pengchaiyu 1.73 345 eP Pn 17 21 26.4 +0.8
baz=346
TCU Taichung 1.74 277 eP Pb 17 21 27.9 +0.2
baz=275
TCU eS Sb 17 21 49.4 +0.2
baz=275
CHN5 Tsauling 1.76 259 eP Pn 17 21 27.8 +1.7
baz=248
CHN5 eS Sn 17 21 48.7 +0.6
baz=248
TTN Taitung 1.76 228 eP Pn 17 21 27.2 +1.2
baz=217
TWGBT Beinan 1.77 231 eP Pn 17 21 25.7 -0.3
baz=242
TWGBT eS Sn 17 21 46.2 -1.8
baz=242
TWG Pinlang 1.77 231 eP Pn 17 21 25.7 -0.4
baz=239
WDJ Dajia District 1.80 283 eS Sn 17 21 50.4 +1.5
baz=281
STYH Taoyuan 1.81 245 eP Pn 17 21 27.5 +0.9
baz=234
STYT Tauyuan 1.83 245 eP Pn 17 21 28.0 +1.0
baz=236
STYT eS Sn 17 21 50.1 +0.3
baz=236
WCHH Zhanghua 1.84 275 eP Pb 17 21 29.5 +0.1
baz=285
WCHH eS Sb 17 21 52.2 +0.1
baz=285
WGK Gukeng 1.85 262 eP Pn 17 21 29.1 +1.9
baz=261
WDLH Douliu 1.87 263 eP Pn 17 21 29.6 +2.1
baz=260
WDLH eS Sb 17 21 53.2 +0.1
baz=260
TPUB Ta-pu 1.89 250 eP Pn 17 21 29.5 +1.8
baz=239
TPUB eS Sn 17 21 52.1 +1.1
baz=239
WTP Ta-pu 1.92 249 eP Pn 17 21 29.8 +1.6
baz=239
WTP eS Sn 17 21 53.6 +1.7
baz=239
CHN2 Minshiung 1.96 258 eP Pb 17 21 31.3 -0.2
baz=256
CHN2 eS Sb 17 21 56.0 +0.4
baz=256
ECL Taimali 2.00 228 eP Pn 17 21 28.7 -0.5
baz=237
SLGT Liugui 2.00 242 eP Pn 17 21 30.8 +1.5
baz=234
SLGT eS Sn 17 21 56.0 +2.1
baz=234
WRL Guolierlin Hig 2.00 269 eP Pn 17 21 29.1 -0.2
baz=280
WRL eS Sn 17 21 54.0 +0.1
baz=280
WTK Tuku 2.01 263 eP Pn 17 21 31.7 +2.3
baz=261
WTK eS Sn 17 21 56.4 +2.4
baz=261
CHY Chiayi 2.01 258 eP Pn 17 21 31.5 +2.2
baz=255
CHY eS Sn 17 21 55.8 +1.7
baz=255
SGST Jiashian 2.01 245 eP Pn 17 21 30.6 +1.2
baz=235
SGST eS Sn 17 21 55.7 +1.6
baz=235
CHN1 Nanshi 2.02 248 eP Pn 17 21 31.6 +2.1
baz=246
CHN1 eS Sn 17 21 56.7 +2.4
baz=246
SNST Tainan City 2.03 250 eP Pn 17 21 32.0 +2.4
baz=247
SNST eS Sn 17 21 57.1 +2.6
baz=247
JTJ Tarama 2.07 70 P Pb 17 21 32.3 -1.1
JTJ eS Sn 17 21 57.4 +1.8
WTCT Ta-ch'eng 2.09 268 eS Sn 17 21 58.8 +2.7
baz=278
LAY Lan-yu 2.12 206 eP Pn 17 21 29.8 -1.0
baz=204
SSD Sandimen 2.14 236 eP Pn 17 21 32.3 +1.1
baz=229
TSMG Majia 2.15 235 eP Pn 17 21 32.6 +1.3
baz=229
TSMG eS Sn 17 21 59.9 +2.3
baz=229
WSF Szhu 2.17 262 eS Sn 17 21 59.9 +2.0
baz=260
ICHU Yijhu 2.17 255 eP Pn 17 21 33.6 +2.0
baz=252
ICHU eS Sn 17 21 59.8 +1.7
baz=252
SCST Cishan 2.17 241 eP Pn 17 21 34.2 +2.6
baz=228
SCST eS Sn 17 22 01.1 +3.0
baz=228
CHN3 Shinhua 2.19 247 eP Pb 17 21 35.1 -0.4
baz=244
CHN3 eS Sb 17 22 02.7 +0.3
baz=244
TAW Tawu 2.20 224 eP Pn 17 21 32.6 +0.6
baz=232
EAST Anshuo 2.22 226 eP Pn 17 21 32.1 -0.2
baz=231
EAST eS Sn 17 21 59.4 +0.1
baz=231
MASBT Mashibuluo 2.22 234 eP Pn 17 21 33.1 +0.8
baz=226
SGLT Jiouru 2.26 238 eP Pb 17 21 37.0 +0.4
baz=232
SCLT Jiali 2.31 251 eS Sn 17 22 03.9 +2.5
baz=248
SSPT Xinbi 2.34 232 eP Pn 17 21 35.5 +1.5
baz=225
SNJT Kaohsiung City 2.37 240 eP Pb 17 21 37.7 -0.8
baz=238
SLIU Shizi 2.37 224 eP Pn 17 21 34.4 +0.1
baz=212
SCZT Fangliau 2.38 229 eP Pn 17 21 36.0 +1.5
baz=221
JIRB Irabujima 2.54 69 P Pn 17 21 37.7 +1.1
JIRB eS Sn 17 22 07.9 +0.8
TSEB Hengchuen, Pin 2.55 217 eP Pn 17 21 38.6 +1.8
baz=216
HEN Hengchun 2.56 221 eP Pn 17 21 38.1 +1.2
baz=219
HEN eS Sn 17 22 07.9 +0.2
baz=219
WLCH Liuqiu 2.56 232 eP Pn 17 21 40.0 +3.1
baz=244
TWKBT Hengchun 2.57 219 eP Pn 17 21 38.1 +1.0
baz=217
TWKBT eS Sn 17 22 08.0 +0.2
baz=217
TWK1 Hengchun 2.57 219 eP Pn 17 21 38.4 +1.3
baz=217
TWK1 eS Sn 17 22 08.3 +0.4
baz=217
JIKM Ikemajima 2.63 68 P Pn 17 21 37.8 -0.2
JIKM eS Sn 17 22 09.5 0.0
JMJ Miyako jima 2 2.64 70 eP Pn 17 21 39.6 +1.6
baz=71
JMJ eS Sn 17 22 10.8 +1.2
baz=71
JMJ2 Miyako jima3 2.64 72 P Pn 17 21 39.9 +1.8
JMJ2 eS Sn 17 22 10.8 +1.1
JOGS Gusukube 2.72 72 P Pn 17 21 41.5 +2.4
JOGS eS Sn 17 22 12.6 +1.0
WDGT Dungji 2.75 256 eP Pn 17 21 40.9 +1.4
baz=253
WDGT eS Sn 17 22 12.3 -0.1
baz=253
PNG Penghu 2.78 263 eP Pn 17 21 41.3 +1.3
baz=260
PNG eS Sn 17 22 13.1 0.0
baz=260
VCHM Qimei 2.97 256 eP Pn 17 21 43.8 +1.2
baz=253
VCHM eS Sn 17 22 17.5 -0.2
baz=253
VWUC VWUC 3.02 291 eP Pn 17 21 43.4 +0.1
baz=289
VWUC eS Sn 17 22 16.4 -2.6
baz=289
MATB Ma-tsu 3.23 313 eP Pn 17 21 47.1 +0.9
baz=301
PTMZ Houxiangcun 3.32 290 eP Pn 17 21 47.8 +0.4
baz=290
LYJJ Jianjiangzhen 3.63 316 eP Pn 17 21 52.0 +0.4
baz=316
XPSS Dashiqiu 3.67 325 eP Pn 17 21 52.9 +0.8
baz=324
KNM Kinmen 3.80 278 eP Pn 17 21 56.7 +2.7
baz=277
KNMB Chin-men Tao 3.85 279 eP Pn 17 21 55.4 +0.8
baz=278
MHZQ Yeshan 3.86 305 eP Pn 17 21 54.9 +0.1
baz=303
AXDP Jialang 4.29 284 eP Pn 17 22 01.8 +1.0
baz=284
ZPLA Ao Xicun 4.40 271 eP Pn 17 22 03.5 +1.2
baz=270
JOW Kunigami 5.91 60 Pn Pn 17 22 21.8 -1.2
1.4nm,0.3s,baz=138,slow=16,SNR=9.1
JOW Kunigami 5.91 60 eP Pn 17 22 22.4 -0.6
baz=61
KSRS Korea Array 14.23 18 Pn Pn 17 24 17.9 +0.9
0.1nm,0.3s,baz=194,slow=11,SNR=1.9
KSRS LR LR 17 30 12.6
comp=Z,67nm,18.7s,baz=118,slow=40
SONM Songino Array 27.09 336 P P 17 26 36.6 -1.5
0.2nm,0.4s,baz=153,slow=13,SNR=2.6
MKAR Makanchi Array 39.39 316 P P 17 28 24.2 -0.7
0.5nm,0.5s,baz=100,slow=9.9,SNR=11
ZALV Zalesovo Beam 41.13 327 P P 17 28 37.5 -1.8
0.8nm,0.5s,baz=127,slow=7.9,SNR=4.4
ASAR Alice Springs 48.59 166 P P 17 29 41.1 +2.1
0.2nm,0.5s,baz=349,slow=10,SNR=6.4
FINES FINESS Array B 72.28 330 P P 17 32 19.6 -0.8
1.2nm,0.9s,baz=57,slow=7.0,SNR=5.1
YKA Yellowknife Ar 82.69 23 P P 17 33 17.4 -1.2
0.3nm,0.6s,baz=314,slow=4.8,SNR=7.3

NOU 21 17:30:28.3, 16°42S×167°63E, h0km, MLv4.1, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.05**	**337**	P		Pg	17 30 48.4 -0.1
DVP	**Devils Point**	**1.40**	**158**	P		Pn	17 30 53.8 -1.4
MARNC	**Mare, Loyalty**	**5.05**	**176**	P		Pn	17 31 45.2 -0.1
KOUNC	**Koumac, New Ca**	**5.19**	**217**	P		Pn	17 31 47.2 -0.1
YATNC	**Mamie plateau,**	**5.65**	**187**	P		Pn	17 31 53.8 +0.2
DZM	**Mont Dzumac**	**5.73**	**191**	P		Pn	17 31 53.9 -0.9
NOUC	**Port Laguerre**	**5.79**	**192**	P		Pn	17 31 54.9 -0.6
ONTNC	**Ouen Toro**	**5.96**	**191**	P		Pn	17 31 57.5 -0.4
OUENC	**Ouen Island, N**	**6.01**	**187**	P		Pn	17 31 58.9 +0.3
PINNC	**Pines Island,**	**6.16**	**182**	P		Pn	17 32 00.6 0.0

*SOME **21** 17:36:16.7, 42°.13N×69°.43E, h15km*
*KRNET **21** 17:36:16.4±0.1, 42°.20N×69°.34E, h21km, mb2.5*
*NNC **21** 17:36:17.6±2.8, 42°.20N×69°.43E, h0km, mb1.3, mpv2.7,*
Error ellipse: s-maj=18.1km s-min=6.4km az=54.0
ISC 21 17:36:13.7±2.1, 42°26N±0°.04×69°17E±0°.09, h17km±10km, n15, σ2s54/26, 8C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHM	**Chimkent**	**0.33**	**79**	eP		**Pg**	**17 36 22.1 +1.5**
	12nm,0.2s						
CHM				eS		**Sb**	**17 36 25.9 -0.3**
	189nm,0.2s						
IUG	**luzhnay**	**0.65**	**100**	eP		**Pb**	**17 36 26.5 -0.3**
	baz=96						
IUG				eS		**Sb**	**17 36 33.8 -1.9**
	baz=96						
IUG	**luzhnay**	**0.65**	**100**	eP		**Pb**	**17 36 26.4 -0.3**
	399nm,0.3s						
IUG				eS		**Sb**	**17 36 33.7 -1.9**
	50nm,0.2s						
IUG	**luzhnay**	**0.65**	**100**	P		**Pb**	**17 36 26.5 -0.3**
	399nm,0.3s						
IUG				S		**Sb**	**17 36 33.7 -1.9**
	50nm,0.2s						
BRLS	**Borolday**	**0.92**	**32**	eP		Pb	17 36 29.4 -1.8
	baz=29						

BRLS				*e*S		**Sb**	**17 36 38.3**	**-4.8**
	baz=29								
BRLS	**Borolday**	**0.92**	**32**	*e*P		Pb	17 36 29.4	-1.8
	0.4nm,0.1s								
BRLS				*e*S		**Sb**	**17 36 38.4**	**-4.8**
	10nm,0.1s								
BRLS	**Borolday**	**0.92**	**32**	P		Pb	17 36 29.4	-1.8
	0.4nm,0.1s								
BRLS				S		**Sb**	**17 36 38.4**	**-4.7**
	10nm,0.1s								
KK31	**Karatay Array**	**1.30**	**49**	P		**Pg**	**17 36 40.8**	**+2.0**
	0.3nm,0.4s,baz=70,slow=13,SNR=5.5								
KK31				S		**Sg**	**17 36 57.0**	**+1.1**
	1.1nm,0.3s,baz=220,slow=26,SNR=19								
TRKS	**Terek-Say**	**1.64**	**116**	⇑*i*P		**Pg**	**17 36 44.7**	**-0.6**
	baz=18								
TRKS				⇑*i*S		**Sg**	**17 37 05.4**	**-1.3**
	baz=18								
MNAS	**Manas**	**2.48**	**84**	⇑*i*P		**Pb**	**17 36 56.7**	**-1.3**
	baz=82								
MNAS				⇑*i*S		**Sb**	**17 37 26.2**	**-2.1**
	baz=82								
BTK	**Batken**	**2.53**	**150**	⇓*i*P		**Pb**	**17 36 57.3**	**-1.4**
	baz=52								
BTK				⇓*i*S		**Sb**	**17 37 27.5**	**-2.0**
	baz=52								
MRKS	**Merke**	**3.04**	**79**	*e*P		**Pg**	**17 37 10.3**	**-1.7**
	0.9nm,0.2s								
MRKS				*e*S		**Sg**	**17 37 47.9**	**-3.5**
	2.8nm,0.3s								
MRKS	**Merke**	**3.04**	**79**	Pg		**Pb**	**17 37 08.6**	**+1.1**
	0.6nm,0.2s								
MRKS				Lg		Lg	17 37 45.6		
	2.9nm,0.4s								
AML	**Almayashu**	**3.37**	**91**	⇑*i*P		**Pn**	**17 37 08.6**	**+2.7**
	baz=90								
AML				⇑*i*S		**Sn**	**17 37 47.4**	**+1.7**
	baz=90								
EKS2	**Erkin-Say**	**3.44**	**82**	⇑*i*P		**Pn**	**17 37 09.8**	**+3.2**
	baz=81								
EKS2				⇑*i*S		**Sn**	**17 37 49.3**	**+2.3**
	baz=81								

NEIC ***21*** *17:38:18.0±0.8, 16°.22S±0°.10×176°.9W±0°.1, h383km±7km, mb4.4/21, Error ellipse: s-maj=18.4km s-min=9.9km az=129.0*

IDC ***21*** *17:38:19.2±1.5, 16°.26S×176°.81W, h396km±17km, mb3.2/6, mb1 3.5/8, mb1mx3.2/41, mbtmp4.0/8, Error ellipse: s-maj=32.3km s-min=15.4km az=147.0*

ISC 21 17:38:19.4±0.6, 16°.2S±0°.2×176°.8W±0°.1, h400km, n31, σ0s97/30, mb4.2/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.17**	**252**	P			**Pn**	**17 39 44.5**	**+1.3**
	3.6nm,0.3s,baz=77,slow=11,SNR=21								
MSVF	**Nonsavu**	**5.17**	**252**				**Pn**	**17 39 44.7**	**+1.5**
AFI	**Afiamalu**	**5.35**	**66**	P			**Pn**	**17 39 43.8**	**-1.4**
	6.4nm,0.3s,baz=71,slow=2.6,SNR=9.9								
AFI	**Afiamalu**	**5.35**	**66**				**Pn**	**17 39 43.6**	**-1.6**
OUZ	**Omahuta**	**20.82**	**203**	P			**P**	**17 42 31.7**	**+0.5**
OUZ				IAmb			IAmb	17 42 32.6	
	comp=Z,39nm,1.5s								
URZ	**Urewera**	**22.64**	**193**	P			**P**	**17 42 47.0**	**-0.6**
	comp=Z,1.9nm,0.3s,baz=300,slow=23,SNR=6.0								
URZ	**Urewera**	**22.64**	**193**	IAmb			IAmb	17 42 49.0	
	comp=Z,11nm,1.2s								
BKZ	**Black Stump Fm**	**23.64**	**193**	P			**P**	**17 42 56.1**	**-0.7**
BFZ	**Birch Farm**	**25.15**	**193**	P			**P**	**17 43 10.4**	**+0.2**
QRZ	**Quartz Range**	**26.24**	**199**	P			**P**	**17 43 19.5**	**-0.4**
QRZ				IAmb			IAmb	17 43 31.5	
	comp=Z,33nm,1.3s								
THZ	**Tophouse**	**26.99**	**197**	P			**P**	**17 43 25.7**	**-0.9**
THZ				IAmb			IAmb	17 43 45.3	
	comp=Z,35nm,1.5s								
KHZ	**Kahutara**	**27.43**	**196**	P			**P**	**17 43 28.7**	**-1.6**
LTZ	**Lake Taylor**	**28.11**	**197**	P			**P**	**17 43 36.1**	**-0.3**
LTZ				IAmb			IAmb	17 43 39.4	
	comp=Z,38nm,1.5s								
FOZ	**Fox Glacier**	**29.55**	**200**	P			**P**	**17 43 48.4**	**-0.5**
WKZ	**Wanaka**	**30.96**	**200**	P			**P**	**17 44 00.8**	**-0.6**
WKZ				IAmb			IAmb	17 44 23.5	
	comp=Z,45nm,1.4s								
MLZ	**Mavora Lakes**	**31.74**	**200**	P			**P**	**17 44 07.2**	**-0.9**
MLZ				IAmb			IAmb	17 44 26.9	
	comp=Z,39nm,1.6s								
WHZ	**Wether Hill Ro**	**32.26**	**200**	P			**P**	**17 44 11.7**	**-0.8**
WHZ				IAmb			IAmb	17 44 41.0	
	comp=Z,47nm,1.5s								
PTCN	**Pitcairn Islan**	**44.41**	**109**	P			**P**	**17 45 53.8**	**+1.1**
BBOO	**Buckleboo**	**45.59**	**240**	P			**P**	**17 46 01.1**	**-0.6**
WR0	**Warramunga Arr**	**46.29**	**258**	P			**P**	**17 46 06.2**	**-1.1**
WR0				IAmb			IAmb	17 46 18.2	
	comp=Z,17nm,1.4s								
WB0	**Warramunga Arr**	**46.44**	**258**	P			**P**	**17 46 07.7**	**-0.8**
WB2	**Warramunga Arr**	**46.47**	**258**	P			**P**	**17 46 07.6**	**-1.1**
WB2				IAmb			IAmb	17 46 18.1	
	comp=Z,25nm,1.6s								
WRA	**Warramunga Arr**	**46.48**	**258**	P			**P**	**17 46 08.0**	**-0.8**
	comp=Z,0.4nm,0.2s,baz=97,slow=8.2,SNR=15								
AS31	**Alice Springs**	**46.76**	**253**	P			**P**	**17 46 10.8**	**-0.1**
ASAR	**Alice Springs**	**46.76**	**253**	P			**P**	**17 46 10.7**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=89,slow=7.6,SNR=133								
MTN	**Manton Dam**	**50.41**	**267**	P			**P**	**17 46 38.0**	**-0.4**
PSA00	**Pilbara Seismi**	**59.84**	**254**	P			**P**	**17 47 44.8**	**-0.1**
TXAR	**Lajitas Array**	**83.77**	**57**	P			**P**	**17 50 07.1**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=216,slow=6.2,SNR=5.5								
ILAR	**Eielson Array**	**83.88**	**12**	P			**P**	**17 50 04.8**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=225,slow=4.7,SNR=9.0								
PDAR	**Pinedale Array**	**85.05**	**43**	P			**P**	**17 50 12.4**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=243,slow=6.0,SNR=1.9								
GERES	**GERESS Array B**	**146.31**	**347**	PKPbc			**PKPab**	**17 57 14.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=324,slow=4.8,SNR=3.5								

JMA ***21*** *17:46:29.5±0.1, 23°.90N×122°.53E, h32km±3km, M2.4*

TAP ***21*** *17:46:29.9, 23°.97N×122°.53E, h30km, ML3.0, D*

ISC 21 17:46:29.1±1.1, 23°.91N±0°.02×122°.54E±0°.02, h26km±13km, n106, σ0s82/185, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.66**	**34**	P			**Pb**	**17 46 42.2**	**+0.2**
JYNG				S			**Sn**	**17 46 51.4**	**-0.9**
YOJ	**Yonaguni jima**	**0.70**	**38**	P			**Pb**	**17 46 43.1**	**+0.4**
YOJ				S			**Sn**	**17 46 52.4**	**-1.0**
YOJ	**Yonaguni jima**	**0.70**	**38**	P			**Pb**	**17 46 42.9**	**+0.2**
	baz=47								
YOJ				*e*S			**Sn**	**17 46 52.6**	**-0.8**
	baz=47								
HWA	**Hwalien**	**0.86**	**275**	P			**Pn**	**17 46 45.4**	**-0.2**
	baz=258								
HWA				*e*S			**Sn**	**17 46 57.8**	**+0.5**
	baz=258								
EWUT	**Wuta**	**0.88**	**308**	P			**Pn**	**17 46 45.5**	**-0.3**
	baz=305								
EWUT				S			**Sn**	**17 46 57.7**	**0.0**
	baz=305								
TWD	**Chiawan**	**0.88**	**281**	*i* P			**Pn**	**17 46 45.1**	**-0.8**
	baz=278								
TWD				*i* S			**Sb**	**17 46 56.9**	**-0.2**
	baz=278								
NACB	**Ninganchiao**	**0.90**	**287**	P			**Pn**	**17 46 46.0**	**-0.2**
	baz=270								
NACB				S			**Sb**	**17 46 57.8**	**0.0**
	baz=270								
TWC	**Suao**	**0.94**	**318**	*i* P			**Pn**	**17 46 45.8**	**-0.9**
	baz=316								
TWC				S			**Sb**	**17 46 58.5**	**-0.3**
	baz=316								
ETLH	**Xiulin Townshi**	**1.01**	**287**	P			**Pn**	**17 46 47.8**	**+0.1**
	baz=272								
ETLH				S			**Sn**	**17 47 00.4**	**-0.8**
	baz=272								
ESL	**Shilin**	**1.02**	**265**	*i* P			**Pn**	**17 46 47.2**	**-0.6**
	baz=262								
ESL				S			**Sn**	**17 46 60.0**	**-1.2**
	baz=262								
NDS	**Dongshan**	**1.04**	**314**	P			**Pb**	**17 46 48.3**	**-0.3**
	baz=312								
NDS				S			**Sb**	**17 47 02.5**	**+0.7**
	baz=312								
EGFH	**Guangfu**	**1.05**	**257**	P			**Pn**	**17 46 48.4**	**+0.2**
	baz=254								
EGFH				S			**Sn**	**17 47 02.1**	**+0.1**
	baz=254								
HGSD	**Ruisui**	**1.10**	**248**	P			**Pn**	**17 46 48.8**	**-0.1**
	baz=245								
HGSD				S			**Sn**	**17 47 03.5**	**+0.1**
	baz=245								
ILA	**Ilan**	**1.12**	**320**	*e*S			**Sb**	**17 47 05.0**	**+1.1**
	baz=308								
TWE	**Neicheng**	**1.14**	**316**	*i* P			**Pb**	**17 46 49.7**	**-0.4**
	baz=314								
TWE				S			**Sb**	**17 47 05.7**	**+1.3**
	baz=314								
NTC	**Toucheng**	**1.14**	**326**	P			**Pb**	**17 46 49.8**	**-0.4**
	baz=324								
NTC				S			**Sb**	**17 47 05.3**	**+0.6**
	baz=324								
ENTT	**Nioudou**	**1.15**	**310**	*i* P			**Pb**	**17 46 50.0**	**-0.3**
	baz=294								
ENTT				S			**Sb**	**17 47 04.5**	**-0.4**
	baz=294								
NDT	**Datong Townshi**	**1.16**	**307**	P			**Pb**	**17 46 50.9**	**+0.3**
	baz=292								
NDT				S			**Sb**	**17 47 04.8**	**-0.5**
	baz=292								
HATJ	**Hateruma jima**	**1.17**	**82**	P			**Pn**	**17 46 50.5**	**+0.7**
HATJ				*e*S			**Sn**	**17 47 05.4**	**+0.5**
IRIF	**Iriomote-Funau**	**1.17**	**68**	P			**Pn**	**17 46 50.3**	**+0.5**
IRIF				S			**Sb**	**17 47 05.9**	**+0.5**
NNSB	**Datong**	**1.18**	**296**	P			**Pn**	**17 46 50.5**	**+0.4**
	baz=283								
NNSB				S			**Sn**	**17 47 05.0**	**-0.4**
	baz=283								
NNSH	**Datong**	**1.18**	**296**	P			**Pn**	**17 46 50.5**	**+0.4**
	baz=283								
NNSH				S			**Sb**	**17 47 05.2**	**-0.6**
	baz=283								
WHF	**Hehuan Shan**	**1.19**	**282**	*i* P			**Pn**	**17 46 50.6**	**+0.1**
	baz=279								
WHF				S			**Sb**	**17 47 06.7**	**+0.3**
	baz=279								
NNS	**Nan Shan**	**1.19**	**297**	*i* P			**Pn**	**17 46 50.7**	**+0.5**
	baz=283								
NNS				*i* S			**Sb**	**17 47 05.6**	**-0.5**
	baz=283								
TWB1	**Santiao Chiao**	**1.21**	**336**	P			**Pn**	**17 46 50.3**	**-0.1**
	baz=350								
TWB1				S			**Sb**	**17 47 06.8**	**+0.3**
	baz=350								
FUSS	**Fushou**	**1.23**	**286**	P			**Pn**	**17 46 51.4**	**+0.4**
	baz=283								
TIPB	**Shuangxi**	**1.24**	**329**	P			**Pb**	**17 46 51.3**	**-0.6**
	baz=327								
TIPB				S			**Sb**	**17 47 07.7**	**+0.1**
	baz=327								
OWD	**Renai**	**1.25**	**272**	P			**Pn**	**17 46 51.4**	**+0.3**
	baz=270								
OWD				S			**Sn**	**17 47 06.7**	**-0.4**
	baz=270								
YULB	**Yu-li**	**1.25**	**246**	P			**Pn**	**17 46 51.2**	**+0.3**
	baz=243								
YULB				S			**Sn**	**17 47 06.9**	**-0.1**
	baz=243								
EYUL	**Yuli**	**1.25**	**244**	P			**Pn**	**17 46 51.3**	**+0.3**
	baz=241								
EYUL				*e*S			**Sn**	**17 47 07.2**	**+0.2**
	baz=241								
CHGB	**Renai**	**1.26**	**277**	P			**Pn**	**17 46 51.7**	**+0.4**
	baz=275								
CHGB				*e*S			**Sb**	**17 47 08.1**	**-0.1**
	baz=275								
TWF1	**Yuli**	**1.27**	**244**	*i* P			**Pn**	**17 46 51.7**	**+0.5**
	baz=242								
TWF1				*e*S			**Sn**	**17 47 06.0**	**-1.4**
	baz=242								
NWLT	**Wulai**	**1.28**	**313**	P			**Pb**	**17 46 52.2**	**-0.4**
	baz=298								
NWLT				S			**Sb**	**17 47 08.1**	**-0.6**
	baz=298								
VWDT	**VWDT**	**1.29**	**263**	P			**Pn**	**17 46 52.1**	**+0.6**
	baz=261								
VWDT				S			**Sn**	**17 47 08.0**	**+0.1**
	baz=261								
TWT	**Tachien**	**1.29**	**286**	*i* P			**Pb**	**17 46 53.1**	**+0.2**
	baz=272								
TWT				S			**Sb**	**17 47 09.7**	**+0.5**
	baz=272								
YHNB	**Yeheng**	**1.30**	**306**	P			**Pb**	**17 46 52.4**	**-0.6**
	baz=304								
YHNB				S			**Sb**	**17 47 08.7**	**-0.7**
	baz=304								
TDCB	**Techi**	**1.31**	**286**	P			**Pb**	**17 46 52.9**	**-0.3**
	baz=272								
TDCB				*e*S			**Sn**	**17 47 08.8**	**+0.2**
	baz=272								
FULB	**Fuli**	**1.34**	**239**	P			**Pn**	**17 46 52.2**	**-0.1**
	baz=226								
FULB				S			**Sn**	**17 47 08.7**	**-0.7**
	baz=226								
CHKT	**Chengkung**	**1.34**	**233**	*e*P			**Pn**	**17 46 52.5**	**+0.2**
	baz=220								
CHKT				S			**Sn**	**17 47 07.9**	**-1.4**
	baz=220								
WFSB	**Wu-fen Shan**	**1.35**	**329**	*e*P			**Pb**	**17 46 52.8**	**-0.9**
	baz=328								
WFSB				S			**Sb**	**17 47 10.7**	**+0.1**
	baz=328								
TWA	**Mucha**	**1.38**	**321**	*i* P			**Pb**	**17 46 53.7**	**-0.5**
	baz=320								
TWA				S			**Sb**	**17 47 11.3**	**-0.2**
	baz=320								
JKRS	**Kuro-shima**	**1.38**	**76**	P			**Pn**	**17 46 53.6**	**+0.8**
JKRS				S			**Sb**	**17 47 11.5**	**-0.1**
NHDH	**Xindian Distri**	**1.40**	**319**	P			**Pb**	**17 46 54.6**	**0.0**
	baz=334								
NHDH				S			**Sb**	**17 47 12.9**	**+0.8**
	baz=334								
WPL	**Puli Township**	**1.45**	**274**	*e*P			**Pn**	**17 46 54.8**	**+1.0**
	baz=272								
SSLB	**Suanglung**	**1.46**	**266**	P			**Pn**	**17 46 54.6**	**+0.8**
	baz=263								
EDH	**Donghe**	**1.47**	**231**	P			**Pn**	**17 46 54.0**	**0.0**
	baz=220								
EDH				S			**Sn**	**17 47 10.7**	**-1.6**
	baz=220								
DPDB	**Guoxing**	**1.48**	**275**	P			**Pn**	**17 46 55.0**	**+0.8**
	baz=273								
WCS	**Beigang Elemen**	**1.50**	**276**	P			**Pb**	**17 46 55.8**	**-0.5**
	baz=266								
WCS				S			**Sb**	**17 47 15.2**	**+0.4**
	baz=266								
SMLT	**Sun Moon Lake**	**1.50**	**269**	*i* P			**Pn**	**17 46 55.5**	**+1.0**
	baz=267								
SMLT				S			**Sn**	**17 47 13.8**	**+0.5**
	baz=267								
WHP	**Taichung City**	**1.50**	**285**	P			**Pb**	**17 46 56.9**	**+0.4**
	baz=273								
WHP				S			**Sb**	**17 47 14.8**	**-0.3**
	baz=273								
YUS	**Yu-Shan**	**1.51**	**254**	*i* P			**Pn**	**17 46 55.8**	**+0.8**
	baz=252								
YM01	**YM01**	**1.52**	**325**	P			**Pb**	**17 46 55.9**	**-0.7**
	baz=323								
YM01				S			**Sb**	**17 47 15.5**	**0.0**
	baz=323								
YM10	**YM10**	**1.53**	**325**	P			**Pn**	**17 46 54.8**	**-0.1**
	baz=323								
YM11	**YM11**	**1.53**	**325**	P			**Pb**	**17 46 56.1**	**-0.8**
	baz=324								
YM05	**YM05**	**1.53**	**325**	*e*P			**Pn**	**17 46 55.2**	**+0.3**
	baz=324								
YM05				*e*S			**Sb**	**17 47 14.5**	**-1.5**
	baz=324								
JIJ	**Ishigaki jima**	**1.53**	**72**	P			**Pn**	**17 46 55.2**	**+0.3**
JIJ				S			**Sn**	**17 47 13.7**	**-0.3**
TYC	**Yuchr**	**1.54**	**270**	*i* P			**Pn**	**17 46 56.2**	**+1.3**
	baz=268								
TYC				S			**Sn**	**17 47 14.6**	**+0.5**
	baz=268								
YM04	**YM04**	**1.54**	**324**	P			**Pn**	**17 46 55.6**	**+0.6**
	baz=322								
YM08	**YM08**	**1.54**	**326**	*e*P			**Pn**	**17 46 55.5**	**+0.5**
	baz=325								
WHYT	**Xinyi Township**	**1.56**	**263**	P			**Pn**	**17 46 56.7**	**+1.5**
	baz=249								
WHYT				*e*S			**Sn**	**17 47 15.3**	**+0.7**
	baz=249								
NJD	**Zhudong**	**1.56**	**302**	S			**Sb**	**17 47 17.3**	**+0.7**
	baz=300								
TWS1	**Kuangyinshan**	**1.57**	**320**	*e*P			**Pn**	**17 46 55.2**	**-0.1**
	baz=335								
LIOB	**Emei**	**1.57**	**298**	P			**Pb**	**17 46 57.3**	**-0.2**
	baz=296								
LDUT	**Ludao**	**1.57**	**219**	P			**Pn**	**17 46 53.7**	**-1.7**
	baz=217								
NSTT	**Nanjuang**	**1.58**	**297**	P			**Pb**	**17 46 57.6**	**-0.1**
	baz=296								
NSTT				S			**Sb**	**17 47 16.2**	**-0.9**
	baz=296								
TWY	**Chenhua**	**1.61**	**328**	*e*S			**Sb**	**17 47 16.7**	**-1.3**
	baz=327								
LONT	**Longtian**	**1.63**	**233**	P			**Pn**	**17 46 56.4**	**+0.1**
	baz=223								
LONT				S			**Sn**	**17 47 16.8**	**+0.3**
	baz=223								
ALS	**Alishan**	**1.64**	**256**	*i* P			**Pn**	**17 46 58.0**	**+1.4**
	baz=245								
WJS	**Zhushan**	**1.66**	**267**	P			**Pb**	**17 46 58.7**	**-0.3**
	baz=265								
WJS				*e*S			**Sb**	**17 47 20.4**	**+0.8**
	baz=265								
TWQ1	**Liyutan**	**1.67**	**286**	P			**Pb**	**17 46 59.5**	**+0.3**
	baz=283								
TWQ1				S			**Sb**	**17 47 20.8**	**+0.9**
	baz=283								
WWF	**Wufeng**	**1.69**	**275**	*e*S			**Sb**	**17 47 21.2**	**+0.8**
	baz=267								
WNT	**Mingjian**	**1.70**	**269**	P			**Pb**	**17 46 59.5**	**-0.2**
	baz=267								
WNT				S			**Sb**	**17 47 19.8**	**-0.8**
	baz=267								
WNT1	**Nantou City**	**1.70**	**270**	*e*P			**Pb**	**17 47 00.2**	**+0.5**
	baz=268								
WNT1				*e*S			**Sb**	**17 47 21.7**	**+0.9**
	baz=268								
NMLH	**Miaoli**	**1.71**	**292**	*e*S			**Sb**	**17 47 20.6**	**-0.5**
	baz=290								
TCU	**Taichung**	**1.72**	**278**	*e*P			**Pb**	**17 46 59.9**	**-0.1**
	baz=276								
TCU				S			**Sb**	**17 47 21.9**	**+0.7**
	baz=276								
TWGBT	**Beinan**	**1.73**	**231**	*e*P			**Pn**	**17 46 56.5**	**-1.0**
	baz=240								
TWG	**Pinlang**	**1.73**	**232**	P			**Pn**	**17 46 57.3**	**-0.2**
	baz=240								
CHN5	**Tsauling**	**1.73**	**260**	*i* P			**Pb**	**17 46 59.7**	**-0.7**
	baz=249								
CHN5				S			**Sb**	**17 47 21.5**	**-0.2**
	baz=249								
JISG	**Ishigakijimahi**	**1.75**	**67**	P			**Pn**	**17 46 58.0**	**+0.1**
JISG				S			**Sn**	**17 47 18.8**	**-0.6**
STYH	**Taoyuan**	**1.78**	**246**	P			**Pn**	**17 46 59.5**	**+1.3**
	baz=236								
STYH				*e*S			**Sn**	**17 47 20.7**	**+0.8**
	baz=236								
WDJ	**Dajia District**	**1.79**	**285**	*e*S			**Sb**	**17 47 23.1**	**-0.1**
	baz=282								
STYT	**Tauyuan**	**1.80**	**246**	*i* P			**Pn**	**17 46 59.6**	**+1.1**
	baz=236								
STYT				*i* S			**Sn**	**17 47 22.1**	**+1.6**
	baz=236								
WCHH	**Zhanghua**	**1.82**	**276**	S			**Sb**	**17 47 24.2**	**0.0**
	baz=273								
WGK	**Gukeng**	**1.82**	**263**	*i* P			**Pb**	**17 47 01.2**	**-0.6**
	baz=261								
WGK				S			**Sb**	**17 47 23.4**	**-0.9**
	baz=261								
WDLH	**Douliu**	**1.84**	**264**	P			**Pb**	**17 47 01.5**	**-0.7**
	baz=261								
WDLH				S			**Sb**	**17 47 25.0**	**+0.1**
	baz=261								
TPUB	**Ta-pu**	**1.85**	**251**	P			**Pn**	**17 47 01.5**	**+2.2**
	baz=240								
TPUB				S			**Sb**	**17 47 24.3**	**-0.8**
	baz=240								
WTP	**Ta-pu**	**1.89**	**250**	P			**Pb**	**17 47 02.1**	**-0.8**
	baz=238								
WTP				S			**Sb**	**17 47 26.1**	**+0.1**
	baz=238								
CHN2	**Minshiung**	**1.93**	**259**	*e*S			**Sb**	**17 47 28.6**	**+1.4**
	baz=257								
ECL	**Taimali**	**1.96**	**228**	*i* P			**Pn**	**17 47 00.7**	**0.0**
	baz=238								
ECL				*e*S			**Sn**	**17 47 23.4**	**-1.0**
	baz=238								
SLGT	**Liugui**	**1.96**	**243**	P			**Pn**	**17 47 02.8**	**+2.0**
	baz=233								
SLGT				*e*S			**Sn**	**17 47 27.0**	**+2.4**
	baz=233								
SGST	**Jiashian**	**1.98**	**246**	*i* P			**Pn**	**17 47 02.9**	**+2.0**
	baz=235								
SGST				*i* S			**Sn**	**17 47 27.6**	**+2.7**
	baz=235								
CHN1	**Nanshi**	**1.98**	**249**	*i* P			**Pb**	**17 47 03.8**	**-0.7**
	baz=247								
CHN1				*i* S			**Sb**	**17 47 28.8**	**0.0**
	baz=247								
CHY	**Chiayi**	**1.98**	**259**	S			**Sb**	**17 47 27.9**	**-0.9**
	baz=256								
WTK	**Tuku**	**1.98**	**264**	P			**Pb**	**17 47 03.7**	**-0.8**
	baz=262								
WTK				S			**Sb**	**17 47 27.8**	**-1.0**
	baz=262								
SNST	**Tainan City**	**2.00**	**250**	P			**Pb**	**17 47 03.9**	**-0.8**
	baz=248								
SNST				S			**Sb**	**17 47 29.2**	**+0.1**
	baz=248								
LAY	**Lan-yu**	**2.07**	**206**	*i* P			**Pn**	**17 47 01.4**	**-0.9**
	baz=204								
LAY				*e*S			**Sn**	**17 47 26.5**	**-0.8**
	baz=204								
SSD	**Sandimen**	**2.10**	**237**	P			**Pn**	**17 47 04.3**	**+1.6**
	baz=230								
SSD				S			**Sn**	**17 47 29.2**	**+1.2**
	baz=230								
TSMG	**Majia**	**2.11**	**236**	P			**Pn**	**17 47 04.0**	**+1.2**
	baz=229								
TSMG				*e*S			**Sn**	**17 47 29.3**	**+1.0**
	baz=229								
SCST	**Cishan**	**2.14**	**242**	P			**Pb**	**17 47 06.7**	**-0.5**
	baz=229								
SCST				S			**Sb**	**17 47 33.4**	**+0.1**
	baz=229								
WSF	**Szhu**	**2.14**	**263**	P			**Pb**	**17 47 05.9**	**-1.3**
	baz=261								
WSF				S			**Sb**	**17 47 32.4**	**-1.0**
	baz=261								
ICHU	**Yijhu**	**2.14**	**256**	*e*P			**Pb**	**17 47 05.9**	**-1.3**
	baz=253								
ICHU				*e*S			**Sb**	**17 47 32.4**	**-1.0**
	baz=253								
EAST	**Anshuo**	**2.17**	**226**	*i* P			**Pn**	**17 47 04.2**	**+0.5**
	baz=224

MATI				*e*S	**Sn**	**17 48 30.6**	**+1.3**
DAV	**Davao City (W)**	**1.77 212**		P	**Pn**	**17 48 12.7**	**+2.2**
	113nm,0.3s,baz=246,slow=5.4,SNR=9.0						
DAV				S	**Sn**	**17 48 35.7**	**+3.4**
	95nm,0.3s,baz=294,slow=10,SNR=4.8						
DAV	**Davao City (W)**	**1.77 212**			**Pn**	**17 48 11.5**	**+0.9**
CGP	**Cagayan de Oro**	**1.81 266**	⇑	*i*P	**Pn**	**17 48 11.1**	**0.0**
CGP				*i*S	**Sn**	**17 48 32.1**	**-1.1**
KCP	**Kidapawan**	**2.11 222**	⇓	*i*P	**Pn**	**17 48 15.1**	**0.0**
KCP				*i*S	**Sn**	**17 48 39.6**	**-0.9**
MSLP	**Maasin**	**2.25 313**		*e*P	**Pn**	**17 48 17.9**	**+1.0**
MSLP				*e*S	**Sn**	**17 48 44.3**	**+0.5**
DDMP	**Don Marcelino,**	**2.59 198**		*e*P	**Pn**	**17 48 21.0**	**-0.5**
DDMP				*e*S	**Sn**	**17 48 51.2**	**-0.8**
SKMP	**Bagumbayan, Su**	**2.83 224**		*e*P	**Pn**	**17 48 24.2**	**-0.7**
LLP	**Lapu-Lapu**	**3.05 305**	⇓	*e*P	**Pn**	**17 48 29.4**	**+1.5**
LLP				*e*S	**Sn**	**17 49 05.0**	**+1.6**
PAGZ	**Pagadian**	**3.19 257**		*e*P	**Pn**	**17 48 29.1**	**-0.6**
CNOP	**Candoni, Negro**	**4.03 288**		*e*P	**Pn**	**17 48 42.0**	**+0.8**
CNOP				*e*S	**Sn**	**17 49 25.1**	**-2.0**
GUIM	**Jordan**	**4.38 298**		*e*P	**Pn**	**17 48 46.9**	**+1.0**
SIJI	**Sorong**	**10.51 153**		P	**Pn**	**17 50 10.6**	**+0.8**
	1.4nm,0.3s,baz=287,slow=23,SNR=18						
SIJI				S	**Sn**	**17 52 01.4**	**-4.5**
	0.7nm,0.3s,baz=182,slow=23,SNR=7.5						
MTN	**Manton Dam**	**21.77 168**		P	**P**	**17 52 28.3**	**+0.5**
MTN				IAmb	IAmb	17 52 35.3	
	comp=Z,43nm,1.3s						
KNRA	**Kununurra**	**24.20 175**		P	**P**	**17 52 52.2**	**+0.4**
LEM	**Lembang**	**24.28 231**		LR	LR	18 03 08.2	
	comp=Z,22nm,19.1s,baz=252,slow=38						
FITZ	**Fitzroy Crossi**	**26.52 182**		P	**P**	**17 53 13.1**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=14,slow=7.4,SNR=17						
WB0	**Warramunga Arr**	**29.22 165**		P	**P**	**17 53 33.4**	**-3.5**
WB0				IAmb	IAmb	17 54 00.3	
	comp=Z,34nm,1.8s						
WRA	**Warramunga Arr**	**29.37 165**		P	**P**	**17 53 37.5**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=339,slow=8.5,SNR=2.6						
WR0	**Warramunga Arr**	**29.44 165**		P	**P**	**17 53 37.9**	**-0.9**
WR0				IAmb	IAmb	17 53 57.4	
	comp=Z,29nm,1.8s						
AS31	**Alice Springs**	**32.85 167**		P	**P**	**17 54 09.0**	**+0.1**
AS31				IAmb	IAmb	17 55 17.0	
	comp=Z,5.5nm,1.9s						
ASAR	**Alice Springs**	**32.85 167**		P	**P**	**17 54 08.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=349,slow=7.3,SNR=29						
FORT	**Forrest**	**39.16 178**		P	**P**	**17 55 03.5**	**+0.9**
BBOO	**Buckleboo**	**42.15 168**		P	**P**	**17 55 28.0**	**+0.8**
BBOO				IAmb	IAmb	17 55 39.8	
	comp=Z,30nm,1.6s						
STKA	**Stephens Creek**	**42.73 161**		P	**P**	**17 55 33.1**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=350,slow=12,SNR=3.4						
MKAR	**Makanchi Array**	**53.52 323**		P	**P**	**17 56 53.9**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=131,slow=9.1,SNR=1.6						

*JMA **21** 17:53:18.7±0.1,24˚.01N×122˚.43E,h21km±3km,M2.0*
*TAP **21** 17:53:19.0,24˚.08N×122˚.44E,h28km,ML2.5,D*

ISC 21 17:53:18.4±1.2,**24˚.01N**±0˚.03×**122˚.42E**±0˚.02,**h20**km±5km,
n53,σ0°**46**/93,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.65**	**48**	P	**Pb**	**17 53 31.0**	**-0.1**
JYNG				S	**Sb**	**17 53 39.3**	**-0.4**
YOJ	**Yonaguni jima**	**0.70**	**50**	P	**Pb**	**17 53 32.0**	**0.0**
YOJ				S	**Sb**	**17 53 40.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.70**	**50**	*i*P	**Pb**	**17 53 31.8**	**-0.2**
	baz=53						
YOJ				S	**Sb**	**17 53 40.9**	**-0.3**
	baz=53						
EWUT	**Wuta**	**0.73**	**307**	P	**Pg**	**17 53 32.6**	**-0.1**
	baz=301						
EWUT				S	**Sg**	**17 53 42.5**	**0.0**
	baz=301						
ENA	**Nanau**	**0.74**	**304**	*e*P	**Pg**	**17 53 33.5**	**+0.4**
	baz=298						
ENA				*e*S	**Sn**	**17 53 44.2**	**-0.4**
	baz=298						
NACB	**Ninganchiao**	**0.77**	**282**	*i*P	**Pg**	**17 53 33.5**	**-0.1**
	baz=277						
NACB				*e*S	**Sg**	**17 53 43.9**	**0.0**
	baz=277						
TWC	**Suao**	**0.79**	**319**	*i*P	**Pb**	**17 53 33.2**	**-0.3**
	baz=315						
TWC				*i*S	**Sb**	**17 53 42.5**	**-1.2**
	baz=315						
ETLH	**Xiulin Townshi**	**0.88**	**283**	P	**Pb**	**17 53 35.1**	**0.0**
	baz=278						
ETLH				*e*S	**Sg**	**17 53 47.4**	**+0.1**
	baz=278						
NDS	**Dongshan**	**0.89**	**314**	P	**Pb**	**17 53 35.4**	**+0.2**
	baz=310						
NDS				*e*S	**Sb**	**17 53 46.7**	**0.0**
	baz=310						
ESL	**Shilin**	**0.92**	**258**	*e*P	**Pb**	**17 53 33.8**	**-2.0**
	baz=254						
ILA	**Ilan**	**0.97**	**321**	*e*P	**Pn**	**17 53 36.9**	**0.0**
	baz=317						
ILA				*e*S	**Sg**	**17 53 49.9**	**-0.2**
	baz=317						
EGFH	**Guangfu**	**0.97**	**250**	*e*P	**Pb**	**17 53 36.9**	**+0.3**
	baz=246						
EGFH				*e*S	**Sg**	**17 53 50.1**	**-0.1**
	baz=246						
TWE	**Neicheng**	**0.98**	**316**	P	**Pb**	**17 53 36.9**	**+0.1**
	baz=313						
TWE				*e*S	**Sb**	**17 53 49.0**	**-0.3**
	baz=313						
NTC	**Toucheng**	**0.99**	**327**	*e*P	**Pb**	**17 53 37.1**	**+0.1**
	baz=324						
NTC				*e*S	**Sb**	**17 53 49.2**	**-0.5**
	baz=324						
ENTT	**Nioudou**	**1.00**	**309**	P	**Pn**	**17 53 37.3**	**0.0**
	baz=305						
ENTT				*e*S	**Sn**	**17 53 50.5**	**-0.4**
	baz=305						
NDT	**Datong Townshi**	**1.01**	**306**	P	**Pg**	**17 53 38.0**	**-0.2**
	baz=302						
NDT				*e*S	**Sb**	**17 53 50.3**	**0.0**
	baz=302						
NNSB	**Datong**	**1.03**	**294**	P	**Pb**	**17 53 37.9**	**+0.1**
	baz=290						
NNSB				*e*S	**Sn**	**17 53 51.6**	**-0.3**
	baz=290						
NNSH	**Datong**	**1.03**	**294**	*e*P	**Pb**	**17 53 37.6**	**-0.1**
	baz=290						
NNSH				*e*S	**Sb**	**17 53 51.5**	**+0.6**
	baz=290						
NNS	**Nan Shan**	**1.04**	**294**	*e*P	**Pb**	**17 53 38.0**	**0.0**
	baz=290						
NNS				*e*S	**Sn**	**17 53 52.2**	**-0.1**
	baz=290						
HGSD	**Ruisui**	**1.05**	**241**	*e*P	**Pb**	**17 53 37.5**	**-0.4**
	baz=238						
HGSD				*e*S	**Sb**	**17 53 49.8**	**-1.4**
	baz=238						
WHF	**Hehuan Shan**	**1.06**	**277**	*e*P	**Pb**	**17 53 37.8**	**-0.6**
	baz=273						
WHF				*e*S	**Sn**	**17 53 52.8**	**-0.3**
	baz=273						
TWB1	**Santiao Chiao**	**1.07**	**339**	*i*P	**Pb**	**17 53 37.7**	**-0.6**
	baz=336						
TWB1				*e*S	**Sb**	**17 53 51.3**	**-0.5**
	baz=336						
TIPB	**Shuangxi**	**1.10**	**331**	*i*P	**Pn**	**17 53 38.8**	**0.0**
	baz=328						
TIPB				*e*S	**Sb**	**17 53 52.1**	**-0.6**
	baz=328						
FUSS	**Fushou**	**1.10**	**283**	*e*P	**Pb**	**17 53 38.6**	**-0.3**
	baz=279						
NWLT	**Wulai**	**1.13**	**313**	P	**Pn**	**17 53 39.3**	**+0.1**
	baz=309						
NWLT				*e*S	**Sb**	**17 53 53.7**	**+0.1**
	baz=309						
OWD	**Renai**	**1.14**	**267**	*e*P	**Pn**	**17 53 39.0**	**-0.4**
	baz=264						
OWD				*e*S	**Sb**	**17 53 54.0**	**0.0**
	baz=264						
CHGB	**Renai**	**1.14**	**273**	*e*P	**Pn**	**17 53 39.6**	**+0.2**
	baz=269						
CHGB				*e*S	**Sn**	**17 53 54.6**	**0.0**
	baz=269						
YHNB	**Yeheng**	**1.15**	**305**	P	**Pn**	**17 53 39.7**	**+0.1**
	baz=301						
YHNB				*e*S	**Sn**	**17 53 55.0**	**+0.2**
	baz=301						
TWT	**Tachien**	**1.16**	**282**	*e*P	**Pg**	**17 53 40.9**	**-0.1**
	baz=278						
NSK	**Sanguang**	**1.17**	**305**	*e*P	**Pn**	**17 53 39.9**	**+0.1**
	baz=301						
NSK				*e*S	**Sb**	**17 53 55.0**	**+0.1**
	baz=301						
TDCB	**Techi**	**1.18**	**282**	*e*P	**Pb**	**17 53 40.6**	**+0.4**
	baz=278						
VWDT	**VWDT**	**1.20**	**258**	*e*P	**Pb**	**17 53 40.7**	**+0.3**
	baz=255						
VWDT				*e*S	**Sn**	**17 53 56.1**	**+0.4**
	baz=255						
YULB	**Yu-li**	**1.20**	**239**	*e*P	**Pn**	**17 53 40.0**	**-0.1**
	baz=237						
YULB				*e*S	**Sb**	**17 53 55.3**	**-0.3**
	baz=237						
WFSB	**Wu-fen Shan**	**1.20**	**331**	*e*P	**Pn**	**17 53 39.9**	**-0.3**
	baz=329						
EYUL	**Yuli**	**1.21**	**237**	*e*P	**Pn**	**17 53 40.4**	**+0.2**
	baz=235						
EYUL				*e*S	**Sn**	**17 53 56.4**	**+0.4**
	baz=235						
TWF1	**Yuli**	**1.22**	**238**	*e*P	**Pn**	**17 53 40.4**	**0.0**
	baz=235						
TWF1				*e*S	**Sn**	**17 53 57.1**	**+0.8**
	baz=235						
TWA	**Mucha**	**1.23**	**322**	P	**Pb**	**17 53 41.6**	**+0.6**
	baz=319						
TWA				*e*S	**Sn**	**17 53 57.5**	**+0.9**
	baz=319						
IRIF	**Iriomote-Funau**	**1.24**	**75**	P	**Pb**	**17 53 41.0**	**-0.2**
IRIF				S	**Sn**	**17 53 57.2**	**+0.4**
TATO	**Taipei**	**1.28**	**319**	*e*P	**Pb**	**17 53 42.3**	**+0.4**
	baz=316						
FULB	**Fuli**	**1.31**	**232**	*e*P	**Pn**	**17 53 41.8**	**+0.1**
	baz=230						
FULB				*e*S	**Sb**	**17 53 59.5**	**+0.6**
	baz=230						
SSLB	**Suanglung**	**1.36**	**261**	*e*P	**Pb**	**17 53 43.6**	**+0.4**
	baz=258						
YM01	**YM01**	**1.37**	**326**	*e*P	**Pb**	**17 53 43.1**	**-0.3**
	baz=323						
WHP	**Taichung City**	**1.37**	**281**	*e*P	**Pb**	**17 53 43.7**	**+0.2**
	baz=276						
WHP				*e*S	**Sb**	**17 54 01.1**	**+0.5**
	baz=276						
WCS	**Beigang Elemen**	**1.38**	**272**	*e*P	**Pb**	**17 53 43.5**	**0.0**
	baz=269						
YM10	**YM10**	**1.38**	**326**	*e*P	**Pn**	**17 53 43.0**	**+0.3**
	baz=323						
YM05	**YM05**	**1.38**	**326**	*e*P	**Pb**	**17 53 43.5**	**-0.2**
	baz=324						
YM04	**YM04**	**1.39**	**325**	*e*P	**Pn**	**17 53 43.0**	**+0.2**
	baz=322						
SMLT	**Sun Moon Lake**	**1.40**	**265**	*e*P	**Pb**	**17 53 43.5**	**-0.4**
	baz=262						
SMLT				*e*S	**Sn**	**17 54 01.2**	**+0.4**
	baz=262						
LIOB	**Emei**	**1.43**	**296**	*e*P	**Pb**	**17 53 44.4**	**0.0**
	baz=293						
LIOB				*e*S	**Sb**	**17 54 03.1**	**+0.9**
	baz=293						
JKRS	**Kuro-shima**	**1.47**	**81**	P	**Pb**	**17 53 44.7**	**-0.4**
JKRS				S	**Sb**	**17 54 03.0**	**-0.4**
JIJ	**Ishigaki jima**	**1.61**	**77**	P	**Pn**	**17 53 46.1**	**+0.3**
JIJ				S	**Sn**	**17 54 06.0**	**0.0**
JISG	**Ishigakijimahi**	**1.82**	**71**	P	**Pn**	**17 53 49.5**	**+0.9**
JISG				S	**Sn**	**17 54 10.9**	**-0.2**
JTJ	**Tarama**	**2.17**	**73**	*e*S	**Sn**	**17 54 20.8**	**+0.9**

*SOME **21** 17:59:10.0,42˚.58N×83˚.88E,h20km*
*NNC **21** 17:59:14.6±2.0,42˚.81N×83˚.61E,h0km,mb4.0,mpv3.7,*
Error ellipse: s-maj=17.6km s-min=8.9km az=149.0

ISC 21 17:59:12.1±2.2,**42˚.63N**±0˚.10×**83˚.71E**±0˚.08,**h10**km,**n37**,
σ2°**42**/52,**6C-9D**,**Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.59**	**289**	*e*P	**Pb**	**17 59 59.8**	**+1.1**
	9.5nm,0.3s						
KTMS				*e*S	**Sg**	**18 00 36.0**	**+0.6**
	146nm,0.5s						
KTMS	**Ketmen**	**2.59**	**289**	Pg	**Pb**	**17 59 59.8**	**+1.1**
	9.5nm,0.3s						
KTMS				Lg	Lg	18 00 36.0	
	146nm,0.5s						
SHLS	**Shalkode**	**3.16**	**281**	*e*P	**Pn**	**18 00 03.8**	**+1.7**
	80nm,0.5s						
SHLS				*e*S	**Sn**	**18 00 42.7**	**+2.7**
	296nm,0.5s						
SHLS	**Shalkode**	**3.16**	**281**	Pg	**Pn**	**18 00 03.8**	**+1.7**
	80nm,0.5s						
SHLS				Lg	Lg	18 00 42.7	
	296nm,0.5s						
PDGK	**Podgornoye**	**3.17**	**284**	Pg	**Pb**	**18 00 09.7**	**+1.1**
	9.7nm,0.4s						
PDGK				Lg	Lg	18 00 52.4	
	61nm,0.5s						
PDGK	**Podgornoye**	**3.17**	**284**	⇑Pn	**Pb**	**18 00 06.3**	**-2.3**
	11nm,0.5s						
PDGK				⇓Lg	Lg	18 00 52.4	
	101nm,0.6s						
UZB	**Uzynbulak**	**3.48**	**280**	*e*P	**Pb**	**18 00 14.6**	**+0.7**
	6.4nm,0.2s						
UZB				*e*S	**Sg**	**18 01 00.8**	**-3.1**
	61nm,0.4s						
UZB	**Uzynbulak**	**3.48**	**280**	Pg	**Pb**	**18 00 13.3**	**-0.6**
	7.0nm,0.3s						
UZB				Lg	Lg	18 00 59.6	
	61nm,0.4s						
KPKS	**Kokpek**	**3.77**	**284**	*e*P	**Pg**	**18 00 22.6**	**-1.8**
	24nm,0.3s						
KPKS				*e*S	**Sg**	**18 01 15.0**	**+1.7**
	115nm,0.5s						
SATY	**Saty**	**3.92**	**278**	*e*P	**Pg**	**18 00 25.1**	**-2.1**
	18nm,0.5s						
SATY				*e*S	**Sg**	**18 01 18.9**	**+0.9**
	70nm,0.4s						
SATY	**Saty**	**3.92**	**278**	Pg	**Pb**	**18 00 19.8**	**-1.6**
	7.3nm,0.5s						
SATY				Lg	Lg	18 01 10.4	
	37nm,0.4s						
MK31	**Makanchi Array**	**4.28**	**347**	Pn	**Pn**	**18 00 17.6**	**+0.2**
	0.3nm,0.2s,baz=161,slow=13,SNR=61						
MK31				⇓Pg	**Pb**	**18 00 28.9**	**+1.4**
	2.5nm,0.4s,baz=154,slow=16,SNR=7.9						
MK31				⇓Lg	Lg	18 01 26.8	
	15nm,0.5s,baz=159,slow=28,SNR=3.8						
MAKZ	**Makanchi**	**4.36**	**344**	⇑Pn	**Pn**	**18 00 18.5**	**+0.2**
	1.0nm,0.4s						
MAKZ				⇓Pg	**Pb**	**18 00 29.9**	**+1.1**
	5.3nm,0.8s						
MAKZ				⇑Lg	Lg	18 01 29.4	
	13nm,0.7s						
TDK	**Taldyqorghan**	**4.51**	**304**	*e*P	**Pg**	**18 00 36.2**	**-2.2**
	64nm,0.5s						
TDK				*e*S	**Sg**	**18 01 38.2**	**+1.4**
	117nm,0.5s						
TDK	**Taldyqorghan**	**4.51**	**304**	Pg	**Pg**	**18 00 36.4**	**-2.0**
	64nm,0.5s						
TDK				Lg	Lg	18 01 38.2	
	117nm,0.5s						
ARXS	**Arharly**	**4.57**	**292**	*e*P	**Pb**	**18 00 35.7**	**+3.3**
	12nm,0.4s						
ARXS				*e*S	**Sg**	**18 01 36.8**	**-1.9**
	48nm,0.5s						
ARXS	**Arharly**	**4.57**	**292**	Pg	**Pb**	**18 00 34.2**	**+1.8**
	8.3nm,0.4s						
ARXS				Lg	Lg	18 01 35.8	
	48nm,0.5s						
KOTS	**Kotyrbulak**	**4.88**	**279**	*e*P	**Pb**	**18 00 40.7**	**+3.0**
	27nm,0.6s						
KOTS				*e*S	**Sg**	**18 01 46.6**	**-2.1**
	50nm,0.6s						
KOTS	**Kotyrbulak**	**4.88**	**279**	Pg	**Pb**	**18 00 40.7**	**+3.0**
	27nm,0.6s						
KOTS				Lg	Lg	18 01 46.6	
	50nm,0.6s						
ZSN	**Zaisan**	**4.89**	**9**	*e*P	**Pb**	**18 00 40.5**	**+2.7**
	4.8nm,0.5s						
ZSN				*e*S	**Sg**	**18 01 45.2**	**-3.8**
	17nm,0.5s						
ZSN	**Zaisan**	**4.89**	**9**	Pg	**Pb**	**18 00 40.5**	**+2.7**
	4.4nm,0.5s						
ZSN				Lg	Lg	18 01 45.3	
	17nm,0.7s						
MDOK	**Medeo**	**4.92**	**278**	*e*P	**Pb**	**18 00 42.0**	**+3.5**
	6.4nm,0.5s						
MDOK				*e*S	**Sg**	**18 01 48.3**	**-1.8**
	28nm,0.6s						
MDOK	**Medeo**	**4.92**	**278**	⇓Pn	Pn	18 00 31.9	+5.6
	2.2nm,0.5s						
MDOK				⇓Pg	**Pg**	**18 00 43.5**	**-2.8**
	7.1nm,0.5s						
MDOK				⇑Lg	Lg	18 01 51.6	
	30nm,0.7s						
MDOK	**Medeo**	**4.92**	**278**	Pg	**Pb**	**18 00 41.0**	**+2.6**
	8.5nm,0.5s						
MDOK				Lg	Lg	18 01 47.7	
	24nm,0.6s						
TNSS	**Tian-Shan**	**4.99**	**277**	*e*P	**Pg**	**18 00 44.0**	**-3.6**
	10nm,0.4s						
TNSS				*e*S	**Sg**	**18 01 51.2**	**-1.0**
	11nm,0.5s						
TNSS	**Tian-Shan**	**4.99**	**277**	Pg	**Pg**	**18 00 44.0**	**-3.6**
	10nm,0.4s						
TNSS				Lg	Lg	18 01 51.2	
	11nm,0.5s						
IZV	**Izvestkoviy**	**5.23**	**277**	*e*P	**Pg**	**18 00 49.5**	**-2.8**
	8.9nm,0.5s						
IZV				*e*S	**Sg**	**18 02 01.3**	**+1.2**
	28nm,0.7s						
IZV	**Izvestkoviy**	**5.23**	**277**	Pg	**Pg**	**18 00 49.5**	**-2.8**
	8.9nm,0.5s						
IZV				Lg	Lg	18 02 01.3	
	28nm,0.7s						
KTBS	**Karatobe**	**5.25**	**284**	*e*P	**Pg**	**18 00 49.6**	**-3.0**
	5.0nm,0.4s						
KTBS				*e*S	**Sg**	**18 02 02.1**	**+1.5**
	37nm,0.6s						
KTBS	**Karatobe**	**5.25**	**284**	Pg	**Pg**	**18 00 49.6**	**-3.0**
	5.0nm,0.4s						
KTBS				Lg	Lg	18 02 02.1	
	37nm,0.6s						
MTBS	**Maitube**	**5.37**	**278**	*e*P	**Pg**	**18 00 51.1**	**-3.8**
	9.8nm,0.5s						
MTBS				*e*S	**Sg**	**18 02 03.2**	**-1.3**
	18nm,0.5s						
MTBS	**Maitube**	**5.37**	**278**	Pg	**Pg**	**18 00 51.1**	**-3.8**
	9.8nm,0.5s						
MTBS				Lg	Lg	18 02 03.2	
	18nm,0.5s						
KST	**Kastek**	**5.71**	**277**	Pg	Pg	18 00 56.5	-5.0
	10nm,0.6s						
KST				Lg	Lg	18 02 13.3	
	25nm,0.8s						
KRBS	**Karabastau**	**5.97**	**283**	Pg	**Pg**	**18 01 03.2**	**-3.2**
	6.0nm,0.5s						
KRBS				Lg	Lg	18 02 24.0	
	9.8nm,0.4s						
TKM2	**Tokmak 2**	**5.98**	**276**	⇓Pn	Pn	18 00 46.5	+5.7
	2.9nm,0.8s						
TKM2				⇓Pg	**Pg**	**18 01 05.4**	**-1.1**
	2.5nm,0.5s						
TKM2				⇑Lg	Lg	18 02 25.9	
	13nm,0.7s						
SGDS	**Sogindy**	**6.70**	**280**	Pg	**Pg**	**18 01 16.6**	**-3.8**
	2.1nm,0.5s						
AAK	**Ala-Archa**	**6.80**	**273**	⇓Pg	**Pg**	**18 01 19.9**	**-2.3**
	3.8nm,0.9s						
AAK				⇑Lg	Lg	18 02 53.4	
	12nm,0.8s						

*IDC **21** 18:17:50.9±1.7,52˚.39N×131˚.77W,h0km,mb3.3/2,*
mb1 3.5/7,mb1mx3.3/50,mbtmp3.3/7,ML3.4/5,MS2.8/1,
Ms1 2.8/1,ms1mx2.3/32,Error ellipse: s-maj=28.6km
s-min=13.7km az=46.0
*PGC **21** 18:17:53.2±0.8,52˚.43N×131˚.74W,h24km,ML3.6/16,*
91km south of Sandspit, Bc Haida Gwaii Region

ISC 21 18:17:52.6±1.2,**52˚.43N**±0˚.04×**131˚.68W**±0˚.04,**h11**km±8km,
n42,σ1°**74**/55,**Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNB	**Barry Inlet**	**0.15**	**343**	P	**Pb**	**18 17 58.1**	**+0.5**
BNB				S	**Sg**	**18 18 00.8**	**+2.0**
HG4B	**Hotspring**	**0.32**	**114**	P	**Pb**	**18 18 00.9**	**+0.5**
HG4B				S	**Sb**	**18 18 05.9**	**+0.3**
HG1B	**Mitchell Dam**	**0.58**	**332**	P	**Pb**	**18 18 04.0**	**-0.7**
HG1B				S	**Sb**	**18 18 11.7**	**-1.2**
MOBC	**Moresby Island**	**0.74**	**346**	P	**Pb**	**18 18 07.2**	**-0.4**
MOBC				S	**Sb**	**18 18 17.4**	**-0.3**
DIB	**Dawson Inlet,**	**0.92**	**328**	P	**Pg**	**18 18 09.4**	**-0.8**
DIB				S	**Sg**	**18 18 21.3**	**-0.9**
H02S1	**DAWSON INLET T**	**0.92**	**328**	Pn	**Pg**	**18 18 09.5**	**-0.8**
H02S1				Sn	**Sg**	**18 18 21.1**	**-1.1**
BNAB	**Bonilla**	**1.24**	**30**	P	**Pn**	**18 18 15.6**	**-0.3**
BNAB				S	**Sn**	**18 18 32.9**	**+0.4**
MASB	**Masset**	**1.60**	**353**	Pn	**Pn**	**18 18 20.9**	**+0.1**
NDB	**Naden**	**1.71**	**334**	Pn	**Pn**	**18 18 21.1**	**-1.3**
NDB				Sn	**Sn**	**18 18 42.6**	**-1.6**
GRNB	**Grenville Isla**	**1.76**	**35**	Pn	**Pn**	**18 18 22.7**	**-0.3**
GRNB				Pg	**Pb**	**18 18 25.1**	**+0.2**
GRNB				Sg	**Sb**	**18 18 48.7**	**+1.7**
LIB	**Langara Island**	**2.01**	**336**	Sg	**Sg**	**18 18 55.1**	**-2.0**
RUBB	**Prince Rupert**	**2.08**	**24**	Pn	**Pn**	**18 18 27.5**	**0.0**
RUBB				Sg	**Sb**	**18 18 57.5**	**+1.2**
BBB	**Bella Bella**	**2.20**	**95**	Pn	**Pn**	**18 18 27.9**	**-1.1**
	4.3nm,0.3s,baz=273,slow=10,SNR=35						
BBB				Lg	Lg	18 19 00.3	
	82nm,0.3s,baz=30,slow=21,SNR=13						
BBB				LR	LR	18 19 24.6	
	comp=Z,179nm,19.3s,baz=359,slow=42						
BBB	**Bella Bella**	**2.20**	**95**	Pn	**Pn**	**18 18 28.3**	**-0.8**
BBB				Sn	**Sn**	**18 18 55.2**	**-1.0**
BBB				Sg	**Sg**	**18 19 02.9**	**-0.5**
KITB	**Kitimat**	**2.46**	**47**	Pn	**Pn**	**18 18 32.7**	**0.0**
KITB				Sg	**Sb**	**18 19 09.5**	**+2.3**
HOLB	**Holberg**	**2.85**	**128**	Pn	**Pn**	**18 18 36.8**	**-1.2**
HOLB				Sn	**Sn**	**18 19 09.9**	**-2.3**
PHC	**Port Hardy**	**3.16**	**121**	Pn	**Pn**	**18 18 40.8**	**-1.4**
PHC				Sn	**Sn**	**18 19 17.6**	**-2.2**
MAYB	**Maynard**	**3.47**	**124**	Pn	**Pn**	**18 18 45.5**	**-1.2**
WOSB	**Woss**	**3.93**	**123**	Pn	**Pn**	**18 18 52.4**	**-0.5**
NCRB	**Newcastle Ridg**	**4.06**	**118**	Pn	**Pn**	**18 18 54.7**	**0.0**
CBB	**Campbell River**	**4.63**	**119**	Sn	**Sn**	**18 19 54.1**	**-2.1**
UBRB	**Upper Baezaeko**	**4.65**	**81**	Pn	**Pn**	**18 19 05.0**	**+2.3**
UBRB				Sg	**Sg**	**18 20 17.5**	**-4.3**
FSB	**Fort Saint Jam**	**4.85**	**62**	Pn	**Pn**	**18 19 06.3**	**+0.8**
FSB				Sg	**Sg**	**18 20 24.1**	**-4.0**
BTB	**Buttle Lake**	**4.89**	**125**	Pn	**Pn**	**18 19 07.9**	**+1.7**
TXB	**Texada**	**5.32**	**118**	Pn	**Pn**	**18 19 12.0**	**0.0**
MGB	**Mount Grey**	**5.61**	**125**	Pn	**Pn**	**18 19 16.8**	**+0.7**

MARNC	**Mare, Loyalty**	**1.81**	**262**	P	Pn	18 20 02.4	-0.5
LIFNC	**LIFOU**	**2.57**	**280**	P	Pn	18 20 12.1	-1.3
PINNC	**Pines Island,**	**2.70**	**239**	P	Pn	18 20 15.0	-0.1
YATNC	**Mamie plateau,**	**2.96**	**253**	P	Pn	18 20 18.7	-0.1
OUENC	**Ouen Island, N**	**3.12**	**247**	P	Pn	18 20 21.0	+0.1
DZM	**Mont Dzumac**	**3.37**	**255**	*e*Pn	Pn	18 20 25.5	+1.1
	10nm,0.2s						
DZM				*e*Sn	Sn	18 21 04.9	-0.3
	22nm,0.3s						
DZM				*e*LR	LR	18 21 09.5	
	comp=Z,570nm,26.3s						
ONTNC	**Ouen Toro**	**3.42**	**251**	P	Pn	18 20 24.8	-0.3
NOUC	**Port Laguerre**	**3.50**	**255**	P	Pn	18 20 25.9	-0.3
DVP	**Devils Point**	**3.87**	**334**	P	Pn	18 20 31.3	0.0
KOUNC	**Koumac, New Ca**	**5.34**	**276**	P	Pn	18 20 52.9	+1.4

*IPEC **21** 18:34:23.2±0.1,50.°21N×19.°04E,h0km±1km,ML1.6/3, Error ellipse: s-maj=2.7km s-min=0.8km az=167.0*
PRU 21 18:34:24.0±0.0,**50.°18N×19.°00E,h0km,Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.52**	**85**	*e*Pg	Pg	18 34 32.3	-1.5
OJC				*e*Sg	Sg	18 34 38.9	-1.6
OKC	**Ostrava-Krasne**	**0.65**	**238**	*e*SG	Sg	18 34 43.2	-1.6
	comp=Z,18nm,0.5s						
MORC	**Moravsky Berou**	**1.02**	**247**	*e*PG	Pg	18 34 43.7	+0.1
MORC				*e*SG	Sg	18 34 56.3	-0.6
MORC	**Moravsky Berou**	**1.02**	**247**	*e*Pg	Pg	18 34 43.6	0.0
	baz=65						
MORC				*e*Sg	Sg	18 34 56.3	-0.6
	13nm,0.3s,baz=65						
LANS	**Liptovska Anna**	**1.07**	**163**	*e*PG	Pg	18 34 44.3	-0.3
LANS				*e*SG	Sg	18 34 59.2	+0.7
LANS				*e*LG	Lg	18 35 01.8	
NIE	**Niedzica**	**1.14**	**132**	*e*Pg	Pg	18 34 45.8	0.0
NIE				*e*Sg	Sb	18 35 02.6	+0.8
KRLC	**Kraliky**	**1.43**	**267**	*e*PG	Pn	18 34 49.9	-1.4
KRLC				*e*SG	Sg	18 35 10.1	+0.1
	comp=Z,18nm,0.8s						
VYHS	**Vyhne**	**1.69**	**184**	*e*PN	Pn	18 34 53.8	-1.0
VYHS				*e*SN	Sn	18 35 16.1	-1.0
DPC	**Dobruska-Polom**	**1.73**	**277**	*e*PG	Pn	18 34 54.9	-0.4
DPC				*e*SG	Sg	18 35 19.3	-0.1
	comp=Z,10.0nm,0.2s						
VRAC	**Vranov**	**1.79**	**242**	*e*PN	Pn	18 34 56.1	0.0
VRAC				*e*SG	Sb	18 35 20.6	0.0
VRAC	**Vranov**	**1.79**	**242**	*e*Pn	Pn	18 34 56.1	0.0
	baz=59						
VRAC				*e*Sg	Sb	18 35 20.5	-0.1
	4.8nm,0.3s,baz=59						
OSTC	**Ostas**	**1.82**	**283**	*e*PG	Pb	18 34 57.8	-0.4
OSTC				*e*SG	Sg	18 35 24.0	+1.5
	comp=Z,21nm,1.3s						
KSP	**Ksiaz**	**1.85**	**292**	*e*Pg	Pb	18 34 59.0	+0.3
KSP				*e*Sg	Sg	18 35 23.4	0.0
CHVC	**Chvalec**	**1.93**	**283**	*e*PG	Pn	18 34 58.1	0.0
CHVC				*e*SG	Sg	18 35 27.0	+1.1
	comp=Z,12nm,0.8s						
KRUC	**Moravsky**	**2.03**	**238**	*e*PN	Pn	18 34 59.3	-0.1
KRUC				*e*SG	Sb	18 35 28.1	+0.6
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn	Pn	18 34 59.2	-0.2
	baz=55						
KRUC				*e*Sg	Sb	18 35 28.1	+0.6
	1.8nm,0.2s,baz=55						
CRVS	**Cervenica-Dubn**	**2.05**	**128**	*e*PG	Pg	18 35 03.1	-0.2
PRU	**Pruhonice**	**2.88**	**268**	*e*SG	Sg	18 35 55.6	-0.8
	comp=Z,3.9nm,0.6s						
BRG	**Berggiesshubel**	**3.30**	**284**	Sg	Sg	18 36 09.8	-0.2
BRG				Amp		18 36 19.1	
	comp=Z,3.5nm,0.6s						
CKRC	**Cesky Krumlov**	**3.35**	**248**	*e*SG	Sg	18 36 09.5	-2.0
	comp=Z,3.8nm,0.6s						
KHC	**Kasperske Hory**	**3.68**	**255**	*e*SG	Sg	18 36 20.2	-1.8
	comp=Z,3.9nm,0.9s						

*IDC **21** 18:40:37.4±0.6,46.°23N×152.°92E,h0km,mb4.2/25, mb1 4.3/31,mb1mx4.2/61,mbtmp4.2/31,ML3.5/5,MS3.9/18, Ms1 3.9/18,ms1mx3.6/58,Error ellipse: s-maj=16.3km s-min=12.0km az=148.0*
*JMA **21** 18:40:40.1±0.8,46.°47N×152.°96E,h30km,M5.0*
*SKHL **21** 18:40:41.5±0.7,46.°00N×153.°20E,h49km±5km,mb5.0/13, mbv5.2/3,ms4.4/5,msh5.2/3*
*MOS **21** 18:40:41.3±1.2,46.°15N×153.°03E,h44km,mb4.8/16, MS3.6/8,Error ellipse: s-maj=6.5km s-min=5.6km az=105.4*
*NEIC **21** 18:40:44.2±1.6,46.°28N±0.°08×152.°88E±0.°07,h43km±4km, mb4.6/77,Error ellipse: s-maj=12.4km s-min=6.5km az=171.0*
ISC 21 18:40:41.9±0.5,**46.°04N**±0.°05×**153.°09E**±0.°05,**h36**km±2km, **n346,**σ1$**74**/368,**mb4.6**/111,**MS4.2**/23,**25C-24D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.75**	**259**	*d* iPN	**Pn**	**18 41 38.8**	**+1.7**
KUR				*i* S	**Sn**	**18 42 22.7**	**+2.7**
KUR				pmax	pmax		
	comp=Z,1μm,0.3s						
KUR				pmax	pmax		
	comp=N,427nm,0.2s						
KUR				smax	smax		
	comp=N,837nm,0.4s						
KUR				smax	smax		
	comp=E,234nm,0.3s						
KUR				smax	smax		
	comp=E,1μm,1.8s						
KUR				smax	smax		
	comp=N,1μm,0.9s						
KUR	**Kuril'sk**	**3.75**	**259**	*i* P	**Pn**	**18 41 38.8**	**+1.7**
KUR				AMB	AMB	18 41 39.0	
	comp=N,430nm,0.4s						
KUR				AMB	AMB	18 41 39.0	
	comp=N,1μm,0.4s						
KUR				*e*S	**Sn**	**18 42 21.3**	**+1.3**
KUR				A	A	18 42 24.0	
	comp=N,840nm,0.4s						
KUR				A	A	18 42 24.0	
	comp=N,230nm,0.4s						
KUR				A	A	18 42 27.0	
	comp=N,1μm,2.0s						
KUR				A	A	18 42 27.0	
	comp=N,1μm,2.0s						
KUR				AMS	AMS	18 42 56.6	
	comp=N,5μm,15.0s						
KUR				AMS	AMS	18 42 56.6	
	comp=N,5μm,15.0s						
SKR	**Severo-Kuril's**	**5.06**	**22**	*e*PN	**Pn**	**18 41 54.5**	**-0.7**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1μm,11.0s						
SKR				MLR	MLR		
	comp=Z,600nm,13.0s						
SKR	**Severo-Kuril's**	**5.06**	**22**	*e*P	**Pn**	**18 41 55.8**	**+0.6**
SKR				AMB	AMB	18 41 57.0	
	comp=Z,60nm,0.5s						
SKR				AMB	AMB	18 41 57.9	
	comp=Z,800nm,4.0s						
SKR				*e*S	**Sn**	**18 42 51.3**	**-1.0**
SKR				A	A	18 42 53.0	
	comp=Z,100nm,0.5s						
SKR				A	A	18 42 53.0	
	comp=Z,150nm,0.5s						
SKR				A	A	18 42 56.5	
	comp=Z,2μm,5.0s						
SKR				A	A	18 42 56.5	
	comp=Z,2μm,5.0s						
SKR				AMS	AMS	18 43 31.0	
	comp=Z,1μm,11.0s						
YUK	**Yuzh-Kuril'sk**	**5.50**	**251**	*d* iPN	**Pn**	**18 42 01.9**	**+0.7**
YUK				pmax	pmax		
	comp=N,127nm,0.2s						
YUK				pmax	pmax		
	comp=E,132nm,0.2s						
YUK				pmax	pmax		
	comp=Z,298nm,0.2s						
YUK				MLR	MLR		
	comp=Z,694nm,14.0s						
YUK	**Yuzh-Kuril'sk**	**5.50**	**251**	*i* P	**Pn**	**18 42 02.5**	**+1.3**
YUK				AMB	AMB	18 42 05.0	
	comp=Z,130nm,0.2s						
YUK				AMB	AMB	18 42 05.0	
	comp=Z,300nm,0.2s						
YUK				*i* S	**Sn**	**18 43 03.9**	**+0.8**
YUK				A	A	18 43 08.0	
	comp=Z,1μm,2.0s						
YUK				A	A	18 43 08.0	
	comp=Z,500nm,2.0s						
YUK				A	A	18 43 13.0	
	comp=Z,460nm,0.4s						
YUK				A	A	18 43 13.0	
	comp=Z,410nm,0.4s						
YUK				AMS	AMS	18 43 13.8	
	comp=Z,700nm,14.0s						
GRPR	**Tuman**	**5.58**	**251**	ǁ *i* PN	**Pn**	**18 42 03.2**	**+1.0**
GRPR				pmax	pmax		
	comp=N,55nm,0.3s						
GRPR				pmax	pmax		
	comp=E,58nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,168nm,0.3s						
GRPR	**Tuman**	**5.58**	**251**	*i* P	**Pn**	**18 42 03.2**	**+1.0**
GRPR				AMB	AMB	18 42 05.0	
	comp=Z,60nm,0.3s						
GRPR				AMB	AMB	18 42 05.0	
	comp=Z,60nm,0.3s						
GRPR				AMB	AMB	18 42 05.0	
	comp=Z,170nm,0.3s						
GRPR				*i* S	**Sn**	**18 43 06.2**	**+1.2**
GRPR				A	A	18 43 09.0	
	comp=Z,430nm,0.5s						
GRPR				A	A	18 43 09.0	
	comp=Z,270nm,0.5s						
GLVR	**Golovnino**	**5.85**	**249**	ǁ *i* PN	**Pn**	**18 42 06.7**	**+0.7**
GLVR				pmax	pmax		
	comp=Z,352nm,0.5s						
GLVR				pmax	pmax		
	comp=N,207nm,0.3s						
GLVR	**Golovnino**	**5.85**	**249**	*i* P	**Pn**	**18 42 06.7**	**+0.7**
GLVR				AMB	AMB	18 42 10.0	
	comp=N,350nm,0.5s						
GLVR				*i* S	**Sn**	**18 43 10.8**	**-0.9**
GLVR				A	A	18 43 16.0	
	comp=N,780nm,0.5s						
GLVR				A	A	18 43 16.0	
	comp=N,120nm,0.5s						
NEM2	**Nemuro 2**	**5.88**	**246**	P	**Pn**	**18 42 05.6**	**-0.8**
NEM2				*e*S	**Sn**	**18 43 09.6**	**-2.9**
RUSJ	**Misakicho**	**5.88**	**254**	*e*PN	**Pn**	**18 42 09.5**	**+3.1**
RUSJ				*e*S	**Sn**	**18 43 15.5**	**+3.0**
NMR	**Nemuro--Hokkai**	**5.88**	**246**	ǁ *i* PN	**Pn**	**18 42 05.6**	**-0.9**
NMR	**Nemuro--Hokkai**	**5.88**	**246**	*i* P	**Pn**	**18 42 05.6**	**-0.9**
NMR				*i* S	**Sn**	**18 43 10.5**	**-2.1**
PAU	**Pauzhetka**	**5.96**	**23**	*e*P	**Pn**	**18 42 08.8**	**+1.3**
PAU				AMB	AMB	18 42 10.2	
	comp=N,90nm,0.8s						
JRA	**Rausu**	**6.03**	**252**	P	**Pn**	**18 42 09.7**	**+1.3**
JNK	**Nakash**	**6.44**	**251**	P	**Pn**	**18 42 14.5**	**+0.4**
JNK				*e*S	**Sn**	**18 43 25.2**	**-1.1**
JAK	**Akkeshi**	**6.73**	**246**	P	**Pn**	**18 42 17.2**	**-0.8**
JAK				*e*S	**Sn**	**18 43 30.0**	**-3.3**
JTKR	**Abashiri--Toko**	**6.83**	**256**	P	**Pn**	**18 42 20.9**	**+1.5**
JAR	**Ashorobuto**	**7.19**	**251**	P	**Pn**	**18 42 25.3**	**+0.9**
JAR				*e*S	**Sn**	**18 43 44.3**	**-0.4**
YSS	**Yuzh-Sakhalins**	**7.19**	**281**	*e*PN	**Pn**	**18 42 27.2**	**+2.8**
YSS				pmax	pmax		
	comp=Z,40nm,0.9s						
YSS				MLR	MLR		
	comp=Z,2μm,16.0s						
YSS				MLR	MLR		
	comp=E,900nm,11.0s						
YSS	**Yuzh-Sakhalins**	**7.19**	**281**	Pn	**Pn**	**18 42 27.1**	**+2.8**
YSS	**Yuzh-Sakhalins**	**7.19**	**281**	*e*P	**Pn**	**18 42 27.2**	**+2.8**
YSS				AMB	AMB	18 42 28.0	
	comp=E,40nm,0.9s						
YSS				*e*S	**Sn**	**18 43 45.7**	**+1.0**
YSS				AMS	AMS	18 44 55.0	
	comp=E,900nm,11.0s						
YSS				AMS	AMS	18 44 55.0	
	comp=E,2μm,16.0s						
JKK2	**Kamakawa 2**	**7.65**	**257**	P	**Pn**	**18 42 32.6**	**+1.9**
JKA	**Kamikawa-asahi**	**7.67**	**259**	Pn	**Pn**	**18 42 33.5**	**+2.5**
JKA	**Kamikawa-asahi**	**7.67**	**259**	*e*P	**Pn**	**18 42 33.5**	**+2.5**
ASAJ	**Asahikawa**	**7.67**	**259**	Pn	**Pn**	**18 42 31.4**	**+0.4**
	comp=E,5.2nm,0.3s,baz=82,slow=10,SNR=41						
ASAJ				LR	LR	18 45 34.3	
	comp=E,692nm,18.0s,baz=35,slow=39						
ASAJ	**Asahikawa**	**7.67**	**259**	P	**Pn**	**18 42 33.7**	**+2.7**
ASAJ	**Asahikawa**	**7.67**	**259**	PN	**Pn**	**18 42 33.5**	**+2.5**
PEA0B	**Petropavlovsk-**	**7.68**	**21**	PN	**Pn**	**18 42 30.1**	**-1.0**
PEA0B	**Petropavlovsk-**	**7.68**	**21**	Pn	**Pn**	**18 42 30.1**	**-1.0**
PETK	**Petropavlovsk-**	**7.68**	**21**	Pn	**Pn**	**18 42 30.3**	**-0.8**
	comp=E,1.3nm,0.3s,baz=172,slow=11,SNR=23						
JCH	**Churui**	**7.77**	**247**	P	**Pn**	**18 42 32.3**	**0.0**
JCH				*e*S	**Sn**	**18 43 55.5**	**-3.5**
PET	**Petropavlovsk**	**7.87**	**25**	*e*S	**Sn**	**18 43 59.8**	**-1.5**
JFR	**Furan**	**8.02**	**253**	P	**Pn**	**18 42 38.4**	**+2.6**
UGL	**Uglegorsk**	**8.05**	**296**	ǁ *i* PN	**Pn**	**18 42 39.9**	**+3.8**
UGL				*e*S	**Sn**	**18 44 09.7**	**+3.9**
UGL				pmax	pmax		
	comp=Z,61nm,0.8s						
UGL				smax	smax		
	comp=N,39nm,0.6s						
UGL				smax	smax		
	comp=E,84nm,0.8s						
UGL	**Uglegorsk**	**8.05**	**296**	*i* P	**Pn**	**18 42 39.0**	**+2.9**
UGL				AMB	AMB	18 42 45.0	
	comp=E,60nm,0.8s						
UGL				*e*S	**Sn**	**18 44 07.1**	**+1.3**
UGL				A	A	18 44 15.0	
	comp=E,40nm,0.6s						
UGL				A	A	18 44 15.0	
	comp=E,80nm,0.6s						
JEM	**Erimo**	**8.21**	**244**	P	**Pn**	**18 42 39.6**	**+1.2**
ERM	**Erimo**	**8.21**	**244**	*ce*PN	**Pn**	**18 42 39.5**	**+1.2**
ERM				pmax	pmax		
	comp=Z,61nm,1.3s						
ERM	**Erimo**	**8.21**	**244**	Pn	**Pn**	**18 42 39.6**	**+1.2**
JNBK	**Urakawa-nobuka**	**8.33**	**247**	P	**Pn**	**18 42 38.9**	**-1.1**
TYV	**Tymovskoe**	**8.44**	**309**	*e*PN	**Pn**	**18 42 44.0**	**+2.5**
TYV				*e*S	**Sn**	**18 44 20.0**	**+4.5**
TYV				pmax	pmax		
	comp=Z,18nm,0.8s						
TYV				pmax	pmax		
	comp=Z,200nm,2.3s						
TYV				smax	smax		
	comp=E,16nm,1.5s						
TYV	**Tymovskoe**	**8.44**	**309**	*e*P	**Pn**	**18 42 44.0**	**+2.5**
TYV				AMB	AMB	18 42 44.7	
	comp=E,20nm,0.8s						
TYV				AMB	AMB	18 42 45.0	
	comp=E,200nm,2.3s						
TYV				*e*S	**Sn**	**18 44 16.0**	**+0.6**
TYV				A	A	18 44 23.0	
	comp=E,20nm,1.0s						
TYV				A	A	18 44 23.0	
	comp=E,30nm,1.0s						
JEW	**Eniwo**	**8.92**	**253**	Pn	**Pn**	**18 42 50.2**	**+2.1**
JNB	**Noboribetsu**	**9.35**	**252**	*e*S	**Sn**	**18 44 35.2**	**-2.7**
JKB	**Kayabe**	**9.63**	**249**	P	**Pn**	**18 42 57.0**	**-0.9**
JKB				*e*S	**Sn**	**18 44 38.8**	**-5.9**
JYM2	**Yakumo 2**	**9.96**	**251**	P	**Pn**	**18 43 02.3**	**0.0**
OKH	**Okha**	**9.97**	**323**	*de*PN	Pn	18 43 08.2	+5.8
OKH				*e*S	Sn	18 45 05.4	+13
OKH				pmax	pmax		
	comp=Z,100nm,11.2s						
OKH				smax	smax		
	comp=N,100nm,12.9s						
OKH				smax	smax		
	comp=E,100nm,13.0s						
OKH				MLR	MLR		
	comp=N,1μm,16.0s						
OKH				MLR	MLR		
	comp=E,1μm,16.0s						
OKH				MLR	MLR		
	comp=Z,800nm,15.0s						
OKH	**Okha**	**9.97**	**323**	*e*P	**Pn**	**18 43 06.4**	**+4.0**
OKH				AMB	AMB	18 43 12.1	
	comp=Z,100nm,11.0s						
OKH				AMS	AMS	18 47 24.3	
	comp=Z,1μm,16.0s						
OKH				AMS	AMS	18 47 24.3	
	comp=Z,1μm,16.0s						
OKH				AMS	AMS	18 47 24.3	
	comp=Z,700nm,16.0s						
JANG	**Nango**	**10.17**	**240**	P	**Pn**	**18 43 02.1**	**-3.1**
JANG				*e*S	Sn	18 44 48.1	-10
JTM	**Tenmabayashi**	**10.20**	**243**	P	**Pn**	**18 43 03.8**	**-1.9**
JTM				*e*S	**Sn**	**18 44 50.3**	**-8.3**
JTM	**Tenmabayashi**	**10.20**	**243**		**Pn**	**18 43 03.7**	**-1.9**
JTH	**Tanohata**	**10.23**	**237**	P	**Pn**	**18 43 03.0**	**-3.1**
JTH				*e*S	Sn	18 44 49.0	-11
NKL	**Nikolayevsk**	**10.73**	**316**	*e*PN	**Pn**	**18 43 15.9**	**+3.0**
NKL				pmax	pmax		
	comp=E,50nm,1.1s						
NKL				pmax	pmax		
	comp=N,501nm,0.8s						
NKL				pmax	pmax		
	comp=Z,28nm,1.3s						
NKL				MLR	MLR		
	comp=E,1μm,19.0s						
NKL				MLR	MLR		
	comp=N,3μm,12.0s						
NKL				MLR	MLR		
	comp=Z,1μm,14.0s						
NKL	**Nikolayevsk**	**10.73**	**316**	*e*P	**Pn**	**18 43 15.9**	**+3.0**
NKL				AMB	AMB	18 43 16.5	
	comp=Z,50nm,1.0s						
NKL				AMB	AMB	18 43 16.5	
	comp=Z,50nm,1.0s						
NKL				AMB	AMB	18 43 16.5	
	comp=Z,30nm,1.0s						
NKL				AMS	AMS	18 48 11.0	
	comp=Z,4μm,15.0s						
NKL				AMS	AMS	18 48 11.0	
	comp=Z,1μm,15.0s						
NKL				AMS	AMS	18 48 11.0	
	comp=Z,1μm,15.0s						
GRNR	**Gornyy**	**12.03**	**299**	⇑ *i* PN	**Pn**	**18 43 35.1**	**+4.4**
GRNR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GRNR				MLR	MLR		
	comp=N,150nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,620nm,16.0s						
GRNR				MLR	MLR		
	comp=E,550nm,15.0s						
GRNR	**Gornyy**	**12.03**	**299**	*e*P	**Pn**	**18 43 35.1**	**+4.4**
GRNR				AMB	AMB	18 43 36.1	
	comp=E,10.0nm,0.9s						
GRNR				AMS	AMS	18 48 19.0	
	comp=E,200nm,17.0s						
GRNR				AMS	AMS	18 48 19.0	
	comp=E,600nm,17.0s						
GRNR				AMS	AMS	18 48 19.0	
	comp=E,600nm,17.0s						
JMM	**Marumori**	**12.26**	**233**	Pn	**Pn**	**18 43 31.4**	**-2.4**
JSD	**Sado**	**13.60**	**239**	Pn	**Pn**	**18 43 50.5**	**-1.6**
MA2	**Magadan**	**13.63**	**355**	Pn	**Pn**	**18 43 52.1**	**-0.2**
	comp=E,1.2nm,0.3s,baz=168,slow=8.8,SNR=6.0						
MA2				LR	LR	18 49 29.1	
	comp=E,353nm,18.0s,baz=180,slow=40						
MA2	**Magadan**	**13.63**	**355**	Pn	**Pn**	**18 43 51.5**	**-0.9**
MAJO	**Matsushiro**	**14.65**	**235**	*i* P	**Pn**	**18 44 06.9**	**+0.5**
MAJO	**Matsushiro**	**14.65**	**235**	Pn	**Pn**	**18 44 04.4**	**-2.0**
MAT	**Matsushiro**	**14.65**	**235**	P	**Pn**	**18 44 04.3**	**-2.1**
MJAR	**Matsushiro Arr**	**14.65**	**235**	Pn	**Pn**	**18 44 04.2**	**-2.3**
	comp=E,0.0nm,0.3s,baz=29,slow=14,SNR=6.3						
MJAR	**Matsushiro Arr**	**14.65**	**235**	Pn	**Pn**	**18 44 03.3**	**-3.1**
KLR	**Kul'dur**	**14.72**	**290**	Pn	**Pn**	**18 44 06.0**	**-1.4**
	comp=E,0.1nm,0.3s,baz=92,slow=16,SNR=8.5						
KLR				LR	LR	18 50 06.4	
	comp=E,615nm,18.0s,baz=98,slow=39						
KLR	**Kul'dur**	**14.72**	**290**	*ce*P	**Pn**	**18 44 07.6**	**+0.2**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLR	**Kul'dur**	**14.72**	**290**	*e*P	**Pn**	**18 44 07.6**	**+0.2**
KLR				AMB	AMB	18 44 14.8	
	comp=Z,10.0nm,1.0s						
EKMR	**Ekimchan**	**14.81**	**306**	*e*P	**Pn**	**18 44 07.3**	**-1.2**
EKMR				AMB	AMB	18 44 13.0	
	comp=Z,10.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**15.01**	**271**	*i* P	**Pn**	**18 44 09.8**	**-1.3**
USA0B	**Ussuriysk Arra**	**15.01**	**271**	Pn	**Pn**	**18 44 11.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**15.01**	**271**	Pn	**Pn**	**18 44 09.6**	**-1.6**
	baz=65,slow=13,SNR=28						
USRK				LR	LR	18 49 51.2	
	comp=Z,371nm,19.4s,baz=57,slow=37						
USRK	**Ussuriysk Ar.**	**15.01**	**271**	P	**Pn**	**18 44 11.1**	**0.0**
USRK	**Ussuriysk Ar.**	**15.01**	**271**		**Pn**	**18 44 11.1**	**0.0**
JHJ	**Hachijo jima 2**	**16.45**	**223**	LR	LR	18 55 14.9	
	comp=Z,76nm,18.2s,baz=96,slow=53						
MDJ	**Mudanjiang**	**16.57**	**274**	P	**Pn**	**18 44 31.3**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,21nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.9s						
MDJ				LR	LR		
	comp=N,390nm,11.8s						
MDJ				LR	LR		
	comp=E,340nm,19.4s						
MDJ	**Mudanjiang**	**16.57**	**274**	Pn	**Pn**	**18 44 31.0**	**-0.4**
JWT	**Wachi**	**17.15**	**237**	Pn	**P**	**18 44 39.8**	**-0.3**
BMKR	**Bomnak**	**17.65**	**308**	*e*P	**Pn**	**18 44 44.0**	**-0.7**
ZEA	**Zeya**	**18.26**	**304**	*e*P	**P**	**18 44 51.8**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,100nm,5.7s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ZEA				MLR	MLR		
	comp=E,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,15.0s						
ZEA	**Zeya**	**18.26**	**304**	*e*P	**Pn**	**18 44 53.8**	**+1.6**
ZEA				AMB	AMB	18 44 56.3	
	comp=Z,100nm,5.7s						
ZEA				AMB	AMB	18 45 04.0	
	comp=Z,10.0nm,1.0s						
ZEA				AMS	AMS	18 52 22.0	
	comp=Z,300nm,14.0s						
ZEA				AMS	AMS	18 52 22.0	
	comp=Z,300nm,14.0s						
KROS	**Kirovskiy**	**18.61**	**306**	*e*P	**P**	**18 44 56.0**	**+0.1**
KROS				AMB	AMB	18 44 58.2	
	comp=Z,10.0nm,0.8s						
JHS	**Saijyo**	**18.71**	**241**		**Pn**	**18 44 59.7**	**+1.9**
CN2	**Changchun**	**19.66**	**273**	*e*P	**P**	**18 45 07.9**	**+0.4**
CN2				*e*S	S	18 48 22.6	-25
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,100nm,3.3s						
CN2				LR	LR		
	comp=N,300nm,17.0s						
CN2				LR	LR		
	comp=E,340nm,18.0s						
CN2				LR	LR		
	comp=Z,390nm,17.0s						
KSRS	**Korea Array**	**20.58**	**254**	P	**P**	**18 45 18.5**	**+1.0**
	comp=Z,3.8nm,0.6s,baz=55,slow=11,SNR=16						
KSRS				LR	LR	18 52 15.4	
	comp=Z,209nm,21.6s,baz=66,slow=34						
KS19	**Wonju Array Si**	**20.59**	**254**	P	Pn	18 45 19.7	-0.4
KSAR	**Wonju Array Be**	**20.61**	**254**	P	Pn	18 45 21.3	+1.0
KSAR	**Wonju Array Be**	**20.61**	**254**	P	Pn	18 45 21.3	+1.0
YAK	**Yakutsk**	**20.91**	**328**	P	**P**	**18 45 19.4**	**-1.5**
	comp=Z,7.1nm,0.3s,baz=120,slow=5.1,SNR=14						
YAK				LR	LR	18 53 37.8	
	comp=Z,303nm,18.1s,baz=90,slow=38						
YAK	**Yakutsk**	**20.91**	**328**	*e*P	**P**	**18 45 19.5**	**-1.4**
YAK				*e*S	**S**	**18 49 05.4**	**-6.3**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
YAK				smax	smax		
	comp=E,168nm,3.7s						
YAK				smax	smax		
	comp=N,40nm,2.6s						
YAK				MLR	MLR		
	com

BILL MLR MLR
comp=Z,16nm,2.5s
comp=Z,184nm,15.0s
BILL Bilibino 23.08 13 P **P** **18 45 41.6 -2.4**
BILL Bilibino 23.08 13 *eP* **P** **18 45 44.3 +0.3**
BOD Bodaibo 26.43 311 *eP* **P** **18 46 11.9 -3.0**
BOD pmax pmax
comp=Z,9.0nm,1.7s
TIXI Tiksi 28.14 344 P **P** **18 46 27.6 -2.5**
comp=Z,0.8nm,0.4s,baz=210,slow=2.5,SNR=4.8
TIXI LR LR 18 58 43.7
comp=Z,243nm,18.4s,baz=152,slow=39
H11N2 WAKE ISLAND Hy 28.60 152 T T 19 18 28.7
baz=340,slow=75,SNR=323
H11N1 WAKE ISLAND Hy 28.62 152 T T 19 18 29.8
baz=340,slow=75,SNR=250
H11N3 WAKE ISLAND Hy 28.62 152 T T 19 18 30.0
baz=340,slow=75,SNR=246
H11S1 WAKE ISLAND Hy 29.68 153 T T 19 19 58.0
baz=340,slow=76,SNR=129
H11S3 WAKE ISLAND Hy 29.69 153 T T 19 19 54.8
baz=340,slow=76,SNR=158
H11S2 WAKE ISLAND Hy 29.70 153 T T 19 19 55.6
baz=340,slow=76,SNR=180
NJ2 Nanjing 29.78 254 *eP* **P** **18 46 47.3 +2.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=N,430nm,16.1s
NJ2 LR LR
comp=E,280nm,12.3s
NJ2 LR LR
comp=Z,290nm,14.7s
HHC Hu-ho-hao-te 30.33 275 *eP* **P** **18 46 51.3 +1.3**
HHC S **S** **18 51 50.9 +3.1**
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,110nm,6.4s
HHC LR LR
comp=N,240nm,15.3s
HHC LR LR
comp=E,390nm,15.8s
HHC LR LR
comp=Z,390nm,15.3s
ULN Ulaanbaatar 31.12 290 *ceP* **P** **18 46 55.8 -1.2**
ULN pmax pmax
comp=Z,1.0nm,0.4s
ULN Ulaanbaatar 31.12 290 P **P** **18 46 55.3 -1.6**
SONM Songino Array 31.56 290 P **P** **18 46 59.0 -1.8**
comp=Z,0.5nm,0.5s,baz=80,slow=7.9,SNR=6.3
SONM LR LR 19 00 51.4
comp=Z,318nm,18.1s,baz=68,slow=39
SONM Songino Array 31.56 290 P **P** **18 46 59.1 -1.7**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 31.56 290 P **P** **18 46 59.0 -1.7**
KDAK Kodiak Island 34.57 50 LR LR 19 01 11.2
comp=Z,102nm,20.2s,baz=269,slow=36
TPUB Ta-pu 34.66 240 P **P** **18 47 29.3 +1.4**
SKT Skwentna 34.98 43 P **P** **18 47 30.8 +0.5**
SKT IAmb IAmb 18 47 53.8
comp=Z,5.3nm,1.1s
CNPM China Poot 35.16 47 P **P** **18 47 33.8 +1.9**
KTH Kantishna Hill 35.31 40 P **P** **18 47 34.8 +1.5**
KTH IAmb IAmb 18 47 50.0
comp=Z,11nm,1.2s
BPAW Bear Paw Mtn. 35.31 39 P **P** **18 47 34.2 +1.0**
BPAW IAmb IAmb 18 47 50.8
comp=Z,10nm,1.6s
BRLK Bradley Lake 35.33 47 P **P** **18 47 33.5 +0.1**
XAN Xi'an 35.44 266 P **P** **18 47 34.0 -0.7**
XAN pmax pmax
comp=Z,12nm,1.3s
XAN Xi'an 35.44 266 P **P** **18 47 34.0 -0.7**
XAN IAmb IAmb 18 47 44.0
comp=Z,12nm,1.3s
NEA2 Nenana 36.17 38 P **P** **18 47 40.2 -0.3**
TOLK Toolik Lake Re 36.36 31 P **P** **18 47 42.9 +0.8**
TOLK IAmb IAmb 18 48 08.8
comp=Z,13nm,1.6s
PWL Port Wells 36.54 45 P **P** **18 47 44.5 +0.8**
PWL IAmb IAmb 18 48 31.0
comp=Z,18nm,1.3s
MDM Murphy Dome 36.55 38 P **P** **18 47 44.7 +1.0**
ILAR Eielson Array 37.12 38 P **P** **18 47 48.2 -0.3**
comp=Z,1.0nm,0.8s,baz=262,slow=8.2,SNR=8.6
ILAR Eielson Array 37.12 38 P **P** **18 47 48.8 +0.3**
M24K Tolsona, Glenn 37.50 42 P **P** **18 47 53.4 +1.5**
LZH Lanzhou 37.90 273 ⇓P **P** **18 47 57.6 +1.9**
LZH pP pP 18 48 06.0 +1.4
LZH sP sP 18 48 09.1 +0.1
LZH pmax pmax
comp=Z,41nm,1.2s
SCRK Sand Creek 38.39 39 P **P** **18 47 59.8 +0.4**
GTA Gaotai 39.07 280 ⇓P **P** **18 48 07.1 +1.7**
GTA pP sP 18 48 17.5 -0.8
GTA sP pwP 18 48 22.3 +1.3
GTA PcP **PcP** **18 50 14.8 0.0**
GTA pmax pmax
comp=Z,11nm,1.0s
GTA pmax pmax
comp=Z,49nm,5.8s
GTA LR LR
comp=N,180nm,15.6s
GTA LR LR
comp=E,160nm,16.7s
GTA LR LR
comp=Z,180nm,17.5s
K27K Chicken 39.23 39 P **P** **18 48 07.5 +1.2**
K27K IAmb IAmb 18 48 22.9
comp=Z,9.0nm,1.2s
NRIK Noril'sk 39.36 329 LR LR 19 04 58.7
comp=Z,76nm,18.2s,baz=120,slow=37
L27K Beaver Creek, 39.43 41 P **P** **18 48 09.5 +1.5**
BARN Barnard Glacie 39.76 44 P **P** **18 48 12.6 +1.6**
BARN IAmb IAmb 18 48 35.5
comp=Z,9.5nm,1.2s
CTGM Chitina Glacie 39.93 44 P **P** **18 48 14.0 +1.6**
CTGM IAmb IAmb 18 48 18.8
comp=Z,13nm,1.2s
CD2 Chengdu 40.80 266 P **P** **18 48 21.0 +1.2**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 LR LR
comp=N,190nm,14.5s
CD2 LR LR
comp=E,140nm,13.7s
CD2 LR LR
comp=Z,270nm,13.2s
GYA Guiyang 41.55 258 ⇓P **P** **18 48 27.3 +1.2**
GYA pmax pmax
comp=Z,2.0nm,0.9s
HYT Haines Junctio 41.80 43 P **P** **18 48 29.0 +1.3**
HYT IAmb IAmb 18 48 41.5
comp=Z,16nm,1.4s
INK Inuvik 42.26 32 P **P** **18 48 31.4 +0.3**
comp=Z,1.0nm,0.5s,baz=288,slow=5.9,SNR=10
INK Inuvik 42.26 32 P **P** **18 48 31.8 +0.6**
INK pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 42.26 32 P **P** **18 48 31.8 +0.6**
DGZ Jazzator, Alta 42.93 300 *i* P **P** **18 48 36.5 -0.6**
DGZ pmax pmax
comp=Z,1.0nm,0.3s
ZAA0 Zalesovo Array 43.01 306 P **P** **18 48 35.4 -2.1**
ZALV Zalesovo Beam 43.01 306 P **P** **18 48 35.6 -1.9**
comp=Z,0.9nm,0.3s,baz=54,slow=7.5,SNR=7.7
ZALV PcP **PcP** **18 50 28.1 +0.9**
comp=Z,0.7nm,0.5s,baz=96,slow=4.5,SNR=4.1
ZALV LR LR 19 07 36.1
comp=Z,491nm,18.5s,baz=78,slow=38
ZALV Zalesovo Beam 43.01 306 *i* P **P** **18 48 35.5 -2.0**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 43.01 306 P **P** **18 48 35.5 -2.0**
ZALV **PcP** **18 50 27.2 0.0**
KMI Kunming 45.10 260 ⇑P **P** **18 48 56.1 +1.3**
KMI pP sP 18 49 08.4 +0.1
KMI sP pwP 18 49 12.5 +3.3
KMI PP **PP** **18 50 42.3 +1.8**
KMI S **S** **18 55 28.8 -3.0**
KMI pmax pmax
comp=Z,7.0nm,1.0s
KMI pmax pmax
comp=Z,110nm,4.8s

KMI LR LR
comp=N,130nm,24.1s
KMI LR LR
comp=E,120nm,24.6s
KMI LR LR
comp=Z,130nm,13.9s
WMQ Urumqi 45.17 292 *eP* **P** **18 48 56.8 +1.8**
WMQ pmax pmax
comp=Z,16nm,0.6s
WMQ pmax pmax
comp=Z,86nm,4.1s
WMQ LR LR
comp=N,250nm,16.7s
WMQ LR LR
comp=E,480nm,16.7s
WMQ LR LR
comp=Z,410nm,15.3s
MK31 Makanchi Array 47.25 298 P **P** **18 49 10.1 -1.2**
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MK31 Makanchi Array 47.25 298 P **P** **18 49 10.1 -1.2**
MK31 IAmb IAmb 18 49 11.4
comp=Z,5.7nm,0.9s
MKAR Makanchi Array 47.25 298 P **P** **18 49 10.5 -0.8**
comp=Z,6.7nm,0.9s,baz=67,slow=7.7,SNR=44
MKAR Makanchi Array 47.25 298 P **P** **18 49 09.8 -1.5**
MKAR Makanchi Array 47.25 298 P **P** **18 49 09.8 -1.5**
MAKZ Makanchi 47.44 298 P **P** **18 49 11.3 -1.5**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 47.44 298 P **P** **18 49 11.3 -1.5**
MAKZ IAmb IAmb 18 49 12.9
comp=Z,5.5nm,1.0s
EUNU Eureka 49.82 11 P **P** **18 49 32.1 +1.4**
EUNU IAmb IAmb 18 49 39.7
comp=Z,15nm,1.4s
LSA Lhasa 50.30 274 P **P** **18 49 36.9 +1.5**
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 50.30 274 P **P** **18 49 36.9 +1.5**
LSA IAmb IAmb 18 49 39.5
comp=Z,7.2nm,0.6s
LSA Lhasa 50.30 274 *eP* **P** **18 49 36.9 +1.5**
BRVK Borovoye 51.34 310 *ceP* **P** **18 49 40.8 -1.5**
BRVK pmax pmax
comp=Z,5.0nm,0.5s
BRVK Borovoye 51.34 310 P **P** **18 49 41.3 -1.1**
BRVK IAmb IAmb 18 49 42.5
comp=Z,12nm,1.1s
YKA Yellowknife Ar 51.50 36 P **P** **18 49 43.4 -0.1**
comp=Z,0.9nm,0.8s,baz=296,slow=6.8,SNR=9.8
RES Resolute Bay 51.51 18 P **P** **18 49 42.6 -0.7**
comp=Z,2.1nm,0.8s,baz=318,slow=14,SNR=6.0
RES Resolute Bay 51.51 18 P **P** **18 49 43.3 0.0**
RES pmax pmax
comp=Z,4.0nm,1.1s
RES Resolute Bay 51.51 18 P **P** **18 49 43.3 0.0**
CHTO Chiang Mai 51.94 257 P **P** **18 49 48.9 +1.6**
CHTO pmax pmax
comp=Z,5.0nm,0.8s
CHTO Chiang Mai 51.94 257 P **P** **18 49 48.9 +1.6**
CHTO IAmb IAmb 18 49 50.2
comp=Z,5.0nm,0.8s
CMAR Chiang Mai Arr 52.19 257 P **P** **18 49 50.2 +1.1**
comp=Z,1.5nm,0.7s,baz=35,slow=7.9,SNR=12
CMAR Chiang Mai Arr 52.19 257 P **P** **18 49 50.3 +1.2**
SHL Shillong 52.34 269 P **P** **18 49 50.7 +0.3**
SHL pmax pmax
comp=Z,11nm,0.6s
SHL Shillong 52.34 269 P **P** **18 49 50.6 +0.3**
SPA0 Spitsbergen Ar 53.30 350 P **P** **18 49 55.0 -1.6**
TAPN Taplejung 54.12 274 *eP* **P** **18 50 05.2 +1.5**
comp=Z,8.0nm,0.4s
AAK Ala-Archa 54.13 297 *ceP* **P** **18 50 03.1 -0.3**
AAK pmax pmax
comp=Z,17nm,0.7s
AAK Ala-Archa 54.13 297 P **P** **18 50 03.4 0.0**
AAK IAmb IAmb 18 50 04.5
comp=Z,6.0nm,0.8s
AAK Ala-Archa 54.13 297 *eP* **P** **18 50 03.1 -0.3**
JIRN Jiri 54.99 275 *eP* **P** **18 50 11.7 +1.7**
comp=Z,21nm,0.5s
GUN Gumba 55.05 275 *eP* **P** **18 50 11.7 +1.3**
comp=Z,8.0nm,0.4s
RAMN Ramite 55.14 274 *eP* **P** **18 50 12.3 +1.3**
comp=Z,22nm,0.4s
ARU Arti 55.52 318 *cP* **P** **18 50 11.7 -1.3**
ARU *PP **sP** **18 50 25.5 -1.4**
ARU 18 52 12.8
ARU S **S** **18 57 53.3 -2.2**
ARU SS **SS** **19 01 34.2 -5.7**
ARU pmax pmax
comp=Z,4.0nm,0.5s
ARU MLR MLR
comp=Z,237nm,16.0s
ARU Arti 55.52 318 P **P** **18 50 11.6 -1.3**
KKN Kakani 55.54 276 *eP* **P** **18 50 15.6 +1.8**
comp=Z,17nm,0.7s
PKI Pulchoki 55.58 275 *eP* **P** **18 50 15.4 +1.1**
comp=Z,7.3nm,0.5s
PKIN Phulchoki 55.59 275 *eP* **P** **18 50 15.3 +1.1**
comp=Z,11nm,0.6s
DMN Daman 55.77 276 *eP* **P** **18 50 17.1 +1.6**
comp=Z,36nm,0.8s
GKN Gorkha 55.85 276 *eP* **P** **18 50 17.5 +1.5**
comp=Z,32nm,0.8s
NEEM North Greenlan 55.87 6 *i* P **P** **18 50 15.1 -0.5**
DANN Dangsing 56.24 277 *eP* **P** **18 50 20.5 +1.6**
KK31 Karatay Array 56.33 299 P **P** **18 50 18.5 -0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 56.33 299 P **P** **18 50 18.5 -0.5**
KK31 IAmb IAmb 18 50 19.7
comp=Z,4.4nm,0.9s
KKAR Karatay Array 56.33 299 P **P** **18 50 18.9 -0.1**
KKAR 18 51 19.2
KKAR Karatay Array 56.33 299 P **P** **18 50 18.6 -0.4**
KKAR IAmb IAmb 18 50 19.7
comp=Z,4.4nm,0.9s
KKAR PcP **PcP** **18 51 18.6 +2.6**
KKAR Karatay Array 56.33 299 P **P** **18 50 18.9 -0.1**
KKAR PcP **PcP** **18 51 19.2 +3.2**
KOLN Koldanda 56.71 277 *eP* **P** **18 50 23.8 +1.6**
comp=Z,30nm,0.8s
KEV Kevo 58.00 341 P **P** **18 50 29.5 -0.9**
KEV pmax pmax
comp=Z,42nm,1.5s
KEV Kevo 58.00 341 P **P** **18 50 29.5 -0.9**
ARCES ARCESS Array B 58.51 341 P **P** **18 50 33.0 -0.9**
comp=Z,1.3nm,0.5s,baz=20,slow=6.5,SNR=17
GAR Garm 58.80 295 P **P** **18 50 37.4 +0.8**
ABKAR Akbulak array 58.87 310 P **P** **18 50 36.0 -0.7**
ABKAR Akbulak array 58.87 310 P **P** **18 50 36.0 -0.7**
ABKAR IAmb IAmb 18 50 36.6
comp=Z,4.6nm,0.6s
PLID Pearl Lake 60.09 55 P **P** **18 50 46.3 +0.8**
PLID IAmb IAmb 18 50 52.7
comp=Z,5.0nm,0.9s
NIL Nilore 60.11 289 P **P** **18 50 46.8 +1.2**
NIL pmax pmax
comp=Z,32nm,0.9s
NIL Nilore 60.11 289 P **P** **18 50 46.8 +1.2**
KLMR Klimovskoe 60.70 329 *eP* **P** **18 50 47.6 -1.5**
KLMR pmax pmax
comp=Z,10.0nm,1.1s
KLMR Klimovskoe 60.70 329 *eP* **P** **18 50 47.7 -1.4**
KLMR AMP 18 50 49.1
comp=Z,10.0nm,1.1s
SUMG Summit 61.41 4 *i* P **P** **18 50 54.7 +0.4**
SUMG IAmb IAmb 18 50 56.8
comp=Z,6.3nm,0.5s
SUMG Summit 61.41 4 P **P** **18 50 54.4 +0.2**
SUMG pmax pmax
comp=Z,8.0nm,0.7s
SUMG Summit 61.41 4 P **P** **18 50 54.4 +0.2**
LRM Limekiln Ridge 61.64 52 P **P** **18 50 57.3 +1.2**
EGMT Eagleton 61.73 49 P **P** **18 50 58.3 +1.8**
EGMT IAmb IAmb 18 51 09.6
comp=Z,9.4nm,1.4s
BOZ Bozeman (W) 62.23 52 P **P** **18 51 01.3 +1.3**
BOZ pmax pmax
comp=Z,10.0nm,1.5s
BOZ Bozeman (W) 62.23 52 P **P** **18 51 01.3 +1.3**
BOZ IAmb IAmb 18 51 07.5
comp=Z,10nm,1.5s

KBL Kabul 62.31 292 P **P** **18 51 00.6 -0.1**
KBL pmax pmax
comp=Z,12nm,0.9s
KBL Kabul 62.31 292 P **P** **18 51 00.6 -0.1**
RYN Ryan 62.52 62 P **P** **18 51 03.9 +1.8**
RYN IAmb IAmb 18 51 18.7
comp=Z,4.6nm,1.3s
NVAR Mina Array Bea 62.78 62 P **P** **18 51 05.2 +1.4**
comp=Z,1.3nm,0.7s,baz=286,slow=6.2,SNR=7.5
QLMT Earthquake Lak 62.82 53 P **P** **18 51 06.0 +2.1**
BELG Belogornoye 63.05 319 *i* P **P** **18 51 04.4 -0.6**
BELG pmax pmax
comp=Z,2.0nm,0.4s
ABJI Asem Bagus 63.84 224 P **P** **18 51 11.4 +0.7**
comp=Z,59nm,0.8s
REDW Red Top Meadow 64.07 54 P **P** **18 51 12.4 +0.1**
REDW IAmb IAmb 18 51 27.4
comp=Z,6.2nm,1.1s
FIA1 FINESS Array S 64.67 335 P **P** **18 51 15.5 0.0**
FIA1 IAmb IAmb 18 51 34.0
comp=Z,7.8nm,1.1s
FINES FINESS Array B 64.67 335 P **P** **18 51 15.1 -0.4**
comp=Z,4.9nm,0.5s,baz=37,slow=7.4,SNR=53
FINES LR LR 19 22 13.1
comp=Z,116nm,19.4s,baz=33,slow=39
FINES FINESS Array B 64.67 335 P **P** **18 51 15.5 -0.1**
FINES FINESS Array B 64.67 335 P **P** **18 51 15.5 -0.1**
ICESG Greenland Ices 64.80 5 *i* P **P** **18 51 18.7 +2.0**
ICESG IAmb IAmb 18 51 19.8
comp=Z,10nm,0.7s
BW06 Boulder Array 65.18 54 P **P** **18 51 19.6 +0.1**
PD31 Pinedale Array 65.18 54 P **P** **18 51 20.4 +0.9**
PDAR Pinedale Array 65.18 54 P **P** **18 51 20.8 +1.2**
comp=Z,1.0nm,1.0s,baz=272,slow=4.3,SNR=5.6
PDAR Pinedale Array 65.18 54 P **P** **18 51 20.6 +1.1**
FRB Frobisher Bay 65.72 19 P **P** **18 51 22.0 -0.3**
comp=Z,1.8nm,0.6s,baz=306,slow=9.0,SNR=1.9
VRH Novokhopyorsk 66.54 320 *eP* **P** **18 51 26.4 -1.4**
VRH pmax pmax
comp=Z,10.0nm,0.8s
RDMU Red Mountain 66.61 55 P **P** **18 51 29.9 +1.2**
RDMU IAmb IAmb 18 51 43.3
comp=Z,7.8nm,1.0s
HRA Herat 66.74 296 P **P** **18 51 30.0 +0.3**
HRA IAmb IAmb 18 51 31.4
comp=Z,6.9nm,0.8s
LPSR Galich'ya Gora 66.75 323 *eP* **P** **18 51 27.4 -1.7**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VSU Vasula 66.83 333 *eP* **P** **18 51 29.7 +0.2**
GEYT Alibeck 66.95 301 P **P** **18 51 29.6 -1.1**
comp=Z,2.0nm,0.5s,baz=184,slow=4.2,SNR=4.3
GEYT Alibeck 66.95 301 IAmb IAmb 18 52 15.5
comp=Z,3.2nm,0.9s
PFO Pinyon Flats O 67.00 65 LR LR 19 16 03.3
comp=Z,36nm,21.2s,baz=350,slow=32
AAL Aland 67.44 337 *eP* **P** **18 51 32.5 -0.8**
MTSE Matsula 67.54 334 *eP* **P** **18 51 30.8 -3.2**
VSR Storozhevoye 67.65 322 *eP* **P** **18 51 34.2 -0.7**
VSR pmax pmax
comp=Z,20nm,1.4s
WB0 Warramunga Arr 67.66 199 P **P** **18 51 35.4 +0.2**
WRA Warramunga Arr 67.84 199 P **P** **18 51 37.0 +0.7**
comp=Z,1.0nm,0.9s,baz=14,slow=6.7,SNR=3.6
UPP Uppsala 68.35 338 *eP* **P** **18 51 38.8 -0.2**
NC303 NORSAR Array S 68.69 341 P **P** **18 51 41.2 0.0**
NC303 IAmb IAmb 18 52 09.6
comp=Z,20nm,1.5s
NC405 NORSAR Array S 68.71 341 P **P** **18 51 41.5 +0.2**
NC204 NORSAR Array S 68.78 342 P **P** **18 51 42.0 +0.2**
NB201 NORSAR Array S 68.86 341 P **P** **18 51 42.2 -0.1**
NOA NORSAR Array B 68.89 341 P **P** **18 51 42.5 -0.1**
comp=Z,1.6nm,0.5s,baz=28,slow=6.5,SNR=20
NOA LR LR 19 26 25.3
comp=Z,132nm,18.5s,baz=30,slow=40
NC602 NORSAR Array S 69.09 341 P **P** **18 51 43.2 -0.5**
ISAL Salakas 69.35 331 *eP* **P** **18 51 45.6 +0.2**
IIGN Ignalina 69.49 331 *eP* **P** **18 51 46.6 +0.3**
MAK Makhachkala 69.52 311 *eP* **P** **18 51 46.6 0.0**
MAK *e* 18 54 23.1
MAK *eS* **S** **19 00 53.2 +1.6**
MAK *eSS* **SS** **19 05 24.9 +6.2**
MAK pmax pmax
comp=Z,91nm,1.5s
MAK MLR MLR
comp=Z,296nm,19.0s
NACGM Naroch 69.66 330 *i* P **P** **18 51 47.4 +0.1**
NACGM *i* P **P** **18 51 47.4 +0.1**
NACGM *i* P **P** **18 51 47.4 +0.1**
NACGM *i* PcP **pwP** **18 52 04.1 +0.4**
NACGM *i* PP PP 18 54 05.7 -15
NACGM *i* PPP PPP 18 56 20.4
NACGM *i* S **S** **19 00 53.8 +0.9**
NACGM *i* PS PnS 19 02 09.5 +48
NACGM *i* SS **SS** **19 05 10.5 -10**
NACGM *i* SSS SSS 19 08 37.0
NACGM *i* LQ LQ 19 19 01.5
NACGM *i* LR LR 19 22 50.6
KIV Kislovodsk 71.28 314 *eP* **P** **18 51 56.2 -1.3**
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,461nm,18.0s
KBZ Khabaz 71.34 314 P **P** **18 51 57.8 0.0**
comp=Z,6.4nm,0.7s,baz=121,slow=3.5,SNR=19
KBZ LR LR 19 27 56.3
comp=Z,190nm,18.1s,baz=27,slow=40
KBZ Khabaz 71.34 314 *ceP* **P** **18 51 57.7 0.0**
KBZ pmax pmax
comp=Z,2.0nm,0.4s
ZEI Tsey 71.51 313 *eP* **P** **18 51 58.3 -0.8**
ZEI pmax pmax
comp=Z,5.0nm,1.0s
ZEI Tsey 71.51 313 *eP* **P** **18 51 58.3 -0.8**
ASAR Alice Springs 71.53 199 P **P** **18 52 00.8 +1.8**
comp=Z,0.8nm,0.8s,baz=13,slow=6.2,SNR=12
ASAR Alice Springs 71.53 199 P **P** **18 52 00.4 +1.4**
ASAR Alice Springs 71.53 199 P **P** **18 52 00.4 +1.4**
AKASG Malin Array Be 72.12 326 P **P** **18 52 02.0 -0.3**
comp=Z,7.1nm,0.4s,baz=35,slow=6.1,SNR=56
AKASG LR LR 19 25 39.7
comp=Z,121nm,20.5s,baz=35,slow=38
AKASG Malin Array Be 72.12 326 P **P** **18 52 02.5 +0.1**
AKBB Malin Array Si 72.12 326 *ceP* **P** **18 52 01.6 -0.7**
AKBB Malin Array Si 72.12 326 P **P** **18 52 02.1 -0.3**
PALK Pallekele 72.58 262 P **P** **18 52 04.6 -1.0**
PALK pmax pmax
comp=Z,22nm,1.4s
PALK Pallekele 72.58 262 P **P** **18 52 04.6 -1.0**
SORM Soroca 74.52 325 ⇑P **P** **18 52 16.5 +0.1**
BUR08 Bucovina Ar. S 76.15 327 P **P** **18 52 26.4 +0.4**
BUR08 IAmb IAmb 18 52 31.8
comp=Z,5.3nm,0.7s
BURAR Bucovina Array 76.17 327 ⇑P **P** **18 52 26.2 +0.1**
BURAR Bucovina Array 76.17 327 P **P** **18 52 26.2 +0.1**
BURAR IAmb IAmb 18 52 27.9
comp=Z,6.7nm,0.8s
BIZ Bicaz 76.38 326 ⇑P **P** **18 52 28.2 +1.0**
TESR Tescani 76.51 325 ⇑P **P** **18 52 28.7 +0.7**
TRPA Tarpa 76.74 328 ⇑P **P** **18 52 30.0 +0.9**
DPC Dobruska-Polom 76.94 333 *eP* **P** **18 52 30.7 +0.3**
DPC Dobruska-Polom 76.94 333 *eP* **P** **18 52 30.7 +0.3**
LANS Liptovska Anna 76.95 331 *eP* **P** **18 52 31.6 +1.1**
LANS Liptovska Anna 76.95 331 *eP* **P** **18 52 31.6 +1.1**
CFR Carcaliu 76.99 323 ⇑P **P** **18 52 30.8 +0.2**
VRI Vrincioaia 77.01 325 ⇑P **P** **18 52 31.9 +1.1**
KRLC Kraliky 77.04 333 *eP* **P** **18 52 31.3 +0.4**
KRLC Kraliky 77.04 333 *eP* **P** **18 52 31.3 +0.4**
CLL Collm 77.10 336 *i* P **P** **18 52 30.9 -0.3**
comp=Z,4.0nm,0.9s
CLL LmV 19 29 00.0
comp=Z,100nm,20.5s
CLL Collm 77.10 336 *i* P **P** **18 52 30.9 -0.3**
CLL pmax pmax
comp=Z,4.0nm,0.9s
TPGR Topolog 77.14 323 ⇓P **P** **18 52 32.6 +1.1**
DOPR Dopca 77.46 326 ⇑P **P** **18 52 33.4 0.0**
MLR Muntele Rosu 77.63 325 ⇓P **P** **18 52 35.6 +1.2**
VYHS Vyhne 77.73 331 *eP* **P** **18 52 36.0 +1.2**
VYHS Vyhne 77.73 331 *eP* **P** **18 52 36.0 +1.2**
VRAC Vranov 77.77 333 ⇑P **P** **18 52 36.2 +1.2**
TXAR Lajitas Array 77.86 60 P **P** **18 52 36.8 +0.9**
comp=Z,0.7nm,0.5s,baz=300,slow=4.5,SNR=10
TXAR Lajitas Array 77.86 60 P **P** **18 52 36.5 +0.6**

VOIR		78.03 325	⇓P		P	18 52 37.8	+1.2
MODS	Modra-Piesok	78.36 332	*eP*		P	18 52 40.0	+1.7
MODS			pmax	pmax			
	comp=Z,8.0nm,1.0s						
MODS	Modra-Piesok	78.36 332	*eP*		P	18 52 40.0	+1.7
SIRR	Siria	78.63 328	⇓P		P	18 52 40.4	+0.5
KHC	Kasperske Hory	78.86 334	*P*		P	18 52 41.6	+0.5
KHC			pmax	pmax			
	comp=Z,3.0nm,0.6s						
KHC	Kasperske Hory	78.86 334	*eP*		P	18 52 41.4	+0.3
KHC	Kasperske Hory	78.86 334	P		P	18 52 41.6	+0.5
KHC			IAmb	IAmb		18 52 56.2	
	comp=Z,2.9nm,0.6s						
BRTR	Keskin Array B	78.89 317	P		P	18 52 40.6	-0.9
	comp=Z,4.9nm,1.1s,baz=30,slow=3.0,SNR=8.6						
CKRC	Cesky Krumlov	78.92 334	*eP*		P	18 52 42.6	+1.2
GZR	Gura Zlata	78.95 327	⇑P		P	18 52 42.6	+0.9
GERES	GERESS Array B	79.08 334	P		P	18 52 42.0	-0.4
	comp=Z,1.1nm,0.5s,baz=28,slow=6.0,SNR=10.0						
GERES	GERESS Array B	79.08 334	P		P	18 52 42.3	0.0
GERES	GERESS Array B	79.08 334	P		P	18 52 42.3	0.0
BZS	Buzias	79.20 328	⇓P		P	18 52 43.5	+0.6
CONA	Conrad Observa	79.21 332	*eP*		P	18 52 43.6	+0.5
	comp=Z,5.8nm,0.9s						
RAR	Rarotonga	79.40 136	LR		LR	19 19 17.9	
	comp=Z,132nm,21.3s,baz=293,slow=29						
BTNL	Ternell	79.59 339	*dP*		P	18 52 46.6	+1.6
MEM	Membach	79.60 339	*dP*		P	18 52 46.8	+1.8
BSTI	Sart Tilman	79.73 340	*dP*		P	18 52 47.8	+2.1
MOA	Molln	79.79 333	*i* P		P	18 52 46.5	+0.3
	comp=Z,1.9nm,0.7s						
MDVR	Moldovita	79.87 327	⇑P		P	18 52 47.7	+1.0
PLVB	Pleven	79.90 325	⇓P		P	18 52 47.8	+1.0
BCLA	Clavier	79.95 340	*dP*		P	18 52 47.4	+0.5
BCLA			dpP		sP	18 52 59.8	-1.1
BGES	Gesves	80.03 340	*dP*		P	18 52 49.1	+1.8
BMRD	Maredsous	80.18 340	*dP*		P	18 52 50.0	+1.8
FRGS	Fruska Gora	80.26 328	⇑P		P	18 52 49.6	+0.9
DOU	Dourbes	80.42 340	*dP*		P	18 52 51.5	+2.1
SOKA	Soboth	80.58 332	*eP*		P	18 52 50.7	+0.2
	comp=Z,4.7nm,1.0s						
KBA	Koelnbreinsper	80.76 333	*i* P		P	18 52 52.8	+1.2
	comp=Z,14nm,1.0s						
BOVS	Bovan	80.84 327	⇑P		P	18 52 52.9	+1.1
WATA	Walderalm	81.07 335	*eP*		P	18 52 54.7	+1.5
	comp=Z,5.5nm,0.6s						
BFO	Black Forest	81.09 337	P		P	18 52 53.2	0.0
BFO			pmax	pmax			
	comp=Z,4.0nm,0.9s						
BFO	Black Forest	81.09 337	P		P	18 52 53.1	0.0
VTS	Vitosha	81.10 325	⇓P		P	18 52 54.7	+1.2
VTS	Vitosha	81.10 325	P		P	18 52 53.5	+0.1
VTS			pmax	pmax			
	comp=Z,5.0nm,0.8s						
VTS	Vitosha	81.10 325	P		P	18 52 53.5	+0.1
VTS			IAmb	IAmb		18 53 01.5	
	comp=Z,5.4nm,0.8s						
WTTA	Wattenberg	81.12 335	*eP*		P	18 52 54.9	+1.4
	comp=Z,9.8nm,0.5s						
RETA	Reutte	81.17 335	*i* P		P	18 52 55.0	+1.3
	comp=Z,4.1nm,0.7s						
MOTA	Moosalm	81.20 335	*eP*		P	18 52 54.8	+0.9
	comp=Z,11nm,1.2s						
SQTA	Sankt Quirin	81.28 335	*eP*		P	18 52 55.2	+0.9
	comp=Z,7.6nm,1.0s						
ECH	Echery	81.51 338	P		P	18 52 55.5	+0.1
ECH			pmax	pmax			
	comp=Z,4.0nm,0.8s						
ECH	Echery	81.51 338	P		P	18 52 55.5	+0.1
ECH			IAmb	IAmb		18 52 57.9	
	comp=Z,4.1nm,0.8s						
TUE	Stuetta	82.50 336	P		P	18 53 00.9	+0.1
TUE			IAmb	IAmb		18 53 06.3	
	comp=Z,9.1nm,1.0s						
NRCA	Norcia	84.62 332	P		P	18 53 12.2	+0.6
NRCA			IAmb	IAmb		18 53 15.2	
	comp=Z,11nm,1.0s						
RAYN	Ar Rayn	84.74 299	P		P	18 53 12.8	+0.3
RAYN			pmax	pmax			
	comp=Z,2.0nm,0.9s						
RAYN	Ar Rayn	84.74 299	P		P	18 53 12.8	+0.3
H03N2	Juan Fernandez	138.76 91	T		T	21 35 56.1	
	baz=308,slow=77,SNR=4.2						
H03N1	Juan Fernandez	138.78 91	T		T	21 35 52.8	
	baz=308,slow=77,SNR=4.0						
H03N3	Juan Fernandez	138.78 91	T		T	21 35 45.7	
	baz=308,slow=77,SNR=11						
PLCA	Paso Flores	148.16 96	PKPbc		PKiKP	19 00 24.9	-0.4
	comp=Z,2.6nm,0.9s,baz=184,slow=3.0,SNR=4.8						
SNAA	Sanae	151.87 196	PKPdf		PKPbc	19 00 30.5	-1.0
VNA2	Neumayer--Watz	153.31 194	PKPdf		PKPbc	19 00 31.3	-3.4
VNA3	Neumayer Olymp	153.40 192	PKPdf		PKPdf	19 00 30.8	+3.6
VNA1	Neumayer--Stat	153.70 194	PKPdf		PKPdf	19 00 29.3	+1.7

IDC ***21*** *18:59:22.4±1.5,26.6ˊ65N×108.2ˊ92E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/43, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=45.2km s-min=27.4km az=59.0*

ISC 21 18:59:27.8±1.3,26.7ˊN±0.2ˊ×109.0ˊE±0.2ˊ,h35km,n7, σ0:79/7,mb3.6/6,Southeastern China

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	19.26	52	P	P	P	19 03 49.5	+0.4
	0.1nm,0.3s,baz=244,slow=12,SNR=4.8							
SONM	Songino Array	21.19	355	P	P	P	19 04 10.2	0.0
	1.8nm,0.8s,baz=168,slow=11,SNR=12							
MKAR	Makanchi Array	29.09	321	P	P	P	19 05 26.1	+1.2
	0.1nm,0.5s,baz=117,slow=11,SNR=2.3							
ZALV	Zalesovo Beam	32.55	333	P	P	P	19 05 54.6	-0.7
	1.2nm,0.7s,baz=122,slow=7.2,SNR=4.8							
ASAR	Alice Springs	55.57	152	P	P	P	19 08 59.8	-0.1
	0.4nm,1.0s,baz=333,slow=6.9,SNR=2.3							
NOA	NORSAR Array B	70.64	329	P	P	P	19 10 38.8	-0.7
	0.4nm,0.7s,baz=69,slow=6.5,SNR=2.1							
YKA	Yellowknife Ar	84.54	19	P	P	P	19 11 57.1	+0.2
	0.4nm,0.6s,baz=325,slow=4.6,SNR=6.3							

SJA ***21*** *19:00:17.1±0.8, 14ˊ91S×71ˊ97W, h151km±53km, ML6.0, MW4.9*

NEIC ***21*** *19:00:17.4, 14ˊ65S×71ˊ16W, h149km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=5.03; Mθθ=4.69; Mθφ=0.34; Mrθ=-6.48; Mθφ=-5.02; Mφr=-0.39; Fault plane solution: Mo9.54000×10¹⁶ NP1:φs=95.42000°, δ70.70000°, λ=-118.89000°. NP2:φs=334.51000°, δ34.28000°, λ=-35.93000°. Principal axes: T 9.9515, Plg21.0000°, Azm207.0000°; N -0.8735, Plg27.0000°, Azm106.0000°; P -9.0780, Plg55.0000°, Azm329.0000°;*

MOS ***21*** *19:00:18.6±1.4, 14ˊ68S×71ˊ21W, h132km, mb5.3/8 Error ellipse: s-maj=11.1km s-min=5.8km az=109.7*

VAO ***21*** *19:00:19.5±0.2, 14ˊ78S×71ˊ31W, h134km, mb5.2*

GUC ***21*** *19:00:20.2±0.5, 14ˊ56S×71ˊ69W, h121km±81km, ML5.3*

NEIC ***21*** *19:00:21.3±2.6, 14ˊ76S±0ˊ06×71ˊ35W±0ˊ08, h153km±1km, mb5.5/508, Mwb5.3/27, Mwc5.3(GCMT), Error ellipse: s-maj=13.6km s-min=10.0km az=242.0*

IDC ***21*** *19:00:22.2±0.6, 14ˊ62S×71ˊ13W, h153km±4km, mb4.7/21, mb1 4.9/26, mb1mx4.8/37, mbtmp5.1/26, MS4.1/5, Ms1 4.2/5, ms1mx3.7/20, Error ellipse: s-maj=11.5km s-min=7.7km az=54.0*

NEIC ***21*** *19:00:23, 14ˊ66S×71ˊ42W, h154km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.73; Mθθ=0.34; Mθφ=0.39; Mrθ=-0.58; Mθφ=-0.59; Mφr=0.09; Fault plane solution: Mo1.05000×10¹⁷ NP1:φs=340.00000°, δ35.00000°, λ=-50.00000°. NP2:φs=114.00000°, δ64.00000°, λ=-115.00000°. Principal axes: T 1.0863, Plg15.0000°, Azm222.0000°; N -0.0818, Plg22.0000°, Azm126.0000°; P -1.0045, Plg63.0000°, Azm344.0000°;*

GCMT ***21*** *19:00:24.3±0.2, 14ˊ71S±0ˊ01×71ˊ36W±0ˊ01, h154km±1km, MW5.3/139, Moment Tensor Solution. s90,c123; s139,c223; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.82±.02; Mθθ=0.38±.02; Mφφ=0.44±.02; Mrθ=0.56±.01; Mθφ=-0.53±.02; Mφr=0.14±.02; Best double couple: Mo1.05500×10¹⁷ NP1:φs=335.00000°, δ33.00000°, λ=-58.00000°. NP2:φs=119.00000°, δ62.00000°, λ=-109.00000°. Principal axes: T 1.0680, Plg15.0000°, Azm223.0000°; N -0.0250, Plg17.0000°, Azm128.0000°; P -1.0420, Plg67.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 19:00:20.2±0.4,14.82S±0.03×71.36W±0.05,h144km±3km, h144km:pP-P,n878,σ1s54/817,mb5.5/290,58C-269D,
Fault plane solution: NP1:φs119.55571°, δ54.27409°, λ-92.64250°. NP2:φs304.07507°, δ35.81053°, λ-86.33240°. Principal axes: T Plg9.2387°, Azm211.4485°; N Plg2.1450°, Azm121.0994°; P Plg80.5114°, Azm18.1499°; **Central Peru**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.44	115	P		Pn	19 01 15.9	+2.3
	86nm,0.3s,baz=297,slow=10,SNR=562							
LPAZ				S		Sn	19 01 56.9	+2.2
	111nm,0.3s,baz=212,slow=24,SNR=16							
LPAZ	La Paz	3.44	115	*eP*		Pn	19 01 15.9	+2.3
AP01	Chacalluta	3.66	165			Pn	19 01 16.6	+0.7
PB16	IPOC Station P	3.92	153	⇑*iP*		Pn	19 01 22.1	+2.3
PB16				*i* S		Sn	19 02 10.2	+4.2
PB16	IPOC Station P	3.92	153			Pn	19 01 21.8	+2.0
PB16	IPOC Station P	3.92	153	*eP*		Pn	19 01 22.1	+2.3
PB16				*eS*		Sn	19 02 08.2	+2.2
MNMC	Minye Minye	4.60	159			Pn	19 01 29.4	+0.9
MNMC					Sn	Sn	19 02 21.4	-0.3
MNMCX	Minye Minye	4.60	159	*i* P		Pn	19 01 29.5	+1.0
MNMCX				*eS*		Sn	19 02 22.3	+0.6
PSGCX	Pisagua	4.89	166			Pn	19 01 31.0	-1.2
PSGCX					Sn	Sn	19 02 25.4	-2.9
PSGCX	Pisagua	4.89	166	*i* P		Pn	19 01 31.3	-0.9
PSGCX				*eS*		Sn	19 02 26.1	-2.2
PB11	IPOC Station P	5.17	162	Pn		Pn	19 01 35.1	-0.9
PB11				Sn		Sn	19 02 32.0	-3.1
PB11	IPOC Station P	5.17	162	*eP*		Pn	19 01 35.2	-0.9
PB11				*eS*		Sn	19 02 33.4	-1.7
TA02	Huaiquique	5.54	168	*eP*		Pn	19 01 39.9	-0.9
TA02	Huaiquique	5.54	168			Pn	19 01 39.5	-1.2
PB08	IPOC Station P	5.69	159	⇑*iP*		Pn	19 01 43.4	+0.3
PB08				*i* S		Sn	19 02 45.8	-2.0
PB08	IPOC Station P	5.69	159			Pn	19 01 43.2	+0.1
PB08					Sn	Sn	19 02 45.9	-1.9
PB08	IPOC Station P	5.69	159	*eP*		Pn	19 01 43.3	+0.2
PB08				*eS*		Sn	19 02 46.4	-1.4
TA01	Diego Aracena	5.82	169	⇑*iP*		Pn	19 01 42.7	-1.8
TA01				*i* S		Sn	19 02 45.4	-5.0
TA01	Diego Aracena	5.82	169	Pn		Pn	19 01 42.7	-1.8
TA01				Sn		Sn	19 02 45.4	-5.0
NNA	Nana	6.03	297	P		Pn	19 01 47.8	+0.4
	11nm,0.3s,baz=148,slow=8.8,SNR=16							
NNA				S		Sn	19 02 51.6	-3.9
	14nm,0.3s,baz=250,slow=9.5,SNR=4.8							
NNA	Nana	6.03	297	*ceP*		Pn	19 01 47.6	+0.1
NNA				pmax	pmax			
	comp=Z,154nm,0.7s							
NNA	Nana	6.03	297			Pn	19 01 47.5	+0.1
PATCX	Punta Patache	6.07	169			Pn	19 01 45.9	-2.1
PB01	IPOC Station P	6.44	164			Pn	19 01 50.8	-2.0
PB01	IPOC Station P	6.44	164	*eP*		Pn	19 01 51.4	-1.5
PB01				*eS*		Sn	19 03 01.5	-3.8
PB07	IPOC Station P	7.01	169			Pn	19 01 58.3	-2.3
PB07	IPOC Station P	7.01	169	*eP*		Pn	19 01 59.1	-1.4
PB07				*eS*		Sn	19 03 14.9	-4.2
ETMB	Extrema	7.07	46	*eP*		Pn	19 02 00.1	-1.2
CZSB	Cruzeiro do Su	7.17	349	*eP*		Pn	19 02 01.1	-1.5
PB09	IPOC Station P	7.22	164			Pn	19 02 01.9	-1.5
PB09	IPOC Station P	7.22	164	*eP*		Pn	19 02 02.1	-1.3
PB09				*eS*		Sn	19 03 20.2	-4.0
PB03	IPOC Station P	7.35	168	*eP*		Pn	19 02 03.6	-1.4
PB03				*eS*		Sn	19 03 22.3	-4.9
PB04	IPOC Station P	7.56	171			Pn	19 02 05.5	-2.4
PB04	IPOC Station P	7.56	171	*i* P		Pn	19 02 06.0	-1.9
PB04				*eS*		Sn	19 03 26.3	-6.0
PB06	IPOC Station P	8.02	168			Pn	19 02 11.0	-3.1
PB06	IPOC Station P	8.02	168	*eP*		Pn	19 02 11.9	-2.2
PB06				*eS*		Sn	19 03 39.1	-4.4
PB05	IPOC Station P	8.06	172	*eP*		Pn	19 02 12.4	-2.2
PB05				*eS*		Sn	19 03 37.4	-7.0
LVC	Limon Verde	8.09	164	P		Pn	19 02 14.3	-0.8
	comp=Z,319nm,0.3s,baz=332,slow=8.9,SNR=1208							
LVC				S		Sn	19 03 40.0	-5.4
	comp=Z,295nm,0.3s,baz=186,slow=21,SNR=12							
LVC	Limon Verde	8.09	164	P		Pn	19 02 13.8	-1.3
LVC	Limon Verde	8.09	164	Pn		Pn	19 02 13.8	-1.3
LVC	Limon Verde	8.09	164	*eP*		Pn	19 02 14.0	-1.1
PB15	IPOC Station P	8.53	168			Pn	19 02 18.2	-2.7
PB15	IPOC Station P	8.53	168	*eP*		Pn	19 02 18.9	-2.0
PB15				*eS*		Sn	19 03 51.4	-4.4
PB10	IPOC Station P	8.68	175	Pn		Pn	19 02 19.3	-3.4
PB10	IPOC Station P	8.68	175	*eP*		Pn	19 02 20.5	-2.2
PB10				*eS*		Sn	19 03 52.9	-6.2
PB14	IPOC Station P	9.79	175	Pn		Pn	19 02 34.5	-3.4
PB14	IPOC Station P	9.79	175	*eP*		Pn	19 02 35.3	-2.6
PB14				*eS*		Sn	19 04 18.1	-8.4
SIV	San Ignacio	9.99	98	P		Pn	19 02 38.4	-1.9
	comp=Z,24nm,0.3s,baz=293,slow=11,SNR=89							
ATAH	Atahualpa	10.30	317	P		Pn	19 02 44.7	0.0
	comp=Z,0.8nm,0.3s,baz=156,slow=9.5,SNR=15							
GO02	Mina Guanaco	10.42	171	Pn		Pn	19 02 43.4	-2.8
VILB	Vilhena	10.99	82	*eP*		Pn	19 02 51.2	-2.4
AC01	Pan de Azucar	11.29	177	Pn		Pn	19 02 55.1	-2.4
PTLB	Pontes e Lacer	11.82	95	*eP*		Pn	19 03 02.0	-2.4
AC02	Maricunga	12.13	170	Pn		Pn	19 03 07.3	-1.6
GO03	Copiap	12.75	175			Pn	19 03 14.3	-2.2
AC04	Llanos de Chal	13.32	179			Pn	19 03 21.1	-2.7
LCO	Las Campanas	14.13	178	P		Pn	19 03 33.1	-1.2
LCO	Las Campanas	14.13	178	Pn		Pn	19 03 33.1	-1.2
PTLC	Puerto Leguiza	15.28	347	*eP*		Pn	19 03 42.6	-5.9
GO04	Tololo Observa	15.29	178			Pn	19 03 48.8	+0.1
GO04					IAmb	IAmb	19 03 53.4	
	comp=Z,431nm,1.1s							
CLDB	Colider	15.67	77	*eP*		Pn	19 03 52.3	-1.1
AQDB	Aquidauana	15.94	113	*eP*		P	19 03 57.5	+0.1
CO03	El Pedregal	15.95	178			Pn	19 03 56.9	+0.1
PP1B	Ponte de Pedra	16.07	102	*eP*		Pn	19 03 57.9	-0.3
CO02	Combarbal	16.31	179	P		P	19 04 01.3	-0.2
ZON	Zonda	16.82	172	P		Pn	19 04 08.8	+1.4
ZON				pmax	pmax			
	comp=Z,180nm,1.0s							
ZON	Zonda	16.82	172			Pn	19 04 08.8	+1.4
ZON					IAmb	IAmb	19 04 11.7	
	comp=Z,180nm,1.0s							
GCUF	Volcan Galeras	17.01	339	*eP*		Pn	19 04 11.8	+1.7
MACC	Macarena, Meta	17.04	351	*eP*		Pn	19 04 12.8	+2.8
CRUC	La Cruz	17.20	341	*eP*		Pn	19 04 13.8	+1.4
GARC	Garzon, Huila	17.39	346	*eP*		Pn	19 04 14.7	+0.2
CPUP	Villa Florida	17.41	133	P		P	19 04 12.9	-0.6
	comp=Z,0.7nm,0.3s,baz=314,slow=11,SNR=40							
CPUP	Villa Florida	17.41	133	P		P	19 04 12.6	-0.9
CPUP				pmax	pmax			
	comp=Z,48nm,0.6s							
CPUP	Villa Florida	17.41	133	P		P	19 04 12.6	-0.9
NPGB	Novo Progresso	17.50	65	*eP*		P	19 04 14.7	+0.1
NPGB				*eS*		S	19 07 29.3	-0.2
SOTA	Rioblanco	17.63	342	*eP*		Pn	19 04 18.9	+1.3
PCON	Cinco Dias	17.76	343	*eP*		Pn	19 04 20.0	+0.8
BETC	Betania	17.86	347	*eP*		Pn	19 04 19.8	-0.1
VA03	San Esteban	17.88	178	P		Pn	19 04 20.3	+0.3
VA03					IAmb	IAmb	19 04 23.9	
	comp=Z,162nm,0.7s							
PTGA	Pitinga	17.97	40	P		P	19 04 18.2	-1.6
	comp=Z,12nm,0.3s,baz=215,slow=12,SNR=124							
PTGA	Pitinga	17.97	40			P	19 04 18.0	-1.7
PTGA	Pitinga	17.97	40	*eP*		P	19 04 18.0	-1.7
PTGA	Pitinga	17.97	40	*eP*		P	19 04 18.3	-1.4
TUMC	Tumaco	18.08	336	*eP*		Pn	19 04 21.7	-0.7
VA01	Torpederas	18.12	181			P	19 04 21.2	+0.1
VA01					IAmb	IAmb	19 04 25.9	
	comp=Z,193nm,1.0s							
PEL	Peldehue	18.25	178	P		Pn	19 04 24.5	+0.1
PEL				pmax	pmax			
	comp=Z,156nm,0.9s							
PEL	Peldehue	18.25	178	P		Pn	19 04 24.5	+0.1
PEL					IAmb	IAmb	19 04 26.5	
	comp=Z,156nm,0.9s							
PEL	Peldehue	18.25	178	*eP*		Pn	19 04 25.0	+0.6
PEL				*eP*		Pn	19 04 25.0	+0.6
MT02	Curacav	18.36	179	P		Pn	19 04 25.3	-0.3
MT02					IAmb	IAmb	19 04 27.9	
	comp=Z,187nm,0.8s							
MT05	Renca	18.50	178	P		Pn	19 04 27.4	+0.1
MT05					IAmb	IAmb	19 04 29.8	
	comp=Z,185nm,0.8s							
ITTB	Itaituba	18.57	58	*eP*		P	19 04 25.9	-0.3
MT03	Universidad Ad	18.60	178	P		Pn	19 04 28.5	-0.1
MT03					IAmb	IAmb	19 04 37.8	
	comp=Z,174nm,0.7s							
VA05	Santo Domingo	18.75	181	P		Pn	19 04 29.4	-0.8
VA05					IAmb	IAmb	19 04 33.3	
	comp=Z,279nm,0.9s							
MT09	Talagante	18.87	179	P		Pn	19 04 31.2	-0.5
MT09					IAmb	IAmb	19 04 36.4	
	comp=Z,157nm,0.8s							
ARAG	Araguaiana, MT	18.88	95	*eP*		P	19 04 29.8	+0.1
PTGC	Puerto Gaitan,	18.91	358	*eP*		P	19 04 30.3	+0.2
VILC	Villavicencio,	18.95	353	*eP*		Pn	19 04 37.7	+4.9
MT01	Popeta	18.96	180	P		Pn	19 04 31.8	-0.8
MT01					IAmb	IAmb	19 04 36.5	
	comp=Z,276nm,0.8s							
ORTC	Ortega, Tolima	19.01	348	*eP*		P	19 04 30.9	-0.2
YOTC	Yotoco, Valle	19.33	345	*eP*		P	19 04 34.8	+0.2
TRCB	Terra Rica	19.41	117	*eP*		P	19 04 35.9	+0.5
CHIC	Chingaza	19.47	353	*eP*		P	19 04 36.3	-0.2
BO01	Tunca	19.48	179	P		Pn	19 04 37.8	-0.9
BO01					IAmb	IAmb	19 04 39.3	
	comp=Z,194nm,0.9s							
ANIL	Santa Ana	19.60	348	*eP*		P	19 04 37.8	0.0
MALC	Bahia Malaga	19.63	342	*eP*		Pn	19 04 40.3	-0.3
TOLC	Tolima	19.68	348	*eP*		P	19 04 37.9	-0.7
ROSC	El Rosal	19.76	351	P		P	19 04 39.1	-0.5
	comp=Z,3.2nm,0.3s,baz=128,slow=9.6,SNR=8.1							
ROSC	El Rosal	19.76	351	P		P	19 04 39.3	-0.2
ROSC				pmax	pmax			
	comp=Z,268nm,1.3s							
ROSC	El Rosal	19.76	351	P		P	19 04 39.3	-0.2
ROSC				IAmb	IAmb		19 04 54.2	
	comp=Z,268nm,1.2s							
ROSC	El Rosal	19.76	351	*eP*		Pn	19 04 46.0	+3.5
H03N1	Juan Fernandez	19.76	199	P		Pn	19 04 41.6	-0.1
	baz=121,slow=14,SNR=52							
H03N1				T		T	19 23 24.5	
	baz=21,slow=73,SNR=29							
H03N2	Juan Fernandez	19.77	199	P		Pn	19 04 41.8	0.0
	baz=121,slow=14,SNR=61							
H03N2				T		T	19 23 24.1	
	baz=21,slow=73,SNR=25							
H03N3	Juan Fernandez	19.78	199	P		Pn	19 04 41.6	-0.3
	baz=121,slow=14,SNR=31							
H03N3				T		T	19 23 23.1	
	baz=21,slow=73,SNR=33							
BO02	Sierra Bellavi	19.89	179	P		Pn	19 04 42.5	-1.1
BO02						PcP	19 08 52.1	+0.4
RREF	El Recreo	19.99	348	*eP*		P	19 04 42.0	-0.3
H03S3	Juan Fernandez	20.12	199	P		Pn	19 04 45.7	-0.2
	baz=11,slow=18,SNR=30							
H03S1	Juan Fernandez	20.13	199	P		Pn	19 04 45.3	-0.8
	baz=11,slow=18,SNR=26							
H03S2	Juan Fernandez	20.13	199	P		Pn	19 04 45.9	-0.2
	baz=11,slow=18,SNR=54							
BOAV	Boa Vista	20.20	33	*eP*		P	19 04 43.8	-0.1
PCMB	Pacaembu	20.24	112	*eP*		P	19 04 44.2	-0.1
GUY2C	Guyana, Caldas	20.31	348	*eP*		P	19 04 45.2	-0.4
SPBC	San Pablo de B	20.52	352	*eP*		P	19 04 45.6	-1.8
PIZC	Pizarro, Choco	20.54	343	*eP*		P	19 04 49.1	+1.6
NORC	Norcasia	20.55	350	*eP*		P	19 04 45.8	-1.9
ITRB	Iturama	20.63	107	*eP*		P	19 04 48.3	-0.2
PTGB	Pitanga	20.63	121	*eP*		P	19 04 48.6	0.0
RUSC	La Rusia	20.65	355	*eP*		P	19 04 47.4	-1.9
CBOC	Ciudad Bolivar	21.07	347	*eP*		P	19 04 53.2	-0.2
MALB	Monte Alegre	21.24	54	*eP*		P	19 04 54.2	-0.8
HELC	Santa Helena	21.28	349	*eP*		P	19 04 56.7	+0.8
BARC	Barichara	21.35	355	*eP*		P	19 04 56.5	0.0
PTBC	PUERTO BERRIO,	21.45	352	*eP*		P	19 04 51.4	-5.9
BI02	San Fabin de	21.75	180	P		P	19 05 01.6	+1.2
BI02					IAmb	IAmb	19 05 05.0	
	comp=Z,264nm,0.8s							
SOLC	Bahia Solano	21.76	344	*eP*		P	19 05 01.1	+0.6
ELOV	Elorza	21.76	5	*eP*		P	19 04 59.1	-1.5
BRRC	Barranca, Sant	21.91	354	*eP*		P	19 04 59.9	-2.3
PAMC	Pamplona, Colo	22.06	356	*eP*		P	19 05 01.2	-3.0
DBBC	Dabeiba	22.23	347	*eP*		P	19 05 04.2	-1.3
FRTB	Fartura	22.25	116	*eP*		P	19 05 04.5	-1.1
ZARC	Zaragoza, Cauc	22.44	351	*eP*		P	19 05 05.6	-1.8
BDFB	Brasilia	22.54	95	P		P	19 05 08.1	-0.4
	comp=Z,37nm,0.5s,baz=261,slow=11,SNR=64							
BDFB	Brasilia	22.54	95	P		P	19 05 07.6	-0.9
BDFB		

JTS Las Juntas de 28.36 331 *i* P **P** 19 06 03.4 +2.4
JTS pmax pmax
comp=Z,33nm,1.2s
JTS Las Juntas de 28.36 331 P **P** 19 06 02.3 +1.3
JTS Las Juntas de 28.36 331 *eP* **P** 19 06 03.5 +2.4
ORTG Ortega, Santa 28.66 330 P **P** 19 06 05.3 +1.5
ORTG IAmb IAmb 19 06 07.4
comp=Z,187nm,2.0s
ORTG **PcP** 19 09 10.7 -0.4
SJMB Sao Joao De Ma 29.13 102 *eP* **P** 19 06 06.9 -0.9
BSFB Barra de Sao F 29.46 102 *eP* **P** 19 06 09.6 -1.2
PRVC Isla de Provid 29.72 340 *eP* **P** 19 06 15.3 +2.3
ESPN Las Esperanzas 29.75 334 P **P** 19 06 11.5 -1.8
RIB01 Linhares ES 29.91 103 *eP* **P** 19 06 13.9 -0.8
ACON Acoyapa 29.93 332 P **P** 19 06 15.5 +0.6
ACON IAmb IAmb 19 06 18.0
comp=Z,110nm,1.6s
BOAB BOACO BROADBAN 30.58 332 P **P** 19 06 16.2 -4.4
BOAB IAmb IAmb 19 06 34.1
comp=Z,101nm,1.3s
GDU01 Guandu, BA 30.81 92 *eP* **P** 19 06 21.7 -1.0
NBIT Itapeh - BA 30.84 94 *eP* **P** 19 06 22.5 -0.5
NBPB Pedra_Branca-C 32.56 77 *eP* **P** 19 06 38.4 +0.2
TGUH Tegucigalpa,Un 32.73 331 P **P** 19 06 41.0 +1.4
TGUH IAmb IAmb 19 06 42.0
comp=Z,117nm,1.1s
NBMA Muriti-CE 32.80 81 *eP* **P** 19 06 39.9 -0.3
ICMP Isla Caja de M 32.85 9 P **P** 19 06 37.9 -2.5
ICMP IAmb IAmb 19 06 41.8
comp=Z,92nm,0.8s
MLPR Magueyes Islan 32.86 8 P **P** 19 06 38.3 -2.2
MLPR IAmb IAmb 19 06 39.7
comp=Z,130nm,1.1s
NBMO Morrinhos-CE 32.92 73 *eP* **P** 19 06 40.9 -0.3
NBLA Lagarto - SE 32.92 87 *eP* **P** 19 06 40.4 -0.8
OBIP Obispado Ponce 32.99 8 P **P** 19 06 38.9 -2.8
NBTA Tacaratu-PE 33.04 84 *eP* **P** 19 06 41.3 -1.0
SJG San Juan 33.13 9 P **P** 19 06 39.7 -3.1
SJG pmax pmax
comp=Z,74nm,1.4s
SJG San Juan 33.13 9 P **P** 19 06 39.7 -3.1
AOPR Arecibo Observ 33.27 8 P **P** 19 06 41.6 -2.6
AOPR IAmb IAmb 19 06 43.1
comp=Z,61nm,0.6s
CBYP Canovanas 33.33 10 IAmb IAmb 19 06 43.4
comp=Z,83nm,0.9s
CBYP **PcP** 19 09 23.7 +0.3
GCPR Guaynabo City 33.33 9 P **P** 19 06 41.2 -3.4
GCPR **PcP** 19 09 22.9 -0.4
CUPR Culebra, Puert 33.46 11 P **P** 19 06 42.3 -3.4
CUPR IAmb IAmb 19 06 43.7
comp=Z,82nm,1.1s
SDDR Presa de Saban 33.59 0 P **P** 19 06 45.0 -2.0
SDDR Presa de Saban 33.59 0 *eP* **P** 19 06 44.6 -2.3
MTO3 Montecristo 34.06 328 P **P** 19 06 52.3 +1.1
MTO3 IAmb IAmb 19 06 54.0
comp=Z,90nm,1.2s
MTO3 **PcP** 19 09 25.9 +0.2
ESQI Esquipulas 34.19 328 P **P** 19 06 53.5 +1.3
ESQI IAmb IAmb 19 06 55.4
comp=Z,224nm,1.5s
NBCL Cascavel-CE 34.22 75 *eP* **P** 19 06 52.6 +0.1
NBLI Livramento-PB 34.53 81 *eP* **P** 19 06 55.2 0.0
NBAN Anadia - AL 34.64 86 *eP* **P** 19 06 55.4 -0.7
NBPA Parau_RN 34.84 79 *eP* **P** 19 06 57.5 -0.2
FSCY Frank Sound, G 35.27 344 P **P** 19 07 02.3 +1.0
RTAL Retalhuleu 35.42 325 P **P** 19 06 58.8 -3.9
NBRF Rio Formoso - 35.96 84 *eP* **P** 19 07 06.6 -0.7
RCBR Riachuelo 35.96 79 P **P** 19 07 06.4 -1.1
RCBR pmax pmax
comp=Z,59nm,0.9s
RCBR Riachuelo 35.96 79 P **P** 19 07 06.4 -1.1
RCBR IAmb IAmb 19 07 09.5
comp=Z,59nm,0.8s
RCBR Riachuelo 35.96 79 *eP* **P** 19 07 06.8 -0.7
NBPV Pedro Velho 36.38 81 *eP* **P** 19 07 10.4 -0.5
PETF Flores 36.45 329 P **P** 19 07 12.0 +0.6
PETF IAmb IAmb 19 07 15.3
comp=Z,72nm,1.1s
CCIG Comitan 37.10 326 P **P** 19 07 17.1 0.0
RPN Rapa Nui 37.37 245 LR LR 19 18 41.5
comp=Z,316nm,18.2s,baz=350,slow=29
TEIG Tepich 38.60 334 P **P** 19 07 29.3 -0.2
USHA Ushuaia 39.99 177 P **P** 19 07 42.5 +2.0
comp=Z,46nm,0.7s,baz=352,slow=5.6,SNR=5.8
TLIG Tlapa 41.90 319 P **P** 19 07 58.1 +1.2
TLIG **PcP** 19 09 51.4 +1.4
DWPF Disney Wildern 43.78 347 P 19 08 11.8
baz=166
DWPF Disney Wildern 43.78 347 P **P** 19 08 11.1 -0.6
DWPF IAmb IAmb 19 08 12.4
comp=Z,130nm,0.7s
553A Crawfordville 46.49 344 P **P** 19 08 33.1 +0.1
451A Vernon 47.25 343 IAmb IAmb 19 08 40.0
comp=Z,132nm,0.9s
TIGA Tifton 47.47 346 P 19 08 40.7
baz=164
TIGA Tifton 47.47 346 P **P** 19 08 39.8 -0.9
TIGA IAmb IAmb 19 08 41.9
comp=Z,271nm,1.3s
BRAL Brewton 48.15 342 P 19 08 46.2
baz=159
BRAL Brewton 48.15 342 P **P** 19 08 45.8 0.0
ZAIG Zacatecas 48.27 320 P **P** 19 08 48.7 +1.5
ZAIG IAmb IAmb 19 08 50.7
comp=Z,87nm,1.1s
ZAIG **PcP** 19 10 12.8 +0.7
NHSC New Hope 48.40 350 P 19 08 48.0
baz=168,SNR=7.1
NHSC New Hope 48.40 350 IAmb IAmb 19 08 49.2
comp=Z,135nm,0.8s
Y57A Sumter 49.32 350 P **P** 19 08 54.1 -0.6
Y57A PcP **PcP** 19 10 14.2 -1.1
GOGA Godfrey 49.34 347 P 19 08 54.7
baz=164,SNR=29
GOGA Godfrey 49.34 347 IAmb IAmb 19 08 55.8
comp=Z,110nm,1.0s
344A Westbrook Farm 49.63 338 IAmb IAmb 19 08 58.2
comp=Z,71nm,0.9s
Z51A Franklin 49.65 345 P **P** 19 08 56.8 -0.5
Z51A PcP **PcP** 19 10 16.1 -0.5
HODGE Hodges 49.87 348 P **P** 19 08 58.3 -0.6
HODGE IAmb IAmb 19 09 00.1
comp=Z,126nm,1.3s
HODGE PcP **PcP** 19 10 17.1 -0.2
LRAL Lakeview Retre 49.88 343 P 19 08 58.7
baz=160,SNR=31
LRAL Lakeview Retre 49.88 343 P **P** 19 08 58.3 -0.7
LRAL IAmb IAmb 19 08 59.9
comp=Z,121nm,1.1s
Y52A Lilburn 49.91 346 IAmb IAmb 19 08 60.0
comp=Z,132nm,1.1s
BIRD Birdtown, Kers 49.95 350 IAmb IAmb 19 09 00.5
comp=Z,75nm,0.9s
342A Flagon Creek P 50.15 337 IAmb IAmb 19 09 03.2
comp=Z,190nm,1.1s
CNNC Cliffs of the 50.17 353 P 19 09 00.2
baz=172
VBMS Vicksburg 50.25 339 P 19 09 01.6
baz=156
Z47A Carrollton 50.35 342 IAmb IAmb 19 09 03.4
comp=Z,156nm,0.9s
PAULI Pauline 50.36 349 P **P** 19 09 02.3 -0.3
PAULI IAmb IAmb 19 09 03.9
comp=Z,113nm,1.1s
PAULI PcP **PcP** 19 10 19.6 +0.6
KMSC Kings Mountain 50.58 349 P 19 09 04.2
baz=167,SNR=13
KMSC Kings Mountain 50.58 349 IAmb IAmb 19 09 05.5
comp=Z,126nm,1.2s
BG3 Lake Jocassee 50.75 348 P **P** 19 09 04.9 -0.6
BG3 PcP **PcP** 19 10 21.2 +0.7
833A Chaparral WMA, 50.76 328 P 19 09 06.7
baz=144,SNR=21
X51A Calhoun 50.77 346 IAmb IAmb 19 09 06.5
comp=Z,214nm,1.2s
FPAL Fort Paine 50.93 345 IAmb IAmb 19 09 07.5
comp=Z,106nm,1.0s
W52A Murphy 51.06 347 IAmb IAmb 19 09 08.8
comp=Z,199nm,1.3s
X48A Hartselle 51.22 343 IAmb IAmb 19 09 09.8
comp=Z,194nm,1.1s
V55A Taylorsville 51.26 350 IAmb IAmb 19 09 10.8
comp=Z,119nm,1.1s

U59A Littleton 51.26 353 P **P** 19 09 07.9 -1.4
U59A PcP **PcP** 19 10 23.1 +0.7
V53A Saluda 51.38 348 IAmb IAmb 19 09 11.1
comp=Z,78nm,1.1s
NATX Nacogdoches 51.43 334 P 19 09 12.0
baz=151
NATX Nacogdoches 51.43 334 P **P** 19 09 11.7 +1.0
NATX IAmb IAmb 19 09 13.2
comp=Z,265nm,1.5s
NATX **PcP** 19 10 24.1 +1.0
W50A Signal Mountai 51.48 345 IAmb IAmb 19 09 11.8
comp=Z,189nm,1.1s
CPCT Cooper Cave 51.53 346 IAmb IAmb 19 09 11.6
comp=Z,70nm,0.8s
TKL Tuckaleechee C 51.56 347 IAmb IAmb 19 09 12.2
comp=Z,138nm,1.1s
SWET Sewanee 51.65 345 P **P** 19 09 11.4 -0.9
SWET IAmb IAmb 19 09 12.2
comp=Z,82nm,0.7s
V52A Sevierville 51.70 347 P **P** 19 09 11.1 -1.5
V51A Loudon 51.83 347 IAmb IAmb 19 09 14.2
comp=Z,121nm,1.0s
T59A Double "B" Far 51.85 354 IAmb IAmb 19 09 13.8
comp=Z,64nm,0.8s
435B Jarrell 51.89 331 P 19 09 14.8
baz=147
435B Jarrell 51.89 331 P **P** 19 09 14.2 +0.2
435B IAmb IAmb 19 09 16.0
comp=Z,78nm,1.1s
OXF Oxford 51.98 341 P 19 09 13.4
baz=158,SNR=8.9
OXF Oxford 51.98 341 IAmb IAmb 19 09 15.4
comp=Z,230nm,1.3s
Z41A Richland Creek 52.01 337 P 19 09 15.4
baz=153
PLAL Pickwick Lake 52.01 343 P **P** 19 09 13.0 -1.9
PLAL IAmb IAmb 19 09 15.0
comp=Z,96nm,1.1s
PLAL PcP **PcP** 19 10 24.9 -0.3
T57A Hurt 52.08 352 IAmb IAmb 19 09 16.0
comp=Z,87nm,1.1s
CCAR Cane Creek 52.23 338 IAmb IAmb 19 09 17.5
comp=Z,84nm,0.8s
BLA Blacksburg 52.45 351 P 19 09 18.2
baz=169,SNR=9.8
BLA Blacksburg 52.45 351 P **P** 19 09 17.8 -0.4
BLA pmax pmax
comp=Z,193nm,1.4s
BLA Blacksburg 52.45 351 P **P** 19 09 17.8 -0.4
BLA IAmb IAmb 19 09 19.7
comp=Z,193nm,1.4s
X43A Marvell 52.46 340 P 19 09 18.0
baz=156
S60A Water View 52.48 355 P 19 09 18.5
baz=173
W45A Hickory Valley 52.51 342 P **P** 19 09 17.1 -1.4
S58A Poland Farm, P 52.53 353 P 19 09 17.6
baz=172,SNR=6.0
S58A Poland Farm, P 52.53 353 P **P** 19 09 17.6 -1.1
S58A PcP **PcP** 19 10 27.7 +0.5
CLTN Cedars of Leba 52.58 345 P **P** 19 09 16.9 -2.2
CLTN IAmb IAmb 19 09 19.6
comp=Z,118nm,1.0s
JSRW J. Sargeant Re 52.59 353 P **P** 19 09 17.1 -2.0
JSRW PcP **PcP** 19 10 27.8 +0.5
S59A Mechanicsville 52.60 354 P 19 09 18.0
baz=173
JCT Junction City 52.71 329 P 19 09 20.7
baz=145,SNR=9.2
S56A Natural Bridge 52.79 352 P 19 09 20.2
baz=170,SNR=5.4
S57A Dark Hollow, R 52.79 352 P 19 09 20.1
baz=171,SNR=14
S57A Dark Hollow, R 52.79 352 P **P** 19 09 19.5 -1.1
S57A IAmb IAmb 19 09 21.3
comp=Z,62nm,1.1s
S57A PcP **PcP** 19 10 28.5 +0.3
U49A Red Boiling Sp 52.84 345 P **P** 19 09 19.4 -1.6
U49A IAmb IAmb 19 09 20.8
comp=Z,84nm,0.7s
WHTX Lake Whitney, 52.84 332 P 19 09 22.0
baz=148,SNR=18
WHTX Lake Whitney, 52.84 332 P **P** 19 09 20.4 -0.7
R58B Mineral 52.86 354 P 19 09 20.3
baz=172,SNR=5.6
R58B Mineral 52.86 354 P **P** 19 09 19.8 -1.3
Z38A Mt. Pleasant 52.87 335 P **P** 19 09 21.4 +0.2
Z38A IAmb IAmb 19 09 22.9
comp=Z,89nm,0.8s
Z38A **PcP** 19 10 29.1 +0.6
WVT Waverly 53.02 343 P 19 09 21.0
baz=160
WVT Waverly 53.02 343 P **P** 19 09 19.7 -2.6
WVT pmax pmax
comp=Z,100nm,1.1s
WVT Waverly 53.02 343 P **P** 19 09 19.7 -2.6
WVT IAmb IAmb 19 09 22.1
comp=Z,100nm,1.1s
R59A King George, V 53.02 354 P 19 09 21.3
baz=173
R60A Leonardtown, M 53.04 355 P 19 09 21.4
baz=174
CBN Corbin Frederi 53.05 354 P 19 09 21.7
baz=173
T50A Nancy 53.11 347 P **P** 19 09 20.9 -2.0
T50A IAmb IAmb 19 09 23.2
comp=Z,84nm,0.8s
X40A Basin Creek Fa 53.12 338 P 19 09 22.6
baz=154
X40A Basin Creek Fa 53.12 338 P **P** 19 09 22.4 -0.7
S54A Dingess, Beckl 53.17 350 P 19 09 23.3
baz=168,SNR=21
S54A Dingess, Beckl 53.17 350 P **P** 19 09 21.9 -1.5
R57A Stanardsville 53.26 353 P 19 09 23.8
baz=171,SNR=8.7
LPAR Lepanto 53.26 341 P **P** 19 09 23.8 -0.3
S51A Beattyville 53.44 348 P **P** 19 09 23.9 -1.5
S51A IAmb IAmb 19 09 25.7
comp=Z,56nm,0.8s
MIAR Mount Ida 53.45 337 P 19 09 25.5
baz=153,SNR=20
MIAR Mount Ida 53.45 337 P **P** 19 09 24.9 -0.6
MIAR pmax pmax
comp=Z,65nm,0.9s
MIAR Mount Ida 53.45 337 P **P** 19 09 24.9 -0.6
MIAR IAmb IAmb 19 09 26.7
comp=Z,65nm,0.8s
R55A Marlinton 53.46 351 P 19 09 25.8
baz=169,SNR=8.8
R55A Marlinton 53.46 351 P **P** 19 09 24.0 -1.6
R55A IAmb IAmb 19 09 28.1
comp=Z,138nm,1.5s
R55A PcP **PcP** 19 10 31.6 +0.9
R56A Bull Pasture M 53.48 352 P 19 09 25.4
baz=170
R54A Victor 53.49 351 P 19 09 25.7
baz=168,SNR=20
W41B Gary Mavity, V 53.53 339 P 19 09 25.7
baz=155,SNR=17
Q61A Milford 53.55 356 P 19 09 25.6
baz=175
T47A Sharon Grove 53.63 344 P **P** 19 09 25.0 -1.7
Q59A Harwood 53.63 355 P 19 09 25.6
baz=174
WHAR Wooly Hollow 53.65 339 P **P** 19 09 25.4 -1.5
WHAR IAmb IAmb 19 09 27.7
comp=Z,73nm,1.0s
R53A Hurricane 53.80 350 P **P** 19 09 26.1 -1.9
Q58A Fox Den Farm, 53.81 354 P 19 09 27.2
baz=172,SNR=9.6
TX31 Lajitas Ar. Si 53.85 325 P **P** 19 09 28.6 -0.1
TX32 Lajitas Array 53.85 325 P **P** 19 09 28.3 -0.3
TX32 IAmb IAmb 19 09 30.4
comp=Z,57nm,1.0s
TXAR Lajitas Array 53.85 325 P **P** 19 09 29.2 +0.5
comp=Z,34nm,0.8s,baz=149,slow=8.7,SNR=347
TXAR Lajitas Array 53.85 325 P **P** 19 09 27.9 -0.8
TXAR Lajitas Array 53.85 325 P **P** 19 09 27.9 -0.8
Z35A Perchaven, San 53.89 333 P **P** 19 09 27.8 -0.9
LCAR Lake Charles 53.97 340 P **P** 19 09 27.9 -1.3
LCAR IAmb IAmb 19 09 29.7
comp=Z,79nm,1.1s
LCAR PcP **PcP** 19 10 33.1 +0.5
Q57A Strasburg 53.98 353 P 19 09 29.1
baz=171,SNR=11
T45A Paducah 54.08 343 P **P** 19 09 28.3 -1.7

Q56A Snyder Ridge, 54.08 352 P 19 09 30.2
baz=170,SNR=8.3
Q56A Snyder Ridge, 54.08 352 P **P** 19 09 29.6 -0.4
Q56A IAmb IAmb 19 09 31.3
comp=Z,54nm,1.1s
W39A Magazine 54.10 337 P 19 09 30.7
baz=153,SNR=27
W39A Magazine 54.10 337 P **P** 19 09 29.7 -0.5
W39A IAmb IAmb 19 09 32.0
comp=Z,165nm,1.2s
W39A PcP **PcP** 19 10 34.1 +0.9
R50A Paris 54.21 347 P **P** 19 09 29.9 -1.1
Q53A Leroy 54.24 350 P 19 09 31.0
baz=168,SNR=44
Q54A Coxs Mills 54.25 351 P **P** 19 09 30.1 -1.2
Q54A IAmb IAmb 19 09 32.1
comp=Z,87nm,1.0s
P59A Jarrettsville 54.35 355 P 19 09 31.3
baz=174
P57A Homestead Farm 54.38 354 P 19 09 32.1
baz=172,SNR=7.4
P57A Homestead Farm 54.38 354 P **P** 19 09 31.8 -0.3
ABTX Abilene, Hawle 54.39 331 P 19 09 33.1
baz=146,SNR=14
R49A Shelbyville 54.40 347 P **P** 19 09 30.8 -1.5
R49A IAmb IAmb 19 09 32.5
comp=Z,195nm,1.4s
Q52A Bidwell 54.47 350 P **P** 19 09 31.4 -1.3
P56A Dayton Farm, R 54.49 353 P 19 09 32.5
baz=171
P60A Greenville 54.50 356 P 19 09 31.6
baz=175
P60A Greenville 54.50 356 P **P** 19 09 31.2 -1.8
WCI Wyandotte Cave 54.60 346 P 19 09 32.9
baz=162
WCI Wyandotte Cave 54.60 346 P **P** 19 09 32.3 -1.4
WCI pmax pmax
comp=Z,214nm,1.1s
WCI Wyandotte Cave 54.60 346 P **P** 19 09 32.3 -1.4
WUPA West Chester U 54.62 356 P **P** 19 09 32.3 -1.5
USIN University of 54.70 344 P **P** 19 09 33.3 -1.1
Q51A Peebles 54.73 349 P **P** 19 09 32.9 -1.8
Q51A IAmb IAmb 19 09 35.0
comp=Z,118nm,1.3s
Q51A PcP **PcP** 19 10 36.0 +0.5
MVL Millersville 54.74 355 P **P** 19 09 32.7 -2.0
MCWV Mont Chateau 54.77 352 P 19 09 34.9
baz=170
MCWV Mont Chateau 54.77 352 P **P** 19 09 34.5 -0.5
U40A Yellville 54.80 339 P 19 09 34.9
baz=154,SNR=15
U40A Yellville 54.80 339 IAmb IAmb 19 09 35.5
comp=Z,47nm,0.8s
P53A Whipple 54.83 351 P **P** 19 09 34.6 -0.8
O58A Lewisberry 54.91 355 P 19 09 35.4
baz=173
O60A Telford 54.98 356 P 19 09 35.1
baz=175
O57A Amberson 55.06 354 P 19 09 36.7
baz=172,SNR=5.6
P52A Corning 55.10 350 P 19 09 36.6
baz=167,SNR=17
P52A Corning 55.10 350 P **P** 19 09 36.1 -1.2
P52A IAmb IAmb 19 09 37.7
comp=Z,145nm,1.1s
P52A PcP **PcP** 19 10 36.5 -0.5
P51A Williamsport 55.12 349 IAmb IAmb 19 09 37.6
comp=Z,139nm,1.4s
O56A Blue Knob Stat 55.22 353 P 19 09 37.9
baz=171,SNR=7.8
MGMO Mountain Grove 55.33 340 P **P** 19 09 38.2 -0.8
MGMO PcP **PcP** 19 10 39.1 +1.2
N61A South Mountain 55.36 357 P 19 09 38.6
baz=176
O54A Avella 55.36 352 IAmb IAmb 19 09 40.0
comp=Z,118nm,1.6s
P49A Miami Univ. Ec 55.49 347 P 19 09 38.9
baz=164,SNR=22
TUL1 Leonard 55.50 336 P 19 09 40.5
baz=151,SNR=8.8
SSPA Standing Stone 55.51 354 P 19 09 39.8
baz=172
O52A Adamsville 55.52 350 IAmb IAmb 19 09 40.9
comp=Z,101nm,1.0s
O53A New Philadelph 55.55 351 P 19 09 40.0
baz=168,SNR=9.4
BLO Bloomington 55.55 346 P **P** 19 09 39.2 -1.4
BLO 19 10 39.1
BLO pmax pmax
comp=Z,126nm,0.7s
BLO Bloomington 55.55 346 P **P** 19 09 39.2 -1.4
BLO PcP **PcP** 19 10 39.1 +0.5
O53A New Philadelph 55.55 351 IAmb IAmb 19 09 41.3
comp=Z,54nm,0.8s
P48A Milroy 55.58 347 IAmb IAmb 19 09 39.8
comp=Z,73nm,0.7s
N57A Milroy 55.59 354 P 19 09 39.8
baz=173
PAL Palisades 55.59 358 P 19 09 40.0
baz=177
N58A Sunbury 55.60 355 P 19 09 40.1
baz=174,SNR=7.2
N59A State Game Lan 55.60 356 P 19 09 40.7
baz=175
WMOK Wichita Mounta 55.75 333 P 19 09 42.0
baz=147,SNR=6.4
CCM Cathedral Cave 55.81 341 P 19 09 41.8
baz=156
CCM Cathedral Cave 55.81 341 P **P** 19 09 41.5 -1.0
CCM 19 10 39.4
CCM Cathedral Cave 55.81 341 P **P** 19 09 41.5 -1.0
CCM PcP **PcP** 19 10 39.4 -0.3
CCM IAmb IAmb 19 10 41.4
comp=Z,75nm,0.8s
N56A West Decatur 55.83 354 P 19 09 42.5
baz=172
ACSO Alum Creek Sta 55.83 349 P 19 09 41.8
baz=166,SNR=19
ACSO Alum Creek Sta 55.83 349 P **P** 19 09 41.4 -1.1
M61A Granite Spring 55.89 358 P 19 09 42.2
baz=177
M63A Gales Ferry 55.94 359 P 19 09 42.0
baz=179
M60A Port Jervis 55.95 357 P 19 09 41.6
baz=176
M62A Hamden 56.00 359 P 19 09 42.6
baz=178
O49A Covington 56.04 348 P **P** 19 09 42.7 -1.4
N54A Moraine State 56.07 352 P 19 09 44.1
baz=170,SNR=9.5
OK029 Liberty Lake 56.08 334 P **P** 19 09 44.3 -0.1
M57A Sunshine Farm, 56.13 355 P 19 09 44.1
baz=173,SNR=6.2
M57A Sunshine Farm, 56.13 355 IAmb IAmb 19 09 44.8
comp=Z,65nm,1.2s
S39A Bolivar 56.17 339 pP **pP** 19 10 19.4 -0.5
S39A PcP **PcP** 19 10 41.7 +0.5
M59A Waymart 56.20 356 P 19 09 44.3
baz=175
M56A Emporium 56.38 354 P 19 09 45.7
baz=172,SNR=7.3
M56A Emporium 56.38 354 IAmb IAmb 19 09 46.9
comp=Z,48nm,1.0s
N51A Ashland 56.39 350 P **P** 19 09 45.4 -1.1
N51A PcP **PcP** 19 10 41.6 -0.3
L63A North Scituate 56.40 360 P 19 09 45.6
baz=180
M54A Oil Creek Stat 56.57 353 P 19 09 47.3
baz=170,SNR=7.7
M54A Oil Creek Stat 56.57 353 IAmb IAmb 19 09 48.6
comp=Z,192nm,1.8s
L60A Shokan 56.59 357 P 19 09 47.5
baz=177
MNTX Cornudas Mount 56.61 325 P 19 09 48.3
baz=140,SNR=60
MNTX Cornudas Mount 56.61 325 IAmb IAmb 19 09 49.5
comp=Z,68nm,1.0s
M53A WI Miller and 56.64 352 P 19 09 47.8
baz=169,SNR=8.6
M53A WI Miller and 56.64 352 P **P** 19 09 47.1 -1.2
M53A IAmb IAmb 19 09 48.3
comp=Z,144nm,1.3s
T35A Sooner Cattle 56.66 336 IAmb IAmb 19 09 50.0
comp=Z,86nm,1.1s
L58A Harry Jones Me 56.73 356 P 19 09 48.3
baz=175,SNR=5.8

M51A	Elyria	56.76	350	P			19 09 48.0	
	baz=167,SNR=5.2							
L57A	Andrews Acres	56.76	355	P			19 09 48.5	
	baz=174							
L61A	Hillsdale 1, H	56.77	358	P			19 09 48.1	
	baz=177							
ALLY	Alegheny Colle	56.77	352	P	P		19 09 48.0	-1.2
ALLY				IAmb	IAmb		19 09 49.9	
	comp=Z,98nm,1.1s							
L59A	Walton	56.83	357	P			19 09 48.8	
	baz=176							
BINY	Binghamton	56.90	356	P			19 09 49.4	
	baz=175,SNR=6.1							
BINY	Binghamton	56.90	356	IAmb	IAmb		19 09 50.5	
	comp=Z,43nm,0.8s							
CROK	Carrier	56.91	334	P	P		19 09 50.1	-0.1
CROK				pP	pP		19 10 26.8	+1.5
CROK				PcP	PcP		19 10 44.4	+0.4
L56A	Greenwood	56.96	355	P			19 09 49.8	
	baz=173,SNR=5.5							
L56A	Greenwood	56.96	355	IAmb	IAmb		19 09 50.9	
	comp=Z,60nm,1.2s							
N47A	Urbana	56.99	347	P	P		19 09 48.9	-1.9
L61B	Northampton	57.00	359	P			19 09 49.7	
	baz=178							
MSTX	Muleshoe	57.01	329	P			19 09 51.3	
	baz=143,SNR=9.3							
HRV	Adam Dziewonsk	57.04	360	P			19 09 50.1	
	baz=180							
L53A	Girard	57.09	352	P			19 09 50.9	
	baz=170,SNR=6.7							
AMTX	Amarillo	57.21	330	P			19 09 52.3	
	baz=144							
ERPA	Erie	57.21	352	P			19 09 51.8	
	baz=170,SNR=5.8							
K63A	Dunstable	57.23	360	P			19 09 51.2	
	baz=180							
U32A	Winter Ranch,	57.23	334	P	P		19 09 52.4	-0.1
K61A	Williamstown	57.23	358	P			19 09 52.1	
	baz=178							
TRY	Troy	57.31	358	IAmb	IAmb		19 09 53.1	
	comp=Z,44nm,0.9s							
WVNY	West Valley, N	57.33	354	P	P		19 09 52.5	-0.7
WVNY				IAmb	IAmb		19 09 53.8	
	comp=Z,52nm,1.1s							
K59A	Cooperstown	57.40	357	P			19 09 52.7	
	baz=176,SNR=8.3							
P40A	Paris	57.41	341	P	P		19 09 52.8	-0.9
P40A				pP	pP		19 10 27.8	-1.0
K58A	Earlville	57.44	356	P			19 09 53.1	
	baz=175							
K57A	Scipio Center	57.46	355	P			19 09 52.9	
	baz=174,SNR=5.3							
KAN10	Anthony SW Sta	57.48	335	IAmb	IAmb		19 09 55.8	
	comp=Z,124nm,1.4s							
K56A	Middlesex	57.50	355	P			19 09 53.6	
	baz=173							
HDIL	Hopedale	57.56	344	P			19 09 53.4	
	baz=159,SNR=7.1							
HDIL	Hopedale	57.56	344	P	P		19 09 53.2	-1.5
MMNY	Mt. Morris Dam	57.59	354	IAmb	IAmb		19 09 55.1	
	comp=Z,118nm,1.7s							
L48A	N Adams	57.76	348	P	P		19 09 54.7	-1.5
J60A	Lant Hill Farm	57.81	358	P			19 09 55.3	
	baz=178							
J61A	Chester	57.89	359	P			19 09 57.1	
	baz=178							
P38A	Dawn	57.98	340	IAmb	IAmb		19 09 57.6	
	comp=Z,43nm,1.0s							
HSIG		57.99	319	P	P		19 09 59.0	+1.0
HSIG				IAmb	IAmb		19 10 00.2	
	comp=Z,134nm,1.8s							
M44A	Midewin, Midew	58.02	345	P	P		19 09 55.9	-2.1
M44A				IAmb	IAmb		19 09 57.4	
	comp=Z,97nm,1.2s							
J56A	Wolcott	58.03	355	P			19 09 56.4	
	baz=174							
J59A	Piesco	58.07	357	P			19 09 57.5	
	baz=176,SNR=6.8							
J59A	Piesco	58.07	357	IAmb	IAmb		19 09 58.1	
	comp=Z,55nm,1.1s							
J57A	Williamstown	58.10	356	P			19 09 57.6	
	baz=175							
J57A	Williamstown	58.10	356	IAmb	IAmb		19 10 50.0	
	comp=Z,53nm,1.1s							
L46A	Eue Claire	58.21	347	P	P		19 09 57.4	-1.8
I58A	Old Forge	58.32	357	P			19 09 59.1	
	baz=176							
I59A	Olmsteadville	58.38	358	P			19 09 59.4	
	baz=177,SNR=7.8							
I60A	Shoreham	58.41	358	P			19 10 00.1	
	baz=178							
I64A	Boothbay	58.48	1	P			19 10 00.3	
	baz=182							
121A	Cookes Peak, D	58.58	324	P			19 10 03.7	
	baz=138,SNR=45							
121A	Cookes Peak, D	58.58	324	P	P		19 10 03.1	+0.8
121A				IAmb	IAmb		19 10 04.9	
	comp=Z,90nm,1.0s							
KSU1	Kansas State U	58.60	337	P			19 10 01.8	
	baz=151,SNR=8.9							
I57A	Carthage	58.60	356	P			19 10 01.4	
	baz=175							
KSU1	Kansas State U	58.60	337	IAmb	IAmb		19 10 02.8	
	comp=Z,98nm,0.8s							
319A	Douglas	58.61	322	IAmb	IAmb		19 10 04.8	
	comp=Z,96nm,1.0s							
PECO	Prince Edward	58.70	355	P	P		19 10 01.4	-1.1
L44A	Lake County Fo	58.73	346	P			19 10 01.4	
	baz=161							
LBNH	Lisbon	58.78	360	P			19 10 02.8	
	baz=179							
N38A	Joes South For	58.94	341	P	P		19 10 03.2	-1.1
N38A				IAmb	IAmb		19 10 04.6	
	comp=Z,58nm,0.9s							
I51A	Listowel	59.01	352	P			19 10 03.8	
	baz=169,SNR=7.1							
H58A	Gabriels	59.01	358	P			19 10 03.8	
	baz=177							
L42A	Oliver, Polo	59.01	344	IAmb	IAmb		19 10 04.1	
	comp=Z,77nm,0.8s							
H61A	Lyndonville	59.07	360	P			19 10 04.9	
	baz=179							
H60A	Morristown	59.11	359	P			19 10 04.7	
	baz=178							
H62A	Milan	59.11	0	P			19 10 05.2	
	baz=180							
H57A	Richville	59.11	357	P			19 10 04.3	
	baz=175,SNR=5.8							
H63A	New Sharon	59.21	1	P			19 10 05.8	
	baz=181							
H59A	Cadyville	59.22	358	P			19 10 05.6	
	baz=177							
LONY	Lake Ozonia	59.23	357	P			19 10 05.5	
	baz=176							
DELO	Deloro Mine	59.33	355	P	P		19 10 05.8	-1.1
DELO					PcP		19 10 53.5	+0.1
DELO				IAmb	IAmb		19 10 54.7	
	comp=Z,46nm,1.0s							
FRNY	Flat Rock	59.41	358	P	P		19 10 06.6	-0.9
H53A	Bobcaygeon	59.47	354	P			19 10 06.9	
	baz=172,SNR=5.4							
CBKS	Cedar Bluff	59.60	334	P			19 10 09.5	
	baz=148,SNR=24							
G60A	Masonville	59.64	359	P			19 10 08.2	
	baz=179							
ANMO	Albuquerque	59.66	327	P			19 10 10.4	
	baz=140							
ANMO	Albuquerque	59.66	327	*i* P	P		19 10 10.4	+0.7
ANMO				pmax	pmax			
	comp=Z,42nm,1.1s							
ANMO	Albuquerque	59.66	327	P	P		19 10 09.9	+0.2
G63A	Kingsbury	59.67	1	P			19 10 08.2	
	baz=182							
SADO	Sadowa	59.73	354	P	P		19 10 08.0	-1.6
SADO				IAmb	IAmb		19 10 09.6	
	comp=Z,52nm,1.1s							
G57A	Newington	59.73	357	P			19 10 08.6	
	baz=176,SNR=6.1							
G58A	Ormstown	59.73	358	P			19 10 08.5	
	baz=177							
G62A	West of Eustis	59.76	1	P			19 10 09.6	
	baz=181,SNR=7.1							
G62A	West of Eustis	59.76	1	P	P		19 10 09.1	-0.7
G62A				IAmb	IAmb		19 10 10.6	
	comp=Z,90nm,1.0s							
N35A	Tabor	59.80	339	P	P		19 10 06.6	-3.7
N35A					PcP		19 10 55.5	0.0
N35A				IAmb	IAmb		19 10 56.9	
	comp=Z,84nm,0.8s							
G61A	St-Isidore-de-	59.82	360	P			19 10 09.9	
	baz=180							
PKME	Peaks-Kenny Pk	59.83	2	P			19 10 09.6	
	baz=182							
G64A	Maxfield	59.84	2	P			19 10 09.9	
	baz=183							
G65A	Princeton	59.84	3	P			19 10 09.7	
	baz=184							
SCIA	State Center	59.94	341	P			19 10 10.7	
	baz=155							
JFWS	Jewell Farm	60.02	344	P			19 10 10.9	
	baz=159,SNR=18							
TUC	Tucson	60.17	322	P			19 10 13.8	
	baz=135							
TUC	Tucson	60.17	322	P	P		19 10 13.4	+0.3
TUC							19 10 57.4	
TUC				pmax	pmax			
	comp=Z,30nm,1.2s							
TUC	Tucson	60.17	322	P	P		19 10 13.4	+0.3
TUC				PcP	PcP		19 10 57.4	+0.1
G54A	Lake Saint Pet	60.24	355	P			19 10 12.1	
	baz=172,SNR=5.6							
T25A	Trinidad	60.33	330	P			19 10 15.3	
	baz=143,SNR=7.4							
F64A	Sherman	60.46	2	P			19 10 13.8	
	baz=183							
F60A	Warwick	60.51	360	P			19 10 13.4	
	baz=179							
F61A	St Evariste	60.51	0	P			19 10 13.7	
	baz=180							
GLMI	Grayling	60.57	349	P			19 10 14.3	
	baz=165							
I42A	Draeger Farm,	60.59	346	IAmb	IAmb		19 10 16.0	
	comp=Z,94nm,0.9s							
LMN	Caledonia Moun	60.68	5	P	P		19 10 14.4	-1.7
LMN				IAmb	IAmb		19 10 15.8	
	comp=Z,41nm,0.9s							
ALGO	Algonquin Park	60.79	355	P			19 10 15.7	
	baz=172							
E58A	La Victoria	60.93	358	P			19 10 17.0	
	baz=178							
E61A	Lac Etchemin	60.97	1	P			19 10 17.6	
	baz=181							
KSCO	Kaye Shedlock'	61.01	332	P			19 10 19.6	
	baz=145,SNR=9.4							
E63A	Oxbow	61.02	2	P			19 10 17.6	
	baz=183							
I40A	Norwalk	61.02	344	P	P		19 10 17.6	-0.9
E64A	Bridgewater	61.04	3	P			19 10 17.8	
	baz=184							
214A	Organ Pipe Nat	61.16	320	P			19 10 21.3	
	baz=133,SNR=16							
E56A	St. Veronique	61.17	357	P			19 10 18.4	
	baz=176,SNR=6.8							
BGNE	Belgrade	61.19	337	P			19 10 19.9	
	baz=150,SNR=13							
X18A	Snowflake	61.27	324	IAmb	IAmb		19 10 23.3	
	comp=Z,89nm,1.2s							
D60A	Saint Jean D'O	61.45	0	P			19 10 20.6	
	baz=180							
W18A	Petrified Fore	61.58	325	P			19 10 23.9	
	baz=137,SNR=5.6							
W18A	Petrified Fore	61.58	325	P	P		19 10 23.8	+1.1
W18A				IAmb	IAmb		19 10 25.2	
	comp=Z,156nm,1.6s							
D63A	Stockholm	61.64	3	P			19 10 22.0	
	baz=183							
D58A	Chemin du LacG	61.65	359	P			19 10 21.9	
	baz=178,SNR=14							
D56A	ZEC Mazanza, M	61.66	357	P			19 10 21.5	
	baz=176,SNR=5.1							
D55A	Sainte-Anne-du	61.67	357	P			19 10 21.6	
	baz=175,SNR=8.8							
D61A	St Aubert, Com	61.75	1	P			19 10 22.8	
	baz=181							
SFX	San Felipe	61.85	318	IAmb	IAmb		19 10 26.7	
	comp=Z,66nm,1.0s							
LATQ	La Tuque	61.93	359	P			19 10 25.1	
	baz=178							
BATG	Bathurst New B	62.00	4	P	P		19 10 23.9	-1.0
S22A	4UR Ranch, Cre	62.00	329	P			19 10 26.5	
	baz=140,SNR=20							
E46A	Sault Ste Mari	62.01	350	P	P		19 10 23.0	-2.0
E46A				IAmb	IAmb		19 10 24.9	
	comp=Z,67nm,0.9s							
X16A	Lo Mia Camp, P	62.05	323	IAmb	IAmb		19 10 28.6	
	comp=Z,73nm,1.1s							
Q24A	Divide	62.13	331	P			19 10 27.3	
	baz=142,SNR=5.0							
SPX	San Pedro Mart	62.25	318	P	P		19 10 28.4	+1.0
113A	Mohawk Valley,	62.31	320	IAmb	IAmb		19 10 29.8	
	comp=Z,43nm,1.0s							
OGNE	Ogallala	62.34	334	P			19 10 28.4	
	baz=146,SNR=5.7							
OGNE	Ogallala	62.34	334	P	P		19 10 27.8	+0.3
MVCO	Mesa Verde	62.45	327	P			19 10 29.5	
	baz=139,SNR=28							
MVCO	Mesa Verde	62.46	327	P	P		19 10 29.0	+0.5
MVCO				IAmb	IAmb		19 10 30.8	
	comp=Z,122nm,1.2s							
E43A	Lone Tree Farm	62.52	348	IAmb	IAmb		19 10 28.4	
	comp=Z,51nm,0.7s							
Y14A	Wickenburg	62.64	322	P	P		19 10 30.3	+0.7
Y14A				IAmb	IAmb		19 10 32.2	
	comp=Z,87nm,1.6s							
ECSD	EROS Data Cent	62.68	340	P			19 10 29.5	
	baz=152,SNR=30							
WUAZ	Wupatki	62.79	324	P			19 10 32.3	
	baz=136,SNR=29							
WUAZ	Wupatki	62.79	324	IAmb	IAmb		19 10 33.5	
	comp=Z,93nm,1.1s							
SPMN	Marine on St.	62.85	343	P			19 10 30.1	
	baz=156,SNR=14							
VLDQ	Val d'Or	62.89	355	P	P		19 10 29.6	-1.2
VLDQ				PcP	PcP		19 11 07.3	-0.4
ISCO	Idaho Springs	63.01	331	P			19 10 33.3	
	baz=142,SNR=16							
ISCO	Idaho Springs	63.02	331	P	P		19 10 32.4	+0.1
ISCO				pmax	pmax			
	comp=Z,81nm,1.4s							
ISCO	Idaho Springs	63.02	331	P	P		19 10 32.4	+0.1
ISCO				IAmb	IAmb		19 10 34.5	
	comp=Z,81nm,1.4s							
GLA	Glamis	63.16	320	P			19 10 34.4	
	baz=132,SNR=8.1							
SMCO	Snowmass	63.18	330	IAmb	IAmb		19 10 35.9	
	comp=Z,38nm,0.9s							
PV01	Paradox Valley	63.19	328	IAmb	IAmb		19 10 35.9	
	comp=Z,111nm,1.2s							
PV15	Paradox Valley	63.30	328	P	P		19 10 35.0	+0.9
PV02	Paradox Valley	63.33	328	IAmb	IAmb		19 10 36.7	
	comp=Z,126nm,1.4s							
PV13	Radium Mtn., P	63.34	328	IAmb	IAmb		19 10 36.6	
	comp=Z,135nm,1.4s							
PV05	Paradox Valley	63.42	327	IAmb	IAmb		19 10 36.9	
	comp=Z,74nm,1.3s							
PV03	Paradox Valley	63.42	328	IAmb	IAmb		19 10 37.2	
	comp=Z,79nm,1.4s							
PV12	Saucer Basin,	63.45	328	P	P		19 10 35.4	+0.4
PV12				IAmb	IAmb		19 10 37.6	
	comp=Z,69nm,1.2s							
PV18	Skein Mesa, Pa	63.45	328	IAmb	IAmb		19 10 37.3	
	comp=Z,110nm,1.6s							
PV07	Paradox Valley	63.46	328	P	P		19 10 35.5	+0.4
PV07				IAmb	IAmb		19 10 37.5	
	comp=Z,124nm,1.7s							
PV11	David Mesa, Pa	63.47	328	IAmb	IAmb		19 10 37.6	
	comp=Z,62nm,1.2s							
PV17	East Wray Mesa	63.50	328	P	P		19 10 35.9	+0.5
PV17				IAmb	IAmb		19 10 37.7	
	comp=Z,149nm,1.9s							
PV16	Nyswonger Mesa	63.50	328	IAmb	IAmb		19 10 37.7	
	comp=Z,92nm,1.6s							
PV19	Morning Glory	63.53	328	P	P		19 10 36.0	+0.4
PV19				IAmb	IAmb		19 10 37.9	
	comp=Z,76nm,1.6s							
PV04	Paradox Valley	63.56	328	IAmb	IAmb		19 10 38.2	
	comp=Z,148nm,2.0s							
PDMCI	Parker Dam,Lak	63.58	321	P			19 10 36.5	
	baz=133							
PV22	Blue Mesa, Par	63.60	328	IAmb	IAmb		19 10 37.7	
	comp=Z,42nm,1.0s							
PV10	Paradox Valley	63.61	328	IAmb	IAmb		19 10 37.9	
	comp=Z,140nm,1.7s							
F36A	Milaca	63.64	343	P	P		19 10 34.8	-1.1
SWSC	Sam W. Stewart	63.70	319	P			19 10 37.9	
	baz=131							
IKP	In-Ko-Pah, Jac	63.71	319	P			19 10 38.4	
	baz=131,SNR=14							
LSQQ	Lebel-sur-Quev	63.79	356	P			19 10 36.0	
	baz=174							
BC3	Big Chuckawall	63.95	320	P			19 10 39.8	
	baz=132,SNR=20							
TKX	Tecate	63.98	318	IAmb	IAmb		19 10 41.3	
	comp=Z,84nm,1.2s							
N23A	Red Feather La	64.03	331	P			19 10 39.9	
	baz=142,SNR=14							
MONP2	Monument Peak	64.06	319	P			19 10 40.8	
	baz=130,SNR=25							
BAR	Barrett	64.09	318	IAmb	IAmb		19 10 41.9	
	comp=Z,71nm,1.1s							
IRM	Iron Mountain	64.09	320	P			19 10 40.8	
	baz=132,SNR=31							
SUSD	Miller	64.12	338	P			19 10 39.0	
	baz=150,SNR=8.3							
SUSD	Miller	64.12	338	P	P		19 10 39.0	0.0
PHWY	Pilot Hill	64.14	332	IAmb	IAmb		19 10 41.6	
	comp=Z,133nm,1.7s							
NEE2	Needles Airpor	64.18	321	P			19 10 40.6	
	baz=133							
109C	Camp Elliot, M	64.50	318	P			19 10 43.0	
	baz=130							
109C	Camp Elliot, M	64.50	318	IAmb	IAmb		19 10 44.6	
	comp=Z,65nm,1.1s							
CHGQ	Chibougamau	64.50	358	P			19 10 40.3	
	baz=177,SNR=9.0							
BELC	Belle Mtn. Jos	64.52	320	P			19 10 43.6	
	baz=131,SNR=14							
MATQ	Matagami	64.54	355	P			19 10 40.3	
	baz=173,SNR=14							
O20A	White River Ci	64.54	329	P			19 10 43.4	
	baz=140,SNR=18							
O20A	White River Ci	64.54	329	P	P		19 10 42.4	+0.3
O20A				IAmb	IAmb		19 10 44.5	
	comp=Z,82nm,1.1s							
PFO	Pinyon Flats O	64.56	319	P			19 10 44.0	
	baz=131,SNR=17							
PFO	Pinyon Flats O	64.56	319	P	P		19 10 43.3	+1.0
	comp=Z,22nm,1.1s,baz=125,slow=4.6,SNR=7.9							
PFO	Pinyon Flats O	64.56	319	*i* P	P		19 10 43.0	+0.7
PFO				pmax	pmax			
	comp=Z,64nm,1.3s							
PFO	Pinyon Flats O	64.56	319	P	P		19 10 42.9	+0.7
PFO					PcP		19 11 16.3	+1.2
PKCU	Pink Cliffs	64.69	325	IAmb	IAmb		19 10 46.3	
	comp=Z,79nm,1.3s							
GMRC	Granite Mounta	64.83	321	P			19 10 45.7	
	baz=132,SNR=34							
LCMT	Little Creek M	64.92	324	IAmb	IAmb		19 10 47.5	
	comp=Z,49nm,1.2s							
SRU	San Rafael Swe	64.93	327	P	P		19 10 45.0	+0.3
SRU				pmax	pmax			
	comp=Z,42nm,0.9s							
SRU	San Rafael Swe	64.93	327	P	P		19 10 45.0	+0.3
SRU				IAmb	IAmb		19 10 46.8	
	comp=Z,42nm,0.9s							
DRLN	Deer Lake	64.97	10	P	P		19 10 42.8	-1.6
DRLN				IAmb	IAmb		19 10 43.8	
	comp=Z,102nm,0.9s							
MURC	Murrieta	65.02	319	P			19 10 47.0	
	baz=130							
EYMN	Ely	65.02	345	P			19 10 44.2	
	baz=158,SNR=19							
Q16A	Castle Valley	65.14	327	P	P		19 10 46.7	+0.7
Q16A				IAmb	IAmb		19 10 48.8	
	comp=Z,38nm,1.0s							
SZCU	Shurtz Canyon	65.24	324	P	P		19 10 47.9	+1.2
SZCU				IAmb	IAmb		19 10 49.6	
	comp=Z,57nm,1.3s							
BBRC	Big Bear Solar	65.27	319	P			19 10 49.1	
	baz=130							
HEC	Hector,Ludlow	65.27	320	P			19 10 48.8	
	baz=131,SNR=28							
P17A	Butcher Ranch,	65.31	327	IAmb	IAmb		19 10 49.4	
	comp=Z,102nm,1.2s							
CCUT	Cedar City	65.36	324	IAmb	IAmb		19 10 50.9	
	comp=Z,92nm,1.3s							
MSU	Marysvale	65.38	326	P	P		19 10 48.8	+1.1
MSU	Marysvale	65.38	326	P	P		19 10 48.8	+1.1
TUQ	Turquoise Moun	65.42	321	P			19 10 49.3	
	baz=132,SNR=9.4							
SCI2	San Clemente I	65.50	317	P			19 10 49.8	
	baz=129							
RDMU	Red Mountain	65.53	329	P	P		19 10 49.0	+0.4
RDMU				IAmb	IAmb		19 10 50.6	
	comp=Z,84nm,1.1s							
TCRU	Three Creeks R	65.60	326	IAmb	IAmb		19 10 51.9	
	comp=Z,91nm,1.3s							
CIS	Catalina Islan	65.68	318	P			19 10 50.7	
	baz=129							
K22A	Casper	65.69	332	P			19 10 50.4	
	baz=142,SNR=17							
RRX	Edison Barstow	65.72	320	P			19 10 51.6	
	baz=131							
FMP	Fort Macarthur	65.79	318	P			19 10 52.1	
	baz=129							
RSSD	Black Hills	65.80	335	P			19 10 51.1	
	baz=145							
RSSD	Black Hills	65.80	335	P	P		19 10 50.7	+0.5
RSSD				pmax	pmax			
	comp=Z,252nm,1.8s							
RSSD	Black Hills	65.80	335	P	P		19 10 50.7	+0.5
SHOC	Shoshone, Teco	65.94	321	P			19 10 52.7	
	baz=132							
MWC	Mount Wilson	65.97	319	IAmb	IAmb		19 10 54.3	
	comp=Z,52nm,1.1s							
B35A	Bob, Littlefor	65.98	344	P	P		19 10 49.8	-1.2
PASC	Pasadena Art C	66.01	319	P	P		19 10 53.0	+1.5
PASC				IAmb	IAmb		19 10 54.5	
	comp=Z,54nm,1.1s							
DECC	Green Verdugo	66.16	319	P			19 10 54.2	
	baz=129							
MPU	Maple Canyon	66.18	327	IAmb	IAmb		19 10 55.2	
	comp=Z,66nm,1.2s							
PRN	Pahroc Range	66.23	323	P	P		19 10 54.3	+1.3
SNCC	San Nicolas Is	66.31	317	P			19 10 54.5	
	baz=128							
PSUT	Pine Spring	66.33	325	IAmb	IAmb		19 10 56.6	
	comp=Z,47nm,1.1s							
EDW2	Edwards Air Fo	66.34	319	P			19 10 55.0	
	baz=130,SNR=13							
JLU	Jordanelle	66.51	328	IAmb	IAmb		19 10 57.4	
	comp=Z,88nm,1.2s							
AGMN	Agassiz Nation	66.52	342	P			19 10 54.4	
	baz=154,SNR=42							
AGMN	Agassiz Nation	66.52	342	P	P		19 10 54.0	-0.4
LRMC	Laurel Mtn Rad	66.53	320	P			19 10 56.6	
	baz=130,SNR=14							
E28A	Huff	66.57	338	P	P		19 10 55.6	+0.8
TPNV	Topopah Spring	66.62	322	P			19 10 57.6	
	baz=132,SNR=39							
TPNV	Topopah Spring	66.63	322	P	P		19 10 56.6	+1.1
TPNV				pmax	pmax			
	comp=Z,56nm,1.0s							
TPNV	Topopah Spring	66.63	322	P	P		19 10 56.6	+1.1
TPNV				IAmb	IAmb		19 10 58.8	
	comp=Z,56nm,1.0s							
OSI	Osito Audit: C	66.64	319	P			19 10 56.5	
	baz=129							
FURC	Furnace Creek,	66.67	321	P			19 10 57.7	
	baz=131,SNR=22							
SCZ2	Santa Cruz Isl	66.84	318	P			19 10 58.1	
	baz=128							
SPR3	Spring Creek 3	66.92	325	P	P		19 10 58.2	+0.6
SPR3				IAmb	IAmb		19 11 00.0	
	comp=Z,60nm,1.2s							
DUG	Dugway, Tooele	66.93	327	P			19 10 59.0	
	baz=136,SNR=48							
DUG	Dugway, Tooele	66.93	327	IAmb	IAmb		19 11 00.2	
	comp=Z,84nm,1.1s							
ARVC	Arvin	67.03	319	P			19 10 59.4	
	baz=129							
VNA3	Neumayer Olymp	67.11	162	P	P		19 10 59.8	+1.9
VNA3	Neumayer Olymp	67.11	162	sP	sP		19 11 41.8	-8.5
ISA	Isabella, Lake

baz=128
R11A Troy Canyon, C 67.18 323 P 19 11 01.0
baz=133,SNR=79
BW06 Boulder Array 67.19 330 P 19 10 59.4
baz=140,SNR=53
PD31 Pinedale Array 67.19 330 P P **19 10 58.7 -0.4**
PDAR Pinedale Array 67.19 330 P P **19 10 59.4 +0.3**
comp=Z,7.2nm,0.5s,baz=148,slow=6.8,SNR=77
PDAR Pinedale Array 67.19 330 P P **19 10 58.9 -0.1**
MDND Maddock 67.30 340 P 19 11 00.4
baz=150,SNR=10
HWUT Hardware Ranch 67.31 328 IAmb IAmb 19 11 01.7
comp=Z,101nm,1.4s
VNA1 Neumayer--Stat 67.32 161 P P **19 11 01.4 +2.2**
VNA1 Neumayer--Stat 67.32 161 sP sP 19 11 44.3 -7.3
GRAC Grapevine Rang 67.33 321 P 19 11 01.8
baz=131
CWC Cottonwood Cre 67.40 321 P 19 11 02.3
baz=130
PKM Mcpherson Peak 67.51 318 P 19 11 02.9
baz=128,SNR=31
SPUT South Promonto 67.55 328 P P **19 11 01.9 +0.7**
VES Vestal, Richgr 67.64 319 P 19 11 03.6
baz=129,SNR=8.5
VNA2 Neumayer--Watz 67.69 161 P P **19 11 03.2 +1.7**
baz=286,slow=6.6
VNA2 Neumayer--Watz 67.69 161 pP pP 19 11 33.6 -4.2
VNA2 Neumayer--Watz 67.69 161 sP sP 19 11 46.2 -7.7
TIN Tinemaha, Big 67.89 321 P 19 11 05.4
baz=130,SNR=9.2
SMMC Simmler 67.89 319 P 19 11 05.4
baz=128,SNR=11
AHID Auburn Hatcher 67.94 329 P P **19 11 03.2 -0.5**
AHID IAmb IAmb 19 11 05.5
comp=Z,68nm,1.0s
VOG Valley Oaks Go 68.13 320 P 19 11 05.5
baz=129
REDW Red Top Meadow 68.26 330 IAmb IAmb 19 11 08.0
comp=Z,109nm,1.4s
ULM Lac du Bonnet 68.29 343 P P **19 11 05.0 -0.4**
comp=Z,88nm,0.8s,baz=154,slow=6.2,SNR=81
ULM Lac du Bonnet 68.29 343 P P **19 11 04.3 -1.2**
ULM pmax pmax
comp=Z,159nm,1.1s
ULM Lac du Bonnet 68.29 343 P P **19 11 04.3 -1.2**
SNOW Snow King Moun 68.29 330 IAmb IAmb 19 11 07.6
comp=Z,37nm,0.7s
PAGB Antelope Grade 68.31 319 P P **19 11 07.4 +1.4**
MLAC Mammoth, Mammo 68.63 321 P 19 11 10.1
baz=130,SNR=5.0
ELK Elko 68.63 326 P P **19 11 08.8 +0.6**
ELK pmax pmax
comp=Z,23nm,1.1s
ELK Elko 68.63 326 P P **19 11 08.8 +0.6**
LAO LASA Array 68.78 335 P 19 11 09.8
baz=144,SNR=21
LAO LASA Array 68.78 335 IAmb IAmb 19 11 10.9
comp=Z,169nm,1.4s
NVAR Mina Array Bea 68.83 322 P P **19 11 11.0 +1.6**
comp=Z,12nm,0.8s,baz=146,slow=7.3,SNR=49
NVAR Mina Array Bea 68.83 322 P P **19 11 10.4 +1.0**
RLMT Red Lodge 68.86 332 P 19 11 10.5
baz=140,SNR=40
RLMT Red Lodge 68.86 332 P P **19 11 09.6 +0.2**
RLMT IAmb IAmb 19 11 11.8
comp=Z,92nm,1.2s
H17A Grant Village 68.91 331 P 19 11 11.4
baz=139,SNR=25
H17A Grant Village 68.91 331 IAmb IAmb 19 11 15.6
comp=Z,90nm,1.6s
LKWY Lake 68.95 331 IAmb IAmb 19 11 13.4
comp=Z,93nm,0.9s
PMPB Monarch Peak 68.96 319 IAmb IAmb 19 11 13.2
comp=Z,65nm,1.0s
YMP Mirror Lake Pl 68.97 331 P P **19 11 11.1 +0.9**
YMP IAmb IAmb 19 11 23.0
comp=Z,80nm,1.1s
RYN Ryan 69.08 322 P P **19 11 11.8 +0.9**
YUF Upper Falls 69.12 331 IAmb IAmb 19 11 15.0
comp=Z,135nm,1.9s
DBIC Dimbokro 69.29 77 P P **19 11 10.4 -2.0**
comp=Z,7.9nm,0.7s,baz=230,slow=6.1,SNR=13
DBIC LR LR 19 41 00.1
comp=Z,144nm,18.6s,baz=220,slow=35
DBIC Dimbokro 69.29 77 P P **19 11 10.1 -2.4**
DBIC pmax pmax
comp=Z,57nm,1.3s
DBIC Dimbokro 69.29 77 P P **19 11 10.1 -2.4**
YMR Madison River 69.30 331 IAmb IAmb 19 11 15.2
comp=Z,94nm,1.0s
SNAA Sanae 69.32 162 P P **19 11 13.5 +1.8**
SNAA Sanae 69.32 162 sP sP 19 11 55.6 -8.6
SNAA Sanae 69.32 162 *ce*P P **19 11 13.5 +1.8**
SNAA pmax pmax
comp=Z,29nm,0.6s
SNAA Sanae 69.32 162 P P **19 11 13.3 +1.6**
SNAA IAmb IAmb 19 11 14.3
comp=Z,36nm,0.6s
YHH Holmes Hill 69.33 331 P P **19 11 13.5 +1.0**
YHH IAmb IAmb 19 11 15.4
comp=Z,120nm,1.4s
YHB Horse Butte 69.47 331 IAmb IAmb 19 11 16.1
comp=Z,85nm,0.9s
YHL Hebgen Lake 69.53 331 IAmb IAmb 19 11 16.9
comp=Z,116nm,1.0s
GCMT Greycliff 69.55 332 P P **19 11 14.6 +1.0**
WAKR Walker 69.55 321 IAmb IAmb 19 11 17.3
comp=Z,114nm,1.6s
SAO San Andreas Ge 69.71 319 P P **19 11 16.0 +1.4**
SAO pmax pmax
comp=Z,19nm,1.2s
SAO San Andreas Ge 69.71 319 P P **19 11 16.0 +1.4**
YERR Yerington 69.74 322 P P **19 11 15.9 +0.9**
YERR IAmb IAmb 19 11 18.1
comp=Z,153nm,1.5s
CMB Columbia Colle 69.83 321 P P **19 11 15.7 +0.3**
CMB pmax pmax
comp=Z,31nm,1.5s
CMB Columbia Colle 69.83 321 P P **19 11 15.7 +0.3**
PNTR Pine Nut 70.02 322 P P **19 11 18.5 +1.8**
PNTR IAmb IAmb 19 11 19.9
comp=Z,229nm,1.8s
HLID Hailey 70.17 328 P 19 11 19.0
baz=135,SNR=47
VCNR Virginia City 70.19 322 IAmb IAmb 19 11 20.9
comp=Z,79nm,1.3s
BCYI Bear Canyon 70.21 329 P P **19 11 17.9 +0.1**
FUL Funchal 70.27 47 *e*PcP PcP **19 11 37.8 -1.0**
FUL A A 19 11 38.5
comp=Z,150nm,0.2s
PAHR Pah Rah Range 70.29 322 IAmb IAmb 19 11 21.4
comp=Z,93nm,1.1s
BOZ Bozeman (W) 70.30 331 P 19 11 19.3
baz=138,SNR=40
BOZ Bozeman (W) 70.30 331 IAmb IAmb 19 11 20.5
comp=Z,112nm,1.5s
MCMT McKenzie Canyo 70.31 330 P P **19 11 19.3 +0.9**
DLMT Dillon 70.58 330 IAmb IAmb 19 11 22.5
comp=Z,90nm,1.6s
AFDM Forest Hills D 70.76 321 P P **19 11 21.8 +0.8**
MFID Camas Ranch 70.80 327 IAmb IAmb 19 11 24.1
comp=Z,110nm,1.1s
EGMT Eagleton 71.31 334 P 19 11 25.1
baz=141,SNR=57
EGMT Eagleton 71.31 334 P P **19 11 24.7 +0.5**
EGMT IAmb IAmb 19 11 26.1
comp=Z,213nm,1.4s
ORV Oroville 71.46 321 IAmb IAmb 19 11 28.4
comp=Z,147nm,1.4s
O03E Paynes Creek 72.10 322 P 19 11 29.5
baz=128,SNR=5.7
MOD Modoc Plateau 72.24 324 P P **19 11 31.1 +1.2**
MOD IAmb IAmb 19 11 32.6
comp=Z,159nm,1.4s
MSO Missoula 72.29 331 P 19 11 31.6
baz=137,SNR=30
MSO Missoula 72.30 331 IAmb IAmb 19 11 33.0
comp=Z,93nm,1.2s
O02D Mt. Diablo Mer 72.62 321 P 19 11 33.0
baz=128
KOWA Kowa 72.69 69 P P **19 11 30.7 -2.2**
M04C Macdoel 73.05 323 P 19 11 36.1
baz=129,SNR=11
N02D Trinity Center 73.06 322 P 19 11 35.0
baz=128,SNR=9.1
K05A Summer Lake 73.10 324 IAmb IAmb 19 11 38.3
comp=Z,117nm,1.5s
JTMT Jette 73.12 331 P P **19 11 36.0 +1.1**
M02C Callahan 73.41 322 P 19 11 37.5
baz=128,SNR=11
K04D Chiloquin, OR 73.53 324 P 19 11 39.1
baz=129
YBH Yreka Blue Hor 73.53 322 P P **19 11 37.0 -0.5**
YBH pmax pmax
comp=Z,33nm,1.3s
YBH Yreka Blue Hor 73.53 322 P P **19 11 37.0 -0.5**
L04D Klamath Falls 73.59 323 P 19 11 38.8
baz=128,SNR=8.7
KHMM Horse Mountain 73.62 321 P P **19 11 38.9 +0.9**
KHMM IAmb IAmb 19 11 41.2
comp=Z,90nm,1.3s
J05D Fort Rock, OR 73.65 324 P 19 11 39.8
baz=130,SNR=26
PINE Pine Mountain 73.81 325 P P **19 11 40.4 +1.2**
PINE IAmb IAmb 19 11 42.4
comp=Z,74nm,1.1s
NVL N'lazarevskaya 73.87 160 *i* P P **19 11 38.2 -0.7**
NVL pmax pmax
comp=Z,39nm,1.2s
FFC Flin Flon 74.00 342 P P **19 11 39.5 -0.2**
FFC pmax pmax
comp=Z,51nm,1.4s
FFC Flin Flon 74.00 342 P P **19 11 39.5 -0.2**
KRMB Red Mountain 74.11 322 IAmb IAmb 19 11 44.1
comp=Z,93nm,1.3s
J04D Umpqua Nationa 74.12 324 P 19 11 42.3
baz=129,SNR=10.0
L02E Cave Junction 74.32 322 P 19 11 43.7
baz=127,SNR=7.8
I05D Terrebonne, OR 74.38 325 P 19 11 44.3
baz=130,SNR=13
F07A Phinny Hill Vi 74.63 327 P P **19 11 45.4 +1.7**
K02D Willamette Mer 74.68 323 P 19 11 46.0
baz=128,SNR=13
KBO Bosley Butte 74.72 322 IAmb IAmb 19 11 47.7
comp=Z,210nm,1.5s
HAWA Hanford 74.76 328 IAmb IAmb 19 11 47.2
comp=Z,68nm,1.1s
NEW Newport 74.83 330 P 19 11 45.5
baz=134,SNR=6.6
D08A Wollman Farm, 74.89 328 IAmb IAmb 19 11 48.1
comp=Z,117nm,1.6s
G05D Wamic, OR 74.95 326 P 19 11 47.9
baz=130,SNR=10
E07A Sunnyside 75.03 328 P P **19 11 47.4 +1.4**
I03D Drain, OR 75.11 324 P 19 11 47.9
baz=128,SNR=5.9
J01E Myrtle Point 75.12 323 P 19 11 48.5
baz=127
QSPA South Pole Qui 75.33 180 P P **19 11 49.4 +1.8**
comp=Z,16nm,0.6s,baz=178,slow=1.8
F05D White Salmon 75.44 326 P 19 11 50.5
baz=130
COR Corvallis 75.63 324 P P **19 11 50.6 +1.2**
COR pmax pmax
comp=Z,140nm,1.2s
COR Corvallis 75.63 324 P P **19 11 50.6 +1.2**
COR IAmb IAmb 19 11 52.7
comp=Z,140nm,1.2s
I02D Swisshome 75.64 324 P 19 11 51.3
baz=128
FCC Fort Churchill 75.65 348 IAmb IAmb 19 11 50.5
comp=Z,146nm,1.2s
B08A Colville Reser 75.97 329 P P **19 11 51.5 +0.2**
G03D McMinnville, O 76.00 325 P 19 11 53.1
baz=128
F04D Rainier, OR 76.40 326 P 19 11 55.9
baz=129
E04D Cinebar 76.46 326 P 19 11 55.4
baz=129,SNR=6.6
C06D Leavenworth 76.47 328 P 19 11 55.1
baz=131
D05A Enumclaw 76.56 327 IAmb IAmb 19 11 57.0
comp=Z,116nm,0.9s
D04E Lakebay 76.96 327 P 19 11 58.8
baz=129
E03A Lebam 76.99 326 IAmb IAmb 19 12 00.2
comp=Z,140nm,1.2s
B06A Marblemount 77.15 328 P P **19 11 58.3 +0.4**
B06A IAmb IAmb 19 11 59.7
comp=Z,69nm,0.9s
B05A Bryant 77.30 328 P 19 11 59.5
baz=130,SNR=10
D03D Eldon 77.35 327 P 19 12 00.6
baz=129,SNR=6.1
TORD Torodi Ar. Bea 77.46 73 P P **19 11 58.4 -1.9**
comp=Z,17nm,0.8s,baz=264,slow=5.6,SNR=78
TORD pP **pP** **19 12 37.9 +0.5**
comp=Z,26nm,1.1s,baz=268,slow=5.4,SNR=3.1
TORD LR LR 19 45 11.9
comp=Z,169nm,20.0s,baz=290,slow=35
TORD Torodi Ar. Bea 77.46 73 P P **19 11 57.8 -2.5**
NLWA Neilton Lookou 77.68 327 IAmb IAmb 19 12 04.1
comp=Z,92nm,1.1s
A05A Maple Falls 77.77 329 IAmb IAmb 19 12 03.5
comp=Z,110nm,1.1s
A04D Lummi Island 77.90 328 P 19 12 03.6
baz=129
PFVI Vila Bisbo 78.25 46 *e*P P **19 12 02.5 -1.7**
PFVI Vila Bisbo 78.25 46 *e*PcP PcP **19 12 11.1 -2.0**
MORF Marmelete 78.45 46 *e*P P **19 12 05.9 +0.5**
NRS Narsarsuaq 78.50 12 P P **19 12 04.0 -1.0**
NRS pmax pmax
comp=Z,55nm,1.1s
NRS Narsarsuaq 78.50 12 P P **19 12 04.0 -1.0**
EVO Evora 79.48 45 *e*P P **19 12 10.8 -0.1**
PMTG Montargil 79.59 45 *e*P P **19 12 11.1 -0.4**
comp=Z,36nm,1.4s
PESTR Estremoz 79.93 45 *e*P P **19 12 13.9 +0.5**
comp=Z,37nm,1.7s
PBAR Barrancos 79.99 46 *e*P P **19 12 13.4 -0.3**
comp=Z,34nm,2.0s
COI Coimbra 80.02 44 *e*PcP PcP **19 12 19.4 -1.3**
COI A A 19 12 28.2
comp=Z,51nm,1.6s
NUUK Nuuk 80.19 9 ⇓ *i* P P **19 12 13.5 -0.6**
NUUK IAmb IAmb 19 12 14.4
comp=Z,44nm,1.0s
PMRV Marv??o 80.33 45 *e*P P **19 12 15.2 -0.3**
PTO Porto 80.34 43 *e*P P **19 12 14.0 -1.5**
PCBR Castelo Branco 80.47 45 *e*P P **19 12 15.0 -1.2**
PVIS Viseu 80.61 44 *e*P P **19 12 16.1 -0.9**
MTE Manteigas 80.69 44 *e*P P **19 12 17.8 +0.3**
POLO Lamas de Olo 80.99 43 *e*P P **19 12 18.5 -0.6**
PBRG Braganca 81.89 43 *e*P P **19 12 23.3 -0.4**
comp=Z,29nm,2.1s
SBA Scott Base 81.94 190 P P **19 12 26.0 +2.7**
SBA pmax pmax
comp=Z,38nm,1.4s
SBA Scott Base 81.94 190 P P **19 12 26.0 +2.7**
PAB San Pablo 82.48 46 P P **19 12 25.7 -1.2**
PAB pmax pmax
comp=Z,34nm,1.4s
PAB San Pablo 82.48 46 P P **19 12 25.7 -1.2**
ESDC Sonseca Array 82.81 46 P P **19 12 28.2 -0.4**
comp=Z,7.1nm,0.8s,baz=251,slow=5.0,SNR=31
ESDC pP **pP** **19 13 06.2 -0.1**
comp=Z,2.7nm,0.9s,baz=256,slow=6.0,SNR=4.3
ESDC LR LR 19 48 23.2
comp=Z,82nm,18.2s,baz=265,slow=35
ESDC Sonseca Array 82.81 46 P P **19 12 27.5 -1.1**
ESBB Sonseca Array 82.81 46 P P **19 12 27.5 -1.1**
VNDA Vanda 82.98 190 P P **19 12 31.2 +2.4**
comp=Z,8.0nm,0.8s,baz=130,slow=4.5,SNR=33
VNDA pP **pP** **19 13 09.1 +2.8**
comp=Z,7.8nm,1.0s,baz=130,slow=5.9,SNR=5.7
VNDA Vanda 82.98 190 P P **19 12 31.1 +2.4**
VNDA pmax pmax
comp=Z,19nm,1.2s
VNDA Vanda 82.98 190 P P **19 12 31.1 +2.4**
SFJD Kangerlussuaq 83.01 8 *i* P P **19 12 27.4 -1.4**
SFJD Kangerlussuaq 83.01 8 *i* P P **19 12 27.4 -1.4**
SFJD Kangerlussuaq 83.01 8 P P **19 12 27.2 -1.7**
DY2G Dye2 83.18 10 ⇓ *i* P P **19 12 29.2 -0.9**
DY2G IAmb IAmb 19 12 29.8
comp=Z,47nm,0.7s
DY2G *i* 19 13 07.9
SYO Syowa Base 83.54 160 ⇓ *e*P P **19 12 30.8 -0.9**
SYO Syowa Base 83.54 160 ⇓ *e*PcP P **19 12 33.2 +1.5**
TAM Tamanrasset 84.00 65 P P **19 12 34.3 -0.8**
TAM pmax pmax
comp=Z,34nm,1.5s
TAM Tamanrasset 84.00 65 P P **19 12 34.3 -0.8**
SUR Sutherland 84.00 122 P P **19 12 35.5 +0.4**
ANGG Ammassalik, Gr 84.11 13 *i* P P **19 12 33.9 -0.5**
YKA Yellowknife Ar 84.15 341 P P **19 12 35.0 +0.2**
comp=Z,45nm,0.8s,baz=135,slow=5.5,SNR=522
YKA pP **pP** **19 13 13.3 +0.9**
comp=Z,9.0nm,0.9s,baz=134,slow=5.5,SNR=2.7
DIB Dawson Inlet, 85.53 328 IAmb IAmb 19 12 44.3
comp=Z,54nm,1.0s
ICESG Greenland Ices 86.67 11 *i* P P **19 12 46.9 -0.8**
ICESG IAmb IAmb 19 12 47.7
comp=Z,63nm,1.0s
ICESG *i* 19 13 26.1
WRAK Wrangell Islan 87.17 331 P 19 12 51.0
baz=122
DLBC Dease Lake 87.23 333 IAmb IAmb 19 12 52.8
comp=Z,68nm,1.1s
UPNV Upernavik 87.98 4 *i* P P **19 12 52.5 -0.8**
UPNV IAmb IAmb 19 12 53.8
comp=Z,5.8nm,0.9s
BOSA Boshof 88.67 119 P P **19 12 57.9 0.0**
BOSA Boshof 88.67 119 P P **19 12 57.9 0.0**
SIT Sitka 88.91 331 P 19 12 59.3
baz=120
SUMG Summit 89.87 9 ⇓ *i* P P **19 13 03.0 +0.3**
SUMG IAmb IAmb 19 13 03.8
comp=Z,59nm,1.0s
SUMG *i* 19 13 44.2
SUMG Summit 89.87 9 P P **19 13 02.3 -0.4**
SUMG pmax pmax
comp=Z,59nm,1.0s
SUMG Summit 89.87 9 P P **19 13 02.3 -0.4**
SUMG IAmb IAmb 19 13 04.0
comp=Z,59nm,1.0s
LBTB Lobatse 89.96 116 P P **19 13 03.5 -0.5**
LBTB pmax pmax
comp=Z,10.0nm,0.8s
LBTB Lobatse 89.96 116 P P **19 13 03.5 -0.5**
SKAG Skagway 90.11 333 P 19 13 04.8
baz=120
SKAG Skagway 90.11 333 IAmb IAmb 19 13 06.2
comp=Z,125nm,1.8s
CLF Chambon-Foret 90.31 40 IAmb IAmb 19 13 05.0
comp=Z,56nm,1.3s
WHY Whitehorse 90.51 334 P P **19 13 06.2 +0.6**
RES Resolute Bay 90.54 354 IAmb IAmb 19 13 07.2
comp=Z,61nm,0.9s
KEST Kesra 91.19 53 LR LR 19 52 21.0
comp=Z,86nm,21.9s,baz=204,slow=34
TULEG Thule 91.19 1 ⇓ *i* P P **19 13 08.5 +0.2**
TULEG IAmb IAmb 19 13 10.8
comp=Z,12nm,0.9s
MAW Mawson 91.36 164 P P **19 13 10.8 +1.4**
comp=Z,8.4nm,0.9s,baz=238,slow=9.1,SNR=7.4
MAW pP **pP** **19 13 49.4 +1.8**
comp=Z,31nm,1.1s,baz=215,slow=6.0,SNR=14
MAW Mawson 91.36 164 P P **19 13 11.0 +1.6**
MAW pP **19 13 50.0 +2.5**
HYT Haines Junctio 91.72 333 P P **19 13 11.7 +0.4**
HYT IAmb IAmb 19 13 13.9
comp=Z,39nm,1.5s
PINM Pinnacle 92.61 332 P 19 13 16.6
baz=115
PCA Pinnacle 92.61 332 IAmb IAmb 19 13 17.5
comp=Z,40nm,1.0s
NEEM North Greenlan 92.84 4 ⇓ *i* P P **19 13 16.6 +0.2**
NEEM IAmb IAmb 19 13 17.4
comp=Z,61nm,1.0s
NEEM *i* 19 13 56.2
TABL Table Mountain 93.16 332 IAmb IAmb 19 13 19.9
comp=Z,26nm,1.0s
CTGM Chitina Glacie 93.46 333 IAmb IAmb 19 13 21.5
comp=Z,32nm,1.3s
CTG Chitna Glacier 93.46 333 P 19 13 20.1
baz=114
BARN Barnard Glacie 93.64 333 P P **19 13 20.0 -0.2**
BARN IAmb IAmb 19 13 23.0
comp=Z,46nm,1.5s
INK Inuvik 93.91 341 P P **19 13 21.4 +0.4**
comp=Z,27nm,0.9s,baz=98,slow=4.5,SNR=69
INK PP **PP** **19 17 09.8 +0.9**
comp=Z,4.3nm,1.1s,baz=143,slow=11,SNR=4.6
INK Inuvik 93.91 341 IAmb IAmb 19 13 22.5
comp=Z,44nm,1.1s
EPYK Eagle Plains 94.02 338 P 19 13 21.8
baz=118,SNR=6.5
EPYK Eagle Plains 94.02 338 P P **19 13 21.6 0.0**
MCARA McCarthy VSAT 94.38 333 P 19 13 24.2
baz=113
MCARA McCarthy VSAT 94.38 333 IAmb IAmb 19 13 25.1
comp=Z,23nm,0.8s
VRDI Verde Repeater 94.51 332 IAmb IAmb 19 13 25.4
comp=Z,20nm,0.9s
L27K Beaver Creek, 94.53 334 P P **19 13 23.9 -0.1**
L27K IAmb IAmb 19 13 25.8
comp=Z,29nm,1.2s
L27K Beaver Creek, 94.53 334 P 19 13 24.6
baz=114,SNR=19
GLB Gilahina Butte 94.75 333 IAmb IAmb 19 13 26.4
comp=Z,39nm,1.7s
BMRM Bremner River 94.93 332 P 19 13 26.1
baz=112
DAVA Damuels 94.93 42 *i* P P **19 13 25.3 -1.1**
comp=Z,7.3nm,1.1s
EGAK Eagle 94.97 336 P 19 13 25.9
baz=114,SNR=13
K27K Chicken 95.03 335 P P **19 13 26.3 +0.1**
K27K IAmb IAmb 19 13 28.3
comp=Z,35nm,1.1s
N25K Chitina, Valde 95.16 333 P 19 13 27.3
baz=112
Q23K Middleton Isla 95.19 330 P 19 13 27.6
baz=110
MENT Mentasta 95.28 334 IAmb IAmb 19 13 28.5
comp=Z,32nm,1.9s
FETA Feichten 95.41 43 *i* P P **19 13 27.6 -1.0**
comp=Z,3.9nm,1.0s
RETA Reutte 95.56 42 *i* P P **19 13 28.1 -1.0**
comp=Z,2.9nm,0.5s
DOT Dot Lake 95.69 335 P P **19 13 28.8 -0.5**
DOT IAmb IAmb 19 13 30.4
comp=Z,17nm,1.0s
KLU Klutina 95.71 332 P 19 13 29.8
baz=110,SNR=14
MOTA Moosalm 95.75 43 *i* P P **19 13 28.8 -1.3**
comp=Z,5.8nm,0.8s
SCRK Sand Creek 95.78 335 P 19 13 29.9
baz=112,SNR=13
SQTA Sankt Quirin 95.78 43 *i* P P **19 13 29.1 -1.1**
comp=Z,12nm,1.0s
PAX Paxson 96.04 334 P 19 13 30.9
baz=111
GLI Glacier Island 96.04 332 P 19 13 30.4
baz=109
M24K Tolsona, Glenn 96.04 333 P 19 13 31.4
baz=110,SNR=7.1
M24K Tolsona, Glenn 96.04 333 P P **19 13 30.6 -0.4**
WATA Walderalm 96.06 43 *e*P P **19 13 30.2 -1.3**
comp=Z,8.3nm,1.2s
WTTA Wattenberg 96.08 43 *i* P P **19 13 30.6 -1.0**
comp=Z,14nm,1.3s
SCM Sheep Creek Mo 96.46 332 IAmb IAmb 19 13 33.6
comp=Z,16nm,0.9s
ABTA Abfaltersbach 96.52 43 *e*P P **19 13 32.5 -1.0**
comp=Z,8.1nm,1.1s
PWL Port Wells 96.61 331 IAmb IAmb 19 13 34.1
comp=Z,24nm,1.1s
KNK Knik Glacier 96.84 332 P 19 13 34.3
baz=108
WAT6 Susitna Watana 96.89 333 P 19 13 34.8
baz=109,SNR=11
SML Sawmill 96.90 332 P 19 13 34.8
baz=108,SNR=9.6
PRP Porcupine Dome 96.96 336 P 19 13 34.9
baz=110
HDA Harding Lake 97.15 335 P 19 13 35.4
baz=109,SNR=9.2
HDA P 19 13 35.4
baz=109,SNR=9.2
GHO Glory Hole Cre 97.16 332 IAmb IAmb 19 13 37.0
comp=Z,20nm,1.0s
PMR Palmer 97.20 332 P 19 13 36.2
baz=108
ILAR Eielson Array 97.25 335 P P **19 13 35.9 -0.4**
comp=Z,3.8nm,0.8s,baz=144,slow=3.2,SNR=28
ILAR PP **PP** **19 17 28.2 -6.5**
comp=Z,0.9nm,0.7s,baz=116,slow=5.9,SNR=6.1

ILAR	Eielson Array	97.25	335		P		P	19 13 35.1	-1.1
ILAR	Eielson Array	97.25	335		P		P	19 13 35.1	-1.1
MYKA	Terra Mystica	97.25	44	*e*	P		P	19 13 35.5	-1.3
	comp=Z,5.0nm,1.0s								
RC01	Rabbit Creek A	97.33	331		IAmb		IAmb	19 13 37.7	
	comp=Z,32nm,1.2s								
RC01	Rabbit Creek A	97.33	331		P			19 13 36.6	
	baz=107								
WAT2	Susitna Watana	97.38	333		P			19 13 36.6	
	baz=108								
BRSE	Bradley Lake S	97.41	330		P			19 13 37.0	
	baz=106								
CCB	Clear Creek Bu	97.58	335		P		P	19 13 37.2	-0.5
CCB					IAmb		IAmb	19 13 38.6	
	comp=Z,11nm,1.0s								
POKR	Poker Plat Res	97.58	336		P			19 13 37.7	
	baz=109								
POKR	Poker Plat Res	97.58	336		IAmb		IAmb	19 13 39.1	
	comp=Z,16nm,0.8s								
RND	Reindeer	97.63	334		IAmb		IAmb	19 13 40.2	
	comp=Z,25nm,1.0s								
WRH	Wood River Hil	97.64	335		IAmb		IAmb	19 13 38.9	
	comp=Z,11nm,0.9s								
COLA	College	97.67	335		P			19 13 37.8	
	baz=108								
COLA	College	97.67	335	*i*	P		Pdif	19 13 38.2	+0.1
COLA					pmax		pmax		
	comp=Z,21nm,0.9s								
COLA	College	97.67	335		P		Pdif	19 13 38.3	+0.1
COLA					IAmb		IAmb	19 13 39.2	
	comp=Z,23nm,0.8s								
TCOL	CIGO, UAF Yank	97.67	335		IAmb		IAmb	19 13 39.2	
	comp=Z,25nm,0.8s								
TCOL	CIGO, UAF Yank	97.67	335		P			19 13 38.0	
	baz=108								
MCK	McKinley	97.76	334		IAmb		IAmb	19 13 39.2	
	comp=Z,10nm,0.9s								
MCK	McKinley	97.76	334		P			19 13 38.6	
	baz=108,SNR=5.6								
KDAK	Kodiak Island	97.80	328		P			19 13 38.8	
	baz=105								
KHC	Kasperske Hory	97.80	41	*i*	P		P	19 13 37.4	-1.8
KHC					pmax		pmax		
	comp=Z,16nm,2.1s								
GERES	GERESS Array B	97.81	42		P		P	19 13 37.1	-2.1
	comp=Z,0.8nm,0.7s,baz=202,slow=2.9,SNR=7.6								
GERES	GERESS Array B	97.81	42		P		P	19 13 37.7	-1.6
GERES	GERESS Array B	97.81	42		P		P	19 13 37.7	-1.6
MDM	Murphy Dome	97.85	335		P		P	19 13 38.4	-0.6
SUA	Susitna One	97.90	332		P			19 13 39.3	
	baz=106								
SUA	Susitna One	97.90	332		IAmb		IAmb	19 13 40.7	
	comp=Z,23nm,1.0s								
CLL	Collm	97.95	39	*i*	Pdif		P	19 13 38.4	-1.3
	comp=Z,5.0nm,1.0s								
CLL	Collm	97.95	39	*i*	P		P	19 13 38.4	-1.3
CLL					pmax		pmax		
	comp=Z,5.0nm,1.0s								
CUT	Chulitna	97.95	333		P			19 13 39.3	
	baz=106								
NEA2	Nenana	98.08	335		P		P	19 13 40.0	
	baz=107,SNR=6.9								
NEA2	Nenana	98.08	335		P		P	19 13 39.6	-0.4
NEA2					IAmb		IAmb	19 13 41.0	
	comp=Z,28nm,1.2s								
BWN	Browne	98.12	334		P		P	19 13 39.9	-0.3
TRF	Thorofare Moun	98.26	334		P		P	19 13 40.8	-0.2
TRF	Thorofare Moun	98.26	334		P			19 13 41.2	
	baz=106								
I23K	Minto, Yukon-K	98.36	335		P			19 13 41.1	
	baz=107,SNR=7.8								
SKT	Skwentna	98.40	332		P			19 13 41.5	
	baz=106,SNR=15								
KTH	Kantishna Hill	98.56	334		IAmb		IAmb	19 13 43.6	
	comp=Z,12nm,0.9s								
BPAW	Bear Paw Mtn.	98.74	334				P	19 13 42.4	-0.6
BPAW					IAmb		IAmb	19 13 43.8	
	comp=Z,17nm,0.9s								
BPAW	Bear Paw Mtn.	98.74	334		P			19 13 42.7	
	baz=106,SNR=17								
MLY	Manley	98.89	335		P			19 13 43.2	
	baz=106,SNR=7.8								
PPLA	Purkeypile	98.94	333		IAmb		IAmb	19 13 44.5	
	comp=Z,18nm,1.0s								
PPLA	Purkeypile	98.94	333		P			19 13 43.9	
	baz=105,SNR=5.7								
CHUM	Lake Minchumin	99.25	334		P			19 13 44.7	
	baz=104,SNR=5.2								
COLD	Coldfoot	99.28	337		P			19 13 45.9	
	baz=106								
TOLK	Toolik Lake Re	99.45	339		P			19 13 46.2	
	baz=106								
LANS	Liptovska Anna	101.59	42	*e*	P		Pdif	19 13 55.2	-0.9
LANS	Liptovska Anna	101.59	42	*e*	PDIFF		Pdif	19 13 55.2	-0.9
CRVS	Cervenica-Dubn	102.85	43	*e*	P		Pdif	19 14 00.6	-1.1
CRVS	Cervenica-Dubn	102.85	43	*e*	PDIFF		Pdif	19 14 00.6	-1.1
FALS	False Pass	103.15	324		P			19 14 03.7	
	baz=97								
NACGM	Naroch	106.66	37	*i*	PKP		PKiKP	19 18 27.4	-0.7
NACGM				*i*	PKP		PKiKP	19 18 27.4	-0.7
NACGM				*i*	PKP		PKiKP	19 18 27.4	-0.7
NACGM				*i*	pPKP		PP	19 18 55.5	+10
NACGM				*i*	PP		PP	19 20 02.8	+77
NACGM				*i*	PPP		PPP	19 22 57.2	
NACGM				*i*	SKS		SKSac	19 25 04.2	+20
NACGM				*i*	SKKS		SKKSac	19 26 14.6	+40
NACGM				*i*	S			19 27 34.1	
NACGM				*i*	SS		SS	19 35 07.0	+88
NACGM				*i*	SSS		SSS	19 40 36.7	
MNK	Minsk	107.28	37	*i*	PP		PP	19 18 48.4	-1.7
	comp=E,2.0nm,1.3s								
MNK				*i*	PP		PP	19 18 48.4	-1.7
	comp=N,12nm,1.4s								
MNK				*i*	PP		PP	19 18 48.4	-1.7
	comp=Z,3.0nm,0.8s								
MNK				*i*	PPP		PPP	19 21 04.6	
MNK				*i*	SKS		SKSdf	19 25 29.6	+1.9
MNK				*i*	PS		PS	19 28 12.2	-1.9
MNK				*i*	SS		SS	19 33 49.0	+1.7
MNK				*i*	SKKS		SKKSdf	19 36 57.4	-2.3
MNK				*i*	SSS		SSS	19 37 50.9	
MNK				*i*	SSS		SSS	19 37 50.9	
MNK				*i*	LRM		MLR	20 03 43.6	
	comp=E,61nm,16.9s								
MNK				*i*	LRM		MLR	20 03 47.1	
	comp=N,52nm,16.6s								
MNK				*i*	LRM		MLR	20 04 00.5	
	comp=E,9.0nm,17.8s								
AKASG	Malin Array Be	108.01	41		PKiKP		PKiKP	19 18 30.5	-0.2
	comp=E,2.7nm,0.6s,baz=271,slow=2.7,SNR=13								
BRTR	Keskin Array B	110.79	53		PKiKP		PKiKP	19 18 37.2	+0.7
	comp=E,3.9nm,0.8s,baz=198,slow=3.6,SNR=11								
OBN	Obninsk	112.28	36	*c*	*i* PKIKP		PKiKP	19 18 39.2	+0.6
OBN					*e*			19 19 12.4	
OBN					*e*			19 19 22.7	
OBN					*e*SS		SS	19 34 54.4	+0.3
OBN					pmax		pmax		
	comp=Z,8.0nm,0.4s								
ANN	Anapa	113.60	47	*i*	PKIKP		PKiKP	19 18 40.0	-1.5
ANN					*e*			19 19 31.1	
ANN					pmax		pmax		
	comp=Z,29nm,0.9s								
SOC	Sochi	115.30	49	*i*	PKIKP		PKPdf	19 18 45.0	+0.2
SOC					*e*			19 19 47.1	
SOC					*e*PPP		PPP	19 22 11.8	
SOC					*e*			19 25 22.9	
SOC					*e*PS		PKKPab	19 29 28.7	+3.9
SOC					*e*SS		SS	19 35 47.4	+13
SOC					*e*SSS		SSS	19 39 50.7	
SOC					pmax		pmax		
	comp=Z,29nm,0.8s								
BILL	Bilibino	115.49	339	*d*	*i* PKIKP		PKPdf	19 18 45.5	+1.0
BILL					*e*			19 19 18.8	
BILL					*e*			19 19 46.5	
BILL					*e*			19 25 38.3	
BILL					*e*SS		SS	19 35 45.8	+10
BILL					pmax		pmax		
	comp=Z,9.0nm,1.7s								
PRGR	Permogore	115.66	28	*e*	PKIKP		PKPdf	19 18 45.9	+1.0
PRGR					pmax		pmax		
	comp=Z,15nm,0.9s								
KIV	Kislovodsk	117.42	48		PKiKP		PKiKP	19 18 49.9	+0.8
KIV	Kislovodsk	117.42	48	*e*	PKIKP		PKiKP	19 18 49.9	+0.8
KIV					pmax		pmax		
	comp=Z,40nm,1.1s								
KIV	Kislovodsk	117.42	48		PKPdf		PKPdf	19 18 49.0	-0.1
GOF	Gofitskoye	117.55	47	‖ *e*	PKIKP		PKiKP	19 18 50.2	+1.0
KBZ	Khabaz	117.59	48		PKP		PKiKP	19 18 50.2	+1.0
	comp=Z,27nm,0.8s,baz=227,slow=2.8,SNR=60								
KBZ	Khabaz	117.59	48	*c*	*i* PKIKP		PKiKP	19 18 50.4	+1.2
KIRV	Kirov	118.41	31	*c*	*i* PKIKP		PKiKP	19 18 51.6	+1.2
ZEI	Tsey	118.42	49		*i* PKIKP		PKiKP	19 18 51.6	+0.4
ZEI					pmax		pmax		
	comp=Z,18nm,1.0s								
GNI	Garni	119.30	52		PKiKP		PKiKP	19 18 54.3	+1.3
GNI	Garni	119.30	52	*c*	*i* PKIKP		PKiKP	19 18 54.6	+1.6
GNI					pmax		pmax		
	comp=Z,14nm,0.8s								
GNI	Garni	119.30	52		PKPdf		PKiKP	19 18 53.5	+0.6
GROC	Groznyy	119.75	49	*i*	PKIKP		PKPdf	19 18 50.5	-2.9
GROC					pmax		pmax		
	comp=Z,13nm,0.6s								
RAYN	Ar Rayn	120.13	71	*i*	PKiKP		PKiKP	19 18 55.8	+0.9
	SNR=20								
RAYN	Ar Rayn	120.13	71		PKIKP		PKiKP	19 18 55.1	+0.2
RAYN	Ar Rayn	120.13	71		PKPdf		PKiKP	19 18 55.1	+0.2
RST	Umm Al-Ruwaisa	121.67	64	*e*	P			19 18 58.0	
TIXI	Tiksi	121.91	353	*c*	*i* PKIKP		PKiKP	19 18 56.9	0.0
TIXI	Tiksi	121.91	353		PKPdf		PKPdf	19 18 56.5	-0.2
RDF	Al-Radifah	122.15	65	*e*	P			19 18 58.8	
UMR	Umm Al-Rimmam	122.30	64	‖ *e*	P			19 18 59.5	
QRN	Al-Qurain	122.48	65	*e*	P			19 18 59.8	
ARU	Arti	123.79	31	*i*	PKIKP		PKiKP	19 19 01.7	+0.7
ARU								19 20 46.4	
ARU								19 26 01.8	
ARU					SP		SP	19 30 30.3	+2.9
ARU					SS		SS	19 37 24.7	+2.2
ARU	Arti	123.79	31		PKPdf		PKiKP	19 19 01.1	+0.1
STKA	Stephens Creek	123.83	214		PKP		PKiKP	19 19 02.5	+0.5
	comp=Z,11nm,0.9s,baz=85,slow=6.4,SNR=3.1								
NRIK	Noril'sk	123.92	9		PKP		PKiKP	19 19 01.1	+0.2
	comp=Z,1.4nm,0.3s,baz=338,slow=4.3,SNR=6.4								
NRIK	Noril'sk	123.92	9	*c*	*i* PKIKP		PKiKP	19 19 02.1	+1.2
NRIK	Noril'sk	123.92	9		PKPdf		PKiKP	19 19 01.0	+0.1
SVE	Sverdlovsk	124.62	30	*e*	PKIKP		PKiKP	19 19 03.3	+0.6
SVE					pmax		pmax		
	comp=Z,17nm,1.3s								
MA2	Magadan	125.73	335	*c*	*i* PKIKP		PKiKP	19 19 06.4	+1.6
MA2					pmax		pmax		
	comp=Z,20nm,2.5s								
PETK	Petropavlovsk-	125.80	326		PKP		PKiKP	19 19 05.8	+0.7
	comp=Z,13nm,0.9s,baz=96,slow=3.0,SNR=6.2								
AKTO	Aktyubinsk	126.00	38		PKiKP		PKiKP	19 19 05.9	+0.3
SOCY	Socotra	126.90	86		PKPdf		PKiKP	19 19 08.5	0.0
AB31	Akbulak array	127.61	38	*i*	PKIKP		PKiKP	19 19 09.3	+0.4
ABKAR	Akbulak array	127.61	38		PKPdf		PKiKP	19 19 09.1	+0.2
ASUD	Al Ashush, Dub	129.14	70		PKiKP		PKiKP	19 19 13.9	+1.2
CTA	Charters Tower	129.29	228		PKP		PKiKP	19 19 13.8	+0.6
	comp=Z,19nm,1.0s,baz=113,slow=1.7,SNR=5.7								
FAQ	Al Faqa, Dubai	129.38	70	*i*	PKiKP		PKiKP	19 19 13.4	+0.3
	SNR=10.0								
NAZ	Nazwa, Dubai	129.44	70		PKiKP		PKiKP	19 19 13.9	+0.6
ALNE	Al Ain	129.53	71		PKiKP		PKiKP	19 19 14.4	+0.9
SHME	Shamm	129.84	68		PKiKP		PKiKP	19 19 14.6	+0.5
HATD	Hatta, Dubai	129.87	70	*i*	PKiKP		PKiKP	19 19 14.3	+0.1
	SNR=7.8								
HATD	Hatta, Dubai	129.87	70		P		SKPbc	19 22 24.4	+1.7
MSFE	Esma-Masafi	129.88	69		PKiKP		PKiKP	19 19 14.6	+0.3
GEYT	Alibeck	129.93	53		PKP		PKiKP	19 19 14.4	+0.5
	comp=Z,15nm,0.8s,baz=247,slow=6.1,SNR=24								
GEYT					SKPbc		SKPab	19 22 22.2	0.0
	comp=Z,3.0nm,0.7s,baz=275,slow=5.2,SNR=4.6								
GEYT	Alibeck	129.93	53		PKPdf		PKiKP	19 19 13.6	-0.4
UOSS	Minazif	129.93	70	*i*	PKiKP		PKPdf	19 19 13.8	+0.3
	SNR=7.2								
UOSS	Minazif	129.93	70		PKPdf		PKPdf	19 19 13.5	0.0
UOSS	Minazif	129.93	70		P		SKPbc	19 22 23.0	0.0
BANOM	Banah	129.99	69		PKiKP		PKiKP	19 19 14.6	+0.1
BANOM	Banah	129.99	69		P		SKPbc	19 22 24.5	+1.3
MDH	Madha	130.01	69		PKiKP		PKiKP	19 19 14.0	-0.4
ARQ	Araqi	130.24	72		P		SKPbc	19 22 25.6	+1.4
SOHO	SOHO	130.25	71	*i*	PKiKP		PKiKP	19 19 15.0	+0.1
	SNR=18								
SOHO	SOHO	130.25	71		P		SKPbc	19 22 25.3	+1.2
YAK	Yakutsk	130.53	347	*c*	*i* PKIKP		PKiKP	19 19 14.3	0.0
YAK					pmax		pmax		
	comp=Z,61nm,1.3s								
YAK	Yakutsk	130.53	347		PKPdf		PKPdf	19 19 13.5	+0.1
BSY	Bisya	130.86	73		P		SKPbc	19 22 28.1	+1.7
HOQ	Hoqain	130.96	72		P		SKPbc	19 22 28.3	+1.6
DQM	DQM	131.11	76		P		SKPbc	19 22 29.7	+2.4
BRVK	Borovoye	131.34	30	*c*	*i* PKIKP		PKiKP	19 19 16.8	+0.6
BRVK					pmax		pmax		
	comp=Z,30nm,1.3s								
BRVK	Borovoye	131.34	30		PKPdf		PKiKP	19 19 16.0	-0.2
BRVK	Borovoye	131.34	30		P		SKPbc	19 22 29.0	+1.9
MHTO	MHTO	131.55	75		P		SKPbc	19 22 29.7	+0.8
SMDO	Samad	131.65	72		P		SKPbc	19 22 30.5	+1.2
JMDO	Jabal Madar	131.70	73		P		SKPbc	19 22 30.0	+0.6
BIDO	Bidbid	131.71	72		P		SKPbc	19 22 30.5	+1.1
WBK	Wadi Bani Khal	132.50	73		P		SKPbc	19 22 34.1	+1.8
BRZS	Berezniki	134.39	32	*e*	PKP		PKPdf	19 19 20.1	-1.1
	baz=32								
BRZS	Berezniki	134.39	32	*e*	PKiKP		PKPdf	19 19 20.9	-0.3
ASAR	Alice Springs	134.46	213		PKP		PKiKP	19 19 23.1	-0.6
	comp=Z,7.7nm,0.7s,baz=117,slow=2.1,SNR=5.8								
ASAR					SKPbc		SKPbc	19 22 39.9	+1.0
	comp=Z,5.2nm,1.0s,baz=134,slow=3.9,SNR=6.7								
ASAR					PKKP		PKKPdf	19 29 07.3	-0.2
	comp=Z,0.9nm,0.7s,baz=326,slow=1.5,SNR=8.2								
ASAR	Alice Springs	134.46	213		PKHKP		PKPpre	19 19 12.4	
ASAR								19 19 22.5	
ASAR	Alice Springs	134.46	213				PKPpre	19 19 12.4	
ASAR					PKPdf		PKPdf	19 19 22.5	+0.3
ZALV	Zalesovo Beam	136.72	20		PKP		PKPdf	19 19 26.0	+0.7
	comp=Z,73nm,0.8s,baz=314,slow=2.3,SNR=34								
ZALV	Zalesovo Beam	136.72	20		PKHKP		PKPpre	19 19 13.6	
ZALV								19 19 26.0	
ZALV	Zalesovo Beam	136.72	20				PKPpre	19 19 13.6	
KURBB	Kurchatov Arra	136.79	28		PKIKP		PKPdf	19 19 26.3	+0.7
BOD	Bodaibo	136.89	356		PKiKP		PKPpre	19 19 12.8	
BOD					pmax		pmax		
	comp=Z,11nm,1.1s								
KK31	Karatay Array	136.91	41	*i*	PKIKP		PKPdf	19 19 26.7	+0.6
KK31	Karatay Array	136.91	41		PKPdf		PKPdf	19 19 26.3	+0.2
KKAR	Karatay Array	136.91	41		PKIKP		PKPdf	19 19 26.2	+0.1
KKAR	Karatay Array	136.91	41		PKPdf		PKPdf	19 19 26.2	+0.1
IUG	Iuzhnay	137.05	43	*e*	PKP		PKPdf	19 19 25.8	-0.8
	baz=43								
IUG	Iuzhnay	137.05	43	*e*	PKiKP		PKPdf	19 19 25.7	-0.8
WRA	Warrmunga Arr	137.19	217		PKP		PKPdf	19 19 27.6	+0.3
	comp=Z,15nm,0.8s,baz=144,slow=1.5,SNR=6.4								
WRA					SKPbc		SKPbc	19 22 47.7	+0.4
	comp=Z,3.5nm,0.9s,baz=144,slow=2.6,SNR=5.0								
DZA	Taraz	137.54	41	*e*	PKiKP		PKiKP	19 19 28.4	-0.9
	baz=41								
DZA	Taraz	137.54	41	*i*	PKIKP		PKiKP	19 19 28.3	-0.9
SEM	Semipalatinsk	137.71	27	*e*	PKP		PKPdf	19 19 26.6	-1.0
	baz=27								
SEM				*e*	PKiKP		PKiKP	19 19 28.2	-1.4
	baz=27								
SEM	Semipalatinsk	137.71	27	*e*	PKiKP		PKPdf	19 19 26.6	-1.0
CHGR	Chuyangaron	137.95	48				PKPdf	19 19 27.3	-1.0
BTLS	Baital	138.05	37	*e*	PKP		PKPdf	19 19 27.6	-0.6
	baz=37								
BTLS	Baital	138.05	37	*e*	PKIKP		PKPdf	19 19 27.5	-0.6
ZEA	Zeya	138.50	343	*e*	PKIKP		PKiKP	19 19 30.1	-0.7
ZEA					pmax		pmax		
	comp=Z,10.0nm,1.3s								
ASAJ	Asahikawa	138.95	322		PKHKP		PKPpre	19 19 17.0	
ASAJ					pmax		pmax		
	comp=Z,90nm,1.4s								
EKS2	Erkin-Say	139.20	40		P		PKiKP	19 19 32.7	-0.1
	SNR=55								
SGDS	Sogindy	139.29	39	*e*	PKP		PKPdf	19 19 29.9	-0.6
	baz=39								
SGDS	Sogindy	139.29	39	*e*	PKIKP		PKPdf	19 19 29.9	-0.6
KBL	Kabul	139.35	54		PKIKP		PKPdf	19 19 31.5	+0.4
KBL	Kabul	139.35	54		PKPdf		PKPdf	19 19 31.5	+0.4
AML	Almayashu	139.43	41		P		PKiKP	19 19 32.6	-1.0
	SNR=43								
CHMS	Chumysh	139.62	39		P		PKiKP	19 19 32.8	-0.7
	SNR=12								
AAK	Ala-Archa	139.66	40		P		PKiKP	19 19 33.5	-0.3
	SNR=27								
AAK	Ala-Archa	139.66	40	*i*	PKiKP		PKiKP	19 19 33.7	0.0
	SNR=6.0								
AAK	Ala-Archa	139.66	40		PKIKP		PKPdf	19 19 32.1	+0.8
AAK	Ala-Archa	139.66	40		PKPdf		PKPdf	19 19 32.3	+1.0
UCH	Uchtor	139.90	40		P		PKiKP	19 19 34.5	-0.1
	SNR=42								
KBK	Karagaybulak	139.93	39		P		PKiKP	19 19 33.9	-0.4
	SNR=11								
TKM2	Tokmak 2	140.18	39		P		PKiKP	19 19 34.4	-0.4
	SNR=18								
TKM2	Tokmak 2	140.18	39		PKIKP		PKPdf	19 19 32.7	+0.4
TDK	Taldyqorghan	140.53	34	*e*	PKP		PKPdf	19 19 31.9	-0.8
	baz=34								
TDK	Taldyqorghan	140.53	34	*e*	PKIKP		PKPdf	19 19 31.9	-0.8
MDOK	Medeo	140.90	37	*e*	PKP		PKPdf	19 19 32.3	-1.3
	baz=38								
MDOK	Medeo	140.90	37	*e*	PKIKP		PKPdf	19 19 32.2	-1.3
ULHL	Ulahol	140.95	39		P		PKiKP	19 19 35.8	-0.7
	SNR=38								
MAKZ	Makanchi	141.12	29		PKIKP		PKPdf	19 19 34.0	+0.3
MAKZ	Makanchi	141.12	29				PKPpre	19 19 26.7	
MAKZ					PKPdf		PKPdf	19 19 34.3	+0.7
MK31	Makanchi Array	141.28	29	*i*	PKIKP		PKPdf	19 19 34.1	+0.1
MKAR	Makanchi Array	141.28	29		PKiKP		PKPpre	19 19 27.2	
	comp=Z,2.1nm,0.6s,baz=330,slow=3.4,SNR=26								
MKAR					PKP		PKiKP	19 19 35.6	-1.1
	comp=Z,8.7nm,0.7s,baz=324,slow=2.1,SNR=27								
MKAR	Makanchi Array	141.28	29				PKPpre	19 19 27.1	
MKAR					PKPdf		PKPdf	19 19 34.6	+0.7
KPKS	Kokpek	141.66	36	*e*	PKP		PKPdf	19 19 33.9	-0.9
	baz=36								
KPKS	Kokpek	141.66	36	*e*	PKIKP		PKPdf	19 19 33.9	-0.9
SATY	Saty	141.76	37	*e*	PKP		PKPdf	19 19 33.8	-1.3
	baz=37								
SATY	Saty	141.76	37	*e*	PKIKP		PKPdf	19 19 33.7	-1.3
ZSN	Zaisan	141.94	26	*e*	PKP		PKPdf	19 19 34.4	-0.7
	baz=26								
ZSN	Zaisan	141.94	26	*e*	PKIKP		PKPdf	19 19 34.4	-0.7
UZB	Uzynbulak	142.06	36	*e*	PKP		PKPdf	19 19 34.3	-1.3
	baz=36								
UZB	Uzynbulak	142.06	36	*e*	PKIKP		PKPdf	19 19 34.3	-1.3
PDGK	Podgornoye	142.20	35		PKIKP		PKPdf	19 19 36.7	+0.8
KSH	Kashi	142.27	43		PKP		PKiKP	19 19 37.9	-1.2
SHLS	Shalkode	142.30	36	*e*	PKP		PKPdf	19 19 35.5	-0.6
	baz=35								
SHLS	Shalkode	142.30	36	*e*	PKIKP		PKPdf	19 19 35.4	-0.6
MOY	Mondy	142.74	8	*e*	PKIKP		PKPdf	19 19 36.9	+0.4
MOY					pmax		pmax		
	comp=Z,41nm,2.2s								
NIL	Nilore	142.93	53		PKIKP		PKPdf	19 19 37.0	-0.3
NIL	Nilore	142.93	53				PKPdf	19 19 37.0	-0.3
JAY	Jayapura	143.88	244		PKP		PKPdf	19 19 39.1	-0.5
	comp=Z,28nm,1.1s,baz=148,slow=2.3,SNR=4.5								
ZAK	Zakamensk	144.27	6	*e*	PKIKP		PKPbc	19 19 38.0	+0.2
ZAK					pmax		pmax		
	comp=Z,61nm,1.2s								
HIA	Hailar	144.47	347		PKIKP		PKPbc	19 19 38.8	+0.4
HIA	Hailar	144.47	347				PKPbc	19 19 38.8	+0.5
USRK	Ussuriysk Ar.	144.62	331		PKP		PKPbc	19 19 39.1	+0.1
	comp=Z,30nm,0.8s,baz=33,slow=5.0,SNR=74								
USRK							SKPbc		
	comp=Z,2.5nm,0.9s,baz=49,slow=2.7,SNR=2.5								
JYT	Yasato	144.68	313				PKPab	19 19 39.2	-0.1
GUMO	Guam	144.88	273		PKP2		PKPab	19 19 40.6	-0.1
GUMO	Guam	144.88	273				PKPab	19 19 40.6	-0.1
MAJO	Matsushiro	145.91	315		PKP2		PKPbc	19 19 43.3	0.0
MAJO	Matsushiro	145.91	315		PKPdf		PKPbc	19 19 43.3	0.0
MAT	Matsushiro	145.91	315		PKP		PKPab	19 19 43.8	-0.2
MJAR	Matsushiro Arr	145.91	315		PKPbc		PKPab	19 19 43.8	-0.2
	comp=Z,126nm,0.9s,baz=51,slow=1.4,SNR=125								
WMQ	Urumqi	146.02	28	*e*	PKPbc		PKPab	19 19 43.9	-0.3
WMQ					LR		LR		
	comp=Z,330nm,25

	comp=Z,280nm,10.8s							
KMI	**Kunming**	**168.35**	**27**	⇑PKP	**PKPdf**	**19 20 10.8**	**0.0**	
KMI				LR	LR			
	comp=Z,120nm,16.1s							
KMI				LR	LR			
	comp=Z,130nm,22.4s							
KMI				LR	LR			
	comp=Z,190nm,20.5s							
CHTO	**Chiang Mai**	**169.90**	**66**		**PKPdf**	**19 20 10.5**	**-1.1**	
CM31	**Chiang Mai Arr**	**170.03**	**67**		**PKPdf**	**19 20 11.7**	**0.0**	
CMAR	**Chiang Mai Arr**	**170.03**	**67**	PKP	**PKPdf**	**19 20 12.4**	**+0.8**	
	comp=Z,6.0nm,1.0s,baz=276,slow=1.7,SNR=28							
CMAR	**Chiang Mai Arr**	**170.03**	**67**		**PKPdf**	**19 20 11.5**	**-0.2**	

*NEIC **21** 19:10:15.1±1.9, 6˚.34S±0˚.07×154˚.76E±0˚.06, h39^{km}±1^{km}, mb5.4/305, Mwb5.3/63 Error ellipse: s-maj=11.8km s-min=9.8km az=206.0*

*MOS **21** 19:10:15.8±1.0, 6˚.27S×154˚.73E, h56^{km}, mb5.4/29, MS4.7/7, Error ellipse: s-maj=6.9km s-min=5.4km az=103.5*

*BJI **21** 19:10:16.0±0.0, 6˚.19S×155˚.09E, h70^{km}, mB5.2/45, mb5.2/61, Ms4.8/50, Ms7 4.6/47*

*NEIC **21** 19:10:18, 6˚.34S×154˚.76E, h35^{km}, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.14; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-0.68; $M_{r\theta}$-0.10; $M_{\theta\phi}$0.88; $M_{\phi r}$0.06; Fault plane solution: $M_0$1.33000×10^{17} NP1:ϕ_s141.22000°, δ42.50000°, λ93.77000°. NP2:ϕ_s316.11000°, δ47.61000°, λ86.55000°. Principal axes: T 1.1442, Plg86.0000°, Azm184.0000°; N 0.3206, Plg3.0000°, Azm318.0000°; P -1.4648, Plg3.0000°, Azm49.0000°;*

*GCMT **21** 19:10:19.1±0.1, 6˚.54S±0˚.01×154˚.67E±0˚.01, h48^{km}, MW5.4/146, Moment Tensor Solution. s146,c232; s116,c196; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.57±.02; $M_{\theta\theta}$-0.89±.02; $M_{\phi\phi}$-0.68±.02; $M_{r\theta}$-0.02±.02; $M_{\theta\phi}$0.94±.01; $M_{\phi r}$-0.01±.02; Best double couple: $M_0$1.65400×10^{17} NP1:ϕ_s133.00000°, δ45.00000°, λ91.00000°. NP2:ϕ_s311.00000°, δ45.00000°, λ89.00000°. Principal axes: T 1.5700, Plg89.0000°, Azm140.0000°; N 0.1630, Plg1.0000°, Azm312.0000°; P -1.7380, Plg0.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **21** 19:10:20.1±1.8, 6˚.30S×154˚.81E, h85^{km}±16^{km}, mb5.0/27, mb1 5.1/32, mb1mx5.0/40, mbtmp5.3/32, MS4.5/27, Ms1 4.6/27, ms1mx4.6/27 Error ellipse: s-maj=10.9km s-min=8.5km az=25.0*

*DJA **21** 19:10:20.5±0.4, 6˚.5±3˚×15˚.5E±˚, h78^{km}±4^{km}, M5.3/76, mB5.7/48, mb5.5/76, MLv5.7/2, Mw(mB)5.3/48, MwMwp5.2/10, Mwp5.4/10*

ISC 21 19:10:17.6±0.4, 6˚.36S±0˚.04×154˚.83E±0˚.04, h63^{km}±3^{km}, h64^{km}:pP-P, n714, σ1°44/692, mb5.4/285, 4C-8D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.42**	**309**	Pn	**Pn**	**19 11 08.6**	**+0.1**
RABL	**Rabaul**	**3.42**	**309**	P	**Pn**	**19 11 11.5**	**+3.0**
HNR	**Honiara**	**5.92**	**121**	P	**Pn**	**19 11 46.5**	**+3.8**
	146nm,0.3s,baz=203,slow=0.3,SNR=88						
HNR				S	**Sn**	**19 12 54.7**	**+5.5**
	60nm,0.3s,baz=90,slow=20,SNR=1.3						
HNR				LR	LR	19 14 03.5	
	comp=Z,8μm,20.8s,baz=295,slow=38						
HNR	**Honiara**	**5.92**	**121**	P	**Pn**	**19 11 44.6**	**+1.9**
HNR						19 12 54.7	
HNR	**Honiara**	**5.92**	**121**	Pn	**Pn**	**19 11 44.6**	**+1.9**
HNR	**Honiara**	**5.92**	**121**	P	**Pn**	**19 11 47.2**	**+4.5**
PMG	**Port Moresby**	**8.18**	**248**	P	**Pn**	**19 12 15.1**	**+1.5**
	32nm,0.3s,baz=36,slow=7.9,SNR=58						
PMG				S	**Sn**	**19 13 49.3**	**+4.6**
	31nm,0.3s,baz=204,slow=24,SNR=9.5						
PMG				LR	LR	19 15 18.3	
	comp=Z,8μm,21.4s,baz=58,slow=36						
PMG	**Port Moresby**	**8.18**	**248**	P	**Pn**	**19 12 13.7**	**0.0**
PMG						19 13 49.3	
PMG	**Port Moresby**	**8.18**	**248**		**Pn**	**19 12 13.7**	**0.0**
PMG	**Port Moresby**	**8.18**	**248**	P	**Pn**	**19 12 14.5**	**+0.8**
PATS	**Pohnpei**	**13.56**	**15**	P	**Pn**	**19 13 27.2**	**0.0**
	baz=14,SNR=7.2						
PATS	**Pohnpei**	**13.56**	**15**	Pn	**Pn**	**19 13 25.9**	**-1.3**
COEN	**Coen**	**13.73**	**236**	Pn	**Pn**	**19 13 28.9**	**-0.5**
JAY	**Jayapura**	**14.59**	**285**	P	**Pn**	**19 13 42.6**	**+1.9**
	1.3nm,0.3s,baz=96,slow=9.2,SNR=6.7						
JAY				LR	LR	19 19 06.0	
	comp=Z,3μm,20.9s,baz=86,slow=36						
JAY	**Jayapura**	**14.59**	**285**	P	**Pn**	**19 13 38.9**	**-1.9**
	595nm36nm,1.1s						
GENI	**Genyem**	**15.09**	**284**	P	**P**	**19 13 51.0**	**-0.1**
	3μm2μm118nm,1.1s						
SANVU	**Saraoutou**	**15.13**	**128**	Pn	**Pn**	**19 13 48.3**	**+0.6**
MTSU	**Mount Surprise**	**15.56**	**220**	P	**P**	**19 13 55.2**	**-1.2**
	baz=16,SNR=34						
CTA	**Charters Tower**	**15.99**	**211**	P	**Pn**	**19 13 59.6**	**+0.9**
	0.8nm,0.3s,baz=32,slow=14,SNR=17						
CTA				LR	LR	19 19 45.6	
	comp=Z,4μm,19.6s,baz=36,slow=35						
CTAO	**Charters Tower**	**15.99**	**211**	P	**P**	**19 14 00.8**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,57nm,1.0s						
CTAO	**Charters Tower**	**15.99**	**211**		**P**	**19 14 00.8**	**-0.3**
DZM	**Mont Dzumac**	**19.23**	**145**	*e*P	**Pn**	**19 14 39.0**	**+0.5**
	comp=Z,515nm,1.0s						
DZM				*e*S	**S**	**19 18 06.3**	**-5.4**
	comp=Z,2μm,25.9s						
DZM				*e*LR	LR	19 19 08.8	
	comp=Z,6μm,26.1s						
DZM	**Mont Dzumac**	**19.23**	**145**	P	**Pn**	**19 14 38.7**	**+0.2**
	comp=Z,4.8nm,0.3s,baz=327,slow=13,SNR=58						
DZM				LR	LR	19 21 12.7	
	comp=Z,2μm,21.6s,baz=330,slow=34						
DZM	**Mont Dzumac**	**19.23**	**145**	P	**P**	**19 14 37.8**	**+0.8**
DZM				IAmb	IAmb	19 14 41.3	
	comp=Z,215nm,0.9s						
KWAJ	**Kwajalein Atol**	**19.73**	**40**	P	**Pn**	**19 14 44.4**	**+0.1**
KWAJ				pmax	pmax		
	comp=Z,579nm,0.7s						
KWAJ	**Kwajalein Atol**	**19.73**	**40**		**Pn**	**19 14 44.4**	**+0.1**
QIS	**Mount Isa**	**20.43**	**225**	P	**P**	**19 14 51.1**	**+1.2**
	baz=20,SNR=27						
RMQ	**Roma**	**20.84**	**195**	P	**P**	**19 14 55.8**	**+1.6**
	baz=21,SNR=25						
GUMO	**Guam**	**22.15**	**334**	P	**P**	**19 15 09.3**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,425nm,1.3s						
GUMO	**Guam**	**22.15**	**334**	P	**P**	**19 15 09.3**	**+0.9**
QLP	**Quilpie**	**22.50**	**205**	P	**P**	**19 15 13.5**	**+1.4**
	baz=23,SNR=22						
FAKI	**Fak Fak**	**22.76**	**278**	P	**P**	**19 15 14.5**	**-0.5**
FAKI				IAmb	IAmb	19 15 18.5	
	comp=Z,222nm,1.1s						
FAKI	**Fak Fak**	**22.76**	**278**	P	**P**	**19 15 17.5**	**+2.5**
	comp=Z,3μmcomp=Z,3μmcomp=Z,202nm,1.0s						
KDU	**Kakadu**	**22.91**	**252**	P	**P**	**19 15 16.6**	**+0.1**
	baz=23,SNR=9.9						
SAUI	**Saumlaki**	**23.40**	**265**	P	**P**	**19 15 21.5**	**+0.2**
SAUI	**Saumlaki**	**23.40**	**265**	P	**P**	**19 15 24.6**	**+3.4**
	comp=Z,5μmcomp=Z,10μmcomp=Z,446nm,1.1s						
WR0	**Warramunga Arr**	**23.89**	**234**	P	**P**	**19 15 25.9**	**+0.2**
WR0				IAmb	IAmb	19 15 29.7	
	comp=Z,146nm,1.0s						
WB0	**Warramunga Arr**	**23.91**	**234**	P	**P**	**19 15 26.4**	**+0.5**
WB0				IAmb	IAmb	19 15 29.8	
	comp=Z,97nm,0.8s						
WRAB	**Tennant Creek**	**24.03**	**234**	*i* P	**P**	**19 15 27.8**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,109nm,0.8s						
WRAB	**Tennant Creek**	**24.03**	**234**	P	**P**	**19 15 27.2**	**+0.3**
WRAB				IAmb	IAmb	19 15 30.9	
	comp=Z,207nm,1.3s						
WB2	**Warramunga Arr**	**24.04**	**234**	P	**P**	**19 15 27.4**	**+0.4**
WB2				IAmb	IAmb	19 15 31.1	
	comp=Z,104nm,0.8s						
WRA	**Warramunga Arr**	**24.05**	**234**	P	**P**	**19 15 27.8**	**+0.6**
	comp=Z,75nm,0.8s,baz=60,slow=9.7,SNR=104						
WRA				PcP	**PcP**	**19 19 08.6**	**+1.0**
	comp=Z,17nm,0.7s,baz=55,slow=2.2,SNR=7.3						
WRA				S	**S**	**19 19 46.5**	**+6.2**
	comp=Z,7.8nm,1.0s,baz=58,slow=16,SNR=7.2						
WRA				LR	LR	19 24 42.2	
	comp=Z,3μm,20.2s,baz=65,slow=36						
WRA	**Warramunga Arr**	**24.05**	**234**	*i* P	**P**	**19 15 27.7**	**+0.6**
WRA				pmax	pmax		
	comp=Z,72nm,0.7s						
WRA	**Warramunga Arr**	**24.05**	**234**	P	**P**	**19 15 26.8**	**-0.3**
ARMA	**Armidale**	**24.12**	**187**	P	**P**	**19 15 29.5**	**+1.8**
	baz=24,SNR=36						
ARMA	**Armidale**	**24.12**	**187**	P	**P**	**19 15 29.0**	**+1.2**
ARMA				IAmb	IAmb	19 16 04.3	
	comp=Z,144nm,1.5s						
SIJI	**Sorong**	**24.13**	**282**	P	**P**	**19 15 27.7**	**-0.2**
	comp=Z,98nm,0.8s,baz=71,slow=8.2,SNR=31						
SIJI				LR	LR	19 26 24.9	
	comp=Z,1μm,21.7s,baz=146,slow=40						
SWI	**Sorong**	**24.14**	**282**	P	**P**	**19 15 29.9**	**+1.9**
	comp=Z,2μmcomp=Z,2μmcomp=Z,217nm,0.9s						
MTN	**Manton Dam**	**24.22**	**253**	P	**P**	**19 15 28.7**	**0.0**
	baz=24,SNR=17						
MTN	**Manton Dam**	**24.22**	**253**	P	**P**	**19 15 28.9**	**+0.2**
MTN				IAmb	IAmb	19 15 32.2	
	comp=Z,112nm,0.9s						
ANA2	**Anatahan**	**24.29**	**338**	P	**P**	**19 15 28.7**	**-0.6**
MSVF	**Nonsavu**	**25.33**	**119**	P	**P**	**19 15 39.2**	**+0.4**
	comp=Z,25nm,0.7s,baz=268,slow=12,SNR=15						
MSVF				LR	LR	19 24 46.6	
	comp=Z,3μm,21.0s,baz=303,slow=34						
MSVF	**Nonsavu**	**25.33**	**119**	P	**P**	**19 15 39.3**	**+0.4**
MSVF				pmax	pmax		
	comp=Z,86nm,1.2s						
MSVF	**Nonsavu**	**25.33**	**119**	P	**P**	**19 15 39.3**	**+0.4**
MSVF				IAmb	IAmb	19 15 54.9	
	comp=Z,86nm,1.2s						
CMSA	**Cobar Meteorol**	**26.47**	**198**	P	**P**	**19 15 49.3**	**+0.3**
	baz=27,SNR=64						
AS31	**Alice Springs**	**26.47**	**227**	P	**P**	**19 15 48.7**	**-0.4**
ASAR	**Alice Springs**	**26.47**	**227**	P	**P**	**19 15 49.0**	**-0.1**
	comp=Z,17nm,0.7s,baz=56,slow=8.9,SNR=128						
ASAR				PcP	**PcP**	**19 19 13.6**	**+0.5**
	comp=Z,19nm,0.7s,baz=57,slow=2.7,SNR=15						
ASAR				LR	LR	19 25 54.8	
	comp=Z,2μm,20.7s,baz=112,slow=35						
ASAR				P3KPbc		19 48 32.8	
	comp=Z,0.6nm,0.8s,baz=237,slow=4.3,SNR=5.2						
ASAR	**Alice Springs**	**26.47**	**227**	P	**P**	**19 15 48.2**	**-0.9**
KNRA	**Kununurra**	**27.18**	**248**	P	**P**	**19 15 55.3**	**-0.2**
KNRA				IAmb	IAmb	19 16 45.4	
	comp=Z,53nm,0.7s						
NLAI	**Namlea**	**27.80**	**275**	P	**P**	**19 16 05.7**	**+4.6**
	comp=Z,67nm,1.5s						
WAKE	**Wake Island**	**28.02**	**24**	P	**P**	**19 16 03.4**	**+0.6**
STKA	**Stephens Creek**	**28.24**	**204**	P	**P**	**19 16 04.5**	**-0.3**
	comp=Z,19nm,0.6s,baz=16,slow=8.8,SNR=37						
STKA				PcP	**PcP**	**19 19 17.5**	**+0.5**
	comp=Z,18nm,0.8s,baz=345,slow=4.4,SNR=6.7						
STKA				LR	LR	19 27 22.9	
	comp=Z,3μm,19.8s,baz=15,slow=36						
STKA	**Stephens Creek**	**28.24**	**204**	P	**P**	**19 16 04.8**	**0.0**
	baz=28,SNR=39						
STKA	**Stephens Creek**	**28.24**	**204**	P	**P**	**19 16 04.2**	**-0.6**
TNTI	**Ternate**	**28.31**	**284**	P	**P**	**19 16 06.8**	**+1.2**
SANI	**Sanana**	**29.07**	**277**	P	**P**	**19 16 12.5**	**+0.1**
	comp=Z,1μmcomp=Z,149nm,1.1s						
CAN	**Canberra**	**29.32**	**190**	P	**P**	**19 16 15.4**	**+1.0**
CAN				pmax	pmax		
	comp=Z,183nm,1.8s						
CAN	**Canberra**	**29.32**	**190**	P	**P**	**19 16 15.4**	**+1.0**
CAN				IAmb	IAmb	19 16 35.7	
	comp=Z,182nm,1.8s						
SOEI	**Soe**	**30.44**	**262**	P	**P**	**19 16 23.3**	**-1.4**
SOEI				IAmb	IAmb	19 16 39.3	
	comp=Z,58nm,0.9s						
SOEI	**Soe**	**30.44**	**262**	P	**P**	**19 16 25.5**	**+0.8**
	comp=Z,2μmcomp=Z,1μmcomp=Z,67nm,0.9s						
HTT	**Hallett**	**30.72**	**207**	P	**P**	**19 16 27.0**	**+0.2**
	baz=31,SNR=11						
FITZ	**Fitzroy Crossi**	**30.76**	**245**	P	**P**	**19 16 27.1**	**-0.2**
	comp=Z,28nm,0.7s,baz=79,slow=7.5,SNR=28						
FITZ				PcP	**PcP**	**19 19 25.0**	**+1.3**
	comp=Z,21nm,0.7s,baz=155,slow=4.3,SNR=5.3						
FITZ	**Fitzroy Crossi**	**30.76**	**245**	P	**P**	**19 16 26.9**	**-0.4**
	baz=31,SNR=23						
FITZ	**Fitzroy Crossi**	**30.76**	**245**	P	**P**	**19 16 26.6**	**-0.7**
FITZ				IAmb	IAmb	19 16 29.7	
	comp=Z,130nm,1.6s						
BATI	**Baumata**	**31.07**	**261**	P	**P**	**19 16 30.9**	**+0.8**
	comp=Z,37nm,0.6s,baz=167,slow=3.8,SNR=16						
BATI	**Baumata**	**31.07**	**261**	P	**P**	**19 16 33.8**	**+3.7**
	comp=Z,61nm,0.9s						
MATI	**Mati**	**31.42**	**294**	*e*P	P	19 16 25.7	-7.5
WRKA	**Warakurna**	**31.46**	**231**	P	**P**	**19 16 33.1**	**-0.4**
	baz=32,SNR=94						
KMSI	**Cibinong**	**31.55**	**282**	P	**P**	**19 16 35.5**	**+1.2**
	comp=Z,3μmcomp=Z,337nm,0.7s						
BBOO	**Buckleboo**	**31.59**	**211**	P	**P**	**19 16 34.1**	**-0.3**
	baz=32,SNR=16						
BBOO	**Buckleboo**	**31.59**	**211**	P	**P**	**19 16 34.1**	**-0.3**
BBOO				IAmb	IAmb	19 16 47.2	
	comp=Z,31nm,0.7s						
BBOO					**PcP**	**19 19 25.3**	**-0.4**
TOO	**Toolangi**	**32.21**	**194**	P	**P**	**19 16 42.6**	**+2.7**
	baz=32,SNR=5.4						
TOO	**Toolangi**	**32.21**	**194**	P	**P**	**19 16 39.6**	**-0.3**
TOO				pmax	pmax		
	comp=Z,16nm,1.1s						
TOO	**Toolangi**	**32.21**	**194**	P	**P**	**19 16 39.6**	**-0.3**
MMRI	**Maumere**	**32.38**	**264**	P	**P**	**19 16 40.9**	**-0.7**
MMRI	**Maumere**	**32.38**	**264**	P	**P**	**19 16 41.5**	**-0.2**
	comp=Z,3μmcomp=Z,230nm,1.1s						
LUWI	**Luwuk**	**32.41**	**278**	P	**P**	**19 16 42.1**	**+0.2**
LUWI	**Luwuk**	**32.41**	**278**	P	**P**	**19 16 44.2**	**+2.3**
	comp=Z,4μmcomp=Z,414nm,1.2s						
GTOI	**Gorontalo**	**32.51**	**281**	P	**P**	**19 16 44.2**	**+1.5**
	comp=Z,1μmcomp=Z,122nm,0.7s						
ARPS	**Mount Arapiles**	**32.52**	**200**	P	**P**	**19 16 43.2**	**+0.7**
	baz=33,SNR=29						
CGP	**Cagayan de Oro**	**33.46**	**296**	*e*P	**P**	**19 16 51.5**	**+0.5**
OUZ	**Omahuta**	**33.52**	**152**	P	**P**	**19 16 51.5**	**+0.3**
OUZ				IAmb	IAmb	19 16 55.8	
	comp=Z,50nm,1.0s						
MRSI	**Marisa**	**33.52**	**280**	P	**P**	**19 16 52.2**	**+0.6**
	comp=Z,940nmcomp=Z,98nm,1.0s						
KNTN	**Kanton**	**33.53**	**85**	P	**P**	**19 16 52.1**	**+0.5**
APSI	**Ampana**	**33.54**	**278**	P	**P**	**19 16 53.1**	**+1.4**
	comp=Z,2μmcomp=Z,248nm,1.1s						
MSLP	**Maasin**	**34.05**	**299**	*e*P	**P**	**19 16 56.0**	**-0.1**
BASI	**Baing, Sumba**	**34.10**	**261**	P	**P**	**19 16 59.3**	**+2.7**
	comp=Z,2μmcomp=Z,210nm,1.0s						
BNSI	**Bone**	**34.62**	**271**	P	**P**	**19 17 05.4**	**+4.3**
	comp=Z,822nmcomp=Z,33nm,1.0s						
TOLI2	**Tolitoli**	**34.79**	**281**	P	**P**	**19 17 01.2**	**-1.3**
TOLI2				IAmb	IAmb	19 17 18.1	
	comp=Z,61nm,0.8s						
KAPI	**Kappang**	**34.93**	**270**	P	**P**	**19 17 04.3**	**+0.5**
	comp=Z,11nm,0.6s,baz=112,slow=6.9,SNR=10.0						
KAPI	**Kappang**	**34.93**	**270**	P	**P**	**19 17 03.8**	**+0.1**
KAPI				pmax	pmax		
	comp=Z,48nm,1.0s						
KAPI	**Kappang**	**34.93**	**270**	P	**P**	**19 17 03.8**	**+0.1**
KAPI				IAmb	IAmb	19 17 19.8	
	comp=Z,48nm,0.9s						
FORT	**Forrest**	**34.94**	**223**	P	**P**	**19 17 03.6**	**0.0**
	baz=35,SNR=22						
FORT	**Forrest**	**34.94**	**223**	P	**P**	**19 17 03.1**	**-0.5**
SPSI	**Sidrap Palu**	**34.99**	**272**	P	**P**	**19 17 07.0**	**+2.7**
	comp=Z,27nm,0.9s						
TTSI	**Tana Toraja**	**35.04**	**274**	P	**P**	**19 17 04.2**	**-0.5**
	comp=Z,676nmcomp=Z,35nm,1.2s						
WBSI	**Waikabubak, Su**	**35.23**	**262**	P	**P**	**19 17 08.6**	**+2.2**
	comp=Z,2μmcomp=Z,128nm,1.6s						
CNOP	**Candoni, Negro**	**35.87**	**296**	*e*P	**P**	**19 17 12.8**	**+1.0**
GUIM	**Jordan**	**36.26**	**298**	*e*P	**P**	**19 17 14.9**	**-0.2**
NIUE	**Niue**	**36.54**	**114**	P	**P**	**19 17 17.4**	**0.0**
	baz=37,SNR=4.4						
HIZ	**Hauiti**	**36.79**	**153**	P	**P**	**19 17 21.4**	**+2.0**
HIZ				IAmb	IAmb	19 17 27.0	
	comp=Z,64nm,0.8s						
PLAI	**Plampang**	**36.80**	**264**	P	**P**	**19 17 18.6**	**-1.2**
	comp=Z,2μmcomp=Z,271nm,0.8s						
TAU	**Tasmania Unive**	**37.00**	**189**	P	**P**	**19 17 21.8**	**+0.8**
TAU				pmax	pmax		
	comp=Z,124nm,1.3s						
TAU	**Tasmania Unive**	**37.00**	**189**	P	**P**	**19 17 21.8**	**+0.8**
PSA00	**Pilbara Seismi**	**37.04**	**242**	P	**P**	**19 17 20.9**	**-0.8**
PSA00				IAmb	IAmb	19 17 31.9	
	comp=Z,55nm,0.8s						
PSA00	**Pilbara Seismi**	**37.04**	**242**	P	**P**	**19 17 21.6**	**-0.1**
OMRZ	**Omania**	**37.16**	**151**	P	**P**	**19 17 25.4**	**+2.8**
HAZ	**Te Kaha**	**37.58**	**150**	P	**P**	**19 17 27.4**	**+1.3**
URZ	**Urewera**	**37.64**	**151**	P	**P**	**19 17 27.6**	**+1.1**
	comp=Z,55nm,0.7s,baz=302,slow=23,SNR=30						
URZ	**Urewera**	**37.64**	**151**	P	**P**	**19 17 27.5**	**+1.0**
URZ	**Urewera**	**37.64**	**151**	P	**P**	**19 17 28.9**	**+2.4**
TWSI	**Taliwang, Sumb**	**37.68**	**264**	P	**P**	**19 17 27.3**	**0.0**
	comp=Z,583nmcomp=Z,62nm,0.9s						
RUGZ	**Raukumara Rang**	**37.69**	**150**	P	**P**	**19 17 28.3**	**+1.1**
MXZ	**Matakaoa Point**	**37.70**	**149**	P	**P**	**19 17 28.6**	**+1.6**
MXZ				IAmb	IAmb	19 17 32.0	
	comp=Z,75nm,0.9s						
QRZ	**Quartz Range**	**37.79**	**158**	P	**P**	**19 17 29.3**	**+1.4**
RTZ	**Ruatahuna**	**37.86**	**151**	P	**P**	**19 17 29.5**	**+1.0**
WMGZ	**Waiomatatini S**	**37.95**	**149**	P	**P**	**19 17 29.3**	**+0.1**
RAGZ	**Rawiri**	**37.97**	**151**	P	**P**	**19 17 31.8**	**+2.4**
MTHZ	**Maungataniwha**	**37.98**	**152**	P	**P**	**19 17 30.8**	**+1.3**
TWGZ	**Tauwhareparae**	**38.00**	**150**	P	**P**	**19 17 31.5**	**+1.8**
MYLDM	**Lahad Datu**	**38.03**	**287**	P	**P**	**19 17 30.3**	**+0.1**
BKZ	**Black Stump Fm**	**38.06**	**152**	P	**P**	**19 17 30.0**	**-0.2**
BKZ				IAmb	IAmb	19 17 46.7	
	comp=Z,119nm,1.4s						
TKGZ	**Te Karaka**	**38.14**	**150**	P	**P**	**19 17 29.4**	**-1.4**
SNGZ	**Shannon Statio**	**38.16**	**151**	P	**P**	**19 17 32.6**	**+1.6**
BKB	**Balikpapan**	**38.17**	**276**	P	**P**	**19 17 31.0**	**-0.4**
NNZ	**Nelson**	**38.45**	**157**	P	**P**	**19 17 33.9**	**+0.6**
THZ	**Tophouse**	**38.75**	**158**	P	**P**	**19 17 36.0**	**+0.1**
LQP	**Lukban**	**38.79**	**302**	*e*P	**P**	**19 17 36.9**	**+0.2**
TUWZ	**Tuamarina**	**38.85**	**157**	P	**P**	**19 17 37.4**	**+0.7**
BSWZ	**Blackbirch Sta**	**39.07**	**157**	P	**P**	**19 17 39.1**	**+0.5**
BFZ	**Birch Farm**	**39.18**	**154**	P	**P**	**19 17 39.7**	**+0.2**
BFZ				IAmb	IAmb	19 17 47.5	
	comp=Z,39nm,0.8s						
BHW	**Baring Head**	**39.21**	**156**	P	**P**	**19 17 40.2**	**+0.6**
CMWZ	**Cape Campbell**	**39.23**	**157**	P	**P**	**19 17 41.2**	**+1.4**
FOZ	**Fox Glacier**	**39.30**	**163**	P	**P**	**19 17 41.7**	**+1.3**
ENPP	**El Nido**	**39.32**	**296**	*e*P	**P**	**19 17 41.1**	**+0.2**
JMZ	**Minamidaito 2**	**39.36**	**325**	P	**P**	**19 17 42.0**	**+0.9**
MSWZ	**Moikau Station**	**39.37**	**156**	P	**P**	**19 17 41.1**	**+0.1**
LTZ	**Lake Taylor**	**39.41**	**160**	P	**P**	**19 17 41.8**	**+0.4**
LTZ				IAmb	IAmb	19 17 44.9	
	comp=Z,70nm,0.7s						
PLWZ	**Palliser**	**39.50**	**156**	P	**P**	**19 17 41.8**	**-0.4**
KHZ	**Kahutara**	**39.55**	**158**	P	**P**	**19 17 41.8**	**-0.7**
KHZ				IAmb	IAmb	19 17 44.3	
	comp=Z,53nm,0.8s						
KMBL	**Kambalda**	**39.60**	**227**	P	**P**	**19 17 43.1**	**-0.1**
	baz=40,SNR=13						
OXZ	**Oxford**	**39.82**	**160**	P	**P**	**19 17 44.1**	**-0.7**
OXZ				IAmb	IAmb	19 17 51.5	
	comp=Z,59nm,0.5s						
RPZ	**Rata Peaks**	**39.85**	**162**	P	**P**	**19 17 45.9**	**+0.9**
	comp=Z,65nm,0.7s,baz=271,slow=1.6,SNR=33						
RPZ	**Rata Peaks**	**39.85**	**162**	P	**P**	**19 17 45.2**	**+0.2**
RPZ				IAmb	IAmb	19 17 47.7	
	comp=Z,64nm,0.7s						
SPMM	**Sapulut**	**39.85**	**285**	P	**P**	**19 17 47.0**	**+1.6**
BBKI	**Banjar Baru**	**39.94**	**272**	P	**P**	**19 17 48.5**	**+2.3**
	comp=Z,647nmcomp=Z,33nm,0.8s						
LBZ	**Lake Benmore**	**40.19**	**163**	P	**P**	**19 17 47.8**	**-0.1**
MTKI	**Muara Teweh, K**	**40.20**	**276**	P	P	19 17 54.2	+5.9
WKZ	**Wanaka**	**40.27**	**164**	P	**P**	**19 17 48.4**	**-0.1**
MQZ	**McQueen's Vall**	**40.36**	**160**	P	**P**	**19 17 49.5**	**+0.3**
MQZ				IAmb	IAmb	19 17 51.6	
	comp=Z,189nm,1.7s						
JAGI	**Jajag, Banyuwa**	**40.38**	**264**	P	**P**	**19 17 48.9**	**-0.9**
DCZ	**Deep Cove**	**40.40**	**167**	P	**P**	**19 17 49.8**	**+0.3**
KKM	**Kota Kinabalu**	**40.46**	**287**	P	**P**	**19 17 49.3**	**-1.3**
MLZ	**Mavora Lakes**	**40.54**	**166**	P	**P**	**19 17 50.7**	**-0.1**
MLZ				IAmb	IAmb	19 17 53.3	
	comp=Z,64nm,1.0s						
ODZ	**Otahua Downs**	**40.92**	**163**	P	**P**	**19 17 53.7**	**-0.2**
APYP	**Conner**	**40.97**	**307**	*e*P	**P**	**19 17 54.8**	**+0.2**
WHZ	**Wether Hill Ro**	**40.99**	**166**	P	**P**	**19 17 53.9**	**-0.5**
JHJ	**Hachijo jima 2**	**41.78**	**341**	LR	LR	19 32 46.7	
	comp=Z,388nm,20.8s,baz=132,slow=32						
JOW	**Kunigami**	**41.84**	**323**	P	**P**	**19 18 01.5**

comp=Z,4µmcomp=Z,305nm,1.3s
RAR Rarotonga 46.31 113 P **P 19 18 37.4 -0.1**
comp=Z,33nm,0.8s,baz=261,slow=4.7,SNR=4.2
RAR Rarotonga 46.31 113 P **P 19 18 37.8 +0.3**
RAR pmax pmax
comp=Z,395nm,2.0s
RAR Rarotonga 46.31 113 P **P 19 18 37.8 +0.3**
CISI Cisompet, Garu 46.66 266 P **P 19 18 39.1 -1.4**
JSD Sado 46.79 342 P **P 19 18 39.8 -1.1**
LEM Lembang 46.89 267 P **P 19 18 41.7 -0.6**
comp=Z,92nm,0.7s,baz=46,slow=7.0,SNR=32
KNMB Chin-men Tao 46.90 312 P **P 19 18 41.2 -0.8**
KNMB lAmb lAmb 19 18 44.8
comp=Z,46nm,0.8s
QZH Quanzhou 47.03 313 P **P 19 18 43.9 +0.9**
QZH S **S 19 25 30.9 +0.5**
QZH LR LR
comp=Z,350nm,15.2s
QZH LR LR
comp=Z,570nm,20.0s
JTU Tsushima 47.23 331 P **P 19 18 44.1 -0.3**
JTU lAmb lAmb 19 20 14.6
comp=Z,82nm,1.3s
CBJI Citeko 47.67 267 P **P 19 18 49.7 +1.5**
comp=Z,2µmcomp=Z,166nm,0.9s
DBJI Dramaga 47.76 267 P **P 19 18 52.7 +3.7**
XMAS Kiritimati 48.37 82 P **P 19 18 53.5 -0.1**
JTM Tenmabayashi 48.59 346 P **P 19 18 54.8 0.0**
JTM lAmb lAmb 19 20 06.9
comp=Z,77nm,1.3s
PPBI Pangkal Pinang 48.72 273 P **P 19 19 00.8 +4.5**
XMIS Christmas Isla 48.78 262 P **P 19 18 55.7 -1.1**
SSE Sheshan 49.21 321 P P 19 19 04.8 +5.0
SSE S **S 19 26 05.3 +4.2**
SSE pmax pmax
comp=Z,8.0nm,0.7s
SSE pmax pmax
comp=Z,97nm,3.3s
SSE LR LR
comp=Z,180nm,26.9s
SSE LR LR
comp=Z,150nm,30.6s
DLV T Lat 49.54 291 P **P 19 19 02.4 -0.4**
DLV lAmb lAmb 19 19 05.7
comp=Z,91nm,1.4s
TJN Taejon 49.70 331 *i* P **P 19 19 02.7 -0.7**
KASI Kota Agung 50.05 268 P **P 19 19 06.1 -0.4**
comp=Z,782nmcomp=Z,72nm,0.8s
KSRS Korea Array 50.30 332 P **P 19 19 07.3 -0.6**
comp=Z,16nm,0.8s,baz=149,slow=7.6,SNR=43
KSRS LR LR 19 40 06.8
comp=Z,122nm,19.1s,baz=144,slow=36
KSAR Wonju Array Be 50.31 332 P **P 19 19 06.3 -1.7**
KSAR Wonju Array Be 50.31 332 P **P 19 19 06.2 -1.7**
KS19 Wonju Array Si 50.37 332 P **P 19 19 07.3 -1.1**
LWLI Liwa 50.52 269 P **P 19 19 11.6 +1.4**
comp=Z,78nm,0.9s
INCN Inchon 50.94 331 P **P 19 19 12.9 +0.1**
INCN pmax pmax
comp=Z,71nm,0.9s
INCN Inchon 50.94 331 P **P 19 19 12.9 +0.1**
QIZ Qiongzhong 50.99 301 P **P 19 19 12.6 -0.9**
QIZ S **S 19 26 25.1 -1.2**
QIZ pmax pmax
comp=Z,29nm,2.3s
QIZ pmax pmax
comp=Z,310nm,2.7s
QIZ LR LR
comp=Z,540nm,17.5s
QIZ LR LR
comp=Z,690nm,28.0s
QIZ Qiongzhong 50.99 301 P **P 19 19 15.0 +1.5**
NJ2 Nanjing 51.32 320 *eP* **P 19 19 16.1 +0.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,350nm,11.8s
NJ2 LR LR
comp=Z,280nm,11.4s
NJ2 LR LR
comp=Z,380nm,18.0s
JKA Kamikawa-asahi 51.44 349 P **P 19 19 17.0 +0.6**
JKA lAmb lAmb 19 20 22.0
comp=Z,90nm,1.4s
ASAJ Asahikawa 51.44 349 LR LR 19 39 14.3
comp=Z,756nm,20.1s,baz=177,slow=34
MYKOM Kota Tinggi 51.53 277 P **P 19 19 17.7 0.0**
MYKOM lAmb lAmb 19 19 20.1
comp=Z,42nm,0.9s
MYKOM Kota Tinggi 51.53 277 P **P 19 19 18.0 +0.4**
MSHR Mys Shultsa 53.26 338 *i* P **P 19 19 29.8 -0.1**
MSHR pmax pmax
comp=Z,10.0nm,1.1s
WHN Wuhan 53.37 316 ⇓P **P 19 19 32.9 +2.0**
WHN S **S 19 27 04.3 +5.8**
WHN pmax pmax
comp=Z,120nm,1.2s
WHN LR LR
comp=Z,180nm,3.9s
WHN LR LR
comp=Z,680nm,10.9s
WHN LR LR
comp=Z,2µm,30.6s
UBPT Khong Chiam 53.42 294 P **P 19 19 32.2 +0.6**
UBPT lAmb lAmb 19 20 16.3
comp=Z,48nm,1.3s
SDSI Sungai Dareh 53.54 274 P **P 19 19 33.4 +0.9**
comp=Z,1µmcomp=Z,124nm,0.8s
BKNI Bangkinang 54.09 275 P **P 19 19 35.6 -1.0**
BKNI Bangkinang 54.09 275 P **P 19 19 37.2 +0.7**
comp=Z,2µmcomp=Z,213nm,0.8s
YSS Yuzh-Sakhalins 54.15 350 *eP* **P 19 19 37.4 +1.1**
YSS *e* 19 21 35.2
YSS *eS* **S 19 27 05.1 -3.4**
YSS *eSS* **SS 19 30 54.6 +3.4**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=N,400nm,15.0s
YSS MLR MLR
comp=Z,800nm,15.0s
USA0B Ussuriysk Arra 54.38 340 ⇓*i* P **P 19 19 38.9 +0.9**
USRK Ussuriysk Ar. 54.38 340 LR LR 19 41 15.0
comp=Z,190nm,21.1s,baz=143,slow=34
USRK Ussuriysk Ar. 54.38 340 P **P 19 19 38.4 +0.3**
DL2 Dalian 54.54 328 P **P 19 19 39.6 +0.3**
DL2 *eS* **S 19 27 14.8 +0.8**
DL2 sS **sS 19 27 41.6 +1.6**
DL2 pmax pmax
comp=Z,44nm,0.8s
DL2 pmax pmax
comp=Z,120nm,5.8s
DL2 LR LR
comp=Z,360nm,23.5s
DL2 LR LR
comp=Z,330nm,20.9s
DL2 LR LR
comp=Z,600nm,21.5s
IPM Ipoh 54.78 280 P **P 19 19 40.5 -1.0**
IPM Ipoh 54.78 280 P **P 19 19 41.0 -0.6**
KHU Kahuku 55.03 61 P **P 19 19 44.4 +0.9**
KHU pmax pmax
comp=Z,288nm,1.1s
KHU Kahuku 55.03 61 P **P 19 19 44.4 +0.9**
TIA Tai'an 55.16 323 P **P 19 19 43.8 -0.1**
TIA S **S 19 27 16.6 -5.9**
TIA pmax pmax
comp=Z,19nm,1.2s
TIA LR LR
comp=Z,220nm,25.5s
TIA LR LR
comp=Z,340nm,24.5s
TIA LR LR
comp=Z,450nm,33.3s
MLOA Mauna Loa Obse 55.18 61 P **P 19 19 45.9 +1.1**
AIN Ainahou 55.22 61 P **P 19 19 47.2 +2.4**
HMH Humu'ula Sheep 55.28 61 P **P 19 19 47.2 +1.8**
POHA Pohakuloa 55.30 61 P **P 19 19 46.0 +0.6**
PPT2 Papeete2 55.34 107 *eS* **S 19 27 24.8 -0.8**
comp=Z,308nm,24.8s
PPT2 eLQ LQ 19 33 36.5
comp=Z,1µm,33.8s
PPT2 eLR LR 19 36 04.3
comp=Z,843nm,26.8s,baz=283
MDJ Mudanjiang 55.59 338 P P 19 19 41.8 -5.0
MDJ pmax pmax
comp=Z,63nm,1.3s
MDJ pmax pmax
comp=Z,280nm,10.3s
MNSI Mandailing Nat 55.60 275 P **P 19 19 46.3 -1.1**
comp=Z,1µmcomp=Z,155nm,0.8s
TBI Tubuai 56.08 114 *eS* **S 19 27 34.8 -0.4**
comp=Z,257nm,28.5s
TBI *eLQ* LQ 19 33 55.9
comp=Z,431nm,43.5s
TBI *eLR* LR 19 36 25.0
comp=Z,2µm,29.0s,baz=283
SRAK Srakaew 56.15 291 P **P 19 19 49.0 -2.3**
comp=Z,1µmcomp=Z,108nm,0.7s
RPSI Rantau Prapat 56.53 277 P **P 19 19 52.5 -1.6**
RPSI lAmb lAmb 19 19 56.1
comp=Z,101nm,1.7s
PSI Prapat 56.55 278 P **P 19 19 52.5 -1.9**
PSI pmax pmax
comp=Z,101nm,1.7s
ENH Enshi 56.69 313 P **P 19 19 53.9 -1.0**
ENH lAmb lAmb 19 19 56.8
comp=Z,28nm,0.8s
CHAI Chaiyaphum 56.79 294 P **P 19 19 57.7 +1.8**
SKR Severo-Kuril's 56.82 1 *eP* **P 19 19 54.1 -1.3**
SKR *eS* **S 19 27 51.1 +7.2**
SKR pmax pmax
comp=Z,56nm,2.9s
SKR MLR MLR
comp=Z,400nm,16.0s
PATY Pattaya 56.93 290 P **P 19 19 59.0 +2.1**
comp=Z,3µmcomp=Z,62nm,0.9s
GYA Guiyang 56.94 307 ⇑P **P 19 19 58.3 +1.4**
GYA sP sP 19 20 24.3 +4.1
GYA S **S 19 27 49.8 +3.1**
GYA ScS **ScS 19 29 34.4 -6.7**
GYA pmax pmax
comp=Z,4.0nm,1.2s
GYA pmax pmax
comp=Z,37nm,4.9s
GYA LR LR
comp=Z,110nm,21.2s
SLVN Son La 57.02 300 P **P 19 19 57.2 -0.3**
KRAB Krabi 57.33 284 P P 19 20 10.4 +11
comp=Z,51µmcomp=Z,710nm,0.5s
GSI Gunungsitoli 57.66 276 P **P 19 20 00.3 -1.8**
GSI Gunungsitoli 57.66 276 P **P 19 20 01.6 -0.4**
comp=Z,138nm,0.8s
SURT Suratani 57.89 285 P P 19 20 11.4 +7.8
comp=Z,0.8nm,1.2s
PHET Kaeng Krachan 58.08 289 P **P 19 20 07.2 +2.2**
comp=Z,957nmcomp=Z,130nm,0.8s
BJI Beijing 58.31 326 P **P 19 20 04.0 -2.1**
BJI pmax pmax
comp=Z,44nm,0.9s
PHIT Phitsanulok 58.63 294 P **P 19 20 10.0 +1.3**
comp=Z,4µmcomp=Z,546nm,0.8s
UTTA Uttaradit 58.68 295 P **P 19 20 10.0 +0.9**
comp=Z,2µmcomp=Z,214nm,0.8s
NANT Nan 58.90 296 P **P 19 20 11.1 +0.4**
comp=Z,27µmcomp=Z,3µm,1.0s
KLR Kul'dur 58.91 343 LR LR 19 43 31.9
comp=Z,263nm,21.5s,baz=152,slow=34
KLR Kul'dur 58.91 343 *i* P **P 19 20 10.8 +0.7**
KLR pmax pmax
comp=Z,19nm,0.9s
SRDT SRDT 58.96 291 P **P 19 20 12.9 +1.9**
comp=Z,51nm,1.2s
UTHA Uthaitani 59.01 292 P **P 19 20 12.0 +0.6**
XAN Xi'an 59.14 316 pmax pmax
comp=Z,38nm,0.9s
XAN Xi'an 59.14 316 P **P 19 20 11.2 -0.9**
XAN lAmb lAmb 19 20 13.5
comp=Z,38nm,0.9s
XAN Xi'an 59.14 316 PKIKP **P 19 20 11.2 -0.9**
PET Petropavlovsk 59.25 3 *eP* **P 19 20 13.2 +0.9**
PET *e**PP **sP 19 20 34.1 -2.2**
PET *eS* **S 19 28 15.9 +0.4**
PET pmax pmax
comp=Z,128nm,0.7s
PET Petropavlovsk 59.25 3 P **P 19 20 12.8 +0.5**
PEA0B Petropavlovsk- 59.29 2 *i* P **P 19 20 13.2 +0.5**
PEA0B Petropavlovsk- 59.29 2 *i* P **P 19 20 13.2 +0.5**
PETK Petropavlovsk- 59.29 2 P **P 19 20 13.3 +0.6**
comp=Z,54nm,0.7s,baz=165,slow=6.8,SNR=24
PETK LR LR 19 42 01.3
comp=Z,752nm,21.9s,baz=182,slow=32
PETK Petropavlovsk- 59.29 2 P **P 19 20 12.9 +0.3**
SUKH Sukhothai 59.43 294 P **P 19 20 15.6 +1.3**
comp=Z,2µmcomp=Z,250nm,0.8s
KMI Kunming 59.53 304 P **P 19 20 15.2 +0.1**
KMI pmax pmax
comp=Z,77nm,0.9s
KMI Kunming 59.53 304 P **P 19 20 15.2 +0.1**
KHLT Khaolaem Dam 59.58 291 P **P 19 20 17.2 +1.9**
comp=Z,64nm,1.1s
UMPA Umpang Tak 59.74 293 P **P 19 20 18.1 +1.6**
comp=Z,1µmcomp=Z,127nm,0.9s
LAMP Lampang 59.77 296 P **P 19 20 13.7 -2.9**
comp=Z,2µmcomp=Z,325nm,0.8s
CM31 Chiang Mai Arr 60.36 295 P **P 19 20 21.2 +0.5**
CMAR Chiang Mai Arr 60.36 295 P **P 19 20 21.7 +1.0**
comp=Z,110nm,0.8s,baz=123,slow=5.1,SNR=165
CMAR LR LR 19 45 14.4
comp=Z,232nm,21.4s,baz=154,slow=35
CMAR PKPPKP **P'P'df 19 49 45.4 +1.4**
comp=Z,0.6nm,0.8s,baz=284,slow=4.3,SNR=6.1
CMAR Chiang Mai Arr 60.36 295 P **P 19 20 21.1 +0.4**
CMAR Chiang Mai Arr 60.36 295 P **P 19 20 21.1 +0.4**
CMMT Chiang Mai 60.47 296 P **P 19 20 21.1 -0.4**
comp=Z,465nmcomp=Z,57nm,1.1s
CM33 Chiang Mai Arr 60.48 296 P **P 19 20 22.0 +0.5**
CHTO Chiang Mai 60.48 296 P **P 19 20 20.9 -0.6**
CHTO pmax pmax
comp=Z,112nm,1.1s
CHTO Chiang Mai 60.48 296 P **P 19 20 20.9 -0.6**
CM32 Chiang Mai Arr 60.51 295 P **P 19 20 23.0 +1.3**
SMY Shemya 61.10 13 P **P 19 20 26.0 +1.0**
SMY pmax pmax
comp=Z,298nm,1.5s
SMY Shemya 61.10 13 P **P 19 20 26.0 +1.0**
MHMT Maesarieng 61.19 295 P **P 19 20 27.5 +1.2**
comp=Z,1µmcomp=Z,147nm,0.8s
AMKA Amchitka 61.23 17 P **P 19 20 26.9 +1.0**
CD2 Chengdu 61.28 310 P **P 19 20 26.8 0.0**
CD2 S **S 19 28 42.0 -0.5**
CD2 pmax pmax
comp=Z,80nm,0.6s
CD2 pmax pmax
comp=Z,260nm,8.8s
CD2 LR LR
comp=Z,380nm,10.2s
CD2 LR LR
comp=Z,560nm,20.0s
CD2 LR LR
comp=Z,640nm,21.6s
HHC Hu-ho-hao-te 61.49 324 *eP* **P 19 20 29.0 +1.0**
HHC S **S 19 28 43.9 -1.1**
HHC sS sS 19 29 12.8 0.0
HHC SS **SS 19 32 46.0 -1.1**
HHC pmax pmax
comp=Z,22nm,1.2s
HHC pmax pmax
comp=Z,150nm,5.9s
HHC LR LR
comp=Z,230nm,19.6s
HHC LR LR
comp=Z,240nm,17.9s
HHC LR LR
comp=Z,400nm,17.9s
ADK Adak 62.93 19 P **P 19 20 38.4 +1.1**
ADK pmax pmax
comp=Z,114nm,0.8s
ADK Adak 62.93 19 P **P 19 20 38.4 +1.1**
HIA Hailar 63.28 335 *i* P **P 19 20 40.4 +0.6**
HIA pmax pmax
comp=Z,47nm,0.8s
HIA Hailar 63.28 335 P **P 19 20 39.6 -0.2**
HIA lAmb lAmb 19 20 41.6
comp=Z,44nm,0.9s
LZH Lanzhou 63.75 315 *eP* **P 19 20 45.1 +1.8**
LZH pP pP 19 21 00.5 +0.7
LZH sP sP 19 21 07.1 +0.4
LZH S **S 19 29 12.5 -1.1**
LZH sS sS 19 29 43.5 +2.0
LZH pmax pmax
comp=Z,56nm,1.2s
LZH pmax pmax
comp=Z,200nm,8.1s
LZH LR LR
comp=Z,330nm,20.6s
LZH LR LR
comp=Z,410nm,19.5s
LZH LR LR
comp=Z,320nm,20.1s
ATKA Atka Island 64.04 21 P **P 19 20 45.1 +0.5**
ZEA Zeya 64.22 342 *eP* **P 19 20 45.9 +0.1**
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,1.1s
TAOE Nuku Hiva Isla 64.43 97 *e*LR LR 19 40 08.0
comp=Z,491nm,23.3s
TAOE Nuku Hiva Isla 64.43 97 P **P 19 20 47.7 -0.4**
MA2 Magadan 65.80 358 *i* P **P 19 20 56.4 +0.4**
MA2 pmax pmax
comp=Z,47nm,0.9s
MA2 Magadan 65.80 358 P **P 19 20 55.4 -0.6**
NIKH Nikolski High 66.63 23 P 19 21 01.8
baz=220
NIKH Nikolski High 66.63 23 P **P 19 21 01.4 +0.1**
CASY Casey 67.14 198 P **P 19 21 04.2 -0.3**
CASY lAmb lAmb 19 21 06.8
comp=Z,18nm,0.8s
GTA Gaotai 68.17 317 ⇓P **P 19 21 12.3 +0.7**
GTA S **S 19 30 07.8 +0.6**
GTA sS sS 19 30 34.6 -0.9
GTA SS **SS 19 34 35.4 +4.2**
GTA pmax pmax
comp=Z,19nm,1.1s
GTA pmax pmax
comp=Z,110nm,8.0s
GTA LR LR
comp=Z,180nm,18.5s
GTA LR LR
comp=Z,220nm,19.3s
GTA LR LR
comp=Z,350nm,20.7s
ULN Ulaanbaatar 68.38 328 *i* P **P 19 21 13.6 +0.8**
ULN pmax pmax
comp=Z,17nm,0.9s
ULN Ulaanbaatar 68.38 328 P **P 19 21 13.0 +0.2**
ULN lAmb lAmb 19 21 15.2
comp=Z,22nm,0.9s
SONM Songino Array 68.72 327 P **P 19 21 14.9 0.0**
comp=Z,18nm,0.8s,baz=143,slow=5.1,SNR=14
SONM PKPPKP 19 49 31.3
comp=Z,1.7nm,0.9s,baz=302,slow=2.7,SNR=11
SONM LR LR 19 53 06.5
comp=Z,209nm,18.7s,baz=128,slow=37
SONM Songino Array 68.72 327 P **P 19 21 16.7 +1.9**
SONM pmax pmax
comp=Z,10.0nm,0.8s
SONM Songino Array 68.72 327 P **P 19 21 16.7 +1.9**
SHL Shillong 68.83 300 P **P 19 21 15.7 -0.4**
SHL pmax pmax
comp=Z,98nm,0.8s
SHL Shillong 68.83 300 P **P 19 21 15.7 -0.4**
SEY Seymchan 69.12 359 *i* P **P 19 21 17.9 +1.1**
SPIA Saint Paul Isl 69.42 19 P 19 21 19.5
baz=217
SPIA Saint Paul Isl 69.42 19 P **P 19 21 19.4 +0.6**
FALS False Pass 70.19 24 P 19 21 24.0
baz=225
FALS False Pass 70.19 24 P **P 19 21 23.9 +0.4**
LSA Lhasa 70.78 304 P **P 19 21 28.2 -0.1**
LSA pmax pmax
comp=Z,15nm,0.8s
LSA Lhasa 70.78 304 P **P 19 21 28.2 -0.1**
YAK Yakutsk 70.91 348 *eP* **P 19 21 27.8 +0.1**
YAK *e**PP **pP 19 21 42.5 -2.3**
YAK *eS* **S 19 30 39.1 +0.9**
YAK *e**SS **sS 19 31 06.1 -1.0**
YAK *e* 19 31 16.4
YAK pmax pmax
comp=Z,58nm,1.0s
YAK pmax pmax
comp=N,17nm,1.2s
YAK smax smax
comp=N,90nm,3.3s
YAK smax smax
comp=E,101nm,3.8s
YAK Yakutsk 70.91 348 P **P 19 21 26.9 -0.8**
YAK lAmb lAmb 19 21 30.4
comp=Z,51nm,1.0s
VNDA Vanda 71.22 178 P **P 19 21 29.9 +0.4**
comp=Z,8.7nm,0.8s,baz=328,slow=6.9,SNR=34
VNDA Vanda 71.22 178 P **P 19 21 29.8 +0.3**
SBA Scott Base 71.73 177 P **P 19 21 33.8 +1.2**
SBA pmax pmax
comp=Z,20nm,1.1s
SBA Scott Base 71.73 177 P **P 19 21 33.8 +1.2**
SDPT Sand Point 71.75 25 P 19 21 33.7
baz=227
ZAK Zakamensk 71.87 328 *eP* **P 19 21 32.2 -1.8**
ZAK pmax pmax
comp=Z,35nm,1.0s
BOD Bodaibo 71.97 338 *eP* **P 19 21 31.1 -3.2**
BOD pmax pmax
comp=Z,18nm,1.1s
TLY Talaya 72.44 329 *ceP* **P 19 21 38.9 +1.7**
TLY pmax pmax
comp=Z,10.0nm,1.0s
TLY Talaya 72.44 329 P **P 19 21 37.9 +0.6**
TAPN Taplejung 72.94 301 *eP* **P 19 21 41.9 +0.8**
comp=Z,40nm,0.6s
ODAN Odare 73.07 300 *eP* **P 19 21 43.1 +1.3**
comp=Z,86nm,0.6s
RAMN Ramite 73.77 300 *eP* **P 19 21 47.2 +1.3**
comp=Z,25nm,0.5s
JIRN Jiri 74.32 301 *eP* **P 19 21 49.9 +0.6**
comp=Z,53nm,0.6s
GAMB Gambell 74.35 15 P 19 21 48.7
baz=215,SNR=22
GAMB Gambell 74.35 15 P **P 19 21 48.4 +0.3**
GAMB lAmb lAmb 19 21 51.0
comp=Z,37nm,0.9s
GUN Gumba 74.65 301 *eP* **P 19 21 51.2 0.0**
comp=Z,144nm,0.6s
BILL Bilibino 74.67 4 *d i*P **P 19 21 50.1 +0.2**
BILL *e* 19 22 04.5
BILL *e* 19 24 41.8
BILL *i* S **S 19 31 26.6 +5.8**
BILL pmax pmax
comp=Z,66nm,0.9s
BILL MLR MLR
comp=Z,146nm,18.0s
BILL Bilibino 74.67 4 P **P 19 21 49.5 -0.4**
PKI Pulchoki 74.96 301 *eP* **P 19 21 52.6 -0.3**
comp=Z,45nm,0.7s
PKIN Phulchoki 74.97 301 *eP* **P 19 21 52.3 -0.6**
comp=Z,46nm,0.7s
KKN Kakani 75.13 301 *eP* **P 19 21 53.4 -0.4**
comp=Z,87nm,0.7s
PALK Pallekele 75.17 279 P **P 19 21 53.8 -0.3**
PALK pmax pmax
comp=Z,58nm,0.9s
PALK Pallekele 75.17 279 P **P 19 21 53.8 -0.3**
PALK lAmb lAmb 19 21 56.9
comp=Z,58nm,0.8s
DMN Daman 75.23 301 *eP* **P 19 21 54.4 0.0**
comp=Z,98nm,0.7s
SII Sitkinak Islan 75.24 26 P 19 21 53.9
baz=233
GKN Gorkha 75.73 301 *eP* **P 19 21 56.8 -0.4**
comp=Z,81nm,0.7s
OHAK Old Harbor 76.03 26 P 19 21 59.0
baz=234
OHAK Old Harbor 76.03 26 P **P 19 21 58.3 +0.4**
OHAK lAmb lAmb 19 22 02.6
comp=Z,20nm,0.7s
KOLN Koldanda 76.56 300 *eP* **P 19 22 01.5 -0.4**
comp=Z,96nm,0.7s
DANN Dangsing 76.57 301 *eP* **P 19 22 01.3 -0.8**
comp=Z,110nm,0.8s
KDAK Kodiak Island 76.67 26 P 19 22 02.7
baz=234
ANM Nome 76.67 17 P 19 22 02.1
baz=221,SNR=12
ANM Nome 76.67 17 P **P 19 22 01.0 -0.5**
ANM pmax pmax

ANM Nome 76.67 17 P P 19 22 01.0 -0.5
ANM IAmb IAmb 19 22 04.6
comp=Z,41nm,0.8s
TNA Tin City 76.75 15 P 19 22 02.9
baz=218
TNA Tin City 76.76 15 P P 19 22 02.5 +0.6
TNA IAmb IAmb 19 22 05.0
comp=Z,24nm,0.8s
HOM Homer 78.16 25 P 19 22 11.0
baz=235
WMQ Urumqi 78.25 317 *eP* P 19 22 11.6 +0.7
WMQ pP pP 19 22 27.8 -0.3
WMQ sP sP 19 22 37.0 +2.0
WMQ pmax pmax
comp=Z,41nm,1.1s
WMQ pmax pmax
comp=Z,240nm,6.5s
WMQ LR LR
comp=Z,270nm,23.1s
WMQ LR LR
comp=Z,500nm,24.9s
WMQ LR LR
comp=Z,570nm,25.9s
CNPM China Poot 78.25 25 P P 19 22 10.6 +0.1
BRLK Bradley Lake 78.54 25 P P 19 22 12.1 +0.1
BRLK IAmb IAmb 19 22 38.6
comp=Z,40nm,1.1s
BRSE Bradley Lake S 78.58 25 P 19 22 12.9
baz=236
SKT Skwentna 79.56 23 P 19 22 17.2
baz=234
SKT Skwentna 79.56 23 P P 19 22 16.5 -1.0
SUA Susitna One 79.56 23 P 19 22 17.8
baz=235
SUA Susitna One 79.56 23 P P 19 22 17.3 -0.4
SUA IAmb IAmb 19 22 21.3
comp=Z,22nm,0.7s
TIXI Tiksi 79.71 352 P P 19 22 17.4 -0.7
TIXI pmax pmax
comp=Z,9.0nm,1.0s
TIXI Tiksi 79.71 352 P P 19 22 17.4 -0.7
RC01 Rabbit Creek A 79.75 24 P 19 22 18.5
baz=236,SNR=5.8
RC01 Rabbit Creek A 79.76 24 P P 19 22 18.5 -0.1
RC01 IAmb IAmb 19 22 36.0
comp=Z,35nm,1.0s
PPLA Purkeypile 79.85 22 P P 19 22 18.8 -0.5
PPLA Purkeypile 79.85 22 P 19 22 19.7
baz=234
RDOG Red Dog Mine 79.95 15 P 19 22 20.2
baz=223
RDOG Red Dog Mine 79.95 15 P P 19 22 19.5 0.0
RDOG IAmb IAmb 19 22 22.6
comp=Z,42nm,0.7s
PWL Port Wells 80.20 25 IAmb IAmb 19 22 38.7
comp=Z,51nm,0.9s
PMR Palmer 80.28 24 P 19 22 21.5
baz=237,SNR=6.6
CHUM Lake Minchumin 80.39 21 P 19 22 22.0
baz=234,SNR=19
KNK Knik Glacier 80.45 24 P 19 22 22.5
baz=237
GHO Glory Hole Cre 80.46 24 P P 19 22 22.1 -0.4
GHO IAmb IAmb 19 22 56.8
comp=Z,27nm,1.0s
DGZ Jazzator, Alta 80.54 323 *i* P P 19 22 21.7 -1.6
DGZ pmax pmax
comp=Z,23nm,0.8s
KTH Kantishna Hill 80.70 22 P P 19 22 22.5 -1.2
SML Sawmill 80.71 24 P 19 22 24.0
baz=238,SNR=20
GLI Glacier Island 80.73 25 P P 19 22 24.3 +0.4
GLI IAmb IAmb 19 22 41.4
comp=Z,42nm,0.9s
GLI Glacier Island 80.73 25 P 19 22 23.7
baz=239
TRF Thorofare Moun 80.87 22 P 19 22 24.0
baz=236,SNR=9.2
BPAW Bear Paw Mtn. 80.99 21 P P 19 22 24.3 -0.9
BPAW Bear Paw Mtn. 80.99 21 P 19 22 24.4
baz=235,SNR=10
EYAK Cordova Ski Ar 81.13 26 P 19 22 25.7
baz=240
SCM Sheep Creek Mo 81.13 24 P P 19 22 26.5 +0.4
SCM pmax pmax
comp=Z,41nm,1.0s
SCM Sheep Creek Mo 81.13 24 P P 19 22 26.4 +0.4
SCM IAmb IAmb 19 22 50.3
comp=Z,41nm,1.0s
IMAR Indian Mountai 81.18 19 P P 19 22 26.1 0.0
WAT2 Susitna Watana 81.24 23 P 19 22 26.5
baz=237
ZSN Zaisan 81.36 320 *eP* P 19 22 26.5 -1.1
comp=Z,6.4nm,0.8s,baz=320
ZSN Zaisan 81.36 320 *eP* P 19 22 26.4 -1.1
ZSN pmax pmax
comp=Z,6.0nm,0.8s
WAT6 Susitna Watana 81.36 23 P 19 22 27.3
baz=238,SNR=16
RND Reindeer 81.38 22 IAmb IAmb 19 22 30.9
comp=Z,27nm,0.7s
KAIM Kayak Island 81.40 26 P 19 22 27.5
baz=241
KLU Klutina 81.53 25 P 19 22 28.6
baz=240,SNR=12
KLU Klutina 81.53 25 P P 19 22 28.7 +0.5
KLU IAmb IAmb 19 22 46.3
comp=Z,33nm,0.9s
MCK McKinley 81.53 22 P 19 22 27.3
baz=237,SNR=33
MCK McKinley 81.53 22 IAmb IAmb 19 22 31.6
comp=Z,55nm,0.8s
BWN Browne 81.58 21 P P 19 22 28.9 +0.6
MLY Manley 81.62 20 P 19 22 28.1
baz=235,SNR=28
MLY Manley 81.62 20 IAmb IAmb 19 22 30.8
comp=Z,17nm,0.6s
M24K Tolsona, Glenn 81.74 24 P 19 22 29.0
baz=239,SNR=9.1
M24K Tolsona, Glenn 81.74 24 IAmb IAmb 19 22 33.9
comp=Z,51nm,1.0s
BMRM Bremner River 81.83 25 P P 19 22 30.7 +0.9
BMRM IAmb IAmb 19 22 35.8
comp=Z,45nm,1.2s
BMRM Bremner River 81.83 25 P 19 22 29.6
baz=241,SNR=8.6
NEA2 Nenana 81.96 21 P 19 22 29.4
baz=236,SNR=16
N25K Chitina, Valde 82.14 25 IAmb IAmb 19 22 49.6
comp=Z,100nm,1.8s
N25K Chitina, Valde 82.14 25 P 19 22 31.8
baz=241,SNR=6.7
I23K Minto, Yukon-K 82.17 21 P P 19 22 31.3 0.0
I23K Minto, Yukon-K 82.17 21 P 19 22 31.4
baz=236,SNR=8.8
GLB Gilahina Butte 82.39 25 P P 19 22 33.4 +0.7
GLB IAmb IAmb 19 22 50.5
comp=Z,31nm,0.9s
VRDI Verde Repeater 82.44 25 P P 19 22 32.5 -0.6
VRDI IAmb IAmb 19 22 50.4
comp=Z,26nm,1.0s
PAX Paxson 82.46 23 P 19 22 33.0
baz=240
MDM Murphy Dome 82.46 21 P P 19 22 32.5 -0.5
TCOL CIGO, UAF Yank 82.55 21 P P 19 22 32.5 -0.8
TCOL IAmb IAmb 19 22 36.5
comp=Z,31nm,0.8s
TCOL CIGO, UAF Yank 82.55 21 P 19 22 32.9
baz=238
COLA College 82.55 21 P P 19 22 32.8 -0.6
COLA pmax pmax
comp=Z,32nm,0.8s
COLA College 82.55 21 P P 19 22 32.8 -0.6
COLA IAmb IAmb 19 22 36.5
comp=Z,32nm,0.8s
COLA College 82.55 21 P 19 22 33.0
baz=238
HDA Harding Lake 82.63 22 P 19 22 33.0
baz=238
HDA P 19 22 33.0
baz=238
MCARA McCarthy VSAT 82.70 25 P 19 22 33.9
baz=242
MCARA McCarthy VSAT 82.70 25 IAmb IAmb 19 22 40.7
comp=Z,46nm,1.0s
MK31 Makanchi Array 82.82 319 P P 19 22 34.6 -0.6
MK31 pmax pmax
comp=Z,36nm,0.9s
MK31 Makanchi Array 82.82 319 P P 19 22 34.6 -0.6
MK31 IAmb IAmb 19 22 37.5
comp=Z,36nm,0.9s
MKAR Makanchi Array 82.82 319 P P 19 22 34.9 -0.4
comp=Z,40nm,0.8s,baz=98,slow=5.7,SNR=67
MKAR PKKPbc **PKKPbc** 19 40 58.0 -2.6
comp=Z,0.3nm,0.7s,baz=354,slow=1.2,SNR=3.9
MKAR LR LR 19 59 49.2
comp=Z,179nm,20.4s,baz=102,slow=36
MKAR Makanchi Array 82.82 319 P P 19 22 34.4 -0.9
POKR Poker Plat Res 82.83 21 P 19 22 34.1
baz=238
ILAR Eielson Array 82.85 22 P P 19 22 33.5 -1.4
comp=Z,8.2nm,0.6s,baz=249,slow=3.9,SNR=60
ILAR LR LR 19 54 52.4
comp=Z,1µm,21.6s,baz=250,slow=32
MAKZ Makanchi 83.03 319 P P 19 22 34.5 -1.8
MAKZ pmax pmax
comp=Z,56nm,0.9s
MAKZ Makanchi 83.03 319 P P 19 22 34.5 -1.8
COLD Coldfoot 83.06 19 P P 19 22 36.3 +0.3
COLD Coldfoot 83.06 19 P 19 22 36.3
baz=235,SNR=17
TABL Table Mountain 83.09 27 P P 19 22 37.6 +1.0
TABL IAmb IAmb 19 22 54.4
comp=Z,27nm,0.8s
BARN Barnard Glacie 83.14 26 P P 19 22 38.1 +1.4
BARN IAmb IAmb 19 22 39.8
comp=Z,56nm,1.4s
MENT Mentasta 83.14 24 P P 19 22 36.8 +0.3
CTG Chitna Glacier 83.23 26 P 19 22 35.9
baz=244
CTGM Chitina Glacie 83.24 26 IAmb IAmb 19 23 02.1
comp=Z,33nm,0.9s
LOGN Logan Glacier 83.32 26 IAmb IAmb 19 22 44.9
comp=Z,29nm,1.0s
PCA Pinnacle 83.34 27 IAmb IAmb 19 23 02.0
comp=Z,38nm,0.9s
PINM Pinnacle 83.34 27 P 19 22 37.5
baz=245
DOT Dot Lake 83.35 23 P P 19 22 37.5 -0.1
DOT IAmb IAmb 19 23 07.5
comp=Z,21nm,0.9s
SCRK Sand Creek 83.54 23 P 19 22 38.5
baz=241,SNR=18
ZAA0 Zalesovo Array 83.56 326 IAmb IAmb 19 22 39.4
comp=Z,31nm,0.8s
ZALV Zalesovo Beam 83.56 326 P P 19 22 37.3 -1.5
comp=Z,35nm,0.8s,baz=112,slow=5.1,SNR=36
ZALV LR LR 19 59 53.8
comp=Z,83nm,21.0s,baz=98,slow=36
ZALV Zalesovo Beam 83.56 326 P P 19 22 37.1 -1.7
BCPM Bancas Point 83.57 27 P P 19 22 39.6 +0.9
QSPA South Pole Qui 83.61 180 P P 19 22 39.1 0.0
PRP Porcupine Dome 83.73 21 P 19 22 39.0
baz=240
SHLS Shalkode 83.76 315 *eP* P 19 22 37.9 -2.3
comp=Z,12nm,1.2s,baz=315
SHLS Shalkode 83.76 315 *eP* P 19 22 37.9 -2.3
SHLS pmax pmax
comp=Z,12nm,1.2s
A21K Barrow 83.81 14 IAmb IAmb 19 22 41.9
comp=Z,47nm,0.9s
A21K Barrow 83.81 14 P 19 22 39.4
baz=229
L27K Beaver Creek, 83.97 24 P 19 22 41.3
baz=243,SNR=12
BCAR Beaver Creek A 83.98 24 P P 19 22 40.9 0.0
UZB Uzunbulak 84.07 314 *eP* P 19 22 41.1 -0.8
comp=Z,17nm,1.3s,baz=314
UZB Uzunbulak 84.07 314 *eP* P 19 22 41.0 -0.8
UZB pmax pmax
comp=Z,17nm,1.3s
TOLK Toolik Lake Re 84.07 18 IAmb IAmb 19 22 43.9
comp=Z,21nm,0.8s
TOLK Toolik Lake Re 84.07 18 P 19 22 41.5
baz=236
K27K Chicken 84.31 23 P P 19 22 43.6 +1.2
K27K IAmb IAmb 19 23 01.0
comp=Z,28nm,1.2s
KPKS Kokpek 84.38 315 *eP* P 19 22 42.7 -0.7
comp=Z,15nm,1.4s,baz=315
KPKS Kokpek 84.38 315 *eP* P 19 22 42.7 -0.7
KPKS pmax pmax
comp=Z,15nm,1.4s
SATY Saty 84.48 314 *eP* P 19 22 43.2 -0.7
comp=Z,4.9nm,0.6s,baz=314
SATY Saty 84.48 314 *eP* P 19 22 43.2 -0.7
SATY pmax pmax
comp=Z,5.0nm,0.6s
SIT Sitka 84.55 31 P 19 22 43.4
baz=250
HYT Haines Junctio 84.89 27 IAmb IAmb 19 23 04.0
comp=Z,33nm,0.9s
MAW Mawson 84.92 203 P P 19 22 46.0 +0.6
comp=Z,41nm,0.6s,baz=101,slow=5.6,SNR=59
MAW Mawson 84.92 203 P P 19 22 46.0 +0.6
baz=85,SNR=50
MAW Mawson 84.92 203 P P 19 22 46.0 +0.6
MAW Mawson 84.92 203 P P 19 22 45.3 -0.2
TDK Taldyqorghan 84.95 316 *eP* P 19 22 45.6 -0.6
comp=Z,26nm,1.3s,baz=316
TDK Taldyqorghan 84.95 316 *eP* P 19 22 45.5 -0.6
TDK pmax pmax
comp=Z,28nm,1.3s
EGAK Eagle 85.00 23 P 19 22 46.6
baz=244,SNR=11
EGAK Eagle 85.00 23 IAmb IAmb 19 23 03.8
comp=Z,31nm,1.1s
BMAR Burnt Mountain 85.02 20 P P 19 22 46.3 +0.4
CRAG Craig 85.18 33 P 19 22 47.5
baz=252
DAWY Dawson 85.39 24 P P 19 22 48.2 +0.3
SKAG Skagway 85.39 29 P 19 22 48.4
baz=249
MDOK Medeo 85.47 314 *eP* P 19 22 48.1 -0.8
baz=314
KSH Kashi 85.48 310 P P 19 22 50.5 +1.5
KSH pP pP 19 23 04.1 -2.4
KSH S **S** 19 33 22.3 +6.5
KSH pmax pmax
comp=Z,26nm,0.8s
KSH pmax pmax
comp=Z,170nm,2.8s
KSH LR LR
comp=Z,91nm,6.2s
KSH LR LR
comp=Z,75nm,5.1s
KSH LR LR
comp=Z,160nm,5.8s
TNSS Tian-Shan 85.52 314 *eP* P 19 22 49.1 -0.4
baz=314
TNSS Tian-Shan 85.52 314 *eP* P 19 22 49.1 -0.4
AAA Alma-Ata 85.58 314 *eP* P 19 22 49.0 -0.3
baz=314
AAA Alma-Ata 85.58 314 *eP* P 19 22 49.0 -0.3
ULHL Ulahol 85.85 313 P P 19 22 51.2 +0.3
SNR=24
WRAK Wrangell Islan 85.89 32 P 19 22 50.7
baz=252
WHY Whitehorse 86.03 28 P P 19 22 51.9 +0.6
TKM2 Tokmak 2 86.46 314 P P 19 22 53.6 -0.3
SNR=10
NIL Nilore 86.52 304 P P 19 22 53.1 -1.0
NIL pmax pmax
comp=Z,22nm,0.8s
NIL Nilore 86.52 304 P P 19 22 53.1 -1.0
NIL IAmb IAmb 19 22 59.3
comp=Z,22nm,0.8s
KBK Karagaybulak 86.87 313 P P 19 22 57.1 +1.2
SNR=7.0
CHMS Chumysh 87.08 314 P P 19 22 57.7 +1.0
SNR=12
UCH Uchtor 87.11 313 P P 19 22 58.8 +1.4
SNR=7.2
AAK Ala-Archa 87.20 313 P P 19 22 57.7 +0.2
SNR=10
AAK Ala-Archa 87.20 313 *i* P P 19 22 56.7 -0.7
AAK pmax pmax
comp=Z,32nm,0.8s
AAK Ala-Archa 87.20 313 P P 19 22 55.9 -1.6
AAK IAmb IAmb 19 22 59.2
comp=Z,12nm,0.8s
SGDS Sogindy 87.26 314 *eP* P 19 22 55.6 -2.1
comp=Z,6.6nm,1.4s,baz=314
SGDS Sogindy 87.26 314 *eP* P 19 22 55.5 -2.1
SGDS pmax pmax
comp=Z,7.0nm,1.4s
EPYK Eagle Plains 87.34 22 P P 19 22 57.6 +0.2
EPYK Eagle Plains 87.34 22 P 19 22 57.7
baz=248,SNR=34
DLBC Dease Lake 87.68 31 IAmb IAmb 19 23 02.7
comp=Z,22nm,1.1s
AML Almayashu 87.69 313 P P 19 22 56.8 -3.3
SNR=6.3
EKS2 Erkin-Say 87.72 313 P P 19 22 55.6 -4.4
SNR=5.9
J01E Myrtle Point 87.95 46 P 19 23 01.3
baz=259
BTLS Baital 87.98 316 *eP* P 19 23 00.2 -0.8
comp=Z,7.6nm,0.9s,baz=316
BTLS Baital 87.98 316 *eP* P 19 23 00.1 -0.8
BTLS pmax pmax
comp=Z,8.0nm,0.9s
GDXM Geysers 88.03 51 P P 19 23 02.5 +1.1
GDXM IAmb IAmb 19 23 05.7
comp=Z,16nm,0.9s
K02D Willamette Mer 88.06 47 P 19 23 02.5
baz=260
NRIK Noril'sk 88.09 341 P P 19 22 59.3 -1.6
comp=Z,25nm,0.7s,baz=108,slow=4.9,SNR=26
NRIK LR LR 20 04 21.8
comp=Z,258nm,19.4s,baz=90,slow=37
NRIK Noril'sk 88.09 341 *i* P P 19 22 58.8 -2.1
NRIK pmax pmax
comp=Z,32nm,0.9s
O02D Mt. Diablo Mer 88.27 49 P 19 23 03.8
baz=260
M02C Callahan 88.42 48 P 19 23 04.4
baz=260
I03D Drain, OR 88.47 46 P 19 23 04.9
baz=260
N02D Trinity Center 88.47 49 P 19 23 04.7
baz=260
HUMO Hull Mountain 88.56 47 P P 19 23 04.7 +1.0
HUMO IAmb IAmb 19 23 08.4
comp=Z,18nm,1.1s
L04D Klamath Falls 88.97 47 P 19 23 07.4
baz=261
O03E Paynes Creek 89.03 49 P 19 23 07.4
baz=261
H04D Lebanon 89.04 45 P 19 23 06.8
baz=260
ORV Oroville 89.15 50 P P 19 23 07.6 +1.1
ORV pmax pmax
comp=Z,9.0nm,0.8s
ORV Oroville 89.15 50 P P 19 23 07.6 +1.1
INK Inuvik 89.19 21 IAmb IAmb 19 23 08.1
comp=Z,15nm,1.1s
M04C Macdoel 89.24 48 P 19 23 08.4
baz=261
J04D Umpqua Nationa 89.28 47 P 19 23 08.6
baz=261
AFDM Forest Hills D 89.46 51 P P 19 23 08.7 +0.6
AFDM IAmb IAmb 19 23 12.3
comp=Z,17nm,0.8s
DZA Taraz 89.54 313 *eP* P 19 23 07.6 -0.8
baz=313
DZA Taraz 89.54 313 *eP* P 19 23 07.5 -0.8
A04D Lummi Island 89.78 41 P 19 23 10.9
baz=260
BRZS Berezniki 89.79 320 *eP* P 19 23 08.7 -0.7
comp=Z,4.6nm,1.0s,baz=320
BRZS Berezniki 89.79 320 *eP* P 19 23 08.6 -0.7
BRZS pmax pmax
comp=Z,5.0nm,1.0s
PKM Mcpherson Peak 89.80 55 P 19 23 11.2
baz=262,SNR=19
SNCC San Nicolas Is 89.82 57 P 19 23 11.9
baz=262
J05D Fort Rock, OR 89.92 47 P 19 23 11.2
baz=261,SNR=11
I05D Terrebonne, OR 90.00 46 P 19 23 11.8
baz=261
BEKR Beckworth 90.06 50 P P 19 23 12.0 +1.0
K05A Summer Lake 90.08 47 P P 19 23 12.2 +1.1
K05A IAmb IAmb 19 23 17.4
comp=Z,16nm,1.1s
KBL Kabul 90.10 305 P P 19 23 10.0 -1.4
KBL pmax pmax
comp=Z,8.0nm,0.6s
KBL Kabul 90.10 305 P P 19 23 10.0 -1.4
KBL IAmb IAmb 19 23 15.2
comp=Z,7.9nm,0.6s
RUBR Rubicon Trail 90.10 51 P P 19 23 13.3 +2.0
RUBR IAmb IAmb 19 23 15.3
comp=Z,20nm,0.7s
F05D White Salmon 90.16 44 P 19 23 12.3
baz=261
G05D Wamic, OR 90.16 45 P 19 23 12.1
baz=261
PINE Pine Mountain 90.20 46 IAmb IAmb 19 23 15.2
comp=Z,33nm,1.6s
IUG Iuzhnay 90.38 312 *eP* P 19 23 12.7 +0.3
baz=312
IUG Iuzhnay 90.38 312 *eP* P 19 23 12.6 +0.3
MOD Modoc Plateau 90.39 48 P P 19 23 13.8 +1.3
VES Vestal, Richgr 90.52 54 P 19 23 14.3
baz=263
VCNR Virginia City 90.53 51 P P 19 23 14.0 +0.8
VCNR IAmb IAmb 19 23 16.6
comp=Z,18nm,0.9s
WAKR Walker 90.59 51 P P 19 23 14.7 +1.2
WAKR IAmb IAmb 19 23 16.9
comp=Z,13nm,0.8s
CIS Catalina Islan 90.76 57 P 19 23 15.1
baz=263
PAHR Pah Rah Range 90.78 50 IAmb IAmb 19 23 17.5
comp=Z,19nm,0.9s
YERR Yerington 90.80 51 P P 19 23 14.9 +0.4
YERR IAmb IAmb 19 23 17.6
comp=Z,15nm,0.8s
ISA Isabella, Lake 90.99 54 P P 19 23 16.3 +1.0
ISA pmax pmax
comp=Z,15nm,1.2s
ISA Isabella, Lake 90.99 54 P P 19 23 16.3 +1.0
ISA IAmb IAmb 19 23 18.6
comp=Z,15nm,1.2s
ISA Isabella, Lake 90.99 54 P 19 23 16.7
baz=263,SNR=6.7
I07A Izee 91.27 46 P P 19 23 17.3 +0.8
EDW2 Edwards Air Fo 91.28 55 P 19 23 18.1
baz=263,SNR=24
RYN Ryan 91.31 51 P P 19 23 17.8 +1.0
RYN IAmb IAmb 19 23 20.1
comp=Z,25nm,0.9s
E07A Sunnyside 91.36 43 IAmb IAmb 19 23 19.2
comp=Z,14nm,0.9s
CWC Cottonwood Cre 91.40 54 P 19 23 18.7
baz=263
NVAR Mina Array Bea 91.46 52 P P 19 23 18.7 +1.1
comp=Z,24nm,0.8s,baz=250,slow=6.5,SNR=118
NVAR LR LR 19 59 12.4
comp=Z,451nm,19.8s,baz=270,slow=32
NVAR Mina Array Bea 91.46 52 P P 19 23 18.0 +0.3
HAWA Hanford 91.55 44 IAmb IAmb 19 23 20.1
comp=Z,14nm,0.8s
NV11 Mina Array Sit 91.58 52 P P 19 23 18.6 +0.5
LRMC Laurel Mtn Rad 91.61 55 P 19 23 19.4
baz=263,SNR=30
WVOR Wild Horse Val 91.69 48 IAmb IAmb 19 23 21.2
comp=Z,9.6nm,0.9s
BRVK Borovoye 91.76 323 *i* P P 19 23 15.6 -2.8
BRVK pmax pmax
comp=Z,19nm,1.1s
BRVK Borovoye 91.76 323 P P 19 23 16.4 -2.0
BRVK IAmb IAmb 19 23 19.0
comp=Z,20nm,1.0s
109C Camp Elliot, M 91.79 57 P 19 23 20.6
baz=264
MURC Murrieta 91.79 57 P 19 23 20.2
baz=264
G08A Pilot Rock 91.81 45 P P 19 23 18.7 -0.2
B08A Colville Reser 91.94 42 P P 19 23 19.5 +0.1
B08A IAmb IAmb 19 23 21.4
comp=Z,12nm,1.1s
GRAC Grapevine Rang 92.03 53 P 19 23 21.3
baz=264
D08A Wollman Farm, 92.06 43 P P 19 23 20.7 +0.8
D08A IAmb IAmb 19 23 22.3
comp=Z,10nm,0.9s
TPH Tonopah 92.26 52 P P 19 23 22.1 +0.7

TPH pmax pmax
comp=Z,98nm,0.8s
TPH Tonopah 92.26 52 P **P 19 23 22.1 +0.7**
MONP2 Monument Peak 92.36 57 P 19 23 22.9
baz=264,SNR=14
FURC Furnace Creek, 92.38 54 P 19 23 23.0
baz=264,SNR=15
PFO Pinyon Flats O 92.41 57 *i*P **P 19 23 22.7 +0.7**
PFO pmax pmax
comp=Z,24nm,1.0s
PFO Pinyon Flats O 92.41 57 P **P 19 23 22.9 +0.9**
PFO IAmb IAmb 19 23 25.4
comp=Z,18nm,1.0s
PFO Pinyon Flats O 92.41 57 P 19 23 23.4
baz=264,SNR=13
E09A Wood Farm, Sta 92.52 44 IAmb IAmb 19 23 24.5
comp=Z,20nm,1.0s
C09A Chrisman Ranch 92.58 42 P **P 19 23 23.0 +0.6**
C09A IAmb IAmb 19 23 24.4
comp=Z,13nm,1.0s
IKP In-Ko-Pah, Jac 92.60 58 P 19 23 24.2
baz=264
HEC Hector,Ludlow 92.63 55 P 19 23 24.1
baz=264,SNR=16
C36M Paulatuk 92.77 21 IAmb IAmb 19 23 24.3
comp=Z,12nm,0.8s
C36M Paulatuk 92.77 21 P 19 23 23.2
baz=260
SHOC Shoshone, Teco 92.79 54 P 19 23 24.6
baz=264,SNR=5.7
BELC Belle Mtn. Jos 92.83 56 P 19 23 24.7
baz=264,SNR=36
SYO Syowa Base 92.87 199 *e*PcP **PcP 19 23 24.4 +0.6**
SWSC Sam W. Stewart 92.89 57 P 19 23 24.7
baz=264
TPNV Topopah Spring 92.92 53 P 19 23 24.8
baz=264,SNR=30
TPNV Topopah Spring 92.92 53 IAmb IAmb 19 23 27.8
comp=Z,24nm,1.0s
BMO Blue Mountains 92.92 45 P **P 19 23 23.9 -0.2**
BMO pmax pmax
comp=Z,7.0nm,0.9s
BMO Blue Mountains 92.92 45 P **P 19 23 23.9 -0.2**
TUQ Turquoise Moun 93.03 55 P 19 23 25.5
baz=264,SNR=8.1
F10A Beach Ranch, E 93.09 44 P **P 19 23 24.8 -0.1**
F10A IAmb IAmb 19 23 26.9
comp=Z,13nm,0.9s
GMRC Granite Mounta 93.18 56 P 19 23 25.9
baz=264,SNR=28
BC3 Big Chuckawall 93.25 57 P 19 23 26.5
baz=265,SNR=17
NEW Newport 93.40 42 P **P 19 23 25.8 -0.4**
NEW pmax pmax
comp=Z,16nm,1.0s
NEW Newport 93.40 42 P **P 19 23 25.8 -0.4**
NEW IAmb IAmb 19 23 28.1
comp=Z,16nm,1.0s
NEW Newport 93.40 42 P 19 23 27.0
baz=264,SNR=10.0
IRM Iron Mountain 93.55 56 P 19 23 28.2
baz=265,SNR=31
R11A Troy Canyon, C 93.57 52 P 19 23 28.2
baz=265,SNR=25
R11A Troy Canyon, C 93.58 52 P **P 19 23 28.3 +0.9**
R11A IAmb IAmb 19 23 30.7
comp=Z,15nm,0.9s
GLA Glamis 93.71 57 P 19 23 28.7
baz=265
GLA Glamis 93.71 57 IAmb IAmb 19 23 32.0
comp=Z,12nm,0.8s
SHPR Sheep Range 93.75 54 P **P 19 23 29.6 +1.5**
SHPR IAmb IAmb 19 23 31.9
comp=Z,22nm,0.9s
PRN Pahroc Range 93.91 53 P **P 19 23 29.7 +0.8**
PRN IAmb IAmb 19 23 32.6
comp=Z,24nm,1.1s
NEE2 Needles Airpor 94.03 56 P 19 23 30.1
baz=265
PDMCI Parker Dam,Lak 94.39 56 P 19 23 31.7
baz=265,SNR=6.9
SPR3 Spring Creek 3 94.61 51 P **P 19 23 32.7 +0.5**
W13A Hualapai Mount 94.66 55 IAmb IAmb 19 23 36.1
comp=Z,19nm,0.9s
HLID Hailey 94.88 47 P **P 19 23 34.2 +1.0**
HLID Hailey 94.88 47 P 19 23 33.1
baz=266
PSUT Pine Spring 94.94 52 IAmb IAmb 19 23 37.1
comp=Z,13nm,1.1s
CCUT Cedar City 95.26 53 P **P 19 23 36.7 +1.5**
CCUT IAmb IAmb 19 23 39.0
comp=Z,7.7nm,0.8s
LCMT Little Creek M 95.32 53 P **P 19 23 36.4 +1.1**
214A Organ Pipe Nat 95.32 59 P 19 23 34.8
baz=266
MSO Missoula 95.43 44 P 19 23 35.7
baz=267
WALA Waterton Lakes 95.58 41 P **P 19 23 36.5 +0.2**
WALA IAmb IAmb 19 23 38.9
comp=Z,16nm,1.0s
KNB Kanab 95.66 53 P **P 19 23 38.4 +1.4**
KNB pmax pmax
comp=Z,10.0nm,1.0s
KNB Kanab 95.66 53 P **P 19 23 38.4 +1.4**
KNB IAmb IAmb 19 23 40.8
comp=Z,10nm,1.0s
YKA Yellowknife Ar 95.86 28 P **P 19 23 36.9 -0.1**
comp=Z,11nm,0.8s,baz=265,slow=4.3,SNR=94
YKA PP **PP 19 27 31.8 +2.2**
comp=Z,1.6nm,1.1s,baz=266,slow=6.9,SNR=5.0
YKA PKKPbc **PKKPbc 19 40 24.9 -3.7**
comp=Z,1.7nm,0.7s,baz=92,slow=3.0,SNR=23
DUG Dugway, Tooele 95.86 50 P 19 23 38.0
baz=267
HVU Hansel Valley 95.98 49 P **P 19 23 38.6 +0.3**
HVU pmax pmax
comp=Z,9.0nm,0.9s
HVU Hansel Valley 95.98 49 P **P 19 23 38.6 +0.3**
HVU IAmb IAmb 19 23 40.9
comp=Z,8.9nm,0.9s
MCMT McKenzie Canyo 96.08 46 P **P 19 23 40.0 +1.2**
MTPU Mount Pierson 96.22 52 P **P 19 23 41.3 +1.6**
MTPU IAmb IAmb 19 23 43.9
comp=Z,14nm,0.8s
WUAZ Wupatki 96.74 55 IAmb IAmb 19 23 52.5
comp=Z,11nm,0.9s
WUAZ Wupatki 96.74 55 P 19 23 42.6
baz=267
HRY Holter Researc 96.88 44 P **P 19 23 42.3 +0.2**
BOZ Bozeman (W) 96.98 45 P **P 19 23 43.8 +1.1**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
BOZ Bozeman (W) 96.98 45 P **P 19 23 43.8 +1.1**
BOZ Bozeman (W) 96.98 45 P 19 23 43.8
baz=268
TMUT Trail Mountain 97.05 51 P Pdif 19 23 44.2 +0.8
TMUT IAmb IAmb 19 23 46.6
comp=Z,10nm,0.8s
Q16A Castle Valley 97.06 52 P Pdif 19 23 44.5 +1.1
Q16A IAmb IAmb 19 23 47.7
comp=Z,7.7nm,0.9s
YHL Hebgen Lake 97.27 46 P Pdif 19 23 44.4 +0.1
P17A Butcher Ranch, 97.42 51 P Pdif 19 23 46.3 +1.4
P17A IAmb IAmb 19 23 47.9
comp=Z,7.1nm,0.8s
REDW Red Top Meadow 97.46 47 P Pdif 19 23 46.1 +1.0
MOOW Moose Ponds 97.55 47 P Pdif 19 23 46.1 +0.6
SRU San Rafael Swe 97.57 51 P Pdif 19 23 46.2 +0.6
SRU pmax pmax
comp=Z,6.0nm,0.8s
SRU San Rafael Swe 97.57 51 P Pdif 19 23 46.2 +0.6
FLWY Flagg Ranch 97.59 46 P Pdif 19 23 46.3 +0.6
FLWY IAmb IAmb 19 26 00.5
comp=Z,15nm,1.6s
H17A Grant Village 97.69 46 P 19 23 47.0
baz=269
ABKAR Akbulak array 97.97 319 P **P 19 23 44.6 -2.2**
W18A Petrified Fore 98.06 56 IAmb IAmb 19 25 49.3
comp=Z,14nm,0.8s
EGMT Eagleton 98.31 42 P 19 23 48.9
baz=270
GCMT Greycliff 98.36 45 P Pdif 19 23 50.1 +1.2
BW06 Boulder Array 98.40 48 P **P 19 23 48.5 -0.7**
BW06 Boulder Array 98.40 48 P 19 23 48.6
baz=269
PDAR Pinedale Array 98.40 48 P **P 19 23 48.9 -0.4**
comp=Z,3.6nm,0.8s,baz=245,slow=2.2,SNR=29
PDAR PP **PP 19 27 52.2 +2.2**
comp=Z,0.9nm,1.0s,baz=256,slow=6.0,SNR=4.3
PDAR PKKPbc **PKKPbc 19 40 19.3 -1.9**
comp=Z,0.3nm,0.5s,baz=116,slow=5.0,SNR=3.9
PDAR LR LR 20 04 48.3
comp=Z,482nm,19.2s,baz=295,slow=33
PDAR Pinedale Array 98.40 48 P **P 19 23 47.8 -1.5**
RLMT Red Lodge 98.63 45 P 19 23 50.2
baz=270
ARU Arti 98.73 326 *d*P **P 19 23 48.2 -1.9**
ARU 19 27 48.1
ARU S **SKSac 19 34 19.4 -3.2**
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU MLR MLR
comp=Z,188nm,18.0s
ARU Arti 98.73 326 P **P 19 23 47.6 -2.5**
ARU IAmb IAmb 19 23 49.8
comp=Z,8.4nm,0.9s
PV16 Nyswonger Mesa 98.81 52 IAmb IAmb 19 23 54.4
comp=Z,15nm,1.3s
PV04 Paradox Valley 98.82 52 P Pdif 19 23 52.8 +1.6
PV04 IAmb IAmb 19 23 54.4
comp=Z,12nm,1.0s
PV11 David Mesa, Pa 98.84 52 P Pdif 19 23 52.6 +1.3
PV11 IAmb IAmb 19 23 55.2
comp=Z,19nm,1.4s
PV03 Paradox Valley 98.86 52 IAmb IAmb 19 26 37.2
comp=Z,11nm,1.2s
PV13 Radium Mtn., P 98.88 52 P Pdif 19 23 52.8 +1.2
PV13 IAmb IAmb 19 23 54.6
comp=Z,16nm,1.6s
PV12 Saucer Basin, 98.90 52 P Pdif 19 23 52.3 +0.7
PV12 IAmb IAmb 19 23 54.8
comp=Z,13nm,1.0s
PV22 Blue Mesa, Par 98.91 52 P Pdif 19 23 53.0 +1.4
PV22 IAmb IAmb 19 23 54.6
comp=Z,6.3nm,0.8s
MVCO Mesa Verde 99.12 53 **Pdif 19 23 54.4 +1.7**
MVCO IAmb IAmb 19 23 57.0
comp=Z,5.8nm,0.7s
MVCO Mesa Verde 99.12 53 P 19 23 52.9
baz=269
GEYT Alibeck 99.16 307 LR LR 20 11 42.9
comp=Z,101nm,19.9s,baz=25,slow=37
AKTO Aktyubinsk 99.21 320 LR LR 20 08 38.8
comp=Z,108nm,21.8s,baz=62,slow=35
O20A White River Ci 99.36 50 IAmb IAmb 19 23 56.3
comp=Z,9.2nm,1.0s
O20A White River Ci 99.36 50 P 19 23 53.9
baz=270
121A Cookes Peak, D 99.60 58 P 19 23 55.2
baz=269
LAO LASA Array 100.73 44 P 19 24 00.2
baz=272
ANMO Albuquerque 100.75 56 P 19 24 00.7
baz=270
SNAA Sanae 100.75 187 Pdiff **Pdif 19 23 59.2 +0.2**
SNAA Sanae 100.75 187 P **Pdif 19 23 59.3 +0.3**
comp=Z,3.9nm,1.1s,baz=121,slow=4.1,SNR=5.2
N23A Red Feather La 101.10 50 P 19 24 01.6
baz=271
VNA3 Neumayer Olymp 101.87 185 Pdiff **Pdif 19 24 04.5 +0.6**
VNA2 Neumayer--Watz 101.96 186 Pdiff **Pdif 19 24 05.2 +0.9**
baz=153,slow=5.7
VNA1 Neumayer--Stat 102.31 186 Pdiff **Pdif 19 24 06.6 +0.8**
RSSD Black Hills 102.39 46 P 19 24 07.4
baz=273
TXAR Lajitas Array 103.10 61 PP **PKiKP 19 28 24.5 -5.5**
comp=Z,0.2nm,0.3s,baz=270,slow=4.6,SNR=3.5
TXAR PKKPbc **PKKPbc 19 40 05.6 -1.4**
comp=Z,2.0nm,0.7s,baz=96,slow=3.9,SNR=18
TXAR Lajitas Array 103.10 61 PKKPbc PKKPbc 19 40 08.4 +1.4
PRGR Permogore 104.64 332 *e*P **Pdif 19 24 14.5 -1.7**
PRGR pmax pmax
comp=Z,14nm,0.9s
WMOK Wichita Mounta 107.06 56 P 19 28 36.9
baz=274
KLMR Klimovskoe 107.70 332 *e*P **Pdif 19 24 25.5 -4.4**
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 107.70 332 *e*Pdif **Pdif 19 24 25.5 -4.4**
KLMR AMP 19 24 29.2
comp=Z,12nm,1.2s
ARCES ARCESS Array B 108.94 343 PKKPbc PKKPbc 19 39 47.9 -2.3
comp=Z,2.4nm,0.8s,baz=242,slow=2.6,SNR=4.3
ARCES ARCESS Array B 108.94 343 PKKPbc 19 39 47.2 -3.1
KIV Kislovodsk 110.28 315 *i* PKIKP **PKiKP 19 28 41.5 -1.4**
KIV pmax pmax
comp=Z,8.0nm,1.1s
W39A Magazine 111.10 55 P 19 28 44.3
baz=277
W41B Gary Mavity, V 112.35 55 P 19 28 46.4
baz=278
JFWS Jewell Farm 112.48 46 P 19 28 46.7
baz=283
FINES FINESS Array B 113.29 336 Pdiff **Pdif 19 24 53.3 -1.4**
comp=Z,1.3nm,0.8s,baz=82,slow=4.0,SNR=4.7
FINES PKiKP **PKiKP 19 28 47.4 -0.5**
comp=Z,2.1nm,0.9s,baz=116,slow=3.2,SNR=4.4
FINES PKKPbc **PKKPbc 19 39 32.9 -2.8**
comp=Z,2.0nm,0.7s,baz=151,slow=4.4,SNR=6.8
OXF Oxford 114.76 55 P 19 28 51.6
baz=280
CLTN Cedars of Leba 116.93 53 **PKpdf 19 28 54.0 -1.6**
AKASG Malin Array Be 116.93 325 PKhKP PKPpre 19 28 49.1
comp=Z,1.0nm,0.4s,baz=45,slow=2.6,SNR=4.1
AKASG PKP **PKPdf 19 28 54.1 -1.1**
comp=Z,0.7nm,0.4s,baz=57,slow=2.1,SNR=4.9
AKASG Malin Array Be 116.93 325 PKPdf **PKPdf 19 28 53.8 -1.4**
LRAL Lakeview Retre 116.99 56 P 19 28 56.1
baz=281
PLCA Paso Flores 117.32 142 PKP **PKPdf 19 28 55.5 -1.0**
comp=Z,1.4nm,0.6s,baz=178,slow=3.7,SNR=4.1
P49A Miami Univ. Ec 117.35 49 P 19 28 56.7
baz=285
BRTR Keskin Array B 117.84 312 PKP **PKPdf 19 28 56.2 -1.3**
comp=Z,1.8nm,0.7s,baz=48,slow=1.8,SNR=4.9
BRTR PKKPbc **PKKPbc 19 39 19.8 +0.4**
comp=Z,1.4nm,0.9s,baz=224,slow=3.4,SNR=3.6
BRTR Keskin Array B 117.84 312 PKiKP **PKPdf 19 28 56.4 -1.2**
BRTR Keskin Array B 117.84 312 **PKPdf 19 28 56.4 -1.2**
Z51A Franklin 118.44 56 **PKPdf 19 28 57.8 -0.9**
MATQ Matagami 118.45 36 P 19 28 57.3
baz=296
152A Waverly Hall 118.95 56 **PKPdf 19 28 59.0 -0.7**
TKL Tuckaleechee C 119.05 53 PKiKP **PKPdf 19 28 58.9 -0.9**
TKL Tuckaleechee C 119.05 53 **PKPdf 19 28 58.9 -0.9**
NOA NORSAR Array B 119.05 341 PKP **PKPdf 19 28 58.7 -0.4**
comp=Z,1.1nm,0.7s,baz=48,slow=2.0,SNR=4.7
LSQQ Lebel-sur-Quev 119.15 36 P 19 28 59.6
baz=297
Y52A Lilburn 119.23 55 PKPdf **PKiKP 19 29 00.7 +0.4**
P52A Corning 119.23 48 P 19 28 59.5
baz=287
O53A New Philadelph 119.72 47 P 19 29 01.2
baz=288
M53A WI Miller and 119.72 46 P 19 29 00.6
baz=290
N53A Lisbon 119.81 46 **PKPdf 19 29 00.4 -0.7**
GOGA Godfrey 119.82 55 P 19 29 01.3
baz=283
ALGO Algonquin Park 119.82 40 P 19 29 01.2
baz=294
BG3 Lake Jocassee 119.88 53 **PKiKP 19 29 01.8 +0.3**
Q53A Leroy 119.92 49 P 19 29 01.5
baz=287
G54A Lake Saint Pet 120.02 40 P 19 29 01.6
baz=294
CHGQ Chibougamau 120.25 35 P 19 29 01.6
baz=300
BOSA Boshof 120.28 232 PKP **PKPdf 19 29 02.3 -0.3**
comp=Z,7.7nm,0.7s,baz=117,slow=2.1,SNR=18
BOSA PKKPbc **PKKPbc 19 39 10.2 -0.1**
comp=Z,1.7nm,0.7s,baz=302,slow=4.9,SNR=4.5
O54A Avella 120.35 47 **PKPdf 19 29 02.2 +0.1**
N54A Moraine State 120.37 46 P 19 29 02.0
baz=290
S54A Dingess, Beckl 120.39 50 P 19 29 01.9
baz=287
M54A Oil Creek Stat 120.41 45 **PKiKP 19 29 02.6 +0.3**
M54A Oil Creek Stat 120.41 45 P 19 29 01.7
baz=290
R54A Victor 120.52 49 P 19 29 01.8
baz=288
BURAR Bucovina Array 120.65 323 PKPdf **PKiKP 19 29 02.9 +0.1**
JTS Las Juntas de 120.79 82 PKIKP **PKPdf 19 29 03.4 -0.3**
JTS Las Juntas de 120.79 82 PKPdf **PKPdf 19 29 03.4 -0.3**
E55A Montcerf-Lytto 120.86 39 P 19 29 02.9
baz=296
MCWV Mont Chateau 120.91 47 P 19 29 03.3
baz=289
D55A Sainte-Anne-du 120.97 38 P 19 29 03.1
baz=297
KMSC Kings Mountain 121.11 53 **PKPdf 19 29 03.7 0.0**
KMSC Kings Mountain 121.11 53 P 19 29 03.5
baz=286
R55A Marlinton 121.14 49 P 19 29 03.0
baz=288
BLA Blacksburg 121.24 50 P 19 29 03.3
baz=287
D56A ZEC Mazanza, M 121.39 38 P 19 29 03.6
baz=298
E56A St. Veronique 121.46 38 P 19 29 03.8
baz=297
M56A Emporium 121.46 45 P 19 29 04.2
baz=292
N56A West Decatur 121.59 45 P 19 29 04.8
baz=291
Q56A Snyder Ridge, 121.59 48 P 19 29 04.4
baz=289
LBTB Lobatse 121.61 236 PKIKP **PKPdf 19 29 05.3 +0.1**
LBTB Lobatse 121.61 236 PKPdf **PKPdf 19 29 05.3 +0.1**
O56A Blue Knob Stat 121.62 46 P 19 29 04.8
baz=291
R56A Bull Pasture M 121.64 48 P 19 29 04.6
baz=289
L56A Greenwood 121.65 44 P 19 29 04.9
baz=292
P56A Dayton Farm, R 121.69 47 P 19 29 04.7
baz=290
SSPA Standing Stone 121.98 46 P 19 29 05.7
baz=291
K57A Scipio Center 122.13 43 P 19 29 05.8
baz=294
G57A Newington 122.13 40 P 19 29 05.8
baz=298
Q57A Strasburg 122.16 47 P 19 29 05.9
baz=290
W57A Gilead 122.16 52 **PKPdf 19 29 04.7 -1.1**
N57A Milroy 122.17 45 P 19 29 05.6
baz=292
L57A Andrews Acres 122.19 44 P 19 29 05.5
baz=293
J57A Williamstown 122.20 42 P 19 29 05.8
baz=295
I57A Carthage 122.20 41 P 19 29 05.9
baz=295
CRVS Cervenica-Dubn 122.21 325 *e*PKIKP **PKiKP 19 29 07.7 +2.0**
CRVS Cervenica-Dubn 122.21 325 *e*PKP **PKiKP 19 29 07.7 +2.0**
M57A Sunshine Farm, 122.25 45 P 19 29 05.8
baz=292
P57A Homestead Farm 122.30 47 P 19 29 06.3
baz=291
O57A Amberson 122.31 46 P 19 29 06.0
baz=291
R57A Stanardsville 122.33 48 P 19 29 06.0
baz=289
LATQ La Tuque 122.42 36 P 19 29 06.1
baz=300
D58A Chemin du LacG 122.50 37 P 19 29 06.2
baz=300
NHSC New Hope 122.56 55 P 19 29 07.0
baz=285
LONY Lake Ozonia 122.61 40 P 19 29 07.0
baz=296
E58A La Victoria 122.61 38 P 19 29 06.5
baz=299
K58A Earlville 122.70 42 P 19 29 07.3
baz=294
BINY Binghamton 122.70 43 P 19 29 07.0
baz=294
Q58A Fox Den Farm, 122.73 47 P 19 29 07.1
baz=290
N58A Sunbury 122.73 45 P 19 29 06.9
baz=292
O58A Lewisberry 122.85 46 P 19 29 07.0
baz=292
L58A Harry Jones Me 122.86 43 P 19 29 07.2
baz=294
S58A Poland Farm, P 122.90 49 P 19 29 06.7
baz=289
R58B Mineral 122.92 49 P 19 29 07.2
baz=290
H58A Gabriels 122.95 40 P 19 29 07.0
baz=297
J59A Piesco 123.16 41 P 19 29 07.2
baz=296
D59A Saint-Raymond 123.16 36 P 19 29 07.4
baz=300
LANS Liptovska Anna 123.19 327 *e*PKIKP **PKiKP 19 29 09.1 +1.5**
LANS Liptovska Anna 123.19 327 *e*PKP **PKiKP 19 29 09.1 +1.5**
K59A Cooperstown 123.23 42 P 19 29 07.7
baz=295
L59A Walton 123.35 43 P 19 29 08.4
baz=295
M59A Waymart 123.35 44 P 19 29 08.5
baz=294
N59A State Game Lan 123.36 45 P 19 29 08.0
baz=293
T59A Double "B" Far 123.49 50 PKPdf **PKPdf 19 29 07.9 -0.4**
F60A Warwick 123.61 38 P 19 29 08.2
baz=300
I60A Shoreham 123.78 40 P 19 29 08.9
baz=297
N60A Cedar Hill Far 123.85 44 P 19 29 09.2
baz=294
O60A Telford 123.85 45 P 19 29 09.1
baz=293
MORC Moravsky Berou 123.86 328 *e*PKP **PKiKP 19 29 08.9 0.0**
MORC Moravsky Berou 123.86 328 PKIKP **PKiKP 19 29 09.1 +0.1**
MORC Moravsky Berou 123.86 328 **PKiKP 19 29 09.1 +0.1**
P60A Greenville 123.88 46 P 19 29 08.7
baz=293
J60A Lant Hill Farm 123.97 41 P 19 29 09.6
baz=297
KRLC Kraliky 124.08 329 *e*PKIKP **PKiKP 19 29 09.6 +0.2**
KRLC MLR MLR
comp=Z,300nm,19.5s
KRLC Kraliky 124.08 329 *e*PKPDF **PKiKP 19 29 09.6 +0.2**
KRLC AMS AMS 20 24 50.0
comp=Z,300nm,19.5s
OSTC Ostas 124.08 329 AMS AMS 20 22 10.0
comp=Z,500nm,25.4s
VTS Vitosha 124.14 318 PKIKP **PKPdf 19 29 08.8 -0.8**
VTS Vitosha 124.14 318 PKPdf **PKPdf 19 29 08.8 -0.8**
CHVC Chvalec 124.15 329 AMS AMS 20 22 40.0
comp=Z,400nm,21.6s
DPC Dobruska-Polom 124.16 329 *e*PKIKP **PKiKP 19 29 09.8 +0.3**
DPC MLR MLR
comp=Z,300nm,20.3s
DPC Dobruska-Polom 124.16 329 *e*PKPDF **PKiKP 19 29 09.8 +0.3**
DPC AMS AMS 20 22 00.0
comp=Z,300nm,20.3s
UPC Upice 124.22 329 AMS AMS 20 22 30.0
comp=Z,400nm,17.5s
E61A Lac Etchemin 124.25 37 P 19 29 10.0
baz=301
K61A Williamstown 124.33 42 P 19 29 10.1
baz=297
JAVC Velka Javorina 124.33 327 *e*PKP **PKiKP 19 29 10.8 +0.9**
J61A Chester 124.49 41 P 19 29 11.0
baz=298
M61A Granite Spring 124.58 43 P 19 29 11.2
baz=295
VRAC Vranov 124.64 328 *e*PKP **PKiKP 19 29 10.6 +0.1**
MODS Modra-Piesok 124.82 327 *e*PKIKP **PKiKP 19 29 10.8 -0.1**
MODS Modra-Piesok 124.82 327 *e*PKP **PKiKP 19 29 10.8 -0.1**
G62A West of Eustis 124.85 38 P 19 29 11.1
baz=301
KRUC Moravsky 124.89 328 *e*PKP **PKPdf 19 29 10.4 -0.2**
PVCC Panska Ves 124.92 330 AMS AMS 20 23 30.0
comp=Z,200nm,18.3s
BRG Berggiesshubel 125.01 331 *e*PKP **PKiKP 19 29 11.6 +0.5**
BRG Amp 19 29 12.6
comp=Z,7.8nm,1.1s
BRG *ex* x 19 29 26.8
BRG Amp 19 29 28.2
comp=Z,5.7nm,1.0s
CLL Collm 125.18 332 *i* PKPdf **PKiKP 19 29 11.6 +0.2**
comp=Z,7.0nm,1.2s
CLL *ep*PKPdf **pPKPdf 19 29 25.0 -4.3**
CLL Collm 125.18 332 *i* PKIKP **PKiKP 19 29 11.6 +0.2**

CLL					pmax	pmax			
	comp=Z,7.0nm,1.2s								
TREC	**Trest**	**125.23**	**329**		AMS	AMS	20 26 20.0		
	comp=Z,500nm,21.2s								
PRU	**Pruhonice**	**125.28**	**330**		AMS	AMS	20 23 40.0		
	comp=Z,300nm,22.0s								
G63A	**Kingsbury**	**125.46**	**37**		P		19 29 11.4		
	baz=302								
M63A	**Gales Ferry**	**125.71**	**43**		P		19 29 13.0		
	baz=297								
F64A	**Sherman**	**125.82**	**36**		P		19 29 13.2		
	baz=303								
CONA	**Conrad Observa**	**125.85**	**327**	*e*	P	**PKPdf**	**19 29 12.6**	**0.0**	
	comp=Z,1.7nm,0.6s								
I64A	**Boothbay**	**126.06**	**39**		P		19 29 13.1		
	baz=301								
CKRC	**Cesky Krumlov**	**126.13**	**329**	*e*	PKPDF	**PKiKP**	**19 29 14.3**	**+0.9**	
NKC	**Novy Kostel**	**126.15**	**331**		AMS	AMS	20 20 30.0		
	comp=Z,300nm,19.8s								
FNA	**Florina**	**126.20**	**317**		PKIKP	**PKPdf**	**19 29 12.4**	**-1.0**	
FNA	**Florina**	**126.20**	**317**		PKPdf	**PKPdf**	**19 29 12.4**	**-1.0**	
KHC	**Kasperske Hory**	**126.31**	**329**	*e*	PKIKP	**PKPdf**	**19 29 13.4**	**0.0**	
KHC					MLR	MLR			
	comp=Z,300nm,20.0s								
KHC	**Kasperske Hory**	**126.31**	**329**	*e*	PKPDF	**PKPdf**	**19 29 13.4**	**0.0**	
KHC					AMS	AMS	20 24 20.0		
	comp=Z,300nm,20.0s								
KHC	**Kasperske Hory**	**126.31**	**329**		PKPdf	**PKPdf**	**19 29 12.9**	**-0.4**	
GERES	**GERESS Array B**	**126.43**	**329**		PKP	**PKPdf**	**19 29 12.9**	**-0.8**	
	comp=Z,1.8nm,0.7s,baz=86,slow=1.7,SNR=16								
GERES	**GERESS Array B**	**126.43**	**329**			**PKPdf**	**19 29 12.6**	**-1.1**	
SOKA	**Soboth**	**127.05**	**326**	*e*	P	**PKPdf**	**19 29 14.5**	**-0.4**	
	comp=Z,2.9nm,1.1s								
KBA	**Koelnbreinsper**	**127.72**	**327**	*e*	P	**PKPdf**	**19 29 16.6**	**+0.2**	
	comp=Z,6.1nm,1.4s								
ABTA	**Abfaltersbach**	**128.37**	**328**	*e*	P	**PKPdf**	**19 29 17.0**	**-0.5**	
	comp=Z,5.5nm,1.0s								
LVC	**Limon Verde**	**128.43**	**125**		PKP	**PKPdf**	**19 29 18.4**	**-0.2**	
	comp=Z,5.3nm,0.7s,baz=263,slow=5.0,SNR=5.0								
WATA	**Walderalm**	**128.49**	**329**	*i*	P	**PKPdf**	**19 29 17.8**	**+0.1**	
	comp=Z,9.6nm,1.3s								
WTTA	**Wattenberg**	**128.50**	**329**	*i*	P	**PKPdf**	**19 29 17.7**	**-0.1**	
	comp=Z,11nm,1.1s								
STAL	**STALIGIAL**	**128.57**	**327**		PKPdf	**PKPdf**	**19 29 16.7**	**-1.1**	
MOTA	**Moosalm**	**128.72**	**329**	*i*	P	**PKPdf**	**19 29 18.0**	**-0.2**	
	comp=Z,8.1nm,1.1s								
SQTA	**Sankt Quirin**	**128.75**	**329**	*i*	P	**PKiKP**	**19 29 18.7**	**-0.2**	
	comp=Z,8.3nm,1.1s								
RETA	**Reutte**	**128.81**	**329**	*i*	P	**PKiKP**	**19 29 18.7**	**-0.2**	
	comp=Z,4.0nm,0.8s								
PB11	**IPOC Station P**	**129.12**	**122**		PKPdf	**PKiKP**	**19 29 20.2**	**-0.3**	
FETA	**Feichten**	**129.13**	**329**	*i*	P	**PKPdf**	**19 29 19.1**	**+0.1**	
	comp=Z,7.4nm,1.1s								
PB08	**IPOC Station P**	**129.37**	**122**			**PKiKP**	**19 29 21.1**	**-0.2**	
DAVA	**Damuels**	**129.38**	**330**	*i*	P	**PKiKP**	**19 29 20.2**	**0.0**	
	comp=Z,4.1nm,0.7s								
MNMC	**Minye Minye**	**129.44**	**121**			**PKPdf**	**19 29 20.8**	**+0.3**	
ROSC	**El Rosal**	**131.08**	**89**		PKP	**PKPdf**	**19 29 23.3**	**-0.6**	
	comp=Z,39nm,0.7s,baz=39,slow=0.9,SNR=10								
ROSC	**El Rosal**	**131.08**	**89**		PKPdf	**PKPdf**	**19 29 23.1**	**-0.8**	
LPAZ	**La Paz**	**131.91**	**118**		PKP	**PKPdf**	**19 29 24.1**	**-1.6**	
	comp=Z,5.4nm,0.9s,baz=342,slow=1.2,SNR=13								
LPAZ	**La Paz**	**131.91**	**118**		PKIKP	**PKPdf**	**19 29 25.1**	**-0.6**	
LPAZ	**La Paz**	**131.91**	**118**		PKPdf	**PKPdf**	**19 29 25.1**	**-0.6**	
CPUP	**Villa Florida**	**134.96**	**138**		PKP	**PKPdf**	**19 29 29.8**	**-0.6**	
	comp=Z,3.9nm,0.8s,baz=226,slow=1.6,SNR=6.8								
MLPR	**Magueyes Islan**	**137.58**	**70**		PKPdf	**PKPdf**	**19 29 33.9**	**-1.5**	
OBIP	**Obispado Ponce**	**137.97**	**70**			**PKPdf**	**19 29 35.3**	**-0.9**	
SJG	**San Juan**	**138.39**	**70**		PKIKP	**PKPdf**	**19 29 35.4**	**-1.5**	
SJG	**San Juan**	**138.39**	**70**			**PKPdf**	**19 29 35.4**	**-1.5**	
CDVI	**St. Croix**	**139.75**	**70**		PKPdf	**PKPdf**	**19 29 38.6**	**-0.8**	
ESDC	**Sonseca Array**	**141.73**	**333**		PKP	**PKPdf**	**19 29 42.9**	**+0.4**	
	comp=Z,0.6nm,0.7s,baz=33,slow=3.1,SNR=3.1								
MVO	**Moncorvo**	**141.75**	**338**	*e*	PKPdf	**PKiKP**	**19 29 44.2**	**-1.2**	
POLO	**Lamas de Olo**	**141.85**	**339**	*e*	PKPdf	**PKPdf**	**19 29 37.4**	**-5.3**	
PVIS	**Viseu**	**142.46**	**338**	*e*	PKPdf	**PKPdf**	**19 29 40.0**	**-3.8**	
PCBR	**Castelo Branco**	**143.06**	**337**	*e*	PKPdf	PKPbc	19 29 42.7	+1.0	
PMRV	**Marv??o**	**143.38**	**337**	*e*	PKPdf	PKPbc	19 29 43.5	+0.9	
PMTG	**Montargil**	**144.02**	**337**	*e*	PKPdf	PKPbc	19 29 45.0	+0.5	
PBAR	**Barrancos**	**144.31**	**335**	*e*	PKPdf	**PKPdf**	**19 29 46.5**	**-0.5**	
EVO	**Evora**	**144.40**	**337**	*e*	PKPdf	**PKPdf**	**19 29 46.6**	**-0.6**	
PTGA	**Pitinga**	**144.56**	**100**		PKP	**PKPab**	**19 29 46.1**	**-0.7**	
	comp=Z,49nm,0.7s,baz=240,slow=3.6,SNR=73								
TOSP	**Speyside**	**144.73**	**79**		PKPdf	**PKPab**	**19 29 47.0**	**-0.3**	
PBEJ	**Beja**	**144.78**	**336**	*e*	PKPdf	**PKPdf**	**19 29 48.5**	**+0.7**	
PCVE	**Castro Verde**	**145.18**	**336**	*e*	PKPdf	**PKPdf**	**19 29 49.6**	**+1.0**	
PVAQ	**Vaqueiros**	**145.25**	**335**	*e*	PKPdf	**PKPdf**	**19 29 49.9**	**+1.2**	
PTEO	**Sao Teotonio**	**145.53**	**337**	*e*	PKPab	**PKPab**	**19 29 51.1**	**+1.5**	
MORF	**Marmelete**	**145.71**	**336**	*e*	PKPdf	**PKPdf**	**19 29 48.2**	**-1.3**	
MORF	**Marmelete**	**145.71**	**336**	*e*	PKPab	**PKPab**	**19 29 51.0**	**+0.7**	
TAM	**Tamanrasset**	**146.21**	**302**		PKP2	**PKPab**	**19 29 52.7**	**-0.1**	
TAM	**Tamanrasset**	**146.21**	**302**			**PKPab**	**19 29 52.7**	**-0.1**	
BDFB	**Brasilia**	**148.54**	**134**		PKPbc	**PKPdf**	**19 29 56.1**	**+1.2**	
	comp=Z,12nm,0.8s,baz=202,slow=1.0,SNR=15								
BDFB	**Brasilia**	**148.54**	**134**		PKPdf	**PKPdf**	**19 29 55.7**	**+0.8**	
MDP	**Montagnes des**	**152.64**	**91**		PKPbc	**PKPbc**	**19 30 07.1**	**-1.2**	
	comp=Z,49nm,0.8s,baz=283,slow=2.3,SNR=14								
MDP					PKPab	**pPKPdf**	**19 30 19.4**	**-0.1**	
	comp=Z,37nm,0.8s,baz=239,slow=5.2,SNR=6.1								
TORD	**Torodi Ar. Bea**	**152.69**	**286**		PKP	**PKPdf**	**19 30 00.6**	**-0.6**	
	comp=Z,3.6nm,0.8s,baz=26,slow=1.8,SNR=20								
TORD					PKPbc	**PKPbc**	**19 30 07.6**	**-0.7**	
	comp=Z,9.2nm,0.7s,baz=79,slow=2.0,SNR=34								
TORD					PKPab	**PKPab**	**19 30 18.6**	**-0.6**	
	comp=Z,8.9nm,0.7s,baz=71,slow=2.7,SNR=11								
TORD	**Torodi Ar. Bea**	**152.69**	**286**			**PKPdf**	**19 29 59.9**	**-1.4**	
TORD					PKPbc	**PKPbc**	**19 30 08.0**	**-0.3**	
TORD					PKPab	**PKPab**	**19 30 18.3**	**-0.9**	
KOWA	**Kowa**	**157.70**	**293**		PKPab	**PKPab**	**19 30 39.5**	**-1.0**	
DBIC	**Dimbokro**	**159.81**	**272**		PKPab	**PKPab**	**19 30 49.5**	**-0.3**	
	comp=Z,28nm,0.8s,baz=85,slow=5.3,SNR=20								
DBIC	**Dimbokro**	**159.81**	**272**		PKIKP	**PKPdf**	**19 30 11.1**	**+0.5**	
DBIC							19 30 49.2		
DBIC	**Dimbokro**	**159.81**	**272**		PKPdf	**PKPdf**	**19 30 11.1**	**+0.5**	
DBIC					PKPab	**PKPab**	**19 30 49.2**	**-0.7**	

*ATH **21** 20:04:21.3,35.˚97N×28.˚50E,h63km±7km,ML3.3/6,Error ellipse: s-maj=9.9km s-min=2.3km az=359.0*
*IDC **21** 20:04:22.5±1.4,35.˚99N×28.˚45E,h42km±21km,mb3.3/3, mb1 3.5/7,mb1mx3.2/44,mbtmp3.5/7,ML3.5/4,Error ellipse: s-maj=23.8km s-min=9.8km az=158.0*
*NIC **21** 20:04:23.5±0.0,35.˚85N×28.˚58E,h25km±1km,Ml3.4/3*
*ISK **21** 20:04:23.6,36.˚02N×28.˚52E,h31km,ML3.3/21*
*THE **21** 20:04:25.0,36.˚12N×28.˚52E,h49km±2km,ML3.1/3,Error ellipse: s-maj=2.3km s-min=0.7km az=346.0*
*DDA **21** 20:04:26.4,36.˚30N×28.˚57E,h51km±4km,ML2.8*
*HLW **21** 20:04:28.4,35.˚48N×28.˚61E,h31km±27km,Md4.0,Ml4.1*

ISC 21 20:04:22.9±0.8,36°02N±0.03×28°54E±0.02,h55km±8km, n97,σ1s80/130,mb3.4/3,3C,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ARG	**Arkhangelos**	**0.39**	**300**	P		**Pn**	**20 04 33.7**	**+0.4**
ARG				S		**Sn**	**20 04 41.4**	**+0.7**
ARG				AML		AML	20 04 44.2	
	comp=N,2358µm,0.3s							
ARG				AML		AML	20 04 44.6	
	comp=E,3917µm,0.3s							
ARG	**Arkhangelos**	**0.39**	**300**	P		**Pn**	**20 04 33.7**	**+0.4**
ARG				S		**Sn**	**20 04 41.2**	**+0.5**
	comp=E,2µm,0.3s							
ARG	**Arkhangelos**	**0.39**	**300**	PG		**Pn**	**20 04 33.8**	**+0.5**
ARG				SG		**Sn**	**20 04 39.8**	**-0.9**
ARG	**Arkhangelos**	**0.39**	**300**	⇑P		**Pn**	**20 04 33.8**	**+0.5**
ARG				S		**Sn**	**20 04 41.4**	**+0.7**
FETY	**Fethiye**	**0.76**	**36**	P		**Pn**	**20 04 37.5**	**-0.2**
FETY	**Fethiye**	**0.76**	**36**	*i* P		**Pn**	**20 04 37.4**	**-0.2**
FETY	**Fethiye**	**0.76**	**36**	PG		**Pn**	**20 04 37.9**	**+0.3**
FETY				SG		**Sn**	**20 04 49.3**	**+1.0**
TURN	**Turunc**	**0.79**	**343**	*i* P		**Pn**	**20 04 39.4**	**+1.4**
TURN				*i* S		**Sn**	**20 04 48.2**	**-0.8**
TURN	**Turunc**	**0.79**	**343**	PG		**Pn**	**20 04 38.9**	**+0.9**
TURN				SG		**Sn**	**20 04 49.9**	**+0.9**
DALY	**Dalyan (Mula)**	**0.80**	**7**	*i* P		**Pn**	**20 04 39.3**	**+1.1**
DALY				*i* S		**Sn**	**20 04 48.5**	**-0.8**
DALY	**Dalyan (Mula)**	**0.80**	**7**	PG		**Pn**	**20 04 39.1**	**+1.0**
DALY				SG		**Sn**	**20 04 50.4**	**+1.1**
KSL	**Kastellorizon**	**0.86**	**81**	P		**Pn**	**20 04 40.0**	**+1.1**
KSL				S		**Sn**	**20 04 52.6**	**+2.0**
KSL				AML		AML	20 04 53.5	
	comp=E,2267µm,0.5s							
KSL				AML		AML	20 04 55.2	
	comp=N,1140µm,0.3s							
KSL	**Kastellorizon**	**0.86**	**81**	P		**Pn**	**20 04 40.2**	**+1.3**
KSL				S		**Sn**	**20 04 52.5**	**+2.0**
	comp=N,858nm,0.5s							
KSL	**Kastellorizon**	**0.86**	**81**	⇑P		**Pn**	**20 04 40.4**	**+1.5**
KSL				S		**Sn**	**20 04 52.9**	**+2.3**
AKAS	**Kas**	**0.89**	**76**	*i* P		**Pn**	**20 04 39.8**	**+0.3**
AKAS				*i* S		**Sn**	**20 04 46.7**	**-4.9**
AKAS				IAML			20 04 56.0	
	comp=N,457nm,0.5s							
AKAS				IAML			20 04 58.0	
	comp=E,228nm,0.4s							
AKAS	**Kas**	**0.89**	**76**	PG		**Pn**	**20 04 40.3**	**+0.8**
AKAS				SG		**Sn**	**20 04 52.7**	**+1.1**
DATC	**Datca-Mugla**	**1.02**	**316**	PG		**Pn**	**20 04 41.9**	**+0.9**
YER	**Yerkesik**	**1.13**	**350**	PN		**Pn**	**20 04 44.2**	**+1.6**
KARP	**Karpathos**	**1.21**	**248**	P		**Pn**	**20 04 44.5**	**+0.9**
KARP				AML		AML	20 05 12.8	
	comp=E,2465µm,0.3s							
KARP				AML		AML	20 05 13.2	
	comp=N,2884µm,0.4s							
KARP	**Karpathos**	**1.21**	**248**	P		**Pn**	**20 04 45.0**	**+1.3**
KARP	**Karpathos**	**1.21**	**248**	PN		**Pn**	**20 04 45.0**	**+1.3**
KARP	**Karpathos**	**1.21**	**248**	⇑P		**Pn**	**20 04 45.0**	**+1.3**
KARP				AML		AML	20 05 00.3	
	comp=N,1.9nm,0.4s							
KARP				AML		AML	20 05 00.3	
	comp=N,1.9nm,0.4s							
KARP				S		**Sn**	**20 05 00.6**	**+1.5**
KARP				AML		AML	20 05 01.4	
	comp=N,2.3nm,0.4s							
KARP				AML		AML	20 05 01.4	
	comp=N,2.3nm,0.4s							
NIS1	**Nisyros Isl.**	**1.24**	**298**	P		**Pn**	**20 04 44.8**	**+0.8**
NIS1				AML		AML	20 05 09.6	
	comp=N,2973µm,0.6s							
NIS1				AML		AML	20 05 10.3	
	comp=E,2513µm,0.4s							
NIS1	**Nisyros Isl.**	**1.24**	**298**	P		**Pn**	**20 04 45.1**	**+1.1**
NIS1				S		**Sn**	**20 05 00.5**	**+0.7**
	comp=E,1µm,0.4s							
NIS1	**Nisyros Isl.**	**1.24**	**298**	PN		**Pn**	**20 04 45.2**	**+1.2**
MULA	**Mugla, Merkez-**	**1.25**	**352**	*i* P		**Pn**	**20 04 46.3**	**+2.1**
MULA				*i* S		**Sn**	**20 04 58.1**	**-1.8**
MULA				IAML			20 05 07.0	
	comp=N,175nm,0.4s							
MULA				IAML			20 05 10.0	
	comp=E,175nm,0.5s							
CAEL	**Denizli, Camel**	**1.27**	**30**	*i* P		**Pn**	**20 04 46.8**	**+2.2**
CAEL				*i* S		**Sn**	**20 05 00.0**	**-0.6**
CAEL				IAML			20 05 09.0	
	comp=N,264nm,0.5s							
CAEL				IAML			20 05 11.0	
	comp=E,294nm,0.6s							
ELL	**Elmali**	**1.32**	**56**	PN		**Pn**	**20 04 47.5**	**+2.3**
ELL	**Elmali**	**1.32**	**56**	P		**Pn**	**20 04 47.5**	**+2.3**
ELL				S		**Sn**	**20 05 05.4**	**+3.5**
BDRM	**Kayabasi**	**1.36**	**320**	*i* P		**Pn**	**20 04 46.6**	**+0.9**
BDRM				*i* S		**Sn**	**20 04 58.2**	**-4.5**
BDRM				IAML			20 05 06.0	
	comp=N,210nm,0.3s							
BDRM				IAML			20 05 07.0	
	comp=E,129nm,0.4s							
BODT	**Bodrum**	**1.43**	**317**	P		**Pn**	**20 04 46.6**	**0.0**
BODT				S		**Sn**	**20 05 03.8**	**-0.6**
BODT	**Bodrum**	**1.43**	**317**	PN		**Pn**	**20 04 46.4**	**-0.2**
KOSK	**Kos Island**	**1.45**	**301**	PN		**Pn**	**20 04 47.7**	**+0.9**
GOLH	**Golhisar**	**1.47**	**34**	*i* P		**Pn**	**20 04 49.8**	**+2.9**
GOLH				*i* S		**Sn**	**20 05 04.9**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.47**	**12**	*i* P		**Pn**	**20 04 49.1**	**+1.9**
TAVA				*i* S		**Sn**	**20 05 02.9**	**-2.6**
AKUM	**Antalya-Kumluc**	**1.49**	**78**	*i* P		**Pn**	**20 04 49.2**	**+1.9**
AKUM				*i* S		**Sn**	**20 05 02.0**	**-3.7**
AKUM				IAML			20 05 10.0	
	comp=E,99nm,0.3s							
YKAV	**Yalikavak-Bodr**	**1.50**	**318**	PN		**Pn**	**20 04 48.5**	**+1.1**
AYDN	**Tasoluk**	**1.72**	**342**	*i* P		**Pn**	**20 04 52.6**	**+2.0**
AYDN				*i* S		**Sn**	**20 05 05.7**	**-5.8**
AYDN				IAML			20 05 13.0	
	comp=E,116nm,0.4s							
AYDN				IAML			20 05 14.0	
	comp=N,94nm,0.3s							
KORT	**Korkueli**	**1.76**	**56**	*i* P		Pn	20 04 54.0	+2.8
KORT				*i* S		**Sn**	**20 05 10.0**	**-2.4**
KORT				IAML			20 05 21.0	
	comp=E,143nm,0.9s							
KORT				IAML			20 05 26.0	
	comp=N,107nm,0.7s							
KORT	**Korkueli**	**1.76**	**56**	PN		**Pn**	**20 04 52.9**	**+1.8**
DDIM	**Aydin, Didim**	**1.77**	**324**	*i* P		**Pn**	**20 04 52.3**	**+1.1**
DDIM				*i* S		**Sn**	**20 05 07.6**	**-5.0**
DDIM				IAML			20 05 28.0	
	comp=N,160nm,1.0s							
DDIM				IAML			20 05 32.0	
	comp=E,192nm,0.8s							
ANTB	**Antalya**	**1.92**	**62**	PN		**Pn**	**20 04 55.1**	**+1.9**
GCAM	**G?zelcaml?**	**1.98**	**328**	PN		**Pn**	**20 04 55.8**	**+1.8**
AYDB	**Zeytinkoy-Aydi**	**1.99**	**345**	PN		**Pn**	**20 04 55.8**	**+1.5**
BRDR	**BURDUR-Merkez**	**2.07**	**36**	*i* P		**Pn**	**20 04 57.5**	**+2.1**
BRDR				*i* S		Sn	20 05 11.0	-9.1
BUCA	**Burdur, Bucak-**	**2.08**	**51**	*i* P		**Pn**	**20 04 58.0**	**+2.4**
BUCA				*i* S		**Sn**	**20 05 16.7**	**-3.6**
ZKR	**Zakros**	**2.10**	**245**	P		**Pn**	**20 04 57.5**	**+1.9**
ZKR				AML		AML	20 05 15.2	
	comp=E,1099µm,0.3s							
ZKR				AML		AML	20 05 16.8	
	comp=N,700µm,0.4s							
ZKR	**Zakros**	**2.10**	**245**	P		**Pn**	**20 04 57.5**	**+1.9**
ZKR	**Zakros**	**2.10**	**245**	PN		**Pn**	**20 04 57.5**	**+1.9**
ZKR	**Zakros**	**2.10**	**245**	P		**Pn**	**20 04 57.5**	**+1.9**
ZKR				AML		AML	20 05 09.8	
	comp=N,1.0nm,0.6s							
ZKR				AML		AML	20 05 15.8	
	comp=N,0.6nm,0.5s							
STIA	**Sitia Lasithi**	**2.15**	**248**	P		**Pn**	**20 04 58.7**	**+2.3**
SMG	**Samos**	**2.17**	**322**	P		**Pn**	**20 04 57.5**	**+0.9**
BASM	**Basmaki-Afyon**	**2.25**	**32**	PN		**Pn**	**20 04 59.1**	**+1.3**
ISP	**Isparta**	**2.40**	**41**	PN		**Pn**	**20 05 01.7**	**+1.8**
MANT	**Manisa**	**2.47**	**0**	*i* P		**Pn**	**20 05 01.6**	**+0.7**
MANT				*i* S		Sn	20 05 18.3	-12
KULA	**Kula-Manisa**	**2.49**	**2**	PN		**Pn**	**20 05 02.0**	**+0.9**
FRMA	**Ierapetra Chan**	**2.50**	**247**	P		**Pn**	**20 05 01.6**	**+0.5**
NPS	**Neapolis**	**2.50**	**253**	P		**Pn**	**20 05 02.3**	**+1.1**
NPS				AML		AML	20 05 32.6	
	comp=E,971µm,0.3s							
NPS				AML		AML	20 05 33.9	
	comp=N,810µm,0.3s							
NPS	**Neapolis**	**2.50**	**253**	P		**Pn**	**20 05 02.2**	**+1.1**
SANT	**Santorini**	**2.51**	**279**	PN		**Pn**	**20 05 02.3**	**+0.9**
THT2	**Imerovigli**	**2.55**	**280**	PN		**Pn**	**20 05 03.3**	**+1.4**
KZIL	**AFYON_Kizioren**	**2.57**	**29**	P		**Pn**	**20 05 03.1**	**+0.8**
KZIL				*i* S		**Sn**	**20 05 29.0**	**-3.5**
APE	**Apeiranthos**	**2.64**	**294**	PN		**Pn**	**20 05 04.3**	**+1.2**
USAK	**Uak-Merkez**	**2.72**	**8**	*i* P		**Pn**	**20 05 05.2**	**+1.1**
USAK				*i* S		Sn	20 05 26.5	-9.3
USAK				IAML			20 06 34.0	
	comp=N,37nm,3.6s							
URLA	**Izmir**	**2.80**	**327**	PN		**Pn**	**20 05 07.4**	**+2.1**
HRKL	**Herakleio**	**2.88**	**257**	PN		**Pn**	**20 05 07.8**	**+1.4**
AKHS	**Akhisar**	**2.91**	**349**	*i* P		**Pn**	**20 05 08.0**	**+1.3**
AKHS				*i* S		Sn	20 05 30.5	-10
IDI	**Anoyia**	**3.06**	**257**	P		**Pn**	**20 05 09.0**	**+0.1**
	comp=N,3.7nm,0.3s,baz=349,slow=8.5,SNR=45							
IDI				S		**Sn**	**20 05 41.9**	**-2.4**
	comp=N,15nm,0.3s,baz=296,slow=22,SNR=8.2							
IDI	**Anoyia**	**3.06**	**257**	P		**Pn**	**20 05 09.6**	**+0.7**
YVAC	**Isparta, Yalva**	**3.12**	**43**	*i* P		**Pn**	**20 05 11.7**	**+2.0**
YVAC				*i* S		Sn	20 05 36.6	-9.1
GDZ	**Gediz**	**3.15**	**13**	*i* P		**Pn**	**20 05 10.2**	**0.0**
GDZ				*i* S		Sn	20 05 33.4	-13
SIVA	**Sivas**	**3.20**	**253**	P		**Pn**	**20 05 13.1**	**+2.4**
AKMS	**Akamas**	**3.25**	**107**	P		**Pn**	**20 05 12.2**	**+0.7**
AKMS				AML		AML	20 05 49.4	
	comp=N,0.9nm,0.2s							
AKMS				AML		AML	20 05 50.2	
	comp=N,0.6nm,0.2s							
OSC1	**CSNet OBS 1**	**3.38**	**137**	P		**Pn**	**20 05 13.2**	**0.0**
OSC1				S		**Sn**	**20 05 51.6**	**-0.4**
ALFC	**Alefka**	**3.42**	**103**	P		**Pn**	**20 05 14.6**	**+0.8**
NATA	**Nata**	**3.52**	**109**	P		**Pn**	**20 05 16.1**	**+0.9**
DURS	**Dursunbey**	**3.58**	**359**	*i* P		**Pn**	**20 05 16.4**	**+0.5**
DURS				*i* S		Sn	20 05 48.9	-8.1
IMMV	**Iera Moni Meta**	**3.75**	**263**	P		**Pn**	**20 05 19.2**	**+1.0**
SZAC	**Souni**	**3.77**	**108**	P		**Pn**	**20 05 19.1**	**+0.6**
ASGA	**Asgata**	**4.04**	**106**	P		**Pn**	**20 05 22.9**	**+0.7**
OSC2	**CSNet OBS 4**	**4.25**	**133**	S		**Sn**	**20 06 13.2**	**-0.4**
SLUM	**Salum**	**5.30**	**212**	P		**Pn**	**20 05 40.1**	**+0.6**
	baz=217							
BRTR	**Keskin Array B**	**5.47**	**46**	P		**Pn**	**20 05 44.4**	**+2.4**
	comp=N,0.3nm,0.3s,baz=232,slow=16,SNR=9.1							
BRTR				S		**Sn**	**20 06 45.4**	**+1.7**
	comp=N,0.5nm,0.3s,baz=214,slow=26,SNR=7.1							
MMAI	**Mount Meron Ar**	**6.41**	**116**	P		**Pn**	**20 05 54.4**	**-0.4**
	comp=N,4.3nm,0.3s,baz=310,slow=11,SNR=20							
MMAI				S		**Sn**	**20 07 03.1**	**-3.5**
	comp=N,9.0nm,0.3s,baz=316,slow=28,SNR=13							
KOT	**Kottamia**	**6.68**	**155**	P		**Pn**	**20 05 57.7**	**-0.8**
	baz=153							
KOT				AMP			20 07 00.0	
	baz=153							
KOT				S		Sn	20 07 02.7	-10
	baz=153							
HSAF	**As Saff**	**6.87**	**157**	P		**Pn**	**20 06 00.4**	**-0.7**
	baz=156							
GLL	**Jalalah**	**6.96**	**157**	P		**Pn**	**20 06 01.6**	**-0.7**
	baz=155							
RYAN	**Fayoum**	**7.07**	**168**	P		**Pn**	**20 06 03.2**	**-0.7**
	baz=167							
SUZ	**Suez**	**7.14**	**148**	P		**Pn**	**20 06 04.1**	**-0.7**
	baz=146							
SWA2		**7.24**	**202**	P		**Pn**	**20 06 05.6**	**-0.5**
	baz=205							
NBNS	**Bani Suef**	**7.74**	**162**	P		**Pn**	**20 06 12.2**	**-0.7**
	baz=160							
EIL	**Elat**	**8.32**	**138**	P		**Pn**	**20 06 20.4**	**-0.5**
	comp=N,1.0nm,0.3s,baz=320,slow=4.0,SNR=14							
EIL				S		**Sn**	**20 07 48.4**	**-5.1**
	comp=N,1.6nm,0.3s,baz=302,slow=12,SNR=6.4							
TAMRE	**El Minia**	**8.56**	**166**	P		**Pn**	**20 06 22.8**	**-1.3**
	baz=165							
LANS	**Liptovska Anna**	**14.71**	**336**	*e*	PN	**Pn**	**20 07 45.6**	**-2.1**
FINES	**FINESS Array B**	**25.49**	**357**	P		**P**	**20 09 45.5**	**-0.2**
	comp=N,4.1nm,1.2s,baz=166,slow=8.8,SNR=3.5							
TORD	**Torodi Ar. Bea**	**33.18**	**233**	P		**P**	**20 10 55.1**	**+0.6**
	comp=N,0.2nm,0.3s,baz=36,slow=9.0,SNR=5.4							
MKAR	**Makanchi Array**	**41.00**	**58**	P		**P**	**20 12 02.4**	**+1.9**
	comp=N,0.2nm,0.6s,baz=272,slow=9.8,SNR=3.2							

*JMA **21** 20:06:48.2±0.1,24.˚50N×122.˚86E,h69km±1km,M2.4*
*TAP **21** 20:06:49.5,24.˚47N×122.˚80E,h54km,ML2.7,C*

ISC 21 20:06:48.8±1.2,24°45N±0.04×122°86E±0.02,h63km±7km, n81,σ0s86/128,Taiwan region

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

TWT	**Tachien**	**1.54**	**263**	*eP*	**Pn**	**20 07 15.1**	**+0.8**
	baz=262							
TWT				eS	**Sn**	**20 07 33.6**	**0.0**
	baz=262							
TDCB	**Techi**	**1.56**	**263**	*eP*	**Pn**	**20 07 15.0**	**+0.5**
	baz=262							
TDCB				eS	**Sn**	**20 07 34.0**	**+0.1**
	baz=262							
CHGB	**Renai**	**1.58**	**256**	*eP*	**Pn**	**20 07 14.9**	**0.0**
	baz=244							
CHGB				eS	**Sn**	**20 07 34.0**	**-0.6**
	baz=244							
OWD	**Renai**	**1.61**	**252**	*eP*	**Pn**	**20 07 15.0**	**-0.2**
	baz=251							
OWD				eS	**Sn**	**20 07 34.2**	**-1.0**
	baz=251							
HGSD	**Ruisui**	**1.62**	**234**	*eP*	**Pn**	**20 07 14.8**	**-0.4**
	baz=232							
HGSD				eS	**Sn**	**20 07 34.6**	**-0.6**
	baz=232							
NJD	**Zhudong**	**1.63**	**280**	*eP*	**Pn**	**20 07 16.9**	**+1.5**
	baz=279							
LIOB	**Emei**	**1.69**	**277**	*eP*	**Pn**	**20 07 16.7**	**+0.6**
	baz=276							
JTJ	**Tarama**	**1.69**	**83**	P	**Pn**	**20 07 16.1**	**-0.1**
JTJ				eS	**Sn**	**20 07 36.7**	**-0.2**
VWDT	**VWDT**	**1.71**	**246**	*eP*	**Pn**	**20 07 16.6**	**+0.2**
	baz=245							
VWDT				eS	**Sn**	**20 07 36.5**	**-0.8**
	baz=245							
WHP	**Taichung City**	**1.75**	**265**	*eP*	**Pn**	**20 07 18.3**	**+1.2**
	baz=264							
WHP				eS	**Sn**	**20 07 38.2**	**-0.2**
	baz=264							
YULB	**Yu-li**	**1.77**	**234**	*eP*	**Pn**	**20 07 16.7**	**-0.6**
	baz=243							
EYUL	**Yuli**	**1.79**	**232**	*eP*	**Pn**	**20 07 17.4**	**-0.1**
	baz=222							
EYUL				eS	**Sn**	**20 07 38.8**	**-0.3**
	baz=222							
WPL	**Puli Township**	**1.79**	**256**	*eP*	**Pn**	**20 07 18.0**	**+0.5**
	baz=247							
TWF1	**Yuli**	**1.80**	**233**	*eP*	**Pn**	**20 07 17.2**	**-0.5**
	baz=223							
TWF1				eS	**Sn**	**20 07 38.4**	**-1.1**
	baz=223							
DPDB	**Guoxing**	**1.81**	**257**	*eP*	**Pn**	**20 07 18.3**	**+0.5**
	baz=248							
SSLB	**Suanglung**	**1.86**	**250**	*eP*	**Pn**	**20 07 18.5**	**0.0**
	baz=248							
SSLB				eS	**Sn**	**20 07 40.6**	**-0.3**
	baz=248							
SMLT	**Sun Moon Lake**	**1.87**	**253**	*eP*	**Pn**	**20 07 19.3**	**+0.6**
	baz=251							
FULB	**Fuli**	**1.90**	**229**	*eP*	**Pn**	**20 07 18.1**	**-0.9**
	baz=227							
TYC	**Yuchr**	**1.91**	**254**	*eP*	**Pn**	**20 07 19.9**	**+0.8**
	baz=245							
WHYT	**Xinyi Township**	**1.98**	**248**	*eP*	**Pn**	**20 07 21.0**	**+0.9**
	baz=239							
WJS	**Zhushan**	**2.04**	**253**	*eP*	**Pn**	**20 07 22.6**	**+1.6**
	baz=244							
EDH	**Donghe**	**2.05**	**224**	*eP*	**Pn**	**20 07 19.7**	**-1.3**
	baz=223							
EDH				eS	**Sn**	**20 07 43.4**	**-2.1**
	baz=223							
WNT	**Mingjian**	**2.06**	**254**	*eP*	**Pn**	**20 07 22.4**	**+1.2**
	baz=252							
ALS	**Alishan**	**2.10**	**244**	*eP*	**Pn**	**20 07 22.9**	**+0.9**
	baz=242							
JIRB	**Irabujima**	**2.14**	**79**	P	**Pn**	**20 07 22.0**	**-0.3**
JIRB				eS	**Sn**	**20 07 47.2**	**-0.6**
CHN5	**Tsauling**	**2.17**	**247**	*eP*	**Pn**	**20 07 24.1**	**+1.4**
	baz=237							
CHN5				eS	**Sn**	**20 07 49.4**	**+0.9**
	baz=237							
LDUT	**Ludao**	**2.18**	**216**	S	**Sn**	**20 07 45.8**	**-2.9**
	baz=214							
LONT	**Longtian**	**2.21**	**226**	*eP*	**Pn**	**20 07 22.3**	**-0.9**
	baz=233							
WGK	**Gukeng**	**2.23**	**250**	*eP*	**Pn**	**20 07 24.6**	**+1.2**
	baz=248							
WDLH	**Douliu**	**2.25**	**251**	*eP*	**Pn**	**20 07 24.2**	**+0.5**
	baz=249							
STYH	**Taoyuan**	**2.29**	**237**	*eP*	**Pn**	**20 07 25.0**	**+0.7**
	baz=235							
STYH				eS	**Sn**	**20 07 51.7**	**+0.3**
	baz=235							
STYT	**Tauyuan**	**2.31**	**237**	*eP*	**Pn**	**20 07 25.4**	**+0.8**
	baz=235							
STYT				eS	**Sn**	**20 07 52.1**	**+0.1**
	baz=235							
TPUB	**Ta-pu**	**2.34**	**241**	*eP*	**Pn**	**20 07 26.4**	**+1.5**
	baz=240							
TPUB				eS	**Sn**	**20 07 54.1**	**+1.4**
	baz=240							
CHN4	**Tsaushan**	**2.34**	**243**	*eP*	**Pn**	**20 07 26.8**	**+1.8**
	baz=234							
CHN4				eS	**Sn**	**20 07 54.6**	**+1.9**
	baz=234							
WTP	**Ta-pu**	**2.38**	**240**	*eP*	**Pn**	**20 07 26.9**	**+1.4**
	baz=238							
WTK	**Tuku**	**2.38**	**252**	*eP*	**Pn**	**20 07 26.7**	**+1.2**
	baz=250							
CHN1	**Nanshi**	**2.48**	**240**	*eP*	**Pn**	**20 07 29.0**	**+2.2**
	baz=238							
SLGT	**Liugui**	**2.49**	**235**	*eP*	**Pn**	**20 07 28.4**	**+1.3**
	baz=225							
ECL	**Taimali**	**2.54**	**224**	*eP*	**Pn**	**20 07 28.2**	**+0.5**
	baz=230							
SSD	**Sandimen**	**2.65**	**231**	*eP*	**Pn**	**20 07 31.1**	**+1.8**
	baz=222							
SCST	**Cishan**	**2.67**	**235**	*eP*	**Pn**	**20 07 31.6**	**+2.2**
	baz=224							
MASBT	**Mashibuluo**	**2.74**	**229**	*eP*	**Pn**	**20 07 31.1**	**+0.7**
	baz=225							
MASBT				eS	**Sn**	**20 08 02.1**	**-0.4**
	baz=225							
EAST	**Anshuo**	**2.77**	**222**	*eP*	**Pn**	**20 07 31.9**	**+1.0**
	baz=227							
SCZT	**Fangliau**	**2.92**	**225**	*eP*	**Pn**	**20 07 34.3**	**+1.5**
	baz=223							
VWUC	**VWUC**	**3.14**	**281**	*eP*	**Pn**	**20 07 35.2**	**-0.7**
	baz=279							

*DJA **21** 20:14:39.1±0.3,9°S±3°×12°4E±°,h145km±5km,M4.2/12, mb4.1/8,mB5.0/3,MLv4.2/12,Mw(mB)4.3/3*
*NEIC **21** 20:14:40.4±1.9,8.77S±0.06°×124.1E±0.1,h117km±10km, mb4.1/6,Error ellipse: s-maj=15.9km s-min=7.3km az=71.0*
*IDC **21** 20:14:43.6±1.1,9.39S×123.85E,h166km±11km,mb3.5/2, mb1 3.8/5,mb1mx3.3/33,mbtmp4.2/5,MS3.5/1,Ms1 3.5/1, ms1mx2.6/31,Error ellipse: s-maj=50.5km s-min=16.6km az=59.0*

ISC 21 20:14:41.8±0.6,9.07S±0.05×124.08E±0.05,h150km,n41, σ2s37/47,mb4.4/7,Timor region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.71**	**165**			**Pn**	**20 15 02.2**	**-2.3**
SOEI	**Soe**	**0.71**	**165**	P		**Pn**	**20 15 02.2**	**-2.3**
SOEI				S		**Sn**	**20 15 18.2**	**-3.7**
BATI	**Baumata**	**1.20**	**200**	P		**Pn**	**20 15 08.2**	**-0.2**
	312nm,0.3s,baz=36,slow=3.8,SNR=586							
BATI				S		**Sn**	**20 15 29.0**	**+0.1**
	147nm,0.3s,baz=114,slow=17,SNR=7.0							
BATI	**Baumata**	**1.20**	**200**	P		**Pn**	**20 15 08.1**	**-0.4**
BATI				S		**Sn**	**20 15 27.1**	**-1.8**
MMRI	**Maumere**	**1.87**	**283**			**Pn**	**20 15 13.9**	**-1.6**
MMRI	**Maumere**	**1.87**	**283**	P		**Pn**	**20 15 13.8**	**-1.7**
MMRI				S		**Sn**	**20 15 38.6**	**-2.7**
BASI	**Baing, Sumba**	**3.64**	**251**	P		**Pn**	**20 15 38.0**	**+0.6**
BASI				S		**Sn**	**20 16 20.2**	**-0.3**
WBSI	**Waikabubak, Su**	**4.66**	**263**	P		**Pn**	**20 15 50.8**	**-0.1**
WBSI				S		**Sn**	**20 16 41.1**	**-3.6**
BNSI	**Bone**	**6.09**	**319**	P		**Pn**	**20 16 08.6**	**-1.2**
	0.1nm42nm,1.1s							
PLAI	**Plampang**	**6.23**	**272**	P		**Pn**	**20 16 12.1**	**+0.4**
	0.3nm606nm24nm,0.8s							
PLAI				S		**Sn**	**20 17 18.8**	**-3.2**
	0.3nm606nm24nm,0.8s							
NLAI	**Namlea**	**6.52**	**28**	P		**Pn**	**20 16 13.5**	**-2.1**
	0.1nm2μm19nm,0.7s							
SPSI	**Sidrap Palu**	**6.64**	**320**	P		**Pn**	**20 16 14.0**	**-3.1**
	0.1nm11nm,0.7s							

TWSI	**Taliwang, Sumb**	**7.12**	**272**		P	**Pn**	**20 16 21.9**	**-1.7**
	0.2nm9.9nm,0.8s							
SAUI	**Saumlaki**	**7.22**	**82**		Pn	**Pn**	**20 16 22.1**	**-2.8**
SANI	**Sanana**	**7.23**	**15**		P	**Pn**	**20 16 22.4**	**-2.6**
	0.1nm30nm,0.7s							
MTN	**Manton Dam**	**7.87**	**119**		Pn	**Pn**	**20 16 31.4**	**-2.2**
KNRA	**Kununurra**	**8.00**	**146**			**Pn**	**20 16 34.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**9.10**	**171**		P	**Pn**	**20 16 48.2**	**-1.7**
	2.2nm,0.3s,baz=358,slow=8.8,SNR=79							
FITZ					S	**Sn**	**20 18 27.1**	**-4.0**
	10nm,0.3s,baz=276,slow=23,SNR=25							
FITZ	**Fitzroy Crossi**	**9.10**	**171**		Pn	**Pn**	**20 16 49.4**	**-0.6**
JAGI	**Jajag, Banyuwa**	**9.83**	**273**			**Pn**	**20 16 56.9**	**-2.8**
FAKI	**Fak Fak**	**10.16**	**54**		Pn	Pn	20 17 00.1	-3.9
PSA00	**Pilbara Seismi**	**13.08**	**198**		Pn	**P**	**20 17 45.1**	**-1.7**
WB0	**Warramunga Arr**	**14.58**	**138**		Pn	**Pn**	**20 17 59.4**	**-1.7**
WRA	**Warramunga Arr**	**14.67**	**139**		P	**Pn**	**20 18 00.6**	**-1.7**
	1.7nm,0.3s,baz=320,slow=14,SNR=53							
WRA					S	Sn	20 20 33.8	-11
	1.5nm,0.3s,baz=313,slow=23,SNR=8.7							
WRA	**Warramunga Arr**	**14.67**	**139**			**Pn**	**20 18 00.2**	**-2.1**
WB2	**Warramunga Arr**	**14.68**	**139**		Pn	**Pn**	**20 18 00.3**	**-2.0**
WR0	**Warramunga Arr**	**14.81**	**138**		Pn	**Pn**	**20 18 02.1**	**-2.0**
GIRL	**Giralia**	**16.48**	**214**		Pn	P	20 18 31.2	+6.8
AS31	**Alice Springs**	**17.29**	**148**			**Pn**	**20 18 36.3**	**+2.0**
ASAR	**Alice Springs**	**17.29**	**148**		P	**Pn**	**20 18 33.9**	**-0.5**
	0.7nm,0.3s,baz=325,slow=12,SNR=54							
ASAR					S	**S**	**20 21 42.1**	**-4.0**
	0.8nm,0.3s,baz=324,slow=17,SNR=10							
ASAR	**Alice Springs**	**17.29**	**148**			**Pn**	**20 18 36.5**	**+2.2**
COEN	**Coen**	**19.32**	**106**			**Pn**	**20 18 58.3**	**-0.1**
COEN					IAmb	IAmb	20 19 04.4	
	comp=Z,17nm,1.2s							
MORW	**Morawa**	**21.28**	**200**		IAmb	IAmb	20 19 32.8	
	comp=Z,24nm,1.4s							
MORW						**P**	**20 19 21.1**	**+4.6**
CTA	**Charters Tower**	**24.06**	**120**		P	**P**	**20 19 45.1**	**+1.7**
	comp=Z,6.6nm,0.8s,baz=302,slow=9.5,SNR=3.8							
BBOO	**Buckleboo**	**26.09**	**157**		P	**P**	**20 20 06.5**	**+4.8**
NJ2	**Nanjing**	**41.19**	**353**	*eP*		**P**	**20 22 14.3**	**+2.6**
NJ2					pmax	pmax		
	comp=Z,12nm,0.5s							
HHC	**Hu-ho-hao-te**	**50.99**	**348**	*eP*		**P**	**20 23 30.8**	**+2.4**
HHC					pmax	pmax		
	comp=Z,12nm,0.8s							
HHC					pmax	pmax		
	comp=Z,55nm,7.0s							
ASAJ	**Asahikawa**	**55.53**	**16**		LR	LR	20 47 60.0	
	comp=Z,44nm,19.8s,baz=182,slow=36							
WMQ	**Urumqi**	**62.13**	**331**	*eP*		**P**	**20 24 50.3**	**+3.3**
WMQ					pmax	pmax		
	comp=Z,23nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,100nm,4.9s							
MKAR	**Makanchi Array**	**66.91**	**330**		P	**P**	**20 25 18.9**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=134,slow=8.3,SNR=6.7							
MAKZ	**Makanchi**	**67.08**	**330**		P	**P**	**20 25 19.7**	**+0.7**
MAKZ					IAmb	IAmb	20 25 25.0	
	comp=Z,0.7nm,0.8s							

IDC 21 20:22:05.8±1.6,13.70N×55.75E,h0km,mb3.7/5, mb1 4.0/5,mb1mx3.5/48,mbtmp3.7/5,MS3.5/5,Ms1 3.5/5, ms1mx3.0/43,Error ellipse: s-maj=46.7km s-min=34.4km az=48.0,Socotra region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**33.07**	**26**		LR	LR	20 41 29.7	
	comp=Z,61nm,19.3s,baz=287,slow=35							
OPO	**Ambohidratompo**	**33.16**	**195**		LR	LR	20 40 51.8	
	comp=Z,47nm,19.6s,baz=140,slow=34							
AKTO	**Aktyubinsk**	**36.68**	**2**		LR	LR	20 46 46.8	
	comp=Z,69nm,18.4s,baz=55,slow=40							
MKAR	**Makanchi Array**	**39.79**	**29**		P	P	20 29 40.6	0.0
	0.4nm,0.8s,baz=214,slow=9.6,SNR=5.1							
MKAR						LR	20 46 49.4	
	comp=Z,60nm,20.4s,baz=258,slow=37							
ZALV	**Zalesovo Beam**	**46.21**	**23**		P	P	20 30 31.9	-0.6
	0.6nm,0.6s,baz=202,slow=7.4,SNR=3.5							
ESDC	**Sonseca Array**	**58.13**	**308**		P	P	20 32 01.6	0.0
	0.9nm,0.8s,baz=81,slow=6.3,SNR=5.2							
SFJD	**Kangerlussuaq**	**83.76**	**338**		LR	LR	21 14 13.2	
	comp=Z,104nm,21.6s,baz=144,slow=37							
WRA	**Warramunga Arr**	**84.20**	**112**		P	P	20 34 39.8	+0.1
	1.2nm,0.9s,baz=290,slow=7.8,SNR=2.4							
ASAR	**Alice Springs**	**84.89**	**116**		P	P	20 34 43.4	+0.1
	0.7nm,0.8s,baz=293,slow=5.3,SNR=5.7							

*IDC **21** 20:32:27.4±0.5,1.75S×138.60E,h0km,mb4.4/21, mb1 4.6/27,mb1mx4.4/48,mbtmp4.5/27,ML4.6/3,MS4.0/28, Ms1 4.0/28,ms1mx3.8/47,Error ellipse: s-maj=14.9km s-min=9.5km az=80.0*
*GCMT **21** 20:32:31.3±0.4,1.44S±0.02°×138.85E±0.03,h22km±1km, MW4.9/67,Moment Tensor Solution. s16,c18; s67,c87; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.31±.22; Mθθ-1.73±.12; Mφφ-0.58±.12; Mrθ-1.76±.16; Mrφ0.71±.06; Mθφ0.45±.17; Best double couple: Mo2.84400×10^16 NP1:φ121.00000°,δ26.00000°,λ101.00000°. NP2: φ289.00000°,δ65.00000°,λ85.00000°. Principal axes: T 2.9780, Plg70.0000°, Azm188.0000°; N -0.2680, Plg5.0000°, Azm291.0000°; P -2.7110, Plg20.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **21** 20:32:31.4±0.0,1.37S×139.09E,h31km,mB5.0/38, mb4.6/56,Ms4.4/24,Ms7 4.1/23*
*DJA **21** 20:32:31.5±1.1,2°S±3°×13°9E±°,h14km±7km,M4.6/40, mB5.2/13,mb4.7/40,MLv4.6/6,Mw(mB)4.6/13*
*NEIC **21** 20:32:31.3±1.7,1.70S±0.07×138.66E±0.05,h30km±4km, mb4.9/79,Error ellipse: s-maj=11.3km s-min=7.1km az=203.0*

ISC 21 20:32:32.5±0.3,1.79S±0.04×138.71E±0.04,h36km,n217, σ1s85/211,mb4.8/86,MS4.0/33,2C-1D,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.66**	**119**		P	**Pn**	**20 32 58.7**	**-0.3**
GENI					S	**Sn**	**20 33 19.8**	**+0.7**
JAY	**Jayapura**	**2.12**	**110**		Pn	**Pn**	**20 33 03.5**	**-1.9**
	50nm,0.3s,baz=255,slow=8.8,SNR=191							
JAY					Lg	Lg	20 33 28.6	
	164nm,0.3s,baz=125,slow=23,SNR=5.9							
JAY	**Jayapura**	**2.12**	**110**		P	**Pn**	**20 33 03.4**	**-2.0**
JAY					S	**Sn**	**20 33 29.0**	**-1.5**
SRPI	**Serui, Papua**	**2.47**	**268**		P	**Pn**	**20 33 09.3**	**-0.9**
SRPI					S	**Sn**	**20 33 40.5**	**+1.3**
FAKI	**Fak Fak**	**6.55**	**260**		Pn	**Pn**	**20 34 06.3**	**-0.1**
FAKI	**Fak Fak**	**6.55**	**260**		P	**Pn**	**20 34 03.2**	**-3.2**
SIJI	**Sorong**	**7.50**	**277**		Pn	**Pn**	**20 34 18.4**	**-1.0**
	0.6nm,0.3s,baz=343,slow=22,SNR=1.4							
SIJI					LR	LR	20 37 32.6	
	comp=Z,1μm,18.0s,baz=79,slow=41							
SWI	**Sorong**	**7.51**	**277**		P	**Pn**	**20 34 22.3**	**+2.8**
	0.2nm590nm30nm,0.9s							
MANU	**Manus Island**	**8.65**	**92**			**Pn**	**20 34 34.7**	**-0.6**
SAUI	**Saumlaki**	**9.61**	**230**		Pn	**Pn**	**20 34 47.0**	**-1.3**
PMG	**Port Moresby**	**11.30**	**132**		Pn	**Pn**	**20 35 12.2**	**+0.6**
	0.9nm,0.3s,baz=315,slow=12,SNR=8.3							
PMG					LR	LR	20 41 01.5	
	comp=Z,974nm,19.8s,baz=354,slow=45							
PMG	**Port Moresby**	**11.30**	**132**		Pn	**Pn**	**20 35 13.7**	**+2.1**
NLAI	**Namlea**	**11.69**	**263**		P	**Pn**	**20 35 16.9**	**+0.1**
	2μm23nm,1.1s							
SANI	**Sanana**	**12.72**	**269**		P	**Pn**	**20 35 32.4**	**+1.5**
	15nm,0.8s							
COEN	**Coen**	**12.87**	**160**		Pn	**Pn**	**20 35 33.1**	**+0.1**
MTN	**Manton Dam**	**13.30**	**214**		Pn	**Pn**	**20 35 38.3**	**-0.5**
RABL	**Rabaul**	**13.64**	**100**			**Pn**	**20 35 46.1**	**+2.5**
KMSI	**Cibinong**	**14.91**	**279**		P	P	20 36 27.2	+21
LUWI	**Luwuk**	**15.95**	**272**		P	**Pn**	**20 36 14.4**	**0.0**
LUWI	**Luwuk**	**15.95**	**272**		P	**P**	**20 36 17.9**	**+0.3**
	34nm,0.8s							
SOEI	**Soe**	**16.39**	**241**		P	**Pn**	**20 36 20.6**	**+0.5**
SOEI	**Soe**	**16.39**	**241**		P	**P**	**20 36 21.5**	**-1.1**
	206nm,1.1s							
MRSI	**Marisa**	**16.92**	**278**		P	P	20 36 42.9	+15
KNRA	**Kununurra**	**16.93**	**215**		P	**Pn**	**20 36 26.2**	**-0.5**
KNRA					IAmb	IAmb	20 36 38.7	
	comp=Z,215nm,1.6s							

BATI	**Baumata**	**17.13**	**240**		Pn	**Pn**	**20 36 29.0**	**-0.2**
	comp=Z,11nm,0.3s,baz=41,slow=1.3,SNR=20							
BATI	**Baumata**	**17.13**	**240**		P	**Pn**	**20 36 28.2**	**-1.1**
	comp=Z,108nm,0.8s							
MMRI	**Maumere**	**17.75**	**247**		P	**Pn**	**20 36 36.7**	**-0.2**
TOLI2	**Tolitoli**	**18.16**	**279**			**Pn**	**20 36 40.1**	**-1.8**
WB0	**Warramunga Arr**	**18.36**	**193**			**P**	**20 36 42.7**	**-1.4**
WB0					IAmb	IAmb	20 36 48.2	
	comp=Z,60nm,0.8s							
WR0	**Warramunga Arr**	**18.51**	**192**			**P**	**20 36 45.1**	**-0.7**
WR0					IAmb	IAmb	20 36 49.9	
	comp=Z,58nm,0.8s							
WRAB	**Tennant Creek**	**18.53**	**193**		P	**P**	**20 36 46.0**	**0.0**
WRAB					IAmb	IAmb	20 36 50.2	
	comp=Z,61nm,0.9s							
WB2	**Warramunga Arr**	**18.54**	**193**			**P**	**20 36 45.8**	**-0.3**
WB2					IAmb	IAmb	20 36 50.3	
	comp=Z,59nm,0.8s							
WRA	**Warramunga Arr**	**18.54**	**193**		P	**Pn**	**20 36 46.5**	**0.0**
	comp=Z,3.2nm,0.3s,baz=18,slow=12,SNR=84							
WRA					S	**Sn**	**20 40 07.5**	**-5.3**
	comp=Z,0.4nm,0.3s,baz=12,slow=22,SNR=4.7							
WRA					LR	LR	20 44 09.6	
	comp=Z,515nm,18.6s,baz=25,slow=38							
WRA	**Warramunga Arr**	**18.54**	**193**		P	**P**	**20 36 45.6**	**-0.5**
BNSI	**Bone**	**18.75**	**262**		P	**Pn**	**20 36 52.8**	**+3.6**
	comp=Z,742nmcomp=Z,27nm,1.3s							
TTSI	**Tana Toraja**	**18.92**	**266**		P	**Pn**	**20 36 51.2**	**0.0**
	comp=Z,578nmcomp=Z,28nm,1.4s							
SPSI	**Sidrap Palu**	**19.04**	**263**		P	**Pn**	**20 36 54.8**	**+2.2**
	comp=Z,604nmcomp=Z,23nm,1.0s							
KAPI	**Kappang**	**19.19**	**260**		LR	LR	20 45 35.5	
	comp=Z,223nm,20.7s,baz=83,slow=41							
KAPI	**Kappang**	**19.19**	**260**		P	**Pn**	**20 36 54.0**	**-0.5**
CTA	**Charters Tower**	**19.62**	**158**		P	**Pn**	**20 36 58.9**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=336,slow=12,SNR=13							
CTAO	**Charters Tower**	**19.62**	**158**			**Pn**	**20 36 59.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**20.67**	**218**		P	**P**	**20 37 09.8**	**+0.5**
	comp=Z,12nm,0.8s,baz=60,slow=10,SNR=7.6							
FITZ					S	**S**	**20 40 55.5**	**-3.0**
	comp=Z,9.0nm,0.7s,baz=148,slow=14,SNR=5.9							
FITZ					LR	LR	20 45 50.8	
	comp=Z,108nm,19.6s,baz=36,slow=39							
FITZ	**Fitzroy Crossi**	**20.67**	**218**		P	**P**	**20 37 09.5**	**+0.1**
MYLDM	**Lahad Datu**	**21.34**	**289**		P	**P**	**20 37 16.3**	**-0.4**
MYLDM					IAmb	IAmb	20 37 51.0	
	comp=Z,65nm,1.3s							
BKB	**Balikpapan**	**21.81**	**271**		P	**P**	**20 37 20.6**	**-1.1**
PLAI	**Plampang**	**21.97**	**251**		P	**P**	**20 37 25.7**	**+2.2**
	comp=Z,40nm,1.0s							
AS31	**Alice Springs**	**22.23**	**192**		P	**P**	**20 37 26.6**	**+0.4**
ASAR	**Alice Springs**	**22.24**	**192**		P	**P**	**20 37 26.9**	**+0.6**
	comp=Z,56nm,0.8s,baz=23,slow=10,SNR=284							
ASAR					S	**S**	**20 41 31.5**	**+2.4**
	comp=Z,11nm,0.9s,baz=12,slow=24,SNR=11							
ASAR					LR	LR	20 46 25.5	
	comp=Z,366nm,18.6s,baz=14,slow=38							
ASAR	**Alice Springs**	**22.24**	**192**		P	**P**	**20 37 26.0**	**-0.3**
HNR	**Honiara**	**22.44**	**111**		P	**P**	**20 37 30.0**	**+1.5**
	comp=Z,74nm,0.6s,baz=233,slow=7.2,SNR=5.4							
HNR					LR	LR	20 46 13.5	
	comp=Z,258nm,19.4s,baz=312,slow=37							
HNR	**Honiara**	**22.44**	**111**		P	**P**	**20 37 29.1**	**+0.6**
TWSI	**Taliwang, Sumb**	**22.79**	**252**		P	**P**	**20 37 32.7**	**+0.5**
	comp=Z,13nm,1.1s							
TGY	**Tagaytay City**	**23.66**	**312**		LR	LR	20 46 55.3	
	comp=Z,335nm,20.8s,baz=144,slow=37							
KKM	**Kota Kinabalu**	**23.77**	**289**		P	**P**	**20 37 41.8**	**-0.3**
KKM					IAmb	IAmb	20 37 54.3	
	comp=Z,22nm,0.9s							
MTKI	**Muara Teweh, K**	**23.82**	**272**		P	**P**	**20 37 42.7**	**+0.3**
BBKI	**Banjar Baru**	**23.90**	**266**		P	**P**	**20 37 44.7**	**+1.5**
	comp=Z,807nmcomp=Z,63nm,1.2s							
KMMI	**Kalianget**	**25.21**	**257**		P	**P**	**20 37 56.8**	**+1.7**
	comp=Z,3μmcomp=Z,58nm,1.1s							
JAGI	**Jajag, Banyuwa**	**25.33**	**254**		P	**P**	**20 37 55.1**	**-1.1**
JAGI					IAmb	IAmb	20 38 24.9	
	comp=Z,16nm,0.9s							
SBUM	**Sibu**	**26.82**	**279**		P	**P**	**20 38 09.2**	**-0.5**
PSA00	**Pilbara Seismi**	**26.91**	**222**		P	**P**	**20 38 10.6**	**+0.2**
JCJ	**Chichijima**	**28.92**	**6**		LR	LR	20 48 45.3	
	comp=Z,251nm,19.1s,baz=110,slow=34							
STKA	**Stephens Creek**	**30.05**	**175**		P	**P**	**20 38 38.8**	**+0.5**
	comp=Z,6.8nm,0.7s,baz=345,slow=9.0,SNR=21							
STKA					LR	LR	20 52 20.6	
	comp=Z,413nm,19.6s,baz=350,slow=40							
STKA	**Stephens Creek**	**30.05**	**175**		P	**P**	**20 38 38.5**	**+0.2**
JOW	**Kunigami**	**30.19**	**341**		LR	LR	20 48 23.7	
	comp=Z,347nm,20.5s,baz=120,slow=32							
JOW	**Kunigami**	**30.19**	**341**		P	**P**	**20 38 40.6**	**+1.1**
YOJ	**Yonaguni jima**	**30.23**	**331**		P	**P**	**20 38 41.4**	**+1.5**
FORT	**Forrest**	**30.54**	**198**		P	**P**	**20 38 43.8**	**+1.2**
NACB	**Ninganchiao**	**30.71**	**328**		P	**P**	**20 38 42.6**	**-1.5**

MSVF IAmb IAmb 20 40 30.7
comp=Z,48nm,1.2s
PHIT Phitsanulok 42.21 298 P P 20 40 28.6 +6.3
comp=Z,42nm,1.2s
UTTA Uttaradit 42.30 299 P **P** **20 40 27.4 +4.3**
comp=Z,15nm,1.2s
SRDT SRDT 42.36 294 P P 20 40 29.0 +5.4
comp=Z,7.6nm,1.2s
UTHA Uthaitani 42.48 295 P **P** **20 40 28.9 +4.4**
comp=Z,24nm,1.1s
NANT Nan 42.60 300 P **P** **20 40 29.3 +3.8**
comp=Z,5µmcomp=Z,193nm,1.1s
TIA Tai'an 42.83 334 P **P** **20 40 24.8 -2.3**
TIA pmax pmax
comp=Z,7.0nm,1.2s
TIA LR LR
comp=Z,170nm,20.6s
TIA LR LR
comp=Z,120nm,17.5s
TIA LR LR
comp=Z,280nm,23.0s
SUKH Sukhothai 43.01 298 P P 20 40 35.3 +6.5
comp=Z,9.6nm,0.9s
UMPA Umpang Tak 43.23 296 P P 20 40 37.0 +6.4
comp=Z,30nm,1.0s
LAMP Lampang 43.41 300 P **P** **20 40 35.0 +2.9**
comp=Z,23nm,1.0s
CM35 Chiang Mai Arr 43.89 299 P **P** **20 40 38.0 +2.0**
KMI Kunming 43.93 310 ⇑P **P** **20 40 39.9 +3.5**
KMI pP sP 20 40 49.1 -2.1
KMI sP pP 20 40 54.3 +7.3
KMI PP **PcP** **20 42 22.0 -0.1**
KMI S **S** **20 47 05.3 -0.7**
KMI pmax pmax
comp=Z,11nm,1.5s
KMI pmax pmax
comp=Z,52nm,3.5s
KMI LR LR
comp=Z,120nm,18.8s
KMI LR LR
comp=Z,150nm,19.2s
KMI LR LR
comp=Z,190nm,23.7s
KMI Kunming 43.93 310 P **P** **20 40 36.0 -0.5**
CM31 Chiang Mai Arr 43.99 299 P **P** **20 40 35.1 -1.7**
CM31 IAmb IAmb 20 40 41.4
comp=Z,14nm,1.0s
CMAR Chiang Mai Arr 43.99 299 P **P** **20 40 36.6 -0.1**
comp=Z,8.0nm,0.9s,baz=115,slow=6.3,SNR=20
CMAR LR LR 20 59 47.1
comp=Z,55nm,18.1s,baz=160,slow=37
CMAR Chiang Mai Arr 43.99 299 P **P** **20 40 36.3 -0.5**
CMMT Chiang Mai 44.12 300 P **P** **20 40 40.0 +2.2**
comp=Z,4.4nm,1.1s
CHTO Chiang Mai 44.13 300 P **P** **20 40 37.8 -0.1**
XAN Xi'an 45.33 325 P **P** **20 40 45.4 -1.9**
XAN pmax pmax
comp=Z,24nm,1.2s
XAN LR LR
comp=Z,150nm,22.8s
XAN LR LR
comp=Z,170nm,21.7s
XAN LR LR
comp=Z,220nm,19.5s
XAN Xi'an 45.33 325 P **P** **20 40 45.7 -1.6**
XAN IAmb IAmb 20 40 51.5
comp=Z,27nm,1.2s
JKA Kamikawa-asahi 45.84 4 P **P** **20 40 49.8 -1.2**
USA0B Ussuriysk Arra 46.18 353 P **P** **20 40 52.6 -1.1**
USA0B IAmb IAmb 20 41 06.0
comp=Z,14nm,1.4s
USRK Ussuriysk Ar. 46.18 353 P **P** **20 40 52.6 -1.1**
comp=Z,1.4nm,0.6s,baz=169,slow=8.4,SNR=3.5
USRK LR LR 20 56 41.5
comp=Z,293nm,21.8s,baz=162,slow=32
USRK Ussuriysk Ar. 46.18 353 P **P** **20 40 52.0 -1.7**
BJT Baijiatuan 46.45 336 P **P** **20 40 54.1 -1.8**
BJT IAmb IAmb 20 40 59.4
comp=Z,18nm,1.3s
BJI Beijing 46.46 336 P **P** **20 40 54.4 -1.6**
BJI S **S** **20 47 45.8 +4.2**
BJI pmax pmax
comp=Z,10.0nm,1.3s
BJI LR LR
comp=Z,210nm,15.7s
BJI LR LR
comp=Z,160nm,11.4s
CD2 Chengdu 46.51 317 P **P** **20 40 54.5 -2.1**
CD2 S **S** **20 47 42.3 -0.5**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,110nm,4.9s
CD2 LR LR
comp=Z,180nm,9.6s
CD2 LR LR
comp=Z,200nm,14.1s
CD2 LR LR
comp=Z,240nm,16.3s
HHC Hu-ho-hao-te 49.12 333 *e*P **P** **20 41 18.4 +1.6**
HHC S **S** **20 48 13.3 -6.4**
HHC pmax pmax
comp=Z,17nm,0.8s
HHC pmax pmax
comp=Z,120nm,5.7s
HHC LR LR
comp=Z,190nm,17.0s
HHC LR LR
comp=Z,140nm,17.0s
HHC LR LR
comp=Z,230nm,17.0s
LZH Lanzhou 49.76 323 *e*P **P** **20 41 26.0 +4.3**
LZH pP sP 20 41 37.8 +1.7
LZH S **S** **20 48 37.1 +8.3**
LZH sS sS 20 48 48.5 +1.9
LZH pmax pmax
comp=Z,40nm,1.1s
LZH pmax pmax
comp=Z,69nm,7.6s
LZH LR LR
comp=Z,180nm,16.8s
LZH LR LR
comp=Z,210nm,17.4s
LZH LR LR
comp=Z,140nm,15.7s
URZ Urewera 50.52 141 LR LR 21 01 31.1
comp=Z,125nm,21.1s,baz=31,slow=34
TUWZ Tuamarina 50.62 146 P **P** **20 41 27.4 -0.6**
RPZ Rata Peaks 50.67 150 P **P** **20 41 29.1 +0.7**
KHZ Kahutara 51.06 147 P **P** **20 41 31.8 +0.5**
BFZ Birch Farm 51.47 144 P **P** **20 41 34.6 +0.2**
GTA Gaotai 54.34 323 P **P** **20 41 58.9 +3.1**
GTA pP sP 20 42 09.3 -0.8
GTA sP pP 20 42 13.6 +7.0
GTA pmax pmax
comp=Z,11nm,1.3s
GTA pmax pmax
comp=Z,85nm,5.1s
GTA LR LR
comp=Z,78nm,17.1s
GTA LR LR
comp=Z,64nm,17.1s
GTA LR LR
comp=Z,110nm,18.5s
LSA Lhasa 55.14 309 P **P** **20 42 01.4 -0.8**
LSA IAmb IAmb 20 42 07.7
comp=Z,14nm,1.2s
ULN Ulaanbaatar 56.64 335 P **P** **20 42 11.2 -1.0**
ULN IAmb IAmb 20 42 17.8
comp=Z,10.0nm,1.2s
SONM Songino Array 56.90 335 P **P** **20 42 12.8 -1.1**
comp=Z,1.2nm,0.7s,baz=157,slow=7.3,SNR=9.1
SONM LR LR 21 07 27.7
comp=Z,236nm,18.5s,baz=127,slow=37
SONM Songino Array 56.90 335 P **P** **20 42 13.0 -0.9**
PETK Petropavlovsk- 56.98 14 P **P** **20 42 13.8 -0.4**
comp=Z,6.8nm,1.1s,baz=56,slow=3.7,SNR=4.4
PETK LR LR 21 03 13.9
comp=Z,105nm,21.6s,baz=194,slow=32
TLY Talaya 60.99 336 P **P** **20 42 39.2 -2.9**
TLY IAmb IAmb 20 42 58.8
comp=Z,8.2nm,1.0s
YAK Yakutsk 64.03 355 LR LR 21 07 51.8
comp=Z,178nm,20.8s,baz=82,slow=33
YAK Yakutsk 64.03 355 P **P** **20 42 60.0 -2.2**
YAK IAmb IAmb 20 43 19.8
comp=Z,9.5nm,0.9s
WMQ Urumqi 64.30 321 *e*P **P** **20 43 07.3 +2.8**
WMQ pP pP 20 43 15.3 -0.2
WMQ sP sP 20 43 21.8 +2.6
WMQ pmax pmax
comp=Z,28nm,1.1s
WMQ pmax pmax
comp=Z,250nm,5.1s
CASY Casey 67.36 192 P **P** **20 43 24.2 +0.5**
CASY IAmb IAmb 20 43 26.4
comp=Z,11nm,1.1s
MK31 Makanchi Array 69.07 322 P **P** **20 43 33.9 -0.9**
MK31 IAmb IAmb 20 43 39.7
comp=Z,11nm,1.1s
MKAR Makanchi Array 69.07 322 P **P** **20 43 34.0 -0.8**
comp=Z,2.8nm,0.9s,baz=110,slow=7.2,SNR=16
MKAR LR LR 21 15 39.9
comp=Z,54nm,18.1s,baz=56,slow=38
MKAR Makanchi Array 69.07 322 P **P** **20 43 33.3 -1.5**
MAKZ Makanchi 69.27 322 P **P** **20 43 34.1 -1.9**
MAKZ IAmb IAmb 20 43 40.8
comp=Z,19nm,1.2s
SHLS Shalkode 69.34 318 *e*P **P** **20 43 34.8 -1.9**
comp=Z,7.8nm,1.3s,baz=318
UZB Uzynbulak 69.63 318 *e*P **P** **20 43 38.2 -0.3**
comp=Z,4.4nm,1.0s,baz=318
KPKS Kokpek 69.98 318 *e*P **P** **20 43 40.0 -0.6**
comp=Z,11nm,1.2s,baz=318
SATY Saty 70.02 317 *e*P **P** **20 43 40.2 -0.7**
comp=Z,8.5nm,1.1s,baz=317
KSH Kashi 70.46 313 P **P** **20 43 47.9 +4.3**
KSH pP sP 20 44 00.3 +1.5
KSH pmax pmax
comp=Z,8.0nm,1.1s
KSH pmax pmax
comp=Z,43nm,3.4s
TDK Taldyqorghan 70.77 319 *e*P **P** **20 43 45.1 -0.2**
comp=Z,7.1nm,0.8s,baz=319
TDK *e*S **S** **20 52 58.2 +0.6**
baz=319
NIL Nilore 70.78 307 P **P** **20 43 44.1 -1.5**
NIL IAmb IAmb 20 43 50.5
comp=Z,12nm,1.0s
MDOK Medeo 70.98 317 *e*P **P** **20 43 46.1 -0.7**
baz=317
MDOK *e*S **S** **20 53 00.4 0.0**
baz=317
TNSS Tian-Shan 71.00 317 *e*P **P** **20 43 47.5 +0.3**
baz=317
AAA Alma-Ata 71.08 317 *e*P **P** **20 43 48.2 +0.9**
baz=317
ZAA0 Zalesovo Array 71.15 330 P **P** **20 43 45.9 -1.5**
ZAA0 IAmb IAmb 20 43 50.9
comp=Z,22nm,1.6s
ZALV Zalesovo Beam 71.15 330 P **P** **20 43 45.6 -1.7**
comp=Z,3.8nm,0.7s,baz=119,slow=5.8,SNR=11
ZALV LR LR 21 14 47.2
comp=Z,86nm,20.4s,baz=102,slow=36
ZALV Zalesovo Beam 71.15 330 P **P** **20 43 45.0 -2.3**
SEM Semipalatinsk 71.90 325 *e*P **P** **20 43 51.0 -1.3**
baz=325
AAK Ala-Archa 72.55 316 P **P** **20 43 56.8 +0.6**
comp=Z,3.0nm,1.1s,baz=134,slow=5.3,SNR=8.2
AAK Ala-Archa 72.55 316 P **P** **20 43 56.1 -0.1**
TIXI Tiksi 73.59 357 LR LR 21 14 15.4
comp=Z,84nm,20.8s,baz=180,slow=34
TIXI Tiksi 73.59 357 P **P** **20 43 59.5 -2.0**
TIXI IAmb IAmb 20 44 02.0
comp=Z,12nm,1.6s
BTLS Baital 73.66 318 *e*P **P** **20 44 02.5 0.0**
baz=318
KBL Kabul 74.39 307 P **P** **20 44 05.7 -1.6**
KBL IAmb IAmb 20 44 11.5
comp=Z,9.9nm,1.4s
GAR Garm 74.50 311 P **P** **20 44 07.6 -0.1**
DZA Taraz 74.84 315 *e*P **P** **20 44 09.1 -0.4**
baz=315
SDPT Sand Point 75.35 31 P **P** **20 44 12.0 -0.1**
KK31 Karatay Array 75.48 315 P **P** **20 44 12.7 -0.4**
KK31 IAmb IAmb 20 44 18.0
comp=Z,9.6nm,1.4s
KKAR Karatay Array 75.48 315 P **P** **20 44 12.3 -0.8**
IUG Iuzhnay 75.55 314 *e*P **P** **20 44 13.7 -0.1**
baz=314
BRZS Berezniki 76.21 323 *e*P **P** **20 44 17.1 -0.1**
comp=Z,6.6nm,1.5s,baz=322
VNDA Vanda 76.69 175 P **P** **20 44 19.4 +0.1**
comp=Z,1.2nm,0.5s,baz=324,slow=6.3,SNR=7.0
VNDA LR LR 21 18 53.1
comp=Z,155nm,18.1s,baz=340,slow=36
VNDA Vanda 76.69 175 P **P** **20 44 19.9 +0.5**
BRVK Borovoye 78.64 325 P **P** **20 44 29.7 -0.9**
NRIK Noril'sk 78.85 344 P **P** **20 44 31.9 +0.5**
comp=Z,6.8nm,1.0s,baz=111,slow=6.2,SNR=7.4
NRIK LR LR 21 19 50.4
comp=Z,81nm,20.9s,baz=118,slow=36
NRIK Noril'sk 78.85 344 P **P** **20 44 30.4 -1.0**
NRIK IAmb IAmb 20 44 37.3
comp=Z,13nm,1.2s
HRA Herat 79.87 305 P **P** **20 44 35.8 -2.2**
KDAK Kodiak Island 80.32 30 LR LR 21 15 35.9
comp=Z,128nm,20.3s,baz=248,slow=32
RDOG Red Dog Mine 80.32 19 P **P** **20 44 38.8 -0.7**
MLY Manley 83.50 24 P **P** **20 44 55.6 -0.8**
MLY IAmb IAmb 20 45 04.6
comp=Z,16nm,1.7s
GEYT Alibeck 83.68 308 P **P** **20 44 58.6 +0.8**
comp=Z,1.3nm,0.5s,baz=212,slow=5.1,SNR=2.5
GEYT Alibeck 83.68 308 P **P** **20 44 56.5 -1.4**
ABKAR Akbulak array 84.03 320 P **P** **20 44 58.7 -0.6**
ABKAR IAmb IAmb 20 45 04.6
comp=Z,16nm,1.2s
ABKAR Akbulak array 84.03 320 P **P** **20 44 58.0 -1.3**
SCM Sheep Creek Mo 84.05 27 P **P** **20 45 01.1 +1.9**
I23K Minto, Yukon-K 84.10 24 P **P** **20 45 01.2 +1.9**
I23K IAmb IAmb 20 45 08.1
comp=Z,6.1nm,1.1s
CCB Clear Creek Bu 84.59 24 P **P** **20 45 01.8 0.0**
CCB IAmb IAmb 20 45 08.8
comp=Z,6.8nm,1.1s
IL31 85.00 24 P **P** **20 45 02.4 -1.5**
IL31 IAmb IAmb 20 45 07.6
comp=Z,7.1nm,1.4s
ILAR Eielson Array 85.00 24 P **P** **20 45 04.7 +0.8**
comp=Z,1.3nm,0.8s,baz=283,slow=4.5,SNR=8.9
ILAR LR LR 21 18 02.9
comp=Z,68nm,20.3s,baz=154,slow=32
ILAR Eielson Array 85.00 24 P **P** **20 45 02.4 -1.6**
AKTO Aktyubinsk 85.44 321 P **P** **20 45 07.4 +0.9**
comp=Z,1.8nm,0.8s,baz=100,slow=6.8,SNR=3.6
SYO Syowa Base 91.61 201 ⇓*e*P **P** **20 45 35.0 -0.4**
KLMR Klimovskoe 96.04 331 *e*P **P** **20 45 56.4 +0.5**
KLMR AMP 20 45 59.2
comp=Z,18nm,1.5s
YKA Yellowknife Ar 99.25 27 P **Pdif** **20 46 12.6 +2.3**
comp=Z,0.8nm,1.0s,baz=277,slow=4.6,SNR=4.9
YKA LR LR 21 28 05.1
comp=Z,60nm,22.0s,baz=0.0,slow=34
VYHS Vyhne 110.76 322 *e*PDIFF **Pdif** **20 47 04.2 +2.3**
PLCA Paso Flores 129.97 151 PKP **PKiKP** **20 51 40.0 +0.3**
comp=Z,1.6nm,0.8s,baz=268,slow=3.5,SNR=3.4
TORD Torodi Ar. Bea 136.00 287 PKP **PKPdf** **20 51 49.2 -1.6**
comp=Z,1.2nm,0.9s,baz=65,slow=2.0,SNR=4.8
TORD Torodi Ar. Bea 136.00 287 **PKPdf** **20 51 49.0 -1.8**
DBIC Dimbokro 143.36 279 PKhKP PKPpre 20 52 01.0
comp=Z,4.5nm,0.8s,baz=148,slow=1.2,SNR=4.5
SOTA Rioblanco 144.70 89 *e*P **PKPdf** **20 52 06.6 -0.7**
PCON Cinco Dias 144.91 89 *e*P PKPbc 20 52 07.1 +0.2
YOTC Yotoco, Valle 144.92 86 *e*P **PKPab** **20 52 05.8 -0.6**
CBOC Ciudad Bolivar 145.13 82 *e*P **PKPbc** **20 52 06.6 -0.5**
SJCC San Jacinto, C 145.37 75 *e*P **PKPab** **20 52 08.1 +0.2**
UREC San Jos de Ur 145.38 79 *e*P **PKPbc** **20 52 07.2 -0.5**
GUY2C Guyana, Caldas 145.82 83 *e*P **PKPbc** **20 52 09.2 -0.4**
TOLC Tolima 145.91 85 *e*P **PKPdf** **20 52 08.4 -0.7**
ORTC Ortega, Tolima 146.02 86 *e*P **PKPdf** **20 52 07.8 -1.1**
ZARC Zaragoza, Cauc 146.08 79 *e*P **PKPdf** **20 52 08.2 -0.7**
NORC Norcasia 146.29 83 *e*P **PKPdf** **20 52 08.7 -0.7**
PTBC PUERTO BERRIO 146.60 81 *e*P **PKPdf** **20 52 07.1 -2.8**
MACC Macarena, Meta 147.46 89 *e*P **PKPbc** **20 52 12.5 -1.3**
LPAZ La Paz 147.97 125 PKPbc **PKiKP** **20 52 17.1 -0.6**
comp=Z,13nm,0.9s,baz=268,slow=3.3,SNR=16
RUSC La Rusia 148.03 82 *e*P **PKPdf** **20 52 13.1 +0.2**
CPUP Villa Florida 148.03 152 PKPbc **PKiKP** **20 52 16.6 -0.3**
comp=Z,21nm,1.0s,baz=229,slow=2.6,SNR=27

*OMAN **21** 20:34:26.7, 10°.39N×57°.06E, h313km, mb4.4/3*
*IDC **21** 20:34:43.6±1.6, 13°.99N×56°.03E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.4/61, mbtmp3.7/6, MS3.4/2, Ms1 3.4/2, ms1mx2.7/44, Error ellipse: s-maj=47.9km s-min=32.0km az=44.0*

ISC 21 20:34:32.3±2.2, 12°.0N±0°.2×56°.5E±0°.2, h10km, n13, σ1s46/8, mb3.8/6, Socotra region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**2.48**	**274**	P	Pg	20 35 30.4	+11
	SNR=17						
DMTO	**DMTO**	**5.88**	**345**	P	**Pb**	**20 36 15.4**	**+0.5**
	SNR=7.9						
RBK	**Rabkut**	**5.91**	**338**	P	**Pb**	**20 36 16.3**	**+0.8**
SHAO	**Shalim**	**6.05**	**352**	P	**Pb**	**20 36 17.9**	**+0.1**
	SNR=5.3						
ABTO	**Aybut**	**6.17**	**330**	P	**Pb**	**20 36 18.7**	**-1.1**
WSAR	**Wadi Sarin**	**11.36**	**10**	LR	LR	20 40 20.9	
	comp=Z,152nm,18.1s,baz=222,slow=35						
MKAR	**Makanchi Array**	**40.93**	**27**	P	**P**	**20 42 13.2**	**-1.8**
	0.4nm,0.9s,baz=230,slow=11,SNR=3.8						
KIRV	**Kirov**	**46.80**	**355**	LR	LR	21 06 15.8	
	comp=Z,51nm,18.7s,baz=308,slow=42						
ZALV	**Zalesovo Beam**	**47.48**	**22**	P	**P**	**20 43 08.9**	**+1.6**
	1.3nm,0.9s,baz=220,slow=10,SNR=2.7						
FINES	**FINESS Array B**	**54.09**	**343**	P	**P**	**20 43 55.9**	**-1.1**
	0.9nm,0.7s,baz=108,slow=4.5,SNR=3.4						
ESDC	**Sonseca Array**	**59.77**	**309**	P	**P**	**20 44 39.0**	**+1.2**
	0.3nm,0.8s,baz=76,slow=4.3,SNR=5.5						
WRA	**Warramunga Arr**	**82.87**	**112**	P	P	20 47 16.8	+19
	0.8nm,0.9s,baz=304,slow=3.8,SNR=1.8						
ASAR	**Alice Springs**	**83.49**	**116**	P	P	20 47 20.6	+20
	0.5nm,0.8s,baz=304,slow=5.5,SNR=2.6						

IDC 21 20:40:36.4±1.8, 1°.57S×138°.93E, h0km, mb3.5/3, mb1 3.9/5, mb1mx3.5/49, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=31.6km s-min=16.6km az=23.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.01**	**118**	Pn	Pb	20 41 13.4	-0.4
	5.8nm,0.3s,baz=268,slow=8.5,SNR=13						
JAY				Lg	Lg	20 41 39.5	
	9.5nm,0.3s,baz=126,slow=21,SNR=12						
WRA	**Warramunga Arr**	**18.80**	**194**	P	P	20 44 56.2	-1.4
	0.5nm,0.3s,baz=19,slow=12,SNR=18						
FITZ	**Fitzroy Crossi**	**20.97**	**218**	P	Pn	20 45 22.8	-1.0
	4.7nm,0.9s,baz=38,slow=12,SNR=1.7						
ASAR	**Alice Springs**	**22.50**	**192**	P	P	20 45 36.9	-0.8
	2.1nm,0.7s,baz=12,slow=12,SNR=10						
MKAR	**Makanchi Array**	**69.03**	**322**	P	P	20 51 43.8	-0.2
	0.1nm,0.5s,baz=101,slow=6.0,SNR=1.7						

*IDC **21** 20:50:40.4±1.1, 14°.28N×56°.08E, h0km, mb3.6/9, mb1 3.8/9, mb1mx3.4/53, mbtmp3.6/9, MS3.5/2, Ms1 3.6/2, ms1mx2.7/34, Error ellipse: s-maj=32.4km s-min=22.8km az=23.0*

ISC 21 20:50:43.3±1.2, 14°.3N±0°.2×56°.1E±0°.2, h18km, n11, σ0s46/9, mb3.6/9, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**9.21**	**15**	LR	LR	20 56 17.8	
	comp=Z,204nm,19.0s,baz=213,slow=36						
GEYT	**Alibeck**	**23.61**	**4**	P	**P**	**20 55 53.6**	**+0.3**
	1.4nm,0.8s,baz=209,slow=15,SNR=2.3						
MKAR	**Makanchi Array**	**39.12**	**29**	P	**P**	**20 58 09.6**	**-0.1**
	0.6nm,0.8s,baz=224,slow=5.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	**41.27**	**78**	P	**P**	**20 58 28.2**	**+0.3**
	1.2nm,0.9s,baz=277,slow=9.8,SNR=7.7						
AKASG	**Malin Array Be**	**42.32**	**335**	P	**P**	**20 58 35.8**	**-0.1**
	0.1nm,0.3s,baz=137,slow=8.3,SNR=1.5						
ZALV	**Zalesovo Beam**	**45.54**	**23**	P	**P**	**20 59 01.1**	**-0.7**
	0.5nm,0.6s,baz=212,slow=14,SNR=2.4						
TORD	**Torodi Ar. Bea**	**52.74**	**276**	P	**P**	**20 59 57.3**	**-0.3**
	0.5nm,1.0s,baz=92,slow=5.8,SNR=2.2						
ESDC	**Sonseca Array**	**58.01**	**308**	P	**P**	**21 00 35.8**	**+0.5**
	1.2nm,0.8s,baz=83,slow=5.8,SNR=8.0						
ARCES	**ARCESS Array B**	**58.44**	**348**	LR	LR	21 27 20.8	
	comp=Z,70nm,21.3s,baz=235,slow=38						
WRA	**Warramunga Arr**	**84.13**	**112**	P	**P**	**21 03 13.5**	**-0.4**
	0.8nm,0.8s,baz=301,slow=4.5,SNR=5.1						
ASAR	**Alice Springs**	**84.87**	**116**	P	**P**	**21 03 17.7**	**+0.1**
	0.6nm,0.8s,baz=291,slow=4.8,SNR=6.4						

*TAP **21** 20:59:53.3, 23°.95N×122°.51E, h23km±1km, ML2.7, D*
*JMA **21** 20:59:53.0±0.1, 23°.92N×122°.52E, h34km±4km, M2.3*

ISC 21 20:59:52.4±0.9, 23°.90N±0°.03×122°.53E±0°.02, h20km±8km, n67, σ0s67/110, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.67**	**35**	P	**Pb**	**21 00 05.6**	**+0.2**
JYNG				S	**Sb**	**21 00 14.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.72**	**38**	P	**Pb**	**21 00 06.4**	**+0.2**
YOJ				*e*S	**Sb**	**21 00 15.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.72**	**38**	P	**Pb**	**21 00 06.5**	**+0.3**
	baz=52						
YOJ				S	**Sb**	**21 00 15.1**	**-0.5**
	baz=52						
TWD	**Chiawan**	**0.87**	**282**	*e*P	**Pb**	**21 00 08.6**	**-0.1**
	baz=264						
TWD				S	**Sb**	**21 00 19.8**	**-0.2**
	baz=264						
NACB	**Ninganchiao**	**0.90**	**288**	P	**Pb**	**21 00 09.1**	**-0.1**
	baz=270						
NACB				S	**Sb**	**21 00 19.7**	**-1.0**
	baz=270						
TWC	**Suao**	**0.94**	**319**	*i* P	**Pb**	**21 00 10.0**	**0.0**
	baz=318						
TWC				S	**Sb**	**21 00 21.6**	**-0.4**
	baz=318						
ESL	**Shilin**	**1.00**	**266**	*i* P	**Pn**	**21 00 10.6**	**-0.7**
	baz=261						
ESL				S	**Sb**	**21 00 23.1**	**-0.7**
	baz=261						
ETLH	**Xiulin Townshi**	**1.00**	**288**	*e*P	**Pb**	**21 00 10.8**	**-0.3**
	baz=272						
ETLH				*e*S	**Sb**	**21 00 23.2**	**-0.7**
	baz=272						
EGFH	**Guangfu**	**1.03**	**258**	*e*P	**Pn**	**21 00 11.3**	**-0.3**
	baz=253						
NDS	**Dongshan**	**1.04**	**315**	*e*P	**Pb**	**21 00 12.1**	**+0.4**
	baz=313						
NDS				*e*S	**Sn**	**21 00 25.6**	**-0.1**
	baz=313						
HGSD	**Ruisui**	**1.09**	**248**	*e*P	**Pn**	**21 00 12.1**	**-0.4**
	baz=245						
TWE	**Neicheng**	**1.14**	**317**	P	**Pn**	**21 00 12.8**	**-0.2**
	baz=315						
TWE				*e*S	**Sn**	**21 00 29.4**	**+1.3**
	baz=315						
ENTT	**Nioudou**	**1.15**	**310**	P	**Pb**	**21 00 13.7**	**+0.2**
	baz=309						
ENTT				*e*S	**Sb**	**21 00 27.3**	**-0.7**
	baz=309						
NDT	**Datong Townshi**	**1.16**	**307**	*e*P	**Pb**	**21 00 14.1**	**+0.4**
	baz=305						
NDT				*e*S	**Sn**	**21 00 28.7**	**-0.1**
	baz=305						
NNSB	**Datong**	**1.17**	**297**	*e*P	**Pn**	**21 00 13.5**	**-0.2**
	baz=281						
NNSB				*e*S	**Sb**	**21 00 28.2**	**-0.5**
	baz=281						
NNSH	**Datong**	**1.17**	**297**	*e*P	**Pn**	**21 00 13.8**	**+0.1**
	baz=282						
NNSH				*e*S	**Sb**	**21 00 28.3**	**-0.4**
	baz=282						
WHF	**Hehuan Shan**	**1.18**	**282**	P	**Pn**	**21 00 14.0**	**-0.1**
	baz=265						
WHF				*e*S	**Sb**	**21 00 29.6**	**+0.3**
	baz=265						
HATJ	**Hateruma jima**	**1.18**	**82**	P	**Pn**	**21 00 13.8**	**+0.1**
HATJ				*e*S	**Sn**	**21 00 29.3**	**+0.1**
IRIF	**Iriomote-Funau**	**1.18**	**68**	P	**Pn**	**21 00 13.6**	**-0.2**
IRIF				S	**Sn**	**21 00 29.4**	**+0.1**
NNS	**Nan Shan**	**1.18**	**297**	*e*P	**Pb**	**21 00 14.4**	**+0.2**
	baz=281						
NNS				*e*S	**Sb**	**21 00 28.6**	**-0.5**
	baz=281						

FUSS	**Fushou**	**1.22 287**	*e*P	**Pn**	**21 00 14.9**	**+0.4**
	baz=284					
YULB	**Yu-li**	**1.23 246**	P	**Pn**	**21 00 14.7**	**+0.3**
	baz=243					
YULB			*e*S	**Sn**	**21 00 30.3**	**-0.2**
	baz=243					
EYUL	**Yuli**	**1.23 244**	*e*P	**Pn**	**21 00 14.8**	**+0.4**
	baz=240					
EYUL			*e*S	**Sn**	**21 00 30.1**	**-0.5**
	baz=240					
OWD	**Renai**	**1.24 273**	*e*P	**Pn**	**21 00 14.5**	**-0.1**
	baz=270					
OWD			*e*S	**Sn**	**21 00 29.8**	**-1.0**
	baz=270					
TIPB	**Shuangxi**	**1.25 329**	*e*P	**Pn**	**21 00 14.5**	**-0.2**
	baz=329					
TIPB			S	**Sb**	**21 00 30.9**	**0.0**
	baz=329					
CHGB	**Renai**	**1.25 278**	P	**Pn**	**21 00 15.1**	**+0.2**
	baz=263					
CHGB			S	**Sn**	**21 00 30.2**	**-1.0**
	baz=263					
TWF1	**Yuli**	**1.25 245**	*e*P	**Pn**	**21 00 14.9**	**+0.2**
	baz=241					
TWF1			*e*S	**Sn**	**21 00 30.8**	**-0.2**
	baz=241					
VWDT	**VWDT**	**1.27 264**	*e*P	**Pn**	**21 00 15.5**	**+0.5**
	baz=260					
VWDT			*e*S	**Sn**	**21 00 31.2**	**-0.3**
	baz=260					
NWLT	**Wulai**	**1.28 313**	P	**Pb**	**21 00 16.3**	**+0.5**
	baz=312					
NWLT			*e*S	**Sn**	**21 00 31.1**	**-0.7**
	baz=312					
TWT	**Tachien**	**1.28 286**	*e*P	**Pb**	**21 00 16.9**	**+1.0**
	baz=270					
TWT			S	**Sb**	**21 00 33.0**	**+0.9**
	baz=270					
TDCB	**Techi**	**1.30 286**	*e*P	**Pn**	**21 00 16.1**	**+0.6**
	baz=271					
TDCB			*e*S	**Sn**	**21 00 31.9**	**-0.5**
	baz=271					
YHNB	**Yeheng**	**1.30 307**	*e*P	**Pn**	**21 00 15.8**	**+0.3**
	baz=304					
NSK	**Sanguang**	**1.32 306**	*e*P	**Pn**	**21 00 16.1**	**+0.4**
	baz=304					
FULB	**Fuli**	**1.33 239**	*e*P	**Pn**	**21 00 15.7**	**-0.1**
	baz=222					
FULB			*e*S	**Sn**	**21 00 31.9**	**-0.9**
	baz=222					
WFSB	**Wu-fen Shan**	**1.35 330**	*e*P	**Pn**	**21 00 14.5**	**-1.6**
	baz=330					
WFSB			*e*S	**Sb**	**21 00 34.8**	**+0.9**
	baz=330					
TWA	**Mucha**	**1.38 322**	*e*P	**Pb**	**21 00 17.6**	**+0.2**
	baz=320					
JKRS	**Kuro-shima**	**1.40 76**	P	**Pn**	**21 00 17.2**	**+0.5**
JKRS			*e*S	**Sn**	**21 00 35.3**	**+0.7**
SSLB	**Suanglung**	**1.44 266**	*e*P	**Pn**	**21 00 18.3**	**+0.9**
	baz=263					
EDH	**Donghe**	**1.45 231**	*e*P	**Pn**	**21 00 17.0**	**-0.4**
	baz=217					
DPDB	**Guoxing**	**1.47 276**	*e*P	**Pn**	**21 00 18.7**	**+0.9**
	baz=272					
SMLT	**Sun Moon Lake**	**1.49 270**	*e*P	**Pn**	**21 00 18.9**	**+0.8**
	baz=255					
WHP	**Taichung City**	**1.49 285**	*e*P	**Pb**	**21 00 20.6**	**+1.1**
	baz=270					
WHP			*e*S	**Sb**	**21 00 38.2**	**+0.2**
	baz=270					
YUS	**Yu-Shan**	**1.50 255**	*e*P	**Pn**	**21 00 19.0**	**+0.4**
	baz=251					
YUS			*e*S	**Sn**	**21 00 37.5**	**-0.3**
	baz=251					
TYC	**Yuchr**	**1.53 271**	*e*P	**Pn**	**21 00 19.5**	**+1.0**
	baz=267					
WHYT	**Xinyi Township**	**1.54 263**	*e*P	**Pn**	**21 00 19.8**	**+1.0**
	baz=260					
JIJ	**Ishigaki jima**	**1.55 72**	P	**Pn**	**21 00 18.5**	**-0.3**
JIJ			*e*S	**Sn**	**21 00 37.2**	**-1.1**
LIOB	**Emei**	**1.57 299**	*e*P	**Pb**	**21 00 20.9**	**+0.3**
	baz=297					
LIOB			*e*S	**Sb**	**21 00 40.1**	**0.0**
	baz=297					
NSTT	**Nanjuang**	**1.57 298**	*e*S	**Sb**	**21 00 39.4**	**-0.8**
	baz=282					
LONT	**Longtian**	**1.62 233**	*e*P	**Pn**	**21 00 20.2**	**+0.4**
	baz=220					
LONT			*e*S	**Sn**	**21 00 39.0**	**-1.0**
	baz=220					
ALS	**Alishan**	**1.62 257**	P	**Pn**	**21 00 21.3**	**+1.2**
	baz=253					
TWGBT	**Beinan**	**1.71 231**	*e*P	**Pn**	**21 00 20.7**	**-0.3**
	baz=218					
TWGBT			*e*S	**Sn**	**21 00 41.1**	**-1.1**
	baz=218					
TWG	**Pinlang**	**1.71 232**	*e*P	**Pn**	**21 00 21.1**	**0.0**
	baz=220					
CHN5	**Tsauling**	**1.72 260**	*e*P	**Pn**	**21 00 22.9**	**+1.7**
	baz=257					
CHN5			*e*S	**Sb**	**21 00 44.2**	**-0.3**
	baz=257					
JISG	**Ishigakijimahi**	**1.77 67**	P	**Pn**	**21 00 21.6**	**-0.2**
JISG			S	**Sn**	**21 00 42.5**	**-1.2**
STYT	**Tauyuan**	**1.78 246**	*e*P	**Pn**	**21 00 23.4**	**+1.4**
	baz=243					
WDLH	**Douliu**	**1.83 264**	*e*P	**Pb**	**21 00 24.7**	**-0.5**
	baz=261					
TPUB	**Ta-pu**	**1.84 252**	*e*P	**Pb**	**21 00 25.2**	**-0.1**
	baz=238					
TPUB			*e*S	**Sb**	**21 00 47.8**	**-0.1**
	baz=238					
CHN4	**Tsaushan**	**1.85 253**	P	**Pb**	**21 00 25.4**	**-0.1**
	baz=250					
CHN4			S	**Sb**	**21 00 49.4**	**+1.1**
	baz=250					
WTP	**Ta-pu**	**1.87 250**	*e*P	**Pn**	**21 00 25.0**	**+1.7**
	baz=236					
WTP			*e*S	**Sb**	**21 00 48.8**	**0.0**
	baz=236					
ECL	**Taimali**	**1.94 228**	*e*P	**Pn**	**21 00 24.6**	**+0.4**
	baz=238					
SGST	**Jiashian**	**1.96 246**	*e*P	**Pn**	**21 00 26.1**	**+1.7**
	baz=243					
CHN1	**Nanshi**	**1.96 249**	*e*P	**Pb**	**21 00 27.5**	**0.0**
	baz=246					
CHN1			*e*S	**Sb**	**21 00 52.2**	**+0.7**
	baz=246					
WTK	**Tuku**	**1.97 264**	*e*S	**Sb**	**21 00 52.3**	**+0.7**
	baz=261					
SSD	**Sandimen**	**2.08 237**	*e*P	**Pb**	**21 00 28.9**	**-0.6**
	baz=226					
JTJ	**Tarama**	**2.12 69**	P	**Pn**	**21 00 27.7**	**+1.1**
EAST	**Anshuo**	**2.16 226**	*e*P	**Pn**	**21 00 27.8**	**+0.6**
	baz=223					
MASBT	**Mashibuluo**	**2.16 234**	*e*P	**Pn**	**21 00 28.2**	**+1.0**
	baz=223					

*NOU **21** 21:35:09.3, 38.59S×175.79E, h165km, MLv3.1, North Island, New Zealand*

WEL 21 21:35:08.4, 39.3S±3.1×17.6E±.1, h178km±5km, M3.0/55, mB4.5/1, ML2.4/6, MLv3.0/55, Mw(mB)3.7/1, Error ellipse: s-maj=0.0km s-min=0.0km az=107.2, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLZ	**Tolley Road**	**0.30**	**335**	P	Pn	21 35 32.4	-0.1
KATZ	**Kakaramea**	**0.37**	**180**	P	Pn	21 35 32.5	-0.2
NTVZ	**North Tongarir**	**0.49**	**182**	P	Pn	21 35 32.9	-0.2
TWVZ	**Taurewa**	**0.51**	**204**	P	Pn	21 35 33.1	-0.1
TMVZ	**Te Maari**	**0.51**	**180**	P	Pn	21 35 33.1	0.0
WTVZ	**West Tongariro**	**0.52**	**189**	P	Pn	21 35 33.1	-0.1
NNVZ	**North Ngauruho**	**0.53**	**187**	P	Pn	21 35 33.2	-0.1
OTVZ	**Oturere**	**0.56**	**183**	P	Pn	21 35 33.4	0.0
NGZ	**Ngauruhoe**	**0.57**	**188**	P	Pn	21 35 33.5	0.0
SNVZ	**South Ngauruho**	**0.58**	**184**	P	Pn	21 35 33.5	-0.1
MRHZ	**Matea Rd**	**0.61**	**112**	P	Pn	21 35 32.6	-1.0
TUVZ	**Tukino**	**0.66**	**183**	P	Pn	21 35 34.0	0.0
HIZ	**Hauiti**	**0.67**	**278**	P	Pn	21 35 34.6	+0.8
PKVZ	**Pokaka**	**0.73**	**202**	P	Pn	21 35 34.5	+0.3
MTVZ	**Mangateitei**	**0.80**	**193**	P	Pn	21 35 34.9	+0.3
MOVZ	**Moawhango**	**0.80**	**177**	P	Pn	21 35 34.4	-0.2
BKZ	**Black Stump Fm**	**0.83**	**132**	P	Pn	21 35 34.3	-0.5
BHHZ	**Black Hill Sta**	**0.93**	**162**	P	Pn	21 35 35.2	-0.3
MTHZ	**Maungataniwha**	**0.93**	**106**	P	Pn	21 35 34.9	-0.5
KWHZ	**Kaweka Forest**	**0.99**	**146**	P	Pn	21 35 35.9	-0.1
NMHZ	**Naumai**	**0.99**	**120**	P	Pn	21 35 36.6	+0.7
RTZ	**Ruatahuna**	**1.00**	**91**	P	Pn	21 35 35.5	-0.6
RAHZ	**Arahi**	**1.13**	**106**	P	Pn	21 35 36.7	-0.3
MCHZ	**McNeill Hill**	**1.14**	**137**	P	Pn	21 35 37.9	+0.9
KRHZ	**Kereru**	**1.16**	**153**	P	Pn	21 35 37.5	+0.3
URZ	**Urewera**	**1.16**	**73**	P	Pn	21 35 36.5	-0.7
ARHZ	**Aropaoanui**	**1.21**	**123**	P	Pn	21 35 38.1	+0.6
WAZ	**Wanganui**	**1.27**	**206**	P	Pn	21 35 39.5	+1.4
WHHZ	**Waihua**	**1.29**	**112**	P	Pn	21 35 38.2	-0.1
PNHZ	**Pukenui**	**1.36**	**164**	P	Pn	21 35 39.3	+0.4
PREZ	**Palmer Road**	**1.41**	**238**	P	Pn	21 35 42.2	+2.8
NEZ	**North Egmont**	**1.42**	**242**	P	Pn	21 35 42.1	+2.6
MWZ	**Matawai**	**1.46**	**80**	P	Pn	21 35 40.6	+0.7
TSZ	**Takapari Road**	**1.47**	**172**	P	Pn	21 35 40.5	+0.6
KHEZ	**Kahui Hut**	**1.48**	**242**	P	Pn	21 35 42.7	+2.6
KAHZ	**Kahuranaki**	**1.50**	**143**	P	Pn	21 35 41.0	+0.7
CKHZ	**Cape Kidnapper**	**1.50**	**135**	P	Pn	21 35 41.0	+0.8
WPHZ	**Waipukurau**	**1.57**	**159**	P	Pn	21 35 41.4	+0.6
RIGZ	**Rimuhau**	**1.62**	**94**	P	Pn	21 35 46.3	+4.9
OHWZ	**Ohakea**	**1.62**	**190**	P	Pn	21 35 43.0	+1.6
PXZ	**Pawanui**	**1.69**	**148**	P	Pn	21 35 42.6	+0.6
DVHZ	**Dannevirke**	**1.73**	**168**	P	Pn	21 35 42.9	+0.4
POWZ	**Post Office Ro**	**1.78**	**178**	P	Pn	21 35 43.6	+0.6
MHGZ	**Mahia Peninsul**	**1.81**	**108**	P	Pn	21 35 44.0	+0.7
PRHZ	**Porangahau**	**1.81**	**157**	P	Pn	21 35 44.0	+0.7
HAZ	**Te Kaha**	**1.85**	**63**	P	Pn	21 35 43.6	-0.1
WIAZ	**Waiheke Island**	**1.86**	**346**	P	Pn	21 35 46.2	+2.3
ANWZ	**Angora Road**	**1.95**	**162**	P	Pn	21 35 45.5	+0.8
PRWZ	**Pori Road**	**1.96**	**174**	P	Pn	21 35 45.8	+1.0
PKGZ	**Pakihiroa**	**2.00**	**70**	P	Pn	21 35 46.2	+0.8
MRZ	**Mangatainoka R**	**2.05**	**183**	P	Pn	21 35 46.5	+0.6
BFZ	**Birch Farm**	**2.12**	**169**	P	Pn	21 35 47.1	+0.5
TIWZ	**Tintock**	**2.17**	**176**	P	Pn	21 35 47.9	+0.6
OGWZ	**Otaki Gorge**	**2.25**	**190**	P	Pn	21 35 48.9	+0.9
WMGZ	**Waiomatatini S**	**2.28**	**71**	P	Pn	21 35 54.9	+6.4
HOWZ	**Holdsworth Sta**	**2.29**	**183**	P	Pn	21 35 49.1	+0.5
CPWZ	**Castlepoint**	**2.33**	**171**	P	Pn	21 35 50.0	+1.0
KIW	**Kapiti Island**	**2.33**	**195**	P	Pn	21 35 49.7	+0.7
TMWZ	**Te Maipa**	**2.50**	**177**	P	Pn	21 35 51.4	+0.4
MTW	**Mount Morrison**	**2.55**	**183**	P	Pn	21 35 51.9	+0.3
DUWZ	**D'Urville Isla**	**2.59**	**211**	P	Pn	21 35 53.1	+1.1
PAWZ	**Paruwai Farm**	**2.78**	**184**	P	Pn	21 35 54.5	+0.2
TRWZ	**Traveller**	**2.79**	**180**	P	Pn	21 35 54.7	+0.4
TCW	**Tory Channel**	**2.82**	**202**	P	Pn	21 35 55.5	+0.8
MSWZ	**Moikau Station**	**2.83**	**187**	P	Pn	21 35 55.1	+0.3
BHW	**Baring Head**	**2.87**	**193**	P	Pn	21 35 55.7	+0.4
PLWZ	**Palliser**	**2.98**	**186**	P	Pn	21 35 56.8	+0.1
TUWZ	**Tuamarina**	**3.12**	**205**	P	Pn	21 35 59.0	+0.6
NNZ	**Nelson**	**3.16**	**214**	P	Pn	21 36 00.0	+1.2
QRZ	**Quartz Range**	**3.30**	**227**	P	Pn	21 36 01.8	+1.2
BSWZ	**Blackbirch Sta**	**3.41**	**204**	P	Pn	21 36 02.9	+1.0
THZ	**Tophouse**	**3.81**	**213**	P	Pn	21 36 07.8	+0.7
KHZ	**Kahutara**	**4.15**	**203**	P	Pn	21 36 11.9	+0.7
GVZ	**Greta Valley S**	**4.80**	**204**	P	Pn	21 36 20.1	+0.4
LTZ	**Lake Taylor**	**4.92**	**211**	P	Pn	21 36 21.5	+0.3
OKCZ	**Okains Bay**	**5.49**	**200**	P	Pn	21 36 28.7	+0.1
MQZ	**McQueen's Vall**	**5.59**	**203**	P	Pn	21 36 29.2	-0.6
RACZ	**Rakaia**	**5.78**	**207**	P	Pn	21 36 32.1	-0.2
TMZ	**Timaru**	**6.76**	**210**	P	Pn	21 36 43.7	-1.6
ODZ	**Otahua Downs**	**7.46**	**209**	P	Pn	21 36 54.9	+0.4

*JMA **21** 21:39:42.6±0.1, 23.92N×122.52E, h33km±4km, M2.9*
*TAP **21** 21:39:43.2, 23.97N×122.54E, h34km±1km, ML3.4, D*

ISC 21 21:39:42.5±1.1, 23.92N±0.03×122.54E±0.02, h30km±12km, n85, σ0.994/136, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.64**	**35**	P	**Pn**	**21 39 55.4**	**-0.2**
JYNG				*e*S	**Sb**	**21 40 03.8**	**-0.3**
YOJ	**Yonaguni jima**	**0.69**	**39**	P	**Pn**	**21 39 56.1**	**-0.1**
YOJ				*e*S	**Sn**	**21 40 04.9**	**-1.0**
YOJ	**Yonaguni jima**	**0.69**	**39**	⇓ *i*P	**Pn**	**21 39 56.1**	**-0.1**
	baz=41						
YOJ				S	**Sn**	**21 40 05.0**	**-0.8**
	baz=41						
EWUT	**Wuta**	**0.87**	**307**	*e*P	**Pb**	**21 39 59.3**	**+0.2**
	baz=304						
EWUT				S	**Sb**	**21 40 10.4**	**0.0**
	baz=304						
TWD	**Chiawan**	**0.88**	**280**	*e*P	**Pn**	**21 39 57.7**	**-1.1**
	baz=277						
TWD				*e*S	**Sn**	**21 40 09.9**	**-0.6**
	baz=277						
NACB	**Ninganchiao**	**0.90**	**286**	P	**Pn**	**21 39 58.9**	**-0.2**
	baz=271						
NACB				S	**Sn**	**21 40 08.9**	**-2.2**
	baz=271						
TWC	**Suao**	**0.93**	**318**	*i* P	**Pn**	**21 39 59.6**	**+0.1**
	baz=305						
TWC				*i* S	**Sn**	**21 40 11.4**	**-0.4**
	baz=305						
ETLH	**Xiulin Townshi**	**1.01**	**287**	*e*P	**Pn**	**21 40 00.8**	**+0.1**
	baz=272						
ETLH				*e*S	**Sn**	**21 40 13.6**	**-0.3**
	baz=272						
ESL	**Shilin**	**1.02**	**264**	*e*P	**Pn**	**21 40 00.5**	**-0.3**
	baz=261						
NDS	**Dongshan**	**1.03**	**313**	*e*P	**Pb**	**21 40 01.7**	**-0.2**
	baz=311						
NDS				*e*S	**Sb**	**21 40 15.0**	**0.0**
	baz=311						
EGFH	**Guangfu**	**1.05**	**256**	*e*P	**Pn**	**21 40 01.1**	**0.0**
	baz=253						
EGFH				*e*S	**Sn**	**21 40 14.5**	**-0.3**
	baz=253						
ILA	**Ilan**	**1.11**	**319**	*e*P	**Pb**	**21 40 03.7**	**+0.6**
	baz=307						
ILA				*e*S	**Sb**	**21 40 19.0**	**+1.9**
	baz=307						
HGSD	**Ruisui**	**1.11**	**247**	P	**Pn**	**21 40 01.9**	**-0.1**
	baz=245						
TWE	**Neicheng**	**1.12**	**315**	⇑ *i*P	**Pb**	**21 40 02.9**	**-0.5**
	baz=304						
TWE				*e*S	**Sb**	**21 40 17.5**	**-0.2**
	baz=304						
NTC	**Toucheng**	**1.13**	**325**	*e*P	**Pb**	**21 40 03.8**	**+0.2**
	baz=324						
NTC				*e*S	**Sb**	**21 40 18.3**	**+0.4**
	baz=324						
ENTT	**Nioudou**	**1.14**	**309**	P	**Pb**	**21 40 03.2**	**-0.5**
	baz=295						
NDT	**Datong Townshi**	**1.16**	**306**	*e*P	**Pb**	**21 40 03.7**	**-0.3**
	baz=291						
NDT				*e*S	**Sb**	**21 40 18.1**	**-0.5**
	baz=291						
IRIF	**Iriomote-Funau**	**1.16**	**69**	P	**Pn**	**21 40 03.4**	**+0.7**
IRIF				*e*S	**Sb**	**21 40 19.4**	**+0.6**
HATJ	**Hateruma jima**	**1.17**	**83**	P	**Pn**	**21 40 03.7**	**+0.9**
HATJ				S	**Sb**	**21 40 19.2**	**+0.3**
NNSB	**Datong**	**1.17**	**296**	*e*P	**Pn**	**21 40 03.5**	**+0.5**
	baz=283						
NNSB				*e*S	**Sn**	**21 40 18.0**	**0.0**
	baz=283						
NNSH	**Datong**	**1.17**	**296**	P	**Pn**	**21 40 03.5**	**+0.6**
	baz=293						
NNS	**Nan Shan**	**1.18**	**296**	*e*P	**Pn**	**21 40 03.7**	**+0.6**
	baz=284						
NNS				*e*S	**Sn**	**21 40 18.2**	**-0.1**
	baz=284						
WHF	**Hehuan Shan**	**1.19**	**281**	P	**Pn**	**21 40 04.0**	**+0.6**
	baz=267						
WHF				*e*S	**Sn**	**21 40 18.7**	**0.0**
	baz=267						
TWB1	**Santiao Chiao**	**1.19**	**335**	*e*P	**Pn**	**21 40 03.7**	**+0.6**
	baz=349						
TWB1				*e*S	**Sb**	**21 40 19.8**	**+0.1**
	baz=349						
FUSS	**Fushou**	**1.23**	**286**	*e*P	**Pn**	**21 40 04.6**	**+0.8**
	baz=283						
TIPB	**Shuangxi**	**1.23**	**328**	P	**Pb**	**21 40 04.4**	**-0.8**
	baz=327						
TIPB				S	**Sb**	**21 40 20.5**	**-0.3**
	baz=327						
OWD	**Renai**	**1.25**	**272**	*e*P	**Pn**	**21 40 04.5**	**+0.4**
	baz=269						
OWD				*e*S	**Sn**	**21 40 19.6**	**-0.3**
	baz=269						
YULB	**Yu-li**	**1.25**	**245**	P	**Pn**	**21 40 04.4**	**+0.4**
	baz=232						
YULB				*e*S	**Sn**	**21 40 20.1**	**+0.2**
	baz=232						
CHGB	**Renai**	**1.26**	**277**	P	**Pn**	**21 40 04.6**	**+0.4**
	baz=264						
CHGB				S	**Sn**	**21 40 19.7**	**-0.5**
	baz=264						
EYUL	**Yuli**	**1.26**	**243**	*e*P	**Pn**	**21 40 04.4**	**+0.4**
	baz=240						
EYUL				*e*S	**Sn**	**21 40 20.2**	**+0.2**
	baz=240						
NWLT	**Wulai**	**1.27**	**312**	*e*P	**Pb**	**21 40 05.4**	**-0.5**
	baz=299						
NWLT				*e*S	**Sb**	**21 40 21.4**	**-0.5**
	baz=299						
TWF1	**Yuli**	**1.27**	**244**	P	**Pn**	**21 40 04.8**	**+0.6**
	baz=241						
TWF1				S	**Sn**	**21 40 20.8**	**+0.4**
	baz=241						
TWT	**Tachien**	**1.29**	**285**	*e*P	**Pb**	**21 40 06.3**	**+0.1**
	baz=272						
TWT				*e*S	**Sb**	**21 40 22.6**	**0.0**
	baz=272						
VWDT	**VWDT**	**1.29**	**263**	P	**Pn**	**21 40 05.2**	**+0.8**
	baz=260						
VWDT				S	**Sn**	**21 40 21.2**	**+0.4**
	baz=260						
YHNB	**Yeheng**	**1.30**	**305**	*e*P	**Pn**	**21 40 05.3**	**+0.7**
	baz=291						
TDCB	**Techi**	**1.30**	**285**	*e*P	**Pb**	**21 40 06.0**	**-0.5**
	baz=283						
NSK	**Sanguang**	**1.31**	**305**	*e*P	**Pn**	**21 40 05.8**	**+0.9**
	baz=291						
NWF	**Wu-fen Shan**	**1.34**	**329**	*e*P	**Pb**	**21 40 06.0**	**-1.0**
	baz=328						
WFSB	**Wu-fen Shan**	**1.34**	**329**	*e*P	**Pb**	**21 40 06.0**	**-1.0**
	baz=328						
WFSB				*e*S	**Sb**	**21 40 24.0**	**+0.3**
	baz=328						
FULB	**Fuli**	**1.35**	**238**	*e*P	**Pn**	**21 40 05.5**	**+0.1**
	baz=225						
FULB				*e*S	**Sn**	**21 40 21.4**	**-0.8**
	baz=225						
CHKT	**Chengkung**	**1.35**	**233**	P	**Pn**	**21 40 05.2**	**-0.2**
	baz=220						
CHKT				S	**Sn**	**21 40 21.0**	**-1.3**
	baz=220						
TWA	**Mucha**	**1.37**	**321**	P	**Pb**	**21 40 07.1**	**-0.5**
	baz=337						
TWA				*e*S	**Sb**	**21 40 25.1**	**+0.5**
	baz=337						
JKRS	**Kuro-shima**	**1.38**	**77**	P	**Pn**	**21 40 07.0**	**+1.3**
SSLB	**Suanglung**	**1.46**	**265**	*e*P	**Pn**	**21 40 07.8**	**+1.0**
	baz=263						
EDH	**Donghe**	**1.48**	**230**	*e*P	**Pn**	**21 40 07.0**	**0.0**
	baz=220						
EDH				*e*S	**Sn**	**21 40 24.0**	**-1.3**
	baz=220						
DPDB	**Guoxing**	**1.48**	**275**	*e*P	**Pn**	**21 40 08.6**	**+1.4**
	baz=273						
WHP	**Taichung City**	**1.50**	**284**	*e*P	**Pb**	**21 40 10.6**	**+0.8**
	baz=273						
SMLT	**Sun Moon Lake**	**1.50**	**269**	*e*P	**Pn**	**21 40 08.6**	**+1.1**
	baz=258						
YM01	**YM01**	**1.50**	**324**	*e*P	**Pb**	**21 40 09.3**	**-0.5**
	baz=323						
YM10	**YM10**	**1.52**	**324**	*e*P	**Pn**	**21 40 08.8**	**+1.1**
	baz=323						
YUS	**Yu-Shan**	**1.52**	**254**	P	**Pn**	**21 40 08.9**	**+0.8**
	baz=252						
YM11	**YM11**	**1.52**	**325**	*e*P	**Pb**	**21 40 08.9**	**-1.3**
	baz=324						
YM05	**YM05**	**1.52**	**325**	*e*P	**Pn**	**21 40 08.9**	**+1.1**
	baz=323						
YM04	**YM04**	**1.53**	**324**	*e*P	**Pb**	**21 40 09.2**	**-1.0**
	baz=322						
JIJ	**Ishigaki jima**	**1.53**	**73**	P	**Pn**	**21 40 08.2**	**+0.4**
JIJ				*e*S	**Sn**	**21 40 26.6**	**-0.1**
YM03	**YM03**	**1.55**	**324**	*e*P	**Pn**	**21 40 08.7**	**+0.6**
	baz=323						
LIOB	**Emei**	**1.56**	**298**	*e*P	**Pb**	**21 40 10.5**	**-0.4**
	baz=296						
LIOB				*e*S	**Sb**	**21 40 30.0**	**-0.3**
	baz=296						
NSTT	**Nanjuang**	**1.57**	**297**	*e*P	**Pb**	**21 40 10.7**	**-0.3**
	baz=295						
NSTT				*e*S	**Sb**	**21 40 29.4**	**-1.0**
	baz=295						
LDUT	**Ludao**	**1.58**	**219**	*e*P	**Pn**	**21 40 08.5**	**0.0**
	baz=216						
LDUT				*e*S	**Sn**	**21 40 26.7**	**-1.3**
	baz=216						
ALS	**Alishan**	**1.64**	**256**	*i* P	**Pn**	**21 40 11.0**	**+1.4**
	baz=253						
ALS				S	**Sn**	**21 40 30.1**	**+0.3**
	baz=253						
LONT	**Longtian**	**1.64**	**232**	*e*P	**Pn**	**21 40 10.4**	**+1.0**
	baz=223						
LONT				*e*S	**Sn**	**21 40 29.3**	**-0.1**
	baz=223						
WJS	**Zhushan**	**1.66**	**267**	*e*P	**Pb**	**21 40 13.0**	**+0.5**
	baz=264						
WJS				*e*S	**Sb**	**21 40 33.8**	**+0.8**
	baz=264						
TWGBT	**Beinan**	**1.73**	**231**	*e*P	**Pn**	**21 40 11.1**	**+0.5**
	baz=239						
CHN5	**Tsauling**	**1.73**	**260**	P	**Pn**	**21 40 12.6**	**+1.9**
	baz=248						
CHN5				*e*S	**Sb**	**21 40 34.3**	**-1.0**
	baz=248						
TWG	**Pinlang**	**1.74**	**231**	*e*P	**Pn**	**21 40 10.9**	**+0.2**
	baz=220						
TWG				*e*S	**Sn**	**21 40 30.8**	**-1.0**
	baz=220						
JISG	**Ishigakijimahi**	**1.75**	**67**	P	**Pn**	**21 40 11.0**	**+0.2**
JISG				S	**Sn**	**21 40 32.1**	**+0.1**
STYH	**Taoyuan**	**1.78**	**246**	*e*P	**Pn**	**21 40 12.9**	**+1.6**
	baz=234						
STYT	**Tauyuan**	**1.80**	**246**	*e*P	**Pn**	**21 40 13.1**	**+1.5**
	baz=233						
WCHH	**Zhanghua**	**1.82**	**275**	*e*S	**Sb**	**21 40 37.5**	**-0.1**
	baz=272						
WDLH	**Douliu**	**1.85**	**263**	*e*P	**Pb**	**21 40 14.9**	**-0.8**
	baz=260						
WDLH				*e*S	**Sb**	**21 40 38.8**	**+0.5**
	baz=260						
TPUB	**Ta-pu**	**1.86**	**251**	*e*P	**Pn**	**21 40 14.7**	**+2.4**
	baz=238						
TPUB				*e*S	**Sb**	**21 40 38.4**	**-0.3**
	baz=238						
CHN4	**Tsaushan**	**1.87**	**253**	P	**Pb**	**21 40 15.0**	**-1.1**
	baz=250

Ms1 2.7/1, ms1mx2.3/21, Error ellipse: s-maj=64.5km s-min=24.5km az=78.0

ISC 21 21:47:19.8±1.0, 19°4N±0.1′×121°5E±0.3, h52km, n10, σ1°07/7, mb3.3/4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CVP	**Callao Caves**	**1.70**	**168**	*eP*	**Pn**	**21 47 46.5**	**-0.6**
CVP				*i* S	**Sn**	**21 48 09.0**	**+1.3**
KSRS	**Korea Array**	**18.88**	**16**	P	**P**	**21 51 35.4**	**-0.4**
	0.2nm,0.3s,baz=195,slow=13,SNR=1.9						
CMAR	**Chiang Mai Arr**	**21.32**	**271**	LR	LR	22 00 35.7	
	comp=Z,13nm,19.4s,baz=170,slow=38						
WRA	**Warramunga Arr**	**41.06**	**161**	P	**P**	**21 54 57.4**	**-1.1**
	0.3nm,0.5s,baz=344,slow=9.2,SNR=1.3						
MKAR	**Makanchi Array**	**42.05**	**320**	P	**P**	**21 55 06.5**	**+0.1**
	0.2nm,0.6s,baz=125,slow=9.3,SNR=2.7						
H11N1	**WAKE ISLAND Hy**	**42.72**	**82**	T	T	22 40 54.2	
	baz=278						
H11N2	**WAKE ISLAND Hy**	**42.72**	**82**	T	T	22 40 53.7	
	baz=278						
H11N3	**WAKE ISLAND Hy**	**42.73**	**82**	T	T	22 40 56.3	
	baz=278						
ASAR	**Alice Springs**	**44.47**	**164**	P	**P**	**21 55 25.7**	**-0.3**
	0.3nm,0.5s,baz=348,slow=7.3,SNR=5.1						
YKA	**Yellowknife Ar**	**87.28**	**23**	P	**P**	**22 00 01.6**	**+1.0**
	0.4nm,0.7s,baz=312,slow=4.2,SNR=7.5						

*IDC **21** 22:23:06.8±2.4, 13.77S×167.30E, h194km±20km, mb3.9/16, mb1 4.0/17, mb1mx3.7/37, mbtmp4.3/17, Error ellipse: s-maj=20.3km s-min=12.8km az=97.0*

*NEIC **21** 22:23:07.9±1.3, 13.76S±0.09×167.3E±0.2, h205km±6km, mb4.5/50, Error ellipse: s-maj=21.3km s-min=13.5km az=95.0*

*NOU **21** 22:23:36.8, 15.78S×167.28E, h5km, MLv4.4, Vanuatu Islands*

ISC 21 22:23:07.6±0.4, 13°69S±0.06×167°2E±0.1, h200km, n108, σ0°97/117, mb4.4/42, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.75**	**181**		**Pn**	**22 23 43.9**	**+0.3**
SANVU				Sn	**Sn**	**22 24 11.4**	**-0.3**
SANVU	**Saraoutou**	**1.75**	**181**	P	**Pn**	**22 23 44.0**	**+0.3**
DVP	**Devils Point**	**4.12**	**167**	P	**Pn**	**22 24 12.8**	**+2.0**
KOUNC	**Koumac, New Ca**	**7.38**	**202**	P	Pn	22 24 59.9	+7.1
YATNC	**Mamie plateau,**	**8.33**	**182**	P	**Pn**	**22 25 09.4**	**+4.2**
DZM	**Mont Dzumac**	**8.37**	**185**	P	**Pn**	**22 25 05.6**	**-0.2**
	0.3nm,0.3s,baz=13,slow=14,SNR=2.5						
DZM				S	**Sn**	**22 26 40.1**	**+0.1**
	baz=140,slow=23,SNR=1.5						
DZM	**Mont Dzumac**	**8.37**	**185**	Pn	**Pn**	**22 25 09.0**	**+3.2**
DZM	**Mont Dzumac**	**8.37**	**185**	P	**Pn**	**22 25 10.1**	**+4.3**
NOUC	**Port Laguerre**	**8.41**	**186**	P	Pn	22 25 11.2	+5.0
OUENC	**Ouen Island, N**	**8.69**	**182**	P	Pn	22 25 15.4	+5.6
EIDS	**Eidsvold**	**19.12**	**230**	P	**P**	**22 27 17.0**	**+1.3**
CTA	**Charters Tower**	**21.05**	**250**	P	**P**	**22 27 36.2**	**-0.1**
	5.5nm,0.6s,baz=78,slow=12,SNR=6.9						
CTAO	**Charters Tower**	**21.05**	**250**	P	**P**	**22 27 36.0**	**-0.3**
CTAO				IAmb	IAmb	22 27 43.6	
	comp=Z,21nm,1.4s						
ARMA	**Armidale**	**22.01**	**218**	P	**P**	**22 27 46.9**	**+0.8**
ARMA				IAmb	IAmb	22 27 52.2	
	comp=Z,25nm,1.4s						
COEN	**Coen**	**23.36**	**266**	P	**P**	**22 27 58.9**	**+0.4**
COEN				IAmb	IAmb	22 27 59.9	
	comp=Z,22nm,1.4s						
BKZ	**Black Stump Fm**	**26.66**	**164**	P	**P**	**22 28 26.8**	**-1.3**
BKZ				IAmb	IAmb	22 28 28.4	
	comp=Z,25nm,1.4s						
CAN	**Canberra**	**27.09**	**214**	P	**P**	**22 28 32.3**	**+0.3**
STKA	**Stephens Creek**	**29.65**	**228**	P	**P**	**22 28 54.9**	**+0.3**
	comp=Z,4.4nm,0.5s,baz=51,slow=9.2,SNR=17						
STKA				PcP	**PcP**	**22 31 54.1**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=75,slow=5.3,SNR=5.3						
STKA	**Stephens Creek**	**29.65**	**228**	P	**P**	**22 28 55.3**	**+0.7**
TOO	**Toolangi**	**30.67**	**215**	P	**P**	**22 29 03.9**	**+0.4**
TOO				IAmb	IAmb	22 29 14.9	
	comp=Z,15nm,1.2s						
WR0	**Warramunga Arr**	**31.87**	**254**	P	**P**	**22 29 13.2**	**-1.1**
WB2	**Warramunga Arr**	**32.04**	**254**	P	**P**	**22 29 14.8**	**-1.0**
WB2				IAmb	IAmb	22 29 32.4	
	comp=Z,6.8nm,1.1s						
WB2				PcP	**PcP**	**22 32 00.8**	**+0.3**
WRA	**Warramunga Arr**	**32.05**	**254**	P	**P**	**22 29 14.7**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=85,slow=9.2,SNR=7.3						
WRA				PcP	**PcP**	**22 32 00.5**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=79,slow=3.5,SNR=7.3						
WRA	**Warramunga Arr**	**32.05**	**254**	IAmb	IAmb	22 29 20.4	
	comp=Z,0.2nm,0.9s						
WRA				PcP	**PcP**	**22 32 01.0**	**+0.3**
AS31	**Alice Springs**	**33.02**	**248**	P	**P**	**22 29 23.0**	**-1.2**
ASAR	**Alice Springs**	**33.02**	**248**	P	**P**	**22 29 23.2**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=74,slow=9.2,SNR=48						
ASAR				PcP	**PcP**	**22 32 03.1**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=78,slow=2.3,SNR=8.6						
ASAR				ScP	**ScP**	**22 35 29.6**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=70,slow=5.5,SNR=4.4						
ASAR	**Alice Springs**	**33.02**	**248**	P	**P**	**22 29 22.8**	**-1.5**
BBOO	**Buckleboo**	**34.19**	**231**	P	**P**	**22 29 34.0**	**-0.2**
BBOO				IAmb	IAmb	22 29 46.8	
	comp=Z,22nm,1.3s						
MTN	**Manton Dam**	**35.13**	**267**	P	**P**	**22 29 42.8**	**+0.4**
KNRA	**Kununurra**	**37.23**	**262**	P	**P**	**22 29 59.9**	**-0.4**
FORT	**Forrest**	**39.80**	**238**	P	**P**	**22 30 20.6**	**-0.9**
FORT				IAmb	IAmb	22 30 21.4	
	comp=Z,25nm,1.0s						
FITZ	**Fitzroy Crossi**	**40.18**	**258**	P	**P**	**22 30 24.6**	**-0.1**
FITZ				IAmb	IAmb	22 30 28.7	
	comp=Z,17nm,1.3s						
PSA00	**Pilbara Seismi**	**45.69**	**253**	P	**P**	**22 31 09.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**49.26**	**238**	P	**P**	**22 31 35.1**	**-1.1**
NWAO				IAmb	IAmb	22 31 46.6	
	comp=Z,18nm,1.2s						
UGM	**Wanagama**	**55.90**	**270**	P	**P**	**22 32 25.3**	**+0.1**
JGF	**Kuroka**	**56.59**	**331**	P	**P**	**22 32 30.1**	**+0.3**
MJAR	**Matsushiro Arr**	**56.97**	**332**	P	**P**	**22 32 32.1**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=170,slow=8.5,SNR=8.6						
MAJO	**Matsushiro**	**56.97**	**332**	P	**P**	**22 32 32.4**	**+0.1**
MAJO				IAmb	IAmb	22 32 32.8	
	comp=Z,5.6nm,0.5s						
JWT	**Wachi**	**57.29**	**329**	P	**P**	**22 32 34.3**	**-0.3**
JWT				IAmb	IAmb	22 32 36.8	
	comp=Z,6.1nm,0.8s						
JNU	**Nakatsue**	**58.06**	**324**	P	**P**	**22 32 40.4**	**+0.4**
JSD	**Sado**	**58.19**	**333**	P	**P**	**22 32 41.9**	**+1.1**
JSD				IAmb	IAmb	22 32 44.2	
	comp=Z,7.9nm,0.7s						
JHS	**Saijyo**	**58.24**	**327**	P	**P**	**22 32 41.1**	**-0.1**
JHS				IAmb	IAmb	22 32 44.3	
	comp=Z,16nm,1.4s						
CISI	**Cisompet, Garu**	**58.60**	**269**	P	**P**	**22 32 43.1**	**-1.1**
YHNB	**Yeheng**	**58.78**	**310**	P	**P**	**22 32 45.8**	**+0.6**
KSRS	**Korea Array**	**62.87**	**325**	P	**P**	**22 33 13.1**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=139,slow=6.7,SNR=5.8						
VNDA	**Vanda**	**63.89**	**181**	P	**P**	**22 33 16.6**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=348,slow=7.4,SNR=6.4						
VNDA	**Vanda**	**63.89**	**181**	P	**P**	**22 33 17.9**	**-0.6**
CASY	**Casey**	**64.47**	**202**	P	**P**	**22 33 21.9**	**-0.6**
USA0B	**Ussuriysk Arra**	**65.95**	**333**	P	**P**	**22 33 33.1**	**+0.9**
USA0B				IAmb	IAmb	22 33 34.7	
	comp=Z,12nm,1.2s						
USRK	**Ussuriysk Ar.**	**65.95**	**333**	P	**P**	**22 33 33.1**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=107,slow=6.6,SNR=8.7						
PETK	**Petropavlovsk-**	**67.03**	**354**	P	**P**	**22 33 40.0**	**+1.1**
	comp=Z,5.6nm,0.7s,baz=150,slow=7.2,SNR=4.4						
PETK	**Petropavlovsk-**	**67.03**	**354**	P	**P**	**22 33 39.9**	**+1.0**
MDJ	**Mudanjiang**	**67.35**	**332**	P	**P**	**22 33 41.6**	**+0.6**
MDJ				IAmb	IAmb	22 33 43.2	
	comp=Z,7.0nm,0.7s						
GSI	**Gunungsitoli**	**70.58**	**276**	P	**P**	**22 33 60.0**	**-1.7**
ENH	**Enshi**	**70.68**	**309**	P	**P**	**22 34 01.2**	**-0.8**
ENH				IAmb	IAmb	22 34 02.8	
	comp=Z,11nm,0.9s						
BJT	**Baijiatuan**	**71.43**	**321**	P	**P**	**22 34 06.3**	**+0.1**
BJT				IAmb	IAmb	22 34 07.4	
	comp=Z,4.8nm,0.7s						
XAN	**Xi'an**	**72.96**	**312**	P	**P**	**22 34 16.1**	**+0.6**
XAN				pP	PcP	22 34 21.5	-10
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
XAN	**Xi'an**	**72.96**	**312**	P	**P**	**22 34 15.8**	**+0.2**
XAN				IAmb	IAmb	22 34 16.5	
	comp=Z,6.1nm,0.6s						
CM31	**Chiang Mai Arr**	**74.50**	**294**	P	**P**	**22 34 25.4**	**+0.7**
CM31				IAmb	IAmb	22 34 26.7	
	comp=Z,5.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**74.50**	**294**	P	**P**	**22 34 26.4**	**+1.7**
	comp=Z,4.0nm,0.6s,baz=128,slow=5.0,SNR=19						
CMAR	**Chiang Mai Arr**	**74.50**	**294**	P	**P**	**22 34 25.3**	**+0.7**
CHTO	**Chiang Mai**	**74.62**	**294**	P	**P**	**22 34 25.8**	**+0.4**
CHTO				IAmb	IAmb	22 34 27.1	
	comp=Z,5.1nm,0.9s						
QSPA	**South Pole Qui**	**76.33**	**180**	P	**P**	**22 34 34.0**	**-0.5**
QSPA				IAmb	IAmb	22 34 35.5	
	comp=Z,8.3nm,0.9s						
YAK	**Yakutsk**	**81.03**	**343**	P	**P**	**22 35 00.4**	**+0.6**
ULN	**Ulaanbaatar**	**81.28**	**324**	P	**P**	**22 35 01.8**	**+0.1**
BILL	**Bilibino**	**81.51**	**360**	P	**P**	**22 35 02.3**	**+0.1**
BILL				IAmb	IAmb	22 35 03.6	
	comp=Z,7.6nm,0.7s						
SONM	**Songino Array**	**81.64**	**324**	P	**P**	**22 35 03.9**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=143,slow=5.3,SNR=8.7						
SONM	**Songino Array**	**81.64**	**324**	P	**P**	**22 35 03.5**	**0.0**
GTA	**Gaotai**	**81.92**	**314**	*eP*	**P**	**22 35 06.5**	**+1.3**
GTA				sP	PcP	22 35 17.4	+7.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MAW	**Mawson**	**82.83**	**202**	P	**P**	**22 35 09.5**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=106,slow=4.6,SNR=7.2						
MAW	**Mawson**	**82.83**	**202**	P	**P**	**22 35 09.8**	**+0.6**
IMAR	**Indian Mountai**	**84.58**	**15**	P	**P**	**22 35 19.2**	**+1.3**
WRH	**Wood River Hil**	**84.98**	**18**	P	**P**	**22 35 19.9**	**-0.1**
WRH				IAmb	IAmb	22 35 25.3	
	comp=Z,8.0nm,1.4s						
CCB	**Clear Creek Bu**	**85.19**	**18**	P	**P**	**22 35 21.0**	**0.0**
MDM	**Murphy Dome**	**85.29**	**17**	P	**P**	**22 35 21.6**	**0.0**
IL31		**85.55**	**18**	P	**P**	**22 35 22.6**	**-0.1**
ILAR	**Eielson Array**	**85.55**	**18**	P	**P**	**22 35 22.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=238,slow=5.2,SNR=7.7						
SNAA	**Sanae**	**94.58**	**183**	P	**P**	**22 36 04.3**	**-0.9**
VNA3	**Neumayer Olymp**	**95.25**	**181**	P	**P**	**22 36 06.8**	**-1.5**
VNA2	**Neumayer--Watz**	**95.51**	**182**	P	**P**	**22 36 08.8**	**-0.6**
	baz=179,slow=4.2						
VNA1	**Neumayer--Stat**	**95.81**	**182**	P	**P**	**22 36 09.8**	**-0.9**
MK31	**Makanchi Array**	**96.43**	**316**	P	**P**	**22 36 14.2**	**+0.2**
MK31				IAmb	IAmb	22 36 15.0	
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**96.43**	**316**	P	**P**	**22 36 14.4**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=92,slow=6.2,SNR=32						
MKAR				PKiKP	**PKiKP**	**22 40 50.2**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=84,slow=3.5,SNR=3.6						
MKAR	**Makanchi Array**	**96.43**	**316**	P	**P**	**22 36 13.9**	**-0.1**
ZALV	**Zalesovo Beam**	**96.53**	**324**	P	**P**	**22 36 13.6**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=114,slow=3.6,SNR=7.1						
ZALV	**Zalesovo Beam**	**96.53**	**324**	P	**P**	**22 36 13.0**	**-1.3**
MAKZ	**Makanchi**	**96.64**	**316**	P	**P**	**22 36 14.8**	**-0.2**
MAKZ				IAmb	IAmb	22 36 16.5	
	comp=Z,1.8nm,0.9s						
YKA	**Yellowknife Ar**	**96.64**	**27**	P	**P**	**22 36 13.1**	**-1.4**
	comp=Z,0.1nm,0.4s,baz=256,slow=4.3,SNR=3.2						
ARU	**Arti**	**111.62**	**326**	PKiKP	**PKiKP**	**22 41 17.3**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=181,slow=3.6,SNR=3.9						
ARCES	**ARCESS Array B**	**119.24**	**346**	PKP	**PKPdf**	**22 41 32.0**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=222,slow=1.6,SNR=26						
ARCES	**ARCESS Array B**	**119.24**	**346**		**PKPdf**	**22 41 32.0**	**-0.3**
BOSA	**Boshof**	**124.14**	**221**	PKP	**PKPdf**	**22 41 42.2**	**-0.9**
	comp=Z,2.3nm,1.1s,baz=348,slow=4.2,SNR=4.1						
BOSA	**Boshof**	**124.14**	**221**		**PKPdf**	**22 41 42.6**	**-0.5**
FINES	**FINESS Array B**	**124.75**	**338**	PKP	**PKPdf**	**22 41 43.0**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=75,slow=2.7,SNR=12						
FINES	**FINESS Array B**	**124.75**	**338**		**PKPdf**	**22 41 43.0**	**-0.1**
NOA	**NORSAR Array B**	**129.62**	**345**	PKP	**PKPdf**	**22 41 52.6**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=344,slow=1.9,SNR=4.6						
AKASG	**Malin Array Be**	**129.86**	**326**	PKP	**PKPdf**	**22 41 53.5**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=56,slow=3.1,SNR=2.1						
CLL	**Collm**	**137.09**	**336**	*i* PKPdf	**PKPdf**	**22 42 06.7**	**0.0**
CONA	**Conrad Observa**	**138.40**	**331**	*i* P	**PKPdf**	**22 42 09.3**	**-0.1**
	comp=Z,1.0nm,0.8s						
CONA				*i* P	**PKiKP**	**22 42 12.2**	**+0.7**
	comp=Z,1.1nm,0.5s						
GERES	**GERESS Array B**	**138.70**	**334**	PKP	**PKPdf**	**22 42 10.6**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=45,slow=2.1,SNR=6.5						
GERES	**GERESS Array B**	**138.70**	**334**		**PKPdf**	**22 42 10.7**	**+0.8**
MOA	**Molln**	**139.20**	**332**	*eP*	**PKiKP**	**22 42 13.3**	**+0.2**
	comp=Z,0.8nm,0.4s						
SOKA	**Soboth**	**139.69**	**330**	*i* P	**PKPdf**	**22 42 11.9**	**+0.2**
	comp=Z,2.8nm,1.1s						
WTTA	**Wattenberg**	**140.81**	**334**	*i* P	**PKPdf**	**22 42 13.5**	**-0.4**
	comp=Z,2.4nm,0.7s						
WTTA				*eP*	**PKiKP**	**22 42 16.9**	**+0.3**
	comp=Z,0.8nm,0.3s						
KEST	**Kesra**	**150.38**	**322**	PKPbc	**PKiKP**	**22 42 36.6**	**+0.1**
	comp=Z,12nm,0.6s,baz=91,slow=0.8,SNR=20						
ESDC	**Sonseca Array**	**152.98**	**345**	PKPbc	**PKiKP**	**22 42 42.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=11,slow=4.2,SNR=5.1						
ESDC				PKPab	**PKPab**	**22 42 53.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=21,slow=3.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**165.92**	**269**	PKP	**PKPdf**	**22 42 48.5**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=50,slow=1.4,SNR=7.7						
TORD				PKPab	**PKPab**	**22 43 50.6**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=88,slow=4.7,SNR=10						
TORD	**Torodi Ar. Bea**	**165.92**	**269**		**PKPdf**	**22 42 49.8**	**+0.3**

*NEIC **21** 22:49:35.9±1.1, 31.01N±0.07×50.42E±0.06, h5km±5km, Error ellipse: s-maj=9.8km s-min=7.1km az=199.0*

*TEH **21** 22:49:36.5, 31.10N×50.50E, h8km, ML3.8*

*THR **21** 22:49:37.8±0.3, 31.05N×50.41E, h14km±6km, ML3.8*

*IDC **21** 22:49:40.3±3.2, 31.12N×50.27E, h26km±20km, mb3.7/20, mb1 3.8/23, mb1mx3.6/51, mbtmp3.8/23, ML3.4/3, MS2.8/4, Ms1 2.8/4, ms1mx2.4/42, Error ellipse: s-maj=21.5km s-min=13.3km az=152.0*

*OMAN **21** 22:49:46.5, 30.65N×50.63E, h210km, mb4.5/23*

ISC 21 22:49:36.4±0.4, 31°05N±0.03×50°52E±0.03, h10km, n192, σ2°14/219, mb4.2/41, MS2.8/3, 7C-8D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.51**	**207**	*ePg*	**Pg**	**22 49 47.4**	**+1.1**
ABEH				*eSg*	**Sb**	**22 49 55.4**	**+0.5**
KLNJ	**Kolanjah**	**0.92**	**92**	Pg	**Pb**	**22 49 54.9**	**+0.2**
KLNJ	**Kolanjah**	**0.92**	**92**	*ePg*	**Pb**	**22 49 54.9**	**+0.2**
IBRJ	**Brojen**	**1.06**	**36**	*ePg*	**Pn**	**22 49 57.1**	**-0.6**
SHK1	**Shahrekord**	**1.31**	**14**	*ePg*	**Pn**	**22 50 00.5**	**-0.5**
AHWZ	**Ahwaz**	**1.63**	**280**	Pg	**Pg**	**22 50 07.8**	**0.0**
AHWZ				Sg	**Sg**	**22 50 31.0**	**+2.1**
AHWZ	**Ahwaz**	**1.63**	**280**	*eSg*	**Sg**	**22 50 31.0**	**+2.1**
AHWZ				*ePg*	**Pg**	**22 50 07.8**	**0.0**
IPIR	**Pirpir**	**1.66**	**11**	*e*		22 50 38.2	
	comp=Z,12µm,0.5s						
IPIR				*ePg*	**Pg**	**22 50 07.9**	**-0.4**
KAZ1	**Kazerun**	**1.72**	**145**	*ePn*	**Pg**	**22 50 09.7**	**+0.2**
IRAM	**Ramesheh**	**1.76**	**64**	*e*		22 50 41.4	
	comp=Z,9µm,0.6s						
IRAM				*ePg*	**Pg**	**22 50 09.8**	**-0.5**
SHGR	**Shooshtar-Gavs**	**1.81**	**306**	*ePg*	**Pb**	**22 50 09.4**	**-0.2**
SHGR				IAML		22 50 41.9	
	comp=E,806nm,0.5s						
SHGR				IAML		22 50 43.9	
	comp=N,1µm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.81**	**306**	Pg	**Pb**	**22 50 09.4**	**-0.2**
SHGR	**Shooshtar-Gavs**	**1.81**	**306**	*ePg*	**Pb**	**22 50 09.4**	**-0.2**
IGAR	**Gharneh**	**1.87**	**43**	*ePn*	**Pb**	**22 50 11.1**	**+0.2**
IGAR				*e*		22 50 14.3	
	comp=Z,6µm,0.4s						
SHI	**Shiraz**	**2.22**	**129**	Pn	**Pb**	**22 50 17.0**	**+0.2**
SHI	**Shiraz**	**2.22**	**129**	*ePn*	**Pb**	**22 50 17.1**	**+0.2**
AHBU	**AHRAM**	**2.28**	**163**	*ePn*	**Pb**	**22 50 17.4**	**-0.3**
IZEF	**Zefreh**	**2.40**	**39**	*ePn*	**Pb**	**22 50 19.1**	**-0.7**
IKLH	**Kolahrood**	**2.43**	**21**	*ePn*	**Pb**	**22 50 19.5**	**-1.0**
IKLH				*e*		22 51 04.2	
	comp=Z,4µm,0.6s						
NASN	**Na'in**	**2.61**	**48**	*ePn*	**Pb**	**22 50 23.0**	**-0.6**
NASN	**Na'in**	**2.61**	**48**	*ePn*	**Pb**	**22 50 23.0**	**-0.6**
KHMZ	**Khomeyn**	**2.72**	**350**	*ePn*	**Pb**	**22 50 23.1**	**-2.2**
KHMZ	**Khomeyn**	**2.72**	**350**	*ePn*	**Pb**	**22 50 23.2**	**-2.2**
QAM	**Ghamsar**	**2.81**	**16**	*ePn*	**Pb**	**22 50 24.3**	**-2.6**
ISAD	**Sadrabad**	**2.84**	**72**	*ePn*	**Pb**	**22 50 26.4**	**-1.0**
ISAD				*e*		22 50 32.5	
	comp=Z,3µm,0.3s						
UMR	**Umm Al-Rimmam**	**2.85**	**239**	*eP*		22 50 23.2	
DHL1	**Dehloran**	**3.20**	**301**	*ePn*	**Pn**	**22 50 28.6**	**+1.8**
KRSH	**Karshahi**	**3.21**	**25**	*ePn*	**Pn**	**22 50 29.7**	**+2.5**
QRN	**Al-Qurain**	**3.22**	**225**	*eP*		22 50 28.5	
RDF	**Al-Radifah**	**3.34**	**231**	*eP*		22 50 30.7	
QIR1	**Qir**	**3.38**	**139**	*ePn*	**Pn**	**22 50 32.3**	**+3.0**
RST	**Umm Al-Ruwaisa**	**3.42**	**244**	*eP*		22 50 31.3	
ANAR	**Anarak**	**3.46**	**51**	*ePn*	**Pb**	**22 50 34.3**	**-3.6**
ASAO	**Ashtian**	**3.51**	**353**	*ePn*	**Pn**	**22 50 34.1**	**+2.8**
ASAO	**Ashtian**	**3.51**	**353**	*ePn*	**Pn**	**22 50 34.1**	**+2.8**
ICHK	**Chekchek**	**3.52**	**69**	*ePn*	**Pb**	**22 50 35.7**	**-3.3**
ICHK				*e*		22 50 43.9	
	comp=Z,2µm,0.4s						
IMEH	**Mehriz**	**3.52**	**83**	*ePn*	**Pb**	**22 50 35.8**	**-3.2**
ISFB	**Sefidab**	**3.60**	**23**	*ePn*	**Pn**	**22 50 35.1**	**+2.8**
JHRM	**Jahrom**	**3.67**	**133**	*ePn*	**Pn**	**22 50 37.3**	**+3.8**
YZKH	**Yazd**	**3.72**	**68**	*ePn*	**Pn**	**22 50 38.2**	**-4.1**
YZKH	**Yazd**	**3.72**	**68**	*ePn*	**Pn**	**22 50 38.2**	**-4.1**
IBAF	**Bafgh**	**4.35**	**82**	*ePn*	**Pn**	**22 50 46.9**	**+4.1**
IRAZ	**Razeghan**	**4.37**	**354**	*ePn*	**Pn**	**22 50 45.5**	**+2.4**
KER	**Kermanshah**	**4.38**	**320**	*ePn*	**Pn**	**22 50 44.8**	**+1.6**
IHSB	**Hasanabad**	**4.42**	**8**	*ePn*	**Pn**	**22 50 46.6**	**+2.9**
IMHD	**Mahdasht**	**4.62**	**1**	*ePn*	**Pn**	**22 50 48.9**	**+2.4**
QABG	**Abgarm-Qazvin**	**4.71**	**351**	*ePn*	**Pn**	**22 50 48.7**	**+0.9**
LAR1	**LAR**	**4.76**	**134**	*ePn*	**Pn**	**22 50 52.8**	**+4.4**
ILAS	**Lasjerd**	**4.78**	**25**	*ePn*	**Pn**	**22 50 52.0**	**+3.3**
IDHR	**Dehrash**	**5.03**	**317**	*ePn*	**Pn**	**22 50 54.2**	**+2.0**
KHGB	**Koh Gabri**	**5.17**	**96**	*ePn*	**Pn**	**22 50 57.7**	**+3.5**
IANJ	**Anjilo**	**5.24**	**32**	*ePn*	**Pn**	**22 50 57.5**	**+2.4**
ISHM	**Shahmirzad**	**5.28**	**25**	*ePn*	**Pn**	**22 50 58.6**	**+3.0**
QALM	**Alamut, Qazvin**	**5.37**	**1**	*ePn*	**Pn**	**22 50 59.0**	**+2.2**
TVBK	**TV Kerman**	**5.49**	**100**	*ePn*	**Pn**	**22 51 02.5**	**+3.9**
NGRK	**Negar Kerman**	**5.55**	**103**	*ePn*	**Pn**	**22 51 03.9**	**+4.5**
TPRV	**Parvadeh(Tabas**	**5.59**	**68**	*ePn*	**Pn**	**22 51 03.9**	**+4.1**
TNSJ	**Nastanj**	**5.91**	**59**	*ePn*	**Pn**	**22 51 07.7**	**+3.6**
GENO	**Geno**	**6.13**	**125**	*ePn*	**Pn**	**22 51 10.3**	**+3.0**
TKDS	**Koohdasht(Taba**	**6.14**	**64**	*ePn*	**Pn**	**22 51 11.2**	**+3.8**
CHMN	**Cheshme madani**	**6.17**	**99**	*ePn*	**Pn**	**22 51 11.9**	**+3.9**
JRN	**Qarnain Island**	**6.42**	**161**	*ePn*	**Pn**	**22 51 13.1**	**+2.0**
JRN	**Qarnain Island**	**6.42**	**161**	P	**Pn**	**22 51 13.5**	**+2.3**
JRN				S	**Sn**	**22 52 25.1**	**+0.6**
SHME	**Shamm**	**7.02**	**134**	*ePn*	**Pn**	**22 51 21.2**	**+1.9**
SHME	**Shamm**	**7.02**	**134**	P	**Pn**	**22 51 24.0**	**+4.7**
SHME				S	**Sn**	**22 52 39.0**	**-0.2**
SLWR	**Sila**	**7.03**	**171**	*ePn*	**Pn**	**22 51 21.7**	**+2.2**
SLWR	**Sila**	**7.03**	**171**	P	**Pn**	**22 51 21.8**	**+2.2**
SLWR				S	**Sn**	**22 52 38.5**	**-1.0**
BANOM	**Banah**	**7.21**	**134**	*ePn*	**Pn**	**22 51 24.3**	**+2.3**
BANOM	**Banah**	**7.21**	**134**	P	**Pn**	**22 51 24.5**	**+2.5**
BANOM				S	**Sn**	**22 52 42.9**	**-1.1**

AKBB	**Malin Array Si**	**25.23**	**327**	P		**P**		**22 55 02.0**	**-0.3**
LOT	**Lotru**	**25.31**	**312**	⇓P		**P**		**22 55 06.7**	**+3.4**
SRE	**Strehaia**	**25.35**	**310**	⇑P		**P**		**22 55 07.3**	**+3.7**
FNA	**Florina**	**25.42**	**301**	P		**P**		**22 55 04.3**	**0.0**
FNA				IAmb		IAmb		22 55 07.7	
	comp=Z,7.8nm,0.7s								
BURAR	**Bucovina Array**	**25.46**	**318**	⇓P		**P**		**22 55 04.7**	**+0.1**
BURAR	**Bucovina Array**	**25.46**	**318**	P		**P**		**22 55 04.9**	**+0.3**
BUR08	**Bucovina Ar. S**	**25.48**	**318**	P		**P**		**22 55 04.6**	**-0.2**
BUR08				IAmb		IAmb		22 55 20.2	
	comp=Z,2.5nm,0.9s								
GZR	**Gura Zlata**	**25.92**	**311**	⇑P		**P**		**22 55 10.5**	**+1.7**
HERR	**Herculane**	**25.95**	**310**	⇓P		**P**		**22 55 12.2**	**+3.2**
BOVS	**Bovan**	**25.98**	**307**	⇑P		**P**		**22 55 10.8**	**+1.5**
BVAR	**Borovoye Array**	**26.29**	**28**	P		**P**		**22 55 13.6**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=183,slow=13,SNR=4.5								
BVAR				ScP		**ScP**		**23 02 15.7**	**-2.2**
	comp=Z,0.8nm,0.8s,baz=104,slow=6.3,SNR=3.9								
MDVR	**Moldovita**	**26.38**	**309**	⇓P		**P**		**22 55 15.4**	**+2.5**
DRGR		**26.55**	**314**	⇑P		**P**		**22 55 14.8**	**+0.3**
BZS	**Buzias**	**26.76**	**311**	⇓P		**P**		**22 55 17.3**	**+1.0**
DIVS	**Divibare**	**27.31**	**307**	P		**P**		**22 55 21.1**	**-0.3**
DIVS				IAmb		IAmb		22 55 25.5	
	comp=Z,2.7nm,1.0s								
KURBB	**Kurchatov Arra**	**28.56**	**39**	P		**P**		**22 55 34.8**	**+2.4**
	comp=Z,1.4nm,0.6s,baz=240,slow=9.6,SNR=12								
KURK	**Kurchatov**	**28.66**	**39**	P		**P**		**22 55 34.8**	**+1.6**
MK31	**Makanchi Array**	**29.04**	**48**	P		**P**		**22 55 38.4**	**+1.6**
MKAR	**Makanchi Array**	**29.04**	**48**	P		**P**		**22 55 39.2**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=246,slow=8.6,SNR=6.9								
MKAR				ScP		**ScP**		**23 02 25.4**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=270,slow=2.3,SNR=1.9								
MKAR				LR		LR		23 08 47.5	
	comp=Z,22nm,18.6s,baz=312,slow=39								
MKAR	**Makanchi Array**	**29.04**	**48**	P		**P**		**22 55 37.8**	**+1.0**
NRCA	**Norcia**	**31.88**	**302**	P		**P**		**22 56 01.6**	**-0.3**
NRCA				IAmb		IAmb		22 56 13.5	
	comp=Z,2.3nm,0.7s								
MURB	**Monte Urbino**	**32.37**	**303**	P		**P**		**22 56 05.6**	**-0.6**
KBA	**Koelnbreinsper**	**32.64**	**310**	*i* P		**P**		**22 56 08.1**	**-0.6**
	comp=Z,1.9nm,0.6s								
CTI	**Castel Tesino**	**33.52**	**308**	P		**P**		**22 56 15.7**	**-0.6**
CTI				IAmb		IAmb		22 56 22.4	
	comp=Z,2.6nm,0.9s								
ZAA0	**Zalesovo Array**	**33.58**	**37**	P		**P**		**22 56 17.4**	**+0.8**
ZAA0				IAmb		IAmb		22 56 21.8	
	comp=Z,2.5nm,0.5s								
ZALV	**Zalesovo Beam**	**33.58**	**37**	P		**P**		**22 56 18.3**	**+1.7**
	comp=Z,1.8nm,0.5s,baz=254,slow=7.7,SNR=11								
ZCCA	**Zocca**	**33.66**	**304**	P		**P**		**22 56 17.0**	**-0.4**
ZCCA				IAmb		IAmb		22 56 25.5	
	comp=Z,5.3nm,0.8s								
WTTA	**Wattenberg**	**33.82**	**310**	*eP*		**P**		**22 56 18.3**	**-0.6**
	comp=Z,2.5nm,0.5s								
WATA	**Walderalm**	**33.87**	**310**	*i* P		**P**		**22 56 18.4**	**-1.0**
	comp=Z,1.3nm,0.5s								
SQTA	**Sankt Quirin**	**34.09**	**310**	*i* P		**P**		**22 56 20.4**	**-0.8**
	comp=Z,4.3nm,0.4s								
MOTA	**Moosalm**	**34.19**	**310**	*eP*		**P**		**22 56 21.7**	**-0.5**
	comp=Z,2.3nm,0.5s								
FIA1	**FINESS Array S**	**34.35**	**339**	P		**P**		**22 56 23.6**	**+0.4**
FIA1				IAmb		IAmb		22 56 40.7	
	comp=Z,5.1nm,1.1s								
FINES	**FINESS Array B**	**34.35**	**339**	P		**P**		**22 56 22.8**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=144,slow=9.7,SNR=22								
FINES				PcP		**PcP**		**22 58 58.8**	**0.0**
	comp=Z,1.2nm,0.8s,baz=113,slow=3.2,SNR=1.8								
FINES	**FINESS Array B**	**34.35**	**339**	P		**P**		**22 56 23.1**	**-0.1**
FETA	**Feichten**	**34.36**	**309**	*eP*		**P**		**22 56 23.1**	**-0.5**
	comp=Z,3.4nm,1.1s								
VSL	**Villasalto**	**34.39**	**296**	P		**P**		**22 56 23.7**	**-0.1**
DAVA	**Damuels**	**34.98**	**309**	*eP*		**P**		**22 56 28.0**	**-1.0**
	comp=Z,4.3nm,0.4s								
BNI	**Bardonecchia**	**36.79**	**305**	P		**P**		**22 56 43.6**	**-0.9**
BNI				IAmb		IAmb		22 56 49.3	
	comp=Z,3.1nm,1.0s								
NC405	**NORSAR Array S**	**39.34**	**331**	P		**P**		**22 57 04.9**	**-0.7**
NOA	**NORSAR Array B**	**39.50**	**331**	P		**P**		**22 57 06.2**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=124,slow=8.5,SNR=1.7								
TLY	**Talaya**	**43.76**	**46**	LR		LR		23 19 05.6	
	comp=Z,18nm,19.5s,baz=263,slow=40								
ESDC	**Sonseca Array**	**44.67**	**297**	P		**P**		**22 57 49.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=60,slow=7.6,SNR=2.6								
SONM	**Songino Array**	**45.28**	**52**	P		**P**		**22 57 56.8**	**+2.4**
	comp=Z,0.5nm,0.7s,baz=280,slow=9.3,SNR=4.6								
TOA0	**Torodi Ar. Sit**	**48.21**	**260**	P		**P**		**22 58 16.7**	**-0.9**
TOA0				IAmb		IAmb		22 58 20.2	
	comp=Z,3.3nm,0.8s								
TORD	**Torodi Ar. Bea**	**48.21**	**260**	P		**P**		**22 58 17.3**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=51,slow=7.6,SNR=21								
TORD				PcP		**PcP**		**22 59 44.9**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=70,slow=2.4,SNR=2.4								
TORD	**Torodi Ar. Bea**	**48.21**	**260**	P		**P**		**22 58 16.9**	**-0.6**
TORD				IAmb		IAmb		22 58 20.3	
	comp=Z,1.9nm,0.8s								
KOWA	**Kowa**	**52.41**	**265**	P		**P**		**22 58 49.0**	**-0.4**
KOWA				IAmb		IAmb		22 58 58.3	
	comp=Z,9.0nm,1.4s								
LBTB	**Lobatse**	**60.64**	**206**	P		**P**		**22 59 48.4**	**+0.6**
KSRS	**Korea Array**	**62.63**	**61**	P		**P**		**23 00 02.5**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=282,slow=6.2,SNR=2.0								
BOSA	**Boshof**	**64.03**	**205**	P		**P**		**23 00 11.2**	**+0.7**
	comp=Z,6.1nm,0.7s,baz=22,slow=9.3,SNR=14								
BOSA	**Boshof**	**64.03**	**205**	P		**P**		**23 00 10.8**	**+0.3**
FRB	**Frobisher Bay**	**74.08**	**336**	P		**P**		**23 01 12.7**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=97,slow=6.2,SNR=4.6								
INK	**Inuvik**	**80.90**	**2**	P		**P**		**23 01 50.9**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=347,slow=9.0,SNR=7.7								
INK	**Inuvik**	**80.90**	**2**	P		**P**		**23 01 50.7**	**+0.4**
INK				IAmb		IAmb		23 01 57.5	
	comp=Z,3.0nm,1.1s								
BMAR	**Burnt Mountain**	**81.16**	**6**	P		**P**		**23 01 53.6**	**+1.7**
IMAR	**Indian Mountai**	**81.48**	**10**	P		**P**		**23 01 54.3**	**+0.7**
ILAR	**Eielson Array**	**83.52**	**7**	P		**P**		**23 02 04.4**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=328,slow=2.0,SNR=5.2								
ILAR	**Eielson Array**	**83.52**	**7**	P		**P**		**23 02 04.8**	**+0.5**
SCRK	**Sand Creek**	**84.60**	**6**	P		**P**		**23 02 11.0**	**+1.1**
SCRK				IAmb		IAmb		23 02 17.4	
	comp=Z,2.2nm,1.0s								
L27K	**Beaver Creek,**	**85.69**	**6**	P		**P**		**23 02 16.5**	**+1.2**
L27K				IAmb		IAmb		23 02 25.6	
	comp=Z,1.8nm,1.0s								
YKA	**Yellowknife Ar**	**86.02**	**353**	P		**P**		**23 02 16.9**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=20,slow=5.8,SNR=8.5								

*IDC **21** 23:07:04.0±4.3, 36.°88N×71.°20E, h75km±28km, mb3.2/8, mb1 3.4/15, mb1mx3.2/53, mbtmp3.6/15, Error ellipse: s-maj=48.0km s-min=20.4km az=163.0*
*NEIC **21** 23:07:09.0±1.7, 37.°23N±0.°07×70.°9E±0.°1, h97km±5km, mb4.1/7, Error ellipse: s-maj=13.7km s-min=9.6km az=85.0*
*NNC **21** 23:07:14.0±5.7, 37.°54N×70.°91E, h111km±100km, mb3.4, mpv3.8, Error ellipse: s-maj=57.7km s-min=42.4km az=146.0*

ISC 21 23:07:08.7±0.8, 37.°24N±0.°07×70.°90E±0.°07, h100km, n40, σ1§49/41, mb3.7/12, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GAR	**Garm**	**1.82**	**346**	Pn		**Pn**	**23 07 40.7**	**+1.7**
KBL	**Kabul**	**3.09**	**210**	Pn		**Pn**	**23 07 57.7**	**+1.9**
NIL	**Nilore**	**4.06**	**151**	Pn		**Pn**	**23 08 07.2**	**-1.6**
KK31	**Karatay Array**	**5.87**	**357**	P		**Pn**	**23 08 34.4**	**+1.3**
	7.4nm,0.3s,baz=178,slow=12,SNR=98							
KK31				⇑S		**Sn**	**23 09 38.2**	**-0.8**
	2.8nm,0.3s,baz=185,slow=23,SNR=5.0							
KK31	**Karatay Array**	**5.87**	**357**	Pn		**Pn**	**23 08 34.2**	**+1.1**
KKAR	**Karatay Array**	**5.87**	**357**	Pn		**Pn**	**23 08 34.2**	**+1.1**
KKAR	**Karatay Array**	**5.87**	**357**	Pn		**Pn**	**23 08 33.9**	**+0.7**
AAK	**Ala-Archa**	**6.06**	**26**	P		**Pn**	**23 08 36.2**	**+0.4**
	1.2nm,0.3s,baz=177,slow=5.1,SNR=11							
AAK				S		**Sn**	**23 09 40.8**	**-3.0**
	0.7nm,0.3s,baz=338,slow=23,SNR=7.5							
AAK	**Ala-Archa**	**6.06**	**26**	⇓P		**Pn**	**23 08 37.7**	**+1.8**
	2.0nm,0.4s							
AAK				S		**Sn**	**23 09 43.1**	**-0.8**
	5.2nm,0.6s							
THN	**Thein Dam**	**6.22**	**139**	*eP*		**Pn**	**23 08 40.0**	**+2.1**
THN				*eS*		Sn	23 09 06.5	-41
DHRM	**DHARAMSHALA**	**6.67**	**137**	*eP*		Pn	23 08 38.7	-5.7
DHRM				*eS*		Sn	23 09 46.0	-13
DHRM				IAML			23 09 48.7	
	comp=N,173nm,0.7s							
DHRM				IAML			23 09 49.7	
	comp=E,217nm,0.6s							
SMLA	**Simla**	**8.01**	**138**	*eP*		Pn	23 08 56.3	-5.9
SMLA				*eS*		Sn	23 10 17.6	-13
SMLA				IAML			23 10 21.3	
	comp=E,70nm,0.5s							
SMLA				IAML			23 10 22.2	
	comp=N,74nm,0.5s							
DDI	**Dehra Dun**	**9.11**	**137**	*eS*		Sn	23 10 42.5	-16
GEYT	**Alibeck**	**10.17**	**278**	P		**Pn**	**23 09 30.6**	**-1.1**
	comp=N,0.9nm,0.3s,baz=100,slow=7.7,SNR=7.4							
GEYT				S		**Sn**	**23 11 21.5**	**-2.3**
	comp=N,1.2nm,0.3s,baz=327,slow=11,SNR=5.6							
GYA0B	**ALIBECK ARRAY**	**10.17**	**278**	Pn		**Pn**	**23 09 31.3**	**-0.4**
MKAR	**Makanchi Array**	**12.75**	**38**	P		**Pn**	**23 10 03.5**	**-2.7**
	comp=N,0.1nm,0.3s,baz=223,slow=14,SNR=5.2							
AB31	**Akbulak array**	**14.40**	**330**	P		**Pn**	**23 10 26.9**	**-0.7**
	comp=N,2.1nm,0.6s,baz=135,slow=13,SNR=50							
ABKAR	**Akbulak array**	**14.40**	**330**	Pn		**Pn**	**23 10 27.4**	**-0.3**
KURBB	**Kurchatov Arra**	**14.45**	**20**	P		**Pn**	**23 10 27.0**	**-1.3**
	comp=N,0.0nm,0.3s,baz=203,slow=11,SNR=1.6							
BVAR	**Borovoye Array**	**15.79**	**359**	P		**Pn**	**23 10 45.2**	**0.0**
	comp=N,0.2nm,0.3s,baz=160,slow=11,SNR=3.4							
AKTO	**Aktyubinsk**	**16.10**	**329**	P		**P**	**23 10 51.4**	**+0.9**
	comp=N,0.9nm,0.3s,baz=129,slow=10.0,SNR=16							
AKTO	**Aktyubinsk**	**16.10**	**329**	⇑P		**P**	**23 10 53.1**	**+2.6**
	comp=N,6.4nm,0.8s							
ZAA0	**Zalesovo Array**	**19.28**	**26**			**P**	**23 11 24.9**	**-0.4**
ZALV	**Zalesovo Beam**	**19.28**	**26**	P		**P**	**23 11 24.5**	**-0.8**
	comp=N,0.5nm,0.3s,baz=215,slow=10,SNR=7.7							
ZALV	**Zalesovo Beam**	**19.28**	**26**	P		**P**	**23 11 24.1**	**-1.2**
BELG	**Belogornoye**	**22.27**	**320**	P		**P**	**23 11 58.8**	**+1.5**
	comp=N,3.1nm,0.7s,baz=166,slow=12,SNR=3.0							
TLY	**Talaya**	**27.20**	**47**			**P**	**23 12 45.2**	**+2.4**
TLY				IAmb		IAmb	23 12 46.2	
	comp=Z,4.7nm,0.6s							
SONM	**Songino Array**	**27.99**	**56**	P		**P**	**23 12 47.7**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=260,slow=10,SNR=2.7							
FINES	**FINESS Array B**	**36.83**	**326**	P		**P**	**23 14 09.1**	**+2.4**
	comp=Z,0.7nm,0.8s,baz=120,slow=11,SNR=5.1							
NOA	**NORSAR Array B**	**43.74**	**323**	P		**P**	**23 15 03.9**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=100,slow=7.7,SNR=1.6							
TOA0	**Torodi Ar. Sit**	**65.66**	**268**			**P**	**23 17 43.0**	**+0.4**
TOA0				IAmb		IAmb	23 17 54.8	
	comp=Z,4.0nm,1.4s							
TORD	**Torodi Ar. Bea**	**65.66**	**268**	P		**P**	**23 17 42.4**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=56,slow=6.1,SNR=1.7							
IMAR	**Indian Mountai**	**71.49**	**18**	P		**P**	**23 18 18.2**	**+0.2**
INK	**Inuvik**	**73.19**	**9**	P		**P**	**23 18 29.1**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=355,slow=5.1,SNR=6.8							
INK	**Inuvik**	**73.19**	**9**	P		**P**	**23 18 29.6**	**+1.6**
INK				IAmb		IAmb	23 18 48.5	
	comp=Z,2.1nm,1.4s							
ILAR	**Eielson Array**	**74.09**	**16**	P		**P**	**23 18 31.8**	**-1.7**
	comp=Z,0.2nm,0.7s,baz=334,slow=6.7,SNR=2.2							
KTH	**Kantishna Hill**	**74.19**	**18**	P		**P**	**23 18 34.3**	**+0.2**
KTH				IAmb		IAmb	23 18 34.8	
	comp=Z,2.1nm,0.9s							
PPLA	**Purkeypile**	**74.41**	**19**	P		**P**	**23 18 35.8**	**+0.2**
SCRK	**Sand Creek**	**75.40**	**15**	P		**P**	**23 18 42.1**	**+0.8**
SCRK				IAmb		IAmb	23 18 54.7	
	comp=Z,4.5nm,1.5s							
YKA	**Yellowknife Ar**	**80.51**	**3**	P		**P**	**23 19 09.4**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=351,slow=5.4,SNR=7.7							

*JMA **21** 23:34:35.0±0.4, 41.°63N×144.°73E, h38km±3km, M3.3*
*IDC **21** 23:34:41.5±14.0, 43.°00N×143.°93E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/32, mbtmp3.4/4, Error ellipse: s-maj=362.0km s-min=38.7km az=167.0*

ISC 21 23:34:40.7±1.9, 42.°1N±0.°2×144.°4E±0.°1, h34km, n14, σ0§70/8, mb3.2/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JEM	**Erimo**	**0.92**	**268**	P		**Pn**	**23 34 57.3**	**+0.1**
JOB	**Onbets**	**0.95**	**334**	P		**Pb**	**23 34 59.1**	**+0.5**
JCH	**Churui**	**0.95**	**307**	P		**Pb**	**23 34 58.9**	**+0.2**
JKHN	**Kushirohamanak**	**1.18**	**29**	P		**Pn**	**23 35 00.3**	**-0.4**
SONM	**Songino Array**	**27.31**	**295**	P		**P**	**23 40 21.9**	**-0.3**
	0.4nm,0.8s,baz=87,slow=8.9,SNR=2.0							
H11N2	**WAKE ISLAND Hy**	**29.30**	**133**	T		T	00 10 56.7	
	baz=325,slow=75,SNR=6.6							
H11N1	**WAKE ISLAND Hy**	**29.31**	**133**	T		T	00 10 57.5	
	baz=325,slow=75,SNR=5.9							
H11N3	**WAKE ISLAND Hy**	**29.31**	**133**	T		T	00 10 58.0	
	baz=325,slow=75,SNR=5.4							
H11S1	**WAKE ISLAND Hy**	**30.19**	**134**	T		T	00 12 06.5	
	baz=330							
H11S3	**WAKE ISLAND Hy**	**30.19**	**134**	T		T	00 12 06.5	
	baz=330							
H11S2	**WAKE ISLAND Hy**	**30.20**	**134**	T		T	00 12 06.5	
	baz=330							
MKAR	**Makanchi Array**	**43.59**	**298**	P		**P**	**23 42 40.8**	**-0.6**
	0.2nm,0.6s,baz=74,slow=9.1,SNR=2.4							
ILAR	**Eielson Array**	**44.05**	**35**	P		**P**	**23 42 45.9**	**+1.1**
	0.5nm,1.0s,baz=266,slow=7.1,SNR=2.4							
FINES	**FINESS Array B**	**65.45**	**332**	P		**P**	**23 45 19.2**	**-0.5**
	0.5nm,0.4s,baz=47,slow=7.7,SNR=7.7							

*IDC **22** 00:03:05.2±1.4, 27.°28N×126.°63E, h159km±16km, mb3.0/7, mb1 3.2/7, mb1mx3.0/36, mbtmp3.5/7, Error ellipse: s-maj=32.8km s-min=17.5km az=63.0*
*JMA **22** 00:03:05.9±0.3, 27.°23N×126.°54E, h147km±5km, M3.4*

ISC 22 00:03:04.2±0.9, 27.°24N±0.°09×126.°41E±0.°08, h152km±10km, n25, σ1§32/40, mb3.2/7, Northwest of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKE	**Kume jima 2**	**0.97**	**160**	P		**Pn**	**00 03 29.7**	**+0.7**
JKE				*eS*		**Sn**	**00 03 48.3**	**+0.4**
JAGN	**Aguni-jima**	**0.99**	**131**	P		**Pn**	**00 03 29.8**	**+0.7**
JAGN				S		**Sn**	**00 03 47.9**	**-0.1**
JIH	**Iheya**	**1.40**	**98**	P		**Pn**	**00 03 33.7**	**+0.8**
JIH				S		**Sn**	**00 03 54.1**	**-0.7**
JNTH	**Nagotoyohara**	**1.61**	**116**	P		**Pn**	**00 03 35.7**	**+0.6**
JNTH				S		**Sn**	**00 03 57.4**	**-1.3**
JJT3	**Tamagusuku3**	**1.64**	**131**	P		**Pn**	**00 03 36.6**	**+1.1**
JJT3				*eS*		**Sn**	**00 03 59.2**	**-0.2**
JOW	**Kunigami**	**1.71**	**103**	P		**Pn**	**00 03 36.7**	**+0.4**
	30nm,0.3s,baz=161,slow=28,SNR=63							
JOW				S		**Sn**	**00 03 59.1**	**-1.6**
	82nm,0.3s,baz=129,slow=25,SNR=26							
JOW	**Kunigami**	**1.71**	**103**	P		**Pn**	**00 03 36.6**	**+0.4**
JOW				S		**Sn**	**00 03 59.0**	**-1.7**
JYRO	**Yoronjima**	**1.83**	**96**	P		**Pn**	**00 03 37.8**	**+0.3**
JYRO				S		**Sn**	**00 04 00.8**	**-2.2**
JOKE	**Okinoerabujima**	**1.92**	**86**	P		**Pn**	**00 03 39.0**	**+0.4**
JOKE				S		**Sn**	**00 04 03.1**	**-1.9**
JTK	**Tokunoshima**	**2.32**	**76**	P		**Pn**	**00 03 43.3**	**+0.1**
JTK				*eS*		**Sn**	**00 04 11.1**	**-2.2**
JOGS	**Gusukube**	**2.63**	**200**	P		**Pn**	**00 03 47.8**	**+0.7**
JOGS				*eS*		**Sn**	**00 04 19.9**	**-0.3**
JAMN	**Amaminishikomi**	**2.64**	**67**	P		**Pn**	**00 03 47.2**	**0.0**
JAMN				*eS*		**Sn**	**00 04 19.1**	**-1.3**
JIRB	**Irabujima**	**2.65**	**205**	*eS*		**Sn**	**00 04 18.9**	**-1.7**
JTJ	**Tarama**	**3.01**	**211**	*eS*		**Sn**	**00 04 26.6**	**-2.1**
JAM	**Amami Oshima**	**3.06**	**67**	P		**Pn**	**00 03 52.2**	**-0.2**
JAM				*eS*		**Sn**	**00 04 27.7**	**-1.9**
JISG	**Ishigakijimahi**	**3.25**	**216**	P		**Pn**	**00 03 55.0**	**+0.1**
JISG				*eS*		**Sn**	**00 04 32.3**	**-1.8**
JZK	**Kikaishima**	**3.33**	**70**	*eS*		**Sn**	**00 04 35.3**	**-0.6**
JIJ	**Ishigaki jima**	**3.52**	**216**	P		**Pn**	**00 03 57.7**	**-0.7**
JIJ				S		**Sn**	**00 04 37.3**	**-3.0**
SONM	**Songino Array**	**25.83**	**328**	P		**P**	**00 08 24.6**	**+3.1**
	0.2nm,0.3s,baz=144,slow=10.0,SNR=4.2							
MKAR	**Makanchi Array**	**39.65**	**311**	P		**P**	**00 10 21.7**	**+0.5**
	0.5nm,0.5s,baz=105,slow=9.8,SNR=11							
ZALV	**Zalesovo Beam**	**40.46**	**323**	P		**P**	**00 10 27.6**	**-0.1**
	0.7nm,0.4s,baz=103,slow=9.5,SNR=3.7							
WRA	**Warramunga Arr**	**47.53**	**170**	P		**P**	**00 11 23.8**	**-0.5**
	0.3nm,0.6s,baz=4.2,slow=8.5,SNR=1.8							
ASAR	**Alice Springs**	**51.13**	**171**	P		**P**	**00 11 52.5**	**+0.9**
	0.1nm,0.3s,baz=359,slow=13,SNR=5.0							
ILAR	**Eielson Array**	**64.32**	**28**	P		**P**	**00 13 22.4**	**-0.8**
	0.2nm,0.5s,baz=271,slow=5.2,SNR=1.7							
YKA	**Yellowknife Ar**	**78.29**	**25**	P		**P**	**00 14 47.0**	**-0.1**
	0.1nm,0.6s,baz=306,slow=5.4,SNR=2.8							

*IDC **22** 00:07:15.2±5.0, 58.°29N×18.°49E, h0km, mb1 3.3/3, mb1mx3.0/37, mbtmp3.2/3, ML2.3/3, Error ellipse: s-maj=68.9km s-min=15.7km az=175.0*
*UPP **22** 00:07:17.4±0.3, 58.°71N×18.°54E, h0km, ML2.7, Explosion*
*DNK **22** 00:07:17.5±1.7, 58.°70N×18.°57E, h0km, ML2.4, Explosion*
*HEL **22** 00:07:18.3±0.1, 58.°71N×18.°51E, h0km, ML2.1, ML2.7(UPP), Explosion*
*NAO **22** 00:07:21.0±2.1, 58.°97N×18.°40E, ML2.1*
*BER **22** 00:07:22.7±5.0, 59.°10N×18.°48E, h0km, ML2.1(NAO), Suspected explosion*

ISC 22 00:07:17.7±0.8, 58.°71N±0.°02×18.°48E±0.°03, h0km, n64, σ1§16/85, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.39**	**320**	P		**Pg**	**00 07 25.2**	**+0.1**
NYNU				S		**Sg**	**00 07 30.4**	**+0.3**
NYNU	**Nynaeshamn**	**0.39**	**320**	P		**Pg**	**00 07 25.2**	**+0.1**
NYNU				S		**Sg**	**00 07 30.4**	**+0.3**
NYNU	**Nynaeshamn**	**0.39**	**320**	*i* P		**Pg**	**00 07 25.2**	**+0.1**
NYNU				*i* S		**Sg**	**00 07 30.4**	**+0.3**
VIKU	**Vikbolandet**	**0.96**	**258**	P		**Pg**	**00 07 35.8**	**-0.2**
VIKU	**Vikbolandet**	**0.96**	**258**	P		**Pg**	**00 07 35.8**	**-0.2**
VIKU	**Vikbolandet**	**0.96**	**258**	*eP*		**Pg**	**00 07 35.8**	**-0.2**
NRTU	**Norrtaelje**	**0.97**	**4**	P		**Pg**	**00 07 35.5**	**-0.8**
NRTU	**Norrtaelje**	**0.97**	**4**	P		**Pg**	**00 07 35.5**	**-0.8**
NRTU	**Norrtaelje**	**0.97**	**4**	*eP*		**Pg**	**00 07 35.5**	**-0.8**
NRTU				*eS*		**Sg**	**00 07 47.8**	**-1.1**
GOTU	**Gotland**	**1.03**	**177**	*eP*		**Pg**	**00 07 36.5**	**-0.8**
GOTU				*eS*		**Sg**	**00 07 50.0**	**-0.6**
ESKU	**Eskilstuna**	**1.20**	**297**	P		**Pg**	**00 07 40.1**	**-0.6**
ESKU	**Eskilstuna**	**1.20**	**297**	P		**Pg**	**00 07 40.1**	**-0.6**
ESKU	**Eskilstuna**	**1.20**	**297**	*eP*		**Pg**	**00 07 40.1**	**-0.6**
UPP	**Uppsala**	**1.23**	**340**	P		**Pg**	**00 07 40.5**	**-0.8**
UPP				S		**Sg**	**00 07 56.7**	**-0.6**
UPP	**Uppsala**	**1.23**	**340**	*eP*		**Pg**	**00 07 40.5**	**-0.8**
UPP				*eS*		**Sg**	**00 07 56.7**	**-0.6**
FIBU	**Brunna**	**1.33**	**335**	P		**Pg**	**00 07 42.3**	**-0.9**
FIBU				S		**Sn**	**00 08 01.3**	**-0.6**
FIBU	**Brunna**	**1.33**	**335**	P		**Pg**	**00 07 42.3**	**-0.9**
FIBU				S		**Sn**	**00 08 01.3**	**-0.6**
BACU	**Backbrunna**	**1.35**	**329**	P		**Pg**	**00 07 42.7**	**-0.8**
BACU	**Backbrunna**	**1.35**	**329**	P		**Pg**	**00 07 42.7**	**-0.8**
BACU	**Backbrunna**	**1.35**	**329**	*eP*		**Pg**	**00 07 42.7**	**-0.8**
FLYU	**Flymyra**	**1.46**	**348**	P		**Pn**	**00 07 44.4**	**-0.9**
FLYU	**Flymyra**	**1.46**	**348**	P		**Pn**	**00 07 44.4**	**-0.9**
FLYU	**Flymyra**	**1.46**	**348**	*eP*		**Pn**	**00 07 44.4**	**-0.9**
VSTU	**Vaestervik**	**1.47**	**225**	P		**Pn**	**00 07 44.8**	**-0.6**
VSTU	**Vaestervik**	**1.47**	**225**	P		**Pn**	**00 07 44.8**	**-0.6**
VSTU	**Vaestervik**	**1.47**	**225**	*eP*		**Pn**	**00 07 44.8**	**-0.6**
GRAU	**Graesoe**	**1.63**	**1**	P		**Pn**	**00 07 47.3**	**-0.3**
GRAU	**Graesoe**	**1.63**	**1**	P		**Pn**	**00 07 47.3**	**-0.3**
GRAU	**Graesoe**	**1.63**	**1**	*eP*		**Pn**	**00 07 47.3**	**-0.3**
AAL	**Aland**	**1.66**

mb4.4/21, Error ellipse: s-maj=13.3km s-min=6.2km az=54.0

ISC 22 00:22:14.0±0.5, **1°.61N**±0°.06×**126°.58E**±0°.05, **h47km, n63,** σ**1s18/65, mb4.4/19, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**137**	Pn	**Pn**	**00 22 33.0**	**-0.6**
TNTI	**Ternate**	**1.14**	**137**	P	**Pn**	**00 22 33.0**	**-0.6**
TNTI				S	**Sn**	**00 22 48.8**	**+0.7**
SGSI	**Sangihe**	**2.32**	**333**	P	Pn	00 22 44.6	-5.1
LBMI	**Labuha**	**2.41**	**158**	P	**Pn**	**00 22 52.5**	**+1.5**
KMSI	**Cibinong**	**2.80**	**248**	P	**Pn**	**00 22 54.7**	**-1.5**
KMSI				S	**Sn**	**00 23 28.7**	**-0.1**
SANI	**Sanana**	**3.68**	**189**	P	**Pn**	**00 23 08.5**	**+0.1**
SANI				S	**Sn**	**00 23 50.8**	**+0.2**
GTOI	**Gorontalo**	**3.70**	**255**	P	**Pn**	**00 23 08.7**	**+0.1**
GTOI				S	**Sn**	**00 23 50.4**	**-0.6**
LUWI	**Luwuk**	**4.63**	**235**	Pn	**Pn**	**00 23 19.1**	**-2.4**
LUWI	**Luwuk**	**4.63**	**235**	P	**Pn**	**00 23 19.4**	**-2.1**
LUWI				S	**Sn**	**00 24 16.5**	**+2.5**
MRSI	**Marisa**	**4.77**	**256**	P	**Pn**	**00 23 24.0**	**+0.6**
NLAI	**Namlea**	**4.84**	**174**	P	**Pn**	**00 23 25.9**	**+1.5**
NLAI				S	**Sn**	**00 24 17.1**	**-2.1**
APSI	**Ampana**	**5.53**	**243**	P	**Pn**	**00 23 35.1**	**+1.3**
	0.3nm887nm70nm, 1.1s						
TOLI2	**Tolitoli**	**5.82**	**265**	Pn	**Pn**	**00 23 35.5**	**-2.3**
TTSI	**Tana Toraja**	**8.19**	**236**	P	**Pn**	**00 24 13.1**	**+2.8**
SPSI	**Sidrap Palu**	**8.78**	**231**	P	**Pn**	**00 24 18.0**	**-0.3**
MYLDM	**Lahad Datu**	**8.81**	**294**	Pn	**Pn**	**00 24 20.0**	**+1.2**
KAPI	**Kappang**	**9.48**	**226**	Pn	**Pn**	**00 24 28.7**	**+0.8**
	1.8nm,0.3s,baz=43,slow=6.6,SNR=5.1						
KAPI	**Kappang**	**9.48**	**226**		**Pn**	**00 24 29.0**	**+1.1**
BATI	**Baumata**	**12.09**	**194**	LR	LR	00 31 09.0	
	comp=Z,71nm,18.9s,baz=268,slow=44						
SBUM	**Sibu**	**14.38**	**274**	P	**P**	**00 25 43.2**	**+2.5**
MTN	**Manton Dam**	**15.05**	**163**	Pn	**Pn**	**00 25 43.5**	**-0.2**
MTN				IAmb	IAmb	00 25 59.6	
	comp=Z,29nm,1.2s						
KSM	**Kuching**	**16.27**	**270**	P	**Pn**	**00 25 59.0**	**-0.4**
KSM				IAmb	IAmb	00 26 10.5	
	comp=Z,6.6nm,0.5s						
KNRA	**Kununurra**	**17.31**	**173**	P	**Pn**	**00 26 12.4**	**0.0**
KNRA				IAmb	IAmb	00 26 13.1	
	comp=Z,64nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P	**P**	**00 26 37.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=22,slow=12,SNR=6.5						
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P	**P**	**00 26 37.6**	**-0.9**
WB0	**Warramunga Arr**	**22.58**	**161**	P	**P**	**00 27 09.7**	**-1.0**
WRAB	**Tennant Creek**	**22.73**	**161**	P	**P**	**00 27 12.7**	**+0.6**
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**00 27 10.8**	**-1.3**
	comp=Z,25nm,0.7s,baz=338,slow=11,SNR=88						
WRA	**Warramunga Arr**	**22.73**	**161**	P	**P**	**00 27 10.3**	**-1.9**
WB2	**Warramunga Arr**	**22.73**	**161**	P	**P**	**00 27 11.0**	**-1.2**
WR0	**Warramunga Arr**	**22.81**	**160**	P	**P**	**00 27 11.9**	**-1.1**
WR0				IAmb	IAmb	00 27 13.6	
	comp=Z,18nm,0.7s						
AS31	**Alice Springs**	**26.11**	**165**	P	**P**	**00 27 44.1**	**+0.4**
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**00 27 43.2**	**-0.6**
	comp=Z,6.1nm,0.8s,baz=350,slow=13,SNR=42						
ASAR				PcP	**PcP**	**00 31 10.3**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=5.2,slow=1.9,SNR=3.3						
NJ2	**Nanjing**	**31.15**	**347**	*eP*	P	00 28 31.9	+3.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
FORT	**Forrest**	**32.24**	**178**	P	**P**	**00 28 37.8**	**-0.2**
BBOO	**Buckleboo**	**35.39**	**166**	P	**P**	**00 29 04.9**	**-0.5**
BBOO				IAmb	IAmb	00 29 22.0	
	comp=Z,5.6nm,1.1s						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**00 29 10.8**	**-1.7**
	comp=Z,2.9nm,0.6s,baz=328,slow=8.8,SNR=6.0						
STKA	**Stephens Creek**	**36.22**	**158**	P	**P**	**00 29 12.3**	**-0.2**
ARMA	**Armidale**	**39.80**	**145**	P	**P**	**00 29 43.5**	**+0.6**
ARMA				IAmb	IAmb	00 29 51.0	
	comp=Z,14nm,1.2s						
HHC	**Hu-ho-hao-te**	**41.36**	**343**	*eP*	**P**	**00 29 57.0**	**+1.4**
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,6.3s						
SONM	**Songino Array**	**49.25**	**342**	P	**P**	**00 30 57.5**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=152,slow=9.2,SNR=4.9						
SONM	**Songino Array**	**49.25**	**342**	P	P	00 31 01.5	+3.5
TLY	**Talaya**	**53.49**	**342**	P	P	00 31 33.5	+4.0
WMQ	**Urumqi**	**54.38**	**326**	*eP*	**P**	**00 31 36.8**	**+0.5**
WMQ				pP	pwP	00 31 50.8	+1.9
WMQ				sP	sP	00 32 00.3	+6.1
WMQ				PcP	PcP	00 32 46.5	+6.8
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,99nm,3.6s						
WMQ				LR	LR		
	comp=N,1μm,29.0s						
WMQ				LR	LR		
	comp=E,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,190nm,29.0s						
MK31	**Makanchi Array**	**59.21**	**326**	P	**P**	**00 32 09.3**	**-1.2**
MK31				IAmb	IAmb	00 32 13.0	
	comp=Z,1.4nm,0.5s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**00 32 09.0**	**-1.4**
	comp=Z,1.9nm,0.4s,baz=121,slow=8.0,SNR=35						
MKAR				LR	LR	00 58 12.7	
	comp=Z,18nm,21.5s,baz=83,slow=37						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**00 32 09.1**	**-1.3**
MAKZ	**Makanchi**	**59.40**	**326**	P	**P**	**00 32 11.0**	**-0.7**
MAKZ				IAmb	IAmb	00 32 14.2	
	comp=Z,2.2nm,0.5s						
ZALV	**Zalesovo Beam**	**62.40**	**334**	P	**P**	**00 32 30.8**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=148,slow=8.5,SNR=3.1						
ZALV	**Zalesovo Beam**	**62.40**	**334**	P	**P**	**00 32 30.7**	**-1.3**
NRIK	**Noril'sk**	**72.44**	**346**	P	**P**	**00 33 34.8**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=138,slow=5.1,SNR=5.2						
NRIK	**Noril'sk**	**72.44**	**346**	P	**P**	**00 33 35.0**	**-0.1**
NRIK				IAmb	IAmb	00 33 38.2	
	comp=Z,5.3nm,1.2s						
SOCY	**Socotra**	**72.65**	**282**	P	**P**	**00 33 35.7**	**-1.8**
SOCY				IAmb	IAmb	00 33 55.1	
	comp=Z,4.4nm,1.0s						
ABKAR	**Akbulak array**	**73.69**	**321**	P	**P**	**00 33 43.0**	**+0.1**
VNDA	**Vanda**	**81.36**	**173**	P	**P**	**00 34 25.1**	**0.0**
	comp=Z,1.6nm,0.4s,baz=316,slow=8.1,SNR=21						
VNDA	**Vanda**	**81.36**	**173**		**P**	**00 34 25.5**	**+0.4**
TTA	**Tatalina**	**82.85**	**27**	P	**P**	**00 34 34.3**	**+1.0**
TTA				IAmb	IAmb	00 34 37.5	
	comp=Z,3.9nm,1.2s						
FINES	**FINESS Array B**	**93.62**	**332**	P	**P**	**00 35 26.5**	**+1.4**
	comp=Z,1.5nm,0.9s,baz=42,slow=4.3,SNR=3.3						
TXAR	**Lajitas Array**	**122.99**	**53**	PKP	**PKiKP**	**00 41 06.0**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=77,slow=2.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**123.41**	**287**	PKP	**PKiKP**	**00 41 07.3**	**0.0**
	comp=Z,0.3nm,0.8s,baz=124,slow=1.8,SNR=2.4						
S39A	**Bolivar**	**126.25**	**39**	PKPdf	**PKiKP**	**00 41 12.0**	**-0.4**
LRAL	**Lakeview Retre**	**133.19**	**40**	PKPdf	**PKiKP**	**00 41 25.9**	**-0.5**
TKL	**Tuckaleechee C**	**133.34**	**34**	PKPdf	**PKiKP**	**00 41 26.3**	**-0.4**

*UPP **22** 00:23:28.8±0.2, 58°.70N×18°.56E, h0km, ML2.5, Explosion*
*DNK **22** 00:23:29.3±1.7, 58°.70N×18°.54E, h0km, ML2.2, Explosion*
*HEL **22** 00:23:29.7±0.0, 58°.71N×18°.54E, h0km, ML2.1, ML2.5(UPP), Explosion*
*IDC **22** 00:23:34.2±3.0, 59°.04N×18°.49E, h0km, mb1 3.5/2, mb1mx3.0/46, mbtmp3.4/2, ML1.8/3, Error ellipse: s-maj=37.1km s-min=10.5km az=1.0*

ISC 22 00:23:28.9±0.8, **58°.73N**±0°.03×**18°.46E**±0°.03, **h0km, n65,** σ**0s91/78, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.36**	**320**	P	**Pb**	**00 23 36.8**	**-1.4**
NYNU				S	**Sg**	**00 23 41.9**	**+1.4**
NYNU	**Nynaeshamn**	**0.36**	**320**	P	**Pb**	**00 23 36.8**	**-1.4**
NYNU				S	**Sg**	**00 23 41.9**	**+1.4**
NYNU	**Nynaeshamn**	**0.36**	**320**	*i* P	**Pb**	**00 23 36.8**	**-1.4**
NYNU				*i* S	**Sg**	**00 23 41.9**	**+1.4**
VIKU	**Vikbolandet**	**0.95**	**257**	P	**Pb**	**00 23 47.4**	**-0.8**
VIKU	**Vikbolandet**	**0.95**	**257**	P	**Pb**	**00 23 47.4**	**-0.8**
VIKU	**Vikbolandet**	**0.95**	**257**	*eP*	**Pb**	**00 23 47.4**	**-0.8**
NRTU	**Norrtaelje**	**0.96**	**5**	P	**Pg**	**00 23 47.1**	**-0.1**
NRTU	**Norrtaelje**	**0.96**	**5**	P	**Pg**	**00 23 47.1**	**-0.1**
NRTU	**Norrtaelje**	**0.96**	**5**	*eP*	**Pg**	**00 23 47.1**	**-0.1**
NRTU				*eS*	**Sg**	**00 23 59.0**	**-0.6**
ESKU	**Eskilstuna**	**1.18**	**296**	P	**Pb**	**00 23 51.7**	**-0.5**
ESKU	**Eskilstuna**	**1.18**	**296**	P	**Pb**	**00 23 51.7**	**-0.5**
ESKU	**Eskilstuna**	**1.18**	**296**	*eP*	**Pb**	**00 23 51.7**	**-0.5**
UPP	**Uppsala**	**1.21**	**340**	*eP*	**Pg**	**00 23 52.0**	**-0.2**
UPP	**Uppsala**	**1.21**	**340**	P	**Pb**	**00 23 52.2**	**-0.5**
UPP	**Uppsala**	**1.21**	**340**	*eP*	**Pb**	**00 23 52.2**	**-0.5**
FIBU	**Brunna**	**1.30**	**335**	P	**Pb**	**00 23 53.9**	**-0.5**
FIBU	**Brunna**	**1.30**	**335**	P	**Pb**	**00 23 53.9**	**-0.5**
FIBU	**Brunna**	**1.30**	**335**	*eP*	**Pb**	**00 23 53.9**	**-0.5**
BACU	**Backbrunna**	**1.32**	**329**	P	**Pb**	**00 23 54.2**	**-0.4**
BACU	**Backbrunna**	**1.32**	**329**	P	**Pb**	**00 23 54.2**	**-0.4**
BACU	**Backbrunna**	**1.32**	**329**	*eP*	**Pb**	**00 23 54.2**	**-0.4**
FLYU	**Flymyra**	**1.43**	**349**	P	**Pn**	**00 23 55.9**	**-0.3**
FLYU	**Flymyra**	**1.43**	**349**	P	**Pn**	**00 23 55.9**	**-0.3**
FLYU	**Flymyra**	**1.43**	**349**	*eP*	**Pn**	**00 23 55.9**	**-0.3**
VSTU	**Vaestervik**	**1.48**	**224**	P	**Pn**	**00 23 56.4**	**-0.3**
VSTU	**Vaestervik**	**1.48**	**224**	P	**Pn**	**00 23 56.4**	**-0.3**
VSTU	**Vaestervik**	**1.48**	**224**	*eP*	**Pn**	**00 23 56.4**	**-0.3**
GRAU	**Graesoe**	**1.61**	**2**	P	**Pn**	**00 23 58.8**	**+0.2**
GRAU	**Graesoe**	**1.61**	**2**	P	**Pn**	**00 23 58.8**	**+0.2**
GRAU	**Graesoe**	**1.61**	**2**	*eP*	**Pn**	**00 23 58.8**	**+0.2**
LNKU	**Linkoeping**	**1.63**	**253**	P	**Pb**	**00 23 59.4**	**-0.5**
LNKU	**Linkoeping**	**1.63**	**253**	P	**Pb**	**00 23 59.4**	**-0.5**
LNKU	**Linkoeping**	**1.63**	**253**	*eP*	**Pb**	**00 23 59.4**	**-0.5**
BYXU	**Byxelkrok**	**1.64**	**209**	P	**Pn**	**00 23 58.9**	**0.0**
BYXU	**Byxelkrok**	**1.64**	**209**	P	**Pn**	**00 23 58.9**	**0.0**
BYXU	**Byxelkrok**	**1.64**	**209**	*eP*	**Pn**	**00 23 58.9**	**0.0**
OSTU	**Oestervaala**	**1.65**	**336**	P	**Pb**	**00 23 59.8**	**-0.4**
OSTU	**Oestervaala**	**1.65**	**336**	P	**Pb**	**00 23 59.8**	**-0.4**
OSTU	**Oestervaala**	**1.65**	**336**	*eP*	**Pb**	**00 23 59.8**	**-0.4**
AAL	**Aland**	**1.65**	**28**	*eP*	**Pn**	**00 23 58.8**	**-0.3**
AAL				*eS*	**Sn**	**00 24 20.1**	**-1.0**
AAL				IAML		00 24 24.5	
	comp=Z,4μm,0.1s						
AAL	**Aland**	**1.65**	**28**	P	**Pn**	**00 23 58.9**	**-0.3**
AAL	**Aland**	**1.65**	**28**	*eP*	**Pn**	**00 23 59.0**	**-0.3**
AAL				*eS*	**Sn**	**00 24 20.0**	**-1.0**
SLIT	**Slitere, Latvi**	**2.31**	**117**	*eP*	**Pn**	**00 24 08.6**	**+0.4**
SLIT	**Slitere, Latvi**	**2.31**	**117**	*eP*	**Pn**	**00 24 07.5**	**-0.7**
SLIT				*eSB*	**Sn**	**00 24 37.8**	**+0.5**
MTSE	**Matsula**	**2.80**	**88**	*eP*	**Pn**	**00 24 15.1**	**+0.2**
MTSE				*eS*	**Sn**	**00 24 49.2**	**0.0**
HFC2	**Hagfors New Ar**	**2.81**	**302**	*eP*	**Pn**	**00 24 16.7**	**+1.6**
HFC2				*eSB*	**Sb**	**00 24 55.7**	**+0.8**
BLEU	**Blekinge**	**2.82**	**211**	*i* P	**Pn**	**00 24 15.8**	**+0.6**
RAF	**Rauma**	**2.84**	**35**	*eP*	**Pn**	**00 24 16.9**	**+1.4**
RAF				*ePB*	**Pb**	**00 24 18.5**	**-2.0**
RAF				MPN		00 24 18.8	
	comp=Z,1.7nm,0.1s						
RAF				*eSG*	**Sb**	**00 24 55.6**	**-0.2**
RAF				MSG		00 24 58.5	
	comp=Z,2.9nm,0.1s						
ARNU	**Arnoeviken**	**3.02**	**350**	*eP*	**Pn**	**00 24 18.0**	**0.0**
ARNU				*eS*	**Sn**	**00 24 54.3**	**-0.5**
BORU	**Boraas**	**3.20**	**252**	*i* P	**Pn**	**00 24 22.7**	**+2.2**
PBUR	**Paburge**	**3.30**	**144**	*eP*	**Pn**	**00 24 23.1**	**+1.3**
DEL	**Delary**	**3.35**	**229**	*e*	**Pn**	**00 24 22.0**	**-0.5**
	baz=33,slow=11						
DEL				*i* P	Pb	00 24 23.1	-6.0
DEL				IAML		00 25 20.5	
	comp=Z,2.1nm,0.4s						
MEF	**Metsahovi**	**3.38**	**61**	*eP*	**Pn**	**00 24 23.1**	**+0.2**
MEF				MPN		00 24 27.4	
	comp=Z,0.6nm,0.1s						
MEF				MSG		00 25 15.1	
	comp=Z,5.2nm,0.2s						
NUR	**Nurmijrvi**	**3.62**	**58**	*eSG*	**Sb**	**00 25 19.8**	**+1.7**
STRU	**Stroemstad**	**3.79**	**278**	*i* P	**Pn**	**00 24 30.6**	**+2.1**
BSD	**Bornholm Skovb**	**4.11**	**210**	*i* P	**Pn**	**00 24 32.4**	**-0.5**
BSD				*i*		00 24 41.8	
BSD				*i* S	**Sn**	**00 25 20.8**	**-0.8**
BSD				IAML		00 25 43.2	
	comp=Z,3.1nm,0.4s						
BSD	**Bornholm Skovb**	**4.11**	**210**	*eP*	**Pn**	**00 24 32.4**	**-0.5**
BSD				*eS*	**Sn**	**00 25 20.4**	**-1.2**
LUNU	**Lund**	**4.13**	**223**	*i* P	**Pn**	**00 24 33.0**	**-0.2**
PVF	**Pernaja**	**4.18**	**61**	MSG		00 25 42.3	
	comp=Z,4.4nm,0.3s						
NOA	**NORSAR Array B**	**4.32**	**306**	Pn	**Pn**	**00 24 37.4**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=97,slow=18,SNR=1.3						
NOA				Lg	Lg	00 25 43.9	
	comp=Z,0.1nm,0.3s,baz=145,slow=23,SNR=12						
PABE	**Paberze**	**4.41**	**135**	*eP*	**Pn**	**00 24 38.4**	**+1.4**
FINES	**FINESS Array B**	**4.69**	**51**	Pn	**Pn**	**00 24 42.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=245,slow=13,SNR=10						
FINES				Pg	**Pb**	**00 24 53.2**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=246,slow=13,SNR=6.5						
FINES				Lg	Lg	00 25 53.0	
	comp=Z,1.0nm,0.3s,baz=237,slow=28,SNR=13						
ISAL	**Salakas**	**5.24**	**124**	IAML		00 24 42.7	
	comp=Z,1.8nm,0.5s						
IIGN	**Ignalina**	**5.43**	**125**	*eP*	**Pn**	**00 24 51.0**	**0.0**
ARCES	**ARCESS Array B**	**11.27**	**13**	Pn	**Pn**	**00 26 08.4**	**-2.5**
	baz=195,slow=13,SNR=6.8						

*ANF **22** 00:24:15.8±0.1, 61°.90N×149°.43W, h37km±4km, ML3.6/40, Error ellipse: s-maj=1.2km s-min=1.1km az=80.0, Hypocentre not reviewed by the ISC*
*NEIC **22** 00:24:16.1±1.3, 61°.91N±0°.02×149°.43W±0°.04, h40km±7km, Error ellipse: s-maj=3.6km s-min=2.6km az=195.0*

AEIC 22 00:24:16±1.2, **61°.89N**±0°.02×**149°.43W**±0°.06, **h38**km±7**km, ML3.3, ML3.5**/125(NEIC), **Error ellipse: s-maj=3.8km s-min=3.2km az=89.0, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GHO	**Glory Hole Cre**	**0.27**	**117**		Pn	00 24 23.9	-0.5
GHO					Sn	00 24 30.8	-1.0
PMR	**Palmer**	**0.33**	**155**		Pn	00 24 24.0	-0.3
PMR	**Palmer**	**0.33**	**155**		Sn	00 24 31.0	-0.1
PMR				IAML		00 24 31.4	
	comp=E,4μm,0.3s						
PMR				IAML		00 24 31.5	
	comp=N,3μm,0.3s						
PMR	**Palmer**	**0.33**	**155**	P		00 24 23.9	
	baz=335,SNR=129						
PMR				S		00 24 31.0	
	baz=335						
SML	**Sawmill**	**0.53**	**99**		Pn	00 24 26.5	-0.6
SML					Sn	00 24 35.1	+0.3
SML				IAML		00 24 35.8	
	comp=E,2μm,0.6s						
SML				IAML		00 24 35.9	
	comp=N,3μm,0.6s						
SML	**Sawmill**	**0.53**	**99**	P		00 24 26.5	
	baz=280,SNR=366						
SML				S		00 24 35.3	
	baz=280						
CUT	**Chulitna**	**0.65**	**323**		Pn	00 24 28.1	-0.6
CUT					Sn	00 24 38.1	+0.4
CUT				IAML		00 24 38.5	
	comp=E,4μm,0.2s						
CUT				IAML		00 24 38.5	
	comp=N,3μm,0.2s						
CUT	**Chulitna**	**0.65**	**323**	P		00 24 28.2	
	baz=142,SNR=593						
CUT				S		00 24 38.1	
	baz=142						
KNK	**Knik Glacier**	**0.67**	**136**		Pn	00 24 28.4	-0.6
KNK				IAML		00 24 40.7	
	comp=N,3μm,0.4s						
KNK	**Knik Glacier**	**0.67**	**136**	P		00 24 28.5	
	baz=317						
KNK				S		00 24 38.4	
	baz=317						
SUA	**Susitna One**	**0.76**	**236**		Pn	00 24 29.9	-0.5
SUA					Sn	00 24 41.2	+0.5
SUA	**Susitna One**	**0.76**	**236**	P		00 24 29.8	
	baz=55,SNR=41						
SUA				S		00 24 41.3	
	baz=55						
RC01	**Rabbit Creek A**	**0.82**	**191**		Pn	00 24 30.6	-0.4
RC01					Sn	00 24 42.5	+0.6
RC01				IAML		00 24 45.3	
	comp=E,2μm,0.2s						
RC01	**Rabbit Creek A**	**0.82**	**191**	P		00 24 30.5	
	baz=10,SNR=181						
RC01				S		00 24 42.6	
	baz=10						
FIS	**Fire Island**	**0.84**	**207**	Pn	Pn	00 24 31.6	+0.3
FIS				IAML		00 24 45.6	
	comp=E,2μm,0.7s						
FIS				IAML		00 24 46.2	
	comp=N,2μm,0.7s						
WAT7	**Susitna Watana**	**0.98**	**16**		Pn	00 24 32.7	-0.6
SCM	**Sheep Creek Mo**	**1.00**	**93**		Pn	00 24 33.2	-0.2
SCM				IAML		00 24 49.0	
	comp=N,2μm,0.5s						
SKT	**Skwentna**	**1.00**	**276**		Pn	00 24 32.8	-0.7
SKT				IAML		00 24 47.0	
	comp=E,1μm,0.2s						
SKT	**Skwentna**	**1.00**	**276**	P		00 24 32.8	
	baz=94,SNR=100						
SKT				S		00 24 46.3	
	baz=94						
WAT1	**Susitna Watana**	**1.02**	**23**		Pn	00 24 33.3	-0.5
WAT6	**Susitna Watana**	**1.05**	**48**		Pn	00 24 33.7	-0.6
WAT6					Sn	00 24 47.4	-0.3
WAT6	**Susitna Watana**	**1.05**	**48**	P		00 24 33.7	
	baz=230,SNR=99						
WAT6				S		00 24 47.3	
	baz=230						
HUR	**Hurricane**	**1.09**	**355**		Pn	00 24 34.8	0.0
WAT2	**Susitna Watana**	**1.14**	**20**		Pn	00 24 35.1	-0.4
WAT2					Sn	00 24 50.4	+0.5
WAT2	**Susitna Watana**	**1.14**	**20**	P		00 24 35.1	
	baz=200						
WAT2				S		00 24 50.2	
	baz=200						
PWL	**Port Wells**	**1.16**	**153**		Pn	00 24 35.4	-0.3
PWL				IAML		00 24 53.7	
	comp=N,1μm,0.7s						
PWL				IAML		00 24 55.2	
	comp=E,1μm,0.6s						
STLK	**Strandline Lak**	**1.21**	**252**		Pn	00 24 36.4	0.0
CAPN	**Captain Cook N**	**1.40**	**217**		Pn	00 24 40.8	+1.9
CAPN				IAML		00 25 02.6	
	comp=E,1μm,0.4s						
O22K	**Cooper Landing**	**1.43**	**186**		Pn	00 24 39.1	-0.2
O22K	**Cooper Landing**	**1.43**	**186**	P		00 24 38.9	
	baz=5.7,SNR=12						
SLKM	**Skilak Lake**	**1.44**	**196**		Pn	00 24 39.4	-0.2
SLKM					Sn	00 24 58.1	+0.8
SPCP	**Crater Peak Br**	**1.45**	**245**		Pn	00 24 40.0	+0.3
SPCN	**Chakachatna No**	**1.48**	**244**		Pn	00 24 40.6	+0.7
SPCR	**Spurr Chakacha**	**1.50**	**244**		Pn	00 24 40.6	+0.2
SPCR	**Spurr Chakacha**	**1.50**	**244**	P		00 24 40.5	
	baz=61,SNR=63						
GLI	**Glacier Island**	**1.52**	**131**		Pn	00 24 40.6	+0.1
GLI	**Glacier Island**	**1.52**	**131**	P		00 24 40.7	
	baz=313,SNR=56						
RND	**Reindeer**	**1.54**	**10**		Pn	00 24 41.0	0.0
M24K	**Tolsona, Glenn**	**1.55**	**81**		Pn	00 24 42.0	+1.0
M24K	**Tolsona, Glenn**	**1.55**	**81**	P		00 24 42.0	
	baz=264,SNR=115						
JPK	**Jack Peak**	**1.60**	**121**		Pn	00 24 42.0	+0.3
TRF	**Thorofare Moun**	**1.61**	**346**		Pn	00 24 42.0	0.0
TRF				IAML		00 25 04.9	
	comp=N,528nm,0.5s						
TRF				IAML		00 25 05.3	
	comp=E,334nm,0.5s						
TRF	**Thorofare Moun**	**1.61**	**346**	P		00 24 42.1	
	baz=165,SNR=70						
PPLA	**Purkeypile**	**1.63**	**309**		Pn	00 24 42.5	+0.2
PPLA	**Purkeypile**	**1.63**	**309**	P		00 24 42.3	
	baz=127,SNR=40						
VMT	**TAPS TI Valdez**	**1.68**	**118**		Pn	00 24 43.0	+0.3
KLU	**Klutina**	**1.72**	**102**		Pn	00 24 43.6	+0.2
KLU				IAML		00 25 10.2	
	comp=E,603nm,0.4s						
KLU	**Klutina**	**1.72**	**102**	P		00 24 43.5	
	baz=285,SNR=107						
KTH	**Kantishna Hill**	**1.80**	**338**		Pn	00 24 44.8	+0.3
KTH				IAML		00 25 08.8	
	comp=N,479nm,0.7s						
KTH				IAML		00 25 09.7	
	comp=E,561nm,0.5s						
FID	**Port Fidalgo**	**1.83**	**128**		Pn	00 24 44.7	-0.1
MCK	**McKinley**	**1.86**	**7**		Pn	00 24 45.8	+0.5
MCK	**McKinley**	**1.86**	**7**	P		00 24 45.7	
	baz=187,SNR=39						
PS11	**TAPS Pump St11**	**1.88**	**83**		Pn	00 24 46.4	+0.9
DIV	**Divide**	**1.91**	**112**		Pn	00 24 45.9	-0.2
PAX	**Paxson**	**2.13**	**58**	Pn	Pn	00 24 50.5	+1.4
PAX	**Paxson**	**2.13**	**58**	P		00 24 49.6	
	baz=241,SNR=45						
NCT	**North Crescent**	**2.16**	**233**		Pn	00 24 49.7	+0.2
RSO	**Redoubt South**	**2.16**	**230**	Pn	Pn	00 24 50.0	+0.4
RED	**Redoubt Volcan**	**2.20**	**229**		Pn	00 24 50.2	+0.2
EYAK	**Cordova Ski Ar**	**2.23**	**126**		Pn	00 24 50.2	-0.1
EYAK	**Cordova Ski Ar**	**2.23**	**126**	P		00 24 50.1	
	baz=309				

COLA					S			00 25 37.4	
	baz=194								
MCARA	**McCarthy VSAT**	**3.10**	**97**			Pn		00 25 02.3	+0.1
MCARA	**McCarthy VSAT**	**3.10**	**97**		P			00 25 02.5	
	baz=282								
IL31		**3.11**	**20**		Pn	Pn		00 25 02.5	+0.2
ILAR	**Eielson Array**	**3.11**	**20**			Pn		00 25 02.7	+0.3
MDM	**Murphy Dome**	**3.12**	**9**		Pn	Pn		00 25 02.9	+0.3
KAIM	**Kayak Island**	**3.14**	**127**		Pn	Pn		00 25 02.8	-0.1
KAIM					IAML			00 25 47.7	
	comp=N,137nm,1.5s								
KAIM					IAML			00 27 05.5	
	comp=E,119nm,1.7s								
KAIM	**Kayak Island**	**3.14**	**127**		P			00 25 02.3	
	baz=311								
BERG	**Berg Lake**	**3.16**	**116**		Pn	Pn		00 25 04.0	+1.0
MLY	**Manley**	**3.20**	**350**			Pn		00 25 03.9	+0.1
MLY	**Manley**	**3.20**	**350**		P			00 25 03.7	
	baz=169,SNR=38								
TT01	**Tatalina**	**3.23**	**291**			Pn		00 25 03.6	-0.5
TTA	**Tatalina**	**3.24**	**292**			Pn		00 25 04.0	-0.3
TTA					IAML			00 25 55.9	
	comp=N,82nm,0.7s								
TTA					IAML			00 25 57.1	
	comp=E,100nm,0.6s								
TTA	**Tatalina**	**3.24**	**292**		P			00 25 03.7	
	baz=106,SNR=25								
CRQM	**Cirque**	**3.24**	**108**		Pn	Pn		00 25 05.0	+0.7
SCRK	**Sand Creek**	**3.25**	**48**			Pn		00 25 04.6	+0.2
SCRK					IAML			00 25 57.9	
	comp=N,76nm,0.7s								
SCRK	**Sand Creek**	**3.25**	**48**		P			00 25 04.3	
	baz=232,SNR=15								
I23K	**Minto, Yukon-K**	**3.27**	**0**			Pn		00 25 05.0	+0.4
I23K					IAML			00 25 44.1	
	comp=N,71nm,0.8s								
I23K	**Minto, Yukon-K**	**3.27**	**0**		P			00 25 04.8	
	baz=180,SNR=62								
SUCK	**Suckling Hills**	**3.30**	**121**		Pn	Pn		00 25 05.1	0.0
SUCK					IAML			00 25 57.3	
	comp=N,187nm,0.5s								
SUCK					IAML			00 25 58.4	
	comp=E,88nm,1.1s								
KHIT	**Khitrov Hills**	**3.33**	**113**			Pn		00 25 05.2	-0.2
POKR	**Poker Plat Res**	**3.36**	**15**			Pn		00 25 06.2	+0.4
POKR	**Poker Plat Res**	**3.36**	**15**		P			00 25 06.1	
	baz=196								
PTPK	**Patty Peak**	**3.41**	**99**			Pn		00 25 07.0	+0.3
PS07	**TAPS Pump Stn7**	**3.47**	**8**			Pn		00 25 08.0	+0.7
BALM	**Baldy**	**3.50**	**101**			Pn		00 25 07.6	-0.3
L27K	**Beaver Creek,**	**3.72**	**68**		Pn	Pn		00 25 12.1	+1.3
L27K					IAML			00 26 10.4	
	comp=N,50nm,1.2s								
L27K	**Beaver Creek,**	**3.72**	**68**		P			00 25 11.1	
	baz=255								
BC03		**3.74**	**68**			Pn		00 25 11.8	+0.8
BCAR	**Beaver Creek A**	**3.74**	**68**		Pn	Pn		00 25 11.8	+0.7
BARN	**Barnard Glacie**	**3.82**	**99**			Pn		00 25 12.7	+0.4
BARN					IAML			00 26 17.0	
	comp=N,66nm,0.6s								
BARN					IAML			00 26 18.9	
	comp=E,72nm,0.6s								
GRNC	**Granite Creek**	**3.88**	**104**			Pn		00 25 13.2	0.0
GRNC					IAML			00 26 21.4	
	comp=N,94nm,0.7s								
K27K	**Chicken**	**3.98**	**54**		Pn	Pn		00 25 14.8	+0.4
K27K	**Chicken**	**3.98**	**54**		P			00 25 14.5	
	baz=241								
CTG	**Chitna Glacier**	**3.99**	**100**		P			00 25 14.7	
	baz=287								
CTGM	**Chitina Glacie**	**4.00**	**100**		Pn	Pn		00 25 15.1	+0.3
CTGM					IAML			00 26 17.7	
	comp=N,61nm,0.8s								
YAH	**Yahtse**	**4.03**	**109**		Pn	Pn		00 25 15.6	+0.3
YAH					IAML			00 26 17.9	
	comp=E,83nm,1.1s								
YAH					IAML			00 26 23.2	
	comp=N,82nm,0.8s								
PRP	**Porcupine Dome**	**4.03**	**24**		Pn	Pn		00 25 16.0	+0.9
PRP					IAML			00 26 09.0	
	comp=E,68nm,0.8s								
PRP					IAML			00 26 28.5	
	comp=N,51nm,0.7s								
BVCY	**Beaver Creek**	**4.05**	**79**			Pn		00 25 16.4	+1.0
YUK2	**White River**	**4.07**	**88**			Pn		00 25 16.0	+0.3
LOGN	**Logan Glacier**	**4.19**	**101**			Pn		00 25 17.4	-0.1
LOGN	**Logan Glacier**	**4.19**	**101**		IAML			00 26 24.8	
	comp=N,39nm,0.5s								
LOGN					IAML			00 26 33.0	
	comp=E,53nm,1.1s								
YUK3	**Moose Creek**	**4.25**	**88**			Pn		00 25 18.7	+0.4
TABL	**Table Mountain**	**4.27**	**106**		Pn	Pn		00 25 18.6	+0.1
TABL					IAML			00 26 28.9	
	comp=E,33nm,1.0s								
TABL					IAML			00 26 30.2	
	comp=N,43nm,1.0s								
KDAK	**Kodiak Island**	**4.42**	**203**		Pn	Pn		00 25 19.1	-1.3
IM03		**4.53**	**337**			Pn		00 25 21.9	+0.1
IMAR	**Indian Mountai**	**4.53**	**337**			Pn		00 25 22.2	+0.4
EGAK	**Eagle**	**4.71**	**49**		Pn	Pn		00 25 24.9	+0.5
EGAK					IAML			00 26 45.0	
	comp=N,40nm,0.7s								
EGAK					IAML			00 26 52.5	
	comp=N,48nm,0.8s								
EGAK	**Eagle**	**4.71**	**49**		P			00 25 24.5	
	baz=236								
PCA	**Pinnacle**	**4.81**	**108**		Pn	Pn		00 25 26.8	+0.9
PINM	**Pinnacle**	**4.82**	**108**		P			00 25 26.0	
	baz=296								
DAWY	**Dawson**	**5.07**	**60**		Pn	Pn		00 25 31.1	+1.7
DAWY					IAML			00 27 00.4	
	comp=E,21nm,1.0s								
OHAK	**Old Harbor**	**5.08**	**204**		Pn	Pn		00 25 28.9	-0.6
BCPM	**Bancas Point**	**5.16**	**108**		Pn	Pn		00 25 30.9	+0.3
BCPM					IAML			00 29 02.7	
	comp=N,49nm,1.0s								
COLD	**Coldfoot**	**5.37**	**357**		Pn	Pn		00 25 33.9	+0.5
COLD	**Coldfoot**	**5.37**	**357**		P			00 25 33.6	
	baz=176								
HYT	**Haines Junctio**	**5.83**	**95**		Pn	Pn		00 25 40.7	+0.8
BMAR	**Burnt Mountain**	**5.93**	**18**			Pn		00 25 41.2	+0.1
TOLK	**Toolik Lake Re**	**6.78**	**360**		Pn	Pn		00 25 51.7	-1.0
TOLK	**Toolik Lake Re**	**6.78**	**360**		P			00 25 51.7	
	baz=179								
EPYK	**Eagle Plains**	**7.14**	**46**		Pn	Pn		00 26 00.7	+3.0
ANM	**Nome**	**7.68**	**297**		Pn	Pn		00 26 05.9	+0.8
ANM	**Nome**	**7.68**	**297**		P			00 26 05.6	
	baz=103								
BESE	**Bessie Mountai**	**7.97**	**108**		Pn	Pn		00 26 08.8	-0.3
JIS	**Juneau Island**	**8.34**	**109**		Pn	Pn		00 26 14.4	+0.3
TNA	**Tin City**	**8.97**	**302**		Pn	Pn		00 26 23.4	+0.6
DLBC	**Dease Lake**	**10.25**	**101**		Pn	Pn		00 26 40.0	-0.5

*SKHL **22** 00:32:13.7±0.2, 43.50N×146.30E, h33km±1km, mb3.5/3*
*JMA **22** 00:32:13.4±0.2, 43.54N×146.01E, h73km±2km, M2.8*

ISC 22 00:32:12.8±3.4, **43.56N**±0.07×**146.1E**±0.1, **h69**km±17km, **n12**, σ0**s59**/21, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.33**	**234**	P	**Pn**	**00 32 24.7**	**+0.7**
NEM2				*e*S	**Sn**	**00 32 32.7**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.34**	**236**	*i* P	**Pn**	**00 32 23.2**	**-0.9**
GLVR	**Golovnino**	**0.46**	**293**	*i* P	**Pn**	**00 32 25.7**	**+0.6**
GLVR				AMB	AMB	00 32 25.8	
	10.0nm,0.2s						
GLVR				*i* S	**Sn**	**00 32 34.5**	**+0.3**
GLVR				A	A	00 32 35.0	
	700nm,0.3s						
GLVR				A	A	00 32 35.0	
	960nm,0.3s						
GRPR	**Tuman**	**0.50**	**331**	*i* P	**Pn**	**00 32 25.5**	**0.0**
GRPR				AMB	AMB	00 32 26.0	
	20nm,0.2s						
GRPR				*i* S	**Sn**	**00 32 34.4**	**-0.4**
GRPR				A	A	00 32 35.0	
	700nm,0.2s						
GRPR				A	A	00 32 35.0	
	210nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.51**	**339**	*i* P	**Pn**	**00 32 25.5**	**0.0**
YUK				AMB	AMB	00 32 26.0	
	20nm,0.1s						
YUK				*e*S	**Sn**	**00 32 34.4**	**-0.5**
YUK				A	A	00 32 35.0	
	560nm,0.2s						
YUK				A	A	00 32 35.0	
	780nm,0.2s						
JRA	**Rausu**	**0.81**	**298**	P	**Pn**	**00 32 29.1**	**+0.3**
JRA				*e*S	**Sn**	**00 32 41.0**	**+0.3**
JNSB	**Nemuroshibetsu**	**0.83**	**285**	P	**Pn**	**00 32 29.4**	**+0.3**
JNSB				*e*S	**Sn**	**00 32 41.4**	**+0.2**
JKHN	**Kushirohamanak**	**0.84**	**236**	P	**Pn**	**00 32 29.5**	**+0.3**
JNK	**Nakash**	**1.01**	**272**	P	**Pn**	**00 32 31.0**	**-0.3**
JNK				*e*S	**Sn**	**00 32 43.6**	**-1.5**
JAK	**Akkeshi**	**1.18**	**242**	P	**Pn**	**00 32 33.3**	**-0.1**
JAK				*e*S	**Sn**	**00 32 48.4**	**-0.5**
JTKR	**Abashiri--Toko**	**1.65**	**285**	P	**Pn**	**00 32 39.9**	**+0.3**
JOB	**Onbets**	**1.79**	**249**	P	**Pn**	**00 32 42.2**	**+0.7**
JOB				*e*S	**Sn**	**00 33 03.1**	**-0.2**

*IDC **22** 00:35:21.7±1.4, 52.15N×172.84W, h0km, mb3.7/4,*
mb1 4.1/7, mb1mx3.6/45, mbtmp3.9/7, ML3.9/3, MS3.3/2,
Ms1 3.3/2, ms1mx2.4/70, Error ellipse: s-maj=49.4km
s-min=22.2km az=149.0
*AEIC **22** 00:35:32±4.3, 52.0N±0.1×172.74W±0.08, h76km±5km,*
Error ellipse: s-maj=19.3km s-min=6.0km az=170.0
*NEIC **22** 00:35:32.5±2.1, 52.1N±0.1×172.81W±0.06, h92km±8km,*
mb3.9/36, ML3.3/28(AEIC), Error ellipse: s-maj=20.5km
s-min=1.7km az=166.0

ISC 22 00:35:32.5±0.9, **52.1N**±0.1×**172.79W**±0.05, **h100**km, **n83**, σ1**s49**/78, **mb3.7/5**, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.83**	**284**		**Pn**	**00 35 50.7**	**-0.5**
ATKA	**Atka Island**	**0.88**	**279**		**Pn**	**00 35 50.5**	**-1.0**
ATKA	**Atka Island**	**0.88**	**279**		**Sn**	**00 36 04.0**	**-1.9**
KOWE	**Korovin West**	**0.95**	**288**		**Pn**	**00 35 52.1**	**-0.3**
GSMY	**Great Sitkin M**	**2.02**	**270**		**Pn**	**00 36 05.3**	**0.0**
GSTR	**Great Sitkin T**	**2.02**	**272**		**Pn**	**00 36 05.7**	**+0.4**
GSTD	**Great Sitkin T**	**2.07**	**271**		**Pn**	**00 36 06.1**	**0.0**
GSTD					**Sn**	**00 36 30.8**	**-0.9**
ADAG	**Mount Adagdak**	**2.36**	**269**		**Pn**	**00 36 10.5**	**+0.8**
ADK	**Adak**	**2.42**	**267**		**Pn**	**00 36 10.5**	**0.0**
ADK					**Sn**	**00 36 38.3**	**-1.3**
NIKH	**Nikolski High**	**2.56**	**68**		**Sn**	**00 36 41.8**	**-1.2**
NIKH	**Nikolski High**	**2.56**	**68**		**Pn**	**00 36 11.7**	**-0.7**
KIKV	**Kanaga Island**	**2.72**	**268**		**Pn**	**00 36 15.0**	**+0.5**
KIMD	**Kanaga Island**	**2.77**	**265**		**Pn**	**00 36 15.6**	**+0.5**
OKSO	**Okmok South**	**3.09**	**64**		**Pn**	**00 36 19.9**	**+0.5**
TAFP	**Tanaga Falls P**	**3.22**	**269**		**Pn**	**00 36 21.7**	**+0.5**
TASE	**Tanaga Southea**	**3.26**	**268**		**Pn**	**00 36 22.2**	**+0.5**
MAPS	**Pakushin South**	**3.94**	**62**		**Pn**	**00 36 31.2**	**+0.5**
MGOD	**Makushin Gods**	**3.97**	**62**		**Pn**	**00 36 31.6**	**+0.4**
MSW	**Makushin Switc**	**4.07**	**61**		**Pn**	**00 36 33.0**	**+0.5**
MNAT	**Makushin Natee**	**4.11**	**61**		**Pn**	**00 36 33.6**	**+0.5**
AKUT	**Akutan**	**4.70**	**61**	Pn	**Pn**	**00 36 42.1**	**+1.1**
SPIA	**Saint Paul Isl**	**5.32**	**15**		**Pn**	**00 36 50.9**	**+1.6**
WESP	**Westdahl Peak**	**5.41**	**60**		**Pn**	**00 36 51.3**	**+0.6**
FALS	**False Pass**	**6.25**	**60**	Pn	**Pn**	**00 37 03.1**	**+1.1**
SDPT	**Sand Point**	**8.00**	**61**	Pn	**Pn**	**00 37 24.9**	**-1.0**
OHAK	**Old Harbor**	**12.39**	**58**	Pn	**Pn**	**00 38 21.0**	**-4.0**
KDAK	**Kodiak Island**	**12.92**	**56**	Pn	**Pn**	**00 38 27.5**	**-4.5**
	0.9nm,0.3s,baz=224,slow=3.8,SNR=18						
KDAK				Sn	**S**	**00 41 08.1**	**-4.4**
	0.2nm,0.3s,baz=146,slow=2.5,SNR=1.4						
KDAK	**Kodiak Island**	**12.92**	**56**	Pn	**Pn**	**00 38 28.2**	**-3.8**
TTA	**Tatalina**	**14.07**	**33**	P	**P**	**00 38 54.2**	**+2.6**
CNPM	**China Poot**	**14.18**	**50**	Pn	**Pn**	**00 38 46.9**	**-1.6**
BRLK	**Bradley Lake**	**14.43**	**49**	Pn	**Pn**	**00 38 50.1**	**-1.6**
SKT	**Skwentna**	**15.16**	**41**	P	**P**	**00 39 03.0**	**-0.7**
SUA	**Susitna One**	**15.23**	**43**	P	**Pn**	**00 39 02.7**	**+0.8**
PPLA	**Purkeypile**	**15.41**	**37**	P	**P**	**00 39 08.2**	**+1.7**
PPLA				IAmb	IAmb	00 39 10.8	
	comp=Z,12nm,1.2s						
PWL	**Port Wells**	**16.03**	**47**	Pn	**Pn**	**00 39 10.9**	**-0.9**
GHO	**Glory Hole Cre**	**16.14**	**44**	P	**Pn**	**00 39 13.0**	**-0.3**
KTH	**Kantishna Hill**	**16.25**	**37**	P	**P**	**00 39 17.0**	**+1.1**
KTH				IAmb	IAmb	00 39 18.2	
	comp=Z,6.4nm,1.1s						
SML	**Sawmill**	**16.41**	**44**	P	**Pn**	**00 39 16.6**	**0.0**
SML				IAmb	IAmb	00 39 27.6	
	comp=Z,11nm,1.3s						
TRF	**Thorofare Moun**	**16.43**	**37**	P	**P**	**00 39 17.8**	**-0.1**
TRF				IAmb	IAmb	00 39 29.8	
	comp=Z,8.1nm,1.3s						
BPAW	**Bear Paw Mtn.**	**16.55**	**35**	P	**P**	**00 39 21.1**	**+2.0**
FID	**Port Fidalgo**	**16.84**	**49**	Pn	**Pn**	**00 39 18.5**	**-3.3**
SCM	**Sheep Creek Mo**	**16.86**	**45**	Pn	**Pn**	**00 39 21.2**	**-0.9**
SCM				IAmb	IAmb	00 39 39.9	
	comp=Z,14nm,1.2s						
IMAR	**Indian Mountai**	**16.92**	**27**		**P**	**00 39 24.2**	**+1.0**
MCK	**McKinley**	**17.09**	**38**	P	**P**	**00 39 25.3**	**+0.2**
MCK				IAmb	IAmb	00 39 25.8	
	comp=Z,4.4nm,0.8s						
BWN	**Browne**	**17.14**	**36**	P	**P**	**00 39 26.0**	**+0.5**
BWN				IAmb	IAmb	00 39 44.1	
	comp=Z,9.4nm,1.2s						
MLY	**Manley**	**17.20**	**33**	P	**P**	**00 39 28.4**	**+2.1**
KLU	**Klutina**	**17.35**	**47**	P	**Pn**	**00 39 26.0**	**-2.0**
KLU				IAmb	IAmb	00 39 40.5	
	comp=Z,8.1nm,1.2s						
NEA2	**Nenana**	**17.52**	**35**	P	**Pn**	**00 39 29.8**	**-0.2**
I23K	**Minto, Yukon-K**	**17.74**	**33**	P	**Pn**	**00 39 33.8**	**+1.1**
I23K				IAmb	IAmb	00 39 35.7	
	comp=Z,5.6nm,0.8s						
WRH	**Wood River Hil**	**17.80**	**36**	P	**P**	**00 39 32.0**	**-0.8**
WRH				IAmb	IAmb	00 39 37.4	
	comp=Z,2.6nm,0.6s						
PETK	**Petropavlovsk-**	**17.91**	**285**	P	**P**	**00 39 32.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=72,slow=9.5,SNR=9.1						
PETK				LR	LR	00 45 34.5	
	comp=Z,52nm,20.5s,baz=62,slow=34						
PETK	**Petropavlovsk-**	**17.91**	**285**	P	**P**	**00 39 34.0**	**-0.1**
CCB	**Clear Creek Bu**	**18.00**	**36**	P	**P**	**00 39 34.3**	**-0.7**
CCB				IAmb	IAmb	00 39 38.1	
	comp=Z,4.1nm,0.4s						
MDM	**Murphy Dome**	**18.02**	**35**	P	**Pn**	**00 39 35.5**	**-0.6**
GLB	**Gilahina Butte**	**18.29**	**48**	P	**P**	**00 39 37.5**	**-0.8**
GLB				IAmb	IAmb	00 39 37.7	
	comp=Z,11nm,1.4s						
IL31		**18.40**	**36**	P	**P**	**00 39 38.8**	**-0.6**
IL31				IAmb	IAmb	00 39 41.1	
	comp=Z,4.8nm,0.5s						
ILAR	**Eielson Array**	**18.40**	**36**	P	**P**	**00 39 37.9**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=236,slow=9.0,SNR=76						
ILAR	**Eielson Array**	**18.40**	**36**	P	**Pn**	**00 39 39.8**	**-0.8**
DOT	**Dot Lake**	**18.97**	**41**	P	**P**	**00 39 46.0**	**+0.3**
GRNC	**Granite Creek**	**19.06**	**51**	P	**P**	**00 39 47.4**	**+0.5**
GRNC				IAmb	IAmb	00 39 52.5	
	comp=Z,14nm,1.4s						
SCRK	**Sand Creek**	**19.14**	**40**	P	**P**	**00 39 47.3**	**-0.3**
TABL	**Table Mountain**	**19.30**	**52**	P	**P**	**00 39 50.1**	**+0.7**
CTGM	**Chitina Glacie**	**19.32**	**50**	P	**P**	**00 39 49.9**	**+0.3**
LOGN	**Logan Glacier**	**19.44**	**51**	P	**P**	**00 39 51.1**	**+0.2**
LOGN				IAmb	IAmb	00 40 03.4	
	comp=Z,11nm,1.4s						
PCA	**Pinnacle**	**19.67**	**53**	P	**Pn**	**00 39 54.5**	**-1.1**
K27K	**Chicken**	**19.93**	**41**	P	**P**	**00 39 57.0**	**+0.9**
EGAK	**Eagle**	**20.59**	**40**	P	**P**	**00 40 03.6**	**+0.5**
BMAR	**Burnt Mountain**	**20.64**	**31**	P	Pn	**00 40 05.7**	**-1.2**
DAWY	**Dawson**	**21.05**	**42**	P	**P**	**00 40 07.8**	**-0.3**
DAWY				IAmb	IAmb	00 40 12.1	
	comp=Z,2.5nm,0.7s						
INK	**Inuvik**	**24.75**	**34**	P	**P**	**00 40 43.5**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=240,slow=6.6,SNR=22						
INK	**Inuvik**	**24.75**	**34**	P	**P**	**00 40 44.9**	**+0.6**
INK				IAmb	IAmb	00 40 46.7	
	comp=Z,2.6nm,0.6s						
YKA	**Yellowknife Ar**	**32.01**	**48**	P	**P**	**00 41 49.5**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=274,slow=9.0,SNR=8.1						
H11N2	**WAKE ISLAND Hy**	**35.98**	**214**	T	T	01 20 35.8	
	baz=21,slow=76,SNR=23						
H11N3	**WAKE ISLAND Hy**	**35.98**	**214**	T	T	01 20 36.4	
	baz=21,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**35.99**	**214**	T	T	01 20 37.1	
	baz=21,slow=76,SNR=34						
H11S1	**WAKE ISLAND Hy**	**37.18**	**213**	T	T	01 21 55.7	
	baz=20,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**37.19**	**213**	T	T	01 21 57.5	
	baz=20,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**37.20**	**213**	T	T	01 21 57.9	
	baz=20,slow=76,SNR=14						
PDAR	**Pinedale Array**	**42.52**	**77**	P	**P**	**00 43 20.2**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=324,slow=4.5,SNR=6.5						
PDAR	**Pinedale Array**	**42.52**	**77**	P	**P**	**00 43 20.3**	**+2.2**
JNU	**Nakatsue**	**44.36**	**268**	LR	LR	01 06 39.2	
	comp=Z,68nm,18.2s,baz=104,slow=42						
ASAR	**Alice Springs**	**88.62**	**227**	P	**P**	**00 48 16.1**	**+2.0**
	comp=Z,0.6nm,0.5s,baz=26,slow=5.0,SNR=8.9						
ASAR	**Alice Springs**	**88.62**	**227**	P	**P**	**00 48 15.6**	**+1.5**

*DNK **22** 00:50:17.8±1.6, 81.63N×3.52W, h95km±99km, ML1.2*

BER 22 00:50:17.1±2.1, **81.43N**×3.54W, **h10**km, **ML1.4, ML1.2**(DNK), **Confirmed Earthquake, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NOR	**Nord**	**1.96**	**282**	*e*	Pn	00 50 46.7	-3.6
	baz=77,slow=12						
NOR				*i* P	Pb	00 50 49.0	-3.7
NOR				*i* S	Sn	00 51 11.3	-3.4
NOR				IAML		00 51 13.3	
	comp=Z,2.9nm,0.4s						
NOR	**Nord**	**1.96**	**282**	*e*	Pn	00 50 46.7	-3.6
	baz=77,slow=12						
NOR				*i* P	Pb	00 50 49.0	-3.7
NOR				*i* S	Sn	00 51 11.3	-3.4
NOR				IAML		00 51 13.3	
	comp=Z,2.9nm,0.4s						
KBS	**Kingsbay**	**3.64**	**126**	*i* P	Pn	00 51 12.2	-1.2
KBS	**Kingsbay**	**3.64**	**126**	*e* P	Pn	00 51 12.3	-1.1
KBS				*e*S	Sn	00 51 51.9	-4.4
SPA0	**Spitsbergen Ar**	**4.78**	**123**	*e* P	Pn	00 51 27.7	-1.3
SPA0				*e*S	Sn	00 52 18.3	-6.1
SPA0				IAML		00 52 19.6	
	comp=Z,2.7nm,0.8s						
DBG	**Daneborg**	**7.91**	**215**	*i* S	Sn	00 53 30.1	-11
DBG				*e*	Pn	00 52 08.4	-3.5
	baz=16,slow=14						
DBG				*i* P	Pn	00 52 09.4	-2.6
DBG				IAML		00 53 45.0	
	comp=Z,0.5nm,0.4s						
DBG	**Daneborg**	**7.91**	**215**	*i* S	Sn	00 53 30.1	-11
DBG				*e*	Pn	00 52 08.4	-3.5
	baz=16,slow=14						
DBG				*i* P	Pn	00 52 09.4	-2.6
DBG				IAML		00 53 45.0	
	comp=Z,0.5nm,0.4s						

KRSC 22 00:58:07.1±1.1, **54.73N**×**165.97E**, **h39**km±14km, **ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.47**	**0**	*e* P	Pn	00 58 17.3	-0.1
BKI				*e*S	Sn	00 58 24.1	-0.5
KBTR	**Krutoberegovo**	**2.33**	**311**	*e* P	Pn	00 58 44.8	+2.0
KBTR				*e*S	Sn	00 59 11.9	+1.8
MKZ	**Mys Kozlova**	**2.47**	**268**	*e* P	Pn	00 58 48.3	+3.6
MKZ				*e*S	Sn	00 59 17.7	+4.1
TUMD	**Tumrok D**	**3.25**	**281**	*e* P	Pn	00 58 59.2	+3.8
TUMD				*e*S	Sn	00 59 36.4	+3.6
BDR	**Baidarnaya**	**3.27**	**306**	*e* P	Pn	00 59 01.4	+5.6
KZV	**Kizimen**	**3.30**	**279**	*e* P	Pn	00 59 00.5	+4.2
KZV				*e*S	Sn	00 59 38.7	+4.4
TUMR	**Tumrok**	**3.40**	**282**	*e* P	Pn	00 59 02.4	+4.8
KMNR	**Kamenistaya**	**3.44**	**290**	*e* P	Pn	00 59 03.2	+5.1
KMNR				*e*S	Sn	00 59 42.6	+5.0
SDLR	**Sedlovina**	**4.43**	**254**	*e* P	Pn	00 59 16.0	+4.3
SDLR				*e*S	Sn	01 00 05.9	+3.9
SMAR	**Somma**	**4.48**	**254**	*e* P	Pn	00 59 17.1	+4.6
UGLR	**Uglovaya**	**4.49**	**253**	*e* P	Pn	00 59 16.6	+4.1
KRER	**Koryakskii**	**4.49**	**254**	*e* P	Pn	00 59 17.0	+4.3
AVH	**Avacha**	**4.51**	**254**	*e* P	Pn	00 59 17.6	+4.7
KRX	**Arik**	**4.53**	**255**	*e* P	Pn	00 59 17.8	+4.7
KOK	**Koryaka**	**4.56**	**255**	*e* P	Pn	00 59 17.9	+4.4
GNL	**Ganaly**	**4.83**	**261**	*e* P	Pn	00 59 21.4	+4.2
RUS	**Russkaya**	**5.00**	**246**	*e* P	Pn	00 59 23.2	+3.7
KRMR	**Karymshinskiy**	**5.02**	**251**	*e* P	Pn	00 59 24.6	+4.8
MTVR	**Mutnovka**	**5.15**	**247**	P	Pn	00 59 26.4	+4.7
GRL	**Gorelyy**	**5.18**	**248**	*e* P	Pn	00 59 25.9	+3.8
ASAK	**Asacha**	**5.35**	**247**	*e* P	Pn	00 59 28.7	+4.3

*UPP **22** 01:00:44.4±0.6, 58.77N×18.60E, h0km, ML2.2, Explosion*
*DNK **22** 01:00:44.6±1.8, 58.75N×18.61E, h0km, ML2.5, Explosion*
*HEL **22** 01:00:45.6±0.1, 58.79N×18.57E, h0km, ML2.5,*
ML2.2(UPP), Explosion
*NAO **22** 01:00:48.3±2.1, 59.04N×18.47E, ML2.2*
*BER **22** 01:00:50.4±4.5, 59.09N×18.53E, h0km, ML2.2(NAO),*
Suspected explosion

ISC 22 01:00:44.7±0.8, **58.78N**±0.03×**18.50E**±0.

BJUU	**Bjuv**	**4.01**	**230**	*i* P		**Pn**	**01 01 47.1**	**-0.2**
NRA0	**NORESS Array S**	**4.03**	**302**	Pn		**Pn**	**01 01 48.2**	**+0.7**
	comp=E,6.3nm,0.3s							
NRA0				Sn		**Sn**	**01 02 38.0**	**+2.6**
	baz=95,slow=22							
NRA0				Lg		Lg	01 02 52.2	
	baz=100,slow=28							
NRA0	**NORESS Array S**	**4.03**	**302**	Pn		**Pn**	**01 01 48.2**	**+0.7**
	baz=109,slow=12							
NRA0				Sn		**Sn**	**01 02 38.0**	**+2.6**
	baz=95,slow=22							
NRA0				Sg		**Sg**	**01 02 52.2**	**-1.7**
	baz=100,slow=28							
PVF	**Pernaja**	**4.13**	**62**	*e*P		**Pn**	**01 01 50.2**	**+1.2**
PVF				*e*SG		**Sb**	**01 02 50.8**	**+2.1**
PVF				MSG			01 03 03.3	
	comp=Z,6.3nm,0.3s							
BSD	**Bornholm Skovb**	**4.17**	**210**	*e*P		**Pn**	**01 01 49.5**	**+0.1**
BSD	**Bornholm Skovb**	**4.17**	**210**	*i* P		**Pn**	**01 01 48.0**	**-1.4**
BSD				*i* S		**Sn**	**01 02 39.4**	**+0.6**
BSD				IAML			01 03 21.5	
	comp=Z,5.0nm,0.4s							
BSD	**Bornholm Skovb**	**4.17**	**210**	*e*P		**Pn**	**01 01 48.9**	**-0.6**
BSD				*e*S		**Sn**	**01 02 38.4**	**-0.4**
LUNU	**Lund**	**4.18**	**223**	*i* P		**Pn**	**01 01 49.6**	**0.0**
NB2	**NORSAR Subarra**	**4.31**	**305**	Pn		**Pn**	**01 01 52.4**	**+0.9**
	baz=125,slow=14							
NB2				Lg		Lg	01 03 00.5	
	baz=117,slow=37							
NB2	**NORSAR Subarra**	**4.31**	**305**	Pn		**Pn**	**01 01 52.4**	**+0.9**
	baz=125,slow=14							
NB2				Sg		**Sg**	**01 03 00.5**	**-2.5**
	baz=117,slow=37							
VSU	**Vasula**	**4.32**	**91**	*e*P		**Pn**	**01 01 52.6**	**+1.0**
PABE	**Paberze**	**4.43**	**135**	*e*P		**Pb**	**01 02 02.8**	**-0.6**
HUSU	**Husum**	**4.59**	**4**	*e*P		**Pn**	**01 01 56.3**	**+1.1**
FIA0	**FINESS Array S**	**4.64**	**52**	Pn		**Pn**	**01 01 56.5**	**+0.6**
	baz=247,slow=12							
FIA0				Sn		**Sn**	**01 02 50.1**	**-0.2**
	baz=241,slow=22							
FIA0				Lg		Lg	01 03 08.2	
	baz=242,slow=28							
FIA0	**FINESS Array S**	**4.64**	**52**	Pn		**Pn**	**01 01 56.5**	**+0.6**
	baz=247,slow=12							
FIA0				Sn		**Sn**	**01 02 50.1**	**-0.2**
	baz=241,slow=22							
FIA0				Sg		**Sb**	**01 03 08.2**	**+5.0**
	baz=242,slow=28							
FIA1	**FINESS Array S**	**4.64**	**52**	MSN			01 03 28.7	
	comp=Z,2.5nm,0.2s							
VAF	**Ylistaro**	**4.74**	**24**	MSN			01 03 32.1	
	comp=Z,3.5nm,0.3s							
ISAL	**Salakas**	**5.25**	**125**	*e*P		**Pn**	**01 02 07.8**	**+3.4**
ISAL				IAML			01 04 13.0	
	comp=Z,3.4nm,0.6s							
HOMB	**Homborsund**	**5.26**	**269**	*i* P		**Pn**	**01 02 04.4**	**0.0**
HOMB				IAML			01 03 44.0	
	comp=Z,3.6nm,0.4s							
IIGN	**Ignalina**	**5.44**	**126**	*e*P		**Pn**	**01 02 08.2**	**+1.3**
IIGN				IAML			01 03 54.0	
	comp=Z,4.1nm,0.6s							
APA0	**Apatity Array**	**10.97**	**30**	Pn		**Pn**	**01 03 21.9**	**-0.8**
	baz=233,slow=11							
APA0	**Apatity Array**	**10.97**	**30**	Pn		**Pn**	**01 03 21.9**	**-0.8**
	baz=233,slow=11							
ARA0	**ARCESS Array S**	**11.21**	**13**	Pn		**Pn**	**01 03 23.1**	**-2.8**
	baz=193,slow=16							
ARA0	**ARCESS Array S**	**11.21**	**13**	Pn		**Pn**	**01 03 23.1**	**-2.8**
	baz=193,slow=16							

IDC ***22*** *01:03:49.2±2.2,5.°03S×104.°17E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.6/58, mbtmp3.9/7, Error ellipse: s-maj=111.0km s-min=19.7km az=52.0*

NEIC ***22*** *01:03:55.1±1.2,5.°7S±0.°1×103.°4E±0.°1, h62km±7km, mb4.0/6, Error ellipse: s-maj=25.8km s-min=6.2km az=52.0*

ISC 22 01:03:53.5±0.8,5.°7S±0.°1×103.°4E±0.°1, h47km, n29, σ1°29/23, mb4.0/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.36**	**340**			**Pn**	**01 04 17.8**	**+1.7**
CISI	**Cisompet, Garu**	**4.76**	**114**	Pn		**Pn**	**01 05 05.3**	**+2.5**
XMIS	**Christmas Isla**	**5.29**	**155**	Pn		**Pn**	**01 05 11.6**	**+1.5**
UGM	**Wanagama**	**7.40**	**108**	Pn		**Pn**	**01 05 40.1**	**+1.0**
DLV	**T Lat**	**18.19**	**16**			**Pn**	**01 08 03.5**	**+0.6**
DLV				IAmb	IAmb		01 08 04.3	
	comp=Z,9.6nm,1.0s							
FITZ	**Fitzroy Crossi**	**24.98**	**122**	P		**P**	**01 09 11.4**	**-1.6**
	comp=Z,5.4nm,1.1s,baz=300,slow=14,SNR=2.2							
FITZ	**Fitzroy Crossi**	**24.98**	**122**	P		**P**	**01 09 11.4**	**-1.6**
FITZ				IAmb	IAmb		01 09 22.7	
	comp=Z,18nm,1.3s							
H01W3	**Cape Leeuwin H**	**30.73**	**163**	T		T	01 42 23.2	
	baz=342							
H01W2	**Cape Leeuwin H**	**30.75**	**163**	T		T	01 42 27.5	
	baz=342,slow=74							
H01W1	**Cape Leeuwin H**	**30.75**	**163**	T		T	01 42 27.1	
	baz=342,slow=74							
H08S2	**Diego Garcia H**	**30.78**	**265**	T		T	01 42 43.1	
	baz=86,slow=76,SNR=13							
H08S3	**Diego Garcia H**	**30.79**	**265**	T		T	01 42 43.7	
	baz=86,slow=76,SNR=14							
H08S1	**Diego Garcia H**	**30.80**	**265**	T		T	01 42 44.7	
	baz=86,slow=76,SNR=9.8							
WRA	**Warramunga Arr**	**33.24**	**118**	P		**P**	**01 10 25.7**	**-0.8**
	comp=Z,9.9nm,0.9s,baz=301,slow=8.7,SNR=2.4							
WRA	**Warramunga Arr**	**33.24**	**118**	P		**P**	**01 10 26.6**	**+0.1**
WR0	**Warramunga Arr**	**33.43**	**118**	P		**P**	**01 10 27.8**	**-0.3**
ASAR	**Alice Springs**	**34.37**	**125**	P		**P**	**01 10 36.3**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=303,slow=8.7,SNR=5.7							
ASAR	**Alice Springs**	**34.37**	**125**	P		**P**	**01 10 35.2**	**-1.2**
SONM	**Songino Array**	**53.32**	**2**	P		**P**	**01 13 05.1**	**-2.9**
	comp=Z,1.1nm,0.6s,baz=183,slow=10,SNR=7.3							
SONM				PcP		**PcP**	**01 14 15.0**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=179,slow=1.8,SNR=2.9							
SONM	**Songino Array**	**53.32**	**2**	P		**P**	**01 13 07.1**	**-0.9**
SONM				IAmb	IAmb		01 13 09.1	
	comp=Z,1.1nm,0.9s							
MK31	**Makanchi Array**	**55.48**	**343**	P		**P**	**01 13 23.6**	**+0.1**
MK31				IAmb	IAmb		01 13 23.9	
	comp=Z,0.6nm,0.6s							
MKAR	**Makanchi Array**	**55.48**	**343**	P		**P**	**01 13 23.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=154,slow=8.5,SNR=9.7							
MKAR	**Makanchi Array**	**55.48**	**343**	P		**P**	**01 13 22.9**	**-0.7**
ZALV	**Zalesovo Beam**	**61.40**	**348**	P		**P**	**01 14 04.1**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=156,slow=6.1,SNR=8.7							
ABKAR	**Akbulak array**	**66.47**	**331**	P		**P**	**01 14 38.5**	**+0.4**
FINES	**FINESS Array B**	**88.91**	**332**	P		**P**	**01 16 44.1**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=104,slow=5.2,SNR=10							
FINES	**FINESS Array B**	**88.91**	**332**	P		**P**	**01 16 43.6**	**+0.9**
H09N1	**TRISTAN DA CUNI**	**06.68**	**229**	T		T	03 13 40.6	
	SNR=24							
TXAR	**Lajitas Array**	**145.22**	**44**	PKP		**PKPdf**	**01 23 27.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=4.3,slow=0.2,SNR=10							

IDC ***22*** *01:08:30.7±1.3,4.°88S×152.°71E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/32, mbtmp3.8/5, MS3.0/1, Ms1 3.0/1, ms1mx2.3/29, Error ellipse: s-maj=40.5km s-min=28.3km az=131.0*

NEIC ***22*** *01:08:38.5±2.7,5.°1S±0.°1×152.°6E±0.°1, h61km±13km, mb4.1/5, Error ellipse: s-maj=17.0km s-min=13.3km az=49.0*

ISC 22 01:08:37.6±0.9,5.°13S±0.°08×152.°6E±0.°1, h55km, n18, σ1°35/19, mb3.8/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.04**	**334**			**Pn**	**01 08 55.5**	**-0.6**
RABL				Sn		**Sn**	**01 09 10.2**	**+0.4**
PMG	**Port Moresby**	**6.89**	**232**	Sn		**Sn**	**01 11 32.1**	**-1.0**
	3.0nm,0.3s,baz=132,slow=19,SNR=1.6							
JAY	**Jayapura**	**12.18**	**282**	LR		LR	01 15 41.3	
	comp=Z,68nm,19.1s,baz=262,slow=35							
EIDS	**Eidsvold**	**20.18**	**184**	P		**P**	**01 13 06.5**	**-1.2**
EIDS				IAmb	IAmb		01 13 14.7	
	comp=Z,11nm,1.3s							
DZM	**Mont Dzumac**	**21.50**	**143**	P		**P**	**01 13 22.4**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=236,slow=13,SNR=1.7							
DZM	**Mont Dzumac**	**21.50**	**143**	P		**P**	**01 13 22.7**	**+0.6**
DZM				IAmb	IAmb		01 13 31.6	
	comp=Z,10nm,1.0s							
WB0	**Warramunga Arr**	**22.95**	**229**	P		**P**	**01 13 37.6**	**+0.1**
WB0				IAmb	IAmb		01 13 53.0	
	comp=Z,6.5nm,1.1s							
WR0	**Warramunga Arr**	**22.96**	**228**	P		**P**	**01 13 39.1**	**+1.5**
WB2	**Warramunga Arr**	**23.09**	**229**	P		**P**	**01 13 41.6**	**+2.7**
WRA	**Warramunga Arr**	**23.10**	**229**	P		**P**	**01 13 41.5**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=54,slow=9.9,SNR=3.0							
ASAR	**Alice Springs**	**25.79**	**223**	P		**P**	**01 14 06.2**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=51,slow=9.0,SNR=2.6							
ASAR	**Alice Springs**	**25.79**	**223**	P		**P**	**01 14 03.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**29.35**	**242**	P		**P**	**01 14 36.2**	**+0.7**
	comp=Z,4.1nm,0.9s,baz=58,slow=9.5,SNR=2.4							
FITZ	**Fitzroy Crossi**	**29.35**	**242**	P		**P**	**01 14 36.6**	**+1.0**
ILAR	**Eielson Array**	**82.53**	**22**	P		**P**	**01 20 54.1**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=232,slow=4.4,SNR=5.5							
TOA0	**Torodi Ar. Sit**	**150.25**	**288**	PKPdf		**PKPdf**	**01 28 17.1**	**-1.4**
TOA0				PKPbc		**PKiKP**	**01 28 24.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**150.25**	**288**	PKPbc		**PKiKP**	**01 28 24.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=74,slow=2.1,SNR=9.8							
TORD	**Torodi Ar. Bea**	**150.25**	**288**			**PKiKP**	**01 28 24.8**	**+0.3**

IDC ***22*** *01:29:07.6±0.7,28.°87N×82.°53E, h0km, mb4.0/24, mb1 4.1/27, mb1mx4.0/57, mbtmp4.0/27, ML4.1/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/53, Error ellipse: s-maj=18.6km s-min=13.7km az=36.0*

DMN ***22*** *01:29:09.3±0.5, 28.°68N×81.°78E, h30km, Ml4.6/8, Error ellipse: s-maj=22.5km s-min=9.4km az=17.0*

NEIC ***22*** *01:29:09.4±2.0, 28.°9N±0.°1×82.°54E±0.°09, h10km±1km, mb4.4/33, Error ellipse: s-maj=19.2km s-min=11.7km az=207.0*

NDI ***22*** *01:29:11.3±1.9, 28.°85N×82.°39E, h10km, ML3.9, mb4.4(NEIC)*

ISC 22 01:29:11.3±1.4, 28.°84N±0.°05×82.°34E±0.°04, h23km±11km, n102, σ1°75/117, mb4.2/38, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PYUN	**Piuthan**	**0.94**	**142**	*e*Pn		**Pb**	**01 29 27.6**	**-1.4**
PYUN	**Piuthan**	**0.94**	**142**	*e*Pg		**Pn**	**01 29 29.7**	**+0.4**
PYUN				*e*Sg		**Sn**	**01 29 44.6**	**+2.5**
	2μm,0.3s							
DANN	**Dangsing**	**1.34**	**111**	*e*Pn		**Pn**	**01 29 34.6**	**-0.3**
DANN	**Dangsing**	**1.34**	**111**	*e*Pg		**Pb**	**01 29 37.1**	**+1.1**
DANN				*e*Sg		**Sb**	**01 29 56.9**	**+4.1**
	2μm,0.4s							
KOLN	**Koldanda**	**1.54**	**134**	*e*Pn		**Pb**	**01 29 39.2**	**-0.1**
KOLN				*e*Sn		**Sb**	**01 29 59.4**	**+0.9**
	740nm,0.4s							
GKN	**Gorkha**	**2.19**	**112**	*e*Pn		**Pn**	**01 29 48.3**	**+1.8**
GKN				*e*Sn		**Sb**	**01 30 17.2**	**+0.1**
DMN	**Daman**	**2.73**	**116**	*e*Pn		**Pn**	**01 29 55.6**	**+1.6**
DMN				*e*Sn		**Sn**	**01 30 29.0**	**+2.5**
	767nm,0.7s							
KKN	**Kakani**	**2.80**	**111**	*e*Pn		**Pn**	**01 29 56.3**	**+1.4**
KKN				*e*Sn		**Sb**	**01 30 31.7**	**-2.9**
	621nm,0.6s							
PKIN	**Phulchoki**	**2.98**	**114**	*e*Pn		**Pn**	**01 29 58.9**	**+1.5**
PKIN				*e*Sn		**Sn**	**01 30 35.9**	**+3.3**
	543nm,0.5s							
PKI	**Pulchoki**	**2.99**	**114**	*e*Pn		**Pn**	**01 29 59.0**	**+1.4**
PKI				*e*Sn		**Sn**	**01 30 35.9**	**+2.9**
	420nm,0.6s							
GUN	**Gumba**	**3.25**	**106**	*e*Pn		**Pn**	**01 30 03.6**	**+2.3**
GUN				*e*Sn		**Sn**	**01 30 43.8**	**+4.3**
	1μm,0.8s							
JIRN	**Jiri**	**3.59**	**108**	*e*Pn		**Pn**	**01 30 07.9**	**+1.9**
RAMN	**Ramite**	**4.21**	**116**	*e*Pn		**Pn**	**01 30 15.7**	**+1.3**
RAMN				*e*Sn		**Sn**	**01 31 03.9**	**+0.8**
ODAN	**Odare**	**4.89**	**113**	*e*Pn		**Pn**	**01 30 25.4**	**+1.7**
ODAN				*e*Sn		**Sn**	**01 31 22.2**	**+2.5**
TAPN	**Taplejung**	**4.97**	**106**	*e*Pn		**Pn**	**01 30 26.3**	**+1.4**
TAPN				*e*Sn		**Sn**	**01 31 23.6**	**+1.8**
SMLA	**Simla**	**5.03**	**298**	*e*P		**Pn**	**01 30 28.5**	**+3.1**
SMLA				IAML			01 31 51.3	
	comp=E,320nm,0.4s							
BOK	**Bokaro**	**5.95**	**147**	*e*P		**Pn**	**01 30 39.4**	**+1.3**
BOK				*e*S		**Sn**	**01 31 44.3**	**-1.2**
DHRM	**DHARAMSHALA**	**6.22**	**305**	*e*P		**Pn**	**01 30 43.0**	**+1.0**
DHRM				*e*S		**Sn**	**01 31 51.0**	**-1.4**
DHRM				IAML			01 31 56.6	
	comp=N,119nm,0.6s							
DHRM				IAML			01 31 56.9	
	comp=E,118nm,0.4s							
BHPL	**Bhopal**	**7.12**	**220**	*e*P		**Pn**	**01 30 54.0**	**-0.1**
BHPL				*e*S		**Sn**	**01 32 11.5**	**-2.9**
BHPL				IAML			01 32 15.5	
	comp=E,134nm,0.3s							
BHPL				IAML			01 32 17.0	
	comp=N,104nm,0.2s							
SARP	**Sargodha**	**8.90**	**293**	P		**Pn**	**01 31 18.7**	**+0.2**
SHL	**Shillong**	**9.10**	**109**	*e*P		**Pn**	**01 31 20.5**	**-0.9**
SHL				*e*S		**Sn**	**01 32 55.9**	**-7.5**
CHCP	**Chirah Chowk**	**9.13**	**304**	P		**Pn**	**01 31 22.7**	**+1.0**
NIL	**Nilore**	**9.13**	**304**	Pn		**Pn**	**01 31 22.4**	**+0.7**
THW	**Thamme Wali**	**9.93**	**296**	P		**Pn**	**01 31 32.2**	**-0.4**
CEP	**Cherat**	**10.21**	**302**	P		**Pn**	**01 31 36.1**	**-0.5**
HYB	**Hyderabad**	**11.89**	**198**	*i* P		**Pn**	**01 31 59.0**	**-0.6**
HYB				*e*S		Sn	01 34 24.0	+12
KBL	**Kabul**	**12.66**	**300**	Pn		**Pn**	**01 32 09.1**	**-1.1**
KDJ	**Kajisay**	**13.90**	**344**	Pn		**Pn**	**01 32 26.0**	**-1.1**
PRZ	**Przheval'sk**	**13.98**	**348**	Pn		**Pn**	**01 32 25.9**	**-2.2**
GAR	**Garm**	**14.21**	**319**	Pn		**Pn**	**01 32 28.5**	**-2.7**
BOOM	**Boomskoye usch**	**14.57**	**341**	Pn		**Pn**	**01 32 34.4**	**-1.8**
ARSB	**Arslanbob**	**14.61**	**331**	Pn		**Pn**	**01 32 34.1**	**-2.6**
AAK	**Ala-Archa**	**15.15**	**337**	Pn		**Pn**	**01 32 42.9**	**-1.2**
	comp=N,0.3nm,0.3s,baz=164,slow=14,SNR=2.2							
AAK				Sn		**Sn**	**01 35 28.0**	**-3.2**
	baz=197,slow=20,SNR=1.7							
AAK	**Ala-Archa**	**15.15**	**337**			**Pn**	**01 32 43.4**	**-0.7**
FRU1	**Bishkek**	**15.26**	**338**	P		**P**	**01 32 51.1**	**+1.0**
FRU1				IAmb	IAmb		01 33 04.4	
	comp=Z,18nm,0.5s							
KK31	**Karatay Array**	**17.12**	**329**			**Pn**	**01 33 07.3**	**-1.8**
KKAR	**Karatay Array**	**17.12**	**329**			**Pn**	**01 33 06.7**	**-2.4**
MK31	**Makanchi Array**	**17.92**	**360**	P		**P**	**01 33 19.8**	**+0.3**
MKAR	**Makanchi Array**	**17.92**	**360**	P		**Pn**	**01 33 16.3**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=186,slow=14,SNR=18							
MAKZ	**Makanchi**	**17.94**	**359**	P		**P**	**01 33 19.5**	**-0.2**
HRA	**Herat**	**17.98**	**293**	P		**Pn**	**01 33 19.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**18.37**	**121**	P		**P**	**01 33 20.4**	**-4.1**
	comp=Z,0.7nm,0.3s,baz=322,slow=16,SNR=1.5							
KURBB	**Kurchatov Arra**	**21.94**	**353**	P		**P**	**01 34 02.6**	**-0.5**
	comp=Z,8.4nm,0.6s,baz=179,slow=10.0,SNR=102							
KURBB				PcP		**PcP**	**01 38 02.1**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=194,slow=2.0,SNR=3.3							
WSAR	**Wadi Sarin**	**22.01**	**261**	P		**P**	**01 34 07.2**	**+3.1**
	comp=Z,3.5nm,0.8s,baz=112,slow=2.0,SNR=4.3							
KURK	**Kurchatov**	**22.03**	**354**	P		**P**	**01 34 02.6**	**-1.4**
GEYT	**Alibeck**	**22.11**	**300**	P		**P**	**01 34 05.9**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=111,slow=15,SNR=3.5							
GYA0B	**ALIBECK ARRAY**	**22.11**	**300**	P		**P**	**01 34 08.3**	**+3.1**
GYA0B				IAmb	IAmb		01 34 24.6	
	comp=Z,5.1nm,0.9s							
ZAA0	**Zalesovo Array**	**25.15**	**3**	P		**P**	**01 34 33.9**	**-0.7**
ZAA0				IAmb	IAmb		01 34 44.1	
	comp=Z,4.3nm,0.7s							
ZALV	**Zalesovo Beam**	**25.15**	**3**	P		**P**	**01 34 34.5**	**0.0**
	comp=Z,2.6nm,0.5s,baz=190,slow=11,SNR=14							
ZALV	**Zalesovo Beam**	**25.15**	**3**	P		**P**	**01 34 33.5**	**-1.1**
BVAR	**Borovoye Array**	**25.72**	**343**	P		**P**	**01 34 39.6**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=101,slow=19,SNR=5.0							
SRIT	**Nakonsritamara**	**25.87**	**138**	P		**P**	**01 34 41.5**	**0.0**
SONM	**Songino Array**	**26.57**	**38**	P		**P**	**01 34 47.3**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=221,slow=7.7,SNR=10							
SONM	**Songino Array**	**26.57**	**38**	P		**P**	**01 34 47.9**	**+0.2**
ABKAR	**Akbulak array**	**26.62**	**326**	P		**P**	**01 34 49.1**	**+1.2**
ABKAR				IAmb	IAmb		01 34 50.3	
	comp=Z,8.8nm,1.0s							
AKTO	**Aktyubinsk**	**28.33**	**326**	P		**P**	**01 35 03.9**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=130,slow=8.6,SNR=7.0							
KSRS	**Korea Array**	**38.81**	**65**	P		**P**	**01 36 30.8**	**-3.6**
	comp=Z,0.9nm,0.4s,baz=274,slow=8.6,SNR=4.2							
MMAI	**Mount Meron Ar**	**40.22**	**288**	LR		LR	01 56 33.9	
	comp=Z,30nm,18.2s,baz=45,slow=41							
NRIK	**Noril'sk**	**40.64**	**3**	P		**P**	**01 36 49.8**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=153,slow=6.3,SNR=7.6							
NRIK	**Noril'sk**	**40.64**	**3**	P		**P**	**01 36 49.9**	**+0.6**
NRIK				IAmb	IAmb		01 36 50.7	
	comp=Z,3.8nm,0.9s							
BRTR	**Keskin Array B**	**41.23**	**298**	P		**P**	**01 36 55.3**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=100,slow=1.8,SNR=2.6							
BRTR	**Keskin Array B**	**41.23**	**298**	P		**P**	**01 36 56.1**	**+1.4**
MLR	**Muntele Rosu**	**46.95**	**307**	P		**P**	**01 37 42.4**	**+2.0**
	comp=Z,4.1nm,0.7s,baz=199,slow=0.7,SNR=8.2							
MLR	**Muntele Rosu**	**46.95**	**307**	P		**P**	**01 37 43.5**	**+3.1**
MLR				IAmb	IAmb		01 37 43.8	
	comp=Z,5.1nm,0.8s							
BURAR	**Bucovina Array**	**47.50**	**310**	P		**P**	**01 37 46.1**	**+1.4**
BURAR				IAmb	IAmb		01 37 54.5	
	comp=Z,1.0nm,0.8s							
BUR08	**Bucovina Ar. S**	**47.51**	**310**	P		**P**	**01 37 46.2**	**+1.4**
BUR08				IAmb	IAmb		01 38 03.3	
	comp=Z,2.8nm,1.2s							
PABE	**Paberze**	**48.97**	**320**	P		**P**	**01 37 56.6**	**+0.9**
FIA1	**FINESS Array S**	**49.08**	**328**	P		**P**	**01 37 56.8**	**+0.4**
FIA1				IAmb	IAmb		01 38 08.4	
	comp=Z,8.5nm,1.1s							
FINES	**FINESS Array B**	**49.08**	**328**	P		**P**	**01 37 56.6**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=111,slow=7.5,SNR=28							
FINES	**FINESS Array B**	**49.08**	**328**	P		**P**	**01 37 56.8**	**+0.3**
AGG	**Agios Georgios**	**50.02**	**298**	P		**P**	**01 38 04.4**	**+0.3**
AGG				IAmb	IAmb		01 38 15.7	
	comp=Z,9.0nm,1.1s							
ARCES	**ARCESS Array B**	**51.83**	**338**	P		**P**	**01 38 17.3**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=97,slow=7.0,SNR=14							
HFS	**Hagfors**	**54.87**	**325**	P		**P**	**01 38 39.8**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=125,slow=7.4,SNR=13							
GERES	**GERESS Array B**	**55.15**	**311**	P		**P**	**01 38 42.6**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=64,slow=6.8,SNR=2.8							
NC602	**NORSAR Array S**	**55.96**	**326**	P		**P**	**01 38 48.0**	**+0.5**
NOA	**NORSAR Array B**	**56.12**	**326**	P		**P**	**01 38 48.2**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=96,slow=6.5,SNR=5.5							
NAO01	**NORSAR Array S**	**56.28**	**326**	P		**P**	**01 38 50.5**	**+0.7**
DAVOX	**Davos/Dischmat**	**57.97**	**309**	P		**P**	**01 39 01.0**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=90,slow=7.1,SNR=2.4							
EKA	**Eskdalemuir Ar**	**64.33**	**321**	P		**P**	**01 39 44.9**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=94,slow=7.1,SNR=9.6							
LSZ	**Lusaka**	**68.27**	**237**	P		**P**	**01 40 12.1**	**+1.2**
LSZ				IAmb	IAmb		01 40 12.4	
	comp=Z,2.6nm,0.5s							
ESDC	**Sonseca Array**	**69.58**	**305**	P		**P**	**01 40 18.5**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=57,slow=7.8,SNR=4.1							
WB0	**Warramunga Arr**	**69.71**	**128**	P		**P**	**01 40 19.4**	**-0.3**
WRA	**Warramunga Arr**	**69.79**	**128**	P		**P**	**01 40 19.7**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=323,slow=6.1,SNR=7.7							
WRA	**Warramunga Arr**	**69.79**	**128**	P		**P**	**01 40 20.0**	**-0.2**
WB2	**Warramunga Arr**	**69.80**	**128**	P		**P**	**01 40 20.1**	**-0.1**
BORG	**Borgarnes**	**69.84**	**334**	P		**P**	**01 40 19.2**	**-0.6**
EUNU	**Eureka**	**71.15**	**358**	P		**P**	**01 40 27.5**	**-0.1**
EUNU				IAmb	IAmb		01 40 35.8	
	comp=Z,6.7nm,1.5s							
ASAR	**Alice Springs**	**72.03**	**131**	P		**P**	**01 40 33.6**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=320,slow=7.0,SNR=7.3							
TOLK	**Toolik Lake Re**	**75.62**	**17**	P		**P**	**01 40 54.2**	**+0.1**
TOLK				IAmb	IAmb		01 41 01.8	
	comp=Z,7.2nm,1.5s							
TOA0	**Torodi Ar. Sit**	**75.68**	**277**	P		**P**	**01 40 56.3**	**+1.0**
TOA0				IAmb	IAmb		01 40 56.6	
	comp=Z,3.5nm,0.8s							
TORD	**Torodi Ar. Bea**	**75.68**	**277**	P		**P**	**01 40 55.9**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=57,slow=4.9,SNR=21							
**IM

VSTU	**Vaestervik**	**1.55**	**224**	*eP*		**Pn**	**01 39 17.9**	**-0.9**
GRAU	**Graesoe**	**1.55**	**0**	P		**Pn**	**01 39 18.3**	**-0.6**
GRAU	**Graesoe**	**1.55**	**0**	P		**Pn**	**01 39 18.3**	**-0.6**
GRAU	**Graesoe**	**1.55**	**0**	P		**Pn**	**01 39 18.3**	**-0.6**
GRAU	**Graesoe**	**1.55**	**0**	P		**Pn**	**01 39 18.3**	**-0.6**
GRAU	**Graesoe**	**1.55**	**0**	*eP*		**Pn**	**01 39 18.3**	**-0.6**
AAL	**Aland**	**1.58**	**28**	*eP*		**Pn**	**01 39 18.4**	**-0.9**
AAL	**Aland**	**1.58**	**28**	P		**Pn**	**01 39 18.4**	**-0.9**
AAL	**Aland**	**1.58**	**28**	*eP*		**Pn**	**01 39 18.4**	**-0.9**
AAL				*eS*		**Sn**	**01 39 38.8**	**-1.7**
OSTU	**Oestervaala**	**1.61**	**334**	P		**Pn**	**01 39 19.7**	**0.0**
OSTU	**Oestervaala**	**1.61**	**334**	P		**Pn**	**01 39 19.7**	**0.0**
OSTU	**Oestervaala**	**1.61**	**334**	P		**Pn**	**01 39 19.7**	**0.0**
OSTU	**Oestervaala**	**1.61**	**334**	P		**Pn**	**01 39 19.7**	**0.0**
OSTU	**Oestervaala**	**1.61**	**334**	*eP*		**Pn**	**01 39 19.7**	**0.0**
FORU	**Forsmark**	**1.61**	**354**	P		**Pn**	**01 39 19.7**	**-0.1**
FORU	**Forsmark**	**1.61**	**354**	P		**Pn**	**01 39 19.7**	**-0.1**
FORU	**Forsmark**	**1.61**	**354**	P		**Pn**	**01 39 19.7**	**-0.1**
FORU	**Forsmark**	**1.61**	**354**	P		**Pn**	**01 39 19.7**	**-0.1**
FORU	**Forsmark**	**1.61**	**354**	*eP*		**Pn**	**01 39 19.7**	**-0.1**
LNKU	**Linkoeping**	**1.69**	**252**	P		**Pn**	**01 39 20.6**	**-0.1**
LNKU	**Linkoeping**	**1.69**	**252**	P		**Pn**	**01 39 20.6**	**-0.1**
LNKU	**Linkoeping**	**1.69**	**252**	P		**Pn**	**01 39 20.6**	**-0.1**
LNKU	**Linkoeping**	**1.69**	**252**	P		**Pn**	**01 39 20.6**	**-0.1**
LNKU	**Linkoeping**	**1.69**	**252**	*eP*		**Pn**	**01 39 20.6**	**-0.1**
BYXU	**Byxelkrok**	**1.71**	**209**	P		**Pn**	**01 39 20.5**	**-0.5**
BYXU	**Byxelkrok**	**1.71**	**209**	P		**Pn**	**01 39 20.5**	**-0.5**
BYXU	**Byxelkrok**	**1.71**	**209**	P		**Pn**	**01 39 20.5**	**-0.5**
BYXU	**Byxelkrok**	**1.71**	**209**	P		**Pn**	**01 39 20.5**	**-0.5**
BYXU	**Byxelkrok**	**1.71**	**209**	*eP*		**Pn**	**01 39 20.5**	**-0.5**
SLIT	**Slitere, Latvi**	**2.31**	**119**	*eP*		**Pn**	**01 39 29.2**	**0.0**
SLIT	**Slitere, Latvi**	**2.31**	**119**	*eP*		**Pn**	**01 39 29.7**	**+0.4**
SLIT				*eS*		**Sn**	**01 39 59.6**	**+1.4**
MTSE	**Matsula**	**2.76**	**89**	*eP*		**Pn**	**01 39 34.9**	**-0.5**
MTSE	**Matsula**	**2.76**	**89**	*eP*		**Pn**	**01 39 35.1**	**-0.3**
MTSE				*eS*		**Sn**	**01 40 09.4**	**+0.1**
RAF	**Rauma**	**2.77**	**35**	*eP*		**Pn**	**01 39 35.9**	**+0.2**
RAF				MPN			01 39 38.6	
	comp=Z,2.5nm,0.1s							
RAF				*eS*		**Sn**	**01 40 09.2**	**-0.6**
HFS	**Hagfors**	**2.81**	**301**	Pn		**Pn**	**01 39 37.1**	**+0.9**
	comp=Z,2.3nm,0.3s,baz=110,slow=13,SNR=38							
HFS				Sn		**Sn**	**01 40 11.1**	**+0.3**
	comp=Z,3.4nm,0.3s,baz=114,slow=25,SNR=6.0							
HFS	**Hagfors**	**2.81**	**301**	Pn		**Pn**	**01 39 37.2**	**+0.9**
	baz=98,slow=14							
HFS				Lg		Lg	01 40 16.1	
HFS	**Hagfors**	**2.81**	**301**	Pn		**Pn**	**01 39 37.2**	**+0.9**
	baz=98,slow=14							
HFS				Sg		**Sb**	**01 40 16.1**	**+0.1**
BLEU	**Blekinge**	**2.89**	**212**	*i* P		**Pn**	**01 39 37.3**	**0.0**
BLEU	**Blekinge**	**2.89**	**212**	*i* P		**Pn**	**01 39 37.3**	**0.0**
ARNU	**Arnoeviken**	**2.97**	**349**	*eP*		**Pn**	**01 39 38.1**	**-0.3**
ARNU				*eS*		**Sn**	**01 40 14.2**	**-0.4**
BORU	**Boraas**	**3.26**	**252**	*i* P		**Pn**	**01 39 43.6**	**+1.2**
BORU	**Boraas**	**3.26**	**252**	*i* P		**Pn**	**01 39 43.6**	**+1.2**
MEF	**Metsahovi**	**3.32**	**62**	*eP*		**Pn**	**01 39 43.7**	**+0.6**
MEF				MSG			01 40 36.7	
	comp=Z,14nm,0.3s							
PBUR	**Paburge**	**3.33**	**145**	IAML			01 39 55.3	
	comp=Z,13nm,0.4s							
PBUR				*eP*		**Pn**	**01 39 40.8**	**-2.4**
PBUR				*eP*		**Pn**	**01 39 40.9**	**-2.4**
NUR	**Nurmijrvi**	**3.55**	**58**	*eP*		**Pn**	**01 39 47.8**	**+1.4**
NUR				MSG			01 40 40.9	
	comp=Z,5.7nm,0.3s							
FABU	**Falkenberg**	**3.58**	**242**	*i* P		**Pn**	**01 39 46.5**	**-0.2**
FABU	**Falkenberg**	**3.58**	**242**	*i* P		**Pn**	**01 39 46.5**	**-0.2**
TJOU	**Tjoern**	**3.71**	**261**	*eP*		**Pn**	**01 39 49.2**	**+0.7**
TJOU	**Tjoern**	**3.71**	**261**	*eP*		**Pn**	**01 39 49.2**	**+0.7**
ONAU	**Onsala**	**3.78**	**251**	*i* P		**Pn**	**01 39 51.3**	**+1.9**
ONAU	**Onsala**	**3.78**	**251**	*i* P		**Pn**	**01 39 51.3**	**+1.9**
STRU	**Stroemstad**	**3.82**	**277**	*i* P		**Pn**	**01 39 51.0**	**+1.0**
ARBE	**Arbavere**	**3.90**	**77**	*eP*		**Pn**	**01 39 50.5**	**-0.7**
HEMU	**Hemsoen**	**3.91**	**357**	*eP*		**Pn**	**01 39 51.5**	**+0.3**
HEMU				*eS*		**Sn**	**01 40 38.2**	**+0.4**
BJUU	**Bjuv**	**4.03**	**230**	*i* P		**Pn**	**01 39 52.4**	**-0.5**
BJUU	**Bjuv**	**4.03**	**230**	*i* P		**Pn**	**01 39 52.4**	**-0.5**
NC602	**NORSAR Array S**	**4.04**	**302**	*eP*		**Pn**	**01 39 52.3**	**-0.8**
NC602				IAML			01 40 58.0	
	comp=Z,9.9nm,0.4s							
NRA0	**NORESS Array S**	**4.04**	**302**	Pn		**Pn**	**01 39 52.9**	**-0.1**
	baz=124,slow=12							
NRA0				Sn		**Sn**	**01 40 41.7**	**+0.7**
	baz=102,slow=28							
NRA0				Lg		Lg	01 40 56.1	
	baz=98,slow=28							
NRA0	**NORESS Array S**	**4.04**	**302**	Pn		**Pn**	**01 39 52.9**	**-0.1**
	baz=124,slow=12							
NRA0				Sn		**Sn**	**01 40 41.7**	**+0.7**
	baz=102,slow=28							
NRA0				Sg		**Sg**	**01 40 56.1**	**-3.5**
	baz=98,slow=28							
PVF	**Pernaja**	**4.12**	**62**	*eP*		**Pn**	**01 39 54.2**	**+0.2**
PVF				MSG			01 41 02.3	
	comp=Z,16nm,0.3s							
OSL	**Oslo**	**4.16**	**289**	*eP*		**Pn**	**01 39 53.5**	**-1.2**
OSL				IAML			01 41 13.5	
	comp=Z,16nm,0.4s							
BSD	**Bornholm Skovb**	**4.18**	**210**	*eP*		**Pn**	**01 39 54.1**	**-1.0**
BSD	**Bornholm Skovb**	**4.18**	**210**	*i* P		**Pn**	**01 39 54.0**	**-1.0**
BSD				*i* S		**Sn**	**01 40 43.9**	**-0.6**
BSD				IAML			01 41 10.9	
	comp=Z,15nm,0.4s							
BSD	**Bornholm Skovb**	**4.18**	**210**	*i* P		**Pn**	**01 39 54.0**	**-1.0**
BSD				*i* S		**Sn**	**01 40 43.9**	**-0.6**
BSD				IAML			01 41 10.9	
	comp=Z,15nm,0.4s							
BSD	**Bornholm Skovb**	**4.18**	**210**	*eP*		**Pn**	**01 39 53.9**	**-1.1**
BSD				*eS*		**Sn**	**01 40 43.4**	**-1.1**
LUNU	**Lund**	**4.20**	**223**	*i* P		**Pn**	**01 39 54.4**	**-0.9**
LUNU	**Lund**	**4.20**	**223**	*i* P		**Pn**	**01 39 54.4**	**-0.9**
NB201	**NORSAR Array S**	**4.29**	**305**	IAML			01 41 06.4	
	comp=Z,7.4nm,0.3s							
VSU	**Vasula**	**4.30**	**91**	*eP*		**Pn**	**01 39 57.7**	**+1.1**
NB2	**NORSAR Subarra**	**4.32**	**305**	Pn		**Pn**	**01 39 57.5**	**+0.5**
	baz=127,slow=14							
NB2				Lg		Lg	01 41 05.2	
	baz=122,slow=28							
NB2	**NORSAR Subarra**	**4.32**	**305**	Pn		**Pn**	**01 39 57.5**	**+0.5**
	baz=127,slow=14							
NB2				Sg		**Sg**	**01 41 05.2**	**-3.5**
	baz=122,slow=28							
NOA	**NORSAR Array B**	**4.32**	**305**	Pn		**Pn**	**01 39 57.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=122,slow=15,SNR=28							
NOA				Pg		**Pb**	**01 40 05.6**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=161,slow=17,SNR=5.3							
NOA				Lg		Lg	01 41 04.0	
	comp=Z,0.5nm,0.3s,baz=294,slow=18,SNR=7.2							
NC303	**NORSAR Array S**	**4.35**	**307**	*eP*		**Pn**	**01 39 57.5**	**+0.2**
PABE	**Paberze**	**4.43**	**136**	*eP*		**Pn**	**01 39 59.0**	**+0.6**
FIA0	**FINESS Array S**	**4.62**	**52**	Pn		**Pn**	**01 40 01.8**	**+0.8**
	baz=243,slow=11							
FIA0				Pg		**Pb**	**01 40 11.3**	**-0.5**
	baz=234,slow=14							
FIA0				Sn		**Sn**	**01 40 55.7**	**+0.4**
	baz=241,slow=22							
FIA0				Lg		Lg	01 41 11.8	
	baz=230,slow=28							
FIA0	**FINESS Array S**	**4.62**	**52**	Pn		**Pn**	**01 40 01.8**	**+0.8**
	baz=243,slow=11							
FIA0				Pg		**Pb**	**01 40 11.3**	**-0.5**
	baz=234,slow=14							
FIA0				Sn		**Sn**	**01 40 55.7**	**+0.4**
	baz=241,slow=22							
FIA0				Sg		**Sb**	**01 41 11.8**	**+3.8**
	baz=230,slow=28							
FINES	**FINESS Array B**	**4.62**	**52**	Pn		**Pn**	**01 40 01.8**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=237,slow=12,SNR=18							
FINES				Pg		**Pb**	**01 40 10.5**	**-1.4**
	comp=Z,1.2nm,0.3s,baz=244,slow=12,SNR=14							
FINES				Sn		**Sn**	**01 40 54.6**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=243,slow=23,SNR=6.7							
FINES				Lg		Lg	01 41 11.5	
	comp=Z,4.0nm,0.3s,baz=240,slow=25,SNR=12							
FIA1	**FINESS Array S**	**4.62**	**52**	MSN			01 41 21.9	
	comp=Z,12nm,0.3s							
NC204	**NORSAR Array S**	**4.62**	**306**	*eP*		**Pn**	**01 40 00.5**	**-0.7**
NC204				IAML			01 41 22.9	
	comp=Z,8.0nm,0.3s							
KONO	**Kongsberg**	**4.67**	**284**	*eP*		**Pn**	**01 40 01.9**	**+0.2**
ISAL	**Salakas**	**5.24**	**125**	*eP*		**Pb**	**01 40 23.5**	**+1.0**
HOMB	**Homborsund**	**5.28**	**269**	*i* P		**Pn**	**01 40 09.7**	**-0.4**
HOMB				IAML			01 41 42.5	
	comp=Z,3.5nm,0.4s							
HOMB	**Homborsund**	**5.28**	**269**	*eP*		**Pn**	**01 40 09.3**	**-0.8**
HOMB				*eS*		Sn	01 41 00.6	-11
HOMB				IAML			01 41 42.5	
	comp=Z,3.5nm,0.4s							
HOMB				IAML			01 41 51.1	
	comp=Z,4.6nm,0.4s							
IIGN	**Ignalina**	**5.43**	**126**	*eP*		**Pb**	**01 40 24.3**	**-1.4**
SKAR	**Skarslia**	**5.51**	**294**	*eP*		**Pn**	**01 40 11.7**	**-1.6**
SKAR				*eS*		Sn	01 41 04.1	-13
SKAR				IAML			01 41 53.3	
	comp=Z,8.2nm,0.4s							
GKP	**Gorka Klasztor**	**5.58**	**188**	*eP*		**Pb**	**01 40 32.1**	**+3.9**
IDID	**Didziasalis**	**5.67**	**124**	*eP*		**Pb**	**01 40 27.1**	**-2.7**
DOMB	**Dombas**	**5.71**	**309**	*eP*		**Pn**	**01 40 17.0**	**+0.9**
DOMB				IAML			01 41 58.7	
	comp=Z,5.7nm,0.4s							
SNART	**Snartemo**	**5.94**	**270**	*eP*		**Pn**	**01 40 18.7**	**-0.5**
SNART				IAML			01 42 09.4	
	comp=Z,7.8nm,0.4s							
SNART	**Snartemo**	**5.94**	**270**	*eP*		**Pn**	**01 40 19.1**	**-0.1**
SNART				IAML			01 41 59.1	
	comp=Z,7.7nm,0.4s							
SNART				IAML			01 42 09.4	
	comp=Z,7.8nm,0.4s							
ODD1	**Odda**	**6.19**	**286**	*eP*		**Pn**	**01 40 22.4**	**-0.2**
ODD1				IAML			01 42 07.1	
	comp=Z,4.5nm,0.3s							
BLS5	**Blasjo**	**6.25**	**281**	*eP*		**Pn**	**01 40 22.6**	**-0.9**
BLS5				IAML			01 42 20.5	
	comp=Z,5.0nm,0.4s							
OUF	**Merijarvi**	**6.33**	**25**	MSN			01 42 11.1	
	comp=Z,4.9nm,0.3s							
AKN	**Aaknes**	**6.63**	**306**	*eP*		**Pn**	**01 40 28.6**	**-0.1**
HYA	**Hoyanger**	**6.64**	**296**	*eP*		**Pn**	**01 40 27.7**	**-1.0**
HYA				IAML			01 42 28.6	
	comp=Z,5.5nm,0.5s							
ASK	**Askoy**	**6.97**	**290**	*eP*		**Pn**	**01 40 32.2**	**-1.1**
ASK				IAML			01 42 44.2	
	comp=Z,7.4nm,0.4s							
FOO	**Floro**	**7.29**	**298**	*eP*		**Pn**	**01 40 35.3**	**-2.3**
APA0	**Apatity Array**	**10.96**	**30**	Pn		**Pn**	**01 41 25.8**	**-2.1**
	baz=230,slow=18							
APA0	**Apatity Array**	**10.96**	**30**	Pn		**Pn**	**01 41 25.8**	**-2.1**
	baz=230,slow=18							
ARA0	**ARCESS Array S**	**11.20**	**13**	Pn		**Pn**	**01 41 28.6**	**-2.6**
	baz=195,slow=16							
ARA0	**ARCESS Array S**	**11.20**	**13**	Pn		**Pn**	**01 41 28.6**	**-2.6**
	baz=195,slow=16							
ARCES	**ARCESS Array B**	**11.20**	**13**	Pn		**Pn**	**01 41 28.9**	**-2.3**
	baz=195,slow=13,SNR=22							
ARCES				Sn		Sn	01 43 26.1	-11
	baz=190,slow=24,SNR=1.9							
EKA	**Eskdalemuir Ar**	**12.28**	**263**	Pn		**Pn**	**01 41 46.0**	**-0.1**
	baz=70,slow=12,SNR=3.4							
SPITS	**Spitsbergen Ar**	**19.50**	**359**	P		**Pn**	**01 43 20.8**	**+1.4**
	baz=116,slow=10,SNR=1.9							
MKAR	**Makanchi Array**	**38.88**	**79**	P		**P**	**01 46 19.2**	**+2.4**
	comp=Z,1.3nm,0.9s,baz=328,slow=5.1,SNR=7.9							

IDC 22 01:41:11.2±1.7, **59°.34N**×**30°.15W**, **h0**km, **mb3.4**/3, **mb1 3.6**/4, **mb1mx3.2**/51, **mbtmp3.6**/4, **ML3.6**/1, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.7**/40, **Error ellipse: s-maj=43.7km s-min=33.4km az=45.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.82**	**34**	Pn	Pn		01 42 52.1	-0.3
	1.0nm,0.3s,baz=83,slow=5.3,SNR=1.9							
NOA	**NORSAR Array B**	**20.39**	**67**	LR	LR		01 53 42.2	
	comp=Z,69nm,18.9s,baz=285,slow=37							
HFS	**Hagfors**	**21.82**	**69**	LR	LR		01 54 25.5	
	comp=Z,87nm,19.4s,baz=281,slow=36							
YKA	**Yellowknife Ar**	**38.41**	**312**	P	P		01 48 33.7	-0.1
	0.4nm,0.8s,baz=56,slow=9.3,SNR=5.2							
TORD	**Torodi Ar. Bea**	**51.82**	**139**	P	P		01 50 20.6	-0.2
	0.5nm,0.8s,baz=335,slow=7.6,SNR=2.7							
MKAR	**Makanchi Array**	**60.69**	**47**	P	P		01 51 24.0	+0.1
	0.3nm,0.8s,baz=316,slow=8.5,SNR=4.1							

IDC 22 01:41:52.4±1.8, **59°.18N**×**30°.38W**, **h0**km, **mb3.5**/4, **mb1 3.7**/5, **mb1mx3.3**/51, **mbtmp3.6**/5, **ML3.7**/1, **MS3.3**/2, **Ms1 3.3**/2, **ms1mx2.7**/44, **Error ellipse: s-maj=39.7km s-min=35.0km az=57.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**7.02**	**33**	Pn	Pn		01 43 36.6	+0.3
	1.5nm,0.3s,baz=92,slow=6.4,SNR=1.7							
JMIC	**Jan Mayen**	**14.87**	**28**	LR	LR		01 49 54.8	
	comp=Z,194nm,21.8s,baz=251,slow=32							
ARCES	**ARCESS Array B**	**25.30**	**43**	P	P		01 47 20.3	+0.2
	3.5nm,0.9s,baz=259,slow=9.8,SNR=1.6							
MDT	**Midelt**	**31.48**	**135**	LR	LR		01 59 38.9	
	comp=Z,35nm,18.7s,baz=210,slow=34							
YKA	**Yellowknife Ar**	**38.44**	**312**	P	P		01 49 15.1	-0.1
	0.2nm,0.7s,baz=58,slow=9.2,SNR=1.2							
TORD	**Torodi Ar. Bea**	**51.77**	**139**	P	P		01 51 01.7	0.0
	0.4nm,0.7s,baz=338,slow=7.8,SNR=2.0							
MKAR	**Makanchi Array**	**60.89**	**47**	P	P		01 52 06.0	-0.4
	0.4nm,0.8s,baz=323,slow=5.2,SNR=4.2							

*IDC **22** 01:42:04.1±1.3, 59°.18N×30°.43W, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.5/51, mbtmp3.9/7, ML4.0/1, Error ellipse: s-maj=33.7km s-min=23.8km az=1.0*
*NEIC **22** 01:42:05.2±1.5, 59°.04N±0°.04×30°.4W±0°.3, h10km±2km, mb4.1/4, Error ellipse: s-maj=22.6km s-min=6.6km az=93.0*

ISC 22 01:42:06.7±1.0, **59°.1N**±0°.1×**30°.4W**±0°.1, **h17**km, **n14, s06**, **65**/14, **mb3.9**/8, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**7.07**	**33**	Pn	Pn		01 43 49.2	0.0
	2.6nm,0.3s,baz=235,slow=6.0,SNR=1.7							
SUMG	**Summit**	**13.88**	**350**	Pn	Pn		01 45 23.1	+0.5
ARCES	**ARCESS Array B**	**25.35**	**43**	P	P		01 47 31.0	-1.3
	5.1nm,1.0s,baz=286,slow=14,SNR=3.9							
FCC	**Fort Churchill**	**31.74**	**297**		P		01 48 29.7	+0.4
FCC				IAmb	IAmb		01 48 37.4	
	comp=Z,3.0nm,1.2s							
YKA	**Yellowknife Ar**	**38.46**	**312**	P	P		01 49 26.6	-0.5
	comp=Z,0.7nm,0.7s,baz=58,slow=9.3,SNR=10							
TOLK	**Toolik Lake Re**	**45.15**	**333**	P	P		01 50 21.9	+0.2
TOLK				IAmb	IAmb		01 50 22.1	
	comp=Z,2.3nm,0.9s							
PDAR	**Pinedale Array**	**49.37**	**288**	P	P		01 50 55.0	-0.2
	comp=Z,0.7nm,0.7s,baz=65,slow=7.1,SNR=6.1							
PDAR	**Pinedale Array**	**49.37**	**288**	P	P		01 50 54.6	-0.6
BVAR	**Borovoye Array**	**51.35**	**49**	P	P		01 51 09.8	+0.1
	comp=Z,0.8nm,0.8s,baz=42,slow=6.6,SNR=3.9							
TORD	**Torodi Ar. Bea**	**51.75**	**139**	P	P		01 51 13.4	+0.3
	comp=Z,0.9nm,0.8s,baz=347,slow=7.3,SNR=4.0							
MAKZ	**Makanchi**	**60.80**	**47**	P	P		01 52 16.9	-0.4
MK31	**Makanchi Array**	**60.93**	**46**	P	P		01 52 19.2	+1.0
MKAR	**Makanchi Array**	**60.93**	**46**	P	P		01 52 18.3	0.0
	comp=Z,2.3nm,0.9s,baz=322,slow=6.2,SNR=11							
MKAR	**Makanchi Array**	**60.93**	**46**	P	P		01 52 19.2	+0.9

*IDC **22** 01:53:11.2±0.9, 59°.19N×30°.70W, h0km, mb3.7/8, mb1 4.0/10, mb1mx3.6/58, mbtmp3.8/10, ML3.6/2, Error ellipse: s-maj=28.0km s-min=18.4km az=17.0*
*NEIC **22** 01:53:15.8±2.6, 59°.5N±0°.1×30°.5W±0°.1, h10km±2km, mb4.2/7, Error ellipse: s-maj=21.0km s-min=10.0km az=182.0*

ISC 22 01:53:14.9±0.7, **59°.4N**±0°.1×**30°.75W**±0°.09, **h16**km, **n21, s05**/21, **mb3.9**/12, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**6.98**	**35**	Pn	Pn		01 54 55.9	-0.4
	1.9nm,0.3s,baz=215,slow=6.4,SNR=2.2							
BORG	**Borgarnes**	**6.98**	**35**		Pn		01 54 58.1	+1.8
ANGG	**Ammassalik, Gr**	**7.03**	**336**	Pn	Pn		01 54 56.8	-0.2
EKA	**Eskdalemuir Ar**	**15.37**	**93**	Pn	Pn		01 56 49.5	-1.4
	baz=190,slow=29,SNR=2.4							
ARCES	**ARCESS Array B**	**25.30**	**43**	P	P		01 58 38.9	-1.3
	5.8nm,1.0s,baz=5.7,slow=4.9,SNR=2.0							
ESBB	**Sonseca Array**	**25.98**	**127**	P	P		01 58 49.1	+2.5
ESDC	**Sonseca Array**	**25.98**	**127**	P	P		01 58 44.9	-1.8
	2.4nm,1.0s,baz=330,slow=9.8,SNR=9.9							
ESDC	**Sonseca Array**	**25.98**	**127**	P	P		01 58 49.7	+3.0
FINES	**FINESS Array B**	**27.39**	**61**	P	P		01 58 59.4	+0.2
FIA1	**FINESS Array S**	**27.39**	**61**	P	P		01 58 57.5	-1.6
FIA1				IAmb	IAmb		01 59 06.8	
	comp=Z,5.6nm,1.1s							
BURAR	**Bucovina Array**	**34.27**	**85**	P	P		02 00 00.5	+0.5
BURAR				IAmb	IAmb		02 00 04.1	
	comp=Z,1.6nm,1.0s							
YKA	**Yellowknife Ar**	**38.17**	**312**	P	P		02 00 33.6	+0.6
	comp=Z,0.8nm,0.8s,baz=58,slow=9.3,SNR=10.0							
TAM	**Tamanrasset**	**44.62**	**129**	P	P		02 01 29.1	+2.5
TAM				IAmb	IAmb		02 01 29.9	
	comp=Z,3.5nm,1.3s							
PD31	**Pinedale Array**	**49.13**	**287**	P	P		02 02 05.2	+3.4
PD31				IAmb	IAmb		02 02 05.6	
	comp=Z,2.7nm,1.0s							
PDAR	**Pinedale Array**	**49.13**	**287**	P	P		02 01 59.8	-1.9
	comp=Z,0.2nm,0.5s,baz=194,slow=41,SNR=3.5							
PDAR	**Pinedale Array**	**49.13**	**287**	P	P		02 02 04.0	+2.3
BW06	**Boulder Array**	**49.13**	**287**	P	P		02 02 04.5	+2.8
BW06				IAmb	IAmb		02 02 05.6	
	comp=Z,3.6nm,1.1s							
TORD	**Torodi Ar. Bea**	**52.04**	**138**	P	P		02 02 20.4	-3.2
	comp=Z,0.9nm,0.9s,baz=343,slow=7.6,SNR=4.0							
ELK	**Elko**	**53.43**	**290**	P	P		02 02 33.5	-0.5
	comp=Z,0.5nm,0.7s,baz=300,slow=22,SNR=2.2							
TXAR	**Lajitas Array**	**56.63**	**272**	P	P		02 02 55.9	-1.2
	comp=Z,0.1nm,0.7s,baz=355,slow=28,SNR=1.8							
MKAR	**Makanchi Array**	**60.90**	**46**	P	P		02 03 26.1	-0.3
	comp=Z,1.4nm,0.9s,baz=335,slow=5.4,SNR=8.3							

*IDC **22** 01:54:10.1±0.4, 59°.29N×30°.42W, h0km, mb4.3/41, mb1 4.4/45, mb1mx4.3/62, mbtmp4.3/45, ML3.7/4, MS4.3/9, Ms1 4.3/9, ms1mx4.0/18, Error ellipse: s-maj=13.2km s-min=8.5km az=6.0*

*GCMT **22** 01:54:11.1±0.2, 59°.42N±0°.02×30°.34W±0°.02, h12km, MW5.0/119, Moment Tensor Solution. s45,c52; s119,c199; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}-2.96±.08; $M_{\theta\theta}$-0.27±.09; $M_{\phi\phi}$3.23±.06; $M_{r\theta}$2.13±.31; $M_{\theta\phi}$0.41±.06; $M_{r\phi}$0.05±.25; Best double couple: M_o3.71600×10^16^ NP1:ϕ_s342.00000°, δ49.00000°, λ-130.00000°. NP2:ϕ_s213.00000°, δ55.00000°, λ-54.00000°. Principal axes: T 3.2940, Plg3.0000°, Azm279.0000°; N 0.8430, Plg29.0000°, Azm10.0000°; P -4.1370, Plg61.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **22** 01:54:12.2±1.5, 59°.31N±0°.08×30°.3W±0°.1, h10km±1km, mb4.7/194 Error ellipse: s-maj=14.8km s-min=12.0km az=23.0*

*REY **22** 01:54:15.0, 59°.17N×28°.59W, h10km*

ISC 22 01:54:10.9±2.0, **59°.33N**±0°.05×**30°.31W**±0°.04, **h4**km±12km, **n359, s19**/**20**/316, **mb4.7**/168, **MS4.4**/26, **9C-36D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
IGRV	**Grindav??k**	**5.89**	**36**	P	P		01 55 39.2	+0.4
	baz=30							
IGRV				S		**Sn**	**01 56 46.4**	**-0.1**
	baz=30							
IKRI	**Krysuvik**	**6.02**	**37**	P	P		01 55 40.8	+0.2
	baz=31							
IKRI				S		**Sn**	**01 56 48.8**	**-1.1**
	baz=31							
IVOS	**Vogsosar**	**6.12**	**38**	P	P		01 55 39.6	-2.4
	baz=32							
IKAS	**Kald??rsel**	**6.19**	**37**	P	P		01 55 43.6	+0.6
	baz=31							
ISAN	**Sandskeio**	**6.30**	**37**	P	P	

BHOU Houvegnez 22.49 97 *d*P **P 01 59 11.9 +0.8**
NOR Nord 22.70 5 *i* P **P 01 59 14.7 +1.7**
NOR IAmb IAmb 01 59 18.2
comp=Z,4.7nm,0.9s
PTO Porto 22.71 134 *e*P **P 01 59 15.8 +2.3**
comp=Z,45nm,1.4s
POLO Lamas de Olo 22.81 132 *e*P **P 01 59 16.4 +1.8**
comp=Z,17nm,1.4s
PBRG Braganca 22.85 130 *e*P **P 01 59 16.6 +1.6**
comp=Z,31nm,1.7s
PVRL Vila Real 22.93 132 *e*P **P 01 59 17.3 +1.5**
comp=Z,23nm,1.3s
WLF Walferdange 22.99 99 P **P 01 59 15.9 -0.4**
MVO Moncorvo 23.29 131 *e*P **P 01 59 20.6 +1.1**
comp=Z,57nm,1.7s
MVO *e*LR LR 02 05 10.1
comp=Z,506nm,20.0s
PVIS Viseu 23.34 133 *e*P **P 01 59 22.1 +2.0**
comp=Z,39nm,1.5s
COI Coimbra 23.60 134 *e*P **P 01 59 24.2 +1.7**
comp=Z,43nm,1.1s
PCAS Casmilo, Conde 23.70 135 *e*P **P 01 59 25.7 +2.1**
comp=Z,45nm,1.5s
MTE Manteigas 23.75 133 *e*P **P 01 59 25.5 +1.4**
comp=Z,33nm,1.4s
MTE *e*LR LR 02 04 27.1
comp=Z,460nm,20.0s
MTE Manteigas 23.75 133 P **P 01 59 23.7 -0.4**
MTE IAmb IAmb 01 59 28.8
comp=Z,20nm,1.1s
SPITS Spitsbergen Ar 24.12 22 P **P 01 59 27.2 -0.1**
comp=Z,16nm,1.1s,baz=220,slow=15,SNR=1.9
PCBR Castelo Branco 24.26 133 *e*P **P 01 59 29.4 +0.5**
comp=Z,26nm,1.7s
ECH Echery 24.43 100 P **P 01 59 30.3 -0.1**
PMRV Marv??o 24.66 134 *e*P **P 01 59 34.0 +1.5**
comp=Z,30nm,1.4s
PMRV *e*LR LR 02 05 32.7
comp=Z,510nm,20.0s
PMTG Montargil 24.67 135 *e*P **P 01 59 32.5 0.0**
BFO Black Forest 24.95 99 P **P 01 59 33.8 -1.3**
PESTR Estremoz 25.08 135 *e*P **P 01 59 36.6 +0.3**
comp=Z,27nm,1.4s
PESTR Estremoz 25.08 135 P **P 01 59 36.4 +0.1**
PESTR IAmb IAmb 01 59 39.0
comp=Z,25nm,1.5s
STU Stuttgart 25.10 97 P **P 01 59 36.6 +0.2**
STU IAmb IAmb 01 59 46.5
comp=Z,14nm,0.8s
SSB Saint Sauveur 25.17 108 P **P 01 59 37.2 +0.2**
ARCES ARCESS Array B 25.17 43 P **P 01 59 36.9 +0.1**
comp=Z,14nm,1.1s,baz=270,slow=9.3,SNR=10
EVO Evora 25.22 136 *e*P **P 01 59 37.8 +0.3**
CLL Collm 25.51 89 *i* P **P 01 59 40.2 +0.2**
comp=Z,20nm,1.5s
CLL Lm MLR 02 09 00.0
comp=Z,900nm,20.0s
CLL Collm 25.51 89 P **P 01 59 39.9 -0.1**
GRA1 Grafenberg Arr 25.56 94 P **P 01 59 40.9 +0.4**
GRA1 IAmb IAmb 01 59 42.4
comp=Z,30nm,1.3s
GRFO Grafenberg 25.56 94 P **P 01 59 41.0 +0.5**
GRFO IAmb IAmb 01 59 42.3
comp=Z,34nm,1.4s
PAB San Pablo 25.73 129 P **P 01 59 41.8 -0.4**
ESBB Sonseca Array 25.77 128 IAmb IAmb 01 59 54.0
comp=Z,33nm,1.5s
ESDC Sonseca Array 25.77 128 P **P 01 59 42.9 +0.3**
comp=Z,9.7nm,1.0s,baz=328,slow=9.4,SNR=16
ESDC Sonseca Array 25.77 128 P **P 01 59 42.7 +0.1**
NKC Novy Kostel 25.86 92 *e*P **P 01 59 43.8 +0.5**
NKC AMS AMS 02 10 20.0
comp=Z,2µm,16.7s
MORF Marmelete 26.09 138 *e*P **P 01 59 47.6 +2.1**
BRG Berggiesshubel 26.24 89 *e*P **P 01 59 47.0 +0.3**
BRG Amp 01 59 52.8
comp=Z,83nm,3.0s
BRG Amp 02 09 44.0
comp=E,0.5nm,16.2s
BRG Amp 02 09 51.0
comp=Z,0.8nm,19.2s
BRG Amp 02 09 57.0
comp=N,0.9nm,18.0s
PVAQ Vaqueiros 26.33 136 *e*LQ LQ 02 04 46.6
PVAQ *e*LR LR 02 06 16.0
comp=N,878nm,20.0s
BNI Bardonecchia 26.38 106 P **P 01 59 49.5 +1.3**
BNI IAmb IAmb 02 00 05.2
comp=Z,19nm,1.4s
DAVA Damuels 26.42 99 *e*P **P 01 59 50.9 +2.4**
comp=Z,5.6nm,0.9s
EUNU Eureka 26.46 341 P **P 01 59 48.4 -0.1**
GKP Gorka Klasztor 26.58 82 *e*P **P 01 59 50.9 +1.2**
TUE Stuetta 26.71 101 P **P 01 59 51.0 -0.2**
TUE IAmb IAmb 02 00 07.6
comp=Z,15nm,1.0s
CHGQ Chibougamau 26.73 269 P 01 59 52.1
baz=52
RETA Reutte 26.74 98 *e*P P 01 59 59.0 +7.7
comp=Z,7.3nm,1.2s
DAVOX Davos/Dischmat 26.76 100 P **P 01 59 51.4 -0.3**
comp=Z,8nm,0.9s,baz=1.5,slow=21,SNR=2.9
PVCC Panska Ves 26.77 89 AMS AMS 02 11 50.0
comp=Z,700nm,14.8s
PRA Prague 26.97 90 AMS AMS 02 11 10.0
comp=Z,1µm,17.3s
MOTA Moosalm 27.00 98 *e*P **P 01 59 56.9 +3.1**
comp=Z,4.4nm,1.0s
FETA Feichten 27.03 99 *e*P **P 01 59 55.3 +1.2**
comp=Z,6.9nm,1.1s
PRU Pruhonice 27.08 90 *e*P **P 01 59 53.9 -0.4**
PRU AMS AMS 02 11 20.0
comp=Z,1µm,16.3s
KHC Kasperske Hory 27.11 93 *e*P **P 01 59 55.8 +1.1**
KHC AMS AMS 02 10 30.0
comp=Z,1µm,19.9s
KHC Kasperske Hory 27.11 93 IAmb IAmb 01 59 59.7
comp=Z,25nm,1.8s
SQTA Sankt Quirin 27.14 98 *e*P **P 01 59 55.7 +0.7**
comp=Z,3.0nm,0.8s
FINES FINESS Array B 27.21 61 P **P 01 59 55.2 -0.1**
comp=Z,7.6nm,0.8s,baz=289,slow=5.8,SNR=13
FINES FINESS Array B 27.21 61 P **P 01 59 54.9 -0.4**
FIA1 FINESS Array S 27.21 61 P **P 01 59 55.9 +0.6**
WATA Walderalm 27.25 97 *e*P **P 01 59 57.1 +1.1**
comp=Z,9.6nm,1.6s
WTTA Wattenberg 27.33 97 *e*P **P 01 59 58.1 +1.4**
comp=Z,5.7nm,1.5s
GERES GERESS Array B 27.36 93 P **P 01 59 56.7 -0.2**
comp=Z,0.2nm,0.4s,baz=264,slow=40,SNR=2.4
GERES GERESS Array B 27.36 93 P **P 01 59 55.7 -1.2**
KSP Ksiaz 27.46 87 *e*P **P 01 59 58.5 +0.7**
CHVC Chvalec 27.49 88 *e*P **P 01 59 58.5 +0.5**
CHVC AMS AMS 02 11 40.0
comp=Z,800nm,17.7s
UPC Upice 27.52 88 AMS AMS 02 11 40.0
comp=Z,900nm,16.7s
E60A Ste Agathe de 27.53 260 P 01 59 59.0
baz=47
OSTC Ostas 27.59 88 *e*P **P 01 59 59.6 +0.7**
OSTC AMS AMS 02 11 50.0
comp=Z,900nm,17.5s
RES Resolute Bay 27.60 329 P **P 01 59 58.5 -0.2**
comp=Z,1.8nm,0.8s,baz=108,slow=8.3,SNR=5.2
RES Resolute Bay 27.60 329 P **P 02 00 00.5 +1.8**
CKRC Cesky Krumlov 27.68 92 *e*P **P 02 00 00.7 +1.0**
CKRC AMS AMS 02 10 50.0
comp=Z,1µm,19.1s
D58A Chemin du LacG 27.77 263 P 01 59 60.0
baz=48
DPC Dobruska-Polom 27.77 88 *e*P **P 02 00 01.0 +0.5**
DPC AMS AMS 02 11 50.0
comp=Z,700nm,15.4s
PMOZ Porto Moniz, M 27.92 156 *e*P **P 02 00 03.9 +1.8**
TREC Trest 27.99 91 *e*P **P 02 00 03.3 +0.8**
TREC AMS AMS 02 11 40.0
comp=Z,1µm,14.9s
F60A Warwick 28.06 260 P 02 00 02.8
baz=46
ABTA Abfaltersbach 28.12 97 *e*P **P 02 00 04.8 +1.1**
comp=Z,6.9nm,1.5s
CTI Castel Tesino 28.16 99 P **P 02 00 04.2 +0.1**
KRLC Kraliky 28.17 88 *e*P **P 02 00 04.8 +0.7**
KRLC AMS AMS 02 11 40.0
comp=Z,600nm,15.1s
MOA Molln 28.29 94 *e*P P 02 00 11.1 +6.0
comp=Z,2.6nm,1.0s
KBA Koelnbreinsper 28.32 96 *e*P **P 02 00 09.6 +4.0**
comp=Z,3.8nm,0.9s
ZOU Zoufplan 28.48 97 IAmb IAmb 02 00 10.8
comp=Z,12nm,1.0s
MATQ Matagami 28.49 272 P 02 00 07.1
baz=52
VRAC Vranov 28.55 90 P **P 02 00 08.0 +0.6**
comp=Z,1.6nm,0.5s,baz=292,slow=7.0,SNR=4.1
VRAC Vranov 28.55 90 *e*P **P 02 00 08.1 +0.6**
KRUC Moravsky 28.60 90 *e*P **P 02 00 08.4 +0.5**
MORC Moravsky Berou 28.75 88 *e*P **P 02 00 09.7 +0.5**
MYKA Terra Mystica 28.77 97 *e*P **P 02 00 10.6 +1.1**
comp=Z,2.2nm,0.5s
ROBS Robic 28.97 97 *e*P **P 02 00 11.3 +0.1**
OKC Ostrava-Krasne 29.02 87 AMS AMS 02 13 20.0
comp=Z,600nm,12.4s
CONA Conrad Observa 29.05 92 *e*P **P 02 00 12.2 +0.2**
comp=Z,5.4nm,1.1s
D55A Sainte-Anne-du 29.14 265 P 02 00 12.7
baz=48
SUW Suwalki 29.17 77 IAmb IAmb 02 00 14.0
comp=Z,18nm,1.0s
OBKA Obir 29.32 96 *e*P **P 02 00 15.3 +0.9**
comp=Z,9.5nm,1.2s
ARSA Arzberg 29.32 94 *e*P **P 02 00 15.3 +0.9**
comp=Z,10nm,1.1s
SOKA Soboth 29.45 95 *e*P **P 02 00 15.8 +0.2**
MODS Modra-Piesok 29.49 90 *e*P **P 02 00 15.6 -0.2**
PERS Pernice 29.52 95 *e*P **P 02 00 16.3 +0.2**
LJU Ljubljana 29.62 97 *i* P **P 02 00 13.9 -3.1**
OJC Ojcow 29.63 85 *e*P **P 02 00 17.3 +0.3**
OJC Ojcow 29.63 85 P **P 02 00 17.1 +0.1**
OJC IAmb IAmb 02 00 18.2
comp=Z,14nm,1.3s
GROS Grobnik 29.84 95 *e*P **P 02 00 18.6 -0.3**
G57A Newington 30.19 262 P 02 00 22.0
baz=46
NACGM Naroch 30.48 73 *i* P **P 02 00 25.8 +1.3**
NACGM *i* P **P 02 00 25.8 +1.3**
NACGM *i* P **P 02 00 25.8 +1.3**
NACGM *i* PPP PPP 02 01 36.0
NACGM *i* S **S 02 05 27.6 +1.8**
NACGM *i* SS **ScP 02 07 05.9 -0.3**
NACGM *i* SSS SSS 02 07 47.2
NACGM *i* LQ LQ 02 09 40.5
NACGM *i* LQ LQ 02 10 32.5
PSZ Piszkesteto 31.12 89 ⇓P **P 02 00 31.8 +1.5**
PSZ Piszkesteto 31.12 89 IAmb IAmb 02 00 32.8
comp=Z,11nm,1.1s
ALGO Algonquin Park 31.17 266 P 02 00 30.5
baz=47
NRCA Norcia 31.18 102 IAmb IAmb 02 00 36.5
comp=Z,17nm,1.3s
MNK Minsk 31.24 73 *i* P **P 02 00 30.7 -0.4**
comp=E,4.0nm,1.3s
MNK *i* P **P 02 00 30.7 -0.4**
comp=N,16nm,1.2s
MNK *i* P **P 02 00 30.7 -0.4**
comp=Z,15nm,1.1s
MNK *i* PP **PnPn 02 01 33.1 +0.4**
MNK *i* PPP PPP 02 01 42.1
MNK *i* PcP **PcP 02 03 24.2 -1.2**
MNK *i* S **S 02 05 36.5 -1.2**
MNK *i* SS **SnSn 02 07 23.3 +4.0**
MNK *i* SSS SSS 02 07 38.4
MNK *i* LQ LQ 02 10 16.7
MNK *i* LR LR 02 11 26.9
MNK *i* LRM MLR 02 14 04.7
comp=Z,150nm,15.2s
MNK *i* LRM MLR 02 14 09.8
comp=N,241nm,19.6s
MNK *i* LRM MLR 02 14 15.5
comp=E,12nm,14.5s
CRVS Cervenica-Dubn 31.30 86 *e*P **P 02 00 32.4 +0.6**
MORH Mrgy, Hungar 31.61 92 ⇑P **P 02 00 35.0 +0.5**
FCC Fort Churchill 31.70 297 P **P 02 00 35.4 +0.3**
FCC IAmb IAmb 02 00 38.4
comp=Z,7.3nm,0.8s
TRPA Tarpa 32.34 86 ⇓P **P 02 00 41.5 +0.6**
H53A Bobcaygeon 32.40 265 P 02 00 42.0
baz=46
M60A Port Jervis 32.75 257 P 02 00 44.9
baz=41
BINY Binghamton 32.78 259 P 02 00 45.5
baz=43
FRGS Fruska Gora 32.93 93 ⇑P **P 02 00 46.9 +0.8**
SIRR Siria 33.12 90 ⇑P **P 02 00 49.7 +1.9**
DRGR 33.31 88 ⇓P **P 02 00 51.0 +1.6**
KLMR Klimovskoe 33.36 57 *e*P **P 02 00 48.4 -1.3**
KLMR AMP 02 00 51.3
comp=Z,37nm,1.3s
KLMR *e*PcP **PcP 02 03 30.3 -0.8**
BZS Buzias 33.54 91 ⇓P **P 02 00 52.6 +1.2**
ARCR ARCALIA 33.95 86 ⇓P **P 02 00 55.7 +0.7**
BUR08 Bucovina Ar. S 34.02 85 P **P 02 00 56.3 +0.6**
BUR08 IAmb IAmb 02 01 01.3
comp=Z,17nm,1.3s
BURAR Bucovina Array 34.05 85 ⇓P **P 02 00 56.9 +1.0**
BURAR Bucovina Array 34.05 85 P **P 02 00 56.6 +0.6**
AKASG Malin Array Be 34.11 78 P **P 02 00 56.3 0.0**
comp=Z,3.3nm,0.7s,baz=308,slow=8.8,SNR=12
AKASG PcP **PcP 02 03 31.9 -1.5**
comp=Z,0.2nm,0.3s,baz=306,slow=2.6,SNR=4.8
AKASG Malin Array Be 34.11 78 P **P 02 00 54.9 -1.4**
AKBB Malin Array Si 34.11 78 P **P 02 00 56.0 -0.3**
AKBB IAmb IAmb 02 01 03.6
comp=Z,12nm,1.1s
MDVR Moldovita 34.16 92 ⇓P **P 02 00 56.7 -0.2**
GZR Gura Zlata 34.29 90 ⇓P **P 02 00 59.0 +1.0**
HERR Herculane 34.46 91 ⇑P **P 02 01 00.0 +0.7**
N57A Milroy 34.64 259 P 02 01 01.9
baz=41
PRAR RASCA 34.73 85 ⇓P **P 02 01 03.0 +1.3**
LOT Lotru 34.76 89 ⇓P **P 02 01 02.9 +0.7**
O58A Lewisberry 34.80 258 P 02 01 02.9
baz=41
ERPA Erie 34.87 263 P 02 01 03.9
baz=43
KEST Kesra 34.88 115 P **P 02 01 03.6 +0.4**
comp=Z,8.8nm,1.0s,baz=297,slow=5.2,SNR=7.1
N56A West Decatur 34.90 260 P 02 01 04.2
baz=42
BIZ Bicaz 34.95 85 ⇑P **P 02 01 05.1 +1.5**
P59A Jarrettsville 34.95 256 P 02 01 04.8
baz=40
BOVS Bovan 34.97 93 ⇓P **P 02 01 03.7 -0.1**
OBN Obninsk 35.07 67 P **P 02 01 05.2 +0.7**
comp=Z,1.3nm,0.5s,baz=247,slow=20,SNR=3.2
OBN Obninsk 35.07 67 P **P 02 01 04.2 -0.4**
OBN IAmb IAmb 02 01 06.4
comp=Z,15nm,1.1s
O57A Amberson 35.09 258 P 02 01 05.9
baz=41
M54A Oil Creek Stat 35.15 262 P 02 01 06.1
baz=42
DOPR Dopca 35.23 87 ⇓P **P 02 01 07.0 +0.9**
ARR Arges 35.26 88 ⇓P **P 02 01 07.7 +1.3**
SORM Soroca 35.30 82 ⇑P **P 02 01 07.3 +0.7**
OZUR 35.35 87 ⇓P **P 02 01 08.4 +1.3**
VOIR 35.42 88 ⇑P **P 02 01 08.7 +0.9**
O56A Blue Knob Stat 35.52 259 P 02 01 09.2
baz=41
M53A WI Miller and 35.71 263 P 02 01 10.5
baz=42
N54A Moraine State 35.72 262 P 02 01 10.9
baz=42
MLR Muntele Rosu 35.84 87 P **P 02 01 13.6 +2.1**
comp=Z,2.2nm,1.0s,baz=312,slow=2.3,SNR=2.6
MLR Muntele Rosu 35.84 87 P **P 02 01 14.1 +2.6**
MLR IAmb IAmb 02 01 18.9
comp=Z,19nm,1.6s
VRI Vrincioaia 35.99 86 ⇑P **P 02 01 14.1 +1.5**
R60A Leonardtown, M 36.05 255 P 02 01 13.7
baz=39
VTS Vitosha 36.48 93 ⇑P **P 02 01 17.7 +0.7**
EYMN Ely 36.71 280 P 02 01 19.4
baz=49
O52A Adamsville 37.29 262 P **P 02 01 24.6 +0.9**
O52A IAmb IAmb 02 01 29.0
comp=Z,22nm,1.2s
S58A Poland Farm, P 37.29 256 P 02 01 24.7
baz=39
R56A Bull Pasture M 37.35 258 P 02 01 24.6
baz=40
ULM Lac du Bonnet 37.40 286 P **P 02 01 23.4 -1.2**
comp=Z,6.7nm,0.8s,baz=55,slow=8.5,SNR=10
ULM Lac du Bonnet 37.40 286 P **P 02 01 25.8 +1.3**
FFC Flin Flon 37.54 295 P **P 02 01 26.3 +0.6**
Q53A Leroy 38.08 261 P 02 01 29.9
baz=40
YKA Yellowknife Ar 38.36 312 P **P 02 01 31.9 -0.6**
comp=Z,5.5nm,0.9s,baz=58,slow=9.2,SNR=27
YKA PcP **PcP 02 03 44.5 -1.4**
comp=Z,0.7nm,0.8s,baz=50,slow=3.4,SNR=5.8
AGMN Agassiz Nation 38.67 283 P 02 01 35.4
baz=48
KIRV Kirov 38.80 55 P **P 02 01 36.5 +0.3**
comp=Z,5.2nm,0.4s,baz=289,slow=7.4,SNR=5.5
ALN Alexandroupoli 39.17 92 IAmb IAmb 02 01 44.9
comp=Z,34nm,1.4s
P49A Miami Univ. Ec 39.19 264 P 02 01 40.9
baz=41
JFWS Jewell Farm 39.54 273 P 02 01 42.7
baz=44
P48A Milroy 39.61 265 P **P 02 01 44.9 +1.7**
L40A Anamosa 40.66 273 IAmb IAmb 02 01 55.3
comp=Z,13nm,0.9s
HDIL Hopedale 40.77 270 P 02 01 53.5
baz=42
WCI Wyandotte Cave 40.98 265 P 02 01 55.4
baz=40
INK Inuvik 41.11 327 P **P 02 01 55.9 +0.6**
comp=Z,1.3nm,0.8s,baz=22,slow=12,SNR=4.5
Q44A Meyer Farm, Va 41.86 268 IAmb IAmb 02 02 05.3
comp=Z,20nm,1.1s
NHSC New Hope 41.92 254 P 02 02 02.8
baz=36
ECSD EROS Data Cent 42.20 279 P 02 02 05.1
baz=44
T47A Sharon Grove 42.34 264 IAmb IAmb 02 02 09.4
comp=Z,18nm,1.1s
P40A Paris 42.95 271 IAmb IAmb 02 02 13.8
comp=Z,19nm,1.1s
GOGA Godfrey 43.31 257 P 02 02 12.7
baz=37
WVT Waverly 43.38 264 P **P 02 02 13.7 -0.4**
WVT Waverly 43.38 264 P 02 02 13.3
baz=39
CCM Cathedral Cave 43.64 269 P **P 02 02 16.6 +0.3**
CCM IAmb IAmb 02 02 19.0
comp=Z,12nm,0.9s
CCM Cathedral Cave 43.65 269 P 02 02 15.6
baz=40
BRTR Keskin Array B 43.93 87 P **P 02 02 19.6 +0.8**
comp=Z,3.2nm,1.1s,baz=334,slow=8.2,SNR=6.8
BRTR Keskin Array B 43.93 87 P **P 02 02 19.0 +0.2**
ARU Arti 43.98 53 P **P 02 02 19.6 +0.8**
ARU IAmb IAmb 02 02 24.8
comp=Z,21nm,1.1s
NRIK Noril'sk 44.14 27 P **P 02 02 20.7 +0.8**
comp=Z,1.2nm,0.3s,baz=299,slow=7.0,SNR=6.9
NRIK Noril'sk 44.14 27 P **P 02 02 20.6 +0.8**
NRIK IAmb IAmb 02 02 22.1
comp=Z,15nm,1.4s
TAM Tamanrasset 44.42 129 P **P 02 02 23.5 +0.7**
TAM IAmb IAmb 02 02 25.4
comp=Z,16nm,1.4s
BMAR Burnt Mountain 44.71 330 P **P 02 02 25.2 +0.6**
MGMO Mountain Grove 44.86 269 IAmb IAmb 02 02 29.3
comp=Z,17nm,1.1s
LAO LASA Array 44.88 289 IAmb IAmb 02 02 30.2
comp=Z,15nm,1.1s
LAO LASA Array 44.88 289 P 02 02 26.6
baz=45
S39A Bolivar 44.99 270 IAmb IAmb 02 02 29.4
comp=Z,23nm,1.6s
TOLK Toolik Lake Re 45.00 333 P 02 02 26.4
baz=39
LCAR Lake Charles 45.12 267 IAmb IAmb 02 02 31.1
comp=Z,9.6nm,1.0s
LRAL Lakeview Retre 45.39 260 IAmb IAmb 02 02 33.1
comp=Z,17nm,1.2s
LRAL Lakeview Retre 45.39 260 P 02 02 29.6
baz=37,SNR=5.1
KSU1 Kansas State U 45.60 274 P **P 02 02 32.0 +0.1**
KSU1 Kansas State U 45.60 274 P 02 02 31.4
baz=41
EGMT Eagleton 45.62 293 P 02 02 31.0
baz=45
KBZ Khabaz 45.67 76 P **P 02 02 34.4 +2.1**
comp=Z,4.1nm,1.0s,baz=296,slow=8.2,SNR=5.1
KBZ PcP **PcP 02 04 10.6 +0.3**
comp=Z,2.9nm,1.0s,baz=315,slow=5.7,SNR=3.5
FCAR Ozark Folk Cen 45.76 268 IAmb IAmb 02 02 37.3
comp=Z,11nm,1.3s
EGAK Eagle 45.77 326 P 02 02 32.2
baz=42
U40A Yellville 45.77 269 P 02 02 32.1
baz=39,SNR=6.4
DAWY Dawson 45.78 325 IAmb IAmb 02 02 42.9
comp=Z,8.3nm,1.1s
W41B Gary Mavity, V 46.38 267 P 02 02 37.2
baz=39,SNR=7.6
K27K Chicken 46.59 326 P 02 02 38.6
baz=41
DLBC Dease Lake 46.79 315 P **P 02 02 42.4 +1.3**
comp=Z,3.0nm,0.9s,baz=52,slow=2.0,SNR=5.1
DLBC Dease Lake 46.79 315 IAmb IAmb 02 02 46.1
comp=Z,11nm,1.2s
CCAR Cane Creek 47.12 266 P **P 02 02 44.6 +0.8**
W39A Magazine 47.15 268 P 02 02 43.7
baz=39,SNR=7.2
SCRK Sand Creek 47.18 327 P 02 02 42.6
baz=40
X40A Basin Creek Fa 47.21 267 P 02 02 43.8
baz=38,SNR=5.4
BCAR Beaver Creek A 47.24 325 P **P 02 02 46.8 +2.3**
L27K Beaver Creek, 47.26 325 P **P 02 02 46.2 +1.6**
L27K IAmb IAmb 02 02 48.8
comp=Z,12nm,1.6s
L27K Beaver Creek, 47.26 325 P 02 02 44.0
baz=40
IL31 47.35 329 P **P 02 02 47.2 +1.9**
IL31 IAmb IAmb 02 02 49.6
comp=Z,12nm,1.4s
ILAR Eielson Array 47.35 329 P **P 02 02 46.4 +1.0**
comp=Z,2.4nm,1.0s,baz=27,slow=6.7,SNR=14
ILAR PcP **PcP 02 04 15.6 -0.4**
comp=Z,1.6nm,0.9s,baz=5.7,slow=2.3,SNR=5.5
ILAR Eielson Array 47.35 329 P **P 02 02 46.2 +0.9**
RLMT Red Lodge 47.48 289 P 02 02 47.1
baz=43
MIAR Mount Ida 47.55 268 P 02 02 47.1
baz=38,SNR=6.1
MDM Murphy Dome 47.56 329 IAmb IAmb 02 02 51.3
comp=Z,10nm,1.2s
HYT Haines Junctio 47.61 321 P **P 02 02 49.5 +2.0**
HYT IAmb IAmb 02 02 51.9
comp=Z,11nm,1.1s
TUL1 Leonard 47.62 271 P 02 02 47.9
baz=39
HDA Harding Lake 47.66 328 P 02 02 47.8
baz=38
HDA P 02 02 47.8
baz=38
I23K Minto, Yukon-K 47.70 330 P 02 02 47.7
baz=37
VBMS Vicksburg 47.82 263 P 02 02 49.2
baz=37
K22A Casper 47.96 285 P 02 02 49.9
baz=42
AKTO Aktyubinsk 47.96 59 P **P 02 02 50.9 +0.7**
comp=Z,5.4nm,0.9s,baz=311,slow=8.4,SNR=14
IMAR Indian Mountai 48.10 333 P **P 02 02 51.1 0.0**
MLY Manley 48.15 331 P 02 02 51.4
baz=36
BOZ Bozeman (W) 48.26 292 IAmb IAmb 02 02 56.9
comp=Z,10nm,1.2s
BOZ Bozeman (W) 48.27 292 P 02 02 52.0
baz=43,SNR=7.3
PAX Paxson 48.38 326 P 02 02 52.7
baz=38
PHWY Pilot Hill 48.43 283 IAmb IAmb 02 02 57.6
comp=Z,8.9nm,1.1s
X37A Clayton 48.43 269 IAmb IAmb 02 02 59.5
comp=Z,12nm,1.1s
MSO Missoula 48.45 294 P 02 02 53.4
baz=43
TIXI Tiksi 48.50 9 P **P 02 02 54.4 +0.3**
YHL Hebgen Lake 48.60 291 IAmb IAmb 02 02 59.7
comp=Z,8.3nm,1.0s

H17A	Grant Village	48.65	290	IAmb	IAmb	02 03 01.2		
	comp=Z,8.7nm,1.0s							
H17A	Grant Village	48.65	290	P		02 02 54.9		
	baz=42,SNR=7.2							
CTG	Chitna Glacier	48.72	323	P		02 02 55.4		
	baz=40							
MCK	McKinley	48.73	329	P		02 02 55.3		
	baz=37							
KSCO	Kaye Shedlock'	48.73	279	P		02 02 55.3		
	baz=40							
KOWA	Kowa	48.80	145	P	P	02 02 56.4	-0.6	
YPP	Pitchstone Pla	48.85	290	IAmb	IAmb	02 03 10.4		
	comp=Z,9.4nm,1.2s							
NEW	Newport	48.87	298	P	P	02 02 57.3	0.0	
	comp=Z,1.4nm,0.6s,baz=46,slow=5.2,SNR=3.5							
NEW	Newport	48.87	298	P		02 02 56.5		
	baz=43							
MCARA	McCarthy VSAT	48.91	324	P		02 02 56.7		
	baz=39							
FLWY	Flagg Ranch	48.94	290	P	P	02 02 58.9	+0.8	
FLWY				IAmb	IAmb	02 03 14.1		
	comp=Z,16nm,1.6s							
BPAW	Bear Paw Mtn.	48.97	330	P		02 02 57.4		
	baz=36							
N23A	Red Feather La	48.98	283	P		02 02 57.4		
	baz=41,SNR=8.2							
GNI	Garni	49.24	78	P	P	02 03 01.3	+0.9	
WAT2	Susitna Watana	49.26	328	P		02 02 59.5		
	baz=36							
WAT6	Susitna Watana	49.33	327	P		02 03 00.2		
	baz=37							
BW06	Boulder Array	49.36	288	IAmb	IAmb	02 03 04.0		
	comp=Z,14nm,1.1s							
PD31	Pinedale Array	49.36	288	IAmb	IAmb	02 03 04.0		
	comp=Z,12nm,1.1s							
PDAR	Pinedale Array	49.36	288	P	P	02 03 00.5	-0.9	
	comp=Z,8.0nm,0.9s,baz=63,slow=6.4,SNR=22							
PDAR	Pinedale Array	49.36	288	P	P	02 03 00.2	-1.2	
BW06	Boulder Array	49.36	288	P		02 03 01.1		
	baz=42,SNR=7.1							
MCMT	McKenzie Canyo	49.41	292	P	P	02 03 03.6	+1.9	
SNOW	Snow King Moun	49.42	289	IAmb	IAmb	02 03 05.7		
	comp=Z,8.8nm,1.1s							
CHUM	Lake Minchumin	49.48	330	P		02 03 01.5		
	baz=35							
REDW	Red Top Meadow	49.55	289	P	P	02 03 04.4	+1.6	
REDW				IAmb	IAmb	02 03 08.3		
	comp=Z,10nm,1.2s							
ISCO	Idaho Springs	49.64	282	IAmb	IAmb	02 03 07.2		
	comp=Z,14nm,1.4s							
ISCO	Idaho Springs	49.64	282	P		02 03 04.0		
	baz=40							
ABKAR	Akbulak array	49.67	59	P	P	02 03 03.8	+0.5	
ABKAR					PcP	02 04 23.9	-0.6	
WMOK	Wichita Mounta	50.06	272	IAmb	IAmb	02 03 09.8		
	comp=Z,10nm,1.1s							
WMOK	Wichita Mounta	50.06	272	P		02 03 07.0		
	baz=38							
GLI	Glacier Island	50.52	326	P		02 03 09.3		
	baz=36							
F10A	Beach Ranch, E	50.61	296	IAmb	IAmb	02 03 13.1		
	comp=Z,8.6nm,1.1s							
O20A	White River Ci	50.70	284	IAmb	IAmb	02 03 15.2		
	comp=Z,15nm,1.2s							
O20A	White River Ci	50.70	284	P		02 03 11.1		
	baz=40							
PLID	Pearl Lake	50.71	294	IAmb	IAmb	02 03 14.1		
	comp=Z,14nm,1.4s							
SKT	Skwentna	50.85	329	P		02 03 11.6		
	baz=34							
SUA	Susitna One	51.07	328	P	P	02 03 15.8	+1.9	
T25A	Trinidad	51.07	279	IAmb	IAmb	02 03 18.3		
	comp=Z,14nm,0.9s							
T25A	Trinidad	51.07	279	P		02 03 13.4		
	baz=39,SNR=5.2							
HLID	Hailey	51.11	292	P		02 03 13.9		
	baz=41							
BRVK	Borovoye	51.12	50	P	P	02 03 14.5	+0.2	
BRVK				IAmb	IAmb	02 03 16.3		
	comp=Z,13nm,1.2s							
SDCO	Great Sand Dun	51.15	280	P		02 03 14.9		
	baz=39							
TTA	Tatalina	51.20	332	IAmb	IAmb	02 03 31.4		
	comp=Z,13nm,1.5s							
TTA	Tatalina	51.20	332	P		02 03 14.1		
	baz=32							
HWUT	Hardware Ranch	51.21	288	IAmb	IAmb	02 03 18.4		
	comp=Z,12nm,1.1s							
AMTX	Amarillo	51.43	275	P		02 03 17.5		
	baz=38							
TCUT	Toone Canyon	51.51	288	IAmb	IAmb	02 03 34.4		
	comp=Z,9.9nm,1.0s							
WHTX	Lake Whitney,	51.55	269	P		02 03 18.0		
	baz=37							
S22A	4UR Ranch, Cre	51.82	281	P		02 03 19.1		
	baz=39,SNR=5.3							
ANM	Nome	51.85	337	P		02 03 19.6		
	baz=27							
TOA0	Torodi Ar. Sit	51.86	139	P	P	02 03 19.1	-1.1	
TOA0				IAmb	IAmb	02 03 19.7		
	comp=Z,11nm,1.1s							
TORD	Torodi Ar. Bea	51.86	139	P	P	02 03 19.1	-1.1	
	comp=Z,5.0nm,0.9s,baz=343,slow=7.4,SNR=21							
TORD	Torodi Ar. Bea	51.86	139	P	P	02 03 19.0	-1.2	
ABTX	Abilene, Hawle	52.17	271	IAmb	IAmb	02 03 25.4		
	comp=Z,14nm,1.0s							
ABTX	Abilene, Hawle	52.17	271	P		02 03 22.0		
	baz=37							
BILL	Bilibino	52.36	352	P	P	02 03 24.1	+0.8	
BILL				IAmb	IAmb	02 03 34.9		
	comp=Z,16nm,1.4s							
PV11	David Mesa, Pa	52.42	283	P	P	02 03 25.1	+0.7	
PV11				IAmb	IAmb	02 03 28.1		
	comp=Z,20nm,1.4s							
BGU	Big Grassy Mou	52.45	289	P	P	02 03 25.5	+1.0	
SRU	San Rafael Swe	52.61	285	IAmb	IAmb	02 03 29.4		
	comp=Z,7.0nm,0.9s							
DUG	Dugway, Tooele	52.90	288	P	P	02 03 28.4	+0.5	
MVCO	Mesa Verde	53.08	282	IAmb	IAmb	02 03 33.0		
	comp=Z,8.6nm,1.0s							
MVCO	Mesa Verde	53.08	282	P		02 03 29.5		
	baz=39							
Q16A	Castle Valley	53.08	286	IAmb	IAmb	02 03 32.7		
	comp=Z,10nm,1.2s							
J08A	Circle Bar Ran	53.18	294	IAmb	IAmb	02 03 32.9		
	comp=Z,7.1nm,1.0s							
ELK	Elko	53.66	290	P	P	02 03 32.8	-0.8	
	comp=Z,4.2nm,0.9s,baz=31,slow=4.8,SNR=15							
ELK				LR	LR	02 25 00.6		
	comp=Z,384nm,21.4s,baz=356,slow=34							
ELK	Elko	53.66	290	IAmb	IAmb	02 03 38.3		
	comp=Z,7.3nm,1.1s							
ANMO	Albuquerque	53.81	279	P	P	02 03 36.4	+1.6	
ANMO	Albuquerque	53.82	279	P		02 03 35.0		
	baz=38							
JCT	Junction City	53.96	270	P		02 03 35.5		
	baz=36							
WVOR	Wild Horse Val	53.97	294	IAmb	IAmb	02 03 58.5		
	comp=Z,9.3nm,0.9s							
MTPU	Mount Pierson	54.26	286	IAmb	IAmb	02 03 48.5		
	comp=Z,11nm,1.4s							
BRZS	Berezniki	54.45	51	eP	P	02 03 38.9	-0.1	
	comp=Z,9.3nm,1.1s,baz=51							
SPR3	Spring Creek 3	54.57	288	IAmb	IAmb	02 03 45.4		
	comp=Z,13nm,1.2s							
PSUT	Pine Spring	54.70	287	IAmb	IAmb	02 03 45.2		
	comp=Z,9.1nm,1.0s							
GDL2	Guadalupe Moun	54.92	275	P	P	02 03 42.9	+0.2	
SZCU	Shurtz Canyon	55.06	286	IAmb	IAmb	02 03 46.8		
	comp=Z,13nm,1.5s							
MOD	Modoc Plateau	55.16	295	IAmb	IAmb	02 03 47.4		
	comp=Z,11nm,1.1s							
KNB	Kanab	55.38	285	IAmb	IAmb	02 03 49.1		
	comp=Z,14nm,1.2s							
LCMT	Little Creek M	55.59	286	IAmb	IAmb	02 03 53.8		
	comp=Z,13nm,1.6s							
ZAA0	Zalesovo Array	55.67	40	P	P	02 03 47.0	-0.7	
ZAA0				IAmb	IAmb	02 03 52.3		
	comp=Z,9.9nm,1.2s							
ZALV	Zalesovo Beam	55.67	40	P	P	02 03 48.1	+0.5	
	comp=Z,3.4nm,1.0s,baz=308,slow=7.1,SNR=3.5							
ZALV				PcP	PcP	02 04 47.1	+0.1	
	comp=Z,0.8nm,0.6s,baz=343,slow=4.5,SNR=2.1							
R11A	Troy Canyon, C	55.69	288	IAmb	IAmb	02 03 52.1		
	comp=Z,11nm,1.2s							
R11A	Troy Canyon, C	55.69	288	P		02 03 47.7		
	baz=38,SNR=6.5							

WUAZ	Wupatki	55.84	283	IAmb	IAmb	02 03 53.1		
	comp=Z,11nm,0.9s							
WUAZ	Wupatki	55.84	283	P		02 03 48.8		
	baz=38							
MNTX	Cornudas Mount	55.84	276	P		02 03 48.7		
	baz=37							
PRN	Pahroc Range	56.17	287	IAmb	IAmb	02 03 55.9		
	comp=Z,10nm,1.1s							
121A	Cookes Peak, D	56.40	278	IAmb	IAmb	02 03 57.3		
	comp=Z,5.8nm,0.8s							
121A	Cookes Peak, D	56.40	278	P		02 03 53.2		
	baz=37							
YBH	Yreka Blue Hor	56.41	296	LR	LR	02 27 32.7		
	comp=Z,876nm,18.8s,baz=16,slow=36							
TXAR	Lajitas Array	56.86	272	P	P	02 03 55.5	-1.1	
	comp=Z,2.4nm,1.0s,baz=56,slow=6.4,SNR=12							
TXAR				PcP	PcP	02 04 51.4	-0.8	
	comp=Z,0.5nm,0.7s,baz=75,slow=1.0,SNR=1.7							
TXAR	Lajitas Array	56.86	272	P	P	02 03 58.2	+1.5	
NVAR	Mina Array Bea	56.94	291	P	P	02 03 56.8	-0.5	
	comp=Z,1.7nm,0.8s,baz=46,slow=4.7,SNR=9.6							
SEM	Semipalatinsk	57.00	46	eP	P	02 03 57.1	-0.4	
	comp=Z,5.7nm,1.2s,baz=46							
TPNV	Topopah Spring	57.12	288	P	P	02 03 58.6	+0.2	
TPNV				IAmb	IAmb	02 04 04.9		
	comp=Z,6.3nm,0.9s							
TPNV	Topopah Spring	57.12	288	P		02 03 58.0		
	baz=37							
GEYT	Alibeck	57.54	70	P	P	02 04 01.7	+0.4	
	comp=Z,4.6nm,1.0s,baz=342,slow=12,SNR=5.1							
GEYT	Alibeck	57.54	70	P	P	02 04 02.4	+1.1	
GRAC	Grapevine Rang	57.62	289	P		02 04 02.4		
	baz=37,SNR=6.8							
319A	Douglas	58.08	278	P	P	02 04 06.0	+0.7	
319A				IAmb	IAmb	02 04 09.3		
	comp=Z,10nm,1.2s							
TUC	Tucson	58.09	280	P	P	02 04 06.1	+0.8	
TUC	Tucson	58.09	280	P		02 04 05.4		
	baz=36							
PDMCI	Parker Dam,Lak	58.18	284	P		02 04 05.7		
	baz=37							
CWC	Cottonwood Cre	58.41	289	P		02 04 07.4		
	baz=37							
GMRC	Granite Mounta	58.55	286	P		02 04 07.6		
	baz=37,SNR=6.1							
BTLS	Baital	58.97	53	eP	P	02 04 11.6	+0.5	
	baz=54							
KKAR	Karatay Array	59.06	57	P	P	02 04 12.7	+0.8	
ISA	Isabella, Lake	59.22	289	IAmb	IAmb	02 04 17.6		
	comp=Z,9.2nm,1.1s							
ISA	Isabella, Lake	59.22	289	P		02 04 13.3		
	baz=36							
BELC	Belle Mtn. Jos	59.34	286	P		02 04 14.4		
	baz=36,SNR=5.5							
BC3	Big Chuckawall	59.35	285	P		02 04 14.2		
	baz=36							
DZA	Taraz	59.58	57	eP	P	02 04 16.1	+0.7	
	baz=57							
EDW2	Edwards Air Fo	59.62	288	P		02 04 16.1		
	baz=36							
IUG	Iuzhnay	59.63	58	eP	P	02 04 16.4	+0.5	
	baz=58							
PFO	Pinyon Flats O	59.88	286	LR	LR	02 29 59.2		
	comp=Z,431nm,19.3s,baz=42,slow=36							
PFO	Pinyon Flats O	59.88	286	P	P	02 04 17.8	0.0	
PFO	Pinyon Flats O	59.88	286	P		02 04 18.0		
	baz=36,SNR=5.1							
TPFO	Pinon Flats	59.88	286	P		02 04 17.9		
	baz=36							
MONP2	Monument Peak	60.44	285	P		02 04 21.5		
	baz=36							
PKM	Mcpherson Peak	60.49	289	P		02 04 21.5		
	baz=36							
SGDS	Sogindy	60.52	54	eP	P	02 04 22.4	+0.5	
	comp=Z,7.2nm,1.6s,baz=54							
MAKZ	Makanchi	60.63	47	P	P	02 04 23.1	+0.6	
BAR	Barrett	60.74	285	P	P	02 04 23.9	+0.4	
BAR				IAmb	IAmb	02 04 27.6		
	comp=Z,5.5nm,0.9s							
MK31	Makanchi Array	60.76	47	IAmb	IAmb	02 04 24.8		
	comp=Z,8.4nm,1.1s							
MKAR	Makanchi Array	60.76	47	P	P	02 04 23.5	+0.1	
	comp=Z,11nm,1.0s,baz=336,slow=5.7,SNR=36							
TDK	Taldyqorghan	60.76	50	eP	P	02 04 24.3	+0.9	
	baz=51							
CIS	Catalina Islan	61.01	287	P		02 04 24.5		
	baz=36							
AAK	Ala-Archa	61.13	55	P	P	02 04 26.5	+0.4	
SCZ2	Santa Cruz Isl	61.13	288	P		02 04 25.5		
	baz=36							
ZSN	Zaisan	61.15	45	eP	P	02 04 26.3	+0.3	
	baz=45							
AAA	Alma-Ata	61.66	53	eP	P	02 04 30.8	+1.2	
	baz=53							
ZAIG	Zacatecas	61.67	267	P	P	02 04 31.3	+1.1	
MDOK	Medeo	61.75	52	eP	P	02 04 31.1	+0.7	
	baz=53							
TNSS	Tian-Shan	61.81	53	eP	P	02 04 32.0	+0.9	
	baz=53							
BOOM	Boomskoye usch	61.85	54	IAmb	IAmb	02 04 35.4		
	comp=Z,9.8nm,1.3s							
MTO3	Montecristo	62.12	250	P	P	02 04 32.5	-0.7	
MTO3				IAmb	IAmb	02 04 37.6		
	comp=Z,7.5nm,1.1s							
KPKS	Kokpek	62.15	51	eP	P	02 04 33.6	+0.6	
	comp=Z,9.6nm,1.1s,baz=52							
SATY	Saty	62.38	52	eP	P	02 04 34.9	+0.3	
	comp=Z,8.4nm,1.3s,baz=52							
UZB	Uzynbulak	62.55	51	eP	P	02 04 36.0	+0.3	
	baz=52							
SHLS	Shalkode	62.72	51	eP	P	02 04 38.9	+2.1	
	comp=Z,9.3nm,1.1s,baz=51							
RAYN	Ar Rayn	62.86	89	P	P	02 04 38.4	+0.5	
RAYN				IAmb	IAmb	02 04 42.3		
	comp=Z,7.8nm,1.6s							
ROSC	El Rosal	63.94	230	P	P	02 04 46.4	+0.9	
	comp=Z,7.0nm,0.6s,baz=45,slow=9.0,SNR=6.9							
ROSC	El Rosal	63.94	230	P	P	02 04 46.6	+1.1	
KSH	Kashi	64.34	55	P	P	02 04 50.5	+2.9	
KSH				pP	pP	02 04 52.6	+4.1	
KSH				S	S	02 13 28.4	+2.2	
KSH				pmax	pmax			
	comp=Z,13nm,1.0s							
KSH				pmax	pmax			
	comp=Z,120nm,5.1s							
KSH				LR	LR			
	comp=N,320nm,16.5s							
KSH				LR	LR			
	comp=E,350nm,14.4s							
KSH				LR	LR			
	comp=Z,450nm,16.5s							
WMQ	Urumqi	65.28	45	eP	P	02 04 56.4	+2.8	
WMQ				pmax	pmax			
	comp=Z,53nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,130nm,3.7s							
WMQ				LR	LR			
	comp=N,1μm,29.0s							
WMQ				LR	LR			
	comp=E,2μm,29.1s							
WMQ				LR	LR			
	comp=Z,220nm,25.9s							
UOSS	Minazif	67.14	80	P	P	02 05 05.5	-0.2	
SONM	Songino Array	67.47	30	P	P	02 05 06.7	-0.9	
	comp=Z,1.7nm,0.9s,baz=325,slow=6.4,SNR=12							
SONM	Songino Array	67.47	30	P	P	02 05 06.7	-0.9	
SONM				IAmb	IAmb	02 05 09.1		
	comp=Z,5.7nm,1.4s							
ULN	Ulaanbaatar	67.61	30	P	P	02 05 08.6	0.0	
NIL	Nilore	68.08	61	P	P	02 05 11.7	+0.1	
GTA	Gaotai	73.32	38	⇓P	P	02 05 43.4	-0.1	
GTA				pP	PcP	02 05 56.1	-3.8	
GTA				sP	sP	02 06 00.9	+16	
GTA				pmax	pmax			
	comp=Z,9.0nm,1.4s							
GTA				pmax	pmax			
	comp=Z,66nm,5.1s							
GTA				LR	LR			
	comp=N,89nm,16.7s							
GTA				LR	LR			
	comp=E,140nm,16.0s							
GTA				LR	LR			
	comp=Z,100nm,17.4s							
HHC	Hu-ho-hao-te	75.31	29	eP	P	02 05 55.8	+0.7	
HHC				pmax	pmax			
	comp=Z,19nm,0.9s							
HHC				pmax	pmax			
	comp=Z,80nm,5.9s							
HHC				LR	LR			
	comp=N,130nm,15.3s							
HHC				LR	LR			
	comp=E,150nm,16.2s							
HHC				LR	LR			
	comp=Z,140nm,14.5s							
USRK	Ussuriysk Ar.	75.80	13	P	P	02 05 57.6	-0.1	
	comp=Z,1.8nm,0.9s,baz=301,slow=6.1,SNR=4.6							
USRK	Ussuriysk Ar.	75.80	13	P	P	02 05 56.8	-0.8	
BDFB	Brasilia	76.09	198	P	P	02 05 59.2	-0.3	
	comp=Z,3.7nm,0.8s,baz=27,slow=9.9,SNR=5.1							
SOCY	Socotra	76.71	89	P	P	02 05 59.5	-3.7	
SOCY				IAmb	IAmb	02 06 01.8		
	comp=Z,8.9nm,1.1s							
KMBO	Kilima Mbogo	79.69	110	LR	LR	02 43 13.5		
	comp=Z,106nm,18.0s,baz=316,slow=37							
XAN	Xi'an	81.02	33	P	P	02 06 26.3	-0.4	
XAN				pP	PcP	02 06 33.3	+0.1	
XAN				pmax	pmax			
	comp=Z,8.0nm,0.9s							
XAN				LR	LR			
	comp=N,150nm,13.0s							
XAN				LR	LR			
	comp=E,130nm,11.9s							
KSRS	Korea Array	81.89	17	P	P	02 06 30.6	-0.6	
	comp=E,1.2nm,0.5s,baz=345,slow=4.4,SNR=6.7							
KSRS				LR	LR	02 43 48.1		
	comp=E,25nm,18.0s,baz=350,slow=36							
KSAR	Wonju Array Be	81.90	17	P	P	02 06 29.4	-1.8	
CD2	Chengdu	82.39	39	P	P	02 06 34.0	0.0	
CD2				pmax	pmax			
	comp=Z,20nm,0.9s							
PB16	IPOC Station P	83.75	217	P	P	02 06 40.5	-1.1	
MJAR	Matsushiro Arr	84.01	9	P	P	02 06 42.0	-0.2	
	comp=Z,1.0nm,0.4s,baz=336,slow=6.1,SNR=6.2							
PB11	IPOC Station P	85.14	217	P	P	02 06 47.6	-0.5	
NJ2	Nanjing	85.43	26	eP	P	02 06 49.3	-0.1	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
KMI	Kunming	87.40	42	⇓P	P	02 06 57.3	-2.2	
KMI				pmax	pmax			
	comp=Z,8.0nm,0.7s							
CPUP	Villa Florida	88.22	204	P	P	02 07 00.8	-2.0	
	comp=Z,1.9nm,0.9s,baz=62,slow=11,SNR=3.1							
CMAR	Chiang Mai Arr	92.16	47	P	P	02 07 21.4	-0.2	
	comp=Z,1.0nm,0.2s,baz=326,slow=6.3,SNR=7.3							
CMAR	Chiang Mai Arr	92.16	47	P	P	02 07 20.8	-0.8	
BOSA	Boshof	98.87	133	LR	LR	02 51 25.9		
	comp=Z,74nm,20.2s,baz=3.5,slow=35							
VNA1	Neumayer--Stat	130.63	171	Pdiff	Pdif	02 10 11.5	-0.4	
VNA2	Neumayer--Watz	130.97	170	PKPdf	PKPdf	02 13 20.5	-1.3	
VNA2	Neumayer--Watz	130.97	170	Pdiff	Pdif	02 10 12.9	-0.6	
VNA3	Neumayer Olymp	131.09	171	PKPdf	PKPdf	02 13 20.9	-1.2	
VNA3	Neumayer Olymp	131.09	171	Pdiff	Pdif	02 10 20.3	+6.2	
SNAA	Sanae	132.11	169	PKPdf	PKPdf	02 13 22.5	-1.6	
ASAR	Alice Springs	142.66	24	PKhKP	PKPpre	02 13 39.8		
	comp=Z,1.2nm,0.9s,baz=17,slow=3.8,SNR=6.7							
ASAR	Alice Springs	142.66	24		PKPpre	02 13 39.4		
STKA	Stephens Creek	152.01	15	PKPbc	PKPbc	02 14 05.6	-1.1	
	comp=Z,5.7nm,1.0s,baz=326,slow=5.9,SNR=4.9							
STKA	Stephens Creek	152.01	15		PKPbc	02 14 05.3	-1.4	
VNDA	Vanda	161.27	188	PKPab	PKPab	02 14 54.5	-0.2	
	comp=Z,0.9nm,0.8s,baz=194,slow=4.1,SNR=5.4							
VNDA	Vanda	161.27	188		PKPab	02 14 54.8	+0.1	

IDC ***22*** *02:31:17.0±3.1,27.56N±54.59E,h0km,mb3.6/4, mb1 3.6/4,mb1mx3.3/30,mbtmp3.7/4,Error ellipse: s-maj=69.8km s-min=34.2km az=147.0*
TEH ***22*** *02:31:21.7,27.83N±54.47E,h14km,ML3.5*
OMAN ***22*** *02:31:30.0,27.11N±54.25E,h5km,mb5.2/10,ml3.1/13, ms2.8/6*

ISC 22 02:31:21.1±0.7,**27.76N**±0.04±**54.37E**±0.05,**h10**km,**n64,**
σ25**53**/83,**mb3.7**/3,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res	ISC
							h m s		
LAR1	LAR	0.09	180	eP	g	Pg	02 31 26.2	+2.5	
JHRM	Jahrom	1.02	317	eP	g	Pg	02 31 41.3	+0.6	
LMD1	Lamerd	1.15	249	eP	g	Pg	02 31 45.9	+2.6	
QIR1	Qir	1.37	301	eP	g	Pb	02 31 48.1	+1.2	
QIR1				eSg		Sg	02 32 07.9	+2.6	
GENO	Geno	1.64	102	eP	g	Pn	02 31 50.9	+0.8	
SHME	Shamm	2.33	137	ePn		Pn	02 32 01.2	+1.8	
SHME	Shamm	2.33	137	P		Pn	02 32 02.9	+3.5	
SHI	Shiraz	2.48	319	ePn		Pn	02 32 03.8	+2.0	
BANOM	Banah	2.51	136	ePn		Pn	02 32 03.7	+1.7	
NGRK	Negar Kerman	2.79	47	ePn		Pn	02 32 06.3	+0.1	
MASF	Masafi	2.87	146	P		Pn	02 32 10.1	+3.2	
MSFE	Esma-Masafi	2.88	146	ePn		Pn	02 32 08.7	+1.6	
NAZ	Nazwa, Dubai	3.00	157	ePn		Pn	02 32 11.6	+3.0	
NAZ	Nazwa, Dubai	3.00	157	P		Pn	02 32 13.1	+4.5	
MDH	Madha	3.00	144	ePn		Pn	02 32 10.7	+2.0	
MDH	Madha	3.00	144	P		Pn	02 32 12.2	+3.5	
KAZ1	Kazerun	3.04	308	ePn		Pn	02 32 12.1	+2.8	
TVBK	TV Kerman	3.05	43	ePn		Pn	02 32 15.5	+0.8	
JRN	Qarnain Island	3.12	206	ePn		Pn	02 32 13.1	+2.7	
JRN	Qarnain Island	3.12	206	P		Pn	02 32 11.0	+0.6	
KHGB	Koh Gabri	3.19	35	ePn		Pn	02 32 12.1	+0.6	
FAQ	Al Faqa, Dubai	3.20	160	ePn		Pn	02 32 14.7	+3.3	
FAQ	Al Faqa, Dubai	3.20	160	P		Pn	02 32 15.4	+3.9	
ASUD	Al Ashush, Dub	3.24	164	ePn		Pn	02 32 14.6	+2.6	
UOSS	Minazif	3.25	149	ePn		Pn	02 32 14.1	+1.9	
UOSS	Minazif	3.25	149	P		Pn	02 32 15.2	+3.0	
HATD	Hatta, Dubai	3.32	151	ePn		Pn	02 32 13.5	+0.3	
HATD	Hatta, Dubai	3.32	151	P		Pn	02 32 16.8	+3.6	
CHMN	Cheshme madani	3.48	52	ePn		Pn	02 32 17.5	+1.9	
IMEH	Mehriz	3.62	3	ePn		Pn	02 32 17.6	+0.1	
KBAM	BAM	3.84	68	ePn		Pn	02 32 21.3	+0.9	
IBAF	Bafgh	3.95	15	ePn		Pn	02 32 23.1	+1.2	
KLNJ	Kolanjah	4.04	324	ePn		Pn	02 32 23.3	-0.1	
SOHO	SOHO	4.10	151	ePn		Pn	02 32 26.1	+2.2	
SOHO	SOHO	4.10	151	P		Pn	02 32 26.1	+2.2	
ISAD	Sadrabad	4.18

1.4nm,0.9s,baz=145,slow=8.4,SNR=3.6

TORD	**Torodi Ar. Bea**	**51.09**	**265**	P		**P**	**02 40 22.8**	**-1.4**
	0.4nm,0.6s,baz=65,slow=8.2,SNR=8.1							

IDC 22 02:46:38.5±3.2, 27°51'S×67°04'W, h0km, mb3.7/1, mb1 3.2/4, mb1mx3.2/22, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=71.2km s-min=42.3km az=42.0, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**5.16**	**340**	Pn	Pn	02 47 57.5	+0.2
	0.4nm,0.3s,baz=114,slow=20,SNR=2.2						
CPUP	**Villa Florida**	**8.75**	**85**	Pn	Pn	02 48 48.0	+1.8
	0.1nm,0.3s,baz=265,slow=8.4,SNR=1.8						
SIV	**San Ignacio**	**12.72**	**27**	Pn	Pn	02 49 40.6	-0.2
	0.1nm,0.3s,baz=227,slow=18,SNR=1.7						
TORD	**Torodi Ar. Bea**	**77.88**	**68**	P	P	02 58 37.1	-1.4
	0.5nm,0.7s,baz=246,slow=5.8,SNR=3.1						
MKAR	**Makanchi Array**	**149.17**	**43**	PKPbc	PKPbc	03 06 29.4	+0.6
	0.3nm,0.7s,baz=281,slow=3.3,SNR=3.0						

*IDC **22** 02:49:51.4±4.3,5.50S×147.33E,h216km±45km,mb3.2/3, mb1 3.4/5,mb1mx3.1/25,mbtmp3.7/5, Error ellipse: s-maj=75.0km s-min=26.1km az=133.0*

ISC 22 02:49:50.0±1.4, 5°55'±0°1'×147°2E±0°3, h200km, n6, σ2s50/7, mb3.7/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.86**	**180**	P	Pn	02 50 52.8	+2.8
	1.3nm,0.3s,baz=190,slow=11,SNR=1.6						
PMG				S	Sn	02 51 34.1	-3.3
	7.1nm,0.3s,baz=200,slow=21,SNR=9.1						
WRA	**Warramunga Arr**	**19.02**	**220**	P	Pn	02 53 58.6	-1.5
	0.6nm,0.3s,baz=48,slow=12,SNR=26						
ASAR	**Alice Springs**	**22.12**	**214**	P	P	02 54 31.1	+1.6
	1.2nm,0.5s,baz=48,slow=8.5,SNR=19						
FITZ	**Fitzroy Crossi**	**24.48**	**237**	P	P	02 54 51.4	+0.5
	1.8nm,0.6s,baz=54,slow=11,SNR=6.8						
ILAR	**Eielson Array**	**84.97**	**23**	P	P	03 02 01.7	-0.8
	0.4nm,0.8s,baz=242,slow=6.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**145.15**	**285**	PKPbc	PKPbc	03 09 03.8	-1.0
	0.2nm,0.5s,baz=71,slow=3.5,SNR=5.8						

*UCR **22** 03:38:58.5±2.2,9.42N×85.97W,h22km±6km,MW4.5, mb4.2(NEIC)*
*INET **22** 03:39:00.5,9.43N×85.79W,h15km,MW3.9*
*UPA **22** 03:39:01.8±1.4,9.41N×85.86W,h28km±54km,MW4.6*
*IDC **22** 03:39:05.7±0.9,11.11N×85.11W,h0km,mb3.8/6, mb1 4.2/8,mb1mx3.9/34,mbtmp3.8/8,ML3.3/2,MS3.0/5, Ms1 3.0/5,ms1mx2.7/30, Error ellipse: s-maj=36.1km s-min=13.0km az=70.0*
*NEIC **22** 03:39:05.6±1.9,9.89N±0.06×85.36W±0.06,h58km±6km, mb4.2/24, Error ellipse: s-maj=11.1km s-min=6.3km az=220.0*

ISC 22 03:38:59.6±1.7, 9°47N±0°05×85°86W±0°05, h16km±10km, n91, σ1s16/101, mb4.2/18, 1C-14D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.49**	**26**	*e*P	**Pg**	**03 39 10.1**	**+0.6**
GRZA				*e*S	**Sn**	**03 39 19.8**	**-0.4**
INDI	**Punta indio, G**	**0.53**	**41**	*e*P	**Pb**	**03 39 11.1**	**+0.7**
SAJU	**San Juanillo,**	**0.61**	**13**	*e*P	**Pg**	**03 39 11.6**	**-0.2**
SAJU				*e*S	**Sb**	**03 39 22.2**	**+1.9**
CAO2	**Cobano, Puntar**	**0.77**	**73**	Pn	**Pb**	**03 39 14.1**	**-0.5**
ORTG	**Ortega, Santa**	**0.97**	**24**	Pn	**Pb**	**03 39 16.8**	**-1.4**
ORTG					Sn	**03 39 25.9**	**-4.9**
LAFE	**Finca La Fe, P**	**0.99**	**70**	*e*P	**Pb**	**03 39 17.3**	**-1.0**
PLVR	**Palo Verde**	**1.01**	**29**	*e*P	**Pb**	**03 39 16.7**	**-2.0**
JTS	**Las Juntas de**	**1.21**	**47**	Pg	**Pn**	**03 39 21.5**	**-0.3**
	198nm,0.3s,baz=298,slow=3.9,SNR=835						
JTS				Lg	Lg	03 39 39.1	
	185nm,0.3s,baz=46,slow=16,SNR=6.2						
JTS	**Las Juntas de**	**1.21**	**47**	*e*P	**Pn**	**03 39 21.8**	**0.0**
JTS				*e*S	**Sn**	**03 39 38.9**	**+1.0**
JTS	**Las Juntas de**	**1.21**	**47**	*e*P	**Pn**	**03 39 21.4**	**-0.5**
JTS	**Las Juntas de**	**1.21**	**47**		**Pn**	**03 39 21.3**	**-0.5**
JTS				Sn	Sb	03 39 27.1	-10
COLC	**Colonia**	**1.35**	**28**	*i*P	**Pn**	**03 39 23.2**	**-0.7**
COLC				*i* S	**Sb**	**03 39 42.6**	**+0.9**
LAPC	**Finca la Perla**	**1.36**	**18**	*i*P	**Pn**	**03 39 22.8**	**-1.1**
LIM1	**Limonal**	**1.36**	**26**	*i*P	**Pn**	**03 39 23.2**	**-0.8**
GBS3	**Finca Las Img**	**1.36**	**17**	*i* P	**Pn**	**03 39 22.9**	**-1.1**
CUI	**Cuipilapa**	**1.36**	**30**	*i*P	**Pn**	**03 39 23.3**	**-0.7**
CUI				*i* S	**Sb**	**03 39 43.0**	**+0.9**
GPS2	**Hotel Rincn d**	**1.37**	**21**	*i*P	**Pn**	**03 39 23.3**	**-0.8**
GUAB	**Guayabo de Bag**	**1.38**	**26**	*i*P	**Pn**	**03 39 23.4**	**-0.8**
GUAB				*i* S	**Sb**	**03 39 43.7**	**+0.8**
BUEV	**Buena Vista**	**1.39**	**18**	*i*P	**Pn**	**03 39 23.6**	**-0.9**
BUEV				*e*P	**Pb**	**03 39 23.7**	**-1.6**
HORNC	**Hornillas**	**1.41**	**28**	*i*P	**Pn**	**03 39 23.7**	**-0.9**
HORNC				*i* S	**Sn**	**03 39 43.6**	**+0.8**
ACAL	**Aguas Claras**	**1.41**	**35**	*i*P	**Pn**	**03 39 24.3**	**-0.4**
GB1A	**Borinquen Arri**	**1.42**	**18**	*i* P	**Pn**	**03 39 24.0**	**-0.8**
ARE1	**Arenal 1**	**1.49**	**48**	*e*P	**Pn**	**03 39 26.6**	**+0.8**
BUAI	**Buenos Aires**	**1.49**	**20**	*i*P	**Pn**	**03 39 25.0**	**-0.8**
PTEN	**Parque Tenorio**	**1.51**	**34**	*i*P	**Pn**	**03 39 25.7**	**-0.3**
CEDE	**Laguna Cedeo**	**1.52**	**48**	*i*P	**Pn**	**03 39 26.7**	**+0.6**
HDC	**Heredia**	**1.80**	**73**	*i*P	**Pn**	**03 39 30.7**	**+0.7**
HDC				*e*S	**Sn**	**03 39 54.1**	**+1.5**
HDC	**Heredia**	**1.80**	**73**	*e*P	**Pn**	**03 39 30.7**	**+0.7**
COVE	**Coope Vega, Sa**	**1.90**	**49**	*e*P	**Pn**	**03 39 31.9**	**+0.7**
EDDO	**Dominical**	**1.98**	**96**	*e*P	**Pn**	**03 39 30.5**	**-1.9**
RIMA	**Rio Macho**	**1.99**	**81**	*e*P	**Pn**	**03 39 32.2**	**-0.5**
CDM	**Cerro de Muert**	**2.06**	**87**	*e*P	**Pn**	**03 39 33.8**	**-0.2**
CVTR	**Volcan Turrial**	**2.14**	**75**	*e*P	**Pn**	**03 39 35.8**	**+0.8**
PEZE	**Perez Zeledon,**	**2.15**	**92**	*e*P	**Pn**	**03 39 34.2**	**-0.6**
PEZE	**Perez Zeledon,**	**2.15**	**92**	Pn	**Pn**	**03 39 33.9**	**-1.0**
EDPN	**Palmar Norte**	**2.42**	**102**	*e*P	**Pn**	**03 39 38.2**	**-0.2**
RIOS	**Rincon, Osa**	**2.43**	**108**	*e*P	**Pn**	**03 39 38.0**	**-0.6**
RIOS	**Rincon, Osa**	**2.43**	**108**	Pn	**Pn**	**03 39 38.2**	**-0.4**
RIOS					Sn	**03 40 05.6**	**-2.5**
BATAN	**Batan**	**2.52**	**75**	*e*P	**Pn**	**03 39 41.7**	**+1.8**
EDBA	**Buenos Aires**	**2.56**	**97**	*e*P	**Pn**	**03 39 39.3**	**-1.2**
DRK0	**Durika**	**2.58**	**94**	*e*P	**Pn**	**03 39 41.2**	**+0.3**
DRK0				*e*S	**Sn**	**03 40 12.1**	**0.0**
DRK0	**Durika**	**2.58**	**94**	*e*P	**Pn**	**03 39 40.7**	**-0.2**
PTJ1	**Puerto Jimnez**	**2.69**	**110**	*e*S	**Sn**	**03 40 12.9**	**-1.5**
PIRO	**Carate, Puerto**	**2.70**	**113**	*e*P	**Pn**	**03 39 42.7**	**+0.3**
PIRO				*e*S	**Sn**	**03 40 14.6**	**-0.2**
LPLA	**Las Palmas La**	**2.84**	**99**	*e*P	**Pn**	**03 39 44.7**	**+0.3**
EDSV	**San Vito**	**2.92**	**102**	*e*P	**Pn**	**03 39 46.5**	**+1.0**
BRU2	**Volcan**	**3.19**	**102**	*e*P	**Pn**	**03 39 50.6**	**+1.3**
BRU2				*e*S	**Sn**	**03 40 27.8**	**+0.7**
BRU2	**Volcan**	**3.19**	**102**	*e*P	**Pn**	**03 39 50.6**	**+1.3**
BCO2	**Palmira**	**3.37**	**102**	*e*P	**Pn**	**03 39 53.5**	**+1.8**
LNBQ3	**Los Naranjos,**	**3.44**	**101**	*e*P	**Pn**	**03 39 54.1**	**+1.5**
DVD	**David**	**3.52**	**107**	*e*P	**Pn**	**03 39 54.6**	**+1.0**
DVD				*e*S	**Sn**	**03 40 33.7**	**-1.1**
TGUH	**Tegucigalpa,Un**	**4.77**	**343**		**Pn**	**03 40 11.2**	**+0.2**
APG	**El Apazote**	**7.11**	**321**	Pn	**Pn**	**03 40 44.4**	**+1.1**
	0.7nm,0.3s,baz=158,slow=14,SNR=5.0						
APG				LR	LR	03 43 42.6	
	comp=Z,44nm,20.9s,baz=102,slow=43						
TEIG	**Tepich**	**10.95**	**348**	LR	LR	03 45 34.7	
	comp=Z,73nm,18.7s,baz=132,slow=41						
CMIG	**Matias Romero**	**11.60**	**312**	Pn	**Pn**	**03 41 45.4**	**+0.8**
	0.2nm,0.3s,baz=123,slow=16,SNR=3.9						
ATAH	**Atahualpa**	**18.09**	**155**	LR	LR	03 50 06.2	
	comp=Z,43nm,18.3s,baz=317,slow=34						
ZAIG	**Zacatecas**	**20.77**	**312**	P	Pn	03 43 42.4	-0.3
TXAR	**Lajitas Array**	**25.87**	**322**	P	**P**	**03 44 32.4**	**+1.6**
	3.3nm,0.9s,baz=140,slow=8.9,SNR=21						
TX31	**Lajitas Ar. Si**	**25.87**	**322**	P	**P**	**03 44 33.1**	**+2.3**
TX32	**Lajitas Array**	**25.87**	**322**	P	**P**	**03 44 33.1**	**+2.3**
TX32				IAmb	IAmb	03 44 34.7	
	comp=Z,6.9nm,1.1s						
LPIG	**La Paz**	**27.50**	**305**	LR	LR	03 56 49.1	
	comp=Z,25nm,18.2s,baz=188,slow=39						
SMCO	**Snowmass**	**35.10**	**331**	P	**P**	**03 45 51.5**	**-1.2**
PV12	**Saucer Basin,**	**35.36**	**328**	P	**P**	**03 45 54.8**	**+0.1**
PV12				IAmb	IAmb	03 45 57.6	
	comp=Z,6.0nm,1.2s						
CCX	**Cicese**	**36.22**	**312**	P	**P**	**03 46 01.9**	**+0.1**
SRU	**San Rafael Swe**	**36.85**	**327**	P	**P**	**03 46 07.5**	**0.0**
TMUT	**Trail Mountain**	**37.36**	**327**	P	**P**	**03 46 12.3**	**+0.5**

MPU	**Maple Canyon**	**38.10**	**327**	P	**P**	**03 46 18.9**	**+0.9**
MPU				IAmb	IAmb	03 46 20.8	
	comp=Z,4.9nm,1.0s						
DUG	**Dugway, Tooele**	**38.87**	**326**	P	**P**	**03 46 23.8**	**-0.5**
PDAR	**Pinedale Array**	**39.13**	**332**	P	**P**	**03 46 27.1**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=289,slow=37,SNR=2.5						
PDAR	**Pinedale Array**	**39.13**	**332**	P	**P**	**03 46 26.8**	**+0.2**
HWUT	**Hardware Ranch**	**39.22**	**329**	P	**P**	**03 46 28.3**	**+0.9**
HWUT				IAmb	IAmb	03 46 29.8	
	comp=Z,4.8nm,1.1s						
BGU	**Big Grassy Mou**	**39.50**	**327**	P	**P**	**03 46 30.5**	**+0.8**
BGU				IAmb	IAmb	03 46 32.6	
	comp=Z,4.8nm,1.2s						
ELK	**Elko**	**40.59**	**325**	P	**P**	**03 46 39.2**	**+0.3**
ELK				IAmb	IAmb	03 46 41.5	
	comp=Z,3.3nm,0.9s						
NVAR	**Mina Array Bea**	**40.97**	**320**	P	**P**	**03 46 43.7**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=137,slow=8.2,SNR=3.9						
NVAR	**Mina Array Bea**	**40.97**	**320**	P	**P**	**03 46 43.8**	**+1.8**
HLID	**Hailey**	**42.09**	**329**	P	**P**	**03 46 52.0**	**+1.0**
MCMT	**McKenzie Canyo**	**42.24**	**331**	P	**P**	**03 46 53.5**	**+1.2**
PLID	**Pearl Lake**	**43.97**	**329**	P	**P**	**03 47 06.4**	**+0.1**
PLID				IAmb	IAmb	03 47 07.5	
	comp=Z,4.3nm,1.1s						
YKA	**Yellowknife Ar**	**56.88**	**345**	P	**P**	**03 48 42.5**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=140,slow=7.2,SNR=8.3						
INK	**Inuvik**	**66.50**	**343**	LR	LR	04 21 00.7	
	comp=Z,58nm,21.3s,baz=312,slow=39						
DOT	**Dot Lake**	**67.78**	**336**	P	**P**	**03 49 55.7**	**-0.7**
IL31		**69.36**	**336**	P	**P**	**03 50 06.2**	**0.0**
IL31				IAmb	IAmb	03 50 09.8	
	comp=Z,2.5nm,1.0s						
ILAR	**Eielson Array**	**69.36**	**336**	P	**P**	**03 50 06.9**	**+0.6**
	comp=Z,3.2nm,1.1s,baz=125,slow=4.6,SNR=16						
ILAR	**Eielson Array**	**69.36**	**336**	P	**P**	**03 50 05.0**	**-1.2**
RND	**Reindeer**	**69.67**	**335**	P	**P**	**03 50 08.0**	**-0.2**
MCK	**McKinley**	**69.81**	**335**	P	**P**	**03 50 08.4**	**-0.7**
MCK				IAmb	IAmb	03 50 14.7	
	comp=Z,4.6nm,1.2s						
I23K	**Minto, Yukon-K**	**70.48**	**336**	P	**P**	**03 50 13.8**	**+0.7**
I23K				IAmb	IAmb	03 50 15.8	
	comp=Z,4.5nm,1.1s						
MLY	**Manley**	**70.99**	**336**	P	**P**	**03 50 17.8**	**+1.5**
MLY				IAmb	IAmb	03 50 19.1	
	comp=Z,3.7nm,1.1s						
COLD	**Coldfoot**	**71.53**	**338**	P	**P**	**03 50 20.4**	**+1.0**
COLD				IAmb	IAmb	03 50 23.6	
	comp=Z,4.6nm,1.2s						
ESDC	**Sonseca Array**	**77.80**	**51**	P	**P**	**03 50 56.3**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=280,slow=5.6,SNR=6.2						
ESDC	**Sonseca Array**	**77.80**	**51**	P	**P**	**03 50 53.5**	**-3.0**

*IDC **22** 03:49:22.7±2.2,46.16N×152.98E,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.6/47,mbtmp3.7/9,ML2.2/1, Error ellipse: s-maj=55.8km s-min=26.9km az=160.0*

ISC 22 03:49:27.8±1.7, 46°2N±0°3×153°0E±0°2, h31km, n9, σ0s70/9, mb3.9/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.53**	**22**	Pn	**Pn**	**03 51 15.3**	**-0.1**
	0.2nm,0.3s,baz=191,slow=11,SNR=1.9						
KSRS	**Korea Array**	**20.55**	**254**	P	**P**	**03 54 03.9**	**+0.3**
	0.5nm,0.4s,baz=41,slow=9.7,SNR=1.9						
MKAR	**Makanchi Array**	**47.08**	**298**	P	**P**	**03 57 56.0**	**-0.6**
	1.1nm,0.8s,baz=68,slow=8.0,SNR=9.6						
YKA	**Yellowknife Ar**	**51.40**	**36**	P	**P**	**03 58 30.0**	**+0.8**
	0.2nm,0.7s,baz=298,slow=7.6,SNR=3.7						
ARCES	**ARCESS Array B**	**58.30**	**341**	P	**P**	**03 59 18.3**	**-0.8**
	5.6nm,1.1s,baz=14,slow=7.7,SNR=1.7						
FINES	**FINESS Array B**	**64.46**	**335**	P	**P**	**04 00 01.3**	**+0.6**
	0.5nm,0.4s,baz=46,slow=4.2,SNR=1.4						
NOA	**NORSAR Array B**	**68.68**	**341**	P	**P**	**04 00 28.3**	**+0.6**
	0.8nm,0.9s,baz=29,slow=6.6,SNR=4.2						
AKASG	**Malin Array Be**	**71.91**	**326**	P	**P**	**04 00 48.0**	**+0.4**
	1.3nm,0.4s,baz=38,slow=6.1,SNR=9.4						
TXAR	**Lajitas Array**	**77.84**	**60**	P	**P**	**04 01 21.7**	**-0.7**
	0.1nm,0.5s,baz=306,slow=5.1,SNR=2.1						

*IDC **22** 03:50:23.4±2.2,6.99S×129.77E,h131km±29km,mb3.0/1, mb1 3.5/6,mb1mx3.2/40,mbtmp3.9/6,MS3.6/1,Ms1 3.6/1, ms1mx2.5/15, Error ellipse: s-maj=39.3km s-min=21.0km az=95.0*

ISC 22 03:50:22.2±0.9, 7°07S±0°06×129°8E±0°1, h150km, n7, σ4s01/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.32**	**13**	P	**Pn**	**03 51 53.5**	**+0.2**
	1.1nm,0.3s,baz=248,slow=24,SNR=8.9						
SIJI				S	**Sn**	**03 52 59.0**	**-5.5**
	2.3nm,0.3s,baz=226,slow=22,SNR=7.8						
BATI	**Baumata**	**6.86**	**243**	P	**Pn**	**03 52 02.2**	**+1.7**
	6.0nm,0.3s,baz=295,slow=22,SNR=2.5						
BATI				S	**Sn**	**03 53 14.7**	**-2.8**
	6.6nm,0.3s,baz=107,slow=15,SNR=2.4						
FITZ	**Fitzroy Crossi**	**11.71**	**200**	P	**Pn**	**03 53 05.7**	**+1.0**
	0.4nm,0.3s,baz=8.0,slow=12,SNR=23						
FITZ				S	**Sn**	**03 55 07.6**	**-6.6**
	0.9nm,0.3s,baz=266,slow=16,SNR=7.0						
WRA	**Warramunga Arr**	**13.52**	**162**	P	**Pn**	**03 53 30.1**	**+2.0**
	0.6nm,0.3s,baz=343,slow=12,SNR=20						
WRA				S	**Sn**	**03 55 54.8**	**-3.2**
	0.5nm,0.3s,baz=333,slow=23,SNR=5.4						
ASAR	**Alice Springs**	**16.96**	**167**	P	**Pn**	**03 54 15.6**	**+4.8**
	0.4nm,0.3s,baz=347,slow=10,SNR=22						
ASAR				S	**S**	**03 57 18.7**	**-0.6**
	0.1nm,0.3s,baz=221,slow=38,SNR=2.6						
CTA	**Charters Tower**	**20.51**	**131**	LR	LR	04 02 53.2	
	comp=Z,162nm,20.5s,baz=254,slow=36						
MKAR	**Makanchi Array**	**68.20**	**327**	P	**P**	**04 01 09.0**	**+2.5**
	0.2nm,0.5s,baz=111,slow=7.9,SNR=1.8						

*MOS **22** 03:50:32.8±1.4,46.40N×152.86E,h36km,mb4.6/11, Error ellipse: s-maj=8.4km s-min=6.9km az=74.8*
*SKHL **22** 03:50:34.7±0.2,46.30N×152.80E,h49km±5km,mb4.8/10, mbv5.6/2,ms4.2/4,msh5.1/2*
*IDC **22** 03:50:35.1±2.5,46.40N×152.90E,h44km±23km,mb3.7/20, mb1 4.0/25,mb1mx3.8/50,mbtmp4.0/25,ML3.2/5,MS3.5/2, Ms1 3.5/2,ms1mx2.9/22, Error ellipse: s-maj=22.3km s-min=13.3km az=157.0*

ISC 22 03:50:34.4±0.7, 46°29N±0°08×152°96E±0°07, h40km, n131, σ1s64/136, mb4.3/45, MS4.1/3, 20C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.72**	**255**	*c i*PN	**Pn**	**03 51 29.5**	**+0.2**
KUR				*e*S	**Sn**	**03 52 13.4**	**+1.6**
KUR				pmax	pmax		
	comp=Z,338nm,0.5s						
KUR				pmax	pmax		
	comp=N,82nm,0.3s						
KUR				pmax	pmax		
	comp=E,49nm,0.5s						
KUR				smax	smax		
	comp=E,354nm,0.6s						
KUR				smax	smax		
	comp=N,222nm,0.4s						
KUR	**Kuril'sk**	**3.72**	**255**	*i* P	**Pn**	**03 51 29.4**	**+0.2**
KUR				AMB	AMB	03 51 29.9	
KUR				AMB	AMB	03 51 29.9	
	comp=N,80nm,0.4s						
KUR				AMB	AMB	03 51 29.9	
	comp=N,50nm,0.4s						
KUR				AMB	AMB	03 51 29.9	
	comp=N,340nm,0.4s						
KUR				AMB	AMB	03 51 32.3	
	comp=N,1μm,4.0s						
KUR				*e*S	**Sn**	**03 52 10.5**	**-1.3**
KUR				A	A	03 52 20.6	
	comp=N,2μm,4.0s						
KUR				A	A	03 52 20.6	
	comp=N,2μm,4.0s						
KUR				A	A	03 52 28.5	
	comp=N,220nm,0.5s						
KUR				A	A	03 52 28.5	
	comp=N,350nm,0.5s						
SKR	**Severo-Kuril's**	**4.87**	**24**	*e*PN	**Pn**	**03 51 46.3**	**+1.3**
SKR				*e*S	**Sn**	**03 52 39.6**	**-0.5**
SKR				pmax	pmax		
	comp=Z,221nm,1.1s						
SKR				smax	smax		
	comp=N,129nm,0.7s						
SKR				smax	smax		
	comp=E,165nm,0.7s						
SKR				MLR	MLR		
	comp=Z,1μm,13.0s						
SKR	**Severo-Kuril's**	**4.87**	**24**	*e*P	**Pn**	**03 51 46.4**	**+1.4**
SKR				AMB	AMB	03 51 47.7	
	comp=Z,220nm,1.0s						
SKR				AMB	AMB	03 51 50.0	
	comp=Z,1μm,4.0s						
SKR				*e*S	**Sn**	**03 52 40.0**	**-0.1**
SKR				A	A	03 52 56.0	
	comp=Z,4μm,5.0s						
SKR				A	A	03 52 56.0	
	comp=Z,1μm,5.0s						
SKR				A	A	03 52 56.3	
	comp=Z,130nm,0.7s						
SKR				A	A	03 52 56.3	
	comp=Z,170nm,0.7s						
SKR				AMS	AMS	03 54 29.0	
	comp=Z,4μm,16.0s						
SKR				AMS	AMS	03 54 29.0	
	comp=Z,4μm,16.0s						
SKR				AMS	AMS	03 54 29.4	
	comp=Z,1μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**5.50**	**248**	PN	**Pn**	**03 51 57.2**	**+3.4**
YUK				*e*S	**Sn**	**03 52 58.7**	**+3.0**
YUK				smax	smax		
	comp=E,116nm,0.4s						
YUK				smax	smax		
	comp=N,321nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**5.50**	**248**	*e*P	**Pn**	**03 51 54.1**	**+0.3**
YUK				AMB	AMB	03 51 57.3	
	comp=N,200nm,0.5s						
YUK				*e*S	**Sn**	**03 52 53.7**	**-2.0**
YUK				A	A	03 53 01.0	
	comp=N,320nm,0.5s						
YUK				A	A	03 53 01.0	
	comp=N,120nm,0.5s						
GRPR	**Tuman**	**5.58**	**248**	*i*PN	**Pn**	**03 51 54.8**	**0.0**
GRPR				pmax	pmax		
	comp=Z,113nm,0.3s						
GRPR				pmax	pmax		
	comp=E,96nm,0.2s						
GRPR	**Tuman**	**5.58**	**248**	*i* P	**Pn**	**03 51 55.1**	**+0.3**
GRPR				AMB	AMB	03 51 58.0	
	comp=E,100nm,0.3s						
GRPR				AMB	AMB	03 51 58.0	
	comp=E,110nm,0.3s						
GRPR				*e*S	**Sn**	**03 52 56.9**	**-0.7**
GRPR				A	A	03 53 00.0	
	comp=E,180nm,0.4s						
GRPR				A	A	03 53 00.0	
	comp=E,80nm,0.4s						
GLVR	**Golovnino**	**5.86**	**247**	*e*PN	**Pn**	**03 51 57.1**	**-1.5**
GLVR	**Golovnino**	**5.86**	**247**	*e*P	**Pn**	**03 51 59.1**	**+0.5**
GLVR				*e*S	**Sn**	**03 53 03.0**	**-1.5**
RUSJ	**Misakicho**	**5.87**	**251**	*e*PN	**Pn**	**03 51 59.8**	**+1.0**
RUSJ				*e*S	**Sn**	**03 53 07.1**	**+2.3**
NMR	**Nemuro--Hokkai**	**5.92**	**243**	*e*PN	**Pn**	**03 51 56.3**	**-3.1**
NMR	**Nemuro--Hokkai**	**5.92**	**243**	*e*P	**Pn**	**03 51 56.5**	**-2.9**
YSS	**Yuzh-Sakhalins**	**7.06**	**279**	*e*P	**Pn**	**03 52 16.3**	**+1.2**
YSS				AMB	AMB	03 52 17.0	
	comp=E,20nm,0.4s						
YSS				AMS	AMS	03 55 03.0	
	comp=E,600nm,18.0s						
PETK	**Petropavlovsk-**	**7.48**	**22**	P	**Pn**	**03 52 20.4**	**-0.5**
	comp=E,0.6nm,0.3s,baz=171,slow=10,SNR=5.1						
ASAJ	**Asahikawa**	**7.64**	**257**	P	**Pn**	**03 52 23.1**	**+0.1**
	comp=E,1.0nm,0.3s,baz=328,slow=15,SNR=2.0						
ASAJ				LR	LR	03 55 15.5	
	comp=E,255nm,18.0s,baz=84,slow=37						
TYV	**Tymovskoe**	**8.22**	**308**	*e*P	**Pn**	**03 52 31.9**	**+0.9**
TYV				AMB	AMB	03 52 33.5	
	comp=E,50nm,0.7s						
OKH	**Okha**	**9.72**	**322**	*e*P	**Pn**	**03 52 53.7**	**+2.2**
OKH				AMB	AMB	03 52 59.4	
	comp=E,50nm,0.8s						
OKH				AMS	AMS	03 57 55.0	
	comp=E,500nm,15.0s						
OKH				AMS	AMS	03 57 55.0	
	comp=E,600nm,15.0s						
OKH				AMS	AMS	03 57 55.0	
	comp=E,500nm,15.0s						
NKL	**Nikolayevsk**	**10.50**	**315**	*e*P	**Pn**	**03 53 03.0**	**+0.9**
NKL				AMB	AMB	03 53 04.0	
	comp=E,10.0nm,0.6s						
NKL				AMS	AMS	03 58 04.0	
	comp=E,400nm,16.0s						
NKL				AMS	AMS	03 58 04.0	
	comp=E,900nm,16.0s						
NKL				AMS	AMS	03 58 04.0	
	comp=E,500nm,16.0s						
GRNR	**Gornyy**	**11.84**	**298**	AMS	AMS	03 58 18.0	
	comp=E,200nm,16.0s						
GRNR				AMS	AMS	03 58 18.0	
	comp=E,300nm,16.0s						
GRNR				AMS	AMS	03 58 18.0	
	comp=E,400nm,16.0s						
KLR	**Kul'dur**	**14.56**	**289**	P	**Pn**	**03 53 57.8**	**+0.3**
	comp=E,0.1nm,0.3s,ba

comp=Z,6.0nm,0.8s
CD2 Chengdu 40.74 266 P P 03 58 11.8 +0.4
CD2 pmax pmax
comp=Z,10.0nm,0.8s
INK Inuvik 42.09 32 P P 03 58 20.5 -1.4
comp=Z,1.1nm,0.6s,baz=292,slow=6.1,SNR=6.5
DGZ Jazzator, Alta 42.74 299 *i* P **P 03 58 24.8 -2.8**
DGZ pmax pmax
comp=Z,2.0nm,1.1s
ZALV Zalesovo Beam 42.80 306 P P 03 58 26.2 -1.6
comp=Z,0.6nm,0.3s,baz=65,slow=8.1,SNR=1.9
MK31 Makanchi Array 47.06 298 *i* P **P 03 59 00.7 -1.2**
MKAR Makanchi Array 47.06 298 P **P 03 59 01.0 -0.9**
comp=Z,3.9nm,0.8s,baz=67,slow=7.7,SNR=25
MKAR Makanchi Array 47.06 298 *ce* P **P 03 59 05.5 +3.6**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
BRVK Borovoye 51.11 310 *ce* P **P 03 59 31.2 -1.5**
BRVK pmax pmax
comp=Z,3.0nm,0.5s
RES Resolute Bay 51.31 18 P P 03 59 34.1 +0.3
comp=Z,1.2nm,0.8s,baz=288,slow=9.6,SNR=2.6
YKA Yellowknife Ar 51.36 36 P P 03 59 34.7 +0.3
comp=Z,0.6nm,0.8s,baz=295,slow=7.1,SNR=6.9
YKA Yellowknife Ar 51.36 36 *ce* P **P 03 59 36.4 +2.0**
CMAR Chiang Mai Arr 52.16 257 P P 03 59 42.0 +1.0
comp=Z,1.1nm,0.4s,baz=35,slow=7.2,SNR=6.2
CMAR Chiang Mai Arr 52.16 257 P P 03 59 42.0 +1.0
AAK Ala-Archa 53.95 297 *ce* P **P 03 59 53.8 -0.3**
AAK pmax pmax
comp=Z,11nm,0.7s
AAK Ala-Archa 53.95 297 *e* P **P 03 59 53.8 -0.3**
ARU Arti 55.28 318 *c* iP **P 04 00 02.0 -1.3**
ARU S **S 04 07 42.5 -1.5**
ARU pmax pmax
comp=Z,12nm,1.7s
NEEM North Greenlan 55.63 6 *i* P **P 04 00 05.6 -0.3**
NEEM IAmb IAmb 04 00 07.8
comp=Z,5.3nm,1.0s
PRGR Permogore 57.70 327 *e* P **P 04 00 18.8 -1.6**
PRGR pmax pmax
comp=Z,6.0nm,0.7s
ARCES ARCESS Array B 58.25 341 P **P 04 00 23.7 -0.5**
comp=Z,3.4nm,0.9s,baz=32,slow=7.3,SNR=5.7
SUMG Summit 61.17 4 *i* P **P 04 00 45.7 +1.0**
SUMG IAmb IAmb 04 00 47.6
comp=Z,5.3nm,0.6s
SUMG Summit 61.17 4 *i* P **P 04 00 45.6 +1.0**
SUMG pmax pmax
comp=Z,5.0nm,0.6s
NVAR Mina Array Bea 62.74 62 P P 04 00 56.1 +0.6
comp=Z,0.8nm,0.8s,baz=270,slow=5.9,SNR=5.2
FINES FINESS Array B 64.41 335 P P 04 01 05.3 -0.5
comp=Z,2.6nm,0.5s,baz=36,slow=7.2,SNR=15
ICESG Greenland Ices 64.56 5 *i* P **P 04 01 09.2 +2.0**
ICESG IAmb IAmb 04 01 10.4
comp=Z,5.5nm,0.6s
PDAR Pinedale Array 65.10 54 P P 04 01 11.0 -0.1
comp=Z,0.7nm,0.8s,baz=293,slow=2.5,SNR=4.1
OBN Obninsk 65.63 326 *i* P **P 04 01 12.8 -1.1**
OBN pmax pmax
comp=Z,5.0nm,1.0s
OBN MLR MLR
comp=Z,46nm,15.0s
WRA Warramunga Arr 68.04 199 P P 04 01 30.1 +0.5
comp=Z,0.6nm,0.8s,baz=12,slow=7.0,SNR=2.2
NOA NORSAR Array B 68.63 341 P P 04 01 32.1 -0.8
comp=Z,1.0nm,0.5s,baz=29,slow=6.6,SNR=11
NACGM Naroch 69.40 330 *i* P **P 04 01 36.9 -0.9**
NACGM *i* P **P 04 01 36.9 -0.9**
NACGM *i* P **P 04 01 36.9 -0.9**
NACGM *i* PP PP 04 01.2 -10
NACGM *i* PPP PPP 04 05 32.4
NACGM *i* S S 04 10 20.5 -21
NACGM *i* PS **PnS 04 11 20.6 +10**
NACGM *i* SS SS 04 14 29.4 -39
NACGM *i* SSS SSS 04 17 53.1
NACGM *i* LQ LQ 04 25 47.8
NACGM *i* LR LR 04 30 37.0
KIV Kislovodsk 71.05 314 *e* P **P 04 01 46.6 -1.5**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,209nm,17.0s
KBZ Khabaz 71.11 314 P P 04 01 48.8 +0.5
comp=Z,3.8nm,0.8s,baz=76,slow=2.8,SNR=8.4
KBZ Khabaz 71.11 314 *ce* P **P 04 01 49.5 +1.2**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 71.11 314 *e* P **P 04 01 49.5 +1.2**
AKASG Malin Array Be 71.87 326 P **P 04 01 52.3 -0.5**
comp=Z,5.6nm,0.5s,baz=36,slow=6.2,SNR=19
AKBB Malin Array Si 71.87 326 *ce* P **P 04 01 52.5 -0.3**
SORM Soroca 74.27 325 ⇓P **P 04 02 07.1 +0.1**
SORM Soroca 74.27 325 ⇓P **P 04 02 07.1 +0.1**
BURAR Bucovina Array 75.92 327 ⇑P **P 04 02 17.4 +0.7**
BURAR Bucovina Array 75.92 327 ⇑P **P 04 02 17.4 +0.7**
TESR Tescani 76.26 325 ⇓P **P 04 02 19.5 +0.9**
TRPA Tarpa 76.48 328 ⇓P **P 04 02 20.6 +0.9**
VRI Vrincioaia 76.76 325 ⇓P **P 04 02 23.5 +2.1**
VRI Vrincioaia 76.76 325 ⇓P **P 04 02 23.5 +2.1**
KRLC Kraliky 76.78 333 *e* P **P 04 02 21.9 +0.4**
KRLC smax smax
comp=N,6.0nm,0.4s
KRLC Kraliky 76.78 333 *e* P **P 04 02 21.9 +0.4**
CLL Collm 76.84 336 *i* P **P 04 02 21.9 +0.2**
comp=Z,5.0nm,0.9s
CLL *i* pP **pP 04 02 34.0 +1.2**
CLL L L 04 39 00.0
comp=Z,100nm,21.5s
CLL Collm 76.84 336 *i* P **P 04 02 21.9 +0.2**
CLL pmax pmax
comp=Z,5.0nm,0.9s
TPGR Topolog 76.89 323 ⇓P **P 04 02 22.4 +0.3**
MLR Muntele Rosu 77.38 325 ⇑P **P 04 02 26.0 +0.9**
MLR Muntele Rosu 77.38 325 ⇑P **P 04 02 26.0 +0.9**
VYHS Vyhne 77.48 331 *e* P **P 04 02 23.1 -2.3**
VYHS Vyhne 77.48 331 *e* P **P 04 02 23.1 -2.3**
DRGR 77.55 328 ⇓P **P 04 02 26.3 +0.4**
DRGR 77.55 328 ⇓P **P 04 02 26.3 +0.4**
PRU Pruhonice 77.56 334 *e* P **P 04 02 27.8 +2.0**
PRU Pruhonice 77.56 334 *e* P **P 04 02 27.8 +2.0**
VOIR 77.78 325 ⇑P **P 04 02 28.6 +1.4**
VOIR 77.78 325 ⇑P **P 04 02 28.6 +1.4**
TXAR Lajitas Array 77.81 60 P **P 04 02 27.4 -0.3**
comp=Z,0.3nm,0.5s,baz=298,slow=4.4,SNR=9.3
KHC Kasperske Hory 78.61 334 *e* P **P 04 02 32.6 +0.9**
KHC *e* 04 02 45.0
KHC Kasperske Hory 78.61 334 *e* P **P 04 02 32.6 +0.9**
KHC *e* pP **pwP 04 02 45.0 -1.7**
BRTR Keskin Array B 78.65 317 P **P 04 02 31.9 -0.4**
comp=Z,1.7nm,0.9s,baz=191,slow=1.3,SNR=5.3
BRTR Keskin Array B 78.65 317 *i* P **P 04 02 33.7 +1.5**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
GZR Gura Zlata 78.70 327 ⇓P **P 04 02 33.3 +1.0**
GZR Gura Zlata 78.70 327 ⇓P **P 04 02 33.3 +1.0**
GERES GERESS Array B 78.82 334 P **P 04 02 32.8 -0.1**
comp=Z,0.8nm,0.6s,baz=30,slow=3.7,SNR=6.4
BZS Buzias 78.95 328 ⇑P **P 04 02 34.9 +1.4**
BZS Buzias 78.95 328 ⇑P **P 04 02 34.9 +1.4**
CONA Conrad Observa 78.95 332 *e* P **P 04 02 34.1 +0.5**
comp=Z,2.0nm,0.9s
MOA Molln 79.53 333 *e* P **P 04 02 38.1 +1.3**
comp=Z,2.9nm,0.9s
ARSA Arzberg 79.66 332 *e* P **P 04 02 37.7 +0.3**
comp=Z,1.4nm,0.5s
SOKA Soboth 80.32 332 *e* P **P 04 02 41.2 +0.1**
comp=Z,2.3nm,0.9s
KBA Koelnbreinsper 80.50 333 *e* P **P 04 02 43.4 +1.2**
comp=Z,6.9nm,1.1s
WATA Walderalm 80.81 335 *e* P **P 04 02 44.2 +0.4**
comp=Z,6.4nm,0.7s
VTS Vitosha 80.86 325 ⇓P **P 04 02 45.5 +1.4**
VTS Vitosha 80.86 325 ⇓P **P 04 02 45.5 +1.4**
WTTA Wattenberg 80.86 334 *e* P **P 04 02 44.9 +0.8**
comp=Z,4.7nm,0.5s
RETA Reutte 80.92 335 *e* P **P 04 02 47.4 +3.2**
comp=Z,3.0nm,0.8s
MOTA Moosalm 80.94 335 *e* P **P 04 02 45.2 +0.6**
comp=Z,4.8nm,0.8s
SQTA Sankt Quirin 81.03 335 *e* P **P 04 02 45.6 +0.6**
comp=Z,3.7nm,0.7s
FETA Feichten 81.35 335 *e* P **P 04 02 48.6 +1.9**
comp=Z,3.7nm,1.1s

H03N2 Juan Fernandez 138.85 91 T T 06 45 40.8
baz=308,slow=74
H03N1 Juan Fernandez 138.87 91 T T 06 45 41.8
baz=308
H03N3 Juan Fernandez 138.87 91 T T 06 45 38.8
baz=308,slow=74
PLCA Paso Flores 148.27 96 PKPbc **PKPbc 04 10 15.1 -0.7**
comp=Z,2.0nm,1.0s,baz=84,slow=2.6,SNR=4.1

PRU 22 04:00:36.0±0.0, 51°48N×15°87E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.90**	**172**	*e*PG	Pg	04 00 53.1	-0.1
CHVC				*e*SG	Sg	04 01 05.6	+0.7
OSTC	**Ostas**	**0.95**	**167**	*e*PG	Pg	04 00 54.4	+0.2
OSTC				*e*SG	Sg	04 01 06.9	+0.4
DPC	**Dobruska-Polom**	**1.17**	**166**	*e*PG	Pg	04 00 58.2	-0.1
DPC				*e*SG	Sg	04 01 13.2	-0.2
BRG	**Berggiesshubel**	**1.36**	**244**	Sg	Sn	04 01 21.5	+0.6
BRG				Amp		04 01 22.0	
	comp=Z,3.8nm,0.3s						
KRLC	**Kraliky**	**1.52**	**157**	*e*PG	Pn	04 01 03.8	-0.7
KRLC				*e*SG	Sg	04 01 23.6	-1.2
KHC	**Kasperske Hory**	**2.77**	**213**	*e*SG	Sg	04 02 03.7	-1.3

*JMA **22** 04:00:56.9±0.4, 44°.03N×147°.88E, h0km, M4.7*
*MOS **22** 04:00:56.0±0.9, 44°.41N×148°.20E, h63km, mb3.9/7, Error ellipse: s-maj=10.3km s-min=9.1km az=177.0*
*SKHL **22** 04:00:56.9±0.6, 44°.40N×148°.20E, h68km±3km, mb5.0/8*
*NEIC **22** 04:00:58.4±1.6, 44°.4N±0°.1×148°.2E±0°.1, h72km±9km, mb4.1/7, Error ellipse: s-maj=14.9km s-min=13.2km az=167.0*
*IDC **22** 04:01:01.3±2.5, 44°.49N×148°.05E, h90km±21km, mb3.5/19, mb1 3.7/23, mb1mx3.6/36, mbtmp3.8/23, MS3.0/1, Ms1 3.0/1, ms1mx2.5/30, Error ellipse: s-maj=20.8km s-min=13.9km az=151.0*
ISC 22 04:00:56.2±1.4, 44°.31N±0°.06×148°.26E±0°.08, h51km±12km, n95, σ1°49/110, mb3.8/26, 4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.96**	**343**	*d i*PN	**Pn**	**04 01 12.9**	**-0.5**
KUR				*i* S	**Sn**	**04 01 25.0**	**-1.1**
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=E,635nm,0.1s						
KUR				pmax	pmax		
	comp=N,624nm,0.4s						
KUR				smax	smax		
	comp=E,5μm,0.4s						
KUR				smax	smax		
	comp=N,3μm,0.2s						
KUR	**Kuril'sk**	**0.96**	**343**	*i* P	**Pn**	**04 01 12.4**	**-1.0**
KUR				AMB	AMB	04 01 13.0	
	comp=N,620nm,0.4s						
KUR				AMB	AMB	04 01 13.0	
	comp=N,640nm,0.4s						
KUR				AMB	AMB	04 01 13.0	
	comp=N,2μm,0.4s						
KUR				*i* S	**Sn**	**04 01 24.0**	**-2.1**
KUR				A	A	04 01 25.0	
	comp=N,3μm,0.4s						
KUR				A	A	04 01 25.0	
	comp=N,5μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.75**	**262**	*d i*PN	**Pn**	**04 01 23.8**	**-0.3**
YUK				*e*S	**Sn**	**04 01 43.3**	**-1.8**
YUK				pmax	pmax		
	comp=Z,1μm,0.4s						
YUK				pmax	pmax		
	comp=N,264nm,0.5s						
YUK				pmax	pmax		
	comp=E,394nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
YUK				smax	smax		
	comp=E,2μm,1.0s						
YUK				smax	smax		
	comp=N,2μm,0.8s						
YUK	**Yuzh-Kuril'sk**	**1.75**	**262**	*i* P	**Pn**	**04 01 23.8**	**-0.3**
YUK				AMB	AMB	04 01 25.0	
	comp=N,260nm,0.4s						
YUK				AMB	AMB	04 01 25.0	
	comp=N,390nm,0.4s						
YUK				AMB	AMB	04 01 25.0	
	comp=N,1μm,0.4s						
YUK				*e*S	**Sn**	**04 01 43.3**	**-1.8**
YUK				A	A	04 01 48.3	
	comp=N,2μm,1.0s						
YUK				A	A	04 01 48.3	
	comp=N,2μm,1.0s						
YUK				A	A	04 01 49.0	
	comp=N,2μm,0.4s						
YUK				A	A	04 01 49.0	
	comp=N,2μm,0.4s						
GRPR	**Tuman**	**1.82**	**261**	⇓*i*PN	**Pn**	**04 01 25.0**	**0.0**
GRPR				*e*S	**Sn**	**04 01 45.0**	**-1.9**
GRPR				pmax	pmax		
	comp=E,400nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,980nm,0.2s						
GRPR				smax	smax		
	comp=N,3μm,0.3s						
GRPR				smax	smax		
	comp=E,2μm,0.2s						
GRPR	**Tuman**	**1.82**	**261**	*i* P	**Pn**	**04 01 25.0**	**0.0**
GRPR				AMB	AMB	04 01 28.0	
	comp=E,980nm,0.3s						
GRPR				*e*S	**Sn**	**04 01 46.3**	**-0.6**
GRPR				A	A	04 01 52.0	
	comp=E,3μm,0.4s						
GRPR				A	A	04 01 52.0	
	comp=E,2μm,0.4s						
NEM2	**Nemuro 2**	**2.05**	**243**	P	**Pn**	**04 01 27.9**	**-0.3**
NEM2				*e*S	**Sn**	**04 01 50.2**	**-2.4**
GLVR	**Golovnino**	**2.06**	**255**	*e*PN	**Pn**	**04 01 28.6**	**+0.3**
GLVR				*e*S	**Sn**	**04 01 53.0**	**+0.3**
GLVR				pmax	pmax		
	comp=Z,318nm,0.2s						
GLVR				smax	smax		
	comp=N,3μm,0.4s						
GLVR				smax	smax		
	comp=E,4μm,0.3s						
GLVR	**Golovnino**	**2.06**	**255**	*e* P	**Pn**	**04 01 28.6**	**+0.3**
GLVR				AMB	AMB	04 01 30.0	
	comp=E,320nm,0.2s						
GLVR				*e*S	**Sn**	**04 01 53.0**	**+0.3**
GLVR				A	A	04 01 59.0	
	comp=E,3μm,0.5s						
GLVR				A	A	04 01 59.0	
	comp=E,4μm,0.5s						
NMR	**Nemuro--Hokkai**	**2.06**	**244**	PN	**Pn**	**04 01 27.9**	**-0.4**
NMR				*e*S	**Sn**	**04 01 50.9**	**-1.9**
NMR	**Nemuro--Hokkai**	**2.06**	**244**	*e* P	**Pn**	**04 01 27.9**	**-0.4**
NMR				*e*S	**Sn**	**04 01 50.9**	**-1.9**
RUSJ	**Misakicho**	**2.17**	**266**	⇓*i*PN	**Pn**	**04 01 31.3**	**+1.4**
RUSJ				*i* S	**Sn**	**04 01 57.2**	**+1.6**
JRA	**Rausu**	**2.29**	**262**	P	**Pn**	**04 01 32.5**	**+1.0**
JRA				*e*S	**Sn**	**04 01 59.3**	**+0.9**
JNSB	**Nemuroshibetsu**	**2.41**	**258**	P	**Pn**	**04 01 33.6**	**+0.5**
JKHN	**Kushirohamanak**	**2.56**	**242**	P	**Pn**	**04 01 35.3**	**+0.1**
JKHN				*e*S	**Sn**	**04 02 03.1**	**-2.0**
JNK	**Nakash**	**2.66**	**255**	P	**Pn**	**04 01 37.3**	**+0.8**
JNK				*e*S	**Sn**	**04 02 07.2**	**-0.3**
JAK	**Akkeshi**	**2.90**	**244**	P	**Pn**	**04 01 39.9**	**+0.1**
JAK				*e*S	**Sn**	**04 02 12.0**	**-1.4**
JTKR	**Abashiri--Toko**	**3.15**	**265**	P	**Pn**	**04 01 44.1**	**+0.8**
JAR	**Ashorobuto**	**3.40**	**254**	P	**Pn**	**04 01 48.2**	**+1.4**
JOB	**Onbets**	**3.51**	**248**	P	**Pn**	**04 01 49.0**	**+0.8**
JOB				*e*S	**Sn**	**04 02 27.8**	**-0.6**
JCH	**Churui**	**3.95**	**246**	P	**Pn**	**04 01 54.8**	**+0.6**
JCH				*e*S	**Sn**	**04 02 38.1**	**-1.1**
JKA	**Kamikawa-asahi**	**4.07**	**269**	Pn	**Pn**	**04 01 57.7**	**+1.8**
JKA					**Sn**	**04 02 44.6**	**+2.3**
ASAJ	**Asahikawa**	**4.07**	**269**	P	**Pn**	**04 01 58.5**	**+2.5**
	comp=E,4.2nm,0.3s,baz=80,slow=12,SNR=12						
ASAJ				*S*	**Sn**	**04 02 45.4**	**+3.0**
	comp=E,2.9nm,0.3s,baz=56,slow=23,SNR=1.2						
ASAJ				LR	LR	04 03 37.6	

comp=E,177nm,18.5s,baz=202,slow=40
ERM Erimo 4.38 240 *i* PN **Pn 04 02 03.1 +2.9**
ERM Erimo 4.38 240 Pn 04 02 03.4 +3.2
ERM Sn **Sn 04 02 52.9 +3.0**
JEM Erimo 4.38 240 Pn **Pn 04 02 00.6 +0.5**
JEM Sn **Sn 04 02 44.6 -5.2**
JNBK Urakawa-nobuka 4.50 245 P **Pn 04 02 02.3 +0.5**
YSS Yuzh-Sakhalins 4.68 306 *e*PN **Pn 04 02 04.6 +0.4**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS Yuzh-Sakhalins 4.68 306 Pn **Pn 04 02 05.0 +0.8**
YSS Yuzh-Sakhalins 4.68 306 *e*P **Pn 04 02 04.6 +0.4**
YSS AMB AMB 04 02 05.4
comp=Z,30nm,0.8s
JEW Eniwo 5.16 256 Pn **Pn 04 02 12.9 +2.0**
JTM Tenmabayashi 6.37 239 Pn **Pn 04 02 28.8 +1.3**
TYV Tymovskoe 7.57 332 *e*P **Pn 04 02 44.6 +0.8**
TYV AMB AMB 04 02 46.0
comp=Z,40nm,0.8s
JSD Sado 9.80 234 Pn **Pn 04 03 14.8 +0.4**
OKH Okha 9.88 341 *e*P **Pn 04 03 17.5 +2.1**
OKH AMB AMB 04 03 19.4
comp=Z,70nm,0.6s
USRK Ussuriysk Ar. 11.67 275 P **Pn 04 03 41.8 +1.9**
baz=83,slow=15,SNR=3.7
USRK Ussuriysk Ar. 11.67 275 Pn 04 03 41.7 +1.7
KLR Kul'dur 12.33 299 P **Pn 04 03 51.8 +2.8**
comp=Z,0.1nm,0.3s,baz=114,slow=16,SNR=4.0
KLR Kul'dur 12.33 299 *e*P **Pn 04 03 48.3 -0.7**
EKMR Ekimchan 13.36 316 *e*P **Pn 04 04 00.5 -2.4**
BMKR Bomnak 16.29 317 *e*P **Pn 04 04 37.0 -4.3**
KSRS Korea Array 16.81 253 P **P 04 04 50.4 +0.9**
comp=Z,0.4nm,0.3s,baz=67,slow=12,SNR=4.5
KSRS Korea Array 16.81 253 *e*P **P 04 04 51.8 +2.3**
KSRS pmax pmax
comp=Z,1.0nm,0.8s
BILL Bilibino 25.60 16 *i* P **P 04 06 24.1 +3.8**
BILL pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 29.00 292 P **P 04 06 51.2 +0.1**
comp=Z,0.3nm,0.4s,baz=102,slow=12,SNR=2.6
SONM Songino Array 29.00 292 P **P 04 06 50.6 -0.5**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM Songino Array 29.00 292 P **P 04 06 50.6 -0.5**
H11N2 WAKE ISLAND Hy 29.02 142 T T 04 37 40.0
baz=332,slow=76,SNR=477
H11N1 WAKE ISLAND Hy 29.04 142 T T 04 37 43.9
baz=332,slow=76,SNR=423
H11N3 WAKE ISLAND Hy 29.04 142 T T 04 37 41.3
baz=332,slow=76,SNR=551
H11S1 WAKE ISLAND Hy 30.02 143 T T 04 38 54.1
baz=333,slow=76,SNR=1213
H11S3 WAKE ISLAND Hy 30.02 143 T T 04 38 54.8
baz=333,slow=76,SNR=509
H11S2 WAKE ISLAND Hy 30.04 143 T T 04 38 55.4
baz=333,slow=76,SNR=677
ILAR Eielson Array 40.56 37 P **P 04 08 30.9 +0.7**
comp=Z,0.5nm,0.5s,baz=270,slow=8.5,SNR=8.2
ILAR Eielson Array 40.56 37 *e*P **P 04 08 30.8 +0.6**
ILAR pmax pmax
comp=Z,1.0nm,0.5s
DGZ Jazzator, Alta 40.83 300 *i* P **P 04 08 33.6 +0.8**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
ZALV Zalesovo Beam 41.30 307 P P 04 08 35.6 -0.8
comp=Z,0.5nm,0.4s,baz=66,slow=7.0,SNR=2.5
ZALV PcP **PcP 04 10 33.9 -0.2**
comp=Z,1.5nm,0.4s,baz=110,slow=3.9,SNR=6.3
K27K Chicken 42.70 38 P **P 04 08 46.7 -1.1**
K27K IAmb IAmb 04 08 49.8
comp=Z,3.6nm,0.8s
L27K Beaver Creek, 42.94 39 P P 04 08 47.2 -2.5
MK31 Makanchi Array 45.03 298 P P 04 09 06.2 -0.5
MK31 pmax pmax
comp=Z,1.0nm,0.8s
MK31 Makanchi Array 45.03 298 P P 04 09 06.2 -0.5
MK31 IAmb IAmb 04 09 07.7
comp=Z,1.3nm,0.8s
MKAR Makanchi Array 45.03 298 P P 04 09 06.1 -0.6
comp=Z,1.2nm,0.7s,baz=78,slow=8.9,SNR=14
MKAR PcP **PcP 04 10 46.6 -0.2**
comp=Z,0.8nm,0.6s,baz=62,slow=4.1,SNR=7.5
INK Inuvik 45.51 31 P P 04 09 10.5 +0.4
comp=Z,1.0nm,0.6s,baz=297,slow=8.3,SNR=13
CMAR Chiang Mai Arr 48.45 254 P P 04 09 33.9 +0.3
comp=Z,0.7nm,0.3s,baz=46,slow=7.4,SNR=4.4
AAK Ala-Archa 51.83 296 *i* P **P 04 09 59.4 +0.2**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 51.83 296 *i* P **P 04 09 59.4 +0.2**
KKAR Karatay Array 54.16 298 P **P 04 10 15.1 -1.1**
KKAR Karatay Array 54.16 298 P **P 04 10 15.1 -1.1**
RES Resolute Bay 54.20 17 P **P 04 10 15.4 -0.5**
RES pmax pmax
comp=Z,2.0nm,0.7s
RES Resolute Bay 54.20 17 P **P 04 10 15.4 -0.5**
RES IAmb IAmb 04 10 15.9
comp=Z,1.7nm,0.7s
YKA Yellowknife Ar 54.89 34 P **P 04 10 21.7 +0.6**
comp=Z,1.2nm,0.6s,baz=301,slow=7.0,SNR=19
ABKAR Akbulak array 57.33 309 P **P 04 10 38.6 -0.2**
ABKAR IAmb IAmb 04 10 39.4
comp=Z,1.5nm,0.9s
ARCES ARCESS Array B 59.00 340 P **P 04 10 49.1 -1.0**
comp=Z,4.9nm,1.0s,baz=36,slow=7.8,SNR=1.4
FINES FINESS Array B 64.73 333 P **P 04 11 27.9 -0.9**
comp=Z,0.6nm,0.4s,baz=46,slow=10,SNR=1.3
WRA Warramunga Arr 65.20 194 P **P 04 11 33.4 +1.2**
comp=Z,0.7nm,0.9s,baz=7.4,slow=7.4,SNR=2.3
NVAR Mina Array Bea 66.60 59 P **P 04 11 42.6 +1.1**
comp=Z,0.3nm,0.5s,baz=308,slow=6.4,SNR=3.2
ASAR Alice Springs 68.91 194 P **P 04 11 57.3 +1.6**
comp=Z,0.5nm,0.7s,baz=7.8,slow=5.6,SNR=4.1
PDAR Pinedale Array 68.94 50 P **P 04 11 57.0 +0.9**
comp=Z,0.3nm,0.6s,baz=325,slow=1.4,SNR=2.4
NOA NORSAR Array B 69.36 339 P **P 04 11 57.2 -1.0**
comp=Z,0.5nm,0.7s,baz=30,slow=6.6,SNR=5.0
NOA NORSAR Array B 69.36 339 *e*P **P 04 11 58.3 +0.1**
KBZ Khabaz 70.02 312 P **P 04 12 02.2 -0.2**
comp=Z,2.0nm,0.8s,baz=64,slow=6.2,SNR=5.0
KBZ Khabaz 70.02 312 *e*P **P 04 12 02.7 +0.3**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 70.02 312 *e*P **P 04 12 02.7 +0.3**
ULM Lac du Bonnet 70.57 38 P **P 04 12 05.8 +0.1**
comp=Z,1.3nm,0.5s,baz=315,slow=8.6,SNR=2.3
ULM Lac du Bonnet 70.57 38 P **P 04 12 05.7 +0.1**
ULM IAmb IAmb 04 12 18.5
comp=Z,2.3nm,1.1s
AKASG Malin Array Be 71.59 324 P **P 04 12 10.6 -1.3**
comp=Z,0.6nm,0.5s,baz=40,slow=5.9,SNR=4.0
GERES GERESS Array B 79.05 331 P **P 04 12 53.2 -1.7**
comp=Z,0.3nm,0.4s,baz=55,slow=7.3,SNR=2.5
GERES GERESS Array B 79.05 331 P **P 04 12 53.5 -1.4**
GERES GERESS Array B 79.05 331 P **P 04 12 53.5 -1.4**
TXAR Lajitas Array 81.57 57 P **P 04 13 10.1 +0.8**
comp=Z,0.5nm,0.6s,baz=300,slow=3.6,SNR=7.4
TXAR Lajitas Array 81.67 57 P **P 04 13 09.6 +0.3**
TORD Torodi Ar. Bea 115.23 324 PKP **PKiKP 04 19 31.3 -1.0**
comp=Z,0.2nm,0.3s,baz=4.1,slow=2.2,SNR=5.5
H03N2 Juan Fernandez 142.16 90 T T 06 59 01.7
baz=304,slow=77,SNR=35
H03N3 Juan Fernandez 142.18 90 T T 06 58 56.4
baz=304,slow=77,SNR=38
H03N1 Juan Fernandez 142.18 90 T T 06 59 02.3
baz=304,slow=77,SNR=34

*IPEC **22** 04:11:36.0±0.2, 49°.84N×18°.49E, h0km, ML1.4/3, Error ellipse: s-maj=1.7km s-min=1.1km az=164.0*
PRU 22 04:11:37.1±0.0, 49.85N×18.43E, h0km, Mining Induced Event Lazy, E=3.5e+04, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.18**	**266**	*e*PG	Pg	04 11 40.7	+0.1
OKC				*e*SG	Sg	04 11 43.6	+0.6
	comp=Z,66nm,0.5s						
MORC	**Moravsky Berou**	**0.58**	**263**	*e*PG	Pg	04 11 47.8	-0.4
MORC				*e*SG	Sg	04 11 55.1	-0.6
MORC	**Moravsky Berou**	**0.58**	**263**	*e*Pg	Pg	04 11 47.8	-0.4
	baz=84						
MORC				*e*Sg	Sg	04 11 55.1	-0.6
	7.5nm,0.4s,baz=84						
OJC	**Ojcow**	**0.96**	**67**	*e*Pg	Pg	04 11 53.8	-1.7

OJC				*e*Sg	Sg	04 12 06.9	-0.9
LANS	**Liptovska Anna**	**0.97**	**136**	*e*PG	Pg	04 11 54.9	-0.8
LANS				*e*SG	Sn	04 12 11.5	-1.1
LANS				*e*LG	Lg	04 12 14.0	
KRLC	**Kraliky**	**1.09**	**283**	*e*PG	Pg	04 11 56.3	-1.6
KRLC	comp=Z,5.6nm,0.4s			*e*SG	Sg	04 12 10.8	-1.2
KRLC	**Kraliky**	**1.09**	**283**	*e*	Pg	04 11 56.3	-1.6
JAVC	**Velka Javorina**	**1.11**	**207**	*e*PG	Pg	04 11 57.9	-0.4
JAVC	**Velka Javorina** baz=28	**1.11**	**207**	*e*Pg	Pg	04 11 57.8	-0.5
NIE	**Niedzica**	**1.29**	**109**	*e*Pg	Pg	04 12 01.0	-0.8
NIE				*e*Sg	Sb	04 12 19.0	-0.4
VRAC	**Vranov**	**1.31**	**246**	*e*PG	Pg	04 12 01.1	-1.1
VRAC				*e*SG	Sg	04 12 18.2	-1.0
VRAC	**Vranov** baz=66	**1.31**	**246**	*e*Pg	Pg	04 12 01.1	-1.1
VRAC	6.0nm,0.4s,baz=66			*e*Sg	Sg	04 12 18.2	-1.0
VYHS	**Vyhne**	**1.38**	**169**	*e*PG	Pg	04 12 01.9	-1.7
VYHS				*e*SG	Sg	04 12 21.3	-0.2
DPC	**Dobruska-Polom**	**1.45**	**291**	*e*PG	Pn	04 12 03.3	-1.3
DPC	comp=Z,2.5nm,0.3s			*e*SG	Sg	04 12 23.0	-0.6
KRUC	**Moravsky**	**1.54**	**240**	*e*PG	Pn	04 12 04.5	-1.4
KRUC				*e*SG	Sn	04 12 25.5	-1.1
KRUC	**Moravsky** baz=60	**1.54**	**240**	*e*Pg	Pn	04 12 04.4	-1.5
KRUC	3.8nm,0.4s,baz=60			*e*Sg	Sn	04 12 25.5	-1.1
OSTC	**Ostas**	**1.59**	**297**	*e*PG	Pn	04 12 05.4	-1.1
OSTC				*e*SG	Sg	04 12 28.3	+0.2
MODS	**Modra-Piesok**	**1.66**	**208**	*e*PN	Pn	04 12 05.9	-1.6
MODS				*e*SN	Sn	04 12 28.2	-1.3
CHVC	**Chvalec**	**1.69**	**297**	*e*PG	Pn	04 12 07.4	-0.6
CHVC				*e*SG	Sn	04 12 30.5	+0.1
KHC	**Kasperske Hory**	**3.24**	**259**	*e*SG	Sg	04 13 19.9	-1.4

IDC ***22*** *04:16:09.2±2.1,46°.21N×152°.99E,h0km,mb3.7/10, mb1 3.9/12,mb1mx3.7/35,mbtmp3.7/12,ML2.6/2,MS3.1/2, Ms1 3.1/2,ms1mx2.6/28,Error ellipse: s-maj=55.1km s-min=22.7km az=159.0*
MOS ***22*** *04:16:13.2±1.5,46°.14N×152°.95E,h45km,mb4.0/1,Error ellipse: s-maj=18.0km s-min=11.0km az=51.6*
SKHL ***22*** *04:16:14.0±0.4,45°.80N×153°.20E,h66km±4km,mb4.3/3*
ISC 22 05:16:12.7±1.1,46°.0N±0°.1×153°.1E±0°.1,h31km,n34, σ1§51/33,mb3.7/9,1D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.77**	**261**	*d* iPN		**Pn**	**04 17 10.8**	**+2.2**
KUR				*e*S		**Sn**	**04 17 54.5**	**+2.6**
KUR	comp=Z,282nm,0.3s			pmax	pmax			
KUR	comp=N,112nm,0.2s			pmax	pmax			
KUR	comp=E,36nm,0.3s			pmax	pmax			
KUR	comp=E,120nm,0.6s			smax	smax			
KUR	comp=N,47nm,0.5s			smax	smax			
KUR	**Kuril'sk**	**3.77**	**261**	*i* P	AMB	**Pn**	**04 17 10.8**	**+2.2**
KUR	comp=N,10.0nm,0.4s			AMB	AMB	04 17 11.0		
KUR	comp=N,40nm,0.4s			AMB	AMB	04 17 11.0		
KUR	comp=N,30nm,0.4s			AMB	AMB	04 17 11.0		
KUR				*e*S		**Sn**	**04 17 53.1**	**+1.2**
KUR	comp=N,50nm,0.5s			A	A	04 18 09.7		
KUR	comp=N,120nm,0.5s			A	A	04 18 09.7		
SKR	**Severo-Kuril's**	**5.13**	**22**	*e*PN		**Pn**	**04 17 30.1**	**+2.9**
SKR				*e*S		**Sn**	**04 18 25.5**	**+0.2**
SKR	comp=Z,132nm,1.1s			pmax	pmax			
SKR	comp=N,72nm,0.7s			smax	smax			
SKR	comp=E,103nm,0.7s			smax	smax			
SKR	comp=Z,2μm,16.0s			MLR	MLR			
SKR	**Severo-Kuril's**	**5.13**	**22**	*e*P		**Pn**	**04 17 30.3**	**+3.1**
SKR	comp=Z,10.0nm,0.7s			AMB	AMB	04 17 31.0		
SKR				*e*S		**Sn**	**04 18 27.5**	**+2.2**
SKR	comp=Z,80nm,0.7s			A	A	04 18 35.0		
SKR	comp=Z,110nm,0.7s			A	A	04 18 35.0		
SKR	comp=Z,2μm,16.0s			AMS	AMS	04 21 03.6		
GRPR	**Tuman**	**5.58**	**252**	*e*PN		**Pn**	**04 17 34.7**	**+1.2**
GRPR	comp=Z,59nm,0.4s			pmax	pmax			
GRPR	comp=E,40nm,0.3s			pmax	pmax			
GRPR	**Tuman**	**5.58**	**252**	*e*P		**Pn**	**04 17 34.9**	**+1.4**
GRPR	comp=E,40nm,0.4s			AMB	AMB	04 17 36.0		
GRPR	comp=E,60nm,0.4s			AMB	AMB	04 17 36.0		
GRPR				*e*S		**Sn**	**04 18 36.0**	**-0.5**
GRPR	comp=E,60nm,0.3s			A	A	04 18 38.0		
GRPR	comp=E,50nm,0.3s			A	A	04 18 38.0		
GLVR	**Golovnino**	**5.85**	**250**	*e*S		**Sn**	**04 18 42.2**	**-1.0**
NMR	**Nemuro--Hokkai**	**5.88**	**247**	*e*PN		**Pn**	**04 17 37.0**	**-0.6**
NMR	**Nemuro--Hokkai**	**5.88**	**247**	*e*P		**Pn**	**04 17 37.0**	**-0.6**
NMR				*e*S		**Sn**	**04 18 42.0**	**-1.9**
PETK	**Petropavlovsk-** comp=E,0.3nm,0.3s,baz=168,slon=12,SNR=5.7	**7.75**	**21**	Pn		**Pn**	**04 18 01.6**	**-1.6**
ERM	**Erimo**	**8.20**	**245**	*i* PN		**Pn**	**04 18 12.1**	**+2.6**
EKMR	**Ekimchan**	**14.89**	**306**	*e*P		**Pn**	**04 19 40.3**	**-0.5**
USRK	**Ussuriysk Ar.** baz=69,slon=10,SNR=4.2	**15.04**	**271**	Pn		**Pn**	**04 19 43.1**	**+0.3**
BMKR	**Bomnak**	**17.74**	**308**	*e*P		**Pn**	**04 20 15.8**	**-1.2**
KSRS	**Korea Array** comp=E,1.0nm,0.5s,baz=55,slon=10,SNR=4.4	**20.59**	**255**	P		Pn	04 20 50.3	-1.0
KSRS	comp=E,25nm,19.5s,baz=112,slow=34			LR	LR	04 27 47.6		
H11N2	**WAKE ISLAND Hy** baz=340,slow=76,SNR=4.3	**28.51**	**152**	T	T	04 53 50.1		
H11N1	**WAKE ISLAND Hy** baz=340,slow=76,SNR=5.2	**28.52**	**152**	T	T	04 53 51.8		
H11N3	**WAKE ISLAND Hy** baz=340,slow=76,SNR=5.4	**28.52**	**152**	T	T	04 54 10.0		
H11S1	**WAKE ISLAND Hy** baz=341,slow=76,SNR=12	**29.59**	**153**	T	T	04 55 14.7		
H11S3	**WAKE ISLAND Hy** baz=341,slow=76,SNR=14	**29.60**	**153**	T	T	04 55 23.6		
H11S2	**WAKE ISLAND Hy** baz=341,slow=76,SNR=9.9	**29.61**	**153**	T	T	04 55 18.2		
INK	**Inuvik** comp=E,0.3nm,0.5s,baz=248,slow=5.4,SNR=1.0	**42.31**	**32**	P		**P**	**04 24 03.2**	**+0.3**
MKAR	**Makanchi Array** comp=E,1.1nm,0.8s,baz=69,slow=6.6,SNR=7.8	**47.33**	**298**	P		**P**	**04 24 42.4**	**-0.9**
MKAR	comp=E,43nm,19.3s,baz=59,slow=37			LR	LR	04 45 31.5		
MKAR	**Makanchi Array**	**47.33**	**298**	*e*P		**P**	**04 24 42.2**	**-1.1**
MKAR	**Makanchi Array**	**47.33**	**298**	*e*P		**P**	**04 24 42.2**	**-1.1**
YKA	**Yellowknife Ar** comp=E,0.2nm,0.9s,baz=297,slow=6.8,SNR=3.0	**51.55**	**36**	P		**P**	**04 25 15.4**	**+0.3**
FINES	**FINESS Array B** comp=E,0.7nm,0.4s,baz=39,slow=6.7,SNR=8.9	**64.77**	**335**	P		**P**	**04 26 46.8**	**-0.8**
NOA	**NORSAR Array B** comp=E,0.4nm,0.5s,baz=30,slow=6.6,SNR=4.8	**68.98**	**341**	P		**P**	**04 27 14.0**	**-0.5**
NOA	**NORSAR Array B**	**68.98**	**341**	P		**P**	**04 27 14.0**	**-0.5**
KBZ	**Khabaz** comp=E,2.5nm,1.0s,baz=329,slow=5.9,SNR=3.0	**71.42**	**314**	P		**P**	**04 27 30.2**	**+0.6**
AKASG	**Malin Array Be** comp=E,2.1nm,0.4s,baz=34,slow=6.0,SNR=7.2	**72.22**	**326**	P		**P**	**04 27 33.7**	**-0.6**
AKASG	**Malin Array Be**	**72.22**	**326**	*e*P		**P**	**04 27 33.5**	**-0.8**
TXAR	**Lajitas Array** comp=E,0.3nm,0.6s,baz=303,slow=5.2,SNR=3.5	**77.87**	**60**	P		**P**	**04 28 08.4**	**+0.9**
GERES	**GERESS Array B** comp=E,0.2nm,0.4s,baz=43,slow=5.9,SNR=2.3	**79.18**	**334**	P		**P**	**04 28 14.9**	**+0.6**

IDC ***22*** *04:54:25.5±12.0,8°.27S×12°.89W,h0km,mb4.0/5, mb1 4.2/5,mb1mx3.7/36,mbtmp4.0/5,MS3.2/5,Ms1 3.2/5, ms1mx2.9/31,Error ellipse: s-maj=470.6km s-min=94.6km az=149.0*
ISC 22 04:54:29.0±1.0,7°.6S±0°.1×113°.7W±0°.2,h10km,n14, σ0§58/10,mb4.1/5,MS3.3/4,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
H10N1	**ASCENSION HYDR** baz=83,slow=13,SNR=2052	**0.85**	**253**	Pn	Pn	**Pn**	**04 54 46.6**	**-0.2**
H10N1	baz=80,slow=76,SNR=11			T	T	04 55 41.1		
H10N2	**ASCENSION HYDR** baz=83,slow=13,SNR=1189	**0.86**	**254**	Pn	Pn	**Pn**	**04 54 46.8**	**-0.1**
H10N2	baz=80,slow=76,SNR=11			T	T	04 55 42.3		
H10N3	**ASCENSION HYDR** baz=83,slow=13,SNR=915	**0.87**	**254**	Pn	Pn	**Pn**	**04 54 47.0**	**-0.1**
H10N3	baz=80,slow=76,SNR=11			T	T	04 55 42.3		
H10S2	**ASCENSION HYDR** SNR=66	**1.67**	**216**	Pn	Pn	**Pn**	**04 54 58.2**	**+0.1**
H10S2	baz=44,slow=74,SNR=30			T	T	04 56 36.1		
H10S3	**ASCENSION HYDR**	**1.68**	**216**	Pn	Pn	**Pn**	**04 54 58.0**	**-0.2**
H10S3	baz=176,slow=74,SNR=27			T	T	04 56 37.9		
DBIC	**Dimbokro** comp=Z,44nm,21.6s,baz=209,slow=32	**16.67**	**32**	LR	LR	05 03 20.2		
TORD	**Torodi Ar. Bea** 1.6nm,0.6s,baz=217,slow=11,SNR=9.9	**25.64**	**37**	P	**P**	**04 59 58.1**	**-0.9**
TORD	comp=Z,43nm,19.1s,baz=255,slow=33			LR	LR	05 08 30.0		
LPAZ	**La Paz** comp=Z,24nm,21.6s,baz=116,slow=33	**53.86**	**255**	LR	LR	05 24 12.3		
PLCA	**Paso Flores** comp=Z,33nm,19.6s,baz=174,slow=34	**60.21**	**227**	LR	LR	05 28 37.6		
GERES	**GERESS Array B** 0.3nm,0.2s,baz=198,slow=5.9,SNR=4.0	**61.11**	**20**	P	**P**	**05 04 43.8**	**+0.4**
BRTR	**Keskin Array B** comp=Z,25nm,18.5s,baz=164,slow=38	**64.22**	**39**	LR	LR	05 35 17.0		
AKASG	**Malin Array Be** 0.6nm,0.4s,baz=231,slow=5.9,SNR=2.4	**68.86**	**28**	P	**P**	**05 05 33.2**	**-0.5**
FINES	**FINESS Array B** 1.5nm,0.6s,baz=202,slow=3.0,SNR=9.9	**75.45**	**19**	P	**P**	**05 06 13.7**	**+0.8**
ARCES	**ARCESS Array B** 3.0nm,0.9s,baz=221,slow=3.6,SNR=6.9	**81.52**	**13**	P	**P**	**05 06 47.0**	**+0.6**

IDC ***22*** *05:27:15.9±3.2,53°.36N×90°.93E,h0km,mb1 3.3/3, mb1mx3.1/49,mbtmp3.3/3,ML2.6/3,Error ellipse: s-maj=27.2km s-min=23.1km az=57.0*
NNC ***22*** *05:27:23.4±8.9,53°.18N×90°.30E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=68.4km s-min=39.2km az=66.0, Suspected Mining explosion.*
ISC 22 05:27:18.8±4.1,53°.3N±0°.1×90°.6E±0°.2,h0km,n8,σ1§11/12, 4C-7D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=95,slow=308,SNR=1.2	**3.52**	**283**	*i*			05 52 50.0	
ZAA0	**Zalesovo Array** 0.9nm,0.8s	**3.52**	**283**	⇑Pg		**Pg**	**05 28 25.8**	**-0.4**
ZAA0	9.2nm,0.9s			⇓Lg	Lg	05 29 12.7		
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=94,slow=12,SNR=11	**3.52**	**283**	Pn	Pn	**Pn**	**05 28 15.2**	**+0.5**
ZALV	2.2nm,0.3s,baz=98,slow=26,SNR=7.3			Lg	Lg	05 29 12.7		
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=69,slow=14,SNR=34	**7.95**	**255**	Pn	**Pn**	**05 29 14.9**	**-0.5**
KURBB	0.2nm,0.3s,baz=68,slow=26,SNR=14			Sn	**Sn**	**05 30 45.8**	**-0.1**
KURBB	0.1nm,0.3s,baz=58,slow=34,SNR=2.8			Lg	Lg	05 31 33.8		
KURBB	**Kurchatov Arra** 3.7nm,0.5s	**7.95**	**255**	⇓Pn	**Pn**	**05 29 13.9**	**-1.5**
KURBB	20nm,0.7s			⇓Sn	**Sn**	**05 30 48.2**	**+2.3**
KURBB	24nm,0.8s			⇓Lg	Lg	05 31 32.5		
MK31	**Makanchi Array** 0.7nm,0.7s,baz=40,slow=12,SNR=5.2	**8.45**	**223**	⇓Pn	**Pn**	**05 29 23.3**	**+1.0**
MK31	0.6nm,0.6s			⇑Sn	**Sn**	**05 30 57.2**	**-1.1**
MK31	5.4nm,1.0s,baz=28,slow=34			⇑Lg	Lg	05 31 45.2		
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=38,slow=12,SNR=6.8	**8.45**	**223**	Pn	**Pn**	**05 29 22.2**	**-0.1**
MKAR	0.1nm,0.3s,baz=32,slow=20,SNR=1.7			Sn	**Sn**	**05 30 58.6**	**+0.3**
MKAR	0.1nm,0.3s,baz=39,slow=29,SNR=2.8			Lg	Lg	05 31 48.7		
MAKZ	**Makanchi** 0.7nm,0.9s	**8.56**	**224**	⇑Pn	**Pn**	**05 29 24.7**	**+0.7**
MAKZ	1.5nm,0.6s			⇓Sn	**Sn**	**05 31 01.1**	**-0.1**
MAKZ	2.2nm,0.8s			⇓Lg	Lg	05 31 47.1		

DJA ***22*** *05:33:41.4±0.3,6°.S±3°.×10°.5E±°,h10km,M4.3/13, MLv4.3/13*
NEIC ***22*** *05:33:47.2±2.0,6°.4S±0°.1×105°.15E±0°.04,h72km±10km, mb4.3/7,Error ellipse: s-maj=19.3km s-min=6.0km az=185.0*
IDC ***22*** *05:33:50.5±5.6,6°.22S×105°.37E,h92km±43km,mb3.7/8, mb1 3.9/9,mb1mx3.5/55,mbtmp4.0/9,MS3.2/3,Ms1 3.3/3, ms1mx2.7/27,Error ellipse: s-maj=84.0km s-min=16.0km az=50.0*
ISC 22 05:33:42.6±1.4,6°.09S±0°.07×105°.29E±0°.05,h23km±11km, n37,σ1§29/38,mb4.2/11,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.72**	**357**	P	P	**Pb**	**05 33 55.0**	**-1.4**
BLSI				S	S	**Sb**	**05 34 05.2**	**-0.7**
KASI	**Kota Agung**	**0.97**	**305**	P	P	**Pb**	**05 34 00.1**	**-0.6**
KASI				S	S	**Sn**	**05 34 14.2**	**+0.4**
TNG	**Tangerang**	**1.35**	**94**	P	P	**Pn**	**05 34 04.8**	**-1.3**
DBJI	**Dramaga**	**1.52**	**108**	P	P	**Pn**	**05 34 07.1**	**-1.4**
DBJI				S	S	**Sb**	**05 34 29.0**	**-0.1**
SKJI	**Sukabumi**	**1.56**	**126**	P	P	**Pn**	**05 34 07.8**	**-1.1**
SKJI				S	S	**Sb**	**05 34 29.9**	**-0.1**
CBJI	**Citeko**	**1.59**	**102**	P	P	**Pb**	**05 34 10.8**	**-0.5**
LWLI	**Liwa**	**1.62**	**311**	P	P	**Pn**	**05 34 10.7**	**+0.8**
LEM	**Lembang** 30nm,0.3s,baz=315,slow=20,SNR=16	**2.43**	**108**	P	P	**Pb**	**05 34 26.8**	**+1.1**
LEM	11nm,0.3s,baz=248,slow=9.0,SNR=3.5			S	S	**Sb**	**05 34 55.7**	**+0.4**
LEM	comp=Z,646nm,21.2s,baz=28,slow=42			LR	LR	05 35 26.9		
LEM	**Lembang**	**2.43**	**108**	P	P	**Pn**	**05 34 20.2**	**-0.8**
LEM				Pg	P	**Pb**	**05 34 26.5**	**+0.8**
LHSI	**Lahat**	**2.85**	**322**	Pg	P	**Pb**	**05 34 35.4**	**+2.5**
MNAI	**Manna**	**2.89**	**306**	Pn	P	**Pb**	**05 34 31.9**	**-1.6**
MNAI	**Manna**	**2.89**	**306**	P	P	**Pn**	**05 34 27.7**	**+0.5**
CISI	**Cisompet, Garu**	**2.90**	**120**	P	P	**Pn**	**05 34 27.8**	**+0.3**
JCJI	**Jatiwangi**	**2.99**	**98**	P	P	**Pn**	**05 34 29.5**	**+0.9**
KSI	**Kapahiang**	**3.62**	**312**	P	P	**Pn**	**05 34 36.9**	**-0.4**
PPBI	**Pangkal Pinang**	**3.99**	**12**	P	P	**Pn**	**05 34 42.7**	**+0.3**
UGM	**Wanagama**	**5.50**	**110**	Pn	Pn	**Pn**	**05 35 05.6**	**+2.4**
PSI	**Prapat** comp=Z,178nm,19.9s,baz=94,slow=41	**10.88**	**324**	LR	LR	05 41 18.3		
FITZ	**Fitzroy Crossi** 9.4nm,1.2s,baz=307,slow=6.2,SNR=2.7	**23.17**	**123**	P	P	**P**	**05 38 48.1**	**+0.3**
FITZ	**Fitzroy Crossi** comp=Z,21nm,1.4s	**23.17**	**123**	IAmb	IAmb		05 38 59.5	
CMAR	**Chiang Mai Arr** comp=Z,0.7nm,0.4s,baz=177,slow=9.1,SNR=6.8	**25.18**	**346**	P	P	**P**	**05 39 09.8**	**+3.3**
CMAR	comp=Z,36nm,20.9s,baz=180,slow=38			LR	LR	05 49 40.8		
WB0	**Warramunga Arr**	**31.38**	**118**	P	P	**P**	**05 39 59.4**	**-2.6**
WB0	comp=Z,7.4nm,1.1s			IAmb	IAmb	05 40 20.3		
WRA	**Warramunga Arr** comp=Z,2.7nm,0.7s,baz=297,slow=9.3,SNR=15	**31.40**	**119**	P	P	**05 40 01.3**	**-0.9**
WRA	comp=Z,0.5nm,0.8s,baz=316,slow=2.0,SNR=2.1			PcP	**PcP**	**05 42 54.5**	**-1.1**
WB2	**Warramunga Arr**	**31.41**	**119**	P	P	**05 40 00.9**	**-1.3**
WR0	**Warramunga Arr** comp=Z,9.5nm,1.4s	**31.58**	**119**	P	P	**05 40 02.7**	**-1.0**
WR0				IAmb	IAmb	05 40 12.5		
H08S2	**Diego Garcia H**	**32.59**	**265**	T	T	06 14 23.7		
	baz=89,slow=76,SNR=10							
ASAR	**Alice Springs** comp=Z,1.6nm,0.8s,baz=298,slow=8.3,SNR=10	**32.60**	**125**	P	**P**	**05 40 12.0**	**-0.7**
ASAR	**Alice Springs**	**32.60**	**125**	P	**P**	**05 40 11.9**	**-0.9**
H08S3	**Diego Garcia H** baz=89,slow=76,SNR=7.1	**32.60**	**265**	T	T	06 14 28.6		
H08S1	**Diego Garcia H** baz=89,slow=76,SNR=1.9	**32.61**	**265**	T	T	06 14 32.8		
STKA	**Stephens Creek** comp=Z,3.9nm,0.8s,baz=305,slow=8.5,SNR=7.1	**42.51**	**132**	P	**P**	**05 41 36.4**	**0.0**
STKA	**Stephens Creek**	**42.51**	**132**	P	**P**	**05 41 35.9**	**-0.6**
STKA	comp=Z,1.5nm,1.0s			IAmb	IAmb	05 41 42.9		
MKAR	**Makanchi Array** comp=Z,0.5nm,0.8s,baz=151,slow=6.6,SNR=4.2	**56.47**	**341**	P	**P**	**05 43 22.9**	**+0.2**
AKASG	**Malin Array Be** comp=Z,0.2nm,0.5s,baz=94,slow=3.3,SNR=6.9	**85.93**	**322**	P	**P**	**05 46 20.6**	**-0.2**
MLR	**Muntele Rosu** comp=Z,1.4nm,0.5s,baz=5.1,slow=5.4,SNR=5.2	**86.88**	**316**	P	**P**	**05 46 26.5**	**+0.7**
BURAR	**Bucovina Array**	**87.80**	**318**	P	**P**	**05 46 28.0**	**-2.1**
BURAR	comp=Z,2.1nm,0.8s			IAmb	IAmb	05 46 34.5		
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=260,slow=2.5,SNR=4.8	**144.21**	**46**	PKP	PKPbc	05 53 16.1	+0.4	

IDC 22 05:53:24.3±1.5,16°.52N×47°.05W,h0km,mb3.7/4, mb1 3.8/4,mb1mx3.5/37,mbtmp3.7/4,MS3.0/4,Ms1 3.0/4, ms1mx2.7/32,Error ellipse: s-maj=70.0km s-min=29.3km az=50.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SJG	**San Juan** comp=Z,31nm,21.3s,baz=88,slow=33	**18.31**	**278**	LR	LR		06 03 32.8	
PTGA	**Pitinga** comp=Z,33nm,18.8s,baz=72,slow=36	**21.36**	**218**	LR	LR		06 06 19.6	
RCBR	**Riachuelo** 5.9nm,0.8s,baz=320,slow=7.9,SNR=1.9	**24.79**	**153**	P	P		05 58 48.2	0.0
LPAZ	**La Paz** comp=Z,433nm,19.0s,baz=155,slow=34	**38.67**	**214**	LR	LR		06 15 37.6	
H10N3	**ASCENSION HYDR** baz=309,slow=75,SNR=31	**40.28**	**124**	T	T		06 44 02.1	
H10N2	**ASCENSION HYDR** baz=309,slow=75,SNR=28	**40.29**	**124**	T	T		06 44 02.3	
H10N1	**ASCENSION HYDR** baz=309,slow=75,SNR=44	**40.30**	**124**	T	T		06 44 03.6	
H10S3	**ASCENSION HYDR** baz=307,slow=74,SNR=13	**40.83**	**126**	T	T		06 44 49.6	
H10S2	**ASCENSION HYDR** baz=273,slow=74,SNR=7.2	**40.85**	**126**	T	T		06 44 51.7	
DBIC	**Dimbokro** comp=Z,26nm,21.7s,baz=148,slow=32	**42.39**	**98**	LR	LR		06 16 05.2	
TORD	**Torodi Ar. Bea** 0.4nm,0.6s,baz=277,slow=8.0,SNR=2.4	**47.15**	**87**	P	P		06 01 58.7	-0.2
TORD	comp=Z,27nm,18.2s,baz=240,slow=33			LR	LR		06 19 15.0	
YKA	**Yellowknife Ar** 0.2nm,0.6s,baz=106,slow=7.1,SNR=4.1	**65.15**	**332**	P	P		06 04 06.7	-0.2
ILAR	**Eielson Array** 0.6nm,0.7s,baz=69,slow=4.7,SNR=5.5	**79.33**	**335**	P	P		06 05 31.9	+0.2

IDC ***22*** *05:59:59.8±14.0,58°.30S×26°.90W,h210km±132km, mb3.8/2,mb1 3.8/2,mb1mx3.2/25,mbtmp4.4/2,Error ellipse: s-maj=95.3km s-min=30.5km az=110.0*
ISC 22 05:59:58.4±1.2,58°.3S±0°.2×26°.8W±0°.4,h200km,n9, σ0§57/9,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**14.60**	**155**	P	P	**Pn**	**06 03 15.0**	**-0.3**
VNA3	**Neumayer Olymp**	**14.77**	**158**	P	P	**Pn**	**06 03 16.8**	**-0.6**
VNA2	**Neumayer--Watz** baz=314,slow=13	**15.00**	**155**	P	P	**Pn**	**06 03 20.6**	**+0.4**
SNAA	**Sanae**	**16.57**	**153**	P	P	**Pn**	**06 03 37.9**	**-0.3**
QSPA	**South Pole Qui** 1.7nm,0.5s,baz=202,slow=5.4,SNR=17	**31.91**	**180**	P	P	**P**	**06 06 05.5**	**+0.7**
TORD	**Torodi Ar. Bea** 3.9nm,0.7s,baz=199,slow=6.4,SNR=36	**74.94**	**29**	P	P		**06 11 17.6**	**+0.3**
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=124,slow=2.9,SNR=6.2	**138.01**	**316**	PKP		**PKPdf**	**06 18 56.8**	**-0.8**
SONM	**Songino Array** 0.8nm,0.6s,baz=254,slow=5.4,SNR=2.2	**150.56**	**90**	PKPbc		**PKPbc**	**06 19 25.5**	**0.0**
ILAR	**Eielson Array** 0.2nm,0.6s,baz=117,slow=3.2,SNR=3.8	**151.77**	**308**	PKPbc		**PKPbc**	**06 19 27.4**	**-0.2**

SJA ***22*** *06:00:04.7±0.7,37°.57S×74°.16W,h10km,ML4.6,MW4.1*
IDC ***22*** *06:00:09.9±0.7,37°.65S×73°.48W,h0km,mb4.4/13, mb1 4.4/16,mb1mx4.4/28,mbtmp4.3/16,ML3.9/3,MS4.0/11, Ms1 4.0/11,ms1mx3.9/16,Error ellipse: s-maj=23.9km s-min=12.2km az=73.0*
NEIC ***22*** *06:00:10.5±1.6,37°.67S±0°.05×73°.7W±0°.1,h10km±1km, Error ellipse: s-maj=15.8km s-min=9.1km az=277.0*
NEIC ***22*** *06:00:11.1,37°.63S×73°.64W,h16km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr3.42; Mθθ-2.01; Mϕϕ-1.41; Mrθ0.85; Mrϕ-2.82; Mθϕ-6.83; Fault plane solution: M08.01000×10^15^ NP1:ϕ186.30000°, δ78.11000°, λ66.91000°. NP2:ϕ70.50000°, δ25.83000°, λ151.76000°. Principal axes: T 8.7643, Plg51.0000°, Azm70.0000°; N -1.8111, Plg23.0000°, Azm191.0000°; P -6.9532, Plg29.0000°, Azm295.0000°;*
GUC ***22*** *06:00:12.6±0.5,37°.77S×73°.69W,h16km±6km,ML5.1, MW5.2*
VAO ***22*** *06:00:12.5±0.7,37°.56S×73°.38W,h10km,mb4.8*
ISC 22 06:00:10.7±0.4,37°.68S±0°.03×73°.68W±0°.05,h10km,n174, σ1§26/165,mb4.6/28,MS4.1/13,6C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.95**	**29**	*e*P		**Pn**	**06 00 30.1**	**0.0**
CCSP				*i* S		**Sn**	**06 00 43.5**	**-0.1**
CCSP	comp=E,79μm,0.4s			IAML			06 00 46.4	
CANA	**Caviahue**	**2.08**	**96**	*e*P		**Pb**	**06 00 47.7**	**-1.0**
CANA				*e*S		**Sg**	**06 01 18.8**	**+1.2**
CANA	comp=Z,5μm,1.0s			IAML			06 01 27.9	
BI02	**San Fabin de**	**2.17**	**63**	⇑*i* P		**Pn**	**06 00 47.6**	**+0.6**
BI02				*i* S		**Sb**	**06 01 17.0**	**-0.2**
BI02	**San Fabin de**	**2.17**	**63**			**Pn**	**06 00 47.4**	**+0.4**
BI02	**San Fabin de**	**2.17**	**63**	*e*P		**Pn**	**06 00 47.6**	**+0.6**
BI02				*e*S		**Sg**	**06 01 19.7**	**-0.8**
ML02	**Panimavida**	**2.64**	**44**	Pn		**Pn**	**06 00 53.7**	**+0.4**
LL04	**Puerto Octay**	**3.37**	**163**	*e*P		**Pn**	**06 01 03.2**	**-0.1**
LL04				*i* S		**Sn**	**06 01 40.8**	**-2.6**
LL04	**Puerto Octay**	**3.37**	**163**			**Pn**	**06 01 03.2**	**-0.1**
BO03	**Pichilemu**	**3.47**	**24**	⇑*e*P		**Pn**	**06 01 04.0**	**-0.7**
BO03				*i*

MT01	Popeta	4.29	28			Pn	06 01 15.5	-0.5
VA05	Santo Domingo	4.35	23⇑	*i*P		Pn	06 01 16.0	-0.9
VA05	Santo Domingo	4.35	23	Pn		Pn	06 01 16.1	-0.8
MT09	Talagante	4.47	30⇑	*i*P		Pn	06 01 18.2	-0.4
MT09	Talagante	4.47	30			Pn	06 01 18.3	-0.4
LL01	San Ignacio de	4.79	169	*e*P		Pn	06 01 23.4	+0.5
LL01	San Ignacio de	4.79	169			Pn	06 01 23.4	+0.5
LL01	San Ignacio de	4.79	169	*e*P		Pn	06 01 23.7	+0.8
LL01				IAML			06 02 49.8	
	comp=Z,350nm,0.9s							
MT02	Curacav	4.87	26			Pn	06 01 23.4	-0.7
MT05	Renca	4.91	30			Pn	06 01 24.3	-0.2
MT03	Universidad Ad	4.91	33			Pn	06 01 24.2	-0.4
VA01	Torpederas	4.94	20	Pn		Pn	06 01 23.9	-0.9
PEL	Peldehue	5.14	29	Pn		Pn	06 01 27.5	-0.3
LL07	Hotel Espejo d	5.15	178	Pn		Pn	06 01 27.9	+0.2
GO07	Milladeo Hill,	5.43	180			Pn	06 01 31.1	-0.5
VA03	San Esteban	5.53	28			Pn	06 01 32.6	-0.6
LL02	Futaleuf	5.68	166	Pn		Pn	06 01 37.4	+2.3
H03S1	Juan Fernandez	5.72	310	T		T	06 07 20.4	
	baz=131,slow=74,SNR=3052							
H03S3	Juan Fernandez	5.73	311	T		T	06 07 18.7	
	baz=131,slow=74,SNR=2744							
H03S2	Juan Fernandez	5.74	310	T		T	06 07 18.7	
	baz=131,slow=74,SNR=2620							
CO02	Combarbal	6.83	20			Pn	06 01 50.2	-0.9
CO03	El Pedregal	7.26	21	Pn		Pn	06 01 56.1	-0.8
ZON	Zonda	7.38	35	Pn		Pn	06 01 58.0	-0.5
LCO	Las Campanas	9.00	17	Pn		Pn	06 02 19.3	-1.6
AC04	Llanos de Chal	9.70	14			Pn	06 02 28.5	-1.8
GO03	Copiap	10.47	17			Pn	06 02 38.9	-2.0
GO03	Copiap	10.47	17	*e*P		Pn	06 02 39.7	-1.2
GO08	Villa O'Higgin	10.81	176	*e*P		Pn	06 02 48.8	+3.4
CYA	Choya	11.33	38	*e*P		Pn	06 02 47.8	-4.9
AC01	Pan de Azucar	11.79	14	Pn		Pn	06 02 55.4	-3.6
GO02	Mina Guanaco	12.96	17	Pn		Pn	06 03 12.1	-3.0
LVC	Limon Verde	15.57	17	Pn		Pn	06 03 50.4	-0.2
	comp=Z,0.2nm,0.3s,baz=150,slow=8.1,SNR=2.7							
LVC				Sn		Sn	06 06 46.3	+2.9
	comp=Z,0.0nm,0.3s,baz=23,slow=15,SNR=2.2							
LVC	Limon Verde	15.57	17	P		Pn	06 03 52.0	+1.3
PB04	IPOC Station P	15.60	12	P		Pn	06 03 50.3	-0.5
PB07	IPOC Station P	16.23	13	P		P	06 04 02.9	+0.7
PB07				IAmb		IAmb	06 04 04.4	
	comp=Z,63nm,1.5s							
PB09	IPOC Station P	16.29	15	P		Pn	06 04 00.2	+0.4
PB01	IPOC Station P	16.97	14	P		P	06 04 10.0	-0.3
PB01				IAmb		IAmb	06 04 20.1	
	comp=Z,87nm,1.4s							
PLTB	Pedras Altas	17.52	76	*e*P		Pn	06 04 13.3	-1.7
EFI	East Falkland	17.81	147	P		Pn	06 04 18.9	+0.5
EFI				IAmb		IAmb	06 04 21.8	
	comp=Z,52nm,0.8s							
CPUP	Villa Florida	17.87	55	P		Pn	06 04 18.3	-1.1
	comp=Z,0.2nm,0.3s,baz=247,slow=9.3,SNR=7.2							
CPUP				LR		LR	06 11 55.0	
	comp=Z,925nm,18.6s,baz=230,slow=40							
CPUP	Villa Florida	17.87	55	P		P	06 04 19.6	-0.4
PB08	IPOC Station P	17.92	14	P		P	06 04 22.2	+1.2
PB11	IPOC Station P	18.20	12	IAmb		IAmb	06 04 34.1	
	comp=Z,82nm,0.9s							
CPSB	Cacapava Do Su	18.26	73	*e*P		Pn	06 04 23.5	-0.6
PSGCX	Pisagua	18.28	11	P		P	06 04 25.9	+1.2
PSGCX				IAmb		IAmb	06 04 28.9	
	comp=Z,30nm,0.8s							
MNMC	Minye Minye	18.82	12	IAmb		IAmb	06 04 41.9	
	comp=Z,56nm,1.0s							
PB16	IPOC Station P	19.62	12	P		Pn	06 04 41.7	+0.4
PB16				IAmb		IAmb	06 04 50.1	
	comp=Z,44nm,1.2s							
CNLB	Canela	20.75	73	*e*P		P	06 04 50.8	-0.8
LPAZ	La Paz	21.87	14	P		P	06 05 04.7	+0.4
	comp=Z,14nm,1.0s,baz=174,slow=10,SNR=16							
LPAZ	La Paz	21.87	14	P		P	06 05 06.0	+1.8
LPAZ	La Paz	21.87	14	*e*P		P	06 05 04.5	+0.2
PTGB	Pitanga	22.49	61	*e*P		P	06 05 09.1	-1.4
AQDB	Aquidauana	23.18	47	*e*P		P	06 05 16.8	-0.8
TRCB	Terra Rica	23.39	57	*e*P		P	06 05 18.6	-1.1
SIV	San Ignacio	24.31	31	P		P	06 05 28.1	-0.4
	comp=Z,7.0nm,0.9s,baz=206,slow=8.5,SNR=28							
PCMB	Pacaembu	25.13	57	*e*P		P	06 05 34.7	-1.2
PTLB	Pontes e Lacer	25.61	34	*e*P		P	06 05 40.0	-0.3
NNA	Nana	25.74	353	P		P	06 05 42.5	+1.0
	comp=Z,6.8nm,0.6s,baz=206,slow=13,SNR=3.8							
NNA	Nana	25.74	353	IAmb		IAmb	06 05 44.9	
	comp=Z,14nm,0.9s							
PP1B	Ponte de Pedra	25.93	45	*e*P		P	06 05 43.2	-0.1
ITRB	Iturama	27.07	55	*e*P		P	06 05 51.8	-1.6
RCLB	Rio Claro- Sao	27.15	63	*e*P		P	06 05 54.3	0.0
VAO	Valinhos	27.18	65	*e*P		P	06 05 54.2	-0.4
ETMB	Extrema	28.55	16	*e*P		P	06 06 07.4	+0.7
CZSB	Cruzeiro do Su	29.83	2	*e*P		P	06 06 19.0	+0.9
BDFB	Brasilia	31.56	53	P		P	06 06 32.6	-0.9
	comp=Z,2.4nm,0.8s,baz=209,slow=10,SNR=4.0							
BDFB				LR		LR	06 20 07.8	
	comp=Z,400nm,19.8s,baz=232,slow=38							
BDFB	Brasilia	31.56	53	IAmb		IAmb	06 06 40.7	
	comp=Z,15nm,1.4s							
PEXB	Peixe	34.11	48	*e*P		P	06 06 55.2	-0.5
RIB01	Linhares ES	34.26	67	*e*P		P	06 06 56.2	-0.7
JANB	Januaria	34.40	57	*e*P		P	06 06 57.2	-1.0
NPGB	Novo Progresso	34.74	33	*e*P		P	06 07 00.0	-1.1
SDBA	SAO DESIDERIO	35.97	53	*e*P		P	06 07 11.0	-0.8
ITTB	Itaituba	36.99	31	*e*P		P	06 07 19.3	-1.1
SMTB	Santa Maria do	37.12	46	*e*P		P	06 07 21.3	-0.3
OTAV	Otavalo	37.99	352	P		P	06 07 30.4	+1.0
OTAV				IAmb		IAmb	06 07 53.3	
	comp=Z,13nm,1.4s							
PTGA	Pitinga	38.88	22	P		P	06 07 35.8	-0.5
	comp=Z,1.6nm,0.3s,baz=261,slow=11,SNR=5.3							
ORTC	Ortega, Tolima	41.40	358	*e*P		P	06 07 58.5	+1.2
YOTC	Yotoco, Valle	41.53	356	*e*P		P	06 08 00.3	+1.8
NBLA	Lagarto - SE	41.72	60	*e*P		P	06 08 00.1	+0.1
GUY2C	Guyana, Caldas	42.71	358	*e*P		P	06 08 09.4	+0.9
NBTA	Tacaratu-PE	42.88	58	*e*P		P	06 08 08.7	-0.7
RUSC	La Rusia	43.35	1	*e*P		P	06 08 15.0	+1.3
CBOC	Ciudad Bolivar	43.37	357	*e*P		P	06 08 14.4	+0.8
BELA	Belgrano 2	43.52	169	P		P	06 08 14.9	+1.0
HELC	Santa Helena	43.68	357	*e*P		P	06 08 15.0	-1.2
NBMA	Muriti-CE	43.71	55	*e*P		P	06 08 16.0	-0.2
NBPB	Pedra_Branca-C	44.57	53	*e*P		P	06 08 22.9	-0.1
NBLI	Livramento-PB	44.91	57	*e*P		P	06 08 25.6	-0.2
ZARC	Zaragoza, Cauc	44.95	358	*e*P		P	06 08 24.9	-1.1
SMLC	San Martn de	46.24	359	*e*P		P	06 08 33.8	-2.4
NBCL	Cascavel-CE	46.40	53	*e*P		P	06 08 38.0	+0.5
VNA3	Neumayer Olymp	46.49	156	P		P	06 08 38.6	+0.9
VNA3	Neumayer Olymp	46.49	156	PcP		PcP	06 10 11.8	0.0
NBPV	Pedro Velho	46.72	58	*e*P		P	06 08 39.5	-0.5
VNA1	Neumayer--Stat	46.85	155	P		P	06 08 41.6	+1.2
VNA2	Neumayer--Watz	47.17	156	P		P	06 08 43.8	+0.9
	baz=274,slow=8.9							
VNA2	Neumayer--Watz	47.17	156	PcP		PcP	06 10 14.3	0.0
SNAA	Sanae	48.72	157	P		P	06 08 55.8	+0.9
SNAA	Sanae	48.72	157	P		P	06 08 55.6	+0.7
	comp=Z,14nm,0.9s,baz=275,slow=6.9,SNR=27							
SNAA	Sanae	48.72	157	P		P	06 08 55.7	+0.7
QSPA	South Pole Qui	52.56	180	P		P	06 09 25.1	+1.0
	comp=Z,2.8nm,0.9s,baz=185,slow=1.3,SNR=8.7							
QSPA	South Pole Qui	52.56	180	P		P	06 09 25.7	+1.5
RKT	Rikitea	53.95	267	*e*T		T	07 07 35.4	
	comp=Z,2.4nm,0.2s							
VNDA	Vanda	60.24	192	LR		LR	06 31 28.3	
	comp=Z,65nm,20.3s,baz=326,slow=31							
TAOE	Nuku Hiva Isla	66.04	277	*e*LR		LR	06 30 50.8	
	comp=Z,206nm,25.1s							
MEH	Mehetia	67.10	265	*e*T		T	07 24 06.2	
	comp=Z,21nm,0.2s							
TIAR	Tiarei	68.29	264	*e*T		T	07 25 33.4	
	comp=Z,226nm,0.2s							
PAE	Paea	68.42	264	*e*T		T	07 25 42.8	
	comp=Z,1.5nm,0.3s							
PPT2	Papeete2	68.46	264	*e*LR		LR	06 31 57.0	
	comp=Z,178nm,25.0s							
PPT2	Papeete2	68.46	264	*e*T		T	07 25 45.0	
	comp=Z,1.9nm,0.3s							
PPT	Papeete	68.47	264	LR		LR	06 33 29.5	
	comp=Z,222nm,18.6s,baz=132,slow=29							
MAW	Mawson	70.03	164	LR		LR	06 44 40.3	
	comp=Z,135nm,18.2s,baz=218,slow=38							
143A	Socs Landing,	71.95	344	P		P	06 11 33.2	-0.9
TX31	Lajitas Ar. Si	72.34	333	IAmb		IAmb	06 11 48.4	
	comp=Z,9.8nm,1.1s							
TX32	Lajitas Array	72.34	333	P		P	06 11 36.0	-0.6
TXAR	Lajitas Array	72.34	333	P		P	06 11 37.9	+1.2
	comp=Z,1.2nm,0.7s,baz=154,slow=8.1,SNR=14							
TXAR				LR		LR	06 38 32.6	
	comp=Z,113nm,18.2s,baz=0.0,slow=32							
X48A	Hartselle	72.83	348	IAmb		IAmb	06 11 40.9	
	comp=Z,5.9nm,0.8s							
W50A	Signal Mountai	73.31	350	IAmb		IAmb	06 11 44.0	
	comp=Z,12nm,1.1s							
CPCT	Cooper Cave	73.45	351	P		P	06 11 43.5	+0.5
CPCT				IAmb		IAmb	06 11 43.6	
	comp=Z,6.7nm,0.9s							
V48A	Smith Brothers	74.06	349	P		P	06 11 45.6	-1.0
WVT	Waverly	74.60	348	P		P	06 11 50.1	+0.4
WVT				IAmb		IAmb	06 11 51.3	
	comp=Z,6.7nm,1.0s							
LCAR	Lake Charles	75.15	345	IAmb		IAmb	06 12 11.8	
	comp=Z,4.9nm,0.8s							
CCM	Cathedral Cave	77.09	346	P		P	06 12 04.0	+0.2
CCM				IAmb		IAmb	06 12 05.1	
	comp=Z,7.0nm,0.8s							
DBIC	Dimbokro	77.61	71	P		P	06 12 07.8	+0.4
	comp=Z,17nm,1.0s,baz=223,slow=5.9,SNR=12							
DBIC				LR		LR	06 43 58.2	
	comp=Z,69nm,18.4s,baz=184,slow=34							
DBIC	Dimbokro	77.61	71	P		P	06 12 08.2	+0.8
ANMO	Albuquerque	78.41	333	P		P	06 12 13.5	+1.9
P40A	Paris	78.67	346	P		P	06 12 11.9	-0.7
BOSA	Boshof	79.53	118	P		P	06 12 18.2	+0.1
	comp=Z,7.9nm,1.0s,baz=206,slow=4.5,SNR=7.5							
BOSA				LR		LR	06 49 08.4	
	comp=Z,55nm,18.0s,baz=222,slow=37							
BOSA	Boshof	79.53	118	P		P	06 12 18.4	+0.4
T25A	Trinidad	79.69	335	IAmb		IAmb	06 12 21.9	
	comp=Z,16nm,1.5s							
SMCO	Snowmass	82.39	335	P		P	06 12 33.6	+0.5
SMCO				IAmb		IAmb	06 12 36.0	
	comp=Z,9.6nm,1.4s							
KOWA	Kowa	83.36	66	P		P	06 12 38.1	-0.1
KOWA				IAmb		IAmb	06 12 39.1	
	comp=Z,5.9nm,0.8s							
PRN	Pahroc Range	83.92	328	P		P	06 12 40.3	-0.5
PRN				IAmb		IAmb	06 12 52.5	
	comp=Z,5.1nm,1.0s							
RDMU	Red Mountain	84.53	333	P		P	06 12 44.4	+0.5
RDMU				IAmb		IAmb	06 13 01.6	
	comp=Z,4.1nm,1.0s							
F36A	Milaca	85.06	346	IAmb		IAmb	06 12 48.5	
	comp=Z,6.8nm,1.1s							
NVAR	Mina Array Bea	86.17	326	P		P	06 12 53.4	+1.2
	comp=Z,0.6nm,0.7s,baz=152,slow=6.9,SNR=5.3							
NVAR				LR		LR	06 47 41.2	
	comp=Z,25nm,18.3s,baz=265,slow=33							
NVAR	Mina Array Bea	86.17	326	P		P	06 12 52.0	-0.1
PDAR	Pinedale Array	86.47	334	P		P	06 12 54.5	+0.9
	comp=Z,0.9nm,0.9s,baz=145,slow=5.4,SNR=5.5							
PDAR	Pinedale Array	86.47	334	P		P	06 12 53.0	-0.6
TOA0	Torodi Ar. Sit	86.70	71	P		P	06 12 54.9	-0.1
TOA0				IAmb		IAmb	06 12 55.1	
	comp=Z,4.7nm,1.0s							
TORD	Torodi Ar. Bea	86.70	71	P		P	06 12 54.9	-0.1
	comp=Z,1.2nm,0.6s,baz=214,slow=4.9,SNR=7.9							
TORD				LR		LR	06 51 02.0	
	comp=Z,44nm,18.1s,baz=300,slow=35							
TORD	Torodi Ar. Bea	86.70	71	P		P	06 12 53.4	-1.6
DZM	Mont Dzumac	98.00	234	*e*LR		LR	06 45 43.4	
	comp=Z,142nm,24.0s							
ESDC	Sonseca Array	100.06	47	LR		LR	06 57 40.5	
	comp=Z,58nm,19.4s,baz=230,slow=34							
BRTR	Keskin Array B	124.72	64	PKP		PKPdf	06 19 10.6	+0.1
	comp=Z,1.2nm,0.7s,baz=202,slow=5.3,SNR=4.8							
AKASG	Malin Array Be	125.62	50	PKP		PKPdf	06 19 11.4	-0.2
	comp=Z,0.6nm,0.4s,baz=267,slow=2.6,SNR=2.4							
NRIK	Noril'sk	146.69	12	PKPbc		PKPbc	06 19 51.6	0.0
	comp=Z,3.2nm,0.7s,baz=60,slow=1.5,SNR=3.1							
ZALV	Zalesovo Beam	158.02	35	PKP		PKPdf	06 20 07.0	-0.1
	comp=Z,0.7nm,0.4s,baz=267,slow=2.5,SNR=6.5							
ZALV				PKPab		PKPab	06 20 40.5	0.0
	comp=Z,2.0nm,0.6s,baz=305,slow=5.2,SNR=6.6							
MKAR	Makanchi Array	160.08	55	PKP		PKPdf	06 20 10.0	+0.3
	comp=Z,2.2nm,1.1s,baz=325,slow=1.5,SNR=8.3							
MKAR				PKPab		PKPab	06 20 49.2	-0.5
	comp=Z,2.0nm,0.7s,baz=284,slow=3.9,SNR=12							

*IDC **22** 07:04:10.0±0.9, 36.°34N×87.°77E, h0km, mb3.8/10, mb1 3.9/15, mb1mx3.8/49, mbtmp3.8/15, ML3.3/5, MS3.3/14, Ms1 3.4/14, ms1mx3.1/46, Error ellipse: s-maj=26.3km s-min=16.1km az=48.0*

ISC 22 07:04:14.7±0.9, 36.°2N±0.°1×87.°68E±0.°09, h35km, n26, σ1s87/19, mb3.8/9, MS3.3/11, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
WMQ	Urumqi	7.58	0	*e*Pn	Pn	07 06 03.8			+1.1
WMQ				Sn	Sn	07 07 30.3			+3.0
WMQ				smax	smax				
	comp=N,77nm,1.5s								
WMQ				smax	smax				
	comp=E,85nm,1.7s								
GTA	Gaotai	10.11	68	*e*P	Pn	07 06 39.6			+2.2
GTA				pP		07 06 43.5			
GTA				sP		07 06 46.9			
GTA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
GTA				pmax	pmax				
	comp=Z,22nm,4.7s								
GTA				LR	LR				
	comp=N,760nm,14.5s								
GTA				LR	LR				
	comp=E,340nm,14.5s								
GTA				LR	LR				
	comp=Z,350nm,14.2s								
MKAR	Makanchi Array	11.29	341	Pn	Pn	07 06 50.7			-2.8
	comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=9.5								
MKAR				Lg	Lg	07 10 06.8			
	comp=Z,0.1nm,0.3s,baz=88,slow=38,SNR=1.9								
MKAR				LR	LR	07 11 45.2			
	comp=Z,87nm,19.8s,baz=166,slow=41								
AAK	Ala-Archa	12.03	306	Pn	Pn	07 07 03.4			-0.4
	comp=Z,0.2nm,0.3s,baz=127,slow=12,SNR=9.8								
AAK				Lg	Lg	07 10 34.6			
	comp=Z,0.2nm,0.3s,baz=229,slow=17,SNR=1.3								
AAK				LR	LR	07 12 27.3			
	comp=Z,734nm,20.9s,baz=319,slow=41								
LZH	Lanzhou	13.06	86	*e*P	Pn	07 07 15.8			-2.1
LZH				pP	P	07 07 20.0			-7.7
LZH				sP		07 07 23.8			
LZH				pmax	pmax				
	comp=Z,18nm,1.2s								
LZH				LR	LR				
	comp=N,370nm,10.8s								
LZH				LR	LR				
	comp=E,210nm,11.9s								
LZH				LR	LR				
	comp=Z,280nm,10.3s								
KURBB	Kurchatov Arra	15.82	338	Pn	Pn	07 07 51.5			-3.2
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=16								
KURBB				Lg	Lg	07 12 31.4			
	comp=Z,0.0nm,0.3s,baz=282,slow=41,SNR=1.6								
ZALV	Zalesovo Beam	17.83	354	P	Pn	07 08 16.7			-3.0
	comp=Z,0.2nm,0.3s,baz=180,slow=12,SNR=11								
ZALV				LR	LR	07 14 56.8			
	comp=Z,58nm,19.3s,baz=195,slow=36								
SONM	Songino Array	18.05	44	P	Pn	07 08 21.2			-1.5
	comp=Z,0.5nm,0.3s,baz=242,slow=11,SNR=2.1								
CMAR	Chiang Mai Arr	20.31	148	LR	LR	07 16 32.5			
	comp=Z,28nm,18.7s,baz=352,slow=36								
BVAR	Borovoye Array	20.72	330	P	P	07 08 51.6			-0.3
	comp=Z,1.4nm,0.7s,baz=133,slow=18,SNR=9.5								
GEYT	Alibeck	23.61	283	P	P	07 09 24.0			+1.6
	comp=Z,1.7nm,0.5s,baz=198,slow=9.3,SNR=4.0								
GEYT				LR	LR	07 20 28.7			
	comp=Z,72nm,19.2s,baz=15,slow=41								
AKTO	Aktyubinsk	25.62	313	P	P	07 09 40.7			+0.1
	comp=Z,1.2nm,0.6s,baz=100,slow=9.7,SNR=5.0								
AKTO				LR	LR	07 20 55.7			
	comp=Z,81nm,19.4s,baz=265,slow=39								
ARU	Arti	28.15	325	LR	LR	07 22 31.4			
	comp=Z,76nm,22.0s,baz=167,slow=39								
KSRS	Korea Array	32.06	76	LR	LR	07 24 29.3			
	comp=Z,46nm,18.3s,baz=319,slow=38								
NRIK	Noril'sk	33.16	360	LR	LR	07 25 09.1			
	comp=Z,86nm,18.8s,baz=238,slow=38								
JNU	Nakatsue	35.44	82	LR	LR	07 27 33.7			
	comp=Z,56nm,21.1s,baz=48,slow=40								
MJAR	Matsushiro Arr	40.29	74	LR	LR	07 28 36.7			
	comp=Z,17nm,21.3s,baz=200,slow=36								
AKASG	Malin Array Be	43.69	308	LR	LR	07 33 59.4			
	comp=Z,74nm,19.4s,baz=285,slow=41								
FINES	FINESS Array B	45.51	324	P	P	07 12 30.0			-0.3
	comp=Z,1.2nm,0.8s,baz=88,slow=4.7,SNR=1.6								
FINES				LR	LR	07 32 53.0			
	comp=Z,57nm,19.9s,baz=84,slow=38								
NOA	NORSAR Array B	52.69	323	LR	LR	07 37 13.3			
	comp=Z,50nm,18.2s,baz=290,slow=38								
GERES	GERESS Array B	53.90	308	P	P	07 13 34.6			+0.1
	comp=Z,0.2nm,0.3s,baz=80,slow=11,SNR=4.1								
ILAR	Eielson Array	70.68	22	P	P	07 15 26.6			+0.1
	comp=Z,0.6nm,0.8s,baz=303,slow=4.7,SNR=4.8								
WRA	Warramunga Arr	71.18	134	P	P	07 15 31.7			+1.6
	comp=Z,0.8nm,0.8s,baz=305,slow=9.5,SNR=3.0								
ASAR	Alice Springs	73.86	136	P	P	07 15 47.2			+1.3
	comp=Z,1.0nm,0.9s,baz=329,slow=4.9,SNR=4.3								
TORD	Torodi Ar. Bea	79.16	279	P	P	07 16 16.3			+0.1
	comp=Z,0.9nm,0.8s,baz=51,slow=4.7,SNR=5.4								
YKA	Yellowknife Ar	79.99	10	P	P	07 16 19.6			-0.3
	comp=Z,0.7nm,0.7s,baz=337,slow=5.2,SNR=11								

*NOU **22** 07:06:46.2, 13.°18S×166.°51E, h2km, mb4.9, Vanuatu Islands*

*IDC **22** 07:06:52.7±1.9, 13.°54S×166.°72E, h46km±16km, mb4.2/19, mb1 4.4/22, mb1mx4.1/45, mbtmp4.5/22, ML3.5/2, MS3.7/17, Ms1 3.7/17, ms1mx3.5/34, Error ellipse: s-maj=17.6km s-min=12.2km az=79.0*

*NEIC **22** 07:06:53.5±2.4, 13.°58S±0.°05×166.°69E±0.°09, h54km±6km, mb4.7/41, Error ellipse: s-maj=12.2km s-min=7.7km az=83.0*

ISC 22 07:06:51.6±0.4, 13.°52S±0.°05×166.°76E±0.°08, h35km, n127, σ1s54/123, mb4.7/47, MS3.8/15, 2C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SANVU	Saraoutou	1.96	167	Pn	Pn	07 07 23.5			+1.2
SANVU	Saraoutou	1.96	167	P	Pn	07 07 24.5			+2.1
DVP	Devils Point	4.40	162	P	Pn	07 08 00.3			+4.4
LIFNC	LIFOU	7.23	176	P	Pn	07 08 39.1			+4.3
KOUNC	Koumac, New Ca	7.38	198	P	Pn	07 08 38.6			+1.8
HNR	Honiara	7.82	301	P	Pn	07 08 43.4			+0.5
	48nm,0.3s,baz=59,slow=2.9,SNR=9.0								
HNR				S	Sn	07 10 09.3			-0.8
	49nm,0.3s,baz=49,slow=23,SNR=12								
HNR				LR	LR	07 11 43.7			
	comp=Z,362nm,21.3s,baz=133,slow=37								
HNR	Honiara	7.82	301		Pn	07 08 45.2			+2.3
MARNC	Mare, Loyalty	8.01	171	P	Pn	07 08 49.3			+3.8
YATNC	Mamie plateau,	8.49	179	P	Pn	07 08 54.8			+2.7
DZM	Mont Dzumac	8.51	182	*e*Pn	Pn	07 08 54.8			+2.4
	79nm,0.3s								
DZM				*e*Sn	Sn	07 10 23.4			-3.9
	13nm,0.3s								
DZM				*e*LR	LR	07 10 50.0			
	comp=Z,498nm,24.8s								
DZM	Mont Dzumac	8.51	182	P	Pn	07 08 53.7			+1.3
	3.1nm,0.3s,baz=4.6,slow=18,SNR=25								
DZM				S	Sn	07 10 28.6			+1.3
	1.6nm,0.3s,baz=287,slow=19,SNR=1.1								
DZM				LR	LR	07 11 50.7			
	comp=Z,356nm,21.1s,baz=356,slow=35								
DZM	Mont Dzumac	8.51	182	Pn	Pn	07 08 52.0			-0.4
DZM	Mont Dzumac	8.51	182	P	Pn	07 08 55.1			+2.7
NOUC	Port Laguerre	8.54	183	P	Pn	07 08 54.7			+1.9
ONTNC	Ouen Toro	8.74	182	P	Pn	07 08 58.1			+2.5
OUENC	Ouen Island, N	8.85	180	P	Pn	07 09 00.0			+3.0
MSVF	Nonsavu	11.65	113	LR	LR	07 13 21.3			
	comp=Z,942nm,18.3s,baz=211,slow=33								
EIDS	Eidsvold	18.88	229	P	Pn	07 11 11.6			+1.8
EIDS				IAmb	IAmb	07 11 12.5			

APSI	**Ampana**	**46.37**	**282**	P	**P**	**07 15 15.6**	**+0.7**
	comp=Z,40nm,1.0s						
MRSI	**Marisa**	**46.53**	**284**	P	**P**	**07 15 19.6**	**+3.5**
	comp=Z,19nm,1.1s						
BNSI	**Bone**	**46.89**	**277**	P	**P**	**07 15 19.0**	**+0.1**
	comp=Z,51nm,1.0s						
KAPI	**Kappang**	**47.09**	**276**	P	**P**	**07 15 21.2**	**+0.7**
NWAO	**Narrogin (SRO)**	**48.95**	**238**	P	**P**	**07 15 34.0**	**-0.7**
NWAO	**Narrogin (SRO)**	**48.95**	**238**	P	**P**	**07 15 33.2**	**-1.5**
NWAO				IAmb	IAmb	07 15 34.4	
	comp=Z,12nm,0.8s						
TWSI	**Taliwang, Sumb**	**49.10**	**270**	P	**P**	**07 15 35.9**	**-0.2**
	comp=Z,25nm,1.0s						
MORW	**Morawa**	**49.35**	**243**	P	**P**	**07 15 37.1**	**-0.7**
MTKI	**Muara Teweh, K**	**52.82**	**279**	P	**P**	**07 16 03.9**	**-0.1**
	comp=Z,58nm,0.5s						
MJAR	**Matsushiro Arr**	**56.61**	**333**	P	**P**	**07 16 30.4**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=167,slow=9.5,SNR=5.3						
MJAR	**Matsushiro Arr**	**56.61**	**333**	IAmb	IAmb	07 16 31.5	
	comp=Z,1.5nm,0.7s						
KSRS	**Korea Array**	**62.47**	**326**	P	**P**	**07 17 11.6**	**+0.1**
	comp=Z,1.7nm,0.9s,baz=146,slow=6.8,SNR=6.5						
KSRS				LR	LR	07 43 19.6	
	comp=Z,13nm,19.1s,baz=335,slow=35						
VNDA	**Vanda**	**64.05**	**181**	P	**P**	**07 17 20.5**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=352,slow=4.7,SNR=3.8						
VNDA	**Vanda**	**64.05**	**181**	IAmb	IAmb	07 17 25.3	
	comp=Z,1.6nm,1.0s						
NJ2	**Nanjing**	**64.47**	**316**	*e*P	**P**	**07 17 27.1**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**65.59**	**333**	P	**P**	**07 17 32.4**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=125,slow=6.3,SNR=4.9						
IPM	**Ipoh**	**67.64**	**281**	P	**P**	**07 17 45.8**	**+0.2**
MNSI	**Mandailing Nat**	**68.04**	**276**	P	**P**	**07 17 47.8**	**-0.3**
KLR	**Kul'dur**	**69.71**	**336**	P	**P**	**07 17 58.3**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=111,slow=6.7,SNR=5.6						
KMI	**Kunming**	**73.25**	**302**	⇑P	**P**	**07 18 21.1**	**+1.2**
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
LAMP	**Lampang**	**73.42**	**294**	P	**P**	**07 18 22.2**	**+1.4**
CM36	**Chiang Mai Arr**	**73.89**	**294**	P	**P**	**07 18 24.0**	**+0.4**
CM35	**Chiang Mai Arr**	**73.90**	**294**	P	**P**	**07 18 24.0**	**+0.4**
CM04	**Chiang Mai Arr**	**73.96**	**294**	P	**P**	**07 18 25.1**	**+1.2**
CM09	**Chiang Mai Arr**	**73.96**	**294**	P	**P**	**07 18 25.6**	**+1.6**
CM34	**Chiang Mai Arr**	**73.96**	**294**	P	**P**	**07 18 25.0**	**+1.1**
CM01	**Chiang Mai Arr**	**73.98**	**294**	P	**P**	**07 18 25.6**	**+1.5**
CM05	**Chiang Mai Arr**	**73.99**	**294**	P	**P**	**07 18 25.5**	**+1.4**
CM02	**Chiang Mai Arr**	**74.00**	**294**	P	**P**	**07 18 25.7**	**+1.5**
CMAR	**Chiang Mai Arr**	**74.01**	**294**	P	**P**	**07 18 24.9**	**+0.7**
	comp=Z,7.2nm,0.8s,baz=122,slow=4.4,SNR=30						
CMAR				LR	LR	07 46 22.1	
	comp=Z,6.5nm,21.7s,baz=115,slow=32						
CMAR	**Chiang Mai Arr**	**74.01**	**294**	P	**P**	**07 18 24.6**	**+0.4**
CM15	**Chiang Mai Arr**	**74.02**	**294**	P	**P**	**07 18 26.0**	**+1.7**
CM13	**Chiang Mai Arr**	**74.03**	**294**	P	**P**	**07 18 25.8**	**+1.5**
CMMT	**Chiang Mai**	**74.13**	**294**	P	**P**	**07 18 24.8**	**-0.1**
CM33	**Chiang Mai Arr**	**74.13**	**294**	P	**P**	**07 18 25.0**	**+0.1**
CHTO	**Chiang Mai**	**74.13**	**294**	P	**P**	**07 18 24.6**	**-0.4**
CHTO				IAmb	IAmb	07 18 26.4	
	comp=Z,6.8nm,0.9s						
CHTO	**Chiang Mai**	**74.13**	**294**		**P**	**07 18 25.1**	**+0.2**
HHC	**Hu-ho-hao-te**	**74.35**	**320**	*e*P	**P**	**07 18 26.4**	**+0.5**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,74nm,7.6s						
QSPA	**South Pole Qui**	**76.50**	**180**	P	**P**	**07 18 37.7**	**-0.2**
QSPA				IAmb	IAmb	07 18 40.6	
	comp=Z,5.2nm,0.8s						
SEY	**Seymchan**	**77.03**	**353**	P	**P**	**07 18 40.0**	**-0.6**
	comp=Z,4.3nm,0.6s,baz=129,slow=3.5,SNR=10						
LZH	**Lanzhou**	**77.15**	**312**	*e*P	**P**	**07 18 43.3**	**+1.2**
LZH				pP	sP	07 18 58.4	+1.8
LZH				sP	PcP	07 19 09.4	+17
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
BILL	**Bilibino**	**81.34**	**360**	P	**P**	**07 19 04.8**	**+0.8**
BILL				IAmb	IAmb	07 19 06.1	
	comp=Z,4.7nm,0.7s						
GTA	**Gaotai**	**81.48**	**314**	⇓P	**P**	**07 19 06.5**	**+0.9**
GTA				pP	pP	07 19 17.6	+1.3
GTA				sP	sP	07 19 21.6	+1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,5.5s						
GTA				LR	LR		
	comp=N,79nm,16.4s						
GTA				LR	LR		
	comp=E,180nm,18.2s						
GTA				LR	LR		
	comp=Z,50nm,17.1s						
SHL	**Shillong**	**82.56**	**298**	P	**P**	**07 19 11.9**	**+0.2**
SHL				IAmb	IAmb	07 19 12.5	
	comp=Z,9.7nm,1.0s						
TLY	**Talaya**	**84.72**	**326**	P	**P**	**07 19 21.9**	**0.0**
	comp=Z,2.3nm,0.6s,baz=177,slow=3.6,SNR=5.9						
TLY	**Talaya**	**84.72**	**326**	P	**P**	**07 19 21.5**	**-0.4**
TLY				IAmb	IAmb	07 19 22.3	
	comp=Z,3.9nm,0.8s						
CCB	**Clear Creek Bu**	**85.17**	**18**	IAmb	IAmb	07 19 25.8	
	comp=Z,3.2nm,0.7s						
TCOL	**CIGO, UAF Yank**	**85.32**	**18**	IAmb	IAmb	07 19 26.4	
	comp=Z,6.9nm,0.8s						
COLA	**College**	**85.32**	**18**	P	**P**	**07 19 24.6**	**+0.1**
COLA				IAmb	IAmb	07 19 26.4	
	comp=Z,7.2nm,0.9s						
IL31		**85.54**	**18**	P	**P**	**07 19 24.4**	**-1.2**
IL31				IAmb	IAmb	07 19 28.3	
	comp=Z,3.7nm,0.7s						
ILAR	**Eielson Array**	**85.54**	**18**	P	**P**	**07 19 24.5**	**-1.1**
	comp=Z,3.1nm,0.7s,baz=238,slow=5.3,SNR=23						
ILAR				LR	LR	07 50 47.7	
	comp=Z,49nm,21.0s,baz=236,slow=31						
ILAR	**Eielson Array**	**85.54**	**18**	P	**P**	**07 19 25.2**	**-0.5**
NVAR	**Mina Array Bea**	**86.86**	**49**	P	**P**	**07 19 33.9**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=234,slow=8.6,SNR=5.8						
NVAR				LR	LR	07 50 42.0	
	comp=Z,80nm,19.3s,baz=240,slow=30						
SYO	**Syowa Base**	**89.71**	**197**	⇑*e*PcP	**PcP**	**07 19 46.8**	**-0.3**
WMQ	**Urumqi**	**91.53**	**315**	*e*P	**P**	**07 19 55.9**	**+1.1**
SNAA	**Sanae**	**94.72**	**183**	P	**P**	**07 20 06.8**	**-2.2**
VNA3	**Neumayer Olymp**	**95.41**	**181**	P	**P**	**07 20 09.6**	**-2.6**
VNA2	**Neumayer--Watz**	**95.66**	**182**	P	**P**	**07 20 11.6**	**-1.6**
	baz=169,slow=3.5						
MKAR	**Makanchi Array**	**95.99**	**317**	P	**P**	**07 20 14.7**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=101,slow=6.2,SNR=13						
MKAR	**Makanchi Array**	**95.99**	**317**	P	**P**	**07 20 13.8**	**-1.4**
ZALV	**Zalesovo Beam**	**96.13**	**324**	P	**P**	**07 20 14.2**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=103,slow=4.7,SNR=5.1						
YKA	**Yellowknife Ar**	**96.71**	**27**	P	**P**	**07 20 17.2**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=255,slow=4.1,SNR=11						
ARCES	**ARCESS Array B**	**118.97**	**345**	PKP	**PKPdf**	**07 25 34.2**	**-1.8**
	comp=Z,2.6nm,0.7s,baz=88,slow=2.4,SNR=14						
BOSA	**Boshof**	**123.96**	**221**	PKP	**PKPdf**	**07 25 45.9**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=288,slow=2.2,SNR=3.8						
FINES	**FINESS Array B**	**124.42**	**338**	PKP	**PKiKP**	**07 25 46.8**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=355,slow=2.3,SNR=4.0						
NOA	**NORSAR Array B**	**129.34**	**345**	PKP	**PKPdf**	**07 25 55.5**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=30,slow=2.0,SNR=5.7						
VYHS	**Vyhne**	**136.19**	**329**	*e*PKP	**PKiKP**	**07 26 11.1**	**+0.1**
MODS	**Modra-Piesok**	**137.04**	**330**	*e*PKP	**PKiKP**	**07 26 13.9**	**+1.1**
ESDC	**Sonseca Array**	**152.70**	**344**	PKPbc	**PKPbc**	**07 26 44.2**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=7.7,slow=4.4,SNR=8.1						
ESDC				PKPab	**pPKPbc**	**07 26 57.2**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=7.4,slow=4.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**165.46**	**270**	PKP	**PKPdf**	**07 26 52.5**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=207,slow=0.3,SNR=2.3						
TORD				PKPab	**PKPab**	**07 27 51.1**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=86,slow=3.5,SNR=5.5						

IDC 22 07:20:46.3±4.0, 4°07'S×154°69'E, *h*0km, mb4.2/2, mb1 4.5/2, mb1mx3.6/38, mbtmp4.2/2, Error ellipse: s-maj=200.7km s-min=46.1km az=121.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.35**	**230**	P	P	07 26 14.7	-0.5
	4.0nm,0.4s,baz=58,slow=8.1,SNR=107						
ASAR	**Alice Springs**	**27.97**	**224**	P	P	07 26 39.6	+0.6
	0.7nm,0.4s,baz=55,slow=9.2,SNR=15						
TORD	**Torodi Ar. Bea**	**151.85**	**290**	PKPbc	PKPbc	07 40 44.0	-0.3
	0.6nm,0.3s,baz=79,slow=2.2,SNR=13						

JMA 22 07:37:21.1±0.2, 35°79'N×140°92'E, *h*14km±1km, M3.6, 5C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.10**	**210**	⇓P	Pg	07 37 24.2	0.0
CHOJ				S	Sg	07 37 26.1	-0.2
JIHU	**Itakohorinouch**	**0.36**	**299**	⇑P	Pb	07 37 29.0	-0.4
JSMT	**Sammumatsuo**	**0.41**	**249**	⇑P	Pb	07 37 29.8	-0.3
JHYU	**Hitachinakayam**	**0.61**	**334**	⇑P	Pg	07 37 33.3	+0.2
JHYU				*e*S	Sg	07 37 41.2	0.0
JYT	**Yasato**	**0.73**	**307**	⇑P	Pg	07 37 34.7	-0.7
JYT				S	Sg	07 37 44.3	-0.7
JHO	**Hitachi**	**0.87**	**341**	⇑P	Pg	07 37 36.9	-1.0
JHO				S	Sg	07 37 48.9	-0.4
BSO3	**Boso 3**	**1.04**	**199**	P	Pb	07 37 40.6	-0.1
MAT	**Matsushiro**	**2.32**	**290**	P	Pn	07 37 58.4	-0.5
MAT				*e*S	Sn	07 38 27.0	-0.2

*IDC 22 07:47:38.6±1.0, 12°93'N×44°89'W, *h*0km, mb3.8/7, mb1 4.1/8, mb1mx3.7/47, mbtmp3.9/8, ML4.2/1, MS3.4/17, Ms1 3.4/17, ms1mx3.2/35, Error ellipse: s-maj=34.2km s-min=21.0km az=150.0*

ISC 22 07:47:40.2±1.0, 12°9'N±0°2×44°9'W±0°2, *h*10km, n25, σ1°12/8, mb3.8/6, MS3.5/16, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**10.85**	**225**	Pn	**Pn**	**07 50 14.1**	**-1.6**
	1.6nm,0.3s,baz=43,slow=16,SNR=10						
MDP				Sn	Sn	07 52 04.1	-13
	0.1nm,0.3s,baz=39,slow=10,SNR=1.3						
MDP				LR	LR	07 54 07.3	
	comp=Z,59nm,19.2s,baz=116,slow=36						
PTGA	**Pitinga**	**20.14**	**229**	P	**P**	**07 52 15.1**	**+0.4**
	3.4nm,0.5s,baz=53,slow=15,SNR=7.5						
PTGA				LR	LR	07 59 21.1	
	comp=Z,67nm,18.9s,baz=66,slow=35						
RCBR	**Riachuelo**	**20.62**	**154**	LR	LR	07 57 55.9	
	comp=Z,89nm,21.1s,baz=308,slow=30						
SJG	**San Juan**	**21.11**	**287**	LR	LR	07 59 16.5	
	comp=Z,85nm,21.4s,baz=104,slow=33						
ROSC	**El Rosal**	**30.10**	**257**	LR	LR	08 05 36.3	
	comp=Z,97nm,19.2s,baz=159,slow=36						
H10N3	**ASCENSION HYDR**	**36.56**	**123**	T	T	08 33 12.5	
	baz=304,slow=75,SNR=18						
H10N2	**ASCENSION HYDR**	**36.56**	**123**	T	T	08 33 12.9	
	baz=304,slow=75,SNR=22						
H10N1	**ASCENSION HYDR**	**36.58**	**123**	T	T	08 33 14.1	
	baz=304,slow=75,SNR=28						
LPAZ	**La Paz**	**36.96**	**219**	P	**P**	**07 54 51.9**	**+1.3**
	1.6nm,0.9s,baz=54,slow=7.5,SNR=3.9						
LPAZ				LR	LR	08 09 55.8	
	comp=Z,67nm,18.9s,baz=42,slow=36						
H10S3	**ASCENSION HYDR**	**37.06**	**124**	T	T	08 34 04.4	
	baz=279,slow=74,SNR=9.7						
H10S2	**ASCENSION HYDR**	**37.08**	**124**	T	T	08 33 57.3	
	baz=301,slow=74,SNR=5.3						
KOWA	**Kowa**	**39.74**	**83**	P	**P**	**07 55 13.6**	**+0.2**
	1.0nm,0.6s,baz=278,slow=7.1,SNR=1.7						
DBIC	**Dimbokro**	**39.92**	**95**	LR	LR	08 11 23.8	
	comp=Z,36nm,18.2s,baz=234,slow=36						
TORD	**Torodi Ar. Bea**	**45.37**	**84**	P	**P**	**07 55 58.2**	**-1.0**
	1.6nm,1.0s,baz=270,slow=6.7,SNR=6.0						
TORD				LR	LR	08 12 24.9	
	comp=Z,61nm,21.6s,baz=235,slow=33						
ULM	**Lac du Bonnet**	**55.66**	**323**	LR	LR	08 17 02.7	
	comp=Z,32nm,21.3s,baz=82,slow=32						
TXAR	**Lajitas Array**	**56.66**	**297**	P	**P**	**07 57 24.5**	**+0.3**
	0.3nm,1.0s,baz=125,slow=7.8,SNR=2.3						
TXAR				LR	LR	08 20 35.4	
	comp=Z,14nm,21.9s,baz=0.0,slow=35						
PLCA	**Paso Flores**	**58.38**	**203**	P	**P**	**07 57 36.5**	**+0.6**
	0.9nm,0.7s,baz=46,slow=7.1,SNR=3.2						
ANMO	**Albuquerque**	**59.47**	**303**	LR	LR	08 20 27.1	
	comp=Z,70nm,20.1s,baz=88,slow=33						
PDAR	**Pinedale Array**	**62.79**	**312**	LR	LR	08 22 08.3	
	comp=Z,33nm,21.8s,baz=130,slow=33						
NEW	**Newport**	**68.67**	**317**	LR	LR	08 24 33.6	
	comp=Z,32nm,19.3s,baz=94,slow=32						
NVAR	**Mina Array Bea**	**69.15**	**306**	LR	LR	08 28 44.4	
	comp=Z,24nm,18.5s,baz=159,slow=36						
BRTR	**Keskin Array B**	**73.14**	**52**	LR	LR	08 30 17.6	
	comp=Z,16nm,19.8s,baz=102,slow=35						
DLBC	**Dease Lake**	**76.59**	**327**	LR	LR	08 29 50.4	
	comp=Z,39nm,18.0s,baz=104,slow=33						
BOSA	**Boshof**	**79.32**	**123**	LR	LR	08 26 59.9	
	comp=Z,58nm,19.2s,baz=190,slow=30						
ILAR	**Eielson Array**	**83.50**	**335**	P	**P**	**08 00 07.6**	**-0.4**
	0.7nm,0.9s,baz=72,slow=4.7,SNR=6.2						

*IDC 22 07:49:38.3±1.2, 23°62'N×121°62'E, *h*0km, mb3.3/5, mb1 3.6/7, mb1mx3.4/47, mbtmp3.4/7, ML3.4/2, Error ellipse: s-maj=36.9km s-min=24.3km az=71.0*
*TAP 22 07:49:40.0, 23°74'N×121°49'E, *h*9km, ML3.8, C*
*JMA 22 07:49:39.0±0.1, 23°71'N×121°55'E, *h*0km, M3.1*

ISC 22 07:49:39.8±0.9, 23°72'N±0°01×121°55'E±0°02, *h*7km±6km, n120, σ0°80/186, mb3.3/5, 6C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.12**	**244**	⇑*i*P	**Pg**	**07 49 42.5**	**+0.1**
	baz=220						
EGFH				*i* S	**Sg**	**07 49 43.8**	**-0.4**
	baz=220						
ESL	**Shilin**	**0.14**	**312**	⇓*i*P	**Pg**	**07 49 42.5**	**-0.2**
	baz=328						
ESL				*i* S	**Sg**	**07 49 44.0**	**-0.7**
	baz=328						
HGSD	**Ruisui**	**0.26**	**206**	⇑*i*P	**Pg**	**07 49 45.9**	**+1.1**
	baz=205						
HGSD				S	**Sg**	**07 49 52.5**	**+4.2**
	baz=205						
HWA	**Hwalien**	**0.26**	**12**	⇑*i*P	**Pb**	**07 49 46.1**	**-0.7**
	baz=14						
HWA				S	**Sb**	**07 49 50.1**	**-1.4**
	baz=14						
TWD	**Chiawan**	**0.36**	**7**	⇓*i*P	**Pb**	**07 49 47.4**	**-1.1**
	baz=4.0						
TWD				S	**Sg**	**07 49 51.8**	**+0.2**
	baz=4.0						
VWDT	**VWDT**	**0.37**	**275**	⇓*i*P	**Pg**	**07 49 46.8**	**-0.2**
	baz=272						
VWDT				*i* S	**Sg**	**07 49 51.2**	**-0.7**
	baz=272						
YULB	**Yu-li**	**0.40**	**215**	⇑*i*P	**Pg**	**07 49 47.5**	**0.0**
	baz=219						
YULB				S	**Sg**	**07 49 52.9**	**+0.1**
	baz=219						
OWD	**Renai**	**0.41**	**304**	⇓*i*P	**Pg**	**07 49 47.3**	**-0.5**
	baz=305						
OWD				S	**Sg**	**07 49 51.8**	**-1.5**
	baz=305						
EYUL	**Yuli**	**0.43**	**209**	*e*P	**Pb**	**07 49 48.6**	**-1.1**
	baz=217						
EYUL				*e*S	**Sg**	**07 49 52.9**	**-0.8**
	baz=217						
TWF1	**Yuli**	**0.43**	**212**	⇑*i*P	**Pb**	**07 49 48.3**	**-1.5**
	baz=215						
TWF1				S	**Sg**	**07 49 54.0**	**+0.1**
	baz=215						
NACB	**Ninganchiao**	**0.45**	**6**	⇓*i*P	**Pg**	**07 49 48.7**	**+0.1**
NACB				S	**Sg**	**07 49 54.8**	**+0.3**
CHGB	**Renai**	**0.48**	**315**	⇓*i*P	**Pg**	**07 49 48.9**	**-0.2**
	baz=325						
CHGB				S	**Sg**	**07 49 54.7**	**-0.7**
	baz=325						
ETLH	**Xiulin Townshi**	**0.49**	**353**	⇓*i*P	**Pg**	**07 49 49.1**	**-0.1**
	baz=356						
ETLH				S	**Sg**	**07 49 55.5**	**-0.1**
	baz=356						
WHF	**Hehuan Shan**	**0.49**	**329**	⇓*i*P	**Pg**	**07 49 49.1**	**-0.3**
	baz=331						
WHF				S	**Sg**	**07 49 55.5**	**-0.4**
	baz=331						
SSLB	**Suanglung**	**0.55**	**277**	⇓*i*P	**Pg**	**07 49 49.9**	**-0.5**
	baz=275						
SSLB				*i* S	**Sg**	**07 49 55.8**	**-1.7**
	baz=275						
FULB	**Fuli**	**0.57**	**204**	P	**Pb**	**07 49 52.5**	**+0.4**
	baz=213						
FUSS	**Fushou**	**0.59**	**332**	P	**Pg**	**07 49 51.1**	**-0.1**
	baz=333						
FUSS				S	**Sg**	**07 49 58.2**	**-0.9**
	baz=333						
YUS	**Yu-Shan**	**0.59**	**247**	⇑*i*P	**Pg**	**07 49 51.3**	**0.0**
	baz=253						
YUS				S	**Sg**	**07 49 58.1**	**-1.0**
	baz=253						
WPL	**Puli Township**	**0.61**	**298**	*e*P	**Pg**	**07 49 51.4**	**-0.2**
	baz=297						
WPL				*e*S	**Sg**	**07 49 58.9**	**-0.7**
	baz=297						
SMLT	**Sun Moon Lake**	**0.61**	**285**	⇓*i*P	**Pg**	**07 49 51.2**	**-0.4**
	baz=284						
SMLT				*i* S	**Sg**	**07 49 58.6**	**-1.1**
	baz=284						
TWT	**Tachien**	**0.63**	**327**	P	**Pg**	**07 49 52.0**	**+0.1**
	baz=328						
TWT				S	**Sg**	**07 49 59.5**	**-0.7**
	baz=328						
WHYT	**Xinyi Township**	**0.64**	**268**	*e*S	**Sg**	**07 49 59.3**	**-1.0**
	baz=258						
TDCB	**Techi**	**0.64**	**326**	*i* P	**Pg**	**07 49 52.0**	**-0.1**
	baz=328						
TDCB				S	**Sg**	**07 49 59.0**	**-1.5**
	baz=328						
CHKT	**Chengkung**	**0.64**	**195**	*e*P	**Pb**	**07 49 53.8**	**+0.6**
	baz=178						
CHKT				*e*S	**Sn**	**07 50 05.5**	**-0.2**
	baz=178						
DPDB	**Guoxing**	**0.65**	**299**	P	**Pg**	**07 49 52.1**	**-0.2**
	baz=299						
DPDB				*e*S	**Sg**	**07 49 59.6**	**-1.1**
	baz=299						
TYC	**Yuchr**	**0.66**	**286**	⇓*i*P	**Pg**	**07 49 51.9**	**-0.5**
	baz=286						
TYC				S	**Sg**	**07 49 60.0**	**-1.0**
	baz=286						
ALS	**Alishan**	**0.71**	**253**	⇓*i*P	**Pb**	**07 49 53.6**	**-1.0**
	baz=250						
ALS				*i* S	**Sg**	**07 50 02.0**	**-0.8**
	baz=250						
NNSB	**Datong**	**0.72**	**348**	⇓*i*P	**Pg**	**07 49 53.7**	**0.0**
	baz=350						
NNSB				S	**Sg**	**07 50 02.4**	**-0.6**
	baz=350						
NNSH	**Datong**	**0.72**	**348**	P	**Pg**	**07 49 53.6**	**0.0**
	baz=349						
NNSH				S	**Sg**	**07 50 02.8**	**-0.2**
	baz=349						
NNS	**Nan Shan**	**0.73**	**348**	⇓*i*P	**Pg**	**07 49 53.9**	**0.0**
	baz=350						
NNS				S	**Sg**	**07 50 03.5**	**+0.1**
	baz=350						
EWUT	**Wuta**	**0.75**	**16**	P	**Pb**	**07 49 54.5**	**-0.7**
	baz=6.0						
EWUT				*e*S	**Sb**	**07 50 05.6**	**0.0**
	baz=6.0						
WJS	**Zhushan**	**0.76**	**278**	P	**Pb**	**07 49 55.3**	**0.0**
	baz=276						
WJS				S	**Sb**	**07 50 06.6**	**+0.9**
	baz=276						
EDH	**Donghe**	**0.78**	**197**	*e*P	**Pb**	**07 49 55.8**	**+0.1**
	baz=196						
EDH				*e*S	**Sn**	**07 50 09.4**	**+0.3**
	baz=196						
WHP	**Taichung City**	**0.78**	**315**	P	**Pg**	**07 49 54.7**	**-0.1**
	baz=315						
WHP				S	**Sg**	**07 50 04.3**	**-0.6**
	baz=315						
CHN5	**Tsauling**	**0.81**	**261**	⇓*i*P	**Pb**	**07 49 55.6**	**-0.5**
	baz=252						
CHN5				S	**Sg**	**07 50 06.0**	**+0.2**
	baz=252						
WNT	**Mingjian**	**0.81**	**281**	P	**Pb**	**07 49 55.9**	**-0.1**
	baz=284						
WNT				S	**Sb**	**07 50 07.6**	**+0.4**
	baz=284						
WNT1	**Nantou City**	**0.81**	**283**	*e*P	**Pb**	**07 49 56.8**	**+0.5**
	baz=281						
WNT1				*e*S	**Sb**	**07 50 08.8**	**+1.3**
	baz=281						
WWF	**Wufeng**	**0.84**	**293**	*e*P	**Pb**	**07 49 56.9**	**+0.2**
	baz=297						
WWF				*e*S	**Sb**	**07 50 09.1**	**+1.0**
	baz=297						
NDT	**Datong Townshi**	**0.88**	**358**	⇓*i*P	**Pb**	**07 49 56.9**	**-0.4**
	baz=350						
NDT				S	**Sg**	**07 50 07.7**	**-0.4**
	baz=350						
STYH	**Taoyuan**	**0.90**	**232**	*e*P	**Pb**	**07 49 57.0**	**-0.7**
	baz=228						
STYH				*e*S	**Sg**	**07 50 07.8**	**-0.8**
	baz=228						
LONT	**Longtian**	**0.90**	**205**	*e*P	**Pb**	**07 49 57.8**	**+0.1**
	baz=212						
TCU	**Taichung**	**0.90**	**298**	*e*P	**Pb**	**07 49 58.0**	**+0.3**
	baz=297						
TCU				*e*S	**Sn**	**07 50 11.9**	**-0.2**
	baz=297						
WGK	**Gukeng**	**0.90**	**268**	*e*P	**Pb**	**07 49 58.0**	**+0.3**
	baz=266						
WGK				*e*S	**Sb**	**07 50 10.5**	**+0.5**
	baz=266						
STYT	**Tauyuan**	**0.91**	**233**	*e*P	**Pb**	**07 49 57.3**	**-0.7**
	baz=226						
STYT				*e*S	**Sb**	**07 50 09.5**	**-0.8**
	baz=226						
ENTT	**Nioudou**	**0.91**	**1**	⇓*i*P	**Pb**	**07 49 57.6**	**-0.4**
	baz=353						
ENTT				S	**Sg**	**07 50 09.7**	**+0.5**
	baz=353						
NDS	**Dongshan**	**0.92**	**10**	*e*P	**Pb**	**07 49 57.6**	**-0.5**
	baz=358					

CHY	**Chiayi**	**1.05**	**258**	*e*P	**Pb**	**07 50 00.4**	**+0.1**
	baz=257								
CHY				*e*S	**Sb**	**07 50 14.6**	**+0.3**
	baz=257								
WTK	**Tuku**	**1.06**	**268**	*e*P	**Pb**	**07 50 00.2**	**-0.2**
	baz=266								
WTK				*e*S	**Sb**	**07 50 14.3**	**-0.2**
	baz=266								
NMLH	**Miaoli**	**1.06**	**320**	*e*P	**Pn**	**07 50 01.0**	**-0.1**
	baz=318								
NMLH				*e*S	**Sb**	**07 50 14.6**	**0.0**
	baz=318								
CHN1	**Nanshi**	**1.08**	**240**	P	**Pb**	**07 50 00.8**	**+0.1**
	baz=240								
CHN1				S	**Sb**	**07 50 15.5**	**+0.5**
	baz=240								
SNST	**Tainan City**	**1.08**	**243**	*e*P	**Pn**	**07 50 01.1**	**-0.3**
	baz=243								
SNST				*e*S	**Sb**	**07 50 15.6**	**+0.4**
	baz=243								
WRL	**Guolierlin Hig**	**1.08**	**280**	*e*P	**Pb**	**07 50 00.9**	**0.0**
	baz=278								
WRL				*e*S	**Sb**	**07 50 15.1**	**-0.1**
	baz=278								
SGST	**Jiashian**	**1.09**	**234**	*e*P	**Pg**	**07 50 00.2**	**-0.5**
	baz=234								
SGST				*e*S	**Sb**	**07 50 15.1**	**-0.3**
	baz=234								
SLGT	**Liugui**	**1.10**	**229**	*e*P	**Pb**	**07 50 01.0**	**-0.1**
	baz=218								
SLGT				*e*S	**Sb**	**07 50 16.1**	**+0.4**
	baz=218								
NTC	**Toucheng**	**1.16**	**13**	*e*P	**Pb**	**07 50 01.9**	**-0.1**
	baz=8.0								
NTC				*e*S	**Sn**	**07 50 18.8**	**+0.3**
	baz=8.0								
EGS		**1.17**	**17**	*e*P	**Pn**	**07 50 03.2**	**+0.6**
	baz=5.0								
SBCB	**Hsinchu**	**1.18**	**334**	*e*P	**Pb**	**07 50 02.7**	**+0.2**
	baz=333								
SBCB				*e*S	**Sn**	**07 50 19.4**	**+0.4**
	baz=333								
HSN	**Hsinchu**	**1.20**	**334**	*e*P	**Pn**	**07 50 03.8**	**+0.9**
	baz=335								
HSN				*e*S	**Sn**	**07 50 20.4**	**+1.0**
	baz=335								
NHDH	**Xindian Distri**	**1.24**	**359**	*e*P	**Pn**	**07 50 04.4**	**+1.0**
	baz=12								
ECL	**Taimali**	**1.25**	**206**	*e*P	**Pb**	**07 50 03.3**	**-0.3**
	baz=189								
TATO	**Taipei**	**1.25**	**358**	*e*P	**Pn**	**07 50 04.4**	**+0.7**
	baz=10.0								
TWA	**Mucha**	**1.25**	**2**	*e*P	**Pn**	**07 50 04.4**	**+0.7**
	baz=17								
CHN3	**Shinhua**	**1.26**	**240**	*e*S	**Sn**	**07 50 24.2**	**+3.2**
	baz=240								
TIPB	**Shuangxi**	**1.27**	**12**	*e*P	**Pn**	**07 50 04.2**	**+0.2**
	baz=13								
SCST	**Cishan**	**1.28**	**229**	*e*P	**Pn**	**07 50 05.5**	**+1.5**
	baz=215								
CHN8	**Yiju**	**1.28**	**253**	*e*P	**Pn**	**07 50 04.5**	**+0.4**
	baz=249								
NCUH	**Zhongli**	**1.28**	**345**	*e*P	**Pn**	**07 50 05.2**	**+1.1**
	baz=2.0								
NCU	**National Centr**	**1.28**	**345**	*e*P	**Pn**	**07 50 05.0**	**+0.9**
	baz=3.0								
SSD	**Sandimen**	**1.28**	**221**	*e*P	**Pn**	**07 50 04.0**	**-0.1**
	baz=211								
TSMG	**Majia**	**1.31**	**220**	*e*P	**Pn**	**07 50 05.0**	**+0.6**
	baz=209								
TWB1	**Santiao Chiao**	**1.34**	**17**	*e*P	**Pb**	**07 50 06.0**	**+0.7**
	baz=6.0								
NWF	**Wu-fen Shan**	**1.36**	**9**	*e*P	**Pb**	**07 50 07.0**	**+1.4**
	baz=9.0								
WFSB	**Wu-fen Shan**	**1.36**	**9**	*e*P	**Pb**	**07 50 06.6**	**+1.1**
	baz=9.0								
TWM1	**Shoushan**	**1.37**	**229**	*e*P	**Pb**	**07 50 08.5**	**+2.8**
	baz=227								
TWS1	**Kuangyinshan**	**1.38**	**355**	*e*P	**Pb**	**07 50 07.5**	**+1.6**
	baz=12								
MASBT	**Mashibuluo**	**1.39**	**217**	*e*P	**Pb**	**07 50 05.9**	**-0.2**
	baz=209								
YM01	**YM01**	**1.42**	**1**	*e*P	**Pb**	**07 50 06.9**	**+0.3**
	baz=1.0								
ANP	**Anpu**	**1.46**	**359**	*e*P	**Pb**	**07 50 08.3**	**+1.0**
	baz=18								
YM08	**YM08**	**1.46**	**2**	*e*P	**Pb**	**07 50 07.9**	**+0.7**
	baz=2.0								
JYNG	**Yonagunijimaku**	**1.47**	**60**	P	**Pn**	**07 50 06.9**	**+0.2**
JYNG				S	**Sn**	**07 50 28.1**	**+1.9**
EAST	**Anshuo**	**1.48**	**206**	*e*P	**Pg**	**07 50 07.1**	**-1.1**
	baz=192								
SSPT	**Xinbi**	**1.53**	**216**	*e*P	**Pg**	**07 50 09.4**	**+0.3**
	baz=215								
YOJ	**Yonaguni jima**	**1.53**	**61**	P	**Pb**	**07 50 08.1**	**-0.3**
YOJ				*e*S	**Sg**	**07 50 29.2**	**+0.3**
YOJ	**Yonaguni jima**	**1.53**	**61**	*e*P	**Pn**	**07 50 06.9**	**-0.6**
	baz=65								
SCZT	**Fangliau**	**1.59**	**213**	*e*P	**Pg**	**07 50 09.9**	**-0.4**
	baz=211								
SLIU	**Shizi**	**1.65**	**205**	*e*P	**Pg**	**07 50 11.4**	**0.0**
	baz=192								
TWKBT	**Hengchun**	**1.90**	**201**	*e*P	**Pn**	**07 50 11.6**	**-0.9**
	baz=187								
HATJ	**Hateruma jima**	**2.10**	**80**	P	**Pn**	**07 50 15.7**	**+0.5**
HATJ				*e*S	**Sn**	**07 50 40.9**	**-0.7**
JKRS	**Kuro-shima**	**2.31**	**77**	P	**Pn**	**07 50 19.3**	**+1.1**
JKRS				*e*S	**Sn**	**07 50 47.1**	**+0.2**
JIJ	**Ishigaki jima**	**2.46**	**74**	P	**Pn**	**07 50 20.3**	**0.0**
JIJ				*e*S	**Sn**	**07 50 49.2**	**-1.4**
JISG	**Ishigakijimahi**	**2.67**	**71**	P	**Pn**	**07 50 23.1**	**0.0**
AXDP	**Jialang**	**3.47**	**290**	*e*P	**Pn**	**07 50 33.6**	**-0.5**
	baz=302								
JOW	**Kunigami**	**6.83**	**62**	Pn	**Pn**	**07 51 19.6**	**-0.8**
	1.7nm,0.3s,baz=282,slow=19,SNR=5.6								
KSRS	**Korea Array**	**14.74**	**20**	Pn	**Pn**	**07 53 09.4**	**+0.7**
	0.1nm,0.3s,baz=199,slow=12,SNR=1.2								
MKAR	**Makanchi Array**	**38.90**	**316**	P	**P**	**07 57 06.0**	**+0.1**
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.7								
H11N1	**WAKE ISLAND Hy**	**42.18**	**86**	T	T	08 42 30.7			
	baz=283								
H11N2	**WAKE ISLAND Hy**	**42.19**	**86**	T	T	08 42 31.3			
	baz=283								
H11N3	**WAKE ISLAND Hy**	**42.20**	**86**	T	T	08 42 32.5			
	baz=283								
H11S3	**WAKE ISLAND Hy**	**42.30**	**88**	T	T	08 42 43.5			
	baz=290								
H11S1	**WAKE ISLAND Hy**	**42.31**	**88**	T	T	08 42 42.4			
	baz=290								
H11S2	**WAKE ISLAND Hy**	**42.32**	**88**	T	T	08 42 42.9			
	baz=290								
KURBB	**Kurchatov Arra**	**42.67**	**320**	P	**P**	**07 57 37.8**	**+0.8**
	0.2nm,0.5s,baz=108,slow=8.8,SNR=2.2								
WRA	**Warramunga Arr**	**45.16**	**163**	P	**P**	**07 57 55.7**	**-1.6**
	0.6nm,0.9s,baz=345,slow=8.8,SNR=2.2								
ASAR	**Alice Springs**	**48.61**	**165**	P	**P**	**07 58 23.2**	**-1.1**
	0.2nm,0.7s,baz=353,slow=12,SNR=2.1								
YKA	**Yellowknife Ar**	**83.27**	**23**	P	**P**	**08 02 06.8**	**0.0**
	0.4nm,0.9s,baz=310,slow=4.8,SNR=5.4								

*INET **22** 08:07:03.3,9.°52N×85.°80W,h14km,MW3.2*
UCR 22 08:07:00.8±1.7,9.°44N×85.°96W,h24km±4km,MW3.7,
13C-2D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.57**	**34**	⇑*i*P	Pb	08 07 12.2	0.0
GRZA				*e*S	Sn	08 07 21.3	-0.9
INDI	**Punta indio, G**	**0.62**	**47**	⇑*i*P	Pb	08 07 13.2	+0.1
INDI				*e*S	Sn	08 07 23.4	0.0
PLVR	**Palo Verde**	**1.09**	**33**	⇑*i*P	Pn	08 07 18.8	-1.9
PLVR				*e*S	Sb	08 07 34.1	-0.7
LAFE	**Finca La Fe, P**	**1.10**	**70**	⇑*e*P	Pn	08 07 19.4	-1.3
JTS	**Las Juntas de**	**1.30**	**49**	⇑*i*P	Pn	08 07 23.6	-0.1
JTS				*e*S	Sb	08 07 41.4	+0.4
LAPC	**Finca la Perla**	**1.42**	**21**	⇑*i*P	Pn	08 07 24.0	-1.2
GBS3	**Finca Las Img**	**1.43**	**20**	⇑*i*P	Pn	08 07 25.1	-0.1
COLC	**Colonia**	**1.43**	**31**	*i* P	Pn	08 07 25.1	-0.2
COLC				*i* S	Sb	08 07 44.2	-0.5
LIM1	**Limonal**	**1.43**	**29**	*i* P	Pn	08 07 25.4	0.0
GPS2	**Hotel Rincn d**	**1.44**	**25**	⇑*e*P	Pn	08 07 25.4	-0.1
GPS2				*e*S	Sb	08 07 45.3	+0.4
CUI	**Cuipilapa**	**1.44**	**33**	*e*P	Pn	08 07 24.6	-0.9
CUI				*i* S	Sn	08 07 43.6	-0.2
GUAB	**Guayabo de Bag**	**1.45**	**30**	*i* P	Pn	08 07 25.6	-0.1
BUEV	**Buena Vista**	**1.46**	**22**	⇑*i*P	Pn	08 07 25.6	-0.2
GB1A	**Borinquen Arri**	**1.48**	**22**	⇑*i*P	Pn	08 07 25.9	-0.2
GB1A				*e*S	Sb	08 07 45.5	-0.6
HORNC	**Hornillas**	**1.48**	**31**	*i* P	Pn	08 07 26.0	-0.1
HORNC				*i* S	Sn	08 07 45.4	+0.5
ACAL	**Aguas Claras**	**1.50**	**37**	⇑*i*P	Pn	08 07 26.4	+0.1
BUAI	**Buenos Aires**	**1.56**	**23**	*i* P	Pn	08 07 26.3	-0.8
ARE1	**Arenal 1**	**1.59**	**50**	⇑*i*P	Pn	08 07 28.4	+0.8
PTEN	**Parque Tenorio**	**1.59**	**37**	*i* P	Pn	08 07 27.9	+0.3
SRA1	**San Ramn**	**1.59**	**66**	*e*P	Pn	08 07 27.9	+0.2
CEDE	**Laguna Cedeo**	**1.62**	**50**	*i* P	Pn	08 07 27.9	0.0
FORC	**Fortuna**	**1.63**	**51**	*i* P	Pb	08 07 29.2	-1.0
HDC	**Heredia**	**1.90**	**73**	*e*P	Pn	08 07 32.8	+0.9
HDC				*e*S	Sn	08 07 55.1	-0.1
COVE	**Coope Vega, Sa**	**1.99**	**50**	*e*P	Pn	08 07 34.0	+0.9
EDDO	**Dominical**	**2.08**	**95**	*e*P	Pn	08 07 33.6	-0.5
RIMA	**Rio Macho**	**2.09**	**81**	⇓*e*P	Pn	08 07 34.3	-0.3
CDM	**Cerro de Muert**	**2.17**	**87**	*i* P	Pn	08 07 35.8	-0.1
MRVA	**Moravia de Chi**	**2.51**	**81**	*e*P	Pn	08 07 40.5	+0.1
RIOS	**Rincon, Osa**	**2.52**	**107**	⇑*i*P	Pn	08 07 40.2	-0.2
EDBA	**Buenos Aires**	**2.66**	**96**	*e*P	Pn	08 07 42.3	0.0
DRK0	**Durika**	**2.68**	**93**	*e*P	Pn	08 07 42.7	0.0
PIRO	**Carate, Puerto**	**2.79**	**111**	*e*P	Pn	08 07 44.2	+0.3
POTG	**Potrero Grande**	**2.83**	**98**	*e*P	Pn	08 07 44.9	+0.3
EDSV	**San Vito**	**3.01**	**102**	⇓*e*P	Pn	08 07 48.6	+1.4
BRU2	**Volcan**	**3.29**	**101**	*e*P	Pn	08 07 52.4	+1.4

*INET **22** 08:11:26.4,9.°42N×85.°83W,h24km,MW3.4*
UCR 22 08:11:22.8±1.5,9.°43N×86.°03W,h23km±4km,MW3.8,
19C-1D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.62**	**39**	⇑*i*P	Pb	08 11 35.0	+0.1
GRZA				*e*S	Sn	08 11 44.4	-1.0
INDI	**Punta indio, G**	**0.68**	**50**	⇑*i*P	Pb	08 11 36.0	0.0
INDI				*e*S	Sn	08 11 46.2	-0.7
PLVR	**Palo Verde**	**1.13**	**36**	⇑*i*P	Pn	08 11 41.6	-1.8
PLVR				*e*S	Sb	08 11 57.0	-1.1
LAFE	**Finca La Fe, P**	**1.16**	**71**	⇑*i*P	Pn	08 11 42.1	-1.6
LAFE				*e*S	Sn	08 11 55.8	-3.1
JTS	**Las Juntas de**	**1.36**	**51**	⇑*i*P	Pn	08 11 46.2	-0.2
JTS				*e*S	Sb	08 12 04.3	-0.3
LAPC	**Finca la Perla**	**1.45**	**24**	⇑*i*P	Pn	08 11 46.7	-1.0
GBS3	**Finca Las Img**	**1.46**	**23**	⇑*i*P	Pn	08 11 47.9	+0.1
COLC	**Colonia**	**1.47**	**33**	⇑*i*P	Pn	08 11 47.9	-0.1
COLC				*i* S	Sb	08 12 07.3	-0.5
GPS2	**Hotel Rincn d**	**1.47**	**27**	⇑*e*P	Pn	08 11 48.1	+0.1
GPS2				*e*S	Sb	08 12 07.3	-0.5
LIM1	**Limonal**	**1.47**	**31**	⇑*i*P	Pn	08 11 48.1	0.0
CUI	**Cuipilapa**	**1.49**	**35**	⇑*e*P	Pn	08 11 47.2	-1.0
CUI				*i* S	Sn	08 12 06.6	-0.4
BUEV	**Buena Vista**	**1.49**	**24**	⇑*i*P	Pn	08 11 48.3	0.0
BUEV				*i* S	Sb	08 12 08.1	-0.3
GUAB	**Guayabo de Bag**	**1.49**	**32**	⇑*i*P	Pn	08 11 48.3	0.0
GUAB				*i* S	Sn	08 12 07.8	+0.7
GB1A	**Borinquen Arri**	**1.51**	**24**	⇑*i*P	Pn	08 11 48.7	+0.1
GB1A				⇑*i*P	Pb	08 11 48.9	-1.4
GB1A				*e*S	Sn	08 12 08.2	+0.6
ACAL	**Aguas Claras**	**1.54**	**39**	*i* P	Pn	08 11 49.2	+0.2
BUAI	**Buenos Aires**	**1.59**	**25**	⇑*i*P	Pn	08 11 49.0	-0.6
PTEN	**Parque Tenorio**	**1.64**	**39**	⇑*i*P	Pn	08 11 50.5	+0.2
ARE1	**Arenal 1**	**1.65**	**51**	⇑*i*P	Pn	08 11 51.3	+0.9
SRA1	**San Ramn**	**1.66**	**67**	*e*P	Pn	08 11 51.1	+0.4
CEDE	**Laguna Cedeo**	**1.67**	**51**	⇑*e*P	Pn	08 11 50.7	-0.1
FORC	**Fortuna**	**1.69**	**52**	*i* P	Pn	08 11 51.6	+0.6
HDC	**Heredia**	**1.97**	**73**	*e*P	Pn	08 11 55.6	+0.7
COVE	**Coope Vega, Sa**	**2.05**	**51**	*e*P	Pn	08 11 56.8	+0.9
OCM	**Ochomogo**	**2.09**	**77**	*e*P	Pn	08 11 57.4	+0.8
RIMA	**Rio Macho**	**2.16**	**81**	*e*P	Pn	08 11 57.2	-0.5
CDM	**Cerro de Muert**	**2.24**	**87**	⇓*i*P	Pn	08 11 58.5	-0.4
PEZE	**Perez Zeledon,**	**2.32**	**91**	*e*P	Pn	08 11 59.2	-0.5
MRVA	**Moravia de Chi**	**2.58**	**81**	*e*P	Pn	08 12 03.4	+0.1
RIOS	**Rincon, Osa**	**2.59**	**106**	*e*P	Pn	08 12 02.6	-0.7
EDBA	**Buenos Aires**	**2.73**	**95**	*e*P	Pn	08 12 05.0	-0.3
DRK0	**Durika**	**2.75**	**93**	*e*P	Pn	08 12 05.5	-0.2
PIRO	**Carate, Puerto**	**2.85**	**111**	*e*P	Pn	08 12 06.1	-0.8
POTG	**Potrero Grande**	**2.90**	**97**	*e*P	Pn	08 12 07.5	-0.1
EDSV	**San Vito**	**3.08**	**101**	*e*P	Pn	08 12 11.1	+1.0

*IDC **22** 08:17:45.2±0.6,16.°77S×173.°54W,h0km,mb4.4/16,*
mb1 4.6/18,mb1mx4.5/29,mbtmp4.4/18,ML4.0/2,MS3.5/5,
Ms1 3.6/5,ms1mx3.3/20,Error ellipse: s-maj=25.0km
s-min=13.9km az=128.0
*NEIC **22** 08:17:55.7±1.6,16.°9S±0.°1×173.°6W±0.°1,h89km±6km,*
mb4.6/56,Error ellipse: s-maj=23.4km s-min=11.9km
az=140.0
ISC 22 08:17:52.1±0.5,16.°8S±0.°1×173.°6W±0.°1,h52km,n130,
σ1.9 03/116,mb4.6/43,MS3.7/6,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.38**	**31**	Pn	**Pn**	**08 18 38.7**	**-3.7**
	16nm,0.3s,baz=204,slow=5.4,SNR=1.5						
AFI				Sn	Sn	08 19 07.9	-14
	93nm,0.3s,baz=32,slow=21,SNR=9.8						
AFI				LR	LR	08 19 31.6	
	comp=Z,192nm,20.9s,baz=242,slow=32						
AFI	**Afiamalu**	**3.38**	**31**	Pn	**Pn**	**08 18 46.9**	**+4.4**
MSVF	**Nonsavu**	**8.04**	**262**	Pn	Pn	08 19 55.3	+8.9
	1.1nm,0.3s,baz=114,slow=15,SNR=11						
MSVF	**Nonsavu**	**8.04**	**262**		Pn	08 19 50.9	+4.5
DZM	**Mont Dzumac**	**19.54**	**251**	*e*Pn	**Pn**	**08 22 20.2**	**+3.0**
	15nm,0.7s						
DZM				*e*LR	LR	08 26 56.7	
	comp=Z,594nm,25.6s						
DZM	**Mont Dzumac**	**19.54**	**251**	P	**Pn**	**08 22 16.3**	**-0.9**
	0.5nm,0.3s,baz=102,slow=20,SNR=2.0						
DZM	**Mont Dzumac**	**19.54**	**251**	P	**Pn**	**08 22 16.2**	**-1.0**
OUZ	**Omahuta**	**21.60**	**210**	P	**P**	**08 22 37.4**	**-0.2**
OUZ				lAmb	lAmb	08 23 03.2	
	comp=Z,33nm,1.3s						
URZ	**Urewera**	**22.86**	**199**	P	**P**	**08 22 52.0**	**+0.9**
	comp=Z,12nm,0.6s,baz=307,slow=20,SNR=19						
URZ	**Urewera**	**22.86**	**199**	P	**P**	**08 22 52.1**	**+1.1**
URZ				lAmb	lAmb	08 22 52.8	
	comp=Z,14nm,0.6s						
PAE	**Paea**	**22.94**	**96**	*e*T	T	08 46 21.9	
	comp=Z,2.0nm,0.3s						
PPT2	**Papeete2**	**22.95**	**95**	*e*LR	LR	08 28 08.0	
	comp=Z,299nm,26.2s						
PPT2	**Papeete2**	**22.95**	**95**	*e*T	T	08 46 22.7	
	comp=Z,3.2nm,0.3s						
TBI	**Tubuai**	**23.55**	**110**	*e*LR	LR	08 28 31.3	
	comp=Z,364nm,27.2s						
TBI	**Tubuai**	**23.55**	**110**	*e*T	T	08 47 16.7	
	comp=Z,12nm,0.3s						
HIZ	**Hauiti**	**23.87**	**203**	P	**P**	**08 23 00.5**	**-0.2**
BKZ	**Black Stump Fm**	**23.89**	**199**	P	**P**	**08 23 01.0**	**+0.1**
BKZ				lAmb	lAmb	08 23 19.6	
	comp=Z,25nm,1.4s						
VAH	**Vaihoa**	**25.00**	**90**	*e*T	T	08 48 51.1	
	comp=Z,7.4nm,0.3s						
QRZ	**Quartz Range**	**26.76**	**204**	P	**P**	**08 23 27.1**	**+0.2**
TUWZ	**Tuamarina**	**26.77**	**201**	P	**P**	**08 23 27.6**	**+0.7**
NNZ	**Nelson**	**26.78**	**202**	P	**P**	**08 23 28.8**	**+1.7**
KHZ	**Kahutara**	**27.78**	**201**	P	**P**	**08 23 35.0**	**-1.0**
KHZ				lAmb	lAmb	08 23 50.0	
	comp=Z,17nm,1.1s						
LTZ	**Lake Taylor**	**28.55**	**202**	P	**P**	**08 23 42.0**	**-1.0**
LTZ				lAmb	lAmb	08 23 49.4	
	comp=Z,13nm,0.7s						
OXZ	**Oxford**	**29.11**	**202**	P	**P**	**08 23 47.6**	**-0.3**
OXZ				lAmb	lAmb	08 24 03.0	
	comp=Z,27nm,1.3s						
MQZ	**McQueen's Vall**	**29.23**	**201**	P	**P**	**08 23 49.1**	**+0.2**
MQZ				lAmb	lAmb	08 24 10.4	
	comp=Z,18nm,1.2s						
RPZ	**Rata Peaks**	**29.80**	**203**	P	**P**	**08 23 55.0**	**+1.0**
	comp=Z,3.7nm,0.7s,baz=315,slow=4.3,SNR=1.8						
RPZ	**Rata Peaks**	**29.80**	**203**	P	**P**	**08 23 53.7**	**-0.3**
FOZ	**Fox Glacier**	**30.12**	**204**	P	**P**	**08 23 57.0**	**+0.2**
DCZ	**Deep Cove**	**32.79**	**205**	P	**P**	**08 24 20.4**	**+0.1**
WHZ	**Wether Hill Ro**	**32.83**	**204**	P	**P**	**08 24 21.5**	**+0.9**
WHZ				lAmb	lAmb	08 24 26.9	
	comp=Z,9.9nm,0.8s						
TAOE	**Nuku Hiva Isla**	**33.51**	**81**	*e*T	T	08 59 24.0	
	comp=Z,36nm,0.2s						
ARMA	**Armidale**	**34.47**	**241**	P	**P**	**08 24 35.3**	**+0.1**
RKT	**Rikitea**	**36.75**	**106**	*e*T	T	09 03 43.7	
	comp=Z,5.0nm,0.3s						

TOO	**Toolangi**	**41.44**	**232**	P	**P**	**08 25 33.2**	**-0.6**
TOO				lAmb	lAmb	08 25 52.1	
	comp=Z,12nm,1.2s						
COEN	**Coen**	**41.73**	**268**	P	**P**	**08 25 37.5**	**+1.1**
COEN				lAmb	lAmb	08 25 38.0	
	comp=Z,8.5nm,1.2s						
STKA	**Stephens Creek**	**43.18**	**241**	P	**P**	**08 25 48.3**	**+0.3**
	comp=Z,17nm,0.8s,baz=85,slow=9.0,SNR=32						
STKA	**Stephens Creek**	**43.18**	**241**	P	**P**	**08 25 48.2**	**+0.2**
BBOO	**Buckleboo**	**47.95**	**241**	P	**P**	**08 26 25.4**	**-0.3**
BBOO				lAmb	lAmb	08 26 26.6	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**49.17**	**258**	P	**P**	**08 26 34.4**	**-0.8**
WR0				lAmb	lAmb	08 26 35.5	
	comp=Z,7.9nm,1.1s						
WB0	**Warramunga Arr**	**49.33**	**258**	P	**P**	**08 26 35.5**	**-1.0**
WB0				lAmb	lAmb	08 26 38.5	
	comp=Z,8.9nm,1.1s						
WB2	**Warramunga Arr**	**49.35**	**258**	P	**P**	**08 26 35.2**	**-1.4**
WB2				lAmb	lAmb	08 26 38.8	
	comp=Z,3.9nm,0.7s						
WRAB	**Tennant Creek**	**49.35**	**258**	P	**P**	**08 26 34.8**	**-1.9**
WRA	**Warramunga Arr**	**49.36**	**258**	P	**P**	**08 26 35.8**	**-1.0**
	comp=Z,2.0nm,0.4s,baz=97,slow=7.2,SNR=72						
WRA				PcP	**PcP**	**08 27 59.6**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=93,slow=3.6,SNR=2.8						
WRA	**Warramunga Arr**	**49.36**	**258**	P	**P**	**08 26 34.0**	**-2.7**
AS31	**Alice Springs**	**49.51**	**253**	P	**P**	**08 26 37.3**	**-0.5**
ASAR	**Alice Springs**	**49.51**	**253**	P	**P**	**08 26 37.5**	**-0.4**
	comp=Z,33nm,0.7s,baz=88,slow=8.5,SNR=236						
ASAR				PcP	**PcP**	**08 27 59.8**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=98,slow=4.7,SNR=1.5						
ASAR	**Alice Springs**	**49.51**	**253**	P	**P**	**08 26 36.3**	**-1.6**
FORT	**Forrest**	**54.62**	**244**	P	**P**	**08 27 14.6**	**-1.1**
VNDA	**Vanda**	**61.95**	**186**	P	**P**	**08 28 07.1**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=13,slow=4.9,SNR=5.9						
PSA00	**Pilbara Seismi**	**62.63**	**254**	P	**P**	**08 28 10.0**	**-1.6**
MJAR	**Matsushiro Arr**	**69.91**	**320**	P	**P**	**08 28 58.9**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=156,slow=5.7,SNR=2.2						
QSPA	**South Pole Qui**	**73.23**	**180**	P	**P**	**08 29 18.2**	**+0.7**
QSPA				lAmb	lAmb	08 29 34.0	
	comp=Z,10.0nm,1.4s						
PETK	**Petropavlovsk-**	**73.93**	**342**	P	**P**	**08 29 21.7**	**+0.2**
	comp=Z,5.7nm,0.7s,baz=121,slow=7.4,SNR=4.8						
PETK				LR	LR	08 55 48.8	
	comp=Z,31nm,21.4s,baz=86,slow=31						
NVAR	**Mina Array Bea**	**75.50**	**42**	P	**P**	**08 29 31.4**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=224,slow=9.7,SNR=12						
NVAR				LR	LR	08 54 42.9	
	comp=Z,47nm,19.6s,baz=226,slow=29						
NVAR	**Mina Array Bea**	**75.50**	**42**	P	**P**	**08 29 30.6**	**-0.6**
NV11	**Mina Array Sit**	**75.60**	**42**	P	**P**	**08 29 31.7**	**0.0**
K05A	**Summer Lake**	**76.51**	**37**	P	**P**	**08 29 36.7**	**-0.2**
KSRS	**Korea Array**	**77.05**	**316**	P	**P**	**08 29 41.6**	**+1.9**
	comp=Z,1.1nm,0.5s,baz=132,slow=5.5,SNR=7.2						
PINE	**Pine Mountain**	**77.15**	**36**	P	**P**	**08 29 41.1**	**+0.7**
PINE				lAmb	lAmb	08 29 44.7	
	comp=Z,20nm,1.5s						
USRK	**Ussuriysk Ar.**	**78.41**	**323**	P	**P**	**08 29 48.7**	**+1.5**
	comp=Z,0.8nm,0.5s,baz=117,slow=5.3,SNR=4.2						
TMUT	**Trail Mountain**	**80.61**	**44**	P	**P**	**08 29 59.7**	**0.0**
HLID	**Hailey**	**80.84**	**39**	P	**P**	**08 29 59.5**	**-1.1**
HVU	**Hansel Valley**	**80.89**	**41**	P	**P**	**08 29 59.8**	**-1.1**
TCUT	**Toone Canyon**	**81.42**	**43**	P	**P**	**08 30 03.1**	**-0.7**
TCUT				lAmb	lAmb	08 30 05.0	
	comp=Z,5.5nm,0.9s						
**TXA

SQTA	**Sankt Quirin**	**149.43**	**354**	*eP*		**PKPbc**	**08 37 35.7**	**+0.1**
	comp=Z,9.6nm,1.5s							
DAVA	**Damuels**	**149.49**	**355**	*eP*		**PKiKP**	**08 37 36.6**	**-0.3**
	comp=Z,14nm,1.2s							
OBKA	**Obir**	**149.64**	**349**	*eP*		**PKPbc**	**08 37 35.7**	**-0.4**
	comp=Z,4.1nm,1.2s							
FETA	**Feichten**	**149.68**	**354**	*eP*		**PKiKP**	**08 37 36.9**	**-0.4**
	comp=Z,9.1nm,1.1s							
MYKA	**Terra Mystica**	**149.68**	**350**	*eP*		**PKPbc**	**08 37 35.7**	**-0.4**
	comp=Z,4.1nm,0.9s							
ABTA	**Abfaltersbach**	**149.74**	**352**	*eP*		**PKPbc**	**08 37 36.4**	**0.0**
	comp=Z,9.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**174.16**	**128**	PKP		**PKPdf**	**08 37 56.4**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=339,slow=2.1,SNR=4.9							

*IDC **22** 08:37:58.9±0.8, 19°.27N×144°.64E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/42, mbtmp3.8/12, ML2.5/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/31, Error ellipse: s-maj=30.8km s-min=17.5km az=95.0*
*NEIC **22** 08:38:00.3±1.7, 19°.2N±0°.1×144°.6E±0°.2, h10km±1km, mb4.4/12, Error ellipse: s-maj=27.0km s-min=20.9km az=82.0*

ISC 22 08:38:03.0±0.8, 19°.2N±0°.1×144°.6E±0°.2, h27km, n34, σ0s73/23, mb4.2/15, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**17.93**	**335**		**P**	**08 42 09.9**	**-1.0**
MJAR	**Matsushiro Arr**	**18.13**	**343**	P	**Pn**	**08 42 12.0**	**-0.9**
	0.0nm,0.3s,baz=155,slow=13,SNR=4.1						
MJAR	**Matsushiro Arr**	**18.13**	**343**	IAmb	IAmb	08 42 15.2	
	comp=Z,1.7nm,0.9s						
PATS	**Pohnpei**	**18.15**	**131**		**Pn**	**08 42 12.6**	**-0.7**
JNU	**Nakatsue**	**18.49**	**321**	LR	LR	08 48 44.2	
	comp=Z,63nm,19.3s,baz=66,slow=35						
JSD	**Sado**	**19.53**	**345**	P	**P**	**08 42 27.6**	**-0.7**
JSD				IAmb	IAmb	08 42 29.5	
	comp=Z,12nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**20.91**	**88**	T	T	09 04 13.7	
	baz=276,slow=75,SNR=294						
H11S1	**WAKE ISLAND Hy**	**20.92**	**88**	T	T	09 04 35.5	
	baz=276,slow=75,SNR=260						
H11S2	**WAKE ISLAND Hy**	**20.92**	**88**	T	T	09 04 29.6	
	baz=276,slow=75,SNR=205						
H11N1	**WAKE ISLAND Hy**	**21.01**	**85**	T	T	09 04 35.6	
	baz=273,slow=74,SNR=25						
H11N2	**WAKE ISLAND Hy**	**21.02**	**85**	T	T	09 04 40.1	
	baz=273,slow=74,SNR=23						
H11N3	**WAKE ISLAND Hy**	**21.03**	**85**	T	T	09 04 36.9	
	baz=273,slow=74,SNR=19						
KSRS	**Korea Array**	**23.28**	**325**	P	**P**	**08 43 08.3**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=150,slow=9.7,SNR=5.5						
KLR	**Kul'dur**	**31.66**	**344**	P	**P**	**08 44 23.1**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=154,slow=5.6,SNR=9.4						
WB0	**Warramunga Arr**	**40.04**	**195**	P	**P**	**08 45 35.3**	**-0.8**
WB0				IAmb	IAmb	08 45 41.0	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**40.22**	**195**	P	**P**	**08 45 37.2**	**-0.3**
WB2				IAmb	IAmb	08 45 44.7	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**40.22**	**195**	P	**P**	**08 45 37.6**	**0.0**
	comp=Z,1.5nm,0.9s,baz=11,slow=8.9,SNR=9.5						
WRA	**Warramunga Arr**	**40.22**	**195**	IAmb	IAmb	08 45 42.8	
	comp=Z,0.2nm,0.9s						
ASAR	**Alice Springs**	**43.91**	**194**	P	**P**	**08 46 07.6**	**0.0**
	comp=Z,0.5nm,0.7s,baz=11,slow=9.2,SNR=10						
SEY	**Seymchan**	**43.98**	**5**	P	**P**	**08 46 08.2**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=155,slow=8.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**56.96**	**322**	P	**P**	**08 47 46.0**	**0.0**
	comp=Z,1.3nm,0.6s,baz=99,slow=6.5,SNR=3.9						
MKAR	**Makanchi Array**	**57.34**	**314**	P	**P**	**08 47 49.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=91,slow=9.5,SNR=4.5						
TOLK	**Toolik Lake Re**	**63.47**	**22**	P	**P**	**08 48 31.1**	**+0.7**
IL31		**63.62**	**26**	P	**P**	**08 48 30.2**	**-1.0**
IL31				IAmb	IAmb	08 48 38.4	
	comp=Z,3.6nm,1.0s						
ILAR	**Eielson Array**	**63.62**	**26**	P	**P**	**08 48 30.5**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=255,slow=4.9,SNR=16						
SCRK	**Sand Creek**	**64.73**	**28**	P	**P**	**08 48 39.1**	**+0.4**
BMAR	**Burnt Mountain**	**65.03**	**24**	P	**P**	**08 48 41.9**	**+1.3**
BRVK	**Borovoye**	**65.46**	**320**	P	**P**	**08 48 44.5**	**+0.9**
BRVK				IAmb	IAmb	08 48 44.9	
	comp=Z,3.2nm,0.8s						
KKAR	**Karatay Array**	**65.63**	**309**	P	**P**	**08 48 45.7**	**+0.8**
INK	**Inuvik**	**69.28**	**23**	P	**P**	**08 49 07.6**	**+0.2**
	comp=Z,1.9nm,1.0s,baz=302,slow=6.7,SNR=5.7						
INK	**Inuvik**	**69.28**	**23**	IAmb	IAmb	08 49 15.5	
	comp=Z,3.0nm,0.9s						
PPT	**Papeete**	**74.28**	**115**	LR	LR	09 15 06.0	
	comp=Z,45nm,19.9s,baz=165,slow=30						
YKA	**Yellowknife Ar**	**77.99**	**28**	P	**P**	**08 49 58.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=292,slow=5.3,SNR=5.8						
NVAR	**Mina Array Bea**	**83.61**	**52**	P	**P**	**08 50 30.4**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=267,slow=5.4,SNR=4.5						

IDC 22 09:06:13.8±2.1, 4°.82S×151°.98E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/30, mbtmp3.5/3, Error ellipse: s-maj=142.5km s-min=28.6km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.83**	**227**	P	P	09 11 18.5	-0.2
	0.9nm,0.6s,baz=51,slow=9.7,SNR=2.3						
ASAR	**Alice Springs**	**25.59**	**221**	P	P	09 11 45.0	+0.1
	0.5nm,0.6s,baz=58,slow=8.8,SNR=8.7						
ILAR	**Eielson Array**	**82.48**	**22**	P	P	09 18 38.0	0.0
	0.6nm,0.8s,baz=245,slow=5.1,SNR=7.3						
TORD	**Torodi Ar. Bea**	**149.53**	**288**	PKPbc	PKPbc	09 26 05.9	-0.5
	0.6nm,1.0s,baz=88,slow=3.2,SNR=2.4						

IDC 22 09:09:54.4±4.6, 12°.36S×167°.42E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/31, mbtmp3.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/32, Error ellipse: s-maj=227.6km s-min=30.3km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.61**	**252**	P	P	09 16 28.1	0.0
	0.6nm,0.5s,baz=84,slow=8.9,SNR=9.4						
ASAR	**Alice Springs**	**33.71**	**246**	P	P	09 16 37.6	-0.1
	0.6nm,0.6s,baz=73,slow=9.1,SNR=15						
LEM	**Lembang**	**59.12**	**269**	LR	LR	09 49 39.8	
	comp=Z,33nm,18.7s,baz=226,slow=40						
ILAR	**Eielson Array**	**84.24**	**18**	P	P	09 22 27.6	0.0
	0.6nm,0.6s,baz=240,slow=5.8,SNR=16						

JMA 22 09:11:40.2±0.1, 35°.16N×140°.19E, h11km, 2km, M2.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKUC	**kamogawauchiur**	**0.01**	**92**	P	Pg	09 11 42.1	0.0
KTR	**Katsuura**	**0.10**	**97**	P	Pg	09 11 43.0	+0.1
BSO4	**Boso 4**	**0.21**	**144**	P	Pg	09 11 45.0	+0.4
JCN	**Nagara**	**0.26**	**2**	P	Pb	09 11 46.3	-0.6
TATJ	**Tateyama 2**	**0.28**	**243**	P	Pg	09 11 46.5	+0.7
BSO3	**Boso 3**	**0.44**	**144**	P	Pg	09 11 48.8	0.0
BSO3				*eX*		09 11 54.5	
JSMT	**Sammumatsuo**	**0.53**	**24**	P	Pg	09 11 50.4	-0.1
MAT	**Matsushiro**	**2.12**	**311**	P	Pn	09 12 14.7	-0.9
MAT				*eS*	Sn	09 12 41.6	-0.4

IDC 22 09:12:13.7±1.9, 1°.09N×123°.26E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/34, mbtmp3.2/3, Error ellipse: s-maj=209.9km s-min=28.4km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.55**	**153**	P	P	09 17 25.2	-0.8
	0.2nm,0.4s,baz=330,slow=12,SNR=7.2						
ASAR	**Alice Springs**	**26.69**	**158**	P	P	09 17 56.4	+1.6
	0.1nm,0.3s,baz=345,slow=9.6,SNR=1.8						
MKAR	**Makanchi Array**	**57.84**	**328**	P	P	09 22 06.5	-0.7
	0.2nm,0.5s,baz=124,slow=7.9,SNR=2.2						

*RSNC **22** 09:31:46.0±1.2, 9°.65N×72°.90W, h3km±9km, ML2.3*
*FUNV **22** 09:31:48.8, 9°.65N×72°.84W, h5km, MW3.6*

ISC 22 09:31:44.9±1.2, 9°.66N±0°.03×72°.86W±0°.03, h14km±9km, n13, σ1s25/26, 2C, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQV	**Machiques**	**0.51**	**40**	*eP*	**Pn**	**09 31 57.6**	**-0.1**
MCQV				*eS*	**Sn**	**09 32 05.5**	**-0.7**
CRJC	**Cerrejon, Guaj**	**1.35**	**359**	*eP*	**Pb**	**09 32 09.9**	**-0.2**
CRJC				*eS*	**Sb**	**09 32 28.3**	**+1.0**
CRJC				*i*		09 32 30.5	
	comp=Z,75nm,0.2s						
ARGC	**Ariguani, Magd**	**1.38**	**278**	*eP*	**Pn**	**09 32 10.1**	**+0.3**
ARGC				*eS*	**Sb**	**09 32 28.2**	**+0.2**
ARGC				*i*		09 32 29.2	
	comp=Z,18nm,0.2s						
SMLC	**San Martn de**	**1.47**	**235**	*eP*	**Pn**	**09 32 11.0**	**0.0**
SMLC				*eS*	**Sn**	**09 32 29.3**	**-0.7**
OCAC	**Ocana**	**1.48**	**198**	*eP*	**Pb**	**09 32 12.3**	**-0.1**
OCAC				*eS*	**Sb**	**09 32 31.6**	**+0.5**
CAPV	**Capacho**	**1.86**	**163**	*eP*	**Pg**	**09 32 20.7**	**0.0**
CAPV				*eS*	**Sg**	**09 32 44.8**	**-0.1**
SJCC	**San Jacinto, C**	**2.29**	**276**	*eP*	**Pb**	**09 32 25.0**	**-1.1**
SJCC				*eS*	**Sb**	**09 32 55.2**	**+0.8**
PAMC	**Pamplona, Colo**	**2.31**	**176**	*eP*	**Pb**	**09 32 26.0**	**-0.7**
PAMC				*eS*	**Sg**	**09 32 58.5**	**-0.8**
PAMC				*i*		09 32 59.4	
	comp=Z,18nm,0.3s						
SOCV	**Socops**	**2.41**	**124**	*eP*	**Pn**	**09 32 24.6**	**+0.7**
SOCV				*eS*	**Sb**	**09 32 57.4**	**-0.3**
SOCV	**Socops**	**2.41**	**124**	*eP*	**Pb**	**09 32 27.7**	**-0.3**
SOCV				*eS*	**Sg**	**09 32 56.7**	**-0.9**
DABV	**Dabajuro**	**2.53**	**60**	*eP*	**Pb**	**09 32 30.1**	**+0.1**
DABV				*eS*	**Sb**	**09 32 59.9**	**-1.1**
MONV	**Montecano**	**3.64**	**51**	*eP*	**Pb**	**09 32 45.1**	**-4.0**
MONV				*eS*	**Sn**	**09 33 26.2**	**+2.4**
BAUV	**El Baul**	**4.81**	**98**	*eP*	**Pn**	**09 32 59.1**	**+2.1**
BAUV				*eS*	**Sn**	**09 33 52.7**	**+0.1**

IDC 22 09:36:55.1±7.1, 1°.86S×136°.42E, h0km, mb3.7/2, mb1 4.0/4, mb1mx3.6/40, mbtmp3.8/4, ML3.8/2, Error ellipse: s-maj=115.3km s-min=38.6km az=150.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**4.33**	**99**	Pn	Pn	09 38 02.9	+0.5
	3.4nm,0.3s,baz=225,slow=12,SNR=20						
JAY				Sn	Sn	09 38 48.4	-5.2
	0.8nm,0.3s,baz=148,slow=19,SNR=1.1						
WRA	**Warramunga Arr**	**18.08**	**186**	P	Pn	09 41 06.9	-1.0
	0.4nm,0.3s,baz=9.0,slow=12,SNR=23						
WRA				S	Sn	09 44 14.8	-16
	0.1nm,0.3s,baz=359,slow=23,SNR=2.4						
ASAR	**Alice Springs**	**21.81**	**186**	P	P	09 41 48.8	-0.3
	1.0nm,0.5s,baz=12,slow=11,SNR=23						
STKA	**Stephens Creek**	**30.25**	**171**	P	P	09 43 08.2	+0.4
	1.2nm,0.7s,baz=1.9,slow=10,SNR=4.1						

*IDC **22** 09:47:47.0±1.7, 20°.95S×178°.65W, h608km±20km, mb3.1/6, mb1 3.3/9, mb1mx3.0/38, mbtmp4.1/9, Error ellipse: s-maj=36.1km s-min=15.7km az=147.0*

ISC 22 09:47:46.2±0.9, 21°.0S±0°.2×178°.6W±0°.2, h600km, n10, σ0s98/11, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.59**	**315**	P	**P**	**09 49 17.7**	**+1.5**
	0.8nm,0.3s,baz=135,slow=7.7,SNR=4.9						
AFI	**Afiamalu**	**9.59**	**43**	P	**P**	**09 50 00.6**	**-0.6**
	3.0nm,0.3s,baz=318,slow=12,SNR=4.8						
URZ	**Urewera**	**17.57**	**191**	P	**P**	**09 51 18.3**	**+0.6**
	0.2nm,0.3s,baz=308,slow=20,SNR=1.8						
CTA	**Charters Tower**	**32.93**	**265**	P	**P**	**09 53 32.6**	**-0.5**
	baz=80,slow=8.5						
STKA	**Stephens Creek**	**37.09**	**245**	P	**P**	**09 54 07.8**	**+0.4**
	2.6nm,0.7s,baz=88,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**43.90**	**257**	P	**P**	**09 55 00.9**	**-0.5**
	4.6nm,0.6s,baz=95,slow=7.5,SNR=87						
ASAR				PcP	**PcP**	**09 56 33.6**	**-0.4**
	0.2nm,0.5s,baz=103,slow=3.4,SNR=4.2						
WRA	**Warramunga Arr**	**44.02**	**263**	P	**P**	**09 55 01.3**	**-1.1**
	2.9nm,0.5s,baz=97,slow=7.9,SNR=78						
NVAR	**Mina Array Bea**	**81.77**	**44**	P	**P**	**09 59 05.0**	**+1.2**
	0.2nm,0.3s,baz=221,slow=8.0,SNR=2.9						
ILAR	**Eielson Array**	**88.95**	**13**	P	**P**	**09 59 36.4**	**-1.1**
	0.2nm,0.5s,baz=224,slow=5.3,SNR=4.8						
PDAR	**Pinedale Array**	**89.70**	**43**	P	**P**	**09 59 42.2**	**+0.4**
	0.2nm,0.5s,baz=224,slow=5.0,SNR=2.0						

*IDC **22** 09:49:28.2±2.0, 9°.11N×85°.75W, h0km, mb3.6/5, mb1 4.0/7, mb1mx3.7/41, mbtmp3.7/7, ML3.5/2, Error ellipse: s-maj=37.7km s-min=18.2km az=145.0*
*UCR **22** 09:49:32.6±2.1, 9°.44N×85°.89W, h26km±4km, MW4.3*
*UPA **22** 09:49:32.4±2.0, 9°.41N×85°.89W, h10km±53km, MW4.4*
*INET **22** 09:49:34.0, 9°.47N×85°.80W, h15km, MW3.7*

ISC 22 09:49:33.2±0.9, 9°.46N±0°.04×85°.81W±0°.05, h16km, n57, σ1s11/75, mb3.7/5, 1C-29D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRZA	**Playa Garza**	**0.48**	**21**	↓*iP*	**Pb**	**09 49 43.3**	**0.0**
GRZA				*eS*	**Sn**	**09 49 52.5**	**-1.1**
INDI	**Punta indio, G**	**0.51**	**37**	↓*iP*	**Pb**	**09 49 44.2**	**+0.6**
INDI				*eS*	**Sn**	**09 49 54.0**	**-0.1**
LAFE	**Finca La Fe, P**	**0.95**	**69**	↓*iP*	**Pb**	**09 49 50.5**	**-0.9**
LAFE				*eS*	**Sg**	**09 50 04.1**	**-0.1**
PLVR	**Palo Verde**	**0.99**	**27**	↓*iP*	**Pb**	**09 49 49.9**	**-2.2**
PLVR				*eS*	**Sb**	**09 50 05.1**	**+0.1**
JTS	**Las Juntas de**	**1.18**	**46**	Pg	**Pn**	**09 49 54.4**	**-0.7**
	106nm,0.3s,baz=191,slow=23,SNR=877						
JTS				LR	LR	09 49 59.2	
	comp=Z,28nm,19.4s,baz=240,slow=22						
JTS				Lg	Lg	09 50 13.2	
	baz=343,slow=17						
JTS	**Las Juntas de**	**1.18**	**46**	↓*iP*	**Pn**	**09 49 54.6**	**-0.4**
JTS				*eS*	**Sg**	**09 50 12.7**	**+1.2**
JTS	**Las Juntas de**	**1.18**	**46**	↓*iP*	**Pn**	**09 49 54.3**	**-0.8**
JTS				*eS*	**Sg**	**09 50 12.6**	**+1.1**
COLC	**Colonia**	**1.34**	**27**	↓*iP*	**Pn**	**09 49 56.3**	**-0.9**
CUI	**Cuipilapa**	**1.35**	**28**	↓*iP*	**Pn**	**09 49 55.5**	**-1.9**
CUI				*i*	**Sn**	**09 50 15.1**	**0.0**
LAPC	**Finca la Perla**	**1.35**	**16**	↓*iP*	**Pn**	**09 49 55.1**	**-2.3**
GBS3	**Finca Las Img**	**1.36**	**15**	↓*iP*	**Pn**	**09 49 56.2**	**-1.3**
GPS2	**Hotel Rincn d**	**1.36**	**19**	↓*iP*	**Pn**	**09 49 56.8**	**-0.8**
GPS2				*eS*	**Sb**	**09 50 15.8**	**+0.3**
GUAB	**Guayabo de Bag**	**1.36**	**25**	↓*iP*	**Pn**	**09 49 56.5**	**-1.1**
BUEV	**Buena Vista**	**1.39**	**17**	↓*iP*	**Pn**	**09 49 56.8**	**-1.2**
BUEV				*eS*	**Sb**	**09 50 16.8**	**+0.4**
HORNC	**Hornillas**	**1.39**	**27**	↓*iP*	**Pn**	**09 49 56.9**	**-1.1**
HORNC				*i* S	**Sb**	**09 50 16.6**	**+0.2**
ACAL	**Aguas Claras**	**1.39**	**33**	↓*iP*	**Pn**	**09 49 57.5**	**-0.6**
GB1A	**Borinquen Arri**	**1.41**	**17**	↓*iP*	**Pn**	**09 49 57.1**	**-1.2**
SRA1	**San Ramn**	**1.45**	**65**	↓*eP*	**Pn**	**09 49 58.7**	**-0.2**
ARE1	**Arenal 1**	**1.47**	**47**	↓*iP*	**Pb**	**09 49 59.6**	**-0.4**
BUAI	**Buenos Aires**	**1.48**	**19**	↓*iP*	**Pn**	**09 49 57.3**	**-2.0**
PTEN	**Parque Tenorio**	**1.49**	**33**	↓*iP*	**Pn**	**09 49 58.9**	**-0.5**
CEDE	**Laguna Cedeo**	**1.49**	**47**	↓*iP*	**Pn**	**09 49 59.0**	**-0.5**
FORC	**Fortuna**	**1.50**	**48**	↓*iP*	**Pb**	**09 49 59.9**	**-0.9**
HDC	**Heredia**	**1.76**	**72**	*eP*	**Pb**	**09 50 03.7**	**-1.4**
HDC				*eS*	**Sb**	**09 50 27.4**	**+0.3**
HDC	**Heredia**	**1.76**	**72**	↓*iP*	**Pn**	**09 50 03.6**	**+0.4**
COVE	**Coope Vega, Sa**	**1.87**	**48**	↓*iP*	**Pn**	**09 50 04.6**	**+0.1**
OCM	**Ochomogo**	**1.88**	**77**	*eP*	**Pn**	**09 50 04.6**	**-0.2**
EDDO	**Dominical**	**1.94**	**96**	*eP*	**Pn**	**09 50 04.7**	**-0.8**
RIMA	**Rio Macho**	**1.95**	**81**	↓*iP*	**Pn**	**09 50 05.2**	**-0.5**
CDM	**Cerro de Muert**	**2.02**	**87**	↓*iP*	**Pn**	**09 50 06.8**	**-0.3**
CDM				*eS*	**Sb**	**09 50 33.2**	**-1.8**
CVTR	**Volcan Turrial**	**2.10**	**75**	*eP*	**Pb**	**09 50 09.3**	**-1.8**
PEZE	**Perez Zeledon,**	**2.11**	**92**	↓*eP*	**Pn**	**09 50 07.1**	**-0.8**
MRVA	**Moravia de Chi**	**2.37**	**81**	*eP*	**Pn**	**09 50 11.6**	**+0.1**
EDPN	**Palmar Norte**	**2.38**	**102**	*eP*	**Pn**	**09 50 10.8**	**-0.7**
RIOS	**Rincon, Osa**	**2.39**	**108**	↑*iP*	**Pn**	**09 50 11.2**	**-0.6**
BATAN	**Batan**	**2.48**	**75**	*eP*	**Pn**	**09 50 14.4**	**+1.4**
EDBA	**Buenos Aires**	**2.52**	**97**	*eP*	**Pn**	**09 50 13.2**	**-0.3**
EDBA				*eS*	**Sn**	**09 50 44.6**	**+0.6**
DRK0	**Durika**	**2.54**	**94**	*eP*	**Pn**	**09 50 13.8**	**-0.2**
DRK0				*eS*	**Sn**	**09 50 45.1**	**+0.4**
DRK0	**Durika**	**2.54**	**94**	*eP*	**Pn**	**09 50 13.7**	**-0.2**
PIRO	**Carate, Puerto**	**2.66**	**113**	*eP*	**Pn**	**09 50 15.5**	**0.0**
PIRO				*eS*	**Sn**	**09 50 47.4**	**0.0**
PIRO	**Carate, Puerto**	**2.66**	**113**	*eP*	**Pn**	**09 50 15.2**	**-0.2**
POTG	**Potrero Grande**	**2.69**	**98**	*eP*	**Pn**	**09 50 15.5**	**-0.4**
LPLA	**Las Palmas La**	**2.80**	**99**	*eP*	**Pn**	**09 50 17.6**	**0.0**
EDSV	**San Vito**	**2.88**	**103**	*eP*	**Pn**	**09 50 19.5**	**+1.0**
CDITO	**Canoas**	**3.04**	**107**	*eP*	**Pn**	**09 50 21.0**	**+0.5**
CDITO				*eS*	**Sb**	**09 50 60.0**	**-3.8**
BRU2	**Volcan**	**3.15**	**102**	↓*iP*	**Pn**	**09 50 23.4**	**+1.0**
BRU2				*eS*	**Sn**	**09 51 00.4**	**+0.6**
BRU2	**Volcan**	**3.15**	**102**	*eP*	**Pn**	**09 50 22.9**	**+0.6**
BCO2	**Palmira**	**3.33**	**103**	↓*iP*	**Pn**	**09 50 25.6**	**+0.8**
DVD	**David**	**3.48**	**107**	*eP*	**Pn**	**09 50 27.1**	**+0.5**
DVD				*eS*	**Sn**	**09 51 10.4**	**+2.9**
CHGR2	**Aguacate**	**3.66**	**98**	*eS*	**Sn**	**09 51 13.6**	**+1.6**
APG	**El Apazote**	**7.14**	**321**	Pn	**Pn**	**09 51 18.2**	**+0.9**
	0.4nm,0.3s,baz=135,slow=7.1,SNR=2.3						
TEIG	**Tepich**	**10.96**	**348**	Pn	**Pn**	**09 52 12.0**	**+2.6**
	0.5nm,0.3s,baz=138,slow=18,SNR=1.6						
TXAR	**Lajitas Array**	**25.90**	**322**	P	**P**	**09 55 05.3**	**+0.6**
	1.4nm,0.8s,baz=138,slow=12,SNR=18						
NVAR	**Mina Array Bea**	**41.00**	**320**	P	**P**	**09 57 16.6**	**+0.7**
	0.4nm,0.7s,baz=141,slow=5.8,SNR=2.8						
YKA	**Yellowknife Ar**	**56.90**	**345**	P	**P**	**09 59 15.8**	**-1.3**
	0.2nm,0.6s,baz=145,slow=6.9,SNR=6.6						
ILAR	**Eielson Array**	**69.39**	**336**	P	**P**	**10 00 40.0**	**0.0**
	0.5nm,0.7s,baz=121,slow=4.5,SNR=9.0						
ESDC	**Sonseca Array**	**77.77**	**51**	P	**P**	**10 01 28.8**	**-1.1**
	0.7nm,0.6s,baz=291,slow=6.3,SNR=4.8						

*SOME **22** 10:22:28.3, 40°.78N×74°.17E, h0km*
*KRNET **22** 10:22:28.5±0.1, 40°.65N×74°.14E, h11km, mb2.8*
*ISU **22** 10:22:29, 41°.00N×71°.80E, h5km*
*NNC **22** 10:22:30.5±1.3, 40°.71N×74°.18E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=10.1km s-min=6.1km az=162.0*

ISC 22 10:22:27.2±1.2, 40°.66N±0°.03×74°.08E±0°.03, h2km±11km, n59, σ1s36/95, 35C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**0.78**	**215**	↓*iP*	**Pg**	**10 22 43.3**	**+1.1**
	baz=18						
SFK				↓*iS*	**Sb**	**10 22 54.7**	**-0.1**
	baz=18						
OHH	**Osh**	**1.00**	**263**	↑*iP*	**Pn**	**10 22 48.3**	**0.0**
	baz=63						
OHH				↑*iS*	**Sn**	**10 23 02.6**	**-0.3**
	baz=63						
OHH	**Osh**	**1.00**	**263**	*eP*	**Pn**	**10 22 48.0**	**-0.3**
OHH				*eS*	**Sg**	**10 22 59.0**	**-0.2**
ARSB	**Arslanbob**	**1.07**	**309**	↑*iP*	**Pn**	**10 22 49.5**	**+0.2**
	baz=8.0						
ARSB				↑*iS*	**Sn**	**10 23 05.1**	**+0.4**
	baz=8.0						
ARSB	**Arslanbob**	**1.07**	**309**	*eP*	**Pn**	**10 22 49.0**	**-0.3**
ARLS	**Aral**	**1.22**	**9**	↑*iP*	**Pg**	**10 22 51.2**	**+0.7**
	baz=7.0						
ARLS				↑*iS*	**Sn**	**10 23 08.0**	**-0.5**
	baz=7.0						
AML	**Almayashu**	**1.50**	**349**	↑*eP*	**Pg**	**10 22 56.9**	**+0.9**
	baz=47						
AML				↑*iS*	**Sg**	**10 23 17.6**	**+2.2**
	baz=47						
AML	**Almayashu**	**1.50**	**349**	P	**Pg**	**10 22 56.6**	**+0.6**
	SNR=21						
UCH	**Uchtor**	**1.60**	**12**	↑*iP*	**Pg**	**10 22 58.5**	**+0.6**
	baz=10.0						
UCH				↑*iS*	**Sg**	**10 23 20.0**	**+1.3**
	baz=10.0						
UCH	**Uchtor**	**1.60**	**12**	P	**Pg**	**10 22 58.1**	**+0.3**
	SNR=59						
AAK	**Ala-Archa**	**2.00**	**9**	↑*eP*	**Pg**	**10 23 05.4**	**-0.2**
	baz=8.0						
AAK				↑*iS*	**Sg**	**10 23 31.9**	**+0.4**
	baz=8.0						
AAK	**Ala-Archa**	**2.00**	**9**	P	**Pg**	**10 23 05.7**	**+0.1**
	SNR=11						
AAK	**Ala

MTBS	**Maitube**		**3.03**	**35**	*e*P		**Pb**	**10 23 23.8**	**+2.0**
	2.5nm,0.2s								
MTBS					*e*S		**Sg**	**10 24 03.9**	**-0.5**
	13nm,0.4s								
MTBS	**Maitube**		**3.03**	**35**	Pg		**Pb**	**10 23 23.8**	**+2.0**
	2.5nm,0.2s								
MTBS					Lg		Lg	10 24 03.9	
	13nm,0.4s								
IZV	**Izvestkoviy**		**3.04**	**38**	*e*P		**Pb**	**10 23 24.0**	**+2.0**
	2.2nm,0.3s								
IZV					*e*S		**Sg**	**10 24 04.4**	**-0.3**
	12nm,0.3s								
IZV	**Izvestkoviy**		**3.04**	**38**	Pg		**Pb**	**10 23 24.0**	**+2.0**
	2.2nm,0.3s								
IZV					Lg		Lg	10 24 04.4	
	12nm,0.3s								
TNSS	**Tian-Shan**		**3.20**	**41**	*e*P		**Pb**	**10 23 25.8**	**+0.9**
	2.1nm,0.2s								
TNSS					*e*S		**Sb**	**10 24 07.6**	**+3.1**
	2.9nm,0.4s								
TNSS	**Tian-Shan**		**3.20**	**41**	Pg		**Pb**	**10 23 25.8**	**+0.9**
	2.1nm,0.2s								
TNSS					Lg		Lg	10 24 07.6	
	2.9nm,0.4s								
KRBS	**Karabastau**		**3.26**	**21**	*e*P		**Pg**	**10 23 28.4**	**-1.2**
	2.9nm,0.4s								
KRBS					*e*S		**Sg**	**10 24 11.6**	**-0.2**
	5.7nm,0.4s								
KRBS	**Karabastau**		**3.26**	**21**	Pg		**Pg**	**10 23 28.4**	**-1.2**
	2.9nm,0.4s								
KRBS					Lg		Lg	10 24 11.6	
	5.7nm,0.4s								
MDOK	**Medeo**		**3.34**	**41**	*e*P		**Pb**	**10 23 29.3**	**+2.1**
	2.4nm,0.3s								
MDOK					*e*S		**Sg**	**10 24 13.1**	**-1.4**
	2.7nm,0.4s								
MDOK	**Medeo**		**3.34**	**41**	Pg		**Pb**	**10 23 29.3**	**+2.1**
	2.4nm,0.3s								
MDOK					Lg		Lg	10 24 13.1	
	2.7nm,0.4s								
IUG	**Iuzhnay**		**3.39**	**297**	*e*P		**Pg**	**10 23 31.7**	**-0.4**
	2.4nm,0.3s								
IUG					*e*S		**Sg**	**10 24 17.2**	**+1.1**
	86nm,0.6s								
IUG	**Iuzhnay**		**3.39**	**297**	Pg		**Pg**	**10 23 31.7**	**-0.4**
	143nm,0.4s								
IUG					Lg		Lg	10 24 17.2	
	86nm,0.6s								
KOTS	**Kotyrbulak**		**3.42**	**40**	*e*P		**Pb**	**10 23 31.1**	**+2.4**
	5.4nm,0.3s								
KOTS					*e*S		**Sg**	**10 24 16.2**	**-1.0**
	9.7nm,0.5s								
KOTS	**Kotyrbulak**		**3.42**	**40**	Pg		**Pb**	**10 23 31.1**	**+2.4**
	5.4nm,0.3s								
KOTS					Lg		Lg	10 24 16.2	
	9.7nm,0.5s								
KTBS	**Karatobe**		**3.61**	**31**	*e*P		**Pb**	**10 23 34.0**	**+2.2**
	1.4nm,0.4s								
KTBS					*e*S		**Sg**	**10 24 21.3**	**-1.9**
	6.0nm,0.4s								
KTBS	**Karatobe**		**3.61**	**31**	Pg		**Pb**	**10 23 34.0**	**+2.2**
	1.4nm,0.4s								
KTBS					Lg		Lg	10 24 21.3	
	6.0nm,0.4s								
KK31	**Karatay Array**		**3.62**	**314**	⇓Pn		**Pb**	**10 23 30.2**	**-1.7**
	0.4nm,0.3s,baz=130,slow=15,SNR=9.1								
KK31					⇑Lg		Lg	10 24 23.8	
	7.7nm,0.6s,baz=133,slow=28,SNR=13								
BRLS	**Boroldaу**		**3.96**	**308**	*e*P		**Pg**	**10 23 41.6**	**-1.4**
	0.3nm,0.2s								
BRLS					*e*S		**Sg**	**10 24 33.9**	**-0.5**
	11nm,0.5s								
BRLS	**Boroldaу**		**3.96**	**308**	Pg		**Pg**	**10 23 41.6**	**-1.4**
	0.3nm,0.2s								
BRLS					Lg		Lg	10 24 33.9	
	11nm,0.5s								
BTLS	**Baital**		**4.38**	**360**	*e*P		**Pb**	**10 23 47.5**	**+2.6**
	0.6nm,0.1s								
BTLS					*e*S		**Sg**	**10 24 44.0**	**-3.8**
	2.0nm,0.3s								
BTLS	**Baital**		**4.38**	**360**	Pg		**Pb**	**10 23 47.5**	**+2.6**
	0.6nm,0.1s								
BTLS					Lg		Lg	10 24 44.0	
	2.0nm,0.3s								
ARXS	**Arharly**		**4.50**	**37**	*e*P		**Pb**	**10 23 49.3**	**+2.3**
	3.8nm,0.4s								
ARXS					*e*S		**Sg**	**10 24 47.4**	**-4.5**
	6.4nm,0.5s								
ARXS	**Arharly**		**4.50**	**37**	Pg		**Pb**	**10 23 49.3**	**+2.3**
	3.8nm,0.4s								
ARXS					Lg		Lg	10 24 47.4	
	6.4nm,0.5s								

*ISK **22** 10:33:51.8,36°.66N×28°.59E,h57km,ML3.2/20*
*DDA **22** 10:33:51.9,36°.64N×28°.51E,h55km,ML3.6*
*ATH **22** 10:33:51.0,36°.77N×28°.57E,h44km±15km,ML3.3/4,Error ellipse: s-maj=16.6km s-min=1.5km az=187.0*
*THE **22** 10:33:52.6,36°.64N×28°.59E,h61km±4km,ML3.4/5,Error ellipse: s-maj=5.0km s-min=1.3km az=87.0*
*HLW **22** 10:33:56.4,35°.97N×28°.55E,h10km±10km,Md3.8,Ml4.0*
ISC 22 10:33:53.0±1.1,36°.64N±0°.03×28°.53E±0°.02,h51km±6km, n65,σ1§25/101,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.20**	**30**	*i* P	**Pn**	**10 34 01.3**	**-0.1**
DALY				*i* S	**Sn**	**10 34 07.3**	**-0.1**
DALY	**Dalyan (Mula)**	**0.20**	**30**	PG	**Pn**	**10 34 01.1**	**-0.3**
DALY				SG	**Sn**	**10 34 07.9**	**+0.5**
TURN	**Turunc**	**0.26**	**300**	*i* P	**Pn**	**10 34 02.1**	**+0.3**
TURN				IAML		10 34 09.0	
	comp=E,6μm,0.2s						
TURN				*i* S	**Sn**	**10 34 09.2**	**+1.1**
TURN	**Turunc**	**0.26**	**300**	PG	**Pn**	**10 34 02.1**	**+0.3**
TURN				SG	**Sn**	**10 34 09.3**	**+1.1**
FETY	**Fethiye**	**0.45**	**91**	P	**Pn**	**10 34 02.5**	**-1.1**
FETY				S	**Sn**	**10 34 10.9**	**-0.5**
FETY	**Fethiye**	**0.45**	**91**	PG	**Pn**	**10 34 02.6**	**-1.1**
FETY				SG	**Sn**	**10 34 11.1**	**-0.3**
YER	**Yerkesik**	**0.53**	**338**	P	**Pn**	**10 34 05.0**	**+0.3**
YER				S	**Sn**	**10 34 14.6**	**+1.5**
YER	**Yerkesik**	**0.53**	**338**	PG	**Pn**	**10 34 05.4**	**+0.7**
ARG	**Arkhangelos**	**0.54**	**217**	P	**Pn**	**10 34 04.9**	**+0.3**
ARG				S	**Sn**	**10 34 14.3**	**+1.2**
ARG				AML	AML	10 34 15.2	
	comp=N,3544μm,0.4s						
ARG				AML	AML	10 34 15.9	
	comp=E,6057μm,0.2s						
ARG	**Arkhangelos**	**0.54**	**217**	P	**Pn**	**10 34 05.0**	**+0.3**
ARG				S	**Sn**	**10 34 14.1**	**+1.0**
	comp=E,2μm,0.3s						
ARG	**Arkhangelos**	**0.54**	**217**	PG	**Pn**	**10 34 05.1**	**+0.4**
ARG				SG	**Sn**	**10 34 14.4**	**+1.2**
MULA	**Mugla, Merkez-**	**0.63**	**345**	*i* P	**Pn**	**10 34 06.3**	**+0.3**
MULA				*i* S	**Sn**	**10 34 16.6**	**+1.2**
DATC	**Datca-Mugla**	**0.71**	**280**	PG	**Pn**	**10 34 07.2**	**+0.4**
DATC				SG	**Sn**	**10 34 18.4**	**+1.5**
CAEL	**Denizli, Camel**	**0.80**	**53**	*i* P	**Pn**	**10 34 08.1**	**0.0**
CAEL				*i* S	**Sn**	**10 34 21.1**	**+1.9**
CAEL				IAML		10 34 26.0	
	comp=E,2μm,0.7s						
AKAS	**Kas**	**0.96**	**115**	*i* P	**Pn**	**10 34 09.2**	**-1.1**
AKAS				*i* S	**Sn**	**10 34 23.2**	**+0.2**
AKAS	**Kas**	**0.96**	**115**	PG	**Pn**	**10 34 09.6**	**-0.7**
BDRM	**Kayabasi**	**0.97**	**296**	*i* P	**Pn**	**10 34 10.6**	**+0.3**
BDRM				*i* S	**Sn**	**10 34 24.1**	**+1.1**
KSL	**Kastellorizon**	**0.98**	**120**	P	**Pn**	**10 34 10.1**	**-0.4**
KSL				S	**Sn**	**10 34 24.2**	**+0.9**
KSL				AML	AML	10 34 24.4	
	comp=E,1190μm,0.3s						
KSL				AML	AML	10 34 24.8	
	comp=N,1302μm,0.3s						
GOLH	**Golhisar**	**1.02**	**54**	*i* P	**Pn**	**10 34 11.5**	**+0.5**
GOLH				*i* S	**Sn**	**10 34 25.6**	**+1.3**
BODT	**Bodrum**	**1.06**	**294**	P	**Pn**	**10 34 10.9**	**-0.7**
BODT				S	**Sn**	**10 34 25.4**	**+0.1**
BODT	**Bodrum**	**1.06**	**294**	PN	**Pn**	**10 34 11.1**	**-0.5**
NIS1	**Nisyros Isl.**	**1.09**	**268**	P	**Pn**	**10 34 11.7**	**-0.2**
NIS1				AML	AML	10 34 33.0	
	comp=N,3071μm,0.3s						
NIS1				AML	AML	10 34 35.6	
	comp=E,2722μm,0.3s						
NIS1	**Nisyros Isl.**	**1.09**	**268**	P	**Pn**	**10 34 11.7**	**-0.2**
NIS1				S	**Sn**	**10 34 27.1**	**+1.2**
	comp=E,1μm,0.4s						
NIS1	**Nisyros Isl.**	**1.09**	**268**	PN	**Pn**	**10 34 12.5**	**+0.6**
YKAV	**Yalikavak-Bodr**	**1.11**	**296**	PN	**Pn**	**10 34 12.4**	**+0.2**
YKAV				SN	**Sn**	**10 34 27.5**	**+1.1**
ELL	**Elmali**	**1.11**	**84**	PG	**Pn**	**10 34 11.9**	**-0.5**
NISR	**Nisiros**	**1.13**	**269**	P	**Pn**	**10 34 12.5**	**+0.1**
AYDN	**Tasoluk**	**1.14**	**333**	*i* P	**Pn**	**10 34 12.5**	**-0.1**
AYDN				*i* S	**Sn**	**10 34 28.5**	**+1.2**
KOSK	**Kos Island**	**1.25**	**275**	PN	**Pn**	**10 34 14.6**	**+0.6**
DDIM	**Aydin, Didim**	**1.31**	**309**	*i* P	**Pn**	**10 34 15.4**	**+0.5**
DDIM				*i* S	**Sn**	**10 34 32.3**	**+1.0**
DDIM				IAML		10 34 34.0	
	comp=N,800nm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**1.40**	**339**	PN	**Pn**	**10 34 15.5**	**-0.7**
GCAM	**G?zelcaml?**	**1.48**	**316**	*i* P	**Pn**	**10 34 17.1**	**0.0**
GCAM				*i* S	**Sn**	**10 34 35.9**	**+0.5**
GCAM				IAML		10 34 36.0	
	comp=E,761nm,0.3s						
GCAM	**G?zelcaml?**	**1.48**	**316**	PN	**Pn**	**10 34 17.3**	**+0.2**
GCAM				SN	**Sn**	**10 34 36.1**	**+0.8**
AKUM	**Antalya-Kumluc**	**1.50**	**102**	*i* P	**Pn**	**10 34 17.7**	**+0.3**
AKUM				*i* S	**Sn**	**10 34 36.3**	**+0.5**
KORT	**Korkueli**	**1.50**	**76**	*i* P	**Pn**	**10 34 18.6**	**+0.9**
KORT				*i* S	**Sn**	**10 34 41.7**	**+5.5**
KARP	**Karpathos**	**1.56**	**226**	P	**Pn**	**10 34 18.4**	**+0.1**
KARP				S	**Sn**	**10 34 37.4**	**+0.1**
	comp=E,740nm,0.2s						
KARP	**Karpathos**	**1.56**	**226**	PN	**Pn**	**10 34 18.7**	**+0.4**
SMG	**Samos**	**1.72**	**309**	P	**Pn**	**10 34 20.9**	**+0.4**
SMG				AML	AML	10 34 42.9	
	comp=N,4201μm,0.3s						
SMG				AML	AML	10 34 43.8	
	comp=E,4354μm,0.3s						
SMG	**Samos**	**1.72**	**309**	P	**Pn**	**10 34 20.7**	**+0.2**
SMG				S	**Sn**	**10 34 41.0**	**-0.3**
	comp=E,2μm,0.3s						
BUCA	**Burdur, Bucak-**	**1.76**	**67**	*i* P	**Pn**	**10 34 22.0**	**+0.8**
BUCA				*i* S	**Sn**	**10 34 44.6**	**+2.1**
BCK	**Bucak**	**1.84**	**63**	PN	**Pn**	**10 34 21.7**	**-0.5**
MANT	**Manisa**	**1.84**	**1**	*i* P	**Pn**	**10 34 21.4**	**-1.0**
MANT				*i* S	**Sn**	**10 34 42.4**	**-2.3**
KULA	**Kula-Manisa**	**1.87**	**3**	PN	**Pn**	**10 34 21.9**	**-0.7**
DGB	**zmir**	**1.92**	**317**	*i* P	**Pn**	**10 34 22.5**	**-0.7**
DGB				*i* S	**Sn**	**10 34 45.6**	**-0.6**
DGB				IAML		10 34 47.0	
	comp=N,301nm,0.2s						
ISP	**Isparta**	**1.98**	**53**	P	**Pn**	**10 34 24.5**	**+0.4**
USAK	**Uak-Merkez**	**2.10**	**10**	*i* P	**Pn**	**10 34 25.0**	**-0.7**
USAK				*i* S	**Sn**	**10 34 48.5**	**-2.2**
ZEYE	**Izmir, Urla-Ze**	**2.27**	**315**	*i* P	**Pn**	**10 34 27.6**	**-0.3**
ZEYE				*i* S	**Sn**	**10 34 54.0**	**-0.6**
URLA	**Izmir**	**2.30**	**319**	*i* P	**Pn**	**10 34 27.3**	**-1.2**
URLA				*i* S	**Sn**	**10 34 54.8**	**-0.8**
ZKR	**Zakros**	**2.42**	**232**	P	**Pn**	**10 34 31.1**	**+1.1**
ZKR				S	**Sn**	**10 34 58.3**	**-0.1**
	comp=N,118nm,0.5s						
ZKR	**Zakros**	**2.42**	**232**	PN	**Pn**	**10 34 31.3**	**+1.3**
APE	**Apeiranthos**	**2.44**	**281**	PN	**Pn**	**10 34 31.1**	**+0.7**
KEPZ	**Antalya-Kepez**	**2.48**	**83**	*i* P	**Pn**	**10 34 32.0**	**+1.0**
KEPZ				*i* S	**Sn**	**10 35 03.3**	**+3.2**
SHUT	**Suhut-Afyon**	**2.49**	**40**	PN	**Pn**	**10 34 30.8**	**-0.4**
CHOS	**Chios island**	**2.63**	**312**	PN	**Pn**	**10 34 33.8**	**+0.9**
IDI	**Anoyia**	**3.25**	**246**	PN	**Pn**	**10 34 42.3**	**+0.9**
SLUM	**Salum**	**5.83**	**209**	P	**Pn**	**10 35 14.9**	**-1.9**
	baz=213						
SLUM				AMP		10 36 00.0	
	baz=213						
SLUM				S	Sn	10 36 12.2	-10
	baz=213						
HNAT	**Natroun**	**7.21**	**165**	P	**Pn**	**10 35 33.7**	**-2.1**
	baz=164						
KOT	**Kottamia**	**7.24**	**157**	P	**Pn**	**10 35 34.1**	**-2.1**
	baz=154						
HSAF	**As Saff**	**7.45**	**159**	P	**Pn**	**10 35 36.5**	**-2.6**
	baz=157						
GLL	**Jalalah**	**7.53**	**158**	P	**Pn**	**10 35 37.9**	**-2.3**
	baz=156						
SWA2		**7.82**	**200**	P	**Pn**	**10 35 41.9**	**-2.2**
	baz=203						
ZAF	**Zafarana**	**8.08**	**154**	P	**Pn**	**10 35 45.8**	**-1.9**
	baz=152						
ZNM	**Zenema**	**8.11**	**152**	P	**Pn**	**10 35 46.0**	**-2.1**
	baz=149						
NBNS	**Bani Suef**	**8.33**	**163**	P	**Pn**	**10 35 48.8**	**-2.3**
	baz=161						
GRB	**Gharib**	**9.09**	**156**	P	**Pn**	**10 35 59.5**	**-2.1**
	baz=153						

*IDC **22** 10:46:21.1±1.0,29°.31N×98°.79E,h0km,mb3.5/6, mb1 3.7/7,mb1mx3.4/53,mbtmp3.6/7,ML4.2/1,Error ellipse: s-maj=69.8km s-min=18.2km az=65.0*
ISC 22 10:46:22.3±1.0,29°.3N±0°.2×98°.7E±0°.4,h10km,n7,σ1§21/7, mb3.6/6,Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.78**	**179**	Pn	**Pn**	**10 48 56.7**	**-0.1**
	0.5nm,0.3s,baz=350,slow=11,SNR=5.8						
CMAR				Pg		10 49 38.6	
	baz=355,slow=17,SNR=1.6						
CMAR				Lg	Lg	10 51 56.1	
	0.1nm,0.3s,baz=5.6,slow=28,SNR=1.7						
MKAR	**Makanchi Array**	**21.66**	**328**	P	**P**	**10 51 12.9**	**-0.1**
	0.4nm,0.6s,baz=134,slow=10,SNR=6.8						
KURBB	**Kurchatov Arra**	**26.16**	**330**	P	**P**	**10 51 58.9**	**+2.2**
	0.5nm,0.6s,baz=140,slow=11,SNR=8.3						
NRIK	**Noril'sk**	**40.61**	**354**	P	**P**	**10 54 01.5**	**-0.5**
	0.9nm,0.3s,baz=170,slow=6.1,SNR=1.8						
WRA	**Warramunga Arr**	**59.82**	**141**	P	**P**	**10 56 28.1**	**0.0**
	0.4nm,0.6s,baz=325,slow=8.1,SNR=5.6						
ASAR	**Alice Springs**	**62.61**	**143**	P	**P**	**10 56 47.4**	**+0.4**
	0.2nm,0.5s,baz=332,slow=6.8,SNR=2.0						
NOA	**NORSAR Array B**	**63.65**	**327**	P	**P**	**10 56 52.6**	**-0.8**
	0.4nm,0.7s,baz=82,slow=6.3,SNR=1.3						

UCR 22 11:05:29.4±2.2,9°.43N×85°.97W,h20km±5km,MW3.7,8C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRZA	**Playa Garza**	**0.59**	**34**	⇑*i* P	Pg	11 05 41.2	-0.1
GRZA				*e*S	Sn	11 05 50.8	-0.9
SAJU	**San Juanillo,**	**0.69**	**22**	⇑*i* P	Pb	11 05 42.6	-0.2
PLVR	**Palo Verde**	**1.10**	**34**	⇑*e*P	Pn	11 05 47.7	-2.2
PLVR				*e*S	Sb	11 06 03.0	-0.9
LAFE	**Finca La Fe, P**	**1.11**	**70**	⇑*e*P	Pn	11 05 48.8	-1.1
LAFE				*e*S	Sb	11 06 03.0	-1.2
JTS	**Las Juntas de**	**1.32**	**49**	*e*P	Pn	11 05 52.7	-0.1
JTS				*e*S	Sb	11 06 11.1	+0.9
LAPC	**Finca la Perla**	**1.44**	**22**	⇑*i* P	Pn	11 05 52.8	-1.6
GBS3	**Finca Las Img**	**1.44**	**21**	*i* P	Pn	11 05 54.0	-0.5
CUI	**Cuipilapa**	**1.46**	**33**	*i* P	Pn	11 05 53.3	-1.4
BUEV	**Buena Vista**	**1.47**	**22**	*e*P	Pn	11 05 54.3	-0.6
BUEV				*i* P	Pb	11 05 54.4	-1.8
BUEV				*i* S	Sb	11 06 14.3	-0.2
GB1A	**Borinquen Arri**	**1.49**	**22**	*e*P	Pn	11 05 54.8	-0.4
GB1A				⇑*i* P	Pb	11 05 54.9	-1.7
GB1A				*i* S	Sb	11 06 14.8	-0.4
ACAL	**Aguas Claras**	**1.52**	**38**	*i* P	Pn	11 05 55.4	-0.1
ARE1	**Arenal 1**	**1.61**	**50**	*e*P	Pn	11 05 57.6	+0.9
ARE1				*e*S	Sg	11 06 20.0	-1.5
SRA1	**San Ramn**	**1.61**	**66**	*e*P	Pn	11 05 56.2	-0.7
CEDE	**Laguna Cedeo**	**1.64**	**50**	*e*P	Pn	11 05 57.2	+0.1
CEDE				*i* P	Pb	11 05 57.3	-1.7
FORC	**Fortuna**	**1.65**	**51**	*i* P	Pb	11 05 58.4	-0.8
HDC	**Heredia**	**1.92**	**73**	*e*P	Pn	11 06 02.0	+0.9
COVE	**Coope Vega, Sa**	**2.01**	**50**	⇑*i* P	Pn	11 06 02.8	+0.5
RIMA	**Rio Macho**	**2.11**	**81**	*e*P	Pn	11 06 03.8	0.0
RIMA				*e*S	Sn	11 06 29.6	0.0
CDM	**Cerro de Muert**	**2.18**	**87**	⇑*i* P	Pn	11 06 05.0	0.0
CDM				*e*S	Sn	11 06 32.2	+0.4
PEZE	**Perez Zeledon,**	**2.27**	**91**	*e*P	Pn	11 06 06.0	+0.1
MRVA	**Moravia de Chi**	**2.53**	**81**	*e*P	Pn	11 06 10.0	+0.5
RIOS	**Rincon, Osa**	**2.53**	**106**	*e*P	Pn	11 06 09.6	+0.1
DRK0	**Durika**	**2.70**	**93**	*e*P	Pn	11 06 12.4	+0.5

*IDC **22** 11:26:39.8±1.2,2°.29S×136°.62E,h0km,mb3.9/6, mb1 4.3/12,mb1mx4.1/31,mbtmp4.2/12,ML4.3/5,MS3.3/2, Ms1 3.3/2,ms1mx2.7/24,Error ellipse: s-maj=26.5km s-min=16.3km az=40.0*

*DJA **22** 11:26:41.8±0.6,2°.5S±4°×13°.7E±°,h20km±5km,M4.4/7, mb4.4/6,mB4.8/2,MLv4.4/7,Mw(mB)4.1/2*
*NEIC **22** 11:26:43.4±1.6,2°.4S±0°.1×136°.69E±0°.07,h33km±7km, mb4.0/13,Error ellipse: s-maj=16.4km s-min=9.4km az=189.0*
ISC 22 11:26:43.6±0.6,2°.28S±0°.07×136°.64E±0°.04,h42km,n46, σ1§69/47,mb3.9/8,1C-1D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**0.57**	**316**	P	**Pn**	**11 26 52.2**	**-3.2**
SRPI				S	**Sn**	**11 27 01.1**	**-2.6**
BAKI	**Biak**	**1.21**	**334**	P	**Pn**	**11 27 02.2**	**-1.9**
GENI	**Genyem**	**3.54**	**95**	P	**Pn**	**11 27 36.2**	**0.0**
GENI				S	**Sn**	**11 28 18.7**	**+1.9**
JAY	**Jayapura**	**4.07**	**93**	Pn	**Pn**	**11 27 43.0**	**-0.4**
	14nm,0.3s,baz=247,slow=11,SNR=75						
JAY				Sn	**Sn**	**11 28 28.9**	**-1.1**
	5.9nm,0.3s,baz=132,slow=20,SNR=1.5						
JAY	**Jayapura**	**4.07**	**93**	P	**Pn**	**11 27 42.7**	**-0.8**
JAY				S	**Sn**	**11 28 29.4**	**-0.6**
FAKI	**Fak Fak**	**4.43**	**262**	P	**Pn**	**11 27 49.1**	**+0.7**
FAKI	**Fak Fak**	**4.43**	**262**	P	**Pn**	**11 27 48.5**	**+0.2**
FAKI				S	**Sn**	**11 28 37.7**	**-1.0**
SIJI	**Sorong**	**5.55**	**285**	Pn	**Pn**	**11 28 04.1**	**+0.3**
	5.3nm,0.3s,baz=252,slow=22,SNR=21						
SIJI				Sn	**Sn**	**11 29 05.6**	**-0.7**
	0.8nm,0.3s,baz=290,slow=22,SNR=1.3						
SIJI				Lg	Lg	11 29 34.0	
	2.2nm,0.3s,baz=298,slow=9.4,SNR=5.7						
SWI	**Sorong**	**5.55**	**285**	P	**Pn**	**11 28 03.6**	**-0.2**
	0.2nm32nm,0.5s						
SANI	**Sanana**	**10.64**	**271**	P	**Pn**	**11 29 13.8**	**+0.2**
	499nm13nm,0.8s						
MANU	**Manus Island**	**10.73**	**89**	Pn	**Pn**	**11 29 13.5**	**-1.3**
MTN	**Manton Dam**	**11.82**	**207**		**Pn**	**11 29 28.9**	**-0.9**
PMG	**Port Moresby**	**12.63**	**124**	Pn	**Pn**	**11 29 41.2**	**+0.4**
	0.6nm,0.3s,baz=302,slow=14,SNR=2.0						
PMG	**Port Moresby**	**12.63**	**124**	Pn	**Pn**	**11 29 39.3**	**-1.5**
COEN	**Coen**	**13.28**	**151**	Pn	**Pn**	**11 29 48.2**	**-1.4**
MRSI	**Marisa**	**14.95**	**280**	P	P	11 30 27.6	+11
BATI	**Baumata**	**15.10**	**238**	Pn	**Pn**	**11 30 14.3**	**+0.1**
	2.2nm,0.3s,baz=309,slow=12,SNR=1.8						
BATI	**Baumata**	**15.10**	**238**	P	P	11 30 30.2	+11
KNRA	**Kununurra**	**15.40**	**210**		**Pn**	**11 30 17.0**	**-1.2**
BNSI	**Bone**	**16.63**	**262**	P	P	11 30 48.6	+13
WB0	**Warramunga Arr**	**17.51**	**187**	P	**Pn**	**11 30 42.3**	**-2.5**
WB0				IAmb	IAmb	11 30 59.4	
	comp=Z,8.6nm,0.7s						
WRAB	**Tennant Creek**	**17.68**	**187**	P	**Pn**	**11 30 44.6**	**-2.3**
WRAB				IAmb	IAmb	11 31 00.9	
	comp=Z,12nm,0.9s						
WR0	**Warramunga Arr**	**17.69**	**186**	P	**Pn**	**11 30 45.8**	**-1.2**
WR0				IAmb	IAmb	11 31 06.0	
	comp=Z,9.8nm,0.8s						
WB2	**Warramunga Arr**	**17.69**	**187**	P	**Pn**	**11 30 45.0**	**-2.0**
WB2				IAmb	IAmb	11 30 49.5	
	comp=Z,10.0nm,0.6s						
WRA	**Warramunga Arr**	**17.69**	**187**	P	**Pn**	**11 30 47.3**	**+0.2**
	comp=Z,1.3nm,0.3s,baz=8.6,slow=12,SNR=53						
WRA				S	Sn	11 33 51.6	-12
	comp=Z,0.3nm,0.3s,baz=6.3,slow=23,SNR=4.1						
WRA	**Warramunga Arr**	**17.69**	**187**	P	**Pn**	**11 30 45.0**	**-2.0**
FITZ	**Fitzroy Crossi**	**19.06**	**214**	P	**Pn**	**11 31 04.8**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=33,slow=12,SNR=14						
CTA	**Charters Tower**	**20.04**	**153**	P	Pn	11 31 15.0	-0.3
	comp=Z,3.3nm,0.8s,baz=318,slow=12,SNR=1.9						
AS31	**Alice Springs**	**21.42**	**187**	P	**P**	**11 31 28.6**	**+0.5**
AS31				IAmb	IAmb	11 31 47.5	
	comp=Z,5.5nm,1.0s						
ASAR	**Alice Springs**	**21.42**	**187**	P	**P**	**11 31 28.6**	**+0.5**
	comp=Z,3.6nm,0.4s,baz=10,slow=11,SNR=87						
ASAR				S	**S**	**11 35 22.3**	**-1.5**
	comp=Z,2.3nm,0.9s,baz=8.5,slow=21,SNR=4.3						
ASAR	**Alice Springs**	**21.42**	**187**	P	**P**	**11 31 28.3**	**+0.1**
EIDS	**Eidsvold**	**26.84**	**150**	P	**P**	**11 32 17.9**	**-2.5**
FORT	**Forrest**	**29.48**	**195**	P	**P**	**11 32 43.5**	**-0.3**
STKA	**Stephens Creek**	**29.80**	**171**	P	**P**	**11 32 48.6**	**+1.9**
	comp=Z,2.1nm,0.4s,baz=347,slow=9.7,SNR=11						
STKA	**Stephens Creek**	**29.80**	**171**	P	**P**	**11 32 46.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**42.43**	**301**	P	**P**	**11 34 36.2**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=123,slow=7.6,SNR=1.5						
SONM	**Songino Array**	**56.47**	**336**	LR	LR	11 59 24.2	
	comp=Z,27nm,

PRHZ	**Porangahau**	**3.10 190**	P	Pn	11 29 44.4	-2.5
DVHZ	**Dannevirke**	**3.22 196**	P	Pn	11 29 46.0	-2.6
ANWZ	**Angora Road**	**3.31 192**	P	Pn	11 29 47.0	-2.7
PRWZ	**Pori Road**	**3.51 197**	P	Pn	11 29 49.8	-2.5
BFZ	**Birch Farm**	**3.57 194**	P	Pn	11 29 49.8	-3.4
MRZ	**Mangatainoka R**	**3.71 201**	P	Pn	11 29 51.6	-3.4
TIWZ	**Tintock**	**3.74 197**	P	Pn	11 29 52.1	-3.4
HOWZ	**Holdsworth Sta**	**3.95 201**	P	Pn	11 29 54.4	-3.8
OGWZ	**Otaki Gorge**	**3.98 205**	P	Pn	11 29 55.4	-3.3
TMWZ	**Te Maipa**	**4.05 196**	P	Pn	11 29 56.0	-3.7
KIW	**Kapiti Island**	**4.11 207**	P	Pn	11 29 56.9	-3.6
MTW	**Mount Morrison**	**4.20 199**	P	Pn	11 29 57.3	-4.3
CAW	**Cannon Point**	**4.28 204**	P	Pn	11 29 58.5	-4.1
TRWZ	**Traveller**	**4.38 197**	P	Pn	11 29 59.7	-4.3
PLWZ	**Palliser**	**4.64 200**	P	Pn	11 30 02.6	-5.0
KHZ	**Kahutara**	**5.97 208**	P	Pn	11 30 20.4	-5.0
GVZ	**Greta Valley S**	**6.63 209**	P	Pn	11 30 28.9	-5.6
LTZ	**Lake Taylor**	**6.79 213**	P	Pn	11 30 30.9	-5.8
OKCZ	**Okains Bay**	**7.28 205**	P	Pn	11 30 37.0	-6.2
TMZ	**Timaru**	**8.63 212**	P	Pn	11 30 55.2	-6.3

IDC ***22*** *11:32:06.1±2.6,36.°59N×140.°59E,h0km,mb3.5/2, mb1 3.7/2,mb1mx3.3/27,mbtmp3.5/2,Error ellipse: s-maj=42.8km s-min=18.5km az=17.0*
JMA ***22*** *11:32:06.3,36.°70N×140.°64E,h6km±1km,M2.9*
JMA Felt II J1.

ISC 22 11:32:05.6±1.4,36.°70N±0.°03×140.°72E±0.°09,h7km±9km, n17,σ0.66/17,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.15**	**234**	P	**Pg**	**11 32 08.7**	**-0.1**
JHYU	**Hitachinakayam**	**0.37**	**197**	P	**Pb**	**11 32 13.6**	**-0.9**
JHYU				S	**Sg**	**11 32 18.8**	**+1.0**
ONAJ	**Iwakimizuishiy**	**0.41**	**9**	P	**Pb**	**11 32 14.5**	**-0.7**
ONAJ				S	**Sb**	**11 32 20.5**	**-1.1**
JFFD	**Fukushimafurud**	**0.41**	**342**	P	**Pg**	**11 32 14.0**	**+0.4**
JYT	**Yasato**	**0.63**	**222**	P	**Pg**	**11 32 17.7**	**-0.1**
JYT				S	**Sg**	**11 32 26.0**	**-0.1**
JFK	**Kawauchi**	**0.68**	**10**	P	**Pb**	**11 32 19.4**	**-0.4**
JFK				S	**Sb**	**11 32 28.7**	**-0.7**
JFT	**Otama**	**0.87**	**339**	P	**Pb**	**11 32 22.6**	**-0.5**
JFT				S	**Sg**	**11 32 34.1**	**+0.3**
MJAR	**Matsushiro Arr** 1.3nm,0.3s,baz=85,slow=15,SNR=34	**2.03**	**266**	Pn	**Pn**	**11 32 40.3**	**+0.1**
MJAR	0.7nm,0.3s,baz=87,slow=27,SNR=5.0			Lg	Lg	11 33 05.8	
MAT	**Matsushiro**	**2.03**	**266**	P	**Pn**	**11 32 40.4**	**+0.2**
MAT				S	**Sn**	**11 33 05.9**	**+0.1**
H11N2	**WAKE ISLAND Hy** baz=311,slow=75	**28.46**	**119**	T	T	12 07 45.9	
H11N1	**WAKE ISLAND Hy** baz=311,slow=75	**28.47**	**119**	T	T	12 07 47.1	
H11N3	**WAKE ISLAND Hy** baz=311,slow=75	**28.48**	**119**	T	T	12 07 47.4	
H11S1	**WAKE ISLAND Hy** baz=314,slow=75	**29.15**	**121**	T	T	12 08 37.0	
H11S3	**WAKE ISLAND Hy** baz=314,slow=75	**29.15**	**121**	T	T	12 08 37.2	
H11S2	**WAKE ISLAND Hy** baz=314,slow=75	**29.17**	**121**	T	T	12 08 39.1	
WRA	**Warramunga Arr** 0.4nm,0.6s,baz=5.1,slow=7.5,SNR=5.8	**56.66**	**187**	P	**P**	**11 41 50.5**	**+1.0**
ASAR	**Alice Springs** 0.5nm,0.9s,baz=355,slow=6.8,SNR=3.5	**60.38**	**187**	P	**P**	**11 42 15.8**	**+0.3**

IDC ***22*** *12:06:20.8±2.9,10.°16S×121.°67E,h56km±28km,mb3.5/3, mb1 3.6/6,mb1mx3.3/48,mbtmp3.8/6,ML3.5/3,MS2.8/3, Ms1 2.8/3,ms1mx2.5/33,Error ellipse: s-maj=27.4km s-min=18.4km az=36.0*

ISC 22 12:06:18.8±0.9,10.°38S±0.°08×121.°67E±0.°08,h35km,n10, σ3.22/12,mb3.7/3,Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata** 5.6nm,0.3s,baz=233,slow=2.1,SNR=7.7	**1.97**	**85**	P	**Pn**	**12 06 51.8**	**+2.0**
BATI				S	**Sn**	**12 07 15.7**	**+2.4**
KAPI	**Kappang** 4.4nm,0.3s,baz=154,slow=14,SNR=1.6	**5.66**	**340**	P	**Pn**	**12 07 40.6**	**+0.1**
KAPI	comp=Z,82nm,19.5s,baz=159,slow=40			LR	LR	12 10 01.5	
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=342,slow=12,SNR=10	**8.58**	**154**	P	**Pn**	**12 08 24.4**	**+3.8**
FITZ	0.8nm,0.3s,baz=179,slow=21,SNR=9.3			S	**Sn**	**12 09 55.2**	**-1.1**
FITZ	comp=Z,70nm,21.4s,baz=324,slow=42			LR	LR	12 12 27.1	
SIJI	**Sorong** comp=Z,35nm,18.1s,baz=312,slow=45	**13.43**	**46**	LR	LR	12 16 16.1	
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=293,slow=13,SNR=13	**15.48**	**129**	P	**Pn**	**12 09 52.6**	**-2.0**
WRA	0.1nm,0.3s,baz=290,slow=22,SNR=3.6			S	Sn	12 12 33.3	-12
ASAR	**Alice Springs** 0.1nm,0.3s,baz=323,slow=13,SNR=18	**17.63**	**140**	P	**P**	**12 10 23.9**	**+1.3**
ASAR	0.1nm,0.3s,baz=312,slow=22,SNR=7.6			S	**Sn**	**12 13 30.4**	**-6.9**
STKA	**Stephens Creek** 1.0nm,0.6s,baz=354,slow=9.2,SNR=3.3	**28.24**	**142**	P	**P**	**12 12 11.0**	**+2.4**
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=151,slow=5.5,SNR=2.7	**66.89**	**332**	P	**P**	**12 17 05.5**	**-2.0**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=141,slow=5.5,SNR=1.5	**71.28**	**338**	P	**P**	**12 17 32.3**	**-2.2**
TXAR	**Lajitas Array** 0.2nm,0.7s,baz=194,slow=2.2,SNR=3.5	**133.72**	**59**	PKP	**PKPdf**	**12 25 32.3**	**-0.4**

FUNV ***22*** *12:24:21.2,10.°14N×70.°34W,h5km,MW3.4*

ISC 22 12:24:20.8±1.3,10.°18N±0.°04×70.°33W±0.°04,h3km±12km, n10,σ0.61/16,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CURV	**Curarigua**	**0.40**	**115**	*e*P	**Pg**	**12 24 28.6**	**0.0**
CURV				*e*S	**Sg**	**12 24 33.3**	**-0.5**
SIQV	**Siquisique**	**0.69**	**48**	*e*P	**Pg**	**12 24 34.5**	**+0.4**
SIQV				*e*S	**Sb**	**12 24 45.9**	**+0.3**
DABV	**Dabajuro**	**0.80**	**338**	*e*P	**Pb**	**12 24 37.7**	**+0.3**
DABV	**Dabajuro**	**0.80**	**338**	*e*P	**Pg**	**12 24 35.8**	**-0.3**
DABV				*e*S	**Sb**	**12 24 48.6**	**+0.1**
SANV	**Sanarito**	**1.03**	**131**	*e*P	**Pg**	**12 24 40.2**	**-0.5**
SANV				*e*S	**Sg**	**12 24 53.6**	**-0.5**
MAPV	**Macapo**	**1.88**	**101**	*e*P	**Pn**	**12 24 54.1**	**+0.2**
MAPV				*e*S	**Sn**	**12 25 17.7**	**-0.4**
SOCV	**Socops**	**1.96**	**195**	*e*P	**Pn**	**12 24 55.3**	**+0.3**
BAUV	**El Baul**	**2.57**	**118**	*e*P	**Pn**	**12 25 03.5**	**+0.1**
BAUV				*e*S	**Sn**	**12 25 34.5**	**-0.7**
PAMC	**Pamplona, Colo**	**3.67**	**220**	*e*P	**Pb**	**12 25 28.0**	**+1.3**
SMLC	**San Martn de**	**3.94**	**250**	*e*P	**Pn**	**12 25 21.4**	**-0.9**

IDC 22 12:34:14.2±6.9,10.°71S×161.°73E,h96km±45km,mb3.3/3, mb1 3.5/5,mb1mx3.2/43,mbtmp3.8/5,Error ellipse: s-maj=65.6km s-min=32.5km az=99.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara** 94nm,0.3s,baz=166,slow=5.1,SNR=2.1	**2.17**	**306**	P	Pn	12 34 49.0	+0.1
HNR				S	Sn	12 35 15.8	+0.5
	67nm,0.3s,baz=162,slow=7.4,SNR=6.3						
CTA	**Charters Tower** 0.2nm,0.3s,baz=72,slow=9.6,SNR=2.1	**17.58**	**236**	P	Pn	12 38 14.1	+0.8
WRA	**Warramunga Arr** 0.6nm,0.8s,baz=78,slow=8.9,SNR=4.6	**27.93**	**248**	P	P	12 39 55.9	+0.1
ASAR	**Alice Springs** 0.3nm,0.5s,baz=62,slow=10,SNR=6.5	**29.47**	**240**	P	P	12 40 08.9	-0.5
SONM	**Songino Array** 0.5nm,0.4s,baz=141,slow=7.3,SNR=3.7	**76.11**	**325**	P	P	12 45 51.8	+0.1

IDC 22 12:39:58.0±2.2,21.°26N×121.°64E,h0km,mb4.0/4, mb1 4.2/4,mb1mx3.4/42,mbtmp4.0/4,Error ellipse: s-maj=246.9km s-min=26.1km az=65.0,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong** 7.4nm,0.7s,baz=356,slow=9.2,SNR=7.2	**23.92**	**156**	P	P	12 45 15.2	+1.4

WRA	**Warramunga Arr** 1.9nm,0.7s,baz=344,slow=9.1,SNR=24	**42.79**	**162**	P	P	12 47 56.6	-1.0
ZALV	**Zalesovo Beam** 0.6nm,0.4s,baz=116,slow=6.6,SNR=3.8	**42.94**	**329**	P	P	12 47 58.4	-0.1
ASAR	**Alice Springs** 0.8nm,0.6s,baz=345,slow=7.2,SNR=26	**46.22**	**164**	P	P	12 48 24.9	-0.1

UCR ***22*** *12:50:19.1±1.9,8.°56N×83.°31W,h1km±2km,MW3.9*
UPA ***22*** *12:50:19.5±1.9,8.°58N×83.°26W,h0km±5km,MW4.4*

ISC 22 12:50:19.8±0.8,8.°56N±0.°03×83.°30W±0.°02,h9km±6km,n42, σ0.86/71,3C-7D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTJ1	**Puerto Jimnez**	**0.03**	**195**	*i*P	**Pg**	**12 50 21.4**	**0.0**
PTJ1				*i* S	**Sg**	**12 50 23.1**	**+0.6**
PIRO	**Carate, Puerto**	**0.16**	**195**	*i*P	**Pg**	**12 50 22.3**	**-0.9**
PIRO				*i* S	**Sg**	**12 50 25.3**	**-0.3**
PIRO	**Carate, Puerto**	**0.16**	**195**	*i*P	**Pg**	**12 50 22.3**	**-0.9**
PIRO				*e*S	**Sg**	**12 50 25.3**	**-0.3**
RIOS	**Rincon, Osa**	**0.26**	**303**	*e*P	**Pg**	**12 50 24.4**	**-0.6**
RIOS				*e*S	**Sg**	**12 50 28.9**	**+0.5**
EDSV	**San Vito**	**0.41**	**51**	*e*P	**Pg**	**12 50 27.9**	**0.0**
EDSV				*e*S	**Sb**	**12 50 36.6**	**+0.8**
CDITO	**Canoas**	**0.42**	**88**	*e*P	**Pg**	**12 50 28.0**	**+0.1**
CDITO				*e*S	**Sb**	**12 50 35.1**	**-0.8**
EDPN	**Palmar Norte**	**0.43**	**338**	*e*P	**Pg**	**12 50 27.9**	**-0.3**
EDPN				*e*S	**Sb**	**12 50 35.7**	**-0.5**
SBAR3	**San Bartolo, C**	**0.47**	**121**	*e*P	**Pb**	**12 50 29.8**	**-0.6**
SBAR3				*i* S	**Sb**	**12 50 38.0**	**+0.5**
POTG	**Potrero Grande**	**0.52**	**20**	*e*P	**Pg**	**12 50 30.1**	**+0.2**
POTG				*e*S	**Sb**	**12 50 39.0**	**+0.1**
LPLA	**Las Palmas La**	**0.55**	**31**	*e*P	**Pb**	**12 50 30.6**	**-1.1**
LPLA				*e*S	**Sb**	**12 50 39.7**	**0.0**
BRU2	**Volcan**	**0.64**	**69**	*i*P	**Pg**	**12 50 32.2**	**0.0**
BRU2				*i* S	**Sb**	**12 50 43.1**	**+0.6**
BRU2	**Volcan**	**0.64**	**69**	*e*P	**Pg**	**12 50 32.1**	**-0.1**
BRU2				*e*S	**Sb**	**12 50 42.2**	**-0.2**
DRK0	**Durika**	**0.70**	**4**	*e*P	**Pb**	**12 50 34.4**	**+0.1**
DRK0				*i* S	**Sb**	**12 50 44.7**	**+0.5**
DRK0	**Durika**	**0.70**	**4**	*e*P	**Pg**	**12 50 33.1**	**-0.2**
DRK0				*e*S	**Sb**	**12 50 44.5**	**+0.4**
BC3P	**Paso Ancho**	**0.72**	**69**	*e*P	**Pg**	**12 50 33.5**	**-0.3**
BC3P				*e*S	**Sb**	**12 50 46.0**	**+1.1**
BCO2	**Palmira**	**0.77**	**78**	*i*P	**Pg**	**12 50 34.4**	**-0.3**
BCO2				*e*S	**Sb**	**12 50 47.4**	**+1.1**
DVD	**David**	**0.84**	**98**	*i* S	**Sn**	**12 50 50.5**	**0.0**
LOCO3	**Loma Colorada,**	**0.88**	**100**	*e*P	**Pb**	**12 50 36.7**	**-0.6**
LOCO3				*e*S	**Sb**	**12 50 52.+1.0**	
EDDO	**Dominical**	**0.89**	**321**	*e*P	**Pg**	**12 50 36.3**	**-0.6**
EDDO				*e*S	**Sg**	**12 50 48.8**	**+0.4**
PEZE	**Perez Zeledon,**	**0.90**	**335**	*e*P	**Pg**	**12 50 36.7**	**-0.5**
PEZE				*e*S	**Sb**	**12 50 49.5**	**-0.3**
CHIR3	**Chiriqui UPA,**	**0.97**	**100**	*e*S	**Sb**	**12 50 51.1**	**-0.6**
PSOM3	**Paja de Sombre**	**0.97**	**83**	*i*P	**Pg**	**12 50 38.0**	**-0.4**
PSOM3				*i* S	**Sb**	**12 50 52.9**	**+1.0**
GUAL3	**Gualaca, Chiri**	**0.99**	**92**	*e*P	**Pb**	**12 50 38.6**	**-0.5**
GUAL3				*e*S	**Sg**	**12 50 49.7**	**-1.9**
CDM	**Cerro de Muert**	**1.09**	**335**	*e*P	**Pg**	**12 50 40.2**	**-0.6**
CDM				*e*S	**Sb**	**12 50 57.0**	**+1.3**
CNI2	**El Empalme, Bo**	**1.18**	**43**	*e*S	**Sn**	**12 50 59.0**	**+0.2**
CHGR2	**Aguacate**	**1.20**	**72**	*e*P	**Pg**	**12 50 42.0**	**-0.8**
CHGR2				*e*S	**Sg**	**12 50 57.8**	**-0.6**
MRVA	**Moravia de Chi**	**1.26**	**353**	*e*P	**Pg**	**12 50 43.0**	**-1.1**
MRVA				*e*S	**Sg**	**12 50 59.2**	**-1.3**
RIMA	**Rio Macho**	**1.32**	**335**	*e*P	**Pg**	**12 50 43.1**	**-2.1**
OCM	**Ochomogo**	**1.48**	**334**	*e*P	**Pn**	**12 50 46.2**	**-0.7**
CVTR	**Volcan Turrial**	**1.52**	**343**	*e*P	**Pn**	**12 50 47.1**	**-0.5**
HDC	**Heredia**	**1.64**	**331**	*i*P	**Pn**	**12 50 49.8**	**+0.8**
HDC				*i* S	**Sg**	**12 51 12.7**	**0.0**
HDC	**Heredia**	**1.64**	**331**	*e*P	**Pn**	**12 50 49.7**	**+0.6**
LAFE	**Finca La Fe, P**	**2.02**	**308**	*e*P	**Pn**	**12 50 55.7**	**+1.6**
GMAL	**Guarumal, Vera**	**2.19**	**111**	*e*P	**Pn**	**12 50 56.0**	**-0.5**
GMAL				*e*S	**Sn**	**12 51 25.9**	**+2.2**
ARE1	**Arenal 1**	**2.35**	**323**	*e*P	**Pn**	**12 51 00.2**	**+1.5**
JTS	**Las Juntas de**	**2.37**	**317**	*i*P	**Pn**	**12 51 00.9**	**+2.0**
JTS				*e*S	**Sn**	**12 51 29.1**	**+0.8**
JTS	**Las Juntas de**	**2.37**	**317**	*e*P	**Pn**	**12 51 00.5**	**+1.5**
JTS				*e*S	**Sn**	**12 51 28.2**	**0.0**
GRZA	**Playa Garza**	**2.67**	**300**	*e*P	**Pn**	**12 51 02.8**	**-0.3**
PLVR	**Palo Verde**	**2.70**	**311**	*e*P	**Pn**	**12 51 03.9**	**+0.3**
CACAO	**El Cacao, Vera**	**2.70**	**116**	*e*P	**Pn**	**12 51 04.6**	**+1.1**
CACAO				*e*S	**Sn**	**12 51 37.0**	**+0.8**
CUI	**Cuipilapa**	**2.78**	**319**	*e*P	**Pn**	**12 51 05.4**	**+0.8**
AZU	**Azuero**	**3.09**	**104**	*e*S	**Sn**	**12 51 46.1**	**+0.2**

IDC ***22*** *12:55:26.9±1.6,14.°28N×56.°20E,h0km,mb3.7/8, mb1 3.9/8,mb1mx3.4/67,mbtmp3.7/8,MS3.2/11, Ms1 3.2/11,ms1mx2.9/58,Error ellipse: s-maj=42.3km s-min=29.1km az=40.0*

ISC 22 12:55:29.8±1.6,14.°3N±0.°3×56.°2E±0.°2,h18km,n16, σ1.08/8,mb3.6/8,MS3.1/10,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin** comp=Z,212nm,21.3s,baz=210,slow=36	**9.16**	**14**	LR	LR	13 00 55.9	
GEYT	**Alibeck** comp=Z,27nm,19.3s,baz=30,slow=39	**23.57**	**4**	LR	LR	13 10 46.1	
KMBO	**Kilima Mbogo** comp=Z,59nm,18.1s,baz=99,slow=36	**24.24**	**232**	LR	LR	13 10 11.1	
EIL	**Elat** comp=Z,41nm,18.4s,baz=138,slow=36	**24.86**	**311**	LR	LR	13 10 34.6	
GNI	**Garni** comp=Z,31nm,18.8s,baz=204,slow=41	**27.62**	**341**	LR	LR	13 14 14.2	
BRTR	**Keskin Array B** comp=Z,28nm,18.4s,baz=147,slow=40	**32.13**	**326**	LR	LR	13 16 37.3	
AKTO	**Aktyubinsk** comp=Z,40nm,18.8s,baz=161,slow=36	**36.04**	**2**	LR	LR	13 17 21.8	
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=224,slow=6.7,SNR=4.2	**39.04**	**29**	P	**P**	**13 02 57.2**	**+1.6**
MKAR	comp=Z,30nm,19.6s,baz=230,slow=40			LR	LR	13 21 19.4	
KURBB	**Kurchatov Arra** 0.4nm,0.8s,baz=212,slow=7.9,SNR=2.9	**40.48**	**22**	P	**P**	**13 03 06.3**	**-1.1**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=276,slow=8.1,SNR=2.2	**41.15**	**78**	P	**P**	**13 03 13.5**	**+0.1**
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=258,slow=5.7,SNR=2.3	**45.47**	**23**	P	**P**	**13 03 47.6**	**-0.2**
FINES	**FINESS Array B** 1.9nm,0.8s,baz=134,slow=10.0,SNR=1.5	**51.79**	**342**	P	**P**	**13 04 35.6**	**-0.7**
FINES	comp=Z,26nm,18.9s,baz=15,slow=37			LR	LR	13 27 47.5	
ESDC	**Sonseca Array** 1.0nm,0.8s,baz=90,slow=5.9,SNR=4.1	**58.09**	**308**	P	**P**	**13 05 23.2**	**+0.8**
ESDC	comp=Z,31nm,18.1s,baz=170,slow=39			LR	LR	13 33 02.6	
ASAJ	**Asahikawa** comp=Z,35nm,18.2s,baz=154,slow=38	**77.62**	**47**	LR	LR	13 43 57.2	
WRA	**Warramunga Arr** 0.9nm,1.0s,baz=306,slow=4.5,SNR=3.0	**84.03**	**112**	P	**P**	**13 08 00.2**	**+0.3**
ASAR	**Alice Springs** 0.3nm,0.9s,baz=290,slow=5.6,SNR=1.9	**84.77**	**116**	P	**P**	**13 08 02.8**	**-0.8**

IDC ***22*** *12:57:02.8±1.4,3.°02S×129.°87E,h0km,mb3.8/3, mb1 4.1/6,mb1mx3.6/51,mbtmp3.9/6,ML4.0/2,MS3.1/6, Ms1 3.1/6,ms1mx2.8/42,Error ellipse: s-maj=41.1km s-min=17.1km az=103.0*
DJA ***22*** *12:57:08.8±0.9,3°S±3°×13°0E±°,h27km±9km,M3.8/9, MLv3.8/9*

ISC 22 12:57:05.2±0.7,2.°96S±0.°04×129.°94E±0.°05,h25km,n17, σ3.22/20,Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.08**	**249**	P	**Pn**	**12 57 24.6**	**-0.1**
MSAI				S	**Sb**	**12 57 40.7**	**+1.9**
BNDI	**Bandanaira**	**1.55**	**181**	P	**Pb**	**12 57 34.7**	**+1.4**
BNDI				S	**Sb**	**12 57 56.9**	**+4.4**
FAKI	**Fak Fak**	**2.31**	**89**	P	**Pb**	**12 57 47.2**	**+1.0**
SIJI	**Sorong** 1.3nm,0.3s,baz=37,slow=21,SNR=25	**2.47**	**33**	Pn	**Pn**	**12 57 44.7**	**+0.9**
SIJI	16nm,0.3s,baz=140,slow=23,SNR=30			Pg	**Pb**	**12 57 49.0**	**+0.2**
SIJI	11nm,0.3s,baz=262,slow=4.4,SNR=9.7			Sn	**Sb**	**12 58 18.9**	**+0.1**
SIJI	comp=Z,174nm,21.5s,baz=170,slow=52			LR	LR	12 59 15.2	
SWI	**Sorong**	**2.47**	**32**	P	**Pb**	**12 57 49.0**	**+0.2**
SWI				S	**Sb**	**12 58 20.7**	**+1.9**
NLAI	**Namlea**	**2.84**	**264**	P	**Pn**	**12 57 51.0**	**+2.0**
SANI	**Sanana**	**4.04**	**283**	P	**Pn**	**12 58 04.9**	**-0.6**
SANI				S	**Sn**	**12 58 48.1**	**-4.0**
BATI	**Baumata** comp=Z,163nm,20.2s,baz=76,slow=38	**9.52**	**221**	LR	LR	13 03 04.1	
KAPI	**Kappang** comp=Z,66nm,19.7s,baz=98,slow=39	**10.36**	**258**	LR	LR	13 03 45.7	
DAV	**Davao City (W)** comp=Z,36nm,21.5s,baz=336,slow=39	**10.87**	**336**	LR	LR	13 04 11.1	
FITZ	**Fitzroy Crossi** 0.5nm,0.3s,baz=18,slow=8.6,SNR=12	**15.62**	**195**	Pn	**Pn**	**13 00 44.5**	**+0.7**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=343,slow=12,SNR=22	**17.42**	**166**	Pn	**Pn**	**13 01 04.9**	**-1.8**
WRA	0.0nm,0.3s,baz=124,slow=22,SNR=1.5			Sn	**Sn**	**13 04 10.3**	**-10**
ASAR	**Alice Springs** 10nm,0.8s,baz=350,slow=10,SNR=128	**20.94**	**170**	P	**P**	**13 01 46.8**	**+0.5**
ASAR	0.6nm,0.8s,baz=348,slow=17,SNR=4.5			S	**S**	**13 05 34.2**	**-4.4**
LEM	**Lembang** comp=Z,49nm,20.1s,baz=58,slow=41	**22.56**	**259**	LR	LR	13 12 16.8	
STKA	**Stephens Creek** 1.2nm,0.8s,baz=337,slow=13,SNR=1.1	**30.79**	**160**	P	**P**	**13 03 20.4**	**+1.5**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=120,slow=8.9,SNR=2.4	**64.85**	**326**	P	**P**	**13 07 44.3**	**+2.2**
BBB	**Bella Bella** comp=Z,58nm,21.7s,baz=38,slow=30	**99.66**	**38**	LR	LR	13 46 21.8	

IDC 22 13:09:06.9±36.0,54.°78S×140.°94E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.6/28,mbtmp3.7/3,MS3.6/2,Ms1 3.6/2, ms1mx2.9/28,Error ellipse: s-maj=672.9km s-min=168.2km az=142.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks** comp=Z,139nm,20.8s,baz=198,slow=32	**22.38**	**73**	LR	LR	13 21 11.9	
STKA	**Stephens Creek** 3.9nm,0.9s,baz=167,slow=9.2,SNR=3.9	**22.90**	**1**	P	P	13 14 12.2	+0.1
H01W1	**Cape Leeuwin H** baz=142,slow=76,SNR=6.8	**27.21**	**306**	T	T	13 42 33.7	
H01W2	**Cape Leeuwin H** baz=142,slow=76,SNR=8.3	**27.22**	**306**	T	T	13 42 35.7	
H01W3	**Cape Leeuwin H** baz=142,slow=76,SNR=5.0	**27.23**	**306**	T	T	13 42 35.2	
ASAR	**Alice Springs** 0.6nm,0.7s,baz=168,slow=9.5,SNR=9.1	**31.51**	**348**	P	P	13 15 30.4	-0.1
WRA	**Warramunga Arr** 0.7nm,0.6s,baz=172,slow=10,SNR=6.3	**35.14**	**349**	P	P	13 16 02.0	-0.1
MAW	**Mawson** comp=Z,100nm,18.6s,baz=58,slow=35	**36.99**	**219**	LR	LR	13 30 50.7	

WEL 22 13:14:28.9±1.3,32.°5±14.°×17.°8E±2.°5,h27km±23km, M4.5/17,mB4.8/2,ML4.8/16,MLv4.5/17,Mw(mB)4.0/2, Error ellipse: s-maj=0.0km s-min=0.0km az=118.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**4.31**	**50**	P	Pn	13 15 32.9	+0.2
GLKZ				S	Sn	13 16 22.7	+0.7
MXZ	**Matakaoa Point**	**5.46**	**180**	P	Pn	13 15 49.4	+1.0
MXZ				S	Sn	13 16 51.9	+1.5
HAZ	**Te Kaha**	**5.67**	**184**	P	Pn	13 15 52.1	+0.8
HAZ				S	Sn	13 16 59.6	+4.0
WMGZ	**Waiomatatini S**	**5.72**	**179**	P	Pn	13 15 51.0	-1.0
PKGZ	**Pakihiroa**	**5.79**	**182**	P	Pn	13 15 55.2	+2.1
PKGZ				S	Sn	13 16 59.0	+0.4
PUZ	**Puketiti**	**5.97**	**180**	P	Pn	13 15 54.3	-1.2
PUZ				S	Sn	13 17 01.3	-1.7
TWGZ	**Tauwhareparae**	**6.08**	**182**	P	Pn	13 15 58.3	+1.2
TWGZ				S	Sn	13 17 07.9	+2.1
URZ	**Urewera**	**6.23**	**189**	P	Pn	13 16 00.0	+1.0
URZ				S	Sn	13 17 12.0	+2.6
MWZ	**Matawai**	**6.26**	**185**	P	Pn	13 15 59.1	-0.4
MWZ				S	Sn	13 17 11.5	+1.3
MUGZ	**Murupara**	**6.50**	**191**	P	Pn	13 16 04.2	+1.6
MUGZ				S	Sn	13 17 17.9	+2.1
RTZ	**Ruatahuna**	**6.60**	**189**	P	Pn	13 16 03.7	-0.5
RTZ				S	Sn	13 17 18.0	-0.6
RIGZ	**Rimuhau**	**6.62**	**184**	P	Pn	13 16 03.4	-1.0
RIGZ				S	Sn	13 17 16.0	-2.9
MTHZ	**Maungataniwha**	**6.85**	**189**	P	Pn	13 16 09.4	+1.8
MTHZ				S	Sn	13 17 25.2	+0.5
RAHZ	**Arahi**	**6.88**	**188**	P	Pn	13 16 09.0	+1.0
RAHZ				S	Sn	13 17 24.7	-0.8
NMHZ	**Naumai**	**7.10**	**189**	P	Pn	13 16 09.3	-1.7
BKZ	**Black Stump Fm**	**7.21**	**191**	P	Pn	13 16 12.7	+0.1
ARHZ	**Aropaoanui**	**7.24**	**188**	P	Pn	13 16 12.7	-0.1
MCHZ	**McNeill Hill**	**7.46**	**190**	P	Pn	13 16 14.5	-1.3
KWHZ	**Kaweka Forest**	**7.48**	**191**	P	Pn	13 16 16.3	+0.2
KRHZ	**Kereru**	**7.70**	**191**	P	Pn	13 16

MAKZ	**Makanchi**	**40.16**	**315**	P	**P**	**13 30 16.2**	**-0.6**
MAKZ				IAmb	IAmb	13 30 17.2	
	comp=Z,2.2nm,1.0s						
ZALV	**Zalesovo Beam**	**41.62**	**326**	P	**P**	**13 30 27.0**	**-1.6**
	comp=Z,0.6nm,0.4s,baz=122,slow=11,SNR=4.2						
KURK	**Kurchatov**	**43.62**	**320**	P	**P**	**13 30 44.6**	**-0.3**
KURBB	**Kurchatov Arra**	**43.65**	**319**	P	**P**	**13 30 44.6**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=119,slow=7.6,SNR=9.8						
ASAR	**Alice Springs**	**48.29**	**167**	P	P	13 31 39.2	+17
	comp=Z,0.4nm,0.8s,baz=353,slow=6.8,SNR=3.2						
BVAR	**Borovoye Array**	**49.19**	**320**	P	**P**	**13 31 28.4**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=185,slow=7.4,SNR=6.1						
DZM	**Mont Dzumac**	**61.97**	**134**	LR	LR	13 57 47.0	
	comp=Z,59nm,19.1s,baz=340,slow=33						
TTA	**Tatalina**	**64.89**	**30**	P	**P**	**13 33 20.3**	**+0.7**
TTA				IAmb	IAmb	13 33 29.2	
	comp=Z,2.6nm,1.2s						
TOLK	**Toolik Lake Re**	**67.05**	**23**	P	**P**	**13 33 34.5**	**+1.1**
TOLK				IAmb	IAmb	13 33 55.2	
	comp=Z,3.8nm,1.3s						
FINES	**FINESS Array B**	**72.75**	**330**	P	**P**	**13 34 08.5**	**0.0**
	comp=Z,1.6nm,0.5s,baz=61,slow=5.3,SNR=14						
INK	**Inuvik**	**72.86**	**22**	P	**P**	**13 34 09.5**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=274,slow=5.6,SNR=6.9						
INK	**Inuvik**	**72.86**	**22**	IAmb	IAmb	13 34 10.2	
	comp=Z,1.7nm,0.8s						
AKASG	**Malin Array Be**	**74.43**	**319**	P	**P**	**13 34 17.9**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=57,slow=6.5,SNR=4.8						
AKASG	**Malin Array Be**	**74.43**	**319**	IAmb	IAmb	13 34 19.2	
	comp=Z,0.9nm,1.1s						
AKBB	**Malin Array Si**	**74.43**	**319**	P	**P**	**13 34 17.7**	**-0.9**
BR131	**Keskin Array S**	**74.94**	**307**	P	**P**	**13 34 22.9**	**+0.9**
BR131				IAmb	IAmb	13 34 23.5	
	comp=Z,5.1nm,0.9s						
BRTR	**Keskin Array B**	**74.94**	**307**	P	**P**	**13 34 22.9**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=111,slow=6.8,SNR=5.5						
EUNU	**Eureka**	**75.12**	**5**	P	**P**		
EUNU				IAmb	IAmb	13 34 22.8	**+0.6**
	comp=Z,4.9nm,1.5s					13 34 38.5	
BUR08	**Bucovina Ar. S**	**77.97**	**317**	P	**P**	**13 34 38.8**	**-0.1**
BUR08				IAmb	IAmb	13 34 40.2	
	comp=Z,5.9nm,1.4s						
MLR	**Muntele Rosu**	**78.30**	**315**	P	**P**	**13 34 41.6**	**+0.8**
MLR				IAmb	IAmb	13 34 42.7	
	comp=Z,5.2nm,1.1s						
KWP	**Kalwaria Pacla**	**78.73**	**319**	P	**P**	**13 34 43.9**	**+0.9**
RES	**Resolute Bay**	**78.73**	**10**	P	**P**	**13 34 42.7**	**+0.2**
RES				IAmb	IAmb	13 34 43.3	
	comp=Z,0.7nm,0.7s						
NC300	**NORSAR Array S**	**79.26**	**333**	P	**P**	**13 34 45.3**	**-0.3**
NOA	**NORSAR Array B**	**79.46**	**333**	P	**P**	**13 34 46.8**	**0.0**
	comp=Z,0.9nm,0.7s,baz=54,slow=7.8,SNR=2.2						
NC204	**NORSAR Array S**	**79.53**	**333**	P	**P**	**13 34 46.7**	**-0.4**
YKA	**Yellowknife Ar**	**82.58**	**23**	P	**P**	**13 35 03.6**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=306,slow=4.8,SNR=9.7						
GERES	**GERESS Array B**	**84.35**	**321**	P	**P**	**13 35 12.8**	**0.0**
	comp=Z,1.3nm,0.7s,baz=63,slow=6.1,SNR=7.5						
GERES	**GERESS Array B**	**84.35**	**321**	P	**P**	**13 35 12.6**	**-0.2**

NNC 22 13:30:44.0±6.5, 38°.33N×71°.53E, h0km, mb3.5, mpv3.1, 9C-3D, Error ellipse: s-maj=46.0km s-min=29.5km az=179.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.83**	**351**	⇑Pn	Pn	13 31 58.5	+0.5
	0.6nm,0.3s,baz=177,slow=13,SNR=13						
KK31				⇓Pg	Pb	13 32 11.9	+2.4
	2.5nm,0.6s,baz=171,slow=16,SNR=4.2						
KK31				⇓Sn	Sn	13 32 56.1	+1.5
	0.9nm,0.3s,baz=176,slow=23						
KK31				⇑Lg	Lg	13 33 16.6	
	1.9nm,0.5s,baz=167,slow=28						
AAK	**Ala-Archa**	**4.86**	**27**	⇑Pg	Pb	13 32 11.7	+1.6
	3.0nm,0.9s						
AAK				⇑Lg	Lg	13 33 15.4	
	2.6nm,0.7s						
TKM2	**Tokmak 2**	**5.53**	**33**	⇑Pg	Pb	13 32 24.4	+2.9
	1.7nm,0.6s						
TKM2				⇓Lg	Lg	13 33 43.0	
	2.7nm,1.0s						
MAKZ	**Makanchi**	**11.44**	**39**	⇑Pn	Pn	13 33 30.8	+2.2
	0.5nm,0.7s						
MAKZ				⇑Lg	Lg	13 34 03.4	
	0.2nm,0.6s						
MK31	**Makanchi Array**	**11.59**	**40**	⇑Pn	Pn	13 33 30.3	-0.3
	0.4nm,0.6s,baz=164,slow=14,SNR=4.6						
MK31				⇑Lg	Lg	13 34 04.4	
	0.3nm,0.5s,baz=163,slow=27,SNR=5.9						

*JMA **22** 13:37:55.3±0.9, 20°.70N×121°.72E, h2km, M4.2*
*NEIC **22** 13:37:56.4±1.9, 20°.36N±0°.08×121°.73E±0°.09, h57km±8km, mb4.3/33, Error ellipse: s-maj=14.4km s-min=7.2km az=131.0*
*IDC **22** 13:37:59.3±3.5, 20°.40N×121°.89E, h88km±34km, mb3.4/13, mb1 3.6/15, mb1mx3.4/57, mbtmp3.8/15, MS2.9/4, Ms1 2.9/4, ms1mx2.6/34, Error ellipse: s-maj=22.0km s-min=13.4km az=84.0*

ISC 22 13:37:55.1±0.6, 20°.38N±0°.06×121°.69E±0°.08, h43km, n70, σ1§29/66, mb4.1/27, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.50**	**347**		**Pn**	**13 38 33.2**	**-0.1**
YULB	**Yu-li**	**3.02**	**353**	Pn	**Pn**	**13 38 42.1**	**+1.6**
TPUB	**Ta-pu**	**3.07**	**341**	Pn	**Pn**	**13 38 41.6**	**+0.4**
SSLB	**Suanglung**	**3.46**	**349**	Pn	**Pn**	**13 38 47.0**	**+0.5**
NACB	**Ninganchiao**	**3.78**	**359**	Pn	**Pn**	**13 38 51.6**	**+0.7**
HATJ	**Hateruma jima**	**4.15**	**28**	P	**Pn**	**13 38 57.6**	**+1.7**
HATJ				*e*S	**Sn**	**13 39 43.4**	**+0.2**
JYNG	**Yonaqunijimaku**	**4.22**	**16**	P	**Pn**	**13 38 57.0**	**+0.2**
JYNG				*e*S	**Sn**	**13 39 42.8**	**-2.0**
YOJ	**Yonaguni jima**	**4.24**	**16**	Pn	**Pn**	**13 38 59.3**	**+2.1**
YHNB	**Yeheng**	**4.28**	**356**	Pn	**Pn**	**13 39 00.3**	**+2.5**
IRIF	**Iriomote-Funau**	**4.37**	**25**	P	**Pn**	**13 39 00.6**	**+1.7**
IRIF				S	**Sn**	**13 39 48.4**	**-0.1**
JKRS	**Kuro-shima**	**4.40**	**29**	P	**Pn**	**13 39 01.3**	**+1.9**
JKRS				*e*S	**Sn**	**13 39 49.0**	**-0.3**
JIJ	**Ishigaki jima**	**4.57**	**29**	P	**Pn**	**13 39 03.0**	**+1.3**
JIJ				S	**Sn**	**13 39 52.2**	**-1.3**
TATO	**Taipei**	**4.58**	**358**	Pn	**Pn**	**13 39 05.3**	**+3.5**
JISG	**Ishigakijimahi**	**4.84**	**30**	P	**Pn**	**13 39 07.0**	**+1.6**
JISG				*e*S	**Sn**	**13 39 59.3**	**-0.9**
JTJ	**Tarama**	**5.07**	**33**	P	**Pn**	**13 39 10.1**	**+1.5**
JTJ				S	**Sn**	**13 40 05.9**	**0.0**
JIRB	**Irabujima**	**5.47**	**35**	P	**Pn**	**13 39 16.5**	**+2.4**
JIRB				*e*S	**Sn**	**13 40 16.5**	**+0.7**
JOW	**Kunigami**	**8.81**	**42**	P	**Pn**	**13 40 01.6**	**+1.6**
	3.1nm,0.3s,baz=122,slow=30,SNR=5.4						
JNU	**Nakatsue**	**15.10**	**31**	LR	LR	13 47 17.1	
	comp=Z,88nm,19.2s,baz=104,slow=37						
KKM	**Kota Kinabalu**	**15.21**	**201**	P	**P**	**13 41 32.8**	**+1.4**
KKM				IAmb	IAmb	13 41 35.1	
	comp=Z,24nm,1.1s						
KSRS	**Korea Array**	**17.86**	**16**	P	**P**	**13 42 01.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=198,slow=11,SNR=6.8						
KSRS				LR	LR	13 48 57.9	
	comp=Z,21nm,18.1s,baz=176,slow=37						
SBUM	**Sibu**	**20.07**	**209**	P	Pn	13 42 26.7	-0.4
CMAR	**Chiang Mai Arr**	**21.54**	**269**	P	**P**	**13 42 42.7**	**+1.8**
USRK	**Ussuriysk Ar.**	**25.26**	**18**	P	**P**	**13 43 17.7**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=188,slow=6.3,SNR=2.7						
KAPI	**Kappang**	**25.30**	**185**	P	**P**	**13 43 19.9**	**+2.1**
	comp=Z,4.9nm,0.3s,baz=335,slow=7.3,SNR=3.8						
KAPI	**Kappang**	**25.30**	**185**	IAmb	IAmb	13 43 45.1	
	comp=Z,7.1nm,0.5s						
FAKI	**Fak Fak**	**25.36**	**155**	P	**P**	**13 43 17.2**	**-1.1**
FAKI				IAmb	IAmb	13 43 18.4	
	comp=Z,14nm,1.0s						
ASAJ	**Asahikawa**	**29.38**	**32**	LR	LR	13 54 40.3	
	comp=Z,39nm,18.5s,baz=188,slow=34						
KLR	**Kul'dur**	**29.89**	**13**	P	**P**	**13 43 57.8**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=221,slow=9.3,SNR=2.1						
KLR				LR	LR	13 56 23.7	
	comp=Z,13nm,19.8s,baz=88,slow=37						
SONM	**Songino Array**	**30.06**	**339**	P	**P**	**13 44 00.5**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=153,slow=9.1,SNR=4.1						
SONM	**Songino Array**	**30.06**	**339**	IAmb	IAmb	13 44 01.3	
	comp=Z,0.5nm,0.9s						
MK31	**Makanchi Array**	**41.44**	**319**	P	**P**	**13 45 38.2**	**+0.6**
MKAR	**Makanchi Array**	**41.44**	**319**	P	**P**	**13 45 38.6**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=112,slow=9.2,SNR=7.6						
WB0	**Warramunga Arr**	**41.79**	**162**	P	**P**	**13 45 39.5**	**-1.1**
WB0				IAmb	IAmb	13 45 46.8	
	comp=Z,6.8nm,1.2s						
WRAB	**Tennant Creek**	**41.94**	**162**	P	**P**	**13 45 40.1**	**-1.7**
WRAB				IAmb	IAmb	13 46 02.0	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**41.94**	**162**	P	**P**	**13 45 40.0**	**-1.8**
	comp=Z,1.4nm,0.8s,baz=345,slow=9.3,SNR=11						
WB2	**Warramunga Arr**	**41.95**	**162**	P	**P**	**13 45 40.5**	**-1.4**
WB2				IAmb	IAmb	13 46 08.0	
	comp=Z,6.1nm,1.3s						
WR0	**Warramunga Arr**	**42.02**	**162**	P	**P**	**13 45 40.0**	**-2.4**
WR0				IAmb	IAmb	13 45 54.6	
	comp=Z,5.1nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**42.36**	**83**	T	T	14 31 12.5	
	baz=278,slow=75,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**42.37**	**83**	T	T	14 31 06.7	
	baz=278,slow=75,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**42.37**	**85**	T	T	14 31 01.2	
	baz=281,slow=74,SNR=26						
H11N3	**WAKE ISLAND Hy**	**42.38**	**83**	T	T	14 31 13.4	
	baz=278,slow=75,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**42.38**	**85**	T	T	14 30 59.5	
	baz=281,slow=74,SNR=26						
H11S2	**WAKE ISLAND Hy**	**42.39**	**85**	T	T	14 31 01.6	
	baz=281,slow=74,SNR=28						
ZAA0	**Zalesovo Array**	**43.71**	**329**	P	**P**	**13 45 55.8**	**0.0**
ZALV	**Zalesovo Beam**	**43.71**	**329**	P	**P**	**13 45 55.9**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=131,slow=7.4,SNR=3.0						
KURBB	**Kurchatov Arra**	**45.35**	**322**	P	**P**	**13 46 09.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=119,slow=7.6,SNR=2.5						
AS31	**Alice Springs**	**45.37**	**164**	P	**P**	**13 46 08.4**	**-1.0**
ASAR	**Alice Springs**	**45.37**	**164**	P	**P**	**13 46 08.9**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=345,slow=6.7,SNR=25						
GAMB	**Gambell**	**61.60**	**28**	P	**P**	**13 48 08.0**	**+0.2**
A21K	**Barrow**	**68.20**	**20**	P	**P**	**13 48 50.8**	**+0.1**
TTA	**Tatalina**	**68.57**	**29**	P	**P**	**13 48 53.2**	**0.0**
TTA				IAmb	IAmb	13 49 21.6	
	comp=Z,6.5nm,1.3s						
MLY	**Manley**	**70.71**	**27**	P	**P**	**13 49 06.5**	**+0.1**
BPAW	**Bear Paw Mtn.**	**70.72**	**28**	P	**P**	**13 49 06.5**	**+0.1**
BPAW				IAmb	IAmb	13 49 08.7	
	comp=Z,9.7nm,1.5s						
TOLK	**Toolik Lake Re**	**70.75**	**23**	P	**P**	**13 49 06.8**	**+0.2**
TOLK				IAmb	IAmb	13 49 31.2	
	comp=Z,6.8nm,1.5s						
KTH	**Kantishna Hill**	**70.81**	**28**	P	**P**	**13 49 07.2**	**+0.1**
WRH	**Wood River Hil**	**71.92**	**27**	P	**P**	**13 49 14.1**	**+0.5**
POKR	**Poker Plat Res**	**72.08**	**26**	P	**P**	**13 49 13.1**	**-1.5**
ILAR	**Eielson Array**	**72.38**	**27**	P	**P**	**13 49 14.6**	**-1.7**
	comp=Z,0.2nm,0.6s,baz=292,slow=4.8,SNR=2.2						
K27K	**Chicken**	**74.58**	**27**	P	**P**	**13 49 29.6**	**+0.3**
K27K				IAmb	IAmb	13 49 44.1	
	comp=Z,8.8nm,1.5s						
EGAK	**Eagle**	**74.77**	**26**	P	**P**	**13 49 30.0**	**-0.4**
EGAK				IAmb	IAmb	13 49 49.1	
	comp=Z,4.8nm,1.4s						
MCARA	**McCarthy VSAT**	**74.82**	**30**	P	**P**	**13 49 30.5**	**-0.3**
BARN	**Barnard Glacie**	**75.54**	**30**	P	**P**	**13 49 34.3**	**-0.9**
BARN				IAmb	IAmb	13 49 46.4	
	comp=Z,9.0nm,1.3s						
DAWY	**Dawson**	**75.70**	**27**	P	**P**	**13 49 35.3**	**-0.6**
CTGM	**Chitina Glacie**	**75.72**	**30**	P	**P**	**13 49 36.2**	**+0.1**
INK	**Inuvik**	**75.56**	**22**	P	**P**	**13 49 37.9**	**-2.7**
	comp=Z,1.0nm,1.0s,baz=315,slow=5.9,SNR=3.9						
INK	**Inuvik**	**76.56**	**22**	IAmb	IAmb	13 50 05.3	
	comp=Z,3.7nm,1.4s						
EUNU	**Eureka**	**78.64**	**5**	P	**P**	**13 49 51.2**	**-0.9**
EUNU				IAmb	IAmb	13 50 11.7	
	comp=Z,3.9nm,1.5s						
WHY	**Whitehorse**	**78.81**	**29**	P	**P**	**13 49 53.5**	**+0.1**
WHY				IAmb	IAmb	13 50 10.8	
	comp=Z,2.9nm,1.1s						
C36M	**Paulatuk**	**79.22**	**19**	P	**P**	**13 49 54.3**	**-1.0**
C36M				IAmb	IAmb	13 50 15.4	
	comp=Z,8.8nm,1.5s						
YKA	**Yellowknife Ar**	**86.28**	**23**	P	**P**	**13 50 31.3**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=309,slow=4.4,SNR=17						

*DJA **22** 13:45:43.9±1.7, 10°.N±9°.×12°.7E±1°.2, h42km±14km, M5.0/14, mB5.1/1, mb4.6/14, MLv5.1/1, Mw(mB)4.5/1*
*MAN **22** 13:45:48.2, 9°.86N×126°.12E, h22km, MS3.9*
MAN INTENSITY III - GENERAL LUNA.
*NEIC **22** 13:45:50.5±1.8, 9°.91N±0°.07×126°.0E±0°.1, h77km±7km, mb4.5/40, Error ellipse: s-maj=16.7km s-min=10.5km az=82.0*
*IDC **22** 13:45:53.1±1.4, 9°.87N×126°.01E, h99km±13km, mb4.0/31, mb1 4.0/36, mb1mx3.9/69, mbtmp4.3/36, MS3.2/10, Ms1 3.2/10, ms1mx3.0/41, Error ellipse: s-maj=16.6km s-min=8.7km az=78.0*

ISC 22 13:45:48.1±0.7, 9.92N±0°.04×126°.14E±0°.05, h52km±6km, n153, σ1§98/148, mb4.3/63, MS3.1/9, 5C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.14**	**186**	*e*P	**Pn**	**13 45 53.5**	**-2.9**
GLSP				*e*S	**Sn**	**13 45 59.3**	**-3.0**
BUTP	**Butuan**	**1.08**	**209**	*e*P	**Pn**	**13 46 06.2**	**-0.8**
BUTP				*e*S	**Sn**	**13 46 21.3**	**+0.4**
CGP	**Cagayan de Oro**	**2.04**	**225**	⇑*i*P	**Pn**	**13 46 20.9**	**+0.8**
CGP				*e*S	**Sn**	**13 46 44.8**	**+0.4**
LLP	**Lapu-Lapu**	**2.18**	**281**	⇑*i*P	**Pn**	**13 46 23.9**	**+2.0**
LLP				*e*S	**Sn**	**13 46 50.4**	**+2.6**
BUKP	**Musuan**	**2.29**	**208**	*e*P	**Pn**	**13 46 25.0**	**+1.4**
BUKP				*e*S	**Sn**	**13 46 53.9**	**+3.2**
DAV	**Davao City (W)**	**2.89**	**191**	P	**Pn**	**13 46 34.6**	**+2.9**
	155nm,0.3s,baz=305,slow=3.6,SNR=4.9						
DAV				S	**Sn**	**13 47 10.5**	**+5.3**
	77nm,0.3s,baz=318,slow=23,SNR=12						
DAV				LR	LR	13 48 08.2	
	comp=Z,826nm,20.9s,baz=322,slow=48						
MATI	**Mati**	**2.96**	**178**	*e*P	**Pn**	**13 46 34.8**	**+2.1**
MATI				*e*S	Sn	13 47 16.1	+9.2
KCP	**Kidapawan**	**3.08**	**200**	⇑*i*P	**Pn**	**13 46 37.3**	**+3.0**
KCP				*i* S	**Sn**	**13 47 13.8**	**+3.8**
CNOP	**Candoni, Negro**	**3.45**	**269**	*e*P	**Pn**	**13 46 40.0**	**+0.6**
CNOP				*e*S	**Sn**	**13 47 19.6**	**+0.6**
GUIM	**Jordan**	**3.56**	**282**	*e*P	**Pn**	**13 46 41.4**	**+0.4**
GUIM				*e*S	**Sn**	**13 47 18.7**	**-3.2**
RCP	**Roxas**	**3.71**	**296**	⇑*e*P	**Pn**	**13 46 45.5**	**+2.5**
SKMP	**Bagumbayan, Su**	**3.73**	**205**	*e*P	**Pn**	**13 46 43.5**	**+0.2**
SKMP				*e*S	**Sn**	**13 47 19.6**	**-6.5**
DDMP	**Don Marcelino,**	**3.82**	**186**	*e*P	**Pn**	**13 46 45.5**	**+1.1**
JAP	**San Jose, Anti**	**4.21**	**282**	⇑*e*P	Pn	13 46 53.5	+3.7
LQP	**Lukban**	**6.13**	**313**	*e*P	Pn	13 47 19.9	+3.5
TGY	**Tagaytay City**	**6.57**	**310**	P	Pn	13 47 27.4	+5.1
	36nm,0.3s,baz=261,slow=17,SNR=1.4						
TGY				S	Sn	13 48 27.4	-8.6
	135nm,0.3s,baz=167,slow=6.0,SNR=3.8						
MYLDM	**Lahad Datu**	**8.92**	**239**	Pn	Pn	13 47 59.7	+5.3
TNTI	**Ternate**	**9.17**	**172**	P	Pn	13 48 22.1	+24
SZP	**Santa**	**9.38**	**325**	Pn	**Pn**	**13 48 01.9**	**+1.2**
GTOI	**Gorontalo**	**9.74**	**199**	P	**Pn**	**13 48 07.2**	**+1.6**
	29nm,0.8s						
KKM	**Kota Kinabalu**	**10.56**	**249**	Pn	**Pn**	**13 48 19.4**	**+2.4**
LUWI	**Luwuk**	**11.40**	**197**	Pn	**Pn**	**13 48 23.8**	**-4.5**
APSI	**Ampana**	**11.65**	**203**	P	Pn	13 48 39.2	+7.4
	20nm,1.2s						
SIJI	**Sorong**	**11.87**	**154**	P	Pn	13 48 39.8	+5.0
	0.8nm,0.3s,baz=178,slow=23,SNR=2.2						
SIJI				S	**Sn**	**13 50 42.4**	**-3.5**
	0.6nm,0.3s,baz=232,slow=22,SNR=1.6						
SANI	**Sanana**	**11.89**	**181**	P	**Pn**	**13 48 35.4**	**+0.3**
	23nm,0.7s						
TWG	**Pinlang**	**13.71**	**340**	Pn	**Pn**	**13 48 59.9**	**-0.1**
FAKI	**Fak Fak**	**14.13**	**154**	P	**P**	**13 49 13.0**	**+1.2**
YULB	**Yu-li**	**14.17**	**342**		**P**	**13 49 12.3**	**+0.1**
TPUB	**Ta-pu**	**14.31**	**339**		**P**	**13 49 13.0**	**-0.8**
TTSI	**Tana Toraja**	**14.34**	**206**	P	**P**	**13 49 16.4**	**+2.3**
	20nm,0.8s						
SSLB	**Suanglung**	**14.65**	**341**		**P**	**13 49 18.1**	**+0.6**
NACB	**Ninganchiao**	**14.82**	**344**	Pn	**Pn**	**13 49 17.4**	**+2.8**
SPSI	**Sidrap Palu**	**15.19**	**205**	P	**P**	**13 49 24.7**	**+1.2**
	15nm,0.8s						
BNSI	**Bone**	**15.45**	**203**	P	**P**	**13 49 26.7**	**+0.3**
	14nm,0.8s						
SBUM	**Sibu**	**15.70**	**243**		**P**	**13 49 28.5**	**-0.7**
KAPI	**Kappang**	**16.14**	**203**	P	**P**	**13 49 33.6**	**-0.5**
	1.5nm,0.3s,baz=53,slow=9.2,SNR=5.6						
KAPI	**Kappang**	**16.14**	**203**		**P**	**13 49 33.9**	**-0.3**
JMZ	**Minamidaito 2**	**16.53**	**16**	P	**P**	**13 49 42.2**	**+3.8**
JOW	**Kunigami**	**16.94**	**7**	P	**P**	**13 49 45.8**	**+2.9**
	0.7nm,0.3s,baz=322,slow=29,SNR=2.1						
JOW				S	**Sn**	**13 52 45.9**	**-3.2**
	1.2nm,0.3s,baz=55,slow=28,SNR=2.0						
GUMO	**Guam**	**18.69**	**77**	P	**Pn**	**13 50 05.1**	**+2.0**
SOEI	**Soe**	**19.64**	**186**	P	**P**	**13 50 12.4**	**-0.3**
SOEI				IAmb	IAmb	13 50 37.3	
	comp=Z,25nm,0.9s						
BATI	**Baumata**	**20.15**	**187**	P	Pn	13 50 20.3	-0.1
	comp=Z,25nm,0.6s,baz=268,slow=6.6,SNR=8.0						
BATI	**Baumata**	**20.15**	**187**	P	Pn	13 50 21.2	+0.8
	comp=Z,20nm,1.0s						
JCJ	**Chichijima**	**22.83**	**39**	P	**P**	**13 50 48.3**	**+1.4**
	comp=Z,54nm,0.7s,baz=310,slow=6.5,SNR=4.0						
JCJ				LR	LR	13 57 46.7	
	comp=Z,62nm,21.9s,baz=244,slow=31						
JCJ	**Chichijima**	**22.83**	**39**	P	**P**	**13 50 48.5**	**+1.6**
MTN	**Manton Dam**	**23.15**	**168**	P	**P**	**13 50 49.5**	**-0.7**
MTN				IAmb	IAmb	13 51 00.1	
	comp=Z,56nm,1.4s						
JNU	**Nakatsue**	**23.50**	**10**	LR	LR	14 00 38.4	
	comp=Z,26nm,19.2s,baz=186,slow=38						
KHON	**Khomkaen**	**23.57**	**288**	P	**P**	**13 50 58.5**	**+4.2**
UGM	**Wanagama**	**23.57**	**222**	P	**P**	**13 50 53.3**	**-1.0**
MYKOM	**Kota Tinggi**	**23.58**	**251**	P	**P**	**13 50 55.5**	**+1.1**
MYKOM				IAmb	IAmb	13 51 06.5	
	comp=Z,20nm,1.3s						
NONG	**Nongkai**	**23.71**	**292**	P	**P**	**13 50 55.9**	**+0.3**
	comp=Z,12µmcomp=Z,15nm,0.9s						
LEM	**Lembang**	**24.84**	**229**	P	**P**	**13 51 07.4**	**+1.3**
	comp=Z,13nm,0.5s,baz=326,slow=15,SNR=2.0						
LEM				LR	LR	14 01 57.6	
	comp=Z,85nm,18.4s,baz=25,slow=39						
IPM	**Ipoh**	**25.49**	**260**	P	**P**	**13 51 09.8**	**-2.0**
IPM				IAmb	IAmb	13 51 15.3	
	comp=Z,15nm,1.0s						
KNRA	**Kununurra**	**25.57**	**174**	P	**P**	**13 51 11.9**	**-0.4**
KNRA				IAmb	IAmb	13 51 34.1	
	comp=Z,36nm,1.3s						
JHJ	**Hachijo jima 2**	**26.29**	**27**	LR	LR	14 01 27.3	
	comp=Z,34nm,19.1s,baz=222,slow=35						
UTHA	**Uthaitani**	**26.62**	**285**	P	**P**	**13 51 26.7**	**+4.7**
	comp=Z,22nm,0.9s						
SUKH	**Sukhothai**	**26.81**	**289**	P	P	13 51 32.4	+8.8
	comp=Z,8.5nm,0.6s						
KSRS	**Korea Array**	**27.46**	**3**	P	**P**	**13 51 31.1**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=184,slow=9.3,SNR=5.5						
CM35	**Chiang Mai Arr**	**27.53**	**291**	P	**P**	**13 51 36.0**	**+5.8**
CM34	**Chiang Mai Arr**	**27.58**	**292**	P	**P**	**13 51 32.0**	**+1.4**
CM02	**Chiang Mai Arr**	**27.66**	**291**	P	**P**	**13 51 36.0**	**+4.7**
	comp=Z,4.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**27.67**	**291**	P	**P**	**13 51 31.9**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=97,slow=7.7,SNR=11						
CMAR				LR	LR	14 02 46.1	
	comp=Z,56nm,18.5s,baz=168,slow=37						
CMAR	**Chiang Mai Arr**	**27.67**	**291**	P	**P**	**13 51 31.1**	**-0.3**
CM15	**Chiang Mai Arr**	**27.68**	**291**	P	**P**	**13 51 35.4**	**+3.8**
	comp=Z,4.4nm,1.0s						
CM13	**Chiang Mai Arr**	**27.69**	**291**	P	**P**	**13 51 35.4**	**+3.7**
	comp=Z,56nmcomp=Z,3.6nm,1.0s						
CMMT	**Chiang Mai**	**27.75**	**292**	P	**P**	**13 51 35.8**	**+3.6**
	comp=Z,171nmcomp=Z,2.2nm,1.6s						
CM33	**Chiang Mai Arr**	**27.75**	**292**	P	**P**	**13 51 33.0**	**+0.8**
CHTO	**Chiang Mai**	**27.76**	**292**	P	**P**	**13 51 31.7**	**-0.5**
CM32	**Chiang Mai Arr**	**27.80**	**291**	P	**P**	**13 51 38.0**	**+5.4**
FITZ	**Fitzroy Crossi**	**27.85**	**181**	P	**P**	**13 51 33.2

PETK	**Petropavlovsk-**	**50.01**	**24**	P		**P**	**13 54 39.2**	**+2.1**
	comp=Z,7.0nm,1.0s,baz=204,slow=3.3,SNR=2.5							
PETK				LR		LR	14 18 10.2	
	comp=Z,21nm,18.1s,baz=188,slow=39							
DZM	**Mont Dzumac**	**50.73**	**129**	P		**P**	**13 54 42.9**	**-0.3**
	comp=Z,8.6nm,1.0s,baz=256,slow=12,SNR=2.1							
MK31	**Makanchi Array**	**52.23**	**323**	P		**P**	**13 54 53.4**	**-0.5**
MK31				IAmb		IAmb	13 54 54.6	
	comp=Z,2.5nm,0.8s							
MKAR	**Makanchi Array**	**52.23**	**323**	P		**P**	**13 54 53.3**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=122,slow=8.0,SNR=31							
MKAR				PcP		PcP	**13 56 04.5**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=108,slow=6.4,SNR=3.6							
MKAR	**Makanchi Array**	**52.23**	**323**	P		**P**	**13 54 53.1**	**-0.9**
MAKZ	**Makanchi**	**52.42**	**323**	P		**P**	**13 54 54.5**	**-0.9**
NIL	**Nilore**	**53.82**	**305**	P		**P**	**13 55 05.3**	**-0.7**
NIL				IAmb		IAmb	13 55 09.8	
	comp=Z,8.4nm,0.9s							
ZAA0	**Zalesovo Array**	**54.87**	**331**	P		**P**	**13 55 11.7**	**-1.4**
ZALV	**Zalesovo Beam**	**54.87**	**331**	P		**P**	**13 55 11.3**	**-1.8**
	comp=Z,1.6nm,0.7s,baz=108,slow=6.3,SNR=8.0							
ZALV				PcP		PcP	**13 56 13.0**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=130,slow=6.0,SNR=1.9							
ZALV	**Zalesovo Beam**	**54.87**	**331**	P		**P**	**13 55 11.5**	**-1.6**
KKAR	**Karatay Array**	**58.40**	**315**	P		**P**	**13 55 37.1**	**-1.4**
TIXI	**Tiksi**	**61.70**	**1**	P		**P**	**13 56 00.3**	**-0.2**
BRVK	**Borovoye**	**61.95**	**326**	P		**P**	**13 56 01.2**	**-1.3**
BRVK				IAmb		IAmb	13 56 02.5	
	comp=Z,2.7nm,0.9s							
GEYT	**Alibeck**	**66.65**	**307**	P		**P**	**13 56 33.3**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=134,slow=4.2,SNR=2.4							
ABKAR	**Akbulak array**	**67.06**	**319**	P		**P**	**13 56 34.4**	**-1.5**
AKTO	**Aktyubinsk**	**68.51**	**320**	P		**P**	**13 56 43.7**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=79,slow=10,SNR=3.1							
ARU	**Arti**	**69.45**	**327**	P		**P**	**13 56 48.9**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=108,slow=5.9,SNR=5.7							
ARU	**Arti**	**69.45**	**327**	IAmb		IAmb	13 56 50.1	
	comp=Z,3.6nm,0.6s							
SOCY	**Socotra**	**70.66**	**279**	P		**P**	**13 56 57.2**	**-1.9**
SOCY				IAmb		IAmb	13 56 58.5	
	comp=Z,7.4nm,0.7s							
BELG	**Belogornoye**	**75.20**	**322**	P		**P**	**13 57 24.4**	**-0.7**
	comp=Z,12nm,0.8s,baz=312,slow=10,SNR=3.0							
CASY	**Casey**	**76.86**	**186**	P		**P**	**13 57 34.4**	**+0.3**
CASY				IAmb		IAmb	13 57 57.8	
	comp=Z,8.6nm,1.2s							
IMAR	**Indian Mountai**	**76.97**	**24**	P		**P**	**13 57 36.4**	**+1.4**
KBZ	**Khabaz**	**78.35**	**313**	P		**P**	**13 57 42.9**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=153,slow=2.3,SNR=4.2							
KLMR	**Klimovskoe**	**79.77**	**330**	*eP*		**P**	**13 57 47.5**	**-3.0**
KLMR				AMP			13 57 49.9	
	comp=Z,6.0nm,1.2s							
ILAR	**Eielson Array**	**79.81**	**26**	P		**P**	**13 57 51.4**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=248,slow=6.8,SNR=9.3							
ARCES	**ARCESS Array B**	**84.47**	**340**	P		**P**	**13 58 14.7**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=81,slow=5.9,SNR=10.0							
INK	**Inuvik**	**84.65**	**22**	P		**P**	**13 58 17.1**	**+1.2**
	comp=Z,2.2nm,1.0s,baz=251,slow=6.3,SNR=4.4							
BRTR	**Keskin Array B**	**85.65**	**309**	P		**P**	**13 58 20.5**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=73,slow=5.6,SNR=4.3							
FINES	**FINESS Array B**	**86.14**	**332**	P		**P**	**13 58 22.4**	**-1.0**
	comp=Z,4.2nm,0.8s,baz=61,slow=6.4,SNR=10.0							
AKASG	**Malin Array Be**	**86.75**	**321**	P		**P**	**13 58 25.7**	**-1.0**
	comp=Z,2.3nm,0.7s,baz=64,slow=4.1,SNR=2.0							
VNDA	**Vanda**	**89.60**	**173**	P		**P**	**13 58 39.2**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=258,slow=2.6,SNR=3.6							
VNDA	**Vanda**	**89.60**	**173**	IAmb		IAmb	13 58 42.4	
	comp=Z,7.0nm,1.4s							
RES	**Resolute Bay**	**91.86**	**10**	P		**P**	**13 58 50.6**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=329,slow=6.4,SNR=5.8							
NOA	**NORSAR Array B**	**93.01**	**334**	LR		LR	14 44 02.5	
	comp=Z,8.9nm,18.4s,baz=145,slow=38							
YKA	**Yellowknife Ar**	**94.12**	**24**	P		**P**	**13 59 02.3**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=300,slow=4.4,SNR=15							
GERES	**GERESS Array B**	**96.89**	**322**	P		**P**	**13 59 13.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=88,slow=7.0,SNR=2.5							
TXAR	**Lajitas Array**	**118.15**	**49**	PKP		**PKPdf**	**14 04 29.4**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=290,slow=2.6,SNR=2.2							
TORD	**Torodi Ar. Bea**	**120.28**	**292**	PKP		**PKPdf**	**14 04 33.7**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=45,slow=2.1,SNR=3.5							
PLCA	**Paso Flores**	**145.94**	**157**	PKPbc		**PKPdf**	**14 05 22.8**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=194,slow=1.8,SNR=4.4							

*JMA **22** 13:53:10.9±0.2,23.95N×122.42E,h19km±5km,M2.2*
*TAP **22** 13:53:11.2,23.96N×122.44E,h15km±1km,ML2.6,D*

ISC 22 13:53:09.8±1.1,**23.96N**±0.03×**122.42E**±0.02,**h11**km±10km, **n51**,σ0**840**/78,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.68**	**44**	P		**Pb**	**13 53 24.0**	**+0.2**
JYNG				S		**Sb**	**13 53 32.6**	**-0.7**
YOJ	**Yonaguni jima**	**0.73**	**47**	P		**Pb**	**13 53 25.0**	**+0.3**
YOJ				*e*S		**Sb**	**13 53 34.2**	**-0.6**
YOJ	**Yonaguni jima**	**0.73**	**47**	*i* P		**Pb**	**13 53 24.8**	**+0.2**
	baz=45							
YOJ				*e*S		**Sb**	**13 53 34.1**	**-0.6**
	baz=45							
EWUT	**Wuta**	**0.76**	**310**	*e*P		**Pb**	**13 53 25.5**	**+0.4**
	baz=308							
EWUT				*e*S		**Sb**	**13 53 35.5**	**0.0**
	baz=308							
NACB	**Ninganchiao**	**0.79**	**286**	*i* P		**Pb**	**13 53 25.8**	**+0.3**
	baz=285							
NACB				*e*S		**Sb**	**13 53 37.4**	**+1.1**
	baz=285							
ETLH	**Xiulin Townshi**	**0.89**	**286**	*e*P		**Pb**	**13 53 27.4**	**-0.1**
	baz=285							
ETLH				*e*S		**Sb**	**13 53 39.9**	**+0.5**
	baz=285							
ESL	**Shilin**	**0.92**	**261**	*e*P		**Pn**	**13 53 28.9**	**+0.2**
	baz=260							
NDS	**Dongshan**	**0.93**	**316**	P		**Pb**	**13 53 27.9**	**-0.1**
	baz=315							
NDS				*e*S		**Sb**	**13 53 40.9**	**+0.5**
	baz=315							
EGFH	**Guangfu**	**0.95**	**253**	*e*P		**Pn**	**13 53 29.5**	**+0.3**
	baz=252							
EGS		**0.99**	**333**	*i* P		**Pb**	**13 53 29.0**	**0.0**
	baz=332							
EGS				*e*S		**Sg**	**13 53 41.5**	**-0.3**
	baz=332							
ILA	**Ilan**	**1.01**	**323**	*e*S		**Sb**	**13 53 43.2**	**+0.5**
	baz=321							
TWE	**Neicheng**	**1.02**	**318**	P		**Pn**	**13 53 29.9**	**-0.3**
	baz=317							
TWE				*e*S		**Sb**	**13 53 43.4**	**+0.4**
	baz=317							
HGSD	**Ruisui**	**1.03**	**243**	*e*P		**Pg**	**13 53 29.2**	**-0.4**
	baz=243							
ENTT	**Nioudou**	**1.03**	**311**	P		**Pn**	**13 53 30.0**	**-0.3**
	baz=310							
ENTT				*e*S		**Sg**	**13 53 43.1**	**-0.1**
	baz=310							
NTC	**Toucheng**	**1.04**	**329**	P		**Pn**	**13 53 30.1**	**-0.3**
	baz=327							
NTC				S		**Sb**	**13 53 43.9**	**+0.3**
	baz=327							
NDT	**Datong Townshi**	**1.05**	**308**	*e*P		**Pn**	**13 53 30.7**	**+0.2**
	baz=306							
NDT				*e*S		**Sg**	**13 53 42.9**	**-0.7**
	baz=306							
NNSB	**Datong**	**1.06**	**296**	P		**Pn**	**13 53 30.5**	**-0.2**
	baz=295							
NNSB				*e*S		**Sn**	**13 53 44.9**	**-0.6**
	baz=295							
NNSH	**Datong**	**1.06**	**296**	P		**Pb**	**13 53 30.4**	**+0.2**
	baz=295							
NNSH				S		**Sb**	**13 53 44.8**	**+0.6**
	baz=295							
NNS	**Nan Shan**	**1.07**	**297**	P		**Pn**	**13 53 30.8**	**-0.2**
	baz=296							
NNS				*e*S		**Sb**	**13 53 45.0**	**+0.5**
	baz=296							
WHF	**Hehuan Shan**	**1.07**	**280**	*e*P		**Pg**	**13 53 30.4**	**-0.1**
	baz=279							
WHF				*e*S		**Sb**	**13 53 45.5**	**+0.6**
	baz=279							
FUSS	**Fushou**	**1.11**	**285**	P		**Pb**	**13 53 31.4**	**+0.1**
	baz=284							
FUSS				*e*S		**Sb**	**13 53 46.4**	**+0.5**
	baz=284							
TWB1	**Santiao Chiao**	**1.12**	**339**	*e*P		**Pg**	**13 53 31.2**	**-0.1**
	baz=338							
OWD	**Renai**	**1.14**	**270**	*e*P		**Pb**	**13 53 31.4**	**-0.3**
	baz=269							
TIPB	**Shuangxi**	**1.14**	**332**	*e*P		**Pn**	**13 53 32.0**	**+0.1**
	baz=330							
TIPB				*e*S		**Sb**	**13 53 46.3**	**-0.3**
	baz=330							
CHGB	**Renai**	**1.15**	**275**	*e*P		**Pb**	**13 53 31.5**	**-0.3**
	baz=274							
NWLT	**Wulai**	**1.17**	**314**	*e*P		**Pg**	**13 53 32.6**	**+0.3**
	baz=313							
NWLT				*e*S		**Sg**	**13 53 47.4**	**-0.1**
	baz=313							
YULB	**Yu-li**	**1.18**	**241**	*e*P		**Pb**	**13 53 31.5**	**-0.7**
	baz=241							
EYUL	**Yuli**	**1.18**	**239**	*e*P		**Pb**	**13 53 32.4**	**+0.1**
	baz=239							
YHNB	**Yeheng**	**1.19**	**307**	*e*P		**Pg**	**13 53 32.7**	**0.0**
	baz=305							
VWDT	**VWDT**	**1.19**	**260**	*e*P		**Pn**	**13 53 32.2**	**-0.2**
	baz=260							
VWDT				*e*S		**Sb**	**13 53 47.7**	**-0.1**
	baz=260							
TDCB	**Techi**	**1.19**	**284**	*e*P		**Pg**	**13 53 33.1**	**+0.3**
	baz=283							
TWF1	**Yuli**	**1.20**	**240**	*e*P		**Pn**	**13 53 32.1**	**-0.4**
	baz=239							
TWF1				*e*S		**Sb**	**13 53 47.7**	**-0.3**
	baz=239							
WFSB	**Wu-fen Shan**	**1.25**	**332**	*e*P		**Pg**	**13 53 33.7**	**-0.2**
	baz=331							
IRIF	**Iriomote-Funau**	**1.25**	**72**	P		**Pg**	**13 53 33.9**	**0.0**
IRIF				*e*S		**Sn**	**13 53 50.1**	**-0.1**
TWA	**Mucha**	**1.27**	**323**	*e*P		**Pg**	**13 53 34.6**	**+0.3**
	baz=322							
FULB	**Fuli**	**1.28**	**234**	*e*P		**Pn**	**13 53 33.4**	**-0.4**
	baz=234							
CHKT	**Chengkung**	**1.29**	**229**	*e*P		**Pg**	**13 53 35.3**	**+0.6**
	baz=228							
TATO	**Taipei**	**1.32**	**320**	*e*P		**Pg**	**13 53 36.1**	**+0.9**
	baz=319							
SSLB	**Suanglung**	**1.35**	**263**	*e*P		**Pb**	**13 53 35.6**	**+0.3**
	baz=262							
SSLB				*e*S		**Sg**	**13 53 53.5**	**+0.1**
	baz=262							
DPDB	**Guoxing**	**1.37**	**273**	*e*P		**Pb**	**13 53 35.4**	**-0.1**
	baz=272							
WHP	**Taichung City**	**1.39**	**284**	*e*P		**Pg**	**13 53 36.8**	**+0.3**
	baz=282							
SMLT	**Sun Moon Lake**	**1.39**	**267**	*e*P		**Pb**	**13 53 36.4**	**+0.4**
	baz=266							
EDH	**Donghe**	**1.42**	**226**	*e*P		**Pb**	**13 53 36.8**	**+0.4**
	baz=226							
TYC	**Yuchr**	**1.43**	**268**	*e*P		**Pg**	**13 53 37.4**	**+0.1**
	baz=267							
YM08	**YM08**	**1.44**	**328**	*e*P		**Pb**	**13 53 36.7**	**0.0**
	baz=327							
LIOB	**Emei**	**1.45**	**298**	*e*P		**Pg**	**13 53 37.5**	**-0.2**
	baz=297							
NSTT	**Nanjuang**	**1.46**	**298**	*e*P		**Pg**	**13 53 37.7**	**-0.2**
	baz=296							
NSTT				*e*S		**Sb**	**13 53 55.9**	**+0.3**
	baz=296							
JKRS	**Kuro-shima**	**1.48**	**79**	P		**Pg**	**13 53 38.8**	**+0.6**
JKRS				*e*S		**Sg**	**13 53 57.1**	**-0.3**
ALS	**Alishan**	**1.55**	**254**	*e*P		**Pb**	**13 53 38.5**	**-0.2**
	baz=253							
JIJ	**Ishigaki jima**	**1.62**	**75**	P		**Pn**	**13 53 39.0**	**+0.6**
JIJ				*e*S		**Sb**	**13 53 59.8**	**-0.5**
JISG	**Ishigakijimahi**	**1.83**	**70**	P		**Pn**	**13 53 42.0**	**+0.7**
JISG				S		**Sn**	**13 54 04.4**	**-0.1**

*IDC **22** 14:45:40.5±1.4,38.14N×23.95E,h0km,mb3.4/4,*
mb1 3.5/4,mb1mx3.4/44,mbtmp3.4/4,Error ellipse:
s-maj=64.3km s-min=24.9km az=153.0
*ISK **22** 14:45:43.4,34.99N×27.01E,h10km,ML3.0/11*
*THE **22** 14:45:44.9,35.10N×26.92E,h0km±2km,ML2.7/4,Error*
ellipse: s-maj=8.1km s-min=0.8km az=147.0
*ATH **22** 14:45:45.1,35.03N×26.98E,h13km±3km,ML2.9/6,Error*
ellipse: s-maj=4.6km s-min=1.3km az=331.0

ISC 22 14:45:43.5±1.7,**35.01N**±0.07×**27.01E**±0.05,**h8**km±11km, **n29**,σ0**966**/39,**mb3.6**/4,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KARP	**Karpathos**	**0.55**	**13**	P		**Pb**	**14 45 55.2**	**-0.2**
KARP				S		**Sb**	**14 46 03.1**	**-0.3**
KARP				AML		AML	14 46 04.3	
	comp=E,3714μm,0.1s							
KARP				AML		AML	14 46 04.4	
	comp=N,5018μm,0.2s							
KARP	**Karpathos**	**0.55**	**13**	P		**Pb**	**14 45 55.3**	**-0.1**
KARP				S		**Sb**	**14 46 03.0**	**-0.5**
	comp=N,2μm,0.1s							
KARP	**Karpathos**	**0.55**	**13**	PG		**Pb**	**14 45 55.3**	**-0.1**
KARP				SG		**Sb**	**14 46 03.2**	**-0.3**
ZKR	**Zakros**	**0.66**	**279**	P		**Pg**	**14 45 56.8**	**+0.6**
ZKR				S		**Sb**	**14 46 06.0**	**-0.5**
ZKR				AML		AML	14 46 07.7	
	comp=N,1706μm,0.4s							
ZKR				AML		AML	14 46 08.6	
	comp=E,2362μm,0.3s							
ZKR	**Zakros**	**0.66**	**279**	P		**Pg**	**14 45 56.8**	**+0.6**
ZKR				S		**Sb**	**14 46 06.0**	**-0.5**
	comp=E,1μm,0.4s							
ZKR	**Zakros**	**0.66**	**279**	PG		**Pg**	**14 45 56.7**	**+0.5**
ZKR				SG		**Sb**	**14 46 06.3**	**-0.2**
STIA	**Sitia Lasithi**	**0.78**	**285**	P		**Pg**	**14 45 57.9**	**-0.5**
STIA				S		**Sg**	**14 46 09.2**	**+0.7**
FRMA	**Ierapetra Chan**	**1.05**	**271**	P		**Pg**	**14 46 01.9**	**-1.7**
FRMA				S		**Sg**	**14 46 16.0**	**-1.2**
	comp=E,258nm,0.5s							
NPS	**Neapolis**	**1.17**	**283**	P		**Pb**	**14 46 06.1**	**+0.2**
NPS				S		**Sg**	**14 46 21.5**	**+0.3**
NPS				AML		AML	14 46 27.9	
	comp=E,1722μm,0.5s							
NPS				AML		AML	14 46 28.2	
	comp=N,1192μm,0.7s							
NPS	**Neapolis**	**1.17**	**283**	P		**Pb**	**14 46 05.9**	**-0.1**
NPS				S		**Sn**	**14 46 21.9**	**-0.4**
	comp=N,615nm,0.5s							
ARG	**Arkhangelos**	**1.51**	**37**	PN		**Pn**	**14 46 11.4**	**+0.6**
NIS1	**Nisyros Isl.**	**1.59**	**5**	PN		**Pb**	**14 46 12.9**	**-0.3**
IDI	**Anoyia**	**1.76**	**280**	P		**Pb**	**14 46 16.1**	**+0.1**
IDI				S		**Sb**	**14 46 37.8**	**-0.4**
IDI				AML		AML	14 46 42.9	
	comp=N,258μm,0.5s							
IDI				AML		AML	14 46 46.7	
	comp=E,387μm,0.6s							
IDI	**Anoyia**	**1.76**	**280**	PN		**Pn**	**14 46 15.1**	**+0.8**
SIVA	**Sivas**	**1.80**	**271**	P		**Pb**	**14 46 17.6**	**+0.8**
SIVA				AML		AML	14 46 49.7	
	comp=E,616μm,0.9s							
SIVA				AML		AML	14 46 50.2	
	comp=N,618μm,0.6s							
SANT	**Santorini**	**1.85**	**318**	PN		**Pn**	**14 46 16.1**	**+0.5**
BODT	**Bodrum**	**2.06**	**7**	PN		**Pn**	**14 46 19.3**	**+0.9**
DALY	**Dalyan (Mula)**	**2.24**	**36**	PN		**Pn**	**14 46 21.7**	**+0.8**
VAM	**Vamos**	**2.33**	**281**	P		**Pb**	**14 46 25.5**	**-0.3**
VAM				AML		AML	14 47 01.2	
	comp=E,248μm,0.5s							
VAM				AML		AML	14 47 04.5	
	comp=N,218μm,0.6s							
APE	**Apeiranthos**	**2.38**	**330**	PN		**Pn**	**14 46 23.7**	**+0.9**
AKAS	**Kas**	**2.44**	**59**	PN		**Pn**	**14 46 24.2**	**+0.4**
IMMV	**Iera Moni Meta**	**2.52**	**281**	P		**Pb**	**14 46 28.3**	**-0.6**
IMMV	**Iera Moni Meta**	**2.52**	**281**	PN		**Pn**	**14 46 25.6**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**3.02**	**13**	PN		**Pn**	**14 46 32.7**	**+1.0**
KTHA	**Kythira Island**	**3.45**	**292**	PN		**Pn**	**14 46 37.9**	**+0.4**
ESDC	**Sonseca Array**	**24.99**	**290**	P		P	14 50 33.2	-35
	comp=N,0.8nm,1.0s,baz=90,slow=14,SNR=2.2							
TORD	**Torodi Ar. Bea**	**31.58**	**233**	P		**P**	**14 52 06.8**	**+0.2**
	comp=N,0.3nm,0.3s,baz=34,slow=9.0,SNR=5.0							
MKAR	**Makanchi Array**	**42.59**	**57**	P		**P**	**14 53 40.4**	**+0.5**
	comp=N,0.6nm,0.6s,baz=290,slow=7.1,SNR=7.7							
SONM	**Songino Array**	**58.41**	**51**	P		**P**	**14 55 38.9**	**-0.6**
	comp=N,0.3nm,0.5s,baz=303,slow=8.4,SNR=2.4							

*IDC **22** 15:25:25.4±2.8,54.41N×18.76E,h0km,mb3.0/1,*
mb1 3.2/4,mb1mx3.1/27,mbtmp3.1/4,ML2.5/3,Error
ellipse: s-maj=31.4km s-min=23.3km az=0.0
*UPP **22** 15:25:26.1±2.1,54.42N×18.44E,h0km,ML2.5,Suspected*
explosion
*DNK **22** 15:25:35.8±0.6,54.76N×17.90E,h50km±11km,ML2.0,*
Suspected explosion
*PRU **22** 15:25:43.8±0.0,53.47N×17.05E,h0km*

ISC 22 15:25:24.8±0.9,**54.53N**±0.04×**18.74E**±0.06,**h0**km,**n30**, σ1**879**/43,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GKP	**Gorka Klasztor**	**1.55**	**216**	*e*Pg		**Pg**	**15 25 55.7**	**+1.2**
GKP				*e*Sg		**Sg**	**15 26 17.5**	**+3.1**
BSD	**Bornholm Skovb**	**2.29**	**286**	*i* P		**Pn**	**15 26 04.0**	**+0.3**
BSD				*i* S		**Sb**	**15 26 35.5**	**-0.1**
BSD				IAML			15 26 38.5	
	comp=Z,12nm,0.3s							
BLEU	**Blekinge**	**2.43**	**318**	*e*		**Pn**	**15 26 05.8**	**0.0**
	baz=141,slow=12							
BLEU				P		**Pb**	**15 26 06.7**	**-2.7**
BLEU				*i* P		Pg	15 26 06.8	-4.6
BLEU				S		**Sn**	**15 26 37.4**	**+1.2**
BYXU	**Byxelkrok**	**2.93**	**341**	P		**Pn**	**15 26 14.1**	**+1.6**
BYXU				S		**Sn**	**15 26 50.9**	**+2.5**
BYXU	**Byxelkrok**	**2.93**	**341**	P		**Pn**	**15 26 14.1**	**+1.6**
BYXU				S		**Sn**	**15 26 50.9**	**+2.5**
OSKU	**Oskarshamn**	**3.05**	**332**	P		**Pn**	**15 26 16.1**	**+1.8**
OSKU				S		**Sn**	**15 26 53.5**	**+2.0**
OSKU	**Oskarshamn**	**3.05**	**332**	P		**Pn**	**15 26 16.1**	**+1.8**
OSKU				S		**Sn**	**15 26 53.5**	**+2.0**
VXJU	**Vaexsjoe**	**3.21**	**320**	P		**Pn**	**15 26 17.7**	**+1.2**
VXJU				S		**Sn**	**15 26 56.2**	**+0.7**
VXJU	**Vaexsjoe**	**3.21**	**320**	P		**Pn**	**15 26 17.7**	**+1.2**
VXJU				S		**Sn**	**15 26 56.2**	**+0.7**
VSTU	**Vaestervik**	**3.37**	**339**	P		**Pn**	**15 26 20.4**	**+1.8**
VSTU	**Vaestervik**	**3.37**	**339**	P		**Pn**	**15 26 20.4**	**+1.8**
DEL	**Delary**	**3.38**	**307**	*i* P		**Pn**	**15 26 18.8**	**0.0**
DEL				*i*			15 26 26.6	
DEL				IAML			15 27 14.1	
	comp=Z,1.0nm,0.3s							
BJUU	**Bjuv**	**3.61**	**298**	*i* P		**Pn**	**15 26 22.1**	**+0.1**
VIKU	**Vikbolandet**	**4.13**	**345**	P		**Pn**	**15 26 31.6**	**+2.5**
VIKU	**Vikbolandet**	**4.13**	**345**	P		**Pn**	**15 26 31.6**	**+2.5**
CHVC	**Chvalec**	**4.28**	**204**	*e*PN		**Pn**	**15 26 31.8**	**+0.6**
DPC	**Dobruska-Polom**	**4.44**	**200**	*e*PN		**Pn**	**15 26 34.0**	**+0.5**
DPC				*e*SG		**Sn**	**15 27 25.2**	**-0.7**
NYNU	**Nynaeshamn**	**4.50**	**355**	P		**Pn**	**15 26 35.8**	**+1.7**
NYNU	**Nynaeshamn**	**4.50**	**355**	P		**Pn**	**15 26 35.8**	**+1.7**
ONAU	**Onsala**	**4.79**	**310**	*i* P		**Pn**	**15 26 38.4**	**+0.3**
ASKU	**Askersund**	**4.87**	**335**	P		**Pn**	**15 26 41.1**	**+1.9**
ASKU	**Askersund**	**4.87**	**335**	P		**Pn**	**15 26 41.1**	**+1.9**
ESKU	**Eskilstuna**	**4.88**	**346**	P		**Pn**	**15 26 41.4**	**+2.0**
ESKU	**Eskilstuna**	**4.88**	**346**	P		**Pn**	**15 26 41.4**	**+2.0**
VYHS	**Vyhne**	**6.05**	**179**	*e*PN		**Pn**	**15 26 56.6**	**+1.1**
VYHS				*e*SN		**Pg**	**15 27 21.9**	**+1.2**
STRU	**Stroemstad**	**6.13**	**320**	*i* P		**Pn**	**15 26 56.8**	**+0.3**
NOA	**NORSAR Array B**	**7.66**	**331**	Pn		**Pn**	**15 27 16.8**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=152,slow=12,SNR=9.7							
FINES	**FINESS Array B**	**7.95**	**26**	Pn		**Pn**	**15 27 21.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=209,slow=12,SNR=8.8							
FINES				Sn		**Sn**	**15 28 50.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=214,slow=22,SNR=1.3							
ARCES	**ARCESS Array B**	**15.37**	**9**	Pn		**Pn**	**15 28 57.8**	**-4.9**
	baz=190,slow=12,SNR=9.5							
MKAR	**Makanchi Array**	**39.76**	**74**	P		**P**	**15 32 59.8**	**+0.8**
	comp=Z,0.2nm,0.9s,baz=314,slow=7.1,SNR=1.7							

*IDC **22** 15:41:14.9±1.7,9.04S×124.26E,h0km,mb3.5/1,*
mb1 3.5/4,mb1mx3.3/36,mbtmp3.4/4,ML3.4/3,Error
ellipse: s-maj=35.9km s-min=16.8km az=105.0
*DJA **22** 15:41:25.1±0.5,9.52S×124.12E±,h10km,M3.6/6,mb3.8/2,*
MLv3.6/6

ISC 22 15:41:21.3±1.1,**9.38S**±0.09×**124.13E**±0.09,**h66**km,**n11**, σ4**909**/16,**Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**0.39**	**161**	P		Pn	15 41 38.4	+5.5
SOEI				S		**Sn**	**15 41 49.9**	**+8.5**
BATI	**Baumata**	**0.94**	**209**	Pg		**Pn**	**15 41 41.5**	**+2.6**
	24nm,0.3s,baz=292,slow=6.1,SNR=38							
BATI				Lg		Lg	15 41 55.5	
	79nm,0.3s,baz=62,slow=5.2,SNR=9.5							
BATI	**Baumata**	**0.94**	**209**	P		**Pn**	**15 41 41.3**	**+2.4**
BATI				S		**Sn**	**15 41 55.8**	**+3.9**
MMRI	**Maumere**	**2.02**	**291**	P		**Pn**	**15 41 54.3**	**+1.2**
MMRI				S		**Sn**	**15 42 15.3**	**-2.0**
WBSI	**Waikabubak,

227µm,0.2s
VSK1 VASILIKIADES 0.30 26 P Pg 15 55 42.3 -0.2
VSK1 S Sg 15 55 47.2 +0.5
VLMS Volimes, Zakyn 0.34 142 P Pg 15 55 42.9 -0.4
VLMS S Sg 15 55 48.1 +0.2
VLMS AML AML 15 55 49.2
comp=E,85418µm,0.2s
VLMS AML AML 15 55 56.1
comp=N,77503µm,0.5s
VLMS Volimes, Zakyn 0.34 142 P Pg 15 55 43.0 -0.2
VLMS S Sg 15 55 47.8 -0.1
comp=N,38µm,0.3s
FSK Fiskardo 0.34 22 P Pg 15 55 43.0 -0.3
FSK S Sg 15 55 48.2 +0.2
FSK Fiskardo 0.34 22 P Pg 15 55 43.0 -0.3
FSK S Sg 15 55 48.4 +0.4
comp=N,59µm,0.4s
EVGI Lefkada island 0.52 23 P Pg 15 55 46.1 -0.5
EVGI Lefkada island 0.52 23 P Pg 15 55 46.0 -0.5
EVGI S Sb 15 55 54.1 -0.6
comp=N,7µm,0.3s
LTHK Lithakia 0.55 141 P Pg 15 55 46.4 -0.8
LTHK AML AML 15 56 00.6
comp=N,28235µm,0.3s
LTHK AML AML 15 56 04.2
comp=E,28670µm,0.4s
LTHK Lithakia 0.55 141 P Pg 15 55 46.4 -0.8
LTHK S Sg 15 55 54.9 +0.4
comp=E,9µm,0.3s
DRAG Dragano-Lefkad 0.56 14 P Pg 15 55 46.6 -0.7
DRAG Dragano-Lefkad 0.56 14 P Pg 15 55 46.7 -0.7
DRAG S Sb 15 55 55.5 -0.3
comp=E,41µm,0.5s
NYDR Nydri-Lefkada 0.62 22 P Pg 15 55 47.6 -0.8
NYDR Nydri-Lefkada 0.62 22 P Pg 15 55 47.6 -0.8
NYDR S Sg 15 55 56.9 +0.3
comp=E,9µm,0.5s
VTN Vitineika 0.66 110 P Pg 15 55 48.8 -0.4
AST1 Astakos 0.67 53 P Pg 15 55 48.8 -0.7
LKD2 Lefkada island 0.68 17 P Pg 15 55 48.8 -0.8
LKD2 S Sg 15 55 57.9 -0.6
LKD2 AML AML 15 56 06.2
comp=N,15336µm,0.6s
LKD2 AML AML 15 56 08.3
comp=E,9936µm,0.6s
LKD2 Lefkada island 0.68 17 P Pg 15 55 48.9 -0.7
TSLK Tsoukalades, L 0.71 16 P Pg 15 55 49.5 -0.7
TSLK S Sg 15 55 58.6 -0.9
TSLK AML AML 15 56 08.6
comp=N,19297µm,0.4s
TSLK AML AML 15 56 09.2
comp=E,16867µm,0.4s
TSLK Tsoukalades, L 0.71 16 P Pg 15 55 49.5 -0.7
AXS Araxos 0.77 86 P Pg 15 55 50.4 -0.8
AXS AML AML 15 56 13.5
comp=E,6555µm,0.5s
AXS AML AML 15 56 14.7
comp=N,13488µm,0.6s
AXS Araxos 0.77 86 P Pg 15 55 50.5 -0.8
RLS Riolos of Patr 0.84 95 P Pg 15 55 51.6 -1.1
RLS AML AML 15 56 08.7
comp=N,10527µm,0.6s
RLS AML AML 15 56 13.1
comp=E,10616µm,0.4s
RLS Riolos of Patr 0.84 95 P Pg 15 55 51.7 -1.1
PVO Paravola 1.00 61 P Pb 15 55 55.1 -0.5
PVO AML AML 15 56 11.8
comp=E,31135µm,0.3s
PVO AML AML 15 56 17.4
comp=N,22169µm,0.6s
PVO Paravola 1.00 61 P Pb 15 55 55.1 -0.5
DRO Drossia 1.05 100 P Pb 15 55 55.5 -0.9
DRO AML AML 15 56 24.7
comp=N,18194µm,0.5s
DRO AML AML 15 56 25.1
comp=E,25231µm,0.4s
DRO Drossia 1.05 100 P Pb 15 55 55.7 -0.7
UPR University Cam 1.10 82 P Pb 15 55 56.9 -0.3
AMT Artemida-Makis 1.20 120 P Pn 15 55 58.2 -0.7
AMT Artemida-Makis 1.20 120 P Pn 15 55 58.1 -0.7
LAKA Lakka 1.25 85 P Pn 15 55 58.6 -0.8
ANX Ano Chora 1.28 69 P Pn 15 55 59.1 -0.8
ANX AML AML 15 56 24.7
comp=E,18771µm,0.6s
ANX AML AML 15 56 25.0
comp=N,33000µm,0.5s
ANX Ano Chora 1.28 69 P Pn 15 55 59.6 -0.3
TRIZ Trizonia 1.33 80 P Pb 15 56 00.0 -0.6
EVR Evrytania 1.35 55 P Pb 15 56 01.7 +0.3
EVR AML AML 15 56 27.4
comp=N,5944µm,0.7s
EVR AML AML 15 56 36.1
comp=E,4663µm,0.7s
KLV Kalavryta, Ach 1.38 94 P Pn 15 56 00.8 -0.6
KLV AML AML 15 56 30.3
comp=E,2768µm,0.5s
KLV AML AML 15 56 34.2
comp=N,2506µm,0.7s
KLV Kalavryta, Ach 1.38 94 P Pn 15 56 01.3 -0.1
IGT Igoumenitsa 1.39 358 P Pb 15 56 01.9 -0.2
IGT AML AML 15 56 29.7
comp=E,4727µm,0.5s
IGT AML AML 15 56 35.8
comp=N,3120µm,0.4s
IGT Igoumenitsa 1.39 358 P Pn 15 56 01.6 +0.2
ITM Ithomi 1.55 128 *eP* **Pb 15 56 04.5 -0.3**
ITM Ithomi 1.55 128 Pn Pn 15 56 04.1 +0.6
JAN Janina 1.55 13 P Pb 15 56 04.7 -0.2
JAN AML AML 15 56 35.0
comp=N,3676µm,0.4s
JAN AML AML 15 56 35.1
comp=E,3967µm,0.5s
KEK Kerkira 1.64 344 P Pn 15 56 05.2 +0.4
KEK AML AML 15 56 39.6
comp=E,4021µm,0.5s
KEK AML AML 15 56 49.8
comp=N,3393µm,0.5s
KEK Kerkira 1.64 344 P Pn 15 56 05.2 +0.4
AGG Agios Georgios 1.75 59 *eP* **Pb 15 56 08.6 +0.3**
AGG Agios Georgios 1.75 59 P Pb 15 56 08.4 +0.1
AGG Agios Georgios 1.75 59 Pn Pb 15 56 08.4 +0.1
SCTE Santa Cesarea 2.44 323 Pn 15 56 16.1 +0.2
LIT Litokhoron 2.54 39 P Pn 15 56 18.9 +1.7
LIT Litokhoron 2.54 39 Pn Pn 15 56 18.9 +1.7
FNA Florina 2.74 16 *eP* **Pn 15 56 21.6 +1.6**
FNA Florina 2.74 16 P Pn 15 56 21.7 +1.6
FNA Florina 2.74 16 Pn Pn 15 56 21.7 +1.6
KTHA Kythira Island 2.84 131 *eP* **Pn 15 56 23.9 +2.6**
OHR Ohrid 2.98 6 *i* **Pn Pn 15 56 25.4 +2.1**
TIP Timpagrande 3.03 291 Pn Pn 15 56 24.0 0.0
GRG Griva 3.21 28 P Pn 15 56 28.7 +2.3
TIR Tirane 3.23 353 *ePn* **Pn 15 56 26.7 0.0**
TIR *eSn* Sn 15 56 54.2 -11
TIR Tirane 3.23 353 ⇓**P Pn 15 56 27.0 +0.3**
TIR Tirane 3.23 353 P Pn 15 56 27.7 +1.0
TIR Tirane 3.23 353 Pn Pn 15 56 27.6 +1.0
SOH Sokhos 3.52 40 P Pn 15 56 32.7 +2.0
OUR Ouranopolis 3.54 51 *eP* **Pn 15 56 32.5 +1.6**
CEL Celeste 3.55 273 Pn Pn 15 56 30.9 -0.2
KNT Kendrikon 3.58 32 *eP* **Pn 15 56 32.6 +1.1**
VAY Valandovo 3.59 27 *ePn* **Pn 15 56 32.5 +0.9**
VAY *eSn* Sn 15 57 07.4 -6.4
VAY Valandovo 3.59 27 *i Pn* **Pn 15 56 32.7 +1.1**
STIP Stip 3.80 21 *i Pn* **Pn 15 56 37.4 +2.8**
SRS Serrai 3.86 39 P Pn 15 56 37.1 +1.7
SKO Skopje 3.91 11 P Pn 15 56 37.7 +1.7
SKO Skopje 3.91 11 *i Pn* **Pn 15 56 36.9 +0.9**
ULC Ulcinj 3.92 347 *ePn* **Pn 15 56 36.4 +0.2**
ULC *i Sn* **Sn 15 57 21.7 -0.3**
IMMV Iera Moni Meta 3.93 132 *eP* **Pn 15 56 37.7 +1.4**
DRME Dracevica, Mon 4.15 347 *ePn* **Pn 15 56 39.3 0.0**
DRME Dracevica, Mon 4.15 347 ⇓*i Pn* **Pn 15 56 39.6 +0.3**
DRME *i Sn* **Sn 15 57 27.1 -0.5**
BUM Brajici-Budva 4.31 345 ⇑*i Pn* **Pn 15 56 41.5 -0.1**
BUM *i Sn* **Sn 15 57 31.0 -0.7**
PDG Podgorica 4.37 349 ⇑**P Pn 15 56 42.8 +0.4**
PDG Podgorica 4.37 349 *ePn* **Pn 15 56 42.0 -0.4**
PDG Podgorica 4.37 349 Pn Pn 15 56 41.9 -0.4
TTG Podgorica 4.37 349 *ePn* **Pn 15 56 42.7 +0.4**
TTG *i Sn* **Sn 15 57 32.5 -0.6**
SIGR SIGRI 4.40 74 *eP* **Pn 15 56 43.8 +1.1**
GVDS Gavdos 4.43 137 *eP* **Pn 15 56 44.6 +1.4**
GVD Gavdhos 4.44 137 *eP* **Pn 15 56 43.7 +0.4**

CHOS Chios island 4.46 85 *eP* **Pn 15 56 44.6 +1.0**
PVY Plav 4.46 356 *ePn* **Pn 15 56 43.9 +0.2**
PVY *i Sn* **Sn 15 57 34.8 -0.7**
HCY Herceg Novi 4.54 342 *ePn* **Pn 15 56 43.1 -1.6**
HCY Herceg Novi 4.54 342 *ePn* **Pn 15 56 44.1 -0.6**
HCY *i Sn* **Sn 15 57 36.4 -0.9**
CEME Cevo 4.54 346 ⇑*i Pn* **Pn 15 56 44.6 -0.2**
CEME *i Sn* **Sn 15 57 36.6 -0.8**
PRVS Prvonek 4.54 16 *ePn* **Pn 15 56 45.0 +0.2**
IDI Anoyia 4.59 127 Pn Pn 15 56 46.8 +1.3
comp=N,0.8nm,0.3s,baz=292,slow=8.9,SNR=12
IDI Sn **Sn 15 57 40.5 +1.8**
comp=N,8.6nm,0.3s,baz=31,slow=5.1,SNR=6.5
IDI LR LR 15 58 41.5
comp=N,150nm,18.8s,baz=251,slow=41
IDI Anoyia 4.59 127 *eP* **Pn 15 56 47.9 +2.4**
IDI Anoyia 4.59 127 Pn Pn 15 56 46.1 +0.5
BOSS Bosilegrad 4.63 19 *ePn* **Pn 15 56 46.5 +0.6**
IVA Berane 4.74 355 ⇓*i Pn* **Pn 15 56 47.7 +0.2**
IVA *i Sn* **Sn 15 57 41.5 -0.8**
NKME Niksic 4.75 347 *ePn* **Pn 15 56 47.7 +0.1**
NKME *i Sn* **Sn 15 57 41.5 -1.0**
KOME Kolasin 4.75 352 ⇑*i Pn* **Pn 15 56 47.9 +0.2**
KOME *i Sn* **Sn 15 57 41.7 -0.9**
NKY Niksic 4.79 347 *ePn* **Pn 15 56 48.4 +0.2**
NKY *i Sn* **Sn 15 57 42.4 -1.1**
VAE Valguarnera 4.79 264 Sn Sn 15 57 45.5 +2.0
comp=N,5.9nm,0.3s,baz=152,slow=21,SNR=6.4
BARS Barje 4.79 13 *ePn* **Pn 15 56 46.7 -1.5**
TREB Trebinje 4.83 342 *ePn* **Pn 15 56 47.5 -1.2**
RAFF Raffo Rosso 4.88 261 Pn Pn 15 56 48.0 -1.3
URLA Izmir 4.88 86 *eP* **Pn 15 56 50.2 +0.8**
BRY Bratogost 4.96 344 *ePn* **Pn 15 56 49.5 -1.1**
BRY Bratogost 4.96 344 ⇓*i Pn* **Pn 15 56 49.7 -0.9**
BRY *i Sn* **Sn 15 57 46.5 -1.4**
VTS Vitosha 4.97 25 *ePn* **Pn 15 56 51.3 +0.6**
VTS *eSn* **Sn 15 57 39.1 -8.9**
VTS Vitosha 4.97 25 ⇑**P Pn 15 56 51.9 +1.2**
VTS Vitosha 4.97 25 P Pn 15 56 52.1 +1.4
VTS Vitosha 4.97 25 Pn Pn 15 56 52.1 +1.4
RDO Rodhopi 4.97 51 *eP* **Pn 15 56 51.9 +1.3**
SGRT San Giovanni R 5.08 317 Pn Pn 15 56 52.5 +0.3
SELS Selova 5.10 6 *ePn* **Pn 15 56 51.9 -0.5**
SELS *eSn* Sn 15 57 39.1 -12
ENEZ Enez 5.15 58 *eP* **Pn 15 56 54.5 +1.4**
ALN Alexandroupoli 5.16 56 *eP* **Pn 15 56 54.6 +1.4**
ALN Alexandroupoli 5.16 56 P Pn 15 56 54.5 +1.4
ALN Alexandroupoli 5.16 56 Pn Pn 15 56 54.5 +1.3
UPM Unac-Piva 5.18 348 *ePn* **Pn 15 56 54.0 +0.3**
UPM Unac-Piva 5.18 348 ⇑*i Pn* **Pn 15 56 53.7 0.0**
UPM *i Sn* **Sn 15 57 51.8 -1.6**
PLE Pljevlja 5.24 352 ⇓*i Pn* **Pn 15 56 54.5 +0.1**
PLE *i Sn* **Sn 15 57 53.2 -1.5**
PAOL Paolisi 5.35 304 Pn Pn 15 56 57.9 +2.0
ERIK Erikli-Kesan 5.37 60 *eP* **Pn 15 56 57.4 +1.4**
ZAPS Zavoj 5.40 18 *ePn* **Pn 15 56 57.1 +0.6**
IVAS Ivanjica 5.43 358 *ePn* **Pn 15 56 56.1 -0.9**
IVAS *eSn* Sn 15 57 48.2 -11
ZKR Zakros 5.57 121 *eP* **Pn 15 57 01.9 +3.1**
BOVS Bovan 5.58 10 *ePn* **Pn 15 56 58.3 -0.6**
BOVS Bovan 5.58 10 ⇑**P Pn 15 56 58.7 -0.2**
CORL Corleone 5.61 270 Pn Pn 15 56 59.9 +0.4
CLTB Caltabellotta 5.71 267 Pn Pn 15 57 01.9 +1.0
GRUS Gruza 5.75 2 *ePn* **Pn 15 57 00.8 -0.4**
GRUS *eSn* Sn 15 57 54.5 -12
BBLS Lazići 5.77 353 *ePn* **Pn 15 57 01.7 +0.1**
BBLS *eSn* Sn 15 57 54.1 -14
BBLS Lazići 5.77 353 *ePn* **Pn 15 57 01.3 -0.3**
ZAGS Zajecar 5.83 13 *ePn* **Pn 15 57 02.1 -0.3**
DIVS Divibare 5.96 357 *ePn* **Pn 15 57 03.6 -0.7**
DIVS *eSn* Sn 15 57 59.2 -13
DIVS Divibare 5.96 357 *ePn* **Pn 15 57 03.1 -1.1**
DIVS Divibare 5.96 357 Pn Pn 15 57 03.6 -0.7
HAPS Han Pijesak,Bl 6.04 350 *ePn* **Pn 15 57 04.0 -1.4**
TRUS Trudelj 6.08 0 *ePn* **Pn 15 57 05.2 -0.6**
PLVB Pleven 6.14 30 ⇑**P Pn 15 57 09.2 +2.5**
INTR Introdacqua 6.30 310 Pn Pn 15 57 11.7 +2.7
TEKS Tekeris 6.43 354 *eSn* **Sn 15 58 09.2 -15**
TEKS Tekeris 6.43 354 *ePn* **Pn 15 57 05.5 -5.2**
MGRS Mrkonjic Grad 6.75 339 *ePn* **Pn 15 57 15.3 +0.3**
AQU L'Aquila 6.81 310 *ePn* **Pn 15 57 22.4 +6.5**
HERR Herculane 6.90 12 ⇓**P Pn 15 57 18.6 +1.5**
FRGS Fruska Gora 7.02 357 *ePn* **Pn 15 57 17.6 -1.2**
FRGS *eSn* Sn 15 58 25.0 -13
FRGS Fruska Gora 7.02 357 *ePn* **Pn 15 57 19.3 +0.5**
BLY Banja Luka 7.03 341 *ePn* **Pn 15 57 18.0 -0.8**
MRAK Mrakovica 7.35 340 *ePn* **Pn 15 57 22.8 -0.5**
GZR Gura Zlata 7.46 13 ⇑**P Pn 15 57 25.3 +0.4**
BZS Buzias 7.52 7 P Pn 15 57 25.9 +0.2
MURB Monte Urbino 7.87 313 Pn Pn 15 57 32.5 +2.1
VOIR 8.07 24 ⇓**P Pn 15 57 34.9 +1.6**
MORH Mrgy, Hungar 8.17 351 ⇑**P Pn 15 57 33.4 -1.1**
MORH Mrgy, Hungar 8.17 351 *ePn* **Pn 15 57 33.1 -1.4**
BOJS Bojanci 8.30 334 *ePn* **Pn 15 57 35.9 -0.4**
BOJS *eSn* **Sn 15 59 05.1 -4.7**
MLR Muntele Rosu 8.43 28 Pn Pn 15 57 39.4 +1.2
comp=N,0.6nm,0.3s,baz=211,slow=8.2,SNR=7.0
MLR LR LR 16 01 17.8
comp=N,154nm,19.2s,baz=210,slow=41
MLR Muntele Rosu 8.43 28 ⇑**P Pn 15 57 40.8 +2.6**
MLR Muntele Rosu 8.43 28 Pn Pn 15 57 41.3 +3.1
GBRS Gornja Briga 8.48 332 *ePn* **Pn 15 57 38.7 -0.1**
GBRS IAML 15 59 15.5
comp=Z,81nm,0.9s
CRES Cresnjev 8.51 336 *i Pn* **Pn 15 57 38.0 -1.2**
CRES *eSn* **Sn 15 59 10.0 -5.1**
CRES IAML 15 59 13.4
comp=Z,47nm,0.8s
CRES Cresnjev 8.51 336 *ePn* **Pn 15 57 38.6 -0.6**
VISS Visnje 8.70 333 *ePn* **Pn 15 57 41.0 -0.8**
VSL Villasalto 8.71 282 Pn Pn 15 57 41.6 -0.3
CEY Cerknica 8.80 332 *ePn* **Pn 15 57 42.8 -0.3**
PLOR Plostina 8.99 29 ⇑**P Pn 15 57 48.0 +2.1**
TRI Trieste 9.03 329 P Pn 15 57 45.4 -0.9
TRI Trieste 9.03 329 Pn Pn 15 57 45.4 -0.9
VRI Vrincioaia 9.04 29 ⇓**P Pn 15 57 48.5 +2.1**
KEST Kesra 9.17 258 Pn Pn 15 57 47.7 -0.7
comp=Z,0.4nm,0.3s,baz=55,slow=8.5,SNR=4.0
KEST Sn **Sn 15 59 26.6 -4.8**
comp=Z,0.2nm,0.3s,baz=357,slow=14,SNR=1.2
KEST LR LR 16 02 12.7
comp=Z,70nm,19.0s,baz=270,slow=43
KEST Kesra 9.17 258 Pn Pn 15 57 48.9 +0.5
SOKA Soboth 9.41 337 *i Pn* **Pn 15 57 50.3 -1.2**
comp=Z,10nm,0.4s,SNR=16
SOKA *eSn* **Sn 15 59 30.0 -7.1**
comp=Z,7.1nm,0.6s
OBKA Obir 9.41 334 *i Pn* **Pn 15 57 52.0 +0.4**
comp=Z,9.6nm,0.5s,SNR=11
OBKA *eSn* **Sn 15 59 33.7 -3.7**
comp=Z,32nm,0.8s
TEOL Teolo 9.72 321 Pn Pn 15 57 54.5 -1.2
ARSA Arzberg 9.78 340 *ePn* **Pn 15 57 55.8 -0.8**
comp=Z,3.4nm,0.3s,SNR=4.6
MYKA Terra Mystica 9.84 332 *i Pn* **Pn 15 57 57.2 -0.3**
comp=Z,3.6nm,0.5s
MYKA *eSn* **Sn 15 59 45.4 -2.4**
comp=Z,9.9nm,0.6s
STAL STALIGIAL 9.91 327 Pn Pn 15 57 57.4 -1.1
ZOU Zoufplan 10.04 329 Pn Pn 15 57 59.6 -0.8
CTI Castel Tesino 10.23 323 P Pn 15 58 01.5 -1.3
CTI Castel Tesino 10.23 323 Pn Pn 15 58 01.4 -1.3
MSSA Maissana 10.25 310 Pn Pn 15 58 06.0 +2.9
CONA Conrad Observa 10.33 343 Pn Pn 15 58 05.2 +1.1
comp=Z,1.8nm,0.9s
KBA Koelnbreinsper 10.33 332 *i Pn* **Pn 15 58 03.8 -0.4**
comp=Z,3.6nm,0.4s,SNR=7.3
KBA *eSn* **Sn 15 59 54.9 -5.0**
comp=Z,10nm,0.6s
KBA Koelnbreinsper 10.33 332 P Pn 15 58 03.9 -0.4
ABTA Abfaltersbach 10.38 328 *eSn* **Sn 15 59 56.3 -4.8**
comp=Z,30nm,0.7s
VYHS Vyhne 10.41 354 *eP* **Pn 15 58 07.7 +2.5**
VYHS *e* 16 00 00.6
VYHS Vyhne 10.41 354 *ePN* **Pn 15 58 07.7 +2.5**
VYHS *eSN* **Sn 16 00 00.6 -1.0**
BR131 Keskin Array S 10.44 77 *i P* **Pn 15 58 08.0 +2.3**
BRTR Keskin Array B 10.44 77 LR LR 16 03 05.6
comp=Z,143nm,19.3s,baz=294,slow=44
MOA Molln 10.69 337 *i Pn* **Pn 15 58 08.7 -0.3**
comp=Z,6.2nm,0.3s,SNR=13
WTTA Wattenberg 11.16 328 *i Pn* **Pn 15 58 16.5 +0.9**
comp=Z,3.9nm,0.4s,SNR=4.6
WTTA *eSn* **Sn 16 00 15.8 -4.4**
comp=Z,18nm,0.5s
WATA Walderalm 11.24 328 *i Pn* **Pn 15 58 17.6 +0.9**
comp=Z,6.0nm,0.5s
WATA *eSn* **Sn 16 00 17.5 -4.7**
comp=Z,37nm,0.9s
SQTA Sankt Quirin 11.31 326 *ePn* **Pn 15 58 19.9 +2.3**
comp=Z,2.1nm,0.2s
SQTA *eSn* **Sn 16 00 22.2 -1.6**
comp=Z,25nm,0.6s
FETA Feichten 11.37 324 *ePn* Pn 15 58 24.1 +5.6
comp=Z,2.2nm,0.5s
FETA *eSn* **Sn 16 00 24.8 -0.7**
comp=Z,7.7nm,0.6s
MOTA Moosalm 11.45 326 *i Pn* **Pn 15 58 20.5 +0.9**
comp=Z,4.2nm,0.4s,SNR=5.9
MOTA *eSn* **Sn 16 00 22.5 -4.9**
comp=Z,16nm,0.8s
DAVOX Davos/Dischmat 11.60 321 Pn Pn 15 58 22.6 +0.9
comp=Z,0.3nm,0.3s,baz=138,slow=18,SNR=2.8
DAVOX Sn **Sn 16 00 25.6 -5.6**
comp=Z,0.8nm,0.3s,baz=297,slow=21,SNR=5.9
TUE Stuetta 11.66 319 Pn Pn 15 58 23.5 +1.0
GEC2 GERESS Array S 11.75 338 Pn Pn 15 58 21.8 -1.7
GERES GERESS Array B 11.75 338 Pn Pn 15 58 22.5 -1.0
comp=Z,0.7nm,0.3s,baz=154,slow=13,SNR=13
GERES Sn Sn 16 00 24.6 -10
comp=Z,0.2nm,0.3s,baz=160,slow=19,SNR=3.0
GERES LR LR 16 04 35.9
comp=Z,69nm,19.7s,baz=176,slow=46
GERES GERESS Array B 11.75 338 P Pn 15 58 22.9 -0.6
GERES GERESS Array B 11.75 338 Pn Pn 15 58 22.9 -0.6
DAVA Damuels 11.96 323 *eSn* **Sn 16 00 35.6 -4.3**
comp=Z,17nm,0.6s
KHC Kasperske Hory 12.04 338 *i P* **Pn 15 58 27.7 +0.2**
SENIN Lac Senin/Sane 12.70 314 Pn Pn 15 58 38.7 +2.0
MMAI Mount Meron Ar 13.24 108 Pn Pn 15 58 44.2 +0.2
baz=309,slow=12,SNR=1.5
MMAI Sn **Sn 16 01 02.9 -8.1**
comp=Z,1.0nm,0.3s,baz=302,slow=17,SNR=1.6
AKASG Malin Array Be 14.04 24 Pn Pn 15 58 53.8 -0.9
comp=Z,0.7nm,0.3s,baz=212,slow=12,SNR=5.9
AKASG Malin Array Be 14.04 24 P Pn 15 58 55.5 +0.8
AKASG Malin Array Be 14.04 24 Pn Pn 15 58 55.5 +0.8
AKBB Malin Array Si 14.04 24 *ceP* **Pn 15 58 54.8 +0.1**
CLL Colim 14.16 341 *ePP* **P 15 59 06.0 +2.0**
EIL Elat 14.73 121 Pn Pn 15 59 03.9 -0.5
comp=Z,0.3nm,0.3s,baz=338,slow=6.8,SNR=2.7
EIL Sn Sn 16 01 38.3 -9.1
comp=Z,0.4nm,0.3s,baz=70,slow=6.3,SNR=2.6
MNK Minsk 17.14 15 *i P* **Pn 15 59 32.3 -3.1**
comp=E,2.0nm,0.7s
MNK *i P* **Pn 15 59 32.3 -3.1**
comp=N,28nm,0.8s
MNK *i P* **Pn 15 59 32.3 -3.1**
comp=Z,29nm,0.7s
MNK *i* PP **sP 15 59 42.1 -0.7**
MNK *i* PPP PPP 15 59 49.8
MNK *i* S **Sn 16 02 42.7 -3.0**
MNK *i* SS **SnSn 16 02 58.3 -0.7**
MNK *i* SSS SSS 16 03 11.1
MNK *i* PcP **PcP 16 04 16.4 -2.7**
MNK *i* LQ LQ 16 04 27.1
MNK *i* LR LR 16 05 54.9
MNK *i* LRM MLR 16 06 54.7
comp=Z,34nm,13.0s
MNK *i* LRM MLR 16 06 56.2
comp=E,11nm,18.1s
MNK *i* LRM MLR 16 06 59.8
comp=N,117nm,20.3s
NACGM Naroch 17.32 12 *i P* **P 15 59 40.3 +1.4**
NACGM *i P* **P 15 59 40.3 +1.4**
NACGM *i P* **P 15 59 40.3 +1.4**
NACGM *i* PP **PnPn 15 59 50.2 +2.6**
NACGM *i* PPP PPP 15 59 57.9
NACGM *i* S **Sn 16 02 53.1 +3.2**
NACGM *i* SS **SnSn 16 03 07.6 +4.3**
NACGM *i* SSS SSS 16 03 21.4
NACGM *i* LQ LQ 16 04 52.4
NACGM *i* LR LR 16 06 04.5
PABE Paberze 17.54 7 Pn Pn 15 59 38.7 -1.5
PABE IAmb IAmb 15 59 48.8
comp=Z,27nm,1.1s
KIV Kislovodsk 17.76 64 *eP* **P 15 59 44.3 +0.3**
KIV pmax pmax
comp=Z,50nm,1.1s
KIV MLR MLR
comp=Z,58nm,14.0s
KIV Kislovodsk 17.76 64 P 15 59 44.8 +0.8
KBZ Khabaz 17.87 65 P Pn 15 59 44.8 +0.3
comp=Z,0.1nm,0.3s,baz=188,slow=9.1,SNR=3.1
KBZ Khabaz 17.87 65 *ceP* **P 15 59 46.8 +1.7**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
PYA1 Pyatigorsk 18.07 64 *i P* **P 15 59 49.3 +1.9**
ZEI Tsey 18.45 68 *eP* P 15 59 43.0 -8.8
ZEI pmax pmax
comp=Z,2.0nm,0.5s
VORD Divnogorie 18.52 40 *eP* **Pn 15 59 52.5 +0.1**
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 18.61 39 *eP* **P 15 59 51.8 -1.4**
VSR pmax pmax
comp=Z,7.0nm,0.5s
GNI Garni 18.97 76 P P 15 59 57.7 +0.2
comp=Z,0.3nm,0.3s,baz=74,slow=2.9,SNR=3.6
GNI Garni 18.97 76 *ceP* **Pn 15 59 58.8 +0.6**
GNI pmax pmax
comp=Z,28nm,1.7s
GNI Garni 18.97 76 P Pn 15 59 58.2 0.0
ESDC Sonseca Array 19.01 282 P Pn 15 59 59.6 +1.0
baz=83,slow=13,SNR=2.4
ESDC Sonseca Array 19.01 282 P Pn 15 59 58.9 +0.4
LPSR Galich'ya Gora 19.37 36 *eP* **P 16 00 02.1 +0.6**
LPSR pmax pmax
comp=Z,10.0nm,0.7s
VRH Novokhopyorsk 19.92 42 *eP* **P 16 00 07.9 +0.4**
VRH pmax pmax
comp=Z,20nm,1.2s
OBN Obninsk 20.20 28 *i P* **P 16 00 09.4 -1.1**
OBN *i* 16 00 15.5
OBN pmax pmax
comp=Z,18nm,1.0s
OBN MLR MLR
comp=Z,86nm,15.0s
MDT Midelt 21.02 263 P P 16 00 20.7 +0.9
comp=Z,1.3nm,0.7s,baz=121,slow=11,SNR=2.8
MOS Moscow 21.07 28 *eP* **P 16 00 21.8 +1.9**
HFS Hagfors 22.42 351 P P 16 00 34.8 +0.4
comp=Z,6.3nm,0.5s,baz=156,slow=11,SNR=58
NC602 NORSAR Array S 23.29 349 P P 16 00 42.9 -0.6
NC602 IAmb IAmb 16 01 02.5
comp=Z,11nm,1.1s
EKA Eskdalemuir Ar 23.40 325 P P 16 00 45.2 +0.5
comp=Z,4.6nm,0.9s,baz=127,slow=10,SNR=8.9
NAO01 NORSAR Array S 23.50 348 P P 16 00 45.6 0.0
FINES FINESS Array B 23.59 7 P P 16 00 45.5 -1.0
comp=Z,3.1nm,0.4s,baz=176,slow=10.0,SNR=41
FINES LR LR 16 10 48.6
comp=Z,79nm,18.5s,baz=131,slow=39
FIA1 FINESS Array S 23.59 7 P P 16 00 45.6 -0.9
NOA NORSAR Array B 23.63 349 P P 16 00 46.6 -0.3
comp=Z,1.4nm,0.7s,baz=154,slow=9.3,SNR=13
NC204 NORSAR Array S 23.93 348 P P 16 00 49.9 +0.1
KLMR Klimovskoe 25.71 22 *eP* **P 16 01 03.9 -2.0**
KLMR pmax pmax
comp=Z,20nm,1.5s
KLMR Klimovskoe 25.71 22 *eP* **P 16 01 03.9 -2.0**
KLMR AMP 16 01 11.6
comp=Z,20nm,1.5s
KIRV Kirov 27.74 33 *ceP* **P 16 01 24.0 -0.2**
PRGR Permogore 28.23 25 *eP* **P 16 01 27.7 -0.9**
PRGR pmax pmax
comp=Z,8.0nm,1.0s
AKTO Aktyubinsk 29.28 53 P P 16 01 38.0 0.0
comp=Z,0.6nm,0.4s,baz=293,slow=7.7,SNR=2.2
TORD Torodi Ar. Bea 29.94 219 P P 16 01 43.9 -0.3
comp=Z,3.1nm,0.9s,baz=34,slow=9.2,SNR=14
ABKAR Akbulak array 30.34 56 P P 16 01 46.5 -1.0
ARU Arti 31.15 42 *di P* **P 16 01 53.6 -0.9**
ARU 16 02 52.4
ARU S **S 16 07 01.6 +1.9**
ARU SS **SnSn 16 08 41.6 +0.3**
ARU pmax pmax

comp=Z,9.0nm,1.3s
ARCES ARCESS Array B 31.57 3 P **P 16 01 57.0 -1.1**
comp=Z,0.7nm,0.4s,baz=186,slow=12,SNR=11
ARCES LR LR 16 14 45.5
comp=Z,32nm,18.4s,baz=180,slow=36
ARCES ARCESS Array B 31.57 3 P **P 16 01 57.3 -0.8**
ARCES ARCESS Array B 31.57 3 P **P 16 01 57.3 -0.8**
BRVK Borovoye 37.15 50 *ce*P **P 16 02 46.8 +0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.3s
BRVK Borovoye 37.15 50 P **P 16 02 46.4 -0.2**
BRVK IAmb IAmb 16 02 51.8
comp=Z,5.6nm,1.4s
KK31 Karatay Array 37.90 66 P **P 16 02 54.2 +1.2**
KK31 pmax pmax
comp=Z,5.0nm,1.4s
KK31 Karatay Array 37.90 66 P **P 16 02 54.2 +1.2**
KK31 IAmb IAmb 16 02 58.2
comp=Z,5.4nm,1.4s
KKAR Karatay Array 37.90 66 P **P 16 02 53.5 +0.5**
KKAR Karatay Array 37.90 66 P **P 16 02 53.5 +0.5**
DBIC Dimbokro 38.80 223 P **P 16 03 03.3 +2.5**
comp=Z,5.4nm,0.9s,baz=17,slow=8.0,SNR=5.1
DBIC LR LR 16 18 37.8
comp=Z,34nm,18.3s,baz=87,slow=36
DBIC Dimbokro 38.80 223 P **P 16 03 03.9 +3.1**
AAK Ala-Archa 40.86 66 *i* P **P 16 03 20.6 +2.6**
AAK pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 45.19 58 P **P 16 03 51.5 -1.3**
MAKZ pmax pmax
comp=Z,1.0nm,0.7s
MAKZ Makanchi 45.19 58 P **P 16 03 51.5 -1.3**
MK31 Makanchi Array 45.40 58 *i* P **P 16 03 55.4 +0.9**
MK31 Makanchi Array 45.40 58 P **P 16 03 53.2 -1.2**
MK31 IAmb IAmb 16 03 59.4
comp=Z,5.0nm,1.3s
MKAR Makanchi Array 45.40 58 P **P 16 03 53.2 -1.2**
comp=Z,1.9nm,0.5s,baz=271,slow=7.5,SNR=38
ZALV Zalesovo Beam 45.78 48 P **P 16 03 56.2 -1.1**
comp=Z,4.2nm,0.4s,baz=273,slow=8.6,SNR=25
ZALV LR LR 16 25 56.6
comp=Z,32nm,20.3s,baz=50,slow=40
ZALV Zalesovo Beam 45.78 48 P **P 16 03 56.4 -1.0**
ZALV Zalesovo Beam 45.78 48 P **P 16 03 56.4 -1.0**
NRIK Noril'sk 46.87 27 LR LR 16 26 19.7
comp=Z,38nm,18.6s,baz=266,slow=39
NRIK Noril'sk 46.87 27 *i* P **P 16 04 06.4 +0.7**
NRIK pmax pmax
comp=Z,2.0nm,1.1s
DGZ Jazzator, Alta 48.12 53 *i* P **P 16 04 16.7 +0.8**
DGZ pmax pmax
comp=Z,1.0nm,1.0s
EUNU Eureka 55.53 348 P **P 16 05 11.3 +0.7**
EUNU IAmb IAmb 16 05 29.8
comp=Z,3.8nm,1.4s
SONM Songino Array 60.55 51 P **P 16 05 45.1 -1.3**
comp=Z,1.0nm,0.8s,baz=277,slow=8.1,SNR=5.5
SONM Songino Array 60.55 51 P **P 16 05 46.4 0.0**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 60.55 51 P **P 16 05 46.4 0.0**
YAK Yakutsk 65.19 29 *i* P **P 16 06 20.0 +3.3**
YAK pmax pmax
comp=Z,7.0nm,0.8s
CMAR Chiang Mai Arr 69.99 82 P **P 16 06 47.1 -0.7**
comp=Z,0.6nm,0.7s,baz=302,slow=7.9,SNR=6.5
CMAR Chiang Mai Arr 69.99 82 *ce*P **P 16 06 49.7 +1.9**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
BILL Bilibino 71.07 13 *i* P P 16 06 58.8 +5.2
BILL pmax pmax
comp=Z,3.0nm,1.6s
YKA Yellowknife Ar 73.39 340 P **P 16 07 07.7 +0.2**
comp=Z,0.6nm,1.1s,baz=41,slow=5.2,SNR=4.9
YKA Yellowknife Ar 73.39 340 *ce*P **P 16 07 09.8 +2.3**
YKA pmax pmax
comp=Z,1.0nm,1.1s
KLR Kul'dur 73.96 39 *ce*P **P 16 07 12.4 +1.2**
IMAR Indian Mountai 76.11 358 P P **P 16 07 24.0 +0.8**
ILAR Eielson Array 76.94 354 P **P 16 07 28.6 +0.7**
comp=Z,0.5nm,0.9s,baz=29,slow=2.1,SNR=2.9
USRK Ussuriysk Ar. 77.37 43 P **P 16 07 30.4 -0.4**
USRK Ussuriysk Ar. 77.37 43 P **P 16 07 30.4 -0.4**
GAMB Gambell 77.97 5 P **P 16 07 34.2 +0.5**
GAMB IAmb IAmb 16 07 48.6
comp=Z,3.2nm,1.2s
KSRS Korea Array 79.42 51 P **P 16 07 41.6 -0.6**
comp=Z,0.8nm,0.6s,baz=313,slow=4.6,SNR=7.2
YSS Yuzh-Sakhalins 80.85 36 *ce*P **P 16 07 51.4 +1.7**
YSS pmax pmax
comp=Z,31nm,2.5s
CPUP Villa Florida 96.95 242 LR LR 16 53 23.2
comp=Z,39nm,18.9s,baz=206,slow=36
ASAR Alice Springs 122.26 96 PKP **PKPdf 16 14 30.2 -1.0**
comp=Z,0.3nm,1.0s,baz=307,slow=1.8,SNR=1.5

*SOF **22** 16:15:05.6, 40.26N×21.36E, h28km, MD3.0*
*THE **22** 16:15:09.4, 40.58N±21.62E, h2km±2km, ML2.5/9, Error ellipse: s-maj=2.7km s-min=0.4km az=235.0*
*ATH **22** 16:15:09.1, 40.59N±21.63E, h13km±5km, ML2.6/7, Error ellipse: s-maj=5.2km s-min=1.1km az=313.0*
*SKO **22** 16:15:10.0, 40.60N±21.56E, h8km*
*BEO **22** 16:15:12.1±0.8, 40.67N±21.63E, h15km±4km, ML2.5/9*
ISC 22 16:15:09.2±1.0, 40.58N±0.02×21.64E±0.02, h6km±9km, n58, σ1s24/89, 1C, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FNA	**Florina**	**0.28**	**315**	P		**Pg**	**16 15 14.7**	**-0.1**
FNA				S		**Sg**	**16 15 18.8**	**+0.3**
FNA				AML		AML	16 15 21.7	
	comp=N,3964μm,0.5s							
FNA				AML		AML	16 15 21.9	
	comp=E,3406μm,0.4s							
FNA	**Florina**	**0.28**	**315**	P		**Pg**	**16 15 14.6**	**-0.1**
FNA				S		**Sg**	**16 15 18.5**	**0.0**
	comp=E,2μm,0.4s							
FNA	**Florina**	**0.28**	**315**	P		**Pg**	**16 15 14.6**	**-0.1**
FNA				S		**Sg**	**16 15 18.8**	**+0.3**
FNA	**Florina**	**0.28**	**315**	*i* Pg		**Pg**	**16 15 14.7**	**-0.1**
FNA				*i* Sg		**Sg**	**16 15 18.8**	**+0.3**
KZN	**Kozani**	**0.29**	**160**	P		**Pg**	**16 15 14.7**	**-0.3**
KZN				AML		AML	16 15 21.9	
	comp=N,4541μm,0.4s							
KZN				AML		AML	16 15 25.3	
	comp=E,4536μm,0.5s							
KZN	**Kozani**	**0.29**	**160**	P		**Pg**	**16 15 14.6**	**-0.4**
KZN				S		**Sg**	**16 15 19.3**	**+0.4**
	comp=E,2μm,0.3s							
KTI	**Kastanea**	**0.41**	**117**	P		**Pg**	**16 15 16.9**	**-0.4**
NEST	**Nestorio**	**0.48**	**250**	P		**Pg**	**16 15 18.1**	**-0.4**
NEST				S		**Sg**	**16 15 25.0**	**+0.3**
NEST				AML		AML	16 15 30.1	
	comp=E,1734μm,0.4s							
NEST				AML		AML	16 15 30.5	
	comp=N,1877μm,0.4s							
NEST	**Nestorio**	**0.48**	**250**	P		**Pg**	**16 15 18.8**	**+0.3**
NEST				S		**Sg**	**16 15 25.1**	**+0.3**
	comp=N,692nm,0.5s							
PENT	**Pentalofos**	**0.54**	**225**	P		**Pg**	**16 15 19.6**	**-0.2**
PENT				S		**Sg**	**16 15 27.0**	**+0.2**
PENT				AML		AML	16 15 32.2	
	comp=E,839μm,0.4s							
PENT				AML		AML	16 15 34.7	
	comp=N,1357μm,0.4s							
PENT	**Pentalofos**	**0.54**	**225**	P		**Pg**	**16 15 19.4**	**-0.3**
PENT				S		**Sg**	**16 15 27.3**	**+0.5**
	comp=N,518nm,0.5s							
KBN	**Korca**	**0.65**	**274**	P		**Pg**	**16 15 21.7**	**0.0**
KBN				S		**Sg**	**16 15 30.4**	**+0.3**
	comp=N,605nm,0.5s							
KPRO	**Kipourio**	**0.66**	**199**	P		**Pg**	**16 15 21.6**	**-0.4**
KPRO				S		**Sg**	**16 15 31.1**	**+0.5**
KPRO				AML		AML	16 15 33.1	
	comp=N,1467μm,0.5s							
KPRO				AML		AML	16 15 34.6	
	comp=E,1481μm,0.5s							
KPRO	**Kipourio**	**0.66**	**199**	P		**Pg**	**16 15 21.6**	**-0.4**
KPRO				S		**Sg**	**16 15 31.4**	**+0.8**
	comp=E,745nm,0.5s							
GRG	**Griva**	**0.69**	**57**	P		**Pg**	**16 15 21.9**	**-0.6**
GRG				AML		AML	16 15 38.1	
	comp=N,602μm,0.4s							
GRG				AML		AML	16 15 39.8	
	comp=E,562μm,0.3s							
GRG	**Griva**	**0.69**	**57**	P		**Pg**	**16 15 22.8**	**+0.2**
GRG	**Griva**	**0.69**	**57**	*e*P		**Pg**	**16 15 22.7**	**+0.2**
GRG	**Griva**	**0.69**	**57**	*i* Pg		**Pg**	**16 15 21.9**	**-0.6**
GRG				*i* Sg		**Sn**	**16 15 34.8**	**-1.8**
LIT	**Litokhoron**	**0.81**	**126**	P		**Pg**	**16 15 24.3**	**-0.5**
LIT				S		**Sb**	**16 15 36.5**	**-0.4**
LIT				AML		AML	16 15 39.0	
	comp=E,2111μm,0.3s							
LIT				AML		AML	16 15 39.5	
	comp=N,1795μm,0.5s							
LIT	**Litokhoron**	**0.81**	**126**	P		**Pg**	**16 15 25.1**	**+0.3**
LIT				S		**Sb**	**16 15 37.0**	**+0.1**
	comp=N,992nm,0.4s							
LIT	**Litokhoron**	**0.81**	**126**	*i* Pg		**Pg**	**16 15 25.2**	**+0.3**
LIT				*i* Sg		**Sn**	**16 15 38.4**	**-1.2**
OHR	**Ohrid**	**0.83**	**310**	*i* Pg		**Pg**	**16 15 25.2**	**+0.1**
OHR				*i* Sg		**Sn**	**16 15 37.8**	**-2.2**
OHR				*e*Lg		Lg	16 15 40.5	
	comp=N,175nm,0.6s							
THE	**Thessaloniki**	**1.01**	**87**	*i* Pg		**Pg**	**16 15 29.3**	**+0.6**
VAY	**Valandovo**	**1.02**	**44**	*e*Pg		**Pn**	**16 15 30.2**	**+0.1**
VAY				*e*Sg		**Sg**	**16 15 43.0**	**+0.9**
VAY	**Valandovo**	**1.02**	**44**	*i* Pg		**Pb**	**16 15 26.7**	**-2.6**
VAY				*i* Sg		**Sn**	**16 15 44.0**	**-0.7**
VAY				*e*Lg		Lg	16 15 50.4	
	comp=N,169nm,0.6s							
THL	**Klokotos Trika**	**1.06**	**164**	P		**Pb**	**16 15 29.0**	**-0.9**
THL	**Klokotos Trika**	**1.06**	**164**	P		**Pb**	**16 15 29.1**	**-0.8**
THL				S		**Sn**	**16 15 44.6**	**-1.0**
	comp=N,302nm,0.8s							
HORT	**Hortiatis**	**1.11**	**89**	P		**Pn**	**16 15 31.0**	**-0.4**
HORT				S		**Sn**	**16 15 47.3**	**+0.2**
	comp=N,140nm,0.4s							
HORT	**Hortiatis**	**1.11**	**89**	*e*P		**Pb**	**16 15 30.8**	**-0.1**
HORT				S		**Sn**	**16 15 47.0**	**-0.1**
KNT	**Kendrikon**	**1.12**	**58**	P		**Pb**	**16 15 30.0**	**-0.9**
KNT	**Kendrikon**	**1.12**	**58**	*e*P		**Pb**	**16 15 30.6**	**-0.4**
KNT				S		**Sn**	**16 15 46.7**	**-0.4**
KNT	**Kendrikon**	**1.12**	**58**	*i* Pg		**Pb**	**16 15 30.1**	**-0.9**
KNT				*i* Sg		**Sn**	**16 15 48.0**	**+0.9**
STIP	**Stip**	**1.18**	**20**	*i* Pn		**Pg**	**16 15 33.1**	**+1.2**
STIP				*i* Sn		**Sn**	**16 15 54.2**	**+5.4**
STIP				*e*Lg		Lg	16 15 59.9	
	comp=N,17nm,0.4s							
SOH	**Sokhos**	**1.33**	**79**	P		**Pb**	**16 15 34.4**	**-0.2**
SOH	**Sokhos**	**1.33**	**79**	*i* Pn		**Pb**	**16 15 34.3**	**-0.3**
SOH				*i* Sn		**Sg**	**16 15 54.3**	**+2.4**
IGT	**Igoumenitsa**	**1.45**	**224**	*i* Pn		**Pg**	**16 15 38.8**	**+1.7**
IGT				*i* Sn		**Sg**	**16 16 01.8**	**+5.9**
TIR	**Tirane**	**1.54**	**300**	*e*Pg		**Pg**	**16 15 39.1**	**+0.3**
TIR				*e*Sg		**Sg**	**16 16 00.7**	**+1.9**
SRS	**Serrai**	**1.58**	**70**	*i* Pn		**Pb**	**16 15 38.1**	**-0.6**
AGG	**Agios Georgios**	**1.65**	**161**	*e*P		**Pn**	**16 15 38.8**	**+0.1**
KKB	**Krupnik**	**1.68**	**40**	*i* P		**Pb**	**16 15 40.1**	**-0.5**
XOR	**Xorichti**	**1.71**	**135**	P		**Pn**	**16 15 39.2**	**-0.3**
PRZK	**Prizren**	**1.75**	**338**	*i* Pn		**Pb**	**16 15 41.8**	**-0.1**
OUR	**Ouranopolis**	**1.81**	**97**	*e*P		**Pn**	**16 15 40.3**	**-0.6**
MMB	**Musomiste**	**1.87**	**57**	*i* P		**Pn**	**16 15 42.2**	**+0.4**
PRVS	**Prvonek**	**1.95**	**10**	*e*Pn		**Pb**	**16 15 43.5**	**-1.7**
PRVS				*e*Sn		**Sn**	**16 16 06.4**	**-1.3**
BOSS	**Bosilegrad**	**2.01**	**18**	*e*Pn		**Pb**	**16 15 44.5**	**-1.7**
BOSS				*e*Sn		**Sb**	**16 16 09.7**	**-1.8**
BARS	**Barje**	**2.23**	**3**	*e*Pn		**Pn**	**16 15 46.0**	**-0.8**
BARS				*e*Sn		**Sn**	**16 16 13.2**	**-1.5**
VTS	**Vitosha**	**2.36**	**30**	*e*Pn		**Pn**	**16 15 49.3**	**+0.7**
VTS	**Vitosha**	**2.36**	**30**	*e*P		**Pn**	**16 15 49.5**	**+0.9**
RZN	**Rozhen**	**2.57**	**64**	*e*P		**Pn**	**16 15 53.2**	**+1.6**
SELS	**Selova**	**2.66**	**352**	*e*Pn		**Pn**	**16 15 54.2**	**+1.5**
ZAPS	**Zavoj**	**2.79**	**15**	*e*Pn		**Pn**	**16 15 55.0**	**+0.6**
BOVS	**Bovan**	**3.05**	**1**	*e*Pn		**Pn**	**16 15 58.0**	**0.0**
IVAS	**Ivanjica**	**3.19**	**340**	*e*Pn		**Pn**	**16 16 00.4**	**+0.5**
ZAGS	**Zajecar**	**3.26**	**8**	*e*Pn		**Pn**	**16 16 01.2**	**+0.4**
GRUS	**Gruza**	**3.37**	**349**	*e*Pn		**Pn**	**16 16 03.4**	**+1.0**
BBLS	**Lazići**	**3.67**	**334**	*e*Pn		**Pn**	**16 16 08.0**	**+1.4**
DIVS	**Divibare**	**3.72**	**341**	*e*Pn		**Pn**	**16 16 07.6**	**+0.4**

IDC 22 16:20:10.9±1.7, 4.10S×129.46E, h0km, mb3.2/1, mb1 3.2/4, mb1mx3.1/28, mbtmp3.1/4, ML2.9/3, Error ellipse: s-maj=60.0km s-min=27.6km az=85.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.68**	**29**	Pn		Pn	16 21 09.5	+0.4
	1.7nm,0.3s,baz=86,slow=2.9,SNR=38							
SIJI				Sn		Sn	16 21 49.9	-3.3
	2.4nm,0.3s,baz=216,slow=22,SNR=8.7							
WRA	**Warramunga Arr**	**16.45**	**164**	Pn		Pn	16 24 01.8	-1.4
	0.0nm,0.3s,baz=348,slow=13,SNR=1.9							
ASAR	**Alice Springs**	**19.92**	**168**	P		P	16 24 45.1	+0.7
	0.1nm,0.3s,baz=350,slow=11,SNR=8.4							
MKAR	**Makanchi Array**	**65.53**	**326**	P		P	16 30 56.0	-0.2
	0.1nm,0.4s,baz=126,slow=6.0,SNR=2.8							

*IDC **22** 16:38:26.2±1.6, 6.75S×129.62E, h140km±19km, mb3.3/3, mb1 3.5/8, mb1mx3.2/31, mbtmp3.8/8, Error ellipse: s-maj=21.2km s-min=12.8km az=105.0*
*NEIC **22** 16:38:27.6±0.8, 6.68S±0.07×129.53E±0.07, h158km±11km, mb4.4/7, Error ellipse: s-maj=10.4km s-min=9.6km az=186.0*
ISC 22 16:38:27.5±0.6, 6.74S±0.06×129.58E±0.07, h165km, n29, σ1s97/32, mb4.3/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.11**	**126**			**Pn**	**16 39 06.9**	**+2.1**
FAKI	**Fak Fak**	**4.63**	**35**	Pn		**Pn**	**16 39 35.9**	**-0.5**
SOEI	**Soe**	**6.06**	**240**	Pn		**Pn**	**16 39 55.1**	**-0.1**
SIJI	**Sorong**	**6.07**	**16**	P		**Pn**	**16 39 55.7**	**+0.4**
	1.0nm,0.3s,baz=233,slow=23,SNR=2.7							
SIJI				S		**Sn**	**16 41 01.6**	**-2.6**
	2.0nm,0.3s,baz=239,slow=23,SNR=9.0							
MTN	**Manton Dam**	**6.26**	**166**			**Pn**	**16 39 57.9**	**+0.1**
BATI	**Baumata**	**6.79**	**239**	P		**Pn**	**16 40 05.0**	**0.0**
	2.7nm,0.3s,baz=132,slow=2.0,SNR=8.9							
BATI				S		**Sn**	**16 41 21.1**	**-0.4**
	3.5nm,0.3s,baz=35,slow=22,SNR=8.3							
KNRA	**Kununurra**	**8.92**	**185**	Pn		**Pn**	**16 40 30.7**	**-2.4**
FITZ	**Fitzroy Crossi**	**11.93**	**198**	P		**Pn**	**16 41 10.0**	**-2.5**
	0.3nm,0.3s,baz=24,slow=10,SNR=19							
FITZ				S		Sn	16 43 13.0	-12
	0.4nm,0.3s,baz=205,slow=21,SNR=2.2							
FITZ	**Fitzroy Crossi**	**11.93**	**198**			**Pn**	**16 41 09.7**	**-2.8**
WB0	**Warramunga Arr**	**13.77**	**161**	Pn		**Pn**	**16 41 33.3**	**-2.7**
WRA	**Warramunga Arr**	**13.92**	**161**	P		**Pn**	**16 41 35.3**	**-2.5**
	0.6nm,0.3s,baz=342,slow=12,SNR=20							
WRA				S		Sn	16 44 01.9	-11
	1.1nm,0.3s,baz=331,slow=22,SNR=8.9							
WB2	**Warramunga Arr**	**13.92**	**161**	Pn		**Pn**	**16 41 35.4**	**-2.5**
WR0	**Warramunga Arr**	**14.00**	**160**	Pn		**Pn**	**16 41 37.6**	**-1.3**
COEN	**Coen**	**15.17**	**119**			**P**	**16 41 56.1**	**+1.4**
COEN				IAmb		IAmb	16 42 04.5	
	comp=Z,12nm,1.5s							
AS31	**Alice Springs**	**17.34**	**167**	P		**Pn**	**16 42 20.1**	**+0.4**
ASAR	**Alice Springs**	**17.34**	**167**	P		**Pn**	**16 42 20.3**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=344,slow=9.3,SNR=148							
ASAR				S		**S**	**16 45 25.1**	**-5.8**
	comp=Z,0.2nm,0.3s,baz=353,slow=27,SNR=4.5							
ASAR	**Alice Springs**	**17.34**	**167**	P		**Pn**	**16 42 20.2**	**+0.4**
PSA00	**Pilbara Seismi**	**17.50**	**212**	P		**Pn**	**16 42 20.9**	**-0.7**
CISI	**Cisompet, Garu**	**21.61**	**267**	P		**P**	**16 43 04.7**	**-0.2**
CISI				IAmb		IAmb	16 43 14.7	
	comp=Z,28nm,1.1s							
FORT	**Forrest**	**23.96**	**183**	P		**P**	**16 43 27.7**	**+1.0**
FORT				IAmb		IAmb	16 43 37.5	
	comp=Z,10nm,1.1s							
BBOO	**Buckleboo**	**26.64**	**168**	P		**P**	**16 43 51.5**	**+0.6**
BBOO				IAmb		IAmb	16 44 06.2	
	comp=Z,16nm,1.4s							
STKA	**Stephens Creek**	**27.41**	**157**	P		**P**	**16 43 58.8**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=341,slow=8.4,SNR=5.4							
STKA	**Stephens Creek**	**27.41**	**157**	P		**P**	**16 43 58.9**	**+1.1**
CMAR	**Chiang Mai Arr**	**39.24**	**310**	P		**P**	**16 45 41.2**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=135,slow=7.3,SNR=2.4							
CMAR	**Chiang Mai Arr**	**39.24**	**310**	P		**P**	**16 45 41.9**	**+1.7**
KSAR	**Wonju Array Be**	**43.98**	**358**	P		**P**	**16 46 15.8**	**-2.5**
WHZ	**Wether Hill Ro**	**51.15**	**146**	P		**P**	**16 47 15.2**	**+1.6**
WHZ				IAmb		IAmb	16 47 17.8	
	comp=Z,18nm,1.3s							
MK31	**Makanchi Array**	**67.78**	**327**	P		**P**	**16 49 09.2**	**+1.7**
MKAR	**Makanchi Array**	**67.78**	**327**	P		**P**	**16 49 09.2**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=120,slow=7.9,SNR=6.0							

*JMA **22** 16:50:31.9±0.1, 24.09N×122.27E, h23km±3km, M2.4*
*TAP **22** 16:50:31.9, 24.14N×122.27E, h27km, ML2.8, D*
ISC 22 16:50:31.6±1.0, 24.10N±0.02×122.27E±0.02, h26km±11km, n97, σ0s78/189, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.56**	**307**	P		**Pb**	**16 50 42.5**	**-0.4**
	baz=312							
EWUT				S		**Sb**	**16 50 50.2**	**-0.5**
	baz=312							
TWD	**Chiawan**	**0.62**	**268**	*e*P		**Pb**	**16 50 44.0**	**+0.1**
	baz=251							
TWD				*e*S		**Sb**	**16 50 53.1**	**+0.9**
	baz=251							
NACB	**Ninganchiao**	**0.62**	**277**	P		**Pb**	**16 50 43.6**	**-0.3**
	baz=259							
NACB				*e*S		**Sn**	**16 50 53.4**	**-0.5**
	baz=259							
JYNG	**Yonagunijimaku**	**0.71**	**60**	P		**Pb**	**16 50 45.3**	**0.0**
JYNG				S		**Sn**	**16 50 55.2**	**-0.7**
ETLH	**Xiulin Townshi**	**0.73**	**278**	P		**Pb**	**16 50 45.8**	**+0.1**
	baz=275							
ETLH				*e*S		**Sn**	**16 50 56.7**	**+0.1**
	baz=275							
NDS	**Dongshan**	**0.73**	**316**	*i* P		**Pb**	**16 50 45.3**	**-0.4**
	baz=314							
NDS				*i* S		**Sb**	**16 50 55.2**	**-0.2**
	baz=314							
YOJ	**Yonaguni jima**	**0.76**	**62**	P		**Pb**	**16 50 46.3**	**0.0**
YOJ				S		**Sb**	**16 50 56.6**	**+0.3**
YOJ	**Yonaguni jima**	**0.76**	**62**	P		**Pb**	**16 50 46.3**	**0.0**
	baz=63							
YOJ				*e*S		**Sn**	**16 50 57.2**	**-0.1**
	baz=63							
ILA	**Ilan**	**0.81**	**324**	*e*P		**Pn**	**16 50 47.0**	**-0.3**
	baz=322							
ILA				*e*S		**Sn**	**16 50 58.0**	**-0.6**
	baz=322							
ESL	**Shilin**	**0.82**	**250**	*e*P		**Pb**	**16 50 46.3**	**-0.9**
	baz=237							
ESL				*e*S		**Sb**	**16 50 57.7**	**-0.1**
	baz=237							
TWE	**Neicheng**	**0.83**	**318**	*i* P		**Pb**	**16 50 47.1**	**-0.2**
	baz=322							
TWE				S		**Sn**	**16 50 58.6**	**-0.3**
	baz=322							
ENTT	**Nioudou**	**0.84**	**310**	*i* P		**Pn**	**16 50 47.5**	**-0.2**
	baz=307							
ENTT				S		**Sb**	**16 50 57.9**	**-0.5**
	baz=307							
NTC	**Toucheng**	**0.85**	**332**	P		**Pn**	**16 50 47.9**	**0.0**
	baz=341							
NTC				*e*S		**Sn**	**16 50 59.0**	**-0.5**
	baz=341							
NDT	**Datong Townshi**	**0.85**	**306**	P		**Pn**	**16 50 48.2**	**+0.3**
	baz=313							
NDT				S		**Sn**	**16 50 59.1**	**-0.5**
	baz=313							
NNSB	**Datong**	**0.87**	**292**	P		**Pb**	**16 50 47.9**	**-0.3**
	baz=289							
NNSB				S		**Sn**	**16 50 59.8**	**-0.4**
	baz=289							
NNSH	**Datong**	**0.87**	**292**	P		**Pb**	**16 50 48.1**	**-0.1**
	baz=289							
NNSH				S		**Sn**	**16 50 59.8**	**-0.5**
	baz=289							
EGFH	**Guangfu**	**0.89**	**241**	*e*P		**Pn**	**16 50 47.5**	**-0.8**
	baz=229							
EGFH				*e*S		**Sb**	**16 50 60.0**	**+0.2**
	baz=229							
NNS	**Nan Shan**	**0.89**	**292**	P		**Pb**	**16 50 48.4**	**-0.1**
	baz=290							
NNS				*e*S		**Sn**	**16 51 00.2**	**-0.4**
	baz=290							
WHF	**Hehuan Shan**	**0.92**	**273**	P		**Pn**	**16 50 48.6**	**-0.6**
	baz=270							
WHF				*e*S		**Sn**	**16 51 02.5**	**+0.7**
	baz=270							
TWB1	**Santiao Chiao**	**0.94**	**344**	*e*P		**Pn**	**16 50 48.6**	**-0.5**
	baz=342							
TWB1				*e*S		**Sb**	**16 51 00.6**	**-0.7**
	baz=342							
FUSS	**Fushou**	**0.95**	**279**	P		**Pn**	**16 50 49.5**	**0.0**
	baz=277							
FUSS				*e*S		**Sn**	**16 51 04.2**	**+2.0**
	baz=277							
TIPB	**Shuangxi**	**0.96**	**335**	*i* P		**Pb**	**16 50 49.4**	**-0.2**
	baz=333							
TIPB				S		**Sb**	**16 51 00.9**	**-0.9**
	baz=333							
NWLT	**Wulai**	**0.97**	**314**	P		**Pb**	**16 50 50.0**	**+0.2**
	baz=312							
NWLT				S		**Sn**	**16 51 02.9**	**+0.3**
	baz=312							
HGSD	**Ruisui**	**0.99**	**232**	*e*P		**Pn**	**16 50 48.4**	**-1.3**
	baz=220							
HGSD				*e*S		**Sn**	**16 51 02.3**	**-0.5**
	baz=220							
YHNB	**Yeheng**	**0.99**	**305**	P		**Pb**	**16 50 52.0**	**0.0**
	baz=291							
YHNB				S		**Sn**	**16 51 02.8**	**-0.4**
	baz=291							
CHGB	**Renai**	**1.00**	**268**	P		**Pn**	**16 50 50.1**	**-0.1**
	baz=254							
CHGB				*e*S		**Sn**	**16 51 03.9**	**+0.3**
	baz=254							
TWT	**Tachien**	**1.01**	**279**	*e*P		**Pb**	**16 50 50.9**	**+0.3**
	baz=276							
TWT				*e*S		**Sn**	**16 51 04.7**	**+1.0**
	baz=276							
OWD	**Renai**	**1.01**	**262**	*e*P		**Pn**	**16 50 50.0**	**-0.2**
	baz=260							
OWD				*e*S		**Sn**	**16 51 02.2**	**-1.5**
	baz=260							
TDCB	**Techi**	**1.03**	**279**	*e*P		**Pn**	**16 50 50.4**	**0.0**
	baz=277							
TDCB				*e*S		**Sn**	**16 51 04.0**	**-0.1**
	baz=277							
NWF	**Wu-fen Shan**	**1.06**	**335**	*e*P		**Pb**	**16 50 51.1**	**-0.3**
	baz=333							
NWF				*e*S		**Sb**	**16 51 05.0**	**0.0**
	baz=333

baz=256
YM01 YM01 1.22 329 *e*P **Pb 16 50 53.4 -0.6**
baz=341
YM01 *e*S **Sb 16 51 09.7 +0.3**
baz=341
WHP Taichung City 1.22 278 *e*P **Pb 16 50 54.2 +0.1**
baz=266
WHP *e*S **Sb 16 51 10.5 +0.9**
baz=266
DPDB Guoxing 1.23 267 *e*P **Pn 16 50 53.5 +0.3**
baz=257
DPDB *e*S **Sn 16 51 09.3 +0.3**
baz=257
SSLB Suanglung 1.25 256 *e*P **Pn 16 50 53.4 +0.1**
baz=255
SSLB *e*S **Sn 16 51 09.6 +0.3**
baz=255
YM08 YM08 1.25 330 *e*P **Pb 16 50 53.6 -0.9**
baz=342
LIOB Emei 1.27 296 *e*P **Pb 16 50 55.2 +0.4**
baz=294
FULB Fuli 1.27 225 *e*P **Pn 16 50 53.0 -0.6**
baz=212
FULB *e*S **Sn 16 51 09.6 -0.3**
baz=212
NSTT Nanjuang 1.27 295 *e*P **Pb 16 50 55.3 +0.4**
baz=293
NSTT *e*S **Sb 16 51 11.0 +0.1**
baz=293
SMLT Sun Moon Lake 1.27 260 *e*P **Pn 16 50 54.3 +0.5**
baz=259
SMLT *e*S **Sb 16 51 11.1 +0.1**
baz=259
ANP Anpu 1.28 328 *e*P **Pb 16 50 54.2 -0.9**
baz=326
CHKT Chengkung 1.30 220 *e*P **Pn 16 50 53.7 -0.3**
baz=209
CHKT *e*S **Sn 16 51 09.1 -1.4**
baz=209
TYC Yuchr 1.31 262 *e*P **Pn 16 50 54.8 +0.6**
baz=261
TYC *e*S **Sb 16 51 11.9 0.0**
baz=261
TWY Chenhua 1.32 333 *e*P **Pb 16 50 54.6 -1.1**
baz=330
TWY *e*S **Sb 16 51 11.9 -0.3**
baz=330
IRIF Iriomote-Funau 1.35 80 P **Pb 16 50 55.8 -0.4**
IRIF S **Sb 16 51 14.7 +1.6**
YUS Yu-Shan 1.35 243 *e*P **Pn 16 50 55.1 -0.2**
baz=243
YUS *e*S **Sn 16 51 12.6 0.0**
baz=243
WHYT Xinyi Township 1.36 253 *e*P **Pn 16 50 55.2 +0.2**
baz=241
WHYT *e*S **Sb 16 51 13.5 +0.1**
baz=241
TWQ1 Liyutan 1.39 280 *e*P **Pb 16 50 56.7 -0.2**
baz=279
TWQ1 *e*S **Sb 16 51 14.2 -0.1**
baz=279
HATJ Hateruma jima 1.40 92 P **Pb 16 50 57.4 +0.3**
HATJ *e*S **Sn 16 51 14.2 +1.1**
EDH Donghe 1.43 219 *e*P **Pn 16 50 55.2 -0.7**
baz=210
EDH *e*S **Sn 16 51 12.0 -1.8**
baz=210
WJS Zhushan 1.44 259 *e*P **Pb 16 50 57.8 0.0**
baz=258
WJS *e*S **Sb 16 51 17.0 +1.4**
baz=258
TCU Taichung 1.46 272 *e*P **Pb 16 50 58.1 0.0**
baz=271
TCU *e*S **Sb 16 51 17.1 +0.9**
baz=271
ELDTW Lidau 1.47 232 *e*P **Pn 16 50 55.7 -0.7**
baz=219
ELDTW *e*S **Sn 16 51 13.4 -1.4**
baz=219
ALS Alishan 1.47 247 *e*P **Pn 16 50 57.7 +1.1**
baz=246
ALS *e*S **Sn 16 51 15.8 +0.7**
baz=246
WNT Mingjian 1.47 262 *e*P **Pb 16 50 58.7 +0.4**
baz=261
WNT *e*S **Sb 16 51 17.4 +0.9**
baz=261
PCYT Pengchaiyu 1.53 353 *e*P **Pb 16 50 57.9 -1.4**
baz=351
CHN5 Tsauling 1.54 251 *e*P **Pb 16 50 59.1 -0.5**
baz=251
CHN5 *e*S **Sb 16 51 18.8 +0.1**
baz=251
LONT Longtian 1.59 222 *e*P **Pn 16 50 57.1 -0.9**
baz=222
LONT *e*S **Sn 16 51 17.2 -0.4**
baz=222
JKRS Kuro-shima 1.59 85 P **Pb 16 50 59.7 -0.6**
JKRS *e*S **Sb 16 51 19.3 -0.7**
LDUT Ludao 1.60 208 *e*P **Pn 16 50 57.6 -0.6**
baz=208
LDUT *e*S **Sn 16 51 16.5 -1.5**
baz=208
WGK Gukeng 1.62 256 *e*P **Pb 16 51 00.2 -0.6**
baz=255
WGK *e*S **Sb 16 51 21.3 +0.5**
baz=255
WDLH Douliu 1.64 256 *e*P **Pb 16 51 00.6 -0.5**
baz=243
WDLH *e*S **Sb 16 51 22.1 +0.7**
baz=243
STYH Taoyuan 1.66 236 *e*P **Pn 16 50 59.8 +0.9**
baz=236
STYH *e*S **Sn 16 51 21.2 +1.8**
baz=236
STYT Tauyuan 1.67 236 *e*P **Pn 16 51 01.0 +1.7**
baz=236
STYT *e*S **Sn 16 51 21.3 +1.4**
baz=236
TWGBT Beinan 1.68 221 *e*P **Pn 16 50 57.5 -1.8**
baz=232
TWGBT *e*S **Sn 16 51 18.1 -1.9**
baz=232
TWG Pinlang 1.69 221 *e*P **Pn 16 50 59.9 +0.5**
baz=232
TWG *e*S **Sn 16 51 19.4 -0.7**
baz=232
TTN Taitung 1.69 218 *e*P **Pn 16 50 59.2 -0.3**
baz=208
TPUB Ta-pu 1.70 242 *e*P **Pb 16 51 01.4 -0.8**
baz=243
TPUB *e*S **Sb 16 51 22.9 -0.4**
baz=243
JIJ Ishigaki jima 1.73 81 P **Pn 16 51 00.5 +0.6**
JIJ S **Sn 16 51 21.5 +0.4**
WTP Ta-pu 1.74 241 *e*P **Pn 16 51 01.8 +1.6**
baz=241
WTP *e*S **Sb 16 51 25.0 +0.6**
baz=241
WRL Guolierlin Hig 1.74 264 *e*P **Pb 16 51 02.3 -0.7**
baz=263
WRL *e*S **Sb 16 51 23.4 -1.0**
baz=263
WTK Tuku 1.77 257 *e*P **Pb 16 51 02.6 -0.8**
baz=244
WTK *e*S **Sb 16 51 25.6 +0.3**
baz=244
CHN1 Nanshi 1.84 241 *e*P **Pb 16 51 04.2 -0.4**
baz=241
CHN1 *e*S **Sb 16 51 27.1 -0.2**
baz=241
SGST Jiashian 1.85 237 *e*P **Pn 16 51 03.3 +1.6**
baz=237
SGST *e*S **Sb 16 51 28.2 +0.7**
baz=237
SLGT Liugui 1.85 234 *e*P **Pn 16 51 02.7 +1.0**
baz=223
SLGT *e*S **Sb 16 51 26.8 -0.9**
baz=223
JISG Ishigakijimahi 1.92 75 P **Pn 16 51 03.3 +0.7**
JISG S **Sn 16 51 25.9 0.0**
ECL Taimali 1.93 219 *e*P **Pn 16 51 02.3 -0.4**
baz=220
ECL *e*S **Sn 16 51 23.8 -2.2**
baz=220
WSF Szhu 1.93 257 *e*P **Pn 16 51 04.7 +1.9**
baz=271
WSF *e*S **Sb 16 51 29.9 0.0**
baz=271
SSD Sandimen 2.02 228 *e*P **Pn 16 51 05.0 +1.0**
baz=222
SSD *e*S **Sn 16 51 30.0 +1.6**
baz=222
SCST Cishan 2.03 234 *e*P **Pb 16 51 07.1 -0.7**
baz=235
SCST *e*S **Sb 16 51 32.5 -0.2**
baz=235
TSMG Majia 2.04 227 *e*P **Pn 16 51 05.5 +1.3**
baz=222
TSMG *e*S **Sn 16 51 30.6 +1.7**
baz=222
MASBT Mashibuluo 2.11 226 *e*P **Pn 16 51 06.5 +1.2**
baz=221
MASBT *e*S **Sn 16 51 32.6 +1.9**
baz=221
EAST Anshuo 2.15 218 *e*P **Pn 16 51 05.5 -0.4**
baz=219
EAST *e*S **Sn 16 51 31.0 -0.8**
baz=219
SCZT Fangliau 2.30 222 *e*P **Pn 16 51 08.6 +0.8**
baz=217
SCZT *e*S **Sn 16 51 36.3 +1.1**
baz=217
SLIU Shizi 2.31 216 *e*P **Pn 16 51 08.6 +0.6**
baz=218
SLIU *e*S **Sn 16 51 35.5 -0.2**
baz=218
PNG Penghu 2.54 258 *e*P **Pn 16 51 13.1 +1.9**
baz=258
PNG *e*S **Sn 16 51 41.5 +0.2**
baz=258
VWUC VWUC 2.72 290 *e*P **Pn 16 51 13.4 -0.1**
baz=288
VWUC *e*S **Sn 16 51 45.1 -0.5**
baz=288
PTMZ Houxiangcun 3.02 289 *e*P **Pn 16 51 18.1 +0.4**
baz=288
PTMZ *e*S **Sn 16 51 54.0 +1.1**
baz=288

*IDC **22** 16:51:38.3±0.9, 19°.64N×121°.77E, h0km, mb3.5/9, mb1 3.7/10, mb1mx3.5/46, mbtmp3.5/10, ML3.6/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/32, Error ellipse: s-maj=30.8km s-min=19.3km az=87.0*
*MAN **22** 16:51:43.9, 19°.84N×121°.61E, h45km, MS2.9*
*JMA **22** 16:51:46.3±0.6, 20°.09N×121°.79E, h0km, M3.9*
ISC 22 16:51:45.8±0.7, 19°.74N±0°.04×121°.7E±0°.1, h52km, n25, σ1§38/31, mb3.3/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BBP	**Basco**	**0.73**	**19**	*e*P		**Pn**	**16 51 59.0**	**-1.1**
BBP				*e*S		**Sn**	**16 52 09.6**	**-0.8**
SGCP	**Mt. Cagua**	**1.53**	**168**	*e*P		**Pn**	**16 52 11.2**	**+0.4**
SGCP	**Mt. Cagua**	**1.53**	**168**	*e*S		**Sn**	**16 52 31.4**	**+1.9**
APYP	**Conner**	**1.92**	**193**	*e*P		**Pn**	**16 52 15.7**	**-0.4**
APYP				*e*S		**Sn**	**16 52 41.1**	**+2.0**
HATJ	**Hateruma jima**	**4.71**	**24**	P		**Pn**	**16 52 56.3**	**+2.0**
HATJ				*e*S		**Sn**	**16 53 48.3**	**+0.6**
JYNG	**Yonagunijimaku**	**4.82**	**14**	P		**Pn**	**16 52 57.9**	**+2.0**
JYNG				*e*S		**Sn**	**16 53 50.5**	**+0.1**
YOJ	**Yonaguni jima**	**4.85**	**14**	P		**Pn**	**16 52 59.3**	**+3.1**
YOJ				*e*S		**Sn**	**16 53 51.4**	**+0.4**
IRIF	**Iriomote-Funau**	**4.94**	**22**	P		**Pn**	**16 52 59.0**	**+1.6**
IRIF				*e*S		**Sn**	**16 53 53.3**	**0.0**
JKRS	**Kuro-shima**	**4.96**	**25**	P		**Pn**	**16 53 00.6**	**+2.9**
JKRS				*e*S		**Sn**	**16 53 54.5**	**+0.8**
JIJ	**Ishigaki jima**	**5.12**	**26**	P		**Pn**	**16 53 00.7**	**+0.7**
JIJ				*e*S		**Sn**	**16 53 56.4**	**-1.4**
JISG	**Ishigakijimahi**	**5.39**	**26**	P		**Pn**	**16 53 04.0**	**+0.4**
JISG				*e*S		**Sn**	**16 54 03.2**	**-1.2**
JTJ	**Tarama**	**5.61**	**29**	*e*S		**Sn**	**16 54 10.4**	**+0.7**
KSRS	**Korea Array**	**18.46**	**16**	P		**P**	**16 55 57.9**	**+0.7**
	0.2nm,0.3s,baz=194,slow=11,SNR=7.4							
KSRS				LR		LR	17 02 01.3	
	comp=Z,14nm,21.6s,baz=225,slow=34							
CMAR	**Chiang Mai Arr**	**21.55**	**270**	P		**P**	**16 56 30.7**	**-0.3**
	0.4nm,0.8s,baz=78,slow=9.6,SNR=2.7							
USRK	**Ussuriysk Ar.**	**25.85**	**17**	P		**P**	**16 57 12.7**	**+0.3**
	0.8nm,0.6s,baz=213,slow=7.5,SNR=4.9							
SONM	**Songino Array**	**30.66**	**340**	P		**P**	**16 57 55.5**	**+0.1**
	0.4nm,0.7s,baz=148,slow=8.4,SNR=2.1							
WRA	**Warramunga Arr**	**41.34**	**162**	P		**P**	**16 59 24.4**	**-2.4**
	0.5nm,0.9s,baz=342,slow=9.1,SNR=2.7							
MKAR	**Makanchi Array**	**41.93**	**319**	P		**P**	**16 59 31.4**	**0.0**
	0.2nm,0.5s,baz=124,slow=7.3,SNR=2.8							
H11N1	**WAKE ISLAND Hy**	**42.43**	**82**	T		T	17 45 15.5	
	baz=278,slow=75,SNR=13							
H11N2	**WAKE ISLAND Hy**	**42.43**	**82**	T		T	17 45 15.6	
	baz=278,slow=75,SNR=6.6							
H11N3	**WAKE ISLAND Hy**	**42.45**	**82**	T		T	17 45 16.7	
	baz=278,slow=75,SNR=8.0							
PETK	**Petropavlovsk-**	**43.33**	**31**	P		**P**	**16 59 43.5**	**+0.9**
	3.1nm,0.8s,baz=200,slow=2.7,SNR=5.4							
ASAR	**Alice Springs**	**44.76**	**164**	P		**P**	**16 59 53.5**	**-0.8**
	0.2nm,0.4s,baz=345,slow=7.0,SNR=11							
ILAR	**Eielson Array**	**72.93**	**27**	P		**P**	**17 03 08.1**	**-1.3**
	0.4nm,0.6s,baz=267,slow=4.4,SNR=4.1							
YKA	**Yellowknife Ar**	**86.86**	**23**	P		**P**	**17 04 24.5**	**-0.1**
	0.6nm,0.5s,baz=308,slow=4.4,SNR=15							

*IDC **22** 16:53:33.7±0.9, 12°.32N±0°.07×144°.3E±0°.2, h32km±6km, mb4.4/20, Error ellipse: s-maj=22.1km s-min=6.9km az=108.0*
*NEIC **22** 16:53:38.9±1.9, 12°.32N±0°.07×144°.3E±0°.2, h32km±6km, mb4.4/20, Error ellipse: s-maj=22.1km s-min=6.9km az=99.0*
ISC 22 16:53:38.3±0.6, 12°.36N±0°.09×144°.3E±0°.1, h30km, n45, σ1§05/37, mb4.3/20, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.32**	**23**			**Pb**	**16 54 01.6**	**-0.9**
PATS	**Pohnpei**	**14.82**	**110**		Pn	**Pn**	**16 57 04.5**	**-1.4**
SIJI	**Sorong**	**18.48**	**226**	LR		LR	17 05 12.6	
	comp=Z,28nm,19.3s,baz=90,slow=38							
JHJ	**Hachijo jima 2**	**21.08**	**349**	LR		LR	17 06 03.2	
	comp=Z,63nm,18.1s,baz=120,slow=36							
H11S3	**WAKE ISLAND Hy**	**22.37**	**71**	T		T	17 22 01.5	
	baz=258,slow=75,SNR=16							
H11S1	**WAKE ISLAND Hy**	**22.39**	**71**	T		T	17 22 14.7	
	baz=258,slow=75,SNR=15							
H11S2	**WAKE ISLAND Hy**	**22.39**	**71**	T		T	17 22 02.8	
	baz=258,slow=75,SNR=20							
H11N1	**WAKE ISLAND Hy**	**22.85**	**68**	T		T	17 22 39.8	
	baz=255,slow=75,SNR=52							
H11N2	**WAKE ISLAND Hy**	**22.86**	**68**	T		T	17 22 40.3	
	baz=255,slow=75,SNR=56							
H11N3	**WAKE ISLAND Hy**	**22.87**	**68**	T		T	17 22 43.9	
	baz=255,slow=75,SNR=45							
LUWI	**Luwuk**	**25.22**	**240**	P		**P**	**16 58 59.9**	**-1.8**
SBUM	**Sibu**	**33.30**	**255**	P		**P**	**17 00 13.7**	**0.0**
WB0	**Warramunga Arr**	**33.40**	**197**	P		**P**	**17 00 14.2**	**-0.2**
WB0					IAmb	IAmb	17 00 15.2	
	comp=Z,7.7nm,1.3s							
USRK	**Ussuriysk Ar.**	**33.46**	**344**	P		**P**	**17 00 13.9**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=148,slow=8.5,SNR=2.8							
USRK	**Ussuriysk Ar.**	**33.46**	**344**	P		**P**	**17 00 14.3**	**-0.3**
WR0	**Warramunga Arr**	**33.54**	**197**	P		**P**	**17 00 15.6**	**0.0**
WR0					IAmb	IAmb	17 00 21.9	
	comp=Z,7.4nm,1.4s							
WB2	**Warramunga Arr**	**33.58**	**197**	P		**P**	**17 00 15.8**	**-0.2**
WB2					IAmb	IAmb	17 00 18.5	
	comp=Z,11nm,1.3s							
WRA	**Warramunga Arr**	**33.58**	**197**	P		**P**	**17 00 15.6**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=19,slow=9.6,SNR=6.9							
WRA	**Warramunga Arr**	**33.58**	**197**	P		**P**	**17 00 16.0**	**0.0**
ASAR	**Alice Springs**	**37.24**	**196**	P		**P**	**17 00 47.9**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=19,slow=11,SNR=15							
ASAR	**Alice Springs**	**37.24**	**196**	P		**P**	**17 00 48.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**44.10**	**284**	P		**P**	**17 01 44.1**	**0.0**
	comp=Z,0.5nm,0.4s,baz=88,slow=6.4,SNR=4.6							
BBOO	**Buckleboo**	**45.61**	**190**	P		**P**	**17 01 56.6**	**+0.7**
BBOO					IAmb	IAmb	17 02 08.9	
	comp=Z,11nm,1.3s							
SONM	**Songino Array**	**47.44**	**326**	P		**P**	**17 02 10.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=130,slow=5.1,SNR=2.5							
SONM	**Songino Array**	**47.44**	**326**	P		**P**	**17 02 12.1**	**+1.8**
MK31	**Makanchi Array**	**62.02**	**317**	P		**P**	**17 03 55.5**	**-0.3**
MKAR	**Makanchi Array**	**62.02**	**317**	P		**P**	**17 03 55.7**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=96,slow=8.6,SNR=11							
MKAR	**Makanchi Array**	**62.02**	**317**	P		**P**	**17 03 55.5**	**-0.4**
MAKZ	**Makanchi**	**62.23**	**317**	P		**P**	**17 03 56.7**	**-0.6**
MAKZ					IAmb	IAmb	17 03 57.5	
	comp=Z,1.6nm,0.8s							
BPAW	**Bear Paw Mtn.**	**67.99**	**25**	P		**P**	**17 04 35.9**	**+1.5**
BPAW					IAmb	IAmb	17 04 47.6	
	comp=Z,3.4nm,1.1s							
SCM	**Sheep Creek Mo**	**68.99**	**28**	P		**P**	**17 04 39.1**	**-1.6**
KKAR	**Karatay Array**	**69.87**	**311**	P		**P**	**17 04 47.3**	**+0.8**
ILAR	**Eielson Array**	**69.89**	**25**	P		**P**	**17 04 45.4**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=253,slow=5.7,SNR=9.0							
BRVK	**Borovoye**	**70.64**	**322**	P		**P**	**17 04 50.9**	**-0.1**
VRDI	**Verde Repeater**	**70.69**	**29**	P		**P**	**17 04 52.5**	**+1.1**
DOT	**Dot Lake**	**70.85**	**27**	P		**P**	**17 04 53.1**	**+1.0**
CTGM	**Chitina Glacie**	**71.67**	**30**	P		**P**	**17 04 59.3**	**+2.1**
EPYK	**Eagle Plains**	**74.32**	**24**	P		**P**	**17 05 13.6**	**+0.9**
EPYK					IAmb	IAmb	17 05 29.5	
	comp=Z,5.5nm,1.5s							
INK	**Inuvik**	**75.69**	**22**	P		**P**	**17 05 20.4**	**0.0**
INK					IAmb	IAmb	17 05 23.9	
	comp=Z,5.7nm,1.4s							
ABKAR	**Akbulak array**	**77.10**	**318**	P		**P**	**17 05 28.0**	**-0.9**
C36M	**Paulatuk**	**79.09**	**21**	P		**P**	**17 05 39.9**	**+0.5**
C36M					IAmb	IAmb	17 05 49.8	
	comp=Z,6.2nm,1.4s							
EUNU	**Eureka**	**84.14**	**8**	P		**P**	**17 06 07.8**	**+1.7**
EUNU					IAmb	IAmb	17 06 14.6	
	comp=Z,4.5nm,1.4s							
YKA	**Yellowknife Ar**	**84.18**	**27**	P		**P**	**17 06 06.7**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=284,slow=5.0,SNR=6.1							
NVAR	**Mina Array Bea**	**88.08**	**51**	P		**P**	**17 06 28.3**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=262,slow=6.3,SNR=3.8							
FINES	**FINESS Array B**	**92.05**	**335**	P		**P**	**17 06 42.3**	**-2.0**
	comp=Z,1.7nm,0.8s,baz=54,slow=7.1,SNR=3.8							

*NOU **22** 17:02:52.6, 30°.77S×175°.48W, h15km, mb5.4, Kermadec Islands Region*
*MOS **22** 17:03:11.9±0.9, 30°.61S×178°.20W, h41km, mb5.2/18, Error ellipse: s-maj=10.3km s-min=8.2km az=64.1*
*IDC **22** 17:03:12.4±2.2, 30°.61S×178°.19W, h38km±17km, mb4.6/14, mb1 4.7/17, mb1mx4.6/26, mbtmp4.7/17, ML5.1/2, MS4.1/24, Ms1 4.1/24, ms1mx4.1/33, Error ellipse: s-maj=17.5km s-min=15.3km az=98.0*
*NEIC **22** 17:03:12.0±1.9, 30°.66S±0°.06×178°.3W±0°.1, h35km±1km, mb5.2/145, Error ellipse: s-maj=16.5km s-min=8.9km az=107.0*
*BJI **22** 17:03:13.3±0.0, 30°.57S×177°.81W, h65km, mB5.5/20, mb5.1/29, Ms4.9/5, Ms7 4.6/5*
*GCMT **22** 17:03:16.0±0.2, 30°.68S±0°.02×177°.94W±0°.02, h55km, MW5.1/101, Moment Tensor Solution. s92,c128; s101,c147; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.89±.14; Mθθ0.32±.13; Mϕϕ-5.21±.11; Mrθ0.43±.09; Mθϕ-1.75±.10; Mϕr0.80±.09; Best double couple: Mo5.38200×10^16^ NP1:ϕs194.00000°, δ40.00000°, λ86.00000°. NP2:ϕs19.00000°, δ50.00000°, λ93.00000°. Principal axes: T 4.9720, Plg85.0000°, Azm315.0000°; N 0.8180, Plg2.0000°, Azm197.0000°; P -5.7910, Plg5.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 17:03:12.1±0.2, 30°.69S±0°.03×178°.21W±0°.04, h36km±1km, h36km:pP-P, n628, σ1§53/601, mb5.2/118, MS4.3/28, 48C-13D, Fault plane solution: NP1:ϕs208.35510°, δ35.38613°, λ116.90411°. NP2:ϕs356.45715°, δ58.90847°, λ72.18212°. Principal axes: T Plg70.3282°, Azm226.4602°; N Plg15.1908°, Azm5.8811°; P Plg12.2001°, Azm99.2466°; Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.45**	**10**	P		**Pn**	**17 03 36.6**	**+0.8**
GLKZ				*e*S		**Sn**	**17 03 51.7**	**-1.7**
RAO	**Raoul Island**	**1.46**	**10**	Pn		**Pn**	**17 03 34.4**	**-1.5**
	996nm,0.3s,baz=71,slow=12,SNR=19							
RAO					Sn	**Sn**	**17 03 52.0**	**-1.8**
	6μm,0.3s,baz=127,slow=20,SNR=11							
RAO					LR	LR	17 04 02.6	
	comp=Z,1μm,20.3s,baz=162,slow=37							
RAO	**Raoul Island**	**1.46**	**10**			**Pn**	**17 03 36.6**	**+0.7**
RAO					Sn	**Sn**	**17 03 53.0**	**-0.7**
RIZ	**Raoul Island**	**1.46**	**10**	P		**Pn**	**17 03 36.8**	**+0.8**
RIZ				S		**Sn**	**17 03 53.2**	**-0.6**
MXZ	**Matakaoa Point**	**7.43**	**202**	Pn		**Pn**	**17 04 56.2**	**-1.8**
MXZ	**Matakaoa Point**	**7.43**	**202**	P		**Pn**	**17 04 57.6**	**-0.4**
MXZ				S		**Sn**	**17 06 21.6**	**+0.5**
WMGZ	**Waiomatatini S**	**7.64**	**201**	P		**Pn**	**17 04 59.4**	**-1.4**
WMGZ				S		**Sn**	**17 06 27.2**	**+1.1**
HAZ	**Te Kaha**	**7.79**	**204**	P		**Pn**	**17 05 01.7**	**-1.1**
HAZ				S		**Sn**	**17 06 31.5**	**+1.8**
PKGZ	**Pakihiroa**	**7.81**	**202**	P		**Pn**	**17 05 01.6**	**-1.5**
PKGZ				S		**Sn**	**17 06 28.7**	**-1.6**
PUZ	**Puketiti**	**7.92**	**201**	P		**Pn**	**17 05 02.5**	**-2.2**
PUZ				S		**Sn**	**17 06 34.2**	**+1.2**
TWGZ	**Tauwhareparae**	**8.10**	**202**	P		**Pn**	**17 05 05.1**	**-2.1**
TWGZ				S		**Sn**	**17 06 36.3**	**-1.2**
CNGZ	**Carnagh Statio**	**8.31**	**200**	P		**Pn**	**17 05 08.2**	**-1.9**
OPRZ	**Ohinepanea**	**8.34**	**210**	P		**Pn**	**17 05 12.8**	**+2.3**
TGRZ	**Tauranga**	**8.38**	**212**	P		**Pn**	**17 05 14.9**	**+4.0**
TKGZ	**Te Karaka**	**8.38**	**202**	P		**Pn**	**17 05 09.9**	**-1.1**
MWZ	**Matawai**	**8.39**	**204**	P		**Pn**	**17 05 08.6**	**-2.6**
MARZ	**Manawahe**	**8.41**	**209**	P		**Pn**	**17 05 14.7**	**+3.2**
URZ	**Urewera**	**8.48**	**206**	Pn		**Pn**	**17 05 10.7**	**-1.6**
	2.6nm,0.3s,baz=301,slow=24,SNR=53							
URZ					Sn	**Sn**	**17 06 46.2**	**-0.4**
	43nm,0.3s,baz=222,slow=16,SNR=16							
URZ					LR	LR	17 08 30.1	
	comp=Z,1μm,20.3s,baz=31,slow=37							
URZ	**Urewera**	**8.48**	**206**	Pn		**Pn**	**17 05 10.3**	**-1.9**
URZ	**Urewera**	**8.48**	**206**	P		**Pn**	**17 05 10.4**	**-1.9**
EDRZ	**Edgecumbe**	**8.49**	**208**	P		**Pn**	**17 05 15.0**	**+2.5**
RAGZ	**Rawiri**	**8.58**	**204**	P		**Pn**	**17 05 12.0**	**-1.7**
KMRZ	**Kaimai**	**8.62**	**213**	P		Pn	17 05 19.8	+5.5
KARZ	**Kaharoa**	**8.62**	**211**	P		Pn	17 05 19.2	+4.8
OMRZ	**Omania**	**8.64**	**210**	P		Pn	17 05 21.4	+6.8
RIGZ	**Rimuhau**	**8.65**	**201**	P		**Pn**	**17 05 12.5**	**-2.2**
TARZ	**Mount Tarawera**	**8.70**	**209**	P		**Pn**	**17 05 17.5**	**+2.1**
TOZ	**Tahuroa Road**	**8.74**	**215**	P		Pn	17 05 21.7	+5.9
MUGZ	**Murupara**	**8.80**	**207**	P		**Pn**	**17 05 14.3**	**-2.4**
PRGZ	**Paritu Road**	**8.81**	**200**	P		**Pn**	**17 05 14.1**	**-2.8**
RTZ	**Ruatahuna**	**8.84**	**205**	P		**Pn**	**17 05 14.3**	**-3.0**
SNGZ	**Shannon Statio**	**8.86**	**203**	P		**Pn**	**17 05 15.8**	**-1.8**
PRRZ	**Plateau Road**	**8.97**	**208**	P		Pn	17 05 25.2	+6.2
KNZ	**Kokohu**	**8.97**	**201**	P		**Pn**	**17 05 16.1**	**-3.0**
MHGZ	**Mahia Peninsul**	**9.02**	**200**	P		**Pn**	**17 05 16.3**	**-3.5**
RAHZ	**Arahi**	**9.07**	**204**	P		**Pn**	**17 05 18.8**	**-1.6**
MTHZ	**Maungataniwha**	**9.10**	**205**	P		**Pn**	**17 05 18.9**	**-2.0**
WHHZ	**Waihua**	**9.16**	**203**	P		**Pn**	**17 05 24.5**	**+2.8**
TLZ	**Tolley Road**	**9.20**	**212**	P		Pn	17 05 27.9	+5.7
NMHZ	**Naumai**	**9.33**	**205**	P		**Pn**	**17 05 23.7**	**-0.3**
ARHZ	**Aropaoanui**	**9.41**	**203**	P		**Pn**	**17 05 22.4**	**-2.6**
WATZ	**Wairara**	**9.42**	**210**	P		**Pn**	**17 05 28.5**	**+3.3**
BKZ	**Black Stump Fm**	**9.50**	**206**			**Pn**	**17 05 23.1**	**-3.3**
BKZ	**Black Stump Fm**	**9.50**	**206**	P		**Pn**	**17 05 23.0**	**-3.4**
RATZ	**Rangitukua**	**9.54**	**210**	P		**Pn**	**17 05 30.0**	**+3.1**
KATZ	**Kakaramea**	**9.66**	**210**	P		**Pn**	**17 05 31.7**	**+3.0**
HIZ	**Hauiti**	**9.67**	**214**	Pn		**Pn**	**17 05 28.3**	**-0.3**
HIZ	**Hauiti**	**9.67**	**214**	P		Pn	17 05 33.4	+4.7
MCHZ	**McNeill Hill**	**9.68**	**204**	P		**Pn**	**17 05 26.9**	**-1.9**
KWHZ	**Kaweka Forest**	**9.76**	**205**	P		**Pn**	**17 05 28.3**	**-1.6**
NTVZ	**North Tongarir**	**9.77**	**209**	P		**Pn**	**17 05 32.6**	**+2.4**
TMVZ	**Te Maari**	**9.77**	**209**	P		**Pn**	**17 05 28.7**	**-1.5**
WTVZ	**West Tongariro**	**9.82**	**210**	P		**Pn**	**17 05 32.0**	**+1.2**
OTVZ	**Oturere**	**9.83**	**209**	P		**Pn**	**17 05 31.8**	**+0.8**
SNVZ	**South Ngauruho**	**9.86**	**209**	P		**Pn**	**17 05 32.2**	**+0.7**
KAHZ	**Kahuranaki**	**9.93**	**202**	P		Pn	17 05 28.4	-3.9
BHHZ	**Black Hill Sta**	**9.95**	**207**	P		**Pn**	**17 05 30.4**	**-2.1**
KRHZ	**Kereru**	**9.97**	**205**	P		Pn	17 05 28.8	-4.0
MOVZ	**Moawhango**	**10.00**	**208**	P		**Pn**	**17 05 32.0**	**-1.2**
PKVZ	**Pokaka**	**10.07**	**210**	P		**Pn**	**17 05 38.4**	**+4.2**
PXZ	**Pawanui**	**10.15**	**202**	P		Pn	17 05 30.5	-4.7
VRZ	**Vera Road**	**10.20**	**213**	P		**Pn**	**17 05 39.5**	**+3.6**
PNHZ	**Pukenui**	**10.27**	**205**	P		Pn	17 05 32.8	-4.1
WPHZ	**Waipukurau**	**10.32**	**204**

NEZ North Egmont 10.63 214 P **Pn** **17 05 46.1 +4.3**
PRWZ Pori Road 10.92 204 P **Pn** **17 05 43.2 -2.5**
BFZ Birch Farm 10.94 203 Pn Pn 17 05 41.0 -5.0
BFZ Birch Farm 10.94 203 P Pn 17 05 40.9 -5.1
TIWZ Tintock 11.14 204 P Pn 17 05 44.9 -3.9
MSWZ Moikau Station 11.93 204 Pn Pn 17 05 55.5 -4.2
MSWZ Moikau Station 11.93 204 P Pn 17 05 55.4 -4.3
SNZO South Karori 12.04 206 Pn **Pn** **17 05 58.2 -2.9**
BHW Baring Head 12.06 206 Pn Pn 17 05 55.0 -6.4
PLWZ Palliser 12.06 204 Pn Pn 17 05 55.5 -6.0
NFK Norfolk Island 12.13 274 P **Pn** **17 06 03.2 +0.8**
baz=12,SNR=3.9
TUWZ Tuamarina 12.45 208 Pn 17 06 00.8 -5.8
NNZ Nelson 12.51 211 Pn Pn 17 06 01.8 -5.7
QRZ Quartz Range 12.59 214 Pn Pn 17 06 05.1 -3.6
CMWZ Cape Campbell 12.61 207 Pn Pn 17 06 04.7 -4.1
BSWZ Blackbirch Sta 12.71 208 Pn 17 06 05.2 -5.0
BSWZ Blackbirch Sta 12.71 208 P **Pn** **17 06 08.2 -2.0**
THZ Tophouse 13.16 210 Pn Pn 17 06 11.7 -4.7
MSVF Nonsavu 13.34 344 Pn **Pn** **17 06 19.0 -0.1**
0.4nm,0.3s,baz=288,slow=22,SNR=2.1
MSVF LR LR 17 10 42.9
comp=Z,2µm,19.6s,baz=177,slow=34
MSVF Nonsavu 13.34 344 *i* P **P** **17 06 24.7 -3.5**
MSVF Nonsavu 13.34 344 Pn Pn 17 06 14.3 -4.8
MSVF Nonsavu 13.34 344 P Pn 17 06 13.7 -5.4
KHZ Kahutara 13.44 207 Pn Pn 17 06 13.6 -6.6
DSZ Denniston Nort 13.65 213 P **Pn** **17 06 22.1 -1.0**
GVZ Greta Valley S 14.10 207 P **Pn** **17 06 26.7 -2.6**
LTZ Lake Taylor 14.26 210 Pn Pn 17 06 26.4 -5.1
AMCZ Amberley 14.43 208 P **Pn** **17 06 31.1 -2.6**
OXZ Oxford 14.81 209 Pn **Pn** **17 06 35.6 -3.2**
MQZ McQueen's Vall 14.88 207 Pn Pn 17 06 33.5 -6.2
MARNC Mare, Loyalty 15.38 303 P **P** **17 06 54.3 +3.6**
RPZ Rata Peaks 15.54 210 Pn **Pn** **17 06 45.6 -2.9**
1.3nm,0.3s,baz=46,slow=3.1,SNR=10
RPZ Sn Sn 17 09 25.1 -14
5.1nm,0.3s,baz=95,slow=22,SNR=15
RPZ Rata Peaks 15.54 210 Pn **Pn** **17 06 45.5 -2.9**
YAYNC Mamie plateau, 15.87 299 P **P** **17 07 02.5 +6.4**
FOZ Fox Glacier 15.96 213 Pn **Pn** **17 06 52.5 -1.3**
DZM Mont Dzumac 16.20 298 *e*P **P** **17 07 03.3 +3.4**
245nm,1.5s
DZM *e*LR LR 17 10 40.4
comp=Z,5µm,25.4s
DZM Mont Dzumac 16.20 298 Pn **P** **17 07 00.5 +0.6**
0.3nm,0.3s,baz=119,slow=14,SNR=9.9
DZM LR LR 17 12 04.7
comp=Z,2µm,19.4s,baz=132,slow=33
DZM Mont Dzumac 16.20 298 Pn **Pn** **17 06 54.5 -2.6**
DZM Mont Dzumac 16.20 298 P P 17 07 06.8 +6.9
NOUC Port Laguerre 16.29 298 P **P** **17 07 07.4 +6.6**
62nm,1.6s
LIFNC LIFOU 16.39 304 P P 17 07 08.8 +6.8
LBZ Lake Benmore 16.45 211 Pn **Pn** **17 06 56.1 -4.0**
ODZ Otahua Downs 16.79 208 Pn **Pn** **17 06 58.1 -6.2**
WKZ Wanaka 17.32 212 Pn **Pn** **17 07 05.2 -5.8**
AFI Afiamalu 17.72 21 P **Pn** **17 07 14.6 -1.6**
4.2nm,0.3s,baz=321,slow=20,SNR=4.1
MLZ Mavora Lakes 18.14 212 P **P** **17 07 17.7 -3.5**
WHZ Wether Hill Ro 18.62 212 P **P** **17 07 23.8 -2.6**
DCZ Deep Cove 18.67 214 P **P** **17 07 24.4 -2.5**
RAR Rarotonga 19.06 65 P **Pn** **17 07 31.2 -1.1**
1.3nm,0.3s,baz=286,slow=3.5,SNR=4.4
RAR S Sn 17 10 45.2 -20
1.0nm,0.3s,baz=12,slow=5.0,SNR=3.1
RAR LR LR 17 14 15.2
comp=Z,255nm,19.9s,baz=278,slow=35
RAR Rarotonga 19.06 65 lAmb lAmb 17 07 33.7
comp=Z,74nm,1.1s
ARMA Armidale 25.94 263 P **P** **17 08 42.7 +1.4**
baz=26,SNR=40
ARMA Armidale 25.94 263 P **P** **17 08 45.5 +4.2**
TBI Tubuai 26.59 81 *e*S **S** **17 13 27.2 +7.8**
comp=Z,430nm,33.0s
TBI *e*LQ LQ 17 14 15.4
comp=Z,724nm,25.0s
TBI *e*LR LR 17 15 36.3
comp=Z,2µm,26.5s
TBI Tubuai 26.59 81 *e*T T 17 36 33.4
comp=Z,79nm,0.3s
CNB Canberra Magne 27.51 252 P **P** **17 08 56.3 +1.0**
baz=27,SNR=14
CAN Canberra 27.81 252 P **P** **17 08 58.6 +0.6**
CAN pmax pmax
comp=Z,36nm,0.9s
CAN Canberra 27.81 252 P **P** **17 08 58.6 +0.6**
CAN lAmb lAmb 17 09 03.2
comp=Z,36nm,0.9s
YNG Young 28.32 254 P **P** **17 09 03.6 +1.1**
baz=28,SNR=7.6
PAE Paea 29.07 70 *e*T T 17 39 37.3
comp=Z,26nm,0.2s
PPT2 Papeete2 29.11 70 *e*LR LR 17 16 26.9
comp=Z,2µm,28.0s
PPT2 Papeete2 29.11 70 *e*T T 17 39 40.8
comp=Z,18nm,0.3s
PPT Papeete 29.12 70 LR LR 17 17 56.5
comp=Z,252nm,19.8s,baz=212,slow=30
RMQ Roma 29.24 270 P **P** **17 09 12.6 +1.8**
baz=29,SNR=43
TIAR Tiarei 29.31 70 *e*T T 17 39 51.6
comp=Z,241nm,0.2s
HNR Honiara 29.36 312 LR LR 17 19 15.6
comp=Z,372nm,21.3s,baz=184,slow=33
TAU Tasmania Unive 29.96 236 P **P** **17 09 18.8 +1.8**
TAU pmax pmax
comp=Z,26nm,0.9s
TAU Tasmania Unive 29.96 236 P **P** **17 09 18.8 +1.8**
MEH Mehetia 30.19 72 *e*T T 17 41 01.6
comp=Z,53nm,0.2s
TOO Toolangi 30.68 247 P **P** **17 09 24.1 +0.6**
baz=30,SNR=23
TOO Toolangi 30.68 247 P **P** **17 09 26.1 +2.7**
TOO pmax pmax
comp=Z,18nm,0.8s
TOO Toolangi 30.68 247 P **P** **17 09 26.1 +2.7**
VAH Vaihoa 31.95 68 *e*T T 17 43 13.0
comp=Z,180nm,0.2s
QLP Quilpie 33.11 268 P **P** **17 09 47.3 +2.5**
baz=33,SNR=22
ARPS Mount Arapiles 33.59 249 P **P** **17 09 51.6 +2.7**
baz=33,SNR=12
CTAO Charters Tower 33.67 280 P **P** **17 09 52.9 +3.2**
CTAO pmax pmax
comp=Z,71nm,0.7s
CTAO Charters Tower 33.67 280 P **P** **17 09 52.9 +3.2**
STKA Stephens Creek 34.23 257 P **P** **17 09 57.8 +3.2**
comp=Z,223nm,0.9s,baz=99,slow=10,SNR=394
STKA LR LR 17 22 35.6
comp=Z,672nm,19.7s,baz=80,slow=34
STKA Stephens Creek 34.23 257 *c i*P **P** **17 09 57.5 +2.9**
STKA Stephens Creek 34.23 257 P **P** **17 09 57.8 +3.2**
STKA lAmb lAmb 17 09 58.8
comp=Z,37nm,0.8s
MTSU Mount Surprise 36.17 281 P **P** **17 10 14.3 +3.0**
baz=36,SNR=31
HTT Hallett 36.25 254 P **P** **17 10 14.2 +2.3**
baz=36,SNR=50
RABL Rabaul 38.40 307 P **P** **17 10 31.0 +0.8**
RABL lAmb lAmb 17 10 37.4
comp=Z,28nm,0.7s
BBOO Buckleboo 38.71 255 P **P** **17 10 34.1 +1.3**
baz=39,SNR=156
BBOO Buckleboo 38.71 255 **P** **17 10 34.3 +1.5**
RKT Rikitea 39.10 90 *e*LR LR 17 21 17.5
comp=Z,1µm,27.2s
QIS Mount Isa 39.15 275 P **P** **17 10 38.5 +1.9**
baz=39,SNR=22
COEN Coen 39.18 286 P **P** **17 10 39.5 +2.7**
COEN lAmb lAmb 17 10 40.3
comp=Z,24nm,0.7s
TAOE Nuku Hiva Isla 41.59 67 *e*LR LR 17 22 11.4
comp=Z,795nm,27.1s
AS31 Alice Springs 42.91 267 P **P** **17 11 08.6 +1.1**
ASAR Alice Springs 42.91 267 P **P** **17 11 08.4 +0.9**
comp=Z,39nm,0.9s,baz=104,slow=7.6,SNR=270
ASAR PcP **PcP** **17 12 56.9 -1.1**
comp=Z,2.7nm,0.5s,baz=119,slow=3.5,SNR=2.0
ASAR ScP **ScP** **17 16 46.5 +0.3**
comp=Z,1.7nm,0.8s,baz=117,slow=4.1,SNR=4.1
ASAR PKiKP **PKiKP** **17 20 00.6 -1.3**
comp=Z,0.4nm,0.6s,baz=97,slow=1.4,SNR=4.4
ASAR LR LR 17 28 57.6
comp=Z,669nm,18.2s,baz=122,slow=36

ASAR Alice Springs 42.91 267 P **P** **17 11 08.5 +1.0**
WR0 Warramunga Arr 43.75 273 P **P** **17 11 15.2 +0.9**
WR0 lAmb lAmb 17 11 17.3
comp=Z,59nm,0.8s
WB2 Warramunga Arr 43.92 273 P **P** **17 11 16.6 +0.9**
WRAB Tennant Creek 43.92 273 *ce*P **P** **17 11 16.5 +0.8**
WRAB pmax pmax
comp=Z,125nm,1.3s
WRAB Tennant Creek 43.92 273 P **P** **17 11 16.9 +1.3**
WRA Warramunga Arr 43.93 273 P **P** **17 11 16.6 +0.8**
comp=Z,70nm,0.6s,baz=112,slow=7.8,SNR=806
WRA ScP **ScP** **17 16 49.5 -0.9**
comp=Z,1.0nm,0.7s,baz=114,slow=3.8,SNR=2.8
WRA PKiKP **PKiKP** **17 20 01.4 -1.4**
comp=Z,0.5nm,0.5s,baz=109,slow=0.5,SNR=6.9
WRA LR LR 17 28 50.8
comp=Z,438nm,18.5s,baz=115,slow=35
WB0 Warramunga Arr 43.95 273 P **P** **17 11 16.8 +0.9**
FORT Forrest 45.80 255 P **P** **17 11 30.7 +0.3**
baz=46,SNR=84
FORT Forrest 45.80 255 P **P** **17 11 31.1 +0.6**
WRKA Warakurna 47.26 263 P **P** **17 11 42.1 0.0**
baz=47,SNR=77
SBA Scott Base 47.73 184 P **P** **17 11 48.8 +3.8**
SBA pmax pmax
comp=Z,47nm,1.1s
SBA Scott Base 47.73 184 P **P** **17 11 48.8 +3.8**
SBA lAmb lAmb 17 11 50.3
comp=Z,47nm,1.1s
VNDA Vanda 47.79 186 P **P** **17 11 48.2 +2.9**
comp=Z,3.8nm,0.7s,baz=9.9,slow=6.5,SNR=16
VNDA LR LR 17 28 39.0
comp=Z,147nm,20.8s,baz=9.5,slow=32
VNDA Vanda 47.79 186 P **P** **17 11 47.1 +1.7**
VNDA pmax pmax
comp=Z,10.0nm,1.2s
VNDA Vanda 47.79 186 P **P** **17 11 47.1 +1.7**
GENI Genyem 48.23 297 P **P** **17 11 51.1 +1.5**
comp=Z,73nm,1.1s
KDU Kakadu 48.79 280 P **P** **17 11 54.6 +0.7**
baz=49,SNR=4.6
MTN Manton Dam 49.85 279 P **P** **17 12 02.8 +0.8**
baz=50,SNR=16
MTN Manton Dam 49.85 279 P **P** **17 12 02.5 +0.4**
MTN lAmb lAmb 17 12 03.7
comp=Z,23nm,0.7s
KNRA Kununurra 50.55 275 P **P** **17 12 08.1 +0.8**
KNRA lAmb lAmb 17 12 09.8
comp=Z,26nm,0.6s
KMBL Kambalda 50.76 253 P **P** **17 12 08.5 -0.3**
baz=51,SNR=11
FITZ Fitzroy Crossi 52.18 270 P **P** **17 12 20.1 +0.6**
baz=52,SNR=23
FITZ Fitzroy Crossi 52.18 270 P **P** **17 12 20.1 +0.6**
FITZ lAmb lAmb 17 12 21.9
comp=Z,34nm,1.1s
KLBR Kellerberrin 54.08 251 P **P** **17 12 32.9 -0.5**
baz=54,SNR=23
FAKI Fak Fak 54.27 291 P **P** **17 12 34.6 -0.3**
FAKI lAmb lAmb 17 12 36.3
comp=Z,23nm,1.2s
CASY Casey 54.80 208 P **P** **17 12 38.1 +0.1**
MUN Mundaring 55.23 250 P **P** **17 12 41.4 -0.2**
baz=55,SNR=4.3
BLDU Ballidu 55.23 252 P **P** **17 12 41.2 -0.5**
baz=55,SNR=6.0
PSA00 Pilbara Seismi 55.75 264 P **P** **17 12 44.5 -1.1**
PSA00 lAmb lAmb 17 12 44.6
comp=Z,29nm,1.3s
MORW Morawa 56.27 254 P **P** **17 12 48.9 -0.3**
baz=56,SNR=15
MORW Morawa 56.27 254 P **P** **17 12 48.9 -0.3**
MORW lAmb lAmb 17 12 49.7
comp=Z,33nm,1.1s
SWI Sorong 56.28 292 P **P** **17 12 50.4 +1.0**
comp=Z,24nm,0.8s
SOEI Soe 57.22 278 P **P** **17 12 54.9 -1.3**
SOEI lAmb lAmb 17 12 60.0
comp=Z,36nm,0.9s
SANI Sanana 59.87 287 P **P** **17 13 14.6 0.0**
comp=Z,18nm,0.9s
GIRL Giralia 60.12 260 P **P** **17 13 17.0 +0.8**
PLAI Plampang 63.23 276 P **P** **17 13 37.4 +0.2**
comp=Z,44nm,0.9s
TWSI Taliwang, Sumb 64.04 275 P **P** **17 13 45.2 +2.6**
TOLI2 Tolitoli 65.94 287 P **P** **17 13 54.0 -0.9**
JAGI Jajag, Banyuwa 66.51 274 P **P** **17 13 58.6 -0.1**
JAGI lAmb lAmb 17 13 59.5
comp=Z,21nm,0.9s
BBKI Banjar Baru 68.46 279 P **P** **17 14 13.4 +2.4**
BELA Belgrano 2 69.52 172 P **P** **17 14 17.0 +0.4**
BELA lAmb lAmb 17 14 18.2
comp=Z,39nm,1.1s
UGM Wanagama 69.91 273 P **P** **17 14 20.5 +0.5**
MYLDM Lahad Datu 70.12 289 P **P** **17 14 21.3 +0.1**
PBKI Pangkalan Bun 71.55 278 P **P** **17 14 31.7 +1.7**
comp=Z,5µmcomp=Z,57nm,0.5s
MAW Mawson 71.97 201 P **P** **17 14 32.2 +0.6**
comp=Z,16nm,0.7s,baz=137,slow=6.7,SNR=19
MAW LR LR 17 44 56.1
comp=Z,216nm,20.1s,baz=62,slow=35
MAW Mawson 71.97 201 P **P** **17 14 32.4 +0.9**
baz=72,SNR=14
MAW Mawson 71.97 201 P **P** **17 14 32.4 +0.9**
MAW pmax pmax
comp=Z,5.0nm,1.0s
MAW Mawson 71.97 201 P **P** **17 14 32.4 +0.9**
CISI Cisompet, Garu 72.41 272 P **P** **17 14 34.9 -0.3**
KKM Kota Kinabalu 72.47 288 P **P** **17 14 35.4 -0.2**
KKM lAmb lAmb 17 15 03.6
comp=Z,54nm,1.2s
SBUM Sibu 73.81 283 P **P** **17 14 43.3 -0.1**
KSM Kuching 74.90 281 P **P** **17 14 49.2 -0.5**
KSM lAmb lAmb 17 14 50.5
comp=Z,30nm,1.1s
PPBI Pangkal Pinang 76.56 276 P **P** **17 14 59.6 +0.4**
SYO Syowa Base 76.79 193 ⇑ *i*P **P** **17 15 00.2 +0.7**
SYO Syowa Base 76.79 193 ‖ *e*pP pP 17 15 10.2 +0.4
JSG Sagara 76.91 324 P **P** **17 15 00.7 +0.1**
JYT Yasato 77.17 327 P **P** **17 15 01.8 -0.2**
JYT lAmb lAmb 17 15 05.0
comp=Z,23nm,0.9s
SNAA Sanae 77.87 179 P **P** **17 15 06.3 +0.7**
SNAA Sanae 77.87 179 PP PP 17 18 01.4 +0.5
SNAA Sanae 77.87 179 PcP **PcP** **17 15 13.8 -1.6**
SNAA Sanae 77.87 179 pP pP 17 15 23.3 +7.2
SNAA Sanae 77.87 179 sP sP 17 15 31.4 +12
SNAA Sanae 77.87 179 P **P** **17 15 05.7 0.0**
comp=Z,15nm,0.8s,baz=202,slow=7.3,SNR=45
SNAA Sanae 77.87 179 *ce*P **P** **17 15 06.3 +0.7**
SNAA pmax pmax
comp=Z,50nm,1.7s
SNAA Sanae 77.87 179 P **P** **17 15 06.4 +0.7**
SNAA lAmb lAmb 17 15 12.2
comp=Z,26nm,0.9s
VNA3 Neumayer Olymp 78.03 176 P **P** **17 15 07.1 +0.6**
VNA3 Neumayer Olymp 78.03 176 PP PP 17 18 02.8 +0.5
VNA3 Neumayer Olymp 78.03 176 PcP **PcP** **17 15 14.7 -1.4**
VNA3 Neumayer Olymp 78.03 176 pP pP 17 15 24.0 +7.2
VNA3 Neumayer Olymp 78.03 176 sP sP 17 15 32.5 +12
JGF Kuroka 78.06 324 P **P** **17 15 06.0 -1.1**
MJAR Matsushiro Arr 78.38 325 P **P** **17 15 07.5 -1.3**
comp=Z,5.6nm,1.0s,baz=157,slow=4.8,SNR=12
MJAR LR LR 17 44 38.2
comp=Z,59nm,21.3s,baz=130,slow=32
MAJO Matsushiro 78.38 325 *i*P **P** **17 15 10.1 +1.3**
MAJO pmax pmax
comp=Z,10.0nm,1.1s
MAJO Matsushiro 78.38 325 P **P** **17 15 08.8 0.0**
MAT Matsushiro 78.38 325 P **P** **17 15 07.9 -0.9**
VNA2 Neumayer--Watz 78.46 177 P **P** **17 15 09.8 +0.9**
baz=168,slow=4.6
VNA2 Neumayer--Watz 78.46 177 PP PP 17 18 05.6 -0.2
VNA2 Neumayer--Watz 78.46 177 PcP **PcP** **17 15 17.3 -0.7**
VNA2 Neumayer--Watz 78.46 177 pP pP 17 15 26.1 +6.9
VNA2 Neumayer--Watz 78.46 177 sP sP 17 15 34.9 +12
NVL N'lazarevskaya 78.57 183 *e*P **P** **17 15 09.1 -0.4**
NVL pmax pmax
comp=Z,34nm,1.1s
VNA1 Neumayer--Stat 78.69 177 P **P** **17 15 11.0 +0.9**
VNA1 Neumayer--Stat 78.69 177 PcP **PcP** **17 15 18.5 -0.5**
VNA1 Neumayer--Stat 78.69 177 pP pP 17 15 27.9 +7.5
VNA1 Neumayer--Stat 78.69 177 sP sP 17 15 36.4 +12
JSU Suzuyama 78.72 317 P **P** **17 15 10.2 -0.6**
JSU lAmb lAmb 17 15 12.5
comp=Z,20nm,0.9s
JWT Wachi 78.81 323 P **P** **17 15 10.7 -0.5**
YULB Yu-li 79.09 305 P **P** **17 15 11.5 -1.5**
YULB lAmb lAmb 17 15 19.7
comp=Z,50nm,1.4s
TPUB Ta-pu 79.50 305 P **P** **17 15 13.8 -1.5**
TPUB lAmb lAmb 17 15 37.1
comp=Z,50nm,1.2s
JSD Sado 79.54 326 P **P** **17 15 14.8 -0.3**
SSLB Suanglung 79.58 306 P **P** **17 15 14.3 -1.5**
SSLB lAmb lAmb 17 15 15.4
comp=Z,37nm,1.3s
COCO West Island 79.59 262 *ce*P **P** **17 15 16.5 +0.5**
JNU Nakatsue 79.65 319 LR LR 17 45 17.5
comp=Z,163nm,21.4s,baz=82,slow=32
JNU Nakatsue 79.65 319 P **P** **17 15 16.0 +0.1**
JNU lAmb lAmb 17 15 19.9
comp=Z,32nm,1.1s
JHS Saijyo 79.80 321 P **P** **17 15 15.8 -0.9**
LL02 Futaleuf 80.28 135 P **P** **17 15 20.4 +1.1**
LL02 **pwP** **17 15 34.8 +1.6**
H03S2 Juan Fernandez 80.46 124 T T 18 44 30.0
baz=237,slow=74
H03S1 Juan Fernandez 80.47 124 T T 18 44 29.4
baz=237,slow=74
H03S3 Juan Fernandez 80.47 124 T T 18 44 28.3
baz=237,slow=74
MYKOM Kota Tinggi 80.55 278 P **P** **17 15 21.0 -0.2**
MYKOM lAmb lAmb 17 15 22.1
comp=Z,23nm,1.0s
H03N3 Juan Fernandez 80.65 123 T T 18 44 41.9
baz=242,slow=73
H03N2 Juan Fernandez 80.65 123 T T 18 44 36.9
baz=242,slow=73
H03N1 Juan Fernandez 80.67 123 T T 18 44 35.5
baz=242,slow=73
LL04 Puerto Octay 81.17 132 P **P** **17 15 24.9 +0.8**
LL04 **sP** **17 15 41.5 +3.7**
LL04 lAmb lAmb 17 15 43.3
comp=Z,21nm,0.8s
DLV T Lat 82.08 289 P **P** **17 15 29.4 -0.1**
PLCA Paso Flores 82.44 133 P **P** **17 15 31.9 +1.0**
comp=Z,15nm,1.0s,baz=228,slow=5.8,SNR=23
PLCA LR LR 17 44 02.6
comp=Z,201nm,19.9s,baz=226,slow=30
PLCA Paso Flores 82.44 133 P **P** **17 15 32.0 +1.0**
PLCA Paso Flores 82.44 133 P **P** **17 15 31.5 +0.5**
PLCA **pwP** **17 15 45.9 +1.0**
EFI East Falkland 82.64 147 *i*P **P** **17 15 30.0 -1.6**
EFI pmax pmax
comp=Z,24nm,0.8s
MNSI Mandailing Nat 83.70 275 P **P** **17 15 36.3 -1.4**
comp=Z,28nm,0.4s
TJN Taejon 84.00 319 *ce*P **P** **17 15 39.6 +1.0**
BI02 San Fabin de 84.25 129 P **P** **17 15 40.9 +0.5**
BI02 **pwP** **17 15 56.4 +2.2**
IPM Ipoh 84.35 279 P **P** **17 15 40.5 -0.6**
IPM lAmb lAmb 17 15 41.4
comp=Z,21nm,1.0s
KSRS Korea Array 84.45 320 P **P** **17 15 41.3 +0.4**
comp=Z,2.4nm,0.8s,baz=139,slow=5.1,SNR=12
KSRS LR LR 17 50 58.0
comp=Z,45nm,19.1s,baz=144,slow=34
SCZ2 Santa Cruz Isl 84.81 45 P 17 15 43.8
baz=228
YSS Yuzh-Sakhalins 84.93 334 *e*P **P** **17 15 43.9 +0.8**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS Yuzh-Sakhalins 84.93 334 P **P** **17 15 43.5 +0.4**
CIS Catalina Islan 85.17 47 P 17 15 45.8
baz=228
RPSI Rantau Prapat 85.23 276 P **P** **17 15 44.1 -1.4**
RPSI lAmb lAmb 17 15 45.1
comp=Z,23nm,1.1s
PSI Prapat 85.28 276 LR LR 17 54 19.2
comp=Z,267nm,21.1s,baz=94,slow=36
PSI Prapat 85.28 276 P **P** **17 15 44.1 -1.8**
PSI pmax pmax
comp=Z,23nm,1.1s
PKM Mcpherson Peak 85.30 45 P 17 15 46.9
baz=227
BO02 Sierra Bellavi 85.63 128 P **P** **17 15 47.8 +0.5**
BO02 **sP** **17 16 04.1 +3.0**
BO01 Tunca 85.65 128 **P** **17 15 48.0 +0.7**
GSI Gunungsitoli 85.68 274 P **P** **17 15 47.4 -0.3**
MT01 Popeta 85.84 127 P **P** **17 15 48.8 +0.6**
MWC Mount Wilson 85.94 46 P **P** **17 15 48.2 -0.5**
MWC pmax pmax
comp=Z,23nm,1.2s
MWC Mount Wilson 85.94 46 P **P** **17 15 48.2 -0.5**
MWC lAmb lAmb 17 16 08.2
comp=Z,23nm,1.2s
VA01 Torpederas 86.03 126 P **P** **17 15 49.1 0.0**
PEA0B Petropavlovsk- 86.05 346 *i*P **P** **17 15 51.2 +2.7**
PETK Petropavlovsk- 86.05 346 P **P** **17 15 48.4 -0.2**
comp=Z,22nm,0.7s,baz=116,slow=7.2,SNR=38
PETK LR LR 17 47 20.7
comp=Z,126nm,21.0s,baz=152,slow=31
PETK Petropavlovsk- 86.05 346 P **P** **17 15 51.4 +2.8**
PETK Petropavlovsk- 86.05 346 P **P** **17 15 51.4 +2.8**
MURC Murrieta 86.06 47 P 17 15 50.7
baz=229
MT09 Talagante 86.07 127 P **P** **17 15 49.8 +0.2**
MONP2 Monument Peak 86.09 48 P 17 15 50.8
baz=230
IKP In-Ko-Pah, Jac 86.14 48 P 17 15 50.9
baz=230
MT02 Curacav 86.25 127 P **P** **17 15 50.9 +0.5**
NJ2 Nanjing 86.30 311 *e*P **P** **17 15 51.8 +1.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
VES Vestal, Richgr 86.38 44 P 17 15 51.5
baz=228
EDW2 Edwards Air Fo 86.41 46 P 17 15 52.0
baz=228
SWSC Sam W. Stewart 86.53 48 P 17 15 52.6
baz=230
PFO Pinyon Flats O 86.54 47 P 17 15 52.9
baz=229,SNR=5.4
PFO Pinyon Flats O 86.54 47 *i*P **P** **17 15 50.2 -1.4**
PFO pmax pmax
comp=Z,8.0nm,0.8s
PFO Pinyon Flats O 86.54 47 P **P** **17 15 52.2 +0.6**
PFO lAmb lAmb 17 16 10.9
comp=Z,18nm,1.1s
ISA Isabella, Lake 86.63 45 P 17 15 52.9
baz=228
PEL Peldehue 86.63 127 P **P** **17 15 53.0 +0.8**
PEL pmax pmax
comp=Z,72nm,0.9s
PEL Peldehue 86.63 127 P **P** **17 15 53.0 +0.8**
ISA Isabella, Lake 86.63 45 P **P** **17 15 52.5 +0.5**
ISA pmax pmax
comp=Z,20nm,1.0s
ISA Isabella, Lake 86.63 45 P **P** **17 15 52.5 +0.5**
ISA lAmb lAmb 17 16 11.2
comp=Z,20nm,0.9s
LRMC Laurel Mtn Rad 87.00 45 P 17 15 54.8
baz=229
BELC Belle Mtn. Jos 87.08 47 P 17 15 55.7
baz=230,SNR=7.4
CMB Columbia Colle 87.10 42 P **P** **17 15 55.0 +0.8**
CMB pmax pmax
comp=Z,15nm,1.0s
CMB Columbia Colle 87.10 42 P **P** **17 15 55.0 +0.8**
CMB lAmb lAmb 17 16 12.7
comp=Z,15nm,0.9s
BC3 Big Chuckawall 87.21 48 P 17 15 56.4
baz=230,SNR=7.2
GLA Glamis 87.22 49 P 17 15 56.6
baz=230
O02D Mt. Diablo Mer 87.24 39 P 17 15 56.4
baz=225
USA0B Ussuriysk Arra 87.30 327 P **P** **17 15 55.1 +0.2**
USA0B pmax pmax
comp=Z,8.0nm,1.0s
USA0B Ussuriysk Arra 87.30 327 P **P** **17 15 55.1 +0.2**
USRK Ussuriysk Ar. 87.30 327 P **P** **17 15 55.0 +0.2**
comp=Z,5.1nm,0.8s,baz=108,slow=4.4,SNR=8.1
USRK Ussuriysk Ar. 87.30 327 P **P** **17 15 54.8 -0.1**
CWC Cottonwood Cre 87.39 44 P 17 15 57.0
baz=228
AFDM Forest Hills D 87.39 41 P **P** **17 15 55.9 +0.3**
HEC Hector,Ludlow 87.40 47 P 17 15 56.9
baz=230

CO02 Combarbal 87.51 125 P **P** **17 15 56.0 -0.6**
ORV Oroville 87.51 40 P **P** **17 15 57.1 +1.1**
ORV pmax pmax
comp=Z,6.0nm,1.0s
ORV Oroville 87.51 40 P **P** **17 15 57.1 +1.1**
IRM Iron Mountain 87.72 48 P 17 15 58.8
baz=230,SNR=12
MLAC Mammoth, Mammo 87.73 43 P 17 15 58.8
baz=228
GMRC Granite Mounta 87.80 47 P 17 15 59.0
baz=230,SNR=5.2
N02D Trinity Center 87.84 39 P 17 16 00.3
baz=225
O03E Paynes Creek 87.86 40 P 17 15 58.4
baz=226
214A Organ Pipe Nat 87.86 51 P 17 15 59.1
baz=232
CO03 El Pedregal 87.94 125 P **P** **17 15 58.9 +0.2**
TUQ Turquoise Moun 88.05 46 P 17 16 00.1
baz=230
M02C Callahan 88.06 38 P 17 16 00.2
baz=225
SHOC Shoshone, Teco 88.14 46 P 17 16 00.2
baz=230
FURC Furnace Creek, 88.14 45 P 17 16 00.3
baz=229
TYV Tymovskoe 88.25 336 *e*P **P** **17 16 00.9 +1.7**
TYV pmax pmax
comp=Z,17nm,0.9s
TYV pmax pmax
comp=Z,500nm,2.9s
PNTR Pine Nut 88.27 42 P **P** **17 15 59.5 -0.4**
PNTR IAmb IAmb 17 16 18.7
comp=Z,18nm,0.8s
LHV Little Huntoon 88.34 43 P **P** **17 16 00.8 +0.8**
LHV IAmb IAmb 17 16 19.1
comp=Z,17nm,0.9s
NEE2 Needles Airpor 88.45 48 P 17 16 02.2
baz=230
PDMCI Parker Dam,Lak 88.46 48 P 17 16 02.1
baz=231
K02D Willamette Mer 88.55 37 P 17 16 02.3
baz=225
NVAR Mina Array Bea 88.58 43 P **P** **17 16 02.0 +0.6**
comp=Z,5.9nm,0.8s,baz=221,slow=8.4,SNR=40
NVAR LR LR 17 52 47.5
comp=Z,90nm,18.0s,baz=206,slow=34
NVAR Mina Array Bea 88.58 43 P **P** **17 16 01.6 +0.2**
RYN Ryan 88.58 43 P **P** **17 16 01.6 +0.3**
RYN IAmb IAmb 17 16 20.0
comp=Z,8.8nm,1.0s
NV11 Mina Array Sit 88.67 43 P **P** **17 16 02.7 +1.0**
NV11 IAmb IAmb 17 16 20.4
comp=Z,12nm,1.0s
MDJ Mudanjiang 88.76 326 P **P** **17 16 02.1 +0.2**
MDJ pP sP 17 16 20.8 +4.1
MDJ sP pwP 17 16 28.6 +14
MDJ pmax pmax
comp=Z,14nm,1.4s
MDJ pmax pmax
comp=Z,180nm,4.4s
MDJ Mudanjiang 88.76 326 P **P** **17 16 02.0 +0.2**
MDJ IAmb IAmb 17 16 29.6
comp=Z,19nm,1.4s
PAHR Pah Rah Range 88.81 41 P **P** **17 16 03.0 +0.6**
TPNV Topopah Spring 88.83 45 P 17 16 03.7
baz=230,SNR=5.6
TPNV Topopah Spring 88.83 45 P **P** **17 16 03.6 +1.0**
TPNV pmax pmax
comp=Z,8.0nm,0.9s
TPNV Topopah Spring 88.83 45 P **P** **17 16 03.6 +1.0**
TPNV IAmb IAmb 17 16 21.7
comp=Z,7.7nm,0.8s
M04C Macdoel 88.87 39 P 17 16 03.8
baz=226
ZON Zonda 88.94 126 P **P** **17 16 04.4 +1.1**
ZON pmax pmax
comp=Z,39nm,1.3s
ZON Zonda 88.94 126 P **P** **17 16 04.4 +1.1**
Y14A Wickenburg 88.97 49 P **P** **17 16 04.2 +1.0**
Y14A IAmb IAmb 17 16 22.6
comp=Z,18nm,0.9s
LCO Las Campanas 88.97 123 P **P** **17 16 03.4 -0.4**
LCO pmax pmax
comp=Z,66nm,1.5s
LCO Las Campanas 88.97 123 **P** **17 16 03.4 -0.4**
TPH Tonopah 88.98 44 P **P** **17 16 04.2 +0.9**
TPH pmax pmax
comp=Z,65nm,0.9s
TPH Tonopah 88.98 44 P **P** **17 16 04.2 +0.9**
KVN Kaiserville 89.11 42 P **P** **17 16 04.1 +0.2**
KVN pmax pmax
comp=Z,10.0nm,0.9s
KVN Kaiserville 89.11 42 P **P** **17 16 04.1 +0.2**
KVN IAmb IAmb 17 16 22.4
comp=Z,9.9nm,0.9s
W13A Hualapai Mount 89.12 48 P **P** **17 16 05.6 +1.5**
W13A IAmb IAmb 17 16 24.2
comp=Z,13nm,1.1s
SHPR Sheep Range 89.22 46 P **P** **17 16 05.9 +1.5**
SHPR IAmb IAmb 17 16 07.2
comp=Z,20nm,1.5s
I03D Drain, OR 89.43 36 P 17 16 06.0
baz=225
TUC Tucson 89.44 51 P **P** **17 16 07.1 +1.7**
TUC pmax pmax
comp=Z,29nm,1.2s
TUC Tucson 89.44 51 P **P** **17 16 07.1 +1.7**
J04D Umpqua Nationa 89.75 37 P 17 16 07.5
baz=226
MOD Modoc Plateau 89.79 39 P **P** **17 16 07.2 +0.3**
MOD IAmb IAmb 17 16 25.5
comp=Z,12nm,1.0s
PRN Pahroc Range 89.86 45 P **P** **17 16 08.2 +0.8**
PRN IAmb IAmb 17 16 27.1
comp=Z,17nm,1.1s
319A Douglas 89.90 53 P **P** **17 16 07.8 +0.1**
319A IAmb IAmb 17 16 27.4
comp=Z,20nm,1.0s
I04A Tendick Farm, 89.98 37 P 17 16 08.7
baz=225
K05A Summer Lake 90.03 38 P **P** **17 16 08.7 +0.5**
K05A IAmb IAmb 17 16 27.1
comp=Z,20nm,1.0s
R11A Troy Canyon, C 90.14 44 P 17 16 09.2
baz=230
J05D Fort Rock, OR 90.24 38 P 17 16 09.8
baz=226
CN2 Changchun 90.26 323 *e*P **P** **17 16 06.8 -2.1**
CN2 pmax pmax
comp=Z,20nm,1.2s
X16A Lo Mia Camp, P 90.28 49 P **P** **17 16 11.1 +1.7**
GRNR Gornyy 90.46 333 *i*P **P** **17 16 13.9 +4.3**
GRNR pmax pmax
comp=Z,10.0nm,0.8s
GRNR MLR MLR
comp=E,50nm,14.0s
GRNR MLR MLR
comp=N,110nm,17.0s
GRNR MLR MLR
comp=Z,160nm,20.0s
LCMT Little Creek M 90.73 46 P **P** **17 16 12.9 +1.5**
LCMT IAmb IAmb 17 16 30.8
comp=Z,9.5nm,1.0s
PINE Pine Mountain 90.74 38 P **P** **17 16 12.4 +1.0**
I05D Terrebonne, OR 90.91 37 P 17 16 13.0
baz=226
CCUT Cedar City 90.99 46 P **P** **17 16 14.1 +1.4**
CCUT IAmb IAmb 17 16 32.3
comp=Z,9.3nm,1.1s
WUAZ Wupatki 90.99 49 P 17 16 14.1
baz=232
KNB Kanab 90.99 47 P **P** **17 16 13.7 +1.0**
KNB pmax pmax
comp=Z,13nm,1.0s
KNB Kanab 90.99 47 P **P** **17 16 13.7 +1.0**
KNB IAmb IAmb 17 16 32.2
comp=Z,12nm,1.0s
WUAZ Wupatki 90.99 49 P **P** **17 16 14.3 +1.6**
WUAZ IAmb IAmb 17 16 32.3
comp=Z,19nm,1.1s
WVOR Wild Horse Val 91.06 40 P **P** **17 16 13.0 +0.2**
WVOR pmax pmax
comp=Z,12nm,1.2s
WVOR Wild Horse Val 91.06 40 P **P** **17 16 13.0 +0.2**
WVOR IAmb IAmb 17 16 31.5
comp=Z,12nm,1.1s
SZCU Shurtz Canyon 91.19 46 P **P** **17 16 14.8 +1.1**
PSUT Pine Spring 91.30 45 P **P** **17 16 15.2 +1.0**
X18A Snowflake 91.33 50 P **P** **17 16 15.3 +1.0**
X18A IAmb IAmb 17 16 34.0
comp=Z,15nm,1.0s
AC02 Maricunga 91.35 122 P **P** **17 16 15.0 -0.2**
AC02 IAmb IAmb 17 16 36.2
comp=Z,17nm,1.1s
GYA Guiyang 91.54 300 *e*P **P** **17 16 15.8 +0.4**
GYA pmax pmax
comp=Z,2.0nm,1.3s
121A Cookes Peak, D 91.61 53 P 17 16 16.8
baz=234
121A Cookes Peak, D 91.61 53 P **P** **17 16 16.8 +1.1**
121A IAmb IAmb 17 16 34.6
comp=Z,9.1nm,1.1s
I07A Izee 91.70 38 P **P** **17 16 16.5 +0.8**
I07A IAmb IAmb 17 16 35.0
comp=Z,10nm,0.9s
J08A Circle Bar Ran 91.77 39 P **P** **17 16 15.9 -0.1**
J08A IAmb IAmb 17 16 34.7
comp=Z,12nm,1.1s
W18A Petrified Fore 91.82 50 P 17 16 17.6
baz=233
W18A Petrified Fore 91.82 50 P **P** **17 16 17.5 +0.9**
W18A IAmb IAmb 17 16 36.0
comp=Z,18nm,1.1s
E04D Cinebar 91.84 35 P 17 16 17.6
baz=225
ELK Elko 91.88 43 P **P** **17 16 16.9 +0.1**
ELK pmax pmax
comp=Z,5.0nm,1.0s
ELK Elko 91.88 43 P **P** **17 16 16.9 +0.1**
MTPU Mount Pierson 92.03 46 P **P** **17 16 19.5 +1.8**
MTPU IAmb IAmb 17 16 37.6
comp=Z,22nm,1.3s
MSU Marysvale 92.32 46 P **P** **17 16 20.3 +1.4**
MSU Marysvale 92.32 46 P **P** **17 16 20.3 +1.4**
TX31 Lajitas Ar. Si 92.70 57 P **P** **17 16 21.1 +0.4**
TX32 Lajitas Array 92.70 57 P **P** **17 16 21.3 +0.6**
TX32 IAmb IAmb 17 16 39.8
comp=Z,11nm,1.2s
TXAR Lajitas Array 92.70 57 P **P** **17 16 20.9 +0.2**
comp=Z,2.0nm,1.1s,baz=216,slow=6.2,SNR=9.1
TXAR LR LR 17 53 53.8
comp=Z,50nm,18.1s,baz=0.0,slow=33
MNTX Cornudas Mount 92.80 55 P 17 16 21.8
baz=235
MNTX Cornudas Mount 92.80 55 P **P** **17 16 21.1 +0.1**
G08A Pilot Rock 92.80 37 P **P** **17 16 21.7 +1.0**
G08A IAmb IAmb 17 16 39.4
comp=Z,19nm,1.1s
BJI Beijing 93.00 316 P **P** **17 16 24.8 +3.2**
MFID Camas Ranch 93.26 40 P **P** **17 16 23.3 +0.4**
MFID IAmb IAmb 17 16 41.4
comp=Z,13nm,0.9s
B05A Bryant 93.27 34 P 17 16 25.6
baz=226
CMAR Chiang Mai Arr 93.33 289 P **P** **17 16 23.6 0.0**
comp=Z,0.6nm,0.5s,baz=121,slow=2.5,SNR=4.5
CMAR PP **PP** **17 20 09.9 +1.8**
comp=Z,1.2nm,0.8s,baz=137,slow=6.1,SNR=7.1
CMAR LR LR 17 59 24.9
comp=Z,44nm,20.9s,baz=191,slow=36
TMUT Trail Mountain 93.40 46 P **P** **17 16 24.4 +0.5**
MA2 Magadan 93.53 345 *i* P **P** **17 16 25.0 +1.4**
MA2 pmax pmax
comp=Z,6.0nm,1.0s
SRU San Rafael Swe 93.71 46 P **P** **17 16 25.3 +0.1**
SRU pmax pmax
comp=Z,8.0nm,0.9s
SRU San Rafael Swe 93.71 46 P **P** **17 16 25.3 +0.1**
SRU IAmb IAmb 17 16 43.8
comp=Z,7.5nm,0.9s
KMI Kunming 93.79 297 ǁP **P** **17 16 27.6 +1.6**
KMI pmax pmax
comp=Z,6.0nm,0.6s
ANMO Albuquerque 93.90 51 P 17 16 27.4
baz=235
ANMO Albuquerque 93.90 51 *c* e P **P** **17 16 26.8 +0.6**
ANMO pmax pmax
comp=Z,3.0nm,1.0s
ANMO Albuquerque 93.90 51 P **P** **17 16 25.3 -0.9**
HVU Hansel Valley 93.97 43 P **P** **17 16 27.1 +0.7**
HVU pmax pmax
comp=Z,12nm,1.0s
HVU Hansel Valley 93.97 43 P **P** **17 16 27.1 +0.7**
HVU IAmb IAmb 17 16 44.9
comp=Z,12nm,1.0s
D08A Wollman Farm, 94.01 36 P **P** **17 16 25.9 -0.2**
D08A IAmb IAmb 17 16 44.6
comp=Z,8.1nm,0.8s
HLID Hailey 94.14 41 P 17 16 27.9
baz=231,SNR=6.3
HLID Hailey 94.14 41 P **P** **17 16 27.6 +0.5**
HLID IAmb IAmb 17 16 45.9
comp=Z,7.4nm,0.9s
F10A Beach Ranch, E 94.16 38 P **P** **17 16 25.7 -1.3**
F10A IAmb IAmb 17 16 44.6
comp=Z,13nm,1.1s
PLID Pearl Lake 94.24 39 P **P** **17 16 27.4 -0.1**
PLID IAmb IAmb 17 16 45.7
comp=Z,10nm,1.0s
GAMB Gambell 94.29 3 P **P** **17 16 27.5 +0.5**
GAMB IAmb IAmb 17 16 28.8
comp=Z,11nm,1.0s
PB11 IPOC Station P 95.02 116 P **P** **17 16 32.0 +0.2**
PB11 IAmb IAmb 17 16 51.2
comp=Z,16nm,1.0s
PINM Pinnacle 95.69 18 P 17 16 35.1
baz=212
N25K Chitina, Valde 95.92 15 P 17 16 36.1
baz=209
PB16 IPOC Station P 95.94 115 **P** **17 16 35.2 -1.4**
PB16 IAmb IAmb 17 16 57.1
comp=Z,16nm,1.3s
CD2 Chengdu 96.09 302 *e*P **P** **17 16 36.1 0.0**
MCARA McCarthy VSAT 96.10 16 P 17 16 36.4
baz=210
WAT6 Susitna Watana 96.11 14 P 17 16 36.7
baz=206
SDCO Great Sand Dun 96.12 50 P 17 16 36.9
baz=236
HHC Hu-ho-hao-te 96.31 314 *e*P **P** **17 16 36.5 -0.4**
HHC pmax pmax
comp=Z,25nm,0.7s
HHC pmax pmax
comp=Z,97nm,6.9s
TRF Thorofare Moun 96.41 12 P 17 16 37.7
baz=204
PDAR Pinedale Array 96.47 44 P **P** **17 16 36.9 -1.0**
comp=Z,0.7nm,0.8s,baz=187,slow=3.6,SNR=5.0
PDAR PKKPbc **PKKPbc** **17 33 22.4 -0.9**
comp=Z,0.9nm,0.6s,baz=86,slow=4.9,SNR=10
PDAR LR LR 17 52 27.1
comp=Z,85nm,21.9s,baz=280,slow=31
YHL Hebgen Lake 96.77 41 P **P** **17 16 39.5 +0.3**
YHL IAmb IAmb 17 16 59.1
comp=Z,9.4nm,1.2s
BPAW Bear Paw Mtn. 96.88 12 P 17 16 40.3
baz=203
MCK McKinley 96.92 13 P 17 16 40.8
baz=205
YHH Holmes Hill 96.92 41 P **P** **17 16 40.6 +0.7**
YHH IAmb IAmb 17 16 59.7
comp=Z,9.5nm,1.4s
BOZ Bozeman (W) 96.97 40 P 17 16 40.3
baz=233
BOZ Bozeman (W) 96.97 40 P **P** **17 16 39.3 -0.6**
BOZ pmax pmax
comp=Z,5.0nm,1.1s
BOZ Bozeman (W) 96.97 40 P **P** **17 16 39.3 -0.6**
BWN Browne 97.22 12 P Pdif 17 16 40.1 -0.4
MENT Mentasta 97.29 15 P **P** **17 16 39.7 -1.0**
L27K Beaver Creek, 97.83 16 P 17 16 45.0
baz=211
I23K Minto, Yukon-K 98.13 12 P 17 16 46.5
baz=205
SCRK Sand Creek 98.14 15 P 17 16 46.5
baz=209
LPAZ La Paz 98.19 114 P Pdif 17 16 47.6 +0.8
comp=Z,1.0nm,0.7s,baz=247,slow=1.0,SNR=3.9
LPAZ LR LR 17 52 43.3
comp=Z,62nm,21.6s,baz=217,slow=30
ILAR Eielson Array 98.25 13 P **P** **17 16 44.1 -0.8**
comp=Z,12nm,1.0m,0.8s,baz=216,slow=5.9,SNR=5.2
ILAR LR LR 17 54 03.1
comp=Z,44nm,21.8s,baz=210,slow=31
BILL Bilibino 99.11 354 *i* P **Pdif** **17 16 51.7 +2.9**
BILL *i* 17 20 54.8
BILL pmax pmax
comp=Z,2.0nm,1.0s
CPUP Villa Florida 99.95 129 LR LR 17 53 54.1
comp=Z,88nm,21.3s,baz=222,slow=30
GTA Gaotai 103.18 308 *e*P **PKiKP** **17 21 28.3 +1.1**
GTA pP PP 17 21 33.8 +10
GTA sP 17 21 36.8
GTA pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 103.24 318 Pdiff **Pdif** **17 17 09.7 +1.9**
comp=Z,0.4nm,0.7s,baz=134,slow=4.2,SNR=2.0
YKA Yellowknife Ar 105.79 26 PKiKP **PKiKP** **17 21 30.4 -0.6**
comp=Z,0.6nm,0.6s,baz=251,slow=1.3,SNR=14
YKA PKKPbc **PKKPbc** **17 32 52.2 -4.2**
comp=Z,2.7nm,0.9s,baz=49,slow=3.1,SNR=24
WMQ Urumqi 113.26 308 *e*PKP **PKiKP** **17 21 43.8 -2.0**
DGZ Jazzator, Alta 115.39 314 *i* PKiKP **PKPdf** **17 21 49.1 -0.7**
ZSN Zaisan 116.33 311 *e*PKP **PKPdf** **17 21 50.3 -1.3**
baz=311
ZSN Zaisan 116.33 311 *e*PKiKP **PKPdf** **17 21 50.2 -1.3**
BOSA Boshof 116.92 203 PKP **PKPdf** **17 21 53.0 -0.5**
comp=Z,6.3nm,1.0s,baz=130,slow=2.5,SNR=9.0
RES Resolute Bay 117.58 17 PKiKP **PKPdf** **17 21 52.5 -0.6**
RES Resolute Bay 117.58 17 PKPdf **PKPdf** **17 21 52.5 -0.6**
MK31 Makanchi Array 117.82 310 *i* PKiKP **PKPdf** **17 21 53.0 -1.5**
MK31 Makanchi Array 117.82 310 PKPdf **PKPdf** **17 21 52.9 -1.5**
MKAR Makanchi Array 117.82 310 PKP **PKPdf** **17 21 53.2 -1.3**
comp=Z,2.6nm,0.6s,baz=217,slow=1.2,SNR=37
MKAR Makanchi Array 117.82 310 PKPdf **PKPdf** **17 21 52.6 -1.8**
MAKZ Makanchi 118.03 310 PKiKP **PKPdf** **17 21 53.2 -1.6**
MAKZ Makanchi 118.03 310 PKPdf **PKPdf** **17 21 53.2 -1.6**
ZALV Zalesovo Beam 118.13 318 PKP **PKPdf** **17 21 53.2 -1.5**
comp=Z,1.5nm,0.6s,baz=137,slow=1.9,SNR=7.8
ZALV Zalesovo Beam 118.13 318 **PKPdf** **17 21 53.1 -1.7**
SHLS Shalkode 118.73 305 *i* PKP **PKPdf** **17 21 54.6 -1.8**
baz=305
SHLS Shalkode 118.73 305 *i* PKiKP **PKPdf** **17 21 54.6 -1.8**
UZB Uzynbulak 119.04 305 *e*PKP **PKPdf** **17 21 55.6 -1.5**
baz=305
UZB Uzynbulak 119.04 305 *e*PKiKP **PKPdf** **17 21 55.6 -1.5**
KPKS Kokpek 119.36 306 *e*PKP **PKPdf** **17 21 56.2 -1.5**
baz=306
KPKS Kokpek 119.36 306 *e*PKiKP **PKPdf** **17 21 56.1 -1.5**
SATY Saty 119.45 305 *e*PKP **PKPdf** **17 21 56.7 -1.2**
baz=305
SATY Saty 119.45 305 *e*PKiKP **PKPdf** **17 21 56.6 -1.2**
NRIK Noril'sk 119.83 336 PKP **PKPdf** **17 21 56.4 -1.1**
comp=Z,3.9nm,0.6s,baz=82,slow=2.5,SNR=7.1
NRIK Noril'sk 119.83 336 *c i* PKiKP **PKPdf** **17 21 57.4 -0.2**
NRIK Noril'sk 119.83 336 PKPdf **PKPdf** **17 21 56.9 -0.6**
TDK Taldyqorghan 119.96 307 *e*PKP **PKPdf** **17 21 57.4 -1.2**
baz=307
TDK Taldyqorghan 119.96 307 *e*PKiKP **PKPdf** **17 21 57.4 -1.2**
EUNU Eureka 120.32 12 **PKPdf** **17 21 57.6 -0.8**
MDOK Medeo 120.44 305 *e*PKP **PKPdf** **17 21 58.3 -1.5**
baz=305
MDOK Medeo 120.44 305 *e*PKiKP **PKPdf** **17 21 58.2 -1.5**
TNSS Tian-Shan 120.47 305 *e*PKP **PKPdf** **17 21 59.1 -1.0**
baz=305
TNSS Tian-Shan 120.47 305 *e*PKiKP **PKPdf** **17 21 59.1 -1.0**
ULHL Ulahol 120.77 304 P **PKPdf** **17 22 00.3 -0.2**
SNR=12
KURK Kurchatov 121.12 314 PKiKP **PKPdf** **17 21 59.5 -1.1**
KURK Kurchatov 121.12 314 **PKPdf** **17 21 59.5 -1.1**
KURBB Kurchatov Arra 121.16 314 PKP **PKPdf** **17 21 59.5 -1.1**
comp=Z,7.7nm,0.6s,baz=112,slow=2.0,SNR=42
KURBB Kurchatov Arra 121.16 314 PKiKP **PKPdf** **17 21 58.7 -2.0**
TKM2 Tokmak 2 121.40 304 P **PKPdf** **17 22 00.9 -0.8**
SNR=8.6
KBK Karagaybulak 121.80 304 P **PKPdf** **17 22 02.0 -0.5**
SNR=8.9
UCH Uchtor 122.01 303 P **PKiKP** **17 22 03.2 -0.2**
SNR=15
CHMS Chumysh 122.03 304 P **PKPdf** **17 22 02.1 -0.6**
SNR=9.8
AAK Ala-Archa 122.12 304 PKP **PKPdf** **17 22 02.1 -0.9**
comp=Z,5.5nm,0.6s,baz=141,slow=2.7,SNR=18
AAK Ala-Archa 122.12 304 P **PKPdf** **17 22 02.4 -0.6**
SNR=10
AAK Ala-Archa 122.12 304 *c i* PKiKP **PKPdf** **17 22 02.3 -0.7**
AAK pmax pmax
comp=Z,15nm,0.6s
AAK Ala-Archa 122.12 304 PKPdf **PKPdf** **17 22 01.9 -1.2**
F60A Warwick 122.15 52 P 17 22 03.0
baz=258
SGDS Sogindy 122.22 305 *e*PKP **PKPdf** **17 22 01.7 -1.4**
baz=305
SGDS Sogindy 122.22 305 *e*PKiKP **PKPdf** **17 22 01.7 -1.4**
AML Almayashu 122.58 303 P **PKPdf** **17 22 04.0 -0.3**
SNR=16
EKS2 Erkin-Say 122.64 304 P **PKPdf** **17 22 03.7 -0.3**
SNR=11
BTLS Baital 122.98 306 *e*PKP **PKPdf** **17 22 03.2 -1.2**
baz=306
BTLS Baital 122.98 306 *e*PKiKP **PKPdf** **17 22 03.2 -1.2**
PKME Peaks-Kenny Pk 123.84 54 P 17 22 05.8
baz=259
F63A Nahmakanta, Br 124.05 53 P 17 22 06.2
baz=259
TULEG Thule 124.11 15 **PKPdf** **17 22 04.9 -0.7**
KBL Kabul 124.17 293 PKiKP **PKPdf** **17 22 06.8 -0.5**
KBL Kabul 124.17 293 PKPdf **PKPdf** **17 22 06.8 -0.5**
G64A Maxfield 124.21 54 P 17 22 06.7
baz=259
GAR Garm 124.33 299 PKPdf **PKPdf** **17 22 07.1 -0.3**
DZA Taraz 124.45 303 *e*PKP **PKPdf** **17 22 06.1 -1.2**
baz=303
DZA Taraz 124.45 303 *e*PKiKP **PKPdf** **17 22 06.1 -1.2**
H65A Eastbrook 124.46 54 P 17 22 06.5
baz=259
E63A Oxbow 124.65 52 P 17 22 06.7
baz=260
D63A Stockholm 124.96 52 P 17 22 07.7
baz=261
KK31 Karatay Array 125.08 303 PKiKP **PKPdf** **17 22 08.0 -0.5**
KK31 Karatay Array 125.08 303 **PKPdf** **17 22 08.0 -0.5**
KKAR Karatay Array 125.08 303 PKiKP **PKPdf** **17 22 07.1 -1.4**
KKAR Karatay Array 125.08 303 PKPdf **PKPdf** **17 22 07.1 -1.4**
KKAR Karatay Array 125.08 303 PKPdf **PKPdf** **17 22 07.3 -1.2**
IUG Iuzhnay 125.24 302 *e*PKP **PKPdf** **17 22 08.2 -0.8**
baz=302
IUG Iuzhnay 125.24 302 *e*PKiKP **PKPdf** **17 22 08.1 -0.8**
BRVK Borovoye 126.55 316 *c i* PKiKP **PKPdf** **17 22 10.4 -0.6**
BRVK pmax pmax
comp=Z,12nm,0.8s
BRVK Borovoye 126.55 316 PKPdf **PKPdf** **17 22 09.9 -1.0**
SOCY Socotra 128.52 261 PKPdf **PKPdf** **17 22 15.3 -0.7**
AB31 Akbulak array 132.96 310 *i* PKiKP **PKPdf** **17 22 21.3 -1.9**
ABKAR Akbulak array 132.96 310 PKPpre 17 22 15.9
ABKAR Akbulak array 132.96 310 PKPdf **PKPdf** **17 22 22.5 -0.7**
SUMG Summit 133.03 15 PKiKP **PKPdf** **17 22 23.1 -0.1**
SUMG Summit 133.03 15 PKPdf **PKPdf** **17 22 23.1 -0.1**
ARU Arti 133.20 320 *i* PKiKP **PKiKP** **17 22 24.5 -0.2**
ARU 17 24 51.5
ARU SS SS 17 42 28.4 -3.4
ARU Arti 133.20 320 PKPdf **PKPdf** **17 22 22.3 -1.2**
GEYT Alibeck 133.52 295 PKP **PKPdf** **17 22 24.3 -0.4**
comp=Z,6.7nm,1.0s,baz=215,slow=1.8,SNR=7.1
GEYT Alibeck 133.52 295 **PKPdf** **17 22 24.8 0.0**
KMBO Kilima Mbogo 133.75 233 PKP **PKPdf** **17 22 25.7 -0.5**
comp=Z,1.0nm,0.6s,baz=62,slow=4.4,SNR=4.8
KIRV Kirov 137.45 325 *c i* PKiKP **PKPdf** **17 22 31.4 +0.1**
ARCES ARCESS Array B 138.84 348 PKhKP PKPpre 17 22 24.5
comp=Z,2.4nm,0.5s,baz=60,slow=1.7,SNR=22
ARCES PKP **PKPdf** **17 22 32.9 -0.7**
comp=Z,6.4nm,0.6s,baz=31,slow=2.1,SNR=6.1
RAYN Ar Rayn 140.63 270 PKiKP **PKPdf** **17 22 38.0 -0.3**
RAYN Ar Rayn 140.63 270 PKPdf **PKPdf** **17 22 38.0 -0.3**
KLMR Klimovskoe 140.93 332 *e*PKiKP **PKPdf** **17 22 35.9 -1.7**
KLMR pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 140.93 332 *e*PKPdf **PKPdf** **17 22 36.0 -1.7**
KLMR AMP 17 22 42.6
comp=Z,11nm,0.8s
LOF Lofoten 141.89 353 *e*PKPdf **PKPdf** **17 22 39.7 +0.6**
GNI Garni 144.04 297 *c i* PKiKP **PKiKP** **17 22 46.0 -1.6**
GNI pmax pmax
comp=Z,16nm,1.0s
VRH Novokhopyorsk 144.13 316 *e*PKiKP **PKPdf** **17 22 44.6 +1.0**
VRH pmax pmax

	comp=Z,10.0nm,0.6s						
MOS	**Moscow**	**144.47 325**	*i* PKIKP	**PKPab**	**17 22 40.9**	**-1.5**
MOS			pmax	pmax		
	comp=Z,40nm,0.7s						
ZEI	**Tsey**	**144.50 302**	*i* PKIKP	**PKPab**	**17 22 42.3**	**-1.0**
ZEI			pmax	pmax		
	comp=Z,9.0nm,0.6s						
GOF	**Gofitskoye**	**144.81 306**↑	*e*PKIKP	**PKPab**	**17 22 44.0**	**-0.1**
GOF			pmax	pmax		
	comp=Z,41nm,0.6s						
KBZ	**Khabaz**	**145.12 304**	PKPbc	**PKPbc**	**17 22 44.5**	**-0.6**
	comp=Z,18nm,0.8s,baz=185,slow=1.9,SNR=22						
KBZ	**Khabaz**	**145.12 304**	*i* PKIKP	**PKPbc**	**17 22 45.0**	**-0.1**
LPSR	**Galich'ya Gora**	**145.22 320**	*e*PKP2	**PKPbc**	**17 22 44.1**	**-1.0**
LPSR			pmax	pmax		
	comp=Z,50nm,0.8s						
KIV	**Kislovodsk**	**145.24 304**	*i* PKIKP	**PKPbc**	**17 22 45.2**	**-0.5**
KIV			pmax	pmax		
	comp=Z,59nm,1.1s						
KIV			MLR	MLR		
	comp=Z,174nm,25.0s						
KIV	**Kislovodsk**	**145.24 304**		**PKPbc**	**17 22 44.4**	**-1.3**
SHA1	**Shidzhatmaz**	**145.29 304**	*i* PKIKP	**PKPbc**	**17 22 45.3**	**-0.7**
OBN	**Obninsk**	**145.31 325**c	*i* PKIKP	**PKPbc**	**17 22 44.6**	**-0.7**
OBN			*i*		17 22 58.9	
OBN			pmax	pmax		
	comp=Z,46nm,0.8s						
OBN	**Obninsk**	**145.31 325**		**PKPbc**	**17 22 43.7**	**-1.6**
NEY	**Neytrino**	**145.31 303**	*i* PKIKP	**PKPdf**	**17 22 45.3**	**-0.9**
FIA1	**FINESS Array S**	**145.35 340**		**PKPdf**	**17 22 44.4**	**-1.0**
FINES	**FINESS Array B**	**145.36 340**	PKPbc	**PKPdf**	**17 22 44.5**	**-0.9**
	comp=Z,56nm,0.5s,baz=61,slow=3.6,SNR=532						
GEVA	**Gevas**	**145.38 294**		**PKPdf**	**17 22 45.1**	**-1.3**
NSS	**Namsos**	**145.54 352**	*e*PKPbc	**PKPab**	**17 22 45.9**	**-0.2**
VSR	**Storozhevoye**	**145.63 317**	*e*PKIKP	**PKPdf**	**17 22 45.3**	**-0.9**
VSR			pmax	pmax		
	comp=Z,60nm,0.6s						
VORD	**Divnogorie**	**145.65 317**	*e*PKP2	**PKPdf**	**17 22 46.0**	**-0.2**
VORD			pmax	pmax		
	comp=Z,30nm,0.7s						
MARD	**Mardin**	**147.18 292**	PKPdf	**PKPdf**	**17 22 50.2**	**+0.8**
KOPT	**Kop Dagi**	**147.30 297**		**PKPdf**	**17 22 49.3**	**-0.4**
VSU	**Vasula**	**147.42 336**	*e*P	**PKPbc**	**17 22 51.5**	**0.0**
MOL	**Molde**	**147.89 355**	*e*PKPdf	**PKPdf**	**17 22 50.0**	**+0.4**
MTSE	**Matsula**	**148.21 338**	*e*P	**PKPbc**	**17 22 53.6**	**0.0**
DOMB	**Dombas**	**148.28 353**	*e*PKPbc	**PKPbc**	**17 22 53.5**	**-0.3**
AKN	**Aaknes**	**148.32 355**	*e*PKPdf	**PKPdf**	**17 22 50.7**	**+0.3**
ANN	**Anapa**	**148.76 307**	*i* PKP2	**PKPbc**	**17 22 54.8**	**-0.7**
ANN			pmax	pmax		
	comp=Z,31nm,0.7s						
NC303	**NORSAR Array S**	**148.81 351**		**PKPdf**	**17 22 52.2**	**+1.0**
NC204	**NORSAR Array S**	**148.84 352**		**PKPdf**	**17 22 50.6**	**-0.7**
NC405	**NORSAR Array S**	**148.87 351**	PKPdf	**PKPbc**	**17 22 53.1**	**-2.2**
NB201	**NORSAR Array S**	**148.99 351**		**PKPbc**	**17 22 55.1**	**-0.5**
NB2	**NORSAR Subarra** baz=14,slow=2.6	**149.01 351**	PKP	**PKPbc**	**17 22 55.4**	**-0.3**
NOA	**NORSAR Array B**	**149.01 351**	PKPbc	**PKPbc**	**17 22 55.0**	**-0.7**
	comp=Z,11nm,0.6s,baz=15,slow=4.2,SNR=41						
FOO	**Floro**	**149.01 357**	*e*PKPbc	**PKPbc**	**17 22 55.6**	**+0.1**
FOO			*e*PKPab	**PKPab**	**17 22 59.9**	**+0.1**
NBO00	**NORSAR Array S**	**149.08 351**		**PKPbc**	**17 22 55.2**	**-0.6**
NAO01	**NORSAR Array S**	**149.24 351**		**PKPbc**	**17 22 56.2**	**0.0**
NC602	**NORSAR Array S**	**149.26 351**		**PKPbc**	**17 22 55.2**	**-1.0**
NC602	**NORSAR Array S**	**149.26 351**	*e*PKPdf	**PKPdf**	**17 22 52.2**	**+0.3**
NC602			*e*PKPbc	**PKPbc**	**17 22 55.9**	**-0.3**
HYA	**Hoyanger**	**149.38 356**	*e*PKPdf	**PKPdf**	**17 22 52.1**	**+0.1**
HYA			*e*PKPbc	**PKPbc**	**17 22 56.5**	**+0.1**
SUE	**Sulen**	**149.57 357**	*e*PKPbc	**PKPbc**	**17 22 57.1**	**+0.1**
IDID	**Didziasalis**	**149.68 331**	*e*P	**PKPbc**	**17 22 57.6**	**+0.2**
SKAR	**Skarslia**	**149.69 354**	*e*PKPdf	**PKPdf**	**17 22 52.8**	**+0.1**
SKAR			*e*PKPbc	**PKiKP**	**17 22 57.6**	**-0.8**
MNK	**Minsk**	**149.74 329**	*i* PKP	**PKPdf**	**17 22 53.5**	**+0.7**
	comp=E,5.0nm,1.2s						
MNK			*i* PKP	**PKPdf**	**17 22 53.5**	**+0.7**
	comp=N,25nm,1.0s						
MNK			*i* PKP	**PKPdf**	**17 22 53.5**	**+0.7**
	comp=Z,93nm,1.1s						
MNK			*i* PP	**PP**	**17 26 33.0**	**+1.9**
MNK			*i* PPP	PPP	17 29 54.1	
MNK			*i* SKS	**SKSdf**	**17 29 57.2**	**-0.7**
MNK			*i* SS	**SS**	**17 45 46.1**	**+2.4**
MNK			*i* SSS	SSS	17 51 26.0	
MNK			*i* LQ	LQ	18 22 34.2	
MNK			*i* LR	LR	18 27 18.6	
MNK			*i* LRM	MLR	18 30 36.7	
	comp=N,108nm,28.9s						
MNK			*i* LRM	MLR	18 30 40.6	
	comp=E,9.0nm,19.7s						
MNK			*i* LRM	MLR	18 31 19.9	
	comp=Z,84nm,18.4s						
ISAL	**Salakas**	**149.75 332**	*e*P	**PKiKP**	**17 23 00.3**	**+1.7**
IIGN	**Ignalina**	**149.86 332**	*e*P	**PKiKP**	**17 22 58.2**	**-0.7**
NACGM	**Naroch**	**149.94 331**	*i* PKP	**PKPbc**	**17 22 58.2**	**+0.1**
NACGM			*i* PKP	**PKPbc**	**17 22 58.2**	**+0.1**
NACGM			*i* PKP	**PKPbc**	**17 22 58.2**	**+0.1**
NACGM			*i* Pb	**PKPab**	**17 23 02.6**	**-1.2**
	comp=Z,137nm,1.1s						
NACGM			*i* PP	**PP**	**17 26 33.4**	**+1.1**
NACGM			*i* PPP	PPP	17 29 48.2	
NACGM			*i* SKS	SKSdf	17 30 26.7	+29
NACGM			*i* SKKS	**SKKSac**	**17 33 22.7**	**+2.3**
NACGM			*i* SS	SS	17 44 55.7	-50
NACGM			*i* SSS	SSS	17 51 17.4	
NACGM			*i* LQ	LQ	18 21 18.1	
NACGM			*i* LR	LR	18 32 41.9	
GAZ	**Gaziantep**	**150.03 292**	PKPdf	**PKPdf**	**17 22 53.1**	**-0.9**
ASK	**Askoy**	**150.12 357**	*e*PKPbc	**PKiKP**	**17 22 58.5**	**-0.6**
OSL	**Oslo**	**150.14 351**	*e*PKPdf	**PKPdf**	**17 22 53.6**	**+0.3**
BER	**Bergen**	**150.21 356**	*e*PKPdf	**PKPdf**	**17 22 53.1**	**-0.3**
BER			*e*PKPbc	**PKiKP**	**17 22 58.9**	**-0.5**
KONO	**Kongsberg**	**150.57 352**c	*i* PKIKP	**PKPbc**	**17 22 59.4**	**0.0**
KONO			pmax	pmax		
	comp=Z,30nm,0.7s						
KONO	**Kongsberg**	**150.57 352**		**PKPbc**	**17 22 58.9**	**-0.5**
KONO	**Kongsberg**	**150.57 352**	*e*PKPdf	**PKPdf**	**17 22 54.3**	**+0.3**
KONO			*e*PKPbc	**PKPbc**	**17 22 59.3**	**-0.1**
KONO			*e*PKPab	**pPKPdf**	**17 23 06.8**	**+2.0**
ODD1	**Odda**	**150.60 355**	*e*PKPdf	**PKPdf**	**17 22 54.3**	**+0.2**
ODD1			*e*PKPbc	**PKiKP**	**17 22 59.8**	**-0.5**
PABE	**Paberze**	**150.63 334**	*e*P	**PKiKP**	**17 22 59.9**	**-0.5**
PABE	**Paberze**	**150.63 334**		**PKPbc**	**17 22 59.6**	**-0.1**
STRU	**Stroemstad**	**150.95 350**	*i* P	**PKPbc**	**17 23 00.1**	**-0.3**
PBUR	**Paburge**	**150.97 337**	*e*P	**PKPbc**	**17 23 00.3**	**-0.2**
BLS5	**Blasjo**	**151.10 355**	*e*PKPbc	**PKiKP**	**17 23 01.1**	**-0.2**
GHAJ	**Ghor Haditha**	**151.10 280**		**PKPbc**	**17 23 00.7**	**-0.9**
KMY	**Karmoy**	**151.38 356**	*e*PKPbc	**PKiKP**	**17 23 01.5**	**-0.3**
AKASG	**Malin Array Be**	**151.42 322**	PKPbc	**PKPbc**	**17 23 01.1**	**-0.6**
	comp=Z,27nm,0.6s,baz=49,slow=2.7,SNR=47						
AKBB	**Malin Array Si**	**151.42 322**	PKIKP	**PKPbc**	**17 23 00.8**	**-0.9**
AKBB	**Malin Array Si**	**151.42 322**		**PKPbc**	**17 23 00.8**	**-0.9**
BORU	**Boraas**	**152.01 347**	*i* P	**PKPbc**	**17 23 02.4**	**-0.5**
HOMB	**Homborsund**	**152.04 352**	*i* P	**PKiKP**	**17 23 03.1**	**-0.1**
HOMB			IAmb	IAmb	17 23 03.9	
	comp=Z,42nm,0.7s						
HOMB	**Homborsund**	**152.04 352**	*e*PKPbc	**PKiKP**	**17 23 03.3**	**+0.1**
SUW	**Suwalki**	**152.05 333**	*e*PKP	**PKPbc**	**17 23 02.4**	**-0.6**
SUW	**Suwalki**	**152.05 333**	*e*P	**PKPbc**	**17 23 02.7**	**-0.3**
SUW	**Suwalki**	**152.05 333**	PKIKP	**PKPbc**	**17 23 02.0**	**-1.0**
SUW	**Suwalki**	**152.05 333**		**PKPbc**	**17 23 02.0**	**-1.0**
SNART	**Snartemo**	**152.11 354**	*i* P	**PKiKP**	**17 23 03.2**	**-0.2**
SNART			IAmb	IAmb	17 23 04.0	
	comp=Z,27nm,0.6s						
SNART	**Snartemo**	**152.11 354**	*e*PKPdf	**PKPdf**	**17 22 56.5**	**+0.2**
SNART			*e*PKPbc	**PKiKP**	**17 23 03.7**	**+0.3**
ILGA	**Ilgaz**	**152.28 301**		**PKiKP**	**17 23 04.4**	**-0.2**
ONAU	**Onsala**	**152.39 348**	*i* P	**PKiKP**	**17 23 03.5**	**-0.4**
BLEU	**Blekinge**	**152.56 343**	*i* P	**PKPbc**	**17 23 03.7**	**-0.4**
BR131	**Keskin Array S**	**152.58 298**	PKIKP	**PKPbc**	**17 23 03.6**	**-1.3**
BR131	**Keskin Array S**	**152.58 298**		**PKPbc**	**17 23 03.6**	**-1.3**
BRTR	**Keskin Array B**	**152.58 298**	PKPbc	**PKPbc**	**17 23 04.1**	**-0.8**
	comp=Z,9.5nm,0.6s,baz=144,slow=2.9,SNR=18						
BRTR	**Keskin Array B**	**152.58 298**	PKIKP	**PKPbc**	**17 23 03.6**	**-1.3**
BRTR	**Keskin Array B**	**152.58 298**		**PKPbc**	**17 23 03.6**	**-1.3**
FABU	**Falkenberg**	**152.61 347**	*i* P	**PKPbc**	**17 23 03.8**	**-0.4**
DEL	**Delary**	**152.87 345**	*i* P	**PKiKP**	**17 23 04.6**	**-0.3**
ANTO	**Ankara**	**153.19 298**	PKIKP	**PKPbc**	**17 23 05.7**	**-0.5**
ANTO	**Ankara**	**153.19 298**		**PKPbc**	**17 23 05.7**	**-0.5**
CSS	**Mathiatis**	**153.22 288**		**PKPbc**	**17 23 05.3**	**-1.0**
BSD	**Bornholm Skovb**	**153.85 343**	*e*P	**PKiKP**	**17 23 06.8**	**-0.3**
BSD	**Bornholm Skovb**	**153.85 343**	*i* P	**PKiKP**	**17 23 06.7**	**-0.3**
BSD			IAmb	IAmb	17 23 07.4	
	comp=Z,11nm,0.6s						
BSD	**Bornholm Skovb**	**153.85 343**	*i* PKIKP	**PKPbc**	**17 23 06.6**	**-0.4**
BSD			pmax	pmax		
	comp=Z,11nm,0.6s						
MDUB	**Mudurnu**	**154.27 300**		**PKPdf**	**17 23 00.5**	**+0.2**
BEL	**Belsk**	**154.65 332**	*e*PKP	**PKiKP**	**17 23 09.5**	**+0.7**
DBIC	**Dimbokro**	**155.30 164**	PKP	**PKPdf**	**17 23 02.1**	**-0.2**
	comp=Z,3.9nm,0.5s,baz=207,slow=1.7,SNR=9.1						
DBIC			PKKPab		17 30 02.1	
	comp=Z,4.5nm,0.9s,baz=82,slow=2.3,SNR=3.0						
BUR08	**Bucovina Ar. S**	**155.33 320**		**PKPdf**	**17 23 00.3**	**-1.2**
BURAR	**Bucovina Array**	**155.34 320**	PKPdf	**PKPdf**	**17 23 00.5**	**-1.0**
BURAR				**pPKPdf**	**17 23 10.8**	**-1.6**
KWP	**Kalwaria Pacla**	**155.38 326**	*e*PKP	PKPab	17 23 14.2	-13
KWP	**Kalwaria Pacla**	**155.38 326**		PKPdf	17 23 11.1	+10
UZH	**Uzhgorod**	**156.25 325**	*e*PKIKP	PKPdf	17 23 10.5	+8.0
CRVS	**Cervenica-Dubn**	**156.47 326**	*e*PKP2	**PKPab**	**17 23 31.5**	**-0.1**
CRVS	**Cervenica-Dubn**	**156.47 326**	*e*PKP	**PKPab**	**17 23 31.5**	**-0.1**
CHVC	**Chvalec**	**157.44 336**	*e*PKPAB	**PKPab**	**17 23 35.8**	**+0.1**
DPC	**Dobruska-Polom**	**157.54 335**	*e*PKP2	**PKPab**	**17 23 35.7**	**-0.5**
DPC	**Dobruska-Polom**	**157.54 335**	*e*PKPAB	**PKPab**	**17 23 35.7**	**-0.5**
KRLC	**Kraliky**	**157.60 334**	*e*PKP2	**PKPab**	**17 23 34.9**	**-1.5**
KRLC	**Kraliky**	**157.60 334**	*e*PKPAB	**PKPab**	**17 23 34.9**	**-1.5**
CLL	**Collm**	**157.78 341**	*i* (PKP)	PKPdf	17 23 13.1	+8.7
	comp=Z,9.0nm,1.1s						
CLL			*i* pPKPdf	pPKPdf	17 23 15.2	0.0
CLL			*i* sPKPdf	sPKPdf	17 23 19.3	+0.3
CLL			*i* PKPab	**PKPab**	**17 23 36.3**	**-0.8**
	comp=Z,9.0nm,0.8s						
CLL			*i*		17 23 40.1	
	comp=Z,13nm,0.7s						
CLL			*e*PPS	PPS	17 40 48.0	
CLL			*e*SSSS		17 57 48.0	
CLL			L	L	18 35 00.0	
	comp=Z,100nm,18.3s						
CLL	**Collm**	**157.78 341**	PKIKP	**PKPdf**	**17 23 03.2**	**-1.2**
CLL	**Collm**	**157.78 341**	PKPdf	**PKPdf**	**17 23 03.2**	**-1.2**
BRG	**Berggiesshubel**	**157.90 339**	Amp		17 23 41.3	
	comp=Z,8.5nm,0.8s						
BRG	**Berggiesshubel**	**157.90 339**	*e*PKP	PKPdf	17 23 20.1	+16
BRG	**Berggiesshubel**	**157.90 339**	Amp		17 23 21.2	
	comp=Z,3.2nm,0.9s						
BRG	**Berggiesshubel**	**157.90 339**	*ex*	x	17 23 37.3	
PRU	**Pruhonice**	**158.47 337**	*e*PKP2	**PKPab**	**17 23 43.4**	**+3.3**
PRU	**Pruhonice**	**158.47 337**	*e*PKPAB	**PKPab**	**17 23 43.4**	**+3.3**
MODS	**Modra-Piesok**	**158.75 331**	*e*PKIKP	**PKPdf**	**17 23 05.5**	**-0.2**
MODS			*e*		17 23 41.0	
MODS	**Modra-Piesok**	**158.75 331**	*e*PKP	**PKPdf**	**17 23 05.5**	**-0.2**
MODS			*e*		17 23 41.0	
KHC	**Kasperske Hory**	**159.53 337**	*e*PKIKP	**PKPdf**	**17 23 06.1**	**-0.5**
KHC			*e*		17 23 44.7	
KHC	**Kasperske Hory**	**159.53 337**	*e*PKPDF	**PKPdf**	**17 23 06.1**	**-0.5**
KHC			*e*PKPAB	**PKPab**	**17 23 44.7**	**-0.1**
CKRC	**Cesky Krumlov**	**159.54 336**	*e*PKPAB	**PKPab**	**17 23 44.8**	**-0.1**
GERES	**GERESS Array B**	**159.73 337**	PKP	**PKPdf**	**17 23 06.1**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=103,slow=4.2,SNR=5.2						
GERES			PKPab	**PKPab**	**17 23 45.0**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=33,slow=5.1,SNR=4.9						
BCLA	**Clavier**	**160.12 353**	*d*PKPab	**PKPab**	**17 23 46.2**	**-1.0**
BCLA			*dx*	x	17 23 49.7	
BMRD	**Maredsous**	**160.28 354**	*d*PKPab	**PKPab**	**17 23 47.6**	**-0.3**
GROS	**Grobnik**	**161.00 330**	*e*PKPdf	**PKPdf**	**17 23 06.8**	**-1.6**
LJU	**Ljubljana**	**161.74 331**	*i* PKPdf	**PKPdf**	**17 23 07.9**	**-1.2**
VISS	**Visnje**	**161.80 330**	*e*PKPdf	**PKPdf**	**17 23 08.2**	**-1.0**
MOTA	**Moosalm**	**161.89 339**	*e*P	**PKPab**	**17 23 55.6**	**+0.3**
	comp=Z,3.7nm,0.6s						
SQTA	**Sankt Quirin**	**161.97 339**	*e*P	**PKPab**	**17 23 56.2**	**+0.6**
	comp=Z,5.2nm,0.6s						
FETA	**Feichten**	**162.29 340**	*e*P	**PKPab**	**17 23 57.6**	**+0.5**
	comp=Z,5.5nm,0.9s						
DAVA	**Damuels**	**162.29 342**	*e*P	**PKPab**	**17 23 57.0**	**-0.1**
	comp=Z,3.9nm,0.7s						
TOA0	**Torodi Ar. Sit**	**162.54 180**		**PKPdf**	**17 23 09.4**	**-1.4**
TOA0			PKPab	**PKPab**	**17 23 58.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**162.54 180**	PKP	**PKPdf**	**17 23 10.3**	**-0.5**
	comp=Z,4.5nm,0.9s,baz=259,slow=0.3,SNR=20						
TORD			PKPab	**PKPab**	**17 23 57.9**	**-0.8**
	comp=Z,16nm,0.7s,baz=176,slow=3.8,SNR=25						
TORD	**Torodi Ar. Bea**	**162.54 180**		**PKPdf**	**17 23 10.7**	**-0.1**
KOWA	**Kowa**	**163.02 160**		**PKPdf**	**17 23 11.1**	**-0.2**
TUE	**Stuetta**	**163.19 342**		**PKPdf**	**17 23 08.7**	**-2.1**
TUE			PKPab	**PKPab**	**17 23 59.3**	**-1.8**
POLO	**Lamas de Olo**	**166.83 33**	*e*PKPdf	**PKPdf**	**17 23 14.4**	**+0.5**
PCBR	**Castelo Branco**	**168.15 37**	*e*PKPdf	**PKPdf**	**17 23 15.9**	**+1.1**
EVO	**Evora**	**168.76 43**	*e*PKPdf	**PKPdf**	**17 23 16.6**	**+1.4**
PBAR	**Barrancos**	**169.57 42**	*e*PKPdf	**PKPdf**	**17 23 16.8**	**+1.1**
PBDV	**Barranco-do-Ve**	**169.62 48**	*e*PKPdf	**PKPdf**	**17 23 17.6**	**+1.7**
PAB	**San Pablo**	**169.84 28**	PKIKP	**PKPdf**	**17 23 15.8**	**-0.2**
PAB	**San Pablo**	**169.84 28**		**PKPdf**	**17 23 15.8**	**-0.2**
ESDC	**Sonseca Array**	**169.88 26**	PKP	**PKPdf**	**17 23 15.3**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=343,slow=4.0,SNR=15						
ESDC			PKPab	**PKPab**	**17 24 30.3**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=323,slow=3.9,SNR=5.3						
ESDC	**Sonseca Array**	**169.88 26**		**PKPdf**	**17 23 15.1**	**-0.9**

*SNET **22** 17:10:05.7±0.8, 13°.20N×89°.19W, h54km±5km, ML3.5*
*INET **22** 17:10:05.2, 13°.14N×89°.18W, h53km, MW3.4*
*GCG **22** 17:10:23.3±0.3, 14°.53N×90°.01W, h56km±8km, MD3.6*

ISC 22 17:10:06.7±1.7, 13°.2N±0°.1×89°.16W±0°.05, h55km, n30, σ0s60/38, 7C-5D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.31**	**330**	*e*P		**Pn**		**17 10 15.4**	**-1.0**
LALI				*e*S		**Sn**		**17 10 22.8**	**-0.5**
LFRS	**El Faro**	**0.41**	**13**	*i*P		**Pn**		**17 10 16.8**	**-0.7**
SNET	**Serv Nac Est T**	**0.47**	**351**	*e*P		**Pn**		**17 10 17.9**	**-0.2**
SNET				*e*S		**Sn**		**17 10 26.4**	**+0.2**
SNET				IAML				17 10 28.8	
	comp=Z,2μm,0.2s								
AEIL	**Aeropuerto Ilo**	**0.48**	**5**	*e*P		**Pn**		**17 10 17.7**	**-0.4**
AEIL				IAML				17 10 30.5	
	comp=Z,4μm,0.2s								
COEG	**Centro de Oper**	**0.48**	**34**	*i*P		**Pn**		**17 10 17.4**	**-0.7**
COEG				*e*S		**Sn**		**17 10 26.8**	**+0.3**
COEG				IAML				17 10 28.8	
	comp=Z,3μm,0.2s								
IGN	**Direccin Gen**	**0.49**	**359**	*e*P		**Pn**		**17 10 17.8**	**-0.5**
UDBS	**Universidad Do**	**0.49**	**0**	*e*P		**Pn**		**17 10 17.9**	**-0.4**
UEES	**Universidad Ev**	**0.50**	**351**	*e*P		**Pn**		**17 10 17.7**	**-0.7**
BOQS	**Boqueron**	**0.53**	**347**	*e*P		**Pn**		**17 10 18.3**	**-0.5**
BOQS				*e*S		**Sn**		**17 10 28.2**	**+0.6**
LBRS	**Las Brisas**	**0.53**	**12**	*e*P		**Pn**		**17 10 18.5**	**-0.2**
LFU	**La Fuente**	**0.53**	**5**	*e*P		**Pn**		**17 10 18.4**	**-0.3**
PAVA	**Las Pavas**	**0.54**	**24**	*e*P		**Pn**		**17 10 18.4**	**-0.4**
PAVA				*e*S		**Sn**		**17 10 28.5**	**+0.9**
UESV	**Universidad de**	**0.55**	**41**	*e*P		**Pn**		**17 10 18.4**	**-0.6**
UESV				IAML				17 10 28.9	
	comp=Z,2μm,0.1s								
ALJI	**Alcalda de J**	**0.58**	**79**	*e*P		**Pn**		**17 10 18.7**	**-0.5**
COEB	**Comit de Eme**	**0.67**	**65**	*e*P		**Pn**		**17 10 19.7**	**-0.7**
COEB				*e*S		**Sn**		**17 10 30.9**	**+0.5**
COEB				IAML				17 10 32.7	
	comp=Z,1μm,0.2s								
TECA	**Tecapa**	**0.69**	**67**	*e*P		**Pn**		**17 10 20.2**	**-0.5**
SBLS	**San Blas**	**0.77**	**324**	*e*P		**Pn**		**17 10 21.1**	**-0.6**
SNJE	**San Jose**	**0.78**	**326**	*e*P		**Pn**		**17 10 21.1**	**-0.7**
RTR	**El Retiro**	**0.82**	**325**	*e*P		**Pn**		**17 10 21.8**	**-0.6**
PACA	**Pacayal**	**0.85**	**73**	*e*P		**Pn**		**17 10 22.6**	**-0.1**
LCY	**Lacayo**	**0.86**	**76**	*e*P		**Pn**		**17 10 22.7**	**-0.2**
JUCU	**Jucuarn**	**0.89**	**88**	*e*P		**Pn**		**17 10 23.0**	**-0.1**
JUCU				*e*S		**Sn**		**17 10 35.2**	**0.0**
JUCU				IAML				17 10 40.3	
	comp=Z,1μm,0.4s								
MTO3	**Montecristo**	**1.19**	**351**	*i*P		**Pn**		**17 10 26.7**	**-0.6**
LCND	**La Caada**	**1.24**	**86**	*i*P		**Pn**		**17 10 27.3**	**-0.4**
LCND				*e*S		**Sn**		**17 10 44.4**	**+1.0**
CNCH	**Conchagua**	**1.29**	**87**	*e*P		**Pn**		**17 10 28.0**	**-0.6**
ESQI	**Esquipulas**	**1.35**	**352**	*i*P		**Pn**		**17 10 29.1**	**-0.2**
NBG	**Las Nubes**	**1.79**	**320**	*e*P		**Pn**		**17 10 34.4**	**-1.0**
PCG	**Pacaya**	**1.83**	**310**	*e*P		**Pn**		**17 10 37.0**	**+1.0**
MRL	**Marmol**	**1.92**	**345**	*e*P		**Pn**		**17 10 37.2**	**0.0**
FUG	**Fuego 3**	**2.04**	**307**	*e*P		**Pn**		**17 10 39.4**	**+0.6**
FUG				*e*S		Sn		17 10 51.9	-11

IDC 22 17:20:06.8±7.4, 19°.28S×178°.38W, h656km±43km, mb3.0/3, mb1 3.1/4, mb1mx2.7/36, mbtmp4.0/4, Error ellipse: s-maj=221.0km s-min=93.9km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.73**	**294**	P		P		17 21 34.7	-0.2
	1.6nm,0.3s,baz=228,slow=23,SNR=6.4								
CTA	**Charters Tower**	**33.28**	**263**	P		P		17 25 54.0	+0.4
	1.5nm,0.3s,baz=93,slow=9.2,SNR=6.5								
WRA	**Warramunga Arr**	**44.43**	**261**	P		P		17 27 22.7	+0.1
	1.7nm,0.7s,baz=97,slow=6.9,SNR=28								
ASAR	**Alice Springs**	**44.47**	**256**	P		P		17 27 22.8	-0.1
	0.9nm,0.3s,baz=87,slow=8.7,SNR=39								
AKASG	**Malin Array Be**	**141.78**	**332**	PKP	PKPdf			17 38 25.1	-0.4
	0.6nm,0.5s,baz=43,slow=4.3,SNR=4.6								

*IDC **22** 17:23:46.3±1.1, 36°.56N×141°.11E, h0km, mb3.7/7, mb1 3.8/14, mb1mx3.6/52, mbtmp3.8/14, ML3.3/4, MS2.4/1, Ms1 2.4/1, ms1mx2.2/40, Error ellipse: s-maj=23.6km s-min=15.0km az=83.0*
*JMA **22** 17:23:52.6±0.1, 36°.62N×140°.97E, h47km±1km, M3.9*
JMA Felt II J1.
*NIED **22** 17:23:52.6, 36°.62N×140°.97E, h47km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.34; Mθθ-1.67; Mφφ0.33; Mrθ-0.30; Mrφ-4.89; Mθφ3.26; Fault plane solution: M06.08000×10¹⁴ NP1:φs10.00000°, δ79.00000°, λ34.00000°. NP2:φs272.00000°, δ56.00000°, λ167.00000°.*

ISC 22 17:23:49.5±1.6, 36°.54N±0°.05×141°.17E±0°.07, h27km±12km, n31, σ1s42/34, mb3.6/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.48**	**279**	P		P	**Pn**	**17 24 01.7**	**+1.0**
JHO				S		S	**Sn**	**17 24 07.9**	**-0.4**
JHYU	**Hitachinakayam**	**0.51**	**247**	P		P	**Pn**	**17 24 02.7**	**+1.7**
JHYU				eS		Sn	**Sn**	**17 24 09.8**	**+1.0**
ONAJ	**Iwakimizuishiy**	**0.64**	**333**	P		P	**Pn**	**17 24 03.3**	**+0.4**
ONAJ				S		Sn	**Sb**	**17 24 10.9**	**+0.2**
JFFD	**Fukushimafurud**	**0.73**	**319**	P		P	**Pn**	**17 24 04.5**	**+0.3**
JFFD				S		Sn	**Sb**	**17 24 12.7**	**-0.8**
JYT	**Yasato**	**0.84**	**249**	P		P	**Pn**	**17 24 06.5**	**+0.9**
JYT				eS		Sn	**Sn**	**17 24 16.6**	**-0.5**
JFK	**Kawauchi**	**0.86**	**344**	P		P	**Pn**	**17 24 06.3**	**+0.4**
JFK				eS		Sn	**Sb**	**17 24 16.2**	**-0.9**
JFT	**Otama**	**1.18**	**326**	P		P	**Pb**	**17 24 11.5**	**+0.2**
JFT				eS

ASAR	**Alice Springs**	**57.14**	**188**	P		**P**	**18**	**08**	**04.5** **+0.1**
	0.2nm,0.5s,baz=3.7,slow=7.4,SNR=7.6								

JMA ***22*** *18:20:07.4±0.1,30.°41N×142.°74E,h77km,M3.8*
IDC ***22*** *18:20:09.0±4.3,30.°26N×142.°36E,h0km,mb3.5/4,*
mb1 3.6/7,mb1mx3.4/43,mbtmp3.5/7,ML3.3/3,Error ellipse: s-maj=157.5km s-min=17.9km az=73.0
ISC 22 18:20:10.7±1.4**,30.°41N**±0.°07×**142.°6E**±0.°2**,h24**km**,n15,** σ2**19/17,mb3.5/4,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
CBIJ	**Chichi jima**	**3.32**	**186**	*e*S		**Sn**		**18 21 37.0**	**-2.8**
JCJ	**Chichijima**	**3.32**	**186**	Pn		**Pn**		**18 21 00.5**	**-0.7**
	6.2nm,0.3s,baz=94,slow=23,SNR=6.4								
JCJ					Sn			18 21 38.3	-1.5
	5.6nm,0.3s,baz=296,slow=23,SNR=2.6								
JHJ2	**Mitsune**	**3.58**	**320**	*e*S		**Sn**		**18 21 45.3**	**-0.9**
JHJ	**Hachijo jima 2**	**3.60**	**319**	Pn		**Pn**		**18 21 03.6**	**-1.4**
	6.7nm,0.3s,baz=282,slow=17,SNR=1.9								
JHJ					Sn			18 21 43.1	-3.7
	10nm,0.3s,baz=118,slow=23,SNR=6.3								
JMKN	**Mikurajimanish**	**4.30**	**325**	*e*S		**Sn**		**18 22 02.9**	**-1.1**
BSO1	**Boso 1**	**4.44**	**343**	S		**Sn**		**18 22 05.4**	**-1.3**
JOD2	**Odawara 2**	**5.66**	**330**	P		**Pn**		**18 21 31.7**	**-1.6**
JHU	**Hanno**	**6.09**	**334**	*e*S		**Sn**		**18 22 45.2**	**-3.0**
JHO	**Hitachi**	**6.41**	**345**	P		**Pn**		**18 21 41.0**	**-2.6**
JAG	**Ashikaga**	**6.54**	**337**	P		**Pn**		**18 21 43.8**	**-1.6**
MJAR	**Matsushiro Arr**	**7.12**	**330**	Pn		**Pn**		**18 21 52.9**	**-0.5**
	0.3nm,0.3s,baz=159,slow=10,SNR=18								
SONM	**Songino Array**	**32.66**	**312**	P		**P**		**18 26 44.1**	**+3.2**
	0.2nm,0.5s,baz=99,slow=9.2,SNR=2.4								
MKAR	**Makanchi Array**	**48.70**	**307**	P		**P**		**18 28 55.3**	**+2.3**
	0.1nm,0.5s,baz=87,slow=8.1,SNR=1.7								
WRA	**Warramunga Arr**	**50.69**	**190**	P		**P**		**18 29 08.7**	**+0.4**
	0.7nm,0.6s,baz=6.4,slow=7.6,SNR=10								
ASAR	**Alice Springs**	**54.41**	**190**	P		**P**		**18 29 36.2**	**+0.4**
	0.4nm,0.5s,baz=2.8,slow=5.4,SNR=19								

IDC ***22*** *18:37:22.5±1.8,1.°28N×126.°19E,h0km,mb3.6/3,*
mb1 3.9/3,mb1mx3.4/40,mbtmp3.7/3,MS2.8/1,Ms1 2.8/1,
ms1mx2.2/35,Error ellipse: s-maj=161.0km s-min=23.3km az=65.0
DJA ***22*** *18:37:36.3±0.9,2.°1N±5.°×12.°7E±.°,h81km±12km,M3.9/7,*
mb4.0/1,mB4.4/1,MLv3.9/7,Mw(mB)3.5/1
ISC 22 18:37:34.0±1.5**,1.°6N**±0.°1×**127.°28E**±0.°09**,h100**km**,n10,** σ1**69/13,mb3.7/3,Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TNTI	**Ternate**	**0.84**	**174**	P		**Pn**		**18 37 55.7**	**+2.9**
KMSI	**Cibinong**	**3.45**	**253**	P		**Pn**		**18 38 26.8**	**+1.0**
KMSI				S		**Sn**		**18 39 06.6**	**+0.7**
SANI	**Sanana**	**3.85**	**200**	P		**Pn**		**18 38 31.5**	**+0.2**
SANI				S		**Sn**		**18 39 13.1**	**-2.5**
GTOI	**Gorontalo**	**4.37**	**257**	P		**Pn**		**18 38 39.9**	**+1.7**
GTOI				S		**Sn**		**18 39 29.2**	**+1.1**
NLAI	**Namlea**	**4.82**	**182**	P		**Pn**		**18 38 46.0**	**+1.7**
NLAI				S		**Sn**		**18 39 39.7**	**+0.7**
APSI	**Ampana**	**6.16**	**246**	P		**Pn**		**18 39 03.3**	**+0.8**
WRA	**Warramunga Arr**	**22.51**	**162**	P		**P**		**18 42 24.6**	**-1.0**
	1.4nm,0.3s,baz=338,slow=11,SNR=36								
ASAR	**Alice Springs**	**25.94**	**166**	P		**P**		**18 42 56.2**	**-0.9**
	0.4nm,0.5s,baz=344,slow=7.8,SNR=13								
KSRS	**Korea Array**	**35.67**	**1**	LR		LR		18 58 31.2	
	comp=Z,15nm,21.3s,baz=81,slow=35								
MKAR	**Makanchi Array**	**59.60**	**326**	P		**P**		**18 47 26.0**	**-1.5**
	0.6nm,0.5s,baz=121,slow=7.8,SNR=14								

TAP ***22*** *19:00:37.8,24.°83N×122.°08E,h11km,ML2.5,C*
JMA ***22*** *19:00:39.1±0.1,24.°82N×122.°01E,h28km,M2.2*
ISC 22 19:00:37.8±1.0**,24.°82N**±0.°02×**122.°11E**±0.°02**,h8**km**±8**km**,**
n53,σ0**73/100,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TWB1	**Santiao Chiao**	**0.22**	**328**	*i* P		**Pg**		**19 00 42.5**	**+0.4**
	baz=340								
TWB1				*i* S		**Sg**		**19 00 45.3**	**+0.1**
	baz=340								
NTC	**Toucheng**	**0.26**	**277**	*i* P		**Pg**		**19 00 43.0**	**0.0**
	baz=274								
NTC				*e*S		**Sg**		**19 00 45.7**	**-0.8**
	baz=274								
TIPB	**Shuangxi**	**0.30**	**300**	*i* P		**Pg**		**19 00 44.0**	**+0.2**
	baz=301								
TIPB				*i* S		**Sg**		**19 00 47.5**	**-0.3**
	baz=301								
NWF	**Wu-fen Shan**	**0.39**	**309**	*i* P		**Pg**		**19 00 45.9**	**+0.5**
	baz=304								
NWF				*e*S		**Sg**		**19 00 50.6**	**0.0**
	baz=304								
WFSB	**Wu-fen Shan**	**0.39**	**309**	P		**Pg**		**19 00 45.9**	**+0.5**
	baz=303								
WFSB				S		**Sg**		**19 00 51.4**	**+0.9**
	baz=303								
TWE	**Neicheng**	**0.42**	**256**	*i* P		**Pg**		**19 00 45.8**	**-0.2**
	baz=251								
ENTT	**Nioudou**	**0.53**	**250**	*i* P		**Pg**		**19 00 48.2**	**+0.2**
	baz=244								
NHDH	**Xindian Distri**	**0.55**	**285**	*e*P		**Pb**		**19 00 50.2**	**+0.5**
	baz=274								
NHDH				*e*S		**Sg**		**19 00 55.9**	**+0.2**
	baz=274								
NWLT	**Wulai**	**0.56**	**265**	P		**Pg**		**19 00 48.2**	**-0.3**
	baz=262								
NWLT				S		**Sg**		**19 00 55.4**	**-0.5**
	baz=262								
TATO	**Taipei**	**0.59**	**285**	P		**Pg**		**19 00 49.5**	**+0.4**
	baz=275								
TATO				*e*S		**Sg**		**19 00 56.4**	**-0.5**
	baz=275								
NDT	**Datong Townshi**	**0.59**	**248**	P		**Pg**		**19 00 49.5**	**+0.3**
	baz=242								
NDT				*e*S		**Sg**		**19 00 56.8**	**-0.1**
	baz=242								
TWY	**Chenhua**	**0.65**	**314**	*i* P		**Pb**		**19 00 51.3**	**0.0**
	baz=316								
NTST	**Danshui**	**0.69**	**300**	*i* P		**Pb**		**19 00 52.3**	**+0.3**
	baz=300								
NNSB	**Datong**	**0.77**	**240**	P		**Pg**		**19 00 52.6**	**-0.1**
	baz=241								
NNSB				*e*S		**Sb**		**19 01 04.7**	**+0.5**
	baz=241								
NNSH	**Datong**	**0.77**	**240**	*i* P		**Pg**		**19 00 52.3**	**-0.4**
	baz=239								
NNSH				*e*S		**Sn**		**19 01 05.1**	**-1.8**
	baz=239								
NNS	**Nan Shan**	**0.77**	**241**	*i* P		**Pg**		**19 00 52.8**	**+0.1**
	baz=242								
NNS				*e*S		**Sg**		**19 01 01.5**	**-1.3**
	baz=242								
NACB	**Ninganchiao**	**0.80**	**216**	P		**Pb**		**19 00 53.7**	**-0.2**
	baz=202								
NACB				S		**Sg**		**19 01 03.4**	**-0.2**
	baz=202								
PCYT	**Pengchaiyu**	**0.80**	**357**	P		**Pn**		**19 00 55.1**	**-0.2**
	baz=11								
ETLH	**Xiulin Townshi**	**0.84**	**223**	P		**Pb**		**19 00 54.4**	**-0.3**
	baz=226								
ETLH				*e*S		**Sg**		**19 01 04.6**	**-0.4**
	baz=226								
JYNG	**Yonagunijimaku**	**0.84**	**116**	P		**Pn**		**19 00 55.6**	**-0.3**
JYNG				*e*S		**Sn**		**19 01 07.7**	**-0.8**
TWD	**Chiawan**	**0.88**	**213**	P		**Pb**		**19 00 55.1**	**-0.1**
	baz=199								
TWD				S		**Sb**		**19 01 06.4**	**-0.7**
	baz=199								
YOJ	**Yonaguni jima**	**0.89**	**114**	P		**Pn**		**19 00 57.2**	**+0.6**
YOJ				S		**Sn**		**19 01 09.9**	**+0.2**
LIOB	**Emei**	**1.01**	**260**	*e*P		**Pn**		**19 00 58.2**	**-0.1**
	baz=256								
LIOB				*e*S		**Sb**		**19 01 11.1**	**0.0**
	baz=256								
WHF	**Hehuan Shan**	**1.03**	**229**	*i* P		**Pn**		**19 00 58.4**	**-0.5**
	baz=222								
WHF				S		**Sg**		**19 01 11.0**	**+0.1**
	baz=222								
NSTT	**Nanjuang**	**1.03**	**259**	P		**Pn**		**19 00 59.1**	**+0.6**
	baz=255								
NSTT				*e*S		**Sn**		**19 01 14.3**	**+1.2**
	baz=255								
TDCB	**Techi**	**1.04**	**237**	P		**Pb**		**19 00 57.5**	**-0.6**
	baz=223								
TDCB				S		**Sb**		**19 01 11.4**	**-0.5**
	baz=223								
CHGB	**Renai**	**1.15**	**229**	P		**Pn**		**19 01 00.1**	**-0.2**
	baz=222								
CHGB				S		**Sg**		**19 01 15.0**	**+0.4**
	baz=222								
ESL	**Shilin**	**1.18**	**212**	*i* P		**Pb**		**19 00 59.9**	**-0.5**
	baz=205								
ESL				*i* S		**Sb**		**19 01 15.2**	**-0.7**
	baz=205								
WHP	**Taichung City**	**1.19**	**243**	P		**Pg**		**19 01 01.5**	**+0.8**
	baz=238								
WHP				S		**Sn**		**19 01 16.7**	**-0.6**
	baz=238								
OWD	**Renai**	**1.22**	**225**	P		**Pn**		**19 01 00.8**	**-0.4**
	baz=217								
OWD				S		**Sb**		**19 01 15.8**	**-1.2**
	baz=217								
EGFH	**Guangfu**	**1.31**	**209**	*e*P		**Pg**		**19 01 03.4**	**+0.5**
	baz=208								
EGFH				*e*S		**Sg**		**19 01 21.0**	**+1.1**
	baz=208								
TWQ1	**Liyutan**	**1.31**	**249**	*e*P		**Pg**		**19 01 04.7**	**+1.8**
	baz=260								
TWQ1				*e*S		**Sg**		**19 01 21.4**	**+1.5**
	baz=260								
DPDB	**Guoxing**	**1.34**	**234**	*e*P		**Pg**		**19 01 04.3**	**+0.9**
	baz=228								
DPDB				*e*S		**Sg**		**19 01 22.0**	**+1.2**
	baz=228								
VWDT	**VWDT**	**1.39**	**220**	P		**Pg**		**19 01 04.6**	**+0.2**
	baz=222								
VWDT				S		**Sg**		**19 01 22.1**	**-0.3**
	baz=222								
SMLT	**Sun Moon Lake**	**1.45**	**230**	*e*P		**Pg**		**19 01 06.9**	**+1.3**
	baz=223								
SMLT				*e*S		**Sg**		**19 01 24.8**	**+0.4**
	baz=223								
TYC	**Yuchr**	**1.47**	**232**	*e*P		**Pg**		**19 01 07.3**	**+1.4**
	baz=216								
TYC				*e*S		**Sg**		**19 01 24.6**	**-0.4**
	baz=216								
HGSD	**Ruisui**	**1.47**	**206**	*e*P		**Pg**		**19 01 07.4**	**+1.5**
	baz=212								
HGSD				*e*S		**Sg**		**19 01 25.6**	**+0.6**
	baz=212								
SSLB	**Suanglung**	**1.48**	**226**	*e*P		**Pb**		**19 01 05.7**	**+0.2**
	baz=219								
SSLB				*e*S		**Sn**		**19 01 23.5**	**-0.7**
	baz=219								
IRIF	**Iriomote-Funau**	**1.55**	**108**	P		**Pn**		**19 01 05.6**	**-0.1**
IRIF				*e*S		**Sb**		**19 01 26.4**	**-0.1**
WJS	**Zhushan**	**1.61**	**232**	*e*P		**Pg**		**19 01 10.8**	**+2.1**
	baz=220								
WJS				*e*S		**Sg**		**19 01 31.2**	**+1.6**
	baz=220								
TWF1	**Yuli**	**1.64**	**207**	*e*P		**Pg**		**19 01 10.2**	**+0.9**
	baz=208								
TWF1				*e*S		**Sg**		**19 01 32.1**	**+1.4**
	baz=208								
ALS	**Alishan**	**1.77**	**223**	*e*P		**Pg**		**19 01 12.4**	**+0.7**
	baz=198								
ALS				*e*S		**Sg**		**19 01 35.0**	**+0.3**
	baz=198								
CHN5	**Tsauling**	**1.79**	**227**	*e*P		**Pg**		**19 01 12.4**	**+0.3**
	baz=219								
CHN5				*e*S		**Sg**		**19 01 36.8**	**+1.4**
	baz=219								
JKRS	**Kuro-shima**	**1.82**	**108**	P		**Pn**		**19 01 09.9**	**+0.5**
JKRS				*e*S		**Sn**		**19 01 33.1**	**+0.4**
JIJ	**Ishigaki jima**	**1.90**	**104**	P		**Pn**		**19 01 11.0**	**+0.5**
ELDTW	**Lidau**	**1.91**	**212**	*e*P		**Pb**		**19 01 13.1**	**+0.2**
	baz=189								
ELDTW				S		**Sb**		**19 01 37.1**	**+0.1**
	baz=189								
JISG	**Ishigakijimahi**	**2.01**	**96**	P		**Pb**		**19 01 13.6**	**-1.0**
JISG				*e*S		**Sb**		**19 01 39.4**	**-0.4**
TPUB	**Ta-pu**	**2.03**	**222**	*e*P		**Pg**		**19 01 15.9**	**-0.9**
	baz=199								
TPUB				S		**Sb**		**19 01 41.5**	**+1.0**
	baz=199								
STYT	**Tauyuan**	**2.07**	**217**	*e*P		**Pg**		**19 01 16.4**	**-1.0**
	baz=206								
STYT				*e*S		**Sg**		**19 01 44.6**	**+0.3**
	baz=206								
WTP	**Ta-pu**	**2.08**	**221**	*e*P		**Pg**		**19 01 18.0**	**+0.2**
	baz=208								
WTP				S		**Sg**		**19 01 44.8**	**0.0**
	baz=208								
CHN1	**Nanshi**	**2.18**	**222**	*e*P		**Pb**		**19 01 17.7**	**+0.2**
	baz=209								
CHN1				*e*S		**Sg**		**19 01 48.2**	**+0.2**
	baz=209								
MATB	**Ma-tsu**	**2.36**	**304**	*e*P		**Pn**		**19 01 16.8**	**0.0**
	baz=299								
MATB				*e*S		**Sn**		**19 01 45.3**	**-0.7**
	baz=299								
MASBT	**Mashibuluo**	**2.59**	**212**	*e*P		**Pb**		**19 01 23.4**	**-1.0**
	baz=183								
MASBT				*e*S		**Sb**		**19 01 55.9**	**-0.4**
	baz=183								

IDC ***22*** *19:05:44.8±2.8,29.°09N×142.°00E,h0km,mb3.5/5,*
mb1 3.7/6,mb1mx3.5/37,mbtmp3.5/6,ML2.7/1,MS3.8/1,
Ms1 3.8/1,ms1mx2.6/31,Error ellipse: s-maj=89.2km s-min=22.8km az=70.0
NEIC ***22*** *19:05:47.3±0.8,29.°19N±0.°07×142.°1E±0.°2,h22km±3km,*
mb4.5/5,Error ellipse: s-maj=21.4km s-min=9.7km az=77.0
ISC 22 19:05:48.3±1.0**,29.°20N**±0.°09×**142.°3E**±0.°2**,h35**km**,n19,** σ1**22/17,mb4.0/8,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JCJ	**Chichijima**	**2.10**	**182**		Pn		**Pn**	**19 06 20.2**	**-0.8**
MJAR	**Matsushiro Arr**	**8.07**	**336**		Pn		**Pn**	**19 07 43.6**	**+0.6**
	0.1nm,0.3s,baz=139,slow=11,SNR=3.5								
MAJO	**Matsushiro**	**8.07**	**336**		Pn		**Pn**	**19 07 42.6**	**-0.4**
MAT	**Matsushiro**	**8.07**	**336**		P		**Pn**	**19 07 42.9**	**-0.1**
JMM	**Marumori**	**8.73**	**352**		Pn		**Pn**	**19 07 49.1**	**-2.8**
JSD	**Sado**	**9.42**	**340**		Pn		**Pn**	**19 08 00.4**	**-1.0**
JSU	**Suzuyama**	**10.45**	**286**		Pn		**Pn**	**19 08 13.0**	**-2.7**
SONM	**Songino Array**	**33.27**	**314**		P		**P**	**19 12 23.5**	**+1.0**
	0.2nm,0.5s,baz=117,slow=8.4,SNR=2.7								
CMAR	**Chiang Mai Arr**	**40.84**	**265**		P		**P**	**19 13 26.6**	**-0.3**
	0.3nm,0.7s,baz=89,slow=5.4,SNR=3.1								
CTA	**Charters Tower**	**49.16**	**175**		LR		LR	19 33 39.5	
	comp=Z,106nm,21.4s,baz=274,slow=34								
MKAR	**Makanchi Array**	**49.20**	**308**		P		**P**	**19 14 33.5**	**+0.4**
	0.2nm,0.7s,baz=82,slow=9.0,SNR=2.7								
WB0	**Warramunga Arr**	**49.27**	**190**		P		**P**	**19 14 34.1**	**+0.3**
WB0					IAmb		IAmb	19 14 55.8	
	comp=Z,8.2nm,1.3s								
WR0	**Warramunga Arr**	**49.44**	**190**		P		**P**	**19 14 34.7**	**-0.3**
WR0					IAmb		IAmb	19 14 36.8	
	comp=Z,3.4nm,0.8s								
WB2	**Warramunga Arr**	**49.45**	**190**		P		**P**	**19 14 35.8**	**+0.7**
WB2					IAmb		IAmb	19 14 50.4	
	comp=Z,7.1nm,1.2s								
WRA	**Warramunga Arr**	**49.45**	**190**		P		**P**	**19 14 35.6**	**+0.5**
	comp=Z,7nm,0.7s,baz=11,slow=8.2,SNR=16								
WRA	**Warramunga Arr**	**49.45**	**190**		IAmb		IAmb	19 14 38.3	
	comp=Z,0.3nm,1.2s								
ASAR	**Alice Springs**	**53.18**	**190**		P		**P**	**19 15 03.6**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=0.4,slow=5.3,SNR=12								
KKAR	**Karatay Array**	**57.92**	**305**		P		**P**	**19 15 37.3**	**+0.2**
N33A	**J Bar K, Exete**	**91.12**	**41**		P		**P**	**19 18 50.1**	**+0.6**

IDC ***22*** *19:15:39.0±50.0,15.°75S×172.°45W,h0km,mb4.0/3,*
mb1 4.2/3,mb1mx3.6/36,mbtmp4.0/3,Error ellipse: s-maj=972.6km s-min=182.6km az=79.0
NEIC ***22*** *19:15:59.8±1.0,16.°4S±0.°2×173.°4W±0.°2,h112km±6km,*
mb4.6/13,Error ellipse: s-maj=36.3km s-min=15.4km az=152.0
ISC 22 19:15:58.6±1.1**,16.°5S**±0.°3×**173.°3W**±0.°2**,h100**km**,n17,** σ0**76/15,mb4.5/10,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AFI	**Afiamalu**	**2.98**	**30**		Pn		**Pn**	**19 16 44.5**	**+0.3**
CTAO	**Charters Tower**	**38.48**	**258**		P		**P**	**19 23 10.6**	**-0.6**
CTAO					IAmb		IAmb	19 23 20.8	
	comp=Z,15nm,1.4s								
STKA	**Stephens Creek**	**43.56**	**241**		P		**P**	**19 23 54.0**	**+1.3**
	comp=Z,1.1nm,0.5s,baz=80,slow=12,SNR=4.3								
BBOO	**Buckleboo**	**48.33**	**241**		P		**P**	**19 24 31.2**	**+1.0**
BBOO					IAmb		IAmb	19 24 43.9	
	comp=Z,11nm,1.4s								
WR0	**Warramunga Arr**	**49.48**	**258**		P		**P**	**19 24 39.4**	**+0.2**
WR0					IAmb		IAmb	19 25 01.4	
	comp=Z,7.2nm,1.4s								
WB0	**Warramunga Arr**	**49.64**	**258**		P		**P**	**19 24 40.4**	**+0.1**
WB0					IAmb		IAmb	19 25 08.3	
	comp=Z,11nm,1.5s								
WB2	**Warramunga Arr**	**49.66**	**258**		P		**P**	**19 24 40.2**	**-0.3**
WB2					IAmb		IAmb	19 24 47.6	
	comp=Z,11nm,1.5s								
WRA	**Warramunga Arr**	**49.67**	**258**		P		**P**	**19 24 40.2**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=95,slow=7.1,SNR=29								
WRA	**Warramunga Arr**	**49.67**	**258**		IAmb		IAmb	19 24 41.0	
	comp=Z,0.1nm,1.0s								
AS31	**Alice Springs**	**49.85**	**253**		P		**P**	**19 24 41.7**	**-0.2**
ASAR	**Alice Springs**	**49.85**	**253**		P		**P**	**19 24 42.0**	**0.0**
	comp=Z,2.4nm,0.6s,baz=90,slow=8.0,SNR=51								
MTN	**Manton Dam**	**53.72**	**266**		P		**P**	**19 25 09.4**	**-1.4**
FORT	**Forrest**	**54.99**	**244**		P		**P**	**19 25 20.2**	**+0.4**
FORT					IAmb		IAmb	19 25 24.1	
	comp=Z,11nm,1.0s								
FITZ	**Fitzroy Crossi**	**58.06**	**259**		P		**P**	**19 25 41.6**	**-0.2**
FITZ					IAmb		IAmb	19 25 56.5	
	comp=Z,6.5nm,1.2s								
RMX	**La Rumorosa**	**73.34**	**48**		P		**P**	**19 27 20.3**	**+0.5**
NVAR	**Mina Array Bea**	**75.10**	**42**				pP	19 27 57.1	+2.4
PEZE	**Perez Zeledon,**	**92.28**	**81**		P		**P**	**19 28 57.3**	**-1.0**

IDC ***22*** *19:27:29.1±2.7,11.°88S×166.°73E,h130km±22km,*
mb4.1/17,mb1 4.2/19,mb1mx4.0/41,mbtmp4.4/19,Error ellipse: s-maj=18.7km s-min=13.3km az=98.0
NEIC ***22*** *19:27:29.5±2.2,11.°8S±0.°1×166.°6E±0.°1,h132km±6km,*
mb4.8/72,Error ellipse: s-maj=17.0km s-min=14.7km az=82.0
ISC 22 19:27:25.7±0.4**,11.°76S**±0.°06×**166.°75E**±0.°07**,h100**km**,**
n158,σ1**28/159,mb4.7/67,9C-8D,Fault plane solution:**
NP1:ϕs85.09365°,δ74.73704°,λ146.01886°. **NP2:**
ϕs185.15538°,δ57.37042°,λ18.21498°. **Principal axes:**
T Plg34.5706°, Azm40.4982°; N Plg53.1275°,
Azm243.7600°; P Plg11.2523°, Azm138.3783°; **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
HNR	**Honiara**	**7.08**	**288**		P		**Pn**	**19 29 09.5**	**+2.9**
	24nm,0.3s,baz=131,slow=0.8,SNR=5.9								
HNR					S		**Sn**	**19 30 31.2**	**+5.6**
	1.4nm,0.3s,baz=172,slow=14,SNR=1.2								
HNR	**Honiara**	**7.08**	**288**				**Pn**	**19 29 07.8**	**+1.2**
DZM	**Mont Dzumac**	**10.26**	**182**		P		Pn	19 29 56.3	+6.3
	0.7nm,0.3s,baz=15,slow=20,SNR=1.3								
DZM					S		**Sn**	**19 31 45.2**	**+2.0**
	0.5nm,0.3s,baz=256,slow=18,SNR=2.2								
PMG	**Port Moresby**	**19.40**	**275**		P		**Pn**	**19 31 44.9**	**-1.2**
	0.2nm,0.3s,baz=74,slow=7.4,SNR=1.5								
PMG	**Port Moresby**	**19.40**	**275**		P		**P**	**19 31 42.5**	**-1.5**
CTA	**Charters Tower**	**21.36**	**245**		P		**P**	**19 32 06.3**	**+1.2**
	9.3nm,0.7s,baz=78,slow=12,SNR=13								
CTAO	**Charters Tower**	**21.36**	**245**		P		**P**	**19 32 03.2**	**-2.0**
MANU	**Manus Island**	**21.51**	**295**		P		**P**	**19 32 04.7**	**-2.0**
ARMA	**Armidale**	**23.27**	**215**		P		**P**	**19 32 25.8**	**+1.1**
NIUE	**Niue**	**23.61**	**111**		P		**P**	**19 32 27.5**	**-0.3**
BKZ	**Black Stump Fm**	**28.64**	**164**		P		**P**	**19 33 14.1**	**+1.2**
MOVZ	**Moawhango**	**28.67**	**165**		P		**P**	**19 33 15.3**	**+2.1**
TSZ	**Takapari Road**	**29.34**	**165**		P		**P**	**19 33 20.8**	**+1.7**
QRZ	**Quartz Range**	**29.40**	**171**		P		**P**	**19 33 19.1**	**-0.4**
DVHZ	**Dannevirke**	**29.62**	**165**		P		**P**	**19 33 22.6**	**+1.1**
MRZ	**Mangatainoka R**	**29.82**	**166**		P		**P**	**19 33 24.0**	**+0.7**
KIW	**Kapiti Island**	**29.87**	**168**		P		**P**	**19 33 24.8**	**+1.2**
OGWZ	**Otaki Gorge**	**29.88**	**167**		P		**P**	**19 33 24.9**	**+1.1**
NNZ	**Nelson**	**29.92**	**170**		P		**P**	**19 33 23.2**	**-0.8**
BFZ	**Birch Farm**	**30.00**	**165**		P		**P**	**19 33 25.6**	**+0.8**
BFZ	**Birch Farm**	**30.00**	**165**		P		**P**	**19 33 25.7**	**+0.8**
HOWZ	**Holdsworth Sta**	**30.03**	**167**		P		**P**	**19 33 25.8**	**+0.7**
H11S2	**WAKE ISLAND Hy**	**30.06**	**360**		T		T	20 04 14.9	
	baz=181,slow=76,SNR=7.5								
H11S3	**WAKE ISLAND Hy**	**30.06**	**360**		T		T	20 04 14.6	
	baz=181,slow=76,SNR=6.8								
H11S1	**WAKE ISLAND Hy**	**30.07**	**360**		T		T	20 04 16.0	
	baz=181,slow=76,SNR=3.3								
TUWZ	**Tuamarina**	**30.22**	**169**		P		**P**	**19 33 27.2**	**+0.4**
SNZO	**South Karori**	**30.25**	**168**		P		**P**	**19 33 27.6**	**+0.6**
MTW	**Mount Morrison**	**30.28**	**167**		P		**P**	**19 33 28.0**	**+0.7**
TMWZ	**Te Maipa**	**30.32**	**166**		P		**P**	**19 33 28.6**	**+0.9**
THZ	**Tophouse**	**30.37**	**171**		P		**P**	**19 33 29.2**	**+1.1**
THZ					IAmb		IAmb	19 33 40.0	
	comp=Z,18nm,0.9s								

SWI	**Sorong**	**36.84**	**285**	P	**P**	**19 34 25.1**	**+0.5**
	comp=Z,28nm,1.1s						
KNRA	**Kununurra**	**37.08**	**260**	P	**P**	**19 34 26.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**40.16**	**256**	P	**P**	**19 34 52.4**	**+0.1**
FITZ				IAmb	IAmb	19 34 53.4	
	comp=Z,23nm,1.0s						
NLAI	**Namlea**	**40.17**	**279**	P	**P**	**19 34 53.9**	**+1.5**
	comp=Z,2μmcomp=Z,34nm,0.9s						
FORT	**Forrest**	**40.45**	**236**	P	**P**	**19 34 54.6**	**0.0**
SANI	**Sanana**	**41.54**	**280**	P	**P**	**19 35 03.0**	**-0.7**
	comp=Z,21nm,0.9s						
SOEI	**Soe**	**41.76**	**268**	P	**P**	**19 35 03.4**	**-2.2**
SOEI				IAmb	IAmb	19 35 09.0	
	comp=Z,24nm,1.2s						
MIDW	**Midway**	**42.61**	**21**	P	**P**	**19 35 13.9**	**+1.8**
KMSI	**Cibinong**	**44.21**	**283**	P	**P**	**19 35 21.5**	**-3.7**
LUWI	**Luwuk**	**44.91**	**280**	P	**P**	**19 35 30.4**	**-0.4**
	comp=Z,5μmcomp=Z,29nm,1.1s						
PSA00	**Pilbara Seismi**	**45.83**	**251**	P	**P**	**19 35 38.4**	**+0.4**
PSA00				IAmb	IAmb	19 35 50.1	
	comp=Z,30nm,1.4s						
BNSI	**Bone**	**46.70**	**275**	P	**P**	**19 35 46.2**	**+1.2**
	comp=Z,37nm,0.9s						
TOLI2	**Tolitoli**	**47.42**	**283**	P	**P**	**19 35 48.6**	**-1.9**
TOLI2				IAmb	IAmb	19 35 51.0	
	comp=Z,12nm,0.8s						
TWSI	**Taliwang, Sumb**	**49.12**	**269**	P	**P**	**19 36 02.4**	**-1.2**
NWAO	**Narrogin (SRO)**	**49.89**	**237**	P	**P**	**19 36 08.2**	**-1.0**
NWAO				IAmb	IAmb	19 36 09.2	
	comp=Z,18nm,0.9s						
MORW	**Morawa**	**50.15**	**242**	P	**P**	**19 36 11.2**	**-0.1**
MYLDM	**Lahad Datu**	**50.85**	**287**	P	**P**	**19 36 15.2**	**-1.5**
MYLDM				IAmb	IAmb	19 36 35.2	
	comp=Z,23nm,1.3s						
JAGI	**Jajag, Banyuwa**	**51.83**	**268**	P	**P**	**19 36 22.5**	**-1.6**
JAGI				IAmb	IAmb	19 36 23.4	
	comp=Z,17nm,0.8s						
KKM	**Kota Kinabalu**	**53.29**	**287**	P	**P**	**19 36 35.1**	**+0.3**
JMN	**Monobe**	**55.00**	**326**	P	**P**	**19 36 47.5**	**+0.6**
MJAR	**Matsushiro Arr**	**55.06**	**332**	P	**P**	**19 36 46.9**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=168,slow=9.3,SNR=5.7						
MJAR	**Matsushiro Arr**	**55.06**	**332**	P	**P**	**19 36 46.4**	**-0.8**
MAJO	**Matsushiro**	**55.06**	**332**	P	**P**	**19 36 47.3**	**+0.1**
YOJ	**Yonaguni jima**	**55.85**	**310**	P	**P**	**19 36 50.9**	**-2.2**
SBUM	**Sibu**	**56.01**	**281**	P	**P**	**19 36 53.4**	**-1.1**
JSD	**Sado**	**56.26**	**333**	P	**P**	**19 36 56.4**	**+0.6**
JSD				IAmb	IAmb	19 36 58.0	
	comp=Z,11nm,1.0s						
JEW	**Eniwo**	**59.07**	**339**	P	**P**	**19 37 15.8**	**+0.4**
JKA	**Kamikawa-asahi**	**59.79**	**340**	P	**P**	**19 37 21.3**	**+1.0**
KSRS	**Korea Array**	**61.02**	**325**	P	**P**	**19 37 29.8**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=139,slow=6.3,SNR=9.7						
KSAR	**Wonju Array Be**	**61.03**	**325**	P	**P**	**19 37 29.4**	**+0.5**
USRK	**Ussuriysk Ar.**	**64.03**	**333**	P	**P**	**19 37 49.9**	**+1.3**
	comp=Z,3.5nm,0.8s,baz=122,slow=5.4,SNR=6.4						
USRK	**Ussuriysk Ar.**	**64.03**	**333**	P	**P**	**19 37 49.7**	**+1.0**
USA0B	**Ussuriysk Arra**	**64.03**	**333**	P	**P**	**19 37 47.0**	**-1.6**
VNDA	**Vanda**	**65.80**	**181**	P	**P**	**19 37 59.7**	**0.0**
	comp=Z,1.9nm,0.7s,baz=334,slow=7.0,SNR=7.3						
VNDA	**Vanda**	**65.80**	**181**		**P**	**19 37 59.2**	**-0.5**
CASY	**Casey**	**66.08**	**202**	P	**P**	**19 38 00.8**	**-0.9**
CASY				IAmb	IAmb	19 38 01.8	
	comp=Z,7.4nm,0.8s						
SBA	**Scott Base**	**66.09**	**180**		**P**	**19 38 02.2**	**+0.6**
SBA				IAmb	IAmb	19 38 05.5	
	comp=Z,7.9nm,0.9s						
IPM	**Ipoh**	**67.31**	**280**	P	**P**	**19 38 07.3**	**-3.2**
IPM				IAmb	IAmb	19 38 10.1	
	comp=Z,19nm,1.3s						
MNSI	**Mandailing Nat**	**67.85**	**276**	P	**P**	**19 38 13.5**	**-0.3**
RPSI	**Rantau Prapat**	**68.92**	**278**	P	**P**	**19 38 19.4**	**-1.1**
RPSI				IAmb	IAmb	19 38 20.8	
	comp=Z,11nm,0.9s						
ENH	**Enshi**	**69.11**	**309**	P	**P**	**19 38 19.8**	**-1.6**
ENH				IAmb	IAmb	19 38 22.6	
	comp=Z,13nm,0.8s						
GSI	**Gunungsitoli**	**69.91**	**276**	P	**P**	**19 38 26.5**	**-0.1**
SLVN	**Son La**	**69.91**	**298**	P	**P**	**19 38 23.4**	**-3.2**
XAN	**Xi'an**	**71.33**	**312**	P	**P**	**19 38 35.6**	**+0.7**
XAN				pP	PcP	19 38 42.3	-12
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN	**Xi'an**	**71.33**	**312**	P	**P**	**19 38 34.7**	**-0.2**
XAN				IAmb	IAmb	19 38 36.8	
	comp=Z,12nm,1.2s						
KMI	**Kunming**	**72.33**	**301**	⇑P	**P**	**19 38 42.6**	**+1.3**
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
KMI	**Kunming**	**72.33**	**301**	P	**P**	**19 38 42.3**	**+1.0**
KMI				IAmb	IAmb	19 38 43.9	
	comp=Z,11nm,1.0s						
CM31	**Chiang Mai Arr**	**73.30**	**293**	P	**P**	**19 38 47.3**	**+0.4**
CM31				IAmb	IAmb	19 38 49.1	
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.30**	**293**	P	**P**	**19 38 47.9**	**+1.0**
	comp=Z,6.7nm,0.8s,baz=125,slow=4.7,SNR=61						
CMAR	**Chiang Mai Arr**	**73.30**	**293**	P	**P**	**19 38 47.3**	**+0.4**
CHTO	**Chiang Mai**	**73.41**	**294**		**P**	**19 38 48.2**	**+0.7**
HIA	**Hailar**	**73.47**	**330**	P	**P**	**19 38 48.5**	**+1.2**
QSPA	**South Pole Qui**	**78.25**	**180**	P	**P**	**19 39 14.2**	**-0.2**
QSPA				IAmb	IAmb	19 39 15.6	
	comp=Z,21nm,0.9s						
BRLK	**Bradley Lake**	**78.95**	**20**	P	**P**	**19 39 18.2**	**+0.1**
BRLK				IAmb	IAmb	19 39 22.6	
	comp=Z,31nm,1.3s						
YAK	**Yakutsk**	**79.06**	**343**	P	**P**	**19 39 19.2**	**+0.7**
YAK				IAmb	IAmb	19 39 19.5	
	comp=Z,8.0nm,0.5s						
ULN	**Ulaanbaatar**	**79.45**	**324**		**P**	**19 39 21.6**	**+0.4**
ULN				IAmb	IAmb	19 39 23.3	
	comp=Z,6.7nm,0.8s						
BILL	**Bilibino**	**79.59**	**360**	P	**P**	**19 39 22.1**	**+0.8**
SONM	**Songino Array**	**79.82**	**323**	P	**P**	**19 39 23.9**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=145,slow=5.5,SNR=18						
SONM	**Songino Array**	**79.82**	**323**		**P**	**19 39 23.2**	**0.0**
GTA	**Gaotai**	**80.26**	**314**	⇓P	**P**	**19 39 27.4**	**+1.6**
GTA				pP	PcP	19 39 33.4	+0.8
GTA				sP	pP	19 39 36.8	-15
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
IL31		**83.87**	**18**	P	**P**	**19 39 43.8**	**-0.1**
ILAR	**Eielson Array**	**83.87**	**18**	P	**P**	**19 39 44.5**	**+0.5**
	comp=Z,2.8nm,0.9s,baz=225,slow=6.1,SNR=15						
ILAR	**Eielson Array**	**83.87**	**18**		**P**	**19 39 43.6**	**-0.3**
DOT	**Dot Lake**	**84.00**	**20**	P	**P**	**19 39 45.2**	**+0.6**
DOT				IAmb	IAmb	19 39 47.7	
	comp=Z,9.1nm,1.2s						
NVAR	**Mina Array Bea**	**85.73**	**50**	P	**P**	**19 39 54.9**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=232,slow=7.3,SNR=3.5						
TAPN	**Taplejung**	**85.81**	**299**	*eP*	**P**	**19 39 54.9**	**+0.1**
	comp=Z,14nm,0.9s						
ODAN	**Odare**	**85.96**	**298**	*eP*	**P**	**19 39 55.5**	**0.0**
	comp=Z,15nm,0.8s						
BMAR	**Burnt Mountain**	**86.39**	**17**	P	**P**	**19 39 56.2**	**-0.3**
RAMN	**Ramite**	**86.66**	**298**	*eP*	**P**	**19 39 59.1**	**+0.1**
JIRN	**Jiri**	**87.19**	**299**	*eP*	**P**	**19 40 01.8**	**+0.1**
GUN	**Gumba**	**87.52**	**299**	*eP*	**P**	**19 40 02.6**	**-0.6**
	comp=Z,12nm,0.8s						
PKI	**Pulchoki**	**87.84**	**299**	*eP*	**P**	**19 40 04.1**	**-0.7**
	comp=Z,7.7nm,0.5s						
PKIN	**Phulchoki**	**87.86**	**299**	*eP*	**P**	**19 40 03.5**	**-1.2**
	comp=Z,11nm,0.7s						
KKN	**Kakani**	**88.01**	**299**	*eP*	**P**	**19 40 05.1**	**-0.3**
DMN	**Daman**	**88.11**	**299**	*eP*	**P**	**19 40 05.6**	**-0.3**
	comp=Z,15nm,0.6s						
GKN	**Gorkha**	**88.61**	**299**	*eP*	**P**	**19 40 07.6**	**-0.6**
	comp=Z,23nm,0.8s						
WMQ	**Urumqi**	**90.30**	**315**	*eP*	**P**	**19 40 15.9**	**+0.3**
WMQ				pmax	pmax		
	comp=Z,12nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.3s						
SYO	**Syowa Base**	**91.39**	**197**	⇑*eX*	**P**	**19 40 24.4**	**+4.3**
SYO	**Syowa Base**	**91.39**	**197**	⇓*epP*	pP	19 40 53.0	+7.1
PDAR	**Pinedale Array**	**93.31**	**47**	P	**P**	**19 40 30.0**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=266,slow=7.1,SNR=1.9						
ZALV	**Zalesovo Beam**	**94.71**	**324**	P	**P**	**19 40 35.6**	**0.0**
	comp=Z,0.7nm,0.5s,baz=108,slow=4.7,SNR=5.0						
ZALV	**Zalesovo Beam**	**94.71**	**324**	P	**P**	**19 40 34.2**	**-1.3**
MK31	**Makanchi Array**	**94.71**	**317**		**P**	**19 40 35.6**	**-0.2**
MK31				IAmb	IAmb	19 40 36.9	
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**94.71**	**317**	P	**P**	**19 40 36.0**	**+0.2**
	comp=Z,6.4nm,0.7s,baz=92,slow=6.4,SNR=63						
MKAR	**Makanchi Array**	**94.71**	**317**		**P**	**19 40 35.3**	**-0.5**
MAKZ	**Makanchi**	**94.93**	**317**		**P**	**19 40 36.9**	**+0.1**
MAKZ				IAmb	IAmb	19 40 37.8	
	comp=Z,4.8nm,1.0s						
YKA	**Yellowknife Ar**	**95.15**	**27**	P	**P**	**19 40 36.8**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=254,slow=4.6,SNR=4.9						
ARCES	**ARCESS Array B**	**117.27**	**346**	PKP	**PKPdf**	**19 45 58.2**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=86,slow=1.8,SNR=17						
SFJD	**Kangerlussuaq**	**119.47**	**16**	PKP	**PKPdf**	**19 46 02.9**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=338,slow=5.4,SNR=2.0						
FINES	**FINESS Array B**	**122.79**	**339**	PKP	**PKPdf**	**19 46 09.2**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=146,slow=3.7,SNR=8.7						
SRO	**Srobarova**	**135.40**	**330**	*e*PKP	**PKPdf**	**19 46 33.5**	**-0.4**
GERES	**GERESS Array B**	**136.78**	**334**	PKP	**PKPdf**	**19 46 37.0**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=56,slow=2.5,SNR=3.9						
KEST	**Kesra**	**148.57**	**323**	PKPbc	**PKPbc**	**19 47 01.3**	**-0.3**
	comp=Z,6.9nm,0.9s,baz=292,slow=3.8,SNR=6.0						
ESDC	**Sonseca Array**	**151.00**	**345**	PKPbc	**PKPbc**	**19 47 07.0**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=26,slow=2.4,SNR=8.5						
ESDC				PKPab	**PKPab**	**19 47 15.2**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=9.8,slow=3.7,SNR=6.7						
TORD	**Torodi Ar. Bea**	**165.34**	**277**	PKP	**PKPdf**	**19 47 18.6**	**-0.7**
	comp=Z,1.6nm,1.1s,baz=31,slow=1.7,SNR=4.8						
TORD				PKPab	**PKPab**	**19 48 16.7**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=65,slow=4.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**165.34**	**277**		**PKPdf**	**19 47 18.4**	**-1.0**
DBIC	**Dimbokro**	**170.30**	**239**	PKPab	**PKPab**	**19 48 39.1**	**-0.5**
	comp=Z,4.0nm,0.8s,baz=53,slow=6.6,SNR=3.7						

IDC 22 19:28:43.1±1.8, 8.36S×128.41E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.4/30, mbtmp3.4/4, ML3.6/2 Error ellipse: s-maj=251.8km s-min=30.4km az=65.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**12.87**	**154**	Pn	Pn	19 31 47.0	-0.5
	0.4nm,0.3s,baz=334,slow=13,SNR=17						
WRA				Sn	Sn	19 34 09.2	-2.4
	0.2nm,0.3s,baz=330,slow=21,SNR=3.3						
ASAR	**Alice Springs**	**16.11**	**162**	Pn	Pn	19 32 31.6	+0.5
	0.1nm,0.3s,baz=334,slow=9.6,SNR=15						
MKAR	**Makanchi Array**	**68.51**	**328**	P	P	19 39 47.3	-0.1
	0.1nm,0.3s,baz=111,slow=8.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**72.11**	**335**	P	P	19 40 09.5	+0.2
	0.4nm,0.4s,baz=108,slow=9.3,SNR=2.3						

IDC 22 19:29:17.4±3.2, 16.93S×173.39W, h0km, mb4.2/2, mb1 4.3/3, mb1mx3.7/38, mbtmp4.1/3, ML3.5/1, Error ellipse: s-maj=136.0km s-min=25.2km az=133.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.38**	**28**	Pn	Pn	19 30 10.4	-1.1
	4.4nm,0.3s,baz=122,slow=8.3,SNR=6.3						
AFI				Sn	Sn	19 30 55.0	+2.5
	6.9nm,0.3s,baz=52,slow=18,SNR=2.5						
WRA	**Warramunga Arr**	**49.52**	**258**	P	P	19 38 08.9	-1.4
	0.5nm,0.3s,baz=98,slow=6.0,SNR=11						
WRA				PcP	PcP	19 39 31.3	-1.0
	0.4nm,0.9s,baz=98,slow=3.8,SNR=1.6						
ASAR	**Alice Springs**	**49.66**	**253**	P	P	19 38 12.1	+0.8
	4.8nm,0.5s,baz=85,slow=7.8,SNR=67						
ASAR				PcP	PcP	19 39 33.4	+0.6
	0.4nm,0.9s,baz=92,slow=4.6,SNR=1.9						
GERES	**GERESS Array B**	**147.65**	**351**	PKPbc	PKPbc	19 49 03.9	-0.1
	0.5nm,0.6s,baz=10,slow=2.2,SNR=3.6						

*JMA **22** 19:37:41.6±0.1, 23.94N×122.37E, h21km, 3km, M2.1*
*TAP **22** 19:37:42.5, 24.04N×122.39E, h48km±1km, ML2.6, D*
ISC 22 19:37:40.3±1.1, 24.04N±0.03×122.41E±0.02, h11km±9km, n65, σ0.72/116, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.64**	**50**	P	**Pn**	**19 37 55.3**	**-0.1**
JYNG				*e*S	**Sn**	**19 38 05.4**	**-0.2**
YOJ	**Yonaguni jima**	**0.70**	**52**	P	**Pn**	**19 37 56.5**	**+0.4**
YOJ				*e*S	**Sn**	**19 38 07.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.70**	**52**	*e*P	**Pn**	**19 37 56.5**	**+0.4**
	baz=59						
YOJ				*e*S	**Sn**	**19 38 07.8**	**+0.8**
	baz=59						
HWA	**Hwalien**	**0.73**	**266**	*e*P	**Pn**	**19 37 57.0**	**+0.4**
	baz=265						
HWA				*e*S	**Sb**	**19 38 06.3**	**+1.1**
	baz=265						
TWD	**Chiawan**	**0.74**	**274**	*e*P	**Pb**	**19 37 55.3**	**+0.1**
	baz=273						
TWD				*e*S	**Sb**	**19 38 05.5**	**+0.1**
	baz=273						
NACB	**Ninganchiao**	**0.75**	**281**	*e*P	**Pb**	**19 37 55.7**	**+0.3**
	baz=271						
NACB				*e*S	**Sb**	**19 38 06.3**	**+0.6**
	baz=271						
ETLH	**Xiulin Townshi**	**0.86**	**282**	*e*P	**Pb**	**19 37 57.4**	**0.0**
	baz=281						
ETLH				*e*S	**Sb**	**19 38 09.4**	**+0.5**
	baz=281						
ESL	**Shilin**	**0.92**	**256**	*e*P	**Pb**	**19 37 58.7**	**+0.4**
	baz=248						
ESL				*e*S	**Sg**	**19 38 10.2**	**+0.2**
	baz=248						
ILA	**Ilan**	**0.94**	**321**	*e*P	**Pn**	**19 38 00.1**	**+0.6**
	baz=315						
ILA				*e*S	**Sn**	**19 38 13.2**	**+0.2**
	baz=315						
TWE	**Neicheng**	**0.96**	**316**	P	**Pn**	**19 38 00.0**	**+0.3**
	baz=316						
TWE				*e*S	**Sn**	**19 38 12.9**	**-0.5**
	baz=316						
EGFH	**Guangfu**	**0.97**	**248**	*e*P	**Pb**	**19 37 59.5**	**+0.4**
	baz=240						
EGFH				*e*S	**Sg**	**19 38 12.0**	**+0.5**
	baz=240						
NTC	**Toucheng**	**0.97**	**327**	*e*P	**Pn**	**19 37 59.8**	**-0.1**
	baz=336						
NTC				*e*S	**Sn**	**19 38 13.4**	**-0.2**
	baz=336						
ENTT	**Nioudou**	**0.97**	**308**	P	**Pn**	**19 37 60.0**	**0.0**
	baz=300						
ENTT				S	**Sn**	**19 38 13.2**	**-0.6**
	baz=300						
NDT	**Datong Townshi**	**0.99**	**305**	P	**Pn**	**19 38 00.5**	**+0.3**
	baz=298						
NDT				S	**Sb**	**19 38 12.6**	**0.0**
	baz=298						
NNSB	**Datong**	**1.01**	**293**	P	**Pb**	**19 38 00.2**	**+0.2**
	baz=293						
NNSB				S	**Sb**	**19 38 13.7**	**+0.4**
	baz=293						
NNSH	**Datong**	**1.01**	**293**	P	**Pb**	**19 38 00.4**	**+0.4**
	baz=293						
NNSH				*e*S	**Sg**	**19 38 13.4**	**+0.3**
	baz=293						
NNS	**Nan Shan**	**1.02**	**293**	P	**Pb**	**19 38 00.5**	**+0.3**
	baz=293						
NNS				S	**Sb**	**19 38 14.0**	**+0.3**
	baz=293						
TWB1	**Santiao Chiao**	**1.04**	**339**	*e*P	**Pn**	**19 38 01.5**	**+0.7**
	baz=350						
TWB1				*e*S	**Sn**	**19 38 14.9**	**-0.5**
	baz=350						
WHF	**Hehuan Shan**	**1.05**	**276**	P	**Pg**	**19 38 00.5**	**-0.1**
	baz=276						
WHF				*e*S	**Sg**	**19 38 14.0**	**-0.2**
	baz=276						
HGSD	**Ruisui**	**1.05**	**239**	*e*P	**Pg**	**19 38 00.5**	**0.0**
	baz=239						
HGSD				*e*S	**Sg**	**19 38 14.2**	**0.0**
	baz=239						
TIPB	**Shuangxi**	**1.07**	**331**	*e*P	**Pn**	**19 38 02.1**	**+0.8**
	baz=343						
TIPB				*e*S	**Sn**	**19 38 15.5**	**-0.7**
	baz=343						
NWLT	**Wulai**	**1.11**	**312**	P	**Pn**	**19 38 02.1**	**+0.3**
	baz=301						
NWLT				*e*S	**Sn**	**19 38 16.8**	**-0.3**
	baz=301						
CHGB	**Renai**	**1.13**	**272**	P	**Pg**	**19 38 01.6**	**-0.4**
	baz=271						
CHGB				S	**Sg**	**19 38 16.4**	**-0.3**
	baz=271						
OWD	**Renai**	**1.13**	**266**	*e*P	**Pg**	**19 38 02.1**	**+0.1**
	baz=275						
OWD				*e*S	**Sg**	**19 38 15.6**	**-1.2**
	baz=275						
TWT	**Tachien**	**1.14**	**281**	*e*P	**Pn**	**19 38 02.9**	**+0.5**
	baz=272						
TWT				*e*S	**Sg**	**19 38 17.5**	**+0.3**
	baz=272						
TDCB	**Techi**	**1.16**	**281**	*e*P	**Pn**	**19 38 03.3**	**+0.7**
	baz=272						
TDCB				*e*S	**Sg**	**19 38 17.0**	**-0.7**
	baz=272						
WFSB	**Wu-fen Shan**	**1.18**	**331**	*e*P	**Pn**	**19 38 03.7**	**+0.9**
	baz=343						
VWDT	**VWDT**	**1.19**	**257**	*e*P	**Pb**	**19 38 03.0**	**+0.1**
	baz=248						
VWDT				*e*S	**Sb**	**19 38 17.2**	**-1.1**
	baz=248						
TWF1	**Yuli**	**1.22**	**236**	*e*P	**Pn**	**19 38 03.0**	**-0.4**
	baz=250						
TWF1				*e*S	**Sb**	**19 38 18.5**	**-0.8**
	baz=250						
NHDH	**Xindian Distri**	**1.22**	**319**	*e*P	**Pg**	**19 38 04.3**	**+0.5**
	baz=330						
IRIF	**Iriomote-Funau**	**1.25**	**76**	P	**Pg**	**19 38 04.7**	**+0.4**
IRIF				*e*S	**Sn**	**19 38 21.7**	**+1.2**
TATO	**Taipei**	**1.25**	**318**	*e*P	**Pg**	**19 38 04.6**	**+0.1**
	baz=307						
TATO				*e*S	**Sg**	**19 38 20.5**	**-0.3**
	baz=307						
HATJ	**Hateruma jima**	**1.28**	**89**	P	**Pg**	**19 38 05.3**	**+0.4**
TAP	**Taipei**	**1.29**	**321**	*e*P	**Pn**	**19 38 03.1**	**-1.2**
	baz=335						
FULB	**Fuli**	**1.32**	**231**	*e*P	**Pn**	**19 38 04.6**	**0.0**
	baz=221						
FULB				*e*S	**Sb**	**19 38 20.2**	**-1.8**
	baz=221						
CHKT	**Chengkung**	**1.33**	**226**	*e*P	**Pn**	**19 38 04.7**	**-0.1**
	baz=225						
SSLB	**Suanglung**	**1.35**	**260**	*e*P	**Pb**	**19 38 05.9**	**+0.3**
	baz=259						
SSLB				*e*S	**Sb**	**19 38 21.3**	**-1.7**
	baz=259						
DPDB	**Guoxing**	**1.35**	**270**	*e*P	**Pb**	**19 38 05.8**	**+0.1**
	baz=270						
WHP	**Taichung City**	**1.35**	**281**	*e*P	**Pg**	**19 38 06.7**	**+0.3**
	baz=274						
WHP				*e*S	**Sb**	**19 38 22.6**	**-0.6**
	baz=274						
SMLT	**Sun Moon Lake**	**1.39**	**264**	*e*P	**Pn**	**19 38 06.3**	**+0.6**
	baz=264						
SMLT				*e*S	**Sb**	**19 38 23.2**	**-0.8**
	baz=264						
LIOB	**Emei**	**1.41**	**296**	*e*P	**Pg**	**19 38 07.2**	**-0.2**
	baz=296						
LIOB				*e*S	**Sn**	**19 38 24.8**	**+0.3**
	baz=296						
NSTT	**Nanjuang**	**1.41**	**295**	*e*P	**Pg**	**19 38 07.4**	**0.0**
	baz=295						
NSTT				*e*S	**Sn**	**19 38 24.8**	**+0.2**
	baz=295						
TYC	**Yuchr**	**1.42**	**265**	*e*P	**Pg**	**19 38 08.0**	**+0.4**
	baz=265						
WHYT	**Xinyi Township**	**1.46**	**257**	*e*P	**Pb**	**19 38 07.7**	**+0.2**
	baz=253						
JKRS	**Kuro-shima**	**1.48**	**82**	P	**Pg**	**19 38 10.1**	**+1.4**
JKRS				S	**Sg**	**19 38 28.4**	**+0.4**
TWQ1	**Liyutan**	**1.52**	**282**	*e*P	**Pb**	**19 38 09.0**	**+0.4**
	baz=282						
TWQ1				*e*S	**Sn**	**19 38 27.6**	**+0.3**
	baz=282						
ELDTW	**Lidau**	**1.53**	**237**	*e*P	**Pn**	**19 38 07.5**	**-0.2**
	baz=236						
WJS	**Zhushan**	**1.55**	**262**	*e*P	**Pb**	**19 38 09.6**	**+0.5**
	baz=262						
ALS	**Alishan**	**1.56**	**251**	*e*P	**Pb**	**19 38 09.2**	**-0.1**
	baz=251						
ALS				*e*S	**Sn**	**19 38 27.1**	**-1.5**
	baz=251						
WNT	**Mingjian**	**1.58**	**265**	*e*P	**Pb**	**19 38 09.9**	**+0.3**
	baz=264						
WNT				*e*S	**Sn**	**19 38 29.4**	**+0.7**
	baz=264						
JIJ	**Ishigaki jima**	**1.62**	**78**	P	**Pg**	**19 38 10.3**	**-1.1**
JIJ				*e*S	**Sg**	**19 38 30.9**	**-1.6**
CHN5	**Tsauling**	**1.64**	**255**	*e*P	**Pb**	**19 38 10.8**	**+0.2**
	baz=255						
CHN5				*e*S	**Sn**	**19 38 30.5**	**+0.2**
	baz=255						
STYT	**Tauyuan**	**1.74**	**240**	*e*P	**Pn**	**19 38 11.0**	**+0.4**
	baz=234						
STYT				*e*S	**Sn**	**19 38 31.8**	**-1.1**
	baz=234						
WDLH	**Douliu**	**1.74**	**259**	*e*P	**Pb**	**19 38 12.5**	**+0.2**
	baz=259						
WDLH				*e*S	**Sn**	**19 38 33.4**	**+0.7**
	baz=259						
TPUB	**Ta-pu**	**1.78**	**246**	*e*P	**Pn**	**19 38 12.5**	**+1.4**
	baz=246						
TPUB				*e*S	**Sn**	**19 38 33.8**	**0.0**
	baz=246						
WTP	**Ta-pu**	**1.82**	**245**	*e*P	**Pn**	**19 38 13.0**	**+1.4**
	baz=244						
WTP				*e*S	**Sn**	**19 38 35.0**	**+0.2**
	baz=244						
JISG	**Ishigakijimahi**	**1.82**	**72**	P	**Pb**	**19 38 13.0**	**-0.7**
JISG				*e*S	**Sb**	**19 38 36.3**	**-0.3**
CHN1	**Nanshi**	**1.92**	**244**	*e*P	**Pn**	**19

JTAJ	**Takarajima**	**2.35**	**245**	P		**Pn**	**19 48 25.2**	**+1.4**
JAM	**Amamí Oshima**	**2.49**	**226**	P		**Pn**	**19 48 26.3**	**+0.5**
JNU	**Nakatsue**	**3.02**	**348**	Pn		**Pn**	**19 48 33.7**	**+0.6**
	4.5nm,0.3s,baz=65,slow=2.5,SNR=31							
JNU				Sn		**Sn**	**19 49 07.2**	**-1.2**
	1.7nm,0.3s,baz=20,slow=20,SNR=4.0							
JOW	**Kunigami**	**4.45**	**223**	Pn		**Pn**	**19 48 51.6**	**-1.1**
	1.1nm,0.3s,baz=88,slow=17,SNR=1.3							
JOW				Sn		**Sn**	**19 49 42.4**	**-1.3**
	2.0nm,0.3s,baz=197,slow=19,SNR=1.9							
KSRS	**Korea Array**	**7.90**	**338**	Pn		**Pn**	**19 49 38.9**	**-1.2**
	0.1nm,0.3s,baz=158,slow=13,SNR=1.9							
MJAR	**Matsushiro Arr**	**8.40**	**39**	Pn		**Pn**	**19 49 48.5**	**+1.4**
	0.1nm,0.3s,baz=244,slow=14,SNR=5.5							
KLR	**Kul'dur**	**19.04**	**0**	P		**P**	**19 52 07.7**	**+0.7**
	0.1nm,0.3s,baz=166,slow=7.4,SNR=6.8							
SONM	**Songino Array**	**26.20**	**319**	P		**P**	**19 53 19.1**	**-0.5**
	0.3nm,0.4s,baz=132,slow=10,SNR=3.6							
MKAR	**Makanchi Array**	**41.33**	**308**	P		**P**	**19 55 29.8**	**-0.7**
	0.3nm,0.5s,baz=94,slow=11,SNR=4.6							
KURBB	**Kurchatov Arra**	**44.23**	**313**	P		**P**	**19 55 53.5**	**-0.4**
	0.6nm,0.8s,baz=99,slow=9.5,SNR=3.0							
BVAR	**Borovoye Array**	**49.45**	**316**	P		**P**	**19 56 33.8**	**-0.9**
	0.3nm,0.4s,baz=116,slow=17,SNR=6.2							
WRA	**Warramunga Arr**	**49.89**	**177**	P		**P**	**19 56 39.1**	**+0.8**
	0.5nm,0.9s,baz=341,slow=5.3,SNR=1.5							
ASAR	**Alice Springs**	**53.57**	**177**	P		**P**	**19 57 06.1**	**+0.3**
	0.3nm,0.7s,baz=316,slow=5.1,SNR=5.8							
FINES	**FINESS Array B**	**70.92**	**331**	P		**P**	**19 59 02.4**	**+0.8**
	0.9nm,0.6s,baz=88,slow=4.3,SNR=5.1							

IDC 22 19:51:39.5±30.0, 33°03'N×97°74E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.2/53, mbtmp3.4/4, ML3.3/2, MS3.8/1, Ms1 3.8/1, ms1mx2.4/44, Error ellipse: s-maj=429.4km s-min=76.9km az=167.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SONM	**Songino Array**	**16.18**	**21**	Pn		Pn	19 55 28.0	-0.3
	0.1nm,0.3s,baz=203,slow=14,SNR=2.3							
MKAR	**Makanchi Array**	**18.10**	**324**	P		P	19 55 53.1	+0.3
	0.1nm,0.3s,baz=129,slow=13,SNR=13							
KURBB	**Kurchatov Arra**	**22.56**	**327**	P		P	19 56 40.1	-1.0
	0.7nm,0.6s,baz=136,slow=10,SNR=6.1							
ZALV	**Zalesovo Beam**	**22.84**	**340**	P		P	19 56 44.9	+0.7
	1.5nm,0.8s,baz=138,slow=12,SNR=5.7							
MMAI	**Mount Meron Ar**	**51.55**	**288**	LR		LR	20 26 19.3	
	comp=Z,96nm,19.4s,baz=310,slow=40							

*KRNET **22** 19:52:21.7±0.1, 40°.07N×71°.32E, h13km, mb3.3*
*SOME **22** 19:52:22.9, 40°.10N×71°.35E, h10km*
*ISU **22** 19:52:23, 40°.10N×71°.34E, h10km*
*NNC **22** 19:52:26.4±3.0, 40°.26N×71°.41E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=24.0km s-min=10.5km az=4.0*

ISC 22 19:52:19.0±1.3, 40°03N±0°.04×71°35E±0°.02, h1km±11km, n44, σ1°§62/76, 21C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BTK	**Batken**	**0.41**	**274**	⇑*i*	P	**Pb**	**19 52 29.2**	**+0.1**
	baz=68							
BTK				⇑*i*	S	**Sb**	**19 52 34.9**	**-1.0**
	baz=68							
BTK	**Batken**	**0.41**	**274**	*e*	P	**Pb**	**19 52 29.0**	**-0.1**
BTK				*e*	S	**Sb**	**19 52 34.0**	**-1.9**
MINT	**Mingtut**	**0.52**	**327**	*e*	P	**Pn**	**19 52 32.0**	**-1.6**
MINT				*e*	S	**Sn**	**19 52 39.0**	**-4.1**
DRK	**Karamyk**	**0.65**	**148**	⇑*i*	P	**Pn**	**19 52 35.2**	**-0.4**
	baz=48							
DRK				⇑*i*	S	**Sn**	**19 52 44.8**	**-1.9**
	baz=48							
FRG	**Fergana**	**0.78**	**25**	*e*	P	**Pg**	**19 52 32.0**	**-1.9**
FRG				*e*	S	**Sg**	**19 52 38.0**	**-6.0**
NAM	**Namangan**	**0.99**	**14**	*e*	P	**Pn**	**19 52 42.0**	**+2.0**
NAM				*e*	S	**Sn**	**19 52 57.0**	**+2.4**
ANR	**Andizhan**	**1.06**	**47**	*e*	P	**Pn**	**19 52 43.0**	**+2.0**
ANR				*e*	S	**Sn**	**19 53 01.0**	**+4.7**
OHH	**Osh**	**1.20**	**65**	⇑*i*	P	**Pg**	**19 52 44.4**	**+2.3**
	baz=68							
OHH				⇑*i*	S	**Sn**	**19 53 01.3**	**+1.3**
	baz=68							
OHH	**Osh**	**1.20**	**65**	*e*	P	**Pg**	**19 52 45.0**	**+2.9**
OHH				*e*	S	**Sn**	**19 53 01.0**	**+1.0**
TRKS	**Terek-Say**	**1.50**	**354**	⇑*i*	P	**Pg**	**19 52 48.2**	**+0.3**
	baz=55							
TRKS				⇑*i*	S	**Sg**	**19 53 07.0**	**-0.4**
	baz=55							
ARSB	**Arslanbob**	**1.79**	**43**	⇓*e*	P	**Pg**	**19 52 54.6**	**+1.3**
	baz=45							
ARSB				⇓*i*	S	**Sg**	**19 53 18.5**	**+1.9**
	baz=45							
ARSB	**Arslanbob**	**1.79**	**43**	*e*	P	**Pg**	**19 52 54.0**	**+0.7**
ARSB				*e*	S	**Sg**	**19 53 16.0**	**-0.6**
CHMG	**Chimgan**	**1.83**	**327**	*e*	P	**Pg**	**19 52 55.0**	**+1.0**
CHMG				*e*	S	**Sg**	**19 53 18.0**	**+0.3**
CHRV	**Charvak**	**1.93**	**327**	*e*	P	**Pg**	**19 52 57.0**	**+1.1**
CHRV				*e*	S	**Sg**	**19 53 21.0**	**+0.1**
TAS	**Tashkent**	**2.03**	**310**	⇑*i*	P	**Pg**	**19 52 58.8**	**+0.9**
	baz=10.0							
TAS				⇑*i*	S	**Sg**	**19 53 24.9**	**+0.7**
	baz=10.0							
TAS	**Tashkent**	**2.03**	**310**	*e*	P	**Pg**	**19 52 59.0**	**+1.1**
TAS				*e*	S	**Sg**	**19 53 26.0**	**+1.8**
IUG	**Iuzhnay**	**2.34**	**335**	*e*	P	**Pg**	**19 53 04.5**	**+0.7**
	11nm,0.3s							
IUG				*e*	S	**Sg**	**19 53 34.2**	**+0.1**
	157nm,0.4s							
IUG	**Iuzhnay**	**2.34**	**335**	Pg		**Pg**	**19 53 04.5**	**+0.7**
	480nm,0.4s							
IUG				Lg		Lg	19 53 34.7	
	157nm,0.4s							
MNAS	**Manas**	**2.60**	**19**	⇑*e*	P	**Pg**	**19 53 06.6**	**-2.3**
	baz=20							
MNAS				⇑*i*	S	**Sb**	**19 53 38.8**	**-0.3**
	baz=20							
CHM	**Chimkent**	**2.64**	**331**	*e*	P	**Pg**	**19 53 11.5**	**+1.9**
	17nm,0.3s							
CHM				*e*	S	**Sg**	**19 53 45.9**	**+2.1**
	254nm,0.4s							
AML	**Almayashu**	**2.75**	**39**	⇑*i*	P	**Pb**	**19 53 08.4**	**-0.7**
	baz=40							
AML				⇑*i*	S	**Sb**	**19 53 43.0**	**-0.4**
	baz=40							
DZA	**Taraz**	**2.86**	**360**	*e*	P	**Pg**	**19 53 14.6**	**+0.8**
	30nm,0.3s							
DZA				*e*	S	**Sg**	**19 53 51.5**	**+0.6**
	125nm,0.3s							
DZA	**Taraz**	**2.86**	**360**	Pg		**Pg**	**19 53 14.6**	**+0.8**
	30nm,0.3s							
DZA				Lg		Lg	19 53 51.5	
	125nm,0.3s							
ARLS	**Aral**	**2.90**	**50**	⇑*e*	P	**Pb**	**19 53 11.0**	**-0.6**
	baz=51							
ARLS				⇑*i*	S	**Sb**	**19 53 46.1**	**-1.5**
	baz=51							
MRKS	**Merke**	**3.06**	**27**	*e*	P	**Pg**	**19 53 17.9**	**+0.4**
MRKS				*e*	S	**Sg**	**19 53 57.4**	**+0.2**
MRKS	**Merke**	**3.06**	**27**	Pg		**Pg**	**19 53 17.9**	**+0.4**
MRKS				Lg		Lg	19 53 57.4	
KK31	**Karatay Array**	**3.13**	**349**	⇑Pn		**Pg**	**19 53 18.1**	**-1.0**
	5.6nm,0.5s,baz=161,slow=16,SNR=23							
KK31				⇓Lg		Lg	19 53 59.7	
	8.4nm,0.3s,baz=171,slow=31,SNR=8.5							
BRLS	**Borolday**	**3.20**	**340**	*e*	P	**Pb**	**19 53 16.7**	**0.0**
	0.5nm,0.3s							
BRLS				*e*	S	**Sb**	**19 53 55.2**	**-1.1**
	26nm,0.3s							
BRLS	**Borolday**	**3.20**	**340**	Pg		**Pb**	**19 53 16.7**	**0.0**
	0.5nm,0.3s							
BRLS				Lg		Lg	19 53 55.2	
	26nm,0.3s							
UCH	**Uchtor**	**3.24**	**46**	⇑*e*	P	**Pb**	**19 53 15.8**	**-1.8**
	baz=47							
UCH				⇑*i*	S	**Sb**	**19 53 54.8**	**-3.0**
	baz=47							
AAK	**Ala-Archa**	**3.52**	**41**	Pg		**Pg**	**19 53 26.3**	**-0.1**
	5.0nm,0.6s							
AAK				Lg		Lg	19 54 13.1	
	18nm,0.7s							
SGDS	**Sogindy**	**4.21**	**35**	Pg		**Pg**	**19 53 38.6**	**-1.0**
	2.7nm,0.3s							
SGDS				Lg		Lg	19 54 32.7	
	5.9nm,0.5s							
TKM2	**Tokmak 2**	**4.30**	**46**	⇑Pn		Pb	19 53 29.4	-6.1
	4.2nm,0.5s							
TKM2				⇑Sn		**Sn**	**19 54 19.4**	**+2.7**
	5.3nm,0.8s							
TKM2				⇓Lg		Lg	19 54 38.1	
	4.3nm,0.5s							
KST	**Kastek**	**4.59**	**48**	*e*P		**Pg**	**19 53 47.5**	**+0.6**
	4.7nm,0.4s							
KST				*e*S		**Sg**	**19 54 47.9**	**+1.6**
	6.4nm,0.6s							
KST	**Kastek**	**4.59**	**48**	Pg		**Pg**	**19 53 47.5**	**+0.6**
	4.7nm,0.4s							
KST				Lg		Lg	19 54 47.9	
	6.4nm,0.6s							
DGS	**Degeres**	**4.61**	**44**	*e*P		**Pg**	**19 53 47.5**	**+0.2**
	2.4nm,0.5s							
DGS				*e*S		**Sg**	**19 54 47.5**	**+0.4**
	8.4nm,0.5s							
KRBS	**Karabastau**	**4.88**	**40**	*e*P		**Pg**	**19 53 51.0**	**-1.5**
	2.4nm,0.6s							
KRBS				*e*S		**Sg**	**19 54 54.2**	**-1.6**
	4.3nm,0.6s							
MTBS	**Maitube**	**4.91**	**49**	*e*P		**Pg**	**19 53 52.7**	**-0.4**
	1.5nm,0.3s							
MTBS				*e*S		**Sg**	**19 54 56.6**	**0.0**
	6.3nm,0.4s							
MTBS	**Maitube**	**4.91**	**49**	Pg		**Pg**	**19 53 52.7**	**-0.4**
	1.5nm,0.3s							
MTBS				Lg		Lg	19 54 56.6	
	6.3nm,0.4s							
TNSS	**Tian-Shan**	**5.16**	**53**	*e*P		**Pg**	**19 53 58.0**	**0.0**
	1.2nm,0.3s							
TNSS				*e*S		**Sg**	**19 55 05.8**	**+0.9**
	3.0nm,0.6s							
TNSS	**Tian-Shan**	**5.16**	**53**	Pg		**Pg**	**19 53 58.0**	**0.0**
	1.2nm,0.3s							
TNSS				Lg		Lg	19 55 05.8	
	3.0nm,0.6s							
MDOK	**Medeo**	**5.29**	**52**	*e*P		**Pg**	**19 53 59.7**	**-0.8**
	2.4nm,0.8s							
MDOK				*e*S		**Sg**	**19 55 08.5**	**-0.5**
	5.9nm,0.8s							
MDOK	**Medeo**	**5.29**	**52**	Pg		**Pg**	**19 53 59.7**	**-0.8**
	2.4nm,0.8s							
MDOK				Lg		Lg	19 55 08.5	
	5.9nm,0.8s							
BTLS	**Baital**	**5.39**	**21**	*e*P		**Pg**	**19 54 02.4**	**+0.2**
	7.3nm,0.5s							
BTLS				*e*S		**Sg**	**19 55 13.1**	**+1.1**
	2.9nm,0.6s							

IDC 22 20:08:47.0±13.0, 2°.18N×127°.86E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.1/57, mbtmp3.4/4, Error ellipse: s-maj=223.0km s-min=124.2km az=147.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.27**	**186**	P		P	20 13 23.7	-0.6
	2.2nm,0.9s,baz=11,slow=10,SNR=1.6							
WRA	**Warramunga Arr**	**22.88**	**164**	P		P	20 13 53.2	+0.7
	0.3nm,0.9s,baz=348,slow=11,SNR=2.0							
ASAR	**Alice Springs**	**26.35**	**167**	P		P	20 14 25.5	+0.5
	0.3nm,0.9s,baz=342,slow=6.8,SNR=2.1							
STKA	**Stephens Creek**	**36.29**	**160**	P		P	20 15 51.8	-0.7
	0.8nm,0.5s,baz=346,slow=8.3,SNR=3.4							

*IDC **22** 20:13:01.6±2.4, 28°.41N×83°.73E, h0km, mb3.3/4, mb1 3.5/7, mb1mx3.2/63, mbtmp3.3/7, ML3.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/25, Error ellipse: s-maj=74.1km s-min=22.6km az=67.0*

ISC 22 20:13:05.9±2.1, 28°.4N±0°.2×83°.7E±0°.4, h35km, n8, σ1°§37/7, mb3.3/4, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AAK	**Ala-Archa**	**16.02**	**335**	Pn		**Pn**	**20 16 47.7**	**-1.0**
	0.1nm,0.3s,baz=213,slow=23,SNR=1.3							
CMAR	**Chiang Mai Arr**	**17.14**	**122**	P		**Pn**	**20 17 00.9**	**-1.9**
	baz=303,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**18.37**	**357**	P		**P**	**20 17 17.7**	**+0.1**
	0.2nm,0.3s,baz=179,slow=10,SNR=9.9							
KURBB	**Kurchatov Arra**	**22.51**	**351**	P		**P**	**20 18 02.2**	**-0.2**
	0.6nm,0.8s,baz=174,slow=10,SNR=7.9							
SONM	**Songino Array**	**26.18**	**36**	P		**P**	**20 18 38.2**	**+1.0**
	0.4nm,0.6s,baz=224,slow=8.1,SNR=4.7							
BELG	**Belogornoye**	**35.85**	**322**	LR		LR	20 37 25.8	
	comp=Z,31nm,19.8s,baz=297,slow=41							
WRA	**Warramunga Arr**	**68.60**	**129**	P		**P**	**20 24 06.5**	**+0.9**
	0.4nm,0.9s,baz=320,slow=6.7,SNR=1.5							
ASAR	**Alice Springs**	**70.87**	**132**	P		**P**	**20 24 20.6**	**+1.1**
	0.5nm,1.1s,baz=316,slow=6.4,SNR=2.0							

*IDC **22** 20:16:50.5±0.9, 37°.07N×24°.99E, h43km±8km, mb3.4/5, mb1 3.4/5, mb1mx3.0/48, mbtmp3.6/5, Error ellipse: s-maj=25.2km s-min=8.6km az=108.0*

ISC 22 20:16:50.8±1.0, 37°.0N±0°.1×25°.1E±0°.2, h50km, n6, σ1°§35/11, mb3.9/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDI	**Anoyia**	**1.75**	**185**	P		**Pn**	**20 17 18.8**	**-0.1**
	5.5nm,0.3s,baz=74,slow=15,SNR=79							
IDI				S		**Sn**	**20 17 40.6**	**+0.6**
	12nm,0.3s,baz=329,slow=16,SNR=5.8							
TORD	**Torodi Ar. Bea**	**31.68**	**227**	P		**P**	**20 23 08.7**	**-0.9**
	0.7nm,0.6s,baz=34,slow=9.1,SNR=7.9							
TORD				pP		**pP**	**20 23 20.8**	**-1.8**
	1.5nm,0.5s,baz=33,slow=9.1,SNR=10							
KURBB	**Kurchatov Arra**	**40.02**	**53**	P		**P**	**20 24 21.6**	**+0.9**
	0.3nm,0.6s,baz=277,slow=8.9,SNR=3.6							
KURBB				pP		**pP**	**20 24 33.5**	**-0.3**
	0.6nm,0.5s,baz=275,slow=8.7,SNR=7.8							
DBIC	**Dimbokro**	**40.71**	**229**	P		**P**	**20 24 28.5**	**+1.8**
	3.6nm,0.9s,baz=288,slow=3.2,SNR=2.0							
MKAR	**Makanchi Array**	**42.82**	**58**	P		**P**	**20 24 43.2**	**-0.5**
	0.3nm,0.5s,baz=281,slow=6.5,SNR=4.8							
MKAR				pP		**pP**	**20 24 54.9**	**-2.1**
	0.6nm,0.6s,baz=276,slow=6.9,SNR=6.9							
ZALV	**Zalesovo Beam**	**43.77**	**48**	P		**P**	**20 24 52.3**	**+1.0**
	0.3nm,0.4s,baz=268,slow=8.7,SNR=1.6							
ZALV				pP		**pP**	**20 25 05.3**	**+0.7**
	1.1nm,0.5s,baz=272,slow=7.8,SNR=4.4							

*DDA **22** 20:19:53.4, 35°.14N×26°.61E, h7km±4km, MW4.2*
*IDC **22** 20:19:53.7±0.5, 35°.18N×26°.77E, h0km, mb4.1/28, mb1 4.1/41, mb1mx4.1/57, mbtmp4.1/41, ML3.7/11, MS3.2/17, Ms1 3.2/17, ms1mx3.0/52, Error ellipse: s-maj=12.7km s-min=10.1km az=153.0*
*NIC **22** 20:19:54.1±0.0, 35°.04N×26°.88E, h4km±2km, Ml4.4/4*
*ISK **22** 20:19:55.8, 35°.25N×26°.79E, h2km, ML4.1/30*
*NEIC **22** 20:19:55.4±2.7, 35°.11N±0°.07×26°.81E±0°.06, h10km±1km, mb4.2/47, Error ellipse: s-maj=11.2km s-min=8.0km az=190.0*
*HLW **22** 20:19:56.0, 35°.06N×27°.08E, h10km±18km, Ml4.5*
*THE **22** 20:19:57.2, 35°.16N×26°.84E, h0km, ML4.1/10, Error ellipse: s-maj=2.9km s-min=0.6km az=150.0*
*ATH **22** 20:19:57.8, 35°.29N×26°.71E, h12km±3km, ML4.1/6, Error ellipse: s-maj=5.7km s-min=1.0km az=151.0*

ISC 22 20:19:56.7±0.5, 35°.10N±0°.03×26°.83E±0°.02, h21km±4km, n387, σ1°§62/419, mb4.1/47, MS3.2/12, 15C-17D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZKR	**Zakros**	**0.50**	**272**	P		**Pb**	**20 20 06.2**	**-0.6**
ZKR				S		**Sb**	**20 20 12.7**	**-1.0**
ZKR				AML		AML	20 20 17.4	
	comp=E,34678μm,0.4s							
ZKR				AML		AML	20 20 20.5	
	comp=N,29191μm,0.4s							
ZKR	**Zakros**	**0.50**	**272**	P		**Pb**	**20 20 06.3**	**-0.5**
ZKR				S		**Sn**	**20 20 16.5**	**-0.2**
	comp=N,16μm,0.5s							
ZKR	**Zakros**	**0.50**	**272**	PG		**Pb**	**20 20 06.3**	**-0.5**
ZKR				SG		**Sb**	**20 20 13.8**	**+0.1**
ZKR	**Zakros**	**0.50**	**272**	P		**Pb**	**20 20 05.3**	**-1.5**
ZKR				S		**Sb**	**20 20 14.5**	**+0.8**
KARP	**Karpathos**	**0.52**	**31**	P		**Pb**	**20 20 06.0**	**-1.1**
KARP				AML		AML	20 20 16.9	
KARP				AML		AML	20 20 17.1	
KARP	**Karpathos**	**0.52**	**31**	P		**Pb**	**20 20 06.5**	**-0.8**
KARP				S		**Sb**	**20 20 14.5**	**0.0**
	comp=N,64μm,0.4s							
KARP	**Karpathos**	**0.52**	**31**			**Pb**	**20 20 06.1**	**-1.1**
KARP	**Karpathos**	**0.52**	**31**	⇑P		**Pb**	**20 20 05.3**	**-1.9**
KARP				S		**Sb**	**20 20 14.7**	**+0.2**
KARP				AML		AML	20 20 16.5	
	comp=N,130nm,0.4s							
KARP				AML		AML	20 20 16.5	
	comp=N,130nm,0.4s							
KARP				AML		AML	20 20 16.7	
	comp=N,120nm,0.5s							
KARP				AML		AML	20 20 16.7	
	comp=N,120nm,0.5s							
STIA	**Sitia Lasithi**	**0.61**	**280**	P		**Pb**	**20 20 08.3**	**-0.5**
STIA				S		**Sn**	**20 20 19.6**	**+0.2**
NPS	**Neapolis**	**1.01**	**280**	P		**Pn**	**20 20 15.4**	**-0.2**
NPS				AML		AML	20 20 36.8	
	comp=N,13824μm,0.5s							
NPS				AML		AML	20 20 42.1	
	comp=E,30045μm,0.5s							
NPS	**Neapolis**	**1.01**	**280**	P		**Pn**	**20 20 15.6**	**0.0**
NPS				S		**Sn**	**20 20 32.6**	**+3.4**
	comp=E,12μm,0.6s							
LAST	**Lasithi**	**1.11**	**274**	P		**Pn**	**20 20 16.7**	**-0.4**
LAST				AML		AML	20 20 40.3	
	comp=E,8382μm,0.7s							
LAST				AML		AML	20 20 44.8	
	comp=N,11636μm,0.7s							
LAST	**Lasithi**	**1.11**	**274**	P		**Pb**	**20 20 17.6**	**+0.4**
LAST				S		**Sn**	**20 20 34.3**	**+2.5**
	comp=N,6μm,0.7s							
HRKL	**Herakleio**	**1.43**	**279**	P		**Pb**	**20 20 23.7**	**+1.1**
HRKL	**Herakleio**	**1.43**	**279**	PN		**Pb**	**20 20 23.2**	**+0.6**
HRKL				SN		**Sb**	**20 20 42.6**	**+2.2**
IACM	**Heraklion**	**1.46**	**279**	P		**Pb**	**20 20 24.0**	**+1.0**
IACM	**Heraklion**	**1.46**	**279**	P		**Pb**	**20 20 24.0**	**+1.0**
KSTL	**Kastelli Herak**	**1.46**	**279**	P		**Pn**	**20 20 20.0**	**-1.7**
KSTL				S		**Sn**	**20 20 37.9**	**-2.3**
NIS1	**Nisyros Isl.**	**1.53**	**11**	P		**Pn**	**20 20 23.4**	**+0.6**
NIS1				AML		AML	20 20 56.2	
	comp=E,15852μm,0.7s							
NIS1				AML		AML	20 20 58.4	
	comp=N,19663μm,0.8s							
NIS1	**Nisyros Isl.**	**1.53**	**11**	P		**Pn**	**20 20 23.7**	**+0.9**
NIS1				S		**Sb**	**20 20 44.5**	**+1.3**
	comp=N,10μm,0.8s							
NIS1	**Nisyros Isl.**	**1.53**	**11**	PN		**Pn**	**20 20 23.2**	**+0.4**
NISR	**Nisiros**	**1.53**	**9**	P		**Pn**	**20 20 23.1**	**+0.3**
NISR				S		**Sb**	**20 20 45.0**	**+1.7**
	comp=N,7μm,0.8s							
ARG	**Arkhangelos**	**1.54**	**43**	P		**Pb**	**20 20 24.3**	**-0.1**
ARG				S		**Sn**	**20 20 42.9**	**+0.7**
ARG				AML		AML	20 20 50.5	
	comp=E,16023μm,0.4s							
ARG				AML		AML	20 20 51.0	
	comp=N,9711μm,0.4s							
ARG	**Arkhangelos**	**1.54**	**43**	P		**Pb**	**20 20 24.6**	**+0.2**
ARG				S		**Sb**	**20 20 44.0**	**+0.6**
	comp=N,6μm,0.4s							
ARG	**Arkhangelos**	**1.54**	**43**	PN		**Pn**	**20 20 23.9**	**+1.0**
ARG				SN		**Sb**	**20 20 44.4**	**+1.0**
ARG	**Arkhangelos**	**1.54**	**43**	⇑P		**Pn**	**20 20 23.9**	**+1.0**
ARG				S		**Sb**	**20 20 45.7**	**+2.3**
IDI	**Anoyia**	**1.60**	**277**	Pg		**Pb**	**20 20 26.1**	**+0.6**
	comp=N,139nm,0.3s,baz=92,slow=13,SNR=100							
IDI				Lg		Lg	20 20 48.5	
	comp=N,139nm,0.3s,baz=303,slow=21,SNR=6.2							
IDI				LR		LR	20 21 04.8	
	comp=N,583nm,21.8s,baz=82,slow=46							
IDI	**Anoyia**	**1.60**	**277**	P		**Pb**	**20 20 25.8**	**+0.3**
IDI	**Anoyia**	**1.60**	**277**	P		**Pb**	**20 20 25.9**	**+0.3**
IDI	**Anoyia**	**1.60**	**277**	PN		**Pb**	**20 20 25.5**	**0.0**
IDI	**Anoyia**	**1.60**	**277**	Pn		**Pb**	**20 20 25.3**	**-0.2**
KOSK	**Kos Island**	**1.66**	**4**	P		**Pn**	**20 20 25.1**	**+0.6**
KOSK				S		**Sn**	**20 20 46.6**	**+1.5**
	comp=N,4μm,0.5s							
KOSK	**Kos Island**	**1.66**	**4**	PN		**Pn**	**20 20 25.2**	**+0.7**
SIVA	**Sivas**	**1.66**	**268**	P		**Pn**	**20 20 26.9**	**+0.4**
SIVA	**Sivas**	**1.66**	**268**	P		**Pb**	**20 20 27.1**	**+0.6**
SIVA				S		**Sb**	**20 20 47.5**	**+0.6**
	comp=N,9μm,0.7s							
SANT	**Santorini**	**1.69**	**319**	P		**Pn**	**20 20 25.6**	**+0.6**
SANT	**Santorini**	**1.69**	**319**	P		**Pn**	**20 20 25.9**	**+0.9**
SANT	**Santorini**	**1.69**	**319**	PN		**Pn**	**20 20 25.0**	**0.0**
SANT	**Santorini**	**1.69**	**319**	Pn		**Pn**	**20 20 25.2**	**+0.1**
TMBK	**Timbaki Herakl**	**1.69**	**270**	P		**Pb**	**20 20 27.3**	**+0.2**
TMBK				S		**Sb**	**20 20 50.0**	**+2.1**
	comp=N,3μm,1.6s							
THR8	**Santorini-Mono**	**1.71**	**320**	P		**Pn**	**20 20 26.1**	**+0.9**
THR6	**Thira Island,**	**1.71**	**318**	P		**Pn**	**20 20 26.4**	**+1.1**
THR9	**Santorini-Faro**	**1.74**	**317**	P		**Pn**	**20 20 26.6**	**+1.0**
SNT1	**Gialos, Santor**	**1.74**	**320**	P		**Pn**	**20 20 26.6**	**+0.9**
SFIR	**Foira Santorin**	**1.75**	**320**	P		**Pn**	**20 20 27.1**	**+0.9**
THR7	**Fira-Santorini**	**1.75**	**320**	P		**Pb**	**20 20 27.2**	**-0.8**
SNT5	**Nea Kammeni, S**	**1.75**	**319**	P		**Pn**	**20 20 26.7**	**+0.9**
THR3	**Thira Island,**	**1.75**	**319**	P		**Pn**	**20 20 26.8**	**+1.0**
THT2

ANKY **Antikythira Is** 2.98 286 P Pn 20 20 44.8 +2.1
ANKY **Antikythira Is** 2.98 286 P Pn 20 20 44.7 +2.0
ELL **Elmali** 2.99 56 PN Pn 20 20 44.7 +1.7
ELL **Elmali** 2.99 56 Pn 20 20 45.0 +2.0
GOLH **Golhisar** 3.07 45 *i* P Pn 20 20 46.4 +2.3
AKUM **Antalya-Kumluc** 3.11 66 *i* P Pn 20 20 45.1 +0.6
AKUM *i* S Sn 20 21 21.0 0.0
ZEYE **Izmir, Urla-Ze** 3.15 355 *i* P Pn 20 20 43.2 -1.8
URLA **Izmir** 3.26 357 *i* P Pn 20 20 45.9 -0.7
URLA **Izmir** 3.26 357 PN Pn 20 20 47.2 +0.6
KTHA **Kythira Island** 3.28 292 P Pn 20 20 48.8 +2.0
KTHA **Kythira Island** 3.28 292 PN Pn 20 20 48.6 +1.8
KTHR **Kythira** 3.32 292 P Pn 20 20 49.5 +2.1
CHOS **Chios island** 3.34 349 P Pn 20 20 48.0 +0.2
CHOS **Chios island** 3.34 349 PN Pn 20 20 48.3 +0.5
KEMT **Kemer-ANTALYA** 3.38 63 PN Pn 20 20 49.7 +1.5
KORT **Korkueli** 3.43 55 PN Pn 20 20 51.0 +2.0
KARY **Karystos** 3.50 327 P Pn 20 20 51.3 +1.4
VLI **Veliai** 3.55 298 P Pn 20 20 52.6 +2.1
ANTB **Antalya** 3.58 59 PN Pn 20 20 53.4 +2.4
MANT **Manisa** 3.66 22 *i* P Pn 20 20 53.2 +0.9
MANT **Manisa** 3.66 22 Pn Pn 20 20 54.0 +1.8
VLY **Voula,Athens** 3.68 319 P Pn 20 20 54.3 +2.0
KULA **Kula-Manisa** 3.71 23 P Pn 20 20 54.7 +1.8
KULA **Kula-Manisa** 3.71 23 PN Pn 20 20 54.4 +1.5
BUCA **Burdur, Bucak-** 3.75 52 *i* P Pn 20 20 56.8 +3.4
KRND **KRANIDI** 3.75 309 P Pn 20 20 55.9 +2.6
ATHU **Athens Univers** 3.77 320 P Pn 20 20 55.5 +1.9
DION **Dionisos Attik** 3.78 323 P Pn 20 20 55.7 +2.0
PTL **Penteli** 3.79 322 P Pn 20 20 55.5 +1.6
ATH **Athens Observa** 3.81 320 P Pn 20 20 56.3 +2.2
BASM **Basmaki-Afyon** 3.83 42 PN Pn 20 20 56.4 +1.9
AKHS **Akhisar** 3.86 11 *i* P Pn 20 20 56.1 +1.4
ZEDA **zmir-Bergama** 3.87 3 *i* P Pn 20 20 57.8 +2.9
DKL **Dikili** 3.97 1 PN Pn 20 20 56.9 +0.6
OSC1 **CSNet OBS 1** 4.01 112 P Pn 20 20 55.5 -1.4
OSC1 S Sn 20 21 44.5 +1.3
USAK **Uak-Merkez** 4.01 25 *i* P Pn 20 20 59.1 +2.1
ISP **Isparta** 4.03 46 PN Pn 20 20 59.0 +1.8
ISP **Isparta** 4.03 46 Pn Pn 20 20 59.1 +1.8
EREA **Eretria** 4.05 326 P Pn 20 20 59.7 +2.2
KYMI **Kymi, Euboea I** 4.15 329 P Pn 21 20 00.6 +1.8
VILL **Villia** 4.17 318 P Pn 20 21 01.3 +2.2
SIGR **SIGRI** 4.18 350 P Pn 20 20 59.8 +0.6
SIGR **SIGRI** 4.18 350 PN Pn 20 20 59.5 +0.3
LOUT **Loutraki** 4.24 314 P Pn 20 21 02.7 +2.7
VLX **Vlachokerasia** 4.25 304 P Pn 20 21 02.6 +2.3
LTK **Loutraki** 4.26 314 P Pn 20 21 03.2 +2.8
KEPZ **Antalya-Kepez** 4.27 64 *i* P Pn 20 21 03.7 +3.2
STEP **BALIKESIR_Sava** 4.33 9 *i* P Pn 20 21 02.7 +1.4
SIMA **Simav-Kutahya** 4.33 23 PN Pn 20 21 02.6 +1.2
BUHA **Balikesir, Bur** 4.40 2 *i* P Pn 20 21 03.5 +1.2
GEDZ **Gediz** 4.45 27 PN Pn 20 21 04.8 +1.8
ITM **Ithomi** 4.48 299 P Pn 20 21 05.7 +2.4
ITM **Ithomi** 4.48 299 Pn Pn 20 21 05.5 +2.2
PYL **PYLOS** 4.50 295 P Pn 20 21 04.4 +0.8
AKMS **Akamas** 4.52 89 P Pn 20 21 04.3 +0.5
AKMS AML AML 20 22 02.4
comp=E,2.1nm,0.4s
AKMS AML AML 20 22 02.5
comp=E,2.6nm,0.8s
SHUT **Suhut-Afyon** 4.56 40 PN Pn 20 21 06.4 +1.8
GAZI **Gazipasa** 4.61 74 *i* P Pn 20 21 04.9 -0.2
BALI **Balikesir** 4.61 10 PN Pn 20 21 06.8 +1.7
SEDI **Konya, Seydise** 4.62 58 *i* P Pn 20 21 08.2 +2.8
BAYC **CANAKKALE_Bayr** 4.64 357 *i* P Pn 20 21 05.5 -0.1
BALY **Balya** 4.68 7 *i* P Pn 20 21 07.8 +1.8
LKR **Lokris** 4.69 320 P Pn 20 21 08.4 +2.2
ATAL **Atalanti** 4.71 321 P Pn 20 21 08.7 +2.2
NATA **Nata** 4.73 92 P Pn 20 21 06.7 -0.1
ALFC **Alefka** 4.73 88 ⇑P Pn 20 21 06.7 -0.1
ALFC AML AML 20 22 02.7
comp=E,3.1nm,1.0s
ALFC AML AML 20 22 02.7
comp=E,2.8nm,0.7s
KLV **Kalavryta, Ach** 4.78 309 P Pn 20 21 09.8 +2.3
AMT **Artemida-Makis** 4.80 302 P Pn 20 21 11.2 +3.5
OSC2 **CSNet OBS 4** 4.94 113 S Sn 20 22 01.0 +0.8
AXAR **Agios Charalam** 4.96 319 P Pn 20 21 12.8 +2.9
LIA **Limnos Island** 4.97 345 P Pn 20 21 10.6 +0.6
SZAC **Souni** 4.98 92 ⇑P Pn 20 21 10.0 -0.3
LAKA **Lakka** 5.00 310 P Pn 20 21 13.2 +2.6
DRO **Drossia** 5.01 306 P Pn 20 21 13.6 +2.9
TRIZ **Trizonia** 5.02 312 P Pn 20 21 14.1 +3.3
GOKA **anakkale-Gk** 5.14 352 *i* P Pn 20 21 13.5 +1.1
ANX **Ano Chora** 5.26 313 P Pn 20 21 16.6 +2.5
ASGA **Asgata** 5.28 92 P Pn 20 21 14.3 0.0
AGG **Agios Georgios** 5.32 319 P Pn 20 21 17.9 +3.0
AGG **Agios Georgios** 5.32 319 Pn Pn 20 21 17.9 +3.0
CSS **Mathiatis** 5.34 90 Pn Pn 20 21 15.0 -0.1
CSS **Mathiatis** 5.34 90 ⇑P Pn 20 21 14.9 -0.3
CSS AML AML 20 22 24.2
comp=E,0.5nm,1.0s
CSS AML AML 20 22 26.4
comp=E,0.4nm,0.6s
MAKR **Makrakomi, Fth** 5.42 318 P Pn 20 21 20.0 +3.7
EVR **Evrytania** 5.54 315 P Pn 20 21 21.3 +3.3
MVOU **Mavrovouni** 5.58 89 ⇑P Pn 20 21 18.2 -0.2
ALN **Alexandroupoli** 5.82 354 Pn Pn 20 21 22.8 +1.0
SWA2 5.95 192 P Pn 20 21 24.4 +0.8
baz=194
LIT **Litokhoron** 6.07 327 P Pn 20 21 27.4 +2.3
LIT **Litokhoron** 6.07 327 Pn Pn 20 21 27.5 +2.3
MDUB **Mudurnu** 6.38 32 Pn 20 21 28.9 -0.6
KPRO **Kipourio** 6.51 320 P Pn 20 21 34.9 +3.6
BR231 **Keskin MP Arra** 6.69 43 Pn 20 21 35.8 +2.0
ANTO **Ankara** 6.72 43 Pn 20 21 36.2 +2.1
GLL **Jalalah** 6.88 142 P Pn 20 21 35.3 -1.1
baz=143
VAY **Valandovo** 7.06 333 *i* Pn Pn 20 21 44.0 +5.3
BR131 **Keskin Array S** 7.12 48 Pn Pn 20 21 43.4 +3.6
BRTR **Keskin Array B** 7.12 48 Pn Pn 20 21 42.2 +2.5
comp=E,0.8nm,0.3s,baz=215,slow=15,SNR=10.0
BRTR Sn Sn 20 23 01.4 +1.3
baz=214,slow=25,SNR=2.5
BRTR LR LR 20 25 20.6
comp=E,216nm,20.3s,baz=230,slow=46
BRTR **Keskin Array B** 7.12 48 Pn 20 21 41.4 +1.7
FNA **Florina** 7.13 324 Pn Pn 20 21 42.3 +2.6
SUZ **Suez** 7.29 134 P Pn 20 21 41.6 -0.4
baz=135
MMAI **Mount Meron Ar** 7.41 104 Pn Pn 20 21 42.3 -1.4
comp=E,3.5nm,0.3s,baz=291,slow=12,SNR=17
MMAI Sn Sn 20 23 04.3 -2.8
comp=E,11nm,0.3s,baz=314,slow=32,SNR=8.5
STIP **Stip** 7.53 332 *i* Pn Pn 20 21 49.5 +4.3
OHR **Ohrid** 7.66 323 *i* Pn Pn 20 21 52.2 +5.2
VTS **Vitosha** 8.02 341 ⇓P Pn 20 21 52.1 +0.1
VTS **Vitosha** 8.02 341 Pn Pn 20 21 54.7 +2.7
HFRF **Wahat Farafira** 8.03 171 P Pn 20 21 52.0 -0.1
baz=172
HFRF AMP 20 23 00.0
baz=172
HFRF S Sn 20 23 16.8 -5.3
baz=172
TAMRE **El Minia** 8.18 154 P Pn 20 21 53.6 -0.5
baz=154
GHAJ **Ghor Haditha** 8.24 115 Pn 20 21 54.6 -0.4
SCTE **Santa Cesarea** 8.29 309 Pn Pn 20 21 54.5 -1.1
GAZ **Gaziantep** 8.65 73 Pn Pn 20 22 02.8 +2.2
EIL **Elat** 8.74 126 Pn Pn 20 22 01.3 -0.5
comp=E,1.5nm,0.3s,baz=310,slow=2.0,SNR=19
EIL Sn Sn 20 23 33.6 -6.2
comp=E,7.4nm,0.3s,baz=37,slow=14,SNR=8.2
HKAT **Jabal Katrina** 8.95 135 P Pn 20 22 02.5 -2.4
baz=136
TIP **Timpagrande** 9.01 300 Pn Pn 20 22 05.3 -0.3
MFTR **Murfatlar** 9.15 7 ⇑P Pn 20 22 11.0 +3.6
PDG **Podgorica** 9.41 323 ⇑P Pn 20 22 12.6 +1.7
PDG **Podgorica** 9.41 323 Pn Pn 20 22 12.1 +1.1
TIRR **Tirgusor** 9.43 7 Pn Pn 20 22 12.9 +1.7
TLPR **Topalu** 9.48 5 ⇓P Pn 20 22 14.1 +2.2
HARR **Harsova** 9.62 5 ⇓P Pn 20 22 16.2 +2.9
TPGR **Topolog** 9.82 7 ⇓P Pn 20 22 19.5 +2.9
CFR **Carcaliu** 10.12 5 ⇓P Pn 20 22 23.2 +2.6
TLCR 10.19 8 ⇑P Pn 20 22 25.1 +3.4
RAFF **Raffo Rosso** 10.30 285 Pn 20 22 23.1 -0.1
VAE **Valguarnera** 10.30 287 Pn Pn 20 22 23.4 +0.1
comp=E,0.7nm,0.3s,baz=76,slow=8.3,SNR=2.6
VAE Sn Sn 20 24 15.5 -2.6
comp=E,0.7nm,0.3s,baz=60,slow=20,SNR=1.3
HERR **Herculane** 10.34 342 ⇑P Pn 20 22 23.4 -0.3

MLR **Muntele Rosu** 10.40 357 Pn Pn 20 22 25.6 +0.8
comp=E,0.1nm,0.3s,baz=178,slow=21,SNR=3.0
MLR **Muntele Rosu** 10.40 357 ⇑P Pn 20 22 25.5 +0.8
MLR **Muntele Rosu** 10.40 357 Pn Pn 20 22 27.5 +2.8
VOIR 10.42 353 ⇑P Pn 20 22 25.2 +0.3
DIVS **Divibare** 10.42 332 Pn Pn 20 22 26.1 +1.2
GZR **Gura Zlata** 10.74 344 ⇑P Pn 20 22 29.6 +0.3
PLOR **Plostina** 10.74 359 ⇓P Pn 20 22 31.0 +1.7
VRI **Vrincioaia** 10.76 360 ⇓P Pn 20 22 31.3 +1.8
SGRT **San Giovanni R** 10.94 311 Pn 20 22 29.7 -2.3
OZUR 11.02 356 ⇓P Pn 20 22 34.3 +1.3
BZS **Buzias** 11.23 341 ⇓P Pn 20 22 36.0 +0.1
CORL **Corleone** 11.24 288 Pn 20 22 37.0 +0.8
CLTB **Caltabellotta** 11.26 287 Pn Pn 20 22 37.0 +0.6
PAOL **Paolisi** 11.33 305 Pn 20 22 38.6 +1.2
BIZ **Bicaz** 11.84 358 ⇓P Pn 20 22 45.9 +1.6
MILM **Milestii Mici** 11.90 7 ⇑P Pn 20 22 48.1 +3.0
INTR **Introdacqua** 12.24 308 Pn Pn 20 22 50.3 +0.5
BURAR **Bucovina Array** 12.56 355 Pn Pn 20 22 56.8 +2.5
BUR08 **Bucovina Ar. S** 12.60 355 Pn Pn 20 22 54.8 +0.1
AQU **L'Aquila** 12.73 309 Pn Pn 20 22 57.9 +1.3
NRCA **Norcia** 13.16 310 Pn Pn 20 23 01.5 -0.9
MURB **Monte Urbino** 13.76 311 Pn Pn 20 23 12.2 +1.7
LATE **Laterza** 13.89 307 Pn 20 23 14.3 +2.0
KEST **Kesra** 14.28 278 Pn Pn 20 23 17.3 -0.4
comp=E,0.2nm,0.3s,baz=309,slow=4.2,SNR=4.8
KEST Sn Sn 20 25 51.1 -4.2
comp=E,0.1nm,0.3s,baz=32,slow=11,SNR=1.6
KEST LR LR 20 29 25.8
comp=E,74nm,20.5s,baz=316,slow=40
KEST **Kesra** 14.28 278 Pn Pn 20 23 20.0 +2.4
VSL **Villasalto** 14.57 293 P P 20 23 27.8 -0.1
SOKA **Soboth** 14.59 326 *e*Pn P 20 23 28.1 -0.1
comp=E,5.4nm,0.9s
CASP **Castiglione de** 14.59 307 P 20 23 27.2 -0.9
OSSC **Osservatorio P** 14.69 310 P P 20 23 28.1 -1.2
ARSA **Arzberg** 14.81 328 *e*P P 20 23 28.4 -2.1
comp=E,5.4nm,1.0s
MODS **Modra-Piesok** 15.04 335 *e*P P 20 23 34.5 +1.4
LANS **Liptovska Anna** 15.06 341 *e*P P 20 23 36.6 +3.3
GNI **Garni** 15.06 65 Pn P 20 23 31.4 -2.1
comp=E,0.3nm,0.3s,baz=64,slow=19,SNR=4.1
GNI LR LR 20 30 31.5
comp=E,81nm,19.3s,baz=281,slow=42
GNI **Garni** 15.06 65 IAmb IAmb 20 23 44.1
comp=Z,4.8nm,0.8s
KIV **Kislovodsk** 15.08 49 P P 20 23 34.4 +0.7
KIV IAmb IAmb 20 23 44.0
comp=Z,12nm,1.0s
KVAR **Kislovodsk Arr** 15.08 49 Pn P 20 23 33.3 -0.4
baz=251,slow=18,SNR=1.9
KVAR LR LR 20 30 59.3
comp=Z,114nm,18.3s,baz=79,slow=44
KBZ **Khabaz** 15.10 50 Pn P 20 23 32.3 -1.4
comp=E,0.1nm,0.3s,baz=246,slow=8.5,SNR=11
ZCCA **Zocca** 15.28 312 Pn 20 23 31.5 +0.4
ZCCA IAmb IAmb 20 24 17.8
comp=Z,7.4nm,0.9s
STAL **STALIGIAL** 15.44 321 Pn Pn 20 23 35.3 +2.2
ZOU **Zoufplan** 15.50 322 P P 20 23 37.2 -1.2
KBA **Koelnbreinsper** 15.68 324 *e*P P 20 23 40.6 +0.3
comp=Z,4.0nm,0.6s
AKASG **Malin Array Be** 15.69 6 Pn Pn 20 23 35.9 -0.5
comp=Z,3.3nm,0.3s,baz=195,slow=11,SNR=23
AKBB **Malin Array Si** 15.69 6 P 20 23 40.0 -0.3
AKBB IAmb IAmb 20 23 43.6
comp=Z,8.5nm,0.6s
MOA **Molln** 15.81 327 *e*P P 20 23 41.5 -0.2
comp=Z,9.0nm,1.1s
ABTA **Abfaltersbach** 15.86 322 *e*Pn Pn 20 23 39.6 +0.9
comp=Z,5.3nm,0.9s
CTI **Castel Tesino** 15.87 318 Pn Pn 20 23 40.1 +1.3
CTI IAmb IAmb 20 23 44.0
comp=Z,15nm,1.3s
OJC **Ojcow** 15.96 343 Pn Pn 20 23 40.0 +0.1
VRAC **Vranov** 16.08 335 Pn Pn 20 23 41.5 +0.1
comp=Z,0.4nm,0.3s,baz=132,slow=11,SNR=4.2
MORC **Moravsky Berou** 16.17 338 Pn Pn 20 23 42.7 +0.1
CKRC **Cesky Krumlov** 16.54 330 *e*P P 20 23 49.8 0.0
WTTA **Wattenberg** 16.65 321 *e*P P 20 23 51.9 +0.7
comp=Z,3.4nm,0.5s
KRLC **Kraliky** 16.67 337 *e*P P 20 23 50.5 -0.7
WATA **Walderalm** 16.73 322 *e*P P 20 23 52.3 +0.3
comp=Z,5.1nm,0.6s
GEC2 **GERESS Array S** 16.82 329 Pn 20 23 51.2 +0.4
GEC2 IAmb IAmb 20 23 55.6
comp=Z,23nm,1.8s
GERES **GERESS Array B** 16.82 329 Pn Pn 20 23 50.6 -0.2
comp=Z,0.4nm,0.3s,baz=138,slow=13,SNR=21
GERES LR LR 20 32 00.4
comp=Z,76nm,18.4s,baz=154,slow=44
SQTA **Sankt Quirin** 16.84 321 *e*P P 20 23 54.3 +1.0
comp=Z,4.0nm,0.5s
FETA **Feichten** 16.97 319 *e*P P 20 23 55.9 +1.2
comp=Z,7.8nm,1.1s
MOTA **Moosalm** 16.98 321 *e*Pn P 20 23 54.5 -0.2
comp=Z,3.5nm,0.8s
DPC **Dobruska-Polom** 17.06 337 *e*P Pn 20 23 54.4 +0.6
KHC **Kasperske Hory** 17.09 329 *e*P P 20 23 55.3 -0.5
KHC **Kasperske Hory** 17.09 329 Pn 20 23 54.1 -0.1
RETA **Reutte** 17.25 321 *e*Pn P 20 23 57.7 +0.1
comp=Z,4.0nm,0.5s
DAVOX **Davos/Dischmat** 17.28 318 Pn Pn 20 23 55.9 -0.9
comp=Z,0.1nm,0.3s,baz=335,slow=3.7,SNR=3.6
PBCC **Pribram** 17.35 331 *e*P P 20 23 58.7 0.0
PRU **Pruhonice** 17.38 333 *e*P Pn 20 23 57.9 +0.1
TUE **Stuetta** 17.40 316 Pn 20 23 57.2 -1.1
PRA **Prague** 17.49 333 *e*P P 20 24 00.6 +0.4
DAVA **Damuels** 17.59 319 *e*Pn P 20 24 01.3 -0.2
comp=Z,5.3nm,0.6s
BNI **Bardonecchia** 18.30 309 P P 20 24 10.9 +1.6
BRG **Berggiesshubel** 18.33 333 *e*P P 20 24 09.5 +0.1
BRG Amp 20 24 10.6
comp=Z,7.1nm,1.1s
GRA1 **Grafenberg Arr** 18.53 327 P P 20 24 11.7 -0.1
GRA1 IAmb IAmb 20 24 21.4
comp=Z,31nm,1.6s
GRFO **Grafenberg** 18.53 327 P P 20 24 10.4 -1.3
GRFO IAmb IAmb 20 24 21.4
comp=Z,35nm,1.7s
SENIN **Lac Senin/Sane** 18.54 313 P P 20 24 10.3 -1.8
SENIN IAmb IAmb 20 24 23.0
comp=Z,8.6nm,0.7s
CLL **Collm** 19.03 333 *e*P P 20 24 17.0 -0.1
comp=Z,6.0nm,0.8s
CLL *e*PP PnPn 20 24 29.0 -1.5
CLL L L 20 31 00.0
comp=Z,100nm,18.1s
CLL **Collm** 19.03 333 P P 20 24 14.9 -2.2
BFO **Black Forest** 19.05 320 P P 20 24 16.6 -0.8
BFO IAmb IAmb 20 24 29.3
comp=Z,15nm,1.6s
SUW **Suwalki** 19.09 353 *e*P Pn 20 24 18.4 -0.2
GKP **Gorka Klasztor** 19.39 342 *e*P P 20 24 21.5 +0.4
MNK **Minsk** 19.42 2 *i* P P 20 24 17.1 -4.3
comp=E,1.0nm,0.7s
MNK *i* P P 20 24 17.1 -4.3
comp=N,9.0nm,0.8s
MNK *i* P P 20 24 17.1 -4.3
comp=Z,13nm,0.9s
MNK *i* PP sP 20 24 31.6 +1.8
MNK *i* S Sn 20 27 53.5 -6.1
MNK *i* SS SnSn 20 28 10.2 -3.7
MNK *i* LQ LQ 20 29 43.7
MNK *i* LR LR 20 31 22.3
MNK *i* LRM MLR 20 33 08.6
comp=N,202nm,21.9s
MNK *i* LRM MLR 20 33 09.9
comp=E,6.0nm,13.6s
MNK *i* LRM MLR 20 33 13.1
comp=Z,74nm,16.1s
SSB **Saint Sauveur** 19.77 308 P P 20 24 25.1 -0.3
RAYN **Ar Rayn** 19.92 120 Pn 20 24 29.3 +0.5
IDID **Didziasalis** 20.22 360 *e*P Pn 20 24 31.4 -0.6
IIGN **Ignalina** 20.26 359 *e*P Pn 20 24 31.8 -0.7
ISAL **Salakas** 20.48 359 *e*P P 20 24 33.8 +0.9
PABE **Paberze** 20.50 355 *e*P P 20 24 32.4 -0.8
PABE **Paberze** 20.50 355 P P 20 24 32.0 -1.1
OBN **Obninsk** 21.12 16 LR LR 20 33 10.9
comp=Z,16nm,18.4s,baz=2.5,slow=38
BTNL **Ternell** 21.57 322 *d*P P 20 24 44.8 +0.1
comp=Z,7.9nm,1.1s
MEM **Membach** 21.64 322 *d*P P 20 24 45.5 -0.1
comp=Z,8.4nm,0.8s

BCLA **Clavier** 21.89 321 *d*P P 20 24 47.7 -0.4
comp=Z,5.7nm,1.1s
BGES **Gesves** 21.98 321 *d*P P 20 24 50.5 +1.4
comp=Z,5.0nm,0.9s
BGES *d*PnPn PnPn 20 25 11.3 +0.4
DOU **Dourbes** 22.07 320 *d*P P 20 24 51.3 +1.2
comp=Z,5.1nm,0.7s
TAM **Tamanrasset** 22.26 242 P P 20 24 52.4 -0.1
TAM IAmb IAmb 20 25 06.3
comp=Z,12nm,1.4s
BELG **Belogornoye** 22.77 34 P P 20 24 56.5 -1.0
comp=Z,6.7nm,0.4s,baz=37,slow=19,SNR=7.6
ESBB **Sonseca Array** 24.82 290 P P 20 25 16.3 -1.2
ESBB IAmb IAmb 20 25 17.9
comp=Z,6.4nm,0.8s
ESDC **Sonseca Array** 24.82 290 P P 20 25 17.1 -0.4
comp=Z,4.3nm,0.7s,baz=81,slow=9.7,SNR=47
ESDC **Sonseca Array** 24.82 290 P P 20 25 15.9 -1.6
PAB **San Pablo** 25.12 289 P P 20 25 19.3 -0.9
GEYT **Alibeck** 25.25 74 P P 20 25 21.8 +0.5
comp=Z,2.5nm,0.6s,baz=294,slow=11,SNR=4.2
GEYT **Alibeck** 25.25 74 P P 20 25 21.4 +0.2
GEYT IAmb IAmb 20 25 41.3
comp=Z,2.5nm,0.7s
GYA0B **ALIBECK ARRAY** 25.25 74 P P 20 25 21.2 -0.1
GYA0B IAmb IAmb 20 25 45.0
comp=Z,4.6nm,0.7s
MDT **Midelt** 26.12 274 P P 20 25 30.0 +0.7
comp=Z,3.2nm,0.9s,baz=71,slow=13,SNR=5.8
MDT LR LR 20 37 49.7
comp=Z,57nm,21.3s,baz=106,slow=41
FINES **FINESS Array B** 26.37 359 P P 20 25 29.6 -1.5
comp=Z,1.2nm,0.5s,baz=156,slow=12,SNR=8.2
FINES LR LR 20 36 35.2
comp=Z,54nm,20.2s,baz=207,slow=38
FINES **FINESS Array B** 26.37 359 P P 20 25 31.3 +0.2
FIA1 **FINESS Array S** 26.37 359 P P 20 25 31.6 +0.5
HFS **Hagfors** 26.47 345 P P 20 25 31.7 -0.3
comp=Z,1.0nm,0.5s,baz=140,slow=12,SNR=6.5
HFS LR LR 20 37 52.5
comp=Z,110nm,19.8s,baz=176,slow=41
PBRG **Braganca** 27.01 294 *e*P P 20 25 36.5 -0.7
KLMR **Klimovskoe** 27.04 14 P P 20 25 34.9 -2.2
KLMR AMP 20 25 53.3
comp=Z,17nm,1.3s
MVO **Moncorvo** 27.20 293 *e*P P 20 25 38.9 0.0
comp=Z,19nm,2.0s
PBAR **Barrancos** 27.26 287 *e*P P 20 25 39.0 -0.5
AKTO **Aktyubinsk** 27.30 46 P P 20 25 39.4 -0.3
comp=Z,2.7nm,0.8s,baz=232,slow=11,SNR=5.1
PMRV **Marv??o** 27.48 289 *e*P P 20 25 41.5 +0.1
comp=Z,18nm,2.1s
PCBR **Castelo Branco** 27.53 290 *e*P P 20 25 42.8 +1.0
MTE **Manteigas** 27.58 291 *e*P P 20 25 42.6 +0.3
POLO **Lamas de Olo** 27.78 293 *e*P P 20 25 43.8 -0.4
NOA **NORSAR Array B** 27.83 344 P P 20 25 43.2 -1.1
comp=Z,0.4nm,0.5s,baz=138,slow=11,SNR=2.3
NOA LR LR 20 37 54.0
comp=Z,46nm,18.7s,baz=345,slow=39
KIRV **Kirov** 27.85 26 LR LR 20 37 06.2
comp=Z,35nm,20.4s,baz=231,slow=37
PVAQ **Vaqueiros** 27.87 285 *e*P P 20 25 45.0 +0.1
PCAB **Cabril** 27.97 294 *e*P P 20 25 45.7 -0.1
PBDV **Barranco-do-Ve** 28.05 285 *e*P P 20 25 46.4 -0.2
ABKAR **Akbulak array** 28.07 50 P P 20 25 45.2 -1.3
EKA **Eskdalemuir Ar** 28.89 324 P P 20 25 51.9 -1.9
comp=Z,0.6nm,0.5s,baz=123,slow=10,SNR=6.9
PMST **Lisbon--Monsan** 28.90 288 *e*P P 20 25 55.3 +1.2
ARU **Arti** 30.30 35 P P 20 26 05.5 -0.8
comp=Z,0.5nm,0.3s,baz=241,slow=13,SNR=3.8
ARU **Arti** 30.30 35 P P 20 26 06.4 +0.1
TOA0 **Torodi Ar. Sit** 31.52 232 P P 20 26 17.6 +0.3
TORD **Torodi Ar. Bea** 31.52 232 P P 20 26 17.8 +0.4
comp=Z,2.7nm,0.4s,baz=34,slow=9.1,SNR=37
TORD **Torodi Ar. Bea** 31.52 232 P P 20 26 17.6 +0.3
TORD IAmb IAmb 20 26 21.5
comp=Z,2.1nm,0.7s
SOCY **Socotra** 33.55 126 P P 20 26 35.2 -0.1
SOCY IAmb IAmb 20 27 37.2
comp=Z,4.5nm,1.0s
KOWA **Kowa** 34.49 241 P P 20 26 43.4 0.0
comp=Z,1.4nm,0.6s,baz=292,slow=7.0,SNR=2.7
KOWA **Kowa** 34.49 241 P P 20 26 44.2 +0.9
ARCES **ARCESS Array B** 34.50 359 P P 20 26 41.1 -1.8
comp=Z,1.1nm,0.6s,baz=167,slow=8.7,SNR=9.0
KK31 **Karatay Array** 34.51 63 P P 20 26 44.7 +1.4
KK31 IAmb IAmb 20 26 55.2
comp=Z,6.3nm,1.4s
KKAR **Karatay Array** 34.51 63 P P 20 26 43.9 +0.5
KKAR **Karatay Array** 34.51 63 P P 20 26 44.7 +1.4
KKAR IAmb IAmb 20 26 55.3
comp=Z,6.3nm,1.4s
BVAR **Borovoye Array** 35.40 46 P P 20 26 51.8 +0.9
comp=Z,1.4nm,0.7s,baz=357,slow=3.0,SNR=5.4
ARSB **Arslanbob** 36.45 66 P P 20 27 01.6 +1.4
ARSB IAmb IAmb 20 27 10.3
comp=Z,4.4nm,0.8s
AAK **Ala-Archa** 37.46 64 P P 20 27 10.4 +1.6
AAK IAmb IAmb 20 27 11.2
comp=Z,3.3nm,0.7s
BOOM **Boomskoye usch** 38.53 64 P P 20 27 19.3 +1.5
BOOM IAmb IAmb 20 27 43.1
comp=Z,3.0nm,0.9s
DBIC **Dimbokro** 40.61 233 P P 20 27 35.0 -0.1
comp=Z,1.6nm,0.5s,baz=25,slow=12,SNR=1.7
MAKZ **Makanchi** 42.45 57 P P 20 27 51.0 +1.0
MAKZ IAmb IAmb 20 27 51.6
comp=Z,2.8nm,0.7s
MK31 **Makanchi Array** 42.67 57 P P 20 27 52.7 +0.9
MK31 IAmb IAmb 20 27 53.4
comp=Z,4.2nm,0.6s
MKAR **Makanchi Array** 42.67 57 P P 20 27 52.6 +0.9
comp=Z,5.4nm,0.6s,baz=279,slow=6.9,SNR=76
MKAR LR LR 20 47 21.0
comp=Z,44nm,18.2s,baz=266,slow=39
ZAA0 **Zalesovo Array** 44.06 46 P P 20 28 03.0 +0.2
ZALV **Zalesovo Beam** 44.06 46 P P 20 28 03.1 +0.3
comp=Z,4.9nm,0.5s,baz=268,slow=7.9,SNR=20
ZALV LR LR 20 48 30.4
comp=Z,22nm,18.6s,baz=278,slow=39
ZALV **Zalesovo Beam** 44.06 46 P P 20 28 02.9 +0.1
WMQ **Urumqi** 46.85 60 *e*P P 20 28 27.4 +2.2
NRIK **Noril'sk** 47.36 25 P P 20 28 29.0 +0.3
comp=Z,2.3nm,0.4s,baz=235,slow=7.4,SNR=4.6
NRIK **Noril'sk** 47.36 25 P P 20 28 29.1 +0.4
MATP **Matopo** 55.24 178 P P 20 29 29.9 +1.5
comp=Z,1.2nm,0.5s,baz=355,slow=5.8,SNR=7.8
GTA **Gaotai** 56.78 62 *e*P P 20 29 40.4 +1.0
GTA pP pP 20 29 45.8 +0.4
GTA sP pwP 20 29 49.1 +0.7
GTA pmax pmax
comp=Z,2.0nm,0.7s
SONM **Songino Array** 58.46 51 P P 20 29 52.3 +1.1
comp=Z,1.4nm,0.6s,baz=286,slow=7.8,SNR=17
SONM **Songino Array** 58.46 51 P P 20 29 52.2 +1.1
SONM IAmb IAmb 20 30 00.9
comp=Z,5.3nm,1.6s
TIXI **Tiksi** 60.74 21 LR LR 20 59 01.8
comp=Z,28nm,19.1s,baz=266,slow=39
TIXI **Tiksi** 60.74 21 P P 20 30 06.0 -0.2
BOSA **Boshof** 63.39 182 P P 20 30 25.2 +0.6
comp=Z,2.7nm,1.0s,baz=2.7,slow=10,SNR=1.8
CMAR **Chiang Mai Arr** 65.22 84 P P 20 30 37.5 +0.6
INK **Inuvik** 75.86 353 LR LR 21 06 48.7
comp=Z,27nm,18.4s,baz=28,slow=37
USA0B **Ussuriysk Arra** 75.91 46 P P 20 31 42.3 +0.6
USRK **Ussuriysk Ar.** 75.91 46 P P 20 31 42.1 +0.4
comp=Z,3.0nm,0.7s,baz=288,slow=5.2,SNR=5.8
KSAR **Wonju Array Be** 77.21 53 P P 20 31 49.5 +0.4
KSRS **Korea Array** 77.23 53 P P 20 31 49.3 +0.1
comp=Z,1.3nm,0.8s,baz=307,slow=4.1,SNR=5.1
KSRS LR LR 21 09 28.3
comp=Z,14nm,18.3s,baz=310,slow=38
YKA **Yellowknife Ar** 77.92 343 P P 20 31 51.5 -1.1
comp=Z,1.0nm,0.9s,baz=38,slow=5.7,SNR=9.1
IMAR **Indian Mountai** 79.24 0 P P 20 32 00.4 +0.5
ILAR **Eielson Array** 80.34 357 P P 20 32 05.2 -0.7
comp=Z,0.3nm,0.5s,baz=337,slow=3.3,SNR=4.2
MJAR **Matsushiro Arr** 84.34 49 P P 20 32 27.1 -0.3
comp=Z,1.0nm,0.5s,baz=301,slow=5.6,SNR=3.2
MJAR **Matsushiro Arr** 84.34 49 IAmb IAmb 20 33 25.7
comp=Z,1.4nm,0.8s
PDAR **Pinedale Array** 92.86 329 P P 20 33 09.0 +0.8
comp=Z,0.1nm,0.3s,baz=64,slow=6.1,SNR=1.8
PDAR LR LR 21 17 24.4

comp=Z,22nm,19.1s,baz=60,slow=37
ASAR Alice Springs 116.69 101 PKP **PKiKP 20 38 40.4 +0.7**
comp=Z,0.1nm,0.5s,baz=313,slow=2.0,SNR=1.8

*NEIC **22** 20:55:07.1±1.8, 41°.29S±0°.05×72°.73W±0°.05, h10km±1km, mb4.6/8, Error ellipse: s-maj=9.3km s-min=5.4km az=327.0*
*IDC **22** 20:55:08.8±3.1, 41°.26S×72°.50W, h0km, mb4.2/3, mb1 4.4/3, mb1mx4.0/32, mbtmp4.2/3, Error ellipse: s-maj=56.7km s-min=17.4km az=177.0*
ISC 22 20:55:08.4±0.7, **41°.35S**±0°.04×**72°.68W**±0°.06, **h10**km, **n26,** σ1§**86**/26, **mb4.6/7, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LL03	**Petrohue**	**0.30**	**45**	Op		**Pg**	**20 55 12.1**	**-2.3**
LL04	**Puerto Octay**	**0.48**	**25**			**Pg**	**20 55 15.7**	**-2.1**
LL05	**Los Muermos**	**0.60**	**264**			**Pg**	**20 55 17.4**	**-2.6**
LL01	**San Ignacio de**	**1.05**	**169**			**Pg**	**20 55 26.3**	**-2.3**
LL07	**Hotel Espejo d**	**1.60**	**201**			**Pn**	**20 55 34.8**	**-1.9**
PLCA	**Paso Flores**	**1.73**	**70**	Pg		**Pn**	**20 55 37.4**	**-1.2**
	13nm,0.3s,baz=253,slow=14,SNR=23							
PLCA				Lg		Lg	20 55 58.3	
	11nm,0.3s,baz=252,slow=13,SNR=2.8							
PLCA	**Paso Flores**	**1.73**	**70**			**Pn**	**20 55 36.9**	**-1.7**
GO07	**Millabeo Hill,**	**1.91**	**202**			**Pn**	**20 55 40.2**	**-0.8**
LL02	**Futaleuf**	**1.94**	**162**			**Pn**	**20 55 41.3**	**-0.2**
BI02	**San Fabin de**	**4.81**	**14**			**Pn**	**20 56 21.8**	**+0.9**
ML02	**Panimavida**	**5.67**	**10**			**Pn**	**20 56 31.6**	**-1.0**
BO02	**Sierra Bellavi**	**6.71**	**14**			**Pn**	**20 56 47.6**	**+0.5**
BO01	**Tunca**	**7.06**	**11**	Pn		**Pn**	**20 56 49.6**	**-2.2**
MT01	**Popeta**	**7.56**	**9**	Pn		**Pn**	**20 56 56.5**	**-2.1**
PEL	**Peldehue**	**8.34**	**12**	Pn		**Pn**	**20 57 07.7**	**-1.7**
PB01	**IPOC Station P**	**20.42**	**9**	P		**P**	**20 59 45.4**	**-0.4**
PB11	**IPOC Station P**	**21.67**	**8**	P		**P**	**20 59 56.9**	**-2.5**
PB11				IAmb		IAmb	21 00 04.2	
	comp=Z,29nm,1.1s							
LPAZ	**La Paz**	**25.28**	**10**	P		**P**	**21 00 36.8**	**+1.1**
	comp=Z,8.3nm,1.3s,baz=180,slow=5.1,SNR=9.3							
LPAZ	**La Paz**	**25.28**	**10**	P		**P**	**21 00 34.0**	**-1.7**
BELA	**Belgrano 2**	**39.77**	**168**	P		**P**	**21 02 40.7**	**-0.2**
BELA				IAmb		IAmb	21 02 44.0	
	comp=Z,17nm,1.6s							
SNAA	**Sanae**	**45.06**	**155**	P		**P**	**21 03 24.8**	**+0.8**
SNAA				IAmb		IAmb	21 03 26.8	
	comp=Z,11nm,1.4s							
QSPA	**South Pole Qui**	**48.90**	**180**	P		**P**	**21 03 55.5**	**+1.3**
QSPA				IAmb		IAmb	21 03 58.1	
	comp=Z,10nm,1.0s							
SDV	**Santo Domingo**	**50.02**	**3**	P		**P**	**21 04 05.6**	**+2.3**
	comp=Z,5.0nm,0.4s,baz=186,slow=2.6,SNR=3.1							
152A	**Waverly Hall**	**74.48**	**349**	P		**P**	**21 06 50.4**	**+3.6**
LRAL	**Lakeview Retre**	**75.18**	**348**	P		**P**	**21 06 49.4**	**-1.4**
TXAR	**Lajitas Array**	**75.95**	**332**	P		**P**	**21 06 56.5**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=148,slow=7.4,SNR=4.0							

*IDC **22** 21:08:37.8±0.9, 17°.08S×65°.67W, h0km, mb3.7/6, mb1 4.0/9, mb1mx3.9/32, mbtmp3.9/9, ML4.3/4, MS3.6/7, Ms1 3.6/7, ms1mx3.2/32, Error ellipse: s-maj=27.5km s-min=21.2km az=31.0*
*NEIC **22** 21:08:42.3±2.1, 17°.28S×70°.08×65°.8W±0°.1, h22km±5km, mb4.4/15, Error ellipse: s-maj=15.0km s-min=10.5km az=60.0*
*VAO **22** 21:08:42.1±0.4, 17°.11S×65°.83W, h10km, mb4.4*
*SCB **22** 21:08:47.8±2.3, 17°.20S×65°.92W, h45km±74km, ML4.4/2, Error ellipse: s-maj=9.5km s-min=5.7km az=1.0*
ISC 22 21:08:43.0±0.5, **17°.22S**±0°.05×**65°.91W**±0°.06, **h35**km, **n90,** σ1§**53**/85, **mb4.2**/12, **MS3.6**/4, **Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BBOE	**La Paz, Chanca**	**2.03**	**281**	P		**Pn**	**21 09 17.5**	**+2.3**
LPAZ	**La Paz**	**2.32**	**293**	Pn		**Pn**	**21 09 20.9**	**+1.5**
	196nm,0.3s,baz=103,slow=10,SNR=992							
LPAZ				Lg		Lg	21 09 52.0	
	140nm,0.3s,baz=107,slow=9.7,SNR=6.3							
LPAZ				LR		LR	21 10 33.9	
	comp=Z,242nm,18.9s,baz=109,slow=47							
LPAZ	**La Paz**	**2.32**	**293**	P		**Pn**	**21 09 20.5**	**+1.2**
LPAZ				S		**Sn**	**21 09 43.8**	**-3.2**
LPAZ				IAML			21 09 54.8	
	2µm,0.6s							
LPAZ	**La Paz**	**2.32**	**293**	*eP*		**Pn**	**21 09 20.8**	**+1.5**
BBOB	**La Paz, Bander**	**2.39**	**296**	P		**Pn**	**21 09 21.6**	**+1.5**
PB16	**IPOC Station P**	**3.60**	**252**			**Pn**	**21 09 39.3**	**+2.3**
PB16	**IPOC Station P**	**3.60**	**252**	P		**Pn**	**21 09 38.3**	**+1.4**
MNMC	**Minye Minye**	**3.99**	**241**			**Pn**	**21 09 43.7**	**+1.9**
MNMC	**Minye Minye**	**3.99**	**241**	P		**Pn**	**21 09 43.8**	**+1.9**
MOCB	**Mochara**	**4.01**	**176**	P		**Pn**	**21 09 45.0**	**+2.5**
MOCB				S		**Sn**	**21 10 24.8**	**-3.7**
MOCB				IAML			21 10 43.5	
	411nm,0.3s							
PB08	**IPOC Station P**	**4.23**	**226**			**Pn**	**21 09 46.5**	**+1.2**
PB08	**IPOC Station P**	**4.23**	**226**	P		**Pn**	**21 09 46.6**	**+1.2**
PB11	**IPOC Station P**	**4.36**	**234**			**Pn**	**21 09 48.4**	**+1.4**
PB11	**IPOC Station P**	**4.36**	**234**	P		**Pn**	**21 09 48.4**	**+1.4**
PSGC	**Pisagua**	**4.65**	**239**	P		**Pn**	**21 09 51.5**	**+0.7**
PSGCX	**Pisagua**	**4.65**	**239**			**Pn**	**21 09 51.6**	**+0.8**
HMBC	**Humberstone**	**4.84**	**231**	P		**Pn**	**21 09 54.9**	**+1.3**
YJA	**Yavi**	**4.94**	**176**	P		**Pn**	**21 09 57.2**	**+2.0**
TA02	**Huaiquique**	**5.02**	**232**			**Pn**	**21 09 56.5**	**+0.7**
PB01	**IPOC Station P**	**5.09**	**221**			**Pn**	**21 09 58.5**	**+1.6**
PB01	**IPOC Station P**	**5.09**	**221**	P		**Pn**	**21 09 58.8**	**+1.9**
TA01	**Diego Aracena**	**5.24**	**230**			**Pn**	**21 09 59.1**	**+0.3**
PATCX	**Punta Patache**	**5.38**	**228**			**Pn**	**21 10 01.3**	**+0.4**
PB09	**IPOC Station P**	**5.53**	**214**			**Pn**	**21 10 05.0**	**+2.0**
PB09	**IPOC Station P**	**5.53**	**214**	P		**Pn**	**21 10 04.9**	**+1.9**
PB07	**IPOC Station P**	**5.84**	**219**			**Pn**	**21 10 07.7**	**+0.3**
PB07	**IPOC Station P**	**5.84**	**219**	P		**Pn**	**21 10 08.3**	**+0.9**
PB03	**IPOC Station P**	**6.01**	**216**	P		**Pn**	**21 10 10.8**	**+1.1**
LVC	**Limon Verde**	**6.06**	**207**	Pn		**Pn**	**21 10 13.0**	**+2.5**
	6.5nm,0.3s,baz=19,slow=10.0,SNR=44							
LVC				LR		LR	21 12 45.9	
	comp=Z,160nm,19.8s,baz=20,slow=39							
LVC	**Limon Verde**	**6.06**	**207**			**Pn**	**21 10 12.6**	**+2.1**
LVC	**Limon Verde**	**6.06**	**207**	P		**Pn**	**21 10 12.1**	**+1.6**
LVC	**Limon Verde**	**6.06**	**207**	*eP*		**Pn**	**21 10 13.6**	**+3.1**
PB06	**IPOC Station P**	**6.45**	**212**			**Pn**	**21 10 17.1**	**+1.4**
PB06	**IPOC Station P**	**6.45**	**212**	P		**Pn**	**21 10 17.1**	**+1.4**
PB04	**IPOC Station P**	**6.46**	**217**	Pn		**Pn**	**21 10 17.6**	**+1.7**
PB04	**IPOC Station P**	**6.46**	**217**	P		**Pn**	**21 10 17.2**	**+1.3**
PTLB	**Pontes e Lacer**	**6.74**	**76**	P		**Pn**	**21 10 20.4**	**+1.0**
PTLB	**Pontes e Lacer**	**6.74**	**76**	*eP*		**Pn**	**21 10 19.6**	**+0.2**
PB15	**IPOC Station P**	**6.83**	**209**			**Pn**	**21 10 21.9**	**+0.9**
VILB	**Vilhena**	**6.96**	**53**	P		**Pn**	**21 10 23.1**	**+0.6**
VILB	**Vilhena**	**6.96**	**53**	*eP*		**Pn**	**21 10 23.5**	**+1.0**
ETMB	**Extrema**	**7.37**	**358**	P		**Pn**	**21 10 28.4**	**+0.3**
ETMB	**Extrema**	**7.37**	**358**	*eP*		**Pn**	**21 10 28.3**	**+0.2**
PB14	**IPOC Station P**	**8.48**	**209**	Pn		**Pn**	**21 10 42.9**	**-0.7**
GO02	**Mina Guanaco**	**8.62**	**203**	Pn		**Pn**	**21 10 45.7**	**+0.2**
CLDB	**Colider**	**11.66**	**59**	*eP*		**Pn**	**21 11 26.1**	**-0.9**
CPUP	**Villa Florida**	**12.06**	**140**	Pn		**Pn**	**21 11 30.9**	**-1.5**
	0.2nm,0.3s,baz=298,slow=2.4,SNR=1.4							
CPUP				Lg		Lg	21 14 58.4	
	0.2nm,0.3s,baz=61,slow=17,SNR=2.5							
ARAG	**Araguaiana, MT**	**13.61**	**86**	*eP*		**Pn**	**21 11 53.6**	**+0.1**
CO03	**El Pedregal**	**14.24**	**197**	Pn		**Pn**	**21 12 01.9**	**-0.3**
MACA	**Manacapuru-AM**	**14.88**	**21**	*eP*		**Pn**	**21 12 10.4**	**-0.6**
VA03	**San Esteban**	**16.03**	**194**	Pn		**Pn**	**21 12 25.9**	**-0.1**
MT02	**Curacav**	**16.65**	**195**	Pn		**Pn**	**21 12 33.8**	**+0.1**
MT01	**Popeta**	**17.25**	**195**	Pn		**Pn**	**21 12 41.1**	**-0.2**
MT01				IAmb		IAmb	21 12 42.3	
	comp=Z,18nm,0.9s							
CPSB	**Cacapava Do Su**	**17.37**	**141**	*eP*		**P**	**21 12 45.5**	**+1.8**
PTGA	**Pitinga**	**17.40**	**20**	P		**Pn**	**21 12 39.2**	**-4.0**
	comp=Z,0.7nm,0.3s,baz=199,slow=17,SNR=4.8							
PTGA				LR		LR	21 19 48.3	
	comp=Z,319nm,18.4s,baz=214,slow=39							
PTGA	**Pitinga**	**17.40**	**20**	*eP*		**P**	**21 12 43.9**	**-0.3**
BO01	**Tunca**	**17.72**	**194**			**Pn**	**21 12 46.6**	**-0.4**
BO01				IAmb		IAmb	21 12 47.5	
	comp=Z,15nm,0.7s							
PEXB	**Peixe**	**17.77**	**76**	*eP*		**P**	**21 12 47.8**	**-0.5**
BO02	**Sierra Bellavi**	**18.03**	**193**			**Pn**	**21 12 50.9**	**-0.1**
BO02				IAmb		IAmb	21 12 51.9	
	comp=Z,22nm,0.8s							
MALB	**Monte Alegre**	**19.09**	**38**	*eP*		**Pn**	**21 13 03.1**	**-0.6**
PRPB	**Parauapebas**	**19.19**	**57**	*eP*		**Pn**	**21 13 05.3**	**+0.3**
SMTB	**Santa Maria do**	**19.67**	**67**	*eP*		**Pn**	**21 13 10.5**	**-0.3**
BI02	**San Fabin de**	**19.94**	**193**	P		**P**	**21 13 12.1**	**0.0**
BOAV	**Boa Vista**	**20.20**	**16**	*eP*		Pn	21 13 15.6	-1.5
PLCA	**Paso Flores**	**23.77**	**189**	LR		LR	21 24 21.6	
	comp=Z,140nm,19.1s,baz=19,slow=39							
GDU01	**Guandu, BA**	**25.61**	**86**	*eP*		**P**	**21 14 11.4**	**+2.1**
MDP	**Montagnes des**	**25.76**	**32**	LR		LR	21 24 56.0	
	comp=Z,303nm,18.9s,baz=212,slow=38							
SDV	**Santo Domingo**	**26.36**	**349**	LR		LR	21 25 54.5	
	comp=Z,60nm,21.1s,baz=207,slow=40							
PCRV	**Puerto La Cruz**	**27.25**	**3**	LR		LR	21 25 48.1	
	comp=Z,540nm,20.7s,slow=38							
TXAR	**Lajitas Array**	**58.91**	**321**	P		**P**	**21 18 39.9**	**+0.9**
TX31	**Lajitas Ar. Si**	**58.91**	**321**	P		**P**	**21 18 39.5**	**+0.5**
TX31				IAmb		IAmb	21 18 43.1	
	comp=Z,4.8nm,0.8s							
DBIC	**Dimbokro**	**64.81**	**74**	P		**P**	**21 19 17.5**	**-1.3**
	comp=Z,2.3nm,0.8s,baz=220,slow=16,SNR=1.7							
DBIC	**Dimbokro**	**64.81**	**74**	P		P	21 19 22.7	+3.9
SNAA	**Sanae**	**65.41**	**162**	P		**P**	**21 19 21.3**	**-0.6**
SNAA				IAmb		IAmb	21 19 32.6	
	comp=Z,4.3nm,1.2s							
SDCO	**Great Sand Dun**	**66.14**	**326**	P		**P**	**21 19 29.0**	**+1.7**
SDCO				IAmb		IAmb	21 19 32.6	
	comp=Z,2.8nm,1.3s							
KOWA	**Kowa**	**68.72**	**66**	P		**P**	**21 19 47.5**	**+3.8**
KOWA				IAmb		IAmb	21 19 50.1	
	comp=Z,5.4nm,0.8s							
EYMN	**Ely**	**68.80**	**342**	P		**P**	**21 19 45.7**	**+2.2**
BAR	**Barrett**	**69.41**	**316**	P		**P**	**21 19 48.9**	**+1.2**
BAR				IAmb		IAmb	21 19 50.5	
	comp=Z,2.2nm,0.6s							
PDAR	**Pinedale Array**	**71.93**	**328**	P		**P**	**21 20 03.2**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=115,slow=6.1,SNR=2.2							
QSPA	**South Pole Qui**	**72.95**	**180**	P		**P**	**21 20 08.6**	**-0.1**
QSPA				IAmb		IAmb	21 20 16.7	
	comp=Z,8.7nm,1.4s							
TOA0	**Torodi Ar. Sit**	**73.25**	**70**			P	21 20 15.5	+4.3
TORD	**Torodi Ar. Bea**	**73.25**	**70**	P		**P**	**21 20 10.7**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=248,slow=6.3,SNR=5.1							
NVAR	**Mina Array Bea**	**73.99**	**320**	P		**P**	**21 20 16.4**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=100,slow=8.7,SNR=1.7							
ESDC	**Sonseca Array**	**80.81**	**44**	P		**P**	**21 20 52.6**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=241,slow=5.3,SNR=4.1							
YKA	**Yellowknife Ar**	**88.15**	**340**	P		**P**	**21 21 29.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=126,slow=5.1,SNR=20							
ZALV	**Zalesovo Beam**	**136.90**	**25**	PKP		**PKPdf**	**21 28 01.4**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=298,slow=3.1,SNR=1.5							
WRA	**Warramunga Arr**	**138.06**	**209**	PKP		**PKPdf**	**21 28 03.6**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=147,slow=1.9,SNR=1.3							
MKAR	**Makanchi Array**	**140.52**	**35**	PKP		**PKPdf**	**21 28 06.5**	**-2.2**
	comp=Z,0.2nm,0.7s,baz=259,slow=3.8,SNR=2.1							
SONM	**Songino Array**	**148.82**	**10**	PKPbc		**PKPbc**	**21 28 26.2**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=26,slow=1.9,SNR=3.8							
USRK	**Ussuriysk Ar.**	**149.16**	**334**	PKPbc		**PKPbc**	**21 28 26.5**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=360,slow=4.5,SNR=1.7							

*VAO **22** 21:12:43.3±0.8, 16°.31S×70°.77W, h106km, mb4.7*
*IDC **22** 21:13:00.8±0.7, 16°.51S×69°.58W, h194km±5km, mb4.1/17, mb1 4.2/21, mb1mx4.2/36, mbtmp4.7/21, Error ellipse: s-maj=12.5km s-min=10.0km az=32.0*
*NEIC **22** 21:13:00.4±2.1, 16°.57S±0°.06×69°.65W±0°.08, h192km±4km, mb4.4/70, Error ellipse: s-maj=12.0km s-min=8.5km az=113.0*
*GUC **22** 21:13:01.1±0.4, 16°.72S×69°.90W, h206km±4km, ML5.2*
ISC 22 21:12:59.8±0.6, **16°.59S**±0°.04×**69°.76W**±0°.05, **h194**km±5km, **n168,** σ1§**52**/184, **mb4.4**/45, **5C-2D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I08BO	**LAS PENAS INFR**	**1.30**	**74**	P		**Pn**	**21 13 33.4**	**+1.5**
	baz=261,slow=15,SNR=10							
LPAZ	**La Paz**	**1.59**	**79**	P		**Pn**	**21 13 35.0**	**+0.5**
	466nm,0.3s,baz=318,slow=6.5,SNR=97							
LPAZ				S		**S**	**21 13 59.7**	**-1.5**
	67nm,0.3s,baz=180,slow=24,SNR=7.9							
LPAZ	**La Paz**	**1.59**	**79**	↓*i*P		**Pn**	**21 13 35.0**	**+0.5**
LPAZ				*i* S		**S**	**21 13 59.2**	**-2.0**
LPAZ	**La Paz**	**1.59**	**79**	Pn		**Pn**	**21 13 34.9**	**+0.4**
LPAZ				Sn		**S**	**21 13 59.5**	**-1.8**
PB16	**IPOC Station P**	**1.75**	**172**	↓*i*P		**Pn**	**21 13 37.3**	**+1.3**
PB16				*i* S		**S**	**21 14 05.2**	**+1.0**
PB16	**IPOC Station P**	**1.75**	**172**			**Pn**	**21 13 37.3**	**+1.3**
PB16				Sn		**S**	**21 14 05.0**	**+0.8**
AP01	**Chacalluta**	**1.86**	**197**	↑*i*P		**Pn**	**21 13 36.2**	**-0.2**
AP01				*i* S		**S**	**21 14 03.5**	**-1.5**
AP01				IAML			21 14 05.5	
	comp=E,21µm,0.4s							
AP01	**Chacalluta**	**1.86**	**197**			**Pn**	**21 13 36.2**	**-0.2**
MNMC	**Minye Minye**	**2.53**	**177**			**Pn**	**21 13 44.4**	**+0.3**
PSGC	**Pisagua**	**3.01**	**187**	↑*i*P		**Pn**	**21 13 48.4**	**-1.0**
PSGC				*i* S		**S**	**21 14 24.8**	**-3.5**
PSGC				IAML			21 14 27.3	
	comp=N,2µm,0.3s							
PSGCX	**Pisagua**	**3.01**	**187**	Pn		**Pn**	**21 13 48.2**	**-1.2**
PB11	**IPOC Station P**	**3.15**	**178**	↑*i*P		**Pn**	**21 13 51.0**	**-0.2**
PB11				*i* S		**S**	**21 14 29.1**	**-2.3**
PB11				IAML			21 14 32.7	
	comp=E,5µm,0.2s							
PB11	**IPOC Station P**	**3.15**	**178**			**Pn**	**21 13 51.0**	**-0.2**
PB08	**IPOC Station P**	**3.58**	**171**	↑*i*P		**Pn**	**21 13 57.1**	**+0.5**
PB08				*i* S		**S**	**21 14 39.1**	**-1.9**
PB08	**IPOC Station P**	**3.58**	**171**			**Pn**	**21 13 57.1**	**+0.5**
TA02	**Huaiquique**	**3.68**	**186**			**Pn**	**21 13 56.6**	**-0.8**
TA01	**Diego Aracena**	**3.98**	**186**	↑*i*P		**Pn**	**21 13 59.8**	**-1.3**
TA01				*i* S		**S**	**21 14 45.0**	**-4.2**
TA01	**Diego Aracena**	**3.98**	**186**	Pn		**Pn**	**21 14 00.3**	**-0.8**
PATCX	**Punta Patache**	**4.22**	**185**			**Pn**	**21 14 03.6**	**-0.8**
PB01	**IPOC Station P**	**4.44**	**177**			**Pn**	**21 14 06.2**	**-0.8**
PB07	**IPOC Station P**	**5.11**	**181**			**Pn**	**21 14 14.8**	**-0.9**
PB09	**IPOC Station P**	**5.20**	**175**	*eP*		**Pn**	**21 14 16.8**	**-0.1**
PB09				*i* S		**S**	**21 15 14.3**	**-3.3**
PB09	**IPOC Station P**	**5.20**	**175**			**Pn**	**21 14 16.1**	**-0.7**
PB04	**IPOC Station P**	**5.72**	**184**			**Pn**	**21 14 22.3**	**-1.3**
LVC	**Limon Verde**	**6.04**	**173**	P		**Pn**	**21 14 27.9**	**0.0**
	comp=E,8.4nm,0.3s,baz=34,slow=10,SNR=86							
LVC				S		**S**	**21 15 31.5**	**-6.0**
	comp=E,44nm,0.3s,baz=136,slow=18,SNR=5.1							
PB06	**IPOC Station P**	**6.09**	**178**			**Pn**	**21 14 27.0**	**-1.3**
NNA	**Nana**	**8.25**	**303**	P		**Pn**	**21 14 57.0**	**+0.5**
	comp=E,14nm,0.3s,baz=131,slow=12,SNR=19							
NNA				S		**S**	**21 16 25.5**	**-3.9**
	comp=E,23nm,0.3s,baz=168,slow=15,SNR=8.7							
NNA	**Nana**	**8.25**	**303**	Pn		**Pn**	**21 14 56.3**	**-0.2**
CZSB	**Cruzeiro do Su**	**9.27**	**342**	*eP*		Pn	21 14 46.7	-23
LCO	**Las Campanas**	**12.39**	**184**	Pn		**Pn**	**21 15 49.0**	**-1.1**
ATAH	**Atahualpa**	**12.64**	**317**	P		**Pn**	**21 15 54.1**	**+0.7**
	comp=E,0.0nm,0.3s,baz=171,slow=4.3,SNR=2.2							
CO03	**El Pedregal**	**14.21**	**183**	Pn		**Pn**	**21 16 13.0**	**+0.3**
MACA	**Manacapuru-AM**	**16.05**	**35**	*eP*		P	21 16 25.4	-9.5
VA03	**San Esteban**	**16.12**	**182**	P		**Pn**	**21 16 36.2**	**+0.3**
VA03				IAmb		IAmb	21 16 39.6	
	comp=Z,15nm,0.9s							
BO01	**Tunca**	**17.77**	**184**	P		**Pn**	**21 16 54.2**	**-1.2**
BO01				IAmb		IAmb	21 17 01.5	
	comp=Z,15nm,0.7s							
ITTB	**Itaituba**	**18.36**	**50**	*eP*		**P**	**21 16 59.6**	**-0.5**
PTGA	**Pitinga**	**18.48**	**32**	P		**P**	**21 17 00.7**	**-0.7**
	comp=Z,19nm,0.3s,baz=207,slow=14,SNR=46							
PTGA	**Pitinga**	**18.48**	**32**			**P**	**21 17 00.7**	**-0.7**
ITAB	**Concordia**	**19.46**	**126**	*eP*		**P**	**21 17 12.0**	**+0.2**
BI02	**San Fabin de**	**20.04**	**184**	P		**P**	**21 17 19.6**	**+1.5**
BI02				IAmb		IAmb	21 17 28.6	
	comp=Z,13nm,0.8s							
FRTB	**Fartura**	**20.12**	**113**	*eP*		**P**	**21 17 19.6**	**+0.6**
CPSB	**Cacapava Do Su**	**20.29**	**136**	*eP*		**P**	**21 17 20.8**	**+0.1**
BDFB	**Brasilia**	**20.91**	**90**	P		**P**	**21 17 25.9**	**-1.7**
	comp=Z,16nm,0.6s,baz=282,slow=6.9,SNR=10							
BDFB	**Brasilia**	**20.91**	**90**	P		**P**	**21 17 25.8**	**-1.8**
BDFB				IAmb		IAmb	21 17 29.0	
	comp=Z,21nm,1.0s							
PLTB	**Pedras Altas**	**21.06**	**139**	*eP*		**P**	**21 17 27.8**	**-1.2**
MALB	**Monte Alegre**	**21.14**	**48**	*eP*		**P**	**21 17 26.3**	**-3.6**
PEXB	**Peixe**	**21.25**	**81**	*eP*		**P**	**21 17 30.0**	**-1.1**
CNLB	**Canela**	**21.49**	**129**	*eP*		**P**	**21 17 33.7**	**+0.2**
ROSC	**El Rosal**	**21.77**	**348**	S		**S**	**21 21 16.4**	**-8.2**
	comp=Z,4.9nm,0.3s,baz=91,slow=23,SNR=5.0							
PRPB	**Parauapebas**	**22.09**	**64**	*eP*		**P**	**21 17 38.2**	**-1.5**
SMTB	**Santa Maria do**	**22.93**	**73**	*eP*		**P**	**21 17 46.6**	**-0.7**
BSCB	**Bom Sucesso**	**24.04**	**104**	*eP*		**P**	**21 17 58.4**	**+1.0**
PLCA	**Paso Flores**	**24.07**	**181**	P		**P**	**21 17 58.5**	**+1.3**
	comp=Z,14nm,0.6s,baz=355,slow=10,SNR=12							
PLCA	**Paso Flores**	**24.07**	**181**	P		**P**	**21 17 58.5**	**+1.0**
SDBA	**SAO DESIDERIO**	**24.41**	**83**	*eP*		**P**	**21 17 59.5**	**-1.3**
MDP	**Montagnes des**	**27.40**	**40**	P		**P**	**21 18 26.0**	**-1.6**
	comp=Z,5.9nm,0.7s,baz=74,slow=20,SNR=0.9							
TOSP	**Speyside**	**29.17**	**19**	P		**P**	**21 18 42.8**	**-0.4**
NBIT	**Itapeh - BA**	**29.21**	**91**	*eP*		**P**	**21 18 43.3**	**-0.3**
NBPB	**Pedra_Branca-C**	**31.53**	**73**	*eP*		**P**	**21 19 03.2**	**-0.8**
NBMO	**Morrinhos-CE**	**32.04**	**69**	*eP*		**P**	**21 19 07.2**	**-1.3**
NBAN	**Anadia - AL**	**33.29**	**82**	*eP*		**P**	**21 19 17.9**	**-1.5**
MLPR	**Magueyes Islan**	**34.45**	**5**	P		**P**	**21 19 28.5**	**-0.7**
PDPR	**Patillas Dam,**	**34.59**	**6**	P		**P**	**21 19 29.1**	**-1.3**
RCBR	**Riachuelo**	**34.83**	**76**	P		**P**	**21 19 31.6**	**-1.1**
	comp=Z,14nm,0.7s,baz=232,slow=9.3,SNR=8.9							
RCBR	**Riachuelo**	**34.83**	**76**	P		**P**	**21 19 31.2**	**-1.4**
AOPR	**Arecibo Observ**	**34.84**	**5**	P		**P**	**21 19 31.6**	**-1.0**
APG	**El Apazote**	**37.46**	**326**	P		**P**	**21 19 56.4**	**+1.2**
	comp=Z,3.6nm,0.3s,baz=128,slow=9.3,SNR=4.0							
PETF	**Flores**	**38.75**	**328**	P		**P**	**21 20 06.2**	**+0.6**
ZAIG	**Zacatecas**	**50.61**	**320**	P		**P**	**21 21 41.1**	**+1.5**
ZAIG				IAmb		IAmb	21 21 42.7	
	comp=Z,6.6nm,0.7s							
JCT	**Junction City**	**55.02**	**328**	P		**P**	**21 22 12.6**	**+1.1**
JCT				IAmb		IAmb	21 22 13.6	
	comp=Z,7.1nm,0.8s							
WHTX	**Lake Whitney,**	**55.12**	**331**	P		**P**	**21 22 13.0**	**+0.9**
SLBS	**Sierra La Lagu**	**56.07**	**315**	P		**P**	**21 22 21.1**	**+2.0**
TX32	**Lajitas Array**	**56.18**	**324**	P		**P**	**21 22 20.2**	**+0.4**
TXAR	**Lajitas Array**	**56.18**	**324**	P		**P**	**21 22 20.6**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=151,slow=9.5,SNR=25							
TXAR				PcP		**PcP**	**21 23 16.6**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=142,slow=6.5,SNR=5.9							
TXAR	**Lajitas Array**	**56.18**	**324**	P		**P**	**21 22 20.4**	**+0.6**
ABTX	**Abilene, Hawle**	**56.68**	**330**	P		**P**	**21 22 23.9**	**+0.7**
ABTX				IAmb		IAmb	21 22 24.9	
	comp=Z,12nm,0.9s							
FVM	**French Village**	**57.66**	**341**	P		**P**	**21 22 29.9**	**0.0**
M56A	**Emporium**	**58.30**	**

BOSA					IAmb	IAmb	21 25 37.9				
	comp=Z,4.8nm,1.0s										
MAW	**Mawson**	**89.24**	**164**	P	**P**		**21 25 35.0 +1.6**				
	comp=Z,5.9nm,0.6s,baz=201,slow=6.3,SNR=16										
MAW	**Mawson**	**89.24**	**164**	P	**P**		**21 25 35.0 +1.6**				
DLBC	**Dease Lake**	**89.50**	**333**	P	**P**		**21 25 36.5 +1.8**				
KEST	**Kesra**	**91.00**	**53**	P	**P**		**21 25 41.6 -0.7**				
	comp=Z,1.2nm,0.8s,baz=222,slow=16,SNR=1.6										
CRVS	**Cervenica-Dubn**	**103.10**	**43**	*e*PDIFF	**Pdif**		**21 26 36.0 -0.6**				
STKA	**Stephens Creek**	**123.20**	**212**	PKP	**PKiKP**		**21 31 34.9 +0.7**				
	comp=Z,0.9nm,0.4s,baz=114,slow=5.7,SNR=3.9										
STKA	**Stephens Creek**	**123.20**	**212**		**PKiKP**		**21 31 34.7 +0.4**				
ARU	**Arti**	**124.49**	**32**	PKP	**PKiKP**		**21 31 36.1 +0.2**				
	comp=Z,0.9nm,0.4s,baz=200,slow=4.0,SNR=5.1										
ARU	**Arti**	**124.49**	**32**		**PKiKP**		**21 31 36.5 +0.6**				
BVAR	**Borovoye Array**	**132.13**	**31**	SKPbc	**SKPab**		**21 35 00.3 +0.6**				
	comp=Z,0.7nm,0.6s,baz=214,slow=5.0,SNR=4.8										
ASAR	**Alice Springs**	**133.79**	**211**	PKP	**PKiKP**		**21 31 55.4 -0.4**				
	comp=Z,0.8nm,0.5s,baz=129,slow=1.9,SNR=14										
ASAR	**Alice Springs**	**133.79**	**211**		**PKiKP**		**21 31 55.0 -0.8**				
WRA	**Warramunga Arr**	**136.66**	**214**	PKP	**PKiKP**		**21 32 00.9 -0.7**				
	comp=Z,1.9nm,0.3s,baz=141,slow=1.8,SNR=62										
WRA	**Warramunga Arr**	**136.66**	**214**		**PKiKP**		**21 32 00.5 -1.2**				
KURK	**Kurchatov**	**137.57**	**30**		**PKiKP**		**21 32 01.8 -0.7**				
KURBB	**Kurchatov Arra**	**137.59**	**30**	PKP	**PKiKP**		**21 32 01.8 -0.8**				
	comp=Z,0.6nm,0.4s,baz=308,slow=2.6,SNR=7.3										
KURBB				SKPbc	**SKPbc**		**21 35 16.2 +0.3**				
	comp=Z,0.5nm,0.7s,baz=313,slow=3.2,SNR=5.8										
ZALV	**Zalesovo Beam**	**137.80**	**22**	PKP	**PKPdf**		**21 32 00.6 -0.2**				
	comp=Z,4.2nm,0.6s,baz=316,slow=2.8,SNR=19										
ZALV				SKPbc	**SKiKP**		**21 35 18.0 -2.6**				
	comp=Z,0.8nm,0.4s,baz=300,slow=6.7,SNR=6.4										
ZALV	**Zalesovo Beam**	**137.80**	**22**		**PKPdf**		**21 32 00.5 -0.3**				
AAK	**Ala-Archa**	**139.97**	**42**	SKPbc	**SKiKP**		**21 35 25.3 -0.4**				
	comp=Z,1.0nm,0.8s,baz=172,slow=4.6,SNR=4.8										
MKAR	**Makanchi Array**	**142.01**	**32**	PKhKP	PKPpre		21 32 04.8				
	comp=Z,0.9nm,0.5s,baz=315,slow=2.4,SNR=5.2										
MKAR				PKP	**PKiKP**		**21 32 10.2 -1.6**				
	comp=Z,1.0nm,0.6s,baz=350,slow=1.9,SNR=9.0										
MKAR				SKPbc	**SKPbc**		**21 35 26.9 -1.2**				
	comp=Z,0.9nm,0.8s,baz=347,slow=2.9,SNR=8.4										
MKAR	**Makanchi Array**	**142.01**	**32**		**PKPdf**		**21 32 09.4 +0.7**				
JAY	**Jayapura**	**144.43**	**241**	PKP	**PKPdf**		**21 32 14.6 +0.6**				
	comp=Z,16nm,1.0s,baz=163,slow=20,SNR=2.4										
USRK	**Ussuriysk Ar.**	**146.91**	**331**	PKPbc	**PKPab**		**21 32 21.1 -0.2**				
	comp=Z,5.2nm,0.6s,baz=33,slow=3.2,SNR=16										
USRK	**Ussuriysk Ar.**	**146.91**	**331**		**PKPab**		**21 32 20.7 -0.5**				
MJAR	**Matsushiro Arr**	**148.24**	**314**	PKPbc	**PKiKP**		**21 32 24.3 -0.6**				
	comp=Z,7.8nm,0.6s,baz=95,slow=2.0,SNR=16										
SONM	**Songino Array**	**148.58**	**5**	PKPbc	**PKiKP**		**21 32 25.7 +0.1**				
	comp=Z,11nm,0.5s,baz=331,slow=1.7,SNR=44										
KSRS	**Korea Array**	**154.01**	**327**	PKP	**PKPdf**		**21 32 28.4 -0.1**				
	comp=Z,0.6nm,0.5s,baz=9.3,slow=0.8,SNR=6.1										
KSRS				PKPbc	**PKiKP**		**21 32 38.0 +1.3**				
	comp=Z,0.9nm,0.3s,baz=37,slow=1.4,SNR=9.5										

*IDC **22** 21:19:17.6±12.0, 12.39S×166.62E, h268km±119km, mb3.2/6, mb1 3.4/6, mb1mx3.1/33, mbtmp3.8/6, Error ellipse: s-maj=89.3km s-min=43.6km az=140.0*

ISC 22 21:19:15.7±1.4, 12.4S±0.5×166.7E±0.4, h250km, n8, σ0§41/8, mb3.5/6, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**21.03**	**246**	P	**P**	**21 23 41.0**	**+0.2**
	2.7nm,0.7s,baz=75,slow=12,SNR=5.7						
STKA	**Stephens Creek**	**30.14**	**226**	P	**P**	**21 25 02.5**	**0.0**
	1.0nm,0.8s,baz=47,slow=6.1,SNR=3.1						
WRA	**Warramunga Arr**	**31.90**	**252**	P	**P**	**21 25 18.3**	**+0.1**
	0.4nm,0.5s,baz=86,slow=9.2,SNR=5.0						
ASAR	**Alice Springs**	**33.03**	**246**	P	**P**	**21 25 27.9**	**-0.1**
	0.7nm,0.6s,baz=69,slow=9.3,SNR=8.8						
ILAR	**Eielson Array**	**84.48**	**18**	P	**P**	**21 31 20.2**	**+0.1**
	1.8nm,0.5s,baz=243,slow=5.0,SNR=25						
NVAR	**Mina Array Bea**	**86.19**	**50**	P	**P**	**21 31 29.7**	**+0.2**
	0.1nm,0.3s,baz=224,slow=3.8,SNR=2.1						
ARCES	**ARCESS Array B**	**117.83**	**346**	PKP	**PKiKP**	**21 37 31.9**	**+0.1**
	2.9nm,1.0s,baz=74,slow=3.1,SNR=6.6						
ESDC	**Sonseca Array**	**151.57**	**345**	PKPbc	**PKPbc**	**21 38 39.8**	**-0.8**
	0.3nm,0.7s,baz=1.7,slow=5.0,SNR=1.9						

IDC 22 21:27:57.7±472.0, 41.86S×67.95W, h0km, Error ellipse: s-maj=231.4km s-min=188.1km az=94.0, Southern Argentina

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02AR	**USHUAIA INFRAS**	**12.73**	**178**	*i*		22 51 00.0	
	baz=355,slow=329,SNR=0.9						
I08BO	**LAS PENAS INFR**	**25.56**	**359**	*i*		00 06 39.9	
	baz=181,slow=329,SNR=1.6						
I09BR	**BRASILIA INFRA**	**31.28**	**39**	*i*		00 35 10.0	
	baz=212,slow=309,SNR=2.3						

*JMA **22** 21:32:08.3±0.1, 37.06N×141.20E, h50km±1km, M3.7*
JMA Felt II J1.

*IDC **22** 21:32:12.1±7.1, 36.86N×141.07E, h86km±53km, mb3.1/5, mb1 3.2/6, mb1mx3.0/49, mbtmp3.4/6, ML2.4/1, Error ellipse: s-maj=60.7km s-min=25.8km az=69.0*

ISC 22 21:32:07.6±1.3, 37.04N±0.06×141.32E±0.09, h50km, n24, σ0§88/27, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.42**	**278**	P	**Pn**	**21 32 17.7**	**-0.3**
ONAJ				S	**Sn**	**21 32 24.1**	**-1.4**
JFK	**Kawauchi**	**0.48**	**312**	P	**Pn**	**21 32 18.3**	**-0.4**
JFK				S	**Sn**	**21 32 25.3**	**-1.3**
JFFD	**Fukushimafurud**	**0.61**	**275**	P	**Pn**	**21 32 19.7**	**-0.5**
JFFD				S	**Sn**	**21 32 27.7**	**-1.6**
JHO	**Hitachi**	**0.74**	**235**	P	**Pn**	**21 32 21.4**	**-0.5**
JHO				S	**Sn**	**21 32 30.7**	**-1.5**
JFT	**Otama**	**0.92**	**302**	P	**Pn**	**21 32 24.7**	**+0.5**
JFT				S	**Sn**	**21 32 35.9**	**-0.6**
JMM	**Marumori**	**0.92**	**333**	P	**Pn**	**21 32 24.2**	**-0.1**
JMM				S	**Sn**	**21 32 35.7**	**-0.9**
JFY	**Yanaizu**	**1.34**	**286**	P	**Pn**	**21 32 30.0**	**+0.1**
JIO	**Ouri**	**1.41**	**1**	P	**Pn**	**21 32 31.2**	**+0.3**
JIO				S	**Sn**	**21 32 47.4**	**-0.9**
JOU	**Okura**	**1.42**	**339**	P	**Pn**	**21 32 31.5**	**+0.5**
JYS	**Shirataka**	**1.54**	**320**	P	**Pn**	**21 32 33.3**	**+0.6**
JAG	**Ashikaga**	**1.62**	**248**	P	**Pn**	**21 32 33.6**	**-0.2**
MJAR	**Matsushiro Arr**	**2.55**	**260**	P	**Pn**	**21 32 47.3**	**+0.8**
	0.9nm,0.3s,baz=83,slow=15,SNR=21						
MJAR				S	**Sn**	**21 33 16.5**	**+0.3**
	0.7nm,0.3s,baz=92,slow=27,SNR=7.6						
MAT	**Matsushiro**	**2.55**	**260**	P	**Pn**	**21 32 47.5**	**+1.0**
MAT				*eS*	**Sn**	**21 33 18.0**	**+1.7**
SONM	**Songino Array**	**27.72**	**304**	P	**P**	**21 37 51.2**	**0.0**
	0.2nm,0.5s,baz=96,slow=9.3,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**28.21**	**121**	T	T	22 08 03.4	
	baz=314,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**28.22**	**121**	T	T	22 08 06.3	
	baz=314,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**28.23**	**121**	T	T	22 08 05.1	
	baz=314,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**28.93**	**123**	T	T	22 08 54.6	
	baz=315,slow=76,SNR=17						
H11S3	**WAKE ISLAND Hy**	**28.93**	**123**	T	T	22 08 51.1	
	baz=315,slow=76,SNR=20						
H11S2	**WAKE ISLAND Hy**	**28.94**	**123**	T	T	22 08 52.1	
	baz=315,slow=76,SNR=17						
ZALV	**Zalesovo Beam**	**41.85**	**312**	P	**P**	**21 39 53.2**	**+0.7**
	0.7nm,0.5s,baz=103,slow=9.1,SNR=3.0						
MKAR	**Makanchi Array**	**44.05**	**302**	P	**P**	**21 40 09.5**	**-0.9**
	0.2nm,0.5s,baz=83,slow=9.4,SNR=2.1						
KURBB	**Kurchatov Arra**	**45.94**	**308**	P	**P**	**21 40 25.8**	**+0.6**
	0.6nm,0.5s,baz=82,slow=7.7,SNR=6.9						
WRA	**Warramunga Arr**	**57.06**	**188**	P	**P**	**21 41 49.1**	**+0.5**
	0.5nm,0.9s,baz=5.4,slow=7.3,SNR=2.2						

*NEIC **22** 21:38:28.6±1.4, 8.07N±0.08×38.2W±0.1, h10km±1km, mb4.5/19, Error ellipse: s-maj=17.5km s-min=13.0km az=265.0*

*IDC **22** 21:38:29.1±0.7, 8.15N×38.23W, h0km, mb4.0/15, mb1 4.2/16, mb1mx3.9/52, mbtmp4.1/16, ML3.6/1, MS3.6/24, Ms1 3.6/24, ms1mx3.4/51, Error ellipse: s-maj=23.3km s-min=16.3km az=151.0*

ISC 22 21:38:30.3±0.5, 8.09N±0.09×38.16W±0.09, h16km, n62, σ1§59/38, mb4.3/22, MS3.6/22, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**14.01**	**171**	Pn	**Pn**	**21 41 49.7**	**+1.3**
	0.3nm,0.3s,baz=291,slow=23,SNR=1.3						
RCBR				Sn	Sn	21 44 14.4	-9.3
	0.2nm,0.3s,baz=18,slow=13,SNR=2.3						
RCBR				LR	LR	21 45 55.4	
	comp=Z,99nm,20.8s,baz=304,slow=32						
RCBR	**Riachuelo**	**14.01**	**171**		**Pn**	**21 41 47.0**	**-1.3**
MDP	**Montagnes des**	**14.69**	**259**	LR	LR	21 47 14.1	
	comp=Z,122nm,18.9s,baz=96,slow=36						
SACV	**Santiago Islan**	**15.80**	**63**	Pn	**Pn**	**21 42 07.6**	**-4.8**
H05S1	**Guadeloupe/Mar**	**23.10**	**288**	T	T	22 07 21.1	
	SNR=11						
PTGA	**Pitinga**	**23.44**	**249**	LR	LR	21 52 54.3	
	comp=Z,81nm,19.4s,baz=76,slow=37						
PTGA	**Pitinga**	**23.44**	**249**	P	**P**	**21 43 38.0**	**-1.2**
PTGA				IAmb	IAmb	21 43 47.3	
	comp=Z,19nm,1.4s						
H05N1	**Guadeloupe/Mar**	**23.81**	**292**	T	T	22 08 19.1	
	SNR=3.5						
BDFB	**Brasilia**	**25.52**	**203**	P	**P**	**21 43 59.6**	**+1.1**
	comp=Z,3.3nm,0.6s,baz=40,slow=13,SNR=2.6						
BDFB				LR	LR	21 53 42.5	
	comp=Z,147nm,20.0s,baz=332,slow=36						
BDFB	**Brasilia**	**25.52**	**203**	P	**P**	**21 43 57.1**	**-1.4**
BDFB				IAmb	IAmb	21 44 03.3	
	comp=Z,10nm,1.1s						
H10N3	**ASCENSION HYDR**	**28.40**	**123**	T	T	22 14 18.6	
	baz=303,slow=75,SNR=144						
H10N2	**ASCENSION HYDR**	**28.40**	**123**	T	T	22 14 17.5	
	baz=303,slow=75,SNR=168						
H10N1	**ASCENSION HYDR**	**28.42**	**123**	T	T	22 14 16.4	
	baz=303,slow=75,SNR=137						
H10S3	**ASCENSION HYDR**	**28.89**	**125**	T	T	22 14 57.9	
	baz=301,slow=74,SNR=65						
H10S2	**ASCENSION HYDR**	**28.91**	**125**	T	T	22 14 59.5	
	baz=279,slow=74,SNR=39						
SJG	**San Juan**	**28.98**	**293**	LR	LR	21 54 42.0	
	comp=Z,25nm,18.7s,baz=92,slow=34						
DBIC	**Dimbokro**	**33.05**	**90**	P	**P**	**21 45 06.7**	**+1.2**
	comp=Z,4.9nm,0.8s,baz=246,slow=6.9,SNR=5.0						
DBIC	**Dimbokro**	**33.05**	**90**	P	**P**	**21 45 03.0**	**-2.5**
DBIC				IAmb	IAmb	21 45 08.9	
	comp=Z,9.6nm,1.0s						
KOWA	**Kowa**	**34.05**	**76**	P	**P**	**21 45 14.8**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=263,slow=7.5,SNR=12						
KOWA	**Kowa**	**34.05**	**76**	P	**P**	**21 45 12.4**	**-1.8**
KOWA				IAmb	IAmb	21 45 26.5	
	comp=Z,6.6nm,0.9s						
ROSC	**El Rosal**	**36.07**	**267**	LR	LR	22 01 14.9	
	comp=Z,87nm,18.1s,baz=59,slow=38						
LPAZ	**La Paz**	**38.30**	**231**	P	**P**	**21 45 52.7**	**+1.5**
	comp=Z,4.0nm,0.8s,baz=51,slow=7.4,SNR=14						
LPAZ				LR	LR	22 00 39.6	
	comp=Z,101nm,20.8s,baz=60,slow=35						
LPAZ	**La Paz**	**38.30**	**231**	P	**P**	**21 45 50.5**	**-0.7**
CPUP	**Villa Florida**	**38.95**	**208**	LR	LR	22 02 25.0	
	comp=Z,162nm,18.0s,baz=30,slow=37						
TOA0	**Torodi Ar. Sit**	**39.46**	**79**	P	**P**	**21 45 59.1**	**-1.3**
TORD	**Torodi Ar. Bea**	**39.46**	**79**	P	**P**	**21 46 02.0**	**+1.7**
	comp=Z,4.7nm,0.8s,baz=274,slow=8.6,SNR=26						
TORD				LR	LR	22 01 01.7	
	comp=Z,95nm,18.5s,baz=260,slow=34						
TORD	**Torodi Ar. Bea**	**39.46**	**79**	P	**P**	**21 45 59.6**	**-0.7**
ESDC	**Sonseca Array**	**43.86**	**39**	P	**P**	**21 46 38.0**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=233,slow=9.0,SNR=3.8						
ESDC				LR	LR	22 01 23.7	
	comp=Z,119nm,20.5s,baz=240,slow=31						
ACON	**Acoyapa**	**46.41**	**279**	P	**P**	**21 46 55.1**	**-1.6**
H09W1	**TRISTAN DA CUN**	**51.05**	**153**	T	T	22 42 33.2	
	SNR=3.9						
KEST	**Kesra**	**51.28**	**50**	P	**P**	**21 47 36.6**	**+2.7**
	comp=Z,4.2nm,0.7s,baz=169,slow=3.3,SNR=6.6						
KEST				LR	LR	22 09 23.8	
	comp=Z,88nm,18.7s,baz=284,slow=36						
KEST	**Kesra**	**51.28**	**50**	P	**P**	**21 47 33.8**	**-0.2**
KEST				IAmb	IAmb	21 47 39.4	
	comp=Z,4.6nm,0.8s						
OSSC	**Osservatorio P**	**55.62**	**42**	P	**P**	**21 48 05.0**	**-0.6**
OSSC				IAmb	IAmb	21 48 16.5	
	comp=Z,5.7nm,1.0s						
DAVOX	**Davos/Dischmat**	**56.18**	**38**	P	**P**	**21 48 11.7**	**+1.9**
	comp=Z,1.6nm,0.9s,baz=185,slow=7.2,SNR=2.3						
DAVOX				LR	LR	22 09 16.4	
	comp=Z,113nm,20.3s,baz=271,slow=33						
CTI	**Castel Tesino**	**56.95**	**39**	P	**P**	**21 48 14.1**	**-1.1**
CTI				IAmb	IAmb	21 48 24.8	
	comp=Z,3.9nm,0.7s						
TIP	**Timpagrande**	**57.97**	**49**	P	**P**	**21 48 22.1**	**-0.4**
TIP				IAmb	IAmb	21 48 28.3	
	comp=Z,7.5nm,1.2s						
GERES	**GERESS Array B**	**59.41**	**37**	P	**P**	**21 48 33.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=218,slow=4.6,SNR=2.1						
VRAC	**Vranov**	**61.33**	**38**	LR	LR	22 12 43.9	
	comp=Z,35nm,19.9s,baz=192,slow=34						
ULM	**Lac du Bonnet**	**63.47**	**323**	P	**P**	**21 48 59.6**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=180,slow=18,SNR=2.4						
ULM				LR	LR	22 13 15.2	
	comp=Z,33nm,18.5s,baz=23,slow=33						
ULM	**Lac du Bonnet**	**63.47**	**323**	P	**P**	**21 48 58.4**	**-1.2**
NOA	**NORSAR Array B**	**64.16**	**24**	P	**P**	**21 49 03.4**	**-0.5**
	comp=Z,1.4nm,1.1s,baz=234,slow=6.8,SNR=1.5						
NOA				LR	LR	22 15 04.3	
	comp=Z,30nm,18.4s,baz=210,slow=34						
SUMG	**Summit**	**64.43**	**360**	P	**P**	**21 49 05.8**	**-0.2**
SUMG				IAmb	IAmb	21 49 12.8	
	comp=Z,3.9nm,0.9s						
TXAR	**Lajitas Array**	**64.75**	**299**	P	**P**	**21 49 09.7**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=103,slow=6.0,SNR=4.9						
TXAR	**Lajitas Array**	**64.75**	**299**	P	**P**	**21 49 07.6**	**-1.0**
MLR	**Muntele Rosu**	**66.20**	**44**	P	**P**	**21 49 17.0**	**-0.7**
BURAR	**Bucovina Array**	**66.22**	**41**	P	**P**	**21 49 17.2**	**-0.5**
FFC	**Flin Flon**	**68.45**	**326**	P	**P**	**21 49 30.8**	**-0.8**
FFC				IAmb	IAmb	21 49 39.1	
	comp=Z,4.2nm,0.9s						
AKASG	**Malin Array Be**	**69.51**	**39**	P	**P**	**21 49 40.4**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=263,slow=5.5,SNR=2.3						
AKASG				LR	LR	22 17 60.0	
	comp=Z,43nm,20.9s,baz=255,slow=34						
FINES	**FINESS Array B**	**70.77**	**27**	P	**P**	**21 49 48.2**	**+2.5**
	comp=Z,2.3nm,0.9s,baz=289,slow=4.3,SNR=3.4						
FINES				LR	LR	22 20 36.4	
	comp=Z,29nm,18.0s,baz=208,slow=36						
PDAR	**Pinedale Array**	**70.90**	**312**	LR	LR	22 16 54.8	
	comp=Z,84nm,21.9s,baz=128,slow=33						
BOSA	**Boshof**	**71.16**	**124**	LR	LR	22 13 57.5	
	comp=Z,44nm,21.7s,baz=248,slow=30						
EIL	**Elat**	**71.38**	**61**	LR	LR	22 22 20.1	
	comp=Z,48nm,19.3s,baz=291,slow=37						
ARCES	**ARCESS Array B**	**73.42**	**19**	LR	LR	22 17 43.8	
	comp=Z,27nm,20.3s,baz=275,slow=32						
YKA	**Yellowknife Ar**	**76.61**	**332**	P	**P**	**21 50 20.1**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=96,slow=6.2,SNR=6.6						
ATD	**Arta Tunnel**	**79.66**	**80**	LR	LR	22 25 18.8	
	comp=Z,22nm,19.2s,baz=304,slow=35						
SNAA	**Sanae**	**82.94**	**169**	P	**P**	**21 50 55.3**	**+1.2**
SNAA				IAmb	IAmb	21 51 11.2	
	comp=Z,3.0nm,1.2s						
AKTO	**Aktyubinsk**	**87.74**	**40**	LR	LR	22 29 07.5	
	comp=Z,14nm,21.7s,baz=240,slow=35						
ABKAR	**Akbulak array**	**89.19**	**40**	P	**P**	**21 51 26.4**	**+1.0**
ILAR	**Eielson Array**	**90.57**	**336**	LR	LR	22 30 24.8	
	comp=Z,20nm,18.5s,baz=126,slow=34						
H01W2	**Cape Leeuwin H**	**143.15**	**140**	T	T	00 38 21.0	
	baz=239,slow=75,SNR=4.3						
H01W3	**Cape Leeuwin H**	**143.16**	**140**	T	T	00 38 18.8	
	baz=239,slow=75,SNR=4.7						
H01W1	**Cape Leeuwin H**	**143.16**	**140**	T	T	00 38 19.2	
	baz=239,slow=75,SNR=4.6						

*IDC **22** 21:51:07.9±1.1, 28.00N×52.37E, h0km, mb3.7/16, mb1 3.8/17, mb1mx3.6/49, mbtmp3.7/17, ML3.7/1, Error ellipse: s-maj=24.1km s-min=19.7km az=20.0*

*TEH **22** 21:51:11.7, 28.11N×52.51E, h20km, ML3.6*

*THR **22** 21:51:13.0±0.4, 28.24N×52.61E, h14km±7km, ML3.1*

*DSN **22** 21:51:16.9±0.8, 27.80N×52.80E, h10km, ML3.7/10, Error ellipse: s-maj=12.6km s-min=6.0km az=14.0*

*OMAN **22** 21:51:17.6, 27.77N×52.65E, h170km, mb4.4/13, ml3.7/13*

ISC 22 21:51:11.0±0.6, 28.07N±0.04×52.52E±0.05, h15km, n104, σ1§90/132, mb3.8/16, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIR1	**Qir**	**0.61**	**49**	*e*Pg	**Pg**	**21 51 22.0**	**-1.0**
LMD1	**Lamerd**	**0.92**	**142**	*e*Pg	**Pb**	**21 51 30.2**	**+1.5**
LMD1				*e*Sg	**Sn**	**21 51 45.2**	**+2.7**
JHRM	**Jahrom**	**1.03**	**65**	*e*Pg	**Pb**	**21 51 29.9**	**-0.6**
AHBU	**AHRAM**	**1.34**	**306**	*e*Pg	**Pn**	**21 51 37.0**	**+1.9**
SHI	**Shiraz**	**1.56**	**360**	*e*Pg	**Pb**	**21 51 40.5**	**+0.7**
LAR1	**LAR**	**1.69**	**103**	*e*Pn	**Pn**	**21 51 42.2**	**+2.2**
KAZ1	**Kazerun**	**1.73**	**334**	*e*Pn	**Pn**	**21 51 40.5**	**-0.1**
KLNJ	**Kolanjah**	**3.04**	**345**	*e*Pn	**Pn**	**21 52 00.3**	**+1.5**
JRN	**Qarnain Island**	**3.13**	**175**	*e*Pn	**Pn**	**21 52 01.7**	**+2.0**
JRN	**Qarnain Island**	**3.13**	**175**	P	**Pn**	**21 52 02.4**	**+2.6**
IRAM	**Ramesheh**	**3.73**	**358**	*e*Pn	**Pn**	**21 52 09.5**	**+1.3**
IMEH	**Mehriz**	**3.77**	**28**	*e*Pn	**Pn**	**21 52 11.0**	**+2.1**
SHME	**Shamm**	**3.80**	**121**	P	**Pn**	**21 52 10.8**	**+1.8**
SHME	**Shamm**	**3.80**	**121**	*e*Pn	**Pn**	**21 52 09.5**	**+0.5**
SHME	**Shamm**	**3.80**	**121**	P	**Pn**	**21 52 12.0**	**+3.0**
BANOM	**Banah**	**3.99**	**122**	P	**Pn**	**21 52 13.2**	**+1.6**
BANOM				S	**Sn**	**21 52 57.4**	**-0.8**
BANOM	**Banah**	**3.99**	**122**	*e*Pn	**Pn**	**21 52 13.4**	**+1.8**
BANOM	**Banah**	**3.99**	**122**	P	**Pn**	**21 52 13.5**	**+1.8**
BANOM				S	**Sn**	**21 52 59.6**	**+1.4**
NGRK	**Negar Kerman**	**4.01**	**66**	*e*Pn	**Pn**	**21 52 13.8**	**+1.6**
SLWR	**Sila**	**4.05**	**191**	*e*Pn	**Pn**	**21 52 14.4**	**+1.9**
SLWR	**Sila**	**4.05**	**191**	P	**Pn**	**21 52 15.0**	**+2.5**
SLWR				S	**Sn**	**21 53 02.4**	**+2.7**
KHGB	**Koh Gabri**	**4.15**	**55**	*e*Pn	**Pn**	**21 52 15.9**	**+1.9**
NAZ	**Nazwa, Dubai**	**4.16**	**137**	P	**Pn**	**21 52 15.5**	**+1.5**
NAZ	**Nazwa, Dubai**	**4.16**	**137**	*e*Pn	**Pn**	**21 52 16.4**	**+2.4**
NAZ	**Nazwa, Dubai**	**4.16**	**137**	P	**Pn**	**21 52 16.8**	**+2.8**
NAZ				S	**Sn**	**21 53 04.1**	**+1.7**
KRBR	**Kerman**	**4.17**	**62**	*e*Pn	**Pn**	**21 52 16.6**	**+2.2**
KRBR	**Kerman**	**4.17**	**62**	*e*Pn	**Pn**	**21 52 16.6**	**+2.2**
TVBK	**TV Kerman**	**4.17**	**62**	*e*Pn	**Pn**	**21 52 16.6**	**+2.2**
MASF	**Masafi**	**4.22**	**129**	P	**Pn**	**21 52 16.9**	**+2.1**
MASF				S	**Sn**	**21 53 04.7**	**+0.9**
MSFE	**Esma-Masafi**	**4.23**	**129**	P	**Pn**	**21 52 16.6**	**+1.7**
MSFE				S	**Sn**	**21 53 03.1**	**-1.0**
MSFE	**Esma-Masafi**	**4.23**	**129**	*e*Pn	**Pn**	**21 52 17.0**	**+2.1**
ASUD	**Al Ashush, Dub**	**4.25**	**143**	P	**Pn**	**21 52 17.9**	**+2.7**
ASUD	**Al Ashush, Dub**	**4.25**	**143**	*e*Pn	**Pn**	**21 52 17.2**	**+2.0**
ASUD	**Al Ashush, Dub**	**4.25**	**143**	P	**Pn**	**21 52 18.5**	**+3.2**
	SNR=14						
ASUD				S	**Sn**	**21 53 06.8**	**+2.2**
FAQ	**Al Faqa, Dubai**	**4.31**	**140**	P	**Pn**	**21 52 17.9**	**+1.9**
FAQ	**Al Faqa, Dubai**	**4.31**	**140**	*e*Pn	**Pn**	**21 52 18.1**	**+2.1**
FAQ	**Al Faqa, Dubai**	**4.31**	**140**	P	**Pn**	**21 52 18.3**	**+2.4**
FAQ				S	**Sn**	**21 53 07.0**	**+1.1**
IGAR	**Gharneh**	**4.34**	**355**	*e*Pn	**Pn**	**21 52 17.4**	**+0.8**
MDH	**Madha**	**4.36**	**128**	P	**Pn**	**21 52 18.2**	**+1.5**
MDH	**Madha**	**4.36**	**128**	*e*Pn	**Pn**	**21 52 18.4**	**+1.7**
MDH	**Madha**	**4.36**	**128**	P	**Pn**	**21 52 18.

NOU ***22*** *22:03:31.0,38°.39S×175°.88E,h218km,MLv3.3,North Island, New Zealand*

WEL 22 22:03:34.1,39°.3S±10°×17°6E±°,h200km±6km,M2.9/10, MLv2.9/10,Error ellipse: s-maj=0.0km s-min=0.0km az=26.9,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLZ	**Tolley Road**	**0.29**	**327**	P	Pn	22 04 00.1	-0.6
TLZ	**Tolley Road**	**0.29**	**327**	P	Pn	22 03 60.0	-0.7
TLZ				S	S	22 04 20.2	-1.2
KRVZ	**Karewarewa**	**0.53**	**188**	P	Pn	22 04 01.7	+0.2
TMVZ	**Te Maari**	**0.55**	**183**	P	Pn	22 04 01.8	+0.3
WTVZ	**West Tongariro**	**0.56**	**192**	P	Pn	22 04 01.8	+0.2
ETVZ	**East Tongariro**	**0.56**	**182**	P	Pn	22 04 01.8	+0.2
NNVZ	**North Ngauruho**	**0.57**	**190**	P	Pn	22 04 01.9	+0.2
MRHZ	**Matea Rd**	**0.59**	**117**	P	Pn	22 04 00.5	-1.2
OTVZ	**Oturere**	**0.59**	**185**	P	Pn	22 04 02.2	+0.4
NGZ	**Ngauruhoe**	**0.61**	**190**	P	Pn	22 04 02.2	+0.3
SNVZ	**South Ngauruho**	**0.62**	**187**	P	Pn	22 04 02.4	+0.5
HIZ	**Hauiti**	**0.69**	**274**	P	Pn	22 04 01.9	-0.1
HIZ	**Hauiti**	**0.69**	**274**	P	Pn	22 04 01.8	-0.3
HIZ				S	S	22 04 23.5	-0.2
TUVZ	**Tukino**	**0.70**	**185**	P	Pn	22 04 02.6	+0.4
PKVZ	**Pokaka**	**0.78**	**203**	P	Pn	22 04 03.0	+0.4
MUGZ	**Murupara**	**0.81**	**84**	P	Pn	22 04 01.2	-1.5
MOVZ	**Moawhango**	**0.84**	**179**	P	Pn	22 04 03.0	+0.1
BKZ	**Black Stump Fm**	**0.84**	**136**	P	Pn	22 04 02.6	-0.2
MTVZ	**Mangateitei**	**0.84**	**194**	P	Pn	22 04 03.5	+0.5
TOZ	**Tahuroa Road**	**0.86**	**347**	P	Pn	22 04 01.9	-1.1
MTHZ	**Maungataniwha**	**0.91**	**108**	P	Pn	22 04 02.7	-0.6
BHHZ	**Black Hill Sta**	**0.95**	**165**	P	Pn	22 04 03.7	+0.1
RTZ	**Ruatahuna**	**0.97**	**93**	P	Pn	22 04 02.6	-1.2
NMHZ	**Naumai**	**0.99**	**123**	P	Pn	22 04 02.5	-1.3
KWHZ	**Kaweka Forest**	**1.01**	**148**	P	Pn	22 04 04.4	+0.5
RAHZ	**Arahi**	**1.11**	**109**	P	Pn	22 04 04.5	-0.2
URZ	**Urewera**	**1.12**	**74**	P	Pn	22 04 02.8	-1.9
MCHZ	**McNeill Hill**	**1.15**	**140**	P	Pn	22 04 05.8	+0.9
KRHZ	**Kereru**	**1.18**	**156**	P	Pn	22 04 05.7	+0.5
ARHZ	**Aropaoanui**	**1.20**	**126**	P	Pn	22 04 05.7	+0.4
SNGZ	**Shannon Statio**	**1.27**	**100**	P	Pn	22 04 05.4	-0.5
RAGZ	**Rawiri**	**1.32**	**87**	P	Pn	22 04 05.2	-1.1
WAZ	**Wanganui**	**1.32**	**206**	P	Pn	22 04 07.2	+0.9
PNHZ	**Pukenui**	**1.39**	**165**	P	Pn	22 04 07.4	+0.6
PNHZ	**Pukenui**	**1.39**	**165**	P	Pn	22 04 07.4	+0.6
PNHZ				S	S	22 04 31.3	-0.8
MWZ	**Matawai**	**1.43**	**81**	P	Pn	22 04 05.6	-1.5
NEZ	**North Egmont**	**1.46**	**241**	P	Pn	22 04 08.6	+1.1
TSZ	**Takapari Road**	**1.50**	**173**	P	Pn	22 04 08.4	+0.7
CKHZ	**Cape Kidnapper**	**1.51**	**137**	P	Pn	22 04 08.5	+0.7
KAHZ	**Kahuranaki**	**1.51**	**144**	P	Pn	22 04 08.7	+0.9
KHEZ	**Kahui Hut**	**1.53**	**241**	P	Pn	22 04 09.2	+1.1
KNZ	**Kokohu**	**1.58**	**107**	P	Pn	22 04 08.0	-0.4
WPHZ	**Waipukurau**	**1.59**	**160**	P	Pn	22 04 09.3	+0.7
WPHZ	**Waipukurau**	**1.59**	**160**	P	Pn	22 04 09.0	+0.4
WPHZ				S	S	22 04 34.2	-0.9
RIGZ	**Rimuhau**	**1.59**	**96**	P	Pn	22 04 07.9	-0.7
TKGZ	**Te Karaka**	**1.66**	**86**	P	Pn	22 04 08.3	-1.0
PXZ	**Pawanui**	**1.70**	**149**	P	Pn	22 04 10.0	+0.5
PXZ				S	S	22 04 36.1	-0.9
PRGZ	**Paritu Road**	**1.71**	**103**	P	Pn	22 04 09.2	-0.5
DVHZ	**Dannevirke**	**1.76**	**169**	P	Pn	22 04 10.5	+0.3
DVHZ				S	S	22 04 36.6	-1.3
MHGZ	**Mahia Peninsul**	**1.79**	**110**	P	Pn	22 04 10.5	0.0
HAZ	**Te Kaha**	**1.81**	**64**	P	Pn	22 04 07.9	-2.7
TWGZ	**Tauwhareparae**	**1.81**	**78**	P	Pn	22 04 09.9	-0.8
POWZ	**Post Office Ro**	**1.82**	**179**	P	Pn	22 04 11.7	+1.0
PRHZ	**Porangahau**	**1.83**	**158**	P	Pn	22 04 10.6	-0.2
PRHZ				S	S	22 04 38.5	-0.7
CNGZ	**Carnagh Statio**	**1.94**	**88**	P	Pn	22 04 11.5	-0.4
PKGZ	**Pakihiroa**	**1.96**	**70**	P	Pn	22 04 10.5	-1.8
ANWZ	**Angora Road**	**1.97**	**163**	P	Pn	22 04 13.0	+0.7
PRWZ	**Pori Road**	**1.99**	**175**	P	Pn	22 04 13.1	+0.7
MRZ	**Mangatainoka R**	**2.09**	**183**	P	Pn	22 04 13.9	+0.5
BFZ	**Birch Farm**	**2.15**	**170**	P	Pn	22 04 14.3	+0.2
BFZ				S	S	22 04 43.8	-1.0
TIWZ	**Tintock**	**2.21**	**177**	P	Pn	22 04 15.2	+0.4
TIWZ				S	S	22 04 45.4	-0.6
OGWZ	**Otaki Gorge**	**2.29**	**191**	P	Pn	22 04 16.1	+0.6
HOWZ	**Holdsworth Sta**	**2.33**	**184**	P	Pn	22 04 16.2	+0.2
HOWZ	**Holdsworth Sta**	**2.33**	**184**	P	Pn	22 04 16.1	0.0
HOWZ				S	S	22 04 47.2	-1.2
KIW	**Kapiti Island**	**2.38**	**195**	P	Pn	22 04 16.7	+0.2
CAW	**Cannon Point**	**2.59**	**191**	P	Pn	22 04 19.2	+0.3
MTW	**Mount Morrison**	**2.59**	**184**	P	Pn	22 04 18.8	-0.1
DUWZ	**D'Urville Isla**	**2.63**	**212**	P	Pn	22 04 19.5	+0.1
TRWZ	**Traveller**	**2.83**	**181**	P	Pn	22 04 21.6	0.0
MSWZ	**Moikau Station**	**2.87**	**187**	P	Pn	22 04 21.9	-0.2
TCW	**Tory Channel**	**2.87**	**203**	P	Pn	22 04 22.4	+0.3
BHW	**Baring Head**	**2.91**	**193**	P	Pn	22 04 22.5	-0.1
PLWZ	**Palliser**	**3.02**	**187**	P	Pn	22 04 23.5	-0.4
TUWZ	**Tuamarina**	**3.17**	**205**	P	Pn	22 04 25.5	-0.1
NNZ	**Nelson**	**3.21**	**214**	P	Pn	22 04 26.1	0.0
QRZ	**Quartz Range**	**3.35**	**227**	P	Pn	22 04 26.9	-0.9
BSWZ	**Blackbirch Sta**	**3.45**	**204**	P	Pn	22 04 29.1	+0.1
THZ	**Tophouse**	**3.86**	**213**	P	Pn	22 04 34.0	-0.1
KHZ	**Kahutara**	**4.19**	**203**	P	Pn	22 04 38.2	+0.1
GVZ	**Greta Valley S**	**4.85**	**204**	P	Pn	22 04 46.1	-0.3
LTZ	**Lake Taylor**	**4.96**	**211**	P	Pn	22 04 47.4	-0.6

CRAAG ***22*** *22:05:13.4,35°.70N×5°.82E,Ml3.5*

IDC ***22*** *22:05:14.7±1.7,35°.71N×5°.76E,h0km,mb3.3/2,mb1 3.3/4, mb1mx3.0/45,mbtmp3.3/4,ML3.0/2,Error ellipse: s-maj=35.2km s-min=26.4km az=163.0*

ISC 22 22:05:16.1±1.0,35°.75N±0°.10×5°.73E±0°.05,h10km,n14, σ0$90/15,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHR	**Kef el Ahmar**	**0.33**	**326**	P	**Pg**	**22 05 25.5**	**-0.1**
SET	**Setif**	**0.53**	**329**	P	**Pg**	**22 05 25.0**	**-1.4**
CTEI	**Djebel Teioual**	**0.63**	**60**	P	**Pg**	**22 05 26.7**	**-1.6**
CASM	**Ain Smara**	**0.80**	**50**	P	**Pn**	**22 05 33.3**	**-0.2**
DFRA	**Djebel Bou Aff**	**0.81**	**8**	P	**Pg**	**22 05 31.6**	**0.0**
CKFL	**Kef-Lekhel**	**1.03**	**50**	P	**Pn**	**22 05 37.7**	**+1.0**
ATAF	**Djebel Tarf**	**1.19**	**277**	P	**Pb**	**22 05 39.5**	**+0.7**
CAEH	**'Ain El Ouahch**	**1.37**	**41**	P	**Pn**	**22 05 40.6**	**-0.7**
ABSA	**Djebel Ababsia**	**1.51**	**69**	P	**Pn**	**22 05 42.8**	**-0.5**
CMAH	**Djebel Manchou**	**1.62**	**57**	P	**Pg**	**22 05 48.0**	**+0.8**
KEST	**Kesra**	**2.94**	**89**	Pn	**Pn**	**22 06 03.8**	**+0.9**
	1.4nm,0.3s,baz=92,slow=3.5,SNR=25						
KEST				Sn	**Sn**	**22 06 38.6**	**+0.4**
	1.1nm,0.3s,baz=271,slow=8.3,SNR=3.7						
ESDC	**Sonseca Array**	**8.63**	**300**	Pn	**Pn**	**22 07 22.0**	**+1.0**
	0.1nm,0.3s,baz=112,slow=13,SNR=6.1						
TORD	**Torodi Ar. Bea**	**22.79**	**190**	P	**P**	**22 10 18.4**	**-0.5**
	0.4nm,0.5s,baz=0.9,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**56.46**	**53**	P	**P**	**22 14 57.7**	**-0.3**
	0.3nm,0.5s,baz=284,slow=5.7,SNR=6.1						

IDC ***22*** *22:15:28.3±0.6,8°.82S×125°.86E,h0km,mb4.3/17, mb1 4.4/21,mb1mx4.2/45,mbtmp4.4/21,ML4.4/4,MS3.3/12, Ms1 3.3/12,ms1mx3.1/45,Error ellipse: s-maj=26.3km s-min=14.2km az=87.0*

NEIC ***22*** *22:15:29.8±2.0,8°.81S±0°.05×126°.07E±0°.06,h10km±1km, mb4.6/54,Error ellipse: s-maj=10.4km s-min=8.2km az=131.0*

DJA ***22*** *22:15:37.5±0.4,9°S±2°×12°6E±°,h39km±6km,M4.7/27, mB5.2/17,mb4.9/27,MLv4.8/13,Mw(mB)4.5/17*

ISC 22 22:15:33.6±0.3,8°.78S±0°.05×126°.10E±0°.05,h35km,n131, σ1$58/114,mb4.5/49,MS3.2/7,1C,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.05**	**242**		**Pn**	**22 16 06.5**	**+0.7**
SOEI	**Soe**	**2.05**	**242**	P	**Pn**	**22 16 07.3**	**+1.5**
BATI	**Baumata**	**2.79**	**239**	Pn	**Pn**	**22 16 17.4**	**+1.6**
	156nm,0.3s,baz=91,slow=3.9,SNR=109						
BATI				Sn	**Sn**	**22 16 49.2**	**+0.9**
	264nm,0.3s,baz=59,slow=1.9,SNR=6.7						
BATI				LR	LR	22 17 29.1	
	comp=Z,391nm,21.1s,baz=126,slow=47						
BATI	**Baumata**	**2.79**	**239**	P	**Pn**	**22 16 17.3**	**+1.4**
BATI				S	**Sn**	**22 16 50.3**	**+2.0**
MMRI	**Maumere**	**3.82**	**272**	Pn	**Pn**	**22 16 30.5**	**+0.5**
MMRI	**Maumere**	**3.82**	**272**	P	Pn	22 16 35.8	+5.8
NLAI	**Namlea**	**5.59**	**10**	P	Pn	22 17 01.6	+7.2
	0.6nm3μm135nm,0.4s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**5.63**	**255**	P	**Pn**	**22 16 58.9**	**+4.0**
	0.5nm2μm132nm,0.8s						
MTN	**Manton Dam**	**6.38**	**130**	Pn	**Pn**	**22 17 06.7**	**+1.4**
WBSI	**Waikabubak, Su**	**6.68**	**262**	P	Pn	22 17 16.8	+7.5
	0.3nm66nm,0.6s						
SANI	**Sanana**	**6.69**	**359**	P	Pn	22 17 14.9	+5.5
	0.2nm688nm46nm,0.5s						
KAPI	**Kappang**	**7.33**	**300**	Pn	Pn	22 17 22.9	+4.7
	2.4nm,0.3s,baz=151,slow=10.0,SNR=11						
KAPI				Sn	**Sn**	**22 18 41.6**	**+1.4**
	baz=61,slow=23,SNR=0.9						
KAPI				LR	LR	22 20 11.8	
	comp=Z,439nm,22.0s,baz=109,slow=40						
KAPI	**Kappang**	**7.33**	**300**		**Pn**	**22 17 20.1**	**+1.9**
KNRA	**Kununurra**	**7.33**	**159**	Pn	**Pn**	**22 17 18.0**	**-0.3**
BNSI	**Bone**	**7.37**	**306**	P	**Pn**	**22 17 23.0**	**+4.2**
	0.4nm1μm124nm,0.6s						
SPSI	**Sidrap Palu**	**7.90**	**307**	P	Pn	22 17 31.3	+5.2
	769nm66nm,1.0s						
PLAI	**Plampang**	**8.22**	**269**	P	Pn	22 17 45.8	+15
LUWI	**Luwuk**	**8.37**	**337**	P	Pn	22 17 39.0	+6.5
	2μm136nm,0.5s						
FAKI	**Fak Fak**	**8.44**	**47**	Pn	**Pn**	**22 17 36.5**	**+2.9**
TTSI	**Tana Toraja**	**8.45**	**312**	P	Pn	22 17 43.1	+9.4
	2μm50nm,0.8s						
APSI	**Ampana**	**8.98**	**330**	P	Pn	22 17 48.1	+7.1
	1μm123nm,1.0s						
TWSI	**Taliwang, Sumb**	**9.11**	**270**	P	Pn	22 17 59.7	+17
FITZ	**Fitzroy Crossi**	**9.28**	**183**	Pn	**Pn**	**22 17 42.9**	**-2.1**
	15nm,0.3s,baz=9.7,slow=10,SNR=146						
FITZ				Sn	Sn	22 19 18.1	-10
	10nm,0.3s,baz=23,slow=13,SNR=2.7						
FITZ	**Fitzroy Crossi**	**9.28**	**183**	Pn	**Pn**	**22 17 43.0**	**-2.0**
SIJI	**Sorong**	**9.39**	**33**	Pn	**Pn**	**22 17 48.7**	**+2.1**
	0.4nm,0.3s,baz=150,slow=20,SNR=1.6						
SIJI				Sn	Sn	22 19 42.0	+11
	0.5nm,0.3s,baz=236,slow=23,SNR=1.7						
SWI	**Sorong**	**9.39**	**33**	P	Pn	22 17 54.5	+7.9
	29nm,0.9s						
KMSI	**Cibinong**	**9.53**	**347**	P	Pn	22 17 57.7	+9.3
	76nm,0.5s						
TNTI	**Ternate**	**9.57**	**8**	Pn	**Pn**	**22 17 51.7**	**+2.6**
MRSI	**Marisa**	**10.09**	**336**	P	Pn	22 18 03.4	+7.3
WRA	**Warramunga Arr**	**13.66**	**145**	Pn	**Pn**	**22 18 40.7**	**-4.4**
	5.6nm,0.3s,baz=324,slow=13,SNR=110						
WRA				Sn	Sn	22 21 02.1	-14
	10.0nm,0.3s,baz=316,slow=25,SNR=11						
UGM	**Wanagama**	**15.44**	**272**	Pn	**Pn**	**22 19 09.2**	**+0.3**
DAV	**Davao City (W)**	**15.75**	**358**	LR	LR	22 25 23.8	
	comp=Z,95nm,21.9s,baz=303,slow=38						
MYLDM	**Lahad Datu**	**15.80**	**331**		**P**	**22 19 16.1**	**-1.0**
JAY	**Jayapura**	**15.80**	**68**	Pn	**P**	**22 19 16.9**	**-0.3**
	0.4nm,0.3s,baz=338,slow=19,SNR=1.5						
AS31	**Alice Springs**	**16.58**	**154**		**Pn**	**22 19 21.1**	**-2.6**
ASAR	**Alice Springs**	**16.58**	**154**	Pn	**Pn**	**22 19 21.2**	**-2.4**
	3.4nm,0.3s,baz=320,slow=11,SNR=81						
ASAR				Sn	Sn	22 22 11.4	-15
	1.2nm,0.3s,baz=314,slow=16,SNR=3.7						
ASAR				LR	LR	22 26 57.3	
	comp=Z,138nm,19.5s,baz=340,slow=41						
COEN	**Coen**	**17.51**	**109**	P	**Pn**	**22 19 34.5**	**-0.7**
KKM	**Kota Kinabalu**	**17.72**	**326**		**P**	**22 19 39.7**	**+1.2**
KKM				lAmb	lAmb	22 19 42.2	
	comp=Z,49nm,1.3s						
SBUM	**Sibu**	**17.77**	**308**		**P**	**22 19 39.6**	**+0.7**
GIRL	**Giralia**	**17.88**	**218**		**Pn**	**22 19 38.8**	**-1.0**
CISI	**Cisompet, Garu**	**18.14**	**273**		**Pn**	**22 19 41.9**	**-1.2**
CISI				lAmb	lAmb	22 19 58.4	
	comp=Z,32nm,0.9s						
LEM	**Lembang**	**18.41**	**275**	LR	LR	22 28 31.2	
	comp=Z,155nm,18.1s,baz=99,slow=43						
PMG	**Port Moresby**	**20.81**	**93**	P	Pn	22 20 18.0	+3.3
	comp=Z,24nm,0.7s,baz=250,slow=5.0,SNR=7.4						
PMG				LR	LR	22 30 27.7	
	comp=Z,111nm,18.9s,baz=280,slow=43						
PMG	**Port Moresby**	**20.81**	**93**	P	**P**	**22 20 13.2**	**+1.1**
PMG				lAmb	lAmb	22 20 18.9	
	comp=Z,27nm,0.7s						
FORT	**Forrest**	**21.97**	**175**	P	**P**	**22 20 23.4**	**-1.0**
MORW	**Morawa**	**22.29**	**204**	P	**P**	**22 20 27.0**	**-1.0**
MORW				lAmb	lAmb	22 20 28.1	
	comp=Z,13nm,0.6s						
CTA	**Charters Tower**	**22.50**	**122**	P	**P**	**22 20 33.6**	**+3.3**
	comp=Z,11nm,0.9s,baz=296,slow=9.7,SNR=9.1						
CTAO	**Charters Tower**	**22.50**	**122**	P	**P**	**22 20 31.2**	**+0.9**
CTAO				lAmb	lAmb	22 20 34.6	
	comp=Z,13nm,0.9s						
NWAO	**Narrogin (SRO)**	**25.39**	**198**	P	**P**	**22 20 56.8**	**-1.1**
	comp=Z,7.3nm,0.5s,baz=36,slow=7.6,SNR=9.7						
NWAO				S	**S**	**22 25 32.0**	**+10**
	comp=Z,4.4nm,0.6s,baz=310,slow=13,SNR=1.9						
NWAO	**Narrogin (SRO)**	**25.39**	**198**	P	**P**	**22 20 56.9**	**-0.9**
BBOO	**Buckleboo**	**25.63**	**160**	P	**P**	**22 21 00.5**	**+0.5**
BBOO				lAmb	lAmb	22 21 02.9	
	comp=Z,10nm,0.9s						
STKA	**Stephens Creek**	**27.12**	**150**	P	**P**	**22 21 14.4**	**+0.9**
	comp=Z,5.7nm,0.4s,baz=321,slow=10,SNR=6.1						
STKA				S	S	22 26 19.6	+30
	comp=Z,1.7nm,0.6s,baz=232,slow=18,SNR=2.6						
STKA				LR	LR	22 32 53.9	
	comp=Z,128nm,18.4s,baz=8.7,slow=38						
STKA	**Stephens Creek**	**27.12**	**150**	P	**P**	**22 21 14.3**	**+0.9**
ARMA	**Armidale**	**32.13**	**136**	P	**P**	**22 21 59.7**	**+1.6**
ARMA				lAmb	lAmb	22 22 01.1	
	comp=Z,3.3nm,0.7s						
HNR	**Honiara**	**33.42**	**94**	LR	LR	22 36 22.5	
	comp=Z,42nm,20.3s,baz=262,slow=37						
JOW	**Kunigami**	**35.46**	**3**	P	**P**	**22 22 27.9**	**+1.0**
	comp=Z,24nm,0.9s,baz=189,slow=12,SNR=3.7						
CMAR	**Chiang Mai Arr**	**38.09**	**315**	P	**P**	**22 22 49.2**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=147,slow=7.1,SNR=1.8						
CMAR				LR	LR	22 40 01.9	
	comp=Z,35nm,18.2s,baz=175,slow=39						
CMAR	**Chiang Mai Arr**	**38.09**	**315**	P	**P**	**22 22 48.7**	**-0.7**
CHTO	**Chiang Mai**	**38.33**	**316**	P	**P**	**22 22 51.1**	**-0.3**
JCJ	**Chichijima**	**38.92**	**23**	LR	LR	22 35 03.6	
	comp=Z,37nm,21.8s,baz=211,slow=30						
KMI	**Kunming**	**40.66**	**327**	⇑P	**P**	**22 23 11.3**	**+0.3**
KMI				sP	sP	22 23 33.3	+7.7
KMI				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KMI	**Kunming**	**40.66**	**327**	P	**P**	**22 23 10.7**	**-0.4**
KMI				lAmb	lAmb	22 23 12.4	
	comp=Z,13nm,1.5s						
DZM	**Mont Dzumac**	**40.94**	**114**	P	**P**	**22 23 12.0**	**-1.2**
JNU	**Nakatsue**	**41.91**	**6**	P	**P**	**22 23 20.9**	**-0.1**
	comp=Z,7.4nm,0.7s,baz=174,slow=10,SNR=3.3						
JNU	**Nakatsue**	**41.91**	**6**	P	**P**	**22 23 21.4**	**+0.4**
JNU				lAmb	lAmb	22 23 22.3	
	comp=Z,21nm,1.2s						
JMN	**Monobe**	**42.91**	**10**	P	**P**	**22 23 29.4**	**+0.3**
JMN				lAmb	lAmb	22 23 33.9	
	comp=Z,18nm,1.1s						
JHJ	**Hachijo jima 2**	**43.66**	**17**	LR	LR	22 38 43.2	
	comp=Z,46nm,20.9s,baz=196,slow=32						
JHS	**Saijyo**	**44.04**	**8**	P	**P**	**22 23 38.9**	**+0.7**
JWT	**Wachi**	**44.70**	**11**	P	**P**	**22 23 44.0**	**+0.7**
JWT				lAmb	lAmb	22 24 00.2	
	comp=Z,7.4nm,0.9s						
XAN	**Xi'an**	**45.60**	**340**	P	**P**	**22 23 49.5**	**-1.0**
XAN				lAmb	lAmb	22 23 50.2	
	comp=Z,6.7nm,0.6s						
KSAR	**Wonju Array Be**	**46.01**	**2**	P	**P**	**22 23 54.5**	**+0.8**
INCN	**Inchon**	**46.02**	**1**	P	**P**	**22 23 53.2**	**-0.6**
KSRS	**Korea Array**	**46.02**	**2**	P	**P**	**22 23 54.9**	**+1.2**
	comp=Z,6.1nm,0.9s,baz=178,slow=9.9,SNR=29						
KSRS				LR	LR	22 45 58.1	
	comp=Z,12nm,18.9s,baz=185,slow=40						
KS19	**Wonju Array Si**	**46.07**	**2**	P	**P**	**22 23 54.4**	**+0.2**
MJAR	**Matsushiro Arr**	**46.49**	**13**	P	**P**	**22 23 57.1**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=181,slow=8.9,SNR=5.0						
MJAR	**Matsushiro Arr**	**46.49**	**13**	P	**P**	**22 23 56.9**	**-0.6**
JSD	**Sado**	**47.94**	**13**	P	**P**	**22 24 09.2**	**+0.4**
LSA	**Lhasa**	**50.94**	**320**	P	**P**	**22 24 31.7**	**-0.7**
ODAN	**Odare**	**51.62**	**315**	eP	**P**	**22 24 36.9**	**-0.4**
	comp=Z,8.5nm,0.8s						
TAPN	**Taplejung**	**51.70**	**315**	eP	**P**	**22 24 37.1**	**-0.8**
	comp=Z,5.3nm,0.4s						
RAMN	**Ramite**	**52.23**	**314**	eP	**P**	**22 24 41.4**	**-0.5**
	comp=Z,15nm,0.6s						
USA0B	**Ussuriysk Arra**	**53.00**	**5**	P	**P**	**22 24 47.2**	**+0.4**
USA0B				lAmb	lAmb	22 24 57.2	
	comp=Z,12nm,1.5s						
USRK	**Ussuriysk Ar.**	**53.00**	**5**	P	**P**	**22 24 47.5**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=193,slow=7.4,SNR=9.9						
USRK	**Ussuriysk Ar.**	**53.00**	**5**	P	**P**	**22 24 47.3**	**+0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDJ	**Mudanjiang**	**53.24**	**3**	P	**P**	**22 24 49.6**	**+1.0**
MDJ				lAmb	lAmb	22 24 51.3	
	comp=Z,9.8nm,1.0s						
GUN	**Gumba**	**53.32**	**315**	eP	**P**	**22 24 49.1**	**-0.9**
	comp=Z,8.8nm,0.5s						
PKI	**Pulchoki**	**53.45**	**314**	eP	**P**	**22 24 49.8**	**-1.1**
	comp=Z,7.9nm,0.5s						
PKIN	**Phulchoki**	**53.46**	**314**	eP	**P**	**22 24 49.7**	**-1.3**
	comp=Z,7.5nm,0.5s						
KKN	**Kakani**	**53.67**	**314**	eP	**P**	**22 24 50.9**	**-1.5**
	comp=Z,2.8nm,0.4s						
GTA	**Gaotai**	**53.79**	**335**	P	**P**	**22 24 53.0**	**0.0**
GTA				sP	pP	22 25 02.8	-0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GKN	**Gorkha**	**54.26**	**314**	eP	**P**	**22 24 55.3**	**-1.3**
	comp=Z,5.6nm,0.3s						
KOLN	**Koldanda**	**54.87**	**313**	eP	**P**	**22 24 59.8**	**-1.3**
	comp=Z,6.1nm,0.5s						
KLR	**Kul'dur**	**57.97**	**4**	P	**P**	**22 25 22.1**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=234,slow=8.7,SNR=2.1						
HIA	**Hailar**	**58.07**	**355**	P	**P**	**22 25 23.0**	**-0.3**
HIA				lAmb	lAmb	22 25 25.0	
	comp=Z,6.9nm,0.8s						
ULN	**Ulaanbaatar**	**58.87**	**345**	P	**P**	**22 25 28.9**	**-0.2**
ULN				lAmb	lAmb	22 25 30.8	
	comp=Z,5.6nm,1.1s						
SONM	**Songino Array**	**59.01**	**345**	P	**P**	**22 25 30.0**	**0.0**
	comp=Z,1.7nm,0.9s,baz=182,slow=5.2,SNR=10						
SONM	**Songino Array**	**59.01**	**345**	P	**P**	**22 25 29.8**	**-0.2**
PEA0B	**Petropavlovsk-**	**67.26**	**20**	P	**P**	**22 26 25.1**	**+0.6**
PETK	**Petropavlovsk-**	**67.26**	**20**	P	**P**	**22 26 25.5**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=171,slow=2.9,SNR=5.8						
PETK	**Petropavlovsk-**	**67.26**	**20**	P	**P**	**22 26 25.1**	**+0.6**
KDJ	**Kajisay**	**67.55**	**323**	P	**P**	**22 26 26.3**	**-0.5**
MK31	**Makanchi Array**	**67.67**	**329**	P	**P**	**22 26 26.4**	**-0.8**
MK31				lAmb	lAmb	22 26 27.2	
	comp=Z,1.8nm,0.7s						
MKAR	**Makanchi Array**	**67.67**	**329**	P	**P**	**22 26 26.6**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=126,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**67.67**	**329**	P	**P**	**22 26 26.7**	**-0.6**
BOOM	**Boomskoye usch**	**68.51**	**322**	P	**P**	**22 26 32.2**	**-0.6**
BOOM				lAmb	lAmb	22 26 33.7	
	comp=Z,4.0nm,1.1s						
KBL	**Kabul**	**69.01**	**312**	P	**P**	**22 26 35.1**	**-1.0**
AAK	**Ala-Archa**	**69.47**	**322**	P	**P**	**22 26 38.6**	**-0.2**
AAK				lAmb	lAmb	22 26 39.8	
	comp=Z,3.7nm,0.9s						
ARSB	**Arslanbob**	**69.69**	**320**	P	**P**	**22 26 40.3**	**+0.1**
ARSB				lAmb	lAmb	22 26 44.1	
	comp=Z,5.3nm,1.0s						
ZAA0	**Zalesovo Array**	**71.53**	**336**	P	**P**	**22 26 49.7**	**-1.2**
ZAA0				lAmb	lAmb	22 26 54.0	
	comp=Z,

NPS S Sn 22 18 09.8 +1.2
comp=N,4µm,0.6s
LAST Lasithi 1.13 276 P Pb 22 17 55.2 -0.5
LAST S Sb 22 18 09.3 -0.9
LAST AML AML 22 18 18.4
comp=N,5915µm,0.6s
LAST AML AML 22 18 21.9
comp=E,5294µm,0.7s
LAST Lasithi 1.13 276 P Pb 22 17 55.7 0.0
LAST S Sn 22 18 12.4 +1.4
HRKL Herakleio 1.45 281 PN Pn 22 18 01.2 +1.0
ARG Arkhangelos 1.56 42 P Pb 22 18 02.9 -0.1
ARG AML AML 22 18 33.8
comp=E,6109µm,0.4s
ARG AML AML 22 18 34.1
comp=N,5135µm,0.8s
ARG Arkhangelos 1.56 42 PN Pb 22 18 02.9 -0.1
ARG Arkhangelos 1.56 42 ⇑P Pn 22 18 02.6 +0.9
ARG S Sn 22 18 21.8 +0.3
NIS1 Nisyros Isl. 1.57 10 PN Pn 22 18 01.8 0.0
IDI Anoyia 1.62 279 P Pb 22 18 05.4 +1.2
comp=N,59nm,0.3s,baz=107,slow=16,SNR=359
IDI S Sg 22 18 28.2 +1.3
comp=N,32nm,0.3s,baz=143,slow=23,SNR=6.9
IDI LR LR 22 18 42.6
comp=N,361nm,19.7s,baz=80,slow=42
IDI Anoyia 1.62 279 P Pn 22 18 04.0 +1.5
IDI AML AML 22 18 38.1
comp=E,2726µm,0.5s
IDI AML AML 22 18 39.5
comp=N,4241µm,0.6s
IDI Anoyia 1.62 279 PN Pn 22 18 03.9 +1.3
IDI Anoyia 1.62 279 Pn Pb 22 18 04.3 +0.1
SIVA Sivas 1.67 269 P Pb 22 18 05.4 +0.4
KOSK Kos Island 1.70 4 PN Pn 22 18 03.5 0.0
SANT Santorini 1.73 320 P Pn 22 18 04.0 -0.1
SANT AML AML 22 18 35.9
comp=N,2468µm,0.7s
SANT AML AML 22 18 37.0
comp=E,5293µm,0.5s
SANT Santorini 1.73 320 P Pn 22 18 04.7 +0.6
SANT Santorini 1.73 320 PN Pn 22 18 03.6 -0.5
SANT Santorini 1.73 320 Pn Pn 22 18 04.4 +0.3
THR9 Santorini-Faro 1.78 317 P Pn 22 18 05.3 +0.6
THR3 Thira Island, 1.79 319 P Pn 22 18 05.4 +0.5
THT2 Imerovigli 1.80 320 P Pn 22 18 05.5 +0.5
THT2 Imerovigli 1.80 320 PN Pn 22 18 05.1 +0.1
DATC Datca-Mugla 1.82 21 PN Pn 22 18 05.6 +0.3
THR5 Thira Island, 1.83 319 P Pn 22 18 05.7 +0.4
BODT Bodrum 2.04 10 PN Pn 22 18 08.3 0.0
TURN Turunc 2.06 33 *i* P Pn 22 18 10.1 +1.6
TURN *i* S Sb 22 18 36.2 -0.7
TURN IAML 22 18 47.0
comp=N,383nm,0.6s
TURN IAML 22 18 48.0
comp=E,459nm,0.5s
TURN Turunc 2.06 33 PN Pn 22 18 09.4 +0.9
BDRM Kayabasi 2.06 13 *i* P Pn 22 18 08.8 +0.2
BDRM *i* P Pb 22 18 08.8 -0.9
VAM Vamos 2.20 280 P Pn 22 18 12.4 +2.0
GVDS Gavdos 2.27 266 PN Pn 22 18 13.4 +1.9
APE Apeiranthos 2.28 332 P Pn 22 18 11.7 +0.1
APE AML AML 22 18 43.2
comp=E,1699µm,0.6s
APE AML AML 22 18 45.4
comp=N,2598µm,0.7s
APE Apeiranthos 2.28 332 P Pn 22 18 11.8 +0.2
APE Apeiranthos 2.28 332 PN Pn 22 18 11.2 -0.4
APE Apeiranthos 2.28 332 ⇑P Pn 22 18 11.1 -0.4
GVD Gavdos 2.28 265 P Pb 22 18 14.5 -0.8
GVD Gavdos 2.28 265 PN Pn 22 18 13.2 +1.7
DALY Dalyan (Mula) 2.29 39 *i* P Pn 22 18 12.8 +1.1
DALY *i* S Sb 22 18 45.7 +2.2
DALY IAML 22 19 04.0
comp=N,424nm,1.0s
DALY Dalyan (Mula) 2.29 39 PN Pn 22 18 13.0 +1.3
YER Yerkesik 2.38 29 PN Pn 22 18 13.6 +0.6
IMMV Iera Moni Meta 2.38 281 P Pn 22 18 15.4 +2.4
IMMV Iera Moni Meta 2.38 281 PN Pn 22 18 14.1 +1.1
FETY Fethiye 2.41 48 PN Pn 22 18 14.3 +1.0
DDIM Aydin, Didim 2.42 7 *i* P Pn 22 18 16.0 +2.5
MULA Mugla, Merkez- 2.50 28 *i* P Pn 22 18 15.6 +0.9
AKAS Kas 2.54 62 *i* P Pn 22 18 15.2 0.0
AKAS Kas 2.54 62 PN Pn 22 18 15.5 +0.3
AKAS Kas 2.54 62 Pn Pn 22 18 16.0 +0.8
KNDR Palaiochora Ch 2.60 275 PN Pn 22 18 18.2 +2.3
GCAM G?zelcami? 2.66 7 *i* P Pn 22 18 18.4 +1.6
GCAM G?zelcami? 2.66 7 PN Pn 22 18 17.2 +0.4
AYDN Tasoluk 2.73 17 *i* P Pn 22 18 19.2 +1.3
CAEL Denizli, Camel 2.88 43 *i* P Pn 22 18 22.3 +2.4
DGB zmir 2.99 1 *i* P Pn 22 18 23.0 +1.7
ELL Elmali 3.00 55 PN Pn 22 18 23.4 +1.7
ELL Elmali 3.00 55 Pn 22 18 23.6 +2.0
AYDB Zeytinkoy-Aydi 3.01 16 PN Pn 22 18 22.2 +0.5
GOLH Golhisar 3.09 44 *i* P Pn 22 18 24.7 +1.9
AKUM Antalya-Kumluc 3.11 65 *i* P Pn 22 18 23.9 +0.9
AKUM *i* S Sn 22 19 00.4 +0.5
AKUM IAML 22 19 12.0
comp=E,77nm,0.6s
URLA Izmir 3.31 357 PN Pn 22 18 26.1 +0.4
KTHA Kythira Island 3.31 292 PN Pn 22 18 26.8 +1.1
CHOS Chios island 3.39 349 PN Pn 22 18 27.3 +0.4
KORT Korkueli 3.44 55 *i* P Pn 22 18 30.3 +2.6
KORT *i* S Sn 22 19 09.2 +1.0
KORT IAML 22 19 24.0
comp=N,140nm,0.7s
KORT Korkueli 3.44 55 PN Pn 22 18 29.6 +2.0
ANTB Antalya 3.59 58 PN Pn 22 18 32.1 +2.5
MANT Manisa 3.69 21 *i* P Pn 22 18 32.2 +1.0
MANT Manisa 3.69 21 Pn Pn 22 18 32.8 +1.5
KULA Kula-Manisa 3.75 22 PN Pn 22 18 32.7 +0.9
SLUM Salum 3.81 202 P Pn 22 18 34.0 +1.4
baz=201
SLUM S Sn 22 19 16.6 -0.5
baz=201
BASM Basmaki-Afyon 3.85 41 PN Pn 22 18 34.8 +1.5
AKHS Akhisar 3.90 11 *i* P Pn 22 18 34.2 +0.4
ZEDA zmir-Bergama 3.91 3 *i* P Pn 22 18 34.6 +0.7
OSC1 CSNet OBS 1 3.98 112 S Sn 22 19 23.6 +2.3
DKL Dikili 4.01 1 PN Pn 22 18 35.5 +0.2
USAK Uak-Merkez 4.05 25 *i* P Pn 22 18 37.0 +1.1
ISP Isparta 4.05 46 Pn Pn 22 18 37.2 +1.2
KZIL AFYON_Kizioren 4.15 39 *i* P Pn 22 18 39.0 +1.6
SIGR SIGRI 4.22 349 PN Pn 22 18 38.2 -0.1
KEPZ Antalya-Kepez 4.28 63 *i* P Pn 22 18 40.6 +1.5
STEP BALIKESIR_Sava 4.37 9 *i* P Pn 22 18 42.5 +2.2
BUHA Balikesir, Bur 4.44 2 *i* P Pn 22 18 44.0 +2.7
AKMS Akamas 4.50 89 P Pn 22 18 43.3 +1.2
AKMS AML AML 22 19 38.0
comp=N,1.0nm,0.3s
AKMS AML AML 22 19 38.2
comp=N,1.4nm,0.5s
ITM Ithomi 4.51 299 PN Pn 22 18 43.8 +1.5
ITM Ithomi 4.51 299 Pn Pn 22 18 43.6 +1.3
GAZI Gazipasa 4.61 74 *i* P Pn 22 18 43.8 +0.2
SEDI Konya, Seydise 4.63 57 *i* P Pn 22 18 46.5 +2.5
SEDI *i* S Sn 22 19 42.1 +4.5
SEDI IAML 22 19 47.0
comp=E,70nm,0.6s
SEDI IAML 22 19 56.0
comp=N,92nm,0.8s
BAYC CANAKKALE_Bayr 4.69 357 *i* P Pn 22 18 43.4 -1.3
NATA Nata 4.71 92 P Pn 22 18 46.1 +1.1
NATA S Sn 22 19 41.9 +2.5
ALFC Alefka 4.72 87 ⇑P Pn 22 18 45.7 +0.6
BALY Balya 4.72 7 *i* P Pn 22 18 44.5 -0.6
DURS Dursunbey 4.72 15 *i* P Pn 22 18 46.4 +1.2
DOGA KONYA_Doganhis 4.93 50 *i* P Pn 22 18 52.9 +4.7
SZAC Souni 4.97 92 P Pn 22 18 48.9 +0.3
ANDZ Kutahya, Merke 5.07 28 *i* P Pn 22 18 49.7 -0.3
CSS Mathiatis 5.32 89 Pn 22 18 54.2 +0.8
CSS Mathiatis 5.32 89 ⇑P Pn 22 18 54.1 +0.8
MVOU Mavrovouni 5.57 88 P Pn 22 18 57.9 +1.2
ALN Alexandroupoli 5.87 354 Pn Pn 22 19 01.4 +0.6
SWA2 5.91 192 P Pn 22 19 02.8 +1.3
baz=192
LIT Litokhoron 6.11 327 Pn 22 19 06.1 +1.8
MDUB Mudurnu 6.41 31 Pn Pn 22 19 09.3 +0.9
RYAN Fayoum 6.63 153 P Pn 22 19 13.1 +1.7
baz=154
RYAN AMP 22 20 00.0
baz=154
RYAN S Sn 22 20 26.0 -0.5
baz=154
BR231 Keskin MP Arra 6.71 43 Pn Pn 22 19 14.4 +1.8
ANTO Ankara 6.74 43 Pn 22 19 14.2 +1.2
GLL Jalalah 6.83 142 P Pn 22 19 14.3 +0.1
baz=143
VAY Valandovo 7.11 333 *i* P Pn 22 19 20.9 +3.0
BR131 Keskin Array S 7.14 47 Pn Pn 22 19 20.3 +1.8
BRTR Keskin Array B 7.14 47 P Pn 22 19 21.4 +2.9
comp=N,0.3nm,0.3s,baz=222,slow=15,SNR=4.9
BRTR S Sn 22 20 43.1 +3.8
comp=N,0.2nm,0.3s,baz=213,slow=24,SNR=1.9
BRTR Keskin Array B 7.14 47 Pn Pn 22 19 20.2 +1.8
MMAI Mount Meron Ar 7.39 104 P Pn 22 19 22.3 +0.4
comp=N,2.6nm,0.3s,baz=295,slow=12,SNR=18
MMAI S Sn 22 20 43.2 -2.1
comp=N,7.2nm,0.3s,baz=297,slow=11,SNR=11
STIP Stip 7.57 332 *i* P Pn 22 19 27.7 +3.4
OHR Ohrid 7.70 324 *i* P Pn 22 19 32.4 +6.3
VTS Vitosha 8.06 341 ⇓P Pn 22 19 33.3 +2.2
VTS Vitosha 8.06 341 Pn Pn 22 19 33.0 +1.9
GHAJ Ghor Haditha 8.21 115 Pn Pn 22 19 34.0 +1.0
SCTE Santa Cesarea 8.33 309 Pn Pn 22 19 33.4 -1.2
EIL Elat 8.70 126 P Pn 22 19 40.1 +0.3
comp=N,0.5nm,0.3s,baz=288,slow=3.3,SNR=9.7
EIL S Sn 22 21 11.7 -6.0
comp=N,3.5nm,0.3s,baz=337,slow=6.0,SNR=9.2
HKAT Jabal Katrina 8.91 135 P Pn 22 19 42.6 -0.2
baz=136
TIP Timpagrande 9.05 300 ⇑P Pn 22 19 43.6 -1.0
TIP Timpagrande 9.05 300 Pn Pn 22 19 43.6 -1.0
PDG Podgorica 9.45 323 ⇑P Pn 22 19 51.1 +1.0
PDG Podgorica 9.45 323 Pn 22 19 51.3 +1.3
TIRR Tirgusor 9.47 7 Pn Pn 22 19 51.4 +1.1
TLBR Topalu 9.52 5 ⇓P Pn 22 19 53.9 +2.9
HARR Harsova 9.66 5 ⇓P Pn 22 19 54.8 +1.9
TPGR Topolog 9.87 7 ⇓P Pn 22 19 57.7 +2.0
CFR Carcaliu 10.16 5 ⇓P Pn 22 20 00.5 +0.8
RAFF Raffo Rosso 10.33 286 Pn 22 20 02.0 -0.1
HERR Herculane 10.38 342 ⇓P Pn 22 20 03.5 +0.7
MLR Muntele Rosu 10.45 356 P Pn 22 20 06.2 +2.4
comp=N,0.1nm,0.3s,baz=162,slow=10,SNR=4.6
MLR LR LR 22 24 37.7
comp=N,93nm,19.2s,baz=176,slow=41
MLR Muntele Rosu 10.45 356 ⇑P Pn 22 20 06.6 +2.8
MLR Muntele Rosu 10.45 356 Pn Pn 22 20 04.8 +1.0
VOIP 10.46 353 ⇓P Pn 22 20 06.2 +2.3
DIVS Divibare 10.46 332 Pn Pn 22 20 05.5 +1.5
MDVR Moldovita 10.48 339 ⇑P Pn 22 20 03.9 -0.3
BISRR Bisoca 10.48 359 ⇑P Pn 22 20 08.3 +4.1
GZR Gura Zlata 10.78 344 ⇑P Pn 22 20 09.6 +1.2
PLOR Plostina 10.79 359 ⇑P Pn 22 20 16.3 +7.9
VRI Vrincioaia 10.80 360 ⇓P Pn 22 20 09.8 +1.3
DOPR Dopca 10.96 355 ⇑P Pn 22 20 13.4 +2.7
OZUR 11.06 356 ⇓P Pn 22 20 13.7 +1.7
CORL Corleone 11.27 289 Pn Pn 22 20 16.2 +1.2
BZS Buzias 11.28 341 ⇑P Pn 22 20 14.4 -0.6
INTR Introdacqua 12.28 308 Pn 22 20 29.7 +0.8
BURAR Bucovina Array 12.61 355 Pn Pn 22 20 35.7 +2.4
NRCA Norcia 13.20 310 Pn 22 20 41.2 -0.2
MURB Monte Urbino 13.80 311 Pn 22 20 53.7 +4.2
KEST Kesra 14.30 278 P Pn 22 20 57.6 +1.2
comp=N,0.1nm,0.3s,baz=69,slow=14,SNR=3.0
KEST S Sn 22 23 35.7 +1.0
comp=N,0.1nm,0.3s,baz=46,slow=22,SNR=1.4
KEST LR LR 22 28 09.0
comp=N,38nm,18.2s,baz=251,slow=44
KEST Kesra 14.30 278 Pn Pn 22 20 59.0 +2.6
CRVS Cervenica-Dubn 14.40 346 *e*PN Pn 22 20 52.8 -4.9
TRI Trieste 14.56 321 Pn Pn 22 21 00.7 +0.7
CASP Castiglione de 14.63 307 Pn Pn 22 21 01.6 +0.7
SOKA Soboth 14.63 326 *i* Pn P 22 21 05.3 -1.9
comp=N,2.0nm,0.6s
OSSC Osservatorio P 14.73 310 Pn 22 21 04.2 +2.0
GNI Garni 15.06 65 P P 22 21 11.5 -0.7
comp=N,0.2nm,0.3s,baz=269,slow=18,SNR=2.4
GNI LR LR 22 27 31.0
comp=N,22nm,18.4s,baz=278,slow=39
GNI Garni 15.06 65 Pn Pn 22 21 09.7 +2.8
GNI IAmb IAmb 22 21 30.2
comp=Z,12nm,1.4s
MODS Modra-Piesok 15.09 335 *e*PN Pn 22 21 04.8 -2.2
MODS Modra-Piesok 15.09 335 *e*P P 22 21 13.2 +1.0
KIV Kislovodsk 15.10 49 Pn 22 21 08.7 +1.5
KIV IAmb IAmb 22 21 23.2
comp=Z,9.3nm,1.2s
KVAR Kislovodsk Arr 15.10 49 LR LR 22 28 28.6
comp=Z,64nm,19.5s,baz=84,slow=43
KBZ Khabaz 15.11 50 P P 22 21 14.2 +1.8
comp=Z,0.1nm,0.3s,baz=258,slow=4.2,SNR=8.3
ZCCA Zocca 15.32 312 Pn Pn 22 21 11.4 +1.2
ZOU Zoufplan 15.54 322 Pn 22 21 13.6 +0.4
ZOU IAmb IAmb 22 21 16.9
comp=Z,6.9nm,1.1s
KBA Koelnbreinsper 15.72 324 *i* Pn Pn 22 21 16.0 +0.6
comp=Z,2.8nm,0.6s
AKASG Malin Array Be 15.73 6 P P 22 21 18.5 -0.9
comp=Z,1.5nm,0.3s,baz=194,slow=11,SNR=16
AKASG Malin Array Be 15.73 6 Pn Pn 22 21 16.6 +1.2
AKBB Malin Array Si 15.73 6 Pn Pn 22 21 17.6 +2.1
AKBB IAmb IAmb 22 21 19.1
comp=Z,6.1nm,0.9s
MOA Molln 15.86 328 *e*Pn Pn 22 21 19.8 +2.7
comp=Z,1.9nm,0.5s
ABTA Abfaltersbach 15.90 322 *i* Pn Pn 22 21 20.1 +2.3
comp=Z,3.7nm,0.6s
CTI Castel Tesino 15.91 318 Pn Pn 22 21 19.1 +1.2
CTI IAmb IAmb 22 21 21.4
comp=Z,16nm,1.5s
OJC Ojcow 16.01 343 Pn Pn 22 21 21.4 +2.5
VRAC Vranov 16.12 335 P Pn 22 21 22.6 +2.2
comp=Z,0.2nm,0.3s,baz=141,slow=8.8,SNR=5.7
VRAC LR LR 22 28 43.4
comp=Z,41nm,20.2s,baz=149,slow=42
MORC Moravsky Berou 16.22 338 Pn Pn 22 21 22.7 +1.0
CKRC Cesky Krumlov 16.59 330 *e*P Pn 22 21 28.4 +2.0
WTTA Wattenberg 16.70 322 *e*Pn P 22 21 30.4 +0.1
comp=Z,1.6nm,0.4s
KRLC Kraliky 16.72 337 *e*P P 22 21 30.4 +0.1
WATA Walderalm 16.77 322 *i* Pn P 22 21 31.1 +0.1
comp=Z,2.5nm,0.5s
GEC2 GERESS Array S 16.86 329 Pn Pn 22 21 30.9 +1.0
GERES GERESS Array B 16.86 329 P Pn 22 21 29.1 -0.8
comp=Z,0.3nm,0.3s,baz=137,slow=14,SNR=20
GERES GERESS Array B 16.86 329 Pn 22 21 29.9 -0.1
SQTA Sankt Quirin 16.89 321 *i* Pn Pn 22 21 31.8 +1.5
comp=Z,4.0nm,0.5s
FETA Feichten 17.01 320 *i* Pn Pn 22 21 33.0 +1.1
comp=Z,3.4nm,0.7s
MOTA Moosalm 17.02 321 *e*Pn Pn 22 21 32.2 +0.2
comp=Z,1.9nm,0.7s
DPC Dobruska-Polom 17.11 337 *e*P Pn 22 21 33.3 +0.4
KHC Kasperske Hory 17.13 329 *e*P P 22 21 35.2 +0.3
KHC Kasperske Hory 17.13 329 Pn Pn 22 21 33.3 0.0
KHC IAmb IAmb 22 21 38.0
comp=Z,5.4nm,0.6s
RETA Reutte 17.29 321 *e*Pn Pn 22 21 36.7 +1.4
comp=Z,2.1nm,0.4s
OSTC Ostas 17.32 337 *e*P Pn 22 21 36.1 +0.5
DAVOX Davos/Dischmat 17.33 318 P Pn 22 21 36.7 +0.8
comp=Z,0.1nm,0.3s,baz=122,slow=19,SNR=3.2
PBCC Pribram 17.40 331 *e*P Pn 22 21 37.2 +0.7
PRU Pruhonice 17.43 333 *e*P Pn 22 21 36.3 -0.6
TUE Stuetta 17.45 316 Pn Pn 22 21 38.2 +0.9
TUE IAmb IAmb 22 21 53.0
comp=Z,8.4nm,1.0s
DAVA Damuels 17.63 319 *e*Pn Pn 22 21 39.8 +0.1
comp=Z,4.6nm,0.5s
BNI Bardonecchia 18.34 309 Pn 22 21 47.1 -1.3
BRG Berggiesshubel 18.37 333 *e*P Pn 22 21 48.1 -0.4
BRG Amp 22 21 49.3
comp=Z,5.2nm,0.9s
SENIN Lac Senin/Sane 18.58 313 P P 22 21 49.8 -1.3
SENIN IAmb IAmb 22 21 56.2
comp=Z,6.5nm,0.6s
CLL Collm 19.07 333 *i* P P 22 21 55.9 -0.3
comp=Z,4.0nm,0.8s
CLL Collm 19.07 333 P P 22 21 55.0 -1.2
ECH Echery 19.66 318 P P 22 22 01.9 -0.9
ECH IAmb IAmb 22 22 14.8
comp=Z,9.3nm,1.4s
SSB Saint Sauveur 19.81 308 P P 22 22 03.6 -0.8
SSB IAmb IAmb 22 22 04.4
comp=Z,5.0nm,1.0s
RAYN Ar Rayn 19.88 120 P Pn 22 22 07.8 +0.8
PABE Paberze 20.55 355 P P 22 22 10.7 -1.5
TAM Tamanrasset 22.25 242 P P 22 22 31.0 -0.1
BELG Belogornoye 22.80 34 P P 22 22 37.0 +0.6
comp=Z,7.8nm,0.5s,baz=187,slow=7.1,SNR=4.8
ESBB Sonseca Array 24.85 290 P P 22 22 55.4 -1.0
ESDC Sonseca Array 24.85 290 P P 22 22 55.4 -1.0
comp=Z,2.7nm,0.7s,baz=83,slow=9.5,SNR=32
ESDC Sonseca Array 24.85 290 P P 22 22 55.4 -1.0
GEYT Alibeck 25.24 74 P P 22 22 59.8 -0.1
comp=Z,1.9nm,0.6s,baz=301,slow=10.0,SNR=4.3
GEYT Alibeck 25.24 74 P P 22 23 00.6 +0.7
GEYT IAmb IAmb 22 23 02.0
comp=Z,1.8nm,0.7s
MDT Midelt 26.14 274 P P 22 23 08.8 +0.6
comp=Z,1.9nm,0.9s,baz=141,slow=5.3,SNR=3.8
FINES FINESS Array B 26.41 359 P P 22 23 07.9 -2.3
comp=Z,3.3nm,0.8s,baz=161,slow=14,SNR=5.8
FINES FINESS Array B 26.41 359 P P 22 23 09.6 -0.6
HFS Hagfors 26.51 345 P P 22 23 08.3 -2.8
comp=Z,2.2nm,0.8s,baz=143,slow=12,SNR=2.4
HFS LR LR 22 35 12.9
comp=Z,96nm,19.2s,baz=166,slow=40
PBRG Braganca 27.04 295 *e*P P 22 23 15.4 -0.8
MVO Moncorvo 27.23 293 *e*P P 22 23 17.2 -0.7
comp=Z,26nm,2.0s
PBAR Barrancos 27.29 287 *e*P P 22 23 17.9 -0.5
AKTO Aktyubinsk 27.32 46 P P 22 23 17.4 -1.1
comp=Z,1.0nm,0.6s,baz=239,slow=12,SNR=4.1
PMRV Marv??o 27.50 289 *e*P P 22 23 21.5 +1.2
MTE Manteigas 27.61 291 *e*P P 22 23 22.1 +0.8
MTE Manteigas 27.61 291 P P 22 23 21.8 +0.5
PVRL Vila Real 27.75 293 *e*P P 22 23 23.9 +1.4
NOA NORSAR Array B 27.87 344 P P 22 23 20.7 -2.6
comp=Z,0.3nm,0.5s,baz=109,slow=9.3,SNR=1.9
PVIS Viseu 27.88 292 *e*P P 22 23 23.7 +0.1
PVAQ Vaqueiros 27.89 285 *e*P P 22 23 26.5 +2.8
ABKAR Akbulak array 28.08 49 P P 22 23 27.0 +1.7
ABKAR Akbulak array 28.08 49 P P 22 23 26.0 +0.7
ABKAR IAmb IAmb 22 23 40.8
comp=Z,1.2nm,0.8s
PMTG Montargil 28.17 289 *e*P P 22 23 26.5 +0.3
EKA Eskdalemuir Ar 28.93 324 P P 22 23 30.8 -2.0
comp=Z,2.2nm,0.8s,baz=121,slow=11,SNR=9.5
TOA0 Torodi Ar. Sit 31.50 232 P P 22 23 56.2 +0.3
TORD Torodi Ar. Bea 31.50 232 P P 22 23 56.0 +0.1
comp=Z,2.9nm,0.8s,baz=35,slow=8.7,SNR=22
TORD Torodi Ar. Bea 31.50 232 P P 22 23 56.1 +0.3
TORD IAmb IAmb 22 24 00.1
comp=Z,1.6nm,0.9s
KK31 Karatay Array 34.52 63 P P 22 24 22.8 +0.8
KK31 IAmb IAmb 22 24 24.3
comp=Z,2.1nm,0.9s
KKAR Karatay Array 34.52 63 P P 22 24 23.0 +0.9
ARCES ARCESS Array B 34.54 359 P P 22 24 19.8 -2.2
comp=Z,2.5nm,0.9s,baz=180,slow=4.9,SNR=4.6
BRVK Borovoye 35.37 46 P P 22 24 29.7 +0.4
BRVK IAmb IAmb 22 24 52.8
comp=Z,2.3nm,1.1s
BVAR Borovoye Array 35.42 46 P P 22 24 29.9 +0.2
comp=Z,0.9nm,0.8s,baz=158,slow=4.3,SNR=5.1
ARSB Arslanbob 36.46 66 P P 22 24 40.2 +1.3
KMBO Kilima Mbogo 37.29 163 LR LR 22 42 26.3
comp=Z,42nm,19.6s,baz=300,slow=40
AAK Ala-Archa 37.46 64 P P 22 24 49.1 +1.6
AAK IAmb IAmb 22 24 50.2
comp=Z,3.4nm,0.7s
NIL Nilore 38.07 78 P P 22 24 53.0 +0.4
NIL IAmb IAmb 22 25 02.2
comp=Z,6.1nm,1.1s
BOOM Boomskoye usch 38.54 64 P P 22 24 57.8 +1.2
BOOM IAmb IAmb 22 25 19.5
comp=Z,4.6nm,1.3s
KDJ Kajisay 39.49 64 P P 22 25 05.5 +1.0
KDJ IAmb IAmb 22 25 14.5
comp=Z,3.3nm,0.8s
MAKZ Makanchi 42.46 57 P P 22 25 29.4 +0.6
MAKZ IAmb IAmb 22 25 30.6
comp=Z,2.7nm,0.6s
MK31 Makanchi Array 42.68 57 P P 22 25 31.0 +0.5
MKAR Makanchi Array 42.68 57 P P 22 25 31.3 +0.8
comp=Z,6.5nm,0.6s,baz=279,slow=6.8,SNR=104
SPITS Spitsbergen Ar 43.46 357 P P 22 25 35.2 -1.2
comp=Z,8.6nm,0.9s,baz=161,slow=18,SNR=1.8
ZAA0 Zalesovo Array 44.08 46 P P 22 25 41.8 +0.1
ZALV Zalesovo Beam 44.08 46 P P 22 25 41.3 -0.4
comp=Z,5.6nm,0.6s,baz=270,slow=8.4,SNR=29
ZALV Zalesovo Beam 44.08 46 P P 22 25 41.6 0.0
NRIK Noril'sk 47.39 25 P P 22 26 07.0 -0.6
comp=Z,2.5nm,0.5s,baz=249,slow=8.6,SNR=2.3
SONM Songino Array 58.48 51 P P 22 27 31.1 +1.1
comp=Z,1.7nm,0.7s,baz=288,slow=8.1,SNR=7.2
SONM Songino Array 58.48 51 P P 22 27 31.1 +1.1
SONM IAmb IAmb 22 27 31.9
comp=Z,1.4nm,0.8s
ULN Ulaanbaatar 58.89 51 P P 22 27 33.8 +1.0
CMAR Chiang Mai Arr 65.21 84 P P 22 28 15.5 0.0
comp=Z,0.5nm,0.3s,baz=300,slow=7.2,SNR=1.6
KLR Kul'dur 72.94 42 P P 22 29 02.4 -0.7
comp=Z,0.5nm,0.3s,baz=301,slow=5.7,SNR=3.7
USRK Ussuriysk Ar. 75.93 46 P P 22 29 20.4 -0.1
comp=Z,2.7nm,0.7s,baz=288,slow=5.3,SNR=10
KSRS Korea Array 77.24 53 P P 22 29 28.9 +0.9
comp=Z,1.4nm,0.6s,baz=298,slow=4.8,SNR=6.8
YKA Yellowknife Ar 77.97 343 P P 22 29 29.6 -2.0
comp=Z,0.9nm,0.8s,baz=39,slow=5.2,SNR=11
ILAR Eielson Array 80.38 357 P P 22 29 43.3 -1.5
comp=Z,0.4nm,0.6s,baz=344,slow=3.6,SNR=6.2
ULM Lac du Bonnet 81.16 327 P P 22 29 47.0 -2.3
comp=Z,1.9nm,0.6s,baz=44,slow=4.4,SNR=3.4
MJAR Matsushiro Arr 84.36 49 P P 22 30 06.5 +0.3
comp=Z,1.1nm,0.6s,baz=328,slow=3.5,SNR=2.2
PDAR Pinedale Array 92.91 329 P P 22 30 45.6 -1.6
comp=Z,0.3nm,0.6s,baz=66,slow=5.0,SNR=3.4

IDC 22 22:27:49.2±1.7, 5°65.5S×145°91.6E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.5/39, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=53.6km s-min=28.4km az=119.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.93**	**162**	Pn	Pn	Pn	22 28 50.7	-0.1
	2.4nm,0.3s,baz=300,slow=8.9,SNR=1.8							
PMG					Sn	Sn	22 29 25.3	-12
	6.0nm,0.3s,baz=177,slow=12,SNR=7.0							
WRA	**Warramunga Arr**	**18.12**	**217**	P		Pn	22 32 01.1	-1.4
	0.1nm,0.3s,baz=48,slow=12,SNR=6.6							
ASAR	**Alice Springs**	**21.32**	**212**	P		P	22 32 39.3	+1.5
	0.3nm,0.3s,baz=40,slow=9.6,SNR=2.7							
FITZ	**Fitzroy Crossi**	**23.34**	**236**	P		P	22 32 59.1	-0.2
	2.5nm,0.9s,baz=60,slow=11,SNR=1.8							
ILAR	**Eielson Array**	**85.59**	**23**	P		P	22 40 29.1	-0.1
	0.4nm,0.6s,baz=262,slow=5.4,SNR=6.2							

*IDC **22** 22:30:04.5±0.8, 35°11N×26°78E, h0km, mb3.8/11, mb1 3.9/16, mb1mx3.7/49, mbtmp3.8/16, ML3.3/5, MS2.7/1, Ms1 2.7/1, ms1mx2.0/55, Error ellipse: s-maj=18.7km s-min=17.3km az=170.0*

*ISK **22** 22:30:06.8, 35°17N×26°83E, h10km, ML3.5/19*

*ATH **22** 22:30:07.3, 35°09N×26°82E, h9km±3km, ML3.4/4, Error ellipse: s-maj=7.3km s-min=1.2km az=337.0*

*DDA **22** 22:30:07.6, 35°15N×26°73E, h6km±4km, MW3.9*

*THE **22** 22:30:08.1, 35°14N×26°81E, h0km±1km, ML3.3/5, Error ellipse: s-maj=6.7km s-min=1.1km az=148.0*

ISC 22 22:30:06.1±1.2, 35°05N±0°04×26°88E±0°02, h12km±8km, n103, σ1$40/124, mb3.9/11, Crete

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.55**	**277**	P		Pg	22 30 16.7	-0.2
ZKR				S		Sb	22 30 24.9	-0.7
ZKR				AML	AML		22 30 26.3	
	comp=N,7241µm,0.6s							
ZKR				AML	AML		22 30 30.6	
	comp=E,10236µm,0.6s							
ZKR	**Zakros**	**0.55**	**277**	P		Pg	22 30 16.9	+0.1
ZKR				S		Sb	22 30 25.1	-0.5
	comp=E,4µm,0.6s							
ZKR	**Zakros**	**0.55**	**277**	PG		Pg	22 30 16.7	-0.2
ZKR				SG		Sb	22 30 24.7	-0.9
KARP	**Karpathos**	**0.55**	**25**	P		Pg	22 30 16.9	-0.1

KARP				S	**Sb**	22 30 24.9	-0.9
KARP				AML	AML	22 30 27.8	
	comp=N,14267µm,0.4s						
KARP				AML	AML	22 30 28.0	
	comp=E,15888µm,0.4s						
KARP	**Karpathos**	**0.55**	**25**	P	**Pg**	22 30 17.0	+0.1
KARP				S	**Sb**	22 30 26.3	+0.6
KARP	**Karpathos**	**0.55**	**25**	PG	**Pg**	22 30 16.3	-0.6
KARP				SG	**Sg**	22 30 23.8	-0.5
STIA	**Sitia Lasithi**	**0.66**	**284**	P	**Pg**	22 30 18.8	-0.2
FRMA	**Ierapetra Chan**	**0.94**	**268**	P	**Pg**	22 30 22.2	-2.1
FRMA				S	**Sb**	22 30 36.8	-0.1
	comp=E,1µm,0.6s						
NPS	**Neapolis**	**1.06**	**282**	P	**Pg**	22 30 26.3	-0.2
NPS				S	**Sb**	22 30 40.8	+0.5
NPS	**Neapolis**	**1.06**	**282**	P	**Pb**	22 30 26.9	+0.4
NPS				S	**Sn**	22 30 42.2	+0.6
	comp=E,3µm,0.6s						
LAST	**Lasithi**	**1.15**	**276**	P	**Pg**	22 30 27.9	-0.5
LAST				S	**Sg**	22 30 41.9	-1.5
LAST				AML	AML	22 30 50.7	
	comp=E,2841µm,0.6s						
LAST				AML	AML	22 30 53.3	
	comp=N,1913µm,0.6s						
LAST	**Lasithi**	**1.15**	**276**	P	**Pg**	22 30 28.3	-0.1
LAST				S	**Sn**	22 30 45.0	+1.0
	comp=N,1µm,0.6s						
HRKL	**Herakleio**	**1.48**	**281**	P	**Pg**	22 30 35.0	+0.4
HRKL	**Herakleio**	**1.48**	**281**	PN	**Pb**	22 30 33.8	+0.2
KSTL	**Kastelli Herak**	**1.50**	**280**	P	**Pn**	22 30 31.6	-1.4
ARG	**Arkhangelos**	**1.55**	**41**	P	**Pb**	22 30 35.9	+1.1
ARG				S	**Sg**	22 30 56.3	+0.3
ARG				AML	AML	22 31 06.0	
	comp=E,2128µm,0.9s						
ARG				AML	AML	22 31 09.4	
	comp=N,1617µm,0.9s						
ARG	**Arkhangelos**	**1.55**	**41**	P	**Pn**	22 30 35.2	+1.6
ARG	**Arkhangelos**	**1.55**	**41**	PN	**Pn**	22 30 35.3	+1.6
IDI	**Anoyia**	**1.65**	**279**	Pg	**Pg**	22 30 37.6	-0.2
	comp=N,23nm,0.3s,baz=104,slow=15,SNR=69						
IDI				Lg	Lg	22 30 59.6	
	comp=N,24nm,0.3s,baz=187,slow=18,SNR=6.8						
IDI	**Anoyia**	**1.65**	**279**	P	**Pb**	22 30 37.0	+0.5
IDI				S	**Sb**	22 30 57.4	+0.1
IDI	**Anoyia**	**1.65**	**279**	P	**Pb**	22 30 37.0	+0.5
IDI	**Anoyia**	**1.65**	**279**	PN	**Pn**	22 30 36.2	+1.2
SIVA	**Sivas**	**1.70**	**270**	P	**Pn**	22 30 37.2	+1.3
SIVA				S	**Sn**	22 30 58.1	+0.8
SIVA	**Sivas**	**1.70**	**270**	P	**Pb**	22 30 37.7	+0.4
KOSK	**Kos Island**	**1.71**	**3**	P	**Pn**	22 30 36.3	+0.6
KOSK				S	**Sg**	22 30 58.9	-2.1
	comp=N,882nm,0.6s						
KOSK	**Kos Island**	**1.71**	**3**	PN	**Pn**	22 30 35.6	-0.1
SANT	**Santorini**	**1.76**	**319**	PN	**Pn**	22 30 36.6	+0.1
THR8	**Santorini-Mono**	**1.77**	**320**	P	**Pn**	22 30 36.5	-0.2
THR6	**Thira Island,**	**1.78**	**318**	P	**Pn**	22 30 37.4	+0.6
SNT1	**Gialos, Santor**	**1.81**	**320**	P	**Pn**	22 30 37.7	+0.6
THR7	**Fira-Santorini**	**1.81**	**320**	P	**Pn**	22 30 36.6	-0.6
SNT5	**Nea Kammeni, S**	**1.81**	**319**	P	**Pn**	22 30 37.9	+0.6
THT2	**Imerovigli**	**1.82**	**320**	P	**Pn**	22 30 38.1	+0.7
THT2	**Imerovigli**	**1.82**	**320**	PN	**Pn**	22 30 37.5	+0.1
THR5	**Thira Island,**	**1.85**	**318**	P	**Pn**	22 30 38.8	+1.0
BODT	**Bodrum**	**2.04**	**10**	PN	**Pb**	22 30 40.1	-0.3
TURN	**Turunc**	**2.05**	**32**	*i* P	**Pb**	22 30 44.4	+1.0
TURN				*i* S	**Sn**	22 31 08.0	+2.0
TURN	**Turunc**	**2.05**	**32**	PN	**Pn**	22 30 41.1	+0.6
BDRM	**Kayabasi**	**2.07**	**13**	*i* P	**Pn**	22 30 40.9	+0.2
VAM	**Vamos**	**2.22**	**280**	P	**Pb**	22 30 45.4	-0.9
VAM	**Vamos**	**2.22**	**280**	P	**Pn**	22 30 44.8	+1.9
DALY	**Dalyan (Mula)**	**2.28**	**39**	*i* P	**Pb**	22 30 47.3	+0.1
DALY				*i* S	**Sg**	22 31 19.5	+0.1
DALY	**Dalyan (Mula)**	**2.28**	**39**	PN	**Pn**	22 30 45.1	+1.4
APE	**Apeiranthos**	**2.30**	**332**	PN	**Pn**	22 30 43.9	0.0
GVDS	**Gavdos**	**2.30**	**266**	PN	**Pn**	22 30 45.9	+2.0
GVD	**Gavdhos**	**2.30**	**266**	PN	**Pn**	22 30 45.5	+1.5
YER	**Yerkesik**	**2.38**	**28**	PN	**Pn**	22 30 45.9	+0.9
FETY	**Fethiye**	**2.39**	**48**	PN	**Pn**	22 30 46.2	+1.0
IMMV	**Iera Moni Meta**	**2.41**	**281**	P	**Pb**	22 30 48.0	-1.4
IMMV	**Iera Moni Meta**	**2.41**	**281**	P	**Pn**	22 30 47.7	+2.3
IMMV	**Iera Moni Meta**	**2.41**	**281**	PN	**Pn**	22 30 46.9	+1.5
DDIM	**Aydin, Didim**	**2.42**	**7**	*i* P	**Pn**	22 30 47.3	+1.7
MULA	**Mugla, Merkez-**	**2.50**	**27**	*i* P	**Pn**	22 30 47.3	+0.6
AKAS	**Kas**	**2.52**	**61**	*i* P	**Pn**	22 30 49.5	+2.4
AKAS	**Kas**	**2.52**	**61**	PN	**Pn**	22 30 48.5	+1.4
KNDR	**Palaiochora Ch**	**2.62**	**275**	P	**Pn**	22 30 50.7	+2.3
KNDR	**Palaiochora Ch**	**2.62**	**275**	PN	**Pn**	22 30 50.1	+1.7
GCAM	**G?zelcaml?**	**2.67**	**6**	PN	**Pn**	22 30 49.3	+0.4
AYDN	**Tasoluk**	**2.73**	**17**	*i* P	**Pn**	22 30 50.5	+0.6
CAEL	**Denizli, Camel**	**2.87**	**43**	*i* P	**Pn**	22 30 54.8	+3.0
ELL	**Elmali**	**2.99**	**54**	PN	**Pn**	22 30 55.1	+1.6
AYDB	**Zeytinkoy-Aydi**	**3.01**	**15**	PN	**Pn**	22 30 54.2	+0.4
GOLH	**Golhisar**	**3.08**	**44**	*i* P	**Pn**	22 30 56.6	+1.8
AKUM	**Antalya-Kumluc**	**3.10**	**65**	*i* P	**Pn**	22 30 57.3	+2.5
URLA	**Izmir**	**3.32**	**356**	*i* P	**Pn**	22 30 58.0	+0.1
URLA	**Izmir**	**3.32**	**356**	PN	**Pn**	22 30 58.3	+0.4
KTHA	**Kythira Island**	**3.33**	**292**	P	**Pn**	22 30 59.6	+1.4
KTHA	**Kythira Island**	**3.33**	**292**	PN	**Pn**	22 30 59.7	+1.5
KTHR	**Kythira**	**3.38**	**292**	P	**Pn**	22 31 00.2	+1.4
CHOS	**Chios Island**	**3.40**	**349**	PN	**Pn**	22 30 59.2	+0.1
KORT	**Korkueli**	**3.42**	**54**	*i* P	**Pn**	22 31 03.0	+3.5
KORT				*i* S	**Sb**	22 31 48.2	-0.3
KORT				IAML		22 32 10.0	
	comp=N,43nm,1.2s						
KORT				IAML		22 32 19.0	
	comp=E,61nm,1.3s						
KORT	**Korkueli**	**3.42**	**54**	PN	**Pn**	22 31 01.3	+1.8
VLI	**Veliai**	**3.61**	**299**	P	**Pn**	22 31 03.0	+1.1
MANT	**Manisa**	**3.69**	**21**	*i* P	**Pn**	22 31 05.1	+1.8
KULA	**Kula-Manisa**	**3.75**	**22**	PN	**Pn**	22 31 05.2	+1.3
ZEDA	**zmir-Bergama**	**3.92**	**2**	*i* P	**Pn**	22 31 08.3	+2.2
ZEDA				*i* S	**Sn**	22 31 48.9	-3.2
ZEDA				IAML		22 32 24.0	
	comp=E,17nm,1.4s						
USAK	**Uak-Merkez**	**4.04**	**24**	*i* P	**Pn**	22 31 08.7	+0.7
KEPZ	**Antalya-Kepez**	**4.26**	**63**	*i* P	**Pn**	22 31 11.6	+0.7
KEPZ				*i* S	**Sn**	22 31 57.8	-2.7
LAKA	**Lakka**	**5.07**	**310**	P	**Pn**	22 31 25.3	+3.3
ANX	**Ano Chora**	**5.33**	**313**	P	**Pn**	22 31 28.9	+3.3
BRTR	**Keskin Array B**	**7.12**	**47**	Pg	**Pb**	22 32 08.1	-1.8
	comp=E,0.2nm,0.3s,baz=249,slow=13,SNR=1.6						
MMAI	**Mount Meron Ar**	**7.36**	**104**	Pn	**Pn**	22 31 54.2	+0.7
	comp=E,0.9nm,0.3s,baz=284,slow=11,SNR=10						
MMAI				Sn	**Sn**	22 33 13.5	-3.6
	comp=E,0.6nm,0.3s,baz=308,slow=29,SNR=1.1						
EIL	**Elat**	**8.68**	**126**	Pn	**Pn**	22 32 12.3	+0.7
	comp=E,0.4nm,0.3s,baz=326,slow=4.5,SNR=6.1						
EIL				Sn	**Sn**	22 33 45.1	-4.3
	comp=E,1.0nm,0.3s,baz=338,slow=4.4,SNR=7.4						
MLR	**Muntele Rosu**	**10.46**	**356**	Pn	**Pn**	22 32 37.5	+1.5
	comp=E,0.0nm,0.3s,baz=235,slow=18,SNR=1.9						
KBZ	**Khabaz**	**15.10**	**50**	Pn	**Pn**	22 33 41.1	+1.8
	comp=E,0.1nm,0.3s,baz=184,slow=13,SNR=2.3						
AKASG	**Malin Array Be**	**15.74**	**6**	Pn	**Pn**	22 33 49.0	+1.4
	comp=E,0.9nm,0.3s,baz=194,slow=11,SNR=5.8						
CKRC	**Cesky Krumlov**	**16.61**	**330**	*eP*	**P**	22 34 01.1	-0.2
KRLC	**Kraliky**	**16.74**	**337**	*eP*	**P**	22 34 02.6	-0.1
GERES	**GERESS Array B**	**16.88**	**329**	Pn	**Pn**	22 34 03.1	+0.8
	comp=E,0.1nm,0.3s,baz=141,slow=11,SNR=7.2						
DPC	**Dobruska-Polom**	**17.12**	**337**	*eP*	**Pn**	22 34 06.5	+1.2
KHC	**Kasperske Hory**	**17.15**	**329**	*eP*	**Pn**	22 34 06.7	+1.0
DAVOX	**Davos/Dischmat**	**17.35**	**318**	LR	LR	22 43 21.9	
	comp=E,28nm,19.9s,baz=98,slow=46						
ESDC	**Sonseca Array**	**24.88**	**290**	P	**P**	22 35 27.8	-1.0
	comp=E,0.8nm,0.6s,baz=83,slow=9.5,SNR=9.6						
FINES	**FINESS Array B**	**26.42**	**359**	P	**P**	22 35 43.0	+0.6
	comp=E,1.5nm,0.9s,baz=239,slow=15,SNR=3.7						
EKA	**Eskdalemuir Ar**	**28.96**	**324**	P	**P**	22 36 03.9	-1.4
	comp=E,0.8nm,0.7s,baz=123,slow=11,SNR=3.7						
TORD	**Torodi Ar. Bea**	**31.52**	**232**	P	**P**	22 36 28.4	+0.1
	comp=E,0.8nm,0.5s,baz=34,slow=8.8,SNR=11						
ARCES	**ARCESS Array B**	**34.55**	**359**	P	**P**	22 36 52.8	-1.5
	comp=E,3.0nm,1.1s,baz=163,slow=6.6,SNR=1.2						
MKAR	**Makanchi Array**	**42.66**	**57**	P	**P**	22 38 03.5	+0.8
	comp=E,1.9nm,0.6s,baz=283,slow=6.4,SNR=25						
ZALV	**Zalesovo Beam**	**44.07**	**46**	P	**P**	22 38 13.5	-0.3
	comp=E,1.6nm,0.5s,baz=267,slow=8.2,SNR=7.8						
SONM	**Songino Array**	**58.47**	**51**	P	**P**	22 40 03.2	+1.1
	comp=E,0.3nm,0.4s,baz=283,slow=6.6,SNR=3.7						
BOSA	**Boshof**	**63.34**	**182**	P	**P**	22 40 36.3	+1.1
	comp=E,1.8nm,0.9s,baz=23,slow=13,SNR=1.4						
KSRS	**Korea Array**	**77.23**	**53**	P	**P**	22 42 00.7	+0.5
	comp=E,0.5nm,0.5s,baz=320,slow=2.1,SNR=1.9						
YKA	**Yellowknife Ar**	**77.98**	**343**	P	**P**	22 42 02.3	-1.7

comp=E,0.3nm,0.8s,baz=38,slow=5.6,SNR=4.3

WEL ***22*** *22:36:00,41.73S×174.31E,h19km,ML4.4,Mw4.0, Moment Tensor Solution. s4 Moment tensor: Scale 10¹⁵ Nm; Mrr0.59; Mθθ0.34; Mϕϕ-0.93; Mrθ-0.24; Mθϕ-0.91; Mϕr0.14; Fault plane solution: M₀1.21000×10¹⁵ NP1: ϕs247.00000°,δ66.00000°,λ155.00000°. NP2: ϕs348.00000°,δ67.00000°,λ26.00000°. Principal axes: T -140.4300, Plg34.0000°, Azm208.0000°; N 100.6200, Plg56.0000°, Azm26.0000°; P 39.8100, Plg1.0000°, Azm117.0000°;*

IDC ***22*** *22:36:39.2±1.7, 41.63S×174.19E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.7/30, mbtmp3.7/4, ML3.5/2, MS3.7/2, Ms1 3.7/2, ms1mx3.0/35 Error ellipse: s-maj=43.9km s-min=30.9km az=139.0*

NEIC ***22*** *22:36:41.9±1.2, 41.73S±0.04×174.32E±0.04, h22km±3km, mb4.2/5, Error ellipse: s-maj=5.6km s-min=3.7km az=152.0*

WEL ***22*** *22:36:42.2, 41.6S±0.8×174.3E±0.9, h18km±2km, M4.2/14, ML4.5/14, MLv4.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=117.7*

NOU ***22*** *22:36:43.2, 41.86S×174.46E, h58km, MLv4.3, Cook Strait, New Zealand*

ISC 22 22:36:42.2±0.8, 41.72S±0.03×174.31E±0.02, h23km±5km, n166,σ1§24/179, mb4.2/5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CMWZ	**Cape Campbell**	**0.08**	**244**			**Pb**	**22 36 46.0**	**-0.5**
CMWZ				Sg		**Sb**	**22 36 49.4**	**+0.1**
CMWZ	**Cape Campbell**	**0.08**	**244**	P		**Pb**	**22 36 46.1**	**-0.4**
CMWZ				S		**Sb**	**22 36 49.8**	**+0.5**
BSWZ	**Blackbirch Sta**	**0.32**	**270**			**Pb**	**22 36 48.9**	**-0.5**
BSWZ				Sg		**Sb**	**22 36 54.0**	**-0.3**
BSWZ	**Blackbirch Sta**	**0.32**	**270**	P		**Pb**	**22 36 48.9**	**-0.5**
BSWZ				S		**Sb**	**22 36 54.1**	**-0.3**
TUWZ	**Tuamarina**	**0.40**	**316**			**Pb**	**22 36 49.4**	**-1.1**
TUWZ				Sg		**Sb**	**22 36 54.7**	**-1.6**
TUWZ	**Tuamarina**	**0.40**	**316**	P		**Pb**	**22 36 49.5**	**-1.1**
TUWZ				S		**Sb**	**22 36 54.5**	**-1.8**
SNZO	**South Karori**	**0.50**	**37**			**Pb**	**22 36 52.0**	**-0.3**
SNZO				Sg		**Sb**	**22 36 59.1**	**-0.1**
TCW	**Tory Channel**	**0.51**	**357**	P		**Pb**	**22 36 51.3**	**-1.1**
TCW				S		**Sb**	**22 36 57.5**	**-1.8**
BHW	**Baring Head**	**0.52**	**54**			**Pb**	**22 36 52.7**	**0.0**
BHW	**Baring Head**	**0.52**	**54**	P		**Pb**	**22 36 52.8**	**+0.1**
WEL	**Wellington**	**0.55**	**39**	P		**Pb**	**22 36 53.0**	**-0.2**
WEL				S		**Sb**	**22 37 00.2**	**-0.4**
PLWZ	**Palliser**	**0.72**	**79**			**Pn**	**22 36 57.4**	**+0.4**
PLWZ	**Palliser**	**0.72**	**79**	P		**Pn**	**22 36 57.4**	**+0.4**
MSWZ	**Moikau Station**	**0.77**	**67**			**Pn**	**22 36 57.6**	**+0.1**
MSWZ	**Moikau Station**	**0.77**	**67**	P		**Pn**	**22 36 57.7**	**+0.1**
MSWZ				S		**Sn**	**22 37 10.3**	**+1.9**
CAW	**Cannon Point**	**0.83**	**44**	P		**Pb**	**22 36 57.8**	**-0.2**
NNZ	**Nelson**	**0.86**	**305**			**Pb**	**22 36 57.5**	**-0.8**
NNZ	**Nelson**	**0.86**	**305**	P		**Pb**	**22 36 57.6**	**-0.8**
KHZ	**Kahutara**	**0.90**	**219**			**Pn**	**22 37 00.2**	**+0.8**
KHZ	**Kahutara**	**0.90**	**219**	P		**Pn**	**22 37 00.5**	**+1.0**
KHZ				S		**Sn**	**22 37 13.3**	**+1.5**
PAWZ	**Paruwai Farm**	**0.90**	**69**	P		**Pn**	**22 36 59.8**	**+0.3**
PAWZ				S		**Sn**	**22 37 14.0**	**+2.1**
DUWZ	**D'Urville Isla**	**0.96**	**342**	P		**Pb**	**22 36 59.1**	**-1.0**
DUWZ				S		**Sb**	**22 37 11.3**	**-1.0**
KIW	**Kapiti Island**	**0.97**	**28**	P		**Pb**	**22 36 59.8**	**-0.5**
THZ	**Tophouse**	**1.05**	**267**			**Pb**	**22 37 01.6**	**-0.1**
THZ	**Tophouse**	**1.05**	**267**	P		**Pb**	**22 37 01.6**	**-0.1**
MTW	**Mount Morrison**	**1.06**	**59**	P		**Pb**	**22 37 01.8**	**0.0**
TRWZ	**Traveller**	**1.08**	**73**	P		**Pb**	**22 37 02.1**	**-0.1**
OGWZ	**Otaki Gorge**	**1.11**	**36**	P		**Pb**	**22 37 02.3**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.22**	**48**	P		**Pb**	**22 37 04.1**	**-0.6**
TMWZ	**Te Maipa**	**1.34**	**63**	P		**Pn**	**22 37 05.3**	**-0.1**
MRZ	**Mangatainoka R**	**1.43**	**43**	P		**Pn**	**22 37 07.0**	**+0.4**
TIWZ	**Tintock**	**1.52**	**52**	P		**Pn**	**22 37 07.9**	**0.0**
GVZ	**Greta Valley S**	**1.57**	**217**	P		**Pb**	**22 37 09.3**	**-1.2**
QRZ	**Quartz Range**	**1.61**	**303**			**Pb**	**22 37 10.3**	**-0.8**
QRZ	**Quartz Range**	**1.61**	**303**	P		**Pb**	**22 37 10.3**	**-0.8**
CPWZ	**Castlepoint**	**1.64**	**61**	P		**Pn**	**22 37 10.0**	**+0.5**
OHWZ	**Ohakea**	**1.69**	**27**	P		**Pb**	**22 37 12.0**	**-0.6**
PRWZ	**Pori Road**	**1.71**	**48**	P		**Pn**	**22 37 10.6**	**+0.1**
POWZ	**Post Office Ro**	**1.72**	**40**	P		**Pn**	**22 37 10.9**	**+0.2**
BFZ	**Birch Farm**	**1.79**	**55**			**Pn**	**22 37 11.2**	**-0.5**
BFZ	**Birch Farm**	**1.79**	**55**	P		**Pn**	**22 37 10.9**	**-0.7**
LTZ	**Lake Taylor**	**1.85**	**234**			**Pn**	**22 37 13.2**	**+0.7**
LTZ	**Lake Taylor**	**1.85**	**234**	P		**Pn**	**22 37 13.3**	**+0.8**
DSZ	**Denniston Nort**	**1.87**	**268**	P		**Pb**	**22 37 14.5**	**-1.2**
AMCZ	**Amberley**	**1.91**	**219**	P		**Pn**	**22 37 13.5**	**+0.2**
DVHZ	**Dannevirke**	**2.00**	**45**	P		**Pn**	**22 37 14.0**	**-0.5**
WAZ	**Wanganui**	**2.02**	**15**	P		**Pb**	**22 37 17.6**	**-0.7**
ANWZ	**Angora Road**	**2.06**	**53**	P		**Pn**	**22 37 15.1**	**-0.3**
TSZ	**Takapari Road**	**2.08**	**38**	P		**Pn**	**22 37 15.7**	**0.0**
OKCZ	**Okains Bay**	**2.21**	**204**	P		**Pn**	**22 37 17.2**	**-0.2**
LREZ	**Lake Rotokare**	**2.25**	**2**	P		**Pb**	**22 37 21.1**	**-1.1**
PRHZ	**Porangahau**	**2.28**	**51**	P		**Pn**	**22 37 17.4**	**-0.9**
PNHZ	**Pukenui**	**2.30**	**39**	P		**Pn**	**22 37 20.4**	**-0.3**
WPHZ	**Waipukurau**	**2.31**	**45**	P		**Pn**	**22 37 18.6**	**-0.2**
NMEZ	**Namu Road**	**2.32**	**352**	P		**Pb**	**22 37 22.3**	**-1.0**
OXZ	**Oxford**	**2.33**	**225**			**Pn**	**22 37 18.4**	**-0.5**
OXZ	**Oxford**	**2.33**	**225**	P		**Pn**	**22 37 18.5**	**-0.5**
MQZ	**McQueen's Vall**	**2.33**	**211**			**Pn**	**22 37 18.1**	**-1.0**
MQZ	**McQueen's Vall**	**2.33**	**211**	P		**Pn**	**22 37 18.1**	**-1.0**
INZ	**Inchbonnie**	**2.35**	**244**	P		**Pn**	**22 37 20.3**	**+0.9**
PREZ	**Palmer Road**	**2.37**	**357**	P		**Pb**	**22 37 22.6**	**-1.7**
AKCZ	**Akaroa Harbour**	**2.39**	**205**	P		**Pn**	**22 37 19.4**	**-0.5**
KHEZ	**Kahui Hut**	**2.43**	**355**	P		**Pb**	**22 37 23.5**	**-1.7**
NEZ	**North Egmont**	**2.45**	**356**	P		**Pb**	**22 37 23.4**	**-2.1**
NBEZ	**Newall Road No**	**2.47**	**352**	P		**Pb**	**22 37 23.9**	**-1.9**
MTVZ	**Mangateitei**	**2.49**	**21**	P		**Pb**	**22 37 23.9**	**-2.4**
DREZ	**Durham Road**	**2.52**	**358**	P		**Pb**	**22 37 25.2**	**-1.6**
PKE	**Pukeiti**	**2.53**	**354**	P		**Pn**	**22 37 24.1**	**+2.2**
PKVZ	**Pokaka**	**2.55**	**18**	P		**Pn**	**22 37 23.9**	**+1.8**
MOVZ	**Moawhango**	**2.56**	**26**	P		**Pn**	**22 37 22.8**	**+0.5**
PXZ	**Pawanui**	**2.57**	**50**	P		**Pn**	**22 37 21.1**	**-1.2**
RACZ	**Rakaia**	**2.57**	**218**	P		**Pn**	**22 37 21.6**	**-0.7**
WNVZ	**Wahianoa**	**2.58**	**23**	P		**Pn**	**22 37 24.0**	**+1.4**
TRVZ	**Turoa**	**2.59**	**22**	P		**Pn**	**22 37 24.9**	**+2.0**
BHHZ	**Black Hill Sta**	**2.59**	**32**	P		**Pn**	**22 37 23.1**	**+0.4**
KRHZ	**Kereru**	**2.60**	**38**	P		**Pn**	**22 37 22.2**	**-0.5**
VRZ	**Vera Road**	**2.61**	**8**	P		**Pn**	**22 37 25.4**	**+2.5**
DRZ	**Dome Shelter**	**2.62**	**22**	P		**Pb**	**22 37 29.3**	**+0.8**
WHVZ	**Whangaehu Hut**	**2.62**	**22**	P		**Pn**	**22 37 24.7**	**+1.4**
FWVZ	**Far West T-bar**	**2.63**	**22**	P		**Pn**	**22 37 25.1**	**+1.6**
MHEZ	**Mangahewa**	**2.64**	**0**	P		**Pb**	**22 37 27.0**	**-1.7**
TUVZ	**Tukino**	**2.65**	**23**	P		**Pn**	**22 37 24.9**	**+1.2**
NGZ	**Ngauruhoe**	**2.72**	**22**	P		**Pn**	**22 37 26.0**	**+1.4**
SNVZ	**South Ngauruho**	**2.72**	**22**	P		**Pn**	**22 37 26.0**	**+1.3**
KAHZ	**Kahuranaki**	**2.74**	**46**	P		**Pn**	**22 37 23.6**	**-1.1**
OTVZ	**Oturere**	**2.75**	**23**	P		**Pn**	**22 37 26.3**	**+1.3**
NNVZ	**North Ngauruho**	**2.77**	**22**	P		**Pn**	**22 37 26.8**	**+1.6**
WTVZ	**West Tongariro**	**2.77**	**21**	P		**Pn**	**22 37 26.6**	**+1.3**
TWVZ	**Tauwera**	**2.78**	**18**	P		**Pn**	**22 37 27.1**	**+1.7**
ETVZ	**East Tongariro**	**2.79**	**23**	P		**Pn**	**22 37 26.5**	**+1.0**
KWHZ	**Kaweka Forest**	**2.80**	**36**	P		**Pn**	**22 37 25.3**	**-0.3**
TMVZ	**Te Maari**	**2.81**	**23**	P		**Pn**	**22 37 26.7**	**+1.0**
KRVZ	**Karewarewa**	**2.81**	**22**	P		**Pn**	**22 37 27.5**	**+1.7**
NTVZ	**North Tongarir**	**2.81**	**22**	P		**Pn**	**22 37 27.0**	**+1.1**
WACZ	**Wakanui South**	**2.87**	**218**	P		**Pn**	**22 37 26.2**	**-0.3**
MCHZ	**McNeill Hill**	**2.91**	**40**	P		**Pn**	**22 37 26.4**	**-0.6**
KATZ	**Kakaramea**	**2.94**	**22**	P		**Pn**	**22 37 31.5**	**-2.4**
WVZ	**Waitaha Valley**	**2.97**	**242**	P		**Pn**	**22 37 28.5**	**+0.6**
RITZ	**Rihia Road**	**2.98**	**24**	P		**Pn**	**22 37 34.4**	**-0.2**
BKZ	**Black Stump Fm**	**3.04**	**34**			**Pn**	**22 37 28.4**	**-0.5**
BKZ	**Black Stump Fm**	**3.04**	**34**	P		**Pn**	**22 37 36.2**	**+0.6**
RATZ	**Rangitukua**	**3.06**	**22**	P		**Pb**	**22 37 33.7**	**-2.2**
RPZ	**Rata Peaks**	**3.12**	**229**	Pn		**Pn**	**22 37 29.9**	**-0.1**
	13nm,0.3s,baz=82,slow=2.9,SNR=26							
RPZ				Sn		**Sn**	**22 38 05.7**	**-0.8**
	19nm,0.3s,baz=358,slow=22,SNR=6.3							
RPZ				LR		LR	22 39 07.2	
	comp=Z,234nm,19.4s,baz=16,slow=48							
RPZ	**Rata Peaks**	**3.12**	**229**	Pn		**Pn**	**22 37 29.7**	**-0.2**
RPZ	**Rata Peaks**	**3.12**	**229**	P		**Pn**	**22 37 29.9**	**-0.1**
HATZ	**Hinemaiaia**	**3.13**	**26**	P		**Pb**	**22 37 37.4**	**+0.2**
ARHZ	**Aropaoanui**	**3.19**	**41**	P		**Pn**	**22 37 32.2**	**+1.3**
WATZ	**Wairara**	**3.20**	**20**	P		**Pb**	**22 37 36.5**	**-1.7**
ARCZ	**Arundel**	**3.21**	**225**	P		**Pn**	**22 37 30.7**	**-0.5**
HIZ	**Hauiti**	**3.23**	**8**	Pn		**Pn**	**22 37 33.5**	**+2.1**
HIZ	**Hauiti**	**3.23**	**8**	P		**Pn**	**22 37 33.7**	**+2.3**
NMHZ	**Naumai**	**3.24**	**37**	P		**Pb**	**22 37 37.3**	**-1.7**
GCSZ	**Gaunt Creek Bo**	**3.35**	**240**	P		**Pn**	**22 37 33.6**	**+0.5**
MTHZ	**Maungataniwha**	**3.45**	**35**	P		**Pn**	**22 37 33.7**	**-0.9**
RAHZ	**Arahi**	**3.51**	**38**	P		**Pn**	**22 37 39.2**	**+3.9**
TLZ	**Tolley Road**	**3.51**	**16**	P		**Pn**	**22 37 37.4**	**+2.0**
PRRZ	**Plateau Road**	**3.59**	**27**	P		**Pb**	**22 37 43.9**	**-1.0**
TMZ	**Timaru**	**3.60**	**221**	P		**Pn**	**22 37 36.6**	**0.0**
MUGZ	**Murupara**	**3.75**	**31**	P		**Pb**	**22 37 44.1**	**-3.5**
MHGZ	**Mahia Peninsul**	**3.75**	**48**	P		**Pn**	**22 37 38.2**	**-0.4**
RRRZ	**Republican Roa**	**3.77**	**27**	P		**Pb**	**22 37 46.3**	**-1.8**
FOZ	**Fox Glacier**	**3.78**	**240**			**Pn**	**22 37 39.5**	**+0.5**
FOZ	**Fox Glacier**	**3.78**	**240**	P		**Pn**	**22 37 39.7**	**+0.7**
RIGZ	**Rimuhau**	**4.00**	**42**	P		**Pn**	**22 37 40.4**	**-1.7**
LBZ	**Lake Benmore**	**4.03**	**227**			**Pn**	**22 37 42.2**	**-0.2**
LBZ	**Lake Benmore**	**4.03**	**227**	P		**Pn**	**22 37 42.6**	**+0.1**
URZ	**Urewera**	**4.07**	**33**	Pn		**Pn**	**22 37 42.8**	**-0.1**
	1.4nm,0.3s,baz=121,slow=23,SNR=7.7							
URZ				Sn		**Sn**	**22 38 27.7**	**-2

WAZ	**Wanganui**	**1.98**	**16**	P		**Pb**	**22 43 18.0**	**-1.0**
TSZ	**Takapari Road**	**2.05**	**39**	P		**Pn**	**22 43 16.3**	**-0.1**
ANWZ	**Angora Road**	**2.05**	**55**	P		**Pn**	**22 43 15.2**	**-1.2**
LREZ	**Lake Rotokare**	**2.20**	**3**	P		**Pb**	**22 43 20.8**	**-2.0**
OKCZ	**Okains Bay**	**2.25**	**203**	P		**Pn**	**22 43 17.9**	**-1.2**
NMEZ	**Namu Road**	**2.26**	**352**	P		**Pb**	**22 43 23.8**	**-0.1**
PRHZ	**Porangahau**	**2.27**	**53**	P		**Pn**	**22 43 18.0**	**-1.3**
PNHZ	**Pukenui**	**2.28**	**41**	P		**Pn**	**22 43 19.0**	**-0.5**
WPHZ	**Waipukurau**	**2.29**	**47**	P		**Pn**	**22 43 18.9**	**-0.7**
PREZ	**Palmer Road**	**2.31**	**358**	P		**Pb**	**22 43 22.8**	**-1.9**
OXZ	**Oxford**	**2.34**	**224**			**Pn**	**22 43 19.1**	**-1.2**
OXZ	**Oxford**	**2.34**	**224**	P		**Pn**	**22 43 19.3**	**-1.1**
INZ	**Inchbonnie**	**2.35**	**242**	P		**Pn**	**22 43 21.1**	**+0.6**
KHEZ	**Kahui Hut**	**2.37**	**355**	P		**Pb**	**22 43 23.1**	**-2.7**
MQZ	**McQueen's Vall**	**2.37**	**210**	Pn		**Pb**	**22 43 18.8**	**-1.8**
MQZ	**McQueen's Vall**	**2.37**	**210**	P		**Pn**	**22 43 18.9**	**-1.8**
NEZ	**North Egmont**	**2.39**	**357**	P		**Pb**	**22 43 23.8**	**-2.2**
NBEZ	**Newall Road No**	**2.41**	**353**	P		**Pb**	**22 43 23.9**	**-2.5**
AKCZ	**Akaroa Harbour**	**2.43**	**204**	P		**Pn**	**22 43 20.2**	**-1.3**
MTVZ	**Mangateitei**	**2.45**	**22**	P		**Pn**	**22 43 23.5**	**+1.7**
DREZ	**Durham Road**	**2.47**	**359**	P		**Pb**	**22 43 24.9**	**-2.5**
PKE	**Pukeiti**	**2.47**	**355**	P		**Pb**	**22 43 24.5**	**-3.0**
PKVZ	**Pokaka**	**2.50**	**20**	P		**Pn**	**22 43 24.1**	**+1.4**
MOVZ	**Moawhango**	**2.52**	**27**	P		**Pn**	**22 43 23.4**	**+0.6**
WNVZ	**Wahianoa**	**2.54**	**24**	P		**Pn**	**22 43 24.4**	**+1.2**
TRVZ	**Turoa**	**2.55**	**23**	P		**Pn**	**22 43 24.8**	**+1.4**
PXZ	**Pawanui**	**2.55**	**51**	P		**Pn**	**22 43 21.6**	**-1.6**
VRZ	**Vera Road**	**2.56**	**9**	P		**Pb**	**22 43 25.6**	**-3.3**
BHHZ	**Black Hill Sta**	**2.56**	**33**	P		**Pn**	**22 43 23.6**	**+0.1**
KRHZ	**Kereru**	**2.57**	**39**	P		**Pn**	**22 43 22.8**	**-0.7**
DRZ	**Dome Shelter**	**2.58**	**23**	P		**Pb**	**22 43 26.2**	**-3.2**
WHVZ	**Whangaehu Hut**	**2.58**	**23**	P		**Pb**	**22 43 25.1**	**+1.3**
MHEZ	**Mangahewa**	**2.58**	**1**	P		**Pb**	**22 43 25.5**	**-1.7**
FWVZ	**Far West T-bar**	**2.59**	**23**	P		**Pn**	**22 43 25.6**	**+1.6**
RACZ	**Rakaia**	**2.60**	**216**	P		**Pn**	**22 43 22.3**	**-1.5**
TUVZ	**Tukino**	**2.61**	**24**	P		**Pn**	**22 43 25.4**	**+1.3**
NGZ	**Ngauruhoe**	**2.68**	**23**	P		**Pn**	**22 43 26.6**	**+1.4**
SNVZ	**South Ngauruho**	**2.68**	**23**	P		**Pn**	**22 43 26.5**	**+1.4**
OTVZ	**Oturere**	**2.71**	**24**	P		**Pn**	**22 43 26.8**	**+1.2**
KAHZ	**Kahuranaki**	**2.72**	**48**	P		**Pn**	**22 43 24.2**	**-1.3**
NNVZ	**North Ngauruho**	**2.72**	**23**	P		**Pn**	**22 43 27.2**	**+1.4**
WTVZ	**West Tongariro**	**2.73**	**22**	P		**Pn**	**22 43 27.2**	**+1.4**
TWVZ	**Taurewa**	**2.73**	**19**	P		**Pn**	**22 43 27.1**	**+1.3**
ETVZ	**East Tongariro**	**2.75**	**24**	P		**Pn**	**22 43 27.2**	**+1.1**
TMVZ	**Te Maari**	**2.77**	**24**	P		**Pn**	**22 43 27.3**	**+1.1**
KRVZ	**Karewarewa**	**2.77**	**23**	P		**Pn**	**22 43 27.7**	**+1.4**
KWHZ	**Kaweka Forest**	**2.77**	**37**	P		**Pn**	**22 43 25.6**	**-0.6**
NTVZ	**North Tongarir**	**2.77**	**23**	P		**Pn**	**22 43 27.6**	**+1.2**
MCHZ	**McNeill Hill**	**2.88**	**41**	P		**Pn**	**22 43 27.0**	**-0.8**
KATZ	**Kakaramea**	**2.89**	**23**	P		**Pn**	**22 43 29.4**	**+1.3**
WAKZ	**Wakanui South**	**2.90**	**217**	P		**Pn**	**22 43 26.7**	**-1.3**
CKHZ	**Cape Kidnapper**	**2.92**	**48**	P		**Pn**	**22 43 26.9**	**-1.4**
RITZ	**Rihia Road**	**2.94**	**25**	P		**Pn**	**22 43 29.4**	**+0.8**
WVZ	**Waitaha Valley**	**2.98**	**240**	P		**Pn**	**22 43 29.1**	**0.0**
BKZ	**Black Stump Fm**	**3.01**	**35**			**Pn**	**22 43 28.6**	**-1.1**
BKZ	**Black Stump Fm**	**3.01**	**35**	P		**Pn**	**22 43 28.8**	**-0.8**
RATZ	**Rangitukua**	**3.02**	**23**	P		**Pn**	**22 43 30.7**	**+1.0**
HATZ	**Hinemaiaia**	**3.10**	**27**	P		**Pb**	**22 43 36.2**	**-1.9**
RPZ	**Rata Peaks**	**3.14**	**228**	Pn		**Pn**	**22 43 30.4**	**-0.9**
	50nm,0.3s,baz=78,slow=2.6,SNR=54							
RPZ				Sn		**Sn**	**22 44 06.7**	**-1.1**
	141nm,0.3s,baz=172,slow=22,SNR=13							
RPZ	**Rata Peaks**	**3.14**	**228**	Pn		**Pn**	**22 43 30.3**	**-1.0**
RPZ	**Rata Peaks**	**3.14**	**228**	P		**Pn**	**22 43 30.5**	**-0.8**
WATZ	**Wairara**	**3.15**	**21**	P		**Pn**	**22 43 32.4**	**+0.9**
ARHZ	**Aropaoanui**	**3.17**	**42**	P		**Pn**	**22 43 30.4**	**-1.3**
HIZ	**Hauiti**	**3.17**	**8**	Pn		**Pn**	**22 43 33.3**	**+1.5**
HIZ	**Hauiti**	**3.17**	**8**	P		**Pn**	**22 43 34.1**	**+2.3**
NMHZ	**Naumai**	**3.21**	**38**	P		**Pn**	**22 43 31.4**	**-1.0**
ARCZ	**Arundel**	**3.23**	**224**	P		**Pn**	**22 43 31.3**	**-1.3**
WHTZ	**Whakaora**	**3.26**	**24**	P		**Pb**	**22 43 38.8**	**-2.0**
MRHZ	**Matea Rd**	**3.27**	**31**	P		**Pn**	**22 43 32.3**	**-0.7**
GCSZ	**Gaunt Creek Bo**	**3.35**	**239**	P		**Pn**	**22 43 34.1**	**-0.1**
MTHZ	**Maungataniwha**	**3.42**	**36**	P		**Pn**	**22 43 33.8**	**-1.4**
WHHZ	**Waihua**	**3.43**	**42**	P		**Pn**	**22 43 34.3**	**-1.0**
WPRZ	**Whakapapatarin**	**3.45**	**25**	P		**Pn**	**22 43 36.2**	**+0.5**
TLZ	**Tolley Road**	**3.46**	**17**	P		**Pn**	**22 43 36.9**	**+1.1**
RAHZ	**Arahi**	**3.48**	**39**	P		**Pn**	**22 43 34.4**	**-1.7**
HRRZ	**Handcock Road**	**3.61**	**26**	P		**Pn**	**22 43 37.7**	**-0.1**
TMZ	**Timaru**	**3.62**	**220**	P		**Pn**	**22 43 37.1**	**-0.9**
MUGZ	**Murupara**	**3.71**	**32**	P		**Pn**	**22 43 38.1**	**-1.1**
SNGZ	**Shannon Statio**	**3.71**	**40**	P		**Pn**	**22 43 37.2**	**-2.0**
MHGZ	**Mahia Peninsul**	**3.74**	**49**	P		**Pn**	**22 43 37.3**	**-2.3**
FOZ	**Fox Glacier**	**3.78**	**239**	Pn		**Pn**	**22 43 39.8**	**-0.3**
FOZ	**Fox Glacier**	**3.78**	**239**	P		**Pn**	**22 43 39.6**	**-0.5**
PRGZ	**Paritu Road**	**3.89**	**47**	P		**Pn**	**22 43 39.3**	**-2.3**
URZ	**Urewera**	**4.04**	**34**	Pn		**Pn**	**22 43 41.3**	**-2.3**
	14nm,0.3s,baz=121,slow=23,SNR=35							
URZ				Sn		**Sn**	**22 44 29.5**	**-0.4**
	75nm,0.3s,baz=35,slow=4.9,SNR=6.4							
URZ	**Urewera**	**4.04**	**34**			**Pn**	**22 43 41.8**	**-1.8**
LBZ	**Lake Benmore**	**4.05**	**226**			**Pn**	**22 43 43.0**	**-0.8**
ODZ	**Otahua Downs**	**4.29**	**217**			**Pn**	**22 43 45.3**	**-1.9**
WKZ	**Wanaka**	**4.97**	**229**	Pn		**Pn**	**22 43 55.0**	**-1.5**
MXZ	**Matakaoa Point**	**5.14**	**39**			**Pn**	**22 43 56.7**	**-2.1**
MLZ	**Mavora Lakes**	**5.81**	**228**	Pn		**Pn**	**22 44 05.1**	**-0.9**
DCZ	**Deep Cove**	**6.42**	**231**			**Pn**	**22 44 14.0**	**-2.3**
OUZ	**Omahuta**	**6.45**	**355**			**Pn**	**22 44 17.6**	**+0.9**
PYZ	**Puysegur Point**	**7.09**	**228**	Pn		**Pn**	**22 44 24.0**	**-1.6**
I36NZ	**CHATHAM INFRAS**	**7.17**	**111**	*i*			23 26 40.0	
	baz=290,slow=324,SNR=1.1							
DZM	**Mont Dzumac**	**20.61**	**339**	P		Pn	22 47 21.9	-1.2
DZM				IAmb		IAmb	22 47 41.1	
	comp=Z,27nm,1.1s							
CAN	**Canberra**	**20.73**	**279**	P		**P**	**22 47 19.6**	**-2.3**
CAN				IAmb		IAmb	22 47 21.2	
	comp=Z,58nm,1.5s							
MSVF	**Nonsavu**	**24.06**	**9**	P		**P**	**22 47 55.9**	**-0.8**
MSVF				IAmb		IAmb	22 48 03.7	
	comp=Z,42nm,1.3s							
EIDS	**Eidsvold**	**25.13**	**303**	P		**P**	**22 48 05.9**	**-0.4**
STKA	**Stephens Creek**	**27.79**	**280**	P		**P**	**22 48 30.6**	**+0.3**
	comp=Z,3.5nm,1.1s,baz=129,slow=3.5,SNR=3.1							
BBOO	**Buckleboo**	**31.47**	**274**	P		**P**	**22 49 02.5**	**-0.4**
BBOO				IAmb		IAmb	22 49 08.9	
	comp=Z,9.7nm,1.2s							
VNDA	**Vanda**	**36.34**	**185**	P		**P**	**22 49 46.2**	**+1.6**
	comp=Z,1.5nm,0.7s,baz=1.1,slow=10,SNR=3.3							
SBA	**Scott Base**	**36.44**	**183**	P		**P**	**22 49 46.9**	**+1.4**
SBA				IAmb		IAmb	22 49 50.2	
	comp=Z,28nm,1.2s							
AS31	**Alice Springs**	**38.02**	**285**	P		**P**	**22 49 58.7**	**-0.8**
ASAR	**Alice Springs**	**38.02**	**285**	P		**P**	**22 49 58.5**	**-1.0**
	comp=Z,2.1nm,0.4s,baz=124,slow=7.0,SNR=42							
ASAR	**Alice Springs**	**38.02**	**285**	P		**P**	**22 49 59.0**	**-0.6**
FORT	**Forrest**	**38.42**	**271**	P		**P**	**22 50 02.1**	**-0.7**
FORT				IAmb		IAmb	22 50 20.2	
	comp=Z,11nm,0.8s							
COEN	**Coen**	**38.58**	**306**	P		**P**	**22 50 03.8**	**-0.5**
WR0	**Warramunga Arr**	**39.93**	**290**	P		**P**	**22 50 14.8**	**-0.7**
WB2	**Warramunga Arr**	**40.08**	**290**	P		**P**	**22 50 15.8**	**-0.9**
WB2				IAmb		IAmb	22 50 20.5	
	comp=Z,11nm,0.7s							
WRA	**Warramunga Arr**	**40.08**	**290**	P		**P**	**22 50 15.8**	**-1.0**
	comp=Z,5.6nm,0.6s,baz=127,slow=7.9,SNR=30							
WRA	**Warramunga Arr**	**40.08**	**290**	P		**P**	**22 50 15.7**	**-1.2**
WB0	**Warramunga Arr**	**40.16**	**291**	P		**P**	**22 50 16.5**	**-1.0**
WB0				IAmb		IAmb	22 50 32.3	
	comp=Z,6.2nm,0.7s							
CASY	**Casey**	**42.29**	**213**	P		**P**	**22 50 35.5**	**+1.1**
CASY				IAmb		IAmb	22 50 36.6	
	comp=Z,22nm,1.2s							
NWAO	**Narrogin (SRO)**	**45.48**	**262**	P		**P**	**22 50 59.5**	**-0.9**
KNRA	**Kununurra**	**46.87**	**290**	P		**P**	**22 51 12.1**	**+0.6**
MTN	**Manton Dam**	**47.19**	**295**	P		**P**	**22 51 13.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**47.50**	**285**	P		**P**	**22 51 15.6**	**-0.9**
FITZ				IAmb		IAmb	22 51 20.3	
	comp=Z,17nm,1.3s							
MORW	**Morawa**	**48.28**	**266**	P		**P**	**22 51 21.7**	**-0.7**
MORW				IAmb		IAmb	22 51 23.1	
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**48.47**	**180**	P		**P**	**22 51 25.7**	**+2.1**
PSA00	**Pilbara Seismi**	**49.62**	**276**	P		**P**	**22 51 31.7**	**-1.0**
GIRL	**Giralia**	**53.18**	**271**	P		**P**	**22 51 59.3**	**-0.1**
BELA	**Belgrano 2**	**59.44**	**173**	P		**P**	**22 52 43.9**	**+0.7**
BELA				IAmb		IAmb	22 52 45.6	
	comp=Z,8.8nm,1.1s							
MAW	**Mawson**	**59.55**	**204**	P		**P**	**22 52 46.1**	**+2.1**
	comp=Z,1.6nm,0.7s,baz=128,slow=14,SNR=1.5							
MAW	**Mawson**	**59.55**	**204**	P		**P**	**22 52 44.9**	**+0.9**
SNAA	**Sanae**	**66.96**	**181**	P		**P**	**22 53 34.4**	**+1.1**
SNAA	**Sanae**	**66.96**	**181**	P		**P**	**22 53 34.4**	**+1.1**
	comp=Z,3.5nm,0.8s,baz=203,slow=7.0,SNR=13							
SNAA	**Sanae**	**66.96**	**181**	P		**P**	**22 53 34.1**	**+0.9**
SNAA				IAmb		IAmb	22 53 37.1	
	comp=Z,4.7nm,0.9s							
VNA3	**Neumayer Olymp**	**67.37**	**179**	P		**P**	**22 53 37.0**	**+1.2**
VNA2	**Neumayer--Watz**	**67.72**	**179**	P		**P**	**22 53 39.3**	**+1.3**
	baz=175,slow=5.3							
VNA1	**Neumayer--Stat**	**67.99**	**179**	P		**P**	**22 53 41.0**	**+1.3**
MJAR	**Matsushiro Arr**	**84.53**	**332**	P		**P**	**22 55 13.3**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=158,slow=3.9,SNR=1.8							
NJ2	**Nanjing**	**89.34**	**316**	*e*P		**P**	**22 55 39.1**	**+1.8**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
KSRS	**Korea Array**	**89.39**	**325**	P		**P**	**22 55 37.7**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=142,slow=5.4,SNR=9.4							
KSAR	**Wonju Array Be**	**89.39**	**325**	P		**P**	**22 55 37.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**91.62**	**293**	P		**P**	**22 55 48.5**	**+0.2**
	comp=Z,2.6nm,0.3s,baz=156,slow=3.4,SNR=10							
CMAR	**Chiang Mai Arr**	**91.62**	**293**	P		**P**	**22 55 48.3**	**0.0**
KMI	**Kunming**	**93.69**	**301**	⇑P		**P**	**22 56 01.1**	**+3.1**
KMI				pmax		pmax		
	comp=Z,5.0nm,0.9s							
HHC	**Hu-ho-hao-te**	**99.83**	**317**	*e*P		**Pdif**	**22 56 26.0**	**+0.8**
HHC				pmax		pmax		
	comp=Z,20nm,0.9s							
HHC				pmax		pmax		
	comp=Z,140nm,8.2s							
WMQ	**Urumqi**	**115.12**	**307**	*e*P		**PKiKP**	**23 01 22.6**	**+0.8**
YKA	**Yellowknife Ar**	**118.29**	**30**	PKP		**PKiKP**	**23 01 27.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=238,slow=1.3,SNR=19							
MKAR	**Makanchi Array**	**119.93**	**308**	PKP		**PKPdf**	**23 01 29.8**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=129,slow=2.0,SNR=2.5							
KBZ	**Khabaz**	**144.60**	**290**	PKP		**PKPab**	**23 02 14.9**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=61,slow=4.4,SNR=6.7							
SFJD	**Kangerlussuaq**	**144.84**	**29**	PKP		**PKPab**	**23 02 15.1**	**-0.7**
	comp=Z,3.6nm,0.6s,baz=191,slow=11,SNR=3.8							
SFJD	**Kangerlussuaq**	**144.84**	**29**			**PKPdf**	**23 02 15.7**	**-1.0**
DBIC	**Dimbokro**	**145.15**	**182**	PKPbc		**PKPdf**	**23 02 18.7**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=156,slow=5.0,SNR=8.4							
DBIC	**Dimbokro**	**145.15**	**182**			**PKPdf**	**23 02 18.6**	**-0.4**
SUMG	**Summit**	**145.22**	**17**	*i* P		**PKPdf**	**23 02 17.6**	**-0.2**
SUMG				IAmb		IAmb	23 02 18.6	
	comp=Z,3.9nm,0.8s							
DY2G	**Dye2**	**146.63**	**28**	*i* P		**PKPbc**	**23 02 21.1**	**-0.7**
DY2G				IAmb		IAmb	23 02 22.7	
	comp=Z,6.2nm,0.7s							
ICESG	**Greenland Ices**	**147.28**	**22**	*i* P		**PKiKP**	**23 02 27.3**	**+1.3**
ICESG				IAmb		IAmb	23 02 28.5	
	comp=Z,4.8nm,0.6s							
ARCES	**ARCESS Array B**	**147.69**	**340**	PKPbc		**PKPbc**	**23 02 23.6**	**-0.9**
	comp=Z,2.8nm,0.6s,baz=32,slow=2.0,SNR=19							
ARCES	**ARCESS Array B**	**147.69**	**340**			**PKPbc**	**23 02 23.4**	**-1.0**
BRTR	**Keskin Array B**	**150.26**	**280**	PKPab		**PKPab**	**23 02 37.3**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=146,slow=5.7,SNR=6.1							
TORD	**Torodi Ar. Bea**	**150.87**	**195**	PKP		**PKPdf**	**23 02 28.9**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=148,slow=0.9,SNR=5.3							
TORD				PKPbc		**PKiKP**	**23 02 34.5**	**0.0**
	comp=Z,3.8nm,0.5s,baz=165,slow=2.4,SNR=61							
TORD	**Torodi Ar. Bea**	**150.87**	**195**			**PKPdf**	**23 02 28.6**	**+0.3**
TORD				PKPbc		**PKiKP**	**23 02 34.4**	**-0.2**
FINES	**FINESS Array B**	**152.46**	**327**	PKPbc		**PKPbc**	**23 02 34.7**	**-1.4**
	comp=Z,4.6nm,1.0s,baz=56,slow=3.7,SNR=13							
AKASG	**Malin Array Be**	**154.37**	**303**	PKPbc		**PKiKP**	**23 02 40.4**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=65,slow=2.5,SNR=1.3							
GERES	**GERESS Array B**	**164.57**	**304**	PKPab		**PKPab**	**23 03 39.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=111,slow=2.2,SNR=1.6							
ESDC	**Sonseca Array**	**177.61**	**215**	PKP		**PKPdf**	**23 02 51.5**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=117,slow=1.7,SNR=4.6							
ESDC				PKPab		PKPab	23 04 37.4	0.0
	comp=Z,0.4nm,0.9s,baz=150,slow=6.2,SNR=4.3							

MOS ***22*** *22:57:11.4±0.9, 11°.93S×166°.38E, h42km, mb6.3/45, MS5.8/16, Error ellipse: s-maj=7.2km s-min=5.5km az=116.6*

IDC ***22*** *22:57:12.1±1.5, 12°.04S×166°.69E, h40km±12km, mb5.4/25, mb1 5.5/26, mb1mx5.5/29, mbtmp5.6/26, ML3.3/1, MS5.4/27, Ms1 5.5/27, ms1mx5.4/32, Error ellipse: s-maj=13.0km s-min=10.9km az=73.0*

NEIC ***22*** *22:57:15.7±1.3, 12°.04S±0°.08×166°.43E±0°.07, h72km±1km, mb6.0/238, Mwb6.3/83, Mwc6.2/62, Mww6.2, Mwc6.3(GCMT), Error ellipse: s-maj=13.6km s-min=12.0km az=202.0*

BJI ***22*** *22:57:15.6±0.0, 11°.55S×166°.61E, h73km, mB6.0/66, mb5.9/89, Ms5.8/97, Ms7 5.7/91*

NEIC ***22*** *22:57:16, 12°.03S×166°.42E, h75km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr3.37; Mθθ-0.33; Mϕϕ-3.04; Mrθ0.44; Mrϕ0.69; Mθϕ-1.70; Fault plane solution: M₀3.73000×10¹⁸ NP1:φs166.07000°, δ59.04000°, λ89.55000°. NP2:φs346.95000°, δ30.97000°, λ90.75000°. Principal axes: T 3.8114, Plg76.0000°, Azm75.0000°; N -0.1680, Plg0.0000°, Azm166.0000°; P -3.6434, Plg14.0000°, Azm256.0000°;*

NEIC ***22*** *22:57:19, 12°.11S×166°.16E, h90km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr2.07; Mθθ-0.58; Mϕϕ-1.49; Mrθ-0.19; Mrϕ0.59; Mθϕ-2.25; Fault plane solution: M₀2.98000×10¹⁸ NP1:φs324.00000°, δ23.00000°, λ60.00000°. NP2:φs176.00000°, δ70.00000°, λ102.00000°. Principal axes: T 3.2089, Plg63.0000°, Azm104.0000°; N -0.5267, Plg11.0000°, Azm352.0000°; P -2.6822, Plg24.0000°, Azm256.0000°;*

NOU ***22*** *22:57:20.8, 12°.14S×166°.33E, h98km, ML5.9, Santa Cruz Islands*

NEIC ***22*** *22:57:20, 12°.04S×166°.33E, h91km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr2.32; Mθθ-0.38; Mϕϕ-1.94; Mrθ0.44; Mrϕ0.56; Mθϕ-2.12; Fault plane solution: M₀3.11000×10¹⁸ NP1:φs339.00000°, δ23.00000°, λ83.00000°. NP2:φs166.00000°, δ67.00000°, λ93.00000°. Principal axes: T 3.2043, Plg68.0000°, Azm82.0000°; N -0.2079, Plg3.0000°, Azm345.0000°; P -2.9964, Plg22.0000°, Azm254.0000°;*

GCMT ***22*** *22:57:20.6±0.0, 12.07S×166°.33E, h94km, MW6.2/173, Moment Tensor Solution. s173,c440; s166,c628; Duration: 3s3 Moment tensor: Scale 10¹⁸Nm; Mrr2.23±.01; Mθθ-0.35±.01; Mϕϕ-1.89±.01; Mrθ0.38±.01; Mrϕ0.58±.01; Mθϕ-2.09±.01; Best double couple: M₀3.02700×10¹⁸ NP1:φs337.00000°, δ23.00000°, λ80.00000°. NP2:φs167.00000°, δ67.00000°, λ94.00000°. Principal axes: T 3.1090, Plg67.0000°, Azm85.0000°; N -0.1720, Plg4.0000°, Azm346.0000°; P -2.9450, Plg22.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***22*** *22:57:35.3, 12°.19S×166°.04E, h95km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr2.44; Mθθ-0.50; Mϕϕ-1.94; Mrθ0.28; Mrϕ0.52; Mθϕ-1.74; Fault plane solution: M₀2.87000×10¹⁸ NP1:φs167.09000°, δ63.89000°, λ93.76000°. NP2:φs338.60000°, δ26.37000°, λ82.38000°. Principal axes: T 3.0478, Plg71.0000°, Azm85.0000°; N -0.3500, Plg3.0000°, Azm345.0000°; P -2.6977, Plg19.0000°, Azm254.0000°;*

ISC 22 22:57:16.9±0.3, **12°.08S**±0°.03×**166°.48E**±0°.03, **h84**km±1km, **h84**km:**pP-P, n1364**, **σ1°.76**/1522, **mb6.0**/272, **164C-97D, Fault plane solution: NP1:**φs306.24457°, δ41.33266°, λ60.25335°. **NP2:**φs163.51782°, δ55.01210°, λ113.57615°. **Principal axes:** T Plg69.4580°, Azm127.2246°; N Plg19.1282°, Azm329.4692°; P Plg7.2097°, Azm236.9546°; **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DVP	**Devils Point**	**5.84**	**164**	P		**Pn**	**22 58 45.6**	**+4.6**
HNR	**Honiara**	**6.94**	**292**	Pn		**Pn**	**22 58 57.2**	**+1.2**
	215nm,0.3s,baz=138,slow=5.9,SNR=40							
HNR				Sn		**Sn**	**23 00 12.1**	**-1.4**
	721nm,0.3s,baz=172,slow=21,SNR=8.5							
HNR	**Honiara**	**6.94**	**292**	P		**Pn**	**22 58 56.3**	**+0.3**
HNR	**Honiara**	**6.94**	**292**			**Pn**	**22 58 56.3**	**+0.3**
LIFNC	**LIFOU**	**8.67**	**175**	P		**Pn**	**22 59 21.5**	**+1.9**
KOUNC	**Koumac, New Ca**	**8.68**	**194**	P		**Pn**	**22 59 22.9**	**+3.2**
MARNC	**Mare, Loyalty**	**9.46**	**171**	P		**Pn**	**22 59 32.5**	**+2.1**
YATNC	**Mamie plateau,**	**9.93**	**178**	P		**Pn**	**22 59 38.7**	**+2.0**
DZM	**Mont Dzumac**	**9.93**	**180**	*e*Pn		**Pn**	**22 59 38.8**	**+1.9**
	524nm,0.4s							
DZM				*e*Sn		**Sn**	**23 01 19.6**	**-7.1**
	2µm,0.8s							
DZM				*e*LR		LR	23 01 54.0	
	comp=Z,102µm,30.1s							
DZM	**Mont Dzumac**	**9.93**	**180**	Pn		**Pn**	**22 59 39.7**	**+2.8**
	35nm,0.3s,baz=15,slow=3.0,SNR=271							
DZM				Sn		**Sn**	**23 01 20.7**	**-6.0**
	23nm,0.3s,baz=328,slow=17,SNR=1.4							
DZM	**Mont Dzumac**	**9.93**	**180**	Pn		**Pn**	**22 59 38.9**	**+1.9**
NOUC	**Port Laguerre**	**9.96**	**181**	P		**Pn**	**22 59 40.6**	**+3.4**
ONTNC	**Ouen Toro**	**10.17**	**180**	P		**Pn**	**22 59 43.5**	**+3.5**
MSVF	**Nonsavu**	**12.51**	**118**	Sn		**Sn**	23 02 10.3	-19
	baz=224,slow=21,SNR=8.3							
MSVF				LR		LR	23 03 17.4	
	comp=Z,25µm,20.0s,baz=297,slow=30							
MSVF	**Nonsavu**	**12.51**	**118**	*c* P		**P**	**23 00 17.0**	**-3.2**
MSVF	**Nonsavu**	**12.51**	**118**	Pn		**Pn**	**23 00 15.6**	**+3.7**
FUNA	**Funafuti**	**13.00**	**75**	Pn		**Pn**	**23 00 19.4**	**+1.0**
RABL	**Rabaul**	**16.19**	**298**	Pn		**Pn**	**23 00 57.8**	**-1.7**
NFK	**Norfolk Island**	**16.93**	**176**	P		**P**	**23 01 11.5**	**+2.4**
	baz=17,SNR=4.1							
NFK	**Norfolk Island**	**16.93**	**176**	P		**P**	**23 01 11.6**	**+2.4**
PMG	**Port Moresby**	**19.17**	**276**	*d* P		**P**	**23 01 35.6**	**-0.1**
	3.1nm,0.3s,baz=83,slow=12,SNR=15							
PMG				S		**Sn**	**23 05 12.8**	**+2.3**
	0.3nm,0.3s,baz=285,slow=22,SNR=1.3							
PMG	**Port Moresby**	**19.17**	**276**	*d* P		**P**	**23 01 34.8**	**+0.9**
PMG				pmax		pmax		
	comp=Z,713nm,2.0s							
PMG	**Port Moresby**	**19.17**	**276**			**P**	**23 01 32.6**	**-1.4**
PMG				IAmb		IAmb	23 02 20.8	
	comp=Z,533nm,1.1s							
EIDS	**Eidsvold**	**19.65**	**226**	P		**Pn**	**23 01 41.2**	**-0.1**
EIDS				IAmb		IAmb	23 01 53.4	
	comp=Z,609nm,1.0s							
PATS	**Pohnpei**	**20.48**	**336**	P		**P**	**23 01 48.9**	**+0.8**
	baz=21,SNR=13							
PATS	**Pohnpei**	**20.48**	**336**	P		**P**	**23 01 47.6**	**-0.5**
PATS				IAmb		IAmb	23 01 53.9	
	comp=Z,2µm,1.1s							
LHI	**Lord Howe Isla**	**20.52**	**198**	P		Pn	23 01 50.6	-0.7
	baz=21,SNR=13							
LHI	**Lord Howe Isla**	**

comp=Z,204nm,0.8s
TOO Toolangi 31.58 213 P **P** **23 03 32.4 +0.8**
TOO IAmb IAmb 23 03 36.6
comp=Z,204nm,0.8s
WR0 Warramunga Arr 31.64 252 P **P** **23 03 31.7 -0.6**
WR0 IAmb IAmb 23 03 54.3
comp=Z,191nm,1.5s
RPZ Rata Peaks 31.76 174 P **P** **23 03 33.7 +0.6**
comp=Z,165nm,0.8s,baz=341,slow=2.0,SNR=19
RPZ Rata Peaks 31.76 174 P **P** **23 03 34.6 +1.5**
WB2 Warramunga Arr 31.81 252 P **P** **23 03 33.0 -0.9**
WRAB Tennant Creek 31.81 252 *ce*P **P** **23 03 33.7 -0.1**
WRAB pmax pmax
comp=Z,264nm,2.5s
WRAB Tennant Creek 31.81 252 P **P** **23 03 32.9 -0.9**
WRAB IAmb IAmb 23 03 35.3
comp=Z,355nm,1.8s
WRA Warramunga Arr 31.82 252 P **P** **23 03 33.7 -0.3**
comp=Z,27nm,0.6s,baz=84,slow=9.2,SNR=148
WRA PcP **PcP** **23 06 25.2 +1.9**
comp=Z,57nm,0.8s,baz=83,slow=3.0,SNR=12
WRA S **S** **23 08 34.0 -4.6**
comp=Z,5.6nm,0.9s,baz=75,slow=14,SNR=1.1
WRA ScP **ScP** **23 10 02.7 +3.4**
comp=Z,17nm,1.0s,baz=83,slow=3.4,SNR=7.0
WRA PKiKP **PKiKP** **23 13 51.1 -0.9**
comp=Z,5.0nm,0.8s,baz=342,slow=0.5,SNR=10
WRA LR LR 23 15 52.1
comp=Z,11µm,19.7s,baz=75,slow=35
WRA P3KPbc 23 35 06.1
comp=Z,1.1nm,0.9s,baz=262,slow=3.1,SNR=5.1
WRA Warramunga Arr 31.82 252 P **P** **23 03 33.0 -1.0**
JCZ Jackson Bay 31.94 177 P **P** **23 03 37.3 +2.6**
ARCZ Arundel 32.01 174 P **P** **23 03 35.3 +0.1**
LBZ Lake Benmore 32.34 175 P **P** **23 03 38.5 +0.3**
LBZ IAmb IAmb 23 04 05.1
comp=Z,155nm,1.2s
LBZ Lake Benmore 32.34 175 P **P** **23 03 38.9 +0.8**
TMZ Timaru 32.42 174 P **P** **23 03 39.1 +0.2**
WKZ Wanaka 32.70 177 P **P** **23 03 43.9 +2.6**
HTT Hallett 32.95 225 P **P** **23 03 44.8 +1.2**
baz=33,SNR=80
AS31 Alice Springs 32.99 245 P **P** **23 03 43.0 -1.1**
ASAR Alice Springs 32.99 245 P **P** **23 03 44.0 -0.2**
comp=Z,54nm,0.7s,baz=69,slow=9.7,SNR=260
ASAR PcP **PcP** **23 06 26.6 +0.2**
comp=Z,46nm,0.8s,baz=69,slow=2.9,SNR=9.4
ASAR S **S** **23 08 50.2 -6.5**
comp=Z,3.7nm,0.9s,baz=70,slow=23,SNR=1.6
ASAR ScP **ScP** **23 10 06.0 +2.7**
comp=Z,16nm,0.9s,baz=84,slow=3.5,SNR=8.7
ASAR PKiKP **PKiKP** **23 13 53.1 +0.3**
comp=Z,3.6nm,0.9s,baz=107,slow=1.9,SNR=5.6
ASAR LR LR 23 16 40.6
comp=Z,8µm,19.9s,baz=82,slow=35
ASAR P3KPbc 23 35 02.6
comp=Z,0.9nm,0.8s,baz=254,slow=4.8,SNR=7.0
ASAR Alice Springs 32.99 245 P **P** **23 03 42.9 -1.3**
ASAR Alice Springs 32.99 245 P **P** **23 03 42.9 -1.3**
ODZ Otahua Downs 33.04 175 P **P** **23 03 46.7 +2.5**
ARPS Mount Arapiles 33.09 218 P **P** **23 03 46.3 +1.5**
baz=33,SNR=76
EAZ Earnscleugh 33.12 176 P **P** **23 03 46.1 +1.2**
MLZ Mavora Lakes 33.20 178 P **P** **23 03 45.5 -0.2**
MLZ IAmb IAmb 23 03 49.7
comp=Z,298nm,1.1s
KDU Kakadu 33.21 265 P **P** **23 03 46.6 +0.5**
baz=33,SNR=31
DCZ Deep Cove 33.27 179 P **P** **23 03 46.8 +0.6**
RAR Rarotonga 33.52 110 P **P** **23 03 44.7 -4.0**
comp=Z,6.5nm,0.4s,baz=290,slow=22,SNR=1.7
WHZ Wether Hill Ro 33.72 178 P **P** **23 03 50.4 +0.3**
WHZ IAmb IAmb 23 03 53.2
comp=Z,382nm,1.4s
PYZ Puysegur Point 33.97 180 P **P** **23 03 52.5 +0.3**
PYZ IAmb IAmb 23 04 02.2
comp=Z,163nm,1.0s
MTN Manton Dam 34.51 265 P **P** **23 03 58.0 +0.7**
baz=34,SNR=8.6
MTN Manton Dam 34.51 265 P **P** **23 03 57.2 -0.1**
MTN IAmb IAmb 23 04 17.9
comp=Z,98nm,0.8s
BBOO Buckleboo 34.67 229 P **P** **23 03 59.3 +0.8**
baz=35,SNR=191
BBOO Buckleboo 34.67 229 P **P** **23 03 58.7 +0.2**
BBOO IAmb IAmb 23 04 34.8
comp=Z,97nm,0.8s
TAU Tasmania Unive 34.92 205 P **P** **23 04 01.2 +0.7**
TAU pmax pmax
comp=Z,500nm,1.2s
TAU Tasmania Unive 34.92 205 P **P** **23 04 01.2 +0.7**
TAU IAmb IAmb 23 04 05.4
comp=Z,500nm,1.1s
ANA2 Anatahan 34.92 324 P **P** **23 04 01.0 +0.1**
FAKI Fak Fak 35.10 282 P **P** **23 04 02.1 -0.4**
FAKI Fak Fak 35.10 282 P **P** **23 04 06.6 +4.1**
SIJI Sorong 36.66 285 PcP **PcP** **23 06 38.2 +1.0**
baz=87,slow=7.1
SWI Sorong 36.67 285 P **P** **23 04 16.0 +0.1**
comp=Z,10µmcomp=Z,3µmcomp=Z,277nm,1.0s
KNRA Kununurra 36.76 260 P **P** **23 04 16.6 0.0**
KNRA IAmb IAmb 23 04 48.7
comp=Z,313nm,1.1s
BNDI Bandanaira 36.93 279 P **P** **23 04 19.8 +1.7**
comp=Z,12µmcomp=Z,15µmcomp=Z,1µm,1.2s
JOHN Johnston Islan 37.18 40 P **P** **23 04 20.6 +0.6**
JOHN IAmb IAmb 23 04 49.4
comp=Z,310nm,1.2s
WRKA Warakurna 38.28 245 P **P** **23 04 29.2 -0.3**
baz=38,SNR=188
XMAS Kiritimati 38.49 71 P **P** **23 04 31.4 +0.2**
XMAS IAmb IAmb 23 04 41.0
comp=Z,222nm,1.2s
FITZ Fitzroy Crossi 39.82 256 S **S** **23 10 38.2 -2.6**
baz=232,slow=19
FITZ LR LR 23 19 56.3
comp=Z,10µm,21.8s,baz=80,slow=34
FITZ Fitzroy Crossi 39.82 256 P **P** **23 04 42.6 +0.3**
baz=40,SNR=43
FITZ Fitzroy Crossi 39.82 256 P **P** **23 04 42.2 -0.2**
FITZ IAmb IAmb 23 05 10.0
comp=Z,526nm,1.9s
NLAI Namlea 39.96 279 P **P** **23 04 44.7 +1.2**
comp=Z,5µmcomp=Z,336nm,1.2s
FORT Forrest 40.05 236 P **P** **23 04 44.7 +0.6**
baz=40,SNR=158
FORT Forrest 40.05 236 P **P** **23 04 44.3 +0.2**
TNTI Ternate 40.88 285 P **P** **23 04 50.8 -0.4**
TNTI Ternate 40.88 285 P P 23 04 56.3 +5.2
SANI Sanana 41.34 281 P **P** **23 04 55.3 +0.4**
comp=Z,13µmcomp=Z,4µmcomp=Z,174nm,1.2s
SOEI Soe 41.49 269 P **P** **23 04 55.5 -0.7**
SOEI IAmb IAmb 23 05 50.6
comp=Z,162nm,1.0s
SOEI Soe 41.49 269 P **P** **23 05 00.7 +4.5**
BATI Baumata 42.02 268 ScP **ScP** **23 10 45.4 +8.1**
comp=Z,17nm,0.5s,baz=72,slow=3.2,SNR=3.9
BATI Baumata 42.02 268 P **P** **23 05 02.3 +1.8**
comp=Z,7µmcomp=Z,2µmcomp=Z,168nm,0.7s
PAE Paea 42.75 103 *e*P **P** **23 05 07.3 +1.0**
comp=Z,43nm,1.4s
PAE *ep*P **pP** **23 05 25.6 -0.3**
comp=Z,41nm,1.1s
PPT Papeete 42.75 103 LR LR 23 20 12.2
comp=Z,4µm,18.7s,baz=259,slow=32
PPT2 Papeete2 42.75 103 *e*S **S** **23 11 27.4 +3.0**
comp=Z,5µm,27.2s
PPT2 *e*LQ LQ 23 15 16.3
comp=Z,36µm,36.0s
PPT2 *e*LR LR 23 17 03.2
comp=Z,92µm,31.2s
TIAR Tiarei 42.97 103 *e*P **P** **23 05 09.2 +1.1**
comp=Z,25nm,1.4s
TIAR *ep*P **pP** **23 05 26.4 -1.4**
comp=Z,24nm,1.1s
TBI Tubuai 43.28 111 *e*S **S** **23 11 35.0 +3.2**
comp=Z,4µm,29.5s
TBI *e*LQ LQ 23 15 33.2
comp=Z,20µm,32.0s
TBI *e*LR LR 23 17 19.3
comp=Z,54µm,32.5s
MMRI Maumere 43.62 270 P **P** **23 05 12.7 -0.7**
MMRI IAmb IAmb 23 05 50.9
comp=Z,266nm,1.1s
MMRI Maumere 43.62 270 P **P** **23 05 16.3 +2.9**
comp=Z,10µmcomp=Z,172nm,1.1s

KMSI Cibinong 44.03 284 P P 23 05 26.8 +10
MEH Mehetia 44.20 103 *e*P **P** **23 05 19.4 +1.4**
comp=Z,51nm,1.1s
MEH *ep*P **pP** **23 05 36.3 -1.4**
comp=Z,97nm,1.2s
VAH Vaihoa 44.64 99 *e*P **P** **23 05 22.7 +1.2**
comp=Z,184nm,1.2s
LUWI Luwuk 44.71 281 P **P** **23 05 22.1 0.0**
LUWI IAmb IAmb 23 05 52.2
comp=Z,882nm,1.6s
LUWI Luwuk 44.71 281 P **P** **23 05 26.2 +4.1**
comp=Z,13µmcomp=Z,7µmcomp=Z,346nm,1.5s
GTOI Gorontalo 44.97 283 P **P** **23 05 27.0 +2.9**
comp=Z,2µmcomp=Z,104nm,0.8s
BASI Baing, Sumba 45.04 268 P **P** **23 05 28.8 +4.1**
comp=Z,8µmcomp=Z,2µmcomp=Z,175nm,1.6s
KMBL Kambalda 45.29 238 P **P** **23 05 27.1 +0.6**
baz=45,SNR=52
PSA00 Pilbara Seismi 45.48 252 P **P** **23 05 28.3 +0.1**
PSA00 IAmb IAmb 23 07 09.8
comp=Z,215nm,0.8s
JCJ Chichijima 45.53 329 P **P** **23 05 28.3 0.0**
APSI Ampana 45.83 281 P **P** **23 05 35.2 +4.3**
MRSI Marisa 45.94 283 P **P** **23 05 36.2 +4.4**
WBSI Waikabubak, Su 46.27 268 P **P** **23 05 36.9 +2.4**
comp=Z,3µmcomp=Z,207nm,0.9s
BNSI Bone 46.47 275 P **P** **23 05 36.9 +0.9**
comp=Z,10µmcomp=Z,5µmcomp=Z,343nm,1.1s
KAPI Kappang 46.69 275 S **S** **23 12 21.5 +0.1**
comp=Z,2.1nm,0.4s,baz=347,slow=23,SNR=1.0
KAPI Kappang 46.69 275 P **P** **23 05 37.8 +0.1**
KAPI pmax pmax
comp=Z,349nm,1.3s
KAPI Kappang 46.69 275 P **P** **23 05 37.8 +0.1**
KAPI IAmb IAmb 23 06 06.7
comp=Z,348nm,1.2s
SPSI Sidrap Palu 46.90 276 P **P** **23 05 40.1 +0.8**
comp=Z,10µmcomp=Z,3µmcomp=Z,116nm,1.0s
TTSI Tana Toraja 47.05 277 P **P** **23 05 44.8 +4.3**
TOLI2 Tolitoli 47.24 283 P **P** **23 05 41.1 -0.8**
TOLI2 IAmb IAmb 23 07 16.6
comp=Z,210nm,1.4s
PLAI Plampang 47.96 269 P **P** **23 05 47.6 0.0**
comp=Z,12µmcomp=Z,4µmcomp=Z,307nm,1.5s
KLBR Kellerberrin 48.77 239 P **P** **23 05 53.6 0.0**
baz=49,SNR=25
AIN Ainahou 48.81 51 P **P** **23 05 55.3 +1.1**
MLOA Mauna Loa Obse 48.82 50 P **P** **23 05 54.4 -0.1**
TWSI Taliwang, Sumb 48.85 269 P **P** **23 05 54.6 +0.2**
comp=Z,7µmcomp=Z,2µmcomp=Z,116nm,0.8s
HMH Humu'ula Sheep 48.93 50 P **P** **23 05 56.0 +0.7**
BLDU Ballidu 49.46 240 P **P** **23 05 59.0 +0.1**
baz=50,SNR=26
NWAO Narrogin (SRO) 49.49 237 P **P** **23 05 59.5 +0.4**
baz=50,SNR=31
NWAO Narrogin (SRO) 49.49 237 P **P** **23 05 59.0 -0.1**
NWAO pmax pmax
comp=Z,303nm,1.0s
NWAO Narrogin (SRO) 49.49 237 P **P** **23 05 59.0 -0.1**
NWAO IAmb IAmb 23 06 03.3
comp=Z,303nm,0.9s
MORW Morawa 49.77 242 P **P** **23 06 01.7 +0.5**
baz=50,SNR=64
MORW Morawa 49.77 242 P **P** **23 06 01.3 +0.1**
MORW IAmb IAmb 23 06 05.8
comp=Z,317nm,1.0s
MUN Mundaring 50.14 238 P **P** **23 06 04.5 +0.5**
baz=50,SNR=58
DNP Denpasar 50.49 269 P **P** **23 06 11.4 +4.5**
KBKI Kotabaru 50.55 276 P **P** **23 06 10.9 +3.6**
comp=Z,2µmcomp=Z,74nm,0.9s
SRBI Sinaraja 50.58 269 P **P** **23 06 08.0 +0.5**
comp=Z,12µmcomp=Z,4µmcomp=Z,270nm,1.4s
MYLDM Lahad Datu 50.70 287 P **P** **23 06 07.9 -0.5**
MYLDM IAmb IAmb 23 06 52.9
comp=Z,338nm,1.2s
GIRL Giralia 50.74 251 P **P** **23 06 09.0 +0.4**
baz=51,SNR=9.4
JMZ Minamidaito 2 50.97 318 P **P** **23 06 10.0 -0.2**
JAGI Jajag, Banyuwa 51.56 269 P **P** **23 06 13.6 -1.2**
JAGI Jajag, Banyuwa 51.56 269 P **P** **23 06 13.9 -1.0**
comp=Z,11µmcomp=Z,4µmcomp=Z,372nm,1.3s
ABJI Asem Bagus 51.58 270 P **P** **23 06 16.3 +1.3**
comp=Z,10µmcomp=Z,5µmcomp=Z,282nm,1.0s
JHJ2 Mitsune 51.65 331 P **P** **23 06 14.8 -0.3**
BBKI Banjar Baru 51.80 275 P **P** **23 06 18.1 +1.4**
comp=Z,3µmcomp=Z,167nm,1.7s
MTKI Muara Teweh, K 52.34 278 P **P** **23 06 24.4 +3.7**
comp=Z,7µmcomp=Z,41nm,1.6s
TAOE Nuku Hiva Isla 52.51 92 *e*S **S** **23 13 43.9 +1.0**
comp=Z,3µm,24.3s
TAOE *e*LQ LQ 23 19 21.6
comp=Z,11µm,28.0s
TAOE *e*LR LR 23 21 41.0
comp=Z,34µm,30.0s
TAOE Nuku Hiva Isla 52.51 92 P **P** **23 06 23.0 +0.9**
TAOE IAmb IAmb 23 06 52.1
comp=Z,213nm,1.2s
KKM Kota Kinabalu 53.13 287 P **P** **23 06 25.9 -0.8**
JOW Kunigami 53.60 317 PKP2bc 23 37 03.3
comp=Z,6.7nm,0.4s,baz=159,slow=8.5,SNR=2.0
JOW Kunigami 53.60 317 P **P** **23 06 30.3 +0.5**
JYT Yasato 54.08 334 P **P** **23 06 32.9 -0.1**
SZP Santa 54.16 302 P **P** **23 06 33.8 -0.1**
SZP IAmb IAmb 23 07 12.6
comp=Z,466nm,1.8s
JGF Kuroka 54.85 331 P **P** **23 06 38.0 -0.7**
JGF IAmb IAmb 23 06 44.3
comp=Z,222nm,1.1s
PBKI Pangkalan Bun 55.06 275 P P 23 06 45.6 +5.0
JMN Monobe 55.13 327 P **P** **23 06 40.6 -0.1**
UGM Wanagama 55.19 269 P **P** **23 06 41.3 -0.2**
UGM Wanagama 55.19 269 P **P** **23 06 45.9 +4.3**
MJA0 Matsu Arr-Jizo 55.20 332 *e*P **P** **23 06 40.1 -1.1**
MJA0 pmax pmax
comp=Z,182nm,1.1s
JMM Marumori 55.22 335 P **P** **23 06 41.5 +0.3**
MJAR Matsushiro Arr 55.22 332 P **P** **23 06 40.1 -1.1**
comp=Z,182nm,1.1s,baz=167,slow=8.2,SNR=49
MJAR Matsushiro Arr 55.22 332 P **P** **23 06 39.7 -1.6**
MJAR pmax pmax
comp=Z,101nm,1.1s
MJAR Matsushiro Arr 55.22 332 P **P** **23 06 39.7 -1.6**
MJAR IAmb IAmb 23 06 46.3
comp=Z,101nm,1.1s
MAJO Matsushiro 55.22 332 *c i*P **P** **23 06 40.2 -1.1**
MAJO pmax pmax
comp=Z,83nm,1.7s
MAJO Matsushiro 55.22 332 P **P** **23 06 40.5 -0.8**
MAT Matsushiro 55.22 332 P **P** **23 06 40.3 -1.0**
MAT S S 23 14 03.4 -15
SMRI Semarang 55.41 270 P **P** **23 06 43.4 +0.2**
SMRI Semarang 55.41 270 P **P** **23 06 47.5 +4.4**
JSU Suzuyama 55.42 322 P **P** **23 06 43.0 +0.1**
SBUM Sibu 55.81 281 P **P** **23 06 45.9 0.0**
SBUM IAmb IAmb 23 06 51.4
comp=Z,117nm,1.1s
YOJ Yonaguni jima 55.86 311 P **P** **23 06 46.4 +0.3**
YOJ pmax pmax
comp=Z,547nm,1.1s
YOJ Yonaguni jima 55.86 311 P **P** **23 06 46.4 +0.3**
STKI Sintang 55.90 278 P P 23 06 51.6 +5.0
JNU Nakatsue 56.34 324 PKPPKP PKPPKPdf 23 36 45.2
comp=Z,8.7nm,1.0s,baz=57,slow=12,SNR=2.4
JNU PKP2bc 23 37 02.2
comp=Z,11nm,1.1s,baz=204,slow=19,SNR=3.5
JNU Nakatsue 56.34 324 P **P** **23 06 49.2 -0.2**
TWG Pinlang 56.41 308 P **P** **23 06 49.9 -0.1**
TWG IAmb IAmb 23 07 07.2
comp=Z,148nm,1.2s
JSD Sado 56.44 333 P **P** **23 06 49.5 -0.4**
JHS Saijyo 56.50 327 P **P** **23 06 50.4 -0.1**
YULB Yu-li 56.55 309 P **P** **23 06 50.6 -0.4**
YULB IAmb IAmb 23 06 57.2
comp=Z,237nm,1.1s
NACB Ninganchiao 56.76 310 P **P** **23 06 51.5 -1.0**
TPUB Ta-pu 57.01 308 P **P** **23 06 53.5 -0.7**
SSLB Suanglung 57.03 309 P **P** **23 06 53.8 -0.6**
SSLB IAmb IAmb 23 06 58.9
comp=Z,256nm,1.3s
TATO Taipei 57.29 310 P **P** **23 06 56.3 +0.1**
KSM Kuching 57.38 280 P **P** **23 06 56.6 -0.5**
KSM IAmb IAmb 23 07 02.5
comp=Z,163nm,1.2s
JCJI Jatiwangi 57.63 270 P **P** **23 07 03.0 +4.1**

CISI Cisompet, Garu 57.90 269 P **P** **23 06 59.6 -1.2**
CISI Cisompet, Garu 57.90 269 P **P** **23 07 00.5 -0.3**
comp=Z,10µmcomp=Z,5µmcomp=Z,362nm,1.0s
ERM Erimo 57.95 340 *c i*P **P** **23 07 00.2 -0.3**
ERM pmax pmax
comp=Z,13nm,0.5s
ERM Erimo 57.95 340 P **P** **23 07 00.7 +0.2**
ERM IAmb IAmb 23 07 06.0
comp=Z,56nm,0.7s
JTU Tsushima 58.20 324 P **P** **23 07 02.1 -0.3**
JTU IAmb IAmb 23 07 08.9
comp=Z,217nm,0.8s
LEM Lembang 58.21 269 S **S** **23 15 00.9 +1.8**
comp=Z,8.6nm,0.4s,baz=145,slow=23,SNR=1.5
LEM LR LR 23 34 50.0
comp=Z,2µm,18.9s,baz=97,slow=39
YUK Yuzh-Kuril'sk 58.92 343 *c i*P **P** **23 07 06.2 -1.0**
YUK *e*S **S** **23 15 05.2 -1.6**
YUK *e*SS **SS** **23 19 01.3 -0.8**
YUK *e*SSS SSS 23 21 22.6
YUK pmax pmax
comp=Z,277nm,1.2s
YUK pmax pmax
comp=Z,403nm,2.2s
CBJI Citeko 59.03 270 P **P** **23 07 11.4 +2.8**
JEW Eniwo 59.27 339 P **P** **23 07 09.6 -0.1**
JEW IAmb IAmb 23 07 20.2
comp=Z,177nm,1.1s
QZH Quanzhou 59.46 309 ⇑ *i*P **P** **23 07 11.8 +0.5**
QZH pP **pP** **23 07 29.3 -2.5**
QZH S **S** **23 15 16.0 +1.6**
QZH pmax pmax
comp=Z,220nm,1.4s
QZH pmax pmax
comp=Z,2µm,3.0s
QZH LR LR
comp=Z,4µm,20.4s
QZH LR LR
comp=Z,2µm,20.4s
QZH LR LR
comp=Z,6µm,36.0s
KUR Kuril'sk 59.48 345 ⇑ *i*P **P** **23 07 11.9 +0.9**
KUR *i* PPP PPP 23 10 49.5
KUR *i* S **S** **23 15 13.2 -0.8**
KUR pmax pmax
comp=Z,1µm,3.1s
KUR pmax pmax
comp=E,86nm,1.3s
KUR pmax pmax
comp=Z,332nm,1.3s
KUR pmax pmax
comp=N,73nm,1.2s
XMIS Christmas Isla 59.57 265 P **P** **23 07 12.1 -0.3**
JKA Kamikawa-asahi 60.01 340 P **P** **23 07 14.6 -0.1**
JKA IAmb IAmb 23 07 20.2
comp=Z,209nm,1.0s
ASAJ Asahikawa 60.01 340 PKP2bc P'P'df 23 36 52.0 +14
comp=Z,6.6nm,0.9s,baz=240,slow=3.5,SNR=3.9
ASAJ Asahikawa 60.01 340 P **P** **23 07 14.6 -0.1**
ASAJ pmax pmax
comp=Z,209nm,1.0s
PPBI Pangkal Pinang 60.57 274 P **P** **23 07 20.1 +0.9**
comp=Z,12µmcomp=Z,6µmcomp=Z,198nm,1.6s
TJN Taejon 60.69 324 *c i*P **P** **23 07 18.6 -0.9**
SSE Sheshan 61.10 316 P **P** **23 07 22.6 +0.2**
SSE sP **pwP** **23 07 48.4 +1.9**
SSE S **S** **23 15 36.8 +1.6**
SSE pmax pmax
comp=Z,65nm,0.7s
SSE pmax pmax
comp=Z,1.0nm,2.9s
SSE LR LR
comp=Z,710nm,22.0s
SSE Sheshan 61.10 316 P **P** **23 07 22.1 -0.3**
KSRS Korea Array 61.14 325 P **P** **23 07 23.2 +0.7**
comp=Z,175nm,0.9s,baz=136,slow=7.0,SNR=57
KSRS PcP **PcP** **23 08 07.8 +3.1**
comp=Z,35nm,1.0s,baz=147,slow=5.0,SNR=4.2
KSRS PKP2ab 23 36 56.5
comp=Z,1.1nm,0.7s,baz=334,slow=2.9,SNR=7.6
KSRS Korea Array 61.14 325 *e*P **P** **23 07 22.8 +0.3**
KSRS pmax pmax
comp=Z,175nm,0.9s
KSAR Wonju Array Be 61.15 325 P **P** **23 07 22.6 0.0**
KSAR Wonju Array Be 61.15 325 P **P** **23 07 22.6 0.0**
KS19 Wonju Array Si 61.20 326 P **P** **23 07 22.9 -0.1**
KASI Kota Agung 61.50 270 P **P** **23 07 25.2 -0.3**
comp=Z,8µmcomp=Z,3µmcomp=Z,276nm,1.2s
HKC Hong Kong Obse 61.62 304 ⇑ P **P** **23 07 28.0 +1.9**
PMBI Palembang 61.74 273 P **P** **23 07 27.4 +0.3**
INCN Inchon 61.88 325 P **P** **23 07 27.4 -0.2**
INCN pmax pmax
comp=Z,675nm,1.3s
INCN Inchon 61.88 325 P **P** **23 07 27.4 -0.2**
INCN Inchon 61.88 325 P **P** **23 07 31.7 +4.1**
INCN P **P** **23 07 31.7 +4.1**
LWLI Liwa 62.02 271 P **P** **23 07 32.1 +3.0**
comp=Z,5µmcomp=Z,133nm,0.9s
DLV T Lat 62.32 290 P **P** **23 07 31.4 +0.2**
DLV IAmb IAmb 23 07 36.6
comp=Z,542nm,1.9s
YSS Yuzh-Sakhalins 62.49 342 *α i*P **P** **23 07 31.8 +0.4**
YSS *e*S **S** **23 15 46.1 -6.1**
YSS *e*SS **SS** **23 20 05.5 +7.5**
YSS pmax pmax
comp=Z,1µm,5.7s
YSS pmax pmax
comp=Z,240nm,1.1s
YSS Yuzh-Sakhalins 62.49 342 P **P** **23 07 31.6 +0.2**
YSS IAmb IAmb 23 07 37.1
comp=Z,311nm,1.1s
GZH Guangzhou 62.66 304 P **P** **23 07 34.6 +1.6**
GZH sP **sP** **23 08 02.6 +0.8**
GZH S **S** **23 15 57.8 +2.6**
GZH pmax pmax
comp=Z,2µm,3.1s
LHSI Lahat 62.78 272 P **P** **23 07 36.9 +2.9**
comp=Z,125nm,2.0s
TEY Ternei 62.96 337 *e*P **P** **23 07 31.4 -3.1**
TEY pmax pmax
comp=N,30nm,1.2s
TEY pmax pmax
comp=E,20nm,1.2s
TEY pmax pmax
comp=Z,60nm,1.2s
TEY pmax pmax
comp=Z,400nm,2.6s
JMBI JAMBI 63.12 274 P P 23 07 42.4 +6.1
NJ2 Nanjing 63.26 315 ⇑ *i*P **P** **23 07 37.5 +0.7**
NJ2 pP **pP** **23 07 57.6 +0.2**
NJ2 S **S** **23 16 04.6 +2.2**
NJ2 sS **sS** **23 16 38.1 +0.8**
NJ2 ScS **ScS** **23 17 23.4 +1.0**
NJ2 pmax pmax
comp=Z,120nm,0.9s
NJ2 pmax pmax
comp=Z,2µm,3.5s
NJ2 LR LR
comp=Z,3µm,21.1s
NJ2 LR LR
comp=Z,2µm,22.6s
NJ2 LR LR
comp=Z,6µm,21.6s
MSHR Mys Shultsa 63.31 331 *c i*P **P** **23 07 35.8 -1.1**
MSHR pmax pmax
comp=Z,30nm,0.7s
MYKOM Kota Tinggi 63.71 278 P **P** **23 07 39.9 -0.2**
MYKOM IAmb IAmb 23 07 45.5
comp=Z,107nm,1.0s
QIZ Qiongzhong 63.81 298 P **P** **23 07 41.4 +0.7**
QIZ pP **pP** **23 07 58.1 -2.7**
QIZ sP **pwP** **23 08 06.9 +0.5**
QIZ S **S** **23 16 08.3 -1.3**
QIZ sS **sS** **23 16 45.0 +1.7**
QIZ SS **SS** **23 20 23.5 +4.1**
QIZ pmax pmax
comp=Z,33nm,1.1s
QIZ pmax pmax
comp=Z,1µm,2.9s
QIZ LR LR
comp=Z,2µm,25.0s
QIZ LR LR
comp=Z,2µm,24.0s
QIZ LR LR
comp=Z,5µm,25.7s

QIZ	**Qiongzhong**	**63.81**	**298**	P	**P**	**23 07 40.3**	**-0.4**
QIZ				IAmb	IAmb	23 07 46.7	
	comp=Z,454nm,1.5s						
USA0B	**Ussuriysk Arra**	**64.19**	**333***c*	*i*P	**P**	**23 07 41.8**	**-0.9**
USA0B	**Ussuriysk Arra**	**64.19**	**333**	P	**P**	**23 07 42.2**	**-0.5**
USRK	**Ussuriysk Ar.**	**64.19**	**333**	P	**P**	**23 07 43.6**	**+0.9**
	comp=Z,245nm,0.9s,baz=128,slow=6.2,SNR=41						
USRK				PKP2ab		23 36 44.0	
	comp=Z,1.7nm,0.8s,baz=268,slow=5.7,SNR=5.5						
USRK	**Ussuriysk Ar.**	**64.19**	**333**	P	**P**	**23 07 42.9**	**+0.2**
USRK	**Ussuriysk Ar.**	**64.19**	**333**	P	**P**	**23 07 42.9**	**+0.2**
RGRI	**Rengat**	**64.68**	**275**	P	P	23 07 51.7	+5.2
PET	**Petropavlovsk**	**65.19**	**355***c*	*i*P	**P**	**23 07 50.4**	**+1.4**
PET				*e**SP	**sP**	**23 08 19.5**	**+0.1**
PET				*e*		23 10 17.1	
PET				*e*S	**S**	**23 16 26.8**	**+1.4**
PET				pmax	pmax		
	comp=Z,4µm,17.2s						
ADK	**Adak**	**65.35**	**11**	P	**P**	**23 07 50.5**	**+0.4**
ADK				pmax	pmax		
	comp=Z,172nm,1.4s						
ADK	**Adak**	**65.35**	**11**	P	**P**	**23 07 50.5**	**+0.4**
ADK				IAmb	IAmb	23 08 32.6	
	comp=Z,172nm,1.4s						
PEA0B	**Petropavlovsk-**	**65.37**	**354**	*i* P	**P**	**23 07 51.1**	**+0.9**
PETK	**Petropavlovsk-**	**65.37**	**354**	P	**P**	**23 07 50.2**	**0.0**
	comp=Z,15nm,0.7s,baz=130,slow=8.0,SNR=8.3						
PETK				LR	LR	23 30 43.6	
	comp=Z,3µm,21.6s,baz=168,slow=31						
PETK	**Petropavlovsk-**	**65.37**	**354**	P	**P**	**23 07 51.0**	**+0.8**
PETK	**Petropavlovsk-**	**65.37**	**354**	P	**P**	**23 07 51.0**	**+0.8**
VNDA	**Vanda**	**65.47**	**181**	P	**P**	**23 07 51.2**	**+0.7**
	comp=Z,63nm,0.7s,baz=347,slow=7.4,SNR=59						
VNDA				LR	LR	23 34 01.4	
	comp=Z,3µm,18.4s,baz=9.5,slow=34						
VNDA				PKP2bc		23 36 35.9	
	comp=Z,0.7nm,0.5s,baz=241,slow=9.2,SNR=4.5						
VNDA	**Vanda**	**65.47**	**181**	P	**P**	**23 07 51.1**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,576nm,1.5s						
VNDA	**Vanda**	**65.47**	**181**	P	**P**	**23 07 51.1**	**+0.5**
VNDA				IAmb	IAmb	23 07 55.2	
	comp=Z,576nm,1.4s						
MDJ	**Mudanjiang**	**65.60**	**332**	P	**P**	**23 07 52.4**	**+0.6**
MDJ				PcP	**PcP**	**23 08 23.5**	**+0.7**
MDJ				S	**S**	**23 16 34.4**	**+3.6**
MDJ				pmax	pmax		
	comp=Z,390nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,2µm,9.7s						
MDJ				LR	LR		
	comp=Z,3µm,26.3s						
MDJ				LR	LR		
	comp=Z,3µm,22.1s						
MDJ				LR	LR		
	comp=Z,8µm,34.9s						
MDJ	**Mudanjiang**	**65.60**	**332**	P	**P**	**23 07 52.3**	**+0.4**
WHN	**Wuhan**	**65.62**	**312**⇑	*i*P	**P**	**23 07 52.5**	**+0.3**
WHN				sP	**pwP**	**23 08 17.8**	**+1.0**
WHN				S	**S**	**23 16 30.5**	**-1.0**
WHN				sS	**sS**	**23 17 06.6**	**+0.7**
WHN				pmax	pmax		
	comp=Z,3µm,3.5s						
WHN				LR	LR		
	comp=Z,6µm,20.2s						
WHN				LR	LR		
	comp=Z,3µm,17.7s						
WHN				LR	LR		
	comp=Z,16µm,27.2s						
CASY	**Casey**	**65.68**	**202**	P	**P**	**23 07 52.0**	**0.0**
CASY				IAmb	IAmb	23 07 56.0	
	comp=Z,420nm,1.1s						
DL2	**Dalian**	**65.74**	**323**⇑	*i*P	**P**	**23 07 53.3**	**+0.5**
DL2				pP	**pwP**	**23 08 17.8**	**+1.8**
DL2				S	**S**	**23 16 33.8**	**+1.1**
DL2				pmax	pmax		
	comp=Z,670nm,0.8s						
DL2				pmax	pmax		
	comp=Z,840nm,4.1s						
DL2				LR	LR		
	comp=Z,2µm,30.3s						
DL2				LR	LR		
	comp=Z,2µm,34.1s						
DL2				LR	LR		
	comp=Z,5µm,35.3s						
SBA	**Scott Base**	**65.77**	**180**	P	**P**	**23 07 53.2**	**+0.8**
SBA				pmax	pmax		
	comp=Z,1µm,1.6s						
SBA	**Scott Base**	**65.77**	**180**	P	**P**	**23 07 53.2**	**+0.8**
BKNI	**Bangkinang**	**66.09**	**276**	P	**P**	**23 07 55.1**	**-0.6**
BKNI	**Bangkinang**	**66.09**	**276**	P	**P**	**23 07 56.5**	**+0.8**
	comp=Z,14µmcomp=Z,8µmcomp=Z,909nm,0.9s						
UBPT	**Khong Chiam**	**66.23**	**293**	P	**P**	**23 07 57.8**	**+1.3**
UBPT	**Khong Chiam**	**66.23**	**293**	P	**P**	**23 07 56.5**	**0.0**
UBPT				IAmb	IAmb	23 08 02.0	
	comp=Z,164nm,1.1s						
SNY	**Shenyang**	**66.59**	**326**	⇑P	**P**	**23 07 58.0**	**-0.2**
SNY				S	**S**	**23 16 45.1**	**+2.2**
SNY				pmax	pmax		
	comp=Z,2µm,11.2s						
SNY				LR	LR		
	comp=Z,2µm,22.4s						
SNY				LR	LR		
	comp=Z,2µm,22.4s						
SNY				LR	LR		
	comp=Z,4µm,29.6s						
TIA	**Tai'an**	**66.87**	**318**	P	**P**	**23 07 59.8**	**-0.3**
TIA				S	**S**	**23 16 46.3**	**-0.2**
TIA				pmax	pmax		
	comp=Z,42nm,1.0s						
TIA				pmax	pmax		
	comp=Z,1µm,3.9s						
TIA				LR	LR		
	comp=Z,3µm,26.9s						
TIA				LR	LR		
	comp=Z,4µm,24.9s						
TIA				LR	LR		
	comp=Z,8µm,27.9s						
CN2	**Changchun**	**67.00**	**329**	*e*P	**P**	**23 08 00.1**	**-0.7**
CN2				*e*PP	**PP**	**23 10 30.9**	**+1.3**
CN2				*e*S	**S**	**23 16 41.9**	**-5.9**
CN2				pmax	pmax		
	comp=Z,480nm,0.9s						
CN2				pmax	pmax		
	comp=Z,270nm,4.0s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
CN2				LR	LR		
	comp=Z,2µm,22.0s						
CN2				LR	LR		
	comp=Z,5µm,23.0s						
IPM	**Ipoh**	**67.11**	**280**	P	**P**	**23 08 01.6**	**-0.6**
MNSI	**Mandailing Nat**	**67.62**	**276**	P	**P**	**23 08 04.8**	**-0.6**
	comp=Z,10µmcomp=Z,3µmcomp=Z,392nm,0.9s						
KULM	**Kulim**	**67.69**	**281**	P	**P**	**23 08 05.0**	**-0.7**
KULM				IAmb	IAmb	23 08 11.5	
	comp=Z,185nm,1.0s						
GRNR	**Gornyy**	**67.86**	**340**⇑	*i*P	**P**	**23 08 09.6**	**+3.5**
GRNR				*e*S	**S**	**23 17 05.5**	**+7.7**
GRNR				pmax	pmax		
	comp=N,20nm,1.2s						
GRNR				pmax	pmax		
	comp=E,20nm,1.2s						
GRNR				pmax	pmax		
	comp=Z,50nm,1.1s						
GRNR				smax	smax		
	comp=N,8.0nm,0.9s						
COCO	**West Island**	**67.90**	**262**	P	**P**	**23 08 06.6**	**-0.5**
COCO				pmax	pmax		
	comp=Z,484nm,1.5s						
COCO	**West Island**	**67.90**	**262**	P	**P**	**23 08 06.6**	**-0.5**
COCO				IAmb	IAmb	23 08 12.9	
	comp=Z,484nm,1.5s						
NIKH	**Nikolski High**	**68.16**	**16**	P		23 08 08.1	
	baz=206						
KLR	**Kul'dur**	**68.29**	**336**	PKiKP	**PKiKP**	**23 14 31.0**	**+1.6**
	comp=Z,2.7nm,0.9s,baz=45,slow=2.9,SNR=2.5						
KLR				PKP2bc		23 36 21.6	
	comp=Z,4.5nm,1.1s,baz=302,slow=1.8,SNR=7.9						
KLR	**Kul'dur**	**68.29**	**336***c*	*i*P	**P**	**23 08 07.5**	**-1.3**
KLR				pmax	pmax		
	comp=Z,18nm,0.9s						
NKL	**Nikolayevsk**	**68.63**	**344**	*e*P	**P**	**23 08 10.7**	**-0.1**
NKL				pmax	pmax		
	comp=E,63nm,1.2s						
NKL				pmax	pmax		
	comp=N,424nm,1.0s						
NKL				pmax	pmax		
	comp=Z,127nm,0.9s						
RPSI	**Rantau Prapat**	**68.70**	**278**	P	**P**	**23 08 11.4**	**-0.7**
RPSI				IAmb	IAmb	23 08 16.3	
	comp=Z,297nm,0.9s						
PSI	**Prapat**	**68.73**	**278**	S	**S**	**23 17 08.4**	**-1.4**
	comp=Z,2.1nm,0.4s,baz=0.1,slow=23,SNR=1.5						
PSI	**Prapat**	**68.73**	**278**	P	**P**	**23 08 11.4**	**-1.0**
PSI				pmax	pmax		
	comp=Z,297nm,0.9s						
KHON	**Khomkaen**	**68.99**	**293**	P	**P**	**23 08 15.4**	**+1.6**
	comp=Z,302nm,1.0s						
KHON	**Khomkaen**	**68.99**	**293**	P	**P**	**23 08 15.4**	**+1.6**
ENH	**Enshi**	**69.11**	**309**	P	**P**	**23 08 13.9**	**-0.4**
TSI	**Tuntungan**	**69.24**	**278**	P	**P**	**23 08 16.2**	**+0.7**
	comp=Z,10µmcomp=Z,6µmcomp=Z,799nm,0.9s						
NONG	**Nongkai**	**69.30**	**295**	P	**P**	**23 08 16.2**	**+0.4**
	comp=Z,23µmcomp=Z,609nm,0.9s						
NONG	**Nongkai**	**69.30**	**295**	P	**P**	**23 08 16.2**	**+0.4**
GYA	**Guiyang**	**69.60**	**304**	⇑P	**P**	**23 08 18.1**	**+0.5**
GYA				pP	pP	23 08 38.4	-0.1
GYA				PcP	**pwP**	**23 08 41.8**	**-0.2**
GYA				PP	**PP**	**23 10 53.0**	**+0.4**
GYA				S	**S**	**23 17 17.8**	**-1.8**
GYA				SS	**SS**	**23 21 45.8**	**-3.5**
GYA				pmax	pmax		
	comp=Z,250nm,3.5s						
CHAI	**Chaiyaphum**	**69.60**	**292**	P	**P**	**23 08 17.9**	**+0.3**
PATY	**Pattaya**	**69.67**	**289**	P	**P**	**23 08 20.6**	**+2.5**
	comp=Z,4µmcomp=Z,445nm,0.9s						
PATY	**Pattaya**	**69.67**	**289**	P	**P**	**23 08 20.6**	**+2.5**
	comp=Z,4µmcomp=Z,445nm,0.9s						
GSI	**Gunungsitoli**	**69.68**	**276**	P	**P**	**23 08 17.6**	**-0.6**
GSI	**Gunungsitoli**	**69.68**	**276**	P	**P**	**23 08 18.6**	**+0.4**
	comp=Z,13µmcomp=Z,5µmcomp=Z,564nm,0.9s						
BJT	**Baijiatuao**	**69.73**	**321**	P	**P**	**23 08 18.0**	**+0.1**
BJT				pmax	pmax		
	comp=Z,484nm,1.2s						
BJT	**Baijiatuao**	**69.73**	**321**	P	**P**	**23 08 18.0**	**+0.1**
BJT				IAmb	IAmb	23 08 23.5	
	comp=Z,484nm,1.2s						
BJI	**Beijing**	**69.74**	**321**	P	**P**	**23 08 18.3**	**+0.3**
BJI				PcP	**PcP**	**23 08 41.9**	**+1.7**
BJI				S	**S**	**23 17 22.3**	**+1.9**
BJI				ScS	**ScS**	**23 18 13.4**	**+1.1**
BJI				pmax	pmax		
	comp=Z,360nm,1.0s						
BJI				LR	LR		
	comp=Z,4µm,23.9s						
BJI				LR	LR		
	comp=Z,3µm,24.5s						
BJI				LR	LR		
	comp=Z,11µm,31.2s						
SLVN	**Son La**	**69.83**	**298**	P	**P**	**23 08 19.1**	**0.0**
SLVN				IAmb	IAmb	23 08 25.1	
	comp=Z,410nm,1.5s						
SURT	**Suratani**	**70.45**	**284**	P	P	23 08 28.1	+5.3
	comp=Z,55nmcomp=Z,6.4nm,1.1s						
TPTI		**70.53**	**278**	P	**P**	**23 08 26.3**	**+2.9**
	comp=Z,1µmcomp=Z,71nm,0.9s						
PKDT	**Phuket**	**70.59**	**283**	P	**P**	**23 08 26.0**	**+2.3**
	comp=Z,3µmcomp=Z,182nm,1.4s						
PHET	**Kaeng Krachan**	**70.81**	**288**	P	**P**	**23 08 27.6**	**+2.6**
	comp=Z,2µmcomp=Z,202nm,1.2s						
PHET	**Kaeng Krachan**	**70.81**	**288**	P	**P**	**23 08 27.6**	**+2.6**
TIY	**Taiyuan**	**70.81**	**317**	*e*P	**P**	**23 08 25.6**	**+0.9**
TIY				pP	**pP**	**23 08 46.8**	**+0.8**
TIY				S	**S**	**23 17 32.3**	**-0.9**
TIY				sS	**sS**	**23 18 10.8**	**+2.7**
TIY				LR	LR		
	comp=Z,10µm,43.1s						
LHMI	**Lhok Sumawe**	**71.23**	**280**	P	**P**	**23 08 32.3**	**+4.7**
XAN	**Xi'an**	**71.35**	**312**	P	**P**	**23 08 28.6**	**+0.6**
XAN				S	**S**	**23 17 35.4**	**-4.2**
XAN				pmax	pmax		
	comp=Z,580nm,1.3s						
XAN				pmax	pmax		
	comp=Z,3µm,3.6s						
XAN				LR	LR		
	comp=Z,2µm,23.9s						
XAN				LR	LR		
	comp=Z,3µm,30.4s						
XAN				LR	LR		
	comp=Z,7µm,31.4s						
XAN	**Xi'an**	**71.35**	**312**	P	**P**	**23 08 28.1**	**+0.1**
XAN				pmax	pmax		
	comp=Z,537nm,1.1s						
XAN	**Xi'an**	**71.35**	**312**	P	**P**	**23 08 28.1**	**+0.1**
FALS	**False Pass**	**71.36**	**18**	P		23 08 27.7	
	baz=211						
UTTA	**Uttaradit**	**71.51**	**293**	P	**P**	**23 08 30.0**	**+0.8**
	comp=Z,2µmcomp=Z,223nm,1.0s						
UTTA	**Uttaradit**	**71.51**	**293**	P	**P**	**23 08 30.0**	**+0.8**
SRDT	**SRDT**	**71.72**	**290**	P	**P**	**23 08 31.9**	**+1.4**
	comp=Z,118nm,1.1s						
SRDT	**SRDT**	**71.72**	**290**	P	**P**	**23 08 31.9**	**+1.4**
UTHA	**Uthaitani**	**71.80**	**291**	P	**P**	**23 08 32.2**	**+1.2**
	comp=Z,3µmcomp=Z,292nm,1.0s						
SUKH	**Sukhothai**	**72.25**	**293**	P	**P**	**23 08 34.6**	**+1.0**
	comp=Z,3µmcomp=Z,366nm,0.8s						
KMI	**Kunming**	**72.28**	**301**	⇑P	**P**	**23 08 35.4**	**+1.4**
KMI				pP	pP	23 08 53.8	-1.3
KMI				sP	sP	23 09 01.6	-2.4
KMI				PP	**PP**	**23 11 13.8**	**-2.0**
KMI				S	**S**	**23 17 52.4**	**+1.5**
KMI				sS	sS	23 18 24.6	+0.5
KMI				SKS	**SKSac**	**23 18 31.1**	**-0.4**
KMI				SS	**SS**	**23 22 25.5**	**-5.2**
KMI				pmax	pmax		
	comp=Z,480nm,1.2s						
KMI				pmax	pmax		
	comp=Z,2µm,3.7s						
KMI				LR	LR		
	comp=Z,1µm,17.2s						
KMI				LR	LR		
	comp=Z,2µm,21.0s						
KMI				LR	LR		
	comp=Z,4µm,26.3s						
KMI	**Kunming**	**72.28**	**301**	P	**P**	**23 08 35.1**	**+1.1**
KMI				pmax	pmax		
	comp=Z,628nm,1.2s						
KMI	**Kunming**	**72.28**	**301**	P	**P**	**23 08 35.1**	**+1.1**
KHLT	**Khaolaem Dam**	**72.35**	**290**	P	**P**	**23 08 35.4**	**+1.1**
	comp=Z,1µmcomp=Z,69nm,1.2s						
KHLT	**Khaolaem Dam**	**72.35**	**290**	P	**P**	**23 08 35.4**	**+1.1**
MA2	**Magadan**	**72.53**	**352**	LR	LR	23 34 42.5	
	comp=Z,4µm,22.0s,baz=170,slow=31						
MA2	**Magadan**	**72.53**	**352**	*i* P	**P**	**23 08 35.9**	**+1.5**
MA2				pmax	pmax		
	comp=Z,126nm,2.3s						
MA2	**Magadan**	**72.53**	**352**	P	**P**	**23 08 33.8**	**-0.7**
UMPA	**Umpang Tak**	**72.54**	**291**	P	**P**	**23 08 37.1**	**+1.7**
	comp=Z,3µmcomp=Z,197nm,0.7s						
LAMP	**Lampang**	**72.59**	**294**	P	P	23 08 27.0	-8.7
	comp=Z,6µmcomp=Z,838nm,0.8s						
SDPT	**Sand Point**	**72.69**	**19**	P		23 08 36.1	
	baz=214						
CM35	**Chiang Mai Arr**	**73.07**	**294**	P	**P**	**23 08 39.0**	**+0.5**
HHC	**Hu-ho-hao-te**	**73.09**	**320**	*e*P	**P**	**23 08 39.4**	**+1.1**
HHC				pP	PcP	23 08 56.8	+2.2
HHC				sP	sP	23 09 08.6	-0.1
HHC				S	**S**	**23 17 58.8**	**-0.5**
HHC				sS	sS	23 18 32.8	-1.9
HHC				SS	**SS**	**23 22 44.9**	**+2.6**
HHC				pmax	pmax		
	comp=Z,310nm,0.9s						
HHC				LR	LR		
	comp=Z,3µm,17.9s						
HHC				LR	LR		
	comp=Z,4µm,16.2s						
HHC				LR	LR		
	comp=Z,9µm,19.6s						
CM34	**Chiang Mai Arr**	**73.13**	**294**	P	**P**	**23 08 39.0**	**+0.1**
CM04	**Chiang Mai Arr**	**73.14**	**294**	P	**P**	**23 08 40.0**	**+1.1**
	comp=Z,3µmcomp=Z,342nm,0.9s						
CM09	**Chiang Mai Arr**	**73.14**	**294**	P	**P**	**23 08 40.2**	**+1.3**
	comp=Z,2µmcomp=Z,331nm,0.9s						
CM01	**Chiang Mai Arr**	**73.16**	**294**	P	**P**	**23 08 40.3**	**+1.2**
	comp=Z,3µmcomp=Z,326nm,0.8s						
CM05	**Chiang Mai Arr**	**73.17**	**294**	P	**P**	**23 08 40.2**	**+1.2**
	comp=Z,2µmcomp=Z,231nm,1.0s						
CM02	**Chiang Mai Arr**	**73.18**	**294**	P	**P**	**23 08 40.0**	**+0.9**
	comp=Z,85nmcomp=Z,2µmcomp=Z,275nm,0.9s						
CM31	**Chiang Mai Arr**	**73.19**	**294**	P	**P**	**23 08 40.4**	**+1.2**
	comp=Z,67µmcomp=Z,8µm,0.9s						
CM31	**Chiang Mai Arr**	**73.19**	**294**	P	**P**	**23 08 40.0**	**+0.7**
CM31				IAmb	IAmb	23 08 45.1	
	comp=Z,284nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.19**	**294**	P	**P**	**23 08 40.4**	**+1.1**
	comp=Z,155nm,0.8s,baz=121,slow=4.8,SNR=110						
CMAR				PKiKP	**PKiKP**	**23 14 38.9**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=267,slow=4.4,SNR=4.8						
CMAR				S	**S**	**23 17 58.0**	**-3.0**
	comp=Z,1.0nm,0.3s,baz=129,slow=8.5,SNR=4.0						
CMAR	**Chiang Mai Arr**	**73.19**	**294**	*e*P	**P**	**23 08 40.3**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,167nm,0.8s						
CMAR	**Chiang Mai Arr**	**73.19**	**294**	P	**P**	**23 08 39.8**	**+0.6**
CM15	**Chiang Mai Arr**	**73.20**	**294**	P	**P**	**23 08 40.5**	**+1.2**
	comp=Z,2µmcomp=Z,305nm,0.9s						
CM13	**Chiang Mai Arr**	**73.21**	**294**	P	**P**	**23 08 40.5**	**+1.1**
	comp=Z,2µmcomp=Z,276nm,0.9s						
CMMT	**Chiang Mai**	**73.30**	**294**	P	**P**	**23 08 39.4**	**-0.4**
	comp=Z,2µmcomp=Z,148nm,1.1s						
CM33	**Chiang Mai Arr**	**73.30**	**294**	P	**P**	**23 08 40.0**	**+0.1**
CHTO	**Chiang Mai**	**73.30**	**294**	P	**P**	**23 08 40.0**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,437nm,1.4s						
CHTO	**Chiang Mai**	**73.30**	**294**	P	**P**	**23 08 40.0**	**+0.1**
CHTO				IAmb	IAmb	23 08 45.4	
	comp=Z,437nm,1.4s						
CM32	**Chiang Mai Arr**	**73.34**	**294**	P	**P**	**23 08 41.0**	**+0.9**
ZEA	**Zeya**	**73.58**	**337**	*e*P	**P**	**23 08 41.5**	**+0.8**
ZEA				*e*S	**S**	**23 18 06.6**	**+2.6**
ZEA				pmax	pmax		
	comp=E,40nm,0.9s						
ZEA				pmax	pmax		
	comp=N,140nm,1.1s						
ZEA				pmax	pmax		
	comp=Z,190nm,1.2s						
ZEA				smax	smax		
	comp=E,600nm,15.5s						
ZEA				smax	smax		
	comp=N,2µm,17.0s						
HIA	**Hailar**	**73.63**	**330**	P	**P**	**23 08 41.3**	**+0.1**
HIA				pmax	pmax		
	comp=Z,338nm,1.0s						
HIA	**Hailar**	**73.63**	**330**	P	**P**	**23 08 41.3**	**+0.1**
HIA				IAmb	IAmb	23 08 46.5	
	comp=Z,338nm,1.0s						
CD2	**Chengdu**	**73.80**	**307**	⇑P	**P**	**23 08 43.3**	**+0.7**
CD2				S	**S**	**23 18 07.5**	**-0.2**
CD2				sS	ScS	23 18 45.5	+0.3
CD2				SS	**SS**	**23 22 52.8**	**-0.7**
CD2				pmax	pmax		
	comp=Z,730nm,1.1s						
CD2				pmax	pmax		
	comp=Z,3µm,11.7s						
CD2				LR	LR		
	comp=Z,2µm,23.0s						
CD2				LR	LR		
	comp=Z,3µm,23.5s						
CD2				LR	LR		
	comp=Z,4µm,24.2s						
BTO	**Baotou**	**73.94**	**319**	*e*P	**P**	**23 08 45.0**	**+1.7**
BTO				S	**SKiKP**	**23 18 02.8**	**-1.3**
BTO				pmax	pmax		
	comp=Z,350nm,1.8s						
BTO				LR	LR		
	comp=Z,14µm,27.0s						
BTO				LR	LR		
	comp=Z,11µm,26.5s						
MHMT	**Maesarieng**	**74.01**	**293**	P	**P**	**23 08 44.4**	**+0.4**
	comp=Z,3µmcomp=Z,302nm,1.1s						
SEY	**Seymchan**	**75.58**	**353**	LR	LR	23 37 51.2	
	comp=Z,5µm,21.4s,baz=159,slow=32						
SEY	**Seymchan**	**75.58**	**353**	*i* P	**P**	**23 08 53.7**	**+1.6**
SII	**Sitkinak Islan**	**75.78**	**21**	P		23 08 54.2	
	baz=220						
LZH	**Lanzhou**	**75.99**	**312**	⇑P	**P**	**23 08 57.0**	**+1.7**
LZH				pP	pP	23 09 17.0	+0.7
LZH				sP	sP	23 09 25.8	+0.7
LZH				S	**S**	**23 18 33.0**	**+1.0**
LZH				SS	**SS**	**23 23 24.9**	**-1.8**
LZH				pmax	pmax		
	comp=Z,170nm,1.2s						
LZH				pmax	pmax		
	comp=Z,2µm,8.7s						
LZH				LR	LR		
	comp=Z,2µm,21.7s						
LZH				LR	LR		
	comp=Z,2µm,20.1s						
LZH				LR	LR		
	comp=Z,3µm,20.6s						
OHAK	**Old Harbor**	**76.60**	**21**	P		23 08 58.9	
	baz=220						
PBA	**Port Blair**	**76.91**	**285**	*e*P	P	23 09 01.9	+1.3
PBA				IAmb	IAmb	23 09 12.2	
	comp=Z,84nm,0.8s						
PBA	**Port Blair**	**76.91**	**285**	P	P	23 09 00.1	-0.5
DGPR	**DIGLIPUR**	**77.14**	**287**	*e*P	**P**	**23 09 02.6**	**+0.7**
DGPR				IAmb	IAmb	23 09 09.9	
	comp=Z,193nm,1.1s						
GAMB	**Gambell**	**77.46**	**10**	P		23 09 02.0	
	baz=202,SNR=23						
GAMB	**Gambell**	**77.46**	**10**	P	**P**	**23 09 02.3**	**-0.4**
QSPA	**South Pole Qui**	**77.93**	**180**	P	**P**	**23 09 05.6**	**0.0**
QSPA				IAmb	IAmb	23 09 09.1	
	comp=Z,558nm,1.4s						
CIT	**Chita**	**78.42**	**330**	*e*P	**P**	**23 09 08.7**	**+0.3**
CIT				*e*		23 12 00.2	
CIT				*e*		23 18 59.7	
CIT				pmax	pmax		
	comp=Z,1µm,2.1s						
HOM	**Homer**	**79.01**	**20**	P		23 09 11.0	
	baz=222						
RSO	**Redoubt South**	**79.26**	**19**	P	**P**	**23 09 13.3**	**+0.3**
YAK	**Yakutsk**	**79.29**	**343***c*	*i*P	**P**	**23 09 12.7**	**-0.1**
YAK				*e*		**23 09 20.1**	
YAK				*e**PP	**pP**	**23 09 34.1**	**-0.5**
YAK				*e*		23 12 13.5	
YAK				*e*PPP	PPP	23 14 05.3	
YAK				*e*S	**S**	**23 19 06.2**	**+0.1**
YAK				*e*		23 19 30.6	
YAK				*e**SS	**sS**	**23 19 47.8**	**+4.3**
YAK				*e*SS	**SS**	**23 24 10.0**	**-5.0**
YAK				pmax	pmax		
	comp=Z,147nm,0.9s						
YAK				pmax	pmax		
	comp=N,58nm,1.1s						
YAK				pmax	pmax		
	comp=E,32nm,1.1s						
YAK				pmax	pmax		
	comp=Z,106nm,1.9s						
YAK				pmax	pmax		
	comp=N,55nm,1.8s						
YAK				pmax	pmax		
	comp=E,58nm,2.2s						
YAK				smax	smax		
	comp=N,307nm,4.9s						
YAK				smax	smax		
	comp=E,177nm,5.1s						
YAK	**Yakutsk**	**79.29**	**343**	P	**P**	**23 09 11.9**	**-0.9**
ANM	**Nome**	**79.35**	**12**	P		23 09 13.0	
	baz=208,SNR=14						
ANM	**Nome**	**79.35**	**12**	P	**P**	**23 09 13.1**	**0.0**
ANM				pmax	pmax		
	comp=Z,52nm,1.2s						
ANM	**Nome**	**79.35**	**12**	P	**P**	**23 09 13.1**	**0.0**
BRSE	**Bradley Lake S**	**79.38**	**20**	P		23 09 14.1	
	baz=222						
ULN	**Ulaanbaatar**	**79.56**	**324***c*	*i*P	**P**	**23 09 15.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,230nm,0.9s						
ULN	**Ulaanbaatar**	**79.56**	**324**	P	**P**	**23 09 15.4**	**+0.5**
MOKO	**MOKOCHONG**	**79.63**	**300**	*e*P	**P**	**23 09 16.1**	**+0.4**
MOKO				IAmb	IAmb	23 09 20.4	
	comp=

BILL *i* 23 12 21.4
BILL *i* S **S** **23 19 12.4 -0.1**
BILL pmax pmax
comp=Z,66nm,1.0s
BILL MLR MLR
comp=Z,800nm,18.0s
BILL Bilibino 79.91 360 P **P** **23 09 15.4 -0.7**
BILL lAmb lAmb 23 09 20.7
comp=Z,243nm,1.5s
SONM Songino Array 79.93 324 P **P** **23 09 17.5 +0.7**
comp=Z,119nm,1.0s,baz=156,slow=6.5,SNR=101
SONM PKKPbc **PKKPbc** **23 28 02.0 -2.2**
comp=Z,0.5nm,0.6s,baz=270,slow=5.9,SNR=3.7
SONM PKPPKP **P'P'df** **23 36 03.5 -1.4**
comp=Z,0.6nm,0.9s,baz=254,slow=2.8,SNR=4.4
SONM LR LR 23 43 05.0
comp=Z,956nm,21.8s,baz=122,slow=34
SONM Songino Array 79.93 324 *eP* **P** **23 09 17.0 +0.2**
SONM pmax pmax
comp=Z,30nm,0.4s
SONM Songino Array 79.93 324 P **P** **23 09 16.4 -0.4**
SONM lAmb lAmb 23 09 23.7
comp=Z,189nm,1.0s
JORH JORHAT 79.99 300 *eP* **P** **23 09 18.4 +1.0**
SPCR Spurr Chakacha 79.99 19 P 23 09 15.6
baz=221
CAPN Captain Cook N 80.01 20 P 23 09 16.9
baz=222
SEW Seward 80.09 21 P 23 09 16.4
baz=224
TTA Tatalina 80.21 16 P 23 09 17.9
baz=217,SNR=15
TTA Tatalina 80.21 16 P **P** **23 09 17.4 -0.5**
TTA pmax pmax
comp=Z,33nm,1.0s
TTA Tatalina 80.21 16 P **P** **23 09 17.4 -0.5**
O22K Cooper Landing 80.27 20 P 23 09 18.2
baz=223
O22K Cooper Landing 80.27 20 P **P** **23 09 18.3 +0.1**
O22K lAmb lAmb 23 09 30.5
comp=Z,195nm,0.9s
GTA Gaotai 80.30 314 ⇑P **P** **23 09 20.0 +1.0**
GTA pP pwP 23 09 42.4 -0.6
GTA sP sP 23 09 50.8 +1.2
GTA PP **PP** **23 12 26.1 +3.2**
GTA S **S** **23 19 20.3 +2.3**
GTA pmax pmax
comp=Z,60nm,1.2s
GTA pmax pmax
comp=Z,2μm,4.4s
GTA LR LR
comp=Z,2μm,18.9s
GTA LR LR
comp=Z,2μm,19.3s
GTA LR LR
comp=Z,4μm,20.0s
ZIRO ZIRO 80.58 301 *eP* **P** **23 09 21.8 +0.9**
ZIRO lAmb lAmb 23 09 26.2
comp=Z,806nm,1.1s
SILR SILCHAR 80.61 298 *eP* **P** **23 09 21.8 +1.0**
SUA Susitna One 80.66 19 P 23 09 19.1
baz=222,SNR=7.0
RC01 Rabbit Creek A 80.71 20 P 23 09 20.0
baz=223
SKT Skwentna 80.79 19 P 23 09 20.7
baz=222
PWL Port Wells 81.02 21 P **P** **23 09 21.4 -0.8**
PWL lAmb lAmb 23 09 26.2
comp=Z,101nm,0.9s
PMR Palmer 81.28 20 P 23 09 22.8
baz=224
PPLA Purkeypile 81.28 18 P 23 09 22.1
baz=221
BELO BELONIA 81.33 296⇑ *eP* **P** **23 09 26.1 +1.5**
KNK Knik Glacier 81.38 20 P 23 09 23.5
baz=224
GLI Glacier Island 81.47 21 P 23 09 23.2
baz=226,SNR=7.8
GLI Glacier Island 81.47 21 P **P** **23 09 23.8 -0.7**
GHO Glory Hole Cre 81.48 20 P **P** **23 09 24.7 0.0**
CUT Chulitna 81.51 19 P 23 09 23.7
baz=223
FID Port Fidalgo 81.59 21 P **P** **23 09 25.3 +0.1**
SHL Shillong 81.64 298 P **P** **23 09 26.4 -0.1**
SHL pmax pmax
comp=Z,644nm,1.3s
SHL Shillong 81.64 298 *eP* **P** **23 09 26.9 +0.3**
SHL lAmb lAmb 23 09 31.3
comp=Z,704nm,1.4s
SHL Shillong 81.64 298 P **P** **23 09 26.4 -0.1**
AGT Agartala 81.69 297 *eP* **P** **23 09 28.1 +1.6**
SML Sawmill 81.70 20 P 23 09 25.5
baz=224,SNR=9.0
EYAK Cordova Ski Ar 81.72 22 P 23 09 25.4
baz=227
BOD Bodaibo 81.77 335 *eP* **P** **23 09 25.1 -1.1**
BOD pmax pmax
comp=Z,241nm,1.6s
KAIM Kayak Island 81.79 23 P 23 09 25.6
baz=228
AIS Amsterdam Isla 81.86 233 P **P** **23 09 27.8 +0.6**
CHUM Lake Minchumin 82.00 17 P 23 09 26.4
baz=221,SNR=6.1
GUWA GUWAHATI 82.00 299 *eP* **P** **23 09 28.3 +0.2**
GUWA lAmb lAmb 23 09 32.5
comp=Z,173nm,0.6s
SCM Sheep Creek Mo 82.06 20 P **P** **23 09 27.5 -0.2**
SCM pmax pmax
comp=Z,92nm,0.8s
SCM Sheep Creek Mo 82.06 20 P **P** **23 09 27.5 -0.2**
SCM lAmb lAmb 23 09 34.4
comp=Z,92nm,0.8s
TRF Thorofare Moun 82.27 18 P 23 09 27.8
baz=223
TRF Thorofare Moun 82.27 18 P **P** **23 09 28.5 -0.5**
KLU Klutina 82.30 21 P 23 09 28.7
baz=227
KLU Klutina 82.30 21 P **P** **23 09 28.4 -0.6**
BMRM Bremner River 82.41 22 P 23 09 29.0
baz=228
BMRM Bremner River 82.42 22 P **P** **23 09 28.8 -0.8**
BMRM lAmb lAmb 23 10 13.9
comp=Z,183nm,1.5s
WAT6 Susitna Watana 82.45 20 P 23 09 29.1
baz=225,SNR=15
WAT2 Susitna Watana 82.45 19 P 23 09 28.8
baz=224
BPAW Bear Paw Mtn. 82.55 17 P 23 09 29.2
baz=222,SNR=6.8
M24K Tolsona, Glenn 82.64 20 P 23 09 30.4
baz=226,SNR=9.6
M24K Tolsona, Glenn 82.64 20 P **P** **23 09 30.2 -0.5**
M24K lAmb lAmb 23 10 46.5
comp=Z,168nm,1.2s
N25K Chitina, Valde 82.84 21 P 23 09 31.4
baz=228,SNR=15
N25K Chitina, Valde 82.85 21 P **P** **23 09 31.3 -0.5**
MCK McKinley 82.89 18 P 23 09 30.9
baz=224,SNR=15
MCK McKinley 82.89 18 P **P** **23 09 31.4 -0.6**
MCK pmax pmax
comp=Z,63nm,1.0s
MCK McKinley 82.89 18 P **P** **23 09 31.4 -0.6**
RDOG Red Dog Mine 82.89 11 P 23 09 31.6
baz=210
TGL Tana Glacier 82.93 23 P **P** **23 09 31.9 -0.4**
ZAK Zakamensk 82.96 325 *eP* **P** **23 09 32.2 -0.5**
ZAK *e* 23 19 43.8
ZAK pmax pmax
comp=Z,278nm,1.3s
BWN Browne 83.05 18 P **P** **23 09 32.7 0.0**
BWN lAmb lAmb 23 09 36.4
comp=Z,149nm,1.0s
YAH Yahtse 83.09 23 P **P** **23 09 32.8 -0.5**
H02S1 DAWSON INLET T 83.18 32 P **P** **23 09 35.2 +1.6**
IMAR Indian Mountai 83.23 15 P **P** **23 09 33.0 -0.7**
MCARA McCarthy VSAT 83.27 22 P **P** **23 09 34.0 +0.1**
MCARA McCarthy VSAT 83.27 22 P 23 09 33.7
baz=230,SNR=14
MLY Manley 83.31 17 P 23 09 33.0
baz=222,SNR=14
MLY Manley 83.32 17 P **P** **23 09 34.5 +0.3**
IRK Irkutsk 83.32 327 *eP* **P** **23 09 33.4 -1.0**
IRK *e* 23 09 55.4
IRK pmax pmax
comp=Z,572nm,2.3s

TABL Table Mountain 83.37 23 P **P** **23 09 34.8 +0.1**
TABL lAmb lAmb 23 09 39.0
comp=Z,80nm,1.0s
TLY Talaya 83.38 326 *c iP* **P** **23 09 34.6 -0.2**
TLY *eS* **S** **23 19 46.8 -2.2**
TLY pmax pmax
comp=Z,1μm,1.5s
TLY Talaya 83.38 326 P **P** **23 09 34.3 -0.5**
TLY lAmb lAmb 23 09 39.8
comp=Z,376nm,1.1s
PAX Paxson 83.47 20 P 23 09 34.0
baz=227
PAX Paxson 83.47 20 P **P** **23 09 34.9 -0.2**
PAX pmax pmax
comp=Z,148nm,2.0s
PAX Paxson 83.47 20 P **P** **23 09 34.9 -0.2**
O02D Mt. Diablo Mer 83.47 47 P 23 09 36.0
baz=248
NEA2 Nenana 83.48 18 P 23 09 33.6
baz=224,SNR=12
NEA2 Nenana 83.48 18 P **P** **23 09 34.6 -0.4**
PINM Pinnacle 83.50 24 P 23 09 34.5
baz=232,SNR=9.3
LSA Lhasa 83.52 302 P **P** **23 09 37.8 +1.3**
LSA S **S** **23 19 52.9 +0.7**
LSA pmax pmax
comp=Z,100nm,0.6s
LSA LR LR
comp=Z,3μm,18.5s
LSA LR LR
comp=Z,3μm,24.2s
LSA LR LR
comp=Z,6μm,28.5s
LSA Lhasa 83.52 302 P **P** **23 09 37.3 +0.8**
LSA Lhasa 83.52 302 P **P** **23 09 37.1 +0.6**
LSA pmax pmax
comp=Z,171nm,0.9s
LSA Lhasa 83.52 302 P **P** **23 09 37.1 +0.6**
LSA lAmb lAmb 23 09 42.5
comp=Z,171nm,0.9s
CTG Chitna Glacier 83.62 23 P 23 09 35.7
baz=231
L02E Cave Junction 83.64 45 P 23 09 36.9
baz=248
SCZ2 Santa Cruz Isl 83.69 53 P 23 09 36.1
baz=251
SBC Santa Barbara 83.78 53 P 23 09 36.8
baz=251
I23K Minto, Yukon-K 83.80 17 P 23 09 35.7
baz=223
K02D Willamette Mer 83.81 44 P 23 09 37.6
baz=248
N02D Trinity Center 83.83 46 P 23 09 37.2
baz=248
SIT Sitka 83.83 28 P 23 09 36.9
baz=237
PKM Mcpherson Peak 83.85 53 P 23 09 37.4
baz=251
M02C Callahan 83.88 46 P 23 09 38.0
baz=248
HDA Harding Lake 83.99 18 P 23 09 36.6
baz=226,SNR=59
HDA P 23 09 36.6
baz=226,SNR=59
MDM Murphy Dome 83.99 18 P **P** **23 09 36.8 -0.8**
MDM lAmb lAmb 23 09 41.2
comp=Z,77nm,1.0s
CRAG Craig 84.02 30 P 23 09 37.2
baz=239
MAW Mawson 84.03 202 P **P** **23 09 38.0 +0.2**
comp=Z,53nm,0.9s,baz=110,slow=7.5,SNR=33
MAW PKKPbc **PKKPbc** **23 27 53.5 -0.9**
comp=Z,1.5nm,0.6s,baz=346,slow=8.3,SNR=1.9
MAW LR LR 23 40 46.5
comp=Z,4μm,21.3s,baz=96,slow=31
MAW Mawson 84.03 202 P **P** **23 09 38.0 +0.2**
baz=84,SNR=40
MAW Mawson 84.03 202 P **P** **23 09 37.8 0.0**
MAW pmax pmax
comp=Z,182nm,1.9s
MAW Mawson 84.03 202 P **P** **23 09 37.8 0.0**
MAW lAmb lAmb 23 09 42.1
comp=Z,182nm,1.9s
TCOL CIGO, UAF Yank 84.04 18 P **P** **23 09 37.6 -0.2**
TCOL lAmb lAmb 23 09 41.3
comp=Z,122nm,1.2s
TCOL CIGO, UAF Yank 84.04 18 P 23 09 36.2
baz=225
COLA College 84.04 18 P 23 09 36.3
baz=225
COLA College 84.05 18 *ceP* **P** **23 09 41.0 +3.2**
COLA pmax pmax
comp=Z,35nm,1.0s
YBH Yreka Blue Hor 84.10 45 LR LR 23 41 49.4
comp=Z,2μm,19.6s,baz=240,slow=32
YBH Yreka Blue Hor 84.10 45 P **P** **23 09 39.2 +0.4**
YBH pmax pmax
comp=Z,53nm,1.0s
YBH Yreka Blue Hor 84.10 45 P **P** **23 09 39.2 +0.4**
ORV Oroville 84.17 48 P **P** **23 09 39.5 +0.4**
ORV pmax pmax
comp=Z,80nm,1.3s
ORV Oroville 84.17 48 P **P** **23 09 39.5 +0.4**
O03E Paynes Creek 84.22 47 P 23 09 38.5
baz=249
I02D Swisshome 84.23 43 P 23 09 39.5
baz=247
SCI2 San Clemente I 84.23 55 P 23 09 39.5
baz=252
HUMO Hull Mountain 84.26 44 P **P** **23 09 39.8 +0.4**
HUMO lAmb lAmb 23 10 18.4
comp=Z,95nm,1.2s
ILAR Eielson Array 84.27 18 P **P** **23 09 38.0 -0.9**
comp=Z,62nm,0.9s,baz=232,slow=6.0,SNR=49
ILAR PKiKP **PKiKP** **23 14 52.7 -0.2**
comp=Z,1.3nm,0.7s,baz=284,slow=3.8,SNR=5.3
ILAR PKKP **PKKPdf** **23 27 48.0 +1.5**
comp=Z,1.4nm,0.7s,baz=354,slow=2.5,SNR=9.5
ILAR PKPPKP **P'P'df** **23 35 54.8 -0.9**
comp=Z,1.2nm,1.1s,baz=360,slow=2.3,SNR=5.8
ILAR LR LR 23 41 13.0
comp=Z,2μm,21.7s,baz=235,slow=31
ILAR Eielson Array 84.27 18 P **P** **23 09 39.2 +0.3**
ILAR Eielson Array 84.27 18 P **P** **23 09 39.2 +0.3**
POKR Poker Plat Res 84.34 18 P 23 09 37.7
baz=225,SNR=19
I03D Drain, OR 84.41 43 P 23 09 38.8
baz=248
CMB Columbia Colle 84.46 49 P **P** **23 09 40.8 +0.2**
CMB pmax pmax
comp=Z,35nm,1.0s
CMB Columbia Colle 84.46 49 P **P** **23 09 40.8 +0.2**
CIS Catalina Islan 84.47 54 P 23 09 40.4
baz=252
L04D Klamath Falls 84.56 45 P 23 09 41.1
baz=248
OSI Osito Audit: C 84.61 53 P 23 09 41.5
baz=251
SCRK Sand Creek 84.64 20 P 23 09 40.5
baz=228,SNR=43
SCRK Sand Creek 84.64 20 P **P** **23 09 40.7 -0.3**
SCRK lAmb lAmb 23 09 45.4
comp=Z,112nm,1.0s
VOG Valley Oaks Go 84.65 51 P 23 09 41.1
baz=251
FMP Fort Macarthur 84.66 54 P 23 09 41.0
baz=252
ARVC Arvin 84.69 53 P 23 09 41.4
baz=251
VES Vestal, Richgr 84.72 52 P 23 09 41.3
baz=251
M04C Macdoel 84.73 45 P 23 09 41.9
baz=249
L27K Beaver Creek, 84.78 21 P 23 09 41.1
baz=230,SNR=21
BCAR Beaver Creek A 84.80 21 P **P** **23 09 41.1 -0.6**
DECC Green Verdugo 84.80 54 P 23 09 42.2
baz=252
MOY Mondy 84.84 325 *eP* **P** **23 09 42.0 -0.3**
MOY pmax pmax
comp=Z,536nm,2.5s
WRAK Wrangell Islan 84.88 29 P 23 09 41.9
baz=239
MWC Mount Wilson 85.01 54 P **P** **23 09 43.7 +0.1**
MWC pmax pmax
comp=Z,96nm,1.2s
MWC Mount Wilson 85.01 54 P **P** **23 09 43.7 +0.1**

MWC lAmb lAmb 23 10 26.4
comp=Z,96nm,1.2s
BBB Bella Bella 85.02 34 PKKPbc PKKPbc 23 27 52.1 -0.2
comp=Z,6.0nm,0.8s,baz=328,slow=9.5,SNR=1.3
BBB LR LR 23 41 11.6
comp=Z,3μm,20.5s,baz=246,slow=31
G03D McMinnville, O 85.04 42 P 23 09 43.3
baz=248
I04A Tendick Farm, 85.07 43 P 23 09 42.9
baz=248
J04D Umpqua Nationa 85.07 44 P 23 09 43.9
baz=248
K04D Chiloquin, OR 85.09 45 P 23 09 43.4
baz=249
COLD Coldfoot 85.10 16 P **P** **23 09 44.2 +1.1**
COLD Coldfoot 85.10 16 P 23 09 43.6
baz=222,SNR=14
BEKR Beckworth 85.11 48 P **P** **23 09 43.7 -0.2**
H04D Lebanon 85.12 43 P 23 09 43.8
baz=248
ISA Isabella, Lake 85.13 52 P 23 09 43.9
baz=252
ISA Isabella, Lake 85.13 52 P **P** **23 09 44.5 +0.4**
ISA pmax pmax
comp=Z,86nm,1.4s
ISA Isabella, Lake 85.13 52 P **P** **23 09 44.5 +0.4**
SKAG Skagway 85.15 26 P 23 09 42.9
baz=237
PRP Porcupine Dome 85.20 18 P 23 09 42.2
baz=227
EDW2 Edwards Air Fo 85.26 53 P 23 09 44.6
baz=252,SNR=8.6
K27K Chicken 85.31 20 P 23 09 43.9
baz=230
109C Camp Elliot, M 85.36 55 P 23 09 44.9
baz=252
E03A Lebam 85.36 41 P **P** **23 09 45.1 +0.3**
E03A lAmb lAmb 23 10 30.2
comp=Z,109nm,1.1s
MLAC Mammoth, Mammo 85.48 50 P 23 09 46.0
baz=251
MURC Murrieta 85.50 54 P 23 09 45.7
baz=252
F04D Rainier, OR 85.53 41 P 23 09 46.0
baz=248
CBX Cerro Bola 85.54 56 P **P** **23 09 46.6 +0.4**
H04A Detroit Lake 85.55 43 P **P** **23 09 46.6 +0.7**
BAR Barrett 85.64 55 P **P** **23 09 46.6 0.0**
CWC Cottonwood Cre 85.68 52 P 23 09 46.8
baz=252
J05D Fort Rock, OR 85.68 44 P 23 09 46.5
baz=249,SNR=12
LRMC Laurel Mtn Rad 85.69 53 P 23 09 46.8
baz=252,SNR=9.3
K05A Summer Lake 85.72 45 P **P** **23 09 47.8 +0.9**
K05A lAmb lAmb 23 10 21.9
comp=Z,132nm,1.3s
TAPN Taplejung 85.74 299 *eP* **P** **23 09 47.7 +0.1**
comp=Z,846nm,1.2s
TIN Tinemaha, Big 85.76 51 P 23 09 47.8
baz=252
MOD Modoc Plateau 85.84 46 P **P** **23 09 47.4 -0.2**
ODAN Odare 85.88 298 *eP* **P** **23 09 48.4 +0.2**
comp=Z,2μm,1.4s
MONP2 Monument Peak 85.91 55 P 23 09 48.1
baz=253,SNR=11
BBRC Big Bear Solar 85.92 54 P 23 09 48.2
baz=252
I05D Terrebonne, OR 85.99 43 P 23 09 48.1
baz=249
E04D Cinebar 86.00 41 P 23 09 48.1
baz=248
WHY Whitehorse 86.00 25 P **P** **23 09 48.2 +0.4**
D03D Eldon 86.04 40 P 23 09 48.2
baz=248
RRX Edison Barstow 86.04 53 P 23 09 48.3
baz=252
PINE Pine Mountain 86.06 44 P **P** **23 09 49.2 +0.5**
PINE lAmb lAmb 23 10 27.5
comp=Z,115nm,1.4s
IKP In-Ko-Pah, Jac 86.09 56 P 23 09 48.8
baz=253
PFO Pinyon Flats O 86.09 55 PKKPbc PKKPbc 23 27 49.4 +0.4
comp=Z,3.3nm,0.8s,baz=318,slow=3.3,SNR=5.8
PFO Pinyon Flats O 86.09 55 *ceP* **P** **23 09 48.1 -0.8**
PFO Pinyon Flats O 86.09 55 P **P** **23 09 49.4 +0.5**
PFO Pinyon Flats O 86.09 55 P 23 09 48.9
baz=253,SNR=6.5
TPFO Pinon Flats 86.09 55 P 23 09 49.1
baz=253
EGAK Eagle 86.10 20 P **P** **23 09 48.3 +0.2**
EGAK lAmb lAmb 23 09 52.7
comp=Z,80nm,0.9s
EGAK Eagle 86.10 20 P 23 09 47.8
baz=231
NVAR Mina Array Bea 86.14 50 P **P** **23 09 49.3 +0.1**
comp=Z,5.6nm,0.8s,baz=231,slow=7.4,SNR=27
NVAR PKiKP **PKiKP** **23 14 58.2 +1.2**
comp=Z,0.6nm,0.6s,baz=232,slow=2.2,SNR=2.5
NVAR PKKP **PKKPdf** **23 27 35.4 -7.2**
comp=Z,0.6nm,0.7s,baz=55,slow=5.6,SNR=3.8
NVAR PKKPbc **PKKPbc** **23 27 51.0 +1.7**
comp=Z,0.7nm,0.6s,baz=80,slow=3.0,SNR=4.8
NVAR PKPPKP **P'P'df** **23 35 51.7 -3.0**
comp=Z,1.7nm,0.8s,baz=117,slow=2.4,SNR=5.1
NVAR LR LR 23 40 04.6
comp=Z,7μm,21.9s,baz=266,slow=30
NVAR Mina Array Bea 86.14 50 P **P** **23 09 48.6 -0.6**
NV11 Mina Array Sit 86.25 50 P **P** **23 09 49.4 -0.2**
NV11 lAmb lAmb 23 10 32.7
comp=Z,134nm,1.3s
TOLK Toolik Lake Re 86.30 15 P 23 09 49.1
baz=223
TOLK Toolik Lake Re 86.31 15 P **P** **23 09 48.9 -0.2**
G05D Wamic, OR 86.33 42 P 23 09 49.2
baz=249
BOK Bokaro 86.39 295⇑ *eP* **P** **23 09 52.3 +1.9**
GRAC Grapevine Rang 86.40 51 P 23 09 50.5
baz=252
SWSC Sam W. Stewart 86.42 55 P 23 09 50.5
baz=253
F05D White Salmon 86.47 42 P 23 09 50.3
baz=249
HEC Hector,Ludlow 86.55 53 P 23 09 50.6
baz=253
BELC Belle Mtn. Jos 86.57 54 P 23 09 50.9
baz=253,SNR=12
RAMN Ramite 86.58 298 *eP* **P** **23 09 51.6 -0.1**
comp=Z,873nm,1.3s
D05A Enumclaw 86.60 40 P **P** **23 09 51.5 +0.6**
D05A lAmb lAmb 23 10 34.7
comp=Z,186nm,1.5s
FURC Furnace Creek, 86.62 52 P 23 09 51.4
baz=252
A04D Lummi Island 86.73 39 P 23 09 51.5
baz=248
TPH Tonopah 86.84 50 P **P** **23 09 52.2 -0.4**
TPH pmax pmax
comp=Z,549nm,1.7s
TPH Tonopah 86.84 50 P **P** **23 09 52.1 -0.4**
A21K Barrow 86.84 11 P 23 09 51.7
baz=216
BC3 Big Chuckawall 86.90 55 P 23 09 52.5
baz=253,SNR=7.4
SHOC Shoshone, Teco 86.91 52 P 23 09 52.4
baz=253
H06S1 SOCORRO T 86.92 70 T T 00 45 12.5
SNR=24
B05A Bryant 86.93 39 P 23 09 52.7
baz=248
DLBC Dease Lake 86.98 28 PKKPbc PKKPbc 23 27 47.4 -0.7
comp=Z,3.0nm,0.9s,baz=260,slow=2.3,SNR=3.5
DLBC Dease Lake 86.98 28 P **P** **23 09 52.8 +0.2**
TUQ Turquoise Moun 87.04 53 P 23 09 53.1
baz=253
GMRC Granite Mounta 87.06 54 P 23 09 53.6
baz=253,SNR=11
JIRN Jiri 87.12 299 *eP* **P** **23 09 54.6 +0.2**
comp=Z,1μm,1.3s
WVOR Wild Horse Val 87.19 46 P **P** **23 09 53.6 -0.5**
WVOR pmax pmax
comp=Z,85nm,1.3s
WVOR Wild Horse Val 87.19 46 P **P** **23 09 53.5 -0.5**
WVOR lAmb lAmb 23 10 39.5
comp=Z,85nm,1.2s
TPNV Topopah Spring 87.24 51 P 23 09 54.2
baz=253,SNR=11

GLA Glamis 87.24 56 P **P** **23 09 54.3 -0.2**
GLA pmax pmax
comp=Z,56nm,0.9s
GLA Glamis 87.24 56 P **P** **23 09 54.3 -0.2**
GLA IAmb IAmb 23 10 28.1
comp=Z,56nm,0.8s
GLA Glamis 87.24 56 P 23 09 54.8
baz=254
TPNV Topopah Spring 87.24 51 P **P** **23 09 54.4 -0.1**
TPNV pmax pmax
comp=Z,112nm,1.6s
TPNV Topopah Spring 87.24 51 P **P** **23 09 54.4 -0.1**
TPNV IAmb IAmb 23 10 37.9
comp=Z,112nm,1.6s
TIXI Tiksi 87.24 349 LR LR 23 44 21.6
comp=Z,1μm,21.4s,baz=136,slow=32
TIXI Tiksi 87.24 349 *c iP* **P** **23 09 52.2 -1.3**
TIXI Tiksi 87.24 349 P **P** **23 09 52.4 -1.1**
TIXI IAmb IAmb 23 09 57.7
comp=Z,181nm,1.5s
IRM Iron Mountain 87.29 54 P 23 09 54.7
baz=254,SNR=15
PALK Pallekele 87.41 278 P **P** **23 09 56.9 +1.2**
comp=Z,106nm,0.8s,baz=218,slow=5.6,SNR=14
PALK PKiKP **PKiKP** **23 15 01.3 +1.7**
comp=Z,7.2nm,0.9s,baz=143,slow=3.9,SNR=3.8
PALK Pallekele 87.41 278 *c iP* **P** **23 09 56.6 +0.9**
PALK pmax pmax
comp=Z,254nm,1.0s
PALK Pallekele 87.41 278 P **P** **23 09 56.1 +0.5**
PALK IAmb IAmb 23 10 01.2
comp=Z,171nm,0.9s
GUN Gumba 87.45 299 *eP* **P** **23 09 56.0 0.0**
comp=Z,512nm,0.8s
C06D Leavenworth 87.56 40 P 23 09 55.4
baz=249
PKI Pulchoki 87.77 299 *eP* **P** **23 09 57.3 -0.2**
comp=Z,1μm,1.1s
PKIN Phulchoki 87.78 299 *eP* **P** **23 09 57.1 -0.3**
comp=Z,417nm,0.8s
SRIG Santa Rosalia 87.88 62 P **P** **23 09 57.6 +0.1**
SRIG IAmb IAmb 23 10 36.6
comp=Z,109nm,1.4s
NEE2 Needles Airpor 87.88 54 P 23 09 57.3
baz=254
HAWA Hanford 87.90 42 P **P** **23 09 57.9 +0.7**
KKN Kakani 87.93 299 *eP* **P** **23 09 58.1 0.0**
comp=Z,349nm,0.9s
113A Mohawk Valley, 88.02 56 P **P** **23 09 58.0 -0.1**
113A IAmb IAmb 23 10 30.4
comp=Z,88nm,1.5s
DMN Daman 88.04 299 *eP* **P** **23 09 58.8 +0.1**
comp=Z,961nm,0.8s
PDMCI Parker Dam,Lak 88.13 54 P 23 09 58.9
baz=254,SNR=11
R11A Troy Canyon, C 88.15 50 P 23 09 58.8
baz=253,SNR=16
EPYK Eagle Plains 88.54 20 P **P** **23 09 59.7 -0.2**
EPYK IAmb IAmb 23 10 43.8
comp=Z,116nm,1.9s
EPYK Eagle Plains 88.54 20 P 23 09 59.8
baz=235
GKN Gorkha 88.54 299 *eP* **P** **23 10 00.4 -0.5**
comp=Z,1μm,1.1s
214A Organ Pipe Nat 88.58 57 P 23 10 01.4
baz=255,SNR=8.0
214A Organ Pipe Nat 88.58 57 P **P** **23 10 00.6 -0.3**
214A IAmb IAmb 23 10 41.0
comp=Z,123nm,1.4s
E09A Wood Farm, Sta 88.84 42 P **P** **23 10 02.1 +0.4**
E09A IAmb IAmb 23 10 44.9
comp=Z,107nm,1.6s
BMO Blue Mountains 88.88 44 P **P** **23 10 01.9 -0.1**
BMO pmax pmax
comp=Z,72nm,1.5s
BMO Blue Mountains 88.88 44 P **P** **23 10 01.9 -0.1**
BMO IAmb IAmb 23 10 45.2
comp=Z,72nm,1.5s
SLBS Sierra La Lagu 89.01 66 P **P** **23 10 03.3 +0.2**
MDRS Chennai 89.09 283 *eP* **P** **23 10 03.9 +0.4**
ELK Elko 89.10 48 PKKPbc PKKPbc 23 27 42.6 +0.3
comp=Z,1.1nm,0.7s,baz=302,slow=6.4,SNR=6.2
ELK Elko 89.10 48 P **P** **23 10 02.7 -0.6**
ELK pmax pmax
comp=Z,76nm,1.4s
ELK Elko 89.10 48 P **P** **23 10 02.7 -0.6**
ELK IAmb IAmb 23 10 46.5
comp=Z,76nm,1.4s
KOLN Koldanda 89.37 298 *eP* **P** **23 10 04.1 -0.8**
comp=Z,348nm,0.8s
DANN Dangsing 89.37 299 *eP* **P** **23 10 04.1 -0.9**
comp=Z,651nm,0.9s
HSIG 89.40 60 P **P** **23 10 04.9 +0.2**
HSIG IAmb IAmb 23 10 44.1
comp=Z,158nm,1.7s
BELA Belgrano 2 89.40 176 P **P** **23 10 02.9 -1.0**
MFID Camas Ranch 89.45 45 P **P** **23 10 04.7 -0.1**
PSUT Pine Spring 89.51 50 P **P** **23 10 04.7 -0.6**
PSUT IAmb IAmb 23 10 48.6
comp=Z,67nm,1.2s
PYUN Piuthan 89.97 299 *eP* **P** **23 10 06.7 -1.0**
comp=Z,695nm,1.0s
NEW Newport 90.06 40 P 23 10 06.8
baz=252,SNR=10
NEW Newport 90.06 40 LR LR 23 42 25.8
comp=Z,2μm,21.9s,baz=254,slow=30
NEW Newport 90.06 40 P **P** **23 10 07.1 -0.3**
NEW pmax pmax
comp=Z,109nm,1.9s
NEW Newport 90.06 40 P **P** **23 10 07.1 -0.3**
NEW IAmb IAmb 23 10 49.6
comp=Z,109nm,1.9s
TUC Tucson 90.33 57 P 23 10 09.8
baz=256
TUC Tucson 90.34 57 P **P** **23 10 09.5 +0.4**
TUC pmax pmax
comp=Z,91nm,1.7s
TUC Tucson 90.34 57 P **P** **23 10 09.5 +0.4**
TUC IAmb IAmb 23 10 49.2
comp=Z,91nm,1.6s
WMQ Urumqi 90.34 315 P **P** **23 10 09.0 +0.2**
WMQ sP pwP 23 10 32.8 -0.7
WMQ PP **PP** **23 13 42.6 -1.6**
WMQ SKS **SKSac** **23 23 31.8 -0.9**
WMQ S **S** **23 20 53.9 -2.6**
WMQ sS sS 23 21 31.5 -1.9
WMQ SS **SS** **23 26 54.8 -3.8**
WMQ pmax pmax
comp=Z,370nm,1.3s
WMQ pmax pmax
comp=Z,2μm,3.7s
WMQ LR LR
comp=Z,2μm,19.5s
WMQ LR LR
comp=Z,2μm,29.1s
WMQ LR LR
comp=Z,5μm,29.1s
WMQ Urumqi 90.34 315 P **P** **23 10 08.7 -0.1**
WMQ pmax pmax
comp=Z,290nm,1.0s
WMQ Urumqi 90.34 315 P **P** **23 10 08.7 -0.1**
HLID Hailey 90.48 46 P 23 10 09.7
baz=254,SNR=20
HLID Hailey 90.48 46 P **P** **23 10 09.1 -0.6**
HLID IAmb IAmb 23 10 52.3
comp=Z,122nm,1.8s
WUAZ Wupatki 90.64 54 P 23 10 10.5
baz=256
INK Inuvik 90.64 19 PKKP 23 27 36.1
comp=Z,2.1nm,0.6s,baz=12,slow=5.2,SNR=8.5
INK LR LR 23 44 46.2
comp=Z,2μm,21.9s,baz=205,slow=32
INK Inuvik 90.64 19 P **P** **23 10 09.4 -0.2**
INK pmax pmax
comp=Z,11nm,1.2s
INK Inuvik 90.64 19 P **P** **23 10 09.3 -0.2**
WUAZ Wupatki 90.64 54 P **P** **23 10 10.9 +0.3**
WUAZ IAmb IAmb 23 10 50.5
comp=Z,98nm,1.4s
DUG Dugway, Tooele 90.73 49 P 23 10 10.7
baz=255,SNR=6.0
DUG Dugway, Tooele 90.73 49 P **P** **23 10 10.5 -0.4**
DUG pmax pmax
comp=Z,50nm,1.2s
DUG Dugway, Tooele 90.73 49 P **P** **23 10 10.4 -0.4**
DUG IAmb IAmb 23 10 54.0
comp=Z,50nm,1.1s
SYO Syowa Base 91.00 197 ⇑ *iP* **P** **23 10 10.8 -0.6**
SYO Syowa Base 91.00 197 ⇑ *i* PcP **PcP** **23 10 13.1 +0.8**
SYO Syowa Base 91.00 197 ⇑ *e* pP pP 23 10 30.0 -3.1
319A Douglas 91.36 58 P **P** **23 10 13.6 -0.4**
319A IAmb IAmb 23 10 47.7
comp=Z,85nm,1.1s
BCYI Bear Canyon 91.39 45 P **P** **23 10 14.0 0.0**
HYB Hyderabad 91.61 287 *i P* **P** **23 10 14.0 -1.3**
HYB epP **pP** **23 10 33.0 -3.6**
HYB *e* SKS **SKSac** **23 20 41.0 0.0**
HYB eSP SP 23 22 21.0 +2.5
HYB Hyderabad 91.61 287 *eP* **P** **23 10 13.6 -1.7**
HYB IAmb IAmb 23 10 18.2
comp=Z,206nm,1.0s
MSO Missoula 91.70 42 P 23 10 14.3
baz=254
MSO Missoula 91.70 42 P **P** **23 10 15.5 +0.3**
JTMT Jette 91.73 42 P **P** **23 10 15.5 +0.2**
JTMT IAmb IAmb 23 10 57.6
comp=Z,51nm,1.6s
W18A Petrified Fore 91.85 55 P **P** **23 10 16.6 +0.4**
W18A IAmb IAmb 23 10 55.0
comp=Z,159nm,2.0s
W18A Petrified Fore 91.85 55 P 23 10 16.8
baz=257
MCMT McKenzie Canyo 91.91 45 P **P** **23 10 16.2 -0.2**
DGZ Jazzator, Alta 92.15 320 *c iP* **P** **23 10 16.7 -0.5**
DGZ pmax pmax
comp=Z,114nm,0.9s
H08S2 Diego Garcia H 92.29 262 P **P** **23 10 18.3 +0.1**
H08S3 Diego Garcia H 92.30 262 P **P** **23 10 18.3 +0.1**
H08S1 Diego Garcia H 92.31 262 P **P** **23 10 18.3 +0.1**
WALA Waterton Lakes 92.33 40 P **P** **23 10 17.5 -0.5**
DGAR Diego Garcia 92.38 262 P **P** **23 10 19.1 +0.2**
DGAR pmax pmax
comp=Z,392nm,1.4s
DGAR Diego Garcia 92.38 262 P **P** **23 10 19.1 +0.2**
121A Cookes Peak, D 92.86 58 P **P** **23 10 20.5 -0.4**
121A Cookes Peak, D 92.86 58 P 23 10 21.6
baz=258
BOZ Bozeman (W) 92.93 44 P 23 10 20.6
baz=256,SNR=12
YHL Hebgen Lake 93.06 45 P **P** **23 10 22.1 +0.3**
YHL IAmb IAmb 23 11 04.7
comp=Z,39nm,1.1s
HRY Holter Researc 93.07 43 P **P** **23 10 21.1 -0.4**
ZSN Zaisan 93.21 318 ⇑ *iP* **P** **23 10 21.8 -0.2**
comp=Z,267nm,2.5s,baz=318
ZSN Zaisan 93.21 318 *c iP* **P** **23 10 21.7 -0.2**
ZSN pmax pmax
comp=Z,267nm,2.5s
FLWY Flagg Ranch 93.21 46 P **P** **23 10 22.8 +0.4**
MVCO Mesa Verde 93.29 53 P 23 10 22.0
baz=257
H17A Grant Village 93.37 45 P 23 10 24.1
baz=256,SNR=6.2
BW06 Boulder Array 93.72 47 P 23 10 23.8
baz=257
PD31 Pinedale Array 93.72 47 P **P** **23 10 24.8 +0.1**
PDAR Pinedale Array 93.72 47 P **P** **23 10 25.4 +0.6**
comp=Z,3.1nm,0.9s,baz=199,slow=3.1,SNR=14
PDAR PKKP **PKKPdf** **23 27 28.9 -0.5**
comp=Z,2.8nm,0.7s,baz=38,slow=2.6,SNR=16
PDAR PKPPKP 23 35 41.5
comp=Z,1.0nm,0.9s,baz=130,slow=4.6,SNR=3.9
PDAR LR LR 23 48 01.7
comp=Z,2μm,19.1s,baz=260,slow=33
PDAR Pinedale Array 93.72 47 P **P** **23 10 25.5 +0.8**
BHPL Bhopal 93.83 293 ⇑ *eP* **P** **23 10 25.1 -0.4**
Y22D IRIS PASSCAL I 93.89 56 P 23 10 25.8
baz=258
O20A White River Ci 94.12 50 P 23 10 26.6
baz=258
C36M Paulatuk 94.17 19 P 23 10 24.0
baz=247
ANMO Albuquerque 94.44 55 PKKPbc PKKPbc 23 27 29.3 +1.1
comp=Z,1.8nm,0.7s,baz=123,slow=4.4,SNR=7.6
ANMO Albuquerque 94.44 55 *c iP* **P** **23 10 27.3 -0.9**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 94.44 55 P **P** **23 10 28.9 +0.7**
ANMO Albuquerque 94.44 55 P 23 10 27.6
baz=258
RLMT Red Lodge 94.44 45 P 23 10 27.7
baz=258
PMSA Palmer Station 94.50 161 P **P** **23 10 26.8 -0.8**
comp=Z,64nm,0.7s,baz=213,slow=2.0,SNR=17
PMSA Palmer Station 94.50 161 P **P** **23 10 27.7 +0.1**
DDI Dehra Dun 94.66 300 ⇑ *eP* **P** **23 10 29.2 0.0**
MNTX Cornudas Mount 94.68 59 P **P** **23 10 29.0 -0.1**
MNTX Cornudas Mount 94.68 59 P 23 10 28.1
baz=259
S22A 4UR Ranch, Cre 94.70 53 P 23 10 29.1
baz=258,SNR=10
EGMT Eagleton 94.75 42 P 23 10 28.9
baz=257
MK31 Makanchi Array 94.77 317 *c iP* **P** **23 10 28.9 -0.3**
MK31 Makanchi Array 94.77 317 P **P** **23 10 28.8 -0.3**
MKAR Makanchi Array 94.77 317 P **P** **23 10 29.6 +0.4**
comp=Z,216nm,0.7s,baz=90,slow=6.0,SNR=580
MKAR PP **PP** **23 14 18.0 -0.9**
comp=Z,8.3nm,0.9s,baz=100,slow=11,SNR=3.5
MKAR PKiKP **PKiKP** **23 15 12.1 +1.0**
comp=Z,4.3nm,0.8s,baz=76,slow=3.6,SNR=6.9
MKAR PKKP **PKKPdf** **23 27 24.1 -3.3**
comp=Z,4.4nm,0.6s,baz=266,slow=2.8,SNR=20
MKAR Makanchi Array 94.77 317 *i P* **P** **23 10 29.1 -0.1**
MKAR pmax pmax
comp=Z,218nm,0.7s
MKAR Makanchi Array 94.77 317 P **P** **23 10 28.3 -0.8**
ZAA0 Zalesovo Array 94.82 324 P **P** **23 10 27.5 -1.6**
ZALV Zalesovo Beam 94.82 324 P **P** **23 10 28.3 -0.8**
comp=Z,104nm,0.8s,baz=116,slow=4.8,SNR=71
ZALV PP **PP** **23 14 19.1 +0.1**
comp=Z,16nm,1.1s,baz=104,slow=6.3,SNR=5.0
ZALV PKKPbc **PKKPdf** **23 27 25.2 -2.2**
comp=Z,1.1nm,0.4s,baz=273,slow=2.9,SNR=6.2
ZALV LR LR 23 53 10.4
comp=Z,506nm,20.9s,baz=110,slow=35
ZALV Zalesovo Beam 94.82 324 *eP* **P** **23 10 27.8 -1.4**
ZALV pmax pmax
comp=Z,104nm,0.8s
ZALV Zalesovo Beam 94.82 324 P **P** **23 10 27.7 -1.4**
MAKZ Makanchi 94.98 317 P **P** **23 10 29.1 -1.0**
MAKZ Makanchi 94.98 317 P **P** **23 10 29.6 -0.6**
MNCI Minicoy 95.02 277 P **P** **23 10 31.3 +0.3**
MNCY Minicoy 95.05 277 *i eP* **P** **23 10 29.9 -1.3**
NVL N'lazarevskaya 95.55 188 *eP* **P** **23 10 31.7 -0.6**
NVL *e* 23 10 50.2
NVL pmax pmax
comp=Z,155nm,1.3s
YKA Yellowknife Ar 95.56 27 P **P** **23 10 30.1 -2.3**
comp=Z,6.2nm,0.8s,baz=253,slow=4.2,SNR=31
YKA PP **PP** **23 14 21.8 -2.7**
comp=Z,1.2nm,1.0s,baz=242,slow=6.8,SNR=2.4
YKA PKiKP **PKiKP** **23 15 14.5 +2.6**
comp=Z,1.0nm,0.6s,baz=245,slow=1.1,SNR=9.2
YKA PKPPKP **P'P'df** **23 35 34.5 -0.6**
comp=Z,0.5nm,0.8s,baz=64,slow=2.4,SNR=5.9
YKA LR LR 23 50 46.4
comp=Z,1μm,18.4s,baz=0.0,slow=34
SMLA Simla 95.57 301 *eP* **P** **23 10 32.2 -0.9**
SMLA IAmb IAmb 23 10 38.3
comp=Z,93nm,0.9s
TX32 Lajitas Array 95.69 61 P **P** **23 10 34.3 +0.4**
TXAR Lajitas Array 95.69 61 P **P** **23 10 34.2 +0.3**
comp=Z,2.8nm,0.9s,baz=233,slow=4.4,SNR=19
TXAR PP **PP** **23 14 27.1 +0.5**
comp=Z,1.2nm,0.9s,baz=255,slow=3.5,SNR=1.9
TXAR PKKPbc **PKKPbc** **23 27 24.7 +0.2**
comp=Z,1.2nm,0.7s,baz=113,slow=4.2,SNR=8.4
TXAR PKPPKP 23 35 39.4
comp=Z,0.5nm,0.7s,baz=113,slow=3.3,SNR=4.0
TXAR LR LR 23 45 48.7
comp=Z,2μm,20.6s,baz=0.0,slow=30
SDCO Great Sand Dun 95.74 53 P 23 10 33.9
baz=259
K22A Casper 95.89 48 P 23 10 34.2
baz=259
N23A Red Feather La 95.98 50 P 23 10 35.1
baz=259
SHLS Shalkode 96.00 313 ⇑ *iP* **P** **23 10 33.6 -1.5**
comp=Z,114nm,1.4s,baz=313
SHLS *e* S **SKSac** **23 21 01.2 -2.9**
baz=313
SHLS Shalkode 96.00 313 *c iP* **P** **23 10 33.5 -1.5**
SHLS *e* S **SKSac** **23 21 01.2 -2.9**
SHLS pmax pmax
comp=Z,114nm,1.4s
ISCO Idaho Springs 96.03 51 P 23 10 35.4
baz=259
SNAA Sanae 96.13 183 P **P** **23 10 33.8 -1.3**
SNAA Sanae 96.13 183 P **P** **23 10 33.8 -1.3**
comp=Z,58nm,0.9s,baz=190,slow=3.3,SNR=60
SNAA Sanae 96.13 183 *c iP* **P** **23 10 34.1 -0.9**
SNAA pmax pmax
comp=Z,112nm,1.1s
SNAA Sanae 96.13 183 P **P** **23 10 33.7 -1.3**
POO Poona 96.22 288 *eP* **P** **23 10 36.1 -0.3**
POO IAmb IAmb 23 10 40.0
comp=Z,126nm,0.9s
UZB Uzynbulak 96.32 313 ⇑ *iP* **P** **23 10 36.2 -0.3**
comp=Z,130nm,2.4s,baz=313
UZB *e* S **SKSac** **23 21 04.3 -1.5**
baz=313
UZB Uzynbulak 96.32 313 *c iP* **P** **23 10 36.2 -0.3**
UZB *e* S **SKSac** **23 21 04.3 -1.5**
UZB pmax pmax
comp=Z,130nm,2.4s
T25A Trinidad 96.48 54 P 23 10 37.0
baz=260
DHRM DHARAMSHALA 96.50 301 ⇑ *eP* **P** **23 10 35.7 -2.0**
DHRM IAmb IAmb 23 10 41.0
comp=Z,78nm,0.7s
KPKS Kokpek 96.62 313 ⇑ *iP* **P** **23 10 37.4 -0.4**
comp=Z,210nm,2.4s,baz=313
KPKS *e* S **SKSac** **23 21 05.6 -1.6**
baz=313
KPKS Kokpek 96.62 313 *c iP* **P** **23 10 37.3 -0.4**
KPKS *e* S **SKSac** **23 21 05.6 -1.6**
KPKS pmax pmax
comp=Z,210nm,2.4s
SATY Saty 96.75 312 *eP* **P** **23 10 38.2 -0.3**
comp=Z,78nm,2.2s,baz=312
SATY *e* PP **PP** **23 14 34.2 -0.2**
baz=312
SATY *e* S **SKSac** **23 21 06.7 -1.3**
baz=312
SATY Saty 96.75 312 *eP* **P** **23 10 38.1 -0.3**
SATY *e* 23 14 34.2
SATY *e* S **SKSac** **23 21 06.6 -1.3**
SATY pmax pmax
comp=Z,78nm,2.2s
VNA3 Neumayer Olymp 96.83 181 P **P** **23 10 36.7 -1.4**
VNA2 Neumayer--Watz 97.08 182 P **P** **23 10 38.8 -0.4**
baz=166,slow=4.3
VNA2 Neumayer--Watz 97.08 182 pP pP 23 11 00.6 -0.7
TDK Taldyqorghan 97.08 314 *eP* **P** **23 10 39.4 -0.3**
comp=Z,184nm,2.0s,baz=314
TDK *e* S **SKSac** **23 21 08.2 -1.2**
baz=314
TDK Taldyqorghan 97.08 314 *eP* **P** **23 10 39.4 -0.3**
TDK *e* S **SKSac** **23 21 08.1 -1.3**
TDK pmax pmax
comp=Z,184nm,2.0s
MSTX Muleshoe 97.25 57 P 23 10 40.3
baz=260
NRIK Noril'sk 97.34 339 P **P** **23 10 38.9 -1.4**
comp=Z,15nm,1.0s,baz=107,slow=4.5,SNR=15
NRIK PP **PP** **23 14 37.5 -0.6**
comp=Z,10nm,1.1s,baz=44,slow=2.2,SNR=3.6
NRIK PKiKP **PKiKP** **23 15 16.2 +1.3**
comp=Z,12nm,1.1s,baz=135,slow=5.4,SNR=4.6
NRIK PKKPbc **PKKPbc** **23 27 19.4 -2.1**
comp=Z,1.0nm,0.5s,baz=228,slow=6.7,SNR=4.8
NRIK LR LR 23 54 55.3
comp=Z,751nm,19.5s,baz=108,slow=36
NRIK Noril'sk 97.34 339 *c iP* **P** **23 10 38.8 -1.5**
NRIK pmax pmax
comp=Z,11nm,0.9s
NRIK Noril'sk 97.34 339 P **P** **23 10 39.1 -1.2**
NRIK IAmb IAmb 23 10 44.2
comp=Z,101nm,1.6s
VNA1 Neumayer--Stat 97.39 182 P **P** **23 10 40.4 -0.2**
VNA1 Neumayer--Stat 97.39 182 pP pP 23 11 01.4 -1.3
MDOK Medeo 97.74 312 *eP* **P** **23 10 42.5 -0.5**
baz=312
MDOK *e* PP **PP** **23 14 42.2 +0.1**
baz=312
MDOK *e* S **SKSac** **23 21 11.6 -1.6**
baz=312
MDOK Medeo 97.74 312 *eP* **P** **23 10 42.4 -0.5**
MDOK *e* 23 14 42.1
MDOK *e* S **SKSac** **23 21 11.5 -1.6**
TNSS Tian-Shan 97.80 312 *eP* **P** **23 10 42.7 -0.8**
baz=312
TNSS Tian-Shan 97.80 312 *eP* **P** **23 10 42.6 -0.8**
AAA Alma-Ata 97.85 312 *eP* **P** **23 10 42.6 -0.7**
baz=312
AAA *e* S **SKSac** **23 21 11.8 -1.7**
baz=312
AAA Alma-Ata 97.85 312 *eP* **P** **23 10 42.6 -0.7**
AAA *e* S **SKSac** **23 21 11.8 -1.7**
RSSD Black Hills 97.93 47 P 23 10 43.1
baz=261
KURBB Kurchatov Arra 97.94 320 PP **PP** **23 14 45.3 +2.2**
comp=Z,19nm,1.1s,baz=100,slow=8.0,SNR=7.2
KURBB PKiKP **PKiKP** **23 15 17.9 +1.4**
comp=Z,3.9nm,0.8s,baz=105,slow=1.6,SNR=6.0
KURBB PKKPbc **PKKPbc** **23 27 18.0 -1.1**
comp=Z,1.9nm,0.7s,baz=278,slow=3.1,SNR=12
KURBB Kurchatov Arra 97.94 320 P **P** **23 10 41.6 -1.8**
KSH Kashi 97.97 309 P Pdif 23 10 45.1 +1.1
KSH pP pP 23 11 05.8 -0.1
KSH PP **PP** **23 14 48.5 +4.6**
KSH SKS **SKSac** **23 21 17.3 +2.9**
KSH S **ScS** **23 22 06.1 +2.1**
KSH SS **SS** **23 28 51.0 +3.3**
KSH pmax pmax
comp=Z,12nm,1.2s
KSH pmax pmax
comp=Z,790nm,5.7s
KSH LR LR
comp=Z,990nm,17.9s
KSH LR LR
comp=Z,2μm,21.8s
KSH LR LR
comp=Z,2μm,21.5s
ULHL Ulahol 98.19 311 P **P** **23 10 44.9 -0.2**
SNR=17
BOOM Boomskoye usch 98.44 312 P **P** **23 10 45.6 -0.6**
BOOM pmax pmax
comp=Z,48nm,1.3s
BOOM Boomskoye usch 98.44 312 P **P** **23 10 45.5 -0.6**
BOOM IAmb IAmb 23 10 50.9
comp=Z,48nm,1.2s
TKM2 Tokmak 2 98.76 312 P **P** **23 10 46.9 -0.7**
SNR=14
KBK Karagaybulak 99.19 312 P **Pdif** **23 10 50.4 +0.9**
SNR=12
NIL Nilore 99.25 302 P **Pdif** **23 10 48.2 -1.6**
NIL pmax pmax
comp=Z,19nm,0.8s
NIL Nilore 99.25 302 **Pdif** **23 10 48.1 -1.6**
NIL IAmb IAmb 23 11 13.0
comp=Z,19nm,0.8s
CHMS Chumysh 99.38 312 P **Pdif** **23 10 49.2 -0.9**
SNR=15
UCH Uchtor 99.45 311 P **Pdif** **23 10 52.7 +1.7**
SNR=15
AAK Ala-Archa 99.52 312 PKiKP **PKiKP** **23 15 21.7 +1.9**
comp=Z,2.3nm,0.7s,baz=158,slow=5.4,SNR=1.5
AAK Ala-Archa 99.52 312 P **Pdif** **23 10 50.5 -0.4**
SNR=18
AAK Ala-Archa 99.52 312 *i* Pdiff **Pdif** **23 10 50.2 -0.7**
SNR=7.4
AAK Ala-Archa 99.52 312 P **Pdif** **23 10 49.8 -1.1**
AAK pmax pmax
comp=Z,17nm,1.0s
AAK Ala-Archa 99.52 312 Pdif **Pdif** **23 10 49.8 -1.1**
SGDS Sogindy 99.53 312 *eP* **Pdif** **23 10 50.4 -0.5**
baz=312
SGDS Sogindy 99.53 312 *eP* **Pdif** **23 10 50.3 -0.5**
USP Ospenovka 99.60 312 P **Pdif** **23 10 52.0 +0.9**
SNR=20
AML Almayashu 100.05 311 P **Pdif** **23 10 53.5 -0.1**
SNR=27
EKS2 Erkin-Say 100.05 312 P **Pdif** **23 10 54.3 +1.1**
SNR=14

BTLS	Baital	100.15	314⇑	*e*P		Pdif	23 10 52.6	-0.8	
	comp=Z,47nm,2.1s,baz=314								
BTLS	Baital	100.15	314	*ce*P		Pdif	23 10 52.6	-0.8	
BTLS				pmax	pmax				
	comp=Z,47nm,2.1s								
WMOK	Wichita Mounta	100.63	57	P			23 10 55.0		
	baz=263								
CMIG	Matias Romero	101.61	75	PKKPbc	PKKPbc		23 27 08.2	+0.8	
	comp=Z,3.8nm,0.6s,baz=88,slow=8.1,SNR=7.2								
DZA	Taraz	101.87	312	*e*P		Pdif	23 11 00.0	-1.1	
	baz=312								
DZA	Taraz	101.87	312	*e*P		Pdif	23 11 00.0	-1.1	
KK31	Karatay Array	102.48	312	*i* P		Pdif	23 11 02.7	-1.2	
IUG	luzhnay	102.76	311	*e*P		Pdif	23 11 04.0	-1.3	
	baz=311								
IUG	luzhnay	102.76	311	*e*P		Pdif	23 11 03.9	-1.3	
BVAR	Borovoye Array	103.21	322	PP		PP	23 15 21.8	-1.2	
	comp=Z,15nm,1.0s,baz=79,slow=11,SNR=6.4								
BVAR				PKKPbc		PKKPbc	23 27 01.5	-2.5	
	comp=Z,0.8nm,0.5s,baz=240,slow=7.9,SNR=5.0								
BRVK	Borovoye	103.27	322	P		Pdif	23 11 05.6	-1.5	
RES	Resolute Bay	103.86	16	PKKPbc	PKKPbc		23 26 58.8	-3.9	
	comp=Z,2.1nm,0.6s,baz=127,slow=5.9,SNR=14								
ULM	Lac du Bonnet	104.06	41	PKiKP		PKiKP	23 15 26.3	-1.2	
	comp=Z,2.1nm,0.5s,baz=293,slow=0.8,SNR=5.8								
ULM				PKKPbc		PKKPbc	23 27 00.9	-0.4	
	comp=Z,0.8nm,0.5s,baz=190,slow=6.1,SNR=1.3								
APG	El Apazote	105.48	78	PKKPbc	PKKPbc		23 26 58.3	+2.1	
	comp=Z,7.8nm,0.3s,baz=245,slow=3.0,SNR=6.0								
PLCA	Paso Flores	105.62	139	PKKPbc	PKKPbc		23 26 58.7	+2.5	
	comp=Z,3.7nm,0.9s,baz=28,slow=3.7,SNR=5.8								
W41B	Gary Mavity, V	106.01	57	P			23 15 32.3		
	baz=266								
EYMN	Ely	106.92	43	P			23 15 34.1		
	baz=271								
CCM	Cathedral Cave	106.97	54	P			23 15 34.6		
	baz=268								
JFWS	Jewell Farm	107.82	49	P			23 15 36.3		
	baz=270								
WVT	Waverly	109.65	56	P			23 15 39.1		
	baz=269								
AB31	Akbulak array	109.85	318	*e*P		Pdif	23 11 36.3	-0.2	
ARU	Arti	109.89	326	PKiKP		PKiKP	23 15 38.2	0.0	
	comp=Z,3.9nm,0.6s,baz=205,slow=1.6,SNR=11								
ARU				PKKPbc		PKKPbc	23 26 42.5	-0.9	
	comp=Z,1.1nm,0.5s,baz=304,slow=2.8,SNR=6.8								
ARU				PKKPab		PKKPab	23 26 53.6	+1.3	
	comp=Z,10.0nm,0.6s,baz=255,slow=1.4,SNR=24								
BRAL	Brewton	110.17	61	P			23 15 40.4		
	baz=268								
SFIN	Lafayette	110.21	51	P			23 15 40.4		
	baz=271								
LRAL	Lakeview Retre	110.27	59	P			23 15 40.2		
	baz=269								
WCI	Wyandotte Cave	110.87	54	P			23 15 41.2		
	baz=271								
WSAR	Wadi Sarin	110.94	290	PKiKP		PKiKP	23 15 43.4	+2.2	
	comp=Z,13nm,0.9s,baz=142,slow=1.1,SNR=12								
AKTO	Aktyubinsk	110.98	319	Pdiff		Pdif	23 11 41.5	+0.1	
	comp=Z,5.4nm,0.8s,baz=89,slow=3.3,SNR=3.9								
AKTO				PKiKP		PKiKP	23 15 41.5	+1.0	
	comp=Z,12nm,0.7s,baz=122,slow=1.5,SNR=19								
AKTO	Aktyubinsk	110.98	319	P		Pdif	23 11 36.7	-4.8	
MHTO	MHTO	111.37	288	P		PKiKP	23 15 41.8	-0.2	
	SNR=14								
DQM	DQM	111.67	287	P		PKiKP	23 15 45.4	+2.8	
	SNR=8.6								
GEYT	Alibeck	111.78	306	Pdiff		Pdif	23 11 47.8	+2.5	
	comp=Z,0.7nm,0.4s,baz=272,slow=20,SNR=1.5								
GEYT				PKiKP		PKiKP	23 15 43.6	+1.2	
	comp=Z,10nm,0.8s,baz=215,slow=1.8,SNR=12								
GEYT	Alibeck	111.78	306			Pdif	23 11 45.9	+0.5	
GEYT				PKiKP		PKiKP	23 15 42.0	-0.5	
GLMI	Grayling	111.81	46	P			23 15 43.4		
	baz=275								
NEEM	North Greenlan	111.88	8	*i* P		PKiKP	23 15 41.1	-0.7	
NEEM	North Greenlan	111.88	8	*i* P		PKKPab	23 26 44.6	+1.2	
NEEM	North Greenlan	111.88	8	IAmb		IAmb	23 26 46.0		
	comp=Z,12nm,1.0s								
KBS	Kingsbay	112.01	355	*e*PP		PP	23 16 27.5	+1.1	
P49A	Miami Univ. Ec	112.06	52	P			23 15 43.7		
	baz=272								
BSY	Bisya	112.22	290	P		PKiKP	23 15 43.4	-0.2	
	SNR=12								
OPO	Ambohidratompo	112.84	244	PKiKP		PKiKP	23 15 45.1	-0.1	
	comp=Z,8.6nm,0.6s,baz=61,slow=1.8,SNR=13								
ARQ	Araqi	112.88	290	P		PKiKP	23 15 45.8	+0.9	
	SNR=6.6								
ARQ				P		PKiKP	23 15 45.8	+0.9	
	SNR=6.6								
SOHO	SOHO	112.92	291	*i* PKiKP		PKiKP	23 15 43.0	-1.9	
	SNR=49								
SOHO	SOHO	112.92	291	P		PKiKP	23 15 44.4	-0.5	
TKL	Tuckaleechee C	112.94	56	PKKPbc	PKKPbc		23 26 33.7	+1.1	
	comp=Z,2.2nm,0.7s,baz=130,slow=6.8,SNR=2.6								
TIGA	Tifton	113.14	61	P			23 15 45.9		
	baz=270								
MDH	Madha	113.20	292	*i* PKiKP		PKiKP	23 15 43.4	-2.0	
	SNR=7.1								
GOGA	Godfrey	113.23	59	P			23 15 46.0		
	baz=271								
UOSS	Minazif	113.27	292	*i* PKiKP		PKiKP	23 15 44.5	-1.1	
	SNR=12								
UOSS	Minazif	113.27	292	P		PKiKP	23 15 44.2	-1.4	
UOSS				P		PKiKP	23 15 44.2	-1.4	
SHAO	Shalim	113.29	285	PKiKP		PKiKP	23 15 46.8	+1.0	
HATD	Hatta, Dubai	113.33	292	*i* PKiKP		PKiKP	23 15 45.3	-0.4	
	SNR=22								
HATD	Hatta, Dubai	113.33	292	P		PKiKP	23 15 43.8	-1.9	
	SNR=15								
MSFE	Esma-Masafi	113.33	292	*i* PKiKP		PKiKP	23 15 43.9	-1.9	
	SNR=8.7								
ACSO	Alum Creek Sta	113.36	51	P			23 15 46.3		
	baz=274								
ALNE	Al Ain	113.63	291	*i* PKiKP		PKiKP	23 15 44.6	-1.8	
	SNR=23								
ALNE	Al Ain	113.63	291	P		PKiKP	23 15 46.2	-0.1	
	SNR=17								
NAZ	Nazwa, Dubai	113.76	292	*i* PKiKP		PKiKP	23 15 46.7	+0.2	
	SNR=13								
NAZ	Nazwa, Dubai	113.76	292	P		PKiKP	23 15 45.3	-1.2	
	SNR=10								
FAQ	Al Faqa, Dubai	113.81	292	*i* PKiKP		PKiKP	23 15 46.7	+0.1	
	SNR=6.0								
FAQ	Al Faqa, Dubai	113.81	292	P		PKiKP	23 15 47.1	+0.5	
	SNR=5.4								
ASUD	Al Ashush, Dub	114.05	292	*i* PKPdf		PKPdf	23 15 45.7	-1.3	
	SNR=11								
ASUD	Al Ashush, Dub	114.05	292	P		PKiKP	23 15 47.7	+0.6	
	SNR=5.8								
P52A	Corning	114.05	52	P			23 15 47.9		
	baz=274								
KIRV	Kirov	114.22	329	PKP		PKiKP	23 15 46.5	+0.1	
	comp=Z,20nm,0.8s,baz=332,slow=2.5,SNR=7.1								
KIRV				PP		PP	23 16 41.0	-1.6	
	comp=Z,18nm,0.8s,baz=231,slow=0.8,SNR=3.8								
KIRV				PKKPbc		PKKPbc	23 26 28.6	-0.3	
	comp=Z,8.4nm,0.6s,baz=217,slow=5.1,SNR=2.0								
AJN	Ajban	114.35	292	*i* PKiKP		PKPdf	23 15 47.6	0.0	
	SNR=5.2								
I51A	Listowel	114.48	47	P			23 15 48.3		
	baz=277								
Q53A	Leroy	114.58	53	P			23 15 48.5		
	baz=274								
O53A	New Philadelph	114.71	51	P			23 15 48.7		
	baz=275								
S54A	Dingess, Beckl	114.82	54	P			23 15 49.1		
	baz=274								
KMSC	Kings Mountain	114.95	57	P			23 15 49.1		
	baz=273								
PRGR	Permogore	114.98	333	*e*PKIKP		PKiKP	23 15 47.3	-0.4	
PRGR				*e*			23 16 05.2		
PRGR				*e*			23 16 48.9		
PRGR				*e*SP		SP	23 26 23.7	+6.4	
PRGR				*e*PS		PKKPbc	23 26 25.5	-1.0	
PRGR				pmax	pmax				
	comp=Z,23nm,0.8s								
M53A	WI Miller and	115.00	50	P			23 15 49.7		
	baz=276								
R54A	Victor	115.05	53	P			23 15 49.5		
	baz=274								
L53A	Girard	115.25	49	P			23 15 49.9		
	baz=277								
DAG	Danmarks Havn	115.26	1	*i* P		PKiKP	23 15 46.5	-1.5	
DAG	Danmarks Havn	115.26	1	IAmb		IAmb	23 26 31.7		
	comp=Z,6.2nm,1.0s								
DAG	Danmarks Havn	115.26	1	*i* PKIKP		PKiKP	23 15 46.4	-1.5	
DAG	Danmarks Havn	115.26	1	*i* P		PKKPab	23 26 29.2	+1.2	
ERPA	Erie	115.44	49	P			23 15 50.2		
	baz=277								
N54A	Moraine State	115.56	50			PKPdf	23 15 48.8	-0.8	
N54A	Moraine State	115.56	50	P			23 15 50.3		
	baz=276								
BLA	Blacksburg	115.57	54	P			23 15 50.7		
	baz=274								
SADO	Sadowa	115.69	46	PKKPbc	PKKPbc		23 26 24.9	+1.4	
	comp=Z,6.9nm,0.7s,baz=90,slow=3.0,SNR=2.6								
R55A	Marlinton	115.72	53	P			23 15 50.6		
	baz=275								
M54A	Oil Creek Stat	115.75	50	P			23 15 50.7		
	baz=277								
MATQ	Matagami	115.80	40	P			23 15 50.8		
	baz=282								
MCWV	Mont Chateau	115.81	52	P			23 15 51.2		
	baz=276								
W57A	Gilead	116.05	57			PKPdf	23 15 50.1	-0.5	
LVZ	Lovozero	116.07	342	*c i* PKIKP		PKiKP	23 15 49.4	-0.3	
H53A	Bobcaygeon	116.12	46	P			23 15 51.2		
	baz=279								
S56A	Natural Bridge	116.21	54	P			23 15 51.2		
	baz=275								
ALGO	Algonquin Park	116.26	45	P			23 15 51.4		
	baz=280								
R56A	Bull Pasture M	116.27	53	P			23 15 51.4		
	baz=276								
G54A	Lake Saint Pet	116.33	45	P			23 15 51.9		
	baz=280								
LSQQ	Lebel-sur-Quev	116.37	41	P			23 15 51.6		
	baz=282								
Q56A	Snyder Ridge,	116.38	52	P			23 15 52.7		
	baz=276								
P56A	Dayton Farm, R	116.60	52	P			23 15 52.7		
	baz=276								
APA	Apatity	116.64	342	⇓ *i* PKIKP		PKPdf	23 15 49.8	-1.0	
APA				*i* PS		PKKPdf	23 26 42.0	-4.9	
APA				pmax	pmax				
	comp=Z,24nm,0.8s								
APA				MLR	MLR				
	comp=Z,5μm,21.0s								
S57A	Dark Hollow, R	116.69	54	P			23 15 52.2		
	baz=275								
O56A	Blue Knob Stat	116.72	51	P			23 15 52.5		
	baz=277								
N56A	West Decatur	116.84	50	P			23 15 52.7		
	baz=278								
M56A	Emporium	116.86	50	P			23 15 52.6		
	baz=278								
R57A	Stanardsville	116.97	53	P			23 15 52.5		
	baz=276								
BELG	Belogornoye	116.98	323	PKP		PKPdf	23 15 51.4	-0.5	
	comp=Z,168nm,0.9s,baz=301,slow=2.2,SNR=26								
BELG				PKKPbc		PKKPab	23 26 22.3	+1.3	
	comp=Z,12nm,0.8s,baz=258,slow=3.8,SNR=4.9								
BELG	Belogornoye	116.98	323	*i* PKIKP		PKiKP	23 15 52.5	+0.7	
Q57A	Strasburg	116.98	52	P			23 15 53.1		
	baz=276								
KEV	Kevo	116.99	345	PKIKP		PKPdf	23 15 50.6	-0.8	
KEV	Kevo	116.99	345	PKPdf		PKPdf	23 15 50.6	-0.8	
LPA	La Plata	117.11	140	PKIKP		PKPdf	23 15 44.2	-8.5	
LPA				PP		PP	23 16 54.5	-8.4	
LPA				pPP			23 17 13.8		
LPA				SKIKS			23 19 23.8		
LPA				SKS		SKSdf	23 22 40.1	-17	
LPA				SDIFF		SKKSac	23 24 35.5	+39	
LPA				PS		PKKPdf	23 26 53.9	+9.1	
LPA				SS		SS	23 33 16.9	+12	
LPA				PPP		PPP	23 33 50.9		
LPA				SSS		SSS	23 37 10.7		
HAMF	Hammerfest	117.12	347	*e*PKPdf		PKiKP	23 15 52.5	+0.9	
HAMF				IVmB_BB			23 16 12.0		
	comp=Z,2μm,3.1s								
HAMF				*e*SKPdf		SKPdf	23 19 18.3	-1.4	
HAMF				IVMs_BB	IVMs_BB		00 03 30.8		
	comp=Z,4μm,4.6s								
SSPA	Standing Stone	117.19	50			PKPdf	23 15 51.4	-1.3	
SSPA	Standing Stone	117.19	50	P			23 15 53.5		
	baz=278								
L56A	Greenwood	117.22	49	P			23 15 53.5		
	baz=279								
P57A	Homestead Farm	117.24	52	P			23 15 53.5		
	baz=277								
K56A	Middlesex	117.31	48	P			23 15 53.6		
	baz=279								
YOTC	Yotoco, Valle	117.38	92	*e*P		PKPdf	23 15 50.0	-4.0	
S58A	Poland Farm, P	117.41	54	P			23 15 53.7		
	baz=276								
N57A	Milroy	117.43	50	P			23 15 54.3		
	baz=278								
O57A	Amberson	117.43	51	P			23 15 54.1		
	baz=278								
R58B	Mineral	117.51	53			PKiKP	23 15 54.0	+0.6	
R58B	Mineral	117.51	53	P			23 15 53.8		
	baz=276								
ARA0	ARCESS Array S	117.52	346	*e*PKPdf		PKPdf	23 15 52.0	-0.4	
ARA0				*e*PP		PP	23 17 06.2	+1.0	
ARCES	ARCESS Array B	117.52	346	PKP		PKPdf	23 15 51.6	-0.8	
	comp=Z,46nm,0.7s,baz=69,slow=1.8,SNR=287								
ARCES				PKKPbc		PKKPbc	23 26 16.8	-1.1	
	comp=Z,10nm,0.8s,baz=223,slow=2.7,SNR=22								
ARCES	ARCESS Array B	117.52	346	PKIKP		PKPdf	23 15 51.8	-0.6	
ARCES	ARCESS Array B	117.52	346			PKPdf	23 15 51.8	-0.6	
J56A	Wolcott	117.56	47	P			23 15 53.9		
	baz=280								
Q58A	Fox Den Farm,	117.56	52	P			23 15 54.4		
	baz=277								
M57A	Sunshine Farm,	117.66	50	P			23 15 54.6		
	baz=278								
DBG	Daneborg	117.68	2	*i* P		PKiKP	23 15 53.0	+0.4	
DBG	Daneborg	117.68	2	*i* P		PKKPab	23 26 19.7	+2.3	
SUMG	Summit	117.75	8	*i* P		PKiKP	23 15 54.0	+0.6	
SUMG	Summit	117.75	8	*i* PKIKP		PKiKP	23 15 53.9	+0.6	
SUMG	Summit	117.75	8	PKPdf		PKiKP	23 15 53.6	+0.3	
L57A	Andrews Acres	117.77	49	P			23 15 54.8		
	baz=279								
D55A	Sainte-Anne-du	117.80	43	P			23 15 54.8		
	baz=283								
T59A	Double "B" Far	117.87	55	PKPdf		PKiKP	23 15 54.5	+0.4	
CBN	Corbin Frederi	117.88	53	P			23 15 55.0		
	baz=277								
K57A	Scipio Center	117.89	48	P			23 15 54.6		
	baz=280								
O58A	Lewisberry	117.99	51	P			23 15 54.9		
	baz=278								
KLMR	Klimovskoe	117.99	334	*e*PKIKP		PKPdf	23 15 52.9	-0.6	
KLMR				*e*PS		PKKPdf	23 26 48.7	+4.5	
KLMR				*e*SS		SS	23 33 11.4	-4.7	
KLMR				pmax	pmax				
	comp=Z,35nm,0.8s								
KLMR	Klimovskoe	117.99	334	*e*PKPdf		PKPdf	23 15 53.0	-0.6	
KLMR				AMP			23 15 56.9		
	comp=Z,35nm,0.8s								
KLMR				*e*PP		PP	23 17 02.7	-6.1	
KLMR				*e*PKKP		PKKPbc	23 26 13.0	-2.9	
KLMR				*e*PS		PKKPdf	23 26 48.7	+4.5	
KLMR				*e*PS		PKKPdf	23 26 48.7	+4.5	
KLMR				*e*SS		SS	23 33 11.4	-4.7	
KLMR				*e*SS		SS	23 33 11.4	-4.7	
KLMR				LQ		LQ	23 57 16.0		
KLMR				LQ		LQ	23 57 16.0		
KLMR				LR		LR	00 00 08.6		
S59A	Mechanicsville	117.99	54	P			23 15 54.7		
	baz=276								
N58A	Sunbury	118.04	50	P			23 15 55.0		
	baz=278								
J57A	Williamstown	118.15	47	P			23 15 55.4		
	baz=280								
E56A	St. Veronique	118.19	44	P			23 15 55.3		
	baz=283								
D56A	ZEC Mazanza, M	118.27	43	P			23 15 54.7		
	baz=283								
I57A	Carthage	118.29	46	P			23 15 55.4		
	baz=281								
BINY	Binghamton	118.37	48	P			23 15 55.6		
	baz=280								
H57A	Richville	118.38	46	P			23 15 55.9		
	baz=281								
MVL	Millersville	118.44	51			PKPdf	23 15 54.9	-0.1	
KTK1	Kautokeino	118.45	346	*e*PKPdf		PKPdf	23 15 53.0	-1.2	
KTK1				IVmB_BB			23 16 06.9		
	comp=Z,2μm,3.6s								
KTK1				*ep*PKPdf		sPKPdf	23 16 22.9	-3.1	
KTK1				*e*PKSdf		PKSdf	23 19 31.9	+1.4	
L58A	Harry Jones Me	118.50	49	P			23 15 55.9		
	baz=280								
TOLC	Tolima	118.50	91	*e*P		PKiKP	23 15 56.7	+0.3	
S60A	Water View	118.50	54	P			23 15 56.2		
	baz=277								
K58A	Earlville	118.52	48	P			23 15 56.2		
	baz=280								
O59A	Robesonia	118.52	51	P			23 15 56.7		
	baz=279								
G57A	Newington	118.54	45	P			23 15 56.0		
	baz=282								
GUY2C	Guyana, Caldas	118.58	91	*e*P		PKPdf	23 15 55.9	-0.8	
JETT	Jettan, Norway	118.68	347	*e*PKPdf		PKiKP	23 15 54.8	+0.1	
JETT				*e*PP		PP	23 17 14.3	+1.0	
N59A	State Game Lan	118.74	50			PKPdf	23 15 55.4	-0.3	
N59A	State Game Lan	118.74	50	P			23 15 56.9		
	baz=279								
I58A	Old Forge	118.83	47	P			23 15 56.7		
	baz=281								
M59A	Waymart	118.89	49	P			23 15 56.6		
	baz=280								
LONY	Lake Ozonia	118.92	46	P			23 15 56.5		
	baz=282								
TRO	Tromso	118.94	348	*e*PKPdf		PKiKP	23 15 55.5	+0.3	
TRO				*e*PP		PP	23 17 15.3	+0.3	
P60A	Greenville	119.01	51	P			23 15 56.8		
	baz=279								
L59A	Walton	119.06	48	P			23 15 57.3		
	baz=280								
LPAZ	La Paz	119.08	116	PKP		PKPdf	23 15 57.0	-0.8	
	comp=Z,3.2nm,0.6s,baz=269,slow=4.3,SNR=11								
LPAZ				PKKPbc		PKKPbc	23 26 12.4	+0.9	
	comp=Z,6.4nm,0.8s,baz=41,slow=2.3,SNR=8.2								
LPAZ				SKKP		SKKPdf	23 30 06.2	-3.5	
	comp=Z,2.5nm,0.9s,baz=66,slow=8.4,SNR=4.0								
LPAZ	La Paz	119.08	116	*e*PKIKP		PKiKP	23 15 59.6	+1.8	
LPAZ				pmax	pmax				
	comp=Z,3.0nm,0.6s								
LPAZ	La Paz	119.08	116	PKPdf		PKPdf	23 15 56.5	-1.2	
K59A	Cooperstown	119.09	48	P			23 15 57.0		
	baz=281								
O60A	Telford	119.11	51	P			23 15 57.0		
	baz=279								
G58A	Ormstown	119.17	45	P			23 15 57.3		
	baz=283								
J59A	Piesco	119.21	47	P			23 15 57.4		
	baz=282								
H58A	Gabriels	119.24	46	P			23 15 57.4		
	baz=282								
N60A	Cedar Hill Far	119.25	50	P			23 15 57.6		
	baz=280								
MAK	Makhachkala	119.28	313	*i* P		Pdif	23 12 23.0	+4.5	
MAK				*i*			23 15 56.8		
MAK				*e*			23 17 16.9		
MAK				*e*PPP		PPP	23 19 50.1		
MAK				*e*			23 22 46.7		
MAK				*e*SS		SS	23 33 34.2	+0.1	
MAK				*e*SSS		SSS	23 37 57.9		
MAK				pmax	pmax				
	comp=Z,143nm,0.8s								
MAK				MLR	MLR				
	comp=Z,679nm,16.0s								
E58A	La Victoria	119.42	43	P			23 15 57.1		
	baz=284								
ZARC	Zaragoza, Cauc	119.48	88	*e*P		PKPdf	23 15 52.2	-5.6	
LATQ	La Tuque	119.49	42	P			23 15 56.9		
	baz=285								
D58A	Chemin du LacG	119.50	42	P			23 15 56.9		
	baz=285								
M60A	Port Jervis	119.52	49	P			23 15 58.1		
	baz=280								
ROSC	El Rosal	119.53	91	PKKPbc	PKKPbc		23 26 10.2	+0.8	
	comp=Z,15nm,0.6s,baz=220,slow=18,SNR=3.0								
SJCC	San Jacinto, C	119.54	85	*e*P		PKiKP	23 15 58.1	+0.1	
I59A	Olmsteadville	119.59	46	P			23 15 58.2		
	baz=282								
L60A	Shokan	119.70	48	P			23 15 58.5		
	baz=281								
SFJD	Kangerlussuaq	119.86	16	*i* P		PKiKP	23 15 57.5	+0.4	
SFJD	Kangerlussuaq	119.86	16	PKIKP		PKiKP	23 15 57.5	+0.4	
SFJD	Kangerlussuaq	119.86	16	PKPdf		PKiKP	23 15 57.5	+0.4	
N61A	South Mountain	119.87	50	P			23 15 58.7		
	baz=280								
I60A	Shoreham	119.99	46	P			23 15 58.1		
	baz=283								
J60A	Lant Hill Farm	120.03	47	P			23 15 58.2		
	baz=282								
CHIC	Chingaza	120.06	92	*e*P		PKPdf	23 15 57.8	-1.7	
PAL	Palisades	120.11	50	P			23 15 58.8		
	baz=281								
L61A	Hillsdale 1, H	120.15	48	P			23 15 58.6		
	baz=282								
M61A	Granite Spring	120.16	49	P			23 15 58.7		
	baz=281								
D59A	Saint-Raymond	120.21	42	P			23 15 58.7		
	baz=286								
H60A	Morristown	120.24	45	P			23 15 59.1		
	baz=284								
K61A	Williamstown	120.26	48	P			23 15 59.5		
	baz=282								
G60A	Masonville	120.37	45	P			23 15 59.0		
	baz=284								
F60A	Warwick	120.41	44	P			23 15 59.1		
	baz=285								
SMLC	San Martn de	120.45	87	*e*P		PKPdf	23 15 57.6	-2.1	
GROC	Groznyy	120.46	313	*i* PKIKP		PKPdf	23 15 55.5	-3.3	
GROC				*e*			23 17 25.8		
GROC				*e*			23 22 58.9		
GROC				pmax	pmax				
	comp=Z,97nm,1.1s								
ICESG	Greenland Ices	120.62	11	*i* P		PKPdf	23 15 58.4	-0.5	
J61A	Chester	120.62	47	P			23 16 00.1		
	baz=283								
E60A	Ste Agathe de	120.64	43	P			23 15 59.5		
	baz=286								
QRN	Al-Qurain	120.68	296	*e*P			23 15 58.6		
L61B	Northampton	120.73	48	P			23 16 00.3

SCO Scoresbysund 121.41 3 PKPdf PKPdf 23 15 59.6 -0.3
M63A Gales Ferry 121.41 49 P 23 16 01.6
baz=282
N2TV Tŷrnvik 121.44 348 ePKPdf PKiKP 23 16 01.1 +1.0
N2TV ePS PKKPdf 23 27 27.1 +49
RST Umm Al-Ruwaisa 121.44 297 eP 23 16 00.2
K63A Dunstable 121.50 47 P 23 16 01.8
baz=284
N2ST Straumen 121.52 347 ePKPdf PKiKP 23 16 01.1 +0.8
HRV Adam Dziewonsk 121.53 47 P 23 16 01.7
baz=283
FAUS Fauske 121.56 347 ePKPdf PKiKP 23 16 01.3 +0.9
FAUS epPKPdf pPKPdf 23 16 27.3 +4.0
FAUS eSKSdf SKSdf 23 23 03.2 -1.2
G62A West of Eustis 121.57 44 P 23 16 01.4
baz=286
NUUK Nuuk 121.57 19 i P PKPdf 23 15 59.6 -0.7
L63A North Scituate 121.63 48 P 23 16 02.2
baz=283
J63A Strafford 121.69 46 P 23 16 02.2
baz=284
NBB08 Skaug oppvekst 121.69 348 ePKPdf PKiKP 23 16 01.5 +0.9
I63A Otisfield 121.84 45 P 23 16 02.5
baz=285
GNI Garni 121.87 310 PKP PKiKP 23 16 02.4 +0.3
comp=Z,54nm,0.9s,baz=346,slow=3.3,SNR=40
GNI Garni 121.87 310 PKPdf PKPdf 23 15 58.9 -3.0
GNI Garni 121.87 310c i PKIKP PKiKP 23 16 02.7 +0.6
GNI pmax pmax
comp=Z,164nm,1.7s
GNI Garni 121.87 310 PKPdf PKPdf 23 16 01.8 -0.1
NBB29 Rokland skole 121.87 347 eSKSac SKSac 23 22 51.6 -1.1
LPSR Galich'ya Gora 121.90 325 i PKIKP PKiKP 23 16 01.6 +0.1
LPSR pmax pmax
comp=Z,100nm,1.0s
LPSR MLR MLR
comp=Z,3µm,21.0s
ZEI Tsey 121.91 313 i PKIKP PKPdf 23 16 01.7 -0.2
ZEI pmax pmax
comp=Z,50nm,0.9s
GOF Gofitskoye 121.92 316⇑ ePKIKP PKiKP 23 16 03.9 +2.1
GOF pmax pmax
comp=Z,68nm,0.9s
OBN Obninsk 122.06 329 PKP PKiKP 23 16 01.9 +0.2
comp=Z,13nm,0.7s,baz=96,slow=2.1,SNR=14
OBN Obninsk 122.06 329 ⇓P PKiKP 23 16 02.3 +0.6
OBN Obninsk 122.06 329 i PKIKP PKPdf 23 16 01.3 -0.2
OBN i 23 16 20.7
OBN i 23 17 39.7
OBN i S SKSac 23 22 50.7 -3.1
OBN pmax pmax
comp=Z,43nm,0.8s
OBN Obninsk 122.06 329 PKPdf PKPdf 23 16 01.2 -0.3
NBB05 Inndyr 122.11 348 ePKPdf PKiKP 23 16 02.4 +0.9
PYA1 Pyatigorsk 122.15 315 i PKIKP PKiKP 23 16 02.3 0.0
L64A Middleborough 122.18 48 P 23 16 03.4
baz=284
G63A Kingsbury 122.22 44 P 23 16 02.9
baz=286
NBB30 Finnes 122.23 348 eSP SP 23 27 22.1 +0.3
NBB17 Glomfjord BYr 122.32 348 ePKPdf PKiKP 23 16 02.7 +0.8
NBB17 IVMs_BB IVMs_BB 00 01 34.2
comp=Z,5µm,5.2s
VSR Storozhevoye 122.32 324 i PKIKP PKPdf 23 16 02.0 -0.2
VSR pmax pmax
comp=Z,90nm,0.7s
VSR MLR MLR
comp=Z,3µm,26.0s
VORD Divnogorie 122.34 323 ePKIKP PKiKP 23 16 02.6 +0.2
VORD pmax pmax
comp=Z,50nm,0.8s
KBZ Khabaz 122.38 314 PKP PKiKP 23 16 03.8 +1.1
comp=Z,27nm,0.8s,baz=139,slow=2.9,SNR=21
KBZ PP PP 23 17 38.9 -0.6
comp=Z,11nm,0.9s,baz=30,slow=7.5,SNR=2.6
KBZ PKKPbc PKKPbc 23 25 59.2 +0.2
comp=Z,1.5nm,0.8s,baz=232,slow=18,SNR=3.7
KBZ Khabaz 122.38 314 ePKIKP PKiKP 23 16 03.9 +1.2
KBZ pmax pmax
comp=Z,27nm,0.8s
F63A Nahmakanta, Br 122.40 43 P 23 16 03.3
baz=287
PKME Peaks-Kenny Pk 122.40 44 P 23 16 03.3
baz=287
KVAR Kislovodsk Arr 122.46 315 PKP PKiKP 23 16 05.4 +2.3
comp=Z,14nm,0.9s,baz=292,slow=19,SNR=10
KIV Kislovodsk 122.47 315 ⇑P PKiKP 23 16 03.2 +0.2
KIV Kislovodsk 122.47 315 i PKPdf PKPdf 23 16 02.0 -0.8
SNR=8.9
KIV Kislovodsk 122.47 315 i P Pdif 23 12 31.7 -1.1
KIV i 23 16 01.3
KIV e 23 17 38.4
KIV e 23 22 53.0
KIV ePS PKKPdf 23 27 33.9 +58
KIV eSS SS 23 34 13.1 -1.8
KIV pmax pmax
comp=Z,121nm,1.1s
KIV Kislovodsk 122.47 315 PKPdf PKiKP 23 16 03.9 +0.9
AKH Akhalkalaki 122.53 312 ⇑P PKiKP 23 16 03.7 +0.4
I64A Boothbay 122.54 45 P 23 16 03.6
baz=286
SHA1 Shidzhatmaz 122.55 314 i PKIKP PKPdf 23 16 02.5 -0.7
H64A Troy 122.62 44 P 23 16 03.6
baz=286
NEY Neytrino 122.63 314 i PKIKP PKiKP 23 16 03.6 +0.1
E63A Oxbow 122.63 42 P 23 16 03.8
baz=288
D63A Stockholm 122.64 41 P 23 16 03.5
baz=289
MOR8 Moi Rana 122.76 347 IVmB_BB 23 16 01.4
comp=Z,3µm,4.3s
MOR8 ePKPdf PKPdf 23 16 01.9 -0.7
MOR8 epPKPdf sPKPdf 23 16 30.1 -4.2
MOR8 IVMs_BB IVMs_BB 23 56 06.6
comp=Z,6µm,4.9s
G64A Maxfield 122.76 44 P 23 16 03.9
baz=287
KONS Konsvik 122.76 348 ePKPdf PKPdf 23 16 01.9 -0.7
KONS ePP PP 23 17 42.1 +1.1
NBB40 Tonnes 122.78 348 ePKPdf PKiKP 23 16 03.7 +0.9
CPUP Villa Florida 122.80 132 PKP PKiKP 23 16 02.1 -1.8
comp=Z,4.9nm,0.7s,baz=282,slow=1.9,SNR=10
CPUP PKKPbc PKKPbc 23 25 57.2 +0.1
comp=Z,12nm,0.8s,baz=68,slow=3.7,SNR=17
CPUP Villa Florida 122.80 132 PKIKP PKPdf 23 16 03.1 -0.8
CPUP Villa Florida 122.80 132 PKPdf PKPdf 23 16 03.1 -0.8
F64A Sherman 122.85 43 P 23 16 03.8
baz=288
CPSB Cacapava Do Su 122.91 139 eP PKPdf 23 16 03.6 -0.4
STOK Stokkvaagen 122.93 348 ePKPdf PKiKP 23 16 03.7 +0.6
FIA1 FINESS Array S 123.00 339 PKPdf PKPdf 23 16 02.6 -0.6
FINES FINESS Array B 123.00 339 PKP PKPdf 23 16 02.6 -0.5
comp=Z,19nm,0.6s,baz=72,slow=3.2,SNR=29
FINES PKKPbc PKKPab 23 25 54.9 +0.4
comp=Z,4.2nm,0.8s,baz=211,slow=1.7,SNR=10
FINES FINESS Array B 123.00 339 PKIKP PKPdf 23 16 02.4 -0.7
FINES FINESS Array B 123.00 339 PKPdf 23 16 02.4 -0.7
RAYN Ar Rayn 123.00 290 i PKiKP PKPdf 23 16 04.5 +0.1
SNR=117
RAYN Ar Rayn 123.00 290 PKIKP PKPdf 23 16 04.1 -0.3
RAYN Ar Rayn 123.00 290 PKPdf PKPdf 23 16 04.1 -0.3
E64A Bridgewater 123.02 42 P 23 16 04.1
baz=289
CHVG Ch'k'valeri 123.22 313 ⇓P PKiKP 23 16 04.5 +0.1
CHVG Ch'k'valeri 123.22 313 ⇓PKIKP PKiKP 23 16 04.5 +0.1
H65A Eastbrook 123.27 44 P 23 16 04.7
baz=287
ETMB Extrema 123.30 110 eP PKPdf 23 16 03.3 -1.8
GEVA Gevas 123.52 308 PKPdf PKPdf 23 16 04.6 -0.5
G65A Princeton 123.58 43 P 23 16 05.3
baz=288
ISOG Isortoq, Green 123.83 12 eP PKPdf 23 16 04.2 -0.4
BATG Bathurst New B 123.88 41 PKPdf PKPdf 23 16 03.9 -1.4
H66A Whiting 123.88 44 P 23 16 06.2
baz=288
ANGG Ammassalik, Gr 124.05 12 i P PKiKP 23 16 05.2 -0.1
SDDR Presa de Saban 124.12 75 PKPdf 23 16 05.2 -1.5
SOC Sochi 124.64 315 i PKIKP PKPdf 23 16 05.1 -1.8
SOC e 23 17 51.8
SOC ePPP PPP 23 20 35.5
SOC ePS PS 23 27 42.8 -13
SOC MLR MLR
comp=Z,1µm,22.0s
NSS Namsos 124.70 347 ePKPdf PKiKP 23 16 06.6 0.0
NSS epPKPdf sPKPdf 23 16 34.2 -3.9
NSS ePP PP 23 17 55.0 +0.8
VSU Vasula 124.70 336 eP PKPdf 23 16 06.2 -0.3
BOSA Boshof 124.85 222 PKP PKPdf 23 16 08.0 0.0
comp=Z,30nm,0.8s,baz=102,slow=1.8,SNR=32
BOSA Boshof 124.85 222 PKIKP PKPdf 23 16 07.6 -0.3
BOSA Boshof 124.85 222 PKPdf PKPdf 23 16 07.6 -0.3
ATD Arta Tunnel 124.91 276 PKPdf 23 16 08.1 -0.2
SUR Sutherland 124.93 216 PKP PKiKP 23 16 09.0 +0.6
comp=Z,25nm,0.8s,baz=178,slow=1.2,SNR=12
SUR Sutherland 124.93 216 PKPdf PKPdf 23 16 08.1 0.0
KOPT Kop Dagi 125.07 311 PKPdf PKPdf 23 16 07.9 -0.3
CNLB Canela 125.30 140 eP PKPdf 23 16 08.3 -0.4
KTUT Trabzon 125.35 312 ⇑P PKiKP 23 16 09.4 +0.7
MARD Mardin 125.50 307 PKPdf PKiKP 23 16 09.2 -0.1
MTSE Matsula 125.68 337 eP PKiKP 23 16 08.9 +0.1
NRS Narsarsuaq 125.77 18 i P PKPdf 23 16 08.4 0.0
NRS Narsarsuaq 125.77 18 i PKIKP PKPdf 23 16 08.4 0.0
ANN Anapa 125.79 317 i PKIKP PKPdf 23 16 08.1 -0.9
ANN e 23 18 00.1
ANN eSS SS 23 34 56.0 -0.4
ANN pmax pmax
comp=Z,83nm,1.0s
ITAB Concordia 125.86 137 eP PKPdf 23 16 09.6 -0.2
AAL Aland 126.00 340 eP PKPdf 23 16 08.8 -0.1
TBLU Trondheim 126.19 347 ePKPdf PKPdf 23 16 08.9 -0.3
TBLU IVmB_BB 23 16 23.3
comp=Z,3µm,4.2s
TBLU eSKPdf SKiKP 23 19 35.8 -2.4
TBLU IVMs_BB IVMs_BB 00 06 00.4
comp=Z,5µm,4.4s
MNK Minsk 126.65 331 ePKIKP PKiKP 23 16 12.0 +1.2
MNK e 23 18 16.0
MNK pmax pmax
comp=Z,300nm,2.0s
MNK Minsk 126.65 331 i PKP PKiKP 23 16 10.7 -0.2
comp=E,1.0nm,0.7s
MNK i PKP PKiKP 23 16 10.7 -0.2
comp=N,22nm,0.9s
MNK i PKP PKiKP 23 16 10.7 -0.2
comp=Z,96nm,0.8s
MNK i pPKP pPKPdf 23 16 35.6 +2.2
MNK i PP PP 23 18 08.8 +1.3
MNK i PPP PPP 23 20 51.0
MNK i SKS SKSdf 23 23 14.0 -0.5
MNK i PS PS 23 27 53.1 -19
MNK i SS SS 23 35 07.8 +1.6
MNK i SSS SSS 23 40 00.0
IDID Didziasalis 126.68 333 eP PKPdf 23 16 09.7 -0.7
ISAL Salakas 126.80 333 eP PKiKP 23 16 12.5 +1.4
IIGN Ignalina 126.89 333 eP PKiKP 23 16 11.8 +0.5
NACGM Naroch 126.92 332 i PKP PKPdf 23 16 10.8 -0.1
NACGM i PKP PKPdf 23 16 10.8 -0.1
NACGM i PKP PKPdf 23 16 10.8 -0.1
NACGM i pPKP pPKPdf 23 16 34.5 +0.5
NACGM i sPKP 23 16 48.9
NACGM i PP PP 23 17 51.8 -17
NACGM i PPP PPP 23 20 29.6
NACGM i SKS SKSdf 23 23 07.7 -7.3
NACGM i SKKS SKKSac 23 24 53.3 -6.0
NACGM i SP SP 23 27 34.7 -29
NACGM i SP SP 23 27 34.7 -29
NACGM i PS PS 23 28 11.4 -3.4
NACGM i PS PS 23 28 11.4 -3.4
NACGM i SS SS 23 34 22.0 -47
NACGM i SSS SSS 23 39 10.0
TER01 Tubaro-SC 126.93 140 eP PKiKP 23 16 13.8 +1.5
LBTB Lobatse 126.95 226 PKP PKPdf 23 16 12.0 0.0
comp=Z,24nm,0.8s,baz=124,slow=3.7,SNR=20
LBTB Lobatse 126.95 226 PKIKP PKPdf 23 16 11.6 -0.4
LBTB Lobatse 126.95 226 PKPdf PKPdf 23 16 11.6 -0.4
UPP Uppsala 127.02 341 eP PKPdf 23 16 09.6 -1.2
PTLB Pontes e Lacer 127.20 120 eP PKPdf 23 16 11.4 -1.2
MOL Molde 127.38 348 ePKPdf PKiKP 23 16 12.2 +0.1
MOL IVmB_BB 23 16 17.7
comp=Z,3µm,3.8s
MOL epPKPdf sPKPdf 23 16 39.3 -3.9
MOL eSKSac SKSac 23 23 07.6 -2.8
AQDB Aquidauana 127.39 128 eP PKPdf 23 16 12.0 -0.9
VILB Vilhena 127.43 117 eP PKPdf 23 16 12.3 -0.8
DOMB Dombas 127.52 347 ePKPdf PKiKP 23 16 13.2 +0.8
DOMB IVmB_BB 23 16 19.7
comp=Z,3µm,4.5s
DOMB ePP PP 23 18 13.5 +0.6
DOMB eSKSdf SKSdf 23 23 14.9 -1.1
DOMB IVMs_BB IVMs_BB 00 03 33.2
comp=Z,5µm,5.0s
MATP Matopo 127.55 232 PKP PKPdf 23 16 13.3 0.0
comp=Z,29nm,0.9s,baz=128,slow=2.0,SNR=25
NC303 NORSAR Array S 127.69 345 PKPdf 23 16 12.0 -0.2
PABE Paberze 127.78 334 eP PKiKP 23 16 13.2 +0.2
PABE Paberze 127.78 334 PKPdf PKPdf 23 16 12.6 +0.2
AKN Aaknes 127.84 348 ePKPdf PKiKP 23 16 13.0 0.0
AKN ePP PP 23 18 16.4 +1.4
NB2 NORSAR Subarra 127.89 345 PKPdf PKPdf 23 16 11.6 -1.0
baz=31,slow=1.9
NOA NORSAR Array B 127.89 345 PKP PKPdf 23 16 12.2 -0.4
comp=Z,16nm,0.7s,baz=32,slow=2.0,SNR=23
KMBO Kilima Mbogo 127.91 259 PKhKP PKPpre 23 16 06.9
comp=Z,3.9nm,0.9s,baz=317,slow=1.8,SNR=4.2
KMBO PKP PKiKP 23 16 15.6 +0.6
comp=Z,22nm,0.9s,baz=57,slow=5.0,SNR=30
SIM Simferopol' 127.92 318 ePKIKP PKPdf 23 16 12.5 -0.6
SIM pmax pmax
comp=Z,48nm,0.5s
TOKA Tokat 127.94 312 PKiKP 23 16 15.3 +1.3
NC602 NORSAR Array S 128.06 345 ePKPdf PKPdf 23 16 13.0 +0.1
NC602 ePP PP 23 18 17.4 +0.9
MLPR Magueyes Islan 128.11 77 PKPdf PKPdf 23 16 12.8 -1.4
AKASG Malin Array Be 128.12 327 PKP PKPdf 23 16 13.1 -0.3
comp=Z,28nm,0.8s,baz=58,slow=2.3,SNR=35
AKASG PP PP 23 18 17.6 +0.3
comp=Z,38nm,1.1s,baz=46,slow=6.9,SNR=9.7
AKASG Malin Array Be 128.12 327 ePKIKP PKPdf 23 16 13.0 -0.3
AKASG pmax pmax
comp=Z,27nm,0.8s
AKASG Malin Array Be 128.12 327 PKPdf PKiKP 23 16 13.7 -0.2
AKBB Malin Array Si 128.12 327 PKIKP PKPdf 23 16 13.1 -0.2
AKBB Malin Array Si 128.12 327 PKPdf PKPdf 23 16 13.1 -0.2
PBUR Puburge 128.28 335 eP PKiKP 23 16 14.3 +0.2
GAZ Gaziantep 128.29 308 PKPdf PKPdf 23 16 14.1 -0.1
TRCB Terra Rica 128.33 132 eP PKPdf 23 16 13.9 -0.7
DIKM Dikmen 128.38 314 ⇑P PKiKP 23 16 14.5 -0.3
AOPR Arecibo Observ 128.40 76 PKPdf 23 16 13.8 -1.0
OBIP Obispado Ponce 128.53 77 PKPdf PKPdf 23 16 14.0 -1.0
SKAR Skarslia 128.90 346 ePKPdf PKiKP 23 16 15.4 +0.2
SKAR epPKPdf sPKPdf 23 16 42.4 -3.9
SKAR ePP PP 23 18 23.6 +1.7
OSL Oslo 128.96 345 ePKPdf PKiKP 23 16 15.6 +0.3
OSL IVmB_BB 23 16 28.6
comp=Z,1µm,4.1s
OSL ePP PP 23 18 23.1 +0.9
OSL eSKPdf SKPdf 23 19 41.3 -1.2
SJG San Juan 128.97 76 PKiKP PKPdf 23 16 14.3 -1.5
SJG San Juan 128.97 76 PKPdf 23 16 14.2 -1.5
PDPR Patillas Dam, 129.09 77 PKPdf 23 16 15.0 -1.1
SUW Suwalki 129.11 333 ePKP PKiKP 23 16 15.9 +0.1
SUW Suwalki 129.11 333 eP PKPdf 23 16 14.3 -0.7
SUW Suwalki 129.11 333 PKIKP PKPdf 23 16 14.7 -0.4
SUW Suwalki 129.11 333 PKPdf 23 16 14.7 -0.4
BZK Bozkurt 129.14 315 ⇑P PKiKP 23 16 16.3 +0.1
TIJ01 Guaruva-PR 129.22 137 eP PKiKP 23 16 17.9 +0.8
CBYP Canovanas 129.25 76 PKPdf 23 16 15.9 -0.5
HUMP Col San Antoni 129.25 76 PKPdf 23 16 15.8 -0.6
KONO Kongsberg 129.50 345 PKIKP PKPdf 23 16 15.9 +0.3
KONO Kongsberg 129.50 345 PKPdf PKPdf 23 16 15.9 +0.3
KONO Kongsberg 129.50 345 ePKPdf PKPdf 23 16 15.8 +0.1
KONO ePP PP 23 16 26.1 +0.4
STRU Stroemstad 129.61 344 i P PKiKP 23 16 16.3 -0.3
PP1B Ponte de Pedra 129.62 125 eP PKPdf 23 16 16.9 -0.2
ODD1 Odda 129.97 347 ePKPdf PKiKP 23 16 17.4 0.0
STVI Saint Thomas 130.11 76 PKPdf 23 16 17.3 -0.7
BR131 Keskin Array S 130.19 312c i PKIKP PKPdf 23 16 16.8 -1.0
BR131 Keskin Array S 130.19 312 PKPdf PKPdf 23 16 17.8 -0.1
BRTR Keskin Array B 130.19 312 PKP PKPdf 23 16 17.9 +0.1
comp=Z,28nm,0.9s,baz=146,slow=4.6,SNR=26
BRTR PP PP 23 18 29.1 -2.5
comp=Z,4.2nm,0.8s,baz=104,slow=5.2,SNR=3.9
BRTR SKPbc SKPbc 23 19 38.8 +5.3
comp=Z,8.1nm,1.0s,baz=100,slow=2.9,SNR=3.1
BRTR Keskin Array B 130.19 312 PKPdf 23 16 18.0 +0.1
CDVI St. Croix 130.28 77 PKPdf PKPdf 23 16 17.9 -0.5
KIS Kishinev 130.28 323 ePKP PKPdf 23 16 16.5 -1.0
comp=Z,170nm,3.0s
KIS epPKP pPKPdf 23 16 30.0 -10
KIS Kishinev 130.28 323 ePP PP 23 18 26.0 -5.6
KIS Kishinev 130.28 323 ePKIKP PKPdf 23 16 16.5 -1.0
KIS e 23 16 30.0
KIS pmax pmax
comp=Z,170nm,3.0s
KIS MLR MLR
comp=Z,500nm,23.0s
BORU Boraas 130.32 342 i P PKiKP 23 16 18.3 +0.2
MILM Milestii Mici 130.33 323 ⇑P PKPdf 23 16 17.9 +0.3
BLS5 Blasjo 130.45 347 ePKPdf PKiKP 23 16 20.1 +1.7
LSZ Lusaka 130.56 238 PKhKP PKPpre 23 16 03.5
baz=116,slow=7.7
LSZ PKP PKiKP 23 16 20.3 +0.3
comp=Z,20nm,0.5s,baz=131,slow=1.2
LSZ PP PP 23 18 36.6 +2.3
comp=Z,4.5nm,0.9s,baz=100,slow=4.2,SNR=3.2
LSZ Lusaka 130.56 238 PKIKP PKPdf 23 16 19.3 +0.2
LSZ Lusaka 130.56 238 PKPdf PKPdf 23 16 19.3 +0.2
ANTO Ankara 130.75 313 PKIKP PKiKP 23 16 19.3 -0.4
ANTO Ankara 130.75 313 PKiKP PKiKP 23 16 19.2 -0.4
MMAI Mount Meron Ar 130.75 303 PKhKP PKPpre 23 16 08.5
comp=Z,2.1nm,0.7s,baz=75,slow=7.6,SNR=2.1
MMAI PKP PKiKP 23 16 20.9 +1.0
comp=Z,16nm,0.6s,baz=90,slow=5.8,SNR=25
MMAI SKPbc SKPab 23 19 41.0 +5.2
comp=Z,17nm,1.0s,baz=98,slow=11,SNR=5.2
BR231 Keskin MP Arra 130.78 313 PKiKP 23 16 19.8 0.0
ONAU Onsala 130.78 342 eP PKPdf 23 16 16.4 -1.7
ONAU i P PKiKP 23 16 18.4 -0.6
FABU Falkenberg 130.86 341 i P PKiKP 23 16 19.9 +0.7
LODK Lodwar 130.88 264 PKPdf PKiKP 23 16 20.4 -0.3
KMY Karmoy 130.90 347 ePKPdf PKiKP 23 16 20.1 +0.9
DEL Delary 130.92 340 i P PKPdf 23 16 18.0 -0.4
DEL i P PKiKP 23 16 18.9 -0.5
HOMB Hombersund 130.98 345 i P PKiKP 23 16 20.3 +0.9
GHAJ Ghor Haditha 130.99 301 PKPdf PKiKP 23 16 20.4 +0.2
TLCR 131.18 321 ⇑P PKPdf 23 16 19.5 +0.2
TLCR 131.18 321 ⇑PKIKP PKPdf 23 16 19.5 +0.2
SNART Snartemo 131.24 346 i P PKiKP 23 16 19.9 -0.1
SNART Snartemo 131.24 346 ePKPdf PKiKP 23 16 19.9 -0.1
LVV L'vov 131.36 328 i PKHKP PKPpre 23 16 04.3
LVV e 23 16 20.2
LVV e 23 18 37.9
LVV eSS SS 23 36 12.3 +7.8
LVV MLR MLR
comp=N,900nm,24.0s
LVV MLR MLR
comp=E,1µm,24.0s
LVV MLR MLR
comp=Z,2µm,24.0s
BJUU Bjuv 131.52 340 i P PKiKP 23 16 20.3 -0.3
TPGR Topolog 131.59 321 ⇓P PKiKP 23 16 20.8 -0.3
PRAR RASCA 131.59 324 ⇓P PKPdf 23 16 20.5 +0.5
GHRR 131.60 322 ⇑P PKiKP 23 16 21.9 +0.9
CFR Carcaliu 131.60 321 ⇑P PKiKP 23 16 20.6 -0.5
CFR Carcaliu 131.60 321 ⇑PKIKP PKiKP 23 16 20.6 -0.5
BSD Bornholm Skovb 131.64 339 eP PKiKP 23 16 22.3 +1.4
BSD Bornholm Skovb 131.64 339 i P PKiKP 23 16 21.1 +0.2
BSD e 23 16 44.0
BSD Bornholm Skovb 131.64 339 i PKIKP PKiKP 23 16 21.0 +0.2
BEL Belsk 131.64 332 ePKP PKiKP 23 16 21.0 +0.1
MDUB Mudurnu 131.66 314 PKPdf PKPdf 23 16 19.8 -0.7
LUNU Lund 131.74 340 i P PKiKP 23 16 21.3 +0.3
TIRR Tirgusor 131.78 320 PKIKP PKiKP 23 16 21.6 +0.2
TIRR Tirgusor 131.78 320 PKPdf PKiKP 23 16 21.6 +0.2
TESR Tescani 131.81 323 ⇓P PKiKP 23 16 21.3 -0.1
EIL Elat 131.83 299 PKP PKiKP 23 16 22.3 +0.3
comp=Z,42nm,0.9s,baz=282,slow=0.3,SNR=18
EIL PP PP 23 18 44.8 +2.4
comp=Z,9.8nm,0.9s,baz=267,slow=1.2,SNR=4.1
EIL SKPbc SKPab 23 19 45.0 +4.6
comp=Z,9.8nm,1.0s,baz=57,slow=3.8,SNR=4.3
BIZ Bicaz 131.90 324 ⇑P PKiKP 23 16 21.5 -0.2
MFTR Murfatlar 131.91 320 ⇓P PKiKP 23 16 21.5 -0.2
CSS Mathiatis 131.92 306 PKPdf PKiKP 23 16 21.8 -0.3
TLBR Topalu 131.97 320 ⇑P PKiKP 23 16 21.4 -0.5
HARR Harsova 131.97 321 ⇑P PKiKP 23 16 22.0 +0.2
HARR Harsova 131.97 321 ⇑PKIKP PKiKP 23 16 22.0 +0.2
BUR08 Bucovina Ar. S 132.01 325 PKPdf PKiKP 23 16 22.2 +0.2
BURAR Bucovina Array 132.02 325 ⇓P PKiKP 23 16 22.4 +0.4
BURAR Bucovina Array 132.02 325 ⇓PKIKP PKiKP 23 16 22.4 +0.4
BURAR Bucovina Array 132.02 325 PKPdf PKiKP 23 16 22.2 +0.2
COP Copenhagen 132.03 341 eP PKiKP 23 16 21.5 -0.1
COP Copenhagen 132.03 341 ePKIKP PKiKP 23 16 21.5 -0.1
VRI Vrincioaia 132.10 323 ⇑P PKPdf 23 16 21.0 -0.1
VRI ⇓P PKiKP 23 16 21.6 -0.5
VRI Vrincioaia 132.10 323 ⇓PKIKP PKiKP 23 16 21.6 -0.5
KWP Kalwaria Pacla 132.15 329 ePKP PKPdf 23 16 20.9 -0.1
KWP Kalwaria Pacla 132.15 329 PKIKP PKiKP 23 16 22.1 0.0
KWP Kalwaria Pacla 132.15 329 PKPdf 23 16 22.1 0.0
GKP Gorka Klasztor 132.16 336 ePKP PKiKP 23 16 21.6 -0.3
GKP Gorka Klasztor 132.16 336 eP PKiKP 23 16 22.7 +0.8
PLOR Plostina 132.16 323 ⇑P PKPdf 23 16 21.7 +0.5
PLOR Plostina 132.16 323 ⇑PKIKP PKPdf 23 16 21.7 +0.5
PTGA Pitinga 132.16 102 PKPdf PKPdf 23 16 21.6 -0.5
BISRR Bisoca 132.28 322 ⇑P PKiKP 23 16 23.3 +0.8
MUD Monsted U'grnd 132.38 343 i P PKiKP 23 16 22.9 +0.7
MUD Monsted U'grnd 132.38 343 i PKIKP PKiKP 23 16 22.9 +0.7
PGOR Pogoanele 132.44 321 ⇑P PKiKP 23 16 23.3 +0.5
OZUR 132.54 323 ⇑P PKPdf 23 16 20.9 -1.0
NEHR Nehoiu 132.59 322 ⇓P PKiKP 23 16 22.8 -0.4
ISR Istrita 132.60 322 ⇑P PKiKP 23 16 22.7 -0.5
ISR Istrita 132.60 322 ⇑PKIKP PKiKP 23 16 22.7 -0.5
LEHL Lehliu 132.77 321 ⇓P PKiKP 23 16 23.6 +0.2
MLR Muntele Rosu 132.77 322 PKhKP PKPpre 23 16 11.6
comp=Z,2.4nm,0.8s,baz=174,slow=4.7,SNR=6.1
MLR PKP PKiKP 23 16 23.8 +0.2
comp=Z,21nm,0.9s,baz=353,slow=2.7,SNR=21
MLR PP PP 23 18 51.5 +3.8
comp=Z,9.8nm,0.8s,baz=80,slow=11,SNR=2.9
MLR SKPbc SKiKP 23 19 49.9 -2.4
comp=Z,16nm,1.0s,baz=124,slow=7.3,SNR=3.6
MLR Muntele Rosu 132.77 322 ⇑P PKPdf 23 16 22.0 -0.5
MLR Muntele Rosu 132.77 322 ⇑PKIKP PKPdf 23 16 22.0 -0.5
MLR Muntele Rosu 132.77 322 PKPdf 23 16 22.9 +0.4
DOPR Dopca 132.84 323 ⇓P PKPdf 23 16 22.1 -0.3
ISK Istanbul-Kandi 132.90 316 P PKiKP 23 16 23.6 -0.2
SECR 132.94 322 ⇓P PKPdf 23 16 21.6 -1.0
UZH Uzhgorod 132.99 328 ePKIKP PKPdf 23 16 20.7 -1.9
UZH e 23 16 34.4
UZH i 23 18 48.9
UZH e 23 29 10.5
UZH eSS SS 23 36 28.4 +4.1
UZH MLR MLR
comp=Z,200nm,20.0s
OJC Ojcow 133.20 331 ePKP PKiKP 23 16 23.7 -0.5
OJC Ojcow 133.20 331 PKIKP PKPdf 23 16 23.3 +0.3
OJC Ojcow 133.20 331 PKPdf PKPdf 23 16 23.3 +0.3
CRVS Cervenica-Dubn 133.25 329 ePKIKP PKiKP 23 16 24.1 -0.2
CRVS e 23 18 51.7
CRVS Cervenica-Dubn 133.25 329 ePKP PKiKP 23 16 24.1 -0.2
CRVS ePP PP 23 18 51.7 +1.3
VOIR 133.33 323 ⇓P PKPdf 23 16 23.9 +0.4
VOIR 133.33 323 ⇓PKIKP PKPdf 23 16 23.9 +0.4
CJR Cluj-Napoca 133.44 325 ⇓P PKPdf 23 16 24.1 +0.5
CJR Cluj-Napoca 133.44 325 ⇓PKIKP PKPdf 23 16 24.1 +0.5
NIE Niedzica 133.49 330 ePKP PKiKP 23 16 24.7 -0.1
ARR Arges 133.61 323 ⇑P PKiKP 23 16 25.2 0.0
HUMR Humele 133.86 322 ⇓P PKPdf 23 16 24.9 +0.5
DRGR 133.89 326 ⇑P PKPdf 23 16 23.3 -1.2
DRGR 133.89 326 ⇑PKIKP PKPdf 23 16 23.3 -1.2
LTVH Ltavrtes, Hu 133.97 327 ⇑P PKPdf 23 16 24.2 -0.3
ELL Elmali 133.99 310 PKIKP PKPdf 23 16 24.7 -0.3
ELL Elmali 133.99 310 PKPdf 23 16 24.7 -0.3
KECS Kecovo 134.01 329 ePKIKP PKiKP 23 16 26.2 +0.3
KECS e 23 18 57.1
KECS Kecovo 134.01 329 ePKP PKiKP 23 16 26.2 +0.3
KECS ePP PP 23 18 57.1 +1.8
LANS Liptovska Anna 134.07 330 ePKIKP PKiKP 23 16 27.4 +1.4
LANS e 23 18 59.2
LANS Liptovska Anna 134.07 330 ePKP PKiKP 23 16 27.4 +1.4
LANS ePP PP 23 18 59.2 +3.5
OKC Ostrava-Krasne 134.23 332 ePKIKP PKiKP 23 16 26.6 +0.3
OKC MLR MLR
comp=Z,4µm,22.0s
OKC Ostrava-Krasne 134.23 332 ePKPDF PKiKP 23 16 26.6 +0.3
OKC AMS AMS 00 11 10.0
comp=Z,4µm,22.0s
KULA Kula-Manisa 134.24 313 P PKPdf 23 16 24.6 -0.8

MBAR	**Mbarara**	**134.30 257**	PKP	**PKiKP**	**23 16 28.0 +0.3**			
	comp=Z,28nm,0.8s,baz=128,slow=5.3,SNR=22							
MBAR	**Mbarara**	**134.30 257**	PKIKP	**PKPdf**	**23 16 26.7 +0.4**			
MBAR	**Mbarara**	**134.30 257**		**PKPdf**	**23 16 26.7 +0.4**			
DEV	**Deva**	**134.32 325**	⇑P	**PKiKP**	**23 16 25.9 -0.7**			
DEV	**Deva**	**134.32 325**	⇑PKIKP	**PKiKP**	**23 16 25.9 -0.7**			
MANT	**Manisa**	**134.32 313**	PKPdf	**PKPdf**	**23 16 25.7 0.0**			
KSP	**Ksiaz**	**134.34 334**	*e*PKP	**PKPdf**	**23 16 25.2 +0.1**			
AKAS	**Kas**	**134.40 309**	PKPdf	**PKiKP**	**23 16 26.6 -0.6**			
MORC	**Moravsky Berou**	**134.55 332**	*e*PKP	**PKPdf**	**23 16 25.5 -0.1**			
MORC			*e*PP	**PP**	**23 18 59.4 +0.7**			
OSTC	**Ostas**	**134.59 334**	*e*PKPpre	PKPpre	23 16 16.8			
OSTC			*e*PKPDF	**PKiKP**	**23 16 27.5 +0.5**			
OSTC			*e*PP	**PP**	**23 19 02.2 +3.4**			
OSTC			AMS	AMS	00 15 20.0			
	comp=Z,2µm,24.2s							
CHVC	**Chvalec**	**134.63 334**	*e*PKPDF	**PKiKP**	**23 16 27.6 +0.5**			
CHVC			AMS	AMS	00 15 20.0			
	comp=Z,2µm,21.5s							
GZR	**Gura Zlata**	**134.68 324**	⇓P	**PKPdf**	**23 16 26.1 +0.1**			
GZR	**Gura Zlata**	**134.68 324**	⇓PKIKP	**PKPdf**	**23 16 26.1 +0.1**			
PSZ	**Piszkesteto**	**134.68 329**	PKIKP	**PKPdf**	**23 16 26.1 +0.2**			
PSZ	**Piszkesteto**	**134.68 329**	PKPdf	**PKPdf**	**23 16 26.1 +0.2**			
KRLC	**Kraliky**	**134.69 333**	*e*PKHKP	PKPpre	23 16 13.7			
KRLC			*e*		23 16 27.4			
KRLC			MLR	MLR				
	comp=Z,4µm,25.6s							
KRLC	**Kraliky**	**134.69 333**	*e*PKPpre	PKPpre	23 16 13.7			
KRLC			*e*PKPDF	**PKiKP**	**23 16 27.4 +0.1**			
KRLC			AMS	AMS	00 13 30.0			
	comp=Z,4µm,25.6s							
PLVB	**Pleven**	**134.69 321**	⇑P	**PKPdf**	**23 16 26.2 +0.2**			
DPC	**Dobruska-Polom**	**134.69 333**	*e*PKHKP	PKPpre	23 16 15.5			
DPC			*e*		23 16 27.6			
DPC			MLR	MLR				
	comp=Z,3µm,22.5s							
DPC	**Dobruska-Polom**	**134.69 333**	*e*PKPpre	PKPpre	23 16 15.5			
DPC			*e*PKPDF	**PKiKP**	**23 16 27.6 +0.3**			
DPC			AMS	AMS	00 15 40.0			
	comp=Z,3µm,22.5s							
UPC	**Upice**	**134.71 334**	*e*PKIKP	**PKiKP**	**23 16 28.6 +1.4**			
UPC			MLR	MLR				
	comp=Z,2µm,23.6s							
UPC	**Upice**	**134.71 334**	*e*PKPDF	**PKiKP**	**23 16 28.6 +1.4**			
UPC			AMS	AMS	00 14 50.0			
	comp=Z,2µm,23.6s							
SIRR	**Siria**	**134.78 326**	⇑P	**PKPdf**	**23 16 26.2 +0.1**			
VYHS	**Vyhne**	**134.83 330**	*e*PKIKP	**PKiKP**	**23 16 27.4 -0.1**			
VYHS			*e*		23 18 59.8			
VYHS	**Vyhne**	**134.83 330**	*e*PKP	**PKiKP**	**23 16 27.4 -0.1**			
VYHS			*e*PP	**PP**	**23 18 59.8 -0.6**			
BSZH	**Besenyszg**	**134.89 328**	⇑P	**PKPdf**	**23 16 25.9 -0.3**			
KOLL	**Kolacno**	**134.98 330**	*e*PKP	**PKiKP**	**23 16 27.4 -0.4**			
KOLL			*e*PP	**PP**	**23 19 02.1 +0.8**			
ALN	**Alexandroupoli**	**135.01 317**	P	**PKPdf**	**23 16 25.3 -1.3**			
ALN	**Alexandroupoli**	**135.01 317**	PKIKP	**PKPdf**	**23 16 26.8 +0.1**			
ALN	**Alexandroupoli**	**135.01 317**	PKPdf	**PKPdf**	**23 16 26.8 +0.1**			
ENEZ	**Enez**	**135.02 317**	P	**PKPdf**	**23 16 26.2 -0.4**			
JAVC	**Velka Javorina**	**135.14 331**	*e*PKP	**PKiKP**	**23 16 27.6 -0.6**			
JAVC			*e*PP	**PP**	**23 19 03.6 +1.2**			
HERR	**Herculane**	**135.18 324**	⇑P	**PKPdf**	**23 16 25.7 -1.2**			
BZS	**Buzias**	**135.20 325**	⇑P	**PKiKP**	**23 16 27.9 -0.5**			
BZS	**Buzias**	**135.20 325**	⇑PKIKP	**PKiKP**	**23 16 27.9 -0.5**			
RDO	**Rodhopi**	**135.23 317**	P	**PKPdf**	**23 16 25.7 -1.3**			
AMBH	**Ambrzfalva**	**135.24 326**	⇑P	**PKPdf**	**23 16 27.5 +0.6**			
BRG	**Berggiesshubel**	**135.30 335**	*e*PKP	PKPdf	23 16 17.6 -9.3			
BRG			Amp		23 16 18.3			
	comp=Z,2.7nm,0.8s							
BRG			⇓ *i*PKPf		23 16 28.9			
BRG			Amp		23 16 32.3			
	comp=Z,49nm,1.1s							
BRG			pPKP	pPKPdf	23 16 51.3 +1.3			
BRG			Amp		23 16 55.3			
	comp=Z,30nm,1.3s							
BRG			PP	**PP**	**23 19 02.9 -0.3**			
BRG			Amp		23 19 08.9			
	comp=Z,95nm,2.2s							
BRG			SKP		23 19 53.0			
BRG			Amp		23 19 57.4			
	comp=Z,27nm,1.3s							
BRG	**Berggiesshubel**	**135.30 335**	SS	SS	23 36 47.0 -4.7			
PVCC	**Panska Ves**	**135.31 335**	*e*PKIKP	**PKPdf**	**23 16 27.3 +0.4**			
PVCC			MLR	MLR				
	comp=Z,3µm,25.3s							
PVCC	**Panska Ves**	**135.31 335**	*e*PKPDF	**PKPdf**	**23 16 27.3 +0.4**			
PVCC			AMS	AMS	00 10 20.0			
	comp=Z,3µm,25.3s							
EZN	**Ezine**	**135.32 315**	P	**PKPdf**	**23 16 27.6 +0.4**			
VRAC	**Vranov**	**135.32 332**	*e*PKP	**PKPdf**	**23 16 27.1 +0.1**			
VRAC			*e*PP	**PP**	**23 19 03.6 +0.1**			
CLL	**Collm**	**135.34 337**	*e*PKPpre	PKPpre	23 16 15.0			
CLL			*i* (PKiKP)		23 16 28.8			
	comp=Z,50nm,0.9s							
CLL			*i* pPKPdf	pPKPdf	23 16 49.4 -0.6			
CLL			*e*		23 18 52.0			
CLL			*e*PP	**PP**	**23 19 06.0 +2.6**			
CLL			*i* SKPdf	**SKPab**	**23 19 54.7 -0.1**			
CLL			*e*PKSbc	PKSbc	23 19 59.0 -0.1			
CLL			*i* PKSdf	PKSdf	23 20 02.7 -0.3			
CLL			*e*PPP	PPP	23 21 59.0			
CLL			*e*SKSP		23 29 06.0			
CLL			*e*PPS	PPS	23 31 12.0			
CLL			*e*SS	**SS**	**23 36 55.0 +2.9**			
CLL			*e*SKSKSKSac		23 38 48.0			
CLL			*e*SSS	SSS	23 41 56.0			
CLL	**Collm**	**135.34 337**	*i* PKIKP	**PKiKP**	**23 16 28.8 +0.3**			
CLL			pmax	pmax				
	comp=Z,50nm,0.9s							
CLL			MLR	MLR				
	comp=Z,2µm,29.1s							
CLL	**Collm**	**135.34 337**		**PKPdf**	**23 16 27.6 +0.7**			
GADA	**Gvkgeada**	**135.44 316**	P	**PKPdf**	**23 16 27.0 -0.5**			
SMOL	**Smolenice**	**135.49 331**	*e*PKIKP	**PKiKP**	**23 16 28.3 -0.6**			
SMOL			*e*		23 19 06.0			
SMOL	**Smolenice**	**135.49 331**	*e*PKP	**PKiKP**	**23 16 28.3 -0.6**			
SMOL			*e*PP	**PP**	**23 19 06.0 +1.4**			
SRO	**Srobarova**	**135.54 329**	*e*PKIKP	**PKiKP**	**23 16 30.6 +1.6**			
SRO			*e*		23 19 07.5			
SRO	**Srobarova**	**135.54 329**	*e*PKP	**PKiKP**	**23 16 30.6 +1.6**			
SRO			*e*PP	**PP**	**23 19 07.5 +2.6**			
SMTH	**Samothraki Isl**	**135.56 317**	P	**PKPdf**	**23 16 27.3 -0.4**			
KRUC	**Moravsky**	**135.59 332**	*e*PKP	**PKPdf**	**23 16 27.2 -0.3**			
KRUC			*e*PP	**PP**	**23 19 04.5 -0.6**			
BANR	**Banloc**	**135.61 325**	⇑P	**PKPdf**	**23 16 27.9 +0.3**			
PRK	**Paraskevi**	**135.62 315**	P	**PKPdf**	**23 16 28.5 +0.7**			
MDVR	**Moldovita**	**135.65 324**	⇓P	**PKiKP**	**23 16 29.4 0.0**			
MODS	**Modra-Piesok**	**135.66 331**	*e*PKIKP	**PKPdf**	**23 16 26.8 -0.9**			
MODS			*e*		23 19 05.0			
MODS	**Modra-Piesok**	**135.66 331**	*e*PKP	**PKPdf**	**23 16 26.8 -0.9**			
MODS			*e*PP	**PP**	**23 19 05.0 -0.7**			
PRA	**Prague**	**135.71 334**	*e*PKIKP	**PKPdf**	**23 16 26.8 -0.9**			
PRA			MLR	MLR				
	comp=Z,2µm,19.0s							
PRA	**Prague**	**135.71 334**	*e*PKPDF	**PKPdf**	**23 16 26.8 -0.9**			
PRA			AMS	AMS	00 14 20.0			
	comp=Z,2µm,19.0s							
PRU	**Pruhonice**	**135.73 334**	*e*PKHKP	PKPpre	23 16 18.0			
PRU			*e*		23 16 26.3			
PRU			MLR	MLR				
	comp=Z,3µm,24.8s							
PRU	**Pruhonice**	**135.73 334**	*e*PKPpre	PKPpre	23 16 18.0			
PRU			*e*PKPDF	**PKPdf**	**23 16 26.3 -1.4**			
PRU			*ep*PKP	pPKPdf	23 16 52.3 +1.5			
PRU			*e*SKP		23 20 06.2			
PRU			AMS	AMS	00 14 20.0			
	comp=Z,3µm,24.8s							
TREC	**Trest**	**135.83 333**	AMS	AMS	00 12 00.0			
	comp=Z,4µm,27.5s							
ZST	**Bratislava**	**135.87 331**	*e*PKIKP	**PKiKP**	**23 16 30.3 +0.7**			
ZST			*e*		23 19 09.5			
ZST	**Bratislava**	**135.87 331**	*e*PKP	**PKiKP**	**23 16 30.3 +0.7**			
ZST			*e*PP	**PP**	**23 19 09.4 +2.5**			
SMG	**Samos**	**135.88 312**	P	**PKPdf**	**23 16 29.2 +0.8**			
SIGR	**SIGRI**	**135.92 315**	P	**PKPdf**	**23 16 27.3 -1.1**			
VTS	**Vitosha**	**135.96 321**	PKIKP	**PKPdf**	**23 16 29.1 +0.5**			
VTS	**Vitosha**	**135.96 321**		**PKPdf**	**23 16 29.1 +0.5**			
KAVA	**Kavala**	**135.98 318**	P	**PKPdf**	**23 16 27.7 -0.7**			
THAS	**Thassos island**	**136.04 317**	P	**PKPdf**	**23 16 27.6 -0.9**			
LIA	**Limnos Island**	**136.07 316**	P	**PKPdf**	**23 16 27.2 -1.4**			
ESK	**Eskdalemuir**	**136.12 352**	*e*P	PKPpre	23 16 01.9			
ESK	**Eskdalemuir**	**136.12 352**	PKIKP	**PKiKP**	**23 16 29.1 -0.8**			
ESK	**Eskdalemuir**	**136.12 352**	PKPdf	**PKiKP**	**23 16 29.1 -0.8**			
BDFB	**Brasilia**	**136.13 128**	PKhKP	PKPpre	23 16 18.1			
	comp=Z,1.5nm,0.5s,baz=249,slow=11,SNR=3.4							
BDFB			PKP	**PKPdf**	**23 16 28.8 -0.8**			
	comp=Z,11nm,0.8s,baz=292,slow=2.7,SNR=12							
PBCC	**Pribram**	**136.19 334**	*e*PKPDF	**PKiKP**	**23 16 31.5 +1.2**			
NVR	**Nevrokopi**	**136.23 319**	P	**PKPdf**	**23 16 28.0 -1.0**			
BOVS	**Bovan**	**136.32 323**	⇓P	**PKPdf**	**23 16 28.2 -0.7**			
EDMD	**Edmundbyers**	**136.40 350**	*e*P	PKPpre	23 16 03.9			
NKC	**Novy Kostel**	**136.40 336**	*e*PKIKP	**PKPdf**	**23 16 29.0 0.0**			
NKC			*e*		23 19 13.3			
NKC			MLR	MLR				
	comp=Z,3µm,27.9s							
NKC	**Novy Kostel**	**136.40 336**	*e*PKPDF	**PKPdf**	**23 16 29.0 0.0**			
NKC			*e*PP	**PP**	**23 19 13.3 +3.2**			
NKC			AMS	AMS	00 14 10.0			
	comp=Z,3µm,27.9s							
MORH	**Mrgy, Hungar**	**136.44 328**	⇓P	**PKiKP**	**23 16 30.2 -0.7**			
MORH	**Mrgy, Hungar**	**136.44 328**	*e*P	**PKPdf**	**23 16 28.5 -0.6**			
NEWG	**New Galloway**	**136.45 352**	*e*P	PKPpre	23 16 11.0			
FRGS	**Fruska Gora**	**136.49 326**	⇓P	**PKPdf**	**23 16 29.2 -0.1**			
FRGS	**Fruska Gora**	**136.49 326**	*e*P	PKPdf	23 16 19.3 -10			
GDLE	**Glaisdale, N Y**	**136.59 349**	*e*P	PKPpre	23 16 08.7			
CONA	**Conrad Observa**	**136.65 331**	*e*P	PKPdf	23 16 21.5 -8.1			
	comp=Z,4.0nm,0.6s							
CONA			*e*P	**PKiKP**	**23 16 31.7 +0.3**			
	comp=Z,27nm,0.6s							
CONA			*e*P	**PP**	**23 19 12.6 +0.7**			
CKRC	**Cesky Krumlov**	**136.70 333**	*e*PKPDF	**PKPdf**	**23 16 29.7 +0.1**			
CKRC			AMS	AMS	00 14 40.0			
	comp=Z,3µm,25.9s							
GAL1	**Galloway**	**136.76 353**	*e*P	PKPpre	23 16 07.7			
KHC	**Kasperske Hory**	**136.79 334**	*e*PKHKP	PKPpre	23 16 20.0			
KHC			*e*		23 16 30.4			
KHC			*e*		23 19 16.0			
KHC			MLR	MLR				
	comp=Z,4µm,25.6s							
KHC	**Kasperske Hory**	**136.79 334**	*e*PKPpre	PKPpre	23 16 20.0			
KHC			*e*PKPDF	**PKPdf**	**23 16 30.4 +0.6**			
KHC			*e*PP	**PP**	**23 19 16.0 +3.4**			
KHC			*e*SKP		23 20 01.9			
KHC			AMS	AMS	00 16 10.0			
	comp=Z,4µm,25.6s							
KESW	**Keswick, Cumbr**	**136.81 351**	*e*P	PKPpre	23 16 04.1			
SOH	**Sokhos**	**136.83 318**	P	**PKPdf**	**23 16 28.6 -1.5**			
GEC2	**GERESS Array S**	**136.95 334**		**PKiKP**	**23 16 31.3 -0.7**			
GERES	**GERESS Array B**	**136.95 334**	PKhKP	PKPpre	23 16 20.7			
	comp=Z,2.2nm,0.7s,baz=90,slow=3.1,SNR=12							
GERES			PKP	**PKiKP**	**23 16 31.5 -0.5**			
	comp=Z,16nm,0.7s,baz=90,slow=2.7,SNR=20							
GERES			SKPbc	**SKPab**	**23 20 01.4 -0.8**			
	comp=Z,6.1nm,1.0s,baz=40,slow=2.3,SNR=4.5							
TEKS	**Tekeris**	**137.03 325**	*e*P	**PKPdf**	**23 16 29.1 -1.2**			
DIVS	**Divibare**	**137.04 324**	*e*P	PKPdf	23 16 22.1 -8.3			
DIVS	**Divibare**	**137.04 324**		**PKiKP**	**23 16 31.5 -0.8**			
PAIG	**Paliouri**	**137.06 317**	P	**PKPdf**	**23 16 28.8 -1.7**			
VAY	**Valandovo**	**137.07 319**	*i* P	**PKiKP**	**23 16 31.7 -0.6**			
HPK	**Haverah Park**	**137.18 350**	*e*P	PKPpre	23 16 05.7			
BEHE	**Becsehely**	**137.23 329**	*e*P	**PKPdf**	**23 16 29.3 -1.3**			
ARSA	**Arzberg**	**137.29 331**	*e*P	**PKiKP**	**23 16 32.2 -0.5**			
	comp=Z,5.5nm,0.7s,SNR=6.0							
GRA1	**Grafenberg Arr**	**137.32 336**		**PKPdf**	**23 16 31.4 +0.7**			
GRF	**Grafenberg Arr**	**137.32 336**	PKIKP	**PKPdf**	**23 16 31.4 +0.7**			
GRFO	**Grafenberg**	**137.32 336**	PKIKP	**PKPdf**	**23 16 31.4 +0.7**			
GRFO	**Grafenberg**	**137.32 336**	PKPdf	**PKPdf**	**23 16 31.4 +0.7**			
IOMK	**Kirk Michael**	**137.33 352**	*e*P	PKPpre	23 16 09.2			
KYMI	**Kymi, Euboea I**	**137.40 315**	P	**PKPdf**	**23 16 28.7 -2.5**			
MOA	**Molln**	**137.44 332**	*e*P	**PKPdf**	**23 16 27.8 -3.2**			
	comp=Z,8.6nm,0.7s							
KOGS	**Kog**	**137.51 329**	*e*	**PKPdf**	**23 16 23.8 -7.4**			
KOGS			*e*PKPdf	**PKiKP**	**23 16 30.4 -2.6**			
KOGS			*e*PP	**PP**	**23 19 13.3 -3.9**			
BBLS	**Lazići**	**137.52 324**	*e*P	PKPdf	23 16 23.0 -8.3			
DIAM	**Diamantina, MG**	**137.61 135**	*e*P	**PKiKP**	**23 16 33.4 -0.9**			
HAPS	**Han Pijesak,BI**	**137.64 325**	*e*P	**PKPdf**	**23 16 28.6 -3.0**			
XOR	**Xorichti**	**137.67 317**	P	**PKPdf**	**23 16 31.8 +0.1**			
RUDO	**Rudo**	**137.69 324**	*e*P	**PKPdf**	**23 16 27.7 -3.9**			
LIT	**Litokhoron**	**137.76 318**	P	**PKPdf**	**23 16 29.8 -2.0**			
DION	**Dionisos Attik**	**137.78 314**	P	**PKPdf**	**23 16 30.2 -1.7**			
SMIA	**Simia**	**137.90 316**	P	**PKiKP**	**23 16 33.3 -0.8**			
WACR	**West Acre**	**137.90 347**	*e*P	PKPpre	23 16 10.7			
LAST	**Lasithi**	**137.91 310**	P	**PKPdf**	**23 16 29.7 -2.6**			
ATHU	**Athens Univers**	**137.94 314**	P	**PKPdf**	**23 16 30.0 -2.2**			
SOKA	**Soboth**	**137.94 331**	*e*P	PKPdf	23 16 23.3 -8.7			
	comp=Z,4.3nm,0.7s							
SOKA			*e*P	**PKiKP**	**23 16 33.4 -0.6**			
	comp=Z,16nm,0.7s							
VLY	**Voula,Athens**	**137.98 314**	P	**PKPdf**	**23 16 31.2 -1.1**			
STNC	**Stoke**	**138.11 350**	*e*P	PKPpre	23 16 09.5			
ATAL	**Atalanti**	**138.12 316**	P	**PKPdf**	**23 16 30.8 -1.7**			
FNA	**Florina**	**138.12 319**	P	**PKPdf**	**23 16 32.6 +0.1**			
FNA	**Florina**	**138.12 319**	PKIKP	**PKPdf**	**23 16 32.6 +0.1**			
FNA	**Florina**	**138.12 319**		**PKPdf**	**23 16 32.6 +0.1**			
KZN	**Kozani**	**138.12 319**	P	**PKPdf**	**23 16 31.0 -1.6**			
LKR	**Lokris**	**138.15 316**	P	**PKPdf**	**23 16 30.5 -2.0**			
MRAK	**Mrakovica**	**138.15 327**	*e*P	**PKPdf**	**23 16 26.9 -5.5**			
WPS	**Cemaes, Angles**	**138.16 352**	*e*P	PKPpre	23 16 07.4			
VILL	**Villia**	**138.17 315**	P	**PKPdf**	**23 16 30.6 -2.1**			
BLY	**Banja Luka**	**138.18 327**	*e*P	PKPdf	23 16 22.7 -10			
UPM	**Unac-Piva**	**138.21 324**	*e*P	**PKPdf**	**23 16 26.0 -6.8**			
GCIS	**Gornji Cirnik**	**138.22 329**	*i*	**PKPdf**	**23 16 27.5 -5.0**			
GCIS			*e*PKPdf	**PKiKP**	**23 16 32.4 -2.1**			
WLF1	**Llynfaes**	**138.26 352**	*e*P	PKPpre	23 16 09.5			
OBKA	**Obir**	**138.29 331**	*i* P	**PKPdf**	**23 16 25.8 -6.9**			
	comp=Z,2.3nm,1.0s							
IDI	**Anoyia**	**138.30 310**	PKhKP	PKPpre	23 16 26.2			
	comp=Z,5.4nm,0.4s,baz=145,slow=3.2,SNR=6.0							
IDI			PKP	**PKPdf**	**23 16 33.8 +0.8**			
	comp=Z,97nm,1.0s,baz=141,slow=0.9,SNR=12							
IDI			SKPbc	**SKPab**	**23 20 09.5 +0.9**			
	comp=Z,8.9nm,0.7s,baz=338,slow=19,SNR=1.6							
IDI	**Anoyia**	**138.30 310**	P	**PKPdf**	**23 16 32.5 -0.5**			
IDI	**Anoyia**	**138.30 310**	⇑P	**PKPdf**	**23 16 31.9 -1.1**			
AXAR	**Agios Charalam**	**138.33 316**	P	**PKPdf**	**23 16 31.7 -1.2**			
BEBN	**Eben Emael**	**138.33 342**	*d*PKiKP	**PKiKP**	**23 16 34.2 -0.4**			
CRES	**Cresnjev**	**138.34 329**	*e*P	PKPdf	23 16 24.7 -8.0			
THL	**Klokotos Trika**	**138.35 317**	P	**PKPdf**	**23 16 31.2 -1.7**			
BTNL	**Ternell**	**138.37 341**	*d*PKiKP	**PKiKP**	**23 16 33.7 -1.0**			
MEM	**Membach**	**138.39 341**	*d*PKPdf	**PKPdf**	**23 16 30.9 -1.7**			
MEM			*d*PKiKP	**PKiKP**	**23 16 34.2 -0.5**			
AGG	**Agios Georgios**	**138.42 317**	P	**PKPdf**	**23 16 31.7 -1.4**			
KBA	**Koelnbreinsper**	**138.44 332**	*e*P	**PKPdf**	**23 16 25.6 -7.4**			
	comp=Z,7.9nm,0.8s							
KBA			*e*P	**PP**	**23 19 22.1 -1.0**			
	comp=Z,9.1nm,1.4s							
MGRS	**Mrkonjic Grad**	**138.45 327**	*e*P	PKPdf	23 16 22.0 -11			
FOEL	**Foel Wylfa**	**138.47 351**	*e*P	PKPpre	23 16 12.5			
SIVA	**Sivas**	**138.47 310**	P	**PKiKP**	**23 16 35.5 +0.2**			
LTK	**Loutraki**	**138.48 315**	P	PKPdf	23 16 24.7 -8.5			
PDG	**Podgorica**	**138.48 323**	*e*P	**PKPdf**	**23 16 26.4 -6.6**			
BSTI	**Sart Tilman**	**138.55 342**	*d*PKiKP	**PKiKP**	**23 16 34.0 -1.1**			
MAKR	**Makrakomi, Fth**	**138.56 317**	P	**PKPdf**	**23 16 27.7 -5.6**			
KPRO	**Kipourio**	**138.58 318**	P	**PKPdf**	**23 16 32.5 -0.9**			
BRY	**Bratogost**	**138.61 324**	*e*P	PKPdf	23 16 25.4 -8.1			
BHOU	**Houvegnez**	**138.62 341**	*d*PKiKP	**PKPdf**	**23 16 33.1 0.0**			
MYKA	**Terra Mystica**	**138.63 332**	*e*P	PKPdf	23 16 25.4 -7.9			
	comp=Z,5.8nm,0.6s							
LJU	**Ljubljana**	**138.64 330**	*i*	**PKPdf**	**23 16 28.0 -5.2**			
LJU			*i* PKPdf	**PKiKP**	**23 16 32.9 -2.5**			
LJU			*i* PKiKP	PKPpre	23 16 34.9			
LJU			*i* PP	**PP**	**23 19 22.6 -1.6**			
LJU			*e*		23 20 08.8			
DRME	**Dracevica, Mon**	**138.67 323**	*e*P	PKPdf	23 16 23.8 -10			
UCC	**Uccle**	**138.72 343**	*d*PKiKP	**PKiKP**	**23 16 35.7 +0.4**			
UCC			*dp*PKP	**pPKPdf**	**23 16 52.0 -4.3**			
TIR	**Tirane**	**138.75 321**	PKIKP	**PKPdf**	**23 16 33.6 +0.1**			
TIR	**Tirane**	**138.75 321**		**PKPdf**	**23 16 33.6 +0.1**			
BCLA	**Clavier**	**138.78 342**	*d*PKiKP	**PKiKP**	**23 16 34.9 -0.6**			
EVR	**Evrytania**	**138.82 317**	P	**PKPdf**	**23 16 33.4 -0.5**			
TREB	**Trebinje**	**138.83 324**	*e*P	**PKPdf**	**23 16 28.8 -4.9**			
BGES	**Gesves**	**138.87 342**	*d*PKiKP	**PKiKP**	**23 16 34.8 -0.9**			
CEY	**Cerknica**	**138.91 330**	*e*P	**PKPdf**	**23 16 26.5 -7.3**			
ANX	**Ano Chora**	**138.91 316**	P	PKPdf	23 16 26.2 -7.9			
HCY	**Herceg Novi**	**138.92 323**	*e*P	PKPdf	23 16 25.5 -8.3			
TRIZ	**Trizonia**	**138.93 316**	P	**PKPdf**	**23 16 34.1 +0.2**			
LSK	**Leskovik**	**138.96 319**	P	**PKiKP**	**23 16 37.8 +1.5**			
SNF	**Seneffe**	**139.00 343**	*d*PKiKP	**PKiKP**	**23 16 35.4 -0.5**			
WATA	**Walderalm**	**139.02 334**	*e*P	**PKPdf**	**23 16 34.3 +0.2**			
	comp=Z,14nm,0.6s							
WATA			*e*P	**PP**	**23 19 27.0 +0.3**			
KLV	**Kalavryta, Ach**	**139.03 315**	P	**PKPdf**	**23 16 27.0 -7.3**			
RCHB	**Rochefort**	**139.03 342**	*d*PKiKP	**PKiKP**	**23 16 36.2 +0.2**			
BMRD	**Maredsous**	**139.04 342**	*d*PKPdf	**PKPdf**	**23 16 32.8 -1.0**			
BMRD			*d*PKiKP	**PKiKP**	**23 16 35.0 -1.0**			
LAKA	**Lakka**	**139.05 316**	P	**PKPdf**	**23 16 34.5 +0.2**			
WTTA	**Wattenberg**	**139.05 334**	*i* P	**PKPdf**	**23 16 30.2 -4.0**			
	comp=Z,3.0nm,0.5s,SNR=12							
WTTA			*e*P	**PKiKP**	**23 16 33.6 -2.8**			
	comp=Z,100nm,1.2s							
WTTA			*i* P	**PP**	**23 19 26.1 -0.8**			
	comp=Z,643nm,3.6s							
ABTA	**Abfaltersbach**	**139.06 333**	*e*P	PKPdf	23 16 25.1 -9.0			
	comp=Z,18nm,0.7s							
ABTA			*e*P	**PKiKP**	**23 16 34.6 -1.8**			
	comp=Z,46nm,0.8s							
ABTA			*e*P	**PP**	**23 19 27.6 +0.8**			
	comp=Z,22nm,1.3s							
JAN	**Janina**	**139.07 318**	P	**PKiKP**	**23 16 35.5 -1.0**			
VLI	**Veliai**	**139.11 313**	P	**PKPdf**	**23 16 26.6 -7.8**			
WLF	**Walferdange**	**139.16 340**	*dx*	PKPdf	23 16 24.4 -10			
PVO	**Paravola**	**139.17 317**	P	**PKPdf**	**23 16 27.9 -6.5**			
VLX	**Vlachokerasia**	**139.20 314**	P	**PKPdf**	**23 16 27.2 -7.4**			
MOTA	**Moosalm**	**139.22 334**	*i* P	**PKPdf**	**23 16 26.7 -7.8**			
	comp=Z,3.4nm,0.9s,SNR=16							
MOTA			*e*P	**PKiKP**	**23 16 31.6 -5.1**			
	comp=Z,54nm,1.3s							
MOTA			*e*P	**PP**	**23 19 27.4 -0.4**			
	comp=Z,7.3nm,0.8s							
TRI	**Trieste**	**139.25 331**	PKIKP	**PKPdf**	**23 16 34.8 +0.5**			
TRI	**Trieste**	**139.25 331**	PKPdf	**PKPdf**	**23 16 34.8 +0.5**			
RETA	**Reutte**	**139.25 335**	*e*P	**PP**	**23 19 26.4 -1.5**			
	comp=Z,32nm,2.0s							
SQTA	**Sankt Quirin**	**139.27 334**	*e*P	**PKPdf**	**23 16 26.7 -7.8**			
	comp=Z,9.2nm,0.6s,SNR=14							
SQTA			*e*P	**PP**	**23 19 28.5 +0.3**			
	comp=Z,56nm,1.4s							
DOU	**Dourbes**	**139.28 342**	*d*PKiKP	**PKiKP**	**23

PBDV	**Barranco-do-Ve**	**154.45**	**350**	*e*PKPdf		**PKPdf**	**23 16 59.8**	**0.0**
MORF	**Marmelete**	**154.51**	**351**	*e*PKPdf		**PKPdf**	**23 16 59.2**	**-0.6**
MORF				*e*PP		**PP**	**23 20 58.4**	**+1.1**
MORF				IAMs_20		IAMs_20	00 28 55.4	
	comp=N,3µm,39.0s							
MORF	**Marmelete**	**154.51**	**351**	*e*PKIKP		**PKPdf**	**23 16 59.3**	**-0.6**
MORF				*e*			23 20 58.4	
MORF	**Marmelete**	**154.51**	**351**	*e*PKPdf		**PKPdf**	**23 16 58.8**	**-1.1**
PFVI	**Vila Bisbo**	**154.71**	**351**	*e*PKPdf		**PKPdf**	**23 17 00.3**	**+0.2**
SFS	**San Fernando**	**154.85**	**346**	PKP		**PKPdf**	**23 16 59.8**	**-0.4**
SFS	**San Fernando**	**154.85**	**346**	PP		PP	23 21 01.4	+2.3
MELI	**Melilla**	**154.98**	**339**	PKP		**PKPdf**	**23 16 57.1**	**-3.3**
MELI	**Melilla**	**154.98**	**339**	PP		PP	23 21 01.0	+1.0
CEU	**Ceuta**	**155.17**	**344**	PKP		**PKPdf**	**23 17 00.8**	**0.0**
CEU	**Ceuta**	**155.17**	**344**	PP		PP	23 21 03.2	+2.3
PVLZ	**Peæn de**	**155.54**	**342**	PKP		**PKPdf**	**23 16 59.9**	**-1.3**
PVLZ	**Peæn de**	**155.54**	**342**	PP		PP	23 21 03.7	+0.7
IFR	**Ifrane**	**157.33**	**342**	PKP		**PKPdf**	**23 17 04.5**	**+0.6**
IFR	**Ifrane**	**157.33**	**342**	PP		PP	23 21 14.8	+1.6
MDT	**Midelt**	**157.81**	**340**	PP		PP	23 21 17.4	+1.6
	comp=N,7.7nm,1.0s,baz=20,slow=6.4,SNR=4.0							
AVE	**Averroes**	**158.16**	**346**	PKP		**PKPdf**	**23 17 04.9**	**+0.2**
AVE	**Averroes**	**158.16**	**346**	PP		PP	23 21 16.1	-1.4
PMPST	**Porto Santo, M**	**158.94**	**7**	*e*PKPdf		**PKPdf**	**23 17 06.9**	**+1.3**
PMPS	**Porto Santo**	**158.97**	**7**	*e*PKPdf		**PKPdf**	**23 17 08.4**	**+2.8**
TAM	**Tamanrasset**	**158.97**	**303**	PKIKP		**PKPdf**	**23 17 05.6**	**-0.5**
TAM	**Tamanrasset**	**158.97**	**303**	PKPdf		**PKPdf**	**23 17 05.6**	**-0.5**
H10S2	**ASCENSION HYDR**	**159.06**	**177**	PKPab		**PKPab**	**23 17 44.0**	**+1.4**
H10S3	**ASCENSION HYDR**	**159.07**	**177**	PKPab		**PKPab**	**23 17 44.1**	**+1.4**
PMOZ	**Porto Moniz, M**	**159.08**	**9**	*e*PKPdf		**PKPdf**	**23 17 06.4**	**+0.4**
PMOZ	**Porto Moniz, M**	**159.08**	**9**	*e*SS		SS	23 41 36.7	+17
PMOZ	**Porto Moniz, M**	**159.08**	**9**	eLR		LR	00 11 54.7	
	comp=N,1µm,18.0s							
PMAR	**Madeira**	**159.22**	**8**	*e*PKPdf		**PKPdf**	**23 17 06.1**	**-0.1**
FUL	**Funchal**	**159.30**	**8**	*e*PKPdf		**PKPdf**	**23 17 07.8**	**+1.8**
H10N1	**ASCENSION HYDR**	**160.18**	**177**	PKPab		**PKPab**	**23 17 48.3**	**+0.9**
H10N3	**ASCENSION HYDR**	**160.18**	**177**	PKPab		**PKPab**	**23 17 48.3**	**+0.9**
H10N2	**ASCENSION HYDR**	**160.19**	**177**	PKPab		**PKPab**	**23 17 48.3**	**+0.8**
TOA0	**Torodi Ar. Sit**	**165.12**	**276**			**PKPdf**	**23 17 11.6**	**-0.8**
TOA0				PKPab		**PKPab**	**23 18 10.5**	**+0.7**
TORD	**Torodi Ar. Bea**	**165.12**	**276**	PKP		**PKPdf**	**23 17 11.6**	**-0.8**
	comp=N,44nm,0.9s,baz=356,slow=1.4,SNR=77							
TORD				PKPab		**PKPab**	**23 18 11.6**	**+1.8**
	comp=N,63nm,0.8s,baz=86,slow=3.7,SNR=14							
TORD				PP		**PP**	**23 21 57.4**	**+0.4**
	comp=N,5.2nm,0.8s,baz=90,slow=7.4,SNR=4.2							
TORD	**Torodi Ar. Bea**	**165.12**	**276**			**PKPdf**	**23 17 10.7**	**-1.6**
TORD				PKPab		**PKPab**	**23 18 10.2**	**+0.4**
DBIC	**Dimbokro**	**169.91**	**239**	PKP		**PKPdf**	**23 17 14.7**	**-1.1**
	comp=N,24nm,1.0s,baz=84,slow=1.1,SNR=14							
DBIC				PKPab		**PKPab**	**23 18 31.1**	**+0.2**
	comp=N,94nm,0.7s,baz=112,slow=4.6,SNR=23							
DBIC	**Dimbokro**	**169.91**	**239**	PKIKP		**PKPdf**	**23 17 15.2**	**-0.6**
DBIC							23 18 31.3	
DBIC	**Dimbokro**	**169.91**	**239**			**PKPdf**	**23 17 15.2**	**-0.6**
DBIC				PKPab		**PKPab**	**23 18 31.3**	**+0.4**
KOWA	**Kowa**	**170.45**	**286**	PKP		**PKPdf**	**23 17 15.6**	**-0.5**
	comp=N,33nm,0.9s,baz=88,slow=1.2,SNR=8.2							
KOWA				PKPab		**PKPab**	**23 18 35.4**	**+2.0**
	comp=N,61nm,0.9s,baz=68,slow=1.9,SNR=11							
KOWA				PP		**PP**	**23 22 24.3**	**+0.3**
	comp=N,17nm,1.0s,baz=53,slow=3.5,SNR=6.0							
KOWA	**Kowa**	**170.45**	**286**			**PKPdf**	**23 17 15.8**	**-0.3**
KOWA				PKPab		**PKPab**	**23 18 34.4**	**+1.0**

WEL 22 23:03:47.6,44°S±10°×17°3E±°,h11km±5km,M2.2/3, ML2.5/3,MLv2.2/3 Error ellipse: s-maj=0.0km s-min=0.0km az=178.3,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.21**	**206**	P	Pb	23 03 53.7	+0.2
MQZ				S	Sg	23 03 58.5	+3.4
OKCZ	**Okains Bay**	**0.29**	**136**	P	Pb	23 03 54.8	-0.1
AMCZ	**Amberley**	**0.35**	**344**	P	Pg	23 03 53.2	-1.4
AMCZ				S	Sg	23 03 57.9	-1.4
AKCZ	**Akaroa Harbour**	**0.37**	**165**	P	Pb	23 03 56.6	+0.4
AKCZ				S	Sb	23 04 03.5	+1.5

*IDC **22** 23:07:29.4±1.2,31°46S×76°70E,h0km,mb4.4/14, mb1 4.5/14,mb1mx4.1/71,mbtmp4.4/14,MS4.7/5, Ms1 4.7/5,ms1mx4.3/33,Error ellipse: s-maj=37.7km s-min=21.2km az=52.0*

*NEIC **22** 23:07:30.8±1.2,31°5S±0°1×76°8E±0°2,h10km±1km, mb4.9/28,Error ellipse: s-maj=21.9km s-min=17.3km az=266.0*

ISC 22 23:07:30.8±0.5,31°47S±0°10×76°7E±0°1,h10km,n71, σ0°72/62,mb4.8/26,MS4.7/5,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**24.03**	**350**	T	T	23 37 45.0	
	baz=172,slow=76,SNR=1113						
H08S1	**Diego Garcia H**	**24.04**	**350**	T	T	23 37 45.2	
	baz=172,slow=76,SNR=201						
H08S3	**Diego Garcia H**	**24.05**	**350**	T	T	23 37 46.4	
	baz=172,slow=76,SNR=1354						
H01W2	**Cape Leeuwin H**	**31.36**	**106**	T	T	23 47 15.1	
	baz=265,slow=74,SNR=100						
H01W3	**Cape Leeuwin H**	**31.36**	**106**	T	T	23 47 06.2	
	baz=265,slow=74,SNR=98						
H01W1	**Cape Leeuwin H**	**31.38**	**106**	T	T	23 46 45.9	
	baz=265,slow=74,SNR=107						
MORW	**Morawa**	**33.90**	**96**	P	**P**	**23 14 13.4**	**-0.6**
MORW				IAmb	IAmb	23 14 39.1	
	comp=Z,34nm,1.4s						
NWAO	**Narrogin (SRO)**	**34.15**	**103**	P	**P**	**23 14 15.8**	**-0.3**
PALK	**Pallekele**	**38.71**	**6**	P	**P**	**23 14 54.9**	**-0.3**
CASY	**Casey**	**40.33**	**160**	P	**P**	**23 15 09.0**	**+0.9**
MATP	**Matopo**	**44.45**	**272**	LR	LR	23 30 38.9	
	comp=Z,1µm,21.4s,baz=180,slow=31						
LBTB	**Lobatse**	**45.19**	**265**	LR	LR	23 31 50.4	
	comp=Z,791nm,21.6s,baz=188,slow=32						
LSZ	**Lusaka**	**47.01**	**278**	LR	LR	23 31 59.3	
	comp=Z,672nm,18.4s,baz=336,slow=31						
LSZ	**Lusaka**	**47.01**	**278**	P	**P**	**23 16 02.7**	**-0.1**
BBOO	**Buckleboo**	**49.66**	**108**	P	**P**	**23 16 22.2**	**-0.6**
BBOO				IAmb	IAmb	23 16 23.6	
	comp=Z,20nm,1.1s						
ASAR	**Alice Springs**	**50.78**	**96**	P	**P**	**23 16 31.6**	**0.0**
	comp=Z,5.5nm,0.7s,baz=252,slow=6.3,SNR=25						
ASAR	**Alice Springs**	**50.78**	**96**	P	**P**	**23 16 31.4**	**-0.2**
AS31	**Alice Springs**	**50.79**	**96**	P	**P**	**23 16 31.2**	**-0.3**
WRA	**Warramunga Arr**	**52.63**	**92**	P	**P**	**23 16 45.4**	**0.0**
	comp=Z,9.8nm,1.2s,baz=247,slow=7.3,SNR=6.2						
WRA	**Warramunga Arr**	**52.63**	**92**	P	**P**	**23 16 44.9**	**-0.5**
WR0	**Warramunga Arr**	**52.80**	**92**	P	**P**	**23 16 46.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**54.02**	**26**	P	**P**	**23 16 54.2**	**-1.2**
	comp=Z,1.2nm,0.4s,baz=214,slow=6.4,SNR=2.0						
CMAR				LR	LR	23 38 17.1	
	comp=Z,572nm,18.5s,baz=110,slow=34						
STKA	**Stephens Creek**	**54.41**	**109**	P	**P**	**23 16 57.8**	**-0.5**
	comp=Z,7.2nm,1.1s,baz=244,slow=7.1,SNR=5.4						
STKA	**Stephens Creek**	**54.41**	**109**	P	**P**	**23 16 57.8**	**-0.5**
SNAA	**Sanae**	**57.20**	**202**	P	**P**	**23 17 18.4**	**+0.6**
SNAA				IAmb	IAmb	23 17 41.3	
	comp=Z,15nm,1.4s						
SHL	**Shillong**	**58.53**	**16**	P	**P**	**23 17 28.5**	**+0.8**
QSPA	**South Pole Qui**	**58.68**	**180**	P	**P**	**23 17 28.6**	**+0.4**
	comp=Z,6.4nm,1.1s,baz=296,slow=12,SNR=2.7						
QSPA	**South Pole Qui**	**58.68**	**180**	P	**P**	**23 17 28.5**	**+0.3**
FAKI	**Fak Fak**	**59.36**	**73**	P	**P**	**23 17 33.3**	**-0.3**
SIJI	**Sorong**	**59.75**	**70**	P	**P**	**23 17 37.8**	**+1.5**
	comp=Z,14nm,0.8s,baz=324,slow=3.8,SNR=9.2						
SIJI				LR	LR	23 41 38.9	
	comp=Z,747nm,19.1s,baz=142,slow=34						
KMI	**Kunming**	**61.52**	**27**	P	**P**	**23 17 48.4**	**+0.1**
KMI				IAmb	IAmb	23 17 59.9	
	comp=Z,6.9nm,0.9s						
LSA	**Lhasa**	**62.35**	**14**	P	**P**	**23 17 54.4**	**+0.3**
CTA	**Charters Tower**	**62.71**	**98**	P	**P**	**23 17 56.6**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=235,slow=17,SNR=2.4						
BTK	**Batken**	**71.38**	**355**	P	**P**	**23 18 51.6**	**+0.6**
BTK				IAmb	IAmb	23 18 54.7	
	comp=Z,5.7nm,0.8s						
XAN	**Xi'an**	**71.87**	**28**	P	**P**	**23 18 54.4**	**+0.4**
XAN				IAmb	IAmb	23 19 12.4	
	comp=Z,22nm,1.5s						
ARSB	**Arslanbob**	**72.51**	**357**	P	**P**	**23 18 58.8**	**+0.9**
ARSB				IAmb	IAmb	23 18 59.6	
	comp=Z,8.8nm,0.8s						

AAK	**Ala-Archa**	**73.77**	**358**	P		**P**	**23 19 05.4**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=189,slow=6.2,SNR=4.1							
AAK	**Ala-Archa**	**73.77**	**358**	P		**P**	**23 19 06.0**	**+0.8**
KK31	**Karatay Array**	**74.43**	**355**	P		**P**	**23 19 09.6**	**+0.7**
KK31				IAmb		IAmb	23 19 11.3	
	comp=Z,18nm,1.0s							
KKAR	**Karatay Array**	**74.43**	**355**	P		**P**	**23 19 09.6**	**+0.7**
KKAR	**Karatay Array**	**74.43**	**355**	P		**P**	**23 19 09.9**	**+1.0**
KKAR				IAmb		IAmb	23 19 11.3	
	comp=Z,18nm,1.0s							
MK31	**Makanchi Array**	**78.06**	**4**	P		**P**	**23 19 29.1**	**-0.4**
MKAR	**Makanchi Array**	**78.06**	**4**	P		**P**	**23 19 29.1**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=194,slow=7.0,SNR=8.2							
MKAR	**Makanchi Array**	**78.06**	**4**			**P**	**23 19 28.6**	**-0.9**
KURBB	**Kurchatov Arra**	**81.75**	**1**	P		**P**	**23 19 49.5**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=188,slow=5.6,SNR=5.5							
ABKAR	**Akbulak array**	**81.75**	**349**	P		**P**	**23 19 49.0**	**-0.3**
ABKAR	**Akbulak array**	**81.75**	**349**	P		**P**	**23 19 49.3**	**0.0**
ABKAR				IAmb		IAmb	23 19 53.0	
	comp=Z,18nm,1.6s							
SONM	**Songino Array**	**83.31**	**20**	P		**P**	**23 19 58.5**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=182,slow=6.5,SNR=6.4							
SONM	**Songino Array**	**83.31**	**20**	P		**P**	**23 19 57.8**	**+0.1**
KSAR	**Wonju Array Be**	**83.56**	**39**	P		**P**	**23 19 59.5**	**+0.5**
BVAR	**Borovoye Array**	**84.32**	**356**	P		**P**	**23 20 02.6**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=134,slow=8.5,SNR=3.5							
BRVK	**Borovoye**	**84.36**	**356**	P		**P**	**23 20 02.9**	**+0.1**
BRVK				IAmb		IAmb	23 20 12.9	
	comp=Z,4.3nm,0.8s							
ZAA0	**Zalesovo Array**	**85.35**	**5**	P		**P**	**23 20 07.5**	**-0.2**
ZAA0				IAmb		IAmb	23 20 08.6	
	comp=Z,8.2nm,1.0s							
ZALV	**Zalesovo Beam**	**85.35**	**5**	P		**P**	**23 20 07.8**	**+0.2**
	comp=Z,6.9nm,0.8s,baz=202,slow=3.2,SNR=11							
ZALV	**Zalesovo Beam**	**85.35**	**5**	P		**P**	**23 20 07.2**	**-0.5**
MJAR	**Matsushiro Arr**	**88.81**	**45**	P		**P**	**23 20 25.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=194,slow=4.1,SNR=3.0							
PB08	**IPOC Station P**	**119.14**	**217**			**PKiKP**	**23 26 21.9**	**+0.7**
PB11	**IPOC Station P**	**119.72**	**217**			**PKPdf**	**23 26 20.9**	**-1.1**
MNMC	**Minye Minye**	**120.21**	**217**			**PKPdf**	**23 26 21.2**	**-1.9**
DLBC	**Dease Lake**	**147.47**	**26**	PKPbc		**PKPab**	**23 27 16.7**	**+0.2**
	comp=Z,3.0nm,0.9s,baz=301,slow=8.3,SNR=4.6							
YKA	**Yellowknife Ar**	**148.11**	**10**	PKPbc		**PKPbc**	**23 27 15.5**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=332,slow=3.2,SNR=20							
YHB	**Horse Butte**	**165.35**	**23**			**PKPdf**	**23 27 34.0**	**-1.7**
NVAR	**Mina Array Bea**	**165.85**	**57**	PKPab		**PKPab**	**23 28 36.9**	**+1.0**
	comp=Z,1.4nm,0.9s,baz=290,slow=3.7,SNR=3.1							
HVU	**Hansel Valley**	**167.19**	**34**			**PKPdf**	**23 27 36.1**	**-1.0**
DUG	**Dugway, Tooele**	**168.35**	**39**			**PKPdf**	**23 27 37.5**	**-0.4**
NLU	**North Lily Min**	**168.91**	**38**			**PKPdf**	**23 27 37.5**	**-0.9**
MSU	**Marysvale**	**169.86**	**44**			**PKPdf**	**23 27 38.7**	**-0.3**
MTPU	**Mount Pierson**	**170.16**	**46**			**PKPdf**	**23 27 38.6**	**-0.9**
X16A	**Lo Mia Camp, P**	**172.52**	**65**			**PKPdf**	**23 27 40.2**	**-0.3**
TUC	**Tucson**	**173.54**	**81**			**PKPdf**	**23 27 39.2**	**-1.6**
JCT	**Junction City**	**176.88**	**253**			**PKPdf**	**23 27 40.5**	**-1.2**

*HEL **22** 23:42:04.7,67°.84N×19°.93E,h0km,ML1.9,Explosion*
UPP 22 23:42:06.0±0.1,67°.85N×20°.20E,h0km,ML2.7, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	**0.23**	**265**	P	Pg	23 42 10.7	+0.2
RATU	**Laukkuluspa**	**0.23**	**265**	*i* P	Pg	23 42 10.7	+0.2
KOVU	**Salmi**	**0.38**	**358**	P	Pg	23 42 13.3	+0.1
KOVU				S	Sg	23 42 18.3	+0.1
KOVU	**Salmi**	**0.38**	**358**	*i* P	Pg	23 42 13.3	+0.1
KOVU				*i* S	Sg	23 42 18.3	+0.1
NIKU	**Nikkaluokta**	**0.44**	**273**	P	Pg	23 42 14.6	+0.1
NIKU	**Nikkaluokta**	**0.44**	**273**	*i* P	Pg	23 42 14.6	+0.1
LANU	**Lannavaara**	**0.70**	**72**	P	Pg	23 42 19.3	-0.2
LANU	**Lannavaara**	**0.70**	**72**	*e*P	Pg	23 42 19.3	-0.2
LANU				*e*S	Sg	23 42 28.7	+0.1
DUNU	**Dundret**	**0.74**	**169**	P	Pg	23 42 20.0	-0.2
DUNU	**Dundret**	**0.74**	**169**	*i* P	Pg	23 42 20.0	-0.2
KIF	**Kilpisjarvi**	**1.19**	**11**	*e*P	Pg	23 42 28.5	-0.2
KIF	**Kilpisjarvi**	**1.19**	**11**	*e*PB	Pg	23 42 28.8	+0.1
KIF				MSG		23 42 42.5	
	comp=Z,14nm,0.2s						
KIF				*e*S	Sg	23 42 44.3	+0.3
PAJU	**Pajala**	**1.40**	**125**	*e*P	Pg	23 42 31.5	-1.2
	baz=307						
PAJU				*e*SB	Sg	23 42 50.3	-0.4
HEF	**Hetta**	**1.41**	**65**	*e*P	Pn	23 42 30.2	-2.8
HEF	**Hetta**	**1.41**	**65**	*e*P	Pn	23 42 31.9	-1.0
HEF				MSG		23 42 49.8	
	comp=Z,9.7nm,0.2s						
HEF				*e*SN	Sn	23 42 54.7	+2.5
TOF	**Tornio**	**2.40**	**136**	*e*PB	Pn	23 42 48.0	+1.5
	baz=318						
TOF				MSG		23 43 17.8	
	comp=Z,6.0nm,0.2s						
TOF				*e*SG	Sb	23 43 20.0	-0.2
SGF	**Sodankyl**	**2.45**	**97**	*e*PB	Pb	23 42 49.1	-1.8
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*PB	Pb	23 42 51.7	-1.3
ARA0				*e*SG	Sb	23 43 26.7	+1.5
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pb	23 42 51.1	-1.9
RNF				*e*SB	Sb	23 43 24.3	-1.0

*DNK **22** 23:43:01.3±0.2,67°.83N×20°.22E,h0km,ML2.9(UPP), Explosion*
UPP 22 23:43:00.9±0.2,67°.83N×20°.21E,h0km,ML2.9, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	23 43 05.6	+0.2
RATU				S	Sg	23 43 08.9	+0.5
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	23 43 05.6	+0.2
RATU				S	Sg	23 43 08.9	+0.5
KOVU	**Salmi**	**0.39**	**357**	P	Pg	23 43 08.5	+0.1
KOVU				S	Sg	23 43 13.7	+0.2
KOVU	**Salmi**	**0.39**	**357**	P	Pg	23 43 08.5	+0.1
KOVU				S	Sg	23 43 13.7	+0.2
NIKU	**Nikkaluokta**	**0.45**	**275**	P	Pg	23 43 09.5	0.0
NIKU	**Nikkaluokta**	**0.45**	**275**	P	Pg	23 43 09.5	0.0
PAJU	**Pajala**	**1.38**	**125**	P	Pg	23 43 26.4	-1.0
PAJU	**Pajala**	**1.38**	**125**	P	Pg	23 43 26.4	-1.0

TRN 23 00:12:58.5,14°.84N×60°.25W,h28km,MD3.6,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILAM	**Ilet Lapin Mar**	**0.61**	**264**	*e*P	Pn	00 13 12.1	+0.8
ILAM				*e*S	Sn	00 13 22.1	+1.9
MVM	**Montagne Vaucl**	**0.68**	**246**	*e*P	Pn	00 13 13.4	+1.0
MPOM	**Morne Pois Mar**	**0.71**	**237**	*e*P	Pn	00 13 13.3	+0.7
MPOM				*e*S	Sn	00 13 24.2	+1.6
LPMF	**Morne Lapointe**	**0.74**	**250**	*e*P	Pn	00 13 13.7	+0.6
ZAM	**Aeronautique**	**0.80**	**251**	*e*P	Pn	00 13 14.5	+0.6
TRMF	**Trois Ilets**	**0.83**	**249**	*e*P	Pn	00 13 15.2	+0.9
BIM	**Bigot**	**0.85**	**248**	*e*P	Pb	00 13 15.7	+1.0
BIM				*e*S	Sn	00 13 28.7	+2.3
BAMF	**Morne Balai**	**0.87**	**269**	*e*P	Pb	00 13 16.2	+1.2
FDF	**Fort de France**	**0.88**	**263**	*e*P	Pb	00 13 15.9	+0.7
FDF				*e*S	Sn	00 13 29.1	+2.2
GBMF	**Grand Be**	**0.89**	**268**	*e*P	Pb	00 13 16.3	+1.0
SVN	**Savane Anatole**	**0.89**	**271**	*e*P	Pb	00 13 16.3	+1.0
CXM	**Morne La Croix**	**0.89**	**269**	*e*P	Pb	00 13 16.6	+1.2
PML	**Morne Lenard**	**0.91**	**267**	*e*P	Pb	00 13 16.6	+1.1
PCM	**Pelee Case Pet**	**0.93**	**269**	*e*P	Pb	00 13 16.9	+0.9
SLW	**Petit Monier**	**1.05**	**220**	*e*P	Pb	00 13 18.4	+0.3
SLW				*e*S	Sb	00 13 33.2	+1.8
SLBI	**Saint Lucia, B**	**1.07**	**221**	*e*P	Pn	00 13 17.9	+0.2
SLBI				*e*S	Sb	00 13 33.4	+1.4
DLPL	**La Plaine**	**1.08**	**297**	*e*P	Pb	00 13 19.4	+0.8
DLPL				*e*S	Sb	00 13 33.8	+1.4
SLB	**Belfond**	**1.26**	**218**	*e*P	Pb	00 13 22.6	+1.0
SLB				*e*S	Sb	00 13 39.0	+1.4
DSLB	**Salisbury**	**1.28**	**298**	*e*P	Pb	00 13 21.9	-0.1
DSLB				*e*S	Sb	00 13 37.8	-0.3
MCLT	**Moule a Chique**	**1.30**	**211**	*e*S	Sb	00 13 39.0	+0.3
MAGL	**Barre de l'ile**	**1.49**	**318**	*e*P	Pn	00 13 24.2	+0.8
MAGL				*e*S	Sb	00 13 44.1	0.0
TDBA	**Terre de Bas,**	**1.68**	**307**	*e*P	Pb	00 13 27.3	-1.3
TDBA				*e*S	Sb	00 13 48.3	-1.1
TBG	**Guadaloupe-3**	**1.68**	**307**	*e*P	Pn	00 13 26.5	+0.4
CBE	**Ff, Capester**	**1.79**	**313**	*e*P	Pn	00 13 28.3	+0.7
CBE				*e*S	Sn	00 13 50.9	+1.4

SVB	**Belmont**	**1.83**	**212**	*e*P		Pn	00 13 29.4	+1.2
SVB				*e*S		Sn	00 13 52.0	+1.5
ABD	**La Joyeuse, An**	**2.02**	**324**	*e*P		Pn	00 13 32.1	+1.4
ABD				*e*S		Sn	00 13 57.1	+2.0
ANBD	**Bethesda, Anti**	**2.64**	**327**	*e*P		Pn	00 13 41.5	+2.3
ANBD				*e*S		Sn	00 14 11.9	+1.5
BPA	**Boggy Peak**	**2.69**	**325**	*e*P		Pn	00 13 40.8	+0.8
BPA				*e*S		Sn	00 14 12.0	+0.4

*IGQ **23** 00:22:04±1.0,5°S±9°×8°1W±°,h10km*
*IDC **23** 00:22:08.0±2.9,4°.81S×80°.80W,h63km±28km,mb3.4/5, mb1 3.7/8,mb1mx3.5/33,mbtmp3.8/8,ML3.6/3,Error ellipse: s-maj=29.0km s-min=17.0km az=17.0*

ISC 23 00:22:06.2±0.8,4°.82S±0°.05×80°.89W±0°.08,h43km,n53, σ1ş83/60,mb3.7/5,Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCRA	**Macar, Loja**	**1.03**	**65**	P	**Pn**	**00 22 22.0**	**-2.3**
MCRA				S	**Sn**	**00 22 35.0**	**-2.7**
ARNL	**Arenillas**	**1.50**	**33**	P	**Pn**	**00 22 29.0**	**-1.7**
GONZ	**Gonzanam**	**1.60**	**69**	P	**Pn**	**00 22 31.0**	**-1.4**
GONZ				S	**Sn**	**00 22 53.0**	**+1.0**
ISPG	**Isla Puna-Puer**	**1.97**	**21**	P	**Pn**	**00 22 39.0**	**+1.8**
ISPG				S	**Sn**	**00 23 08.0**	**+7.3**
MORR	**Playas El Morr**	**2.23**	**14**	P	**Pn**	**00 22 41.0**	**+0.3**
SALI	**Salinas**	**2.61**	**358**	P	**Pn**	**00 22 46.0**	**0.0**
COHC	**Cochancay**	**2.85**	**35**	P	**Pn**	**00 22 49.0**	**-0.2**
COHC				S	**Sn**	**00 23 26.0**	**+3.7**
BOSC	**San Juan Bosco**	**2.91**	**55**	P	**Pn**	**00 22 51.0**	**+0.8**
PPLP	**Puerto Lpez**	**3.25**	**2**	P	**Pn**	**00 22 55.0**	**+0.2**
ATAH	**Atahualpa**	**3.39**	**133**	P	**Pn**	**00 22 58.0**	**+1.0**
	12nm,0.3s,baz=332,slow=10.0,SNR=47						
ATAH				S	**Sn**	**00 23 37.0**	**+0.8**
	28nm,0.3s,baz=325,slow=18,SNR=7.3						
SANGA	**Volcan Sangay**	**3.72**	**43**	P	**Pn**	**00 23 04.0**	**+2.3**
CHSH	**Refugio Sur-Vo**	**3.87**	**32**	P	**Pn**	**00 23 03.0**	**-0.8**
TAMH	**Tambohuasha Ch**	**3.87**	**33**	P	**Pn**	**00 23 04.0**	**+0.3**
BMAS	**Trigal station**	**4.08**	**36**	P	**Pn**	**00 23 07.0**	**+0.6**
ARRY	**Arrayan**	**4.09**	**37**	P	**Pn**	**00 23 07.0**	**+0.4**
BBIL	**Ulba Tungurahu**	**4.11**	**36**	P	**Pn**	**00 23 08.0**	**+1.1**
RETU	**Refugio**	**4.14**	**36**	P	**Pn**	**00 23 08.0**	**+0.6**
JUIV	**Juive**	**4.15**	**36**	P	**Pn**	**00 23 08.0**	**+0.7**
POND	**Pondoa**	**4.16**	**36**	P	**Pn**	**00 23 08.0**	**+0.5**
BULB	**Ulba Tungurahu**	**4.17**	**37**	P	**Pn**	**00 23 09.0**	**+1.3**
BRUN	**Tungurahua Vol**	**4.18**	**36**	P	**Pn**	**00 23 09.0**	**+1.1**
CAB1	**Cabo Pasado-Ma**	**4.42**	**6**	P	**Pn**	**00 23 12.0**

KANR	**Karaman**	**1.08 331**	*e*Pg	**Pn**	**00 39 25.2 +2.5**
KANR			*e*Sg	**Sn**	**00 39 42.4 +5.3**
KRNR	**Karanay**	**1.11 302**⇓	*e*PG	**Pb**	**00 39 23.5 +0.2**
KRNR			*e*		00 39 38.9
KRNR			pmax	pmax	
	comp=Z,50nm,0.4s				
KRNR			smax	smax	
	comp=N,175nm,0.4s				
KRNR	**Karanay**	**1.11 302**	*e*Pg	**Pb**	**00 39 23.6 +0.2**
KRNR			*e*Sg	**Sn**	**00 39 38.8 +0.6**
UNCR	**Uncukul**	**1.13 295**	*e*PG	**Pn**	**00 39 24.7 +1.2**
UNCR			*e*S	**Sn**	**00 39 39.4 +0.8**
UNCR			pmax	pmax	
	comp=Z,1μm,0.3s				
XNZR	**Khunzakh**	**1.14 285**	*e*PG	**Pb**	**00 39 24.2 +0.4**
XNZR			*e*S	**Sb**	**00 39 38.9 +0.6**
XNZR			pmax	pmax	
	comp=Z,4.0nm,0.6s				
XNZR	**Khunzakh**	**1.14 285**	*e*Pg	**Pn**	**00 39 24.3 +0.6**
XNZR			*e*Sg	**Sb**	**00 39 39.0 +0.6**
DBC	**Dubki**	**1.27 308**⇑	*e*PG	**Pg**	**00 39 26.1 -1.0**
DBC			*e*		00 39 42.8
DBC			pmax	pmax	
	comp=Z,45nm,0.4s				
DBC			smax	smax	
	comp=N,210nm,0.5s				
DBC	**Dubki**	**1.27 308**	*e*Pg	**Pg**	**00 39 26.1 -1.0**
SEKA	**Sheki**	**1.28 216**	PG	**Pn**	**00 39 25.4 -0.1**
ZKTA	**Zakatala**	**1.32 243**	PG	**Pn**	**00 39 25.7 -0.4**
DLMR	**Dylym**	**1.42 306**⇓	*e*PG	**Pg**	**00 39 29.2 -0.7**
DLMR			*e*		00 39 48.4
DLMR			pmax	pmax	
	comp=Z,111nm,0.3s				
DLMR			smax	smax	
	comp=N,199nm,0.5s				
DLMR	**Dylym**	**1.42 306**	*e*Pg	**Pg**	**00 39 29.3 -0.7**
DLMR			*e*Sg	**Sg**	**00 39 48.0 -0.4**
DVE	**Vedeno**	**1.68 296**	*de*PN	**Pb**	**00 39 33.5 +0.5**
DVE			pmax	pmax	
	comp=Z,51nm,0.3s				
DVE	**Vedeno**	**1.68 296**	*e*Pg	**Pb**	**00 39 33.5 +0.5**
DVE			*e*Sg	**Sg**	**00 39 55.7 -1.2**
MNGR	**Mingechevir, A**	**1.69 210**	PN	**Pb**	**00 39 34.0 +0.9**
DDFL	**Dedoflistskaro**	**1.75 243**	PN	**Pg**	**00 39 36.1 -0.1**
GROC	**Groznyy**	**2.01 299**	*e*PN	**Pb**	**00 39 39.4 +0.9**
GROC			*e*S	**Sg**	**00 40 07.1 -0.2**
GROC			pmax	pmax	
	comp=Z,16nm,0.2s				
GROC			smax	smax	
	comp=N,79nm,0.6s				
GROC			smax	smax	
	comp=N,80nm,0.6s				
GROC	**Groznyy**	**2.01 299**	*e*Pg	**Pb**	**00 39 38.7 +0.2**
GROC			*e*Sg	**Sn**	**00 40 01.6 +1.5**
GANJ	**Ganja**	**2.13 222**	PN	**Pn**	**00 39 37.8 +0.6**
KMGR	**Komgaron**	**2.58 289**	*e*Pn	**Pn**	**00 39 44.4 +0.9**
KMGR			*e*Sn	**Sn**	**00 40 16.1 +1.7**
BTNK	**Botanikuri**	**2.59 259**	PN	**Pn**	**00 39 44.9 +1.3**
VLKR	**Vladikavkaz**	**2.71 288**	*i* Pn	**Pn**	**00 39 45.3 0.0**
VLKR			*i* Sn	**Sn**	**00 40 18.8 +1.3**
BTKR	**Batakoyurt**	**2.91 294**	*e*Pn	**Pn**	**00 39 48.4 +0.4**
BTKR			*e*Sn	**Sn**	**00 40 22.8 +0.4**
TRKR	**Terskaya**	**2.94 301**	*e*Pn	**Pb**	**00 39 51.7 -2.6**
TRKR			*e*Sn	**Sb**	**00 40 27.1 -2.7**
LACR	**Lac**	**2.94 283**	*e*PN	**Pn**	**00 39 51.2 +2.8**
LACR			pmax	pmax	
	comp=Z,21nm,0.3s				
LACR	**Lac**	**2.94 283**	*e*Pn	**Pn**	**00 39 50.3 +2.0**
LACR			*e*Sn	**Sn**	**00 40 22.9 -0.3**
ARNR	**Ardon**	**3.03 289**	*e*Pn	**Pn**	**00 39 51.9 +2.4**
ARNR			*e*Sn	**Sn**	**00 40 26.9 +1.6**
KORR	**Kora**	**3.15 287**	*e*Pn	**Pn**	**00 39 52.4 +1.0**
KORR			*e*Sn	**Sn**	**00 40 28.8 +0.4**
ZEI	**Tsey**	**3.22 281**	*e*Pn	**Pn**	**00 39 52.8 +0.5**
PRTR	**Priterechnaya**	**3.24 299**	*e*Pn	**Pn**	**00 39 55.3 +2.9**
STDR	**Stavd-Durt**	**3.24 292**	*e*Pn	**Pn**	**00 39 55.6 +3.2**
STDR			*e*Sn	**Sn**	**00 40 32.8 +2.4**
GNI	**Garni**	**3.34 232**	Pn	**Pn**	**00 39 55.8 +1.7**
	comp=Z,2.5nm,0.3s,baz=99,slow=17,SNR=10				
GNI			Sn	**Sn**	**00 40 35.9 +2.6**
	comp=Z,2.8nm,0.3s,baz=316,slow=16,SNR=3.1				
GNI	**Garni**	**3.34 232**	*i* PN	**Pn**	**00 39 55.5 +1.5**
GNI			*i* S	**Sn**	**00 40 35.9 +2.6**
GNI			pmax	pmax	
	comp=Z,12nm,0.6s				
GNI			smax	smax	
	comp=Z,21nm,1.3s				
GNI	**Garni**	**3.34 232**	*e*Pn	**Pn**	**00 39 55.5 +1.5**
LSNR	**Lesken**	**3.38 289**	*e*Pn	**Pn**	**00 39 57.2 +2.8**
LSNR			*e*Sn	**Sn**	**00 40 36.2 +2.3**
DIGR	**Digorskoe uzhe**	**3.47 282**	*e*Pn	**Pn**	**00 39 57.6 +1.8**
DIGR			*e*Sn	**Sn**	**00 40 36.4 0.0**
ONI	**Oni**	**3.53 277**	*e*Sn	**Sn**	**00 40 37.4 -0.3**
LKRN	**Lenkeran, Azer**	**3.56 173**	PN	**Pn**	**00 39 59.0 +2.1**
NCK	**Nalchik**	**3.60 292**	*e*Pn	**Pn**	**00 39 59.5 +2.1**
NCK			*e*Sn	**Sn**	**00 40 41.5 +2.1**
NAX	**Nakhchivan**	**3.69 215**	PN	**Pn**	**00 39 59.5 +0.8**
PYA1	**Pyatigorsk**	**4.15 298**	*e*Pn	**Pn**	**00 40 06.2 +1.3**
PYA1			*e*Sn	**Sn**	**00 40 52.5 -0.4**
KBZ	**Khabaz**	**4.16 293**	Pn	**Pn**	**00 40 06.2 +1.2**
	comp=Z,0.3nm,0.3s,baz=102,slow=9.3,SNR=13				
KBZ			Sn	**Sn**	**00 40 53.8 +0.8**
	comp=Z,1.5nm,0.3s,baz=35,slow=16,SNR=4.4				
BEYR	**Belyy Ugol+**	**4.31 296**	*e*Pn	**Pn**	**00 40 08.5 +1.3**
BEYR			*e*Sn	**Sn**	**00 40 56.2 -0.8**
SHA1	**Shidzhatmaz**	**4.33 292**	*e*PN	**Pn**	**00 40 09.3 +1.8**
SHA1			pmax	pmax	
	comp=Z,5.0nm,0.4s				
SHA1	**Shidzhatmaz**	**4.33 292**	*e*Pn	**Pn**	**00 40 09.3 +1.8**
SHA1			*e*Sn	**Sn**	**00 40 57.8 +0.2**
KVAR	**Kislovodsk Arr**	**4.37 295**	Pn	**Pn**	**00 40 10.2 +2.1**
	baz=60,slow=15,SNR=2.2				
KVAR			Sn	**Sn**	**00 40 58.6 0.0**
	baz=176,slow=15,SNR=6.7				
KIV	**Kislovodsk**	**4.38 295**	*e*PN	**Pn**	**00 40 09.6 +1.4**
KIV			*e*S	**Sn**	**00 41 01.4 +2.7**
KIV			pmax	pmax	
	comp=Z,15nm,1.1s				
KIV	**Kislovodsk**	**4.38 295**	*e*Pn	**Pn**	**00 40 09.6 +1.4**
KIV			*e*Sn	**Sn**	**00 40 59.1 +0.4**
GOF	**Gofitskoye**	**4.67 309**	*e*Pn	**Pn**	**00 40 14.3 +2.2**
GOF			*e*Sn	**Sn**	**00 41 07.9 +2.1**
ANN	**Anapa**	**8.22 292**	*i* P	**Pn**	**00 41 03.8 +3.0**
GEYT	**Alibeck**	**8.74 116**	Pn	**Pn**	**00 41 08.0 -0.1**
	comp=Z,0.4nm,0.3s,baz=293,slow=14,SNR=5.7				
GEYT			Sn	**Sn**	**00 42 42.4 -3.7**
	comp=Z,0.4nm,0.3s,baz=246,slow=25,SNR=1.8				
BELG	**Belogornoye**	**10.16 358**	Sn	Sn	00 43 10.7 -10
	comp=Z,0.3nm,0.3s,baz=143,slow=20,SNR=1.7				
AKTO	**Aktyubinsk**	**10.63 36**	Pn	**Pn**	**00 41 34.2 +0.5**
	comp=Z,0.5nm,0.3s,baz=215,slow=9.9,SNR=22				
AKTO			Sn	**Sn**	**00 43 25.7 -6.4**
	comp=Z,0.3nm,0.3s,baz=224,slow=20,SNR=2.3				
AKTO	**Aktyubinsk**	**10.63 36**	⇓P	**Pn**	**00 41 34.1 +0.3**
	comp=Z,1.9nm,0.7s				
AKTO			⇓S	**Sn**	**00 43 29.0 -3.2**
	comp=Z,2.3nm,0.7s				
AKTO	**Aktyubinsk**	**10.63 36**	P	**Pn**	**00 41 34.0 +0.3**
AKTO			S	**Sn**	**00 43 29.0 -3.2**
AB31	**Akbulak array**	**10.78 45**	P	**Pn**	**00 41 36.3 +0.3**
	comp=Z,0.3nm,0.3s,baz=234,slow=12,SNR=31				
AB31			⇑S	**Sn**	**00 43 33.1 -2.8**
	comp=Z,1.1nm,0.5s,baz=230,slow=25,SNR=5.3				
AB31	**Akbulak array**	**10.78 45**	P	**Pn**	**00 41 36.2 +0.3**
AB31			S	**Sn**	**00 43 33.4 -2.6**
OBN	**Obninsk**	**14.96 333**	*e*P	**Pn**	**00 42 35.6 +2.8**
OBN			pmax	pmax	
	comp=Z,2.0nm,0.3s				
ARU	**Arti**	**15.69 22**	*i* P	**Pn**	**00 42 44.5 +2.1**
ARU			pmax	pmax	
	comp=Z,3.0nm,1.1s				
MNK	**Minsk**	**18.15 319**	*i* P	**Pn**	**00 43 12.1 -1.2**
	comp=E,3.0nm,1.2s				
MNK			*i* P	**Pn**	**00 43 12.1 -1.2**
	comp=N,15nm,1.4s				
MNK			*i* P	**Pn**	**00 43 12.1 -1.2**
	comp=Z,4.0nm,0.8s				
MNK			*i* PP	**PnPn**	**00 43 23.2 -1.2**
MNK			*i* PPP	PPP	00 43 30.9
MNK			*i* S	**Sn**	**00 46 35.2 0.0**
MNK			*i* SS	**SnSn**	**00 46 50.3 +1.6**
MNK			*i* SSS	SSS	00 47 03.1
MNK			*i* PcP	**PcP**	**00 47 50.5 +4.5**
MNK			*i* LQ	LQ	00 48 35.9
MNK			*i* LR	LR	00 49 35.5
MNK			*i* LRM	MLR	00 51 18.3
	comp=E,17nm,18.1s				
MNK			*i* LRM	MLR	00 51 18.3
	comp=N,206nm,16.3s				
MNK			*i* LRM	MLR	00 51 18.3
	comp=Z,86nm,17.2s				
BVAR	**Borovoye Array**	**18.36 46**	P	**Pn**	**00 43 16.4 +0.5**
	comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=1.8				
IDI	**Anoyia**	**19.42 257**	P	**P**	**00 43 25.9 -1.9**
	comp=Z,0.2nm,0.3s,baz=11,slow=16,SNR=1.3				
KURBB	**Kurchatov Arra**	**22.39 58**	P	**P**	**00 44 01.3 +1.6**
	comp=Z,0.1nm,0.4s,baz=275,slow=12,SNR=2.3				
KURK	**Kurchatov**	**22.47 57**	P	**P**	**00 44 01.3 +0.8**
FINES	**FINESS Array B**	**23.37 333**	P	**P**	**00 44 08.8 -0.9**
	comp=Z,1.4nm,0.6s,baz=140,slow=11,SNR=9.8				
MKAR	**Makanchi Array**	**24.61 68**	P	**P**	**00 44 23.1 +1.5**
	comp=Z,0.1nm,0.3s,baz=261,slow=8.6,SNR=2.8				
HFS	**Hagfors**	**27.60 322**	P	**P**	**00 44 47.6 -0.8**
	comp=Z,2.2nm,0.8s,baz=142,slow=12,SNR=1.6				
ARCES	**ARCESS Array B**	**29.77 344**	P	**P**	**00 45 08.5 +0.9**
	comp=Z,2.7nm,0.9s,baz=142,slow=9.0,SNR=1.6				
CMAR	**Chiang Mai Arr**	**48.95 103**	P	**P**	**00 47 50.3 +2.6**
	comp=Z,1.0nm,0.3s,baz=24,slow=14,SNR=1.6				
TORD	**Torodi Ar. Bea**	**49.51 248**	P	**P**	**00 47 49.6 -2.5**
	comp=Z,0.4nm,0.8s,baz=34,slow=7.6,SNR=4.2				
PETK	**Petropavlovsk-**	**67.36 39**	P	**P**	**00 49 54.8 -1.3**
	comp=Z,5.0nm,0.9s,baz=29,slow=6.6,SNR=1.6				
YKA	**Yellowknife Ar**	**74.69 352**	P	**P**	**00 50 39.7 -0.8**
	comp=Z,0.1nm,0.5s,baz=32,slow=7.0,SNR=3.0				

IDC 23 00:45:50.9±3.0, 6.62°S×129.55°E, h115km±42km, mb3.2/1, mb1 3.2/5, mb1mx3.1/35, mbtmp3.5/5, MS3.3/1, Ms1 3.3/1, ms1mx2.9/15, Error ellipse: s-maj=77.0km s-min=22.3km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.96**	**17**	P	Pn	00 47 16.8	-0.1
	0.7nm,0.3s,baz=304,slow=23,SNR=6.4						
SIJI				S	Sn	00 48 18.0	-6.0
	1.2nm,0.3s,baz=245,slow=23,SNR=1.7						
FITZ	**Fitzroy Crossi**	**12.03**	**198**	P	Pn	00 48 39.5	+0.8
	0.2nm,0.3s,baz=4.4,slow=11,SNR=15						
FITZ				S	Sn	00 50 47.8	-3.3
	0.3nm,0.3s,baz=340,slow=18,SNR=2.4						
WRA	**Warramunga Arr**	**14.03**	**161**	P	Pn	00 49 04.0	-0.9
	0.3nm,0.3s,baz=329,slow=14,SNR=11						
WRA				S	Sn	00 51 29.7	-10
	0.2nm,0.3s,baz=337,slow=23,SNR=3.0						
ASAR	**Alice Springs**	**17.46**	**167**	P	P	00 49 46.8	-0.1
	0.1nm,0.3s,baz=345,slow=10,SNR=1.8						
ASAR				S	Sn	00 52 47.0	-15
	baz=349,slow=32,SNR=1.8						
TGY	**Tagaytay City**	**22.29**	**337**	LR	LR	01 02 04.5	
	comp=Z,72nm,19.1s,baz=98,slow=44						
MKAR	**Makanchi Array**	**67.67**	**327**	P	P	00 56 35.8	+0.1
	0.2nm,0.4s,baz=120,slow=7.4,SNR=4.0						

*NEIC **23** 01:04:08.3±0.8, 13.65°S±0.09°×166.6°E±0.1, h62km±7km, mb4.2/9, Error ellipse: s-maj=22.8km s-min=9.2km az=61.0*
*IDC **23** 01:04:08.6±4.1, 13.71°S×166.65°E, h58km±32km, mb3.8/9, mb1 3.9/11, mb1mx3.7/40, mbtmp4.1/11, ML4.2/2, Error ellipse: s-maj=37.9km s-min=24.1km az=96.0*
ISC 23 01:04:07.4±0.7, 13.62°S±0.07°×166.7°E±0.1, h50km, n31, σ0.93/34, mb4.2/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.78**	**302**	P	**Pn**	**01 05 59.3**	**+1.1**
	22nm,0.3s,baz=191,slow=16,SNR=3.5						
HNR	**Honiara**	**7.78**	**302**	Pn	**Pn**	**01 05 58.7**	**+0.5**
DZM	**Mont Dzumac**	**8.41**	**181**	P	**Pn**	**01 06 07.7**	**+0.9**
	0.5nm,0.3s,baz=63,slow=18,SNR=1.3						
DZM				S	**Sn**	**01 07 42.1**	**+1.7**
	baz=330,slow=20,SNR=0.9						
DZM	**Mont Dzumac**	**8.41**	**181**	Pn	**Pn**	**01 06 07.2**	**+0.4**
DZM				Sn	**Sn**	**01 07 40.5**	**0.0**
STKA	**Stephens Creek**	**29.28**	**227**	P	**P**	**01 10 05.5**	**+0.4**
	0.7nm,0.4s,baz=49,slow=6.8,SNR=4.3						
TOO	**Toolangi**	**30.41**	**215**	P	**P**	**01 10 14.0**	**-1.1**
TOO				IAmb	IAmb	01 10 17.5	
	comp=Z,5.9nm,0.8s						
WB0	**Warramunga Arr**	**31.47**	**254**	P	**P**	**01 10 23.3**	**-1.3**
WB0				IAmb	IAmb	01 10 40.8	
	comp=Z,3.1nm,1.1s						
WB2	**Warramunga Arr**	**31.53**	**254**	P	**P**	**01 10 23.3**	**-1.9**
WB2				IAmb	IAmb	01 10 37.0	
	comp=Z,2.6nm,0.9s						
WRA	**Warramunga Arr**	**31.54**	**254**	P	**P**	**01 10 24.2**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=87,slow=9.1,SNR=5.4						
ASAR	**Alice Springs**	**32.53**	**247**	P	**P**	**01 10 33.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=74,slow=9.4,SNR=8.1						
ASAR				PcP	**PcP**	**01 13 19.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=122,slow=1.2,SNR=1.5						
BBOO	**Buckleboo**	**33.81**	**230**	P	**P**	**01 10 44.8**	**-0.1**
BBOO				IAmb	IAmb	01 11 03.2	
	comp=Z,4.7nm,0.9s						
MTN	**Manton Dam**	**34.58**	**267**	P	**P**	**01 10 50.9**	**-0.9**
MJAR	**Matsushiro Arr**	**56.65**	**333**	P	**P**	**01 13 45.5**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=166,slow=10,SNR=4.1						
CASY	**Casey**	**64.33**	**202**	P	**P**	**01 14 37.5**	**-0.1**
CASY				IAmb	IAmb	01 14 51.3	
	comp=Z,4.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**65.63**	**333**	P	**P**	**01 14 48.0**	**+1.7**
	comp=Z,1.4nm,0.6s,baz=145,slow=7.0,SNR=4.2						
CMAR	**Chiang Mai Arr**	**73.96**	**294**	P	**P**	**01 15 40.2**	**+2.1**
	comp=Z,0.9nm,0.3s,baz=112,slow=4.4,SNR=8.0						
CMAR	**Chiang Mai Arr**	**73.96**	**294**	P	**P**	**01 15 37.1**	**-1.0**
QSPA	**South Pole Qui**	**76.40**	**180**	P	**P**	**01 15 51.5**	**0.0**
SONM	**Songino Array**	**81.26**	**324**	P	**P**	**01 16 19.2**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=139,slow=7.0,SNR=4.7						
SONM	**Songino Array**	**81.26**	**324**	P	**P**	**01 16 18.2**	**-0.1**
PAGB	**Antelope Grade**	**84.60**	**51**	P	**P**	**01 16 35.6**	**-0.3**
MKAR	**Makanchi Array**	**96.00**	**317**	P	**P**	**01 17 29.7**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=97,slow=6.5,SNR=10						
MKAR	**Makanchi Array**	**96.00**	**317**	P	**P**	**01 17 29.6**	**+0.3**
ZALV	**Zalesovo Beam**	**96.15**	**324**	P	**P**	**01 17 29.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=108,slow=3.3,SNR=4.0						
ARCES	**ARCESS Array B**	**119.03**	**345**	PKP	**PKPdf**	**01 22 49.2**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=84,slow=1.7,SNR=17						
ARCES	**ARCESS Array B**	**119.03**	**345**		**PKPdf**	**01 22 49.3**	**-0.8**
FINES	**FINESS Array B**	**124.48**	**338**	PKP	**PKPdf**	**01 23 00.2**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=104,slow=4.6,SNR=1.2						
KEST	**Kesra**	**149.98**	**321**	PKPbc	**PKiKP**	**01 23 53.2**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=4.5,slow=2.4,SNR=4.5						
KEST	**Kesra**	**149.98**	**321**		**PKPbc**	**01 23 52.1**	**-0.8**
ESDC	**Sonseca Array**	**152.76**	**344**	PKPbc	**PKiKP**	**01 23 59.3**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=316,slow=5.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**165.36**	**270**	PKPab	**PKPab**	**01 25 05.6**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=169,slow=2.6,SNR=2.6						

IDC 23 01:20:15.2±3.0, 32.71°S×178.57°W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.7/20, mbtmp3.7/3, ML3.5/1, Error ellipse: s-maj=70.6km s-min=45.0km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.56**	**211**	Pn	Pn	01 21 52.2	-0.7
	1.1nm,0.3s,baz=120,slow=23,SNR=15						
URZ				Sn	Sn	01 23 04.3	-4.2
	baz=303,slow=23,SNR=1.3						
ASAR	**Alice Springs**	**42.56**	**270**	P	P	01 28 12.8	-0.2
	0.4nm,0.6s,baz=103,slow=7.1,SNR=6.7						
WRA	**Warramunga Arr**	**43.76**	**275**	P	P	01 28 22.7	0.0
	0.4nm,0.3s,baz=114,slow=7.5,SNR=9.6						
FINES	**FINESS Array B**	**147.12**	**338**	PKPbc	PKPbc	01 39 58.8	-0.7
	0.9nm,0.6s,baz=29,slow=4.4,SNR=7.2						

*IDC **23** 01:40:42.4±2.5, 18.79°S×169.09°E, h208km±27km, mb3.7/7, mb1 3.9/8, mb1mx3.6/24, mbtmp4.2/8, Error ellipse: s-maj=54.8km s-min=16.0km az=156.0*
*NOU **23** 01:41:18.3, 21.055°×167.63°E, h0km, MLv2.8, Loyalty Islands*
ISC 23 01:40:41.6±0.9, 18.8°S±0.1°×169.1°E±0.1, h201km, n22, σ0.91/23, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIFNC	**LIFOU**	**2.67**	**221**	P	**Pn**	**01 41 27.1**	**-0.4**
MARNC	**Mare, Loyalty**	**2.90**	**200**	P	**Pn**	**01 41 29.3**	**-0.8**
YATNC	**Mamie plateau,**	**3.89**	**212**	P	**Pn**	**01 41 41.1**	**-1.0**
DZM	**Mont Dzumac**	**4.14**	**217**	P	**Pn**	**01 41 45.8**	**+0.5**
	2.5nm,0.3s,baz=53,slow=19,SNR=18						
DZM				S	**S**	**01 42 34.9**	**+0.1**
	1.2nm,0.3s,baz=53,slow=20,SNR=1.4						
DZM	**Mont Dzumac**	**4.14**	**217**	P	**Pn**	**01 41 45.8**	**+0.5**
OUENC	**Ouen Island, N**	**4.22**	**210**	P	**Pn**	**01 41 46.6**	**+0.4**
NOUC	**Port Laguerre**	**4.25**	**218**	P	**Pn**	**01 41 47.4**	**+0.9**
ONTNC	**Ouen Toro**	**4.32**	**215**	P	**Pn**	**01 41 48.3**	**+0.8**
CTA	**Charters Tower**	**21.59**	**263**	P	**P**	**01 45 16.9**	**+1.0**
	3.2nm,0.6s,baz=62,slow=12,SNR=2.5						
STKA	**Stephens Creek**	**28.00**	**237**	P	**P**	**01 46 14.8**	**+0.8**
	2.6nm,0.7s,baz=63,slow=7.9,SNR=6.8						
WRA	**Warramunga Arr**	**32.79**	**262**	P	**P**	**01 46 55.8**	**-0.4**
	2.2nm,0.5s,baz=101,slow=8.5,SNR=24						
WRA				S	**S**	**01 51 57.1**	**-1.2**
	0.6nm,0.9s,baz=31,slow=23,SNR=2.0						
ASAR	**Alice Springs**	**33.12**	**255**	P	**P**	**01 46 59.2**	**+0.1**
	13nm,0.4s,baz=82,slow=8.8,SNR=223						
ASAR				pP	**pwP**	**01 47 43.8**	**-1.8**
	1.0nm,0.8s,baz=86,slow=9.6,SNR=1.7						
SONM	**Songino Array**	**86.75**	**323**	P	**P**	**01 53 04.1**	**+1.1**
	0.4nm,0.6s,baz=134,slow=4.2,SNR=2.2						
ILAR	**Eielson Array**	**89.80**	**17**	P	**P**	**01 53 15.4**	**-1.4**
	0.3nm,0.5s,baz=238,slow=5.2,SNR=7.8						
TXAR	**Lajitas Array**	**96.65**	**61**	P	**P**	**01 53 50.1**	**+0.7**
	0.7nm,1.0s,baz=212,slow=4.4,SNR=4.4						
YKA	**Yellowknife Ar**	**100.29**	**27**	P	**Pdif**	**01 54 05.4**	**+0.7**
	0.4nm,0.8s,baz=249,slow=4.4,SNR=5.7						
GEYT	**Alibeck**	**117.64**	**304**	PKP	**PKiKP**	**01 59 04.8**	**+0.7**
	1.2nm,0.5s,baz=96,slow=2.9,SNR=2.1						
ARCES	**ARCESS Array B**	**124.56**	**345**	PKP	**PKPdf**	**01 59 15.4**	**-0.9**
	3.9nm,0.9s,baz=60,slow=1.4,SNR=6.7						
GERES	**GERESS Array B**	**144.00**	**332**	PKP	PKPab	01 59 51.3	+0.2
	0.3nm,0.5s,baz=48,slow=4.2,SNR=5.7						
MOA	**Molln**	**144.47**	**330**	*e*P	PKPbc	01 59 53.4	+0.4
	2.3nm,0.7s						
SOKA	**Soboth**	**144.93**	**328**	*e*P	**PKPdf**	**01 59 55.3**	**+0.4**
	0.8nm,0.4s						
FETA	**Feichten**	**146.68**	**333**	*e*P	**PKPbc**	**01 59 59.9**	**0.0**
	0.4nm,0.3s						

*KOLA **23** 01:47:50.1, 68.36°N×20.36°E, h0km, ML2.8, Sweden, Lapland*
*IDC **23** 01:47:51.1±0.9, 67.16°N×20.88°E, h0km, mb1 3.2/3, mb1mx3.0/38, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=15.2km s-min=7.0km az=109.0*
*DNK **23** 01:47:51.2±0.7, 67.18°N×20.65°E, h0km, ML3.1(UPP), Suspected explosion*
*NAO **23** 01:47:51.1±0.6, 67.15°N×20.82°E, ML3.2*
*HEL **23** 01:47:51.5±0.1, 67.17°N×20.65°E, h1km, ML2.8, ML3.1(UPP), Confirmed Induced event*
*IEPN **23** 01:47:53.0, 67.20°N×20.85°E, h10km*
*BER **23** 01:47:53.0±3.2, 67.14°N×20.80°E, h1km, ML2.7, ML3.2(NAO), Confirmed Induced event*
ISC 23 01:47:49.0±0.6, 67.16°N±0.02×20.77°E±0.02, h0km, n77, σ2.501/142, 15D, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.09**	**245**	⇓P	**Pg**	**01 47 52.5**	**+1.9**
DUNU				S	**Sg**	**01 47 53.6**	**+1.9**
DUNU	**Dundret**	**0.09**	**245**	⇓*i*P	**Pg**	**01 47 52.5**	**+1.9**
DUNU				*i* S	**Sg**	**01 47 53.6**	**+1.9**
MASU	**Masugnsbyn**	**0.56**	**57**	⇓P	**Pb**	**01 48 02.1**	**+0.3**
MASU				S	**Sb**	**01 48 10.4**	**0.0**
MASU	**Masugnsbyn**	**0.56**	**57**	⇓*i*P	**Pb**	**01 48 02.1**	**+0.3**
MASU				*i* S	**Sb**	**01 48 10.4**	**0.0**
RATU	**Laukkuluspa**	**0.81**	**327**	⇓P	**Pg**	**01 48 04.9**	**+0.4**
RATU				S	**Sg**	**01 48 15.3**	**+0.4**
RATU	**Laukkuluspa**	**0.81**	**327**	⇓*i*P	**Pg**	**01 48 04.9**	**+0.4**
RATU				*i* S	**Sg**	**01 48 15.4**	**+0.4**
SALU	**Saltoluokta**	**0.91**	**285**	⇓P	**Pg**	**01 48 07.0**	**+0.7**
SALU				S	**Sg**	**01 48 18.6**	**+0.5**
PAJU	**Pajala**	**0.93**	**97**	⇓P	**Pb**	**01 48 08.8**	**+0.8**
PAJU				S	**Sb**	**01 48 22.3**	**+1.4**
PAJU	**Pajala**	**0.93**	**97**	*e*P	**Pb**	**01 48 08.8**	**+0.8**
PAJU				*e*S	**Sb**	**01 48 22.1**	**+1.2**
NIKU	**Nikkaluokta**	**0.98**	**318**	⇓P	**Pg**	**01 48 08.0**

	comp=Z,66nm,0.5s							
NBB30	**Finnes**	**2.76**	**269**	*eP*		**Pn**	**01 48 37.8**	**+3.4**
NBB30				IAML			01 49 20.3	
	comp=Z,79nm,0.3s							
LOF	**Lofoten**	**2.93**	**293**	*eP*		**Pn**	**01 48 40.2**	**+3.4**
LOF				IAML			01 49 30.4	
	comp=Z,36nm,0.5s							
OUL	**Oulu**	**2.95**	**133**	*eP*		**Pn**	**01 48 39.9**	**+2.9**
OUL				*eS*		**Sn**	**01 49 14.2**	**+1.2**
OBF4	**Vikkela, Lumij**	**2.95**	**141**	MSG			01 49 26.0	
	comp=Z,25nm,0.3s							
ARA0	**ARCESS Array S**	**2.97**	**34**	Pn		**Pn**	**01 48 39.3**	**+2.0**
	baz=210,slow=16							
ARA0				Sn		**Sn**	**01 49 16.1**	**+2.6**
	baz=216,slow=22							
ARA0	**ARCESS Array S**	**2.97**	**34**	Pn		**Pn**	**01 48 39.3**	**+2.0**
	baz=210,slow=16							
ARA0				Sn		**Sn**	**01 49 16.1**	**+2.6**
	baz=216,slow=22							
ARCES	**ARCESS Array B**	**2.97**	**34**	Pn		**Pn**	**01 48 39.3**	**+2.0**
	baz=216,slow=13,SNR=261							
ARCES				Pg		**Pb**	**01 48 42.0**	**-0.7**
	baz=216,slow=15,SNR=12							
ARCES				Sn		**Sn**	**01 49 16.4**	**+2.8**
	baz=216,slow=24,SNR=12							
N2SV	**S_rvΨgen**	**3.07**	**287**	*eP*		**Pn**	**01 48 40.5**	**+1.8**
N2SV				IAML			01 49 29.1	
	comp=Z,15nm,0.3s							
KONS	**Konsvik**	**3.10**	**261**	*eP*		**Pn**	**01 48 41.1**	**+2.1**
KONS				IAML			01 49 28.9	
	comp=Z,53nm,0.3s							
STOK	**Stokkvaagen**	**3.18**	**259**	*eP*		**Pn**	**01 48 42.4**	**+2.1**
KEV	**Kevo**	**3.48**	**39**	Pn		**Pn**	**01 48 46.3**	**+2.0**
KEV				Pg		**Pg**	**01 48 54.6**	**-1.0**
KEV				Sn		**Sn**	**01 49 27.1**	**+0.9**
KEV				Lg		Lg	01 49 42.8	
KEV	**Kevo**	**3.48**	**39**	*eP*		**Pn**	**01 48 46.0**	**+1.7**
HAMF	**Hammerfest**	**3.66**	**15**	*eP*		**Pn**	**01 48 49.6**	**+2.9**
HAMF				*eS*		**Sn**	**01 49 30.4**	**-0.1**
HAMF				IAML			01 49 49.4	
	comp=Z,42nm,0.4s							
NSS	**Namsos**	**4.47**	**238**	*eP*		**Pn**	**01 48 59.9**	**+1.9**
NSS				IAML			01 50 11.8	
	comp=Z,28nm,0.4s							
NOD	**Norderasen**	**4.48**	**216**	*eP*		**Pn**	**01 48 59.7**	**+1.6**
APA0	**Apatity Array**	**4.74**	**79**	Pn		**Pn**	**01 49 02.9**	**+1.3**
	baz=263,slow=14							
APA0				Sn		**Sn**	**01 49 57.1**	**-0.1**
	baz=277,slow=28							
APA0				Lg		Lg	01 50 16.1	
	baz=280,slow=28							
APA0	**Apatity Array**	**4.74**	**79**	Pn		**Pn**	**01 49 02.9**	**+1.3**
	baz=263,slow=14							
APA0				Sn		**Sn**	**01 49 57.1**	**-0.1**
	baz=277,slow=28							
APA0				Sg		**Sb**	**01 50 16.1**	**+5.6**
	baz=280,slow=28							
APA0	**Apatity Array**	**4.74**	**79**	P		**Pn**	**01 49 02.6**	**+0.9**
APA0				S		**Sn**	**01 49 57.0**	**-0.2**
JOF	**Joensuu**	**6.16**	**129**	*eP*		**Pn**	**01 49 23.6**	**+2.4**
JOF				*eS*		**Sn**	**01 50 31.2**	**-1.0**
FIA0	**FINESS Array S**	**6.18**	**156**	Pn		**Pn**	**01 49 24.4**	**+3.1**
	baz=344,slow=14							
FIA0				Sn		**Sn**	**01 50 34.0**	**+1.3**
	baz=349,slow=28							
FIA0				Lg		Lg	01 51 04.6	
	baz=343,slow=37							
FIA0	**FINESS Array S**	**6.18**	**156**	Pn		**Pn**	**01 49 24.4**	**+3.1**
	baz=344,slow=14							
FIA0				Sn		**Sn**	**01 50 34.0**	**+1.3**
	baz=349,slow=28							
FIA0				Sg		**Sg**	**01 51 04.6**	**-2.7**
	baz=343,slow=37							
FINES	**FINESS Array B**	**6.18**	**156**	Pn		**Pn**	**01 49 24.5**	**+3.1**
	comp=Z,1.1nm,0.3s,baz=346,slow=12,SNR=49							
FINES				Sn		**Sn**	**01 50 33.4**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=345,slow=23,SNR=11							
FINES				Lg		Lg	01 51 04.0	
	comp=Z,4.8nm,0.3s,baz=344,slow=26,SNR=11							
SLVR	**Solovky**	**6.43**	**102**	*eP*		**Pn**	**01 49 26.1**	**+1.3**
SLVR				*eS*		**Sn**	**01 50 36.4**	**-2.5**
NC204	**NORSAR Array S**	**7.33**	**221**	*eP*		**Pn**	**01 49 38.5**	**+1.2**
NB2	**NORSAR Subarra**	**7.42**	**219**	Pn		**Pn**	**01 49 40.4**	**+2.0**
	baz=27,slow=14							
NB2				Sn		**Sn**	**01 51 01.8**	**-1.5**
	baz=32,slow=22							
NB2				Lg		Lg	01 51 41.6	
	baz=29,slow=37							
NB2	**NORSAR Subarra**	**7.42**	**219**	Pn		**Pn**	**01 49 40.4**	**+2.0**
	baz=27,slow=14							
NB2				Sn		**Sn**	**01 51 01.8**	**-1.5**
	baz=32,slow=22							
NB2				Sg		**Sg**	**01 51 41.6**	**-5.4**
	baz=29,slow=37							
NOA	**NORSAR Array B**	**7.42**	**219**	Pn		**Pn**	**01 49 39.7**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=31,slow=11,SNR=8.0							
NOA				Sn		**Sn**	**01 51 00.4**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=36,slow=23,SNR=5.3							
NOA				Lg		Lg	01 51 40.1	
	comp=Z,0.2nm,0.3s,baz=45,slow=27,SNR=3.0							
NRA0	**NORESS Array S**	**7.61**	**216**	Pn		**Pn**	**01 49 43.1**	**+2.1**
	baz=19,slow=14							
NRA0				Sn		**Sn**	**01 51 05.7**	**-2.1**
	baz=34,slow=22							
NRA0				Lg		Lg	01 51 47.5	
	baz=18,slow=28							
NRA0	**NORESS Array S**	**7.61**	**216**	Pn		**Pn**	**01 49 43.1**	**+2.1**
	baz=19,slow=14							
NRA0				Sn		**Sn**	**01 51 05.7**	**-2.1**
	baz=34,slow=22							
NRA0				Sg		**Sg**	**01 51 47.5**	**-5.6**
	baz=18,slow=28							
HFS	**Hagfors**	**7.71**	**207**	Pn		**Pn**	**01 49 43.3**	**+0.9**
	baz=19,slow=16							
HFS				Sn		**Sn**	**01 51 07.7**	**-2.7**
	baz=16,slow=28							
HFS	**Hagfors**	**7.71**	**207**	Pn		**Pn**	**01 49 43.3**	**+0.9**
	baz=19,slow=16							
HFS				Sn		**Sn**	**01 51 07.7**	**-2.7**
	baz=16,slow=28							
KLMR	**Klimovskoe**	**10.34**	**119**	*eP*		**Pn**	**01 50 17.4**	**-1.0**
	comp=Z,33nm,1.9s							
KLMR				*eS*		**Sn**	**01 52 07.1**	**-7.7**
LSH	**Leshukonskoye**	**10.38**	**91**	*eP*		**Pn**	**01 50 19.1**	**+0.2**
	comp=Z,83nm,2.8s							
LSH				*eS*		**Sn**	**01 52 11.2**	**-4.5**
SPA0	**Spitsbergen Ar**	**11.15**	**355**	Pn		**Pn**	**01 50 30.3**	**+0.9**
	baz=156,slow=28							
SPA0	**Spitsbergen Ar**	**11.15**	**355**	Pn		**Pn**	**01 50 30.3**	**+0.9**
	baz=156,slow=28							
SPA0	**Spitsbergen Ar**	**11.15**	**355**	*eP*		**Pn**	**01 50 29.7**	**+0.3**
SPA0				S		**Sn**	**01 52 28.2**	**-6.4**
PRGR	**Permogore**	**12.03**	**106**	*eP*		**Pn**	**01 50 41.4**	**0.0**
	comp=Z,4.9nm,0.8s							
PRGR				*eS*		**Sn**	**01 52 49.5**	**-6.6**

IDC ***23*** *02:09:52.6±3.3,5.3°×154.1°±0.1, h176km±30km, mb3.6/14, mb1 3.7/16, mb1mx3.5/55, mbtmp4.0/16, Error ellipse: s-maj=20.9km s-min=14.9km az=75.0*

ISC 23 02:09:49.7±0.8, 5.3°S±0.1°×154.3°E±0.1°, h150km, n20, σ1.9s01/19, mb3.8/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.17**	**239**	P		**Pn**	**02 11 46.4**	**+1.0**
	1.9nm,0.3s,baz=59,slow=18,SNR=2.4							
PMG				S		**Sn**	**02 13 17.1**	**+0.7**
	1.7nm,0.3s,baz=115,slow=14,SNR=4.4							
CTA	**Charters Tower**	**16.68**	**207**	P		**Pn**	**02 13 34.7**	**-0.1**
	0.2nm,0.3s,baz=39,slow=14,SNR=4.3							
DZM	**Mont Dzumac**	**20.45**	**146**	P		**P**	**02 14 16.6**	**+0.8**
	9.3nm,0.4s,baz=263,slow=7.5,SNR=23							
WRA	**Warramunga Arr**	**24.27**	**231**	P		**P**	**02 14 52.0**	**-1.3**
	2.2nm,0.6s,baz=55,slow=10.0,SNR=31							
H11S3	**WAKE ISLAND Hy**	**26.59**	**27**	T		T	02 42 40.0	
	baz=206,slow=74,SNR=3.1							
H11S2	**WAKE ISLAND Hy**	**26.59**	**27**	T		T	02 42 43.4	
	baz=206,slow=74,SNR=5.1							
H11S1	**WAKE ISLAND Hy**	**26.61**	**27**	T		T	02 42 44.2	
	baz=206,slow=74,SNR=3.4							
ASAR	**Alice Springs**	**26.83**	**225**	P		**P**	**02 15 16.3**	**0.0**
	0.3nm,0.6s,baz=56,slow=9.0,SNR=2.5							
FITZ	**Fitzroy Crossi**	**30.74**	**243**	P		**P**	**02 15 49.1**	**-1.9**
	0.7nm,0.4s,baz=61,slow=11,SNR=1.1							
KSRS	**Korea Array**	**49.07**	**332**	P		**P**	**02 18 20.9**	**-0.8**
	0.8nm,0.4s,baz=149,slow=9.6,SNR=4.0							
KLR	**Kul'dur**	**57.70**	**343**	P		**P**	**02 19 25.7**	**+1.2**
	0.4nm,0.4s,baz=144,slow=11,SNR=2.6							
CMAR	**Chiang Mai Arr**	**59.39**	**295**	P		**P**	**02 19 37.7**	**+0.8**
	0.8nm,0.3s,baz=118,slow=5.2,SNR=1.5							
SONM	**Songino Array**	**67.49**	**327**	P		**P**	**02 20 30.5**	**+0.8**
	0.8nm,0.4s,baz=145,slow=6.4,SNR=6.9							
VNDA	**Vanda**	**72.33**	**178**	P		**P**	**02 20 58.9**	**+0.3**
	1.8nm,0.6s,baz=338,slow=6.3,SNR=9.5							
MKAR	**Makanchi Array**	**81.63**	**319**	P		**P**	**02 21 51.5**	**+0.4**
	0.5nm,0.4s,baz=102,slow=6.8,SNR=10							
ILAR	**Eielson Array**	**82.03**	**22**	P		**P**	**02 21 53.4**	**+0.5**
	0.8nm,0.6s,baz=240,slow=5.1,SNR=15							
ZALV	**Zalesovo Beam**	**82.34**	**326**	P		**P**	**02 21 53.7**	**-0.9**
	0.7nm,0.3s,baz=126,slow=3.9,SNR=2.4							
KURBB	**Kurchatov Arra**	**85.06**	**322**	P		**P**	**02 22 07.7**	**-0.8**
	0.7nm,0.9s,baz=108,slow=3.4,SNR=5.5							
MAW	**Mawson**	**85.71**	**203**	P		**P**	**02 22 11.0**	**-0.5**
	2.8nm,0.6s,baz=115,slow=4.9,SNR=8.3							
TORD	**Torodi Ar. Bea**	**151.84**	**288**	PKPbc		**PKPbc**	**02 29 26.2**	**-1.6**
	0.3nm,0.3s,baz=89,slow=1.7,SNR=10							
TORD				PKPab		**PKPab**	**02 29 36.8**	**-0.7**
	1.4nm,0.8s,baz=77,slow=4.3,SNR=4.0							

JMA ***23*** *02:14:44.1±0.2, 35.58°N×140.09°E, h65km±2km, M3.2 Broadband fault plane solution: P waves. NP1: ϕs215.00000°, δ3.00000°, λ81.00000°. NP2:ϕs44.00000°, δ87.00000°, λ90.00000°. Principal axes: T Plg48.0000°, Azm315.0000°; N Plg0.0000°, Azm44.0000°; P Plg42.0000°, Azm134.0000°;*

JMA Felt I J1.

IDC ***23*** *02:14:45.9±2.8, 35.39°N×139.82°E, h78km±18km, mb3.3/4, mb1 3.5/5, mb1mx3.1/68, mbtmp3.7/5 Error ellipse: s-maj=54.1km s-min=7.3km az=68.0*

ISC 23 02:14:43.8±0.9, 35.51°N±0.05°×140.13°E±0.05°, h72km±8km, n26, σ1.9s15/29, mb3.8/4, 2C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.11**	**147**	↑P		**Pn**	**02 14 54.6**	**+0.3**
JSMT	**Sammumatsuo**	**0.29**	**64**	P		**Pn**	**02 14 55.2**	**+0.1**
BSO3	**Boso 3**	**0.78**	**156**	↑P		**Pn**	**02 14 59.9**	**+0.5**
BSO3				X			02 15 13.6	
JOD2	**Odawara 2**	**0.89**	**254**	↓P		**Pn**	**02 15 01.0**	**0.0**
JOD2				S		**Sn**	**02 15 13.3**	**-0.5**
JIM2	**Oshima 3**	**0.98**	**216**	P		**Pn**	**02 15 02.1**	**-0.1**
JIM2				S		**Sn**	**02 15 15.8**	**0.0**
JAG	**Ashikaga**	**1.06**	**329**	↓P		**Pn**	**02 15 02.6**	**-0.6**
BSO1	**Boso 1**	**1.10**	**141**	P		**Pn**	**02 15 03.2**	**0.0**
BSO1				*eS*		**Sn**	**02 15 19.4**	**+1.7**
JRY	**Ryogami san**	**1.12**	**297**	↓P		**Pn**	**02 15 04.2**	**+0.3**
JFNN	**Fujinakano**	**1.22**	**255**	P		**Pn**	**02 15 05.7**	**+0.5**
JFNN				S		**Sn**	**02 15 21.7**	**+0.5**
JYN	**Shimob**	**1.29**	**270**	↓P		**Pn**	**02 15 06.4**	**+0.2**
JYN				S		**Sn**	**02 15 22.7**	**-0.3**
JIZS	**Izushimoda**	**1.30**	**233**	P		**Pn**	**02 15 06.6**	**+0.4**
JKT	**Katashina**	**1.44**	**331**	↓P		**Pn**	**02 15 07.4**	**-0.7**
MJAR	**Matsushiro Arr**	**1.86**	**304**	P		**Pn**	**02 15 13.1**	**-0.6**
	3.2nm,0.3s,baz=134,slow=16,SNR=108							
MJAR				S		**Sn**	**02 15 35.6**	**-0.8**
	2.4nm,0.3s,baz=108,slow=18,SNR=3.2							
MAT	**Matsushiro**	**1.87**	**304**	P		**Pn**	**02 15 14.1**	**+0.4**
MAT				*eS*		**Sn**	**02 15 35.0**	**-1.4**
JHJ	**Hachijo jima 2**	**2.41**	**187**	P		**Pn**	**02 15 21.4**	**+0.5**
	80nm,0.3s,baz=94,slow=22,SNR=36							
JHJ				S		**Sn**	**02 15 49.1**	**-0.3**
	78nm,0.3s,baz=216,slow=22,SNR=9.4							
JCJ	**Chichijima**	**8.57**	**168**	P		**Pn**	**02 16 42.9**	**-2.3**
	14nm,0.3s,baz=288,slow=20,SNR=12							
JCJ				S		**Sn**	**02 18 16.2**	**-4.1**
	5.4nm,0.3s,baz=287,slow=19,SNR=1.6							
H11N2	**WAKE ISLAND Hy**	**28.33**	**117**	T		T	02 50 19.8	
	baz=308,slow=75,SNR=16							
H11N1	**WAKE ISLAND Hy**	**28.34**	**117**	T		T	02 50 19.1	
	baz=308,slow=75,SNR=10							
H11N3	**WAKE ISLAND Hy**	**28.35**	**117**	T		T	02 50 19.9	
	baz=308,slow=75,SNR=10.0							
H11S1	**WAKE ISLAND Hy**	**28.97**	**119**	T		T	02 50 30.9	
	baz=312,slow=74							
H11S3	**WAKE ISLAND Hy**	**28.97**	**119**	T		T	02 50 29.2	
	baz=312,slow=74							
H11S2	**WAKE ISLAND Hy**	**28.99**	**119**	T		T	02 50 31.4	
	baz=312							
MKAR	**Makanchi Array**	**44.06**	**303**	P		**P**	**02 22 44.4**	**-0.1**
	0.2nm,0.5s,baz=86,slow=8.2,SNR=2.2							
KURBB	**Kurchatov Arra**	**46.13**	**309**	P		**P**	**02 23 01.6**	**+0.8**
	0.4nm,0.4s,baz=83,slow=7.5,SNR=9.9							
WRA	**Warramunga Arr**	**55.42**	**187**	P		**P**	**02 24 11.2**	**+0.3**
	0.6nm,0.5s,baz=1.4,slow=7.3,SNR=17							
NOA	**NORSAR Array B**	**75.18**	**337**	P		**P**	**02 26 19.4**	**+1.2**
	1.8nm,1.0s,baz=47,slow=4.9,SNR=3.3							

IDC 23 02:28:30.8±388.0, 16.99°N×44.85°E, h0km, Error ellipse: s-maj=451.4km s-min=151.6km az=43.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I52GB	**DIEGO GARCIA I**	**36.51**	**129**	*i*		06 12 00.0	
	baz=309,slow=317,SNR=1.1						
I48TN	**KSRA INFRASON**	**86.66**	**308**	*i*		06 10 50.0	
	baz=12,slow=325,SNR=0.5						
I26DE	**FREYUNG INFRAS**	**40.62**	**328**	*i*		06 38 50.0	
	baz=126,slow=324,SNR=0.8						

IDC ***23*** *02:32:53.7±1.6, 67.51°N×18.99°W, h0km, mb3.2/2, mb1 3.6/4, mb1mx3.3/38, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=37.9km s-min=28.4km az=30.0*

ISC 23 02:32:53.6±1.1, 67.64°N±0.06°×19.3°W±0.1°, h10km, n5, σ2.9s63/7, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**3.02**	**343**	*e*		Pn	02 33 36.6	-4.6
	baz=188,slow=3.7							
SCO				*i* P		**Pn**	**02 33 38.6**	**-2.7**
SCO				*eS*		**Sn**	**02 34 16.9**	**-0.4**
SCO				IAML			02 34 24.7	
	comp=Z,5.0nm,0.3s							
BORG	**Borgarnes**	**3.02**	**197**	Pn		**Pn**	**02 33 41.0**	**-0.3**
	comp=Z,4.1nm,0.3s,baz=15,slow=9.2,SNR=12							
BORG				Sn		**Sn**	**02 34 14.4**	**-3.1**
	comp=Z,12nm,0.3s,baz=352,slow=5.7,SNR=8.0							
FINES	**FINESS Array B**	**20.04**	**86**	P		**P**	**02 37 26.0**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=320,slow=15,SNR=1.0							
GERES	**GERESS Array B**	**25.09**	**122**	P		**P**	**02 38 18.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=340,slow=8.3,SNR=2.5							
YKA	**Yellowknife Ar**	**36.70**	**309**	P		**P**	**02 40 03.2**	**+3.2**
	comp=Z,0.3nm,0.9s,baz=39,slow=8.8,SNR=4.8							

IDC 23 02:33:26.0±2.0, 67.65°N×18.63°W, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.2/37, mbtmp3.4/3, ML2.8/1, MS3.0/5, Ms1 3.0/5, ms1mx2.7/33, Error ellipse: s-maj=103.2km s-min=28.5km az=29.0, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**3.12**	**202**	Sn	Sn	02 34 48.2	-6.0
	7.3nm,0.3s,baz=89,slow=19,SNR=1.7						
JMIC	**Jan Mayen**	**4.91**	**42**	LR	LR	02 35 37.3	
	comp=Z,156nm,20.3s,baz=142,slow=27						
SFJD	**Kangerlussaq**	**12.28**	**282**	LR	LR	02 40 31.3	
	comp=Z,129nm,20.5s,baz=54,slow=35						
NOA	**NORSAR Array B**	**14.39**	**103**	LR	LR	02 41 46.9	
	comp=Z,28nm,20.6s,baz=265,slow=35						
FINES	**FINESS Array B**	**19.79**	**87**	P		P	02 37 57.4	0.0
	0.1nm,0.3s,baz=305,slow=14,SNR=1.7						
GERES	**GERESS Array B**	**24.89**	**123**	P		P	02 38 50.3	0.0
	0.6nm,0.7s,baz=327,slow=7.1,SNR=5.0						
AKASG	**Malin Array Be**	**28.80**	**102**	LR		LR	02 51 27.4	
	comp=Z,21nm,18.5s,baz=295,slow=38						
YKA	**Yellowknife Ar**	**36.88**	**310**	P		P	02 40 35.5	-0.1
	0.4nm,1.1s,baz=43,slow=8.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**46.16**	**53**	LR		LR	03 05 29.3	
	comp=Z,18nm,19.1s,baz=1.5,slow=42						

IDC ***23*** *02:48:05.2±2.0, 67.82°N×18.20W, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.2/31, mbtmp3.4/3, ML2.8/1, MS2.9/1, Ms1 3.0/1, ms1mx2.4/19, Error ellipse: s-maj=102.5km s-min=28.2km az=30.0*

ISC 23 02:48:06.6±1.8, 68.1°N±0.3°×17.8°W±0.2°, h10km, n5, σ2.9s00/5, Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**2.77**	**330**	*e*		Pn	02 48 45.0	-5.9
	baz=160,slow=6.9							
SCO				*eP*		**Pn**	**02 48 48.7**	**-2.2**
SCO				*eS*		**Pg**	**02 49 00.8**	**+1.2**
SCO				IAML			02 49 09.6	
	comp=Z,3.0nm,0.3s							
NOA	**NORSAR Array B**	**14.23**	**106**	LR		LR	02 56 31.1	
	comp=Z,41nm,18.6s,baz=250,slow=35							
FINES	**FINESS Array B**	**19.47**	**89**	P		**Pn**	**02 52 34.9**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=313,slow=13,SNR=1.8							
GERES	**GERESS Array B**	**24.91**	**125**	P		**P**	**02 53 29.0**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=335,slow=9.1,SNR=5.8							
YKA	**Yellowknife Ar**	**36.80**	**310**	P		**P**	**02 55 14.9**	**+1.0**
	comp=Z,0.1nm,0.7s,baz=44,slow=8.2,SNR=4.0							

SOME ***23*** *02:53:02.5, 39.22°N×71.72°E, h10km*

KRNET ***23*** *02:53:03.7±0.1, 39.16°N×71.63°E, mb3.3*

NNC ***23*** *02:53:05.9±4.4, 39.12°N×71.84°E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=32.2km s-min=20.0km az=2.0*

ISC 23 02:52:57.1±2.2, 39.0°N±0.1°×71.80°E±0.04°, h10km, n24, σ1.8s85/42, 15C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**0.50**	**0**	↓*iP*		**Pn**	**02 53 10.4**	**-0.1**
	baz=23							
DRK				↓*iS*		**Sb**	**02 53 15.7**	**+0.2**
	baz=23							
BTK	**Batken**	**1.31**	**325**	↑*eP*		**Pg**	**02 53 24.7**	**+2.4**
	baz=25							
BTK				↑*iS*		**Sn**	**02 53 39.7**	**+0.4**
	baz=25							
ARSB	**Arslanbob**	**2.51**	**21**	↓*iP*		**Pg**	**02 53 46.3**	**+1.2**
	baz=25							
ARSB				↓*iS*		**Sg**	**02 54 17.3**	**-0.4**
	baz=25							
TRKS	**Terek-Say**	**2.59**	**349**	↑*iP*		**Pg**	**02 53 45.2**	**-1.6**
	baz=51							
TRKS				↑*iS*		**Sb**	**02 54 15.6**	**-0.2**
	baz=51							
IUG	**Iuzhnay**	**3.44**	**337**	*eP*		**Pg**	**02 54 02.5**	**-0.3**
	506nm,0.3s							
IUG				*eS*		**Sg**	**02 54 47.0**	**-0.5**
	122nm,0.6s							
IUG	**Iuzhnay**	**3.44**	**337**	Pg		**Pg**	**02 54 00.7**	**-2.2**
	295nm,0.2s							
IUG				Lg		Lg	02 54 43.0	
	41nm,0.4s							
AML	**Almayashu**	**3.46**	**24**	↑*iP*		**Pb**	**02 54 00.1**	**+1.4**
	baz=27							
AML				↑*iS*		**Sb**	**02 54 40.6**	**-0.3**
	baz=27							
MNAS	**Manas**	**3.54**	**8**	↑*iP*		**Pb**	**02 54 00.1**	**+0.2**
	baz=11							
MNAS				↑*iS*		**Sb**	**02 54 41.1**	**-1.9**
	baz=11							
UCH	**Uchtor**	**3.84**	**32**	↑*iP*		**Pb**	**02 54 05.3**	**+0.1**
	baz=35							
UCH				↑*iS*		**Sb**	**02 54 50.9**	**-1.1**
	baz=35							
EKS2	**Erkin-Say**	**3.97**	**22**	↑*eP*		**Pb**	**02 54 06.5**	**-0.7**
	baz=24							
EKS2				↑*iS*		**Sb**	**02 54 52.7**	**-2.6**
	baz=24							
AAK	**Ala-Archa**	**4.18**	**28**	↓*iP*		**Pb**	**02 54 10.1**	**-0.8**
	baz=31							
AAK				↓*iS*		**Sb**	**02 54 58.6**	**-2.9**
	baz=31							
AAK	**Ala-Archa**	**4.18**	**28**	↓Pn		**Pb**	**02 54 11.2**	**+0.3**
	2.5nm,0.4s							
AAK				↓Sn		**Sb**	**02 55 00.9**	**-0.6**
	10nm,0.7s							
KK31	**Karatay Array**	**4.23**	**347**	↓Pn		**Pb**	**02 54 10.2**	**-1.3**
	3.8nm,0.4s,baz=178,slow=13,SNR=36							
KK31				↑Sn		**Sb**	**02 55 00.3**	**-2.4**
	1.2nm,0.2s							
KK31				↑Lg		Lg	02 55 14.7	
	11nm,0.6s,baz=176,slow=30,SNR=7.1							
BRLS	**Borolday**	**4.31**	**340**	*eP*		**Pb**	**02 54 13.0**	**+0.1**
	4.0nm,0.2s							
BRLS				*eS*		**Sb**	**02 55 04.7**	**-0.2**
	19nm,0.5s							
BRLS	**Borolday**	**4.31**	**340**	Pg		**Pb**	**02 54 12.4**	**-0.5**
	4.0nm,0.1s							
BRLS				Lg		Lg	02 55 03.4	
	19nm,0.5s							
SGDS	**Sogindy**	**4.95**	**25**	Pg		**Pg**	**02 54 30.4**	**-1.5**
	2.0nm,0.4s							
SGDS				Lg		Lg	02 55 34.3	
	6.0nm,0.3s							
KST	**Kastek**	**5.13**	**36**	*eP*		**Pg**	**02 54 34.6**	**-0.8**
	2.4nm,0.4s							
KST				*eS*		**Sg**	**02 55 41.7**	**-0.2**
	5.1nm,0.5s							
KST	**Kastek**	**5.13**	**36**	Pg

baz=284
I03D Drain, OR 2.46 80 P 03 24 13.7
baz=261,SNR=48
I03D S 03 24 44.9
baz=261
L02E Cave Junction 2.56 116 P 03 24 14.6
baz=295,SNR=16
COR Corvallis 2.75 62 Pn Pn 03 24 18.6 -0.6
COR Sn **Sn 03 24 53.6 +1.2**
COR IAML 03 24 58.5
comp=E,53nm,1.3s
COR IAML 03 25 40.2
comp=E,46nm,3.1s
HUMO Hull Mountain 2.83 103 Pn Pn 03 24 18.9 -1.4
H04D Lebanon 3.10 66 P 03 24 23.9
baz=248,SNR=30
G03D McMinnville, O 3.10 51 P 03 24 23.1
baz=234,SNR=14
G03D S 03 25 01.8
baz=234
I04A Tendick Farm, 3.15 80 P 03 24 24.3
baz=262,SNR=19
YBH Yreka Blue Hor 3.35 117 Pn Pn 03 24 27.7 +0.2
comp=E,0.8nm,0.3s,baz=298,slow=12,SNR=15
YBH Sn **Sn 03 25 09.4 +2.1**
comp=E,0.2nm,0.3s,baz=252,slow=20,SNR=1.6
YBH Yreka Blue Hor 3.35 117 Pn 03 24 26.1 -1.3
H04A Detroit Lake 3.52 66 Pn 03 24 29.4 -0.4
H04A IAML 03 25 16.8
comp=N,24nm,0.4s
E03A Lebam 3.91 34 Pn **Pn 03 24 34.7 -0.3**
PINE Pine Mountain 4.21 82 Pn 03 24 39.1 -0.2
PINE IAML 03 25 25.7
comp=E,20nm,5.0s
PINE IAML 03 26 55.6
comp=N,21nm,4.4s
K05A Summer Lake 4.29 96 Pn **Pn 03 24 40.4 -0.2**
K05A IAML 03 26 21.3
comp=E,20nm,4.4s
K05A IAML 03 26 44.9
comp=N,23nm,4.7s
G05D Wamic, OR 4.31 62 P 03 24 40.4
baz=245
E04D Cinebar 4.36 41 P 03 24 40.7
baz=224,SNR=13
NLWA Neilton Lookou 4.52 25 Pn **Pn 03 24 42.0 -1.6**
NLWA Sn **Sn 03 25 33.6 -2.6**
F05D White Salmon 4.53 54 P 03 24 43.8
baz=237,SNR=11
LON Longmire 4.87 44 Pn 03 24 48.6 +0.3
LON IAML 03 25 54.0
comp=E,8.5nm,2.7s
LON IAML 03 26 03.1
comp=N,12nm,4.2s
D03D Eldon 4.91 30 P 03 24 47.6
baz=213
D05A Enumclaw 5.09 39 Pn 03 24 51.6 +0.4
I07A Izee 5.26 79 Pn 03 24 53.9 +0.1
PGC Sidney 5.78 22 Pn **Pn 03 24 59.5 -1.2**
LTY Liberty 5.79 45 Pn 03 25 01.2 +0.3
G08A Pilot Rock 5.88 68 Pn 03 25 02.4 +0.1
HAWA Hanford 5.94 56 Pn 03 25 02.9 -0.1
WVOR Wild Horse Val 5.99 96 Pn **Pn 03 25 03.1 -0.6**
BMO Blue Mountains 6.93 74 Pn 03 25 15.2 -1.4
B08A Colville Reser 7.19 43 Pn **Pn 03 25 20.7 +0.6**
C09A Chrisman Ranch 7.41 50 Pn 03 25 22.6 -0.5
NVAR Mina Array Bea 8.02 125 Pn **Pn 03 25 33.9 +2.2**
comp=N,0.1nm,0.3s,baz=304,slow=15,SNR=2.3
NEW Newport 8.31 50 Pn **Pn 03 25 35.2 -0.3**
comp=N,0.2nm,0.3s,baz=234,slow=14,SNR=1.9
NEW LR LR 03 29 02.1
comp=N,81nm,18.5s,baz=262,slow=41
PDAR Pinedale Array 12.55 87 Pn **Pn 03 26 35.3 +1.5**
comp=N,0.0nm,0.3s,baz=280,slow=11,SNR=3.7
DLBC Dease Lake 15.27 353 LR LR 03 31 43.6
comp=N,64nm,20.7s,baz=104,slow=32
YKA Yellowknife Ar 20.47 16 P **P 03 28 11.8 -0.8**
comp=N,0.1nm,0.6s,baz=204,slow=10,SNR=5.9
ULM Lac du Bonnet 22.09 61 P **P 03 28 30.1 -0.1**
comp=N,2.3nm,0.7s,baz=261,slow=11,SNR=5.3
TXAR Lajitas Array 23.12 120 P **P 03 28 43.0 +1.7**
comp=N,0.4nm,0.9s,baz=311,slow=8.2,SNR=3.5
ILAR Eielson Array 24.32 339 P **P 03 28 53.2 +0.8**
comp=N,0.4nm,0.8s,baz=156,slow=9.5,SNR=4.5
ILAR LR LR 03 36 31.1
comp=N,31nm,20.6s,baz=158,slow=32
H11N3 WAKE ISLAND Hy 59.70 269 T T 04 38 02.1
baz=51,slow=75,SNR=34
H11N2 WAKE ISLAND Hy 59.70 269 T T 04 38 01.7
baz=51,slow=75,SNR=21
H11N1 WAKE ISLAND Hy 59.71 269 T T 04 38 02.8
baz=51,slow=75,SNR=24
H11S1 WAKE ISLAND Hy 60.62 268 T T 04 39 13.6
baz=50,slow=75,SNR=95
H11S2 WAKE ISLAND Hy 60.62 268 T T 04 39 10.2
baz=50,slow=75,SNR=81
H11S3 WAKE ISLAND Hy 60.63 268 T T 04 39 09.3
baz=50,slow=75,SNR=60

*KRNET **23** 03:30:02.5±0.1, 41.°99N×69.°43E, mb2.5*
ISC 23 03:30:00.3±3.9, 42.°14N±0.°10×69.°1E±0.°2, h10km, n8, σ1°69/15, 11C-5D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**1.44**	**47**	⇓P		**Pn**	**03 30 26.0**	**-0.4**
	0.3nm,0.2s,baz=226,slow=17,SNR=30							
KK31				⇑S		**Sb**	**03 30 43.1**	**-2.4**
	18nm,0.6s,baz=223,slow=28,SNR=24							
TRKS	**Terek-Say**	**1.66**	**111**	⇑*i*P		**Pn**	**03 30 29.1**	**-0.5**
	baz=11							
TRKS				⇑*i*S		**Sn**	**03 30 48.6**	**-2.5**
	baz=11							
MNAS	**Manas**	**2.57**	**81**	⇑*i*P		**Pn**	**03 30 44.4**	**+2.3**
	baz=77							
MNAS				⇑*i*S		**Sn**	**03 31 14.5**	**+1.0**
	baz=77							
ARSB	**Arslanbob**	**3.04**	**104**	⇑*i*P		**Pn**	**03 30 49.5**	**+0.9**
	baz=3.0							
ARSB				⇑*i*S		**Sn**	**03 31 24.7**	**-0.4**
	baz=3.0							
AML	**Almayashu**	**3.44**	**89**	⇑*i*P		**Pn**	**03 30 56.3**	**+2.0**
	baz=86							
AML				⇑*i*S		**Sn**	**03 31 35.2**	**-0.1**
	baz=86							
EKS2	**Erkin-Say**	**3.53**	**80**	⇑*i*P		**Pn**	**03 30 57.7**	**+2.5**
	baz=77							
EKS2				⇑*i*S		**Sn**	**03 31 37.7**	**+0.7**
	baz=77							
UCH	**Uchtor**	**4.05**	**87**	⇓*i*P		**Pn**	**03 31 04.6**	**+1.9**
	baz=85							
UCH				⇓*i*S		**Sn**	**03 31 50.2**	**-0.2**
	baz=85							
AAK	**Ala-Archa**	**4.05**	**81**	⇓Pg		**Pb**	**03 31 11.6**	**-0.2**
	1.2nm,0.6s							
AAK				⇓Lg		Lg	03 32 03.1	
	3.9nm,0.8s							

*FUNV **23** 03:30:08.5, 7.°71N×71.°94W, h5km, MW3.2*
*RSNC **23** 03:30:09.4±0.5, 8.°22N×72.°21W, h0km±3km, ML1.8*
ISC 23 03:30:08.2±1.3, 8.°19N±0.°06×72.°10W±0.°03, h16km±11km, n9, σ1°61/18, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAPV	**Capacho**	**0.38**	**213**	*e*P		**Pg**	**03 30 16.0**	**-0.1**
CAPV				*e*S		**Sg**	**03 30 22.8**	**+1.3**
PAMC	**Pamplona, Colo**	**1.03**	**215**	*e*P		**Pb**	**03 30 27.6**	**-0.3**
PAMC				*e*S		**Sb**	**03 30 42.5**	**+1.1**
PAMC				*i*			03 30 48.4	
	comp=Z,6.4nm,0.1s							
OCAC	**Ocana**	**1.20**	**273**	*e*P		**Pn**	**03 30 28.9**	**-1.7**
OCAC				*e*S		**Sb**	**03 30 44.5**	**-1.7**
OCAC				*i*			03 30 46.9	
	comp=Z,29nm,0.1s							
SOCV	**Socops**	**1.24**	**85**	*e*P		**Pn**	**03 30 30.6**	**-0.4**
SOCV				*e*S		**Sb**	**03 30 47.3**	**+0.2**
SMLC	**San Martn de**	**2.04**	**288**	*e*P		**Pn**	**03 30 42.3**	**+0.3**
SMLC				*e*S		**Sn**	**03 31 07.8**	**+0.7**
SMLC				*i*			03 31 10.1	
	comp=Z,21nm,0.3s							
CURV	**Curarigua**	**2.79**	**49**	*e*P		**Pb**	**03 30 55.8**	**-2.1**
CURV				*e*S		**Sb**	**03 31 31.1**	**-0.7**
SANV	**Sanarito**	**2.85**	**63**	*e*P		**Pn**	**03 30 55.5**	**+2.2**
SANV				*e*S		**Sn**	**03 31 30.2**	**+2.7**
CRJC	**Cerrejon, Guaj**	**2.92**	**345**	*e*P		**Pn**	**03 30 55.6**	**+1.4**
CRJC				*e*S		**Sn**	**03 31 30.9**	**+1.8**
BAUV	**El Baul**	**4.09**	**79**	*e*P		**Pn**	**03 31 09.8**	**-0.3**
BAUV				*e*S		**Sn**	**03 31 55.7**	**-2.0**

IDC 23 04:02:36.5±404.0, 41.°60S×71.°08W, h0km, Error ellipse: s-maj=204.1km s-min=138.7km az=92.0, Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
I14CL	**ROBINSON CRUSO**	**10.02**	**320**	*i*			05 29 52.4	
	baz=147,slow=325,SNR=0.6							
I02AR	**USHUAIA INFRAS**	**13.23**	**170**	*i*			05 24 40.0	
	baz=360,slow=343,SNR=1.2							
I08BO	**LAS PENAS INFR**	**25.40**	**6**	*i*			06 37 50.0	
	baz=183,slow=330,SNR=2.2							
I09BR	**BRASILIA INFRA**	**32.64**	**44**	*i*			07 22 40.0	
	baz=213,slow=321,SNR=0.6							
I13CL	**EASTER ISLAND**	**34.45**	**283**	*i*			08 44 28.1	
	baz=116,slow=318,SNR=1.1							
I27DE	**GEORG VON NEUM**	**42.45**	**154**	*i*			08 20 20.0	
	baz=286,slow=344,SNR=2.8							
I49GB	**TRISTAN DA CUN**	**44.90**	**104**	*i*			08 38 50.0	
	baz=245,slow=323,SNR=1.6							

*IDC **23** 04:03:35.5±3.0, 25.°40S×176.°83W, h45km±28km, mb3.8/4, mb1 4.1/5, mb1mx3.7/38, mbtmp4.2/5, ML4.9/2, Error ellipse: s-maj=31.8km s-min=28.8km az=92.0*
ISC 23 04:03:34.1±0.8, 25.°43S±0.°09×176.°7W±0.°2, h35km, n9, σ1°43/12, mb4.1/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**3.95**	**195**	P		**Pn**	**04 04 33.9**	**+1.6**
	70nm,0.3s,baz=89,slow=22,SNR=1.2							
RAO				S		**Sn**	**04 05 14.9**	**-2.5**
	166nm,0.3s,baz=49,slow=23,SNR=2.7							
AFI	**Afiamalu**	**12.37**	**23**	P		**Pn**	**04 06 29.1**	**+1.2**
	7.0nm,0.3s,baz=299,slow=19,SNR=5.8							
AFI				S		**Sn**	**04 08 42.5**	**-2.1**
	1.5nm,0.3s,baz=110,slow=21,SNR=2.2							
URZ	**Urewera**	**13.82**	**201**	S		Sn	04 09 06.5	-13
	1.1nm,0.3s,baz=120,slow=23,SNR=2.1							
CTA	**Charters Tower**	**34.47**	**271**	P		**P**	**04 10 20.1**	**+1.2**
	1.9nm,0.6s,baz=121,slow=12,SNR=2.0							
ASAR	**Alice Springs**	**44.73**	**261**	P		**P**	**04 11 43.5**	**-0.9**
	1.1nm,0.4s,baz=96,slow=7.5,SNR=21							
ASAR				PcP		**PcP**	**04 13 25.9**	**-0.4**
	0.4nm,0.6s,baz=106,slow=3.3,SNR=2.0							
WRA	**Warramunga Arr**	**45.28**	**267**	P		**P**	**04 11 47.5**	**-1.2**
	0.9nm,0.6s,baz=104,slow=7.9,SNR=13							
WRA				PcP		**PcP**	**04 13 28.2**	**0.0**
	0.9nm,0.9s,baz=92,slow=3.4,SNR=4.1							
QSPA	**South Pole Qui**	**64.66**	**180**	P		**P**	**04 14 08.6**	**+0.4**
	1.2nm,0.8s,baz=83,slow=2.1,SNR=2.5							
AKASG	**Malin Array Be**	**147.84**	**328**	PKPbc		**PKPbc**	**04 23 14.8**	**-0.3**
	0.3nm,0.3s,baz=40,slow=3.4,SNR=4.4							
TORD	**Torodi Ar. Bea**	**167.69**	**173**	PKPab		**PKPab**	**04 24 43.2**	**-0.3**
	0.3nm,0.7s,baz=198,slow=4.1,SNR=2.4							

*IDC **23** 04:09:50.1±7.3, 52.°51N×173.°93W, h132km±70km, mb3.2/6, mb1 3.6/9, mb1mx3.2/56, mbtmp3.8/9, Error ellipse: s-maj=47.4km s-min=23.5km az=167.0*
*NEIC **23** 04:09:53.5±1.2, 52.°4N±0.°2×173.°9W±0.°1, h176km±7km, Error ellipse: s-maj=36.0km s-min=7.9km az=167.0*
*AEIC **23** 04:09:54±1.7, 52.°2N±0.°2×173.°8W±0.°1, h178km±5km, ML3.8, mb4.1/19(NEIC), Error ellipse: s-maj=34.3km s-min=7.8km az=167.0*
ISC 23 04:09:53.4±0.7, 52.°5N±0.°2×173.°92W±0.°06, h170km±7km, n71, σ0°87/65, mb3.5/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOWE	**Korovin West**	**0.24**	**235**			**Pn**	**04 10 16.9**	**+0.6**
KOKL	**Mount Kliuchef**	**0.25**	**223**			**Pn**	**04 10 16.9**	**+0.6**
KOFP	**Korovin Flat P**	**0.26**	**205**			**Pn**	**04 10 16.5**	**+0.2**
ATKA	**Atka Island**	**0.35**	**209**			**Pn**	**04 10 16.2**	**-0.2**
ATKA	**Atka Island**	**0.35**	**209**	Sn		**Sn**	**04 10 33.7**	**-0.3**
GSTR	**Great Sitkin T**	**1.38**	**253**			**Pn**	**04 10 23.6**	**+0.3**
GSTR	**Great Sitkin T**	**1.38**	**253**	Sn		**Sn**	**04 10 46.6**	**+0.2**
GSMY	**Great Sitkin M**	**1.39**	**251**			**Pn**	**04 10 23.5**	**+0.1**
GSTD	**Great Sitkin T**	**1.44**	**253**			**Pn**	**04 10 24.1**	**+0.1**
ETKA	**Kagalaska Isla**	**1.66**	**248**			**Pn**	**04 10 26.5**	**+0.4**
ADAG	**Mount Adagdak**	**1.73**	**253**			**Pn**	**04 10 27.5**	**+0.7**
ADK	**Adak**	**1.81**	**251**			**Pn**	**04 10 27.9**	**+0.3**
KINC	**Kanaga Island**	**2.05**	**255**			**Pn**	**04 10 30.8**	**+0.5**
KIKV	**Kanaga Island**	**2.10**	**254**			**Pn**	**04 10 31.5**	**+0.7**
KIMD	**Kanaga Island**	**2.17**	**251**			**Pn**	**04 10 32.2**	**+0.6**
TAFP	**Tanaga Falls P**	**2.57**	**258**			**Pn**	**04 10 36.9**	**+0.6**
TASE	**Tanaga Southea**	**2.62**	**257**			**Pn**	**04 10 37.8**	**+0.8**
GAEA	**Gareloi East**	**3.06**	**258**			**Pn**	**04 10 43.0**	**+0.8**
NIKH	**Nikolski High**	**3.12**	**79**			**Pn**	**04 10 42.9**	**-0.1**
NIKH	**Nikolski High**	**3.12**	**79**	Sn		**Sn**	**04 11 19.9**	**-1.6**
OKSO	**Okmok South**	**3.59**	**74**			**Pn**	**04 10 49.2**	**+0.4**
CERAA	**Semis' Rag'd T**	**3.98**	**264**			**Pn**	**04 10 54.7**	**+0.9**
CEAP	**Semis' Anvil P**	**4.03**	**265**			**Pn**	**04 10 54.1**	**-0.3**
AMKA	**Amchitka**	**4.34**	**258**			**Pn**	**04 10 59.1**	**+0.6**
MAPS	**Pakushin South**	**4.40**	**70**			**Pn**	**04 10 59.7**	**+0.4**
MGOD	**Makushin Gods**	**4.44**	**70**			**Pn**	**04 11 00.1**	**+0.3**
MSW	**Makushin Switc**	**4.52**	**69**			**Pn**	**04 11 01.5**	**+0.7**
MNAT	**Makushin Natee**	**4.57**	**70**			**Pn**	**04 11 02.2**	**+0.8**
MTBL	**Makushin Table**	**4.59**	**69**			**Pn**	**04 11 02.6**	**+0.8**
LSPA	**Little Sitkin**	**4.64**	**266**			**Pn**	**04 11 01.7**	**-0.7**
AKRB	**Akutan Reef Bi**	**4.98**	**68**			**Pn**	**04 11 08.0**	**+1.2**
ZRO	**Akutan Zero**	**5.02**	**68**			**Pn**	**04 11 08.2**	**+0.8**
AKBBA	**Akutan Broad B**	**5.05**	**68**			**Pn**	**04 11 08.3**	**+0.7**
AKSA	**Akutan Strait**	**5.20**	**68**			**Pn**	**04 11 10.6**	**+1.0**
WECS	**Westdahl Cape**	**5.82**	**66**			**Pn**	**04 11 19.5**	**+1.7**
WESP	**Westdahl Peak**	**5.84**	**66**			**Pn**	**04 11 19.0**	**+0.9**
KDAK	**Kodiak Island**	**13.27**	**58**	P		**Pn**	**04 12 51.9**	**-3.1**
	1.6nm,0.3s,baz=203,slow=2.0,SNR=38							
KDAK				S		Sn	04 15 11.7	-10
	0.2nm,0.3s,baz=170,slow=17,SNR=1.9							
SKT	**Skwentna**	**15.31**	**43**	P		**P**	**04 13 23.0**	**+1.7**
SKT				IAmb		IAmb	04 13 24.9	
	comp=Z,13nm,0.8s							
KTH	**Kantishna Hill**	**16.34**	**38**	P		**Pn**	**04 13 34.2**	**+1.3**
PET	**Petropavlovsk**	**16.57**	**283**	P		**P**	**04 13 34.1**	**-1.2**
BPAW	**Bear Paw Mtn.**	**16.61**	**37**	P		**Pn**	**04 13 37.8**	**+1.6**
BPAW				IAmb		IAmb	04 13 40.1	
	comp=Z,3.6nm,0.7s							
PETK	**Petropavlovsk-**	**17.12**	**283**	P		**Pn**	**04 13 42.8**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=79,slow=13,SNR=4.9							
MCK	**McKinley**	**17.20**	**39**	P		**Pn**	**04 13 43.7**	**+0.6**
MCK				IAmb		IAmb	04 13 46.0	
	comp=Z,5.6nm,0.9s							
MLY	**Manley**	**17.23**	**34**	P		**Pn**	**04 13 44.5**	**+0.9**
I23K	**Minto, Yukon-K**	**17.78**	**35**	P		**Pn**	**04 13 50.5**	**+0.5**
I23K				IAmb		IAmb	04 13 52.2	
	comp=Z,6.0nm,0.7s							
CCB	**Clear Creek Bu**	**18.08**	**38**	P		**P**	**04 13 51.1**	**-0.5**
CCB				IAmb		IAmb	04 13 55.8	
	comp=Z,3.0nm,0.5s							
MDM	**Murphy Dome**	**18.08**	**36**	P		**P**	**04 13 52.1**	**+0.3**
IL31		**18.48**	**38**	P		**P**	**04 13 55.5**	**-0.6**
ILAR	**Eielson Array**	**18.48**	**38**	P		**P**	**04 13 54.7**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=224,slow=10.0,SNR=29							
ILAR	**Eielson Array**	**18.48**	**38**	P		**P**	**04 13 55.0**	**-1.1**
COLD	**Coldfoot**	**18.76**	**29**	P		**Pn**	**04 14 02.0**	**+0.4**
COLD				IAmb		IAmb	04 14 02.4	
	comp=Z,4.5nm,1.0s							
DOT	**Dot Lake**	**19.12**	**43**	P		**P**	**04 14 03.2**	**+0.1**
SCRK	**Sand Creek**	**19.28**	**42**	P		**P**	**04 14 04.7**	**-0.1**
TOLK	**Toolik Lake Re**	**19.88**	**26**	P		**P**	**04 14 11.6**	**+0.4**
TOLK				IAmb		IAmb	04 14 14.8	
	comp=Z,4.4nm,0.8s							
K27K	**Chicken**	**20.08**	**43**	P		**P**	**04 14 14.0**	**+0.7**
K27K				IAmb		IAmb	04 14 19.4	
	comp=Z,5.6nm,0.8s							
EGAK	**Eagle**	**20.72**	**41**	P		**P**	**04 14 20.4**	**+0.3**
EGAK				IAmb		IAmb	04 14 22.1	
	comp=Z,7.3nm,0.6s							
INK	**Inuvik**	**24.80**	**35**	P		**P**	**04 14 59.8**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=263,slow=8.9,SNR=7.3							
INK	**Inuvik**	**24.80**	**35**	P		**P**	**04 14 59.6**	**+0.5**
YKA	**Yellowknife Ar**	**32.24**	**48**	P		**P**	**04 16 04.6**	**-0.6**
	comp=Z,0.2nm,0.8s,baz=290,slow=12,SNR=1.5							
H11N2	**WAKE ISLAND Hy**	**35.96**	**212**	T		T	04 53 59.8	
	baz=18							
H11N3	**WAKE ISLAND Hy**	**35.97**	**212**	T		T	04 53 53.8	
	baz=18,slow=74							
H11N1	**WAKE ISLAND Hy**	**35.98**	**212**	T		T	04 53 22.1	
	baz=18,slow=74							
H11S1	**WAKE ISLAND Hy**	**37.17**	**211**	T		T	04 54 53.4	
	baz=18							
H11S2	**WAKE ISLAND Hy**	**37.18**	**211**	T		T	04 55 29.0	
	baz=18							
H11S3	**WAKE ISLAND Hy**	**37.18**	**211**	T		T	04 55 09.5	
	baz=18							
NVAR	**Mina Array Bea**	**40.45**	**88**	P		**P**	**04 17 16.5**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=302,slow=8.4,SNR=3.3							
PDAR	**Pinedale Array**	**43.10**	**76**	P		**P**	**04 17 37.4**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=325,slow=3.8,SNR=12							
PDAR	**Pinedale Array**	**43.10**	**76**	P		**P**	**04 17 36.6**	**-0.1**
TXAR	**Lajitas Array**	**55.52**	**86**	P		**P**	**04 19 11.5**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=304,slow=5.0,SNR=11							
TXAR	**Lajitas Array**	**55.52**	**86**	P		**P**	**04 19 10.3**	**-0.5**
WRA	**Warramunga Arr**	**84.97**	**228**	P		**P**	**04 22 09.1**	**-0.1**
	comp=Z,0.5nm,0.9s,baz=30,slow=5.2,SNR=2.5							

*TIF **23** 04:10:54.9, 42.°38N×41.°02E, h19km±3km*
*MOS **23** 04:10:55.7±0.0, 42.°48N×41.°05E, h4km, MPVA3.3*
*NORS **23** 04:10:56.5±0.0, 42.°54N×41.°35E, h2km, MPVA3.0*
ISC 23 04:10:55.3±1.7, 42.°46N±0.°06×41.°04E±0.°04, h4km±12km, n17, σ0°53/34, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHVG	**Ch'k'valeri**	**0.82**	**71**	P		**Pg**	**04 11 15.5**	**+0.5**
CHVG				S		**Sb**	**04 11 23.7**	**+0.2**
ARXR	**Arkhyz**	**1.12**	**9**	*i* Pg		**Pb**	**04 11 17.1**	**-0.2**
ARXR				*i* Sg		**Sb**	**04 11 32.4**	**+0.1**
VSLR	**Vesoyloye**	**1.25**	**324**	*i* Pg		**Pg**	**04 11 19.2**	**0.0**
VSLR				*i* Sg		**Sn**	**04 11 36.4**	**-0.4**
RPOR	**Krasnaya Polya**	**1.36**	**336**	*i* Pg		**Pb**	**04 11 21.4**	**0.0**
RPOR				*i* Sg		**Sn**	**04 11 39.8**	**0.0**
TKB	**Tkibuli**	**1.46**	**93**	P		**Pn**	**04 11 21.9**	**-0.6**
TKB				S		**Sb**	**04 11 41.1**	**-0.8**
NEY	**Neytrino**	**1.47**	**57**	*i* Pg		**Pn**	**04 11 23.1**	**+0.3**
NEY				*e*Sg		**Sb**	**04 11 42.3**	**-0.3**
SOC	**Sochi**	**1.48**	**320**	*e*Pg		**Pn**	**04 11 22.9**	**+0.1**
SOC				*i* Sg		**Sg**	**04 11 43.2**	**+0.1**
ABS	**Abastumani**	**1.50**	**117**	P		**Pn**	**04 11 22.6**	**-0.5**
ABS				S		**Sn**	**04 11 42.6**	**-0.6**
GUZR	**Guzeripl'**	**1.68**	**337**	*i* Pg		**Pb**	**04 11 26.6**	**-0.3**
GUZR				*i* Sg		**Sg**	**04 11 49.0**	**-0.3**
SHA1	**Shidzhatmaz**	**1.75**	**42**	*e*Pg		**Pb**	**04 11 27.8**	**-0.3**
SHA1				*i* Sg		**Sg**	**04 11 51.0**	**-0.5**
ONI	**Oni**	**1.79**	**85**	P		**Pn**	**04 11 27.4**	**+0.3**
ONI				S		**Sb**	**04 11 52.1**	**+0.5**
ONI	**Oni**	**1.79**	**85**	*e*Pg		**Pn**	**04 11 27.7**	**+0.6**
ONI				*e*Sg		**Sb**	**04 11 51.8**	**+0.2**
KBZ	**Khabaz**	**1.87**	**46**	*i* Pg		**Pb**	**04 11 30.1**	**+0.1**
KBZ				*i* Sg		**Sg**	**04 11 54.3**	**-1.0**
DIGR	**Digorskoe uzhe**	**1.93**	**76**	*e*Pg		**Pn**	**04 11 30.2**	**+1.1**
DIGR				*e*Sg		**Sb**	**04 11 56.0**	**+0.3**
BKRG	**Bakuriani**	**1.98**	**110**	P		**Pn**	**04 11 30.4**	**+0.7**
BKRG				S		**Sb**	**04 11 57.5**	**+0.5**
ZEI	**Tsey**	**2.14**	**80**	*e*Pg		**Pb**	**04 11 34.9**	**+0.1**
ZEI				*e*Sg		**Sb**	**04 12 02.2**	**+0.4**
TPSR	**Tuapse**	**2.15**	**320**	*e*Pg		**Pn**	**04 11 33.1**	**+1.1**
TPSR				*e*Sg		**Sb**	**04 12 01.5**	**-0.4**

IDC 23 04:20:18.0±10.0, 23.°23S×179.°29W, h578km±102km, mb3.3/4, mb1 3.4/5, mb1mx3.0/52, mbtmp4.3/5, Error ellipse: s-maj=241.6km s-min=99.2km az=84.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**6.01**	**335**	P		P	04 21 58.2	-0.1
	1.3nm,0.3s,baz=180,slow=20,SNR=4.5							
CTA	**Charters Tower**	**32.13**	**269**	P		P	04 25 59.5	+0.2
	6.8nm,0.3s,baz=91,slow=11,SNR=13							
STKA	**Stephens Creek**	**35.58**	**247**	P		P	04 26 27.5	-0.5
	0.8nm,0.4s,baz=83,slow=11,SNR=4.5							
ASAR	**Alice Springs**	**42.79**	**260**	P		P	04 27 26.1	0.0
	1.7nm,0.6s,baz=99,slow=8.1,SNR=14							
WRA	**Warramunga Arr**	**43.11**	**265**	P		P	04 27 28.1	-0.4
	1.4nm,0.3s,baz=102,slow=8.4,SNR=34							

*IDC **23** 04:20:25.1±2.2, 5.°22N×126.°19E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/40, mbtmp3.6/4, MS2.3/1, Ms1 2.3/1, ms1mx2.1/39, Error ellipse: s-maj=193.7km s-min=26.9km az=65.0*
*MAN **23** 04:20:42.6, 4.°49N×125.°69E, h153km, MS3.2*
ISC 23 04:20:44.3±1.0, 4.°57N±0.°09×125.°6E±0.°1, h150km, n10, σ1°62/12, mb3.5/4, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.52**	**3**	*e*P		**Pn**	**04 21 14.8**	**+0.6**
DDMP				*e*S		**Sn**	**04 21 38.0**	**+0.9**
SKMP	**Bagumbayan, Su**	**2.22**	**331**	*e*P		**Pn**	**04 21 22.9**	**+0.7**
SKMP				*e*S		**Sn**	**04 21 52.2**	**+0.9**
MATI	**Mati**	**2.44**	**15**	*e*P		**Pn**	**04 21 23.9**	**-0.9**
KCP	**Kidapawan**	**2.48**	**347**	⇑*i*P		**Pn**	**04 21 26.5**	**+1.1**
KCP				⇑*i*S		**Sn**	**04 21 59.4**	**+2.4**
PAGZ	**Pagadian**	**3.96**	**326**	*e*P		**Pn**	**04 21 43.8**	**-0.2**
WRA	**Warramunga Arr**	**25.82**	**161**	P		**P**	**04 26 02.0**	**+0.1**
	0.7nm,0.8s,baz=342,slow=10,SNR=13							
JCJ	**Chichijima**	**27.41**	**33**	LR		LR	04 38 57.7	
	comp=Z,6.0

NDS	**Dongshan** baz=312	**0.88 314**	P		**Pb**	**04 23 54.2 0.0**
NDS	baz=312		*eS*		**Sg**	**04 24 06.0 -0.2**
ESL	**Shilin** baz=253	**0.92 257**	P		**Pg**	**04 23 55.5 +0.2**
EGS	baz=331	**0.93 332**	*eP*		**Pb**	**04 23 55.1 +0.1**
EGS	baz=331		*eS*		**Sb**	**04 24 06.5 -0.6**
ILA	**Ilan** baz=319	**0.96 321**	*eS*		**Sb**	**04 24 07.9 +0.1**
EGFH	**Guangfu** baz=245	**0.97 249**	*eP*		**Pn**	**04 23 56.3 +0.1**
EGFH	baz=245		*eS*		**Sn**	**04 24 09.7 +0.3**
TWE	**Neicheng** baz=314	**0.97 316**	*eP*		**Pb**	**04 23 56.0 +0.2**
TWE	baz=314		*eS*		**Sb**	**04 24 08.1 -0.2**
NTC	**Toucheng** baz=326	**0.98 328**	*eP*		**Pb**	**04 23 55.9 0.0**
NTC	baz=326		*eS*		**Sb**	**04 24 08.8 +0.1**
ENTT	**Nioudou** baz=306	**0.99 309**	*eP*		**Pn**	**04 23 56.4 0.0**
ENTT	baz=306		*eS*		**Sb**	**04 24 09.1 +0.3**
NDT	**Datong Townshi** baz=303	**1.00 305**	*eP*		**Pg**	**04 23 57.0 +0.1**
NDT	baz=303		S		**Sg**	**04 24 09.9 -0.2**
NNSB	**Datong** baz=290	**1.02 294**	P		**Pb**	**04 23 56.8 +0.1**
NNSB	baz=290		S		**Sg**	**04 24 10.5 -0.3**
NNSH	**Datong** baz=290	**1.02 294**	*eS*		**Sg**	**04 24 10.3 -0.4**
NNS	**Nan Shan** baz=291	**1.03 294**	*eP*		**Pb**	**04 23 57.0 +0.1**
NNS	baz=291		*eS*		**Sb**	**04 24 10.6 +0.4**
HGSD	**Ruisui** baz=237	**1.05 240**	*eP*		**Pb**	**04 23 56.7 -0.4**
WHF	**Hehuan Shan** baz=273	**1.05 277**	P		**Pb**	**04 23 57.0 -0.4**
WHF	baz=273		*eS*		**Sn**	**04 24 12.2 0.0**
TWB1	**Santiao Chiao** baz=338	**1.06 339**	P		**Pb**	**04 23 56.6 -0.6**
TWB1	baz=338		*eS*		**Sb**	**04 24 10.1 -0.6**
TIPB	**Shuangxi** baz=329	**1.09 331**	*eP*		**Pb**	**04 23 57.6 -0.1**
TIPB	baz=329		*eS*		**Sb**	**04 24 10.8 -0.8**
FUSS	**Fushou** baz=279	**1.09 282**	*eP*		**Pn**	**04 23 58.4 +0.3**
FUSS	baz=279		*eS*		**Sg**	**04 24 12.5 -0.5**
NWLT	**Wulai** baz=310	**1.12 312**	*eP*		**Pn**	**04 23 58.4 +0.1**
NWLT	baz=310		*eS*		**Sn**	**04 24 13.1 -0.1**
CHGB	**Renai** baz=269	**1.13 272**	P		**Pb**	**04 23 58.4 -0.2**
CHGB	baz=269		*eS*		**Sn**	**04 24 13.6 -0.2**
OWD	**Renai** baz=264	**1.13 267**	*eP*		**Pn**	**04 23 58.2 -0.3**
OWD	baz=264		*eS*		**Sb**	**04 24 12.5 -0.5**
YHNB	**Yeheng** baz=302	**1.14 305**	*eP*		**Pn**	**04 23 58.6 0.0**
TWT	**Tachien** baz=278	**1.15 282**	*eP*		**Pb**	**04 23 59.1 +0.2**
TWT	baz=278		*eS*		**Sn**	**04 24 14.3 0.0**
TDCB	**Techi** baz=279	**1.17 282**	*eP*		**Pn**	**04 23 59.2 +0.1**
NWF	**Wu-fen Shan** baz=330	**1.19 331**	*eP*		**Pn**	**04 23 59.0 -0.3**
VWDT	**VWDT** baz=254	**1.19 257**	*eP*		**Pb**	**04 23 59.6 +0.1**
WFSB	**Wu-fen Shan** baz=330	**1.19 331**	*eP*		**Pn**	**04 23 59.0 -0.3**
WFSB	baz=330		*eS*		**Sb**	**04 24 14.5 -0.2**
YULB	**Yu-li** baz=236	**1.20 239**	*eP*		**Pn**	**04 23 59.0 -0.3**
EYUL	**Yuli** baz=233	**1.21 236**	*eP*		**Pn**	**04 23 59.6 +0.2**
TWA	**Mucha** baz=320	**1.22 322**	*eP*		**Pb**	**04 24 00.1 +0.1**
TWA	baz=320		*eS*		**Sb**	**04 24 15.0 -0.3**
TWF1	**Yuli** baz=234	**1.22 237**	*eP*		**Pn**	**04 23 59.5 -0.1**
TWF1	baz=234		*eS*		**Sb**	**04 24 15.6 +0.2**
IRIF	**Iriomote-Funau**	**1.24 75**	P		**Pb**	**04 24 00.4 0.0**
IRIF			*eS*		**Sb**	**04 24 16.3 +0.2**
TNOU	**National Taiwa** baz=331	**1.27 333**	*eS*		**Sb**	**04 24 16.3 -0.4**
FULB	**Fuli** baz=229	**1.31 232**	*eP*		**Pb**	**04 24 01.5 0.0**
CHKT	**Chengkung** baz=224	**1.33 226**	*eP*		**Pb**	**04 24 02.0 +0.2**
SSLB	**Suanglung** baz=257	**1.35 260**	*eP*		**Pn**	**04 24 02.0 +0.5**
YM01	**YM01** baz=324	**1.36 326**	*eP*		**Pn**	**04 24 01.2 -0.3**
WHP	**Taichung City** baz=278	**1.36 281**	*eP*		**Pg**	**04 24 03.2 -0.5**
SMLT	**Sun Moon Lake** baz=262	**1.39 265**	*eP*		**Pn**	**04 24 02.4 +0.4**
LIOB	**Emei** baz=294	**1.42 296**	*eP*		**Pb**	**04 24 03.3 0.0**
LIOB	baz=294		*eS*		**Sb**	**04 24 21.8 +0.7**
NSTT	**Nanjuang** baz=293	**1.42 296**	*eP*		**Pb**	**04 24 03.4 0.0**
TYC	**Yuchr** baz=263	**1.43 266**	*eP*		**Pn**	**04 24 03.0 +0.6**
YUS	**Yu-Shan** baz=246	**1.44 249**	*eP*		**Pn**	**04 24 03.4 +0.3**
EDH	**Donghe** baz=222	**1.46 224**	*eP*		**Pn**	**04 24 02.3 -0.6**
JKRS	**Kuro-shima**	**1.48 81**	P		**Pb**	**04 24 04.6 +0.3**
JKRS			S		**Sn**	**04 24 22.5 +0.5**
ALS	**Alishan** baz=248	**1.56 251**	*eP*		**Pn**	**04 24 05.1 +0.6**
LDUT	**Ludao** baz=211	**1.60 213**	*eP*		**Pn**	**04 24 03.9 -0.9**
LONT	**Longtian** baz=225	**1.62 227**	*eP*		**Pn**	**04 24 04.8 -0.3**
JIJ	**Ishigaki jima**	**1.62 77**	P		**Pn**	**04 24 05.3 +0.2**
JIJ			S		**Sn**	**04 24 25.5 0.0**
CHN5	**Tsauling** baz=253	**1.64 255**	*eP*		**Pb**	**04 24 07.2 -0.1**
TWGBT	**Beinan** baz=224	**1.71 226**	*eP*		**Pn**	**04 24 06.6 +0.2**
TWG	**Pinlang** baz=224	**1.71 226**	*eP*		**Pn**	**04 24 06.6 +0.2**
STYT	**Tauyuan** baz=238	**1.74 241**	*eP*		**Pn**	**04 24 07.7 +0.9**
CHN4	**Tsaushan** baz=246	**1.79 249**	*eP*		**Pb**	**04 24 09.8 0.0**
WTP	**Ta-pu** baz=243	**1.82 245**	*eP*		**Pb**	**04 24 09.8 -0.4**
JISG	**Ishigakijimahi**	**1.82 72**	P		**Pn**	**04 24 07.8 -0.1**
JISG			S		**Sn**	**04 24 30.2 -0.3**
SLGT	**Liugui** baz=236	**1.92 238**	*eP*		**Pb**	**04 24 10.9 -1.0**
CHN1	**Nanshi** baz=242	**1.92 245**	*eP*		**Pn**	**04 24 10.6 +1.4**
SSD	**Sandimen** baz=230	**2.07 233**	*eP*		**Pn**	**04 24 12.8 +1.5**
TSMG	**Majia** baz=229	**2.09 231**	*eP*		**Pb**	**04 24 13.6 -1.2**
MASBT	**Mashibuluo** baz=228	**2.15 230**	*eP*		**Pn**	**04 24 13.6 +1.1**
SLIU	**Shizi** baz=218	**2.33 220**	*eP*		**Pb**	**04 24 17.7 -1.2**

IDC 23 04:24:55.4±2.1, 22°98S×66°37W, h216$^{km}_{\pm 27}$, mb3.3/1,

mb1 3.2/4, mb1mx3.0/40, mbtmp3.7/4, Error ellipse: s-maj=49.9km s-min=33.2km az=154.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.37**	**279**	P		Pn	Pn	04 25 40.8	+1.4
	11nm,0.3s,baz=99,slow=5.7,SNR=88								
LVC				S		S	S	04 26 13.5	+0.3
	5.2nm,0.3s,baz=243,slow=21,SNR=39								
LPAZ	**La Paz**	**6.86**	**346**	P		Pn	Pn	04 26 34.7	0.0
	0.4nm,0.3s,baz=146,slow=10,SNR=10.0								
LPAZ				S		S	S	04 27 47.3	-6.2
	baz=354,slow=21,SNR=1.8								
BDFB	**Brasilia**	**18.79**	**70**	P		P	P	04 28 59.9	+0.9
	0.3nm,0.3s,baz=249,slow=8.1,SNR=4.7								
TORD	**Torodi Ar. Bea**	**75.67**	**69**	P		P	P	04 36 16.4	-1.0
	0.4nm,0.5s,baz=256,slow=5.2,SNR=11								
MKAR	**Makanchi Array**	**145.38**	**39**	PKPbc		PKPab	PKPab	04 44 08.6	+0.3
	0.2nm,0.4s,baz=315,slow=2.9,SNR=3.0								

NEIC ***23*** *04:24:57.2±1.3, 15°.91N±0°.05×97°.01W±0°.06, h28$^{km}_{\pm 5}$, mb4.5/149, Mwr4.2/19, Md4.9/55(MEX), Error ellipse: s-maj=9.8km s-min=5.2km az=222.0*

MEX ***23*** *04:24:59.7±1.7, 15°.97N×97°.02W, h29$^{km}_{\pm 10}$, MD4.4*

IDC ***23*** *04:24:59.1±0.9, 16°.13N×96°.81W, h27$^{km}_{\pm 5}$, mb3.9/15, mb1 4.1/20, mb1mx3.9/46, mbtmp4.0/20, ML3.9/5, MS3.6/14, Ms1 3.7/14, ms1mx3.4/34, Error ellipse: s-maj=16.5km s-min=10.8km az=21.0*

NEIC ***23*** *04:24:59.2, 16°.12N×96°.99W, h29km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}2.42; $M_{\theta\theta}$-2.16; $M_{\phi\phi}$-0.26; $M_{r\theta}$-0.47; $M_{\theta\phi}$1.07; $M_{\phi r}$-0.06; Fault plane solution: M_o2.58000×10^{15} NP1:ϕ_s288.15000°, δ49.92000°, λ81.98000°. NP2:ϕ_s120.49000°, δ40.74000°, λ99.42000°. Principal axes: T 2.4750, Plg82.0000°, Azm151.0000°; N 0.1979, Plg6.0000°, Azm293.0000°; P -2.6728, Plg5.0000°, Azm24.0000°;*

ISC 23 04:24:58.2±0.6, 16°.04N±0°.03×96°.98W±0°.03, h29$^{km}_{\pm 4}$**, n248, σ1°43/280, mb4.5/69, MS3.5/11, 3D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.17**	**255**	‖ *eP*		**Pb**	**Pb**	**04 25 03.7**	**-0.4**
	baz=103,slow=3.1								
PEIG				*eS*		**Sb**	**Sb**	**04 25 08.0**	**0.0**
PANG	**Puerto Angel**	**0.61**	**128**	*i* P		**Pb**	**Pb**	**04 25 10.5**	**+0.1**
PANG				*i* S		**Sb**	**Sb**	**04 25 17.5**	**-1.2**
PANG	**Puerto Angel**	**0.61**	**128**			**Pb**	**Pb**	**04 25 10.5**	**+0.1**
PANG						**Sb**	**Sb**	**04 25 17.5**	**-1.2**
YOIG	**Yosondua**	**0.98**	**326**	‖ *eP*		**Pn**	**Pn**	**04 25 14.9**	**-1.4**
YOIG				*i* S		**Sn**	**Sn**	**04 25 28.1**	**-1.2**
OXBJ	**Oaxaca**	**1.05**	**13**	*i* P		**Pn**	**Pn**	**04 25 16.7**	**-0.5**
OXBJ				*i* S		**Sn**	**Sn**	**04 25 30.3**	**-0.7**
VHO	**Vista Hermosa**	**1.05**	**13**	‖ *eP*		**Pn**	**Pn**	**04 25 16.8**	**-0.4**
	baz=191,slow=16								
VHO				*i* S		**Sn**	**Sn**	**04 25 30.4**	**-0.6**
PNIG	**Pinotepa**	**1.16**	**288**	*i* P		**Pn**	**Pn**	**04 25 16.9**	**-1.7**
PNIG				*i* S		**Sn**	**Sn**	**04 25 31.1**	**-2.4**
PNIG	**Pinotepa**	**1.16**	**288**			**Pn**	**Pn**	**04 25 16.9**	**-1.7**
PNIG						**Sn**	**Sn**	**04 25 32.6**	**-0.8**
TXIG	**Tlaxiaco**	**1.42**	**328**	*eP*		**Pn**	**Pn**	**04 25 22.3**	**-0.1**
TXIG				*eS*		**Sn**	**Sn**	**04 25 39.6**	**-0.7**
HLIG	**Huajuapan de L**	**1.95**	**336**	*i* P		**Pn**	**Pn**	**04 25 30.9**	**+1.3**
HLIG				*eS*		**Sn**	**Sn**	**04 25 53.9**	**+0.7**
TOIG	**Toxpalan**	**2.04**	**358**	*eP*		**Pn**	**Pn**	**04 25 31.2**	**+0.4**
TOIG				*i* S		**Sn**	**Sn**	**04 25 55.4**	**0.0**
TLIG	**Tlapa**	**2.15**	**315**	*eP*		**Pn**	**Pn**	**04 25 32.5**	**+0.2**
TLIG				*eS*		**Sn**	**Sn**	**04 25 57.6**	**-0.4**
TLIG	**Tlapa**	**2.15**	**315**	Pn		**Pn**	**Pn**	**04 25 32.7**	**+0.4**
TLIG				Sn		**Sn**	**Sn**	**04 25 58.4**	**+0.4**
FTIG	**Fresnillo de T**	**2.16**	**329**	*eP*		**Pn**	**Pn**	**04 25 33.2**	**+0.8**
CRIG	**Cruz Grande**	**2.18**	**289**	*eP*		**Pn**	**Pn**	**04 25 31.2**	**-1.4**
CRIG				*eS*		**Sn**	**Sn**	**04 25 54.5**	**-4.2**
CMIG	**Matias Romero**	**2.26**	**62**	Pn		**Pn**	**Pn**	**04 25 32.6**	**-1.1**
	21nm,0.3s,baz=237,slow=13,SNR=96								
CMIG				Pg		**Pb**	**Pb**	**04 25 36.5**	**-1.9**
	139nm,0.3s,baz=243,slow=11,SNR=135								
CMIG				Lg		Lg	Lg	04 26 05.0	
	529nm,0.3s,baz=186,slow=20,SNR=11								
TPIG	**Tehuac#an**	**2.39**	**351**	*eP*		**Pb**	**Pb**	**04 25 38.1**	**-2.6**
TPIG				*i* P		**Pb**	**Pb**	**04 25 38.8**	**-2.0**
TPIG				*i* S		**Sb**	**Sb**	**04 26 09.2**	**-0.8**
TPIG	**Tehuac#an**	**2.39**	**351**			**Pb**	**Pb**	**04 25 38.8**	**-2.0**
TPIG						**Sb**	**Sb**	**04 26 09.2**	**-0.8**
ACP2	**Acapulco**	**2.91**	**287**	*eP*		**Pn**	**Pn**	**04 25 42.4**	**-0.3**
ACP2				*eS*		**Sn**	**Sn**	**04 26 08.6**	**-8.1**
TUIG	**Tuzandepetl**	**3.14**	**51**	*eP*		**Pn**	**Pn**	**04 25 45.6**	**-0.2**
MEIG	**Mezcala**	**3.15**	**307**	*i* P		**Pb**	**Pb**	**04 25 54.5**	**+1.0**
MEIG				*i* S		**Sn**	**Sn**	**04 26 23.9**	**+1.2**
MEIG	**Mezcala**	**3.15**	**307**			**Pb**	**Pb**	**04 25 54.5**	**+1.0**
MEIG						**Sb**	**Sb**	**04 26 33.9**	**+2.3**
CAIG	**El Cayaco**	**3.31**	**288**	*i* P		**Pn**	**Pn**	**04 25 47.4**	**-0.7**
CAIG				*i* S		**Sn**	**Sn**	**04 26 27.6**	**+1.0**
CAIG	**El Cayaco**	**3.31**	**288**			**Pn**	**Pn**	**04 25 47.4**	**-0.7**
CAIG						LR	LR	04 26 39.6	
PLIG	**Platanillo**	**3.36**	**314**	*eP*		**Pn**	**Pn**	**04 25 50.3**	**+1.4**
PLIG				*i* S		**Sn**	**Sn**	**04 26 29.0**	**+1.1**
PLIG	**Platanillo**	**3.36**	**314**			**Pn**	**Pn**	**04 25 50.3**	**+1.4**
PLIG						**Sb**	**Sb**	**04 26 40.0**	**+2.3**
YAIG	**Yautepec**	**3.44**	**325**	*eP*		**Pn**	**Pn**	**04 25 52.6**	**+2.6**
YAIG				*i* S		**Sb**	**Sb**	**04 26 39.3**	**-0.8**
YAIG	**Yautepec**	**3.44**	**325**			**Pn**	**Pn**	**04 25 52.6**	**+2.6**
YAIG						**Sb**	**Sb**	**04 26 39.3**	**-0.8**
AMVM	**AMECAMECA**	**3.52**	**331**	*eP*		**Pn**	**Pn**	**04 25 52.5**	**+1.1**
AMVM	**AMECAMECA**	**3.52**	**331**			**Pb**	**Pb**	**04 26 09.5**	**+9.3**
PCIG		**3.63**	**95**	*eP*		**Pn**	**Pn**	**04 25 53.3**	**+0.8**
PCIG				*i* S		**Sn**	**Sn**	**04 26 32.6**	**-1.8**
PCIG		**3.63**	**95**			**Pn**	**Pn**	**04 25 53.3**	**+0.8**
PCIG						**Sn**	**Sn**	**04 26 32.6**	**-1.8**
MAVM	**Malinalco, Edo**	**3.77**	**321**	*eP*		**Pn**	**Pn**	**04 25 55.4**	**+0.8**
MAVM	**Malinalco, Edo**	**3.77**	**321**			**Pb**	**Pb**	**04 26 00.4**	**-3.7**
UNM	**Universidad Na**	**3.88**	**328**	*eP*		**Pn**	**Pn**	**04 25 57.4**	**+1.1**
UNM	**Universidad Na**	**3.88**	**328**	Pn		**Pn**	**Pn**	**04 25 56.3**	**0.0**
PBVM	**Pinon**	**3.93**	**330**	*eP*		**Pn**	**Pn**	**04 25 59.1**	**+2.4**
PTVM	**Pico Tres Padr**	**4.08**	**330**	*eP*		**Pn**	**Pn**	**04 25 59.5**	**+0.6**
VTVM	**Tizayuca**	**4.08**	**335**	*eP*		**Pn**	**Pn**	**04 26 02.8**	**+3.7**
TOVM	**TOLUCA**	**4.13**	**322**	*eP*		**Pb**	**Pb**	**04 26 06.5**	**-3.9**
ZUVM	**ZUMPANGO**	**4.26**	**332**	*eP*		**Pb**	**Pb**	**04 26 10.2**	**-2.5**
ATVM	**ATLACOMULCO**	**4.60**	**324**	*eP*		**Pn**	**Pn**	**04 26 05.6**	**-0.5**
CCIG	**Comitan**	**4.66**	**86**	*eP*		**Pn**	**Pn**	**04 26 11.0**	**+4.2**
CCIG	**Comitan**	**4.66**	**86**	Pn		**Pn**	**Pn**	**04 26 07.8**	**+1.0**
RTAL	**Retalhuleu**	**5.31**	**106**	Pn		**Pn**	**Pn**	**04 26 16.8**	**+1.1**
HUEH	**Huehuetenango**	**5.32**	**97**	Pn		**Pn**	**Pn**	**04 26 18.7**	**+0.7**
MORG	**Morelia**	**5.40**	**313**	Pn		**Pn**	**Pn**	**04 26 18.2**	**+1.1**
APG	**El Apazote**	**6.36**	**98**	Pn		**Pn**	**Pn**	**04 26 31.1**	**+0.8**
	0.6nm,0.3s,baz=273,slow=12,SNR=5.3								
APG				Sn		**Sn**	**Sn**	**04 27 42.4**	**+0.2**
	8.3nm,0.3s,baz=33,slow=19,SNR=4.3								
MMIG	**Aquila**	**6.49**	**291**	*eP*		**Pn**	**Pn**	**04 26 32.6**	**+0.8**
MMIG				*i* S		**Sn**	**Sn**	**04 27 45.6**	**+0.7**
PETF	**Flores**	**6.88**	**82**			**Pn**	**Pn**	**04 26 37.9**	**+0.8**
MTO3	**Montecristo**	**7.53**	**102**			**Pn**	**Pn**	**04 26 46.0**	**-0.4**
TEIG	**Tepich**	**9.26**	**62**	Pn		**Pn**	**Pn**	**04 27 07.4**	**-2.5**
	7.1nm,0.3s,baz=308,slow=1.0,SNR=36								
TEIG				Sn		**Sn**	**Sn**	**04 28 45.3**	**-7.7**
	9.1nm,0.3s,baz=162,slow=20,SNR=1.7								
TEIG				LR		LR	LR	04 31 16.2	
	comp=Z,408nm,20.5s,baz=224,slow=42								
TEIG	**Tepich**	**9.26**	**62**	Pn		**Pn**	**Pn**	**04 27 09.0**	**-0.8**
833A	**Chaparral WMA,**	**12.43**	**350**	P				04 27 53.5	
	baz=169								
JTS	**Las Juntas de**	**13.03**	**115**	Pn		**Pn**	**Pn**	**04 28 02.4**	**+0.9**
	0.3nm,0.3s,baz=343,slow=14,SNR=2.5								
JTS	**Las Juntas de**	**13.03**	**115**			**Pn**	**Pn**	**04 28 02.5**	**+1.0**
TXAR	**Lajitas Array**	**14.59**	**336**	Pn		**Pn**	**Pn**	**04 28 25.6**	**+2.7**
	0.2nm,0.3s,baz=159,slow=14,SNR=12								
TXAR				Lg		Lg	Lg	04 32 38.0	
	0.0nm,0.3s,baz=148,slow=30,SNR=1.4								
TXAR				LR		LR	LR	04 34 21.8	
	comp=Z,450nm,18.4s,baz=0.0,slow=39								
TX31	**Lajitas Ar. Si**	**14.59**	**336**	Pn		**Pn**	**Pn**	**04 28 24.0**	**+1.1**
TX32	**Lajitas Array**	**14.59**	**336**	Pn		**Pn**	**Pn**	**04 28 25.7**	**+2.8**
JCT	**Junction City**	**14.60**	**350**	P				04 28 23.2	
	baz=169								
435B	**Jarrell**	**14.68**	**358**	P				04 28 24.2	
	baz=178								
435B	**Jarrell**	**14.69**	**358**	Pn		**Pn**	**Pn**	**04 28 25.3**	**+1.2**
SOR	**Soroa**	**14.78**	**61**	Pn		**Pn**	**Pn**	**04 28 22.1**	**-3.3**
LPIG	**La Paz**	**14.86**	**305**	LR		LR	LR	04 33 48.4	
	comp=Z,163nm,19.1s,baz=188,slow=35								
RIOS	**Rincon, Osa**	**15.03**	**117**			**Pn**	**Pn**	**04 28 31.4**	**+2.7**

NATX	**Nacogdoches** baz=188	**15.79**	**7**	P		04 28 38.7
342A	**Flagon Creek P**	**15.84**	**15**	Pn	**Pn**	**04 28 40.7 +1.5**
342A				IAmb	IAmb	04 28 56.3
	comp=Z,36nm,0.8s					
WHTX	**Lake Whitney,**	**15.88**	**359**	Pn	**Pn**	**04 28 40.9 +1.1**
WHTX				IAmb	IAmb	04 28 52.0
	comp=Z,25nm,0.8s					
WHTX	**Lake Whitney,** baz=178	**15.88**	**359**	P		04 28 39.7
344A	**Westbrook Farm**	**16.36**	**19**	Pn	**Pn**	**04 28 46.7 +0.8**
ABTX	**Abilene, Hawle**	**16.69**	**352**	Pn	**Pn**	**04 28 51.0 +0.9**
ABTX				IAmb	IAmb	04 29 02.2
	comp=Z,36nm,1.0s					
ABTX	**Abilene, Hawle** baz=171,SNR=8.9	**16.69**	**352**	P		04 28 50.5
346A	**Big Creek Wild**	**16.74**	**23**	Pn	**P**	**04 28 51.9 -0.9**
346A				IAmb	IAmb	04 29 08.4
	comp=Z,30nm,0.6s					
VBMS	**Vicksburg** baz=201	**17.14**	**19**	P		04 28 56.3
Z38A	**Mt. Pleasant**	**17.24**	**6**		**P**	**04 28 58.1 -0.1**
Z38A				IAmb	IAmb	04 29 11.3
	comp=Z,50nm,0.8s					
143A	**Socs Landing,**	**17.34**	**16**	P	**P**	**04 28 59.6 +0.3**
143A				IAmb	IAmb	04 29 12.6
	comp=Z,37nm,1.0s					
MNTX	**Cornudas Mount**	**17.37**	**335**		**P**	**04 28 59.2 -0.5**
MNTX	**Cornudas Mount** baz=152	**17.37**	**335**	P		04 28 59.2
Z41A	**Richland Creek** baz=193,SNR=5.8	**17.55**	**12**	P		04 29 00.9
146A	**Union**	**18.02**	**22**		**P**	**04 29 07.7 +0.9**
X37A	**Clayton**	**18.53**	**4**		**Pn**	**04 29 13.8 +1.1**
MSTX	**Muleshoe**	**18.60**	**345**	P	**Pn**	**04 29 13.8 +0.1**
MSTX				IAmb	IAmb	04 29 26.8
	comp=Z,30nm,1.1s					
MSTX	**Muleshoe** baz=162	**18.60**	**345**	P		04 29 13.7
250A	**Grady**	**18.62**	**30**	P	**Pn**	**04 29 15.4 +1.6**
250A				IAmb	IAmb	04 29 25.5
	comp=Z,18nm,0.6s					
MIAR	**Mount Ida**	**18.68**	**9**		**Pn**	**04 29 15.4 +0.9**
MIAR	**Mount Ida** baz=190,SNR=21	**18.68**	**9**	P		04 29 14.0
WMOK	**Wichita Mounta** baz=175	**18.69**	**355**	P		04 29 14.3
X40A	**Basin Creek Fa** baz=192	**18.74**	**11**	P		04 29 14.8
Z47A	**Carrollton**	**18.89**	**24**	P	**Pn**	**04 29 17.3 +0.2**
Z47A					**S**	**04 32 51.0 +1.6**
352A	**Blakely**	**18.89**	**33**	P	**Pn**	**04 29 18.4 +1.3**
121A	**Cookes Peak, D**	**19.12**	**331**		**P**	**04 29 19.3 +0.1**
LRAL	**Lakeview Retre** baz=210,SNR=5.5	**19.18**	**26**	P		04 29 19.8
LRAL	**Lakeview Retre**	**19.18**	**26**	P	**P**	**04 29 20.1 +0.5**
X43A	**Marvell** baz=198	**19.20**	**15**	P		04 29 19.6
W39A	**Magazine**	**19.29**	**8**	P	**Pn**	**04 29 21.8 -0.1**
W39A				IAmb	IAmb	04 29 36.7
	comp=Z,24nm,0.8s					
W39A	**Magazine** baz=189	**19.29**	**8**	P		04 29 21.2
W41B	**Gary Mavity, V** baz=194	**19.52**	**12**	P		04 29 23.2
BCOK	**Bluff Creek, N**	**19.54**	**358**	P	**Pn**	**04 29 24.4 -0.5**
TIGA	**Tifton** baz=221	**19.59**	**36**	P		04 29 22.3
OXF	**Oxford**	**19.61**	**19**	P	**P**	**04 29 23.9 -0.3**
OXF				IAmb	IAmb	04 29 32.6
	comp=Z,43nm,1.1s					
OXF	**Oxford** baz=202	**19.61**	**19**	P		04 29 22.8
WHAR	**Wooly Hollow**	**19.62**	**11**	P	**Pn**	**04 29 25.5 -0.4**
WHAR					**S**	**04 33 03.8 -0.6**
OK029	**Liberty Lake**	**19.68**	**359**	P	**P**	**04 29 24.9 -0.2**
OK029				IAmb	IAmb	04 29 39.6
	comp=Z,19nm,0.9s					
OK030	**Cody Creek RV**	**19.81**	**0**	P	**Pn**	**04 29 27.4 -0.7**
OK030				IAmb	IAmb	04 29 40.7
	comp=Z,21nm,0.8s					
TUL1	**Leonard** baz=183,SNR=7.8	**19.82**	**3**	P		04 29 27.3
OK031	**S. Brethren Rd**	**19.83**	**0**	P	**Pn**	**04 29 27.8 -0.6**
OK031				IAmb	IAmb	04 29 41.5
	comp=Z,23nm,0.9s					
152A	**Waverly Hall**	**19.94**	**32**	P	**P**	**04 29 27.8 -0.1**
152A				IAmb	IAmb	04 29 43.7
	comp=Z,13nm,0.7s					
BNM	**Barren Site**	**20.02**	**336**	P	**P**	**04 29 28.8 -0.3**
Y22D	**IRIS PASSCAL I** baz=151	**20.07**	**335**	P		04 29 30.0
Y49A	**Blount Mountai**	**20.13**	**26**	P	**P**	**04 29 30.0 -0.1**
LENM	**Lemitar**	**20.17**	**335**	P	**P**	**04 29 31.0 +0.4**
FCAR	**Ozark Folk Cen**	**20.24**	**11**	P	**P**	**04 29 32.0 +0.9**
FCAR				IAmb	IAmb	04 29 44.2
	comp=Z,30nm,0.8s					
W45A	**Hickory Valley**	**20.27**	**19**	P	Pn	04 29 32.6 -1.0
HHAR	**Hobbs**	**20.34**	**7**	P	**P**	**04 29 31.9 -0.4**
HHAR				IAmb	IAmb	04 29 44.6
	comp=Z,16nm,0.8s					
X48A	**Hartselle**	**20.39**	**24**	P	**P**	**04 29 32.1 -0.7**
CROK	**Carrier**	**20.40**	**358**	P	**P**	**04 29 32.5 -0.4**
U38A	**Gravette**	**20.45**	**6**	P	Pn	04 29 34.6 -1.0
PLAL	**Pickwick Lake**	**20.48**	**21**	P	**P**	**04 29 33.1 -0.6**
PLAL				IAmb	IAmb	04 29 41.8
	comp=Z,13nm,0.6s					
TUC	**Tucson**	**20.48**	**325**	P	**P**	**04 29 33.9 0.0**
TUC	**Tucson** baz=139	**20.48**	**325**	P		04 29 35.3
U40A	**Yellville**	**20.56**	**10**	P	**P**	**04 29 35.6 +1.0**
U40A	**Yellville** baz=191,SNR=15	**20.56**	**10**	P		04 29 35.0
LCAR	**Lake Charles**	**20.61

comp=Z,17nm,1.1s
T25A Trinidad 22.02 344 P 04 29 50.5
baz=161
CLTN Cedars of Leba 22.11 23 P **P** **04 29 49.9 -1.4**
CLTN IAmb IAmb 04 29 58.7
comp=Z,15nm,0.8s
T45A Paducah 22.16 18 P **P** **04 29 52.8 +0.9**
DBBC Dabeiba 22.21 111 *eP* **P** **04 29 55.9 +3.2**
W52A Murphy 22.28 29 P **P** **04 29 51.7 -1.6**
W52A IAmb IAmb 04 30 04.5
comp=Z,15nm,1.0s
R32A Long Quarter, 22.35 356 P **P** **04 29 54.4 +0.5**
R32A IAmb IAmb 04 30 04.4
comp=Z,22nm,0.8s
HODGE Hodges 22.43 33 P **P** **04 29 53.3 -1.5**
HODGE IAmb IAmb 04 30 01.7
comp=Z,11nm,0.8s
X16A Lo Mia Camp, P 22.45 327 P **P** **04 29 55.2 +0.1**
CCM Cathedral Cave 22.50 12 P **P** **04 29 56.2 +0.7**
CCM IAmb IAmb 04 30 05.3
comp=Z,13nm,0.6s
CCM Cathedral Cave 22.50 12 P 04 29 55.3
baz=194
UREC San Jos de Ur 22.52 109 *eP* **P** **04 29 56.3 +0.4**
R40A Maddies Statio 22.55 10 P **P** **04 29 56.6 +0.6**
R40A IAmb IAmb 04 30 07.2
comp=Z,16nm,0.8s
S44A Carbondale 22.62 16 P **P** **04 29 57.8 +1.0**
S44A IAmb IAmb 04 30 14.2
comp=Z,19nm,0.7s
T47A Sharon Grove 22.63 21 P **P** **04 29 56.4 -0.4**
V51A Loudon 22.68 27 P **P** **04 29 56.2 -1.2**
V51A IAmb IAmb 04 30 06.7
comp=Z,14nm,0.7s
BG3 Lake Jocassee 22.68 31 P **P** **04 29 58.1 +0.6**
U49A Red Boiling Sp 22.69 24 P **P** **04 29 55.8 -1.7**
U49A IAmb IAmb 04 30 10.9
comp=Z,19nm,0.8s
NHSC New Hope 22.79 39 P 04 29 57.6
baz=226
CBKS Cedar Bluff 22.82 354 P 04 29 59.3
baz=173
CBKS Cedar Bluff 22.82 354 P **P** **04 29 59.4 +0.6**
CBKS IAmb IAmb 04 30 13.7
comp=Z,23nm,1.0s
TKL Tuckaleechee C 22.82 29 P **P** **04 29 57.8 -1.0**
comp=Z,2.0nm,0.4s,baz=190,slow=9.9,SNR=4.4
TKL LR LR 04 40 17.3
comp=Z,58nm,20.2s,baz=196,slow=40
TKL Tuckaleechee C 22.82 29 P **P** **04 29 59.5 +0.6**
TKL IAmb IAmb 04 30 09.6
comp=Z,9.4nm,0.8s
SDCO Great Sand Dun 22.89 342 P **P** **04 30 00.3 +0.4**
SDCO Great Sand Dun 22.89 342 P 04 30 01.4
baz=159,SNR=6.1
CBOC Ciudad Bolivar 22.91 114 *eP* **P** **04 30 03.7 +3.6**
Y14A Wickenburg 22.94 324 P **P** **04 30 00.4 +0.2**
KSU1 Kansas State U 22.98 1 P **P** **04 30 01.5 +1.1**
KSU1 Kansas State U 22.98 1 P 04 30 01.1
baz=181
WUAZ Wupatki 23.28 329 P **P** **04 30 04.1 +0.3**
WUAZ IAmb IAmb 04 30 16.0
comp=Z,18nm,1.1s
WUAZ Wupatki 23.28 329 P 04 30 05.2
baz=143,SNR=13
V53A Saluda 23.28 30 P **P** **04 30 04.7 +1.0**
S22A 4UR Ranch, Cre 23.31 340 P 04 30 05.1
baz=156
GLA Glamis 23.40 320 P 04 30 06.0
baz=132
MVCO Mesa Verde 23.43 336 P **P** **04 30 05.8 +0.5**
MVCO Mesa Verde 23.43 336 P 04 30 06.0
baz=151,SNR=10.0
YOTC Yotoco, Valle 23.55 118 *eP* **P** **04 30 09.2 +2.6**
KMSC Kings Mountain 23.62 33 P 04 30 06.2
baz=220
P38A Dawn 23.69 7 P **P** **04 30 07.4 -0.1**
P38A IAmb IAmb 04 30 20.4
comp=Z,17nm,0.8s
GUY2C Guyana, Caldas 23.77 115 *eP* **P** **04 30 12.8 +3.7**
P40A Paris 23.80 9 P **P** **04 30 09.2 +0.7**
P40A IAmb IAmb 04 30 25.5
comp=Z,22nm,1.0s
Q44A Meyer Farm, Va 23.82 16 P **P** **04 30 09.0 +0.3**
Q44A IAmb IAmb 04 30 17.5
comp=Z,25nm,1.1s
Q24A Divide 23.93 344 P 04 30 10.6
baz=160
PTBC PUERTO BERRIO, 23.99 111 *eP* **P** **04 30 11.9 +1.2**
WCI Wyandotte Cave 24.02 21 P 04 30 10.7
baz=206
WCI Wyandotte Cave 24.02 21 P **P** **04 30 11.1 +0.5**
BC3 Big Chuckawall 24.19 320 P 04 30 13.7
baz=132
V55A Taylorsville 24.23 33 P **P** **04 30 11.3 -1.3**
V55A IAmb IAmb 04 30 20.2
comp=Z,14nm,0.7s
PV01 Paradox Valley 24.26 337 P **P** **04 30 13.3 +0.1**
PV01 IAmb IAmb 04 30 18.5
comp=Z,13nm,1.0s
W13A Hualapai Mount 24.28 325 P **P** **04 30 13.3 -0.1**
MONP2 Monument Peak 24.32 317 P 04 30 14.2
baz=129
IRM Iron Mountain 24.34 321 P 04 30 15.5
baz=134
PV13 Radium Mtn., P 24.38 337 P **P** **04 30 13.1 -1.1**
PV02 Paradox Valley 24.39 337 P **P** **04 30 14.6 +0.3**
P43A Skaggs, Pawnee 24.40 14 P **P** **04 30 14.3 +0.2**
P43A IAmb IAmb 04 30 31.8
comp=Z,17nm,1.1s
PV05 Paradox Valley 24.41 336 P **P** **04 30 14.6 +0.1**
PV15 Paradox Valley 24.41 338 P **P** **04 30 14.6 +0.1**
PV15 IAmb IAmb 04 30 19.6
comp=Z,11nm,0.9s
PV03 Paradox Valley 24.47 337 P **P** **04 30 15.3 +0.2**
PV03 IAmb IAmb 04 30 30.3
comp=Z,14nm,1.2s
R49A Shelbyville 24.48 23 P **P** **04 30 14.5 -0.3**
R49A IAmb IAmb 04 30 16.4
comp=Z,14nm,0.9s
PV18 Skein Mesa, Pa 24.49 337 P **P** **04 30 15.3 +0.1**
PV12 Saucer Basin, 24.51 337 P **P** **04 30 15.6 +0.1**
PV12 IAmb IAmb 04 30 30.9
comp=Z,22nm,1.0s
PV11 David Mesa, Pa 24.52 337 P **P** **04 30 15.8 +0.3**
PV11 IAmb IAmb 04 30 30.8
comp=Z,11nm,0.8s
ORTC Ortega, Tolima 24.53 117 *eP* **P** **04 30 18.9 +3.3**
PV17 East Wray Mesa 24.54 337 P **P** **04 30 15.8 +0.1**
PV16 Nyswonger Mesa 24.55 337 P **P** **04 30 16.0 +0.3**
S51A Beattyville 24.55 26 P **P** **04 30 16.0 +0.5**
S51A IAmb IAmb 04 30 29.3
comp=Z,24nm,1.1s
PV07 Paradox Valley 24.56 338 P **P** **04 30 16.0 +0.2**
PV07 IAmb IAmb 04 30 20.9
comp=Z,11nm,1.0s
PV04 Paradox Valley 24.62 337 P **P** **04 30 16.5 +0.2**
PV04 IAmb IAmb 04 30 31.9
comp=Z,17nm,0.9s
PV14 Lion Creek, Pa 24.64 337 P **P** **04 30 16.8 +0.1**
PV22 Blue Mesa, Par 24.70 337 P **P** **04 30 16.9 -0.1**
PV22 IAmb IAmb 04 30 22.6
comp=Z,10nm,0.9s
BELC Belle Mtn. Jos 24.76 320 P 04 30 18.9
baz=132
TPFO Pinon Flats 24.79 318 P 04 30 19.3
baz=130
R50A Paris 24.80 24 P **P** **04 30 17.5 -0.2**
R50A IAmb IAmb 04 30 27.2
comp=Z,16nm,0.9s
BLO Bloomington 24.80 20 P **P** **04 30 18.4 +0.6**
PFO Pinyon Flats O 24.80 318 P **P** **04 30 20.4 +2.5**
comp=Z,1.8nm,0.6s,baz=123,slow=7.2,SNR=5.5
PFO LR LR 04 40 24.5
comp=Z,120nm,21.3s,baz=176,slow=37
PFO Pinyon Flats O 24.80 318 P **P** **04 30 16.7 -1.3**
PFO Pinyon Flats O 24.80 318 P 04 30 19.3
baz=130
ISCO Idaho Springs 24.84 344 P 04 30 19.8
baz=160,SNR=8.6
ISCO Idaho Springs 24.84 344 P **P** **04 30 18.8 +0.3**
N38A Joes South For 24.88 7 P **P** **04 30 17.9 -0.5**
P46A Rosedale 24.99 18 P **P** **04 30 20.3 +0.8**
GMRC Granite Mounta 25.08 322 P 04 30 21.3
baz=134

OGNE Ogallala 25.20 351 P 04 30 21.9
baz=169
HDIL Hopedale 25.32 14 P 04 30 22.0
baz=197
HDIL Hopedale 25.32 14 P **P** **04 30 23.0 +0.5**
P48A Milroy 25.42 21 P **P** **04 30 22.7 -0.7**
CHIC Chingaza 25.49 114 *eP* **P** **04 30 27.6 +3.0**
RUSC La Rusia 25.50 111 *eP* **P** **04 30 20.0 -4.9**
HEC Hector,Ludlow 25.52 321 P 04 30 24.8
baz=133
CNNC Cliffs of the 25.63 38 P 04 30 24.6
baz=226
BLA Blacksburg 25.68 32 P **P** **04 30 26.2 +0.4**
BLA Blacksburg 25.68 32 P 04 30 25.4
baz=219
TUQ Turquoise Moun 25.69 322 P 04 30 27.3
baz=134
MTPU Mount Pierson 25.69 331 P **P** **04 30 26.0 -0.2**
MTPU IAmb IAmb 04 30 39.0
comp=Z,13nm,0.8s
S54A Dingess, Beckl 25.71 30 P 04 30 25.7
baz=217
SFIN Lafayette 25.73 18 P 04 30 26.1
baz=202
P49A Miami Univ. Ec 25.74 22 P 04 30 25.4
baz=208,SNR=6.9
P49A Miami Univ. Ec 25.74 22 P **P** **04 30 26.2 -0.1**
Q51A Peebles 25.83 25 P **P** **04 30 26.9 -0.2**
L34A Svendsen Farm, 25.84 1 P **P** **04 30 27.9 +0.8**
R53A Hurricane 25.84 28 P **P** **04 30 28.2 +0.9**
O20A White River Ci 25.93 340 P 04 30 28.9
baz=155
O20A White River Ci 25.93 340 P **P** **04 30 28.5 +0.2**
O20A IAmb IAmb 04 30 40.0
comp=Z,13nm,1.0s
CIS Catalina Islan 25.95 316 P 04 30 28.6
baz=127
N23A Red Feather La 25.96 344 P 04 30 28.4
baz=160
SHPR Sheep Range 26.01 325 P **P** **04 30 29.1 +0.1**
FMP Fort Macarthur 26.05 316 P 04 30 29.9
baz=128
R54A Victor 26.16 29 P 04 30 29.9
baz=217
Q52A Bidwell 26.23 27 P **P** **04 30 31.3 +0.6**
P51A Williamsport 26.33 25 P **P** **04 30 32.5 +0.9**
O49A Covington 26.46 22 P **P** **04 30 32.4 -0.3**
Q53A Leroy 26.47 28 P 04 30 33.0
baz=215
S56A Natural Bridge 26.47 32 P 04 30 33.3
baz=220
EDW2 Edwards Air Fo 26.59 319 P 04 30 35.5
baz=130
N47A Urbana 26.61 19 P **P** **04 30 33.4 -0.7**
L42A Oliver, Polo 26.63 12 P **P** **04 30 34.5 +0.2**
MACC Macarena, Meta 26.64 119 *eP* **P** **04 30 34.9 +0.3**
R55A Marlinton 26.66 31 P **P** **04 30 35.2 +0.4**
R55A IAmb IAmb 04 30 38.0
comp=Z,12nm,0.8s
R55A Marlinton 26.66 31 P 04 30 34.8
baz=218
SDV Santo Domingo 26.66 102 P **P** **04 30 36.7 +1.6**
comp=Z,5.5nm,0.8s,baz=296,slow=3.1,SNR=7.7
SDV Santo Domingo 26.66 102 P **P** **04 30 34.0 -1.1**
SDV IAmb IAmb 04 30 45.6
comp=Z,9.1nm,0.8s
P52A Corning 26.84 26 P **P** **04 30 36.5 +0.3**
P52A Corning 26.84 26 P 04 30 36.3
baz=213
S57A Dark Hollow, R 26.85 33 P 04 30 36.2
baz=221
Q54A Coxs Mills 26.88 29 P **P** **04 30 37.4 +0.8**
Q54A IAmb IAmb 04 30 45.8
comp=Z,12nm,0.8s
OSI Osito Audit: C 26.89 317 P 04 30 39.0
baz=128
TPNV Topopah Spring 26.94 324 P **P** **04 30 37.2 -0.1**
TPNV Topopah Spring 26.94 324 P 04 30 38.7
baz=136
ACSO Alum Creek Sta 27.00 24 P **P** **04 30 37.7 0.0**
ACSO Alum Creek Sta 27.00 24 P 04 30 38.4
baz=211
P53A Whipple 27.04 27 P **P** **04 30 38.4 +0.4**
R56A Bull Pasture M 27.11 31 P 04 30 38.8
baz=219
SCZ2 Santa Cruz Isl 27.12 315 P 04 30 40.6
baz=126
L44A Lake County Fo 27.19 15 P 04 30 39.4
baz=199
ARVC Arvin 27.27 318 P 04 30 42.0
baz=129
ISA Isabella, Lake 27.39 320 P 04 30 42.5
baz=130
JFWS Jewell Farm 27.39 11 P 04 30 41.7
baz=194
SBC Santa Barbara 27.43 316 P 04 30 42.4
baz=127
R57A Stanardsville 27.48 33 P 04 30 42.2
baz=221
ECSD EROS Data Cent 27.60 1 P **P** **04 30 43.9 +0.9**
ECSD IAmb IAmb 04 30 56.2
comp=Z,11nm,1.1s
ECSD EROS Data Cent 27.60 1 P 04 30 43.9
baz=181
T60A Surry 27.62 37 P 04 30 43.6
baz=226
CWC Cottonwood Cre 27.65 321 P 04 30 45.1
baz=132
Q56A Snyder Ridge, 27.71 31 P 04 30 44.5
baz=219
S59A Mechanicsville 27.75 35 P 04 30 44.5
baz=224
K22A Casper 27.75 345 P 04 30 46.5
baz=160
PKM Mcpherson Peak 27.77 317 P 04 30 46.4
baz=127
MCWV Mont Chateau 27.88 29 P **P** **04 30 46.2 +0.6**
MCWV IAmb IAmb 04 30 54.6
comp=Z,14nm,1.1s
MCWV Mont Chateau 27.88 29 P 04 30 46.7
baz=217
L48A N Adams 27.98 20 P **P** **04 30 45.9 -0.6**
P56A Dayton Farm, R 28.24 31 P 04 30 47.6
baz=219
M51A Elyria 28.26 24 P 04 30 48.4
baz=211
Q58A Fox Den Farm, 28.40 33 P 04 30 50.1
baz=222
BW06 Boulder Array 28.73 341 P 04 30 53.2
baz=154
PDAR Pinedale Array 28.73 341 P **P** **04 30 55.5 +2.1**
comp=Z,0.5nm,0.7s,baz=143,slow=10,SNR=5.0
PDAR PcP **PcP** **04 34 03.1 -0.2**
comp=Z,0.3nm,0.6s,baz=102,slow=3.8,SNR=2.0
PDAR LR LR 04 43 27.2
comp=Z,111nm,18.9s,baz=171,slow=39
PDAR Pinedale Array 28.73 341 P **P** **04 30 53.5 +0.1**
PDAR **PcP** **04 34 02.6 -0.6**
N54A Moraine State 28.86 27 P 04 30 53.1
baz=215
O56A Blue Knob Stat 28.97 30 P 04 30 54.5
baz=219
NV11 Mina Array Sit 29.05 324 P **P** **04 30 56.1 -0.1**
NV11 IAmb IAmb 04 31 08.2
comp=Z,9.2nm,1.1s
LHV Little Huntoon 29.13 324 P **P** **04 30 56.9 +0.2**
LHV IAmb IAmb 04 31 02.0
comp=Z,9.5nm,1.0s
NVAR Mina Array Bea 29.14 324 P **P** **04 30 59.1 +2.0**
comp=Z,2.2nm,0.8s,baz=141,slow=8.4,SNR=12
NVAR LR LR 04 44 02.6
comp=Z,267nm,18.1s,baz=116,slow=39
ELK Elko 29.27 331 P **P** **04 31 00.7 +2.5**
comp=Z,0.7nm,0.7s,baz=131,slow=17,SNR=2.4
ELK Elko 29.27 331 P **P** **04 30 58.0 -0.2**
SPMN Marine on St. 29.30 6 P 04 30 57.6
baz=188
SPMN Marine on St. 29.30 6 P **P** **04 30 58.5 +0.3**
SPMN IAmb IAmb 04 31 15.3
comp=Z,8.9nm,0.8s
ATAH Atahualpa 29.47 140 P **P** **04 31 03.8 +3.4**
comp=Z,5.5nm,0.8s,baz=358,slow=9.5,SNR=3.6
SSPA Standing Stone 29.58 30 P 04 31 00.3
baz=219
N56A West Decatur 29.60 29 P 04 30 60.0
baz=218

LOHW Long Hollow 29.83 340 P **P** **04 31 02.7 -0.4**
N57A Milroy 29.83 31 P 04 31 04.8
baz=220
RLMT Red Lodge 30.78 343 P **P** **04 31 11.6 +0.1**
RLMT Red Lodge 30.78 343 P 04 31 12.7
baz=157
L56A Greenwood 30.90 29 P 04 31 11.9
baz=218
L57A Andrews Acres 31.13 30 P 04 31 13.9
baz=220
HLID Hailey 31.19 335 P 04 31 15.6
baz=146
BEKR Beckworth 31.28 324 P **P** **04 31 15.7 -0.2**
BEKR IAmb IAmb 04 31 27.6
comp=Z,6.6nm,1.0s
K56A Middlesex 31.45 28 P 04 31 16.5
baz=218
L58A Harry Jones Me 31.64 31 P 04 31 18.6
baz=221
BINY Binghamton 31.69 30 P 04 31 19.2
baz=221
K57A Scipio Center 31.85 29 P 04 31 20.8
baz=219
PAL Palisades 31.89 34 P 04 31 20.4
baz=225
BOZ Bozeman (W) 31.93 340 P 04 31 21.8
baz=153
DLMT Dillon 32.05 339 P **P** **04 31 22.6 0.0**
DLMT IAmb IAmb 04 31 33.7
comp=Z,6.4nm,0.9s
L59A Walton 32.15 31 P 04 31 23.0
baz=222
AGMN Agassiz Nation 32.18 1 P 04 31 23.9
baz=182
AGMN Agassiz Nation 32.18 1 P **P** **04 31 23.6 +0.1**
AGMN IAmb IAmb 04 31 42.1
comp=Z,7.9nm,1.0s
K58A Earlville 32.28 30 P 04 31 24.2
baz=221
O03E Paynes Creek 32.39 323 P 04 31 25.5
baz=131
J57A Williamstown 32.61 29 P 04 31 27.1
baz=220
HRY Holter Researc 32.98 341 P **P** **04 31 30.4 -0.3**
PLID Pearl Lake 33.09 335 P **P** **04 31 31.3 -0.5**
PLID IAmb IAmb 04 31 42.3
comp=Z,5.1nm,1.0s
I58A Old Forge 33.31 30 P 04 31 32.4
baz=221
K61A Williamstown 33.41 33 P 04 31 34.2
baz=224
EGMT Eagleton 33.59 344 P 04 31 37.0
baz=158
H57A Richville 33.70 28 P 04 31 37.4
baz=219
MSO Missoula 33.78 339 P 04 31 38.8
baz=150
MSO Missoula 33.78 339 P **P** **04 31 37.3 -0.4**
ULM Lac du Bonnet 34.13 1 LR LR 04 46 46.3
comp=Z,62nm,19.6s,baz=114,slow=38
LONY Lake Ozonia 34.19 29 P 04 31 41.4
baz=220
LONY Lake Ozonia 34.19 29 P **P** **04 31 41.3 +0.2**
H58A Gabriels 34.23 30 P 04 31 40.9
baz=221
F10A Beach Ranch, E 34.31 335 P **P** **04 31 42.0 -0.3**
F10A IAmb IAmb 04 31 54.0
comp=Z,6.5nm,0.8s
H59A Cadyville 34.63 30 P 04 31 44.2
baz=222
E56A St. Veronique 35.48 26 P 04 31 52.4
baz=218
G05D Wamic, OR 35.58 330 P 04 31 53.2
baz=137
G60A Masonville 35.62 30 P 04 31 52.5
baz=223
D55A Sainte-Anne-du 35.67 25 P 04 31 53.8
baz=217
D56A ZEC Mazanza, M 35.99 26 P 04 31 56.6
baz=218
E58A La Victoria 36.12 28 P 04 31 57.2
baz=221
F05D White Salmon 36.12 331 P 04 31 58.0
baz=138
F60A Warwick 36.44 30 P 04 32 00.4
baz=223
G62A West of Eustis 36.60 32 P 04 32 01.5
baz=226
LSQQ Lebel-sur-Quev 36.75 22 P 04 32 03.3
baz=213
E60A Ste Agathe de 36.97 30 P 04 32 04.8
baz=223
MATQ Matagami 37.11 21 P 04 32 05.9
baz=212
E64A Bridgewater 38.80 33 P 04 32 20.0
baz=228
PTGA Pitinga 40.16 111 P **P** **04 32 32.4 +0.3**
comp=Z,1.5nm,0.3s,baz=293,slow=6.8,SNR=4.9
LPAZ La Paz 42.92 137 P **P** **04 32 56.4 +1.0**
comp=Z,1.7nm,0.9s,baz=328,slow=12,SNR=4.3
LPAZ La Paz 42.92 137 P **P** **04 32 53.3 -2.1**
YKA Yellowknife Ar 48.03 349 P **P** **04 33 34.6 0.0**
comp=Z,1.2nm,0.7s,baz=154,slow=7.6,SNR=19
YKA LR LR 04 56 57.8
comp=Z,63nm,18.3s,baz=0.0,slow=40
L27K Beaver Creek, 56.29 337 P 04 34 37.4
baz=126
N25K Chitina, Valde 56.56 335 P 04 34 39.7
baz=122
K27K Chicken 56.95 338 P 04 34 42.4
baz=126
EGAK Eagle 57.07 339 P 04 34 42.3
baz=127
INK Inuvik 57.17 345 P **P** **04 34 42.5 +0.4**
comp=Z,3.1nm,0.7s,baz=120,slow=6.3,SNR=17
SCRK Sand Creek 57.61 338 P 04 34 45.9
baz=124
PAX Paxson 57.63 336 P 04 34 46.1
baz=122
BDFB Brasilia 57.68 121 P **P** **04 34 47.2 +0.6**
comp=Z,2.7nm,0.8s,baz=249,slow=2.1,SNR=3.9
WAT6 Susitna Watana 58.33 335 P 04 34 52.3
baz=119
WAT2 Susitna Watana 58.86 335 P 04 34 55.7
baz=118
HDA Harding Lake 58.94 337 P 04 34 55.6
baz=121,SNR=5.1
HDA P 04 34 55.6
baz=121,SNR=5.1
PRP Porcupine Dome 59.01 339 P 04 34 56.1
baz=123
SUA Susitna One 59.08 333 P 04 34 57.3
baz=115
ILAR Eielson Array 59.10 338 P **P** **04 34 56.5 +0.7**
comp=Z,3.2nm,0.8s,baz=136,slow=5.7,SNR=28
ILAR pP **pP** **04 35 05.0 0.0**
comp=Z,2.0nm,1.0s,baz=138,slow=4.1,SNR=5.2
ILAR LR LR 05 03 03.2
comp=Z,118nm,18.5s,baz=134,slow=39
MCK McKinley 59.36 336 P 04 34 58.2
baz=118
COLA College 59.51 337 P 04 34 59.2
baz=120
TCOL CIGO, UAF Yank 59.51 337 P 04 34 59.3
baz=120
SPCR Spurr Chakacha 59.62 333 P 04 35 00.2
baz=114
SKT Skwentna 59.64 334 P 04 35 00.5
baz=115
TRF Thorofare Moun 59.77 335 P 04 35 01.7
baz=117,SNR=6.5
NEA2 Nenana 59.83 337 P 04 35 01.7
baz=119
I23K Minto, Yukon-K 60.20 337 P 04 35 04.4
baz=119,SNR=9.2
PPLA Purkeypile 60.30 334 P 04 35 04.2
baz=115
BPAW Bear Paw Mtn. 60.34 336 P **P** **04 35 04.3 +0.1**
BPAW IAmb IAmb 04 35 05.7
comp=Z,4.0nm,0.8s
BPAW Bear Paw Mtn. 60.34 336 P 04 35 04.7
baz=117
MLY Manley 60.66 337 P 04 35 07.4
baz=117,SNR=11
CHUM Lake Minchumin 60.77 335 P 04 35 07.2
baz=115
COLD Coldfoot 61.51 339 P 04 35 12.2
baz=119

TTA	**Tatalina**	**61.93**	**334**	P	**P**	**04 35 15.1**	**-0.1**
TTA				IAmb	IAmb	04 35 16.1	
	comp=Z,5.2nm,0.8s						
TTA	**Tatalina**	**61.93**	**334**	P		04 35 14.8	
	baz=111						
TOLK	**Toolik Lake Re**	**62.00**	**341**	P	**P**	**04 35 16.4**	**+0.9**
TOLK				IAmb	IAmb	04 35 17.3	
	comp=Z,3.8nm,0.8s						
TOLK	**Toolik Lake Re**	**62.00**	**341**	P		04 35 16.3	
	baz=120						
IMAR	**Indian Mountai**	**62.21**	**337**	P	**P**	**04 35 16.9**	**+0.1**
FALS	**False Pass**	**63.49**	**324**	P		04 35 27.4	
	baz=100						
ESDC	**Sonseca Array**	**82.20**	**51**	P	**P**	**04 37 17.3**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=298,slow=3.9,SNR=6.0						
ESDC				pP	**pP**	**04 37 26.0**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=296,slow=4.9,SNR=11						
ESDC				LR	LR	05 12 15.0	
	comp=Z,62nm,18.6s,baz=315,slow=35						
NOA	**NORSAR Array B**	**84.62**	**28**	pP	**pP**	**04 37 39.2**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=300,slow=5.3,SNR=4.1						
NOA				LR	LR	05 17 00.7	
	comp=Z,16nm,18.1s,baz=325,slow=37						
ARCES	**ARCESS Array B**	**85.67**	**17**	LR	LR	05 18 24.8	
	comp=Z,31nm,18.0s,baz=290,slow=38						
TORD	**Torodi Ar. Bea**	**94.54**	**75**	P	**P**	**04 38 15.4**	**-1.4**
	comp=Z,0.4nm,0.9s,baz=305,slow=4.1,SNR=1.9						
TORD	**Torodi Ar. Bea**	**94.54**	**75**	P	**P**	**04 38 15.7**	**-1.1**
STKA	**Stephens Creek**	**124.81**	**242**	PKP	**PKPdf**	**04 43 56.0**	**+0.2**
	comp=Z,0.4nm,0.2s,baz=60,slow=3.5,SNR=4.2						
WRA	**Warramunga Arr**	**131.19**	**257**	PKP	**PKPdf**	**04 44 08.6**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=80,slow=1.9,SNR=8.0						
WRA				pPKP	**pPKPdf**	**04 44 18.4**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=93,slow=2.5,SNR=3.7						
WRA	**Warramunga Arr**	**131.19**	**257**		**PKPdf**	**04 44 07.0**	**-1.3**
ASAR	**Alice Springs**	**131.75**	**252**	PKP	**PKPdf**	**04 44 09.4**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=82,slow=2.0,SNR=5.0						
ASAR	**Alice Springs**	**131.75**	**252**		**PKPdf**	**04 44 09.0**	**-0.3**

IDC 23 04:28:16.2±3.3, 1°17.5S×137°42.6E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/36, mbtmp3.1/3, ML3.0/1, Error ellipse: s-maj=127.5km s-min=31.9km az=81.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.90**	**189**	P	Pn	04 32 38.8	-0.2
	0.1nm,0.3s,baz=11,slow=12,SNR=2.6						
ASAR	**Alice Springs**	**22.62**	**188**	P	P	04 33 18.7	-0.2
	0.3nm,0.6s,baz=19,slow=11,SNR=2.4						
MKAR	**Makanchi Array**	**67.79**	**322**	P	P	04 39 16.0	0.0
	0.1nm,0.4s,baz=122,slow=7.0,SNR=2.2						

ISK 23 04:38:47.7, 38°.77N×26°.39E, h10km, ML2.6/25
DDA 23 04:38:48.1, 38°.76N×26°.41E, h11km±3km, ML2.6
ATH 23 04:38:49.6, 38°.79N×26°.35E, h17km±2km, ML2.1/3, Error ellipse: s-maj=3.4km s-min=1.1km az=272.0

ISC 23 04:38:48.6±0.9, 38°.77N±0°.02×26°.40E±0°.03, h14km±7km, n47, σ0s56/68, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBN	**Karaburun**	**0.21**	**145**	PG	**Pb**	**04 38 53.7**	**-0.6**
KRBN				SG	**Sg**	**04 38 57.5**	**+0.9**
FOCM	**Foa**	**0.27**	**102**	PG	**Pg**	**04 38 54.3**	**+0.1**
FOCM				SG	**Sg**	**04 38 58.4**	**+0.4**
URLA	**Izmir**	**0.44**	**159**	*i* P	**Pg**	**04 38 56.0**	**-1.2**
URLA				*i* S	**Sg**	**04 39 03.0**	**-0.2**
URLA	**Izmir**	**0.44**	**159**	PG	**Pg**	**04 38 56.5**	**-0.8**
URLA				SG	**Sg**	**04 39 03.5**	**+0.3**
CHOS	**Chios island**	**0.47**	**215**	P	**Pb**	**04 38 58.5**	**-0.1**
CHOS				S	**Sb**	**04 39 05.3**	**-0.1**
CHOS				AML	AML	04 39 09.3	
	comp=E,1222μm,0.2s						
CHOS				AML	AML	04 39 09.8	
	comp=N,530μm,0.2s						
PRK	**Paraskevi**	**0.49**	**348**	P	**Pb**	**04 38 58.7**	**-0.2**
PRK				S	**Sb**	**04 39 05.4**	**-0.5**
PRK				AML	AML	04 39 06.5	
	comp=N,915μm,0.6s						
PRK				AML	AML	04 39 09.7	
	comp=E,675μm,0.2s						
DKL	**Dikili**	**0.50**	**53**	PG	**Pg**	**04 38 58.2**	**-0.2**
DKL				SG	**Sg**	**04 39 05.4**	**+0.3**
ZEYE	**Izmir, Urla-Ze**	**0.54**	**171**	*i* P	**Pg**	**04 38 58.6**	**-0.5**
ZEDA	**zmir-Bergama**	**0.57**	**69**	*i* P	**Pg**	**04 38 59.1**	**-0.6**
ZEDA				*i* S	**Sg**	**04 39 06.5**	**-0.7**
AYVA	**Ayvalik**	**0.58**	**23**	*i* P	**Pg**	**04 38 59.6**	**-0.5**
AYVA				*i* S	**Sg**	**04 39 07.8**	**-0.1**
SIGR	**SIGRI**	**0.61**	**316**	P	**Pb**	**04 39 00.7**	**-0.3**
SIGR				S	**Sg**	**04 39 08.6**	**-0.1**
SIGR				AML	AML	04 39 11.9	
	comp=N,213μm,0.4s						
SIGR				AML	AML	04 39 12.2	
	comp=E,407μm,0.4s						
SIGR	**SIGRI**	**0.61**	**316**	PG	**Pg**	**04 39 00.4**	**-0.1**
SIGR				SG	**Sg**	**04 39 08.6**	**-0.1**
PSRA	**Psara**	**0.69**	**251**	P	**Pb**	**04 39 02.8**	**+0.4**
DGB	**zmir**	**0.81**	**152**	*i* P	**Pg**	**04 39 04.0**	**-0.3**
DGB				*i* S	**Sb**	**04 39 15.5**	**+0.3**
BUHA	**Balikesir, Bur**	**0.90**	**36**	*i* P	**Pg**	**04 39 05.8**	**-0.3**
BUHA				*i* S	**Sb**	**04 39 18.4**	**+0.6**
BUHA				IAML		04 39 20.0	
	comp=E,137nm,0.6s						
BAYC	**CANAKKALE_Bayr**	**0.98**	**7**	*i* P	**Pg**	**04 39 07.0**	**-0.5**
BAYC				*i* S	**Sb**	**04 39 20.5**	**+0.4**
BAYC				IAML		04 39 22.0	
	comp=E,218nm,0.4s						
BAYC				IAML		04 39 23.0	
	comp=N,134nm,0.3s						
EZN	**Ezine**	**1.06**	**357**	PG	**Pb**	**04 39 08.0**	**-0.6**
BOZC	**Bozcaada**	**1.10**	**346**	*i* P	**Pb**	**04 39 09.3**	**-0.1**
BOZC				*i* S	**Sb**	**04 39 23.7**	**0.0**
BOZC				*i* S	**Sg**	**04 39 24.2**	**-0.1**
BOZC	**Bozcaada**	**1.10**	**346**	PN	**Pb**	**04 39 08.9**	**-0.6**
SMG	**Samos**	**1.11**	**162**	P	**Pn**	**04 39 10.4**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.19**	**59**	*i* P	**Pn**	**04 39 10.6**	**-0.3**
STEP				*i* S	**Sn**	**04 39 27.8**	**+0.9**
STEP				IAML		04 39 30.0	
	comp=N,120nm,0.4s						
GCAM	**G?zelcaml?**	**1.25**	**148**	PN	**Pb**	**04 39 12.1**	**+0.1**
ECEA	**Canakkale, Ece**	**1.28**	**352**	*i* P	**Pg**	**04 39 13.5**	**+0.2**
ECEA				*i* S	**Sn**	**04 39 29.4**	**+0.3**
BALY	**Balya**	**1.36**	**44**	*i* P	**Pn**	**04 39 12.2**	**-0.9**
BALY				*i* S	**Sg**	**04 39 31.9**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.43**	**125**	PN	**Pb**	**04 39 14.7**	**-0.4**
BALB	**Balikesir**	**1.44**	**52**	PN	**Pn**	**04 39 14.1**	**+0.2**
GOKA	**anakkale-Gk**	**1.47**	**345**	*i* P	**Pn**	**04 39 13.5**	**-1.1**
GOKA				*i* S	**Sn**	**04 39 32.3**	**-1.4**
LIA	**Limnos Island**	**1.47**	**320**	P	**Pn**	**04 39 14.6**	**0.0**
GADA	**Gvkgeada**	**1.47**	**345**	PN	**Pn**	**04 39 15.0**	**+0.3**
LPK	**Lapseki**	**1.62**	**10**	PN	**Pn**	**04 39 17.0**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.63**	**2**	PN	**Pn**	**04 39 17.3**	**+0.5**
KRBG	**Karabiga-Canak**	**1.76**	**23**	PN	**Pn**	**04 39 19.2**	**+0.5**
KULA	**Kula-Manisa**	**1.79**	**97**	PN	**Pn**	**04 39 19.5**	**+0.4**
SMTH	**Samothraki Isl**	**1.83**	**339**	P	**Pb**	**04 39 21.8**	**+0.1**
APE	**Apeiranthos**	**1.83**	**202**	PN	**Pn**	**04 39 20.1**	**+0.4**
ERIK	**Erikli-Kesan**	**1.90**	**3**	PN	**Pn**	**04 39 21.1**	**+0.5**
EDC	**Edincik**	**1.94**	**35**	PN	**Pn**	**04 39 21.7**	**+0.6**
ENEZ	**Enez**	**1.97**	**355**	PN	**Pn**	**04 39 22.2**	**+0.6**
RKY	**Sarkoy-Tekirda**	**2.01**	**17**	PN	**Pn**	**04 39 22.6**	**+0.5**
MAR6	**Marsite Statio**	**2.04**	**19**	PN	**Pn**	**04 39 23.2**	**+0.6**
MRMT	**Marmara Adasi**	**2.05**	**26**	PN	**Pn**	**04 39 23.2**	**+0.5**
KESN	**Edirne-Kesan**	**2.06**	**6**	*i* P	**Pb**	**04 39 26.0**	**-0.1**
KESN				*i* S	**Sb**	**04 39 53.1**	**+1.4**
KESN				IAML		04 39 56.0	
	comp=N,52nm,0.6s						
MAR3	**Marsite Statio**	**2.09**	**19**	PN	**Pn**	**04 39 23.9**	**+0.7**
GZKV	**Gazikoy-Tekird**	**2.10**	**20**	PN	**Pn**	**04 39 23.8**	**+0.5**
KCTX	**Karacabey (Bur**	**2.13**	**45**	PN	**Pn**	**04 39 24.3**	**+0.6**
MAR4	**Marsite Statio**	**2.13**	**19**	PN	**Pn**	**04 39 24.5**	**+0.7**
ALN	**Alexandroupoli**	**2.14**	**353**	PN	**Pn**	**04 39 24.5**	**+0.6**

IDC 23 04:45:44.1±2.2, 24°.01S×180°.00W, h513km±21km, mb3.2/4, mb1 3.5/6, mb1mx3.1/33, mbtmp4.0/6, Error ellipse: s-maj=41.0km s-min=20.5km az=152.0

ISC 23 04:45:44.3±0.9, 24°.1S±0°.1×180°.0W±0°.2, h518km, n8, σ1s14/10, mb3.7/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.58**	**343**	P	**P**	**04 47 26.8**	**-0.3**
	1.0nm,0.3s,baz=258,slow=20,SNR=6.1						
URZ	**Urewera**	**14.35**	**189**	P	**P**	**04 48 48.0**	**+0.8**
	0.5nm,0.3s,baz=304,slow=23,SNR=1.4						
URZ				S	**S**	**04 51 16.9**	**-1.3**
	0.0nm,0.3s,baz=301,slow=23,SNR=1.1						
ASAR	**Alice Springs**	**42.02**	**261**	P	**P**	**04 52 50.5**	**+0.2**
	1.0nm,0.3s,baz=99,slow=7.1,SNR=14						
ASAR				ScP	**ScP**	**04 57 36.8**	**+2.4**
	0.5nm,0.7s,baz=111,slow=3.9,SNR=3.5						
WRA	**Warramunga Arr**	**42.41**	**266**	P	**P**	**04 52 53.0**	**-0.4**
	2.9nm,0.4s,baz=101,slow=8.4,SNR=23						
TXAR	**Lajitas Array**	**90.51**	**58**	P	**P**	**04 57 51.5**	**+0.4**
	0.4nm,0.7s,baz=218,slow=5.7,SNR=7.7						
PDAR	**Pinedale Array**	**92.81**	**44**	P	**P**	**04 58 01.2**	**-0.3**
	0.2nm,0.6s,baz=194,slow=5.5,SNR=1.7						
ARCES	**ARCESS Array B**	**132.06**	**348**	PKP	**PKPdf**	**05 03 57.7**	**-0.3**
	3.5nm,0.9s,baz=54,slow=3.1,SNR=6.3						
AKASG	**Malin Array Be**	**145.13**	**327**	PKPbc	**PKPdf**	**05 04 21.5**	**-0.8**
	0.5nm,0.3s,baz=38,slow=3.7,SNR=4.9						

NEIC 23 04:49:13.8±1.5, 17°.64S±0°.06×69°.47W±0°.07, h168km±4km, mb4.7/14, ML4.4(GUC), Error ellipse: s-maj=10.3km s-min=7.6km az=116.0
VAO 23 04:49:14.8±0.6, 17°.54S×69°.30W, h161km, mb4.5
GUC 23 04:49:14.4±0.7, 17°.54S×69°.48W, h161km±4km, ML4.5
IDC 23 04:49:15.6±0.8, 17°.54S×69°.24W, h164km±5km, mb3.7/14, mb1 3.9/17, mb1mx3.7/44, mbtmp4.2/17, Error ellipse: s-maj=13.9km s-min=11.9km az=16.0

ISC 23 04:49:13.9±0.5, 17°.64S±0°.04×69°.48W±0°.05, h165km±4km, n124, σ1s22/146, mb4.1/18, 4D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.70**	**182**	*e*P	**Pn**	**04 49 39.8**	**+1.2**
PB16				*i* S	**Sn**	**04 49 58.8**	**+1.0**
PB16	**IPOC Station P**	**0.70**	**182**	Pn	**Pn**	**04 49 39.9**	**+1.2**
PB16				Sn	**Sn**	**04 49 58.3**	**+0.5**
AP01	**Chacalluta**	**1.10**	**228**	*e*P	**Pn**	**04 49 41.1**	**+0.2**
AP01				*i* S	**Sn**	**04 50 01.6**	**-0.1**
AP01				IAML		04 50 02.1	
	comp=N,10μm,0.3s						
AP01	**Chacalluta**	**1.10**	**228**		**Pn**	**04 49 41.3**	**+0.5**
AP01				Sn	**Sn**	**04 50 01.6**	**-0.1**
MNMC	**Minye Minye**	**1.49**	**184**	*e*P	**Pn**	**04 49 45.9**	**+1.0**
MNMC				*i* S	**Sn**	**04 50 09.4**	**+0.7**
MNMC				IAML		04 50 13.0	
	comp=E,3μm,0.2s						
MNMC	**Minye Minye**	**1.49**	**184**		**Pn**	**04 49 45.9**	**+1.0**
MNMC				Sn	**Sn**	**04 50 09.0**	**+0.2**
I08BO	**LAS PENAS INFR**	**1.72**	**35**	P	**Pn**	**04 49 50.0**	**+2.5**
	baz=225,slow=12,SNR=7.9						
LPAZ	**La Paz**	**1.86**	**44**	P	**Pn**	**04 49 49.1**	**0.0**
	comp=E,539nm,0.3s,baz=245,slow=5.7						
LPAZ				S	**Sn**	**04 50 13.7**	**-2.5**
	comp=E,20nm,0.3s,baz=104,slow=18,SNR=2.2						
LPAZ	**La Paz**	**1.86**	**44**	⇓*i*P	**Pn**	**04 49 49.3**	**+0.2**
PSGC	**Pisagua**	**2.04**	**197**	*e*P	**Pn**	**04 49 50.9**	**+0.4**
PSGC				*i* S	**Sn**	**04 50 17.8**	**-1.2**
PSGC				IAML		04 50 18.7	
	comp=N,3μm,0.3s						
PSGCX	**Pisagua**	**2.04**	**197**	Pn	**Pn**	**04 49 50.9**	**+0.4**
PSGCX				Sn	**Sn**	**04 50 17.6**	**-1.3**
PB11	**IPOC Station P**	**2.12**	**184**	*e*P	**Pn**	**04 49 52.3**	**+0.8**
PB11				*i* S	**Sn**	**04 50 20.7**	**0.0**
PB11				IAML		04 50 23.6	
	comp=E,2μm,0.2s						
PB11	**IPOC Station P**	**2.12**	**184**		**Pn**	**04 49 52.0**	**+0.6**
PB11				Sn	**Sn**	**04 50 20.1**	**-0.6**
PB08	**IPOC Station P**	**2.51**	**173**	*e*P	**Pn**	**04 49 57.9**	**+1.6**
PB08				*i* S	**Sn**	**04 50 30.2**	**+1.1**
PB08	**IPOC Station P**	**2.51**	**173**		**Pn**	**04 49 57.6**	**+1.3**
TA02	**Huaiquique**	**2.69**	**193**	*e*P	**Pn**	**04 49 58.1**	**+0.1**
TA02				*i* S	**Sn**	**04 50 30.4**	**-2.0**
TA02				IAML		04 50 33.5	
	comp=E,2μm,0.1s						
TA02	**Huaiquique**	**2.69**	**193**		**Pn**	**04 49 58.2**	**+0.1**
TA01	**Diego Aracena**	**2.99**	**193**	*e*P	**Pn**	**04 50 01.8**	**+0.1**
TA01	**Diego Aracena**	**2.99**	**193**	Pn	**Pn**	**04 50 01.6**	**-0.1**
PATCX	**Punta Patache**	**3.23**	**191**	*e*P	**Pn**	**04 50 05.4**	**+0.6**
PATCX	**Punta Patache**	**3.23**	**191**		**Pn**	**04 50 05.1**	**+0.3**
PB01	**IPOC Station P**	**3.39**	**180**	*e*P	**Pn**	**04 50 07.4**	**+0.6**
PB01	**IPOC Station P**	**3.39**	**180**		**Pn**	**04 50 06.8**	**0.0**
PB07	**IPOC Station P**	**4.09**	**185**	⇓*i*P	**Pn**	**04 50 16.6**	**+0.8**
PB07	**IPOC Station P**	**4.09**	**185**		**Pn**	**04 50 15.8**	**0.0**
PB09	**IPOC Station P**	**4.15**	**177**		**Pn**	**04 50 16.9**	**+0.3**
PB03	**IPOC Station P**	**4.40**	**183**	⇓*i*P	**Pn**	**04 50 20.5**	**+0.7**
PB04	**IPOC Station P**	**4.72**	**188**		**Pn**	**04 50 23.8**	**-0.2**
LVC	**Limon Verde**	**4.98**	**174**	P	**Pn**	**04 50 28.7**	**+1.2**
	comp=E,14nm,0.3s,baz=343,slow=6.6,SNR=46						
LVC				S	**Sn**	**04 51 23.2**	**-2.1**
	comp=E,31nm,0.3s,baz=186,slow=19,SNR=21						
LVC	**Limon Verde**	**4.98**	**174**	*e*P	**Pn**	**04 50 28.8**	**+1.2**
LVC	**Limon Verde**	**4.98**	**174**	Pn	**Pn**	**04 50 27.8**	**+0.2**
LVC				Sn	**Sn**	**04 51 23.1**	**-2.1**
LVC	**Limon Verde**	**4.98**	**174**	*e*P	**Pn**	**04 50 28.8**	**+1.2**
PB06	**IPOC Station P**	**5.05**	**181**	⇓*i*P	**Pn**	**04 50 28.5**	**+0.2**
PB06	**IPOC Station P**	**5.05**	**181**		**Pn**	**04 50 28.2**	**-0.1**
PB15	**IPOC Station P**	**5.54**	**180**		**Pn**	**04 50 34.9**	**0.0**
PB10	**IPOC Station P**	**5.93**	**190**	Pn	**Pn**	**04 50 39.0**	**-0.8**
PB10					**Sn**	**04 51 44.5**	**-2.8**
PB14	**IPOC Station P**	**7.01**	**187**	Pn	**Pn**	**04 50 53.2**	**-1.2**
GO02	**Mina Guanaco**	**7.49**	**181**		**Pn**	**04 51 00.3**	**-0.4**
ETMB	**Extrema**	**8.39**	**23**	*e*P	**Pn**	**04 51 10.7**	**-1.8**
AC01	**Pan de Azucar**	**8.54**	**187**	Pn	**Pn**	**04 51 12.1**	**-2.2**
NNA	**Nana**	**9.06**	**307**	P	**Pn**	**04 51 21.4**	**0.0**
	comp=E,6.7nm,0.3s,baz=136,slow=11,SNR=12						
NNA				S	**Sn**	**04 52 56.3**	**-6.1**
	comp=E,4.1nm,0.3s,baz=193,slow=21,SNR=7.6						
NNA	**Nana**	**9.06**	**307**		**Pn**	**04 51 21.1**	**-0.4**
AC02	**Maricunga**	**9.16**	**178**	Pn	**Pn**	**04 51 22.7**	**-0.4**
VILB	**Vilhena**	**10.09**	**64**	*e*P	**Pn**	**04 51 32.4**	**-2.6**
PTLB	**Pontes e Lacer**	**10.16**	**79**	*e*P	**Pn**	**04 51 33.4**	**-2.4**
CO03	**El Pedregal**	**13.19**	**185**	Pn	**Pn**	**04 52 15.2**	**+0.2**
AQDB	**Aquidauana**	**13.34**	**104**	*e*P	**Pn**	**04 52 16.6**	**-0.3**
CPUP	**Villa Florida**	**14.20**	**130**	P	**Pn**	**04 52 28.3**	**+0.6**
	comp=E,0.3nm,0.3s,baz=313,slow=13,SNR=5.5						
CLDB	**Colider**	**14.87**	**65**	*e*P	**Pn**	**04 52 35.5**	**-0.6**
VA03	**San Esteban**	**15.10**	**183**		**Pn**	**04 52 38.9**	**0.0**
VA03				IAmb	IAmb	04 52 44.7	
	comp=Z,24nm,1.0s						
MT02	**Curacav**	**15.63**	**185**		**Pn**	**04 52 45.5**	**+0.2**
MT09	**Talagante**	**16.13**	**185**		**P**	**04 52 52.4**	**+0.7**
TRCB	**Terra Rica**	**16.62**	**111**	*e*P	**Pn**	**04 52 57.2**	**-0.3**
BO01	**Tunca**	**16.75**	**185**	P	**P**	**04 52 57.0**	**-1.4**
BO01				IAmb	IAmb	04 53 03.8	
	comp=Z,9.4nm,0.7s						
MACA	**Manacapuru-AM**	**16.77**	**32**	*e*P	**P**	**04 52 58.5**	**-0.3**
ARAG	**Araguaiana, MT**	**17.04**	**86**	*e*P	**P**	**04 53 01.5**	**-0.1**
NPGB	**Novo Progresso**	**17.34**	**54**	*e*P	**P**	**04 53 03.6**	**-1.3**
PCMB	**Paraembu**	**17.61**	**106**	*e*P	**P**	**04 53 07.8**	**-0.2**
PTGB	**Pitanga**	**17.70**	**116**	*e*P	**Pn**	**04 53 09.3**	**-1.1**
ITRB	**Iturama**	**18.24**	**99**	*e*P	**P**	**04 53 15.2**	**+0.4**
ITAB	**Concordia**	**18.65**	**124**	*e*P	**P**	**04 53 19.1**	**-0.1**
ITTB	**Itaituba**	**18.85**	**47**	*e*P	**P**	**04 53 20.4**	**-1.0**
PTGA	**Pitinga**	**19.23**	**30**	P	**P**	**04 53 24.4**	**-1.1**
	comp=Z,9.5nm,0.3s,baz=199,slow=16,SNR=71						
PTGA	**Pitinga**	**19.23**	**30**	P	**P**	**04 53 24.8**	**-0.8**
PTGA	**Pitinga**	**19.23**	**30**	*e*P	**P**	**04 53 24.6**	**-1.0**
CPSB	**Cacapava Do Su**	**19.37**	**134**	*e*P	**P**	**04 53 27.4**	**+0.4**
FRTB	**Fartura**	**19.50**	**110**	*e*P	**P**	**04 53 28.1**	**-0.3**
BB19B	**Bebedouro**	**20.06**	**103**	*e*P	**P**	**04 53 34.2**	**-0.4**
PLTB	**Pedras Altas**	**20.11**	**137**	*e*P	**P**	**04 53 34.6**	**-0.3**
IPMB	**Ipameri, GO**	**20.26**	**94**	*e*P	**P**	**04 53 35.5**	**-1.1**
CNLB	**Canela**	**20.64**	**128**	*e*P	**P**	**04 53 40.2**	**-0.3**
BDFB	**Brasilia**	**20.66**	**88**	P	**P**	**04 53 40.0**	**-1.1**
	comp=Z,15nm,0.4s,baz=254,slow=9.6,SNR=18						
BDFB	**Brasilia**	**20.66**	**88**	P	**P**	**04 53 39.4**	**-1.7**
BDFB				IAmb	IAmb	04 53 43.7	
	comp=Z,16nm,0.5s						
PEXB	**Peixe**	**21.19**	**78**	*e*P	**P**	**04 53 45.5**	**-1.1**
TER01	**Tubaro-SC**	**21.60**	**124**	*e*P	**P**	**04 53 51.1**	**+0.2**
MALB	**Monte Alegre**	**21.67**	**45**	*e*P	**P**	**04 53 50.9**	**-0.7**
VAO	**Valinhos**	**21.77**	**108**	*e*P	**P**	**04 53 51.7**	**-1.0**
BOAV	**Boa Vista**	**21.78**	**25**	*e*P	**P**	**04 53 52.4**	**-0.4**
PRPB	**Parauapebas**	**22.33**	**62**	*e*P	**P**	**04 53 56.9**	**-1.4**
SMTB	**Santa Maria do**	**23.00**	**71**	*e*P	**P**	**04 54 04.2**	**-0.3**
BSCB	**Bom Sucesso**	**23.55**	**102**	*e*P	**P**	**04 54 09.8**	**+0.3**

MCPB	**Macapa, AP**	**24.26**	**47**	*e*P	**P**	**04 54 15.6**	**-0.4**
JANB	**Januaria**	**24.28**	**88**	*e*P	**P**	**04 54 15.3**	**-0.9**
SDBA	**SAO DESIDERIO**	**24.29**	**81**	*e*P	**P**	**04 54 16.1**	**-0.2**
BSFB	**Barra de Sao F**	**27.21**	**97**	*e*P	**P**	**04 54 42.8**	**+0.3**
RIB01	**Linhares ES**	**27.63**	**98**	*e*P	**P**	**04 54 46.8**	**+0.6**
NAN01	**Guarapari, ES**	**27.95**	**95**	*e*P	**P**	**04 54 49.6**	**+0.6**
MDP	**Montagnes des**	**28.05**	**38**	P	**P**	**04 54 49.4**	**-0.5**
	comp=Z,4.5nm,0.5s,baz=210,slow=9.7,SNR=12						
NBIT	**Itapeh - BA**	**28.95**	**89**	*e*P	**P**	**04 54 57.9**	**-0.1**
GDU01	**Guandu, BA**	**29.04**	**87**	*e*P	**P**	**04 54 58.8**	**0.0**
NBLA	**Lagarto - SE**	**31.38**	**82**	*e*P	**P**	**04 55 18.7**	**-0.7**
NBPB	**Pedra_Branca-C**	**31.60**	**71**	*e*P	**P**	**04 55 20.1**	**-1.0**
NBMA	**Muriti-CE**	**31.63**	**75**	*e*P	**P**	**04 55 21.8**	**+0.2**
NBAN	**Anadia - AL**	**33.18**	**81**	*e*P	**P**	**04 55 34.2**	**-0.9**
RCBR	**Riachuelo**	**34.84**	**74**	P	**P**	**04 55 48.9**	**-0.5**
	comp=Z,7.9nm,0.8s,baz=228,slow=7.8,SNR=7.7						
RCBR	**Riachuelo**	**34.84**	**74**	P	**P**	**04 55 48.9**	**-0.5**
RCBR				IAmb	IAmb	04 55 51.7	
	comp=Z,12nm,0.9s						
APG	**El Apazote**	**38.47**	**326**	P	**P**	**04 56 22.6**	**+2.3**
	comp=Z,2.4nm,0.7s,baz=119,slow=16,SNR=5.3						
TEIG	**Tepich**	**41.90**	**333**	P	**P**	**04 56 50.0**	**+1.8**
	comp=Z,4.5nm,0.7s,baz=116,slow=18,SNR=1.4						
CMIG	**Matias Romero**	**42.62**	**323**	P	**P**	**04 56 56.2**	**+2.1**
	comp=Z,1.3nm,0.5s,baz=80,slow=7.3,SNR=6.3						
342A	**Flagon Creek P**	**53.44**	**336**	P	**P**	**04 58 14.7**	**-2.2**
342A				IAmb	IAmb	04 58 15.3	
	comp=Z,14nm,0.6s						
TXAR	**Lajitas Array**	**57.18**	**324**	P	**P**	**04 58 45.5**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=157,slow=7.5,SNR=8.1						
TXAR	**Lajitas Array**	**57.18**	**324**	P	**P**	**04 58 42.6**	**-1.2**
GDL2	**Guadalupe Moun**	**59.77**	**326**		**S**	**05 06 59.8**	**-0.2**
ANMO	**Albuquerque**	**62.99**	**326**	P	**P**	**04 59 24.9**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=175,slow=11,SNR=2.1						
SDCO	**Great Sand Dun**	**64.67**	**329**	P	**P**	**04 59 34.3**	**-0.1**
DBIC	**Dimbokro**	**68.21**	**75**	P	**P**	**04 59 57.1**	**+0.1**
	comp=Z,30nm,0.6s,baz=226,slow=6.8,SNR=47						
DBIC	**Dimbokro**	**68.21**	**75**	P	**P**	**04 59 56.8**	**-0.3**
E28A	**Huff**	**69.84**	**338**	P	**P**	**05 00 05.0**	**-1.5**
E28A				IAmb	IAmb	05 00 09.3	
	comp=Z,8.6nm,0.5s						
PDAR	**Pinedale Array**	**70.51**	**330**	P	**P**	**05 00 13.2**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=124,slow=8.1,SNR=4.4						
PDAR	**Pinedale Array**	**70.51**	**330**	P	**P**	**05 00 11.3**	**+0.4**
ULM	**Lac du Bonnet**	**71.49**	**342**	P	**P**	**05 00 17.2**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=147,slow=5.9,SNR=11						
KOWA	**Kowa**	**72.02**	**68**	P	**P**	**05 00 20.8**	**+0.5**
KOWA				IAmb	IAmb	05 00

	3.8nm,0.3s								
IZV					Lg		Lg	04 52 52.8	
	11nm,0.4s								
DGS	**Degeres**	**3.25**	**6**	*e*P		**Pg**		**04 52 09.3**	**-0.7**
	6.0nm,0.5s								
DGS				*e*S		**Sg**		**04 52 55.3**	**+3.1**
	12nm,0.5s								
DGS	**Degeres**	**3.25**	**6**	Pg		**Pg**		**04 52 09.3**	**-0.7**
	6.0nm,0.5s								
DGS				Lg		Lg		04 52 55.3	
	12nm,0.5s								
TNSS	**Tian-Shan**	**3.26**	**21**	*e*P		**Pg**		**04 52 09.4**	**-0.9**
	2.4nm,0.4s								
TNSS				*e*S		**Sg**		**04 52 55.0**	**+2.4**
	9.4nm,0.8s								
TNSS	**Tian-Shan**	**3.26**	**21**	Pg		**Pg**		**04 52 09.4**	**-0.9**
	2.4nm,0.4s								
TNSS				Lg		Lg		04 52 55.0	
	9.4nm,0.8s								
MNAS	**Manas**	**3.27**	**320**⇑	*e*P		**Pb**		**04 52 03.1**	**-2.6**
	baz=21								
MNAS				⇑*i*S		**Sb**		**04 52 45.4**	**-0.1**
	baz=21								
MDOK	**Medeo**	**3.41**	**22**	*e*P		**Pg**		**04 52 11.7**	**-1.3**
	3.9nm,0.2s								
MDOK				*e*S		**Sg**		**04 52 59.0**	**+1.8**
	11nm,0.9s								
MDOK	**Medeo**	**3.41**	**22**	Pg		**Pg**		**04 52 11.8**	**-1.3**
	2.7nm,0.5s								
MDOK				⇑Lg		Lg		04 52 57.7	
	14nm,0.7s								
MDOK	**Medeo**	**3.41**	**22**	Pg		**Pg**		**04 52 11.7**	**-1.3**
	3.9nm,0.2s								
MDOK				Lg		Lg		04 52 59.0	
	11nm,0.9s								
SGDS	**Sogindy**	**3.48**	**352**	Pg		**Pg**		**04 52 13.8**	**-0.6**
	2.9nm,0.2s								
SGDS				Lg		Lg		04 53 03.0	
	3.6nm,0.5s								
KOTS	**Kotyrbulak**	**3.49**	**22**	*e*P		**Pg**		**04 52 13.5**	**-1.2**
	5.9nm,0.4s								
KOTS				*e*S		**Sg**		**04 53 02.1**	**+2.2**
	29nm,0.7s								
KOTS	**Kotyrbulak**	**3.49**	**22**	Pg		**Pg**		**04 52 13.5**	**-1.2**
	5.9nm,0.4s								
KOTS				Lg		Lg		04 53 02.1	
	29nm,0.7s								
KRBS	**Karabastau**	**3.70**	**4**	*e*P		**Pg**		**04 52 16.9**	**-1.6**
	2.5nm,0.4s								
KRBS				*e*S		**Sg**		**04 53 08.0**	**+1.5**
	6.0nm,0.6s								
KRBS	**Karabastau**	**3.70**	**4**	Pg		**Pg**		**04 52 16.9**	**-1.6**
	2.5nm,0.4s								
KRBS				Lg		Lg		04 53 08.0	
	6.0nm,0.6s								
KTBS	**Karatobe**	**3.84**	**15**	*e*P		**Pg**		**04 52 19.9**	**-1.4**
	1.0nm,0.3s								
KTBS				*e*S		**Sg**		**04 53 13.3**	**+2.3**
	16nm,0.5s								
KTBS	**Karatobe**	**3.84**	**15**	Pg		**Pg**		**04 52 19.9**	**-1.4**
	1.0nm,0.3s								
KTBS				Lg		Lg		04 53 13.3	
	16nm,0.5s								
IUG	**luzhnay**	**4.54**	**300**	*e*P		**Pg**		**04 52 32.3**	**-2.4**
	95nm,0.4s								
IUG				*e*S		**Sg**		**04 53 34.2**	**+0.8**
	9.6nm,0.6s								
IUG	**luzhnay**	**4.54**	**300**	Pg		**Pb**		**04 52 27.5**	**+0.1**
	119nm,0.3s								
IUG				Lg		Lg		04 53 26.5	
	5.5nm,0.5s								

*IDC **23** 05:08:30.6±1.6,5°.52S×152°.79E, h0km, mb3.9/10, mb1 4.1/10,mb1mx3.9/41,mbtmp3.9/10,MS3.2/1, Ms1 3.2/1,ms1mx2.5/36,Error ellipse: s-maj=55.6km s-min=22.3km az=122.0*

ISC 23 05:08:36.2±1.5,5°.5S±0°.2×152°.8E±0°.3,h37km,n13, σ1§17/13,mb3.7/10,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.80**	**235**	Pn	**Pn**	**05 10 15.3**	**+1.8**
	3.2nm,0.3s,baz=21,slow=8.6,SNR=2.3						
PMG				Sn	**Sn**	**05 11 29.3**	**-0.4**
	2.3nm,0.3s,baz=12,slow=20,SNR=6.1						
WRA	**Warramunga Arr**	**22.98**	**230**	P	**P**	**05 13 38.0**	**+0.2**
	1.7nm,0.8s,baz=54,slow=9.8,SNR=7.4						
ASAR	**Alice Springs**	**25.63**	**223**	P	**P**	**05 14 01.9**	**-0.6**
	1.6nm,0.8s,baz=55,slow=8.6,SNR=15						
STKA	**Stephens Creek**	**28.25**	**200**	LR	LR	05 26 55.7	
	comp=Z,48nn,18.2s,baz=226,slow=39						
FITZ	**Fitzroy Crossi**	**29.33**	**242**	P	**P**	**05 14 33.6**	**-2.0**
	3.1nm,0.9s,baz=72,slow=6.4,SNR=1.8						
CMAR	**Chiang Mai Arr**	**58.18**	**296**	P	**P**	**05 18 26.5**	**-0.5**
	0.6nm,0.3s,baz=98,slow=3.7,SNR=1.4						
SONM	**Songino Array**	**66.93**	**328**	P	**P**	**05 19 25.8**	**+0.8**
	0.3nm,0.5s,baz=132,slow=7.9,SNR=1.8						
MKAR	**Makanchi Array**	**80.86**	**319**	P	**P**	**05 20 46.7**	**+0.2**
	0.3nm,0.6s,baz=116,slow=8.2,SNR=3.8						
ILAR	**Eielson Array**	**82.82**	**22**	P	**P**	**05 20 55.3**	**-1.1**
	0.5nm,0.7s,baz=243,slow=4.0,SNR=3.8						
KURBB	**Kurchatov Arra**	**84.36**	**322**	P	**P**	**05 21 04.0**	**-0.6**
	0.9nm,0.9s,baz=118,slow=3.8,SNR=8.2						
AAK	**Ala-Archa**	**85.16**	**314**	P	**P**	**05 21 10.1**	**+1.1**
	1.3nm,0.5s,baz=90,slow=6.1,SNR=4.3						
YKA	**Yellowknife Ar**	**96.05**	**28**	P	**P**	**05 22 00.9**	**+1.4**
	0.2nm,0.8s,baz=271,slow=4.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**150.52**	**287**	PKPbc	**PKPbc**	**05 28 24.7**	**-0.5**
	0.2nm,0.6s,baz=85,slow=2.6,SNR=1.7						

*TUL **23** 05:20:01.4±1.7,36°.62N±0°.02×97°.66W±0°.05, h7km±7km, ML3.0,mb_Lg3.1/77(NEIC),Error ellipse: s-maj=5.6km s-min=2.1km az=69.0*

*ANF **23** 05:20:01.3±0.3,36°.59N×97°.65W, h7km, ML3.4/6,Error ellipse: s-maj=3.2km s-min=2.7km az=172.0*

*NEIC **23** 05:20:01.3±0.9,36°.60N±0°.01×97°.67W±0°.03, h6km±7km, Error ellipse: s-maj=3.6km s-min=1.4km az=66.0*

*IDC **23** 05:20:02.0±1.9,36°.64N×97°.74W, h0km, mb3.4/1, mb1 3.4/4,mb1mx3.2/48,mbtmp3.1/4,ML3.6/2,MS3.2/1, Ms1 3.3/1,ms1mx2.3/22,Error ellipse: s-maj=31.1km s-min=13.6km az=100.0*

ISC 23 05:20:01.3±1.0,36°.61N±0°.02×97°.67W±0°.02,h11km±8km, n94,σ1§02/73,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.28**	**247**		**Pg**	**05 20 07.2**	**+0.2**
CROK				Sg	**Sb**	**05 20 11.4**	**-1.6**
GC02	**Grant County #**	**0.28**	**327**		**Pg**	**05 20 07.2**	**+0.1**
GC02				Sg	**Sg**	**05 20 11.4**	**+0.4**
KAN17	**Caldwell West**	**0.44**	**350**	Pg	**Pg**	**05 20 10.0**	**0.0**
KAN17				Sg	**Sg**	**05 20 16.0**	**+0.3**
OK032	**Salt Plains WL**	**0.48**	**294**		**Pg**	**05 20 10.8**	**+0.1**
OK032				Sg	**Sg**	**05 20 17.5**	**+0.5**
KAN05	**Bluff City Nor**	**0.52**	**342**		**Pg**	**05 20 11.6**	**0.0**
KAN09	**Caldwell North**	**0.52**	**4**		**Pg**	**05 20 11.5**	**-0.1**
KAN09				Sg	**Sg**	**05 20 18.6**	**+0.1**
KAN01	**Argonia South**	**0.55**	**352**		**Pg**	**05 20 11.8**	**-0.1**
KAN01				Sg	**Sg**	**05 20 19.3**	**+0.2**
KAN10	**Anthony SW Sta**	**0.61**	**326**		**Pg**	**05 20 13.3**	**0.0**
KAN10				Sg	**Sg**	**05 20 21.7**	**+0.3**
KS20	**Mayfield South**	**0.62**	**8**		**Pg**	**05 20 13.2**	**-0.2**
KAN08	**Anthony NE Sta**	**0.66**	**338**		**Pg**	**05 20 14.2**	**0.0**
KAN16	**Harper SW Stat**	**0.69**	**333**	Pg	**Pg**	**05 20 14.6**	**-0.1**
KAN12	**Harper NE Stat**	**0.73**	**339**		**Pg**	**05 20 15.6**	**+0.1**
OK029	**Liberty Lake**	**0.83**	**168**		**Pg**	**05 20 17.2**	**-0.1**
QUOK	**Quay**	**0.89**	**119**		**Pg**	**05 20 18.2**	**-0.2**
OK031	**S. Brethren Rd**	**0.94**	**134**		**Pg**	**05 20 19.1**	**-0.2**
BCOK	**Bluff Creek, N**	**0.95**	**177**		**Pg**	**05 20 19.4**	**-0.3**
T35A	**Sooner Cattle**	**0.97**	**72**	Pg	**Pg**	**05 20 19.5**	**-0.5**
T35B	**Sooner Cattle**	**0.97**	**72**	P	**Pg**	**05 20 19.6**	**-0.5**
	baz=253						
T35B				S	**Sg**	**05 20 32.1**	**-0.6**
	baz=253						
T35B	**Sooner Cattle**	**0.97**	**72**	P		05 20 19.6	
	baz=253						
T35B				S		05 20 32.1	
	baz=253						
OK030	**Cody Creek RV**	**0.99**	**134**		**Pg**	**05 20 20.0**	**-0.4**
OK025	**Westminster Rd**	**1.06**	**165**		**Pg**	**05 20 21.6**	**-0.2**
U32A	**Winter Ranch,**	**1.10**	**258**		**Pg**	**05 20 22.0**	**-0.5**
U32A	**Winter Ranch,**	**1.10**	**258**	P	**Pg**	**05 20 22.0**	**-0.5**
	baz=77						
U32A				S	**Sn**	**05 20 37.2**	**-0.7**
	baz=77						
U32A	**Winter Ranch,**	**1.10**	**258**	P		05 20 22.0	
	baz=77						
U32A				S		05 20 37.2	
	baz=77						
OKCFA	**Oklahoma City**	**1.21**	**172**		**Pb**	**05 20 24.1**	**-0.1**
OKCFA	**Oklahoma City**	**1.21**	**172**	P	**Pb**	**05 20 24.0**	**-0.1**
	baz=352						
OKCFA				S	**Sn**	**05 20 40.4**	**-0.1**
	baz=352						
OKCFA	**Oklahoma City**	**1.21**	**172**	P		05 20 24.0	
	baz=352						
OKCFA				S		05 20 40.4	
	baz=352						
OKCSW	**OKLAHOMA CITY**	**1.22**	**171**		**Pn**	**05 20 24.3**	**0.0**
FNO	**Franklin**	**1.37**	**171**		**Pg**	**05 20 27.6**	**0.0**
TUL1	**Leonard**	**1.67**	**114**	P	**Pn**	**05 20 31.4**	**+1.0**
	baz=296						
TUL1				S	**Sb**	**05 20 53.6**	**+0.6**
	baz=296						
TUL1	**Leonard**	**1.67**	**114**	P		05 20 31.4	
	baz=296						
TUL1				S		05 20 53.6	
	baz=296						
R32A	**Long Quarter,**	**1.99**	**336**		**Pb**	**05 20 36.8**	**-0.7**
R32A	**Long Quarter,**	**1.99**	**336**	P	**Pb**	**05 20 36.9**	**-0.7**
	baz=155						
R32A				S	**Sb**	**05 21 02.2**	**-0.1**
	baz=155						
R32A	**Long Quarter,**	**1.99**	**336**	P		05 20 36.9	
	baz=155						
R32A				S		05 21 02.2	
	baz=155						
WMOK	**Wichita Mounta**	**2.08**	**206**		**Pn**	**05 20 37.2**	**+1.1**
WMOK	**Wichita Mounta**	**2.08**	**206**	P	**Pn**	**05 20 37.3**	**+1.1**
	baz=26						
WMOK	**Wichita Mounta**	**2.08**	**206**	P		05 20 37.3	
	baz=26						
KSU1	**Kansas State U**	**2.62**	**18**	Pn	**Pn**	**05 20 45.0**	**+1.5**
U38A	**Gravette**	**2.65**	**93**		**Pn**	**05 20 45.7**	**+1.7**
U38A				IAmb_Lg		05 21 29.7	
	comp=Z,38nn,0.7s						
CBKS	**Cedar Bluff**	**2.74**	**324**		**Pn**	**05 20 46.0**	**+0.7**
X37A	**Clayton**	**2.75**	**137**		**Pn**	**05 20 47.0**	**+1.6**
HHAR	**Hobbs**	**3.02**	**95**	Pn	**Pn**	**05 20 50.7**	**+1.6**
S39A	**Bolivar**	**3.63**	**71**	IAmb_Lg		05 21 58.8	
	comp=Z,40nn,0.7s						
S39A	**Bolivar**	**3.63**	**71**	P	**Pn**	**05 20 58.3**	**+0.8**
	baz=254						
S39A	**Bolivar**	**3.63**	**71**	P		05 20 58.3	
	baz=254						
MIAR	**Mount Ida**	**3.92**	**121**		**Pn**	**05 21 04.7**	**+3.3**
ABTX	**Abilene, Hawle**	**4.30**	**203**	IAmb_Lg		05 22 27.0	
	comp=Z,26nn,1.2s						
MGMO	**Mountain Grove**	**4.36**	**81**		**Pn**	**05 21 09.5**	**+2.0**
MGMO				IAmb_Lg		05 22 19.1	
	comp=Z,30nn,0.8s						
P38A	**Dawn**	**4.43**	**46**	IAmb_Lg		05 22 22.9	
	comp=Z,44nn,0.8s						
X40A	**Basin Creek Fa**	**4.47**	**117**	Pn	**Pn**	**05 21 11.5**	**+2.5**
X40A				IAmb_Lg		05 22 31.3	
	comp=Z,26nn,1.1s						
N35A	**Tabor**	**4.53**	**20**		**Pn**	**05 21 11.3**	**+1.5**
FCAR	**Ozark Folk Cen**	**4.54**	**98**	IAmb_Lg		05 22 32.4	
	comp=Z,20nn,0.7s						
WHAR	**Wooly Hollow**	**4.56**	**105**	IAmb_Lg		05 22 25.9	
	comp=Z,26nn,0.8s						
KSCO	**Kaye Shedlock'**	**4.60**	**303**	Pn	**Pn**	**05 21 10.0**	**-0.9**
R40A	**Maddies Statio**	**4.61**	**67**		**Pn**	**05 21 10.6**	**-0.3**
R40A				IAmb_Lg		05 22 30.8	
	comp=Z,20nn,0.9s						
WHTX	**Lake Whitney,**	**4.61**	**178**		**Pn**	**05 21 10.8**	**-0.2**
BGNE	**Belgrade**	**4.80**	**356**	Pn	**Pn**	**05 21 13.3**	**-0.2**
237A	**Washetta, Mont**	**4.85**	**161**	Pn	**Pn**	**05 21 12.7**	**-1.5**
MSTX	**Muleshoe**	**4.94**	**239**	Pn	**Pn**	**05 21 15.8**	**+0.2**
LCAR	**Lake Charles**	**5.28**	**94**	IAmb_Lg		05 22 54.8	
	comp=Z,22nn,0.8s						
P40A	**Paris**	**5.30**	**55**	IAmb_Lg		05 22 58.7	
	comp=Z,21nn,0.8s						
CCM	**Cathedral Cave**	**5.32**	**72**	IAmb_Lg		05 22 54.1	
	comp=Z,34nn,0.7s						
N38A	**Joes South For**	**5.42**	**38**	IAmb_Lg		05 23 06.4	
	comp=Z,32nn,0.7s						
T25A	**Trinidad**	**5.43**	**278**	Pn	**Pn**	**05 21 23.8**	**+1.4**
T25A				IAmb_Lg		05 22 58.0	
	comp=Z,22nn,0.7s						
L34A	**Svendsen Farm,**	**5.44**	**10**	IAmb_Lg		05 23 01.9	
	comp=Z,36nn,0.7s						
435B	**Jarrell**	**5.82**	**179**	IAmb_Lg		05 23 22.8	
	comp=Z,30nn,0.8s						
FVM	**French Village**	**5.93**	**74**	IAmb_Lg		05 23 13.9	
	comp=Z,32nn,0.8s						
SLM	**Saint Louis**	**6.23**	**69**	IAmb_Lg		05 23 16.0	
	comp=Z,24nn,0.7s						
PARMO	**Parma**	**6.36**	**87**	IAmb_Lg		05 23 26.5	
	comp=Z,33nn,0.7s						
JCT	**Junction City**	**6.37**	**197**	Pn	**Pn**	**05 21 35.3**	**+0.2**
JCT				IAmb_Lg		05 23 28.2	
	comp=Z,31nn,1.1s						
143A	**Socs Landing,**	**6.47**	**125**	IAmb_Lg		05 23 41.7	
	comp=Z,13nn,0.7s						
S44A	**Carbondale**	**6.80**	**78**	IAmb_Lg		05 23 44.8	
	comp=Z,30nn,0.8s						
SIUC	**Southern Illin**	**6.83**	**78**	IAmb_Lg		05 23 41.1	
	comp=Z,34nn,0.8s						
ISCO	**Idaho Springs**	**7.02**	**299**		**Pn**	**05 21 44.3**	**0.0**
W45A	**Hickory Valley**	**7.04**	**99**	IAmb_Lg		05 23 46.3	
	comp=Z,21nn,0.8s						
OXF	**Oxford**	**7.05**	**105**	IAmb_Lg		05 23 43.3	
	comp=Z,19nn,0.9s						
ECSD	**EROS Data Cent**	**7.16**	**6**	Pn	**Pn**	**05 21 45.6**	**-0.3**
Y45A	**Yeager Farm, C**	**7.19**	**110**	IAmb_Lg		05 23 58.2	
	comp=Z,20nn,1.0s						
T45A	**Paducah**	**7.25**	**84**	IAmb_Lg		05 24 04.4	
	comp=Z,30nn,0.7s						
ANMO	**Albuquerque**	**7.34**	**259**	Lg	Lg	05 23 48.4	
	comp=Z,1.1nn,0.3s,baz=83,slow=16,SNR=12						
L40A	**Anamosa**	**7.38**	**41**	Pn	**Pn**	**05 21 49.3**	**+0.3**
L40A				IAmb_Lg		05 23 51.4	
	comp=Z,23nn,0.8s						
SUSD	**Miller**	**7.88**	**353**	IAmb_Lg		05 24 19.1	
	comp=Z,18nn,0.7s						
PLAL	**Pickwick Lake**	**7.96**	**99**	IAmb_Lg		05 24 21.8	
	comp=Z,11nn,1.1s						
Y22D	**IRIS PASSCAL I**	**7.97**	**254**	IAmb_Lg		05 24 14.2	
	comp=Z,21nn,0.8s						
MNTX	**Cornudas Mount**	**8.06**	**235**	Pn	**Pn**	**05 21 58.6**	**+0.3**
USIN	**University of**	**8.08**	**77**	IAmb_Lg		05 24 20.7	
	comp=Z,23nn,0.8s						
L42A	**Oliver, Polo**	**8.21**	**47**	IAmb_Lg		05 24 33.9	
	comp=Z,23nn,1.1s						
T47A	**Sharon Grove**	**8.48**	**84**	IAmb_Lg		05 24 38.1	
	comp=Z,17nn,0.9s						
JFWS	**Jewell Farm**	**8.50**	**40**	Pn	**Pn**	**05 22 03.9**	**-0.4**
JFWS				IAmb_Lg		05 24 33.7	
	comp=Z,22nn,0.8s						
P46A	**Rosedale**	**8.77**	**67**	IAmb_Lg		05 24 37.1	
	comp=Z,21nn,1.0s						
TX31	**Lajitas Ar. Si**	**8.84**	**216**	Pn	**Pn**	**05 22 08.6**	**-0.4**
TX32	**Lajitas Array**	**8.84**	**216**	Pn	**Pn**	**05 22 08.7**	**-0.3**
TXAR	**Lajitas Array**	**8.84**	**216**	Pn	**Pn**	**05 22 08.7**	**-0.4**
	comp=Z,0.1nn,0.3s,baz=44,slow=12,SNR=9.0						
TXAR				Lg	Lg	05 24 36.6	
	comp=Z,0.5nn,0.3s,baz=32,slow=31,SNR=4.3						
TXAR	**Lajitas Array**	**8.84**	**216**		**Pn**	**05 22 09.6**	**+0.5**
SFIN	**Lafayette**	**9.10**	**62**	IAmb_Lg		05 24 47.6	
	comp=Z,15nn,0.7s						
WCI	**Wyandotte Cave**	**9.19**	**76**	IAmb_Lg		05 24 49.6	
	comp=Z,15nn,0.9s						
PDAR	**Pinedale Array**	**11.03**	**308**	Pn	**Pn**	**05 22 41.6**	**+2.5**
	comp=Z,0.1nn,0.3s,baz=115,slow=15,SNR=2.1						
PDAR				Lg	Lg	05 25 42.5	
	comp=Z,0.1nn,0.3s,baz=113,slow=36,SNR=3.1						
TKL	**Tuckaleechee C**	**11.28**	**91**	Lg	Lg	05 25 52.0	
	comp=Z,0.3nn,0.3s,baz=16,slow=24,SNR=3.7						
ULM	**Lac du Bonnet**	**13.69**	**5**	Pn	**Pn**	**05 23 12.2**	**-3.1**
	comp=Z,0.1nn,0.3s,baz=186,slow=14,SNR=1.0						
ULM				Lg	Lg	05 27 02.9	
	comp=Z,0.2nn,0.3s,baz=104,slow=15,SNR=2.2						
NVAR	**Mina Array Bea**	**16.48**	**283**	LR	LR	05 30 03.4	
	comp=Z,93nn,20.3s,baz=216,slow=37						
ILAR	**Eielson Array**	**40.38**	**330**	P	**P**	**05 27 40.9**	**+2.0**
	comp=Z,0.5nn,0.8s,baz=104,slow=5.9,SNR=4.2						

*NEIC **23** 05:21:31.4±0.8,36°.61N±0°.01×97°.651W±0°.009, h6km±7km, Error ellipse: s-maj=2.0km s-min=1.0km az=187.0*

*IDC **23** 05:21:31.7±1.2,36°.70N×97°.78W, h0km, mb3.8/1, mb1 3.8/5,mb1mx3.5/49,mbtmp3.5/5,ML3.8/3,MS3.0/1, Ms1 3.0/1,ms1mx2.3/44,Error ellipse: s-maj=16.7km s-min=15.6km az=113.0*

*TUL **23** 05:21:31.6±1.4,36°.63N±0°.01×97°.65W±0°.01, h6km±7km, ML3.4,mb_Lg3.3/106(NEIC),Error ellipse: s-maj=2.0km s-min=1.3km az=156.0*

ISC 23 05:21:31.6±1.0,36°.62N±0°.02×97°.65W±0°.03,h9km±9km, n92,σ0§81/49,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.29**	**248**	Pg	**Pg**	**05 21 37.4**	**0.0**
CROK				Sg	**Sg**	**05 21 41.6**	**+0.3**
GC02	**Grant County #**	**0.29**	**325**	Pg	**Pg**	**05 21 37.3**	**0.0**
GC02				Sg	**Sg**	**05 21 41.5**	**+0.2**
KAN17	**Caldwell West**	**0.44**	**348**	Pg	**Pg**	**05 21 40.1**	**-0.1**
KAN17				Sg	**Sg**	**05 21 46.2**	**+0.2**
OK032	**Salt Plains WL**	**0.49**	**293**	Pg	**Pg**	**05 21 40.9**	**-0.1**
OK032				Sg	**Sg**	**05 21 47.7**	**+0.2**
KAN09	**Caldwell North**	**0.52**	**3**	Pg	**Pg**	**05 21 41.6**	**-0.1**
KAN09				Sg	**Sg**	**05 21 48.7**	**+0.1**
KAN05	**Bluff City Nor**	**0.52**	**340**		**Pg**	**05 21 41.6**	**-0.2**
KAN05				Sg	**Sg**	**05 21 48.7**	**+0.1**
KAN01	**Argonia South**	**0.54**	**351**	Pg	**Pg**	**05 21 42.0**	**-0.2**
KAN01				Sg	**Sg**	**05 21 49.3**	**0.0**
KS20	**Mayfield South**	**0.62**	**7**		**Pg**	**05 21 43.4**	**-0.2**
KS20				Sg	**Sg**	**05 21 51.6**	**-0.1**
KAN10	**Anthony SW Sta**	**0.62**	**325**	Pg	**Pg**	**05 21 43.4**	**-0.2**
KAN10				Sg	**Sg**	**05 21 51.7**	**0.0**
KAN08	**Anthony NE Sta**	**0.66**	**337**		**Pg**	**05 21 44.3**	**-0.1**
KAN16	**Harper SW Stat**	**0.69**	**332**	Pg	**Pg**	**05 21 44.8**	**-0.2**
KAN12	**Harper NE Stat**	**0.74**	**338**	Pg	**Pg**	**05 21 45.7**	**-0.1**
OK029	**Liberty Lake**	**0.83**	**169**	Pg	**Pg**	**05 21 47.3**	**-0.3**
QUOK	**Quay**	**0.88**	**120**	Pg	**Pg**	**05 21 48.5**	**-0.1**
OK031	**S. Brethren Rd**	**0.93**	**135**	Pg	**Pg**	**05 21 49.2**	**-0.2**
BCOK	**Bluff Creek, N**	**0.96**	**178**	Pg	**Pg**	**05 21 49.7**	**-0.3**
T35A	**Sooner Cattle**	**0.96**	**71**	Pg	**Pg**	**05 21 49.7**	**-0.4**
OK030	**Cody Creek RV**	**0.98**	**134**	Pg	**Pg**	**05 21 50.2**	**-0.3**
OK025	**Westminster Rd**	**1.06**	**166**	Pg	**Pg**	**05 21 51.5**	**-0.5**
U32A	**Winter Ranch,**	**1.11**	**258**	Pg	**Pg**	**05 21 52.1**	**-0.8**
OKCFA	**Oklahoma City**	**1.21**	**172**	Pg	**Pg**	**05 21 54.2**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**1.22**	**172**		**Pg**	**05 21 54.5**	**-0.5**
FNO	**Franklin**	**1.37**	**171**		**Pb**	**05 21 57.7**	**+0.3**
WMOK	**Wichita Mounta**	**2.09**	**206**	Pn	**Pn**	**05 22 07.6**	**+0.9**
WMOK				IAmb_Lg		05 22 36.4	
	comp=Z,175nn,0.9s						
KSU1	**Kansas State U**	**2.62**	**18**	IAmb_Lg		05 22 55.2	
	comp=Z,78nn,0.8s						
U38A	**Gravette**	**2.64**	**93**	IAmb_Lg		05 22 57.5	
	comp=Z,96nn,0.8s						
W39A	**Magazine**	**3.44**	**113**	IAmb_Lg		05 23 23.4	
	comp=Z,57nn,0.8s						
S39A	**Bolivar**	**3.62**	**71**	IAmb_Lg		05 23 29.9	
	comp=Z,84nn,0.7s						
MIAR	**Mount Ida**	**3.91**	**121**	IAmb_Lg		05 23 36.3	
	comp=Z,51nn,0.9s						
N33A	**J Bar K, Exete**	**4.12**	**2**	IAmb_Lg		05 23 52.9	
	comp=Z,74nn,0.8s						
MGMO	**Mountain Grove**	**4.35**	**81**	IAmb_Lg		05 23 53.3	
	comp=Z,66nn,0.7s						
FCAR	**Ozark Folk Cen**	**4.53**	**98**	IAmb_Lg		05 24 03.4	
	comp=Z,43nn,0.9s						
WHAR	**Wooly Hollow**	**4.55**	**105**	IAmb_Lg		05 23 57.5	
	comp=Z,67nn,0.8s						
R40A	**Maddies Statio**	**4.60**	**67**	IAmb_Lg		05 23 56.7	
	comp=Z,42nn,0.7s						
KSCO	**Kaye Shedlock'**	**4.61**	**303**	IAmb_Lg		05 24 06.9	
	comp=Z,48nn,0.9s						
237A	**Washetta, Mont**	**4.85**	**161**	IAmb_Lg		05 24 18.4	
	comp=Z,41nn,0.9s						
LCAR	**Lake Charles**	**5.27**	**94**	IAmb_Lg		05 24 25.0	
	comp=Z,53nn,0.8s						
P40A	**Paris**	**5.29**	**55**	IAmb_Lg		05 24 19.2	
	comp=Z,53nn,0.9s						
CCM	**Cathedral Cave**	**5.30**	**72**	IAmb_Lg		05 24 21.0	
	comp=Z,58nn,0.8s						
L34A	**Svendsen Farm,**	**5.43**	**10**	Pn	**Pn**	**05 22 49.9**	**-2.9**
L34A				IAmb_Lg		05 24 33.6	
	comp=Z,91nn,0.8s						
NATX	**Nacogdoches**	**5.44**	**152**	Pn	**Pn**	**05 22 52.3**	**-0.6**
NATX				IAmb_Lg		05 24 30.8	
	comp=Z,20nn,0.7s						
T25A	**Trinidad**	**5.44**	**278**		**Pn**	**05 22 50.6**	**-2.5**
T25A				IAmb_Lg		05 24 32.0	
	comp=Z,60nn,0.9s						
CCAR	**Cane Creek**	**5.51**	**118**	IAmb_Lg		05 24 40.0	
	comp=Z,59nn,0.9s						
OGNE	**Ogallala**

comp=Z,37nm,0.8s
Y49A Blount Mountai 9.60 103 lAmb_Lg 05 26 37.4
comp=Z,17nm,1.1s
SWET Sewanee 9.61 95 lAmb_Lg 05 26 34.5
comp=Z,16nm,1.0s
I42A Draeger Farm, 9.87 40 lAmb_Lg 05 26 47.0
comp=Z,24nm,0.9s
G40A Rib Lake 10.31 31 Pn **Pn** **05 23 58.5 -1.2**
PDAR Pinedale Array 11.04 307 Pn **Pn** **05 24 10.3 +0.6**
comp=Z,0.1nm,0.3s,baz=117,slow=14,SNR=2.1
PDAR Lg Lg 05 27 12.1
comp=Z,0.3nm,0.3s,baz=116,slow=33,SNR=2.8
TKL Tuckaleechee C 11.27 91 Pn **Pn** **05 24 15.0 +2.3**
comp=Z,0.2nm,0.3s,baz=292,slow=11,SNR=1.2
TKL Lg Lg 05 27 21.6
comp=Z,0.6nm,0.3s,baz=12,slow=22,SNR=5.9
TKL Tuckaleechee C 11.27 91 **Pn** **05 24 12.2 -0.5**
N49A Columbus Grove 11.36 64 Pn **Pn** **05 24 12.9 -1.1**
ULM Lac du Bonnet 13.69 5 Pn Pn 05 24 39.9 -5.9
comp=Z,0.2nm,0.3s,baz=186,slow=13,SNR=2.4
ULM Lg Lg 05 28 35.4
comp=Z,0.2nm,0.3s,baz=115,slow=19,SNR=2.0
LPIG La Paz 16.56 225 LR LR 05 32 03.1
comp=Z,58nm,19.5s,baz=182,slow=38
ILAR Eielson Array 40.38 330 P **P** **05 29 10.4 +0.9**
comp=Z,0.8nm,0.6s,baz=113,slow=7.3,SNR=7.5

IDC 23 05:27:35.8±6.6, 15°41S×172°.94W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/26, mbtmp3.7/3, MS3.2/10, Ms1 3.2/10, ms1mx3.0/42, Error ellipse: s-maj=300.7km s-min=24.0km az=140.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.87**	**37**	Pn	Pn	05 28 07.4	-1.7
	55nm,0.3s,baz=219,slow=9.0,SNR=27						
AFI				Sn	Sn	05 28 25.2	-8.2
	131nm,0.3s,baz=74,slow=20,SNR=8.5						
AFI				LR	LR	05 28 39.5	
	comp=Z,148nm,19.3s,baz=226,slow=34						
MSVF	**Nonsavu**	**8.95**	**254**	LR	LR	05 32 39.9	
	comp=Z,246nm,18.8s,baz=144,slow=34						
RAR	**Rarotonga**	**13.76**	**117**	LR	LR	05 34 31.8	
	comp=Z,77nm,21.0s,baz=287,slow=30						
RAO	**Raoul Island**	**14.52**	**198**	LR	LR	05 35 37.6	
	comp=Z,254nm,20.3s,baz=128,slow=33						
DZM	**Mont Dzumac**	**20.61**	**248**	eLR	LR	05 37 18.0	
	comp=Z,101nm,26.1s						
DZM	**Mont Dzumac**	**20.61**	**248**	LR	LR	05 38 29.9	
	comp=Z,41nm,21.6s,baz=284,slow=32						
PAE	**Paea**	**22.50**	**99**	eT	T	05 55 57.7	
	1.5nm,0.3s						
PPT	**Papeete**	**22.50**	**99**	LR	LR	05 38 50.6	
	comp=Z,43nm,20.9s,baz=223,slow=30						
PPT2	**Papeete2**	**22.50**	**99**	eLR	LR	05 38 07.7	
	comp=Z,77nm,25.2s						
PPT2	**Papeete2**	**22.50**	**99**	eT	T	05 55 55.5	
	1.6nm,0.3s						
TBI	**Tubuai**	**23.49**	**113**	eLR	LR	05 38 39.1	
	comp=Z,119nm,28.5s						
TBI	**Tubuai**	**23.49**	**113**	eT	T	05 57 22.7	
	3.2nm,0.3s						
HNR	**Honiara**	**27.12**	**279**	LR	LR	05 42 36.6	
	comp=Z,42nm,19.5s,baz=67,slow=33						
RKT	**Rikitea**	**36.57**	**108**	eT	T	06 13 38.1	
	1.9nm,0.3s						
H11S2	**WAKE ISLAND Hy**	**39.20**	**329**	T	T	06 16 16.1	
	baz=149,slow=76,SNR=10.0						
H11S3	**WAKE ISLAND Hy**	**39.22**	**328**	T	T	06 16 16.4	
	baz=149,slow=76,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**39.22**	**329**	T	T	06 16 39.9	
	baz=149,slow=76,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**40.14**	**330**	T	T	06 17 55.2	
	baz=150,slow=76,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**40.15**	**330**	T	T	06 17 56.0	
	baz=150,slow=76,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**40.16**	**330**	T	T	06 17 55.5	
	baz=150,slow=76,SNR=7.1						
WRA	**Warramunga Arr**	**50.28**	**257**	P	P	05 36 34.0	-0.4
	0.3nm,0.5s,baz=92,slow=7.2,SNR=7.7						
ASAR	**Alice Springs**	**50.53**	**252**	P	P	05 36 35.9	-0.5
	1.5nm,0.5s,baz=86,slow=8.5,SNR=24						
KSRS	**Korea Array**	**76.48**	**315**	LR	LR	06 12 23.7	
	comp=Z,7.6nm,18.0s,baz=50,slow=35						
USRK	**Ussuriysk Ar.**	**77.66**	**323**	LR	LR	06 07 47.0	
	comp=Z,37nm,21.9s,baz=102,slow=31						
ILAR	**Eielson Array**	**82.37**	**11**	P	P	05 40 01.1	+1.9
	0.2nm,0.6s,baz=202,slow=5.5,SNR=2.0						
CMAR	**Chiang Mai Arr**	**93.04**	**288**	LR	LR	06 20 14.6	
	comp=Z,4.9nm,20.0s,baz=140,slow=34						
SONM	**Songino Array**	**95.15**	**318**	LR	LR	06 16 58.4	
	comp=Z,30nm,21.8s,baz=22,slow=31						

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*JMA **23** 05:51:17.4, 26°.78N×129°.86E, h52km, M4.0*
*IDC **23** 05:51:20.8±4.9, 26°.11N×129°.05E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/31, mbtmp3.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.3/27, Error ellipse: s-maj=222.0km s-min=18.0km az=58.0*
ISC 23 05:51:14.7±1.6, 26°.79N±0°.03×129°.84E±0°.04, h8km±12km, n23, σ1°45/42, mb3.4/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYRO	**Yoronjima**	**1.27**	**281**	P	**Pb**	**05 51 39.4**	**+0.6**
JYRO				eS	**Sg**	**05 51 55.4**	**-0.1**
JOKE	**Okinoerabujima**	**1.27**	**297**	P	**Pn**	**05 51 39.8**	**+1.0**
JOKE				eS	**Sb**	**05 51 55.5**	**+0.1**
JTK	**Tokunoshima**	**1.27**	**322**	P	**Pn**	**05 51 39.9**	**+1.1**
JTK				eS	**Sb**	**05 51 55.3**	**-0.2**
JOW	**Kunigami**	**1.40**	**272**	Pn	**Pg**	**05 51 41.6**	**-0.1**
	288nm,0.3s,baz=115,slow=16,SNR=698						
JOW				Sn	**Sb**	**05 51 57.5**	**-1.8**
	148nm,0.3s,baz=114,slow=20,SNR=15						
JOW	**Kunigami**	**1.40**	**272**	P	**Pg**	**05 51 41.6**	**-0.1**
JOW				eS	**Sb**	**05 51 58.4**	**-0.8**
JZK	**Kikaishima**	**1.53**	**4**	P	**Pn**	**05 51 43.5**	**+1.2**
JZK				eS	**Sn**	**05 52 03.1**	**+0.8**
JKDJ	**Kitadaitoujima**	**1.55**	**122**	P	**Pn**	**05 51 42.9**	**+0.4**
JKDJ				eS	**Sn**	**05 52 01.6**	**-1.2**
JMZ	**Minamidaito 2**	**1.57**	**128**	P	**Pn**	**05 51 43.1**	**+0.3**
JMZ				eS	**Sn**	**05 52 01.4**	**-1.8**
JAMN	**Amaminishikomi**	**1.57**	**338**	P	**Pn**	**05 51 43.6**	**+0.8**
JAMN				eS	**Sn**	**05 52 01.6**	**-1.7**
JAM	**Amami Oshima**	**1.63**	**353**	P	**Pn**	**05 51 44.4**	**+0.7**
JAM				eS	**Sn**	**05 52 03.3**	**-1.6**
JNTH	**Nagotoyohara**	**1.65**	**261**	P	**Pb**	**05 51 44.7**	**-0.7**
JNTH				eS	**Sb**	**05 52 04.3**	**-2.0**
JIH	**Iheya**	**1.69**	**279**	P	**Pb**	**05 51 45.8**	**-0.3**
JIH				eS	**Sn**	**05 52 06.3**	**-0.1**
JJT3	**Tamagusuku3**	**1.96**	**251**	P	**Pb**	**05 51 49.3**	**-1.2**
JJT3				eS	**Sb**	**05 52 12.8**	**-2.3**
JAGN	**Aguni-jima**	**2.34**	**266**	P	**Pn**	**05 51 54.5**	**+1.1**
JAGN				eS	**Sn**	**05 52 21.8**	**-0.5**
JTAJ	**Takarajima**	**2.43**	**347**	P	**Pn**	**05 51 55.2**	**+0.6**
JTAJ				eS	**Sn**	**05 52 22.1**	**-2.4**
JKE	**Kume jima 2**	**2.78**	**261**	P	**Pn**	**05 51 59.9**	**+0.4**
JKE				eS	**Sn**	**05 52 31.8**	**-1.4**
JNN	**Nakanoshima**	**3.04**	**0**	P	**Pn**	**05 52 04.0**	**+0.9**
JNN				eS	**Sn**	**05 52 38.0**	**-1.8**
JYAK	**Yakushimahirau**	**3.49**	**10**	P	**Pn**	**05 52 10.1**	**+0.9**
JYAK				eS	**Sn**	**05 52 48.1**	**-2.6**
JMTN	**Minamitane**	**3.72**	**14**	P	**Pn**	**05 52 13.1**	**+0.7**
JMTN				eS	**Sn**	**05 52 53.4**	**-2.9**
JTN	**Tanegashima 3**	**3.98**	**14**	P	**Pn**	**05 52 16.8**	**+0.8**
JTN				eS	**Sn**	**05 53 00.8**	**-2.1**
MKAR	**Makanchi Array**	**42.25**	**311**	P	P	05 59 16.2	+7.8
	0.3nm,0.8s,baz=112,slow=6.5,SNR=2.8						
WRA	**Warramunga Arr**	**46.66**	**174**	P	**P**	**05 59 45.4**	**+1.6**
	0.5nm,0.7s,baz=355,slow=8.4,SNR=2.6						
ASAR	**Alice Springs**	**50.31**	**175**	P	**P**	**06 00 15.3**	**+3.3**
	0.2nm,0.4s,baz=3.3,slow=14,SNR=2.4						
ASAR				LR	LR	06 21 17.1	
	comp=Z,24nm,19.9s,baz=188,slow=36						

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*NOU **23** 06:09:15.3, 37°.51S×175°.67E, h246km, MLv3.6, North Island, New Zealand*
WEL 23 06:09:37.3, 39°.1S±0°.6×177°.5E±°, h8km±1km, M3.0/49, ML3.3/49, MLv3.0/49, Error ellipse: s-maj=0.0km s-min=0.0km az=107.9, North Island

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

TWVZ	**Taurewa**	**0.12**	**78**	P	Pg	06 09 41.5	+1.4
TWVZ				S	Sg	06 09 44.1	+2.1
PKVZ	**Pokaka**	**0.20**	**166**	P	Pg	06 09 42.2	+0.9
PKVZ				S	Sg	06 09 45.7	+1.6
WTVZ	**West Tongariro**	**0.24**	**95**	P	Pg	06 09 43.1	+1.1
NGZ	**Ngauruhoe**	**0.26**	**108**	P	Pb	06 09 43.4	-0.9
NGZ				S	Sb	06 09 48.0	-0.9
NNVZ	**North Ngauruho**	**0.26**	**98**	P	Pb	06 09 43.5	-0.8
NNVZ				S	Sb	06 09 47.8	-1.1
FWVZ	**Far West T-bar**	**0.26**	**128**	P	Pg	06 09 43.4	+0.8
FWVZ				S	Sg	06 09 47.2	+1.1
KRVZ	**Karewarewa**	**0.28**	**90**	P	Pg	06 09 43.7	-0.8
DRZ	**Dome Shelter**	**0.28**	**130**	P	Pg	06 09 43.8	+0.8
TRVZ	**Turoa**	**0.29**	**135**	P	Pg	06 09 43.8	+0.7
SNVZ	**South Ngauruho**	**0.29**	**108**	P	Pb	06 09 44.0	-0.8
WHVZ	**Whangaehu Hut**	**0.30**	**129**	P	Pg	06 09 43.9	+0.6
OTVZ	**Oturere**	**0.30**	**103**	P	Pb	06 09 44.3	-0.8
NTVZ	**North Tongarir**	**0.30**	**91**	P	Pb	06 09 44.2	-0.8
NTVZ				S	Sg	06 09 48.5	+1.2
MTVZ	**Mangateitei**	**0.32**	**154**	P	Pg	06 09 44.0	+0.3
TMVZ	**Te Maari**	**0.33**	**94**	P	Pb	06 09 44.6	-0.8
TMVZ				S	Sg	06 09 49.1	+1.0
ETVZ	**East Tongariro**	**0.33**	**97**	P	Pb	06 09 44.7	-0.8
TUVZ	**Tukino**	**0.33**	**121**	P	Pb	06 09 44.8	-0.8
WNVZ	**Wahianoa**	**0.33**	**134**	P	Pg	06 09 44.6	+0.6
KATZ	**Kakaramea**	**0.34**	**69**	P	Pb	06 09 44.9	-0.7
VRZ	**Vera Road**	**0.41**	**266**	P	Pb	06 09 46.2	-0.6
RATZ	**Rangitukua**	**0.44**	**59**	P	Pb	06 09 46.8	-0.6
RITZ	**Rihia Road**	**0.46**	**75**	P	Pb	06 09 47.2	-0.4
MOVZ	**Moawhango**	**0.48**	**131**	P	Pg	06 09 46.8	+0.3
WATZ	**Wairara**	**0.52**	**42**	P	Pg	06 09 48.0	+0.6
HIZ	**Hauiti**	**0.67**	**330**	P	Pb	06 09 50.8	-0.5
WHTZ	**Whakaora**	**0.68**	**51**	P	Pb	06 09 51.3	0.0
WAZ	**Wanganui**	**0.70**	**199**	P	Pg	06 09 50.7	0.0
BHHZ	**Black Hill Sta**	**0.72**	**123**	P	Pg	06 09 51.2	+0.1
KUTZ	**Kaahu Road**	**0.74**	**35**	P	Pg	06 09 51.7	+0.2
MHEZ	**Mangahewa**	**0.75**	**271**	P	Pb	06 09 53.1	+0.5
LREZ	**Lake Rotokare**	**0.78**	**242**	P	Pb	06 09 52.8	-0.2
TLZ	**Tolley Road**	**0.79**	**14**	P	Pg	06 09 52.1	-0.4
DREZ	**Durham Road**	**0.85**	**263**	P	Pb	06 09 54.5	+0.2
WPRZ	**Whakapapatarin**	**0.89**	**50**	P	Pg	06 09 54.6	+0.1
PREZ	**Palmer Road**	**0.91**	**254**	P	Pb	06 09 55.5	+0.2
MRHZ	**Matea Rd**	**0.92**	**74**	P	Pg	06 09 55.0	+0.1
BKZ	**Black Stump Fm**	**0.94**	**95**	P	Pg	06 09 55.4	0.0
KWHZ	**Kaweka Forest**	**0.94**	**111**	P	Pb	06 09 55.8	-0.1
NEZ	**North Egmont**	**0.94**	**259**	P	Pb	06 09 56.0	+0.1
GRRZ	**Galatos Road**	**0.98**	**41**	P	Pg	06 09 56.3	+0.1
KRHZ	**Kereru**	**1.00**	**123**	P	Pb	06 09 56.8	-0.1
KHEZ	**Kahui Hut**	**1.01**	**258**	P	Pb	06 09 57.2	+0.1
PKE	**Pukeiti**	**1.02**	**264**	P	Pb	06 09 57.2	+0.1
HRRZ	**Handcock Road**	**1.05**	**48**	P	Pg	06 09 57.7	+0.1
PNHZ	**Pukenui**	**1.08**	**139**	P	Pg	06 09 57.8	-0.2
HSRZ	**Hossack Road**	**1.08**	**44**	P	Pn	06 09 58.6	-0.1
TSZ	**Takapari Road**	**1.09**	**152**	P	Pg	06 09 58.0	-0.3
OHWZ	**Ohakea**	**1.11**	**179**	P	Pg	06 09 58.2	-0.4
NMEZ	**Namu Road**	**1.14**	**253**	P	Pb	06 09 59.3	+0.1
MCHZ	**McNeill Hill**	**1.15**	**108**	P	Pn	06 10 00.6	+1.0
UTU	**Utuhina**	**1.16**	**38**	P	Pn	06 09 59.8	0.0
NMHZ	**Naumai**	**1.18**	**91**	P	Pn	06 10 00.3	+0.1
HLRZ	**Highlands Stat**	**1.19**	**45**	P	Pn	06 10 00.8	+0.6
NGRZ	**Ngongotaha**	**1.22**	**36**	P	Pg	06 10 00.6	0.0
MTHZ	**Maungataniwha**	**1.24**	**79**	P	Pb	06 10 00.9	0.0
OMRZ	**Omania**	**1.30**	**41**	P	Pg	06 10 02.3	0.0
KARZ	**Kaharoa**	**1.31**	**35**	P	Pb	06 10 02.2	+0.1
MUGZ	**Murupara**	**1.31**	**62**	P	Pn	06 10 01.1	-0.8
WPHZ	**Waipukurau**	**1.31**	**138**	P	Pg	06 10 02.6	0.0
POWZ	**Post Office Ro**	**1.35**	**164**	P	Pn	06 10 02.5	+0.1
KMRZ	**Kaimai**	**1.35**	**23**	P	Pn	06 10 02.5	0.0
TOZ	**Tahuroa Road**	**1.37**	**7**	P	Pn	06 10 01.3	-1.4
DVHZ	**Dannevirke**	**1.38**	**151**	P	Pb	06 10 03.5	+0.2
RTZ	**Ruatahuna**	**1.41**	**71**	P	Pn	06 10 02.8	-0.5
RAHZ	**Arahi**	**1.41**	**83**	P	Pg	06 10 05.3	+1.0
KAHZ	**Kahuranaki**	**1.42**	**120**	P	Pg	06 10 04.5	+0.1
PXZ	**Pawanui**	**1.53**	**128**	P	Pg	06 10 08.2	+1.5
PRWZ	**Pori Road**	**1.55**	**160**	P	Pb	06 10 06.4	+0.2
TGRZ	**Tauranga**	**1.56**	**30**	P	Pb	06 10 06.2	-0.2
MRZ	**Mangatainoka R**	**1.58**	**172**	P	Pn	06 10 05.6	0.0
OPRZ	**Ohinepanea**	**1.60**	**39**	P	Pb	06 10 06.7	-0.3
SNGZ	**Shannon Statio**	**1.63**	**80**	P	Pg	06 10 09.4	+0.8
ANWZ	**Angora Road**	**1.64**	**146**	P	Pb	06 10 07.8	0.0
URZ	**Urewera**	**1.65**	**60**	P	Pb	06 10 07.8	-0.1
OGWZ	**Otaki Gorge**	**1.72**	**183**	P	Pn	06 10 07.4	-0.1
TIWZ	**Tintock**	**1.74**	**165**	P	Pb	06 10 09.1	-0.4
BFZ	**Birch Farm**	**1.75**	**155**	P	Pb	06 10 09.6	0.0
KIW	**Kapiti Island**	**1.79**	**189**	P	Pn	06 10 08.5	-0.8
HOWZ	**Holdsworth Sta**	**1.81**	**175**	P	Pn	06 10 09.5	+0.8
CPWZ	**Castlepoint**	**1.94**	**159**	P	Pg	06 10 15.1	+0.6
DUWZ	**D'Urville Isla**	**2.00**	**211**	P	Pn	06 10 10.9	-0.4
CAW	**Cannon Point**	**2.02**	**185**	P	Pn	06 10 12.5	+0.9
TMWZ	**Te Maipa**	**2.06**	**167**	P	Pb	06 10 14.4	-0.5
MTW	**Mount Morrison**	**2.07**	**175**	P	Pb	06 10 14.5	-0.5
AWAZ	**Awhitu Peninsu**	**2.09**	**346**	P	Pn	06 10 12.3	-0.3
ETAZ	**East Tamaki Re**	**2.16**	**352**	P	Pb	06 10 15.6	-0.9
WEL	**Wellington**	**2.22**	**190**	P	Pb	06 10 16.5	-1.2
WTAZ	**Waiatarua**	**2.23**	**345**	P	Pn	06 10 14.9	+0.3
TCW	**Tory Channel**	**2.25**	**200**	P	Pn	06 10 15.1	+0.4
PAWZ	**Paruwai Farm**	**2.29**	**177**	P	Pb	06 10 19.6	+0.8
WIAZ	**Waiheke Island**	**2.30**	**357**	P	Pn	06 10 14.8	-0.6
MSWZ	**Moikau Station**	**2.32**	**181**	P	Pb	06 10 18.2	-1.1
TRWZ	**Traveller**	**2.32**	**173**	P	Pb	06 10 19.8	+0.5
BHW	**Baring Head**	**2.33**	**188**	P	Pb	06 10 17.7	-1.8
MBAZ	**Motutapu North**	**2.34**	**352**	P	Pn	06 10 15.1	-1.0
KUZ	**Kuaotunu**	**2.37**	**8**	P	Pn	06 10 14.9	-1.5
PLWZ	**Pallister**	**2.47**	**181**	P	Pb	06 10 21.8	-0.2
TUWZ	**Tuamarina**	**2.55**	**203**	P	Pn	06 10 19.7	+0.8
NNZ	**Nelson**	**2.57**	**214**	P	Pn	06 10 20.6	+1.4
QRZ	**Quartz Range**	**2.73**	**230**	P	Pn	06 10 21.0	-0.4
CMWZ	**Cape Campbell**	**2.77**	**197**	P	Pb	06 10 27.7	+0.6
BSWZ	**Blackbirch Sta**	**2.83**	**202**	P	Pb	06 10 26.8	-1.2
THZ	**Tophouse**	**3.22**	**214**	P	Pn	06 10 30.2	+2.0
WCZ	**Waipu Caves**	**3.24**	**346**	P	Pn	06 10 28.4	0.0
KHZ	**Kahutara**	**3.57**	**201**	P	Pn	06 10 32.5	-0.4
DSZ	**Denniston Nort**	**3.75**	**224**	P	Pn	06 10 35.4	0.0
LTZ	**Lake Taylor**	**4.33**	**211**	P	Pn	06 10 42.9	-0.5
WKZ	**Wanaka**	**7.39**	**217**	P	Pn	06 11 30.8	+5.4

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*SOME **23** 06:10:48.6, 44°.48N×82°.83E, h5km*
*NNC **23** 06:10:49.5±1.3, 44°.67N×82°.82E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=12.8km s-min=5.2km az=127.0*
ISC 23 06:10:52.2±2.4, 44°.57N±0°.06×82°.54E±0°.09, h1km±18km, n34, σ2°11/49, 7C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.93**	**235**	eP	**Pg**	**06 11 28.5**	**-0.7**
	2.4nm,0.1s						
KTMS				eS	**Sg**	**06 11 57.5**	**+3.2**
	417nm,0.3s						
DJR	**Jarkent**	**1.98**	**264**	eP	**Pg**	**06 11 29.6**	**-0.5**
	22nm,0.3s						
DJR				eS	**Sg**	**06 11 59.3**	**+3.5**
	59nm,0.3s						
DJR	**Jarkent**	**1.98**	**264**	Pg	**Pg**	**06 11 30.1**	**-0.1**
	22nm,0.3s						
DJR				Lg	Lg	06 12 00.2	
	59nm,0.3s						
MK31	**Makanchi Array**	**2.23**	**356**	⇑Pn	**Pn**	**06 11 27.2**	**-3.2**
	2.7nm,0.2s,baz=172,slow=15,SNR=521						
MK31				⇑Lg	Lg	06 11 56.5	
	28nm,0.2s,baz=168,slow=28,SNR=21						
MAKZ	**Makanchi**	**2.28**	**350**	⇑Pn	**Pn**	**06 11 27.7**	**-3.2**
	5.3nm,0.3s						
MAKZ				⇓Lg	Lg	06 11 57.8	
	30nm,0.5s						
PDGK	**Podgornoye**	**2.52**	**242**	Pg	**Pb**	**06 11 38.4**	**0.0**
	3.9nm,0.1s						
PDGK				Lg	Lg	06 12 14.4	
	46nm,0.4s						
PDGK	**Podgornoye**	**2.52**	**242**	⇓Pg	**Pg**	**06 11 42.1**	**+1.6**
	5.7nm,0.4s						
PDGK				⇓Lg	Lg	06 12 17.5	
	72nm,0.6s						
SHLS	**Shalkode**	**2.63**	**239**	eP	**Pn**	**06 11 36.5**	**+0.6**
	4.5nm,0.2s						
SHLS				eS	**Sb**	**06 12 10.6**	**-2.5**
	120nm,0.4s						
SHLS	**Shalkode**	**2.63**	**239**	Pg	**Pn**	**06 11 36.5**	**+0.6**
	4.5nm,0.2s						
SHLS				Lg	Lg	06 12 10.6	
	120nm,0.4s						

UZB	**Uzynbulak**	**2.91**	**242**	eP	**Pb**	**06 11 45.4**	**+0.4**
	2.9nm,0.2s						
UZB				eS	**Sg**	**06 12 25.8**	**+0.1**
	45nm,0.2s						
UZB	**Uzynbulak**	**2.91**	**242**	Pg	**Pb**	**06 11 45.4**	**+0.4**
	2.9nm,0.2s						
UZB				Lg	Lg	06 12 25.8	
	45nm,0.2s						
TDK	**Taldyqorghan**	**2.97**	**280**	eP	**Pg**	**06 11 48.9**	**-0.2**
	56nm,0.2s						
TDK				eS	**Sg**	**06 12 31.8**	**+4.2**
	45nm,0.4s						
TDK	**Taldyqorghan**	**2.97**	**280**	Pg	**Pg**	**06 11 48.9**	**-0.2**
TDK				Lg	Lg	06 12 31.8	
	45nm,0.4s						
KPKS	**Kokpek**	**2.99**	**250**	eP	**Pb**	**06 11 46.6**	**+0.3**
	15nm,0.1s						
KPKS				eS	**Sg**	**06 12 28.7**	**+0.5**
	205nm,0.4s						
ZSN	**Zaisan**	**3.31**	**29**	eP	**Pn**	**06 11 46.1**	**+0.9**
	26nm,0.2s						
ZSN				eS	**Sn**	**06 12 27.9**	**+2.7**
	52nm,0.4s						
SATY	**Saty**	**3.35**	**245**	eP	**Pb**	**06 11 53.3**	**+0.8**
	3.0nm,0.1s						
SATY				eS	**Sg**	**06 12 39.4**	**-0.3**
	67nm,0.1s						
SATY	**Saty**	**3.35**	**245**	Pg	**Pb**	**06 11 53.3**	**+0.8**
	3.0nm,0.1s						
SATY				Lg	Lg	06 12 39.4	
	67nm,0.1s						
ARXS	**Arharly**	**3.40**	**266**	eP	**Pb**	**06 11 54.6**	**+1.4**
	27nm,0.3s						
ARXS				eS	**Sg**	**06 12 42.0**	**+0.8**
	42nm,0.4s						
KOTS	**Kotyrbulak**	**4.14**	**253**	eP	**Pb**	**06 12 06.9**	**+0.9**
	5.5nm,0.3s						
KOTS				eS	**Sg**	**06 13 03.0**	**-2.2**
	31nm,0.3s						
MDOK	**Medeo**	**4.21**	**252**	eP	**Pg**	**06 12 10.1**	**-2.8**
	3.3nm,0.4s						
MDOK				eS	**Sg**	**06 13 08.2**	**+0.8**
	21nm,0.5s						
MDOK	**Medeo**	**4.21**	**252**	⇑Pg	**Pg**	**06 12 12.6**	**-0.2**
	5.9nm,0.5s						
MDOK				⇑Lg	Lg	06 13 12.5	
	19nm,0.5s						
MDOK	**Medeo**	**4.21**	**252**	Pg	**Pg**	**06 12 10.0**	**-2.8**
	3.3nm,0.4s						
MDOK				Lg	Lg	06 13 08.2	
	21nm,0.5s						
KTBS	**Karatobe**	**4.30**	**261**	eP	**Pb**	**06 12 10.6**	**+2.0**
	2.7nm,0.3s						
KTBS				eS	**Sg**	**06 13 09.2**	**-1.1**
	48nm,0.5s						
TNSS	**Tian-Shan**	**4.33**	**251**	eP	**Pg**	**06 12 13.7**	**-1.4**
	1.7nm,0.2s						
TNSS				eS	**Sg**	**06 13 14.3**	**+3.2**
	15nm,0.3s						
TNSS	**Tian-Shan**	**4.33**	**251**	Pg	**Pg**	**06 12 13.7**	**-1.4**
	1.7nm,0.2s						
TNSS				Lg	Lg	06 13 14.3	
	15nm,0.3s						
IZV	**Izvestkoviy**	**4.55**	**252**	eP	**Pg**	**06 12 16.7**	**-2.7**
	6.0nm,0.4s						
IZV				eS	**Sg**	**06 13 19.8**	**+1.4**
	27nm,0.5s						
IZV	**Izvestkoviy**	**4.55**	**252**	Pg	**Pg**	**06 12 16.7**	**-2.7**
	6.0nm,0.4s						
IZV				Lg	Lg	06 13 19.8	
	27nm,0.5s						
KST	**Kastek**	**5.00**	**255**	eP	**Pg**	**06 12 24.6**	**-3.3**
	5.7nm,0.6s						
KST				eS	**Sg**	**06 13 33.2**	**+0.6**
	15nm,0.5s						
KST	**Kastek**	**5.00**	**255**	Pg	**Pg**	**06 12 24.6**	**-3.3**
	5.7nm,0.6s						
KST				Lg	Lg	06 13 33.2	
	15nm,0.5s						
KRBS	**Karabastau**	**5.02**	**262**	eP	**Pg**	**06 12 26.5**	**-1.7**
	2.8nm,0.3s						
KRBS				eS	**Sg**	**06 13 36.8**	**+3.6**
	14nm,0.4s						
KRBS	**Karabastau**	**5.02**	**262**	Pg	**Pg**	**06 12 26.5**	**-1.7**
	2.8nm,0.3s						
KRBS				Lg	Lg	06 13 36.8	
	14nm,0.4s						
TKM2	**Tokm

OKCFA S Sb 06 21 20.0 +1.0
baz=352
OKCFA Oklahoma City 1.21 172 P 06 21 03.2
baz=352,SNR=64
OKCFA S 06 21 20.0
baz=352
OKCSW OKLAHOMA CITY 1.22 172 Pg 06 21 03.4 -0.4
FNO Franklin 1.37 171 Pn Pb 06 21 06.6 +0.5
TUL1 Leonard 1.66 114 P Pn 06 21 10.6 +1.0
baz=296,SNR=162
TUL1 S Sb 06 21 33.0 +0.9
baz=296
TUL1 Leonard 1.66 114 P 06 21 10.6
baz=296,SNR=138
TUL1 S 06 21 32.9
baz=296
TUL1 Leonard 1.66 114 P 06 21 10.6
baz=296,SNR=162
TUL1 S 06 21 33.0
baz=296
R32A Long Quarter, 1.99 335 Pn Pn 06 21 15.6 +1.3
R32A lAmb_Lg 06 21 46.0
comp=Z,903nm,0.8s
R32A Long Quarter, 1.99 335 P Pn 06 21 15.3 +1.0
baz=155,SNR=131
R32A S Sb 06 21 41.4 -0.4
baz=155
R32A Long Quarter, 1.99 335 P 06 21 15.3
baz=155,SNR=131
R32A S 06 21 41.4
baz=155
WMOK Wichita Mounta 2.08 207 Pn 06 21 16.4 +0.9
WMOK lAmb_Lg 06 21 48.1
comp=Z,636nm,0.8s
WMOK Wichita Mounta 2.08 207 P Pn 06 21 16.4 +0.9
baz=26,SNR=190
WMOK S Sb 06 21 43.9 -0.5
baz=26
WMOK Wichita Mounta 2.08 207 P 06 21 16.4
baz=26,SNR=251
WMOK Wichita Mounta 2.08 207 P 06 21 16.4
baz=26,SNR=190
WMOK S 06 21 43.9
baz=26
KSU1 Kansas State U 2.62 18 Pn Pn 06 21 23.8 +1.0
KSU1 lAmb_Lg 06 22 09.1
comp=Z,778nm,1.1s
KSU1 Kansas State U 2.62 18 P Pn 06 21 23.8 +1.0
baz=199,SNR=45
KSU1 Kansas State U 2.62 18 P 06 21 23.8
baz=199,SNR=142
KSU1 S 06 21 56.4
baz=199
KSU1 Kansas State U 2.62 18 P 06 21 23.8
baz=199,SNR=45
U38A Gravette 2.64 93 lAmb_Lg 06 22 06.3
comp=Z,479nm,0.7s
U38A Gravette 2.64 93 P Pn 06 21 24.4 +1.3
baz=275,SNR=112
U38A Gravette 2.64 93 P 06 21 24.4
baz=275,SNR=112
X37A Clayton 2.74 137 Pn Pn 06 21 25.7 +1.1
X37A lAmb_Lg 06 22 12.2
comp=Z,270nm,0.9s
X37A Clayton 2.74 137 P Pn 06 21 25.6 +1.1
baz=318,SNR=108
X37A Clayton 2.74 137 P 06 21 25.6
baz=318,SNR=108
CBKS Cedar Bluff 2.75 324 P Pn 06 21 25.5 +0.8
baz=142,SNR=25
CBKS Cedar Bluff 2.75 324 P 06 21 25.5
baz=142,SNR=24
CBKS Cedar Bluff 2.75 324 P 06 21 25.5
baz=142,SNR=25
HHAR Hobbs 3.01 95 Pn Pn 06 21 29.5 +1.2
HHAR lAmb_Lg 06 22 16.9
comp=Z,259nm,0.8s
HHAR Hobbs 3.01 95 P Pn 06 21 29.5 +1.2
baz=278,SNR=16
HHAR Hobbs 3.01 95 P 06 21 29.5
baz=278,SNR=16
Z35A Perchaven, San 3.29 174 Pn Pn 06 21 33.3 +1.2
Z35A lAmb_Lg 06 22 31.5
comp=Z,336nm,1.2s
Z35A Perchaven, San 3.29 174 P Pn 06 21 33.1 +1.1
baz=354,SNR=17
Z35A Perchaven, San 3.29 174 P 06 21 33.1
baz=354,SNR=17
W39A Magazine 3.44 113 lAmb_Lg 06 22 35.1
comp=Z,482nm,0.8s
W39A Magazine 3.44 113 P Pn 06 21 35.2 +1.0
baz=296,SNR=25
W39A Magazine 3.44 113 P 06 21 34.7
baz=296
W39A S 06 22 16.6
baz=296
W39A Magazine 3.44 113 P 06 21 35.2
baz=296,SNR=25
S39A Bolivar 3.62 71 Pn Pn 06 21 37.4 +0.8
S39A lAmb_Lg 06 22 43.8
comp=Z,347nm,0.8s
S39A Bolivar 3.62 71 P Pn 06 21 37.3 +0.6
baz=254,SNR=84
S39A Bolivar 3.62 71 P 06 21 37.3
baz=254,SNR=84
U40A Yellville 3.88 92 Pn Pn 06 21 41.1 +1.0
U40A Yellville 3.88 92 P Pn 06 21 41.1 +1.0
baz=275,SNR=66
U40A Yellville 3.88 92 P 06 21 41.1
baz=275,SNR=23
U40A S 06 22 26.6
baz=275
U40A Yellville 3.88 92 P 06 21 41.1
baz=275,SNR=66
U40A P 06 21 41.1
baz=275,SNR=66
MIAR Mount Ida 3.91 121 Pn Pn 06 21 41.9 +1.3
MIAR lAmb_Lg 06 22 49.0
comp=Z,213nm,0.7s
MIAR Mount Ida 3.91 121 P Pn 06 21 41.5 +0.9
baz=303,SNR=48
MIAR Mount Ida 3.91 121 P 06 21 41.3
baz=303
MIAR S 06 22 28.3
baz=303
MIAR Mount Ida 3.91 121 P 06 21 41.5
baz=303,SNR=48
N33B J Bar K, Exete 4.12 2 P Pn 06 21 43.5 0.0
baz=182,SNR=35
N33B J Bar K, Exete 4.12 2 P 06 21 43.5
baz=182,SNR=35
N33A J Bar K, Exete 4.12 2 Pn Pn 06 21 43.7 +0.1
N33A lAmb_Lg 06 23 01.7
comp=Z,210nm,0.9s
ABTX Abilene, Hawle 4.30 203 Pn Pn 06 21 46.6 +0.5
ABTX lAmb_Lg 06 23 01.1
comp=Z,163nm,0.9s
ABTX Abilene, Hawle 4.30 203 P Pn 06 21 46.5 +0.5
baz=22,SNR=40
ABTX Abilene, Hawle 4.30 203 P 06 21 46.6
baz=22
ABTX Abilene, Hawle 4.30 203 P 06 21 46.5
baz=22,SNR=40
MGMO Mountain Grove 4.35 81 Pn Pn 06 21 47.8 +1.2
P38A Dawn 4.43 46 P Pn 06 21 48.0 +0.3
baz=228,SNR=27
P38A Dawn 4.43 46 P 06 21 48.0
baz=228,SNR=27
X40A Basin Creek Fa 4.46 117 Pn Pn 06 21 49.2 +1.0
X40A lAmb_Lg 06 23 00.7
comp=Z,293nm,1.1s
X40A Basin Creek Fa 4.46 117 P Pn 06 21 49.1 +1.0
baz=300,SNR=21
X40A Basin Creek Fa 4.46 117 P 06 21 49.2
baz=300,SNR=7.8
X40A S 06 22 41.6
baz=300
X40A Basin Creek Fa 4.46 117 P 06 21 49.1
baz=300,SNR=21
X40A P 06 21 49.1
baz=300,SNR=21
N35A Tabor 4.53 20 Pn Pn 06 21 50.1 +1.1
N35A Tabor 4.53 20 P Pn 06 21 50.1 +1.1
baz=201,SNR=36
N35A Tabor 4.53 20 P 06 21 50.1
baz=201,SNR=36
FCAR Ozark Folk Cen 4.53 98 Pn Pn 06 21 50.3 +1.2
FCAR lAmb_Lg 06 23 03.8
comp=Z,260nm,0.8s
WHAR Wooly Hollow 4.55 105 lAmb_Lg 06 23 06.6
comp=Z,327nm,0.8s
R40A Maddies Statio 4.60 67 Pn Pn 06 21 50.7 +0.7
R40A lAmb_Lg 06 23 08.2
comp=Z,333nm,0.7s
R40A Maddies Statio 4.60 67 P Pn 06 21 50.8 +0.7
baz=250,SNR=33
R40A Maddies Statio 4.60 67 P 06 21 50.8
baz=250,SNR=33
KSCO Kaye Shedlock' 4.61 303 Pn Pn 06 21 51.1 +0.8
KSCO Kaye Shedlock' 4.61 303 P Pn 06 21 51.1 +0.8
baz=120
KSCO Kaye Shedlock' 4.61 303 P 06 21 50.8
baz=120
KSCO Kaye Shedlock' 4.61 303 P 06 21 51.1
baz=120
WHTX Lake Whitney, 4.61 178 Pn Pn 06 21 51.0 +0.7
WHTX lAmb_Lg 06 23 14.1
comp=Z,131nm,1.1s
WHTX Lake Whitney, 4.61 178 P Pn 06 21 50.9 +0.6
baz=358,SNR=39
WHTX Lake Whitney, 4.61 178 P 06 21 50.7
baz=358,SNR=9.8
WHTX Lake Whitney, 4.61 178 P 06 21 50.9
baz=358,SNR=39
W41B Gary Mavity, V 4.62 107 P Pn 06 21 51.1 +0.8
baz=290,SNR=15
W41B Gary Mavity, V 4.62 107 P 06 21 50.8
baz=290
W41B S 06 22 44.0
baz=290
W41B Gary Mavity, V 4.62 107 P 06 21 51.1
baz=290,SNR=15
BGNE Belgrade 4.80 356 Pn Pn 06 21 53.3 +0.3
BGNE Belgrade 4.80 356 P Pn 06 21 53.5 +0.5
baz=175,SNR=115
BGNE Belgrade 4.80 356 P 06 21 53.3
baz=175,SNR=37
BGNE S 06 22 47.8
baz=175
BGNE Belgrade 4.80 356 P 06 21 53.5
baz=175,SNR=115
237A Washetta, Mont 4.84 161 Pn Pn 06 21 53.6 +0.1
237A lAmb_Lg 06 23 25.6
comp=Z,150nm,0.7s
237A Washetta, Mont 4.84 161 P Pn 06 21 53.7 +0.2
baz=342,SNR=11
237A Washetta, Mont 4.84 161 P 06 21 53.7
baz=342,SNR=11
MSTX Muleshoe 4.95 239 P 06 21 55.5
baz=56
Z41A Richland Creek 5.20 129 P 06 21 58.7
baz=312
Z41A S 06 22 56.2
baz=312
LCAR Lake Charles 5.27 94 Pn Pn 06 22 00.6 +1.2
LCAR lAmb_Lg 06 23 31.8
comp=Z,349nm,0.9s
T42A Van Buren 5.28 84 P Pn 06 22 00.3 +0.9
baz=268,SNR=33
T42A Van Buren 5.28 84 P 06 22 00.3
baz=268,SNR=33
P40A Paris 5.29 55 lAmb_Lg 06 23 39.9
comp=Z,242nm,0.8s
P40A Paris 5.29 55 P Pn 06 21 59.9 +0.3
baz=238,SNR=9.5
P40A Paris 5.29 55 P 06 21 59.9
baz=238,SNR=9.5
CCM Cathedral Cave 5.31 72 Pn Pn 06 22 00.4 +0.6
CCM Cathedral Cave 5.31 72 P Pn 06 22 00.1 +0.3
baz=256,SNR=26
CCM Cathedral Cave 5.31 72 P 06 22 00.0
baz=256
CCM S 06 23 01.8
baz=256
CCM Cathedral Cave 5.31 72 P 06 22 00.1
baz=256,SNR=26
N38A Joes South For 5.42 38 lAmb_Lg 06 23 38.1
comp=Z,376nm,0.8s
N38A Joes South For 5.42 38 P Pn 06 22 01.2 -0.1
baz=221,SNR=36
N38A Joes South For 5.42 38 P 06 22 01.2
baz=221,SNR=36
NATX Nacogdoches 5.44 152 S 06 23 03.2
baz=334
L34A Svendsen Farm, 5.44 10 Pn Pn 06 22 01.5 -0.1
L34A lAmb_Lg 06 23 38.7
comp=Z,367nm,0.8s
L34A Svendsen Farm, 5.44 10 P Pn 06 22 01.7 +0.1
baz=191,SNR=22
L34A Svendsen Farm, 5.44 10 P 06 22 01.7
baz=191,SNR=22
T25A Trinidad 5.44 278 lAmb_Lg 06 23 41.6
comp=Z,220nm,1.0s
T25A Trinidad 5.44 278 P 06 22 01.8
baz=93,SNR=9.5
CCAR Cane Creek 5.51 117 lAmb_Lg 06 23 46.2
comp=Z,203nm,0.9s
OGNE Ogallala 5.52 323 lAmb_Lg 06 23 43.9
comp=Z,135nm,0.7s
OGNE Ogallala 5.52 323 P 06 22 02.5
baz=140,SNR=5.8
OGNE S 06 23 05.9
baz=140
435B Jarrell 5.81 179 Pn Pn 06 22 06.9 +0.1
435B lAmb_Lg 06 24 01.1
comp=Z,188nm,0.8s
435B Jarrell 5.81 179 P Pn 06 22 07.1 +0.3
baz=359,SNR=8.1
435B Jarrell 5.81 179 P 06 22 07.0
baz=359
435B S 06 23 12.5
baz=359
435B Jarrell 5.81 179 P 06 22 07.1
baz=359,SNR=8.1
X43A Marvell 5.90 109 S 06 23 17.4
baz=293
FVM French Village 5.92 74 Pn Pn 06 22 08.5 +0.2
FVM French Village 5.92 74 P Pn 06 22 08.4 +0.2
baz=259,SNR=22
FVM French Village 5.92 74 P 06 22 08.4
baz=259,SNR=22
LPAR Lepanto 6.04 97 lAmb_Lg 06 24 05.2
comp=Z,350nm,0.8s
K31A O'Neill 6.06 352 Pn Pn 06 22 10.7 +0.5
K31A O'Neill 6.06 352 P Pn 06 22 10.7 +0.5
baz=172,SNR=23
K31A O'Neill 6.06 352 P 06 22 10.7
baz=172,SNR=23
SLM Saint Louis 6.22 69 lAmb_Lg 06 24 00.8
comp=Z,246nm,0.8s
SCIA State Center 6.31 32 Pn Pn 06 22 14.3 +0.7
SCIA lAmb_Lg 06 24 16.9
comp=Z,281nm,0.7s
SCIA State Center 6.31 32 P Pn 06 22 14.2 +0.7
baz=214,SNR=6.1
SCIA State Center 6.31 32 P 06 22 13.8
baz=214
SCIA S 06 23 24.5
baz=214
SCIA State Center 6.31 32 P 06 22 14.2
baz=214,SNR=6.1
SDCO Great Sand Dun 6.37 283 lAmb_Lg 06 24 16.7
comp=Z,83nm,1.1s
SDCO Great Sand Dun 6.37 283 P 06 22 15.1
baz=98,SNR=5.9
JCT Junction City 6.37 197 Pn Pn 06 22 13.9 -0.6
JCT lAmb_Lg 06 24 10.4
comp=Z,208nm,0.9s
JCT Junction City 6.37 197 P Pn 06 22 14.6 +0.1
baz=16,SNR=15
JCT Junction City 6.37 197 P 06 22 14.4
baz=16
JCT Junction City 6.37 197 P 06 22 14.6
baz=16,SNR=15
Q24A Divide 6.38 294 P 06 22 15.0
baz=109
Q24A S 06 23 27.7
baz=109
MET Memphis--Engin 6.44 101 lAmb_Lg 06 24 21.8
comp=Z,351nm,0.7s
143A Socs Landing, 6.46 125 lAmb_Lg 06 24 20.3
comp=Z,136nm,0.8s
ISCO Idaho Springs 7.03 299 Pn Pn 06 22 24.2 +0.5
ISCO Idaho Springs 7.03 299 P 06 22 24.2
baz=114,SNR=11
OXF Oxford 7.04 105 lAmb_Lg 06 24 34.4
comp=Z,156nm,0.8s
OXF Oxford 7.04 105 P 06 22 24.1
baz=290
ECSD EROS Data Cent 7.16 6 Pn Pn 06 22 24.6 -0.7
ECSD lAmb_Lg 06 24 29.9
comp=Z,90nm,0.8s
ECSD EROS Data Cent 7.16 6 P Pn 06 22 24.4 -0.9
baz=187,SNR=49
ECSD EROS Data Cent 7.16 6 P 06 22 24.6
baz=187,SNR=19
ECSD EROS Data Cent 7.16 6 P 06 22 24.4
baz=187,SNR=49
Y45A Yeager Farm, C 7.18 110 lAmb_Lg 06 24 36.8
comp=Z,139nm,0.9s
ANMO Albuquerque 7.35 260 Pn Pn 06 22 29.0 +0.9
comp=Z,0.2nm,0.3s,baz=296,slow=9.9,SNR=1.6
ANMO Pg Pg 06 22 55.0 -6.1
comp=Z,1.9nm,0.3s,baz=78,slow=16,SNR=8.5
ANMO Lg Lg 06 24 31.7
comp=Z,6.5nm,0.3s,baz=332,slow=19,SNR=7.5
ANMO LR LR 06 25 35.1
comp=Z,66nm,19.9s,baz=98,slow=40
L40A Anamosa 7.38 40 lAmb_Lg 06 24 34.6
comp=Z,267nm,1.1s
HDIL Hopedale 7.64 56 Pn Pn 06 22 30.9 -0.9
HDIL Hopedale 7.64 56 P Pn 06 22 31.0 -0.9
baz=242,SNR=12
HDIL Hopedale 7.64 56 P 06 22 31.1
baz=242,SNR=10
HDIL Hopedale 7.64 56 P 06 22 31.0
baz=242,SNR=12
735A Kenedy 7.74 181 lAmb_Lg 06 25 02.0
comp=Z,100nm,0.9s
N23A Red Feather La 7.76 306 P 06 22 34.9
baz=121
SUSD Miller 7.88 353 P 06 22 35.4
baz=172
WVT Waverly 7.94 91 lAmb_Lg 06 24 59.2
comp=Z,102nm,0.8s
WVT Waverly 7.94 91 P 06 22 35.6
baz=276
PLAL Pickwick Lake 7.95 99 lAmb_Lg 06 24 55.3
comp=Z,86nm,0.8s
MNTX Cornudas Mount 8.06 235 lAmb_Lg 06 25 08.2
comp=Z,59nm,0.9s
MNTX Cornudas Mount 8.06 235 P 06 22 35.3
baz=50,SNR=5.5
I37A Lemond, Waseca 8.07 22 lAmb_Lg 06 25 02.3
comp=Z,187nm,1.0s
146A Union 8.12 117 lAmb_Lg 06 25 15.1
comp=Z,78nm,0.8s
L42A Oliver, Polo 8.20 47 Pn Pn 06 22 39.4 -0.2
L42A lAmb_Lg 06 25 02.4
comp=Z,241nm,0.8s
833A Chaparral WMA, 8.39 191 P 06 22 42.4
baz=9.6
T47A Sharon Grove 8.47 84 lAmb_Lg 06 25 15.8
comp=Z,220nm,1.0s
JFWS Jewell Farm 8.49 40 Pn Pn 06 22 43.1 -0.4
JFWS lAmb_Lg 06 25 13.0
comp=Z,246nm,0.8s
JFWS Jewell Farm 8.49 40 P Pn 06 22 43.0 -0.4
baz=225,SNR=32
JFWS Jewell Farm 8.49 40 P 06 22 42.4
baz=225,SNR=12
JFWS Jewell Farm 8.49 40 P 06 22 43.0
baz=225,SNR=32
Z47A Carrollton 8.57 111 lAmb_Lg 06 25 22.1
comp=Z,66nm,0.9s
V48A Smith Brothers 8.80 92 lAmb_Lg 06 25 21.0
comp=Z,138nm,1.1s
TX31 Lajitas Ar. Si 8.84 217 P Pn 06 22 48.0 -0.5
baz=33,SNR=16
TX31 Lajitas Ar. Si 8.84 217 P 06 22 48.0
baz=33,SNR=16
TXAR Lajitas Array 8.84 217 Pn Pn 06 22 47.3 -1.1
comp=Z,0.7nm,0.3s,baz=44,slow=11,SNR=40
TXAR Lg Lg 06 25 13.5
comp=Z,1.5nm,0.3s,baz=34,slow=13,SNR=1.9
TXAR LR LR 06 25 37.3
comp=Z,38nm,20.5s,baz=0.0,slow=34
M44A Midewin, Midew 8.87 55 lAmb_Lg 06 25 29.4
comp=Z,235nm,1.0s
X48A Hartselle 8.91 101 lAmb_Lg 06 25 19.3
comp=Z,142nm,1.2s
RSSD Black Hills 8.94 329 lAmb_Lg 06 25 50.2
comp=Z,45nm,0.9s
RSSD Black Hills 8.94 329 P 06 22 50.8
baz=145
RWWY Rawlins 8.99 307 lAmb_Lg 06 25 37.6
comp=Z,62nm,1.1s
I40A Norwalk 9.04 34 lAmb_Lg 06 25 36.4
comp=Z,110nm,0.9s
PV11 David Mesa, Pa 9.08 284 lAmb_Lg 06 25 47.7
comp=Z,63nm,1.1s
SFIN Lafayette 9.09 62 lAmb_Lg 06 25 27.2
comp=Z,172nm,0.7s
SFIN Lafayette 9.09 62 P 06 22 51.5
baz=249
PV16 Nyswonger Mesa 9.12 284 lAmb_Lg 06 25 55.0
comp=Z,44nm,1.2s
K22A Casper 9.12 314 lAmb_Lg 06 25 52.3
comp=Z,116nm,1.2s
PV04 Paradox Valley 9.12 285 lAmb_Lg 06 25 50.0
comp=Z,48nm,1.1s
CLTN Cedars of Leba 9.15 90 lAmb_Lg 06 25 33.9
comp=Z,115nm,1.1s
WCI Wyandotte Cave 9.18 76 lAmb_Lg 06 25 35.3
comp=Z,161nm,0.7s
WCI Wyandotte Cave 9.18 76 P 06 22 53.3
baz=263
HQIL Hanson Quary C 9.20 53 lAmb_Lg 06 25 41.4
comp=Z,104nm,0.8s
F33A 5 Mile Ranch, 9.28 6 lAmb_Lg 06 25 48.4
comp=Z,59nm,0.9s
121A Cookes Peak, D 9.29 247 lAmb_Lg 06 25 40.2
comp=Z,47nm,1.1s
SPMN Marine on St. 9.35 22 lAmb_Lg 06 25 45.9
comp=Z,66nm,0.8s
SPMN Marine on St. 9.35 22 P 06 22 53.9
baz=205,SNR=5.7
K43A Burlington 9.41 47 lAmb_Lg 06 25 40.6
comp=Z,207nm,0.9s
LRAL Lakeview Retre 9.46 109 lAmb_Lg 06 25 52.1
comp=Z,50nm,1.1s
U49A Red Boiling Sp 9.55 87 lAmb_Lg 06 25 54.0
comp=Z,73nm,0.8s
Y49A Blount Mountai 9.60 103 lAmb_Lg 06 25 50.2
comp=Z,54nm,0.8s
SWET Sewanee 9.61 95 lAmb_Lg 06 25 53.3
comp=Z,62nm,0.7s
F36A Milaca 9.75 17 lAmb_Lg 06 26 07.6
comp=Z,48nm,1.0s
I42A Draeger Farm, 9.87 40 lAmb_Lg 06 25 59.5
comp=Z,192nm,1.3s
I42A Draeger Farm, 9.87 40 P Pn 06 23 01.6 -0.8
baz=226,SNR=10
I42A Draeger Farm, 9.87 40 P 06 23 01.6
baz=226,SNR=10
P49A Miami Univ. Ec 10.61 70 P 06 23 11.8
baz=258
PD31 Pinedale Array 11.04 307 Pn Pn 06 23 18.8 +0.1
PDAR Pinedale Array 11.04 307 Pn Pn 06 23 19.4 +0.7
comp=Z,0.4nm,0.3s,baz=120,slow=14,SNR=9.8
PDAR Lg Lg 06 26 25.0
comp=Z,0.8nm,0.3s,baz=108,slow=36,SNR=2.3
PDAR LR LR 06 28 35.1
comp=Z,39nm,18.9s,baz=135,slow=43
PDAR Pinedale Array 11.04 307 Pn 06 23 18.7 +0.1
TKL Tuckaleechee C 11.27 91 Pn Pn 06 23 22.5 +1.0
comp=Z,0.6nm,0.3s,baz=244,slow=8.2,SNR=6.5
TKL Sn Sn 06 25 24.9 -2.7
comp=Z,0.6nm,0.3s,baz=112,slow=21,SNR=2.7
TKL Lg Lg 06 26 30.9
comp=Z,2.7nm,0.3s,baz=12,slow=22,SNR=14
TKL LR LR 06 26 40.7
comp=Z,37nm,20.4s,baz=304,slow=32
TKL Tuckaleechee C 11.27 91 Pn 06 23 21.7 +0.2
S51A Beattyville 11.27 81 Pn Pn 06 23 21.5 -0.1
N49A Columbus Grove 11.36 64 Pn Pn 06 23 21.6 -1.2
L48A N Adams 11.54 59 Pn Pn 06 23 23.6 -1.7
Q51A Peebles 11.57 74 Pn Pn 06 23 26.1 +0.4
AGMN Agassiz Nation 11.75 6 Pn Pn 06 23 25.6 -2.6
AGMN Agassiz Nation 11.75 6 P 06 23 25.1
baz=187
J47A Sunmer 11.86 52 Pn Pn 06 23 26.7 -2.9
V53A Saluda 12.04 90 Pn Pn 06 23 31.7 -0.4

ACSO	**Alum Creek Sta**	**12.06**	**68**	Pn	**Pn**	**06 23 31.4**	**-1.0**
B35A	**Bob, Littlefor**	**12.09**	**13**	Pn	**Pn**	**06 23 30.7**	**-2.0**
EYMN	**Ely**	**12.20**	**20**	Pn	**Pn**	**06 23 31.6**	**-2.7**
EYMN	**Ely**	**12.20**	**20**	P		06 23 31.1	
	baz=204						
Q52A	**Bidwell**	**12.40**	**74**	Pn	**Pn**	**06 23 36.6**	**-0.4**
D41A	**Chassel**	**12.44**	**30**	Pn	**Pn**	**06 23 34.4**	**-3.1**
P52A	**Corning**	**12.59**	**71**	Pn	**Pn**	**06 23 39.8**	**+0.1**
P52A	**Corning**	**12.59**	**71**	P		06 23 38.7	
	baz=261						
E43A	**Lone Tree Farm**	**12.60**	**36**	Pn	**Pn**	**06 23 37.0**	**-2.7**
N51A	**Ashland**	**12.67**	**66**	Pn	**Pn**	**06 23 40.2**	**-0.6**
DGMT	**Dagmar**	**12.79**	**340**	Pn	**Pn**	**06 23 41.3**	**-1.0**
GLMI	**Grayling**	**12.84**	**46**	Pn	**Pn**	**06 23 41.0**	**-2.0**
Q53A	**Leroy**	**12.96**	**75**	P		06 23 43.9	
	baz=265						
Q54A	**Coxs Mills**	**13.51**	**75**	Pn	**Pn**	**06 23 52.0**	**-0.3**
ULM	**Lac du Bonnet**	**13.69**	**5**	Pn	Pn	06 23 49.6	-5.0
	comp=Z,0.7nm,0.3s,baz=184,slow=12,SNR=9.0						
ULM				Sn	Sn	06 26 16.3	-10
	comp=Z,1.0nm,0.3s,baz=77,slow=14,SNR=3.4						
ULM				Lg	Lg	06 27 44.9	
	comp=Z,0.7nm,0.3s,baz=109,slow=13,SNR=4.2						
ULM	**Lac du Bonnet**	**13.69**	**5**	Pn	Pn	06 23 49.8	-4.9
N53A	**Lisbon**	**13.78**	**67**	Pn	**Pn**	**06 23 52.9**	**-3.0**
BLA	**Blacksburg**	**13.80**	**82**	Pn	**Pn**	**06 23 55.2**	**-1.1**
E46A	**Sault Ste Mari**	**13.95**	**42**	Pn	**Pn**	**06 23 55.9**	**-2.2**
R55A	**Marlinton**	**14.03**	**78**	P		06 23 59.1	
	baz=269						
ELK	**Elko**	**14.34**	**292**	LR	LR	06 29 16.6	
	comp=Z,59nm,19.9s,baz=70,slow=36						
N54A	**Moraine State**	**14.44**	**67**	Pn	**Pn**	**06 24 03.4**	**-1.6**
EGMT	**Eagleton**	**14.48**	**326**	Pn	**Pn**	**06 24 04.8**	**-0.7**
T57A	**Hurt**	**14.75**	**83**	Pn	**Pn**	**06 24 08.6**	**-0.5**
M54A	**Oil Creek Stat**	**14.80**	**65**	Pn	**Pn**	**06 24 07.5**	**-2.3**
M56A	**Emporium**	**15.88**	**66**	Pn	**Pn**	**06 24 21.3**	**-2.8**
SSPA	**Standing Stone**	**15.96**	**69**	Pn	**Pn**	**06 24 22.3**	**-2.8**
SADO	**Sadowa**	**16.21**	**54**	LR	LR	06 30 54.0	
	comp=Z,81nm,18.2s,baz=236,slow=38						
LPIG	**La Paz**	**16.55**	**225**	LR	LR	06 31 28.9	
	comp=Z,69nm,19.4s,baz=234,slow=39						
YKA	**Yellowknife Ar**	**27.96**	**343**	P	**P**	**06 26 31.5**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=144,slow=9.6,SNR=6.6						
ILAR	**Eielson Array**	**40.39**	**330**	P	**P**	**06 28 19.6**	**+1.2**
	comp=Z,3.2nm,0.7s,baz=107,slow=5.8,SNR=30						
ARCES	**ARCESS Array B**	**66.35**	**19**	P	**P**	**06 31 30.8**	**+1.8**
	comp=Z,5.2nm,1.1s,baz=311,slow=6.1,SNR=5.3						
NOA	**NORSAR Array B**	**66.92**	**30**	LR	LR	07 02 22.6	
	comp=Z,23nm,18.2s,baz=310,slow=37						
AKASG	**Malin Array Be**	**81.30**	**31**	P	**P**	**06 32 58.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=302,slow=4.5,SNR=6.3						
KSRS	**Korea Array**	**95.08**	**325**	LR	LR	07 20 08.7	
	comp=Z,46nm,18.8s,baz=104,slow=38						

*SOME **23** 06:24:57.7,43˚.57N×83˚.02E,h15km*
*NNC **23** 06:25:01.2±1.6,43˚.71N×82˚.78E,h0km,mb3.5,mpv3.3,*
Error ellipse: s-maj=15.4km s-min=6.5km az=141.0
ISC 23 06:24:55.8±2.1,43˚.38N±0˚.10×82˚.99E±0˚.08,h10km,n29,
σ1§53/44,4C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.93**	**273**	*e*P	**Pg**	**06 25 33.9**	**+1.2**
	6.2nm,0.1s						
KTMS				*e*S	**Sg**	**06 26 00.9**	**+3.2**
	24nm,0.2s						
DJR	**Jarkent**	**2.50**	**293**	*e*P	**Pg**	**06 25 42.9**	**-0.8**
	9.8nm,0.2s						
DJR				*e*S	**Sg**	**06 26 15.7**	**-0.5**
	42nm,0.2s						
DJR	**Jarkent**	**2.50**	**293**	Pg	**Pg**	**06 25 42.9**	**-0.8**
	9.8nm,0.2s						
DJR				Lg	Lg	06 26 15.7	
	42nm,0.2s						
PDGK	**Podgornoye**	**2.55**	**270**	Pg	**Pg**	**06 25 43.6**	**-1.1**
	1.5nm,0.4s						
PDGK				Lg	Lg	06 26 17.5	
	15nm,0.3s						
PDGK	**Podgornoye**	**2.55**	**270**	⇑Pn	**Pg**	**06 25 43.5**	**-1.3**
	3.7nm,0.4s						
PDGK				⇑Lg	Lg	06 26 18.2	
	14nm,0.4s						
SHLS	**Shalkode**	**2.59**	**266**	*e*P	**Pb**	**06 25 41.0**	**-1.3**
	27nm,0.1s						
SHLS				*e*S	**Sb**	**06 26 13.1**	**-1.1**
	251nm,0.5s						
UZB	**Uzynbulak**	**2.91**	**267**	*e*P	**Pg**	**06 25 51.7**	**+0.2**
	3.8nm,0.2s						
UZB				*e*S	**Sg**	**06 26 31.0**	**+1.8**
	21nm,0.3s						
UZB	**Uzynbulak**	**2.91**	**267**	Pg	**Pg**	**06 25 51.7**	**+0.2**
	3.8nm,0.2s						
UZB				Lg	Lg	06 26 31.0	
	21nm,0.3s						
KPKS	**Kokpek**	**3.14**	**273**	*e*P	**Pg**	**06 25 54.4**	**-1.5**
	8.8nm,0.1s						
KPKS				*e*S	**Sg**	**06 26 36.0**	**-0.6**
	54nm,0.4s						
SATY	**Saty**	**3.37**	**266**	*e*P	**Pg**	**06 25 59.3**	**-0.9**
	2.4nm,0.1s						
SATY				*e*S	**Sg**	**06 26 44.5**	**+0.6**
	23nm,0.2s						
SATY	**Saty**	**3.37**	**266**	Pg	**Pg**	**06 25 59.3**	**-0.9**
	2.4nm,0.1s						
SATY				Lg	Lg	06 26 44.5	
	23nm,0.2s						
MK31	**Makanchi Array**	**3.45**	**352**	⇑Pg	**Pb**	**06 25 58.5**	**+1.5**
	0.4nm,0.3s,baz=173,slow=16,SNR=23						
MK31				⇓Lg	Lg	06 26 37.7	
	1.5nm,0.3s,baz=176,slow=29,SNR=14						
ARXS	**Arharly**	**3.83**	**284**	*e*P	**Pb**	**06 26 06.0**	**+2.6**
	3.2nm,0.3s						
ARXS				*e*S	**Sg**	**06 26 55.4**	**-3.3**
	19nm,0.4s						
ZSN	**Zaisan**	**4.28**	**17**	*e*P	**Pb**	**06 26 11.0**	**-0.1**
	7.9nm,0.3s						
ZSN				*e*S	**Sb**	**06 27 04.2**	**+1.3**
	11nm,0.6s						
ZSN	**Zaisan**	**4.28**	**17**	Pg	**Pb**	**06 26 11.0**	**-0.1**
	7.9nm,0.3s						
ZSN				Lg	Lg	06 27 04.1	
	11nm,0.6s						
KOTS	**Kotyrbulak**	**4.29**	**270**	*e*P	**Pg**	**06 26 16.0**	**-2.0**
	3.9nm,0.2s						
KOTS				*e*S	**Sg**	**06 27 12.6**	**-1.1**
	8.1nm,0.4s						
MDOK	**Medeo**	**4.35**	**269**	*e*P	**Pg**	**06 26 17.0**	**-2.0**
	1.4nm,0.3s						
MDOK				*e*S	**Sg**	**06 27 14.4**	**-0.9**
	7.3nm,0.4s						
MDOK	**Medeo**	**4.35**	**269**	⇑Lg	Lg	06 27 14.4	
	5.7nm,0.6s						
MDOK	**Medeo**	**4.35**	**269**	Pg	**Pg**	**06 26 17.0**	**-2.0**
	1.4nm,0.3s						
MDOK				Lg	Lg	06 27 14.4	
	7.3nm,0.4s						
TNSS	**Tian-Shan**	**4.43**	**268**	*e*P	**Pg**	**06 26 19.1**	**-1.6**
	0.9nm,0.2s						
TNSS				*e*S	**Sg**	**06 27 17.2**	**-0.8**
	2.3nm,0.3s						
TNSS	**Tian-Shan**	**4.43**	**268**	Pg	**Pb**	**06 26 17.1**	**+3.2**
	1.3nm,0.4s						
TNSS				Lg	Lg	06 27 15.0	
	2.3nm,0.3s						
KTBS	**Karatobe**	**4.60**	**276**	*e*P	**Pg**	**06 26 22.4**	**-1.4**
	0.6nm,0.1s						
KTBS				*e*S	**Sg**	**06 27 23.1**	**-0.3**
	16nm,0.4s						
KTBS	**Karatobe**	**4.60**	**276**	Pg	**Pg**	**06 26 22.1**	**-1.7**
	0.6nm,0.1s						
KTBS				Lg	Lg	06 27 23.1	
	16nm,0.4s						
IZV	**Izvestkoviy**	**4.67**	**268**	*e*P	**Pg**	**06 26 24.0**	**-1.3**
	2.3nm,0.1s						
IZV				*e*S	**Sg**	**06 27 25.7**	**-0.2**
	9.1nm,0.6s						
IZV	**Izvestkoviy**	**4.67**	**268**	Pg	**Pg**	**06 26 23.4**	**-1.9**
	2.3nm,0.1s						
IZV				Lg	Lg	06 27 25.9	
	9.1nm,0.6s						
MTBS	**Maitube**	**4.80**	**269**	*e*P	**Pg**	**06 26 27.0**	**-0.7**
	1.5nm,0.3s						
MTBS				*e*S	**Sg**	**06 27 30.8**	**+0.9**
	5.1nm,0.3s						
MTBS	**Maitube**	**4.80**	**269**	Pg	**Pg**	**06 26 26.8**	**-0.9**
	1.5nm,0.3s						
MTBS				Lg	Lg	06 27 31.1	
	5.1nm,0.3s						
KST	**Kastek**	**5.15**	**269**	*e*P	**Pg**	**06 26 32.2**	**-2.1**
	0.6nm,0.3s						
KST				*e*S	**Sg**	**06 27 40.6**	**-0.5**
	4.0nm,0.6s						
KRBS	**Karabastau**	**5.33**	**276**	*e*P	**Pg**	**06 26 36.4**	**-1.4**
	0.7nm,0.2s						
KRBS				*e*S	**Sg**	**06 27 47.5**	**+0.7**
	4.9nm,0.5s						

*ATH **23** 06:35:03.7,36˚.15N×28˚.68E,h60km±5km,ML3.3/2,Error*
ellipse: s-maj=6.3km s-min=1.8km az=9.0
*HLW **23** 06:35:04.6,36˚.01N×28˚.82E,h10km±14km,Md4.1,Ml4.0*
*ISK **23** 06:35:05.3,36˚.23N×28˚.71E,h28km,ML3.3/15*
*NIC **23** 06:35:06.8±0.0,36˚.01N×28˚.79E,h51km±3km,Ml4.0/3*
*DDA **23** 06:35:06.1,36˚.22N×28˚.65E,h36km±1km,MW3.5*
*THE **23** 06:35:07.2,36˚.21N×28˚.70E,h23km,ML3.2/3,Error*
ellipse: s-maj=1.2km s-min=0.3km az=358.0
ISC 23 06:35:05.5±1.1,36˚.23N±0˚.03×28˚.70E±0˚.02,h44km±12km,
n75,σ1§72/106,2C-2D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.46**	**269**	P	**Pn**	**06 35 16.4**	**+0.5**
ARG				S	**Sn**	**06 35 24.5**	**+1.2**
ARG				AML	AML	06 35 25.1	
	comp=N,7822μm,0.3s						
ARG				AML	AML	06 35 26.4	
	comp=E,8891μm,0.2s						
ARG	**Arkhangelos**	**0.46**	**269**	P	**Pn**	**06 35 16.5**	**+0.5**
ARG				S	**Sn**	**06 35 24.1**	**+0.8**
	comp=E,4μm,0.2s						
ARG	**Arkhangelos**	**0.46**	**269**	PG	**Pn**	**06 35 15.9**	**0.0**
ARG				SG	**Sn**	**06 35 23.6**	**+0.3**
ARG	**Arkhangelos**	**0.46**	**269**	P	**Pn**	**06 35 16.5**	**+0.6**
FETY	**Fethiye**	**0.51**	**37**	PG	**Pn**	**06 35 16.1**	**-0.5**
DALY	**Dalyan (Mula)**	**0.59**	**356**	*i* P	**Pn**	**06 35 18.2**	**+0.6**
DALY				*i* S	**Sn**	**06 35 26.4**	**+0.2**
DALY	**Dalyan (Mula)**	**0.59**	**356**	PG	**Pn**	**06 35 18.2**	**+0.6**
DALY				SG	**Sn**	**06 35 26.8**	**+0.6**
TURN	**Turunc**	**0.66**	**326**	*i* P	**Pn**	**06 35 19.3**	**+0.8**
TURN				*i* S	**Sn**	**06 35 27.0**	**-0.8**
TURN	**Turunc**	**0.66**	**326**	PG	**Pn**	**06 35 19.1**	**+0.6**
TURN				SG	**Sn**	**06 35 28.8**	**+1.0**
KSL	**Kastellorizon**	**0.72**	**96**	P	**Pn**	**06 35 19.5**	**+0.3**
KSL				S	**Sn**	**06 35 31.0**	**+1.8**
KSL				AML	AML	06 35 31.8	
	comp=E,4452μm,0.4s						
KSL				AML	AML	06 35 34.4	
	comp=N,1835μm,0.3s						
KSL	**Kastellorizon**	**0.72**	**96**	P	**Pn**	**06 35 20.3**	**+1.0**
KSL				S	**Sn**	**06 35 30.5**	**+1.3**
	comp=N,2μm,0.4s						
KSL	**Kastellorizon**	**0.72**	**96**	P	**Pn**	**06 35 20.0**	**+0.8**
KSL				S	**Sn**	**06 35 30.8**	**+1.6**
AKAS	**Kas**	**0.73**	**89**	*i* P	**Pn**	**06 35 19.4**	**-0.2**
AKAS				*i* S	**Sn**	**06 35 28.8**	**-1.0**
AKAS	**Kas**	**0.73**	**89**	PG	**Pn**	**06 35 19.4**	**-0.2**
YER	**Yerkesik**	**0.97**	**340**	PG	**Pn**	**06 35 23.6**	**+0.9**
CAEL	**Denizli, Camel**	**1.02**	**29**	*i* P	**Pn**	**06 35 25.1**	**+1.5**
CAEL				*i* S	**Sn**	**06 35 37.2**	**+0.3**
MULA	**Mugla, Merkez-**	**1.07**	**344**	*i* P	**Pn**	**06 35 25.9**	**+1.7**
MULA				*i* S	**Sn**	**06 35 36.2**	**-1.7**
ELL	**Elmali**	**1.10**	**62**	PN	**Pn**	**06 35 25.3**	**+0.7**
ELL	**Elmali**	**1.10**	**62**	P	**Pn**	**06 35 26.6**	**+2.0**
GOLH	**Golhisar**	**1.22**	**34**	*i* P	**Pn**	**06 35 28.4**	**+2.1**
GOLH				*i* S	**Sn**	**06 35 43.8**	**+2.1**
NIS1	**Nisyros Isl.**	**1.28**	**287**	P	**Pn**	**06 35 28.1**	**+1.1**
NIS1				S	**Sn**	**06 35 45.3**	**+2.3**
NIS1	**Nisyros Isl.**	**1.28**	**287**	P	**Pn**	**06 35 28.1**	**+1.1**
NIS1				S	**Sn**	**06 35 44.7**	**+1.7**
NIS1	**Nisyros Isl.**	**1.28**	**287**	PN	**Pn**	**06 35 27.9**	**+0.9**
BDRM	**Kayabasi**	**1.31**	**310**	*i* P	**Pn**	**06 35 27.2**	**-0.2**
BDRM				*i* S	**Sn**	**06 35 43.3**	**-0.4**
AKUM	**Antalya-Kumluc**	**1.33**	**85**	*i* P	**Pn**	**06 35 28.4**	**+0.8**
AKUM				*i* S	**Sn**	**06 35 42.0**	**-2.2**
BODT	**Bodrum**	**1.39**	**307**	PN	**Pn**	**06 35 28.2**	**-0.3**
KARP	**Karpathos**	**1.42**	**242**	P	**Pn**	**06 35 29.9**	**+0.9**
KARP				S	**Sn**	**06 35 47.6**	**+1.2**
KARP	**Karpathos**	**1.42**	**242**	P	**Pn**	**06 35 30.1**	**+1.2**
KARP				S	**Sn**	**06 35 47.5**	**+1.1**
	comp=N,715nm,0.2s						
KARP	**Karpathos**	**1.42**	**242**	PN	**Pn**	**06 35 29.7**	**+0.8**
KARP	**Karpathos**	**1.42**	**242**	P	**Pn**	**06 35 30.1**	**+1.2**
KARP				S	**Sn**	**06 35 47.6**	**+1.2**
KARP				AML	AML	06 35 48.0	
	comp=N,1.3nm,0.2s						
KARP				AML	AML	06 35 48.0	
	comp=N,1.3nm,0.2s						
KARP				AML	AML	06 35 48.0	
	comp=N,1.8nm,0.2s						
KARP				AML	AML	06 35 48.0	
	comp=N,1.8nm,0.2s						
KORT	**Korkueli**	**1.54**	**59**	*i* P	**Pn**	**06 35 33.0**	**+2.5**
KORT				*i* S	**Sn**	**06 35 51.9**	**+2.5**
KORT	**Korkueli**	**1.54**	**59**	PN	**Pn**	**06 35 31.5**	**+0.9**
AYDN	**Tasoluk**	**1.57**	**336**	*i* P	**Pn**	**06 35 32.5**	**+1.4**
AYDN				*i* S	**Sn**	**06 35 49.2**	**-1.1**
DDIM	**Aydin, Didim**	**1.70**	**317**	*i* P	**Pn**	**06 35 33.7**	**+1.1**
DDIM				*i* S	**Sn**	**06 35 53.3**	**+0.2**
ANTB	**Antalya**	**1.71**	**66**	PN	**Pn**	**06 35 33.9**	**+1.1**
BRDR	**BURDUR-Merkez**	**1.83**	**36**	*i* P	**Pn**	**06 35 36.7**	**+2.2**
AYDB	**Zeytinkoy-Aydi**	**1.83**	**340**	PN	**Pn**	**06 35 35.5**	**+0.8**
BUCA	**Burdur, Bucak-**	**1.85**	**53**	*i* P	**Pn**	**06 35 37.0**	**+2.2**
GCAM	**G?zelcaml?**	**1.88**	**322**	*i* P	**Pn**	**06 35 35.4**	**+0.2**
MANT	**Manisa**	**2.26**	**357**	*i* P	**Pn**	**06 35 41.3**	**+0.6**
MANT				*i* S	**Sn**	**06 36 04.6**	**-2.8**
KULA	**Kula-Manisa**	**2.28**	**359**	PN	**Pn**	**06 35 42.2**	**+1.4**
ZKR	**Zakros**	**2.31**	**242**	P	**Pn**	**06 35 42.8**	**+1.9**
ZKR	**Zakros**	**2.31**	**242**	P	**Pn**	**06 35 42.9**	**+1.9**
ZKR	**Zakros**	**2.31**	**242**	PN	**Pn**	**06 35 42.4**	**+1.4**
ZKR	**Zakros**	**2.31**	**242**	P	**Pn**	**06 35 42.7**	**+1.6**
ZKR				S	**Sn**	**06 36 09.9**	**+1.8**
DGB	**zmir**	**2.33**	**322**	*i* P	**Pn**	**06 35 41.6**	**+0.3**
USAK	**Uak-Merkez**	**2.50**	**6**	*i* P	**Pn**	**06 35 44.7**	**+1.1**
ZEYE	**Izmir, Urla-Ze**	**2.67**	**320**	*i* P	**Pn**	**06 35 46.4**	**+0.4**
ZEYE				*i* S	**Sn**	**06 36 11.2**	**-5.8**
THR3	**Thira Island,**	**2.67**	**275**	P	**Pn**	**06 35 47.0**	**+1.0**
APE	**Apeiranthos**	**2.68**	**289**	PN	**Pn**	**06 35 47.6**	**+1.4**
NPS	**Neapolis**	**2.69**	**250**	P	**Pn**	**06 35 47.1**	**+0.8**
URLA	**Izmir**	**2.71**	**322**	*i* P	**Pn**	**06 35 45.4**	**-1.2**
URLA				*i* S	**Sn**	**06 36 12.6**	**-5.6**
THR5	**Thira Island,**	**2.71**	**275**	P	**Pn**	**06 35 47.8**	**+1.2**
SEDI	**Konya, Seydise**	**2.74**	**63**	*i* P	**Pn**	**06 35 50.4**	**+3.3**
SEDI				*i* S	**Sn**	**06 36 18.6**	**-0.4**
LAST	**Lasithi**	**2.83**	**249**	P	**Pn**	**06 35 49.3**	**+1.0**
CHOS	**Chios island**	**3.02**	**316**	PN	**Pn**	**06 35 52.8**	**+2.0**
DOGA	**KONYA_Doganhis**	**3.02**	**51**	*i* P	**Pn**	**06 35 52.1**	**+1.1**
AKMS	**Akamas**	**3.20**	**111**	⇓P	**Pn**	**06 35 53.5**	**+0.2**
AKMS				AML	AML	06 36 26.6	
	comp=N,1.4nm,0.3s						
AKMS				AML	AML	06 36 26.6	
	comp=N,1.0nm,0.4s						
IDI	**Anoyia**	**3.24**	**254**	PN	**Pn**	**06 35 54.4**	**+0.5**
ALFC	**Alefka**	**3.35**	**107**	P	**Pn**	**06 35 55.1**	**-0.2**
ALFC				AML	AML	06 36 32.2	
	comp=N,1.0nm,0.3s						
ALFC				AML	AML	06 36 32.3	
	comp=N,1.1nm,0.1s						
DURS	**Dursunbey**	**3.37**	**357**	*i* P	**Pn**	**06 35 58.2**	**+2.4**
OSC1	**CSNet OBS 1**	**3.45**	**141**	P	**Pn**	**06 35 56.0**	**-0.7**
OSC1				S	**Sn**	**06 36 33.5**	**-2.8**
NATA	**Nata**	**3.47**	**113**	⇑P	**Pn**	**06 35 57.4**	**+0.3**
BUHA	**Balikesir, Bur**	**3.51**	**339**	*i* P	**Pn**	**06 36 01.7**	**+4.1**
SZAC	**Souni**	**3.71**	**112**	⇑P	**Pn**	**06 36 00.5**	**+0.2**
ASGA	**Asgata**	**3.98**	**110**	⇓P	**Pn**	**06 36 04.2**	**+0.2**
CSS	**Mathiatis**	**3.98**	**107**	P	**Pn**	**06 36 04.3**	**+0.3**
MVOU	**Mavrovouni**	**4.20**	**105**	P	**Pn**	**06 36 07.4**	**+0.5**
KOT	**Kottamia**	**6.81**	**156**	P	**Pn**	**06 36 42.2**	**-0.6**
	baz=156						
KOT				AMP		06 37 00.0	
	baz=156						
KOT				S	**Sn**	**06 37 51.9**	**-7.2**
	baz=156						
HHAG	**Hagoal**	**6.88**	**155**	P	**Pn**	**06 36 43.3**	**-0.5**
	baz=154						
GLL	**Jalalah**	**7.10**	**158**	P	**Pn**	**06 36 45.4**	**-1.4**
	baz=158						
SUZ	**Suez**	**7.25**	**150**	P	**Pn**	**06 36 47.5**	**-1.4**
	baz=150						
HBST	**Basata**	**8.64**	**142**	P	**Pn**	**06 37 07.0**	**-1.0**
	baz=142						
HKAT	**Jabal Katrina**	**8.89**	**148**	P	**Pn**	**06 37 10.4**	**-1.1**
	baz=148						
HFRF	**Wahat Farafira**	**9.06**	**182**	P	**Pn**	**06 37 12.5**	**-1.2**
	baz=183						

IDC 23 06:58:09.7±1.9,0˚.16N×124˚.84E,h0km,mb3.4/3,
mb1 3.7/3,mb1mx3.3/41,mbtmp3.4/3,MS3.5/1,Ms1 3.5/1,
ms1mx2.4/23,Error ellipse: s-maj=177.5km
s-min=27.7km az=63.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.04**	**156**	P	P	07 03 05.6	-0.5
	0.8nm,0.4s,baz=333,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.27**	**160**	P	P	07 03 38.3	+0.4
	0.6nm,0.5s,baz=344,slow=8.0,SNR=12						
JNU	**Nakatsue**	**33.27**	**9**	LR	LR	07 20 33.6	
	comp=Z,71nm,18.1s,baz=26,slow=40						
MKAR	**Makanchi Array**	**59.46**	**327**	P	P	07 08 14.4	-0.1
	0.2nm,0.5s,baz=133,slow=7.5,SNR=2.5						

*NOU **23** 07:00:50.2,41˚.74S×174˚.47E,h21km,MLv3.8,Cook*
Strait, New Zealand
WEL 23 07:00:50.7,42˚.3±2˚×17˚.4E±˚,h24km±2km,MS3.5/20,
ML3.8/20,MLv3.5/20,Error ellipse: s-maj=0.0km
s-min=0.0km az=140.4,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.14**	**199**	P	Pb	07 00 54.5	-1.0
TUWZ	**Tuamarina**	**0.31**	**307**	P	Pb	07 00 58.0	+0.2
TUWZ				S	Sb	07 01 03.4	+0.7
BSWZ	**Blackbirch Sta**	**0.31**	**252**	P	Pb	07 00 57.5	-0.3
TCW	**Tory Channel**	**0.41**	**0**	P	Pb	07 00 59.7	+0.4
TCW				S	Sb	07 01 06.0	+0.8
BHW	**Baring Head**	**0.49**	**65**	P	Pb	07 01 01.2	+0.4
WEL	**Wellington**	**0.50**	**48**	P	Pb	07 01 01.4	+0.6
WEL				S	Sn	07 01 09.2	-1.0
PLWZ	**Palliser**	**0.74**	**86**	P	Pn	07 01 05.8	+0.1
MSWZ	**Moikau Station**	**0.76**	**75**	P	Pn	07 01 06.1	+0.1
MSWZ				S	Sn	07 01 18.6	+1.9
NNZ	**Nelson**	**0.78**	**301**	P	Pn	07 01 06.1	-0.1
CAW	**Cannon Point**	**0.79**	**50**	P	Pn	07 01 06.3	0.0
DUWZ	**D'Urville Isla**	**0.86**	**342**	P	Pn	07 01 07.6	+0.2
DUWZ				S	Sn	07 01 19.8	+0.7
KIW	**Kapiti Island**	**0.90**	**33**	P	Pn	07 01 08.2	+0.3
KIW				S	Sn	07 01 21.0	+1.0
PAWZ	**Paruwai Farm**	**0.90**	**75**	P	Pn	07 01 08.2	+0.3
PAWZ				S	Sn	07 01 21.8	+1.6
KHZ	**Kahutara**	**0.97**	**214**	P	Pn	07 01 09.0	+0.2
KHZ				S	Sn	07 01 23.2	+1.4
MTW	**Mount Morrison**	**1.03**	**64**	P	Pb	07 01 10.2	+0.3
THZ	**Tophouse**	**1.03**	**262**	P	Pb	07 01 10.2	+0.2
OGWZ	**Otaki Gorge**	**1.05**	**40**	P	Pb	07 01 10.7	+0.6
TRWZ	**Traveller**	**1.08**	**79**	P	Pn	07 01 10.5	+0.1
HOWZ	**Holdsworth Sta**	**1.18**	**53**	P	Pb	07 01 12.4	0.0
TMWZ	**Te Maipa**	**1.32**	**68**	P	Pn	07 01 13.8	+0.1
MRZ	**Mangatainoka R**	**1.37**	**46**	P	Pb	07 01 15.4	-0.3
TIWZ	**Tintock**	**1.48**	**56**	P	Pb	07 01 16.1	+0.3
QRZ	**Quartz Range**	**1.54**	**300**	P	Pb	07 01 18.9	+0.4
CPWZ	**Castlepoint**	**1.62**	**65**	P	Pn	07 01 18.1	+0.4
OHWZ	**Ohakea**	**1.62**	**30**	P	Pb	07 01 20.8	+1.0
GVZ	**Greta Valley S**	**1.63**	**214**	P	Pn	07 01 17.9	-0.1
PRWZ	**Pori Road**	**1.67**	**51**	P	Pn	07 01 19.0	+0.6
POWZ	**Post Office Ro**	**1.67**	**43**	P	Pn	07 01 19.5	+1.1
BFZ	**Birch Farm**	**1.76**	**58**	P	Pn	07 01 19.3	-0.4
DSZ	**Denniston Nort**	**1.85**	**265**	P	Pb	07 01 23.0	-0.9
LTZ	**Lake Taylor**	**1.89**	**231**	P	Pn	07 01 21.8	+0.3
WAZ	**Wanganui**	**1.94**	**16**	P	Pb	07 01 26.0	+0.7
DVHZ	**Dannevirke**	**1.95**	**48**	P	Pn	07 01 22.4	+0.1
AMCZ	**Amberley**	**1.97**	**217**	P	Pn	07 01 22.1	-0.4
TSZ	**Takapari Road**	**2.02**	**40**	P	Pn	07 01 24.3	+1.1
ANWZ	**Angora Road**	**2.03**	**56**	P	Pn	07 01 23.2	-0.2
NMEZ	**Namu Road**	**2.22**	**352**	P	Pb	07 01 31.8	+1.7
PRHZ	**Porangahau**	**2.24**	**54**	P	Pn	07 01 26.0	-0.3
PNHZ	**Pukenui**	**2.25**	**41**	P	Pn	07 01 26.9	+0.5
WPHZ	**

KUR pmax pmax
comp=N,101nm,0.3s
KUR pmax pmax
comp=E,30nm,0.3s
KUR smax smax
comp=N,222nm,0.4s
KUR smax smax
comp=E,324nm,0.7s
KUR Kuril'sk 3.72 257 *e*P **Pn 07 02 30.6 +0.9**
KUR AMB AMB 07 02 31.0
comp=E,100nm,0.4s
KUR AMB AMB 07 02 31.0
comp=E,30nm,0.4s
KUR AMB AMB 07 02 31.0
comp=E,310nm,0.4s
KUR *e*S **Sn 07 03 12.4 -0.1**
KUR A A 07 03 25.0
comp=E,320nm,0.7s
KUR A A 07 03 25.0
comp=E,220nm,0.4s
SKR Severo-Kuril's 4.94 24 *e*PN **Pn 07 02 46.8 +0.4**
SKR *e*S **Sn 07 03 42.1 -0.3**
SKR pmax pmax
comp=Z,41nm,0.4s
SKR smax smax
comp=N,55nm,0.4s
SKR smax smax
comp=E,66nm,0.5s
SKR MLR MLR
comp=Z,1μm,16.0s
SKR MLR MLR
comp=Z,600nm,16.0s
SKR Severo-Kuril's 4.94 24 *e*P **Pn 07 02 46.8 +0.4**
SKR AMB AMB 07 02 48.0
comp=Z,40nm,0.4s
SKR *e*S **Sn 07 03 41.6 -0.8**
SKR A A 07 03 43.4
comp=Z,70nm,0.4s
SKR A A 07 03 43.4
comp=Z,120nm,0.4s
SKR AMS AMS 07 04 40.4
comp=Z,4μm,16.0s
SKR AMS AMS 07 04 40.4
comp=Z,4μm,16.0s
SKR AMS AMS 07 04 40.4
comp=Z,2μm,16.0s
PAU Pauzhetka 5.84 24 *e*P **Pn 07 02 58.9 +0.2**
PAU *e*S **Sn 07 04 03.2 -1.3**
PAU A A 07 04 08.0
comp=Z,190nm,0.6s
PAU A A 07 04 08.0
comp=Z,240nm,0.6s
PAU AMS AMS 07 04 50.8
comp=Z,3μm,16.0s
PAU AMS AMS 07 04 50.8
comp=Z,4μm,16.0s
PAU AMS AMS 07 04 50.8
comp=Z,3μm,16.0s
NMR Nemuro--Hokkai 5.90 244 *e*PN **Pn 07 02 57.1 -2.5**
NMR Nemuro--Hokkai 5.90 244 *e*P **Pn 07 02 57.0 -2.5**
YSS Yuzh-Sakhalins 7.10 280⇓*e*PN **Pn 07 03 19.4 +3.3**
YSS pmax pmax
comp=Z,10.0nm,0.6s
YSS MLR MLR
comp=Z,300nm,18.0s
YSS Yuzh-Sakhalins 7.10 280 Pn **Pn 07 03 17.0 +0.9**
YSS Yuzh-Sakhalins 7.10 280 *e*P **Pn 07 03 17.4 +1.3**
YSS AMB AMB 07 03 20.0
comp=Z,10.0nm,0.6s
YSS *e*S **Sn 07 04 35.3 -0.3**
YSS A A 07 04 37.6
comp=Z,30nm,0.3s
YSS AMS AMS 07 05 53.0
comp=Z,300nm,18.0s
PEA0B Petropavlovsk- 7.55 22⇓*e*PN **Pn 07 03 22.1 -0.2**
PEA0B Petropavlovsk- 7.55 22 Pn **Pn 07 03 22.7 +0.4**
PETK Petropavlovsk- 7.55 22 Pn **Pn 07 03 22.4 +0.2**
comp=Z,1.2nm,0.3s,baz=176,slow=12,SNR=19
PETK Sn **Sn 07 04 50.6 +3.9**
comp=Z,1.1nm,0.3s,baz=193,slow=16,SNR=5.7
PETK LR LR 07 06 33.3
comp=Z,91nm,18.4s,baz=267,slow=40
PETK Petropavlovsk- 7.55 22 PN **Pn 07 03 22.9 +0.6**
PETK Petropavlovsk- 7.55 22 **Pn 07 03 22.9 +0.6**
PET Petropavlovsk 7.75 26⇓*e*PN **Pn 07 03 25.6 +0.7**
PET Petropavlovsk 7.75 26 *e*P **Pn 07 03 25.6 +0.7**
ERM Erimo 8.22 243⇑*i*PN **Pn 07 03 31.5 0.0**
ERM Erimo 8.22 243 Pn **Pn 07 03 31.3 -0.2**
TYV Tymovskoe 8.29 308 *e*P **Pn 07 03 33.7 +1.3**
OKH Okha 9.80 322 *e*P **Pn 07 03 56.4 +3.3**
OKH AMS AMS 07 08 17.0
comp=Z,100nm,17.0s
OKH AMS AMS 07 08 17.0
comp=Z,300nm,17.0s
OKH AMS AMS 07 08 17.0
comp=Z,200nm,17.0s
MA2 Magadan 13.46 355 Pn **Pn 07 04 45.0 +2.0**
comp=Z,1.1nm,0.3s,baz=165,slow=4.5,SNR=4.3
MA2 Magadan 13.46 355⇑*e*PN **Pn 07 04 44.5 +1.4**
MA2 Magadan 13.46 355 *e*P **Pn 07 04 44.5 +1.4**
KLR Kul'dur 14.61 290 Pn **Pn 07 04 59.1 +0.3**
comp=Z,0.1nm,0.3s,baz=104,slow=14,SNR=3.8
KLR Kul'dur 14.61 290⇑*e*P **Pn 07 05 00.2 +1.4**
KLR pmax pmax
comp=Z,2.0nm,1.1s
KLR Kul'dur 14.61 290 *e*P **Pn 07 04 58.5 -0.3**
EKMR Ekimchan 14.67 305 *e*P **Pn 07 04 58.0 -1.5**
EKMR AMB AMB 07 05 08.5
comp=Z,3.0nm,0.8s
MJAR Matsushiro Arr 14.69 234 LR LR 07 11 52.9
comp=Z,36nm,19.4s,baz=60,slow=43
MAJO Matsushiro 14.69 234⇑*e*P **P 07 05 03.5 -2.3**
USRK Ussuriysk Ar. 14.94 270 Pn **Pn 07 04 60.0 -3.3**
baz=199,slow=39,SNR=3.3
USRK Ussuriysk Ar. 14.94 270 P **Pn 07 05 00.0 -3.3**
SEY Seymchan 16.77 359 Pn **Pn 07 05 26.0 -0.7**
comp=Z,0.3nm,0.3s,baz=0.8,slow=23,SNR=4.6
SEY Seymchan 16.77 359 P **Pn 07 05 26.0 -0.7**
SEY Seymchan 16.77 359 *e*P **Pn 07 05 26.0 -0.7**
BMKR Bomnak 17.51 308 *e*P **Pn 07 05 33.0 -2.9**
KROS Kirovskiy 18.46 306 *e*P **Pn 07 05 48.0 +0.3**
KSRS Korea Array 20.56 254 P **P 07 06 10.2 -0.2**
comp=Z,1.7nm,0.6s,baz=55,slow=11,SNR=5.8
KSRS Korea Array 20.56 254 *e*P Pn 07 06 12.8 0.0
KSRS pmax pmax
comp=Z,2.0nm,0.6s
KSRS Korea Array 20.56 254 *e*P Pn 07 06 12.8 0.0
JCJ Chichijima 20.91 208 LR LR 07 17 11.3
comp=Z,21nm,18.1s,baz=150,slow=45
BILL Bilibino 22.94 13⇑*e*P **P 07 06 35.3 -0.3**
BILL *i* 07 06 42.4
BILL *e* 07 07 01.8
BILL pmax pmax
comp=Z,2.0nm,0.8s
BILL Bilibino 22.94 13 *e*P **P 07 06 35.3 -0.3**
H11N2 WAKE ISLAND Hy 28.77 152 T T 07 39 14.4
baz=340,slow=75,SNR=59
H11N1 WAKE ISLAND Hy 28.79 152 T T 07 39 14.4
baz=340,slow=75,SNR=31
H11N3 WAKE ISLAND Hy 28.79 152 T T 07 39 15.6
baz=340,slow=75,SNR=26
SONM Songino Array 31.44 290 P **P 07 07 52.6 -0.3**
comp=Z,0.7nm,0.7s,baz=107,slow=5.0,SNR=2.3
SONM Songino Array 31.44 290 IAmb IAmb 07 07 59.8
comp=Z,0.5nm,0.8s
TLY Talaya 32.36 298 LR LR 07 21 44.4
comp=Z,36nm,19.8s,baz=74,slow=38
ILAR Eielson Array 37.03 38 P **P 07 08 41.0 +0.1**
comp=Z,0.4nm,0.8s,baz=256,slow=8.6,SNR=7.5
NRIK Noril'sk 39.19 329⇑*e*P **P 07 08 57.9 -1.1**
NRIK pmax pmax
comp=Z,1.0nm,0.6s
BCAR Beaver Creek A 39.37 41 P **P 07 09 02.1 +1.4**
EGAK Eagle 39.48 38 P **P 07 09 01.8 +0.3**
EGAK IAmb IAmb 07 09 15.1
comp=Z,3.6nm,0.8s
TABL Table Mountain 40.04 45 P **P 07 09 07.1 +0.7**
INK Inuvik 42.15 32 P **P 07 09 24.6 +1.1**
comp=Z,1.4nm,0.5s,baz=303,slow=7.4,SNR=17
DGZ Jazzator, Alta 42.80 300⇑*e*P **P 07 09 30.1 +0.9**
DGZ pmax pmax
comp=Z,1.0nm,1.4s
ZALV Zalesovo Beam 42.87 306 P **P 07 09 27.6 -1.9**
comp=Z,1.0nm,0.4s,baz=348,slow=41,SNR=3.0
MK31 Makanchi Array 47.12 298⇓*i*P **P 07 10 02.4 -1.1**
MK31 Makanchi Array 47.12 298 P **P 07 10 02.7 -0.7**
MKAR Makanchi Array 47.12 298 P **P 07 10 02.5 -1.0**
comp=Z,0.8nm,0.4s,baz=68,slow=7.9,SNR=14
MKAR LR LR 07 30 17.3
comp=Z,66nm,20.2s,baz=63,slow=37
MAKZ Makanchi 47.31 298 P **P 07 10 04.3 -0.6**
MAKZ pmax pmax
comp=Z,3.0nm,1.2s
MAKZ Makanchi 47.31 298 P **P 07 10 04.3 -0.6**
MAKZ IAmb IAmb 07 10 04.7
comp=Z,2.9nm,1.2s
BRVK Borovoye 51.19 310*d*P **P 07 10 33.2 -1.2**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BRVK Borovoye 51.19 310 P **P 07 10 32.5 -1.8**
BRVK IAmb IAmb 07 10 34.0
comp=Z,2.7nm,0.6s
BRVK Borovoye 51.19 310 *i* P **P 07 10 33.2 -1.2**
RES Resolute Bay 51.38 18 P **P 07 10 36.6 +1.1**
RES pmax pmax
comp=Z,3.0nm,1.2s
RES Resolute Bay 51.38 18 P **P 07 10 36.6 +1.1**
YKA Yellowknife Ar 51.41 36 P **P 07 10 36.5 +0.6**
comp=Z,0.8nm,0.8s,baz=296,slow=7.0,SNR=10
YKA PcP **PcP 07 11 49.8 -0.2**
comp=Z,0.2nm,0.6s,baz=307,slow=3.4,SNR=4.6
CMAR Chiang Mai Arr 52.16 257 P **P 07 10 43.2 +1.1**
comp=Z,1.0nm,0.3s,baz=35,slow=6.7,SNR=4.8
CMAR LR LR 07 34 10.2
comp=Z,22nm,19.3s,baz=225,slow=38
CMAR Chiang Mai Arr 52.16 257 *i* P **P 07 10 45.0 +2.9**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BOOM Boomskoye usch 53.18 296 P **P 07 10 50.3 +0.7**
BOOM pmax pmax
comp=Z,3.0nm,0.8s
BOOM Boomskoye usch 53.18 296 P **P 07 10 50.3 +0.7**
BOOM IAmb IAmb 07 10 50.8
comp=Z,3.1nm,0.8s
AAK Ala-Archa 54.01 297⇓*i*P **P 07 10 55.2 -0.4**
AAK pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 54.01 297 P **P 07 10 55.9 +0.3**
AAK IAmb IAmb 07 10 56.9
comp=Z,2.8nm,0.7s
AAK Ala-Arcna 54.01 297 *i* P **P 07 10 55.2 -0.4**
LUWI Luwuk 54.06 218 P **P 07 10 57.0 +1.0**
NEEM North Greenlan 55.72 6 *i* P **P 07 11 07.1 -0.5**
NEEM IAmb IAmb 07 11 10.4
comp=Z,4.7nm,0.8s
KK31 Karatay Array 56.19 299 P **P 07 11 11.1 -0.1**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KK31 Karatay Array 56.19 299 P **P 07 11 11.1 -0.1**
KK31 IAmb IAmb 07 11 12.1
comp=Z,2.0nm,0.8s
KKAR Karatay Array 56.19 299 P **P 07 11 11.3 +0.1**
KKAR pmax pmax
comp=Z,2.0nm,0.8s
KKAR Karatay Array 56.19 299 P **P 07 11 10.9 -0.3**
KKAR IAmb IAmb 07 11 12.0
comp=Z,2.0nm,0.8s
KKAR Karatay Array 56.19 299 P **P 07 11 11.3 +0.1**
ARCES ARCESS Array B 58.34 341 P **P 07 11 24.4 -1.6**
comp=Z,2.9nm,0.9s,baz=38,slow=4.8,SNR=11
ARCES ARCESS Array B 58.34 341 P **P 07 11 25.7 -0.3**
GAR Garm 58.68 295 P **P 07 11 27.9 -1.0**
ABKAR Akbulak array 58.72 310 P **P 07 11 28.4 -0.5**
ABKAR IAmb IAmb 07 11 28.6
comp=Z,3.5nm,0.5s
ABKAR Akbulak array 58.72 310 P **P 07 11 28.4 -0.5**
PLID Pearl Lake 60.05 55 P **P 07 11 38.8 +0.3**
PLID IAmb IAmb 07 11 53.8
comp=Z,3.3nm,0.8s
KLMR Klimovskoe 60.53 329 *e*P **P 07 11 38.4 -2.7**
KLMR pmax pmax
comp=Z,14nm,1.3s
KLMR Klimovskoe 60.53 329 *e*P **P 07 11 38.5 -2.7**
KLMR AMP 07 11 44.2
comp=Z,14nm,1.3s
SUMG Summit 61.25 4 *i* P **P 07 11 46.9 +0.5**
SUMG Summit 61.25 4 P **P 07 11 48.3 +1.9**
SUMG pmax pmax
comp=Z,6.0nm,0.7s
SUMG Summit 61.25 4 P **P 07 11 48.3 +1.9**
NVAR Mina Array Bea 62.76 62 P **P 07 11 57.0 +0.2**
comp=Z,0.9nm,0.6s,baz=295,slow=6.5,SNR=8.2
BELG Belogornoye 62.89 316⇓*i*P **P 07 11 55.8 -1.3**
BELG pmax pmax
comp=Z,3.0nm,0.9s
FINES FINESS Array B 64.50 335 P **P 07 12 07.4 -0.2**
comp=Z,2.1nm,0.4s,baz=43,slow=6.5,SNR=18
FINES FINESS Array B 64.50 335 P **P 07 12 07.1 -0.5**
ICESG Greenland Ices 64.64 5 *i* P **P 07 12 10.4 +1.5**
ICESG IAmb IAmb 07 12 11.8
comp=Z,8.0nm,0.7s
PDAR Pinedale Array 65.13 54 P **P 07 12 12.4 0.0**
comp=Z,0.5nm,0.7s,baz=294,slow=1.5,SNR=5.4
OBN Obninsk 65.72 326⇑*e*P **P 07 12 14.8 -0.8**
OBN pmax pmax
comp=Z,3.0nm,0.6s
OBN Obninsk 65.72 326 *e*P **P 07 12 14.8 -0.8**
DY2G Dye2 66.69 8 *e*P **P 07 12 22.4 +0.4**
GEYT Alibeck 66.82 301 P **P 07 12 23.4 +0.3**
comp=Z,1.1nm,0.3s,baz=270,slow=5.9,SNR=3.9
WB2 Warramunga Arr 67.97 199 P **P 07 12 29.5 -0.8**
WB2 IAmb IAmb 07 12 36.3
comp=Z,7.3nm,1.2s
WRA Warramunga Arr 67.97 199 P **P 07 12 28.8 -1.5**
comp=Z,0.4nm,0.6s,baz=16,slow=6.6,SNR=6.2
WRA Warramunga Arr 67.97 199 *i* P **P 07 12 30.2 -0.1**
WRA pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 68.72 341 P **P 07 12 34.5 -0.2**
comp=Z,0.9nm,0.4s,baz=28,slow=6.5,SNR=16
NOA LR LR 07 46 40.0
comp=Z,26nm,18.2s,baz=255,slow=39
KIV Kislovodsk 71.12 314 *e*P **P 07 12 48.9 -0.9**
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,93nm,18.0s
KIV Kislovodsk 71.12 314 *e*P **P 07 12 48.9 -0.9**
KBZ Khabaz 71.18 314 P **P 07 12 51.0 +1.1**
comp=Z,3.1nm,0.5s,baz=123,slow=2.5,SNR=12
ASAR Alice Springs 71.67 198 P **P 07 12 53.0 +0.1**
comp=Z,0.3nm,0.6s,baz=12,slow=5.1,SNR=7.7
ASAR Alice Springs 71.67 198 P **P 07 12 51.8 -1.2**
AKASG Malin Array Be 71.96 326 P **P 07 12 54.1 -0.4**
comp=Z,0.5nm,0.4s,baz=34,slow=6.3,SNR=22
AKASG Malin Array Be 71.96 326 P **P 07 12 54.4 -0.1**
AKASG IAmb IAmb 07 12 54.8
comp=Z,3.3nm,0.6s
AKBB Malin Array Si 71.96 326*d*P **P 07 12 54.0 -0.5**
AKBB Malin Array Si 71.96 326 P **P 07 12 54.1 -0.4**
BUR08 Bucovina Ar. S 75.98 327 P **P 07 13 18.8 +0.5**
BUR08 IAmb IAmb 07 13 19.4
comp=Z,5.7nm,0.9s
BURAR Bucovina Array 76.00 327 P **P 07 13 19.0 +0.6**
CRVS Cervenica-Dubn 76.31 329 *e*P **P 07 13 21.8 +1.8**
CRVS Cervenica-Dubn 76.31 329 *e*P **P 07 13 21.8 +1.8**
TX31 Lajitas Ar. Si 77.83 60 P **P 07 13 29.3 +0.3**
TX31 IAmb IAmb 07 13 29.8
comp=Z,3.2nm,0.6s
TX32 Lajitas Array 77.83 60 P **P 07 13 29.2 +0.2**
TXAR Lajitas Array 77.83 60 P **P 07 13 29.2 +0.3**
comp=Z,1.2nm,0.6s,baz=303,slow=4.3,SNR=22
TXAR Lajitas Array 77.83 60 P **P 07 13 29.4 +0.4**
KHC Kasperske Hory 78.69 334⇓*e*P **P 07 13 33.8 +0.5**
KHC pmax pmax
comp=Z,5.0nm,1.0s
KHC Kasperske Hory 78.69 334 *e*P **P 07 13 31.5 -1.8**
BRTR Keskin Array B 78.73 317 P **P 07 13 34.3 +0.4**
comp=Z,1.5nm,0.9s,baz=289,slow=7.7,SNR=3.5
BRTR Keskin Array B 78.73 317 *i* P **P 07 13 36.9 +3.0**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
GERES GERESS Array B 78.91 334 P **P 07 13 35.2 +0.6**
comp=Z,0.6nm,0.4s,baz=39,slow=6.3,SNR=4.5
GERES GERESS Array B 78.91 334 *e*P **P 07 13 38.1 +3.5**
GERES pmax pmax
comp=Z,1.0nm,0.4s

SKO 23 07:11:52.3, 42.44N×21.57E, h0km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARS	**Barje**	**0.42**	**26**	*i*	Pg	Pg		07 11 59.0	-1.3
BARS				*i*	Sg	Sg		07 12 05.4	-0.3
SKO	**Skopje**	**0.48**	**192**	*i*	Pg	Pg		07 12 00.8	-0.7
SKO				*i*	Sg	Sb		07 12 09.4	-1.7
SKO				*e*	Lg	Lg		07 12 09.9	
	comp=N,2.7nm,0.3s								
SMRK	**Smrekonice**	**0.64**	**313**	*i*	Pg	Pg		07 12 05.4	+0.9
SMRK				*i*	Sg	Sg		07 12 11.9	-0.8
PRZK	**Prizren**	**0.64**	**249**	*i*	Pg	Pg		07 12 03.7	-0.9
PRZK				*i*	Sg	Sg		07 12 12.3	-0.6
STIP	**Stip**	**0.88**	**148**	*i*	Pg	Pg		07 12 09.2	+0.2
STIP				*i*	Sg	Sb		07 12 22.2	-0.4
STIP				*e*	Lg	Lg		07 12 23.7	
	comp=E,1.6nm,0.2s								

*JMA **23** 07:22:37.9±0.2, 30.60N×139.17E, h479km, M3.8*
*IDC **23** 07:22:37.2±1.1, 30.37N×138.46E, h424km±15km, mb2.9/5, mb1 3.0/9, mb1mx2.8/41, mbtmp3.7/9, Error ellipse: s-maj=26.4km s-min=12.8km az=75.0*
ISC 23 07:22:38.0±0.8, 30.40N±0.09×138.7E±0.1, h450km, n14, σ1s31/17, mb3.2/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.53**	**136**	P		P		**07 23 58.8**	**+0.8**
CBIJ				*e*S		**S**		**07 25 02.1**	**-0.9**
JCJ	**Chichijima**	**4.53**	**136**	P		P		**07 23 57.6**	**-0.4**
	6.5nm,0.3s,baz=357,slow=16,SNR=14								
JCJ				S		**S**		**07 25 00.3**	**-2.7**
	30nm,0.3s,baz=245,slow=20,SNR=11								
BSO1	**Boso 1**	**4.68**	**24**	P		**P**		**07 23 58.7**	**+0.1**
JRY	**Ryogami san**	**5.61**	**2**	P		**P**		**07 24 08.8**	**+0.5**
JRY				S		**S**		**07 25 20.1**	**-1.9**
JAG	**Ashikaga**	**6.05**	**6**	P		**P**		**07 24 11.9**	**-0.8**
MJAR	**Matsushiro Arr**	**6.14**	**357**	P		**P**		**07 24 12.9**	**-0.7**
	0.1nm,0.3s,baz=174,slow=11,SNR=5.3								
JHO	**Hitachi**	**6.40**	**14**	P		**P**		**07 24 15.9**	**-0.4**
KSRS	**Korea Array**	**11.35**	**311**	P		**P**		**07 25 09.4**	**-0.3**
	0.3nm,0.3s,baz=120,slow=9.9,SNR=6.4								
KLR	**Kul'dur**	**19.52**	**346**	P		**P**		**07 26 35.8**	**+1.0**
	0.1nm,0.3s,baz=148,slow=9.4,SNR=4.0								
CMAR	**Chiang Mai Arr**	**37.87**	**261**	P		**P**		**07 29 13.6**	**-1.7**
	0.6nm,0.3s,baz=53,slow=7.7,SNR=4.5								
WRA	**Warramunga Arr**	**50.22**	**185**	P		**P**		**07 30 52.6**	**+1.2**
	0.4nm,0.3s,baz=0.6,slow=7.5,SNR=14								
ASAR	**Alice Springs**	**59.95**	**185**	P		**P**		**07 31 19.4**	**+1.0**
	0.2nm,0.4s,baz=0.0,slow=5.4,SNR=6.9								
YKA	**Yellowknife Ar**	**70.71**	**28**	P		**P**		**07 33 08.8**	**+1.8**
	0.2nm,0.7s,baz=304,slow=5.9,SNR=3.5								
FINES	**FINESS Array B**	**73.61**	**332**	P		**P**		**07 33 24.3**	**+0.4**
	3.3nm,0.9s,baz=189,slow=5.5,SNR=1.3								

*SOME **23** 07:31:15.9, 41.70N×71.67E, h5km*
*KRNET **23** 07:31:15.1±0.1, 41.66N×71.67E, h14km, mb2.1*
*NNC **23** 07:31:17.3±1.9, 41.75N×71.63E, h0km, mb2.3, mpv2.9, Error ellipse: s-maj=15.2km s-min=7.6km az=178.0*
ISC 23 07:31:15.0±1.1, 41.66N±0.03×71.68E±0.02, h10km±11km, n19, σ0s61/38, 17C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**0.43**	**252**	⇑*i*	P		**Pg**	**07 31 23.4**	**0.0**
	baz=42								
TRKS				⇑*i*	S		**Sg**	**07 31 29.0**	**0.0**
	baz=42								
MNAS	**Manas**	**1.03**	**36**	⇓*i*	P		**Pg**	**07 31 34.9**	**+0.2**
	baz=37								
MNAS				⇓*i*	S		**Sb**	**07 31 49.0**	**+0.4**
	baz=37								
ARSB	**Arslanbob**	**1.03**	**109**	⇑*i*	P		**Pg**	**07 31 34.7**	**-0.2**
	baz=8.0								
ARSB				⇑*i*	S		**Sb**	**07 31 49.4**	**+0.6**
	baz=8.0								
IUG	**Iuzhnay**	**1.32**	**292**	*e*	P		**Pb**	**07 31 40.1**	**+0.1**
	88nm,0.2s								
IUG				*e*	S		**Sn**	**07 31 57.2**	**-0.2**
	12nm,0.2s								
IUG	**Iuzhnay**	**1.32**	**292**	P			**Pb**	**07 31 40.1**	**+0.1**
	44nm,0.2s								
IUG				S			**Sn**	**07 31 57.2**	**-0.2**
	12nm,0.2s								
OHH	**Osh**	**1.41**	**143**	⇓*i*	P		**Pb**	**07 31 41.4**	**0.0**
	baz=43								
OHH				⇓*i*	S		**Sg**	**07 32 00.8**	**+0.4**
	baz=43								
AML	**Almayashu**	**1.57**	**72**	⇑*i*	P		**Pb**	**07 31 44.5**	**+0.1**
	baz=72								
AML				⇑*i*	S		**Sg**	**07 32 06.3**	**+0.6**
	baz=72								
MRKS	**Merke**	**1.58**	**46**	*e*	P		**Pg**	**07 31 45.8**	**+0.6**
	1.0nm,0.1s								
MRKS				*e*	S		**Sg**	**07 32 06.9**	**+1.1**
	6.6nm,0.2s								
MRKS	**Merke**	**1.58**	**46**	P			**Pg**	**07 31 45.8**	**+0.6**
	1.5nm,0.2s								
MRKS				S			**Sg**	**07 32 06.9**	**+1.1**
	6.6nm,0.2s								
KK31	**Karatay Array**	**1.68**	**329**	⇑	P		**Pb**	**07 31 46.5**	**+0.5**
	0.3nm,0.2s,baz=141,slow=13,SNR=8.1								
KK31				⇓	S		**Sb**	**07 32 07.8**	**+0.6**
	1.6nm,0.2s,baz=147,slow=29,SNR=11								
BTK	**Batken**	**1.73**	**202**	⇑*i*	P		**Pb**	**07 31 47.3**	**+0.4**
	baz=2.0								
BTK				⇑*i*	S		**Sg**	**07 32 10.3**	**-0.3**
	baz=2.0								
EKS2	**Erkin-Say**	**1.85**	**57**	⇑*e*	P		**Pb**	**07 31 49.3**	**+0.3**
	baz=57								
EKS2				⇑*i*	S		**Sg**	**07 32 14.0**	**-0.5**
	baz=57								
BRLS	**Boroldoy**	**1.93**	**316**	*e*	P		**Pb**	**07 31 50.1**	**-0.2**
	3.7nm,0.3s								
BRLS				*e*	S		**Sb**	**07 32 14.4**	**-0.1**
	12nm,0.2s								
BRLS	**Boroldoy**	**1.93**	**316**	P			**Pb**	**07 31 50.1**	**-0.2**
	3.7nm,0.4s								
BRLS				S			**Sb**	**07 32 14.4**	**-0.1**
	12nm,0.2s								
ARLS	**Aral**	**1.99**	**83**	⇑*i*	P		**Pb**	**07 31 51.1**	**-0.2**
	baz=84								
ARLS				⇑*i*	S		**Sg**	**07 32 18.0**	**-0.8**
	baz=84								
SFK	**Sufi-Kurgan**	**2.15**	**139**	⇑*i*	P		**Pb**	**07 31 53.4**	**-0.8**
	baz=39								
SFK				⇑*i*	S		**Sb**	**07 32 22.1**	**+1.1**
	baz=39								
UCH	**Uchtor**	**2.19**	**74**	⇑*i*	P		**Pb**	**07 31 54.4**	**-0.5**
	baz=74								
UCH				⇑*i*	S		**Sb**	**07 32 23.0**	**+0.7**
	baz=74								
KST	**Kastek**	**3.46**	**65**	*e*	P		**Pg**	**07 32 20.1**	**-1.2**
	1.6nm,0.3s								
KST				*e*	S		**Sg**	**07 33 05.8**	**-0.4**
	2.0nm,0.4s								
BTLS	**Baital**	**3.79**	**26**	*e*	P		**Pg**	**07 32 26.3**	**-1.3**
	0.6nm,0.3s								
BTLS				*e*	S		**Sg**	**07 33 16.3**	**-0.4**
	1.7nm,0.3s								

*IDC **23** 07:55:51.7±1.2, 2.33N×127.69E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/52, mbtmp3.8/6, ML4.1/1, Error ellipse: s-maj=78.0km s-min=19.1km az=65.0*
*DJA **23** 07:55:54.6±0.5, 2.1N±3.1×127.96E±0.09, h10km, M4.0/6, mb4.1/1, MLv4.0/6*
ISC 23 07:55:56.5±1.0, 2.5N±0.1×127.96E±0.09, h35km, n16, σ1s07/10, mb3.8/5, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.80**	**199**	P		P	**Pn**	**07 56 24.8**	**-0.3**
SGSI	**Sangihe**	**2.70**	**296**	P		P	**Pn**	**07 56 37.1**	**-0.5**
SWI	**Sorong**	**4.69**	**135**	P		P	**Pn**	**07 57 05.7**	**+0.9**
SIJI	**Sorong**	**4.69**	**135**	Pn		P	**Pn**	**07 57 05.5**	**+0.6**
	8.1nm,0.3s,baz=107,slow=14,SNR=21								
GTOI	**Gorontalo**	**5.27**	**250**	P		P	**Pn**	**07 57 14.4**	**+1.5**
WRA	**Warramunga Arr**	**23.15**	**165**	P		P	**P**	**08 00 58.7**	**-1.3**
	1.8nm,0.6s,baz=343,slow=11,SNR=15								
ASAR	**Alice Springs**	**26.63**	**168**	P			**P**	**08 01 31.2**	**-0.9**
	0.5nm,0.9s,baz=354,slow=6.9,SNR=5.4								
STKA	**Stephens Creek**	**36.54**	**160**	P		P	**P**	**08 02 58.8**	**-0.2**
	1.7nm,0.7s,baz=340,slow=6.4,SNR=5.5								

H11S3	**WAKE ISLAND Hy**	**41.13**	**65**	T	T	08 47 03.6		
	baz=315,slow=74							
H11S2	**WAKE ISLAND Hy**	**41.15**	**65**	T	T	08 47 21.1		
	baz=253,slow=74							
H11S1	**WAKE ISLAND Hy**	**41.15**	**64**	T	T	08 47 21.0		
H11N1	**WAKE ISLAND Hy**	**41.70**	**63**	T	T	08 47 36.4		
	baz=251,slow=75,SNR=10.0							
H11N2	**WAKE ISLAND Hy**	**41.72**	**63**	T	T	08 47 45.0		
H11N3	**WAKE ISLAND Hy**	**41.72**	**63**	T	T	08 47 39.1		
	baz=262,slow=75,SNR=6.3							
SONM	**Songino Array**	**48.87**	**341**	P	**P**	**08 04 38.3**	**-0.6**	
	0.4nm,0.6s,baz=148,slow=7.0,SNR=2.8							
MKAR	**Makanchi Array**	**59.27**	**325**	P	**P**	**08 05 55.9**	**+1.2**	
	0.7nm,0.5s,baz=119,slow=7.1,SNR=6.6							

*IDC **23** 08:06:12.9±1.9,2.°97S×101.°74E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/59, mbtmp3.8/6, MS2.9/4, Ms1 3.0/4, ms1mx2.6/52, Error ellipse: s-maj=75.8km s-min=21.4km az=58.0*

*DJA **23** 08:06:15.9±0.3,3.°S±3.°×10.°2E±.°, h10km, M4.1/6, MLv4.1/6*

ISC 23 08:06:19.9±1.0, 3.°0S±0.°2×101.°7E±0.°1, h53km, n19, σ0°33/12, mb4.0/6, MS2.9/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**1.83**	**139**	P	**Pn**	**08 06 49.4**	**+0.5**
LHSI	**Lahat**	**1.96**	**115**	P	**Pn**	**08 06 51.0**	**+0.2**
SISI	**Saibi**	**3.12**	**302**	P	**Pn**	**08 07 06.6**	**0.0**
KASI	**Kota Agung**	**3.73**	**133**	P	**Pn**	**08 07 14.4**	**-0.6**
PSI	**Prapat**	**6.40**	**334**	LR	LR	08 10 43.5	
	comp=Z,61nm,20.6s,baz=239,slow=43						
CMAR	**Chiang Mai Arr**	**21.48**	**353**	LR	LR	08 20 48.0	
	comp=Z,25nm,18.4s,baz=315,slow=41						
PALK	**Pallekele**	**23.34**	**296**	LR	LR	08 19 36.2	
	comp=Z,41nm,19.1s,baz=215,slow=34						
H08S2	**Diego Garcia H**	**29.48**	**260**	T	T	08 42 11.1	
	baz=82,slow=76,SNR=4.5						
H08S3	**Diego Garcia H**	**29.49**	**260**	T	T	08 42 15.8	
	baz=82,slow=76,SNR=5.4						
H08S1	**Diego Carcia H**	**29.50**	**260**	T	T	08 41 55.6	
	baz=82,slow=76,SNR=3.4						
WRA	**Warramunga Arr**	**36.00**	**120**	P	**P**	**08 13 15.9**	**-0.2**
	0.2nm,0.3s,baz=304,slow=9.1,SNR=2.1						
ASAR	**Alice Springs**	**37.27**	**126**	P	**P**	**08 13 26.9**	**-0.1**
	1.4nm,0.8s,baz=296,slow=8.2,SNR=16						
SONM	**Songino Array**	**50.77**	**4**	P	**P**	**08 15 14.5**	**-0.2**
	1.8nm,0.7s,baz=176,slow=8.0,SNR=9.6						
MKAR	**Makanchi Array**	**52.45**	**343**	P	**P**	**08 15 27.2**	**0.0**
	0.8nm,0.6s,baz=144,slow=8.0,SNR=14						
KLR	**Kul'dur**	**58.13**	**23**	P	**P**	**08 16 08.1**	**+0.1**
	1.1nm,0.8s,baz=224,slow=6.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**58.46**	**348**	P	**P**	**08 16 10.6**	**+0.4**
	1.2nm,0.7s,baz=150,slow=6.0,SNR=2.3						
AKTO	**Aktyubinsk**	**65.05**	**331**	LR	LR	08 47 34.8	
	comp=Z,14nm,20.0s,baz=282,slow=38						
TXAR	**Lajitas Array**	**144.37**	**40**	PKP	**PKPdf**	**08 25 50.9**	**-0.2**
	0.1nm,0.5s,baz=232,slow=1.0,SNR=2.3						
CPUP	**Villa Florida**	**144.52**	**214**	PKP	**PKPdf**	**08 25 51.5**	**+0.2**
	3.1nm,0.9s,baz=181,slow=6.1,SNR=4.6						

IDC 23 08:11:27.3±19.0, 22.°92S×175.°15W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.8/37, mbtmp4.1/5, Error ellipse: s-maj=359.6km s-min=146.0km az=81.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.95**	**267**	P	P	08 18 31.1	+1.2
	3.4nm,0.3s,baz=97,slow=11,SNR=9.0						
STKA	**Stephens Creek**	**39.22**	**247**	P	P	08 18 56.6	-0.9
	0.6nm,0.4s,baz=83,slow=8.6,SNR=4.5						
ASAR	**Alice Springs**	**46.59**	**259**	P	P	08 19 56.6	-0.8
	0.7nm,0.5s,baz=95,slow=7.3,SNR=13						
WRA	**Warramunga Arr**	**46.93**	**264**	P	P	08 19 59.4	-0.7
	1.4nm,0.3s,baz=97,slow=8.4,SNR=63						
FITZ	**Fitzroy Crossi**	**55.36**	**263**	P	P	08 21 04.5	+1.0
	1.0nm,0.5s,baz=117,slow=4.5,SNR=1.5						

*UCR **23** 08:11:44.8±1.7, 13.°68N×91.°41W, h26km±20km, ML3.5*
*SNET **23** 08:11:44.6±1.4, 13.°73N×91.°34W, h12km±12km, ML3.7*
*GCG **23** 08:11:45.0±0.3, 13.°65N×91.°35W, h4km±41km, MD4.0*
*IDC **23** 08:11:47.5±2.6, 13.°66N×91.°45W, h46km±23km, mb3.2/2, mb1 3.7/6, mb1mx3.4/38, mbtmp3.6/6, ML3.6/4, Error ellipse: s-maj=23.7km s-min=13.7km az=174.0*

ISC 23 08:11:43.6±2.2, 13.°67N±0.°08×91.°40W±0.°05, h14km±12km, n41, σ0°88/54, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.79**	**348**	*e*P	**Pn**	**08 12 00.6**	**+0.2**
RTAL	**Retalhuleu**	**0.90**	**341**	*e*P	**Pb**	**08 12 01.0**	**-0.2**
FUG	**Fuego 3**	**0.94**	**35**	*e*P	**Pn**	**08 12 03.2**	**+0.4**
PCG	**Pacaya**	**1.05**	**47**	*i* P	**Pn**	**08 12 04.9**	**+0.7**
NBG	**Las Nubes**	**1.37**	**48**	*e*P	**Pg**	**08 12 10.3**	**+0.3**
APG	**El Apazote**	**1.61**	**34**	P	**Pb**	**08 12 13.1**	**-0.2**
	26nm,0.3s,baz=232,slow=10,SNR=411						
APG				S	**Sg**	**08 12 34.7**	**-0.8**
	40nm,0.3s,baz=304,slow=20,SNR=11						
APG				LR	LR	08 12 58.9	
	comp=Z,122nm,20.0s,baz=220,slow=43						
HUEH	**Huehuetenango**	**1.65**	**356**	*e*P	**Pn**	**08 12 12.8**	**+0.4**
HUEH				*e*S	**Sn**	**08 12 34.2**	**+0.7**
HUEH				*e*S	**Sg**	**08 12 37.6**	**+0.9**
RTR	**El Retiro**	**1.71**	**82**	*e*P	**Pn**	**08 12 13.1**	**-0.2**
RTR	**El Retiro**	**1.71**	**82**	*e*P	**Pn**	**08 12 13.1**	**-0.2**
SBLS	**San Blas**	**1.73**	**84**	*e*P	**Pn**	**08 12 13.6**	**0.0**
SBLS	**San Blas**	**1.73**	**84**	*e*P	**Pn**	**08 12 13.6**	**0.0**
SNJE	**San Jose**	**1.75**	**83**	*e*P	**Pn**	**08 12 13.7**	**-0.1**
SNJE				*e*S	**Sb**	**08 12 37.9**	**+0.2**
SNJE	**San Jose**	**1.75**	**83**	*e*P	**Pn**	**08 12 13.7**	**-0.1**
SNJE				*e*S	**Sb**	**08 12 37.9**	**+0.2**
BOQS	**Boqueron**	**2.06**	**88**	*e*P	**Pn**	**08 12 18.2**	**+0.1**
BOQS				*e*S	**Sb**	**08 12 45.3**	**-1.3**
BOQS	**Boqueron**	**2.06**	**88**	*e*P	**Pn**	**08 12 18.2**	**+0.1**
BOQS				*e*S	**Sb**	**08 12 45.3**	**-1.3**
UEES	**Universidad Ev**	**2.10**	**88**	IAML		08 12 52.5	
	comp=Z,487nm,0.4s						
UEES	**Universidad Ev**	**2.10**	**88**	IAML		08 12 52.5	
	comp=Z,487nm,0.4s						
SNET	**Serv Nac Est T**	**2.10**	**89**	*e*P	**Pn**	**08 12 18.3**	**-0.3**
SNET				*e*S	**Sn**	**08 12 45.0**	**+0.4**
SNET				IAML		08 12 52.4	
	comp=Z,547nm,0.4s						
SNET	**Serv Nac Est T**	**2.10**	**89**	*e*P	**Pn**	**08 12 18.3**	**-0.3**
SNET				*e*S	**Sn**	**08 12 45.0**	**+0.4**
SNET				IAML		08 12 52.4	
	comp=Z,547nm,0.4s						
MTO3	**Montecristo**	**2.10**	**69**	*e*P	**Pn**	**08 12 19.2**	**+0.5**
MTO3				*e*S	**Sb**	**08 12 46.7**	**-1.2**
MTO3	**Montecristo**	**2.10**	**69**	*e*P	**Pn**	**08 12 19.2**	**+0.5**
MTO3				*e*S	**Sb**	**08 12 46.7**	**-1.2**
MRL	**Marmol**	**2.17**	**49**	*e*P	**Pb**	**08 12 22.0**	**-1.0**
ESQI	**Esquipulas**	**2.18**	**66**	*e*P	**Pn**	**08 12 20.5**	**+0.8**
ESQI				*e*S	**Sn**	**08 12 47.6**	**+1.0**
LFRS	**El Faro**	**2.27**	**91**	*e*P	**Pn**	**08 12 21.6**	**+0.7**
LFRS	**El Faro**	**2.27**	**91**	*e*P	**Pn**	**08 12 21.6**	**+0.7**
PAVA	**Las Pavas**	**2.39**	**89**	*e*P	**Pn**	**08 12 23.0**	**+0.4**
PAVA				*e*S	**Sn**	**08 12 52.8**	**+1.0**
PAVA	**Las Pavas**	**2.39**	**89**	*e*P	**Pn**	**08 12 23.0**	**+0.4**
PAVA				*e*S	**Sn**	**08 12 52.8**	**+1.0**
COEG	**Centro de Oper**	**2.44**	**91**	*e*P	**Pn**	**08 12 24.4**	**+1.1**
COEG				IAML		08 13 05.6	
	comp=Z,417nm,0.4s						
COEG	**Centro de Oper**	**2.44**	**91**	*e*P	**Pn**	**08 12 24.4**	**+1.1**
COEG				IAML		08 13 05.6	
	comp=Z,417nm,0.4s						
COEB	**Comit de Eme**	**2.79**	**93**	*e*P	**Pn**	**08 12 28.0**	**0.0**
COEB	**Comit de Eme**	**2.79**	**93**	*e*P	**Pn**	**08 12 28.0**	**0.0**
TECA	**Tecapa**	**2.82**	**93**	*e*P	**Pn**	**08 12 29.8**	**+1.3**
TECA	**Tecapa**	**2.82**	**93**	*e*P	**Pn**	**08 12 29.8**	**+1.3**
LCND	**La Caada**	**3.43**	**96**	*e*P	**Pn**	**08 12 37.7**	**+0.9**
LCND				IAML		08 13 34.1	
	comp=Z,140nm,0.4s						
LCND	**La Caada**	**3.43**	**96**	*e*P	**Pn**	**08 12 37.7**	**+0.9**
LCND				IAML		08 13 34.1	
	comp=Z,140nm,0.4s						
CMIG	**Matias Romero**	**4.79**	**316**	P	**Pn**	**08 12 55.4**	**0.0**
	comp=Z,1.4nm,0.3s,baz=137,slow=12,SNR=15						
CMIG				S	**Sn**	**08 13 51.3**	**+0.5**
	comp=Z,2.3nm,0.3s,baz=127,slow=17,SNR=5.8						
JTS	**Las Juntas de**	**7.14**	**117**	P	**Pn**	**08 13 30.4**	**+2.6**
	comp=Z,0.6nm,0.3s,baz=0.0,slow=20,SNR=1.7						
TEIG	**Tepich**	**7.17**	**24**	P	**Pn**	**08 13 29.7**	**+1.5**
	comp=Z,2.9nm,0.3s,baz=119,slow=0.7,SNR=23						
TXAR	**Lajitas Array**	**19.30**	**326**	P	**Pn**	**08 16 09.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=10						
NVAR	**Mina Array Bea**	**34.30**	**321**	P	**P**	**08 18 31.4**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=146,slow=7.1,SNR=5.1						
YKA	**Yellowknife Ar**	**51.48**	**346**	P	**P**	**08 20 46.4**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=139,slow=9.4,SNR=9.2						

*GCG **23** 08:29:06.9±0.5, 15.°40N×92.°14W, h195km±224km, MD3.7*
*MEX **23** 08:29:10.7±1.2, 15.°25N×92.°12W, h172km±6km, MD3.5*

ISC 23 08:29:09.5±1.3, 15.°3N±0.°1×92.°16W±0.°08, h173km, n10, σ0°66/14, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.39**	**195**	*e*P	**Pn**	**08 29 32.6**	**-0.5**
THIG				*i* S	**Sn**	**08 29 50.6**	**-0.6**
CCIG	**Comitan**	**0.99**	**1**	*i* P	**Pn**	**08 29 37.2**	**+0.5**
CCIG				*i* S	**Sn**	**08 29 56.7**	**-1.0**
ERG	**Entre ros, C**	**1.02**	**146**	*e*P	**Pn**	**08 29 37.2**	**+0.6**
PCIG		**1.10**	**292**	*e*P	**Pn**	**08 29 37.8**	**+0.5**
PCIG				*i* S	**Sn**	**08 29 58.4**	**-0.3**
FUG	**Fuego 3**	**1.52**	**123**	*e*P	**Pn**	**08 29 41.7**	**+0.4**
PCG	**Pacaya**	**1.74**	**120**	*e*P	**Pn**	**08 29 44.3**	**+0.7**
TGIG		**1.75**	**328**	*e*P	**Pn**	**08 29 44.0**	**+0.6**
NBG	**Las Nubes**	**1.88**	**111**	*e*P	**Pn**	**08 29 45.9**	**+0.8**
MRL	**Marmol**	**2.40**	**95**	*e*P	**Pn**	**08 29 50.7**	**-0.1**
CMIG	**Matias Romero**	**3.18**	**305**	*e*P	**Pn**	**08 30 00.6**	**+0.6**
CMIG				*i* S	**Sn**	**08 30 38.8**	**-0.5**

*WEL **23** 08:31:02.6±0.9, 34.°S±7.°×17.°8W±1.°8, h30km, M4.5/46, mB5.1/31, ML5.3/45, MLv5.0/46, Mw(mB)4.4/31, Error ellipse: s-maj=0.0km s-min=0.0km az=110.2*
*NEIC **23** 08:31:04.2±2.2, 33.°27S±0.°07×179.°3W±0.°2, h32km±5km, mb4.5/18, Error ellipse: s-maj=22.0km s-min=10.4km az=90.0*
*IDC **23** 08:31:06.8±2.5, 33.°36S×179.°33W, h60km±20km, mb3.9/4, mb1 4.3/7, mb1mx3.9/37, mbtmp4.3/7, ML4.7/3, MS3.4/8, Ms1 3.4/8, ms1mx3.1/22, Error ellipse: s-maj=19.0km s-min=17.3km az=141.0*

ISC 23 08:31:04.6±0.5, 33.°38S±0.°05×178.°93W±0.°08, h48km, n149, σ1°89/142, mb4.4/12, MS3.4/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.20**	**12**	P	**Pn**	**08 32 06.1**	**0.0**
GLKZ				S	**Sn**	**08 32 53.0**	**-0.7**
RAO	**Raoul Island**	**4.21**	**12**	LR	LR	08 33 43.8	
	comp=Z,486nm,19.9s,baz=133,slow=37						
MXZ	**Matakaoa Point**	**4.74**	**208**	Pn	**Pn**	**08 32 13.9**	**+0.4**
MXZ	**Matakaoa Point**	**4.74**	**208**	P	**Pn**	**08 32 14.4**	**+0.8**
MXZ				S	**Sn**	**08 33 08.2**	**+1.0**
WMGZ	**Waiomatatini S**	**4.93**	**205**	P	**Pn**	**08 32 16.9**	**+0.8**
WMGZ				S	**Sn**	**08 33 13.4**	**+1.6**
PKGZ	**Pakihiroa**	**5.12**	**208**	P	**Pn**	**08 32 19.1**	**+0.4**
PKGZ				S	**Sn**	**08 33 16.8**	**+0.3**
HAZ	**Te Kaha**	**5.12**	**211**	P	**Pn**	**08 32 19.5**	**+0.8**
HAZ				S	**Sn**	**08 33 18.7**	**+2.1**
PUZ	**Puketiti**	**5.21**	**205**	P	**Pn**	**08 32 19.9**	**-0.1**
PUZ				S	**Sn**	**08 33 19.2**	**+0.4**
TWGZ	**Tauwhareparae**	**5.41**	**207**	P	**Pn**	**08 32 22.8**	**+0.1**
TWGZ				S	**Sn**	**08 33 24.3**	**+0.7**
CNGZ	**Carnagh Statio**	**5.60**	**204**	P	**Pn**	**08 32 25.6**	**+0.4**
TKGZ	**Te Karaka**	**5.69**	**206**	P	**Pn**	**08 32 25.5**	**-0.9**
TKGZ				S	**Sn**	**08 33 29.6**	**-0.8**
OPRZ	**Ohinepanea**	**5.78**	**218**	P	**Pn**	**08 32 30.0**	**+2.3**
MARZ	**Manawahe**	**5.82**	**217**	P	**Pn**	**08 32 30.6**	**+2.2**
URZ	**Urewera**	**5.83**	**212**	P	**Pn**	**08 32 27.9**	**-0.6**
	6.2nm,0.3s,baz=122,slow=24,SNR=56						
URZ				S	**Sn**	**08 33 32.1**	**-2.0**
	27nm,0.3s,baz=210,slow=20,SNR=7.0						
URZ	**Urewera**	**5.83**	**212**		**Pn**	**08 32 28.3**	**-0.2**
URZ	**Urewera**	**5.83**	**212**	P	**Pn**	**08 32 27.9**	**-0.6**
RIGZ	**Rimuhau**	**5.95**	**206**	P	**Pn**	**08 32 30.2**	**0.0**
RIGZ				S	**Sn**	**08 33 33.2**	**-3.8**
OMRZ	**Omania**	**6.07**	**218**	P	**Pn**	**08 32 35.3**	**+3.5**
KARZ	**Kaharoa**	**6.07**	**219**	P	**Pn**	**08 32 34.2**	**+2.4**
TARZ	**Mount Tarawera**	**6.10**	**216**	P	**Pn**	**08 32 35.2**	**+3.0**
MUGZ	**Murupara**	**6.17**	**213**	P	**Pn**	**08 32 32.2**	**-0.9**
RRRZ	**Republican Roa**	**6.18**	**215**	P	**Pn**	**08 32 36.3**	**+3.1**
RTZ	**Ruatahuna**	**6.19**	**211**	P	**Pn**	**08 32 32.3**	**-1.2**
HLRZ	**Highlands Stat**	**6.19**	**217**	P	Pn	08 32 38.7	+5.2
KNZ	**Kokohu**	**6.26**	**205**	P	**Pn**	**08 32 33.8**	**-0.5**
PRRZ	**Plateau Road**	**6.36**	**215**	P	**Pn**	**08 32 36.5**	**+0.8**
RAHZ	**Arahi**	**6.39**	**209**	P	**Pn**	**08 32 38.0**	**+1.8**
ALRZ	**Allen Road**	**6.44**	**215**	P	**Pn**	**08 32 38.6**	**+1.9**
MTHZ	**Maungataniwha**	**6.44**	**211**	P	**Pn**	**08 32 37.2**	**+0.3**
WHWZ	**Waihua**	**6.47**	**208**	P	**Pn**	**08 32 38.8**	**+1.5**
MRHZ	**Matea Rd**	**6.62**	**213**	P	**Pn**	**08 32 39.8**	**+0.5**
NMHZ	**Naumai**	**6.66**	**210**	P	**Pn**	**08 32 40.3**	**+0.3**
TLZ	**Tolley Road**	**6.67**	**221**	P	**Pn**	**08 32 43.2**	**+3.1**
ARHZ	**Aropaoanui**	**6.73**	**208**	P	**Pn**	**08 32 41.9**	**+1.1**
WATZ	**Wairara**	**6.85**	**218**	P	**Pn**	**08 32 43.8**	**+1.3**
BKZ	**Black Stump Fm**	**6.86**	**211**		**Pn**	**08 32 41.5**	**-1.1**
BKZ	**Black Stump Fm**	**6.86**	**211**	P	**Pn**	**08 32 40.7**	**-1.8**
MCHZ	**McNeill Hill**	**7.00**	**209**	P	**Pn**	**08 32 44.8**	**+0.3**
CKHZ	**Cape Kidnapper**	**7.04**	**206**	P	**Pn**	**08 32 43.3**	**-1.8**
KATZ	**Kakaramea**	**7.07**	**216**	P	**Pn**	**08 32 47.6**	**+2.0**
KWHZ	**Kaweka Forest**	**7.10**	**211**	P	**Pn**	**08 32 45.2**	**-0.7**
NTVZ	**North Tongarir**	**7.18**	**216**	P	**Pn**	**08 32 47.2**	**+0.1**
TMVZ	**Te Maari**	**7.18**	**216**	P	**Pn**	**08 32 47.1**	**0.0**
HIZ	**Hauiti**	**7.18**	**223**		**Pn**	**08 32 47.7**	**+0.6**
HIZ	**Hauiti**	**7.18**	**223**	P	**Pn**	**08 32 49.7**	**+2.7**
ETVZ	**East Tongariro**	**7.19**	**215**	P	**Pn**	**08 32 47.7**	**+0.4**
KRVZ	**Karewarewa**	**7.19**	**216**	P	**Pn**	**08 32 48.7**	**+1.4**
KAHZ	**Kahuranaki**	**7.24**	**207**	P	**Pn**	**08 32 45.6**	**-2.2**
NNVZ	**North Ngauruho**	**7.24**	**216**	P	**Pn**	**08 32 47.4**	**-0.5**
OTVZ	**Oturere**	**7.24**	**216**	P	**Pn**	**08 32 47.7**	**-0.2**
WTVZ	**West Tongariro**	**7.24**	**216**	P	**Pn**	**08 32 48.4**	**+0.6**
SNVZ	**South Ngauruho**	**7.26**	**216**	P	**Pn**	**08 32 48.8**	**+0.5**
NGZ	**Ngauruhoe**	**7.28**	**216**	P	**Pn**	**08 32 49.2**	**+0.8**
TWVZ	**Taurewa**	**7.28**	**217**	P	**Pn**	**08 32 50.1**	**+1.7**
KRHZ	**Kereru**	**7.31**	**210**	P	**Pn**	**08 32 47.1**	**-1.6**
BHHZ	**Black Hill Sta**	**7.31**	**212**	P	**Pn**	**08 32 48.2**	**-0.6**
TUVZ	**Tukino**	**7.32**	**215**	P	**Pn**	**08 32 50.3**	**+1.3**
MOVZ	**Moawhango**	**7.38**	**214**	P	**Pn**	**08 32 49.2**	**-0.6**
PXZ	**Pawanui**	**7.45**	**206**	P	**Pn**	**08 32 48.9**	**-1.7**
PKVZ	**Pokaka**	**7.49**	**216**	P	**Pn**	**08 32 51.6**	**+0.4**
MTVZ	**Mangateitei**	**7.50**	**215**	P	**Pn**	**08 32 52.3**	**+0.9**
PNHZ	**Pukenui**	**7.60**	**210**	P	**Pn**	**08 32 51.5**	**-1.3**
WPHZ	**Waipukurau**	**7.64**	**208**	P	**Pn**	**08 32 52.6**	**-0.6**
VRZ	**Vera Road**	**7.67**	**220**	P	**Pn**	**08 32 54.8**	**+1.1**
PRHZ	**Porangahau**	**7.74**	**206**	P	**Pn**	**08 32 52.9**	**-1.7**
TSZ	**Takapari Road**	**7.83**	**210**	P	**Pn**	**08 32 56.2**	**+0.4**
DVHZ	**Dannevirke**	**7.94**	**208**	P	**Pn**	**08 32 56.0**	**-1.5**
ANWZ	**Angora Road**	**7.97**	**206**	P	**Pn**	**08 32 56.6**	**-1.1**
WAZ	**Wanganui**	**8.03**	**216**	P	**Pn**	**08 32 58.0**	**-0.6**
NEZ	**North Egmont**	**8.14**	**222**	P	Pn	08 33 04.8	+4.7
PKE	**Pukeiti**	**8.14**	**223**	P	**Pn**	**08 33 04.4**	**+4.2**
POWZ	**Post Office Ro**	**8.19**	**210**	P	**Pn**	**08 33 01.7**	**+1.0**
KHEZ	**Kahui Hut**	**8.20**	**222**	P	**Pn**	**08 33 04.7**	**+3.8**
PRWZ	**Pori Road**	**8.24**	**208**	P	**Pn**	**08 33 00.8**	**-0.7**
BFZ	**Birch Farm**	**8.24**	**206**	Pn	**Pn**	**08 32 59.7**	**-1.9**
BFZ	**Birch Farm**	**8.24**	**206**	P	**Pn**	**08 32 57.9**	**-3.7**
TIWZ	**Tintock**	**8.46**	**208**	P	**Pn**	**08 33 02.1**	**-2.5**
MRZ	**Mangatainoka R**	**8.49**	**210**	P	**Pn**	**08 33 01.5**	**-3.4**
HOWZ	**Holdsworth Sta**	**8.71**	**209**	P	**Pn**	**08 33 04.5**	**-3.5**
TMWZ	**Te Maipa**	**8.75**	**207**	P	**Pn**	**08 33 05.3**	**-3.2**
OGWZ	**Otaki Gorge**	**8.79**	**211**	P	**Pn**	**08 33 05.7**	**-3.3**
MTW	**Mount Morrison**	**8.94**	**208**	P	**Pn**	**08 33 07.5**	**-3.6**
CANW	**Cannon Point**	**9.07**	**210**	P	**Pn**	**08 33 09.4**	**-3.5**
PAWZ	**Paruwai Farm**	**9.16**	**208**	P	**Pn**	**08 33 12.9**	**-1.2**
MSWZ	**Moikau Station**	**9.26**	**208**	Pn	**Pn**	**08 33 14.4**	**-1.0**
MSWZ	**Moikau Station**	**9.26**	**208**	P	**Pn**	**08 33 12.5**	**-3.0**
SNZO	**South Karori**	**9.40**	**211**	Pn	**Pn**	**08 33 15.5**	**-1.8**
TUWZ	**Tuamarina**	**9.83**	**213**		**Pn**	**08 33 20.4**	**-2.8**
NNZ	**Nelson**	**9.93**	**216**	Pn	**Pn**	**08 33 21.0**	**-3.6**
CTZ	**Chatham Island**	**10.50**	**171**	P	**Pn**	**08 33 34.9**	**+2.6**
CTZ				S	**Sn**	**08 35 21.9**	**-6.5**
RPZ	**Rata Peaks**	**12.95**	**214**	P	**Pn**	**08 34 02.7**	**-3.1**
	0.8nm,0.3s,baz=117,slow=7.1,SNR=6.0						
RPZ				S	Sn	08 36 16.6	-12
	1.8nm,0.3s,baz=323,slow=23,SNR=7.9						
RPZ				LR	LR	08 39 36.5	
	comp=Z,86nm,20.1s,baz=13,slow=40						
RPZ	**Rata Peaks**	**12.95**	**214**		**Pn**	**08 34 03.4**	**-2.5**
GCSZ	**Gaunt Creek Bo**	**13.01**	**217**	P	**Pn**	**08 34 05.7**	**-0.9**
MSVF	**Nonsavu**	**15.82**	**349**	P	**Pn**	**08 34 43.5**	**-0.6**
	0.6nm,0.3s,baz=250,slow=11,SNR=4.1						
MSVF				LR	LR	08 39 09.0	
	comp=Z,154nm,19.0s,baz=182,slow=31						
MSVF	**Nonsavu**	**15.82**	**349**	P	**P**	**08 34 46.7**	**-0.6**
MSVF				IAmb	IAmb	08 35 00.1	
	comp=Z,41nm,1.4s						
SYZ	**Scrubby Hill**	**15.98**	**211**	P	**Pn**	**08 34 46.2**	**+0.2**
DCZ	**Deep Cove**	**16.14**	**218**	P	**Pn**	**08 34 47.3**	**-0.6**
DZM	**Mont Dzumac**	**17.14**	**307**	*e*P	**P**	**08 35 01.9**	**-0.1**
	comp=Z,52nm,1.0s						
DZM				*e*LR	LR	08 39 04.4	
	comp=Z,412nm,24.9s						
DZM	**Mont Dzumac**	**17.14**	**307**	P	**Pn**	**08 35 00.0**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=123,slow=15,SNR=6.4						
DZM				LR	LR	08 39 57.9	
	comp=Z,295nm,19.7s,baz=183,slow=32						
DZM	**Mont Dzumac**	**17.14**	**307**	IAmb	IAmb	08 35 03.3	
	comp=Z,30nm,1.0s						
LHI	**Lord Howe Isla**	**18.66**	**270**	P	**P**	**08 35 15.7**	**-2.9**
EIDS	**Eidsvold**	**27.26**	**279**	P	**P**	**08 36 44.9**	**+0.6**
TBI	**Tubuai**	**27.71**	**77**	*e*LR	LR	08 43 36.8	
	comp=Z,126nm,29.0s						
TBI	**Tubuai**	**27.71**	**77**	*e*T	T	09 05 47.6	
	comp=Z,14nm,0.3s						
PAE	**Paea**	**30.62**	**67**	*e*T	T	09 09 19.3	
	comp=Z,5.9nm,0.2s						
PPT2	**Papeete2**	**30.67**	**66**	*e*LR	LR	08 45 00.3	
	comp=Z,134nm,29.0s						
PPT2	**Papeete2**	**30.67**	**66**	*e*T	T	09 09 22.9	
	comp=Z,5.4nm,0.3s						
PPT	**Papeete**	**30.68**	**66**	LR	LR	08 50 27.3	
	comp=Z,23nm,18.5s,baz=214,slow=38						
STKA	**Stephens Creek**	**33.15**	**262**	LR	LR	08 49 22.7	
	comp=Z,89nm,20.7s,baz=35,slow=33						
VAH	**Vaihoa**	**33.58**	**65**	*e*T	T	09 13 01.7	
	comp=Z,15nm,0.2s						
CTAO	**Charters Tower**	**33.63**	**284**	P	**P**	**08 37 40.4**	**-0.3**
CTAO				IAmb	IAmb	08 37 42.2	
	comp=Z,4.9nm,0.7s						
BBOO	**Buckleboo**	**37.49**	**258**	P	**P**	**08 38 12.4**	**-1.3**
BBOO				IAmb	IAmb	08 38 39.7	
	comp=Z,13nm,1.4s						
COEN	**Coen**	**39.44**	**290**	P	**P**	**08 38 30.1**	**-0.1**
RKT	**Rikitea**	**39.80**	**87**	*e*T	T	09 21 15.5	
	comp=Z,2.1nm,0.2s						
AS31	**Alice Springs**	**42.25**	**271**	P	**P**	**08 38 52.7**	**-0.8**
ASAR	**Alice Springs**	**42.25**	**271**	P	**P**	**08 38 52.6**	**-0.8**
	comp=Z,5

ZSN	**Zaisan**	**2.06**	**20**	*e*P	Pn	09 37 08.4	+1.0
	3.1nm,0.2s							
ZSN				*e*S	Sb	09 37 35.1	-0.9
	6.2nm,0.3s							
DJR	**Jarkent**	**3.11**	**249**	*e*P	Pg	09 37 31.6	+0.6
	1.0nm,0.2s							
DJR				*e*S	Sg	09 38 15.1	+3.8
	13nm,0.4s							
SHLS	**Shalkode**	**3.92**	**235**	*e*P	Pb	09 37 40.5	-1.1
	2.3nm,0.2s							
SHLS				*e*S	Sb	09 38 30.0	+0.3
	30nm,0.4s							
UZB	**Uzynbulak**	**4.19**	**237**	*e*P	Pb	09 37 48.4	+2.3
	2.9nm,0.2s							
UZB				*e*S	Sg	09 38 43.4	-2.5
	4.2nm,0.5s							
KPKS	**Kokpek**	**4.22**	**243**	*e*P	Pb	09 37 49.4	+2.8
	3.6nm,0.1s							
KPKS				*e*S	Sg	09 38 45.8	-1.1
	21nm,0.4s							
ARXS	**Arharly**	**4.46**	**255**	*e*P	Pg	09 37 54.6	-2.4
	3.9nm,0.5s							
ARXS				*e*S	Sg	09 38 54.9	0.0
	8.3nm,0.6s							
SATY	**Saty**	**4.61**	**240**	*e*P	Pb	09 37 55.6	+2.3
	1.6nm,0.5s							
SATY				*e*S	Sg	09 38 56.1	-3.4
	7.3nm,0.5s							
KTBS	**Karatobe**	**5.41**	**253**	*e*P	Pb	09 38 10.4	+3.4
	0.8nm,0.6s							
KTBS				*e*S	Sg	09 39 21.4	-4.0
	22nm,0.5s							
TNSS	**Tian-Shan**	**5.53**	**246**	*e*P	Pg	09 38 15.9	-1.6
	0.7nm,0.2s							
TNSS				*e*S	Sg	09 39 30.8	+1.6
	1.4nm,0.4s							

NNC 23 09:37:23.9±0.9, **44°77'N×81°89'E, h0**km, **mb2.9, mpv2.4, 4C-2D, Error ellipse: s-maj=15.0km s-min=2.0km az=117.0, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**2.04**	**2**	⇑Pn	Pn	09 37 59.5	+0.1
	2.0nm,0.8s						
MAKZ				⇑Sn	Sn	09 38 26.3	+0.7
	12nm,0.9s						
MK31	**Makanchi Array**	**2.04**	**8**	⇓Pn	Pn	09 37 59.5	0.0
	1.3nm,0.5s,baz=184,slow=16,SNR=67						
MK31				⇓Sn	Sb	09 38 26.9	-0.9
	14nm,0.6s,baz=187,slow=25,SNR=51						
PDGK	**Podgornoye**	**2.25**	**231**	⇑Pn	Pn	09 38 02.4	0.0
	2.1nm,0.4s						
PDGK				⇑Sn	Sn	09 38 32.1	+1.1
	20nm,0.8s						

*IDC **23** 09:44:58.4±2.8, 9°29'N×85°71'W, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.6/48, mbtmp3.5/5, ML3.0/1, MS2.9/3, Ms1 3.0/3, ms1mx2.5/32, Error ellipse: s-maj=50.9km s-min=24.4km az=164.0*

*UCR **23** 09:45:01.0±2.3, 9°45'N×85°98'W, h28km±5km, MW4.3*

*UPA **23** 09:45:02.3±1.7, 9°42'N×85°98'W, h21km±47km, MW4.5*

*INET **23** 09:45:03.5, 9°50'N×85°82'W, h19km, MW3.4*

ISC 23 09:45:01.4±1.8, **9°47'N**±0°05×**85°94'W**±0°06, **h15**km±9km, **n70**, σ1°**21**/85, **mb3.5**/4, **2D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRZA	**Playa Garza**	**0.53**	**34**	*e*P	**Pg**	**09 45 12.2**	**+0.2**
GRZA				*e*S	**Sb**	**09 45 21.5**	**+1.5**
INDI	**Punta indio, G**	**0.58**	**48**	*e*P	**Pg**	**09 45 13.6**	**+0.7**
SAJU	**San Juanillo,**	**0.63**	**21**	*e*P	**Pg**	**09 45 13.4**	**-0.5**
SAJU				*e*S	**Sg**	**09 45 23.9**	**+1.5**
PLVR	**Palo Verde**	**1.05**	**34**	*e*P	**Pb**	**09 45 18.6**	**-2.8**
LAFE	**Finca La Fe, P**	**1.07**	**72**	*e*P	**Pb**	**09 45 19.7**	**-1.9**
JTS	**Las Juntas de**	**1.27**	**50**	Pn	**Pn**	**09 45 23.6**	**-1.1**
	120nm,0.3s,baz=359,slow=3.4,SNR=400						
JTS				Sn	**Sb**	**09 45 41.6**	**+0.4**
	355nm,0.3s,baz=210,slow=23,SNR=26						
JTS	**Las Juntas de**	**1.27**	**50**	⇓*e*P	**Pn**	**09 45 23.8**	**-0.9**
JTS				*e*S	**Sb**	**09 45 41.9**	**+0.7**
JTS	**Las Juntas de**	**1.27**	**50**	*e*P	**Pn**	**09 45 23.6**	**-1.1**
LAPC	**Finca la Perla**	**1.38**	**21**	*i*P	**Pn**	**09 45 23.8**	**-2.5**
GBS3	**Finca Las Img**	**1.39**	**20**	*i*P	**Pn**	**09 45 24.8**	**-1.5**
COLC	**Colonia**	**1.39**	**31**	*i*P	**Pn**	**09 45 25.1**	**-1.3**
GPS2	**Hotel Rincn d**	**1.40**	**24**	*i*P	**Pn**	**09 45 25.4**	**-1.1**
CUI	**Cuipilapa**	**1.41**	**33**	*i*P	**Pn**	**09 45 24.3**	**-2.3**
GUAB	**Guayabo de Bag**	**1.41**	**30**	*i*P	**Pn**	**09 45 25.5**	**-1.2**
BUEV	**Buena Vista**	**1.42**	**22**	*i*P	**Pn**	**09 45 25.5**	**-1.3**
BUEV				*i*S	**Sn**	**09 45 45.0**	**-0.2**
GB1A	**Borinquen Arri**	**1.44**	**22**	*i*P	**Pn**	**09 45 25.8**	**-1.3**
GB1A				*i*S	**Sn**	**09 45 45.1**	**-0.7**
HORNC	**Hornillas**	**1.44**	**31**	*i*P	**Pn**	**09 45 25.9**	**-1.3**
ACAL	**Aguas Claras**	**1.46**	**38**	*i*P	**Pn**	**09 45 26.2**	**-1.1**
BUAI	**Buenos Aires**	**1.52**	**23**	*i*P	**Pn**	**09 45 26.2**	**-1.9**
PTEN	**Parque Tenorio**	**1.55**	**37**	*i*P	**Pn**	**09 45 27.5**	**-1.1**
ARE1	**Arenal 1**	**1.56**	**51**	*e*P	**Pn**	**09 45 28.7**	**+0.1**
SRA1	**San Ramn**	**1.56**	**67**	*e*P	**Pn**	**09 45 27.9**	**-0.9**
CEDE	**Laguna Cedeo**	**1.58**	**50**	*e*P	**Pn**	**09 45 28.2**	**-0.8**
FORC	**Fortuna**	**1.60**	**52**	*i*P	**Pn**	**09 45 29.1**	**0.0**
HDC	**Heredia**	**1.88**	**74**	*e*P	**Pn**	**09 45 33.0**	**-0.1**
HDC				*e*S	**Sn**	**09 45 58.2**	**+1.5**
HDC	**Heredia**	**1.88**	**74**	*e*P	**Pn**	**09 45 32.9**	**-0.2**
LCR2	**La Lucha 2**	**1.93**	**82**	*e*P	**Pn**	**09 45 32.2**	**-1.8**
COVE	**Coope Vega, Sa**	**1.96**	**51**	*e*P	**Pn**	**09 45 33.7**	**-0.4**
OCM	**Ochomogo**	**2.00**	**78**	*e*P	**Pn**	**09 45 33.9**	**-1.0**
EDDO	**Dominical**	**2.06**	**96**	*e*P	**Pn**	**09 45 34.3**	**-1.3**
EDDO				*e*S	**Sn**	**09 45 58.7**	**-2.3**
RIMA	**Rio Macho**	**2.07**	**82**	*e*P	**Pn**	**09 45 34.5**	**-1.3**
CDM	**Cerro de Muert**	**2.15**	**88**	*e*P	**Pn**	**09 45 36.2**	**-1.0**
CVTR	**Volcan Turrial**	**2.22**	**76**	*e*P	**Pn**	**09 45 38.5**	**+0.4**
PEZE	**Perez Zeledon,**	**2.24**	**92**	*e*P	**Pn**	**09 45 36.8**	**-1.3**
EDLM	**Las Mercedes**	**2.33**	**95**	*e*P	**Pn**	**09 45 38.2**	**-1.1**
MRVA	**Moravia de Chi**	**2.49**	**82**	*e*P	**Pn**	**09 45 41.0**	**-0.6**
EDPN	**Palmar Norte**	**2.50**	**101**	*e*P	**Pn**	**09 45 40.4**	**-1.2**
RIOS	**Rincon, Osa**	**2.52**	**108**	*e*P	**Pn**	**09 45 40.5**	**-1.3**
BATAN	**Batan**	**2.60**	**76**	*e*P	**Pn**	**09 45 43.9**	**+0.9**
BATAN				*e*S	**Sn**	**09 46 15.2**	**+0.9**
EDBA	**Buenos Aires**	**2.65**	**96**	*e*P	**Pn**	**09 45 43.1**	**-0.6**
DRK0	**Durika**	**2.67**	**94**	*e*P	**Pn**	**09 45 43.5**	**-0.6**
DRK0				*e*S	**Sn**	**09 46 16.3**	**0.0**
DRK0	**Durika**	**2.67**	**94**	*e*P	**Pn**	**09 45 43.2**	**-0.9**
PTJ1	**Puerto Jimnez**	**2.77**	**109**	*e*P	**Pn**	**09 45 45.4**	**+0.2**
PTJ1				*e*S	**Sn**	**09 46 17.3**	**-1.2**
PTJ1	**Puerto Jimnez**	**2.77**	**109**	*e*P	**Pn**	**09 45 45.1**	**-0.2**
PIRO	**Carate, Puerto**	**2.78**	**112**	*e*P	**Pn**	**09 45 44.8**	**-0.7**
PIRO				*e*S	**Sn**	**09 46 19.0**	**+0.1**
PIRO	**Carate, Puerto**	**2.78**	**112**	*e*P	**Pn**	**09 45 43.2**	**-2.3**
POTG	**Potrero Grande**	**2.82**	**98**	*e*P	**Pn**	**09 45 45.6**	**-0.5**
LPLA	**Las Palmas La**	**2.93**	**98**	⇓*e*P	**Pn**	**09 45 47.2**	**-0.5**
EDSV	**San Vito**	**3.00**	**102**	*e*P	**Pn**	**09 45 48.9**	**+0.3**
MLIR3	**Monte Lirio, C**	**3.15**	**102**	*e*P	**Pn**	**09 45 52.3**	**+1.6**
CDITO	**Canoas**	**3.16**	**106**	*e*P	**Pn**	**09 45 50.7**	**0.0**
BRU2	**Volcan**	**3.28**	**102**	*e*P	**Pn**	**09 45 52.8**	**+0.4**
BRU2				*e*S	**Sn**	**09 46 31.1**	**-0.2**
BRU2	**Volcan**	**3.28**	**102**	*e*P	**Pn**	**09 45 52.5**	**0.0**
BC3P	**Paso Ancho**	**3.35**	**101**	*e*P	**Pn**	**09 45 54.4**	**+0.9**
CNI2	**El Empalme, Bo**	**3.42**	**91**	*e*P	**Pn**	**09 45 55.1**	**+0.8**
CNI2				*e*S	**Sn**	**09 46 35.1**	**+0.4**
BCO2	**Palmira**	**3.45**	**102**	*e*P	**Pn**	**09 45 55.4**	**+0.5**
PTAR3	**Potrerillos Ar**	**3.49**	**103**	*e*P	**Pn**	**09 45 56.2**	**+0.9**
BAGA3	**Bagala, Chiriq**	**3.52**	**106**	*e*P	**Pn**	**09 45 56.2**	**+0.6**
LNBQ3	**Los Naranjos,**	**3.52**	**101**	*e*P	**Pn**	**09 45 56.3**	**+0.5**
DVD	**David**	**3.60**	**106**	*e*P	**Pn**	**09 45 55.5**	**-1.2**
DVD				*e*S	**Sn**	**09 46 37.1**	**-1.9**
GUAL3	**Gualaca, Chiri**	**3.72**	**104**	*e*P	**Pn**	**09 45 59.1**	**+0.8**
CHGR2	**Aguacate**	**3.79**	**98**	*e*P	**Pn**	**09 45 59.5**	**+0.2**
CHGR2				*e*S	**Sn**	**09 46 42.7**	**-1.0**
GMAL	**Guarumal, Vera**	**4.96**	**110**	*e*P	**Pn**	**09 46 15.6**	**+0.2**
GMAL				*e*S	**Sn**	**09 47 12.1**	**-0.4**
APG	**El Apazote**	**7.05**	**322**	Pn	**Pn**	**09 46 47.0**	**+2.6**
	0.3nm,0.3s,baz=146,slow=15,SNR=2.1						
TEIG	**Tepich**	**10.93**	**348**	LR	LR	09 51 34.0	
	comp=Z,49nm,20.0s,baz=54,slow=36						
CMIG	**Matias Romero**	**11.53**	**312**	LR	LR	09 51 46.8	
	comp=Z,36nm,18.1s,baz=124,slow=34						
TXAR	**Lajitas Array**	**25.81**	**322**	P	**P**	**09 50 35.5**	**+3.2**
	1.6nm,0.8s,baz=138,slow=10.0,SNR=19						
NVAR	**Mina Array Bea**	**40.91**	**320**	P	**P**	**09 52 45.2**	**+1.6**
	0.3nm,0.7s,baz=144,slow=6.7,SNR=2.5						
YKA	**Yellowknife Ar**	**56.86**	**345**	P	**P**	**09 54 44.3**	**-0.9**
	0.2nm,0.6s,baz=141,slow=7.3,SNR=7.0						
YKA				LR	LR	10 20 32.5	
	comp=Z,24nm,18.4s,baz=0.0,slow=37						
ESDC	**Sonseca Array**	**77.87**	**51**	P	**P**	**09 56 58.4**	**-0.4**
	0.5nm,0.8s,baz=289,slow=6.0,SNR=3.4						

*IDC **23** 09:52:43.0±3.9, 56°85N×156°13W, h60km±34km, mb3.4/8, mb1 3.6/11, mb1mx3.3/62, mbtmp3.6/11, ML3.4/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/33, Error ellipse: s-maj=34.7km s-min=19.0km az=16.0*

*AEIC **23** 09:52:42±1.8, 56°53N±0°04×156°09W±0°05, h52km±7km, ML3.2, ML3.4/12(NEIC), Error ellipse: s-maj=6.9km s-min=3.5km az=203.0*

*NEIC **23** 09:52:42.2±2.0, 56°59N±0°02×156°12W±0°07, h56km±10km, Error ellipse: s-maj=5.8km s-min=1.6km az=64.0*

ISC 23 09:52:42.1±1.0, **56°59N**±0°06×**156°08W**±0°04, **h61**km±10km, **n47**, σ1°**12**/52, **mb3.5**/8, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**1.05**	**91**		**Pn**	**09 53 00.6**	**-0.2**
SII					**Sn**	**09 53 15.9**	**+1.2**
SII	**Sitkinak Islan**	**1.05**	**91**	P		09 53 02.2	
	baz=269						
SII				S		09 53 15.6	
	baz=269						
PLK3	**Peulik 3**	**1.11**	**355**		**Pn**	**09 53 01.8**	**+0.2**
PLK3					**Sn**	**09 53 15.8**	**-0.3**
PLBL	**Peulik Blue Cr**	**1.19**	**340**		**Pn**	**09 53 02.3**	**-0.3**
PLBL					**Sn**	**09 53 17.5**	**-0.4**
PLK5	**Peulik 5**	**1.48**	**343**		**Pn**	**09 53 07.6**	**+1.1**
PLK5					**Sn**	**09 53 25.9**	**+1.1**
OHAK	**Old Harbor**	**1.66**	**66**		**Pn**	**09 53 08.4**	**-0.5**
OHAK					**Sn**	**09 53 28.6**	**-0.5**
OHAK	**Old Harbor**	**1.66**	**66**	P		09 53 08.8	
	baz=247						
KABR	**Katmai Barrier**	**1.66**	**21**		**Pn**	**09 53 09.4**	**+0.4**
VNSG	**Veniaminof 6**	**1.74**	**256**		**Pn**	**09 53 10.3**	**+0.3**
VNSG					**Sn**	**09 53 32.2**	**+1.1**
KABU	**Katmai Buttres**	**1.74**	**14**		**Pn**	**09 53 11.4**	**+1.2**
KELA	**Mount Kelaz**	**1.87**	**5**		**Pn**	**09 53 12.3**	**+0.5**
VNKR	**Veniaminof 5**	**1.92**	**254**		**Pn**	**09 53 10.7**	**-1.8**
VNKR					**Sn**	**09 53 33.8**	**-1.7**
KDAK	**Kodiak Island**	**2.25**	**56**	P	**Pn**	**09 53 16.6**	**-0.3**
	9.9nm,0.3s,baz=235,slow=8.2,SNR=178						
KDAK				S	**Sn**	**09 53 41.9**	**-1.5**
	17nm,0.3s,baz=326,slow=18,SNR=7.1						
KDAK	**Kodiak Island**	**2.25**	**56**	P		09 53 16.5	
	baz=238						
SDPT	**Sand Point**	**2.77**	**245**		**Pn**	**09 53 24.4**	**+0.5**
SDPT	**Sand Point**	**2.77**	**245**	IAML		09 54 03.4	
	comp=E,158nm,0.7s						
SDPT	**Sand Point**	**2.77**	**245**	P		09 53 25.2	
	baz=62						
SDPT				S		09 53 56.3	
	baz=62						
IVE	**Iliamna Volcan**	**3.80**	**24**		**Pn**	**09 53 38.3**	**+0.2**
CNPM	**China Poot**	**3.91**	**39**		**Pn**	**09 53 39.8**	**+0.2**
CNPM	**China Poot**	**3.91**	**39**	IAML		09 55 30.4	
	comp=N,47nm,2.7s						
CNPM				IAML		09 55 36.5	
	comp=E,59nm,3.2s						
BRLK	**Bradley Lake**	**4.21**	**39**		**Pn**	**09 53 43.2**	**-0.5**
BRLK	**Bradley Lake**	**4.21**	**39**	IAML		09 54 29.7	
	comp=N,54nm,3.5s						
BRLK				IAML		09 56 21.4	
	comp=E,54nm,5.0s						
BRSE	**Bradley Lake S**	**4.24**	**40**		**Pn**	**09 53 43.6**	**-0.5**
BRSE	**Bradley Lake S**	**4.24**	**40**	P		09 53 43.9	
	baz=224						
RSO	**Redoubt South**	**4.26**	**23**		**Pn**	**09 53 44.8**	**+0.2**
NCT	**North Crescent**	**4.31**	**21**		**Pn**	**09 53 46.3**	**+1.1**
FALS	**False Pass**	**4.50**	**250**		**Pn**	**09 53 46.9**	**-0.7**
FALS	**False Pass**	**4.50**	**250**	P		09 53 46.9	
	baz=65						
SVW2	**Sparrevohn**	**4.53**	**3**	Pn	**Pn**	**09 53 48.7**	**+0.6**
SVW2				IAML		09 55 08.9	
	comp=E,22nm,1.2s						
SEW	**Seward**	**4.96**	**42**	Pn	**Pn**	**09 53 55.0**	**+1.1**
SLKM	**Skilak Lake**	**4.99**	**36**		**Pn**	**09 53 54.2**	**-0.1**
SPCP	**Crater Peak Br**	**5.11**	**22**		**Pn**	**09 53 56.7**	**+0.5**
RC01	**Rabbit Creek A**	**5.59**	**33**		**Pn**	**09 54 02.2**	**-0.2**
SUA	**Susitna One**	**5.61**	**27**		**Pn**	**09 54 03.5**	**+0.5**
PWL	**Port Wells**	**5.88**	**40**		**Pn**	**09 54 05.4**	**-1.1**
SKT	**Skwentna**	**5.89**	**21**	Pn	**Pn**	**09 54 07.9**	**+1.2**
TT01	**Tatalina**	**6.34**	**0**		**Pn**	**09 54 13.1**	**+0.3**
TTA	**Tatalina**	**6.36**	**0**		**Pn**	**09 54 13.3**	**+0.1**
FID	**Port Fidalgo**	**6.51**	**46**		**Pn**	**09 54 13.5**	**-1.7**
CUT	**Chulitna**	**6.54**	**24**	Pn	**Pn**	**09 54 17.5**	**+2.0**
SCM	**Sheep Creek Mo**	**6.91**	**37**	Pn	**Pn**	**09 54 20.3**	**-0.4**
BMRM	**Bremner River**	**7.40**	**49**	Pn	**Pn**	**09 54 26.6**	**-0.7**
ILAR	**Eielson Array**	**9.36**	**25**	P	**Pn**	**09 54 53.2**	**-0.7**
	comp=E,0.2nm,0.3s,baz=218,slow=12,SNR=8.4						
ILAR				S	**Sn**	**09 56 33.3**	**-4.2**
	comp=E,0.1nm,0.3s,baz=194,slow=28,SNR=2.1						
ILAR				LR	LR	09 58 41.5	
	comp=E,39nm,21.0s,baz=340,slow=39						
INK	**Inuvik**	**15.58**	**32**	P	**Pn**	**09 56 17.6**	**+0.1**
	comp=E,0.2nm,0.3s,baz=296,slow=2.2,SNR=7.1						
YKA	**Yellowknife Ar**	**21.53**	**57**	P	**P**	**09 57 26.3**	**+0.6**
	comp=E,0.5nm,0.9s,baz=270,slow=12,SNR=7.0						
PETK	**Petropavlovsk-**	**26.45**	**282**	P	**P**	**09 58 12.5**	**-0.4**
	comp=E,6.7nm,1.0s,baz=74,slow=16,SNR=2.5						
PDAR	**Pinedale Array**	**32.44**	**95**	P	**P**	**09 59 07.3**	**+0.8**
	comp=E,0.4nm,0.6s,baz=270,slow=1.5,SNR=4.7						
TXAR	**Lajitas Array**	**45.52**	**104**	P	**P**	**10 00 57.5**	**+2.0**
	comp=E,0.3nm,0.7s,baz=305,slow=4.4,SNR=4.3						
SONM	**Songino Array**	**55.48**	**306**	P	**P**	**10 02 11.1**	**+0.7**
	comp=E,0.5nm,0.6s,baz=45,slow=5.6,SNR=2.0						
MKAR	**Makanchi Array**	**66.05**	**320**	P	**P**	**10 03 19.9**	**-2.2**
	comp=E,0.1nm,0.3s,baz=57,slow=10,SNR=2.3						
AKASG	**Malin Array Be**	**72.99**	**356**	P	**P**	**10 04 04.3**	**-0.4**
	comp=E,0.3nm,0.3s,baz=6.2,slow=5.2,SNR=1.6						
GEYT	**Alibeck**	**81.49**	**333**	LR	LR	10 45 19.3	
	comp=E,32nm,20.0s,baz=325,slow=39						
CMAR	**Chiang Mai Arr**	**82.74**	**292**	P	**P**	**10 04 59.9**	**+0.6**
	comp=E,1.1nm,0.3s,baz=11,slow=5.7,SNR=5.2						

*IDC **23** 10:01:38.6±6.7, 56°90N×156°19W, h55km±54km, mb2.9/4, mb1 3.3/7, mb1mx3.1/55, mbtmp3.2/7, ML3.3/3, Error ellipse: s-maj=59.2km s-min=26.3km az=24.0*

*NEIC **23** 10:01:38.0±1.6, 56°58N±0°05×156°03W±0°06, h50km±5km, Error ellipse: s-maj=6.7km s-min=4.7km az=187.0*

*AEIC **23** 10:01:38±1.7, 56°58N±0°04×156°06W±0°05, h21km±2km, ML3.4/40, ML3.5/10(NEIC), Error ellipse: s-maj=5.4km s-min=4.2km az=195.0*

ISC 23 10:01:37.7±1.2, **56°56N**±0°06×**156°03W**±0°04, **h49**km±14km, **n67**, σ0°**96**/71, **mb3.3**/4, **Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**1.02**	**89**		**Pn**	**10 01 55.7**	**0.0**
SII					**Sn**	**10 02 09.7**	**+0.8**
PLK3	**Peulik 3**	**1.14**	**354**		**Pn**	**10 01 56.7**	**-0.6**
PLK3					**Sn**	**10 02 11.4**	**-0.3**
PLK2	**Peulik 2**	**1.22**	**353**		**Pn**	**10 01 58.4**	**+0.1**
PLBL	**Peulik Blue Cr**	**1.22**	**340**		**Pn**	**10 01 58.6**	**+0.2**
PLBL					**Sn**	**10 02 12.7**	**-1.0**
PLK5	**Peulik 5**	**1.51**	**343**		**Pn**	**10 02 02.9**	**+0.6**
KJL	**Kejulik**	**1.52**	**9**		**Pn**	**10 02 02.2**	**-0.2**
KJL					**Sn**	**10 02 21.8**	**+0.7**
CAHL	**Cahill**	**1.54**	**15**		**Pn**	**10 02 02.5**	**-0.3**
OHAK	**Old Harbor**	**1.64**	**65**		**Pn**	**10 02 03.5**	**-0.6**
OHAK					**Sn**	**10 02 23.5**	**-0.5**
OHAK	**Old Harbor**	**1.64**	**65**	IAML		10 02 36.5	
	comp=N,483nm,0.8s						
VNSG	**Veniaminof 6**	**1.76**	**257**		**Pn**	**10 02 05.5**	**-0.2**
VNSG					**Sn**	**10 02 27.6**	**+0.7**
KABU	**Katmai Buttres**	**1.76**	**13**		**Pn**	**10 02 06.0**	**+0.3**
VNHG	**Veniaminof 1**	**1.78**	**260**		**Pn**	**10 02 06.2**	**+0.2**
KARR	**Katmai Rainbow**	**2.07**	**20**		**Pn**	**10 02 10.7**	**+0.7**
KARR					**Sn**	**10 02 36.6**	**+2.0**
KAHG	**Katmai Hook Gl**	**2.10**	**22**		**Pn**	**10 02 11.5**	**+1.2**
KDAK	**Kodiak Island**	**2.24**	**55**	P	**Pn**	**10 02 11.7**	**-0.5**
	comp=N,17nm,0.3s,baz=201,slow=3.7,SNR=132						
KDAK				S	**Sn**	**10 02 37.6**	**-1.1**
	comp=N,22nm,0.3s,baz=263,slow=9.3,SNR=3.4						
SDPT	**Sand Point**	**2.78**	**246**		**Pn**	**10 02 20.6**	**+0.9**
SDPT	**Sand Point**	**2.78**	**246**	IAML		10 03 04.5	
	comp=E,215nm,0.7s						
SDPT				IAML		10 03 10.1	
	comp=N,212nm,1.5s						
AUH	**Augustine H**	**3.13**	**25**		**Pn**	**10 02 24.9**	**+0.4**
IVE	**Iliamna Volcan**	**3.81**	**23**		**Pn**	**10 02 34.5**	**+0.6**
CNPM	**China Poot**	**3.91**	**39**		**Pn**	**10 02 35.0**	**-0.2**
CNPM	**China Poot**	**3.91**	**39**	IAML		10 03 21.8	
	comp=E,62nm,2.7s						
BRLK	**Bradley Lake**	**4.21**	**38**		**Pn**	**10 02 38.3**	**-1.0**
BRLK	**Bradley Lake**	**4.21**	**38**	IAML		10 03 48.1	
	comp=N,54nm,3.5s						
BRLK				IAML		10 04 14.1	
	comp=E,62nm,4.0s						
BRSE	**Bradley Lake S**	**4.24**	**39**		**Pn**	**10 02 38.1**	**-1.6**
RSO	**Redoubt South**	**4.27**	**22**		**Pn**	**10 02 41.7**	**+1.4**
NCT	**North Crescent**	**4.33**	**21**		**Pn**	**10 02 40.5**	**-0.5**
DFR	**Drift River**	**4.40**	**22**		**Pn**	**10 02 41.7**	**-0.3**
DFR	**Drift River**	**4.40**	**22**		**Pn**	**10 02 42.2**	**+0.2**
SLKM	**Skilak Lake**	**4.99**	**35**		**Pn**	**10 02 49.6**	**-0.4**
RC01	**Rabbit Creek A**	**5.59**	**33**		**Pn**	**10 02 57.7**	**-0.5**
SUA	**Susitna One**	**5.62**	**27**		**Pn**	**10 02 59.2**	**+0.5**
PWL	**Port Wells**	**5.88**	**40**		**Pn**	**10 03 01.0**	**-1.2**
SKT	**Skwentna**	**5.90**	**21**	Pn	**Pn**	**10 03 03.7**	**+1.3**
PMR	**Palmer**	**6.17**	**32**	Pn	**Pn**	**10 03 06.8**	**+0.7**
GLI	**Glacier Island**	**6.35**	**43**	Pn	**Pn**	**10 03 07.0**	**-1.6**
TT01	**Tatalina**	**6.37**	**0**		**Pn**	**10 03 08.4**	**-0.4**
GHO	**Glory Hole Cre**	**6.37**	**32**	Pn	**Pn**	**10 03 09.3**	**+0.3**
TTA	**Tatalina**	**6.39**	**0**	Pn	**Pn**	**10 03 09.4**	**+0.2**
FID	**Port Fidalgo**	**6.51**	**46**		**Pn**	**10 03 09.3**	**-1.5**
PPLA	**Purkeypile**	**6.64**	**15**	Pn	**Pn**	**10 03 15.0**	**+2.3**
MSW	**Makushin Switc**	**6.70**	**251**		**Pn**	**10 03 12.5**	**-0.9**
EYAK	**Cordova Ski Ar**	**6.70**	**49**		**Pn**	**10 03 11.6**	**-1.7**
SCM	**Sheep Creek Mo**	**6.92**	**37**		**Pn**	**10 03 15.3**	**-1.1**
RAGM	**Ragged Mountai**	**7.08**	**53**	Pn	**Pn**	**10 03 18.5**	**-0.1**
KLU	**Klutina**	**7.18**	**42**		**Pn**	**10 03 21.8**	**+1.8**
WAT7	**Susitna Watana**	**7.26**	**27**		**Pn**	**10 03 20.3**	**-0.9**
BMRM	**Bremner River**	**7.40**	**49**	Pn	**Pn**	**10 03 22.0**	**-1.0**
KTH	**Kantishna Hill**	**7.46**	**18**	Pn	**Pn**	**10 03 25.0**	**+1.1**
TRF	**Thorofare Moun**	**7.48**	**20**	Pn	**Pn**	**10 03 24.7**	**+0.5**
CRQM	**Cirque**	**7.92**	**53**	Pn	**Pn**	**10 03 30.0**	**-0.0**
BPAW	**Bear Paw Mtn.**	**7.96**	**16**	Pn	**Pn**	**10 03 31.7**	**+1.1**
GLB	**Gilahina Butte**	**7.98**	**47**	Pn	**Pn**	**10 03 31.4**	**+0.5**
GRNC	**Granite Creek**	**8.53**	**55**	Pn	**Pn**	**10 03 39.2**	**+0.5**
TABL	**Table Mountain**	**8.70**	**57**	Pn	**Pn**	**10 03 42.4**	**+1.4**
BARN	**Barnard Glacie**	**8.71**	**53**	Pn	**Pn**	**10 03 41.1**	**+0.1**
CTGM	**Chitina Glacie**	**8.81**	**54**	Pn	**Pn**	**10 03 42.7**	**+0.3**
WRH	**Wood River Hil**	**8.84**	**23**	Pn	**Pn**	**10 03 42.6**	**-0.1**
LOGN	**Logan Glacier**	**8.91**	**55**	Pn	**Pn**	**10 03 44.2**	**+0.4**
CCB	**Clear Creek Bu**	**9.05**	**23**	Pn	**Pn**	**10 03 45.2**	**-0.3**
ANM	**Nome**	**9.24**	**334**	Pn	**Pn**	**10 03 48.7**	**+0.6**
BCPM	**Bancas Point**	**9.28**	**62**	Pn	**Pn**	**10 03 49.1**	**+0.4**
ILAR	**Eielson Array**	**9.37**

MAR3	**Marsite Statio**	**1.34**	**304**	PN		**Pb**	**10 04 44.7**	**+0.4**
SILT	**Sile**	**1.34**	**30**	PN		**Pb**	**10 04 44.6**	**+0.3**
MAR4	**Marsite Statio**	**1.36**	**306**	PN		**Pb**	**10 04 44.6**	**-0.1**
BUHA	**Balikesir, Bur**	**1.38**	**250**	*i* P		**Pb**	**10 04 44.6**	**-0.4**
BUHA				*i* S		**Sn**	**10 05 02.1**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.39**	**300**	PN		**Pb**	**10 04 45.3**	**+0.1**
SAUV	**Serdivan-Sakar**	**1.42**	**58**	PN		**Pg**	**10 04 46.2**	**-0.7**
GULT	**Gulveren**	**1.42**	**71**	PN		**Pb**	**10 04 46.1**	**+0.4**
GOMA	**Golmarmara-Man**	**1.44**	**207**	PN		**Pb**	**10 04 46.1**	**+0.2**
SRCK	**Saricakaya, Es**	**1.44**	**87**	PN		**Pb**	**10 04 46.4**	**+0.4**
KULA	**Kula-Manisa**	**1.48**	**183**	PN		**Pb**	**10 04 46.8**	**+0.1**
MANT	**Manisa**	**1.51**	**186**	*i* P		**Pb**	**10 04 46.9**	**-0.4**
CTYL	**Yalikoy Yolu**	**1.52**	**347**	PN		**Pb**	**10 04 47.0**	**-0.4**
AUKR	**Kirka- Seyitga**	**1.55**	**117**	*i* P		**Pg**	**10 04 49.0**	**-0.4**
KAYN	**Sakarya, Kayna**	**1.55**	**51**	*i* P		**Pb**	**10 04 47.5**	**-0.4**
KAND	**Kocaeli-Kandir**	**1.55**	**44**	*i* P		**Pb**	**10 04 47.6**	**-0.3**
KAND				*i* S		**Sb**	**10 05 08.1**	**+0.7**
LPK	**Lapseki**	**1.57**	**285**	PN		**Pn**	**10 04 47.4**	**+0.6**
SGAZ	**Eskisehir, Sey**	**1.67**	**105**	*i* P		**Pb**	**10 04 49.5**	**-0.6**
DKL	**Dikili**	**1.70**	**238**	PN		**Pn**	**10 04 49.4**	**+0.9**
AFYO	**Afyonkarahisar**	**1.70**	**135**	*i* P		**Pg**	**10 04 51.5**	**-0.8**
AFYO				*i* S		**Sg**	**10 05 14.8**	**+0.4**
VIZE	**Kirklareli, Vi**	**1.73**	**337**	*i* P		**Pn**	**10 04 49.4**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.79**	**284**	PN		**Pb**	**10 04 51.0**	**-1.0**
BTAS	**Taskesti**	**1.81**	**71**	*i* P		**Pb**	**10 04 52.5**	**+0.1**
BTAS				*i* S		**Sg**	**10 05 19.5**	**+1.5**
SAHE	**Sakarya_HENDEK**	**1.82**	**61**	*i* P		**Pn**	**10 04 51.3**	**+1.1**
SAHE				*i* S		**Sb**	**10 05 16.1**	**+1.1**
ERIK	**Erikli-Kesan**	**1.84**	**292**	PN		**Pn**	**10 04 51.4**	**+1.0**
EZN	**Ezine**	**1.87**	**266**	P		**Pn**	**10 04 52.0**	**+1.1**
EZN				S		**Sb**	**10 05 17.9**	**+1.4**
	228nm,0.3s							
EZN	**Ezine**	**1.87**	**266**	PN		**Pb**	**10 04 52.2**	**-1.2**
CIFT	**Ciftеler, Eski**	**1.89**	**109**	PN		**Pb**	**10 04 52.9**	**-0.9**
SHUT	**Suhut-Afyon**	**2.00**	**135**	PN		**Pb**	**10 04 54.4**	**-1.3**
PRK	**Paraskevi**	**2.06**	**249**	P		**Pb**	**10 04 55.2**	**-1.3**
PRK				S		**Sb**	**10 05 22.3**	**+0.5**
	530nm,0.5s							
BOZC	**Bozcaada**	**2.08**	**267**	PN		**Pn**	**10 04 55.0**	**+1.2**
ENEZ	**Enez**	**2.12**	**291**	P		**Pn**	**10 04 55.5**	**+1.2**
ENEZ	**Enez**	**2.12**	**291**	PN		**Pn**	**10 04 55.4**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**2.15**	**198**	PN		**Pn**	**10 04 55.8**	**+0.9**
GADA	**Gvkgeada**	**2.20**	**276**	P		**Pn**	**10 04 56.9**	**+1.6**
GADA				S		**Sb**	**10 05 25.5**	**-0.3**
GADA	**Gvkgeada**	**2.20**	**276**	PN		**Pn**	**10 04 56.6**	**+1.2**
SVRH	**Sivrihisar-ESK**	**2.21**	**103**	PN		**Pn**	**10 04 57.3**	**+1.7**
AUSIV	**SIVRIHISAR**	**2.22**	**104**	PN		**Pn**	**10 04 57.6**	**-1.8**
ALN	**Alexandroupoli**	**2.25**	**294**	P		**Pn**	**10 04 56.9**	**+0.8**
ALN	**Alexandroupoli**	**2.25**	**294**	PN		**Pn**	**10 04 56.8**	**+0.7**
YUVA	**Yuva-Kibriscik**	**2.28**	**79**	PN		**Pb**	**10 04 58.9**	**-1.5**
BASM	**Basmaki-Afyon**	**2.31**	**154**	PN		**Pn**	**10 04 58.6**	**+1.7**
URLA	**Izmir**	**2.34**	**226**	PN		**Pn**	**10 04 59.1**	**+1.8**
SIGR	**SIGRI**	**2.37**	**252**	P		**Pn**	**10 04 58.6**	**+0.9**
SIGR				S		**Sb**	**10 05 29.7**	**-1.1**
	318nm,0.5s							
SIGR	**SIGRI**	**2.37**	**252**	PN		**Pn**	**10 04 58.6**	**+0.9**
SMTH	**Samothraki Isl**	**2.51**	**282**	P		**Pn**	**10 05 00.6**	**+0.9**
CHOS	**Chios island**	**2.64**	**233**	P		**Pn**	**10 05 03.0**	**+1.5**
RDO	**Rodhopi**	**2.71**	**296**	P		**Pn**	**10 05 03.6**	**+1.3**
LIA	**Limnos Island**	**2.75**	**269**	P		**Pn**	**10 05 04.6**	**+1.7**
LIA				S		**Sb**	**10 05 38.8**	**-2.8**
	95nm,0.4s							
SEV	**Sevastopol'**	**5.83**	**37**	*e*S		**Sn**	**10 06 49.1**	**-2.6**
SEV				Sm			10 06 49.8	
	comp=N,4.0nm,0.4s							
SEV				Sm			10 06 49.8	
	comp=E,2.0nm,0.3s							
SUDU	**Sudak**	**6.73**	**41**	*e*P		**Pn**	**10 05 58.7**	**+1.1**
SUDU				Pm			10 06 04.6	
	comp=Z,4.0nm,0.3s							
SUDU				*e*S		**Sn**	**10 07 11.2**	**-2.6**
SUDU				Sm			10 07 15.9	
	comp=N,3.0nm,0.5s							
SUDU				Sm			10 07 15.9	
	comp=E,10.0nm,0.3s							

IDC ***23*** *10:15:17.0±1.3,0˚.51N×92˚.29E, h0km, mb4.0/8, mb1 4.2/11,mb1mx3.8/56,mbtmp4.0/11,ML4.1/2,MS3.3/9, Ms1 3.3/9,ms1mx3.0/52,Error ellipse: s-maj=38.7km s-min=18.8km az=50.0*

NEIC ***23*** *10:15:18.9±1.2,0˚.5N×0˚.2×92˚.3E±0˚.1, h15km±5km, mb4.4/8,Error ellipse: s-maj=23.1km s-min=14.1km az=194.0*

DJA ***23*** *10:15:26.5±1.2,1˚N±7˚×9˚3E±˚, h40km±10km, M4.7/12, mb5.0/12,mB5.0/7,MLv4.9/6,Mw(mB)4.4/7*

ISC 23 10:15:21.6±0.8, 0.6N±0˚.1×92˚.38E±0˚.07, h35km, n46, σ1°§43/39, mb4.3/11, MS3.2/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**5.24**	**82**	Pn	**Pn**	**10 16 37.6**	**+0.1**
TPTI		**5.47**	**61**	P	**Pn**	**10 16 41.0**	**+0.3**
	0.3nm726nm42nm,0.8s						
TPTI				S	**Sn**	**10 17 39.2**	**-3.3**
	0.3nm726nm42nm,0.8s						
PBSI	**Pulau Batu**	**5.93**	**96**	P	**Pn**	**10 16 47.2**	**+0.1**
	1.3nm240nm,0.8s						
PBSI				S	**Sn**	**10 17 51.0**	**-2.9**
	1.3nm240nm,0.8s						
RPSI	**Rantau Prapat**	**6.86**	**72**		**Pn**	**10 17 00.8**	**+1.0**
RPSI	**Rantau Prapat**	**6.86**	**72**		**Pn**	**10 17 00.8**	**+1.0**
PSI	**Prapat**	**6.89**	**71**	Pn	**Pn**	**10 17 00.8**	**+0.5**
	3.6nm,0.3s,baz=360,slow=5.9,SNR=8.4						
PSI				LR	LR	10 20 10.4	
	comp=Z,605nm,18.6s,baz=236,slow=42						
SISI	**Saibi**	**6.97**	**106**	P	**Pn**	**10 17 00.3**	**-1.1**
	0.3nm1µm73nm,0.6s						
MNSI	**Mandailing Nat**	**7.20**	**88**	P	**Pn**	**10 17 05.1**	**+0.6**
	2.6nm9µm503nm,0.5s						
BKNI	**Bangkinang**	**8.66**	**92**	P	Pn	10 17 35.2	+11
IPM	**Ipoh**	**9.45**	**66**	Pn	**Pn**	**10 17 36.3**	**+0.9**
KULM	**Kulim**	**9.48**	**60**	Pn	**Pn**	**10 17 36.0**	**+0.3**
MNAI	**Manna**	**11.66**	**115**	P	**Pn**	**10 18 08.6**	**+3.0**
	112nm,0.8s						
PALK	**Pallekele**	**13.40**	**300**	Pn	**Pn**	**10 18 26.2**	**-3.3**
	1.1nm,0.3s,baz=242,slow=7.9,SNR=4.2						
PALK				Sn	Sn	10 20 46.2	-11
	2.8nm,0.3s,baz=158,slow=8.5,SNR=6.0						
PALK				LR	LR	10 22 59.7	
	comp=Z,46nm,19.1s,baz=224,slow=35						
PALK	**Pallekele**	**13.40**	**300**	Pn	**Pn**	**10 18 26.1**	**-3.4**
LEM	**Lembang**	**16.90**	**116**	LR	LR	10 25 26.0	
	comp=Z,77nm,18.4s,baz=228,slow=36						
KSM	**Kuching**	**17.94**	**87**	P	**P**	**10 19 29.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**18.88**	**20**	P	**Pn**	**10 19 40.6**	**+0.7**
	baz=218,slow=12,SNR=10						
CMAR				LR	LR	10 27 47.4	
	comp=Z,60nm,18.4s,baz=270,slow=40						
CMAR	**Chiang Mai Arr**	**18.88**	**20**	P	**P**	**10 19 39.1**	**0.0**
SBUM	**Sibu**	**19.91**	**85**		**Pn**	**10 19 52.0**	**-0.4**
H08S2	**Diego Garcia H**	**21.46**	**247**	T	T	10 42 02.8	
	baz=68,slow=76,SNR=2.4						
H08S3	**Diego Garcia H**	**21.46**	**247**	T	T	10 42 08.4	
	baz=68,slow=76,SNR=4.0						
H08S1	**Diego Garcia H**	**21.48**	**247**	T	T	10 42 06.0	
	baz=68,slow=76,SNR=4.0						
KAPI	**Kappang**	**27.90**	**102**	LR	LR	10 31 18.9	
	comp=Z,59nm,20.5s,baz=281,slow=34						
BATI	**Baumata**	**32.92**	**110**	LR	LR	10 35 10.5	
	comp=Z,49nm,18.5s,baz=332,slow=36						
WB0	**Warramunga Arr**	**45.88**	**119**	P	**P**	**10 23 41.4**	**+0.4**
WB0				IAmb	IAmb	10 24 02.7	
	comp=Z,7.2nm,1.4s						
WRA	**Warramunga Arr**	**45.89**	**119**	P	**P**	**10 23 41.7**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=296,slow=8.5,SNR=22						
WRAB	**Tennant Creek**	**45.90**	**119**	P	**P**	**10 23 40.3**	**-0.9**
WRAB				IAmb	IAmb	10 23 42.4	
	comp=Z,7.2nm,1.1s						
WB2	**Warramunga Arr**	**45.90**	**119**	P	**P**	**10 23 41.3**	**+0.1**
WR0	**Warramunga Arr**	**46.08**	**119**	P	**P**	**10 23 43.1**	**+0.5**
WR0				IAmb	IAmb	10 23 43.9	
	comp=Z,4.2nm,0.8s						
MKAR	**Makanchi Array**	**46.84**	**350**	P	**P**	**10 23 49.6**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=163,slow=8.7,SNR=9.8						
MKAR	**Makanchi Array**	**46.84**	**350**	P	**P**	**10 23 49.1**	**+0.9**
ASAR	**Alice Springs**	**46.98**	**124**	P	**P**	**10 23 50.0**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=300,slow=7.8,SNR=11						
GENI	**Genyem**	**47.88**	**94**	P	**P**	**10 23 56.4**	**-0.4**
SONM	**Songino Array**	**48.59**	**13**	P	**P**	**10 24 02.9**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=197,slow=8.7,SNR=7.9						
SONM	**Songino Array**	**48.59**	**13**	P	**P**	**10 24 03.7**	**+1.8**
SONM				IAmb	IAmb	10 24 14.7	
	comp=Z,2.5nm,0.8s						
KSRS	**Korea Array**	**49.17**	**38**	LR	LR	10 44 55.6	
	comp=Z,17nm,20.6s,baz=210,slow=36						
KURBB	**Kurchatov Arra**	**51.21**	**349**	P	**P**	**10 24 21.8**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=172,slow=7.2,SNR=4.1						
KURK	**Kurchatov**	**51.28**	**349**	P	**P**	**10 24 21.8**	**-0.2**
ZALV	**Zalesovo Beam**	**53.53**	**354**	P	**P**	**10 24 39.7**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=175,slow=7.1,SNR=5.3						
ZALV				LR	LR	10 48 49.3	
	comp=Z,28nm,21.3s,baz=104,slow=38						
ZALV	**Zalesovo Beam**	**53.53**	**354**	P	**P**	**10 24 39.4**	**+0.7**
BOSA	**Boshof**	**70.32**	**239**	LR	LR	10 52 48.9	
	comp=Z,26nm,19.6s,baz=174,slow=32						
TIXI	**Tiksi**	**74.66**	**11**	P	**P**	**10 26 58.4**	**+1.3**
	comp=Z,3.0nm,0.7s,baz=212,slow=2.4,SNR=10						
TIXI	**Tiksi**	**74.66**	**11**	P	**P**	**10 26 56.0**	**-1.1**
GERES	**GERESS Array B**	**82.10**	**319**	P	**P**	**10 27 40.6**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=101,slow=6.9,SNR=5.7						
GERES	**GERESS Array B**	**82.10**	**319**	P	**P**	**10 27 40.1**	**+1.4**
TXAR	**Lajitas Array**	**146.51**	**26**	PKPbc	**PKPab**	**10 35 01.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=32,slow=0.7,SNR=8.1						

NEIC ***23*** *10:17:57.9±1.7,38˚.60N±0˚.05×141˚.9E±0˚.1, h52km±3km, mb4.2/22,Error ellipse: s-maj=13.5km s-min=6.6km az=106.0*

NIED ***23*** *10:17:57.7,38˚.63N×141˚.92E, h49km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr=0.39; Mθθ=0.98; Mφφ=0.59; Mrθ=0.95; Mrφ=0.18; Mθφ=1.30; Fault plane solution: M0=1.82000×10^15 NP1: φs=222.00000°, δ84.00000°, λ-116.00000°. NP2: φs=120.00000°, δ27.00000°, λ-14.00000°.*

JMA ***23*** *10:17:57.7,38˚.63N×141˚.92E, h49km±1km, M4.2*

JMA Felt II J1.

IDC ***23*** *10:17:58.0±0.7,38˚.56N×141˚.92E, h52km±6km, mb3.8/19, mb1 4.0/25,mb1mx3.8/52,mbtmp4.1/25,MS3.0/15, Ms1 3.1/15,ms1mx2.9/54,Error ellipse: s-maj=14.7km s-min=11.0km az=107.0*

ISC 23 10:17:57.8±0.6, 38.57N±0˚.04×141˚.93E±0˚.06, h50km±5km, n94, σ1°§40/96, mb4.1/27, MS3.0/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.43**	**304**	P	**Pn**	**10 18 07.6**	**-0.6**
JKMT				S	**Sn**	**10 18 14.6**	**-1.1**
JIKH	**Ishinomakikobu**	**0.44**	**235**	P	**Pn**	**10 18 08.5**	**+0.1**
JIKH				S	**Sn**	**10 18 15.9**	**0.0**
JIO	**Ouri**	**0.47**	**256**	P	**Pn**	**10 18 08.6**	**0.0**
JIO				S	**Sn**	**10 18 16.0**	**-0.4**
OFUJ	**Ofunato**	**0.55**	**339**	P	**Pn**	**10 18 08.8**	**-0.9**
OFUJ				S	**Sn**	**10 18 16.5**	**-1.7**
JMK	**Ichinoseki**	**0.67**	**305**	P	**Pn**	**10 18 10.6**	**-0.6**
JMK				S	**Sn**	**10 18 19.9**	**-0.9**
JOU	**Okura**	**1.01**	**259**	P	**Pn**	**10 18 15.7**	**0.0**
JOU				S	**Sn**	**10 18 29.2**	**+0.3**
JOM	**Ohasama**	**1.03**	**332**	P	**Pn**	**10 18 15.2**	**-0.7**
JOM				S	**Sn**	**10 18 26.6**	**-2.7**
JMM	**Marumori**	**1.14**	**232**	P	**Pn**	**10 18 17.2**	**-0.1**
JMM				S	**Sn**	**10 18 31.8**	**0.0**
JMM	**Marumori**	**1.14**	**232**		**Pn**	**10 18 17.2**	**-0.1**
JYK	**Kaneyama**	**1.27**	**286**	P	**Pn**	**10 18 19.0**	**-0.2**
JYK				S	**Sn**	**10 18 35.0**	**-0.2**
JRG	**Rokugo**	**1.30**	**310**	P	**Pn**	**10 18 19.0**	**-0.6**
JRG				S	**Sn**	**10 18 34.1**	**-1.8**
JFK	**Kawauchi**	**1.46**	**215**	P	**Pn**	**10 18 21.9**	**+0.1**
JFK				S	**Sn**	**10 18 39.8**	**0.0**
JYS	**Shirataka**	**1.50**	**257**	P	**Pn**	**10 18 22.7**	**+0.4**
JTM	**Tenmabayashi**	**2.31**	**344**	Pn	**Pn**	**10 18 33.3**	**-0.1**
JYT	**Yasato**	**2.71**	**211**	Pn	**Pn**	**10 18 39.6**	**+0.7**
JSD	**Sado**	**2.93**	**261**	Pn	**Pn**	**10 18 42.0**	**+0.1**
ERM	**Erimo**	**3.57**	**15**	Pn	**Pn**	**10 18 51.0**	**+0.4**
MAJO	**Matsushiro**	**3.58**	**237**	Pn	**Pn**	**10 18 52.6**	**+1.8**
MAT	**Matsushiro**	**3.58**	**237**	P	**Pn**	**10 18 52.6**	**+1.8**
MAT				*e*S	**Sn**	**10 19 34.0**	**+2.1**
MJAR	**Matsushiro Arr**	**3.58**	**237**	P	**Pn**	**10 18 52.5**	**+1.6**
	1.4nm,0.3s,baz=37,slow=12,SNR=71						
MJAR				LR	LR	10 20 31.9	
	comp=Z,119nm,20.4s,baz=85,slow=43						
JEW	**Eniwo**	**4.28**	**355**		**Pn**	**10 19 02.1**	**+1.6**
JGF	**Kuroka**	**4.70**	**232**	Pn	**Pn**	**10 19 08.7**	**+2.4**
ASAJ	**Asahikawa**	**5.56**	**5**	P	**Pn**	**10 19 19.3**	**+1.3**
	5.6nm,0.3s,baz=270,slow=20,SNR=3.6						
ASAJ				S	**Sn**	**10 20 27.6**	**+7.0**
	3.7nm,0.3s,baz=286,slow=32,SNR=3.6						
JKA	**Kamikawa-asahi**	**5.56**	**5**		**Pn**	**10 19 17.7**	**-0.3**
JKA	**Kamikawa-asahi**	**5.56**	**5**		**Sn**	**10 20 27.6**	**+7.0**
JHJ2	**Mitsune**	**5.71**	**198**	Pn	**Pn**	**10 19 20.1**	**0.0**
JHJ	**Hachijo jima 2**	**5.71**	**198**	P	**Pn**	**10 19 20.1**	**0.0**
	24nm,0.3s,baz=336,slow=17,SNR=15						
JHJ				S	**Sn**	**10 20 23.0**	**-1.3**
	49nm,0.3s,baz=44,slow=23,SNR=7.3						
JWT	**Wachi**	**6.17**	**240**		**Pn**	**10 19 29.6**	**+3.3**
JHS	**Saijyo**	**7.91**	**246**	Pn	**Pn**	**10 19 52.4**	**+2.1**
JMN	**Monobe**	**8.10**	**236**	Pn	**Pn**	**10 19 53.0**	**+0.1**
YSS	**Yuzh-Sakhalins**	**8.40**	**4**	Pn	**Pn**	**10 19 56.9**	**+0.1**
USA0B	**Ussuriysk Arra**	**9.35**	**310**	Pn	**Pn**	**10 20 10.4**	**+0.6**
USRK	**Ussuriysk Ar.**	**9.35**	**310**	P	**Pn**	**10 20 10.2**	**+0.5**
	baz=111,slow=14,SNR=14						
USRK				LR	LR	10 23 38.5	
	comp=Z,115nm,18.1s,baz=104,slow=36						
USRK	**Ussuriysk Ar.**	**9.35**	**310**		**Pn**	**10 20 10.0**	**+0.2**
JNU	**Nakatsue**	**10.48**	**242**	LR	LR	10 25 08.1	
	comp=Z,36nm,20.3s,baz=56,slow=41						
KSRS	**Korea Array**	**11.11**	**269**	P	**Pn**	**10 20 35.8**	**+1.9**
	0.3nm,0.3s,baz=79,slow=14,SNR=6.5						
KSRS				LR	LR	10 24 21.8	
	comp=Z,81nm,21.2s,baz=92,slow=34						
JCJ	**Chichijima**	**11.44**	**179**	LR	LR	10 29 38.8	
	comp=Z,14nm,18.4s,baz=342,slow=61						
KLR	**Kul'dur**	**12.92**	**329**	P	**Pn**	**10 20 59.1**	**+0.5**
	0.2nm,0.3s,baz=144,slow=12,SNR=4.9						
KLR				LR	LR	10 26 04.3	
	comp=Z,117nm,18.1s,baz=142,slow=38						
PETK	**Petropavlovsk-**	**18.10**	**32**	LR	LR	10 29 26.2	
	comp=Z,35nm,19.2s,baz=96,slow=38						
MA2	**Magadan**	**21.77**	**12**	P	**P**	**10 22 46.1**	**+1.1**
	4.4nm,0.6s,baz=187,slow=12,SNR=4.3						
MA2				LR	LR	10 31 08.3	
	comp=Z,31nm,21.1s,baz=132,slow=36						
YAK	**Yakutsk**	**24.67**	**346**	LR	LR	10 34 57.0	
	comp=Z,34nm,19.8s,baz=254,slow=41						
SEY	**Seymchan**	**25.21**	**11**	P	**P**	**10 23 19.5**	**+1.0**
	3.1nm,0.7s,baz=193,slow=7.1,SNR=15						
SONM	**Songino Array**	**27.30**	**301**	P	**P**	**10 23 38.1**	**+0.4**
	1.1nm,0.5s,baz=99,slow=9.4,SNR=7.8						
SONM				LR	LR	10 34 02.5	
	comp=Z,36nm,20.8s,baz=61,slow=35						
SONM	**Songino Array**	**27.30**	**301**	P	**P**	**10 23 36.9**	**-0.8**
H11N2	**WAKE ISLAND Hy**	**28.63**	**124**	T	T	10 54 16.3	
	baz=317,slow=75,SNR=2321						
H11N1	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	10 54 11.5	
	baz=317,slow=75,SNR=2343						
H11N3	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	10 54 09.0	
	baz=317,slow=75,SNR=1573						
H11S1	**WAKE ISLAND Hy**	**29.39**	**126**	T	T	10 55 04.1	
	baz=318,slow=76,SNR=440						
H11S3	**WAKE ISLAND Hy**	**29.39**	**126**	T	T	10 55 04.2	
	baz=318,slow=76,SNR=765						
H11S2	**WAKE ISLAND Hy**	**29.41**	**126**	T	T	10 55 04.7	
	baz=318,slow=76,SNR=230						
TLY	**Talaya**	**29.66**	**309**	LR	LR	10 36 25.2	
	comp=Z,68nm,18.9s,baz=96,slow=37						
TIXI	**Tiksi**	**33.82**	**353**	P	**P**	**10 24 33.1**	**-1.6**
	1.1nm,0.5s,baz=137,slow=6.8,SNR=5.4						
TIXI				LR	LR	10 39 28.8	
	comp=Z,28nm,19.3s,baz=256,slow=38						
TIXI	**Tiksi**	**33.82**	**353**	IAmb	IAmb	10 24 34.4	
	comp=Z,2.7nm,1.1s						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**10 25 37.0**	**-0.3**
	comp=Z,2.7nm,0.4s,baz=84,slow=7.9,SNR=7.4						
ZALV	**Zalesovo Beam**	**41.20**	**311**	P	**P**	**10 25 36.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**42.29**	**254**	LR	LR	10 42 53.6	
	comp=Z,21nm,18.5s,baz=191,slow=35						
MK31	**Makanchi Array**	**43.66**	**301**	P	**P**	**10 25 57.5**	**0.0**
MKAR	**Makanchi Array**	**43.66**	**301**	P	**P**	**10 25 57.0**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=83,slow=10,SNR=11						
MAKZ	**Makanchi**	**43.87**	**301**	P	**P**	**10 25 58.5**	**-0.7**
MAKZ				IAmb	IAmb	10 26 01.8	
	comp=Z,2.6nm,0.9s						
KURK	**Kurchatov**	**45.32**	**307**	P	**P**	**10 26 10.3**	**-0.2**
KURBB	**Kurchatov Arra**	**45.39**	**307**	P	**P**	**10 26 10.3**	**-0.8**
	comp=Z,9.1nm,0.4s,baz=80,slow=7.8,SNR=10						
MLY	**Manley**	**46.34**	**33**	P	**P**	**10 26 19.3**	**+0.8**
GHO	**Glory Hole Cre**	**47.24**	**37**	P	**P**	**10 26 25.3**	**-0.4**
IL31		**47.99**	**33**	P	**P**	**10 26 30.0**	**-1.2**
IL31				IAmb	IAmb	10 26 57.1	
	comp=Z,1.9nm,0.9s						
ILAR	**Eielson Array**	**47.99**	**33**	P	**P**	**10 26 30.9**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=255,slow=5.4,SNR=10.0						
ILAR				pP	**pP**	**10 26 44.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=264,slow=6.4,SNR=5.7						
ILAR	**Eielson Array**	**47.99**	**33**	P	**P**	**10 26 29.6**	**-1.7**
SCM	**Sheep Creek Mo**	**47.99**	**37**	P	**P**	**10 26 31.6**	**+0.1**
SCM				IAmb	IAmb	10 26 54.3	
	comp=Z,8.7nm,1.2s						
SCRK	**Sand Creek**	**49.31**	**34**	P	**P**	**10 26 42.0**	**+0.5**
SCRK				IAmb	IAmb	10 26 44.1	
	comp=Z,2.3nm,1.0s						
INK	**Inuvik**	**52.84**	**28**	P	**P**	**10 27 07.9**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=280,slow=7.2,SNR=11						
INK				pP	**pP**	**10 27 22.2**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=322,slow=6.9,SNR=2.4						
INK	**Inuvik**	**52.84**	**28**	P	**P**	**10 27 08.4**	**+0.6**
INK				IAmb	IAmb	10 27 32.1	
	comp=Z,5.0nm,1.4s						
KNRA	**Kununurra**	**55.35**	**195**	P	**P**	**10 27 27.3**	**+0.6**
C36M	**Paulatuk**	**55.87**	**25**	P	**P**	**10 27 30.2**	**+0.4**
C36M				IAmb	IAmb	10 27 53.5	
	comp=Z,4.6nm,1.3s						
ABKAR	**Akbulak array**	**57.27**	**310**	P	**P**	**10 27 39.2**	**-0.9**
ABKAR	**Akbulak array**	**57.27**	**310**	P	**P**	**10 27 39.5**	**-0.6**
ABKAR				IAmb	IAmb	10 27 44.4	
	comp=Z,1.7nm,0.6s						
WB0	**Warramunga Arr**	**58.46**	**188**	P	**P**	**10 27 48.3**	**-0.3**
EUNU	**Eureka**	**58.61**	**9**	P	**P**	**10 27 48.9**	**-0.2**
EUNU				IAmb	IAmb	10 28 10.7	
	comp=Z,3.1nm,1.2s						
WR0	**Warramunga Arr**	**58.63**	**188**	P	**P**	**10 27 49.4**	**-0.4**
WB2	**Warramunga Arr**	**58.63**	**188**	P	**P**	**10 27 49.5**	**-0.3**
WRA	**Warramunga Arr**	**58.63**	**188**	P	**P**	**10 27 49.6**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=7.1,SNR=28						
WRA				pP	**pP**	**10 28 03.2**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=6.3,slow=7.2,SNR=5.6						
WRA	**Warramunga Arr**	**58.63**	**188**	P	**P**	**10 27 49.3**	**-0.5**
RES	**Resolute Bay**	**61.02**	**15**	P	**P**	**10 28 04.6**	**-0.9**
RES				IAmb	IAmb	10 28 13.7	
	comp=Z,1.5nm,1.0s						
YKA	**Yellowknife Ar**	**62.28**	**31**	P	**P**	**10 28 14.4**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=302,slow=6.8,SNR=7.4						
ASAR	**Alice Springs**	**62.36**	**188**	P	**P**	**10 28 14.9**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=13,slow=8.8,SNR=14						
ARCES	**ARCESS Array B**	**62.70**	**339**	P	**P**	**10 28 17.0**	**-0.1**
	comp=Z,4.6nm,1.0s,baz=63,slow=8.2,SNR=1.9						
FINES	**FINESS Array B**	**67.65**	**332**	P	**P**	**10 28 48.7**	**-0.4**

CDM	**Cerro de Muert**	**2.22**	**87**	*e*P	Pn	10 28 52.0	-0.2
PEZE	**Perez Zeledon,**	**2.31**	**91**	*e*P	Pn	10 28 52.5	-0.6
RIOS	**Rincon, Osa**	**2.58**	**107**	*e*P	Pn	10 28 56.6	-0.1
BRU2	**Volcan**	**3.34**	**101**	*e*P	Pn	10 29 08.3	+0.9

*KNET **23** 10:39:45.1±0.4, 42.2°21N×73.7°77E, h3km±8km, ml2.4, Error ellipse: s-maj=3.7km s-min=2.1km az=123.0*
*KRNET **23** 10:39:45.2±0.1, 42.2°20N×73.7°72E, h17km, mb3.5*
*SOME **23** 10:39:45.8, 42.2°23N×73.7°72E, h10km*
*NNC **23** 10:39:47.4±0.8, 42.2°33N×73.7°77E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=7.4km s-min=2.9km az=174.0*

ISC 23 10:39:45.5±0.9,**42°22N**±0.02×**73.75E**±0.02,**h5**km±7km, **n69**,σ1§**24**/123,**35C-24D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.10**	**204**	⇓*i*P	**Pg**	**10 39 47.7**	**-0.1**
AML	baz=95			⇓*i*S	**Sg**	**10 39 49.0**	**-0.4**
AML	**Almayashu**	**0.10**	**204**	⇓P	**Pg**	**10 39 47.5**	**-0.3**
AML	2μm,0.1s			⇑S	**Sg**	**10 39 49.1**	**-0.4**
EKS2	**Erkin-Say**	**0.44**	**3**	⇓P	**Pg**	**10 39 54.7**	**+0.6**
EKS2	91nm,0.2s,SNR=287			⇓S	**Sb**	**10 40 01.1**	**-1.8**
ARLS	**Aral**	**0.56**	**130**	⇓*i*P	**Pg**	**10 39 56.3**	**0.0**
ARLS	baz=27			⇓*i*S	**Sg**	**10 40 04.0**	**+0.4**
UCH	**Uchtor**	**0.57**	**89**	⇓*i*P	**Pg**	**10 39 56.6**	**+0.1**
UCH	baz=87			⇓*i*S	**Sg**	**10 40 04.8**	**+0.8**
UCH	**Uchtor**	**0.57**	**89**	P	**Pg**	**10 39 56.7**	**+0.1**
UCH	66nm,0.2s,SNR=212			⇑S	**Sg**	**10 40 04.8**	**+0.8**
MRKS	**Merke**	**0.65**	**324**	*e*P	**Pg**	**10 39 58.2**	**+0.1**
MRKS	196nm,0.3s baz=26			*e*S	**Sg**	**10 40 07.3**	**+0.7**
MRKS	**Merke**	**0.65**	**324**	*e*P	**Pg**	**10 39 58.1**	**+0.1**
MRKS	82nm,0.1s 334nm,0.2s			*e*S	**Sg**	**10 40 07.3**	**+0.7**
MRKS	**Merke**	**0.65**	**324**	P	**Pg**	**10 39 58.2**	**+0.1**
MRKS	82nm,0.1s 334nm,0.2s			S	**Sg**	**10 40 07.3**	**+0.7**
AAK	**Ala-Archa**	**0.69**	**53**	⇑*i*P	**Pg**	**10 39 59.1**	**+0.2**
AAK	baz=52			⇑*i*S	**Sg**	**10 40 08.5**	**+0.6**
AAK	**Ala-Archa**	**0.69**	**53**	P	**Pg**	**10 39 59.1**	**+0.2**
AAK	32nm,0.2s,SNR=62 55nm,0.2s			⇓S	**Sg**	**10 40 08.4**	**+0.6**
AAK	**Ala-Archa**	**0.69**	**53**	⇑P	**Pg**	**10 39 59.0**	**+0.2**
AAK	16nm,0.4s 19nm,0.3s			⇓S	**Sg**	**10 40 08.1**	**+0.2**
FRU1	**Bishkek**	**0.88**	**48**	⇓*i*P	**Pg**	**10 40 02.5**	**+0.1**
FRU1	baz=46 baz=46			⇓*i*S	**Sb**	**10 40 15.2**	**-0.2**
MNAS	**Manas**	**0.96**	**287**	⇑*i*P	**Pg**	**10 40 03.1**	**-0.9**
MNAS	baz=88 baz=88			⇑*i*S	**Sg**	**10 40 16.0**	**-0.4**
KBK	**Karagaybulak**	**0.99**	**63**	⇑*i*P	**Pg**	**10 40 04.4**	**-0.1**
KBK	baz=63 baz=63			⇑*i*S	**Sb**	**10 40 18.4**	**-0.3**
KBK	**Karagaybulak**	**0.99**	**63**	⇑P	**Pg**	**10 40 04.6**	**0.0**
KBK	18nm,0.1s,SNR=8.8 86nm,0.1s			⇑S	**Sn**	**10 40 18.8**	**-1.9**
ARSB	**Arslanbob**	**1.06**	**213**	⇑*i*P	**Pg**	**10 40 04.1**	**-1.8**
ARSB	baz=12 baz=12			⇑*i*S	**Sg**	**10 40 18.9**	**-0.8**
CHMS	**Chumysh**	**1.07**	**43**	⇑*i*P	**Pg**	**10 40 05.9**	**-0.3**
CHMS	baz=43 baz=43			⇑*i*S	**Sb**	**10 40 20.6**	**-0.4**
CHMS	**Chumysh**	**1.07**	**43**	⇑P	**Pb**	**10 40 06.2**	**-0.5**
CHMS	12nm,0.1s,SNR=24 67nm,0.2s			⇑S	**Sb**	**10 40 20.6**	**-0.4**
USP	**Ospenovka**	**1.18**	**28**	⇓*i*P	**Pb**	**10 40 07.8**	**-0.7**
USP	baz=28 baz=28			⇓*i*S	**Sn**	**10 40 24.2**	**-1.1**
USP	**Ospenovka**	**1.18**	**28**	⇓P	**Pb**	**10 40 08.2**	**-0.4**
USP	13nm,0.1s,SNR=41 69nm,0.2s			⇑S	**Sn**	**10 40 24.2**	**-1.1**
SGDS	**Sogindy**	**1.39**	**27**	P	**Pb**	**10 40 11.9**	**-0.2**
SGDS	13nm,0.2s 90nm,0.2s			S	**Sg**	**10 40 30.2**	**-0.1**
TKM2	**Tokmak 2**	**1.54**	**62**	⇑*i*P	**Pb**	**10 40 13.9**	**-0.6**
TKM2	baz=62 baz=62			⇑*i*S	**Sg**	**10 40 35.1**	**+0.2**
TKM2	**Tokmak 2**	**1.54**	**62**	⇑P	**Pb**	**10 40 14.0**	**-0.5**
TKM2	15nm,0.1s,SNR=23 6.4nm,0.3s			⇑S	**Sg**	**10 40 34.1**	**-0.7**
BOOM	**Boomskoye usch**	**1.65**	**80**	⇓*i*P	**Pb**	**10 40 16.1**	**-0.4**
BOOM	21nm,0.4s baz=79 baz=79			⇓*i*S	**Sg**	**10 40 38.4**	**-0.1**
DGS	**Degeres**	**1.81**	**55**	*e*P	**Pg**	**10 40 19.6**	**-0.6**
DGS	baz=55 baz=55			*e*S	**Sg**	**10 40 43.7**	**0.0**
DGS	**Degeres**	**1.81**	**55**	*e*P	**Pg**	**10 40 19.6**	**-0.6**
DGS	7.0nm,0.2s 43nm,0.3s			*e*S	**Sg**	**10 40 43.6**	**0.0**
DGS	**Degeres**	**1.81**	**55**	P	**Pg**	**10 40 19.6**	**-0.6**
DGS	7.0nm,0.2s 43nm,0.3s			S	**Sg**	**10 40 43.6**	**0.0**
KST	**Kastek**	**1.83**	**63**	*e*P	**Pg**	**10 40 20.0**	**-0.6**
KST	baz=62 baz=62			*e*S	**Sg**	**10 40 44.1**	**-0.2**
KST	**Kastek**	**1.83**	**63**	*e*P	**Pg**	**10 40 20.0**	**-0.6**
KST	9.5nm,0.2s 62nm,0.5s			*e*S	**Sg**	**10 40 44.1**	**-0.2**
KST	**Kastek**	**1.83**	**63**	P	**Pb**	**10 40 19.8**	**+0.2**
KST	13nm,0.3s 62nm,0.5s			S	**Sg**	**10 40 44.1**	**-0.2**
OHH	**Osh**	**1.84**	**203**	⇑*i*P	**Pn**	**10 40 18.8**	**+0.9**
OHH	baz=3.0 baz=3.0			⇑*i*S	**Sb**	**10 40 43.3**	**+0.2**
ULHL	**Ulahol**	**1.85**	**88**	⇓*i*P	**Pb**	**10 40 19.5**	**-0.5**
ULHL	baz=88 baz=88			⇓*i*S	**Sg**	**10 40 44.6**	**-0.5**
ULHL	**Ulahol**	**1.85**	**88**	⇓P	**Pb**	**10 40 19.4**	**-0.5**
	9.1nm,0.1s,SNR=27						
DZA	**Taraz**	**1.91**	**291**	*e*P	**Pb**	**10 40 19.8**	**-1.0**
DZA	baz=92 baz=92			*e*S	**Sn**	**10 40 43.7**	**+0.6**
DZA	**Taraz**	**1.91**	**291**	*e*P	**Pb**	**10 40 19.8**	**-1.0**
DZA	33nm,0.1s 272nm,0.1s			*e*S	**Sn**	**10 40 43.7**	**+0.6**
KRBS	**Karabastau**	**2.04**	**43**	*e*P	**Pb**	**10 40 23.6**	**+0.4**
KRBS	baz=43 baz=43			*e*S	**Sg**	**10 40 50.7**	**-0.5**
KRBS	**Karabastau**	**2.04**	**43**	*e*P	**Pb**	**10 40 23.6**	**+0.4**
KRBS	6.0nm,0.1s 54nm,0.2s			*e*S	**Sg**	**10 40 50.7**	**-0.5**
KRBS	**Karabastau**	**2.04**	**43**	Pg	**Pb**	**10 40 23.6**	**+0.4**
KRBS	6.0nm,0.1s 54nm,0.2s			Lg	Lg	10 40 50.7	
TRKS	**Terek-Say**	**2.07**	**251**	⇑*i*P	**Pn**	**10 40 22.1**	**+1.1**
TRKS	baz=50 baz=50			⇑*i*S	**Sb**	**10 40 49.0**	**-0.6**
MTBS	**Maitube**	**2.18**	**64**	*e*P	**Pb**	**10 40 26.0**	**+0.6**
MTBS	12nm,0.2s 49nm,0.4s			*e*S	**Sg**	**10 40 54.7**	**-0.8**
MTBS	**Maitube**	**2.18**	**64**	Pg	**Pb**	**10 40 26.0**	**+0.6**
MTBS	12nm,0.2s 49nm,0.4s			Lg	Lg	10 40 54.7	
SFK	**Sufi-Kurgan**	**2.21**	**185**	⇑*i*P	**Pn**	**10 40 23.3**	**+0.2**
SFK	baz=84 baz=84			⇑*i*S	**Sb**	**10 40 52.5**	**-1.4**
IZV	**Izvestkoviy**	**2.27**	**68**	*e*P	**Pb**	**10 40 27.5**	**+0.5**
IZV	59nm,0.4s 30nm,0.3s			*e*S	**Sg**	**10 40 57.3**	**-1.0**
IZV	**Izvestkoviy**	**2.27**	**68**	Pg	**Pb**	**10 40 27.5**	**+0.5**
IZV	59nm,0.4s 30nm,0.3s			Lg	Lg	10 40 57.3	
TNSS	**Tian-Shan**	**2.50**	**70**	*e*P	**Pg**	**10 40 32.1**	**-1.4**
TNSS	64nm,0.4s 22nm,0.6s			*e*S	**Sg**	**10 41 05.2**	**-0.6**
TNSS	**Tian-Shan**	**2.50**	**70**	Pg	**Pg**	**10 40 32.1**	**-1.4**
TNSS	64nm,0.4s 22nm,0.6s			Lg	Lg	10 41 05.2	
KK31	**Karatay Array**	**2.54**	**291**	⇑Pn	**Pb**	**10 40 31.2**	**-0.5**
KK31	1.2nm,0.2s,baz=106,slow=17,SNR=39 16nm,0.3s,baz=100,slow=27,SNR=4.0			⇑Lg	Lg	10 41 04.9	
KDJ	**Kajisay**	**2.55**	**91**	⇑*i*P	**Pn**	**10 40 29.4**	**+1.7**
KDJ	baz=90 baz=90			⇑*i*S	**Sb**	**10 41 01.7**	**-2.0**
MDOK	**Medeo**	**2.61**	**68**	*e*P	**Pb**	**10 40 33.4**	**+0.6**
MDOK	36nm,0.3s 47nm,0.5s			*e*S	**Sg**	**10 41 07.9**	**-1.4**
MDOK	**Medeo**	**2.61**	**68**	⇓Pn	**Pb**	**10 40 32.3**	**-0.5**
MDOK	14nm,0.3s 33nm,0.5s			⇑Lg	Lg	10 41 08.4	
MDOK	**Medeo**	**2.61**	**68**	Pg	**Pb**	**10 40 33.4**	**+0.6**
MDOK	36nm,0.3s 47nm,0.5s			Lg	Lg	10 41 07.9	
KTBS	**Karatobe**	**2.62**	**54**	*e*P	**Pb**	**10 40 33.2**	**+0.3**
KTBS	12nm,0.4s 115nm,0.5s			*e*S	**Sg**	**10 41 07.2**	**-2.4**
KTBS	**Karatobe**	**2.62**	**54**	Pg	**Pb**	**10 40 33.3**	**+0.3**
KTBS	12nm,0.4s 115nm,0.5s			Lg	Lg	10 41 07.3	
KOTS	**Kotyrbulak**	**2.68**	**67**	*e*P	**Pb**	**10 40 35.0**	**+0.9**
KOTS	52nm,0.4s 36nm,0.5s			*e*S	**Sg**	**10 41 10.5**	**-1.1**
KOTS	**Kotyrbulak**	**2.68**	**67**	Pg	**Pb**	**10 40 35.0**	**+0.9**
KOTS	52nm,0.4s 36nm,0.5s			Lg	Lg	10 41 10.5	
IUG	**Iuzhnay**	**2.76**	**270**	*e*P	**Pb**	**10 40 36.8**	**+1.4**
IUG	13nm,0.4s 88nm,0.6s			*e*S	**Sg**	**10 41 14.1**	**-0.2**
IUG	**Iuzhnay**	**2.76**	**270**	Pg	**Pb**	**10 40 36.8**	**+1.4**
IUG	778nm,0.4s 88nm,0.6s			Lg	Lg	10 41 13.4	
BTLS	**Baital**	**2.83**	**4**	*e*P	**Pb**	**10 40 37.0**	**+0.5**
BTLS	5.4nm,0.2s 4.7nm,0.3s			*e*S	**Sg**	**10 41 13.7**	**-2.7**
BTLS	**Baital**	**2.83**	**4**	Pg	**Pb**	**10 40 37.1**	**+0.5**
BTLS	5.4nm,0.2s 4.7nm,0.3s			Lg	Lg	10 41 13.7	
ANVS	**Anan'yevo**	**2.95**	**78**	⇓*i*P	**Pn**	**10 40 34.9**	**+1.7**
ANVS	baz=77 baz=77			⇓*i*S	**Sn**	**10 41 11.1**	**+2.0**
SATY	**Saty**	**3.54**	**75**	*e*P	**Pg**	**10 40 50.9**	**-2.4**
SATY	3.0nm,0.2s 16nm,0.3s			*e*S	**Sg**	**10 41 37.6**	**-1.5**
ARXS	**Arharly**	**3.59**	**55**	*e*P	**Pb**	**10 40 50.7**	**+1.2**
ARXS	6.9nm,0.3s 27nm,0.5s			*e*S	**Sg**	**10 41 37.1**	**-3.6**
ARXS	**Arharly**	**3.59**	**55**	Pg	**Pb**	**10 40 50.7**	**+1.2**
ARXS	6.9nm,0.3s 27nm,0.5s			Lg	Lg	10 41 37.1	
KPKS	**Kokpek**	**3.84**	**69**	*e*P	**Pb**	**10 40 55.8**	**+2.1**
KPKS	11nm,0.2s 23nm,0.4s			*e*S	**Sg**	**10 41 46.0**	**-2.8**
SHLS	**Shalkode**	**4.32**	**76**	*e*P	**Pg**	**10 41 10.2**	**+2.0**
SHLS	1.6nm,0.2s 6.2nm,0.3s			*e*S	**Sg**	**10 42 10.3**	**+6.2**
DJR	**Jarkent**	**4.89**	**62**	*e*P	**Pg**	**10 41 15.6**	**-3.7**
DJR	2.3nm,0.4s 6.3nm,0.5s			*e*S	**Sg**	**10 42 19.5**	**-3.1**
MK31	**Makanchi Array**	**7.63**	**50**	Pn	**Pn**	**10 41 39.6**	**+2.3**
MK31	0.3nm,0.5s,baz=232,slow=13,SNR=6.0 0.8nm,0.5s			⇑Lg	Lg	10 43 45.2	

IDC 23 10:45:44.4±46.0,**19.05S**×**177.27W**,**h520**km±373km, **mb3.3**/5,**mb1 3.5**/5,**mb1mx3.0**/36,**mbtmp4.3**/5,**MS2.5**/1, **Ms1 2.5**/1,**ms1mx2.3**/12,**Error ellipse: s-maj=350.3km s-min=97.9km az=69.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.34**	**47**	LR	LR	10 49 27.3	
	comp=Z,39nm,19.8s,baz=180,slow=30						
CTA	**Charters Tower**	**34.34**	**262**	P	P	10 51 47.8	+0.1
	1.5nm,0.3s,baz=90,slow=10.0,SNR=5.7						
STKA	**Stephens Creek**	**39.05**	**243**	P	P	10 52 25.9	-0.3
	0.7nm,0.3s,baz=63,slow=7.5,SNR=6.8						
WRA	**Warramunga Arr**	**45.50**	**260**	P	P	10 53 17.1	-0.1
	1.6nm,0.3s,baz=98,slow=7.7,SNR=61						
ASAR	**Alice Springs**	**45.53**	**255**	P	P	10 53 17.5	0.0
	2.4nm,0.6s,baz=86,slow=8.2,SNR=92						
ASAR				PcP	PcP	10 54 45.1	-0.3
	0.4nm,0.6s,baz=99,slow=4.2,SNR=5.8						
FITZ	**Fitzroy Crossi**	**53.91**	**261**	P	P	10 54 18.9	-0.3
	2.3nm,0.4s,baz=90,slow=10,SNR=12						

*DJA **23** 10:52:17.6±0.4, 2°N±5°×12°9E±°, h10km, M4.7/13, mb5.2/10, mB5.1/7, MLv4.7/13, Mw(mB)4.4/7*
*IDC **23** 10:52:18.7±2.1, 1.83N×128.77E, h45km±23km, mb4.0/17, mb1 4.2/19, mb1mx4.0/38, mbtmp4.3/19, ML4.4/2, MS3.4/9, Ms1 3.4/9, ms1mx3.1/36, Error ellipse: s-maj=18.5km s-min=12.1km az=74.0*
*NEIC **23** 10:52:20.1±2.2, 1.76N±0.07×128.69E±0.08, h56km±8km, mb4.6/31, Error ellipse: s-maj=12.1km s-min=9.9km az=52.0*

ISC 23 10:52:23.1±0.4,**1.70N**±0.05×**128.69E**±0.07,**h92**km,**n117**, σ1§**99**/101,**mb4.5**/51,**2C, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.61**	**235**	Pn	Pn	10 52 46.0	-4.3
TNTI	**Ternate**	**1.61**	**235**	P	Pn	10 52 46.1	-4.3
SWI	**Sorong**	**3.61**	**135**	P	**Pn**	**10 53 14.3**	**-2.7**
SWI				S	**Sn**	**10 53 54.7**	**-3.9**
SIJI	**Sorong**	**3.62**	**135**	P	**Pn**	**10 53 14.1**	**-3.0**
	26nm,0.3s,baz=318,slow=16,SNR=54						
SIJI				S	**Sn**	**10 53 55.0**	**-3.9**
	29nm,0.3s,baz=66,slow=22,SNR=24						
SIJI				LR	LR	10 54 54.0	
	comp=Z,822nm,20.3s,baz=275,slow=42						
SGSI	**Sangihe**	**3.73**	**302**	P	**Pn**	**10 53 13.9**	**-4.7**
SANI	**Sanana**	**4.60**	**216**	P	**Pn**	**10 53 29.9**	**-0.5**
KMSI	**Cibinong**	**4.84**	**257**	P	**Pn**	**10 53 31.3**	**-2.3**
NLAI	**Namlea**	**5.15**	**198**	P	**Pn**	**10 53 35.3**	**-2.6**
	0.6nm2μm115nm,0.5s						
DDMP	**Don Marcelino,**	**5.29**	**326**	*e*P	**Pn**	**10 53 36.3**	**-3.5**
MATI	**Mati**	**5.75**	**335**	*e*P	**Pn**	**10 53 43.2**	**-2.9**
GTOI	**Gorontalo**	**5.78**	**260**	P	**Pn**	**10 53 45.0**	**-1.4**
	0.3nm664nm92nm,0.7s						
FAKI	**Fak Fak**	**5.80**	**142**	Pn	**Pn**	**10 53 44.1**	**-2.6**
FAKI	**Fak Fak**	**5.80**	**142**	P	**Pn**	**10 53 44.4**	**-2.3**
	0.2nm610nm38nm,0.6s						
FAKI				S	**Sn**	**10 54 48.2**	**-3.7**
	0.2nm610nm38nm,0.6s						
SKMP	**Bagumbayan, Su**	**6.33**	**319**	*e*P	**Pn**	**10 53 49.6**	**-4.3**
SKMP				*e*S	**Sn**	**10 54 58.3**	**-6.5**
KCP	**Kidapawan**	**6.38**	**326**	⇑*e*P	**Pn**	**10 53 54.0**	**-0.7**
LUWI	**Luwuk**	**6.51**	**245**	Pn	**Pn**	**10 53 54.3**	**-2.1**
MRSI	**Marisa**	**6.86**	**260**	P	**Pn**	**10 53 57.8**	**-3.3**
	0.6nm2μm143nm,0.6s						
BUKP	**Musuan**	**7.13**	**330**	*e*P	**Pn**	**10 54 03.0**	**-1.9**
APSI	**Ampana**	**7.50**	**250**	P	**Pn**	**10 54 06.7**	**-3.2**
	0.5nm1μm103nm,0.6s						
TOLI2	**Tolitoli**	**7.93**	**266**	Pn	**Pn**	**10 54 12.8**	**-3.0**
BAKI	**Biak**	**7.95**	**111**	P	**Pn**	**10 54 16.3**	**+0.3**
	3μm268nm,0.8s						
PAGZ	**Pagadian**	**8.08**	**319**	*e*P	**Pn**	**10 54 14.0**	**-3.9**
GLSP	**General Luna,**	**8.43**	**342**	*e*P	Pn	10 54 15.8	-6.8
TTSI	**Tana Toraja**	**10.04**	**242**	P	**Pn**	**10 54 42.0**	**-2.5**
	76nm,0.8s						
BNSI	**Bone**	**10.50**	**235**	P	**Pn**	**10 54 50.1**	**-0.7**
	672nm63nm,0.7s						
SPSI	**Sidrap Palu**	**10.54**	**238**	P	**Pn**	**10 54 49.9**	**-1.5**
	916nm106nm,0.6s						
MYLDM	**Lahad Datu**	**10.75**	**289**	Pn	**Pn**	**10 54 53.4**	**-0.7**
KAPI	**Kappang**	**11.14**	**233**	P	**Pn**	**10 54 58.6**	**-0.9**
	3.6nm,0.3s,baz=356,slow=7.2,SNR=8.0						
KAPI	**Kappang**	**11.14**	**233**		**Pn**	**10 54 59.1**	**-0.4**
JAY	**Jayapura**	**12.72**	**109**	LR	LR	10 59 26.9	
	comp=Z,196nm,21.9s,baz=344,slow=34						
SBUM	**Sibu**	**16.48**	**273**	Pn	**Pn**	**10 56 07.0**	**-1.9**
SBUM				IAmb	IAmb	10 56 13.5	
	comp=Z,31nm,1.2s						
KNRA	**Kununurra**	**17.26**	**180**	P	**Pn**	**10 56 17.2**	**-1.3**
KNRA				IAmb	IAmb	10 56 33.3	
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.90**	**189**	P	**P**	**10 56 48.0**	**+0.6**
	comp=Z,4.9nm,0.9s,baz=21,slow=8.3,SNR=9.8						
FITZ	**Fitzroy Crossi**	**19.90**	**189**	P	**P**	**10 56 48.3**	**+0.9**
WB0	**Warramunga Arr**	**22.05**	**166**	P	**P**	**10 57 11.4**	**+0.9**
WB0				IAmb	IAmb	10 57 16.8	
	comp=Z,23nm,1.0s						
WRAB	**Tennant Creek**	**22.20**	**166**	P	**P**	**10 57 13.5**	**+1.4**
WRAB				IAmb	IAmb	10 57 22.1	
	comp=Z,23nm,0.9s						
WRA	**Warramunga Arr**	**22.20**	**166**	P	**P**	**10 57 11.2**	**-0.9**
	comp=Z,1.4nm,0.2s,baz=343,slow=11,SNR=5.8						
WRA	**Warramunga Arr**	**22.20**	**166**	IAmb	IAmb	10 57 19.5	
	comp=Z,1.7nm,1.2s						
WB2	**Warramunga Arr**	**22.21**	**166**	P	**P**	**10 57 13.1**	**+0.9**
WB2				IAmb	IAmb	10 57 22.1	
	comp=Z,23nm,0.9s						
WR0	**Warramunga Arr**	**22.27**	**165**	P	**P**	**10 57 13.8**	**+0.9**
WR0				IAmb	IAmb	10 57 38.4	
	comp=Z,33nm,1.3s						
PSA00	**Pilbara Seismi**	**24.69**	**200**	P	**P**	**10 57 37.3**	**+1.6**
MYKOM	**Kota Tinggi**	**24.83**	**271**	P	**P**	**10 57 38.2**	**+1.1**
MYKOM				IAmb	IAmb	10 57 38.9	
	comp=Z,15nm,0.7s						
QIZ	**Qiongzhong**	**25.25**	**314**	P	**P**	**10 57 40.8**	**-0.1**
QIZ				S	**S**	**11 02 02.5**	**+2.4**
QIZ				pmax	pmax		
	comp=Z,12nm,0.9s						
QIZ				LR	LR		
	comp=N,150nm,2.8s						
QIZ				LR	LR		
	comp=E,240nm,3.1s						
QIZ				LR	LR		
	comp=Z,140nm,4.2s						
AS31	**Alice Springs**	**25.71**	**169**	P	**P**	**10 57 48.9**	**+3.9**
ASAR	**Alice Springs**	**25.71**	**169**	P	**P**	**10 57 46.5**	**+1.5**
	comp=Z,1.4nm,0.5s,baz=349,slow=10,SNR=33						
ASAR	**Alice Springs**	**25.71**	**169**	P	**P**	**10 57 47.2**	**+2.2**
RPSI	**Rantau Prapat**	**29.76**	**272**	P	**P**	**10 58 19.4**	**-1.9**
RPSI				IAmb	IAmb	10 58 39.0	
	comp=Z,11nm,1.0s						
PSI	**Prapat**	**29.77**	**273**	P	**P**	**10 58 21.4**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=178,slow=3.3,SNR=4.3						
CHAI	**Chaiyaphum**	**29.87**	**300**	P	**P**	**10 58 22.0**	**-0.2**
	comp=Z,28nm,0.8s						
NONG	**Nongkai**	**29.89**	**305**	P	**P**	**10 58 25.7**	**+3.3**
	comp=Z,22nm,0.9s						
GSI	**Gunungsitoli**	**31.11**	**270**	P	**P**	**10 58 32.6**	**-0.6**
NJ2	**Nanjing**	**31.59**	**344**	*e*P	**P**	**10 58 39.1**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SUKH	**Sukhothai**	**32.58**	**301**	P	P	10 58 52.0	+6.0
	comp=Z,10.0nm,0.9s						
CM04	**Chiang Mai Arr**	**33.54**	**302**	P	**P**	**10 58 59.0**	**+4.6**
	comp=Z,6.7nm,1.0s						
CM01	**Chiang Mai Arr**	**33.56**	**302**	P	P	10 59 03.9	+9.3
	comp=Z,349nmcomp=Z,5.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**33.59**	**302**	P	**P**	**10 58 55.6**	**+0.8**
	comp=Z,4.0nm,0.9s,baz=116,slow=6.8,SNR=15						
CMAR	**Chiang Mai Arr**	**33.59**	**302**	P	**P**	**10 58 55.1**	**+0.2**
CM15	**Chiang Mai Arr**	**33.61**	**302**	P	P	10 59 01.4	+6.4
	comp=Z,4.1nm,0.7s						
CM13	**Chiang Mai Arr**	**33.61**	**302**	P	P	10 59 00.0	+5.0
	comp=Z,100nmcomp=Z,6.1nm,1.0s						
CMMT	**Chiang Mai**	**33.75**	**302**	P	**P**	**10 58 56.6**	**+0.4**
	comp=Z,4.8nm,0.9s						
CHTO	**Chiang Mai**	**33.75**	**302**	P	**P**	**10 58 55.0**	**-1.3**
CHTO				IAmb	IAmb	10 59 02.3	
	comp=Z,7.0nm,0.8s						
CM32	**Chiang Mai Arr**	**33.76**	**302**	P	P	10 59 02.0	+5.7
JWT	**Wachi**	**34.00**	**10**	P	**P**	**10 58 58.0**	**-0.1**
JWT				IAmb	IAmb	10 58 58.6	
	comp=Z,4.6nm,0.6s						
KMI	**Kunming**	**34.20**	**315**	⇑P	**P**	**10 59 01.4**	**+1.1**
KMI				pmax	pmax		
	comp=Z,21nm,1.1s						
STKA	**Stephens Creek**	**35.56**	**161**	P	**P**	**10 59 13.3**	**+1.6**
	comp=Z,2.2nm,0.6s,baz=333,slow=9.0,SNR=7.6						
STKA	**Stephens Creek**	**35.56**	**161**	P	**P**	**10 59 12.9**	**+1.2**
KSRS	**Korea Array**	**35.59**	**359**	P	**P**	**10 59 10.6**	**-1.2**
	comp=Z,1.6nm,0.4s,baz=176,slow=9.6,SNR=8.8						
MAJO	**Matsushiro**	**35.77**	**13**	P	**P**	**10 59 12.4**	**-1.0**
MAJO				IAmb	IAmb	10 59 18.7	
	comp=Z,7.0nm,0.8s						
MAT	**Matsushiro**	**35.77**	**13**	P	**P**	**10 59 11.7**	**-1.7**
MJAR	**Matsushiro Arr**	**35.77**	**13**	P	**P**	**10 59 11.6**	**-1.8**
	comp=Z,2.9nm,0.6s,baz=187,slow=9.1,SNR=9.7						
NWAO	**Narrogin (SRO)**	**36.10**	**196**	P	**P**	**10 59 16.8**	**+0.5**
	comp=Z,9.5nm,0.9s,baz=30,slow=10,SNR=2.2						
H11S3	**WAKE ISLAND Hy**	**40.82**	**63**	T	T	11 43 51.0	
	SNR=14						
H11S2	**WAKE ISLAND Hy**	**40.83**	**63**	T	T	11 43 18.9	
	baz=251,slow=74,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**40.83**	**63**	T	T	11 43 29.2	
	baz=79,slow=74,SNR=7.7						
LZH	**Lanzhou**	**41.24**	**329**	*e*P	**P**	**11 00 01.4**	**+2.0**
LZH				pP	pP	11 00 19.3	-1.9
LZH				sP	sP	11 00 28.8	-2.9
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
H11N1	**WAKE ISLAND Hy**	**41.42**	**62**	T	T	11 44 24.9	
	baz=248,slow=75,SNR=15						
H11N2	**WAKE ISLAND Hy**	**41.43**	**62**	T	T	11 44 26.2	
	baz=248,slow=75,SNR=11						
H11N3	**WAKE ISLAND Hy**	**41.44**	**62**	T	T	11 44 30.2	
	baz=248

GTA					sP	sP	11 01 11.3	+2.5
GTA					pmax	pmax		
	comp=Z,4.0nm,1.1s							
GTA					pmax	pmax		
	comp=Z,48nm,5.1s							
GTA					LR	LR		
	comp=N,91nm,14.9s							
GTA					LR	LR		
	comp=E,93nm,14.9s							
GTA					LR	LR		
	comp=Z,75nm,17.4s							
TAPN	**Taplejung**	**46.80**	**307**	*eP*	**P**		**11 00 44.9**	**+0.7**
ODAN	**Odare**	**46.84**	**306**	*eP*	**P**		**11 00 45.1**	**+0.7**
	comp=Z,62nm,0.7s							
RAMN	**Ramite**	**47.52**	**306**	*eP*	**P**		**11 00 50.6**	**+0.9**
	comp=Z,55nm,0.8s							
JIRN	**Jiri**	**48.15**	**306**	*eP*	**P**		**11 00 55.1**	**+0.4**
	comp=Z,27nm,0.7s							
GUN	**Gumba**	**48.50**	**307**	*eP*	**P**		**11 00 58.0**	**+0.6**
	comp=Z,29nm,0.6s							
PKI	**Pulchoki**	**48.74**	**306**	*eP*	**P**		**11 00 59.3**	**+0.1**
	comp=Z,5.4nm,0.4s							
DMN	**Daman**	**49.00**	**306**	*eP*	**P**		**11 01 01.2**	**+0.1**
	comp=Z,33nm,0.8s							
ULN	**Ulaanbaatar**	**49.66**	**341**	P	**P**		**11 01 06.1**	**+0.5**
ULN				IAmb	IAmb		11 01 08.1	
	comp=Z,4.1nm,0.8s							
SONM	**Songino Array**	**49.85**	**340**	P	**P**		**11 01 06.7**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=152,slow=8.2,SNR=8.0							
SONM				LR	LR		11 23 32.9	
	comp=Z,29nm,20.2s,baz=161,slow=38							
SONM	**Songino Array**	**49.85**	**340**	P	**P**		**11 01 07.3**	**+0.3**
KOLN	**Koldanda**	**50.29**	**305**	*eP*	**P**		**11 01 11.6**	**+0.7**
	comp=Z,30nm,0.6s							
WMQ	**Urumqi**	**55.51**	**325**	*eP*	**P**		**11 01 50.4**	**+1.6**
WMQ				pP	pP		11 02 06.8	-4.5
WMQ				sP	sP		11 02 14.5	-7.0
WMQ				pmax	pmax			
	comp=Z,25nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,200nm,4.9s							
PETK	**Petropavlovsk-**	**56.60**	**20**	P	**P**		**11 01 56.3**	**0.0**
	comp=Z,4.5nm,0.9s,baz=202,slow=4.9,SNR=4.4							
MA2	**Magadan**	**60.22**	**13**	LR	LR		11 24 58.4	
	comp=Z,33nm,20.5s,baz=176,slow=33							
MK31	**Makanchi Array**	**60.34**	**325**	P	**P**		**11 02 22.6**	**+0.2**
MK31				IAmb	IAmb		11 02 23.5	
	comp=Z,5.2nm,0.8s							
MKAR	**Makanchi Array**	**60.34**	**325**	P	**P**		**11 02 22.6**	**+0.1**
	comp=Z,4.3nm,0.4s,baz=118,slow=8.3,SNR=27							
MKAR				LR	LR		11 30 41.8	
	comp=Z,28nm,18.3s,baz=112,slow=38							
MAKZ	**Makanchi**	**60.52**	**325**	P	**P**		**11 02 23.7**	**0.0**
AAK	**Ala-Archa**	**63.17**	**318**	P	**P**		**11 02 42.7**	**+0.9**
AAK				IAmb	IAmb		11 02 53.5	
	comp=Z,4.7nm,1.1s							
ZALV	**Zalesovo Beam**	**63.28**	**333**	P	**P**		**11 02 41.2**	**-0.8**
	comp=Z,2.3nm,0.7s,baz=108,slow=4.8,SNR=8.0							
ZALV	**Zalesovo Beam**	**63.28**	**333**	P	**P**		**11 02 40.9**	**-1.1**
GAR	**Garm**	**64.73**	**313**	P	**P**		**11 02 51.9**	**-0.1**
KKAR	**Karatay Array**	**66.05**	**317**	P	**P**		**11 03 00.1**	**-0.2**
TIXI	**Tiksi**	**69.85**	**0**	LR	LR		11 35 51.3	
	comp=Z,20nm,18.6s,baz=222,slow=38							
BRVK	**Borovoye**	**70.16**	**327**	P	**P**		**11 03 25.4**	**-0.3**
BRVK				IAmb	IAmb		11 03 28.0	
	comp=Z,7.7nm,0.9s							
NRIK	**Noril'sk**	**72.86**	**346**	LR	LR		11 39 16.2	
	comp=Z,15nm,20.4s,baz=298,slow=39							
ABKAR	**Akbulak array**	**74.96**	**321**	P	**P**		**11 03 53.6**	**-0.7**
ABKAR	**Akbulak array**	**74.96**	**321**	P	**P**		**11 03 53.7**	**-0.6**
VNDA	**Vanda**	**81.18**	**173**	P	**P**		**11 04 30.3**	**+2.1**
	comp=Z,1.8nm,0.8s,baz=316,slow=4.7,SNR=7.6							
VNDA	**Vanda**	**81.18**	**173**	IAmb	IAmb		11 04 31.0	
	comp=Z,2.2nm,0.9s							
KDAK	**Kodiak Island**	**82.56**	**32**	LR	LR		11 36 48.4	
	comp=Z,36nm,19.4s,baz=305,slow=32							
IMAR	**Indian Mountai**	**83.40**	**24**	P	**P**		**11 04 41.9**	**+2.0**
ILAR	**Eielson Array**	**86.09**	**25**	P	**P**		**11 04 54.9**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=237,slow=4.8,SNR=4.4							
FINES	**FINESS Array B**	**94.54**	**332**	P	**P**		**11 05 33.2**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=231,slow=8.8,SNR=1.3							
FINES				LR	LR		11 55 11.6	
	comp=Z,31nm,19.5s,baz=28,slow=40							
TORD	**Torodi Ar. Bea**	**125.40**	**287**	PKP	**PKPdf**		**11 11 15.1**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=85,slow=4.0,SNR=3.0							

*IDC **23** 10:55:38.2±0.9, 50°.36S×113°.99E, h0km, mb4.3/8, mb1 4.4/8, mb1mx4.2/22, mbtmp4.3/8, MS3.5/8, Ms1 3.5/8, ms1mx3.2/29, Error ellipse: s-maj=41.2km s-min=16.6km az=109.0*

*NEIC **23** 10:55:39.6±1.2, 50°.4S±0°.1×113°.8E±0°.4, h10km±1km, mb4.5/17, Error ellipse: s-maj=38.8km s-min=17.6km az=280.0*

ISC 23 10:55:39.8±0.8, 50°.38S±0°.1×113°.9E±0°.2, h10km, n41, σ0 58/31, mb4.4/14, MS3.5/8, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H01W2	**Cape Leeuwin H**	**15.47**	**1**	T		T	11 14 58.2	
	baz=180,slow=74,SNR=365							
H01W1	**Cape Leeuwin H**	**15.48**	**1**	T		T	11 15 09.7	
	baz=180,slow=74,SNR=308							
H01W3	**Cape Leeuwin H**	**15.49**	**1**	T		T	11 15 03.2	
	baz=180,slow=74,SNR=247							
CASY	**Casey**	**16.04**	**185**	Pn		**Pn**	**10 59 24.8**	**-0.4**
MORW	**Morawa**	**21.34**	**5**	P		**P**	**11 00 27.1**	**+0.2**
MORW				IAmb		IAmb	11 00 29.3	
	comp=Z,7.8nm,0.9s							
FORT	**Forrest**	**22.25**	**34**	P		**P**	**11 00 37.0**	**+0.2**
FORT				IAmb		IAmb	11 00 40.0	
	comp=Z,22nm,0.8s							
BBOO	**Buckleboo**	**23.98**	**51**	P		**P**	**11 00 56.0**	**+1.6**
BBOO				IAmb		IAmb	11 01 18.7	
	comp=Z,26nm,1.4s							
STKA	**Stephens Creek**	**27.61**	**58**	P		**P**	**11 01 26.8**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=229,slow=5.2,SNR=3.1							
STKA	**Stephens Creek**	**27.61**	**58**	IAmb		IAmb	11 01 32.1	
	comp=Z,1.2nm,1.1s							
ASAR	**Alice Springs**	**30.87**	**38**	P		**P**	**11 01 55.9**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=208,slow=8.2,SNR=34							
AS31	**Alice Springs**	**30.87**	**38**	P		**P**	**11 01 55.9**	**-0.4**
AS31				IAmb		IAmb	11 01 57.1	
	comp=Z,2.4nm,0.8s							
VNDA	**Vanda**	**32.53**	**163**	P		**P**	**11 02 10.4**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=298,slow=8.2,SNR=5.9							
VNDA				LR		LR	11 14 42.0	
	comp=Z,84nm,19.3s,baz=318,slow=35							
VNDA	**Vanda**	**32.53**	**163**	P		**P**	**11 02 11.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**33.54**	**20**	P		**P**	**11 02 20.5**	**+0.8**
WRA	**Warramunga Arr**	**34.41**	**35**	P		**P**	**11 02 26.9**	**-0.4**
	comp=Z,8.3nm,0.8s,baz=204,slow=8.8,SNR=24							
WRA	**Warramunga Arr**	**34.41**	**35**	P		**P**	**11 02 26.9**	**-0.4**
WB2	**Warramunga Arr**	**34.42**	**36**	P		**P**	**11 02 26.8**	**-0.5**
WB2				IAmb		IAmb	11 02 28.0	
	comp=Z,6.5nm,0.8s							
WRAB	**Tennant Creek**	**34.43**	**36**	P		**P**	**11 02 27.0**	**-0.3**
WR0	**Warramunga Arr**	**34.48**	**36**	P		**P**	**11 02 26.9**	**-0.9**
WB0	**Warramunga Arr**	**34.60**	**35**	P		**P**	**11 02 28.3**	**-0.5**
CTA	**Charters Tower**	**39.58**	**52**	P		**P**	**11 03 10.2**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=218,slow=2.9,SNR=3.6							
CTAO	**Charters Tower**	**39.58**	**52**	P		**P**	**11 03 11.6**	**+0.5**
CTAO				IAmb		IAmb	11 03 11.8	
	comp=Z,8.4nm,1.1s							
QSPA	**South Pole Qui**	**39.75**	**180**	P		**P**	**11 03 12.2**	**-0.2**
	comp=Z,4.7nm,0.7s,baz=324,slow=1.2,SNR=26							
QSPA	**South Pole Qui**	**39.75**	**180**	P		**P**	**11 03 12.7**	**+0.4**
QSPA				IAmb		IAmb	11 03 13.3	
	comp=Z,6.6nm,0.8s							
BATI	**Baumata**	**40.85**	**15**	LR		LR	11 19 55.3	
	comp=Z,69nm,18.5s,baz=214,slow=36							
KAPI	**Kappang**	**45.47**	**8**	LR		LR	11 23 41.5	
	comp=Z,31nm,18.2s,baz=202,slow=37							
URZ	**Urewera**	**45.49**	**100**	LR		LR	11 20 01.5	
	comp=Z,174nm,18.3s,baz=31,slow=32							
PMG	**Port Moresby**	**49.22**	**46**	LR		LR	11 23 23.2	
	comp=Z,44nm,21.0s,baz=215,slow=34							
FAKI	**Fak Fak**	**49.77**	**24**	P		**P**	**11 04 32.8**	**+0.3**
FAKI				IAmb		IAmb	11 04 57.1	
	comp=Z,9.0nm,1.0s							
SNAA	**Sanae**	**50.40**	**202**	P		**P**	**11 04 36.9**	**+0.2**
SNAA	**Sanae**	**50.40**	**202**	P		**P**	**11 04 36.9**	**+0.2**
	comp=Z,3.2nm,0.8s,baz=144,slow=14,SNR=11							
SNAA	**Sanae**	**50.40**	**202**	P		**P**	**11 04 36.6**	**-0.1**
SNAA				IAmb		IAmb	11 04 39.4	
	comp=Z,7.5nm,1.0s							
VNA2	**Neumayer--Watz**	**51.97**	**201**	P		**P**	**11 04 48.7**	**+0.2**
	baz=110,slow=6.5							
VNA3	**Neumayer Olymp**	**52.25**	**200**	P		**P**	**11 04 49.9**	**-0.6**
VNA1	**Neumayer--Stat**	**52.37**	**201**	P		**P**	**11 04 51.7**	**+0.4**
PSI	**Prapat**	**54.52**	**341**	LR		LR	11 23 02.0	
	comp=Z,65nm,21.4s,baz=235,slow=30							
BOSA	**Boshof**	**67.73**	**252**	LR		LR	11 30 44.3	
	comp=Z,26nm,18.5s,baz=192,slow=31							
CMAR	**Chiang Mai Arr**	**69.80**	**345**	P		**P**	**11 06 50.0**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=186,slow=5.7,SNR=6.5							
CMAR				LR		LR	11 37 08.3	
	comp=Z,12nm,18.3s,baz=180,slow=36							
TXAR	**Lajitas Array**	**144.82**	**112**	PKP		**PKPdf**	**11 15 16.6**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=197,slow=4.5,SNR=10							
PDAR	**Pinedale Array**	**149.52**	**87**	PKPbc		**PKPbc**	**11 15 28.8**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=232,slow=4.9,SNR=3.7							
YKA	**Yellowknife Ar**	**151.31**	**46**	PKPbc		**PKiKP**	**11 15 32.1**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=277,slow=1.7,SNR=20							

WEL 23 11:01:54.0, 41°S±2°×17°E±°, h25km±4km, M2.8/41, ML3.1/40, MLv2.8/41, Error ellipse: s-maj=0.0km s-min=0.0km az=81.6, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ANWZ	**Angora Road**	**0.26**	**317**	P		Pb	11 02 00.4	0.0
BFZ	**Birch Farm**	**0.36**	**265**	P		Pn	11 02 03.1	-0.5
PRHZ	**Porangahau**	**0.39**	**351**	P		Pb	11 02 02.8	+0.5
CPWZ	**Castlepoint**	**0.47**	**236**	P		Pn	11 02 07.3	+2.2
DVHZ	**Dannevirke**	**0.55**	**310**	P		Pb	11 02 03.0	-2.0
PRWZ	**Pori Road**	**0.57**	**279**	P		Pb	11 02 05.1	-0.3
WPHZ	**Waipukurau**	**0.62**	**340**	P		Pb	11 02 05.4	-0.8
PXZ	**Pawanui**	**0.63**	**11**	P		Pn	11 02 07.4	+0.1
TIWZ	**Tintock**	**0.64**	**259**	P		Pn	11 02 07.5	0.0
POWZ	**Post Office Ro**	**0.77**	**289**	P		Pb	11 02 07.4	-1.2
TMWZ	**Te Maipa**	**0.77**	**234**	P		Pn	11 02 10.5	+1.1
TSZ	**Takapari Road**	**0.82**	**316**	P		Pb	11 02 07.6	-2.1
PNHZ	**Pukenui**	**0.83**	**332**	P		Pb	11 02 08.2	-1.6
MRZ	**Mangatainoka R**	**0.86**	**269**	P		Pb	11 02 09.6	-0.7
KAHZ	**Kahuranaki**	**0.86**	**8**	P		Pn	11 02 10.7	+0.1
HOWZ	**Holdsworth Sta**	**0.94**	**254**	P		Pb	11 02 11.6	-0.1
KRHZ	**Kereru**	**1.04**	**345**	P		Pn	11 02 11.9	-1.1
MTW	**Mount Morrison**	**1.05**	**241**	P		Pb	11 02 13.4	0.0
TRWZ	**Traveller**	**1.08**	**226**	P		Pb	11 02 14.4	+0.5
OHWZ	**Ohakea**	**1.16**	**292**	P		Pn	11 02 14.3	-0.3
OGWZ	**Otaki Gorge**	**1.18**	**261**	P		Pn	11 02 14.6	-0.4
MCHZ	**McNeill Hill**	**1.21**	**359**	P		Pn	11 02 15.2	0.0
PAWZ	**Paruwai Farm**	**1.22**	**233**	P		Pb	11 02 16.1	-0.2
KWHZ	**Kaweka Forest**	**1.25**	**350**	P		Pn	11 02 15.2	-0.7
BHHZ	**Black Hill Sta**	**1.26**	**337**	P		Pn	11 02 15.0	-1.2
CAW	**Cannon Point**	**1.33**	**249**	P		Pn	11 02 16.9	-0.1
MSWZ	**Moikau Station**	**1.34**	**235**	P		Pn	11 02 17.5	+0.3
KIW	**Kapiti Island**	**1.39**	**261**	P		Pn	11 02 17.4	-0.3
PLWZ	**Palliser**	**1.43**	**230**	P		Pn	11 02 18.6	+0.2
MOVZ	**Moawhango**	**1.45**	**329**	P		Pn	11 02 17.9	-0.7
BKZ	**Black Stump Fm**	**1.49**	**353**	P		Pn	11 02 18.5	-0.8
BKZ	**Black Stump Fm**	**1.49**	**353**	P		Pn	11 02 19.0	-0.3
NMHZ	**Naumai**	**1.55**	**3**	P		Pn	11 02 20.4	+0.3
WNVZ	**Wahianoa**	**1.58**	**327**	P		Pn	11 02 20.3	-0.2
MTVZ	**Mangateitei**	**1.58**	**323**	P		Pn	11 02 20.6	0.0
BHW	**Baring Head**	**1.58**	**241**	P		Pn	11 02 20.4	-0.1
WAZ	**Wanganui**	**1.60**	**304**	P		Pn	11 02 21.1	+0.4
TUVZ	**Tukino**	**1.60**	**329**	P		Pn	11 02 21.0	+0.1
SNVZ	**South Ngauruho**	**1.68**	**330**	P		Pn	11 02 21.8	-0.2
OTVZ	**Oturere**	**1.69**	**331**	P		Pn	11 02 22.0	-0.1
ETVZ	**East Tongariro**	**1.70**	**333**	P		Pn	11 02 22.4	+0.3
NGZ	**Ngauruhoe**	**1.70**	**330**	P		Pn	11 02 22.6	+0.3
PKVZ	**Pokaka**	**1.72**	**322**	P		Pn	11 02 22.8	+0.4
TMVZ	**Te Maari**	**1.72**	**333**	P		Pn	11 02 22.6	+0.2
NNVZ	**North Ngauruho**	**1.74**	**331**	P		Pn	11 02 22.8	+0.1
NTVZ	**North Tongarir**	**1.74**	**332**	P		Pn	11 02 22.8	0.0
KRVZ	**Karewarewa**	**1.76**	**332**	P		Pn	11 02 24.1	+1.1
WTVZ	**West Tongariro**	**1.76**	**330**	P		Pn	11 02 23.6	+0.6
MTHZ	**Maungataniwha**	**1.80**	**3**	P		Pn	11 02 23.2	-0.3
HATZ	**Hinemaiaia**	**1.82**	**345**	P		Pn	11 02 23.6	-0.2
KATZ	**Kakaramea**	**1.85**	**335**	P		Pb	11 02 25.8	-1.4
RATZ	**Rangitukua**	**1.92**	**338**	P		Pb	11 02 30.4	+2.0
TCW	**Tory Channel**	**1.93**	**252**	P		Pn	11 02 24.7	-0.5
RTZ	**Ruatahuna**	**2.04**	**6**	P		Pn	11 02 26.9	0.0
DUWZ	**D'Urville Isla**	**2.13**	**265**	P		Pn	11 02 28.3	+0.3
VRZ	**Vera Road**	**2.14**	**315**	P		Pn	11 02 29.5	+1.4
MWZ	**Matawai**	**2.40**	**16**	P		Pn	11 02 31.2	-0.5
URZ	**Urewera**	**2.41**	**7**	P		Pn	11 02 30.8	-1.0
NEZ	**North Egmont**	**2.44**	**304**	P		Pn	11 02 34.6	+2.3
PKE	**Pukeiti**	**2.55**	**304**	P		Pn	11 02 36.2	+2.4
HIZ	**Hauiti**	**2.57**	**326**	P		Pb	11 02 37.9	-1.5
NNZ	**Nelson**	**2.59**	**256**	P		Pn	11 02 34.1	-0.2
KHZ	**Kahutara**	**2.96**	**232**	P		Pn	11 02 38.7	-0.7
THZ	**Tophouse**	**3.08**	**248**	P		Pn	11 02 40.8	-0.3
QRZ	**Quartz Range**	**3.18**	**266**	P		Pn	11 02 44.8	+2.3

*NOU **23** 11:14:00.9, 31°.12S×175°.82W, h12km, mb5.0, Kermadec Islands Region*

*NEIC **23** 11:14:13.5±1.6, 30°.94S±0°.07×178°.1W±0°.1, h10km±1km, mb4.7/37, Error ellipse: s-maj=21.0km s-min=10.5km az=103.0*

*IDC **23** 11:14:17.6±2.8, 30°.84S×178°.01W, h36km±21km, mb4.4/13, mb1 4.5/15, mb1mx4.2/48, mbtmp4.6/15, ML4.9/2, MS3.7/15, Ms1 3.7/15, ms1mx3.6/24, Error ellipse: s-maj=19.7km s-min=16.6km az=138.0*

ISC 23 11:14:18.1±0.4, 30°.86S±0°.05×178°.09W±0°.09, h46km, n118, σ1 8°80/97, mb4.8/32, MS3.8/15, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**1.61**	**5**	Pn		**Pn**	**11 14 41.9**	**-2.2**
	525nm,0.3s,baz=48,slow=19,SNR=12							
RAO				Sn		**Sn**	**11 14 58.0**	**-5.6**
	4μm,0.3s,baz=80,slow=18,SNR=14							
RAO	**Raoul Island**	**1.61**	**5**			**Pn**	**11 14 41.3**	**-2.8**
RAO	**Raoul Island**	**1.61**	**5**	P		**Pn**	**11 14 43.4**	**-0.7**
URZ	**Urewera**	**8.38**	**207**	Pn		**Pn**	**11 16 13.1**	**-3.8**
	0.8nm,0.3s,baz=123,slow=23,SNR=11							
URZ				Sn		**Sn**	**11 17 47.9**	**-2.2**
	2.8nm,0.3s,baz=165,slow=20,SNR=3.7							
URZ	**Urewera**	**8.38**	**207**	Pn		**Pn**	**11 16 14.0**	**-2.9**
BKZ	**Black Stump Fm**	**9.40**	**207**	Pn		**Pn**	**11 16 28.0**	**-3.1**
BFZ	**Birch Farm**	**10.82**	**204**	Pn		**Pn**	**11 16 46.8**	**-3.7**
SNZO	**South Karori**	**11.94**	**207**	Pn		Pn	11 16 59.0	-6.7
TUWZ	**Tuamarina**	**12.35**	**209**	Pn		**Pn**	**11 17 08.9**	**-2.4**
NNZ	**Nelson**	**12.42**	**211**	Pn		**Pn**	**11 17 11.6**	**-0.6**
THZ	**Tophouse**	**13.07**	**211**	Pn		**Pn**	**11 17 17.6**	**-3.5**
KHZ	**Kahutara**	**13.34**	**208**	Pn		**Pn**	**11 17 20.9**	**-3.9**
MSVF	**Nonsavu**	**13.53**	**344**	Pn		**Pn**	**11 17 27.0**	**-0.5**
	0.6nm,0.3s,baz=103,slow=18,SNR=2.9							
MSVF	**Nonsavu**	**13.53**	**344**	Pn		**Pn**	**11 17 26.8**	**-0.8**
LTZ	**Lake Taylor**	**14.17**	**210**	Pn		**Pn**	**11 17 32.5**	**-3.6**
OXZ	**Oxford**	**14.71**	**210**	Pn		Pn	11 17 38.5	-4.8
MQZ	**McQueen's Vall**	**14.78**	**207**	Pn		**Pn**	**11 17 41.2**	**-2.9**
RPZ	**Rata Peaks**	**15.45**	**211**	Pn		**Pn**	**11 17 53.3**	**+0.4**
	1.2nm,0.3s,baz=235,slow=3.9,SNR=5.7							
RPZ				LR		LR	11 24 19.5	
	comp=Z,135nm,20.5s,baz=34,slow=39							
DZM	**Mont Dzumac**	**16.36**	**299**	*eP*		**Pn**	**11 18 03.8**	**-1.1**
	79nm,1.4s							
DZM				*e*LR		LR	11 21 48.0	
	comp=Z,1μm,24.6s							
DZM	**Mont Dzumac**	**16.36**	**299**	Pn		**P**	**11 18 08.4**	**+1.3**
	0.2nm,0.3s,baz=142,slow=16,SNR=3.1							
DZM				LR		LR	11 23 16.8	
	comp=Z,704nm,18.9s,baz=194,slow=33							
DZM	**Mont Dzumac**	**16.36**	**299**	Pn		**Pn**	**11 18 03.7**	**-1.1**
ODZ	**Otahua Downs**	**16.69**	**209**	Pn		**Pn**	**11 18 05.5**	**-3.2**
WKZ	**Wanaka**	**17.23**	**212**	Pn		**Pn**	**11 18 12.6**	**-2.8**
MLZ	**Mavora Lakes**	**18.06**	**213**			**P**	**11 18 24.1**	**-1.5**
WHZ	**Wether Hill Ro**	**18.54**	**212**			**P**	**11 18 29.1**	**-1.6**
RAR	**Rarotonga**	**19.04**	**64**	LR		LR	11 24 16.9	
	comp=Z,172nm,20.9s,baz=272,slow=32							
ARMA	**Armidale**	**26.02**	**263**	P		**P**	**11 19 50.2**	**+3.1**
TBI	**Tubuai**	**26.51**	**81**	*e*LR		LR	11 26 28.8	
	comp=Z,577nm,28.2s							
TBI	**Tubuai**	**26.51**	**81**	*e*T		T	11 47 09.0	
	26nm,0.3s							
PAE	**Paea**	**29.03**	**70**	*e*T		T	11 49 53.2	
	9.4nm,0.3s							
PPT2	**Papeete2**	**29.07**	**70**	*e*LR		LR	11 27 34.4	
	comp=Z,469nm,27.8s							
PPT2	**Papeete2**	**29.07**	**70**	*e*T		T	11 50 08.6	
	7.7nm,0.3s							
PPT	**Papeete**	**29.08**	**70**	LR		LR	11 31 40.5	
	comp=Z,78nm,18.1s,baz=210,slow=36							
HNR	**Honiara**	**29.54**	**312**	LR		LR	11 29 55.3	
	comp=Z,169nm,21.2s,baz=178,slow=32							
MEH	**Mehetia**	**30.14**	**72**	*e*T		T	11 51 45.2	
	21nm,0.2s							
VAH	**Vaihoa**	**31.92**	**68**	*e*T		T	11 53 55.5	
	58nm,0.2s							
CTA	**Charters Tower**	**33.80**	**280**	P		**P**	**11 20 57.8**	**+1.8**
	9.0nm,0.5s,baz=106,slow=10,SNR=25							
CTAO	**Charters Tower**	**33.80**	**280**	P		**P**	**11 20 58.1**	**+2.1**
STKA	**Stephens Creek**	**34.30**	**258**	P		**P**	**11 21 01.1**	**+1.0**
	22nm,0.8s,baz=93,slow=9.6,SNR=46							
STKA				LR		LR	11 33 56.3	
	comp=Z,222nm,18.5s,baz=51,slow=34							
STKA	**Stephens Creek**	**34.30**	**258**	P		**P**	**11 21 02.2**	**+2.1**
STKA				IAmb		IAmb	11 21 04.7	
	comp=Z,5.3nm,0.9s							
BBOO	**Buckleboo**	**38.77**	**255**	P		**P**	**11 21 38.8**	**+0.5**
BBOO				IAmb		IAmb	11 21 41.6	
	comp=Z,12nm,0.7s							
COEN	**Coen**	**39.32**	**287**	P		**P**	**11 21 44.0**	**+1.0**
COEN				IAmb		IAmb	11 21 46.6	
	comp=Z,8.2nm,0.8s							
TAOE	**Nuku Hiva Isla**	**41.56**	**66**	*e*LR		LR	11 33 08.4	
	comp=Z,417nm,27.9s							
AS31	**Alice Springs**	**43.01**	**267**	P		**P**	**11 22 13.5**	**+0.2**
ASAR	**Alice Springs**	**43.01**	**267**	P		**P**	**11 22 13.9**	**+0.6**
	comp=Z,13nm,0.7s,baz=107,slow=7.7,SNR=103							
ASAR				ScP		**ScP**	**11 27 50.5**	**0.0**
	comp=Z,0.8nm,0.9s,baz=111,slow=4.0,SNR=4.8							
ASAR				LR		LR	11 39 59.1	
	comp=Z,213nm,18.0s,baz=126,slow=36							
ASAR	**Alice Springs**	**43.01**	**267**	P		**P**	**11 22 13.3**	**0.0**
WR0	**Warramunga Arr**	**43.86**	**273**	P		**P**	**11 22 20.6**	**+0.4**
WR0				IAmb		IAmb	11 22 22.6	
	comp=Z,12nm,0.8s							
WB2	**Warramunga Arr**	**44.03**	**273**	P		**P**	**11 22 22.3**	**+0.8**
WRAB	**Tennant Creek**	**44.03**	**273**	P		**P**	**11 22 21.7**	**+0.2**
WRAB				IAmb		IAmb	11 22 24.0	
	comp=Z,14nm,0.8s							
WRA	**Warramunga Arr**	**44.04**	**273**	P		**P**	**11 22 22.1**	**+0.5**
	comp=Z,15nm,0.7s,baz=112,slow=7.7,SNR=82							
WRA				LR		LR	11 40 01.0	
	comp=Z,191nm,19.0s,baz=100,slow=35							
WRA	**Warramunga Arr**	**44.04**	**273**	P		**P**	**11 22 22.0**	**+0.4**
WB0	**Warramunga Arr**	**44.06**	**273**	P		**P**	**11 22 23.3**	**+0.5**
FORT	**Forrest**	**45.85**	**256**	P		**P**	**11 22 36.5**	**+0.6**
SBA	**Scott Base**	**47.58**	**184**	P		**P**	**11 22 49.5**	**+0.8**
MTN	**Manton Dam**	**49.98**	**279**	P		**P**	**11 23 08.4**	**+0.4**
MTN				IAmb		IAmb	11 23 31.7	
	comp=Z,23nm,1.5s							
FITZ	**Fitzroy Crossi**	**52.28**	**270**	P		**P**	**11 23 25.1**	**-0.2**
	comp=Z,3.6nm,0.7s,baz=183,slow=2.5,SNR=8.0							
FITZ	**Fitzroy Crossi**	**52.28**	**270**	P		**P**	**11 23

KBZ	**Khabaz**	**145.30**	**303**	PKPbc	**PKPdf**	**11**	**33**	**50.6**	**0.0**
	comp=Z,3.4nm,0.7s,baz=180,slow=1.6,SNR=6.2								
FINES	**FINESS Array B**	**145.54**	**340**	PKPbc	**PKPdf**	**11**	**33**	**49.6**	**-0.9**
	comp=Z,19nm,0.6s,baz=58,slow=3.7,SNR=54								
NOA	**NORSAR Array B**	**149.19**	**351**	PKPbc	**PKPbc**	**11**	**34**	**01.1**	**+0.2**
	comp=Z,6.3nm,0.8s,baz=20,slow=2.9,SNR=10								
AKASG	**Malin Array Be**	**151.61**	**322**	PKPbc	**PKPbc**	**11**	**34**	**06.7**	**-0.2**
	comp=Z,19nm,0.7s,baz=50,slow=2.5,SNR=11								
BRTR	**Keskin Array B**	**152.74**	**298**	PKPbc	**PKiKP**	**11**	**34**	**11.4**	**+1.1**
	comp=Z,5.9nm,1.0s,baz=158,slow=3.6,SNR=10								
BRTR	**Keskin Array B**	**152.74**	**298**		**PKiKP**	**11**	**34**	**12.6**	**+2.4**
CLL	**Collm**	**157.97**	**341**	*e*PKPab	**PKPab**	**11**	**34**	**46.0**	**+3.3**
TORD	**Torodi Ar. Bea**	**162.37**	**179**	PKP	**PKPdf**	**11**	**34**	**14.8**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=347,slow=2.7,SNR=4.1								
TORD				PKPab	**PKPab**	**11**	**35**	**02.2**	**-0.6**
	comp=Z,3.6nm,1.1s,baz=181,slow=3.8,SNR=7.1								
ESDC	**Sonseca Array**	**169.98**	**27**	PKP	**PKPdf**	**11**	**34**	**19.7**	**-1.1**
	comp=Z,0.9nm,1.0s,baz=346,slow=3.8,SNR=4.8								

IDC ***23*** *11:17:14.4±5.8, 10°.70N×62°.44W, h108km±64km, mb2.8/4, mb1 3.3/6, mb1mx3.1/43, mbtmp3.4/6, Error ellipse: s-maj=81.6km s-min=26.9km az=33.0*
FUNV ***23*** *11:17:16.9, 10°.67N×62°.47W, h90km, MW3.8*
TRN ***23*** *11:17:17.5, 10°.72N×62°.44W, h87km, MD3.7*

ISC 23 11:17:14.6±0.8, 10°.65N±0°.04×62°.50W±0°.03, h108km±8km, n24, σ1§36/40, mb3.2/4, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRUV	**Carupano**	**0.73**	**272**	⇑*e*P		**Pn**	**11 17 33.1**	**+0.2**
CRUV				*e*S		**Sn**	**11 17 45.1**	**-1.6**
TRN	**Trinidad (W)**	**1.08**	**90**	⇑*i*P		**Pn**	**11 17 37.2**	**+0.8**
TRN				*e*S		**Sn**	**11 17 51.4**	**-1.5**
TBH	**Brigand Hill**	**1.42**	**97**	*e*P		**Pn**	**11 17 42.8**	**+2.5**
TBH				*e*S		**Sn**	**11 17 59.8**	**0.0**
GRGR	**Grenville**	**1.69**	**29**	*e*P		**Pn**	**11 17 44.0**	**+0.4**
GRGR				*e*S		**Sn**	**11 18 04.9**	**-0.8**
TPR	**Prospect**	**1.77**	**72**	*e*P		**Pn**	**11 17 45.9**	**+1.2**
TPR				*e*S		**Sn**	**11 18 07.2**	**-0.4**
BOT	**Bacolet**	**1.82**	**73**	*e*P		**Pn**	**11 17 46.0**	**+0.7**
TOSP	**Speyside**	**2.03**	**71**	*e*P		**Pn**	**11 17 48.5**	**+0.5**
TOSP				*e*S		**Sn**	**11 18 12.3**	**-1.1**
PCRV	**Puerto La Cruz**	**2.15**	**258**	P		**Pn**	**11 17 51.4**	**+1.9**
	2.3nm,0.3s,baz=54,slow=6.7,SNR=23							
PCRV				S		**Sn**	**11 18 16.9**	**+0.6**
	6.2nm,0.3s,baz=93,slow=23,SNR=20							
PCRV	**Puerto La Cruz**	**2.15**	**258**	*e*P		**Pn**	**11 17 51.1**	**+1.5**
PCRV				*e*S		**Sn**	**11 18 15.5**	**-0.7**
RIOV	**Rio Grande**	**2.65**	**165**	*e*P		**Pn**	**11 17 57.5**	**+1.4**
RIOV				*e*S		**Sn**	**11 18 27.5**	**-0.3**
PRGV	**PARIAGUAN**	**2.83**	**229**	*e*P		**Pn**	**11 17 59.5**	**+1.2**
PRGV				*e*S		**Sn**	**11 18 32.4**	**+0.4**
SVB	**Belmont**	**2.88**	**25**	*e*P		**Pn**	**11 18 00.8**	**+1.9**
SVB				*e*S		**Sn**	**11 18 32.3**	**-0.8**
MCLT	**Moule a Chique**	**3.40**	**26**	*e*P		**Pn**	**11 18 07.1**	**+1.2**
MCLT				*e*S		**Sn**	**11 18 44.2**	**-1.3**
SLBI	**Saint Lucia, B**	**3.67**	**24**	*e*P		**Pn**	**11 18 11.3**	**+1.8**
SLBI				*e*S		**Sn**	**11 18 50.5**	**-1.5**
MERV	**Las Mercedes**	**3.99**	**250**	*e*P		**Pn**	**11 18 14.9**	**+1.0**
MERV				*e*S		**Sn**	**11 18 58.9**	**-0.9**
TACV	**Tcata**	**4.48**	**264**	*e*P		**Pn**	**11 18 21.5**	**+1.0**
TACV				*e*S		**Sn**	**11 19 09.4**	**-2.3**
DSLB	**Salisbury**	**4.87**	**12**	*e*P		**Pn**	**11 18 27.7**	**+1.9**
LUEV	**Luepa**	**4.89**	**168**	*e*P		**Pn**	**11 18 26.0**	**-0.1**
LUEV				*e*S		**Sn**	**11 19 18.6**	**-3.0**
PTGA	**Pitinga**	**11.58**	**167**	P		**Pn**	**11 19 56.8**	**+0.1**
	2.0nm,0.3s,baz=352,slow=18,SNR=15							
PTGA	**Pitinga**	**11.58**	**167**	*e*P		**Pn**	**11 19 57.3**	**+0.6**
TXAR	**Lajitas Array**	**42.64**	**302**	P		**P**	**11 25 02.4**	**+1.7**
	0.1nm,0.4s,baz=116,slow=8.3,SNR=1.9							
PDAR	**Pinedale Array**	**51.88**	**317**	P		**P**	**11 26 12.1**	**-0.3**
	0.3nm,0.6s,baz=106,slow=11,SNR=3.7							
YKA	**Yellowknife Ar**	**63.71**	**336**	P		**P**	**11 27 34.0**	**-0.4**
	0.1nm,0.4s,baz=110,slow=8.0,SNR=5.0							
INK	**Inuvik**	**73.19**	**338**	P		**P**	**11 28 31.5**	**-1.8**
	0.3nm,0.5s,baz=155,slow=14,SNR=1.6							

IDC ***23*** *11:17:44.2±0.7, 7°.97S×74°.61W, h148km±7km, mb3.3/5, mb1 3.6/10, mb1mx3.4/35, mbtmp4.0/10, Error ellipse: s-maj=12.8km s-min=11.7km az=104.0*
VAO ***23*** *11:17:48.7±0.7, 7°.89S×74°.35W, h149km±4km, mb4.3*

ISC 23 11:17:44.6±0.5, 7°.90S±0°.06×74°.68W±0°.06, h150km, n62, σ1§03/65, mb3.7/7, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CZSB	**Cruzeiro do Su**	**1.97**	**85**	*e*P		**Pn**	**11 18 20.4**	**+1.1**
ATAH	**Atahualpa**	**3.76**	**281**	P		**Pn**	**11 18 42.6**	**+0.5**
	12nm,0.3s,baz=59,slow=3.0,SNR=143							
ATAH				S		**Sn**	**11 19 28.5**	**+1.9**
	26nm,0.3s,baz=50,slow=20,SNR=10							
NNA	**Nana**	**4.59**	**207**	P		**Pn**	**11 18 52.6**	**0.0**
	30nm,0.3s,baz=16,slow=5.1,SNR=35							
NNA				S		**Sn**	**11 19 44.4**	**-1.2**
	50nm,0.3s,baz=105,slow=21,SNR=12							
PTLC	**Puerto Leguiza**	**8.02**	**359**	*e*P		Pn	11 19 31.9	-6.4
GCUF	**Volcan Galeras**	**9.44**	**344**	*e*P		**Pn**	**11 19 57.3**	**-0.4**
CRUC	**La Cruz**	**9.67**	**346**	*e*P		**Pn**	**11 19 59.5**	**-1.1**
MACC	**Macarena, Meta**	**10.01**	**7**	*e*P		**Pn**	**11 20 02.5**	**-2.4**
GARC	**Garzon, Huila**	**10.05**	**355**	*e*P		**Pn**	**11 20 04.0**	**-1.5**
SOTA	**Rioblanco**	**10.15**	**349**	*e*P		**Pn**	**11 20 06.6**	**-0.5**
PCON	**Cinco Dias**	**10.30**	**350**	*e*P		**Pn**	**11 20 08.7**	**-0.4**
LPAZ	**La Paz**	**10.52**	**143**	P		**Pn**	**11 20 10.8**	**-1.2**
	0.4nm,0.3s,baz=333,slow=12,SNR=8.9							
LPAZ	**La Paz**	**10.52**	**143**	*e*P		**Pn**	**11 20 11.2**	**-0.8**
LPAZ	**La Paz**	**10.52**	**143**	*e*P		**Pn**	**11 20 12.6**	**+0.6**
BETC	**Betania**	**10.53**	**356**	*e*P		**Pn**	**11 20 11.8**	**+0.1**
ORTC	**Ortega, Tolima**	**11.74**	**357**	*e*P		**Pn**	**11 20 27.1**	**-0.5**
YOTC	**Yotoco, Valle**	**11.92**	**352**	*e*P		**Pn**	**11 20 31.2**	**+1.2**
VILC	**Villavicencio,**	**11.97**	**5**	*e*P		**Pn**	**11 20 29.6**	**-1.1**
CHIC	**Chingaza**	**12.48**	**4**	*e*P		**Pn**	**11 20 35.8**	**-1.8**
GUY2C	**Guyana, Caldas**	**13.05**	**357**	*e*P		**P**	**11 20 47.4**	**-2.4**
NORC	**Norcasia**	**13.37**	**359**	*e*P		**Pn**	**11 20 49.2**	**+0.5**
CBOC	**Ciudad Bolivar**	**13.73**	**354**	*e*P		**Pn**	**11 20 53.2**	**-0.2**
PTBC	**PUERTO BERRIO,**	**14.34**	**1**	*e*P		**Pn**	**11 21 01.2**	**+0.3**
BARC	**Barichara**	**14.47**	**6**	*e*P		**P**	**11 21 06.2**	**+0.9**
MACA	**Manacapuru-AM**	**14.70**	**72**	*e*P		**P**	**11 21 07.4**	**-0.2**
DBBC	**Dabeiba**	**14.89**	**354**	*e*P		**P**	**11 21 09.6**	**-0.2**
VILB	**Vilhena**	**15.10**	**111**	*e*P		**P**	**11 21 11.5**	**-0.5**
ZARC	**Zaragoza, Cauc**	**15.29**	**359**	*e*P		**Pn**	**11 21 12.7**	**0.0**
UREC	**San Jos de Ur**	**15.57**	**357**	*e*P		**Pn**	**11 21 15.8**	**-0.4**
OCAC	**Ocana**	**16.09**	**5**	*e*P		**Pn**	**11 21 22.0**	**-0.6**
PTGA	**Pitinga**	**16.30**	**65**	P		**Pn**	**11 21 25.0**	**-0.2**
	1.6nm,0.3s,baz=246,slow=12,SNR=8.3							
PTGA	**Pitinga**	**16.30**	**65**	*e*P		**P**	**11 21 25.5**	**+0.2**
MOTC	**Monteria, Cord**	**16.59**	**357**	*e*P		**Pn**	**11 21 28.4**	**-0.2**
SMLC	**San Martn de**	**16.60**	**2**	*e*P		**P**	**11 21 27.5**	**-1.1**
PTLB	**Pontes e Lacer**	**16.97**	**118**	*e*P		**Pn**	**11 21 33.8**	**+0.6**
SDV	**Santo Domingo**	**17.15**	**14**	P		**Pn**	**11 21 35.8**	**+0.2**
	1.6nm,0.3s,baz=229,slow=18,SNR=4.9							
SJCC	**San Jacinto, C**	**17.68**	**358**	*e*P		**Pn**	**11 21 41.1**	**-0.7**
CLDB	**Colider**	**18.87**	**100**	*e*P		**P**	**11 21 54.5**	**+1.1**
CRJC	**Cerrejon, Guaj**	**18.88**	**5**	*e*P		**P**	**11 21 52.0**	**-1.7**
SMRC	**Santa Marta, M**	**18.94**	**1**	*e*P		**P**	**11 21 52.7**	**-1.5**
DABV	**Dabajuro**	**19.12**	**12**	*e*P		**P**	**11 21 56.0**	**-0.2**
ITTB	**Itaituba**	**19.16**	**81**	*e*P		**P**	**11 21 56.6**	**-0.1**
NPGB	**Novo Progresso**	**19.18**	**89**	*e*P		**P**	**11 21 57.3**	**+0.4**
PP1B	**Ponte de Pedra**	**21.57**	**118**	*e*P		**P**	**11 22 23.1**	**+0.6**
AQDB	**Aquidauana**	**22.22**	**126**	*e*P		**P**	**11 22 30.4**	**+1.4**
SNDB	**Serra Nova Dou**	**23.39**	**102**	*e*P		**P**	**11 22 41.5**	**+1.4**
ARAG	**Araguaiana, MT**	**23.68**	**111**	*e*P		**P**	**11 22 43.9**	**+1.2**
MCPB	**Macapa, AP**	**23.76**	**73**	*e*P		**P**	**11 22 43.3**	**-0.2**
CPUP	**Vila Florida**	**24.66**	**140**	*e*P		**P**	**11 22 53.8**	**+2.2**
SJG	**San Juan**	**27.18**	**18**	P		**P**	**11 23 15.9**	**+1.7**
	12nm,0.3s,baz=197,slow=4.6,SNR=8.1							
PLCA	**Paso Flores**	**32.91**	**174**	P		**P**	**11 24 04.4**	**-0.2**
	1.8nm,0.6s,baz=318,slow=9.9,SNR=3.5							
GDU01	**Guandu, BA**	**34.94**	**103**	*e*P		**P**	**11 24 24.3**	**+1.9**
GDU01				*e*pP		**pP**	**11 24 55.2**	**+0.4**
TXAR	**Lajitas Array**	**46.36**	**324**	P		**P**	**11 25 57.0**	**+1.1**
	0.2nm,0.6s,baz=151,slow=6.3,SNR=4.1							
TXAR				pP		**pP**	**11 26 28.5**	**-1.2**
	0.2nm,0.4s,baz=150,slow=8.6,SNR=4.0							
PDAR	**Pinedale Array**	**59.59**	**331**	PcP		**PcP**	**11 28 18.2**	**-0.4**
	0.3nm,0.5s,baz=145,slow=3.3,SNR=4.4							
DBIC	**Dimbokro**	**71.12**	**80**	P		**P**	**11 28 46.3**	**-1.1**
	1.8nm,0.4s,baz=251,slow=6.0,SNR=5.1							
YKA	**Yellowknife Ar**	**76.59**	**342**	P		**P**	**11 29 18.1**	**-0.1**
	0.1nm,0.4s,baz=139,slow=6.3,SNR=6.2							
YKA				pP		**pP**	**11 29 54.5**	**-0.7**
	0.7nm,0.7s,baz=140,slow=6.0,SNR=9.2							
TORD	**Torodi Ar. Bea**	**78.67**	**75**	P		**P**	**11 29 28.9**	**-1.8**
	0.5nm,0.7s,baz=269,slow=5.4,SNR=6.4							
ILAR	**Eielson Array**	**89.63**	**336**	pP		pP	11 31 03.5	+0.4
	0.6nm,0.8s,baz=127,slow=3.8,SNR=6.4							
STKA	**Stephens Creek**	**127.42**	**219**	PKP	**PKiKP**	**11**	**36**	**32.5**	**-0.4**
	0.4nm,0.5s,baz=13,slow=4.6,SNR=3.9								
ZALV	**Zalesovo Beam**	**131.19**	**16**	pPKP	pPKPdf	11	37	19.0	+0.4
	0.7nm,0.4s,baz=355,slow=3.6,SNR=3.3								
MKAR	**Makanchi Array**	**136.52**	**23**	PKP	**PKPdf**	**11**	**36**	**49.1**	**+0.1**
	0.2nm,0.7s,baz=263,slow=1.2,SNR=1.8								
MKAR				pPKP	**pPKPdf**	**11**	**37**	**28.8**	**0.0**
	0.3nm,0.7s,baz=303,slow=3.4,SNR=2.8								
ASAR	**Alice Springs**	**138.00**	**221**	PKhKP	PKPpre	11	36	44.1	
	0.3nm,0.5s,baz=135,slow=2.3,SNR=9.9								
ASAR				PKP	**PKPdf**	**11**	**36**	**52.2**	**-0.2**
	0.5nm,0.5s,baz=113,slow=2.0,SNR=9.9								
ASAR				pPKP	pPKPdf	11	37	32.4	+0.1
	0.4nm,0.6s,baz=117,slow=2.0,SNR=2.6								
WRA	**Warramunga Arr**	**140.23**	**226**	PKhKP	PKPpre	11	36	49.8	
	0.3nm,0.4s,baz=132,slow=2.7,SNR=14								
WRA				PKP	**PKPdf**	**11**	**36**	**56.9**	**+0.4**
	0.9nm,0.5s,baz=121,slow=2.3,SNR=11								

IDC 23 11:44:56.5±48.0, 19°.35S×174°.12W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/24, mbtmp3.7/3, Error ellipse: s-maj=916.5km s-min=181.8km az=83.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.57**	**244**	P		P	11 52 45.5	-0.7
	0.6nm,0.6s,baz=61,slow=10,SNR=1.4							
ASAR	**Alice Springs**	**48.34**	**255**	P		P	11 53 40.6	+0.3
	0.6nm,0.5s,baz=92,slow=8.1,SNR=22							
WRA	**Warramunga Arr**	**48.38**	**260**	P		P	11 53 40.5	-0.2
	0.2nm,0.3s,baz=97,slow=7.2,SNR=15							

NEIC ***23*** *11:52:34.4±1.4, 29°.69S±0°.08×176°.7W±0°.1, h44km±6km, mb4.5/30, Error ellipse: s-maj=14.3km s-min=10.5km az=50.0*
IDC ***23*** *11:52:37.0±2.8, 29°.31S×176°.69W, h58km±20km, mb4.1/8, mb1 4.3/8, mb1mx4.1/23, mbtmp4.4/8, MS3.5/7, Ms1 3.5/7, ms1mx3.2/31, Error ellipse: s-maj=26.7km s-min=24.6km az=86.0*

ISC 23 11:52:32.0±0.6, 29°.68S±0°.06×176°.60W±0°.07, h21km, n96, σ1§95/107, mb4.6/16, MS3.4/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.22**	**289**	P		**Pn**	**11 52 53.5**	**-0.2**
GLKZ				S		**Sb**	**11 53 12.0**	**+2.4**
RAO	**Raoul Island**	**1.22**	**290**	P		**Pb**	**11 52 54.1**	**-0.2**
	508nm,0.3s,baz=83,slow=21,SNR=7.5							
RAO				S		**Sb**	**11 53 10.6**	**+1.0**
	1µm,0.3s,baz=119,slow=21,SNR=6.6							
RIZ	**Raoul Island**	**1.23**	**290**	P		**Pn**	**11 52 53.8**	**-0.2**
RIZ				S		**Sb**	**11 53 12.2**	**+2.2**
PKGZ	**Pakihiroa**	**9.31**	**207**	S		**Sn**	**11 56 30.9**	**+1.9**
HAZ	**Te Kaha**	**9.31**	**209**	P		**Pn**	**11 54 43.3**	**-1.7**
HAZ				S		**Sn**	**11 56 34.0**	**+4.9**
PUZ	**Puketiti**	**9.40**	**206**	S		**Sn**	**11 56 33.2**	**+2.1**
TWGZ	**Tauwhareparae**	**9.60**	**206**	S		**Sn**	**11 56 37.4**	**+1.4**
TKGZ	**Te Karaka**	**9.88**	**206**	P		**Pn**	**11 54 54.6**	**+2.0**
TKGZ				S		**Sn**	**11 56 43.6**	**+0.7**
MWZ	**Matawai**	**9.91**	**208**	P		**Pn**	**11 54 51.6**	**-1.6**
MWZ				S		**Sn**	**11 56 44.8**	**+1.0**
OUZ	**Omahuta**	**9.95**	**234**	Pn		**Pn**	**11 54 55.2**	**+1.5**
URZ	**Urewera**	**10.02**	**210**	P		**Pn**	**11 54 56.3**	**+1.7**
	0.4nm,0.3s,baz=307,slow=23,SNR=1.2							
URZ				S		**Sn**	**11 56 46.7**	**+0.3**
	3.0nm,0.3s,baz=126,slow=23,SNR=7.1							
URZ	**Urewera**	**10.02**	**210**			**Pn**	**11 54 54.3**	**-0.3**
URZ	**Urewera**	**10.02**	**210**	P		**Pn**	**11 54 53.1**	**-1.6**
URZ				S		**Sn**	**11 56 47.2**	**+0.7**
MUGZ	**Murupara**	**10.35**	**210**	P		**Pn**	**11 54 58.9**	**-0.3**
MUGZ				S		**Sn**	**11 56 55.8**	**+1.2**
SNGZ	**Shannon Statio**	**10.37**	**207**	P		**Pn**	**11 55 00.5**	**+1.0**
SNGZ				S		**Sn**	**11 56 56.8**	**+1.7**
BKZ	**Black Stump Fm**	**11.04**	**209**	Pn		**Pn**	**11 55 07.4**	**-1.3**
BKZ	**Black Stump Fm**	**11.04**	**209**	P		**Pn**	**11 55 07.2**	**-1.6**
BKZ				S		**Sn**	**11 57 10.7**	**-0.9**
HIZ	**Hauiti**	**11.30**	**216**	Pn		**Pn**	**11 55 11.4**	**-0.8**
PXZ	**Pawanui**	**11.63**	**206**	P		**Pn**	**11 55 10.3**	**-6.5**
PXZ				S		**Sn**	**11 57 22.0**	**-4.0**
BFZ	**Birch Farm**	**12.43**	**206**	Pn		**Pn**	**11 55 28.8**	**+1.1**
BFZ	**Birch Farm**	**12.43**	**206**	P		**Pn**	**11 55 25.9**	**-1.8**
BFZ				S		**Sn**	**11 57 42.3**	**-3.3**
MSVF	**Nonsavu**	**12.85**	**336**	LR	LR		11 59 01.9	
	comp=Z,102nm,19.0s,baz=167,slow=31							
TUWZ	**Tuamarina**	**14.01**	**211**			**Pn**	**11 55 49.5**	**+0.3**
NNZ	**Nelson**	**14.10**	**213**	Pn		**Pn**	**11 55 51.3**	**+0.9**
BSWZ	**Blackbirch Sta**	**14.27**	**210**	Pn		**Pn**	**11 55 53.6**	**+0.8**
THZ	**Tophouse**	**14.75**	**212**	Pn		**Pn**	**11 56 00.7**	**+1.3**
THZ	**Tophouse**	**14.75**	**212**	P		**Pn**	**11 56 00.2**	**+0.9**
THZ				S		**Sn**	**11 58 37.1**	**-5.0**
KHZ	**Kahutara**	**14.99**	**209**	Pn		**Pn**	**11 56 02.9**	**+0.4**
KHZ	**Kahutara**	**14.99**	**209**	P		**Pn**	**11 56 00.5**	**-2.0**
KHZ				S		**Sn**	**11 58 41.6**	**-6.3**
GVZ	**Greta Valley S**	**15.65**	**209**	P		**Pn**	**11 56 09.9**	**-1.4**
LTZ	**Lake Taylor**	**15.84**	**211**	Pn		**Pn**	**11 56 13.8**	**0.0**
LTZ	**Lake Taylor**	**15.84**	**211**	P		**Pn**	**11 56 15.0**	**+1.3**
LTZ				S		Sn	11 58 58.7	-10
INZ	**Inchbonnie**	**16.18**	**213**	P		**Pn**	**11 56 13.3**	**-4.7**
INZ				S		Sn	11 59 05.8	-11
OXZ	**Oxford**	**16.38**	**211**			**Pn**	**11 56 19.1**	**-1.5**
OXZ				lAmb	lAmb		11 56 28.3	
	comp=Z,36nm,1.1s							
OXZ	**Oxford**	**16.38**	**211**	P		**Pn**	**11 56 18.3**	**-2.3**
OXZ				S		Sn	11 59 08.5	-13
MQZ	**McQueen's Vall**	**16.42**	**209**			**Pn**	**11 56 22.5**	**+1.5**
MQZ				lAmb	lAmb		11 56 46.9	
	comp=Z,32nm,1.2s							
MQZ	**McQueen's Vall**	**16.42**	**209**	P		**P**	**11 56 23.8**	**+0.1**
MQZ				S		Sn	11 59 11.3	-11
WVZ	**Waitaha Valley**	**16.79**	**214**	P		**P**	**11 56 28.6**	**+0.8**
WVZ				S		**Sn**	**11 59 26.2**	**-5.3**
DZM	**Mont Dzumac**	**17.02**	**292**	*e*P		**P**	**11 56 31.6**	**+1.0**
	comp=Z,70nm,1.3s							
DZM				*e*LR	LR		12 00 34.3	
	comp=Z,132nm,20.3s							
DZM	**Mont Dzumac**	**17.02**	**292**	LR	LR		12 01 16.2	
	comp=Z,157nm,19.4s,baz=134,slow=31							
RPZ	**Rata Peaks**	**17.12**	**212**	P		**P**	**11 56 31.7**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=299,slow=2.7,SNR=4.9							
RPZ	**Rata Peaks**	**17.12**	**212**	P		**P**	**11 56 31.8**	**+0.3**
RPZ				lAmb	lAmb		11 56 41.1	
	comp=Z,12nm,0.6s							
RPZ	**Rata Peaks**	**17.12**	**212**	P		**P**	**11 56 32.1**	**+0.5**
RPZ				S		**Sn**	**11 59 30.9**	**-8.8**
GCSZ	**Gaunt Creek Bo**	**17.17**	**214**	P		**Pn**	**11 56 30.0**	**-0.5**
ARCZ	**Arundel**	**17.25**	**211**	P		**Pn**	**11 56 31.3**	**-0.2**
RAR	**Rarotonga**	**17.37**	**65**	LR	LR		12 02 12.5	
	comp=Z,183nm,20.3s,baz=264,slow=33							
FOZ	**Fox Glacier**	**17.58**	**214**			**Pn**	**11 56 36.1**	**+0.5**
FOZ				lAmb	lAmb		11 56 42.0	
	comp=Z,56nm,1.4s							
LBZ	**Lake Benmore**	**18.04**	**212**			**P**	**11 56 42.0**	**+0.3**
ODZ	**Otahua Downs**	**18.35**	**210**	P		**P**	**11 56 45.1**	**+0.1**
ODZ				lAmb	lAmb		11 56 51.5	
	comp=Z,17nm,0.8s							
WKZ	**Wanaka**	**18.92**	**213**	P		**P**	**11 56 50.9**	**-0.5**
WKZ				lAmb	lAmb		11 57 16.4	
	comp=Z,24nm,1.2s							
MLZ	**Mavora Lakes**	**19.75**	**213**	P		**P**	**11 57 00.5**	**+0.1**
MLZ				lAmb	lAmb		11 57 22.1	
	comp=Z,21nm,1.5s							
WHZ	**Wether Hill Ro**	**20.22**	**213**	P		**P**	**11 57 05.5**	**+0.1**
DCZ	**Deep Cove**	**20.29**	**215**	P		**P**	**11 57 06.6**	**+0.4**
DCZ				lAmb	lAmb		11 57 27.6	
	comp=Z,21nm,1.4s							
PPT2	**Papeete2**	**27.45**	**70**	*e*LR	LR		12 04 52.4	
	comp=Z,139nm,28.8s							
ARMA	**Armidale**	**27.46**	**260**	P		**P**	**11 58 16.6**	**-0.2**
ARMA				lAmb	lAmb		11 58 20.4	
	comp=Z,12nm,1.1s							
PPT	**Papeete**	**27.47**	**70**	LR	LR		12 08 33.4	
	comp=Z,62nm,18.5s,baz=182,slow=35							
EIDS	**Eidsvold**	**28.92**	**271**	P		**P**	**11 58 29.1**	**-0.6**
CTAO	**Charters Tower**	**34.89**	**277**	P		**P**	**11 59 22.3**	**+0.1**
CTAO				lAmb	lAmb		11 59 37.2	
	comp=Z,12nm,1.2s							
STKA	**Stephens Creek**	**35.82**	**256**	P		**P**	**11 59 31.4**	**+1.3**
STKA				LR	LR		12 13 29.3	
	comp=Z,205nm,18.2s,baz=195,slow=35							
STKA	**Stephens Creek**	**35.82**	**256**	P		**P**	**11 59 30.8**	**+0.7**
BBOO	**Buckleboo**	**40.33**	**253**	P		**P**	**12 00 07.8**	**-0.3**
AS31	**Alice Springs**	**44.36**	**266**	P		**P**	**12 00 40.4**	**-0.7**
ASAR	**Alice Springs**	**44.36**	**266**	P		**P**	**12 00 40.2**	**-0.8**
	comp=Z,4.1nm,0.7s,baz=102,slow=7.7,SNR=57							
ASAR				PcP		**PcP**	**12 02 26.0**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=129,slow=5.0,SNR=4.1							
WR0	**Warramunga Arr**	**45.11**	**271**	P		**P**	**12 00 46.2**	**-0.8**
WR0				lAmb	lAmb		12 00 48.6	
	comp=Z,12nm,1.1s							
WB2	**Warramunga Arr**	**45.28**	**271**	P		**P**	**12 00 47.4**	**-1.0**
WB2				lAmb	lAmb		12 01 02.9	
	comp=Z,13nm,1.1s							
WRAB	**Tennant Creek**	**45.28**	**271**	P		**P**	**12 00 47.2**	**-1.2**
WRAB				lAmb	lAmb		12 00 50.0	
	comp=Z,14nm,1.2s							
WRA	**Warramunga Arr**	**45.29**	**271**	P		**P**	**12 00 47.5**	**-1.0**
	comp=Z,8.2nm,1.1s,baz=110,slow=7.3,SNR=25							
WRA				LR	LR		12 19 30.1	
	comp=Z,102nm,20.6s,baz=110,slow=36							
WRA	**Warramunga Arr**	**45.29**	**271**	P		**P**	**12 00 47.2**	**-1.2**
WB0	**Warramunga Arr**	**45.31**	**271**	P		**P**	**12 00 47.5**	**-1.1**
WB0				lAmb	lAmb		12 00 52.0	
	comp=Z,10nm,1.1s							
FORT	**Forrest**	**47.41**	**254**	P		**P**	**12 01 04.0**	**-1.0**
SBA	**Scott Base**	**48.85**	**185**	P		**P**	**12 01 15.6**	**+0.2**
VNDA	**Vanda**	**48.94**	**186**	P		**P**	**12 01 19.9**	**+3.8**
	comp=Z,1.4nm,1.0s,baz=17,slow=5.5,SNR=7.4							
VNDA				LR	LR		12 18 26.8	
	comp=Z,26nm,21.0s,baz=354,slow=31							
KNRA	**Kununurra**	**51.87**	**273**	P		**P**	**12 01 39.0**	**-0.1**
**Q

ERM Erimo 0.61 81 *d* iP Pn 12 23 56.8 -1.2
ERM Erimo 0.61 81 Pn 12 23 57.6 -0.3
JEM Erimo 0.61 81 ⇑P Pn 12 23 57.6 -0.4
JEM *e*S Sn 12 24 07.4 -0.6
JIAM Iburiatsuma 0.77 335 ⇓P Pn 12 23 59.8 0.0
JIAM *e*S Sn 12 24 11.4 +0.1
JBT2 Biratori 2 0.85 1 ⇓P Pn 12 23 59.9 -0.9
JKB Kayabe 0.99 268 ⇓P Pn 12 24 01.3 -1.1
JKB *e*S Sn 12 24 14.5 -1.5
JCH Churui 1.02 47 ⇑P Pn 12 24 02.5 -0.4
JCH *e*S Sn 12 24 16.6 -0.1
JNB Noboribetsu 1.12 300 ⇓P Pn 12 24 02.6 -1.5
JOT Ohata 1.12 241 ⇓P Pn 12 24 03.3 -0.8
JEW Eniwo 1.13 324 ⇓P Pn 12 24 03.7 -0.6
JEW *e*S Sn 12 24 18.9 -0.5
JEW Eniwo 1.13 324 Pn 12 24 03.8 -0.6
JFR Furan 1.25 8 ⇓P Pn 12 24 05.0 -0.9
JOB Onbets 1.47 48 P Pn 12 24 09.3 +0.6
JYM2 Yakumo 2 1.49 278 ⇓P Pn 12 24 08.1 -0.9
JTM Tenmabayashi 1.49 221 P Pn 12 24 09.0 0.0
JTM Tenmabayashi 1.49 221 Pn Pn 12 24 09.1 +0.1
JSR Shiriuchi 1.50 255 ⇓P Pn 12 24 08.5 -0.6
JSR *e*S Sn 12 24 27.8 -0.1
JISS Ishikarishitsu 1.52 333 ⇓P Pn 12 24 08.8 -0.5
JISS *e*S Sn 12 24 27.5 -0.8
JAB Ashibetsu 1.58 357 ⇓P Pn 12 24 10.3 +0.1
JANG Nango 1.67 202 ⇑P Pn 12 24 11.4 -0.1
JANG *e*S Sn 12 24 32.6 +0.6
JAR Ashorobuto 1.73 37 ⇑P Pn 12 24 11.7 -0.4
JOMM Oshimamatsumae 1.80 258 P Pn 12 24 12.5 -0.6
JOMM *e*S Sn 12 24 33.8 -1.2
JHR Hokuryu 1.88 346 ⇓P Pn 12 24 14.4 +0.2
JHR *e*S Sn 12 24 37.0 +0.1
ASAJ Asahikawa 2.20 5 P Pn 12 24 18.6 +0.1
58nm,0.3s,baz=208,slow=12,SNR=384
ASAJ S Sn 12 24 42.0 -2.7
57nm,0.3s,baz=161,slow=17,SNR=8.0
ASAJ LR LR 12 24 43.5
comp=Z,65nm,20.2s,baz=265,slow=28
JKA Kamikawa-asahi 2.20 5 Pn 12 24 18.5 -0.1
NMR Nemuro--Hokkai 2.88 59⇑ *i*P Pn 12 24 26.5 -1.2
NMR *i*S Sn 12 24 57.7 -3.5
RUSJ Misakicho 3.04 43⇓ *i*P Pn 12 24 31.9 +2.0
RUSJ *i*S Sn 12 25 07.7 +2.5
GRPR Tuman 3.25 49*c i*P Pn 12 24 33.4 +0.6
GRPR *i*S Sn 12 25 09.1 -1.2
GRPR pmax pmax
comp=N,208nm,0.2s
GRPR pmax pmax
comp=E,268nm,0.2s
GRPR pmax pmax
comp=Z,734nm,0.2s
GRPR smax smax
comp=E,2μm,0.3s
GRPR smax smax
comp=N,2μm,0.4s
YUK Yuzh-Kuril'sk 3.33 49*c i*P Pn 12 24 34.0 +0.2
YUK *i*S Sn 12 25 10.6 -1.6
YUK pmax pmax
comp=E,324nm,0.2s
YUK pmax pmax
comp=Z,537nm,0.2s
YUK smax smax
comp=N,1μm,0.5s
YUK smax smax
comp=E,2μm,0.5s
JMM Marumori 4.23 197 Pn 12 24 45.7 -0.5
JSD Sado 5.00 220 Pn Pn 12 24 57.3 +0.7
YSS Yuzh-Sakhalins 5.04 3 *e*P Pn 12 24 58.4 +1.2
YSS *e*S Sn 12 25 54.2 +0.2
YSS pmax pmax
comp=Z,40nm,0.9s
YSS MLR MLR
comp=Z,500nm,13.0s
YSS Yuzh-Sakhalins 5.04 3 Pn Pn 12 24 57.8 +0.6
KUR Kuril'sk 5.19 49*c i*P Pn 12 25 00.3 +1.0
KUR *i*S Sn 12 25 58.9 +1.1
KUR pmax pmax
comp=Z,80nm,0.4s
KUR pmax pmax
comp=E,49nm,0.2s
KUR smax smax
comp=E,710nm,1.2s
KUR smax smax
comp=N,829nm,1.4s
KUR smax smax
comp=E,148nm,0.5s
KUR smax smax
comp=N,282nm,0.4s
TEY Ternei 5.21 309 *e*P Pn 12 25 00.8 +1.2
JYT Yasato 5.93 197 Pn 12 25 08.0 -1.5
MAJO Matsushiro 6.26 212⇓ *e*P Pn 12 25 11.9 -2.1
MAJO Matsushiro 6.26 212 Pn Pn 12 25 14.7 +0.7
MAT Matsushiro 6.26 212 P Pn 12 25 15.6 +1.6
MAT S Sn 12 26 24.0 -0.2
MJAR Matsushiro Arr 6.26 212 P Pn 12 25 15.8 +1.8
comp=N,0.2nm,0.3s,baz=19,slow=16,SNR=10.0
MJAR Matsushiro Arr 6.26 212 P Pn 12 25 18.0 +4.0
MJAR Matsushiro Arr 6.26 212 Pn Pn 12 25 18.0 +4.0
JGF Kuroka 7.42 213 Pn Pn 12 25 28.9 -0.9
USA0B Ussuriysk Arra 7.92 290⇓ *e*P Pn 12 25 33.7 -2.9
USA0B Ussuriysk Arra 7.92 290 Pn Pn 12 25 34.7 -1.9
USRK Ussuriysk Ar. 7.92 290 P Pn 12 25 36.1 -0.5
baz=95,slow=16,SNR=13
USRK LR LR 12 28 43.8
comp=N,294nm,20.2s,baz=114,slow=38
USRK Ussuriysk Ar. 7.92 290 P Pn 12 25 38.5 +1.9
USRK Ussuriysk Ar. 7.92 290 Pn 12 25 38.5 +1.9
JWT Wachi 8.57 222 Pn Pn 12 25 45.6 0.0
TYV Tymovskoe 8.94 1 *e*P Pn 12 25 51.4 +0.9
TYV *e* 12 27 35.5
TYV pmax pmax
comp=Z,300nm,2.4s
TYV pmax pmax
comp=Z,14nm,1.5s
TYV MLR MLR
comp=E,4μm,18.0s
TYV MLR MLR
comp=Z,1μm,18.0s
JHJ Hachijo jima 2 9.02 194 P Pn 12 25 53.0 +1.3
comp=Z,14nm,0.3s,baz=72,slow=22,SNR=8.0
JHJ LR LR 12 30 10.4
comp=Z,133nm,19.5s,baz=64,slow=42
JHS Saijyo 10.01 229 Pn Pn 12 26 04.7 -0.6
KLR Kul'dur 10.41 318 P Pn 12 26 10.1 -0.6
comp=Z,0.2nm,0.3s,baz=122,slow=15,SNR=23
KLR LR LR 12 30 16.3
comp=Z,336nm,20.4s,baz=138,slow=38
KLR Kul'dur 10.41 318*de*P Pn 12 26 12.3 +1.7
KSRS Korea Array 11.98 253 P Pn 12 26 33.2 +1.2
comp=Z,0.5nm,0.3s,baz=66,slow=13,SNR=11
KSRS LR LR 12 30 43.4
comp=Z,260nm,21.1s,baz=65,slow=35
KSAR Wonju Array Be 12.01 253 P Pn 12 26 34.8 +2.3
KSAR Wonju Array Be 12.01 253 Pn 12 26 34.8 +2.3
CN2 Changchun 12.55 284 *e*P Pn 12 26 39.9 +0.1
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,200nm,15.0s
CN2 LR LR
comp=Z,300nm,15.0s
CN2 LR LR
comp=Z,400nm,13.0s
JCJ Chichijima 14.79 181 LR LR 12 33 58.3
comp=Z,38nm,21.2s,baz=345,slow=41
PEA0B Petropavlovsk- 15.22 37 P Pn 12 27 14.2 -0.7
PEA0B pmax pmax
comp=Z,55nm,1.3s
PEA0B Petropavlovsk- 15.22 37 Pn Pn 12 27 14.2 -0.7
PEA0B IAmb IAmb 12 27 29.1
comp=Z,55nm,1.3s
PETK Petropavlovsk- 15.22 37 P Pn 12 27 14.1 -0.8
comp=Z,0.2nm,0.3s,baz=174,slow=12,SNR=4.4
PETK LR LR 12 34 34.5
comp=Z,58nm,18.9s,baz=214,slow=43
MA2 Magadan 18.43 14 P P 12 27 52.8 -1.1
comp=Z,0.2nm,0.3s,baz=159,slow=8.6,SNR=4.5
MA2 LR LR 12 34 22.0
comp=Z,34nm,21.3s,baz=185,slow=35
MA2 Magadan 18.43 14*de*P P 12 27 53.2 -0.7
MA2 pmax pmax
comp=Z,9.0nm,1.1s
MA2 Magadan 18.43 14 P P 12 27 52.1 -1.8

JOW Kunigami 18.98 222 LR LR 12 35 31.9
comp=Z,164nm,21.1s,baz=72,slow=37
BJI Beijing 19.83 273 P P 12 28 08.4 -0.9
BJI pmax pmax
comp=Z,11nm,0.9s
BJI LR LR
comp=Z,140nm,11.6s
BJI LR LR
comp=Z,160nm,12.6s
NJ2 Nanjing 21.14 250 *e*P P 12 28 22.8 -0.7
NJ2 pmax pmax
comp=Z,11nm,0.5s
YAK Yakutsk 21.52 344 LR LR 12 37 19.8
comp=Z,59nm,19.2s,baz=91,slow=38
YAK Yakutsk 21.52 344 *e*P P 12 28 41.8 +15
YAK *e* 12 32 11.8
YAK pmax pmax
comp=Z,13nm,1.3s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=N,16nm,1.7s
SEY Seymchan 21.86 12 P P 12 28 28.9 -2.1
comp=N,0.8nm,0.3s,baz=204,slow=11,SNR=8.7
SEY Seymchan 21.86 12⇓ *e*P P 12 28 27.8 -3.1
HHC Hu-ho-hao-te 23.07 278 *e*P P 12 28 42.3 -1.7
HHC pmax pmax
comp=N,26nm,1.1s
HHC pmax pmax
comp=N,77nm,5.4s
ULN Ulaanbaatar 25.55 296⇓ *e*P P 12 29 06.5 -0.1
ULN pmax pmax
comp=Z,6.0nm,1.3s
SONM Songino Array 25.99 295 P P 12 29 09.7 -0.9
comp=Z,2.6nm,0.7s,baz=78,slow=8.5,SNR=18
SONM LR LR 12 40 00.9
comp=Z,143nm,21.3s,baz=102,slow=38
SONM Songino Array 25.99 295 P P 12 29 10.2 -0.4
SONM pmax pmax
comp=Z,5.0nm,1.3s
SONM Songino Array 25.99 295 P P 12 29 10.2 -0.4
XAN Xi'an 27.37 264 P P 12 29 23.8 +0.7
XAN pP pP 12 29 38.3 -0.7
XAN pmax pmax
comp=Z,11nm,1.4s
XAN LR LR
comp=Z,140nm,15.2s
XAN LR LR
comp=Z,150nm,14.5s
TLY Talaya 27.94 304 P P 12 29 26.9 -1.0
comp=Z,0.9nm,0.4s,baz=85,slow=4.9,SNR=5.7
TLY Talaya 27.94 304 *e*P P 12 29 27.7 -0.2
TLY pmax pmax
comp=Z,15nm,1.3s
TLY MLR MLR
comp=Z,262nm,13.0s
TLY Talaya 27.94 304 IAmb IAmb 12 29 28.9
comp=Z,9.6nm,1.5s
BILL Bilibino 29.15 18⇓ *e*P P 12 29 40.0 +1.6
BILL pmax pmax
comp=Z,2.0nm,1.2s
H11N2 WAKE ISLAND Hy 30.36 129 T T 13 01 31.6
baz=324,slow=75,SNR=837
H11N1 WAKE ISLAND Hy 30.37 129 T T 13 01 30.6
baz=324,slow=75,SNR=777
H11N3 WAKE ISLAND Hy 30.38 129 T T 13 01 32.8
baz=324,slow=75,SNR=846
H11S1 WAKE ISLAND Hy 31.22 131 T T 13 02 39.1
baz=325,slow=76,SNR=894
H11S3 WAKE ISLAND Hy 31.22 131 T T 13 02 35.5
baz=325,slow=76,SNR=422
H11S2 WAKE ISLAND Hy 31.24 131 T T 13 02 36.6
baz=325,slow=76,SNR=618
GTA Gaotai 32.12 280 *e*P P 12 30 07.3 +2.1
GTA pP pP 12 30 21.9 +0.6
GTA sP sP 12 30 27.0 -2.2
GTA S S 12 35 18.1 +5.3
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,44nm,6.2s
GTA LR LR
comp=Z,98nm,15.3s
GTA LR LR
comp=Z,93nm,16.4s
GTA LR LR
comp=Z,130nm,16.4s
KMI Kunming 36.66 255 ⇓P P 12 30 42.0 -2.6
KMI pmax pmax
comp=Z,7.0nm,0.5s
DGZ Jazzator, Alta 38.30 301⇑ *i*P P 12 30 58.6 +0.4
DGZ pmax pmax
comp=Z,12nm,1.3s
NRIK Noril'sk 39.20 333 LR LR 12 48 22.6
comp=Z,161nm,20.4s,baz=113,slow=38
NRIK Noril'sk 39.20 333⇓ *e*P P 12 31 03.2 -1.9
ZAA0 Zalesovo Array 39.31 308 P P 12 31 05.9 -0.4
ZAA0 IAmb IAmb 12 31 07.1
comp=Z,7.3nm,1.1s
ZALV Zalesovo Beam 39.31 308 P P 12 31 05.4 -0.9
comp=Z,2.5nm,0.4s,baz=87,slow=8.2,SNR=15
ZALV LR LR 12 48 00.9
comp=Z,106nm,19.1s,baz=67,slow=37
ZALV Zalesovo Beam 39.31 308 *i*P P 12 31 06.3 0.0
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 39.31 308 P P 12 31 05.8 -0.6
WMQ Urumqi 39.49 292 *e*P P 12 31 09.1 +1.1
WMQ pP pP 12 31 24.1 -0.4
WMQ sP sP 12 31 30.9 -1.4
WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,210nm,4.3s
TTA Tatalina 41.05 38 P P 12 31 21.2 +0.5
TTA pmax pmax
comp=Z,5.0nm,1.4s
TTA Tatalina 41.05 38 P P 12 31 21.2 +0.5
IMAR Indian Mountai 42.12 33 P P 12 31 29.3 0.0
MK31 Makanchi Array 42.31 298*d i*P P 12 31 30.8 -0.3
MK31 Makanchi Array 42.31 298 P P 12 31 31.1 0.0
MK31 IAmb IAmb 12 31 31.8
comp=Z,6.7nm,1.1s
MKAR Makanchi Array 42.31 298 P P 12 31 29.7 -1.4
comp=Z,4.7nm,0.9s,baz=80,slow=10.0,SNR=26
MKAR pP **pP** 12 31 47.4 -0.3
comp=Z,1.7nm,0.6s,baz=76,slow=10,SNR=5.2
MKAR LR LR 12 50 03.6
comp=Z,60nm,18.3s,baz=109,slow=37
MKAR Makanchi Array 42.31 298*ce*P P 12 31 30.7 -0.4
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 42.31 298 P P 12 31 30.6 -0.4
MAKZ Makanchi 42.51 298 P P 12 31 32.3 -0.5
MAKZ pmax pmax
comp=Z,9.0nm,1.1s
MAKZ Makanchi 42.51 298 P P 12 31 32.2 -0.5
MAKZ IAmb IAmb 12 31 33.5
comp=Z,9.1nm,1.1s
PPLA Purkeypile 42.80 38 P P 12 31 36.4 +1.4
PPLA IAmb IAmb 12 32 03.4
comp=Z,12nm,1.2s
KDAK Kodiak Island 43.06 45 P P 12 31 36.9 -0.1
comp=Z,5.1nm,0.8s,baz=321,slow=3.5,SNR=5.1
BPAW Bear Paw Mtn. 43.29 36 P P 12 31 39.5 +0.7
KTH Kantishna Hill 43.34 37 P P 12 31 39.9 +0.6
KTH IAmb IAmb 12 31 41.3
comp=Z,8.5nm,1.1s
MLY Manley 43.37 35 P P 12 31 40.6 +1.2
COLD Coldfoot 43.57 31 P P 12 31 41.3 +0.3
SUA Susitna One 43.58 40 P P 12 31 42.5 +1.2
SUA IAmb IAmb 12 32 07.8
comp=Z,13nm,1.5s
CMAR Chiang Mai Arr 43.61 251 P P 12 31 40.3 -1.6
comp=Z,0.8nm,0.4s,baz=38,slow=9.1,SNR=2.4
CMAR LR LR 12 50 07.6
comp=Z,74nm,18.2s,baz=82,slow=36
KURK Kurchatov 43.63 304 P P 12 31 39.3 -2.4
KURK Kurchatov 43.63 304 P P 12 31 39.3 -2.4
TRF Thorofare Moun 43.63 37 P P 12 31 42.1 +0.4
TRF IAmb IAmb 12 31 55.2
comp=Z,11nm,1.4s
KURBB Kurchatov Arra 43.71 304 P P 12 31 39.3 -3.0
comp=Z,7.3nm,0.7s,baz=77,slow=8.7,SNR=32

PMR Palmer 44.33 40 P P 12 31 48.1 +1.0
PMR pmax pmax
comp=Z,11nm,1.2s
PMR Palmer 44.33 40 P P 12 31 48.1 +1.0
PMR IAmb IAmb 12 31 48.9
comp=Z,11nm,1.2s
GHO Glory Hole Cre 44.41 39 P P 12 31 48.6 +0.7
GHO IAmb IAmb 12 32 04.7
comp=Z,10.0nm,1.0s
MDM Murphy Dome 44.44 35 P P 12 31 47.7 -0.3
WRH Wood River Hil 44.53 35 P P 12 31 49.3 +0.6
WRH IAmb IAmb 12 32 18.4
comp=Z,7.3nm,1.2s
COLA College 44.60 35⇓ *i*P P 12 31 49.3 +0.1
COLA pmax pmax
comp=Z,4.0nm,0.9s
CCB Clear Creek Bu 44.64 35 P P 12 31 50.0 +0.5
PWL Port Wells 44.80 41 P P 12 31 51.1 +0.1
IL31 45.02 35 P P 12 31 52.4 -0.2
IL31 IAmb IAmb 12 31 53.9
comp=Z,8.1nm,1.2s
ILAR Eielson Array 45.02 35 P P 12 31 52.0 -0.6
comp=Z,2.3nm,0.9s,baz=272,slow=6.6,SNR=21
ILAR LR LR 12 52 42.9
comp=Z,34nm,18.4s,baz=43,slow=39
ILAR Eielson Array 45.02 35 P P 12 31 52.2 -0.4
ILAR Eielson Array 45.02 35 P P 12 31 52.2 -0.4
SCM Sheep Creek Mo 45.15 39 P P 12 31 55.2 +1.4
SCM pmax pmax
comp=Z,18nm,1.1s
SCM Sheep Creek Mo 45.15 39 P P 12 31 55.2 +1.4
PRP Porcupine Dome 45.53 34 P P 12 31 58.0 +1.2
PRP IAmb IAmb 12 31 58.4
comp=Z,4.8nm,1.0s
FYU Fort Yukon 45.55 32 P P 12 31 57.6 +0.9
FYU IAmb IAmb 12 32 20.3
comp=Z,5.5nm,1.0s
SCRK Sand Creek 46.37 36 P P 12 32 03.5 +0.1
SCRK IAmb IAmb 12 32 04.5
comp=Z,3.6nm,0.8s
DOT Dot Lake 46.38 36 P P 12 32 03.2 -0.2
DOT IAmb IAmb 12 32 05.1
comp=Z,6.0nm,1.4s
K27K Chicken 47.19 36 P P 12 32 10.5 +0.9
K27K IAmb IAmb 12 32 35.8
comp=Z,5.1nm,0.9s
EGAK Eagle 47.46 34 P P 12 32 12.0 +0.4
EGAK IAmb IAmb 12 32 37.3
comp=Z,6.0nm,1.1s
L27K Beaver Creek, 47.48 37 IAmb IAmb 12 32 14.3
comp=Z,6.1nm,1.1s
BCAR Beaver Creek A 47.50 37 P P 12 32 12.8 +0.7
BARN Barnard Glacie 47.97 39 P P 12 32 16.3 +0.3
BARN IAmb IAmb 12 32 44.5
comp=Z,13nm,1.2s
BRVK Borovoye 47.98 309*ce*P P 12 32 15.8 -0.1
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BRVK Borovoye 47.98 309 P P 12 32 16.1 +0.2
BRVK IAmb IAmb 12 32 38.9
comp=Z,5.0nm,0.9s
BOOM Boomskoye usch 48.02 294 IAmb IAmb 12 32 42.1
comp=Z,6.6nm,0.8s
CTGM Chitina Glacie 48.15 40 P P 12 32 17.8 +0.5
AAK Ala-Archa 48.94 295*c i*P P 12 32 23.2 -0.5
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 48.94 295 P P 12 32 22.9 -0.8
AAK IAmb IAmb 12 32 23.9
comp=Z,3.0nm,0.6s
EPYK Eagle Plains 48.96 32 P P 12 32 23.4 +0.2
EPYK IAmb IAmb 12 32 47.8
comp=Z,10nm,1.2s
INK Inuvik 49.73 29 P P 12 32 28.9 -0.1
comp=Z,1.6nm,0.3s,baz=277,slow=5.8,SNR=30
INK Inuvik 49.73 29 P P 12 32 28.7 -0.4
INK pmax pmax
comp=Z,7.0nm,1.4s
INK Inuvik 49.73 29 P P 12 32 28.7 -0.4
INK IAmb IAmb 12 32 38.3
comp=Z,6.9nm,1.4s
HYT Haines Junctio 49.99 39 P P 12 32 33.0 +1.7
PMG Port Moresby 51.27 174⇓ *e*P P 12 32 39.3 -1.9
PMG pmax pmax
comp=Z,26nm,1.2s
KK31 Karatay Array 51.42 297 P P 12 32 41.6 -0.6
KK31 pmax pmax
comp=Z,5.0nm,0.6s
KK31 Karatay Array 51.42 297 P P 12 32 41.6 -0.6
KKAR Karatay Array 51.42 297 P P 12 32 41.8 -0.4
KKAR Karatay Array 51.42 297 P P 12 32 41.8 -0.4
KKAR Karatay Array 51.42 297 IAmb IAmb 12 32 42.2
comp=Z,4.9nm,0.6s
C36M Paulatuk 52.71 26 P P 12 32 51.1 -0.2
C36M IAmb IAmb 12 32 54.9
comp=Z,3.7nm,1.0s
ARU Arti 53.25 316 LR LR 12 55 47.2
comp=Z,93nm,18.0s,baz=74,slow=36
ARU Arti 53.25 316*c i*P P 12 32 55.6 +0.1
ARU *PP **pP** 12 33 14.0 +1.3
ARU S S 12 40 25.3 +3.9
ARU SS SS 12 43 58.3 -2.9
ARU pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 53.25 316 P P 12 32 54.9 -0.6
EUNU Eureka 55.25 9 P P 12 33 09.2 -0.6
ABKAR Akbulak array 55.43 308 P P 12 33 11.2 -0.2
ABKAR Akbulak array 55.43 308 IAmb IAmb 12 33 12.4
comp=Z,5.5nm,0.5s
MTN Manton Dam 55.47 193 P P 12 33 12.4 +0.4
SPITS Spitsbergen Ar 55.88 348 LR LR 12 58 21.7
comp=Z,41nm,18.7s,baz=0.0,slow=37
AKTO Aktyubinsk 56.02 310 LR LR 12 58 45.9
comp=Z,95nm,18.9s,baz=74,slow=38
KIRV Kirov 56.84 321 LR LR 13 01 01.8
comp=Z,42nm,19.4s,baz=49,slow=39
KIRV Kirov 56.84 321⇓ *e*P P 12 33 21.5 +0.2
RES Resolute Bay 57.69 15 IAmb IAmb 12 33 48.8
comp=Z,3.9nm,0.9s
KNRA Kununurra 58.67 195 P P 12 33 34.9 +0.3
YKA Yellowknife Ar 59.24 32 P P 12 33 38.4 +0.3
comp=Z,0.5nm,0.3s,baz=294,slow=8.5,SNR=23
ARCES ARCESS Array B 59.70 339 P P 12 33 40.5 -0.5
comp=Z,1.9nm,0.7s,baz=28,slow=5.5,SNR=4.0
ARCES LR LR 13 03 54.6
comp=Z,63nm,18.6s,baz=35,slow=40
KLMR Klimovskoe 60.05 327 *e*P P 12 33 41.9 -1.7
KLMR pmax pmax
comp=Z,16nm,1.5s
KLMR Klimovskoe 60.05 327 *e*P P 12 33 41.9 -1.7
KLMR AMP 12 33 57.4
comp=Z,16nm,1.5s
BELG Belogornoye 60.77 316 LR LR 13 01 48.6
comp=Z,132nm,19.6s,baz=55,slow=38
BELG Belogornoye 60.77 316⇓ *e*P P 12 33 48.3 -0.3
BELG pmax pmax
comp=Z,4.0nm,1.4s
WB0 Warramunga Arr 61.82 189 P P 12 33 55.5 -0.5
WB0 IAmb IAmb 12 34 17.2
comp=Z,5.5nm,0.9s
WRAB Tennant Creek 61.99 189⇓ *e*P P 12 33 56.7 -0.5
WRAB pmax pmax
comp=Z,11nm,1.6s
WRAB Tennant Creek 61.99 189 P P 12 33 56.3 -0.8
WR0 Warramunga Arr 61.99 188 P P 12 33 56.8 -0.4
WB2 Warramunga Arr 62.00 189 P P 12 33 57.2 0.0
WRA Warramunga Arr 62.00 189 P P 12 33 56.6 -0.6
comp=Z,1.0nm,0.6s,baz=6.5,slow=6.9,SNR=17
WRA pP **pP** 12 34 16.7 +1.9
comp=Z,2.7nm,0.7s,baz=6.7,slow=6.8,SNR=7.4
WRA Warramunga Arr 62.00 189 *i*P P 12 33 56.5 -0.7
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 62.00 189 P P 12 33 57.1 -0.1
GEYT Alibeck 62.18 297 P P 12 33 58.0 -0.4
comp=Z,2.3nm,0.7s,baz=197,slow=19,SNR=3.6
GEYT LR LR 13 03 19.7
comp=Z,79nm,18.1s,baz=205,slow=38
OBN Obninsk 64.65 322 *e*P P 12 34 14.6 +0.2
OBN pmax pmax
comp=Z,4.0nm,0.6s
FIA1 FINESS Array S 64.85 332 P P 12 34 15.5 -0.1
FINES FINESS Array B 64.85 332 P P 12 34 15.3 -0.2
comp=Z,4.9nm,0.4s,baz=55,slow=7.1,SNR=66
FINES LR LR 13 05 10.8

	comp=Z,110nm,18.3s,baz=40,slow=38							
ASAR	**Alice Springs**	**65.72**	**188**	P	**P**	**12 34 21.6**	**0.0**
	comp=Z,0.7nm,0.7s,baz=1.1,slow=7.7,SNR=6.0							
ASAR				pP	**pP**	**12 34 41.3**	**+1.9**
	comp=Z,2.6nm,0.8s,baz=10.0,slow=5.9,SNR=9.7							
ASAR	**Alice Springs**	**65.72**	**188**	P	**P**	**12 34 20.7**	**-0.9**
DZM	**Mont Dzumac**	**67.47**	**156**	*e*LR	LR	12 55 07.0		
	comp=Z,96nm,22.9s							
KIV	**Kislovodsk**	**68.29**	**310**	*e*P	**P**	**12 34 39.0**	**+1.0**
KIV				pmax	pmax			
	comp=Z,45nm,1.1s							
KIV				MLR	MLR			
	comp=Z,95nm,17.0s							
KBZ	**Khabaz**	**68.31**	**310**	P	**P**	**12 34 38.5**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=354,slow=9.3,SNR=4.6							
KBZ				LR	LR	13 07 45.3		
	comp=Z,10.0nm,21.0s,baz=50,slow=39							
FFC	**Flin Flon**	**69.22**	**34**	P	**P**	**12 34 43.4**	**-0.1**
FFC				pmax	pmax			
	comp=Z,7.0nm,1.1s							
FFC	**Flin Flon**	**69.22**	**34**	P	**P**	**12 34 43.4**	**-0.1**
FFC				IAmb	IAmb	12 34 44.8		
	comp=Z,6.5nm,1.1s							
NOA	**NORSAR Array B**	**69.97**	**337**	P	**P**	**12 34 47.6**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=20,slow=13,SNR=8.9							
NOA				LR	LR	13 08 53.6		
	comp=Z,47nm,21.2s,baz=30,slow=39							
BOZ	**Bozeman (W)**	**70.77**	**46**	P	**P**	**12 34 54.5**	**+1.2**
BOZ				pmax	pmax			
	comp=Z,4.0nm,1.2s							
BOZ	**Bozeman (W)**	**70.77**	**46**	P	**P**	**12 34 54.5**	**+1.2**
AKASG	**Malin Array Be**	**70.89**	**322**	P	**P**	**12 34 53.2**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=43,slow=6.4,SNR=7.7							
AKASG	**Malin Array Be**	**70.89**	**322**	*ce*P	**P**	**12 34 56.5**	**+2.8**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.3s							
AKBB	**Malin Array Si**	**70.89**	**322**	⇓*e*P	**P**	**12 34 52.9**	**-0.8**
NVAR	**Mina Array Bea**	**71.53**	**55**	P	**P**	**12 34 58.7**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=287,slow=5.7,SNR=6.1							
NVAR				pP	**pP**	**12 35 16.8**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=290,slow=8.5,SNR=8.2							
NVAR	**Mina Array Bea**	**71.53**	**55**	P	**P**	**12 34 58.8**	**+0.7**
PDAR	**Pinedale Array**	**73.76**	**47**	P	**P**	**12 35 11.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=257,slow=1.9,SNR=10							
PDAR	**Pinedale Array**	**73.76**	**47**	P	**P**	**12 35 10.8**	**-0.4**
BUR08	**Bucovina Ar. S**	**74.92**	**321**	P	**P**	**12 35 17.5**	**-0.3**
BUR08				IAmb	IAmb	12 35 40.3		
	comp=Z,4.5nm,1.1s							
BURAR	**Bucovina Array**	**74.94**	**321**	P	**P**	**12 35 17.6**	**-0.3**
ULM	**Lac du Bonnet**	**75.04**	**34**	P	**P**	**12 35 18.2**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=274,slow=11,SNR=3.0							
ULM	**Lac du Bonnet**	**75.04**	**34**	IAmb	IAmb	12 35 19.1		
	comp=Z,8.0nm,1.4s							
BRTR	**Keskin Array B**	**76.17**	**311**	LR	LR	13 16 29.4		
	comp=Z,25nm,19.9s,baz=100,slow=42							
GERES	**GERESS Array B**	**78.94**	**328**	P	**P**	**12 35 39.2**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=33,slow=4.1,SNR=2.9							
PPT	**Papeete**	**86.21**	**118**	LR	LR	13 06 47.7		
	comp=Z,69nm,21.6s,baz=91,slow=30							
PPT2	**Papeete2**	**86.22**	**118**	*e*LR	LR	13 03 10.5		
	comp=Z,100nm,24.8s							
PPT2	**Papeete2**	**86.22**	**118**	*e*T	T	14 10 41.7		
	comp=Z,5.8nm,0.3s							
TXAR	**Lajitas Array**	**86.58**	**53**	P	**P**	**12 36 20.4**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=267,slow=2.5,SNR=4.3							
TXAR				pP	**pP**	**12 36 37.7**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=287,slow=2,9,SNR=5.0							
MEH	**Mehetia**	**87.43**	**117**	*e*T	T	14 12 11.0		
	comp=Z,15nm,0.3s							
TBI	**Tubuai**	**90.43**	**121**	*e*T	T	14 15 55.7		
	comp=Z,12nm,0.3s							
ESDC	**Sonseca Array**	**93.21**	**335**	LR	LR	13 22 11.8		
	comp=Z,48nm,21.0s,baz=330,slow=38							
H03N2	**Juan Fernandez**	**146.51**	**89**	T	T	15 26 41.5		
	baz=300,slow=76,SNR=43							
H03N3	**Juan Fernandez**	**146.52**	**89**	T	T	15 26 42.6		
	baz=300,slow=76,SNR=36							
H03N1	**Juan Fernandez**	**146.53**	**89**	T	T	15 26 42.8		
	baz=300,slow=76,SNR=54							

*IDC **23** 12:40:46.7±12.0, 12.°34S×167.°18E, h187km±104km, mb3.3/7, mb1 3.5/7, mb1mx3.3/41, mbtmp3.8/7, Error ellipse: s-maj=72.8km s-min=36.6km az=123.0*

ISC 23 12:40:50.2±1.8, 12.°4S±0.°3×167.°1E±0.°4, h220km, n8, σ0°82/9, mb3.7/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.44**	**246**	P	**P**	**12 45 22.3**	**+0.9**
	1.4nm,0.5s,baz=48,slow=15,SNR=2.3						
STKA	**Stephens Creek**	**30.45**	**226**	P	**P**	**12 46 41.7**	**-0.7**
	0.8nm,0.4s,baz=84,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**32.33**	**252**	P	**P**	**12 46 58.7**	**-0.3**
	0.4nm,0.8s,baz=84,slow=8.9,SNR=2.5						
ASAR	**Alice Springs**	**33.44**	**246**	P	**P**	**12 47 08.7**	**+0.1**
	0.4nm,0.7s,baz=67,slow=9.7,SNR=4.4						
ASAR				PcP	**PcP**	**12 49 45.6**	**+0.9**
	0.3nm,0.4s,baz=84,slow=2.7,SNR=5.2						
SONM	**Songino Array**	**80.56**	**323**	P	**P**	**12 52 38.8**	**+0.6**
	0.4nm,0.6s,baz=129,slow=6.4,SNR=2.8						
ILAR	**Eielson Array**	**84.37**	**18**	P	**P**	**12 52 57.1**	**-0.2**
	1.2nm,0.6s,baz=239,slow=5.3,SNR=14						
MKAR	**Makanchi Array**	**95.44**	**317**	P	**P**	**12 53 48.8**	**-1.1**
	0.8nm,0.6s,baz=88,slow=5.7,SNR=7.0						
ARCES	**ARCESS Array B**	**117.98**	**346**	PKP	**PKiKP**	**12 59 10.6**	**+0.5**
	4.3nm,1.2s,baz=58,slow=2.3,SNR=6.1						

*JMA **23** 12:49:11.8, 26.°04N×143.°39E, h73km±3km, M4.4*
*NEIC **23** 12:49:12.6±1.1, 25.°93N±0.°09×143.°3E±0.°1, h37km±7km, mb4.4/18, Error ellipse: s-maj=15.3km s-min=13.4km az=117.0*
*IDC **23** 12:49:13.7±0.8, 25.°91N×143.°23E, h45km±7km, mb3.7/18, mb1 3.9/21, mb1mx3.7/58, mbtmp4.0/21, ML3.6/3, MS3.5/22, Ms1 3.5/22, ms1mx3.4/48, Error ellipse: s-maj=16.8km s-min=7.4km az=61.0*

ISC 23 12:49:12.7±0.6, 26.°03N±0.°07×143.°35E±0.°09, h35km, n78, σ1°49/68, mb4.1/23, MS3.5/16, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHH2	**Haha-jima-NKT2**	**1.21**	**300**	P	**Pn**	**12 49 33.8**	**+0.6**
JHH2				*e*S	**Sn**	**12 49 50.0**	**+1.6**
CBIJ	**Chichi jima**	**1.49**	**316**	P	**Pn**	**12 49 37.4**	**+0.4**
CBIJ				*e*S	**Sn**	**12 49 56.7**	**+1.4**
JCJ	**Chichijima**	**1.49**	**316**	P	**Pn**	**12 49 37.5**	**+0.4**
	176nm,0.3s,baz=218,slow=2.3,SNR=92						
JCJ				S	**Sn**	**12 49 56.9**	**+1.6**
	1μm,0.3s,baz=289,slow=23,SNR=22						
JCJ	**Chichijima**	**1.49**	**316**		**Pn**	**12 49 37.6**	**+0.6**
JHJ	**Hachijo jima 2**	**7.72**	**337**	S	**Sn**	**12 52 24.5**	**-4.3**
	7.9nm,0.3s,baz=76,slow=17,SNR=2.8						
JHJ				LR	LR	12 53 54.3		
	comp=Z,201nm,18.3s,baz=154,slow=36							
BSO3	**Boso 3**	**9.08**	**345**	P	**Pn**	**12 51 21.8**	**+0.7**
JHU	**Hanno**	**10.40**	**341**	P	**Pn**	**12 51 39.2**	**-0.1**
JHU				*e*S	**Sn**	**12 53 29.6**	**-5.0**
JYT	**Yasato**	**10.52**	**346**	P	**Pn**	**12 51 41.9**	**+0.9**
JYT	**Yasato**	**10.52**	**346**		**Pn**	**12 51 41.6**	**+0.6**
JHO	**Hitachi**	**10.82**	**348**	P	**Pn**	**12 51 44.1**	**-1.0**
JGF	**Kuroka**	**10.84**	**333**	Pn	**Pn**	**12 51 46.7**	**+1.3**
JAG	**Ashikaga**	**10.89**	**343**	P	**Pn**	**12 51 44.9**	**-1.2**
MJAR	**Matsushiro Arr**	**11.36**	**339**	P	**Pn**	**12 51 53.3**	**+0.7**
	0.2nm,0.3s,baz=161,slow=10,SNR=8.1						
MJAR				S	**Sn**	**12 53 55.4**	**-2.9**
	0.1nm,0.3s,baz=112,slow=38,SNR=3.5						
MJAR				LR	LR	12 55 44.7		
	comp=Z,130nm,20.8s,baz=150,slow=34							
MAJO	**Matsushiro**	**11.37**	**339**		**Pn**	**12 51 53.6**	**+1.0**
MAT	**Matsushiro**	**11.37**	**339**	P	**Pn**	**12 51 53.5**	**+0.9**
MAT				*e*S	**Sn**	**12 53 54.1**	**-4.3**
JMM	**Marumori**	**12.00**	**350**		**Pn**	**12 52 00.1**	**-1.2**
JMM					Sn	12 54 06.4	-7.5
JSU	**Suzuyama**	**12.55**	**299**	Pn	**Pn**	**12 52 10.3**	**+1.4**
JSD	**Sado**	**12.73**	**341**	Pn	**Pn**	**12 52 10.0**	**-1.2**
JNU	**Nakatsue**	**12.95**	**306**	LR	LR	12 57 10.1		
	comp=Z,172nm,18.2s,baz=111,slow=37							
JOW	**Kunigami**	**13.53**	**277**	LR	LR	12 56 52.2		
	comp=Z,204nm,21.6s,baz=316,slow=34							
ERM	**Erimo**	**15.95**	**359**	Pn	**Pn**	**12 52 54.0**	**-0.5**
KSRS	**Korea Array**	**17.35**	**315**	P	**P**	**12 53 13.7**	**+0.5**
	0.1nm,0.3s,baz=130,slow=12,SNR=4.1						
KSRS				LR	LR	12 59 49.9		
	comp=Z,149nm,18.1s,baz=120,slow=37							
JKA	**Kamikawa-asahi**	**18.06**	**358**	P	**P**	**12 53 22.4**	**+1.4**
JKA	**Kamikawa-asahi**	**18.06**	**358**	IAmb	IAmb	12 53 26.4		
	comp=Z,11nm,1.1s							
ASAJ	**Asahikawa**	**18.06**	**358**	P	**P**	**12 53 22.4**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=247,slow=12,SNR=4.6							
ASAJ				LR	LR	12 59 47.8		
	comp=Z,64nm,21.5s,baz=151,slow=35							
USRK	**Ussuriysk Ar.**	**20.34**	**336**	P	Pn	12 53 47.9	-0.2	
	comp=Z,1.1nm,0.5s,baz=146,slow=12,SNR=2.1							
H11N2	**WAKE ISLAND Hy**	**22.57**	**101**	T	T	13 17 26.7		
	baz=291,slow=75,SNR=32							
H11N1	**WAKE ISLAND Hy**	**22.57**	**101**	T	T	13 17 29.4		
	baz=291,slow=75,SNR=20							
H11N3	**WAKE ISLAND Hy**	**22.58**	**101**	T	T	13 17 29.7		
	baz=291,slow=75,SNR=27							
H11S3	**WAKE ISLAND Hy**	**22.84**	**104**	T	T	13 17 19.2		
	baz=294,slow=74,SNR=24							
H11S1	**WAKE ISLAND Hy**	**22.85**	**104**	T	T	13 17 45.7		
	baz=152,slow=74,SNR=32							
H11S2	**WAKE ISLAND Hy**	**22.86**	**104**	T	T	13 18 20.1		
	SNR=25							
KLR	**Kul'dur**	**24.86**	**342**	P	**P**	**12 54 33.3**	**+1.4**
	comp=Z,2.3nm,0.4s,baz=172,slow=9.2,SNR=8.6							
DAV	**Davao City (W)**	**25.34**	**225**	LR	LR	13 02 46.4		
	comp=Z,219nm,21.8s,baz=32,slow=32							
JAY	**Jayapura**	**28.49**	**186**	LR	LR	13 05 53.8		
	comp=Z,102nm,18.9s,baz=13,slow=35							
PETK	**Petropavlovsk-**	**29.11**	**18**	LR	LR	13 05 24.4		
	comp=Z,50nm,21.8s,baz=195,slow=33							
PMG	**Port Moresby**	**35.41**	**173**	LR	LR	13 08 40.0		
	comp=Z,34nm,18.1s,baz=268,slow=33							
SONM	**Songino Array**	**36.20**	**317**	P	**P**	**12 56 12.1**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=122,slow=8.7,SNR=7.0							
SONM				LR	LR	13 11 01.2		
	comp=Z,50nm,19.2s,baz=116,slow=36							
SONM	**Songino Array**	**36.20**	**317**	IAmb	IAmb	12 56 12.5		
	comp=Z,1.9nm,1.1s							
SEY	**Seymchan**	**37.39**	**7**	P	**P**	**12 56 23.4**	**+1.5**
	comp=Z,2.0nm,0.7s,baz=190,slow=5.3,SNR=7.3							
HNR	**Honiara**	**38.77**	**153**	LR	LR	13 12 04.1		
	comp=Z,56nm,18.6s,baz=332,slow=35							
TLY	**Talaya**	**39.42**	**321**	P	**P**	**12 56 39.7**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=54,slow=5.8,SNR=4.5							
CMAR	**Chiang Mai Arr**	**41.63**	**269**	P	**P**	**12 56 56.4**	**-1.4**
	comp=Z,0.7nm,0.4s,baz=54,slow=8.2,SNR=6.0							
CMAR				pP	**sP**	**12 57 09.7**	**-1.4**
	comp=Z,2.1nm,0.6s,baz=64,slow=6.8,SNR=4.6							
CMAR				LR	LR	13 13 58.2		
	comp=Z,49nm,19.9s,baz=130,slow=36							
WB0	**Warramunga Arr**	**46.34**	**192**	P	**P**	**12 57 34.5**	**-1.0**
WB0				IAmb	IAmb	12 57 47.8		
	comp=Z,5.3nm,1.0s							
WR0	**Warramunga Arr**	**46.50**	**191**	P	**P**	**12 57 35.5**	**-1.3**
WR0				IAmb	IAmb	12 57 51.9		
	comp=Z,5.9nm,1.1s							
WRAB	**Tennant Creek**	**46.51**	**192**	P	**P**	**12 57 35.6**	**-1.3**
WB2	**Warramunga Arr**	**46.52**	**192**	P	**P**	**12 57 35.6**	**-1.3**
WRA	**Warramunga Arr**	**46.52**	**192**	P	**P**	**12 57 35.8**	**-1.1**
	comp=Z,3.2nm,0.5s,baz=12,slow=8.6,SNR=49							
WRA				pP	**sP**	**12 57 48.6**	**-0.8**
	comp=Z,5.4nm,0.5s,baz=11,slow=8.5,SNR=9.6							
FITZ	**Fitzroy Crossi**	**47.12**	**203**	P	**P**	**12 57 40.9**	**-0.7**
ASAR	**Alice Springs**	**50.24**	**191**	P	**P**	**12 58 04.2**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=13,slow=12,SNR=10							
MKAR	**Makanchi Array**	**51.96**	**310**	P	**P**	**12 58 17.2**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=92,slow=8.6,SNR=4.5							
MKAR				PcP	**PcP**	**12 59 30.6**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=89,slow=4.6,SNR=1.8							
MKAR				LR	LR	13 22 26.9		
	comp=Z,64nm,18.5s,baz=100,slow=38							
KURK	**Kurchatov**	**54.47**	**315**	P	**P**	**12 58 36.0**	**-0.7**
KURBB	**Kurchatov Arra**	**54.53**	**315**	P	**P**	**12 58 36.0**	**-1.1**
	comp=Z,1.8nm,0.5s,baz=93,slow=7.3,SNR=7.5							
TRF	**Thorofare Moun**	**56.50**	**30**	P	**P**	**12 58 53.1**	**+1.8**
MLY	**Manley**	**56.57**	**28**	P	**P**	**12 58 53.5**	**+1.9**
MLY				IAmb	IAmb	12 59 13.8		
	comp=Z,1.9nm,1.1s							
BOOM	**Boomskoye usch**	**56.68**	**305**	P	**P**	**12 58 53.9**	**+0.9**
BOOM				IAmb	IAmb	12 59 21.9		
	comp=Z,2.9nm,1.1s							
ILAR	**Eielson Array**	**58.15**	**28**	P	**P**	**12 59 02.8**	**0.0**
	comp=Z,1.4nm,0.9s,baz=252,slow=6.1,SNR=10							
ILAR				LR	LR	13 22 21.7		
	comp=Z,28nm,21.0s,baz=276,slow=34							
SCRK	**Sand Creek**	**59.34**	**29**	P	**P**	**12 59 11.9**	**+0.7**
BVAR	**Borovoye Array**	**59.53**	**318**	P	**P**	**12 59 11.0**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=102,slow=11,SNR=9.7							
BVAR				pP	**sP**	**12 59 24.2**	**-1.8**
	comp=Z,1.9nm,0.6s,baz=169,slow=8.8,SNR=8.4							
KKAR	**Karatay Array**	**60.55**	**307**	P	**P**	**12 59 19.6**	**-0.2**
INK	**Inuvik**	**63.57**	**24**	P	**P**	**12 59 40.4**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=296,slow=5.8,SNR=20							
INK				LR	LR	13 27 13.3		
	comp=Z,47nm,18.6s,baz=194,slow=36							
INK	**Inuvik**	**63.57**	**24**	P	**P**	**12 59 40.1**	**+0.6**
INK				IAmb	IAmb	12 59 41.4		
	comp=Z,6.3nm,1.4s							
ABKAR	**Akbulak array**	**66.58**	**315**	P	**P**	**13 00 01.2**	**+1.9**
ABKAR	**Akbulak array**	**66.58**	**315**	P	**P**	**12 59 59.5**	**+0.2**
ABKAR				IAmb	IAmb	13 00 13.1		
	comp=Z,5.8nm,1.4s							
C36M	**Paulatuk**	**66.82**	**23**	P	**P**	**13 00 01.1**	**+0.7**
YKA	**Yellowknife Ar**	**72.58**	**28**	P	**P**	**13 00 36.3**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=296,slow=6.0,SNR=13							
ARCES	**ARCESS Array B**	**74.89**	**341**	P	**P**	**13 00 51.8**	**+2.3**
	comp=Z,4.1nm,0.9s,baz=75,slow=14,SNR=1.8							
FINES	**FINESS Array B**	**79.36**	**334**	P	**P**	**13 01 14.8**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=93,slow=6.1,SNR=7.3							
NVAR	**Mina Array Bea**	**80.36**	**52**	P	**P**	**13 01 21.7**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=266,slow=5.9,SNR=6.7							
NVAR				LR	LR	13 29 16.4		
	comp=Z,90nm,20.2s,baz=262,slow=30							
NVAR	**Mina Array Bea**	**80.36**	**52**	P	**P**	**13 01 19.9**	**-1.0**
PDAR	**Pinedale Array**	**84.23**	**45**	P	**P**	**13 01 41.5**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=345,slow=3.3,SNR=4.3							
PDAR				LR	LR	13 33 05.0		
	comp=Z,77nm,20.5s,baz=310,slow=31							
NOA	**NORSAR Array B**	**84.98**	**339**	LR	LR	13 42 32.3		
	comp=Z,1.4nm,19.1s,baz=305,slow=38							
RAYN	**Ar Rayn**	**86.53**	**294**	P	**P**	**13 01 52.1**	**-0.6**
RAYN				IAmb	IAmb	13 01 53.2		
	comp=Z,2.4nm,0.7s							
BRTR	**Keskin Array B**	**87.49**	**313**	LR	LR	13 45 13.4		
	comp=Z,44nm,18.2s,baz=109,slow=38							
ULM	**Lac du Bonnet**	**87.77**	**34**	LR	LR	13 43 30.9		
	comp=Z,22nm,18.9s,baz=338,slow=37							
TXAR	**Lajitas Array**	**95.40**	**54**	LR	LR	13 40 00.6		
	comp=Z,32nm,20.6s,baz=0.0,slow=32							
PLCA	**Paso Flores**	**148.34**	**126**	PKPbc	**PKiKP**	**13 08 56.8**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=154,slow=4.7,SNR=4.1							
LPAZ	**La Paz**	**149.16**	**78**	PKPbc	**PKiKP**	**13 08 59.4**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=316,slow=7.7,SNR=5.2							

NNC 23 12:56:11.8±2.8, 44.°96N×77.°09E, h0km, mb3.0, mpv2.8, 3C-2D, Error ellipse: s-maj=19.2km s-min=11.9km az=146.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARXS	**Arharly**	**0.91**	**145**	P	Pg	12 56 29.1	-0.2
ARXS				S	Sg	12 56 39.7	-1.4
KNDC	**Almaty**	**1.75**	**183**	⇑P	Pn	12 56 43.5	+0.1
	14nm,0.5s						
KNDC				⇓S	Sb	12 57 07.4	+0.1
	21nm,0.4s						
MDOK	**Medeo**	**1.80**	**181**	⇑P	Pn	12 56 44.4	+0.2
	1.5nm,0.7s						
MDOK				S	Sb	12 57 08.6	-0.3
	2.1nm,0.8s						
TKM2	**Tokmak 2**	**2.31**	**208**	⇑Pg	Pn	12 56 51.3	0.0
	1.1nm,0.8s						
TKM2				⇓Lg	Lg	12 57 22.8	
	2.6nm,1.2s						

*SOME **23** 12:56:14.5, 44.°70N×82.°17E, h10km*
*NNC **23** 12:56:16.4±0.8, 44.°69N×82.°28E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=10.7km s-min=1.8km az=116.0*

ISC 23 12:56:13.0±2.2, 44.°44N±0.°09×82.°6E±0.°1, h10km, n12, σ0°75/21, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**2.02**	**268**	*e*P	**Pn**	**12 56 48.3**	**+1.0**
	5.0nm,0.1s						
DJR				*e*S	**Sn**	**12 57 12.7**	**+0.1**
	2.3nm,0.3s						
DJR	**Jarkent**	**2.02**	**268**	P	**Pn**	**12 56 48.3**	**+1.0**
	5.0nm,0.1s						
DJR	**Jarkent**	**2.02**	**268**	S	**Sn**	**12 57 12.7**	**+0.1**
	2.3nm,0.3s						
MK31	**Makanchi Array**	**2.37**	**355**	⇑Pn	**Pn**	**12 56 53.0**	**+1.0**
	0.9nm,0.2s,baz=181,slow=13,SNR=91						
MK31				⇓Sn	**Sn**	**12 57 21.0**	**-0.1**
	2.7nm,0.5s,baz=181,slow=26,SNR=16						
MAKZ	**Makanchi**	**2.41**	**350**	⇑Pn	**Pn**	**12 56 53.0**	**+0.5**
	1.1nm,0.3s						
MAKZ				⇓Sn	**Sn**	**12 57 21.1**	**-1.0**
	1.8nm,0.3s						
PDGK	**Podgornoye**	**2.51**	**245**	⇑Pn	**Pb**	**12 56 57.4**	**-0.9**
	1.0nm,0.3s						
PDGK				⇓Sn	**Sb**	**12 57 29.2**	**-0.1**
	6.5nm,0.8s						
PDGK	**Podgornoye**	**2.51**	**245**	Pg	**Pb**	**12 56 57.6**	**-0.6**
	1.7nm,0.2s						
SHLS	**Shalkode**	**2.61**	**242**	*e*P	**Pn**	**12 56 56.4**	**+1.0**
	5.4nm,0.2s						
SHLS				*e*S	**Sn**	**12 57 26.5**	**-0.7**
	9.4nm,0.3s						
UZB	**Uzynbulak**	**2.90**	**245**	*e*P	**Pb**	**12 57 04.6**	**-0.3**
	3.0nm,0.2s						
UZB				*e*S	**Sb**	**12 57 40.4**	**-0.1**
	2.6nm,0.2s						
KPKS	**Kokpek**	**3.00**	**252**	*e*P	**Pb**	**12 57 05.4**	**-1.1**
	9.3nm,0.1s						
KPKS				*e*S	**Sb**	**12 57 42.0**	**-1.1**
	8.7nm,0.2s						
SATY	**Saty**	**3.34**	**247**	*e*P	**Pb**	**12 57 12.1**	**-0.4**
	1.9nm,0.1s						
SATY				*e*S	**Sb**	**12 57 53.3**	**+0.2**
	5.9nm,0.1s						
ARXS	**Arharly**	**3.44**	**268**	*e*P	**Pb**	**12 57 13.8**	**-0.2**
	2.2nm,0.2s						
ARXS				*e*S	**Sb**	**12 57 56.3**	**+0.4**
	4.9nm,0.5s						

ISK 23 13:13:32.6, 36.°19N×33.°69E, h0km, ML1.3/4, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARG	**Kargicak-Mersi**	**0.02**	**57**	PG	Pg	13 13 33.8	+0.7
KARG				SG	Sg	13 13 34.9	+1.5
TISA	**Tisan-Mersin**	**0.03**	**190**	PG	Pg	13 13 33.9	+0.8
TISA				SG	Sg	13 13 35.0	+1.5
YESI	**Yesilovacik-Me**	**0.04**	**279**	PG	Pg	13 13 34.3	+1.0
YESI				SG	Sg	13 13 35.1	+1.4
IKL	**Isikli**	**0.05**	**1**	PG	Pg	13 13 34.5	+1.0
IKL				SG	Sg	13 13 35.4	+1.2
AKKU	**Akkuyu-Mersin**	**0.11**	**254**	PG	Pg	13 13 35.5	+0.7
AKK1	**Akkuyu-Mersin**	**0.13**	**248**	PG	Pg	13 13 35.8	+0.8
OREN	**Orenkoy-Mersin**	**0.18**	**275**	PG	Pg	13 13 36.9	+0.8

NIC 23 13:13:46.6±0.0, 34.°80N×32.°36E, h19km±1km, MI2.3/5, 1C-2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.17**	**98**	⇑P	Pg	13 13 51.5	+0.2
NATA				S	Sg	13 13 55.3	+0.8
NATA				AML	AML	13 13 56.2	
	7.0nm,0.5s						
NATA				AML	AML	13 13 56.2	
	7.0nm,0.5s						
NATA				AML	AML	13 13 57.1	
	9.9nm,0.3s						
NATA				AML	AML	13 13 57.1	
	9.9nm,0.3s						
AKMS	**Akamas**	**0.21**	**354**	⇓P	Pg	13 13 52.3	+0.3
AKMS				S	Sg	13 13 56.0	+0.4
AKMS				AML	AML	13 13 57.1	
	1.4nm,0.4s						
AKMS				AML	AML	13 13 57.1	
	1.4nm,0.4s						
AKMS				AML	AML	13 13 57.4	
	0.8nm,0.2s						
AKMS				AML	AML	13 13 57.4	
	0.8nm,0.2s						
**ALFC

10.0nm,0.3s,baz=212,slow=15,SNR=55
ASAJ S **Sb** **13 16 57.9 -2.2**
5.5nm,0.3s,baz=173,slow=29,SNR=3.6
ASAJ LR LR 13 17 40.8
comp=Z,38nm,21.7s,baz=348,slow=41
JKA Kamikawa-asahi 2.92 19 Pn **Pn** **13 16 21.6 +2.9**
JMM Marumori 3.51 186 **Pn** **13 16 28.1 +1.3**
JSD Sado 4.05 216 Pn **Pn** **13 16 34.9 +0.6**
JVT Yasato 5.20 190 Pn **Pn** **13 16 50.9 +0.9**
MAJO Matsushiro 5.37 207 Pn **Pn** **13 16 54.1 +1.7**
MJAR Matsushiro Arr 5.37 207 P Pn 13 16 57.1 +4.7
0.3nm,0.3s,baz=322,slow=16,SNR=13
MJAR LR LR 13 19 05.8
comp=Z,71nm,18.2s,baz=30,slow=39
MJAR Matsushiro Arr 5.37 207 **Pn** **13 16 55.8 +3.4**
JGF Kuroka 6.52 209 Pn Pn 13 17 14.1 +5.9
USA0B Ussuriysk Arra 7.39 296 Pn **Pn** **13 17 21.9 +1.8**
USRK Ussuriysk Ar. 7.39 296 P Pn 13 17 24.9 +4.8
baz=275,slow=30,SNR=2.5
JWT Wachi 7.62 219 Pn **Pn** **13 17 27.7 +4.4**
JHS Saijyo 9.03 228 Pn **Pn** **13 17 46.1 +3.4**
JMN Monobe 9.61 220 Pn **Pn** **13 17 53.8 +3.2**
KSRS Korea Array 11.04 254 P Pn 13 18 15.1 +5.0
1.1nm,0.3s,baz=64,slow=14,SNR=16
KSRS S **Sn** **13 20 19.4 +5.8**
1.3nm,0.3s,baz=66,slow=24,SNR=12
KSRS LR LR 13 21 54.4
comp=Z,73nm,18.9s,baz=60,slow=34
KS19 Wonju Array Si 11.06 254 Pn **Pn** **13 18 11.8 +1.4**
PETK Petropavlovsk- 16.16 38 P **P** **13 19 22.9 +0.4**
0.1nm,0.3s,baz=205,slow=6.4,SNR=1.7
PETK Petropavlovsk- 16.16 38 **Pn** **13 19 18.8 -0.4**
SEY Seymchan 22.59 13 P **P** **13 20 33.4 +0.9**
0.9nm,0.6s,baz=154,slow=9.8,SNR=6.3
YOJ Yonaguni jima 22.70 228 P **P** **13 20 31.5 -2.5**
SONM Songino Array 25.51 297 P **P** **13 21 01.2 +0.4**
0.2nm,0.4s,baz=86,slow=7.4,SNR=1.8
ADK Adak 30.34 55 P **P** **13 21 42.2 -1.5**
H11N2 WAKE ISLAND Hy 30.65 127 T T 13 53 57.5
baz=321,slow=76,SNR=48
H11N1 WAKE ISLAND Hy 30.66 127 T T 13 53 51.6
baz=321,slow=76,SNR=63
H11N3 WAKE ISLAND Hy 31.67 127 T T 13 53 56.9
baz=321,slow=76,SNR=20
H11S1 WAKE ISLAND Hy 31.48 129 T T 13 54 54.0
baz=322,slow=76,SNR=18
H11S3 WAKE ISLAND Hy 31.48 129 T T 13 54 57.6
baz=322,slow=76,SNR=24
H11S2 WAKE ISLAND Hy 31.50 129 T T 13 55 00.6
baz=322,slow=76,SNR=19
ZALV Zalesovo Beam 39.02 309 P **P** **13 22 59.1 +0.4**
1.4nm,0.5s,baz=83,slow=8.4,SNR=5.5
ZALV Zalesovo Beam 39.02 309 P **P** **13 22 59.2 +0.5**
MKAR Makanchi Array 41.85 298 P **P** **13 23 22.0 -0.3**
0.8nm,0.7s,baz=82,slow=10,SNR=8.5
MKAR Makanchi Array 41.85 298 P **P** **13 23 19.5 -2.8**
ILAR Eielson Array 45.95 35 P **P** **13 23 56.3 +1.4**
1.2nm,0.9s,baz=265,slow=4.8,SNR=8.7
INK Inuvik 50.62 29 P **P** **13 24 30.9 +0.1**
2.1nm,0.3s,baz=288,slow=6.0,SNR=15
EUNU Eureka 55.93 9 P **P** **13 25 09.0 -0.9**
EUNU IAmb IAmb 13 25 12.7
comp=Z,2.0nm,0.7s
KNRA Kununurra 57.92 194 P **P** **13 25 21.4 -3.1**
KNRA IAmb IAmb 13 25 47.7
comp=Z,17nm,1.2s
YKA Yellowknife Ar 60.15 31 P **P** **13 25 39.7 +0.2**
comp=Z,0.7nm,0.8s,baz=307,slow=6.1,SNR=12
WR0 Warramunga Arr 61.33 187 P **P** **13 25 45.3 -2.7**
WR0 IAmb IAmb 13 25 50.7
comp=Z,7.4nm,1.4s
WB2 Warramunga Arr 61.33 187 P **P** **13 25 44.2 -3.8**
WB2 IAmb IAmb 13 25 55.8
comp=Z,4.3nm,1.1s
WRA Warramunga Arr 61.33 187 P **P** **13 25 47.0 -1.0**
comp=Z,0.8nm,0.5s,baz=3.8,slow=7.2,SNR=14
WRA Warramunga Arr 61.33 187 IAmb IAmb 13 25 51.7
comp=Z,0.1nm,0.8s
FINES FINESS Array B 64.95 331 P **P** **13 26 11.7 +0.1**
comp=Z,1.5nm,0.5s,baz=35,slow=7.0,SNR=6.6
AS31 Alice Springs 65.06 187 P **P** **13 26 10.9 -1.8**
ASAR Alice Springs 65.06 187 P **P** **13 26 12.4 -0.3**
comp=Z,0.4nm,0.6s,baz=12,slow=12,SNR=16
NVAR Mina Array Bea 72.51 54 P **P** **13 27 00.9 +1.5**
comp=Z,0.3nm,0.5s,baz=292,slow=5.7,SNR=2.8
PDAR Pinedale Array 74.73 46 P **P** **13 27 13.0 +0.5**
comp=Z,0.5nm,0.6s,baz=264,slow=2.5,SNR=6.2
H03N2 Juan Fernandez 147.33 89 T T 16 19 54.8
baz=300,slow=77,SNR=19
H03N3 Juan Fernandez 147.34 89 T T 16 19 55.7
baz=300,slow=77,SNR=23
H03N1 Juan Fernandez 147.35 89 T T 16 19 56.1
baz=300,slow=77,SNR=27

WEL 23 13:25:27.8±1.0, 32°S×21°×17°8E±4°4, h411km±51km, M4.1/14, mB4.2/5, MLv4.5/14, Mw(mB)3.3/5, Error ellipse: s-maj=0.1km s-min=0.0km az=112.9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**5.87**	**184**	P	P	13 26 59.4	+0.4
HAZ				S	S	13 28 13.8	-0.1
WMGZ	**Waiomatatini S**	**5.91**	**179**	P	P	13 26 59.9	+0.4
WMGZ				S	S	13 28 14.3	-0.4
PKGZ	**Pakihiroa**	**5.99**	**182**	P	P	13 27 01.2	+0.9
PKGZ				S	S	13 28 19.0	+2.7
PUZ	**Puketiti**	**6.17**	**181**	P	P	13 27 02.6	+0.4
PUZ				S	S	13 28 18.2	-1.5
TWGZ	**Tauwhareparae**	**6.28**	**183**	P	P	13 27 05.3	+1.9
TWGZ				S	S	13 28 22.2	+0.2
URZ	**Urewera**	**6.43**	**189**	P	P	13 27 04.1	-0.9
URZ				S	S	13 28 24.1	-0.9
MWZ	**Matawai**	**6.46**	**186**	P	P	13 27 05.9	+0.5
TKGZ	**Te Karaka**	**6.54**	**183**	P	P	13 27 06.4	-0.5
TKGZ				S	S	13 28 27.2	0.0
CNGZ	**Carnagh Statio**	**6.58**	**181**	P	P	13 27 06.5	-0.8
RAGZ	**Rawiri**	**6.63**	**186**	P	P	13 27 08.3	+0.3
MUGZ	**Murupara**	**6.70**	**191**	P	P	13 27 07.5	-1.1
MUGZ				S	S	13 28 30.4	+0.2
RTZ	**Ruatahuna**	**6.80**	**189**	P	P	13 27 09.1	-0.8
RTZ				S	S	13 28 32.9	+0.4
RIGZ	**Rimuhau**	**6.82**	**184**	P	P	13 27 08.8	-1.2
RIGZ				S	S	13 28 31.7	-1.0
SNGZ	**Shannon Statio**	**6.92**	**187**	P	P	13 27 10.7	-0.4
SNGZ				S	S	13 28 36.6	+1.7
NMHZ	**Naumai**	**7.30**	**189**	P	P	13 27 14.8	-0.5
NMHZ				S	S	13 28 46.3	+3.7
BKZ	**Black Stump Fm**	**7.41**	**191**	P	P	13 27 15.5	-1.1
BKZ				S	S	13 28 44.0	-1.0
OTVZ	**Oturere**	**7.58**	**196**	P	P	13 27 18.8	+0.3
KWHZ	**Kaweka Forest**	**7.68**	**191**	P	P	13 27 18.3	-1.2
KWHZ				S	S	13 28 50.2	-0.2

*IDC **23** 13:32:45.5±2.6, 29°.41N×51°.88E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.6/38, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=58.7km s-min=31.9km az=150.0*
*THR **23** 13:32:47.2±0.3, 29°.54N×51°.86E, h6km±12km, ML3.4*
*TEH **23** 13:32:47.2, 29°.46N×51°.99E, h7km, ML3.6*
*OMAN **23** 13:32:50.6, 29°.17N×52°.26E, h5km, mb5.1/15, ml3.5/9*

ISC 23 13:32:46.8±0.6, 29°.38N±0°.05×52°.00E±0°.04, h10km, n63, σ1°65/79, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAZ1	**Kazerun**	**0.39**	**308**	*e*Pg	**Pg**	**13 32 54.3**	**-0.3**
SHI	**Shiraz**	**0.52**	**60**	*e*Pg	**Pg**	**13 32 56.6**	**-0.4**
AHBU	**AHRAM**	**0.80**	**230**	*e*Pg	**Pn**	**13 33 03.4**	**-0.8**
JHRM	**Jahrom**	**1.64**	**122**	*e*Pn	**Pg**	**13 33 19.2**	**+0.9**
KLNJ	**Kolanjah**	**1.66**	**348**	*e*Pg	**Pn**	**13 33 17.8**	**+1.5**
ABEH	**Behbahan**	**1.94**	**309**	*e*Pn	**Pb**	**13 33 22.5**	**+0.2**
IRAM	**Ramesheh**	**2.44**	**8**	*e*Pn	**Pn**	**13 33 28.9**	**+1.9**
IGAR	**Gharneh**	**3.01**	**1**	*e*Pn	**Pn**	**13 33 37.1**	**+2.3**
IMEH	**Mehriz**	**3.02**	**48**	*e*Pn	**Pn**	**13 33 37.8**	**+2.9**
SHK1	**Shahrekord**	**3.09**	**342**	*e*Pn	**Pn**	**13 33 37.2**	**+1.3**
IPIR	**Pirpir**	**3.42**	**344**	*e*Pn	**Pn**	**13 33 41.7**	**+1.1**
NASN	**Na'in**	**3.48**	**11**	*e*Pn	**Pn**	**13 33 42.3**	**+1.0**
NASN	**Na'in**	**3.48**	**11**	*e*Pn	**Pn**	**13 33 42.3**	**+1.0**
IZEF	**Zefreh**	**3.51**	**5**	*e*Pn	**Pn**	**13 33 43.8**	**+2.0**
QRN	**Al-Qurain**	**3.62**	**261**	*e*P		13 33 44.3	
SHMA	**Al-Shehemyia**	**3.63**	**195**	P	**Pn**	**13 33 45.7**	**+2.6**
UMR	**Umm Al-Rimmam**	**3.73**	**274**	*e*P		13 33 45.6	
YZKH	**Yazd**	**3.74**	**36**	*e*Pn	**Pn**	**13 33 46.9**	**+2.2**
YZKH	**Yazd**	**3.74**	**36**	*e*Pn	**Pn**	**13 33 46.9**	**+2.2**
IBAF	**Bafgh**	**3.79**	**54**	*e*Pn	**Pn**	**13 33 48.6**	**+3.2**
RDF	**Al-Radifah**	**3.91**	**264**	*e*P		13 33 48.3	
KHGB	**Koh Gabri**	**4.02**	**75**	*e*Pn	**Pn**	**13 33 51.3**	**+2.7**
ANAR	**Anarak**	**4.08**	**21**	*e*Pn	**Pn**	**13 33 52.4**	**+3.0**
NGRK	**Negar Kerman**	**4.14**	**85**	*e*Pn	**Pn**	**13 33 53.2**	**+2.8**
TVBK	**TV Kerman**	**4.19**	**81**	*e*Pn	**Pn**	**13 33 54.2**	**+3.1**
RST	**Umm Al-Ruwaisa**	**4.36**	**273**	*e*P		13 33 54.7	
JRN	**Qarnain Island**	**4.49**	**170**	P	**Pn**	**13 33 56.8**	**+1.9**
JRN				S	**Sn**	**13 34 48.5**	**+1.3**
KRSH	**Karshahi**	**4.58**	**1**	*e*Pn	**Pn**	**13 33 58.4**	**+2.1**
TRNA	**Turayna**	**4.68**	**189**	P	**Pn**	**13 34 00.9**	**+3.3**
TRNA				S	**Sn**	**13 34 53.8**	**+1.9**
CHMN	**Cheshme madani**	**4.85**	**83**	*e*Pn	**Pn**	**13 34 02.8**	**+2.6**
SHME	**Shamm**	**4.95**	**131**	P	**Pn**	**13 34 02.2**	**+0.9**
ISFB	**Sefidab**	**4.96**	**2**	*e*Pn	**Pn**	**13 34 03.2**	**+1.7**
BANOM	**Banah**	**5.14**	**131**	P	**Pn**	**13 34 05.1**	**+1.2**
	SNR=6.6						
BANOM				S	**Sn**	**13 35 01.9**	**-1.5**
ASAO	**Ashtian**	**5.42**	**343**	*e*Pn	**Pn**	**13 34 08.3**	**+0.5**
ASAO	**Ashtian**	**5.42**	**343**	*e*Pn	**Pn**	**13 34 08.4**	**+0.5**
TPRV	**Parvadeh(Tabas**	**5.42**	**47**	*e*Pn	**Pn**	**13 34 10.4**	**+2.6**
MASF	**Masafi**	**5.45**	**136**	P	**Pn**	**13 34 09.2**	**+1.1**
MASF				S	**Sn**	**13 35 09.5**	**-1.4**
IQOM	**Qom**	**5.50**	**352**	*e*Pn	**Pn**	**13 34 09.4**	**+0.4**
MDH	**Madha**	**5.58**	**136**	P	**Pn**	**13 34 11.2**	**+1.2**
MDH				S	**Sn**	**13 35 12.2**	**-2.0**
ASUD	**Al Ashush, Dub**	**5.59**	**147**	P	**Pn**	**13 34 10.3**	**+0.2**
IVRN	**Varamin**	**5.60**	**358**	*e*Pn	**Pn**	**13 34 11.6**	**+1.3**
FAQ	**Al Faqa, Dubai**	**5.62**	**144**	P	**Pn**	**13 34 10.8**	**+0.3**
FAQ				S	**Sn**	**13 35 14.1**	**-1.1**
KBAM	**BAM**	**5.65**	**91**	*e*Pn	**Pn**	**13 34 13.4**	**+2.5**
UOSS	**Minazif**	**5.79**	**139**	P	**Pn**	**13 34 13.1**	**+0.2**
UOSS				S	**Sn**	**13 35 18.0**	**-1.5**
HATD	**Hatta, Dubai**	**5.85**	**140**	P	**Pn**	**13 34 14.8**	**+1.2**
HATD				S	**Sn**	**13 35 20.8**	**0.0**
MZWR	**Madinat Zayed**	**5.85**	**163**	P	**Pn**	**13 34 15.7**	**+2.1**
MZWR				S	**Sn**	**13 35 20.7**	**0.0**
TNSJ	**Nastanj**	**6.03**	**40**	*e*Pn	**Pn**	**13 34 17.6**	**+1.5**
TKDS	**Koohdasht(Taba**	**6.08**	**45**	*e*Pn	**Pn**	**13 34 18.6**	**+1.7**
SOHO	**SOHO**	**6.62**	**141**	P	**Pn**	**13 34 24.2**	**+0.1**
SOHO				S	**Sn**	**13 35 38.4**	**-1.2**
UMZA	**Um Al Zommool**	**7.22**	**156**	P	**Pn**	**13 34 32.3**	**-0.2**
HOQ	**Hoqain**	**7.49**	**139**	P	**Pn**	**13 34 36.1**	**0.0**
HOQ				S	**Sn**	**13 35 59.8**	**-1.3**
BSY	**Bisya**	**8.10**	**144**	P	**Pn**	**13 34 44.8**	**+0.3**
BSY				S	**Sn**	**13 36 15.3**	**-0.9**
SMDO	**Samad**	**8.32**	**138**	P	**Pn**	**13 34 48.0**	**+0.4**
	SNR=7.0						
SMDO				S	**Sn**	**13 36 19.8**	**-1.9**
WSAR	**Wadi Sarin**	**8.54**	**134**	P	**Pn**	**13 34 50.9**	**+0.4**
	SNR=9.8						
WSAR				S	**Sn**	**13 36 23.5**	**-3.4**
JMDO	**Jabal Madar**	**8.89**	**140**	P	**Pn**	**13 34 56.1**	**+0.8**
JMDO				S	**Sn**	**13 36 32.7**	**-2.9**
WBK	**Wadi Bani Khal**	**9.21**	**135**	P	**Pn**	**13 34 59.1**	**-0.7**
WBK				S	**Sn**	**13 36 41.8**	**-1.7**
MHTO	**MHTO**	**9.95**	**146**	P	**Pn**	**13 35 10.0**	**0.0**
DQM	**DQM**	**10.67**	**151**	P	**Pn**	**13 35 19.1**	**-0.8**
DOK	**Doka**	**10.89**	**169**	P	**Pn**	**13 35 24.1**	**+1.3**
WHFO	**Wadi Hawf**	**11.53**	**172**	P	**Pn**	**13 35 31.4**	**-0.2**
	SNR=11						
DMTO	**DMTO**	**11.92**	**166**	P	**Pn**	**13 35 36.9**	**0.0**
ABTO	**Aybut**	**12.03**	**174**	P	**Pn**	**13 35 38.4**	**-0.1**
BRTR	**Keskin Array B**	**18.27**	**309**	P	**Pn**	**13 37 01.1**	**+0.4**
	0.2nm,0.3s,baz=125,slow=12,SNR=6.0						
MKAR	**Makanchi Array**	**29.26**	**45**	P	**P**	**13 38 50.1**	**+1.1**
	0.4nm,0.7s,baz=230,slow=7.8,SNR=3.0						
NOA	**NORSAR Array B**	**41.58**	**331**	P	**P**	**13 40 33.1**	**-1.5**
	0.9nm,0.8s,baz=122,slow=8.5,SNR=2.4						
ARCES	**ARCESS Array B**	**42.97**	**347**	P	**P**	**13 40 45.4**	**-0.4**
	8.4nm,1.2s,baz=137,slow=11,SNR=1.4						
TORD	**Torodi Ar. Bea**	**49.20**	**262**	P	**P**	**13 41 35.0**	**-0.6**
	1.2nm,0.6s,baz=58,slow=8.1,SNR=11						

IDC 23 13:44:04.1±1.8, 6°.94S×130°.01E, h0km, mb3.9/1, mb1 3.7/4, mb1mx3.4/34, mbtmp3.6/4, ML3.3/3, Error ellipse: s-maj=73.8km s-min=28.9km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.16**	**12**	Pn	Pn	13 45 38.0	+1.6
	1.2nm,0.3s,baz=138,slow=10.0,SNR=20						
SIJI				Sn	Sn	13 46 38.3	-9.3
	0.9nm,0.3s,baz=107,slow=22,SNR=3.8						
WRA	**Warramunga Arr**	**13.60**	**162**	Pn	Pn	13 47 16.8	-1.6
	0.1nm,0.3s,baz=348,slow=13,SNR=1.8						
WRA				Sn	Sn	13 49 40.0	-10
	0.6nm,0.3s,baz=332,slow=22,SNR=13						
ASAR	**Alice Springs**	**17.05**	**168**	P	P	13 48 06.0	0.0
	0.1nm,0.3s,baz=353,slow=12,SNR=11						
ASAR				S	Sn	13 51 03.1	-11
	0.1nm,0.3s,baz=356,slow=27,SNR=2.5						
MKAR	**Makanchi Array**	**68.17**	**327**	P	P	13 55 05.8	-0.5
	0.6nm,0.5s,baz=117,slow=8.1,SNR=5.9						

*NEIC **23** 13:52:18.5±1.8, 35°.5S±0°.1×111°.1W±0°.2, h10km±1km, mb4.8/17, Error ellipse: s-maj=37.1km s-min=6.9km az=53.0*
*IDC **23** 13:52:19.5±0.9, 35°.03S×111°.25W, h0km, mb4.1/5, mb1 4.4/5, mb1mx4.0/30, mbtmp4.1/5, MS3.5/4, Ms1 3.6/4, ms1mx3.3/19, Error ellipse: s-maj=46.5km s-min=28.0km az=77.0*

ISC 23 13:52:19.7±0.6, 35°.3S±0°.2×111°.2W±0°.2, h10km, n40, σ1°58/33, mb4.7/12, MS3.7/7, 6C-1D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO09	**Cerro Castillo**	**32.07**	**132**	P	**P**	**13 58 43.2**	**-3.3**
GO09				IAmb	IAmb	13 58 56.3	
	comp=Z,28nm,1.4s						
PLCA	**Paso Flores**	**32.29**	**112**	P	**P**	**13 58 51.7**	**+3.0**
	comp=Z,5.1nm,1.3s,baz=263,slow=12,SNR=2.8						
MG04	**Isla Riesco**	**32.95**	**135**	P	**P**	**13 58 51.3**	**-2.9**
TBI	**Tubuai**	**35.20**	**279**	*e*LR	LR	14 08 22.5	
	comp=Z,233nm,25.8s						
TAOE	**Nuku Hiva Isla**	**37.29**	**308**	P	**P**	**13 59 30.7**	**-1.4**
PPT2	**Papeete2**	**38.31**	**287**	*e*LR	LR	14 09 50.9	
	comp=Z,191nm,26.2s						
PPT	**Papeete**	**38.33**	**287**	LR	LR	14 11 21.9	
	comp=Z,57nm,19.4s,baz=110,slow=30						
EFI	**East Falkland**	**40.94**	**131**	P	**P**	**13 59 57.4**	**-4.8**
LPAZ	**La Paz**	**42.76**	**75**	LR	LR	14 13 46.2	
	comp=Z,102nm,20.3s,baz=254,slow=30						
RAR	**Rarotonga**	**44.60**	**275**	P	**P**	**14 00 32.2**	**0.0**
CPUP	**Villa Florida**	**46.65**	**94**	LR	LR	14 17 39.2	
	comp=Z,76nm,18.6s,baz=216,slow=32						
QSPA	**South Pole Qui**	**54.93**	**180**	P	**P**	**14 01 53.4**	**+2.9**
	comp=Z,0.7nm,0.8s,baz=57,slow=17,SNR=1.2						
VNDA	**Vanda**	**55.21**	**195**	LR	LR	14 20 22.7	
	comp=Z,25nm,19.2s,baz=38,slow=30						
MSTX	**Muleshoe**	**69.33**	**7**	P	**P**	**14 03 27.5**	**+0.2**
MSTX				IAmb	IAmb	14 03 28.3	
	comp=Z,8.9nm,1.2s						
X18A	**Snowflake**	**69.44**	**1**	P	**P**	**14 03 28.5**	**+0.4**
X18A				IAmb	IAmb	14 03 30.2	
	comp=Z,7.2nm,1.2s						
SHPR	**Sheep Range**	**71.50**	**357**	P	**P**	**14 03 41.0**	**+0.4**
DZM	**Mont Dzumac**	**71.59**	**256**	*e*LR	LR	14 25 00.0	
	comp=Z,75nm,30.8s						
CCUT	**Cedar City**	**72.48**	**358**	P	**P**	**14 03 47.4**	**+0.9**
CCUT				IAmb	IAmb	14 03 49.0	
	comp=Z,6.0nm,1.0s						
PSUT	**Pine Spring**	**73.47**	**358**	P	**P**	**14 03 53.0**	**+0.6**
NV11	**Mina Array Sit**	**73.61**	**354**	P	**P**	**14 03 54.8**	**+1.7**
NVAR	**Mina Array Bea**	**73.62**	**354**	P	**P**	**14 03 54.3**	**+1.0**
	comp=Z,1.4nm,0.8s,baz=186,slow=6.7,SNR=9.6						
MOD	**Modoc Plateau**	**77.25**	**353**	P	**P**	**14 04 14.5**	**+0.6**
MOD				IAmb	IAmb	14 04 16.9	
	comp=Z,9.5nm,1.2s						
BW06	**Boulder Array**	**77.67**	**1**	P	**P**	**14 04 16.1**	**-0.3**
BW06				IAmb	IAmb	14 04 18.8	
	comp=Z,9.4nm,1.4s						
PD31	**Pinedale Array**	**77.67**	**1**	P	**P**	**14 04 15.9**	**-0.4**
PD31				IAmb	IAmb	14 04 18.8	
	comp=Z,8.7nm,1.4s						
PDAR	**Pinedale Array**	**77.67**	**1**	P	**P**	**14 04 16.6**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=151,slow=5.4,SNR=19						
HLID	**Hailey**	**78.51**	**358**	P	**P**	**14 04 22.0**	**+1.1**
HLID				IAmb	IAmb	14 04 23.2	
	comp=Z,6.5nm,0.9s						
YKA	**Yellowknife Ar**	**97.46**	**358**	P	**P**	**14 05 52.0**	**-0.8**
	comp=Z,0.4nm,1.0s,baz=174,slow=4.0,SNR=4.7						
ARR	**Arges**	**145.24**	**59**	⇑P	**PKPdf**	**14 11 58.2**	**+0.8**
BURAR	**Bucovina Array**	**145.53**	**55**	⇑P	**PKPab**	**14 11 59.4**	**+1.2**
BURAR	**Bucovina Array**	**145.53**	**55**		**PKPab**	**14 11 59.0**	**+0.8**
VOIR		**145.53**	**59**	⇑P	**PKPab**	**14 11 58.8**	**+0.6**
DOPR	**Dopca**	**145.75**	**58**	⇑P	**PKPab**	**14 11 59.5**	**+0.6**
MLR	**Muntele Rosu**	**146.16**	**59**	⇑P	**PKPab**	**14 12 01.8**	**+1.1**
MLR	**Muntele Rosu**	**146.16**	**59**		**PKPab**	**14 12 00.6**	**-0.1**
BIZ	**Bicaz**	**146.18**	**57**	⇑P	**PKPbc**	**14 11 60.0**	**+0.1**
XAN	**Xi'an**	**147.12**	**280**		**PKPab**	**14 12 04.0**	**-0.6**
AKASG	**Malin Array Be**	**147.65**	**49**	PKPbc	**PKPbc**	**14 12 03.6**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=273,slow=3.6,SNR=5.6						
CFR	**Carcaliu**	**147.72**	**60**	⇓P	**PKiKP**	**14 12 05.2**	**-1.0**
CMAR	**Chiang Mai Arr**	**148.49**	**246**	PKPbc	**PKiKP**	**14 12 08.7**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=161,slow=1.5,SNR=12						
SONM	**Songino Array**	**149.49**	**306**	PKPbc	**PKPbc**	**14 12 09.3**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=143,slow=3.0,SNR=6.5						

*BJI **23** 14:31:38.3±0.0, 45°.77N×142°.25E, h308km, mB4.7/45, mb5.2/84*
*MOS **23** 14:31:39.8±0.9, 45°.74N×142°.09E, h316km, mb4.8/39, Error ellipse: s-maj=5.8km s-min=4.2km az=105.7*
*NIED **23** 14:31:40.4, 45°.71N×142°.20E, h317km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr0.73; Mθθ0.55; Mϕϕ-1.28; Mrθ1.69; Mθϕ0.57; Mϕr-2.28; Fault plane solution: Mo3.07000×10^16 NP1: φs143.00000°, δ81.00000°, λ76.00000°. NP2: φs20.00000°, δ16.00000°, λ146.00000°.*
*IDC **23** 14:31:40.5±0.4, 45°.85N×142°.05E, h303km±4km, mb4.5/38, mb1 4.6/47, mb1mx4.6/51, mbtmp5.2/47 Error ellipse: s-maj=6.8km s-min=6.4km az=139.0*
*NEIC **23** 14:31:40.6±1.9, 45°.72N±0°.07×142°.1E±0°.1, h310km±5km, mb5.0/409, Error ellipse: s-maj=12.1km s-min=8.9km az=114.0*
*JMA **23** 14:31:40.4±0.2, 45°.71N×142°.20E, h317km±2km, M4.8*
*SKHL **23** 14:31:41.7±0.3, 45°.80N×142°.10E, h320km, mb5.6/28, mbv5.8/2, ms3.6/2, msh5.8/4, msha6.1/20*

ISC 23 14:31:40.4±0.4, 45.73N±0°.03×142°.12E±0°.03, h307km±3km, n810, σ1°22/720, mb5.0/370, 288C-173D, Fault plane solution: NP1: φs54.92738°, δ26.47854°, λ-170.88353°. NP2: φs316.75354°, δ85.94906°, λ-63.81103°. Principal axes: T Plg35.6604°, Azm24.1662°; N Plg26.1186°, Azm134.7637°; P Plg43.0695°, Azm252.0426°; Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWK2	**Keihoku**	**0.44**	**201**	P	**Pn**	**14 32 21.0**	**+1.3**
JWK2				*e*S	**S**	**14 32 52.1**	**+1.1**
JRBN	**Rebuntou**	**0.80**	**248**	P	**Pn**	**14 32 21.8**	**+1.1**
JRBN				*e*S	**S**	**14 32 53.2**	**+0.5**
JRR	**Rishiri**	**0.82**	**224**	P	**Pn**	**14 32 22.3**	**+1.5**
JRR				*e*S	**S**	**14 32 55.1**	**+2.2**
JSE	**Soyaes**	**0.84**	**157**	P	**Pn**	**14 32 21.8**	**+0.9**
JSE				*e*S	**S**	**14 32 53.6**	**+0.5**
YSS	**Yuzh-Sakhalins**	**1.30**	**20**	*i* PN	**Pn**	**14 32 24.4**	**+1.5**
YSS				*e*S	**S**	**14 32 57.6**	**+0.8**
YSS				pmax	pmax		
	comp=Z,5μm,1.4s						
YSS				pmax	pmax		
	comp=Z,3μm,2.3s						
YSS				smax	smax		
	comp=N,5μm,1.0s						
YSS				smax	smax		
	comp=Z,12μm,2.9s						
YSS	**Yuzh-Sakhalins**	**1.30**	**20**	Pn	**Pn**	**14 32 24.3**	**+1.5**
YSS	**Yuzh-Sakhalins**	**1.30**	**20**	*i* P	**Pn**	**14 32 24.4**	**+1.5**
YSS				AMB	AMB	14 32 24.7	
	comp=Z,18μm,0.4s						
YSS				*e*S	**S**	**14 32 57.8**	**+1.0**
YSS				A	A	14 32 58.4	
	comp=Z,7μm,1.0s						
YSS				A	A	14 32 58.4	
	comp=Z,6μm,1.0s						
KHLM	**Kholmsk**	**1.33**	**358**	*e*P	**Pn**	**14 32 24.5**	**+1.5**
KHLM				AMB	AMB	14 32 24.8	
	comp=Z,5μm,0.3s						
KHLM				*e*S	**S**	**14 32 58.0**	**+0.9**
KHLM				A	A	14 32 59.5	
	comp=Z,5μm,0.4s						
KHLM				A	A	14 32 59.5	
	comp=Z,5μm,0.4s						
JSS	**Shosan**	**1.34**	**188**	P	**Pn**	**14 32 24.5**	**+1.2**
JSS				*e*S	**S**	**14 32 59.6**	**+2.0**
JYG	**Yagishiri**	**1.39**	**201**	P	**Pn**	**14 32 24.8**	**+1.2**
JYG				*e*S	**S**	**14 32 59.5**	**+1.5**
ASAJ	**Asahikawa**	**1.65**	**168**	P	**Pn**	**14 32 26.3**	**+1.0**
	comp=Z,369nm,0.3s,baz=313,slow=4.0,SNR=4200						
ASAJ				S	**S**	**14 33 02.5**	**+1.4**
	comp=Z,16nm,0.3s,baz=116,slow=30,SNR=20						
ASAJ	**Asahikawa**	**1.65**	**168**	P	**Pn**	**14 32 26.3**

JAK	**Akkeshi**	**3.30**	**145**	P	**Pn**	**14 32 38.0**	**-1.6**
JAK				*e*S	**S**	**14 33 24.0**	**-3.0**
AKK	**Akkeshi**	**3.34**	**143**	*e*P	**Pn**	**14 32 38.8**	**-1.2**
AKK				AMB	AMB	14 32 42.0	
	comp=N,300nm,0.4s						
AKK				*e*S	**S**	**14 33 24.6**	**-3.2**
AKK				A	A	14 33 25.6	
	comp=N,8μm,0.5s						
AKK				A	A	14 33 25.6	
	comp=N,12μm,0.5s						
UGL	**Uglegorsk**	**3.35**	**359**	*d i*PN	**Pn**	**14 32 41.7**	**+1.8**
UGL				*e*S	**S**	**14 33 27.3**	**-0.3**
UGL				pmax	pmax		
	comp=Z,2μm,0.8s						
UGL				pmax	pmax		
	comp=Z,2μm,0.6s						
UGL				smax	smax		
	comp=E,7μm,3.2s						
UGL				smax	smax		
	comp=N,4μm,2.8s						
UGL				smax	smax		
	comp=E,2μm,1.3s						
UGL				smax	smax		
	comp=N,663nm,1.0s						
UGL	**Uglegorsk**	**3.35**	**359**	*e*P	**Pn**	**14 32 41.7**	**+1.8**
UGL				AMB	AMB	14 32 42.0	
	comp=N,2μm,0.5s						
UGL				*e*S	**S**	**14 33 29.1**	**+1.5**
UGL				A	A	14 33 30.5	
	comp=N,4μm,3.0s						
UGL				A	A	14 33 30.5	
	comp=N,7μm,3.0s						
UGL				A	A	14 33 30.5	
	comp=N,700nm,1.0s						
UGL				A	A	14 33 30.5	
	comp=N,2μm,1.0s						
JNBK	**Urakawa-nobuka**	**3.48**	**172**	P	**Pn**	**14 32 40.6**	**-0.9**
NMR	**Nemuro--Hokkai**	**3.50**	**131** ⇑	*i*PN	**Pn**	**14 32 40.2**	**-1.4**
NMR				*i* S	**S**	**14 33 27.4**	**-3.2**
NEM2	**Nemuro 2**	**3.51**	**131**	P	**Pn**	**14 32 41.1**	**-0.6**
NEM2				*e*S	**S**	**14 33 27.1**	**-3.7**
ERM	**Erimo**	**3.79**	**168**	*c i*PN	**Pn**	**14 32 43.7**	**-1.0**
ERM				pmax	pmax		
	comp=Z,2μm,0.7s						
ERM	**Erimo**	**3.79**	**168**	Pn	**Pn**	**14 32 43.9**	**-0.8**
JKB	**Kayabe**	**3.92**	**192**	P	**Pn**	**14 32 45.5**	**-0.6**
JKB				*e*S	**S**	**14 33 34.6**	**-4.2**
TEY	**Ternei**	**3.95**	**262** ⇑	*i*PN	**Pn**	**14 32 47.2**	**+0.9**
TEY				*i* S	**S**	**14 33 38.7**	**-0.5**
TEY				pmax	pmax		
	comp=Z,700nm,1.2s						
TEY				pmax	pmax		
	comp=E,700nm,1.2s						
TEY				pmax	pmax		
	comp=Z,460nm,1.0s						
TEY				pmax	pmax		
	comp=N,70nm,0.4s						
TEY				pmax	pmax		
	comp=Z,490nm,0.9s						
TEY				smax	smax		
	comp=E,340nm,1.8s						
TEY				smax	smax		
	comp=N,380nm,1.1s						
TEY	**Ternei**	**3.95**	**262**	*i* P	**Pn**	**14 32 47.3**	**+0.9**
TEY				AMB	AMB	14 32 48.3	
	comp=N,500nm,0.9s						
TEY				*e*S	**S**	**14 33 39.4**	**+0.2**
TEY				A	A	14 33 40.4	
	comp=N,400nm,1.0s						
TEY				A	A	14 33 40.4	
	comp=N,340nm,1.0s						
KUR	**Kuril'sk**	**4.07**	**95**	*d i*PN	**Pn**	**14 32 49.1**	**+1.4**
KUR				*e*S	**S**	**14 33 42.6**	**+1.0**
KUR				pmax	pmax		
	comp=Z,700nm,0.5s						
KUR				pmax	pmax		
	comp=E,137nm,0.6s						
KUR				pmax	pmax		
	comp=N,73nm,0.4s						
KUR				pmax	pmax		
	comp=Z,4μm,2.9s						
JTM	**Tenmabayashi**	**5.00**	**189**	Pn	**Pn**	**14 32 56.7**	**-1.5**
TYV	**Tymovskoe**	**5.15**	**4**	*e*PN	**Pn**	**14 33 01.1**	**+1.4**
TYV				*e*S	**S**	**14 34 05.5**	**+1.9**
TYV				pmax	pmax		
	comp=Z,54nm,0.3s						
TYV				smax	smax		
	comp=N,172nm,0.8s						
TYV				smax	smax		
	comp=E,2μm,2.1s						
TYV	**Tymovskoe**	**5.15**	**4**	*e*P	**Pn**	**14 33 01.2**	**+1.5**
TYV				AMB	AMB	14 33 04.0	
	comp=E,200nm,0.5s						
TYV				*e*S	**S**	**14 34 04.0**	**+0.4**
TYV				A	A	14 34 06.0	
	comp=E,200nm,0.8s						
TYV				A	A	14 34 06.0	
	comp=E,400nm,0.8s						
TYV				A	A	14 34 07.0	
	comp=E,3μm,5.0s						
TYV				A	A	14 34 07.0	
	comp=E,4μm,5.0s						
GRNR	**Gornyy**	**6.32**	**325** ⇑	*i*PN	**Pn**	**14 33 14.4**	**+0.9**
GRNR				*e*S	**S**	**14 34 29.4**	**+0.7**
GRNR				pmax	pmax		
	comp=N,20nm,0.9s						
GRNR				pmax	pmax		
	comp=E,20nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,30nm,0.8s						
GRNR				smax	smax		
	comp=N,9.0nm,0.6s						
GRNR				MLR	MLR		
	comp=E,140nm,18.0s						
GRNR				MLR	MLR		
	comp=N,130nm,14.0s						
GRNR				MLR	MLR		
	comp=Z,150nm,14.0s						
USA0B	**Ussuriysk Arra**	**7.35**	**262**	*d i*PN	**Pn**	**14 33 27.2**	**+1.2**
USA0B	**Ussuriysk Arra**	**7.35**	**262**		**Pn**	**14 33 27.3**	**+1.2**
USRK	**Ussuriysk Ar.**	**7.35**	**262**	P	**Pn**	**14 33 27.2**	**+1.2**
	baz=68,slow=12,SNR=576						
USRK				S	**S**	**14 34 52.3**	**+0.7**
	baz=72,slow=24,SNR=9.4						
USRK	**Ussuriysk Ar.**	**7.35**	**262**		**Pn**	**14 33 27.0**	**+1.0**
NKL	**Nikolayevsk**	**7.49**	**353**	*e*P	**Pn**	**14 33 28.1**	**+0.6**
NKL				AMB	AMB	14 33 28.4	
	comp=Z,500nm,0.7s						
NKL				*e*S	**S**	**14 34 54.0**	**-0.4**
OKH	**Okha**	**7.85**	**4**	*de*PN	**Pn**	**14 33 33.8**	**+1.9**
OKH				*i* S	**S**	**14 35 05.3**	**+2.9**
OKH				pmax	pmax		
	comp=Z,100nm,13.1s						
OKH				smax	smax		
	comp=N,900nm,7.6s						
OKH				smax	smax		
	comp=E,500nm,12.2s						
OKH				MLR	MLR		
	comp=Z,200nm,6.0s						
OKH				MLR	MLR		
	comp=N,300nm,5.0s						
OKH				MLR	MLR		
	comp=E,300nm,6.0s						
OKH	**Okha**	**7.85**	**4**	*e*P	**Pn**	**14 33 33.6**	**+1.7**
OKH				AMB	AMB	14 33 34.2	
	comp=E,700nm,0.9s						
OKH				*i* S	**S**	**14 35 04.2**	**+1.8**
OKH				A	A	14 35 07.7	
	comp=E,3μm,6.0s						
OKH				A	A	14 35 07.7	
	comp=E,2μm,6.0s						
OKH				AMS	AMS	14 38 44.4	
	comp=E,300nm,7.0s						
OKH				AMS	AMS	14 38 44.4	
	comp=E,200nm,7.0s						
OKH				AMS	AMS	14 38 44.4	
	comp=E,100nm,7.0s						
KLR	**Kul'dur**	**7.85**	**300**	P	**Pn**	**14 33 32.9**	**+0.8**
	comp=E,8.5nm,0.3s,baz=117,slow=11,SNR=207						
KLR	**Kul'dur**	**7.85**	**300**	*d i*PN	**Pn**	**14 33 33.2**	**+1.2**
JMM	**Marumori**	**7.92**	**188**		**Pn**	**14 33 31.0**	**-2.1**
JSD	**Sado**	**8.21**	**202**	Pn	**Pn**	**14 33 35.4**	**-1.2**
MSHR	**Mys Shultsa**	**8.49**	**252**	*d i*PN	**Pn**	**14 33 40.6**	**+0.7**
MSHR				pmax	pmax		
	comp=Z,75nm,0.7s						
MDJ	**Mudanjiang**	**8.92**	**267**	P	**Pn**	**14 33 46.8**	**+1.6**
MDJ				S	**S**	**14 35 27.4**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,340nm,0.7s						
MDJ	**Mudanjiang**	**8.92**	**267**	Pn	**Pn**	**14 33 46.5**	**+1.3**
EKMR	**Ekimchan**	**9.47**	**324**	*e*P	**Pn**	**14 33 53.0**	**+1.3**
EKMR				AMB	AMB	14 33 59.0	
	comp=Z,22nm,0.5s						
EKMR				*e*S	**S**	**14 35 38.0**	**-0.9**
EKMR				A	A	14 35 40.0	
	comp=Z,30nm,1.0s						
EKMR				A	A	14 35 40.0	
	comp=Z,21nm,1.0s						
JYT	**Yasato**	**9.60**	**189**	Pn	**Pn**	**14 33 50.6**	**-3.0**
MAJO	**Matsushiro**	**9.64**	**199**	*c i*PN	**Pn**	**14 33 52.7**	**-1.3**
MAJO	**Matsushiro**	**9.64**	**199**	Pn	**Pn**	**14 33 52.8**	**-1.3**
MAT	**Matsushiro**	**9.64**	**199**	P	**Pn**	**14 33 52.7**	**-1.4**
MAT				S	**S**	**14 35 38.9**	**-4.3**
MJAR	**Matsushiro Arr**	**9.64**	**199**	P	**Pn**	**14 33 53.0**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=15,slow=11,SNR=62						
MJAR				ScP	**ScP**	**14 42 40.9**	**+0.9**
	baz=63,slow=1.2,SNR=24						
MJAR	**Matsushiro Arr**	**9.64**	**199**	PN	**Pn**	**14 33 52.5**	**-1.6**
MJAR	**Matsushiro Arr**	**9.64**	**199**		**Pn**	**14 33 52.5**	**-1.6**
SKR	**Severo-Kuril's**	**10.57**	**57**	*e*PN	**P**	**14 34 07.4**	**-0.4**
SKR				*e*S	**S**	**14 36 01.8**	**-2.0**
SKR				pmax	pmax		
	comp=Z,765nm,0.7s						
SKR				pmax	pmax		
	comp=Z,400nm,4.5s						
SKR				pmax	pmax		
	comp=Z,1μm,4.3s						
SKR				smax	smax		
	comp=N,355nm,1.1s						
SKR				smax	smax		
	comp=E,141nm,0.7s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
SKR				MLR	MLR		
	comp=Z,300nm,13.0s						
JGF	**Kuroka**	**10.74**	**201**	Pn	**Pn**	**14 34 06.3**	**-1.3**
JSG	**Sagara**	**11.44**	**197**		**Pn**	**14 34 15.8**	**-0.3**
JWT	**Wachi**	**11.62**	**208**	Pn	**Pn**	**14 34 17.5**	**-0.6**
CN2	**Changchun**	**12.01**	**267**	*i* P	**Pn**	**14 34 22.8**	**0.0**
CN2				*e*SP		14 35 33.4	
CN2				*e*S	**S**	**14 36 30.1**	**-6.3**
CN2				pmax	pmax		
	comp=Z,320nm,0.8s						
BMKR	**Bomnak**	**12.36**	**321**	*e*P	**Pn**	**14 34 27.0**	**+0.2**
BMKR				AMB	AMB	14 34 31.7	
	comp=Z,11nm,0.5s						
BMKR				*e*S	**S**	**14 36 47.4**	**+3.6**
ZEA	**Zeya**	**12.50**	**315**	*e*PN	**P**	**14 34 29.3**	**0.0**
ZEA				*e*S	**S**	**14 36 41.3**	**-5.8**
ZEA				pmax	pmax		
	comp=E,20nm,0.8s						
ZEA				pmax	pmax		
	comp=N,30nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,60nm,0.7s						
ZEA				smax	smax		
	comp=N,400nm,7.4s						
ZEA				smax	smax		
	comp=E,400nm,7.4s						
PEA0B	**Petropavlovsk-**	**12.53**	**48**	*d i*PN	**P**	**14 34 30.0**	**+0.4**
PEA0B	**Petropavlovsk-**	**12.53**	**48**	P	**P**	**14 34 30.0**	**+0.4**
PETK	**Petropavlovsk-**	**12.53**	**48**	P	**P**	**14 34 29.6**	**+0.1**
	comp=E,3.8nm,0.3s,baz=221,slow=6.3,SNR=89						
PETK				ScP	**ScP**	**14 42 44.2**	**+0.6**
	comp=E,0.3nm,0.3s,baz=109,slow=6.3,SNR=7.0						
JHS	**Saijyo**	**12.72**	**216**		**P**	**14 34 33.1**	**+1.2**
JHJ	**Hachijo jima 2**	**12.72**	**189**	P	**Pn**	**14 34 30.9**	**-0.6**
	comp=E,38nm,0.3s,baz=191,slow=2.0,SNR=19						
JHJ				S	**S**	**14 36 44.6**	**-7.9**
	comp=E,8.4nm,0.3s,baz=261,slow=22,SNR=2.9						
JHJ2	**Mitsune**	**12.72**	**189**		**Pn**	**14 34 30.6**	**-0.9**
PET	**Petropavlovsk**	**12.99**	**50**	*e*PN	**P**	**14 34 34.8**	**+0.1**
PET				*e*S	**S**	**14 36 59.3**	**+1.3**
PET				pmax	pmax		
	comp=Z,169nm,1.6s						
PET	**Petropavlovsk**	**12.99**	**50**	*e*S	**S**	**14 36 54.3**	**-3.7**
KROS	**Kirovskiy**	**13.03**	**317**	*e*P	**P**	**14 34 36.5**	**+1.3**
KROS				AMB	AMB	14 34 38.0	
	comp=Z,7.0nm,0.5s						
KS19	**Wonju Array Si**	**13.45**	**237**	P	**Pn**	**14 34 40.3**	**+0.1**
KSRS	**Korea Array**	**13.45**	**237**	P	**Pn**	**14 34 40.3**	**+0.2**
	comp=Z,3.2nm,0.3s,baz=46,slow=11,SNR=164						
KSRS				ScP	**ScP**	**14 42 46.5**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=33,slow=1.5,SNR=37						
KSAR	**Wonju Array Be**	**13.48**	**237**	PN	**P**	**14 34 39.3**	**-1.0**
KSAR	**Wonju Array Be**	**13.48**	**237**	P	**P**	**14 34 39.3**	**-1.0**
JMN	**Monobe**	**13.55**	**211**		**Pn**	**14 34 41.4**	**-0.1**
SNY	**Shenyang**	**13.95**	**260**	⇓P	**Pn**	**14 34 46.8**	**+0.8**
SNY				pmax	pmax		
	comp=Z,200nm,1.2s						
INCN	**Inchon**	**14.20**	**240**	P	**Pn**	**14 34 50.2**	**+1.1**
INCN	**Inchon**	**14.20**	**240**	Pn	**Pn**	**14 34 50.2**	**+1.1**
TJN	**Taejon**	**14.51**	**235**	*d i*P	**Pn**	**14 34 53.1**	**+0.3**
MA2	**Magadan**	**14.81**	**17**	P	**P**	**14 34 54.8**	**+0.1**
	comp=Z,23nm,0.3s,baz=201,slow=10,SNR=325						
MA2				ScP	**ScP**	**14 42 49.6**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=158,slow=2.8,SNR=4.4						
MA2	**Magadan**	**14.81**	**17**	*c i*P	**P**	**14 34 54.9**	**+0.3**
MA2				pmax	pmax		
	comp=Z,190nm,0.9s						
MA2	**Magadan**	**14.81**	**17**		**Pn**	**14 34 55.5**	**-0.4**
JTU	**Tsushima**	**14.81**	**225**		**Pn**	**14 34 56.3**	**+0.1**
JNU	**Nakatsue**	**15.28**	**218**	P	**Pn**	**14 35 01.1**	**-0.7**
	comp=Z,2.2nm,0.3s,baz=286,slow=2.8,SNR=12						
JNU	**Nakatsue**	**15.28**	**218**	P	**P**	**14 35 00.7**	**+0.6**
JNU				IAmb	IAmb	14 35 03.5	
	comp=Z,76nm,1.0s						
HIA	**Hailar**	**15.52**	**291**	P	**P**	**14 35 02.7**	**+0.1**
HIA				pmax	pmax		
	comp=Z,289nm,0.7s						
HIA	**Hailar**	**15.52**	**291**		**P**	**14 35 02.7**	**+0.1**
DL2	**Dalian**	**16.60**	**253**	P	**P**	**14 35 15.3**	**+0.9**
DL2				S	**S**	**14 38 12.8**	**+0.7**
DL2				ScP	**ScP**	**14 42 54.3**	**+3.2**
DL2				pmax	pmax		
	comp=Z,260nm,0.6s						
DL2				pmax	pmax		
	comp=Z,140nm,8.6s						
JSU	**Suzuyama**	**16.85**	**217**	P	**P**	**14 35 17.5**	**+0.3**
YAK	**Yakutsk**	**17.85**	**341**	P	**P**	**14 35 26.5**	**-1.0**
	comp=Z,2.2nm,0.3s,baz=142,slow=4.0,SNR=78						
YAK				S	**S**	**14 38 32.1**	**-4.1**
	comp=Z,0.1nm,0.3s,baz=32,slow=23,SNR=10						
YAK	**Yakutsk**	**17.85**	**341**	*e*P	**P**	**14 35 26.6**	**-1.0**
YAK				*e*S	**S**	**14 38 36.1**	**0.0**
YAK				pmax	pmax		
	comp=Z,103nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,16nm,1.1s						
YAK				smax	smax		
	comp=E,1μm,1.6s						
YAK				smax	smax		
	comp=N,738nm,1.4s						
YAK	**Yakutsk**	**17.85**	**341**	P	**P**	**14 35 26.4**	**-1.2**
SEY	**Seymchan**	**18.20**	**15**	*i*P	**P**	**14 35 31.9**	**+0.5**
	comp=N,49nm,0.3s,baz=197,slow=7.8,SNR=2610						
SEY	**Seymchan**	**18.20**	**15**	*c i*P	**P**	**14 35 31.7**	**+0.3**
JCJ	**Chichijima**	**18.60**	**180**	P	**P**	**14 35 36.4**	**+0.4**
	comp=N,9.0nm,0.3s,baz=312,slow=11,SNR=7.0						
JCJ	**Chichijima**	**18.60**	**180**	P	**P**	**14 35 36.0**	**0.0**
BJI	**Beijing**	**19.80**	**263**	P	**P**	**14 35 48.3**	**-0.3**
BJI				S	**S**	**14 39 14.8**	**+1.0**
BJI				ScS	**ScS**	**14 46 41.3**	**+0.7**
BJI				pmax	pmax		
	comp=N,270nm,0.8s						
BJI				pmax	pmax		
	comp=N,310nm,3.5s						
BJT	**Baijiatuau**	**19.81**	**263**	P	**P**	**14 35 48.0**	**-0.8**
BJT				pmax	pmax		
	comp=Z,202nm,0.8s						
BJT	**Baijiatuau**	**19.81**	**263**	P	**P**	**14 35 48.0**	**-0.8**
BOD	**Bodaibo**	**21.01**	**315**	*e*P	**P**	**14 35 58.3**	**-2.1**
BOD				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA	**Tai'an**	**21.06**	**252**	P	**P**	**14 36 01.3**	**+0.1**
TIA				pmax	pmax		
	comp=Z,88nm,0.8s						
JOW	**Kunigami**	**21.86**	**215**	P	**P**	**14 36 09.3**	**+0.8**
	comp=Z,47nm,0.7s,baz=42,slow=12,SNR=12						
JOW	**Kunigami**	**21.86**	**215**	P	**P**	**14 36 08.3**	**-0.2**
JOW				IAmb	IAmb	14 36 12.7	
	comp=Z,54nm,0.7s						
NJ2	**Nanjing**	**22.58**	**241**	⇓P	**P**	**14 36 15.8**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,150nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,480nm,3.5s						
HHC	**Hu-ho-hao-te**	**22.69**	**269**	*e*P	**P**	**14 36 17.0**	**+0.9**
HHC				S	**S**	**14 39 59.4**	**-1.7**
HHC				pmax	pmax		
	comp=Z,65nm,0.9s						
HHC				pmax	pmax		
	comp=Z,990nm,5.3s						
TIY	**Taiyuan**	**23.46**	**261**	*e*P	**P**	**14 36 24.9**	**+1.8**
TIY				pmax	pmax		
	comp=Z,190nm,1.2s						
BTO	**Baotou**	**23.87**	**269**	P	**P**	**14 36 28.0**	**+1.2**
ULN	**Ulaanbaatar**	**23.98**	**288**	*d i*P	**P**	**14 36 27.9**	**+0.2**
ULN				pmax	pmax		
	comp=Z,43nm,0.6s						
ULN	**Ulaanbaatar**	**23.98**	**288**	P	**P**	**14 36 28.3**	**+0.6**
ULN				IAmb	IAmb	14 36 29.0	
	comp=Z,51nm,0.6s						
SONM	**Songino Array**	**24.42**	**288**	P	**P**	**14 36 32.1**	**+0.4**
	comp=Z,70nm,0.5s,baz=79,slow=8.8,SNR=486						
SONM				S	**S**	**14 40 29.3**	**+0.9**
	comp=Z,4.5nm,1.2s,baz=84,slow=15,SNR=1.8						
SONM				ScP	**ScP**	**14 43 10.2**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=140,slow=2.6,SNR=15						
SONM	**Songino Array**	**24.42**	**288**	P	**P**	**14 36 32.4**	**+0.7**
SONM				IAmb	IAmb	14 36 32.9	
	comp=Z,38nm,0.6s						
AMKA	**Amchitka**	**25.05**	**63**	P	**P**	**14 36 37.0**	**-0.1**
BILL	**Bilibino**	**25.62**	**21**	*de*P	**P**	**14 36 40.1**	**-1.9**
BILL				*e*S	**S**	**14 40 46.0**	**-0.5**
BILL				pmax	pmax		
	comp=Z,34nm,1.0s						
BILL	**Bilibino**	**25.62**	**21**	P	**P**	**14 36 40.6**	**-1.3**
BILL				IAmb	IAmb	14 36 41.9	
	comp=Z,23nm,0.4s						
TLY	**Talaya**	**25.85**	**297**	P	**P**	**14 36 44.2**	**-0.1**
	comp=Z,2.9nm,0.4s,baz=95,slow=7.0,SNR=5.6						
TLY	**Talaya**	**25.85**	**297**	P	**P**	**14 36 43.5**	**-0.8**
ZAK	**Zakamensk**	**26.16**	**294**	*e*P	**P**	**14 36 47.0**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,24nm,1.1s						
WHN	**Wuhan**	**26.42**	**245**	⇓P	**P**	**14 36 50.1**	**+0.6**
WHN				pmax	pmax		
	comp=Z,130nm,0.6s						
TIXI	**Tiksi**	**26.76**	**351**	P	**P**	**14 36 50.7**	**-1.4**
	comp=Z,11nm,0.4s,baz=140,slow=12,SNR=82						
TIXI	**Tiksi**	**26.76**	**351**	*ce*P	**P**	**14 36 49.8**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,28nm,0.5s						
TIXI	**Tiksi**	**26.76**	**351**	P	**P**	**14 36 50.4**	**-1.7**
MOY	**Mondy**	**27.50**	**297**	*e*P	**P**	**14 36 58.5**	**-0.6**
MOY				pmax	pmax		
	comp=Z,18nm,1.5s						
SSLB	**Suanglung**	**27.80**	**225**	P	**P**	**14 37 00.9**	**-1.0**
XAN	**Xi'an**	**27.83**	**257**	P	**P**	**14 37 02.4**	**+0.3**
XAN				pmax	pmax		
	comp=Z,56nm,1.2s						
XAN				pmax	pmax		
	comp=Z,160nm,3.7s						
XAN	**Xi'an**	**27.83**	**257**	P	**P**	**14 37 02.2**	**+0.1**
XAN				pmax	pmax		
	comp=Z,25nm,0.7s						
XAN	**Xi'an**	**27.83**	**257**	P	**P**	**14 37 02.2**	**+0.1**
YULB	**Yu-li**	**27.96**	**224**	P	**P**	**14 37 04.1**	**+0.8**
QZH	**Quanzhou**	**28.08**	**230**	*e*P	**P**	**14 37 04.8**	**+0.5**
TPUB	**Ta-pu**	**28.37**	**225**	P	**P**	**14 37 06.6**	**-0.3**
ENH	**Enshi**	**29.74**	**250**	P	**P**	**14 37 18.2**	**-0.7**
LZH	**Lanzhou**	**30.24**	**265**	⇓P	**P**	**14 37 25.0**	**+1.6**
LZH				pP	pwP	14 38 25.4	+1.3
LZH				sP	sP	14 39 01.5	+4.5
LZH				SS	SS	14 44 12.0	-5.7
LZH				pmax	pmax		
	comp=Z,230nm,1.2s						
LZH				pmax	pmax		
	comp=Z,390nm,5.4s						
GAMB	**Gambell**	**31.25**	**38**	P	**P**	**14 37 30.3**	**-1.4**
GAMB	**Gambell**	**31.25**	**38**	P		14 37 30.2	
	baz=257						
GTA	**Gaotai**	**31.50**	**274**	⇓P	**P**	**14 37 35.8**	**+1.4**
GTA				pP	pP	14 38 36.8	+3.8
GTA				sP	sP	14 39 12.4	+4.1
GTA				S	**S**	**14 42 21.5**	**+2.0**
GTA				ScP	**ScP**	**14 43 33.1**	**+0.9**
GTA				ScS	**ScS**	**14 47 31.0**	**+0.2**
GTA				pmax	pmax		
	comp=Z,110nm,0.7s						
CD2	**Chengdu**	**33.19**	**257**	P	**P**	**14 37 49.8**	**+0.9**
CD2				pmax	pmax		
	comp=Z,140nm,1.0s						
TNA	**Tin City**	**33.23**	**36**	P	**P**	**14 37 48.0**	**-0.7**
TNA	**Tin City**	**33.23**	**36**	P		14 37 47.8	
	baz=258,SNR=6.5						
SZP	**Santa**	**33.39**	**220**	P	**P**	**14 37 50.6**	**-0.1**
AKUT	**Akutan**	**33.88**	**56**	P	**P**	**14 37 52.2**	**-2.2**
AKUT				IAmb	IAmb	14 38 11.4	
	comp=Z,97nm,1.2s						
ANM	**Nome**	**34.12**	**38**	P	**P**	**14 37 55.6**	**-0.9**
ANM				pmax	pmax		
	comp=Z,39nm,1.0s						
ANM	**Nome**	**34.12**	**38**	P	**P**	**14 37 55.5**	**-0.9**
ANM				IAmb	IAmb	14 37 57.0	
	comp=Z,39nm,1.0s						
ANM	**Nome**	**34.12**	**38**	P		14 37 55.9	
	baz=262,SNR=14						
GYA	**Guiyang**	**34.13**	**248**	⇓P	**P**	**14 37 57.3**	**+0.2**
RDOG	**Red Dog Mine**	**35.66**	**32**	P	**P**	**14 38 08.2**	**-1.3**
RDOG				IAmb	IAmb	14 38 08.5	
	comp=Z,26nm,0.6s						
RDOG	**Red Dog Mine**	**35.66**	**32**	P		14 38 08.1	
	baz=260						
NRIK	**Noril'sk**	**35.77**	**330**	P	**P**	**14 38 09.1**	**-1.3**
	comp=Z,9.0nm,0.4s,baz=115,slow=3.2,SNR=8.6						
NRIK	**Noril'sk**	**35.77**	**330**	*de*P	**P**	**14 38 09.2**	**-1.2**
NRIK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
NRIK	**Noril'sk**	**35.77**	**330**	P	**P**	**14 38 09.0**	**-1.3**
DGZ	**Jazzator, Alta**	**36.33**	**297**	*d i*P	**P**	**14 38 15.9**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SDPT	**Sand Point**	**36.74**	**54**	P	**P**	**14 38 16.2**	**-2.5**
SDPT				IAmb	IAmb	14 38 18.5	
	comp=Z,68nm,0.7s						
ZAA0	**Zalesovo Array**	**36.93**	**304**	P	**P**	**14 38 19.0**	**-1.3**
ZALV	**Zalesovo Beam**	**36.93**	**304**	P	**P**	**14 38 19.5**	**-0.8**
	comp=Z,4.1nm,0.5s,baz=83,slow=9.1,SNR=18						
ZALV				PcP	**PcP**	**14 40 35.7**	**+1.5**
	comp=Z,2.2nm,0.5s,baz=60,slow=3.7,SNR=3.8						
ZALV				ScP	**ScP**	**14 43 51.4**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=68,slow=3.5,SNR=11						
ZALV	**Zalesovo Beam**	**36.93**	**304**	P	**P**	**14 38 18.9**	**-1.4**
KMI	**Kunming**	**37.62**	**250**	⇓P	**P**	**14 38 27.5**	**+0.9**
KMI				pP	pwP	14 39 29.4	+0.3
KMI				sP	sP	14 40 02.0	+0.4
KMI				pmax	pmax		
	comp=Z,88nm,0.9s						
**QIZ

baz=294
ZSN Zaisan 38.62 294 *e*P P 14 38 34.0 -0.5
IMAR Indian Mountai 39.08 36 P P 14 38 36.9 -1.1
CHUM Lake Minchumin 39.80 39 P 14 38 43.8
baz=275,SNR=16
PPLA Purkeypile 39.96 41 IAmb IAmb 14 38 47.6
comp=Z,56nm,0.9s
PPLA Purkeypile 39.96 41 P 14 38 45.3
baz=276,SNR=14
RSO Redoubt South 40.01 44 P P 14 38 45.9 0.0
SPCR Spurr Chakacha 40.17 43 P 14 38 46.8
baz=278,SNR=21
OHAK Old Harbor 40.33 49 P 14 38 47.7
baz=282,SNR=12
BPAW Bear Paw Mtn. 40.37 39 P P 14 38 48.3 -0.2
BPAW Bear Paw Mtn. 40.37 39 P 14 38 47.9
baz=276,SNR=29
SKT Skwentna 40.38 42 P 14 38 47.9
baz=278,SNR=12
MLY Manley 40.38 37 P 14 38 48.1
baz=275,SNR=47
COLD Coldfoot 40.45 34 P 14 38 48.2
baz=273,SNR=37
KTH Kantishna Hill 40.45 39 IAmb IAmb 14 38 50.2
comp=Z,79nm,0.8s
MK31 Makanchi Array 40.50 294*d i*P P 14 38 49.5 -0.4
MKAR Makanchi Array 40.50 294 P P 14 38 49.8 -0.1
comp=Z,8.0nm,0.5s,baz=78,slow=8.8,SNR=113
MKAR ScP **ScP** 14 44 05.2 +0.1
comp=Z,5.1nm,0.6s,baz=61,slow=3.9,SNR=13
SEM Semipalatinsk 40.55 300 *e*P P 14 38 49.0 -1.5
baz=300
SEM Semipalatinsk 40.55 300 *e*P P 14 38 49.0 -1.5
KDAK Kodiak Island 40.58 48 P P 14 38 49.9 -0.4
comp=Z,51nm,0.5s,baz=47,slow=0.3,SNR=134
KDAK Kodiak Island 40.58 48*d i*P P 14 38 49.8 -0.5
KDAK pmax pmax
comp=Z,41nm,0.4s
KDAK Kodiak Island 40.58 48 P P 14 38 49.9 -0.4
KDAK IAmb IAmb 14 38 51.6
comp=Z,42nm,0.5s
KDAK Kodiak Island 40.58 48 P 14 38 49.5
baz=282
TOLK Toolik Lake Re 40.63 32 IAmb IAmb 14 38 50.5
comp=Z,48nm,0.6s
TOLK Toolik Lake Re 40.63 32 P 14 38 49.5
baz=272,SNR=73
MAKZ Makanchi 40.69 294 P P 14 38 51.4 -0.1
MAKZ pmax pmax
comp=Z,12nm,0.5s
MAKZ Makanchi 40.69 294 P P 14 38 51.4 -0.1
HOM Homer 40.70 45 IAmb IAmb 14 38 53.0
comp=Z,102nm,0.8s
TRF Thorofare Moun 40.75 40 IAmb IAmb 14 38 53.0
comp=Z,46nm,0.4s
TRF Thorofare Moun 40.75 40 P 14 38 51.1
baz=277,SNR=29
SUA Susitna One 40.82 43 IAmb IAmb 14 38 53.4
comp=Z,64nm,0.5s
SUA Susitna One 40.82 43 P 14 38 51.5
baz=279,SNR=22
CUT Chulitna 40.90 41 P 14 38 51.9
baz=278,SNR=23
CNPM China Poot 40.92 46 IAmb IAmb 14 38 55.5
comp=Z,64nm,0.5s
I23K Minto, Yukon-K 40.95 37 IAmb IAmb 14 38 53.8
comp=Z,51nm,0.7s
I23K Minto, Yukon-K 40.95 37 P 14 38 52.8
baz=276,SNR=48
BRLK Bradley Lake 41.05 45 P P 14 38 53.4 -0.7
BRLK IAmb IAmb 14 38 55.2
comp=Z,61nm,0.6s
BRSE Bradley Lake S 41.13 45 P 14 38 54.1
baz=281
NEA2 Nenana 41.14 38 IAmb IAmb 14 38 55.1
comp=Z,94nm,0.6s
NEA2 Nenana 41.14 38 P 14 38 54.1
baz=277,SNR=53
MCK McKinley 41.31 39 P 14 38 55.5
baz=278,SNR=32
RC01 Rabbit Creek A 41.37 43 P 14 38 55.8
baz=280,SNR=18
KURK Kurchatov 41.44 301 P P 14 38 57.5 +0.1
KURK Kurchatov 41.44 301 P P 14 38 57.5 +0.1
O22K Cooper Landing 41.49 44 P 14 38 56.6
baz=281,SNR=15
KURBB Kurchatov Arra 41.53 301 P P 14 38 57.5 -0.6
comp=Z,19nm,0.4s,baz=70,slow=8.7,SNR=141
KURBB Kurchatov Arra 41.53 301 P P 14 38 57.0 -1.1
PMR Palmer 41.56 42 P 14 38 57.3
baz=280,SNR=20
WRH Wood River Hil 41.58 38 IAmb IAmb 14 38 58.6
comp=Z,76nm,1.1s
WAT2 Susitna Watana 41.58 40 P 14 38 57.2
baz=279
TCOL CIGO, UAF Yank 41.62 37 P 14 38 58.2
baz=278,SNR=30
COLA College 41.62 37*c i*P P 14 38 57.9 -0.7
COLA pmax pmax
comp=Z,82nm,0.8s
COLA College 41.62 37 P P 14 38 57.9 -0.7
COLA College 41.62 37 P 14 38 58.3
baz=278
CCB Clear Creek Bu 41.67 38 IAmb IAmb 14 38 59.9
comp=Z,43nm,0.6s
SEW Seward 41.69 44 IAmb IAmb 14 38 59.4
comp=Z,55nm,0.8s
SEW Seward 41.69 44 P 14 38 58.3
baz=282,SNR=11
POKR Poker Plat Res 41.77 37 P 14 38 59.4
baz=278,SNR=37
SML Sawmill 41.90 42 P 14 39 00.5
baz=281,SNR=19
KNK Knik Glacier 41.91 42 P 14 39 00.6
baz=281
WAT6 Susitna Watana 42.03 41 P 14 39 01.1
baz=280,SNR=17
IL31 42.05 37 IAmb IAmb 14 39 02.7
comp=Z,80nm,0.6s
ILAR Eielson Array 42.05 37 P P 14 39 00.8 -1.2
comp=Z,60nm,0.6s,baz=270,slow=7.1,SNR=407
ILAR PcP **PcP** 14 40 49.2 -1.2
comp=Z,1.8nm,0.8s,baz=297,slow=3.8,SNR=4.9
ILAR ScP **ScP** 14 44 10.3 -0.5
comp=Z,1.2nm,0.8s,baz=282,slow=4.9,SNR=4.4
ILAR Eielson Array 42.05 37 P P 14 39 01.1 -0.9
HDA Harding Lake 42.08 38 P 14 39 00.9
baz=279,SNR=86
HDA P 14 39 00.9
baz=279,SNR=86
PWL Port Wells 42.08 43 IAmb IAmb 14 39 04.8
comp=Z,59nm,0.4s
SCM Sheep Creek Mo 42.36 42 IAmb IAmb 14 39 07.1
comp=Z,62nm,0.6s
NONG Nongkai 42.44 242 P P 14 39 06.0 +0.2
comp=Z,116nm,0.8s
PRP Porcupine Dome 42.50 36 P P 14 39 05.7 -0.1
PRP Porcupine Dome 42.50 36 P 14 39 05.7
baz=279
BMAR Burnt Mountain 42.60 33 P P 14 39 06.2 -0.4
BMAR PcP 14 40 53.3 +1.0
LSA Lhasa 42.64 266 P P 14 39 09.7 +1.8
LSA Lhasa 42.64 266 P P 14 39 09.7 +1.8
LSA pmax pmax
comp=Z,42nm,0.6s
LSA Lhasa 42.64 266 P P 14 39 09.7 +1.8
LSA IAmb IAmb 14 39 11.3
comp=Z,42nm,0.6s
GLI Glacier Island 42.67 43 P P 14 39 06.0 -1.1
GLI Glacier Island 42.67 43 P 14 39 06.3
baz=283,SNR=7.3
M24K Tolsona, Glenn 42.84 41 IAmb IAmb 14 39 09.2
comp=Z,51nm,0.7s
M24K Tolsona, Glenn 42.84 41 P 14 39 08.6
baz=282,SNR=14
PAX Paxson 42.98 40 P 14 39 08.5
baz=282,SNR=18
KLU Klutina 43.09 42 IAmb IAmb 14 39 11.2
comp=Z,76nm,0.7s
KLU Klutina 43.09 42 P 14 39 10.4
baz=283,SNR=29
EYAK Cordova Ski Ar 43.39 43 IAmb IAmb 14 39 13.9
comp=Z,53nm,0.7s
EYAK Cordova Ski Ar 43.39 43 P 14 39 13.0
baz=284
DOT Dot Lake 43.46 39 IAmb IAmb 14 39 13.8
comp=Z,46nm,0.6s

N25K Chitina, Valde 43.68 42 P 14 39 15.3
baz=284,SNR=12
TDK Taldyqorghan 43.69 293 *e*P P 14 39 15.6 +0.1
baz=293
TDK Taldyqorghan 43.69 293 *e*P P 14 39 15.6 +0.1
PDGK Podgornoye 43.70 290 P P 14 39 15.0 -0.7
MENT Mentasta 43.77 39 IAmb IAmb 14 39 17.1
comp=Z,46nm,0.6s
SHLS Shalkode 43.79 290 *e*P P 14 39 13.9 -2.5
baz=290
SHLS Shalkode 43.79 290 *e*P P 14 39 13.9 -2.5
BMRM Bremner River 43.83 42 P 14 39 16.3
baz=284,SNR=12
RAGM Ragged Mountai 43.95 43 IAmb IAmb 14 39 23.3
comp=Z,39nm,0.6s
KHON Khomkaen 43.95 241 P P 14 39 18.8 +1.0
comp=Z,194nm,0.6s
GLB Gilahina Butte 44.09 42 IAmb IAmb 14 39 21.9
comp=Z,39nm,0.5s
UZB Uzynbulak 44.09 290 *e*P P 14 39 18.2 -0.6
baz=290
UZB Uzynbulak 44.09 290 *e*P P 14 39 18.2 -0.6
KPKS Kokpek 44.17 291 *e*P P 14 39 19.1 -0.2
baz=291
KPKS Kokpek 44.17 291 *e*P P 14 39 19.1 -0.2
VRDI Verde Repeater 44.31 42 IAmb IAmb 14 39 21.3
comp=Z,51nm,0.6s
CM34 Chiang Mai Arr 44.39 247 P P 14 39 21.9 +0.7
EGAK Eagle 44.46 37 P 14 39 20.2
baz=283,SNR=126
MCARA McCarthy VSAT 44.47 42 P 14 39 22.0
baz=285,SNR=34
CM35 Chiang Mai Arr 44.51 247 P P 14 39 22.0 -0.2
SATY Saty 44.53 290 *e*P P 14 39 22.3 0.0
baz=290
SATY Saty 44.53 290 *e*P P 14 39 22.2 0.0
CM33 Chiang Mai Arr 44.55 248 P P 14 39 22.0 -0.5
CMMT Chiang Mai 44.55 247 P P 14 39 22.0 -0.5
comp=Z,312nmcomp=Z,41nm,1.3s
CHTO Chiang Mai 44.55 248 P P 14 39 23.5 +1.0
CHTO pmax pmax
comp=Z,51nm,0.7s
CHTO Chiang Mai 44.55 248 P P 14 39 23.5 +1.0
CHTO IAmb IAmb 14 39 24.2
comp=Z,51nm,0.7s
L27K Beaver Creek, 44.58 39 IAmb IAmb 14 39 23.5
comp=Z,90nm,1.1s
L27K Beaver Creek, 44.58 39 P 14 39 22.5
baz=284,SNR=74
CRQM Cirque 44.58 42 IAmb IAmb 14 39 23.8
comp=Z,63nm,0.7s
BCAR Beaver Creek A 44.60 39 P P 14 39 22.2 -0.2
CM36 Chiang Mai Arr 44.67 247 P P 14 39 24.0 +0.6
TGL Tana Glacier 44.73 42 IAmb IAmb 14 39 24.7
comp=Z,56nm,0.6s
CM32 Chiang Mai Arr 44.73 247 P P 14 39 25.0 +1.1
CM09 Chiang Mai Arr 44.79 247 P P 14 39 25.7 +1.3
comp=Z,174nmcomp=Z,21nm,0.9s
CHAI Chaiyaphum 44.80 242 P P 14 39 24.9 +0.5
comp=Z,749nmcomp=Z,75nm,0.6s
PHIT Phitsanulok 44.80 244 P P 14 39 26.1 +1.6
comp=Z,2µmcomp=Z,77nm,1.0s
CM31 Chiang Mai Arr 44.81 247 P P 14 39 25.6 +1.0
comp=Z,4µmcomp=Z,540nm,0.8s
CM31 Chiang Mai Arr 44.81 247 P P 14 39 25.1 +0.5
CMAR Chiang Mai Arr 44.81 247 P P 14 39 25.5 +0.9
comp=Z,14nm,0.8s,baz=37,slow=7.1,SNR=63
CMAR PcP **sP** 14 41 01.1 -0.1
comp=Z,3.4nm,0.9s,baz=8.4,slow=3.2,SNR=6.3
CMAR ScP **ScP** 14 44 24.0 +1.1
comp=Z,0.6nm,0.6s,baz=22,slow=3.6,SNR=4.2
CM02 Chiang Mai Arr 44.83 247 P P 14 39 25.9 +1.2
comp=Z,179nmcomp=Z,24nm,0.9s
CM15 Chiang Mai Arr 44.83 247 P P 14 39 25.0 +0.3
comp=Z,179nmcomp=Z,18nm,0.9s
CM01 Chiang Mai Arr 44.83 247 P P 14 39 25.9 +1.2
comp=Z,185nmcomp=Z,22nm,0.9s
CM04 Chiang Mai Arr 44.83 247 P P 14 39 25.0 +0.3
comp=Z,196nmcomp=Z,23nm,0.9s
CM05 Chiang Mai Arr 44.85 247 P P 14 39 26.0 +1.1
comp=Z,152nmcomp=Z,16nm,0.9s
CM13 Chiang Mai Arr 44.86 247 P P 14 39 26.1 +1.1
comp=Z,153nmcomp=Z,16nm,0.9s
SUKH Sukhothai 45.09 246 P P 14 39 27.0 +0.3
comp=Z,25nm,0.7s
GRNC Granite Creek 45.24 42 IAmb IAmb 14 39 29.2
comp=Z,45nm,0.7s
BRZS Berezniki 45.26 302 *e*P P 14 39 26.7 -1.0
baz=302
BRZS Berezniki 45.26 302 *e*P P 14 39 26.7 -1.0
YAH Yahtse 45.35 43 IAmb IAmb 14 39 30.5
comp=Z,75nm,0.6s
CTG Chitna Glacier 45.37 42 P 14 39 29.0
baz=287
MDOK Medeo 45.37 291 *e*P P 14 39 28.9 0.0
baz=291
MDOK Medeo 45.37 291 *e*P P 14 39 28.8 0.0
AAA Alma-Ata 45.44 291 *e*P P 14 39 29.7 +0.4
baz=291
AAA Alma-Ata 45.44 291 *e*P P 14 39 29.7 +0.4
TNSS Tian-Shan 45.50 291 *e*P P 14 39 30.3 +0.1
baz=291
TNSS Tian-Shan 45.50 291 *e*P P 14 39 30.2 +0.1
BRVK Borovoye 45.51 306 P P 14 39 28.5 -1.1
BRVK Borovoye 45.51 306 P P 14 39 29.6 +0.1
LOGN Logan Glacier 45.57 42 IAmb IAmb 14 39 31.0
comp=Z,60nm,0.6s
MHMT Maesarieng 45.67 248 P P 14 39 31.0 -0.2
comp=Z,723nmcomp=Z,58nm,0.8s
EPYK Eagle Plains 45.85 34 IAmb IAmb 14 39 32.6
comp=Z,97nm,0.7s
EPYK Eagle Plains 45.85 34 P 14 39 31.9
baz=285,SNR=105
PCA Pinnacle 46.14 43 IAmb IAmb 14 39 35.4
comp=Z,41nm,0.6s
PINM Pinnacle 46.15 43 P 14 39 34.6
baz=288,SNR=8.3
SRAK Srakaew 46.22 240 P P 14 39 33.9 -1.6
comp=Z,11µmcomp=Z,2µm,0.8s
ULHL Ulahol 46.32 290 P P 14 39 37.2 +0.9
SNR=7.5
TKM2 Tokmak 2 46.43 292 P P 14 39 38.3 +1.2
SNR=9.7
TKM2 Tokmak 2 46.43 292 P P 14 39 37.2 +0.1
TAPN Taplejung 46.47 266 *e*P P 14 39 38.9 +1.2
comp=Z,165nm,0.4s
INK Inuvik 46.52 31 P P 14 39 36.5 -0.5
comp=Z,45nm,0.3s,baz=282,slow=6.3,SNR=259
INK PcP **PcP** 14 41 05.6 -0.1
comp=Z,2.5nm,0.5s,baz=218,slow=4.3,SNR=3.3
INK Inuvik 46.52 31 IAmb IAmb 14 39 37.3
comp=Z,55nm,0.9s
UMPA Umpang Tak 46.52 245 P P 14 39 41.3 +3.4
comp=Z,44nm,1.2s
TNTI Ternate 46.62 201 P P 14 39 45.8 +7.2
UTHA Uthaitani 46.64 244 P P 14 39 40.3 +1.5
comp=Z,333nmcomp=Z,31nm,0.8s
SGDS Sogindy 46.81 293 *e*P P 14 39 39.9 -0.1
baz=293
SGDS Sogindy 46.81 293 *e*P P 14 39 39.8 -0.1
KBK Karagaybulak 46.98 292 P P 14 39 42.1 +0.8
SNR=12
USP Ospenovka 46.98 293 P P 14 39 41.8 +0.6
SNR=22
ODAN Odare 47.00 266 *e*P P 14 39 43.0 +1.3
comp=Z,54nm,0.4s
HYT Haines Junctio 47.19 41 IAmb IAmb 14 39 44.7
comp=Z,102nm,0.7s
AAK Ala-Archa 47.28 292 P P 14 39 44.2 +0.6
SNR=9.7
AAK Ala-Archa 47.28 292 *i* P P 14 39 44.0 +0.3
SNR=12
AAK Ala-Archa 47.28 292*d i*P P 14 39 43.9 +0.3
AAK pmax pmax
comp=Z,54nm,1.7s
AAK Ala-Archa 47.28 292 P P 14 39 42.9 -0.7
JIRN Jiri 47.34 268 *e*P P 14 39 45.6 +1.1
comp=Z,278nm,0.5s
SWI Sonong 47.38 195 P P 14 39 46.0 +1.6
comp=Z,43nm,1.1s
GUN Gumba 47.41 268 *e*P P 14 39 45.8 +0.8
comp=Z,185nm,0.5s
RAMN Ramite 47.49 267 *e*P P 14 39 46.3 +0.8
comp=Z,260nm,0.5s
KMSI Cibinong 47.72 205 P P 14 39 47.4 +0.4
comp=Z,2µmcomp=Z,66nm,1.1s
EKS2 Erkin-Say 47.73 292 P P 14 39 47.7 +0.6

SNR=11
KHLT Khaolaem Dam 47.75 244 P P 14 39 48.0 +0.7
comp=Z,36nm,0.9s
SRDT SRDT 47.76 243 P P 14 39 48.2 +0.9
comp=Z,7µmcomp=Z,23nm,1.1s
PATY Pattaya 47.78 240 P P 14 39 49.4 +1.9
comp=Z,95nm,0.9s
KSH Kashi 47.82 287 P P 14 39 52.3 +4.5
KSH pP pwP 14 40 58.9 +5.9
KSH S **S** 14 46 28.6 +8.0
KSH pmax pmax
comp=Z,24nm,0.6s
KKN Kakani 47.90 268 *e*P P 14 39 49.4 +0.8
comp=Z,83nm,0.5s
PKI Pulchoki 47.94 268 *e*P P 14 39 49.7 +0.6
comp=Z,87nm,0.5s
PKIN Phulchoki 47.95 268 *e*P P 14 39 49.6 +0.6
comp=Z,99nm,0.5s
GTOI Gorontalo 47.96 206 P P 14 39 48.4 -0.4
comp=Z,332nmcomp=Z,40nm,0.8s
AML Almayashu 48.04 292 P P 14 39 50.6 +0.9
SNR=13
DMN Daman 48.13 268 *e*P P 14 39 51.3 +0.9
comp=Z,94nm,0.6s
GKN Gorkha 48.22 269 *e*P P 14 39 51.7 +0.8
comp=Z,226nm,0.4s
TOLI2 Tolitoli 48.24 209 P P 14 39 51.0 +0.1
MRSI Marisa 48.45 207 P P 14 39 52.7 +0.2
comp=Z,1µmcomp=Z,146nm,0.9s
PHET Kaeng Krachan 48.54 241 P P 14 39 55.2 +1.9
comp=Z,2µmcomp=Z,263nm,0.8s
DANN Dangsing 48.62 270 *e*P P 14 39 55.5 +1.3
comp=Z,309nm,0.5s
SKAG Skagway 48.70 42 P P 14 39 54.7 +0.8
SKAG Skagway 48.70 42 P 14 39 54.9
baz=292,SNR=10
ARSB Arslanbob 48.90 291 IAmb IAmb 14 39 58.0
comp=Z,61nm,0.8s
KOLN Koldanda 49.09 270 *e*P P 14 39 58.6 +1.0
comp=Z,66nm,0.5s
DZA Taraz 49.20 294 *e*P P 14 39 58.3 +0.3
baz=294
DZA Taraz 49.20 294 *e*P P 14 39 58.3 +0.3
SVE Sverdlovsk 49.22 314 *e*P P 14 39 57.9 +0.1
SVE pmax pmax
comp=Z,24nm,0.9s
FAKI Fak Fak 49.23 193 P P 14 39 58.9 +0.5
FAKI IAmb IAmb 14 39 59.9
comp=Z,72nm,0.8s
FAKI Fak Fak 49.23 193 P P 14 39 58.8 +0.4
comp=Z,860nmcomp=Z,100nm,0.8s
BESE Bessie Mountai 49.27 43 IAmb IAmb 14 40 00.0
comp=Z,38nm,0.7s
PYUN Piuthan 49.31 270 *e*P P 14 40 00.3 +1.0
comp=Z,143nm,0.5s
C36M Paulatuk 49.40 28 IAmb IAmb 14 39 59.0
comp=Z,69nm,0.6s
C36M Paulatuk 49.40 28 P 14 39 58.4
baz=293,SNR=101
LUWI Luwuk 49.62 206 P P 14 39 59.0 -2.3
LUWI IAmb IAmb 14 40 00.6
comp=Z,57nm,0.7s
LUWI Luwuk 49.62 206 P P 14 40 00.4 -0.9
comp=Z,101nm,0.8s
JIS Juneau Island 49.62 44 IAmb IAmb 14 40 02.8
comp=Z,63nm,0.5s
KK31 Karatay Array 49.62 294 P P 14 40 01.6 +0.5
KK31 pmax pmax
comp=Z,10.0nm,0.8s
KK31 Karatay Array 49.62 294 P P 14 40 01.6 +0.5
KKAR Karatay Array 49.62 294 P P 14 40 01.3 +0.1
KKAR Karatay Array 49.62 294 P P 14 40 01.3 +0.1
KKAR Karatay Array 49.62 294 IAmb IAmb 14 40 02.1
comp=Z,9.8nm,0.8s
SIT Sitka 49.66 45 P P 14 40 02.8 +1.7
SIT pmax pmax
comp=Z,66nm,0.8s
SIT Sitka 49.66 45 P P 14 40 02.8 +1.7
SIT IAmb IAmb 14 40 03.9
comp=Z,66nm,0.8s
SIT Sitka 49.66 45 P 14 40 03.0
baz=294,SNR=6.2
SANI Sanana 49.68 201 P P 14 40 01.1 -0.7
comp=Z,671nmcomp=Z,67nm,0.8s
APSI Ampana 49.84 207 P P 14 40 02.9 -0.1
comp=Z,607nmcomp=Z,73nm,0.8s
IUG Iuzhnay 50.41 293 *e*P P 14 40 07.5 +0.3
baz=293
IUG Iuzhnay 50.41 293 *e*P P 14 40 07.4 +0.3
ARU Arti 50.42 314*d i*P P 14 40 05.7 -1.2
ARU *PP **pP** 14 41 11.0 +0.1
ARU S **S** 14 46 56.5 +0.7
ARU SS **SS** 14 50 29.6 -3.7
ARU pmax pmax
comp=Z,10.0nm,0.8s
WRAK Wrangell Islan 51.42 45 P 14 40 16.0
baz=297,SNR=6.4
CRAG Craig 51.45 46 IAmb IAmb 14 40 17.0
comp=Z,65nm,0.6s
CRAG Craig 51.45 46 P 14 40 16.6
baz=297
EUNU Eureka 51.52 10 IAmb IAmb 14 40 14.8
comp=Z,53nm,0.8s
DLBC Dease Lake 51.62 42 P P 14 40 17.6 +1.8
comp=Z,34nm,0.5s,baz=275,slow=3.6,SNR=186
DLBC Dease Lake 51.62 42 IAmb IAmb 14 40 18.2
comp=Z,44nm,0.6s
HOPEN Hopen 51.77 345 *e*P P 14 40 16.0 -0.5
SPA0 Spitsbergen Ar 52.12 348 *e*P P 14 40 18.0 -1.1
KSM Kuching 52.17 222 IAmb IAmb 14 40 22.7
comp=Z,68nm,0.9s
KBS Kingsbay 52.20 349 *e*P P 14 40 19.5 -0.1
MTKI Muara Teweh, K 52.33 215 P P 14 40 22.5 +1.1
comp=Z,42nm,0.8s
NOR Nord 52.42 356 *i* P P 14 40 19.5 -1.7
NOR IAmb IAmb 14 40 20.3
comp=Z,8.1nm,0.8s
NOR Nord 52.42 356 *i* P P 14 40 19.5 -1.7
NOR pmax pmax
comp=Z,8.0nm,0.8s
NIL Nilore 52.82 282 P P 14 40 25.1 +0.2
NIL pmax pmax
comp=Z,76nm,1.0s
NIL Nilore 52.82 282 P P 14 40 25.1 +0.2
NIL IAmb IAmb 14 40 26.7
comp=Z,76nm,0.9s
NDI New Delhi 53.00 275 *e*P P 14 40 33.5 +7.3
AB31 Akbulak array 53.01 306 *e*P P 14 40 25.9 -0.1
ABKAR Akbulak array 53.01 306 P P 14 40 25.6 -0.4
ABKAR Akbulak array 53.01 306 IAmb IAmb 14 40 27.9
comp=Z,8.2nm,0.6s
HSPB Hornsund (broa 53.08 347 *e*P P 14 40 25.5 -0.6
PKDT Phuket 53.25 239 P P 14 40 29.0 +0.9
SPSI Sidrap Palu 53.33 208 P P 14 40 29.2 +0.6
comp=Z,18nm,1.1s
AKTO Aktyubinsk 53.51 308 ScP **ScP** 14 44 59.1 -0.4
comp=Z,1.6nm,0.6s,baz=61,slow=5.7,SNR=3.7
BNSI Bone 53.62 208 P P 14 40 31.4 +0.7
comp=Z,47nm,1.2s
KIRV Kirov 53.80 320 *e*P P 14 40 30.8 -0.6
PBA Port Blair 53.84 247 P P 14 40 31.0 -1.3
PBA IAmb IAmb 14 40 33.0
comp=Z,56nm,0.7s
PRGR Permogore 53.90 324 *e*P P 14 40 30.6 -1.5
PRGR *e*S **S** 14 47 39.7 -2.9
PRGR pmax pmax
comp=Z,20nm,0.9s
KULM Kulim 53.98 235 P P 14 40 33.3 -0.1
KULM IAmb IAmb 14 40 35.8
comp=Z,57nm,0.8s
RES Resolute Bay 54.08 16 P P 14 40 32.4 -0.9
comp=Z,44nm,0.5s,baz=298,slow=7.2,SNR=228
RES Resolute Bay 54.08 16 IAmb IAmb 14 40 33.3
comp=Z,70nm,0.9s
BBKI Banjar Baru 54.65 214 P P 14 40 40.2 +2.1
comp=Z,24nm,0.8s
APA Apatity 55.05 334 *i*P P 14 40 37.6 -2.7
APA *i* 14 41 39.3
APA MLR MLR
comp=Z,1µm,19.0s
KBL Kabul 55.17 286 P P 14 40 41.3 -0.6
KBL pmax pmax
comp=Z,38nm,0.7s
KBL Kabul 55.17 286 P P 14 40 41.3 -0.6
KBL IAmb IAmb 14 40 42.2
comp=Z,38nm,0.7s

HAMF	Hammerfest	55.83	339	*e*P		P		14 40 44.9	-0.9		
ARA0	ARCESS Array S	56.10	338	*e*P		P		14 40 47.4	-0.3		
ARCES	ARCESS Array B	56.10	338	P		P		14 40 46.8	-0.9		
	comp=Z,3.4nm,0.4s,baz=43,slow=8.0,SNR=58										
ARCES	ARCESS Array B	56.10	338	P		P		14 40 47.0	-0.7		
ARCES				pmax	pmax						
	comp=Z,5.0nm,0.8s										
ARCES	ARCESS Array B	56.10	338	P		P		14 40 47.0	-0.7		
YKA	Yellowknife Ar	56.12	33	P		P		14 40 47.8	-0.2		
	comp=Z,39nm,0.7s,baz=306,slow=6.4,SNR=665										
YKA				PcP		PcP		14 41 42.4	+0.6		
	comp=Z,7.5nm,0.8s,baz=307,slow=3.3,SNR=5.8										
YKA				ScP		ScP		14 45 11.9	+1.1		
	comp=Z,3.5nm,0.7s,baz=304,slow=4.0,SNR=10										
TULEG	Thule	56.42	8⇑	*i* P		P		14 40 48.3	-1.5		
TULEG				IAmb	IAmb			14 40 49.5			
	comp=Z,60nm,1.0s										
TSI	Tuntungan	56.63	235	P		P		14 40 54.6	+2.4		
	comp=Z,4µmcomp=Z,72nm,0.7s										
KLMR	Klimovskoe	56.80	325	*e*P		P		14 40 50.8	-1.9		
KLMR				*e*				14 42 59.7			
KLMR				pmax	pmax						
	comp=Z,10.0nm,0.9s										
KLMR	Klimovskoe	56.80	325	*e*P		P		14 40 50.8	-1.9		
KLMR				AMP				14 40 52.3			
	comp=Z,10.0nm,0.9s										
KLMR				*e*PP		PP		14 42 59.8	-2.5		
NEEM	North Greenlan	56.82	3⇑	*i* P		P		14 40 52.0	-1.1		
NEEM				IAmb	IAmb			14 40 52.9			
	comp=Z,72nm,0.4s										
MMRI	Maumere	56.98	204	IAmb	IAmb			14 40 55.3			
	comp=Z,59nm,0.6s										
MMRI	Maumere	56.98	204	P		P		14 40 54.5	0.0		
	comp=Z,1µmcomp=Z,106nm,0.7s										
KTK1	Kautokeino	57.05	338	*e*P		P		14 40 53.8	-0.5		
RPSI	Rantau Prapat	57.08	235	IAmb	IAmb			14 40 56.4			
	comp=Z,38nm,0.8s										
DAG	Danmarks Havn	57.17	355⇑	*i* P		P		14 40 53.7	-1.4		
DAG				IAmb	IAmb			14 40 54.7			
	comp=Z,19nm,0.6s										
DAG	Danmarks Havn	57.17	355⇑	*i* P		P		14 40 53.6	-1.4		
DAG				pmax	pmax						
	comp=Z,19nm,0.6s										
PPBI	Pangkal Pinang	57.34	224	P		P		14 40 58.7	+1.6		
	comp=Z,4µmcomp=Z,67nm,0.9s										
JETT	Jettan, Norway	57.40	339	*e*P		P		14 40 56.4	-0.4		
SOEI	Soe	57.52	201	IAmb	IAmb			14 41 06.4			
	comp=Z,68nm,0.8s										
SOEI	Soe	57.52	201	P		P		14 40 58.1	-0.3		
	comp=Z,88nm,0.7s										
TRO	Tromso	57.70	340	*e*P		P		14 40 58.1	-0.7		
BKNI	Bangkinang	57.86	231	P		P		14 41 02.5	+1.8		
	comp=Z,1µmcomp=Z,148nm,1.0s										
MNSI	Mandailing Nat	58.27	233	P		P		14 41 04.0	+0.5		
	comp=Z,31nm,0.9s										
PLAI	Plampang	58.54	209	P		P		14 41 04.3	-1.0		
	comp=Z,57nm,0.7s										
SRBI	Singaraja	58.75	212	P		P		14 41 07.8	+1.1		
	comp=Z,124nm,1.0s										
TWSI	Taliwang, Sumb	58.76	210	P		P		14 41 06.9	+0.1		
	comp=Z,27nm,1.3s										
MTN	Manton Dam	59.14	193	P		P		14 41 10.1	+0.8		
HYB	Hyderabad	59.34	264	*i* P		P		14 41 10.0	-0.9		
HYB				*e*PcP		PcP		14 41 55.0	-0.3		
DBG	Daneborg	59.66	355	*i* P		P		14 41 10.7	-1.5		
DBG				IAmb	IAmb			14 41 11.8			
	comp=Z,9.0nm,0.5s										
N2IH	Innhavet	59.67	339	*e*P		P		14 41 11.7	-0.6		
STEI	Steigen	59.87	340	*e*P		P		14 41 12.8	-0.9		
PGC	Sidney	60.11	50	IAmb	IAmb			14 41 17.4			
	comp=Z,31nm,0.7s										
LOF	Lofoten	60.13	340	*e*P		P		14 41 14.1	-1.3		
N2TV	TVrnvik	60.18	339	*e*P		P		14 41 15.1	-0.6		
FAUS	Fauske	60.28	339	*e*P		P		14 41 15.8	-0.7		
GEYT	Alibeck	60.35	295	P		P		14 41 17.9	+0.4		
	comp=Z,18nm,0.7s,baz=35,slow=5.4,SNR=18										
GEYT	Alibeck	60.35	295	P		P		14 41 17.1	-0.3		
A04D	Lummi Island	60.47	49	P				14 41 19.3			
	baz=307										
NBB28	Valnes	60.63	339	*e*P		P		14 41 18.0	-0.8		
NLWA	Neilton Lookou	60.63	51	P		P		14 41 20.8	+1.6		
NLWA				IAmb	IAmb			14 41 21.9			
	comp=Z,56nm,1.0s										
N2VA	Vr_y	60.69	340	*e*P		P		14 41 18.6	-0.6		
NBB05	Inndyr	60.86	339	*e*P		P		14 41 19.7	-0.6		
N2RO	R st	60.95	340	*e*P		P		14 41 20.7	-0.2		
D03D	Eidon	60.97	51	P				14 41 22.8			
	baz=307,SNR=8.7										
NBB30	Finnes	60.98	339	*e*P		P		14 41 20.4	-0.7		
NBB17	Glomfjord BVr	61.05	339	*e*P		P		14 41 21.1	-0.5		
B05A	Bryant	61.06	49	P				14 41 23.0			
	baz=307,SNR=9.6										
UPNV	Upernavik	61.10	6⇑	*i* P		P		14 41 20.6	-1.3		
UPNV				IAmb	IAmb			14 41 21.2			
	comp=Z,26nm,0.5s										
B06A	Marblemount	61.23	49	IAmb	IAmb			14 41 24.9			
	comp=Z,64nm,1.0s										
D04E	Lakebay	61.36	51	P				14 41 25.1			
	baz=307										
MOR8	Moi Rana	61.43	339	*e*P		P		14 41 22.1	-2.1		
FINES	FINESS Array B	61.44	331	P		P		14 41 23.1	-1.2		
	comp=Z,15nm,0.5s,baz=46,slow=6.7,SNR=62										
FINES	FINESS Array B	61.44	331	P		P		14 41 23.4	-0.9		
KONS	Konsvik	61.51	339	*e*P		P		14 41 24.4	-0.2		
STOK	Stokkvaagen	61.66	339	*e*P		P		14 41 25.4	-0.3		
E04D	Cinebar	61.85	51	P				14 41 28.9			
	baz=308,SNR=8.8										
C06D	Leavenworth	61.91	49	P				14 41 29.1			
	baz=308										
SUMG	Summit	62.00	0	*i* P		P		14 41 28.3	-0.1		
SUMG				IAmb	IAmb			14 41 28.8			
	comp=Z,47nm,0.5s										
SUMG	Summit	62.00	0	*i* P		P		14 41 28.2	-0.1		
SUMG				pmax	pmax						
	comp=Z,47nm,0.5s										
SUMG	Summit	62.00	0	P		P		14 41 28.2	-0.1		
G03D	McMinnville, O	62.29	53	P				14 41 31.8			
	baz=308										
KNRA	Kununurra	62.30	195	IAmb	IAmb			14 41 32.2			
	comp=Z,30nm,0.7s										
LTY	Liberty	62.44	50	IAmb	IAmb			14 41 35.1			
	comp=Z,31nm,1.1s										
I02D	Swisshome	62.65	54	P				14 41 34.2			
	baz=308										
COR	Corvallis	62.66	53	P		P		14 41 32.4	-0.2		
COR				pmax	pmax						
	comp=Z,57nm,0.7s										
COR	Corvallis	62.66	53	P		P		14 41 32.4	-0.2		
F05D	White Salmon	62.87	51	P				14 41 35.5			
	baz=309,SNR=5.3										
H04D	Lebanon	63.01	53	P				14 41 36.7			
	baz=309,SNR=8.6										
KEBM	Edson Butte	63.13	55	P		P		14 41 37.0	+1.1		
KEBM				IAmb	IAmb			14 41 38.7			
	comp=Z,56nm,0.9s										
I03D	Drain, OR	63.18	54	P				14 41 38.1			
	baz=309,SNR=14										
J01E	Myrtle Point	63.18	55	P				14 41 37.9			
	baz=309,SNR=5.3										
H04A	Detroit Lake	63.22	53	P		P		14 41 37.5	+1.2		
G05D	Wamic, OR	63.35	52	P				14 41 38.8			
	baz=309,SNR=11										
NSS	Namsos	63.37	338	*e*P		P		14 41 36.9	0.0		
D08A	Wollman Farm,	63.50	49	P		P		14 41 38.8	+0.7		
D08A				IAmb	IAmb			14 41 39.3			
	comp=Z,20nm,0.6s										
SCO	Scoresbysund	63.52	354	*i* P		P		14 41 37.4	-0.4		
SCO				IAmb	IAmb			14 41 38.0			
	comp=Z,10nm,0.6s										
SCO	Scoresbysund	63.52	354	P		P		14 41 37.8	0.0		
SCO				pmax	pmax						
	comp=Z,10.0nm,0.6s										
SCO	Scoresbysund	63.52	354	P		P		14 41 37.8	0.0		
HAWA	Hanford	63.59	50	IAmb	IAmb			14 41 40.7			
	comp=Z,35nm,0.7s										
K02D	Willamette Mer	63.62	55	P				14 41 40.7			
	baz=309,SNR=6.7										
I04A	Tendick Farm,	63.65	54	P				14 41 40.4			
	baz=309,SNR=21										
NEW	Newport	63.66	47	P		P		14 41 39.7	+0.5		
	comp=Z,21nm,0.7s,baz=310,slow=5.0,SNR=34										
NEW	Newport	63.66	47	IAmb	IAmb			14 41 40.9			
	comp=Z,25nm,0.8s										
NEW	Newport	63.66	47	P				14 41 39.8			
	baz=310,SNR=18										
I05D	Terrebonne, OR	63.91	53	P				14 41 42.1			
	baz=309,SNR=11										
L02E	Cave Junction	64.00	56	P				14 41 43.1			
	baz=309										
J04D	Umpqua Nationa	64.17	54	P				14 41 44.4			
	baz=309,SNR=21										
J05D	Fort Rock, OR	64.64	53	P				14 41 47.3			
	baz=310,SNR=25										
L04D	Klamath Falls	64.71	55	P				14 41 47.6			
	baz=310,SNR=18										
K04D	Chiloquin, OR	64.76	54	P				14 41 48.0			
	baz=310										
WALA	Waterton Lakes	64.76	45	IAmb	IAmb			14 41 48.1			
	comp=Z,26nm,0.8s										
YBH	Yreka Blue Hor	64.78	55	IAmb	IAmb			14 41 49.3			
	comp=Z,29nm,0.9s										
M02C	Callahan	64.92	56	P				14 41 49.4			
	baz=310,SNR=7.7										
PALK	Pallekele	65.03	254	P		P		14 41 47.4	-1.0		
PALK				pmax	pmax						
	comp=Z,26nm,0.9s										
PALK	Pallekele	65.03	254	P		P		14 41 47.4	-1.0		
PALK				IAmb	IAmb			14 41 49.6			
	comp=Z,26nm,0.9s										
FITZ	Fitzroy Crossi	65.26	197	IAmb	IAmb			14 41 51.7			
	comp=Z,25nm,0.9s										
N02D	Trinity Center	65.27	56	P				14 41 51.3			
	baz=310,SNR=14										
JTMT	Jette	65.45	46	IAmb	IAmb			14 41 56.3			
	comp=Z,20nm,0.6s										
ICESG	Greenland Ices	65.49	1⇑	*i* P		P		14 41 50.7	-0.2		
ICESG				IAmb	IAmb			14 41 51.3			
	comp=Z,39nm,0.7s										
WB0	Warramunga Arr	65.56	188	IAmb	IAmb			14 41 52.7			
	comp=Z,23nm,1.0s										
WDC	Whiskeytown Da	65.62	56	IAmb	IAmb			14 41 54.1			
	comp=Z,22nm,0.9s										
WRAB	Tennant Creek	65.73	188	*de*P		P		14 41 52.3	-0.3		
WRAB				pmax	pmax						
	comp=Z,30nm,1.7s										
WRAB	Tennant Creek	65.73	188	P		P		14 41 53.0	+0.4		
O02D	Mt. Diablo Mer	65.73	57	P				14 41 54.2			
	baz=310,SNR=8.0										
WR0	Warramunga Arr	65.74	188	IAmb	IAmb			14 41 53.8			
	comp=Z,26nm,1.1s										
WRA	Warramunga Arr	65.74	188	P		P		14 41 52.9	+0.2		
	comp=Z,11nm,0.8s,baz=5.6,slow=7.0,SNR=162										
WRA	Warramunga Arr	65.74	188	P		P		14 41 51.9	-0.8		
WRA				pmax	pmax						
	comp=Z,1.0nm,1.0s										
WRA	Warramunga Arr	65.74	188	P		P		14 41 51.9	-0.8		
KIV	Kislovodsk	65.75	309	⇓P		P		14 41 54.3	+1.6		
KIV	Kislovodsk	65.75	309	P		P		14 41 54.0	+1.3		
KIV	Kislovodsk	65.75	309	*e*P		P		14 41 54.3	+1.6		
KIV				pmax	pmax						
	comp=Z,55nm,1.0s										
KBZ	Khabaz	65.78	308	P		P		14 41 53.1	+0.4		
	comp=Z,6.3nm,0.8s,baz=46,slow=6.7,SNR=14										
KBZ	Khabaz	65.78	308	*ce*P		P		14 41 54.0	+1.2		
KBZ				pmax	pmax						
	comp=Z,9.0nm,0.9s										
ZEI	Tsey	65.84	307	*e*P		P		14 41 52.4	-1.0		
ZEI				pmax	pmax						
	comp=Z,6.0nm,1.0s										
J08A	Circle Bar Ran	66.12	52	IAmb	IAmb			14 41 57.6			
	comp=Z,32nm,1.1s										
DOMB	Dombas	66.17	338	*e*P		P		14 41 54.3	-0.7		
FFC	Flin Flon	66.18	35	P		P		14 41 55.6	+0.5		
FFC				pmax	pmax						
	comp=Z,144nm,0.8s										
FFC	Flin Flon	66.18	35	P		P		14 41 55.6	+0.5		
NC303	NORSAR Array S	66.21	336	IAmb	IAmb			14 41 57.2			
	comp=Z,21nm,0.9s										
MSO	Missoula	66.23	47	IAmb	IAmb			14 41 56.9			
	comp=Z,18nm,0.8s										
O03E	Paynes Creek	66.23	56	P				14 41 56.4			
	baz=311,SNR=12										
MSO	Missoula	66.23	47	P				14 41 56.5			
	baz=312,SNR=12										
PLID	Pel Lake	66.32	49	IAmb	IAmb			14 41 58.0			
	comp=Z,21nm,0.7s										
NB2	NORSAR Subarra	66.41	336	P		P		14 41 55.2	-1.3		
	baz=36,slow=6.5										
NOA	NORSAR Array B	66.41	336	P		P		14 41 55.5	-1.0		
	comp=Z,11nm,0.6s,baz=36,slow=6.3,SNR=56										
HFS	Hagfors	66.42	335	P		P		14 41 55.5	-1.1		
	comp=Z,31nm,0.6s,baz=49,slow=6.7,SNR=95										
NC602	NORSAR Array S	66.56	336	*e*P		P		14 41 56.9	-0.6		
AKN	Aaknes	66.58	339	*e*P		P		14 41 57.8	+0.2		
WVOR	Wild Horse Val	66.64	53	IAmb	IAmb			14 42 00.7			
	comp=Z,33nm,1.1s										
ORV	Oroville	66.89	57	IAmb	IAmb			14 42 01.2			
	comp=Z,24nm,0.8s										
SFJD	Kangerlussuaq	67.19	5	*i* P		P		14 41 60.0	-1.2		
SFJD				IAmb	IAmb			14 42 01.3			
	comp=Z,9.3nm,0.5s										
SFJD	Kangerlussuaq	67.19	5	P		P		14 42 00.7	-0.5		
SFJD				pmax	pmax						
	comp=Z,14nm,0.8s										
SFJD	Kangerlussuaq	67.19	5	P		P		14 42 00.7	-0.5		
OSL	Oslo	67.45	336	*e*P		P		14 42 03.1	+0.1		
EGMT	Eagleton	67.50	44	P				14 42 04.5			
	baz=314,SNR=38										
SKAR	Skarslia	67.51	337	*e*P		P		14 42 03.4	0.0		
MFID	Camas Ranch	67.53	50	IAmb	IAmb			14 42 06.1			
	comp=Z,22nm,0.7s										
FOO	Floro	67.57	339	*e*P		P		14 42 03.5	-0.2		
HYA	Hoyanger	67.65	339	*e*P		P		14 42 04.1	-0.1		
AKASG	Malin Array Be	67.82	321	P		P		14 42 04.3	-1.1		
	comp=Z,4.5nm,0.5s,baz=40,slow=6.3,SNR=20										
AKBB	Malin Array Si	67.82	321	P		P		14 42 04.7	-0.7		
AKBB				pmax	pmax						
	comp=Z,7.0nm,0.8s										
AKBB	Malin Array Si	67.82	321	P		P		14 42 04.7	-0.7		
DY2G	Dye2	67.94	4⇑	*i* P		P		14 42 05.7	-0.6		
DY2G				IAmb	IAmb			14 42 07.3			
	comp=Z,60nm,0.7s										
ANN	Anapa	67.99	312	*e*P		P		14 42 08.3	+1.7		
ANN				pmax	pmax						
	comp=Z,19nm,0.7s										
STRU	Stroemstad	68.06	335	*i* P		P		14 42 06.2	-0.6		
SUE	Sulen	68.10	339	*e*P		P		14 42 06.8	-0.1		
HLID	Hailey	68.19	50	P				14 42 09.2			
	baz=313,SNR=15										
BOZ	Bozeman (W)	68.25	47	IAmb	IAmb			14 42 10.2			
	comp=Z,33nm,0.7s										
BOZ	Bozeman (W)	68.25	47	P				14 42 09.4			
	baz=314,SNR=52										
PNTR	Pine Nut	68.30	56	IAmb	IAmb			14 42 11.2			
	comp=Z,39nm,0.8s										
ASK	Askoy	68.49	339	*e*P		P		14 42 09.6	+0.2		
BER	Bergen	68.54	339	*e*P		P		14 42 09.8	+0.2		
ODD1	Odda	68.61	338	*e*P		P		14 42 10.2	0.0		
TJOU	Tjoern	68.76	334	*i* P		P		14 42 10.3	-0.7		
WAKR	Walker	68.79	56	IAmb	IAmb			14 42 14.2			
	comp=Z,28nm,0.8s										
BLEU	Blekinge	68.81	331	*i* P		P		14 42 10.0	-1.5		
YHL	Hebgen Lake	68.99	47	IAmb	IAmb			14 42 15.2			
	comp=Z,22nm,0.9s										
YHB	Horse Butte	69.06	47	IAmb	IAmb			14 42 15.5			
	comp=Z,34nm,0.8s										
BLS5	Blasjo	69.07	338	*e*P		P		14 42 12.9	-0.1		
GCMT	Greycliff	69.10	45	P		P		14 42 14.0	+0.3		
BORG	Borgarnes	69.10	352	P		P		14 42 14.2	+1.1		
	comp=Z,14nm,1.0s,baz=70,slow=4.7,SNR=3.9										
BANOM	Banah	69.13	286	*i* P		P		14 42 14.2	+0.2		
	SNR=23										
SHME	Shamm	69.15	286	*i* P		P		14 42 14.0	0.0		
	SNR=21										
ONAU	Onsala	69.19	334	*i* P		P		14 42 13.0	-0.7		
RYN	Ryan	69.24	56	IAmb	IAmb			14 42 16.8			
	comp=Z,32nm,0.8s										
DEL	Delary	69.33	332	*e*P		P		14 42 13.6	-0.9		
ASAR	Alice Springs	69.47	188	P		P		14 42 16.9	+1.1		
	comp=Z,26nm,0.7s,baz=0.4,slow=4.8,SNR=322										
ASAR	Alice Springs	69.47	188	P		P		14 42 17.2	+1.4		
ASAR	Alice Springs	69.47	188	P		P		14 42 17.2	+1.4		
NVAR	Mina Array Bea	69.50	56	P		P		14 42 17.6	+1.3		
	comp=Z,35nm,0.7s,baz=300,slow=5.9,SNR=287										
MDH	Madha	69.54	286	P		P		14 42 16.4	0.0		
NV11	Mina Array Sit	69.58	56	IAmb	IAmb			14 42 18.8			
	comp=Z,30nm,0.8s										
MSFE	Esma-Masafi	69.60	286	P		P		14 42 16.9	+0.1		
H17A	Grant Village	69.62	47	P				14 42 19.4			
	baz=315,SNR=29										
MLAC	Mammoth, Mammo	69.73	57	P				14 42 19.3			
	baz=313,SNR=5.1										
RLMT	Red Lodge	69.77	46	IAmb	IAmb			14 42 19.4			
	comp=Z,18nm,0.7s										
RLMT	Red Lodge	69.77	46	P				14 42 18.9			
	baz=315,SNR=21										
SNART	Snartemo	69.79	337	*e*P		P		14 42 17.9	+0.6		
SNART	Snartemo	69.79	337	*e*P		P		14 42 17.5	+0.1		
UOSS	Minazif	69.84	285	*i* P		P		14 42 18.3	0.0		
	SNR=18										
UOSS	Minazif	69.84	285	P		P		14 42 18.2	0.0		
UOSS				IAmb	IAmb			14 42 19.1			
	comp=Z,29nm,0.7s										
NUUK	Nuuk	69.89	6	*i* P		P		14 42 17.4	-0.5		
NUUK				IAmb	IAmb			14 42 18.3			
	comp=Z,26nm,0.9s										
HATD	Hatta, Dubai	69.97	285	*i* P		P		14 42 19.4	+0.4		
	SNR=20										
BSD	Bornholm Skovb	70.07	331	*e*P		P		14 42 18.1	-1.0		
BSD	Bornholm Skovb	70.07	331	*e*P		P		14 42 18.1	-1.0		
LAO	LASA Array	70.14	43	P				14 42 20.7			
	baz=316,SNR=8.0										
SOHO	SOHO	70.16	284	P		P		14 42 20.4	+0.2		
PAGB	Antelope Grade	70.17	59	IAmb	IAmb			14 42 22.3			
	comp=Z,63nm,1.2s										
NAZ	Nazwa, Dubai	70.18	286	P		P		14 42 20.3	0.0		
FAQ	Al Faqa, Dubai	70.39	286	P		P		14 42 21.5	-0.1		
SMMC	Simmler	70.60	59	P				14 42 24.3			
	baz=313										
ASUD	Al Ashush, Dub	70.64	286	*i* P		P		14 42 23.5	+0.4		
	SNR=13										
ALNE	Al Ain	70.74	285	*i* P		P		14 42 23.9	+0.2		
	SNR=5.9										
VES	Vestal, Richgr	70.79	58	P				14 42 24.0			
	baz=313,SNR=5.5										
CWC	Cottonwood Cre	70.98	57	P				14 42 26.1			
	baz=313										
PKM	Mcpherson Peak	71.00	59	P				14 42 26.5			
	baz=313										
GRAC	Grapevine Rang	71.02	56	P				14 42 26.7			
	baz=313,SNR=29										
HWUT	Hardware Ranch	71.06	50	IAmb	IAmb			14 42 27.7			
	comp=Z,35nm,0.9s										
R11A	Troy Canyon, C	71.11	54	P				14 42 26.9			
	baz=314,SNR=32										
ISA	Isabella, Lake	71.28	58	P				14 42 26.8			
	baz=313,SNR=12										
BW06	Boulder Array	71.29	48	P		P		14 42 27.7	+0.7		
BW06				IAmb	IAmb			14 42 28.4			
	comp=Z,40nm,0.9s										
PD31	Pinedale Array	71.29	48	IAmb	IAmb			14 42 28.4			
	comp=Z,36nm,0.9s										
PDAR	Pinedale Array	71.29	48	P		P		14 42 27.6	+0.5		
	comp=Z,30nm,0.7s,baz=306,slow=1.0,SNR=256										
PDAR	Pinedale Array	71.29	48	P		P		14 42 27.7	+0.7		
BW06	Boulder Array	71.30	48	P				14 42 27.5			
	baz=316,SNR=66										
DUG	Dugway, Tooele	71.38	51	P				14 42 28.7			
	baz=315,SNR=32										
FURC	Furnace Creek,	71.67	56	P				14 42 30.4			
	baz=314,SNR=36										
TPNV	Topopah Spring	71.70	56	P				14 42 30.6			
	baz=314,SNR=72										
LRMC	Laurel Mtn Rad	71.87	58	P				14 42 31.1			
	baz=314,SNR=13										
BURAR	Bucovina Array	71.87	321	⇓P		P		14 42 30.3	+0.1		
BURAR	Bucovina Array	71.87	321	⇓P		P		14 42 30.3	+0.1		
BIZ	Bicaz	71.98	320	⇓P		P		14 42 31.1	+0.4		
ULM	Lac du Bonnet	72.01	35	P		P		14 42 30.6	-0.1		
	comp=Z,35nm,0.5s,baz=320,slow=6.6,SNR=133										
ULM	Lac du Bonnet	72.01	35	*c* *i* P		P		14 42 30.3	-0.5		
TLCR		72.02	317	⇓P		P		14 42 30.5	-0.4		
TLCR		72.02	317	⇓P		P		14 42 30.5	-0.4		
TESR	Tescani	72.06	319	⇓P		P		14 42 30.8	-0.3		
PRN	Pahroc Range	72.07	55	IA

baz=315,SNR=20
TPFO Pinon Flats 73.90 58 P 14 42 42.8
baz=314,SNR=10
VYHS Vyhne 73.91 325 eP P 14 42 42.0 +0.1
VYHS Vyhne 73.91 325 eP P 14 42 42.0 +0.1
PVCC Panska Ves 73.92 328 eP P 14 42 42.1 +0.2
PVCC Panska Ves 73.92 328 eP P 14 42 42.1 +0.2
PSZ Piszkesteto 73.93 324 ⇓P P 14 42 42.7 +0.6
PSZ Piszkesteto 73.93 324 ⇓P P 14 42 42.7 +0.6
JAVC Velka Javorina 74.08 326 eP P 14 42 44.2 +1.2
VRAC Vranov 74.14 326 ⇓P P 14 42 44.2 +1.0
VRAC Vranov 74.14 326 eP P 14 42 43.8 +0.5
VRAC Vranov 74.14 326 ⇓P P 14 42 44.2 +1.0
IRM Iron Mountain 74.29 57 P 14 42 45.5
baz=315,SNR=26
U15A North Rim 74.33 54 IAmb IAmb 14 42 47.3
comp=Z,43nm,0.9s
W13A Hualapai Mount 74.36 56 IAmb IAmb 14 42 46.9
comp=Z,17nm,0.8s
PRU Pruhonice 74.37 328 eP P 14 42 44.7 +0.2
PRU Pruhonice 74.37 328 eP P 14 42 44.7 +0.2
MONP2 Monument Peak 74.42 59 P 14 42 45.9
baz=315,SNR=6.9
KRUC Moravsky 74.42 326 eP P 14 42 45.0 +0.2
SMOL Smolenice 74.46 325 eP P 14 42 45.9 +0.9
SMOL pmax pmax
comp=Z,4.0nm,0.6s
SMOL Smolenice 74.46 325 eP P 14 42 45.9 +0.9
BC3 Big Chuckawall 74.46 58 P 14 42 46.2
baz=315,SNR=10
N23A Red Feather La 74.51 47 P 14 42 46.7
baz=318,SNR=11
MODS Modra-Piesok 74.63 325 eP P 14 42 46.2 +0.1
MODS Modra-Piesok 74.63 325 eP P 14 42 46.2 +0.1
GZR Gura Zlata 74.66 320 ⇓P P 14 42 46.2 -0.1
GZR Gura Zlata 74.66 320 ⇓P P 14 42 46.2 -0.1
SWSC Sam W. Stewart 74.75 58 P 14 42 47.6
baz=315
IKP In-Ko-Pah, Jac 74.77 59 P 14 42 48.0
baz=315,SNR=8.1
PDMCI Parker Dam,Lak 74.77 56 P 14 42 48.0
baz=315,SNR=18
LAWE Loch Awe, Argy 74.78 342 eP P 14 42 46.3 -0.4
LAWE IAmb IAmb 14 42 47.2
comp=Z,16nm,0.8s
PV04 Paradox Valley 74.78 50 IAmb IAmb 14 42 49.4
comp=Z,37nm,0.9s
PV20 West Nyswonger 74.79 50 IAmb IAmb 14 42 49.3
comp=Z,34nm,0.7s
PV16 Nyswonger Mesa 74.84 50 IAmb IAmb 14 42 49.1
comp=Z,25nm,0.7s
PV07 Paradox Valley 74.89 50 IAmb IAmb 14 42 49.7
comp=Z,24nm,0.7s
PV12 Saucer Basin, 74.89 50 IAmb IAmb 14 43 01.9
comp=Z,29nm,0.9s
PV03 Paradox Valley 74.92 50 IAmb IAmb 14 42 50.0
comp=Z,28nm,0.6s
PV13 Radium Mtn., P 75.00 50 IAmb IAmb 14 42 50.6
comp=Z,36nm,0.7s
PV02 Paradox Valley 75.01 50 IAmb IAmb 14 42 50.0
comp=Z,18nm,0.6s
EKA Eskdalemuir Ar 75.12 340 P P 14 42 48.6 -0.1
comp=Z,3.5nm,0.4s,baz=20,slow=4.9,SNR=47
ESK Eskdalemuir 75.15 340 eP P 14 42 48.6 -0.2
PV01 Paradox Valley 75.15 50 IAmb IAmb 14 42 50.9
comp=Z,25nm,0.6s
SUSD Miller 75.21 40 P 14 42 49.7
baz=321,SNR=6.8
SMCO Snowmass 75.24 49 IAmb IAmb 14 42 52.0
comp=Z,26nm,0.7s
GLA Glamis 75.25 58 IAmb IAmb 14 42 51.9
comp=Z,28nm,0.8s
GLA Glamis 75.25 58 P 14 42 51.0
baz=315,SNR=9.0
F33A 5 Mile Ranch, 75.29 38 IAmb IAmb 14 42 50.2
comp=Z,26nm,0.6s
CKRC Cesky Krumlov 75.42 327 eP P 14 42 50.3 -0.2
KHC Kasperske Hory 75.44 328 ceP P 14 42 50.7 0.0
KHC pmax pmax
comp=Z,9.0nm,0.7s
KHC Kasperske Hory 75.44 328 eP P 14 42 50.4 -0.3
ISCO Idaho Springs 75.49 47 P 14 42 52.4
baz=318,SNR=14
WUAZ Wupatki 75.50 54 IAmb IAmb 14 42 53.8
comp=Z,21nm,0.8s
WUAZ Wupatki 75.50 54 P 14 42 52.8
baz=316,SNR=15
CONA Conrad Observa 75.55 326 eP P 14 42 52.1 +0.7
comp=Z,4.9nm,0.6s
NEWG New Galloway 75.57 341 eP P 14 42 50.1 -1.1
NEWG IAmb IAmb 14 42 50.4
comp=Z,26nm,0.9s
EYMN Ely 75.58 34 P 14 42 51.2
baz=324,SNR=26
GERES GERESS Array B 75.62 328 P P 14 42 51.7 -0.1
comp=Z,2.0nm,0.4s,baz=43,slow=5.3,SNR=22
GERES GERESS Array B 75.62 328 P P 14 42 51.6 -0.2
KESW Keswick, Cumbr 75.79 340 eP P 14 42 51.4 -1.0
MVCO Mesa Verde 75.87 51 IAmb IAmb 14 42 55.4
comp=Z,40nm,0.9s
MVCO Mesa Verde 75.87 51 P 14 42 54.5
baz=317,SNR=29
CLGH Cloghs, Cushen 76.02 342 eP P 14 42 53.7 -0.1
CLGH IAmb IAmb 14 42 54.5
comp=Z,52nm,1.1s
113A Mohawk Valley, 76.08 57 IAmb IAmb 14 42 56.3
comp=Z,19nm,0.9s
X16A Lo Mia Camp, P 76.25 55 IAmb IAmb 14 42 58.1
comp=Z,28nm,0.7s
Q24A Divide 76.35 48 P 14 42 56.9
baz=318,SNR=15
S22A 4UR Ranch, Cre 76.37 50 P 14 42 57.6
baz=318,SNR=26
OGNE Ogallala 76.43 45 P 14 42 56.9
baz=320
IOMK Kirk Michael 76.44 341 eP P 14 42 55.7 -0.4
IOMK IAmb IAmb 14 42 56.2
comp=Z,28nm,0.8s
F36A Milaca 76.45 36 IAmb IAmb 14 42 56.1
comp=Z,12nm,0.6s
BOVS Bovan 76.51 320 ⇓P P 14 42 56.1 -0.7
WACR West Acre 76.52 337 eP P 14 42 57.1 +0.6
WACR IAmb IAmb 14 42 57.8
comp=Z,22nm,0.8s
LBWR Ladybower, Pea 76.53 339 eP P 14 42 56.5 -0.2
LBWR IAmb IAmb 14 43 01.6
comp=Z,27nm,0.8s
WIM Isle of Man 76.56 341 eP P 14 42 56.6 -0.2
VTS Vitosha 76.60 318 ⇓P P 14 42 58.4 +1.0
VTS Vitosha 76.60 318 ⇓P P 14 42 58.4 +1.0
W18A Petrified Fore 76.71 53 P 14 42 59.5
baz=317,SNR=5.8
GMM Mts of Mourne 76.77 341 eP P 14 42 57.7 -0.2
BTNL Ternell 76.78 333 dP P 14 42 57.9 -0.2
comp=Z,7.1nm,0.6s
MEM Membach 76.80 333 dP P 14 42 58.0 -0.2
comp=Z,9.4nm,0.5s
ECSD EROS Data Cent 76.81 40 P 14 42 58.4
baz=322,SNR=19
SOKA Soboth 76.89 326 eP P 14 42 59.1 +0.1
comp=Z,7.2nm,0.5s
X18A Snowflake 77.02 54 IAmb IAmb 14 43 02.2
comp=Z,21nm,0.9s
SDCO Great Sand Dun 77.08 49 P 14 43 01.1
baz=318,SNR=26
WME Myndd Eilian 77.17 340 eP P 14 42 59.8 -0.3
BCLA Clavier 77.18 333 dP P 14 42 59.9 -0.4
BCLA dPcP PcP 14 43 09.4 -0.3
KBA Koelnbreinsper 77.22 327 iP P 14 43 01.5 +0.7
comp=Z,7.2nm,0.6s,SNR=8.0
OBKA Obir 77.22 326 iP P 14 43 01.6 +0.9
comp=Z,3.6nm,0.6s
214A Organ Pipe Nat 77.23 57 P 14 43 01.8
baz=316
STKA Stephens Creek 77.24 180 P P 14 43 01.6 +0.9
comp=Z,5.5nm,0.8s,baz=334,slow=7.7,SNR=12
STKA Stephens Creek 77.24 180 ⇑ iP P 14 43 02.2 +1.5
SPMN Marine on St. 77.26 36 IAmb IAmb 14 43 01.0
comp=Z,19nm,0.6s
SPMN Marine on St. 77.26 36 P 14 43 00.4
baz=324,SNR=6.5
BGES Gesves 77.28 333 dP P 14 43 00.6 -0.3
FOEL Foel Wylfa 77.36 339 eP P 14 43 00.3 -1.0
FOEL IAmb IAmb 14 43 04.7
comp=Z,28nm,0.6s
YLL Llanberis 77.37 340 eP P 14 43 01.1 -0.2

BMRD Maredsous 77.45 334 dP P 14 43 01.5 -0.3
comp=Z,8.9nm,0.7s
BMRD dPcP PcP 14 43 09.2 -1.7
MYKA Terra Mystica 77.48 326 iP P 14 43 01.9 -0.2
comp=Z,11nm,0.7s,SNR=5.4
KSCO Kaye Shedlock' 77.61 46 P 14 43 03.3
baz=320
WATA Walderalm 77.67 328 eP P 14 43 03.7 +0.4
comp=Z,9.6nm,0.5s
WTTA Wattenberg 77.71 328 iP P 14 43 04.1 +0.6
comp=Z,14nm,0.6s,SNR=7.6
DSB Dublin 77.79 341 IAmb IAmb 14 43 07.0
comp=Z,12nm,0.5s
ABTA Abfaltersbach 77.81 327 eP P 14 43 04.4 +0.4
comp=Z,3.3nm,0.7s
MOTA Moosalm 77.84 328 iP P 14 43 04.6 +0.4
comp=Z,21nm,0.9s,SNR=8.9
RETA Reutte 77.84 329 eP P 14 43 04.4 +0.3
comp=Z,10.0nm,0.9s
SQTA Sankt Quirin 77.91 328 iP P 14 43 05.1 +0.6
comp=Z,16nm,0.7s,SNR=5.8
RAYN Ar Rayn 77.93 291 iP P 14 43 05.2 +0.3
SNR=10.0
RAYN Ar Rayn 77.93 291 P P 14 43 05.3 +0.3
RAYN pmax pmax
comp=Z,9.0nm,0.6s
RAYN Ar Rayn 77.93 291 P P 14 43 05.3 +0.3
BGNE Belgrade 77.94 42 P 14 43 04.8
baz=322
COWI Conover 78.02 34 IAmb IAmb 14 43 05.1
comp=Z,21nm,0.5s
T25A Trinidad 78.10 49 IAmb IAmb 14 43 07.4
comp=Z,26nm,0.8s
T25A Trinidad 78.11 49 P 14 43 06.5
baz=319,SNR=19
MCH1 Michaelchurch 78.13 339 eP P 14 43 05.3 -0.2
MCH1 IAmb IAmb 14 43 09.1
comp=Z,28nm,0.5s
TUC Tucson 78.15 56 P P 14 43 06.3 +0.2
TUC pmax pmax
comp=Z,14nm,1.0s
TUC Tucson 78.15 56 P P 14 43 06.3 +0.2
TUC Tucson 78.16 56 P 14 43 07.2
baz=317
FETA Feichten 78.25 328 iP P 14 43 07.4 +0.9
comp=Z,12nm,0.9s,SNR=6.4
G40A Rib Lake 78.29 35 IAmb IAmb 14 43 07.3
comp=Z,2nm,1.0s
DAVA Damuels 78.33 329 eP P 14 43 06.7 -0.3
comp=Z,21nm,1.3s
PDG Podgorica 78.56 321 ⇓P P 14 43 07.8 -0.2
RSBS Rosebush, Pemb 78.60 340 eP P 14 43 07.8 -0.2
RSBS IAmb IAmb 14 43 11.0
comp=Z,17nm,0.9s
E43A Lone Tree Farm 78.61 32 IAmb IAmb 14 43 08.2
comp=Z,24nm,0.7s
ANMO Albuquerque 78.65 51 ceP P 14 43 09.9 +1.0
ANMO pmax pmax
comp=Z,34nm,1.3s
ANMO Albuquerque 78.65 51 P P 14 43 10.4 +1.5
ANMO IAmb IAmb 14 43 10.8
comp=Z,15nm,0.8s
ANMO Albuquerque 78.65 51 P 14 43 10.0
baz=318
CTI Castel Tesino 78.73 327 P P 14 43 07.7 -1.3
CTI pmax pmax
comp=Z,8.0nm,0.6s
CTI Castel Tesino 78.73 327 P P 14 43 07.7 -1.3
DAVOX Davos/Dischmat 78.76 329 P P 14 43 09.6 +0.3
comp=Z,4.1nm,0.4s,baz=320,slow=3.0,SNR=4.3
MATQ Matagami 78.81 25 P 14 43 08.8
baz=333,SNR=15
CBKS Cedar Bluff 79.20 45 P 14 43 11.2
baz=321,SNR=5.1
TUE Stuetta 79.22 329 P P 14 43 11.6 -0.2
E46A Sault Ste Mari 79.60 31 IAmb IAmb 14 43 13.3
comp=Z,17nm,0.8s
CHGQ Chibougamau 79.61 23 P 14 43 12.8
baz=335,SNR=12
LSQQ Lebel-sur-Quev 79.63 25 P 14 43 13.5
baz=333
121A Cookes Peak, D 79.71 54 P 14 43 16.1
baz=318,SNR=23
SCIA State Center 79.78 39 P 14 43 14.6
baz=324
SOCY Socotra 80.09 277 P P 14 43 14.8 -2.0
JFWS Jewell Farm 80.21 36 P 14 43 16.1
baz=326
KSU1 Kansas State U 80.48 42 P 14 43 18.1
baz=323
NRCA Norcia 80.84 325 IAmb IAmb 14 43 21.7
comp=Z,31nm,0.8s
MATE Matera 81.12 321 ⇓P P 14 43 21.9 +0.2
K43A Burlington 81.17 35 IAmb IAmb 14 43 22.2
comp=Z,29nm,0.8s
INTR Introdacqua 81.20 324 IAmb IAmb 14 43 22.6
comp=Z,13nm,0.7s
L42A Oliver, Polo 81.21 36 IAmb IAmb 14 43 22.1
comp=Z,21nm,0.8s
MSTX Muleshoe 81.38 50 P 14 43 23.4
baz=320,SNR=7.4
ITM Ithomi 81.48 316 P P 14 43 23.7 0.0
ITM IAmb IAmb 14 43 24.2
comp=Z,19nm,0.7s
MNTX Cornudas Mount 81.68 53 IAmb IAmb 14 43 26.3
comp=Z,20nm,0.6s
MNTX Cornudas Mount 81.68 53 P 14 43 25.9
baz=319,SNR=38
N41A Harden Midland 81.78 38 IAmb IAmb 14 43 25.9
comp=Z,32nm,1.1s
D55A Sainte-Anne-du 81.91 25 P 14 43 25.4
baz=334,SNR=7.6
ALGO Algonquin Park 82.07 27 P 14 43 25.9
baz=333
D56A ZEC Mazanza, M 82.09 24 P 14 43 26.5
baz=335,SNR=15
E55A Montcerf-Lytto 82.25 26 P 14 43 27.1
baz=334
LATQ La Tuque 82.35 23 P 14 43 27.6
baz=336
E56A St. Veronique 82.47 25 P 14 43 28.3
baz=335,SNR=11
G54A Lake Saint Pet 82.56 27 P 14 43 28.3
baz=333
HDIL Hopedale 82.57 37 P 14 43 28.9
baz=327
D58A Chemin du LacG 82.58 23 P 14 43 28.5
baz=336
WMOK Wichita Mounta 82.86 46 IAmb IAmb 14 43 31.8
comp=Z,16nm,0.7s
WMOK Wichita Mounta 82.86 46 P 14 43 31.2
baz=322,SNR=22
I51A Listowel 82.98 30 P 14 43 31.4
baz=331
H53A Bracaygeon 83.13 28 P 14 43 31.5
baz=333,SNR=5.8
E58A La Victoria 83.13 24 P 14 43 31.7
baz=336
S39A Bolivar 83.15 41 IAmb IAmb 14 43 32.7
comp=Z,34nm,0.9s
PLVO Plevna 83.20 27 IAmb IAmb 14 43 32.7
comp=Z,33nm,0.8s
D61A St Aubert, Com 83.20 22 P 14 43 32.2
baz=338
D60A Saint Jean D'O 83.28 22 P 14 43 32.2
baz=338
AAM Ann Arbor 83.33 32 P 14 43 32.8
baz=330
TUL1 Leonard 83.42 44 P 14 43 34.0
baz=323,SNR=8.8
DELO Deloro Mine 83.49 27 IAmb IAmb 14 43 34.3
comp=Z,24nm,1.0s
SFIN Lafayette 83.62 36 IAmb IAmb 14 43 34.9
comp=Z,14nm,0.6s
SFIN Lafayette 83.63 36 P 14 43 34.4
baz=328,SNR=5.7
E60A Ste Agathe de 83.64 23 P 14 43 34.0
baz=337
U38A Gravette 83.66 43 IAmb IAmb 14 43 35.3
comp=Z,16nm,0.7s
F59A Saint Guilaume 83.75 24 P 14 43 34.9
baz=336
G57A Newington 83.79 25 P 14 43 34.8
baz=335,SNR=7.3
CCM Cathedral Cave 83.79 40 P P 14 43 35.5 0.0
CCM pmax pmax
comp=Z,28nm,0.6s

CCM Cathedral Cave 83.79 40 P P 14 43 35.5 0.0
CCM Cathedral Cave 83.79 40 P 14 43 35.5
baz=326
E61A Lac Etchemin 83.84 22 P 14 43 35.3
baz=338
DRLN Deer Lake 83.86 13 IAmb IAmb 14 43 37.1
comp=Z,26nm,0.8s
D63A Stockholm 83.88 20 P 14 43 35.7
baz=339,SNR=5.3
G58A Ormstown 84.02 25 P 14 43 36.1
baz=336
Q44A Meyer Farm, Va 84.06 38 IAmb IAmb 14 43 37.7
comp=Z,31nm,0.9s
ABTX Abilene, Hawle 84.07 48 P 14 43 37.4
baz=322
F61A St Evariste 84.13 23 P 14 43 37.1
baz=338,SNR=7.3
H57A Richville 84.24 26 P 14 43 37.1
baz=335
LONY Lake Ozonia 84.35 25 P 14 43 37.8
baz=335
E63A Oxbow 84.37 21 IAmb IAmb 14 43 38.8
comp=Z,28nm,0.9s
E63A Oxbow 84.37 21 P 14 43 37.9
baz=339
TX32 Lajitas Array 84.43 53 IAmb IAmb 14 43 40.8
comp=Z,35nm,1.1s
TXAR Lajitas Array 84.43 53 P P 14 43 39.7 +0.7
comp=Z,23nm,0.8s,baz=294,slow=3.9,SNR=185
TXAR Lajitas Array 84.43 53 P P 14 43 39.1 +0.2
U40A Yellville 84.45 42 P 14 43 38.8
baz=325,SNR=42
E64A Bridgewater 84.52 20 P 14 43 38.8
baz=340
H59A Cadyville 84.59 25 P 14 43 38.8
baz=336
G61A St-Isidore-de- 84.62 23 P 14 43 39.8
baz=337,SNR=6.1
H58A Gabriels 84.65 25 P 14 43 39.5
baz=336
M51A Elyria 84.72 32 P 14 43 40.0
baz=331
J56A Wolcott 84.85 27 P 14 43 40.1
baz=334
L53A Girard 84.87 30 P 14 43 41.0
baz=332
F63A Nahmakanta, Br 84.87 21 P 14 43 40.6
baz=339
O49A Covington 84.89 34 IAmb IAmb 14 43 41.8
comp=Z,18nm,0.8s
F64A Sherman 84.91 21 P 14 43 40.8
baz=339
G62A West of Eustis 84.95 23 P 14 43 41.3
baz=338
H60A Morristown 84.95 24 P 14 43 40.6
baz=336
W39A Magazine 84.96 43 P 14 43 41.3
baz=324,SNR=6.0
SLBS Sierra La Lagu 84.99 61 P P 14 43 42.7 +0.9
J57A Williamstown 85.00 27 IAmb IAmb 14 43 41.5
comp=Z,15nm,0.7s
J57A Williamstown 85.00 27 P 14 43 41.1
baz=334
NCB Newcomb 85.04 25 P P 14 43 41.1 -0.5
I58A Old Forge 85.07 26 P 14 43 41.2
baz=335
P48A Milroy 85.08 35 P P 14 43 42.0 +0.1
P48A IAmb IAmb 14 43 43.3
comp=Z,19nm,0.7s
M53A WI Miller and 85.18 31 P 14 43 42.5
baz=332
H61A Lyndonville 85.20 24 P 14 43 42.9
baz=337
K56A Middlesex 85.21 28 P 14 43 42.3
baz=334
PKME Peaks-Kenny Pk 85.23 22 P 14 43 42.7
baz=339
G63A Kingsbury 85.29 22 P 14 43 43.0
baz=338
P49A Miami Univ. Ec 85.30 34 IAmb IAmb 14 43 44.4
comp=Z,30nm,0.9s
P49A Miami Univ. Ec 85.30 34 P 14 43 42.8
baz=329,SNR=8.2
I59A Olmsteadville 85.31 25 P 14 43 42.5
baz=336
ACSO Alum Creek Sta 85.38 33 P 14 43 43.5
baz=330,SNR=5.8
H62A Milan 85.38 23 P 14 43 43.7
baz=337,SNR=6.7
G64A Maxfield 85.38 21 P 14 43 43.4
baz=339
J59A Piesco 85.42 26 IAmb IAmb 14 43 43.6
comp=Z,20nm,0.7s
J59A Piesco 85.42 26 P 14 43 43.1
baz=335
K57A Scipio Center 85.45 27 P 14 43 43.2
baz=334
LBNH Lisbon 85.47 24 P 14 43 43.9
baz=337
LCAR Lake Charles 85.47 41 IAmb IAmb 14 43 45.1
comp=Z,16nm,0.6s
M54A Oil Creek Stat 85.47 30 IAmb IAmb 14 43 44.7
comp=Z,33nm,0.9s
M54A Oil Creek Stat 85.47 30 P 14 43 43.8
baz=332
MIAR Mount Ida 85.58 43 IAmb IAmb 14 43 45.9
comp=Z,29nm,0.8s
MIAR Mount Ida 85.58 43 P 14 43 45.0
baz=325,SNR=20
H63A New Sharon 85.60 22 P 14 43 44.5
baz=338
L56A Greenwood 85.64 28 IAmb IAmb 14 43 45.2
comp=Z,23nm,0.7s
L56A Greenwood 85.64 28 P 14 43 44.3
baz=333,SNR=5.7
JCT Junction City 85.66 50 IAmb IAmb 14 43 45.7
comp=Z,17nm,0.7s
JCT Junction City 85.67 50 P 14 43 45.2
baz=322,SNR=7.5
I61A Oroboro, Fairl 85.67 24 P 14 43 44.9
baz=337
N53A Lisbon 85.67 31 IAmb IAmb 14 43 46.8
comp=Z,25nm,0.8s
K58A Earlville 85.70 27 IAmb IAmb 14 43 45.2
comp=Z,20nm,0.7s
K58A Earlville 85.70 27 P 14 43 44.8
baz=335,SNR=5.3
W41B Gary Mavity, V 85.70 42 P 14 43 45.0
baz=325,SNR=15
WHTX Lake Whitney, 85.70 47 IAmb IAmb 14 43 46.4
comp=Z,21nm,0.8s
WHTX Lake Whitney, 85.71 47 P 14 43 45.3
baz=323,SNR=6.3
G65A Princeton 85.73 21 P 14 43 45.1
baz=340
WCI Wyandotte Cave 85.78 36 P P 14 43 45.5 +0.2
WCI pmax pmax
comp=Z,22nm,0.7s
WCI Wyandotte Cave 85.78 36 P P 14 43 45.5 +0.2
WCI IAmb IAmb 14 43 46.0
comp=Z,22nm,0.7s
WCI Wyandotte Cave 85.78 36 P 14 43 45.4
baz=328
H64A Troy 85.83 22 P 14 43 45.6
baz=339
N54A Moraine State 85.84 31 P 14 43 45.6
baz=332,SNR=6.5
O52A Adamsville 85.91 32 IAmb IAmb 14 43 46.5
comp=Z,24nm,0.7s
K59A Cooperstown 85.94 26 P 14 43 46.0
baz=335,SNR=6.5
J60A Lant Hill Farm 85.95 25 P 14 43 46.2
baz=336
I62A Tamworth 85.97 24 P 14 43 46.7
baz=337
X40A Basin Creek Fa 85.98 43 IAmb IAmb 14 43 47.9
comp=Z,21nm,0.8s
X40A Basin Creek Fa 85.98 43 P 14 43 46.9
baz=325,SNR=11
P51A Williamsport 85.99 33 IAmb IAmb 14 43 47.1
comp=Z,29nm,1.1s
L57A Andrews Acres 86.00 28 P 14 43 46.3
baz=334
M56A Emporium 86.01 29 P 14 43 46.2
baz=333
I63A Otisfield 86.02 23 P 14 43 47.1
baz=338,SNR=6.5
O53A New Philadelph 86.02 32 IAmb IAmb 14 43 47.5

	comp=Z,46nm,1.1s							
O53A	**New Philadelph**	**86.02**	**32**	P			14 43 46.7	
	baz=331,SNR=5.2							
H65A	**Eastbrook**	**86.03**	**21**	P			14 43 46.6	
	baz=339							
BINY	**Binghamton**	**86.10**	**27**	P			14 43 46.3	
	baz=334							
J61A	**Chester**	**86.11**	**25**	P			14 43 46.9	
	baz=337							
P52A	**Corning**	**86.22**	**33**	P			14 43 47.2	
	baz=331							
L58A	**Harry Jones Me**	**86.28**	**27**	P			14 43 47.5	
	baz=334							
O54A	**Avella**	**86.39**	**31**	IAmb	IAmb		14 43 49.2	
	comp=Z,18nm,0.7s							
I64A	**Boothbay**	**86.39**	**22**	P			14 43 48.2	
	baz=338							
L59A	**Walton**	**86.40**	**27**	IAmb	IAmb		14 43 49.2	
	comp=Z,20nm,0.8s							
L59A	**Walton**	**86.41**	**27**	P			14 43 48.3	
	baz=335							
J62A	**Henniker**	**86.43**	**24**	P			14 43 48.9	
	baz=337							
N56A	**West Decatur**	**86.47**	**29**	P			14 43 48.8	
	baz=333							
M57A	**Sunshine Farm,**	**86.50**	**29**	IAmb	IAmb		14 43 50.2	
	comp=Z,20nm,0.8s							
M57A	**Sunshine Farm,**	**86.50**	**29**	P			14 43 48.9	
	baz=334,SNR=6.0							
K61A	**Williamstown**	**86.52**	**25**	P			14 43 48.9	
	baz=336							
R50A	**Paris**	**86.53**	**35**	IAmb	IAmb		14 43 49.7	
	comp=Z,14nm,0.6s							
J63A	**Strafford**	**86.59**	**24**	P			14 43 49.5	
	baz=338							
P53A	**Whipple**	**86.62**	**32**	IAmb	IAmb		14 43 50.1	
	comp=Z,18nm,0.7s							
Q52A	**Bidwell**	**86.75**	**33**	IAmb	IAmb		14 43 51.0	
	comp=Z,19nm,0.8s							
K62A	**Royalston**	**86.83**	**25**	P			14 43 50.7	
	baz=337							
L60A	**Shokan**	**86.84**	**26**	P			14 43 50.6	
	baz=336							
L61A	**Hillsdale 1, H**	**86.86**	**26**	P			14 43 50.4	
	baz=336							
SSPA	**Standing Stone**	**86.86**	**29**	P		**P**	**14 43 50.3**	**-0.2**
SSPA				IAmb	IAmb		14 43 51.2	
	comp=Z,17nm,1.1s							
SSPA	**Standing Stone**	**86.87**	**29**	P			14 43 50.7	
	baz=333							
M59A	**Waymart**	**86.87**	**27**	P			14 43 50.6	
	baz=335							
N57A	**Milroy**	**86.87**	**29**	P			14 43 50.7	
	baz=334,SNR=6.5							
X43A	**Marvell**	**86.88**	**41**	P			14 43 51.2	
	baz=326							
WVT	**Waverly**	**86.90**	**38**	P		**P**	**14 43 51.2**	**+0.4**
WVT				pmax	pmax			
	comp=Z,17nm,0.8s							
WVT	**Waverly**	**86.90**	**38**	P		**P**	**14 43 51.1**	**+0.4**
WVT				IAmb	IAmb		14 43 51.6	
	comp=Z,17nm,0.8s							
WVT	**Waverly**	**86.90**	**38**	P			14 43 51.1	
	baz=328							
O56A	**Blue Knob Stat**	**86.96**	**30**	P			14 43 51.3	
	baz=333,SNR=8.4							
Z41A	**Richland Creek**	**87.00**	**43**	P			14 43 52.1	
	baz=325							
K63A	**Dunstable**	**87.01**	**24**	P			14 43 51.5	
	baz=337							
MCWV	**Mont Chateau**	**87.04**	**31**	P			14 43 52.0	
	baz=332							
N58A	**Sunbury**	**87.08**	**28**	IAmb	IAmb		14 43 52.6	
	comp=Z,18nm,0.9s							
N58A	**Sunbury**	**87.08**	**28**	P			14 43 51.6	
	baz=334							
Q53A	**Leroy**	**87.12**	**33**	P			14 43 52.3	
	baz=331,SNR=15							
HRV	**Adam Dziewonsk**	**87.17**	**24**	P			14 43 52.3	
	baz=337							
NATX	**Nacogdoches**	**87.31**	**46**	P			14 43 53.9	
	baz=324							
N59A	**State Game Lan**	**87.32**	**28**	IAmb	IAmb		14 43 53.5	
	comp=Z,21nm,1.0s							
N59A	**State Game Lan**	**87.32**	**28**	P			14 43 53.0	
	baz=335							
O57A	**Amberson**	**87.33**	**29**	P			14 43 53.1	
	baz=334,SNR=5.6							
S51A	**Beattyville**	**87.38**	**35**	IAmb	IAmb		14 43 54.6	
	comp=Z,19nm,0.9s							
T50A	**Nancy**	**87.41**	**36**	IAmb	IAmb		14 43 53.9	
	comp=Z,16nm,0.6s							
R53A	**Hurricane**	**87.42**	**33**	IAmb	IAmb		14 43 54.5	
	comp=Z,34nm,1.1s							
U49A	**Red Boiling Sp**	**87.45**	**37**	IAmb	IAmb		14 43 54.7	
	comp=Z,27nm,0.9s							
P56A	**Dayton Farm, R**	**87.54**	**31**	P			14 43 54.4	
	baz=333,SNR=14							
N60A	**Cedar Hill Far**	**87.58**	**27**	P			14 43 53.9	
	baz=335							
M61A	**Granite Spring**	**87.60**	**26**	P			14 43 54.1	
	baz=336							
PAGS	**Pennsylvania G**	**87.63**	**29**	IAmb	IAmb		14 43 55.0	
	comp=Z,16nm,0.8s							
O58A	**Lewisberry**	**87.65**	**29**	P			14 43 54.3	
	baz=334							
V48A	**Smith Brothers**	**87.66**	**38**	IAmb	IAmb		14 43 55.5	
	comp=Z,33nm,1.1s							
O59A	**Robesonia**	**87.73**	**28**	P			14 43 54.6	
	baz=334							
Q56A	**Snyder Ridge,**	**87.82**	**31**	IAmb	IAmb		14 43 57.0	
	comp=Z,18nm,1.1s							
Q56A	**Snyder Ridge,**	**87.83**	**31**	P			14 43 55.4	
	baz=333							
PAL	**Palisades**	**87.84**	**26**	P			14 43 55.2	
	baz=336							
P57A	**Homestead Farm**	**87.85**	**30**	P			14 43 55.4	
	baz=333							
L64A	**Middleborough**	**87.90**	**24**	P			14 43 55.7	
	baz=339							
R54A	**Victor**	**87.92**	**33**	P			14 43 56.0	
	baz=332,SNR=6.2							
O60A	**Telford**	**87.98**	**28**	P			14 43 55.8	
	baz=335							
M63A	**Gales Ferry**	**88.04**	**25**	P			14 43 56.2	
	baz=337							
Q57A	**Strasburg**	**88.11**	**30**	P			14 43 56.6	
	baz=333							
S54A	**Dingess, Beckl**	**88.13**	**33**	IAmb	IAmb		14 43 58.1	
	comp=Z,32nm,1.1s							
S54A	**Dingess, Beckl**	**88.13**	**33**	P			14 43 56.9	
	baz=331							
R55A	**Marlinton**	**88.15**	**32**	IAmb	IAmb		14 43 58.1	
	comp=Z,25nm,0.8s							
R55A	**Marlinton**	**88.16**	**32**	P			14 43 57.1	
	baz=332,SNR=5.3							
P59A	**Jarrettsville**	**88.28**	**29**	P			14 43 57.3	
	baz=334							
R56A	**Bull Pasture M**	**88.31**	**31**	P			14 43 57.5	
	baz=332							
P60A	**Greenville**	**88.36**	**28**	P			14 43 57.6	
	baz=335							
KEST	**Kesra**	**88.40**	**323**	P		**P**	**14 43 57.6**	**-0.3**
	comp=Z,9.6nm,0.9s,baz=322,slow=9.2,SNR=10.0							
Q58A	**Fox Den Farm,**	**88.45**	**30**	P			14 43 58.2	
	baz=334							
PBRG	**Braganca**	**88.53**	**337**	*e*P		**P**	**14 43 58.1**	**-0.3**
	comp=Z,13nm,2.3s							
V51A	**Loudon**	**88.65**	**36**	IAmb	IAmb		14 44 00.2	
	comp=Z,24nm,1.0s							
X48A	**Hartselle**	**88.66**	**39**	IAmb	IAmb		14 43 59.7	
	comp=Z,21nm,0.7s							
R57A	**Stanardsville**	**88.72**	**31**	P			14 43 60.0	
	baz=333							
W50A	**Signal Mountai**	**88.77**	**37**	IAmb	IAmb		14 44 00.7	
	comp=Z,19nm,0.8s							
PGAV	**Gavieira, Arco**	**88.78**	**338**	*e*P		**P**	**14 43 59.3**	**-0.3**
CPCT	**Cooper Cave**	**88.89**	**36**	IAmb	IAmb		14 44 01.3	
	comp=Z,28nm,0.9s							
S56A	**Natural Bridge**	**88.89**	**32**	P			14 44 00.7	
	baz=332							
V52A	**Sevierville**	**88.93**	**36**	IAmb	IAmb		14 44 01.2	
	comp=Z,16nm,0.7s							
BLA	**Blacksburg**	**88.98**	**33**	P			14 44 01.1	
	baz=332							
TKL	**Tuckaleechee C**	**89.01**	**36**	IAmb	IAmb		14 44 01.9	
	comp=Z,18nm,0.8s							
S57A	**Dark Hollow, R**	**89.04**	**31**	IAmb	IAmb		14 44 02.3	
	comp=Z,17nm,0.9s							
S57A	**Dark Hollow, R**	**89.05**	**31**	P			14 44 01.5	
	baz=333							
MVO	**Moncorvo**	**89.20**	**337**	*e*P		**P**	**14 44 01.4**	**-0.2**
	comp=Z,14nm,0.8s							
POLO	**Lamas de Olo**	**89.21**	**338**	*e*P		**P**	**14 44 01.5**	**-0.1**
	comp=Z,8.2nm,0.9s							
R58B	**Mineral**	**89.25**	**31**	IAmb	IAmb		14 44 03.7	
	comp=Z,18nm,1.1s							
R58B	**Mineral**	**89.25**	**31**	P			14 44 02.2	
	baz=333							
PVRL	**Vila Real**	**89.28**	**338**	*e*P		**P**	**14 44 01.8**	**-0.1**
Y49A	**Blount Mountai**	**89.44**	**39**	IAmb	IAmb		14 44 03.6	
	comp=Z,18nm,0.9s							
S58A	**Poland Farm, P**	**89.50**	**31**	P			14 44 03.2	
	baz=333							
ESBB	**Sonseca Array**	**89.70**	**334**	IAmb	IAmb		14 44 04.8	
	comp=Z,10nm,0.7s							
ESDC	**Sonseca Array**	**89.70**	**334**	P		**P**	**14 44 04.0**	**+0.1**
	comp=Z,12nm,0.6s,baz=15,slow=4.1,SNR=68							
ESDC	**Sonseca Array**	**89.70**	**334**	P		**P**	**14 44 04.2**	**+0.3**
PVIS	**Viseu**	**89.85**	**338**	*e*P		**P**	**14 44 04.4**	**-0.2**
LRAL	**Lakeview Retre**	**89.88**	**39**	P			14 44 04.9	
	baz=328							
PAB	**San Pablo**	**89.94**	**335**	P		**P**	**14 44 05.1**	**0.0**
PAB				pmax	pmax			
	comp=Z,9.0nm,0.7s							
PAB	**San Pablo**	**89.94**	**335**	P		**P**	**14 44 05.1**	**0.0**
MTE	**Manteigas**	**90.05**	**337**	*e*P		**P**	**14 44 05.5**	**0.0**
	comp=Z,25nm,1.1s							
Y52A	**Lilburn**	**90.44**	**37**	IAmb	IAmb		14 44 08.9	
	comp=Z,18nm,0.9s							
KMSC	**Kings Mountain**	**90.45**	**34**	P			14 44 07.6	
	baz=331							
PCBR	**Castelo Branco**	**90.56**	**337**	*e*P		**P**	**14 44 07.4**	**-0.4**
PMRV	**Marv??o**	**90.92**	**337**	*e*P		**P**	**14 44 10.1**	**+0.6**
W57A	**Gilead**	**90.96**	**33**	IAmb	IAmb		14 44 10.5	
	comp=Z,17nm,0.9s							
GOGA	**Godfrey**	**91.08**	**37**	P			14 44 10.8	
	baz=330							
EVO	**Evora**	**91.93**	**337**	*e*P		**P**	**14 44 14.4**	**+0.2**
	comp=Z,12nm,2.0s							
PBAR	**Barrancos**	**91.99**	**336**	*e*P		**P**	**14 44 14.2**	**-0.2**
PCVE	**Castro Verde**	**92.78**	**337**	*e*P		**P**	**14 44 17.9**	**-0.2**
PVAQ	**Vaqueiros**	**92.90**	**336**	*e*P		**P**	**14 44 18.3**	**-0.3**
	comp=Z,11nm,0.8s							
MDT	**Midelt**	**96.21**	**332**	P		**P**	**14 44 33.6**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=9.6,slow=3.9,SNR=7.4							
VNDA	**Vanda**	**123.59**	**175**	PKP		**PKiKP**	**14 50 00.4**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=317,slow=4.1,SNR=6.9							
LPAZ	**La Paz**	**141.26**	**51**	PKhKP	PKPpre		14 50 30.1	
LPAZ				SKP			14 53 41.8	
	comp=Z,1.2nm,0.4s,baz=11,slow=3.9,SNR=6.9							
	comp=Z,1.4nm,0.6s,baz=18,slow=1.2,SNR=5.5							
PB08	**IPOC Station P**	**143.78**	**56**			**PKPdf**	**14 50 39.3**	**-0.3**
PB01	**IPOC Station P**	**144.29**	**57**			**PKPdf**	**14 50 40.2**	**+0.1**
PB07	**IPOC Station P**	**144.58**	**58**			**PKPdf**	**14 50 41.3**	**+0.6**
PB04	**IPOC Station P**	**144.89**	**59**			**PKPab**	**14 50 42.2**	**+0.9**
NVL	**N'lazarevskaya**	**145.43**	**206**	*e*PKP2		**PKPdf**	**14 50 40.7**	**+0.3**
NVL				pmax	pmax			
	comp=Z,11nm,0.8s							
PB10	**IPOC Station P**	**145.52**	**61**	PKPdf		**PKPab**	**14 50 43.8**	**+0.2**
LVC	**Limon Verde**	**145.84**	**58**	PKP2		**PKPab**	**14 50 45.7**	**+0.4**
LVC	**Limon Verde**	**145.84**	**58**			**PKPab**	**14 50 45.7**	**+0.4**
BELA	**Belgrano 2**	**147.72**	**181**			**PKPbc**	**14 50 47.4**	**0.0**
BDFB	**Brasilia**	**148.82**	**19**	PKPbc		**PKPbc**	**14 50 52.5**	**+0.4**
	comp=Z,16nm,0.7s,baz=285,slow=2.2,SNR=19							
SNAA	**Sanae**	**149.15**	**201**	P		**PKPbc**	**14 50 51.4**	**+0.2**
SNAA	**Sanae**	**149.15**	**201**	PKP2		**PKPbc**	**14 50 51.5**	**+0.2**
SNAA	**Sanae**	**149.15**	**201**			**PKPbc**	**14 50 51.5**	**+0.2**
LCO	**Las Campanas**	**149.31**	**68**	PKP2		**PKiKP**	**14 50 53.8**	**-0.4**
LCO	**Las Campanas**	**149.31**	**68**			**PKiKP**	**14 50 53.8**	**-0.4**
VNA2	**Neumayer--Watz**	**150.75**	**200**	P		**PKiKP**	**14 50 55.6**	**+0.1**
	baz=88,slow=1.3							
VNA3	**Neumayer Olymp**	**151.04**	**198**	P		**PKiKP**	**14 50 55.9**	**-0.2**
VNA1	**Neumayer--Stat**	**151.15**	**200**	P		**PKiKP**	**14 50 57.3**	**+1.0**
BO02	**Sierra Bellavi**	**152.80**	**78**			**PKiKP**	**14 51 01.6**	**+0.6**
CPUP	**Villa Florida**	**155.17**	**45**	PKPab		**PKPab**	**14 51 23.4**	**+0.1**
	comp=Z,10nm,0.8s,baz=341,slow=5.9,SNR=19							
PLCA	**Paso Flores**	**155.78**	**90**	PKPab		**PKPab**	**14 51 27.0**	**+1.2**
	comp=Z,6.5nm,0.9s,baz=280,slow=2.9,SNR=11							

MOS ***23*** *14:57:26.8±0.9,51°.81N×176°.35E,h34km,mb5.7/102, MS4.1/13 Error ellipse: s-maj=5.9km s-min=4.2km az=106.3*

NEIC ***23*** *14:57:27.8±1.8,51°.75N±0°.08×176°.34E±0°.06,h31km±1km, mb5.4/366,Mwb5.0/59,ML5.3(AEIC),Error ellipse: s-maj=13.6km s-min=5.8km az=194.0*

AEIC ***23*** *14:57:27±2.2,51°.62N±0°.08×176°.25E±0°.07,h26km±3km, Error ellipse: s-maj=11.4km s-min=5.5km az=195.0*

BJI ***23*** *14:57:27.8±0.0,51°.96N×176°.12E,h42km,mB5.3/53, mb5.7/84,Ms4.8/62,Ms7 4.4/62*

NEIC ***23*** *14:57:28.1,51°.72N×176°.36E,h20km,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr3.49; Mθθ-4.59; Mφφ 1.09; Mrθ 1.10; Mθφ-1.30; Mrφ0.93; Fault plane solution: M=4.58000×10^16^ NP1:φ=273.72000°, δ38.71000°,λ114.07000°. NP2:φ=63.93000°,δ55.18000°, λ71.90000°. Principal axes: T 3.8638, Plg73.0000°, Azm286.0000°; N 1.2000, Plg15.0000°, Azm75.0000°; P -5.0638, Plg9.0000°, Azm167.0000°;*

IDC ***23*** *14:57:28.3±1.4,51°.80N×176°.46E,h33km±9km,mb5.2/49, mb1 5.2/53,mb1mx5.1/60,mbtmp5.4/53,ML5.7/2,MS4.4/36, Ms1 4.4/36,ms1mx4.3/48 Error ellipse: s-maj=12.2km s-min=7.8km az=178.0*

GCMT ***23*** *14:57:29.8±0.2,51°.83N±0°.01×176°.36E±0°.02,h34km, MW5.2/129,Moment Tensor Solution. s95,c131; s129,c216; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.75±.15; Mθθ-6.28±.11; Mφφ1.52±.11; Mrθ2.37±.14; Mθφ-1.05±.08; Mrφ3.85±.14; Best double couple: M=7.32400×10^16^ NP1:φ=290.00000°,δ39.00000°, λ139.00000°. NP2:φ=54.00000°,δ66.00000°,λ59.00000°. Principal axes: T 7.4570, Plg57.0000°, Azm281.0000°; N -0.2760, Plg28.0000°, Azm68.0000°; P -7.1910, Plg15.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 14:57:29.2±0.4,51.75N±0°.04×176°.31E±0°.03,h42km±2km, h42km:pP-P,n1149,σ1s07/1232,mb5.4/426,MS4.5/66, 431C-192D,Fault plane solution: NP1:φ=282.77774°, δ39.49387°,λ144.99283°. **NP2:φ=41.16847°,δ68.60120°,** λ55.97866°. **Principal axes:** T Plg53.4813°, Azm269.4996°; N Plg31.3948°, Azm55.0049°; P Plg16.7189°, Azm155.5675°; **Fault plane solution: NP1:φ=228.01444°,δ28.13317°,λ70.44663°. NP2:** φ=69.95157°,δ63.61953°,λ100.14591°. **Principal axes:** T Plg69.6777°, Azm0.9691°; N Plg9.0799°, Azm245.4053°; P Plg18.0217°, Azm152.4249°; **Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.38**	**81**		**Pn**	**14 57 52.0**	**0.0**
LSNW	**Little Sitkin**	**1.39**	**80**		**Pn**	**14 57 52.0**	**0.0**
LSPA	**Little Sitkin**	**1.42**	**81**		**Pn**	**14 57 52.6**	**+0.1**
SMY	**Shemya**	**1.68**	**307**		**Pn**	**14 57 56.2**	**+0.3**
SMY				Sn	**Sn**	**14 58 17.8**	**+1.6**
AMKA	**Amchitka**	**1.91**	**100**	Pn	**Pn**	**14 57 57.9**	**-1.2**
AMKA				Sn	**Sn**	**14 58 20.9**	**-1.0**
CETU	**Semis' Tuman**	**1.99**	**82**		**Pn**	**14 58 01.4**	**+1.1**
CESW	**Semis' Southwe**	**2.03**	**84**		**Pn**	**14 58 01.4**	**+0.6**
CEAP	**Semis' Anvil P**	**2.04**	**82**		**Pn**	**14 58 02.1**	**+1.1**
CERAA	**Semis' Rag'd T**	**2.10**	**84**		**Pn**	**14 58 02.5**	**+0.6**
GALAA	**Gareloi Lava P**	**3.06**	**88**		**Pn**	**14 58 16.4**	**+1.4**
TASE	**Tanaga Southea**	**3.51**	**86**		**Pn**	**14 58 22.4**	**+1.1**
TASE					**Sn**	**14 59 04.0**	**+2.4**
TAFP	**Tanaga Falls P**	**3.55**	**85**		**Pn**	**14 58 22.5**	**+0.8**
KIMD	**Kanaga Island**	**4.01**	**87**		**Pn**	**14 58 29.1**	**+1.1**
KICM	**Kanaga Island**	**4.03**	**85**		**Pn**	**14 58 29.8**	**+1.4**
KICM					**Sn**	**14 59 16.8**	**+2.5**
KIKV	**Kanaga Island**	**4.05**	**86**		**Pn**	**14 58 29.6**	**+1.1**
KIWB	**Kanaga Island**	**4.06**	**86**		**Pn**	**14 58 29.4**	**+0.6**
KIRH	**Kanaga Island**	**4.10**	**85**		**Pn**	**14 58 30.8**	**+1.5**
ADK	**Adak**	**4.35**	**85**	P	**Pn**	**14 58 33.5**	**+0.8**
ADK	**Adak**	**4.35**	**85**		**Pn**	**14 58 33.5**	**+0.8**
ADAG	**Mount Adagdak**	**4.40**	**84**		**Pn**	**14 58 34.5**	**+1.1**
GSTD	**Great Sitkin T**	**4.68**	**83**		**Pn**	**14 58 38.4**	**+1.0**
GSTD					**Sn**	**14 59 35.4**	**+5.0**
GSTR	**Great Sitkin T**	**4.74**	**83**		**Pn**	**14 58 38.9**	**+0.9**
GSMY	**Great Sitkin M**	**4.74**	**83**		**Pn**	**14 58 39.9**	**+1.8**
ATKA	**Atka Island**	**5.89**	**82**		**Pn**	**14 58 55.2**	**+1.5**
KOFP	**Korovin Flat P**	**5.95**	**81**		**Pn**	**14 58 56.8**	**+2.1**
NIKH	**Nikolski High**	**9.16**	**77**	P		14 59 40.6	
	baz=266,SNR=6.0						
SPIA	**Saint Paul Isl**	**9.52**	**50**	Pn	**Pn**	**14 59 45.3**	**+1.8**
SPIA	**Saint Paul Isl**	**9.52**	**50**	P		14 59 45.6	
	baz=240,SNR=5.3						
OKSO	**Okmok South**	**9.60**	**74**		**Pn**	**14 59 47.7**	**+3.1**
OKFG	**Magazine Ridge**	**9.75**	**74**		**Pn**	**14 59 50.1**	**+3.4**
PET	**Petropavlovsk**	**10.87**	**284**	*e*P	**Pn**	**15 00 01.1**	**-0.8**
PET				*e*S	**Sn**	**15 01 55.9**	**-6.1**
PET				pmax	pmax		
	comp=Z,83nm,0.6s						
PET				MLR	MLR		
	comp=Z,4μm,16.0s						
PET	**Petropavlovsk**	**10.87**	**284**		**Pn**	**15 00 02.0**	**+0.1**
AKUT	**Akutan**	**11.07**	**71**	Pn	**Pn**	**15 00 07.7**	**+3.0**
PEA0B	**Petropavlovsk-**	**11.44**	**284**	*de*P	**Pn**	**15 00 10.7**	**+0.9**
PEA0B	**Petropavlovsk-**	**11.44**	**284**	Pn	**Pn**	**15 00 10.8**	**+1.0**
PETK	**Petropavlovsk-**	**11.44**	**284**	Pn	**Pn**	**15 00 10.7**	**+0.8**
	comp=Z,4.8nm,0.3s,baz=98,slow=19,SNR=64						
PETK				Sn	**Sn**	**15 02 11.1**	**-5.1**
	comp=Z,3.0nm,0.3s,baz=91,slow=26,SNR=4.6						
PETK				LR	LR	15 04 32.0	
	comp=Z,1μm,21.9s,baz=105,slow=37						
PETK				PcP	**PcP**	**15 06 00.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=54,slow=4.0,SNR=4.0						
PETK	**Petropavlovsk-**	**11.44**	**284**	P	**Pn**	**15 00 10.4**	**+0.6**
PETK	**Petropavlovsk-**	**11.44**	**284**		**Pn**	**15 00 10.4**	**+0.6**
SKR	**Severo-Kuril's**	**12.70**	**273**	*e*P	**Pn**	**15 00 26.4**	**-0.6**
SKR				pmax	pmax		
	comp=Z,87nm,0.6s						
SKR				MLR	MLR		
	comp=Z,500nm,13.0s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
GAMB	**Gambell**	**13.62**	**23**	Pn	**Pn**	**15 00 41.7**	**+2.4**
GAMB	**Gambell**	**13.62**	**23**	P		15 00 41.7	
	baz=213,SNR=12						
SDPT	**Sand Point**	**14.24**	**66**		**Pn**	**15 00 46.9**	**-1.1**
SDPT	**Sand Point**	**14.24**	**66**	P		15 00 48.0	
	baz=264						
ANM	**Nome**	**15.98**	**30**	P	**P**	**15 01 14.3**	**+0.6**
ANM				pmax	pmax		
	comp=Z,287nm,1.4s						
ANM	**Nome**	**15.98**	**30**	P	**P**	**15 01 14.3**	**+0.6**
ANM				IAmb	IAmb	15 01 18.0	
	comp=Z,287nm,1.4s						
ANM	**Nome**	**15.98**	**30**	P		15 01 13.6	
	baz=225,SNR=34						
TNA	**Tin City**	**16.02**	**24**	P	**P**	**15 01 14.4**	**+0.4**
TNA	**Tin City**	**16.02**	**24**	P		15 01 13.9	
	baz=218,SNR=27						
MA2	**Magadan**	**16.32**	**309**	Pn	**Pn**	**15 01 15.6**	**+0.6**
	comp=Z,3.4nm,0.3s,baz=97,slow=10.0,SNR=60						
MA2				LR	LR	15 07 34.3	
	comp=Z,2μm,18.3s,baz=112,slow=37						
MA2	**Magadan**	**16.32**	**309**	*e*P	**Pn**	**15 01 15.2**	**+0.3**
MA2				pmax	pmax		
	comp=Z,115nm,1.0s						
MA2	**Magadan**	**16.32**	**309**		**Pn**	**15 01 16.1**	**+1.2**
SEY	**Seymchan**	**16.97**	**321**	Pn	**Pn**	**15 01 23.5**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=128,slow=9.6,SNR=112						
SEY				LR	LR	15 07 37.9	
	comp=Z,2μm,19.1s,baz=136,slow=36						
SEY				ScP	**ScP**	**15 09 38.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=136,slow=3.9,SNR=4.5						
BILL	**Bilibino**	**17.06**	**347**	*de*P	**P**	**15 01 25.2**	**-0.3**
BILL				*e*S	**Sn**	**15 04 34.2**	**+1.7**
BILL				pmax	pmax		
	comp=Z,81nm,0.9s						
BILL				MLR	MLR		
	comp=Z,3μm,19.0s						
SII	**Sitkinak Islan**	**17.86**	**63**	P		15 01 34.0	
	baz=266						
SVW2	**Sparrevohn**	**18.01**	**48**	P	**P**	**15 01 36.6**	**+0.5**
OHAK	**Old Harbor**	**18.39**	**61**	P	**P**	**15 01 38.3**	**-2.0**
OHAK	**Old Harbor**	**18.39**	**61**	P		15 01 39.1	
	baz=265						
TTA	**Tatalina**	**18.49**	**42**	P	**Pn**	**15 01 43.0**	**+1.1**
TTA				pmax	pmax		
	comp=Z,180nm,1.4s						
TTA	**Tatalina**	**18.49**	**42**	P	**Pn**	**15 01 43.0**	**+1.1**
TTA	**Tatalina**	**18.49**	**42**	P		15 01 42.6	
	baz=245,SNR=47						
KDAK	**Kodiak Island**	**18.82**	**59**	P	**P**	**15 01 43.7**	**-1.3**
	comp=Z,18nm,0.3s,baz=286,slow=3.4,SNR=80						
KDAK				S	**Sn**	**15 05 07.3**	**-7.9**
	comp=Z,0.2nm,0.3s,baz=63,slow=5.7,SNR=1.8						
KDAK	**Kodiak Island**	**18.82**	**59**	*c i*P	**P**	**15 01 43.0**	**-1.9**
KDAK				pmax	pmax		
	comp=Z,115nm,0.8s						
KDAK	**Kodiak Island**	**18.82**	**59**	P	**P**	**15 01 43.8**	**-1.2**
KDAK	**Kodiak Island**	**18.82**	**59**	P		15 01 43.7	
	baz=264						
RSO	**Redoubt South**	**19.17**	**51**	P	**Pn**	**15 01 51.1**	**+1.0**
RDOG	**Red Dog Mine**	**19.21**	**24**	P	**Pn**	**15 01 51.2**	**+0.8**
RDOG				IAmb	IAmb	15 01 52.6	
	comp=Z,326nm,0.8s						
RDOG	**Red Dog Mine**	**19.21**	**24**	P		15 01 50.9	
	baz=222						
HOM	**Homer**	**19.55**	**54**	P	**Pn**	**15 01 54.0**	**-0.5**
HOM	**Homer**	**19.55**	**54**	P		15 01 53.7	
	baz=260,SNR=12						
SPCR	**Spurr Chakacha**	**19.60**	**49**	P		15 01 55.4	
	baz

BPAW Bear Paw Mtn. 21.02 41 P 15 02 10.1
baz=249,SNR=58

TRF Thorofare Moun 21.10 43 P **P** **15 02 10.6 +0.8**
TRF IAmb IAmb 15 02 29.1
comp=Z,140nm,0.9s

TRF Thorofare Moun 21.10 43 P 15 02 10.7
baz=251,SNR=55

PMR Palmer 21.14 49 P **P** **15 02 09.0 -1.1**
PMR pmax pmax
comp=Z,54nm,0.7s

PMR Palmer 21.14 49 P **P** **15 02 08.9 -1.1**
PMR Palmer 21.14 49 P 15 02 08.9
baz=257,SNR=24

GHO Glory Hole Cre 21.27 48 P **P** **15 02 10.8 -0.8**
GHO IAmb IAmb 15 02 24.4
comp=Z,101nm,0.8s

PWL Port Wells 21.38 51 P **P** **15 02 12.4 -0.3**
KNK Knik Glacier 21.42 49 P 15 02 12.4
baz=259

MLY Manley 21.46 39 P **P** **15 02 14.8 +1.2**
MLY IAmb IAmb 15 02 33.3
comp=Z,145nm,1.0s

MLY Manley 21.47 39 P 15 02 14.6
baz=247,SNR=73

SML Sawmill 21.55 48 P 15 02 13.6
baz=258,SNR=59

NKL Nikolayevsk 21.62 288 *e*P **P** **15 02 14.4 -1.0**
NKL *e*S **S** **15 06 11.5 -0.8**
NKL pmax pmax
comp=E,78nm,0.9s

NKL pmax pmax
comp=N,139nm,1.2s

NKL pmax pmax
comp=Z,228nm,1.1s

NKL smax smax
comp=E,93nm,1.3s

NKL smax smax
comp=N,1.0nm,2.3s

NKL MLR MLR
comp=N,2.0nm,14.0s

NKL MLR MLR
comp=E,708nm,14.0s

NKL MLR MLR
comp=Z,530nm,18.0s

BWN Browne 21.68 42 P **P** **15 02 17.4 +1.6**
BWN IAmb IAmb 15 02 33.4
comp=Z,291nm,1.2s

WAT2 Susitna Watana 21.70 45 P 15 02 15.4
baz=255

YUK Yuzh-Kuril'sk 21.70 261 *e*P **P** **15 02 09.9 -6.4**
YUK *e*S **S** **15 06 16.7 +2.7**
YUK pmax pmax
comp=Z,842nm,1.2s

MCK McKinley 21.76 43 P **P** **15 02 16.6 -0.2**
MCK pmax pmax
comp=Z,97nm,0.8s

MCK McKinley 21.76 43 P **P** **15 02 16.6 -0.2**
MCK IAmb IAmb 15 02 35.7
comp=Z,97nm,0.8s

MCK McKinley 21.76 43 P 15 02 16.2
baz=252,SNR=29

NEA2 Nenana 21.98 41 P **P** **15 02 19.5 +0.4**
NEA2 IAmb IAmb 15 02 22.1
comp=Z,227nm,0.8s

NEA2 Nenana 21.98 41 P 15 02 19.5
baz=250,SNR=229

GLI Glacier Island 21.98 51 P **P** **15 02 18.5 -0.7**
GLI Glacier Island 21.98 51 P 15 02 18.0
baz=261,SNR=44

WAT6 Susitna Watana 21.99 47 P 15 02 18.5
baz=256,SNR=115

SCM Sheep Creek Mo 22.02 49 P **P** **15 02 19.7 0.0**
SCM pmax pmax
comp=Z,326nm,0.6s

SCM Sheep Creek Mo 22.02 49 P **P** **15 02 19.7 0.0**
I23K Minto, Yukon-K 22.05 39 P **P** **15 02 20.5 +0.7**
I23K Minto, Yukon-K 22.05 39 P 15 02 20.3
baz=249,SNR=55

Q23K Middleton Isla 22.20 55 P 15 02 21.5
baz=266

YSS Yuzh-Sakhalins 22.25 271 *e*P **P** **15 02 22.9 +0.8**
YSS *e*S **S** **15 06 18.6 -5.6**
YSS pmax pmax
comp=Z,600nm,3.4s

YSS pmax pmax
comp=Z,260nm,0.8s

YSS MLR MLR
comp=Z,700nm,19.0s

YSS Yuzh-Sakhalins 22.25 271 P **P** **15 02 24.0 +1.9**
YSS IAmb IAmb 15 02 26.3
comp=Z,201nm,0.7s

FID Port Fidalgo 22.26 52 P **P** **15 02 21.4 -0.8**
FID IAmb IAmb 15 02 36.5
comp=Z,186nm,1.0s

WRH Wood River Hil 22.34 42 P **P** **15 02 22.4 -0.6**
MDM Murphy Dome 22.44 40 P **P** **15 02 24.1 +0.1**
MDM IAmb IAmb 15 02 26.6
comp=Z,131nm,0.9s

CCB Clear Creek Bu 22.51 41 P **P** **15 02 23.9 -0.8**
TCOL CIGO, UAF Yank 22.56 41 P 15 02 25.2
baz=251,SNR=6.9

COLA College 22.56 41 *de*P **P** **15 02 24.2 -1.1**
COLA pmax pmax
comp=Z,74nm,0.9s

COLA MLR MLR
comp=Z,1μm,18.0s

COLA College 22.56 41 P 15 02 25.2
baz=251

COLD Coldfoot 22.58 34 P **P** **15 02 25.4 -0.1**
COLD Coldfoot 22.58 34 P 15 02 25.5
baz=243,SNR=36

EYAK Cordova Ski Ar 22.60 52 P **P** **15 02 25.1 -0.7**
EYAK IAmb IAmb 15 02 39.5
comp=Z,83nm,0.7s

EYAK Cordova Ski Ar 22.60 52 P 15 02 25.0
baz=264

M24K Tolsona, Glenn 22.61 48 P **P** **15 02 26.2 +0.2**
M24K Tolsona, Glenn 22.61 48 P 15 02 26.3
baz=259,SNR=36

KLU Klutina 22.63 50 P **P** **15 02 25.8 -0.4**
KLU IAmb IAmb 15 02 34.9
comp=Z,88nm,0.8s

KLU Klutina 22.63 50 P 15 02 25.3
baz=261,SNR=42

HDA Harding Lake 22.80 42 P 15 02 25.5
baz=253,SNR=23

HDA P 15 02 25.5
baz=253,SNR=23

POKR Poker Plat Res 22.81 40 P **P** **15 02 27.5 -0.4**
POKR IAmb IAmb 15 02 30.4
comp=Z,60nm,0.7s

POKR Poker Plat Res 22.81 40 P 15 02 27.4
baz=251,SNR=71

IL31 22.92 41 P **P** **15 02 27.1 -2.0**
ILAR Eielson Array 22.92 41 P **P** **15 02 27.1 -2.1**
comp=Z,36nm,1.0s,baz=242,slow=9.7,SNR=154

ILAR ScP **ScP** **15 09 50.4 -1.6**
comp=Z,1.1nm,0.8s,baz=259,slow=2.5,SNR=4.2

ILAR LR LR 15 12 12.6
comp=Z,932nm,18.1s,baz=256,slow=39

ILAR PKiKP **PKiKP** **15 14 00.0 -1.9**
comp=Z,0.4nm,0.6s,baz=308,slow=2.8,SNR=5.6

PAX Paxson 23.09 46 P **P** **15 02 30.3 -0.6**
PAX pmax pmax
comp=Z,124nm,0.8s

PAX Paxson 23.09 46 P **P** **15 02 30.3 -0.6**
PAX IAmb IAmb 15 02 48.6
comp=Z,124nm,0.8s

PAX Paxson 23.09 46 P 15 02 30.2
baz=258,SNR=85

A21K Barrow 23.09 22 P **P** **15 02 30.5 -0.3**
A21K IAmb IAmb 15 02 31.6
comp=Z,128nm,0.5s

A21K Barrow 23.09 22 P 15 02 30.0
baz=226,SNR=5.4

RAGM Ragged Mountai 23.11 53 P **P** **15 02 31.6 +0.5**
BMRM Bremner River 23.20 51 P **P** **15 02 31.8 -0.2**
BMRM IAmb IAmb 15 02 36.9
comp=Z,132nm,0.6s

BMRM Bremner River 23.20 51 P 15 02 31.5
baz=264,SNR=59

KAIM Kayak Island 23.21 54 P **P** **15 02 32.8 +0.8**
KAIM Kayak Island 23.21 54 P 15 02 32.2
baz=266

N25K Chitina, Valde 23.27 50 P **P** **15 02 32.8 0.0**
N25K IAmb IAmb 15 02 33.7
comp=Z,94nm,0.7s

N25K Chitina, Valde 23.27 50 P 15 02 32.8
baz=262,SNR=55

HMT Hamilton 23.31 53 P **P** **15 02 33.4 +0.3**
TOLK Toolik Lake Re 23.46 31 P **P** **15 02 34.2 -0.2**
TOLK IAmb IAmb 15 02 47.6
comp=Z,138nm,0.7s

TOLK Toolik Lake Re 23.46 31 P 15 02 34.4
baz=241,SNR=161

SUCK Suckling Hills 23.54 54 P **P** **15 02 36.3 +1.1**
BERG Berg Lake 23.59 53 P **P** **15 02 36.1 +0.3**
GLB Gilahina Butte 23.63 50 P **P** **15 02 36.0 -0.1**
GLB IAmb IAmb 15 02 37.3
comp=Z,145nm,0.6s

ASAJ Asahikawa 23.68 265 P **P** **15 02 38.0 +1.4**
comp=Z,285nm,0.8s,baz=74,slow=7.0,SNR=140

PRP Porcupine Dome 23.69 40 P **P** **15 02 35.4 -1.4**
PRP IAmb IAmb 15 02 53.4
comp=Z,49nm,0.7s

PRP Porcupine Dome 23.69 40 P 15 02 35.7
baz=252

VRDI Verde Repeater 23.78 51 P **P** **15 02 37.3 -0.4**
VRDI IAmb IAmb 15 02 54.9
comp=Z,120nm,0.8s

DOT Dot Lake 23.85 45 P **P** **15 02 37.4 -0.7**
DOT IAmb IAmb 15 02 56.0
comp=Z,75nm,0.8s

MENT Mentasta 23.87 47 P **P** **15 02 38.6 +0.3**
MENT IAmb IAmb 15 02 53.9
comp=Z,102nm,0.8s

CRQM Cirque 23.90 52 P **P** **15 02 39.0 +0.2**
SCRK Sand Creek 23.95 44 P **P** **15 02 37.8 -1.3**
SCRK IAmb IAmb 15 02 39.2
comp=Z,84nm,0.8s

SCRK Sand Creek 23.95 44 P 15 02 37.8
baz=258,SNR=104

MCARA McCarthy VSAT 24.00 50 P **P** **15 02 39.8 +0.2**
MCARA McCarthy VSAT 24.00 50 P 15 02 39.5
baz=264,SNR=106

TGL Tana Glacier 24.05 52 P **P** **15 02 40.2 +0.1**
TGL IAmb IAmb 15 02 51.0
comp=Z,250nm,1.0s

ERM Erimo 24.47 260 *c* iP **P** **15 02 45.1 +1.2**
ERM pmax pmax
comp=Z,172nm,0.9s

ERM MLR MLR
comp=Z,666nm,22.0s

ERM Erimo 24.47 260 P **P** **15 02 45.5 +1.6**
YAH Yahtse 24.57 53 P **P** **15 02 45.4 +0.5**
GRNC Granite Creek 24.57 52 P **P** **15 02 45.3 +0.3**
BARN Barnard Glacie 24.64 51 P **P** **15 02 46.0 +0.4**
BMAR Burnt Mountain 24.66 36 P **P** **15 02 45.8 +0.2**
L27K Beaver Creek, 24.74 47 P **P** **15 02 46.7 +0.3**
L27K Beaver Creek, 24.75 47 P 15 02 46.3
baz=252,SNR=210

BCAR Beaver Creek A 24.76 47 P **P** **15 02 46.5 -0.1**
GRNR Gornyy 24.77 284 ⇑*i* iP **P** **15 02 47.5 +0.9**
GRNR *e*S **S** **15 07 09.8 +4.0**
GRNR pmax pmax
comp=E,60nm,0.8s

GRNR pmax pmax
comp=N,20nm,1.0s

GRNR pmax pmax
comp=Z,100nm,1.0s

GRNR smax smax
comp=N,2.0nm,0.9s

GRNR MLR MLR
comp=E,200nm,19.0s

GRNR MLR MLR
comp=N,270nm,17.0s

GRNR MLR MLR
comp=Z,350nm,16.0s

K27K Chicken 24.78 44 P **P** **15 02 46.8 +0.1**
K27K IAmb IAmb 15 02 49.7
comp=Z,51nm,0.6s

CTG Chitna Glacier 24.79 52 P 15 02 46.9
baz=267

CTGM Chitina Glacie 24.79 52 P **P** **15 02 47.1 +0.2**
TABL Table Mountain 24.87 53 P **P** **15 02 47.7 +0.1**
LOGN Logan Glacier 24.95 52 P **P** **15 02 48.5 +0.2**
PCA Pinnacle 25.30 54 P **P** **15 02 51.5 0.0**
PINM Pinnacle 25.31 54 P 15 02 51.1
baz=270,SNR=48

EGAK Eagle 25.31 43 P **P** **15 02 51.0 -0.4**
EGAK Eagle 25.31 43 P 15 02 50.9
baz=259,SNR=146

DAWY Dawson 25.96 45 P **P** **15 02 57.5 +0.2**
DAWY IAmb IAmb 15 03 00.9
comp=Z,117nm,0.7s

JTM Tenmabayashi 26.46 259 P **P** **15 03 02.6 +0.6**
JTM IAmb IAmb 15 03 08.2
comp=Z,74nm,0.8s

HYT Haines Junctio 26.66 52 P **P** **15 03 04.0 +0.2**
HYT IAmb IAmb 15 03 18.2
comp=Z,131nm,0.8s

YAK Yakutsk 26.87 311 P **P** **15 03 04.5 -0.9**
comp=Z,137nm,0.8s,baz=316,slow=0.3,SNR=138

YAK ScP **ScP** **15 10 05.9 +2.8**
comp=Z,2.7nm,0.4s,baz=119,slow=4.6,SNR=5.8

YAK LR LR 15 13 58.5
comp=Z,1μm,18.0s,baz=178,slow=37

YAK Yakutsk 26.87 311 *c* iP **P** **15 03 04.5 -0.9**
YAK *e**PP **pP** **15 03 14.7 -1.9**
YAK *e* 15 03 45.9
YAK *e* 15 06 25.5
YAK *e*S **S** **15 07 38.6 -0.2**
YAK *e* 15 13 50.1
YAK pmax pmax
comp=Z,311nm,0.9s

YAK pmax pmax
comp=N,25nm,1.1s

YAK pmax pmax
comp=E,119nm,1.1s

YAK pmax pmax
comp=Z,474nm,4.9s

YAK pmax pmax
comp=N,158nm,4.1s

YAK smax smax
comp=N,220nm,3.3s

YAK smax smax
comp=E,201nm,2.8s

YAK MLR MLR
comp=Z,822nm,13.0s

YAK MLR MLR
comp=N,222nm,20.0s

YAK Yakutsk 26.87 311 P **P** **15 03 03.8 -1.7**
TEY Ternei 26.94 271 ⇑*i* iP **P** **15 03 07.2 +0.9**
TEY *e* 15 03 55.0
TEY pmax pmax
comp=E,30nm,0.9s

TEY pmax pmax
comp=N,10.0nm,1.0s

TEY pmax pmax
comp=Z,60nm,1.0s

EPYK Eagle Plains 27.40 40 P 15 03 09.5
baz=261,SNR=12

WHY Whitehorse 27.95 52 P **P** **15 03 16.0 +0.6**
KLR Kul'dur 28.13 283 P **P** **15 03 17.3 +0.4**
comp=Z,73nm,0.7s,baz=72,slow=6.9,SNR=224

KLR LR LR 15 13 54.8
comp=Z,381nm,21.9s,baz=64,slow=35

KLR Kul'dur 28.13 283 *c* iP **P** **15 03 17.0 +0.1**
KLR pmax pmax
comp=Z,77nm,0.9s

KLR MLR MLR
comp=Z,610nm,24.0s

JMM Marumori 28.45 255 P **P** **15 03 19.1 -0.7**
TIXI Tiksi 28.82 331 P **P** **15 03 22.4 -0.4**
comp=Z,18nm,0.7s,baz=126,slow=11,SNR=60

TIXI ScP **ScP** **15 10 08.9 -0.1**
comp=Z,9.4nm,0.9s,baz=94,slow=5.8,SNR=9.3

TIXI LR LR 15 15 39.5
comp=Z,1μm,18.1s,baz=88,slow=38

TIXI Tiksi 28.82 331 *c* iP **P** **15 03 21.7 -1.1**
TIXI pmax pmax
comp=Z,90nm,0.8s

TIXI Tiksi 28.82 331 P **P** **15 03 22.5 -0.3**
TIXI PcP **PcP** **15 06 31.7 +0.4**
TIXI ScP **ScP** **15 10 09.3 +0.4**
INK Inuvik 28.93 36 P **P** **15 03 22.7 -1.1**
comp=Z,8.5nm,0.6s,baz=237,slow=7.9,SNR=29

INK LR LR 15 15 25.5
comp=Z,820nm,20.7s,baz=237,slow=37

INK Inuvik 28.93 36 P **P** **15 03 24.3 +0.5**
INK pmax pmax
comp=Z,25nm,0.7s

INK Inuvik 28.93 36 P **P** **15 03 24.3 +0.5**
ZEA Zeya 29.30 294 *e*P **P** **15 03 26.7 -0.5**
ZEA *e*S **S** **15 08 11.1 -6.1**
ZEA pmax pmax
comp=E,30nm,0.9s

ZEA pmax pmax
comp=N,20nm,0.7s

ZEA pmax pmax
comp=Z,80nm,1.1s

ZEA smax smax
comp=E,300nm,16.7s

ZEA MLR MLR
comp=E,300nm,16.0s

ZEA MLR MLR
comp=N,200nm,14.0s

ZEA MLR MLR
comp=Z,300nm,17.0s

JSD Sado 29.87 258 P **P** **15 03 32.4 +0.1**
JSD IAmb IAmb 15 03 34.5
comp=Z,48nm,0.9s

JSD PcP **PcP** **15 06 35.2 +0.7**
USA0B Ussuriysk Arra 30.22 273 *c* iP **P** **15 03 35.2 -0.3**
USA0B Ussuriysk Arra 30.22 273 P **P** **15 03 35.4 -0.1**
USA0B IAmb IAmb 15 03 36.6
comp=Z,37nm,0.8s

USRK Ussuriysk Ar. 30.22 273 P **P** **15 03 35.6 +0.1**
comp=Z,41nm,0.7s,baz=58,slow=8.2,SNR=67

USRK PcP **PcP** **15 06 35.8 +0.5**
comp=Z,16nm,0.8s,baz=65,slow=0.8,SNR=15

USRK ScP **ScP** **15 10 16.4 +2.5**
comp=Z,1.9nm,0.7s,baz=73,slow=2.6,SNR=4.9

USRK LR LR 15 14 33.9
comp=Z,528nm,22.0s,baz=51,slow=34

USRK Ussuriysk Ar. 30.22 273 P **P** **15 03 35.1 -0.3**
USRK PcP **PcP** **15 06 36.4 +1.1**
DLBC Dease Lake 30.69 56 P **P** **15 03 39.1 -0.5**
MAJO Matsushiro 30.87 256 *c* iP **P** **15 03 42.3 +1.0**
MAJO pmax pmax
comp=Z,55nm,0.9s

MAJO Matsushiro 30.87 256 P **P** **15 03 42.4 +1.1**
MAJO IAmb IAmb 15 03 43.7
comp=Z,59nm,0.9s

MAT Matsushiro 30.87 256 P **P** **15 03 42.5 +1.2**
MAT *e*S **S** **15 08 45.6 +3.4**
MJAR Matsushiro Arr 30.87 256 P **P** **15 03 42.5 +1.2**
comp=Z,18nm,0.7s,baz=53,slow=7.1,SNR=70

MJAR PcP **PcP** **15 06 39.2 +2.0**
comp=Z,1.8nm,0.6s,baz=89,slow=1.7,SNR=4.0

MJAR ScP **ScP** **15 10 17.3 +1.0**
comp=Z,3.3nm,1.0s,baz=82,slow=2.7,SNR=6.9

MJAR LR LR 15 13 50.6
comp=Z,342nm,22.0s,baz=55,slow=32

MJAR Matsushiro Arr 30.87 256 P **P** **15 03 40.6 -0.7**
MDJ Mudanjiang 31.50 276 P **P** **15 03 45.9 -0.8**
MDJ IAmb IAmb 15 03 47.9
comp=Z,46nm,1.0s

MSHR Mys Shultsa 31.58 271 *ce*P **P** **15 03 48.9 +1.4**
MSHR pmax pmax
comp=Z,81nm,0.9s

C36M Paulatuk 32.45 35 P **P** **15 03 55.0 +0.2**
C36M Paulatuk 32.45 35 P 15 03 54.5
baz=268,SNR=22

H11N2 WAKE ISLAND Hy 32.80 197 T T 15 38 55.2
baz=11,slow=76,SNR=2314

H11N3 WAKE ISLAND Hy 32.81 196 T T 15 38 56.4
baz=11,slow=76,SNR=1825

H11N1 WAKE ISLAND Hy 32.81 197 T T 15 38 56.7
baz=11,slow=76,SNR=1828

H11S1 WAKE ISLAND Hy 34.03 196 T T 15 40 52.6
baz=10,slow=76,SNR=944

H11S3 WAKE ISLAND Hy 34.04 196 T T 15 40 34.4
baz=10,slow=76,SNR=934

H11S2 WAKE ISLAND Hy 34.04 196 T T 15 40 51.4
baz=10,slow=76,SNR=633

CN2 Changchun 34.47 277 *e*P **P** **15 04 12.3 -0.4**
CN2 pmax pmax
comp=Z,20nm,0.8s

CN2 LR LR
comp=Z,400nm,18.0s

CN2 LR LR
comp=Z,400nm,18.0s

CN2 LR LR
comp=Z,500nm,22.0s

JHS Saijyo 34.98 259 P **P** **15 04 18.2 +1.0**
JHS IAmb IAmb 15 04 19.6
comp=Z,48nm,0.8s

JHS PcP **PcP** **15 06 48.9 +0.2**
BOD Bodaibo 35.28 305 *e*P **P** **15 04 18.7 -0.8**
BOD pmax pmax
comp=Z,217nm,0.8s

HIA Hailar 35.29 289 P **P** **15 04 18.0 -1.7**
HIA pmax pmax
comp=Z,58nm,0.9s

HIA Hailar 35.29 289 P **P** **15 04 18.0 -1.7**
HIA IAmb IAmb 15 04 20.3
comp=Z,58nm,0.9s

KSRS Korea Array 36.59 266 P **P** **15 04 32.6 +1.7**
comp=Z,25nm,0.8s,baz=57,slow=8.2,SNR=76

KSRS PcP **PcP** **15 06 54.2 +0.9**
comp=Z,3.8nm,0.7s,baz=28,slow=1.9,SNR=8.6

KSRS LR LR 15 18 37.8
comp=Z,183nm,21.6s,baz=56,slow=35

KSAR Wonju Array Be 36.63 266 P **P** **15 04 30.7 -0.5**
KSAR Wonju Array Be 36.63 266 P **P** **15 04 30.6 -0.5**
YKA Yellowknife Ar 37.18 46 P **P** **15 04 35.7 +0.1**
comp=Z,16nm,0.6s,baz=288,slow=8.3,SNR=154

YKA PcP **PcP** **15 06 55.0 +0.3**
comp=Z,5.6nm,0.7s,baz=288,slow=3.0,SNR=5.9

YKA ScP **ScP** **15 10 37.8 -0.2**
comp=Z,1.2nm,0.9s,baz=290,slow=2.7,SNR=3.8

YKA PKiKP **PKiKP** **15 14 09.8 -1.6**
comp=Z,0.5nm,0.7s,baz=260,slow=0.8,SNR=5.9

INCN Inchon 37.38 267 P **P** **15 04 39.1 +1.5**
INCN pmax pmax
comp=Z,88nm,0.9s

INCN Inchon 37.38 267 P **P** **15 04 39.1 +1.5**
INCN IAmb IAmb 15 04 40.0
comp=Z,88nm,0.8s

JNU Nakatsue 37.62 258 P **P** **15 04 39.0 -0.7**
JNU IAmb IAmb 15 04 42.5
comp=Z,105nm,1.1s

TJN Taejon 37.62 265 *ce*P **P** **15 04 40.8 +1.1**
CIT Chita 37.66 296 *e*P **P** **15 04 40.3 +0.4**
CIT *e* 15 04 51.1
CIT *e* 15 04 55.1
CIT pmax pmax
comp=Z,322nm,1.0s

D03D Eldon 38.48 72 P 15 04 46.4
baz=299

B05A Bryant 38.71 70 P 15 04 47.2
baz=299

E04D Cinebar 39.28 73 P 15 04 52.7
baz=300

DL2 Dalian 39.61 273 P **P** **15 04 56.9 +0.6**
DL2 sP **pP** **15 05 09.0 +1.0**
DL2 PcP **PcP** **15 07 03.0 +0.3**
DL2 S **S** **15 10 57.1 +0.9**
DL2 pmax pmax
comp=Z,88nm,0.6s

DL2 pmax pmax
comp=Z,110nm,10.4s

DL2 LR LR
comp=Z,410nm,15.9s

DL2 LR LR
comp=Z,250nm,16.9s

DL2 LR LR
comp=Z,400nm,14.6s

LON Longmire 39.63 72 P **P** **15 04 56.0 -0.5**
LON pmax pmax
comp=Z,8.0nm,0.9s

LON Longmire 39.63 72 P **P** **15 04 56.0 -0.5**
H04D Lebanon 40.25 75 P 15 05 01.0
baz=302

I03D Drain, OR 40.33 77 P 15 05 01.2
baz=303

H04A Detroit Lake 40.49 75 P **P** **15 05 02.0 -1.6**
RES Resolute Bay 40.66 24 P **P** **15 05 04.4 -0.2**
RES 15 07 06.0
RES pmax pmax
comp=Z,30nm,1.0s

RES Resolute Bay 40.66 24 P **P** **15 05 04.4 -0.2**
RES PcP **PcP** **15 07 06.0 +0.6**
G05D Wamic, OR 40.71 74 P 15 05 04.1
baz=302

EUNU Eureka 40.74 15 P **P** **15 05 05.4 +0.1**
I04A Tendick Farm, 40.84 76 P 15 05 06.1

baz=303
L02E Cave Junction 41.04 79 P 15 05 07.8
baz=304
HUMO Hull Mountain 41.18 78 P **P** **15 05 10.1 +0.8**
I05D Terrebonne, OR 41.19 75 P 15 05 08.4
baz=303
J04D Umpqua Nationa 41.33 77 P 15 05 10.4
baz=304,SNR=8.5
NEW Newport 41.59 67 P 15 05 11.2
baz=300,SNR=7.0
PINE Pine Mountain 41.73 75 P **P** **15 05 14.3 +0.3**
L04D Klamath Falls 41.80 78 P 15 05 14.0
baz=305
YBH Yreka Blue Hor 41.83 79 P **P** **15 05 14.3 -0.4**
YBH pmax pmax
comp=Z,11nm,0.7s
YBH Yreka Blue Hor 41.83 79 P **P** **15 05 14.3 -0.4**
J05D Fort Rock, OR 41.84 76 P 15 05 14.7
baz=304
K04D Chiloquin, OR 41.90 77 P 15 05 15.3
baz=304
M02C Callahan 41.94 79 P 15 05 16.1
baz=305
N02D Trinity Center 42.27 80 P 15 05 17.9
baz=306
BJI Beijing 42.30 278 P **P** **15 05 19.4 +1.0**
BJI sP **sP** **15 05 37.9 +2.8**
BJI PcP **PcP** **15 07 12.0 +0.6**
BJI pmax pmax
comp=Z,37nm,0.6s
BJI pmax pmax
comp=Z,230nm,3.5s
BJI LR LR
comp=Z,250nm,14.1s
BJI LR LR
comp=Z,270nm,22.1s
BJI LR LR
comp=Z,450nm,32.2s
I07A Izee 42.43 74 P **P** **15 05 19.1 -0.5**
NRIK Noril'sk 42.52 328 P **P** **15 05 19.8 -0.1**
comp=Z,68nm,0.7s,baz=85,slow=9.8,SNR=59
NRIK PcP **PcP** **15 07 12.3 +0.7**
comp=Z,24nm,0.8s,baz=65,slow=6.1,SNR=4.3
NRIK LR LR 15 23 16.8
comp=Z,246nm,21.2s,baz=68,slow=36
NRIK Noril'sk 42.52 328*c i*P **P** **15 05 19.6 -0.2**
NRIK pmax pmax
comp=Z,72nm,0.9s
NRIK Noril'sk 42.52 328 P **P** **15 05 19.4 -0.5**
NRIK IAmb IAmb 15 05 21.4
comp=Z,65nm,0.8s
NRIK PcP **PcP** **15 07 12.9 +1.3**
WDC Whiskeytown Da 42.61 80 P **P** **15 05 21.0 0.0**
WDC pmax pmax
comp=Z,9.0nm,0.7s
WDC Whiskeytown Da 42.61 80 P **P** **15 05 21.0 0.0**
IRK Irkutsk 42.64 300 *e*P **P** **15 05 19.6 -1.5**
IRK *e* 15 05 31.0
IRK pmax pmax
comp=Z,58nm,2.2s
O02D Mt. Diablo Mer 42.70 81 P 15 05 21.9
baz=306
WALA Waterton Lakes 43.01 65 P **P** **15 05 23.2 -1.0**
MOD Modoc Plateau 43.19 77 P **P** **15 05 26.1 +0.2**
O03E Paynes Creek 43.23 80 P 15 05 23.9
baz=306,SNR=5.1
TLY Talaya 43.26 300 P **P** **15 05 26.6 +0.5**
comp=Z,29nm,0.7s,baz=31,slow=5.6,SNR=20
TLY PcP **PcP** **15 07 15.6 +1.2**
comp=Z,12nm,0.7s,baz=219,slow=2.5,SNR=4.9
TLY Talaya 43.26 300 *e*P **P** **15 05 26.1 0.0**
TLY *e*S **S** **15 11 43.8 -6.2**
TLY *e*SS **SS** **15 05 02.9 -0.9**
TLY *e*SSS SSS 15 15 27.4
TLY pmax pmax
comp=Z,81nm,0.6s
TLY MLR MLR
comp=Z,2µm,15.0s
TLY Talaya 43.26 300 P **P** **15 05 26.2 0.0**
TLY IAmb IAmb 15 05 27.6
comp=Z,48nm,0.9s
BMO Blue Mountains 43.31 72 P **P** **15 05 26.1 -0.6**
BMO pmax pmax
comp=Z,6.0nm,0.8s
BMO Blue Mountains 43.31 72 P **P** **15 05 26.1 -0.6**
ULN Ulaanbaatar 43.33 293*c i*P **P** **15 05 27.3 +0.4**
ULN pmax pmax
comp=Z,77nm,0.8s
ULN Ulaanbaatar 43.33 293 P **P** **15 05 27.5 +0.6**
ULN IAmb IAmb 15 05 28.6
comp=Z,66nm,0.8s
ULN PcP **PcP** **15 07 15.8 +0.8**
JTMT Jette 43.48 67 P **P** **15 05 27.0 -1.2**
SONM Songino Array 43.73 294 P **P** **15 05 30.9 +0.9**
comp=Z,67nm,0.7s,baz=58,slow=9.2,SNR=350
SONM PcP **PcP** **15 07 16.6 +0.3**
comp=Z,12nm,0.7s,baz=84,slow=2.2,SNR=4.6
SONM ScP **ScP** **15 11 05.0 +0.8**
comp=Z,3.9nm,1.0s,baz=35,slow=2.8,SNR=7.2
SONM LR LR 15 24 32.2
comp=Z,567nm,19.5s,baz=60,slow=37
SONM Songino Array 43.73 294 P **P** **15 05 30.5 +0.5**
SONM IAmb IAmb 15 05 31.8
comp=Z,47nm,0.8s
ORV Oroville 43.86 81 P **P** **15 05 30.0 -1.1**
ORV pmax pmax
comp=Z,9.0nm,0.7s
ORV Oroville 43.86 81 P **P** **15 05 30.0 -1.1**
WVOR Wild Horse Val 43.89 76 P **P** **15 05 30.5 -0.9**
WVOR pmax pmax
comp=Z,19nm,0.9s
WVOR Wild Horse Val 43.89 76 P **P** **15 05 30.5 -0.9**
PLID Pearl Lake 43.94 71 P **P** **15 05 30.4 -1.5**
ZAK Zakamensk 44.12 298 *e*P **P** **15 05 33.2 +0.1**
ZAK *e* 15 07 17.5
ZAK pmax pmax
comp=Z,42nm,1.5s
ZAK pmax pmax
comp=Z,11nm,1.3s
MSO Missoula 44.18 68 P 15 05 32.1
baz=303
HHC Hu-ho-hao-te 44.64 282 *e*P **P** **15 05 38.8 +1.4**
HHC S **S** **15 12 10.4 -0.1**
HHC pmax pmax
comp=Z,98nm,1.3s
HHC pmax pmax
comp=Z,180nm,5.6s
HHC LR LR
comp=Z,480nm,16.5s
HHC LR LR
comp=Z,420nm,16.5s
HHC LR LR
comp=Z,330nm,17.3s
MOY Mondy 44.69 301 *e*P **P** **15 05 38.0 +0.3**
MOY pmax pmax
comp=Z,74nm,2.0s
SSE Sheshan 44.97 265 P **P** **15 05 40.8 +0.8**
SSE S **S** **15 12 17.6 +2.4**
SSE pmax pmax
comp=Z,47nm,1.1s
PNTR Pine Nut 45.31 80 P **P** **15 05 43.4 +0.5**
PNTR IAmb IAmb 15 06 02.2
comp=Z,50nm,0.7s
HRY Holter Researc 45.45 67 P **P** **15 05 42.8 -1.0**
TULEG Thule 45.55 17⇑*i*P **P** **15 05 43.7 -0.4**
TULEG IAmb IAmb 15 05 44.0
comp=Z,23nm,0.6s
TULEG Thule 45.55 17 P **P** **15 05 43.9 -0.2**
TULEG IAmb IAmb 15 05 45.8
comp=Z,22nm,0.6s
YERR Yerington 45.59 80 P **P** **15 05 44.6 -0.5**
BTO Baotou 45.72 283 P **P** **15 05 47.6 +1.6**
HLID Hailey 45.75 72 P **P** **15 05 44.6 -1.7**
HLID Hailey 45.75 72 P 15 05 44.9
baz=305
NJ2 Nanjing 45.76 268⇑*i*P **P** **15 05 46.8 +0.6**
NJ2 pmax pmax
comp=Z,56nm,0.8s
WAKR Walker 45.77 80 P **P** **15 05 47.1 +0.6**
EGMT Eagleton 45.89 64 P **P** **15 05 45.5 -1.8**
EGMT Eagleton 45.89 64 P 15 05 45.3
baz=303,SNR=12
BCYI Bear Canyon 45.91 70 P **P** **15 05 46.6 -1.0**
MCMT McKenzie Canyo 45.93 69 P **P** **15 05 46.4 -1.4**
TIY Taiyuan 46.03 278 *e*P **P** **15 05 50.1 +1.6**
TIY pmax pmax
comp=Z,56nm,0.8s
TIY pmax pmax
comp=Z,310nm,4.7s
BOZ Bozeman (W) 46.20 68 P **P** **15 05 48.3 -1.4**
BOZ pmax pmax
comp=Z,12nm,0.6s
BOZ Bozeman (W) 46.20 68 P **P** **15 05 48.3 -1.4**
BOZ Bozeman (W) 46.20 68 P 15 05 48.1
baz=306,SNR=26
KVN Kaiserville 46.25 79 P **P** **15 05 50.0 -0.3**
KVN pmax pmax
comp=Z,7.0nm,0.9s
KVN Kaiserville 46.25 79 P **P** **15 05 50.0 -0.3**
RYN Ryan 46.26 80 P **P** **15 05 50.4 +0.1**
FFC Flin Flon 46.37 52 P **P** **15 05 50.1 -0.7**
FFC pmax pmax
comp=Z,8.0nm,0.6s
FFC Flin Flon 46.37 52 P **P** **15 05 50.1 -0.7**
LHV Little Huntoon 46.50 80 P **P** **15 05 52.7 +0.7**
NVAR Mina Array Bea 46.51 80 P **P** **15 05 52.2 -0.2**
comp=Z,11nm,0.8s,baz=297,slow=7.1,SNR=64
NVAR LR LR 15 22 11.5
comp=Z,387nm,21.2s,baz=296,slow=32
NVAR Mina Array Bea 46.51 80 P **P** **15 05 52.4 0.0**
NV11 Mina Array Sit 46.60 80 P **P** **15 05 52.8 -0.2**
MLAC Mammoth, Mammo 46.69 81 P 15 05 52.4
baz=309
NOR Nord 46.71 3⇑*i*P **P** **15 05 52.6 -0.5**
NOR IAmb IAmb 15 05 53.1
comp=Z,8.3nm,0.9s
NOR Nord 46.71 3⇑*i*P **P** **15 05 52.6 -0.5**
NOR pmax pmax
comp=Z,8.0nm,0.9s
YHL Hebgen Lake 46.89 68 P **P** **15 05 54.4 -0.9**
YHB Horse Butte 46.94 68 P **P** **15 05 54.7 -0.9**
ELK Elko 46.94 75 P **P** **15 05 55.2 -0.5**
ELK pmax pmax
comp=Z,7.0nm,0.5s
ELK Elko 46.94 75 P **P** **15 05 55.2 -0.5**
PAGB Antelope Grade 47.04 84 P **P** **15 05 57.3 +1.1**
PAGB IAmb IAmb 15 06 06.9
comp=Z,27nm,0.7s
YHH Holmes Hill 47.11 68 P **P** **15 05 56.0 -1.1**
YPP Pitchstone Pla 47.45 69 P **P** **15 05 59.5 -0.2**
SMMC Simmler 47.47 84 P 15 05 58.7
baz=310
YNE Yellowstone No 47.47 67 P **P** **15 05 58.7 -1.1**
H17A Grant Village 47.51 68 P 15 05 60.0
baz=306,SNR=14
FLWY Flagg Ranch 47.62 69 P **P** **15 06 00.7 -0.2**
FLWY IAmb IAmb 15 06 04.3
comp=Z,14nm,0.6s
VES Vestal, Richgr 47.69 83 P 15 06 00.7
baz=310,SNR=7.0
NEEM North Greenlan 47.76 13⇑*i*P **P** **15 06 01.8 +0.1**
NEEM IAmb IAmb 15 06 02.3
comp=Z,102nm,0.6s
HVU Hansel Valley 47.78 73 P **P** **15 06 01.7 -0.5**
HVU pmax pmax
comp=Z,10.0nm,0.8s
HVU Hansel Valley 47.78 73 P **P** **15 06 01.7 -0.5**
RLMT Red Lodge 47.83 67 P **P** **15 06 01.9 -0.7**
RLMT Red Lodge 47.83 67 P 15 06 01.2
baz=306,SNR=13
PKM Mcpherson Peak 47.86 85 P 15 06 03.5
baz=311
FCC Fort Churchill 47.88 45 P **P** **15 06 02.0 -0.4**
FCC pmax pmax
comp=Z,23nm,0.8s
FCC Fort Churchill 47.88 45 P **P** **15 06 01.9 -0.4**
FCC IAmb IAmb 15 06 05.3
comp=Z,23nm,0.8s
CWC Cottonwood Cre 47.92 82 P 15 06 03.8
baz=310
GRAC Grapevine Rang 48.00 81 P 15 06 04.0
baz=310
ISA Isabella, Lake 48.18 83 P 15 06 04.7
baz=310,SNR=5.6
R11A Troy Canyon, C 48.22 78 P **P** **15 06 04.9 -0.8**
R11A Troy Canyon, C 48.22 78 P 15 06 04.8
baz=309,SNR=33
SCZ2 Santa Cruz Isl 48.56 85 P 15 06 08.7
baz=311
HWUT Hardware Ranch 48.61 72 P **P** **15 06 06.9 -1.6**
LAO LASA Array 48.63 64 P 15 06 08.1
baz=306
FURC Furnace Creek, 48.65 81 P 15 06 08.4
baz=310
OSI Osito Audit: C 48.71 84 P 15 06 09.1
baz=311
TPNV Topopah Spring 48.71 80 P **P** **15 06 09.0 -0.4**
TPNV pmax pmax
comp=Z,30nm,0.8s
TPNV Topopah Spring 48.71 80 P **P** **15 06 09.0 -0.4**
TPNV IAmb IAmb 15 06 10.9
comp=Z,30nm,0.8s
TPNV Topopah Spring 48.71 80 P 15 06 08.8
baz=310,SNR=42
DUG Dugway, Tooele 48.74 74 P **P** **15 06 09.4 -0.1**
DUG pmax pmax
comp=Z,11nm,0.7s
DUG Dugway, Tooele 48.74 74 P **P** **15 06 09.4 -0.1**
DUG Dugway, Tooele 48.74 74 P 15 06 08.8
baz=308,SNR=17
LRMC Laurel Mtn Rad 48.79 82 P 15 06 09.4
baz=311,SNR=14
EDW2 Edwards Air Fo 48.99 83 P 15 06 11.2
baz=311,SNR=6.7
BW06 Boulder Array 49.07 70 P **P** **15 06 10.9 -1.3**
BW06 PcP **PcP** **15 07 35.5 +0.1**
PD31 Pinedale Array 49.07 70 P **P** **15 06 10.9 -1.3**
PDAR Pinedale Array 49.07 70 P **P** **15 06 10.8 -1.3**
comp=Z,8.7nm,0.6s,baz=322,slow=3.2,SNR=70
PDAR ScP **ScP** **15 11 26.6 -0.2**
comp=Z,0.6nm,0.8s,baz=298,slow=1.9,SNR=2.8
PDAR LR LR 15 24 41.4
comp=Z,244nm,21.6s,baz=313,slow=33
BW06 Boulder Array 49.08 70 P 15 06 10.7
baz=307,SNR=21
PRN Pahroc Range 49.15 79 P **P** **15 06 12.9 +0.1**
PRN IAmb IAmb 15 06 14.5
comp=Z,17nm,0.7s
PSUT Pine Spring 49.16 77 P **P** **15 06 12.3 -0.6**
PSUT IAmb IAmb 15 06 17.7
comp=Z,14nm,0.6s
KBS Kingsbay 49.25 356 *i* P **P** **15 06 13.0 +0.2**
KBS IAmb IAmb 15 06 13.7
comp=Z,112nm,0.8s
KBS Kingsbay 49.25 356*ce*P **P** **15 06 13.0 +0.2**
KBS pmax pmax
comp=Z,41nm,0.9s
KBS Kingsbay 49.25 356 *e*P **P** **15 06 13.4 +0.6**
SHOC Shoshone, Teco 49.38 81 P 15 06 13.7
baz=310,SNR=25
WHN Wuhan 49.59 270⇑P **P** **15 06 16.4 +0.4**
WHN S **S** **15 13 28.3 +7.3**
WHN pmax pmax
comp=Z,420nm,0.7s
WHN LR LR
comp=Z,940nm,15.7s
WHN LR LR
comp=Z,560nm,9.5s
WHN LR LR
comp=Z,1µm,12.0s
CIS Catalina Islan 49.71 85 P 15 06 16.5
baz=312
SPA0 Spitsbergen Ar 49.76 355 *e*P **P** **15 06 16.0 -0.7**
TUQ Turquoise Moun 49.90 81 P 15 06 18.0
baz=311,SNR=11
HEC Hector,Ludlow 50.04 82 P 15 06 19.2
baz=311,SNR=9.8
CCUT Cedar City 50.08 77 P **P** **15 06 19.9 -0.1**
MSU Marysvale 50.18 76 P **P** **15 06 20.7 0.0**
MSU Marysvale 50.18 76 P **P** **15 06 20.7 0.0**
TMUT Trail Mountain 50.26 74 P **P** **15 06 21.1 -0.2**
TMUT IAmb IAmb 15 06 37.4
comp=Z,18nm,0.7s
MURC Murrieta 50.33 84 P 15 06 21.3
baz=312
YULB Yu-li 50.45 257 P **P** **15 06 22.5 0.0**
YULB IAmb IAmb 15 06 25.3
comp=Z,41nm,1.0s
GMRC Granite Mounta 50.49 82 P 15 06 22.7
baz=311,SNR=21
LCMT Little Creek M 50.50 78 P **P** **15 06 23.2 +0.2**
XAN Xi'an 50.59 277 P **P** **15 06 23.6 +0.1**
XAN pmax pmax
comp=Z,59nm,1.0s
XAN LR LR
comp=Z,270nm,23.8s
XAN LR LR
comp=Z,330nm,22.8s
XAN LR LR
comp=Z,520nm,24.9s
XAN Xi'an 50.59 277 P **P** **15 06 24.0 +0.5**
XAN Xi'an 50.59 277 P **P** **15 06 24.0 +0.5**
XAN IAmb IAmb 15 06 24.7
comp=Z,45nm,0.9s
HOPEN Hopen 50.70 352 *e*P **P** **15 06 23.7 0.0**
KNB Kanab 50.76 78 P **P** **15 06 25.2 +0.2**
KNB pmax pmax
comp=Z,12nm,0.7s
KNB Kanab 50.76 78 P **P** **15 06 25.2 +0.2**
PFO Pinyon Flats O 50.78 83⇓*e*P **P** **15 06 24.1 -1.0**
PFO pmax pmax
comp=Z,10.0nm,1.0s
PFO Pinyon Flats O 50.78 83 P **P** **15 06 23.9 -1.2**
PFO Pinyon Flats O 50.78 83 P 15 06 24.4
baz=312
SRU San Rafael Swe 50.79 74 P **P** **15 06 24.8 -0.4**
SRU pmax pmax
comp=Z,15nm,0.7s
SRU San Rafael Swe 50.79 74 P **P** **15 06 24.8 -0.4**
BELC Belle Mtn. Jos 50.80 83 P 15 06 24.2
baz=312,SNR=18
K22A Casper 50.91 68 P 15 06 24.7
baz=308
TPUB Ta-pu 50.92 258 P **P** **15 06 26.3 +0.1**
HSPB Hornsund (broa 50.94 354 *e*P **P** **15 06 25.4 -0.1**
QZH Quanzhou 50.95 261⇑*i*P **P** **15 06 27.3 +1.0**
QZH *e*S **S** **15 13 36.4 -3.7**
QZH pmax pmax
comp=Z,65nm,0.9s
QZH LR LR
comp=Z,240nm,21.3s
IRM Iron Mountain 51.22 82 P 15 06 28.1
baz=312,SNR=15
MONP2 Monument Peak 51.28 84 P 15 06 29.0
baz=312,SNR=10
BC3 Big Chuckawall 51.37 83 P 15 06 29.2
baz=312,SNR=6.2
DAG Danmarks Havn 51.40 4⇑*i*P **P** **15 06 28.4 -0.6**
DAG IAmb IAmb 15 06 28.7
comp=Z,18nm,0.7s
DAG Danmarks Havn 51.40 4⇑*i*P **P** **15 06 28.3 -0.6**
DAG pmax pmax
comp=Z,19nm,0.7s
RSSD Black Hills 51.41 65 P **P** **15 06 28.3 -1.5**
RSSD PcP **PcP** **15 07 44.3 +0.4**
RSSD Black Hills 51.41 65 P 15 06 28.5
baz=308
U15A North Rim 51.46 78 P **P** **15 06 30.4 0.0**
O20A White River Ci 51.49 72 P **P** **15 06 29.3 -1.1**
O20A White River Ci 51.49 72 P 15 06 29.1
baz=309,SNR=9.3
ZAA0 Zalesovo Array 51.52 311 P **P** **15 06 29.4 -0.8**
ZAA0 IAmb IAmb 15 06 29.8
comp=Z,16nm,0.6s
ZALV Zalesovo Beam 51.52 311 P **P** **15 06 29.3 -0.9**
comp=Z,16nm,0.6s,baz=50,slow=6.9,SNR=68
ZALV PcP **PcP** **15 07 44.1 +0.3**
comp=Z,19nm,0.8s,baz=29,slow=3.4,SNR=7.6
ZALV LR LR 15 30 21.0
comp=Z,479nm,18.2s,baz=58,slow=38
ZALV Zalesovo Beam 51.52 311 *i* P **P** **15 06 29.2 -1.0**
ZALV pmax pmax
comp=Z,14nm,0.5s
ZALV Zalesovo Beam 51.52 311 P **P** **15 06 29.1 -1.1**
ZALV PcP **PcP** **15 07 44.7 +0.9**
CBX Cerro Bola 51.53 85 P **P** **15 06 31.5 +0.8**
CBX IAmb IAmb 15 06 32.4
comp=Z,19nm,0.7s
MDND Maddock 51.53 59 P 15 06 30.1
baz=308
IKP In-Ko-Pah, Jac 51.64 84 P 15 06 31.7
baz=312,SNR=7.0
PDMCI Parker Dam,Lak 51.74 81 P 15 06 31.9
baz=312
ULM Lac du Bonnet 51.99 55 P **P** **15 06 32.9 -0.9**
comp=Z,10nm,0.5s,baz=301,slow=7.1,SNR=21
ULM PcP **PcP** **15 07 45.3 -0.4**
comp=Z,11nm,0.5s,baz=342,slow=2.7,SNR=4.7
ULM LR LR 15 29 52.1
comp=Z,495nm,18.4s,baz=309,slow=38
ULM Lac du Bonnet 51.99 55 P **P** **15 06 32.7 -1.1**
ULM PcP **PcP** **15 07 45.0 -0.6**
GLA Glamis 52.16 83 P **P** **15 06 35.4 +0.1**
GLA pmax pmax
comp=Z,24nm,0.7s
GLA Glamis 52.16 83 P **P** **15 06 35.4 +0.1**
GLA IAmb IAmb 15 06 36.5
comp=Z,24nm,0.7s
GLA Glamis 52.16 83 P 15 06 35.1
baz=312,SNR=12
PV14 Lion Creek, Pa 52.16 74 P **P** **15 06 34.1 -1.4**
PV14 IAmb IAmb 15 06 52.5
comp=Z,18nm,0.7s
PV20 West Nyswonger 52.22 74 P **P** **15 06 35.4 -0.5**
PV20 IAmb IAmb 15 06 37.9
comp=Z,19nm,0.5s
PV04 Paradox Valley 52.22 74 P **P** **15 06 35.0 -0.9**
PV04 IAmb IAmb 15 06 38.1
comp=Z,20nm,0.7s
PV19 Morning Glory 52.23 74 P **P** **15 06 35.2 -0.7**
PV19 IAmb IAmb 15 06 40.6
comp=Z,22nm,0.5s
PV17 East Wray Mesa 52.26 74 P **P** **15 06 35.5 -0.7**
PV17 IAmb IAmb 15 06 38.3
comp=Z,38nm,0.6s
PV16 Nyswonger Mesa 52.27 74 P **P** **15 06 35.6 -0.7**
PV16 IAmb IAmb 15 06 50.2
comp=Z,20nm,0.7s
PV11 David Mesa, Pa 52.30 74 P **P** **15 06 35.9 -0.6**
PV11 IAmb IAmb 15 06 38.6
comp=Z,46nm,0.6s
PV18 Skein Mesa, Pa 52.31 74 P **P** **15 06 35.9 -0.7**
PV18 IAmb IAmb 15 06 52.9
comp=Z,26nm,0.8s
PV12 Saucer Basin, 52.33 74 P **P** **15 06 36.2 -0.5**
PV12 IAmb IAmb 15 06 51.1
comp=Z,23nm,0.6s
LZH Lanzhou 52.33 283⇑P **P** **15 06 38.3 +1.6**
LZH pP sP 15 06 54.0 +0.8
LZH PcP **PcP** **15 07 48.6 +1.2**
LZH pmax pmax
comp=Z,130nm,1.2s
LZH pmax pmax
comp=Z,100nm,8.7s
LZH LR LR
comp=Z,440nm,19.0s
LZH LR LR
comp=Z,540nm,18.4s
LZH LR LR
comp=Z,300nm,19.5s
PV03 Paradox Valley 52.34 74 P **P** **15 06 36.1 -0.7**
PV03 IAmb IAmb 15 06 38.9
comp=Z,21nm,0.6s
N23A Red Feather La 52.35 69 P 15 06 36.0
baz=310,SNR=6.5
PV13 Radium Mtn., P 52.42 74 P **P** **15 06 36.6 -0.9**
PV13 IAmb IAmb 15 06 40.0
comp=Z,59nm,0.6s
PV02 Paradox Valley 52.44 74 P **P** **15 06 36.9 -0.7**
PV02 IAmb IAmb 15 06 39.8
comp=Z,31nm,0.6s
GTA Gaotai 52.57 288⇑P **P** **15 06 39.3 +0.9**
GTA pP pP 15 06 51.3 +1.2
GTA sP sP 15 06 57.4 +2.5
GTA PcP **PcP** **15 07 48.6 +0.4**
GTA pmax pmax
comp=Z,77nm,0.9s
GTA pmax pmax
comp=Z,330nm,5.1s
GTA LR LR
comp=Z,280nm,18.5s
GTA LR LR
comp=Z,530nm,18.2s
GTA LR LR
comp=Z,570nm,18.5s
WUAZ Wupatki 52.62 78 P 15 06 38.2
baz=312,SNR=8.7

Y14A	**Wickenburg**	**52.68**	**81**	P		**P**		**15 06 39.1**	**-0.1**
ENH	**Enshi**	**52.80**	**273**	P		**P**		**15 06 40.1**	**0.0**
ENH				IAmb		IAmb		15 06 41.0	
	comp=Z,52nm,0.7s								
ENH				PcP		**PcP**		**15 07 49.9**	**+0.9**
SMCO	**Snowmass**	**52.85**	**72**	P		**P**		**15 06 39.9**	**-0.9**
DGZ	**Jazzator, Alta**	**52.87**	**305**	*c iP*		**P**		**15 06 40.7**	**+0.2**
DGZ				pmax		pmax			
	comp=Z,51nm,0.8s								
DGZ				MLR		MLR			
	comp=Z,848nm,20.0s								
BJO1	**Bjornoya**	**53.11**	**353**	*eP*		**P**		**15 06 41.2**	**-0.5**
SPX	**San Pedro Mart**	**53.15**	**85**	P		**P**		**15 06 43.8**	**+0.8**
AGMN	**Agassiz Nation**	**53.22**	**56**	P				15 06 41.5	
	baz=309,SNR=12								
MVCO	**Mesa Verde**	**53.24**	**74**	P				15 06 42.3	
	baz=311								
ISCO	**Idaho Springs**	**53.25**	**70**	P				15 06 42.0	
	baz=310								
SUMG	**Summit**	**53.63**	**12⇑**	*iP*		**P**		**15 06 46.3**	**+0.2**
SUMG				IAmb		IAmb		15 06 46.6	
	comp=Z,66nm,0.6s								
SUMG	**Summit**	**53.63**	**12**	P		**P**		**15 06 46.3**	**+0.2**
SUMG				pmax		pmax			
	comp=Z,63nm,0.7s								
SUMG	**Summit**	**53.63**	**12**	P		**P**		**15 06 46.3**	**+0.2**
DBG	**Daneborg**	**53.74**	**6⇑**	*iP*		**P**		**15 06 45.4**	**-0.9**
DBG				IAmb		IAmb		15 06 46.2	
	comp=Z,55nm,0.9s								
S22A	**4UR Ranch, Cre**	**53.88**	**73**	P				15 06 48.0	
	baz=311,SNR=15								
W18A	**Petrified Fore**	**53.88**	**77**	P				15 06 47.6	
	baz=312,SNR=6.0								
Q24A	**Divide**	**54.07**	**71**	P				15 06 48.8	
	baz=311								
214A	**Organ Pipe Nat**	**54.15**	**82**	P				15 06 49.0	
	baz=313								
B35A	**Bob, Littlefor**	**54.28**	**55**	P		**P**		**15 06 49.7**	**-1.0**
SDCO	**Great Sand Dun**	**54.67**	**72**	P				15 06 53.2	
	baz=312								
TUC	**Tucson**	**55.16**	**80**	P				15 06 57.0	
	baz=313								
ZSN	**Zaisan**	**55.62**	**305⇑**	*iP*		**P**		**15 07 00.7**	**+0.2**
	comp=Z,36nm,0.7s,baz=305								
ZSN	**Zaisan**	**55.62**	**305**	*c iP*		**P**		**15 07 00.6**	**+0.2**
ZSN				pmax		pmax			
	comp=Z,36nm,0.7s								
EYMN	**Ely**	**55.68**	**54**	P		**P**		**15 07 00.1**	**-0.7**
EYMN				IAmb		IAmb		15 07 01.0	
	comp=Z,24nm,0.8s								
EYMN	**Ely**	**55.68**	**54**	P				15 07 00.0	
	baz=311,SNR=13								
T25A	**Trinidad**	**55.72**	**72**	P				15 07 01.0	
	baz=312,SNR=8.3								
ECSD	**EROS Data Cent**	**55.77**	**61**	P				15 07 00.9	
	baz=311,SNR=6.4								
CD2	**Chengdu**	**55.90**	**278**	P		**P**		**15 07 03.0**	**+0.3**
CD2				PP		**PP**		**15 09 06.3**	**-1.1**
CD2				S		**S**		**15 14 47.0**	**-0.2**
CD2				sS		sS		15 15 06.3	-0.6
CD2				pmax		pmax			
	comp=Z,100nm,1.0s								
CD2				pmax		pmax			
	comp=Z,220nm,6.0s								
CD2				LR		LR			
	comp=Z,340nm,18.7s								
CD2				LR		LR			
	comp=Z,410nm,18.7s								
CD2				LR		LR			
	comp=Z,480nm,20.4s								
SEM	**Semipalatinsk**	**55.95**	**310**	*eP*		**P**		**15 07 02.0**	**-1.0**
	comp=Z,18nm,0.5s,baz=310								
SEM	**Semipalatinsk**	**55.95**	**310**	*eP*		**P**		**15 07 01.9**	**-1.0**
SEM				pmax		pmax			
	comp=Z,18nm,0.5s								
ANMO	**Albuquerque**	**55.98**	**75⇓**	*eP*		**P**		**15 07 02.7**	**-0.6**
ANMO				pmax		pmax			
	comp=Z,2.0nm,1.0s								
ANMO	**Albuquerque**	**55.98**	**75**	P				15 07 02.3	
	baz=313								
F36A	**Milaca**	**56.01**	**57**	P		**P**		**15 07 02.3**	**-0.9**
F36A				IAmb		IAmb		15 07 05.1	
	comp=Z,11nm,0.5s								
HAMF	**Hammerfest**	**56.33**	**349**	*eP*		**P**		**15 07 04.1**	**-0.9**
SFJD	**Kangerlussuaq**	**56.40**	**20⇑**	*iP*		**P**		**15 07 05.1**	**-0.5**
SFJD				IAmb		IAmb		15 07 05.4	
	comp=Z,25nm,0.6s								
SFJD	**Kangerlussuaq**	**56.40**	**20**	P		**P**		**15 07 05.1**	**-0.5**
SFJD				pmax		pmax			
	comp=Z,65nm,1.1s								
SFJD	**Kangerlussuaq**	**56.40**	**20**	P		**P**		**15 07 05.1**	**-0.5**
SFJD				IAmb		IAmb		15 07 06.0	
	comp=Z,65nm,1.1s								
BGNE	**Belgrade**	**56.47**	**64**	P				15 07 05.0	
	baz=312								
KURK	**Kurchatov**	**56.51**	**311**	P		**P**		**15 07 07.5**	**+0.9**
E38A	**The Farm, Brul**	**56.54**	**56**	P		**P**		**15 07 06.0**	**-0.9**
E38A				IAmb		IAmb		15 07 21.9	
	comp=Z,26nm,0.7s								
WMQ	**Urumqi**	**56.54**	**300**	P		**P**		**15 07 07.9**	**+0.8**
WMQ				pP		sP		15 07 25.0	+0.9
WMQ				pmax		pmax			
	comp=Z,250nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,680nm,4.7s								
WMQ				LR		LR			
	comp=Z,950nm,22.9s								
WMQ				LR		LR			
	comp=Z,930nm,19.3s								
WMQ				LR		LR			
	comp=Z,2μm,25.7s								
WMQ	**Urumqi**	**56.54**	**300**	P		**P**		**15 07 07.3**	**+0.3**
WMQ				pmax		pmax			
	comp=Z,119nm,0.7s								
WMQ	**Urumqi**	**56.54**	**300**	P		**P**		**15 07 07.3**	**+0.3**
ICESG	**Greenland Ices**	**56.60**	**15⇑**	*iP*		**P**		**15 07 06.8**	**-0.7**
ICESG				IAmb		IAmb		15 07 07.5	
	comp=Z,54nm,0.8s								
KURBB	**Kurchatov Arra**	**56.62**	**311**	P		**P**		**15 07 07.5**	**+0.1**
	comp=Z,225nm,0.7s,baz=45,slow=6.5,SNR=1280								
KURBB				PP		**PP**		**15 09 13.2**	**+0.1**
	comp=Z,16nm,0.9s,baz=48,slow=9.4,SNR=4.0								
KURBB	**Kurchatov Arra**	**56.62**	**311**	P		**P**		**15 07 07.0**	**-0.4**
KEV	**Kevo**	**56.75**	**348**	P		**P**		**15 07 07.8**	**-0.3**
KEV				pmax		pmax			
	comp=Z,22nm,0.7s								
KEV	**Kevo**	**56.75**	**348**	P		**P**		**15 07 07.8**	**-0.3**
KEV				IAmb		IAmb		15 07 08.4	
	comp=Z,22nm,0.7s								
SPMN	**Marine on St.**	**56.81**	**58**	P				15 07 08.2	
	baz=312								
121A	**Cookes Peak, D**	**56.83**	**78**	P				15 07 09.1	
	baz=314,SNR=7.2								
ARA0	**ARCESS Array S**	**57.15**	**348**	*eP*		**P**		**15 07 10.8**	**-0.2**
ARCES	**ARCESS Array B**	**57.15**	**348**	P		**P**		**15 07 10.7**	**-0.3**
	comp=Z,29nm,0.5s,baz=30,slow=8.5,SNR=154								
ARCES				PcP		**PcP**		**15 08 05.3**	**+0.2**
	comp=Z,12nm,0.7s,baz=5.7,slow=3.7,SNR=4.8								
ARCES				LR		LR		15 32 27.1	
	comp=Z,455nm,20.8s,baz=5.0,slow=37								
ARCES	**ARCESS Array B**	**57.15**	**348**	P		**P**		**15 07 10.6**	**-0.3**
ARCES				pmax		pmax			
	comp=Z,45nm,0.8s								
ARCES	**ARCESS Array B**	**57.15**	**348**	P		**P**		**15 07 10.6**	**-0.3**
ARCES				IAmb		IAmb		15 07 11.4	
	comp=Z,45nm,0.8s								
GYA	**Guiyang**	**57.25**	**272**	⇓P		**P**		**15 07 13.0**	**+0.6**
GYA				pmax		pmax			
	comp=Z,12nm,0.9s								
LVZ	**Lovozero**	**57.28**	**344**	*ceP*		**P**		**15 07 11.0**	**-0.9**
LVZ				pmax		pmax			
	comp=Z,96nm,0.9s								
LVZ	**Lovozero**	**57.28**	**344**	P		**P**		**15 07 11.3**	**-0.6**
CBKS	**Cedar Bluff**	**57.31**	**67**	P				15 07 11.9	
	baz=312								
SCO	**Scoresbysund**	**57.36**	**7**	*i* P		**P**		**15 07 12.5**	**+0.1**
SCO				IAmb		IAmb		15 07 13.4	
	comp=Z,43nm,1.1s								
SCO	**Scoresbysund**	**57.36**	**7**	P		**P**		**15 07 12.5**	**+0.1**
SCO				pmax		pmax			
	comp=Z,37nm,1.0s								
SCO	**Scoresbysund**	**57.36**	**7**	P		**P**		**15 07 12.5**	**+0.1**
SCO				IAmb		IAmb		15 07 13.6	
	comp=Z,37nm,1.0s								
MK31	**Makanchi Array**	**57.37**	**306**	P		**P**		**15 07 12.3**	**-0.6**
MK31				pmax		pmax			
	comp=Z,46nm,0.8s								
MK31	**Makanchi Array**	**57.37**	**306**	P		**P**		**15 07 12.3**	**-0.6**
MK31				IAmb		IAmb		15 07 13.2	
	comp=Z,46nm,0.8s								
MKAR	**Makanchi Array**	**57.37**	**306**	P		**P**		**15 07 12.3**	**-0.5**
	comp=Z,54nm,0.7s,baz=51,slow=7.2,SNR=468								
MKAR				LR		LR		15 32 45.9	
	comp=Z,914nm,20.6s,baz=40,slow=37								
MKAR	**Makanchi Array**	**57.37**	**306**	P		**P**		**15 07 12.4**	**-0.4**
MKAR	**Makanchi Array**	**57.37**	**306**	P		**P**		**15 07 12.4**	**-0.4**
MAKZ	**Makanchi**	**57.52**	**306**	P		**P**		**15 07 13.5**	**-0.4**
MAKZ				pmax		pmax			
	comp=Z,76nm,0.7s								
MAKZ	**Makanchi**	**57.52**	**306**	P		**P**		**15 07 13.5**	**-0.4**
JETT	**Jettan, Norway**	**57.73**	**350**	*eP*		**P**		**15 07 14.9**	**-0.1**
DY2G	**Dye2**	**57.75**	**19⇑**	*iP*		**P**		**15 07 14.6**	**-0.9**
DY2G				IAmb		IAmb		15 07 15.9	
	comp=Z,59nm,0.6s								
APA	**Apatity**	**57.79**	**344⇓**	*iP*		**P**		**15 07 13.0**	**-2.4**
APA				*i*				15 08 06.0	
APA				pmax		pmax			
	comp=Z,13nm,0.6s								
TRO	**Tromso**	**57.80**	**351**	*eP*		**P**		**15 07 15.5**	**0.0**
KTK1	**Kautokeino**	**57.93**	**349**	*eP*		**P**		**15 07 16.1**	**-0.2**
NUUK	**Nuuk**	**58.52**	**22⇑**	*iP*		**P**		**15 07 20.3**	**-0.2**
NUUK				IAmb		IAmb		15 07 21.0	
	comp=Z,27nm,0.9s								
BVAR	**Borovoye Array**	**58.59**	**317**	P		**P**		**15 07 20.6**	**-0.6**
	comp=Z,98nm,0.6s,baz=82,slow=3.1,SNR=601								
BRVK	**Borovoye**	**58.61**	**317**	P		**P**		**15 07 21.8**	**+0.5**
BRVK				pmax		pmax			
	comp=Z,161nm,0.8s								
BRVK	**Borovoye**	**58.61**	**317**	P		**P**		**15 07 21.8**	**+0.5**
SCIA	**State Center**	**58.85**	**61**	P				15 07 22.1	
	baz=313								
MSTX	**Muleshoe**	**58.86**	**74**	P		**P**		**15 07 23.0**	**-0.5**
MSTX				IAmb		IAmb		15 07 39.9	
	comp=Z,16nm,0.8s								
MSTX	**Muleshoe**	**58.86**	**74**	P				15 07 22.6	
	baz=314,SNR=8.5								
MNTX	**Cornudas Mount**	**58.87**	**77**	P		**P**		**15 07 23.5**	**0.0**
MNTX	**Cornudas Mount**	**58.87**	**77**	P				15 07 23.3	
	baz=314,SNR=15								
KSU1	**Kansas State U**	**58.90**	**65**	P				15 07 22.0	
	baz=313								
E43A	**Lone Tree Farm**	**59.00**	**53**	P		**P**		**15 07 24.0**	**-0.2**
SVE	**Sverdlovsk**	**59.59**	**325**	*d iP*		**P**		**15 07 29.2**	**+1.2**
SVE				pmax		pmax			
	comp=Z,123nm,1.2s								
N2IH	**Innhavet**	**59.71**	**352**	*eP*		**P**		**15 07 28.5**	**-0.2**
JFWS	**Jewell Farm**	**59.74**	**58**	P				15 07 28.0	
	baz=314								
LOF	**Lofoten**	**59.75**	**353**	*eP*		**P**		**15 07 28.4**	**-0.6**
BRZS	**Berezniki**	**59.76**	**313⇑**	*iP*		**P**		**15 07 29.4**	**0.0**
	comp=Z,59nm,0.8s,baz=314								
BRZS	**Berezniki**	**59.76**	**313**	*c iP*		**P**		**15 07 29.3**	**0.0**
BRZS				pmax		pmax			
	comp=Z,59nm,0.8s								
STEI	**Steigen**	**59.80**	**352**	*eP*		**P**		**15 07 29.2**	**-0.2**
ISOG	**Isortoq, Green**	**59.94**	**16⇑**	*iP*		**P**		**15 07 29.2**	**-1.1**
ISOG				IAmb		IAmb		15 07 29.9	
	comp=Z,95nm,0.8s								
H43A	**Windswept, Lux**	**59.94**	**55**	P		**P**		**15 07 30.4**	**-0.3**
H43A				IAmb		IAmb		15 07 30.8	
	comp=Z,34nm,0.6s								
N2SV	**S_rv¥gen**	**60.03**	**353**	*eP*		**P**		**15 07 30.9**	**0.0**
ANGG	**Ammassalik, Gr**	**60.10**	**16⇑**	*iP*		**P**		**15 07 30.1**	**-1.3**
ANGG				IAmb		IAmb		15 07 30.8	
	comp=Z,41nm,0.6s								
ANGG	**Ammassalik, Gr**	**60.10**	**16**	P		**P**		**15 07 29.8**	**-1.6**
N2TV	**T¥rnvik**	**60.17**	**352**	*eP*		**P**		**15 07 31.8**	**-0.1**
N2VA	**Vr_y**	**60.27**	**353**	*eP*		**P**		**15 07 32.0**	**-0.6**
N2ST	**Straumen**	**60.34**	**352**	*eP*		**P**		**15 07 33.0**	**0.0**
PRGR	**Permogore**	**60.35**	**335⇑**	*iP*		**P**		**15 07 34.0**	**+0.8**
PRGR				pmax		pmax			
	comp=Z,154nm,0.7s								
NBB08	**Skaug oppvekst**	**60.39**	**352**	*eP*		**P**		**15 07 33.5**	**+0.1**
N2RO	**R_st**	**60.46**	**353**	*eP*		**P**		**15 07 33.9**	**0.0**
TDK	**Taldyqorghan**	**60.57**	**306**	*i* P		**P**		**15 07 35.1**	**+0.1**
	comp=Z,75nm,0.8s,baz=306								
TDK	**Taldyqorghan**	**60.57**	**306**	*i* P		**P**		**15 07 35.1**	**+0.1**
TDK				pmax		pmax			
	comp=Z,75nm,0.8s								
NBB28	**Valnes**	**60.59**	**352**	*eP*		**P**		**15 07 35.1**	**+0.3**
ARU	**Arti**	**60.63**	**326**	P		**P**		**15 07 35.9**	**+0.8**
	comp=Z,31nm,0.8s,baz=29,slow=3.9,SNR=104								
ARU	**Arti**	**60.63**	**326**	*c iP*		**P**		**15 07 35.8**	**+0.6**
ARU				*PP		**sP**		**15 07 50.5**	**-1.5**
ARU								15 08 19.0	
ARU								15 09 50.2	
ARU				S		**S**		**15 15 51.1**	**+3.1**
ARU				SS		**SS**		**15 19 44.2**	**-1.7**
ARU				pmax		pmax			
	comp=Z,163nm,1.0s								
ARU				MLR		MLR			
	comp=Z,861nm,17.0s								
ARU	**Arti**	**60.63**	**326**	P		**P**		**15 07 36.0**	**+0.8**
KMI	**Kunming**	**60.65**	**274**	⇑P		**P**		**15 07 36.3**	**+0.2**
KMI				pP		sP		15 07 53.6	+0.7
KMI				PcP		**PcP**		**15 08 20.9**	**+0.9**
KMI				pmax		pmax			
	comp=Z,22nm,0.7s								
KMI				pmax		pmax			
	comp=Z,180nm,6.4s								
KMI				LR		LR			
	comp=Z,190nm,22.1s								
KMI				LR		LR			
	comp=Z,140nm,14.5s								
KMI				LR		LR			
	comp=Z,250nm,23.4s								
WMOK	**Wichita Mounta**	**60.68**	**70**	P		**P**		**15 07 35.7**	**-0.2**
WMOK				pmax		pmax			
	comp=Z,8.0nm,0.6s								
WMOK	**Wichita Mounta**	**60.68**	**70**	P		**P**		**15 07 35.7**	**-0.2**
WMOK	**Wichita Mounta**	**60.68**	**70**	P				15 07 35.1	
	baz=314,SNR=9.8								
QIZ	**Qiongzhong**	**60.74**	**264**	P		**P**		**15 07 36.3**	**-0.2**
QIZ				S		**S**		**15 15 49.1**	**-1.3**
QIZ				pmax		pmax			
	comp=Z,33nm,0.9s								
QIZ				pmax		pmax			
	comp=Z,200nm,2.7s								
NBB05	**Inndyr**	**60.78**	**352**	*eP*		**P**		**15 07 35.8**	**-0.3**
NBB30	**Finnes**	**60.87**	**352**	*eP*		**P**		**15 07 36.3**	**-0.4**
MATQ	**Matagami**	**61.01**	**45**	P				15 07 36.2	
	baz=317,SNR=10.0								
PDGK	**Podgornoye**	**61.20**	**304**	P		**P**		**15 07 38.9**	**-0.6**
GLMI	**Grayling**	**61.28**	**53**	P				15 07 39.4	
	baz=315								
SHLS	**Shalkode**	**61.34**	**304**	*i* P		**P**		**15 07 39.2**	**-1.3**
	comp=Z,48nm,0.5s,baz=304								
SHLS	**Shalkode**	**61.34**	**304**	*i* P		**P**		**15 07 39.1**	**-1.3**
SHLS				pmax		pmax			
	comp=Z,48nm,0.5s								
KONS	**Konsvik**	**61.39**	**352**	*eP*		**P**		**15 07 40.0**	**-0.2**
L44A	**Lake County Fo**	**61.48**	**57**	P				15 07 40.2	
	baz=315								
STOK	**Stokkvaagen**	**61.56**	**352**	*eP*		**P**		**15 07 41.2**	**-0.1**
UZB	**Uzunbulak**	**61.57**	**304**	⇑*iP*		**P**		**15 07 42.1**	**+0.1**
	comp=Z,26nm,1.1s,baz=304								
UZB	**Uzunbulak**	**61.57**	**304**	*c iP*		**P**		**15 07 42.1**	**+0.1**
UZB				pmax		pmax			
	comp=Z,26nm,1.1s								
TUL1	**Leonard**	**61.59**	**67**	P				15 07 40.6	
	baz=315								
TX31	**Lajitas Ar. Si**	**61.59**	**78**	P		**P**		**15 07 42.1**	**-0.2**
TX31				IAmb		IAmb		15 07 57.3	
	comp=Z,37nm,0.7s								
TX32	**Lajitas Array**	**61.59**	**78**	P		**P**		**15 07 42.1**	**-0.2**
TX32				IAmb		IAmb		15 07 57.3	
	comp=Z,13nm,0.7s								
TXAR	**Lajitas Array**	**61.59**	**78**	P		**P**		**15 07 42.0**	**-0.2**
	comp=Z,7.7nm,0.4s,baz=304,slow=5.3,SNR=114								
TXAR				LR		LR		15 31 26.5	
	comp=Z,240nm,21.8s,baz=0.0,slow=33								
TXAR				PKP2bc				15 36 59.2	
	comp=Z,0.6nm,0.8s,baz=131,slow=5.1,SNR=5.1								
TXAR	**Lajitas Array**	**61.59**	**78**	P		**P**		**15 07 42.2**	**-0.1**
TXAR	**Lajitas Array**	**61.59**	**78**	P		**P**		**15 07 42.2**	**-0.1**
MOR8	**Moi Rana**	**61.59**	**352**	*eP*		**P**		**15 07 40.2**	**-1.4**
ABTX	**Abilene, Hawle**	**61.66**	**72**	P				15 07 42.1	
	baz=315								
LSQQ	**Lebel-sur-Quev**	**61.81**	**46**	P				15 07 42.2	
	baz=317								
KIRV	**Kirov**	**61.85**	**332**	P		**P**		**15 07 44.3**	**+0.9**
	comp=Z,88nm,0.7s,baz=42,slow=2.8,SNR=27								
KIRV	**Kirov**	**61.85**	**332**	*c iP*		**P**		**15 07 44.1**	**+0.7**
R40A	**Maddies Statio**	**61.89**	**63**	P		**P**		**15 07 43.2**	**-0.8**
R40A				PcP		**PcP**		**15 08 24.4**	**-0.1**
HDIL	**Hopedale**	**61.90**	**59**	P		**P**		**15 07 43.4**	**-0.7**
HDIL	**Hopedale**	**61.90**	**59**	P				15 07 43.1	
	baz=315								
JAY	**Jayapura**	**61.91**	**221**	LR		LR		15 30 23.2	
	comp=Z,195nm,21.4s,baz=8.0,slow=32								
SATY	**Saty**	**61.95**	**305⇑**	*iP*		**P**		**15 07 45.0**	**+0.4**
	comp=Z,35nm,1.2s,baz=305								
SATY	**Saty**	**61.95**	**305**	*c iP*		**P**		**15 07 44.9**	**+0.4**
SATY				pmax		pmax			
	comp=Z,35nm,1.2s								
M44A	**Midewin, Midew**	**61.97**	**58**	P		**P**		**15 07 43.6**	**-1.0**
VLDQ	**Val d'Or**	**62.30**	**47**	P		**P**		**15 07 44.1**	**-2.5**
VLDQ				IAmb		IAmb		15 07 44.8	
	comp=Z,43nm,0.8s								
CHGQ	**Chibougamau**	**62.32**	**44**	P				15 07 45.1	
	baz=318,SNR=24								
KLMR	**Klimovskoe**	**62.53**	**338**	*eP*		**P**		**15 07 45.7**	**-2.2**
KLMR				*e*				15 10 02.9	
KLMR				pmax		pmax			
	comp=Z,110nm,1.0s								
KLMR	**Klimovskoe**	**62.53**	**338**	*eP*		**P**		**15 07 45.8**	**-2.2**
KLMR				AMP				15 07 49.3	
	comp=Z,110nm,1.0s								
KLMR				*e*PP		**PP**		**15 10 02.9**	**-2.3**
KLMR				LQ		LQ		15 31 24.9	
KLMR				LQ		LQ		15 31 24.9	
KLMR				LR		LR		15 32 45.5	
MDOK	**Medeo**	**62.57**	**306**	*i* P		**P**		**15 07 48.9**	**+0.1**
	baz=306								
MDOK	**Medeo**	**62.57**	**306**	*i* P		**P**		**15 07 48.8**	**+0.1**
AAA	**Alma-Ata**	**62.60**	**306**	*eP*		**P**		**15 07 49.0**	**+0.2**
	comp=Z,37nm,0.7s,baz=306								
AAA	**Alma-Ata**	**62.60**	**306**	*eP*		**P**		**15 07 49.0**	**+0.2**
AAA				pmax		pmax			
	comp=Z,37nm,0.7s								
NRS	**Narsarsuaq**	**62.61**	**21⇑**	*iP*		**P**		**15 07 47.4**	**-1.0**
NRS				IAmb		IAmb		15 07 48.2	
	comp=Z,50nm,0.9s								
NRS	**Narsarsuaq**	**62.61**	**21⇑**	*iP*		**P**		**15 07 47.4**	**-1.0**
NRS				pmax		pmax			
	comp=Z,50nm,0.9s								
NRS	**Narsarsuaq**	**62.61**	**21**	P		**P**		**15 07 47.5**	**-1.0**
NRS				IAmb		IAmb		15 07 48.3	
	comp=Z,58nm,1.0s								
CCM	**Cathedral Cave**	**62.62**	**63**	P		**P**		**15 07 46.7**	**-2.2**
CCM				pmax		pmax			
	comp=Z,6.0nm,0.7s								
CCM	**Cathedral Cave**	**62.62**	**63**	P		**P**		**15 07 46.7**	**-2.2**
CCM	**Cathedral Cave**	**62.62**	**63**	P				15 07 46.9	
	baz=315								
MGMO	**Mountain Grove**	**62.70**	**64**	P		**P**		**15 07 47.5**	**-1.9**
MGMO				PcP		**PcP**		**15 08 27.6**	**-0.3**
TNSS	**Tian-Shan**	**62.71**	**306**	*eP*		**P**		**15 07 49.9**	**0.0**
	baz=306								
TNSS	**Tian-Shan**	**62.71**	**306**	*eP*		**P**		**15 07 49.9**	**0.0**
U40A	**Yellville**	**62.94**	**65**	P		**P**		**15 07 49.5**	**-1.6**
U40A				IAmb		IAmb		15 08 06.4	
	comp=Z,13nm,0.8s								
U40A				PcP		**PcP**		**15 08 28.9**	**0.0**
U40A	**Yellville**	**62.94**	**65**	P				15 07 49.1	
	baz=316,SNR=9.4								
JCT	**Junction City**	**63.10**	**74**	P		**P**		**15 07 51.7**	**-0.6**
JCT				pmax		pmax			
	comp=Z,18nm,0.7s								
JCT	**Junction City**	**63.10**	**74**	P		**P**		**15 07 51.7**	**-0.6**
JCT				IAmb		IAmb		15 08 07.6	
	comp=Z,18nm,0.7s								
JCT	**Junction City**	**63.10**	**74**	P				15 07 51.2	
	baz=316,SNR=6.9								
SFIN	**Lafayette**	**63.20**	**58**	P		**P**		**15 07 52.0**	**-0.7**
SFIN	**Lafayette**	**63.20**	**58**	P				15 07 51.7	
	baz=316,SNR=18								
W39A	**Magazine**	**63.24**	**67**	P		**P**		**15 07 52.0**	**-1.0**
W39A				IAmb		IAmb		15 08 05.8	
	comp=Z,36nm,1.5s								
W39A	**Magazine**	**63.24**	**67**	P				15 07 51.7	
	baz=316								
WHTX	**Lake Whitney,**	**63.41**	**71**	P				15 07 52.6	
	baz=316								
NSS	**Namsos**	**63.42**	**353**	*eP*		**P**		**15 07 54.1**	**+0.4**
TKM2	**Tokmak 2**	**63.47**	**306**	P		**P**		**15 07 55.3**	**+0.5**
	SNR=44								
TKM2	**Tokmak 2**	**63.47**	**306**	P		**P**		**15 07 54.2**	**-0.6**
SGDS	**Sogindy**	**63.57**	**307⇑**	*iP*		**P**		**15 07 55.7**	**+0.5**
	comp=Z,30nm,1.1s,baz=307								
SGDS	**Sogindy**	**63.57**	**307**	*c iP*		**P**		**15 07 55.7**	**+0.5**
SGDS				pmax		pmax			
	comp=Z,30nm,1.1s								
AAM	**Ann Arbor**	**63.59**	**55**	P				15 07 54.0	
	baz=317								
ALGO	**Algonquin Park**	**63.63**	**49**	P				15 07 54.2	
	baz=318						

SNR=108
FIA1 **FINESS Array S** 64.68 345 P **P** **15 08 01.7 -0.4**
FINES **FINESS Array B** 64.68 345 P **P** **15 08 01.6 -0.5**
comp=Z,32nm,0.6s,baz=17,slow=7.8,SNR=169
FINES LR LR 15 40 02.1
comp=Z,212nm,19.1s,baz=26,slow=40
FINES **FINESS Array B** 64.68 345 P **P** **15 08 01.7 -0.4**
FINES **FINESS Array B** 64.68 345 P **P** **15 08 01.7 -0.4**
PLVO **Plevna** 64.77 49 P **P** **15 08 01.6 -1.4**
PLVO IAmb IAmb 15 08 02.4
comp=Z,21nm,0.7s
O49A **Covington** 64.78 57 P **P** **15 08 02.3 -0.8**
O49A IAmb IAmb 15 08 03.3
comp=Z,35nm,0.6s
TBLU **Trondheim** 64.82 353 *e*P **P** **15 08 01.1 -1.8**
DELO **Deloro Mine** 64.90 49 P **P** **15 08 03.1 -0.7**
DELO IAmb IAmb 15 08 03.6
comp=Z,16nm,0.7s
LATQ **La Tuque** 64.92 44 P 15 08 02.8
baz=320
AML **Almayashu** 65.01 307 P **P** **15 08 06.1 +1.0**
SNR=11
TRQ **Mont Tremblant** 65.02 46 P **P** **15 08 02.9 -1.7**
M51A **Elyria** 65.05 54 P 15 08 03.3
baz=318
P49A **Miami Univ. Ec** 65.07 57 P 15 08 03.4
baz=317,SNR=6.4
D58A **Chemin du LacG** 65.10 45 P 15 08 03.3
baz=320,SNR=20
WCI **Wyandotte Cave** 65.19 59 P 15 08 04.7
baz=317
ACSO **Alum Creek Sta** 65.45 56 P 15 08 06.2
baz=318
E58A **La Victoria** 65.48 45 P 15 08 05.9
baz=320,SNR=7.8
L53A **Girard** 65.55 53 P 15 08 07.4
baz=318
ERPA **Erie** 65.56 53 P **P** **15 08 07.8 -0.4**
ERPA **Erie** 65.56 53 P 15 08 07.5
baz=318,SNR=5.2
AKTO **Aktyubinsk** 65.56 322 P **P** **15 08 08.8 +0.8**
comp=Z,169nm,0.8s,baz=57,slow=7.2,SNR=229
DZA **Taraz** 65.60 309↑ *e*P **P** **15 08 08.7 +0.2**
comp=Z,23nm,1.0s,baz=309
DZA **Taraz** 65.60 309 *ce*P **P** **15 08 08.6 +0.2**
DZA pmax pmax
comp=Z,23nm,1.0s
D59A **Saint-Raymond** 65.62 44 P 15 08 07.1
baz=321
NONG **Nongkai** 65.62 268 P **P** **15 08 09.2 +0.4**
comp=Z,111nm,1.0s
MOL **Molde** 65.68 354 *e*P **P** **15 08 07.8 -0.7**
G57A **Newington** 65.68 47 P 15 08 07.2
baz=320,SNR=5.3
M53A **WI Miller and** 65.72 53 P **P** **15 08 08.7 -0.5**
M53A IAmb IAmb 15 08 09.4
comp=Z,45nm,0.8s
M53A **WI Miller and** 65.72 53 P 15 08 08.6
baz=318
AB31 **Akbulak array** 65.74 320 *i* P **P** **15 08 09.4 +0.2**
ABKAR **Akbulak array** 65.74 320 P **P** **15 08 09.9 +0.7**
ABKAR **Akbulak array** 65.74 320 P **P** **15 08 08.9 -0.3**
KSH **Kashi** 65.79 303 P **P** **15 08 13.9 +4.1**
KSH S **S** **15 16 54.8 +1.6**
KSH pmax pmax
comp=Z,95nm,0.7s
KSH pmax pmax
comp=Z,120nm,2.9s
KSH LR LR
comp=Z,320nm,6.7s
KSH LR LR
comp=Z,780nm,17.8s
KSH LR LR
comp=Z,790nm,17.2s
KK31 **Karatay Array** 65.83 309 P **P** **15 08 10.2 +0.3**
KK31 pmax pmax
comp=Z,95nm,0.9s
KK31 **Karatay Array** 65.83 309 P **P** **15 08 10.2 +0.3**
KKAR **Karatay Array** 65.83 309 P **P** **15 08 10.5 +0.6**
KKAR pmax pmax
comp=Z,95nm,0.9s
KKAR **Karatay Array** 65.83 309 P **P** **15 08 10.5 +0.6**
KKAR **Karatay Array** 65.83 309 P **P** **15 08 10.2 +0.2**
KKAR IAmb IAmb 15 08 11.2
comp=Z,95nm,0.9s
WVT **Waverly** 65.90 62 P 15 08 09.4
baz=317
P51A **Williamsport** 65.97 56 P **P** **15 08 09.7 -1.1**
P51A IAmb IAmb 15 08 10.3
comp=Z,30nm,0.6s
H57A **Richville** 65.99 48 P 15 08 09.5
baz=320
FAKI **Fak Fak** 66.01 229 P **P** **15 08 11.5 +0.3**
FAKI IAmb IAmb 15 08 12.4
comp=Z,37nm,0.7s
FAKI **Fak Fak** 66.01 229 P **P** **15 08 11.6 +0.3**
comp=Z,518nmcomp=Z,55nm,1.0s
WVNY **West Valley, N** 66.02 52 P **P** **15 08 10.7 -0.4**
G58A **Ormstown** 66.07 47 P 15 08 09.2
baz=320
D60A **Saint Jean D'O** 66.09 44 P 15 08 10.2
baz=321,SNR=6.2
AKN **Aaknes** 66.10 355 *e*P **P** **15 08 11.8 +0.5**
F59A **Saint Guilaume** 66.10 46 P 15 08 10.3
baz=320
DOMB **Dombas** 66.10 353 *e*P **P** **15 08 11.3 -0.1**
O52A **Adamsville** 66.12 55 P **P** **15 08 11.0 -0.8**
Q51A **Peebles** 66.16 57 P **P** **15 08 11.6 -0.5**
M54A **Oil Creek Stat** 66.17 53 P **P** **15 08 11.3 -0.8**
M54A IAmb IAmb 15 08 13.4
comp=Z,22nm,0.8s
M54A **Oil Creek Stat** 66.17 53 P 15 08 11.3
baz=319,SNR=5.3
D61A **St Aubert, Com** 66.18 43 P 15 08 10.9
baz=321
J56A **Wolcott** 66.20 50 P 15 08 11.0
baz=319
OXF **Oxford** 66.21 64 P **P** **15 08 11.8 -0.6**
OXF pmax pmax
comp=Z,55nm,0.6s
OXF **Oxford** 66.21 64 P **P** **15 08 11.8 -0.6**
LONY **Lake Ozonia** 66.24 48 P **P** **15 08 10.6 -1.9**
LONY IAmb IAmb 15 08 10.9
comp=Z,18nm,0.6s
LONY **Lake Ozonia** 66.24 48 P 15 08 10.4
baz=320,SNR=6.1
I57A **Carthage** 66.26 49 P 15 08 10.9
baz=320,SNR=5.1
E60A **Ste Agathe de** 66.29 44 P 15 08 11.3
baz=321
P52A **Corning** 66.33 56 P 15 08 11.6
baz=318
O53A **New Philadelph** 66.34 55 P **P** **15 08 12.0 -1.2**
O53A IAmb IAmb 15 08 12.8
comp=Z,28nm,0.6s
O53A PcP **PcP** **15 08 42.8 0.0**
O53A **New Philadelph** 66.34 55 P 15 08 11.9
baz=318,SNR=6.0
F60A **Warwick** 66.38 45 P 15 08 11.6
baz=321
MYLDM **Lahad Datu** 66.42 247 P **P** **15 08 15.1 +1.2**
MYLDM IAmb IAmb 15 08 17.0
comp=Z,66nm,1.3s
K56A **Middlesex** 66.42 51 P 15 08 13.1
baz=319,SNR=14
N54A **Moraine State** 66.42 53 P 15 08 12.7
baz=319,SNR=6.5
J57A **Williamstown** 66.50 49 P **P** **15 08 13.3 -0.9**
J57A IAmb IAmb 15 08 13.8
comp=Z,47nm,1.2s
J57A **Williamstown** 66.51 49 P 15 08 12.8
baz=320
H58A **Gabriels** 66.58 47 P 15 08 13.0
baz=320,SNR=5.4
PLAL **Pickwick Lake** 66.60 63 P **P** **15 08 14.0 -1.0**
PLAL IAmb IAmb 15 08 30.3
comp=Z,18nm,0.7s
H59A **Cadyville** 66.62 47 P 15 08 13.1
baz=320,SNR=5.5
M55A **Ridgway** 66.65 52 P **P** **15 08 14.7 -0.4**
E61A **Lac Etchemin** 66.65 44 P 15 08 14.0
baz=321
L56A **Greenwood** 66.73 51 P **P** **15 08 15.3 -0.4**
U49A **Red Boiling Sp** 66.73 60 P **P** **15 08 14.9 -0.8**
U49A IAmb IAmb 15 08 15.7
comp=Z,18nm,0.9s
L56A **Greenwood** 66.73 51 P 15 08 14.9
baz=319,SNR=28
NC204 **NORSAR Array S** 66.73 352 P **P** **15 08 15.4 0.0**
NC303 **NORSAR Array S** 66.73 352 P **P** **15 08 15.4 +0.1**
CLTN **Cedars of Leba** 66.74 61 P **P** **15 08 15.6 -0.2**
CLTN IAmb IAmb 15 08 16.6
comp=Z,43nm,0.8s
D62A **Allapoint, All** 66.75 43 P **P** **15 08 15.0 -0.6**
D62A IAmb IAmb 15 08 15.7
comp=Z,32nm,0.7s
MOQ **Mont Orford** 66.75 46 P **P** **15 08 14.9 -0.9**
Q52A **Bidwell** 66.76 56 P **P** **15 08 14.9 -1.0**
Q52A IAmb IAmb 15 08 15.6
comp=Z,34nm,0.6s
I58A **Old Forge** 66.77 48 P 15 08 14.3
baz=320
K57A **Scipio Center** 66.78 50 P 15 08 14.9
baz=320,SNR=7.4
FOO **Floro** 66.79 355 *e*P **P** **15 08 15.5 -0.2**
IUG **Iuzhnay** 66.79 309↑ *i*P **P** **15 08 17.2 +1.0**
baz=309
IUG **Iuzhnay** 66.79 309 *c i*P **P** **15 08 17.1 +1.0**
F61A **St Evariste** 66.79 44 P 15 08 15.2
baz=321
NC405 **NORSAR Array S** 66.81 352 P **P** **15 08 16.0 +0.1**
T50A **Nancy** 66.86 59 P **P** **15 08 15.8 -0.7**
T50A IAmb IAmb 15 08 16.7
comp=Z,22nm,0.7s
G60A **Masonville** 66.89 46 P 15 08 15.4
baz=321
NCB **Newcomb** 66.90 48 P **P** **15 08 15.1 -1.6**
NB201 **NORSAR Array S** 66.91 352 P **P** **15 08 16.6 +0.1**
M56A **Emporium** 66.92 52 P **P** **15 08 16.4 -0.5**
M56A **Emporium** 66.92 52 P 15 08 16.2
baz=319,SNR=19
NB2 **NORSAR Subarra** 66.93 352 P **P** **15 08 16.2 -0.4**
baz=10.0,slow=6.5
NOA **NORSAR Array B** 66.93 352 P **P** **15 08 16.5 -0.2**
comp=Z,56nm,0.8s,baz=11,slow=6.4,SNR=124
NOA LR LR 15 37 25.7
comp=Z,212nm,20.9s,baz=20,slow=36
NBO00 **NORSAR Array S** 66.97 352 P **P** **15 08 17.6 +0.6**
G61A **St-Isidore-de-** 67.10 45 P 15 08 16.5
baz=321
H60A **Morristown** 67.14 46 P 15 08 16.6
baz=321
NAO01 **NORSAR Array S** 67.15 352 P **P** **15 08 17.9 -0.1**
NAO01 IAmb IAmb 15 08 18.6
comp=Z,48nm,0.8s
HYA **Hoyanger** 67.16 355 *e*P **P** **15 08 18.4 +0.4**
J59A **Piesco** 67.16 48 P **P** **15 08 16.9 -1.4**
J59A **Piesco** 67.16 48 P 15 08 16.9
baz=320,SNR=11
K58A **Earlville** 67.17 49 P **P** **15 08 17.4 -1.0**
K58A IAmb IAmb 15 08 29.3
comp=Z,51nm,1.4s
K58A **Earlville** 67.17 49 P 15 08 17.4
baz=320
L57A **Andrews Acres** 67.18 51 P 15 08 17.6
baz=320,SNR=7.1
D63A **Stockholm** 67.19 42 P 15 08 17.4
baz=322,SNR=5.8
I59A **Olmsteadville** 67.20 48 P 15 08 17.0
baz=320,SNR=13
NC602 **NORSAR Array S** 67.20 352 P **P** **15 08 18.2 -0.1**
NC602 **NORSAR Array S** 67.20 352 *e*P **P** **15 08 18.5 +0.2**
Q53A **Leroy** 67.22 56 P 15 08 18.1
baz=319,SNR=16
N56A **West Decatur** 67.30 52 P 15 08 18.6
baz=319,SNR=8.2
SUE **Sulen** 67.34 356 *e*P **P** **15 08 19.5 +0.4**
VSU **Vasula** 67.38 343 *e*P **P** **15 08 19.8 +0.4**
R53A **Hurricane** 67.40 57 P **P** **15 08 19.6 -0.4**
I60A **Shoreham** 67.43 47 P 15 08 18.5
baz=321
BINY **Binghamton** 67.44 50 P **P** **15 08 19.0 -1.2**
BINY IAmb IAmb 15 08 20.4
comp=Z,71nm,1.5s
BINY **Binghamton** 67.44 50 P 15 08 19.1
baz=320
MCWV **Mont Chateau** 67.48 54 P 15 08 19.5
baz=319
Q54A **Coxs Mills** 67.48 55 P **P** **15 08 19.7 -0.8**
Q54A IAmb IAmb 15 08 20.0
comp=Z,13nm,0.6s
Q54A PcP **PcP** **15 08 48.8 +1.2**
H61A **Lyndonville** 67.51 46 P 15 08 19.3
baz=321
SKAR **Skarslia** 67.51 354 *e*P **P** **15 08 20.7 +0.3**
PQI **Presque Isle** 67.51 42 P **P** **15 08 19.4 -1.1**
PQI IAmb IAmb 15 08 19.8
comp=Z,31nm,0.6s
CM34 **Chiang Mai Arr** 67.52 272 P **P** **15 08 21.0 +0.1**
K59A **Cooperstown** 67.53 49 P 15 08 19.6
baz=320,SNR=5.1
E63A **Oxbow** 67.54 43 P **P** **15 08 19.2 -1.5**
E63A IAmb IAmb 15 08 20.1
comp=Z,29nm,0.7s
E63A **Oxbow** 67.54 43 P 15 08 19.3
baz=322,SNR=6.1
M57A **Sunshine Farm,** 67.55 51 P **P** **15 08 20.4 -0.4**
M57A **Sunshine Farm,** 67.55 51 P 15 08 20.4
baz=320,SNR=12
MOS **Moscow** 67.55 336 *e*P **P** **15 08 20.4 -0.2**
MOS *e* 15 08 34.9
MOS pmax pmax
comp=Z,101nm,0.7s
MOS pmax pmax
comp=N,59nm,0.6s
MOS MLR MLR
comp=Z,1μm,19.0s
G62A **West of Eustis** 67.59 45 P **P** **15 08 20.4 -0.6**
G62A IAmb IAmb 15 08 20.9
comp=Z,32nm,0.7s
G62A **West of Eustis** 67.59 45 P 15 08 20.0
baz=322,SNR=5.8
SWET **Sewanee** 67.61 61 P **P** **15 08 20.3 -1.1**
SWET IAmb IAmb 15 08 36.3
comp=Z,19nm,0.6s
ACCN **Adirondack Com** 67.61 48 P **P** **15 08 20.0 -1.2**
ACCN IAmb IAmb 15 08 20.7
comp=Z,40nm,0.7s
BELG **Belogornoye** 67.61 329 P **P** **15 08 21.8 +0.8**
comp=Z,274nm,0.9s,baz=42,slow=0.7,SNR=57
BELG **Belogornoye** 67.61 329 *c i*P **P** **15 08 21.4 +0.4**
BELG pmax pmax
comp=Z,48nm,0.9s
BELG MLR MLR
comp=Z,79nm,18.0s
L58A **Harry Jones Me** 67.62 50 P 15 08 20.5
baz=320,SNR=5.7
MTSE **Matsula** 67.64 345 *e*P **P** **15 08 21.1 0.0**
O56A **Blue Knob Stat** 67.66 53 P **P** **15 08 20.5 -1.1**
O56A IAmb IAmb 15 08 21.4
comp=Z,28nm,0.7s
O56A **Blue Knob Stat** 67.66 53 P 15 08 20.5
baz=319,SNR=7.1
CM33 **Chiang Mai Arr** 67.67 272 P **P** **15 08 21.0 -0.9**
CMMT **Chiang Mai** 67.67 272 P **P** **15 08 20.0 -1.9**
comp=Z,255nmcomp=Z,23nm,0.8s
CHTO **Chiang Mai** 67.67 272 P **P** **15 08 22.0 +0.1**
CHTO pmax pmax
comp=Z,36nm,0.9s
CHTO **Chiang Mai** 67.67 272 P **P** **15 08 22.0 +0.1**
CHTO IAmb IAmb 15 08 23.2
comp=Z,36nm,0.8s
CHTO **Chiang Mai** 67.67 272 P **P** **15 08 22.3 +0.4**
SSPA **Standing Stone** 67.71 52 P **P** **15 08 21.3 -0.5**
SSPA **Standing Stone** 67.71 52 P 15 08 21.2
baz=320
LBNH **Lisbon** 67.74 46 P 15 08 20.9
baz=321
N57A **Milroy** 67.79 52 P 15 08 21.6
baz=320,SNR=14
E64A **Bridgewater** 67.79 42 P 15 08 20.7
baz=323,SNR=9.2
CM36 **Chiang Mai Arr** 67.80 272 P **P** **15 08 22.0 -0.7**
H62A **Milan** 67.82 45 P **P** **15 08 21.6 -0.9**
H62A **Milan** 67.82 45 P 15 08 21.4
baz=322,SNR=11
F63A **Nahmakanta, Br** 67.82 43 P **P** **15 08 21.4 -1.1**
F63A IAmb IAmb 15 08 22.3
comp=Z,48nm,1.1s
F63A **Nahmakanta, Br** 67.82 43 P 15 08 21.3
baz=322,SNR=5.9
BATG **Bathurst New B** 67.83 41 P **P** **15 08 21.7 -0.8**
BATG IAmb IAmb 15 08 22.4
comp=Z,38nm,1.2s
J60A **Lant Hill Farm** 67.83 48 P 15 08 21.3
baz=321,SNR=9.2
I61A **Oroboro, Fairl** 67.85 47 P 15 08 21.7
baz=321
L59A **Walton** 67.89 49 P **P** **15 08 22.2 -0.8**
L59A IAmb IAmb 15 08 23.0
comp=Z,18nm,0.8s
ASK **Askoy** 67.89 355 *e*P **P** **15 08 22.8 +0.2**
L59A **Walton** 67.89 49 P 15 08 22.0
baz=320
CM09 **Chiang Mai Arr** 67.92 272 P **P** **15 08 24.0 +0.5**
comp=Z,483nmcomp=Z,54nm,0.7s
Z47A **Carrollton** 67.93 64 P **P** **15 08 22.5 -0.8**
Z47A IAmb IAmb 15 08 38.5
comp=Z,39nm,0.6s
CM31 **Chiang Mai Arr** 67.94 272 P **P** **15 08 23.9 +0.3**
comp=Z,15umcomp=Z,2um,0.6s
CM31 **Chiang Mai Arr** 67.94 272 P **P** **15 08 24.1 +0.5**
CM31 **Chiang Mai Arr** 67.94 272 P **P** **15 08 24.2 +0.6**
SNR=11
CMAR **Chiang Mai Arr** 67.94 272 P **P** **15 08 24.1 +0.4**
comp=Z,28nm,0.7s,baz=28,slow=7.0,SNR=158
CMAR PKP2ab 15 36 49.1
comp=Z,1.6nm,0.9s,baz=242,slow=4.1,SNR=5.9
CMAR LR LR 15 41 03.8
comp=Z,140nm,19.1s,baz=88,slow=38
CM02 **Chiang Mai Arr** 67.96 272 P **P** **15 08 24.1 +0.4**
comp=Z,408nmcomp=Z,50nm,0.8s
CM15 **Chiang Mai Arr** 67.96 272 P **P** **15 08 24.2 +0.5**
comp=Z,350nmcomp=Z,40nm,0.8s
CM01 **Chiang Mai Arr** 67.96 272 P **P** **15 08 24.0 +0.3**
comp=Z,400nmcomp=Z,45nm,0.8s
W50A **Signal Mountai** 67.96 61 P **P** **15 08 22.5 -1.0**
W50A IAmb IAmb 15 08 38.9
comp=Z,20nm,0.8s
PHIT **Phitsanulok** 67.98 270 P **P** **15 08 24.8 +1.0**
comp=Z,2umcomp=Z,56nm,0.8s
CM05 **Chiang Mai Arr** 67.98 272 P **P** **15 08 24.3 +0.4**
comp=Z,371nmcomp=Z,41nm,0.8s
BER **Bergen** 67.98 355 *e*P **P** **15 08 23.6 +0.4**
CM13 **Chiang Mai Arr** 67.99 272 P **P** **15 08 24.0 +0.1**
comp=Z,398nmcomp=Z,48nm,0.8s
R54A **Victor** 68.01 56 P 15 08 22.8
baz=319,SNR=7.6
F64A **Sherman** 68.02 43 P **P** **15 08 22.6 -1.1**
F64A **Sherman** 68.02 43 P 15 08 22.4
baz=323,SNR=10
KSPA **Keystone Colle** 68.03 50 P **P** **15 08 23.4 -0.5**
KSPA IAmb IAmb 15 08 24.2
comp=Z,24nm,0.7s
OSL **Oslo** 68.06 352 *e*P **P** **15 08 24.3 +0.6**
G63A **Kingsbury** 68.07 44 P 15 08 23.0
baz=322
PKME **Peaks-Kenny Pk** 68.09 44 P 15 08 22.9
baz=322
P56A **Dayton Farm, R** 68.10 54 P 15 08 23.6
baz=320,SNR=7.8
K60A **Five Rivers En** 68.10 48 P 15 08 23.1
baz=321
N58A **Sunbury** 68.13 51 P **P** **15 08 23.8 -0.6**
N58A IAmb IAmb 15 08 24.7
comp=Z,49nm,0.8s
N58A **Sunbury** 68.13 51 P 15 08 23.9
baz=320,SNR=14
S54A **Dingess, Beckl** 68.13 56 P 15 08 23.8
baz=319
J61A **Chester** 68.15 47 P 15 08 23.6
baz=321
O57A **Amberson** 68.16 52 P 15 08 23.9
baz=320,SNR=19
TAPN **Taplejung** 68.19 287 *e*P **P** **15 08 26.2 +0.7**
comp=Z,248nm,0.7s
M59A **Waymart** 68.21 50 P 15 08 23.9
baz=320,SNR=5.8
H63A **New Sharon** 68.24 45 P 15 08 24.0
baz=322
SUKH **Sukhothai** 68.25 271 P **P** **15 08 25.0 -0.5**
comp=Z,915nmcomp=Z,71nm,0.7s
Q56A **Snyder Ridge,** 68.28 54 P 15 08 24.6
baz=320
I62A **Tamworth** 68.29 46 P 15 08 24.1
baz=322
G64A **Maxfield** 68.33 44 P 15 08 24.6
baz=322
K61A **Williamstown** 68.35 48 P 15 08 24.8
baz=321
MRSI **Marisa** 68.37 241 P **P** **15 08 26.0 -0.2**
comp=Z,914nmcomp=Z,104nm,0.9s
OBN **Obninsk** 68.37 336 P **P** **15 08 26.0 +0.3**
comp=Z,23nm,0.9s,baz=334,slow=1.0,SNR=16
OBN **Obninsk** 68.37 336 ⇓P **P** **15 08 26.3 +0.6**
OBN **Obninsk** 68.37 336 *ce*P **P** **15 08 25.7 0.0**
OBN *i* *PP **sP** **15 08 41.2 -1.2**
OBN *i* 15 08 50.9
OBN *e* 15 10 57.3
OBN *e*SS SS 15 21 49.9 +3.7
OBN pmax pmax
comp=Z,91nm,0.9s
R55A **Marlinton** 68.38 55 P **P** **15 08 25.6 -0.6**
R55A IAmb IAmb 15 08 26.8
comp=Z,17nm,0.7s
ODD1 **Odda** 68.38 354 *e*P **P** **15 08 25.9 +0.1**
R55A **Marlinton** 68.38 55 P 15 08 25.1
baz=319,SNR=5.2
L60A **Shokan** 68.43 49 P 15 08 25.3
baz=321
KONO **Kongsberg** 68.44 353 *de*P **P** **15 08 26.6 +0.5**
KONO pmax pmax
comp=Z,44nm,0.8s
KONO **Kongsberg** 68.44 353 P **P** **15 08 25.6 -0.5**
KONO **Kongsberg** 68.44 353 *e*P **P** **15 08 26.5 +0.5**
TKL **Tuckaleechee C** 68.45 60 P **P** **15 08 25.7 -0.9**
comp=Z,16nm,0.7s,baz=353,slow=3.0,SNR=12
I63A **Otisfield** 68.48 45 P **P** **15 08 25.9 -0.8**
I63A IAmb IAmb 15 08 26.7
comp=Z,32nm,0.7s
I63A **Otisfield** 68.48 45 P 15 08 25.9
baz=322,SNR=5.4
N59A **State Game Lan** 68.53 51 P **P** **15 08 26.5 -0.5**
N59A IAmb IAmb 15 08 27.2
comp=Z,48nm,0.9s
N59A **State Game Lan** 68.53 51 P 15 08 26.3
baz=320,SNR=10
P57A **Homestead Farm** 68.53 53 P **P** **15 08 26.4 -0.6**
P57A IAmb IAmb 15 08 26.6
comp=Z,16nm,0.6s
O58A **Lewisberry** 68.58 52 P 15 08 26.5
baz=320,SNR=6.6
J62A **Henniker** 68.58 47 P 15 08 26.3
baz=322
L61A **Hillsdale 1, H** 68.59 49 P 15 08 26.4
baz=321
H64A **Troy** 68.61 44 P 15 08 26.2
baz=322
LRAL **Lakeview Retre** 68.65 64 P 15 08 26.6
baz=318
R56A **Bull Pasture M** 68.65 55 P 15 08 26.6
baz=320,SNR=5.4
Q57A **Strasburg** 68.67 54 P 15 08 26.8
baz=320
ODAN **Odare** 68.75 287 *e*P **P** **15 08 29.5 +0.6**
comp=Z,164nm,0.8s
M60A **Port Jervis** 68.76 50 P 15 08 27.3
baz=321
MHMT **Maesarieng** 68.78 273 P **P** **15 08 28.6 -0.3**
comp=Z,2umcomp=Z,94nm,0.8s
L61B **Northampton** 68.79 48 P 15 08 27.4
baz=321
O59A **Robesonia** 68.79 51 P 15 08 27.9
baz=320,SNR=7.1
K62A **Royalston** 68.83 47 P 15 08 27.8
baz=322
GUN **Gumba** 68.86 288 *e*P **P** **15 08 30.6 +0.9**
comp=Z,711nm,0.7s
JIRN **Jiri** 68.86 288 *e*P **P** **15 08 30.8 +1.1**
comp=Z,678nm,0.7s
J63A **Strafford** 68.87 46 P 15 08 28.1
baz=322
G65A **Princeton** 68.88 43 P 15 08 27.8
baz=323
BLS5 **Blasjo** 68.88 354 *e*P **P** **15 08 29.3 +0.4**
N60A **Cedar Hill Far** 68.89 50 P 15 08 28.0
baz=321,SNR=5.8
STRU **Stroemstad** 68.91 352 *i*P **P** **15 08 29.1 0.0**
SLIT **Slitere, Latvi** 68.92 345 *e*P **P** **15 08 28.7 -0.4**

V53A Saluda 68.95 59 P **P** 15 08 29.3 -0.5
V53A IAmb IAmb 15 08 30.0
comp=Z,18nm,0.7s
LUPA Lehigh Univers 68.96 51 P **P** 15 08 29.2 -0.5
LUPA IAmb IAmb 15 08 29.9
comp=Z,40nm,0.8s
H65A Eastbrook 68.99 44 P 15 08 28.8
baz=323
I64A Boothbay 69.01 45 P 15 08 28.8
baz=322
BLA Blacksburg 69.04 56 P **P** 15 08 29.9 -0.4
BLA pmax pmax
comp=Z,27nm,0.7s
BLA Blacksburg 69.04 56 P **P** 15 08 29.9 -0.4
BLA IAmb IAmb 15 08 30.3
comp=Z,27nm,0.7s
BLA Blacksburg 69.04 56 P 15 08 29.5
baz=319,SNR=5.5
Q58A Fox Den Farm, 69.11 53 P 15 08 29.7
baz=320,SNR=6.5
S56A Natural Bridge 69.12 55 P 15 08 30.0
baz=320,SNR=6.1
K63A Dunstable 69.13 47 P **P** 15 08 30.1 -0.6
K63A IAmb IAmb 15 08 30.6
comp=Z,26nm,0.8s
K63A Dunstable 69.13 47 P 15 08 28.9
baz=322
RAMN Ramite 69.15 287 *e*P **P** 15 08 32.1 +0.7
comp=Z,517nm,0.5s
KMY Karmoy 69.16 355 *e*P **P** 15 08 31.0 +0.5
O60A Telford 69.17 51 P 15 08 30.0
baz=321
M61A Granite Spring 69.18 49 P 15 08 29.7
baz=321
R57A Stanardsville 69.18 54 P 15 08 30.3
baz=320,SNR=7.7
LUWI Luwuk 69.19 239 P **P** 15 08 30.4 -1.0
LUWI Luwuk 69.19 239 P **P** 15 08 30.6 -0.8
comp=Z,2µmcomp=Z,116nm,0.8s
MSVF Nonsavu 69.20 178 LR LR 15 32 41.5
comp=Z,396nm,19.7s,baz=13,slow=30
P59A Jarrettsville 69.21 52 P 15 08 30.5
baz=320,SNR=6.6
HRV Adam Dziewonsk 69.26 47 P 15 08 30.4
baz=322
KKN Kakani 69.31 289 *e*P **P** 15 08 33.1 +0.8
comp=Z,289nm,0.6s
H66A Whiting 69.32 43 P 15 08 30.7
baz=323
PAL Palisades 69.35 50 P 15 08 31.0
baz=321
WUPA West Chester U 69.37 51 P **P** 15 08 32.2 +0.1
S57A Dark Hollow, R 69.37 55 P 15 08 31.5
baz=320
SRAK Srakaew 69.39 267 P **P** 15 08 31.0 -1.6
comp=Z,7µmcomp=Z,999nm,0.8s
PKI Pulchoki 69.39 289 *e*P **P** 15 08 33.6 +0.6
comp=Z,300nm,0.6s
PKIN Phulchoki 69.39 289 *e*P **P** 15 08 33.5 +0.6
comp=Z,312nm,0.5s
BG3 Lake Jocassee 69.40 60 P **P** 15 08 32.3 -0.2
DRLN Deer Lake 69.44 34 P **P** 15 08 32.0 -0.5
DRLN IAmb IAmb 15 08 32.8
comp=Z,27nm,0.9s
M62A Hamden 69.48 49 P 15 08 31.4
baz=322
LMN Caledonia Moun 69.49 41 P **P** 15 08 32.1 -0.8
LMN IAmb IAmb 15 08 33.3
comp=Z,38nm,0.8s
GKN Gorkha 69.52 289 *e*P **P** 15 08 34.2 +0.6
comp=Z,422nm,0.8s
DMN Daman 69.54 289 *e*P **P** 15 08 34.6 +0.8
comp=Z,174nm,0.6s
Y52A Lilburn 69.64 61 P **P** 15 08 33.4 -0.7
Y52A IAmb IAmb 15 08 34.3
comp=Z,19nm,0.7s
V55A Taylorsville 69.66 58 P **P** 15 08 33.8 -0.3
V55A IAmb IAmb 15 08 36.0
comp=Z,20nm,0.7s
APSI Ampana 69.69 240 P **P** 15 08 34.9 +0.5
comp=Z,519nmcomp=Z,41nm,0.8s
BRYW Bryant College 69.73 47 P **P** 15 08 33.6 -0.9
BRYW IAmb IAmb 15 08 34.0
comp=Z,34nm,0.6s
O61A Allentown 69.75 51 P 15 08 33.6
baz=321
R58B Mineral 69.76 54 P 15 08 33.9
baz=320
DANN Dangsing 69.78 290 *e*P **P** 15 08 36.1 +0.8
comp=Z,487nm,0.8s
T57A Hurt 69.80 56 P **P** 15 08 34.1 -0.8
T57A IAmb IAmb 15 08 34.8
comp=Z,32nm,0.6s
UTHA Uthaitani 69.82 270 P **P** 15 08 35.9 +0.6
comp=Z,645nmcomp=Z,76nm,0.8s
TJOU Tjoern 69.86 351 *i*P **P** 15 08 34.7 -0.2
HOMB Homborsund 69.89 353 *i*P **P** 15 08 35.3 +0.3
HOMB IAmb IAmb 15 08 36.1
comp=Z,40nm,0.8s
HOMB Homborsund 69.89 353 *e*P **P** 15 08 35.3 +0.3
M63A Gales Ferry 69.91 48 P **P** 15 08 34.6 -0.9
M63A Gales Ferry 69.91 48 P 15 08 34.3
baz=322
SNART Snartemo 69.91 354 *i*P **P** 15 08 35.9 +0.7
SNART IAmb IAmb 15 08 36.0
comp=Z,50nm,0.8s
SNART Snartemo 69.91 354 *e*P **P** 15 08 35.7 +0.5
S58A Poland Farm, P 69.95 54 P 15 08 34.8
baz=320
LPSR Galich'ya Gora 70.02 334 *e*P **P** 15 08 35.9 -0.1
LPSR pmax pmax
comp=Z,70nm,0.8s
BIGH Upper Bighouse 70.12 0 *e*P **P** 15 08 36.6 +0.1
BIGH IAmb IAmb 15 08 37.3
comp=Z,86nm,0.6s
KMSC Kings Mountain 70.14 58 P **P** 15 08 36.3 -0.7
KMSC IAmb IAmb 15 08 37.0
comp=Z,42nm,0.9s
KMSC Kings Mountain 70.14 58 P 15 08 36.2
baz=320,SNR=12
BORU Boraas 70.14 351 *i*P **P** 15 08 36.5 -0.1
ISAL Salakas 70.22 343 *e*P **P** 15 08 37.2 0.0
KOLN Koldanda 70.31 290 *e*P **P** 15 08 39.0 +0.6
comp=Z,262nm,0.8s
HODGE Hodges 70.34 60 P **P** 15 08 37.6 -0.6
HODGE IAmb IAmb 15 08 38.4
comp=Z,34nm,0.7s
IDID Didziasalis 70.35 342 *e*P **P** 15 08 38.3 +0.4
PYUN Piuthan 70.41 291 *e*P **P** 15 08 39.7 +0.6
comp=Z,478nm,0.9s
IIGN Ignalina 70.42 342 *e*P **P** 15 08 38.6 +0.2
ONAU Onsala 70.46 351 *i*P **P** 15 08 38.0 -0.6
VRH Novokhopyorsk 70.47 332 *e*P **P** 15 08 38.3 -0.5
VRH pmax pmax
comp=Z,120nm,0.8s
PABE Paberze 70.68 344 *e*P **P** 15 08 40.2 +0.3
PABE Paberze 70.68 344 P **P** 15 08 39.7 -0.2
FABU Falkenberg 70.77 351 *i*P **P** 15 08 40.3 -0.2
V58A Windy Hill, Pi 70.80 56 P **P** 15 08 40.6 -0.5
V58A IAmb IAmb 15 08 41.1
comp=Z,18nm,0.6s
JSC Jenkinsville 70.83 59 P **P** 15 08 41.0 -0.3
JSC pmax pmax
comp=Z,18nm,0.6s
JSC Jenkinsville 70.83 59 P **P** 15 08 41.0 -0.3
JSC IAmb IAmb 15 08 41.3
comp=Z,18nm,0.6s
W57A Gilead 70.83 57 P **P** 15 08 40.3 -1.0
W57A IAmb IAmb 15 08 41.1
comp=Z,26nm,0.6s
MNK Minsk 70.89 341 *e*P **P** 15 08 41.0 -0.3
MNK Minsk 70.89 341 *i*P **P** 15 08 41.1 -0.1
comp=E,3.0nm,0.9s
MNK *i*P **P** 15 08 41.1 -0.1
comp=N,18nm,0.9s
MNK *i*P **P** 15 08 41.1 -0.1
comp=Z,65nm,0.9s
MNK *i*pP **pP** 15 08 55.3 +2.0
MNK *i*PcP **PcP** 15 09 01.2 -0.4
MNK *i*sP **PcP** 15 09 01.3 -0.4
MNK *i*PP **PP** 15 11 18.5 +0.5
MNK *i*PPP PPP 15 13 01.7
MNK *i*S **S** 15 17 55.6 +2.5
MNK *i*sS **SKiKP** 15 18 17.9 -1.4
MNK *i*SS **SS** 15 22 27.8 +2.8
MNK *i*SSS SSS 15 25 44.5

MNK *i*SKKS **SKKSdf** 15 35 12.5 -6.1
MNK *i*LQ LQ 15 36 50.1
MNK *i*LR LR 15 38 57.7
MNK *i*LRM MLR 15 44 18.2
comp=E,85nm,18.7s
MNK *i*LRM MLR 15 44 34.3
comp=N,2µm,18.7s
MNK *i*LRM MLR 15 44 36.3
comp=Z,615nm,18.7s
SRDT SRDT 70.94 269 P **P** 15 08 42.3 +0.2
PATY Pattaya 70.95 267 P **P** 15 08 43.0 +0.8
TAOE Nuku Hiva Isla 71.00 134 *e*LR LR 15 30 18.7
comp=Z,916nm,24.1s
TAOE Nuku Hiva Isla 71.00 134 *e*T T 16 26 23.9
comp=Z,49nm,0.3s
MCD Coleburn Disti 71.03 360⇑ *e*P **P** 15 08 42.2 +0.1
GOET G??ttrup 71.06 353 *e*P **P** 15 08 43.5 +1.3
BLEU Blekinge 71.11 349 *i*P **P** 15 08 42.2 -0.4
MDO Dochfour 71.17 0 *e*P **P** 15 08 43.0 +0.1
DEL Delary 71.17 350 *i*P **P** 15 08 42.5 -0.5
DEL IAmb IAmb 15 08 43.0
comp=Z,13nm,0.7s
VSR Storozhevoye 71.19 333 *e*P **P** 15 08 42.9 -0.3
VSR pmax pmax
comp=Z,70nm,0.9s
VORD Divnogorie 71.38 333 *e*P **P** 15 08 44.2 -0.1
VORD pmax pmax
comp=Z,70nm,0.9s
COEN Coen 71.48 214 P **P** 15 08 45.3 +0.1
MUD Monsted U'grnd 71.64 353 *i*P **P** 15 08 45.9 +0.2
MUD IAmb IAmb 15 08 47.6
comp=Z,64nm,1.0s
MUD Monsted U'grnd 71.64 353 *i*P **P** 15 08 45.9 +0.2
MUD pmax pmax
comp=Z,64nm,1.0s
NIL Nilore 71.65 301 P **P** 15 08 47.1 +0.9
NIL pmax pmax
comp=Z,202nm,1.1s
NIL Nilore 71.65 301 P **P** 15 08 47.1 +0.9
DRUM Mains of Drumt 71.70 359 *e*P **P** 15 08 45.4 -0.7
PHET Kaeng Krachan 71.73 268 P **P** 15 08 48.0 +1.1
LUNU Lund 72.05 350 *i*P **P** 15 08 48.4 +0.2
COP Copenhagen 72.10 350⇑ *i*P **P** 15 08 48.7 +0.1
COP IAmb IAmb 15 08 49.1
comp=Z,63nm,0.9s
COP Copenhagen 72.10 350⇑ *i*P **P** 15 08 48.6 +0.1
COP pmax pmax
comp=Z,63nm,0.9s
INVG Invergeldie, C 72.19 0⇑ *e*P **P** 15 08 48.4 -0.6
INVG IAmb IAmb 15 08 49.2
comp=Z,16nm,0.8s
SUW Suwalki 72.24 344 *e*P **P** 15 08 49.2 -0.2
SUW Suwalki 72.24 344 *e*P **P** 15 08 49.0 -0.4
SBUM Sibu 72.26 251 P **P** 15 08 50.6 +0.5
NHSC New Hope 72.31 59 P 15 08 49.5
baz=320
LAWE Loch Awe, Argy 72.35 1⇑ *e*P **P** 15 08 50.1 +0.1
LAWE IAmb IAmb 15 08 50.5
comp=Z,30nm,0.7s
BSD Bornholm Skovb 72.39 349 *i*P **P** 15 08 49.8 -0.4
BSD IAmb IAmb 15 08 50.7
comp=Z,21nm,0.7s
BSD Bornholm Skovb 72.39 349 *i*P **P** 15 08 49.8 -0.4
BSD pmax pmax
comp=Z,21nm,0.7s
EAB Aberfoyle 72.43 0 *e*P **P** 15 08 50.7 +0.2
TTSI Tana Toraja 72.46 241 P **P** 15 08 51.7 +0.5
comp=Z,47nm,1.0s
ESY Stoneypath 72.69 359 *e*P **P** 15 08 51.9 -0.2
KBL Kabul 73.16 305 P **P** 15 08 55.2 -0.3
KBL pmax pmax
comp=Z,163nm,0.8s
KBL Kabul 73.16 305 P **P** 15 08 55.2 -0.3
SPSI Sidrap Palu 73.25 240 P **P** 15 08 55.8 -0.1
comp=Z,24nm,0.8s
ESK Eskdalemuir 73.30 360⇑ *e*P **P** 15 08 55.7 0.0
ESK IAmb IAmb 15 08 56.5
comp=Z,24nm,0.8s
ESK Eskdalemuir 73.30 360 P **P** 15 08 55.0 -0.7
ESK pmax pmax
comp=Z,26nm,0.9s
ESK Eskdalemuir 73.30 360 P **P** 15 08 55.0 -0.7
ESK IAmb IAmb 15 08 56.8
comp=Z,26nm,0.8s
BNSI Bone 73.43 240 P **P** 15 08 57.5 +0.5
comp=Z,33nm,1.2s
MTKI Muara Teweh, K 73.46 246 P **P** 15 08 57.7 +0.5
NEWG New Galloway 73.50 0⇑ *e*P **P** 15 08 56.8 0.0
NEWG IAmb IAmb 15 08 57.6
comp=Z,19nm,0.9s
CLGH Cloghs, Cushen 73.52 1⇑ *e*P **P** 15 08 57.0 +0.1
CLGH IAmb IAmb 15 08 57.5
comp=Z,25nm,0.8s
EDMD Edmundbyers 73.78 359 *e*P **P** 15 08 58.4 -0.1
EDMD IAmb IAmb 15 08 58.8
comp=Z,16nm,0.7s
GKP Gorka Klasztor 73.89 347 *e*P **P** 15 08 59.1 -0.1
GKP Gorka Klasztor 73.89 347 *e*P **P** 15 08 59.5 +0.4
DZM Mont Dzumac 74.01 190 *e*S **SKiKP** 15 18 24.3 -0.4
comp=Z,317nm,33.6s
DZM Mont Dzumac 74.01 190 *e*LR LR 15 31 33.0
comp=Z,705nm,23.3s
KESW Keswick, Cumbr 74.03 360⇑ *e*P **P** 15 09 00.1 +0.2
KESW IAmb IAmb 15 09 00.5
comp=Z,23nm,0.7s
KAPI Kappang 74.14 240 P **P** 15 09 00.0 -1.1
KAPI pmax pmax
comp=Z,16nm,0.8s
KAPI Kappang 74.14 240 P **P** 15 08 60.0 -1.1
KSM Kuching 74.17 252 P **P** 15 09 01.6 +0.3
KSM IAmb IAmb 15 09 02.3
comp=Z,18nm,0.7s
AKASG Malin Array Be 74.18 339 P **P** 15 09 00.9 0.0
comp=Z,55nm,0.5s,baz=22,slow=6.1,SNR=76
AKASG LR LR 15 45 24.6
comp=Z,404nm,18.7s,baz=10.0,slow=39
AKASG Malin Array Be 74.18 339 P **P** 15 09 00.9 0.0
AKBB Malin Array Si 74.18 339 *c*P **P** 15 09 00.8 -0.1
AKBB Malin Array Si 74.18 339 P **P** 15 09 00.9 +0.1
IOMK Kirk Michael 74.36 1⇑ *e*P **P** 15 09 01.8 -0.1
IOMK IAmb IAmb 15 09 02.6
comp=Z,58nm,0.8s
GMM Mts of Mourne 74.36 1 *e*P **P** 15 09 01.4 -0.5
WIM Isle of Man 74.47 1⇑ *e*P **P** 15 09 02.6 0.0
HPK Haverah Park 74.65 359⇑ *e*P **P** 15 09 03.8 +0.2
HPK IAmb IAmb 15 09 04.1
comp=Z,50nm,1.1s
BEL Belsk 74.74 345 *e*P **P** 15 09 02.1 -2.0
PPT Papeete 75.17 146 LR LR 15 34 42.5
comp=Z,444nm,19.6s,baz=333,slow=30
PPT2 Papeete2 75.19 146 *e*LR LR 15 32 10.7
comp=Z,816nm,22.8s,baz=343
PPT2 Papeete2 75.19 146 *e*T T 16 31 36.5
comp=Z,10.0nm,0.3s
LBWR Ladybower, Pea 75.21 359 *e*P **P** 15 09 06.7 -0.1
LBWR IAmb IAmb 15 09 07.2
comp=Z,21nm,0.8s
WME Myndd Eilian 75.22 0⇑ *e*P **P** 15 09 06.5 -0.4
TIAR Tiarei 75.24 146 *e*T T 16 31 40.4
comp=Z,2.7nm,0.3s
PAE Paea 75.25 146 *e*T T 16 31 41.3
comp=Z,3.6nm,0.3s
MTN Manton Dam 75.26 226 P **P** 15 09 07.5 0.0
WLF1 Llynfaes 75.33 0 *e*P **P** 15 09 07.0 -0.4
DSB Dublin 75.35 2 P **P** 15 09 08.2 +0.5
DSB IAmb IAmb 15 09 08.9
comp=Z,34nm,0.9s
YRC Rhoscolyn 75.37 1 *e*P **P** 15 09 07.1 -0.6
GOF Gofitskoye 75.49 328⇑ *i*P **P** 15 09 09.9 +1.3
GOF pmax pmax
comp=Z,255nm,0.8s
BBKI Banjar Baru 75.56 245 P **P** 15 09 09.6 +0.3
comp=Z,1µmcomp=Z,35nm,1.2s
GEYT Alibeck 75.69 314 P **P** 15 09 11.0 +1.1
comp=Z,76nm,0.8s,baz=342,slow=3.3,SNR=124
GEYT LR LR 15 45 18.6
comp=Z,710nm,20.7s,baz=75,slow=38
GEYT Alibeck 75.69 314 P **P** 15 09 10.7 +0.8
GYA0B ALIBECK ARRAY 75.69 314 P **P** 15 09 11.1 +1.2
FOEL Foel Wylfa 75.73 360⇑ *e*P **P** 15 09 09.2 -0.7
FOEL IAmb IAmb 15 09 09.5
comp=Z,45nm,0.7s
MAK Makhachkala 75.77 324 *e*P **P** 15 09 11.2 +1.0
MAK *e* 15 12 00.8
MAK *e*PPP PPP 15 13 47.6

MAK *e*S **S** 15 18 50.5 +1.9
MAK *e*SS **SS** 15 23 41.5 +1.8
MAK *e*SSS SSS 15 27 05.4
MAK pmax pmax
comp=Z,117nm,0.9s
MAK MLR MLR
comp=Z,839nm,18.0s
LLW Llanuwychllyn 75.77 360⇑ *e*P **P** 15 09 10.1 0.0
LLW IAmb IAmb 15 09 11.0
comp=Z,17nm,0.9s
SOEI Soe 75.81 233 P **P** 15 09 11.2 +0.3
comp=Z,46nm,1.1s
CWF Charnwood Fore 75.87 359 *e*P **P** 15 09 09.5 -1.1
MMRI Maumere 75.89 236 P **P** 15 09 11.4 +0.3
comp=Z,43nm,1.0s
CMIG Matias Romero 76.05 80 P **P** 15 09 13.1 +0.9
comp=Z,36nm,1.0s,baz=317,slow=5.4,SNR=35
LVV L'vov 76.09 342 *e*P **P** 15 09 12.1 +0.1
GROC Groznyy 76.17 325 *e*P **P** 15 09 12.0 -0.5
GROC *e* 15 09 23.4
GROC *e**PP **pP** 15 09 26.0 +1.4
GROC pmax pmax
comp=Z,26nm,0.5s
CTAO Charters Tower 76.21 209 P **P** 15 09 13.1 +0.3
CTAO pmax pmax
comp=Z,22nm,0.8s
CTAO Charters Tower 76.21 209 P **P** 15 09 13.1 +0.3
CTAO IAmb IAmb 15 09 14.1
comp=Z,22nm,0.8s
CLL Collm 76.35 349⇑ *i*P **P** 15 09 12.8 -0.6
comp=Z,14nm,0.8s
CLL *i* 15 09 19.3
CLL *e*(PcP) **PcP** 15 09 25.0 -0.1
CLL *e*(SKSac) 15 19 26.0
CLL *e*PPS PPS 15 19 48.0
CLL *e*SS SS 15 23 48.0 -0.1
CLL *e* 15 32 00.0
CLL LmV 15 46 00.0
comp=Z,300nm,20.8s
CLL Collm 76.35 349⇑ *i*P **P** 15 09 12.8 -0.6
CLL *i* 15 09 19.3
CLL *e* 15 09 25.0
CLL pmax pmax
comp=Z,14nm,0.8s
CLL MLR MLR
comp=Z,300nm,20.8s
KSP Ksiaz 76.39 347 *e*P **P** 15 09 13.5 -0.1
OJC Ojcow 76.47 345 *e*P **P** 15 09 14.9 +0.8
OJC Ojcow 76.47 345 P **P** 15 09 14.6 +0.6
OJC pmax pmax
comp=Z,67nm,0.9s
OJC Ojcow 76.47 345 P **P** 15 09 14.6 +0.6
OJC IAmb IAmb 15 09 15.7
comp=Z,67nm,0.9s
BATI Baumata 76.50 234 P **P** 15 09 14.9 +0.2
comp=Z,50nm,0.7s
KWP Kalwaria Pacla 76.53 343 *e*P **P** 15 09 15.7 +1.3
KWP Kalwaria Pacla 76.53 343 P **P** 15 09 15.5 +1.1
KWP pmax pmax
comp=Z,196nm,0.9s
KWP Kalwaria Pacla 76.53 343 P **P** 15 09 15.5 +1.1
KIV Kislovodsk 76.58 327 ⇓*i*P **P** 15 09 15.9 +0.9
KIV Kislovodsk 76.58 327 *i*P **P** 15 09 15.9 +0.9
SNR=11
KIV Kislovodsk 76.58 327 *e*P **P** 15 09 15.9 +0.9
KIV pmax pmax
comp=Z,173nm,1.1s
KIV Kislovodsk 76.58 327 P **P** 15 09 15.8 +0.9
KIV IAmb IAmb 15 09 17.1
comp=Z,47nm,0.9s
KIV Kislovodsk 76.58 327 P **P** 15 09 16.2 +1.2
MCH1 Michaelchurch 76.63 360 *e*P **P** 15 09 14.7 -0.2
MCH1 IAmb IAmb 15 09 15.7
comp=Z,34nm,0.8s
HRA Herat 76.66 309 P **P** 15 09 16.6 +0.9
BRG Berggiesshubel 76.67 349 *i*P **P** 15 09 15.0 -0.2
BRG Amp 15 09 16.9
comp=Z,15nm,0.8s
BRG *ex* x 15 09 20.7
BRG Amp 15 09 21.4
comp=Z,9.8nm,0.8s
BRG *ex* x 15 09 27.3
BRG Amp 15 09 28.2
comp=Z,9.0nm,0.8s
RSBS Rosebush, Pemb 76.67 1 *e*P **P** 15 09 14.9 -0.2
RSBS IAmb IAmb 15 09 15.9
comp=Z,28nm,0.9s
CHVC Chvalec 76.67 347 *e*P **P** 15 09 15.2 0.0
OSTC Ostas 76.68 347 *e*P **P** 15 09 15.7 +0.4
NCK Nalchik 76.68 327 *de*P **P** 15 09 17.2 +1.8
NCK pmax pmax
comp=Z,78nm,0.9s
KBZ Khabaz 76.71 327 P **P** 15 09 16.9 +1.3
comp=Z,40nm,0.8s,baz=71,slow=2.1,SNR=76
KBZ LR LR 15 49 21.3
comp=Z,303nm,18.5s,baz=14,slow=41
KBZ Khabaz 76.71 327 *c*P **P** 15 09 16.8 +1.3
KBZ pmax pmax
comp=Z,53nm,0.9s
UPC Upice 76.75 347 *e*P **P** 15 09 15.7 0.0
UPC Upice 76.75 347 *e*P **P** 15 09 15.7 0.0
MONM Monmouth 76.78 359 *e*P **P** 15 09 15.7 -0.1
MONM IAmb IAmb 15 09 16.4
comp=Z,39nm,0.8s
STRD Stroud 76.84 359 *e*P **P** 15 09 15.6 -0.5
STRD IAmb IAmb 15 09 17.1
comp=Z,81nm,0.9s
DPC Dobruska-Polom 76.87 347 *e*P **P** 15 09 16.7 +0.3
DPC Dobruska-Polom 76.87 347 *e*P **P** 15 09 16.7 +0.3
PVCC Panska Ves 76.93 348 *e*P **P** 15 09 16.5 -0.1
PVCC Panska Ves 76.93 348 *e*P **P** 15 09 16.5 -0.1
PBA Port Blair 76.97 272 P **P** 15 09 16.2 -1.1
KULM Kulim 76.99 262 P **P** 15 09 17.4 -0.2
KULM IAmb IAmb 15 09 18.6
comp=Z,25nm,0.8s
KRLC Kraliky 77.07 347 *e*P **P** 15 09 17.8 +0.3
KRLC Kraliky 77.07 347 *e*P **P** 15 09 17.8 +0.3
OKC Ostrava-Krasne 77.10 346 *e*P **P** 15 09 18.2 +0.6
OKC Ostrava-Krasne 77.10 346 *e*P **P** 15 09 18.2 +0.6
NIE Niedzica 77.16 344 *e*P **P** 15 09 19.0 +0.9
ZEI Tsey 77.20 326 *e*P **P** 15 09 16.7 -1.9
ZEI pmax pmax
comp=Z,92nm,0.9s
MORC Moravsky Berou 77.25 346 *e*P **P** 15 09 18.9 +0.4
PRA Prague 77.39 348 *e*P **P** 15 09 20.2 +0.9
PRA Prague 77.39 348 *e*P **P** 15 09 20.2 +0.9
IPM Ipoh 77.39 261 P **P** 15 09 18.8 -1.0
IPM IAmb IAmb 15 09 20.2
comp=Z,39nm,0.8s
CRVS Cervenica-Dubn 77.45 343 *e*P **P** 15 09 20.6 +0.9
CRVS pmax pmax
comp=Z,69nm,0.8s
CRVS Cervenica-Dubn 77.45 343 *e*P **P** 15 09 20.6 +0.9
PRU Pruhonice 77.46 348 *e*P **P** 15 09 19.6 0.0
PRU Pruhonice 77.46 348 *e*P **P** 15 09 19.6 0.0
NKC Novy Kostel 77.47 349 *e*P **P** 15 09 19.5 -0.2
NKC Novy Kostel 77.47 349 *e*P **P** 15 09 19.5 -0.2
ANN Anapa 77.49 331 *e*P **P** 15 09 18.3 -1.5
ANN *e**PP **pP** 15 09 33.0 +1.0
ANN *e* 15 12 17.5
ANN *e* 15 19 27.2
ANN pmax pmax
comp=Z,44nm,0.7s
ANN MLR MLR
comp=N,814nm,19.0s
ANN MLR MLR
comp=Z,476nm,20.0s
BEBN Eben Emael 77.52 354 *d*P **P** 15 09 20.1 +0.2
LANS Liptovska Anna 77.56 345 *e*P **P** 15 09 21.9 +1.6
LANS pmax pmax
comp=Z,60nm,1.0s
LANS Liptovska Anna 77.56 345 *e*P **P** 15 09 21.9 +1.6
UZH Uzhgorod 77.56 343 ⇓*i*P **P** 15 09 20.4 +0.2
UZH *e* 15 09 36.1
MEM Membach 77.69 354 *d*P **P** 15 09 21.1 +0.2
comp=Z,43nm,0.9s
BTNL Ternell 77.70 354 *d*P **P** 15 09 20.9 -0.1
comp=Z,34nm,1.0s
BTNL *d*pP **sP** 15 09 37.0 -0.9
BSTI Sart Tilman 77.74 354 *d*P **P** 15 09 21.5 +0.3
VRAC Vranov 77.84 347 ⇓P **P** 15 09 22.6 +0.8
VRAC Vranov 77.84 347 *e*P **P** 15 09 22.4 +0.6
IAS Iasi 77.85 339 ⇓P **P** 15 09 22.2 +0.4
CHVG Ch'k'valeri 77.88 327 ⇓P **P** 15 09 23.2 +1.0

SOC Sochi 77.88 329 *e*P P 15 09 21.7 -0.4
SOC *e* 15 12 18.6
SOC *e*PPP PPP 15 14 02.0
SOC *e*S **S** **15 19 14.7 +3.0**
SOC pmax pmax
comp=Z,37nm,0.9s
SOC MLR MLR
comp=Z,527nm,19.0s
SNF Seneffe 77.89 355 *d*P P 15 09 22.4 +0.4
comp=Z,24nm,0.9s
BCLA Clavier 77.92 354 *d*P P 15 09 21.8 -0.4
comp=Z,22nm,0.9s
BUR08 Bucovina Ar. S 77.94 340 P P 15 09 23.2 +0.8
BUR08 lAmb lAmb 15 09 24.3
comp=Z,44nm,0.7s
BURAR Bucovina Array 77.96 340 ⇓P P 15 09 23.3 +0.7
BURAR Bucovina Array 77.96 340 P P 15 09 23.6 +0.9
BGES Gesves 77.97 354 *d*P P 15 09 22.4 0.0
comp=Z,24nm,0.9s
TRPA Tarpa 78.00 342 ⇓P P 15 09 23.9 +1.3
TREC Trest 78.01 347 *e*P P 15 09 23.0 +0.2
TREC Trest 78.01 347 *e*P P 15 09 23.0 +0.2
KECS Kecovo 78.03 344 *e*P P 15 09 24.0 +1.2
KECS pmax pmax
comp=Z,30nm,0.7s
KECS Kecovo 78.03 344 *e*P P 15 09 24.0 +1.2
BMRD Maredsous 78.07 354 *d*P P 15 09 22.9 -0.1
comp=Z,28nm,1.0s
BMRD *d*pP **sP** 15 09 39.5 -0.4
BASI Baing, Sumba 78.08 236 P P 15 09 23.9 +0.4
comp=Z,103nm,0.8s
KRUC Moravsky 78.11 347 *e*P P 15 09 23.7 +0.4
JAVC Velka Javorina 78.12 346 *e*P P 15 09 25.1 +1.7
DYA Yadsworthy 78.19 0⇑ *e*P P 15 09 23.3 -0.4
DYA lAmb lAmb 15 09 24.4
comp=Z,52nm,0.6s
BMR Baia Mare 78.25 342 ⇓P P 15 09 25.0 +0.9
DOU Dourbes 78.29 355 *d*P P 15 09 24.4 +0.1
comp=Z,15nm,1.0s
DOU *d*PcP **PcP** 15 09 32.5 -0.9
VYHS Vyhne 78.29 345 *e*P P 15 09 25.2 +0.9
VYHS Vyhne 78.29 345 *e*P P 15 09 25.2 +0.9
SIM Simferopol' 78.30 334 *e*P P 15 09 23.9 -0.5
SIM *e* 15 09 33.0
SIM pmax pmax
comp=Z,29nm,0.9s
VASR Vaslui 78.32 338 ⇓P P 15 09 25.0 +0.5
PLAI Plampang 78.39 239 P P 15 09 23.8 -1.4
comp=Z,661nmcomp=Z,71nm,0.8s
BIZ Bicaz 78.41 340 ⇓P P 15 09 25.9 +0.9
KHC Kasperske Hory 78.42 349*c* *i*P P 15 09 25.3 +0.2
KHC pmax pmax
comp=Z,50nm,1.0s
KHC Kasperske Hory 78.42 349 *e*P P 15 09 25.5 +0.4
KHC Kasperske Hory 78.42 349 P P 15 09 25.5 +0.4
KHC lAmb lAmb 15 09 26.8
comp=Z,31nm,1.1s
SMOL Smolenice 78.50 346 *e*P P 15 09 26.8 +1.4
SMOL pmax pmax
comp=Z,28nm,1.1s
SMOL Smolenice 78.50 346 *e*P P 15 09 26.8 +1.4
AKH Akhalkalaki 78.56 326 ⇓P P 15 09 27.2 +1.0
WLF Walferdange 78.62 353 *d*P P 15 09 26.9 +0.9
comp=Z,18nm,0.9s
CKRC Cesky Krumlov 78.64 348 *e*P P 15 09 26.2 0.0
ARCR ARCÁLIA 78.64 341 ⇓P P 15 09 28.0 +1.7
MODS Modra-Piesok 78.66 346 *e*P P 15 09 26.8 +0.5
MODS pmax pmax
comp=Z,64nm,1.2s
MODS Modra-Piesok 78.66 346 *e*P P 15 09 26.8 +0.5
PSZ Piszkesteto 78.68 344 ⇓P P 15 09 27.7 +1.2
GERES GERESS Array B 78.69 348 P P 15 09 26.7 +0.1
comp=Z,8.6nm,0.8s,baz=35,slow=4.9,SNR=52
GERES LR LR 15 44 25.3
comp=Z,213nm,22.0s,baz=359,slow=36
GERES GERESS Array B 78.69 348 P P 15 09 26.6 0.0
TESR Tescani 78.70 339 ⇓P P 15 09 26.8 +0.2
KNRA Kununurra 78.82 226 P P 15 09 27.8 +0.3
KNRA lAmb lAmb 15 09 28.5
comp=Z,34nm,0.9s
ZST Bratislava 78.86 346 *e*P P 15 09 29.0 +1.6
ZST pmax pmax
comp=Z,163nm,1.2s
ZST Bratislava 78.86 346 *e*P P 15 09 29.0 +1.6
GHRR 78.96 339 ⇓P P 15 09 29.8 +1.8
CJR Cluj-Napoca 79.15 341 ⇓P P 15 09 30.3 +1.2
GNI Garni 79.23 324 P P 15 09 31.3 +1.5
comp=Z,20nm,0.7s,baz=19,slow=6.8,SNR=5.1
GNI Garni 79.23 324 P P 15 09 31.5 +1.7
GNI Garni 79.23 324 P P 15 09 32.1 +2.3
DRGR 79.25 342 ⇓P P 15 09 30.1 +0.4
VRI Vrincioaia 79.30 339 ⇓P P 15 09 30.4 +0.5
CONA Conrad Observa 79.30 347 *i*P P 15 09 31.0 +1.1
comp=Z,44nm,1.0s,SNR=22
ODBI Odobesti 79.32 339 ⇓P P 15 09 31.6 +1.7
LHMI Lhok Sumawe 79.33 265 P P 15 09 31.8 +1.4
LHMI Lhok Sumawe 79.33 265 P P 15 09 30.6 +0.2
comp=Z,242nm,0.9s
PLOR Plostina 79.33 339 ⇓P P 15 09 30.6 +0.6
JLP Les Platons 79.38 359⇑ *e*P P 15 09 30.2 0.0
JVM Valle D.L. Mar 79.40 359⇑ *e*P P 15 09 30.4 +0.1
JSA Saint Aubin 79.43 359 *e*P P 15 09 29.4 -1.1
TLCR 79.45 337 ⇓P P 15 09 31.5 +0.9
DOPR Dopca 79.49 340 ⇓P P 15 09 32.2 +1.3
MOA Molln 79.59 348 *i*P P 15 09 31.7 +0.3
comp=Z,8.1nm,0.8s,SNR=5.5
BISRR Bisoca 79.60 339 ⇓P P 15 09 33.2 +1.6
CFR Carcaliu 79.62 338 ⇓P P 15 09 32.0 +0.4
TSI Tuntungan 79.67 263 P P 15 09 32.8 +0.5
GRER 79.70 339 ⇓P P 15 09 33.9 +1.8
BFO Black Forest 79.77 352 P P 15 09 32.6 +0.1
BFO pmax pmax
comp=Z,30nm,1.0s
BFO Black Forest 79.77 352 P P 15 09 32.6 +0.1
BFO lAmb lAmb 15 09 33.6
comp=Z,30nm,1.0s
NEHR Nehoiu 79.81 339 ⇓P P 15 09 33.9 +1.2
MLR Muntele Rosu 79.83 339 ⇓P P 15 09 34.4 +1.5
MLR Muntele Rosu 79.83 339 P P 15 09 33.5 +0.6
MLR pmax pmax
comp=Z,45nm,0.9s
MLR Muntele Rosu 79.83 339 P P 15 09 33.5 +0.6
MLR lAmb lAmb 15 09 35.6
comp=Z,45nm,0.9s
TPGR Topolog 79.86 337 ⇓P P 15 09 33.5 +0.6
SIRR Siria 79.95 342 ⇓P P 15 09 34.1 +0.7
ECH Echery 79.98 353 P P 15 09 33.6 0.0
ECH pmax pmax
comp=Z,19nm,0.9s
ECH Echery 79.98 353 P P 15 09 33.6 0.0
ARSA Arzberg 80.01 347 *i*P P 15 09 35.0 +1.2
comp=Z,26nm,0.7s,SNR=16
ISR Istrita 80.05 339 ⇓P P 15 09 34.2 +0.2
VOIR 80.07 340 ⇓P P 15 09 35.3 +1.1
WB0 Warramunga Arr 80.08 220 P P 15 09 34.0 -0.3
WB0 lAmb lAmb 15 09 35.0
comp=Z,78nm,1.5s
HARR Harsova 80.13 338 ⇓P P 15 09 35.3 +0.9
WR0 Warramunga Arr 80.19 219 P P 15 09 34.5 -0.4
WR0 lAmb lAmb 15 09 35.0
comp=Z,19nm,0.6s
KTUT Trabzon 80.20 328 ⇓P P 15 09 35.2 +0.3
ARR Arges 80.22 340 ⇓P P 15 09 36.2 +1.2
SECR 80.23 339 ⇓P P 15 09 35.4 +0.5
TIRR Tirgusor 80.23 337 P P 15 09 35.6 +0.7
TIRR pmax pmax
comp=Z,78nm,0.8s
TIRR Tirgusor 80.23 337 P P 15 09 35.6 +0.7
TLBR Topalu 80.24 338 ⇑P P 15 09 35.6 +0.6
WRAB Tennant Creek 80.24 220*c* *i*P P 15 09 34.5 -0.7
WRAB pmax pmax
comp=Z,58nm,1.7s
WRAB Tennant Creek 80.24 220 P P 15 09 34.0 -1.2
WRAB lAmb lAmb 15 09 35.9
comp=Z,35nm,1.1s
WB2 Warramunga Arr 80.25 220 P P 15 09 35.0 -0.2
WB2 lAmb lAmb 15 09 36.0
comp=Z,37nm,1.0s
WRA Warramunga Arr 80.25 220 P P 15 09 34.9 -0.3
comp=Z,22nm,0.9s,baz=30,slow=5.8,SNR=171
WRA PKiKP **PKiKP** 15 15 04.5 +0.2
comp=Z,0.4nm,0.7s,baz=348,slow=1.6,SNR=4.8
APG El Apazote 80.35 78 P P 15 09 35.6 -0.6
comp=Z,4.2nm,0.4s,baz=283,slow=5.6,SNR=7.6

RETA Reutte 80.37 350 *i*P P 15 09 36.1 +0.3
comp=Z,16nm,1.0s,SNR=9.2
WATA Walderalm 80.43 350 *i*P P 15 09 36.7 +0.6
comp=Z,30nm,0.6s,SNR=16
KBA Koelnbreinsper 80.47 348 *i*P P 15 09 37.7 +1.3
comp=Z,105nm,0.6s,SNR=90
MOTA Moosalm 80.47 350 *i*P P 15 09 36.9 +0.5
comp=Z,54nm,1.1s,SNR=19
WTTA Wattenberg 80.49 349 *i*P P 15 09 37.4 +0.8
comp=Z,56nm,0.6s,SNR=27
MFTR Murfatlar 80.50 337 ⇓P P 15 09 37.0 +0.6
MORH Mrgy, Hungar 80.54 344 ⇓P P 15 09 36.6 +0.1
MORH Mrgy, Hungar 80.54 344⇑ *i*P P 15 09 36.7 +0.1
TBI Tubuai 80.58 148 *e*S S 15 19 35.0 -5.4
comp=Z,77nm,25.4s
TBI Tubuai 80.58 148 *e*LR LR 15 34 45.8
comp=Z,798nm,25.0s,baz=335
TBI Tubuai 80.58 148 *e*T T 16 38 20.3
comp=Z,7.3nm,0.3s
GZR Gura Zlata 80.58 341 ⇓P P 15 09 37.3 +0.5
SQTA Sankt Quirin 80.58 350 *i*P P 15 09 37.7 +0.7
comp=Z,46nm,0.8s,SNR=16
BZS Buzias 80.59 342 ⇓P P 15 09 37.2 +0.4
SOKA Soboth 80.64 347 *i*P P 15 09 38.1 +0.9
comp=Z,54nm,0.9s,SNR=39
DAVA Damuels 80.66 351 *i*P P 15 09 37.8 +0.4
comp=Z,19nm,0.7s,SNR=7.5
PERS Pernice 80.67 347 *i*P P 15 09 38.2 +0.9
comp=Z,104nm,0.6s
RAO Raoul Island 80.81 175 LR LR 15 42 43.5
comp=Z,281nm,18.2s,baz=100,slow=34
FETA Feichten 80.83 350 *i*P P 15 09 39.0 +0.7
comp=Z,55nm,1.5s,SNR=18
OBKA Obir 80.87 347 *i*P P 15 09 39.3 +0.8
comp=Z,57nm,0.5s,SNR=28
MYKA Terra Mystica 80.87 348 *i*P P 15 09 38.7 +0.2
comp=Z,22nm,1.0s,SNR=10
ABTA Abfaltersbach 80.89 349 *i*P P 15 09 39.1 +0.5
comp=Z,53nm,1.0s,SNR=21
HUMR Humele 80.95 340 ⇓P P 15 09 38.3 -0.5
DIKM Dikmen 81.01 332 ⇓P P 15 09 40.0 +0.9
ZOU Zoufplan 81.03 348 P P 15 09 39.7 +0.2
ZOU lAmb lAmb 15 09 41.4
comp=Z,23nm,0.8s
HERR Herculane 81.14 342 ⇓P P 15 09 39.8 0.0
HYB Hyderabad 81.20 287 *i*P P 15 09 40.0 -0.6
HYB *es*P **pP** 15 09 53.0 +0.3
HYB *e*PP **PP** 15 12 46.0 0.0
FRGS Fruska Gora 81.36 343 ⇓P P 15 09 41.6 +0.7
FRGS Fruska Gora 81.36 343⇑ *i*P P 15 09 41.7 +0.7
MDVR Moldovita 81.38 342 ⇓P P 15 09 41.0 -0.1
CRES Cresnjev 81.41 347⇑ *i*P P 15 09 41.5 +0.2
JAVS Javornik 81.54 348 *i*P P 15 09 41.6 -0.4
VLAD Vladila 81.58 340 ⇓P P 15 09 42.7 +0.5
CEY Cerknica 81.64 347⇑ *i*P P 15 09 42.4 -0.1
ZIMR 81.70 339 ⇓P P 15 09 43.0 +0.3
KNDS Knezji Dol 81.86 347 *i*P P 15 09 43.8 +0.1
comp=Z,50nm,0.5s
MRAK Mrakovica 81.99 345⇑ *i*P P 15 09 45.4 +1.0
GSI Gunungsitoli 82.00 262 P P 15 09 43.8 -1.0
GSI lAmb lAmb 15 09 45.8
comp=Z,95nm,1.5s
TEKS Tekeris 82.00 343⇑ *i*P P 15 09 45.2 +0.8
PLVB Pleven 82.12 340 ⇓P P 15 09 45.4 +0.4
BLY Banja Luka 82.20 345 *e*P P 15 09 44.1 -1.3
SALO Salr 82.24 350 P P 15 09 45.7 +0.1
DIVS Divibare 82.36 343⇑ *i*P P 15 09 46.8 +0.5
DIVS Divibare 82.36 343 P P 15 09 46.2 -0.1
DIVS lAmb lAmb 15 09 48.0
comp=Z,44nm,0.9s
FITZ Fitzroy Crossi 82.36 228 P P 15 09 46.9 +0.5
FITZ lAmb lAmb 15 09 47.9
comp=Z,51nm,0.8s
TEOL Teolo 82.37 349 P P 15 09 46.5 +0.2
BOVS Bovan 82.48 342 ⇓P P 15 09 46.6 -0.2
MGRS Mrkonjic Grad 82.54 345⇑ *i*P P 15 09 48.4 +1.2
HAPS Han Pijesak,BI 82.55 344⇑ *i*P P 15 09 46.8 -0.6
BBLS Lazići 82.69 343⇑ *i*P P 15 09 49.1 +1.1
TGUH Tegucigalpa,Un 83.02 76 *e*P P 15 09 51.4 +1.2
POO Poona 83.10 291⇓ *i*P P 15 09 47.0 -3.5
comp=Z,240nm,0.2s
VTS Vitosha 83.15 340 ⇓P P 15 09 51.4 +0.8
VTS Vitosha 83.15 340 P P 15 09 50.9 +0.3
VTS pmax pmax
comp=Z,34nm,0.9s
VTS Vitosha 83.15 340 P P 15 09 50.9 +0.3
VTS lAmb lAmb 15 09 52.0
comp=Z,34nm,0.9s
BNI Bardonecchia 83.16 353 P P 15 09 52.0 +1.4
BNI pmax pmax
comp=Z,57nm,1.0s
BNI Bardonecchia 83.16 353 P P 15 09 52.0 +1.4
BNI lAmb lAmb 15 09 53.6
comp=Z,57nm,1.0s
PLE Pljevlja 83.21 343⇓ *i*P P 15 09 51.3 +0.5
MDUB Mudurnu 83.26 334 P P 15 09 51.8 +0.7
BR131 Keskin Array S 83.26 332 P P 15 09 51.7 +0.5
BR131 pmax pmax
comp=Z,29nm,0.7s
BR131 Keskin Array S 83.26 332 P P 15 09 51.7 +0.5
BR131 lAmb lAmb 15 09 52.3
comp=Z,29nm,0.7s
BRTR Keskin Array B 83.26 332 P P 15 09 51.7 +0.5
comp=Z,16nm,0.7s,baz=43,slow=3.0,SNR=35
BRTR PP **PP** 15 13 05.2 +3.0
comp=Z,4.3nm,0.9s,baz=5.0,slow=2.9,SNR=3.9
BRTR LR LR 15 52 10.5
comp=Z,100nm,18.6s,baz=5.5,slow=39
UPM Unac-Piva 83.42 344⇑ *i*P P 15 09 51.7 -0.3
UPM Unac-Piva 83.42 344⇓ *i*P P 15 09 51.7 -0.3
ZCCA Zocca 83.44 349 P P 15 09 52.0 +0.1
IVA Berane 83.56 343 *e*P P 15 09 52.9 +0.3
MSSA Maissana 83.63 350 P P 15 09 52.9 -0.1
MSSA lAmb lAmb 15 09 53.6
comp=Z,49nm,0.9s
KOME Kolasin 83.65 343⇓ *i*P P 15 09 53.1 0.0
VLC Villacollemand 83.70 350 P P 15 09 54.0 +0.8
VLC lAmb lAmb 15 09 55.1
comp=Z,41nm,0.7s
BRY Bratogost 83.77 344 *e*P P 15 09 53.7 -0.1
BRY Bratogost 83.77 344 *e*P P 15 09 53.4 -0.4
AS31 Alice Springs 83.78 218 P P 15 09 54.0 +0.3
ASAR Alice Springs 83.79 218 P P 15 09 54.0 +0.3
comp=Z,19nm,0.7s,baz=20,slow=5.5,SNR=254
ASAR PKiKP **PKiKP** 15 15 09.5 -0.3
comp=Z,0.7nm,0.8s,baz=33,slow=1.4,SNR=4.2
ASAR Alice Springs 83.79 218 P P 15 09 53.5 -0.3
PVY Plav 83.82 343 *e*P P 15 09 53.9 -0.1
NKME Niksic 83.83 343 *e*P P 15 09 53.9 0.0
TREB Trebinje 83.99 344⇑ *i*P P 15 09 53.6 -1.1
CEME Cevo 84.05 343⇓ *i*P P 15 09 54.7 -0.4
PDG Podgorica 84.11 343 ⇓P P 15 09 55.3 0.0
PDG Podgorica 84.11 343⇑ *i*P P 15 09 55.2 0.0
PDG Podgorica 84.11 343 P P 15 09 55.4 +0.2
TTG Podgorica 84.11 343⇓ *i*P P 15 09 55.4 +0.2
SKO Skopje 84.13 341 *i*P P 15 09 56.0 +0.6
ALN Alexandroupoli 84.17 338 P P 15 09 56.1 +0.5
ALN pmax pmax
comp=Z,46nm,0.9s
ALN Alexandroupoli 84.17 338 P P 15 09 56.0 +0.5
ALN lAmb lAmb 15 09 57.0
comp=Z,46nm,0.9s
HCY Herceg Novi 84.22 344 *e*P P 15 09 55.2 -0.6
HCY Herceg Novi 84.22 344 *e*P P 15 09 55.3 -0.6
STIP Stip 84.25 341 *i*P P 15 09 55.7 -0.3
BUM Brajici-Budva 84.30 343 *e*P P 15 09 56.3 0.0
MURB Monte Urbino 84.33 348 P P 15 09 57.5 +1.1
DRME Dracevica, Mon 84.35 343⇑ *i*P P 15 09 56.5 0.0
DRME Dracevica, Mon 84.35 343⇓ *i*P P 15 09 56.7 +0.2
VAY Valandovo 84.53 340 *i*P P 15 09 58.0 +0.6
ULC Ulcinj 84.56 343 *e*P P 15 09 57.2 -0.4
ARMA Armidale 84.64 201 P P 15 09 59.6 +1.6
ARMA lAmb lAmb 15 10 00.1
comp=Z,15nm,0.8s
NRCA Norcia 84.67 348 P P 15 09 59.2 +0.9
OHR Ohrid 85.09 342 *i*P P 15 10 00.9 +0.6
AQU L'Aquila 85.11 347 *e*P P 15 09 56.3 -4.1
FNA Florina 85.29 341 P P 15 10 01.3 -0.1
FNA pmax pmax
comp=Z,15nm,0.6s
FNA Florina 85.29 341 P P 15 10 01.3 -0.1
FNA lAmb lAmb 15 10 02.7
comp=Z,15nm,0.6s
SGRT San Giovanni R 85.35 346 P P 15 10 01.2 -0.4

ESPN Las Esperanzas 86.26 75 P P 15 10 06.7 +0.3
MATE Matera 86.28 345 ⇓P P 15 10 06.0 -0.1
SHME Shamm 86.50 309 *i*P P 15 10 06.7 -0.7
SNR=17
SHME Shamm 86.50 309 P P 15 10 06.9 -0.6
SNR=6.8
BANOM Banah 86.53 309 *i*P P 15 10 07.1 -0.6
SNR=17
BANOM Banah 86.53 309 P P 15 10 07.3 -0.3
SNR=6.6
PBRG Braganca 86.79 2 *e*P P 15 10 09.1 +0.4
comp=Z,20nm,1.7s
ORTG Ortega, Santa 87.00 77 P P 15 10 10.0 -0.2
ORTG lAmb lAmb 15 10 11.8
comp=Z,41nm,0.9s
MDH Madha 87.05 308 P P 15 10 09.4 -0.8
MASF Masafi 87.06 308 P P 15 10 09.9 -0.4
MSFE Esma-Masafi 87.07 308 *i*P P 15 10 09.6 -0.7
SNR=7.0
ELL Elmali 87.09 334 P P 15 10 10.6 +0.2
ELL pmax pmax
comp=Z,94nm,0.8s
ELL Elmali 87.09 334 P P 15 10 10.6 +0.2
POLO Lamas de Olo 87.19 3 *e*P P 15 10 10.5 -0.2
comp=Z,10nm,1.0s
PVRL Vila Real 87.29 3 *e*P P 15 10 11.4 +0.3
comp=Z,17nm,2.1s
UMR Umm Al-Rimmam 87.34 317 *e*P 15 10 11.0
JTS Las Juntas de 87.36 77 P P 15 10 10.4 -1.4
comp=Z,7.8nm,0.7s,baz=359,slow=6.6,SNR=5.6
JTS Las Juntas de 87.36 77 *e*P P 15 10 10.1 -1.8
UOSS Minazif 87.39 308 *i*P P 15 10 10.6 -1.3
SNR=19
UOSS Minazif 87.39 308 P P 15 10 10.1 -1.7
UOSS Minazif 87.39 308 P P 15 10 10.9 -1.0
MVO Moncorvo 87.42 3 *e*P P 15 10 11.5 -0.3
comp=Z,19nm,1.7s
HATD Hatta, Dubai 87.53 308 *i*P P 15 10 11.6 -0.9
SNR=16
HATD Hatta, Dubai 87.53 308 P P 15 10 12.0 -0.5
SNR=10
WSAR Wadi Sarin 87.61 305 P P 15 10 13.0 +0.1
comp=Z,21nm,0.8s,baz=50,slow=3.5,SNR=20
WSAR Wadi Sarin 87.61 305 P P 15 10 13.4 +0.5
SNR=9.6
NAZ Nazwa, Dubai 87.62 309 *i*P P 15 10 12.3 -0.7
SNR=7.7
NAZ Nazwa, Dubai 87.62 309 P P 15 10 12.7 -0.3
SNR=6.3
BIDO Bidbid 87.63 306 P P 15 10 14.1 +1.1
SNR=5.2
RST Umm Al-Ruwaisa 87.69 318 *e*P 15 10 12.2
PALK Pallekele 87.81 279 P P 15 10 13.8 -0.2
PALK pmax pmax
comp=Z,35nm,0.8s
PALK Pallekele 87.81 279 P P 15 10 13.8 -0.2
PALK lAmb lAmb 15 10 15.3
comp=Z,35nm,0.8s
PALK Pallekele 87.81 279 P P 15 10 14.7 +0.7
PVIS Viseu 87.84 3 *e*P P 15 10 13.6 -0.2
comp=Z,22nm,1.8s
FAQ Al Faqa, Dubai 87.86 309 *i*P P 15 10 12.9 -1.2
SNR=16
FAQ Al Faqa, Dubai 87.86 309 P P 15 10 13.3 -0.7
SNR=5.6
SOHO SOHO 87.91 307 *i*P P 15 10 13.1 -1.2
SNR=13
SOHO SOHO 87.91 307 P P 15 10 13.6 -0.8
RDF Al-Radifah 87.95 317 *e*P 15 10 14.0
WBK Wadi Bani Khal 87.96 305 P P 15 10 15.0 +0.4
SNR=8.7
HOQ Hogain 87.99 307 P P 15 10 14.6 -0.1
SNR=5.4
SMDO Samad 88.05 306 P P 15 10 15.1 0.0
SNR=8.4
ASUD Al Ashush, Dub 88.09 309 *i*P P 15 10 14.7 -0.5
SNR=15
ASUD Al Ashush, Dub 88.09 309 P P 15 10 15.0 -0.2
SNR=6.2
MTE Manteigas 88.17 3 *e*P P 15 10 15.0 -0.4
comp=Z,25nm,1.0s
ALNE Al Ain 88.36 308 *i*P P 15 10 15.8 -0.7
SNR=5.9
ALNE Al Ain 88.36 308 P P 15 10 16.2 -0.3
SNR=13
PCAS Casmilo, Conde 88.48 4 *e*P P 15 10 16.7 -0.1
comp=Z,31nm,1.1s
ARQ Araqi 88.59 307 P P 15 10 17.5 0.0
SNR=12
JMDO Jabal Madar 88.60 305 P P 15 10 17.6 0.0
SNR=8.6
STKA Stephens Creek 88.67 209 P P 15 10 18.2 +0.7
comp=Z,8.0nm,0.7s,baz=2.8,slow=5.9,SNR=13
STKA LR LR 15 49 33.3
comp=Z,215nm,18.3s,baz=27,slow=35
PCBR Castelo Branco 88.73 3 *e*P P 15 10 17.6 -0.3
comp=Z,14nm,1.2s
BSY Bisya 88.74 306 P P 15 10 17.9 -0.5
SNR=8.9
ESDC Sonseca Array 88.95 0 P P 15 10 18.2 -0.9
comp=Z,4.9nm,1.0s,baz=356,slow=4.3,SNR=22
ESDC Sonseca Array 88.95 0 P P 15 10 18.3 -0.8
JRN Qarnain Island 89.01 311 P P 15 10 18.6 -0.9
SHMA Al-Shehemyia 89.10 313 P P 15 10 19.3 -0.6
PMRV Marv??o 89.14 3 *e*P P 15 10 19.2 -0.7
comp=Z,14nm,1.7s
MZWR Madinat Zayed 89.52 309 P P 15 10 21.2 -0.7
URZ Urewera 89.64 179 LR LR 15 43 59.1
comp=Z,335nm,21.9s,baz=31,slow=31
UMZA Um Al Zommool 89.78 308 P P 15 10 22.6 -0.5
MHTO MHTO 89.82 305 P P 15 10 23.2 -0.2
SNR=8.6
TRNA Turayna 89.95 312 P P 15 10 23.6 -0.2
PBAR Barrancos 90.40 3 *e*P P 15 10 25.2 -0.6
comp=Z,17nm,1.5s
DQM DQM 90.92 304 P P 15 10 27.9 -0.6
KEST Kesra 92.14 349 P P 15 10 33.8 -0.2
comp=Z,10.0nm,0.9s,baz=314,slow=5.7,SNR=9.8
KEST PP **PP** 15 14 13.7 +0.4
comp=Z,5.7nm,0.9s,baz=327,slow=8.4,SNR=4.3
SMRC Santa Marta, M 93.02 68 *e*P P 15 10 38.7 +0.5
SJCC San Jacinto, C 93.48 69 *e*P P 15 10 40.6 +0.1
RAYN Ar Rayn 93.56 316 *i*P P 15 10 40.4 -0.3
SNR=11
DOK Doka 93.75 306 P P 15 10 40.8 -0.8
MOTC Monteria, Cord 94.09 70 *e*P P 15 10 43.0 -0.3
DMTO DMTO 94.10 305 P P 15 10 43.1 -0.1
WHFO Wadi Hawf 94.52 306 P P 15 10 43.8 -1.4
URES San Jos de Ur 94.99 71 *e*P P 15 10 46.8 -0.5
SMLC San Martn de 95.01 69 *e*P P 15 10 46.7 -0.7
RPZ Rata Peaks 95.19 184 LR LR 15 51 50.3
comp=Z,149nm,18.3s,baz=35,slow=34
ABTO Aybut 95.24 306 P P 15 10 47.4 -1.0
ZARC Zaragoza, Cauc 96.60 71 *e*P P 15 10 49.4 -0.7
CBOC Ciudad Bolivar 96.22 72 *e*P P 15 10 53.1 0.0
PTBC PUERTO BERRIO, 96.60 71 *e*P P 15 10 53.6 -1.1
SDV Santo Domingo 96.92 66 P P 15 10 56.2 -0.2
comp=Z,4.4nm,0.6s,baz=198,slow=2.1,SNR=5.5
GUY2C Guyana, Caldas 97.11 72 *e*P P 15 10 57.4 -0.1
NORC Norcasia 97.14 72 *e*P P 15 10 56.5 -0.6
YOTC Yotoco, Valle 97.52 74 *e*P Pdif 15 10 59.1 +0.1
SPBC San Pablo de B 97.53 71 *e*P P 15 10 58.4 -0.6
ROSC El Rosal 98.04 72 LR LR 15 55 19.7
comp=Z,77nm,21.6s,baz=268,slow=35
ORTC Ortega, Tolima 98.23 73 *e*P P 15 11 01.4 -0.7
SOCY Socotra 99.25 303 P **Pdif** 15 11 04.1 -2.5
TORD Torodi Ar. Bea 115.21 354 PKP **PKiKP** 15 16 04.2 -1.8
comp=Z,5.2nm,0.6s,baz=358,slow=2.5,SNR=28
TORD PP **PP** 15 17 00.8 -4.6
comp=Z,4.3nm,0.9s,baz=9.7,slow=7.3,SNR=7.3
TORD PKKPbc **PKKPbc** 15 26 39.8 +0.9
comp=Z,1.1nm,0.6s,baz=209,slow=1.9,SNR=5.7
TORD Torodi Ar. Bea 115.21 354 **PKiKP** 15 16 05.3 -0.7
LPAZ La Paz 118.42 80 PKP **PKPdf** 15 16 12.2 -0.6
comp=Z,2.1nm,0.8s,baz=16,slow=5.9,SNR=9.2
KMBO Kilima Mbogo 119.00 311 PKP **PKiKP** 15 16 14.0 +0.3
comp=Z,2.6nm,0.7s,baz=32,slow=4.5,SNR=6.1
KMBO Kilima Mbogo 119.00 311 PKiKP **PKiKP** 15 16 14.0 +0.3
DBIC Dimbokro 121.80 1 PKP **PKPdf** 15 16 18.4 -0.3
comp=Z,16nm,0.6s,baz=357,slow=2.0,SNR=31
PB15 IPOC Station P 122.79 86 **PKiKP** 15 16 21.0 +0.2
GO02 Mina Guanaco 124.14 88 **PKiKP** 15 16 23.6 +0.1
H03N2 Juan Fernandez 124.20 102 T T 17 33 38.2
baz=314,slow=77,SNR=4.1
H03N1 Juan Fernandez 124.21 102 T T 17 33 38.2
baz=314,slow=77,SNR=4.2

H03N3	**Juan Fernandez**	**124.21**	**102**	T	T	17 33 39.0	
	baz=314,slow=77,SNR=4.3						
AC02	**Maricunga**	**125.64**	**89**	PKPdf	**PKiKP**	**15 16 27.3**	**+0.7**
LCO	**Las Campanas**	**126.20**	**92**	PKiKP	**PKiKP**	**15 16 27.6**	**+0.2**
LCO	**Las Campanas**	**126.20**	**92**	PKPdf	**PKiKP**	**15 16 27.6**	**+0.2**
VNDA	**Vanda**	**129.31**	**184**	PKP	**PKiKP**	**15 16 31.8**	**0.0**
	comp=Z,0.9nm,0.6s,baz=359,slow=2.9,SNR=7.6						
SBA	**Scott Base**	**129.47**	**183**	PKiKP	**PKiKP**	**15 16 32.8**	**+0.7**
SBA	**Scott Base**	**129.47**	**183**	PKPdf	**PKiKP**	**15 16 32.8**	**+0.7**
BDFB	**Brasilia**	**129.67**	**61**	PKP	**PKPdf**	**15 16 33.7**	**0.0**
	comp=Z,2.1nm,0.5s,baz=186,slow=9.1,SNR=3.3						
BI02	**San Fabin de**	**131.02**	**100**	PKPdf	**PKPdf**	**15 16 35.9**	**+0.3**
CPUP	**Villa Florida**	**132.56**	**79**	PKP	**PKPdf**	**15 16 38.6**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=352,slow=3.2,SNR=7.2						
CPUP				SKPbc	**SKPbc**	**15 20 01.7**	**-0.4**
	comp=Z,5.9nm,1.0s,baz=334,slow=3.7,SNR=4.9						
PLCA	**Paso Flores**	**134.01**	**104**	PKP	**PKPdf**	**15 16 41.9**	**+0.7**
	comp=Z,10nm,0.6s,baz=257,slow=2.0,SNR=27						
PLCA				SKPbc	**SKPbc**	**15 20 07.6**	**+0.9**
	comp=Z,4.8nm,1.1s,baz=6.7,slow=6.3,SNR=3.2						
PLCA	**Paso Flores**	**134.01**	**104**	PKPdf	**PKiKP**	**15 16 42.1**	**-0.4**
MAW	**Mawson**	**144.91**	**218**	PKPbc	**PKPab**	**15 16 59.5**	**+0.2**
	comp=Z,126nm,0.7s,baz=92,slow=4.0,SNR=81						
MAW	**Mawson**	**144.91**	**218**	PKIKP	**PKPab**	**15 16 59.7**	**+0.4**
MAW	**Mawson**	**144.91**	**218**	PKPdf	**PKPab**	**15 16 59.7**	**+0.4**
LBTB	**Lobatse**	**145.22**	**309**	PKIKP	**PKPdf**	**15 17 02.6**	**+0.6**
LBTB	**Lobatse**	**145.22**	**309**		**PKPdf**	**15 17 02.6**	**+0.6**
BOSA	**Boshof**	**148.37**	**306**	PKPbc	**PKPbc**	**15 17 11.0**	**+0.3**
	comp=Z,32nm,0.8s,baz=44,slow=2.4,SNR=56						
BOSA	**Boshof**	**148.37**	**306**	PKP2	**PKPbc**	**15 17 11.4**	**+0.7**
BOSA	**Boshof**	**148.37**	**306**		**PKPbc**	**15 17 11.4**	**+0.7**
BELA	**Belgrano 2**	**151.44**	**167**		**PKPbc**	**15 17 16.5**	**-0.1**
SYO	**Syowa Base**	**153.35**	**213**	*eP*	PKPbc	**15 17 21.0**	**0.0**
SYO	**Syowa Base**	**153.35**	**213**	⇓*eP*	PKPab	**15 17 36.1**	**+2.8**
SNAA	**Sanae**	**160.00**	**181**	P	**PKPdf**	**15 17 22.6**	**+0.5**
SNAA	**Sanae**	**160.00**	**181**	PKPab	**PKPab**	**15 18 01.1**	**-0.9**
VNA3	**Neumayer Olymp**	**160.25**	**174**	P	**PKPdf**	**15 17 21.2**	**-1.1**
VNA3	**Neumayer Olymp**	**160.25**	**174**	PKPab	**PKPab**	**15 18 02.6**	**-0.5**
VNA2	**Neumayer--Watz**	**160.68**	**176**	P	**PKPdf**	**15 17 21.3**	**-1.5**
	baz=325,slow=1.3						
VNA2	**Neumayer--Watz**	**160.68**	**176**	PKPab	**PKPab**	**15 18 04.9**	**0.0**
VNA1	**Neumayer--Stat**	**160.92**	**175**	P	**PKPdf**	**15 17 23.2**	**+0.2**
VNA1	**Neumayer--Stat**	**160.92**	**175**	PKPab	**PKPab**	**15 18 05.3**	**-0.6**

NEIC ***23*** *14:59:17.8±1.2, 19°.31N±0°.04×67°.78W±0°.03, h1km±7km*
Error ellipse: s-maj=5.7km s-min=4.7km az=165.0
RSPR ***23*** *14:59:19.1, 19°.50N×67°.92W, h58km±15km, MD3.9/17*
OSPL ***23*** *14:59:21.8±2.8, 19°.17N×67°.85W, h0km±20km, ML3.8*

ISC 23 14:59:20.5±1.0, 19°26N±0°.06×67°83W±0°.03, h21km, n100, σ1§40/109, 15C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.91**	**215**	⇓*iP*	**Pn**	**14 59 35.3**	**-2.7**
PCDR	**Punta Cana, DR**	**0.91**	**215**	*eS*	**Sb**	**14 59 49.2**	**0.0**
PCDR	**Punta Cana, DR**	**0.91**	**215**		**Pn**	**14 59 35.4**	**-2.7**
PCDR				IAML		14 59 54.9	
	comp=N,5μm,0.6s						
PCDR	**Punta Cana, DR**	**0.91**	**215**		**Sb**	**14 59 49.2**	**0.0**
PCDR	**Punta Cana, DR**	**0.91**	**215**	*i* P	**Pn**	**14 59 35.3**	**-2.7**
PCDR				*eS*	**Sb**	**14 59 47.2**	**-2.1**
PCDR				IAML		14 59 57.7	
	comp=Z,3μm,0.5s						
AGPR	**Aguadilla, PR**	**1.04**	**139**	⇑*eP*	**Pn**	**14 59 38.2**	**-1.8**
AGPR	**Aguadilla, PR**	**1.04**	**139**	*eS*	**Sb**	**14 59 55.2**	**+2.2**
AGPR	**Aguadilla, PR**	**1.04**	**139**		**Pn**	**14 59 38.1**	**-1.8**
AGPR				IAML		14 59 56.9	
	comp=E,4μm,0.6s						
AGPR	**Aguadilla, PR**	**1.04**	**139**		**Sb**	**14 59 55.2**	**+2.2**
AGPR	**Aguadilla, PR**	**1.04**	**139**	*i* P	**Pn**	**14 59 38.7**	**-1.2**
AGPR				*eS*	**Sb**	**14 59 53.5**	**+0.4**
AGPR				IAML		14 59 56.3	
	comp=Z,3μm,0.3s						
MPR	**Mayaguez**	**1.23**	**148**	*eS*	**Sn**	**15 00 00.6**	**+2.1**
MPR	**Mayaguez**	**1.23**	**148**		**Pn**	**14 59 40.8**	**-1.7**
MPR	**Mayaguez**	**1.23**	**148**		**Sn**	**15 00 00.6**	**+2.1**
MPR	**Mayaguez**	**1.23**	**148**	*i* P	**Pn**	**14 59 43.0**	**+0.5**
MPR				IAML		15 00 03.5	
	comp=Z,897nm,0.6s						
LSP	**Las Mesas**	**1.29**	**147**	⇑*iP*	**Pn**	**14 59 44.0**	**+0.7**
LSP	**Las Mesas**	**1.29**	**147**	*eS*	**Sn**	**15 00 01.9**	**+1.9**
LSP	**Las Mesas**	**1.29**	**147**		**Pn**	**14 59 44.0**	**+0.7**
LSP					**Sn**	**15 00 01.9**	**+1.9**
AOPR	**Arecibo Observ**	**1.37**	**132**	⇓*eP*	**Pn**	**14 59 43.5**	**-0.8**
AOPR	**Arecibo Observ**	**1.37**	**132**	*eS*	**Sn**	**15 00 04.4**	**+2.5**
AOPR	**Arecibo Observ**	**1.37**	**132**		**Pn**	**14 59 43.1**	**-1.3**
AOPR				IAML		15 00 05.9	
	comp=N,4μm,0.2s						
AOPR	**Arecibo Observ**	**1.37**	**132**		**Sn**	**15 00 04.4**	**+2.5**
EMPR	**Esperanza - Ma**	**1.46**	**122**	⇑*eP*	**Pn**	**14 59 45.1**	**-0.5**
EMPR	**Esperanza - Ma**	**1.46**	**122**	*eS*	**Sn**	**15 00 06.3**	**+2.3**
EMPR	**Esperanza - Ma**	**1.46**	**122**		**Pn**	**14 59 45.2**	**-0.4**
EMPR				IAML		15 00 22.0	
	comp=N,3μm,0.8s						
EMPR	**Esperanza - Ma**	**1.46**	**122**		**Sn**	**15 00 06.3**	**+2.3**
MLPR	**Magueyes Islan**	**1.49**	**150**	⇑*eP*	**Pn**	**14 59 45.9**	**-0.1**
MLPR	**Magueyes Islan**	**1.49**	**150**	*eS*	**Sn**	**15 00 06.7**	**+2.0**
MLPR	**Magueyes Islan**	**1.49**	**150**		**Pn**	**14 59 45.3**	**-0.7**
MLPR				IAML		15 00 09.0	
	comp=N,3μm,0.4s						
MLPR				IAML		15 00 09.9	
	comp=E,2μm,0.4s						
MLPR	**Magueyes Islan**	**1.49**	**150**		**Sn**	**15 00 06.7**	**+2.0**
DR12	**Loma Pena Alta**	**1.54**	**252**	Pn	**Pn**	**14 59 45.8**	**-1.1**
GBPR	**Guanica, Bosqu**	**1.57**	**145**	⇑*eP*	**Pn**	**14 59 47.1**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.57**	**145**	*eS*	**Sn**	**15 00 09.2**	**+2.5**
GBPR	**Guanica, Bosqu**	**1.57**	**145**		**Pn**	**14 59 47.1**	**+0.1**
GBPR					**Sn**	**15 00 09.2**	**+2.5**
CELP	**Cerrillos**	**1.67**	**135**	⇓*eP*	**Pn**	**14 59 48.2**	**-0.3**
CELP	**Cerrillos**	**1.67**	**135**	*eS*	**Sn**	**15 00 11.1**	**+1.6**
CELP	**Cerrillos**	**1.67**	**135**		**Pn**	**14 59 48.2**	**-0.3**
CELP					**Sn**	**15 00 11.1**	**+1.6**
OBIP	**Obispado Ponce**	**1.68**	**136**	⇑*eP*	**Pn**	**14 59 49.1**	**+0.4**
OBIP	**Obispado Ponce**	**1.68**	**136**	*eS*	**Sn**	**15 00 11.4**	**+1.9**
OBIP	**Obispado Ponce**	**1.68**	**136**		**Pn**	**14 59 48.3**	**-0.3**
OBIP				IAML		15 00 12.7	
	comp=E,2μm,0.5s						
OBIP				IAML		15 00 15.1	
	comp=N,2μm,0.6s						
OBIP	**Obispado Ponce**	**1.68**	**136**		**Sn**	**15 00 11.4**	**+1.9**
ICMP	**Isla Caja de M**	**1.84**	**138**	⇑*eP*	**Pn**	**14 59 52.0**	**+1.1**
ICMP	**Isla Caja de M**	**1.84**	**138**	*eS*	**Sn**	**15 00 15.6**	**+2.0**
ICMP	**Isla Caja de M**	**1.84**	**138**		**Pn**	**14 59 50.2**	**-0.7**
ICMP				IAML		15 00 21.9	
	comp=N,1μm,0.7s						
ICMP	**Isla Caja de M**	**1.84**	**138**		**Sn**	**15 00 15.6**	**+2.0**
GCPR	**Guaynabo City**	**1.91**	**120**	⇑*eP*	**Pn**	**14 59 50.8**	**-1.0**
GCPR	**Guaynabo City**	**1.91**	**120**	*eS*	**Sn**	**15 00 17.1**	**+2.0**
GCPR	**Guaynabo City**	**1.91**	**120**		**Pn**	**14 59 50.8**	**-1.0**
GCPR	**Guaynabo City**	**1.91**	**120**		**Sn**	**15 00 17.1**	**+2.0**
SJG	**San Juan**	**1.96**	**125**		**Pn**	**14 59 51.8**	**-0.7**
SJG				IAML		15 00 24.0	
	comp=N,1μm,0.3s						
SJG				IAML		15 00 25.2	
	comp=N,1μm,0.4s						
SJG	**San Juan**	**1.96**	**125**	*eP*	**Pn**	**14 59 51.6**	**-0.9**
IGPR	**InterUniversit**	**2.08**	**128**	⇑*eP*	**Pn**	**14 59 53.9**	**-0.3**
IGPR	**InterUniversit**	**2.08**	**128**	*eS*	**Sn**	**15 00 20.5**	**+1.1**
IGPR	**InterUniversit**	**2.08**	**128**		**Sn**	**15 00 20.5**	**+1.1**
CBYP	**Canovanas**	**2.11**	**118**	⇓*eP*	**Pn**	**14 59 53.6**	**-1.1**
CBYP	**Canovanas**	**2.11**	**118**	*eS*	**Sn**	**15 00 21.2**	**+0.9**
CBYP	**Canovanas**	**2.11**	**118**		**Pn**	**14 59 53.6**	**-1.1**
CBYP	**Canovanas**	**2.11**	**118**		**Sn**	**15 00 21.2**	**+0.9**
PDPR	**Patillas Dam,**	**2.11**	**126**	⇑*eP*	**Pn**	**14 59 54.1**	**-0.5**
PDPR	**Patillas Dam,**	**2.11**	**126**		**Pn**	**14 59 53.9**	**-0.8**
SDD	**Santo Domingo**	**2.13**	**248**	Pn	**Pn**	**14 59 55.0**	**+0.2**
SDD				IAML		15 00 29.1	
	comp=E,2μm,1.0s						
SDD				IAML		15 00 33.3	
	comp=N,1μm,0.5s						
SDD	**Santo Domingo**	**2.13**	**248**	*i* P	**Pn**	**14 59 55.3**	**+0.5**
SDD				*eS*	**Sn**	**15 00 22.4**	**+1.8**
HUMP	**Col San Antoni**	**2.18**	**120**	⇑*eP*	**Pn**	**14 59 54.9**	**-0.6**
HUMP	**Col San Antoni**	**2.18**	**120**	*eS*	**Sn**	**15 00 23.3**	**+1.4**
HUMP	**Col San Antoni**	**2.18**	**120**		**Pn**	**14 59 55.0**	**-0.6**
HUMP				IAML		15 00 31.4	
	comp=N,647nm,0.4s						
HUMP				IAML		15 00 35.5	
	comp=E,801nm,0.2s						
HUMP	**Col San Antoni**	**2.18**	**120**		**Sn**	**15 00 23.3**	**+1.4**
MTP	**Monte Pirata**	**2.45**	**118**	⇑*eP*	**Pn**	**14 59 58.3**	**-1.0**
MTP	**Monte Pirata**	**2.45**	**118**	*eS*	**Sn**	**15 00 28.9**	**+0.3**
MTP	**Monte Pirata**	**2.45**	**118**	Pn	**Pn**	**14 59 58.2**	**-1.0**
MTP	**Monte Pirata**	**2.45**	**118**		**Sn**	**15 00 28.9**	**+0.3**
BANI	**BANI**	**2.55**	**251**		**Pn**	**15 00 01.4**	**+0.7**
BANI	**BANI**	**2.55**	**251**	*i* P	**Pn**	**15 00 01.7**	**+0.9**
BANI				*eS*	**Sn**	**15 00 32.3**	**+1.1**
BANI				IAML		15 00 41.6	
	comp=Z,443nm,0.6s						
CUPR	**Culebra, Puert**	**2.59**	**111**	⇑*eP*	**Pn**	**15 00 00.1**	**-1.1**
CUPR	**Culebra, Puert**	**2.59**	**111**	*eS*	**Sn**	**15 00 33.7**	**+1.7**
CUPR	**Culebra, Puert**	**2.59**	**111**	Pn	**Pn**	**14 59 59.7**	**-1.5**
CUPR	**Culebra, Puert**	**2.59**	**111**		**Sn**	**15 00 33.7**	**+1.7**
SC01	**Santiago de Io**	**2.74**	**274**	*i* P	**Pb**	**15 00 07.6**	**-1.2**
SC01				IAML		15 01 00.6	
	comp=Z,641nm,0.8s						
STVI	**Saint Thomas**	**2.87**	**108**	⇑*eP*	**Pn**	**15 00 04.0**	**-1.0**
STVI	**Saint Thomas**	**2.87**	**108**	*eS*	**Sn**	**15 00 39.4**	**+0.5**
STVI	**Saint Thomas**	**2.87**	**108**	Pn	**Pn**	**15 00 04.0**	**-1.0**
STVI				IAML		15 00 56.2	
	comp=E,376nm,0.7s						
STVI				IAML		15 01 02.7	
	comp=N,359nm,0.6s						
STVI	**Saint Thomas**	**2.87**	**108**		**Sn**	**15 00 39.4**	**+0.5**
TBVI	**Tortola**	**3.16**	**105**	⇑*eP*	**Pn**	**15 00 08.2**	**-0.8**
TBVI	**Tortola**	**3.16**	**105**	*eS*	**Sn**	**15 00 45.2**	**+0.8**
TBVI	**Tortola**	**3.16**	**105**		**Pn**	**15 00 08.2**	**-0.8**
TBVI					**Sn**	**15 00 45.2**	**-0.8**
CDVI	**St. Croix**	**3.27**	**117**	⇑*eP*	**Pn**	**15 00 11.1**	**+0.6**
CDVI	**St. Croix**	**3.27**	**117**	*eS*	**Sn**	**15 00 50.4**	**+1.5**
CDVI	**St. Croix**	**3.27**	**117**		**Sn**	**15 00 50.4**	**+1.5**
SDDR	**Presa de Saban**	**3.28**	**266**		**Pn**	**15 00 11.6**	**+0.8**
SDDR				IAML		15 01 09.1	
	comp=N,761nm,0.7s						
SDDR	**Presa de Saban**	**3.28**	**266**	*i* P	**Pn**	**15 00 11.8**	**+1.0**
SDDR				IAML		15 01 05.7	
	comp=Z,338nm,0.8s						
VGBI	**Virgin Gorda,**	**3.33**	**103**	⇓*eP*	**Pn**	**15 00 10.3**	**-1.2**
VGBI	**Virgin Gorda,**	**3.33**	**103**	*eS*	**Sn**	**15 00 50.9**	**+0.5**
VGBI	**Virgin Gorda,**	**3.33**	**103**		**Pn**	**15 00 10.3**	**-1.2**
VGBI					**Sn**	**15 00 50.9**	**+0.5**
GRTK	**Grand Turk**	**3.82**	**306**	*i* P	**Pn**	**15 00 19.6**	**+1.5**
GRTK				IAML		15 01 04.9	
	comp=Z,79nm,0.2s						
CRJC	**Cerrejon, Guaj**	**9.54**	**211**	*eP*	**Pn**	**15 01 34.5**	**-2.3**
ZARC	**Zaragoza, Cauc**	**13.55**	**211**	*eP*	**Pn**	**15 02 30.8**	**-0.8**
BARC	**Barichara**	**13.63**	**203**	*eP*	**Pn**	**15 02 32.1**	**-0.8**
URCC	**San Jos de Ur**	**13.67**	**214**	*eP*	**Pn**	**15 02 32.5**	**-0.8**
PTBC	**PUERTO BERRIO,**	**14.20**	**208**	*eP*	**Pn**	**15 02 40.4**	**-0.1**
NORC	**Norcasia**	**15.25**	**208**	*eP*	**Pn**	**15 02 53.4**	**-1.3**
CBOC	**Ciudad Bolivar**	**15.52**	**212**	*eP*	**Pn**	**15 02 56.0**	**-2.4**
GUY2C	**Guyana, Caldas**	**15.77**	**209**	*eP*	**Pn**	**15 03 02.6**	**+0.6**

KRNET ***23*** *15:14:04.6±0.1, 39°.39N×73°.49E, h17km, mb3.3*
NNC ***23*** *15:14:08.5±1.2, 39°.54N×73°.65E, h0km, mb4.1, mpv3.6,*
Error ellipse: s-maj=9.6km s-min=5.4km az=174.0
SOME ***23*** *15:14:12.0, 39°.90N×73°.18E, h5km*

ISC 23 15:14:07.7±1.3, 39°51N±0°.06×73°38E±0°.03, h10km, n52, σ2§47/82, 34C-8D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.11**	**336**	⇑*iP*	**Pb**	**15 14 28.6**	**-0.4**
	baz=35						
OHH				⇑*iS*	**Sn**	**15 14 45.9**	**+1.1**
	baz=35						
DRK	**Karamyk**	**1.22**	**269**	⇑*iP*	**Pb**	**15 14 29.9**	**-1.1**
	baz=75						
DRK				⇑*iS*	**Sn**	**15 14 48.0**	**+0.2**
	baz=75						
ARSB	**Arslanbob**	**1.84**	**351**	⇑*iP*	**Pb**	**15 14 41.6**	**+0.1**
	baz=49						
ARSB				⇑*iS*	**Sg**	**15 15 08.1**	**+1.3**
	baz=49						
BTK	**Batken**	**2.04**	**286**	⇑*iP*	**Pb**	**15 14 44.0**	**-1.0**
	baz=89						
BTK				⇑*iS*	**Sg**	**15 15 12.8**	**-0.6**
	baz=89						
ARLS	**Aral**	**2.46**	**17**	⇑*eP*	**Pn**	**15 14 49.0**	**+1.0**
	baz=14						
ARLS				⇑*iS*	**Sb**	**15 15 22.1**	**-0.3**
	baz=14						
AML	**Almayashu**	**2.63**	**5**	⇑*iP*	**Pn**	**15 14 52.3**	**+1.7**
	baz=3.0						
AML				⇑*iS*	**Sb**	**15 15 27.3**	**-0.3**
	baz=3.0						
AML	**Almayashu**	**2.63**	**5**	P	**Pn**	**15 14 52.7**	**+2.1**
	SNR=23						
TRKS	**Terek-Say**	**2.64**	**321**	⇓*iP*	**Pn**	**15 14 52.2**	**+1.7**
	baz=20						
TRKS				⇓*iS*	**Sb**	**15 15 26.1**	**-1.6**
	baz=20						
UCH	**Uchtor**	**2.85**	**17**	⇓*iP*	**Pn**	**15 14 55.1**	**+1.5**
	baz=15						
UCH				⇓*iS*	**Sb**	**15 15 32.1**	**-1.9**
	baz=15						
UCH	**Uchtor**	**2.85**	**17**	P	**Pb**	**15 14 56.8**	**-2.1**
	SNR=20						
MNAS	**Manas**	**3.05**	**348**	⇑*iP*	**Pn**	**15 14 58.6**	**+2.5**
	baz=47						
MNAS				⇑*iS*	**Sb**	**15 15 37.1**	**-2.3**
	baz=47						
EKS2	**Erkin-Say**	**3.16**	**5**	⇑*iP*	**Pn**	**15 14 59.5**	**+1.8**
	baz=4.0						
EKS2				⇑*iS*	**Sb**	**15 15 40.1**	**-2.6**
	baz=4.0						
EKS2	**Erkin-Say**	**3.16**	**5**	P	**Pn**	**15 15 00.5**	**+2.9**
	SNR=14						
MRKS	**Merke**	**3.23**	**358**	*eP*	**Pb**	**15 15 05.2**	**-0.1**
	7.5nm,0.3s						
MRKS				*eS*	**Sb**	**15 15 42.2**	**-2.5**
	66nm,0.6s						
MRKS	**Merke**	**3.23**	**358**	Pg	**Pn**	**15 15 00.8**	**+2.2**
	5.2nm,0.4s						
MRKS				Lg	Lg	15 15 42.2	
	66nm,0.6s						
AAK	**Ala-Archa**	**3.24**	**15**	⇑*iP*	**Pn**	**15 15 00.3**	**+1.6**
	baz=13						
AAK				⇑*iS*	**Sn**	**15 15 41.1**	**+3.7**
	baz=13						
AAK	**Ala-Archa**	**3.24**	**15**	P	**Pn**	**15 15 02.0**	**+3.3**
	SNR=13						
AAK	**Ala-Archa**	**3.24**	**15**	⇑Pn	**Pn**	**15 15 01.1**	**+2.4**
	8.0nm,0.5s						
AAK				⇑Lg	Lg	15 15 49.0	
	21nm,0.6s						
KBK	**Karagaybulak**	**3.36**	**20**	⇑*iP*	**Pn**	**15 15 01.9**	**+1.5**
	baz=18						
KBK				⇑*iS*	**Sn**	**15 15 44.1**	**+3.6**
	baz=18						
ULHL	**Ulahol**	**3.49**	**38**	⇓*iP*	**Pn**	**15 15 02.9**	**+0.7**
	baz=35						
ULHL				⇓*iS*	**Sn**	**15 15 45.9**	**+2.2**
	baz=35						
ULHL	**Ulahol**	**3.49**	**38**	P	**Pn**	**15 15 04.4**	**+2.1**
	SNR=6.1						
BOOM	**Boomskoye usch**	**3.55**	**32**	⇑*iP*	**Pn**	**15 15 04.0**	**+0.9**
	baz=30						
BOOM				⇑*iS*	**Sn**	**15 15 47.5**	**+2.3**
	baz=30						
CHMS	**Chumysh**	**3.64**	**16**	P	**Pn**	**15 15 07.3**	**+3.3**
	SNR=5.3						
IUG	**Iuzhnay**	**3.66**	**317**	*eP*	**Pb**	**15 15 12.1**	**-0.4**
	182nm,0.3s						
IUG				*eS*	**Sb**	**15 15 54.2**	**-2.7**
	34nm,0.6s						
IUG	**Iuzhnay**	**3.66**	**317**	Pg	**Pn**	**15 15 07.9**	**+3.5**
	128nm,0.3s						
IUG				Lg	Lg	15 15 53.9	
	34nm,0.6s						
TKM2	**Tokmak 2**	**3.80**	**25**	⇑*iP*	**Pn**	**15 15 07.7**	**+1.3**
	baz=24						
TKM2				⇑*eS*	**Sn**	**15 15 54.1**	**+2.8**
	baz=24						
TKM2	**Tokmak 2**	**3.80**	**25**	⇑Pg	**Pb**	**15 15 15.0**	**0.0**
	3.3nm,0.5s						
TKM2				⇓Lg	Lg	15 16 06.5	
	7.9nm,0.6s						
USP	**Ospenovka**	**3.85**	**12**	⇑*iP*	**Pn**	**15 15 08.8**	**+1.8**
	baz=11						
USP				⇑*iS*	**Sn**	**15 15 55.9**	**+3.6**
	baz=11						
KST	**Kastek**	**4.03**	**28**	*eP*	**Pg**	**15 15 23.2**	**-1.7**
	5.5nm,0.5s						
KST				*eS*	**Sg**	**15 16 13.5**	**-3.6**
	14nm,0.3s						
KST	**Kastek**	**4.03**	**28**	Pg	**Pb**	**15 15 19.3**	**+0.4**
	5.8nm,0.4s						
KST				Lg	Lg	15 16 14.2	
	15nm,0.7s						
SGDS	**Sogindy**	**4.05**	**13**	Pg	**Pb**	**15 15 19.1**	**-0.1**
	4.0nm,0.7s						
SGDS				Lg	Lg	15 16 13.7	
	14nm,0.7s						
KK31	**Karatay Array**	**4.19**	**330**	⇑Pn	**Pn**	**15 15 15.5**	**+3.8**
	2.7nm,0.6s,baz=146,slow=13,SNR=6.8						
KK31				⇑Sn	**Sn**	**15 16 06.3**	**+5.6**
	2.2nm,0.3s						
KK31				⇑Lg	Lg	15 16 22.9	
	3.0nm,0.3s,baz=143,slow=30,SNR=4.0						
IZV	**Izvestkoviy**	**4.29**	**34**	*eP*	**Pg**	**15 15 29.4**	**-0.4**
	4.5nm,0.3s						
IZV				*eS*	**Sg**	**15 16 23.9**	**-1.4**
	22nm,0.6s						
MTBS	**Maitube**	**4.29**	**31**	*eP*	**Pg**	**15 15 28.5**	**-1.2**
	7.2nm,0.4s						
MTBS				*eS*	**Sg**	**15 16 22.1**	**-3.2**
	12nm,0.4s						
MTBS	**Maitube**	**4.29**	**31**	Pg	**Pb**	**15 15 23.9**	**+0.7**
	8.1nm,0.4s						
MTBS				Lg	Lg	15 16 21.7	
	12nm,0.4s						
TNSS	**Tian-Shan**	**4.43**	**36**	*eP*	**Pg**	**15 15 30.9**	**-1.7**
	5.4nm,0.5s						
TNSS				*eS*	**Sg**	**15 16 26.0**	**-4.0**
	7.5nm,0.7s						
TNSS	**Tian-Shan**	**4.43**	**36**	Pg	**Pb**	**15 15 26.5**	**+0.7**
	6.2nm,0.5s						
TNSS				Lg	Lg	15 16 26.3	
	7.5nm,0.7s						
KRBS	**Karabastau**	**4.52**	**22**	*eP*	**Pg**	**15 15 32.5**	**-1.8**
	4.0nm,0.4s						
KRBS				*eS*	**Sg**	**15 16 29.3**	**-3.6**
	9.4nm,0.6s						
KRBS	**Karabastau**	**4.52**	**22**	Pg	**Pb**	**15 15 28.6**	**+1.4**
	4.9nm,0.4s						
KRBS				Lg	Lg	15 16 29.8	
	9.4nm,0.6s						
MDOK	**Medeo**	**4.58**	**36**	*eP*	**Pg**	**15 15 33.5**	**-1.9**
	3.3nm,0.5s						
MDOK				*eS*	**Sg**	**15 16 30.3**	**-4.4**
	8.9nm,0.6s						
MDOK	**Medeo**	**4.58**	**36**	⇑Pg	**Pb**	**15 15 28.6**	**+0.4**
	6.8nm,0.6s						
MDOK				Lg	Lg	15 16 30.2	
	9.3nm,0.6s						
MDOK	**Medeo**	**4.58**	**36**	Pg	**Pb**	**15 15 28.4**	**+0.2**
	7.9nm,0.6s						
MDOK				Lg	Lg	15 16 30.0	
	8.9nm,0.6s						
KOTS	**Kotyrbulak**	**4.66**	**36**	*eP*	**Pg**	**15 15 34.0**	**-3.0**
	17nm,0.5s						
KOTS				*eS*	**Sb**	**15 16 31.9**	**+6.0**
	30nm,0.5s						
KOTS	**Kotyrbulak**	**4.66**	**36**	Pg	**Pb**	**15 15 30.2**	**+0.6**
	23nm,0.5s						
KOTS				Lg	Lg	15 16 32.3	
	30nm,0.5s						
KTBS	**Karatobe**	**4.88**	**29**	*eP*	**Pg**	**15 15 38.9**	**-2.1**
	2.7nm,0.5s						
KTBS				*eS*	**Sg**	**15 16 39.9**	**-4.3**
	16nm,0.6s						
KTBS	**Karatobe**	**4.88**	**29**	Pg	**Pb**	**15 15 34.4**	**+1.2**
	5.3nm,0.5s						
KTBS				Lg	Lg	15 16 39.6	
	15nm,0.7s						
SATY	**Saty**	**5.19**	**45**	*eP*	**Pg**	**15 15 44.4**	**-2.7**
	3.2nm,0.4s						
SATY				*eS*	**Sg**	**15 16 49.0**	**-5.3**
	6.4nm,0.6s						
SATY	**Saty**	**5.19**	**45**	Pg	**Pb**	**15

comp=E,8.1nm,0.3s,baz=295,slow=11,SNR=67
PLCA Sn Sn 15 32 31.3 +1.7
comp=E,9.0nm,0.3s,baz=69,slow=11,SNR=1.5
PLCA LR LR 15 33 15.3
comp=E,247nm,19.6s,baz=306,slow=38
PLCA Paso Flores 4.35 127 *i* P Pn **15 31 38.1 -2.0**
PLCA Paso Flores 4.35 127 Pn Pn **15 31 38.3 -1.8**
PLCA Paso Flores 4.35 127 *eP* Pn **15 31 38.5 -1.6**
LL01 San Ignacio de 4.64 154 Pn **15 31 42.4 -1.7**
LL07 Hotel Espejo d 4.78 165 Pn Pn **15 31 44.1 -1.8**
BO02 Sierra Bellavi 4.90 47 Pn Pn **15 31 45.6 -2.1**
BO02 Sierra Bellavi 4.90 47 *i* P Pn **15 31 45.6 -2.2**
BO02 *eS* **Sn 15 32 39.5 -3.8**
BO02 IAML 15 32 49.1
comp=Z,414nm,0.5s
BO02 IAML 15 32 49.1
comp=Z,414nm,0.5s
GO07 Milladeo Hill, 5.01 168 Pn **15 31 47.6 -1.6**
GO07 Milladeo Hill, 5.01 168 *i* P Pn **15 31 47.5 -1.7**
GO07 *eS* **Sn 15 32 40.5 -5.4**
BO01 Tunca 5.03 42 *eP* Pn **15 31 47.9 -1.7**
BO01 Tunca 5.03 42 Pn Pn **15 31 47.5 -2.0**
EDS3 Malargue 5.21 64 *i* P Pn **15 31 52.4 +0.3**
PUMA Malargue 5.31 61 *i* P Pn **15 31 54.1 +0.8**
H03S1 Juan Fernandez 5.33 324 Pn Pn **15 31 53.2 -0.2**
baz=117,slow=8.6,SNR=450
H03S1 Sn **Sn 15 32 48.8 -4.5**
H03S1 T T 15 38 07.2
baz=146,slow=73,SNR=21
H03S2 Juan Fernandez 5.34 324 Pn Pn **15 31 53.1 -0.4**
baz=117,slow=8.6,SNR=401
H03S2 Sn **Sn 15 32 49.3 -4.4**
baz=14,slow=74,SNR=1.8
H03S2 T T 15 38 05.3
baz=146,slow=73,SNR=19
H03S3 Juan Fernandez 5.35 324 Pn Pn **15 31 53.3 -0.2**
baz=117,slow=8.6,SNR=491
H03S3 Sn **Sn 15 32 49.6 -4.2**
baz=286,slow=74,SNR=3.5
H03S3 T T 15 38 00.9
baz=146,slow=73,SNR=18
MT01 Popeta 5.37 37 *eP* Pn **15 31 51.5 -2.6**
MT01 Popeta 5.37 37 Pn Pn **15 31 51.5 -2.6**
VA05 Santo Domingo 5.38 33 *eP* Pn **15 31 51.8 -2.5**
VA05 Santo Domingo 5.38 33 Pn Pn **15 31 51.8 -2.5**
COIS El Sosneado 5.43 57 *i* P Pn **15 31 53.3 -1.7**
LL02 Futaleuf 5.56 154 Pn Pn **15 31 55.6 -1.1**
MT09 Talagante 5.57 38 *eP* Pn **15 31 55.0 -2.0**
MT09 Talagante 5.57 38 Pn Pn **15 31 54.9 -2.1**
H03N3 Juan Fernandez 5.66 326 Pn Pn **15 31 58.4 +0.4**
baz=170,slow=26,SNR=1042
H03N3 Sn **Sn 15 32 57.3 -4.4**
baz=82,slow=28,SNR=3.3
H03N1 Juan Fernandez 5.67 326 Pn Pn **15 31 58.0 0.0**
baz=170,slow=26,SNR=1287
H03N1 Sn **Sn 15 32 57.2 -4.6**
baz=82,slow=28,SNR=2.7
H03N2 Juan Fernandez 5.68 326 Pn Pn **15 31 58.5 +0.3**
baz=170,slow=26,SNR=829
H03N2 Sn **Sn 15 32 57.3 -4.6**
baz=82,slow=28,SNR=4.1
VA01 Torpederas 5.92 30 Pn **15 31 59.2 -2.4**
MT02 Curacav 5.93 34 Pn **15 31 59.2 -2.6**
MT05 Renca 6.00 38 Pn **15 31 59.8 -3.1**
MT05 Sn **15 33 07.5 -2.9**
MT03 Universidad Ad 6.03 40 Pn **15 32 00.8 -2.5**
PE1 Peldehue 6.23 37 Pn Pn **15 32 04.1 -1.9**
VA03 San Esteban 6.61 36 Pn **15 32 08.8 -2.4**
ARCO CERRO ARCO 7.38 45 *i* P Pn **15 32 21.1 -0.8**
ARCO IAML 15 34 42.7
comp=Z,13nm,0.7s
ARCO IAML 15 34 42.7
comp=Z,13nm,0.7s
AUSP Uspallata 7.61 40 *i* P Pn **15 32 24.1 -1.2**
AUSP *eS* **Sn 15 33 50.1 -0.3**
ASAL Salagasta 7.62 44 *i* P Pn **15 32 23.4 -1.7**
ASAL IAML 15 34 46.2
comp=Z,10.0nm,1.2s
ASAL IAML 15 34 46.2
comp=Z,10.0nm,1.2s
CO02 Combarbal 7.79 27 Pn **15 32 25.2 -2.3**
RTLS Leoncito 8.00 39 *i* P Pn **15 32 29.6 -0.9**
RTLS IAML 15 34 06.3
comp=Z,49nm,0.7s
CO03 El Pedregal 8.23 28 Pn Pn **15 32 31.2 -2.3**
CO03 El Pedregal 8.23 28 *i* P Pn **15 32 32.0 -1.4**
RTCV Cerro Valdivia 8.34 42 *i* P Pn **15 32 32.5 -2.5**
RTCV IAML 15 34 07.8
comp=Z,20nm,0.4s
ZON Zonda 8.52 40 Pn Pn **15 32 35.2 -2.2**
ZON Zonda 8.52 40 *i* P Pn **15 32 36.0 -1.3**
ZON IAmb IAmb 15 32 45.0
comp=Z,43nm,0.4s
ZON IAML 15 34 15.7
comp=Z,32nm,0.4s
RTLL Cerro Villicun 8.79 41 *i* P Pn **15 32 38.8 -2.3**
RTLL IAmb IAmb 15 32 48.8
comp=Z,208nm,0.4s
RTLL IAML 15 34 21.2
comp=Z,34nm,0.7s
GO04 Tololo Observa 8.80 25 Pn **15 32 38.7 -2.7**
ACCO Cerro Coronel 9.12 35 *i* P Pn **15 32 44.0 -1.9**
ACCO *eS* **Sn 15 34 26.0 -1.5**
ACCO IAML 15 34 35.0
comp=Z,34nm,0.4s
ACCO IAML 15 34 35.0
comp=Z,34nm,0.4s
AROD Rodeo 9.30 32 *i* P Pn **15 32 47.8 -0.6**
AROD *eS* **Sn 15 34 30.5 -1.5**
ACDV Cuesta del Vie 9.45 34 *i* P Pn **15 32 48.9 -1.4**
ACDV IAML 15 34 41.1
comp=Z,13nm,0.4s
MRA San Martin 9.63 56 *i* P Pn **15 32 51.8 -0.9**
MRA IAML 15 34 23.6
comp=Z,6.3nm,0.6s
AVFE Valle Fertil 9.85 42 *i* P Pn **15 32 52.2 -3.6**
AVFE *eS* **Sn 15 34 38.2 -7.0**
AVFE IAML 15 34 45.4
comp=Z,17nm,0.4s
AVFE IAML 15 34 45.4
comp=Z,17nm,0.4s
LCO Las Campanas 9.90 23 Pn Pn **15 32 53.7 -2.9**
ACHE Chepes 9.91 47 *i* P Pn **15 32 52.5 -4.1**
ACHE *eS* **Sn 15 34 39.5 -7.2**
AGUA GUANDACOL 10.31 34 *i* P Pn **15 33 00.2 -1.9**
AGUA *eS* **Sn 15 34 55.1 -1.4**
ACLL Llanos de Chal 10.55 20 Pn Pn **15 33 01.5 -3.8**
ACLC CERRO LA CRUZ 11.10 40 *i* P Pn **15 33 07.9 -5.0**
ACLC *eS* **Sn 15 35 08.7 -7.2**
ACLC IAML 15 35 13.8
comp=Z,14nm,0.7s
GO03 Copiap 11.37 23 Pn Pn **15 33 14.0 -2.5**
GO03 Copiap 11.37 23 *i* P Pn **15 33 13.8 -2.7**
AC02 Maricunga 12.43 26 Pn Pn **15 33 28.6 -2.7**
CYA Choya 12.49 41 *i* P Pn 15 33 25.0 -6.7
CYA IAmb IAmb 15 33 28.9
comp=Z,7.3nm,0.3s
AC01 Pan de Azucar 12.64 19 Pn Pn **15 33 29.1 -4.6**
GO02 Mina Guanaco 13.85 21 Pn **15 33 46.2 -4.4**
PB14 IPOC Station P 14.14 18 Pn Pn **15 33 52.7 -1.9**
PB15 IPOC Station P 15.73 20 P Pn **15 34 16.1 +0.4**
LVC Limon Verde 16.45 21 LR LR 15 40 31.3
comp=Z,44nm,20.7s,baz=214,slow=36
LVC Limon Verde 16.45 21 P **P 15 34 26.7 -0.8**
PB07 IPOC Station P 17.05 17 P Pn **15 34 29.3 -3.1**
PB07 IAmb IAmb 15 34 48.2
comp=Z,38nm,1.5s
PB09 IPOC Station P 17.14 19 P Pn **15 34 33.5 0.0**
PB09 IAmb IAmb 15 34 48.2
comp=Z,34nm,1.2s
PB01 IPOC Station P 17.80 18 P Pn **15 34 39.8 -1.9**
PB01 IAmb IAmb 15 35 16.9
comp=Z,16nm,1.3s
EFI East Falkland 18.02 144 P Pn **15 34 41.8 -2.2**
PB08 IPOC Station P 18.75 18 P **P 15 34 52.0 -0.9**
PLTB Pedras Altas 18.77 76 *eP* Pn **15 34 56.1 +2.9**
PB11 IPOC Station P 19.00 16 P Pn **15 34 56.9 +0.6**
PB11 IAmb IAmb 15 35 21.5
comp=Z,21nm,1.2s
PSGCX Pisagua 19.07 15 P **P 15 34 55.8 -0.2**
PSGCX IAmb IAmb 15 35 42.4
comp=Z,38nm,1.5s
CPUP Villa Florida 19.13 57 P **P 15 34 56.5 0.0**
comp=Z,0.3nm,0.3s,baz=232,slow=10,SNR=11
CPUP LR LR 15 42 56.9
comp=Z,238nm,18.6s,baz=224,slow=38
CPUP Villa Florida 19.13 57 P **Pn 15 34 57.2 -0.4**
MNMC Minye Minye 19.63 16 P **P 15 35 00.2 -2.1**
MNMC IAmb IAmb 15 35 23.3
comp=Z,11nm,0.8s
PB16 IPOC Station P 20.42 15 P **P 15 35 08.9 -2.3**
PB16 IAmb IAmb 15 35 38.4
comp=Z,20nm,1.3s
ITAB Concordia 22.18 67 *eP* **P 15 35 31.3 +1.7**
LPAZ La Paz 22.71 18 P **P 15 35 39.6 +3.7**
comp=Z,3.4nm,0.9s,baz=168,slow=8.9,SNR=5.8
LPAZ La Paz 22.71 18 P **P 15 35 38.3 +2.4**
LPAZ IAmb IAmb 15 35 54.0
comp=Z,7.1nm,0.8s
LPAZ La Paz 22.71 18 *eP* **P 15 35 41.6 +5.8**
AQDB Aquidauana 24.41 49 *eP* **P 15 35 55.3 +3.6**
TRCB Terra Rica 24.65 58 *eP* **P 15 35 57.8 +3.8**
SIV San Ignacio 25.38 33 P **P 15 36 03.5 +2.9**
comp=Z,1.5nm,0.7s,baz=233,slow=11,SNR=4.2
SIV LR LR 15 47 48.0
comp=Z,94nm,18.7s,baz=284,slow=40
NNA Nana 26.17 356 LR LR 15 44 00.6
comp=Z,68nm,19.2s,baz=196,slow=31
PCMB Pacaembu 26.39 58 *eP* **P 15 36 13.8 +4.1**
FRTB Fartura 26.40 63 *eP* **P 15 36 11.8 +2.1**
PMSA Palmer Station 27.39 170 LR LR 15 46 58.5
comp=Z,132nm,18.7s,baz=345,slow=36
ITRB Iturama 28.33 56 *eP* **P 15 36 31.3 +4.2**
ETMB Extrema 29.40 18 *eP* P 15 36 42.1 +5.5
RPN Rapa Nui 30.68 281 LR LR 15 45 27.9
comp=Z,217nm,19.9s,baz=2,slow=29
BDFB Brasília 32.81 54 LR LR 15 51 31.8
comp=Z,169nm,20.6s,baz=308,slow=38
SDBA SAO DESIDERIO 37.22 54 *eP* **P 15 37 48.9 +4.1**
SMTB Santa Maria do 38.34 47 *eP* **P 15 37 58.4 +4.3**
VNA3 Neumayer Olymp 46.46 156 P **P 15 39 01.4 +1.8**
VNA2 Neumayer--Watz 47.16 155 P **P 15 39 01.2 -3.8**
baz=278,slow=10.0
SNAA Sanae 48.68 156 P **P 15 39 17.5 +0.7**
TXAR Lajitas Array 72.31 334 P **P 15 41 60.0 +1.5**
comp=Z,0.9nm,0.6s,baz=156,slow=9.7,SNR=12
TXAR Lajitas Array 72.31 334 P **P 15 42 00.0 +1.5**
NVAR Mina Array Bea 86.00 327 P **P 15 43 15.1 +1.9**
comp=Z,0.4nm,0.7s,baz=134,slow=6.5,SNR=2.5
PDAR Pinedale Array 86.47 335 P **P 15 43 16.6 +1.1**
comp=Z,0.1nm,0.4s,baz=159,slow=4.5,SNR=3.8
TORD Torodi Ar. Bea 87.97 72 P **P 15 43 23.7 +0.7**
comp=Z,0.5nm,0.7s,baz=247,slow=5.3,SNR=2.2
DZM Mont Dzumac 96.75 235 LR LR 16 19 17.2
comp=Z,30nm,20.6s,baz=68,slow=30

*IDC **23** 15:38:43.7±1.1, 53°.62N×35°.39W, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/44, mbtmp3.7/8, ML3.6/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/50, Error ellipse: s-maj=36.0km s-min=21.1km az=23.0*
ISC 23 15:38:46.2±1.1, **53°.6N**±0°.2×**35°.4W**±0°.1, **h16**km, **n14,** σ1**19/9, mb3.8/7, MS3.5/7, Reykjanes Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
EKA Eskdalemuir Ar 18.71 72 P **Pn 15 43 03.8 -0.3**
baz=272,slow=8.9,SNR=5.7
FRB Frobisher Bay 19.75 314 LR LR 15 48 47.3
comp=Z,127nm,19.1s,baz=37,slow=31
ESDC Sonsa Array 25.43 110 P **P 15 44 12.7 -0.3**
2.5nm,0.9s,baz=314,slow=9.4,SNR=12
NOA NORSAR Array B 25.72 55 P **P 15 44 15.6 +0.2**
1.3nm,0.8s,baz=310,slow=25,SNR=3.3
NOA LR LR 15 52 42.1
comp=Z,58nm,18.1s,baz=20,slow=33
SADO Sadowa 29.52 271 LR LR 15 55 51.1
comp=Z,103nm,18.7s,baz=28,slow=35
FINES FINESS Array B 32.73 51 LR LR 15 57 04.6
comp=Z,109nm,19.2s,baz=192,slow=34
YKA Yellowknife Ar 40.26 315 P **P 15 46 20.9 -0.9**
0.3nm,0.8s,baz=68,slow=8.8,SNR=2.8
YKA LR LR 16 00 33.1
comp=Z,56nm,18.5s,baz=0.0,slow=32
PDAR Pinedale Array 48.47 289 P **P 15 47 29.0 +1.0**
0.5nm,0.5s,baz=68,slow=6.8,SNR=5.5
PDAR LR LR 16 07 09.8
comp=Z,43nm,18.1s,baz=50,slow=35
TORD Torodi Ar. Bea 49.87 130 P **P 15 47 38.9 +0.3**
1.7nm,0.8s,baz=327,slow=8.4,SNR=8.4
TXAR Lajitas Array 54.28 272 LR LR 16 09 31.1
comp=Z,46nm,19.4s,baz=0.0,slow=34
NVAR Mina Array Bea 56.30 290 LR LR 16 10 52.7
comp=Z,50nm,21.0s,baz=22,slow=34
MKAR Makanchi Array 66.82 41 P **P 15 49 37.8 +1.0**
0.5nm,0.8s,baz=323,slow=7.1,SNR=5.2
SONM Songino Array 73.84 26 P **P 15 50 20.1 +0.3**
0.8nm,0.8s,baz=327,slow=7.1,SNR=4.9
ASAR Alice Springs 149.01 19 PKPbc **PKPbc 15 58 30.9 -2.3**
0.4nm,0.8s,baz=326,slow=1.6,SNR=6.8

*NORS **23** 15:47:28.9±0.0, 43°.02N×45°.97E, h12km, MPVA3.2*
*MOS **23** 15:47:28.5±0.0, 43°.01N×46°.00E, h9km, MPVA3.4*
*TIF **23** 15:47:31.0, 42°.96N×45°.86E, h23km±1km*
ISC 23 15:47:29.8±0.9, **43°.00N**±0°.05×**45°.95E**±0°.03, **h17**km±7km, **n16,** σ1**14/31, Eastern Caucasus**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
DVE Vedeno 0.14 109 *ePg* **Pb 15 47 33.4 -0.7**
DVE *eSg* **Sg 15 47 36.3 -0.4**
GROC Groznyy 0.23 331 *ePg* **Pb 15 47 35.3 -0.2**
GROC *eSg* **Sg 15 47 39.9 +1.1**
DBC Dubki 0.65 88 *ePg* **Pb 15 47 42.8 +0.1**
DBC *eSg* **Sn 15 47 52.3 -1.9**
UNCR Uncukul 0.69 115 *ePg* **Pn 15 47 43.8 -1.0**
UNCR *eSg* **Sn 15 47 53.5 -1.6**
ARKR Arakani 0.87 117 *ePg* **Pn 15 47 47.1 -0.2**
ARKR *eSg* **Sn 15 47 58.7 -0.9**
GNBR Gunib 0.97 129 *ePg* **Pn 15 47 49.5 +0.8**
GNBR *eSg* **Sn 15 48 02.8 +0.8**
PNSH Pansheti 1.05 250 P **Pn 15 47 49.8 -0.1**
PNSH S **Sg 15 48 03.3 -0.6**
LGD Lagodekhi 1.19 169 P **Pg 15 47 52.8 0.0**
LGD S **Sn 15 48 09.1 +1.7**
GUDG Gudauri 1.21 244 P **Pg 15 47 52.8 -0.5**
GUDG S **Sb 15 48 08.0 +0.3**
KMKR Kumukh 1.22 135 *ePg* **Pg 15 47 54.2 +0.8**
KMKR *eSg* **Sn 15 48 11.0 +2.6**
LACR Lac 1.23 262 *ePg* **Pg 15 47 52.9 -0.6**
LACR *eSg* **Sg 15 48 09.9 +0.3**
KORR Kora 1.38 274 *ePg* **Pg 15 47 57.9 +1.4**
KORR *eSg* **Sg 15 48 16.1 +1.6**
ZEI Tsey 1.52 263 *ePg* **Pg 15 47 58.1 -1.0**
ZEI *eSg* **Sg 15 48 17.9 -1.0**
BTNK Botanikuri 1.57 213 P **Pg 15 47 59.6 -0.5**
DIGR Digorskoe uzhe 1.74 267 *ePg* **Pb 15 48 01.2 -0.2**
DIGR *eSg* **Sg 15 48 25.1 -0.9**
DMNI Dmanisi 2.12 219 P **Pg 15 48 08.8 -1.8**
DMNI S **Sb 15 48 35.4 +1.4**

WEL 23 16:33:58.3±1.4, **32°S**±17°×**17°9E**±2°9, **h20**km±19km, **M4.4/11, mB4.8/2, ML4.7/11, MLv4.4/11, Mw(mB)4.1/2, Error ellipse: s-maj=0.0km s-min=0.0km az=119.1, Kermadec Islands region**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
GLKZ Green Lake 3.85 48 S Sn 16 35 42.1 +0.9
HAZ Te Kaha 5.93 188 P Pn 16 35 27.0 +2.1
HAZ S Sn 16 36 33.7 +1.4
WMGZ Waiomatatini S 5.94 183 P Pn 16 35 27.1 +1.9
WMGZ S Sn 16 36 31.7 -1.0
PKGZ Pakihiroa 6.03 185 P Pn 16 35 26.8 +0.3
PKGZ S Sn 16 36 35.6 +0.6
TWGZ Tauwhareparae 6.33 186 P Pn 16 35 30.1 -0.4
TWGZ S Sn 16 36 45.7 +3.6
URZ Urewera 6.52 192 P Pn 16 35 35.0 +2.0
URZ S Sn 16 36 49.8 +3.0
MWZ Matawai 6.53 189 P Pn 16 35 32.7 -0.6
MWZ S Sn 16 36 47.5 +0.3
TKGZ Te Karaka 6.60 186 P Pn 16 35 32.8 -1.4
TKGZ S Sn 16 36 49.7 +0.9
MUGZ Murupara 6.79 193 P Pn 16 35 39.0 +2.1
MUGZ S Sn 16 36 57.2 +3.6
RIGZ Rimuhau 6.87 187 P Pn 16 35 35.9 -2.1
RTZ Ruatahuna 6.89 192 P Pn 16 35 37.4 -0.8
RTZ S Sn 16 36 56.5 +0.4
SNGZ Shannon Statio 7.00 189 P Pn 16 35 38.1 -1.5
SNGZ S Sn 16 36 58.0 -0.6
RAHZ Arahi 7.16 191 P Pn 16 35 43.7 +1.7
RAHZ S Sn 16 37 03.6 +0.8
BKZ Black Stump Fm 7.51 194 P Pn 16 35 45.2 -1.6
BKZ S Sn 16 37 09.4 -2.0
ARHZ Aropaoanui 7.52 191 P Pn 16 35 48.1 +1.3
KWHZ Kaweka Forest 7.78 194 P Pn 16 35 49.9 -0.5

*IDC **23** 16:45:36.7±1.2, 0°.46S×127°.42E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/28, mbtmp3.5/5, Error ellipse: s-maj=85.3km s-min=20.9km az=73.0*
*DJA **23** 16:45:52.2±0.5, 1°S±2°×12°7E±1°, h88km±11km, M4.2/10, mb4.6/2, mB5.0/3, MLv4.0/10, Mw(mB)4.3/3*
ISC 23 16:45:49.2±0.9, **0°.66S**±0°.05×**127°.38E**±0°.09, **h100**km, **n13,** σ2**15/16, mb3.6/4, Halmahera**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
TNTI Ternate 1.42 359 P **Pn 16 46 17.7 +3.1**
TNTI S **Sn 16 46 36.5 +2.8**
SANI Sanana 1.96 225 P **Pn 16 46 23.4 +2.1**
SANI S **Sn 16 46 46.7 +0.9**
NLAI Namlea 2.58 186 P **Pn 16 46 31.9 +2.5**
NLAI S **Sn 16 47 02.0 +1.8**
KMSI Cibinong 3.62 290 P **Pn 16 46 45.7 +2.4**
LUWI Luwuk 4.63 265 P **Pn 16 46 58.7 +1.8**
MRSI Marisa 5.56 282 P **Pn 16 47 10.9 +1.4**
0.2nm687nm29nm,0.7s
APSI Ampana 5.74 267 P **Pn 16 47 14.1 +2.1**
SPSI Sidrap Palu 8.29 247 P **Pn 16 47 48.2 +1.5**
WRA Warramunga Arr 20.34 161 P **P 16 50 16.7 -1.0**
0.6nm,0.3s,baz=343,slow=12,SNR=31
ASAR Alice Springs 23.73 165 P **P 16 50 52.6 +0.2**
0.2nm,0.3s,baz=345,slow=12,SNR=5.9
USRK Ussuriysk Ar. 44.85 5 P **P 16 53 51.4 -2.1**
1.4nm,0.9s,baz=182,slow=9.1,SNR=4.4
SONM Songino Array 51.64 342 P **P 16 54 44.0 -1.8**
0.2nm,0.5s,baz=165,slow=6.4,SNR=1.8
MKAR Makanchi Array 61.53 326 P **P 16 55 54.3 -1.5**
0.6nm,0.3s,baz=115,slow=8.2,SNR=15

*VAO **23** 17:10:39.8±0.7, 8°.88S×76°.83W, h10km, mb4.6*
*NEIC **23** 17:10:48.7±1.4, 8°.36S±0°.07×75°.64W±0°.02, h16km±5km, mb4.7/32, Error ellipse: s-maj=10.7km s-min=2.0km az=191.0*
*IDC **23** 17:10:54.3±1.6, 8°.43S×75°.89W, h53km±17km, mb3.8/11, mb1 4.0/18, mb1mx3.8/45, mbtmp4.1/18, ML3.7/7, MS3.2/7, Ms1 3.2/7, ms1mx3.0/34, Error ellipse: s-maj=16.5km s-min=9.0km az=60.0*
ISC 23 17:10:51.8±0.5, **8°.40S**±0°.05×**75°.80W**±0°.07, **h35**km, **n102,** σ1**86/100, mb4.6/24, Central Peru**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
ATAH Atahualpa 2.87 296 P **Pn 17 11 36.0 +0.5**
39nm,0.3s,baz=117,slow=6.3,SNR=118
ATAH S **Sn 17 12 11.7 +2.7**
71nm,0.3s,baz=126,slow=20,SNR=11
CZSB Cruzeiro do Su 3.13 78 *eP* Pn 17 11 45.0 +6.2
NNA Nana 3.71 196 P **Pn 17 11 47.8 +1.0**
6.4nm,0.3s,baz=9.4,slow=10.0,SNR=7.4
NNA S **Sn 17 12 30.7 +1.3**
12nm,0.3s,baz=257,slow=20,SNR=8.5
NNA LR LR 17 13 15.7
comp=Z,270nm,20.6s,baz=8.5,slow=39
NNA Nana 3.71 196 **Pn 17 11 46.9 +0.1**
PTLC Puerto Leguiza 8.57 7 *eP* **Pn 17 12 51.0 -2.6**
OTAV Otavalo 8.98 343 **Pn 17 12 58.2 -1.4**
ETMB Extrema 9.57 99 *eP* **Pn 17 13 09.7 +2.6**
GCUF Volcan Galeras 9.69 351 *eP* **Pn 17 13 10.6 +1.3**
CRUC La Cruz 9.97 353 *eP* **Pn 17 13 12.3 +0.2**
SOTA Rioblanco 10.50 356 *eP* **Pn 17 13 21.5 +1.2**
GARC Garzon, Huila 10.52 2 *eP* **Pn 17 13 20.7 +0.3**
MACC Macarena, Meta 10.65 11 *eP* **Pn 17 13 23.1 +1.1**
PCON Cinco Dias 10.67 357 *eP* **Pn 17 13 22.9 +0.1**
LPAZ La Paz 10.84 137 P **Pn 17 13 27.9 +2.7**
0.1nm,0.3s,baz=322,slow=6.6,SNR=2.7
LPAZ Lg Lg 17 16 36.7
0.3nm,0.3s,baz=168,slow=16,SNR=5.1
LPAZ La Paz 10.84 137 **Pn 17 13 24.6 -0.5**
BETC Betania 11.01 2 *eP* **Pn 17 13 30.0 +3.0**
ORTC Ortega, Tolima 12.24 3 *eP* **Pn 17 13 44.8 +1.0**
YOTC Yotoco, Valle 12.31 357 *eP* **Pn 17 13 49.7 +4.8**
VILC Villavicencio, 12.60 10 *eP* **Pn 17 13 50.9 +2.0**
CHIC Chingaza 13.11 9 *eP* **Pn 17 13 57.2 +1.2**
ROSC El Rosal 13.23 6 P **Pn 17 13 59.5 +1.8**
1.4nm,0.3s,baz=111,slow=23,SNR=1.5
GUY2C Guyana, Caldas 13.54 2 *eP* **Pn 17 14 05.5 +3.6**
NORC Norcasia 13.90 4 *eP* **Pn 17 14 07.3 +0.8**
CBOC Ciudad Bolivar 14.17 359 *eP* **P 17 14 14.5 -2.9**
RUSC La Rusia 14.45 11 *eP* **Pn 17 14 11.4 -3.1**
PTBC PUERTO BERRIO, 14.90 5 *eP* **Pn 17 14 21.9 +1.8**
DBBC Dabeiba 15.32 358 *eP* **P 17 14 34.2 +4.1**
LVC Limon Verde 15.60 156 LR LR 17 20 24.3
comp=Z,63nm,19.7s,baz=341,slow=36
ZARC Zaragoza, Cauc 15.81 3 *eP* **P 17 14 38.0 +2.5**
MACA Manacapuru-AM 15.90 72 *eP* **P 17 14 39.0 +2.5**
PAMC Pamplona, Colo 15.94 11 *eP* **Pn 17 14 35.8 +1.8**
VILB Vilhena 15.98 108 *eP* **Pn 17 14 35.4 +1.3**
UREC San Jos de Ur 16.05 1 *eP* **P 17 14 39.2 +1.1**
SIV San Ignacio 16.24 119 P **Pn 17 14 39.0 +1.5**
0.9nm,0.3s,baz=315,slow=11,SNR=16
SIV Lg Lg 17 19 26.8
0.3nm,0.3s,baz=2.6,slow=17,SNR=3.9
SIV LR LR 17 21 09.5
comp=Z,85nm,20.7s,baz=268,slow=38
PB14 IPOC Station P 16.94 163 Pn **Pn 17 14 43.8 -2.7**
MOTC Monteria, Cord 17.07 0 *eP* **P 17 14 52.0 +2.7**
SMLC San Martn de 17.17 6 *eP* **P 17 14 51.8 +1.3**
PTGA Pitinga 17.51 65 P **P 17 14 55.9 +1.6**
0.8nm,0.3s,baz=331,slow=23,SNR=7.5
PTGA Lg Lg 17 20 03.4
0.3nm,0.3s,baz=328,slow=22,SNR=1.7
PTGA LR LR 17 21 55.2
comp=Z,67nm,20.6s,baz=242,slow=38
PTGA Pitinga 17.51 65 **Pn 17 14 50.6 -2.8**
PTLB Pontes e Lacer 17.73 115 *eP* **Pn 17 14 55.4 -0.8**
SDV Santo Domingo 17.92 17 P **P 17 14 60.0 +0.9**
1.5nm,0.3s,baz=194,slow=10,SNR=5.4
SDV LR LR 17 22 31.9
comp=Z,99nm,19.9s,baz=224,slow=39
SDV Santo Domingo 17.92 17 **Pn 17 14 55.9 -2.8**
CLDB Colider 19.87 99 *eP* **P 17 15 21.6 +1.4**
NPGB Novo Progresso 20.30 88 *eP* **P 17 15 27.4 +2.5**
ITTB Itaituba 20.33 80 *eP* Pn 17 15 28.4 +1.0
JTS Las Juntas de 20.68 334 P **P 17 15 28.5 -0.6**
3.0nm,0.5s,baz=349,slow=18,SNR=1.7
MALB Monte Alegre 22.40 74 *eP* **P 17 15 50.7 +3.2**
SNDB Serra Nova Dou 24.37 100 *eP* **P 17 16 07.5 +0.6**
ARAG Araguaiana, MT 24.54 109 *eP* **P 17 16 07.8 -0.7**
MCPB Macapa, AP 24.96 73 *eP* **P 17 16 13.3 +0.9**
CPUP Villa Florida 25.01 138 P **P 17 16 13.7 +1.0**
1.2nm,0.7s,baz=296,slow=10,SNR=3.2
CPUP LR LR 17 28 30.6
comp=Z,50nm,20.4s,baz=224,slow=42
CPUP Villa Florida 25.01 138 P **P 17 16 10.7 -1.9**
CPUP Villa Florida 25.01 138 *eP* **P 17 16 07.3 -5.3**
PRPB Parauapebas 25.86 87 *eP* **P 17 16 21.6 +1.1**
PCMB Pacaembu 27.04 122 *eP* **P 17 16 29.1 -2.0**
SMTB Santa Maria do 27.89 93 *eP* **P 17 16 38.6 -0.2**
SJG San Juan 28.01 20 P **P 17 16 39.6 -0.1**
3.4nm,0.3s,baz=334,slow=19,SNR=1.1
SJG San Juan 28.01 20 P **P 17 16 38.5 -1.2**
SJG IAmb IAmb 17 16 49.7
comp=Z,25nm,1.1s
BB19B Bebedouro 29.16 119 *eP* **P 17 16 47.1 -3.0**
FRTB Fartura 29.20 124 *eP* **P 17 16 46.6 -3.8**
JANB Januaria 31.50 105 *eP* **P 17 17 10.8 0.0**
TER01 Tubaro-SC 32.12 132 *eP* P 17 17 11.7 -4.4
RCBR Riachuelo 39.66 89 *eP* **P 17 18 20.4 -0.5**
Y49A Blount Mountai 43.22 347 P **P 17 18 49.4 -0.3**
Y49A IAmb IAmb 17 19 07.8
comp=Z,13nm,1.3s
237A Washetta, Mont 44.49 335 P **P 17 18 57.8 -2.2**
Z38A Mt. Pleasant 45.27 337 P **P 17 19 06.2 +0.1**
TX31 Lajitas Ar. Si 46.13 326 P **P 17 19 13.1 -0.1**
TX31 IAmb IAmb 17 19 17.5

comp=Z,12nm,1.4s
TX32 Lajitas Array 46.13 326 P P 17 19 13.2 0.0
TXAR Lajitas Array 46.13 326 P P 17 19 13.5 +0.3
comp=Z,0.9nm,0.7s,baz=156,slow=9.5,SNR=9.7
TXAR Lajitas Array 46.13 326 P P 17 19 13.2 0.0
Z35A Perchaven, San 46.25 335 P P 17 19 14.4 +0.6
Z35A IAmb IAmb 17 19 19.2
comp=Z,9.0nm,0.8s
LCAR Lake Charles 46.53 343 P P 17 19 15.6 -0.5
LCAR IAmb IAmb 17 19 18.9
comp=Z,5.9nm,1.0s
X37A Clayton 46.60 338 P P 17 19 14.3 -2.3
X37A IAmb IAmb 17 19 22.2
comp=Z,11nm,1.2s
FCAR Ozark Folk Cen 46.66 342 P P 17 19 14.9 -2.1
FCAR IAmb IAmb 17 19 17.2
comp=Z,5.0nm,0.8s
ABTX Abilene, Hawle 46.70 332 P P 17 19 15.2 -2.3
U40A Yellville 47.32 341 P P 17 19 21.9 -0.3
HHAR Hobbs 47.61 340 P P 17 19 22.0 -2.5
HHAR IAmb IAmb 17 19 32.2
comp=Z,3.9nm,0.8s
MGMO Mountain Grove 47.87 342 P P 17 19 24.7 -1.8
MGMO IAmb IAmb 17 19 27.6
comp=Z,6.0nm,0.8s
OK030 Cody Creek RV 48.32 337 P P 17 19 29.2 -0.8
OK029 Liberty Lake 48.47 336 P P 17 19 30.7 -0.4
OK029 IAmb IAmb 17 19 40.1
comp=Z,7.3nm,0.8s
KS20 Mayfield South 49.76 337 P P 17 19 40.9 -0.1
TRY Troy 50.92 2 P P 17 19 49.7 +0.1
ACCN Adirondack Com 51.57 2 P P 17 19 51.9 -2.7
J59A Piesco 51.63 1 P P 17 19 53.9 -1.1
J59A IAmb IAmb 17 20 05.4
comp=Z,7.1nm,0.7s
W13A Hualapai Mount 56.26 323 P P 17 20 29.7 +0.5
PDAR Pinedale Array 59.50 332 P P 17 20 50.3 -1.5
comp=Z,0.2nm,0.6s,baz=160,slow=11,SNR=2.4
ULM Lac du Bonnet 60.97 345 P P 17 21 01.0 -0.3
comp=Z,4.0nm,0.6s,baz=150,slow=7.5,SNR=8.2
ULM Lac du Bonnet 60.97 345 P P 17 21 01.1 -0.3
ULM IAmb IAmb 17 21 01.8
comp=Z,4.8nm,0.7s
DBIC Dimbokro 72.29 80 P P 17 22 16.9 +2.5
comp=Z,2.7nm,0.6s,baz=224,slow=5.7,SNR=5.8
DBIC Dimbokro 72.29 80 P P 17 22 13.9 -0.6
YKA Yellowknife Ar 76.74 343 P P 17 22 39.0 -0.3
comp=Z,0.9nm,0.9s,baz=133,slow=6.9,SNR=5.8
TORD Torodi Ar. Bea 79.86 75 P P 17 22 59.8 +2.2
comp=Z,2.8nm,0.9s,baz=285,slow=6.1,SNR=11
TORD LR LR 17 57 47.6
comp=Z,30nm,18.3s,baz=0.0,slow=35
ESDC Sonseca Array 81.61 48 P P 17 23 09.2 +2.7
comp=Z,0.7nm,0.8s,baz=241,slow=5.3,SNR=5.2
ESDC Sonseca Array 81.61 48 P P 17 23 07.6 +1.0
SUMG Summit 84.34 11 P P 17 23 20.8 +0.4
SUMG IAmb IAmb 17 23 23.1
comp=Z,5.5nm,0.9s
L27K Beaver Creek, 86.91 335 P P 17 23 33.2 +0.3
L27K IAmb IAmb 17 23 34.7
comp=Z,6.5nm,1.1s
K27K Chicken 87.42 336 P P 17 23 36.2 +0.9
K27K IAmb IAmb 17 23 40.2
comp=Z,11nm,1.4s
ILAR Eielson Array 89.64 336 P P 17 23 45.1 -0.6
comp=Z,1.2nm,0.9s,baz=152,slow=3.2,SNR=6.7
MDM Murphy Dome 90.24 336 P P 17 23 48.1 -0.5
MDM IAmb IAmb 17 23 50.0
comp=Z,4.1nm,0.9s
WRA Warramunga Arr 139.10 226 PKP PKPdf 17 30 14.1 -1.8
comp=Z,0.9nm,0.9s,baz=136,slow=2.2,SNR=4.3
KSRS Korea Array 143.97 327 PKP PKPdf 17 30 24.6 +0.5
comp=Z,0.6nm,0.7s,baz=45,slow=0.4,SNR=4.7
FITZ Fitzroy Crossi 146.22 219 PKPbc PKPbc 17 30 29.0 -0.6
comp=Z,3.0nm,0.8s,baz=148,slow=9.5,SNR=3.2

IDC 23 17:20:44.3±4.6, 4°.63S×101°.61E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.3/32, mbtmp3.5/5, Error ellipse: s-maj=202.3km s-min=24.5km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**29.10**	**263**	T	T	17 56 44.4	
baz=84							
H08S3	**Diego Garcia H**	**29.11**	**263**	T	T	17 56 44.4	
baz=84							
H08S1	**Diego Garcia H**	**29.12**	**263**	T	T	17 56 49.4	
baz=84							
H01W3	**Cape Leeuwin H**	**32.26**	**160**	T	T	18 01 18.0	
baz=339,slow=74							
H01W2	**Cape Leeuwin H**	**32.27**	**161**	T	T	18 01 16.4	
baz=339,slow=74							
H01W1	**Cape Leeuwin H**	**32.27**	**160**	T	T	18 01 17.2	
baz=339							
WRA	**Warramunga Arr**	**35.31**	**118**	P	P	17 27 41.3	-0.1
0.2nm,0.5s,baz=297,slow=11,SNR=2.4							
ASAR	**Alice Springs**	**36.43**	**124**	P	P	17 27 50.5	-0.6
0.2nm,0.9s,baz=301,slow=7.7,SNR=1.5							
SONM	**Songino Array**	**52.41**	**4**	P	P	17 29 58.4	-0.2
0.3nm,0.5s,baz=195,slow=7.2,SNR=2.7							
MKAR	**Makanchi Array**	**53.99**	**344**	P	P	17 30 10.1	-0.1
0.5nm,0.5s,baz=148,slow=8.7,SNR=6.9							
ZALV	**Zalesovo Beam**	**60.04**	**349**	P	P	17 30 52.3	-0.6
0.9nm,0.4s,baz=166,slow=6.0,SNR=5.5							
TXAR	**Lajitas Array**	**145.70**	**41**	PKPbc	PKPbc	17 40 26.1	+0.1
0.7nm,0.4s,baz=295,slow=0.7,SNR=18							

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*TAP **23** 17:26:10.7, 24°.04N×122°.70E, h35km, ML2.5, C*
*JMA **23** 17:26:11.0±0.1, 24°.04N×122°.62E, h26km, M1.8*
ISC 23 17:26:08.1±1.1, 23°.90N±0°.02×122°.63E±0°.02, h10km±9km, n71, σ0s74/134, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.62**	**27**	P	**Pb**	**17 26 20.9**	**-0.2**
JYNG				*e*S	**Sg**	**17 26 28.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.66**	**32**	P	**Pb**	**17 26 22.1**	**+0.3**
YOJ				*e*S	**Sg**	**17 26 29.3**	**-0.3**
YOJ	**Yonaguni jima**	**0.66**	**32**	*i* P	**Pb**	**17 26 21.6**	**-0.2**
baz=33							
YOJ				*i* S	**Sg**	**17 26 29.4**	**-0.2**
baz=33							
EWUT	**Wuta**	**0.95**	**305**	P	**Pn**	**17 26 27.6**	**+0.1**
baz=295							
EWUT				S	**Sb**	**17 26 40.1**	**+0.7**
baz=295							
TWD	**Chiawan**	**0.96**	**281**	*e*P	**Pn**	**17 26 28.4**	**+0.6**
baz=272							
TWD				*e*S	**Sn**	**17 26 42.7**	**+1.2**
baz=272							
NACB	**Ninganchiao**	**0.99**	**286**	P	**Pn**	**17 26 28.3**	**+0.3**
baz=265							
ETLH	**Xiulin Townshi**	**1.09**	**287**	P	**Pn**	**17 26 30.4**	**+0.8**
baz=267							
ETLH				S	**Sn**	**17 26 45.6**	**+0.7**
baz=267							
IRIF	**Iriomote-Funau**	**1.09**	**66**	P	**Pn**	**17 26 30.2**	**+0.7**
ESL	**Shilin**	**1.10**	**266**	*e*P	**Pn**	**17 26 30.4**	**+0.8**
baz=250							
ESL				*e*S	**Sn**	**17 26 45.4**	**+0.5**
baz=250							
NDS	**Dongshan**	**1.11**	**311**	P	**Pn**	**17 26 30.2**	**+0.5**
baz=303							
NDS				*e*S	**Sg**	**17 26 43.8**	**-0.2**
baz=303							
EGFH	**Guangfu**	**1.12**	**259**	*e*P	**Pn**	**17 26 30.9**	**+0.9**
baz=252							
EGFH				*e*S	**Sn**	**17 26 46.4**	**+0.9**
baz=252							
HGSD	**Ruisui**	**1.18**	**250**	*e*P	**Pn**	**17 26 32.6**	**+1.9**
baz=245							
HGSD				*e*S	**Sn**	**17 26 47.6**	**+0.8**
baz=245							
NTC	**Toucheng**	**1.20**	**323**	*e*P	**Pb**	**17 26 30.3**	**-0.6**
baz=328							
NTC				S	**Sb**	**17 26 46.8**	**+0.2**
baz=328							
TWE	**Neicheng**	**1.20**	**313**	P	**Pg**	**17 26 31.6**	**+0.4**
baz=305							
TWE				*e*S	**Sg**	**17 26 47.1**	**+0.2**
baz=305							
ENTT	**Nioudou**	**1.22**	**308**	P	**Pg**	**17 26 32.0**	**+0.4**
baz=299							
ENTT				*e*S	**Sn**	**17 26 48.1**	**+0.2**
baz=299							
NDT	**Datong Townshi**	**1.24**	**305**	*e*P	**Pg**	**17 26 32.0**	**+0.1**
baz=284							
NDT				*e*S	**Sn**	**17 26 48.3**	**0.0**
baz=284							
NNSB	**Datong**	**1.26**	**295**	P	**Pg**	**17 26 32.4**	**+0.1**
baz=287							
NNSB				*e*S	**Sn**	**17 26 49.2**	**+0.3**
baz=287							
NNSH	**Datong**	**1.26**	**295**	*e*P	**Pg**	**17 26 32.6**	**+0.3**
baz=287							
NNSH				*e*S	**Sn**	**17 26 51.0**	**+2.0**
baz=287							
NNS	**Nan Shan**	**1.27**	**295**	*e*P	**Pn**	**17 26 32.0**	**0.0**
baz=287							
NNS				*e*S	**Sg**	**17 26 48.8**	**-0.2**
baz=287							
WHF	**Hehuan Shan**	**1.27**	**281**	*e*P	**Pg**	**17 26 32.8**	**+0.2**
baz=275							
WHF				*e*S	**Sg**	**17 26 49.3**	**+0.1**
baz=275							
TIPB	**Shuangxi**	**1.30**	**326**	P	**Pn**	**17 26 32.0**	**-0.4**
baz=332							
TIPB				*e*S	**Sb**	**17 26 46.6**	**-2.7**
baz=332							
JKRS	**Kuro-shima**	**1.30**	**75**	P	**Pg**	**17 26 34.2**	**+1.0**
FUSS	**Fushou**	**1.31**	**286**	*e*P	**Pg**	**17 26 33.5**	**0.0**
baz=279							
FUSS				*e*S	**Sn**	**17 26 51.2**	**+0.7**
baz=279							
EYUL	**Yuli**	**1.32**	**246**	P	**Pg**	**17 26 34.0**	**+0.5**
baz=231							
EYUL				S	**Sg**	**17 26 51.9**	**+1.2**
baz=231							
YULB	**Yu-li**	**1.32**	**248**	P	**Pg**	**17 26 34.3**	**+0.8**
baz=233							
YULB				S	**Sg**	**17 26 51.3**	**+0.6**
baz=233							
OWD	**Renai**	**1.33**	**273**	P	**Pg**	**17 26 34.0**	**+0.2**
baz=267							
OWD				*e*S	**Sg**	**17 26 50.9**	**-0.2**
baz=267							
TWF1	**Yuli**	**1.34**	**246**	P	**Pg**	**17 26 34.9**	**+1.1**
baz=231							
TWF1				*e*S	**Sg**	**17 26 52.3**	**+1.1**
baz=231							
CHGB	**Renai**	**1.34**	**277**	*e*P	**Pg**	**17 26 34.3**	**+0.4**
baz=271							
CHGB				*e*S	**Sg**	**17 26 51.3**	**-0.1**
baz=271							
NWLT	**Wulai**	**1.35**	**311**	P	**Pg**	**17 26 34.0**	**-0.1**
baz=316							
NWLT				*e*S	**Sn**	**17 26 51.3**	**+0.2**
baz=316							
VWDT	**VWDT**	**1.37**	**264**	P	**Pg**	**17 26 35.0**	**+0.5**
baz=259							
VWDT				*e*S	**Sg**	**17 26 52.4**	**+0.2**
baz=259							
YHNB	**Yeheng**	**1.38**	**304**	P	**Pb**	**17 26 34.0**	**0.0**
baz=297							
YHNB				*e*S	**Sb**	**17 26 51.1**	**-0.7**
baz=297							
TDCB	**Techi**	**1.39**	**285**	*e*P	**Pg**	**17 26 35.2**	**+0.3**
baz=269							
CHKT	**Chengkung**	**1.41**	**236**	*e*P	**Pg**	**17 26 35.2**	**0.0**
baz=222							
CHKT				*e*S	**Sg**	**17 26 52.6**	**-0.8**
baz=222							
FULB	**Fuli**	**1.41**	**241**	*e*P	**Pg**	**17 26 35.5**	**+0.3**
baz=227							
FULB				*e*S	**Sg**	**17 26 54.5**	**+0.9**
baz=227							
TWA	**Mucha**	**1.44**	**319**	*e*P	**Pb**	**17 26 34.7**	**-0.3**
baz=312							
TWA				*e*S	**Sn**	**17 26 52.5**	**-0.8**
baz=312							
JIJ	**Ishigaki jima**	**1.46**	**71**	P	**Pb**	**17 26 35.3**	**-0.1**
JIJ				*e*S	**Sn**	**17 26 53.1**	**-0.6**
TATO	**Taipei**	**1.50**	**316**	*e*P	**Pb**	**17 26 35.6**	**-0.4**
baz=324							
TATO				*e*S	**Sn**	**17 26 54.0**	**-0.7**
baz=324							
EDH	**Donghe**	**1.53**	**233**	*e*P	**Pg**	**17 26 37.4**	**-0.1**
baz=221							
EDH				*e*S	**Sb**	**17 26 55.5**	**-0.4**
baz=221							
SSLB	**Suanglung**	**1.54**	**266**	*e*P	**Pg**	**17 26 37.1**	**-0.6**
baz=261							
SSLB				*e*S	**Sg**	**17 26 57.1**	**-0.6**
baz=261							
DPDB	**Guoxing**	**1.56**	**275**	*e*P	**Pg**	**17 26 38.7**	**+0.6**
baz=262							
DPDB				*e*S	**Sg**	**17 26 58.1**	**-0.4**
baz=262							
YM01	**YM01**	**1.57**	**322**	*e*P	**Pn**	**17 26 36.0**	**-0.1**
baz=316							
YM01				*e*S	**Sn**	**17 26 54.8**	**-1.9**
baz=316							
SMLT	**Sun Moon Lake**	**1.58**	**270**	*e*P	**Pg**	**17 26 38.3**	**-0.3**
baz=264							
SMLT				*e*S	**Sb**	**17 26 58.1**	**+0.4**
baz=264							
WHP	**Taichung City**	**1.58**	**284**	P	**Pg**	**17 26 39.0**	**+0.4**
baz=268							
WHP				*e*S	**Sg**	**17 26 59.1**	**-0.1**
baz=268							
YUS	**Yu-Shan**	**1.59**	**256**	*e*P	**Pg**	**17 26 39.2**	**+0.5**
baz=251							
YUS				*e*S	**Sg**	**17 26 59.0**	**-0.4**
baz=251							
LDUT	**Ludao**	**1.62**	**221**	*e*P	**Pb**	**17 26 37.4**	**-0.7**
baz=219							
LDUT				*e*S	**Sn**	**17 26 57.7**	**0.0**
baz=219							
TYC	**Yuchr**	**1.62**	**271**	*e*P	**Pg**	**17 26 39.0**	**-0.3**
baz=265							
TYC				*e*S	**Sb**	**17 26 59.0**	**+0.3**
baz=265							
ELDTW	**Lidau**	**1.64**	**245**	*e*P	**Pb**	**17 26 38.4**	**-0.1**
baz=241							
ELDTW				*e*S	**Sb**	**17 26 59.3**	**-0.1**
baz=241							
WHYT	**Xinyi Township**	**1.64**	**263**	*e*S	**Sg**	**17 27 02.3**	**+1.4**
baz=248							
LIOB	**Emei**	**1.65**	**297**	P	**Pb**	**17 26 38.8**	**+0.1**
baz=291							
LIOB				*e*S	**Sb**	**17 26 59.6**	**0.0**
baz=291							
NSTT	**Nanjuang**	**1.66**	**296**	*e*P	**Pb**	**17 26 39.0**	**+0.2**
baz=290							
NSTT				*e*S	**Sb**	**17 26 59.6**	**-0.1**
baz=290							
JISG	**Ishigakijimahi**	**1.68**	**66**	P	**Pn**	**17 26 38.1**	**+0.5**
JISG				*e*S	**Sn**	**17 26 59.0**	**-0.2**
LONT	**Longtian**	**1.69**	**235**	*e*P	**Pg**	**17 26 40.0**	**-0.6**
baz=224							
LONT				*e*S	**Sb**	**17 27 00.8**	**0.0**
baz=224							
ALS	**Alishan**	**1.72**	**257**	*e*P	**Pg**	**17 26 40.9**	**-0.2**
baz=253							
ALS				*e*S	**Sb**	**17 27 02.1**	**+0.4**
baz=253							
WJS	**Zhushan**	**1.74**	**268**	*e*P	**Pg**	**17 26 41.6**	**0.0**
baz=263							
WJS				*e*S	**Sg**	**17 27 05.2**	**+0.9**
baz=263							
CHN5	**Tsauling**	**1.81**	**261**	*e*P	**Pg**	**17 26 42.5**	**-0.4**
baz=248							
CHN5				*e*S	**Sg**	**17 27 05.6**	**-0.9**
baz=248							
STYH	**Taoyuan**	**1.85**	**247**	*e*P	**Pb**	**17 26 42.5**	**+0.5**
baz=236							
STYH				*e*S	**Sb**	**17 27 05.3**	**+0.1**
baz=236							
STYT	**Tauyuan**	**1.87**	**247**	*e*P	**Pb**	**17 26 42.4**	**0.0**
baz=236							
STYT				*e*S	**Sg**	**17 27 07.1**	**-1.1**
baz=236							
WDLH	**Douliu**	**1.93**	**264**	*e*S	**Sg**	**17 27 09.2**	**-0.9**
baz=260							
TPUB	**Ta-pu**	**1.93**	**252**	*e*P	**Pg**	**17 26 44.1**	**-1.0**
baz=239							
TPUB				*e*S	**Sg**	**17 27 09.3**	**-0.9**
baz=239							
WTP	**Ta-pu**	**1.96**	**251**	*e*P	**Pg**	**17 26 45.2**	**-0.6**
baz=239							
WTP				*e*S	**Sg**	**17 27 10.5**	**-0.7**
baz=239							
SLGT	**Liugui**	**2.03**	**244**	*e*P	**Pg**	**17 26 46.0**	**-1.2**
baz=235							
SLGT				*e*S	**Sb**	**17 27 11.2**	**+0.6**
baz=235							
SGST	**Jiashian**	**2.05**	**247**	*e*P	**Pg**	**17 26 46.4**	**-1.0**
baz=235							
SGST				*e*S	**Sg**	**17 27 12.6**	**-1.4**
baz=235							
CHN1	**Nanshi**	**2.06**	**250**	*e*P	**Pg**	**17 26 46.4**	**-1.2**
baz=246							
CHN1				*e*S	**Sg**	**17 27 12.8**	**-1.4**
baz=246							
WRL	**Guolierlin Hig**	**2.06**	**271**	*e*S	**Sb**	**17 27 12.3**	**+0.9**
baz=279							
WTK	**Tuku**	**2.06**	**265**	*e*P	**Pb**	**17 26 45.6**	**-0.1**
baz=260							
WTK				*e*S	**Sb**	**17 27 11.6**	**+0.2**
baz=260							
LAY	**Lan-yu**	**2.10**	**208**	*e*S	**Sn**	**17 27 10.4**	**+0.8**
baz=207							
SSD	**Sandimen**	**2.17**	**238**	*e*P	**Pb**	**17 26 46.8**	**-0.6**
baz=230							
SSD				*e*S	**Sb**	**17 27 13.9**	**-0.5**
baz=230							
TSMG	**Majia**	**2.18**	**237**	*e*P	**Pb**	**17 26 47.0**	**-0.7**
baz=229							
TSMG				*e*S	**Sb**	**17 27 13.4**	**-1.3**
baz=229							
SCST	**Cishan**	**2.21**	**243**	*e*P	**Pg**	**17 26 50.0**	**-0.5**
baz=229							
SCST				*e*S	**Sg**	**17 27 18.7**	**-0.3**
baz=229							
EAST	**Anshuo**	**2.23**	**228**	*e*P	**Pb**	**17 26 47.4**	**-1.2**
baz=233							
EAST				*e*S	**Sb**	**17 27 14.5**	**-1.7**
baz=233							
MASBT	**Mashibuluo**	**2.24**	**236**	*e*P	**Pb**	**17 26 47.0**	**-1.7**
baz=227							
MASBT				*e*S	**Sb**	**17 27 15.9**	**-0.6**
baz=227							

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*ISK **23** 17:26:59.7, 37°.17N×36°.22E, h4km, ML2.6/13*
*DDA **23** 17:26:59.3, 37°.14N×36°.19E, h7km±2km, ML2.7*
ISC 23 17:27:00.1±1.0, 37°.16N±0°.03×36°.21E±0°.02, h8km±9km, n21, σ0s70/33, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAMA	**Osmaniye**	**0.36**	**86**	*i* P	**Pg**	**17 27 06.8**	**-0.5**
KAMA				*i* S	**Sg**	**17 27 11.6**	**-0.5**
CEYT	**Ceyhan**	**0.40**	**248**	PG	**Pb**	**17 27 08.3**	**-1.1**
ANDN	**Andirin**	**0.43**	**14**	*i* P	**Pg**	**17 27 08.3**	**-0.2**
ANDN				IAML	**S**	**17 27 15.0**	**+0.8**
comp=E,691nm,0.2s							
ANDN				IAML	**S**	**17 27 15.0**	**+0.8**
comp=N,605nm,0.3s							
ANDN				*i* S	**S**	**17 27 15.0**	**+0.8**
KOZT	**Kozan**	**0.44**	**316**	PG	**Pg**	**17 27 08.7**	**0.0**
HCB	**Kahramanmara**	**0.58**	**72**	*i* P	**Pg**	**17 27 10.6**	**-0.7**
HCB				*i* S	**Sg**	**17 27 19.8**	**+0.8**
KMRS	**Kahramanmaras**	**0.65**	**58**	PG	**Pg**	**17 27 12.4**	**-0.2**
TAHT	**Tahtakopru-Hat**	**0.78**	**182**	PG	**Pb**	**17 27 15.6**	**-0.3**
TAHT				SG	**Sb**	**17 27 27.1**	**+0.4**
KUZU	**Kuzuini**	**0.79**	**119**	*i* P	**Pb**	**17 27 15.6**	**-0.4**
KUZU				*i* S	**Sb**	**17 27 26.4**	**-0.5**
KUZU				IAML		17 27 28.0	
comp=N,291nm,0.4s							
KUZU				IAML		17 27 28.0	
comp=E,238nm,0.2s							
GAZ	**Gaziantep**	**0.80**	**89**	PG	**Pb**	**17 27 15.5**	**-0.7**
GAZ				SG	**Sb**	**17 27 26.9**	**-0.2**
KRTS	**Karatas**	**0.89**	**229**	PG	**Pn**	**17 27 18.3**	**-0.5**
KARA	**Karaisali**	**0.93**	**277**	PG	**Pb**	**17 27 18.5**	**+0.1**
CMRD	**Camardi-Nigde**	**1.09**	**298**	PN	**Pn**	**17 27 21.4**	**-0.4**
GZT	**Gaziantep**	**1.09**	**79**	*i* P	**Pb**	**17 27 20.9**	**-0.4**
GZT				IAML		17 27 36.0	
comp=N,151nm,0.4s							
GZT				*i* S	**Sn**	**17 27 36.7**	**-0.5**
GZT				IAML		17 27 37.0	
comp=E,205nm,0.5s							
YAHY	**KAYSERI_Yahyal**	**1.15**	**324**	*i* P	**Pg**	**17 27 21.3**	**-0.9**
YAHY				*i* S	**Sn**	**17 27 40.2**	**+1.6**
SARI	**SarD1z-Kayseri**	**1.25**	**7**	PN	**Pn**	**17 27 24.0**	**0.0**
MERS	**Mersin**	**1.39**	**258**	PN	**Pg**	**17 27 26.8**	**+0.2**
ATAB	**Bozova**	**1.69**	**79**	*i* P	**Pg**	**17 27 32.8**	**+0.4**
ATAB				*i* S	**Sg**	**17 27 54.5**	**+0.2**
BNN	**Bunyan**	**1.71**	**350**	PN	**Pb**	**17 27 30.9**	**-1.0**
DARE	**Darende-Malaty**	**1.73**	**35**	PN	**Pb**	**17 27 31.3**	**-0.8**
AKCD	**Akcadag**	**1.77**	**50**	*i* P	**Pg**	**17 27 33.1**	**-0.8**
AKCD				*i* S	**Sg**	**17 27 56.9**	**0.0**
AKCD				IAML		17 28 01.0	
comp=N,160nm,0.4s							
AKCD				IAML		17 28 01.0	
comp=E,95nm,0.5s							
URFA	**Urfa**	**2.10**	**82**	PN	**Pn**	**17 27 36.8**	**+1.3**

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*TEH **23** 17:44:17.4, 35°.72N×57°.83E, h7km, ML3.4*
*IDC **23** 17:44:18.8±2.5, 35°.76N×57°.51E, h0km, mb3.1/3, mb1 3.3/5, mb1mx3.1/47, mbtmp3.1/5, ML3.2/2, Error ellipse: s-maj=34.5km s-min=18.9km az=25.0*
*THR **23** 17:44:19.7±0.4, 35°.64N×57°.67E, h18km±8km, ML3.4*
ISC 23 17:44:20.7±0.8, 35.72N±0°.03×57°.88E±0°.04, h18km, n43, σ1s44/47, mb3.0/3, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBZV	**Sabzevar**	**0.70**	**342**	*e*Pg	**Pb**	**17 44 32.1**	**-2.4**
SBZV				*e*Sg	**Sb**	**17 44 43.3**	**-0.7**
IAKL	**Akhelmad**	**1.13**	**39**	*e*Pg	**Pn**	**17 44 40.2**	**-1.7**
IAKL				*e*		17 45 01.5	
comp=E,8μm,0.4s							
IPAY	**Payeh**	**1.16**	**51**	*e*Pg	**Pn**	**17 44 41.0**	**-1.3**
IPAY				*e*		17 44 58.1	
comp=Z,5μm,0.4s							
IMOG	**Moghan**	**1.25**	**71**	*e*Pg	**Pn**	**17 44 42.4**	**-1.1**
ISFR	**Sfrayin**	**1.33**	**4**	*e*Pg	**Pn**	**17 44 44.0**	**-0.7**
ISFR				*e*Sg	**Sg**	**17 45 03.6**	**-0.4**
ISFR				*e*		17 45 07.2	
comp=Z,6μm,0.4s							
SHRO	**Shahrood**	**1.54**	**281**	*e*Pn	**Pn**	**17 44 46.2**	**-1.2**
SHRO	**Shahrood**	**1.54**	**281**	*e*Pn	**Pn**	**17 44 46.2**	**-1.2**
IKRD	**Kardeh**	**1.69**	**51**	*e*Pg	**Pb**	**17 44 51.0**	**-0.5**
IKRD				*e*		17 45 18.3	
comp=Z,4μm,0.6s							
IMYA	**Miami**	**1.91**	**70**	*e*Pn	**Pb**	**17 44 53.9**	**-1.2**
IMYA				*e*		17 44 59.9	
comp=Z,2μm,0.2s							
BJRD	**Bojnurd**	**2.01**	**349**	*e*Pn	**Pb**	**17 44 55.7**	**-1.1**
BJRD				*e*Sg	**Sg**	**17 45 24.8**	**-0.7**
BJRD	**Bojnurd**	**2.01**	**349**	*e*Pn	**Pb**	**17 44 55.7**	**-1.1**
TNSJ	**Nastanj**	**2.04**	**211**	*e*Pn	**Pn**	**17 44 53.8**	**-0.5**
TKDS	**Koohdasht(Taba**	**2.19**	**197**	*e*Pn	**Pn**	**17 44 56.2**	**-0.2**
GEYT	**Alibeck**	**2.21**	**5**	Pn	**Pb**	**17 44 58.0**	**-2.2**
comp=Z,4.9nm,0.3s,baz=196,slow=19,SNR=22							
GEYT				Sn	**Sb**	**17 45 26.2**	**-1.1**
comp=Z,3.6nm,0.3s,baz=192,slow=26,SNR=3.9							
AFRZ	**Afriz**	**2.47**	**157**	*e*Pn	**Pn**	**17 45 00.6**	**+0.3**
IMND	**Minoodasht**	**2.51**	**308**	*e*Pn	**Pn**	**17 45 01.5**	**+0.8**
TPRV	**Parvadeh(Tabas**	**2.86**	**201**	*e*Pn	**Pn**	**17 45 05.0**	**-0.5**
SHRT	**Shahrakht**	**2.87**	**135**	*e*Pn	**Pb**	**17 45 07.6**	**-3.8**
SHRT				IAML		17 45 59.1	
comp=N,71nm,0.4s							
SHRT	**Shahrakht**	**2.87**	**135**	*e*Pn	**Pb**	**17 45 07.6**	**-3.8**
ITEG	**Tejag**	**2.91**	**165**	*e*		17 45 59.7	
ITEG	comp=Z,1μm,0.7s			*e*Pn	**Pn**	**17 45 06.6**	**+0.3**
IMON	**Monand**	**2.92**	**149**	*e*Pn	**Pn**	**17 45 07.4**	**+0.9**
IANJ	**Anjilo**	**3.24**	**267**	*e*Pn	**Pn**	**17 45 10.8**	**-0.1**
IGLO	**Ghaloghah**	**3.37**	**285**	*

YZKH	Yazd	4.30	220	*e*Pn		Pn	17 45 24.5	-0.8
IPRN	Peran	4.52	278	*e*Pn		Pn	17 45 28.5	+0.1
IBAF	Bafgh	4.55	206	*e*Pn		Pn	17 45 28.0	-0.8
NHDN	Nehbandan	4.68	157	*e*Pn		Pn	17 45 31.3	+0.7
ISFB	Sefidab	4.82	255	*e*Pn		Pn	17 45 31.8	-0.7
KRSH	Karshahi	5.04	251	*e*Pn		Pn	17 45 35.4	-0.1
IMEH	Mehriz	5.11	213	*e*Pn		Pn	17 45 37.0	+0.5
ISAD	Sadrabad	5.16	224	*e*Pn		Pn	17 45 37.2	-0.1
IZEF	Zefreh	5.39	240	*e*Pn		Pn	17 45 40.2	-0.2
IRAM	Rameshеh	6.01	231	*e*Pn		Pn	17 45 48.7	-0.3
BVAR	Borovoye Array	19.43	23	P		Pn	17 48 45.9	-1.2
	comp=N,0.1nm,0.3s,baz=180,slow=12,SNR=1.2							
KURBB	Kurchatov Arra	21.08	39	P		P	17 49 06.5	+2.6
	comp=N,0.5nm,0.8s,baz=238,slow=11,SNR=4.1							
MKAR	Makanchi Array	21.34	51	P		P	17 49 09.2	+2.4
	comp=N,0.5nm,0.8s,baz=233,slow=11,SNR=4.5							
CMAR	Chiang Mai Arr	40.07	104	P		P	17 51 58.6	+3.4
	comp=N,0.5nm,0.5s,baz=295,slow=8.4,SNR=5.3							

IDC ***23*** *17:44:23.1±2.0,* **6°54S×129°51E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.3/44, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=138.9km s-min=29.0km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.13	161	Pn	Pn	17 47 44.5	-0.1
	0.1nm,0.3s,baz=340,slow=12,SNR=2.3						
WRA				Sn	Sn	17 50 10.6	-12
	0.2nm,0.3s,baz=338,slow=22,SNR=7.2						
ASAR	Alice Springs	17.55	167	P	Pn	17 48 29.2	-0.1
	0.3nm,0.3s,baz=342,slow=9.7,SNR=56						
ASAR				S	Sn	17 51 31.3	-14
	0.0nm,0.3s,baz=324,slow=49,SNR=1.2						
STKA	Stephens Creek	27.62	157	P	P	17 50 12.5	+0.1
	2.5nm,1.0s,baz=335,slow=17,SNR=2.3						
MKAR	Makanchi Array	67.57	327	P	P	17 55 21.5	0.0
	0.1nm,0.4s,baz=132,slow=7.7,SNR=1.5						

IDC ***23*** *17:47:35.5±1.8, 17°32S×174°59W, h258km±18km, mb3.5/8, mb1 3.7/10, mb1mx3.4/44, mbtmp4.1/10, Error ellipse: s-maj=24.8km s-min=13.9km az=136.0*
NEIC ***23*** *17:47:35.2±1.2, 17°08S±0°07×174°5W±0°1, h277km±10km, mb4.5/32, Error ellipse: s-maj=14.9km s-min=9.1km az=72.0*
ISC 23 17:47:34.3±0.5, 17°05S±0°07×174°61W±0°09, h250km, n61, σ1§93/69, mb4.4/22, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.14	42	P	Pn	17 48 41.9	+1.9
	52nm,0.3s,baz=69,slow=1.1,SNR=77						
AFI				S	S	17 49 31.0	-1.1
	43nm,0.3s,baz=39,slow=22,SNR=6.8						
NIUE	Niue	4.89	115	Pn	Pn	17 48 49.4	+0.6
MSVF	Nonsavu	7.04	263	P	Pn	17 49 18.1	+2.4
	1.3nm,0.3s,baz=103,slow=17,SNR=14						
KNTN	Kanton	14.46	12	P	Pn	17 50 46.9	-1.3
DZM	Mont Dzumac	18.54	251	P	P	17 51 32.3	-0.6
DZM				IAmb	IAmb	17 51 56.5	
	comp=Z,29nm,1.4s						
OUZ	Omahuta	20.94	208	P	P	17 51 56.7	-1.5
WCZ	Waipu Caves	21.23	205	P	P	17 51 60.0	-1.0
MXZ	Matakaoa Point	21.37	196	P	P	17 52 00.8	-1.6
WMGZ	Waiomatatini S	21.59	195	P	P	17 52 07.2	+2.8
HAZ	Te Kaha	21.69	197	P	P	17 52 06.3	+0.9
HAZ				S	S	17 55 46.6	-1.0
PKGZ	Pakihiroa	21.74	196	P	P	17 52 07.6	+1.7
PKGZ				S	S	17 55 47.9	-0.7
TWGZ	Tauwhareparae	22.03	196	P	P	17 52 10.6	+2.0
TWGZ				S	S	17 55 58.3	+5.0
OPRZ	Ohinepanea	22.13	199	P	P	17 52 13.5	+4.1
MWZ	Matawai	22.30	196	P	P	17 52 12.2	+1.1
MWZ				S	S	17 56 01.5	+3.9
TKGZ	Te Karaka	22.32	196	P	P	17 52 12.3	+1.2
URZ	Urewera	22.35	197	P	P	17 52 10.5	-0.9
	comp=Z,16nm,0.3s,baz=119,slow=23,SNR=32						
URZ				S	S	17 55 53.4	-4.8
	comp=Z,16nm,1.2s,baz=122,slow=22,SNR=1.7						
URZ	Urewera	22.35	197	P	P	17 52 10.2	-1.2
URZ				IAmb	IAmb	17 52 30.9	
	comp=Z,29nm,1.1s						
URZ	Urewera	22.35	197	P	P	17 52 10.5	-0.9
URZ				S	S	17 55 59.8	+1.6
RAGZ	Rawiri	22.48	197	P	P	17 52 14.3	+1.6
RIGZ	Rimuhau	22.59	196	P	P	17 52 14.9	+1.2
RIGZ				S	S	17 56 06.7	+4.4
HIZ	Hauiti	23.29	201	P	P	17 52 21.3	+1.3
HIZ				IAmb	IAmb	17 52 23.7	
	comp=Z,41nm,1.2s						
BKZ	Black Stump Fm	23.37	198	P	P	17 52 19.5	-1.3
BKZ				IAmb	IAmb	17 52 44.6	
	comp=Z,23nm,1.3s						
BFZ	Birch Farm	24.84	197	P	P	17 52 31.8	-2.3
MSWZ	Moikau Station	25.81	198	P	P	17 52 41.4	-1.4
SNZO	South Karori	25.87	199	P	P	17 52 42.4	-0.8
PLWZ	Palliser	25.95	198	P	P	17 52 41.0	-3.0
QRZ	Quartz Range	26.17	203	P	P	17 52 45.2	-0.8
NNZ	Nelson	26.22	201	P	P	17 52 45.1	-1.2
TUWZ	Tuamarina	26.22	200	P	P	17 52 44.4	-2.0
THZ	Tophouse	26.86	201	P	P	17 52 50.0	-2.2
THZ				IAmb	IAmb	17 52 58.3	
	comp=Z,7.2nm,0.9s						
KHZ	Kahutara	27.24	199	P	P	17 52 54.2	-1.2
KHZ				IAmb	IAmb	17 53 10.9	
	comp=Z,20nm,1.2s						
LTZ	Lake Taylor	27.99	201	P	P	17 53 00.8	-1.3
LTZ				IAmb	IAmb	17 53 07.4	
	comp=Z,22nm,1.2s						
OXZ	Oxford	28.55	201	P	P	17 53 05.7	-1.3
OXZ				IAmb	IAmb	17 53 11.6	
	comp=Z,19nm,1.2s						
MQZ	McQueen's Vall	28.68	199	P	P	17 53 07.3	-0.9
RPZ	Rata Peaks	29.23	202	P	P	17 53 11.6	-1.5
RPZ				IAmb	IAmb	17 53 29.2	
	comp=Z,15nm,1.3s						
FOZ	Fox Glacier	29.52	203	P	P	17 53 14.6	-1.0
FOZ				IAmb	IAmb	17 53 15.4	
	comp=Z,19nm,1.0s						
WKZ	Wanaka	30.93	203	P	P	17 53 26.1	-1.9
MLZ	Mavora Lakes	31.72	203	P	P	17 53 33.0	-2.0
MLZ				IAmb	IAmb	17 53 35.4	
	comp=Z,5.4nm,0.8s						
DCZ	Deep Cove	32.18	204	P	P	17 53 37.7	-1.1
DCZ				IAmb	IAmb	17 53 46.5	
	comp=Z,21nm,1.4s						
WHZ	Wether Hill Ro	32.23	203	P	P	17 53 36.3	-3.0
WHZ				IAmb	IAmb	17 53 37.3	
	comp=Z,11nm,1.3s						
PYZ	Puysegur Point	32.95	204	P	P	17 53 42.3	-3.2
ARMA	Armidale	33.51	240	P	P	17 53 51.1	+0.3
CTA	Charters Tower	37.17	259	P	P	17 54 21.5	-0.4
	comp=Z,1nm,0.8s,baz=100,slow=6.1,SNR=2.6						
TOO	Toolangi	40.53	232	P	P	17 54 49.6	+0.1
TOO				IAmb	IAmb	17 54 55.5	
	comp=Z,20nm,1.5s						
STKA	Stephens Creek	42.22	241	P	P	17 55 02.4	-0.8
	comp=Z,3.1nm,0.8s,baz=92,slow=13,SNR=4.9						
STKA	Stephens Creek	42.22	241	P	P	17 55 02.2	-1.1
BBOO	Buckleboo	46.99	241	P	P	17 55 40.6	-0.2
BBOO				IAmb	IAmb	17 55 41.2	
	comp=Z,21nm,1.2s						
WR0	Warramunga Arr	48.17	258	P	P	17 55 49.7	-0.3
WB0	Warramunga Arr	48.32	258	P	P	17 55 50.8	-0.5
WB2	Warramunga Arr	48.35	258	P	P	17 55 50.8	-0.6
WRA	Warramunga Arr	48.36	258	P	P	17 55 51.1	-0.3
	comp=Z,0.9nm,0.4s,baz=96,slow=7.1,SNR=46						
WRA	Warramunga Arr	48.36	258	P	P	17 55 50.7	-0.8
AS31	Alice Springs	48.51	253	P	P	17 55 52.7	+0.1
ASAR	Alice Springs	48.51	253	P	P	17 55 52.9	+0.2
	comp=Z,9.1nm,0.6s,baz=88,slow=8.9,SNR=223						
ASAR	Alice Springs	48.51	253	P	P	17 55 52.3	-0.3
JWT	Wachi	70.39	318	P	P	17 58 20.7	-0.7
QSPA	South Pole Qui	73.00	180	P	P	17 58 36.0	-0.7
NVAR	Mina Array Bea	76.32	42	P	P	17 58 58.0	+1.8
	comp=Z,0.2nm,0.5s,baz=229,slow=6.9,SNR=1.9						
TXAR	Lajitas Array	82.49	56	P	P	17 59 31.2	+1.7
	comp=Z,0.1nm,0.4s,baz=241,slow=3.0,SNR=1.8						
ILAR	Eielson Array	84.28	12	P	P	17 59 39.6	+2.0
	comp=Z,0.3nm,0.6s,baz=224,slow=5.9,SNR=4.8						
RWWY	Rawlins	85.28	44	P	P	17 59 39.7	-3.8
RWWY				IAmb	IAmb	17 59 46.0	
	comp=Z,9.7nm,0.6s						

IDC ***23*** *17:53:38.7±4.6, 6°86S×127°28E, h435km±58km, mb2.7/2, mb1 2.9/6, mb1mx2.6/50, mbtmp3.8/6, Error ellipse: s-maj=80.0km s-min=21.9km az=50.0*
ISC 23 17:53:36.1±1.5, 6.7S±0.1×127.6E±0.1, h400km, n6, σ1§10/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.25	228	P	Pn	17 55 02.0	+1.3
	6.0nm,0.3s,baz=56,slow=1.2,SNR=16						
BATI				S	S	17 56 08.3	-1.1
	3.8nm,0.3s,baz=57,slow=4.4,SNR=8.9						
FITZ	Fitzroy Crossi	11.52	189	P	P	17 56 10.5	0.0
	0.1nm,0.3s,baz=10,slow=5.0,SNR=14						
WRA	Warramunga Arr	14.73	154	P	P	17 56 46.3	+0.6
	0.5nm,0.3s,baz=329,slow=11,SNR=20						
WRA				S	S	17 59 21.4	-1.3
	0.1nm,0.3s,baz=330,slow=20,SNR=2.6						
ASAR	Alice Springs	17.95	161	P	P	17 57 20.7	+0.5
	0.4nm,0.3s,baz=343,slow=12,SNR=12						
STKA	Stephens Creek	28.28	154	P	P	17 58 55.0	+0.3
	0.6nm,0.6s,baz=334,slow=14,SNR=1.0						
KURBB	Kurchatov Arra	71.00	329	P	P	18 04 10.8	-0.8
	0.2nm,0.4s,baz=127,slow=5.1,SNR=2.3						

IDC ***23*** *17:54:13.7±8.2,* **25°56S×69°23W, h98km±60km, mb3.2/1, mb1 3.3/3, mb1mx3.1/30, mbtmp3.5/3, ML3.0/2, Error ellipse: s-maj=91.0km s-min=68.9km az=88.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.95	6	P	Pn	17 54 58.9	-0.2
	0.5nm,0.3s,baz=247,slow=2.4,SNR=3.0						
LVC				S	Sn	17 55 34.3	+0.3
	5.6nm,0.3s,baz=193,slow=22,SNR=8.6						
LPAZ	La Paz	9.28	7	P	Pn	17 56 26.0	+0.7
	0.2nm,0.3s,baz=174,slow=11,SNR=1.8						
TORD	Torodi Ar. Bea	79.01	70	P	P	18 06 07.0	-0.4
	0.2nm,0.4s,baz=223,slow=4.2,SNR=1.4						
ZALV	Zalesovo Beam	145.71	27	PKPbc	PKPdf	18 13 40.6	+0.3
	0.6nm,0.6s,baz=330,slow=1.6,SNR=2.5						
MKAR	Makanchi Array	149.01	40	PKPbc	PKPbc	18 13 49.7	-0.6
	0.5nm,0.7s,baz=292,slow=3.0,SNR=5.0						
MKAR				pPKPbc	pPKPbc	18 14 17.2	-1.2
	0.3nm,0.7s,baz=316,slow=3.3,SNR=4.0						

IDC ***23*** *17:56:04.5±1.2, 28°05N×65°97E, h0km, mb3.6/15, mb1 3.8/16, mb1mx3.6/51, mbtmp3.6/16, ML3.6/1, MS3.3/5, Ms1 3.3/5, ms1mx2.7/54, Error ellipse: s-maj=26.3km s-min=19.0km az=179.0*
ISC 23 17:56:05.1±0.9, 27.9N±0.1×66.0E±0.1, h10km, n24, σ1§19/21, mb3.6/16, MS3.3/4, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	Thamme Wali	6.97	44	P	Pn	17 57 46.0	-1.3
CEP	Cherat	7.79	40	P	Pn	17 57 58.2	-0.5
WSAR	Wadi Sarin	8.09	236	Pn	Pn	17 58 00.3	-2.4
	1.1nm,0.3s,baz=76,slow=6.5,SNR=14						
WSAR				Sn	Sn	17 59 25.6	-8.6
	0.7nm,0.3s,baz=316,slow=15,SNR=2.3						
CHCP	Chirah Chowk	8.49	46	P	Pn	17 58 07.7	-0.5
AAK	Ala-Archa	16.24	23	Pn	Pn	17 59 51.9	-1.5
	0.2nm,0.3s,baz=311,slow=12,SNR=4.2						
AAK				LR	LR	18 07 03.3	
	comp=Z,35nm,18.6s,baz=226,slow=41						
MKAR	Makanchi Array	22.79	30	P	P	18 01 06.8	-1.1
	0.5nm,0.5s,baz=214,slow=10,SNR=8.3						
MKAR				LR	LR	18 11 59.6	
	comp=Z,79nm,19.7s,baz=204,slow=42						
AKTO	Aktyubinsk	23.28	347	P	P	18 01 11.8	-0.9
	1.0nm,0.7s,baz=160,slow=13,SNR=2.4						
KBZ	Khabaz	24.34	316	P	P	18 01 24.1	+1.2
	1.9nm,0.8s,baz=16,slow=9.9,SNR=2.5						
KURBB	Kurchatov Arra	24.60	19	P	P	18 01 25.8	+0.5
	0.6nm,0.6s,baz=210,slow=8.7,SNR=5.6						
PALK	Pallekele	24.84	143	LR	LR	18 12 30.5	
	comp=Z,31nm,19.3s,baz=60,slow=40						
BVAR	Borovoye Array	25.29	6	P	P	18 01 30.3	-1.2
	0.2nm,0.4s,baz=192,slow=13,SNR=2.0						
ZALV	Zalesovo Beam	29.46	23	P	P	18 02 10.2	+1.3
	0.5nm,0.5s,baz=240,slow=13,SNR=2.3						
AKASG	Malin Array Be	35.85	320	P	P	18 03 05.4	+0.6
	0.2nm,0.3s,baz=111,slow=7.0,SNR=2.7						
MLR	Muntelu Rosu	36.11	310	P	P	18 03 09.0	+1.7
	6.7nm,1.1s,baz=35,slow=9.0,SNR=3.6						
SONM	Songino Array	37.06	46	P	P	18 03 14.9	-0.5
	0.2nm,0.5s,baz=291,slow=4.0,SNR=1.8						
FINES	FINESS Array B	42.70	333	P	P	18 04 01.5	-0.4
	2.9nm,0.9s,baz=119,slow=6.7,SNR=7.1						
GERES	GERESS Array B	44.96	312	P	P	18 04 19.9	-0.5
	0.4nm,0.6s,baz=83,slow=8.0,SNR=2.5						
ARCES	ARCESS Array B	47.70	342	P	P	18 04 42.0	+0.4
	4.1nm,1.1s,baz=116,slow=8.2,SNR=5.8						
KSRS	Korea Array	52.19	63	P	P	18 05 17.4	+1.3
	1.2nm,0.8s,baz=262,slow=7.3,SNR=4.4						
ESDC	Sonseca Array	57.94	301	P	P	18 05 57.5	-0.2
	0.5nm,0.8s,baz=63,slow=6.6,SNR=4.4						
TORD	Torodi Ar. Bea	61.33	270	P	P	18 06 22.8	+1.4
	0.8nm,0.7s,baz=56,slow=5.8,SNR=3.9						
MA2	Magadan	63.79	34	LR	LR	18 35 23.6	
	comp=Z,24nm,18.1s,baz=244,slow=37						
SEY	Seymchan	63.93	31	LR	LR	18 38 20.2	
	comp=Z,122nm,18.6s,baz=20,slow=40						
ASAR	Alice Springs	83.19	121	P	P	18 08 32.7	+0.9
	0.4nm,0.6s,baz=308,slow=5.3,SNR=7.5						

NEIC ***23*** *17:57:29.8±0.8, 16°9S±0°1×174°27W±0°06, h38km±10km, mb4.5/14, Error ellipse: s-maj=17.3km s-min=7.2km az=160.0*
IDC ***23*** *17:57:33.6±3.7, 16°74S×174°04W, h93km±51km, mb3.9/4, mb1 4.0/5, mb1mx3.5/32, mbtmp4.2/5, Error ellipse: s-maj=55.6km s-min=36.5km az=101.0*
ISC 23 17:57:33.4±0.8, 16.77S±0°09×173.8W±0.1, h100km, n20, σ1§25/21, mb4.4/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.47	35	P	Pn	17 58 26.8	+1.3
	22nm,0.3s,baz=206,slow=3.5,SNR=33						
AFI				S	Sn	17 59 03.9	-1.9
	62nm,0.3s,baz=153,slow=2.7,SNR=11						
AFI	Afiamalu	3.47	35	Pn	Pn	17 58 26.7	+1.2
NIUE	Niue	4.37	122	Pn	Pn	17 58 37.7	+0.1
URZ	Urewera	22.84	199	P	P	18 02 28.8	+0.7
	8.2nm,0.8s,baz=121,slow=23,SNR=10						
URZ	Urewera	22.84	199	P	P	18 02 28.9	+0.8
URZ				IAmb	IAmb	18 02 54.4	
	comp=Z,25nm,1.1s						
BKZ	Black Stump Fm	23.86	199	P	P	18 02 37.5	-0.1
BKZ				IAmb	IAmb	18 02 38.1	
	comp=Z,22nm,1.5s						
QRZ	Quartz Range	26.72	203	P	P	18 03 06.9	+3.5
THZ	Tophouse	27.39	202	P	P	18 03 08.6	-0.9
THZ				IAmb	IAmb	18 03 26.5	
	comp=Z,19nm,1.4s						
LTZ	Lake Taylor	28.51	202	P	P	18 03 21.0	+1.6
LTZ				IAmb	IAmb	18 03 34.0	
	comp=Z,17nm,1.3s						
ARMA	Armidale	34.30	240	P	P	18 04 09.0	-1.5
ARMA				IAmb	IAmb	18 04 11.0	
	comp=Z,15nm,1.4s						
STKA	Stephens Creek	43.01	241	P	P	18 05 22.6	-0.6
	comp=Z,1.2nm,0.5s,baz=56,slow=11,SNR=4.0						
BBOO	Buckleboo	47.78	241	P	P	18 06 01.0	+0.2
WR0	Warramunga Arr	48.95	258	P	P	18 06 10.0	0.0
WR0				IAmb	IAmb	18 06 35.6	
	comp=Z,10nm,1.4s						
WB0	Warramunga Arr	49.10	258	P	P	18 06 10.5	-0.7
WB0				IAmb	IAmb	18 06 33.0	
	comp=Z,3.5nm,1.1s						
WB2	Warramunga Arr	49.13	258	P	P	18 06 10.6	-0.8
WRA	Warramunga Arr	49.14	258	P	P	18 06 10.8	-0.6
	comp=Z,0.4nm,0.4s,baz=96,slow=7.0,SNR=19						
WRA				PcP	PcP	18 07 33.5	-0.1
	comp=Z,0.5nm,0.6s,baz=99,slow=3.3,SNR=2.8						
WRA	Warramunga Arr	49.14	258	IAmb	IAmb	18 06 11.1	
	comp=Z,0.2nm,1.2s						
AS31	Alice Springs	49.30	253	P	P	18 06 12.1	-0.5
AS31				IAmb	IAmb	18 06 13.2	
	comp=Z,2.6nm,0.6s						
ASAR	Alice Springs	49.30	253	P	P	18 06 12.2	-0.5
	comp=Z,7.1nm,0.6s,baz=88,slow=8.6,SNR=139						
ASAR				PcP	PcP	18 07 34.4	+0.3
	comp=Z,0.3nm,0.6s,baz=106,slow=3.8,SNR=1.9						
KSU1	Kansas State U	90.87	49	P	P	18 10 31.9	+5.9

SJA ***23*** *17:57:46.8±0.6, 23°26S×66°72W, h232km±3km, ML4.0, MW3.7*
IDC ***23*** *17:57:47.4±1.0, 23°21S×66°54W, h198km±12km, mb3.9/4, mb1 3.8/10, mb1mx3.5/32, mbtmp4.2/10, Error ellipse: s-maj=18.5km s-min=14.5km az=135.0*
VAO ***23*** *17:57:48.7±0.6, 23°22S×66°99W, h253km, mb4.2*
GUC ***23*** *17:57:48.2±0.7, 23°29S×66°77W, h222km±6km, ML4.2*
NEIC ***23*** *17:57:48.4±2.4, 23°26S±0°07×66°9W±0°1, h233km±7km, Error ellipse: s-maj=14.2km s-min=10.8km az=91.0*
ISC 23 17:57:47.2±0.6, 23°30S±0°04×66°77W±0°04, h223km±6km, n109, σ1§48/145, mb4.3/5, 10C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	Humahuaca	1.26	86	*e*P	Pn	17 58 21.9	+0.3
YJA	Yavi	1.61	46	*e*P	Pn	17 58 24.7	+0.2
YJA				*e*P	Pn	17 58 24.8	+0.4
YJA				*e*S	S	17 58 53.6	+0.3
SLA	San Lorenzo	1.83	141	⇓*i*P	Pn	17 58 27.1	+1.0
SLA				*i* S	S	17 58 55.9	-0.5
SLA	San Lorenzo	1.83	141	*e*P	Pn	17 58 27.1	+1.0
SLA				*e*S	S	17 58 57.0	+0.6
LVC	Limon Verde	2.08	289	P	Pn	17 58 30.0	+1.2
	119nm,0.3s,baz=107,slow=6.3,SNR=153						
LVC				S	S	17 59 01.2	+0.3
	44nm,0.3s,baz=222,slow=22,SNR=29						
LVC	Limon Verde	2.08	289	*e*P	Pn	17 58 29.6	+0.9
LVC				*i* S	S	17 59 00.2	-0.7
LVC	Limon Verde	2.08	289		Pn	17 58 29.8	+1.1
LVC	Limon Verde	2.08	289	*e*P	Pn	17 58 30.1	+1.2
LVC	Limon Verde	2.08	289	*e*P	Pn	17 58 29.9	+1.2
LVC				*e*S	S	17 59 01.4	+0.5
PB15	IPOC Station P	2.48	271	⇑*i*P	Pn	17 58 33.9	+1.3
PB15				*i* S	S	17 59 08.7	+0.8
PB15	IPOC Station P	2.48	271		Pn	17 58 33.7	+1.1
PB15	IPOC Station P	2.48	271	*e*P	Pn	17 58 34.2	+1.5
PB15				*e*S	S	17 59 08.2	+0.3
PB06	IPOC Station P	2.64	282	⇑*i*P	Pn	17 58 35.5	+1.2
PB06				*i* S	S	17 59 11.2	+0.2
PB06				IAML		17 59 16.4	
	comp=E,586nm,0.3s						
PB06	IPOC Station P	2.64	282		Pn	17 58 35.5	+1.2
PB06	IPOC Station P	2.64	282	*e*P	Pn	17 58 35.7	+1.4
PB06				*e*S	S	17 59 11.1	+0.1
PB06				IAML		17 59 14.1	
	comp=Z,405nm,0.3s						
PB09	IPOC Station P	2.73	303	⇑*i*P	Pn	17 58 36.8	+1.5
PB09				*i* S	S	17 59 13.0	+0.4
PB09				IAML		17 59 15.9	
	comp=E,272nm,0.6s						
PB09	IPOC Station P	2.73	303		Pn	17 58 36.6	+1.4
PB09	IPOC Station P	2.73	303	*e*P	Pn	17 58 36.9	+1.6
PB09				*e*S	S	17 59 12.7	0.0
PB09				IAML		17 59 15.6	
	comp=Z,249nm,0.5s						
FSA	Cafayete	2.90	166	*e*P	Pn	17 58 38.2	+1.1
FSA				*e*S	S	17 59 15.3	-0.8
PB03	IPOC Station P	3.02	294	⇑*i*P	Pn	17 58 39.4	+0.9
PB03				*i* S	S	17 59 17.3	-1.2
PB03	IPOC Station P	3.02	294	*e*P	Pn	17 58 39.5	+0.9
PB03				*e*S	S	17 59 18.1	-0.4
PB03				IAML		17 59 22.0	
	comp=Z,699nm,0.4s						
GO02	Mina Guanaco	3.17	234	⇑*i*P	Pn	17 58 41.5	+1.2
GO02				*i* S	S	17 59 22.5	+0.6
GO02	Mina Guanaco	3.17	234		Pn	17 58 41.5	+1.2
PB05	IPOC Station P	3.19	277	⇑*i*P	Pn	17 58 41.2	+0.8
PB05	IPOC Station P	3.19	277	*e*P	Pn	17 58 41.5	+1.1
PB05				*e*S	S	17 59 21.4	-0.5
PB05				IAML		17 59 22.3	
	comp=Z,118nm,0.4s						
PB04	IPOC Station P	3.26	286	*i* P	Pn	17 58 42.3	+1.0
PB04				*i* S	S	17 59 23.1	-0.4
PB04	IPOC Station P	3.26	286		Pn	17 58 42.0	+0.7
PB04	IPOC Station P	3.26	286	*e*P	Pn	17 58 42.2	+1.0
PB04				*e*S	S	17 59 23.1	-0.4
PB04				IAML		17 59 24.5	
	comp=Z,358nm,0.5s						
PB07	IPOC Station P	3.27	298	⇑*i*P	Pn	17 58 42.4	+0.9
PB07				*i* S	S	17 59 22.2	-1.7
PB07	IPOC Station P	3.27	298		Pn	17 58 42.3	+0.9
PB07	IPOC Station P	3.27	298	*e*P	Pn	17 58 42.4	+0.9
PB07				*e*S	S	17 59 22.7	-1.2
PB07				IAML		17 59 23.7	
	comp=Z,477nm,0.6s						
PB01	IPOC Station P	3.37	311	*e*P	Pn	17 58 43.1	+0.6
PB01				*i* S	S	17 59 25.2	-0.6
PB01	IPOC Station P	3.37	311		Pn	17 58 43.2	+0.8
PB01	IPOC Station P	3.37	311	*e*P	Pn	17 58 43.3	+0.8
PB01				*e*S	S	17 59 24.7	-1.0
PB01				IAML		17 59 28.0	
	comp=Z,283nm,0.2s						
PB10	IPOC Station

MRA	**San Martin**	**9.14**	**174**	*e*P		**Pn**	**17 59 54.7**	**-0.4**
MRA				*e*S		**S**	**18 01 33.1**	**-4.9**
MRA				IAML			18 01 51.0	
	comp=Z,6.7nm,0.6s							
AUSP	**Uspallata**	**9.19**	**194**	*e*P		**Pn**	**17 59 57.3**	**+1.3**
ASAL	**Salagasta**	**9.44**	**191**	*e*P		**Pn**	**17 59 59.6**	**+0.7**
ASAL				*e*S		**S**	**18 01 40.9**	**-4.2**
ASAL				IAML			18 01 58.5	
	comp=Z,3.8nm,1.7s							
RFA	**San Rafael**	**11.53**	**187**	*e*P		**Pn**	**18 00 25.5**	**0.0**
BO02	**Sierra Bellavi**	**11.98**	**196**	*e*P		**P**	**18 00 37.1**	**+2.0**
TRCB	**Terra Rica**	**13.03**	**91**	*e*P		**P**	**18 00 48.5**	**+1.6**
PTGB	**Pitanga**	**13.52**	**99**	*e*P		**P**	**18 00 54.6**	**+2.2**
PCMB	**Pacaembu**	**14.44**	**86**	*e*P		**P**	**18 01 04.5**	**+1.9**
ITRB	**Iturama**	**15.69**	**80**	*e*P		**Pn**	**18 01 19.1**	**+2.2**
FRTB	**Fartura**	**15.81**	**94**	*e*P		**Pn**	**18 01 19.6**	**+1.3**
ARAG	**Araguaiana, MT**	**15.99**	**65**	*e*P		**Pn**	**18 01 21.6**	**+1.1**
CLDB	**Colider**	**16.20**	**42**	*e*P		**Pn**	**18 01 22.5**	**-0.4**
PLCA	**Paso Flores**	**17.68**	**189**	P		**Pn**	**18 01 40.8**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=21,slow=11,SNR=8.7							
PLCA	**Paso Flores**	**17.68**	**189**	IAmb	IAmb		18 01 46.8	
	comp=Z,3.3nm,0.6s							
VAO	**Valinhos**	**18.22**	**93**	*e*P		**P**	**18 01 44.9**	**+0.8**
BDFB	**Brasilia**	**19.24**	**70**	P		**P**	**18 01 55.8**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=239,slow=12,SNR=17							
PARB	**Paraibuna**	**19.43**	**94**	*e*P		**P**	**18 01 58.4**	**+1.3**
NPGB	**Novo Progresso**	**19.53**	**36**	*e*P		**P**	**18 01 57.1**	**-1.1**
PEXB	**Peixe**	**20.80**	**61**	*e*P		**P**	**18 02 11.7**	**0.0**
ITTB	**Itaituba**	**21.63**	**31**	*e*P		**P**	**18 02 19.4**	**-0.7**
JANB	**Januaria**	**22.72**	**73**	*e*P		**P**	**18 02 30.3**	**0.0**
SMTB	**Santa Maria do**	**23.32**	**55**	*e*P		**P**	**18 02 36.0**	**+0.4**
PTGA	**Pitinga**	**23.38**	**17**	P		**P**	**18 02 36.6**	**+0.5**
	comp=Z,4.4nm,0.2s,baz=228,slow=11,SNR=6.7							
PTGA	**Pitinga**	**23.38**	**17**	P		**P**	**18 02 36.2**	**0.0**
PTGA				IAmb	IAmb		18 02 38.1	
	comp=Z,10nm,1.1s							
SDBA	**SAO DESIDERIO**	**23.43**	**66**	*e*P		**P**	**18 02 36.8**	**+0.1**
MALB	**Monte Alegre**	**24.53**	**31**	*e*P		**P**	**18 02 46.6**	**+0.1**
GDU01	**Guandu, BA**	**27.45**	**74**	*e*P		**P**	**18 03 12.3**	**-0.5**
NBLA	**Lagarto - SE**	**30.21**	**71**	*e*P		**P**	**18 03 37.0**	**-0.2**
TKL	**Tuckaleechee C**	**60.80**	**344**	P		**P**	**18 07 33.3**	**-2.5**
DBIC	**Dimbokro**	**67.38**	**72**	P		**P**	**18 08 19.4**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=158,slow=18,SNR=1.9							
DBIC	**Dimbokro**	**67.38**	**72**	IAmb	IAmb		18 08 44.8	
	comp=Z,17nm,1.5s							
K22A	**Casper**	**75.16**	**331**	P		**P**	**18 09 04.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**76.12**	**69**	P		**P**	**18 09 12.1**	**+1.2**
	comp=Z,2.3nm,0.5s,baz=259,slow=5.7,SNR=20							
TORD	**Torodi Ar. Bea**	**76.12**	**69**	P		**P**	**18 09 11.8**	**+0.8**
PD31	**Pinedale Array**	**76.65**	**329**	P		**P**	**18 09 10.9**	**-2.7**
PD31				IAmb	IAmb		18 09 29.9	
	comp=Z,4.8nm,0.7s							
ESDC	**Sonseca Array**	**85.75**	**44**	P		**P**	**18 10 03.9**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=226,slow=5.4,SNR=4.2							
ESDC	**Sonseca Array**	**85.75**	**44**	P		**P**	**18 10 00.5**	**-0.8**
WRA	**Warramunga Arr**	**132.34**	**207**	PKP		**PKiKP**	**18 16 37.5**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=156,slow=4.2,SNR=2.0							
WRA	**Warramunga Arr**	**132.34**	**207**			**PKiKP**	**18 16 36.7**	**+0.1**
MKAR	**Makanchi Array**	**145.85**	**39**	PKPbc		**PKiKP**	**18 17 03.1**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=322,slow=3.3,SNR=11							
MKAR	**Makanchi Array**	**145.85**	**39**			**PKiKP**	**18 17 03.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**165.81**	**107**	PKPab		**PKPab**	**18 18 29.4**	**+2.6**
	comp=Z,0.5nm,0.7s,baz=250,slow=4.8,SNR=4.6							
CMAR	**Chiang Mai Arr**	**165.81**	**107**			**PKPab**	**18 18 28.9**	**+2.2**

*LDG **23** 18:19:01.8±0.1,51.°68N×0.°66E, h6km, Md2.0/1, Ml2.6/18, Error ellipse: s-maj=1.3km s-min=1.2km az=8.0*
*BGS **23** 18:19:02.3±0.3,51.°65N×0.°68E, h7km±3km, ML1.9*
ISC 23 18:19:00.7±1.2, 51.°64N±0.°03×0.°66E±0.°03, h14km±10km, n26,σ1s17/53, 2D, United Kingdom

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ELSH	**Elham, Standar**	**0.57**	**149**	↓*i*P		**Pb**	**18 19 13.3**	**+0.9**
ELSH				*e*S		**Sb**	**18 19 21.3**	**+0.9**
ELSH				IAML			18 19 22.9	
	comp=E,35nm,0.1s							
ELSH				IAML			18 19 23.4	
	comp=N,36nm,0.2s							
ELSH	**Elham, Standar**	**0.57**	**149**	↓*i*P		**Pb**	**18 19 13.3**	**+0.9**
ELSH				*e*S		**Sb**	**18 19 21.3**	**+0.9**
ELSH				IAML			18 19 22.9	
	comp=E,35nm,0.1s							
ELSH				IAML			18 19 23.4	
	comp=N,36nm,0.2s							
HMNX	**Herstmonceux**	**0.80**	**195**	*e*S		**Sb**	**18 19 27.9**	**+1.0**
HMNX				IAML			18 19 30.3	
	comp=E,65nm,0.2s							
HMNX				IAML			18 19 32.2	
	comp=N,61nm,0.3s							
HMNX	**Herstmonceux**	**0.80**	**195**	*e*S		**Sb**	**18 19 27.9**	**+1.0**
HMNX				IAML			18 19 30.3	
	comp=E,65nm,0.2s							
HMNX				IAML			18 19 32.2	
	comp=N,61nm,0.3s							
WACR	**West Acre**	**1.09**	**359**	*e*P		**Pn**	**18 19 21.6**	**+0.1**
WACR				*e*S		**Sn**	**18 19 35.7**	**-0.6**
WACR				IAML			18 19 38.0	
	comp=N,62nm,0.2s							
WACR				IAML			18 19 38.1	
	comp=E,60nm,0.2s							
WACR	**West Acre**	**1.09**	**359**	*e*P		**Pn**	**18 19 21.6**	**+0.1**
WACR				*e*S		**Sn**	**18 19 35.7**	**-0.6**
WACR				IAML			18 19 38.0	
	comp=N,62nm,0.2s							
WACR				IAML			18 19 38.1	
	comp=E,60nm,0.2s							
WOL	**Wolverton**	**1.22**	**255**	*e*P		**Pg**	**18 19 24.4**	**+0.1**
WOL				*e*S		**Sn**	**18 19 40.5**	**+0.9**
WOL				IAML			18 19 43.3	
	comp=N,33nm,0.4s							
WOL				IAML			18 19 43.6	
	comp=E,26nm,0.3s							
WOL	**Wolverton**	**1.22**	**255**	*e*P		**Pg**	**18 19 24.4**	**+0.1**
WOL				*e*S		**Sn**	**18 19 40.5**	**+0.9**
WOL				IAML			18 19 43.3	
	comp=N,33nm,0.4s							
WOL				IAML			18 19 43.6	
	comp=E,26nm,0.3s							
CWF	**Charnwood Fore**	**1.64**	**313**	*e*P		**Pn**	**18 19 28.9**	**-0.2**
CWF				*e*S		**Sn**	**18 19 49.4**	**-0.5**
CWF				IAML			18 19 51.6	
	comp=E,14nm,0.3s							
CWF				IAML			18 19 52.2	
	comp=N,14nm,0.1s							
CWF	**Charnwood Fore**	**1.64**	**313**	*e*P		**Pn**	**18 19 28.9**	**-0.2**
CWF				*e*S		**Sn**	**18 19 49.4**	**-0.5**
CWF				IAML			18 19 51.6	
	comp=E,14nm,0.3s							
CWF				IAML			18 19 52.2	
	comp=N,14nm,0.1s							
BAIF	**Baives**	**2.75**	**124**	*e*Pn		**Pn**	**18 19 45.1**	**+0.9**
BAIF	**Baives**	**2.75**	**124**	*e*Pg		**Pg**	**18 19 53.3**	**0.0**
BAIF				*e*Sn		**Sn**	**18 20 16.7**	**-0.5**
BAIF				*e*Sg		**Sg**	**18 20 28.6**	**-0.3**
	comp=N,4.6nm,0.4s							
FLN	**La Foliniere**	**2.97**	**195**	*e*Pn		**Pn**	**18 19 48.4**	**+1.1**
FLN	**La Foliniere**	**2.97**	**195**	*e*Pg		**Pg**	**18 19 57.7**	**+0.1**
FLN				*e*Sn		**Sn**	**18 20 22.4**	**-0.3**
FLN				*e*Sg		**Sg**	**18 20 36.0**	**-0.1**
	comp=N,7.8nm,0.3s							
GIVF	**Givet**	**3.05**	**119**	*e*Pg		**Pg**	**18 19 58.8**	**-0.3**
GIVF				*e*Sn		**Sn**	**18 20 23.9**	**-0.8**
	comp=N,2.9nm,0.2s							
GIVF				*e*Sg		**Sg**	**18 20 38.1**	**-0.5**
	comp=N,3.3nm,0.2s							
LDF	**La Druitiere**	**3.09**	**190**	*e*Pn		**Pn**	**18 19 50.1**	**+1.1**
LDF	**La Druitiere**	**3.09**	**190**	*e*Pg		**Pg**	**18 19 59.8**	**-0.1**
LDF				*e*Sn		**Sn**	**18 20 24.6**	**-1.0**
LDF				*e*Sg		**Sg**	**18 20 39.8**	**-0.1**
	comp=N,3.4nm,0.2s							
GRR	**Gorron**	**3.40**	**197**	*e*Pn		**Pn**	**18 19 56.9**	**+3.7**
GRR	**Gorron**	**3.40**	**197**	*e*Pg		**Pg**	**18 20 05.8**	**0.0**
GRR				*e*Sn		**Sn**	**18 20 32.5**	**-0.7**
GRR				*e*Sg		**Sg**	**18 20 49.5**	**-0.2**
	comp=N,4.6nm,0.3s							
SGMF	**Saint Gilles**	**3.97**	**213**	*e*Pn		**Pn**	**18 20 01.1**	**0.0**
SGMF				*e*Sn		**Sn**	**18 20 46.2**	**-1.2**
	comp=N,1.7nm,0.2s							
ROSF	**Rostrenen**	**4.17**	**219**	*e*Pn		**Pn**	**18 20 03.0**	**-0.8**
ROSF				*e*Sn		**Sn**	**18 20 50.9**	**-1.3**
	comp=N,2.0nm,0.2s							
ROSF				*e*Sg		**Sg**	**18 21 13.4**	**-1.0**
	comp=N,3.0nm,0.4s							
QUIF	**Quistinic**	**4.47**	**215**	*e*Pn		**Pn**	**18 20 08.9**	**+0.9**
QUIF	**Quistinic**	**4.47**	**215**	*e*Pg		**Pg**	**18 20 25.4**	**-1.0**
QUIF				*e*Sn		**Sn**	**18 20 58.0**	**-1.8**
	comp=N,1.4nm,0.2s							
QUIF				*e*Sg		**Sg**	**18 21 22.8**	**-1.5**
	comp=N,2.0nm,0.3s							
SSF	**Saint Saulge**	**4.94**	**157**	*e*Pn		**Pn**	**18 20 15.2**	**+0.8**
SSF				*e*Sn		**Sn**	**18 21 09.2**	**-2.1**
SSF				*e*Sg		**Sg**	**18 21 37.6**	**-1.6**
	comp=N,1.5nm,0.3s							
MFF	**Saint Martin d**	**5.07**	**186**	*e*Pn		**Pn**	**18 20 16.9**	**+0.8**
MFF				*e*Sn		**Sn**	**18 21 12.0**	**-2.4**
MFF				*e*Sg		**Sg**	**18 21 41.4**	**-1.9**
	comp=N,4.4nm,0.4s							
RJF	**Les Rejaudoux**	**6.36**	**175**	*e*Sn		**Sn**	**18 21 43.3**	**-3.0**
	comp=N,0.6nm,0.2s							

*MAN **23** 18:22:18.2, 5.°13N×125.°39E, h191km, MS4.0*
*IDC **23** 18:22:21.5±0.8, 5.°29N×125.°52E, h194km±10km, mb3.5/7, mb1 3.7/10, mb1mx3.3/45, mbtmp4.2/10, Error ellipse: s-maj=32.2km s-min=10.6km az=66.0*
*NEIC **23** 18:22:21.1±1.6, 5.°22N±0.°07×125.°5E±0.°1, h192km±8km, mb4.4/25, Error ellipse: s-maj=15.6km s-min=9.9km az=74.0*
ISC 23 18:22:20.5±0.6, 5.°27N±0.°05×125.°51E±0.°06, h190km±6km, n47,σ1s25/60, mb4.2/16, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.85**	**13**	*e*P		**Pn**	**18 22 47.1**	**-1.1**
DDMP				*e*S		**Sn**	**18 23 10.7**	**+0.9**
SKMP	**Bagumbayan, Su**	**1.57**	**322**	*e*P		**Pn**	**18 22 52.6**	**-1.3**
SKMP				*e*S		**Sn**	**18 23 16.6**	**-3.4**
KCP	**Kidapawan**	**1.78**	**346**	↓*i*P		**Pn**	**18 22 56.0**	**-0.1**
KCP				*i* S		**Sn**	**18 23 23.2**	**-0.6**
DAV	**Davao City (W)**	**1.79**	**2**	P		**Pn**	**18 22 57.7**	**+1.5**
	70nm,0.3s,baz=62,slow=3.5,SNR=4.9							
DAV				S		**Sn**	**18 23 25.3**	**+1.4**
	37nm,0.3s,baz=132,slow=23,SNR=9.2							
MATI	**Mati**	**1.82**	**24**	*e*P		**Pn**	**18 22 55.4**	**-1.1**
MATI				*e*S		**Sn**	**18 23 25.7**	**+1.2**
BUKP	**Musuan**	**2.63**	**350**	*e*P		**Pn**	**18 23 05.2**	**-0.2**
BUKP				*e*S		**Sn**	**18 23 41.5**	**+1.0**
CGP	**Cagayan de Oro**	**3.27**	**346**	↓*e*P		**Pn**	**18 23 13.8**	**+0.9**
CGP				*e*S		**Sn**	**18 23 54.4**	**+0.5**
PAGZ	**Pagadian**	**3.32**	**321**	*e*P		**Pn**	**18 23 12.1**	**-1.4**
GLSP	**General Luna,**	**4.53**	**8**	*e*P		**Pn**	**18 23 29.3**	**+0.6**
GLSP				*e*S		**Sn**	**18 24 18.1**	**-4.2**
TNTI	**Ternate**	**4.83**	**157**			**Pn**	**18 23 31.8**	**-0.8**
TOLI2	**Tolitoli**	**6.27**	**229**			**Pn**	**18 23 50.0**	**-1.2**
MYLDM	**Lahad Datu**	**6.98**	**270**			**Pn**	**18 24 02.8**	**+2.2**
SIJI	**Sorong**	**8.38**	**137**	P		**Pn**	**18 24 20.9**	**+2.0**
	0.4nm,0.3s,baz=147,slow=22,SNR=1.9							
SIJI				S		**Sn**	**18 25 50.4**	**-2.6**
	0.1nm,0.3s,baz=84,slow=22,SNR=1.5							
SOEI	**Soe**	**14.97**	**185**	P		**P**	**18 25 45.5**	**+1.5**
BATI	**Baumata**	**15.48**	**187**	P		**P**	**18 25 51.5**	**+2.0**
	9.8nm,0.3s,baz=40,slow=1.3,SNR=26							
JAY	**Jayapura**	**17.03**	**117**	P		**Pn**	**18 26 09.3**	**+1.4**
	2.1nm,0.3s,baz=300,slow=8.7,SNR=10.0							
JAGI	**Jajag, Banyuwa**	**17.74**	**220**	P		**P**	**18 26 13.4**	**-0.9**
JAGI				IAmb	IAmb		18 26 29.1	
	comp=Z,47nm,1.3s							
MTN	**Manton Dam**	**18.84**	**163**	P		**P**	**18 26 27.4**	**+1.1**
MTN				IAmb	IAmb		18 26 28.1	
	comp=Z,6.4nm,0.7s							
KNRA	**Kununurra**	**21.06**	**171**	P		**P**	**18 26 49.8**	**-0.2**
KNRA				IAmb	IAmb		18 26 52.2	
	comp=Z,32nm,1.4s							
MYKOM	**Kota Tinggi**	**21.89**	**262**	P		**P**	**18 26 59.8**	**+1.1**
MYKOM				IAmb	IAmb		18 27 00.1	
	comp=Z,7.2nm,0.7s							
FITZ	**Fitzroy Crossi**	**23.22**	**180**	P		**P**	**18 27 11.3**	**+0.5**
	comp=Z,2.9nm,0.3s,baz=3.6,slow=7.6,SNR=35							
FITZ	**Fitzroy Crossi**	**23.22**	**180**	P		**P**	**18 27 11.4**	**+0.5**
FITZ				IAmb	IAmb		18 27 12.2	
	comp=Z,5.8nm,1.0s							
KULM	**Kulim**	**24.75**	**271**	P		**P**	**18 27 25.9**	**+0.9**
KULM				IAmb	IAmb		18 27 31.8	
	comp=Z,8.4nm,1.0s							
WB0	**Warramunga Arr**	**26.37**	**161**	P		**P**	**18 27 39.4**	**0.0**
WB0				IAmb	IAmb		18 27 49.0	
	comp=Z,5.7nm,1.3s							
WRA	**Warramunga Arr**	**26.51**	**161**	P		**P**	**18 27 40.8**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=332,slow=11,SNR=18							
WRA				PcP		**PcP**	**18 31 01.0**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=353,slow=1.6,SNR=1.3							
WRA				ScP		**ScP**	**18 34 22.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=338,slow=3.0,SNR=2.0							
WRA	**Warramunga Arr**	**26.51**	**161**	P		**P**	**18 27 40.6**	**-0.1**
WB2	**Warramunga Arr**	**26.52**	**161**	P		**P**	**18 27 40.9**	**+0.1**
WR0	**Warramunga Arr**	**26.60**	**161**	P		**P**	**18 27 41.4**	**0.0**
PSA00	**Pilbara Seismi**	**27.25**	**192**	P		**P**	**18 27 46.5**	**-0.7**
PSA00				IAmb	IAmb		18 28 13.3	
	comp=Z,29nm,1.4s							
GSI	**Gunungsitoli**	**28.16**	**263**	P		**P**	**18 27 54.3**	**-1.1**
GSI				IAmb	IAmb		18 28 11.5	
	comp=Z,21nm,1.1s							
CMAR	**Chiang Mai Arr**	**29.06**	**299**	P		**P**	**18 28 04.6**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=115,slow=7.6,SNR=6.9							
CHTO	**Chiang Mai**	**29.20**	**300**	P		**P**	**18 28 06.0**	**+1.3**
CHTO				IAmb	IAmb		18 28 06.4	
	comp=Z,2.0nm,0.5s							
AS31	**Alice Springs**	**29.90**	**164**	P		**P**	**18 28 11.0**	**+0.3**
ASAR	**Alice Springs**	**29.90**	**164**	P		**P**	**18 28 11.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=338,slow=7.0,SNR=36							
ASAR				PcP		**PcP**	**18 31 09.6**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=345,slow=2.5,SNR=7.8							
ASAR				ScP		**ScP**	**18 34 33.0**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=352,slow=5.9,SNR=3.3							
ASAR	**Alice Springs**	**29.90**	**164**	P		**P**	**18 28 11.1**	**+0.4**
JSG	**Sagara**	**31.53**	**20**	P		**P**	**18 28 23.5**	**-1.3**
MORW	**Morawa**	**35.33**	**194**	P		**P**	**18 28 57.4**	**-0.4**
MORW				IAmb	IAmb		18 29 16.0	
	comp=Z,27nm,1.4s							
FORT	**Forrest**	**35.93**	**176**	P		**P**	**18 29 03.4**	**+0.5**
NWAO	**Narrogin (SRO)**	**38.79**	**191**	P		**P**	**18 29 26.8**	**-0.1**
NWAO	**Narrogin (SRO)**	**38.79**	**191**	P		**P**	**18 29 26.9**	**-0.1**
NWAO				IAmb	IAmb		18 29 38.3	
	comp=Z,46nm,1.5s							
BBOO	**Buckleboo**	**39.17**	**166**	P		**P**	**18 29 31.2**	**+1.1**
BBOO				IAmb	IAmb		18 29 52.7	
	comp=Z,23nm,1.4s							
STKA	**Stephens Creek**	**39.99**	**158**	P		**P**	**18 29 36.8**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=333,slow=11,SNR=3.6							
TAU	**Tasmania Unive**	**51.87**	**160**	P		**P**	**18 31 08.7**	**-0.8**
DGAR	**Diego Garcia**	**54.42**	**257**	P		**P**	**18 31 28.5**	**-0.1**
MK31	**Makanchi Array**	**55.61**	**325**	P		**P**	**18 31 37.2**	**+0.5**
MKAR	**Makanchi Array**	**55.61**	**325**	P		**P**	**18 31 37.2**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=118,slow=7.8,SNR=14							
FINES	**FINESS Array B**	**89.91**	**332**	P		**P**	**18 34 56.6**	**-1.2**
	comp=Z,2.4nm,0.9s,baz=139,slow=2.8,SNR=4.4							

*JMA **23** 18:27:36.3, 37.°15N×138.°86E, h16km±1km, M3.9*
Broadband fault plane solution: P waves. NP1: ϕs48.00000°, δ17.00000°, λ101.00000°. NP2: ϕs216.00000°, δ73.00000°, λ87.00000°. Principal axes: T Plg62.0000°, Azm121.0000°; N Plg3.0000°, Azm217.0000°; P Plg28.0000°, Azm309.0000°;
JMA Felt II J1.
*NIED **23** 18:27:36.3, 37.°16N×138.°86E, h16km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr2.70; Mθθ-0.89; Mϕϕ-1.81; Mrθ-3.11; Mθϕ-1.25; Mϕr-3.02; Fault plane solution: M0 5.10000×1014 NP1: ϕs224.00000°, δ74.00000°, λ95.00000°. NP2:ϕs26.00000°, δ17.00000°, λ73.00000°.*
*IDC **23** 18:27:40.3±1.5, 36.°98N×138.°33E, h43km±11km, mb3.2/6, mb1 3.5/9, mb1mx3.3/61, mbtmp3.5/9, ML3.5/2, MS2.9/5, Ms1 2.9/5, ms1mx2.7/18 Error ellipse: s-maj=32.6km s-min=14.1km az=67.0*
ISC 23 18:27:35.1±3.0, 37.°15N±0.°03×138.°83E±0.°04, h8km±21km, n23,σ1s22/30, mb3.5/6, MS3.0/3, 5D, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JIZZ	**Izumozaki**	**0.39**	**346**	↓P		**Pb**	**18 27 44.5**	**+0.2**
JIZZ				S		**Sb**	**18 27 51.3**	**+0.9**
JKT	**Katashina**	**0.51**	**139**	↓P		**Pb**	**18 27 46.1**	**-0.3**
JKT				S		**Sb**	**18 27 53.2**	**-0.8**
JGK	**Kuni**	**0.61**	**195**	↓P		**Pb**	**18 27 48.2**	**+0.1**
JGK				S		**Sb**	**18 27 56.9**	**+0.1**
JFY	**Yanaizu**	**0.74**	**70**	P		**Pb**	**18 27 49.8**	**-0.5**
JFY				S		**Sb**	**18 27 59.4**	**-1.2**
JNS	**Sasagawa**	**0.77**	**30**	P		**Pb**	**18 27 49.9**	**-0.8**
JNS				S		**Sb**	**18 28 00.3**	**-1.0**
MJAR	**Matsushiro Arr**	**0.79**	**219**	P		**Pb**	**18 27 50.6**	**-0.5**
	17nm,0.3s,baz=5.9,slow=21,SNR=469							
MJAR				S		**Sb**	**18 28 00.6**	**-1.4**
	24nm,0.3s,baz=143,slow=25,SNR=16							
MAT	**Matsushiro**	**0.79**	**220**	P		**Pb**	**18 27 50.7**	**-0.4**
MAT				S		**Sb**	**18 28 01.0**	**-0.9**
MAT	**Matsushiro**	**0.79**	**220**	P		**Pb**	**18 27 50.7**	**-0.4**
MAT				S		**Sb**	**18 28 01.1**	**-0.9**
JAG	**Ashikaga**	**0.88**	**145**	↓P		**Pb**	**18 27 52.6**	**-0.1**
JAG				S		**Sb**	**18 28 04.5**	**-0.1**
JSD	**Sado**	**0.99**	**333**	↓P		**Pb**	**18 27 53.4**	**-1.1**
JSD				S		**Sb**	**18 28 06.4**	**-1.3**
JHJ	**Hachijo jima 2**	**4.10**	**169**	P		**Pn**	**18 28 38.2**	**+0.2**
	25nm,0.3s,baz=261,slow=20,SNR=10							
JHJ				S		**Sn**	**18 29 26.0**	**-0.2**
	baz=100,slow=23,SNR=1.0							
JHJ				LR		LR	18 30 14.3	
	comp=Z,116nm,19.2s,baz=310,slow=38							
JNU	**Nakatsue**	**7.66**	**241**	P		Pn	18 29 21.3	-5.7
	0.5nm,0.3s,baz=346,slow=20,SNR=2.2							
KSRS	**Korea Array**	**8.70**	**275**	P		**Pn**	**18 29 43.4**	**+2.2**
	1.4nm,0.3s,baz=89,slow=14,SNR=18							
USRK	**Ussuriysk Ar.**	**8.75**	**326**	P		**Pn**	**18 29 43.2**	**+1.3**
	baz=138,slow=15,SNR=2.3							
KLR	**Kul'dur**	**13.12**	**339**	LR		LR	18 35 13.7	
	comp=Z,25nm,19.8s,baz=165,slow=34							
YAK	**Yakutsk**	**25.55**	**350**	LR		LR	18 42 10.9	
	comp=Z,21nm,19.0s,baz=352,slow=34							
SONM	**Songino Array**	**26.01**	**305**	P		**P**	**18 33 06.5**	**-2.1**
	0.3nm,0.8s,baz=109,slow=8.8,SNR=2.4							
SONM				LR		LR	18 43 38.4	
	comp=Z,40nm,18.3s,baz=68,slow=37							
TLY	**Talaya**	**28.70**	**312**	LR		LR	18 45 49.0	
	comp=Z,48nm,18.2s,baz=66,slow=38							
MKAR	**Makanchi Array**	**42.30**	**302**	P		**P**	**18 35 28.2**	**-1.0**
	0.1nm,0.5s,baz=99,slow=8.9,SNR=1.8							
WRA	**Warramunga Arr**	**56.95**	**185**	P		**P**	**18 37 19.3**	**-1.6**
	1.0nm,0.5s,baz=0.7,slow=7.6,SNR=24							
ASAR	**Alice Springs**	**60.67**	**185**	P		**P**	**18 37 45.8**	**-1.0**
	0.5nm,0.7s,baz=18,slow=13,SNR=6.1							
YKA	**Yellowknife Ar**	**64.73**	**29**	P		**P**	**18 38 16.7**	**+3.3**
	0.2nm,0.7s,baz=306,slow=6.6,SNR=3.0							
AKASG	**Malin Array Be**	**72.92**	**321**	P		**P**	**18 39 04.6**	**0.0**
	0.1nm,0.2s,baz=48,slow=6.4,SNR=1.6							

*NEIC **23** 18:59:30.6±0.7, 13.°8S±0.°1×172.°4E±0.°2, h607km±15km, mb4.5/13, Error ellipse: s-maj=28.7km s-min=10.7km az=117.0*
*IDC **23** 18:59:35.2±4.9, 14.°01S×171.°91E, h621km±67km, mb2.8/4, mb1 3.0/5, mb1mx2.7/25, mbtmp3.9/5, Error ellipse: s-maj=89.9km s-min=37.3km az=154.0*
ISC 23 18:59:33.0±1.1, 14.°1S±0.°2×172.°2E±0.°1, h604km, n21,σ0s84/21, mb4.3/11, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**6.68**	**123**	P		**P**	**19 01 19.8**	**-0.7**
DZM	**Mont Dzumac**	**9.63**	**214**	P		**P**	**19 01 49.9**	**+1.6**
	0.4nm,0.3s,baz=103,slow=13,SNR=3.1							
QRZ	**Quartz Range**	**26.62**	**179**	P		**P**	**19 04 24.7**	**-0.4**
TUWZ	**Tiamarina**	**27.27**	**177**	P		**P**	**19 04 30.4**	**-

ENTT				S		Sn	19 19 04.4	+1.3
	baz=293							
HGSD	**Ruisui**	**1.15 247**		P		**Pn**	**19 18 47.5**	**-0.3**
	baz=245							
HGSD				S		Sb	19 19 02.9	+0.4
	baz=245							
NDT	**Datong Townshi**	**1.16 304**		P		**Pg**	**19 18 49.4**	**+0.9**
	baz=291							
NDT				S		Sn	19 19 04.4	+0.8
	baz=291							
TWB1	**Santiao Chiao**	**1.17 333**		P		**Pg**	**19 18 48.4**	**-0.5**
	baz=345							
TWB1				*e*S		Sn	19 19 03.7	-0.2
	baz=345							
NNSH	**Datong**	**1.18 294**		*e*P		**Pg**	**19 18 48.7**	**-0.3**
	baz=282							
NNSH				*e*S		Sg	19 19 03.9	-0.6
	baz=282							
NNSB	**Datong**	**1.18 294**		P		**Pg**	**19 18 48.7**	**-0.3**
	baz=282							
NNSB				S		Sb	19 19 03.7	+0.1
	baz=282							
NNS	**Nan Shan**	**1.20 294**		P		**Pg**	**19 18 49.3**	**+0.1**
	baz=283							
NNS				*i* S		Sb	19 19 04.0	0.0
	baz=283							
WHF	**Hehuan Shan**	**1.21 279**		*i* P		**Pn**	**19 18 49.1**	**+0.1**
	baz=278							
WHF				S		Sb	19 19 04.6	-0.1
	baz=278							
TIPB	**Shuangxi**	**1.22 326**		P		**Pg**	**19 18 49.9**	**+0.3**
	baz=325							
TIPB				S		Sg	19 19 05.3	-0.3
	baz=325							
FUSS	**Fushou**	**1.25 284**		*e*P		**Pn**	**19 18 49.2**	**-0.1**
	baz=282							
FUSS				*e*S		Sn	19 19 06.2	+0.1
	baz=282							
NWLT	**Wulai**	**1.27 310**		*e*P		**Pg**	**19 18 50.8**	**+0.1**
	baz=309							
NWLT				*e*S		Sg	19 19 06.5	-0.8
	baz=309							
OWD	**Renai**	**1.28 270**		P		**Pb**	**19 18 50.1**	**+0.1**
	baz=269							
OWD				S		Sb	19 19 05.4	-0.9
	baz=269							
CHGB	**Renai**	**1.28 275**		P		**Pb**	**19 18 50.3**	**+0.1**
	baz=273							
CHGB				S		Sb	19 19 06.0	-0.6
	baz=273							
YULB	**Yu-li**	**1.30 245**		P		**Pn**	**19 18 50.2**	**+0.4**
	baz=234							
YULB				S		Sb	19 19 06.5	-0.3
	baz=234							
EYUL	**Yuli**	**1.30 242**		*e*P		**Pn**	**19 18 50.3**	**+0.5**
	baz=241							
EYUL				*e*S		Sb	19 19 07.4	+0.5
	baz=241							
YHNB	**Yeheng**	**1.30 303**		*e*P		**Pb**	**19 18 50.6**	**+0.2**
	baz=302							
YHNB				S		Sg	19 19 07.6	-0.7
	baz=302							
TWT	**Tachien**	**1.31 283**		P		**Pg**	**19 18 52.0**	**+0.6**
	baz=272							
TWT				S		Sb	19 19 07.4	+0.1
	baz=272							
TWF1	**Yuli**	**1.31 243**		*i* P		**Pn**	**19 18 50.5**	**+0.5**
	baz=242							
TWF1				*e*S		Sb	19 19 07.3	0.0
	baz=242							
WFSB	**Wu-fen Shan**	**1.32 327**		P		**Pg**	**19 18 51.4**	**-0.3**
	baz=326							
TDCB	**Techi**	**1.33 283**		*e*P		**Pb**	**19 18 51.0**	**+0.1**
	baz=272							
TDCB				*e*S		Sb	19 19 07.4	-0.4
	baz=272							
VWDT	**VWDT**	**1.33 262**		P		**Pb**	**19 18 51.0**	**+0.2**
	baz=260							
VWDT				S		Sb	19 19 07.3	-0.2
	baz=260							
JKRS	**Kuro-shima**	**1.34 78**		P		**Pg**	**19 18 52.4**	**+0.4**
JKRS				*e*S		Sg	19 19 10.1	+0.6
TWA	**Mucha**	**1.36 319**		*e*S		**Sn**	**19 19 07.7**	**-0.7**
	baz=318							
FULB	**Fuli**	**1.40 238**		*e*P		**Pn**	**19 18 51.4**	**+0.2**
	baz=227							
FULB				*e*S		Sn	19 19 09.5	+0.2
	baz=227							
CHKT	**Chengkung**	**1.40 233**		P		**Pn**	**19 18 51.0**	**-0.2**
	baz=222							
CHKT				*e*S		Sn	19 19 06.7	-2.7
	baz=222							
TAP	**Taipei**	**1.45 318**		P		**Pb**	**19 18 53.1**	**+0.2**
	baz=332							
WPL	**Puli Township**	**1.48 272**		*e*P		**Pb**	**19 18 53.1**	**-0.3**
	baz=271							
WPL				*e*S		Sb	19 19 12.1	+0.1
	baz=271							
JIJ	**Ishigaki jima**	**1.49 74**		P		**Pb**	**19 18 53.6**	**0.0**
JIJ				*e*S		Sb	19 19 12.5	+0.2
SSLB	**Suanglung**	**1.49 264**		P		**Pb**	**19 18 53.3**	**-0.3**
	baz=262							
SSLB				*e*S		Sb	19 19 12.8	+0.4
	baz=262							
YM01	**YM01**	**1.50 323**		P		**Pn**	**19 18 52.0**	**-0.5**
	baz=321							
YM01				S		Sb	19 19 12.1	-0.4
	baz=321							
DPDB	**Guoxing**	**1.51 273**		P		**Pb**	**19 18 54.0**	**+0.1**
	baz=272							
DPDB				*e*S		Sb	19 19 12.8	0.0
	baz=272							
WHP	**Taichung City**	**1.52 282**		*e*P		**Pb**	**19 18 54.2**	**0.0**
	baz=272							
WHP				*e*S		Sn	19 19 12.8	+0.3
	baz=272							
EDH	**Donghe**	**1.52 230**		*e*P		**Pn**	**19 18 52.6**	**-0.3**
	baz=222							
EDH				*e*S		Sn	19 19 10.9	-1.5
	baz=222							
SMLT	**Sun Moon Lake**	**1.53 268**		P		**Pb**	**19 18 54.2**	**-0.2**
	baz=266							
SMLT				S		Sn	19 19 13.4	+0.5
	baz=266							
ANP	**Anpu**	**1.56 322**		*e*P		**Pn**	**19 18 53.3**	**-0.1**
	baz=321							
ANP				*e*S		Sn	19 19 12.5	-0.9
	baz=321							
YUS	**Yu-Shan**	**1.56 253**		P		**Pb**	**19 18 55.0**	**0.0**
	baz=251							
YUS				S		Sn	19 19 14.2	+0.3
	baz=251							
TYC	**Yuchr**	**1.57 268**		P		**Pn**	**19 18 54.3**	**+0.8**
	baz=267							
TYC				*e*S		Sn	19 19 13.9	+0.3
	baz=267							
LIOB	**Emei**	**1.58 296**		*e*P		**Pb**	**19 18 55.0**	**0.0**
	baz=295							
LIOB				S		Sb	19 19 14.8	-0.1
	baz=295							
TWY	**Chenhua**	**1.58 326**		*e*P		**Pn**	**19 18 52.8**	**-1.0**
	baz=325							
TWY				*e*S		Sn	19 19 13.7	-0.2
	baz=325							
WHYT	**Xinyi Township**	**1.60 261**		*e*P		**Pn**	**19 18 54.7**	**+0.8**
	baz=260							
NCU	**National Centr**	**1.62 309**		P		**Pn**	**19 18 54.2**	**0.0**
	baz=308							
NCU				*e*S		Sb	19 19 15.1	-0.8
	baz=308							
ELDTW	**Lidau**	**1.62 242**		*i* P		**Pn**	**19 18 54.7**	**+0.3**
	baz=241							
ELDTW				*i* S		Sn	19 19 13.5	-1.5
	baz=241							
LDUT	**Ludao**	**1.63 219**		*e*P		**Pn**	**19 18 54.3**	**0.0**
	baz=218							
LDUT				*e*S		Sn	19 19 12.7	-2.5
	baz=218							
ALS	**Alishan**	**1.68 255**		P		**Pb**	**19 18 56.8**	**-0.2**
	baz=254							
ALS				S		Sn	19 19 17.1	+0.3
	baz=254							
LONT	**Longtian**	**1.69 232**		*e*P		**Pn**	**19 18 55.6**	**+0.4**
	baz=224							
LONT				*e*S		Sn	19 19 16.5	0.0
	baz=224							
JISG	**Ishigakijimahi**	**1.71 68**		P		**Pb**	**19 18 56.5**	**-0.7**
JISG				*e*S		Sb	19 19 17.9	-0.6
WNT	**Mingjian**	**1.73 268**		P		**Pb**	**19 18 58.4**	**+0.7**
	baz=266							
WNT				S		Sb	19 19 20.1	+0.8
	baz=266							
WNT1	**Nantou City**	**1.73 269**		*e*P		**Pb**	**19 18 58.4**	**+0.7**
	baz=268							
CHN5	**Tsauling**	**1.77 259**		P		**Pb**	**19 18 58.0**	**-0.4**
	baz=258							
TWGBT	**Beinan**	**1.78 231**		P		**Pn**	**19 18 57.7**	**+1.3**
	baz=242							
TWGBT				*e*S		Sn	19 19 18.1	-0.7
	baz=242							
TWG	**Pinlang**	**1.78 231**		P		**Pn**	**19 18 57.7**	**+1.2**
	baz=242							
TWG				*e*S		Sn	19 19 18.7	-0.2
	baz=242							
STYH	**Taoyuan**	**1.82 245**		*e*P		**Pn**	**19 18 58.4**	**+1.4**
	baz=235							
STYT	**Tauyuan**	**1.84 245**		P		**Pb**	**19 18 58.9**	**-0.7**
	baz=237							
STYT				*e*S		Sn	19 19 20.2	-0.2
	baz=237							
WGK	**Gukeng**	**1.86 262**		P		**Pb**	**19 18 60.0**	**+0.1**
	baz=261							
TPUB	**Ta-pu**	**1.90 250**		*e*P		**Pn**	**19 18 59.6**	**+1.5**
	baz=240							
TPUB				*e*S		Sb	19 19 23.6	-0.5
	baz=240							
CHN4	**Tsaushan**	**1.91 252**		P		**Pb**	**19 19 00.5**	**-0.3**
	baz=250							
CHN4				*e*S		Sb	19 19 24.8	+0.3
	baz=250							
WTP	**Ta-pu**	**1.93 249**		P		**Pb**	**19 19 00.9**	**-0.3**
	baz=238							
ECL	**Taimali**	**2.01 228**		*e*P		**Pn**	**19 19 00.3**	**+0.7**
	baz=237							
SLGT	**Liugui**	**2.01 242**		*e*P		**Pb**	**19 19 01.6**	**-0.9**
	baz=234							
SGST	**Jiashian**	**2.02 245**		P		**Pb**	**19 19 02.4**	**-0.2**
	baz=235							
CHN1	**Nanshi**	**2.03 248**		P		**Pb**	**19 19 03.1**	**+0.4**
	baz=247							
SSD	**Sandimen**	**2.15 236**		*e*P		**Pn**	**19 19 02.1**	**+0.6**
	baz=229							
EAST	**Anshuo**	**2.23 226**		*e*P		**Pn**	**19 19 03.7**	**+1.0**
	baz=233							
MASBT	**Mashibuluo**	**2.23 233**		*e*P		**Pn**	**19 19 04.2**	**+1.6**
	baz=227							

*NEIC **23** 19:19:60.0±1.4,5.6S±0.1×154.0E±0.1,h161km±9km, mb4.2/9, Error ellipse: s-maj=18.5km s-min=11.8km az=223.0*

*IDC **23** 19:20:01.0±3.2,5.85S×154.09E,h64km±29km, mb3.4/7, mb1 3.7/9, mb1mx3.4/42, mbtmp3.9/9, ML2.6/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/21, Error ellipse: s-maj=26.9km s-min=19.6km az=171.0*

ISC 23 19:20:01.2±0.8,5.74S±0.08×153.99E±0.08,h100km,n29, σ4s20/22,mb3.9/11, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.38**	**310**	Pn		**Pn**	**19 20 40.1**	**+1.4**
RABL				Sn		**Sn**	**19 21 04.9**	**-2.7**
HNR	**Honiara**	**6.95**	**122**	P		**Pn**	**19 21 38.3**	**-2.1**
	6.9nm,0.3s,baz=324,slow=19,SNR=2.2							
HNR				LR		LR	19 24 22.4	
	comp=Z,78nm,19.3s,baz=212,slow=38							
HNR	**Honiara**	**6.95**	**122**			**Pn**	**19 21 40.9**	**+0.4**
PMG	**Port Moresby**	**7.69**	**241**	P		**Pn**	**19 21 50.9**	**+0.4**
	5.4nm,0.3s,baz=54,slow=6.1,SNR=5.8							
PMG				S		**Sn**	**19 23 17.4**	**+1.3**
	1.9nm,0.3s,baz=3.1,slow=20,SNR=6.3							
PMG				LR		LR	19 25 05.5	
	comp=Z,48nm,18.4s,baz=62,slow=39							
PATS	**Pohnpei**	**13.21**	**19**			**Pn**	**19 23 04.1**	**-0.9**
DZM	**Mont Dzumac**	**20.22**	**145**	P		**P**	**19 24 29.1**	**+0.7**
	7.1nm,0.9s,baz=302,slow=14,SNR=1.4							
DZM	**Mont Dzumac**	**20.22**	**145**	P		**P**	**19 24 25.2**	**-3.2**
WR0	**Warramunga Arr**	**23.61**	**231**	P		**P**	**19 24 56.8**	**-6.5**
WR0				IAmb		IAmb	19 25 20.7	
	comp=Z,9.6nm,1.4s							
WB0	**Warramunga Arr**	**23.62**	**232**	P		**P**	**19 24 57.2**	**-6.2**
MTN	**Manton Dam**	**23.62**	**251**	P		**P**	**19 24 56.7**	**-6.7**
MTN				IAmb		IAmb	19 25 10.4	
	comp=Z,6.6nm,1.1s							
WB2	**Warramunga Arr**	**23.75**	**232**	P		**P**	**19 24 57.8**	**-6.7**
WB2				IAmb		IAmb	19 25 23.5	
	comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**23.76**	**232**	P		**P**	**19 25 08.2**	**+3.6**
	comp=Z,0.4nm,0.4s,baz=57,slow=9.6,SNR=9.1							
WRA				PcP		**PcP**	**19 28 50.8**	**+4.8**
	comp=Z,0.7nm,0.5s,baz=54,slow=2.6,SNR=12							
WRA	**Warramunga Arr**	**23.76**	**232**	P		**P**	**19 24 58.2**	**-6.5**
ASAR	**Alice Springs**	**26.30**	**225**	P		**P**	**19 25 30.6**	**+3.0**
	comp=Z,0.3nm,0.4s,baz=56,slow=9.1,SNR=12							
ASAR				PcP		**PcP**	**19 28 56.4**	**+4.8**
	comp=Z,1.1nm,0.5s,baz=62,slow=2.5,SNR=15							
KNRA	**Kununurra**	**26.65**	**246**	P		**P**	**19 25 29.1**	**-1.7**
KNRA				IAmb		IAmb	19 25 37.9	
	comp=Z,14nm,1.3s							
H11S3	**WAKE ISLAND Hy**	**27.14**	**27**	T		T	19 53 59.2	
	baz=208,slow=74,SNR=27							
H11S2	**WAKE ISLAND Hy**	**27.14**	**27**	T		T	19 53 58.9	
	baz=208,slow=74,SNR=25							
H11S1	**WAKE ISLAND Hy**	**27.16**	**27**	T		T	19 53 59.5	
	baz=208,slow=74,SNR=19							
FITZ	**Fitzroy Crossi**	**30.28**	**244**	LR		LR	19 38 56.7	
	comp=Z,38nm,18.8s,baz=99,slow=38							
FITZ	**Fitzroy Crossi**	**30.28**	**244**	P		**P**	**19 26 00.5**	**-2.6**
FITZ				IAmb		IAmb	19 26 12.4	
	comp=Z,7.2nm,1.4s							
MBWA	**Marble Bar**	**36.56**	**242**	P		P	19 26 50.5	-7.1
MJAR	**Matsushiro Arr**	**44.58**	**342**	LR		LR	19 44 31.5	
	comp=Z,76nm,19.8s,baz=200,slow=33							
CMAR	**Chiang Mai Arr**	**59.35**	**295**	P		P	19 29 58.6	+5.3
	comp=Z,0.8nm,0.8s,baz=118,slow=5.5,SNR=7.7							
SONM	**Songino Array**	**67.75**	**327**	P		P	19 30 53.1	+4.9
	comp=Z,0.5nm,0.6s,baz=138,slow=6.2,SNR=3.7							
RC01	**Rabbit Creek A**	**79.53**	**24**	P		P	19 31 48.1	-8.6
MKAR	**Makanchi Array**	**81.81**	**319**	P		P	19 32 13.8	+4.6
	comp=Z,0.5nm,0.8s,baz=78,slow=11,SNR=3.7							
MKAR	**Makanchi Array**	**81.81**	**319**	P		P	19 32 02.2	-7.0
ILAR	**Eielson Array**	**82.58**	**22**	P		P	19 32 17.3	+4.5
	comp=Z,0.3nm,0.4s,baz=243,slow=4.3,SNR=8.6							
TORD	**Torodi Ar. Bea**	**151.72**	**287**	PKPbc		**PKiKP**	**19 39 47.8**	**+2.3**
	comp=Z,1.1nm,0.7s,baz=94,slow=2.2,SNR=11							
TORD				PKPab		**PKPab**	**19 39 57.6**	**+3.3**
	comp=Z,1.1nm,0.7s,baz=86,slow=3.5,SNR=5.4							

*IDC **23** 19:26:34.5±0.6, 7.95N×126.80E, h0km, mb4.0/17, mb1 4.1/19, mb1mx3.9/63, mbtmp4.0/19, ML3.9/2, MS3.3/6, Ms1 3.3/6, ms1mx2.9/41, Error ellipse: s-maj=31.1km s-min=12.5km az=75.0*

*MAN **23** 19:26:34.0, 8.05N×127.58E, h53km, MS4.4*

*NEIC **23** 19:26:37.0±2.1, 8.10N±0.07×127.18E±0.09, h23km±5km, mb4.4/33, Error ellipse: s-maj=12.3km s-min=10.6km az=80.0*

*DJA **23** 19:26:45.6±1.0, 8°N±5°×12°7E±°, h37km±12km, M4.5/14, mB4.9/5, mb4.6/14, MLv4.7/5, Mw(mB)4.2/5*

ISC 23 19:26:37.8±2.2, 8.16N±0.04×127.24E±0.07, h23km±16km, n84, σ1s54/84, mb4.2/29, MS3.3/5, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.79**	**297**	*e*P		**Pn**	**19 27 08.8**	**+1.5**
BUTP				*e*S		**Sb**	**19 27 31.9**	**0.0**
GLSP	**General Luna,**	**1.95**	**326**	*e*P		**Pn**	**19 27 09.2**	**-0.4**
GLSP				*e*S		**Sb**	**19 27 36.3**	**-0.4**
DAV	**Davao City (W)**	**1.97**	**237**	Pn		**Pn**	**19 27 10.9**	**+1.1**
	43nm,0.3s,baz=60,slow=6.6,SNR=18							
DAV				Sn		**Sn**	**19 27 36.3**	**+2.6**
	121nm,0.3s,baz=265,slow=23,SNR=7.0							
DAV	**Davao City (W)**	**1.97**	**237**			**Pn**	**19 27 09.0**	**-0.8**
BUKP	**Musuan**	**2.17**	**263**	*e*P		**Pn**	**19 27 13.6**	**+1.0**
BUKP				*e*S		**Sb**	**19 27 43.5**	**+0.4**
KCP	**Kidapawan**	**2.42**	**242**	*e*P		**Pn**	**19 27 16.2**	**+0.2**
CGP	**Cagayan de Oro**	**2.53**	**277**	*e*P		**Pn**	**19 27 19.0**	**+1.4**
CGP				*i* S		**Sb**	**19 27 56.2**	**+2.8**
DDMP	**Don Marcelino,**	**2.54**	**217**	*e*P		**Pn**	**19 27 15.6**	**-2.1**
DDMP				*e*S		**Sn**	**19 27 46.9**	**-1.0**
MSLP	**Maasin**	**3.06**	**310**	*e*P		**Pn**	**19 27 26.6**	**+1.8**
MSLP				*e*S		**Sn**	**19 28 01.6**	**+0.8**
SKMP	**Bagumbayan, Su**	**3.13**	**239**	*e*P		**Pn**	**19 27 26.4**	**+0.6**
SKMP				*e*S		**Sn**	**19 28 04.6**	**+2.1**
PAGZ	**Pagadian**	**3.83**	**266**	*e*P		**Pn**	**19 27 35.7**	**+0.3**
LLP	**Lapu-Lapu**	**3.88**	**304**	*e*P		**Pn**	**19 27 36.2**	**+0.2**
LLP				*e*S		**Sb**	**19 28 29.5**	**-2.6**
TNTI	**Ternate**	**7.34**	**179**	Pn		**Pn**	**19 28 24.0**	**+0.4**
TNTI	**Ternate**	**7.34**	**179**	P		**Pn**	**19 28 25.8**	**+2.1**
	0.2nm70nm,1.1s							
LQP	**Lukban**	**8.14**	**317**	*e*P		Pn	19 28 41.0	+6.1
KMSI	**Cibinong**	**8.20**	**203**	P		**Pn**	**19 28 36.9**	**+1.4**
	0.3nm67nm,0.9s							
GTOI	**Gorontalo**	**8.58**	**210**	P		**Pn**	**19 28 41.4**	**+0.7**
	16nm,0.7s							
MRSI	**Marisa**	**9.28**	**215**	P		**Pn**	**19 28 51.8**	**+1.5**
	374nm29nm,0.9s							
TOLI2	**Tolitoli**	**9.51**	**223**	Pn		**Pn**	**19 28 52.1**	**-1.3**
SWI	**Sorong**	**9.82**	**156**	P		**Pn**	**19 29 00.6**	**+2.9**
	14nm,0.9s							
SIJI	**Sorong**	**9.83**	**156**	Pn		**Pn**	**19 28 55.6**	**-2.2**
	0.5nm,0.3s,baz=307,slow=20,SNR=1.9							
SIJI				Sn		Sn	19 30 36.2	-11
	0.3nm,0.3s,baz=2.1,slow=24,SNR=2.0							
LUWI	**Luwuk**	**10.17**	**206**	P		**Pn**	**19 29 04.4**	**+1.9**
	86nm,1.1s							
APSI	**Ampana**	**10.59**	**212**	P		Pn	19 29 17.1	+8.8
TTSI	**Tana Toraja**	**13.36**	**214**	P		**Pn**	**19 29 47.3**	**+1.1**
	54nm,1.2s							
BNSI	**Bone**	**14.36**	**210**	P		**Pn**	**19 29 59.7**	**-0.2**
	17nm,0.8s							
KAPI	**Kappang**	**15.07**	**210**	LR		LR	19 35 17.3	
	comp=Z,39nm,19.1s,baz=80,slow=36							
MTKI	**Muara Teweh, K**	**15.27**	**234**	P		**Pn**	**19 30 13.0**	**+0.9**
	1um68nm,0.4s							
SBUM	**Sibu**	**15.99**	**250**	P		**P**	**19 30 24.6**	**-0.2**
TPUB	**Ta-pu**	**16.34**	**338**			**P**	**19 30 27.4**	**-1.2**
TPUB				IAmb		IAmb	19 30 38.4	
	comp=Z,43nm,1.3s							
SSLB	**Suanglung**	**16.67**	**340**	Pn		**Pn**	**19 30 28.3**	**-1.7**
SSLB				IAmb		IAmb	19 30 47.7	
	comp=Z,40nm,1.5s							
YOJ	**Yonaguni jima**	**16.71**	**346**	Pn		**P**	**19 30 30.8**	**-1.9**
SOEI	**Soe**	**18.04**	**189**			**Pn**	**19 30 46.0**	**-1.3**
SOEI				IAmb		IAmb	19 31 08.4	
	comp=Z,26nm,0.9s							
SOEI	**Soe**	**18.04**	**189**	P		**P**	**19 30 48.3**	**+0.7**
	comp=Z,51nm,1.3s							
BATI	**Baumata**	**18.59**	**191**	P		**P**	**19 30 51.0**	**-2.5**
	comp=Z,1.0nm,0.3s,baz=164,slow=21,SNR=3.0							
BATI	**Baumata**	**18.59**	**191**	P		**Pn**	**19 30 55.6**	**+1.7**
	comp=Z,21nm,0.9s							
MTN	**Manton Dam**	**21.22**	**169**	P		**P**	**19 31 21.6**	**-0.6**
MTN				IAmb		IAmb	19 31 42.8	
	comp=Z,24nm,1.4s							
KNRA	**Kununurra**	**23.73**	**176**	P		**P**	**19 31 44.4**	**-4.0**
KNRA				IAmb		IAmb	19 32 12.6	
	comp=Z,14nm,0.8s							
JNU	**Nakatsue**	**25.07**	**7**	LR		LR	19 42 02.0	
	comp=Z,119nm,18.6s,baz=230,slow=37							
FITZ	**Fitzroy Crossi**	**26.14**	**183**	P		**P**	**19 32 09.6**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=14,slow=8.8,SNR=2.7							
FITZ	**Fitzroy Crossi**	**26.14**	**183**	P		**P**	**19 32 09.8**	**-0.6**
FITZ				IAmb		IAmb	19 32 36.0	
	comp=Z,12nm,1.4s							
PMG	**Port Moresby**	**26.42**	**131**	LR		LR	19 43 13.0	
	comp=Z,44nm,21.4s,baz=328,slow=38							
COEN	**Coen**	**27.07**	**144**	P		**P**	**19 32 18.0**	**-1.0**
COEN				IAmb		IAmb	19 32 33.8	
	comp=Z,8.9nm,1.2s							
JHJ2	**Mitsune**	**27.43**	**23**	P		**P**	**19 32 21.5**	**-0.4**
WB0	**Warramunga Arr**	**28.63**	**166**	P		**P**	**19 32 31.1**	**-1.7**
WB0				IAmb		IAmb	19 32 40.4	
	comp=Z,4.7nm,0.8s							
WRA	**Warramunga Arr**	**28.79**	**166**	P		**P**	**19 32 33.0**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=350,slow=10,SNR=4.7							
WRA	**Warramunga Arr**	**28.79**	**166**	P		**P**	**19 32 32.2**	**-2.0**
WB2	**Warramunga Arr**	**28.79**	**166**	P		**P**	**19 32 32.5**	**-1.7**
WB2				IAmb		IAmb	19 32 56.0	
	comp=Z,5.4nm,0.9s							
WR0	**Warramunga Arr**	**28.85**	**166**	P		**P**	**19 32 33.4**	**-1.3**
WR0				IAmb		IAmb	19 32 39.9	
	comp=Z,13nm,1.4s							
KSRS	**Korea Array**	**29.17**	**1**	LR		LR	19 45 28.3	
	comp=Z,69nm,19.2s,baz=175,slow=39							
CMAR	**Chiang Mai Arr**	**29.33**	**293**	P		**P**	**19 32 37.7**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=111,slow=6.8,SNR=2.3							
CMAR				LR		LR	19 46 06.9	
	comp=Z,67nm,18.0s,baz=165,slow=40							
MAJO	**Matsushiro**	**29.97**	**18**	P		**P**	**19 32 45.0**	**+0.5**
MAJO				IAmb		IAmb	19 33 13.4	
	comp=Z,5.6nm,1.2s							
ASAR	**Alice Springs**	**32.29**	**169**	P		**P**	**19 33 04.9**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=344,slow=7.7,SNR=9.3							
ASAR				PcP		**PcP**	**19 35 52.1**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=336,slow=2.0,SNR=1.3							
CTA	**Charters Tower**	**33.74**	**147**	P		**P**	**19 33 18.7**	**+0.9**
	comp=Z,3.2nm,0.9s,baz=341,slow=14,SNR=4.2							
USRK	**Ussuriysk Ar.**	**36.14**	**6**	P		**P**	**19 33 41.1**	**+2.9**
	comp=Z,1.8nm,0.7s,baz=208,slow=6.3,SNR=4.7							
USRK	**Ussuriysk Ar.**	**36.14**	**6**	P		**P**	**19 33 40.7**	**+2.4**
HNR	**Honiara**	**36.97**	**118**	LR		LR	19 48 28.6	
	comp=Z,40nm,18.0s,baz=244,slow=35							
KLR	**Kul'dur**	**41.11**	**4**	P		**P**	**19 34 21.4**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=202,slow=3.1,SNR=3.8							
STKA	**Stephens Creek**	**42.11**	**162**	P		**P**	**19 34 27.4**	**-0.8**
	comp=Z,2.5nm,0.8s,baz=291,slow=7.9,SNR=3.0							
STKA	**Stephens Creek**	**42.11**	**162**	IAmb		IAmb	19 34 34.9	
	comp=Z,1.8nm,1.4s							
SONM	**Songino Array**	**43.32**	**340**	P		**P**	**19 34 37.4**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=140,slow=5.4,SNR=2.5							
MK31	**Makanchi Array**	**54.28**	**323**	P		**P**	**19 36 02.8**	**+0

MKAR	**Makanchi Array**	**59.33**	**326**	P		P	20 28 59.9	+0.7
	0.1nm,0.4s,baz=111,slow=7.4,SNR=4.4							
KURBB	**Kurchatov Arra**	**63.53**	**328**	P		P	20 29 26.9	-0.6
	0.1nm,0.5s,baz=119,slow=8.1,SNR=2.6							

IDC ***23*** *20:26:37.7±1.1,27.00N×87.78E,h0km,mb3.7/8, mb1 3.8/10,mb1mx3.5/46,mbtmp3.6/10,ML3.2/2,Error ellipse: s-maj=51.1km s-min=17.1km az=56.0*
NDI ***23*** *20:26:40.0±3.6,27.35N×88.14E,h10km±23km,ML4.0*
ISC 23 20:26:42.6±0.8,27.2N±0.1×87.96E±0.08,h36km,n17, σ2s32/23,mb3.7/7,2C,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUWA	**GUWAHATI**	**3.47**	**105**	*e*P	**Pn**	**20 27 34.9**	**+0.8**
GUWA				*e*S	**Sn**	**20 28 14.4**	**+0.3**
GUWA				IAML		20 28 15.6	
	comp=N,144nm,0.1s						
GUWA				IAML		20 28 15.8	
	comp=E,86nm,0.2s						
SHL	**Shillong**	**3.86**	**113**	*e*P	**Pn**	**20 27 39.4**	**-0.2**
SHL				*e*S	**Sn**	**20 28 26.4**	**+2.5**
SHL				IAML		20 28 38.4	
	comp=N,382nm,0.2s						
SHL				IAML		20 28 40.9	
	comp=E,289nm,0.2s						
KOHI	**KOHIMA**	**5.69**	**103**	*e*P	**Pn**	**20 28 04.1**	**-0.8**
KOHI				*e*S	**Sn**	**20 29 06.0**	**-3.0**
KOHI				IAML		20 29 09.9	
	comp=E,1μm,0.3s						
KOHI				IAML		20 29 12.2	
	comp=N,928nm,0.3s						
MOKO	**MOKOCHONG**	**5.92**	**97**	*e*P	**Pn**	**20 28 06.3**	**-1.6**
MOKO				*e*S	**Sn**	**20 29 08.9**	**-5.7**
MOKO				IAML		20 29 11.6	
	comp=E,1μm,0.2s						
MOKO				IAML		20 29 13.8	
	comp=N,2μm,0.3s						
SAIH	**SAIHA**	**6.52**	**134⇑**	*e*P	**Pn**	**20 28 14.8**	**-1.4**
SMLA	**Simla**	**10.23**	**295⇑**	*e*P	**Pn**	**20 29 09.1**	**+2.2**
SMLA				*e*S	**Sn**	**20 30 55.9**	**-4.5**
DHRM	**DHARAMSHALA**	**11.33**	**299**	*e*P	**Pn**	**20 29 22.5**	**+0.3**
DHRM				*e*S	**Sn**	**20 31 23.6**	**-4.1**
DHRM				IAML		20 31 26.3	
	comp=E,15nm,0.4s						
DHRM				IAML		20 31 27.2	
	comp=N,14nm,0.5s						
CMAR	**Chiang Mai Arr**	**13.32**	**128**	Pn	**Pn**	**20 29 48.4**	**-0.8**
	comp=N,0.1nm,0.3s,baz=309,slow=12,SNR=2.1						
AAK	**Ala-Archa**	**18.94**	**328**	P	**P**	**20 31 01.2**	**+0.5**
	comp=N,0.1nm,0.3s,baz=178,slow=8.0,SNR=1.7						
MKAR	**Makanchi Array**	**20.10**	**349**	P	**P**	**20 31 14.9**	**+1.8**
	comp=N,0.5nm,0.4s,baz=169,slow=9.7,SNR=20						
KURBB	**Kurchatov Arra**	**24.51**	**345**	P	**P**	**20 31 59.5**	**+1.0**
	comp=N,0.3nm,0.6s,baz=161,slow=9.2,SNR=4.6						
SONM	**Songino Array**	**25.17**	**30**	P	**P**	**20 32 06.7**	**+2.0**
	comp=N,0.1nm,0.4s,baz=206,slow=10,SNR=1.8						
FINES	**FINESS Array B**	**53.13**	**328**	P	**P**	**20 35 57.1**	**+0.7**
	comp=N,1.0nm,0.7s,baz=134,slow=9.9,SNR=4.2						
ARCES	**ARCESS Array B**	**55.25**	**338**	P	**P**	**20 36 12.7**	**+0.9**
	comp=N,2.9nm,0.9s,baz=95,slow=10.0,SNR=1.8						
GERES	**GERESS Array B**	**59.96**	**313**	P	**P**	**20 36 45.6**	**+0.2**
	comp=N,0.3nm,0.6s,baz=104,slow=4.1,SNR=2.7						
WRA	**Warramunga Arr**	**64.89**	**131**	P	**P**	**20 37 19.2**	**+0.6**
	comp=N,0.7nm,0.5s,baz=322,slow=7.0,SNR=9.5						
ASAR	**Alice Springs**	**67.25**	**134**	P	**P**	**20 37 34.5**	**+0.9**
	comp=N,0.4nm,0.5s,baz=317,slow=6.2,SNR=9.7						

IDC ***23*** *21:09:28.3±0.8,52.44S×13.23E,h0km,mb4.2/10, mb1 4.3/10,mb1mx4.0/32,mbtmp4.2/10,MS3.6/9, Ms1 3.6/9,ms1mx3.3/23,Error ellipse: s-maj=31.1km s-min=18.9km az=85.0*
NEIC ***23*** *21:09:29.7±1.0,52.4S±0.1×13.0E±0.2,h10km±1km, mb4.4/12,Error ellipse: s-maj=25.3km s-min=21.7km az=85.0*
ISC 23 21:09:30.0±0.6,52.39S±0.09×13.0E±0.1,h10km,n39, σ0s76/28,mb4.3/10,MS3.5/9,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**20.59**	**194**	P	**P**	**21 14 09.2**	**+0.3**
SNAA	**Sanae**	**20.59**	**194**	P	**P**	**21 14 08.8**	**0.0**
	28nm,1.0s,baz=18,slow=9.5,SNR=32						
SNAA				LR	LR	21 20 02.3	
	comp=Z,152nm,21.5s,baz=128,slow=31						
SNAA	**Sanae**	**20.59**	**194**	P	**P**	**21 14 08.8**	**0.0**
VNA1	**Neumayer--Stat**	**20.72**	**200**	P	**P**	**21 14 10.6**	**+0.5**
VNA2	**Neumayer--Watz**	**20.76**	**199**	P	Pn	21 14 11.7	-1.2
	baz=30,slow=12						
SUR	**Sutherland**	**20.78**	**19**	P	Pn	21 14 12.7	-1.0
	5.5nm,0.9s,baz=136,slow=9.2,SNR=2.3						
SUR				LR	LR	21 20 13.6	
	comp=Z,171nm,18.3s,baz=173,slow=31						
SUR	**Sutherland**	**20.78**	**19**	P	**P**	**21 14 11.9**	**+0.6**
SUR				IAmb	IAmb	21 14 18.8	
	comp=Z,22nm,1.2s						
VNA3	**Neumayer Olymp**	**21.47**	**200**	P	**P**	**21 14 18.1**	**-0.1**
BOSA	**Boshof**	**25.43**	**26**	LR	LR	21 23 02.4	
	comp=Z,118nm,21.4s,baz=206,slow=32						
BOSA	**Boshof**	**25.43**	**26**	P	**P**	**21 14 57.0**	**-0.9**
BOSA				IAmb	IAmb	21 15 03.7	
	comp=Z,11nm,1.5s						
MAW	**Mawson**	**28.19**	**142**	LR	LR	21 24 43.2	
	comp=Z,105nm,19.7s,baz=261,slow=33						
MAW	**Mawson**	**28.19**	**142**	P	**P**	**21 15 24.3**	**+2.0**
LBTB	**Lobatse**	**28.95**	**24**	LR	LR	21 25 07.2	
	comp=Z,96nm,18.6s,baz=202,slow=32						
LBTB	**Lobatse**	**28.95**	**24**	P	**P**	**21 15 29.6**	**+0.1**
BELA	**Belgrano 2**	**30.73**	**198**	P	**P**	**21 15 44.2**	**-0.5**
BELA				IAmb	IAmb	21 15 45.5	
	comp=Z,5.4nm,0.7s						
QSPA	**South Pole Qui**	**37.84**	**180**	P	**P**	**21 16 46.1**	**-0.4**
	comp=Z,4.2nm,1.0s,baz=278,slow=1.6,SNR=13						
QSPA	**South Pole Qui**	**37.84**	**180**	P	**P**	**21 16 46.3**	**-0.3**
QSPA				IAmb	IAmb	21 16 50.6	
	comp=Z,7.3nm,1.1s						
VNDA	**Vanda**	**48.91**	**171**	P	**P**	**21 18 14.3**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=210,slow=7.8,SNR=3.9						
VNDA				LR	LR	21 37 33.7	
	comp=Z,121nm,20.6s,baz=191,slow=34						
VNDA	**Vanda**	**48.91**	**171**	IAmb	IAmb	21 18 25.7	
	comp=Z,2.3nm,0.9s						
CPUP	**Villa Florida**	**57.77**	**268**	P	**P**	**21 19 21.6**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=100,slow=6.2,SNR=4.9						
CPUP	**Villa Florida**	**57.77**	**268**	P	**P**	**21 19 21.5**	**+0.4**
CPUP				IAmb	IAmb	21 19 22.7	
	comp=Z,4.0nm,1.1s						
BDFB	**Brasilia**	**60.17**	**284**	P	**P**	**21 19 37.6**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=134,slow=9.6,SNR=3.4						
DBIC	**Dimbokro**	**60.78**	**340**	LR	LR	21 41 24.3	
	comp=Z,41nm,19.3s,baz=155,slow=32						
TORD	**Torodi Ar. Bea**	**66.00**	**348**	P	**P**	**21 20 16.2**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=179,slow=7.5,SNR=6.2						
TORD				LR	LR	21 45 00.6	
	comp=Z,31nm,20.0s,baz=110,slow=32						
TORD	**Torodi Ar. Bea**	**66.00**	**348**	P	**P**	**21 20 15.9**	**-0.6**
KOWA	**Kowa**	**68.23**	**342**	P	**P**	**21 20 30.6**	**-0.1**
H01W2	**Cape Leeuwin H**	**69.32**	**120**	T	T	22 36 34.3	
	baz=218						
H01W3	**Cape Leeuwin H**	**69.33**	**120**	T	T	22 36 31.6	
	baz=218						
H01W1	**Cape Leeuwin H**	**69.33**	**120**	T	T	22 36 34.5	
	baz=218						
LPAZ	**La Paz**	**71.91**	**267**	P	**P**	**21 20 55.8**	**+1.6**
	comp=Z,7.0nm,0.9s,baz=127,slow=4.2,SNR=19						
LPAZ	**La Paz**	**71.91**	**267**	P	**P**	**21 20 54.3**	**+0.1**
ASAR	**Alice Springs**	**88.44**	**128**	P	**P**	**21 22 21.7**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=202,slow=4.9,SNR=3.0						
ASAR	**Alice Springs**	**88.44**	**128**	P	**P**	**21 22 22.1**	**-0.4**
ESDC	**Sonseca Array**	**92.88**	**347**	P	**P**	**21 22 42.6**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=192,slow=4.8,SNR=5.3						
GEYT	**Alibeck**	**98.13**	**34**	LR	LR	22 10 05.9	
	comp=Z,27nm,18.5s,baz=40,slow=37						
RES	**Resolute Bay**	**144.29**	**334**	PKP	**PKPdf**	**21 29 03.9**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=79,slow=3.0,SNR=9.4						
RES	**Resolute Bay**	**144.29**	**334**		**PKPdf**	**21 29 03.5**	**-0.9**
YKA	**Yellowknife Ar**	**150.89**	**311**	PKPbc	**PKPbc**	**21 29 20.8**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=97,slow=2.8,SNR=20						
ILAR	**Eielson Array**	**163.87**	**328**	PKPab	**PKPab**	**21 30 25.8**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=21,slow=5.2,SNR=5.9						

TAP 23 21:34:51.8,24.68N×121.78E,h14km,ML1.4,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDS	**Dongshan**	**0.07**	**229**	*i* P	Pg	21 34 54.9	+0.3
	baz=229						
NDS				*i* S	Sg	21 34 57.4	+0.8
	baz=229						
ILA	**Ilan**	**0.09**	**343**	P	Pg	21 34 55.2	+0.4
	baz=347						
ILA				S	Sg	21 34 57.8	+1.0
	baz=347						
TWE	**Neicheng**	**0.11**	**292**	*i* P	Pg	21 34 54.8	-0.2
	baz=293						
TWE				*i* S	Sb	21 34 58.1	-0.1
	baz=293						
NTC	**Toucheng**	**0.18**	**16**	P	Pb	21 34 56.5	-0.4
	baz=15						
NTC				S	Sb	21 34 59.8	-0.5
	baz=15						
ENTT	**Nioudou**	**0.20**	**258**	P	Pb	21 34 57.7	+0.5
	baz=256						
ENTT				*i* S	Sb	21 35 00.7	-0.1
	baz=256						
EWUT	**Wuta**	**0.23**	**179**	P	Pb	21 34 57.6	-0.3
	baz=179						
EWUT				*e*S	Sb	21 35 01.3	-0.6
	baz=179						
NDT	**Datong Townshi**	**0.25**	**252**	P	Pb	21 34 58.3	+0.1
	baz=251						
NDT				S	Sb	21 35 02.4	0.0
	baz=251						
NWLT	**Wulai**	**0.27**	**291**	P	Pb	21 34 58.6	+0.1
	baz=291						
NWLT				S	Sb	21 35 02.6	-0.3
	baz=291						
TIPB	**Shuangxi**	**0.29**	**9**	*i* P	Pb	21 34 58.9	0.0
	baz=8.0						
TIPB				*i* S	Sb	21 35 03.7	0.0
	baz=8.0						
TWA	**Mucha**	**0.34**	**330**	*e*P	Pg	21 34 59.3	+0.4
	baz=330						
TWA				S	Sb	21 35 05.2	+0.1
	baz=330						
NHDH	**Xindian Distri**	**0.36**	**321**	*e*P	Pg	21 34 59.5	+0.3
	baz=320						
NHDH				*e*S	Sb	21 35 06.0	+0.5
	baz=320						
YHNB	**Yeheng**	**0.36**	**268**	P	Pb	21 34 59.9	-0.2
	baz=268						
YHNB				S	Sb	21 35 05.9	+0.2
	baz=268						
TWB1	**Santiao Chiao**	**0.38**	**31**	*i* P	Pb	21 35 00.5	+0.1
	baz=31						
TWB1				*i* S	Sb	21 35 06.6	+0.5
	baz=31						
NSK	**Sanguang**	**0.38**	**269**	P	Pb	21 35 00.5	+0.2
	baz=268						
NSK				*i* S	Sb	21 35 06.0	-0.2
	baz=268						
NNSH	**Datong**	**0.44**	**235**	P	Pb	21 35 01.4	0.0
	baz=234						
NNSH				S	Sb	21 35 08.2	+0.3
	baz=234						
BACT	**New Taipei Cit**	**0.44**	**316**	*e*S	Sb	21 35 08.2	+0.5
	baz=316						
NNS	**Nan Shan**	**0.44**	**237**	P	Pb	21 35 01.1	-0.3
	baz=236						
NNS				S	Sb	21 35 08.2	+0.3
	baz=236						
NNSB	**Datong**	**0.44**	**235**	P	Pb	21 35 01.6	+0.2
	baz=234						
NNSB				S	Sb	21 35 08.3	+0.4
	baz=234						
NWRT	**Kuosheng**	**0.53**	**349**	*e*S	Sb	21 35 11.1	+0.6
	baz=348						
NACB	**Ninganchiao**	**0.53**	**198**	P	Pb	21 35 03.2	+0.3
	baz=198						
NACB				S	Sb	21 35 10.6	+0.1
	baz=198						
YM08	**YM08**	**0.53**	**342**	*e*P	Pb	21 35 03.2	+0.2
	baz=341						
YM08				*e*S	Sb	21 35 10.7	+0.2
	baz=341						

JMA 23 21:35:38.3±0.1,24.26N×123.73E,h19km±1km,M0.9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.07**	**0**	P	Pg	21 35 41.8	-0.1
IRIF				S	Sg	21 35 44.3	0.0
HATJ	**Hateruma jima**	**0.21**	**161**	P	Pg	21 35 43.4	-0.1
HATJ				S	Sg	21 35 46.9	-0.2
JKRS	**Kuro-shima**	**0.26**	**95**	P	Pg	21 35 44.2	0.0
JKRS				S	Sg	21 35 48.4	+0.2
JIJ	**Ishigaki jima**	**0.39**	**75**	P	Pg	21 35 46.2	-0.3
JIJ				S	Sg	21 35 51.5	-0.5
JISG	**Ishigakijimahi**	**0.62**	**58**	P	Pb	21 35 50.5	0.0
JISG				*e*S	Sg	21 35 59.0	0.0

IDC ***23*** *22:05:07.5±0.7,34.63N×70.42E,h0km,mb3.9/19, mb1 4.0/25,mb1mx3.8/51,mbtmp3.9/25,ML3.5/6,Error ellipse: s-maj=16.4km s-min=15.3km az=8.0*
NNC ***23*** *22:05:13.9±6.8,35.02N×69.82E,h0km,mb4.5,mpv4.2, Error ellipse: s-maj=57.3km s-min=47.2km az=153.0*
ISC 23 22:05:08.8±0.6,34.59N±0.06×70.40E±0.07,h10km,n41, σ2s16/47,mb3.9/19,6C-1D,Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**8.50**	**1**	⇑P	**Pn**	**22 07 14.3**	**+2.3**
	4.4nm,0.4s,baz=187,slow=14,SNR=97						
KK31				⇑S	**Sn**	**22 08 47.8**	**-0.2**
	3.6nm,0.3s,baz=190,slow=21,SNR=5.4						
AAK	**Ala-Archa**	**8.65**	**21**	Pn	**Pn**	**22 07 15.8**	**+1.7**
	0.5nm,0.3s,baz=178,slow=11,SNR=13						
AAK				Sn	**Sn**	**22 08 53.8**	**+2.0**
	0.6nm,0.3s,baz=150,slow=20,SNR=1.5						
AAK	**Ala-Archa**	**8.65**	**21**	⇓P	**Pn**	**22 07 17.3**	**+3.2**
	7.1nm,0.5s						
AAK				⇑S	**Sn**	**22 08 53.8**	**+2.0**
	4.6nm,0.5s						
TKM2	**Tokmak 2**	**9.25**	**24**	⇑P	**Pn**	**22 07 24.9**	**+2.4**
	5.4nm,0.7s						
TKM2				⇑S	**Sn**	**22 09 09.4**	**+2.7**
	3.0nm,0.6s						
GEYT	**Alibeck**	**10.46**	**292**	Pn	**Pn**	**22 07 40.8**	**+1.9**
	0.3nm,0.3s,baz=132,slow=14,SNR=1.9						
DANN	**Dangsing**	**12.98**	**115**	*e*P	**Pn**	**22 08 11.1**	**-2.6**
	2.9nm,0.4s						
KOLN	**Koldanda**	**13.18**	**117**	*e*P	**Pn**	**22 08 15.1**	**-1.2**
	2.6nm,0.4s						
GKN	**Gorkha**	**13.82**	**114**	*e*P	**Pn**	**22 08 22.6**	**-2.4**
	5.2nm,0.4s						
DMN	**Daman**	**14.38**	**115**	*e*P	**Pn**	**22 08 30.9**	**-1.9**
	5.4nm,0.5s						
KKN	**Kakani**	**14.42**	**114**	*e*P	**Pn**	**22 08 31.2**	**-2.0**
	5.3nm,0.4s						
PKIN	**Phulchoki**	**14.62**	**114**	*e*P	**Pn**	**22 08 34.0**	**-2.0**
	9.9nm,0.4s						
PKI	**Pulchoki**	**14.63**	**114**	*e*P	**Pn**	**22 08 34.0**	**-2.2**
	6.8nm,0.4s						
GUN	**Gumba**	**14.81**	**112**	*e*P	**Pn**	**22 08 36.5**	**-2.2**
	6.6nm,0.3s						
MKAR	**Makanchi Array**	**15.14**	**33**	Pn	**Pn**	**22 08 41.4**	**-1.3**
	0.1nm,0.3s,baz=220,slow=9.0,SNR=2.2						
JIRN	**Jiri**	**15.18**	**113**	*e*P	**Pn**	**22 08 41.5**	**-2.1**
	5.8nm,0.4s						
RAMN	**Ramite**	**15.86**	**114**	*e*P	**Pn**	**22 08 51.1**	**-1.3**
	3.6nm,0.3s						
TAPN	**Taplejung**	**16.50**	**111**	*e*P	**P**	**22 09 00.6**	**-2.7**
	5.6nm,0.3s						
ODAN	**Odare**	**16.50**	**113**	*e*P	**Pn**	**22 08 59.8**	**-0.9**
	2.1nm,0.4s						
AB31	**Akbulak array**	**16.57**	**335**	P	**Pn**	**22 09 00.8**	**-0.3**
	3.7nm,0.6s,baz=149,slow=11,SNR=107						
AB31				⇑S	**Sn**	**22 11 57.9**	**-7.0**
	1.9nm,0.7s,baz=165,slow=21,SNR=4.2						
KURBB	**Kurchatov Arra**	**17.09**	**18**	P	**Pn**	**22 09 05.8**	**-1.8**
	0.1nm,0.3s,baz=210,slow=10,SNR=8.9						
AKTO	**Aktyubinsk**	**18.24**	**334**	P	**Pn**	**22 09 22.7**	**+0.8**
	0.4nm,0.3s,baz=141,slow=15,SNR=11						
AKTO				S	**Sn**	**22 12 38.4**	**-7.0**
	0.1nm,0.3s,baz=90,slow=20,SNR=1.6						
BVAR	**Borovoye Array**	**18.43**	**360**	P	**P**	**22 09 23.6**	**-0.6**
	0.4nm,0.3s,baz=192,slow=13,SNR=4.8						

GNI	**Garni**	**21.10**	**293**	P		**P**	**22 09 53.8**	**+0.2**
	4.1nm,0.7s,baz=170,slow=13,SNR=3.4							
ZALV	**Zalesovo Beam**	**21.86**	**23**	P		**P**	**22 10 00.8**	**-0.7**
	3.2nm,0.4s,baz=219,slow=12,SNR=16							
ARU	**Arti**	**23.30**	**343**	P		**P**	**22 10 16.2**	**-0.4**
	0.7nm,0.6s,baz=206,slow=10,SNR=4.0							
SONM	**Songino Array**	**29.85**	**53**	P		**P**	**22 11 17.0**	**+0.7**
	0.7nm,0.7s,baz=266,slow=11,SNR=7.2							
CMAR	**Chiang Mai Arr**	**30.03**	**115**	P		**P**	**22 11 19.3**	**+1.3**
	0.4nm,0.3s,baz=305,slow=8.2,SNR=1.5							
AKASG	**Malin Array Be**	**33.80**	**311**	P		**P**	**22 11 51.3**	**+0.5**
	1.0nm,0.5s,baz=86,slow=7.0,SNR=8.0							
NRIK	**Noril'sk**	**36.09**	**10**	P		**P**	**22 12 10.9**	**+0.5**
	1.4nm,0.3s,baz=175,slow=11,SNR=1.8							
FINES	**FINESS Array B**	**38.81**	**328**	P		**P**	**22 12 33.5**	**0.0**
	1.5nm,0.7s,baz=137,slow=12,SNR=3.9							
ARCES	**ARCESS Array B**	**42.73**	**339**	P		**P**	**22 13 05.6**	**-0.1**
	2.0nm,0.8s,baz=113,slow=8.2,SNR=5.8							
NOA	**NORSAR Array B**	**45.62**	**324**	P		**P**	**22 13 28.4**	**-0.7**
	1.0nm,0.5s,baz=98,slow=7.8,SNR=5.3							
MJAR	**Matsushiro Arr**	**54.13**	**67**	P		**P**	**22 14 34.7**	**+0.6**
	0.8nm,0.6s,baz=306,slow=9.3,SNR=2.0							
ESDC	**Sonseca Array**	**57.93**	**299**	P		**P**	**22 15 02.4**	**+1.1**
	1.0nm,1.0s,baz=60,slow=6.9,SNR=7.6							
TORD	**Torodi Ar. Bea**	**65.19**	**269**	P		**P**	**22 15 49.9**	**-0.7**
	0.4nm,0.4s,baz=49,slow=5.9,SNR=9.1							
INK	**Inuvik**	**75.86**	**9**	P		**P**	**22 16 54.6**	**-0.2**
	0.7nm,0.7s,baz=347,slow=3.7,SNR=1.8							
BOSA	**Boshof**	**75.97**	**220**	P		**P**	**22 16 57.2**	**+1.1**
	5.7nm,1.2s,baz=43,slow=8.0,SNR=3.6							
ILAR	**Eielson Array**	**76.75**	**15**	P		**P**	**22 17 01.0**	**+1.0**
	0.2nm,0.4s,baz=333,slow=3.4,SNR=2.3							
WRA	**Warramunga Arr**	**81.41**	**121**	P		**P**	**22 17 26.1**	**-0.1**
	0.4nm,0.4s,baz=322,slow=5.0,SNR=1.5							
YKA	**Yellowknife Ar**	**83.17**	**2**	P		**P**	**22 17 33.7**	**-1.0**
	0.4nm,0.6s,baz=352,slow=5.0,SNR=6.4							
ASAR	**Alice Springs**	**83.57**	**124**	P		**P**	**22 17 37.6**	**+0.2**
	0.7nm,0.5s,baz=310,slow=5.0,SNR=6.2							

JMA ***23*** *22:13:46.1±0.1,23.97N×122.42E,h18km±3km,M2.8*
TAP ***23*** *22:13:46.6,24.01N×122.44E,h27km,ML3.0,D*
ISC 23 22:13:46.4±1.1,24.00N±0.03×122.41E±0.02,h23km±13km, n72,σ0s53/123,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.67**	**47**	P	**Pb**	**22 13 58.9**	**-0.4**
JYNG				S	**Sb**	**22 14 08.6**	**+0.4**
YOJ	**Yonaguni jima**	**0.72**	**50**	P	**Pb**	**22 14 00.0**	**-0.2**
YOJ				*e*S	**Sb**	**22 14 09.6**	**-0.1**
YOJ	**Yonaguni jima**	**0.72**	**50**	P	**Pb**	**22 13 59.9**	**-0.3**
	baz=48						
YOJ				S	**Sb**	**22 14 09.1**	**-0.6**
	baz=48						
EWUT	**Wuta**	**0.73**	**308**	*e*P	**Pb**	**22 14 00.5**	**+0.1**
	baz=305						
EWUT				*i* S	**Sb**	**22 14 10.5**	**+0.5**
	baz=305						
TWD	**Chiawan**	**0.75**	**276**	P	**Pb**	**22 14 01.3**	**+0.6**
	baz=275						
TWD				*i* S	**Sb**	**22 14 11.5**	**+1.0**
	baz=275						
NACB	**Ninganchiao**	**0.76**	**283**	P	**Pb**	**22 14 01.1**	**+0.1**
	baz=282						
NACB				*e*S	**Sb**	**22 14 11.2**	**+0.2**
	baz=282						
ETLH	**Xiulin Townshi**	**0.87**	**284**	P	**Pb**	**22 14 02.9**	**0.0**
	baz=282						
ETLH				*i* S	**Sn**	**22 14 15.9**	**+0.6**
	baz=282						
NDS	**Dongshan**	**0.89**	**315**	*e*P	**Pb**	**22 14 02.9**	**-0.4**
	baz=313						
NDS				*e*S	**Sb**	**22 14 15.3**	**+0.5**
	baz=313						
ESL	**Shilin**	**0.91**	**259**	P	**Pb**	**22 14 02.1**	**-1.4**
	baz=258						
ESL				S	**Sb**	**22 14 16.0**	**+0.7**
	baz=258						
ILA	**Ilan**	**0.97**	**322**	*e*P	**Pb**	**22 14 04.3**	**-0.2**
	baz=320						
ILA				S	**Sb**	**22 14 17.5**	**+0.6**
	baz=320						
TWE	**Neicheng**	**0.99**	**317**	*i* P	**Pn**	**22 14 04.6**	**-0.2**
	baz=315						
TWE				*i* S	**Sb**	**22 14 17.3**	**-0.1**
	baz=315						
ENTT	**Nioudou**	**1.00**	**310**	*i* P	**Pn**	**22 14 04.7**	**-0.3**
	baz=308						
ENTT				*i* S	**Sb**	**22 14 18.5**	**+0.7**
	baz=308						
NTC	**Toucheng**	**1.00**	**328**	*e*P	**Pn**	**22 14 05.0**	**-0.1**
	baz=326						
NTC				*e*S	**Sb**	**22 14 17.8**	**-0.1**
	baz=326						
NDT	**Datong Townshi**	**1.01**	**306**	*e*P	**Pn**	**22 14 05.4**	**+0.2**
	baz=305						
NDT				S	**Sb**	**22 14 18.2**	**0.0**
	baz=305						
NNSB	**Datong**	**1.03**	**295**	P	**Pn**	**22 14 05.5**	**-0.1**
	baz=293						
NNSB				S	**Sb**	**22 14 18.8**	**0.0**
	baz=293						
NNSH	**Datong**	**1.03**	**295**	*e*P	**Pn**	**22 14 05.4**	**-0.2**
	baz=293						
NNSH				S	**Sb**	**22 14 18.8**	**0.0**
	baz=293						
HGSD	**Ruisui**	**1.03**	**241**	P	**Pn**	**22 14 05.0**	**-0.5**
	baz=241						
HGSD				S	**Sn**	**22 14 19.5**	**+0.3**
	baz=241						
NNS	**Nan Shan**	**1.04**	**295**	*i* P	**Pn**	**22 14 05.7**	**0.0**
	baz=293						
NNS			

	baz=330										
WFSB					S		Sn	22 14 23.7	+0.1		
	baz=330										
TWA	**Mucha**	**1.23**	**323**	*i*	P		**Pb**	**22 14 09.4**	**+0.4**		
	baz=321										
TWA				*i*	S		**Sn**	**22 14 24.6**	**+0.4**		
	baz=321										
IRIF	**Iriomote-Funau**	**1.25**	**74**		P		**Pb**	**22 14 09.0**	**-0.3**		
IRIF					S		**Sb**	**22 14 25.8**	**+0.8**		
HATJ	**Hateruma jima**	**1.28**	**87**		P		**Pn**	**22 14 08.8**	**0.0**		
TATO	**Taipei**	**1.28**	**319**		P		**Pb**	**22 14 10.0**	**+0.1**		
	baz=318										
TATO					S		**Sn**	**22 14 25.9**	**+0.5**		
	baz=318										
FULB	**Fuli**	**1.30**	**232**	*e*	P		**Pn**	**22 14 08.9**	**-0.2**		
	baz=232										
FULB				*e*	S		**Sn**	**22 14 26.0**	**+0.2**		
	baz=232										
CHKT	**Chengkung**	**1.31**	**227**		P		**Pn**	**22 14 08.7**	**-0.6**		
	baz=227										
CHKT					S		**Sn**	**22 14 25.2**	**-0.8**		
	baz=227										
WPL	**Puli Township**	**1.33**	**271**		P		**Pn**	**22 14 10.0**	**+0.5**		
	baz=270										
WPL				*e*	S		**Sn**	**22 14 26.1**	**-0.4**		
	baz=270										
SSLB	**Suanglung**	**1.35**	**261**		P		**Pn**	**22 14 10.2**	**+0.3**		
	baz=260										
DPDB	**Guoxing**	**1.36**	**272**	*e*	P		**Pn**	**22 14 10.8**	**+0.8**		
	baz=271										
DPDB				*e*	S		**Sn**	**22 14 26.2**	**-1.0**		
	baz=271										
WHP	**Taichung City**	**1.36**	**282**		P		**Pn**	**22 14 11.0**	**+0.9**		
	baz=281										
WHP				*e*	S		**Sn**	**22 14 27.7**	**+0.2**		
	baz=281										
YM01	**YM01**	**1.37**	**326**	*e*	P		**Pn**	**22 14 10.0**	**-0.2**		
	baz=325										
SMLT	**Sun Moon Lake**	**1.39**	**266**		P		**Pn**	**22 14 11.2**	**+0.8**		
	baz=264										
SMLT					S		**Sn**	**22 14 28.2**	**+0.2**		
	baz=264										
YM08	**YM08**	**1.40**	**328**	*e*	P		**Pn**	**22 14 10.7**	**+0.2**		
	baz=326										
TYC	**Yuchr**	**1.42**	**267**		P		**Pn**	**22 14 11.3**	**+0.6**		
	baz=266										
TYC					S		**Sn**	**22 14 28.5**	**-0.3**		
	baz=266										
LIOB	**Emei**	**1.43**	**297**		P		**Pb**	**22 14 12.1**	**-0.2**		
	baz=296										
LIOB				*e*	S		**Sb**	**22 14 30.1**	**+0.1**		
	baz=296										
YUS	**Yu-Shan**	**1.43**	**249**		P		**Pn**	**22 14 11.8**	**+0.5**		
	baz=249										
YUS					S		**Sn**	**22 14 30.0**	**+0.4**		
	baz=249										
NSTT	**Nanjuang**	**1.43**	**296**		P		**Pn**	**22 14 11.8**	**+0.9**		
	baz=295										
NSTT					S		**Sn**	**22 14 29.8**	**+0.8**		
	baz=295										
EDH	**Donghe**	**1.44**	**225**	*e*	P		**Pn**	**22 14 11.0**	**-0.1**		
	baz=225										
TWY	**Chenhua**	**1.47**	**330**		P		**Pn**	**22 14 11.8**	**+0.4**		
	baz=328										
TWY				*e*	S		**Sn**	**22 14 28.8**	**-1.2**		
	baz=328										
JKRS	**Kuro-shima**	**1.48**	**80**		P		**Pb**	**22 14 13.2**	**0.0**		
JKRS					S		**Sb**	**22 14 32.5**	**+0.9**		
ELDTW	**Lidau**	**1.51**	**238**		P		**Pn**	**22 14 11.8**	**-0.3**		
	baz=237										
ELDTW					S		**Sn**	**22 14 30.3**	**-0.8**		
	baz=237										
ALS	**Alishan**	**1.55**	**252**		P		**Pn**	**22 14 13.8**	**+1.0**		
	baz=251										
LDUT	**Ludao**	**1.58**	**213**	*e*	P		**Pn**	**22 14 12.7**	**-0.2**		
	baz=213										
LONT	**Longtian**	**1.60**	**227**	*e*	P		**Pn**	**22 14 13.2**	**0.0**		
	baz=227										
JIJ	**Ishigaki jima**	**1.62**	**77**		P		**Pn**	**22 14 14.1**	**+0.5**		
JIJ					S		**Sn**	**22 14 33.8**	**0.0**		
CHN5	**Tsauling**	**1.64**	**256**		P		**Pb**	**22 14 15.5**	**-0.4**		
	baz=255										
PCYT	**Pengchaiyu**	**1.65**	**349**	*i*	P		**Pn**	**22 14 13.7**	**-0.3**		
	baz=348										
PCYT					S		**Sn**	**22 14 33.5**	**-1.0**		
	baz=348										
TWGBT	**Beinan**	**1.69**	**226**	*e*	P		**Pn**	**22 14 14.9**	**+0.4**		
	baz=226										
TWG	**Pinlang**	**1.70**	**227**	*e*	P		**Pn**	**22 14 14.7**	**+0.1**		
	baz=226										
STYH	**Taoyuan**	**1.71**	**241**	*e*	P		**Pn**	**22 14 15.2**	**+0.5**		
	baz=241										
STYT	**Tauyuan**	**1.73**	**242**	*e*	P		**Pn**	**22 14 16.1**	**+1.0**		
	baz=241										
WDLH	**Douliu**	**1.74**	**260**	*e*	P		**Pn**	**22 14 15.6**	**+0.5**		
	baz=259										
CHN4	**Tsaushan**	**1.79**	**249**	*e*	P		**Pb**	**22 14 17.8**	**-0.6**		
	baz=248										
WTP	**Ta-pu**	**1.81**	**246**	*e*	P		**Pb**	**22 14 18.2**	**-0.6**		
	baz=245										
JISG	**Ishigakijimahi**	**1.83**	**71**		P		**Pn**	**22 14 16.5**	**+0.1**		
JISG					S		**Sn**	**22 14 38.8**	**-0.1**		
SLGT	**Liugui**	**1.90**	**239**	*e*	P		**Pb**	**22 14 19.8**	**-0.6**		
	baz=238										
SGST	**Jiashian**	**1.91**	**242**	*e*	P		**Pn**	**22 14 18.9**	**+1.4**		
	baz=241										
ECL	**Taimali**	**1.93**	**224**	*e*	P		**Pn**	**22 14 17.9**	**+0.1**		
	baz=224										
MASBT	**Mashibuluo**	**2.14**	**230**	*e*	P		**Pn**	**22 14 21.2**	**+0.6**		
	baz=230										
JTJ	**Tarama**	**2.19**	**73**	*e*	S		**Sn**	**22 14 48.5**	**+0.8**		

IDC ***23*** *22:21:03.5±2.1, 18°.55S×175°.43W, h184km±18km, mb4.1/29, mb1 4.2/31, mb1mx4.2/44, mbtmp4.6/31, MS3.4/2, Ms1 3.4/2, ms1mx2.8/47, Error ellipse: s-maj=13.7km s-min=9.4km az=130.0*

NEIC ***23*** *22:21:05.8±2.0, 18°.45S±0°.06×175°.43W±0°.07, h208km±4km, mb4.7/100, Error ellipse: s-maj=10.3km s-min=7.0km az=47.0*

NOU ***23*** *22:21:09.1, 18°.24S×175°.03W, h282km, mb4.8, Tonga Islands*

ISC 23 22:21:08.5±0.3, 18°.60S±0°.05×175°.29W±0°.05, h238km, n409, σ1$27/411, mb4.7/100, 50C-40D, Fault plane solution: NP1:ϕ±353.98349°, δ66.46000°, λ-118.92253°. NP2:ϕ±228.12332°, δ36.63670°, λ-42.01200°. Principal axes: T Plg16.5586°, Azm104.8855°; N Plg26.3197°, Azm6.4280°; P Plg58.1919°, Azm223.5310°; **Fault plane solution: NP1:ϕ±242.73041°, δ17.07799°, λ-69.56119°. NP2:ϕ±41.43167°, δ74.02696°, λ-96.12345°. Principal axes:** T Plg28.7731°, Azm136.3682°; N Plg5.8862°, Azm43.1227°; P Plg60.5183°, Azm302.6156°;

Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.10**	**96**	P			**Pn**	**22 22 24.6**	**-0.5**
	baz=5.2,SNR=34								
NIUE				S			**S**	**22 23 20.4**	**-5.6**
	baz=5.2								
NIUE	**Niue**	**5.10**	**96**				**Pn**	**22 22 23.5**	**-1.7**
NIUE					Sn		**S**	**22 23 20.9**	**-5.1**
NIUE	**Niue**	**5.10**	**96**	P			**Pn**	**22 22 24.7**	**-0.5**
AFI	**Afiamalu**	**5.75**	**36**	P			Pn	22 22 27.3	-6.1
	26nm,0.3s,baz=180,slow=6.7,SNR=18								
AFI				S			S	22 23 29.3	-12
	57nm,0.3s,baz=180,slow=20,SNR=12								
AFI	**Afiamalu**	**5.75**	**36**				**Pn**	**22 22 29.4**	**-4.1**
AFI					Sn		S	22 23 31.7	-9.4
AFI	**Afiamalu**	**5.75**	**36**	P			**Pn**	**22 22 30.5**	**-2.9**
MSVF	**Nonsavu**	**6.39**	**277**	P			**Pn**	**22 22 42.6**	**+1.0**
	8.4nm,0.3s,baz=112,slow=24,SNR=33								
MSVF						LR	LR	22 23 59.3	
	comp=Z,179nm,19.8s,baz=123,slow=28								
MSVF	**Nonsavu**	**6.39**	**277**				**Pn**	**22 22 38.6**	**-2.9**
MSVF	**Nonsavu**	**6.39**	**277**	P			**Pn**	**22 22 43.8**	**+2.3**
RAO	**Raoul Island**	**10.88**	**192**		Pn		**Pn**	**22 23 40.4**	**+2.1**
GLKZ	**Green Lake**	**10.89**	**192**	P			**Pn**	**22 23 34.8**	**-3.6**
GLKZ				S			S	22 25 30.0	-10
FUNA	**Funafuti**	**11.36**	**331**	Pn			**Pn**	**22 23 42.2**	**-2.2**
RAR	**Rarotonga**	**14.82**	**103**	P			**Pn**	**22 24 26.0**	**-1.1**
	0.6nm,0.3s,baz=308,slow=19,SNR=2.4								
RAR	**Rarotonga**	**14.82**	**103**	P			**P**	**22 24 27.7**	**+0.6**
DVP	**Devils Point**	**15.73**	**271**	P			**Pn**	**22 24 39.6**	**+1.5**

	325μm,0.7s										
MARNC	**Mare, Loyalty**	**15.94**	**257**		P		**Pn**	**22 24 40.8**	**+0.3**		
KNTN	**Kanton**	**16.11**	**13**		P		**P**	**22 24 38.2**	**-3.2**		
KNTN					IAmb		IAmb	22 24 47.4			
	comp=Z,25nm,0.8s										
LIFNC	**LIFOU**	**16.60**	**260**		P		**Pn**	**22 24 48.3**	**0.0**		
	comp=Z,207nm,0.9s										
YATNC	**Mamie plateau,**	**17.07**	**255**		P		**Pn**	**22 24 53.3**	**-0.5**		
DZM	**Mont Dzumac**	**17.48**	**256**		P		**P**	**22 24 56.3**	**-0.1**		
	comp=Z,24nm,0.3s,baz=85,slow=17,SNR=26										
DZM	**Mont Dzumac**	**17.48**	**256**		P		**Pn**	**22 24 58.2**	**-0.6**		
DZM	**Mont Dzumac**	**17.48**	**256**		P		**Pn**	**22 24 58.8**	**+0.1**		
NOUC	**Port Laguerre**	**17.61**	**255**		P		**Pn**	**22 25 00.5**	**+0.3**		
OUZ	**Omahuta**	**19.27**	**209**		P		**Pn**	**22 25 20.0**	**+0.5**		
OUZ					IAmb		IAmb	22 25 24.0			
	comp=Z,24nm,1.1s										
KOUNC	**Koumac, New Ca**	**19.35**	**261**		P		**Pn**	**22 25 19.3**	**-1.3**		
MXZ	**Matakaoa Point**	**19.71**	**195**		P		**P**	**22 25 21.2**	**+1.0**		
MXZ					IAmb		IAmb	22 25 27.5			
	comp=Z,27nm,0.8s										
HAZ	**Te Kaha**	**20.03**	**196**		P		**P**	**22 25 24.0**	**+0.4**		
HAZ					S		**S**	**22 28 51.2**	**-4.1**		
PKGZ	**Pakihiroa**	**20.08**	**195**		P		**P**	**22 25 25.4**	**+1.2**		
PKGZ					S		**S**	**22 28 53.0**	**-3.4**		
PUZ	**Puketiti**	**20.21**	**195**		P		**P**	**22 25 26.4**	**+0.9**		
PUZ					S		**S**	**22 28 52.4**	**-6.3**		
TWGZ	**Tauwhareparae**	**20.38**	**195**		P		**P**	**22 25 29.5**	**+2.2**		
TWGZ					S		**S**	**22 29 01.8**	**0.0**		
CNGZ	**Carnagh Statio**	**20.61**	**195**		P		**P**	**22 25 31.4**	**+1.6**		
CNGZ					S		**S**	**22 29 07.5**	**+1.7**		
MWZ	**Matawai**	**20.64**	**196**		P		**P**	**22 25 29.9**	**-0.3**		
TKGZ	**Te Karaka**	**20.66**	**195**		P		**P**	**22 25 29.5**	**-0.8**		
TKGZ					S		**S**	**22 29 06.4**	**-0.2**		
URZ	**Urewera**	**20.68**	**197**		P		**P**	**22 25 29.8**	**-0.7**		
	comp=Z,27nm,0.5s,baz=76,slow=4.2,SNR=47										
URZ					S		**S**	**22 29 05.0**	**-2.1**		
	comp=Z,8.5nm,0.3s,baz=354,slow=24,SNR=5.6										
URZ	**Urewera**	**20.68**	**197**				**P**	**22 25 30.7**	**+0.1**		
URZ							**S**	**22 29 09.4**	**+2.3**		
URZ	**Urewera**	**20.68**	**197**		P		**P**	**22 25 29.9**	**-0.7**		
URZ					S		**S**	**22 29 02.6**	**-4.5**		
RAGZ	**Rawiri**	**20.82**	**196**		P		**P**	**22 25 32.6**	**+0.5**		
RIGZ	**Rimuhau**	**20.93**	**195**		P		**P**	**22 25 34.1**	**+0.9**		
MUGZ	**Murupara**	**20.98**	**198**		P		**P**	**22 25 34.2**	**+0.5**		
RTZ	**Ruatahuna**	**21.05**	**197**		P		**P**	**22 25 34.1**	**-0.3**		
SNGZ	**Shannon Statio**	**21.11**	**196**		P		**P**	**22 25 36.7**	**+1.7**		
NMHZ	**Naumai**	**21.55**	**197**		P		**P**	**22 25 40.8**	**+1.5**		
HIZ	**Hauiti**	**21.62**	**201**		P		**P**	**22 25 41.3**	**+1.4**		
HIZ					IAmb		IAmb	22 25 56.0			
	comp=Z,37nm,0.9s										
BKZ	**Black Stump Fm**	**21.70**	**197**		P		**P**	**22 25 39.8**	**-0.9**		
BKZ					IAmb		IAmb	22 25 49.2			
	comp=Z,15nm,1.1s										
BFZ	**Birch Farm**	**23.18**	**197**		P		**P**	**22 25 55.0**	**+0.8**		
BFZ					IAmb		IAmb	22 25 56.0			
	comp=Z,31nm,1.0s										
MSWZ	**Moikau Station**	**24.14**	**198**		P		**P**	**22 26 03.0**	**+0.1**		
SNZO	**South Karori**	**24.21**	**199**		P		**P**	**22 26 04.1**	**+0.7**		
BHW	**Baring Head**	**24.25**	**198**		P		**P**	**22 26 04.6**	**+0.8**		
PLWZ	**Palliser**	**24.28**	**197**		P		**P**	**22 26 04.8**	**+0.6**		
QRZ	**Quartz Range**	**24.50**	**203**		P		**P**	**22 26 07.1**	**+1.0**		
NNZ	**Nelson**	**24.55**	**201**		P		**P**	**22 26 07.6**	**+1.1**		
TUWZ	**Tuamarina**	**24.55**	**200**		P		**P**	**22 26 07.3**	**+0.7**		
CMWZ	**Cape Campbell**	**24.76**	**199**		P		**P**	**22 26 09.8**	**+1.3**		
BSWZ	**Blackbirch Sta**	**24.83**	**200**		P		**P**	**22 26 08.8**	**-0.3**		
THZ	**Tophouse**	**25.19**	**201**		P		**P**	**22 26 13.1**	**+0.6**		
THZ					IAmb		IAmb	22 26 24.4			
	comp=Z,16nm,0.9s										
KHZ	**Kahutara**	**25.57**	**199**		P		**P**	**22 26 16.3**	**+0.5**		
KHZ					IAmb		IAmb	22 26 35.0			
	comp=Z,14nm,0.8s										
LTZ	**Lake Taylor**	**26.32**	**201**		P		**P**	**22 26 22.9**	**+0.4**		
OXZ	**Oxford**	**26.88**	**201**		P		**P**	**22 26 26.6**	**-0.9**		
MQZ	**McQueen's Vall**	**27.02**	**199**		P		**P**	**22 26 29.7**	**+1.1**		
MQZ					IAmb		IAmb	22 26 47.7			
	comp=Z,29nm,1.1s										
RPZ	**Rata Peaks**	**27.56**	**202**		P		**P**	**22 26 33.0**	**-0.5**		
	comp=Z,10nm,0.7s,baz=43,slow=16,SNR=3.3										
RPZ	**Rata Peaks**	**27.56**	**202**		P		**P**	**22 26 34.2**	**+0.7**		
RPZ					IAmb		IAmb	22 26 38.7			
	comp=Z,12nm,0.7s										
FOZ	**Fox Glacier**	**27.85**	**204**		P		**P**	**22 26 35.3**	**-0.7**		
FOZ					IAmb		IAmb	22 26 52.4			
	comp=Z,21nm,0.9s										
LBZ	**Lake Benmore**	**28.45**	**202**		P		**P**	**22 26 41.0**	**-0.4**		
ODZ	**Otahua Downs**	**28.86**	**201**		P		**P**	**22 26 45.4**	**+0.3**		
ODZ					IAmb		IAmb	22 26 49.4			
	comp=Z,13nm,1.0s										
WKZ	**Wanaka**	**29.25**	**203**		P		**P**	**22 26 49.5**	**+1.0**		
WKZ					IAmb		IAmb	22 27 05.8			
	comp=Z,23nm,1.1s										
MLZ	**Mavora Lakes**	**30.05**	**204**		P		**P**	**22 26 55.0**	**-0.6**		
MLZ					IAmb		IAmb	22 27 06.2			
	comp=Z,10nm,0.7s										
DCZ	**Deep Cove**	**30.51**	**205**		P		**P**	**22 26 59.5**	**+0.1**		
DCZ					IAmb		IAmb	22 27 03.3			
	comp=Z,17nm,1.0s										
WHZ	**Wether Hill Ro**	**30.56**	**203**		P		**P**	**22 27 00.0**	**+0.1**		
EIDS	**Eidsvold**	**31.85**	**252**		P		**P**	**22 27 10.6**	**-0.9**		
EIDS					IAmb		IAmb	22 27 12.0			
	comp=Z,23nm,0.8s										
ARMA	**Armidale**	**32.21**	**242**		P		**P**	**22 27 14.3**	**-0.4**		
	baz=32,SNR=18										
ARMA	**Armidale**	**32.21**	**242**		P		**P**	**22 27 14.5**	**-0.2**		
ARMA					IAmb		IAmb	22 27 16.9			
	comp=Z,16nm,0.6s										
MGCD	**Mangrove Creek**	**33.38**	**237**		P		**P**	**22 27 26.1**	**+1.4**		
	baz=33,SNR=4.8										
RMQ	**Roma**	**34.04**	**250**		P		**P**	**22 27 30.3**	**-0.2**		
	baz=34,SNR=21										
RABL	**Rabaul**	**34.88**	**290**				**PcP**	**22 30 07.9**	**+2.8**		
CNB	**Canberra Magne**	**35.41**	**235**		P		**P**	**22 27 41.7**	**-0.5**		
	baz=35,SNR=12										
CAN	**Canberra**	**35.69**	**235**		P		**P**	**22 27 44.3**	**-0.3**		
CTAO	**Charters Tower**	**36.27**	**261**		P		**P**	**22 27 48.4**	**-1.2**		
CMSA	**Cobar Meteorol**	**37.43**	**242**		P		**P**	**22 27 58.2**	**-0.9**		
	baz=37,SNR=28										
QLP	**Quilpie**	**38.09**	**250**		P		**P**	**22 28 03.6**	**-1.1**		
	baz=38,SNR=11										
MTSU	**Mount Surprise**	**38.29**	**264**		P		**P**	**22 28 04.9**	**-1.6**		
	baz=38,SNR=53										
TOO	**Toolangi**	**39.08**	**233**		P		**P**	**22 28 12.0**	**-0.9**		
	baz=39,SNR=5.5										
TOO	**Toolangi**	**39.08**	**233**		P		**P**	**22 28 11.8**	**-1.1**		
TOO					IAmb		IAmb	22 28 12.7			
	comp=Z,10nm,0.7s										
TAU	**Tasmania Unive**	**39.77**	**224**		P		**P**	**22 28 18.0**	**-0.4**		
TAU					IAmb		IAmb	22 28 18.5			
	comp=Z,28nm,1.1s										
COEN	**Coen**	**40.08**	**270**		P		**P**	**22 28 20.2**	**-1.1**		
H11S2	**WAKE ISLAND Hy**	**40.88**	**333**		T		T	23 10 45.7			
	baz=146,slow=76										
H11S3	**WAKE ISLAND Hy**	**40.90**	**333**		T		T	23 10 44.5			
	baz=146,slow=76										
H11S1	**WAKE ISLAND Hy**	**40.90**	**333**		T		T	23 10 46.3			
	baz=146,slow=76										
STKA	**Stephens Creek**	**40.92**	**243**		P		**P**	**22 28 26.9**	**-1.2**		
	comp=Z,5.7nm,0.4s,baz=94,slow=11,SNR=19										
STKA					PcP		**PcP**	**22 30 24.9**	**+1.2**		
	comp=Z,2.9nm,0.5s,baz=0.0,slow=7.1,SNR=2.4										
STKA	**Stephens Creek**	**40.92**	**243**		P		**P**	**22 28 27.4**	**-0.5**		
	baz=41,SNR=17										
STKA	**Stephens Creek**	**40.92**	**243**		P		**P**	**22 28 27.5**	**-0.5**		
QIS	**Mount Isa**	**42.45**	**260**		P		**P**	**22 28 38.9**	**-1.6**		
	baz=42,SNR=6.2										
HTT	**Hallett**	**43.38**	**241**		P		**P**	**22 28 47.0**	**-0.8**		
	baz=43,SNR=11										
BBOO	**Buckleboo**	**45.69**	**242**		P		**P**	**22 29 04.7**	**-1.3**		
	baz=46,SNR=25										
BBOO	**Buckleboo**	**45.69**	**242**		P		**P**	**22 29 04.5**	**-1.5**		
BBOO					IAmb		IAmb	22 29 05.6			
	comp=Z,21nm,0.7s										
WR0	**Warramunga Arr**	**47.24**	**260**		P		**P**	**22 29 16.7**	**-1.6**		
WR0					IAmb		IAmb	22 29 18.2			
	comp=Z,16nm,0.8s										
WB0	**Warramunga Arr**	**47.40**	**260**		P		**P**	**22 29 18.5**	**-1.0**		
WB0					IAmb		IAmb	22 29 18.7			
	comp=Z,37nm,0.8s										
WB2	**Warramunga Arr**	**47.42**	**260**		P		**P**	**22 29 18.2**	**-1.4**		
WB2					IAmb		IAmb	22 29 18.9			
	comp=Z,32nm,0.7s										
WRAB	**Tennant Creek**	**47.42**	**260**		P		**P**	**22 29 18.2**	**-1.4**		
WRAB					IAmb		IAmb	22 29 18.8			
	comp=Z,26nm,0.7s										

WRA	**Warramunga Arr**	**47.43**	**260**		P		**P**	**22 29 18.1**	**-1.6**		
	comp=Z,24nm,0.7s,baz=97,slow=7.5,SNR=273										
WRA					PcP		**PcP**	**22 30 46.8**	**+0.6**		
	comp=Z,5.9nm,0.4s,baz=93,slow=3.5,SNR=11										
WRA					S		**S**	**22 35 53.6**	**-2.1**		
	comp=Z,0.7nm,0.8s,baz=99,slow=16,SNR=4.7										
WRA	**Warramunga Arr**	**47.43**	**260**		P		**P**	**22 29 18.4**	**-1.3**		
ASAR	**Alice Springs**	**47.47**	**255**		P		**P**	**22 29 18.8**	**-1.2**		
	comp=Z,127nm,0.6s,baz=88,slow=8.6,SNR=980										
ASAR					PcP		**PcP**	**22 30 46.7**	**+0.4**		
	comp=Z,13nm,0.6s,baz=104,slow=3.8,SNR=13										
ASAR					S		**S**	**22 35 52.0**	**-4.3**		
	comp=Z,1.5nm,0.8s,baz=94,slow=15,SNR=7.6										
ASAR	**Alice Springs**	**47.47**	**255**		P		**P**	**22 29 18.9**	**-1.1**		
KDU	**Kakadu**	**50.51**	**269**		P		**P**	**22 29 41.7**	**-1.3**		
	baz=50,SNR=60										
MTN	**Manton Dam**	**51.74**	**268**		P		**P**	**22 29 50.6**	**-1.6**		
	baz=52,SNR=14										
FORT	**Forrest**	**52.40**	**245**		P		**P**	**22 29 55.6**	**-1.3**		
	baz=52,SNR=11										
FORT	**Forrest**	**52.40**	**245**		P		**P**	**22 29 55.8**	**-1.1**		
WRKA	**Warakurna**	**52.46**	**252**		P		**P**	**22 29 56.4**	**-1.0**		
	baz=52,SNR=40										
FAKI	**Fak Fak**	**53.62**	**280**		P		**P**	**22 30 04.7**	**-1.3**		
FAKI					IAmb		IAmb	22 30 21.8			
	comp=Z,17nm,1.0s										
SWI	**Sorong**	**55.29**	**282**		P		**P**	**22 30 17.2**	**-0.7**		
	comp=Z,2μmcomp=Z,197nm,0.7s										
FITZ	**Fitzroy Crossi**	**55.84**	**260**		P		**P**	**22 30 20.8**	**-1.0**		
	baz=56,SNR=11										
FITZ	**Fitzroy Crossi**	**55.84**	**260**		IAmb		IAmb	22 30 29.5			
	comp=Z,10nm,0.8s										
KMBL	**Kambalda**	**57.68**	**244**		P		**P**	**22 30 33.6**	**-0.9**		
	baz=58,SNR=5.8										
NLAI	**Namlea**	**58.33**	**278**		P		**P**	**22 30 38.7**	**-0.6**		
	comp=Z,913nmcomp=Z,42nm,0.7s										
SOEI	**Soe**	**59.04**	**270**		P		**P**	**22 30 44.8**	**+0.5**		
	comp=Z,2μmcomp=Z,141nm,0.8s										
BATI	**Baumata**	**59.49**	**269**		P		**P**	**22 30 48.1**	**+0.8**		
	comp=Z,34nm,0.7s										
SANI	**Sanana**	**59.78**	**279**		P		**P**	**22 30 47.9**	**-1.3**		
	comp=Z,593nmcomp=Z,61nm,0.8s										
SBA	**Scott Base**	**59.94**	**184**		P		**P**	**22 30 52.0**	**+2.8**		
VNDA	**Vanda**	**60.03**	**186**		P		**P**	**22 30 51.6**	**+1.7**		
	comp=Z,3.1nm,0.9s,baz=345,slow=5.6,SNR=7.9										
VNDA	**Vanda**	**60.03**	**186**		P		**P**	**22 30 51.8**	**+1.9**		
PSA00	**Pilbara Seismi**	**60.61**	**255**		P		**P**	**22 30 52.5**	**-2.2**		
PSA00					IAmb		IAmb	22 30 53.5			
	comp=Z,20nm,0.8s										
PSA00	**Pilbara Seismi**	**60.61**	**255**		P		**P**	**22 30 53.2**	**-1.5**		
PSA00					IAmb		IAmb	22 30 54.3			
	comp=Z,38nm,0.8s										
KLBR	**Kellerberrin**	**61.18**	**244**		P		**P**	**22 30 57.2**	**-1.2**		
	baz=61,SNR=15										
MMRI	**Maumere**	**61.27**	**270**		P		**P**	**22 30 57.7**	**-1.6**		
MMRI	**Maumere**	**61.27**	**270**		P		**P**	**22 30 59.4**	**+0.1**		
	comp=Z,63nm,0.7s										
JCJ	**Chichijima**	**61.35**	**317**		P		**P**	**22 30 59.6**	**+0.1**		
	comp=Z,31nm,0.7s,baz=238,slow=9.5,SNR=1.7										
JCJ	**Chichijima**	**61.35**	**317**		P		**P**	**22 30 56.

MCK					IAmb	IAmb	22 33 16.9		
	comp=Z,13nm,1.0s								
H03S2	**Juan Fernandez**	**84.94**	**124**		T	T	00 06 51.4		
	baz=249,slow=75,SNR=55								
H03S1	**Juan Fernandez**	**84.95**	**124**		T	T	00 06 58.8		
	baz=249,slow=75,SNR=67								
H03S3	**Juan Fernandez**	**84.95**	**124**		T	T	00 06 51.4		
	baz=249,slow=75,SNR=48								
H03N2	**Juan Fernandez**	**85.06**	**123**		T	T	00 06 28.1		
	baz=257,slow=71,SNR=53								
H03N3	**Juan Fernandez**	**85.06**	**123**		T	T	00 06 26.8		
	baz=257,slow=71,SNR=35								
H03N1	**Juan Fernandez**	**85.08**	**123**		T	T	00 06 27.5		
	baz=257,slow=71,SNR=56								
SEY	**Seymchan**	**85.14**	**346**		P	**P**	**22 33 17.7**	**+0.3**	
	comp=Z,4.9nm,0.7s,baz=140,slow=5.8,SNR=18								
DLBC	**Dease Lake**	**85.32**		**22**	P	**P**	**22 33 18.7**	**+0.2**	
	comp=Z,1.7nm,0.7s,baz=231,slow=5.5,SNR=6.0								
WRH	**Wood River Hil**	**85.42**		**11**	IAmb	IAmb	22 33 20.5		
	comp=Z,14nm,0.8s								
IPM	**Ipoh**	**85.45**	**276**		P	**P**	**22 33 20.6**	**+0.4**	
MLY	**Manley**	**85.46**		**10**	P	**P**	**22 33 19.1**	**+0.1**	
DOT	**Dot Lake**	**85.51**		**13**	IAmb	IAmb	22 33 21.3		
	comp=Z,7.9nm,0.7s								
CCB	**Clear Creek Bu**	**85.63**		**11**	IAmb	IAmb	22 33 21.2		
	comp=Z,14nm,0.6s								
I23K	**Minto, Yukon-K**	**85.80**		**11**	P	**P**	**22 33 21.2**	**+0.6**	
SCRK	**Sand Creek**	**85.81**		**13**	P	**P**	**22 33 22.1**	**+1.3**	
TCOL	**CIGO, UAF Yank**	**85.83**		**11**	P	**P**	**22 33 21.5**	**+0.8**	
COLA	**College**	**85.83**		**11**	P	**P**	**22 33 21.5**	**+0.8**	
PDAR	**Pinedale Array**	**85.83**		**42**	P	**P**	**22 33 22.9**	**+1.2**	
	comp=Z,0.3nm,0.5s,baz=203,slow=5.4,SNR=3.3								
PDAR	**Pinedale Array**	**85.83**		**42**	P	**P**	**22 33 21.7**	**0.0**	
MDM	**Murphy Dome**	**85.83**		**11**	P	**P**	**22 33 20.8**	**0.0**	
MDM					IAmb	IAmb	22 33 22.3		
	comp=Z,8.5nm,0.8s								
IL31		**85.92**		**12**	IAmb	IAmb	22 33 23.4		
	comp=Z,4.8nm,0.7s								
ILAR	**Eielson Array**	**85.92**		**12**	P	**P**	**22 33 21.8**	**+0.5**	
	comp=Z,3.5nm,0.6s,baz=226,slow=6.4,SNR=41								
ILAR	**Eielson Array**	**85.92**		**12**	P	**P**	**22 33 20.3**	**-0.9**	
SDCO	**Great Sand Dun**	**86.18**		**48**	P	**P**	**22 33 23.0**	**-0.5**	
BJI	**Beijing**	**86.37**	**314**		P	**P**	**22 33 26.9**	**+2.9**	
BJI					PP	**PP**	**22 36 52.3**	**+3.2**	
BJI					pmax	pmax			
	comp=Z,6.0nm,0.6s								
BJI					LR	LR			
	comp=Z,610nm,71.0s								
RPSI	**Rantau Prapat**	**86.86**	**274**		P	**P**	**22 33 26.2**	**-0.8**	
RPSI					IAmb	IAmb	22 33 27.6		
	comp=Z,15nm,0.9s								
DAWY	**Dawson**	**86.95**		**15**	P	**P**	**22 33 26.9**	**+0.6**	
EGAK	**Eagle**	**87.14**		**14**	P	**P**	**22 33 27.9**	**+0.8**	
COLD	**Coldfoot**	**87.57**		**10**	P	**P**	**22 33 30.0**	**+0.9**	
GYA	**Guiyang**	**87.96**	**299**		*e*P	**P**	**22 33 33.8**	**+1.7**	
GYA					pmax	pmax			
	comp=Z,2.0nm,1.1s								
ABTX	**Abilene, Hawle**	**88.37**		**55**	P	**P**	**22 33 35.5**	**+1.7**	
XAN	**Xi'an**	**89.05**	**306**		P	**P**	**22 33 38.8**	**+1.9**	
XAN					pP	PcP	22 33 45.5	+7.3	
XAN					pmax	pmax			
	comp=Z,16nm,1.1s								
SNAA	**Sanae**	**89.81**	**178**		P	**P**	**22 33 40.7**	**+0.8**	
SNAA	**Sanae**	**89.81**	**178**		P	**P**	**22 33 40.2**	**+0.3**	
VNA3	**Neumayer Olymp**	**89.84**	**175**		P	**P**	**22 33 40.9**	**+0.9**	
HHC	**Hu-ho-hao-te**	**89.89**	**313**		*e*P	**P**	**22 33 42.0**	**+1.3**	
HHC					pmax	pmax			
	comp=Z,15nm,1.1s								
HHC					pmax	pmax			
	comp=Z,56nm,5.6s								
UTTA	**Uttaradit**	**90.23**	**289**		P	**P**	**22 33 45.3**	**+2.6**	
VNA2	**Neumayer--Watz**	**90.31**	**176**		P	**P**	**22 33 43.5**	**+1.4**	
VNA1	**Neumayer--Stat**	**90.53**	**176**		P	**P**	**22 33 44.5**	**+1.4**	
KMI	**Kunming**	**90.79**	**296**		⇓P	**P**	**22 33 47.3**	**+1.8**	
KMI					pmax	pmax			
	comp=Z,15nm,1.4s								
SUKH	**Sukhothai**	**90.98**	**288**		P	**P**	**22 33 48.4**	**+2.3**	
	comp=Z,0.1nmcomp=Z,20nm,0.9s								
YAK	**Yakutsk**	**91.34**	**337**		LR	LR	23 08 01.3		
	comp=Z,41nm,21.9s,baz=274,slow=31								
INK	**Inuvik**	**91.79**		**14**	P	**P**	**22 33 49.6**	**+0.9**	
	comp=Z,5.0nm,0.8s,baz=211,slow=3.8,SNR=18								
INK	**Inuvik**	**91.79**		**14**	IAmb	IAmb	22 33 50.6		
	comp=Z,4.8nm,0.9s								
CM35	**Chiang Mai Arr**	**91.80**	**289**		P	**P**	**22 33 51.0**	**+1.1**	
CM36	**Chiang Mai Arr**	**91.80**	**289**		P	**P**	**22 33 51.0**	**+1.0**	
CM34	**Chiang Mai Arr**	**91.86**	**289**		P	**P**	**22 33 51.0**	**+0.8**	
CM04	**Chiang Mai Arr**	**91.86**	**289**		P	**P**	**22 33 52.6**	**+2.3**	
	comp=Z,0.0nmcomp=Z,105nmcomp=Z,14nm,0.9s								
CM09	**Chiang Mai Arr**	**91.87**	**289**		P	**P**	**22 33 52.0**	**+1.7**	
	comp=Z,0.0nmcomp=Z,92nmcomp=Z,11nm,0.9s								
CM01	**Chiang Mai Arr**	**91.89**	**289**		P	**P**	**22 33 52.8**	**+2.4**	
	comp=Z,0.0nmcomp=Z,93nmcomp=Z,11nm,1.1s								
CM05	**Chiang Mai Arr**	**91.89**	**289**		P	**P**	**22 33 52.0**	**+1.6**	
	comp=Z,0.0nmcomp=Z,71nmcomp=Z,9.5nm,1.0s								
CM02	**Chiang Mai Arr**	**91.90**	**289**		P	**P**	**22 33 52.8**	**+2.4**	
	comp=Z,0.0nmcomp=Z,85nmcomp=Z,11nm,1.0s								
CM31	**Chiang Mai Arr**	**91.91**	**289**		P	**P**	**22 33 53.8**	**+3.3**	
CMAR	**Chiang Mai Arr**	**91.91**	**289**		P	**P**	**22 33 51.9**	**+1.4**	
	comp=Z,7.9nm,0.9s,baz=109,slow=2.9,SNR=36								
CMAR	**Chiang Mai Arr**	**91.91**	**289**		P	**P**	**22 33 51.3**	**+0.8**	
CM15	**Chiang Mai Arr**	**91.93**	**289**		P	**P**	**22 33 53.0**	**+2.4**	
	comp=Z,0.0nmcomp=Z,9.3nm,1.0s								
CM13	**Chiang Mai Arr**	**91.93**	**289**		P	**P**	**22 33 52.0**	**+1.4**	
	comp=Z,0.0nmcomp=Z,78nmcomp=Z,9.2nm,1.0s								
CMMT	**Chiang Mai**	**92.02**	**289**		P	**P**	**22 33 51.0**	**0.0**	
	comp=Z,0.0nmcomp=Z,8.7nm,1.0s								
CM33	**Chiang Mai Arr**	**92.03**	**289**		P	**P**	**22 33 52.0**	**+1.0**	
CHTO	**Chiang Mai**	**92.03**	**289**		P	**P**	**22 33 51.8**	**+0.8**	
CHTO					IAmb	IAmb	22 33 53.3		
	comp=Z,9.6nm,0.8s								
CM32	**Chiang Mai Arr**	**92.06**	**289**		P	**P**	**22 33 54.0**	**+2.8**	
T35A	**Sooner Cattle**	**92.38**		**52**	P	**P**	**22 33 52.1**	**-0.2**	
T35A					IAmb	IAmb	22 33 55.3		
	comp=Z,6.6nm,0.8s								
YKA	**Yellowknife Ar**	**93.73**		**24**	P	**P**	**22 33 58.5**	**+0.7**	
	comp=Z,1.5nm,0.8s,baz=237,slow=4.2,SNR=27								
MGMO	**Mountain Grove**	**95.65**		**53**	P	**P**	**22 34 07.9**	**+0.7**	
SONM	**Songino Array**	**96.02**	**318**		P	**P**	**22 34 10.1**	**+1.3**	
	comp=Z,0.4nm,0.8s,baz=125,slow=7.2,SNR=2.7								
TIXI	**Tiksi**	**97.59**	**345**		P	**P**	**22 34 14.4**	**-0.7**	
	comp=Z,0.2nm,0.3s,baz=127,slow=5.7,SNR=3.6								
TIXI	**Tiksi**	**97.59**	**345**		IAmb	IAmb	22 34 15.9		
	comp=Z,1.6nm,0.9s								
GTA	**Gaotai**	**97.77**	**309**		*e*P	Pdif	22 34 18.6	+1.7	
GTA					pP	pP	22 35 01.5	-13	
GTA					sP	pwP	22 35 19.6	+1.8	
GTA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
ZALV	**Zalesovo Beam**	**110.61**	**322**		PKiKP	**PKiKP**	**22 39 12.4**	**-0.1**	
	comp=Z,3.4nm,0.6s,baz=143,slow=0.9,SNR=15								
ZALV	**Zalesovo Beam**	**110.61**	**322**			**PKiKP**	**22 39 12.1**	**-0.4**	
MKAR	**Makanchi Array**	**111.75**	**314**		PKiKP	**PKiKP**	**22 39 14.6**	**-0.3**	
	comp=Z,1.4nm,0.4s,baz=156,slow=0.9,SNR=34								
BVAR	**Borovoye Array**	**119.25**	**321**		PKP	**PKPdf**	**22 39 28.4**	**-0.7**	
	comp=Z,6.0nm,0.4s,baz=110,slow=3.4,SNR=39								
KKAR	**Karatay Array**	**120.04**	**309**		PKPdf	**PKPdf**	**22 39 30.7**	**-0.2**	
SPITS	**Spitsbergen Ar**	**120.11**	**357**		PKP	**PKiKP**	**22 39 30.6**	**+0.4**	
	comp=Z,19nm,1.1s,baz=55,slow=4.6,SNR=6.4								
KBL	**Kabul**	**121.20**	**300**		PKPdf	**PKiKP**	**22 39 34.1**	**+0.3**	
ARU	**Arti**	**125.06**	**327**		PKP	**PKiKP**	**22 39 40.7**	**+0.2**	
	comp=Z,3.6nm,0.5s,baz=124,slow=2.8,SNR=20								
ARU	**Arti**	**125.06**	**327**		PKPdf	**PKiKP**	**22 39 40.5**	**0.0**	
ABKAR	**Akbulak array**	**126.43**	**318**		PKPdf	**PKPdf**	**22 39 42.9**	**-0.1**	
AKTO	**Aktyubinsk**	**127.31**	**320**		PKP	**PKiKP**	**22 39 45.4**	**+0.2**	
	comp=Z,2.3nm,0.7s,baz=38,slow=3.0,SNR=2.4								
ARCES	**ARCESS Array B**	**127.49**	**351**		PKP	**PKiKP**	**22 39 45.1**	**+0.1**	
	comp=Z,3.5nm,0.5s,baz=14,slow=0.0,SNR=36								
BOSA	**Boshof**	**129.04**	**203**		PKP	**PKiKP**	**22 39 49.4**	**-0.2**	
	comp=Z,1.9nm,0.6s,baz=182,slow=3.1,SNR=7.0								
GEYT	**Alibeck**	**129.88**	**304**		PKP	**PKiKP**	**22 39 50.5**	**-0.3**	
	comp=Z,2.7nm,0.7s,baz=53,slow=3.1,SNR=5.5								
GEYT	**Alibeck**	**129.88**	**304**		PKPdf	**PKiKP**	**22 39 51.0**	**+0.2**	
KLMR	**Klimovskoe**	**131.12**	**338**		*e*PKPdf	**PKPdf**	**22 39 51.3**	**-0.2**	
KLMR					AMP		22 39 56.2		
	comp=Z,7.0nm,1.1s								
BELG	**Belogornoye**	**132.55**	**326**		PKP	**PKiKP**	**22 39 55.4**	**-0.2**	
	comp=Z,19nm,0.9s,baz=94,slow=2.4,SNR=6.0								
FINES	**FINESS Array B**	**134.62**	**346**		PKiKP	PKPpre	22 39 48.9		
	comp=Z,1.2nm,0.8s,baz=51,slow=4.4,SNR=4.4								
FINES					PKP	**PKPdf**	**22 39 57.9**	**-0.3**	
	comp=Z,2.4nm,0.5s,baz=40,slow=2.4,SNR=23								
NOA	**NORSAR Array B**	**137.35**	**355**		PKP	**PKPdf**	**22 40 03.3**	**0.0**	
	comp=Z,0.4nm,0.6s,baz=14,slow=3.6,SNR=3.4								
HFS	**Hagfors**	**138.01**	**353**		PKhKP	PKPpre	22 39 56.8		
	comp=Z,1.6nm,0.5s,baz=66,slow=3.6,SNR=5.5								
HFS					PKP	**PKiKP**	**22 40 05.7**	**-0.8**	
	comp=Z,4.1nm,0.8s,baz=52,slow=7.5,SNR=5.4								
KMBO	**Kilima Mbogo**	**142.49**	**242**		PKhKP	PKPpre	22 40 11.4		
	comp=Z,2.0nm,0.8s,baz=35,slow=5.8,SNR=5.9								
AKASG	**Malin Array Be**	**142.51**	**334**		PKhKP	PKPpre	22 40 08.8		
	comp=Z,2.9nm,0.6s,baz=37,slow=4.2,SNR=9.4								
EKA	**Eskdalemuir Ar**	**142.84**		**7**	PKhKP	PKPpre	22 40 09.6		
	comp=Z,1.4nm,0.6s,baz=313,slow=2.6,SNR=15								
EKA					PKP	**PKPdf**	**22 40 13.5**	**+0.2**	
	comp=Z,0.5nm,0.4s,baz=332,slow=3.7,SNR=4.7								
BEL	**Belsk**	**144.50**	**343**		*e*P	**PKPdf**	**22 40 17.6**	**+1.3**	
SORM	**Soroca**	**144.82**	**332**		⇑P	**PKPdf**	**22 40 16.9**	**0.0**	
MILM	**Milestii Mici**	**145.51**	**330**		⇑P	**PKPbc**	**22 40 18.6**	**-0.2**	
KWP	**Kalwaria Pacla**	**145.83**	**339**		*e*P	**PKPbc**	**22 40 20.1**	**+0.4**	
IAS	**Iasi**	**145.88**	**332**		⇑P	**PKPab**	**22 40 20.5**	**-0.2**	
GAZ	**Gaziantep**	**146.07**	**310**		PKPdf	**PKPbc**	**22 40 21.1**	**+0.2**	
VASR	**Vaslui**	**146.19**	**331**		⇑P	**PKPab**	**22 40 22.0**	**0.0**	
OJC	**Ojcow**	**146.22**	**343**		*e*P	**PKPab**	**22 40 22.1**	**0.0**	
LODK	**Lodwar**	**146.44**	**247**			**PKPab**	**22 40 23.8**	**-0.2**	
KSP	**Ksiaz**	**146.53**	**347**		*e*P	**PKPab**	**22 40 23.3**	**+0.1**	
BURAR	**Bucovina Array**	**146.56**	**335**		⇑P	**PKiKP**	**22 40 24.2**	**-0.4**	
BURAR	**Bucovina Array**	**146.56**	**335**			**PKPab**	**22 40 23.1**	**-0.5**	
CLL	**Collm**	**146.71**	**351**		⇓*i*PKPbc	**PKPab**	**22 40 23.1**	**-0.7**	
	comp=Z,32nm,1.2s								
CLL					*e*		22 40 38.0		
CLL					*e*pPKiKP	pPKPab	22 41 23.0	+0.9	
CLL	**Collm**	**146.71**	**351**			**PKPbc**	**22 40 23.0**	**+0.8**	
BIZ	**Bicaz**	**146.72**	**333**		⇑P	**PKPab**	**22 40 23.8**	**-0.3**	
TLCR		**146.76**	**328**		⇑P	**PKPab**	**22 40 23.8**	**-0.5**	
NIE	**Niedzica**	**146.79**	**341**		*e*P	**PKPab**	**22 40 24.4**	**0.0**	
GHRR		**146.80**	**331**		⇑P	**PKPab**	**22 40 24.5**	**+0.1**	
TESR	**Tescani**	**146.81**	**332**		⇑P	**PKPab**	**22 40 23.6**	**-0.9**	
OSTC	**Ostas**	**146.82**	**347**		*e*PKP	**PKPbc**	**22 40 21.7**	**-0.8**	
OSTC					*ex*	x	22 40 24.2		
CHVC	**Chvalec**	**146.83**	**347**		*e*PKP	**PKPab**	**22 40 23.7**	**-0.7**	
CRVS	**Cervenica-Dubn**	**146.87**	**340**		*e*PKP	**PKPab**	**22 40 24.2**	**-0.4**	
UPC	**Upice**	**146.91**	**347**		*e*PKP	**PKPab**	**22 40 24.0**	**-0.7**	
BRG	**Berggiesshubel**	**146.97**	**349**		*i* PKP	**PKPbc**	**22 40 23.6**	**+0.6**	
BRG					Amp		22 40 25.9		
	comp=Z,9.2nm,0.7s								
DPC	**Dobruska-Polom**	**146.99**	**346**		*e*PKP	**PKPab**	**22 40 24.3**	**-0.8**	
CFR	**Carcaliu**	**147.10**	**329**		⇑P	**PKPbc**	**22 40 24.2**	**+0.8**	
KRLC	**Kraliky**	**147.14**	**346**		*e*PKP	**PKPdf**	**22 40 21.4**	**+0.4**	
KRLC					*ex*	x	22 40 24.1		
TRPA	**Tarpa**	**147.16**	**338**		⇑P	**PKiKP**	**22 40 25.0**	**-0.7**	
PVCC	**Panska Ves**	**147.19**	**348**		*e*PKP	**PKiKP**	**22 40 24.7**	**-1.0**	
TPGR	**Topolog**	**147.19**	**328**		⇑P	**PKiKP**	**22 40 25.1**	**-0.8**	
BMR	**Baia Mare**	**147.19**	**336**		⇑P	**PKiKP**	**22 40 25.2**	**-0.6**	
MORC	**Moravsky Berou**	**147.23**	**345**		*e*PKP	**PKiKP**	**22 40 25.1**	**-0.8**	
MORC	**Moravsky Berou**	**147.23**	**345**			**PKPbc**	**22 40 24.1**	**+0.4**	
VRI	**Vrincioaia**	**147.26**	**331**		⇑P	**PKPbc**	**22 40 24.9**	**+1.0**	
LANS	**Liptovska Anna**	**147.28**	**342**		*e*PKP	**PKiKP**	**22 40 26.1**	**+0.1**	
PLOR	**Plostina**	**147.31**	**331**		⇑P	**PKPbc**	**22 40 24.6**	**+0.5**	
ARCR	**ARCALIA**	**147.34**	**335**		⇑P	**PKiKP**	**22 40 25.9**	**-0.2**	
BR131	**Keskin Array S**	**147.35**	**316**			**PKPbc**	**22 40 25.4**	**+0.9**	
BRTR	**Keskin Array B**	**147.35**	**316**		PKP	**PKPdf**	**22 40 21.8**	**0.0**	
	comp=Z,13nm,0.9s,baz=113,slow=3.7,SNR=23								
BRTR					PKPbc	**PKPbc**	**22 40 25.1**	**+0.6**	
	comp=Z,14nm,0.9s,baz=134,slow=3.6,SNR=25								
OZUR		**147.51**	**332**		⇑P	**PKPbc**	**22 40 25.3**	**+0.7**	
HARR	**Harsova**	**147.55**	**328**		⇑P	**PKiKP**	**22 40 26.3**	**-0.3**	
TLBR	**Topalu**	**147.60**	**328**		⇑P	**PKPbc**	**22 40 25.6**	**+0.8**	
PRA	**Prague**	**147.65**	**348**		*e*PKP	**PKiKP**	**22 40 25.9**	**-0.7**	
PRU	**Pruhonice**	**147.71**	**348**		*e*PKP	**PKiKP**	**22 40 25.9**	**-0.8**	
DOPR	**Dopca**	**147.79**	**332**		⇑P	**PKiKP**	**22 40 26.6**	**-0.5**	
NEHR	**Nehoiu**	**147.79**	**331**		⇑P	**PKiKP**	**22 40 26.3**	**-0.8**	
NKC	**Novy Kostel**	**147.84**	**351**		*e*PKP	**PKiKP**	**22 40 26.5**	**-0.5**	
VRAC	**Vranov**	**147.90**	**345**		PKPbc	**PKPbc**	**22 40 26.0**	**+0.5**	
	comp=Z,2.9nm,0.7s,baz=9.2,slow=4.3,SNR=6.6								
VRAC	**Vranov**	**147.90**	**345**		⇑P	**PKPbc**	**22 40 26.2**	**+0.7**	
VRAC	**Vranov**	**147.90**	**345**		*e*PKP	**PKiKP**	**22 40 26.9**	**-0.3**	
MLR	**Muntele Rosu**	**147.91**	**331**		PKPbc	**PKPbc**	**22 40 26.2**	**+0.4**	
	comp=Z,7.4nm,0.8s,baz=104,slow=2.3,SNR=9.7								
MLR	**Muntele Rosu**	**147.91**	**331**		⇑P	**PKiKP**	**22 40 27.1**	**-0.4**	
CJR	**Cluj-Napoca**	**147.94**	**335**		⇑P	**PKiKP**	**22 40 27.1**	**-0.3**	
LTVH	**Ltavrtes, Hu**	**148.03**	**338**		⇑P	**PKiKP**	**22 40 27.4**	**0.0**	
JAVC	**Velka Javorina**	**148.04**	**344**		*e*PKP	**PKiKP**	**22 40 28.1**	**+0.5**	
MEM	**Membach**	**148.04**	**358**		*d*PKP	**PKiKP**	**22 40 26.8**	**-0.6**	
VYHS	**Vyhne**	**148.05**	**342**		*e*PKP	**PKiKP**	**22 40 27.4**	**-0.1**	
BTNL	**Ternell**	**148.06**	**358**		*d*PKP	**PKiKP**	**22 40 26.9**	**-0.6**	
BSTI	**Sart Tilman**	**148.08**	**359**		*d*PKP	**PKiKP**	**22 40 27.3**	**-0.1**	
TREC	**Trest**	**148.17**	**347**		*e*PKP	**PKiKP**	**22 40 27.3**	**-0.5**	
KRUC	**Moravsky**	**148.18**	**345**		*e*PKP	**PKiKP**	**22 40 27.1**	**-0.7**	
DRGR		**148.22**	**336**		⇑P	**PKiKP**	**22 40 27.3**	**-0.7**	
PSZ	**Piszkesteto**	**148.24**	**340**		⇑P	**PKPbc**	**22 40 26.9**	**+0.4**	
BGES	**Gesves**	**148.28**	**360**		*d*PKP	**PKPbc**	**22 40 27.2**	**+0.7**	
VOIR		**148.35**	**332**		⇑P	**PKiKP**	**22 40 28.0**	**-0.3**	
BMRD	**Maredsous**	**148.37**	**360**		*d*PKP	**PKiKP**	**22 40 27.5**	**-0.6**	
SMOL	**Smolenice**	**148.42**	**344**		*e*PKP	**PKiKP**	**22 40 28.8**	**+0.5**	
MDUB	**Mudurnu**	**148.49**	**319**			**PKPbc**	**22 40 27.3**	**-0.1**	
GRFO	**Grafenberg**	**148.54**	**352**			**PKiKP**	**22 40 28.9**	**+0.4**	
DOU	**Dourbes**	**148.57**		**0**	*d*PKiKP	**PKiKP**	**22 40 28.3**	**-0.2**	
ARR	**Arges**	**148.59**	**333**		⇑P	**PKiKP**	**22 40 29.6**	**+0.8**	
MODS	**Modra-Piesok**	**148.59**	**344**		*e*PKP	**PKiKP**	**22 40 28.3**	**-0.4**	
KHC	**Kasperske Hory**	**148.71**	**349**		*e*PKP	**PKPdf**	**22 40 24.4**	**+0.8**	
KHC					*ex*	x	22 40 28.4		
KHC	**Kasperske Hory**	**148.71**	**349**			**PKiKP**	**22 40 29.0**	**+0.1**	
ZST	**Bratislava**	**148.80**	**344**		*e*PKP	**PKiKP**	**22 40 29.7**	**+0.6**	
CKRC	**Cesky Krumlov**	**148.87**	**348**		*e*PKP	**PKPdf**	**22 40 24.0**	**+0.2**	
CKRC					*ex*	x	22 40 28.9		
GEC2	**GERESS Array S**	**148.96**	**348**			**PKiKP**	**22 40 29.3**	**-0.2**	
GERES	**GERESS Array B**	**148.96**	**348**		PKP	**PKPdf**	**22 40 24.1**	**0.0**	
	comp=Z,0.4nm,0.5s,baz=48,slow=2.0,SNR=4.8								
GERES					PKPbc	**PKiKP**	**22 40 29.2**	**-0.2**	
	comp=Z,6.6nm,0.7s,baz=36,slow=2.5,SNR=40								
WLF	**Walferdange**	**148.99**	**358**		*d*PKiKP	**PKiKP**	**22 40 29.8**	**+0.4**	
WLF	**Walferdange**	**148.99**	**358**			**PKiKP**	**22 40 30.1**	**+0.7**	
MMAI	**Mount Meron Ar**	**149.00**	**304**		PKPbc	**PKiKP**	**22 40 30.1**	**0.0**	
	comp=Z,16nm,0.5s,baz=74,slow=7.0,SNR=68								
SIRR	**Siria**	**149.06**	**337**		⇑P	**PKiKP**	**22 40 29.4**	**-0.3**	
HUMR	**Humele**	**149.08**	**331**		⇑P	**PKPbc**	**22 40 29.1**	**+0.5**	
GZR	**Gura Zlata**	**149.35**	**335**		⇑P	**PKPbc**	**22 40 29.8**	**+0.4**	
CONA	**Conrad Observa**	**149.36**	**345**		*i* P	**PKiKP**	**22 40 30.9**	**+0.5**	
	comp=Z,14nm,1.0s,SNR=7.4								
ZIMR		**149.56**	**330**		⇑P	**PKiKP**	**22 40 31.5**	**+0.8**	
BZS	**Buzias**	**149.62**	**336**		⇑P	**PKiKP**	**22 40 31.2**	**+0.4**	
VLAD	**Vladila**	**149.76**	**331**		⇑P	**PKiKP**	**22 40 31.8**	**+0.7**	
SRE	**Strehaia**	**149.76**	**333**		⇑P	**PKiKP**	**22 40 32.0**	**+0.8**	
MOA	**Molln**	**149.80**	**347**		*e*P	**PKiKP**	**22 40 31.3**	**+0.2**	
HERR	**Herculane**	**149.91**	**334**		⇓P	**PKiKP**	**22 40 31.4**	**-0.1**	
BANR	**Banloc**	**150.00**	**337**		⇑P	**PKiKP**	**22 40 32.7**	**+1.1**	
ARSA	**Arzberg**	**150.08**	**345**		*i* P	**PKPbc**	**22 40 30.0**	**-1.0**	
	comp=Z,6.9nm,1.3s								
PLVB	**Pleven**	**150.12**	**330**		⇑P	**PKiKP**	**22 40 31.9**	**0.0**	
MORH	**Mrgy, Hungar**	**150.15**	**340**		⇑P	**PKiKP**	**22 40 32.2**	**+0.3**	
MORH	**Mrgy, Hungar**	**150.15**	**340**		*e*P	**PKiKP**	**22 40 31.5**	**+0.4**	
BFO	**Black Forest**	**150.20**	**355**			**PKiKP**	**22 40 32.3**	**+0.3**	
MDVR	**Moldovita**	**150.28**	**335**		⇑P	**PKPbc**	**22 40 31.9**	**+0.3**	
EIL	**Elat**	**150.37**	**298**		PKPbc	**PKiKP**	**22 40 33.2**	**+0.3**	
	comp=Z,19nm,0.8s,baz=347,slow=1.9,SNR=11								
CLF	**Chambon-Foret**	**150.58**		**3**		**PKiKP**	**22 40 32.9**	**+0.2**	
FRGS	**Fruska Gora**	**150.68**	**338**		⇑P	**PKiKP**	**22 40 33.4**	**+0.3**	
FRGS	**Fruska Gora**	**150.68**	**338**		*e*P	**PKiKP**	**22 40 33.3**	**+0.3**	
KBA	**Koelnbreinsper**	**150.72**	**348**		*i* P	**PKiKP**	**22 40 33.1**	**-0.3**	
	comp=Z,10nm,0.5s								
SOKA	**Soboth**	**150.73**	**345**		*i* P	**PKiKP**	**22 40 33.1**	**-0.1**	
	comp=Z,9.6nm,0.8s,SNR=5.3								
RETA	**Reutte**	**150.76**	**352**		*e*P	**PKiKP**	**22 40 33.7**	**+0.4**	
	comp=Z,6.9nm,0.7s								
WATA	**Walderalm**	**150.79**	**350**		*i* P	**PKiKP**	**22 40 33.5**	**+0.1**	
	comp=Z,13nm,0.5s,SNR=9.5								
WTTA	**Wattenberg**	**150.85**	**350**		*i* P	**PKiKP**	**22 40 34.1**	**+0.6**	
	comp=Z,19nm,0.5s,SNR=21								
MOTA	**Moosalm**	**150.85**	**351**		*e*P	**PKPdf**	**22 40 28.4**	**+1.3**	
	comp=Z,3.5nm,0.9s								
MOTA					*i* P	**PKiKP**	**22 40 33.8**	**+0.3**	
	comp=Z,14nm,0.9s,SNR=6.6								
SQTA	**Sankt Quirin**	**150.96**	**351**		*e*P	**PKPdf**	**22 40 28.2**	**+0.9**	
	comp=Z,5.0nm,1.3s								
SQTA					*i* P	**PKiKP**	**22 40 34.2**	**+0.5**	
	comp=Z,16nm,0.6s,SNR=7.5								
OBKA	**Obir**	**151.01**	**346**		*e*P	**PKPbc**	**22 40 33.5**	**+0.2**	
	comp=Z,5.9nm,0.7s								
DAVA	**Damuels**	**151.07**	**353**		*i* P	**PKiKP**	**22 40 34.6**	**+0.6**	
	comp=Z,24nm,1.0s,SNR=8.3								
MYKA	**Terra Mystica**	**151.09**	**347**		*i* P	**PKiKP**	**22 40 33.8**	**-0.2**	
	comp=Z,

ILAR	**Eielson Array**	**76.31**	**18**	P		**P**	**23 00 17.1**	**+1.1**	
	0.3nm,0.8s,baz=250,slow=5.4,SNR=2.3								
WRA	**Warramunga Arr**	**76.45**	**125**	P		**P**	**23 00 17.2**	**-0.2**	
	0.3nm,0.5s,baz=317,slow=6.6,SNR=7.8								

IDC 23 22:51:31.4±11.0, 13°74.5S×170°46.6E, h424km±142km, mb2.9/3, mb1 3.2/4, mb1mx2.9/50, mbtmp3.7/4, Error ellipse: s-maj=221.1km s-min=24.5km az=168.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**8.31**	**119**	P		P	22 53 30.5	+0.3
	1.3nm,0.3s,baz=280,slow=12,SNR=5.3							
WRA	**Warramunga Arr**	**35.07**	**255**	P		P	22 57 47.5	+0.3
	0.3nm,0.3s,baz=87,slow=8.8,SNR=7.2							
ASAR	**Alice Springs**	**35.91**	**249**	P		P	22 57 53.9	-0.5
	0.8nm,0.5s,baz=75,slow=9.5,SNR=9.4							
TXAR	**Lajitas Array**	**93.09**	**61**	P		P	23 03 58.9	-0.3
	0.1nm,0.6s,baz=231,slow=5.3,SNR=1.5							

*IDC **23** 23:19:26.0±4.7, 5°74S×149°00E, h124km±36km, mb3.3/4, mb1 3.5/5, mb1mx3.2/47, mbtmp3.8/5, Error ellipse: s-maj=85.6km s-min=33.3km az=110.0*
*NEIC **23** 23:19:27.0±0.9, 5°.8S±0°.1×149°.2E±0°.2, h142km±6km, mb4.3/10, Error ellipse: s-maj=26.8km s-min=15.0km az=114.0*

ISC 23 23:19:28.3±1.2, 5°.9S±0°.1×149°.1E±0°.2, h150km, n16, σ0s87/18, mb4.0/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**4.01**	**208**	P		**Pn**	**23 20 27.8**	**-0.8**
	7.3nm,0.3s,baz=17,slow=14,SNR=6.6							
PMG				S		**Sn**	**23 21 13.7**	**-1.9**
	27nm,0.3s,baz=345,slow=16,SNR=13							
PMG	**Port Moresby**	**4.01**	**208**			**Pn**	**23 20 28.6**	**0.0**
PMG						**Sn**	**23 21 15.8**	**+0.1**
EIDS	**Eidsvold**	**19.49**	**175**	P		**P**	**23 23 44.3**	**+0.5**
EIDS				IAmb		IAmb	23 23 47.0	
	comp=Z,5.3nm,0.7s							
WB0	**Warramunga Arr**	**19.88**	**225**	P		**P**	**23 23 49.2**	**+1.1**
WB0				IAmb		IAmb	23 24 20.2	
	comp=Z,11nm,1.3s							
WR0	**Warramunga Arr**	**19.91**	**224**	P		**P**	**23 23 49.1**	**+0.7**
WR0				IAmb		IAmb	23 23 53.5	
	comp=Z,28nm,1.8s							
WB2	**Warramunga Arr**	**20.03**	**224**	P		**P**	**23 23 50.5**	**+0.8**
WB2				IAmb		IAmb	23 24 46.8	
	comp=Z,28nm,1.9s							
WRA	**Warramunga Arr**	**20.04**	**224**	P		**P**	**23 23 50.1**	**+0.3**
	comp=Z,2.3nm,0.4s,baz=50,slow=10,SNR=38							
WRA	**Warramunga Arr**	**20.04**	**224**	P		**P**	**23 23 49.7**	**-0.1**
KNRA	**Kununurra**	**22.20**	**242**	P		**P**	**23 24 13.4**	**+0.7**
KNRA				IAmb		IAmb	23 25 03.1	
	comp=Z,52nm,1.5s							
ASAR	**Alice Springs**	**22.96**	**218**	P		**P**	**23 24 20.9**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=45,slow=10,SNR=10							
DZM	**Mont Dzumac**	**23.27**	**136**	P		**P**	**23 24 22.1**	**-0.6**
ARMA	**Armidale**	**24.55**	**175**	P		**P**	**23 24 35.3**	**+1.0**
ARMA				IAmb		IAmb	23 25 30.7	
	comp=Z,28nm,1.9s							
FITZ	**Fitzroy Crossi**	**25.92**	**240**	P		**P**	**23 24 46.8**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=55,slow=11,SNR=16							
FORT	**Forrest**	**31.70**	**216**	P		**P**	**23 25 38.8**	**+1.0**
SONM	**Songino Array**	**65.31**	**330**	P		**P**	**23 29 53.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=116,slow=6.6,SNR=2.0							
TORD	**Torodi Ar. Bea**	**147.06**	**285**	PKPbc		**PKPbc**	**23 38 54.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=83,slow=2.9,SNR=8.1							

UCR 23 23:30:55.4±2.0, 9°.44N×85°.97W, h22km±7km, MW3.6, 3D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GRZA	**Playa Garza**	**0.58**	**34**	*e*P		Pb	23 31 06.9	0.0
GRZA				*e*S		Sn	23 31 16.4	-0.8
INDI	**Punta indio, G**	**0.63**	**47**	*e*P		Pb	23 31 07.9	+0.1
SAJU	**San Juanillo,**	**0.68**	**22**	*e*P		Pb	23 31 08.3	-0.2
PLVR	**Palo Verde**	**1.09**	**34**	*e*P		Pn	23 31 13.5	-2.1
PLVR				*e*S		Sb	23 31 28.4	-1.1
LAFE	**Finca La Fe, P**	**1.10**	**70**	*e*P		Pn	23 31 14.5	-1.1
JTS	**Las Juntas de**	**1.31**	**50**	*e*P		Pn	23 31 17.9	-0.6
LAPC	**Finca la Perla**	**1.42**	**22**	*i*P		Pn	23 31 18.7	-1.4
GBS3	**Finca Las Img**	**1.43**	**21**	*i*P		Pn	23 31 19.8	-0.3
CUI	**Cuipilapa**	**1.45**	**33**	*e*P		Pn	23 31 19.0	-1.4
BUEV	**Buena Vista**	**1.46**	**22**	*e*P		Pn	23 31 20.4	-0.3
GB1A	**Borinquen Arri**	**1.48**	**22**	*i*P		Pn	23 31 20.7	-0.2
GB1A				*i* S		Sn	23 31 40.3	+0.5
ACAL	**Aguas Claras**	**1.50**	**38**	*i* P		Pn	23 31 21.1	-0.1
PTEN	**Parque Tenorio**	**1.60**	**37**	*i* P		Pn	23 31 23.2	+0.7
ARE1	**Arenal 1**	**1.60**	**50**	*e*P		Pb	23 31 23.4	-0.8
CEDE	**Laguna Cedeo**	**1.62**	**50**	*i* P		Pn	23 31 23.1	+0.2
FORC	**Fortuna**	**1.64**	**51**	*i* P		Pb	23 31 24.0	-1.0
LCR2	**La Lucha 2**	**1.96**	**81**	*e*P		Pn	23 31 27.3	-0.3
COVE	**Coope Vega, Sa**	**2.00**	**50**	*e*P		Pn	23 31 28.9	+1.0
EDDO	**Dominical**	**2.08**	**95**	*e*P		Pn	23 31 28.7	-0.3
RIMA	**Rio Macho**	**2.10**	**81**	*e*P		Pn	23 31 29.4	-0.1
CDM	**Cerro de Muert**	**2.18**	**87**	*e*P		Pn	23 31 30.9	+0.2
CDM				*e*S		Sn	23 31 57.8	+0.5
PEZE	**Perez Zeledon,**	**2.26**	**91**	*e*P		Pn	23 31 31.5	-0.1
MRVA	**Moravia de Chi**	**2.52**	**81**	*e*P		Pn	23 31 35.8	+0.6
DRK0	**Durika**	**2.69**	**93**	*e*P		Pn	23 31 38.0	+0.4

*IDC **23** 23:39:33.8±1.5, 43°.91N×105°.64W, h0km, mb1 3.4/4, mb1mx3.2/32, mbtmp3.1/4, ML3.3/4, Error ellipse: s-maj=42.9km s-min=8.2km az=147.0*
*NEIC **23** 23:39:33±1.3, 43°.81N±0°.03×105°.25W±0°.09, h0km±2km, ML3.0/38, Error ellipse: s-maj=10.7km s-min=5.4km az=281.0*

ISC 23 23:39:33.1±1.0, 43°.79N±0°.05×105°.28W±0°.06, h0km, n47, σ0s94/49, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.96**	**70**			**Pn**	**23 39 52.7**	**-1.3**
K22A	**Casper**	**1.46**	**219**	Pn		**Pn**	**23 39 58.4**	**-2.5**
PHWY	**Pilot Hill**	**2.49**	**183**			**Pn**	**23 40 15.0**	**-0.2**
RWWY	**Rawlins**	**2.54**	**215**			**Pn**	**23 40 15.2**	**-0.6**
RWWY				IAML			23 40 50.8	
	92nm,0.3s							
RWWY				IAML			23 40 54.3	
	77nm,0.4s							
LAO	**LASA Array**	**2.97**	**347**			**Pn**	**23 40 20.7**	**-0.8**
LAO				IAML			23 41 10.5	
	68nm,0.3s							
RLMT	**Red Lodge**	**3.15**	**296**	Pn		**Pn**	**23 40 21.3**	**-2.9**
RLMT				IAML			23 41 19.7	
	28nm,0.3s							
RLMT				IAML			23 41 24.6	
	27nm,0.3s							
BW06	**Boulder Array**	**3.29**	**253**			**Pn**	**23 40 25.6**	**-0.4**
BW06				IAML			23 41 15.0	
	47nm,0.3s							
BW06				IAML			23 41 17.9	
	29nm,0.3s							
PD31	**Pinedale Array**	**3.29**	**253**			**Pn**	**23 40 26.6**	**+0.5**
PDAR	**Pinedale Array**	**3.29**	**253**	Pn		**Pn**	**23 40 26.3**	**+0.2**
	3.5nm,0.3s,baz=71,slow=17,SNR=68							
PDAR				Pg		**Pb**	**23 40 32.6**	**+0.2**
	7.1nm,0.3s,baz=70,slow=22,SNR=13							
PDAR				Lg		Lg	23 41 11.4	
	19nm,0.3s,baz=69,slow=36,SNR=3.6							
PDAR	**Pinedale Array**	**3.29**	**253**			**Pn**	**23 40 26.9**	**+0.8**
GCMT	**Greycliff**	**3.71**	**304**	Pn		**Pn**	**23 40 33.0**	**+1.3**
H17A	**Grant Village**	**3.86**	**281**			**Pn**	**23 40 33.7**	**-0.3**
H17A				IAML			23 41 36.9	
	comp=N,18nm,0.3s							
LOHW	**Long Hollow**	**3.86**	**269**			**Pn**	**23 40 35.2**	**+1.3**
FLWY	**Flagg Ranch**	**3.92**	**276**			**Pn**	**23 40 35.6**	**+0.8**
FLWY				IAML			23 41 44.1	
	comp=N,28nm,1.4s							
FLWY				IAML			23 41 47.1	
	comp=N,18nm,1.0s							
MOOW	**Moose Ponds**	**3.96**	**271**			**Pn**	**23 40 35.4**	**+0.1**
ISCO	**Idaho Springs**	**4.00**	**184**			**Pn**	**23 40 36.6**	**+0.7**
REDW	**Red Top Meadow**	**4.07**	**266**			**Pn**	**23 40 38.4**	**+1.5**
REDW				IAML			23 41 45.9	
	comp=N,19nm,1.1s							
	comp=N,15nm,1.2s							
O20A	**White River Ci**	**4.27**	**212**			**Pn**	**23 40 39.9**	**+0.3**
O20A				IAML			23 41 49.3	
	comp=E,22nm,0.3s							
O20A				IAML			23 42 02.1	
	comp=N,18nm,3.4s							
E28A	**Huff**	**4.27**	**48**	Pn		**Pn**	**23 40 40.6**	**+1.1**
AHID	**Auburn Hatcher**	**4.37**	**258**	Pn		**Pn**	**23 40 41.6**	**+0.7**
AHID				IAML			23 41 51.2	
	comp=E,16nm,0.3s							
AHID				IAML			23 42 12.6	
	comp=N,16nm,0.8s							
BOZ	**Bozeman (W)**	**4.87**	**294**			**Pn**	**23 40 48.1**	**+0.3**
BOZ				IAML			23 42 11.6	
	comp=N,8.8nm,2.3s							
BOZ				IAML			23 42 56.1	
	comp=N,6.9nm,4.6s							
HWUT	**Hardware Ranch**	**5.12**	**247**			**Pn**	**23 40 51.7**	**+0.5**
HWUT				IAML			23 42 26.9	
	comp=N,7.1nm,2.1s							
HWUT				IAML			23 42 36.3	
	comp=N,7.7nm,1.1s							
KSCO	**Kaye Shedlock'**	**5.18**	**156**	Pn		**Pn**	**23 40 51.3**	**-0.6**
EGMT	**Eagleton**	**5.26**	**325**			**Pn**	**23 40 52.7**	**-0.3**
HRY	**Holter Researc**	**5.47**	**305**			**Pn**	**23 40 56.6**	**+0.7**
LRM	**Limekiln Ridge**	**5.49**	**294**	Pn		**Pn**	**23 40 57.1**	**+0.8**
MCMT	**McKenzie Canyo**	**5.53**	**283**			**Pn**	**23 40 57.1**	**+0.2**
PV22	**Blue Mesa, Par**	**5.88**	**208**	Pn		**Pn**	**23 41 02.0**	**+0.3**
PV07	**Paradox Valley**	**5.92**	**207**	Pn		**Pn**	**23 41 02.6**	**+0.3**
PV15	**Paradox Valley**	**5.96**	**205**	Pn		**Pn**	**23 41 02.3**	**-0.5**
PV04	**Paradox Valley**	**6.05**	**208**	Pn		**Pn**	**23 41 03.7**	**-0.2**
PV12	**Saucer Basin,**	**6.08**	**207**	Pn		**Pn**	**23 41 04.0**	**-0.4**
PV14	**Lion Creek, Pa**	**6.11**	**209**	Pn		**Pn**	**23 41 05.2**	**+0.4**
PV11	**David Mesa, Pa**	**6.12**	**208**	Pn		**Pn**	**23 41 05.2**	**+0.2**
PV16	**Nyswonger Mesa**	**6.13**	**208**	Pn		**Pn**	**23 41 05.2**	**+0.1**
PV03	**Paradox Valley**	**6.16**	**207**	Pn		**Pn**	**23 41 05.6**	**+0.1**
PV02	**Paradox Valley**	**6.16**	**206**	Pn		**Pn**	**23 41 05.5**	**0.0**
PV17	**East Wray Mesa**	**6.17**	**208**	Pn		**Pn**	**23 41 05.5**	**-0.1**
PV01	**Paradox Valley**	**6.18**	**205**	Pn		**Pn**	**23 41 06.0**	**+0.2**
PV18	**Skein Mesa, Pa**	**6.18**	**208**	Pn		**Pn**	**23 41 05.3**	**-0.6**
PV13	**Radium Mtn., P**	**6.23**	**207**	Pn		**Pn**	**23 41 06.6**	**+0.1**
ECSD	**EROS Data Cent**	**6.28**	**88**	Pn		**Pn**	**23 41 06.3**	**-0.6**
PV05	**Paradox Valley**	**6.40**	**208**	Pn		**Pn**	**23 41 07.5**	**-1.4**
DUG	**Dugway, Tooele**	**6.66**	**240**	Pn		**Pn**	**23 41 11.8**	**-0.6**
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn		**Pn**	**23 41 45.1**	**-0.5**
	comp=N,1.3nm,0.3s,baz=229,slow=12,SNR=13							
ULM				Sn		**Sn**	**23 43 29.9**	**+1.1**
	comp=N,0.2nm,0.3s,baz=171,slow=16,SNR=1.9							
ULM				Lg		Lg	23 44 20.8	
	comp=N,0.3nm,0.3s,baz=201,slow=12,SNR=1.9							
NVAR	**Mina Array Bea**	**11.19**	**246**	Pn		**Pn**	**23 42 16.3**	**+1.9**
	comp=N,0.2nm,0.3s,baz=68,slow=13,SNR=2.1							
YKA	**Yellowknife Ar**	**19.51**	**347**	P		**P**	**23 44 00.2**	**-1.4**
	comp=N,0.1nm,0.3s,baz=164,slow=10,SNR=1.9							

*IDC **23** 23:58:16.6±0.5, 12°.27N×95°.02E, h0km, mb4.3/32, mb1 4.4/35, mb1mx4.4/48, mbtmp4.3/35, ML3.8/2, MS3.7/7, Ms1 3.7/7, ms1mx3.5/19, Error ellipse: s-maj=14.9km s-min=11.8km az=50.0*
*NDI **23** 23:58:21.6±3.4, 12°.17N×94°.58E, h30km, mb5.1, mb4.9(NEIC)*
*GCMT **23** 23:58:22.4±0.2, 12°.28N±0°.02×95°.10E±0°.02, h12km±1km, MW4.9/104, Moment Tensor Solution. s28,c33; s104,c154; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}=2.26±.14; $M_{\theta\theta}$0.97±.09; $M_{\phi\phi}$1.29±.09; $M_{r\theta}$0.26±.27; $M_{\theta\phi}$1.42±.06; $M_{\phi r}$-1.02±.26; Best double couple: M_o2.64200×10^16^ NP1:φ241.00000°, δ42.00000°, λ-59.00000°. NP2:φ23.00000°, δ55.00000°, λ-114.00000°. Principal axes: T 2.6340, Plg7.0000°, Azm130.0000°; N 0.0160, Plg20.0000°, Azm37.0000°; P -2.6500, Plg69.0000°, Azm239.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **23** 23:58:22.4±1.6, 12°.30N±0°.07×94°.99E±0°.06, h34km±3km, mb4.9/115 Error ellipse: s-maj=9.5km s-min=8.6km az=182.0*
*DJA **23** 23:58:23.5±0.3, 12°N±2°×9°5E±°, h40km±4km, M4.7/29, mB5.3/7, mb4.7/29, MLv4.6/3, Mw(mB)4.8/7*

ISC 23 23:58:21.5±0.5, 12°.22N±0°.04×94°.93E±0°.04, h30km±3km, h30km:pP-P, n297, σ1s73/283, mb4.8/110, MS4.2/13, 23C-13D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PBA	**Port Blair**	**2.21**	**255**	Pn		Pn	23 58 58.2	+2.0
PBA	**Port Blair**	**2.21**	**255**	P		Pn	23 58 58.1	+1.9
KHLT	**Khaolaem Dam**	**4.38**	**54**	P		**Pn**	**23 59 23.0**	**-3.1**
SRDT	**SRDT**	**4.59**	**62**	P		**Pn**	**23 59 28.9**	**-0.1**
PHET	**Kaeng Krachan**	**4.64**	**81**	P		**Pn**	**23 59 26.5**	**-3.1**
SURT	**Suratani**	**5.00**	**130**	P		**Pn**	**23 59 34.3**	**-0.2**
PKDT	**Phuket**	**5.46**	**142**	P		Pn	23 59 45.9	+5.0
UTHA	**Uthaitani**	**5.50**	**52**	P		**Pn**	**23 59 38.0**	**-3.4**
PATY	**Pattaya**	**5.84**	**83**	P		**Pn**	**23 59 42.2**	**-3.9**
SRIT	**Nakonsritamara**	**5.84**	**128**	Pn		**Pn**	**23 59 46.9**	**+0.8**
LHMI	**Lhok Sumawe**	**7.23**	**164**	Pn		**Pn**	**00 00 06.6**	**+1.4**
CMAR	**Chiang Mai Arr**	**7.31**	**31**	Pn		**Pn**	**00 00 04.0**	**-2.3**
	0.6nm,0.3s,baz=222,slow=14,SNR=8.7							
CMAR	**Chiang Mai Arr**	**7.31**	**31**			**Pn**	**00 00 07.0**	**+0.7**
CHTO	**Chiang Mai**	**7.61**	**30**	Pn		**Pn**	**00 00 11.8**	**+1.4**
KULM	**Kulim**	**8.91**	**140**	Pn		**Pn**	**00 00 29.4**	**+1.2**
IPM	**Ipoh**	**9.77**	**141**	Pn		**Pn**	**00 00 40.6**	**+0.5**
PSI	**Prapat**	**10.16**	**157**	Pn		**Pn**	**00 00 47.2**	**+1.6**
	baz=0.5,slow=16,SNR=1.6							
PSI						LR	LR	00 04 41.7
	comp=Z,412nm,21.2s,baz=274,slow=38							
RPSI	**Rantau Prapat**	**10.26**	**157**			**Pn**	**00 00 47.2**	**+0.4**
RPSI	**Rantau Prapat**	**10.26**	**157**	Pn		**Pn**	**00 00 48.3**	**+1.5**
SAIH	**SAIHA**	**10.38**	**350**	*e*P		**Pn**	**00 00 46.0**	**-2.5**
SAIH				IAmb		IAmb	00 01 03.8	
	comp=Z,32nm,0.7s							
SAIH				*e*S		**Sn**	**00 02 36.4**	**-7.5**
SLVN	**Son La**	**12.48**	**42**	Pn		**Pn**	**00 01 17.0**	**-0.3**
BKNI	**Bangkinang**	**13.28**	**152**	Pn		**Pn**	**00 01 29.1**	**+0.9**
BKNI	**Bangkinang**	**13.28**	**152**	P		**Pn**	**00 01 31.1**	**+2.9**
	comp=Z,12µmcomp=Z,84nm,0.6s							
KOHI	**KOHIMA**	**13.45**	**357**	*e*P		**Pn**	**00 01 29.3**	**-1.2**
KOHI				IAmb		IAmb	00 01 40.6	
	comp=Z,44nm,0.8s							
KOHI				*e*S		Sn	00 03 47.7	-11
SHL	**Shillong**	**13.58**	**348**	Pn		**Pn**	**00 01 32.0**	**-0.4**
MYKOM	**Kota Tinggi**	**13.62**	**139**	Pn		**Pn**	**00 01 31.4**	**-1.4**
MOKO	**MOKOCHONG**	**14.03**	**358**	*e*P		**Pn**	**00 01 40.1**	**+1.6**
MOKO				IAmb		IAmb	00 01 57.1	
	comp=Z,25nm,0.6s							
BOK	**Bokaro**	**14.36**	**325**	*e*P		**Pn**	**00 01 41.4**	**-1.5**
BOK				IAmb		IAmb	00 01 53.3	
	comp=Z,18nm,0.6s							
BOK				*e*S		**Sn**	**00 04 17.0**	**-4.1**
KMI	**Kunming**	**14.80**	**29**	↑P		**P**	**00 01 57.6**	**+2.9**
KMI				LR		LR		
	comp=N,1µm,12.6s							
KMI				LR		LR		
	comp=E,1µm,11.6s							
KMI				LR		LR		
	comp=Z,1µm,13.1s							
KMI	**Kunming**	**14.80**	**29**	Pn		**Pn**	**00 01 49.9**	**+0.9**
PALK	**Pallekele**	**14.86**	**252**	Pn		**Pn**	**00 01 50.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=128,slow=12,SNR=1.6							
PALK				LR		LR	00 07 24.3	
	comp=Z,53nm,18.7s,baz=172,slow=37							
PALK	**Pallekele**	**14.86**	**252**	Pn		**P**	**00 01 53.0**	**-2.1**
QIZ	**Qiongzhong**	**15.87**	**63**	P		**Pn**	**00 02 03.6**	**+0.7**
QIZ				S		**Sn**	**00 05 00.3**	**+2.3**
QIZ				LR		LR		
	comp=N,1µm,17.5s							
QIZ				LR		LR		
	comp=E,860nm,11.4s							
QIZ				LR		LR		
	comp=Z,690nm,10.4s							
TAPN	**Taplejung**	**16.50**	**337**	*e*P		**Pn**	**00 02 11.6**	**+0.4**
	comp=Z,9.8nm,0.5s							
RAMN	**Ramite**	**16.61**	**333**	*e*P		**Pn**	**00 02 13.0**	**+0.5**
	comp=Z,17nm,0.4s							
HYB	**Hyderabad**	**16.65**	**290**	*i* P		**P**	**00 02 17.0**	**+2.0**
HYB				*e*S		**S**	**00 05 28.0**	**+0.4**
JIRN	**Jiri**	**17.40**	**333**	*e*P		**P**	**00 02 23.8**	**+0.1**
	comp=Z,49nm,0.7s							
PKI	**Pulchoki**	**17.68**	**331**	*e*P		**P**	**00 02 26.8**	**+0.1**
	comp=Z,45nm,0.8s							
PKIN	**Phulchoki**	**17.70**	**331**	*e*P		**P**	**00 02 26.9**	**+0.1**
	comp=Z,30nm,0.7s							
LSA	**Lhasa**	**17.74**	**349**	P		**P**	**00 02 30.1**	**+2.6**
LSA				sP		**sP**	**00 02 42.1**	**+3.2**
LSA				PP		PnPn	00 03 07.3	+29
LSA				S		**Sn**	**00 05 42.3**	**-1.6**
LSA				sS		**sS**	**00 06 07.3**	**+4.8**
LSA				SS			00 07 51.8	
LSA				pmax		pmax		
	comp=Z,45nm,1.6s							
LSA				pmax		pmax		
	comp=Z,110nm,2.3s							
LSA				LR		LR		
	comp=N,770nm,13.5s							
LSA				LR		LR		
	comp=E,650nm,18.5s							
LSA				LR		LR		
	comp=Z,740nm,13.5s							
LSA	**Lhasa**	**17.74**	**349**	P		**Pn**	**00 02 26.5**	**-0.3**
GUN	**Gumba**	**17.76**	**333**	*e*P		**P**	**00 02 27.4**	**-0.1**
	comp=Z,20nm,0.6s							
DMN	**Daman**	**17.86**	**330**	*e*P		**P**	**00 02 29.0**	**+0.4**
	comp=Z,28nm,0.6s							
KKN	**Kakani**	**17.93**	**331**	*e*P		**P**	**00 02 29.9**	**+0.6**
	comp=Z,16nm,0.6s							
GYA	**Guiyang**	**17.95**	**36**	*e*P		**P**	**00 02 29.4**	**-0.1**
GYA				S		**Sn**	**00 05 48.3**	**-0.3**
GYA				SS		SnSn	00 06 20.3	+18
GYA				pmax		pmax		
	comp=Z,1.0nm,1.0s							
GYA				LR		LR		
	comp=N,170nm,11.6s							
GYA				LR		LR		
	comp=E,80nm,11.0s							
GYA				LR		LR		
	comp=Z,250nm,11.1s							
GKN	**Gorkha**	**18.42**	**330**	*e*P		**Pn**	**00 02 35.0**	**+0.2**
	comp=Z,28nm,0.7s							
KSM	**Kuching**	**18.61**	**124**	P		**Pn**	**00 02 37.4**	**+0.3**
KOLN	**Koldanda**	**18.76**	**327**	*e*P		**Pn**	**00 02 39.0**	**0.0**
	comp=Z,30nm,0.7s							
DANN	**Dangsing**	**19.14**	**329**	*e*P		**Pn**	**00 02 43.9**	**+0.2**
	comp=Z,36nm,0.6s							
SBUM	**Sibu**	**19.69**	**118**	P		**Pn**	**00 02 49.5**	**-0.5**
SBUM				IAmb		IAmb	00 02 59.7	
	comp=Z,78nm,1.5s							
CD2	**Chengdu**	**20.31**	**22**	P		**P**	**00 02 54.8**	**-0.4**
CD2				pP		pP	00 03 01.5	-1.1
CD2				S		Sn	00 06 48.3	+3.0
CD2				pmax		pmax		
	comp=Z,40nm,0.9s							
CD2				LR		LR		
	comp=N,860nm,9.8s							
CD2				LR		LR		
	comp=E,1µm,10.2s							
CD2				LR		LR		
	comp=Z,940nm,9.8s							
STKI	**Sintang**	**20.39**	**125**	P		**P**	**00 02 53.4**	**-2.7**
POO	**Poona**	**21.26**	**290**	*ex*		x	00 02 41.0	
TNG	**Tangerang**	**21.67**	**147**	P		P	00 03 29.0	+19
MNCI	**Minicoy**	**21.87**	**262**	P		**P**	**00 03 12.8**	**+0.7**
MNCI				IAmb		IAmb	00 03 19.2	
	comp=Z,44nm,0.9s							
ENH	**Enshi**	**22.46**	**35**	P		**P**	**00 03 17.1**	**-1.2**
ENH				IAmb		IAmb	00 03 27.0	
	comp=Z,30nm,1.1s							
MYLDM	**Lahad Datu**	**24.31**	**105**	P		**P**	**00 03 36.6**	**-0.1**
MYLDM				IAmb		IAmb	00 03 48.8	
	comp=Z,65nm,1.4s							
SMRI	**Semarang**	**24.59**	**140**	P		**P**	**00 03 39.2**	**0.0**
SMRI	**Semarang**	**24.59**	**140**	P		**P**	**00 03 42.0**	**+2.8**
	comp=Z,148nm,1.1s							
LZH	**Lanzhou**	**25.09**	**17**	↑P		**P**	**00 03 45.0**	**+1.3**
LZH				pP		pwP	00 03 52.4	-1.7
LZH				sP		sP	00 03 55.3	-0.2
LZH				S		**S**	**00 08 06.1**	**-0.4**
LZH				sS		sS	00 08 21.9	+1.8
LZH				SS		**SnSn**	**00 09 10.6**	**+13**
LZH				pmax		pmax		
	comp=Z,72nm,1.1s							
LZH				pmax		pmax		
	comp=Z,210nm,4.6s							
LZH				LR		LR		
	comp=N,870nm,12.5s							
LZH				LR		LR		
	comp=E,770nm,13.0s							
LZH				LR		LR		
	comp=Z,580nm,13.6s							
XAN	**Xi'an**	**25.18**	**28**	P		P	00 03 34.5	-10
XAN				pP		sP	00 03 55.8	-0.1
XAN				S		**S**	**00 08 13.8**	**+5.9**
XAN				SS		**SnSn**	**00 09 00.4**	**+0.8**
XAN				ScP		ScP	00 10 04.3	-51
XAN				pmax		pmax		
	comp=Z,15nm,1.1s							
XAN				pmax		pmax		
	comp=Z,140nm,6.3s							
XAN				LR		LR		
	comp=N,570nm,10.6s							
XAN				LR		LR		
	comp=E,1µm,11.6s							
XAN				L

comp=Z,31nm,1.1s
KBL **Kabul** 32.35 318 P P 00 04 48.8 +0.2
KBL IAmb IAmb 00 04 56.5
comp=Z,11nm,1.1s
BJT **Baijiatuau** 33.43 30 P P 00 04 53.9 -3.8
KDJ **Kajisay** 33.57 336 P P 00 04 59.9 +0.8
KDJ IAmb IAmb 00 05 08.1
comp=Z,19nm,1.1s
DRK **Karamyk** 34.00 327 P P 00 05 04.0 +1.0
DRK IAmb IAmb 00 05 11.9
comp=Z,19nm,1.1s
MMRI **Maumere** 34.15 126 P P 00 05 04.7 +0.5
MMRI IAmb IAmb 00 05 16.6
comp=Z,14nm,0.8s
BOOM **Boomskoye usch** 34.38 335 P P 00 05 06.5 +0.3
BTK **Batken** 34.94 327 P P 00 05 11.2 +0.3
BTK IAmb IAmb 00 05 20.5
comp=Z,23nm,1.1s
AAK **Ala-Archa** 35.12 333 P P 00 05 13.3 +0.8
comp=Z,1.7nm,0.6s,baz=187,slow=7.7,SNR=6.9
AAK **Ala-Archa** 35.12 333 P P 00 05 13.6 +1.1
AAK IAmb IAmb 00 05 21.4
comp=Z,16nm,1.3s
FRU1 **Bishkek** 35.20 334 P P 00 05 14.6 +1.6
FRU1 IAmb IAmb 00 05 20.2
comp=Z,28nm,1.4s
DL2 **Dalian** 35.61 37 P P 00 05 27.8 +11
DL2 *eS* S 00 11 06.3 +16
DL2 pmax pmax
comp=Z,25nm,1.1s
DL2 LR LR
comp=N,270nm,15.2s
DL2 LR LR
comp=E,360nm,13.2s
DL2 LR LR
comp=Z,390nm,11.0s
WBK **Wadi Bani Khal** 35.74 292 P P 00 05 21.6 +3.6
MK31 **Makanchi Array** 36.07 345 P P 00 05 21.0 +0.6
MK31 IAmb IAmb 00 05 29.9
comp=Z,11nm,0.9s
MKAR **Makanchi Array** 36.07 345 P P 00 05 20.9 +0.4
comp=Z,4.4nm,0.9s,baz=156,slow=9.2,SNR=22
MAKZ **Makanchi** 36.17 345 P P 00 05 21.5 +0.3
MAKZ IAmb IAmb 00 05 29.1
comp=Z,11nm,1.0s
WSAR **Wadi Sarin** 36.17 293 P P 00 05 23.5 +1.9
comp=Z,6.7nm,1.0s,baz=117,slow=6.6,SNR=4.4
WSAR **Wadi Sarin** 36.17 293 P P 00 05 24.8 +3.2
MHTO **MHTO** 36.40 289 P P 00 05 26.4 +2.8
JMDO **Jabal Madar** 36.49 291 P P 00 05 27.4 +3.0
SMDO **Samad** 36.66 292 P P 00 05 28.9 +3.0
BIDO **Bidbid** 36.68 293 P P 00 05 29.2 +3.3
SONM **Songino Array** 36.78 13 P P 00 05 26.1 -0.5
comp=Z,2.9nm,1.1s,baz=198,slow=9.3,SNR=14
SONM LR LR 00 20 41.2
comp=Z,54nm,20.8s,baz=194,slow=37
SONM **Songino Array** 36.78 13 P P 00 05 26.6 0.0
ULN **Ulaanbaatar** 36.95 14 P P 00 05 28.0 -0.1
HRA **Herat** 36.99 312 P P 00 05 28.7 0.0
KK31 **Karatay Array** 37.33 330 P P 00 05 32.0 +0.9
KKAR **Karatay Array** 37.33 330 P P 00 05 31.6 +0.5
BSY **Bisya** 37.38 291 P P 00 05 35.2 +3.3
SNR=16
HOQ **Hoqain** 37.43 293 P P 00 05 34.7 +2.4
JSU **Suzuyama** 37.91 54 P P 00 05 34.9 -1.3
JSU IAmb IAmb 00 05 44.2
comp=Z,14nm,1.0s
SOHO **SOHO** 38.23 294 P P 00 05 41.9 +2.9
SHAO **Shalim** 38.33 284 P P 00 05 43.2 +3.2
UOSS **Minazif** 38.69 295 P P 00 05 43.6 +0.7
UOSS IAmb IAmb 00 05 58.5
comp=Z,15nm,1.1s
KSAR **Wonju Array Be** 38.71 44 P P 00 05 41.4 -1.5
HATD **Hatta, Dubai** 38.73 294 P P 00 05 46.2 +3.0
SNR=7.2
KSRS **Korea Array** 38.75 44 P P 00 05 41.9 -1.3
comp=Z,3.0nm,0.8s,baz=242,slow=9.6,SNR=10
ALNE **Al Ain** 38.92 293 P P 00 05 47.7 +2.8
SNR=8.6
DMTO **DMTO** 38.96 283 P P 00 05 48.5 +3.3
NAZ **Nazwa, Dubai** 39.18 295 P P 00 05 49.2 +2.2
ASUD **Al Ashush, Dub** 39.40 294 P P 00 05 51.2 +2.3
SNR=12
DOK **Doka** 39.78 284 P P 00 05 54.8 +2.7
TLY **Talaya** 39.98 8 P P 00 05 54.1 +0.8
TLY IAmb IAmb 00 06 02.6
comp=Z,34nm,1.5s
SOCY **Socotra** 39.99 274 P P 00 05 55.2 +1.2
WHFO **Wadi Hawf** 40.08 283 P P 00 05 57.0 +2.3
SNR=5.1
ABTO **Aybut** 40.52 282 P P 00 06 00.6 +2.3
KURBB **Kurchatov Arra** 40.58 344 P P 00 05 58.2 0.0
comp=Z,5.4nm,0.9s,baz=161,slow=7.7,SNR=39
KURK **Kurchatov** 40.63 344 P P 00 05 58.2 -0.5
SAUI **Saumlaki** 41.35 117 P P 00 06 05.3 +0.2
JMN **Monobe** 41.42 52 P P 00 06 05.0 -0.5
JMN IAmb IAmb 00 06 14.6
comp=Z,17nm,1.0s
GEYT **Alibeck** 41.61 314 P P 00 06 08.1 +1.1
comp=Z,18nm,0.6s,baz=148,slow=8.7,SNR=42
GEYT **Alibeck** 41.61 314 P P 00 06 08.5 +1.5
GEYT IAmb IAmb 00 06 16.7
comp=Z,20nm,0.8s
GYA0B **ALIBECK ARRAY** 41.61 314 IAmb IAmb 00 06 16.2
comp=Z,27nm,0.8s
JRN **Qarnain Island** 41.68 294 P P 00 06 08.6 +0.9
HIA **Hailar** 42.25 24 P P 00 06 10.9 -1.1
ZAA0 **Zalesovo Array** 42.39 351 P P 00 06 13.3 +0.2
ZAA0 IAmb IAmb 00 06 22.7
comp=Z,25nm,1.0s
ZALV **Zalesovo Beam** 42.39 351 P P 00 06 12.9 -0.1
comp=Z,3.0nm,0.7s,baz=178,slow=8.7,SNR=17
ZALV **Zalesovo Beam** 42.39 351 P P 00 06 12.6 -0.4
BVAR **Borovoye Array** 45.18 339 P P 00 06 34.6 -1.0
comp=Z,1.3nm,0.8s,baz=133,slow=13,SNR=6.8
BRVK **Borovoye** 45.25 339 P P 00 06 36.2 +0.2
MAJO **Matsushiro** 45.74 50 P P 00 06 39.5 -0.8
MAJO IAmb IAmb 00 06 48.4
comp=Z,11nm,1.0s
MAT **Matsushiro** 45.74 50 P P 00 06 39.9 -0.4
MJAR **Matsushiro Arr** 45.74 50 P P 00 06 39.1 -1.1
comp=Z,3.9nm,0.9s,baz=262,slow=11,SNR=6.5
MJAR PcP **PcP** 00 08 17.6 -0.2
comp=Z,5.2nm,0.8s,baz=229,slow=3.4,SNR=7.1
ABKAR **Akbulak array** 46.87 329 P P 00 06 49.0 +0.2
ABKAR **Akbulak array** 46.87 329 IAmb IAmb 00 06 57.1
comp=Z,16nm,1.1s
RDF **Al-Radifah** 47.04 298 *eP* 00 06 50.0
RST **Umm Al-Ruwaisa** 47.62 299 *eP* 00 06 53.7
JMM **Marumori** 48.13 50 P P 00 06 57.8 -1.1
RAYN **Ar Rayn** 48.15 291 P P 00 07 00.4 +1.0
NWAO **Narrogin (SRO)** 49.69 155 P P 00 07 12.1 +1.2
WB0 **Warramunga Arr** 50.20 129 IAmb IAmb 00 07 27.9
comp=Z,14nm,1.1s
WRA **Warramunga Arr** 50.26 129 P P 00 07 14.9 -0.5
comp=Z,4.8nm,0.9s,baz=306,slow=8.2,SNR=22
WRA **Warramunga Arr** 50.26 129 P P 00 07 15.6 +0.2
WRAB **Tennant Creek** 50.27 129 P P 00 07 15.8 +0.4
WRAB IAmb IAmb 00 07 28.6
comp=Z,20nm,1.1s
WB2 **Warramunga Arr** 50.27 129 P P 00 07 15.0 -0.5
WB2 IAmb IAmb 00 07 25.1
comp=Z,18nm,1.2s
WR0 **Warramunga Arr** 50.42 129 P P 00 07 16.1 -0.5
WR0 IAmb IAmb 00 07 26.4
comp=Z,17nm,1.1s
ATD **Arta Tunnel** 50.91 275 LR LR 00 26 09.2
comp=Z,68nm,20.6s,baz=349,slow=33
GNI **Garni** 52.06 312 P P 00 07 30.5 +1.6
ASAR **Alice Springs** 52.20 133 P P 00 07 29.8 -0.1
comp=Z,3.3nm,1.0s,baz=312,slow=6.9,SNR=16
ASAR **Alice Springs** 52.20 133 P P 00 07 30.5 +0.6
AS31 **Alice Springs** 52.20 133 P P 00 07 31.0 +1.1
ARU **Arti** 52.25 335 P P 00 07 30.1 +0.3
MARD **Mardin** 54.31 307 P P 00 07 45.5 +0.1
MARD IAmb IAmb 00 07 53.2
comp=Z,13nm,0.7s
KBZ **Khabaz** 54.48 315 P P 00 07 45.9 -0.5
comp=Z,1.8nm,0.9s,baz=45,slow=8.6,SNR=2.8
KIV **Kislovodsk** 54.70 316 P P 00 07 48.4 +0.3
KIV IAmb IAmb 00 07 56.7
comp=Z,17nm,0.9s
GAZ **Gaziantep** 57.07 306 P P 00 08 05.3 +0.1
GAZ IAmb IAmb 00 08 13.2
comp=Z,11nm,0.8s

NRIK **Noril'sk** 57.26 357 P P 00 08 05.6 -0.3
comp=Z,0.6nm,0.4s,baz=196,slow=12,SNR=1.4
NRIK **Noril'sk** 57.26 357 P P 00 08 06.2 +0.3
TOKA **Tokat** 58.22 310 P P 00 08 14.1 +0.9
TOKA IAmb IAmb 00 08 21.4
comp=Z,10nm,1.0s
KMBO **Kilima Mbogo** 58.77 261 P P 00 08 17.3 -0.4
comp=Z,1.2nm,0.5s,baz=52,slow=14,SNR=2.5
BR131 **Keskin Array S** 60.26 309 P P 00 08 26.7 -0.8
BRTR **Keskin Array B** 60.26 309 P P 00 08 26.4 -1.1
comp=Z,4.5nm,0.7s,baz=114,slow=8.1,SNR=12
BRTR LR LR 00 38 10.2
comp=Z,142nm,20.6s,baz=102,slow=40
OBN **Obninsk** 62.17 326 P P 00 08 41.1 +1.2
MA2 **Magadan** 62.58 28 P P 00 08 41.6 -1.0
MA2 IAmb IAmb 00 08 42.8
comp=Z,9.4nm,0.9s
STKA **Stephens Creek** 62.60 136 P P 00 08 42.9 -0.2
comp=Z,8.1nm,0.8s,baz=301,slow=6.0,SNR=8.6
STKA **Stephens Creek** 62.60 136 P P 00 08 43.5 +0.4
ELL **Elmali** 62.81 305 P P 00 08 44.2 -0.5
TIXI **Tiksi** 62.84 11 P P 00 08 42.4 -1.7
KLMR **Klimovskoe** 62.93 333 *eP* P 00 08 42.9 -1.9
KLMR AMP 00 08 53.2
comp=Z,37nm,1.5s
PETK **Petropavlovsk-** 64.05 37 P P 00 08 51.0 -1.5
comp=Z,2.0nm,0.9s,baz=204,slow=6.0,SNR=1.9
CFR **Carcaliu** 65.09 314 ⇑P P 00 09 05.9 +6.5
AKASG **Malin Array Be** 65.28 320 P P 00 08 59.4 -1.1
comp=Z,0.2nm,0.3s,baz=86,slow=5.0,SNR=10
SORM **Soroca** 65.39 317 ⇑P P 00 09 00.6 -0.6
VRI **Vrincioaia** 66.16 315 ⇑P P 00 09 06.9 +0.6
PLOR **Plostina** 66.22 315 ⇑P P 00 09 07.5 +0.8
MLR **Muntele Rosu** 66.66 314 P P 00 09 09.7 0.0
comp=Z,4.8nm,1.0s,baz=108,slow=6.4
MLR **Muntele Rosu** 66.66 314 ⇑P P 00 09 10.1 +0.5
MLR **Muntele Rosu** 66.66 314 IAmb IAmb 00 09 18.0
comp=Z,11nm,1.0s
DOPR **Dopca** 67.10 315 ⇑P P 00 09 12.6 +0.3
BURAR **Bucovina Array** 67.40 317 ⇑P P 00 09 13.7 -0.6
BURAR **Bucovina Array** 67.40 317 P P 00 09 14.3 0.0
PLVB **Pleven** 67.41 312 ⇑P P 00 09 20.8 +6.5
ARR **Arges** 67.57 314 ⇑P P 00 09 15.1 -0.3
IDID **Didziasalis** 67.65 325 *eP* P 00 09 16.0 +0.5
IIGN **Ignalina** 67.95 325 *eP* P 00 09 17.9 +0.4
VTS **Vitosha** 68.37 311 ⇑P P 00 09 19.8 -0.8
TOO **Toolangi** 68.55 139 P P 00 09 21.8 +0.3
BMR **Baia Mare** 68.57 317 ⇑P P 00 09 12.2 -9.3
DRGR 69.02 316 ⇑P P 00 09 24.9 +0.4
HERR **Herculane** 69.10 313 ⇑P P 00 09 24.9 +0.1
PABE **Paberze** 69.24 325 *eP* P 00 09 25.7 +0.2
PABE **Paberze** 69.24 325 P P 00 09 25.7 +0.2
TRPA **Tarpa** 69.25 317 ⇑P P 00 09 26.1 +0.4
FINES **FINESS Array B** 69.27 331 P P 00 09 25.2 -0.3
comp=Z,1.5nm,0.6s,baz=104,slow=8.0,SNR=6.6
KWP **Kalwaria Pacla** 69.27 319 *eP* P 00 09 33.6 +7.7
SUW **Suwalki** 69.48 323 *eP* P 00 09 26.5 -0.5
MTSE **Matsula** 69.84 328 *eP* P 00 09 28.1 -1.0
NIE **Niedzica** 70.82 318 *eP* P 00 09 36.4 +1.0
OJC **Ojcow** 71.19 319 *eP* P 00 09 37.8 +0.2
OJC **Ojcow** 71.19 319 P P 00 09 37.2 -0.4
OJC IAmb IAmb 00 09 46.1
comp=Z,12nm,1.0s
BILL **Bilibino** 71.79 22 P P 00 09 40.0 -0.8
BILL IAmb IAmb 00 09 40.7
comp=Z,8.4nm,1.0s
MORH **Mrgy, Hungar** 71.80 315 ⇑P P 00 09 41.0 -0.3
JAVC **Velka Javorina** 72.52 318 *eP* P 00 09 46.7 +1.0
MORC **Moravsky Berou** 72.63 318 *eP* P 00 09 46.7 +0.4
MORC **Moravsky Berou** 72.63 318 IAmb IAmb 00 09 56.4
comp=Z,9.9nm,1.0s
VRAC **Vranov** 73.24 318 P P 00 09 49.1 -0.7
comp=Z,2.1nm,0.9s,baz=70,slow=11,SNR=1.6
VRAC **Vranov** 73.24 318 *eP* P 00 09 50.2 +0.4
KRUC **Moravsky** 73.36 318 *eP* P 00 09 50.6 0.0
KSP **Ksiaz** 73.45 320 *eP* P 00 09 59.0 +8.0
CONA **Conrad Observa** 73.72 317 *eP* P 00 09 52.8 0.0
comp=Z,8.8nm,1.7s
ARSA **Arzberg** 73.95 316 *eP* P 00 09 54.6 +0.5
comp=Z,3.9nm,0.8s
SOKA **Soboth** 74.30 315 *eP* P 00 09 56.7 +0.5
comp=Z,5.9nm,1.1s
OBKA **Obir** 74.64 315 *i* P P 00 09 58.6 +0.4
comp=Z,8.5nm,1.1s,SNR=5.9
MOA **Molln** 74.79 316 *eP* P 00 09 58.8 -0.2
comp=Z,5.0nm,1.0s
BRG **Berggiesshubel** 74.94 320 *i* P P 00 10 00.1 +0.4
BRG Amp 00 10 01.1
comp=Z,8.7nm,0.9s
BRG pP **pP** 00 10 07.8 -1.1
BRG Amp 00 10 08.8
comp=Z,49nm,2.0s
GEC2 **GERESS Array S** 75.14 318 P P 00 10 00.8 -0.3
GEC2 IAmb IAmb 00 10 02.1
comp=Z,9.3nm,0.8s
GERES **GERESS Array B** 75.14 318 P P 00 10 01.0 -0.1
comp=Z,5.9nm,0.7s,baz=90,slow=6.7,SNR=60
CLL **Collm** 75.53 320 *i* P P 00 10 02.9 -0.2
comp=Z,9.0nm,1.0s
CLL *i* 00 10 10.4
CLL **Collm** 75.53 320 P P 00 10 02.8 -0.3
STAL **STALIGIAL** 75.92 315 IAmb IAmb 00 10 13.6
comp=Z,20nm,1.0s
ABTA **Abfaltersbach** 76.03 315 *eP* P 00 10 05.4 -0.8
comp=Z,6.2nm,1.2s
NOA **NORSAR Array B** 76.36 330 P P 00 10 07.4 -0.3
comp=Z,1.0nm,0.9s,baz=89,slow=6.0,SNR=2.1
WTTA **Wattenberg** 76.60 316 *eP* P 00 10 09.1 -0.5
comp=Z,7.5nm,0.7s
WATA **Walderalm** 76.63 316 *eP* P 00 10 09.1 -0.6
comp=Z,6.0nm,1.0s
CTI **Castel Tesino** 76.67 315 IAmb IAmb 00 10 19.4
comp=Z,10nm,1.0s
GRA1 **Grafenberg Arr** 76.73 318 IAmb IAmb 00 10 18.6
comp=Z,7.2nm,0.9s
GRFO **Grafenberg** 76.73 318 P P 00 10 11.1 +1.1
GRFO IAmb IAmb 00 10 18.5
comp=Z,6.5nm,0.9s
SQTA **Sankt Quirin** 76.89 316 *eP* P 00 10 10.6 -0.5
comp=Z,6.1nm,0.6s
SQTA *eP* **pP** 00 10 17.8 -2.5
comp=Z,8.4nm,0.8s
MOTA **Mosalm** 76.95 316 *eP* P 00 10 10.7 -0.8
comp=Z,8.5nm,1.0s
MOTA *eP* **pP** 00 10 18.4 -2.3
comp=Z,13nm,1.1s
LBTB **Lobatse** 77.02 241 P P 00 10 12.4 +0.3
LBTB IAmb IAmb 00 10 14.7
comp=Z,16nm,0.9s
RETA **Reutte** 77.18 316 *eP* P 00 10 12.4 -0.3
comp=Z,6.7nm,0.7s
FETA **Feichten** 77.23 316 *eP* P 00 10 12.9 -0.2
comp=Z,7.8nm,0.9s
FETA *eP* **pP** 00 10 20.3 -1.9
comp=Z,7.8nm,0.9s
DAVA **Damuels** 77.79 316 *i* P P 00 10 16.0 -0.2
comp=Z,8.9nm,1.1s,SNR=5.4
DAVOX **Davos/Dischmat** 77.83 316 P P 00 10 15.5 -0.9
comp=Z,4.5nm,0.8s,baz=29,slow=10
TUE **Stuetta** 78.22 315 IAmb IAmb 00 10 27.3
comp=Z,18nm,1.3s
BOSA **Boshof** 78.56 237 P P 00 10 20.9 +0.2
comp=Z,12nm,0.8s,baz=65,slow=5.2,SNR=21
BOSA **Boshof** 78.56 237 P P 00 10 21.4 +0.7
KEST **Kesra** 79.42 304 P P 00 10 24.6 -0.8
comp=Z,4.9nm,0.9s,baz=331,slow=16,SNR=4.3
KEST **Kesra** 79.42 304 P P 00 10 25.2 -0.2
KEST IAmb IAmb 00 10 34.0
comp=Z,8.6nm,0.8s
BTNL **Ternell** 79.91 320 *dP* P 00 10 27.7 +0.1
comp=Z,4.0nm,0.9s
BTNL *dx* x 00 10 35.3
MEM **Membach** 79.99 320 *bP* P 00 10 28.3 +0.3
MEM *dx* x 00 10 35.1
MEM *dS*P **sP** 00 10 39.0 -1.6
WLF **Walferdange** 80.01 319 *bP* P 00 10 27.7 -0.4
WLF *dx* x 00 10 36.1
WLF **Walferdange** 80.01 319 P P 00 10 28.7 +0.6
WLF IAmb IAmb 00 10 36.8
comp=Z,13nm,1.1s
BNI **Bardonecchia** 80.24 314 IAmb IAmb 00 10 40.7
comp=Z,8.8nm,1.1s
BCLA **Clavier** 80.46 320 *bP* P 00 10 30.5 0.0
BGES **Gesves** 80.60 320 *dP* P 00 10 31.4 +0.2
BGES *dx* x 00 10 38.9

BMRD **Maredsous** 80.81 319 *bP* P 00 10 31.0 -1.4
BMRD *dx* x 00 10 38.9
DOU **Dourbes** 80.95 319 *bP* P 00 10 33.1 0.0
TAM **Tamanrasset** 84.82 292 IAmb IAmb 00 11 03.2
comp=Z,8.1nm,1.3s
TOLK **Toolik Lake Re** 87.62 19 P P 00 11 06.7 0.0
MLY **Manley** 88.88 23 IAmb IAmb 00 11 13.8
comp=Z,8.5nm,0.8s
ESDC **Sonseca Array** 89.02 310 P P 00 11 14.0 0.0
comp=Z,1.1nm,0.7s,baz=54,slow=4.4,SNR=13
ESDC **Sonseca Array** 89.02 310 P P 00 11 13.9 0.0
I23K **Minto, Yukon-K** 89.34 22 IAmb IAmb 00 11 26.7
comp=Z,10nm,1.1s
NEA2 **Nenana** 89.72 23 IAmb IAmb 00 11 17.9
comp=Z,6.7nm,0.8s
TRF **Thorofare Moun** 89.78 24 IAmb IAmb 00 11 18.1
comp=Z,8.0nm,0.9s
TORD **Torodi Ar. Bea** 90.36 283 P P 00 11 20.8 +0.2
comp=Z,2.6nm,1.0s,baz=75,slow=4.5,SNR=8.5
TORD PP PP 00 14 53.6 -1.4
comp=Z,0.5nm,1.0s,baz=54,slow=7.3,SNR=3.6
TORD **Torodi Ar. Bea** 90.36 283 P P 00 11 19.8 -0.7
ILAR **Eielson Array** 90.45 22 P P 00 11 18.7 -1.3
comp=Z,1.6nm,0.8s,baz=300,slow=4.3,SNR=16
ILAR **Eielson Array** 90.45 22 P P 00 11 18.1 -1.9
SUA **Susitna One** 90.51 26 P P 00 11 19.3 -1.2
PRP **Porcupine Dome** 90.55 21 P P 00 11 20.5 -0.2
PRP IAmb IAmb 00 11 21.8
comp=Z,7.0nm,1.0s
MVO **Moncorvo** 90.86 312 *eP* P 00 11 23.5 +1.0
MVO *epP* **pP** 00 11 31.1 -0.8
POLO **Lamas de Olo** 91.35 313 *epP* pP 00 11 33.3 -0.9
PCBR **Castelo Branco** 91.58 311 *eP* P 00 11 27.4 +1.6
PCBR *epP* **pP** 00 11 34.5 -0.6
PMRV **Marv??o** 91.63 311 *epP* pP 00 11 34.0 -1.4
PBAR **Barrancos** 91.74 310 *eP* P 00 11 27.2 +0.6
comp=Z,17nm,1.6s
PBAR *epP* **pP** 00 11 35.1 -0.8
SCRK **Sand Creek** 91.94 22 IAmb IAmb 00 11 27.8
comp=Z,5.0nm,0.8s
EVO **Evora** 92.36 310 *epP* pP 00 11 38.0 -0.8
PVAQ **Vaqueiros** 92.48 309 *eP* P 00 11 30.8 +0.8
comp=Z,24nm,1.6s
INK **Inuvik** 92.62 16 P P 00 11 29.3 -0.7
comp=Z,4.9nm,1.1s,baz=277,slow=7.1,SNR=4.4
PBDV **Barranco-do-Ve** 92.69 309 *eP* P 00 11 31.1 +0.1
PTEO **Sao Teotonio** 93.20 309 *epP* pP 00 11 40.5 -2.1
L27K **Beaver Creek,** 93.26 22 IAmb IAmb 00 11 34.7
comp=Z,3.1nm,0.9s
BMRM **Bremner River** 93.33 25 P P 00 11 33.2 -0.3
RAO **Raoul Island** 93.43 119 LR LR 00 58 48.6
comp=Z,109nm,18.5s,baz=101,slow=39
DAWY **Dawson** 93.54 21 IAmb IAmb 00 11 35.2
comp=Z,6.3nm,1.0s
KOWA **Kowa** 95.45 286 P P 00 11 44.8 +0.7
comp=Z,2.2nm,0.7s,baz=74,slow=2.5,SNR=5.8
KOWA **Kowa** 95.45 286 IAmb IAmb 00 11 52.7
comp=Z,4.9nm,1.1s
AFI **Afiamalu** 96.01 103 LR LR 00 49 27.4
comp=Z,41nm,21.7s,baz=322,slow=32
YKA **Yellowknife Ar** 102.04 14 P Pdif 00 12 11.2 -1.5
comp=Z,0.2nm,0.9s,baz=331,slow=5.0,SNR=3.5
YKA PP **PP** 00 16 20.4 -3.1
comp=Z,0.4nm,0.9s,baz=327,slow=6.3,SNR=5.4
ULM **Lac du Bonnet** 117.08 8 PKP **PKPdf** 00 17 02.2 -1.4
comp=Z,1.1nm,0.7s,baz=18,slow=7.9,SNR=3.1
NVAR **Mina Array Bea** 120.80 30 PKP **PKPdf** 00 17 09.1 -2.4
comp=Z,0.8nm,0.8s,baz=293,slow=1.1,SNR=4.2
PDAR **Pinedale Array** 120.85 21 PKP **PKPdf** 00 17 09.2 -2.2
comp=Z,0.3nm,0.8s,baz=231,slow=0.6,SNR=1.9
TXAR **Lajitas Array** 134.95 23 PKP **PKPdf** 00 17 36.4 -2.1
comp=Z,0.3nm,0.9s,baz=80,slow=5.0,SNR=2.7
BDFB **Brasilia** 143.90 260 PKP PKPbc 00 17 53.8 +1.0
comp=Z,5.0nm,0.9s,baz=169,slow=5.2,SNR=4.6
OBIP **Obispado Ponce** 144.84 328 PKPdf **PKPab** 00 17 55.2 -0.2
OBIP pPKPdf **pPKPdf** 00 18 03.3 -2.7
MLPR **Magueyes Islan** 145.12 329 **PKPbc** 00 17 56.1 -0.3
MLPR pPKPbc pPKPab 00 18 04.0 -1.9
LL02 **Futaleuf** 147.09 198 **PKPbc** 00 18 02.1 +0.4
PLCA **Paso Flores** 148.86 202 PKPbc **PKiKP** 00 18 08.0 -0.1
comp=Z,4.1nm,0.8s,baz=242,slow=2.2,SNR=11
PLCA **Paso Flores** 148.86 202 **PKiKP** 00 18 08.2 +0.1
CMIG **Matias Romero** 149.30 19 PKPbc **PKPbc** 00 18 07.7 -0.6
comp=Z,2.6nm,0.8s,baz=295,slow=4.8,SNR=6.0
CPUP **Villa Florida** 150.38 238 PKPbc **PKPbc** 00 18 11.1 +0.4
comp=Z,5.6nm,0.9s,baz=82,slow=3.0,SNR=8.6
CPUP **Villa Florida** 150.38 238 **PKPbc** 00 18 11.2 +0.4
CPUP PKPab **pPKPbc** 00 18 19.2 -1.0

*IDC **23** 23:59:21.8±3.0, 11.84N×95.20E, h0km, mb4.2/8, mb1 4.3/8, mb1mx3.9/46, mbtmp4.2/8, MS3.6/4, Ms1 3.6/4, ms1mx3.4/14, Error ellipse: s-maj=69.9km s-min=57.1km az=138.0*

ISC 23 23:59:25.5±2.5, 11.9N±0.4×95.2E±0.4, h21km, n11, σ0.71/8, mb4.2/8, MS3.8/3, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	7.48	29	LR	LR	00 03 23.5	
	comp=Z,217nm,20.9s,baz=266,slow=32						
MKAR	**Makanchi Array**	36.45	345	P		**P**	**00 06 28.3 -0.6**
	4.9nm,1.1s,baz=141,slow=7.8,SNR=1.0						
KURBB	**Kurchatov Arra**	40.96	344	P		**P**	**00 07 06.4 -0.2**
	3.4nm,1.0s,baz=159,slow=8.2,SNR=0.8						
GEYT	**Alibeck**	42.01	315	P		**P**	**00 07 16.5 +1.0**
	11nm,0.7s,baz=140,slow=7.8,SNR=4.6						
KBZ	**Khabaz**	54.89	315	LR		LR	00 34 38.0
	comp=Z,87nm,21.2s,baz=84,slow=38						
PMG	**Port Moresby**	55.84	110	LR		LR	00 39 22.9
	comp=Z,42nm,19.5s,baz=272,slow=43						
BRTR	**Keskin Array B**	60.65	309	P		**P**	**00 09 34.5 -0.9**
	1.8nm,0.6s,baz=120,slow=6.8,SNR=1.7						
GERES	**GERESS Array B**	75.55	318	P		**P**	**00 11 09.1 +0.5**
	2.6nm,0.7s,baz=90,slow=5.9,SNR=4.5						
ESDC	**Sonseca Array**	89.41	310	P		**P**	**00 12 21.0 -0.1**
	0.6nm,0.7s,baz=64,slow=5.0,SNR=2.4						
TORD	**Torodi Ar. Bea**	90.66	283	P		**P**	**00 12 27.1 -0.2**
	0.7nm,0.9s,baz=74,slow=5.5,SNR=1.7						
ILAR	**Eielson Array**	90.67	22	P		**P**	**00 12 26.6 +0.3**
	0.2nm,0.5s,baz=304,slow=4.5,SNR=2.6						
ILAR				LR		LR	00 59 54.6
	comp=Z,38nm,18.4s,baz=330,slow=40						

*INET **24** 00:08:04.2, 13.82N×91.32W, h0km, MW3.9*
*UCR **24** 00:08:06.9±1.0, 13.94N×91.19W, h14km±8km, ML3.9, mb4.0(NEIC)*
*SNET **24** 00:08:06.8±0.9, 13.94N×91.20W, h15km±7km, ML4.0*
*NEIC **24** 00:08:07.5±2.3, 13.89N±0.09×91.30W±0.05, h56km±13km, mb4.0/15, Error ellipse: s-maj=13.8km s-min=3.9km az=202.0*
*IDC **24** 00:08:08.6±4.3, 13.94N×91.39W, h75km±24km, mb3.5/3, mb1 3.8/5, mb1mx3.3/55, mbtmp3.7/5, MS3.1/3, Ms1 3.1/3, ms1mx2.6/27, Error ellipse: s-maj=45.5km s-min=13.9km az=2.0*
*GCG **24** 00:08:09.3±0.7, 13.81N×91.06W, h26km±6km, MD4.2*

ISC 24 00:08:07.3±1.1, 13.82N±0.08×91.35W±0.06, h65km±8km, n86, σ1.9±11/92, mb3.9/8, 10C-3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	0.65	341	*i* P		Pn	**00 08 20.1 -1.2**
ERG				*eS*		Sn	**00 08 35.8 +4.3**
RTAL	**Retalhuleu**	0.77	334	⇑*i*P		Pn	**00 08 20.5 -2.3**
RTAL				*eS*		Sn	**00 08 31.8 -2.4**
RTAL				IAML			00 08 38.5
	comp=Z,2μm,0.3s						
RTAL	**Retalhuleu**	0.77	334	Pn		Pn	**00 08 20.5 -2.3**
FUG	**Fuego 3**	0.79	38	*eP*		Pn	**00 08 21.7 -1.5**
PCG	**Pacaya**	0.91	52	*eP*		Pn	**00 08 23.8 -0.9**
NBG	**Las Nubes**	1.23	52	*eP*		Pn	**00 08 29.1 +0.3**
APG	**El Apazote**	1.45	36	P		Pn	**00 08 31.2 -0.5**
	comp=Z,104nm,0.3s,baz=227,slow=9.3,SNR=940						
APG				S		Sn	**00 08 50.6 +0.5**
	comp=Z,196nm,0.3s,baz=93,slow=21,SNR=29						
APG				LR		LR	00 09 15.3
	comp=Z,137nm,19.4s,baz=204,slow=48						
HUEH	**Huehuetenango**	1.49	354	⇓*eP*		Pn	**00 08 32.0 -0.3**
HUEH				*eS*		Sn	**00 08 51.8 +0.8**
HUEH				IAML			00 08 58.1
	comp=Z,3μm,0.4s						
HUEH	**Huehuetenango**	1.49	354	Pn		Pn	**00 08 31.5 -0.8**
RTR	**El Retiro**	1.65	87	⇑*i*P		Pn	**00 08 33.8 -0.6**

RTR	**El Retiro**	**1.65**	**87**	⇑*iP*		**Pn**	**00 08 33.8**	**-0.6**
CEVE	**Cerro Verde**	**1.67**	**90**	⇓*eP*		**Pn**	**00 08 33.5**	**-1.2**
CEVE				IAML			00 09 02.2	
	comp=Z,9μm,0.3s							
CEVE	**Cerro Verde**	**1.67**	**90**	⇓*eP*		**Pn**	**00 08 33.5**	**-1.2**
CEVE				IAML			00 09 02.2	
	comp=Z,9μm,0.3s							
SBLS	**San Blas**	**1.68**	**89**	⇑*eP*		**Pn**	**00 08 33.6**	**-1.1**
SBLS	**San Blas**	**1.68**	**89**	⇑*eP*		**Pn**	**00 08 33.6**	**-1.1**
SNJE	**San Jose**	**1.69**	**88**	*eP*		**Pn**	**00 08 34.0**	**-0.9**
SNJE	**San Jose**	**1.69**	**88**	*eP*		**Pn**	**00 08 34.0**	**-0.9**
BOQS	**Boqueron**	**2.01**	**92**	*eP*		**Pn**	**00 08 38.4**	**-0.8**
BOQS	**Boqueron**	**2.01**	**92**	*eP*		**Pn**	**00 08 38.4**	**-0.8**
MTO3	**Montecristo**	**2.01**	**73**	⇑*iP*		**Pn**	**00 08 38.0**	**-1.2**
MTO3	**Montecristo**	**2.01**	**73**	⇑*iP*		**Pn**	**00 08 38.0**	**-1.2**
MTO3	**Montecristo**	**2.01**	**73**	Pn		**Pn**	**00 08 38.0**	**-1.2**
MRL	**Marmol**	**2.04**	**52**	*eP*		**Pn**	**00 08 40.0**	**+0.3**
MRL				*eS*		**Sn**	**00 09 03.7**	**-0.5**
SNET	**Serv Nac Est T**	**2.06**	**94**	*eP*		**Pn**	**00 08 39.0**	**-0.7**
SNET				IAML			00 09 09.9	
	comp=Z,2μm,0.3s							
SNET	**Serv Nac Est T**	**2.06**	**94**	*eP*		**Pn**	**00 08 39.0**	**-0.7**
SNET				IAML			00 09 09.9	
	comp=Z,2μm,0.3s							
SNET	**Serv Nac Est T**	**2.06**	**94**	Pn		**Pn**	**00 08 38.8**	**-0.9**
ESQI	**Esquipulas**	**2.08**	**69**	⇑*iP*		**Pn**	**00 08 39.2**	**-0.8**
ESQI				IAML			00 09 11.7	
	comp=Z,356nm,0.7s							
ESQI	**Esquipulas**	**2.08**	**69**	Pn		**Pn**	**00 08 39.2**	**-0.8**
LFRS	**El Faro**	**2.23**	**95**	⇑*iP*		**Pn**	**00 08 41.7**	**-0.4**
LFRS	**El Faro**	**2.23**	**95**	⇑*iP*		**Pn**	**00 08 41.7**	**-0.4**
LBRS	**Las Brisas**	**2.24**	**92**	*eP*		**Pn**	**00 08 41.8**	**-0.4**
LBRS	**Las Brisas**	**2.24**	**92**	*eP*		**Pn**	**00 08 41.8**	**-0.4**
PAVA	**Las Pavas**	**2.34**	**92**	*eP*		**Pn**	**00 08 43.1**	**-0.5**
PAVA	**Las Pavas**	**2.34**	**92**	*eP*		**Pn**	**00 08 43.1**	**-0.5**
COEG	**Centro de Oper**	**2.41**	**95**	*eP*		**Pn**	**00 08 44.1**	**-0.4**
COEG				IAML			00 09 17.6	
	comp=Z,2μm,0.3s							
COEG	**Centro de Oper**	**2.41**	**95**	*eP*		**Pn**	**00 08 44.1**	**-0.4**
COEG				IAML			00 09 17.6	
	comp=Z,2μm,0.3s							
CCIG	**Comitan**	**2.56**	**343**	Pn		**Pn**	**00 08 47.2**	**+0.5**
COEB	**Comit de Eme**	**2.76**	**96**	*eP*		**Pn**	**00 08 48.6**	**-0.7**
COEB				IAML			00 09 30.3	
	comp=Z,573nm,0.4s							
COEB	**Comit de Eme**	**2.76**	**96**	*eP*		**Pn**	**00 08 48.6**	**-0.7**
COEB				IAML			00 09 30.3	
	comp=Z,573nm,0.4s							
TECA	**Tecapa**	**2.78**	**96**	*eP*		**Pn**	**00 08 49.3**	**-0.5**
TECA	**Tecapa**	**2.78**	**96**	*eP*		**Pn**	**00 08 49.3**	**-0.5**
PACA	**Pacayal**	**2.96**	**96**	*eP*		**Pn**	**00 08 52.9**	**+0.9**
PACA	**Pacayal**	**2.96**	**96**	*eP*		**Pn**	**00 08 52.9**	**+0.9**
FAGO	**Alcalda de S**	**3.15**	**92**	*eP*		**Pn**	**00 08 53.7**	**-0.9**
FAGO	**Alcalda de S**	**3.15**	**92**	*eP*		**Pn**	**00 08 53.7**	**-0.9**
PETF	**Flores**	**3.39**	**25**	Pn		**Pn**	**00 08 57.5**	**-0.3**
LCND	**La Caada**	**3.40**	**98**	*eP*		**Pn**	**00 08 57.4**	**-0.6**
LCND	**La Caada**	**3.40**	**98**	*eP*		**Pn**	**00 08 57.4**	**-0.6**
CNCH	**Conchagua**	**3.46**	**99**	*eP*		**Pn**	**00 08 58.9**	**0.0**
CNCH	**Conchagua**	**3.46**	**99**	*eP*		**Pn**	**00 08 58.9**	**0.0**
TGUH	**Tegucigalpa,Un**	**3.96**	**86**	Pn		**Pn**	**00 09 05.0**	**-0.8**
CRIN	**San Cristobal**	**4.33**	**104**	Pn		**Pn**	**00 09 11.2**	**+0.5**
CMIG	**Matias Romero**	**4.71**	**314**	P		**Pn**	**00 09 14.8**	**-1.1**
	comp=Z,6.6nm,0.3s,baz=132,slow=8.7,SNR=28							
CMIG				S		**Sn**	**00 10 08.1**	**-1.2**
	comp=Z,9.2nm,0.3s,baz=252,slow=18,SNR=5.9							
MATN	**Matagalpa**	**5.35**	**99**	Pn		**Pn**	**00 09 25.3**	**+0.5**
BOAB	**BOACO BROADBAN**	**6.70**	**103**	Pn		**Pn**	**00 09 28.0**	**-1.4**
ACON	**Acoyapa**	**6.29**	**106**	Pn		**Pn**	**00 09 37.5**	**-0.1**
ORTG	**Ortega, Santa**	**6.71**	**120**	Pn		**Pn**	**00 09 43.5**	**+0.2**
TEIG	**Tepich**	**7.01**	**24**	P		**Pn**	**00 09 47.0**	**-0.4**
	comp=Z,41nm,0.3s,baz=276,slow=1.3,SNR=101							
TEIG				LR		LR	00 13 16.4	
	comp=Z,108nm,19.8s,baz=242,slow=44							
TEIG	**Tepich**	**7.01**	**24**	Pn		**Pn**	**00 09 46.9**	**-0.5**
ESPN	**Las Esperanzas**	**7.06**	**102**	Pn		**Pn**	**00 09 47.9**	**-0.1**
JTS	**Las Juntas de**	**7.17**	**119**	Pn		**Pn**	**00 09 50.6**	**+1.0**
PEZE	**Perez Zeledon,**	**8.71**	**120**	Pn		**Pn**	**00 10 09.7**	**-1.1**
RIOS	**Rincon, Osa**	**9.21**	**123**	Pn		**Pn**	**00 10 19.1**	**+1.5**
SOR	**Soroa**	**11.92**	**40**	Pn		**Pn**	**00 10 53.1**	**-1.4**
346A	**Big Creek Wild**	**17.57**	**5**			**P**	**00 12 08.8**	**+0.8**
ROSC	**El Rosal**	**19.01**	**116**	LR		LR	00 20 20.5	
	comp=Z,36nm,18.3s,baz=76,slow=38							
TXAR	**Lajitas Array**	**19.20**	**325**	P		**P**	**00 12 26.9**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=19							
TXAR	**Lajitas Array**	**19.20**	**325**			**P**	**00 12 27.5**	**+1.4**
TX31	**Lajitas Ar. Si**	**19.20**	**325**			**P**	**00 12 27.9**	**+1.8**
TX31				IAmb		IAmb	00 12 33.1	
	comp=Z,11nm,1.4s							
TX32	**Lajitas Array**	**19.20**	**325**			**P**	**00 12 27.9**	**+1.8**
Z47A	**Carrollton**	**19.52**	**8**	P		**P**	**00 12 31.1**	**+1.6**
Z47A				IAmb		IAmb	00 12 39.8	
	comp=Z,12nm,0.8s							
LRAL	**Lakeview Retre**	**19.53**	**11**			**P**	**00 12 30.6**	**+1.1**
LRAL				IAmb		IAmb	00 12 34.4	
	comp=Z,12nm,1.1s							
X48A	**Hartselle**	**20.90**	**10**	P		**P**	**00 12 45.3**	**+0.8**
MNTX	**Cornudas Mount**	**21.96**	**326**	P		**P**	**00 12 55.4**	**-0.4**
FCAR	**Ozark Folk Cen**	**21.98**	**358**	P		**P**	**00 12 55.5**	**-0.5**
FCAR				IAmb		IAmb	00 12 57.7	
	comp=Z,3.9nm,0.7s							
LCAR	**Lake Charles**	**22.15**	**0**	P		**P**	**00 12 57.0**	**-0.8**
LCAR				IAmb		IAmb	00 12 57.9	
	comp=Z,3.7nm,0.7s							
TKL	**Tuckaleechee C**	**22.79**	**16**	P		**P**	**00 13 02.8**	**-1.8**
	comp=Z,1.9nm,0.5s,baz=180,slow=14,SNR=6.3							
TKL				LR		LR	00 22 12.6	
	comp=Z,74nm,18.3s,baz=156,slow=37							
S39A	**Bolivar**	**23.84**	**356**	P		**P**	**00 13 12.9**	**-1.6**
S39A				IAmb		IAmb	00 13 14.4	
	comp=Z,3.1nm,0.7s							
CCM	**Cathedral Cave**	**24.14**	**0**	P		**P**	**00 13 15.7**	**-1.5**
CCM				IAmb		IAmb	00 13 16.9	
	comp=Z,5.4nm,0.7s							
PV13	**Radium Mtn., P**	**28.77**	**331**	P		**P**	**00 13 59.2**	**-0.1**
PV13				IAmb		IAmb	00 14 01.4	
	comp=Z,5.9nm,0.7s							
NVAR	**Mina Array Bea**	**34.21**	**321**	P		**P**	**00 14 47.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=134,slow=8.2,SNR=7.1							
NVAR				pP		**pP**	**00 15 03.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=136,slow=9.1,SNR=4.2							
LRM	**Limekiln Ridge**	**36.54**	**335**	P		**P**	**00 15 08.5**	**+1.5**
J08A	**Circle Bar Ran**	**37.53**	**327**	P		**P**	**00 15 15.9**	**+0.6**
F10A	**Beach Ranch, E**	**38.77**	**331**	P		**P**	**00 15 26.3**	**+0.6**
YKA	**Yellowknife Ar**	**51.34**	**346**	P		**P**	**00 17 02.8**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=147,slow=8.1,SNR=11							
CMAR	**Chiang Mai Arr**	**146.36**	**342**	PKPbc		**PKPdf**	**00 27 41.3**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=326,slow=3.4,SNR=4.6							

*IDC **24** 00:28:48.8±5.5,8°.99S×124°.28E,h76^{km}±66^{km},mb3.2/1, mb1 3.9/4,mb1mx3.4/26,mbtmp3.9/4,ML4.1/3,Error ellipse: s-maj=63.9km s-min=31.6km az=28.0*

*DJA **24** 00:28:51.4±0.8,9°.5S±5°×12°.4E±°,h90^{km}±8^{km},M4.1/8, mb4.4/3,mB4.8/1,MLv4.0/8,Mw(mB)4.1/1*

ISC 24 00:28:49.3±1.0,**9°.27S**±0°.08×**123°.92E**±0°.08,**h100**^{km},**n13, σ3°.33**/19,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.59**	**145**	P	**Pn**	**00 29 08.8**	**+2.8**
SOEI				S	**Sn**	**00 29 22.1**	**+3.7**
BATI	**Baumata**	**0.97**	**195**	P	**Pn**	**00 29 13.6**	**+4.1**
	114nm,0.3s,baz=122,slow=3.3,SNR=66						
BATI				S	**Sn**	**00 29 29.5**	**+5.0**
	70nm,0.3s,baz=277,slow=22,SNR=22						
BATI				LR	LR	00 29 30.0	
	comp=Z,182nm,20.6s,baz=300,slow=30						
BATI	**Baumata**	**0.97**	**195**	P	**Pn**	**00 29 12.2**	**+2.8**
MMRI	**Maumere**	**1.77**	**291**	P	**Pn**	**00 29 19.3**	**+0.3**
MMRI				S	**Sn**	**00 29 40.3**	**-1.4**
BASI	**Baing, Sumba**	**3.43**	**254**	P	**Pn**	**00 29 40.2**	**-0.6**
WBSI	**Waikabubak, Su**	**4.48**	**265**	P	**Pn**	**00 29 54.3**	**-0.8**
PLAI	**Plampang**	**6.08**	**274**	P	**Pn**	**00 30 16.6**	**-0.2**
	0.2nm995nm47nm,0.7s						
BNSI	**Bone**	**6.14**	**322**	P	**Pn**	**00 30 18.4**	**+0.9**
	0.1nm15nm,0.6s						
TWSI	**Taliwang, Sumb**	**6.97**	**274**	P	**Pn**	**00 30 29.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**8.94**	**169**	P	**Pn**	**00 30 57.0**	**+1.4**
	1.9nm,0.3s,baz=357,slow=7.4,SNR=53						
FITZ				S	**Sn**	**00 32 31.3**	**-3.2**
	1.6nm,0.3s,baz=175,slow=9.9,SNR=12						
WRA	**Warramunga Arr**	**14.63**	**138**	P	**Pn**	**00 32 10.2**	**-1.2**
	0.9nm,0.3s,baz=328,slow=14,SNR=32						
WRA				S	**Sn**	**00 34 45.2**	**-7.6**
	1.0nm,0.3s,baz=300,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**17.21**	**147**	P	**P**	**00 32 46.5**	**+2.8**
	0.4nm,0.3s,baz=325,slow=12,SNR=18						
ASAR				S	**Sn**	**00 35 50.4**	**-4.7**
	0.3nm,0.3s,baz=199,slow=26,SNR=4.6						
MKAR	**Makanchi Array**	**67.00**	**330**	P	**P**	**00 39 32.7**	**+1.2**
	0.3nm,0.5s,baz=120,slow=8.5,SNR=4.3						

IDC 24 00:29:17.8±2.0,**11°.24N**×**93°.39E**,**h0**^{km},**mb3.7**/4, **mb1 3.9**/4,**mb1mx3.5**/46,**mbtmp3.7**/4,**MS3.2**/2,**Ms1 3.2**/2, **ms1mx2.6**/29,**Error ellipse: s-maj=98.0km s-min=30.9km az=56.0**,**Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**36.66**	**347**	P	P	00 36 26.9	+0.7
	1.0nm,0.8s,baz=155,slow=9.0,SNR=7.1						
ZALV	**Zalesovo Beam**	**43.14**	**353**	P	P	00 37 19.1	-0.8
	0.8nm,0.6s,baz=167,slow=7.4,SNR=6.3						
WRA	**Warramunga Arr**	**50.85**	**127**	P	P	00 38 20.7	0.0
	0.9nm,0.8s,baz=309,slow=8.3,SNR=3.1						
KMBO	**Kilima Mbogo**	**57.12**	**261**	LR	LR	01 00 10.1	
	comp=Z,19nm,21.8s,baz=59,slow=32						
NRIK	**Noril'sk**	**58.16**	**358**	LR	LR	01 04 54.2	
	comp=Z,31nm,20.4s,baz=320,slow=37						
GERES	**GERESS Array B**	**74.84**	**318**	P	P	00 41 00.3	-0.1
	0.1nm,0.3s,baz=69,slow=7.4,SNR=4.2						

*IDC **24** 00:54:23.7±3.1,33°.87S×178°.93W,h0^{km},mb3.7/2, mb1 4.1/3,mb1mx3.8/23,mbtmp3.9/3,ML4.3/1,Error ellipse: s-maj=71.1km s-min=36.2km az=117.0*

*WEL **24** 00:56:17.0,39°.9S±1.0×17°.7E±°,h43^{km}±3^{km},M2.2/17, ML2.4/17,MLv2.2/17,Error ellipse: s-maj=0.0km s-min=0.0km az=80.4*

ISC 24 00:54:19.2±2.2,**34°.3S**±0°.2×**177°.8W**±0°.3,**h10**^{km},**n36, σ2°.42**/25,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKGZ	**Te Karaka**	**5.46**	**219**	P	**Sn**	**00 56 44.0**	**+0.6**
MWZ	**Matawai**	**5.55**	**222**	P	**Sn**	**00 56 47.8**	**+1.9**
URZ	**Urewera**	**5.74**	**225**	Pn	**Pn**	**00 55 46.9**	**+2.5**
	9.4nm,0.3s,baz=125,slow=23,SNR=26						
URZ				Sn	**Sn**	**00 56 48.0**	**-2.3**
	6.1nm,0.3s,baz=126,slow=23,SNR=5.1						
URZ	**Urewera**	**5.74**	**225**	P	**Sn**	**00 56 50.3**	**-0.1**
ARHZ	**Aropaoanui**	**6.52**	**219**	P	Pg	00 56 30.2	+6.3
MRHZ	**Matea Rd**	**6.53**	**224**	P	Pg	00 56 36.1	+12
BKZ	**Black Stump Fm**	**6.71**	**222**	P	**Pg**	**00 56 31.0**	**+3.2**
CKHZ	**Cape Kidnapper**	**6.78**	**216**	P	**Pg**	**00 56 26.6**	**-2.3**
MCHZ	**McNeill Hill**	**6.80**	**219**	P	**Pg**	**00 56 27.2**	**-2.3**
KWHZ	**Kaweka Forest**	**6.94**	**221**	P	Pg	00 56 27.8	-4.2
KAHZ	**Kahuranaki**	**6.98**	**216**	P	**Pb**	**00 56 24.4**	**+3.9**
KRHZ	**Kereru**	**7.12**	**220**	P	**Pb**	**00 56 26.0**	**+3.0**
NTVZ	**North Tongarir**	**7.14**	**226**	P	**Pg**	**00 56 37.7**	**+1.9**
PXZ	**Pawanui**	**7.17**	**215**	P	Pg	00 56 24.9	-12
BHHZ	**Black Hill Sta**	**7.18**	**222**	P	Pb	00 56 29.9	+5.9
NNVZ	**North Ngauruho**	**7.19**	**226**	P	**Pg**	**00 56 38.4**	**+1.5**
SNVZ	**South Ngauruho**	**7.21**	**225**	P	**Pg**	**00 56 37.4**	**+0.1**
NGZ	**Ngauruhoe**	**7.23**	**226**	P	**Pg**	**00 56 40.3**	**+2.6**
TUVZ	**Tukino**	**7.26**	**225**	P	**Pg**	**00 56 36.8**	**-1.4**
MOVZ	**Moawhango**	**7.29**	**224**	P	Pg	00 56 33.7	-5.1
WPHZ	**Waipukurau**	**7.40**	**217**	P	**Pb**	**00 56 26.1**	**-1.6**
PNHZ	**Pukenui**	**7.41**	**219**	P	**Pb**	**00 56 27.0**	**-0.9**
MTVZ	**Mangateitei**	**7.44**	**225**	P	**Pg**	**00 56 37.3**	**-4.4**
PRHZ	**Porangahau**	**7.46**	**215**	P	**Pb**	**00 56 27.5**	**-1.2**
TSZ	**Takapari Road**	**7.64**	**219**	P	**Pb**	**00 56 29.8**	**-2.0**
ANWZ	**Angora Road**	**7.69**	**215**	P	**Pb**	**00 56 31.4**	**-1.2**
DVHZ	**Dannevirke**	**7.71**	**217**	P	**Pb**	**00 56 29.8**	**-3.3**
BFZ	**Birch Farm**	**7.97**	**215**	P	Pb	00 56 33.6	-3.8
PRWZ	**Pori Road**	**8.01**	**217**	P	Pb	00 56 34.1	-3.9
MRZ	**Mangatainoka R**	**8.28**	**218**	P	Pb	00 56 37.2	-5.5
HOWZ	**Holdsworth Sta**	**8.49**	**217**	P	Pb	00 56 39.8	-6.5
OGWZ	**Otaki Gorge**	**8.61**	**219**	P	Pn	00 56 41.0	+17
KIW	**Kapiti Island**	**8.77**	**219**	P	Pn	00 56 44.6	+18
ASAR	**Alice Springs**	**43.23**	**271**	P	**P**	**01 02 19.4**	**-1.5**
	0.9nm,0.7s,baz=112,slow=7.5,SNR=9.8						
WRA	**Warramunga Arr**	**44.57**	**276**	P	**P**	**01 02 29.1**	**-2.5**
	0.8nm,0.6s,baz=119,slow=7.5,SNR=11						
FINES	**FINESS Array B**	**148.82**	**338**	PKPbc	**PKiKP**	**01 14 09.7**	**+2.1**
	2.8nm,0.9s,baz=25,slow=4.6,SNR=5.5						

*BJI **24** 01:29:45.6±0.0,52°.11N×175°.04W,h50^{km},mB5.0/43, mb5.2/67,Ms4.6/38,Ms7 4.3/41*

*MOS **24** 01:29:46.3±0.9,51°.81N×175°.22W,h44^{km},mb5.1/58, Error ellipse: s-maj=7.1km s-min=4.7km az=102.1*

*GCMT **24** 01:29:47.7±0.3,51°.71N±0°.03×175°.02W±0°.04,h41^{km}±1^{km}, MW5.0/65,Moment Tensor Solution. s43,c48; s65,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.19±.21; M$_{\theta\theta}$-2.29±.16; M$_{\phi\phi}$-0.90±.16; M$_{r\theta}$2.85±.21; M$_{r\phi}$-1.96±.13; M$_{\theta\phi}$0.98±.13; Best double couple: M$_o$4.57800×10^{16} NP1:ϕ$_s$222.00000°,δ26.00000°,λ68.00000°. NP2: ϕ$_s$66.00000°,δ66.00000°,λ101.00000°. Principal axes: T 4.4070, Plg67.0000°, Azm356.0000°; N 0.3410, Plg10.0000°, Azm242.0000°; P -4.7480, Plg20.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*AEIC **24** 01:29:47±2.1,51°.60N±0°.07×175°.18W±0°.04,h28^{km}±3^{km} Error ellipse: s-maj=9.7km s-min=3.8km az=172.0*

*NEIC **24** 01:29:48.7±1.4,51°.78N±0°.06×175°.18W±0°.05,h51^{km}±2^{km}, mb5.3/459,ML5.0(AEIC),Error ellipse: s-maj=9.0km s-min=3.8km az=168.0*

*IDC **24** 01:29:48.9±1.7,51°.89N×175°.30W,h46^{km}±15^{km},mb4.6/40, mb1 4.7/43,mb1mx4.6/57,mbtmp4.8/43,ML4.4/3,MS3.9/17, Ms1 3.9/17,ms1mx3.7/48,Error ellipse: s-maj=13.3km s-min=8.0km az=173.0*

*BGR **24** 01:29:48.5±0.0,51°.47N×177°.31W,h33^{km},mb4.7*

ISC 24 01:29:48.1±0.5,**51°.77N**±0°.05×**175°.22W**±0°.03,**h45**^{km}±3^{km}, **h46**^{km}:**pP-P**,**n820,σ1s09/685**,**mb5.2**/386,**MS4.1**/29, **106C-38D**,**Fault plane solution: NP1:**ϕ$_s$90.94753°, δ58.64546°,λ122.21446°. **NP2:**ϕ$_s$220.49782°,δ43.73843°, λ48.81727°. **Principal axes:** T Plg61.5001°, Azm53.1324°; N Plg27.0803°, Azm252.7956°; P Plg8.2190°, Azm158.5604°; **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSMY	**Great Sitkin M**	**0.58**	**298**		**Pn**	**01 30 01.1**	**+0.9**
GSTR	**Great Sitkin T**	**0.61**	**302**		**Pn**	**01 30 01.7**	**+1.2**
GSTR				Sn	**Sn**	**01 30 11.3**	**+1.9**
GSCK	**Great Sitkin C**	**0.63**	**293**		**Pn**	**01 30 01.6**	**+0.8**
GSCK					**Sn**	**01 30 12.3**	**+2.5**
GSTD	**Great Sitkin T**	**0.64**	**297**		**Pn**	**01 30 01.8**	**+0.9**
ETKA	**Kagalaska Isla**	**0.74**	**277**		**Pn**	**01 30 02.2**	**0.0**
ATKA	**Atka Island**	**0.77**	**55**		**Pn**	**01 30 02.7**	**+0.1**
ATKA				Sn	**Sn**	**01 30 12.8**	**-0.3**
KOWE	**Korovin West**	**0.84**	**45**		**Pn**	**01 30 05.0**	**+1.4**
KOFP	**Korovin Flat P**	**0.86**	**54**		**Pn**	**01 30 04.6**	**+0.8**
ADAG	**Mount Adagdak**	**0.88**	**284**		**Pn**	**01 30 05.2**	**+1.2**
ADK	**Adak**	**0.91**	**278**	P	**Pn**	**01 30 04.9**	**+0.4**
ADK	**Adak**	**0.91**	**278**		**Pn**	**01 30 04.9**	**+0.4**
KIKV	**Kanaga Island**	**1.21**	**276**		**Pn**	**01 30 09.0**	**+0.4**
KICM	**Kanaga Island**	**1.23**	**278**		**Pn**	**01 30 09.5**	**+0.7**
KIMD	**Kanaga Island**	**1.25**	**270**		**Pn**	**01 30 08.9**	**-0.2**
TAFP	**Tanaga Falls P**	**1.72**	**275**		**Pn**	**01 30 16.4**	**+0.9**
TASE	**Tanaga Southea**	**1.75**	**273**		**Pn**	**01 30 16.9**	**+0.9**
GALAA	**Gareloi Lava P**	**2.21**	**271**		**Pn**	**01 30 23.5**	**+1.3**
CERAA	**Semis' Rag'd T**	**3.16**	**274**		**Pn**	**01 30 36.4**	**+1.0**
CERB	**Semis' Cerberu**	**3.20**	**275**		**Sn**	**01 31 16.9**	**+4.3**
CEAP	**Semis' Anvil P**	**3.23**	**276**		**Pn**	**01 30 38.1**	**+1.8**
CESW	**Semis' Southwe**	**3.24**	**274**		**Pn**	**01 30 37.2**	**+0.9**
AMKA	**Amchitka**	**3.44**	**266**	Pn	**Pn**	**01 30 40.0**	**+0.9**
LSNW	**Little Sitkin**	**3.88**	**275**		**Pn**	**01 30 47.3**	**+2.0**
LSSA	**Little Sitkin**	**3.89**	**275**		**Pn**	**01 30 47.0**	**+1.7**
NIKH	**Nikolski High**	**4.08**	**70**		**Pn**	**01 30 48.0**	**+0.1**
NIKH	**Nikolski High**	**4.08**	**70**		**Sn**	**01 31 36.4**	**+2.0**
NIKH	**Nikolski High**	**4.08**	**70**	P		01 30 48.2	
	baz=255,SNR=22						
OKSO	**Okmok South**	**4.59**	**67**		**Pn**	**01 30 57.1**	**+2.1**
OKSO					**Sn**	**01 31 51.0**	**+4.0**
OKFG	**Magazine Ridge**	**4.75**	**67**		**Pn**	**01 30 60.0**	**+2.9**
MAPS	**Pakushin South**	**5.42**	**65**		**Pn**	**01 31 09.3**	**+3.0**
MGOD	**Makushin Gods**	**5.46**	**65**		**Pn**	**01 31 09.6**	**+2.8**
MSW	**Makushin Switc**	**5.55**	**64**		**Pn**	**01 31 10.4**	**+2.4**
MSW					**Sn**	**01 32 14.1**	**+3.6**
MNAT	**Makushin Natee**	**5.59**	**64**		**Pn**	**01 31 11.6**	**+2.9**
AKRB	**Akutan Reef Bi**	**6.02**	**63**		**Pn**	**01 31 17.4**	**+2.9**
AKBBA	**Akutan Broad B**	**6.08**	**64**		**Pn**	**01 31 17.8**	**+2.4**
AKLV	**Akutan Long Va**	**6.09**	**63**		**Pn**	**01 31 18.2**	**+2.7**
SPIA	**Saint Paul Isl**	**6.14**	**26**	Pn	**Pn**	**01 31 16.1**	**-0.1**
SPIA	**Saint Paul Isl**	**6.14**	**26**		**Sn**	**01 32 31.4**	**+6.4**
SPIA	**Saint Paul Isl**	**6.14**	**26**	P		01 31 17.2	
	baz=210,SNR=39						
AKUT	**Akutan**	**6.18**	**64**	Pn	**Pn**	**01 31 17.4**	**+0.7**
SMY	**Shemya**	**6.63**	**283**	P	**Pn**	**01 31 24.2**	**+1.4**
SMY	**Shemya**	**6.63**	**283**	Pn	**Pn**	**01 31 24.1**	**+1.4**
WESP	**Westdahl Peak**	**6.88**	**63**		**Pn**	**01 31 28.4**	**+2.1**
FALS	**False Pass**	**7.72**	**62**		**Pn**	**01 31 38.3**	**+0.6**
SDPT	**Sand Point**	**9.48**	**62**	Pn	**Pn**	**01 32 02.4**	**+0.6**
GAMB	**Gambell**	**12.18**	**7**	Pn	**Pn**	**01 32 40.5**	**+1.8**
GAMB	**Gambell**	**12.18**	**7**	P		01 32 40.3	
	baz=190						
SII	**Sitkinak Islan**	**13.20**	**60**	Pn	**Pn**	**01 32 54.0**	**+1.2**
ANM	**Nome**	**13.81**	**18**	P	**Pn**	**01 33 01.9**	**+0.9**
ANM	**Nome**	**13.81**	**18**	Pn	**Pn**	**01 33 01.9**	**+0.9**
ANM	**Nome**	**13.81**	**18**	P		01 33 02.3	
	baz=206,SNR=42						
OHAK	**Old Harbor**	**13.84**	**58**	Pn	**Pn**	**01 32 59.9**	**-1.4**
OHAK	**Old Harbor**	**13.84**	**58**	P		01 33 00.4	
	baz=256,SNR=7.6						
SVW2	**Sparrevohn**	**14.27**	**41**		**Pn**	**01 33 05.5**	**-1.6**
TNA	**Tin City**	**14.32**	**12**	Pn	**Pn**	**01 33 07.0**	**-0.8**
TNA	**Tin City**	**14.32**	**12**	P		01 33 08.7	
	baz=198,SNR=34						
KDAK	**Kodiak Island**	**14.34**	**56**	P	**Pn**	**01 33 07.8**	**-0.3**
	1.8nm,0.3s,baz=229,slow=2.7,SNR=51						
KDAK	**Kodiak Island**	**14.34**	**56**	⇓*eP*	**Pn**	**01 33 06.2**	**-1.9**
KDAK				pmax	pmax		
	comp=Z,12nm,0.5s						
KDAK	**Kodiak Island**	**14.34**	**56**	Pn	**Pn**	**01 33 05.6**	**-2.5**
KDAK	**Kodiak Island**	**14.34**	**56**	P		01 33 08.0	
	baz=255						
TTA	**Tatalina**	**15.17**	**35**	P	**Pn**	**01 33 17.8**	**-1.3**
TTA				pmax	pmax		
	comp=Z,17nm,1.1s						
TTA	**Tatalina**	**15.17**	**35**	Pn	**Pn**	**01 33 17.8**	**-1.3**
TTA	**Tatalina**

comp=Z,89nm,0.7s
TCOL CIGO, UAF Yank 19.24 37 IAmb IAmb 01 34 15.8
comp=Z,64nm,0.8s
TCOL CIGO, UAF Yank 19.24 37 P 01 34 08.5
baz=240,SNR=14
COLA College 19.25 37 *de*P **P 01 34 08.3 0.0**
COLA pmax pmax
comp=Z,17nm,0.6s
COLA College 19.25 37 P **P 01 34 08.8 +0.6**
COLA IAmb IAmb 01 34 15.8
comp=Z,62nm,0.8s
COLA College 19.25 37 P 01 34 08.3
baz=240
N25K Chitina, Valde 19.30 47 P 01 34 09.0
baz=253,SNR=21
HDA Harding Lake 19.36 38 P 01 34 10.3
baz=242,SNR=31
HDA P 01 34 10.3
baz=242,SNR=31
PAX Paxson 19.36 43 P 01 34 10.4
baz=248,SNR=25
POKR Poker Plat Res 19.52 36 P 01 34 11.8
baz=240
ILAR Eielson Array 19.56 37 P **P 01 34 10.8 -0.9**
comp=Z,3.0nm,0.3s,baz=242,slow=11,SNR=66
ILAR ScP **ScP 01 42 03.1 +1.1**
comp=Z,0.1nm,0.3s,baz=290,slow=2.9,SNR=4.3
ILAR Eielson Array 19.56 37 P **P 01 34 10.3 -1.4**
CRQE Cirque 19.79 50 P 01 34 13.7
baz=257
COLD Coldfoot 19.80 29 IAmb IAmb 01 34 23.0
comp=Z,150nm,0.9s
COLD Coldfoot 19.80 29 P 01 34 14.4
baz=231,SNR=246
MCARA McCarthy VSAT 19.97 49 P 01 34 14.6
baz=256,SNR=16
DOT Dot Lake 20.20 42 IAmb IAmb 01 34 23.8
comp=Z,134nm,0.6s
SCRK Sand Creek 20.36 41 P **P 01 34 20.6 +0.1**
SCRK Sand Creek 20.36 41 P 01 34 20.3
baz=248,SNR=363
PRP Porcupine Dome 20.42 36 P **P 01 34 20.9 -0.3**
PRP Porcupine Dome 20.42 36 P 01 34 21.3
baz=242,SNR=12
SEY Seymchan 20.49 316 P **P 01 34 23.0 +1.2**
comp=Z,93nm,0.8s,baz=111,slow=9.3,SNR=31
SEY PcP **PcP 01 38 32.3 +0.6**
comp=Z,2.0nm,0.4s,baz=129,slow=5.0,SNR=6.0
SEY LR LR 01 42 10.6
comp=Z,829nm,20.5s,baz=130,slow=36
MA2 Magadan 20.51 306 P **P 01 34 23.1 +1.0**
comp=Z,16nm,0.5s,baz=106,slow=9.8,SNR=9.7
MA2 PcP **PcP 01 38 32.6 +0.8**
comp=Z,3.4nm,0.4s,baz=89,slow=4.3,SNR=4.0
MA2 LR LR 01 41 46.7
comp=Z,414nm,20.9s,baz=105,slow=35
MA2 Magadan 20.51 306⇓ *e*P Pn 01 34 23.7 -0.9
MA2 pmax pmax
comp=Z,17nm,0.6s
MA2 Magadan 20.51 306 Pn 01 34 23.5 -1.2
MA2 IAmb IAmb 01 34 31.2
comp=Z,73nm,0.8s
BARN Barnard Glacie 20.54 50 P **P 01 34 21.8 -0.8**
CTG Chitna Glacier 20.67 50 P 01 34 23.4
baz=259
TABL Table Mountain 20.67 52 P **P 01 34 23.6 -0.5**
TOLK Toolik Lake Re 20.89 26 P **P 01 34 26.9 +0.7**
TOLK IAmb IAmb 01 34 36.0
comp=Z,148nm,1.1s
TOLK Toolik Lake Re 20.89 26 P 01 34 27.9
baz=229,SNR=111
L27K Beaver Creek, 20.96 44 P **P 01 34 27.0 0.0**
L27K Beaver Creek, 20.96 44 P 01 34 27.9
baz=253,SNR=34
FYU Fort Yukon 21.03 34 IAmb IAmb 01 34 38.1
comp=Z,79nm,1.2s
PINM Pinnacle 21.06 53 P 01 34 27.4
baz=262,SNR=6.7
K27K Chicken 21.16 42 IAmb IAmb 01 34 38.3
comp=Z,158nm,0.8s
K27K Chicken 21.16 42 P 01 34 30.1
baz=250
A21K Barrow 21.33 16 IAmb IAmb 01 34 35.5
comp=Z,61nm,0.7s
A21K Barrow 21.33 16 P 01 34 32.3
baz=213
EGAK Eagle 21.80 40 IAmb IAmb 01 34 43.2
comp=Z,63nm,0.8s
EGAK Eagle 21.80 40 P 01 34 36.3
baz=250,SNR=80
DAWY Dawson 22.30 43 P **P 01 34 41.5 +0.2**
DAWY IAmb IAmb 01 34 48.3
comp=Z,69nm,1.2s
EPYK Eagle Plains 24.07 38 IAmb IAmb 01 35 03.4
comp=Z,42nm,1.0s
EPYK Eagle Plains 24.07 38 P 01 34 58.8
baz=252,SNR=34
CRAG Craig 24.96 65 IAmb IAmb 01 35 14.2
comp=Z,53nm,0.7s
CRAG Craig 24.96 65 P 01 35 07.3
baz=279
KUR Kuril'sk 25.11 270⇓ *e*P **P 01 35 08.8 +0.4**
KUR pmax pmax
comp=Z,216nm,1.0s
WRAK Wrangell Islan 25.25 62 P 01 35 10.0
baz=278,SNR=5.1
INK Inuvik 25.86 35 P **P 01 35 15.7 +0.7**
comp=Z,16nm,0.5s,baz=231,slow=6.3,SNR=99
INK PcP **PcP 01 38 43.7 +0.9**
comp=Z,3.3nm,0.5s,baz=111,slow=0.3,SNR=7.1
INK Inuvik 25.86 35 P **P 01 35 14.4 -0.5**
INK pmax pmax
comp=Z,20nm,0.7s
INK Inuvik 25.86 35 P **P 01 35 14.4 -0.5**
DLBC Dease Lake 26.27 57 P **P 01 35 20.0 +1.1**
comp=Z,9.2nm,0.8s,baz=264,slow=10,SNR=26
YSS Yuzh-Sakhalins 27.50 277⇑ *e*P **P 01 35 31.1 +1.2**
YSS *e**PP **sP 01 35 44.7 -2.5**
YSS *e* 01 36 18.2
YSS *e*S **S 01 40 09.6 +2.2**
YSS pmax pmax
comp=Z,60nm,0.7s
YSS MLR MLR
comp=Z,800nm,18.0s
YSS MLR MLR
comp=N,400nm,17.0s
YSS MLR MLR
comp=E,400nm,13.0s
YSS Yuzh-Sakhalins 27.50 277 P **P 01 35 30.2 +0.3**
YSS IAmb IAmb 01 35 32.3
comp=Z,46nm,0.8s
BBB Bella Bella 28.62 70 P **P 01 35 40.6 +0.8**
comp=Z,18nm,0.8s,baz=288,slow=9.7,SNR=3.9
BBB Bella Bella 28.62 70 IAmb IAmb 01 35 45.8
comp=Z,75nm,1.2s
JKA Kamikawa-asahi 28.93 272 IAmb IAmb 01 35 45.6
comp=Z,36nm,0.6s
ASAJ Asahikawa 28.93 272 P **P 01 35 43.2 +0.5**
comp=Z,41nm,0.7s,baz=73,slow=5.6,SNR=16
ASAJ LR LR 01 46 42.9
comp=Z,130nm,21.3s,baz=134,slow=35
C36M Paulatuk 29.45 34 P 01 35 47.7
baz=260
JEM Erimo 29.70 267 P P 01 35 43.1 -6.4
GRNR Gornyy 29.83 287⇑ *i*P **P 01 35 51.3 +0.6**
GRNR pmax pmax
comp=Z,5.0nm,1.0s
YAK Yakutsk 30.84 311 LR LR 01 48 38.3
comp=Z,444nm,19.3s,baz=87,slow=37
YAK Yakutsk 30.84 311 *de*P **P 01 35 58.5 -0.9**
YAK pmax pmax
comp=Z,20nm,0.5s
TIXI Tiksi 31.41 330 P **P 01 36 03.9 -0.4**
comp=Z,4.1nm,0.5s,baz=103,slow=13,SNR=8.7
TIXI PcP **PcP 01 38 56.8 +0.2**
comp=Z,39nm,0.5s,baz=111,slow=2.8,SNR=30
TIXI ScP **ScP 01 42 35.1 -0.6**
comp=Z,19nm,0.9s,baz=103,slow=3.0,SNR=23
TIXI LR LR 01 49 49.4
comp=Z,202nm,18.6s,baz=93,slow=38
TIXI Tiksi 31.41 330 P **P 01 36 04.1 -0.1**
TIXI PcP **PcP 01 38 55.8 -0.8**
TIXI ScP **ScP 01 42 35.1 -0.6**
TEY Ternei 32.19 277⇑ *e*P **P 01 36 11.1 -0.3**
TEY pmax pmax
comp=E,70nm,0.7s
TEY pmax pmax
comp=Z,100nm,0.7s
TEY pmax pmax
comp=N,30nm,0.7s
KLR Kul'dur 33.21 287 P **P 01 36 20.4 +0.1**
comp=N,17nm,0.4s,baz=68,slow=7.2,SNR=78
KLR LR LR 01 50 05.4
comp=N,182nm,19.8s,baz=56,slow=37
KLR Kul'dur 33.21 287 *ci*P **P 01 36 20.0 -0.3**
KLR pmax pmax
comp=Z,14nm,1.1s
YKA Yellowknife Ar 33.33 47 P **P 01 36 21.2 0.0**
comp=Z,3.2nm,0.5s,baz=279,slow=9.2,SNR=67
YKA PcP **PcP 01 39 03.1 +1.1**
comp=Z,1.2nm,0.3s,baz=152,slow=1.6,SNR=17
A05A Maple Falls 33.38 73 IAmb IAmb 01 36 24.7
comp=Z,45nm,1.2s
D03D Eldon 33.42 76 P 01 36 24.6
baz=297,SNR=5.4
B05A Bryant 33.69 75 P 01 36 26.3
baz=296,SNR=9.8
E04D Cinebar 34.19 77 P 01 36 31.0
baz=299
LON Longmire 34.56 77 IAmb IAmb 01 36 36.2
comp=Z,12nm,0.8s
H11N2 WAKE ISLAND Hy 34.91 210 T T 02 13 18.7
baz=18,slow=76,SNR=4735
H11N3 WAKE ISLAND Hy 34.92 210 T T 02 13 24.6
baz=18,slow=76,SNR=4916
H11N1 WAKE ISLAND Hy 34.93 210 T T 02 13 12.5
baz=18,slow=76,SNR=4756
JSD Sado 35.08 266 P **P 01 36 37.8 +1.3**
JSD IAmb IAmb 01 36 39.2
comp=Z,30nm,0.5s
B08A Colville Reser 35.29 73 IAmb IAmb 01 36 41.7
comp=Z,44nm,0.7s
USA0B Ussuriysk Arra 35.45 279 P **P 01 36 39.8 +0.1**
USA0B 01 39 09.0
USA0B pmax pmax
comp=Z,55nm,1.4s
USA0B Ussuriysk Arra 35.45 279 P **P 01 36 39.8 +0.1**
USA0B IAmb IAmb 01 36 41.7
comp=Z,55nm,1.4s
USA0B PcP **PcP 01 39 09.0 +0.6**
USRK Ussuriysk Ar. 35.45 279 P **P 01 36 39.6 -0.1**
comp=Z,17nm,0.7s,baz=57,slow=9.6,SNR=33
USRK PcP **PcP 01 39 09.5 +1.1**
comp=Z,14nm,0.9s,baz=83,slow=1.6,SNR=14
USRK LR LR 01 50 18.3
comp=Z,238nm,21.6s,baz=47,slow=35
MAJO Matsushiro 36.05 264 *ce*P **P 01 36 45.4 +0.4**
MAJO pmax pmax
comp=Z,22nm,0.8s
MAT Matsushiro 36.05 264 P **P 01 36 45.4 +0.4**
MAT *e*S **S 01 42 22.8 +2.0**
MJAR Matsushiro Arr 36.05 264 P **P 01 36 45.0 0.0**
comp=Z,12nm,0.7s,baz=49,slow=7.8,SNR=19
MJAR PcP **PcP 01 39 11.1 +0.8**
comp=Z,3.7nm,0.6s,baz=57,slow=1.2,SNR=7.0
MJAR LR LR 01 49 25.1
comp=Z,172nm,21.6s,baz=65,slow=33
H11S1 WAKE ISLAND Hy 36.12 210 T T 02 14 52.2
baz=62,slow=74,SNR=6773
H11S2 WAKE ISLAND Hy 36.14 210 T T 02 15 45.4
SNR=5451
H11S3 WAKE ISLAND Hy 36.14 210 T T 02 15 00.9
baz=24,slow=74,SNR=1731
C09A Chrisman Ranch 36.18 73 P **P 01 36 46.7 +0.7**
C09A IAmb IAmb 01 36 48.5
comp=Z,43nm,1.1s
NEW Newport 36.65 72 P **P 01 36 51.5 +1.5**
comp=Z,46nm,0.8s,baz=298,slow=7.0,SNR=82
NEW Newport 36.65 72 IAmb IAmb 01 36 52.9
comp=Z,41nm,0.7s
NEW Newport 36.65 72 P 01 36 51.4
baz=298,SNR=42
MDJ Mudanjiang 36.70 281 P **P 01 36 51.8 +1.4**
MDJ pP pP 01 37 04.8 +2.3
MDJ pmax pmax
comp=Z,10.0nm,0.6s
MDJ pmax pmax
comp=Z,72nm,4.6s
MDJ LR LR
comp=Z,360nm,22.8s
MDJ LR LR
comp=Z,510nm,24.3s
MSHR Mys Shultsa 36.83 277 *ce*P **P 01 36 52.1 +0.6**
MSHR pmax pmax
comp=Z,144nm,0.8s
JHJ Hachijo jima 2 37.36 258 LR LR 01 49 40.5
comp=Z,122nm,19.9s,baz=67,slow=32
WALA Waterton Lakes 38.15 69 IAmb IAmb 01 37 05.3
comp=Z,37nm,1.0s
RES Resolute Bay 38.45 25 P **P 01 37 04.8 -0.1**
comp=Z,1.8nm,0.4s,baz=280,slow=2.3,SNR=4.0
RES PcP **PcP 01 39 17.2 +0.3**
comp=Z,12nm,0.6s,baz=288,slow=1.7,SNR=15
RES Resolute Bay 38.45 25 IAmb IAmb 01 37 08.9
comp=Z,3.6nm,0.9s
JTMT Jette 38.57 71 IAmb IAmb 01 37 12.9
comp=Z,22nm,0.8s
MSO Missoula 39.23 72 P **P 01 37 12.2 +0.3**
MSO IAmb IAmb 01 37 14.4
comp=Z,66nm,1.3s
MSO Missoula 39.23 72 P 01 37 12.9
baz=301,SNR=25
BOD Bodaibo 39.52 307 *e*P **P 01 37 12.4 -1.6**
BOD pmax pmax
comp=Z,5.0nm,1.0s
CN2 Changchun 39.65 283 *e*P **P 01 37 15.0 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.4s
HIA Hailar 40.20 293⇓ *e*P **P 01 37 19.1 -0.7**
HIA pmax pmax
comp=Z,6.0nm,0.5s
HIA Hailar 40.20 293 P **P 01 37 20.6 +0.8**
HIA IAmb IAmb 01 37 22.7
comp=Z,9.9nm,0.5s
HIA PcP **PcP 01 39 22.9 -0.1**
JHS Saijyo 40.20 266 P **P 01 37 20.4 +0.5**
JHS IAmb IAmb 01 37 26.2
comp=Z,21nm,0.9s
JCJ Chichijima 40.29 249 LR LR 01 55 02.7
comp=Z,45nm,18.6s,baz=39,slow=38
EGMT Eagleton 41.07 68 IAmb IAmb 01 37 29.0
comp=Z,36nm,1.2s
EGMT Eagleton 41.07 68 P 01 37 27.7
baz=301,SNR=18
BOZ Bozeman (W) 41.24 73 IAmb IAmb 01 37 30.7
comp=Z,53nm,1.3s
BOZ Bozeman (W) 41.24 73 P 01 37 29.5
baz=302,SNR=36
NVAR Mina Array Bea 41.29 86 LR LR 01 50 54.1
comp=Z,261nm,20.5s,baz=262,slow=30
QLMT Earthquake Lak 41.77 73 P **P 01 37 33.2 +0.2**
ELK Elko 41.79 81 P **P 01 37 34.8 +1.5**
comp=Z,15nm,0.8s,baz=276,slow=9.1,SNR=6.8
KSRS Kamp Array 41.85 273 P **P 01 37 34.6 +1.2**
comp=Z,30nm,0.9s,baz=56,slow=7.7,SNR=69
KSRS PcP **PcP 01 39 29.6 +1.1**
comp=Z,5.5nm,0.8s,baz=53,slow=3.6,SNR=8.3
KSRS LR LR 01 54 10.1
comp=Z,77nm,19.8s,baz=68,slow=35
KS19 Wonju Array Si 41.86 273 IAmb IAmb 01 37 36.6
comp=Z,30nm,0.9s
KSAR Wonju Array Be 41.89 273 P **P 01 37 34.3 +0.6**
KSAR Wonju Array Be 41.89 273 P **P 01 37 34.3 +0.6**
SNY Shenyang 41.90 281⇓ P **P 01 37 35.3 +1.5**
SNY pmax pmax
comp=Z,38nm,0.8s
FFC Flin Flon 42.09 56 P **P 01 37 34.8 -0.3**
FFC pmax pmax
comp=Z,6.0nm,0.7s
FFC Flin Flon 42.09 56 P **P 01 37 34.8 -0.3**
H17A Grant Village 42.52 73 IAmb IAmb 01 37 42.9
comp=Z,47nm,1.2s
H17A Grant Village 42.52 73 P 01 37 41.1
baz=304,SNR=29
LKWY Lake 42.53 73 IAmb IAmb 01 37 42.6
comp=Z,27nm,1.1s
INCN Inchon 42.64 274 P **P 01 37 40.5 +0.6**
INCN pmax pmax
comp=Z,73nm,1.0s
INCN Inchon 42.64 274 P **P 01 37 40.5 +0.6**
INCN IAmb IAmb 01 37 42.5
comp=Z,73nm,0.9s
JNU Nakatsue 42.83 266 LR LR 01 53 32.0
comp=Z,172nm,21.5s,baz=58,slow=33
JNU Nakatsue 42.83 266 IAmb IAmb 01 37 48.1
comp=Z,38nm,0.9s
TJN Taejon 42.88 272 *ci*P **P 01 37 42.4 +0.6**
RLMT Red Lodge 42.90 72 IAmb IAmb 01 37 45.3
comp=Z,66nm,1.1s
RLMT Red Lodge 42.90 72 P 01 37 43.3
baz=304,SNR=72
LAO LASA Array 43.81 68 IAmb IAmb 01 37 51.7
comp=Z,36nm,0.7s
LAO LASA Array 43.81 68 P 01 37 50.3
baz=303,SNR=12
TULEG Thule 43.89 19 P **P 01 37 49.0 -0.4**
TULEG **PcP 01 39 33.9 -0.8**
PDAR Pinedale Array 44.06 75 P **P 01 37 52.5 +1.0**
comp=Z,26nm,0.6s,baz=309,slow=3.4,SNR=315
BW06 Boulder Array 44.06 75 P 01 37 52.5
baz=306,SNR=68
FCC Fort Churchill 44.06 48 P **P 01 37 50.8 -0.2**
FCC pmax pmax
comp=Z,9.0nm,0.8s
FCC Fort Churchill 44.06 48 P **P 01 37 50.8 -0.2**
DL2 Dalian 44.84 279 P **P 01 37 57.9 +0.4**
DL2 pmax pmax
comp=Z,99nm,0.7s
NRIK Noril'sk 45.19 330 P **P 01 37 59.7 -0.2**
comp=Z,7.1nm,0.7s,baz=79,slow=8.5,SNR=10
NRIK Noril'sk 45.19 330 *ci*P **P 01 37 59.6 -0.3**
NRIK pmax pmax
comp=Z,14nm,1.1s
NRIK Noril'sk 45.19 330 P **P 01 38 00.1 +0.2**
K22A Casper 45.94 73 IAmb IAmb 01 38 07.9
comp=Z,16nm,0.8s
K22A Casper 45.94 73 P 01 38 06.8
baz=306
NOR Nord 46.37 4 *i*P **P 01 38 09.4 +0.3**
NOR IAmb IAmb 01 38 10.4
comp=Z,6.1nm,0.7s
NOR Nord 46.37 4 *i*P **P 01 38 09.4 +0.3**
NOR pmax pmax
comp=Z,6.0nm,0.7s
O20A White River Ci 46.42 77 P 01 38 11.1
baz=308,SNR=55
NEEM North Greenlan 46.51 14⇑ *i*P **P 01 38 10.9 +0.3**
NEEM IAmb IAmb 01 38 11.9
comp=Z,17nm,0.5s
RSSD Black Hills 46.54 70 P **P 01 38 11.6 +0.4**
RSSD pmax pmax
comp=Z,17nm,1.1s
RSSD Black Hills 46.54 70 P **P 01 38 11.6 +0.4**
RSSD Black Hills 46.54 70 P 01 38 11.1
baz=306
MDND Maddock 46.92 63 P 01 38 14.7
baz=305,SNR=24
N23A Red Feather La 47.34 75 P 01 38 18.4
baz=308,SNR=16
BJI Beijing 47.46 284 P **P 01 38 18.8 +0.7**
BJI PcP **PcP 01 39 47.8 0.0**
BJI pmax pmax
comp=Z,15nm,0.6s
BJI LR LR
comp=Z,200nm,25.0s
BJI LR LR
comp=Z,240nm,22.0s
BJI LR LR
comp=Z,340nm,22.7s
BJT Baijiatuan 47.48 284 P **P 01 38 18.0 -0.3**
BJT pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuan 47.48 284 P **P 01 38 17.9 -0.3**
BJT IAmb IAmb 01 38 20.0
comp=Z,12nm,0.7s
ULM Lac du Bonnet 47.59 59 P **P 01 38 19.1 +0.1**
comp=Z,6.1nm,0.4s,baz=308,slow=7.0,SNR=22
ULM Lac du Bonnet 47.59 59 P **P 01 38 18.7 -0.3**
ULM pmax pmax
comp=Z,23nm,1.4s
ULM Lac du Bonnet 47.59 59 P **P 01 38 18.7 -0.3**
ULM IAmb IAmb 01 38 20.1
comp=Z,23nm,1.4s
TLY Talaya 47.72 304 PcP **PcP 01 39 49.1 +0.6**
comp=Z,11nm,0.5s,baz=183,slow=1.3,SNR=12
TLY LR LR 01 59 26.4
comp=Z,184nm,20.1s,baz=42,slow=37
TLY Talaya 47.72 304⇑ *e*P **P 01 38 18.9 -1.1**
TLY pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 48.07 298 *de*P **P 01 38 22.6 -0.3**
ULN pmax pmax
comp=Z,3.0nm,1.1s
ULN Ulaanbaatar 48.07 298 P **P 01 38 22.7 -0.2**
ULN PcP **PcP 01 39 50.1 0.0**
ISCO Idaho Springs 48.22 76 P **P 01 38 24.8 +0.5**
ISCO pmax pmax
comp=Z,11nm,1.3s
ISCO Idaho Springs 48.22 76 P **P 01 38 24.8 +0.5**
ISCO Idaho Springs 48.22 76 P 01 38 25.5
baz=309,SNR=11
SONM Songino Array 48.45 298 P **P 01 38 25.8 0.0**
comp=Z,3.2nm,0.8s,baz=54,slow=7.9,SNR=11
SONM PcP **PcP 01 39 50.6 -0.8**
comp=Z,14nm,0.9s,baz=68,slow=2.1,SNR=18
SONM ScP **ScP 01 43 42.1 0.0**
comp=Z,4.2nm,0.9s,baz=44,slow=3.7,SNR=13
SONM LR LR 01 58 56.4
comp=Z,222nm,21.0s,baz=36,slow=36
SONM Songino Array 48.45 298 ScP **ScP 01 43 42.4 +0.2**
ZAK Zakamensk 48.64 302 *e*P **P 01 38 26.2 -1.1**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
AGMN Agassiz Nation 48.71 61 P **P 01 38 27.4 -0.3**
AGMN IAmb IAmb 01 38 29.2
comp=Z,46nm,1.0s
AGMN Agassiz Nation 48.71 61 P 01 38 27.6
baz=306,SNR=18
S22A 4UR Ranch, Cre 48.78 78 P 01 38 29.9
baz=310,SNR=15
UPNV Upernavik 48.85 20 *i*P **P 01 38 28.9 +0.6**
Q24A Divide 49.02 76 P 01 38 31.6
baz=309,SNR=11
SUSD Miller 49.28 67 P 01 38 32.5
baz=307,SNR=14
TIA Tai'an 49.31 279 P **P 01 38 33.3 +0.9**
TIA sP **sP 01 38 51.8 +1.6**
TIA pmax pmax
comp=Z,43nm,0.4s
TIA pmax pmax
comp=Z,75nm,4.6s
TIA LR LR
comp=Z,110nm,7.8s
TIA LR LR
comp=Z,150nm,8.5s
TIA LR LR
comp=Z,100nm,12.8s
SDCO Great Sand Dun 49.58 78 P **P 01 38 35.3 +0.5**
SDCO IAmb IAmb 01 38 38.3
comp=Z,14nm,0.9s
SDCO Great Sand Dun 49.58 78 P 01 38 36.0
baz=310,SNR=39
OGNE Ogallala 49.64 72 P **P 01 38 36.0 +1.0**
OGNE IAmb IAmb 01 38 37.1
comp=Z,79nm,1.4s
OGNE Ogallala 49.64 72 P 01 38 35.3
baz=309
HHC Hu-ho-hao-te 49.71 288 *e*P **P 01 38 38.3 +2.8**
HHC pmax pmax
comp=Z,19nm,1.2s
HHC pmax pmax
comp=Z,120nm,5.3s
HHC LR LR
comp=Z,230nm,14.7s
HHC LR LR
comp=Z,190nm,14.5s
HHC LR LR
comp=Z,89nm,12.3s
B35A Bob, Littlefor 49.83 60 IAmb IAmb 01 38 37.5
comp=Z,20nm,0.8s
F33A 5 Mile Ranch, 49.93 64 P **P 01 38 36.4 -0.6**
F33A IAmb IAmb 01 38 37.7
comp=Z,52nm,1.1s
SPA0 Spitsbergen Ar 50.12 357 P **P 01 38 38.2 +0.2**
SPA0 IAmb IAmb 01 38 40.5
comp=Z,39nm,1.1s
SSE Sheshan 50.23 272 P **P 01 38 40.5 +1.1**
SSE pmax pmax
comp=Z,48nm,0.7s
KSCO Kaye Shedlock' 50.51 74 IAmb IAmb 01 38 43.8

comp=Z,56nm,1.2s
KSCO Kaye Shedlock' 50.51 74 P 01 38 43.0
baz=310,SNR=5.3
K31A O'Neill 50.51 68 IAmb IAmb 01 38 43.1
comp=Z,61nm,1.0s
T25A Trinidad 50.64 77 IAmb IAmb 01 38 46.0
comp=Z,43nm,0.8s
T25A Trinidad 50.64 77 P 01 38 43.8
baz=311,SNR=54
ANMO Albuquerque 50.83 81 P **P** **01 38 45.3 +1.2**
comp=Z,5.7nm,1.0s,baz=314,slow=8.3,SNR=9.6
ANMO Albuquerque 50.83 81⇓ *e*P **P** **01 38 45.2 +1.0**
ANMO pmax pmax
comp=Z,9.0nm,1.2s
ANMO Albuquerque 50.83 81 P **P** **01 38 44.5 +0.3**
ANMO Albuquerque 50.83 81 P 01 38 45.0
baz=312
DAG Danmarks Havn 50.86 7⇑ *i*P **P** **01 38 43.2 -0.4**
DAG IAmb IAmb 01 38 44.2
comp=Z,6.8nm,0.8s
DAG Danmarks Havn 50.86 7⇑ *i*P **P** **01 38 43.2 -0.4**
DAG pmax pmax
comp=Z,7.0nm,0.8s
NJ2 Nanjing 51.02 274 *e*P **P** **01 38 45.4 0.0**
NJ2 pmax pmax
comp=Z,16nm,0.5s
ECSD EROS Data Cent 51.05 66 IAmb IAmb 01 38 46.1
comp=Z,33nm,0.8s
ECSD EROS Data Cent 51.05 66 P 01 38 45.1
baz=308,SNR=35
EYMN Ely 51.27 59 IAmb IAmb 01 38 48.6
comp=Z,45nm,1.1s
EYMN Ely 51.27 59 P 01 38 46.9
baz=308,SNR=12
F36A Milaca 51.45 62 IAmb IAmb 01 38 49.2
comp=Z,24nm,0.8s
BGNE Belgrade 51.62 69 P 01 38 50.1
baz=310,SNR=6.7
121A Cookes Peak, D 51.63 84 IAmb IAmb 01 38 58.4
comp=Z,8.6nm,0.7s
E38A The Farm, Brul 52.06 60 P **P** **01 38 51.9 -1.1**
SPMN Marine on St. 52.25 62 IAmb IAmb 01 38 55.5
comp=Z,74nm,1.2s
SPMN Marine on St. 52.25 62 P 01 38 54.6
baz=309,SNR=13
L34A Svendsen Farm, 52.29 68 P **P** **01 38 54.1 -0.7**
CBKS Cedar Bluff 52.35 73 P **P** **01 38 55.9 +0.6**
CBKS pmax pmax
comp=Z,63nm,0.7s
CBKS Cedar Bluff 52.35 73 P **P** **01 38 55.9 +0.6**
CBKS Cedar Bluff 52.36 73 P 01 38 56.2
baz=311,SNR=11
SUMG Summit 52.36 15 *i*P **P** **01 38 55.4 +0.1**
SUMG IAmb IAmb 01 38 56.5
comp=Z,6.6nm,0.7s
SUMG Summit 52.36 15 *i*P **P** **01 38 55.4 +0.1**
SUMG pmax pmax
comp=Z,7.0nm,0.7s
SUMG Summit 52.36 15 P **P** **01 38 54.3 -1.0**
DBG Daneborg 53.08 8⇑ *i*P **P** **01 38 59.5 -0.7**
DBG IAmb IAmb 01 39 00.3
comp=Z,8.1nm,0.7s
R32A Long Quarter, 53.22 72 IAmb IAmb 01 39 04.0
comp=Z,26nm,0.7s
D41A Chassel 53.38 58 IAmb IAmb 01 39 04.7
comp=Z,28nm,0.8s
N35A Tabor 53.43 68 P **P** **01 39 03.7 +0.5**
G40A Rib Lake 53.64 61 IAmb IAmb 01 39 06.2
comp=Z,35nm,0.8s
COWI Conover 53.68 59 IAmb IAmb 01 39 06.3
comp=Z,23nm,0.9s
MNTX Cornudas Mount 53.69 83 P **P** **01 39 05.4 +0.2**
MNTX Cornudas Mount 53.69 83 P 01 39 06.1
baz=314,SNR=15
MSTX Muleshoe 53.74 79 IAmb IAmb 01 39 08.2
comp=Z,20nm,0.8s
MSTX Muleshoe 53.74 79 P 01 39 06.0
baz=313,SNR=12
K38A Parkersburg 53.91 65 IAmb IAmb 01 39 07.5
comp=Z,32nm,0.8s
KSU1 Kansas State U 54.01 71 IAmb IAmb 01 39 08.4
comp=Z,38nm,1.1s
KSU1 Kansas State U 54.01 71 P 01 39 07.0
baz=311
SCIA State Center 54.14 66 P 01 39 08.0
baz=311
SFJD Kangerlussuaq 54.42 23 P **P** **01 39 09.8 -0.2**
comp=Z,9.9nm,0.5s,baz=331,slow=5.9,SNR=4.8
SFJD Kangerlussuaq 54.42 23⇑ *i*P **P** **01 39 09.8 -0.2**
SFJD IAmb IAmb 01 39 10.7
comp=Z,5.9nm,0.5s
SFJD Kangerlussuaq 54.42 23⇑ *i*P **P** **01 39 09.8 -0.2**
SFJD pmax pmax
comp=Z,6.0nm,0.5s
KAN08 Anthony NE Sta 54.45 73 P **P** **01 39 09.9 -0.7**
KAN08 IAmb IAmb 01 39 11.2
comp=Z,18nm,0.8s
OK032 Salt Plains WL 54.59 74 IAmb IAmb 01 39 13.0
comp=Z,15nm,0.8s
E43A Lone Tree Farm 54.64 58 IAmb IAmb 01 39 13.6
comp=Z,52nm,0.9s
KAN17 Caldwell West 54.69 73 IAmb IAmb 01 39 13.5
comp=Z,31nm,0.8s
WHN Wuhan 54.84 276 ⇑P **P** **01 39 13.8 +0.2**
WHN sP **sP** **01 39 32.3 +0.9**
WHN pmax pmax
comp=Z,56nm,0.7s
WHN LR LR
comp=Z,680nm,13.9s
ICESG Greenland Ices 55.11 18⇑ *i*P **P** **01 39 14.8 -0.6**
ICESG IAmb IAmb 01 39 15.6
comp=Z,14nm,0.6s
JFWS Jewell Farm 55.14 63 P 01 39 15.1
baz=311,SNR=18
L40A Anamosa 55.16 64 IAmb IAmb 01 39 16.2
comp=Z,38nm,0.7s
I42A Draeger Farm, 55.23 61 IAmb IAmb 01 39 17.7
comp=Z,46nm,0.8s
ZAA0 Zalesovo Array 55.36 315 P **P** **01 39 17.6 +0.7**
ZAA0 PcP **PcP** **01 40 17.4 +0.4**
ZALV Zalesovo Beam 55.36 315 P **P** **01 39 15.6 -1.3**
comp=Z,1.3nm,0.5s,baz=53,slow=7.0,SNR=5.5
ZALV PcP **PcP** **01 40 17.2 +0.3**
comp=Z,11nm,0.9s,baz=44,slow=4.5,SNR=12
ZALV Zalesovo Beam 55.36 315 *i*P **P** **01 39 17.1 +0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 55.36 315 P **P** **01 39 16.3 -0.7**
ZALV PcP **PcP** **01 40 17.9 +1.0**
P38A Dawn 55.45 68 IAmb IAmb 01 39 18.6
comp=Z,36nm,0.8s
T35A Sooner Cattle 55.52 72 IAmb IAmb 01 39 20.8
comp=Z,14nm,0.8s
WMOK Wichita Mounta 55.64 76 IAmb IAmb 01 39 21.7
comp=Z,28nm,0.8s
WMOK Wichita Mounta 55.64 76 P 01 39 19.9
baz=313,SNR=40
YULB Yu-li 55.65 265 IAmb IAmb 01 39 25.9
comp=Z,16nm,0.6s
OK029 Liberty Lake 55.72 74 IAmb IAmb 01 39 21.7
comp=Z,35nm,0.7s
XAN Xi'an 55.76 283 P **P** **01 39 20.5 +0.3**
XAN pP pP 01 39 29.5 -3.4
XAN pmax pmax
comp=Z,21nm,0.6s
XAN pmax pmax
comp=Z,100nm,6.7s
XAN LR LR
comp=Z,280nm,20.6s
XAN LR LR
comp=Z,240nm,22.8s
XAN LR LR
comp=Z,380nm,26.0s
XAN Xi'an 55.76 283 P **P** **01 39 20.1 -0.1**
XAN pmax pmax
comp=Z,13nm,0.6s
XAN Xi'an 55.76 283 P **P** **01 39 20.1 -0.1**
XAN IAmb IAmb 01 39 20.8
comp=Z,13nm,0.6s
DY2G Dye2 55.89 22 *i*P **P** **01 39 20.0 -0.8**
DY2G IAmb IAmb 01 39 22.8
comp=Z,14nm,0.5s
QUOK Quay 55.91 73 IAmb IAmb 01 39 23.3
comp=Z,16nm,0.9s
OK025 Westminster Rd 55.93 74 IAmb IAmb 01 39 22.6
comp=Z,12nm,0.7s
OK031 S. Brethren Rd 55.98 74 IAmb IAmb 01 39 22.8
comp=Z,23nm,0.7s
OK030 Cody Creek RV 56.03 74 IAmb IAmb 01 39 25.6
comp=Z,20nm,1.0s
E46A Sault Ste Mari 56.06 57 IAmb IAmb 01 39 24.1
comp=Z,33nm,0.9s
FNO Franklin 56.12 75 IAmb IAmb 01 39 25.6
comp=Z,24nm,0.6s
G45A Suttons Bay 56.23 59 IAmb IAmb 01 39 25.3
comp=Z,38nm,0.7s
N41A Harden Midland 56.26 65 IAmb IAmb 01 39 24.4
comp=Z,46nm,0.9s
TX31 Lajitas Ar. Si 56.39 84 P **P** **01 39 24.7 -0.2**
TX31 IAmb IAmb 01 39 26.2
comp=Z,24nm,1.0s
TXAR Lajitas Array 56.39 84 P **P** **01 39 25.1 +0.3**
comp=Z,3.6nm,0.6s,baz=298,slow=5.2,SNR=30
TXAR Lajitas Array 56.39 84 P **P** **01 39 25.0 +0.1**
TXAR Lajitas Array 56.39 84 P **P** **01 39 24.9 +0.1**
SCO Scoresbysund 56.53 10 *i*P **P** **01 39 25.3 +0.2**
SCO IAmb IAmb 01 39 26.3
comp=Z,7.2nm,0.6s
SCO Scoresbysund 56.53 10 *i*P **P** **01 39 25.3 +0.2**
SCO pmax pmax
comp=Z,7.0nm,0.6s
SCO Scoresbysund 56.53 10 IAmb IAmb 01 39 26.3
comp=Z,9.1nm,0.6s
ABTX Abilene, Hawle 56.57 78 IAmb IAmb 01 39 27.5
comp=Z,29nm,1.0s
ABTX Abilene, Hawle 56.57 78 P 01 39 26.4
baz=314,SNR=11
TUL1 Leonard 56.63 73 P 01 39 26.3
baz=313,SNR=7.1
GLMI Grayling 56.92 58 P **P** **01 39 28.5 +0.2**
L44A Lake County Fo 56.92 62 P 01 39 26.9
baz=312,SNR=6.6
GLMI Grayling 56.92 58 P 01 39 28.2
baz=312,SNR=7.5
DGZ Jazzator, Alta 57.02 310⇑ *e*P **P** **01 39 28.3 -0.8**
DGZ pmax pmax
comp=Z,2.0nm,0.7s
R40A Maddies Statio 57.08 68 IAmb IAmb 01 39 29.9
comp=Z,24nm,0.5s
MATQ Matagami 57.10 50 P 01 39 28.6
baz=313,SNR=6.5
HAMF Hammerfest 57.13 353 *e*P **P** **01 39 29.4 +0.1**
HDIL Hopedale 57.24 65 P 01 39 30.3
baz=313,SNR=13
GTA Gaotai 57.47 294 *e*P **P** **01 39 34.3 +1.9**
GTA pP pP 01 39 46.0 +0.8
GTA sP sP 01 39 52.5 +2.1
GTA PcP **PcP** **01 40 26.0 +0.4**
GTA pmax pmax
comp=Z,6.0nm,0.7s
GTA pmax pmax
comp=Z,41nm,4.0s
GTA LR LR
comp=Z,180nm,16.7s
GTA LR LR
comp=Z,180nm,18.2s
GTA LR LR
comp=Z,250nm,17.8s
HHAR Hobbs 57.47 71 IAmb IAmb 01 39 38.1
comp=Z,7.7nm,0.6s
Z35A Perchaven, San 57.52 76 P **P** **01 39 33.1 +0.4**
Z35A IAmb IAmb 01 39 35.3
comp=Z,33nm,0.8s
X37A Clayton 57.78 74 IAmb IAmb 01 39 36.8
comp=Z,31nm,0.7s
CCM Cathedral Cave 57.83 68 P **P** **01 39 33.6 -1.2**
CCM pmax pmax
comp=Z,11nm,0.8s
CCM Cathedral Cave 57.83 68 P **P** **01 39 33.6 -1.2**
CCM IAmb IAmb 01 39 34.9
comp=Z,11nm,0.8s
CCM Cathedral Cave 57.83 68 P 01 39 33.9
baz=313
MGMO Mountain Grove 57.85 69 IAmb IAmb 01 39 34.7
comp=Z,21nm,1.2s
J47A Sumner 57.88 60 IAmb IAmb 01 39 36.8
comp=Z,49nm,1.0s
LSQQ Lebel-sur-Quev 57.89 50 P 01 39 33.5
baz=314
JCT Junction City 57.96 80 IAmb IAmb 01 39 42.1
comp=Z,15nm,0.6s
JCT Junction City 57.96 80 P 01 39 34.7
baz=315
SLM Saint Louis 58.01 67 P **P** **01 39 34.7 -1.3**
SLM pmax pmax
comp=Z,22nm,0.6s
SLM Saint Louis 58.01 67 P **P** **01 39 34.7 -1.3**
SLM IAmb IAmb 01 39 36.8
comp=Z,22nm,0.6s
ARA0 ARCESS Array S 58.06 352 *e*P **P** **01 39 36.0 +0.1**
ARCES ARCESS Array B 58.06 352 P **P** **01 39 34.6 -1.3**
comp=Z,3.9nm,0.6s,baz=9.6,slow=7.1,SNR=29
ARCES PcP **PcP** **01 40 27.1 -0.1**
comp=Z,4.0nm,0.6s,baz=19,slow=5.6,SNR=5.9
U40A Yellville 58.06 71 IAmb IAmb 01 39 36.7
comp=Z,16nm,0.5s
U40A Yellville 58.06 71 P 01 39 35.5
baz=314,SNR=21
W39A Magazine 58.31 72 IAmb IAmb 01 39 38.8
comp=Z,12nm,0.7s
W39A Magazine 58.31 72 P 01 39 38.2
baz=314,SNR=11
VLDQ Val d'Or 58.31 51 IAmb IAmb 01 39 37.5
comp=Z,19nm,0.7s
WHTX Lake Whitney, 58.33 77 P 01 39 39.0
baz=315,SNR=24
JETT Jettan, Norway 58.44 354 *e*P **P** **01 39 39.2 +0.6**
TRO Tromso 58.47 354 *e*P **P** **01 39 39.1 +0.4**
CHGQ Chibougamau 58.52 48 P 01 39 38.0
baz=314,SNR=14
SFIN Lafayette 58.59 63 P **P** **01 39 39.7 -0.3**
SFIN Lafayette 58.59 63 P 01 39 40.2
baz=313,SNR=36
KTK1 Kautokeino 58.76 352 *e*P **P** **01 39 41.3 +0.5**
FCAR Ozark Folk Cen 58.81 70 IAmb IAmb 01 39 44.9
comp=Z,29nm,1.1s
MIAR Mount Ida 58.88 73 IAmb IAmb 01 39 43.5
comp=Z,27nm,0.8s
MIAR Mount Ida 58.88 73 P 01 39 42.3
baz=314,SNR=29
435B Jarrell 59.10 78 P **P** **01 39 44.0 +0.3**
435B IAmb IAmb 01 39 45.8
comp=Z,21nm,0.9s
435B Jarrell 59.10 78 P 01 39 43.6
baz=315
AAM Ann Arbor 59.15 60 IAmb IAmb 01 39 45.1
comp=Z,52nm,1.1s
AAM Ann Arbor 59.15 60 P 01 39 44.0
baz=314
S44A Carbondale 59.22 67 IAmb IAmb 01 39 45.5
comp=Z,23nm,0.7s
SIUC Southern Illin 59.23 67 IAmb IAmb 01 39 45.8
comp=Z,24nm,0.6s
W41B Gary Mavity, V 59.23 71 P 01 39 44.0
baz=314,SNR=11
LCAR Lake Charles 59.25 70 IAmb IAmb 01 39 44.1
comp=Z,15nm,1.3s
237A Washetta, Mont 59.32 76 IAmb IAmb 01 39 47.5
comp=Z,32nm,0.8s
X40A Basin Creek Fa 59.36 72 IAmb IAmb 01 39 47.5
comp=Z,13nm,0.8s
X40A Basin Creek Fa 59.36 72 P 01 39 45.3
baz=314,SNR=11
I51A Listowel 59.50 57 P 01 39 46.7
baz=314
ALGO Algonquin Park 59.52 53 P 01 39 45.6
baz=314
PARMO Parma 59.65 68 P **P** **01 39 47.2 -0.2**
833A Chaparral WMA, 59.74 82 P 01 39 48.0
baz=316
SADO Sadowa 59.80 55 IAmb IAmb 01 39 51.1
comp=Z,25nm,1.0s
ZSN Zaisan 59.81 309 *e*P **P** **01 39 48.1 -0.4**
comp=Z,3.3nm,0.9s,baz=309
ZSN Zaisan 59.81 309 *e*P **P** **01 39 48.0 -0.4**
ZSN pmax pmax
comp=Z,3.0nm,0.9s
SEM Semipalatinsk 59.84 314 *e*P **P** **01 39 48.1 -0.7**
baz=314
SEM Semipalatinsk 59.84 314 *e*P **P** **01 39 48.1 -0.7**
G54A Lake Saint Pet 59.89 54 P 01 39 48.7
baz=315
USIN University of 59.94 66 P **P** **01 39 48.7 -0.6**
D55A Sainte-Anne-du 60.04 51 P 01 39 49.4
baz=315,SNR=12
E55A Montcerf-Lytto 60.16 52 P 01 39 50.3
baz=315
NATX Nacogdoches 60.19 76 P 01 39 51.2
baz=315
H53A Bobcaygeon 60.22 55 P 01 39 51.0
baz=315,SNR=6.2
O49A Covington 60.25 62 IAmb IAmb 01 39 52.3
comp=Z,40nm,1.1s
STEI Steigen 60.36 355 *e*P **P** **01 39 51.8 0.0**
D56A ZEC Mazanza, M 60.36 51 P 01 39 51.1
baz=315
X43A Marvell 60.49 71 P 01 39 52.6
baz=315
P49A Miami Univ. Ec 60.50 63 P 01 39 52.7
baz=315,SNR=29
WCI Wyandotte Cave 60.53 65 P **P** **01 39 53.0 -0.4**
WCI pmax pmax
comp=Z,62nm,0.8s
WCI Wyandotte Cave 60.53 65 P **P** **01 39 53.0 -0.4**
WCI Wyandotte Cave 60.53 65 P 01 39 53.4
baz=315
SZP Santa 60.55 261 P **P** **01 39 53.5 -0.3**
E56A St. Veronique 60.59 51 P 01 39 53.1
baz=316,SNR=6.3
M51A Elyria 60.62 60 P 01 39 53.6
baz=315,SNR=5.4
PLVO Plevna 60.65 54 IAmb IAmb 01 39 55.4
comp=Z,20nm,0.6s
N2TV T'rnvik 60.73 355 *e*P **P** **01 39 54.8 +0.5**
N2VA Vr,y 60.74 357 *e*P **P** **01 39 54.3 0.0**
DELO Deloro Mine 60.75 54 IAmb IAmb 01 39 56.1
comp=Z,18nm,0.5s
FAUS Fauske 60.91 355 *e*P **P** **01 39 55.9 +0.3**
ACSO Alum Creek Sta 60.96 61 P 01 39 56.0
baz=315,SNR=11
WMQ Urumqi 60.98 305 *e*P **P** **01 39 56.8 +0.3**
WMQ pP pP 01 40 11.3 +2.0
WMQ sP sP 01 40 15.3 +0.8
WMQ PcP **PcP** **01 40 39.8 +0.4**
WMQ S **S** **01 48 06.0 -5.4**
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,160nm,4.3s
WMQ LR LR
comp=Z,2μm,24.1s
WMQ LR LR
comp=Z,950nm,22.5s
WMQ LR LR
comp=Z,400nm,29.0s
CD2 Chengdu 61.06 284 P **P** **01 39 55.8 -1.4**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 LR LR
comp=Z,280nm,11.5s
CD2 LR LR
comp=Z,330nm,11.5s
LATQ La Tuque 61.06 49 P 01 39 55.6
baz=316
R49A Shelbyville 61.11 64 IAmb IAmb 01 39 58.6
comp=Z,23nm,1.2s
WVT Waverly 61.13 67 P **P** **01 39 56.9 -0.6**
WVT pmax pmax
comp=Z,10.0nm,0.7s
WVT Waverly 61.13 67 P **P** **01 39 56.9 -0.6**
WVT IAmb IAmb 01 40 01.3
comp=Z,10.0nm,0.7s
WVT Waverly 61.13 67 P 01 39 57.5
baz=315
L53A Girard 61.20 58 P 01 39 58.2
baz=315,SNR=5.3
D58A Chemin du LacG 61.22 50 P 01 39 57.2
baz=316
ERPA Erie 61.23 58 P 01 39 58.4
baz=315,SNR=5.3
M53A WI Miller and 61.34 59 P 01 39 59.3
baz=315,SNR=18
OXF Oxford 61.36 70 P 01 39 59.0
baz=315
NBB30 Finnes 61.39 356 *e*P **P** **01 39 59.3 +0.5**
P51A Williamsport 61.44 62 IAmb IAmb 01 40 00.6
comp=Z,26nm,0.8s
143A Socs Landing, 61.46 73 P **P** **01 40 00.4 +0.6**
143A IAmb IAmb 01 40 05.5
comp=Z,26nm,0.9s
MK31 Makanchi Array 61.51 310 *ce*P **P** **01 39 59.4 -0.6**
MKAR Makanchi Array 61.51 310 P **P** **01 39 58.6 -1.3**
comp=Z,3.7nm,0.3s,baz=45,slow=6.5,SNR=47
E58A La Victoria 61.56 50 P 01 40 00.0
baz=316
G57A Newington 61.64 52 P 01 40 00.1
baz=316
MAKZ Makanchi 61.65 310 P **P** **01 40 01.2 +0.3**
MAKZ pmax pmax
comp=Z,8.0nm,0.6s
MAKZ Makanchi 61.65 310 P **P** **01 40 01.2 +0.3**
MAKZ IAmb IAmb 01 40 01.2
comp=Z,8.3nm,0.6s
Y45A Yeager Farm, C 61.74 70 IAmb IAmb 01 40 03.4
comp=Z,18nm,0.7s
D59A Saint-Raymond 61.78 49 P 01 40 01.1
baz=317
PLAL Pickwick Lake 61.80 69 IAmb IAmb 01 40 06.0
comp=Z,19nm,0.7s
ZAIG Zacatecas 61.80 88 P **P** **01 40 02.4 -0.2**
M54A Oil Creek Stat 61.83 58 P 01 40 02.7
baz=316,SNR=16
P52A Corning 61.84 61 IAmb IAmb 01 40 03.2
comp=Z,29nm,0.7s
P52A Corning 61.84 61 P 01 40 01.7
baz=315,SNR=6.3
KONS Konsvik 61.89 356 *e*P **P** **01 40 02.0 -0.1**
O53A New Philadelph 61.90 60 P 01 40 02.9
baz=316,SNR=15
H57A Richville 61.91 53 P 01 40 01.9
baz=316
V48A Smith Brothers 61.98 67 IAmb IAmb 01 40 04.7
comp=Z,9.2nm,0.8s
CLTN Cedars of Leba 62.01 66 IAmb IAmb 01 40 05.0
comp=Z,34nm,1.1s
BRVK Borovoye 62.02 322⇑ *e*P **P** **01 40 03.0 -0.2**
BRVK pmax pmax
comp=Z,14nm,1.1s
BRVK Borovoye 62.02 322 P **P** **01 40 03.0 -0.2**
BRVK IAmb IAmb 01 40 05.2
comp=Z,14nm,1.1s
J56A Wolcott 62.02 55 P 01 40 03.3
baz=316
U49A Red Boiling Sp 62.03 66 IAmb IAmb 01 40 04.8
comp=Z,14nm,0.8s
N54A Moraine State 62.05 59 P 01 40 04.1
baz=316,SNR=27
G58A Ormstown 62.07 52 P 01 40 02.9
baz=316
I57A Carthage 62.15 54 P 01 40 04.3
baz=316
MOR8 Moi Rana 62.15 356 *e*P **P** **01 40 03.5 -0.5**
F59A Saint Guillaume 62.17 51 P 01 40 03.7
baz=317
LONY Lake Ozonia 62.19 53 IAmb IAmb 01 40 04.6
comp=Z,8.4nm,0.5s
LONY Lake Ozonia 62.19 53 P 01 40 03.8
baz=316
K56A Middlesex 62.20 56 P 01 40 05.5
baz=316,SNR=28
T50A Nancy 62.20 65 IAmb IAmb 01 40 06.1
comp=Z,32nm,0.7s
D60A Saint Jean D'O 62.28 49 P 01 40 04.6
baz=317
VBMS Vicksburg 62.33 72 P 01 40 05.9
baz=316
PRGR Permogore 62.36 339 *e*P **P** **01 40 06.0 +0.7**
PRGR pmax pmax
comp=Z,12nm,0.6s
J57A Williamstown 62.36 54 P 01 40 04.9
baz=316
D61A St Aubert, Com 62.41 48 P 01 40 05.6
baz=318
E60A Ste Agathe de 62.43 49 P 01 40 05.3
baz=317
SVE Sverdlovsk 62.43 329 *e*P **P** **01 40 07.3 +1.3**
SVE pmax pmax
comp=Z,13nm,0.9s
L56A Greenwood 62.48 56 P 01 40 07.2
baz=316,SNR=48
F60A Warwick 62.48 50 P 01 40 05.6

baz=317
GYA Guiyang 62.49 278 ⇓P **P** **01 40 07.6 +0.7**
GYA pP pP 01 40 19.9 +0.1
GYA pmax pmax
comp=Z,10.0nm,1.0s
H58A Gabriels 62.54 52 P 01 40 06.5
baz=317
K57A Scipio Center 62.59 55 P 01 40 07.6
baz=316,SNR=18
H59A Cadyville 62.61 52 P 01 40 06.6
baz=317
M56A Emporium 62.62 57 P 01 40 08.1
baz=316,SNR=18
I58A Old Forge 62.67 53 P 01 40 07.1
baz=317
Q53A Leroy 62.72 61 P 01 40 08.8
baz=316,SNR=41
344A Westbrook Farm 62.75 73 IAmb IAmb 01 40 11.1
comp=Z,38nm,0.9s
X48A Hartselle 62.77 68 IAmb IAmb 01 40 13.1
comp=Z,7.0nm,0.6s
E61A Lac Etchemin 62.83 49 P 01 40 08.6
baz=318
NCB Newcomb 62.84 53 IAmb IAmb 01 40 10.1
comp=Z,9.8nm,0.7s
SWET Sewanee 62.86 67 IAmb IAmb 01 40 13.5
comp=Z,13nm,0.6s
F61A St Evariste 62.94 49 P 01 40 09.4
baz=318
G60A Masonville 62.94 51 P 01 40 09.2
baz=317
L57A Andrews Acres 62.94 56 P 01 40 10.2
baz=316,SNR=29
N56A West Decatur 62.97 58 P 01 40 10.3
baz=316,SNR=28
K58A Earlville 63.00 55 P 01 40 10.5
baz=317
MCWV Mont Chateau 63.06 60 P **P** **01 40 10.9 +0.5**
MCWV Mont Chateau 63.06 60 P 01 40 11.0
baz=316,SNR=23
J59A Piesco 63.07 53 IAmb IAmb 01 40 11.4
comp=Z,15nm,0.5s
J59A Piesco 63.07 53 P 01 40 10.2
baz=317,SNR=6.0
Z47A Carrollton 63.07 70 IAmb IAmb 01 40 12.0
comp=Z,32nm,0.7s
I59A Olmsteadville 63.14 53 P 01 40 10.7
baz=317
H60A Morristown 63.16 51 P 01 40 11.2
baz=317
G61A St-Isidore-de- 63.19 50 P 01 40 10.6
baz=318
W50A Signal Mountai 63.23 67 IAmb IAmb 01 40 12.8
comp=Z,19nm,0.7s
BINY Binghamton 63.24 55 P 01 40 12.0
baz=317,SNR=17
M57A Sunshine Farm, 63.28 57 IAmb IAmb 01 40 13.7
comp=Z,45nm,0.9s
M57A Sunshine Farm, 63.28 57 P 01 40 12.4
baz=317,SNR=10
O56A Blue Knob Stat 63.30 58 P 01 40 12.4
baz=316,SNR=15
V51A Loudon 63.34 65 IAmb IAmb 01 40 13.5
comp=Z,19nm,0.6s
SSPA Standing Stone 63.39 58 P **P** **01 40 12.5 0.0**
SSPA Standing Stone 63.39 58 P 01 40 12.8
baz=316
I60A Shoreham 63.39 52 P 01 40 12.7
baz=317
K59A Cooperstown 63.40 54 P 01 40 12.8
baz=317
ARU Arti 63.41 330*c i*P **P** **01 40 11.9 -0.6**
ARU *PP **pP** **01 40 23.4 -2.0**
ARU 01 40 48.4
ARU S **S** **01 48 43.7 +2.2**
ARU SS **SS** **01 52 44.7 -3.1**
ARU pmax pmax
comp=Z,12nm,0.6s
ARU Arti 63.41 330 P **P** **01 40 11.5 -1.0**
ARU IAmb IAmb 01 40 14.2
comp=Z,16nm,0.5s
BRZS Berezniki 63.42 318 *e*P **P** **01 40 12.9 +0.2**
comp=Z,3.7nm,1.1s,baz=318
BRZS Berezniki 63.42 318 *e*P **P** **01 40 12.8 +0.2**
BRZS pmax pmax
comp=Z,4.0nm,1.1s
L58A Harry Jones Me 63.42 55 P 01 40 13.6
baz=317,SNR=18
N57A Milroy 63.48 57 P 01 40 13.7
baz=317,SNR=14
D63A Stockholm 63.48 47 P 01 40 13.2
baz=318
CPCT Cooper Cave 63.50 66 IAmb IAmb 01 40 14.4
comp=Z,15nm,0.5s
R54A Victor 63.50 61 P 01 40 14.1
baz=316,SNR=68
FPAL Fort Paine 63.53 67 IAmb IAmb 01 40 14.4
comp=Z,70nm,1.3s
ACCN Adirondack Com 63.54 53 IAmb IAmb 01 40 16.0
comp=Z,18nm,1.1s
H61A Lyndonville 63.55 51 P 01 40 13.4
baz=318
Y49A Blount Mountai 63.56 68 IAmb IAmb 01 40 14.7
comp=Z,12nm,0.9s
S54A Dingess, Beckl 63.60 62 P 01 40 14.9
baz=316,SNR=23
P56A Dayton Farm, R 63.71 59 P 01 40 15.3
baz=317,SNR=42
G62A West of Eustis 63.71 50 IAmb IAmb 01 40 15.5
comp=Z,23nm,0.6s
G62A West of Eustis 63.71 50 P 01 40 14.8
baz=318,SNR=5.4
L59A Walton 63.73 55 IAmb IAmb 01 40 18.1
comp=Z,34nm,1.0s
L59A Walton 63.73 55 P 01 40 15.2
baz=317,SNR=9.2
V52A Sevierville 63.74 65 P **P** **01 40 14.4 -0.6**
V52A IAmb IAmb 01 40 16.4
comp=Z,23nm,0.8s
LBNH Lisbon 63.77 51 P 01 40 15.0
baz=318
J60A Lant Hill Farm 63.77 53 P 01 40 14.9
baz=317,SNR=6.3
TKL Tuckaleechee C 63.77 65 IAmb IAmb 01 40 16.4
comp=Z,24nm,0.9s
E63A Oxbow 63.80 48 IAmb IAmb 01 40 15.5
comp=Z,19nm,0.7s
E63A Oxbow 63.80 48 P 01 40 14.7
baz=319
LRAL Lakeview Retre 63.81 69 P 01 40 14.7
baz=316
KSPA Keystone Colle 63.82 56 IAmb IAmb 01 40 17.6
comp=Z,44nm,1.0s
O57A Amberson 63.83 58 P 01 40 16.1
baz=317,SNR=49
N58A Sunbury 63.85 57 P 01 40 16.2
baz=317,SNR=14
Q56A Snyder Ridge, 63.85 60 IAmb IAmb 01 40 17.3
comp=Z,45nm,0.9s
Q56A Snyder Ridge, 63.86 60 P 01 40 16.3
baz=317,SNR=14
I61A Oroboro, Fairl 63.86 52 P 01 40 15.6
baz=318
H62A Milan 63.89 51 P **P** **01 40 14.7 -1.1**
H62A IAmb IAmb 01 40 16.7
comp=Z,31nm,0.6s
H62A Milan 63.89 51 P 01 40 15.5
baz=318,SNR=9.6
NSS Namsos 63.90 357 *e*P **P** **01 40 16.0 +0.4**
R55A Marlinton 63.90 61 P 01 40 16.9
baz=317,SNR=22
X51A Calhoun 63.95 67 IAmb IAmb 01 40 17.4
comp=Z,16nm,1.1s
M59A Waymart 64.00 55 P 01 40 17.1
baz=317,SNR=15
F63A Nahmakanta, Br 64.02 48 P 01 40 16.3
baz=318
E64A Bridgewater 64.07 47 P 01 40 16.4
baz=319,SNR=7.6
W52A Murphy 64.09 66 IAmb IAmb 01 40 18.5
comp=Z,38nm,1.2s
J61A Chester 64.12 52 P 01 40 17.2
baz=318
KIRV Kirov 64.16 336*ce*P **P** **01 40 18.4 +1.1**
P57A Homestead Farm 64.16 59 P 01 40 18.3
baz=317,SNR=29
R56A Bull Pasture M 64.20 60 P 01 40 18.7
baz=317,SNR=21
G63A Kingsbury 64.22 49 P 01 40 17.4
baz=318
F64A Sherman 64.25 48 IAmb IAmb 01 40 18.5
comp=Z,14nm,0.6s
F64A Sherman 64.25 48 P 01 40 17.9
baz=319
K61A Williamstown 64.27 53 P 01 40 18.4
baz=318
O58A Lewisberry 64.27 57 P 01 40 18.7
baz=317,SNR=16
Q57A Strasburg 64.28 59 P 01 40 18.9
baz=317,SNR=19
N59A State Game Lan 64.29 56 P 01 40 19.0
baz=317,SNR=16
L60A Shokan 64.29 54 P 01 40 18.8
baz=318
PAGS Pennsylvania G 64.30 57 IAmb IAmb 01 40 19.9
comp=Z,56nm,1.0s
V53A Saluda 64.31 65 IAmb IAmb 01 40 20.4
comp=Z,18nm,0.7s
I62A Tamworth 64.32 51 P 01 40 18.4
baz=318
KLMR Klimovskoe 64.32 342 *e*P **P** **01 40 16.7 -1.7**
KLMR pmax pmax
comp=Z,15nm,1.1s
KLMR Klimovskoe 64.32 342 *e*P **P** **01 40 16.7 -1.7**
KLMR AMP 01 40 22.1
comp=Z,15nm,1.1s
H63A New Sharon 64.36 50 P 01 40 18.4
baz=318
L61A Hillsdale 1, H 64.48 54 P 01 40 20.0
baz=318
BLA Blacksburg 64.52 62 P 01 40 21.0
baz=317,SNR=25
O59A Robesonia 64.52 57 P 01 40 20.4
baz=317,SNR=14
G64A Maxfield 64.52 49 P 01 40 20.0
baz=319
I63A Otisfield 64.56 51 P 01 40 20.3
baz=318
J62A Henniker 64.57 52 P 01 40 19.8
baz=318
M60A Port Jervis 64.57 55 P 01 40 20.7
baz=318,SNR=13
S56A Natural Bridge 64.64 61 P 01 40 22.0
baz=317,SNR=40
MVL Millersville 64.66 57 P **P** **01 40 21.1 +0.2**
MVL IAmb IAmb 01 40 22.4
comp=Z,32nm,0.8s
N60A Cedar Hill Far 64.67 56 P 01 40 21.4
baz=318,SNR=16
L61B Northampton 64.72 53 P 01 40 21.3
baz=318
BG3 Lake Jocassee 64.73 65 IAmb IAmb 01 40 23.0
comp=Z,18nm,0.6s
Q58A Fox Den Farm, 64.73 59 P 01 40 21.9
baz=317,SNR=34
R57A Stanardsville 64.75 60 P 01 40 22.4
baz=317,SNR=49
H64A Troy 64.76 49 P 01 40 22.0
baz=319
ODNJ Ogdensburg 64.76 55 IAmb IAmb 01 40 23.5
comp=Z,32nm,0.9s
K62A Royalston 64.78 53 P 01 40 21.9
baz=318
SDMD Soldier's Deli 64.83 58 IAmb IAmb 01 40 23.9
comp=Z,37nm,0.9s
KSCT Kent School, K 64.86 54 IAmb IAmb 01 40 26.6
comp=Z,19nm,1.0s
P59A Jarrettsville 64.90 57 P 01 40 22.9
baz=317,SNR=13
Y52A Lilburn 64.91 67 P **P** **01 40 22.1 -0.5**
Y52A IAmb IAmb 01 40 25.9
comp=Z,12nm,0.8s
TRNY Table Rock, Ra 64.91 55 IAmb IAmb 01 40 26.0
comp=Z,20nm,1.1s
S57A Dark Hollow, R 64.91 60 P 01 40 23.5
baz=317,SNR=22
O60A Telford 64.92 56 P 01 40 23.1
baz=318,SNR=9.0
250A Grady 65.00 70 IAmb IAmb 01 40 24.8
comp=Z,31nm,0.7s
M61A Granite Spring 65.02 55 P 01 40 23.1
baz=318
V55A Taylorsville 65.06 63 IAmb IAmb 01 40 25.4
comp=Z,41nm,1.0s
BRNJ Basking Ridge 65.08 55 IAmb IAmb 01 40 25.8
comp=Z,54nm,0.9s
WUPA West Chester U 65.09 57 IAmb IAmb 01 40 25.9
comp=Z,21nm,1.1s
G65A Princeton 65.11 48 P 01 40 23.6
baz=319
K63A Dunstable 65.11 52 P 01 40 23.4
baz=318
BRAL Brewton 65.13 71 IAmb IAmb 01 40 29.0
comp=Z,38nm,0.9s
BRAL Brewton 65.13 71 P 01 40 24.6
baz=317
N61A South Mountain 65.17 55 P 01 40 24.6
baz=318
P60A Greenville 65.17 57 P 01 40 24.3
baz=318
PAL Palisades 65.17 55 P 01 40 24.4
baz=318,SNR=6.3
TBLU Trondheim 65.24 357 *e*P **P** **01 40 22.7 -1.6**
CPNY Central Park 65.31 55 P **P** **01 40 24.8 -0.3**
CPNY IAmb IAmb 01 40 27.2
comp=Z,37nm,0.7s
R58B Mineral 65.34 60 P 01 40 25.9
baz=317,SNR=22
152A Waverly Hall 65.40 68 IAmb IAmb 01 40 25.9
comp=Z,11nm,0.8s
CBN Colin Frederi 65.44 59 P 01 40 25.8
baz=318,SNR=11
PAULI Pauline 65.48 65 IAmb IAmb 01 40 27.8
comp=Z,23nm,0.7s
S58A Poland Farm, P 65.51 60 P 01 40 26.8
baz=318,SNR=23
KMSC Kings Mountain 65.52 64 P 01 40 27.1
baz=317,SNR=26
O61A Allentown 65.52 56 P 01 40 26.4
baz=318,SNR=7.6
H66A Whiting 65.54 48 P 01 40 26.2
baz=320
SHLS Shalkode 65.55 309 *e*P **P** **01 40 25.6 -1.3**
SHLS Shalkode 65.55 309 *e*P **P** **01 40 25.5 -1.3**
GOGA Godfrey 65.58 67 IAmb IAmb 01 40 27.7
comp=Z,17nm,0.7s
GOGA Godfrey 65.58 67 P 01 40 26.4
baz=317,SNR=12
HODGE Hodges 65.66 65 IAmb IAmb 01 40 29.2
comp=Z,26nm,0.6s
UZB Uzunbulak 65.77 309 *e*P **P** **01 40 27.6 -0.6**
baz=310
UZB Uzunbulak 65.77 309 *e*P **P** **01 40 27.6 -0.6**
M63A Gales Ferry 65.82 53 P 01 40 28.0
baz=319
FINES FINESS Array B 65.86 349 P **P** **01 40 27.9 -0.4**
comp=Z,3.9nm,0.6s,baz=19,slow=6.1,SNR=19
LMN Caledonia Moun 65.86 46 IAmb IAmb 01 40 29.3
comp=Z,30nm,0.8s
KMI Kunming 65.87 280 ⇑P **P** **01 40 29.8 +0.6**
KMI pmax pmax
comp=Z,54nm,0.9s
KMI Kunming 65.87 280 P **P** **01 40 29.2 0.0**
KMI pmax pmax
comp=Z,40nm,0.8s
KMI Kunming 65.87 280 P **P** **01 40 29.2 0.0**
KMI IAmb IAmb 01 40 30.8
comp=Z,40nm,0.8s
MOL Molde 65.98 359 *e*P **P** **01 40 28.6 -0.5**
QIZ Qiongzhong 66.00 271 P **P** **01 40 31.3 +1.4**
QIZ S **S** **01 49 18.6 +4.3**
QIZ LR LR
comp=Z,190nm,17.2s
QIZ LR LR
comp=Z,200nm,14.7s
QIZ LR LR
comp=Z,170nm,24.5s
SATY Saty 66.13 310 *e*P **P** **01 40 29.6 -0.9**
baz=310
SATY Saty 66.13 310 *e*P **P** **01 40 29.6 -0.9**
352A Blakely 66.15 69 IAmb IAmb 01 40 34.7
comp=Z,28nm,0.8s
JSC Jenkinsville 66.19 65 IAmb IAmb 01 40 32.5
comp=Z,19nm,0.6s
W57A Gilead 66.25 63 IAmb IAmb 01 40 32.7
comp=Z,23nm,0.8s
DRLN Deer Lake 66.26 39 P **P** **01 40 31.1 0.0**
DRLN IAmb IAmb 01 40 32.3
comp=Z,28nm,0.9s
BIRD Birdtown, Kers 66.37 64 IAmb IAmb 01 40 33.6
comp=Z,37nm,0.8s
DOMB Dombas 66.48 358 *e*P **P** **01 40 32.5 +0.2**
BTLS Baital 66.63 314 *e*P **P** **01 40 32.2 -1.4**
baz=314
BTLS Baital 66.63 314 *e*P **P** **01 40 32.2 -1.4**
MDOK Medeo 66.69 311 *e*P **P** **01 40 33.3 -1.0**
baz=311
MDOK Medeo 66.69 311 *e*P **P** **01 40 33.2 -1.0**
AAA Alma-Ata 66.72 311 *e*P **P** **01 40 33.8 -0.5**
baz=311
AAA Alma-Ata 66.72 311 *e*P **P** **01 40 33.7 -0.5**
NC303 NORSAR Array S 67.23 357 IAmb IAmb 01 40 39.1
comp=Z,13nm,0.8s
255A Hazlehurst 67.23 67 IAmb IAmb 01 40 42.1
comp=Z,44nm,1.4s
NC405 NORSAR Array S 67.33 356 IAmb IAmb 01 40 40.3
comp=Z,77nm,1.2s
CNNC Cliffs of the 67.35 62 P 01 40 38.6
baz=318
NB201 NORSAR Array S 67.41 357 IAmb IAmb 01 40 40.4
comp=Z,29nm,0.8s
NOA NORSAR Array B 67.42 357 P **P** **01 40 36.9 -1.4**
comp=Z,6.0nm,0.8s,baz=264,slow=4.2,SNR=20
KDJ Kajisay 67.42 310 P **P** **01 40 38.1 -0.8**
KDJ pmax pmax
comp=Z,5.0nm,0.8s
KDJ Kajisay 67.42 310 P **P** **01 40 38.1 -0.8**
SGDS Sogindy 67.60 312 *e*P **P** **01 40 39.0 -0.8**
baz=312
SGDS Sogindy 67.60 312 *e*P **P** **01 40 39.0 -0.8**
NHSC New Hope 67.66 65 P 01 40 40.9
baz=318,SNR=6.2
NC602 NORSAR Array S 67.71 356 *e*P **P** **01 40 39.8 -0.3**
AAL Aland 67.73 352 *e*P **P** **01 40 40.2 0.0**
BOOM Boomskoye usch 67.73 311 P **P** **01 40 41.0 +0.2**
BOOM pmax pmax
comp=Z,8.0nm,0.6s
BOOM Boomskoye usch 67.73 311 P **P** **01 40 41.0 +0.2**
BOOM IAmb IAmb 01 40 43.3
comp=Z,8.1nm,0.6s
SKAR Skarslia 67.86 358 *e*P **P** **01 40 41.5 +0.4**
SLVN Son La 67.96 277 P **P** **01 40 43.1 +0.7**
SLVN IAmb IAmb 01 40 44.4
comp=Z,32nm,0.8s
UPP Uppsala 68.24 353 *e*P **P** **01 40 43.3 -0.1**
AAK Ala-Archa 68.29 312 P **P** **01 40 44.3 -0.1**
comp=Z,8.4nm,0.5s,baz=154,slow=4.9,SNR=25
AAK LR LR 02 13 00.7
comp=Z,160nm,19.9s,baz=20,slow=38
AAK Ala-Archa 68.29 312*c i*P **P** **01 40 44.2 -0.1**
AAK pmax pmax
comp=Z,11nm,0.8s
AAK Ala-Archa 68.29 312 P **P** **01 40 43.8 -0.5**
AAK IAmb IAmb 01 40 46.4
comp=Z,9.2nm,0.5s
VSU Vasula 68.67 348 *e*P **P** **01 40 46.4 +0.2**
MTSE Matsula 68.79 349 *e*P **P** **01 40 44.5 -2.3**
KONO Kongsberg 68.87 357⇓*e*P **P** **01 40 44.2 -3.2**
KONO pmax pmax
comp=Z,9.0nm,0.8s
KONO Kongsberg 68.87 357 *e*P **P** **01 40 47.4 +0.1**
ABKAR Akbulak array 68.94 325 P **P** **01 40 47.9 -0.1**
656A Willston 69.09 69 IAmb IAmb 01 40 52.1
comp=Z,22nm,0.9s
LSA Lhasa 69.39 292 P **P** **01 40 52.6 +0.9**
LSA pmax pmax
comp=Z,16nm,0.6s
LSA Lhasa 69.39 292 P **P** **01 40 52.5 +0.9**
LSA IAmb IAmb 01 40 55.4
comp=Z,16nm,0.6s
DZA Taraz 69.53 314 *e*P **P** **01 40 51.0 -0.8**
baz=314
DZA Taraz 69.53 314 *e*P **P** **01 40 51.0 -0.8**
KK31 Karatay Array 69.73 315 IAmb IAmb 01 40 54.9
comp=Z,11nm,0.6s
KKAR Karatay Array 69.73 315 P **P** **01 40 52.6 -0.4**
KKAR pmax pmax
comp=Z,11nm,0.6s
KKAR Karatay Array 69.73 315 P **P** **01 40 52.6 -0.4**
KKAR IAmb IAmb 01 40 54.9
comp=Z,11nm,0.6s
MOKO MOKOCHONG 69.94 287 *e*P **P** **01 40 55.7 +1.0**
MOKO IAmb IAmb 01 40 58.1
comp=Z,30nm,0.8s
SLIT Slitere, Latvi 70.02 350 *e*P **P** **01 40 54.1 -0.4**
KSH Kashi 70.02 309 P **P** **01 40 58.4 +3.4**
KSH pP sP 01 41 13.6 +0.3
KSH S **S** **01 50 06.3 +4.2**
KSH sS SKiKP 01 50 31.3 -5.6
KSH pmax pmax
comp=Z,10.0nm,0.5s
KSH pmax pmax
comp=Z,110nm,4.6s
KSH LR LR
comp=Z,230nm,5.2s
KSH LR LR
comp=Z,220nm,6.3s
KSH LR LR
comp=Z,140nm,5.3s
BELG Belogornoye 70.12 334*ce*P **P** **01 40 55.7 +0.5**
BELG pmax pmax
comp=Z,4.0nm,1.0s
FAKI Fak Fak 70.25 237 P **P** **01 40 55.9 -0.7**
FAKI IAmb IAmb 01 40 57.8
comp=Z,36nm,0.8s
OBN Obninsk 70.25 341⇓*e*P **P** **01 40 55.4 -0.5**
OBN *e* 01 41 03.7
OBN *e**PP **sP** **01 41 13.0 -1.2**
OBN *e* 01 41 16.3
OBN SS SS 01 54 37.0 +3.5
OBN pmax pmax
comp=Z,10.0nm,1.0s
OBN MLR MLR
comp=Z,181nm,24.0s
HOMB Homborsund 70.28 358 *e*P **P** **01 40 56.3 +0.3**
KOHI KOHIMA 70.63 287 *e*P **P** **01 40 59.4 +0.5**
KOHI IAmb IAmb 01 41 03.7
comp=Z,20nm,0.7s
DWPF Disney Wildern 70.67 69 P **P** **01 40 59.3 +0.3**
DWPF IAmb IAmb 01 41 01.3
comp=Z,33nm,0.8s
DWPF Disney Wildern 70.67 69 P 01 40 59.3
baz=319
IUG Iuzhnay 70.71 314 *e*P **P** **01 40 59.2 0.0**
baz=314
IUG Iuzhnay 70.71 314 *e*P **P** **01 40 59.1 0.0**
BORU Boraas 70.76 355 *e*P **P** **01 41 00.2 +1.2**
KAC Achnashellach 70.78 6⇑*e*P **P** **01 40 59.2 +0.1**
MCD Coleburn Disti 70.81 5⇑*e*P **P** **01 40 59.7 +0.4**
CMIG Matias Romero 70.82 87 P **P** **01 40 59.8 -0.2**
comp=Z,3.1nm,0.7s,baz=290,slow=9.7,SNR=5.4
MDO Dochfour 70.89 5 *e*P **P** **01 41 00.1 +0.3**
KPL Plockton 70.91 6 *e*P **P** **01 41 00.0 +0.1**
KPL IAmb IAmb 01 41 01.3
comp=Z,13nm,0.6s
MYLDM Lahad Datu 71.38 254 P **P** **01 41 05.2 +1.8**
MYLDM IAmb IAmb 01 41 06.4
comp=Z,31nm,1.0s
FABU Falkenberg 71.39 355 *i* P **P** **01 41 03.9 +1.1**
DRUM Mains of Drumt 71.51 4 *e*P **P** **01 41 03.5 -0.1**
DRUM IAmb IAmb 01 41 04.4
comp=Z,108nm,1.5s
IDID Didziasalis 71.73 347 *e*P **P** **01 41 05.3 +0.4**
IIGN Ignalina 71.77 347 *e*P **P** **01 41 05.2 0.0**
DEL Delary 71.86 355 *i* P **P** **01 41 05.0 -0.7**
DEL *i* P **P** **01 41 06.1 +0.4**
BLEU Blekinge 71.90 354 *i* P **P** **01 41 05.8 -0.2**
PABE Paberze 71.91 349 *e*P **P** **01 41 05.9 -0.1**
PABE Paberze 71.91 349 IAmb IAmb 01 41 07.1
comp=Z,38nm,0.7s
INVG Invergeldie, C 71.92 5⇑*e*P **P** **01 41 06.0 -0.1**
BTK Batken 72.03 312 P **P** **01 41 07.1 0.0**
BTK pmax pmax
comp=Z,9.0nm,0.9s
BTK Batken 72.03 312 P **P** **01 41 07.1 0.0**
SHL Shillong 72.06 289 *e*P **P** **01 41 07.3 -0.3**
SHL IAmb IAmb 01 41 09.9
comp=Z,26nm,0.6s
SHL Shillong 72.06 289 IAmb IAmb 01 41 09.5
comp=Z,60nm,1.2s

LPSR Galich'ya Gora 72.11 339 *e*P P 01 41 07.3 +0.1
LPSR pmax pmax
comp=Z,20nm,0.8s
EAB Aberfoyle 72.14 5 *e*P P 01 41 08.0 +0.6
MNK Minsk 72.36 346 *i* P P 01 41 06.3 -2.4
comp=E,0.0nm,0.9s
MNK *i* P P 01 41 06.3 -2.4
comp=N,7.0nm,0.9s
MNK *i* P P 01 41 06.3 -2.4
comp=Z,19nm,0.9s
MNK *i* PcP PcP 01 41 26.7 +0.3
MNK *i* PP PP 01 43 42.9 -6.2
MNK *i* PPP PPP 01 45 25.6
MNK *i* S S 01 50 26.9 -1.4
MNK *i* ScS ScS 01 51 28.3 +17
MNK *i* SS SS 01 55 19.6 +14
MNK *i* SSS SSS 01 58 13.8
MNK *i* LQ LQ 02 04 48.8
MNK *i* LR LR 02 08 10.0
MNK *i* LRM MLR 02 14 40.4
comp=Z,126nm,17.9s
MNK *i* LRM MLR 02 14 45.3
comp=E,12nm,17.9s
MNK *i* LRM MLR 02 14 45.3
comp=N,230nm,17.9s
ESY Stoneypath 72.50 4 *e*P P 01 41 09.7 +0.2
PGBU Glenifferbraes 72.51 5 *e*P P 01 41 09.9 +0.3
PGBU IAmb IAmb 01 41 10.5
comp=Z,30nm,0.7s
LUNU Lund 72.72 355 *i* P P 01 41 12.0 +1.2
VRH Novokhopyorsk 72.75 337 *e*P P 01 41 09.7 -1.3
VRH pmax pmax
comp=Z,10.0nm,0.8s
CHTO Chiang Mai 72.91 279 P P 01 41 11.6 -0.9
CHTO pmax pmax
comp=Z,35nm,1.2s
CHTO Chiang Mai 72.91 279 P P 01 41 11.6 -0.9
CHTO IAmb IAmb 01 41 13.9
comp=Z,35nm,1.2s
ESK Eskdalemuir 73.07 5⇑ *e*P P 01 41 13.1 +0.1
ESK Eskdalemuir 73.07 5 P P 01 41 12.1 -0.8
ESK pmax pmax
comp=Z,26nm,1.3s
ESK Eskdalemuir 73.07 5 P P 01 41 12.1 -0.8
ESK IAmb IAmb 01 41 14.4
comp=Z,26nm,1.2s
CLGH Cloghs, Cushen 73.13 7 *e*P P 01 41 13.4 +0.2
CLGH IAmb IAmb 01 41 14.7
comp=Z,15nm,0.6s
TAPN Taplejung 73.14 293 *e*P P 01 41 14.4 +0.2
comp=Z,33nm,0.4s
BSD Bornholm Skovb 73.15 354 *i* P P 01 41 13.7 +0.3
BSD Bornholm Skovb 73.15 354 *i* P P 01 41 13.7 +0.3
CM31 Chiang Mai Arr 73.18 279 P P 01 41 14.8 +0.7
CM31 IAmb IAmb 01 41 15.9
comp=Z,30nm,0.8s
CMAR Chiang Mai Arr 73.18 279 P P 01 41 14.9 +0.8
comp=Z,28nm,0.9s,baz=26,slow=7.2,SNR=72
CMAR Chiang Mai Arr 73.18 279 P P 01 41 14.6 +0.4
NEWG New Galloway 73.22 5 *e*P P 01 41 13.9 +0.2
TOLI2 Tolitoli 73.29 250 IAmb IAmb 01 41 15.5
comp=Z,23nm,0.9s
VSR Storozhevoye 73.34 338 *e*P P 01 41 13.8 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.5s
EDMD Edmundbyers 73.62 4⇑ *e*P P 01 41 16.4 +0.2
EDMD IAmb IAmb 01 41 17.0
comp=Z,35nm,0.6s
ODAN Odare 73.69 293 *e*P P 01 41 17.7 +0.3
comp=Z,8.6nm,0.3s
SAIH SAIHA 73.74 286 *e*P P 01 41 17.7 +0.2
SAIH IAmb IAmb 01 41 18.9
comp=Z,42nm,0.7s
GUN Gumba 73.75 294 *e*P P 01 41 18.1 +0.3
comp=Z,92nm,0.4s
JIRN Jiri 73.77 294 *e*P P 01 41 18.5 +0.5
comp=Z,89nm,0.5s
KESW Keswick, Cumbr 73.81 5 *e*P P 01 41 17.5 +0.3
KESW IAmb IAmb 01 41 17.9
comp=Z,15nm,0.7s
IOMK Kirk Michael 74.05 6⇑ *e*P P 01 41 18.8 +0.1
RAMN Ramite 74.08 293 *e*P P 01 41 19.7 +0.1
comp=Z,90nm,0.5s
WIM Isle of Man 74.16 6⇑ *e*P P 01 41 19.4 0.0
KKN Kakani 74.18 295 *e*P P 01 41 20.3 +0.1
comp=Z,32nm,0.5s
PKI Pulchoki 74.28 295 *e*P P 01 41 20.7 -0.2
comp=Z,16nm,0.4s
PKIN Phulchoki 74.28 295 *e*P P 01 41 20.7 -0.1
comp=Z,21nm,0.5s
GKN Gorkha 74.38 295 *e*P P 01 41 21.0 -0.3
comp=Z,43nm,0.5s
DMN Daman 74.42 295 *e*P P 01 41 21.7 +0.1
comp=Z,28nm,0.5s
HPK Haverah Park 74.50 4⇑ *e*P P 01 41 21.6 +0.3
BSEG Bad Segeberg 74.56 357 *e*P P 01 41 22.6 +1.0
comp=Z,12nm,0.9s,baz=5.6,slow=5.6
DANN Dangsing 74.61 296 *e*P P 01 41 22.9 +0.2
comp=Z,22nm,0.3s
GKP Gorka Klasztor 74.81 352 *e*P P 01 41 23.4 +0.3
GKP Gorka Klasztor 74.81 352 *e*P P 01 41 22.7 -0.4
WPS Cemaes, Angles 74.91 6 *e*P P 01 41 23.6 0.0
WPS IAmb IAmb 01 41 24.2
comp=Z,14nm,0.5s
WME Myndd Eilian 74.93 6 *e*P P 01 41 23.6 -0.2
WLF1 Llynfaes 75.03 6 *e*P P 01 41 23.7 -0.6
WLF1 IAmb IAmb 01 41 24.9
comp=Z,18nm,0.8s
YRC Rhoscolyn 75.06 6 *e*P P 01 41 24.7 +0.2
LBWR Ladybower, Pea 75.06 4 *e*P P 01 41 24.4 -0.1
LBWR IAmb IAmb 01 41 25.8
comp=Z,41nm,1.1s
KOLN Koldanda 75.14 296 *e*P P 01 41 25.7 0.0
comp=Z,20nm,0.4s
PYUN Piuthan 75.23 297 *e*P P 01 41 26.2 0.0
comp=Z,22nm,0.4s
STNC Stoke 75.34 4 *e*P P 01 41 26.9 +0.7
STNC IAmb IAmb 01 41 27.5
comp=Z,56nm,0.6s
FOEL Foel Wylfa 75.50 5⇑ *e*P P 01 41 26.5 -0.6
FOEL IAmb IAmb 01 41 27.2
comp=Z,43nm,0.6s
LLW Llanuwchllyn 75.51 5⇑ *e*P P 01 41 27.3 +0.2
LLW IAmb IAmb 01 41 28.2
comp=Z,14nm,0.7s
CWF Charnwood Fore 75.74 4 *e*P P 01 41 27.1 -1.3
CWF IAmb IAmb 01 41 28.8
comp=Z,9.3nm,0.8s
AKASG Malin Array Be 75.82 344 P P 01 41 28.4 -0.6
comp=Z,7.4nm,0.5s,baz=18,slow=6.0,SNR=26
AKASG Malin Array Be 75.82 344 IAmb IAmb 01 41 29.9
comp=Z,1.7nm,0.6s
AKBB Malin Array Si 75.82 344 *d* iP P 01 41 28.1 -0.8
AKBB Malin Array Si 75.82 344 IAmb IAmb 01 41 28.8
comp=Z,9.5nm,0.6s
NIL Nilore 76.00 307 P P 01 41 29.5 -0.8
NIL pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 76.00 307 P P 01 41 29.5 -0.8
SMLA Simla 76.00 303 *e*P P 01 41 29.8 -0.6
SMLA AMP 01 41 31.3
comp=Z,32nm,0.6s
NRDL Niedersach Rie 76.01 357 *e*P P 01 41 30.5 +0.6
comp=Z,4.2nm,0.9s,baz=5.6,slow=5.6
FLTG Flechtingen 76.13 356 *e*P P 01 41 30.7 +0.1
comp=Z,4.9nm,0.7s,baz=5.6,slow=5.6
IBBN Ibbenburen 76.26 358 *e*P P 01 41 31.6 +0.1
comp=Z,16nm,0.9s,baz=5.6,slow=5.6
MTO3 Montecristo 76.29 84 P P 01 41 31.8 -0.7
RSBS Rosebush, Pemb 76.34 6 *e*P P 01 41 31.9 +0.1
RSBS IAmb IAmb 01 41 32.8
comp=Z,23nm,0.7s
ASSE Asse, Remlinge 76.35 356 *e*P P 01 41 32.5 +0.6
comp=Z,4.2nm,0.9s,baz=5.6,slow=5.6
MCH1 Michaelchurch 76.40 5 *e*P P 01 41 32.4 +0.1
MCH1 IAmb IAmb 01 41 33.1
comp=Z,21nm,0.7s
BBSR BB Station 76.52 55 P P 01 41 32.9 -0.3
BBSR IAmb IAmb 01 41 34.7
comp=Z,48nm,0.8s
MONM Monmouth 76.56 5 *e*P P 01 41 33.2 +0.1
MONM IAmb IAmb 01 41 34.5
comp=Z,23nm,0.8s
CLZ Clausthal 76.65 356 *e*P P 01 41 34.7 +0.9
comp=Z,8.8nm,0.8s,baz=5.6,slow=5.6

STRD Stroud 76.66 4 *e*P P 01 41 33.8 +0.1
STRD IAmb IAmb 01 41 35.1
comp=Z,34nm,0.9s
BOK Bokaro 76.92 292 *e*P P 01 41 36.3 +0.7
BOK IAmb IAmb 01 41 38.8
comp=Z,25nm,0.9s
GTTG Gottingen 76.96 357 *e*P P 01 41 35.5 +0.1
comp=Z,19nm,1.2s,baz=5.6,slow=5.6
CLL Collm 77.06 355 *e*P P 01 41 36.0 0.0
comp=Z,8.0nm,0.7s
CLL *e*PP PP 01 44 24.0 -5.0
CLL Collm 77.06 355 *e*P P 01 41 36.0 0.0
CLL pmax pmax
comp=Z,8.0nm,0.7s
CLL Collm 77.06 355 *e*P P 01 41 35.9 0.0
comp=Z,6.2nm,0.7s,baz=5.6,slow=5.6
NEUB Neuenburg 77.22 355 *e*P P 01 41 36.3 -0.6
comp=Z,14nm,0.9s,baz=5.6,slow=5.6
KBL Kabul 77.32 310 P P 01 41 36.7 -1.3
KBL pmax pmax
comp=Z,8.0nm,0.7s
KBL Kabul 77.32 310 P P 01 41 36.7 -1.3
SBUM Sibu 77.33 258 IAmb IAmb 01 41 39.4
comp=Z,9.4nm,0.6s
KASTN Kahler Asten 77.35 358 *e*P P 01 41 38.4 +0.7
comp=Z,2.8nm,0.8s,baz=5.6,slow=5.6
FBE Freiberg 77.42 354 *e*P P 01 41 38.2 +0.1
comp=Z,7.8nm,0.7s,baz=5.6,slow=5.6
BRG Berggiesshubel 77.44 354 *e*P P 01 41 38.1 +0.1
BRG Amp 01 41 39.9
comp=Z,8.0nm,0.7s
BRG Berggiesshubel 77.44 354 *e*P P 01 41 38.2 +0.1
comp=Z,5.9nm,0.7s,baz=5.6,slow=5.6
CHVC Chvalec 77.57 353 *e*P P 01 41 39.2 +0.3
OSTC Ostas 77.59 353 *e*P P 01 41 39.4 +0.4
DPC Dobruska-Polom 77.78 352 *e*P P 01 41 40.7 +0.6
DPC Dobruska-Polom 77.78 352 *e*P P 01 41 40.7 +0.6
MOX Moxa 77.79 356 *e*P P 01 41 40.6 +0.5
comp=Z,4.3nm,0.8s,baz=5.6,slow=5.6
KWP Kalwaria Pacla 77.83 348 *e*P P 01 41 40.8 +0.5
KWP Kalwaria Pacla 77.83 348 IAmb IAmb 01 41 41.6
comp=Z,15nm,0.6s
TGUH Tegucigalpa,Un 77.84 83 P P 01 41 39.7 -1.3
TGUH IAmb IAmb 01 41 43.8
comp=Z,18nm,0.8s
DYA Yadsworthy 77.90 6 *e*P P 01 41 40.4 -0.2
DYA IAmb IAmb 01 41 41.4
comp=Z,20nm,0.6s
TANN Tannenbergstha 77.98 355 *e*P P 01 41 41.5 +0.3
comp=Z,2.9nm,0.9s,baz=5.6,slow=5.6
MEM Membach 77.99 359 *d*P P 01 41 42.0 +0.8
comp=Z,8.7nm,1.0s
BTNL Ternell 78.01 359 *d*P P 01 41 41.9 +0.6
comp=Z,6.5nm,1.0s
KRLC Kraliky 78.02 352 *e*P P 01 41 40.5 -0.9
KRLC Kraliky 78.02 352 *e*P P 01 41 40.5 -0.9
GUNZ Gunzen 78.04 355 *e*P P 01 41 42.0 +0.5
comp=Z,2.9nm,0.8s,baz=5.6,slow=5.6
AHRW Bad Neuenahr-A 78.04 359 *e*P P 01 41 42.2 +0.8
comp=Z,8.8nm,0.9s,baz=5.6,slow=5.6
GOF Gofitskoye 78.06 333⇓ *e*P P 01 41 42.8 +1.2
CCA1 Carnmenellis 78.06 7 *e*P P 01 41 42.2 -0.3
CCA1 IAmb IAmb 01 41 42.5
comp=Z,30nm,0.9s
WERN Wernitzgruen 78.11 355 *e*P P 01 41 42.5 +0.6
comp=Z,6.1nm,0.8s,baz=5.6,slow=5.6
NKC Novy Kostel 78.16 355 *e*P P 01 41 42.5 +0.3
NKC Novy Kostel 78.16 355 *e*P P 01 41 42.5 +0.3
BCLA Clavier 78.18 360 *d*P P 01 41 42.6 +0.3
comp=Z,5.1nm,1.0s
PRA Prague 78.20 354 *e*P P 01 41 42.6 +0.2
PRA Prague 78.20 354 *e*P P 01 41 42.6 +0.2
BGES Gesves 78.22 360 *d*P P 01 41 42.2 -0.3
comp=Z,5.1nm,1.1s
BGES *d*PcP PcP 01 41 50.7 -1.0
MORC Moravsky Berou 78.25 352 *e*P P 01 41 42.7 0.0
PRU Pruhonice 78.28 354 *e*P P 01 41 43.2 +0.4
PRU Pruhonice 78.28 354 *e*P P 01 41 43.2 +0.4
BMRD Maredsous 78.30 0 *d*P P 01 41 43.0 +0.1
comp=Z,8.9nm,0.9s
TNS Taunus Mts 78.33 358 *e*P P 01 41 43.6 +0.4
comp=Z,6.7nm,0.8s,baz=5.6,slow=5.6
MANZ Manzenberg 78.43 355 *e*P P 01 41 44.0 +0.3
comp=Z,2.1nm,0.8s,baz=5.6,slow=5.6
SORM Soroca 78.45 344 ⇑P P 01 41 43.4 -0.3
SORM Soroca 78.45 344 ⇑P P 01 41 43.4 -0.3
DOU Dourbes 78.51 0 *d*P P 01 41 44.3 +0.3
comp=Z,5.7nm,0.8s
ROTZ Rotzenmuhle 78.64 355 *e*P P 01 41 45.1 +0.3
comp=Z,2.2nm,0.8s,baz=5.6,slow=5.6
LANS Liptovska Anna 78.68 350 *e*P P 01 41 46.4 +1.3
LANS pmax pmax
comp=Z,4.0nm,0.6s
LANS Liptovska Anna 78.68 350 *e*P P 01 41 46.4 +1.3
CRVS Cervenica-Dubn 78.70 349 *e*P P 01 41 45.7 +0.6
CRVS Cervenica-Dubn 78.70 349 *e*P P 01 41 45.7 +0.6
MILB Miltenberg 78.70 357 *e*P P 01 41 45.3 +0.2
comp=Z,5.2nm,0.8s,baz=5.6,slow=5.6
GRF Grafenberg Arr 78.76 356 *e*P P 01 41 46.3 +0.8
comp=Z,8.0nm,0.7s,baz=5.6,slow=5.6
GRFO Grafenberg 78.77 356 P P 01 41 44.9 -0.6
GRFO pmax pmax
comp=Z,9.0nm,0.8s
GRFO Grafenberg 78.77 356 P P 01 41 44.9 -0.6
VRAC Vranov 78.79 352 ⇑P P 01 41 45.0 -0.7
VRAC Vranov 78.79 352 *e*P P 01 41 45.9 +0.2
VRAC Vranov 78.79 352 ⇑P P 01 41 45.0 -0.7
TREC Trest 78.90 353 *e*P P 01 41 46.6 +0.4
TREC Trest 78.90 353 *e*P P 01 41 46.6 +0.4
WLF Walferdange 78.93 359 *d*P P 01 41 47.3 +0.9
comp=Z,7.4nm,0.9s
WLF Walferdange 78.93 359 *e*P P 01 41 47.4 +1.0
comp=Z,6.3nm,0.8s,baz=5.6,slow=5.6
KRUC Moravsky 79.06 352 *e*P P 01 41 47.3 +0.2
CTAO Charters Tower 79.08 217 P P 01 41 46.4 -1.1
CTAO pmax pmax
comp=Z,16nm,1.0s
CTAO Charters Tower 79.08 217 P P 01 41 46.4 -1.1
JAVC Velka Javorina 79.14 351 *e*P P 01 41 49.0 +1.4
KIV Kislovodsk 79.17 333 *e*P P 01 41 49.1 +1.2
KIV pmax pmax
comp=Z,29nm,1.1s
KHC Kasperske Hory 79.19 354⇑ *e*P P 01 41 47.9 0.0
KHC pmax pmax
comp=Z,12nm,0.9s
KHC Kasperske Hory 79.19 354 *e*P P 01 41 48.3 +0.4
WET Wettzell 79.22 355 *e*P P 01 41 47.4 -0.6
comp=Z,1.3nm,0.8s,baz=5.6,slow=5.6
JSA Saint Aubin 79.24 5 *e*P P 01 41 47.1 -1.0
JSA IAmb IAmb 01 41 47.9
comp=Z,22nm,0.8s
KSM Kuching 79.26 259 P P 01 41 48.5 -0.1
KSM IAmb IAmb 01 41 50.3
comp=Z,32nm,1.3s
GEYT Alibeck 79.27 320 P P 01 41 49.0 +0.5
comp=Z,5.0nm,0.7s,baz=333,slow=5.3,SNR=11
GEYT Alibeck 79.27 320 P P 01 41 48.8 +0.3
MTN Manton Dam 79.27 233 P P 01 41 47.5 -1.1
KBZ Khabaz 79.32 333 P P 01 41 48.8 +0.2
comp=Z,1.9nm,0.5s,baz=237,slow=13,SNR=8.3
KBZ Khabaz 79.32 333⇓ *e*P P 01 41 48.6 0.0
KBZ pmax pmax
comp=Z,4.0nm,1.0s
TRPA Tarpa 79.32 348 ⇑P P 01 41 48.5 0.0
NCK Nalchik 79.33 332⇓ *e*P P 01 41 48.7 0.0
NCK pmax pmax
comp=Z,6.0nm,1.0s
VYHS Vyhne 79.39 351 *e*P P 01 41 49.0 +0.1
VYHS Vyhne 79.39 351 *e*P P 01 41 49.0 +0.1
BUR08 Bucovina Ar. S 79.43 346 P P 01 41 49.3 0.0
BURAR Bucovina Array 79.45 346 ⇑P P 01 41 49.6 +0.2
BURAR Bucovina Array 79.45 346 ⇑P P 01 41 49.6 +0.2
CKRC Cesky Krumlov 79.46 354 *e*P P 01 41 49.5 +0.2
GEC2 GERESS Array S 79.47 354 P P 01 41 48.7 -0.8
GEC2 GERESS Array S 79.47 354 *e*P P 01 41 49.6 +0.1
comp=Z,2.4nm,0.8s,baz=5.6,slow=5.6
GERES GERESS Array B 79.47 354 P P 01 41 49.6 +0.1
comp=Z,2.0nm,0.7s,baz=35,slow=4.9,SNR=19
GERES GERESS Array B 79.47 354 P P 01 41 49.1 -0.4
GERES GERESS Array B 79.47 354 P P 01 41 49.1 -0.4
SMOL Smolenice 79.51 351 *e*P P 01 41 50.7 +1.1
SMOL Smolenice 79.51 351 *e*P P 01 41 50.7 +1.1
MILM Milestii Mici 79.54 344 ⇑P P 01 41 49.6 -0.1
BIZ Bicaz 79.98 345 ⇑P P 01 41 52.2 0.0
ARCR ARCALIA 80.10 347 ⇑P P 01 41 53.7 +0.9

LTVH Ltavrtes, Hu 80.14 348 ⇑P P 01 41 53.3 +0.4
CONA Conrad Observa 80.22 352 *e*P P 01 41 54.5 +0.9
comp=Z,3.1nm,0.5s
TESR Tescani 80.30 345 ⇑P P 01 41 54.3 +0.4
SOC Sochi 80.32 335 *e*P P 01 41 50.8 -3.2
SOC *e* 01 44 56.3
SOC *e*S S 01 51 52.5 -3.5
SOC *e*SSS SSS 02 00 30.0
ECH Echery 80.37 358 P P 01 41 54.3 +0.1
ECH pmax pmax
comp=Z,6.0nm,1.0s
ECH Echery 80.37 358 P P 01 41 54.3 +0.1
BIR Birlad 80.38 344 ⇑P P 01 41 55.4 +1.1
BIR Birlad 80.38 344 ⇑P P 01 41 55.4 +1.1
CLF Chambon-Foret 80.56 2 P P 01 41 55.1 -0.1
CLF IAmb IAmb 01 41 59.6
comp=Z,21nm,0.8s
CJR Cluj-Napoca 80.57 347 ⇑P P 01 41 56.9 +1.5
CJR Cluj-Napoca 80.57 347 ⇑P P 01 41 56.9 +1.5
DRGR 80.61 348 ⇑P P 01 41 56.0 +0.4
DRGR 80.61 348 ⇑P P 01 41 56.0 +0.4
OZUR 80.85 345 ⇑P P 01 41 58.2 +1.3
VRI Vrincioaia 80.92 345 ⇑P P 01 41 58.1 +0.9
VRI Vrincioaia 80.92 345 ⇑P P 01 41 58.1 +0.9
ARSA Arzberg 80.93 353 *e*P P 01 41 58.4 +1.1
comp=Z,2.7nm,0.6s
PLOR Plostina 80.95 345 ⇑P P 01 41 58.0 +0.6
PLOR Plostina 80.95 345 ⇑P P 01 41 58.0 +0.6
ODBI Odobesti 80.97 344 ⇑P P 01 41 59.3 +1.8
RETA Reutte 80.99 356 *e*P P 01 41 58.3 +0.7
comp=Z,0.4nm,0.3s
DOPR Dopca 81.03 346 ⇑P P 01 41 59.4 +1.6
WATA Walderalm 81.10 355 *e*P P 01 41 58.8 +0.4
comp=Z,1.2nm,0.4s
MOTA Moosalm 81.11 356 *e*P P 01 41 59.0 +0.5
comp=Z,0.9nm,0.3s
WTTA Wattenberg 81.17 355 *e*P P 01 41 59.1 +0.4
comp=Z,2.6nm,0.5s
TLCR 81.22 343 ⇑P P 01 41 59.5 +0.7
TLCR 81.22 343 ⇑P P 01 41 59.5 +0.7
SQTA Sankt Quirin 81.23 356 *e*P P 01 41 59.4 +0.4
comp=Z,1.1nm,0.3s
KBA Koelnbreinsper 81.25 354 *e*P P 01 41 59.9 +0.7
comp=Z,5.5nm,0.5s
SIRR Siria 81.26 348 ⇑P P 01 41 59.7 +0.7
CFR Carcaliu 81.35 344 ⇑P P 01 42 00.2 +0.8
CFR Carcaliu 81.35 344 ⇑P P 01 42 00.2 +0.8
MLR Muntele Rosu 81.41 345 ⇑P P 01 42 01.6 +1.6
MLR Muntele Rosu 81.41 345 ⇑P P 01 42 01.6 +1.6
MLR Muntele Rosu 81.41 345 P P 01 42 00.7 +0.7
MLR IAmb IAmb 01 42 02.2
comp=Z,9.4nm,0.6s
NEHR Nehoiu 81.42 345 ⇑P P 01 42 00.4 +0.5
FETA Feichten 81.45 356 *i* P P 01 42 00.4 +0.2
comp=Z,3.5nm,0.9s,SNR=6.4
SOKA Soboth 81.53 353 *i* P P 01 42 00.5 -0.1
comp=Z,2.3nm,0.5s,SNR=6.1
VOIR 81.60 346 ⇑P P 01 42 02.1 +1.1
VOIR 81.60 346 ⇑P P 01 42 02.1 +1.1
TPGR Topolog 81.61 343 ⇑P P 01 42 02.0 +1.1
ABTA Abfaltersbach 81.64 355 *e*P P 01 42 01.8 +0.7
comp=Z,1.2nm,0.5s
ARR Arges 81.73 346 ⇑P P 01 42 02.9 +1.2
OBKA Obir 81.74 353 *e*P P 01 42 02.2 +0.6
comp=Z,3.1nm,0.7s
HARR Harsova 81.86 344 ⇑P P 01 42 02.0 -0.1
HARR Harsova 81.86 344 ⇑P P 01 42 02.0 -0.1
GZR Gura Zlata 81.98 347 ⇑P P 01 42 03.2 +0.3
GZR Gura Zlata 81.98 347 ⇑P P 01 42 03.2 +0.3
TLBR Topalu 81.98 343 ⇑P P 01 42 03.0 +0.2
TIRR Tirgusor 82.00 343 IAmb IAmb 01 42 04.5
comp=Z,39nm,0.7s
KULM Kulim 82.24 269 P P 01 42 04.0 -0.6
KULM IAmb IAmb 01 42 07.1
comp=Z,17nm,0.7s
HUMR Humele 82.50 346 ⇑P P 01 42 04.9 -0.7
HERR Herculane 82.53 347 ⇓P P 01 42 05.6 -0.1
SGRR Singureni 82.64 345 ⇑P P 01 42 06.6 +0.3
MDVR Moldovita 82.72 348 ⇑P P 01 42 06.6 -0.1
TEOL Teolo 83.06 355 P P 01 42 08.6 +0.2
TEOL IAmb IAmb 01 42 09.7
comp=Z,15nm,1.0s
ZIMR 83.29 345 ⇑P P 01 42 10.3 +0.7
ZIMR 83.29 345 ⇑P P 01 42 10.3 +0.7
PLVB Pleven 83.67 346 ⇑P P 01 42 11.8 +0.2
WB0 Warramunga Arr 83.70 227 IAmb IAmb 01 42 12.2
comp=Z,12nm,0.9s
BOVS Bovan 83.85 348 ⇑P P 01 42 12.5 0.0
WRAB Tennant Creek 83.86 227⇓ *e*P P 01 42 12.5 -0.3
WRAB pmax pmax
comp=Z,12nm,1.0s
WB2 Warramunga Arr 83.87 227 P P 01 42 12.2 -0.6
WB2 IAmb IAmb 01 42 13.3
comp=Z,15nm,0.9s
WRA Warramunga Arr 83.88 227 P P 01 42 12.2 -0.6
comp=Z,6.1nm,0.6s,baz=34,slow=5.9,SNR=64
VTS Vitosha 84.63 346 ⇑P P 01 42 16.5 -0.2
VTS Vitosha 84.63 346 ⇑P P 01 42 16.5 -0.2
OSSC Osservatorio P 84.92 355 IAmb IAmb 01 42 21.7
comp=Z,8.3nm,0.7s
RPSI Rantau Prapat 85.33 268 IAmb IAmb 01 42 25.1
comp=Z,35nm,0.9s
BRTR Keskin Array B 85.46 338 P P 01 42 20.4 -0.5
comp=Z,4.1nm,0.8s,baz=31,slow=5.0,SNR=8.3
BRTR Keskin Array B 85.46 338 *i* P P 01 42 21.5 +0.6
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 85.46 338 P P 01 42 21.2 +0.3
NRCA Norcia 85.50 354 IAmb IAmb 01 42 25.1
comp=Z,9.6nm,0.8s
STIP Stip 85.69 347 *i* P P 01 42 21.9 0.0
PGAV Gavieira, Arco 85.95 10 *e*P P 01 42 24.0 +0.7
PGAV Gavieira, Arco 85.95 10 *e*LR LR 02 13 40.9
comp=Z,529nm,20.0s
HYB Hyderabad 86.14 293 *i* P P 01 42 23.0 -1.4
HYB Hyderabad 86.14 293 *e*P P 01 42 22.9 -1.6
HYB IAmb IAmb 01 42 24.2
comp=Z,16nm,0.6s
PBRG Braganca 86.27 9 *e*P P 01 42 25.4 +0.7
FITZ Fitzroy Crossi 86.49 235 P P 01 42 26.1 +0.2
comp=Z,18nm,0.8s,baz=149,slow=3.7,SNR=8.0
FITZ Fitzroy Crossi 86.49 235 P P 01 42 25.6 -0.3
FITZ IAmb IAmb 01 42 27.3
comp=Z,30nm,1.1s
POLO Lamas de Olo 86.59 9 *e*P P 01 42 27.0 +0.6
FNA Florina 86.69 347 IAmb IAmb 01 42 29.8
comp=Z,5.5nm,0.6s
PVRL Vila Real 86.69 9 *e*P P 01 42 27.4 +0.6
MVO Moncorvo 86.87 9 *e*P P 01 42 27.9 +0.1
MVO Moncorvo 86.87 9 *e*LR LR 02 14 03.6
comp=Z,440nm,20.0s
OBIP Obispado Ponce 86.99 65 P P 01 42 28.9 +0.3
OBIP IAmb IAmb 01 42 33.5
comp=Z,18nm,0.9s
GCPR Guaynabo City 87.07 64 IAmb IAmb 01 42 31.1
comp=Z,24nm,0.9s
SJG San Juan 87.19 64 P P 01 42 29.4 -0.1
SJG pmax pmax
comp=Z,12nm,0.6s
SJG San Juan 87.19 64 P P 01 42 29.4 -0.1
SJG IAmb IAmb 01 42 35.0
comp=Z,12nm,0.6s
PVIS Viseu 87.23 10 *e*P P 01 42 30.0 +0.5
ASAR Alice Springs 87.32 225 P P 01 42 30.1 +0.2
comp=Z,16nm,0.9s,baz=30,slow=4.6,SNR=89
ASAR Alice Springs 87.32 225 P P 01 42 29.6 -0.2
MTP Monte Pirata 87.54 64 IAmb IAmb 01 42 34.2
comp=Z,22nm,0.8s
MTE Manteigas 87.58 9 *e*P P 01 42 31.9 +0.7
MTE Manteigas 87.58 9 *e*LR LR 02 14 48.2
comp=Z,343nm,22.0s
PCAS Casmilo, Conde 87.82 10 *e*P P 01 42 32.8 +0.5
PCBR Castelo Branco 88.14 9 *e*P P 01 42 35.2 +1.5
PMRV Marv??o 88.56 9 *e*P P 01 42 39.1 +3.3
PMRV Marv??o 88.56 9 *e*LR LR 02 15 25.2
comp=Z,371nm,20.0s
ESDC Sonseca Array 88.61 7 P P 01 42 35.6 -0.4
comp=Z,2.7nm,0.8s,baz=347,slow=4.5,SNR=20
MOTC Monteria, Cord 89.04 77 *e*P P 01 42 38.5 +0.2
PBAR Barrancos 89.83 9 *e*P P 01 42 42.2 +0.5
PVAQ Vaqueiros 90.53 10 *e*LR LR 02 15 52.6
comp=Z,310nm,18.0s
OCAC Ocana 90.88 76 *e*P P 01 42 48.1 +1.0
CBOC Ciudad Bolivar 91.11 79 *e*P P 01 42 47.2 -1.0

STKA	Stephens Creek	91.51	216	P		P	01 42 50.1	+0.8
	comp=Z,12nm,0.8s,baz=352,slow=5.8,SNR=15							
STKA	Stephens Creek	91.51	216	P		P	01 42 49.2	-0.1
STKA	Stephens Creek	91.51	216	P		P	01 42 49.2	-0.1
PTBC	PUERTO BERRIO,	91.53	78	eP		P	01 42 49.1	-0.9
GUY2C	Guyana, Caldas	92.01	79	eP		P	01 42 53.3	+0.6
NORC	Norcasia	92.05	78	eP		P	01 42 52.3	-0.1
YOTC	Yotoco, Valle	92.38	81	eP		P	01 42 53.3	-0.8
RUSC	La Rusia	92.87	77	eP		P	01 42 55.8	-1.0
ORTC	Ortega, Tolima	93.12	80	eP		P	01 42 57.5	+0.1
TORD	Torodi Ar. Bea	115.30	3	PKP		PKiKP	01 48 24.4	-0.4
	comp=Z,2.2nm,0.5s,baz=352,slow=2.3,SNR=32							
TORD				PKKPbc		PKKPbc	01 58 58.0	+0.9
	comp=Z,1.2nm,0.7s,baz=188,slow=2.2,SNR=7.1							
H03N2	Juan Fernandez	119.12	108	T		T	04 00 33.8	
	baz=317,slow=77,SNR=54							
H03N1	Juan Fernandez	119.14	108	T		T	04 00 35.1	
	baz=317,slow=77,SNR=47							
H03N3	Juan Fernandez	119.14	108	T		T	04 00 34.4	
	baz=317,slow=77,SNR=57							
DBIC	Dimbokro	121.20	11	PKP		PKPdf	01 48 36.0	-0.1
	comp=Z,4.5nm,0.4s,baz=8.1,slow=1.7,SNR=18							
KMBO	Kilima Mbogo	122.64	320	PKP		PKiKP	01 48 40.5	+1.1
	comp=Z,5.0nm,0.6s,baz=0.6,slow=3.9,SNR=11							
BDFB	Brasilia	124.89	69	PKP		PKPdf	01 48 43.1	-0.1
	comp=Z,2.7nm,0.8s,baz=196,slow=5.9,SNR=3.2							
BI02	San Fabin de	125.89	106	PKPdf		PKPdf	01 48 44.6	+0.1
CPUP	Villa Florida	127.34	86	PKP		PKPdf	01 48 47.4	0.0
	comp=Z,1.3nm,0.5s,baz=318,slow=2.5,SNR=3.2							
LL01	San Ignacio de	128.92	112			PKiKP	01 48 50.3	-0.3
PLCA	Paso Flores	128.97	109	PKP		PKiKP	01 48 50.8	-0.1
	comp=Z,5.9nm,0.8s,baz=280,slow=3.1,SNR=13							
OPO	Ambohidratompo	133.09	299	PKP		PKiKP	01 48 59.8	-0.1
	comp=Z,4.6nm,0.8s,baz=187,slow=5.0,SNR=6.4							
QSPA	South Pole Qui	141.53	180	PKhKP		PKPpre	01 49 06.9	
	comp=Z,4.8nm,0.8s,baz=177,slow=1.0,SNR=6.8							
QSPA				PKP		PKiKP	01 49 14.3	-1.2
	comp=Z,11nm,0.9s,baz=21,slow=1.2,SNR=11							
QSPA	South Pole Qui	141.53	180	PKPdf		PKPdf	01 49 13.3	+0.6
TSUM	Tsumeb	145.97	338	PKPbc		PKPab	01 49 24.5	+1.1
MAW	Mawson	148.16	218	PKPbc		PKPbc	01 49 27.6	+0.2
	comp=Z,31nm,0.8s,baz=84,slow=1.9,SNR=17							
MAW	Mawson	148.16	218			PKPbc	01 49 28.1	+0.7
LBTB	Lobatse	148.92	321	PKP2		PKPbc	01 49 31.2	+0.4
LBTB	Lobatse	148.92	321	PKPbc		PKPbc	01 49 31.2	+0.4
BOSA	Boshof	152.26	319	PKPbc		PKiKP	01 49 39.0	+0.1
	comp=Z,60nm,0.5s,baz=24,slow=2.3,SNR=226							
BOSA	Boshof	152.26	319	PKIKP		PKPbc	01 49 38.3	-0.4
BOSA	Boshof	152.26	319	PKPbc		PKPbc	01 49 38.3	-0.4
SYO	Syowa Base	156.16	211	eP	eP	PKPdf	01 49 35.2	-0.7
VNA3	Neumayer Olymp	159.40	167	PKPdf		PKPdf	01 49 38.7	-1.1
SNAA	Sanae	159.74	173	PKPdf		PKPdf	01 49 40.1	-0.2
SNAA	Sanae	159.74	173	PKPab		PKPab	01 50 18.9	-0.6
	comp=Z,1.4nm,0.4s,baz=202,slow=9.0,SNR=5.8							
VNA2	Neumayer--Watz	160.00	168	PKPdf		PKPdf	01 49 40.6	0.0
VNA1	Neumayer--Stat	160.13	167	PKPdf		PKPdf	01 49 38.7	-1.9

IDC ***24*** *01:34:53.0±0.4, 40.36N×127.18W, h0km, mb5.0/40, mb1 5.0/49, mb1mx4.9/60, mbtmp4.9/49, ML3.9/7, MS4.7/36, Ms1 4.6/36, ms1mx4.6/41 Error ellipse: s-maj=12.4km s-min=7.1km az=25.0*

MOS ***24*** *01:34:53.4±0.8, 40.40N×127.18W, h12km, mb5.6/66, MS4.9/28, Error ellipse: s-maj=8.9km s-min=7.6km az=34.5*

BJI ***24*** *01:34:53.0±0.0, 40.40N×127.10W, h10km, mB5.5/44, mb5.4/64, Ms5.2/46, Ms7 4.8/48*

BGR ***24*** *01:34:55.3±0.0, 40.61N×127.94W, h10km, mb5.5, Ms4.9*

NEIC ***24*** *01:34:55.9, 40.43N×127.19W, h18km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.42; Mθθ=0.14; Mϕϕ=-0.56; Mrθ=0.14; Mrϕ=-1.87; Mθϕ=0.17; Fault plane solution: M₀=1.95000×10¹⁷ NP1:ϕs=264.77000°, δ=87.58000°, λ=-176.12000°. NP2:ϕs=174.61000°, δ=86.12000°, λ=-2.42000°. Principal axes: T 1.6954, Plg=1.0000°, Azm=40.0000°; N 0.4345, Plg=85.0000°, Azm=297.0000°; P -2.1298, Plg=4.0000°, Azm=130.0000°;*

NEIC ***24*** *01:34:55.5±2.5, 40.46N±0.06×127.15W±0.08, h10km±1km, mb5.5/367, Ms_20 5.0/537, Mwb5.5/23, Mww5.4, Mwc5.5(GCMT), Mwr5.3/10(NCEDC) Error ellipse: s-maj=11.7km s-min=9.7km az=225.0*

NCEDC ***24*** *01:34:56.1±2.5, 40.33N±0.06×127.15W±0.09, h18km±1km, Error ellipse: s-maj=12.1km s-min=9.7km az=227.0*

NEIC ***24*** *01:34:56.1, 40.33N×127.15W, h21km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.84; Mθθ=0.75; Mϕϕ=0.09; Mrθ=0.22; Mϕθ=-1.01; Mϕr=-0.36; Fault plane solution: M₀=1.35000×10¹⁷ NP1:ϕs=327.35000°, δ=58.86000°, λ=-60.29000°. NP2:ϕs=99.54000°, δ=41.98000°, λ=-129.36000°. Principal axes: T 1.5450, Plg=9.0000°, Azm=37.0000°; N -0.5658, Plg=25.0000°, Azm=131.0000°; P -0.9792, Plg=63.0000°, Azm=288.0000°;*

NEIC ***24*** *01:34:58, 40.46N×127.30W, h17km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.93; Mθθ=0.51; Mϕϕ=0.43; Mrθ=-0.70; Mϕθ=-1.63; Mϕr=-0.42; Fault plane solution: M₀=1.99000×10¹⁷ NP1:ϕs=352.00000°, δ=59.00000°, λ=-29.00000°. NP2:ϕs=98.00000°, δ=66.00000°, λ=-146.00000°. Principal axes: T 2.1119, Plg=4.0000°, Azm=223.0000°; N -0.2657, Plg=49.0000°, Azm=129.0000°; P -1.8462, Plg=41.0000°, Azm=317.0000°;*

GCMT ***24*** *01:34:59.1±0.1, 40.51N±0.01×127.28W±0.01, h18km, MW5.4/156, Moment Tensor Solution. s105,c198; s156,c310; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.93±.02; Mθθ=0.51±.02; Mϕϕ=0.42±.02; Mrθ=-0.06±.04; Mrϕ=-1.52±.02; Mθr=0.61±.04; Best double couple: M₀=1.76500×10¹⁷ NP1:ϕs=96.00000°, δ=55.00000°, λ=-152.00000°. NP2:ϕs=350.00000°, δ=67.00000°, λ=-38.00000°. Principal axes: T 2.0370, Plg=8.0000°, Azm=45.0000°; N -0.5450, Plg=47.0000°, Azm=143.0000°; P -1.4920, Plg=42.0000°, Azm=308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *01:35:00, 40.40N×127.25W, h20km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.90; Mθθ=0.75; Mϕϕ=0.15; Mrθ=-0.40; Mϕθ=-1.61; Mθr=0.29; Fault plane solution: M₀=1.88000×10¹⁷ NP1:ϕs=355.00000°, δ=77.00000°, λ=0.00000°. NP2:ϕs=265.00000°, δ=90.00000°, λ=167.00000°. Principal axes: T 2.1659, Plg=9.0000°, Azm=220.0000°; N -0.9738, Plg=78.0000°, Azm=83.0000°; P -1.1921, Plg=8.0000°, Azm=311.0000°;*

ISC 24 01:34:55.5±0.4, 40°48N±0.03×127°25W±0.03, h11km±2km, h11km:pP-P,n927,σ1§62/639,mb5.4/327,MS5.0/328, 17C-47D,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
G04D	G04D	0.48	132	P		Pb	01 35 04.8	-0.8
G04D				S		Sb	01 35 26.2	+14
G05D7	G05D7	0.55	233	P		Pg	01 35 03.7	-2.5
G05D7				S		Sn	01 35 30.2	+12
G13D	G13D	0.59	297	S		Sg	01 35 12.7	-1.8
G21D	G21D	0.66	347	S		Sg	01 35 08.2	-8.6
G03D7	G03D7	0.94	116	S		Sg	01 35 24.0	-1.6
G20D	G20D	1.01	17	S		Sb	01 35 11.0	-17
G22D	G22D	1.11	329	S		Sb	01 35 24.0	-6.9
G10D	G10D	1.33	76	P		Pn	01 35 14.8	-4.8
G10D				S		Sb	01 35 34.1	-2.9
G29D	G29D	1.75	351	S		Sn	01 35 40.3	-7.3
G29D				P		Pn	01 35 21.2	-4.3
FS13D	FS13D	1.87	89	S		Sb	01 35 52.2	-0.5
FS13D				P		Pn	01 35 26.8	-0.3
FS09D	FS09D	1.87	91	P		Pb	01 35 29.6	+0.1
FS09D				S		Sb	01 35 52.2	-0.5
FS06D	FS06D	1.87	93	P		Pb	01 35 29.6	+0.1
FS06D				S		Sb	01 35 51.6	-1.2
FS02D	FS02D	1.88	94	P		Pb	01 35 29.6	-0.1
FS02D				S		Sb	01 35 52.2	-1.0
FS16D	FS16D	1.91	87	S		Sn	01 35 49.3	-2.5
FS16D				P		Pn	01 35 27.4	-0.5
G09D	G09D	1.93	84	S		Sn	01 35 49.9	-2.5
G09D				P		Pn	01 35 27.4	-0.8
FS10D	FS10D	1.95	91	S		Sb	01 35 54.4	-0.8
FS10D				P		Pn	01 35 27.9	-0.5
FS44D	FS44D	1.96	81	P		Pn	01 35 26.8	-1.8
FS44D				S		Sn	01 35 53.3	+0.2
FS07D	FS07D	1.99	93	P		Pn	01 35 27.0	-1.9
FS07D				S		Sn	01 35 51.0	-2.6
G36D	G36D	2.00	8	P		Pn	01 35 25.2	-3.5
G36D				S		Sn	01 35 51.6	-1.8
G01D	G01D	2.08	102	P		Pn	01 35 28.7	-1.5
G01D				S		Sb	01 35 57.8	-1.3
FS04D	FS04D	2.11	95	S		Sb	01 35 57.8	-2.1
FS04D				P		Pb	01 35 32.4	-1.3
G37D	G37D	2.15	359	S		Sn	01 35 54.4	-2.9
G37D				P		Pn	01 35 24.5	-6.3
G35D	G35D	2.17	17	P		Pn	01 35 27.9	-3.4
G35D				S		Sn	01 35 54.4	-3.5
KSMM	Slide Mountain	2.37	96			Pn	01 35 31.3	-3.1
JCC	Jacoby Creek,	2.47	81			Pn	01 35 32.8	-2.9
JCC						Sn	01 36 01.6	-4.4
KHMM	Horse Mountain	2.71	81	Pn		Pn	01 35 35.9	-3.2
KRMB	Red Mountain	2.74	67			Pn	01 35 36.8	-2.7
G33D	G33D	2.85	39	S		Sn	01 35 40.3	-35
KBSM	Bell Springs	2.86	100			Pn	01 35 39.0	-2.2
KBO	Bosley Butte	2.86	52	Pn		Pn	01 35 39.1	-2.0
KCPM	Cahto Peak	2.92	105	Pn		Pn	01 35 39.0	-3.1
KOMM	Orleans Mounta	2.99	73			Pn	01 35 40.9	-2.0
GNAM	Navarro Ridge	3.07	114			Pn	01 35 41.5	-2.5
J11D	J11D	3.13	12	P		Pn	01 35 44.3	-0.1
J11D				S		Sn	01 36 22.0	+0.6
L02E	Cave Junction	3.22	57	P			01 35 45.2	
	baz=237,SNR=643							
KEBM	Edson Butte	3.24	41			Pn	01 35 44.3	-2.0
O02D	Mt. Diablo Mer	3.42	94	P			01 35 47.1	
	baz=274,SNR=301							
M02C	Callahan	3.45	73	P			01 35 47.4	
	baz=253,SNR=113							
K02D	Willamette Mer	3.48	49	P			01 35 48.9	
	baz=229,SNR=552							
N02D	Trinity Center	3.49	80	P			01 35 47.4	
	baz=261,SNR=130							
HOPS	Hopland Field	3.55	113			Pn	01 35 46.9	-3.7
GASB	Alder Springs	3.58	102			Pn	01 35 49.2	-1.8
WDC	Whiskeytown Da	3.59	87	P		Pn	01 35 48.8	-2.3
WDC	Whiskeytown Da	3.59	87	Pn		Pn	01 35 48.8	-2.3
J01E	Myrtle Point	3.65	42	P			01 35 50.6	
	baz=221,SNR=48							
YBH	Yreka Blue Hor	3.65	69	Pn		Pn	01 35 51.0	-1.0
	144nm,0.3s,baz=268,slow=13,SNR=770							
YBH						Sn	01 36 35.1	0.0
	44nm,0.3s,baz=324,slow=17,SNR=3.9							
YBH						LR	01 36 57.2	
	comp=Z,9μm,19.1s,baz=270,slow=34							
YBH	Yreka Blue Hor	3.65	69	P		Pn	01 35 50.3	-1.7
YBH	Yreka Blue Hor	3.65	69	Pn		Pn	01 35 50.3	-1.7
FTR	Fort Ross	3.72	120			Pn	01 35 50.7	-2.2
J19D	J19D	3.77	11	P		Pb	01 36 00.1	-1.7
J19D				S		Sg	01 36 54.2	-2.2
GDXM	Geysers	3.83	114			Pn	01 35 52.4	-2.0
HUMO	Hull Mountain	3.86	55	Pn		Pn	01 35 53.7	-1.1
J20D	J20D	3.88	2	P		Pb	01 36 00.9	-2.7
J20D				S		Sb	01 36 51.4	+0.9
L04D	Klamath Falls	4.11	63	P			01 35 59.0	
	baz=244,SNR=1000							
MCCM	Marconi Confer	4.12	123			Pn	01 35 55.2	-3.1
O03E	Paynes Creek	4.17	91	P			01 35 56.8	
	baz=272,SNR=191							
M04C	Macdoel	4.29	71	P			01 36 00.6	
	baz=252,SNR=397							
I03D	Drain, OR	4.33	41	P			01 36 00.2	
	baz=221,SNR=87							
I02D	Swisshome	4.42	34	P			01 36 01.9	
	baz=214,SNR=41							
J27D	J27D	4.42	9	S		Sb	01 37 05.5	-0.6
ORV	Oroville	4.51	100	P		Pn	01 36 01.5	-2.3
ORV	Oroville	4.51	100			Pn	01 36 01.5	-2.3
J28D	J28D	4.55	1	P		Pn	01 36 09.6	+5.8
J28D				S		Sn	01 36 59.2	+2.7
K04D	Chiloquin, OR	4.65	61	P			01 36 05.9	
	baz=242,SNR=88							
J04D	Umpqua Nationa	4.73	53	P			01 36 07.6	
	baz=234,SNR=499							
I04A	Tendick Farm,	4.89	46	P			01 36 09.3	
	baz=227,SNR=290							
COR	Corvallis	5.03	34	P		Pn	01 36 10.7	-0.2
COR	Corvallis	5.03	34			Pn	01 36 10.7	-0.2
AFDM	Forest Hills D	5.08	106			Pn	01 36 10.0	-1.6
H04D	Lebanon	5.24	38	P			01 36 13.9	
	baz=219,SNR=103							
K05A	Summer Lake	5.27	63	Pn		Pn	01 36 13.8	-0.6
J05D	Fort Rock, OR	5.29	56	P			01 36 15.1	
	baz=238,SNR=602							
BEKR	Beckworth	5.32	94	Pn		Pn	01 36 13.6	-1.4
MOD	Modoc Plateau	5.43	73	Pn		Pn	01 36 15.9	-0.7
G03D	McMinnville, O	5.56	30	P			01 36 18.7	
	baz=212,SNR=11							
H04A	Detroit Lake	5.62	40	Pn		Pn	01 36 18.8	-0.2
PINE	Pine Mountain	5.74	53	Pn		Pn	01 36 20.9	0.0
I05D	Terrebonne, OR	5.83	47	P			01 36 22.2	
	baz=229,SNR=89							
CMB	Columbia Colle	5.86	112	P		Pn	01 36 21.3	-1.0
CMB	Columbia Colle	5.86	112	Pn		Pn	01 36 21.3	-1.0
SAO	San Andreas Ge	5.87	127	P		Pn	01 36 19.4	-3.0
SAO	San Andreas Ge	5.87	127	Pn		Pn	01 36 19.4	-3.0
VCNR	Virginia City	5.96	99			Pn	01 36 23.6	-0.3
F04D	Rainier, OR	6.40	28	P			01 36 31.1	
	baz=209,SNR=54							
G05D	Wamic, OR	6.45	41	P			01 36 31.1	
	baz=223,SNR=42							
PMPB	Monarch Peak	6.62	128			Pn	01 36 30.7	-2.1
E03A	Lebam	6.63	23	Pn		Pn	01 36 33.9	+1.1
F05D	White Salmon	6.86	36	P			01 36 36.7	
	baz=219,SNR=26							
E04D	Cinebar	6.96	28	P			01 36 39.0	
	baz=210,SNR=40							
LHV	Little Hunton	7.13	105			Pn	01 36 39.7	-0.1
MLAC	Mammoth, Mammo	7.14	111	P			01 36 41.6	
	baz=295,SNR=87							
NVAR	Mina Array Bea	7.22	104	Pn		Pn	01 36 39.5	-1.7
	3.1nm,0.3s,baz=287,slow=14,SNR=48							
NVAR						LR	01 39 35.8	
	comp=Z,10μm,18.2s,baz=282,slow=39							
NVAR	Mina Array Bea	7.22	104			Pn	01 36 39.8	-1.4
D04E	Lakebay	7.44	24	P			01 36 46.0	
	baz=206,SNR=15							
VOG	Valley Oaks Go	7.44	121	P			01 36 42.5	
	baz=306							
VOG				S			01 38 04.9	
	baz=306							
D03D	Eldon	7.66	22	P			01 36 48.5	
	baz=204,SNR=11							
SMMC	Simmler	7.71	130	P			01 36 45.1	
	baz=314,SNR=10							
TIN	Tinemaha, Big	7.83	113	P			01 36 51.1	
	baz=298,SNR=13							
VES	Vestal, Richgr	7.93	123	P			01 36 48.6	
	baz=308,SNR=44							
PKM	Mcpherson Peak	8.12	131	P			01 36 50.6	
	baz=315,SNR=46							
ISA	Isabella, Lake	8.43	122	P		Pn	01 36 56.4	-1.2
ISA	Isabella, Lake	8.43	122	Pn		Pn	01 36 56.4	-1.2
ISA	Isabella, Lake	8.43	122	P			01 36 56.6	
	baz=307,SNR=137							
ISA				S			01 38 29.2	
	baz=307							
GRAC	Grapevine Rang	8.47	111	P			01 36 59.4	
	baz=297,SNR=22							
SBC	Santa Barbara	8.50	133	P			01 36 56.3	
	baz=317							
ARVC	Arvin	8.54	126	P			01 36 56.6	
	baz=311,SNR=26							
ARVC				S			01 38 31.9	
	baz=311							
B05A	Bryant	8.61	24	P			01 37 01.8	
	baz=206,SNR=22							
C06D	Leavenworth	8.73	29	P			01 37 03.3	
	baz=213,SNR=28							
A04D	Lummi Island	8.85	20	P			01 37 04.5	
	baz=202,SNR=16							
OSI	Osito Audit: C	8.95	128	P			01 37 03.7	
	baz=313							
LRMC	Laurel Mtn Rad	9.05	120	P			01 37 05.8	
	baz=306,SNR=19							
FURC	Furnace Creek,	9.08	113	P			01 37 08.5	
	baz=299,SNR=33							
ELK	Elko	9.14	84	Pn		Pn	01 37 07.2	-0.4
	0.2nm,0.3s,baz=269,slow=12,SNR=22							
ELK						LR	01 40 48.4	
	comp=Z,8μm,19.4s,baz=266,slow=39							
EDW2	Edwards Air Fo	9.22	124	P			01 37 06.7	
	baz=310,SNR=18							
R11A	Troy Canyon, C	9.28	100	P			01 37 09.4	
	baz=286,SNR=19							
TPNV	Topopah Spring	9.29	109	P		Pn	01 37 10.5	+0.9
TPNV	Topopah Spring	9.29	109	Pn		Pn	01 37 10.5	+0.9
TPNV	Topopah Spring	9.29	109	P			01 37 10.6	
	baz=295,SNR=68							
DECC	Green Verdugo	9.43	128	P			01 37 11.1	
	baz=314							
FMP	Fort Macarthur	9.84	131	P			01 37 16.7	
	baz=316							
RRX	Edison Barstow	9.87	121	P			01 37 16.4	
	baz=307							
HLID	Hailey	10.04	68	Pn		Pn	01 37 20.0	+0.2
HLID	Hailey	10.04	68	P			01 37 21.1	
	baz=256,SNR=153							
TUQ	Turquoise Moun	10.26	116	P			01 37 23.1	
	baz=302,SNR=18							
SHPR	Sheep Range	10.27	109	Pn		Pn	01 37 24.3	+1.3
BBRC	Big Bear Solar	10.30	124	P			01 37 22.3	
	baz=310							
HEC	Hector,Ludlow	10.33	120	P			01 37 23.0	
	baz=306,SNR=18							
MURC	Murrieta	10.57	127	P			01 37 27.1	
	baz=313							
NEW	Newport	10.63	40	Pn		Pn	01 37 28.9	+1.2
	0.6nm,0.3s,baz=216,slow=14,SNR=20							
NEW						LR	01 41 42.1	
	comp=Z,4μm,18.2s,baz=217,slow=38							
NEW	Newport	10.63	40	P		Pn	01 37 29.1	+1.4
NEW	Newport	10.63	40	Pn		Pn	01 37 29.1	+1.4
NEW	Newport	10.63	40	P			01 37 29.1	
	baz=226,SNR=7.9							
GMRC	Granite Mounta	10.80	118	P			01 37 29.7	
	baz=305,SNR=27							
PFO	Pinyon Flats O	11.01	125	Pn		Pn	01 37 31.4	-1.7
	1.2nm,0.3s,baz=284,slow=8.5,SNR=11							
PFO						LR	01 41 37.1	
	comp=Z,10μm,18.2s,baz=295,slow=37							
PFO	Pinyon Flats O	11.01	125	eP		Pn	01 37 32.0	-1.1
PFO						pmax	pmax	
	comp=Z,19nm,1.0s							
PFO	Pinyon Flats O	11.01	125	P			01 37 31.7	
	baz=311,SNR=7.0							
TPFO	Pinon Flats	11.02	125	P			01 37 33.2	
	baz=311							
DUG	Dugway, Tooele	11.03	87	P			01 37 34.6	
	baz=275,SNR=98							
BELC	Belle Mtn. Jos	11.05	122	P			01 37 32.1	
	baz=309,SNR=15							
109C	Camp Elliot, M	11.12	130			Pn	01 37 32.5	-1.9
109C	Camp Elliot, M	11.12	130	P			01 37 34.3	
	baz=316							
IRM	Iron Mountain	11.52	119	P			01 37 38.4	
	baz=306,SNR=21							
MONP2	Monument Peak	11.52	128	P			01 37 39.3	
	baz=314,SNR=7.6							
MSO	Missoula	11.54	52	P			01 37 41.0	
	baz=240,SNR=14							
BC3	Big Chuckawall	11.62	122	P			01 37 39.5	
	baz=309							
BBB	Bella Bella	11.72	357	Pn		Pn	01 37 44.4	+1.9
	comp=Z,0.3nm,0.3s,baz=171,slow=8.9,SNR=6.4							
BBB						LR	01 41 12.0	
	comp=Z,3μm,20.1s,baz=179,slow=32							
CBX	Cerro Bola	11.79	130			Pn	01 37 40.6	-3.1
IKP	In-Ko-Pah, Jac	11.88	128	P			01 37 45.3	
	baz=314							
LRM	Limekiln Ridge	12.05	59	Pn		Pn	01 37 47.6	+0.2
PDMCI	Parker Dam,Lak	12.11	116	P			01 37 48.3	
	baz=304							
AHID	Auburn Hatcher	12.30	74			Pn	01 37 46.2	-4.6
GLA	Glamis	12.41	123	P			01 37 51.2	
	baz=310							
QLMT	Earthquake Lak	12.43	64	Pn		Pn	01 37 53.0	+0.5
BOZ	Bozeman (W)	12.52	61	P			01 37 54.3	
	baz=251							
H17A	Grant Village	12.92	67	P			01 38 01.6	
	baz=257							
113A	Mohawk Valley,	13.28	121	Pn		Pn	01 38 04.0	+0.1
BW06	Boulder Array	13.44	74	P			01 38 06.9	
	baz=266							
PD31	Pinedale Array	13.44	74	Pn		Pn	01 38 08.3	+2.0
PDAR	Pinedale Array	13.44	74	Pn		Pn	01 38 07.3	+1.1
	comp=Z,1.9nm,0.3s,baz=248,slow=9.6,SNR=6.4							
PDAR						LR	01 43 39.4	
	comp=Z,7μm,18.9s,baz=264,slow=39							
WUAZ	Wupatki	13.46	107	Pn		Pn	01 38 08.7	+2.0
WUAZ	Wupatki	13.46	107	P			01 38 08.9	
	baz=296,SNR=37							
RLMT	Red Lodge	13.99	65	P			01 38 14.5	
	baz=256							
PV10	Paradox Valley	14.24	93			Pn	01 38 15.8	-1.4
214A	Organ Pipe Nat	14.42	122	P			01 38 19.5	
	baz=310,SNR=9.4							
EGMT	Eagleton	14.61	53	P			01 38 21.6	
	baz=245,SNR=21							
W18A	Petrified Fore	14.84	106	P			01 38 27.6	
	baz=296,SNR=24							
MVCO	Mesa Verde	14.97	97	Pn		Pn	01 38 25.4	-1.9
MVCO	Mesa Verde	14.97	97	P			01 38 23.1	
	baz=288							
CRAG	Craig	15.49	347	Pn		Pn	01 38 32.0	-1.8
CRAG				lAmb		lAmb	01 38 42.8	
	comp=Z,296nm,1.4s							
CRAG	Craig	15.49	347	P			01 38 36.4	
	baz=163							
TUC	Tucson	15.55	116	pmax		pmax		
	comp=Z,118nm,1.3s							
TUC	Tucson	15.55	116	Pn		Pn	01 38 35.3	+0.5
TUC	Tucson	15.55	116	P		Pn	01 38 35.3	+0.5
TUC	Tucson	15.55

BESE Bessie Mountai 18.75 348 P Pn 01 39 15.5 +0.8
BESE IAmb IAmb 01 39 21.0
comp=Z,451nm,1.8s
KSCO Kaye Shedlock' 18.98 86 P Pn 01 39 18.8 +1.1
KSCO Kaye Shedlock' 18.98 86 P 01 39 19.2
baz=282,SNR=60
OGNE Ogallala 19.11 80 P Pn 01 39 19.0 -0.2
OGNE IAmb IAmb 01 39 21.0
comp=Z,322nm,1.4s
OGNE Ogallala 19.11 80 P 01 39 18.2
baz=276,SNR=10
SKAG Skagway 19.67 348 IAmb IAmb 01 39 41.7
comp=Z,456nm,2.0s
MNTX Cornudas Mount 19.69 110 P Pn 01 39 26.7 +0.6
MNTX Cornudas Mount 19.69 110 P 01 39 26.5
baz=302
E28A Huff 20.14 64 P P 01 39 29.4 -0.1
MSTX Muleshoe 20.51 101 P P 01 39 34.4 +0.6
MSTX Muleshoe 20.51 101 P 01 39 35.2
baz=295,SNR=5.9
YKU2 Yakutat 20.59 342 IAMs_20 IAMs_20 01 45 26.3
comp=Z,5μm,18.0s
BCPM Bancas Point 20.97 342 P Pn 01 39 40.1 -0.9
MDND Maddock 21.08 60 IAMs_20 IAMs_20 01 48 06.3
comp=Z,4μm,21.0s
MDND Maddock 21.08 60 P 01 39 41.8
baz=259,SNR=16
SUSD Miller 21.20 70 IAmb IAmb 01 39 44.0
comp=Z,321nm,1.1s
SUSD IAMs_20 IAMs_20 01 48 06.2
comp=Z,8μm,19.0s
SUSD Miller 21.20 70 P 01 39 41.0
baz=269,SNR=9.2
CBKS Cedar Bluff 21.22 86 P P 01 39 42.2 +0.9
CBKS pmax pmax
comp=Z,348nm,1.2s
CBKS MLR MLR
comp=Z,2μm,20.0s
CBKS Cedar Bluff 21.22 86 P P 01 39 42.2 +0.9
CBKS IAmb IAmb 01 39 46.2
comp=Z,348nm,1.2s
CBKS Cedar Bluff 21.22 86 P 01 39 42.5
baz=283,SNR=12
PINM Pinnacle 21.25 342 P 01 39 43.8
baz=152,SNR=28
PCA Pinnacle 21.25 342 P P 01 39 42.7 +1.3
PCA IAmb IAmb 01 39 45.2
comp=Z,282nm,1.2s
PCA IAMs_20 IAMs_20 01 46 04.6
comp=Z,4μm,18.0s
HYT Haines Junctio 21.33 346 IAMs_20 IAMs_20 01 46 18.8
comp=Z,4μm,18.0s
K31A O'Neill 21.39 75 IAmb IAmb 01 39 59.7
comp=Z,304nm,1.1s
K31A IAMs_20 IAMs_20 01 48 31.2
comp=Z,5μm,18.0s
LPIG La Paz 21.66 134 P P 01 39 48.2 +2.1
comp=Z,18nm,0.3s,baz=29,slow=1.5,SNR=6.2
LPIG LR LR 01 47 06.5
comp=Z,2μm,19.3s,baz=326,slow=34
TABL Table Mountain 21.76 341 IAmb IAmb 01 39 56.0
comp=Z,266nm,1.2s
TABL IAMs_20 IAMs_20 01 46 13.3
comp=Z,4μm,18.0s
YAH Yahtse 21.85 340 IAmb IAmb 01 39 52.4
comp=Z,405nm,1.4s
BGNE Belgrade 21.96 78 P P 01 39 50.0 +0.7
BGNE IAmb IAmb 01 39 51.4
comp=Z,230nm,1.1s
BGNE IAMs_20 IAMs_20 01 48 42.2
comp=Z,4μm,18.0s
BGNE Belgrade 21.96 78 P 01 39 49.5
baz=277,SNR=7.8
FFC Flin Flon 22.05 41 P P 01 39 49.6 -0.4
FFC pmax pmax
comp=Z,338nm,1.2s
FFC MLR MLR
comp=Z,2μm,20.0s
FFC Flin Flon 22.05 41 P P 01 39 49.6 -0.4
FFC IAmb IAmb 01 39 57.2
comp=Z,338nm,1.1s
LOGN Logan Glacier 22.07 342 IAmb IAmb 01 40 00.0
comp=Z,315nm,1.2s
LOGN IAMs_20 IAMs_20 01 46 23.3
comp=Z,4μm,18.0s
R32A Long Quarter, 22.10 86 IAmb IAmb 01 39 56.5
comp=Z,269nm,1.3s
R32A IAMs_20 IAMs_20 01 48 49.7
comp=Z,6μm,19.0s
SUCK Suckling Hills 22.15 338 IAmb IAmb 01 39 57.4
comp=Z,359nm,1.3s
GRNC Granite Creek 22.17 341 IAmb IAmb 01 39 55.3
comp=Z,234nm,1.0s
SLBS Sierra La Lagu 22.19 134 P P 01 39 53.5 +1.6
SLBS IAmb IAmb 01 39 59.3
comp=Z,173nm,1.4s
KAIM Kayak Island 22.22 337 P P 01 39 53.1 +1.3
KAIM IAmb IAmb 01 39 57.3
comp=Z,374nm,1.4s
TX32 Lajitas Array 22.24 113 P P 01 39 53.9 +1.5
TXAR Lajitas Array 22.24 113 P P 01 39 51.4 -1.1
comp=Z,42nm,1.1s,baz=292,slow=6.6,SNR=12
TXAR LR LR 01 48 11.6
comp=Z,576nm,20.5s,baz=0.0,slow=36
CTG Chitna Glacier 22.27 342 P 01 39 55.0
baz=151
HPIG 22.40 120 P P 01 39 55.6 +1.4
BARN Barnard Glacie 22.43 342 IAmb IAmb 01 39 58.2
comp=Z,239nm,1.1s
BARN IAMs_20 IAMs_20 01 46 42.9
comp=Z,3μm,18.0s
HMT Hamilton 22.51 338 IAmb IAmb 01 39 58.8
comp=Z,157nm,1.1s
RAGM Ragged Mountai 22.67 337 IAmb IAmb 01 40 01.7
comp=Z,221nm,1.0s
RAGM IAMs_20 IAMs_20 01 46 38.4
comp=Z,3μm,19.0s
D32A Dogwood Acres, 22.72 63 IAmb IAmb 01 39 59.2
comp=Z,243nm,1.1s
ECSD EROS Data Cent 22.90 72 P 01 39 59.0
baz=272,SNR=69
KAN16 Harper SW Stat 22.91 89 P P 01 39 59.5 0.0
KAN16 IAmb IAmb 01 40 12.7
comp=Z,351nm,1.6s
KAN10 Anthony SW Sta 22.92 89 IAmb IAmb 01 40 13.6
comp=Z,238nm,1.3s
VRDI Verde Repeater 23.02 340 P P 01 40 01.0 +0.5
VRDI IAmb IAmb 01 40 04.9
comp=Z,201nm,1.2s
MCARA McCarthy VSAT 23.05 340 P 01 40 02.8
baz=148,SNR=107
F33A 5 Mile Ranch, 23.12 66 IAMs_20 IAMs_20 01 49 23.2
comp=Z,6μm,19.0s
EYAK Cordova Ski Ar 23.12 336 P P 01 40 02.8 +1.5
EYAK IAmb IAmb 01 40 05.7
comp=Z,224nm,1.4s
EYAK Cordova Ski Ar 23.12 336 P 01 40 02.7
baz=142
BMRM Bremner River 23.12 338 IAmb IAmb 01 40 06.0
comp=Z,206nm,1.2s
BMRM Bremner River 23.12 338 P 01 40 03.0
baz=145,SNR=43
CROK Carrier 23.20 90 P P 01 40 02.6 +0.2
CROK IAMs_20 IAMs_20 01 49 25.8
comp=Z,6μm,18.0s
KS21 Milan North St 23.20 88 IAMs_20 IAMs_20 01 49 31.9
comp=Z,4μm,18.0s
L34A Svendsen Farm, 23.21 76 IAMs_20 IAMs_20 01 49 47.3
comp=Z,5μm,18.0s
WMOK Wichita Mounta 23.22 95 IAMs_20 IAMs_20 01 49 26.3
comp=Z,6μm,18.0s
WMOK Wichita Mounta 23.22 95 P 01 40 03.0
baz=292,SNR=11
KAN09 Caldwell North 23.28 89 IAmb IAmb 01 40 05.7
comp=Z,278nm,1.4s
KS20 Mayfield South 23.30 88 IAmb IAmb 01 40 05.9
comp=Z,247nm,1.2s
KS20 IAMs_20 IAMs_20 01 49 36.6
comp=Z,4μm,19.0s
YKA Yellowknife Ar 23.32 15 P P 01 40 03.7 +0.4
YKA PcP PcP 01 43 49.7 -0.3
comp=Z,18nm,0.9s,baz=200,slow=9.6,SNR=35
YKA P3KPbc 02 13 29.1
comp=Z,1.8nm,0.8s,baz=186,slow=3.0,SNR=4.3
comp=Z,0.6nm,0.9s,baz=29,slow=4.5,SNR=6.2
KAN13 South Haven SW 23.43 89 IAmb IAmb 01 40 07.2
comp=Z,268nm,1.4s

ABTX Abilene, Hawle 23.46 101 IAmb IAmb 01 40 09.3
comp=Z,235nm,1.4s
ABTX IAMs_20 IAMs_20 01 49 19.7
comp=Z,4μm,22.0s
ABTX Abilene, Hawle 23.46 101 P 01 40 04.2
baz=297,SNR=11
FID Port Fidalgo 23.50 336 IAmb IAmb 01 40 08.4
comp=Z,170nm,1.1s
KSU1 Kansas State U 23.53 83 IAmb IAmb 01 40 09.3
comp=Z,181nm,1.2s
KSU1 Kansas State U 23.53 83 P 01 40 06.1
baz=283
AGMN Agassiz Nation 23.63 60 P P 01 40 06.7 +0.2
AGMN IAmb IAmb 01 40 16.8
comp=Z,216nm,1.1s
AGMN IAMs_20 IAMs_20 01 49 43.7
comp=Z,5μm,18.0s
AGMN Agassiz Nation 23.63 60 P 01 40 07.0
baz=262,SNR=24
N25K Chitina, Valde 23.65 339 IAmb IAmb 01 40 11.0
comp=Z,191nm,1.1s
N25K Chitina, Valde 23.65 339 P 01 40 09.4
baz=145,SNR=80
OHAK Old Harbor 23.73 324 IAMs_20 IAMs_20 01 46 39.6
comp=Z,4μm,20.0s
OHAK Old Harbor 23.73 324 P 01 40 09.4
baz=124,SNR=25
KDAK Kodiak Island 23.74 325 P P 01 40 09.2 +1.8
comp=Z,95nm,1.0s,baz=152,slow=4.2,SNR=21
KDAK Kodiak Island 23.74 325 *d i* P P **01 40 09.8 +2.3**
KDAK pmax pmax
comp=Z,192nm,1.0s
KDAK Kodiak Island 23.74 325 P P 01 40 08.7 +1.3
KDAK IAmb IAmb 01 40 10.6
comp=Z,181nm,1.1s
KDAK Kodiak Island 23.74 325 IAMs_20 IAMs_20 01 46 50.8
comp=Z,3μm,19.0s
KDAK Kodiak Island 23.74 325 P 01 40 09.4
baz=126
BCOK Bluff Creek, N 23.77 92 IAMs_20 IAMs_20 01 50 09.9
comp=Z,8μm,21.0s
SII Sitkinak Islan 23.79 322 P 01 40 09.3
baz=121,SNR=9.1
GLI Glacier Island 23.80 336 IAmb IAmb 01 40 11.4
comp=Z,188nm,1.0s
GLI Glacier Island 23.80 336 P 01 40 10.1
baz=140,SNR=34
OK029 Liberty Lake 23.84 92 IAmb IAmb 01 40 21.2
comp=Z,164nm,1.2s
N35A Tabor 23.91 79 IAMs_20 IAMs_20 01 49 53.9
comp=Z,3μm,18.0s
KLU Klutina 23.93 338 IAmb IAmb 01 40 13.3
comp=Z,124nm,0.9s
KLU Klutina 23.93 338 P 01 40 11.8
baz=143,SNR=69
ULM Lac du Bonnet 23.95 55 P P 01 40 09.7 +0.1
comp=Z,55nm,1.0s,baz=264,slow=10,SNR=48
ULM LR LR 01 49 45.8
comp=Z,3μm,18.2s,baz=270,slow=37
ULM Lac du Bonnet 23.95 55 *c i* P P **01 40 09.2 -0.4**
ULM Lac du Bonnet 23.95 55 P P 01 40 08.6 -1.0
ULM IAMs_20 IAMs_20 01 49 35.4
comp=Z,3μm,18.0s
OKCFA Oklahoma City 23.98 93 IAmb IAmb 01 40 22.7
comp=Z,255nm,1.5s
OKCFA IAMs_20 IAMs_20 01 50 37.4
comp=Z,5μm,20.0s
OK025 Westminster Rd 24.00 92 IAmb IAmb 01 40 22.8
comp=Z,120nm,1.2s
OK025 IAMs_20 IAMs_20 01 50 02.1
comp=Z,4μm,18.0s
SEW Seward 24.01 332 IAmb IAmb 01 40 22.6
comp=Z,285nm,1.4s
SEW Seward 24.01 332 P 01 40 12.4
baz=135,SNR=9.1
FNO Franklin 24.07 93 IAmb IAmb 01 40 24.4
comp=Z,144nm,1.3s
PWL Port Wells 24.18 335 IAmb IAmb 01 40 16.3
comp=Z,166nm,1.0s
T35A Sooner Cattle 24.19 88 IAMs_20 IAMs_20 01 50 14.1
comp=Z,3μm,19.0s
BCAR Beaver Creek A 24.22 344 P P 01 40 13.4 +1.4
L27K Beaver Creek, 24.23 344 IAmb IAmb 01 40 16.7
comp=Z,93nm,1.1s
L27K Beaver Creek, 24.23 344 P 01 40 14.2
baz=152,SNR=50
BRSE Bradley Lake S 24.23 331 P 01 40 14.2
baz=132
OK031 S. Brethren Rd 24.25 91 IAmb IAmb 01 40 15.3
comp=Z,156nm,1.2s
OK031 IAMs_20 IAMs_20 01 50 57.8
comp=Z,3μm,19.0s
QUOK Quay 24.28 90 IAmb IAmb 01 40 15.5
comp=Z,160nm,1.3s
BRLK Bradley Lake 24.30 330 IAmb IAmb 01 40 15.9
comp=Z,134nm,1.0s
OK030 Cody Creek RV 24.30 91 IAmb IAmb 01 40 15.8
comp=Z,192nm,1.3s
OK030 IAMs_20 IAMs_20 01 50 11.1
comp=Z,3μm,19.0s
O22K Cooper Landing 24.38 333 IAmb IAmb 01 40 27.4
comp=Z,167nm,1.0s
O22K Cooper Landing 24.38 333 P 01 40 15.5
baz=135,SNR=14
JCT Junction City 24.39 106 IAMs_20 IAMs_20 01 50 02.5
comp=Z,4μm,19.0s
JCT Junction City 24.39 106 P 01 40 13.9
baz=302
M24K Tolsona, Glenn 24.49 338 P 01 40 17.6
baz=143,SNR=39
HOM Homer 24.52 330 P P 01 40 15.3 +0.6
HOM Homer 24.52 330 P 01 40 16.2
baz=131,SNR=8.2
MENT Mentasta 24.55 342 IAMs_20 IAMs_20 01 48 02.8
comp=Z,3μm,18.0s
KNK Knik Glacier 24.63 335 P 01 40 18.1
baz=139
DAWY Dawson 24.67 347 IAmb IAmb 01 40 20.1
comp=Z,136nm,1.4s
DAWY IAMs_20 IAMs_20 01 48 25.1
comp=Z,4μm,18.0s
RC01 Rabbit Creek A 24.82 334 IAmb IAmb 01 40 20.9
comp=Z,135nm,1.1s
RC01 Rabbit Creek A 24.82 334 P 01 40 19.4
baz=136,SNR=43
SML Sawmill 24.89 336 P 01 40 20.0
baz=139,SNR=94
PMR Palmer 24.98 335 P 01 40 21.0
baz=138,SNR=87
PAX Paxson 25.01 340 P 01 40 21.1
baz=146,SNR=18
FIS Fire Island 25.02 333 P P 01 40 20.2 +1.0
B35A Bob, Littlefor 25.05 60 IAMs_20 IAMs_20 01 50 26.3
comp=Z,4μm,19.0s
F36A Milaca 25.06 66 IAMs_20 IAMs_20 01 50 32.4
comp=Z,6μm,19.0s
TUL1 Leonard 25.07 90 P 01 40 20.6
baz=290,SNR=8.6
CAPN Captain Cook N 25.08 332 P 01 40 22.9
baz=133,SNR=6.9
K27K Chicken 25.14 345 IAmb IAmb 01 40 24.2
comp=Z,112nm,1.1s
K27K Chicken 25.14 345 P 01 40 22.6
baz=153
WAT6 Susitna Watana 25.31 338 P 01 40 23.9
baz=141,SNR=56
WHTX Lake Whitney, 25.39 100 IAMs_20 IAMs_20 01 50 49.9
comp=Z,3μm,20.0s
WHTX Lake Whitney, 25.39 100 P 01 40 23.2
baz=298,SNR=9.5
SUA Susitna One 25.43 334 IAmb IAmb 01 40 26.1
comp=Z,114nm,1.0s
SUA Susitna One 25.43 334 P 01 40 25.2
baz=135,SNR=56
SCRK Sand Creek 25.50 343 P 01 40 25.3
baz=149,SNR=32
SCIA State Center 25.56 76 P P 01 40 24.9 +0.6
SCIA IAmb IAmb 01 40 51.5
comp=Z,118nm,1.4s
SCIA IAMs_20 IAMs_20 01 50 54.4
comp=Z,4μm,19.0s
SCIA State Center 25.56 76 P 01 40 25.3
baz=278
SPMN Marine on St. 25.57 68 IAmb IAmb 01 40 33.3
comp=Z,167nm,1.2s
SPMN IAMs_20 IAMs_20 01 50 38.9
comp=Z,5μm,18.0s
SPMN Marine on St. 25.57 68 P 01 40 25.2
baz=271,SNR=13
EGAK Eagle 25.64 346 P 01 40 26.6
baz=155,SNR=13
H06N1 SOCORRO T-PHAS 25.68 142 T T 02 07 08.4
SNR=49
N38A Joes South For 25.73 78 IAmb IAmb 01 40 30.2
comp=Z,166nm,1.3s
N38A IAMs_20 IAMs_20 01 51 01.8
comp=Z,5μm,18.0s
P38A Dawn 25.74 81 IAmb IAmb 01 40 29.3
comp=Z,74nm,1.1s
SPCR Spurr Chakacha 25.75 332 P 01 40 28.1
baz=132,SNR=35
WAT2 Susitna Watana 25.86 338 P 01 40 28.9
baz=140
833A Chaparral WMA, 25.88 109 P 01 40 27.6
baz=305
435B Jarrell 25.88 103 P P 01 40 27.2 -0.1
435B IAmb IAmb 01 40 38.2
435B comp=Z,103nm,1.1s IAMs_20 IAMs_20 01 50 51.8
comp=Z,4μm,20.0s
435B Jarrell 25.88 103 P 01 40 27.6
baz=300
CUT Chulitna 25.95 335 P 01 40 29.2
baz=137,SNR=23
U38A Gravette 25.96 88 IAMs_20 IAMs_20 01 51 19.0
comp=Z,5μm,19.0s
SKT Skwentna 26.05 334 IAmb IAmb 01 40 34.3
comp=Z,95nm,1.0s
SKT Skwentna 26.05 334 P 01 40 30.6
baz=134,SNR=30
HHAR Hobbs 26.36 88 IAMs_20 IAMs_20 01 51 32.4
comp=Z,5μm,19.0s
S39A Bolivar 26.39 85 IAMs_20 IAMs_20 01 51 32.3
comp=Z,4μm,19.0s
E38A The Farm, Brul 26.43 65 IAMs_20 IAMs_20 01 51 15.7
comp=Z,3μm,22.0s
SDPT Sand Point 26.46 315 P P 01 40 33.3 +1.0
SDPT Sand Point 26.46 315 P 01 40 33.2
baz=110,SNR=6.9
EPYK Eagle Plains 26.48 351 IAmb IAmb 01 40 35.3
comp=Z,111nm,1.1s
EPYK Eagle Plains 26.48 351 P 01 40 33.6
baz=164,SNR=36
EYMN Ely 26.51 62 P P 01 40 33.3 +0.5
EYMN IAmb IAmb 01 40 49.1
comp=Z,180nm,1.4s
EYMN Ely 26.51 62 IAMs_20 IAMs_20 01 51 08.9
comp=Z,4μm,22.0s
EYMN Ely 26.51 62 P 01 40 33.5
baz=267,SNR=16
MCK McKinley 26.55 338 IAmb IAmb 01 40 36.3
comp=Z,161nm,1.0s
MCK McKinley 26.55 338 P 01 40 34.6
baz=141,SNR=64
HDA Harding Lake 26.57 341 P 01 40 34.7
baz=145,SNR=19
HDA P 01 40 34.7
baz=145,SNR=19
237A Washetta, Mont 26.63 99 P P 01 40 32.6 -1.4
237A IAmb IAmb 01 40 41.5
comp=Z,187nm,1.7s
237A IAMs_20 IAMs_20 01 51 31.6
comp=Z,4μm,20.0s
735A Kenedy 26.73 107 IAMs_20 IAMs_20 01 51 37.3
comp=Z,4μm,18.0s
TRF Thorofare Moun 26.73 337 IAMs_20 IAMs_20 01 49 04.7
comp=Z,2μm,19.0s
TRF Thorofare Moun 26.73 337 P 01 40 36.3
baz=138,SNR=41
W39A Magazine 26.85 91 IAMs_20 IAMs_20 01 51 37.5
comp=Z,3μm,18.0s
W39A Magazine 26.85 91 P 01 40 36.4
baz=291,SNR=9.7
IL31 26.85 341 P P 01 40 36.6 +0.9
IL31 IAmb IAmb 01 40 38.6
comp=Z,81nm,1.0s
ILAR Eielson Array 26.85 341 P P 01 40 37.2 +1.5
comp=Z,49nm,0.9s,baz=158,slow=7.9,SNR=146
ILAR PcP PcP 01 43 57.6 -0.2
comp=Z,6.8nm,0.8s,baz=172,slow=2.8,SNR=15
ILAR LR LR 01 49 35.3
comp=Z,886nm,20.5s,baz=153,slow=33
ILAR Eielson Array 26.85 341 P P 01 40 36.1 +0.3
ILAR Eielson Array 26.85 341 P P 01 40 36.1 +0.3
WRH Wood River Hil 26.91 340 IAmb IAmb 01 40 42.9
comp=Z,163nm,1.2s
PPLA Purkeypile 26.92 335 P 01 40 38.5
baz=135,SNR=71
SVW2 Sparrevohn 26.95 329 IAmb IAmb 01 40 42.9
comp=Z,78nm,1.1s
CCB Clear Creek Bu 26.98 341 IAmb IAmb 01 40 43.4
comp=Z,93nm,1.2s
KTH Kantishna Hill 27.00 337 IAmb IAmb 01 40 43.6
comp=Z,67nm,1.0s
KTH IAMs_20 IAMs_20 01 49 12.7
comp=Z,2μm,19.0s
L40A Anamosa 27.00 75 IAmb IAmb 01 40 43.4
comp=Z,172nm,1.6s
L40A IAMs_20 IAMs_20 01 51 40.7
comp=Z,5μm,20.0s
R40A Maddies Statio 27.02 83 IAMs_20 IAMs_20 01 51 54.1
comp=Z,3μm,19.0s
U40A Yellville 27.16 88 IAMs_20 IAMs_20 01 51 56.7
comp=Z,4μm,20.0s
U40A Yellville 27.16 88 P 01 40 39.1
baz=289
PRP Porcupine Dome 27.17 343 IAMs_20 IAMs_20 01 49 37.1
comp=Z,2μm,18.0s
PRP Porcupine Dome 27.17 343 P 01 40 40.8
baz=148,SNR=13
COLA College 27.18 341 *d i* P P **01 40 40.2 +1.6**
COLA pmax pmax
comp=Z,18nm,0.9s
COLA College 27.18 341 P P 01 40 39.8 +1.2
COLA IAmb IAmb 01 40 45.3
comp=Z,158nm,1.8s
COLA College 27.18 341 P 01 40 39.9
baz=144
TCOL CIGO, UAF Yank 27.18 341 P 01 40 39.6
baz=144
I40A Norwalk 27.21 71 IAmb IAmb 01 40 44.7
comp=Z,167nm,1.4s
MIAR Mount Ida 27.25 92 P P 01 40 39.9 +0.2
MIAR pmax pmax
comp=Z,105nm,1.5s
MIAR MLR MLR
comp=Z,3μm,20.0s
MIAR Mount Ida 27.25 92 P P 01 40 39.9 +0.2
MIAR IAmb IAmb 01 40 54.1
comp=Z,105nm,1.4s
MIAR IAMs_20 IAMs_20 01 52 07.1
comp=Z,3μm,20.0s
MIAR Mount Ida 27.25 92 P 01 40 40.2
baz=292
NEA2 Nenana 27.27 340 P P 01 40 40.0 +0.5
NEA2 PcP **01 43 59.0 +0.2**
NEA2 Nenana 27.27 340 P 01 40 41.0
baz=142,SNR=75
POKR Poker Plat Res 27.27 341 IAmb IAmb 01 40 42.7
comp=Z,95nm,1.1s
POKR Poker Plat Res 27.27 341 P 01 40 41.1
baz=145,SNR=11
ZAIG Zacatecas 27.31 123 P P 01 40 40.4 -0.2
MGMO Mountain Grove 27.35 86 IAMs_20 IAMs_20 01 52 02.8
comp=Z,4μm,19.0s
G40A Rib Lake 27.41 68 IAmb IAmb 01 40 49.6
comp=Z,170nm,1.2s
G40A IAMs_20 IAMs_20 01 51 55.5
comp=Z,5μm,19.0s
BPAW Bear Paw Mtn. 27.42 337 IAmb IAmb 01 40 43.4
comp=Z,80nm,1.0s
BPAW Bear Paw Mtn. 27.42 337 P 01 40 42.0
baz=138,SNR=44
N41A Harden Midland 27.52 78 IAmb IAmb 01 40 48.2
comp=Z,134nm,1.3s
N41A IAMs_20 IAMs_20 01 52 23.9
comp=Z,5μm,18.0s
JFWS Jewell Farm 27.59 73 IAmb IAmb 01 40 48.0
comp=Z,157nm,1.2s
JFWS Jewell Farm 27.60 73 P 01 40 43.0
baz=277,SNR=5.9
NATX Nacogdoches 27.60 98 P P 01 40 43.3 +0.5
NATX IAmb IAmb 01 40 51.3
comp=Z,224nm,1.9s
NATX IAMs_20 IAMs_20 01 52 15.5
comp=Z,4μm,19.0s

NATX	**Nacogdoches** baz=297	**27.60**	**98**	P				01 40 43.1	
CHUM	**Lake Minchumin** baz=136,SNR=39	**27.66**	**336**	P				01 40 44.5	
I23K	**Minto, Yukon-K** baz=142,SNR=87	**27.78**	**340**	P				01 40 46.2	
FCC	**Fort Churchill**	**27.79**	**38**	P		**P**		**01 40 44.2**	**0.0**
FCC	comp=Z,148nm,1.4s			pmax		pmax			
FCC	comp=Z,3µm,20.0s			MLR		MLR			
FCC	**Fort Churchill**	**27.79**	**38**	P		**P**		**01 40 44.2**	**0.0**
FCC	comp=Z,148nm,1.4s			IAmb		IAmb		01 40 54.1	
FCC	comp=Z,3µm,20.0s			IAMs_20		IAMs_20		01 51 43.5	
X40A	**Basin Creek Fa** comp=Z,3µm,22.0s	**27.84**	**91**	IAMs_20		IAMs_20		01 52 48.7	
X40A	**Basin Creek Fa** baz=292	**27.84**	**91**	P				01 40 45.4	
CCM	**Cathedral Cave** comp=Z,4µm,18.0s	**27.86**	**83**	IAMs_20		IAMs_20		01 52 29.4	
CCM	**Cathedral Cave** baz=286	**27.86**	**83**	P				01 40 44.8	
FCAR	**Ozark Folk Cen** comp=Z,3µm,21.0s	**27.87**	**88**	IAMs_20		IAMs_20		01 52 19.1	
WHAR	**Woolly Hollow** comp=Z,3µm,19.0s	**27.96**	**89**	IAMs_20		IAMs_20		01 52 30.8	
FYU	**Fort Yukon** comp=Z,3µm,19.0s	**28.01**	**345**	IAMs_20		IAMs_20		01 50 16.4	
W41B	**Gary Mavity, V** baz=291	**28.03**	**90**	P				01 40 46.0	
MLY	**Manley** baz=140,SNR=136	**28.06**	**339**	P				01 40 48.2	
INK	**Inuvik** comp=Z,13nm,1.0s,baz=163,slow=8.9,SNR=12	**28.09**	**355**	P		**P**		**01 40 47.6**	**+0.8**
INK	comp=Z,2µm,19.9s,baz=166,slow=35			LR		LR		01 51 08.4	
INK	**Inuvik** comp=Z,3µm,19.0s	**28.09**	**355**	IAMs_20		IAMs_20		01 50 58.3	
COWI	**Conover** comp=Z,5µm,18.0s	**28.11**	**66**	IAMs_20		IAMs_20		01 52 18.2	
TTA	**Tatalina** comp=Z,60nm,1.1s	**28.24**	**332**	IAmb		IAmb		01 40 50.8	
TTA	**Tatalina** baz=129,SNR=24	**28.24**	**332**	P				01 40 50.0	
Z41A	**Richland Creek** baz=294	**28.36**	**94**	P				01 40 50.2	
SLM	**Saint Louis**	**28.47**	**82**	P		**P**		**01 40 50.3**	**-0.2**
SLM	comp=Z,44nm,0.9s			pmax		pmax			
SLM	comp=Z,2µm,19.0s			MLR		MLR			
SLM	**Saint Louis**	**28.47**	**82**	P		**P**		**01 40 50.3**	**-0.2**
SLM	comp=Z,2µm,19.0s			IAMs_20		IAMs_20		01 52 36.3	
FVM	**French Village** comp=Z,4µm,18.0s	**28.50**	**83**	IAMs_20		IAMs_20		01 52 49.7	
LCAR	**Lake Charles** comp=Z,3µm,21.0s	**28.55**	**87**	IAMs_20		IAMs_20		01 52 40.5	
HDIL	**Hopedale** comp=Z,5µm,18.0s	**28.71**	**77**	IAMs_20		IAMs_20		01 53 00.8	
HDIL	**Hopedale** baz=282	**28.71**	**77**	P				01 40 52.1	
P43A	**Skaggs, Pawnee** comp=Z,3µm,20.0s	**28.75**	**79**	IAMs_20		IAMs_20		01 52 54.8	
F42A	**Maple Grove Fa** comp=Z,5µm,19.0s	**28.83**	**66**	IAMs_20		IAMs_20		01 52 39.1	
CCAR	**Cane Creek** comp=Z,4µm,20.0s	**28.87**	**92**	IAMs_20		IAMs_20		01 53 07.0	
C36M	**Paulatuk**	**28.98**	**2**	P		**P**		**01 40 54.8**	**+0.2**
C36M	comp=Z,2µm,20.0s			IAMs_20		IAMs_20		01 51 23.6	
C36M	**Paulatuk** baz=185,SNR=5.8	**28.98**	**2**	P				01 40 54.8	
K43A	**Burlington** comp=Z,3µm,18.0s	**29.02**	**73**	IAMs_20		IAMs_20		01 53 16.1	
441A	**DeRidder** comp=Z,3µm,18.0s	**29.19**	**99**	IAMs_20		IAMs_20		01 51 46.5	
H43A	**Windswept, Lux** comp=Z,4µm,19.0s	**29.19**	**69**	IAMs_20		IAMs_20		01 53 01.8	
X43A	**Marvell** baz=292	**29.32**	**90**	P				01 40 58.7	
LPAR	**Lepanto** comp=Z,4µm,18.0s	**29.36**	**88**	IAMs_20		IAMs_20		01 53 15.0	
L44A	**Lake County Fo** baz=280	**29.41**	**74**	P				01 40 58.7	
GNAR	**Gosnell** comp=Z,3µm,19.0s	**29.45**	**87**	IAMs_20		IAMs_20		01 53 16.4	
M44A	**Midewin, Midew** comp=Z,64nm,0.9s	**29.46**	**75**	IAmb		IAmb		01 41 09.8	
S44A	**Carbondale** comp=Z,3µm,18.0s	**29.48**	**83**	IAMs_20		IAMs_20		01 53 20.0	
SIUC	**Southern Illin** comp=Z,3µm,19.0s	**29.50**	**83**	IAMs_20		IAMs_20		01 53 20.2	
PEBM	**Pemiscott Bayo** comp=Z,3µm,18.0s	**29.52**	**86**	IAMs_20		IAMs_20		01 53 18.2	
PVMO	**Portageville** comp=Z,4µm,20.0s	**29.54**	**86**	IAMs_20		IAMs_20		01 53 21.8	
342A	**Flagon Creek P** comp=Z,3µm,21.0s	**29.55**	**97**	IAMs_20		IAMs_20		01 53 16.0	
E43A	**Lone Tree Farm** comp=Z,5µm,20.0s	**29.58**	**65**	IAMs_20		IAMs_20		01 53 12.1	
PENMO	**Penman** comp=Z,3µm,19.0s	**29.58**	**86**	IAMs_20		IAMs_20		01 53 22.9	
IMAR	**Indian Mountai**	**29.61**	**338**	P		**P**		**01 41 00.9**	**+0.6**
IMAR						**PcP**		**01 44 04.3**	**-0.3**
HENM	**Henderson Moun** comp=Z,3µm,18.0s	**29.61**	**85**	IAMs_20		IAMs_20		01 53 23.7	
COLD	**Coldfoot** comp=Z,69nm,1.3s	**29.65**	**342**	IAmb		IAmb		01 41 04.3	
COLD	**Coldfoot** baz=143,SNR=19	**29.65**	**342**	P				01 41 02.7	
LNXT	**Lenox** comp=Z,3µm,19.0s	**29.80**	**86**	IAMs_20		IAMs_20		01 54 19.7	
MET	**Memphis--Engin** comp=Z,2µm,21.0s	**29.81**	**88**	IAMs_20		IAMs_20		01 53 28.0	
HICK	**Hickman** comp=Z,3µm,19.0s	**29.86**	**85**	IAMs_20		IAMs_20		01 53 31.1	
GLAT	**Glass** comp=Z,3µm,20.0s	**29.90**	**86**	IAMs_20		IAMs_20		01 53 31.3	
HALT	**Halls** comp=Z,2µm,19.0s	**29.99**	**86**	IAMs_20		IAMs_20		01 53 34.1	
T45A	**Paducah** comp=Z,4µm,18.0s	**30.14**	**84**	IAMs_20		IAMs_20		01 53 49.8	
W45A	**Hickory Valley** comp=Z,4µm,19.0s	**30.37**	**88**	IAMs_20		IAMs_20		01 53 54.7	
SFIN	**Lafayette** comp=Z,4µm,18.0s	**30.38**	**77**	IAMs_20		IAMs_20		01 53 55.1	
SFIN	**Lafayette** baz=283	**30.38**	**77**	P				01 41 07.0	
OXF	**Oxford** comp=Z,2µm,18.0s	**30.44**	**89**	IAMs_20		IAMs_20		01 54 30.6	
OXF	**Oxford** baz=292	**30.44**	**89**	P				01 41 08.7	
VBMS	**Vicksburg** comp=Z,4µm,18.0s	**30.54**	**94**	IAMs_20		IAMs_20		01 54 11.2	
VBMS	**Vicksburg** baz=296	**30.54**	**94**	P				01 41 09.3	
Y45A	**Yeager Farm, C** comp=Z,2µm,20.0s	**30.59**	**90**	IAMs_20		IAMs_20		01 54 13.6	
USIN	**University of** comp=Z,3µm,19.0s	**30.59**	**82**	IAMs_20		IAMs_20		01 53 53.7	
L46A	**Eue Claire** comp=Z,65nm,1.1s	**30.63**	**74**	IAmb		IAmb		01 41 19.4	
G45A	**Suttons Bay** comp=Z,4µm,18.0s	**30.63**	**67**	IAMs_20		IAMs_20		01 53 53.8	
TOLK	**Toolik Lake Re** baz=145,SNR=51	**30.66**	**344**	P				01 41 12.1	
NIKH	**Nikolski High** baz=97	**30.69**	**308**	P				01 41 09.9	
344A	**Westbrook Farm** comp=Z,3µm,18.0s	**30.72**	**95**	IAMs_20		IAMs_20		01 54 45.0	
WVT	**Waverly** comp=Z,4µm,18.0s	**31.06**	**85**	IAMs_20		IAMs_20		01 54 16.9	
WVT	**Waverly** baz=290	**31.06**	**85**	P				01 41 13.9	
PLAL	**Pickwick Lake** comp=Z,65nm,1.3s	**31.28**	**87**	IAmb		IAmb		01 41 17.2	
PLAL	comp=Z,3µm,18.0s			IAMs_20		IAMs_20		01 54 22.8	
T47A	**Sharon Grove** comp=Z,5µm,19.0s	**31.32**	**83**	IAMs_20		IAMs_20		01 55 02.9	
GLMI	**Grayling** comp=Z,4µm,20.0s	**31.39**	**68**	IAMs_20		IAMs_20		01 54 06.8	
GLMI	**Grayling** baz=277	**31.39**	**68**	P				01 41 17.1	
E46A	**Sault Ste Mari**	**31.44**	**65**	IAmb		IAmb		01 41 26.8	
E46A	comp=Z,83nm,1.2s			IAMs_20		IAMs_20		01 54 20.3	
146A	**Union** comp=Z,5µm,20.0s	**31.47**	**92**	IAMs_20		IAMs_20		01 54 57.9	
J47A	**Sunmer**	**31.48**	**71**	P		**P**		**01 41 16.7**	**-0.4**
J47A	comp=Z,135nm,1.6s			IAmb		IAmb		01 41 28.0	
WCI	**Wyandotte Cave** baz=287	**31.55**	**81**	P				01 41 18.0	
545A	**Edgard** comp=Z,2µm,18.0s	**31.57**	**98**	IAMs_20		IAMs_20		01 54 15.5	
346A	**Big Creek Wild** comp=Z,4µm,19.0s	**31.71**	**95**	IAMs_20		IAMs_20		01 55 26.3	
P48A	**Milroy** comp=Z,2µm,22.0s	**31.86**	**78**	IAMs_20		IAMs_20		01 54 33.1	
PUH	**Pauahi** comp=Z,3µm,19.0s	**31.87**	**237**	IAMs_20		IAMs_20		01 49 57.0	
NPH	**North Pit** comp=Z,3µm,20.0s	**31.88**	**237**	IAMs_20		IAMs_20		01 49 31.4	
SDHHI	**Sand Hill** comp=Z,3µm,20.0s	**31.91**	**237**	IAMs_20		IAMs_20		01 49 32.1	
V48A	**Smith Brothers** comp=Z,3µm,18.0s	**31.96**	**85**	IAMs_20		IAMs_20		01 54 44.8	
Z47A	**Carrollton** comp=Z,40nm,1.0s	**31.99**	**90**	IAmb		IAmb		01 41 40.9	
L48A	**N Adams** comp=Z,4µm,18.0s	**32.00**	**73**	IAMs_20		IAMs_20		01 54 57.0	
CLTN	**Cedars of Leba** comp=Z,4µm,18.0s	**32.21**	**84**	IAMs_20		IAMs_20		01 55 02.4	
KHU	**Kahuku** comp=Z,3µm,20.0s	**32.22**	**237**	IAMs_20		IAMs_20		01 50 06.3	
P49A	**Miami Univ. Ec** baz=285	**32.37**	**78**	P				01 41 24.4	
U49A	**Red Boiling Sp** comp=Z,4µm,20.0s	**32.48**	**83**	IAMs_20		IAMs_20		01 55 39.7	
AAM	**Ann Arbor** baz=282	**32.49**	**72**	P				01 41 25.7	
ANM	**Nome** baz=119,SNR=24	**32.60**	**330**	P				01 41 28.7	
SWET	**Sewanee** comp=Z,4µm,18.0s	**32.83**	**86**	IAMs_20		IAMs_20		01 55 20.8	
LRAL	**Lakeview Retre** comp=Z,2µm,18.0s	**32.87**	**90**	IAMs_20		IAMs_20		01 55 25.0	
LRAL	**Lakeview Retre** baz=295,SNR=8.3	**32.87**	**90**	P				01 41 29.7	
Y49A	**Blount Mountai** comp=Z,2µm,21.0s	**32.98**	**88**	IAMs_20		IAMs_20		01 55 17.9	
T50A	**Nancy** comp=Z,3µm,19.0s	**33.03**	**82**	IAMs_20		IAMs_20		01 55 30.0	
K50A	**Casco** comp=Z,129nm,1.4s	**33.15**	**71**	IAmb		IAmb		01 41 41.0	
W50A	**Signal Mountai** comp=Z,44nm,1.1s	**33.30**	**85**	IAmb		IAmb		01 41 44.4	
W50A	comp=Z,4µm,19.0s			IAMs_20		IAMs_20		01 55 36.4	
FPAL	**Fort Paine** comp=Z,3µm,18.0s	**33.33**	**87**	IAMs_20		IAMs_20		01 55 36.0	
ACSO	**Alum Creek Sta** baz=285,SNR=6.4	**33.47**	**76**	P				01 41 34.3	
Q51A	**Peebles** comp=Z,3µm,18.0s	**33.53**	**78**	IAMs_20		IAMs_20		01 55 52.4	
P51A	**Williamsport** comp=Z,57nm,1.2s	**33.61**	**77**	IAmb		IAmb		01 41 36.9	
BRAL	**Brewton** baz=297	**33.65**	**93**	P				01 41 36.4	
TLIG	**Tlapa**	**33.66**	**124**	P		**P**		**01 41 36.3**	**-0.3**
RDOG	**Red Dog Mine** baz=127	**33.67**	**337**	P				01 41 37.6	
S51A	**Beattyville** comp=Z,3µm,22.0s	**33.76**	**80**	IAMs_20		IAMs_20		01 56 09.6	
CPCT	**Cooper Cave** comp=Z,54nm,1.2s	**33.81**	**85**	IAmb		IAmb		01 41 49.0	
CPCT	comp=Z,3µm,18.0s			IAMs_20		IAMs_20		01 55 53.9	
V51A	**Loudon** comp=Z,66nm,1.4s	**33.81**	**84**	IAmb		IAmb		01 41 48.8	
V51A	comp=Z,4µm,18.0s			IAMs_20		IAMs_20		01 55 54.9	
250A	**Grady** comp=Z,91nm,1.1s	**33.88**	**91**	IAmb		IAmb		01 41 51.7	
250A	comp=Z,2µm,18.0s			IAMs_20		IAMs_20		01 57 36.7	
X51A	**Calhoun** comp=Z,142nm,1.8s	**33.89**	**86**	IAmb		IAmb		01 41 49.5	
X51A	comp=Z,3µm,21.0s			IAMs_20		IAMs_20		01 55 53.9	
TNA	**Tin City** comp=Z,50nm,1.2s	**34.03**	**331**	IAmb		IAmb		01 41 41.6	
TNA	**Tin City** baz=117,SNR=5.3	**34.03**	**331**	P				01 41 40.6	
I51A	**Listowel** baz=280,SNR=5.3	**34.10**	**69**	P				01 41 38.4	
Z51A	**Franklin** comp=Z,2µm,18.0s	**34.15**	**88**	IAMs_20		IAMs_20		01 56 35.7	
A21K	**Barrow** baz=138,SNR=9.1	**34.27**	**344**	P				01 41 43.1	
TKL	**Tuckaleechee C** comp=Z,3µm,19.0s	**34.30**	**84**	IAMs_20		IAMs_20		01 56 47.9	
Q52A	**Bidwell** comp=Z,4µm,18.0s	**34.35**	**78**	IAMs_20		IAMs_20		01 56 09.9	
V52A	**Sevierville** comp=Z,4µm,18.0s	**34.37**	**83**	IAMs_20		IAMs_20		01 56 11.7	
W52A	**Murphy** comp=Z,107nm,1.8s	**34.40**	**85**	IAmb		IAmb		01 41 51.8	
W52A	comp=Z,3µm,20.0s			IAMs_20		IAMs_20		01 56 12.3	
152A	**Waverly Hall** comp=Z,2µm,18.0s	**34.77**	**89**	IAMs_20		IAMs_20		01 57 04.1	
O53A	**New Philadelph** baz=286	**34.77**	**75**	P				01 41 46.3	
Y52A	**Lilburn** comp=Z,110nm,1.7s	**34.77**	**87**	IAmb		IAmb		01 41 57.2	
Y52A	comp=Z,3µm,18.0s			IAMs_20		IAMs_20		01 56 32.2	
R53A	**Hurricane** comp=Z,3µm,18.0s	**34.78**	**79**	IAMs_20		IAMs_20		01 56 42.4	
GAMB	**Gambell**	**34.79**	**327**	P		**P**		**01 41 47.0**	**+1.3**
GAMB	comp=Z,2µm,19.0s			IAMs_20		IAMs_20		01 54 09.3	
GAMB	**Gambell** baz=111	**34.79**	**327**	P				01 41 47.3	
M53A	**WI Miller and** baz=284	**34.86**	**73**	P				01 41 46.6	
451A	**Vernon** comp=Z,65nm,1.1s	**34.90**	**93**	IAmb		IAmb		01 41 58.7	
Q53A	**Leroy** baz=287	**34.94**	**77**	P				01 41 47.5	
V53A	**Saluda** comp=Z,70nm,1.2s	**35.03**	**83**	IAmb		IAmb		01 41 59.5	
V53A	comp=Z,3µm,18.0s			IAMs_20		IAMs_20		01 56 34.1	
L53A	**Girard** baz=283	**35.04**	**72**	P				01 41 48.5	
352A	**Blakely** comp=Z,2µm,18.0s	**35.13**	**91**	IAMs_20		IAMs_20		01 57 34.7	
BG3	**Lake Jocassee** comp=Z,3µm,18.0s	**35.19**	**84**	IAMs_20		IAMs_20		01 56 37.3	
ALLY	**Alegheny Colle** comp=Z,84nm,1.1s	**35.19**	**72**	IAmb		IAmb		01 41 58.2	
ERPA	**Erie** baz=283	**35.19**	**71**	P				01 41 49.7	
SADO	**Sadowa** comp=Z,45nm,1.0s	**35.25**	**67**	IAmb		IAmb		01 42 07.3	
SADO	comp=Z,3µm,18.0s			IAMs_20		IAMs_20		01 56 34.0	
GOGA	**Godfrey** comp=Z,89nm,1.6s	**35.41**	**87**	IAmb		IAmb		01 42 02.5	
GOGA	**Godfrey** comp=Z,3µm,19.0s	**35.41**	**87**	IAMs_20		IAMs_20		01 56 52.1	
GOGA	**Godfrey** baz=294	**35.41**	**87**	P				01 41 51.5	
ADK	**Adak**	**35.42**	**306**	P		**P**		**01 41 51.4**	**+0.1**
ADK	comp=Z,196nm,1.1s			pmax		pmax			
ADK	**Adak**	**35.42**	**306**	P		**P**		**01 41 51.4**	**+0.1**
S54A	**Dingess, Beckl** comp=Z,71nm,1.4s	**35.43**	**79**	IAmb		IAmb		01 41 53.1	
S54A	comp=Z,2µm,22.0s			IAMs_20		IAMs_20		01 56 17.6	
S54A	**Dingess, Beckl** baz=289	**35.43**	**79**	P				01 41 51.6	
N54A	**Moraine State** comp=Z,131nm,1.6s	**35.48**	**73**	IAmb		IAmb		01 41 53.5	
N54A	**Moraine State** baz=285,SNR=5.9	**35.48**	**73**	P				01 41 52.0	
R54A	**Victor** baz=288	**35.54**	**78**	P				01 41 52.4	
M54A	**Oil Creek Stat** comp=Z,103nm,1.5s	**35.58**	**72**	IAmb		IAmb		01 42 01.4	
M54A	**Oil Creek Stat** baz=284	**35.58**	**72**	P				01 41 53.0	
MATQ	**Matagami** baz=274,SNR=5.4	**35.63**	**58**	P				01 41 53.6	
H53A	**Bobcaygeon** baz=281,SNR=6.5	**35.68**	**67**	P				01 41 53.8	
ALGO	**Algonquin Park** baz=279	**35.81**	**65**	P				01 41 54.7	
G54A	**Lake Saint Pet** baz=280	**35.87**	**65**	P				01 41 55.5	
VLDQ	**Val d'Or** comp=Z,3µm,20.0s	**35.91**	**61**	IAMs_20		IAMs_20		01 56 28.1	
MCWV	**Mont Chateau** comp=Z,3µm,22.0s	**35.95**	**75**	IAMs_20		IAMs_20		01 57 24.3	
MCWV	**Mont Chateau** baz=287	**35.95**	**75**	P				01 41 56.0	
HODGE	**Hodges** comp=Z,3µm,21.0s	**36.00**	**85**	IAMs_20		IAMs_20		01 57 11.7	
154A	**Montrose** comp=Z,2µm,20.0s	**36.02**	**88**	IAMs_20		IAMs_20		01 58 33.3	
PAULI	**Pauline** comp=Z,167nm,1.8s	**36.10**	**84**	IAmb		IAmb		01 42 08.4	
LSQQ	**Lebel-sur-Quev** baz=275	**36.12**	**59**	P				01 41 57.9	
R55A	**Marlinton** comp=Z,83nm,1.3s	**36.16**	**78**	IAmb		IAmb		01 42 06.8	
R55A	**Marlinton** baz=288,SNR=7.6	**36.16**	**78**	P				01 41 58.2	
TIGA	**Tifton**	**36.17**	**90**	P		**P**		**01 41 57.7**	**-0.3**
TIGA	comp=Z,2µm,18.0s			IAMs_20		IAMs_20		01 58 59.2	
TIGA	**Tifton** baz=297	**36.17**	**90**	P				01 41 58.2	
BLA	**Blacksburg** comp=Z,141nm,1.6s	**36.29**	**80**	IAmb		IAmb		01 42 10.1	
BLA	comp=Z,3µm,18.0s			IAMs_20		IAMs_20		01 57 23.4	
BLA	**Blacksburg** baz=290	**36.29**	**80**	P				01 41 59.6	
KMSC	**Kings Mountain** comp=Z,88nm,1.4s	**36.35**	**83**	IAmb		IAmb		01 42 10.1	
KMSC	**Kings Mountain** baz=292,SNR=6.4	**36.35**	**83**	P				01 41 59.5	
DELO	**Deloro Mine** comp=Z,2µm,20.0s	**36.36**	**67**	IAMs_20		IAMs_20		01 57 00.5	
CMIG	**Matias Romero** comp=Z,7.1nm,1.0s,baz=302,slow=8.6,SNR=5.6	**36.38**	**120**	P		**P**		**01 41 59.2**	**-0.7**
Q56A	**Snyder Ridge,** comp=Z,122nm,1.8s	**36.62**	**76**	IAmb		IAmb		01 42 03.3	
Q56A	**Snyder Ridge,** baz=288	**36.62**	**76**	P				01 42 01.9	
PLVO	**Plevna**	**36.64**	**66**	P		**P**		**01 42 01.6**	**-0.3**
R56A	**Bull Pasture M** baz=288	**36.66**	**77**	P				01 42 02.4	
M56A	**Emporium** baz=285	**36.66**	**72**	P				01 42 02.0	
O56A	**Blue Knob Stat** comp=Z,185nm,1.8s	**36.71**	**74**	IAmb		IAmb		01 42 13.1	
O56A	comp=Z,3µm,19.0s			IAMs_20		IAMs_20		01 57 37.6	
O56A	**Blue Knob Stat** baz=286	**36.71**	**74**	P				01 42 02.4	
N56A	**West Decatur** baz=286,SNR=9.4	**36.73**	**73**	P				01 42 02.8	
P56A	**Dayton Farm, R** baz=287,SNR=5.3	**36.73**	**75**	P				01 42 02.8	
JSC	**Jenkinsville** comp=Z,1µm,18.0s	**36.74**	**85**	IAMs_20		IAMs_20		01 57 35.3	
S56A	**Natural Bridge** baz=289	**36.77**	**79**	P				01 42 03.1	
255A	**Hazlehurst** comp=Z,2µm,18.0s	**36.80**	**89**	IAMs_20		IAMs_20		01 58 17.9	
PECO	**Prince Edward** comp=Z,2µm,20.0s	**36.92**	**68**	IAMs_20		IAMs_20		01 57 28.3	
L56A	**Greenwood** baz=284,SNR=10	**36.94**	**71**	P				01 42 05.0	
K56A	**Middlesex** baz=284	**36.97**	**70**	P				01 42 04.8	
E55A	**Montcerf-Lytto** baz=280	**37.09**	**63**	P				01 42 05.7	
SSPA	**Standing Stone** comp=Z,3µm,19.0s	**37.10**	**73**	IAMs_20		IAMs_20		01 57 58.0	
SSPA	**Standing Stone** baz=286	**37.10**	**73**	P				01 42 05.8	
Q57A	**Strasburg** baz=288,SNR=6.9	**37.19**	**76**	P				01 42 07.1	
S57A	**Dark Hollow, R** comp=Z,84nm,1.4s	**37.20**	**78**	IAmb		IAmb		01 42 08.7	
S57A	**Dark Hollow, R** baz=289,SNR=8.3	**37.20**	**78**	P				01 42 07.3	
T57A	**Hurt** comp=Z,2µm,18.0s	**37.24**	**79**	IAMs_20		IAMs_20		01 57 51.5	
N57A	**Milroy** baz=286,SNR=7.6	**37.31**	**73**	P				01 42 07.8	
R57A	**Stanardsville** baz=289	**37.35**	**77**	P				01 42 08.4	
P57A	**Homestead Farm** baz=288,SNR=8.2	**37.35**	**75**	P				01 42 08.3	
RES	**Resolute Bay** comp=Z,22nm,0.9s,baz=224,slow=10,SNR=30	**37.38**	**14**	P		**P**		**01 42 09.2**	**+1.4**
RES	comp=Z,752nm,18.1s,baz=236,slow=34			LR		LR		01 56 11.8	
RES	**Resolute Bay**	**37.38**	**14**	P		**P**		**01 42 08.4**	**+0.7**
RES	comp=Z,46nm,1.1s			pmax		pmax			
RES	**Resolute Bay**	**37.38**	**14**	P		**P**		**01 42 08.4**	**+0.7**
D55A	**Sainte-Anne-du** baz=279	**37.39**	**62**	P				01 42 08.5	
O57A	**Amberson** baz=287,SNR=7.1	**37.41**	**74**	P				01 42 08.7	
M57A	**Sunshine Farm,** comp=Z,206nm,1.6s	**37.46**	**72**	IAmb		IAmb		01 42 19.0	
M57A	**Sunshine Farm,** baz=286,SNR=5.3	**37.46**	**72**	P				01 42 09.2	
L57A	**Andrews Acres** baz=285	**37.49**	**71**	P				01 42 09.1	
K57A	**Scipio Center** baz=284	**37.54**	**69**	P				01 42 09.7	
456A	**Hilliard** comp=Z,2µm,18.0s	**37.69**	**90**	IAMs_20		IAMs_20		01 59 03.5	
CHGQ	**Chibougamau** baz=276	**37.72**	**57**	P				01 42 11.1	
J57A	**Williamstown** comp=Z,3µm,20.0s	**37.75**	**68**	IAMs_20		IAMs_20		01 58 03.1	
Q58A	**Fox Den Farm,** baz=288	**37.76**	**76**	P				01 42 11.6	
E56A	**St. Veronique** baz=280	**37.77**	**63**	P				01 42 11.6	
V58A	**Windy Hill, Pi** comp=Z,2µm,21.0s	**37.78**	**81**	IAMs_20		IAMs_20		01 58 11.8	
I57A	**Carthage** baz=283	**37.86**	**67**	P				01 42 12.4	
D56A	**ZEC Mazanza, M** baz=279	**37.87**	**62**	P				01 42 12.4	
257A	**Skidaway Islan** comp=Z,2µm,19.0s	**37.88**	**88**	IAMs_20		IAMs_20		01 58 18.6	
N58A	**Sunbury** comp=Z,232nm,1.8s	**37.90**	**72**	IAmb		IAmb		01 42 22.5	
N58A	**Sunbury** baz=286,SNR=5.1	**37.90**	**72**	P				01 42 12.7	
S58A	**Poland Farm, P** comp=Z,2µm,18.0s	**37.93**	**78**	IAMs_20		IAMs_20		01 57 55.7	
S58A	**Poland Farm, P** baz=290	**37.93**	**78**	P				01 42 12.6	
H57A	**Richville** baz=282	**37.94**	**66**	P				01 42 12.8	
R58B	**Mineral** baz=290	**37.94**	**77**	P				01 42 13.1	
656A	**Willston** comp=Z,4µm,20.0s	**37.94**	**93**	IAMs_20		IAMs_20		02 00 05.2	
AMKA	**Amchitka**	**37.94**	**305**	P		**P**		**01 42 13.0**	**+0.2**
O58A	**Lewisberry** baz=287,SNR=5.5	**37.96**	**74**	P				01 42 13.6	
NHSC	**New Hope** comp=Z,3µm,18.0s	**38.04**	**86**	IAMs_20		IAMs_20		01 58 32.8	
NHSC	**New Hope** baz=295	**38.04**	**86**	P				01 42 14.1	
BINY	**Binghamton** comp=Z,64nm,1.0s	**38.06**	**70**	IAmb		IAmb		01 42 23.6	
BINY	**Binghamton** baz=285,SNR=6.2	**38.06**	**70**	P				01 42 14.2	
G57A	**Newington** baz=282	**38.08**	**65**	P				01 42 14.2	
Y58A	**Scranton** comp=Z,3µm,18.0s	**38.10**	**84**	IAMs_20		IAMs_20		01 58 27.3	
F57A	**Harrington**	**38.14**	**64**	P				01 42 15.0	

baz=281
K58A Earlville 38.15 69 P 01 42 14.8
baz=284,SNR=6.5
L58A Harry Jones Me 38.19 70 P 01 42 15.4
baz=285,SNR=13
CBN Corbin Frederi 38.23 77 IAmb IAmb 01 42 26.4
comp=Z,102nm,1.2s
CBN Corbin Frederi 38.23 77 P 01 42 16.1
baz=289
SDMD Soldier's Deli 38.23 75 IAMs_20 IAMs_20 01 58 37.0
comp=Z,2μm,18.0s
KSPA Keystone Colle 38.38 71 IAmb IAmb 01 42 25.8
comp=Z,111nm,1.8s
I58A Old Forge 38.40 67 P 01 42 17.1
baz=284
O59A Robesonia 38.44 73 P 01 42 17.3
baz=287
P59A Jarrettsville 38.47 74 P 01 42 17.2
baz=288
N59A State Game Lan 38.56 72 P 01 42 18.4
baz=287,SNR=6.1
U59A Littleton 38.57 80 IAMs_20 IAMs_20 01 59 11.7
comp=Z,2μm,20.0s
M59A Waymart 38.63 71 P 01 42 19.1
baz=286,SNR=6.3
G58A Ormstown 38.72 65 P 01 42 19.3
baz=282
K59A Cooperstown 38.72 69 P 01 42 19.6
baz=285,SNR=7.7
L59A Walton 38.73 70 IAmb IAmb 01 42 30.4
comp=Z,292nm,1.9s
L59A Walton 38.73 70 P 01 42 20.2
baz=285
J59A Piesco 38.79 68 IAMs_20 IAMs_20 01 58 35.7
comp=Z,2μm,19.0s
H58A Gabriels 38.79 66 P 01 42 20.6
baz=283,SNR=9.6
J59A Piesco 38.79 68 P 01 42 19.5
baz=284
TEIG Tepich 38.82 110 P P **01 42 20.0 -0.5**
comp=Z,26nm,0.9s,baz=287,slow=7.7,SNR=7.1
TEIG Tepich 38.82 110 P P **01 42 20.4 -0.1**
NCB Newcomb 38.86 67 IAMs_20 IAMs_20 01 58 36.7
comp=Z,2μm,18.0s
CNNC Cliffs of the 38.91 81 IAMs_20 IAMs_20 01 58 56.9
comp=Z,2μm,21.0s
CNNC Cliffs of the 38.91 81 P 01 42 21.4
baz=293
WUPA West Chester U 38.98 73 IAMs_20 IAMs_20 01 58 56.6
comp=Z,3μm,18.0s
P60A Greenville 38.99 74 P 01 42 21.8
baz=288
E58A La Victoria 38.99 63 P 01 42 21.4
baz=281
O60A Telford 39.01 73 P 01 42 21.6
baz=287
N60A Cedar Hill Far 39.06 72 P 01 42 22.0
baz=287,SNR=9.5
H59A Cadyville 39.08 66 P 01 42 22.7
baz=283
D58A Chemin du LacG 39.12 62 P 01 42 22.9
baz=280
LATQ La Tuque 39.14 61 P 01 42 22.8
baz=280
I59A Olmsteadville 39.15 67 P 01 42 22.8
baz=284
M60A Port Jervis 39.27 71 P 01 42 24.1
baz=287,SNR=11
L60A Shokan 39.38 70 P 01 42 24.7
baz=286
DWPF Disney Wildern 39.41 94 P 01 42 25.1
baz=300
F59A Saint Guilaume 39.44 64 P 01 42 25.6
baz=282
K60A Five Rivers En 39.44 69 P 01 42 25.5
baz=285
I60A Shoreham 39.55 67 P 01 42 26.7
baz=284
J60A Lant Hill Farm 39.61 68 P 01 42 27.6
baz=285
P61A Hammonton 39.66 74 IAMs_20 IAMs_20 01 59 27.5
comp=Z,2μm,19.0s
N61A South Mountain 39.68 72 P 01 42 28.2
baz=287
V61A Roper 39.69 80 IAMs_20 IAMs_20 01 59 37.4
comp=Z,2μm,18.0s
H60A Morristown 39.79 66 P 01 42 29.9
baz=284,SNR=5.3
L61A Hillsdale 1, H 39.80 69 P 01 42 28.9
baz=286
VT1 Waterbury 39.80 66 IAmb IAmb 01 42 40.2
comp=Z,89nm,1.0s
D59A Saint-Raymond 39.84 62 P 01 42 29.3
baz=281
K61A Williamstown 39.87 69 P 01 42 30.2
baz=286
PAL Palisades 39.89 71 P 01 42 29.7
baz=287
M61A Granite Spring 39.90 71 P 01 42 29.4
baz=287
PETF Flores 39.90 115 P P **01 42 28.3 -1.2**
PETF IAMs_20 IAMs_20 02 00 15.4
comp=Z,1μm,20.0s
G60A Masonville 39.91 65 P 01 42 29.6
baz=283
F60A Warwick 39.98 63 P 01 42 29.9
baz=282
J61A Chester 40.19 67 P 01 42 32.6
baz=285
E60A Ste Agathe de 40.24 62 P 01 42 32.0
baz=282
I61A Oroboro, Fairl 40.28 66 P 01 42 32.6
baz=285
HNH Hanover 40.29 67 IAMs_20 IAMs_20 01 59 18.4
comp=Z,3μm,20.0s
H61A Lyndonville 40.33 65 P 01 42 33.6
baz=284
L61B Northampton 40.35 69 P 01 42 33.5
baz=286
LBNH Lisbon 40.40 66 P P **01 42 33.5 0.0**
LBNH pmax pmax
comp=Z,73nm,1.2s
LBNH MLR MLR
comp=Z,5μm,19.0s
LBNH Lisbon 40.40 66 P P **01 42 33.5 0.0**
LBNH Lisbon 40.40 66 P 01 42 33.1
baz=284
K62A Royalston 40.60 68 IAMs_20 IAMs_20 01 59 31.7
comp=Z,3μm,19.0s
FFD Franklin Falls 40.79 67 IAMs_20 IAMs_20 01 59 44.7
comp=Z,3μm,19.0s
APG El Apazote 40.83 118 P P **01 42 37.3 -0.2**
comp=Z,6.0nm,1.1s,baz=263,slow=6.1,SNR=5.2
H62A Milan 40.85 65 P 01 42 37.4
baz=284
UCCT U. Connecticut 40.86 69 P P **01 42 37.0 -0.3**
UCCT IAmb IAmb 01 42 47.8
comp=Z,173nm,1.4s
E61A Lac Etchemin 40.87 62 P 01 42 37.9
baz=283
FRB Frobisher Bay 40.94 35 P P **01 42 38.4 +0.7**
comp=Z,15nm,0.8s,baz=257,slow=9.0,SNR=9.9
K63A Dunstable 41.10 68 IAMs_20 IAMs_20 01 59 56.8
comp=Z,2μm,19.0s
G62A West of Eustis 41.12 64 IAMs_20 IAMs_20 01 59 25.5
comp=Z,2μm,18.0s
G62A West of Eustis 41.12 64 P 01 42 39.4
baz=284
HRV Adam Dziewonsk 41.13 68 IAMs_20 IAMs_20 01 59 46.6
comp=Z,2μm,20.0s
J63A Strafford 41.25 67 P 01 42 41.2
baz=286
L63A North Scituate 41.28 69 IAMs_20 IAMs_20 02 00 04.6
comp=Z,3μm,20.0s
G63A Kingsbury 41.77 64 P 01 42 45.0
baz=284
ESQI Esquipulas 41.90 117 P P **01 42 46.7 +0.5**
ESQI IAmb IAmb 01 43 00.0
comp=Z,147nm,1.0s
PKME Peaks-Kenny Pk 41.96 64 IAMs_20 IAMs_20 01 59 49.6
comp=Z,2μm,21.0s
F63A Nahmakanta, Br 41.98 63 IAMs_20 IAMs_20 01 59 48.1
comp=Z,2μm,20.0s
MTO3 Montecristo 42.01 117 P P **01 42 47.0 -0.1**
F64A Sherman 42.45 62 IAMs_20 IAMs_20 02 00 35.6
comp=Z,3μm,19.0s
EUNU Eureka 42.51 10 P P **01 42 51.3 +0.9**
E64A Bridgewater 42.66 62 P 01 42 52.2
baz=284
G65A Princeton 43.16 63 IAMs_20 IAMs_20 02 00 35.3
comp=Z,2μm,20.0s
BATG Bathurst New B 43.62 60 P P **01 42 59.6 -0.2**
BATG IAMs_20 IAMs_20 02 01 47.7
comp=Z,2μm,20.0s
GGN Saint George 43.67 63 IAMs_20 IAMs_20 02 00 51.2
comp=Z,2μm,22.0s
TGUH Tegucigalpa,Un 43.67 115 IAMs_20 IAMs_20 02 04 31.4
comp=Z,1μm,19.0s
BILL Bilibino 44.46 331 *c* iP P **01 43 06.8 +0.6**
BILL *i* *PP **sP** **01 43 10.6 +1.0**
BILL *i* *SP **pwP** **01 43 13.8 +0.8**
BILL 01 44 48.0
BILL *e*SS SS 01 53 09.5 +10
BILL pmax pmax
comp=Z,160nm,1.7s
BILL MLR MLR
comp=Z,622nm,15.0s
BILL Bilibino 44.46 331 P P **01 43 05.9 -0.3**
BILL IAmb IAmb 01 43 08.3
comp=Z,140nm,1.3s
BOAB BOACO BROADBAN 46.91 115 IAMs_20 IAMs_20 02 03 01.7
comp=Z,2μm,19.0s
HAL Halifax 46.02 63 IAMs_20 IAMs_20 02 03 51.0
comp=Z,2μm,19.0s
ALE Alert 46.88 9 IAMs_20 IAMs_20 02 05 25.4
comp=Z,1μm,19.0s
SFJD Kangerlussuaq 48.40 31 P P **01 43 38.0 +1.0**
comp=Z,2μm,0.9ns,baz=252,slow=5.7,SNR=5.1
SFJD Kangerlussuaq 48.40 31 P P **01 43 37.0 -0.1**
SFJD pmax pmax
comp=Z,44nm,1.2s
SFJD MLR MLR
comp=Z,2μm,19.0s
SFJD Kangerlussuaq 48.40 31 P P **01 43 37.0 -0.1**
SFJD IAmb IAmb 01 43 50.1
comp=Z,44nm,1.1s
SFJD Kangerlussuaq 48.40 31 IAMs_20 IAMs_20 02 04 06.4
comp=Z,2μm,19.0s
DRLN Deer Lake 48.58 55 IAmb IAmb 01 43 39.8
comp=Z,65nm,1.5s
DRLN IAMs_20 IAMs_20 02 03 01.0
comp=Z,1μm,18.0s
GTBY Guantanamo Bay 48.74 99 IAMs_20 IAMs_20 02 05 41.2
comp=Z,1μm,20.0s
BBSR BB Station 50.05 78 IAMs_20 IAMs_20 02 05 32.9
comp=Z,1μm,19.0s
PET Petropavlovsk 50.09 311 *j* iP P **01 43 50.7 +0.6**
PET *e*PP **pwP** **01 43 59.6 +2.7**
PET *e*S **S** **01 50 58.2 -2.9**
PET pmax pmax
comp=Z,248nm,1.1s
PET pmax pmax
comp=Z,300nm,14.0s
PET Petropavlovsk 50.09 311 P P **01 43 50.8 +0.6**
TAOE Nuku Hiva Isla 50.51 197 *e*S **S** **01 51 09.4 +1.5**
comp=Z,372nm,25.7s
TAOE *e*LR LR 01 58 10.2
comp=Z,2μm,28.2s
PEA0B Petropavlovsk- 50.61 311 P P **01 43 54.8 +0.6**
PEA0B pmax pmax
comp=Z,283nm,1.3s
PEA0B Petropavlovsk- 50.61 311 P P **01 43 54.8 +0.6**
PETK Petropavlovsk- 50.61 311 P P **01 43 54.7 +0.5**
comp=Z,90nm,0.9s,baz=77,slow=14,SNR=56
PETK LR LR 02 03 11.5
comp=Z,398nm,19.4s,baz=72,slow=34
PETK Petropavlovsk- 50.61 311 P P **01 43 54.6 +0.4**
PETK Petropavlovsk- 50.61 311 P P **01 43 54.6 +0.4**
SEY Seymchan 50.70 324 P P **01 43 55.2 +0.6**
comp=Z,81nm,1.0s,baz=93,slow=6.2,SNR=79
SEY Seymchan 50.70 324 *j* *e*P P **01 43 55.0 +0.3**
SUMG Summit 51.58 23 P P **01 44 02.0 +0.4**
SUMG pmax pmax
comp=Z,65nm,0.9s
SUMG MLR MLR
comp=Z,1μm,19.0s
SUMG Summit 51.58 23 P P **01 44 02.0 +0.4**
SUMG IAmb IAmb 01 44 13.4
comp=Z,65nm,0.9s
SUMG IAMs_20 IAMs_20 02 05 45.4
comp=Z,1μm,19.0s
NRS Narsarsuaq 51.82 38 IAMs_20 IAMs_20 02 05 55.3
comp=Z,2μm,21.0s
SDDR Presa de Saban 52.19 97 P P **01 44 05.8 -0.7**
SKR Severo-Kuril's 52.33 309 *j* *e*P P **01 44 06.8 -0.2**
SC01 Santiago de lo 52.35 96 IAMs_20 IAMs_20 02 09 17.8
comp=Z,2μm,18.0s
MA2 Magadan 52.35 320 P P **01 44 08.1 +0.9**
comp=Z,57nm,0.8s,baz=76,slow=7.4,SNR=51
MA2 LR LR 02 05 15.1
comp=Z,787nm,19.3s,baz=82,slow=35
MA2 Magadan 52.35 320 *d* iP P **01 44 08.0 +0.9**
MA2 pmax pmax
comp=Z,189nm,1.7s
MA2 Magadan 52.35 320 P P **01 44 07.5 +0.4**
MA2 IAMs_20 IAMs_20 02 05 03.8
comp=Z,900nm,20.0s
AOPR Arecibo Observ 56.01 94 IAmb IAmb 01 44 43.9
comp=Z,48nm,0.8s
MLPR Mayeyes Islan 56.01 95 IAmb IAmb 01 44 44.7
comp=Z,32nm,0.8s
TIXI Tiksi 56.26 338 P P **01 44 35.4 +0.1**
comp=Z,16nm,0.9s,baz=68,slow=7.2,SNR=26
TIXI PcP PcP **01 45 32.5 -0.3**
comp=Z,12nm,1.0s,baz=71,slow=3.0,SNR=3.7
TIXI Tiksi 56.26 338 *d* iP P **01 44 35.1 -0.3**
TIXI pmax pmax
comp=Z,327nm,2.5s
TIXI Tiksi 56.26 338 P P **01 44 35.0 -0.4**
TIXI IAmb IAmb 01 44 44.9
comp=Z,53nm,1.4s
GCPR Guaynabo City 56.54 94 IAmb IAmb 01 44 47.6
comp=Z,38nm,0.9s
SJG San Juan 56.61 94 P P **01 44 38.0 -0.6**
SJG pmax pmax
comp=Z,37nm,1.0s
SJG MLR MLR
comp=Z,800nm,18.0s
SJG San Juan 56.61 94 P P **01 44 38.0 -0.6**
SJG IAmb IAmb 01 44 48.9
comp=Z,37nm,0.9s
SJG San Juan 56.61 94 IAMs_20 IAMs_20 02 13 33.7
comp=Z,837nm,18.0s
HUMP Col San Antoni 56.82 94 IAmb IAmb 01 44 49.7
comp=Z,35nm,0.8s
SCO Scoresbysund 57.22 23 IAmb IAmb 01 44 52.4
comp=Z,47nm,1.3s
VAH Vaihoa 58.58 203 *e*T T 02 47 56.7
comp=Z,38nm,0.3s
SDV Santo Domingo 59.07 106 P P **01 44 55.3 -0.9**
SDV IAmb IAmb 01 45 06.2
comp=Z,32nm,1.1s
H11N3 WAKE ISLAND Hy 59.27 270 T T 02 48 56.4
baz=56,slow=74,SNR=199
H11N2 WAKE ISLAND Hy 59.27 270 T T 02 49 28.3
SNR=174
H11N1 WAKE ISLAND Hy 59.29 270 T T 02 48 53.2
baz=97,slow=74,SNR=84
SEUS St. Eustatius 59.39 93 IAMs_20 IAMs_20 02 11 09.3
comp=Z,933nm,20.0s
SPA0 Spitsbergen Ar 59.59 8 IAmb IAmb 01 45 11.1
comp=Z,52nm,1.1s
SPITS Spitsbergen Ar 59.59 8 P P **01 44 59.1 +0.4**
comp=Z,30nm,0.9s,baz=184,slow=8.4,SNR=6.4
OTAV Otavalo 59.66 119 P P **01 44 59.6 -0.9**
OTAV IAmb IAmb 01 45 11.4
comp=Z,42nm,1.2s
OTAV Otavalo 59.66 119 *e*P P **01 45 00.4 -0.2**
SKI Saint Kitts 59.67 93 IAMs_20 IAMs_20 02 06 51.8
comp=Z,1μm,22.0s
TYV Tymovskoe 60.04 313 *e*P P **01 45 02.7 +0.6**
TYV *e*S **S** **01 53 18.7 +4.2**
TYV pmax pmax
comp=Z,500nm,2.6s
TYV pmax pmax
comp=Z,89nm,1.2s
TYV smax smax
comp=E,600nm,4.2s
BORG Borgarnes 60.37 28 P P **01 45 05.2 +1.1**
comp=E,9.8nm,0.8s,baz=315,slow=2.8,SNR=4.5
BORG Borgarnes 60.37 28 P P **01 45 05.2 +1.1**
BORG pmax pmax
comp=Z,161nm,1.7s
YAK Yakutsk 60.73 328 P P **01 45 06.8 +0.1**
comp=Z,38nm,0.5s,baz=80,slow=1.8,SNR=24
YAK Yakutsk 60.73 328 *d* iP P **01 45 07.1 +0.5**
YAK *e*PP **pwP** **01 45 13.2 -0.2**
YAK *e* 01 45 15.7
YAK *e*S **S** **01 53 22.8 -0.2**
YAK *e*SSS SSS 02 00 07.0
YAK pmax pmax
comp=Z,230nm,1.0s
YAK pmax pmax
comp=N,26nm,0.9s
YAK pmax pmax
comp=E,86nm,1.3s
YAK pmax pmax
comp=Z,259nm,1.1s
YAK pmax pmax
comp=N,96nm,1.8s
YAK pmax pmax
comp=E,203nm,2.0s
YAK smax smax
comp=E,117nm,11.9s
YAK smax smax
comp=N,174nm,12.6s
YAK MLR MLR
comp=E,541nm,16.0s
YAK Yakutsk 60.73 328 P P **01 45 06.5 -0.1**
YAK IAMs_20 IAMs_20 02 10 24.8
comp=Z,908nm,20.0s
MEH Mehetia 61.20 203 *e*T T 02 51 15.5
comp=Z,60nm,0.2s
TIAR Tiarei 61.29 204 *e*T T 02 51 21.6
comp=Z,37nm,0.2s
PPT2 Papeete2 61.39 204 *e*S **S** **01 53 35.3 +2.8**
comp=Z,3μm,27.8s
PPT2 *e*LQ LQ 02 00 19.5
comp=Z,682nm,24.8s
PPT2 *e*LR LR 02 03 06.8
comp=Z,3μm,29.0s,baz=18
PPT2 Papeete2 61.39 204 *e*T T 02 51 29.0
comp=Z,14nm,0.2s
YUK Yuzh-Kuril'sk 61.46 305 *j* *e*P P **01 45 11.6 -0.3**
YSS Yuzh-Sakhalins 61.89 309 *c* *e*P P **01 45 15.2 +0.4**
YSS pmax pmax
comp=Z,93nm,1.3s
YSS Yuzh-Sakhalins 61.89 309 P P **01 45 14.4 -0.3**
YSS IAMs_20 IAMs_20 02 07 42.7
comp=Z,653nm,19.0s
ASAJ Asahikawa 63.44 306 P P **01 45 25.0 -0.2**
comp=Z,74nm,0.9s,baz=334,slow=3.5,SNR=20
GRNR Gornyy 63.50 315 *j* iP P **01 45 25.3 -0.2**
GRNR pmax pmax
comp=Z,30nm,1.1s
RKT Rikitea 63.68 188 *e*S **S** **01 54 04.4 +3.5**
comp=Z,1μm,31.5s
RKT *e*LQ LQ 02 01 38.2
comp=Z,3μm,31.0s
RKT *e*LR LR 02 04 22.8
comp=Z,1μm,31.0s
RKT Rikitea 63.68 188 *e*T T 02 54 24.3
comp=Z,68nm,0.3s
GRGR Grenville 63.69 97 IAMs_20 IAMs_20 02 15 25.4
comp=Z,796nm,20.0s
ERM Erimo 64.20 304 *de*P P **01 45 30.4 +0.2**
ERM pmax pmax
comp=Z,96nm,1.3s
ERM Erimo 64.20 304 P P **01 45 30.4 +0.2**
TOSP Speyside 65.06 96 IAMs_20 IAMs_20 02 11 18.8
comp=Z,1μm,21.0s
ZEA Zeya 66.48 321 *e*P P **01 45 44.4 -0.4**
ZEA pmax pmax
comp=Z,40nm,1.0s
TEY Ternei 66.54 310 *j* *e*P P **01 45 43.9 -1.4**
TEY pmax pmax
comp=E,40nm,1.1s
TEY pmax pmax
comp=N,20nm,1.0s
TEY pmax pmax
comp=Z,60nm,1.1s
TBI Tubuai 66.78 202 *e*S **S** **01 54 41.4 +2.4**
comp=Z,564nm,26.2s
TBI Tubuai 66.78 202 *e*LR LR 02 05 45.3
comp=Z,2μm,30.0s,baz=17
TBI Tubuai 66.78 202 *e*T T 02 58 13.7
comp=Z,39nm,0.3s
KLR Kul'dur 66.86 316 P P **01 45 46.4 -0.9**
comp=Z,15nm,0.9s,baz=48,slow=6.1,SNR=36
KLR Kul'dur 66.86 316 *de*P P **01 45 47.0 -0.3**
NRIK Noril'sk 67.52 347 P P **01 45 51.0 -0.1**
comp=Z,8.3nm,0.9s,baz=34,slow=5.0,SNR=17
NRIK LR LR 02 13 57.4
comp=Z,224nm,22.0s,baz=36,slow=35
NRIK Noril'sk 67.52 347 *de*P P **01 45 50.8 -0.4**
NRIK Noril'sk 67.52 347 IAmb IAmb 01 46 01.7
comp=Z,34nm,1.2s
JMM Marumori 68.00 301 IAmb IAmb 01 45 54.8
comp=Z,34nm,0.9s
JMM IAMs_20 IAMs_20 02 10 43.0
comp=Z,571nm,18.0s
ARCES ARCESS Array B 68.48 10 P P **01 45 56.6 -0.6**
comp=Z,7.2nm,0.9s,baz=359,slow=9.7,SNR=4.3
ARCES LR LR 02 14 52.7
comp=Z,400nm,21.7s,baz=345,slow=35
CZSB Cruzeiro do Su 69.39 120 *e*P P **01 46 03.8 +0.3**
BOD Bodaibo 69.51 330 *j* iP P **01 46 02.5 -1.3**
BOD pmax pmax
comp=Z,64nm,1.1s
USA0B Ussuriysk Arra 69.70 311 *d* iP P **01 46 04.9 -0.3**
USA0B Ussuriysk Arra 69.70 311 P P **01 46 05.1 -0.1**
USRK Ussuriysk Ar. 69.70 311 P P **01 46 04.6 -0.6**
comp=Z,41nm,0.8s,baz=53,slow=5.2,SNR=73
USRK LR LR 02 11 33.1
comp=Z,288nm,21.9s,baz=36,slow=32
NNA Nana 69.99 127 *j* *e*P P **01 46 07.0 -0.3**
NNA pmax pmax
comp=Z,46nm,1.3s
MAJO Matsushiro 70.44 302 *d* iP P **01 46 09.3 -0.6**
MAJO pmax pmax
comp=Z,61nm,0.9s
MAJO Matsushiro 70.44 302 P P **01 46 09.1 -0.8**
MAJO Matsushiro 70.44 302 IAMs_20 IAMs_20 02 13 39.8
comp=Z,577nm,19.0s
MAT Matsushiro 70.44 302 P P **01 46 09.2 -0.7**
MAT S S **01 55 26.2 +3.5**
MJAR Matsushiro Arr 70.44 302 P P **01 46 09.1 -0.8**
comp=Z,24nm,0.9s,baz=39,slow=5.4,SNR=46
MJAR LR LR 02 13 50.4
comp=Z,361nm,19.0s,baz=100,slow=33
MDJ Mudanjiang 70.81 313 P P **01 46 11.6 -0.4**
MDJ pmax pmax
comp=Z,25nm,0.9s
MDJ pmax pmax
comp=Z,240nm,5.4s
MDJ LR LR
comp=Z,350nm,22.8s
MDJ LR LR
comp=Z,580nm,19.2s
MDJ LR LR
comp=Z,820nm,22.0s
MDJ Mudanjiang 70.81 313 P P **01 46 10.8 -1.2**
MDJ IAMs_20 IAMs_20 02 12 59.6
comp=Z,643nm,21.0s
BOAV Boa Vista 70.86 104 *e*P P **01 46 13.1 +0.5**
LVZ Lovozero 71.08 7 *j* *e*P P **01 46 14.0 +0.7**
LVZ pmax pmax
comp=Z,24nm,1.0s
MSHR Mys Shultsa 71.17 310 *j* *e*P P **01 46 14.3 +0.1**
MSHR pmax pmax
comp=Z,98nm,1.7s
APA Apatity 71.28 8 *j* iP P **01 46 13.7 -0.7**
APA pmax pmax
comp=Z,6.0nm,1.2s
APA MLR MLR
comp=Z,1μm,15.0s
JGF Kuroka 71.56 301 IAmb IAmb 01 46 17.4
comp=Z,50nm,1.3s
HIA Hailar 72.94 321 *d* iP P **01 46 24.2 -0.5**
HIA pmax pmax
comp=Z,48nm,1.1s
HIA Hailar 72.94 321 P P **01 46 23.8 -0.9**
HIA IAmb IAmb 01 46 25.5
comp=Z,36nm,1.0s
HIA Hailar 72.94 321 IAMs_20 IAMs_20 02 18 28.6
comp=Z,523nm,19.0s
JWT Wachi 73.02 302 IAmb IAmb 01 46 26.0
comp=Z,32nm,1.0s
JWT IAMs_20 IAMs_20 02 13 48.9
comp=Z,584nm,21.0s
NOA NORSAR Array B 73.32 20 P P **01 46 26.7 -0.1**
comp=Z,1.1nm,0.8s,baz=122,slow=15,SNR=14

NOA LR LR 02 17 10.7
comp=Z,136nm,19.8s,baz=335,slow=35
PTGA Pitinga 73.36 106 P **P** **01 46 27.2 -0.4**
PTGA IAmb IAmb 01 46 37.6
comp=Z,36nm,0.8s
PTGA IAMs_20 IAMs_20 02 19 58.4
comp=Z,560nm,21.0s
NAO01 NORSAR Array S 73.40 20 IAmb IAmb 01 46 37.6
comp=Z,77nm,1.1s
CN2 Changchun 73.63 314 *e*P **P** **01 46 27.9 -1.0**
CN2 pP pwP 01 46 35.9 +0.2
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 pmax pmax
comp=Z,170nm,3.9s
MACA Manacapuru-AM 74.49 108 *e*P **P** **01 46 34.1 -0.2**
JMN Monobe 74.97 302 IAmb IAmb 01 46 38.4
comp=Z,80nm,1.3s
JMN IAMs_20 IAMs_20 02 19 21.5
comp=Z,706nm,20.0s
ETMB Extrema 75.26 117 *e*P **P** **01 46 37.5 -1.1**
FIA1 FINESS Array S 76.14 13 P **P** **01 46 43.1 +0.1**
FIA1 IAmb IAmb 01 46 48.7
comp=Z,58nm,1.4s
FINES FINESS Array B 76.14 13 P **P** **01 46 42.3 -0.7**
comp=Z,3.9nm,0.8s,baz=359,slow=7.8,SNR=7.0
FINES LR LR 02 20 13.4
comp=Z,385nm,19.1s,baz=342,slow=36
KSRS Korea Array 76.33 308 P **P** **01 46 44.0 -0.6**
comp=Z,18nm,0.9s,baz=57,slow=5.9,SNR=50
KSRS LR LR 02 14 55.2
comp=Z,266nm,21.5s,baz=62,slow=31
KS19 Wonju Array Si 76.34 308 IAmb IAmb 01 46 45.4
comp=Z,28nm,1.0s
KSAR Wonju Array Be 76.36 308 P **P** **01 46 43.7 -1.0**
KSAR Wonju Array Be 76.36 308 P **P** **01 46 43.7 -1.0**
INCN Inchon 77.09 308 P **P** **01 46 48.1 -0.8**
INCN pmax pmax
comp=Z,33nm,0.9s
INCN Inchon 77.09 308 P **P** **01 46 48.1 -0.8**
INCN IAmb IAmb 01 46 49.8
comp=Z,32nm,0.9s
JNU Nakatsue 77.29 303 P **P** **01 46 50.2 +0.1**
comp=Z,24nm,1.0s,baz=20,slow=8.7,SNR=4.2
TJN Taejon 77.38 307*d* *i*P **P** **01 46 50.0 -0.5**
IRK Irkutsk 77.40 330 *e*P **P** **01 46 49.7 -0.6**
IRK pmax pmax
comp=Z,142nm,1.8s
PRGR Permogore 78.07 3 *e*P **P** **01 46 53.4 -0.4**
PRGR *e* 01 47 02.8
PRGR pmax pmax
comp=Z,66nm,1.1s
TLY Talaya 78.08 330 P **P** **01 46 54.2 0.0**
comp=Z,7.5nm,0.5s,baz=359,slow=4.7
TLY Talaya 78.08 330 *e*P **P** **01 46 54.5 +0.3**
TLY pmax pmax
comp=Z,162nm,1.3s
TLY MLR MLR
comp=Z,1μm,19.0s
TLY Talaya 78.08 330 P **P** **01 46 54.0 -0.2**
TLY IAmb IAmb 01 46 56.1
comp=Z,62nm,1.2s
TLY IAMs_20 IAMs_20 02 21 46.5
comp=Z,523nm,20.0s
SKMB Sankelmark Bun 78.19 24 *e*P **P** **01 46 56.3 +1.6**
comp=Z,86nm,1.2s,baz=330,slow=5.2
MALB Monte Alegre 78.33 103 *e*P **P** **01 46 56.7 +0.6**
KLMR Klimovskoe 78.44 7 *e*P **P** **01 46 54.4 -1.5**
KLMR *e* 01 49 50.6
KLMR pmax pmax
comp=Z,128nm,1.4s
KLMR Klimovskoe 78.44 7 *e*P **P** **01 46 54.5 -1.5**
KLMR AMP 01 47 06.3
comp=Z,128nm,1.4s
KLMR *e*PP **PP** **01 49 50.7 -1.7**
LPAZ La Paz 78.71 123 P **P** **01 46 58.1 -0.6**
comp=Z,5.6nm,0.8s,baz=300,slow=5.0,SNR=20
LPAZ La Paz 78.71 123 P **P** **01 46 57.1 -1.7**
LPAZ pmax pmax
comp=Z,13nm,0.8s
LPAZ La Paz 78.71 123 P **P** **01 46 57.1 -1.7**
LPAZ La Paz 78.71 123 *e*P **P** **01 46 58.2 -0.6**
ITTB Itaituba 78.92 105 *e*P **P** **01 46 58.8 -0.5**
MCPB Macapa, AP 79.00 100 *e*P **P** **01 46 59.8 +0.1**
DL2 Dalian 79.05 312 P **P** **01 46 59.8 +0.1**
DL2 *e*S **S** **01 57 00.9 +2.3**
DL2 pmax pmax
comp=Z,68nm,1.0s
DL2 pmax pmax
comp=Z,230nm,4.6s
DL2 LR LR
comp=Z,230nm,15.1s
DL2 LR LR
comp=Z,260nm,18.4s
DL2 LR LR
comp=Z,370nm,21.6s
MOY Mondy 79.07 332 *e*P **P** **01 47 00.0 +0.2**
MOY pmax pmax
comp=Z,69nm,2.2s
BSEG Bad Segeberg 79.13 24 *e*P **P** **01 47 01.0 +1.2**
comp=Z,146nm,1.9s,baz=330,slow=5.2
ZAK Zakamensk 79.26 330 *e*P **P** **01 47 00.4 -0.4**
ZAK pmax pmax
comp=Z,28nm,1.4s
IBBN Ibbenburen 79.68 26 *e*P **P** **01 47 03.9 +1.1**
comp=Z,160nm,1.5s,baz=330,slow=5.2
ULN Ulaanbaatar 79.72 326*d* *i*P **P** **01 47 03.4 -0.1**
ULN pmax pmax
comp=Z,93nm,2.5s
ULN Ulaanbaatar 79.72 326 P **P** **01 47 03.3 -0.1**
ULN IAmb IAmb 01 47 05.1
comp=Z,97nm,1.7s
ULN Ulaanbaatar 79.72 326 IAMs_20 IAMs_20 02 21 51.2
comp=Z,762nm,20.0s
MNMC Minye Minye 79.91 126 IAmb IAmb 01 47 14.7
comp=Z,34nm,0.7s
SONM Songino Array 80.02 327 P **P** **01 47 05.4 +0.4**
comp=Z,29nm,1.0s,baz=52,slow=4.4,SNR=124
SONM PP **PP** **01 50 10.2 +4.0**
comp=Z,1.0nm,0.8s,baz=27,slow=5.0,SNR=3.8
SONM LR LR 02 22 21.9
comp=Z,759nm,19.6s,baz=29,slow=36
SONM Songino Array 80.02 327 P **P** **01 47 04.5 -0.5**
SONM pmax pmax
comp=Z,48nm,1.2s
SONM Songino Array 80.02 327 P **P** **01 47 04.5 -0.5**
SONM IAmb IAmb 01 47 06.9
comp=Z,48nm,1.2s
BUG Bochum--Univer 80.23 27 *e*P **P** **01 47 06.5 +0.6**
comp=Z,34nm,1.4s,baz=330,slow=5.2
BMRD Maredsous 80.28 29 *d*P **P** **01 47 06.9 +0.7**
BMRD *dx* x 01 47 16.0
NRDL Niedersach Rie 80.29 25 *e*P **P** **01 47 07.3 +1.2**
comp=Z,66nm,1.6s,baz=330,slow=5.2
BGES Gesves 80.33 29 *d*P **P** **01 47 07.2 +0.8**
comp=Z,15nm,1.4s
BGES *d*PcP **pwP** **01 47 12.9 -0.4**
BGES *dx* x 01 47 16.1
BSTI Sart Tilman 80.34 28 *dx* x 01 47 16.3
PB11 IPOC Station P 80.35 126 IAmb IAmb 01 47 16.6
comp=Z,48nm,0.8s
BCLA Clavier 80.38 29 *d*P **P** **01 47 07.6 +0.9**
comp=Z,17nm,1.4s
BCLA *dx* x 01 47 15.9
DOU Dourbes 80.39 29 *d*P **P** **01 47 07.7 +1.0**
comp=Z,11nm,1.5s
DOU *dx* x 01 47 16.8
MEM Membach 80.48 28 *d*P **P** **01 47 08.0 +0.7**
comp=Z,11nm,1.4s
MEM *dx* x 01 47 17.2
BTNL Ternell 80.55 28 *d*P **P** **01 47 08.2 +0.6**
BTNL *dx* x 01 47 17.1
LNIZ Loecknitz 80.67 22 *e*P **P** **01 47 09.2 +1.0**
comp=Z,46nm,1.0s,baz=330,slow=5.2
BHOU Houvegnez 80.69 28 *dx* x 01 47 18.0
ASSE Asse, Remlinge 80.78 25 *e*P **P** **01 47 09.9 +1.2**
comp=Z,72nm,1.4s,baz=330,slow=5.2
FLTG Flechtingen 80.79 24 *e*P **P** **01 47 09.5 +0.7**
comp=Z,65nm,1.3s,baz=330,slow=5.2
KASTN Kahler Asten 80.83 26 *e*P **P** **01 47 09.9 +0.8**
comp=Z,14nm,1.2s,baz=330,slow=5.2
AHRW Bad Neuenahr-A 80.92 28 *e*P **P** **01 47 10.7 +1.1**
comp=Z,60nm,1.6s,baz=330,slow=5.2
CLZ Clausthal 80.93 25 *e*P **P** **01 47 11.1 +1.4**
comp=Z,72nm,1.4s,baz=330,slow=5.2
PB08 IPOC Station P 80.94 126 IAmb IAmb 01 47 20.5
comp=Z,69nm,1.7s
NPGB Novo Progresso 81.00 107 *e*P **P** **01 47 09.7 -0.9**
GTTG Gottingen 81.05 25 *e*P **P** **01 47 11.5 +1.2**
comp=Z,38nm,1.3s,baz=330,slow=5.2
CLF Chambon-Foret 81.17 32 IAmb IAmb 01 47 24.0
comp=Z,79nm,1.2s
BJI Beijing 81.23 316 P **P** **01 47 11.5 +0.1**
BJI pmax pmax
comp=Z,12nm,1.0s
BJI LR LR
comp=Z,230nm,17.1s
BJI LR LR
comp=Z,330nm,17.9s
BJI LR LR
comp=Z,390nm,31.3s
BJT Baijiatuan 81.25 316 P **P** **01 47 08.1 -3.5**
BJT pmax pmax
comp=Z,14nm,1.1s
BJT Baijiatuan 81.25 316 P **P** **01 47 08.1 -3.5**
KIRV Kirov 81.26 2‖ *e*P **P** **01 47 10.4 -0.8**
PABE Paberze 81.29 16 *e*P **P** **01 47 11.9 +0.5**
WLF Walferdange 81.32 29 *dx* x 01 47 22.0
WLF Walferdange 81.32 29 IAmb IAmb 01 47 23.6
comp=Z,50nm,1.4s
WLF IAMs_20 IAMs_20 02 20 05.0
comp=Z,685nm,22.0s
WLF Walferdange 81.32 29 *e*P **P** **01 47 13.0 +1.2**
comp=Z,48nm,1.4s,baz=330,slow=5.2
PB01 IPOC Station P 81.42 127 IAmb IAmb 01 47 21.9
comp=Z,20nm,0.7s
RUE Ruedersdorf 81.44 23 *e*P **P** **01 47 13.1 +0.8**
comp=Z,45nm,1.4s,baz=330,slow=5.2
VILB Vilhena 81.61 115 *e*P **P** **01 47 14.5 +0.8**
ISAL Salakas 81.67 15 *e*P **P** **01 47 13.9 +0.4**
TNS Taunus Mts 81.67 27 *e*P **P** **01 47 14.6 +0.9**
comp=Z,41nm,1.5s,baz=330,slow=5.2
UBBA Unterbreizbach 81.69 26 *e*P **P** **01 47 14.7 +1.1**
comp=Z,35nm,1.6s,baz=330,slow=5.2
GKP Gorka Klasztor 81.71 21 *e*P **P** **01 47 14.1 +0.3**
POLO Lamas de Olo 81.75 41 *e*P **P** **01 47 14.6 +0.3**
comp=Z,33nm,1.4s
POLO *i* LQ LQ 01 47 24.5
PVRL Vila Real 81.86 41 *e*P **P** **01 47 17.6 +2.8**
comp=Z,82nm,1.5s
PVRL *i* LQ LQ 01 47 25.1
IIGN Ignalina 81.89 15 *e*P **P** **01 47 15.1 +0.5**
NEUB Neuenburg 81.93 25 *e*P **P** **01 47 15.7 +0.7**
comp=Z,34nm,1.3s,baz=330,slow=5.2
PBRG Braganca 81.96 41 *e*P **P** **01 47 16.0 +0.7**
comp=Z,35nm,2.1s
PBRG *i* LQ LQ 01 47 25.1
ZAA0 Zalesovo Array 81.98 342 IAmb IAmb 01 47 16.4
comp=Z,39nm,1.4s
ZAA0 IAMs_20 IAMs_20 02 26 09.6
comp=Z,385nm,19.0s
ZALV Zalesovo Beam 81.98 342 P **P** **01 47 14.9 -0.2**
comp=Z,11nm,0.9s,baz=22,slow=5.1,SNR=35
ZALV PP **PP** **01 50 23.1 +1.2**
comp=Z,1.7nm,0.9s,baz=19,slow=6.3,SNR=3.9
ZALV LR LR 02 26 20.3
comp=Z,345nm,18.7s,baz=12,slow=38
ZALV Zalesovo Beam 81.98 342 *i* P **P** **01 47 14.8 -0.3**
ZALV pmax pmax
comp=Z,11nm,0.9s
ZALV Zalesovo Beam 81.98 342 P **P** **01 47 13.8 -1.4**
IDID Didziasalis 82.03 15 *e*P **P** **01 47 15.3 0.0**
PVIS Viseu 82.19 42 *i* LQ LQ 01 47 26.4
CLL Collm 82.22 24 *i* P **P** **01 47 16.8 +0.3**
comp=Z,18nm,1.5s
CLL *i* 01 47 25.3
comp=Z,81nm,1.9s
CLL *e*S **S** **01 57 27.0 -4.5**
CLL *e*PS **PnS** **01 58 24.0 +4.2**
CLL *e*SS **SS** **02 02 54.0 +4.1**
CLL *e*SSS SSS 02 06 24.0
CLL *e*SSSS 02 09 00.0
CLL LmV 02 23 00.0
comp=Z,700nm,21.1s
CLL Collm 82.22 24 *i* P **P** **01 47 16.8 +0.3**
CLL *i* 01 47 25.3
CLL *e*S **S** **01 57 27.0 -4.5**
CLL pmax pmax
comp=Z,18nm,1.5s
CLL MLR MLR
comp=Z,700nm,21.1s
CLL Collm 82.22 24 IAMs_20 IAMs_20 02 23 36.0
comp=Z,749nm,20.0s
CLL Collm 82.22 24 *e*P **P** **01 47 17.2 +0.7**
comp=Z,81nm,1.9s,baz=330,slow=5.2
MILB Miltenberg 82.29 27 *e*P **P** **01 47 18.0 +1.1**
comp=Z,20nm,1.0s,baz=330,slow=5.2
MVO Moncorvo 82.29 41 *i* LQ LQ 01 47 26.8
COI Coimbra 82.30 43 *i* LQ LQ 01 47 26.9
COI Coimbra 82.30 43 IAMs_20 IAMs_20 02 20 24.9
comp=Z,871nm,21.0s
MOX Moxa 82.36 25 *e*P **P** **01 47 18.2 +0.9**
comp=Z,41nm,1.4s,baz=330,slow=5.2
MOX *e*L L 02 24 29.0
comp=Z,862nm,20.0s
PCAS Casmilo, Conde 82.37 43 *e*P P 01 47 23.4 +5.9
comp=Z,81nm,1.7s
NACGM Naroch 82.42 15 *i* P **P** **01 47 16.8 -0.6**
NACGM *i* P **P** **01 47 16.8 -0.6**
NACGM *i* P **P** **01 47 16.8 -0.6**
NACGM *i* PcP **PcP** **01 47 22.2 -0.4**
NACGM *i* PP **PP** **01 50 24.1 -1.5**
NACGM *i* PPP PPP 01 52 08.8
NACGM *i* S **S** **01 57 28.4 -5.0**
NACGM *i* PS **PnS** **01 58 28.9 +6.8**
NACGM *i* SS **SS** **02 02 52.8 +0.2**
NACGM *i* SSS SSS 02 05 59.7
NACGM *i* LR LR 02 21 27.0
SUW Suwalki 82.50 17 *e*P **P** **01 47 17.3 -0.6**
SUW Suwalki 82.50 17 P **P** **01 47 13.5 -4.3**
SUW pmax pmax
comp=Z,68nm,1.2s
SUW Suwalki 82.50 17 P **P** **01 47 13.5 -4.3**
SUW IAmb IAmb 01 47 28.2
comp=Z,68nm,1.2s
MTE Manteigas 82.60 42 *i* LQ LQ 01 47 29.0
FBE Freiberg 82.67 24 *e*P **P** **01 47 20.1 +1.2**
comp=Z,90nm,1.6s,baz=330,slow=5.2
PLN Plauen 82.67 25 *e*P **P** **01 47 19.5 +0.6**
comp=Z,42nm,1.8s,baz=330,slow=5.2
WERD Werda 82.75 25 *e*P **P** **01 47 20.0 +0.7**
baz=330,slow=5.2
SVE Sverdlovsk 82.83 356 *e*P **P** **01 47 19.5 0.0**
SVE pmax pmax
comp=Z,33nm,1.5s
TANN Tannenbergstha 82.83 25 *e*P **P** **01 47 20.5 +0.7**
comp=Z,42nm,1.8s,baz=330,slow=5.2
GUNZ Gunzen 82.84 25 *e*P **P** **01 47 20.5 +0.7**
comp=Z,54nm,1.9s,baz=330,slow=5.2
ECH Echery 82.89 29 IAmb IAmb 01 47 31.5
comp=Z,30nm,1.4s
ECH IAMs_20 IAMs_20 02 23 56.6
comp=Z,504nm,20.0s
BRG Berggiesshubel 82.89 24 *e*P **P** **01 47 21.0 +1.0**
BRG Amp 01 47 22.1
comp=Z,27nm,1.3s
BRG *ex* x 01 47 29.9
BRG Amp 01 47 31.7
comp=Z,61nm,1.4s
BRG Berggiesshubel 82.89 24 *e*P **P** **01 47 21.0 +1.0**
comp=Z,61nm,1.4s,baz=330,slow=5.2
WERN Wernitzgruen 82.92 25 *e*P **P** **01 47 21.1 +0.9**
comp=Z,67nm,1.8s,baz=330,slow=5.2
LVC Limon Verde 82.95 128 P P 01 47 16.0 -5.0
LVC pmax pmax
comp=Z,52nm,1.7s
LVC Limon Verde 82.95 128 P P 01 47 16.0 -5.0
LVC IAmb IAmb 01 47 30.9
comp=Z,52nm,1.6s
LVC Limon Verde 82.95 128 *e*P **P** **01 47 21.0 0.0**
NKC Novy Kostel 82.99 25 *e*P **P** **01 47 21.2 +0.7**
NKC MLR MLR
comp=Z,700nm,18.5s
NKC Novy Kostel 82.99 25 *e*P **P** **01 47 21.2 +0.7**
NKC AMS AMS 02 24 10.0
comp=Z,700nm,18.5s
HHC Hu-ho-hao-te 83.01 319 *e*P **P** **01 47 21.3 +0.4**
HHC pmax pmax
comp=Z,55nm,1.1s
HHC pmax pmax
comp=Z,140nm,5.3s
HHC LR LR
comp=Z,280nm,15.9s
HHC LR LR
comp=Z,470nm,16.9s
HHC LR LR
comp=Z,380nm,16.3s
MNK Minsk 83.01 14 *e*P **P** **01 47 20.0 -0.5**
MNK Minsk 83.01 14 *i* P **P** **01 47 20.4 -0.1**
comp=E,1.0nm,1.0s
MNK *i* P **P** **01 47 20.4 -0.1**
comp=N,6.0nm,1.0s
MNK *i* P **P** **01 47 20.4 -0.1**
comp=Z,14nm,1.0s
MNK *i* PP **PP** **01 50 30.9 +0.5**
MNK *i* PPP PPP 01 52 22.2
MNK *i* S **S** **01 57 38.8 -0.6**
MNK *i* SS **SS** **02 03 04.8 +3.4**
MNK *i* SSS SSS 02 08 17.2
MNK *i* LQ LQ 02 18 52.4
MNK *i* LR LR 02 21 02.0
MNK *i* LRM MLR 02 23 54.8
comp=E,10.0nm,20.0s
MNK *i* LRM MLR 02 25 01.2
comp=N,261nm,20.0s
MNK *i* LRM MLR 02 25 03.7
comp=Z,204nm,20.0s
PCBR Castelo Branco 83.05 42 *e*P **P** **01 47 21.8 +0.8**
comp=Z,88nm,1.6s
PCBR *i* LQ LQ 01 47 30.4
GRA1 Grafenberg Arr 83.06 26 IAMs_20 IAMs_20 02 23 40.0
comp=Z,636nm,21.0s
GRF Grafenberg Arr 83.06 26 *e*P **P** **01 47 22.2 +1.3**
comp=Z,99nm,1.6s,baz=330,slow=5.2
GRF *e*L L 02 15 05.9
comp=Z,278nm,19.7s
GRFO Grafenberg 83.06 26 P **P** **01 47 21.1 +0.2**
GRFO pmax pmax
comp=Z,101nm,1.7s
GRFO MLR MLR
comp=Z,600nm,21.0s
GRFO Grafenberg 83.06 26 P **P** **01 47 21.1 +0.2**
GRFO IAMs_20 IAMs_20 02 23 40.0
comp=Z,645nm,21.0s
MANZ Manzenberg 83.09 25 *e*P **P** **01 47 21.9 +0.8**
comp=Z,36nm,1.5s,baz=330,slow=5.2
JOW Kunigami 83.11 299 IAMs_20 IAMs_20 02 16 16.3
comp=Z,487nm,22.0s
STU Stuttgart 83.15 27 IAMs_20 IAMs_20 02 22 54.5
comp=Z,1μm,22.0s
STU Stuttgart 83.15 27 *e*P **P** **01 47 22.5 +1.1**
comp=Z,66nm,1.9s,baz=330,slow=5.2
BFO Black Forest 83.22 28 P **P** **01 47 22.0 +0.2**
BFO pmax pmax
comp=Z,64nm,1.5s
BFO MLR MLR
comp=Z,500nm,18.0s
BFO Black Forest 83.22 28 P **P** **01 47 22.0 +0.2**
BFO IAmb IAmb 01 47 33.4
comp=Z,64nm,1.5s
BFO IAMs_20 IAMs_20 02 26 19.3
comp=Z,471nm,18.0s
BFO Black Forest 83.22 28 *e*P **P** **01 47 22.8 +1.0**
comp=Z,47nm,1.3s,baz=330,slow=5.2
PMTG Montargil 83.23 43 *e*P **P** **01 47 25.5 +3.5**
comp=Z,102nm,1.7s
PMTG *i* LQ LQ 01 47 31.1
CLDB Colider 83.28 110 *e*P **P** **01 47 22.6 +0.1**
MOS Moscow 83.29 9 *e*P **P** **01 47 18.7 -3.2**
MOS pmax pmax
comp=Z,50nm,1.4s
TMAB Tom-Au,PA,Br 83.29 99 *e*P **P** **01 47 23.8 +1.2**
ROTZ Rotzenmuhle 83.31 25 *e*P **P** **01 47 23.1 +0.9**
comp=Z,41nm,1.5s,baz=330,slow=5.2
ARU Arti 83.33 357*d* *i*P **P** **01 47 21.4 -0.7**
ARU S **S** **01 57 42.8 +0.2**
ARU SS **SS** **02 03 15.9 +10**
ARU pmax pmax
comp=Z,17nm,1.1s
ARU Arti 83.33 357 P **P** **01 47 21.1 -1.1**
ARU IAmb IAmb 01 47 32.2
comp=Z,27nm,1.3s
PVCC Panska Ves 83.39 23 AMS AMS 02 21 40.0
comp=Z,600nm,17.8s
PMRV Marv??o 83.40 43 *e*P **P** **01 47 22.8 -0.1**
comp=Z,149nm,1.4s
PMRV *i* LQ LQ 01 47 32.1
PESTR Estremoz 83.72 43 P **P** **01 47 24.4 -0.1**
PESTR IAmb IAmb 01 47 35.5
comp=Z,60nm,1.2s
EVO Evora 83.74 44 *e*P **P** **01 47 25.3 +0.7**
comp=Z,103nm,1.8s
EVO *i* LQ LQ 01 47 34.6
PRA Prague 83.75 24 *e*P **P** **01 47 25.4 +1.0**
PRA MLR MLR
comp=Z,900nm,18.7s
PRA Prague 83.75 24 *e*P **P** **01 47 25.4 +1.0**
PRA AMS AMS 02 24 20.0
comp=Z,900nm,18.7s
OBN Obninsk 83.78 9*de*P **P** **01 47 24.0 -0.4**
OBN *PP **sP** **01 47 28.0 -0.4**
OBN *e*SP **pwP** **01 47 29.6 -1.6**
OBN *eS* **S** **01 57 51.3 +4.3**
OBN pmax pmax
comp=Z,52nm,2.5s
OBN MLR MLR
comp=Z,317nm,20.0s
OBN Obninsk 83.78 9 P **P** **01 47 23.9 -0.5**
CHVC Chvalec 83.78 23 *e*P **P** **01 47 25.3 +0.7**
CHVC *ex* x 01 47 34.7
CHVC AMS AMS 02 21 40.0
comp=Z,700nm,17.1s
UPC Upice 83.84 23 AMS AMS 02 21 40.0
comp=Z,800nm,19.7s
OSTC Ostas 83.85 22 *e*P **P** **01 47 25.6 +0.6**
OSTC AMS AMS 02 21 40.0
comp=Z,700nm,18.8s
PRU Pruhonice 83.86 24 *e*P **P** **01 47 25.6 +0.6**
PRU *e* 01 47 34.7
PRU MLR MLR
comp=Z,800nm,19.5s
PRU Pruhonice 83.86 24 *e*P **P** **01 47 25.6 +0.6**
PRU *ex* x 01 47 34.7
PRU AMS AMS 02 24 20.0
comp=Z,800nm,19.5s
DPC Dobruska-Polom 84.07 22 *e*P **P** **01 47 27.1 +1.0**
DPC *e* 01 47 36.0
DPC *e* 01 57 51.4
DPC MLR MLR
comp=Z,600nm,18.9s
DPC Dobruska-Polom 84.07 22 *e*P **P** **01 47 27.1 +1.0**
DPC *ex* x 01 47 36.0
DPC *eS* **S** **01 57 51.4 +1.1**
DPC AMS AMS 02 21 50.0
comp=Z,600nm,18.9s
WET Wettzell 84.07 25 *e*P **P** **01 47 27.0 +0.8**
comp=Z,34nm,1.5s,baz=330,slow=5.2
PTLB Pontes e Lacer 84.09 116 *e*P **P** **01 47 25.4 -1.1**
PTEO Sao Teotonio 84.10 45 *i* LQ LQ 01 47 36.0
PBEJ Beja 84.20 44 *i* LQ LQ 01 47 36.4
KHC Kasperske Hory 84.31 25 *e*P **P** **01 47 28.2 +0.9**
KHC *e* 01 47 37.1
KHC *e* 01 57 56.8
KHC MLR MLR
comp=Z,700nm,19.4s
KHC Kasperske Hory 84.31 25 *e*P **P** **01 47 28.2 +0.9**
KHC *ex* x 01 47 37.1
KHC *eS* **S** **01 57 56.8 +4.0**
KHC AMS AMS 02 24 40.0
comp=Z,700nm,19.4s
KHC Kasperske Hory 84.31 25 IAmb IAmb 01 47 38.2
comp=Z,46nm,1.4s
KHC IAMs_20 IAMs_20 02 25 09.1
comp=Z,714nm,19.0s
MORF Marmelete 84.31 45 *e*P **P** **01 47 28.4 +0.8**
MORF IAmb IAmb 01 47 34.4
comp=Z,14nm,0.9s
MORF Marmelete 84.31 45 *e*P **P** **01 47 28.4 +0.8**
MORF Marmelete 84.31 45 *e*P **P** **01 47 28.5 +0.8**
comp=Z,156nm,1.7s
MORF *i* LQ LQ 01 47 37.7
SSB Saint Sauveur 84.31 32 IAmb IAmb 01 47 38.7
comp=Z,41nm,1.4s
PFVI Vila Biebo 84.34 45 *i* LQ LQ 01 47 37.8
FUR Furstenfeldbru 84.39 26 *e*P **P** **01 47 29.0 +1.2**
comp=Z,115nm,1.6s,baz=330,slow=5.2

PCVE	**Castro Verde**	**84.40**	**44**	*e*P		**P**	**01 47 27.9**	**-0.1**
	comp=Z,105nm,1.5s								
PCVE				*i* LQ		LQ	01 47 37.9		
UBR	**Ueberruh**	**84.40**	**27**	*e*P		**P**	**01 47 29.2**	**+1.3**
	comp=Z,80nm,1.6s,baz=330,slow=5.2								
KRLC	**Kraliky**	**84.45**	**22**	*e*P		**P**	**01 47 28.8**	**+0.8**
KRLC				*e*			01 47 38.2		
KRLC					MLR	MLR			
	comp=Z,600nm,25.7s								
KRLC	**Kraliky**	**84.45**	**22**	*e*P		**P**	**01 47 28.8**	**+0.8**
KRLC				*ex*		x	01 47 38.2		
KRLC					AMS	AMS	02 22 00.0		
	comp=Z,600nm,25.7s								
SENIN	**Lac Senin/Sane**	**84.49**	**30**		IAmb	IAmb	01 47 39.8		
	comp=Z,36nm,1.4s								
PRPB	**Parauapebas**	**84.50**	**103**	*e*P		**P**	**01 47 29.7**	**+1.0**
PBAR	**Barrancos**	**84.52**	**43**	*e*P		**P**	**01 47 29.1**	**+0.5**
	comp=Z,121nm,1.7s								
PBAR				*i* LQ		LQ	01 47 38.3		
GEC2	**GERESS Array S**	**84.60**	**25**		IAmb	IAmb	01 47 39.3		
	comp=Z,31nm,1.3s								
GEC2					IAMs_20	IAMs_20	02 26 47.8		
	comp=Z,897nm,19.0s								
GEC2	**GERESS Array S**	**84.60**	**25**	*e*P		**P**	**01 47 29.5**	**+0.6**
	comp=Z,37nm,1.4s,baz=330,slow=5.2								
GERES	**GERESS Array B**	**84.60**	**25**	P		**P**	**01 47 28.6**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=353,slow=3.4,SNR=12								
GERES					LR	LR	02 26 56.6		
	comp=Z,691nm,19.1s,baz=335,slow=37								
GERES	**GERESS Array B**	**84.60**	**25**	P		**P**	**01 47 29.0**	**+0.1**
GERES	**GERESS Array B**	**84.60**	**25**	P		**P**	**01 47 29.0**	**+0.1**
DAVA	**Damuels**	**84.66**	**28**	*e*P		**P**	**01 47 30.7**	**+1.4**
	comp=Z,14nm,1.6s								
DAVA				*i* P		**pwP**	**01 47 39.8**	**+3.7**
	comp=Z,33nm,1.1s,SNR=6.1								
PVAQ	**Vaqueiros**	**84.74**	**44**	*i* LQ		LQ	01 47 40.2		
PVAQ	**Vaqueiros**	**84.74**	**44**	P		**P**	**01 47 29.1**	**-0.6**
PBDV	**Barranco-do-Ve**	**84.74**	**44**	*e*P		**P**	**01 47 31.1**	**+1.3**
	comp=Z,101nm,1.5s								
PBDV				*i* LQ		LQ	01 47 39.8		
TREC	**Trest**	**84.76**	**23**		AMS	AMS	02 22 30.0		
	comp=Z,700nm,17.9s								
RETA	**Reutte**	**84.80**	**27**	*e*P		**P**	**01 47 30.9**	**+1.0**
	comp=Z,8.2nm,1.5s								
RETA				*e*P		**pwP**	**01 47 39.9**	**+3.1**
	comp=Z,26nm,1.4s								
CKRC	**Cesky Krumlov**	**84.81**	**24**	*e*P		**P**	**01 47 29.9**	**0.0**
CKRC				*ex*		x	01 47 39.3		
CKRC					AMS	AMS	02 25 00.0		
	comp=Z,700nm,19.6s								
PAB	**San Pablo**	**84.85**	**41**		IAMs_20	IAMs_20	02 21 43.6		
	comp=Z,574nm,20.0s								
TIY	**Taiyuan**	**84.92**	**317**	*e*P		**P**	**01 47 30.8**	**+0.1**
TIY				S		**S**	**01 58 07.9**	**+8.6**
TIY				pmax		pmax			
	comp=Z,270nm,3.5s								
TIY					LR	LR			
	comp=Z,300nm,14.5s								
TIY					LR	LR			
	comp=Z,150nm,9.4s								
TIY					LR	LR			
	comp=Z,260nm,14.4s								
MORC	**Moravsky Berou**	**84.93**	**22**	*e*P		**P**	**01 47 30.8**	**+0.3**
MORC				*e*			01 47 39.8		
ES07	**SONSECA Array**	**84.94**	**40**		IAMs_20	IAMs_20	02 21 10.9		
	comp=Z,440nm,20.0s								
ESBB	**Sonseca Array**	**84.95**	**40**	P		**P**	**01 47 29.6**	**-1.1**
ESBB				IAmb		IAmb	01 47 42.0		
	comp=Z,39nm,1.4s								
ESDC	**Sonseca Array**	**84.95**	**40**	P		**P**	**01 47 30.6**	**-0.1**
	comp=Z,1.5nm,0.9s,baz=314,slow=4.8,SNR=7.7								
ESDC				PKKPbc		**PKKPbc**	**02 05 37.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=88,slow=1.4,SNR=4.5								
ESDC					LR	LR	02 22 47.6		
	comp=Z,309nm,19.1s,baz=310,slow=34								
ES14	**SONSECA Array**	**84.95**	**40**		IAMs_20	IAMs_20	02 17 59.2		
	comp=Z,443nm,20.0s								
ES10	**SONSECA Array**	**84.99**	**40**		IAMs_20	IAMs_20	02 19 30.2		
	comp=Z,376nm,20.0s								
MOTA	**Moosalm**	**85.04**	**27**	*e*P		**P**	**01 47 32.1**	**+0.9**
	comp=Z,13nm,1.5s								
MOTA				*i* P		**pwP**	**01 47 41.1**	**+3.0**
	comp=Z,52nm,1.6s,SNR=6.0								
VRAC	**Vranov**	**85.08**	**23**	*e*P		**P**	**01 47 31.8**	**+0.6**
VRAC				*e*			01 47 40.9		
DGZ	**Jazzator, Alta**	**85.15**	**338**	*d* iP		**P**	**01 47 32.1**	**+0.4**
DGZ					pmax	pmax			
	comp=Z,53nm,1.0s								
DGZ					MLR	MLR			
	comp=Z,356nm,17.0s								
OJC	**Ojcow**	**85.16**	**21**		IAmb	IAmb	01 47 41.9		
	comp=Z,30nm,1.2s								
TUE	**Stuetta**	**85.16**	**28**	P		**P**	**01 47 32.1**	**+0.2**
SQTA	**Sankt Quirin**	**85.18**	**27**	*i* P		**P**	**01 47 33.1**	**+1.2**
	comp=Z,17nm,1.6s,SNR=7.2								
SQTA				*e*P		**pwP**	**01 47 41.9**	**+3.2**
	comp=Z,68nm,1.7s								
FETA	**Feichten**	**85.19**	**27**	*e*P		**P**	**01 47 33.3**	**+1.3**
	comp=Z,6.6nm,1.0s								
FETA				*e*P		**pwP**	**01 47 42.4**	**+3.6**
	comp=Z,24nm,1.1s								
WATA	**Walderalm**	**85.21**	**27**	*i* P		**P**	**01 47 33.0**	**+1.0**
	comp=Z,16nm,1.5s,SNR=5.4								
WATA				*e*P		**pwP**	**01 47 42.0**	**+3.1**
	comp=Z,64nm,1.6s								
KRUC	**Moravsky**	**85.24**	**23**	*e*P		**P**	**01 47 32.4**	**+0.4**
KRUC				*e*			01 47 41.4		
RJOB	**Jochberg**	**85.27**	**26**	*e*P		**P**	**01 47 33.0**	**+0.7**
	comp=Z,78nm,1.2s,baz=330,slow=5.2								
WTTA	**Wattenberg**	**85.29**	**27**	*i* P		**P**	**01 47 33.7**	**+1.2**
	comp=Z,12nm,1.4s,SNR=5.4								
WTTA				*e*P		**pwP**	**01 47 42.6**	**+3.3**
	comp=Z,56nm,1.7s								
BNI	**Bardonecchia**	**85.35**	**31**		IAmb	IAmb	01 47 44.4		
	comp=Z,43nm,1.1s								
BNI					IAMs_20	IAMs_20	02 25 34.7		
	comp=Z,650nm,19.0s								
NJ2	**Nanjing**	**85.46**	**309**	*e*P		**P**	**01 47 32.5**	**-0.9**
NJ2					pmax	pmax			
	comp=Z,35nm,1.3s								
RABL	**Rabaul**	**85.56**	**261**		IAMs_20	IAMs_20	02 27 08.1		
	comp=Z,711nm,18.0s								
BRVK	**Borovoye**	**85.61**	**349**	*d* iP		**P**	**01 47 33.7**	**0.0**
BRVK					pmax	pmax			
	comp=Z,27nm,0.8s								
BRVK	**Borovoye**	**85.61**	**349**	P		**P**	**01 47 33.0**	**-0.7**
BRVK					IAmb	IAmb	01 47 44.8		
	comp=Z,29nm,0.9s								
MOA	**Molln**	**85.65**	**25**	*i* P		**P**	**01 47 34.8**	**+0.7**
	comp=Z,7.0nm,1.4s,SNR=8.4								
MOA				*e*P		**pwP**	**01 47 43.5**	**+2.5**
	comp=Z,36nm,1.6s								
JAVC	**Velka Javorina**	**85.79**	**22**	*e*P		**P**	**01 47 36.5**	**+1.7**
JAVC				*e*			01 47 45.2		
AC02	**Maricunga**	**86.01**	**130**	P		**P**	**01 47 36.0**	**-0.5**
AC02					IAmb	IAmb	01 47 46.9		
	comp=Z,46nm,1.6s								
H03N2	**Juan Fernandez**	**86.02**	**141**	T		T	03 22 31.7		
	baz=326,slow=78,SNR=43								
KBA	**Koelnbreinsper**	**86.03**	**26**	*i* P		P	01 47 46.0	+10	
	comp=Z,35nm,1.5s,SNR=5.6								
H03N1	**Juan Fernandez**	**86.03**	**141**	T		T	03 22 45.3		
	baz=326,slow=78,SNR=58								
SMOL	**Smolenice**	**86.03**	**23**	*e*P		**P**	**01 47 36.8**	**+0.8**
SMOL				*e*			01 47 47.0		
SMOL	**Smolenice**	**86.03**	**23**	*e*P		**P**	**01 47 36.8**	**+0.8**
SMOL				*e*			01 47 47.0		
H03N3	**Juan Fernandez**	**86.04**	**141**	T		T	03 22 30.1		
	baz=326,slow=78,SNR=36								
ABTA	**Abfaltersbach**	**86.04**	**26**	*i* P		P	01 47 45.6	+9.5	
	comp=Z,26nm,1.5s,SNR=5.8								
CONA	**Conrad Observa**	**86.08**	**24**	*e*P		**P**	**01 47 37.7**	**+1.3**
	comp=Z,8.3nm,1.4s								
CONA				*i* P		**pwP**	**01 47 46.4**	**+3.2**
	comp=Z,39nm,1.8s,SNR=6.5								
MODS	**Modra-Piesok**	**86.11**	**23**	*e*P		**P**	**01 47 36.6**	**+0.2**
MODS				*e*			01 47 45.9		
MODS	**Modra-Piesok**	**86.11**	**23**	*e*P		**P**	**01 47 36.6**	**+0.2**
MODS				*e*			01 47 45.9		
ZST	**Bratislava**	**86.22**	**23**	*e*P		P	01 47 43.7	+6.8	
ZST	**Bratislava**	**86.22**	**23**	*e*		P	01 47 43.7	+6.8	
SEM	**Semipalatinsk**	**86.33**	**343**	*e*P		**P**	**01 47 36.0**	**-1.7**
	baz=343								
SEM					LR	LR	02 26 30.0		
	comp=Z,191nm,17.1s,baz=343								
SEM	**Semipalatinsk**	**86.33**	**343**	*e*P		**P**	**01 47 35.9**	**-1.7**
	comp=Z,191nm,17.0s				MLR	MLR			
CTI	**Castel Tesino**	**86.35**	**27**		IAMs_20	IAMs_20	02 24 59.0		
	comp=Z,706nm,20.0s								
ZOU	**Zoufplan**	**86.36**	**26**		IAMs_20	IAMs_20	02 25 33.4		
	comp=Z,864nm,22.0s								
MYKA	**Terra Mystica**	**86.52**	**26**	*e*P		P	01 47 47.7	+9.2	
	comp=Z,16nm,1.5s								
LPSR	**Galich'ya Gora**	**86.52**	**8**	*e*P		**P**	**01 47 37.6**	**-0.6**
LPSR				*e*			01 47 47.2		
LPSR					pmax	pmax			
	comp=Z,20nm,1.0s								
STAL	**STALIGIAL**	**86.53**	**27**		IAMs_20	IAMs_20	02 25 49.9		
	comp=Z,915nm,21.0s								
ARSA	**Arzberg**	**86.58**	**24**	*e*P		**P**	**01 47 40.6**	**+1.9**
	comp=Z,13nm,1.1s								
LCO	**Las Campanas**	**86.78**	**133**	P		**P**	**01 47 39.6**	**-0.4**
LCO					pmax	pmax			
	comp=Z,21nm,1.1s								
LCO	**Las Campanas**	**86.78**	**133**	P		**P**	**01 47 39.6**	**-0.4**
LCO					IAmb	IAmb	01 47 49.9		
	comp=Z,21nm,1.1s								
AKASG	**Malin Array Be**	**86.89**	**15**	P		**P**	**01 47 38.5**	**-1.6**
	comp=Z,6.8nm,0.9s,baz=345,slow=4.1,SNR=23								
AKASG					LR	LR	02 25 40.7		
	comp=Z,504nm,21.0s,baz=315,slow=35								
AKASG	**Malin Array Be**	**86.89**	**15**	*ce*P		**P**	**01 47 39.2**	**-0.9**
AKASG					pmax	pmax			
	comp=Z,7.0nm,0.9s								
AKASG	**Malin Array Be**	**86.89**	**15**	P		**P**	**01 47 39.5**	**-0.5**
AKBB	**Malin Array Si**	**86.89**	**15**	⇑*e*P		**P**	**01 47 39.5**	**-0.6**
AKBB	**Malin Array Si**	**86.89**	**15**	IAmb		IAmb	01 47 50.1		
	comp=Z,40nm,1.2s								
OBKA	**Obir**	**86.92**	**25**	*e*P		P	01 47 50.0	+10	
	comp=Z,12nm,1.5s								
SOKA	**Soboth**	**86.93**	**25**	*i* P		**P**	**01 47 42.6**	**+2.1**
	comp=Z,21nm,1.5s,SNR=5.6								
PRMA	**PARMA**	**86.97**	**29**		IAMs_20	IAMs_20	02 27 26.6		
	comp=Z,788nm,19.0s								
MSSA	**Maissana**	**87.06**	**29**		IAMs_20	IAMs_20	02 27 55.9		
	comp=Z,606nm,18.0s								
SNDB	**Serra Nova Dou**	**87.26**	**108**	*e*P		**P**	**01 47 42.5**	**+0.1**
UZH	**Uzhgorod**	**87.27**	**20**	*e*P		P	01 47 49.0	+7.0
UZH				*e*			01 47 58.5		
TRI	**Trieste**	**87.37**	**26**		IAMs_20	IAMs_20	02 26 35.1		
	comp=Z,730nm,20.0s								
BELG	**Belogornoye**	**87.39**	**3**	*c i*P		**P**	**01 47 42.1**	**-0.4**
BELG					pmax	pmax			
	comp=Z,6.0nm,1.0s								
VLC	**Villacollemand**	**87.52**	**29**		IAMs_20	IAMs_20	02 27 36.0		
	comp=Z,520nm,21.0s								
DZM	**Mont Dzumac**	**87.55**	**238**	*e*	LR	LR	02 15 27.2		
	comp=Z,1μm,22.8s								
DZM	**Mont Dzumac**	**87.55**	**238**	P		**P**	**01 47 43.9**	**+0.2**
ZCCA	**Zocca**	**87.57**	**29**		IAMs_20	IAMs_20	02 32 04.4		
	comp=Z,545nm,20.0s								
ZSN	**Zaisan**	**87.91**	**339**	*e*P		**P**	**01 47 43.4**	**-1.7**
	comp=Z,25nm,1.5s,baz=339								
ZSN	**Zaisan**	**87.91**	**339**	*e*P		**P**	**01 47 43.4**	**-1.7**
ZSN					pmax	pmax			
	comp=Z,25nm,1.5s								
VSR	**Storozhevoye**	**87.91**	**8**	*e*P		**P**	**01 47 43.1**	**-1.9**
VSR					pmax	pmax			
	comp=Z,20nm,1.4s								
SMTB	**Santa Maria do**	**87.92**	**103**	*e*P		**P**	**01 47 46.5**	**+0.9**
CART	**Cartagena**	**88.02**	**40**		IAMs_20	IAMs_20	02 23 34.5		
	comp=Z,509nm,21.0s								
CO03	**El Pedregal**	**88.19**	**134**		IAmb	IAmb	01 47 56.0		
	comp=Z,34nm,1.4s								
BRZS	**Berezniki**	**88.23**	**347**	*e*P		**P**	**01 47 44.5**	**-2.1**
	comp=Z,4.3nm,1.1s,baz=347								
BRZS	**Berezniki**	**88.23**	**347**	*e*P		**P**	**01 47 44.5**	**-2.1**
BRZS					pmax	pmax			
	comp=Z,4.0nm,1.1s								
CASP	**Castiglione de**	**88.87**	**29**		IAMs_20	IAMs_20	02 30 22.9		
	comp=Z,400nm,19.0s								
WHN	**Wuhan**	**89.20**	**311**	⇓P		**P**	**01 47 51.1**	**-0.3**
WHN				pP		**pwP**	**01 48 00.8**	**+3.5**
WHN				SKS		**SKSac**	**01 58 22.8**	**+1.3**
WHN				S		**S**	**01 58 39.5**	**-1.1**
WHN					pmax	pmax			
	comp=Z,76nm,1.0s								
WHN					LR	LR			
	comp=Z,820nm,25.4s								
MK31	**Makanchi Array**	**89.20**	**340**	*ce*P		**P**	**01 47 50.8**	**-0.5**
MK31	**Makanchi Array**	**89.20**	**340**	P		**P**	**01 47 49.8**	**-1.4**
MK31					IAmb	IAmb	01 47 52.0		
	comp=Z,28nm,1.4s								
MKAR	**Makanchi Array**	**89.20**	**340**	P		**P**	**01 47 49.9**	**-1.4**
	comp=Z,9.2nm,1.1s,baz=35,slow=4.4,SNR=21								
MKAR					LR	LR	02 31 23.9		
	comp=Z,292nm,18.1s,baz=13,slow=38								
MKAR	**Makanchi Array**	**89.20**	**340**	*ce*P		**P**	**01 47 50.5**	**-0.8**
MKAR					pmax	pmax			
	comp=Z,9.0nm,1.1s								
MKAR	**Makanchi Array**	**89.20**	**340**	P		**P**	**01 47 49.8**	**-1.5**
MAKZ	**Makanchi**	**89.27**	**340**	P		**P**	**01 47 50.7**	**-0.9**
MAKZ					pmax	pmax			
	comp=Z,45nm,1.1s								
MAKZ					MLR	MLR			
	comp=Z,500nm,22.0s								
MAKZ	**Makanchi**	**89.27**	**340**	P		**P**	**01 47 50.7**	**-0.9**
MAKZ					IAmb	IAmb	01 47 52.2		
	comp=Z,45nm,1.1s								
MAKZ					IAMs_20	IAMs_20	02 27 45.5		
	comp=Z,500nm,22.0s								
NACB	**Ninganchiao**	**89.32**	**302**	P		**P**	**01 47 51.0**	**-1.1**
NACB					IAmb	IAmb	01 47 53.4		
	comp=Z,61nm,1.4s								
ARAG	**Araguaiana, MT**	**89.39**	**111**	*e*P		**P**	**01 47 52.5**	**+0.1**
PEXB	**Peixe**	**89.53**	**106**	*e*P		**P**	**01 47 52.6**	**-0.6**
XAN	**Xi'an**	**89.56**	**316**	P		**P**	**01 47 52.8**	**-0.4**
XAN				S		**S**	**01 58 43.8**	**-0.3**
XAN					pmax	pmax			
	comp=Z,60nm,1.3s								
XAN					LR	LR			
	comp=Z,200nm,15.2s								
XAN					LR	LR			
	comp=Z,470nm,18.4s								
XAN					LR	LR			
	comp=Z,490nm,19.5s								
XAN	**Xi'an**	**89.56**	**316**	P		**P**	**01 47 51.9**	**-1.3**
XAN					pmax	pmax			
	comp=Z,122nm,1.5s								
XAN	**Xi'an**	**89.56**	**316**	P		**P**	**01 47 51.9**	**-1.3**
XAN	**Xi'an**	**89.56**	**316**	IAMs_20		IAMs_20	02 25 31.4		
	comp=Z,385nm,21.0s								
GTA	**Gaotai**	**89.63**	**325**	⇓P		**P**	**01 47 53.8**	**+0.3**
GTA				pP		pwP	01 47 59.5	+0.1	
GTA				sP		sP	01 48 02.3	+4.8	
GTA				SKS		**SKSac**	**01 58 22.8**	**-1.3**
GTA				S		**S**	**01 58 47.3**	**+2.5**
GTA				pmax		pmax			
	comp=Z,20nm,1.4s								
GTA				pmax		pmax			
	comp=Z,170nm,5.8s								
GTA				LR		LR			
	comp=Z,430nm,18.9s								
GTA				LR		LR			
	comp=Z,650nm,18.9s								
GTA				LR		LR			
	comp=Z,820nm,18.9s								
NBPS	**Pedro II - PI**	**89.63**	**96**	*e*P		**P**	**01 47 54.7**	**+0.9**
VA03	**San Esteban**	**89.74**	**135**	IAMs_20		IAMs_20	02 25 22.7		
	comp=Z,397nm,18.0s								
ZON	**Zonda**	**89.83**	**133**	P		**P**	**01 47 53.0**	**-1.2**
ZON					pmax	pmax			
	comp=Z,24nm,1.3s								
ZON	**Zonda**	**89.83**	**133**	P		**P**	**01 47 53.0**	**-1.2**
MT05	**Renca**	**90.12**	**136**	IAMs_20		IAMs_20	02 19 06.9		
	comp=Z,671nm,20.0s								
AQU	**L'Aquila**	**90.18**	**28**	IAMs_20		IAMs_20	02 30 01.5		
	comp=Z,801nm,19.0s								
WMQ	**Urumqi**	**90.36**	**336**	*e*P		**P**	**01 47 57.3**	**+0.5**
WMQ				sP		pwP	01 48 07.3	+3.6	
WMQ				SKS		**SKSac**	**01 58 31.1**	**+3.0**
WMQ				pmax		pmax			
	comp=Z,35nm,1.7s								
WMQ				pmax		pmax			
	comp=Z,230nm,3.7s								
WMQ				LR		LR			
	comp=Z,3μm,24.5s								
WMQ				LR		LR			
	comp=Z,2μm,29.9s								
WMQ				LR		LR			
	comp=Z,2μm,24.5s								
WMQ	**Urumqi**	**90.36**	**336**	IAMs_20		IAMs_20	02 28 11.8		
	comp=Z,678nm,22.0s								
ABKAR	**Akbulak array**	**90.42**	**355**	P		**P**	**01 47 57.0**	**+0.2**
LZH	**Lanzhou**	**90.50**	**321**	⇑P		**P**	**01 47 58.8**	**+1.1**
LZH				pP		pwP	01 48 03.4	-0.1	
LZH				sP		sP	01 48 05.4	+3.7	
LZH				PP		**PP**	**01 51 32.8**	**+1.3**
LZH				SKS		**SKSac**	**01 58 26.8**	**-2.6**
LZH				S		**S**	**01 58 49.3**	**-3.7**
LZH				pmax		pmax			
	comp=Z,55nm,1.4s								
LZH				pmax		pmax			
	comp=Z,240nm,7.5s								
LZH				LR		LR			
	comp=Z,470nm,16.3s								
LZH				LR		LR			
	comp=Z,470nm,16.8s								
LZH				LR		LR			
	comp=Z,400nm,19.0s								
DIVS	**Divibare**	**90.79**	**23**	IAMs_20		IAMs_20	02 28 19.5		
	comp=Z,387nm,20.0s								
SGRT	**San Giovanni R**	**91.53**	**27**	IAMs_20		IAMs_20	02 26 31.3		
	comp=Z,573nm,22.0s								
PAOL	**Paolisi**	**91.76**	**28**	IAMs_20		IAMs_20	02 28 26.3		
	comp=Z,600nm,21.0s								
TDK	**Taldyqorghan**	**91.84**	**342**	*e*P		**P**	**01 48 02.0**	**-1.5**
	baz=342								
TDK					LR	LR	02 29 12.5		
	comp=Z,260nm,15.2s,baz=342								
TDK	**Taldyqorghan**	**91.84**	**342**	*e*P		**P**	**01 48 02.0**	**-1.5**
TDK					MLR	MLR			
	comp=Z,260nm,15.0s								
BDFB	**Brasilia**	**92.06**	**109**	LR		LR	02 33 58.5		
	comp=Z,348nm,19.1s,baz=316,slow=38								
ENH	**Enshi**	**92.15**	**314**	P		**P**	**01 48 04.0**	**-1.2**
SDBA	**SAO DESIDERIO**	**92.23**	**104**	*e*P		**P**	**01 48 05.5**	**-0.3**
BTLS	**Baital**	**92.74**	**345**	*e*P		**P**	**01 48 06.6**	**-1.1**
	comp=Z,5.0nm,1.3s,baz=345								
BTLS	**Baital**	**92.74**	**345**	*e*P		**P**	**01 48 06.6**	**-1.1**
BTLS					pmax	pmax			
	comp=Z,5.0nm,1.3s								
CPUP	**Villa Florida**	**92.88**	**122**	P		**P**	**01 48 06.9**	**-1.5**
	comp=Z,1.8nm,0.8s,baz=314,slow=10,SNR=3.9								
CPUP					LR	LR	02 30 56.5		
	comp=Z,75nm,18.6s,baz=344,slow=36								
CPUP	**Villa Florida**	**92.88**	**122**	P		**P**	**01 48 06.9**	**-1.5**
CPUP					pmax	pmax			
	comp=Z,28nm,1.6s								
CPUP	**Villa Florida**	**92.88**	**122**	IAmb		IAmb	01 48 17.5		
	comp=Z,28nm,1.6s								
CPUP	**Villa Florida**	**92.88**	**122**	*e*P		**P**	**01 48 08.1**	**-0.4**
VTS	**Vitosha**	**93.08**	**21**	IAMs_20		IAMs_20	02 30 33.2		
	comp=Z,384nm,22.0s								
SHLS	**Shalkode**	**93.32**	**341**	*e*P		**P**	**01 48 08.4**	**-2.1**
	comp=Z,18nm,1.1s,baz=340								
SHLS	**Shalkode**	**93.32**	**341**	*e*P		**P**	**01 48 08.4**	**-2.1**
SHLS					pmax	pmax			
	comp=Z,18nm,1.1s								
UZB	**Uzynbulak**	**93.44**	**341**	*e*P		**P**	**01 48 09.5**	**-1.7**
	baz=341								
UZB	**Uzynbulak**	**93.44**	**341**	*e*P		**P**	**01 48 09.4**	**-1.7**
SATY	**Saty**	**93.67**	**341**	*e*P		**P**	**01 48 10.5**	**-1.7**
	comp=Z,9.8nm,1.1s,baz=341								
SATY	**Saty**	**93.67**	**341**	*e*P		**P**	**01 48 10.5**	**-1.7**
SATY					pmax	pmax			
	comp=Z,10.0nm,1.1s								
AAA	**Alma-Ata**	**93.88**	**343**	*e*P		**P**	**01 48 10.6**	**-2.5**
	baz=342								
AAA	**Alma-Ata**	**93.88**	**343**	*e*P		**P**	**01 48 10.5**	**-2.5**
MDOK	**Medeo**	**93.89**	**342**	*e*P		**P**	**01 48 11.7**	**-1.6**
	baz=342								
MDOK					LR	LR	02 31 11.1		
	comp=Z,196nm,15.2s,baz=342								
MDOK	**Medeo**	**93.89**	**342**	*e*P		**P**	**01 48 11.6**	**-1.6**
MDOK					MLR	MLR			
	comp=Z,197nm,15.0s								
SCTE	**Santa Cesarea**	**93.95**	**26**	IAMs_20		IAMs_20	02 30 00.4		
	comp=Z,363nm,21.0s								
TNSS	**Tian-Shan**	**94.03**	**342**	*e*P		**P**	**01 48 13.3**	**-0.9**
	baz=342								
TNSS	**Tian-Shan**	**94.03**	**342**	*e*P		**P**	**01 48 13.3**	**-0.9**
SGDS	**Sogindy**	**94.15**	**344**	*e*P		**P**	**01 48 12.4**	**-1.9**
	baz=344								
SGDS	**Sogindy**	**94.15**	**344**	*e*P		**P**	**01 48 12.4**	**-1.9**
TIP	**Timpagrande**	**94.18**	**27**	IAMs_20		IAMs_20	02 30 24.2		
	comp=Z,753nm,21.0s								
CLTB	**Caltabellotta**	**94.28**	**30**	IAMs_20		IAMs_20	02 36 20.1		
	comp=Z,395nm,21.0s								
KEST	**Kesra**	**94.30**	**34**	P		**P**	**01 48 16.5**	**+1.4**
	comp=Z,2.6nm,0.8s,baz=342,slow=5.6,SNR=2.1								
KEST					LR	LR	02 30 10.2		
	comp=Z,316nm,21.4s,baz=334,slow=35								
JANB	**Januaria**	**94.38**	**106**	*e*P		**P**	**01 48 15.2**	**-0.4**
CEL	**Celeste**	**94.69**	**28**	IAMs_20		IAMs_20

QIZ				PP	**PP**	**01 52 49.8**	**+0.3**	
QIZ				S	**Sdif**	**02 00 18.4**	**-1.8**	
QIZ				SS	**SS**	**02 07 18.8**	**+3.9**	
QIZ				LR	LR			
	comp=Z,210nm,20.6s							
QIZ				LR	LR			
	comp=Z,220nm,22.6s							
QIZ				LR	LR			
	comp=Z,230nm,21.6s							
LSA	**Lhasa**	**101.61**	**327**	IAMs_20	IAMs_20	02 35 54.6		
	comp=Z,624nm,21.0s							
TORD	**Torodi Ar. Bea**	**108.72**	**53**	PKKPbc	PKKPbc	02 04 32.4	+0.1	
	comp=Z,1.3nm,0.9s,baz=134,slow=3.2,SNR=5.0							
WR3	**Warramunga Arr**	**108.89**	**260**	IAMs_20	IAMs_20	02 28 50.4		
	comp=Z,614nm,21.0s							
WRA	**Warramunga Arr**	**108.92**	**260**	PKiKP	**PKiKP**	**01 53 23.8**	**-1.4**	
	comp=Z,2.4nm,1.0s,baz=41,slow=1.7,SNR=7.9							
ASAR	**Alice Springs**	**111.45**	**257**	PKiKP	**PKiKP**	**01 53 28.3**	**-1.7**	
	comp=Z,2.0nm,0.9s,baz=52,slow=3.0,SNR=8.9							
FITZ	**Fitzroy Crossi**	**114.40**	**267**	PKP	PKPdf	01 53 34.3	-1.4	
	comp=Z,3.1nm,0.9s,baz=232,slow=4.7,SNR=3.7							
KULM	**Kulim**	**116.74**	**304**	IAMs_20	IAMs_20	02 38 02.8		
	comp=Z,240nm,19.0s							
MYKOM	**Kota Tinggi**	**117.30**	**299**	IAMs_20	IAMs_20	02 33 39.6		
	comp=Z,205nm,18.0s							
PSI	**Prapat**	**119.75**	**304**	PKP	**PKPdf**	**01 53 44.8**	**-1.6**	
	comp=Z,4.7nm,0.8s,baz=359,slow=3.0,SNR=4.8							
PALK	**Pallekele**	**125.95**	**325**	IAMs_20	IAMs_20	02 51 20.5		
	comp=Z,361nm,21.0s							
BELA	**Belgrano 2**	**129.75**	**164**		**PKPdf**	**01 54 03.5**	**+0.1**	
QSPA	**South Pole Qui**	**130.29**	**180**	PKP	**PKPdf**	**01 54 04.6**	**-0.1**	
	comp=Z,22nm,1.0s,baz=342,slow=0.5,SNR=19							
QSPA	**South Pole Qui**	**130.29**	**180**	PKPdf	**PKPdf**	**01 54 05.1**	**+0.3**	
VNA3	**Neumayer Olymp**	**136.56**	**155**	PKPdf	**PKPdf**	**01 54 15.7**	**-0.7**	
VNA1	**Neumayer--Stat**	**137.13**	**155**	PKPdf	**PKPdf**	**01 54 17.3**	**0.0**	
VNA2	**Neumayer--Watz**	**137.36**	**155**	PKPdf	**PKiKP**	**01 54 19.2**	**-0.6**	
KMBO	**Kilima Mbogo**	**138.38**	**24**	PKP	**PKPdf**	**01 54 21.9**	**+0.1**	
	comp=Z,4.7nm,1.1s,baz=32,slow=15,SNR=4.0							
SNAA	**Sanae**	**138.58**	**157**	PKPdf	**PKPdf**	**01 54 19.9**	**-0.2**	
SNAA	**Sanae**	**138.58**	**157**	PKPdf	**PKPdf**	**01 54 20.0**	**-0.2**	
	comp=Z,7.9nm,1.0s,baz=276,slow=0.6,SNR=9.7							
SNAA	**Sanae**	**138.58**	**157**	*i* PKIKP	**PKPdf**	**01 54 20.1**	**-0.1**	
SNAA				pmax	pmax			
	comp=Z,11nm,1.3s							
DGAR	**Diego Garcia**	**142.66**	**327**	PKIKP	**PKPdf**	**01 54 27.4**	**-1.8**	
DGAR	**Diego Garcia**	**142.66**	**327**	PKPdf	**PKPdf**	**01 54 27.4**	**-1.8**	
LSZ	**Lusaka**	**147.02**	**47**	PKP2	**PKPdf**	**01 54 37.2**	**+0.4**	
LSZ	**Lusaka**	**147.02**	**47**		**PKPdf**	**01 54 37.1**	**+0.4**	
SYO	**Syowa Base**	**150.56**	**170**	*ep*PKPdf	**PKPbc**	**01 54 45.8**	**-0.3**	
SYO	**Syowa Base**	**150.56**	**170**	*ep*PKPbc	**PKPab**	**01 54 51.8**	**-1.1**	
MAW	**Mawson**	**152.26**	**188**	PKPbc	**PKPbc**	**01 54 49.6**	**-0.5**	
	comp=Z,12nm,0.8s,baz=208,slow=2.6,SNR=6.3							
MAW	**Mawson**	**152.26**	**188**	PKIKP	**PKPbc**	**01 54 49.9**	**-0.2**	
MAW	**Mawson**	**152.26**	**188**		**PKPbc**	**01 54 49.9**	**-0.2**	
LBTB	**Lobatse**	**152.59**	**64**	PKIKP	**PKPbc**	**01 54 52.2**	**-0.2**	
LBTB	**Lobatse**	**152.59**	**64**		**PKPbc**	**01 54 52.2**	**-0.2**	
BOSA	**Boshof**	**154.56**	**71**	PKPbc	**PKPbc**	**01 54 56.1**	**-0.4**	
	comp=Z,3.8nm,1.1s,baz=207,slow=2.9,SNR=3.6							
BOSA	**Boshof**	**154.56**	**71**	PKIKP	**PKPbc**	**01 54 55.2**	**-1.4**	
BOSA	**Boshof**	**154.56**	**71**		**PKPbc**	**01 54 55.2**	**-1.4**	

UCR 24 01:42:04.1±1.6, 5°.64N×82°.91W, h21km, MW3.6, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIRO	**Carate, Puerto**	**2.77**	**351**	*e*P	Pn	01 42 46.3	-1.0
RIOS	**Rincon, Osa**	**3.10**	**349**	*e*P	Pn	01 42 50.7	-1.1
BRU2	**Volcan**	**3.14**	**4**	*e*P	Pn	01 42 52.4	0.0
EDPN	**Palmar Norte**	**3.34**	**351**	*e*P	Pn	01 42 55.5	+0.4
LPLA	**Las Palmas La**	**3.37**	**358**	*e*P	Pn	01 42 56.0	+0.4
POTG	**Potrero Grande**	**3.39**	**356**	*e*P	Pn	01 42 56.3	+0.4
DRK0	**Durika**	**3.61**	**355**	*e*P	Pn	01 42 59.4	+0.4
PEZE	**Perez Zeledon,**	**3.79**	**348**	*e*P	Pn	01 43 01.6	+0.2
CDM	**Cerro de Muert**	**3.98**	**348**	*e*P	Pn	01 43 04.5	+0.3
MRVA	**Moravia de Chi**	**4.19**	**353**	*e*P	Pn	01 43 07.6	+0.7
RIMA	**Rio Macho**	**4.21**	**347**	*e*P	Pn	01 43 06.9	-0.3
LCR2	**La Lucha 2**	**4.21**	**345**	*e*P	Pn	01 43 07.3	0.0
LAFE	**Finca La Fe, P**	**4.59**	**334**	*e*P	Pn	01 43 11.8	-0.5
INDI	**Punta indio, G**	**4.92**	**329**	*e*P	Pn	01 43 16.2	-0.7
GRZA	**Playa Garza**	**5.03**	**328**	*e*P	Pn	01 43 18.4	0.0
JTS	**Las Juntas de**	**5.04**	**336**	*e*P	Pn	01 43 18.4	-0.2
SAJU	**San Juanillo,**	**5.20**	**328**	*e*P	Pn	01 43 20.5	-0.2
PLVR	**Palo Verde**	**5.26**	**333**	*e*P	Pn	01 43 20.7	-1.0
GUAI	**GUAI**	**5.27**	**331**	*e*P	Pn	01 43 22.5	+0.8
CUI	**Cuipilapa**	**5.46**	**336**	*e*P	Pn	01 43 24.6	+0.3
COLC	**Colonia**	**5.48**	**336**	*e*P	Pn	01 43 26.7	+2.1
HORNC	**Hornillas**	**5.52**	**336**	*e*P	Pn	01 43 27.1	+2.0
LAPC	**Finca la Perla**	**5.67**	**334**	*e*P	Pn	01 43 27.1	-0.1
GBS3	**Finca Las Img**	**5.69**	**334**	*e*P	Pn	01 43 29.2	+1.7
GB1A	**Borinquen Arri**	**5.70**	**335**	*e*P	Pn	01 43 29.6	+2.0
BUAI	**Buenos Aires**	**5.73**	**335**	*e*P	Pn	01 43 29.2	+1.2

ATH 24 01:45:36.6, 41°.18N×24°.25E, h9km±4km, ML1.2/5, Error ellipse: s-maj=4.0km s-min=0.9km az=271.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAVA	**Kavala**	**0.27**	**133**	P	Pg	01 45 41.6	-0.4
KAVA				S	Sg	01 45 45.7	0.0
KAVA				AML	AML	01 45 49.6	
	comp=N,120μm,0.1s						
KAVA				AML	AML	01 45 49.6	
	comp=E,78μm,0.1s						
NVR	**Nevrokopi**	**0.34**	**300**	P	Pg	01 45 43.0	-0.3
NVR				S	Sg	01 45 47.8	0.0
NVR				AML	AML	01 45 51.6	
	comp=E,69μm,0.2s						
NVR				AML	AML	01 45 51.6	
	comp=N,62μm,0.1s						
THAS	**Thassos island**	**0.68**	**148**	P	Pg	01 45 49.2	-0.4
THAS				S	Sg	01 45 59.1	+0.7
THAS				AML	AML	01 46 02.1	
	comp=E,117μm,0.2s						
THAS				AML	AML	01 46 02.3	
	comp=N,151μm,0.3s						
SOH	**Sokhos**	**0.77**	**242**	P	Pg	01 45 51.5	+0.1
OUR	**Ouranopolis**	**0.87**	**194**	P	Pg	01 45 53.5	+0.1
RDO	**Rodhopi**	**0.97**	**92**	P	Pg	01 45 54.6	-0.7
RDO				S	Sb	01 46 08.4	-0.2
RDO				AML	AML	01 46 10.7	
	comp=E,42μm,0.2s						
RDO				AML	AML	01 46 12.7	
	comp=N,35μm,0.1s						
PLG	**Polygyros**	**1.01**	**217**	P	Pg	01 45 55.9	-0.2
PLG				S	Sg	01 46 08.9	-0.3
PLG				AML	AML	01 46 09.5	
	comp=N,34μm,0.3s						
PLG				AML	AML	01 46 13.0	
	comp=E,33μm,0.4s						
KNT	**Kendrikon**	**1.02**	**269**	P	Pg	01 45 55.9	-0.3
SMTH	**Samothraki Isl**	**1.20**	**126**	P	Pb	01 45 59.4	-0.2
ALN	**Alexandroupoli**	**1.39**	**101**	P	Pn	01 46 01.9	-0.3
LIA	**Limnos Island**	**1.47**	**151**	P	Pn	01 46 02.7	-0.6
STIP	**Stip**	**1.64**	**289**	*i* Pn	Pn	01 46 04.9	-0.8

*IDC **24** 01:48:52.3±0.7, 30°.48N×142°.86E, h0km, mb3.9/16, mb1 4.1/19, mb1mx3.9/51, mbtmp3.9/19, ML3.5/2, Error ellipse: s-maj=21.9km s-min=15.3km az=85.0*
*JMA **24** 01:48:52.8±0.3, 30°.52N×142°.87E, h48km, M4.0*
*NEIC **24** 01:48:53.5±1.6, 30°.50N±0°.07×142°.6E±0°.1, h11km±4km, mb4.3/7, Error ellipse: s-maj=15.5km s-min=9.5km az=79.0*

ISC 24 01:48:57.0±0.6, 30°.44N±0°.05×142°.59E±0°.09, h35km, n40, σ1s71/41, mb4.0/17, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.35**	**186**	P	**Pn**	**01 49 45.9**	**-1.0**
CBIJ				*e*S	**Sn**	**01 50 24.5**	**-1.0**
JCJ	**Chichijima**	**3.35**	**186**	Pn	**Pn**	**01 49 46.0**	**-0.9**
	13nm,0.3s,baz=309,slow=21,SNR=13						
JCJ				Sn	**Sn**	**01 50 22.1**	**-3.4**
	18nm,0.3s,baz=302,slow=22,SNR=4.6						
JHJ	**Hachijo jima 2**	**3.59**	**319**	Sn	**Sn**	**01 50 28.6**	**-2.7**
	11nm,0.3s,baz=259,slow=22,SNR=1.8						
JMKN	**Mikurajimanish**	**4.28**	**324**	*e*S	**Sn**	**01 50 48.1**	**-0.3**
BSO1	**Boso 1**	**4.42**	**342**	P	**Pn**	**01 49 58.8**	**-2.2**
JHU	**Hanno**	**6.07**	**334**	S	**Sn**	**01 51 30.4**	**-2.1**
JRY	**Ryogami san**	**6.36**	**332**	P	**Pn**	**01 50 28.0**	**-0.3**
JHO	**Hitachi**	**6.38**	**345**	P	**Pn**	**01 50 26.5**	**-2.0**
JHO				*e*S	**Sn**	**01 51 36.1**	**-4.1**
MJAR	**Matsushiro Arr**	**7.10**	**330**	Pn	**Pn**	**01 50 37.4**	**-1.0**
	0.3nm,0.3s,baz=148,slow=12,SNR=6.9						
JTM	**Tenmabayashi**	**10.40**	**354**		**Pn**	**01 51 21.5**	**-2.0**
JSU	**Suzuyama**	**10.47**	**279**	Pn	**Pn**	**01 51 23.5**	**-1.2**
KSRS	**Korea Array**	**14.04**	**304**	Pn	**P**	**01 52 18.4**	**-2.2**
	0.2nm,0.3s,baz=117,slow=14,SNR=7.9						
USRK	**Usurijsk Ar.**	**16.10**	**331**	Pn	**Pn**	**01 52 39.9**	**-0.7**
	baz=124,slow=15,SNR=2.4						
NACB	**Ninganchiao**	**19.66**	**257**	P	**P**	**01 53 22.5**	**-0.5**
NACB				IAmb	IAmb	01 53 38.7	
	comp=Z,17nm,0.8s						
KLR	**Kul'dur**	**20.49**	**339**	P	**P**	**01 53 32.9**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=183,slow=5.9,SNR=4.1						
SONM	**Songino Array**	**32.64**	**312**	P	**P**	**01 55 28.8**	**+3.2**
	comp=Z,1.6nm,0.9s,baz=126,slow=9.2,SNR=6.2						
SONM	**Songino Array**	**32.64**	**312**	P	**P**	**01 55 26.5**	**+0.9**
SONM				IAmb	IAmb	01 55 40.3	
	comp=Z,1.7nm,1.0s						
SEY	**Seymchan**	**33.11**	**8**	P	**P**	**01 55 28.6**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=207,slow=6.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**47.25**	**317**	P	**P**	**01 57 26.7**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=123,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**48.68**	**307**	P	**P**	**01 57 37.9**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=93,slow=9.7,SNR=8.2						
MKAR	**Makanchi Array**	**48.68**	**307**	P	**P**	**01 57 37.2**	**-0.5**
WB0	**Warramunga Arr**	**50.54**	**190**	P	**P**	**01 57 52.4**	**+0.4**
WB0				IAmb	IAmb	01 57 54.7	
	comp=Z,6.6nm,1.0s						
WB2	**Warramunga Arr**	**50.72**	**190**	P	**P**	**01 57 53.3**	**-0.1**
WRA	**Warramunga Arr**	**50.72**	**190**	P	**P**	**01 57 54.3**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=7.4,slow=7.6,SNR=26						
WRA	**Warramunga Arr**	**50.72**	**190**	IAmb	IAmb	01 57 56.3	
	comp=Z,0.3nm,1.1s						
KURK	**Kurchatov**	**50.95**	**313**	P	**P**	**01 57 57.0**	**+2.1**
KURBB	**Kurchatov Arra**	**51.01**	**313**	P	**P**	**01 57 57.0**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=88,slow=7.0,SNR=7.2						
ASAR	**Alice Springs**	**54.44**	**190**	P	**P**	**01 58 21.8**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=4.9,slow=6.7,SNR=17						
IL31		**54.63**	**30**	P	**P**	**01 58 23.0**	**+1.2**
IL31				IAmb	IAmb	01 58 41.2	
	comp=Z,3.2nm,1.2s						
ILAR	**Eielson Array**	**54.63**	**30**	P	**P**	**01 58 21.4**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=264,slow=9.0,SNR=2.9						
KKAR	**Karatay Array**	**57.46**	**304**	P	**P**	**01 58 44.5**	**+2.0**
INK	**Inuvik**	**59.85**	**25**	P	**P**	**01 58 57.0**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=279,slow=3.4,SNR=5.6						
INK	**Inuvik**	**59.85**	**25**	IAmb	IAmb	01 58 59.4	
	comp=Z,5.4nm,1.4s						
YKA	**Yellowknife Ar**	**69.05**	**29**	P	**P**	**01 59 58.4**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=296,slow=5.7,SNR=7.5						
FINES	**FINESS Array B**	**75.12**	**334**	P	**P**	**02 00 36.3**	**+1.2**
	comp=Z,1.8nm,1.0s,baz=35,slow=7.0,SNR=5.5						
KBZ	**Khabaz**	**76.01**	**313**	P	**P**	**02 00 43.5**	**+2.9**
	comp=Z,1.0nm,0.6s,baz=36,slow=6.6,SNR=4.1						
NVAR	**Mina Array Bea**	**78.19**	**52**	P	**P**	**02 00 53.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=305,slow=5.2,SNR=4.5						
BRTR	**Keskin Array B**	**84.00**	**313**	P	**P**	**02 01 26.6**	**+2.5**
	comp=Z,2.3nm,1.0s,baz=116,slow=3.4,SNR=2.8						
TXAR	**Lajitas Array**	**93.32**	**53**	P	**P**	**02 02 09.3**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=300,slow=2.5,SNR=4.4						
LPAZ	**La Paz**	**148.59**	**70**	PKPbc	**PKiKP**	**02 08 42.8**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=345,slow=6.6,SNR=6.7						

IDC 24 02:28:17.1±3.6, 18°.12N×143°.79E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/57, mbtmp3.7/5, ML3.0/1, MS3.4/2, Ms1 3.5/2, ms1mx2.8/49, Error ellipse: s-maj=189.1km s-min=21.9km az=86.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**16.74**	**304**	LR	LR	02 38 09.7	
	comp=Z,86nm,19.4s,baz=158,slow=35						
MJAR	**Matsushiro Arr**	**19.00**	**346**	P	P	02 32 40.7	+0.3
	0.0nm,0.3s,baz=170,slow=9.7,SNR=7.0						
KLR	**Kul'dur**	**32.53**	**345**	P	P	02 34 48.0	-1.7
	0.9nm,0.5s,baz=169,slow=9.4,SNR=4.8						
WRA	**Warramunga Arr**	**38.94**	**194**	P	P	02 35 45.3	+0.2
	0.7nm,0.7s,baz=9.8,slow=9.0,SNR=4.1						
ASAR	**Alice Springs**	**42.64**	**193**	P	P	02 36 14.8	-0.7
	0.3nm,0.6s,baz=13,slow=8.5,SNR=4.8						
ZALV	**Zalesovo Beam**	**57.38**	**323**	P	P	02 38 08.6	+1.4
	0.5nm,0.3s,baz=90,slow=3.0,SNR=4.5						
ILAR	**Eielson Array**	**64.97**	**26**	LR	LR	03 05 26.1	
	comp=Z,48nm,20.4s,baz=256,slow=34						

*BUT **24** 02:32:20.3±1.4, 48°.12N±0°.06×116°.37W±0°.05, h14km±3km, Error ellipse: s-maj=8.3km s-min=5.0km az=186.0*
*IDC **24** 02:32:20.1±0.6, 48°.20N×116°.31W, h0km, mb3.8/6, mb1 4.0/13, mb1mx3.8/54, mbtmp3.8/13, ML3.4/7, MS3.4/1, Ms1 3.4/1, ms1mx2.5/58, Error ellipse: s-maj=8.9km s-min=4.8km az=19.0*
*PGC **24** 02:32:20.5±0.0, 48°.09N×116°.38W, h8km, ML4.0/19, 89km Ene of Spokane, Wa Western Idaho*
*ANF **24** 02:32:20.3±0.5, 48°.14N×116°.42W, h11km±5km, ML4.5/10, Error ellipse: s-maj=7.8km s-min=2.9km az=6.0, Hypocentre not reviewed by the ISC*
*NEIC **24** 02:32:20.3±1.4, 48°.14N±0°.06×116°.36W±0°.05, h9km±5km, mb4.1/29, ML4.1/66, Mwr3.7/10, ML4.1(BUT), ML4.2(OTT), Error ellipse: s-maj=8.2km s-min=5.1km az=185.0*
*NEIC **24** 02:32:20.4, 48°.16N×116°.39W, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.42; $M_{\theta\theta}$=0.87; $M_{\phi\phi}$=1.56; $M_{r\theta}$=-1.77; $M_{r\phi}$=-2.61; $M_{\theta\phi}$=-2.41; Fault plane solution: M_o4.50000×10^{14} NP1:ϕ_s353.09000°, δ63.46000°, λ-45.36000°. NP2:ϕ_s107.43000°, δ50.47000°, λ-144.59000°. Principal axes: T 3.9309, Plg8.0000°, Azm53.0000°; N 0.9787, Plg39.0000°, Azm149.0000°; P -4.9095, Plg50.0000°, Azm314.0000°;*

ISC 24 02:32:19.9±0.5, 48°.11N±0°.03×116°.33W±0°.02, h10km, n199, σ2s96/226, mb4.0/13, Western Idaho

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEW	**Newport**	**0.56**	**287**	Pg	**Pg**	**02 32 29.8**	**-0.9**
	181nm,0.3s,baz=98,slow=14,SNR=2392						
NEW				Lg	Lg	02 32 36.8	
	466nm,0.3s,baz=204,slow=19,SNR=31						
NEW	**Newport**	**0.56**	**287**	Pg	**Pg**	**02 32 30.0**	**-0.7**
NEW				Sg	**Sg**	**02 32 36.9**	**-1.2**
NEW	**Newport**	**0.56**	**287**	P		02 32 30.0	
	baz=106,SNR=777						
NEW				S		02 32 36.7	
	baz=106						
BHMT	**Big Hole Peak**	**1.01**	**121**	P	**Pg**	**02 32 39.0**	**-0.4**
BSMT	**Bassoo Peak**	**1.06**	**103**	P	**Pg**	**02 32 40.2**	**-0.1**
C09A	**Chrisman Ranch**	**1.34**	**258**	P	**Pn**	**02 32 44.5**	**-0.2**
C09A				S	**Sb**	**02 33 01.7**	**-0.7**
C09A	**Chrisman Ranch**	**1.34**	**258**	Pn	**Pn**	**02 32 44.4**	**-0.3**
JTMT	**Jette**	**1.42**	**104**	P	**Pn**	**02 32 46.6**	**+0.8**
JTMT	**Jette**	**1.42**	**104**	Pn	**Pn**	**02 32 46.5**	**+0.6**
JTMT				IAML		02 33 09.4	
	comp=N,4μm,0.6s						
FBMT	**Ferry Basin**	**1.46**	**118**	P	**Pn**	**02 32 47.1**	**+0.7**
YBMT	**Yellow Bay**	**1.57**	**98**	Pn	**Pn**	**02 32 48.8**	**+0.8**
SWMT	**Swartz Lake**	**1.68**	**110**	Pn	**Pn**	**02 32 50.3**	**+0.9**
WALA	**Waterton Lakes**	**1.86**	**58**	Pn	**Pn**	**02 32 53.0**	**+1.0**
WALA				Sn	**Sb**	**02 33 17.8**	**+0.3**
WALA	**Waterton Lakes**	**1.86**	**58**	Pn	**Pn**	**02 32 53.0**	**+1.0**
WALA				IAML		02 33 20.2	
	comp=N,1μm,0.6s						
E09A	**Wood Farm, Sta**	**2.02**	**219**	Pn	**Pn**	**02 32 54.1**	**+0.1**
E09A				IAML		02 33 34.9	
	comp=E,1μm,0.7s						
B08A	**Colville Reser**	**2.03**	**278**	Pn	**Pn**	**02 32 53.5**	**-0.7**
B08A				Sg	**Sb**	**02 33 22.1**	**-0.1**
B08A	**Colville Reser**	**2.03**	**278**	Pn	**Pn**	**02 32 53.3**	**-0.8**
B08A				IAML		02 33 23.8	
	comp=N,2μm,0.5s						
B08A				IAML		02 33 24.5	
	comp=E,1μm,0.7s						
D08A	**Wollman Farm,**	**2.05**	**240**	Pn	**Pn**	**02 32 53.9**	**-0.5**
D08A				IAML		02 33 25.1	
	comp=N,1μm,0.6s						
MSO	**Missoula**	**2.06**	**127**	Pn	**Pn**	**02 32 55.6**	**+0.9**
MSO				IAML		02 33 27.4	
	comp=N,2μm,0.6s						
MSO				IAML		02 33 34.7	
	comp=N,1μm,0.7s						
MSO	**Missoula**	**2.06**	**127**	P		02 32 55.4	
	baz=309,SNR=453						
MSO				S		02 33 22.5	
	baz=309						
SLMT	**Seeley Lake**	**2.10**	**113**	Pn	**Pn**	**02 32 56.0**	**+0.8**
F10A	**Beach Ranch, E**	**2.22**	**196**		**Pn**	**02 32 57.6**	**+0.8**
E08A	**Dider Farm, El**	**2.46**	**230**	Pn	**Pn**	**02 33 01.5**	**+1.4**
E08A				IAML		02 33 38.2	
	comp=E,971nm,0.4s						
OVMT	**Ovando**	**2.48**	**114**	Pn	**Pn**	**02 33 01.2**	**+0.7**
PNT	**Penticton**	**2.50**	**300**	Pn	**Pn**	**02 33 00.2**	**-0.4**
PNT				Sg	**Sb**	**02 33 36.7**	**+1.1**
BPMT	**Black Pine Rid**	**2.57**	**129**	Pn	**Pn**	**02 33 03.0**	**+1.2**
HAWA	**Hanford**	**2.78**	**233**	Pn	**Pn**	**02 33 04.0**	**-0.4**
HAWA				IAML		02 33 51.8	
	comp=E,689nm,0.5s						
HAWA				IAML		02 33 51.8	
	comp=E,875nm,0.6s						
E07A	**Sunnyside**	**2.86**	**239**		**Pn**	**02 33 05.5**	**-0.1**
LYMT	**Lyon Mountain**	**2.96**	**111**	Pn	**Pn**	**02 33 08.0**	**+0.8**
PLID	**Pearl Lake**	**3.03**	**176**		**Pn**	**02 33 08.6**	**+0.6**
PLID				IAML		02 34 03.3	
	comp=E,695nm,0.6s						
ELMT	**Elliston**	**3.05**	**120**	Pn	**Pn**	**02 33 09.4**	**+1.1**
LTY	**Liberty**	**3.06**	**256**	Pn	**Pn**	**02 33 07.7**	**-0.7**
LTY				Sg	**Sb**	**02 33 54.2**	**+2.5**
LTY	**Liberty**	**3.06**	**256**		**Pn**	**02 33 07.6**	**-0.7**
LTY				IAML		02 33 58.9	
	comp=N,504nm,0.7s						
PRDA	**Priddis**	**3.07**	**25**	Pn	**Pn**	**02 33 09.7**	**+1.2**
PRDA				Sg	**Sg**	**02 33 56.5**	**-1.8**
C06D	**Leavenworth**	**3.07**	**268**	P		02 33 07.1	
	baz=85,SNR=26						
C06D				S		02 33 45.5	
	baz=85						
GPW	**Glacier Peak**	**3.23**	**272**	Pn	**Pn**	**02 33 10.7**	**-0.1**
SLEB	**Sale Mountain**	**3.28**	**340**	Pn	**Pn**	**02 33 12.4**	**+0.9**
SLEB				Sg	**Sg**	**02 34 02.8**	**-2.5**
F07A	**Phinny Hill Vi**	**3.31**	**229**		**Pn**	**02 33 12.1**	**+0.3**
BMO	**Blue Mountains**	**3.32**	**192**		**Pn**	**02 33 12.8**	**+0.8**
BMO				IAML		02 34 10.2	
	comp=N,407nm,1.4s						
BMO				IAML		02 34 12.2	
	comp=N,332nm,0.8s						
G08A	**Pilot Rock**	**3.35**	**214**	Pn	**Pn**	**02 33 12.7**	**+0.3**
HRY	**Holter Researc**	**3.35**	**113**	Pn	**Pn**	**02 33 13.5**	**+1.1**
HRY	**Holter Researc**	**3.35**	**113**		**Pn**	**02 33 13.8**	**+1.3**
HBMT	**Mount Humbug**	**3.44**	**131**	Pn	**Pn**	**02 33 14.4**	**+1.1**
B06A	**Marblemount**	**3.47**	**279**	Pn	**Pn**	**02 33 14.4**	**+0.5**
B06A				Sg	**Sb**	**02 34 06.0**	**+2.5**
B06A	**Marblemount**	**3.47**	**279**		**Pn**	**02 33 13.9**	**0.0**
B06A				IAML		02 34 25.5	
	comp=N,616nm,0.7s						
RPW	**Rockport**	**3.48**	**278**	Pn	**Pn**	**02 33 14.2**	**0.0**
LRM	**Limekiln Ridge**	**3.50**	**129**	Pn	**Pn**	**02 33 15.6**	**+1.0**
LRM	**Limekiln Ridge**	**3.50**	**129**		**Pn**	**02 33 15.6**	**+1.0**
HOPB	**Hope**	**3.61**	**293**	Sn	**Sn**	**02 33 57.5**	**-0.9**
JCW	**Jim Creek**	**3.75**	**273**	Pn	**Pn**	**02 33 18.1**	**+0.3**
DLMT	**Dillon**	**3.75**	**136**		**Pn**	**02 33 19.2**	**+1.2**
MBW	**Mount Baker**	**3.77**	**282**	Pn	**Pn**	**02 33 18.8**	**+0.6**
FMW	**Mount Fremont**	**3.81**	**254**	Pn	**Pn**	**02 33 18.4**	**-0.3**
B05A	**Bryant**	**3.87**	**275**	P		02 33 19.0	
	baz=90,SNR=14						
A05A	**Maple Falls**	**3.93**	**285**	Pn	**Pn**	**02 33 20.7**	**+0.5**
A05A				Sg	**Sg**	**02 34 23.0**	**-3.0**
A05A	**Maple Falls**	**3.93**	**285**		**Pn**	**02 33 20.0**	**-0.2**
D05A	**Enumclaw**	**3.

E03A IAML 02 35 11.1
comp=E,167nm,1.3s
NLLB Nanaimo Lost L 5.20 285 Pn **Pn** **02 33 40.2 +2.5**
NLLB Sg **Sb** **02 34 58.0 +4.6**
SHB Sechelt 5.20 289 Pg **Pb** **02 33 52.7 +1.7**
SHB Sg **Sb** **02 34 58.3 +4.8**
B926 Mesachie Lake 5.24 281 Pn **Pn** **02 33 39.5 +1.3**
B926 Sg **Sb** **02 35 01.4 +6.8**
H04A Detroit Lake 5.30 232 Pn **Pn** **02 33 39.7 +0.5**
H04A IAML 02 35 14.9
comp=N,139nm,0.7s
H04A IAML 02 35 18.1
comp=E,125nm,0.9s
GHNB Nanoose 5.37 286 Sg **Sb** **02 35 03.9 +5.6**
PINE Pine Mountain 5.38 218 **Pn** **02 33 40.5 +0.2**
PINE IAML 02 35 24.4
comp=E,105nm,0.8s
PINE IAML 02 35 29.9
comp=N,71nm,0.9s
LKWY Lake 5.42 129 **Pn** **02 33 42.6 +1.7**
H17A Grant Village 5.45 131 **Pn** **02 33 42.2 +0.9**
EDM Edmonton 5.46 19 Pn **Pn** **02 33 40.6 -0.7**
EDM Sn **Sn** **02 34 43.0 -1.2**
EDM Sg **Sb** **02 35 06.5 +5.6**
TXB Texada 5.58 290 Pg **Pb** **02 33 58.5 +1.1**
FLWY Flagg Ranch 5.61 134 **Pn** **02 33 45.0 +1.4**
MGB Mount Grey 5.63 282 Pn **Pn** **02 33 45.4 +1.7**
MGB Sg **Sb** **02 35 13.5 +7.7**
RLMT Red Lodge 5.70 119 **Pn** **02 33 46.3 +1.5**
RLMT Red Lodge 5.70 119 P 02 33 46.8
baz=304,SNR=32
MOOW Moose Ponds 5.84 136 **Pn** **02 33 48.7 +1.9**
WVOR Wild Horse Val 5.90 197 Pn **Pn** **02 33 48.4 +1.0**
J05D Fort Rock, OR 5.92 217 P 02 33 49.3
baz=33,SNR=12
LOHW Long Hollow 6.01 136 **Pn** **02 33 49.1 +0.1**
SNOW Snow King Moun 6.06 138 **Pn** **02 33 50.9 +1.1**
REDW Red Top Meadow 6.09 139 **Pn** **02 33 51.4 +1.1**
OZB Mount Ozzard 6.15 281 Sg **Sg** **02 35 33.8 -3.4**
BTB Buttle Lake 6.23 286 Pn **Pn** **02 33 54.9 +3.0**
BTB Sg **Sg** **02 35 33.1 -6.6**
CBB Campbell River 6.25 291 Sg **Sb** **02 35 27.8 +4.5**
K05A Summer Lake 6.27 213 Pn **Pn** **02 33 53.3 +0.8**
AHID Auburn Hatcher 6.48 144 **Pn** **02 33 57.9 +2.5**
NCRB Newcastle Ridg 6.77 293 Pn **Pn** **02 34 01.3 +1.9**
MOD Modoc Plateau 6.81 206 Pn **Pn** **02 34 00.6 +0.6**
UBRB Upper Baezaeko 6.89 317 Pg Pb 02 34 24.6 +4.9
UBRB Sg **Sg** **02 35 54.3 -6.4**
LAO LASA Array 7.00 98 Pn **Pn** **02 34 04.2 +1.7**
WOSB Woss 7.03 291 Pg **Pb** **02 34 24.4 +2.3**
BW06 Boulder Array 7.15 136 **Pn** **02 34 05.6 +0.9**
PD31 Pinedale Array 7.15 136 Pn **Pn** **02 34 04.5 -0.2**
PDAR Pinedale Array 7.15 136 Pn **Pn** **02 34 07.9 +3.2**
comp=N,0.6nm,0.3s,baz=338,slow=11,SNR=16
PDAR Lg Lg 02 36 07.8
comp=N,0.7nm,0.3s,baz=334,slow=32,SNR=6.7
PDAR Pinedale Array 7.15 136 **Pn** **02 34 04.8 +0.1**
HWUT Hardware Ranch 7.32 151 **Pn** **02 34 07.8 +0.8**
ELK Elko 7.40 174 Pn **Pn** **02 34 12.4 +4.3**
comp=N,1.5nm,0.3s,baz=342,slow=11,SNR=29
ELK Lg Lg 02 36 16.1
comp=N,0.8nm,0.3s,baz=223,slow=21,SNR=8.1
ELK Elko 7.40 174 **Pn** **02 34 09.2 +1.1**
YBH Yreka Blue Hor 7.52 218 Pn **Pn** **02 34 17.4 +3.7**
comp=N,0.2nm,0.3s,baz=5.9,slow=7.0,SNR=3.0
NBC4 NorthernBC 4 8.05 342 Pn **Pn** **02 34 17.6 +0.8**
NBC4 Sg **Sg** **02 36 33.4 -4.7**
FSB Fort Saint Jam 8.11 325 Pg Pg 02 34 48.5 -6.6
DUG Dugway, Tooele 8.30 161 **Pn** **02 34 21.2 +0.8**
DUG Dugway, Tooele 8.30 161 P 02 34 22.0
baz=343,SNR=6.2
PAHR Pah Rah Range 8.68 196 Pn **Pn** **02 34 26.8 +1.2**
BMBC Bull Mountain 8.72 338 Pg Pg 02 34 59.2 -7.4
BEKR Beckworth 8.73 201 Pn **Pn** **02 34 26.7 +0.4**
KVN Kaiserville 9.14 189 **Pn** **02 34 33.3 +1.3**
PNTR Pine Nut 9.32 196 Pn **Pn** **02 34 34.0 -0.4**
ORV Oroville 9.33 205 Pn **Pn** **02 34 35.4 +1.0**
RSSD Black Hills 9.42 110 Pn **Pn** **02 34 36.8 +1.0**
RYN Ryan 9.61 190 Pn **Pn** **02 34 39.3 +1.0**
R11A Troy Canyon, C 9.77 177 **Pn** **02 34 41.4 +0.9**
NVAR Mina Array Bea 9.78 189 Pn **Pn** **02 34 45.3 +4.6**
comp=N,0.2nm,0.3s,baz=0.9,slow=12,SNR=25
O20A White River Ci 9.86 141 **Pn** **02 34 41.6 -0.2**
WAKR Walker 9.86 194 Pn **Pn** **02 34 42.5 +0.7**
LHV Little Huntoon 9.98 190 Pn **Pn** **02 34 45.2 +2.0**
TPH Tonopah 10.05 184 Pn **Pn** **02 34 43.6 -0.8**
NBC5 NorthernBC 5 10.18 340 Pn **Pn** **02 34 47.8 +1.8**
PHWY Pilot Hill 10.29 127 Pn **Pn** **02 34 48.0 +0.1**
E28A Huff 10.72 92 Pn **Pn** **02 34 55.5 +2.0**
PRN Pahroc Range 10.73 175 **Pn** **02 34 53.9 +0.1**
PV04 Paradox Valley 11.11 148 Pn **Pn** **02 34 59.5 +0.7**
FFC Flin Flon 11.13 48 Pn **Pn** **02 34 58.1 -0.9**
TPNV Topopah Spring 11.15 180 Pn **Pn** **02 35 02.2 +2.7**
PV16 Nyswonger Mesa 11.16 140 Pn **Pn** **02 35 00.3 +0.3**
SMCO Snowmass 11.20 139 Pn **Pn** **02 35 01.3 +1.0**
PV18 Skein Mesa, Pa 11.24 149 Pn **Pn** **02 35 01.0 +0.3**
ISCO Idaho Springs 11.33 133 **Pn** **02 35 02.9 +0.9**
DLBC Dease Lake 13.17 327 Lg Lg 02 39 13.0
baz=245,slow=6.6,SNR=4.4
ULM Lac du Bonnet 13.55 73 Pn **Pn** **02 35 28.3 -3.6**
comp=N,0.4nm,0.3s,baz=267,slow=12,SNR=5.7
ULM Lg Lg 02 39 22.1
comp=N,0.6nm,0.3s,baz=175,slow=23,SNR=6.7
W18A Petrified Fore 13.87 157 Pn **Pn** **02 35 37.7 +1.1**
T25A Trinidad 14.02 137 Pn **Pn** **02 35 39.3 +0.7**
X16A Lo Mia Camp, P 14.15 163 Pn **Pn** **02 35 39.9 -0.6**
Y14A Wickenburg 14.37 169 Pn **Pn** **02 35 43.9 +0.5**
X18A Snowflake 14.38 158 Pn **Pn** **02 35 42.4 -1.2**
YKA Yellowknife Ar 14.45 3 Pn **Pn** **02 35 40.9 -3.4**
comp=N,0.3nm,0.3s,baz=185,slow=13,SNR=23
YKA Lg Lg 02 39 44.5
comp=N,0.1nm,0.3s,baz=172,slow=27,SNR=4.1
ANMO Albuquerque 15.06 147 Pn **P** **02 35 57.3 -1.0**
comp=N,0.1nm,0.3s,baz=330,slow=11,SNR=6.6
ANMO Albuquerque 15.06 147 Pn **Pn** **02 35 53.0 +0.1**
113A Mohawk Valley, 15.44 172 Pn **Pn** **02 35 56.1 -1.6**
113A IAmb IAmb 02 36 07.0
comp=Z,9.2nm,0.8s
TUC Tucson 16.33 163 Pn **Pn** **02 36 07.8 -1.4**
TUC IAmb IAmb 02 36 18.3
comp=Z,19nm,1.9s
214A Organ Pipe Nat 16.35 169 Pn **Pn** **02 36 08.8 -0.6**
SPMN Marine on St. 16.39 91 Pn **Pn** **02 36 08.4 -1.4**
SPMN IAmb IAmb 02 36 14.3
comp=Z,7.0nm,0.6s
N35A Tabor 16.41 109 Pn **Pn** **02 36 09.6 -0.6**
N35A IAmb IAmb 02 36 16.8
comp=Z,16nm,0.8s
KAN05 Bluff City Nor 17.43 122 Pn **Pn** **02 36 21.8 -1.2**
OK032 Salt Plains WL 17.45 124 Pn **Pn** **02 36 22.4 -0.9**
OK032 IAmb IAmb 02 36 28.1
comp=Z,9.1nm,0.9s
MNTX Cornudas Mount 18.38 149 **Pn** **02 36 33.3 -1.5**
P40A Paris 19.44 107 P **P** **02 36 46.1 -0.3**
P40A IAmb IAmb 02 36 51.7
comp=Z,7.1nm,0.8s
S39A Bolivar 19.73 113 P **P** **02 36 49.8 +0.2**
HHAR Hobbs 20.28 117 P **P** **02 36 56.1 +0.5**
DAWY Dawson 20.33 330 P **P** **02 36 54.3 -1.7**
MGMO Mountain Grove 20.72 113 P **P** **02 37 00.1 -0.3**
MGMO IAmb IAmb 02 37 05.0
comp=Z,11nm,1.1s
CCM Cathedral Cave 20.81 110 P **P** **02 37 00.7 -0.5**
CCM IAmb IAmb 02 37 04.9
comp=Z,25nm,2.0s
U40A Yellville 20.88 116 P **P** **02 37 02.6 +0.5**
W39A Magazine 21.12 119 P **P** **02 37 04.6 0.0**
W39A Magazine 21.12 119 P 02 37 05.7
baz=315,SNR=8.3
TX31 Lajitas Ar. Si 21.13 148 P **P** **02 37 05.4 +0.4**
TX32 Lajitas Array 21.13 148 P **P** **02 37 05.9 +1.0**
TX32 IAmb IAmb 02 37 08.2
comp=Z,6.1nm,0.7s
TXAR Lajitas Array 21.13 148 P **P** **02 37 06.8 +1.9**
comp=Z,7.0nm,0.7s,baz=341,slow=9.8,SNR=68
TXAR Lajitas Array 21.13 148 P **P** **02 37 06.2 +1.3**
FCAR Ozark Folk Cen 21.63 115 P **P** **02 37 12.4 +2.3**
FCAR IAmb IAmb 02 37 15.4
comp=Z,6.1nm,1.0s
JCT Junction City 21.68 138 P **P** **02 37 11.5 +0.8**
JCT IAmb IAmb 02 37 14.7
comp=Z,12nm,1.4s
MIAR Mount Ida 21.70 120 P **P** **02 37 12.3 +1.5**
MIAR IAmb IAmb 02 37 14.8
comp=Z,8.4nm,1.2s
INK Inuvik 22.03 343 P **P** **02 37 15.8 +1.6**
comp=Z,1.4nm,0.8s,baz=176,slow=11,SNR=3.5
LCAR Lake Charles 22.11 114 P **P** **02 37 16.1 +0.9**
X40A Basin Creek Fa 22.17 119 P **P** **02 37 17.1 +1.2**
X40A IAmb IAmb 02 37 20.9
comp=Z,5.6nm,1.0s
ILAR Eielson Array 23.38 327 P **P** **02 37 30.4 +2.1**
comp=Z,1.0nm,0.7s,baz=132,slow=8.0,SNR=8.3
KDAK Kodiak Island 23.62 308 LR LR 02 44 52.9
comp=Z,87nm,20.0s,baz=281,slow=32
TRF Thorofare Moun 24.11 322 P **P** **02 37 36.9 +1.3**
TRF IAmb IAmb 02 37 42.3
comp=Z,5.7nm,0.9s
ACSO Alum Creek Sta 25.03 96 P **P** **02 37 44.3 +0.4**
U49A Red Boiling Sp 25.22 106 P **P** **02 37 47.9 +2.3**
COLD Coldfoot 25.81 330 P **P** **02 37 50.7 -0.2**
COLD IAmb IAmb 02 37 57.9
comp=Z,3.2nm,0.9s
ARCES ARCESS Array B 59.38 15 P **P** **02 42 21.7 0.0**
comp=Z,2.3nm,0.9s,baz=316,slow=6.9,SNR=3.8
FINES FINESS Array B 66.69 19 P **P** **02 43 10.8 +0.4**
comp=Z,3.0nm,0.9s,baz=320,slow=8.5,SNR=5.1
MKAR Makanchi Array 84.10 347 P **P** **02 44 51.5 +0.8**
comp=Z,0.3nm,0.5s,baz=22,slow=4.7,SNR=2.5

*IDC **24** 02:37:17.8±1.4, 18°.61N×144°.32E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/51, mbtmp3.6/9, ML2.8/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/43, Error ellipse: s-maj=51.9km s-min=21.1km az=85.0*

ISC 24 02:37:22.9±1.3, 18°.6N±0°.1×144°.3E±0°.3, h35km, n11, σ0.98/9, mb3.5/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**8.67**	**347**	LR		LR	LR	02 41 39.2	
comp=Z,86nm,18.9s,baz=118,slow=30									
MJAR	**Matsushiro Arr**	**18.65**	**344**	P		**Pn**	**Pn**	**02 41 38.6**	**+0.3**
0.0nm,0.3s,baz=165,slow=9.0,SNR=5.3									
KSRS	**Korea Array**	**23.63**	**326**	P		**P**	**P**	**02 42 29.3**	**-1.6**
0.5nm,0.3s,baz=148,slow=9.8,SNR=5.8									
KLR	**Kul'dur**	**32.18**	**344**	P		**P**	**P**	**02 43 46.8**	**-0.6**
1.7nm,0.8s,baz=135,slow=6.8,SNR=4.3									
WRA	**Warramunga Arr**	**39.55**	**195**	P		**P**	**P**	**02 44 51.1**	**+0.3**
0.6nm,0.9s,baz=16,slow=9.0,SNR=1.8									
SONM	**Songino Array**	**42.40**	**322**	P		**P**	**P**	**02 45 14.7**	**+0.6**
0.6nm,0.8s,baz=102,slow=41,SNR=2.9									
ASAR	**Alice Springs**	**43.23**	**194**	P		**P**	**P**	**02 45 20.2**	**-0.8**
0.3nm,0.7s,baz=16,slow=11,SNR=2.7									
TLY	**Talaya**	**45.88**	**326**	LR		LR	LR	03 04 45.8	
comp=Z,53nm,18.4s,baz=304,slow=36									
ZALV	**Zalesovo Beam**	**57.28**	**323**	P		**P**	**P**	**02 47 06.9**	**-0.1**
1.4nm,0.6s,baz=101,slow=7.7,SNR=6.2									
MKAR	**Makanchi Array**	**57.57**	**314**	P		**P**	**P**	**02 47 10.6**	**+1.3**
0.8nm,0.8s,baz=99,slow=7.5,SNR=4.6									
ILAR	**Eielson Array**	**64.30**	**26**	P		**P**	**P**	**02 47 54.9**	**+0.3**
0.3nm,0.7s,baz=290,slow=5.4,SNR=2.5									

*IDC **24** 02:38:10.8±2.5, 28°.27S×136°.55E, h0km, mb1 3.5/4, mb1mx3.3/31, mbtmp3.3/4, ML3.0/4, Error ellipse: s-maj=52.2km s-min=15.5km az=51.0*

*AUST **24** 02:38:10.2±1.2, 28°.55S×136°.12E, h2km±10km, Error ellipse: s-maj=6.0km s-min=5.3km az=173.0*

ISC 24 02:38:10.3±0.8, 28°.54S±0°.05×136°.20E±0°.06, h10km, n11, σ1.53/18, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OOD	**Oodnadatta**	**0.87**	**328**	P		**Pg**	**Pg**	**02 38 26.7**	**-0.4**
baz=0.8									
OOD				S		**Sg**	**Sg**	**02 38 38.1**	**-0.3**
baz=0.8									
MULG	**Mulgathing**	**2.56**	**227**	P		**Pn**	**Pn**	**02 38 52.9**	**+1.0**
baz=2.5									
MULG				S		**Sn**	**Sn**	**02 39 23.7**	**+0.7**
baz=2.5									
LCRK	**Leigh Creek**	**2.59**	**138**	P		**Pn**	**Pn**	**02 38 52.8**	**+0.5**
baz=2.6									
LCRK				S		**Sb**	**Sb**	**02 39 28.1**	**-0.6**
baz=2.6									
BBOO	**Buckleboo**	**4.26**	**182**	P		**Pn**	**Pn**	**02 39 15.3**	**0.0**
baz=4.3									
BBOO				S		**Sn**	**Sn**	**02 40 02.5**	**-2.7**
baz=4.3									
ASAR	**Alice Springs**	**5.27**	**336**	Pn		**Pn**	**Pn**	**02 39 30.4**	**+1.2**
0.3nm,0.3s,baz=160,slow=12,SNR=12									
ASAR				Sn		**Sn**	**Sn**	**02 40 29.4**	**-0.8**
0.5nm,0.3s,baz=156,slow=22,SNR=6.7									
ASAR				Lg		Lg	Lg	02 40 54.9	
0.5nm,0.3s,baz=150,slow=23,SNR=6.4									
STKA	**Stephens Creek**	**5.73**	**127**	Pn		**Pn**	**Pn**	**02 39 36.3**	**+0.8**
0.1nm,0.3s,baz=311,slow=9.3,SNR=1.6									
STKA				Sn		**Sn**	**Sn**	**02 40 40.6**	**-0.8**
0.8nm,0.3s,baz=312,slow=13,SNR=5.5									
STKA				Lg		Lg	Lg	02 41 11.3	
0.5nm,0.3s,baz=34,slow=9.1,SNR=3.1									
FORT	**Forrest**	**7.43**	**251**	P		**Pn**	**Pn**	**02 39 58.3**	**-0.5**
baz=7.3									
QIS	**Mount Isa**	**8.53**	**22**	P		**Pn**	**Pn**	**02 40 16.3**	**+2.4**
baz=8.6									
WC3	**Warramunga Arr**	**8.70**	**349**	P		**Pn**	**Pn**	**02 40 16.3**	**0.0**
baz=8.7									
WRA	**Warramunga Arr**	**8.72**	**348**	Pn		**Pn**	**Pn**	**02 40 16.7**	**0.0**
0.6nm,0.3s,baz=163,slow=13,SNR=37									
WRA				Sn		**Sn**	**Sn**	**02 41 51.3**	**-3.8**
0.2nm,0.3s,baz=168,slow=25,SNR=2.5									
FITZ	**Fitzroy Crossi**	**14.21**	**315**	Pn		**Pn**	**Pn**	**02 41 32.9**	**+1.2**
0.1nm,0.3s,baz=119,slow=10,SNR=1.9									

*BJI **24** 02:51:03.4±0.0, 6°.61S×155°.32E, h73km, mB5.0/22, mb4.8/31, Ms4.7/5, Ms7 4.6/6*

*IDC **24** 02:51:05.0±0.4, 6°.38S×154°.92E, h51km±3km, mb4.3/21, mb1 4.4/24, mb1mx4.3/44, mbtmp4.6/24, MS3.8/17, Ms1 3.8/17, ms1mx3.6/43, Error ellipse: s-maj=13.8km s-min=10.2km az=92.0*

*GCMT **24** 02:51:06.8±0.3, 6°.64S±0°.02×154°.76E±0°.03, h48km±1km, MW5.0/50, Moment Tensor Solution. s50,c58; s43,c52; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 3.98±.20; Mθθ -2.11±.15; Mφφ -1.87±.14; Mrθ -0.07±.13; Mθφ 1.73±.10; Mφr 0.48±.11; Best double couple: Mo 3.88100×10^16 NP1: φs 129.00000°, δ42.00000°, λ84.00000°. NP2: φs 317.00000°, δ48.00000°, λ95.00000°. Principal axes: T 4.0200, Plg85.0000°, Azm278.0000°; N -0.2770, Plg4.0000°, Azm133.0000°; P -3.7430, Plg3.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 02:51:07.8±1.5, 6°.54S±0°.08×154°.99E±0°.05, h84km±5km, mb5.0/86 Error ellipse: s-maj=11.0km s-min=6.9km az=179.0*

*DJA **24** 02:51:16.7±0.3, 7°.3S×155°.4E±°, h10km, M5.1/30, mb5.1/30, mB5.5/7, MLv5.2/2, Mw(mB)5.0/7, MwMwp5.9/1, Mwp5.9/1*

ISC 24 02:51:04.9±0.3, 6°.39S±0°.05×155°.09E±0°.05, h56km, n210, σ1.49/181, mb5.1/96, MS3.9/19, 2D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.65**	**307**	Pn		**Pn**	**Pn**	**02 52 02.6**	**+3.6**
RABL	**Rabaul**	**3.65**	**307**	P		Pn	Pn	02 52 05.9	+7.0
HNR	**Honiara**	**5.68**	**122**	P		**Pn**	**Pn**	**02 52 30.7**	**+4.0**
36nm,0.3s,baz=223,slow=3.6,SNR=5.1									
HNR				S		Sn	Sn	02 53 41.9	+11
27nm,0.3s,baz=20,slow=23,SNR=7.5									
HNR				LR		LR	LR	02 54 47.0	
comp=Z,1μm,19.0s,baz=296,slow=38									
HNR	**Honiara**	**5.68**	**122**	Pn		**Pn**	**Pn**	**02 52 30.0**	**+3.3**
PMG	**Port Moresby**	**8.41**	**249**	P		**Pn**	**Pn**	**02 53 04.0**	**-0.2**
72nm,0.3s,baz=47,slow=8.9,SNR=56									
PMG				S		**Sn**	**Sn**	**02 54 39.5**	**+1.8**
32nm,0.3s,baz=212,slow=20,SNR=6.1									
PMG				LR		LR	LR	02 56 09.6	
comp=Z,1μm,21.2s,baz=7.5,slow=37									
PMG	**Port Moresby**	**8.41**	**249**	Pn		**Pn**	**Pn**	**02 53 04.4**	**+0.2**
PMG	**Port Moresby**	**8.41**	**249**	P		**Pn**	**Pn**	**02 53 06.1**	**+1.9**
MANU	**Manus Island**	**8.84**	**299**	Pn		**Pn**	**Pn**	**02 53 13.1**	**+3.1**
PATS	**Pohnpei**	**13.53**	**14**	Pn		**P**	**P**	**02 54 18.9**	**-2.7**

COEN Coen 13.93 236 Pn **Pn** **02 54 18.8 -0.8**
JAY Jayapura 14.85 284 S **Sn** **02 57 17.8 +2.5**
0.3nm,0.3s,baz=358,slow=24,SNR=6.4
JAY Jayapura 14.85 284 P P 02 54 50.3 +14
GENI Genyem 15.35 284 P **P** **02 54 48.5 +6.7**
51nm,1.1s
CTA Charters Tower 16.09 211 P **Pn** **02 54 48.2 +0.6**
0.9nm,0.3s,baz=28,slow=14,SNR=20
CTA LR LR 03 00 52.0
comp=Z,486nm,18.3s,baz=40,slow=37
CTAO Charters Tower 16.09 211 Pn **Pn** **02 54 45.9 -1.8**
DZM Mont Dzumac 19.06 146 *eP* **Pn** **02 55 26.5 +2.4**
27nm,0.7s
DZM *e*LR LR 02 59 58.3
comp=Z,841nm,26.4s
DZM Mont Dzumac 19.06 146 P **Pn** **02 55 25.9 +1.8**
1.8nm,0.3s,baz=271,slow=10.0,SNR=18
DZM Mont Dzumac 19.06 146 P **P** **02 55 22.9 0.0**
EIDS Eidsvold 19.26 191 P **P** **02 55 22.2 -2.7**
SRPI Serui, Papua 19.33 283 P Pn 02 55 38.1 +11
202nm,0.5s
FAKI Fak Fak 23.03 278 P P 02 56 17.1 +12
91nm,0.8s
SAUI Saumlaki 23.66 265 P **P** **02 56 11.2 -0.3**
WR0 Warramunga Arr 24.09 234 P **P** **02 56 14.5 -0.9**
WR0 IAmb IAmb 02 56 17.3
comp=Z,106nm,1.4s
WB0 Warramunga Arr 24.11 235 P **P** **02 56 15.0 -0.7**
WB0 IAmb IAmb 02 56 17.5
comp=Z,76nm,1.3s
ARMA Armidale 24.12 187 P **P** **02 56 16.0 +0.3**
WRAB Tennant Creek 24.23 234 P **P** **02 56 15.1 -1.6**
WRAB IAmb IAmb 02 56 18.5
comp=Z,85nm,1.4s
WB2 Warramunga Arr 24.23 234 P **P** **02 56 15.8 -0.9**
WB2 IAmb IAmb 02 56 18.7
comp=Z,86nm,1.4s
WRA Warramunga Arr 24.24 234 P **P** **02 56 17.6 +0.7**
comp=Z,19nm,0.7s,baz=58,slow=9.3,SNR=113
WRA PcP **PcP** **02 59 56.0 -0.2**
comp=Z,0.7nm,0.3s,baz=35,slow=2.1,SNR=7.3
WRA pPcP 03 00 11.2
comp=Z,4.7nm,0.5s,baz=61,slow=2.6,SNR=9.9
WRA S **S** **03 00 34.6 +2.8**
comp=Z,7.8nm,1.2s,baz=60,slow=16,SNR=8.9
WRA LR LR 03 05 31.8
comp=Z,358nm,18.8s,baz=60,slow=36
WRA Warramunga Arr 24.24 234 P **P** **02 56 15.8 -1.1**
SIJI Sorong 24.40 282 P **P** **02 56 17.1 -1.3**
comp=Z,35nm,0.9s,baz=69,slow=9.6,SNR=17
SIJI LR LR 03 06 26.6
comp=Z,219nm,21.8s,baz=84,slow=38
SWI Sorong 24.40 282 P **P** **02 56 19.8 +1.5**
MTN Manton Dam 24.46 253 P **P** **02 56 18.3 -0.6**
MTN IAmb IAmb 02 56 20.1
comp=Z,42nm,1.1s
MSVF Nonsavu 25.08 119 LR LR 03 05 41.2
comp=Z,308nm,19.8s,baz=304,slow=35
AS31 Alice Springs 26.64 228 P **P** **02 56 37.8 -0.9**
ASAR Alice Springs 26.64 228 P **P** **02 56 38.6 0.0**
comp=Z,4.7nm,0.7s,baz=59,slow=8.8,SNR=52
ASAR pPcP 03 00 17.1
comp=Z,7.1nm,0.7s,baz=63,slow=2.4,SNR=14
ASAR LR LR 03 06 45.1
comp=Z,341nm,21.4s,baz=84,slow=35
ASAR Alice Springs 26.64 228 P **P** **02 56 37.1 -1.5**
H11S3 WAKE ISLAND Hy 27.25 25 T T 03 25 01.4
baz=204,slow=76,SNR=33
H11S2 WAKE ISLAND Hy 27.25 25 T T 03 24 53.8
baz=204,slow=76,SNR=5.9
H11S1 WAKE ISLAND Hy 27.26 25 T T 03 25 03.4
baz=204,slow=76,SNR=29
KNRA Kununurra 27.41 248 P **P** **02 56 43.9 -1.6**
NLAI Namlea 28.07 275 P P 02 57 07.8 +16
LBMI Labuha 28.12 281 P P **02 56 53.5 +1.6**
STKA Stephens Creek 28.32 205 P **P** **02 56 53.3 -0.1**
comp=Z,2.6nm,0.6s,baz=15,slow=12,SNR=7.2
STKA pPcP 03 00 20.0
comp=Z,3.4nm,0.8s,baz=351,slow=8.8,SNR=3.8
STKA Stephens Creek 28.32 205 P **P** **02 56 52.9 -0.6**
H11N1 WAKE ISLAND Hy 28.42 24 T T 03 26 41.9
baz=204,slow=76,SNR=7.0
H11N3 WAKE ISLAND Hy 28.43 24 T T 03 26 31.1
baz=204,slow=76,SNR=13
H11N2 WAKE ISLAND Hy 28.44 24 T T 03 26 42.8
baz=204,slow=76,SNR=6.0
TNTI Ternate 28.58 283 P **P** **02 56 56.1 +0.1**
SANI Sanana 29.34 277 P P 02 57 08.8 +6.1
SOEI Soe 30.70 262 P **P** **02 57 15.4 +0.6**
SOEI IAmb IAmb 02 57 32.0
comp=Z,18nm,0.9s
FITZ Fitzroy Crossi 30.99 245 P **P** **02 57 16.5 -0.8**
comp=Z,11nm,0.7s,baz=77,slow=8.1,SNR=24
FITZ pPcP 03 00 26.8
comp=Z,9.1nm,0.8s,baz=335,slow=5.3,SNR=4.3
FITZ LR LR 03 10 26.0
comp=Z,369nm,19.1s,baz=81,slow=38
FITZ Fitzroy Crossi 30.99 245 P **P** **02 57 15.5 -1.8**
BATI Baumata 31.32 261 LR LR 03 11 11.1
comp=Z,362nm,21.0s,baz=126,slow=39
KMSI Cibinong 31.82 281 P P 02 57 42.4 +18
MMRI Maumere 32.64 264 P **P** **02 57 30.7 -1.1**
MMRI Maumere 32.64 264 P **P** **02 57 33.4 +1.5**
GTOI Gorontalo 32.77 281 P P 02 57 46.5 +13
comp=Z,33nm,0.6s
APSI Ampana 33.80 278 P P 02 57 55.6 +14
comp=Z,13μmcomp=Z,798nmcomp=Z,57nm,1.2s
TOLI2 Tolitoli 35.05 281 P **P** **02 57 51.5 -1.3**
TOLI2 IAmb IAmb 02 58 08.6
comp=Z,14nm,0.5s
FORT Forrest 35.09 223 P **P** **02 57 51.8 -1.1**
WBSI Waikabubak, Su 35.49 262 P P 02 58 14.9 +18
JCJ Chichijima 35.56 340 LR LR 03 10 24.9
comp=Z,50nm,21.9s,baz=124,slow=33
PLAI Plampang 37.06 264 P **P** **02 58 09.1 -0.9**
PSA00 Pilbara Seismi 37.26 243 P **P** **02 58 11.2 -0.4**
PSA00 IAmb IAmb 02 58 27.7
comp=Z,29nm,1.1s
URZ Urewera 37.48 151 P **P** **02 58 15.5 +2.4**
comp=Z,6.6nm,0.5s,baz=124,slow=23,SNR=4.1
URZ Urewera 37.48 151 IAmb IAmb 02 58 18.2
comp=Z,27nm,1.1s
BKZ Black Stump Fm 37.91 153 P **P** **02 58 18.1 +1.2**
BKZ IAmb IAmb 02 58 28.1
comp=Z,31nm,1.4s
MYLDM Lahad Datu 38.30 287 P **P** **02 58 19.2 -1.2**
THZ Tophouse 38.62 158 P **P** **02 58 23.7 +0.8**
THZ IAmb IAmb 02 58 43.0
comp=Z,18nm,0.8s
TUWZ Tuamarina 38.72 157 P **P** **02 58 24.1 +0.5**
BSWZ Blackbirch Sta 38.94 157 P **P** **02 58 25.9 +0.5**
LTZ Lake Taylor 39.29 160 P **P** **02 58 28.5 +0.1**
LTZ IAmb IAmb 02 58 31.2
comp=Z,13nm,1.0s
RPZ Rata Peaks 39.73 162 P **P** **02 58 32.9 +0.9**
comp=Z,8.9nm,0.6s,baz=304,slow=3.5,SNR=4.1
RPZ Rata Peaks 39.73 162 P **P** **02 58 31.3 -0.7**
RPZ IAmb IAmb 02 58 34.8
comp=Z,27nm,1.3s
JHJ Hachijo jima 2 41.90 341 LR LR 03 14 13.4
comp=Z,96nm,21.4s,baz=119,slow=33
SBUM Sibu 43.70 280 P **P** **02 59 04.3 -0.6**
SBUM IAmb IAmb 02 59 21.9
comp=Z,20nm,1.0s
YULB Yu-li 44.34 313 P **P** **02 59 10.7 +0.8**
YULB IAmb IAmb 02 59 26.6
comp=Z,22nm,0.8s
KSM Kuching 45.38 278 P **P** **02 59 17.9 -0.4**
MJAR Matsushiro Arr 45.55 341 LR LR 03 19 28.9
comp=Z,25nm,18.2s,baz=160,slow=38
CISI Cisompet, Garu 46.93 266 P **P** **02 59 29.8 -0.8**
CISI Cisompet, Garu 46.93 266 P P 02 59 43.9 +13
comp=Z,3μmcomp=Z,87nm,0.6s
KSRS Korea Array 50.46 332 P **P** **02 59 55.5 -1.7**
comp=Z,3.0nm,0.9s,baz=148,slow=6.2,SNR=5.0
KSRS pP **pP** **03 00 10.6 -1.4**
comp=Z,6.2nm,1.0s,baz=148,slow=8.3,SNR=5.8
KSRS LR LR 03 19 43.8
comp=Z,33nm,21.2s,baz=132,slow=34
KSAR Wonju Array Be 50.47 332 P **P** **02 59 57.0 -0.2**
NJ2 Nanjing 51.52 320 *eP* **P** **03 00 06.4 +1.2**
NJ2 pmax pmax
comp=Z,12nm,0.5s
SDSI Sungai Dareh 53.80 274 P P 03 00 37.1 +15
comp=Z,75nm,0.9s
BKNI Bangkinang 54.35 275 P **P** **03 00 25.6 -0.8

BKNI **Bangkinang** **54.35 275** P P 03 00 42.1 +16
comp=Z,11µmcomp=Z,117nm,0.8s
USA0B **Ussuriysk Arra** **54.51 340** P **P** **03 00 28.2 +1.2**
USA0B IAmb IAmb 03 00 43.4
comp=Z,11nm,1.1s
USRK **Ussuriysk Ar.** **54.51 340** pP **pP** **03 00 41.3 -0.9**
comp=Z,2.7nm,0.7s,baz=144,slow=7.1,SNR=4.6
USRK LR LR 03 19 20.3
comp=Z,48nm,22.0s,baz=127,slow=31
IPM **Ipoh** **55.05 280** P **P** **03 00 30.0 -1.6**
IPM IAmb IAmb 03 00 47.6
comp=Z,20nm,0.9s
PPT **Papeete** **55.08 107** LR LR 03 19 11.7
comp=Z,48nm,20.0s,baz=306,slow=30
PPT2 **Papeete2** **55.08 107** eLR LR 03 16 45.1
comp=Z,119nm,24.8s
PPTF **Pamatai, Papee** **55.09 107** P **P** **03 00 32.2 +0.4**
TBI **Tubuai** **55.83 114** eLR LR 03 17 04.1
comp=Z,296nm,26.8s
NONG **Nongkai** **56.72 296** P **P** **03 00 43.0 -0.4**
comp=Z,77nm,1.1s
GYA **Guiyang** **57.17 307** eP **P** **03 00 48.8 +2.2**
GYA pP pP 03 01 01.3 -0.4
GYA pmax pmax
comp=Z,1.0nm,0.7s
SLVN **Son La** **57.27 300** P **P** **03 00 47.4 +0.1**
SLVN IAmb IAmb 03 01 04.3
comp=Z,16nm,0.9s
GSI **Gunungsitoli** **57.92 276** P **P** **03 00 50.3 -1.6**
GSI **Gunungsitoli** **57.92 276** P P 03 01 05.8 +14
comp=Z,53nm,0.8s
KLR **Kul'dur** **59.03 342** P **P** **03 00 59.6 +0.7**
comp=Z,2.0nm,0.9s,baz=145,slow=4.7,SNR=4.0
KLR pP **pP** **03 01 13.4 -0.9**
comp=Z,4.2nm,0.9s,baz=133,slow=13,SNR=7.5
PETK **Petropavlovsk-** **59.32 2** P **P** **03 01 01.4 +0.5**
comp=Z,5.6nm,0.8s,baz=166,slow=7.6,SNR=4.6
PETK pP **pP** **03 01 17.3 +1.0**
comp=Z,9.6nm,0.6s,baz=166,slow=6.9,SNR=11
PETK LR LR 03 22 41.1
comp=Z,84nm,21.8s,baz=159,slow=32
XAN **Xi'an** **59.34 316** P P 03 01 16.3 +15
XAN pP sP 03 01 21.1 -2.0
XAN pmax pmax
comp=Z,17nm,0.7s
KMI **Kunming** **59.77 304** ⇓P P 03 01 19.1 +14
KMI pmax pmax
comp=Z,42nm,1.0s
KMI **Kunming** **59.77 304** ⇓P **P** **03 01 06.3 +1.5**
KMI pP sP 03 01 26.4 +0.1
KMI sP PcP 03 01 38.5 -13
KMI pmax pmax
comp=Z,13nm,1.4s
CM31 **Chiang Mai Arr** **60.62 295** P **P** **03 01 10.2 -0.2**
CMAR **Chiang Mai Arr** **60.62 295** P **P** **03 01 10.4 -0.1**
comp=Z,12nm,0.8s,baz=112,slow=5.1,SNR=39
CMAR pP **pP** **03 01 25.5 -0.2**
comp=Z,41nm,0.8s,baz=119,slow=5.3,SNR=26
CMAR **Chiang Mai Arr** **60.62 295** P **P** **03 01 11.2 +0.7**
CMMT **Chiang Mai** **60.73 296** P P 03 01 25.0 +14
comp=Z,392nmcomp=Z,21nm,1.1s
CHTO **Chiang Mai** **60.73 296** P **P** **03 01 11.3 0.0**
CD2 **Chengdu** **61.50 310** P P 03 01 30.6 +14
CD2 pmax pmax
comp=Z,50nm,0.8s
HHC **Hu-ho-hao-te** **61.67 324** eP **P** **03 01 19.6 +2.3**
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,88nm,5.6s
LZH **Lanzhou** **63.96 315** eP **P** **03 01 33.9 +1.2**
LZH pP pP 03 01 48.4 +0.3
LZH sP PcP 03 02 01.3 -6.6
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,100nm,6.2s
MA2 **Magadan** **65.85 358** P **P** **03 01 44.7 +0.4**
comp=Z,5.1nm,0.7s,baz=164,slow=7.8,SNR=5.2
MA2 pP **pP** **03 01 59.9 +0.2**
comp=Z,9.3nm,0.5s,baz=162,slow=4.6,SNR=5.0
MA2 **Magadan** **65.85 358** P **P** **03 01 45.2 +0.9**
MA2 IAmb IAmb 03 02 02.2
comp=Z,15nm,0.9s
GTA **Gaotai** **68.37 317** eP **P** **03 02 01.8 +0.9**
GTA pP pP 03 02 16.5 +0.1
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,47nm,4.0s
GTA LR LR
comp=Z,73nm,16.4s
GTA LR LR
comp=Z,97nm,17.1s
GTA LR LR
comp=Z,99nm,17.1s
ULN **Ulaanbaatar** **68.55 327** P **P** **03 02 02.5 +0.6**
SONM **Songino Array** **68.89 327** P **P** **03 02 04.5 +0.6**
comp=Z,1.8nm,0.6s,baz=130,slow=5.8,SNR=16
SONM pP **pP** **03 02 18.7 -0.8**
comp=Z,6.0nm,0.8s,baz=143,slow=4.5,SNR=14
SONM **Songino Array** **68.89 327** P **P** **03 02 04.2 +0.2**
RKT **Rikitea** **69.08 112** eLR LR 03 23 05.0
comp=Z,351nm,30.0s
SHL **Shillong** **69.08 300** P **P** **03 02 05.8 +0.1**
SEY **Seymchan** **69.16 359** P **P** **03 02 05.5 +0.4**
comp=Z,1.5nm,0.6s,baz=192,slow=2.5,SNR=5.4
SEY pP **pP** **03 02 21.0 +0.3**
comp=Z,5.5nm,0.8s,baz=159,slow=3.5,SNR=7.5
FALS **False Pass** **70.11 24** pP 03 02 27.0
baz=224
VNDA **Vanda** **71.17 178** P **P** **03 02 17.5 +0.2**
comp=Z,2.2nm,0.9s,baz=352,slow=4.0,SNR=4.5
VNDA pP **pP** **03 02 31.8 -1.1**
comp=Z,3.6nm,0.8s,baz=325,slow=6.7,SNR=6.2
TAPN **Taplejung** **73.18 301** eP P 03 02 44.8 +14
comp=Z,60nm,0.9s
ODAN **Odare** **73.31 300** eP P 03 02 45.6 +14
comp=Z,150nm,0.7s
RAMN **Ramite** **74.02 300** eP P 03 02 49.6 +14
comp=Z,29nm,0.6s
JIRN **Jiri** **74.56 301** eP P 03 02 52.9 +14
comp=Z,50nm,0.6s
BILL **Bilibino** **74.68 4** P **P** **03 02 38.8 +0.7**
BILL IAmb IAmb 03 02 56.4
comp=Z,20nm,0.7s
GUN **Gumba** **74.89 301** eP P 03 02 55.0 +14
comp=Z,104nm,0.7s
SII **Sitkinak Islan** **75.15 26** pP 03 02 57.1
baz=233
PKI **Pulchoki** **75.20 301** eP P 03 02 56.3 +14
comp=Z,16nm,0.5s
PKIN **Phulchoki** **75.22 301** eP P 03 02 56.3 +14
comp=Z,34nm,0.6s
KKN **Kakani** **75.37 301** eP P 03 02 57.4 +14
comp=Z,76nm,0.7s
PALK **Pallekele** **75.44 279** P **P** **03 02 43.1 -0.6**
DMN **Daman** **75.47 301** eP P 03 02 58.3 +14
comp=Z,55nm,0.6s
OHAK **Old Harbor** **75.94 26** pP 03 03 01.4
baz=233
GKN **Gorkha** **75.98 301** eP P 03 03 00.7 +14
comp=Z,29nm,0.5s
KDAK **Kodiak Island** **76.58 26** pP 03 03 04.8
baz=234
ANM **Nome** **76.63 16** pP 03 03 06.1
baz=221
ANM **Nome** **76.63 16** P **P** **03 02 50.6 +1.2**
ANM IAmb IAmb 03 03 08.4
comp=Z,9.8nm,0.8s
TNA **Tin City** **76.72 15** pP 03 03 06.1
baz=216
KOLN **Koldanda** **76.81 300** eP P 03 03 05.3 +14
comp=Z,74nm,0.7s
DANN **Dangsing** **76.81 301** eP P 03 03 05.3 +14
comp=Z,69nm,0.7s
SVW2 **Sparrevohn** **77.41 22** P **P** **03 02 55.2 +1.4**
SVW2 IAmb IAmb 03 03 13.7
comp=Z,15nm,0.9s
PYUN **Piuthan** **77.41 301** eP P 03 03 08.2 +13
CNPM **China Poot** **78.17 25** P **P** **03 02 58.7 +0.6**
TTA **Tatalina** **78.43 21** pP 03 03 15.5
baz=230
TTA **Tatalina** **78.43 21** P **P** **03 03 00.1 +0.6**
WMQ **Urumqi** **78.45 317** eP **P** **03 03 02.3 +2.2**
WMQ pP sP 03 03 21.9 -0.1
WMQ S **S** **03 12 50.8 -1.2**
WMQ ScS **SKSac** **03 13 09.6 -0.8**
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ pmax pmax
comp=Z,53nm,3.7s
WMQ LR LR
comp=Z,410nm,26.7s
HYB **Hyderabad** **79.17 289** *i* P P 03 03 16.0 +12
HYB esP sP 03 03 36.0 +10
SKT **Skwentna** **79.48 23** pP 03 03 20.9
baz=234
SUA **Susitna One** **79.49 23** pP 03 03 21.2
baz=235
SUA **Susitna One** **79.49 23** P **P** **03 03 04.0 -1.4**
SUA IAmb IAmb 03 03 22.9
comp=Z,15nm,0.6s
FIS **Fire Island** **79.52 24** P **P** **03 03 06.3 +0.9**
RC01 **Rabbit Creek A** **79.68 24** pP 03 03 22.6
baz=236
RDOG **Red Dog Mine** **79.91 15** pP 03 03 24.3
baz=222
RDOG **Red Dog Mine** **79.91 15** P **P** **03 03 08.9 +1.5**
PMR **Palmer** **80.20 24** pP 03 03 24.9
baz=236
PMR **Palmer** **80.20 24** P **P** **03 03 09.5 +0.4**
PMR IAmb IAmb 03 03 26.7
comp=Z,16nm,0.8s
CUT **Chulitna** **80.21 23** pP 03 03 24.9
baz=235
CUT **Chulitna** **80.22 23** P **P** **03 03 10.1 +1.0**
CUT IAmb IAmb 03 03 26.7
comp=Z,19nm,0.9s
CHUM **Lake Minchumin** **80.33 21** pP 03 03 25.8
baz=233
KNK **Knik Glacier** **80.37 24** pP 03 03 26.0
baz=237
GHO **Glory Hole Cre** **80.38 24** P **P** **03 03 11.0 +0.8**
GHO IAmb IAmb 03 03 28.0
comp=Z,18nm,0.8s
KTH **Kantishna Hill** **80.63 22** P **P** **03 03 13.9 +2.4**
KTH IAmb IAmb 03 03 28.0
comp=Z,15nm,1.2s
SML **Sawmill** **80.64 24** P **P** **03 03 12.6 +1.1**
SML **Sawmill** **80.64 24** pP 03 03 28.1
baz=237
GLI **Glacier Island** **80.65 25** pP 03 03 27.9
baz=238
TRF **Thorofare Moun** **80.81 22** P **P** **03 03 11.3 -1.2**
TRF **Thorofare Moun** **80.81 22** pP 03 03 28.3
baz=235
FID **Port Fidalgo** **80.84 25** P **P** **03 03 10.2 -2.4**
FID IAmb IAmb 03 03 16.2
comp=Z,16nm,1.2s
BPAW **Bear Paw Mtn.** **80.93 21** pP 03 03 28.5
baz=234
BPAW **Bear Paw Mtn.** **80.93 21** P **P** **03 03 10.1 -2.9**
EYAK **Cordova Ski Ar** **81.05 25** pP 03 03 29.1
baz=240
IMAR **Indian Mountai** **81.13 19** P **P** **03 03 14.2 +0.2**
WAT2 **Susitna Watana** **81.17 23** pP 03 03 30.2
baz=237
WAT6 **Susitna Watana** **81.29 23** pP 03 03 30.9
baz=238
KLU **Klutina** **81.45 25** P **P** **03 03 16.6 +0.7**
KLU IAmb IAmb 03 03 34.4
comp=Z,22nm,1.0s
KLU **Klutina** **81.45 25** pP 03 03 32.5
baz=240
MCK **McKinley** **81.47 22** pP 03 03 32.0
baz=236
MLY **Manley** **81.56 20** pP 03 03 32.1
baz=235
M24K **Tolsona, Glenn** **81.66 24** P **P** **03 03 17.7 +0.8**
M24K IAmb IAmb 03 03 35.7
comp=Z,24nm,0.9s
M24K **Tolsona, Glenn** **81.66 24** pP 03 03 33.7
baz=239
BMRM **Bremner River** **81.74 25** P **P** **03 03 18.2 +0.8**
BMRM IAmb IAmb 03 03 35.0
comp=Z,14nm,1.0s
BMRM **Bremner River** **81.74 25** pP 03 03 33.5
baz=241
NEA2 **Nenana** **81.90 21** pP 03 03 34.0
baz=236
N25K **Chitina, Valde** **82.06 25** pP 03 03 35.7
baz=241
I23K **Minto, Yukon-K** **82.10 21** pP 03 03 35.7
baz=236
WRH **Wood River Hil** **82.18 21** P **P** **03 03 18.6 -1.0**
CRQE **Cirque** **82.29 26** pP 03 03 36.6
baz=242
GLB **Gilahina Butte** **82.31 25** P **P** **03 03 18.2 -2.2**
GLB IAmb IAmb 03 03 37.6
comp=Z,12nm,0.9s
VRDI **Verde Repeater** **82.36 25** P **P** **03 03 20.6 -0.2**
VRDI IAmb IAmb 03 03 38.4
comp=Z,16nm,0.9s
PAX **Paxson** **82.39 23** pP 03 03 37.3
baz=240
TCOL **T.O. UAF Yank** **82.48 21** pP 03 03 37.7
baz=237
COLA **College** **82.49 21** P **P** **03 03 20.4 -0.7**
COLA IAmb IAmb 03 03 39.5
comp=Z,8.0nm,0.7s
COLA **College** **82.49 21** pP 03 03 37.0
baz=237
MCARA **McCarthy VSAT** **82.61 25** pP 03 03 38.5
baz=242
POKR **Poker Plat Res** **82.77 21** pP 03 03 38.2
baz=238
IL31 **82.78 21** P **P** **03 03 22.6 -0.1**
ILAR **Eielson Array** **82.78 21** P **P** **03 03 22.9 +0.2**
comp=Z,0.8nm,0.7s,baz=242,slow=5.4,SNR=13
ILAR pP **pP** **03 03 38.0 -0.6**
comp=Z,3.0nm,0.6s,baz=244,slow=5.1,SNR=15
ILAR LR LR 03 37 04.9
comp=Z,145nm,18.7s,baz=242,slow=33
ILAR **Eielson Array** **82.78 21** P **P** **03 03 22.4 -0.3**
COLD **Coldfoot** **83.01 19** pP 03 03 40.5
baz=235
MK31 **Makanchi Array** **83.02 319** P **P** **03 03 24.3 -0.1**
MK31 IAmb IAmb 03 03 40.8
comp=Z,15nm,0.8s
MKAR **Makanchi Array** **83.02 319** P **P** **03 03 24.3 -0.1**
comp=Z,4.2nm,0.8s,baz=102,slow=5.5,SNR=32
MKAR pP **pP** **03 03 39.2 -1.1**
comp=Z,24nm,0.8s,baz=100,slow=5.0,SNR=44
MKAR **Makanchi Array** **83.02 319** P **P** **03 03 23.8 -0.6**
CTG **Chitna Glacier** **83.15 26** pP 03 03 41.6
baz=244
MAKZ **Makanchi** **83.23 319** P **P** **03 03 24.8 -0.6**
MAKZ IAmb IAmb 03 03 41.4
comp=Z,24nm,0.8s
PINM **Pinnacle** **83.25 27** pP 03 03 42.0
baz=245
SCRK **Sand Creek** **83.47 23** pP 03 03 42.7
baz=241
QSPA **South Pole Qui** **83.58 180** P **P** **03 03 27.3 +0.3**
QSPA IAmb IAmb 03 03 44.4
comp=Z,22nm,0.9s
ZAA0 **Zalesovo Array** **83.74 326** P **P** **03 03 25.7 -2.1**
ZAA0 IAmb IAmb 03 03 42.8
comp=Z,14nm,0.7s
ZALV **Zalesovo Beam** **83.74 326** P **P** **03 03 26.8 -1.0**
comp=Z,1.9nm,0.6s,baz=106,slow=5.3,SNR=9.5
ZALV pP **pP** **03 03 41.1 -2.6**
comp=Z,16nm,0.7s,baz=113,slow=5.5,SNR=22
ZALV **Zalesovo Beam** **83.74 326** P **P** **03 03 26.5 -1.3**
L27K **Beaver Creek,** **83.89 24** pP 03 03 45.2
baz=243
TOLK **Toolik Lake Re** **84.02 18** pP 03 03 45.9
baz=235
K27K **Chicken** **84.23 23** pP 03 03 47.5
baz=243
HYT **Haines Junctio** **84.80 27** P **P** **03 03 34.1 +0.9**
EGAK **Eagle** **84.93 23** pP 03 03 50.8
baz=244
MAW **Mawson** **84.99 203** P **P** **03 03 33.5 -0.4**
comp=Z,6.4nm,0.7s,baz=219,slow=6.5,SNR=2.8
MAW pP **pP** **03 03 47.5 -2.4**
comp=Z,12nm,0.9s,baz=98,slow=7.9,SNR=3.8
KDJ **Kajisay** **85.36 313** P **P** **03 03 36.0 -0.6**
KDJ IAmb IAmb 03 03 53.0
comp=Z,12nm,0.8s
KSH **Kashi** **85.70 310** P **P** **03 03 40.3 +2.1**
KSH pP sP 03 04 02.3 +2.0
KSH S **S** **03 14 07.8 +1.1**
KSH pmax pmax
comp=Z,3.0nm,0.3s
KSH pmax pmax
comp=Z,270nm,4.8s
WRAK **Wrangell Islan** **85.78 32** pP 03 03 55.0
baz=252
BOOM **Boomskoye usch** **86.34 313** P **P** **03 03 40.6 -0.8**
NIL **Nilore** **86.75 304** P **P** **03 03 43.7 +0.3**
NIL IAmb IAmb 03 03 59.3
comp=Z,8.1nm,0.8s
EPYK **Eagle Plains** **87.27 22** P **P** **03 03 45.3 +0.1**
EPYK IAmb IAmb 03 04 02.9
comp=Z,19nm,1.1s
EPYK **Eagle Plains** **87.27 22** pP 03 04 01.6
baz=248
AAK **Ala-Archa** **87.41 313** P **P** **03 03 43.7 -2.9**
NRIK **Noril'sk** **88.20 341** pP pP 03 04 03.1 -2.5
comp=Z,12nm,0.9s,baz=109,slow=5.1,SNR=8.4
O03E **Paynes Creek** **88.85 49** pP 03 04 09.2
baz=261
H04D **Lebanon** **88.88 45** pP 03 04 09.0
baz=260
E04D **Cinebar** **89.35 43** pP 03 04 12.2
baz=260
J05D **Fort Rock, OR** **89.75 47** pP 03 04 13.8
baz=261
ISA **Isabella, Lake** **90.79 54** P **P** **03 04 01.2 -1.3**
ISA **Isabella, Lake** **90.79 54** pP 03 04 20.0
baz=263
EDW2 **Edwards Air Fo** **91.09 55** pP 03 04 21.2
baz=263
RYN **Ryan** **91.13 51** P **P** **03 04 03.3 -0.8**
RYN IAmb IAmb 03 04 22.2
comp=Z,11nm,1.2s
TIN **Tinemaha, Big** **91.16 53** pP 03 04 21.2
baz=263
CWC **Cottonwood Cre** **91.21 54** pP 03 04 22.1
baz=263
NVAR **Mina Array Bea** **91.27 52** P **P** **03 04 07.4 +2.5**
comp=Z,2.3nm,1.0s,baz=262,slow=7.2,SNR=9.4
NVAR pP **pP** **03 04 20.5 -0.5**
comp=Z,8.1nm,1.0s,baz=252,slow=6.1,SNR=20
NVAR PKKPbc PKKPbc 03 21 40.5 +12
comp=Z,0.2nm,0.3s,baz=118,slow=2.1,SNR=3.8
NVAR **Mina Array Bea** **91.27 52** P **P** **03 04 06.2 +1.3**
NV11 **Mina Array Sit** **91.39 52** P **P** **03 04 06.7 +1.3**
LRMC **Laurel Mtn Rad** **91.41 55** pP 03 04 23.2
baz=263
KVN **Kaiserville** **91.51 51** P **P** **03 04 05.6 -0.3**
MURC **Murrieta** **91.59 57** pP 03 04 24.2
baz=263
GRAC **Grapevine Rang** **91.84 53** pP 03 04 25.4
baz=263
BRVK **Borovoye** **91.95 323** P **P** **03 04 07.2 -0.2**
BRVK IAmb IAmb 03 04 21.9
comp=Z,6.5nm,0.8s
TPH **Tonopah** **92.08 52** P **P** **03 04 09.6 +1.0**
FURC **Furnace Creek,** **92.18 54** pP 03 04 26.6
baz=264
PFO **Pinyon Flats O** **92.20 57** pP 03 04 26.3
baz=264
TPFO **Pinon Flats** **92.21 57** pP 03 04 26.4
baz=264
HEC **Hector,Ludlow** **92.44 55** pP 03 04 27.5
baz=264
SHOC **Shoshone, Teco** **92.60 54** pP 03 04 28.9
baz=264
BELC **Belle Mtn. Jos** **92.63 56** pP 03 04 28.7
baz=264
TPNV **Topopah Spring** **92.72 53** pP 03 04 28.8
baz=264
GMRC **Granite Mounta** **92.98 56** pP 03 04 30.3
baz=264
BC3 **Big Chuckawall** **93.04 57** pP 03 04 30.1
baz=264
IRM **Iron Mountain** **93.35 56** pP 03 04 31.6
baz=264
R11A **Troy Canyon, C** **93.39 52** pP 03 04 31.8
baz=264
SHPR **Sheep Range** **93.55 54** P **P** **03 04 15.8 +0.4**
SHPR IAmb IAmb 03 04 34.0
comp=Z,6.6nm,1.3s
HLID **Hailey** **94.71 47** pP 03 04 36.9
baz=266
YKA **Yellowknife Ar** **95.76 28** P **P** **03 04 26.1 +1.4**
comp=Z,1.7nm,0.9s,baz=262,slow=4.6,SNR=13
YKA pP **pP** **03 04 40.4 -0.3**
comp=Z,8.3nm,0.9s,baz=265,slow=4.3,SNR=36
YKA PKKPbc PKKPdf 03 21 25.5 +8.2
comp=Z,0.6nm,0.8s,baz=90,slow=3.0,SNR=9.2
BOZ **Bozeman (W)** **96.81 45** pP 03 04 46.7
baz=268
BW06 **Boulder Array** **98.22 48** pP 03 04 52.0
baz=269
PDAR **Pinedale Array** **98.22 48** pP pP 03 04 52.3 -0.4
comp=Z,1.2nm,0.8s,baz=239,slow=2.8,SNR=8.7
N23A **Red Feather La** **100.92 50** pP 03 05 05.1
baz=271
TXAR **Lajitas Array** **102.89 61** PKKP 03 21 08.4
comp=Z,0.3nm,0.6s,baz=105,slow=5.1,SNR=3.5
ECSD **EROS Data Cent** **107.60 46** pP 03 09 41.2
baz=278
W39A **Magazine** **110.90 55** pP 03 09 47.8
baz=277
U40A **Yellville** **111.50 54** pP 03 09 48.7
baz=278
W41B **Gary Mavity, V** **112.15 55** pP 03 09 49.6
baz=278
JFWS **Jewell Farm** **112.31 46** pP 03 09 49.6
baz=282
CCM **Cathedral Cave** **112.51 52** pP 03 09 49.3
baz=280
HDIL **Hopedale** **113.52 49** pP 03 09 52.0
baz=282
SFIN **Lafayette** **115.19 48** pP 03 09 54.7
baz=284
WVT **Waverly** **115.54 53** pP 03 09 55.8
baz=281
WCI **Wyandotte Cave** **116.30 50** pP 03 09 57.0
baz=283
IDID **Didziasalis** **116.32 330** eP PKPdf 03 09 29.1 -13
IDID ePP **PP** **03 10 48.6 +0.4**
ISAL **Salakas** **116.49 330** eP **PKPdf** **03 09 39.1 -3.3**
ISAL ePP **PP** **03 10 51.0 +1.6**
IIGN **Ignalina** **116.55 330** eP **PKPdf** **03 09 36.5 -6.0**
IIGN ePP **PP** **03 10 50.6 +0.6**
LRAL **Lakeview Retre** **116.79 56** pP 03 09 57.7
baz=280
P49A **Miami Univ. Ec** **117.17 49** pP 03 09 58.6
baz=285
ACSO **Alum Creek Sta** **118.26 48** pP 03 10 00.6
baz=287
LSQQ **Lebel-sur-Quev** **119.02 36** pP 03 10 02.1
baz=296
P52A **Corning** **119.06 48** pP 03 10 02.5
baz=287
O53A **New Philadelph** **119.55 47** pP 03 10 03.4
baz=288
M53A **WI Miller and** **119.56 46** pP 03 10 02.8
baz=289
GOGA **Godfrey** **119.62 55** pP 03 10 03.1
baz=283
ALGO **Algonquin Park** **119.68 40** pP 03 10 02.9
baz=294
L53A **Girard** **119.68 45** pP 03 10 03.6
baz=290
Q53A **Leroy** **119.74 49** pP 03 10 03.8
baz=287
G54A **Lake Saint Pet** **119.88 41** pP 03 10 03.7
baz=294
H53A **Bobcaygeon** **119.88 42** pP 03 10 03.4
baz=293
CHGQ **Chibougamau** **120.13 35** pP 03 10 03.5
baz=299
N54A **Moraine State** **120.20 46** pP 03 10 04.7
baz=290
S54A **Dingess, Beckl** **120.21 50** pP 03 10 04.5
baz=287
M54A **Oil Creek Stat** **120.25 45** pP 03 10 04.6
baz=290
R54A **Victor** **120.34 49** pP 03 10 04.7
baz=287
BOSA **Boshof** **120.47 232** pPKP pPKPdf 03 10 05.2 -2.5
comp=Z,1.3nm,0.5s,baz=129,slow=0.9,SNR=2.2
MCWV **Mont Chateau** **120.73 47** pP 03 10 05.5

	baz=289							
KMSC	Kings Mountain	120.92	53	pP			03 10 06.7	
	baz=285							
R55A	Marlinton	120.96	49	pP			03 10 06.8	
	baz=288							
BLA	Blacksburg	121.06	50	pP			03 10 06.4	
	baz=287							
D56A	ZEC Mazanza, M	121.26	38	pP			03 10 06.3	
	baz=297							
M56A	Emporium	121.30	45	pP			03 10 07.4	
	baz=291							
Q56A	Snyder Ridge,	121.42	48	pP			03 10 07.4	
	baz=289							
N56A	West Decatur	121.42	45	pP			03 10 07.7	
	baz=291							
O56A	Blue Knob Stat	121.46	46	pP			03 10 07.4	
	baz=290							
R56A	Bull Pasture M	121.46	49	pP			03 10 07.7	
	baz=288							
L56A	Greenwood	121.49	44	pP			03 10 07.5	
	baz=292							
P56A	Dayton Farm, R	121.52	47	pP			03 10 07.6	
	baz=290							
SSPA	Standing Stone	121.81	46	pP			03 10 08.0	
	baz=291							
Q57A	Strasburg	121.99	48	pP			03 10 08.4	
	baz=290							
G57A	Newington	121.99	40	pP			03 10 07.8	
	baz=298							
N57A	Milroy	122.01	45	pP			03 10 08.6	
	baz=291							
L57A	Andrews Acres	122.03	44	pP			03 10 07.5	
	baz=293							
M57A	Sunshine Farm,	122.09	45	pP			03 10 07.8	
	baz=292							
P57A	Homestead Farm	122.13	47	pP			03 10 07.9	
	baz=290							
O57A	Amberson	122.14	46	pP			03 10 08.7	
	baz=291							
R57A	Stanardsville	122.15	48	pP			03 10 08.0	
	baz=289							
LATQ	La Tuque	122.29	37	pP			03 10 08.3	
	baz=299							
D58A	Chemin du LacG	122.37	37	pP			03 10 08.4	
	baz=299							
E58A	La Victoria	122.48	38	pP			03 10 08.7	
	baz=298							
BINY	Binghamton	122.55	43	pP			03 10 08.8	
	baz=294							
K58A	Earlville	122.55	43	pP			03 10 09.5	
	baz=294							
Q58A	Fox Den Farm,	122.56	47	pP			03 10 09.4	
	baz=290							
N58A	Sunbury	122.57	45	pP			03 10 09.7	
	baz=292							
O58A	Lewisberry	122.69	46	pP			03 10 10.1	
	baz=292							
L58A	Harry Jones Me	122.70	43	pP			03 10 09.6	
	baz=294							
S58A	Poland Farm, P	122.73	49	pP			03 10 09.8	
	baz=289							
R58B	Mineral	122.74	49	pP			03 10 09.4	
	baz=289							
H58A	Gabriels	122.81	40	pP			03 10 09.6	
	baz=296							
O59A	Robesonia	123.14	45	pP			03 10 10.6	
	baz=292							
M59A	Waymart	123.19	44	pP			03 10 10.7	
	baz=294							
N59A	State Game Lan	123.20	45	pP			03 10 11.0	
	baz=293							
I59A	Olmsteadville	123.28	41	pP			03 10 11.2	
	baz=296							
F60A	Warwick	123.48	38	pP			03 10 11.1	
	baz=299							
I60A	Shoreham	123.64	41	pP			03 10 11.9	
	baz=297							
G60A	Masonville	123.66	39	pP			03 10 11.6	
	baz=298							
N60A	Cedar Hill Far	123.69	44	pP			03 10 12.3	
	baz=294							
O60A	Telford	123.69	45	pP			03 10 12.6	
	baz=293							
P60A	Greenville	123.72	46	pP			03 10 11.7	
	baz=292							
J60A	Lant Hill Farm	123.82	41	pP			03 10 12.0	
	baz=296							
F61A	St Evariste	124.06	37	pP			03 10 13.3	
	baz=300							
E61A	Lac Etchemin	124.12	37	pP			03 10 13.1	
	baz=301							
K61A	Williamstown	124.18	42	pP			03 10 13.2	
	baz=296							
I61A	Oroboro, Fairl	124.29	40	pP			03 10 13.8	
	baz=298							
LBNH	Lisbon	124.33	40	pP			03 10 13.5	
	baz=298							
M61A	Granite Spring	124.42	43	pP			03 10 13.8	
	baz=295							
PAL	Palisades	124.45	44	pP			03 10 13.6	
	baz=295							
H62A	Milan	124.65	39	pP			03 10 13.7	
	baz=299							
L61B	Northampton	124.66	42	pP			03 10 13.8	
	baz=297							
G62A	West of Eustis	124.72	38	pP			03 10 13.5	
	baz=300							
G63A	Kingsbury	125.33	38	pP			03 10 14.8	
	baz=301							
F63A	Nahmakanta, Br	125.33	37	pP			03 10 14.5	
	baz=302							
CLL	Collm	125.33	332	*e*PKPdf		PKPdf	03 09 59.0	-0.5
CLL				*e*			03 10 14.0	
CLL				*e*PP		PP	03 11 47.0	-2.7
CLL				*e*SKPdf		SKPdf	03 13 29.0	-1.4
N63A	Mattituck	125.41	43	pP			03 10 16.3	
	baz=296							
PKME	Peaks-Kenny Pk	125.44	37	pP			03 10 15.7	
	baz=302							
M63A	Gales Ferry	125.55	43	pP			03 10 15.8	
	baz=296							
L63A	North Scituate	125.64	42	pP			03 10 16.2	
	baz=297							
G65A	Princeton	126.51	37	pP			03 10 17.9	
	baz=303							
GERES	GERESS Array B	126.59	329	PKP		PKPdf	03 10 01.6	-0.5
	comp=Z,0.2nm,0.3s,baz=3.6,slow=3.1,SNR=2.8							
GERES				pPKP		pPKPdf	03 10 17.3	-1.5
	comp=Z,1.2nm,0.7s,baz=56,slow=2.4,SNR=8.0							
ROSC	El Rosal	130.81	89	pPKP		pPKPdf	03 10 26.6	-1.6
	comp=Z,7.2nm,0.5s,baz=8.1,slow=18,SNR=3.2							
LPAZ	La Paz	131.66	118	pPKP		pPKPdf	03 10 28.5	-1.5
	comp=Z,1.4nm,0.6s,baz=259,slow=5.8,SNR=4.9							
LPAZ	La Paz	131.66	118	PKPdf		PKiKP	03 10 14.3	-0.1
SDV	Santo Domingo	134.63	84			PKPdf	03 10 18.1	-0.4
TAM	Tamanrasset	146.46	302			PKPdf	03 10 39.1	-0.4
BDFB	Brasilia	148.33	134	pPKPbc		pPKPbc	03 11 00.5	-2.2
	comp=Z,12nm,0.8s,baz=225,slow=2.8,SNR=8.1							
BDFB	Brasilia	148.33	134	PKPbc		PKPdf	03 10 44.0	+1.3
TOA0	Torodi Ar. Sit	152.96	286	PKPbc		PKPbc	03 10 56.5	-0.6
TORD	Torodi Ar. Bea	152.96	286	PKPbc		PKPbc	03 10 56.1	-0.9
	comp=Z,0.8nm,0.3s,baz=83,slow=2.2,SNR=43							
TORD				pPKPbc		sPKPdf	03 11 11.6	-0.9
	comp=Z,7.9nm,0.8s,baz=48,slow=2.2,SNR=17							
TORD	Torodi Ar. Bea	152.96	286			PKPbc	03 10 55.5	-1.6

NEIC ***24*** *02:59:41.5±1.8, 35°.96N±0°.05×139°.50E±0°.06, h100km±1km, mb4.4/18, Error ellipse: s-maj=7.2km s-min=6.8km az=116.0*

IDC ***24*** *02:59:42.3±1.1, 35°.94N×139°.37E, h104km±10km, mb3.8/20, mb1 3.9/25, mb1mx3.8/51, mbtmp4.1/25, MS3.3/4, Ms1 3.3/4, ms1mx2.8/49, Error ellipse: s-maj=15.5km s-min=10.2km az=94.0*

NIED ***24*** *02:59:42.3, 35°.99N×139°.52E, h96km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-2.28; Mθθ1.02; Mφφ 1.27; Mrθ 1.26; Mrφ-1.64; Mθφ0.90; Fault plane solution: M₀2.99000×10¹⁵ NP1: φs290.00000°, δ55.00000°, λ-128.00000°. NP2: φs163.00000°, δ50.00000°, λ-49.00000°.*

JMA ***24*** *02:59:42.2±0.1, 35°.99N×139°.52E, h96km±1km, M3.8*

JMA Felt I J1.

ISC 24 02:59:41.6±0.6, 35°.94N±0°.04×139°.46E±0°.05, h101km±5km, n81, σ0°.98/91, mb4.2/28, 1C-5D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHU	Hanno	0.17	239	||P	Pn	02 59 56.5	+0.7
JHU					S	Sn	03 00 07.0	+0.6
TOK	Tokyo	0.35	136		P	Pn	02 59 57.8	+1.4
JRY	Ryogami san	0.46	280	||P	Pn	02 59 57.8	+0.6
JRY					S	Sn	03 00 10.3	+1.4
JAG	Ashikaga	0.48	359	||P	Pn	02 59 57.2	-0.2
JAG					S	Sn	03 00 08.4	-0.7
JYT	Yasato	0.66	64		Pn	Pn	02 59 58.4	-0.3
JOD2	Odawara 2	0.74	204	||P	Pn	02 59 59.5	0.0
JOD2					S	Sn	03 00 12.9	0.0
JKT	Katashina	0.84	348	||P	Pn	03 00 00.5	0.0
JKT					S	Sn	03 00 14.5	-0.2
JYN	Shimob	0.87	240	||P	Pn	03 00 01.3	+0.5
JYN				*i*	S	Sn	03 00 15.9	+0.7
JFNN	Fujinakano	0.98	221		P	Pn	03 00 02.9	+1.1
JFNN					S	Sn	03 00 18.2	+1.2
MJAR	Matsushiro Arr	1.18	301		P	Pn	03 00 03.8	-0.3
	20nm,0.3s,baz=123,slow=9.5,SNR=890							
MJAR					S	Sn	03 00 20.1	-1.0
	13nm,0.3s,baz=118,slow=20,SNR=7.6							
MJAR					LR	LR	03 00 37.1	
	comp=Z,471nm,18.5s,baz=80,slow=51							
MJAR	Matsushiro Arr	1.18	301			Pn	03 00 03.0	-1.0
MAJO	Matsushiro	1.18	301		Pn	Pn	03 00 04.1	0.0
MAT	Matsushiro	1.18	301		P	Pn	03 00 04.1	0.0
MAT					S	Sn	03 00 21.1	0.0
MAT	Matsushiro	1.18	301		P	Pn	03 00 04.2	+0.1
MAT					S	Sn	03 00 21.2	+0.1
MJB9	Matsu-Tunnel	1.18	301			Pn	03 00 03.6	-0.5
JSG	Sagara	1.64	220			Pn	03 00 10.9	+1.3
JFT	Otama	1.72	24		P	Pn	03 00 11.1	+0.4
JFT					S	Sn	03 00 34.0	+1.2
JGF	Kuroka	1.75	259		Pn	Pn	03 00 11.8	+0.8
BSO1	Boso 1	1.79	136		P	Pn	03 00 11.4	+0.5
BSO1					*e*S	Sn	03 00 33.4	+0.1
JMM	Marumori	2.20	29			Pn	03 00 17.4	+0.7
JSD	Sado	2.30	336		Pn	Pn	03 00 17.7	-0.4
JHJ	Hachijo jima 2	2.83	175		P	Pn	03 00 26.8	+1.7
	571nm,0.3s,baz=46,slow=2.9,SNR=213							
JHJ					S	Sn	03 00 59.6	+1.1
	167nm,0.3s,baz=48,slow=21,SNR=13							
JHJ					LR	LR	03 01 19.4	
	comp=Z,135nm,19.1s,baz=6.0,slow=34							
JHJ2	Mitsune	2.84	174		Pn	Pn	03 00 26.6	+1.4
JWT	Wachi	3.37	260		Pn	Pn	03 00 32.9	+0.5
JTM	Tenmabayashi	5.00	14		Pn	Pn	03 00 52.8	-1.5
JMN	Monobe	5.09	246		Pn	Pn	03 00 56.2	+0.5
JHS	Saijyo	5.26	262		Pn	Pn	03 00 58.3	+0.4
JNU	Nakatsue	7.62	251		P	Pn	03 01 31.7	+1.7
	0.8nm,0.3s,baz=83,slow=7.2,SNR=6.3							
ASAJ	Asahikawa	8.51	15		P	Pn	03 01 41.1	-0.8
	1.2nm,0.3s,baz=309,slow=33,SNR=5.0							
JSU	Suzuyama	8.71	242			Pn	03 01 45.2	+0.5
JCJ	Chichijima	9.12	165		P	Pn	03 01 46.5	-3.8
	8.7nm,0.3s,baz=2.4,slow=23,SNR=12							
JCJ					S	Sn	03 03 27.9	-3.3
	20nm,0.3s,baz=298,slow=22,SNR=4.6							
KSRS	Korea Array	9.39	283		P	Pn	03 01 53.8	-0.1
	baz=102,slow=14,SNR=1.4							
KSRS					LR	LR	03 05 09.4	
	comp=Z,87nm,20.7s,baz=114,slow=35							
USRK	Ussuriysk Ar.	10.04	328		P	Pn	03 02 02.5	-0.1
	baz=149,slow=14,SNR=6.5							
KLR	Kul'dur	14.43	339		LR	LR	03 09 04.2	
	comp=Z,73nm,18.2s,baz=356,slow=39							
PETK	Petropavlovsk-	21.43	31		P	P	03 04 21.8	+0.5
	2.2nm,0.4s,baz=220,slow=15,SNR=2.1							
MA2	Magadan	24.77	14		P	P	03 04 54.3	+0.7
	6.7nm,0.6s,baz=198,slow=9.8,SNR=6.7							
MA2	Magadan	24.77	14		P	P	03 04 53.9	+0.2
MA2					IAmb	IAmb	03 04 55.5	
	comp=Z,7.8nm,0.8s							
ZAA0	Zalesovo Array	41.50	313		P	P	03 07 17.7	-0.8
ZALV	Zalesovo Beam	41.50	313		P	P	03 07 18.6	+0.1
	comp=Z,1.0nm,0.5s,baz=90,slow=7.4,SNR=3.5							
ZALV					PcP	PcP	03 09 13.7	-0.5
	comp=Z,1.7nm,0.4s,baz=98,slow=3.8,SNR=4.8							
ZALV	Zalesovo Beam	41.50	313		P	P	03 07 18.8	+0.2
MKAR	Makanchi Array	43.38	303		P	P	03 07 33.8	-0.2
	comp=Z,1.0nm,0.6s,baz=86,slow=8.9,SNR=6.7							
COEN	Coen	49.75	175		P	P	03 08 23.8	-0.1
MDM	Murphy Dome	50.67	32		P	P	03 08 30.1	-0.2
MDM					IAmb	IAmb	03 08 32.8	
	comp=Z,5.9nm,1.1s							
IL31		51.25	32		P	P	03 08 32.1	-2.5
IL31					IAmb	IAmb	03 08 35.8	
	comp=Z,2.8nm,1.1s							
ILAR	Eielson Array	51.25	32		P	P	03 08 35.2	+0.5
	comp=Z,1.2nm,0.9s,baz=269,slow=6.5,SNR=10							
KK31	Karatay Array	52.31	300		P	P	03 08 43.0	+0.1
KK31					IAmb	IAmb	03 08 43.9	
	comp=Z,2.4nm,0.7s							
KKAR	Karatay Array	52.31	300		P	P	03 08 42.7	-0.2
FITZ	Fitzroy Crossi	55.32	196		P	P	03 09 05.1	+0.2
	comp=Z,2.6nm,0.6s,baz=38,slow=9.1,SNR=8.5							
FITZ	Fitzroy Crossi	55.32	196		IAmb	IAmb	03 09 25.0	
	comp=Z,19nm,1.5s							
WB0	Warramunga Arr	55.61	186		P	P	03 09 05.1	-1.9
WB2	Warramunga Arr	55.79	186		IAmb	IAmb	03 09 14.5	
	comp=Z,5.7nm,0.8s							
WRA	Warramunga Arr	55.79	186		P	P	03 09 07.7	-0.5
	comp=Z,4.1nm,0.4s,baz=2.1,slow=7.5,SNR=87							
WRA					PcP	PcP	03 10 07.1	+0.9
	comp=Z,3.1nm,0.8s,baz=1.7,slow=4.1,SNR=5.2							
INK	Inuvik	56.07	27		P	P	03 09 10.0	+0.3
	comp=Z,1.3nm,0.8s,baz=280,slow=4.9,SNR=4.8							
ABKAR	Akbulak array	57.44	310		P	P	03 09 19.2	-0.5
AS31	Alice Springs	59.52	186		IAmb	IAmb	03 09 43.2	
	comp=Z,1.7nm,0.5s							
ASAR	Alice Springs	59.52	186		P	P	03 09 34.4	0.0
	comp=Z,2.2nm,0.7s,baz=19,slow=11,SNR=23							
ASAR					PcP	PcP	03 10 21.6	+0.8
	comp=Z,1.7nm,0.8s,baz=5.8,slow=5.5,SNR=5.9							
ASAR	Alice Springs	59.52	186		P	P	03 09 33.9	-0.4
DZM	Mont Dzumac	63.10	152		P	P	03 09 59.6	+1.0
	comp=Z,20nm,1.1s,baz=311,slow=21,SNR=3.0							
DZM	Mont Dzumac	63.10	152		IAmb	IAmb	03 10 01.9	
	comp=Z,26nm,1.1s							
RES	Resolute Bay	64.04	14		P	P	03 10 03.6	-0.4
RES					IAmb	IAmb	03 10 05.2	
	comp=Z,5.0nm,1.2s							
YKA	Yellowknife Ar	65.53	29		P	P	03 10 14.1	+0.2
	comp=Z,0.3nm,0.7s,baz=301,slow=6.5,SNR=4.8							
STKA	Stephens Creek	67.49	178		P	P	03 10 25.6	-1.0
	comp=Z,3.0nm,0.8s,baz=21,slow=8.9,SNR=3.9							
STKA	Stephens Creek	67.49	178		IAmb	IAmb	03 10 28.6	
	comp=Z,1.9nm,1.1s							
FINES	FINESS Array B	69.04	332		P	P	03 10 35.8	-0.2
	comp=Z,1.1nm,0.7s,baz=90,slow=5.7,SNR=5.0							
KBZ	Khabaz	70.41	310		P	P	03 10 45.2	+0.5
	comp=Z,2.8nm,0.9s,baz=225,slow=7.0,SNR=4.8							
AKASG	Malin Array Be	74.19	322		P	P	03 11 07.3	+0.3
	comp=Z,0.9nm,0.5s,baz=48,slow=6.4,SNR=6.3							
NOA	NORSAR Array B	74.57	337		P	P	03 11 09.1	-0.2
	comp=Z,0.5nm,0.5s,baz=43,slow=5.7,SNR=2.5							
BEKR	Beckworth	74.77	52		P	P	03 11 11.0	+0.1
KVN	Kaiserville	76.67	51		P	P	03 11 22.9	+1.1
KVN					IAmb	IAmb	03 11 24.2	
	comp=Z,3.7nm,0.9s							
NVAR	Mina Array Bea	76.90	52		P	P	03 11 24.7	+1.5
	comp=Z,1.8nm,0.8s,baz=293,slow=5.0,SNR=14							
NVAR	Mina Array Bea	76.90	52		P	P	03 11 24.5	+1.3
GCMT	Greycliff	77.57	42		P	P	03 11 27.2	+0.5
H17A	Grant Village	77.95	44		P	P	03 11 27.6	-1.3
BRTR	Keskin Array B	78.39	311		P	P	03 11 32.1	+0.8
	comp=Z,1.0nm,0.5s,baz=140,slow=2.7,SNR=3.9							
PDAR	Pinedale Array	79.55	44		P	P	03 11 38.5	+0.8
	comp=Z,0.6nm,0.7s,baz=285,slow=2.9,SNR=5.5							
CLL	Collm	81.25	329		*e*P	P	03 11 46.0	-0.3
ULM	Lac du Bonnet	81.27	32		LR	LR	03 47 42.0	
	comp=Z,154nm,21.6s,baz=255,slow=35							
PV05	Paradox Valley	82.83	48		P	P	03 11 55.0	-0.2
PV05					IAmb	IAmb	03 11 57.5	
	comp=Z,3.7nm,0.7s							
TXAR	Lajitas Array	92.03	51		P	P	03 12 40.7	+1.1
	comp=Z,0.5nm,0.5s,baz=284,slow=2.7,SNR=13							
TORD	Torodi Ar. Bea	116.95	313		PKP	PKPdf	03 18 13.8	-1.3
	comp=Z,0.4nm,0.6s,baz=42,slow=1.1,SNR=8.5							
LPAZ	La Paz	148.60	59		PKPbc	PKPbc	03 19 18.8	+0.7
	comp=Z,2.2nm,0.6s,baz=326,slow=3.4,SNR=11							

IDC ***24*** *03:07:36.1±5.0, 6°.27S×149°.32E, h74km±48km, mb3.6/3, mb1 3.9/5, mb1mx3.4/40, mbtmp4.0/5, ML4.2/1, Error ellipse: s-maj=91.0km s-min=30.7km az=133.0*

ISC 24 03:07:38.7±1.9, 6°.4S±0°.4×149°.3E±0°.6, h100km, n6, σ0°.84/7, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.66	215	P		Pn	03 08 32.6	-0.7
	25nm,0.3s,baz=38,slow=4.6,SNR=22							
PMG				S		Sn	03 09 15.6	+0.1
	16nm,0.3s,baz=43,slow=18,SNR=3.2							
WRA	Warramunga Arr	19.80	226	P		P	03 12 02.1	+0.7
	0.8nm,0.3s,baz=52,slow=11,SNR=16							
ASAR	Alice Springs	22.66	219	P		P	03 12 33.2	+1.3
	1.5nm,0.5s,baz=54,slow=9.3,SNR=16							
FITZ	Fitzroy Crossi	25.83	241	P		P	03 13 00.7	-0.3
	1.7nm,0.5s,baz=52,slow=8.8,SNR=10							
ILAR	Eielson Array	84.96	23	P		P	03 20 02.4	-0.1
	0.4nm,0.7s,baz=256,slow=5.0,SNR=5.9							
TORD	Torodi Ar. Bea	147.40	284	PKPbc		PKPbc	03 27 11.9	-0.1
	0.4nm,0.8s,baz=77,slow=2.5,SNR=5.4							

WEL ***24*** *03:36:00, 42°.09S×173°.07E, h48km, ML6.2, Mw6.1, Moment Tensor Solution. s18 Moment tensor: Scale 10¹⁸Nm; Mrr-0.30; Mθθ0.96; Mφφ-0.66; Mrθ 0.63; Mrφ0.52; Mθφ0.86; Fault plane solution: M₀1.45000×10¹⁸ NP1: φs117.00000°, δ40.00000°, λ-11.00000°. NP2: φs215.00000°, δ83.00000°, λ-130.00000°. Principal axes: T 154391.1200, Plg27.0000°, Azm335.0000°; N -17980.3000, Plg39.0000°, Azm220.0000°; P -136410.8200, Plg39.0000°, Azm90.0000°;*

BJI ***24*** *03:36:41.1±0.0, 41°.57S×173°.73E, h53km, mB5.8/56, mb5.5/51, Ms5.7/72, Ms7 5.6/67*

MOS ***24*** *03:36:41.1±1.0, 42°.08S×173°.00E, h46km, mb6.1/30, MS5.6/27, Error ellipse: s-maj=11.3km s-min=8.0km az=111.5*

WEL ***24*** *03:36:42.4, 42°.S±1°×17°.3E±1°, h52km±2km, M6.2/9, ML6.5/9, MLv6.2/9, Error ellipse: s-maj=0.0km s-min=0.0km az=82.4*

NEIC ***24*** *03:36:42.4±1.9, 42°.06S±0°.04×173°.01E±0°.04, h48km±1km, mb6.0/157, Ms_20 5.6/537, Mwb5.9/22, Mwr6.0/45, Mww6.1, Mwc6.0(GCMT), Error ellipse: s-maj=6.6km s-min=4.7km az=346.0*

IDC ***24*** *03:36:42.8±0.5, 41°.95S×173°.10E, h52km±4km, mb5.3/29, mb1 5.2/30, mb1mx5.2/34, mbtmp5.5/30, MS5.4/27, Ms1 5.4/27, ms1mx5.4/29, Error ellipse: s-maj=12.9km s-min=9.8km az=75.0*

NEIC ***24*** *03:36:43.2, 42°.06S×173°.00E, h48km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.45; Mθθ0.54; Mφφ-0.09; Mrθ 0.67; Mrφ0.62; Mθφ0.96; Fault plane solution: M₀1.42000×10¹⁸ NP1:φs95.57000°, δ24.58000°, λ-30.19000°. NP2:φs213.46000°, δ77.93000°, λ-111.57000°. Principal axes: T 1.5352, Plg30.0000°, Azm321.0000°; N -0.2748, Plg21.0000°, Azm218.0000°; P -1.2605, Plg52.0000°, Azm98.0000°;*

NEIC ***24*** *03:36:43.2, 42°.06S×173°.00E, h48km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-2.28; Mθθ5.58; Mφφ-3.30; Mrθ 3.32; Mrφ2.86; Mθφ7.14; Fault plane solution: M₀9.69000×10¹⁷ NP1:φs111.10000°, δ34.21000°, λ-14.49000°. NP2:φs213.16000°, δ81.91000°, λ-123.36000°. Principal axes: T 9.3991, Plg29.0000°, Azm330.0000°; N 0.5548, Plg33.0000°, Azm218.0000°; P -9.9538, Plg43.0000°, Azm91.0000°;*

NOU ***24*** *03:36:43.1, 42°.25S×173°.34E, h54km, ML6.0, South Island, New Zealand*

NEIC ***24*** *03:36:46, 42°.04S×173°.10E, h51km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.21; Mθθ0.78; Mφφ-0.57; Mrθ 0.53; Mθφ0.54; Mrφ0.72; Fault plane solution: M₀1.26000×10¹⁸ NP1:φs115.00000°, δ43.00000°, λ-8.00000°. NP2:φs211.00000°, δ84.00000°, λ-132.00000°. Principal axes: T 1.3477, Plg27.0000°, Azm334.0000°; N -0.2081, Plg42.0000°, Azm217.0000°; P -1.1396, Plg36.0000°, Azm85.0000°;*

GCMT ***24*** *03:36:46.4±0.1, 42°.02S×173°.07E, h48km, MW6.0/163, Moment Tensor Solution. s163,c370; s154,c488; Duration: 2s4 Moment tensor: Scale 10¹⁸Nm; Mrr-0.18±.01; Mθθ0.74±.01; Mφφ-0.55±.01; Mrθ0.57±.01; Mθφ0.50±.01; Mφφ0.74±.01; Best double couple: M₀1.24000×10¹⁸ NP1:φs116.00000°, δ40.00000°, λ-7.00000°. NP2:φs212.00000°, δ85.00000°, λ-130.00000°. Principal axes: T 1.3420, Plg29.0000°, Azm333.0000°; N -0.2050, Plg39.0000°, Azm216.0000°; P -1.1370, Plg37.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***24*** *03:36:47, 42°.08S×173°.15E, h50km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.08; Mθθ0.49; Mφφ-0.41; Mrθ 0.35; Mθφ0.61; Mrφ1.32; Fault plane solution: M₀1.57000×10¹⁸ NP1:φs105.00000°, δ29.00000°, λ-2.00000°. NP2:φs198.00000°, δ89.00000°, λ-119.00000°. Principal axes: T 1.5248, Plg37.0000°, Azm313.0000°; N 0.0811, Plg29.0000°, Azm199.0000°; P -1.6060, Plg39.0000°, Azm81.0000°;*

ISC 24 03:36:42.2±0.2, 42°.11S±0°.02×173°.11E±0°.02, h51km±1km, h51km:pP-P, n1430, σ1°.67/1242, mb6.0/185, MS5.6/319, 94C-79D, Fault plane solution: NP1:φs122.55905°, δ28.11940°, λ-21.92818°. NP2:φs232.10658°, δ79.86267°, λ-116.36872°. Principal axes: T Plg29.9463°, Azm343.3572°; N Plg25.9262°, Azm237.0931°; P Plg48.4262°, Azm113.8594°; South Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THZ	Tophouse	0.37	336			Pn	03 36 52.8	+0.6
THZ	Tophouse	0.37	336	P		Pn	03 36 52.9	+0.6
THZ				S		Sn	03 36 59.9	+0.6
KHZ	Kahutara	0.45	134			Pn	03 36 53.7	+0.8
KHZ	Kahutara	0.45	134	P		Pn	03 36 54.0	+1.2
KHZ				S		Sn	03 37 02.3	+1.8
BSWZ	Blackbirch Sta	0.69	56			Pn	03 36 57.4	+1.5
BSWZ	Blackbirch Sta	0.69	56	P		Pn	03 36 57.6	+1.7
GVZ	Greta Valley S	0.86	184	P		Pn	03 36 59.1	+1.0
CMWZ	Cape Campbell	0.90	67			Pn	03 37 00.8	+2.2
CMWZ	Cape Campbell	0.90	67	P		Pn	03 37 00.2	+1.7
NNZ

MTW **Mount Morrison** 2.03 63 P Pn 03 37 13.4 -0.6
TRWZ **Traveller** 2.06 71 P Pn 03 37 13.5 -0.8
WACZ **Wakanui South** 2.06 206 P Pn 03 37 13.9 -0.4
HOWZ **Holdsworth Sta** 2.17 57 P Pn 03 37 15.5 -0.5
RPZ **Rata Peaks** 2.21 222 P Pn 03 37 16.8 +0.4
576nm,0.3s,baz=51,slow=1.6,SNR=821
RPZ S Sn 03 37 42.4 -0.1
3µm,0.3s,baz=182,slow=7.9,SNR=7.4
RPZ LR LR 03 38 23.6
comp=Z,37µm,19.6s,baz=50,slow=44
RPZ **Rata Peaks** 2.21 222 Pn 03 37 16.0 -0.4
RPZ **Rata Peaks** 2.21 222 P Pn 03 37 16.0 -0.4
TMWZ **Te Maipa** 2.31 65 P Pn 03 37 16.9 -1.0
ARCZ **Arundel** 2.32 217 P Pn 03 37 17.3 -0.7
MRZ **Mangatainoka R** 2.35 53 P Pn 03 37 18.1 -0.3
GCSZ **Gaunt Creek Bo** 2.38 239 P Pn 03 37 19.2 +0.4
TIWZ **Tintock** 2.47 58 P Pn 03 37 19.1 -0.9
OHWZ **Ohakea** 2.52 42 P Pn 03 37 22.0 +1.3
CPWZ **Castlepoint** 2.61 64 P Pn 03 37 21.2 -0.7
POWZ **Post Office Ro** 2.64 50 P Pn 03 37 21.8 -0.5
PRWZ **Pori Road** 2.65 55 P Pn 03 37 21.9 -0.6
WAZ **Wanganui** 2.75 32 P Pn 03 37 25.8 +2.0
TMZ **Timaru** 2.75 213 P Pn 03 37 23.1 -0.7
NMEZ **Namu Road** 2.75 13 P Pn 03 37 26.4 +2.6
BFZ **Birch Farm** 2.76 60 Pn Pn 03 37 22.5 -1.5
BFZ **Birch Farm** 2.76 60 P Pn 03 37 22.4 -1.5
FOZ **Fox Glacier** 2.81 238 P Pn 03 37 24.9 +0.2
FOZ **Fox Glacier** 2.81 238 P Pn 03 37 24.8 +0.1
LREZ **Lake Rotokare** 2.82 21 P Pn 03 37 28.1 +3.4
PREZ **Palmer Road** 2.87 16 P Pn 03 37 28.2 +2.7
KHEZ **Kahui Hut** 2.89 14 P Pn 03 37 28.2 +2.4
NBEZ **Newall Road No** 2.89 12 P Pn 03 37 28.6 +2.8
DVHZ **Dannevirke** 2.93 53 P Pn 03 37 25.1 -1.2
NEZ **North Egmont** 2.93 15 P Pn 03 37 28.5 +2.2
TSZ **Takapari Road** 2.97 47 P Pn 03 37 26.4 -0.5
PKE **Pukeiti** 2.98 13 P Pn 03 37 29.5 +2.4
ANWZ **Angora Road** 3.02 58 P Pn 03 37 26.0 -1.5
DREZ **Durham Road** 3.03 16 P Pn 03 37 30.2 +2.5
LBZ **Lake Benmore** 3.12 222 Pn Pn 03 37 28.6 -0.4
LBZ **Lake Benmore** 3.12 222 P Pn 03 37 28.8 -0.1
MHEZ **Mangahewa** 3.16 17 P Pn 03 37 32.4 +2.9
PNHZ **Pukenui** 3.20 48 P Pn 03 37 29.2 -0.9
VRZ **Vera Road** 3.23 23 P Pn 03 37 32.8 +2.3
PRHZ **Porangahau** 3.23 57 P Pn 03 37 28.8 -1.7
WPHZ **Waipukurau** 3.24 52 P Pn 03 37 29.4 -1.2
MTVZ **Mangateitei** 3.26 34 P Pn 03 37 32.0 +1.2
PKVZ **Pokaka** 3.29 32 P Pn 03 37 32.1 +0.9
WNVZ **Wahianoa** 3.36 35 P Pn 03 37 33.3 +0.9
MOVZ **Moawhango** 3.36 38 P Pn 03 37 32.3 0.0
TRVZ **Turoa** 3.36 34 P Pn 03 37 33.5 +1.1
DRZ **Dome Shelter** 3.39 34 P Pn 03 37 34.2 +1.3
WHVZ **Whangaehu Hut** 3.39 35 P Pn 03 37 33.9 +1.0
FWVZ **Far West T-bar** 3.40 34 P Pn 03 37 34.1 +1.2
TUVZ **Tukino** 3.43 35 P Pn 03 37 34.3 +1.0
ODZ **Otahua Downs** 3.44 211 Pn 03 37 32.6 -0.7
ODZ **Otahua Downs** 3.44 211 P Pn 03 37 32.3 -0.9
BHHZ **Black Hill Sta** 3.44 42 P Pn 03 37 33.3 -0.1
NGZ **Ngauruhoe** 3.49 34 P Pn 03 37 34.9 +0.9
KRHZ **Kereru** 3.49 46 P Pn 03 37 32.9 -1.0
SNVZ **South Ngauruho** 3.49 34 P Pn 03 37 35.2 +1.0
TWVZ **Taurewa** 3.51 31 P Pn 03 37 35.1 +0.7
PXZ **Pawanui** 3.51 55 P Pn 03 37 32.3 -2.0
OTVZ **Oturere** 3.52 34 P Pn 03 37 35.5 +0.9
NNVZ **North Ngauruho** 3.53 34 P Pn 03 37 35.5 +0.8
WTVZ **West Tongariro** 3.53 33 P Pn 03 37 35.4 +0.8
ETVZ **East Tongariro** 3.57 35 P Pn 03 37 35.9 +0.8
KRVZ **Karewarewa** 3.57 34 P Pn 03 37 36.2 +1.0
TMVZ **Te Maari** 3.58 34 P Pn 03 37 36.1 +0.8
NTVZ **North Tongarir** 3.58 34 P Pn 03 37 36.5 +1.1
KAHZ **Kahuranaki** 3.67 52 P Pn 03 37 34.7 -1.8
KWHZ **Kaweka Forest** 3.67 44 P Pn 03 37 35.5 -1.0
KATZ **Kakaramea** 3.70 33 P Pn 03 37 37.7 +0.8
JCZ **Jackson Bay** 3.73 237 P Pn 03 37 36.5 -0.8
RITZ **Rihia Road** 3.76 35 P Pn 03 37 38.3 +0.5
MCHZ **McNeill Hill** 3.81 47 P Pn 03 37 37.1 -1.2
RATZ **Rangitukua** 3.82 33 P Pn 03 37 40.0 +1.5
HIZ **Hauiti** 3.83 21 Pn Pn 03 37 40.5 +1.9
HIZ **Hauiti** 3.83 21 P Pn 03 37 40.3 +1.7
CKHZ **Cape Kidnapper** 3.88 52 P Pn 03 37 39.1 -1.8
BKZ **Black Stump Fm** 3.91 42 Pn 03 37 39.9 -0.8
BKZ **Black Stump Fm** 3.91 42 P Pn 03 37 38.6 -1.1
HATZ **Hinemaiaia** 3.94 36 P Pn 03 37 39.8 -0.3
WATZ **Wairara** 3.94 31 P Pn 03 37 41.2 +1.0
WKZ **Wanaka** 4.03 226 Pn Pn 03 37 40.1 -1.3
WKZ **Wanaka** 4.03 226 P Pn 03 37 39.8 -1.6
WHTZ **Whakaora** 4.07 33 P Pn 03 37 42.6 +0.6
ARHZ **Aropaoanui** 4.10 47 P Pn 03 37 40.9 -1.4
NMHZ **Naumai** 4.12 44 P Pn 03 37 41.3 -1.3
MRHZ **Matea Rd** 4.13 39 P Pn 03 37 41.6 -1.2
KUTZ **Kaahu Road** 4.17 31 P Pn 03 37 44.4 +1.1
EAZ **Earnscleugh** 4.17 220 P Pn 03 37 42.2 -1.1
HHSZ **Highcliff Hill** 4.19 205 P Pn 03 37 42.9 -0.6
TLZ **Tolley Road** 4.21 27 P Pn 03 37 44.5 +0.7
ALRZ **Allen Road** 4.32 36 P Pn 03 37 44.4 -0.9
MTHZ **Maungataniwha** 4.32 42 P Pn 03 37 43.8 -1.6
WHHZ **Waihua** 4.36 47 P Pn 03 37 44.3 -1.6
RAHZ **Arahi** 4.40 45 P Pn 03 37 44.7 -1.8
GRRZ **Galatos Road** 4.40 32 P Pn 03 37 47.0 +0.5
HRRZ **Handcock Road** 4.43 34 P Pn 03 37 46.9 -0.1
HSRZ **Hossack Road** 4.49 33 P Pn 03 37 48.3 +0.7
MSZ **Milford Sound** 4.57 234 P Pn 03 37 47.3 -1.4
RTZ **Ruatahuna** 4.57 42 P Pn 03 37 46.9 -2.0
UTU **Utuhina** 4.58 32 P Pn 03 37 49.4 +0.4
TUZ **Tuapeka** 4.59 212 P Pn 03 37 48.7 -0.4
SNGZ **Shannon Statio** 4.63 46 P Pn 03 37 47.4 -2.2
NGRZ **Ngongotaha** 4.64 32 P Pn 03 37 51.0 +1.2
TARZ **Mount Tarawera** 4.66 35 P Pn 03 37 49.4 -0.7
MHGZ **Mahia Peninsul** 4.69 53 P Pn 03 37 48.4 -2.1
OMRZ **Omania** 4.71 33 P Pn 03 37 50.8 0.0
MKRZ **Makatiti** 4.72 34 P Pn 03 37 51.3 +0.3
KARZ **Kaharoa** 4.74 32 P Pn 03 37 51.9 +0.8
TOZ **Tahuroa Road** 4.74 24 P Pn 03 37 52.0 +0.9
KMRZ **Kaimai** 4.78 28 P Pn 03 37 52.8 +1.1
LIRZ **Lichensteins R** 4.81 33 P Pn 03 37 53.5 +1.5
EDRZ **Edgecumbe** 4.87 36 P Pn 03 37 51.4 -1.5
MLZ **Mavora Lakes** 4.87 226 P Pn 03 37 50.8 -2.1
URZ **Urewera** 4.91 40 P Pn 03 37 49.3 -4.2
84nm,0.3s,baz=122,slow=24,SNR=487
URZ S Sn 03 38 44.3 -4.7
558nm,0.3s,baz=51,slow=16,SNR=10.0
URZ LR LR 03 40 05.9
comp=Z,24µm,21.4s,baz=211,slow=42
URZ **Urewera** 4.91 40 Pn Pn 03 37 51.2 -2.2
MARZ **Manawahe** 4.94 35 P Pn 03 37 53.0 -1.0
TGRZ **Tauranga** 5.00 30 P Pn 03 37 54.9 +0.3
OPRZ **Ohinepanea** 5.01 33 P Pn 03 37 54.2 -0.6
AWAZ **Awhitu Peninsu** 5.17 14 P Pn 03 37 59.2 +2.2
WHRZ **Whale Island** 5.18 36 P Pn 03 37 56.5 +0.6
SYZ **Scrubby Hill** 5.27 211 P Pn 03 37 57.8 -0.5
WTAZ **Waiatarua** 5.29 13 P Pn 03 38 01.0 +2.4
WHZ **Wether Hill Ro** 5.31 223 P Pn 03 37 56.8 -2.1
ETAZ **East Tamaki Re** 5.33 16 P Pn 03 38 01.2 +2.0
EPAZ **Eden Park BICE** 5.37 14 P Pn 03 38 02.4 +2.7
MYRZ **Mayor Island** 5.39 28 P Pn 03 38 01.1 +1.0
HBAZ **Herne Bay Bore** 5.40 14 P Pn 03 38 02.8 +2.7
RVAZ **Riverhead Bore** 5.45 13 P Pn 03 38 03.4 +2.6
DCZ **Deep Cove** 5.46 230 P Pn 03 37 58.6 -2.4
MBAZ **Motutapu North** 5.51 15 P Pn 03 38 03.6 +2.0
WIAZ **Waiheke Island** 5.53 17 P Pn 03 38 03.5 +1.5
WIZ **White Island** 5.55 36 P Pn 03 38 01.5 -0.7
ABAZ **Army Bay** 5.66 14 P Pn 03 38 05.9 +2.3
KUZ **Kuaotunu** 5.72 22 P Pn 03 38 05.1 +0.5
APZ **The Paps** 5.98 216 P Pn 03 38 06.2 -1.8
MXZ **Matakaoa Point** 6.05 43 Pn Pn 03 38 06.0 -3.0
MXZ **Matakaoa Point** 6.05 43 P Pn 03 38 06.9 -2.2
GRZ **Great Barrier** 6.12 18 P Pn 03 38 11.4 +1.3
PYZ **Puysegur Point** 6.15 227 P Pn 03 38 10.6 +0.1
WCZ **Waipu Caves** 6.23 9 P Pn 03 38 13.0 +1.5
OUZ **Omahuta** 6.88 3 Pn Pn 03 38 20.8 +0.3
OUZ **Omahuta** 6.88 3 P Pn 03 38 21.9 +1.4
CTZ **Chatham Island** 7.72 106 P Pn 03 38 30.1 -1.8
I36NZ **CHATHAM INFRAS** 7.84 107 *i* 04 21 10.0
baz=280,slow=320,SNR=1.7
NFK **Norfolk Island** 13.69 341 P Pn 03 39 54.9 +1.3
baz=14,SNR=14
NFK S Sn 03 42 20.8 -3.3
baz=14
NFK **Norfolk Island** 13.69 341 P Pn 03 39 56.6 +3.0
RAO **Raoul Island** 14.74 32 S Sn 03 42 39.1 -10
92nm,0.3s,baz=96,slow=23,SNR=2.3
RAO LR LR 03 45 44.2
comp=Z,13µm,20.3s,baz=198,slow=37
LHI **Lord Howe Isla** 15.41 309 P P 03 40 18.5 -1.4
baz=16,SNR=4.9
LHI **Lord Howe Isla** 15.41 309 Pn Pn 03 40 14.4 -1.8
LHI **Lord Howe Isla** 15.41 309 P P 03 40 19.4 -0.6
MCQ **Macquarie Isla** 15.53 212 P Pn 03 40 17.5 -0.1
baz=16,SNR=3.7
MCQ **Macquarie Isla** 15.53 212 P Pn 03 40 15.7 -1.9
MCQ pmax pmax
comp=Z,323nm,1.0s
MCQ **Macquarie Isla** 15.53 212 Pn Pn 03 40 15.7 -1.9
MCQ **Macquarie Isla** 15.53 212 P Pn 03 40 18.9 +1.3
TAU **Tasmania Unive** 19.01 259 P P 03 40 57.9 -1.8
TAU pmax pmax
comp=Z,154nm,1.0s
TAU **Tasmania Unive** 19.01 259 P P 03 40 57.9 -1.8
RIV **Riverview** 19.14 288 P Pn 03 41 03.9 +1.5
baz=19,SNR=13
MGCD **Mangrove Creek** 19.51 290 P Pn 03 41 06.2 -0.6
baz=20,SNR=17
CNB **Canberra Magne** 19.70 282 P Pn 03 41 10.2 +1.1
baz=20,SNR=48
CAN **Canberra** 19.96 282 P P 03 41 10.3 +0.2
CAN pmax pmax
comp=Z,166nm,1.0s
CAN **Canberra** 19.96 282 P P 03 41 10.3 +0.2
PINNC **Pines Island,** 20.01 345 P Pn 03 41 15.6 +2.9
OUENC **Ouen Island, N** 20.32 343 P Pn 03 41 17.5 +1.1
comp=Z,318nm,1.1s
ONTNC **Ouen Toro** 20.51 342 P Pn 03 41 21.2 +2.5
YATNC **Mamie plateau,** 20.66 343 P Pn 03 41 20.6 +0.2
DZM **Mont Dzumac** 20.74 342 *e*Pn Pn 03 41 20.6 -1.0
DZM comp=Z,3µm,2.0s *e*S S 03 45 02.3 -5.3
comp=Z,7µm,19.5s
DZM *e*LQ LQ 03 45 24.2
comp=Z,29µm,37.1s
DZM *e*LR LR 03 46 18.0
comp=Z,69µm,27.4s
DZM **Mont Dzumac** 20.74 342 P P 03 41 19.2 +0.5
comp=Z,192nm,0.9s,baz=172,slow=10,SNR=26
DZM LR LR 03 48 22.9
comp=Z,26µm,21.7s,baz=172,slow=34
DZM **Mont Dzumac** 20.74 342 P P 03 41 19.2 +0.5
DZM IAMs_20 IAMs_20 03 48 00.9
comp=Z,27µm,22.0s
DZM **Mont Dzumac** 20.74 342 P Pn 03 41 22.1 +0.5
NOUC **Port Laguerre** 20.75 342 P Pn 03 41 21.6 +0.1
ARMA **Armidale** 20.82 297 P Pn 03 41 22.2 -0.2
baz=21,SNR=79
ARMA **Armidale** 20.82 297 P Pn 03 41 21.7 -0.8
YNG **Young** 20.88 284 P Pn 03 41 22.1 -0.9
baz=21,SNR=16
MARNC **Mare, Loyalty** 21.00 347 P P 03 41 24.8 +3.4
TOO **Toolangi** 21.64 273 P P 03 41 30.8 +2.6
baz=22,SNR=32
TOO **Toolangi** 21.64 273 P P 03 41 29.0 +0.8
TOO pmax pmax
comp=Z,305nm,1.3s
TOO MLR MLR
comp=Z,22µm,21.0s
TOO **Toolangi** 21.64 273 P P 03 41 29.0 +0.8
TOO IAMs_20 IAMs_20 03 48 06.9
comp=Z,22µm,21.0s
LIFNC **LIFOU** 21.83 345 P P 03 41 33.4 +3.1
KOUNC **Koumac, New Ca** 22.74 338 P P 03 41 43.0 +3.0
CMSA **Cobar Meteorol** 24.25 287 P P 03 41 56.1 +1.7
baz=24,SNR=21
ARPS **Mount Arapiles** 24.65 272 P P 03 41 60.0 +2.0
baz=25,SNR=50
MSVF **Nonsavu** 24.66 11 P P 03 41 58.9 +0.7
MSVF comp=Z,222nm,0.9s,baz=147,slow=8.8,SNR=22 LR LR 03 50 22.5
comp=Z,18µm,19.5s,baz=198,slow=34
MSVF **Nonsavu** 24.66 11 ⇑*i*P P 03 41 59.6 +1.3
MSVF pmax pmax
comp=Z,222nm,0.9s
MSVF **Nonsavu** 24.66 11 P P 03 41 58.7 +0.5
MSVF IAmb IAmb 03 42 22.4
comp=Z,354nm,0.9s
MSVF **Nonsavu** 24.66 11 IAMs_20 IAMs_20 03 50 11.4
comp=Z,19µm,20.0s
MSVF **Nonsavu** 24.66 11 P P 03 41 59.5 +1.3
DVP **Devils Point** 24.66 349 P P 03 42 01.8 +3.6
comp=Z,618µm,1.0s
RMQ **Roma** 25.32 300 P P 03 42 06.3 +2.1
baz=26,SNR=6.7
STKA **Stephens Creek** 27.03 282 P P 03 42 21.1 +1.5
comp=Z,48nm,1.0s,baz=124,slow=11,SNR=19
STKA LR LR 03 51 36.5
comp=Z,14µm,21.8s,baz=119,slow=33
STKA **Stephens Creek** 27.03 282 P P 03 42 21.8 +2.2
baz=27,SNR=20
STKA **Stephens Creek** 27.03 282 ⇑*i*P P 03 42 20.9 +1.4
STKA **Stephens Creek** 27.03 282 P P 03 42 18.9 -0.7
HTT **Hallett** 28.23 277 P P 03 42 32.0 +1.6
baz=28,SNR=15
QLP **Quilpie** 28.25 294 P P 03 42 32.8 +2.3
baz=28,SNR=19
BBOO **Buckleboo** 30.64 275 P P 03 42 52.6 +1.0
baz=31,SNR=31
BBOO **Buckleboo** 30.64 275 P P 03 42 51.7 +0.1
BBOO IAMs_20 IAMs_20 03 54 05.2
comp=Z,16µm,20.0s
RAR **Rarotonga** 30.87 56 P P 03 42 53.2 -0.5
comp=Z,129nm,0.8s,baz=233,slow=9.4,SNR=12
RAR LR LR 03 52 33.3
comp=Z,5µm,21.5s,baz=216,slow=31
RAR **Rarotonga** 30.87 56 P P 03 42 54.2 +0.5
RAR pmax pmax
comp=Z,173nm,1.0s
RAR **Rarotonga** 30.87 56 P P 03 42 54.2 +0.5
RAR IAmb IAmb 03 43 20.6
comp=Z,173nm,0.9s
AFI **Afiamalu** 31.00 29 P P 03 42 55.2 +0.3
comp=Z,29nm,0.6s,baz=160,slow=15,SNR=5.2
AFI LR LR 03 54 51.1
comp=Z,918nm,20.4s,baz=198,slow=35
AFI **Afiamalu** 31.00 29 P P 03 42 55.6 +0.6
CTA **Charters Tower** 31.56 306 LR LR 03 55 39.6
comp=Z,13µm,18.1s,baz=134,slow=36
CTAO **Charters Tower** 31.56 306 P P 03 42 59.8 -0.1
CTAO pmax pmax
comp=Z,168nm,1.0s
CTAO MLR MLR
comp=Z,14µm,19.0s
CTAO **Charters Tower** 31.56 306 P P 03 42 59.8 -0.1
CTAO IAmb IAmb 03 43 05.6
comp=Z,168nm,0.9s
CTAO **Charters Tower** 31.56 306 IAMs_20 IAMs_20 03 55 28.2
comp=Z,14µm,19.0s
FUNA **Funafuti** 33.87 11 P P 03 43 19.3 -0.7
MTSU **Mount Surprise** 34.23 305 P P 03 43 24.7 +1.6
baz=34,SNR=88
HNR **Honiara** 34.54 337 P P 03 43 26.1 +0.3
comp=Z,413nm,0.7s,baz=257,slow=5.3,SNR=17
HNR LR LR 03 55 30.5
comp=Z,5µm,20.8s,baz=180,slow=33
HNR **Honiara** 34.54 337 P P 03 43 26.6 +0.8
HNR pmax pmax
comp=Z,1µm,1.1s
HNR MLR MLR
comp=Z,5µm,18.0s
HNR **Honiara** 34.54 337 P P 03 43 26.6 +0.8
HNR **Honiara** 34.54 337 P P 03 43 29.5 +3.7
comp=Z,1µm,1.1s
QIS **Mount Isa** 35.45 297 P P 03 43 34.5 +0.9
baz=36,SNR=58
VNDA **Vanda** 35.83 184 P P 03 43 38.6 +2.4
comp=Z,22nm,0.9s,baz=0.1,slow=8.7,SNR=26
VNDA LR LR 03 56 19.9
comp=Z,9µm,20.1s,baz=21,slow=33
VNDA **Vanda** 35.83 184 P P 03 43 37.3 +1.0
VNDA pmax pmax
comp=Z,113nm,1.5s
VNDA **Vanda** 35.83 184 P P 03 43 37.3 +1.0
SBA **Scott Base** 35.95 182 P P 03 43 39.2 +1.9
SBA pmax pmax
comp=Z,218nm,1.2s
SBA **Scott Base** 35.95 182 P P 03 43 39.2 +1.9
SBA IAmb IAmb 03 43 43.0
comp=Z,218nm,1.2s
TBI **Tubuai** 36.26 71 *e*P P 03 43 43.0 +2.5
comp=Z,562nm,1.3s
TBI *e*S S 03 49 18.9 +1.4
comp=Z,4µm,32.5s
TBI *e*LR LR 03 53 30.2
comp=Z,18µm,30.0s,baz=242
TBI **Tubuai** 36.26 71 *e*T T 04 21 50.0
comp=Z,80nm,0.3s
AS31 **Alice Springs** 37.31 287 P P 03 43 49.0 -0.6
ASAR **Alice Springs** 37.31 287 P P 03 43 49.5 0.0
comp=Z,14nm,0.4s,baz=121,slow=6.7,SNR=133
ASAR S S 03 49 34.6 +1.0
comp=Z,5.6nm,0.9s,baz=130,slow=15,SNR=4.3
ASAR LR LR 03 58 42.9
comp=Z,13µm,20.0s,baz=132,slow=35
ASAR P3KPbc 04 14 13.1
comp=Z,1.6nm,1.0s,baz=329,slow=4.8,SNR=5.2
ASAR **Alice Springs** 37.31 287 P P 03 43 48.8 -0.7
FORT **Forrest** 37.57 273 P P 03 43 52.4 +0.8
baz=38,SNR=30
FORT **Forrest** 37.57 273 P P 03 43 51.5 -0.1
FORT IAMs_20 IAMs_20 03 57 29.6
comp=Z,14µm,22.0s
COEN **Coen** 38.17 308 P P 03 43 56.9 +0.1
COEN IAmb IAmb 03 43 59.2
comp=Z,104nm,0.9s
COEN IAMs_20 IAMs_20 03 58 13.4
comp=Z,10µm,22.0s
WR0 **Warramunga Arr** 39.29 292 P P 03 44 06.0 -0.1
WR0 IAmb IAmb 03 44 08.9
comp=Z,240nm,1.2s
WR2 **Warramunga Arr** 39.42 292 IAMs_20 IAMs_20 03 59 40.0
comp=Z,13µm,21.0s
WB2 **Warramunga Arr** 39.43 292 IAmb IAmb 03 44 11.0
comp=Z,467nm,1.4s
WRAB **Tennant Creek** 39.44 292 *c i*P P 03 44 07.7 +0.3
WRAB pmax pmax
comp=Z,262nm,1.3s
WRAB **Tennant Creek** 39.44 292 P P 03 44 07.3 -0.1
WRAB IAmb IAmb 03 44 11.0
comp=Z,370nm,1.4s
WR1 **Warramunga Arr** 39.44 292 IAMs_20 IAMs_20 03 58 44.5
comp=Z,13µm,22.0s
WRA **Warramunga Arr** 39.44 292 P P 03 44 07.7 +0.2
comp=Z,101nm,0.8s,baz=127,slow=8.5,SNR=958
WRA ScP ScP 03 49 56.3 -2.6
comp=Z,7.1nm,0.9s,baz=132,slow=3.5,SNR=6.5
WRA S S 03 50 06.3 +0.6
comp=Z,9.7nm,1.0s,baz=132,slow=15,SNR=6.6
WRA LR LR 03 59 30.1
comp=Z,15µm,21.9s,baz=140,slow=35
WB5 **Warramunga Arr** 39.46 292 IAMs_20 IAMs_20 03 59 30.2
comp=Z,13µm,21.0s
WB7 **Warramunga Arr** 39.48 292 IAMs_20 IAMs_20 03 59 30.6
comp=Z,13µm,21.0s
WB0 **Warramunga Arr** 39.52 292 IAmb IAmb 03 44 10.1
comp=Z,102nm,0.8s
PMG **Port Moresby** 39.76 318 LR LR 03 58 58.6
comp=Z,18µm,21.4s,baz=156,slow=34
PMG **Port Moresby** 39.76 318 *c i*P P 03 44 11.9 +1.8
PMG pmax pmax
comp=Z,774nm,1.1s
PMG **Port Moresby** 39.76 318 P P 03 44 11.6 +1.5
PMG **Port Moresby** 39.76 318 P P 03 44 12.6 +2.5
PAE **Paea** 40.03 64 *e*P P 03 44 14.2 +1.9
comp=Z,41nm,1.2s
PAE **Paea** 40.03 64 *e*T T 04 26 31.0
comp=Z,20nm,0.3s
PPT2 **Papeete2** 40.08 64 *e*P P 03 44 15.0 +2.2
comp=Z,158nm,1.4s
PPT2 *e*S S 03 50 16.0 +0.5
comp=Z,4µm,25.6s
PPT2 *e*LQ LQ 03 53 33.0
comp=Z,4µm,26.8s
PPT2 *e*LR LR 03 55 13.4
comp=Z,21µm,27.0s,baz=226
PPT2 **Papeete2** 40.08 64 *e*T T 04 26 35.7
comp=Z,13nm,0.2s
PPTF **Pamatai, Papee** 40.09 64 P P 03 44 15.5 +2.6
PPTF IAmb IAmb 03 44 43.0
comp=Z,364nm,1.1s
PPT **Papeete** 40.09 64 P P 03 44 12.8 -0.1
comp=Z,83nm,1.1s,baz=128,slow=21,SNR=6.0
PPT LR LR 03 57 01.5
comp=Z,6µm,21.6s,baz=238,slow=30
TIAR **Tiarei** 40.26 64 *e*P P 03 44 16.3 +2.1
comp=Z,29nm,1.3s
TIAR **Tiarei** 40.26 64 *e*T T 04 26 48.2
comp=Z,3.2nm,0.3s
WRKA **Warakurna** 40.53 280 P P 03 44 16.1 -0.5
baz=41,SNR=135
MEH **Mehetia** 40.90 66 *e*P P 03 44 21.7 +2.2
comp=Z,94nm,1.4s
MEH **Mehetia** 40.90 66 *e*T T 04 27 36.4
comp=Z,15nm,0.3s
CASY **Casey** 41.45 213 P P 03 44 24.0 +0.5
KNTN **Kanton** 41.45 23 P P 03 44 23.3 -0.7
KNTN IAMs_20 IAMs_20 03 58 34.2
comp=Z,8µm,21.0s
KNTN **Kanton** 41.45 23 P P 03 44 24.4 +0.4
comp=Z,181nm,1.2s
KMBL **Kambalda** 41.87 268 P P 03 44 28.4 +1.0
baz=42,SNR=12
RABL **Rabaul** 42.13 328 P P 03 44 30.0 +0.4
RABL **Rabaul** 42.13 328 P P 03 44 31.0 +1.4
comp=Z,1µm,1.1s
VAH **Vaihoa** 43.06 63 *e*P P 03 44 38.8 +1.6
comp=Z,174nm,1.4s
VAH **Vaihoa** 43.06 63 *e*T T 04 30 18.2
comp=Z,19nm,0.3s
NWAO **Narrogin (SRO)** 44.56 263 LR LR 03 59 58.0
comp=Z,6µm,21.9s,baz=118,slow=31
NWAO **Narrogin (SRO)** 44.56 263 P P 03 44 50.2 +1.1
baz=44,SNR=4.2
NWAO **Narrogin (SRO)** 44.56 263 P P 03 44 50.0 +0.9
NWAO pmax pmax
comp=Z,170nm,1.5s
NWAO **Narrogin (SRO)** 44.56 263 P P 03 44 50.0 +0.9
NWAO **Narrogin (SRO)** 44.56 263 IAMs_20 IAMs_20 03 59 34.5
comp=Z,7µm,22.0s
KLBR **Kellerberrin** 44.83 265 P P 03 44 51.8 +0.6
baz=45,SNR=16
MUN **Mundaring** 45.78 263 P P 03 45 00.2 +1.4
baz=46,SNR=8.9
KDU **Kakadu** 45.82 298 P P 03 44 59.8 +0.6
baz=46,SNR=92
MANU **Manus Island** 46.09 323 P P 03 45 01.1 -0.2
MANU IAmb IAmb 03 45 05.2
comp=Z,155nm,1.2s
BLDU **Ballidu** 46.09 265 P P 03 45 02.6 +1.4
baz=46,SNR=9.2
KNRA **Kununurra** 46.21 291 P P 03 45 02.4 +0.1
KNRA IAmb IAmb 03 45 30.8
comp=Z,293nm,1.4s
KNRA IAMs_20 IAMs_20 04 05 34.0
comp=Z,9µm,18.0s
MTN **Manton Dam** 46.60 296 P P 03 45 06.6 +1.3
baz=47,SNR=3.7
MTN **Manton Dam** 46.60 296 P P 03 45 05.5 +0.2
MTN IAmb IAmb 03 45 07.7
comp=Z,236nm,0.9s
FITZ **Fitzroy Crossi** 46.79 286 P P 03 45 06.9 +0.1
baz=47,SNR=105
FITZ **Fitzroy Crossi** 46.79 286 P P 03 45 06.6 -0.2
FITZ IAmb IAmb 03 45 09.3
comp=Z,185nm,1.3s
FITZ IAMs_20 IAMs_20 04 03 26.1
comp=Z,7µm,22.0s
MEEK **Meekatharra** 46.79 271 P P 03 45 06.5 -0.3
baz=47,SNR=51
RKT **Rikitea** 46.89 83 *e*P P 03 45 10.0 +2.4
comp=Z,123nm,1.4s
RKT *e*pP **sP** 03 45 24.7 -2.8
comp=Z,138nm,1.1s
RKT *e*S S 03 51 55.9 +1.1
comp=Z,4µm,32.0s
RKT *e*LQ LQ 03 56 26.2
comp=Z,5µm,32.8s
RKT *e*LR LR 03 58 23.0
comp=Z,13µm,30.8s
RKT **Rikitea** 46.89 83 *e*T T 04 34 32.4
comp=Z,29nm,0.3s
MORW **Morawa** 47.39 267 P P 03 45 12.0 +0.7
baz=47,SNR=14
MORW **Morawa** 47.39 267 P P 03 45 11.0 -0.4
MORW IAmb IAmb 03 45 27.0
comp=Z,288nm,1.3s
MORW IAMs_20 IAMs_20 04 02 42.5
comp=Z,7µm,20.0s
QSPA **South Pole Qui** 48.02 180 P P 03 45 19.2 +3.2

comp=Z,154nm,0.9s,baz=25,slow=2.8,SNR=288
QSPA LR LR 04 03 03.3
comp=Z,5µm,19.9s,baz=36,slow=33
QSPA South Pole Qui 48.02 180 P P 03 45 17.5 +1.5
PSA00 Pilbara Seismi 48.81 278 P P 03 45 21.2 -1.2
PSA00 IAmb IAmb 03 45 38.1
comp=Z,281nm,1.3s
PSA00 Pilbara Seismi 48.81 278 P P 03 45 21.0 -1.5
PSA00 IAmb IAmb 03 45 37.8
comp=Z,56nm,0.8s
JAY Jayapura 48.94 315 LR LR 04 05 43.9
comp=Z,3µm,20.5s,baz=142,slow=36
JAY Jayapura 48.94 315 P P 03 45 23.3 -0.2
comp=Z,2µmcomp=Z,94nm,1.3s
GENI Genyem 49.16 314 P P 03 45 25.0 -0.1
comp=Z,5µmcomp=Z,206nm,1.6s
SAUI Saumlaki 50.09 301 P P 03 45 33.2 +1.0
SAUI Saumlaki 50.09 301 P P 03 45 33.9 +1.7
comp=Z,10µmcomp=Z,713nm,1.2s
PATS Pohnpei 50.55 341 P P 03 45 38.4 +2.8
baz=51,SNR=8.0
PATS Pohnpei 50.55 341 P P 03 45 36.6 +1.1
PATS IAms_20 IAms_20 04 04 34.7
comp=Z,6µm,21.0s
KWAJ Kwajalein Atol 50.91 353 IAms_20 IAms_20 04 03 17.7
comp=Z,6µm,22.0s
XMAS Kiritimati 51.40 39 P P 03 45 42.1 +0.1
XMAS IAmb IAmb 03 45 44.9
comp=Z,137nm,1.1s
GIRL Giralia 52.33 272 P P 03 45 49.9 +1.0
baz=52,SNR=12
GIRL Giralia 52.33 272 P P 03 45 50.7 +1.7
BAKI Biak 52.56 311 P P 03 45 51.1 +0.4
comp=Z,9µmcomp=Z,601nm,1.5s
TAOE Nuku Hiva Isla 52.69 65 *e*S **S 03 53 15.0 -1.1**
comp=Z,4µm,31.7s
TAOE *e*LR LR 04 01 04.0
comp=Z,14µm,24.3s,baz=225
FAKI Fak Fak 53.42 306 P P 03 45 55.7 -1.3
FAKI IAmb IAmb 03 46 12.7
comp=Z,119nm,0.8s
FAKI Fak Fak 53.42 306 P P 03 45 56.3 -0.8
comp=Z,4µmcomp=Z,3µmcomp=Z,200nm,1.1s
FAKI pP **pP 03 46 09.8 -1.5**
comp=Z,4µmcomp=Z,3µmcomp=Z,200nm,1.1s
SOEI Soe 53.47 293 P P 03 45 58.3 +0.7
SOEI Soe 53.47 293 P P 03 45 59.7 +2.1
comp=Z,8µmcomp=Z,10µmcomp=Z,613nm,1.1s
BATI Baumata 53.57 292 P P 03 46 00.2 +2.0
comp=Z,4µmcomp=Z,4µmcomp=Z,174nm,1.3s
SWI Sorong 55.65 306 P P 03 46 13.6 +0.4
comp=Z,5µmcomp=Z,6µmcomp=Z,436nm,1.5s
MMRI Maumere 55.67 292 IAms_20 IAms_20 04 09 08.6
comp=Z,7µm,22.0s
MMRI Maumere 55.67 292 P P 03 46 14.1 +0.7
comp=Z,5µmcomp=Z,12µmcomp=Z,428nm,1.4s
BASI Baing, Sumba 55.71 289 P P 03 46 16.0 +2.3
comp=Z,3µmcomp=Z,8µmcomp=Z,548nm,1.3s
NLAI Namlea 56.39 300 P P 03 46 19.1 +0.6
comp=Z,7µmcomp=Z,366nm,2.0s
WBSI Waikabubak, Su 56.95 289 P P 03 46 24.0 +1.4
comp=Z,6µmcomp=Z,309nm,0.8s
SANI Sanana 58.01 300 P P 03 46 30.1 +0.2
comp=Z,6µmcomp=Z,6µmcomp=Z,216nm,0.9s
LBMI Labuha 58.13 303 P P 03 46 30.3 -0.5
comp=Z,10µmcomp=Z,693nm,2.1s
PLAI Plampang 58.66 288 P P 03 46 35.8 +1.3
comp=Z,5µmcomp=Z,5µmcomp=Z,218nm,0.9s
MAW Mawson 58.78 205 P P 03 46 36.9 +2.4
comp=Z,64nm,1.0s,baz=124,slow=8.2,SNR=21
MAW Z,7µm,19.8s,baz=110,slow=35 LR LR 04 10 44.2
MAW Mawson 58.78 205 P P 03 46 35.3 +0.8
baz=58,SNR=14
MAW Mawson 58.78 205 P P 03 46 35.8 +1.2
MAW pmax pmax
comp=Z,56nm,1.5s
MAW Mawson 58.78 205 P P 03 46 35.8 +1.2
BELA Belgrano 2 59.09 173 P P 03 46 37.8 +1.1
TNTI Ternate 59.31 304 IAmb IAmb 03 47 04.7
comp=Z,129nm,1.0s
TNTI Ternate 59.31 304 P P 03 46 39.5 +0.5
comp=Z,3µmcomp=Z,4µmcomp=Z,215nm,2.5s
TWSI Taliwang, Sumb 59.35 287 P P 03 46 40.2 +0.9
comp=Z,3µmcomp=Z,3µmcomp=Z,174nm,1.1s
BKSI Bulukumba 59.49 293 P P 03 46 41.1 +0.8
comp=Z,4µmcomp=Z,233nm,1.4s
KAPI Kappang 59.97 293 P P 03 46 43.6 +0.1
KAPI pmax pmax
comp=Z,747nm,1.5s
KAPI Kappang 59.97 293 P P 03 46 43.6 +0.1
KAPI Kappang 59.97 293 IAms_20 IAms_20 04 11 18.7
comp=Z,5µm,22.0s
BNSI Bone 60.17 293 P P 03 46 46.5 +1.6
comp=Z,5µmcomp=Z,11µmcomp=Z,478nm,1.9s
DNP Denpasar 60.59 286 P P 03 46 47.7 0.0
comp=Z,359nm,1.1s
JOHN Johnston Islan 60.70 19 P P 03 46 47.5 -0.8
JOHN IAmb IAmb 03 47 12.2
comp=Z,144nm,0.9s
SPSI Sidrap Palu 60.72 293 P P 03 46 49.0 +0.4
comp=Z,7µmcomp=Z,211nm,2.1s
LUWI Luwuk 60.86 298 IAms_20 IAms_20 04 12 34.4
comp=Z,5µm,21.0s
LUWI Luwuk 60.86 298 P P 03 46 51.0 +1.4
comp=Z,6µmcomp=Z,24µmcomp=Z,2µm,1.5s
SRBI Singaraja 60.99 286 P P 03 46 50.5 0.0
comp=Z,5µmcomp=Z,7µmcomp=Z,283nm,1.8s
KMSI Cibinong 61.30 300 P P 03 46 52.9 +0.4
comp=Z,556nm,1.1s
TTSI Tana Toraja 61.35 294 P P 03 46 53.3 +0.4
comp=Z,5µmcomp=Z,262nm,1.8s
WAKE Wake Island 61.37 353 P P 03 46 53.4 +0.6
JAGI Jajag, Banyuwa 61.49 285 P P 03 46 54.0 +0.1
JAGI IAmb IAmb 03 47 16.4
comp=Z,151nm,1.1s
JAGI Jajag, Banyuwa 61.49 285 P P 03 46 55.8 +1.9
comp=Z,4µmcomp=Z,168nm,1.8s
APSI Ampana 61.70 297 P P 03 46 57.1 +1.9
comp=Z,6µmcomp=Z,278nm,1.7s
ABJI Asem Bagus 61.89 286 P P 03 46 58.1 +1.5
comp=Z,8µmcomp=Z,406nm,1.4s
MRSI Marisa 62.54 299 P P 03 47 00.9 0.0
comp=Z,4µmcomp=Z,6µmcomp=Z,380nm,1.6s
KMMI Kalianget 62.59 286 P P 03 47 01.8 +0.5
comp=Z,7µmcomp=Z,6µmcomp=Z,230nm,2.3s
RPN Rapa Nui 63.52 104 P P 03 47 09.1 +1.8
RPN pmax pmax
comp=Z,330nm,1.4s
RPN Rapa Nui 63.52 104 P P 03 47 09.1 +1.8
RPN IAms_20 IAms_20 04 08 40.8
comp=Z,5µm,18.0s
KBKI Kotabaru 63.67 291 P P 03 47 09.7 +1.3
comp=Z,3µmcomp=Z,238nm,1.5s
TOLI2 Tolitoli 63.78 298 P P 03 47 08.5 -0.6
TOLI2 IAms_20 IAms_20 04 15 38.8
comp=Z,4µm,22.0s
SYO Syowa Base 63.99 197 ‖ *i*P **P 03 47 10.8 +1.1**
SYO Syowa Base 63.99 197 ‖ *e*pP pP 03 47 22.1 -2.1
SYO Syowa Base 63.99 197 ‖ *es*P sP 03 47 28.2 -1.9
WOJI Wonogiri, Jawa 64.24 283 P P 03 47 13.1 +0.9
comp=Z,4µmcomp=Z,194nm,1.1s
BBKI Banjar Baru 64.48 290 P P 03 47 15.2 +1.4
comp=Z,9µmcomp=Z,444nm,1.7s
PMSA Palmer Station 64.49 156 P P 03 47 14.3 +1.3
comp=Z,79nm,1.0s,baz=311,slow=5.4,SNR=4.5
PMSA Palmer Station 64.49 156 P P 03 47 14.8 +1.7
PMSA IAmb IAmb 03 47 16.2
comp=Z,168nm,1.1s
DDMP Don Marcelino, 64.51 306 *e*P **P 03 47 12.7 -1.2**
BKB Balikpapan 64.64 293 P P 03 47 16.1 +1.3
BKB Balikpapan 64.64 293 P P 03 47 15.5 +0.8
comp=Z,8µmcomp=Z,17µmcomp=Z,1µm,1.7s
MATI Mati 64.85 307 *e*P P 03 47 31.6 +16
SMKI Samarinda 65.02 294 P P 03 47 18.7 +1.5
comp=Z,7µmcomp=Z,13µmcomp=Z,660nm,1.5s
SMRI Semarang 65.13 284 P P 03 47 18.1 +0.1
SMRI Semarang 65.13 284 P P 03 47 17.3 -0.7
comp=Z,7µmcomp=Z,275nm,1.0s
DAV Davao City (W) 65.35 306 P P 03 47 20.0 +0.7
DAV Davao City (W) 65.35 306 IAms_20 IAms_20 04 13 48.8
comp=Z,4µm,22.0s
SKMP Bagumbayan, Su 65.55 305 *e*P **P 03 47 20.5 -0.1**
MTKI Muara Teweh, K 66.24 292 P P 03 47 26.3 +1.2
comp=Z,4µmcomp=Z,10µmcomp=Z,461nm,1.7s
BUKP Musuan 66.30 306 *e*P **P 03 47 26.9 +1.4**
XMIS Christmas Isla 66.34 277 P P 03 47 26.1 +0.3
XMIS IAmb IAmb 03 47 41.9
comp=Z,266nm,1.2s
SNAA Sanae 66.49 181 P P 03 47 27.6 +1.6
SNAA Sanae 66.49 181 P P 03 47 27.6 +1.6
comp=Z,177nm,1.0s,baz=181,slow=6.3,SNR=210
SNAA Sanae 66.49 181 P P 03 47 27.4 +1.4
SNAA pmax pmax
comp=Z,350nm,1.2s
SNAA Sanae 66.49 181 P P 03 47 27.4 +1.4
NVL N'lazarevskaya 66.63 187 *e*P **P 03 47 26.6 -0.2**
NVL pmax pmax
comp=Z,455nm,1.4s
NVL MLR MLR
comp=Z,3µm,16.0s
CISI Cisompet, Garu 66.69 281 P P 03 47 28.4 +0.3
CISI IAms_20 IAms_20 04 15 27.5
comp=Z,4µm,21.0s
CISI Cisompet, Garu 66.69 281 P P 03 47 29.4 +1.3
comp=Z,7µmcomp=Z,432nm,1.1s
BUTP Butuan 66.84 308 *e*P P 03 47 36.1 +7.2
VNA3 Neumayer Olymp 66.94 179 P P 03 47 30.5 +1.6
VNA3 Neumayer Olymp 66.94 179 PP PP 03 49 56.4 +0.3
VNA3 Neumayer Olymp 66.94 179 PcP **PcP 03 47 57.4 +0.4**
VNA3 S **S 03 56 17.0 -0.8**
VNA3 Neumayer Olymp 66.94 179 pP pP 03 47 43.0 -0.4
VNA3 Neumayer Olymp 66.94 179 sP sP 03 47 50.9 +1.5
CGP Cagayan de Oro 66.98 306 ‖ *e*P P 03 47 37.0 +7.3
JCJI Jatiwangi 67.08 282 P P 03 47 30.5 0.0
comp=Z,563nm,1.0s
GLSP General Luna, 67.19 309 *e*P **P 03 47 29.7 -1.4**
VNA2 Neumayer--Watz 67.28 180 P P 03 47 32.8 +1.9
baz=171,slow=6.5
VNA2 Neumayer--Watz 67.28 180 PKiKP **PKiKP 03 53 55.6 -0.8**
VNA2 Neumayer--Watz 67.28 180 PP PP 03 49 59.5 +0.5
VNA2 Neumayer--Watz 67.28 180 PcP **PcP 03 47 58.7 +0.3**
VNA2 S **S 03 56 19.8 -2.0**
VNA2 Neumayer--Watz 67.28 180 pP pP 03 47 47.4 +1.8
VNA2 Neumayer--Watz 67.28 180 sP sP 03 47 52.1 +0.7
PAGZ Pagadian 67.30 305 *e*P **P 03 47 31.5 -0.3**
VNA1 Neumayer--Stat 67.55 180 P P 03 47 34.6 +1.9
VNA1 Neumayer--Stat 67.55 180 PP PP 03 49 58.3 -3.0
VNA1 Neumayer--Stat 67.55 180 PcP **PcP 03 47 59.9 +0.4**
VNA1 Neumayer--Stat 67.55 180 pP pP 03 47 47.6 +0.3
VNA1 Neumayer--Stat 67.55 180 sP sP 03 47 52.1 -1.0
MWH Moku'aweowe 67.76 32 IAms_20 IAms_20 04 12 31.7
comp=Z,3µm,20.0s
HUH Hualalai 67.85 32 IAms_20 IAms_20 04 12 54.0
comp=Z,4µm,21.0s
NPOC North of Pu'u 67.87 32 IAms_20 IAms_20 04 11 59.7
comp=Z,3µm,19.0s
HMH Humu'ula Sheep 67.92 32 P P 03 47 36.4 +0.5
HMH IAmb IAmb 03 48 02.0
comp=Z,303nm,1.3s
HMH IAMs_20 IAMs_20 04 20 34.8
comp=Z,4µm,19.0s
DBJI Dramaga 68.15 281 P P 03 47 37.9 +0.7
comp=Z,314nm,1.0s
MSLP Massin 68.22 308 *e*P **P 03 47 40.5 +2.9**
MYLDM Lahad Datu 68.33 299 P P 03 47 39.4 +1.1
AIS Amsterdam Isla 69.47 237 P P 03 47 45.3 +0.2
AIS IAmb IAmb 03 48 07.6
comp=Z,377nm,1.4s
BLSI Bandar Lampung 70.05 281 P P 03 47 49.5 +0.5
comp=Z,4µmcomp=Z,158nm,0.5s
USHA Ushuaia 70.14 147 P P 03 47 50.9 +1.9
comp=Z,43nm,0.5s,baz=220,slow=7.9,SNR=3.8
MG04 Isla Riesco 70.23 144 P P 03 47 51.3 +1.8
MG04 IAmb IAmb 03 48 15.3
comp=Z,358nm,1.2s
GO10 Punta Arenas 70.25 145 P P 03 47 51.7 +1.9
GO10 IAmb IAmb 03 47 53.5
comp=Z,150nm,0.9s
KKM Kota Kinabalu 70.47 298 P P 03 47 51.6 0.0
KKM IAMs_20 IAMs_20 04 19 51.1
comp=Z,3µm,20.0s
KASI Kota Agung 70.49 280 P P 03 47 52.3 +0.6
comp=Z,3µmcomp=Z,192nm,1.2s
SBUM Sibu 70.53 292 P P 03 47 52.7 +0.8
SBUM IAMs_20 IAMs_20 04 20 25.7
comp=Z,5µm,21.0s
MG05 Puerto Natales 70.65 143 P P 03 47 53.0 +0.9
MG05 IAmb IAmb 03 47 54.9
comp=Z,105nm,1.1s
GO09 Cerro Castillo 71.00 143 IAmb IAmb 03 47 57.4
comp=Z,124nm,1.1s
GO09 IAMs_20 IAMs_20 04 12 20.2
comp=Z,5µm,20.0s
LWLI Liwa 71.15 281 P P 03 47 57.0 +1.1
comp=Z,175nm,1.2s
KSM Kuching 71.16 290 P P 03 47 56.1 +0.4
KSM IAmb IAmb 03 48 12.9
comp=Z,254nm,1.2s
KSM IAMs_20 IAMs_20 04 21 44.1
comp=Z,3µm,20.0s
MDSI Maura Dua 71.42 281 P P 03 47 57.5 +0.2
comp=Z,2µmcomp=Z,130nm,2.1s
BATP Bataraza 71.51 301 *e*P **P 03 47 58.0 +0.2**
PPBI Pangkal Pinang 71.58 284 P P 03 47 58.8 +0.5
comp=Z,14µmcomp=Z,224nm,2.2s
PMBI Mesambang 72.05 283 IAMs_20 IAMs_20 04 17 29.3
comp=Z,4µm,22.0s
ENPP El Nido 72.33 304 *e*P **P 03 48 02.0 -0.7**
LHSI Lahat 72.34 281 P P 03 48 05.0 +2.1
comp=Z,4µmcomp=Z,200nm,1.7s
MNAI Manna 72.40 280 IAMs_20 IAMs_20 04 19 42.7
comp=Z,4µm,20.0s
JCNP Jose Panganiba 72.79 309 *e*P **P 03 48 01.8 -3.6**
LQP Lukban 73.33 307 ‖ *e*P P 03 48 21.8 +13
TGY Tagaytay City 73.67 307 P P 03 48 11.3 +0.6
comp=Z,130nm,0.3s,baz=221,slow=3.1,SNR=6.2
DSRI Dabo 73.86 284 P P 03 48 12.0 +0.1
comp=Z,2µmcomp=Z,2µmcomp=Z,84nm,1.7s
MACP Maragondon, Ca 73.93 307 *e*P **P 03 48 11.3 -0.8**
JCJ Chichijima 74.55 332 P P 03 48 15.6 +0.1
comp=Z,95nm,0.9s,baz=269,slow=9.0,SNR=3.9
JCJ Chichijima 74.55 332 P P 03 48 17.1 +1.6
KRJI Kerinci 75.03 281 P P 03 48 18.7 0.0
comp=Z,765nm,1.1s
MYKOM Kota Tinggi 75.95 286 P P 03 48 24.2 +0.3
MYKOM IAmb IAmb 03 48 40.7
comp=Z,241nm,1.2s
GO07 Milladeo Hill, 76.11 136 P P 03 48 26.3 +1.8
GO07 IAmb IAmb 03 48 48.6
comp=Z,206nm,1.2s
APYP Conner 76.47 310 *e*P **P 03 48 26.6 0.0**
EFI East Falkland 76.58 150 P P 03 48 28.6 +1.7
EFI pmax pmax
comp=Z,315nm,1.2s
EFI East Falkland 76.58 150 P P 03 48 28.6 +1.7
EFI East Falkland 76.58 150 IAMs_20 IAMs_20 04 14 27.9
comp=Z,4µm,22.0s
BKNI Bangkinang 76.98 282 P P 03 48 29.1 -0.7
BKNI IAmb IAmb 03 48 45.4
comp=Z,199nm,1.1s
BKNI IAMs_20 IAMs_20 04 22 32.2
comp=Z,4µm,21.0s
BKNI Bangkinang 76.98 282 P P 03 48 28.5 -1.2
comp=Z,3µmcomp=Z,200nm,1.3s
LL02 Futaleuf 76.99 137 IAmb IAmb 03 48 53.5
comp=Z,228nm,1.2s
LL01 San Ignacio de 77.28 136 IAmb IAmb 03 49 00.1
comp=Z,122nm,1.1s
LL03 Petrohue 78.18 135 IAmb IAmb 03 48 59.2
comp=Z,230nm,1.3s
LL04 Puerto Octay 78.34 135 IAmb IAmb 03 48 54.9
comp=Z,197nm,1.4s
MNSI Mandailing Nat 78.36 282 P P 03 48 36.6 -0.8
comp=Z,3µmcomp=Z,122nm,1.1s
PLCA Paso Flores 79.44 136 P P 03 48 45.6 +2.5
comp=Z,48nm,1.1s,baz=221,slow=5.3,SNR=46
PLCA LR LR 04 15 56.0
comp=Z,5µm,21.6s,baz=213,slow=30
PLCA Paso Flores 79.44 136 P P 03 48 45.0 +1.9
PLCA pmax pmax
comp=Z,310nm,1.5s
PLCA Paso Flores 79.44 136 P P 03 48 45.0 +1.9
PLCA IAmb IAmb 03 49 07.6
comp=Z,310nm,1.5s
IPM Ipoh 79.84 285 P P 03 48 44.9 -0.6
IPM IAmb IAmb 03 49 01.7
comp=Z,308nm,1.4s
IPM IAMs_20 IAMs_20 04 23 02.1
comp=Z,4µm,21.0s
DLV T Lat 79.93 296 IAmb IAmb 03 49 03.6
comp=Z,367nm,1.3s
JOW Kunigami 80.12 320 P P 03 48 46.8 +0.2
comp=Z,12nm,0.7s,baz=328,slow=1.7,SNR=3.3
JOW Kunigami 80.12 320 IAMs_20 IAMs_20 04 21 29.3
comp=Z,3µm,21.0s
RPSI Rantau Prapat 80.13 283 IAmb IAmb 03 49 02.6
comp=Z,260nm,1.5s
GSI Gunungsitoli 80.17 281 IAMs_20 IAMs_20 04 24 22.7
comp=Z,3µm,22.0s
GSI Gunungsitoli 80.17 281 P P 03 48 48.9 +1.6
comp=Z,10µmcomp=Z,511nm,1.8s
TWG Pinlang 80.52 312 IAMs_20 IAMs_20 04 21 12.4
comp=Z,3µm,22.0s
KULM Kulim 80.67 286 P P 03 48 50.1 +0.1
KULM IAmb IAmb 03 48 52.3
comp=Z,304nm,1.5s
KULM IAMs_20 IAMs_20 04 23 48.1
comp=Z,4µm,22.0s
HOPE Hope Point 80.69 163 P P 03 48 50.4 +1.0
HOPE pmax pmax
comp=Z,361nm,1.4s
HOPE Hope Point 80.69 163 P P 03 48 50.4 +1.0
HOPE IAmb IAmb 03 48 52.5
comp=Z,361nm,1.4s
YOJ Yonaguni jima 80.80 315 P P 03 48 49.4 -0.9
YOJ pmax pmax
comp=Z,123nm,1.0s
YOJ Yonaguni jima 80.80 315 P P 03 48 49.4 -0.9
YOJ IAmb IAmb 03 49 10.4
comp=Z,123nm,1.0s
YOJ IAMs_20 IAMs_20 04 19 18.2
comp=Z,3µm,22.0s
YULB Yu-li 80.85 313 IAMs_20 IAMs_20 04 20 57.5
comp=Z,2µm,21.0s
JHJ2 Mitsune 80.86 332 IAMs_20 IAMs_20 04 21 20.2
comp=Z,3µm,21.0s
TSI Tuntungan 80.94 283 P P 03 48 51.5 +0.1
comp=Z,464nm,1.7s
TPUB Ta-pu 81.14 312 IAMs_20 IAMs_20 04 22 05.2
comp=Z,3µm,21.0s
SSLB Suanglung 81.36 313 IAMs_20 IAMs_20 04 21 23.8
comp=Z,4µm,22.0s
TPTI 81.78 282 P P 03 48 55.9 0.0
comp=Z,2µmcomp=Z,64nm,0.9s
YHNB Yeheng 81.83 314 IAMs_20 IAMs_20 04 21 08.6
comp=Z,2µm,21.0s
TATO Taipei 82.02 314 IAMs_20 IAMs_20 04 21 49.3
comp=Z,2µm,22.0s
BI02 San Fabin de 82.04 133 IAmb IAmb 03 49 15.4
comp=Z,184nm,1.1s
JSG Sagara 82.84 332 IAmb IAmb 03 49 22.7
comp=Z,202nm,1.0s
MLSI Meulaboh, Aceh 83.03 282 P P 03 49 02.6 +0.2
comp=Z,5µmcomp=Z,246nm,1.1s
JSU Suzuyama 83.10 324 IAmb IAmb 03 49 18.0
comp=Z,241nm,1.5s
LHMI Lhok Sumawe 83.29 283 IAmb IAmb 03 49 20.9
comp=Z,149nm,1.1s
LHMI IAMs_20 IAMs_20 04 27 25.6
comp=Z,3µm,20.0s
LHMI Lhok Sumawe 83.29 283 P P 03 49 03.9 +0.2
comp=Z,4µmcomp=Z,5µmcomp=Z,187nm,2.1s
JYT Yasato 83.57 334 P P 03 49 04.1 -0.4
JYT IAmb IAmb 03 49 20.4
comp=Z,204nm,1.4s
QZH Quanzhou 83.57 312 ⇑ *i*P **P 03 49 05.4 +0.6**
QZH pP **pP 03 49 19.8 -0.1**
QZH SKS **S 03 59 15.9 -7.0**
QZH S **SKSac 03 59 21.3 -1.8**
QZH pmax pmax
comp=Z,690nm,6.5s
QZH LR LR
comp=Z,790nm,20.4s
QZH LR LR
comp=Z,1µm,20.4s
QZH LR LR
comp=Z,3µm,30.3s
JMN Monobe 83.61 328 IAmb IAmb 03 49 22.2
comp=Z,172nm,1.2s
JMN IAMs_20 IAMs_20 04 21 39.2
comp=Z,2µm,21.0s
BO02 Sierra Bellavi 83.69 132 IAmb IAmb 03 49 24.0
comp=Z,276nm,1.2s
BO01 Tunca 83.82 132 P P 03 49 07.5 +1.3
JGF Kuroka 83.97 331 IAMs_20 IAMs_20 04 23 08.6
comp=Z,2µm,22.0s
VA05 Santo Domingo 84.06 131 IAmb IAmb 03 49 33.4
comp=Z,121nm,1.2s
QIZ Qiongzhong 84.25 302 P P 03 49 07.3 -1.1
QIZ pP **pP 03 49 23.8 +0.2**
QIZ PP **PP 03 52 25.1 +1.2**
QIZ S **S 03 59 28.6 -1.4**
QIZ sS **sS 03 59 53.6 -1.6**
QIZ SS **SS 04 05 01.3 +0.4**
QIZ pmax pmax
comp=Z,32nm,1.5s
QIZ pmax pmax
comp=Z,660nm,6.7s
QIZ LR LR
comp=Z,1µm,22.3s
QIZ LR LR
comp=Z,1µm,21.1s
QIZ LR LR
comp=Z,2µm,25.5s
QIZ Qiongzhong 84.25 302 IAmb IAmb 03 49 24.6
comp=Z,233nm,1.5s
JNU Nakatsue 84.31 325 P P 03 49 08.5 0.0
comp=Z,56nm,1.2s,baz=96,slow=3.1,SNR=7.0
MT09 Talagante 84.33 131 IAmb IAmb 03 49 26.9
comp=Z,265nm,1.5s
JWT Wachi 84.40 330 IAmb IAmb 03 49 26.1
comp=Z,134nm,1.1s
JWT IAMs_20 IAMs_20 04 23 28.1
comp=Z,2µm,22.0s
MJAR Matsushiro Arr 84.52 332 P P 03 49 09.2 -0.2
comp=Z,14nm,0.9s,baz=164,slow=6.4,SNR=25
MJAR LR LR 04 24 36.3
comp=Z,732nm,21.7s,baz=165,slow=34
MJAR Matsushiro Arr 84.52 332 P P 03 49 09.1 -0.4
MAJO Matsushiro 84.52 332 *c i*P **P 03 49 09.2 -0.2**
MAJO pmax pmax
comp=Z,67nm,1.6s
MAJO Matsushiro 84.52 332 P P 03 49 09.3 -0.1
MAT Matsushiro 84.52 332 P P 03 49 08.5 -0.9
MAT S **S 03 59 26.0 -6.0**
MT02 Curacav 84.62 131 IAmb IAmb 03 49 29.5
comp=Z,281nm,1.5s
MT05 Renca 84.75 131 P P 03 49 12.0 +0.9
MT03 Universidad Ad 84.80 131 IAmb IAmb 03 49 42.5
comp=Z,127nm,1.2s
JMM Marumori 84.87 335 IAMs_20 IAMs_20 04 21 16.6
comp=Z,4µm,22.0s
JHS Saijyo 85.03 328 IAmb IAmb 03 49 33.2
comp=Z,120nm,1.2s
JHS IAMs_20 IAMs_20 04 22 37.6
comp=Z,3µm,22.0s
GZH Guangzhou 85.15 307 P P 03 49 14.8 +2.0
GZH SKS **S 03 59 31.0 -7.7**
GZH S **SKKSac 03 59 41.3 +1.6**
GZH LR LR
comp=Z,920nm,18.7s
GZH LR LR
comp=Z,1µm,20.8s
JSD Sado 85.85 333 P P 03 49 15.7 -0.3
JSD IAmb IAmb 03 49 32.4
comp=Z,124nm,1.2s
CMBY CAMPBELL BAY 86.69 282 *e*P **P 03 49 19.9 -0.8**
CMBY IAmb IAmb 03 49 25.3
comp=Z,206nm,0.8s
GO04 Tololo Observa 87.10 129 IAmb IAmb 03 49 40.9
comp=Z,113nm,0.9s
SSE Sheshan 87.11 317 P P 03 49 23.8 +1.5
SSE pmax pmax
comp=Z,15nm,0.8s
SSE pmax pmax
comp=Z,260nm,7.1s
SSE LR LR
comp=Z,570nm,20.2s
SSE LR LR
comp=Z,620nm,19.6s
SSE Sheshan 87.11 317 IAMs_20 IAMs_20 04 27 35.0
comp=Z,2µm,20.0s
ZON Zonda 87.28 131 IAmb IAmb 03 49 51.6
comp=Z,170nm,1.5s
LCO Las Campanas 88.02 128 P P 03 49 28.9 +1.5
LCO pmax pmax
comp=Z,157nm,1.2s
LCO Las Campanas 88.02 128 P P 03 49 28.9 +1.5

LCO IAmb IAmb 03 49 46.0
comp=Z,157nm,1.1s
AC04 Llanos de Chal 88.39 127 IAmb IAmb 03 49 48.8
comp=Z,136nm,1.2s
TJN Taejon 88.59 325*c iP* **P 03 49 30.5 +1.3**
NJ2 Nanjing 89.06 316 ⇓*iP* **P 03 49 32.6 +1.0**
NJ2 pP **pP 03 49 46.6 -0.2**
NJ2 sP **sP 03 49 52.0 -0.6**
NJ2 PP **PP 03 53 05.6 +3.0**
NJ2 SKS **SKSac 03 59 55.8 -1.1**
NJ2 S **S 04 00 17.1 +1.0**
NJ2 sS **sS 04 00 40.9 -0.8**
NJ2 pmax pmax
comp=Z,64nm,1.2s
NJ2 pmax pmax
comp=Z,1μm,3.5s
NJ2 LR LR
comp=Z,1μm,20.2s
NJ2 LR LR
comp=Z,910nm,20.3s
NJ2 LR LR
comp=Z,2μm,23.1s
YUK Yuzh-Kuril'sk 89.17 341 *e*P P 03 49 24.2 -7.6
YUK *e* 03 52 58.1
YUK *e* 04 00 16.3
YUK *e*SS SS 04 06 10.2 -2.2
YUK pmax pmax
comp=Z,501nm,1.2s
YUK pmax pmax
comp=E,246nm,1.3s
YUK pmax pmax
comp=N,400nm,0.8s
JEW Eniwo 89.24 337 IAMs_20 IAMs_20 04 24 15.0
comp=Z,3μm,21.0s
KSRS Korea Array 89.26 326 P **P 03 49 32.8 +0.4**
comp=Z,50nm,1.0s,baz=145,slow=5.5,SNR=114
KSRS pP **pP 03 49 47.0 -0.6**
comp=Z,36nm,1.0s,baz=149,slow=4.9,SNR=10
KSRS LR LR 04 27 10.1
comp=Z,1μm,20.5s,baz=148,slow=34
KSAR Wonju Array Be 89.27 326 P **P 03 49 32.9 +0.5**
KSAR Wonju Array Be 89.27 326 P **P 03 49 32.9 +0.5**
KS19 Wonju Array Si 89.33 326 P **P 03 49 34.0 +1.3**
KS19 IAmb IAmb 03 49 50.5
comp=Z,126nm,1.3s
SLVN Son La 89.73 299 IAMs_20 IAMs_20 04 35 10.1
comp=Z,2μm,20.0s
INCN Inchon 89.83 325 P **P 03 49 35.1 0.0**
INCN pmax pmax
comp=Z,145nm,1.3s
INCN Inchon 89.83 325 P **P 03 49 35.1 0.0**
INCN IAmb IAmb 03 49 52.7
comp=Z,145nm,1.3s
JKA Kamikawa-asahi 90.09 339 IAmb IAmb 03 49 57.3
comp=Z,130nm,1.2s
ASAJ Asahikawa 90.09 339 P **P 03 49 37.2 +1.1**
comp=Z,39nm,1.1s,baz=290,slow=17,SNR=6.0
ASAJ pP **pP 03 49 51.2 -0.2**
comp=Z,54nm,1.1s,baz=259,slow=8.9,SNR=5.0
AC01 Pan de Azucar 90.20 126 IAmb IAmb 03 49 56.4
comp=Z,136nm,1.4s
LPA La Plata 90.23 140 *e*P **P 03 49 36.8 -0.5**
LPA pP **pP 03 49 49.0 -3.5**
LPA sP **sP 03 49 55.4 -2.9**
LPA PP **PP 03 53 10.5 -0.2**
LPA pPP 03 53 21.8
LPA PPP PPP 03 55 04.7
LPA S **S 04 00 20.9 -6.4**
LPA sS **sS 04 00 53.3 +0.7**
LPA PS PS 04 01 48.0 +8.5
LPA PSP PSP 04 02 14.5
LPA SS **SS 04 06 28.9 +2.8**
LPA SSS SSS 04 10 08.2
WHN Wuhan 90.28 312 ⇓P **P 03 49 38.4 +1.1**
WHN pP **pP 03 49 53.3 +0.7**
WHN sP **sP 03 49 57.8 -0.5**
WHN PP **PP 03 53 16.6 +4.4**
WHN pPP 03 53 27.3
WHN SKS **SKSac 04 00 01.3 -2.7**
WHN S **S 04 00 27.4 0.0**
WHN sS **sS 04 00 53.5 +0.5**
WHN pmax pmax
comp=Z,300nm,1.2s
WHN LR LR
comp=Z,16μm,33.8s
WHN LR LR
comp=Z,13μm,33.2s
WHN LR LR
comp=Z,11μm,33.7s
PBA Port Blair 90.69 285 IAmb IAmb 03 49 53.6
comp=Z,132nm,1.3s
CM04 Chiang Mai Arr 90.94 294 P **P 03 49 42.0 +1.3**
CM36 Chiang Mai Arr 90.94 294 P **P 03 49 42.0 +1.3**
CM09 Chiang Mai Arr 90.96 294 P **P 03 49 42.6 +1.8**
CM05 Chiang Mai Arr 90.96 294 P **P 03 49 42.4 +1.5**
CM01 Chiang Mai Arr 90.97 294 P **P 03 49 42.0 +1.2**
CM02 Chiang Mai Arr 90.98 294 P **P 03 49 42.6 +1.7**
CM13 Chiang Mai Arr 91.00 294 P **P 03 49 42.6 +1.6**
CM31 Chiang Mai Arr 91.00 294 P **P 03 49 42.9 +1.8**
CM31 Chiang Mai Arr 91.00 294 IAmb IAmb 03 49 44.2
comp=Z,96nm,1.1s
CMAR Chiang Mai Arr 91.00 294 P **P 03 49 42.5 +1.4**
comp=Z,42nm,0.9s,baz=152,slow=3.4,SNR=118
CMAR pP **pP 03 49 56.7 +0.4**
comp=Z,33nm,0.9s,baz=155,slow=3.1,SNR=6.3
CMAR PP **PP 03 53 19.4 +1.3**
comp=Z,5.2nm,0.8s,baz=150,slow=9.0,SNR=6.1
CMAR PKPPKP **P'P'df 04 15 16.9 +3.4**
comp=Z,1.0nm,0.3s,baz=294,slow=2.9,SNR=6.3
CMAR LR LR 04 35 22.2
comp=Z,1μm,18.9s,baz=173,slow=39
CMAR Chiang Mai Arr 91.00 294 P **P 03 49 43.8 +2.8**
CM15 Chiang Mai Arr 91.01 294 P **P 03 49 42.8 +1.7**
CM35 Chiang Mai Arr 91.01 294 P **P 03 49 42.0 +1.0**
CM34 Chiang Mai Arr 91.14 294 P **P 03 49 42.0 +0.4**
CM32 Chiang Mai Arr 91.20 294 P **P 03 49 43.0 +1.1**
CMMT Chiang Mai 91.25 294 P **P 03 49 42.4 +0.3**
CHTO Chiang Mai 91.25 294 P **P 03 49 43.3 +1.2**
CHTO pmax pmax
comp=Z,151nm,1.5s
CHTO MLR MLR
comp=Z,2μm,22.0s
CHTO Chiang Mai 91.25 294 P **P 03 49 43.3 +1.2**
CHTO Chiang Mai 91.25 294 IAMs_20 IAMs_20 04 30 31.5
comp=Z,2μm,22.0s
CM33 Chiang Mai Arr 91.25 294 P **P 03 49 43.2 +1.0**
PB14 IPOC Station P 91.45 125 IAmb IAmb 03 50 02.6
comp=Z,52nm,1.2s
DGPR DIGLIPUR 91.59 286 *e*P **P 03 49 43.2 -0.5**
DGPR IAmb IAmb 03 49 46.7
comp=Z,19nm,0.9s
GYA Guiyang 91.69 305 ⇑P **P 03 49 45.5 +1.4**
GYA pP pP 03 49 59.9 +0.5
GYA sP sP 03 50 05.6 +0.4
GYA PP **PP 03 53 21.4 -2.2**
GYA SKS **SKSac 04 00 07.8 -4.8**
GYA S **S 04 00 39.5 -1.3**
GYA pmax pmax
comp=Z,4.0nm,1.1s
GYA LR LR
comp=Z,200nm,24.2s
GYA LR LR
comp=Z,250nm,25.0s
GYA LR LR
comp=Z,550nm,24.5s
YSS Yuzh-Sakhalins 92.68 340 *e*P **P 03 49 50.9 +2.9**
YSS *e**PP **pP 03 50 04.5 +1.2**
YSS *e**SP **sP 03 50 10.0 +0.9**
YSS eS **S 04 00 48.6 +0.2**
YSS *e*PS PS 04 02 06.6 -0.2
YSS *e*SS **SS 04 07 01.8 -1.1**
YSS pmax pmax
comp=Z,300nm,5.9s
YSS pmax pmax
comp=Z,30nm,1.4s
YSS smax smax
comp=N,2μm,9.6s
YSS MLR MLR
comp=Z,2μm,18.0s
YSS MLR MLR
comp=N,1μm,19.0s
YSS Yuzh-Sakhalins 92.68 340 IAMs_20 IAMs_20 04 32 06.2
comp=Z,2μm,20.0s
ENH Enshi 92.81 309 P **P 03 49 48.9 -0.2**
ENH IAMs_20 IAMs_20 04 27 21.9
comp=Z,2μm,21.0s
PB15 IPOC Station P 93.07 125 IAmb IAmb 03 50 10.5
comp=Z,73nm,1.1s
KMI Kunming 93.18 301 ⇑P **P 03 49 52.5 +1.3**
KMI pP pP 03 50 07.8 +1.3
KMI sP sP 03 50 13.8 +1.5
KMI PP **PP 03 53 37.6 +2.1**
KMI SKS **SKSac 04 00 19.8 -1.4**
KMI S **S 04 00 51.1 -3.2**
KMI pmax pmax
comp=Z,23nm,1.9s
KMI pmax pmax
comp=Z,390nm,6.9s
KMI LR LR
comp=Z,900nm,25.7s
KMI LR LR
comp=Z,2μm,23.1s
KMI LR LR
comp=Z,3μm,23.1s
KMI Kunming 93.18 301 P **P 03 49 52.3 +1.1**
KMI pmax pmax
comp=Z,42nm,1.2s
KMI MLR MLR
comp=Z,2μm,22.0s
KMI Kunming 93.18 301 P **P 03 49 52.3 +1.1**
KMI IAmb IAmb 03 50 14.5
comp=Z,42nm,1.2s
DL2 Dalian 93.22 322 P **P 03 49 51.6 +0.9**
DL2 PP **PP 03 53 36.4 +1.0**
DL2 SKS **SKSac 04 00 14.8 -5.5**
DL2 S **S 04 00 52.8 -0.8**
DL2 sS **sS 04 01 20.0 +0.7**
DL2 pmax pmax
comp=Z,24nm,1.2s
DL2 pmax pmax
comp=Z,160nm,6.6s
DL2 LR LR
comp=Z,2μm,22.2s
DL2 LR LR
comp=Z,2μm,20.8s
DL2 LR LR
comp=Z,3μm,23.1s
TIA Tai'an 93.22 318 P **P 03 49 51.8 +0.9**
TIA pmax pmax
comp=Z,33nm,0.9s
TIA pmax pmax
comp=Z,270nm,4.6s
TIA LR LR
comp=Z,1μm,19.9s
TIA LR LR
comp=Z,720nm,18.5s
TIA LR LR
comp=Z,2μm,19.2s
PB06 IPOC Station P 93.38 125 IAmb IAmb 03 50 11.7
comp=Z,77nm,1.1s
USA0B Ussuriysk Arra 93.49 332*c iP* **P 03 49 52.5 +0.7**
USA0B Ussuriysk Arra 93.49 332 P **P 03 49 52.0 +0.2**
USRK Ussuriysk Ar. 93.49 332 P **P 03 49 52.2 +0.3**
comp=Z,6.9nm,0.9s,baz=138,slow=6.9,SNR=9.4
USRK pP **pP 03 50 06.3 -0.9**
comp=Z,6.4nm,1.0s,baz=128,slow=3.1,SNR=3.3
USRK LR LR 04 30 19.0
comp=Z,700nm,20.8s,baz=138,slow=34
SKR Severo-Kuril's 93.59 349 *e*P **P 03 49 52.4 +0.3**
SKR *e*S **S 04 00 56.6 +0.4**
SKR pmax pmax
comp=Z,200nm,6.1s
SKR MLR MLR
comp=Z,800nm,20.0s
LVC Limon Verde 93.86 125 P **P 03 49 56.8 +2.0**
LVC pmax pmax
comp=Z,31nm,1.3s
LVC Limon Verde 93.86 125 P **P 03 49 56.8 +2.0**
PB07 IPOC Station P 93.92 124 IAmb IAmb 03 49 59.0
comp=Z,44nm,1.1s
PB07 IAMs_20 IAMs_20 04 22 02.0
comp=Z,3μm,22.0s
ADK Adak 94.03 6 IAMs_20 IAMs_20 04 23 46.7
comp=Z,3μm,22.0s
PATCX Punta Patache 94.43 123 IAMs_20 IAMs_20 04 21 56.5
comp=Z,3μm,22.0s
PB01 IPOC Station P 94.67 124 IAMs_20 IAMs_20 04 23 09.1
comp=Z,3μm,20.0s
MDJ Mudanjiang 94.71 330 P **P 03 49 58.0 +0.5**
MDJ sP sP 03 50 20.3 +1.8
MDJ SKS **SKSac 04 00 23.3 -4.8**
MDJ S **ScS 04 01 08.8 +1.4**
MDJ pmax pmax
comp=Z,10.0nm,1.0s
MDJ pmax pmax
comp=Z,260nm,6.7s
MDJ LR LR
comp=Z,1μm,25.9s
MDJ LR LR
comp=Z,1μm,26.4s
MDJ LR LR
comp=Z,4μm,28.4s
MDJ Mudanjiang 94.71 330 P **P 03 49 56.3 -1.2**
SNY Shenyang 94.75 325 ⇓P **P 03 49 58.6 +0.9**
SNY SKS **SKSac 04 00 23.3 -5.1**
SNY S **ScS 04 01 08.6 +0.8**
SNY pmax pmax
comp=Z,14nm,0.8s
SNY pmax pmax
comp=Z,190nm,10.8s
SNY LR LR
comp=Z,2μm,24.1s
SNY LR LR
comp=Z,1μm,26.1s
SNY LR LR
comp=Z,3μm,25.3s
PB11 IPOC Station P 95.52 123 IAmb IAmb 03 50 05.6
comp=Z,40nm,1.1s
PB11 IAMs_20 IAMs_20 04 22 49.6
comp=Z,3μm,20.0s
PB08 IPOC Station P 95.55 123 IAMs_20 IAMs_20 04 23 03.4
comp=Z,3μm,21.0s
PET Petropavlovsk 95.57 351 *e*P **P 03 50 03.7 +2.6**
PET *e* 03 53 52.3
PET *e* 04 00 27.2
PET *e*S **S 04 01 16.4 +3.0**
PET *e*PS **PS 04 02 33.7 -4.8**
PET *e*PPS PPS 04 03 13.7
PET *e*SSS SSS 04 11 33.3
PET pmax pmax
comp=Z,100nm,15.0s
PET pmax pmax
comp=Z,200nm,13.1s
PET MLR MLR
comp=Z,2μm,22.0s
PET MLR MLR
comp=Z,2μm,16.0s
PET Petropavlovsk 95.57 351 IAMs_20 IAMs_20 04 23 55.9
comp=Z,2μm,22.0s
CN2 Changchun 95.61 327 *e*P **P 03 50 01.3 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
PEA0B Petropavlovsk- 95.77 351 IAMs_20 IAMs_20 04 26 57.0
comp=Z,2μm,22.0s
PETK Petropavlovsk- 95.77 351 LR LR 04 27 28.7
comp=Z,1μm,21.8s,baz=179,slow=32
XAN Xi'an 95.92 311 P **P 03 50 03.8 +0.5**
XAN pmax pmax
comp=Z,41nm,1.0s
XAN MLR MLR
comp=Z,2μm,22.0s
XAN Xi'an 95.92 311 P **P 03 50 03.8 +0.5**
XAN IAmb IAmb 03 50 24.3
comp=Z,41nm,1.0s
MNMC Minye Minye 96.03 122 IAmb IAmb 03 50 08.4
comp=Z,32nm,1.0s
MNMC IAMs_20 IAMs_20 04 23 07.1
comp=Z,3μm,22.0s
NNA Nana 96.42 112 IAMs_20 IAMs_20 04 24 52.1
comp=Z,3μm,20.0s
PALK Pallekele 96.60 274*c iP* **P 03 50 06.2 -0.7**
PALK Pallekele 96.60 274 P **P 03 50 06.9 0.0**
PALK IAmb IAmb 03 50 23.9
comp=Z,43nm,1.5s
PALK Pallekele 96.60 274 IAMs_20 IAMs_20 04 30 11.1
comp=Z,3μm,21.0s
CD2 Chengdu 96.66 306 P **P 03 50 07.6 +0.8**
CD2 pP pP 03 50 23.4 +1.3
CD2 PP **PP 03 54 00.3 -2.0**
CD2 S **S 04 01 22.3 -1.7**
CD2 SS **SS 04 08 02.5 +2.3**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 LR LR
comp=Z,2μm,23.0s
CD2 LR LR
comp=Z,1μm,23.0s
CD2 LR LR
comp=Z,3μm,33.1s
BJT Baijiatuau 96.67 320 P **P 03 50 06.2 -0.3**
BJT Baijiatuau 96.67 320 P **P 03 50 06.2 -0.3**
BJT Baijiatuau 96.67 320 IAMs_20 IAMs_20 04 33 48.1
comp=Z,2μm,20.0s
PB16 IPOC Station P 96.68 122 IAMs_20 IAMs_20 04 23 20.3
comp=Z,3μm,22.0s
TIY Taiyuan 96.77 316 *e*P **P 03 50 08.3 +1.2**
TIY SKS **SKSac 04 00 37.8 -1.7**
TIY S **S 04 01 22.3 -2.4**
TIY pmax pmax
comp=Z,160nm,7.2s
TIY LR LR
comp=Z,1μm,19.7s
TIY LR LR
comp=Z,2μm,24.5s
TIY LR LR
comp=Z,2μm,25.2s
SRIG Santa Rosalia 97.45 60 P Pdif 03 50 11.7 +1.3
SRIG IAmb IAmb 03 50 35.6
comp=Z,40nm,1.0s
SRIG IAMs_20 IAMs_20 04 24 35.9
comp=Z,2μm,20.0s
CPUP Villa Florida 97.51 136 P Pdif 03 50 12.4 +1.5
comp=Z,6.8nm,1.1s,baz=203,slow=2.7,SNR=8.2
CPUP LR LR 04 26 52.1
comp=Z,3μm,21.5s,baz=206,slow=31
CPUP Villa Florida 97.51 136 P Pdif 03 50 11.8 +0.9
SAIH SAIHA 97.81 293 *e*P Pdif 03 50 13.0 +0.7
SAIH IAmb IAmb 03 50 15.1
comp=Z,42nm,1.1s
KLR Kul'dur 97.95 334 P Pdif 03 50 13.1 +1.0
comp=Z,4.2nm,1.1s,baz=178,slow=6.1,SNR=6.7
KLR Kul'dur 97.95 334*c iP* **P 03 50 11.3 -0.7**
KLR pmax pmax
comp=Z,9.0nm,1.4s
SPX San Pedro Mart 98.00 55 IAMs_20 IAMs_20 04 34 17.6
comp=Z,2μm,18.0s
TJX Tijuana 98.08 53 IAMs_20 IAMs_20 04 28 03.4
comp=Z,2μm,19.0s
109C Camp Elliot, M 98.32 53 IAMs_20 IAMs_20 04 28 27.6
comp=Z,2μm,20.0s
TKX Tecate 98.39 53 IAMs_20 IAMs_20 04 28 03.5
comp=Z,2μm,19.0s
OSI Osito Audit: C 98.60 51 IAMs_20 IAMs_20 04 24 56.9
comp=Z,2μm,20.0s
MONP2 Monument Peak 98.73 53 P 03 50 18.2
baz=225
IKP In-Ko-Pah, Jac 98.74 54 P 03 50 18.5
baz=225
MURC Murrieta 98.77 52 P 03 50 19.1
baz=225
LPAZ La Paz 99.07 122 P **Pdif 03 50 20.9 +2.1**
comp=Z,3.3nm,0.9s,baz=332,slow=2.0,SNR=9.5
LPAZ LR LR 04 25 52.7
comp=Z,1μm,21.4s,baz=211,slow=30
LPAZ La Paz 99.07 122 P **Pdif 03 50 19.7 +0.9**
LPAZ pmax pmax
comp=Z,9.0nm,1.1s
LPAZ La Paz 99.07 122 **Pdif 03 50 19.7 +0.9**
EDW2 Edwards Air Fo 99.21 51 P 03 50 20.8
baz=225
PFO Pinyon Flats O 99.21 53 P 03 50 21.3
baz=225
PFO Pinyon Flats O 99.21 53 P **Pdif 03 50 19.5 +1.2**
comp=Z,2.9nm,0.7s,baz=348,slow=9.5,SNR=1.5
PFO Pinyon Flats O 99.21 53 IAMs_20 IAMs_20 04 26 21.3
comp=Z,2μm,21.0s
KOHI KOHIMA 99.22 296 *e*P **Pdif 03 50 18.7 +0.2**
VOI Vohitsoka 99.29 229 IAMs_20 IAMs_20 04 25 48.0
comp=Z,2μm,22.0s
MOKO MOKOCHONG 99.35 297 *e*P **Pdif 03 50 19.5 +0.4**
MOKO IAmb IAmb 03 50 36.3
comp=Z,44nm,1.1s
HOPS Hopland Field 99.37 45 IAMs_20 IAMs_20 04 31 01.0
comp=Z,2μm,19.0s
GDXM Geysers 99.38 45 IAMs_20 IAMs_20 04 31 43.3
comp=Z,2μm,20.0s
HSIG 99.44 59 P **Pdif 03 50 20.9 +1.6**
ISA Isabella, Lake 99.49 50 IAMs_20 IAMs_20 04 25 58.5
comp=Z,2μm,21.0s
HHC Hu-ho-hao-te 99.57 317 *e*P **Pdif 03 50 20.6 +0.9**
HHC PP **PP 03 54 27.8 +3.2**
HHC SKS **SKSac 04 00 52.6 -1.0**
HHC S **ScS 04 01 44.5 -3.9**
HHC SS **SS 04 08 41.8 +0.8**
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.5s
HHC LR LR
comp=Z,2μm,22.6s
HHC LR LR
comp=Z,520nm,19.2s
HHC LR LR
comp=Z,2μm,22.9s
BELC Belle Mtn. Jos 99.76 53 P 03 50 23.4
baz=225
GLA Glamis 99.80 54 P **Pdif 03 50 22.7 +1.9**
GLA pmax pmax
comp=Z,28nm,1.2s
GLA Glamis 99.80 54 Pdif **Pdif 03 50 22.7 +1.9**
BC3 Big Chuckawall 99.84 53 P 03 50 23.5
baz=226
DIBR DIBRUGARH 99.86 298⇑*e*P **Pdif 03 50 21.8 +0.7**
214A Organ Pipe Nat 100.27 56 P 03 50 25.0
baz=227
LZH Lanzhou 100.27 310 *e*P **Pdif 03 50 25.3 +2.3**
LZH pP pP 03 50 38.4 0.0
LZH sP sP 03 50 46.3 +2.2
LZH PP **PP 03 54 30.3 +0.3**
LZH SKS 04 00 54.0
LZH S **Sdif 04 01 55.1 +0.5**
LZH sS pS 04 02 14.8 +0.3
LZH pmax pmax
comp=Z,27nm,1.3s
LZH pmax pmax
comp=Z,200nm,7.1s
LZH LR LR
comp=Z,1μm,17.0s
LZH LR LR
comp=Z,2μm,17.2s
LZH LR LR
comp=Z,2μm,19.0s
214A Organ Pipe Nat 100.27 56 Pdif **Pdif 03 50 23.5 +0.6**
214A IAMs_20 IAMs_20 04 31 42.5
comp=Z,2μm,18.0s
IRM Iron Mountain 100.37 53 P 03 50 25.9
baz=226
KHMM Horse Mountain 100.41 43 IAMs_20 IAMs_20 04 28 50.4
comp=Z,2μm,20.0s
AFDM Forest Hills D 100.45 46 IAMs_20 IAMs_20 04 32 04.9
comp=Z,1μm,19.0s
GMRC Granite Mounta 100.50 52 P 03 50 27.1
baz=226
SHL Shillong 100.61 295 P **Pdif 03 50 24.2 -0.6**
SHL Shillong 100.61 295 *e*P **Pdif 03 50 25.2 +0.4**
SHL IAmb IAmb 03 50 27.5
comp=Z,36nm,1.4s
SHL Shillong 100.61 295 Pdif **Pdif 03 50 24.2 -0.6**
KRMB Red Mountain 100.80 43 IAMs_20 IAMs_20 04 27 51.8
comp=Z,2μm,21.0s
WDC Whiskeytown Da 100.81 44 IAMs_20 IAMs_20 04 27 48.1
comp=Z,2μm,21.0s
WAKR Walker 100.97 48 IAMs_20 IAMs_20 04 32 18.6
comp=Z,1μm,20.0s
FURC Furnace Creek, 100.98 51 P 03 50 28.7
baz=225
UNM Universidad Na 101.06 74 IAMs_20 IAMs_20 04 26 54.6
comp=Z,2μm,20.0s
PDMCI Parker Dam,Lak 101.07 54 P 03 50 29.3
baz=226
KBO Bosley Butte 101.15 42 IAMs_20 IAMs_20 04 28 11.0
comp=Z,2μm,20.0s
PNTR Pine Nut 101.30 47 IAMs_20 IAMs_20 04 32 47.3
comp=Z,2μm,20.0s
LHV Little Huntoon 101.31 48 IAMs_20 IAMs_20 04 28 00.5
comp=Z,2μm,22.0s

YERR	Yerington	101.42	47	IAMs_20	IAMs_20	04 32 51.5		
	comp=Z,2µm,20.0s							
Y14A	Wickenburg	101.51	55	Pdif	**Pdif**	**03 50 30.3**	**+1.9**	
NVAR	Mina Array Bea	101.54	48	P	**Pdif**	**03 50 29.6**	**+1.0**	
	comp=Z,0.5nm,0.8s,baz=235,slow=4.3,SNR=3.5							
NVAR				PKKPbc	**PKKPbc**	**04 06 37.6**	**+1.6**	
	comp=Z,0.9nm,0.8s,baz=69,slow=5.4,SNR=5.4							
YBH	Yreka Blue Hor	101.56	43	IAMs_20	IAMs_20	04 28 08.0		
	comp=Z,2µm,21.0s							
NV11	Mina Array Sit	101.63	48	IAMs_20	IAMs_20	04 28 20.1		
	comp=Z,2µm,20.0s							
TPNV	Topopah Spring	101.67	51	IAMs_20	IAMs_20	04 34 09.2		
	comp=Z,2µm,18.0s							
TUC	Tucson	101.77	57	IAMs_20	IAMs_20	04 28 08.3		
	comp=Z,2µm,19.0s							
W13A	Hualapai Mount	101.77	53	Pdif	**Pdif**	**03 50 31.0**	**+1.2**	
SHPR	Sheep Range	101.99	51	IAMs_20	IAMs_20	04 30 41.8		
	comp=Z,2µm,19.0s							
HUMO	Hull Mountain	102.07	43	IAMs_20	IAMs_20	04 28 55.5		
	comp=Z,2µm,21.0s							
HIA	Hailar	102.35	327	IAMs_20	IAMs_20	04 34 02.6		
	comp=Z,2µm,22.0s							
PRN	Pahroc Range	102.67	51	IAMs_20	IAMs_20	04 29 42.8		
	comp=Z,2µm,20.0s							
MOD	Modoc Plateau	102.93	45	IAMs_20	IAMs_20	04 29 06.3		
	comp=Z,2µm,22.0s							
MA2	Magadan	102.99	349	IAMs_20	IAMs_20	04 30 11.9		
	comp=Z,2µm,21.0s							
R11A	Troy Canyon, C	103.02	50	IAMs_20	IAMs_20	04 31 29.8		
	comp=Z,2µm,19.0s							
K05A	Summer Lake	103.21	44	IAMs_20	IAMs_20	04 29 46.7		
	comp=Z,2µm,21.0s							
COR	Corvallis	103.34	41	IAMs_20	IAMs_20	04 28 23.0		
	comp=Z,2µm,21.0s							
121A	Cookes Peak, D	103.81	59	IAMs_20	IAMs_20	04 28 43.3		
	comp=Z,2µm,21.0s							
PINE	Pine Mountain	103.95	43	IAMs_20	IAMs_20	04 29 46.2		
	comp=Z,2µm,20.0s							
WVOR	Wild Horse Val	104.18	45	IAMs_20	IAMs_20	04 34 28.4		
	comp=Z,2µm,20.0s							
TXAR	Lajitas Array	104.41	64	Pdiff	**Pdif**	**03 50 44.9**	**+3.4**	
	comp=Z,0.4nm,0.9s,baz=224,slow=5.2,SNR=4.4							
TXAR				PP	**PP**	**03 55 04.6**	**+3.4**	
	comp=Z,1.9nm,1.1s,baz=223,slow=6.8,SNR=4.2							
TXAR				PKKPbc	**PKKPbc**	**04 06 29.3**	**+2.4**	
	comp=Z,1.8nm,1.0s,baz=90,slow=2.5,SNR=5.2							
ELK	Elko	104.85	48	IAMs_20	IAMs_20	04 35 43.4		
	comp=Z,1µm,19.0s							
I07A	Izee	104.89	44	IAMs_20	IAMs_20	04 30 29.0		
	comp=Z,2µm,22.0s							
J08A	Circle Bar Ran	104.91	45	IAMs_20	IAMs_20	04 30 10.8		
	comp=Z,2µm,22.0s							
Y22D	IRIS PASSCAL I	105.36	58	IAMs_20	IAMs_20	04 29 53.4		
	comp=Z,2µm,20.0s							
CNPM	China Poot	105.46	18	IAMs_20	IAMs_20	04 38 40.5		
	comp=Z,2µm,19.0s							
LON	Longmire	105.63	40	IAMs_20	IAMs_20	04 33 29.5		
	comp=Z,2µm,20.0s							
BRLK	Bradley Lake	105.75	18	IAMs_20	IAMs_20	04 38 40.9		
	comp=Z,2µm,20.0s							
DUG	Dugway, Tooele	105.85	50	IAMs_20	IAMs_20	04 33 18.8		
	comp=Z,2µm,20.0s							
SEY	Seymchan	106.00	350	PKKPbc	PKKPbc	04 06 24.4	+1.3	
	comp=Z,4.6nm,1.0s,baz=311,slow=2.0,SNR=8.5							
GAMB	Gambell	106.22	7	IAMs_20	IAMs_20	04 31 46.2		
	comp=Z,2µm,22.0s							
E07A	Sunnyside	106.45	41	IAMs_20	IAMs_20	04 30 00.2		
	comp=Z,2µm,22.0s							
LTY	Liberty	106.54	41	IAMs_20	IAMs_20	04 31 45.6		
	comp=Z,2µm,20.0s							
BMO	Blue Mountains	106.55	44	IAMs_20	IAMs_20	04 31 44.2		
	comp=Z,2µm,21.0s							
O22K	Cooper Landing	106.66	18	IAMs_20	IAMs_20	04 34 38.3		
	comp=Z,2µm,21.0s							
PV19	Morning Glory	106.84	53	IAMs_20	IAMs_20	04 33 19.4		
	comp=Z,2µm,22.0s							
PV18	Skein Mesa, Pa	106.85	54	IAMs_20	IAMs_20	04 33 19.4		
	comp=Z,2µm,21.0s							
PV14	Lion Creek, Pa	106.86	53	IAMs_20	IAMs_20	04 33 19.8		
	comp=Z,2µm,22.0s							
PV16	Nyswonger Mesa	106.89	54	IAMs_20	IAMs_20	04 33 28.5		
	comp=Z,2µm,20.0s							
ULN	Ulaanbaatar	106.89	320	IAMs_20	IAMs_20	04 42 13.5		
	comp=Z,2µm,20.0s							
PV03	Paradox Valley	106.89	54	IAMs_20	IAMs_20	04 33 22.6		
	comp=Z,2µm,21.0s							
PV04	Paradox Valley	106.94	53	IAMs_20	IAMs_20	04 33 31.0		
	comp=Z,2µm,19.0s							
PV01	Paradox Valley	106.98	54	IAMs_20	IAMs_20	04 33 12.9		
	comp=Z,2µm,20.0s							
PV22	Blue Mesa, Par	107.11	53	IAMs_20	IAMs_20	04 33 29.3		
	comp=Z,2µm,22.0s							
PV07	Paradox Valley	107.13	54	IAMs_20	IAMs_20	04 33 51.0		
	comp=Z,2µm,22.0s							
FIS	Fire Island	107.13	18	IAMs_20	IAMs_20	04 27 45.8		
	comp=Z,2µm,20.0s							
PV15	Paradox Valley	107.17	54	IAMs_20	IAMs_20	04 33 31.9		
	comp=Z,2µm,21.0s							
SONM	Songino Array	107.18	320	Pdiff	**Pdif**	**03 50 53.5**	**+0.1**	
	comp=Z,1.6nm,0.9s,baz=151,slow=4.8,SNR=7.9							
SONM				PP	PP	03 55 12.7	-8.7	
	comp=Z,3.3nm,1.0s,baz=143,slow=6.5,SNR=5.3							
SONM				PKKPbc	**PKKPbc**	**04 06 20.5**	**+1.4**	
	comp=Z,3.4nm,0.8s,baz=294,slow=2.4,SNR=13							
RC01	Rabbit Creek A	107.19	18	IAMs_20	IAMs_20	04 35 26.4		
	comp=Z,1µm,19.0s							
KVTX	Kingsville	107.20	68	IAMs_20	IAMs_20	04 29 19.4		
	comp=Z,2µm,21.0s							
SUA	Susitna One	107.30	17	IAMs_20	IAMs_20	04 33 28.2		
	comp=Z,2µm,20.0s							
PLID	Pearl Lake	107.39	45	IAMs_20	IAMs_20	04 32 11.4		
	comp=Z,2µm,22.0s							
HWUT	Hardware Ranch	107.49	50	IAMs_20	IAMs_20	04 31 40.3		
	comp=Z,2µm,22.0s							
TTA	Tatalina	107.57	14	IAMs_20	IAMs_20	04 32 38.1		
	comp=Z,2µm,21.0s							
SKT	Skwentna	107.59	17	IAMs_20	IAMs_20	04 35 54.9		
	comp=Z,2µm,21.0s							
ANM	Nome	107.67	10	IAMs_20	IAMs_20	04 34 09.6		
	comp=Z,2µm,22.0s							
PMR	Palmer	107.78	18	IAMs_20	IAMs_20	04 35 43.9		
	comp=Z,1µm,21.0s							
C09A	Chrisman Ranch	108.09	41	IAMs_20	IAMs_20	04 32 35.5		
	comp=Z,2µm,20.0s							
CUT	Chulitna	108.24	17	IAMs_20	IAMs_20	04 41 12.2		
	comp=Z,1µm,19.0s							
PPLA	Purkeypile	108.28	16	IAMs_20	IAMs_20	04 32 06.9		
	comp=Z,2µm,22.0s							
BMRM	Bremner River	108.34	20	IAMs_20	IAMs_20	04 36 55.8		
	comp=Z,1µm,20.0s							
TNA	Tin City	108.34	8	IAMs_20	IAMs_20	04 33 04.0		
	comp=Z,2µm,22.0s							
O20A	White River Ci	108.46	52	IAMs_20	IAMs_20	04 34 50.1		
	comp=Z,2µm,19.0s							
CRQM	Cirque	108.54	21	IAMs_20	IAMs_20	04 35 51.3		
	comp=Z,2µm,20.0s							
YAH	Yahtse	108.59	22	IAMs_20	IAMs_20	04 38 24.2		
	comp=Z,2µm,20.0s							
SMCO	Snowmass	108.61	54	IAMs_20	IAMs_20	04 34 28.0		
	comp=Z,2µm,20.0s							
TGL	Tana Glacier	108.62	21	IAMs_20	IAMs_20	04 35 34.2		
	comp=Z,2µm,20.0s							
PCA	Pinnacle	108.79	23	IAMs_20	IAMs_20	04 32 00.9		
	comp=Z,2µm,21.0s							
TABL	Table Mountain	108.82	22	IAMs_20	IAMs_20	04 31 25.5		
	comp=Z,2µm,22.0s							
BCPM	Bancas Point	108.85	23	IAMs_20	IAMs_20	04 31 27.5		
	comp=Z,3µm,22.0s							
T25A	Trinidad	108.89	57	IAMs_20	IAMs_20	04 33 19.1		
	comp=Z,2µm,20.0s							
GRNC	Granite Creek	108.89	22	IAMs_20	IAMs_20	04 38 43.5		
	comp=Z,2µm,20.0s							
GLB	Gilahina Butte	108.94	20	IAMs_20	IAMs_20	04 37 22.8		
	comp=Z,1µm,20.0s							
NEW	Newport	108.97	42	IAMs_20	IAMs_20	04 33 11.9		
	comp=Z,2µm,21.0s							
KTH	Kantishna Hill	109.12	16	IAMs_20	IAMs_20	04 35 59.4		
	comp=Z,2µm,22.0s							
BARN	Barnard Glacie	109.19	21	IAMs_20	IAMs_20	04 39 02.3		
	comp=Z,2µm,21.0s							
MOOW	Moose Ponds	109.34	48	IAMs_20	IAMs_20	04 37 28.0		
	comp=Z,1µm,20.0s							
BW06	Boulder Array	109.38	50	IAMs_20	IAMs_20	04 38 08.2		
	comp=Z,1µm,18.0s							
PDAR	Pinedale Array	109.38	50	PKKPbc	**PKKPbc**	**04 06 12.6**	**+0.5**	
	comp=Z,1.5nm,0.9s,baz=88,slow=3.6,SNR=5.3							
PDAR				PP	PP	03 55 19.8	-18	
	comp=Z,0.7nm,0.8s,baz=177,slow=3.0,SNR=3.8							
435B	Jarrell	109.42	66	IAMs_20	IAMs_20	04 33 06.4		
	comp=Z,2µm,20.0s							
YAK	Yakutsk	109.53	340	IAMs_20	IAMs_20	04 35 56.8		
	comp=Z,2µm,22.0s							
BPAW	Bear Paw Mtn.	109.60	16	IAMs_20	IAMs_20	04 33 07.9		
	comp=Z,2µm,22.0s							
MSO	Missoula	109.62	44	IAMs_20	IAMs_20	04 33 40.4		
	comp=Z,2µm,20.0s							
MCK	McKinley	109.70	17	IAMs_20	IAMs_20	04 42 06.7		
	comp=Z,2µm,19.0s							
ISCO	Idaho Springs	109.81	54	IAMs_20	IAMs_20	04 32 23.0		
	comp=Z,2µm,22.0s							
BILL	Bilibino	109.94	357	*e*P	**Pdif**	**03 51 04.1**	**-0.9**	
BILL				pmax	pmax			
	comp=Z,16nm,4.1s							
BWN	Browne	109.98	16	IAMs_20	IAMs_20	04 36 47.9		
	comp=Z,2µm,22.0s							
RWWY	Rawlins	110.05	52	IAMs_20	IAMs_20	04 31 58.0		
	comp=Z,1µm,21.0s							
ZAK	Zakamensk	110.42	320	*e*P	**Pdif**	**03 51 02.8**	**-4.9**	
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.4s							
NEA2	Nenana	110.43	16	IAMs_20	IAMs_20	04 37 10.9		
	comp=Z,2µm,20.0s							
MLY	Manley	110.47	16	IAMs_20	IAMs_20	04 39 27.0		
	comp=Z,2µm,20.0s							
WRH	Wood River Hil	110.53	17	IAMs_20	IAMs_20	04 39 31.6		
	comp=Z,2µm,20.0s							
HDA	Harding Lake	110.73	17	IAMs_20	IAMs_20	04 40 22.6		
	comp=Z,1µm,19.0s							
CCB	Clear Creek Bu	110.75	17	IAMs_20	IAMs_20	04 41 19.2		
	comp=Z,1µm,20.0s							
L27K	Beaver Creek,	110.81	20	IAMs_20	IAMs_20	04 38 33.2		
	comp=Z,2µm,20.0s							
WHY	Whitehorse	110.84	25	IAMs_20	IAMs_20	04 38 07.3		
	comp=Z,2µm,21.0s							
I23K	Minto, Yukon-K	110.86	16	IAMs_20	IAMs_20	04 33 46.1		
	comp=Z,2µm,22.0s							
MDM	Murphy Dome	110.93	17	IAMs_20	IAMs_20	04 41 51.1		
	comp=Z,1µm,20.0s							
TCOL	CIGO, UAF Yank	110.93	17	IAMs_20	IAMs_20	04 41 53.2		
	comp=Z,2µm,19.0s							
COLA	College	110.93	17	IAMs_20	IAMs_20	04 41 52.2		
	comp=Z,2µm,19.0s							
ILAR	Eielson Array	111.05	17	PKiKP	**PKiKP**	**03 55 07.2**	**-1.6**	
	comp=Z,0.7nm,0.7s,baz=307,slow=4.2,SNR=6.7							
ILAR				PKKPbc	**PKKPab**	**04 06 13.1**	**+0.4**	
	comp=Z,6.5nm,0.9s,baz=8.9,slow=3.7,SNR=31							
WALA	Waterton Lakes	111.09	42	IAMs_20	IAMs_20	04 36 30.1		
	comp=Z,1µm,18.0s							
TLY	Talaya	111.11	321	IAMs_20	IAMs_20	04 44 56.2		
	comp=Z,1µm,21.0s							
POKR	Poker Plat Res	111.23	17	IAMs_20	IAMs_20	04 42 10.2		
	comp=Z,2µm,19.0s							
RDOG	Red Dog Mine	111.31	9	IAMs_20	IAMs_20	04 35 49.6		
	comp=Z,2µm,22.0s							
U32A	Winter Ranch,	111.86	60	IAMs_20	IAMs_20	04 36 60.0		
	comp=Z,1µm,19.0s							
PRP	Porcupine Dome	111.99	17	IAMs_20	IAMs_20	04 38 14.3		
	comp=Z,1µm,20.0s							
NATX	Nacogdoches	112.00	67	IAMs_20	IAMs_20	04 34 50.4		
	comp=Z,2µm,20.0s							
DAWY	Dawson	112.27	21	IAMs_20	IAMs_20	04 41 03.7		
	comp=Z,2µm,21.0s							
EGAK	Eagle	112.40	19	IAMs_20	IAMs_20	04 39 26.1		
	comp=Z,2µm,21.0s							
COLD	Coldfoot	112.52	15	IAMs_20	IAMs_20	04 35 32.0		
	comp=Z,2µm,22.0s							
EGMT	Eagleton	112.58	45	IAMs_20	IAMs_20	04 37 56.6		
	comp=Z,1µm,19.0s							
OK032	Salt Plains WL	112.63	60	IAMs_20	IAMs_20	04 37 24.2		
	comp=Z,2µm,20.0s							
OGNE	Ogallala	112.68	55	IAMs_20	IAMs_20	04 37 13.9		
	comp=Z,2µm,21.0s							
CBKS	Cedar Bluff	112.84	58	IAMs_20	IAMs_20	04 34 22.3		
	comp=Z,1µm,20.0s							
KS21	Milan North St	113.26	60	IAMs_20	IAMs_20	04 37 55.0		
	comp=Z,1µm,19.0s							
KS20	Mayfield South	113.30	60	IAMs_20	IAMs_20	04 38 04.0		
	comp=Z,1µm,19.0s							
RSSD	Black Hills	113.38	51	IAMs_20	IAMs_20	04 38 05.5		
	comp=Z,2µm,20.0s							
LAO	LASA Array	113.67	48	P		03 55 15.7		
	baz=233							
TUL1	Leonard	113.68	62	P		03 55 15.6		
	baz=234							
TOLK	Toolik Lake Re	113.88	14	P		03 55 15.5		
	baz=210							
MIAR	Mount Ida	114.37	65	P		03 55 16.9		
	baz=235							
MIAR	Mount Ida	114.37	65	IAMs_20	IAMs_20	04 36 03.0		
	comp=Z,2µm,21.0s							
LSZ	Lusaka	114.38	218	IAMs_20	IAMs_20	04 40 27.1		
	comp=Z,2µm,20.0s							
W39A	Magazine	114.60	64	P		03 55 16.9		
	baz=235							
WMQ	Urumqi	114.70	307	PKP	PKPdf	03 55 16.3	-0.2	
WMQ				AMB	AMB			
	comp=Z,330nm,6.3s							
WMQ				LR	LR			
	comp=Z,2µm,21.9s							
WMQ				LR	LR			
	comp=Z,2µm,27.3s							
WMQ				LR	LR			
	comp=Z,3µm,28.9s							
EPYK	Eagle Plains	114.78	20	P		03 55 17.4		
	baz=219							
EPYK	Eagle Plains	114.78	20	IAMs_20	IAMs_20	04 43 21.5		
	comp=Z,1µm,20.0s							
X40A	Basin Creek Fa	114.83	65	IAMs_20	IAMs_20	04 34 24.9		
	comp=Z,2µm,22.0s							
X40A	Basin Creek Fa	114.83	65	P		03 55 18.3		
	baz=235							
KSU1	Kansas State U	114.99	59	P		03 55 17.9		
	baz=235							
KSU1	Kansas State U	114.99	59	IAMs_20	IAMs_20	04 37 36.3		
	comp=Z,2µm,20.0s							
A21K	Barrow	115.17	10	IAMs_20	IAMs_20	04 42 26.2		
	comp=Z,2µm,20.0s							
SDV	Sao Domingo	115.33	101	PKP	**PKPdf**	**03 55 18.4**	**-0.3**	
	comp=Z,6.2nm,0.8s,baz=309,slow=3.6,SNR=5.7							
SDV	Santo Domingo	115.33	101		**PKiKP**	**03 55 19.3**	**+0.5**	
SDV	Santo Domingo	115.33	101	IAMs_20	IAMs_20	04 34 52.0		
	comp=Z,2µm,22.0s							
BGNE	Belgrade	115.33	56	PKiKP	**PKiKP**	**03 55 19.0**	**+1.3**	
BGNE	Belgrade	115.33	56	P		03 55 18.5		
	baz=235							
W41B	Gary Mavity, V	115.62	65	P		03 55 18.9		
	baz=235							
WHAR	Wooly Hollow	115.66	65		**PKiKP**	**03 55 19.0**	**+0.6**	
U40A	Yellville	115.89	64	P		03 55 19.4		
	baz=236							
PTGA	Pitinga	116.01	117		**PKiKP**	**03 55 21.0**	**+1.1**	
X43A	Marvell	116.18	66	P		03 55 20.2		
	baz=236							
BRAL	Brewton	116.94	71	P		03 55 21.4		
	baz=235							
INK	Inuvik	117.07	20	PKP	**PKPdf**	**03 55 19.1**	**-1.0**	
	comp=Z,4.0nm,1.0s,baz=25,slow=2.0,SNR=9.7							
INK				PKKPbc	**PKKPbc**	**04 05 49.8**	**+3.5**	
	comp=Z,7.3nm,0.8s,baz=26,slow=6.6,SNR=17							
INK	Inuvik	117.07	20		**PKiKP**	**03 55 20.2**	**+0.1**	
OXF	Oxford	117.18	67	P		03 55 21.8		
	baz=236							
ECSD	EROS Data Cent	117.57	55	P		03 55 22.5		
	baz=237							
ECSD	EROS Data Cent	117.57	55	IAMs_20	IAMs_20	04 40 19.1		
	comp=Z,2µm,20.0s							
TIXI	Tiksi	117.69	346	PKP	**PKPdf**	**03 55 19.7**	**-1.5**	
	comp=Z,2.1nm,0.4s,baz=115,slow=1.3,SNR=6.8							
TIXI	Tiksi	117.69	346	↑*i*PKiKP	**PKPdf**	**03 55 19.5**	**-1.8**	
TIXI				pmax	pmax			
	comp=Z,19nm,1.0s							
TIXI	Tiksi	117.69	346	PKPdf	**PKPdf**	**03 55 20.0**	**-1.3**	
CCM	Cathedral Cave	117.89	63	P		03 55 22.7		
	baz=237							
CCM	Cathedral Cave	117.90	63	PKiKP	**PKPdf**	**03 55 22.4**	**-0.3**	
CCM	Cathedral Cave	117.90	63	PKPdf	**PKPdf**	**03 55 22.4**	**-0.3**	
LRAL	Lakeview Retre	118.02	70	P		03 55 23.0		
	baz=236							
NIL	Nilore	118.34	291	PKiKP	**PKPdf**	**03 55 23.5**	**-0.3**	
NIL				MLR	MLR			
	comp=Z,1µm,22.0s							
NIL	Nilore	118.34	291	PKPdf	**PKPdf**	**03 55 23.5**	**-0.3**	
ZSN	Zaisan	118.37	310	*e*PKP	**PKPdf**	**03 55 22.2**	**-1.1**	
	baz=310							
ZSN	Zaisan	118.37	310	*e*PKiKP	**PKPdf**	**03 55 22.2**	**-1.1**	
SCIA	State Center	118.69	58	P		03 55 24.6		
	baz=238							
SCIA	State Center	118.69	58	IAMs_20	IAMs_20	04 40 51.1		
	comp=Z,2µm,20.0s							
YKA	Yellowknife Ar	119.11	30	PKP	**PKPdf**	**03 55 22.6**	**-1.6**	
	comp=Z,5.2nm,1.0s,baz=219,slow=1.9,SNR=29							
YKA				PKKPbc	**PKKPbc**	**04 05 38.5**	**-0.2**	
	comp=Z,3.7nm,0.9s,baz=51,slow=4.6,SNR=18							
YKA				SKKPbc	SKKPbc	04 09 27.8	+3.5	
	comp=Z,1.2nm,0.9s,baz=74,slow=5.7,SNR=4.7							
WVT	Waverly	119.14	66	PKIKP	**PKPdf**	**03 55 24.6**	**-0.6**	
WVT	Waverly	119.14	66	PKPdf	**PKPdf**	**03 55 24.6**	**-0.6**	
WVT	Waverly	119.14	66	IAMs_20	IAMs_20	04 36 56.0		
	comp=Z,2µm,22.0s							
WVT	Waverly	119.14	66	P		03 55 25.2		
	baz=237							
DWPF	Disney Wildern	119.23	77	P		03 55 25.7		
	baz=235							
SHLS	Shalkode	119.33	303	*e*PKP	**PKPdf**	**03 55 23.9**	**-1.6**	
	baz=303							
SHLS	Shalkode	119.33	303	*e*PKiKP	**PKPdf**	**03 55 23.8**	**-1.6**	
MK31	Makanchi Array	119.52	308	*c i*PKiKP	**PKPdf**	**03 55 24.3**	**-1.3**	
MKAR	Makanchi Array	119.52	308	PKP	**PKPdf**	**03 55 23.6**	**-2.0**	
	comp=Z,11nm,0.9s,baz=191,slow=0.7,SNR=24							
MKAR				pPKP	**pPKPdf**	**03 55 39.9**	**-1.6**	
	comp=Z,3.7nm,0.7s,baz=196,slow=1.7,SNR=4.6							
MKAR				PKKPbc	**PKKPbc**	**04 05 39.8**	**+2.8**	
	comp=Z,2.5nm,0.8s,baz=298,slow=3.9,SNR=10.0							
MKAR	Makanchi Array	119.52	308	PKPdf	**PKPdf**	**03 55 24.1**	**-1.5**	
TIGA	Tifton	119.54	73	PKPdf	**PKPdf**	**03 55 25.0**	**-1.1**	
UZB	Uzynbulak	119.60	303	*e*PKP	**PKPdf**	**03 55 23.9**	**-2.2**	
	baz=303							
UZB	Uzynbulak	119.60	303	*e*PKiKP	**PKPdf**	**03 55 23.8**	**-2.2**	
SOCY	Socotra	119.62	259	IAMs_20	IAMs_20	04 45 21.3		
	comp=Z,1µm,21.0s							
SOCY	Socotra	119.62	259	P	**PKPdf**	**03 55 26.4**	**-0.4**	
KSH	Kashi	119.66	298	PKP	**PKiKP**	**03 55 30.3**	**+4.0**	
KSH				PP	**PP**	**03 56 56.1**	**+5.9**	
KSH				SKKS		04 03 41.8		
KSH				SS	**SKKSdf**	**04 13 15.0**	**-1.1**	
KSH				AMB	AMB			
	comp=Z,450nm,4.2s							
KSH				LR	LR			
	comp=Z,730nm,18.7s							
KSH				LR	LR			
	comp=Z,700nm,16.9s							
KSH				LR	LR			
	comp=Z,2µm,36.3s							
MAKZ	Makanchi	119.71	308	PKIKP	**PKPdf**	**03 55 24.9**	**-1.0**	
MAKZ	Makanchi	119.71	308	PKPdf	**PKPdf**	**03 55 24.9**	**-1.0**	
SATY	Saty	119.94	303	*e*PKP	**PKPdf**	**03 55 25.5**	**-1.2**	
	baz=303							
SATY	Saty	119.94	303	*e*PKiKP	**PKPdf**	**03 55 25.5**	**-1.2**	
KDJ	Kajisay	120.24	301	PKIKP	**PKiKP**	**03 55 27.5**	**+0.1**	
KDJ	Kajisay	120.24	301		**PKiKP**	**03 55 27.5**	**+0.1**	
C36M	Paulatuk	120.26	21	P		03 55 27.4		
	baz=230							
C36M	Paulatuk	120.26	21	IAMs_20	IAMs_20	04 39 07.9		
	comp=Z,1µm,21.0s							
FFC	Flin Flon	120.39	42	PKIKP	**PKPdf**	**03 55 26.7**	**-0.3**	
FFC	Flin Flon	120.39	42		**PKPdf**	**03 55 26.7**	**-0.3**	
AGMN	Agassiz Nation	120.41	51	P		03 55 27.2		
	baz=240							
AGMN	Agassiz Nation	120.41	51	IAMs_20	IAMs_20	04 39 17.6		
	comp=Z,1µm,21.0s							
HDIL	Hopedale	120.50	61	P		03 55 27.7		
	baz=239							
HDIL	Hopedale	120.50	61	IAMs_20	IAMs_20	04 40 34.8		
	comp=Z,2µm,20.0s							
GOGA	Godfrey	120.70	71	P		03 55 27.9		
	baz=237,SNR=5.6							
GOGA	Godfrey	120.71	71	PKIKP	**PKPdf**	**03 55 27.9**	**-0.4**	
GOGA	Godfrey	120.71	71	PKPdf	**PKPdf**	**03 55 27.9**	**-0.4**	
MDOK	Medeo	120.85	302	*e*PKP	**PKPdf**	**03 55 27.2**	**-1.3**	
	baz=302							
MDOK				*e*PPP	PPP	03 59 30.3		
	baz=302							
MDOK	Medeo	120.85	302	*e*PKIKP	**PKPdf**	**03 55 27.1**	**-1.3**	
MDOK				*e*PPP	PPP	03 59 30.2		
TNSS	Tian-Shan	120.85	302	*e*PKP

baz=239,SNR=5.6
BTK Batken 123.35 296 PKIKP PKPdf 03 55 32.4 -0.9
BTK Batken 123.35 296 PKPdf 03 55 32.4 -0.9
ABTO Aybut 123.46 263 P PKPdf 03 55 34.0 -0.1
WHFO Wadi Hawf 123.46 264 P PKPdf 03 55 33.3 -0.7
KURK Kurchatov 123.55 310 PKIKP PKPdf 03 55 31.6 -1.5
KURK 03 55 47.2
KURK Kurchatov 123.55 310 PKPdf 03 55 31.6 -1.5
KURBB Kurchatov Arra 123.56 310 PKP PKPdf 03 55 31.6 -1.6
comp=Z,9.1nm,0.6s,baz=116,slow=1.7,SNR=6.8
KURBB pPKP **pPKPdf 03 55 47.2 -1.8**
comp=Z,7.2nm,0.6s,baz=116,slow=1.7,SNR=8.0
DOK Doka 123.63 265 P PKPdf 03 55 33.4 -0.9
BTLS Baital 123.66 303 *e*PKP **PKPdf 03 55 32.5 -1.0**
baz=303
BTLS Baital 123.66 303 *e*PKIKP **PKPdf 03 55 32.5 -1.0**
BSY Bisya 123.85 271 P PKPdf 03 55 33.1 -1.5
GRGR Grenville 124.01 106 IAMs_20 IAMs_20 04 39 54.4
comp=Z,2µm,22.0s
P51A Williamsport 124.11 65 PKPdf 03 55 34.0 -0.6
HOQ Hoqain 124.25 272 P PKPdf 03 55 35.3 -0.1
DZA Taraz 124.38 299 *e*PKP **PKPdf 03 55 34.3 -0.8**
baz=299
DZA Taraz 124.38 299 *e*PKIKP **PKPdf 03 55 34.2 -0.8**
S54A Dingess, Beckl 124.47 68 IAMs_20 IAMs_20 04 40 37.8
comp=Z,2µm,22.0s
S54A Dingess, Beckl 124.47 68 P 03 55 35.9
baz=240
ACSO Alum Creek Sta 124.52 64 P 03 55 35.2
baz=241
ACSO Alum Creek Sta 124.52 64 IAMs_20 IAMs_20 04 40 09.3
comp=Z,2µm,22.0s
SJG San Juan 124.62 97 PKP PKPdf 03 55 35.9 -0.3
comp=Z,37nm,1.0s,baz=301,slow=3.6,SNR=4.0
SJG San Juan 124.62 97 PKiKP 03 55 36.6 +0.1
ARQ Araqi 124.70 271 P PKPdf 03 55 35.8 -0.4
SNR=6.6
BLA Blacksburg 124.80 69 P 03 55 36.1
baz=240,SNR=15
BLA Blacksburg 124.80 69 IAMs_20 IAMs_20 04 41 17.4
comp=Z,1µm,22.0s
P52A Corning 124.81 65 P 03 55 35.9
baz=241
P52A Corning 124.81 65 IAMs_20 IAMs_20 04 45 45.5
comp=Z,1µm,20.0s
Q53A Leroy 124.84 67 P 03 55 36.2
baz=241
IUG Iuzhnay 124.88 298 *e*PKP **PKPdf 03 55 35.7 -0.5**
baz=298
IUG Iuzhnay 124.88 298 *e*PKIKP **PKPdf 03 55 35.6 -0.5**
R54A Victor 124.88 68 P 03 55 36.1
baz=241
KKAR Karatay Array 125.01 299 PKIKP PKPdf 03 55 35.5 -0.7
KKAR Karatay Array 125.01 299 PKPdf 03 55 35.5 -0.7
AAM Ann Arbor 125.05 62 P 03 55 36.3
baz=242
MTP Monte Pirata 125.06 97 PKPdf PKPdf 03 55 36.5 -0.5
SOHO SOHO 125.15 272 *i* PKPdf **PKPdf 03 55 36.3 -0.8**
SNR=14
SOHO SOHO 125.15 272 P PKPdf 03 55 36.8 -0.3
MDP Montagnes des 125.19 119 PKP PKiKP 03 55 37.8 -0.1
comp=Z,34nm,0.9s,baz=342,slow=6.0,SNR=7.8
RCBR Riachuelo 125.46 144 PKP PKPdf 03 55 38.3 +0.2
comp=Z,38nm,0.9s,baz=180,slow=4.2,SNR=5.4
RCBR Riachuelo 125.46 144 PKIKP PKiKP 03 55 38.8 +0.3
RCBR Riachuelo 125.46 144 PKPdf PKiKP 03 55 38.8 +0.3
R55A Marlinton 125.53 68 P 03 55 37.5
baz=241,SNR=15
R55A Marlinton 125.53 68 IAMs_20 IAMs_20 04 43 21.8
comp=Z,1µm,20.0s
M51A Elyria 125.58 64 P 03 55 37.6
baz=242
GLMI Grayling 125.58 59 P 03 55 37.7
baz=243
GLMI Grayling 125.58 59 IAMs_20 IAMs_20 04 47 16.6
comp=Z,1µm,19.0s
CNNC Cliffs of the 125.59 72 P 03 55 37.9
baz=240
MBAR Mbarara 125.62 229 IAMs_20 IAMs_20 04 54 22.1
comp=Z,1µm,21.0s
S56A Natural Bridge 125.62 69 P 03 55 37.6
baz=241,SNR=5.1
ALNE Al Ain 125.69 271 *i* PKPdf **PKPdf 03 55 38.1 0.0**
SNR=5.9
ALNE Al Ain 125.69 271 P PKPdf 03 55 38.0 -0.2
SNR=9.6
O53A New Philadelph 125.72 65 P 03 55 38.0
baz=242
O53A New Philadelph 125.72 65 IAMs_20 IAMs_20 04 41 39.7
comp=Z,1µm,21.0s
HATD Hatta, Dubai 125.85 273 *i* PKPdf **PKPdf 03 55 37.9 -0.5**
SNR=13
HATD Hatta, Dubai 125.85 273 P PKPdf 03 55 37.9 -0.5
SNR=9.6
UOSS Minazif 125.86 273 *i* PKPdf **PKPdf 03 55 37.2 -1.2**
SNR=13
UOSS Minazif 125.86 273 PKPdf PKPdf 03 55 37.5 -0.9
UOSS Minazif 125.86 273 P PKPdf 03 55 37.8 -0.7
MDH Madha 126.00 273 *i* PKPdf **PKPdf 03 55 37.6 -1.0**
SNR=5.3
MDH Madha 126.00 273 P PKPdf 03 55 38.3 -0.4
R56A Bull Pasture M 126.08 68 P 03 55 39.0
baz=241,SNR=15
S57A Dark Hollow, R 126.08 69 P 03 55 38.7
baz=241,SNR=12
S57A Dark Hollow, R 126.09 69 IAMs_20 IAMs_20 04 42 06.5
comp=Z,1µm,22.0s
FDF Fort de France 126.11 104 IAMs_20 IAMs_20 04 45 53.3
comp=Z,1µm,21.0s
LODK Lodwar 126.12 236 PKPdf PKiKP 03 55 40.5 +0.7
MSFE Esma-Masafi 126.13 273 *i* PKPdf **PKPdf 03 55 38.2 -0.7**
SNR=8.4
MASF Masafi 126.14 273 P PKPdf 03 55 38.7 -0.3
SNR=6.3
FAQ Al Faqa, Dubai 126.20 272 *i* PKPdf **PKPdf 03 55 38.4 -0.7**
SNR=6.3
FAQ Al Faqa, Dubai 126.20 272 P PKPdf 03 55 38.7 -0.4
NAZ Nazwa, Dubai 126.29 272 *i* PKPdf **PKPdf 03 55 38.2 -1.0**
SNR=8.1
NAZ Nazwa, Dubai 126.29 272 P PKPdf 03 55 39.0 -0.2
SNR=6.3
ASUD Al Ashush, Dub 126.33 272 *i* PKPdf **PKPdf 03 55 39.1 -0.2**
SNR=14
ASUD Al Ashush, Dub 126.33 272 P PKiKP 03 55 39.8 0.0
SNR=8.2
BANOM Banah 126.35 274 PKPdf PKPdf 03 55 37.4 -2.0
BANOM Banah 126.35 274 P PKPdf 03 55 39.5 +0.2
MCWV Mont Chateau 126.37 66 P 03 55 39.1
baz=242,SNR=5.6
HRA Herat 126.49 286 PKPdf PKPdf 03 55 38.8 -0.8
Q56A Snyder Ridge, 126.53 67 P 03 55 39.7
baz=242,SNR=14
Q56A Snyder Ridge, 126.53 67 IAMs_20 IAMs_20 04 43 33.3
comp=Z,1µm,20.0s
SHME Shamm 126.54 274 PKPdf PKPdf 03 55 39.7 0.0
SHME Shamm 126.54 274 P PKiKP 03 55 40.1 0.0
M53A WI Miller and 126.63 64 P 03 55 39.4
baz=243
R57A Stanardsville 126.64 69 P 03 55 39.8
baz=242,SNR=11
S58A Poland Farm, P 126.64 70 P 03 55 40.0
baz=241,SNR=19
S58A Poland Farm, P 126.64 70 IAMs_20 IAMs_20 04 42 37.3
comp=Z,1µm,22.0s
SKI Saint Kitts 126.64 100 PKIKP PKiKP 03 55 41.0 +0.4
SKI Saint Kitts 126.64 100 PKiKP 03 55 41.0 +0.4
BRZS Berezniki 126.67 308 *e*PKP **PKPdf 03 55 37.7 -1.5**
baz=308
BRZS Berezniki 126.67 308 *e*PKIKP **PKPdf 03 55 37.6 -1.5**
N54A Moraine State 126.88 65 IAMs_20 IAMs_20 04 46 23.2
comp=Z,1µm,21.0s
N54A Moraine State 126.88 65 P 03 55 40.2
baz=243
R58B Mineral 126.93 69 P 03 55 39.8
baz=242,SNR=16
R58B Mineral 126.93 69 IAMs_20 IAMs_20 04 42 53.9
comp=Z,1µm,22.0s
P56A Dayton Farm, R 126.99 67 P 03 55 39.8
baz=242,SNR=15
Q57A Strasburg 127.06 68 P 03 55 40.8
baz=242,SNR=17
L53A Girard 127.14 64 P 03 55 40.4
baz=243
NRIK Noril'sk 127.16 334 PKP PKPdf 03 55 38.4 -1.1
comp=Z,6.2nm,0.6s,baz=125,slow=2.0,SNR=8.9
NRIK PKPPKP **P'P'df 04 14 08.6 +7.1**
comp=Z,2.8nm,0.5s,baz=18,slow=3.0,SNR=3.8
NRIK Noril'sk 127.16 334 PKIKP PKPdf 03 55 38.7 -0.8
NRIK Noril'sk 127.16 334 PKPdf PKPdf 03 55 38.7 -0.8
M54A Oil Creek Stat 127.34 64 P 03 55 40.7
baz=243
CBN Corbin Frederi 127.39 69 P 03 55 41.0
baz=242,SNR=5.5
CBN Corbin Frederi 127.39 69 IAMs_20 IAMs_20 04 43 08.2
comp=Z,1µm,22.0s
ERPA Erie 127.39 64 P 03 55 40.9
baz=244
I51A Listowel 127.45 61 P 03 55 41.0
baz=244
Q58A Fox Den Farm, 127.52 68 P 03 55 41.3
baz=242,SNR=9.0
O56A Blue Knob Stat 127.53 66 P 03 55 41.3
baz=243,SNR=24
O56A Blue Knob Stat 127.53 66 IAMs_20 IAMs_20 04 46 04.5
comp=Z,1µm,20.0s
P57A Homestead Farm 127.55 67 IAMs_20 IAMs_20 04 44 04.1
comp=Z,1µm,20.0s
P57A Homestead Farm 127.55 67 P 03 55 41.4
baz=243,SNR=19
ANWB Willy Bob 127.56 100 IAMs_20 IAMs_20 04 42 53.5
comp=Z,1µm,22.0s
N56A West Decatur 128.00 66 P 03 55 42.4
baz=244,SNR=15
O57A Amberson 128.13 67 P 03 55 42.5
baz=243,SNR=12
SSPA Standing Stone 128.15 66 PKPdf 03 55 41.8 -0.5
SSPA Standing Stone 128.15 66 IAMs_20 IAMs_20 04 47 51.1
comp=Z,1µm,19.0s
SSPA Standing Stone 128.15 66 P 03 55 42.7
baz=243
M56A Emporium 128.33 65 P 03 55 43.0
baz=244,SNR=14
M56A Emporium 128.33 65 IAMs_20 IAMs_20 04 42 49.7
comp=Z,2µm,22.0s
N57A Milroy 128.44 66 P 03 55 43.0
baz=244,SNR=16
O58A Lewisberry 128.58 67 P 03 55 43.6
baz=243,SNR=23
P59A Jarrettsville 128.69 68 P 03 55 43.7
baz=243,SNR=8.9
M57A Sunshine Farm, 128.98 66 IAMs_20 IAMs_20 04 50 09.9
comp=Z,1µm,20.0s
M57A Sunshine Farm, 128.98 66 P 03 55 44.2
baz=244,SNR=15
L56A Greenwood 129.03 65 P 03 55 44.0
baz=245,SNR=9.2
N58A Sunbury 129.04 66 P 03 55 44.2
baz=244,SNR=10
N58A Sunbury 129.04 66 IAMs_20 IAMs_20 04 48 18.6
comp=Z,2µm,21.0s
BVAR Borovoye Array 129.15 311 PKhKP PKPpre 03 55 35.3
comp=Z,0.7nm,0.7s,baz=72,slow=6.4,SNR=4.7
BVAR PKP **PKPdf 03 55 42.4 -1.4**
comp=Z,4.8nm,0.8s,baz=112,slow=10,SNR=16
BVAR pPKP pPKPdf 03 55 58.8 -0.8
comp=Z,3.7nm,0.6s,baz=226,slow=8.1,SNR=6.8
BVAR SKPbc SKPab 03 58 58.6 -1.1
comp=Z,6.9nm,1.0s,baz=243,slow=7.9,SNR=4.5
O59A Robesonia 129.17 67 P 03 55 44.8
baz=244,SNR=16
BRVK Borovoye 129.22 311 *c i* PKIKP **PKPdf 03 55 43.5 -0.4**
BRVK Borovoye 129.22 311 PKPdf **PKPdf 03 55 43.8 -0.2**
BRVK Borovoye 129.22 311 IAMs_20 IAMs_20 04 57 49.5
comp=Z,1µm,21.0s
P60A Greenville 129.33 68 P 03 55 44.6
baz=244
P60A Greenville 129.33 68 IAMs_20 IAMs_20 04 45 19.4
comp=Z,2µm,21.0s
H53A Bobcaygeon 129.37 61 P 03 55 44.7
baz=246
K56A Middlesex 129.43 64 P 03 55 44.7
baz=245
L57A Andrews Acres 129.45 65 P 03 55 45.4
baz=245,SNR=13
O60A Telford 129.71 68 P 03 55 45.4
baz=244
N59A State Game Lan 129.72 67 P 03 55 45.9
baz=244,SNR=6.7
N59A State Game Lan 129.72 67 IAMs_20 IAMs_20 04 48 41.6
comp=Z,1µm,20.0s
K57A Scio Center 129.98 64 P 03 55 46.0
baz=246,SNR=5.4
BINY Binghamton 130.12 65 P 03 55 46.4
baz=245,SNR=8.1
L58A Harry Jones Me 130.15 65 P 03 55 46.7
baz=245,SNR=8.8
N60A Cedar Hill Far 130.16 67 P 03 55 45.9
baz=245
O61A Allentown 130.20 68 P 03 55 46.4
baz=244
M59A Waymart 130.22 66 P 03 55 46.8
baz=245,SNR=6.3
ALGO Algonquin Park 130.26 60 P 03 55 46.2
baz=247
K58A Earlville 130.58 65 P 03 55 47.3
baz=246
J57A Williamstown 130.60 64 P 03 55 47.1
baz=246
RES Resolute Bay 130.61 20 PKP PKPdf 03 55 45.7 -0.2
comp=Z,3.6nm,1.0s,baz=187,slow=0.8,SNR=6.9
N61A South Mountain 130.66 68 P 03 55 47.2
baz=245
M60A Port Jervis 130.68 67 P 03 55 46.8
baz=245
L59A Walton 130.75 66 PKPdf 03 55 47.3 0.0
L59A Walton 130.75 66 P 03 55 47.5
baz=246
PAL Palisades 131.03 67 P 03 55 48.1
baz=245
PAL Palisades 131.04 67 IAMs_20 IAMs_20 04 49 45.5
comp=Z,2µm,19.0s
I57A Carthage 131.04 63 P 03 55 47.9
baz=247
GEYT Alibeck 131.11 288 PKP PKPdf 03 55 48.1 0.0
comp=Z,11nm,0.9s,baz=318,slow=2.0,SNR=11
GEYT SKPbc **SKPbc 03 59 06.7 -1.6**
comp=Z,14nm,0.9s,baz=184,slow=5.8,SNR=8.0
GYA0B ALIBECK ARRAY 131.11 288 PKiKP 03 55 48.9 -0.1
K59A Cooperstown 131.12 65 P 03 55 48.5
baz=246
L60A Shokan 131.23 66 P 03 55 48.4
baz=246
M61A Granite Spring 131.26 67 P 03 55 48.0
baz=246
I58A Old Forge 131.40 64 P 03 55 49.1
baz=247
H57A Richville 131.42 63 P 03 55 49.1
baz=247
WSPT Westport, CT 131.50 68 IAMs_20 IAMs_20 04 50 07.8
comp=Z,1µm,18.0s
J59A Piesco 131.62 64 P 03 55 49.5
baz=247
L61A Hillsdale 1, H 131.76 66 P 03 55 49.6
baz=246
MATQ Matagami 131.88 55 P 03 55 50.1
baz=251
M62A Hamden 131.91 67 P 03 55 50.2
baz=246
G57A Newington 131.93 62 P 03 55 50.6
baz=248
LONY Lake Ozonia 132.01 63 P 03 55 50.4
baz=248
LSQQ Lebel-sur-Quev 132.06 56 P 03 55 50.3
baz=250
K61A Williamstown 132.15 66 P 03 55 51.3
baz=247
I59A Olmsteadville 132.18 64 P 03 55 50.9
baz=248
H58A Gabriels 132.21 63 P 03 55 50.5
baz=248
J60A Lant Hill Farm 132.27 65 P 03 55 50.2
baz=247
D55A Sainte-Anne-du 132.31 59 P 03 55 50.8
baz=250,SNR=9.8
L62A Suffield 132.31 67 IAMs_20 IAMs_20 04 47 10.1
comp=Z,1µm,20.0s
E56A St. Veronique 132.42 60 P 03 55 51.4
baz=249
L61B Northampton 132.46 66 P 03 55 51.0
baz=247
M63A Gales Ferry 132.48 68 IAMs_20 IAMs_20 04 50 36.7
comp=Z,1µm,19.0s
M63A Gales Ferry 132.48 68 P 03 55 51.4
baz=246
G58A Ormstown 132.56 62 P 03 55 51.5
baz=249
I60A Shoreham 132.58 64 P 03 55 51.8
baz=248
H59A Cadyville 132.62 63 P 03 55 51.2
baz=248
D56A ZEC Mazanza, M 132.78 60 P 03 55 51.8
baz=250,SNR=7.8
K62A Royalston 132.85 66 P 03 55 52.2
baz=247
J61A Chester 132.89 65 P 03 55 52.5
baz=248
L63A North Scituate 132.96 67 P 03 55 53.2
baz=247
RAYN Ar Rayn 132.99 264 PKiKP PKiKP 03 55 53.0 -0.2
RAYN Ar Rayn 132.99 264 PKIKP PKiKP 03 55 53.1 -0.2
RAYN MLR MLR
comp=Z,800nm,21.0s
RAYN Ar Rayn 132.99 264 PKPdf PKiKP 03 55 53.1 -0.2
M64A Tiverton 133.12 68 IAMs_20 IAMs_20 04 51 13.5
comp=Z,1µm,20.0s
M64A Tiverton 133.12 68 P 03 55 52.8
baz=247
H60A Morristown 133.25 64 P 03 55 53.4
baz=249
HRV Adam Dziewonsk 133.25 67 P 03 55 53.4
baz=247
HRV Adam Dziewonsk 133.25 67 IAMs_20 IAMs_20 04 50 55.9
comp=Z,1µm,20.0s
K63A Dunstable 133.34 66 IAMs_20 IAMs_20 04 50 25.3
comp=Z,1µm,20.0s
K63A Dunstable 133.34 66 P 03 55 53.7
baz=248
I61A Oroboro, Fairl 133.34 65 P 03 55 53.3
baz=248
J62A Henniker 133.35 66 P 03 55 53.4
baz=248
E58A La Victoria 133.50 61 P 03 55 53.3
baz=250
L64A Middleborough 133.52 68 P 03 55 53.1
baz=247
F59A Saint Guilaume 133.65 62 P 03 55 53.6
baz=250
LBNH Lisbon 133.65 64 P 03 55 53.6
baz=249
G60A Masonville 133.68 63 P 03 55 53.4
baz=249
H61A Lyndonville 133.75 64 P 03 55 53.2
baz=249
J63A Strafford 133.87 66 P 03 55 53.3
baz=248
I62A Tamworth 133.91 65 P 03 55 53.4
baz=249
CHGQ Chibougamau 133.94 56 P 03 55 53.4
baz=253,SNR=5.3
D58A Chemin du LacG 134.00 60 P 03 55 54.1
baz=251
ABKAR Akbulak array 134.14 303 PKPdf PKPdf 03 55 52.8 -0.6
LATQ La Tuque 134.16 60 P 03 55 54.9
baz=251
F60A Warwick 134.23 62 P 03 55 55.2
baz=250
G61A St-Isidore-de- 134.28 63 P 03 55 55.0
baz=250
H62A Milan 134.28 64 P 03 55 55.4
baz=249
I63A Otisfield 134.48 65 P 03 55 55.8
baz=249
RDF Al-Radifah 134.49 271 *e*P 03 55 54.4
D59A Saint-Raymond 134.65 61 P 03 55 56.4
baz=251
E60A Ste Agathe de 134.69 62 P 03 55 56.1
baz=251
F61A St Evariste 134.86 62 P 03 55 56.3
baz=251
G62A West of Eustis 134.92 63 P 03 55 56.4
baz=250
H63A New Sharon 135.06 64 P 03 55 56.9
baz=250
I64A Boothbay 135.07 65 P 03 55 56.5
baz=250
RST Umm Al-Ruwaisa 135.20 272 *e*P 03 55 55.9
E61A Lac Etchemin 135.34 62 P 03 55 57.1
baz=252
G63A Kingsbury 135.49 64 P 03 55 57.3
baz=251
SVE Sverdlovsk 135.59 313 *i* PKIKP **PKPdf 03 55 56.5 +0.7**
SVE pmax pmax
comp=Z,26nm,1.1s
SVE MLR MLR
comp=E,2µm,23.0s
SVE MLR MLR
comp=Z,3µm,25.0s
H64A Troy 135.60 65 P 03 55 57.7
baz=250
AKTO Aktyubinsk 135.67 304 PKP PKPdf 03 55 56.5 +0.4
comp=Z,8.6nm,0.8s,baz=122,slow=4.3,SNR=11
AKTO SKPbc **SKPbc 03 59 19.9 -3.3**
comp=Z,19nm,1.0s,baz=19,slow=1.1,SNR=6.7
PKME Peaks-Kenny Pk 135.76 64 P 03 55 57.9
baz=251
D61A St Aubert, Com 135.78 61 P 03 55 58.1
baz=252
F63A Nahmakanta, Br 136.03 63 P 03 55 58.7
baz=251
G64A Maxfield 136.11 64 P 03 55 59.0
baz=251
F64A Sherman 136.58 63 P 03 55 59.4
baz=252
ARU Arti 136.65 313 PKhKP PKPpre 03 55 49.3
comp=Z,1.1nm,0.3s,baz=134,slow=2.9,SNR=7.3
ARU PKP **PKPdf 03 55 57.3 -0.5**
comp=Z,4.1nm,0.7s,baz=9.4,slow=5.9,SNR=7.0
ARU Arti 136.65 313 *i* PKHKP PKPpre 03 55 47.3
ARU MLR MLR
comp=Z,2µm,24.0s
ARU Arti 136.65 313 IAMs_20 IAMs_20 05 02 56.9
comp=Z,2µm,21.0s
E63A Oxbow 136.70 62 P 03 55 59.4
baz=252
G65A Princeton 136.90 64 P 03 55 59.9
baz=252
H66A Whiting 136.93 65 P 03 56 00.3
baz=251
TULEG Thule 137.01 18 *i* P **PKPdf 03 55 53.3 -4.6**
TULEG Thule 137.01 18 IAMs_20 IAMs_20 04 55 15.0
comp=Z,1µm,21.0s
D63A Stockholm 137.09 62 P 03 56 00.3
baz=253
NOR Nord 140.23 2 *e*P **PKPdf 03 56 01.4 -2.4**
NOR Nord 140.23 2 *e*PKIKP **PKPdf 03 56 01.3 -2.4**
NEEM North Greenlan 140.23 14 *e*P **PKPdf 03 55 57.8 -6.5**
MAK Makhachkala 140.50 290 *i* P **Pdif 03 53 19.8 -1.7**
MAK *i* 03 56 21.3
MAK *e* 03 56 24.4
MAK *e* 03 59 04.1
MAK *e*PPP PPP 04 02 07.1
MAK pmax pmax
comp=Z,72nm,1.0s
UPNV Upernavik 141.48 21 *e*P **PKPdf 03 56 00.4 -5.7**
GNI Garni 141.54 285 PKiKP PKiKP 03 56 10.6 +0.2
GNI Garni 141.54 285 PKIKP PKPdf 03 56 08.8 +1.3
GNI MLR MLR
comp=Z,700nm,21.0s
GNI Garni 141.54 285 PKPdf PKPdf 03 56 08.8 +1.3
KIRV Kirov 141.75 315 PKhKP PKPpre 03 56 01.9
comp=Z,1.5nm,0.5s,baz=222,slow=3.3,SNR=5.5
GROC Groznyy 141.77 290 *e*PKHKP PKPpre 03 56 00.5
GROC *e* 04 03 12.2
GROC pmax pmax
comp=Z,8.0nm,0.4s
BELG Belogornoye 142.43 305 PKhKP PKPpre 03 56 04.0
comp=Z,45nm,0.6s,baz=92,slow=0.7,SNR=20
AGRB Hanur-Agry 142.60 283 *e*P **PKPdf 03 56 05.5 -4.0**
SPA0 Spitsbergen Ar 142.62 352 *e*PKPdf **PKPdf 03 56 04.1 -4.0**
SPA0 *ep*PKPdf **sPKPdf 03 56 26.8 -2.8**
AKH Akhalkalaki 142.85 286 *i*P **PKPdf 03 56 07.6 -2.2**
HOPEN Hopen 142.91 348 *ep*PKPdf pPKPdf 03 56 28.3 +3.8
ZEI Tsey 142.98 289 *i* PKIKP **PKPdf 03 56 07.9 -2.1**
ZEI pmax pmax
comp=Z,28nm,1.1s
MARD Mardin 143.39 279 PKPdf PKPbc 03 56 09.4 +1.3
SENK Senkaya-Erzuru 143.40 285 *e*P PKPbc 03 56 08.7 +0.5
PRGR Permogore 143.43 320 *e*PKHKP PKPpre 03 56 05.5
PRGR pmax pmax
comp=Z,77nm,1.5s
KOPR Koprukoy-ERZUR 143.57 283 *e*P PKPbc 03 56 09.6 +0.9
MAZI Mazidag 143.69 279 *e*P PKPbc 03 56 09.7 +0.7

KARO Karlova-Bingo 143.92 282 eP PKPdf 03 56 11.1 -0.7
KBZ Khabaz 143.94 290 PKP PKPbc 03 56 09.4 +0.1
comp=Z,43nm,1.0s,baz=156,slow=1.7,SNR=40
BNGB Bingl 144.08 281 eP PKPdf 03 56 11.3 -0.7
DYBB Diyarbakir 144.10 279 eP PKPdf 03 56 11.1 -0.9
KIV Kislovodsk 144.15 290 i PKPdf PKPbc 03 56 10.0 -0.1
SNR=6.7
KIV Kislovodsk 144.15 290 i PKIKP PKiKP 03 56 14.7 -0.8
KIV e 03 59 26.3
KIV eSS SS 04 18 07.5 -1.6
KIV pmax pmax
comp=Z,101nm,1.1s
KIV MLR MLR
comp=Z,2μm,24.0s
GOF Gofitskoye 144.17 292 i PKIKP PKPbc 03 56 10.4 +0.4
GOF pmax pmax
comp=Z,393nm,1.1s
BATM Batumi 144.20 286 P PKPab 03 56 06.0 -3.9
BATM Batumi 144.20 286 eP PKPab 03 56 06.2 -3.6
BATM Batumi 144.20 286 PKHKP PKPpre 03 56 06.0
CHVG Ch'k'valeri 144.24 288 P PKPab 03 56 08.6 -1.3
CHVG Ch'k'valeri 144.24 288 PKHKP PKPpre 03 56 08.6
YEDI Yedisu-Bingol 144.34 282 eP PKPdf 03 56 12.1 -0.4
DRLN Deer Lake 144.49 61 PKPdf PKPab 03 56 10.7 0.0
GHAJ Ghor Haditha 144.62 266 IAMs_20 IAMs_20 04 58 44.9
comp=Z,1μm,21.0s
DBIC Dimbokro 144.67 183 PKP PKPbc 03 56 12.9 +0.4
comp=Z,113nm,1.0s,baz=158,slow=4.1,SNR=44
DAG Danmarks Havn 144.87 5 i P PKPab 03 56 09.0 -2.3
DAG Danmarks Havn 144.87 5 i PKHKP PKPpre 03 56 08.9
URFA Urfa 144.88 278 eP PKPbc 03 56 12.8 +0.1
ERZN Erzincan 144.98 282 eP PKPdf 03 56 13.3 -0.2
KTUT Trabzon 145.40 284 P PKPab 03 56 14.6 +0.3
KTUT Trabzon 145.40 284 eP PKPab 03 56 15.1 +0.8
MALT Malatya 145.49 279 eP PKPab 03 56 14.9 0.0
SFJD Kangerlussuaq 145.65 29 i P PKPdf 03 56 13.2 -0.4
SFJD Kangerlussuaq 145.65 29 PKIKP PKPdf 03 56 13.2 -0.4
SFJD Kangerlussuaq 145.65 29 PKPdf PKPdf 03 56 13.1 -0.5
ILIC ilic-Erzincan 145.78 281 eP PKPab 03 56 16.2 +0.2
SUMG Summit 145.89 16 i P PKPbc 03 56 14.8 -0.4
SUMG Summit 145.89 16 PKP2 PKPdf 03 56 14.3 -0.1
SUMG Summit 145.89 16 PKPdf PKPdf 03 56 14.3 -0.1
GAZ Gaziantep 145.97 277 eP PKPbc 03 56 16.1 0.0
VRH Novokhopyorsk 145.97 302 ePKP2 PKPbc 03 56 15.4 -0.1
VRH pmax pmax
comp=Z,130nm,0.8s
VRH MLR MLR
comp=Z,3μm,27.0s
LVZ Lovozero 146.01 333 PKP2 PKPbc 03 56 15.0 -0.2
LVZ Lovozero 146.01 333 PKPbc 03 56 15.0 -0.2
SOC Sochi 146.14 289 ePKIKP PKPdf 03 56 14.5 -0.7
SOC e 03 59 37.8
SOC eSS SS 04 18 25.0 -6.7
NUUK Nuuk 146.27 34 i P PKPbc 03 56 15.7 -0.2
DARE Darende-Malaty 146.28 279 eP PKPbc 03 56 16.4 -0.6
KMRS Kahramanmaras 146.32 277 eP PKPbc 03 56 16.5 -0.6
TAHT Tahtakopru-Hat 146.42 275 eP PKPab 03 56 17.9 -0.4
KLMR Klimovskoe 146.48 320 ePKIKP PKPdf 03 56 14.3 -0.9
KLMR e 03 59 37.3
KLMR eSS SS 04 18 28.5 -5.8
KLMR pmax pmax
comp=Z,214nm,0.8s
KLMR Klimovskoe 146.48 320 ePKPdf PKPdf 03 56 14.4 -0.8
KLMR AMP 03 56 17.7
comp=Z,214nm,0.8s
KLMR ePP PP 03 59 37.3 -3.4
KLMR eSS SS 04 18 28.5 -5.8
KLMR eSS SS 04 18 28.5 -5.8
KLMR LQ LQ 04 51 19.1
KLMR LQ LQ 04 51 19.1
KLMR LR LR 04 53 54.5
APA Apatity 146.58 333 i PKP2 PKiKP 03 56 31.2 +12
RSDY Resadiye-TOKAT 146.99 282 eP PKPbc 03 56 18.8 -0.1
CEYT Ceyhan 146.99 276 eP PKPbc 03 56 18.5 -0.4
SVSK Karacayir 147.08 281 eP PKPbc 03 56 18.9 -0.2
KRTS Karatas 147.10 275 eP PKiKP 03 56 34.1 +12
KOZT Kozan 147.11 276 eP PKPbc 03 56 19.2 -0.1
DBG Daneborg 147.13 7 i P PKPdf 03 56 16.9 +1.0
KEV Kevo 147.27 339 PKP2 PKPbc 03 56 18.5 -0.2
KEV pmax pmax
comp=Z,3μm,22.0s
KEV Kevo 147.27 339 PKPbc PKPbc 03 56 18.5 -0.2
DY2G Dye2 147.43 28 i P PKPbc 03 56 18.7 -0.8
DY2G eP PKPab 03 56 19.3 -2.3
DY2G i 03 56 32.4
VORD Divnogorie 147.49 302 ePKP2 PKPbc 03 56 19.3 -0.5
VORD pmax pmax
comp=Z,70nm,1.0s
HAMF Hammerfest 147.50 342 ePKPbc PKPdf 03 56 17.1 +0.5
HAMF epPKPdf pPKPbc 03 56 35.4 +0.3
TOKT Tokat 147.53 282 eP PKPbc 03 56 20.3 -0.1
VORR Voronezh 147.56 303 ePKIKP PKPdf 03 56 16.0 -1.3
VORR pmax pmax
comp=Z,500nm,1.4s
BNN Bunyan 147.58 279 eP PKPdf 03 56 16.6 -1.4
VSR Storozhevoye 147.58 302 ePKP2 PKPbc 03 56 19.2 -0.9
VSR pmax pmax
comp=Z,140nm,1.1s
VSR MLR MLR
comp=Z,2μm,21.0s
TOKA Tokat 147.58 282 PKPbc 03 56 21.4 +0.8
KARA Karaisali 147.60 276 eP PKPdf 03 56 17.8 -0.1
LPSR Galich'ya Gora 147.75 305 ePKP2 PKPbc 03 56 20.9 +0.4
LPSR pmax pmax
comp=Z,240nm,1.1s
LPSR MLR MLR
comp=Z,840nm,18.0s
CMRD Camardi-Nigde 147.79 276 eP PKPdf 03 56 18.3 0.0
ARA0 ARCESS Array S 147.81 339 ePKPab PKPbc 03 56 19.4 -0.8
ARCES ARCESS Array B 147.81 339 PKPbc PKPbc 03 56 19.1 -1.1
comp=Z,24nm,0.5s,baz=63,slow=2.3,SNR=124
ARCES ARCESS Array B 147.81 339 PKPbc PKPbc 03 56 19.4 -0.8
MERS Mersin 147.84 275 eP PKPbc 03 56 21.4 0.0
CSS Mathiatis 147.97 271 IAMs_20 IAMs_20 04 54 26.6
comp=Z,1μm,22.0s
KIZK Mersin 147.98 274 eP PKPdf 03 56 19.8 +1.3
ANN Anapa 148.01 290 ePKP2 PKPbc 03 56 21.1 -0.3
ANN pmax pmax
comp=Z,225μm,1.2s
ICESG Greenland Ices 148.01 22 i P PKPbc 03 56 20.0 -1.2
KVT Kavak 148.12 283 eP PKPbc 03 56 20.6 -1.3
MOS Moscow 148.32 311 ePKIKP PKPdf 03 56 19.1 +0.7
MOS e 03 56 35.2
MOS pmax pmax
comp=Z,205nm,1.4s
MOS MLR MLR
comp=Z,2μm,24.0s
KOZK Kozakli-Nevseh 148.41 279 eP PKPbc 03 56 22.0 -0.9
KTK1 Kautokeino 148.76 340 ePKPbc PKPbc 03 56 21.1 -1.6
KTK1 epPKPdf pPKPbc 03 56 38.1 -0.3
CORM Corum 148.89 281 eP PKPbc 03 56 23.1 -1.0
OBN Obninsk 148.99 310 i P PKPdf 03 56 20.2 +0.7
OBN Obninsk 148.99 310 ePKIKP PKPdf 03 56 19.4 -0.1
OBN e 03 56 33.5
OBN i 03 56 38.2
OBN 04 00 00.0
OBN SS SS 04 19 09.0 +6.0
OBN pmax pmax
comp=Z,34nm,1.3s
OBN pmax pmax
comp=Z,375nm,1.6s
OBN Obninsk 148.99 310 PKPbc 03 56 23.5 -0.1
JETT Jettan, Norway 149.06 342 ePKPbc PKPbc 03 56 21.8 -1.7
SERE Serefiikochisa 149.29 278 eP PKPbc 03 56 24.0 -1.1
KAMT Kaman 149.31 279 eP PKPbc 03 56 24.9 -0.2
TRO Tromso 149.34 343 ePKPbc PKPbc 03 56 22.4 -1.7
TRO IVmB_BB 03 56 22.6
comp=Z,4μm,4.5s
TRO eSKPdf SKPdf 03 59 43.4 -5.6
TRO IVMs_BB IVMs_BB 04 47 16.7
comp=Z,4μm,4.8s
SACV Santiago Islan 149.35 147 PKiKP 03 56 26.7 -0.2
BRTR Keskin Array B 149.48 279 PKP PKPdf 03 56 20.5 -0.5
comp=Z,56nm,1.0s,baz=148,slow=4.4,SNR=38
BRTR PKPbc PKPbc 03 56 24.9 -0.6
comp=Z,56nm,1.0s,baz=144,slow=3.7,SNR=53
BRTR SKKPbc 04 07 31.4
comp=Z,2.1nm,0.8s,baz=257,slow=4.9,SNR=3.9
BRTR Keskin Array B 149.48 279 eP PKPdf 03 56 22.4 +1.4
BRTR Keskin Array B 149.48 279 PKPdf PKPdf 03 56 19.8 -1.3
BRTR PKPbc PKPbc 03 56 25.3 -0.3
BZK Bozkurt 149.83 284 P PKPdf 03 56 21.3 +0.1

NRS Narsarsuaq 150.06 37 i P PKPbc 03 56 25.8 -0.2
NRS Narsarsuaq 150.06 37 i PKIKP PKPbc 03 56 25.8 -0.2
ANTO Ankara 150.14 279 PKIKP PKPbc 03 56 26.8 -0.3
ANTO Ankara 150.14 279 PKPbc 03 56 26.8 -0.3
ANTO IAMs_20 IAMs_20 05 00 04.1
comp=Z,863nm,22.0s
TORD Torodi Ar. Bea 150.20 197 PKP PKPdf 03 56 22.0 -0.7
comp=Z,34nm,1.1s,baz=300,slow=0.5,SNR=85
TORD PKPbc PKiKP 03 56 28.3 -0.4
comp=Z,178nm,1.0s,baz=156,slow=2.0,SNR=86
TORD Torodi Ar. Bea 150.20 197 PKPdf 03 56 22.9 +0.1
TORD PKPbc PKiKP 03 56 29.8 +1.1
SIM Simferopol' 150.35 290 c i PKIKP PKPbc 03 56 26.8 -0.5
SIM pmax pmax
comp=Z,73nm,1.3s
ISOG Isortoq, Green 150.44 27 eP PKPdf 03 56 21.1 -0.4
SCO Scoresbysund 150.53 10 eP PKPbc 03 56 24.7 -2.3
SCO i 03 56 26.8
SCO Scoresbysund 150.53 10 ePKIKP PKPbc 03 56 24.6 -2.3
ANGG Ammassalik, Gr 150.84 26 i P PKPbc 03 56 26.7 -1.0
ISP Isparta 151.16 274 IAMs_20 IAMs_20 04 59 47.6
comp=Z,983nm,22.0s
PUL Pulkovo 151.17 321 i PKIKP PKPbc 03 56 28.5 -0.2
PUL pmax pmax
comp=Z,80nm,0.7s
N2IH Innhavet 151.33 342 ePKPbc PKPbc 03 56 27.3 -1.5
STEI Steigen 151.52 343 ePKPbc PKPbc 03 56 27.7 -1.6
STEI ePKPab PKPab 03 56 35.9 -2.1
STEI epPKPdf sPKPdf 03 56 42.5 -2.0
LOF Lofoten 151.72 344 ePKPbc PKPbc 03 56 27.9 -1.9
LOF IVmB_BB 03 56 28.9
comp=Z,4μm,4.3s
LOF eSKPdf SKPdf 03 59 45.5 -6.8
LOF IVMs_BB IVMs_BB 03 59 46.6
comp=Z,4μm,5.3s
N2TV TYrnvik 151.84 342 ePKPbc PKPbc 03 56 28.2 -1.8
N2TV IVmB_BB 03 56 39.1
comp=Z,3μm,4.2s
N2TV IVMs_BB IVMs_BB 04 51 10.8
comp=Z,5μm,4.7s
N2ST Straumen 151.91 342 ePKPbc PKPbc 03 56 28.9 -1.3
N2ST IVmBBB 03 56 31.2
comp=Z,3μm,3.7s
N2ST eSKPdf SKPdf 03 59 48.4 -4.2
FAUS Fauske 151.95 342 ePKPbc PKPbc 03 56 28.7 -1.6
FAUS IVmB_BB 03 56 41.4
comp=Z,5μm,4.6s
FAUS IVMs_BB IVMs_BB 04 50 33.1
comp=Z,6μm,4.8s
NBB08 Skaug oppvekst 152.10 342 ePKPbc PKPbc 03 56 29.4 -1.2
NBB28 Valnes 152.29 342 ePKPbc PKPbc 03 56 29.3 -1.8
NBB28 ePKSdf PP 03 59 53.6 -20
FINES FINESS Array B 152.35 326 PKPbc PKPbc 03 56 30.4 -1.0
comp=Z,23nm,0.6s,baz=87,slow=2.9,SNR=49
FINES FINESS Array B 152.35 326 c i PKIKP PKPbc 03 56 30.3 -1.1
FINES pmax pmax
comp=Z,23nm,0.6s
FINES FINESS Array B 152.35 326 PKPbc 03 56 29.8 -1.6
KOWA Kowa 152.38 186 PKPdf PKPdf 03 56 25.7 -0.4
KOWA PKPbc PKiKP 03 56 33.4 +0.2
NBB05 Inndyr 152.52 342 ePKPbc PKPbc 03 56 29.9 -1.6
NBB05 IVmB_BB 03 56 30.4
comp=Z,6μm,4.3s
NBB05 ePP PP 04 00 13.0 -2.2
N2RO R_st 152.53 344 eSKPdf SKPdf 03 59 47.6 -5.8
NBB30 Finnes 152.64 342 IVmB_BB 03 56 25.6
comp=Z,4μm,4.2s
NBB30 ePKPbc PKPbc 03 56 28.3 -3.5
NBB30 ePKPab pPKPdf 03 56 39.4 -1.2
NBB30 eSKPdf SKPdf 03 59 45.2 -8.4
NBB11 Glomfjord BYr 152.72 342 i eSKPd 03 59 47.2
KARP Karpathos 152.80 267 IAMs_20 IAMs_20 05 16 44.6
comp=Z,1μm,22.0s
MOR8 Moi Rana 153.13 341 IVmB_BB 03 56 21.1
comp=Z,4μm,6.0s
MOR8 ePKPbc PKPbc 03 56 30.9 -2.1
MOR8 ePKPab pPKPdf 03 56 40.7 -0.7
MOR8 ePKSdf PP 03 59 56.5 -22
KONS Konsvik 153.17 342 ePKPbc PKPbc 03 56 30.2 -2.8
KONS epPKPdf PKPab 03 56 44.6 -0.3
NBB40 Tonnes 153.18 342 ePKPbc PKPbc 03 56 32.1 -1.0
STOK Stokkvaagen 153.33 342 ePKPbc PKPbc 03 56 32.0 -1.4
VSU Vasula 153.38 319 eP PKPab 03 56 44.1 -1.9
AKASG Malin Array Be 153.87 302 PKP PKPdf 03 56 26.4 -0.7
comp=Z,0.2nm,0.3s,baz=46,slow=1.5,SNR=4.1
AKASG PKPbc PKPbc 03 56 33.6 -1.5
comp=Z,9.9nm,0.8s,baz=67,slow=2.3,SNR=9.2
AKBB Malin Array Si 153.87 302 c e PKIKP PKPdf 03 56 26.8 -0.3
AKBB Malin Array Si 153.87 302 PKPbc 03 56 34.6 -0.4
MNK Minsk 154.04 311 ePKIKP PKiKP 03 56 36.0 +0.6
MNK e 03 56 48.0
MNK Minsk 154.04 311 i PKP PKPdf 03 56 25.8 -1.4
comp=E,3.0nm,1.0s
MNK i PKP PKPdf 03 56 25.8 -1.4
comp=N,11nm,1.0s
MNK i PKP PKPdf 03 56 25.8 -1.4
comp=Z,18nm,1.0s
MNK i pPKP sPKPdf 03 56 48.4 -0.4
MNK i sPKP 03 56 57.1
MNK i PKS PKSdf 04 00 00.1 -1.1
MNK i PP PP 04 00 24.2 -0.3
MNK i SKS SKSdf 04 03 25.3 -4.0
MNK i PPP PPP 04 03 53.9
MNK i SKKS SKKSdf 04 12 04.9 -5.1
MNK i SPP SPP 04 17 22.0
MNK i PPS PPS 04 17 33.1
MNK i SS SS 04 20 03.0 +4.2
MNK i SSS SSS 04 25 51.4
MNK i LQ LQ 04 54 47.3
MNK i LR LR 04 59 16.2
MNK i LRM MLR 05 06 19.6
comp=Z,1μm,19.7s
MNK i LRM MLR 05 06 25.6
comp=E,109nm,19.7s
MNK i LRM MLR 05 06 25.6
comp=N,599nm,19.7s
TLCR 154.11 289 P PKPbc 03 56 31.9 -3.8
TLCR 154.11 289 PKIKP PKPbc 03 56 31.9 -3.8
KIS Kishinev 154.24 293 eP PP 04 00 26.0 +0.1
comp=N,380nm,6.4s
KIS eLR LR 05 08 08.0
comp=N,500nm,23.0s
MILM Milestii Mici 154.24 293 P PKPbc 03 56 34.8 -1.2
MFTR Murfatlar 154.27 287 P PKPdf 03 56 30.6 +2.8
TPGR Topolog 154.35 288 P PKPdf 03 56 31.6 +3.6
IDI Anoyia 154.38 265 P PKPdf 03 56 29.2 +0.8
IDI Anoyia 154.38 265 IAMs_20 IAMs_20 05 16 58.4
comp=Z,1μm,20.0s
SANT Santorini 154.39 268 IAMs_20 IAMs_20 05 14 03.8
comp=Z,852nm,21.0s
IDID Didziasalis 154.46 313 eP PKPab 03 56 51.2 +0.4
NACGM Naroch 154.56 312 i PKP PKPbc 03 56 36.0 -0.4
NACGM Naroch 154.56 312 i PKP PKPbc 03 56 36.0 -0.4
NACGM Naroch 154.56 312 i PKP PKPbc 03 56 36.0 -0.4
NACGM Naroch 154.56 312 i pPKP PKPab 03 57 02.8 +12
NACGM Naroch 154.56 312 i sPKP 03 57 34.3
NACGM Naroch 154.56 312 i SKP 03 58 59.3
NACGM Naroch 154.56 312 i PP PP 04 01 12.8 +45
NACGM Naroch 154.56 312 i PPP PPP 04 04 49.4
NACGM Naroch 154.56 312 i SKKS 04 07 09.4
NACGM Naroch 154.56 312 i SPP SPP 04 13 43.4
SORM Soroca 154.57 296 P PKPbc 03 56 36.3 -0.3
SORM Soroca 154.57 296 PKIKP PKPbc 03 56 36.3 -0.3
TLBR Topalu 154.58 287 P PKiKP 03 56 37.1 +0.3
CFR Carcaliu 154.59 289 P PKPdf 03 56 26.8 -1.5
CFR Carcaliu 154.59 289 PKIKP PKPdf 03 56 26.8 -1.5
APE Apeiranthos 154.60 269 P PKPbc 03 56 36.4 -0.8
APE Apeiranthos 154.60 269 PKIKP PKPbc 03 56 36.4 -0.8
MTSE Matsula 154.65 322 eP PKPab 03 56 51.0 -0.4
HARR Harsova 154.68 288 P PKiKP 03 56 37.4 +0.4
HARR Harsova 154.68 288 PKIKP PKiKP 03 56 37.4 +0.4
ISAL Salakas 154.72 314 eP PKPab 03 56 51.4 -0.5
IIGN Ignalina 154.73 313 eP PKPab 03 56 51.4 -0.6
NSS Namsos 155.07 341 ePKPdf PKPdf 03 56 25.0 -3.3
NSS ePKPbc pPKPdf 03 56 33.7 -10
NSS IVmBBB 03 56 34.8
comp=Z,5μm,5.1s
BISRR Bisoca 155.62 290 P PKPdf 03 56 31.6 +1.8
VRI Vrincioaia 155.63 290 P PKPab 03 56 56.7 +0.6
VRI Vrincioaia 155.63 290 PKP2 PKPab 03 56 56.7 +0.6
PLOR Plostina 155.68 290 P PKPdf 03 56 40.4 +11
PLOR Plostina 155.68 290 PKIKP PKPdf 03 56 40.4 +11
TESR Tescani 155.71 292 PKP PKPdf 03 56 42.6 +13

SLIT Slitere, Latvi 155.87 320 eP PKPab 03 56 56.0 -0.7
PABE Paberze 155.89 314 eP PKPab 03 56 54.6 -2.3
BIZ Bicaz 156.09 293 P PKPdf 03 56 30.8 +0.5
MLR Muntele Rosu 156.15 289 P PKPdf 03 56 38.8 +8.2
MLR Muntele Rosu 156.15 289 PKIKP PKPdf 03 56 38.8 +8.2
OZUR 156.29 291 PKPab 03 56 51.7 -7.4
BURAR Bucovina Array 156.69 295 P PKPdf 03 56 42.2 +11
BURAR Bucovina Array 156.69 295 PKIKP PKPdf 03 56 42.2 +11
BURAR Bucovina Array 156.69 295 PKPdf PKPdf 03 56 30.9 -0.2
UPP Uppsala 156.69 328 eP PKPab 03 56 58.0 -2.2
PBUR Paburge 156.76 317 eP PKPab 03 57 01.0 +0.4
SUW Suwalki 156.83 311 eP PKP PKPab 03 57 01.5 +0.5
SUW Suwalki 156.83 311 eP PKPab 03 56 57.6 -3.4
PLVB Pleven 156.89 284 PKPab 03 57 02.6 +0.9
ARR Arges 157.07 289 P PKPdf 03 56 32.0 +0.3
LVV L'vov 157.28 300 ePKIKP PKPdf 03 56 43.0 +11
VTS Vitosha 157.78 282 P PKPab 03 57 04.5 -1.3
VTS Vitosha 157.78 282 PKP2 PKPab 03 57 04.5 -1.3
DOMB Dombas 157.88 340 ePKPdf PKPdf 03 56 28.6 -3.5
DOMB epPKPdf sPKPdf 03 56 50.9 -2.7
NC405 NORSAR Array S 157.88 336 PKPab PKPab 03 57 05.1 -0.3
VAY Valandovo 158.04 278 i P PKPab 03 57 06.0 -0.6
NB2 NORSAR Subarra baz=38,slow=4.4 158.09 336 PKPab PKPab 03 57 05.3 -1.0
NOA NORSAR Array B 158.09 336 PKP PKPdf 03 56 31.1 -1.4
comp=Z,3.2nm,1.0s,baz=49,slow=1.6,SNR=3.6
NOA PKPab PKPab 03 57 05.9 -0.4
comp=Z,20nm,1.1s,baz=41,slow=4.7,SNR=4.9
NOA pPKPab pPKPab 03 57 21.2 -0.4
comp=Z,10nm,1.0s,baz=40,slow=5.6,SNR=6.5
TAM Tamanrasset 158.12 212 PKIKP PKPdf 03 56 34.4 +0.6
TAM Tamanrasset 158.12 212 PKPdf PKPdf 03 56 34.4 +0.6
TAM IAMs_20 IAMs_20 05 13 45.8
comp=Z,1μm,20.0s
KWP Kalwaria Pacla 158.16 300 PKP2 PKPab 03 57 07.9 +0.9
KWP Kalwaria Pacla 158.16 300 PKPab 03 57 07.9 +0.9
NC602 NORSAR Array S 158.23 335 PKPdf PKPdf 03 56 34.0 +1.5
NC602 PKPab PKPab 03 57 06.5 -0.3
NC602 NORSAR Array S 158.23 335 ePKPdf PKPdf 03 56 28.6 -3.9
NC602 ePKPab PKPab 03 57 03.0 -3.8
NC602 IVMs_BB IVMs_BB 04 50 38.8
comp=Z,3μm,5.2s
DEV Deva 158.30 290 P PKPab 03 56 53.4 -14
DEV Deva 158.30 290 PKP2 PKPab 03 56 53.4 -14
STIP Stip 158.39 279 i P PKPab 03 57 08.2 0.0
DRGR 158.42 293 P PKPdf 03 56 33.2 -0.1
DRGR 158.42 293 PKIKP PKPdf 03 56 33.2 -0.1
UZH Uzhgorod 158.57 298 ePKP2 PKPab 03 57 01.1 -7.6
HERR Herculane 158.61 287 P PKPdf 03 56 50.7 +17
BEL Belsk 158.87 307 ePKP PKPab 03 57 11.2 +1.3
BOVS Bovan 159.02 284 P PKPdf 03 56 44.7 +11
CRVS Cervenica-Dubn 159.08 299 ePKIKP PKPdf 03 56 35.3 +1.4
CRVS Cervenica-Dubn 159.08 299 ePKP PKPdf 03 56 35.3 +1.4
CRVS e 03 57 12.9
CRVS e 03 57 25.8
CRVS ePP PP 04 01 07.0 +14
OSL Oslo 159.11 335 IVmB_BB 03 56 46.8
comp=Z,2μm,6.0s
OSL ePKPab PKPab 03 57 07.8 -2.8
SKAR Skarslia 159.22 339 ePKPdf PKPdf 03 56 29.6 -4.2
SKAR IVmB_BB 03 56 44.3
comp=Z,3μm,4.6s
SKAR IVMs_BB IVMs_BB 04 59 24.5
comp=Z,2μm,5.4s
OHR Ohrid 159.30 277 i P PKPab 03 57 04.6 -7.7
NIE Niedzica 159.74 300 ePKP PKPab 03 57 15.7 +1.8
KECS Kecovo 159.78 298 ePKP2 PKPab 03 57 15.1 +1.1
KECS Kecovo 159.78 298 ePKP PKPab 03 57 15.1 +1.1
OJC Ojcow 159.89 303 ePKP PKPab 03 57 14.4 -0.1
TIR Tirane 160.04 277 PKP2 PKPab 03 57 15.7 +0.3
TIR 04 56 36.6
TIR Tirane 160.04 277 PKPdf PKPdf 03 56 36.6 +1.3
TIR PKPab 03 57 15.7 +0.3
ASK Askoy 160.17 342 eSKPdf SKPdf 03 59 55.5 -7.0
DIVS Divibare 160.30 285 eP PKPab 03 57 16.0 -0.6
LANS Liptovska Anna 160.33 300 ePKP2 PKPab 03 57 18.5 +2.0
LANS Liptovska Anna 160.33 300 ePKP PKPab 03 57 18.5 +2.0
FRGS Fruska Gora 160.46 288 PKPdf 03 56 54.3 +19
FRGS Fruska Gora 160.46 288 eP PKPab 03 57 16.7 -0.5
PDG Podgorica 160.67 280 eP PKPab 03 57 31.5 +13
BSD Bornholm Skovb 160.68 320 eP PKPab 03 57 16.4 -1.3
BSD Bornholm Skovb 160.68 320 i P PKPab 03 57 17.4 -0.2
DRME Dracevica, Mon 160.68 279 eP PKPab 03 57 32.1 +14
BBLS Lazići 160.70 284 eP PKPab 03 57 18.6 +0.3
BLS5 Blasjo 160.78 339 ePKPab PKPab 03 57 14.1 -3.9
VYHS Vyhne 160.86 298 ePKP2 PKPab 03 57 19.2 +0.4
VYHS Vyhne 160.86 298 ePKP PKPab 03 57 19.2 +0.4
UPM Unac-Piva 161.01 282 eP PKPab 03 57 18.5 -1.3
OKC Ostrava-Krasne comp=Z,2μm,19.5s 161.02 303 AMS AMS 05 12 10.0
HAPS Han Pijesak,Bl 161.04 285 eP PKPab 03 57 18.4 -1.5
MORH Mrgy, Hungar 161.25 291 P PKPdf 03 56 36.2 -0.2
MORH Mrgy, Hungar 161.25 291 eP PKPab 03 57 21.0 +0.5
SRO Srobarova 161.31 296 ePKP2 PKPab 03 57 22.3 +1.6
SRO Srobarova 161.31 296 ePKP PKPab 03 57 22.3 +1.6
MORC Moravsky Berou 161.41 303 ePKP PKPdf 03 56 35.5 -1.1
MORC e 03 57 21.5
MORC e 03 57 36.3
MORC Moravsky Berou 161.41 303 PKP2 PKPab 03 57 21.7 +0.5
MORC 04 56 37.6
MORC Moravsky Berou 161.41 303 PKPdf PKPdf 03 56 37.6 +1.0
MORC PKPab PKPab 03 57 21.7 +0.5
JAVC Velka Javorina 161.55 300 ePKP PKPdf 03 56 36.1 -0.6
JAVC e 03 57 23.1
JAVC e 03 57 37.8
JAVC e 04 01 21.8
RGN Rugen baz=66,slow=4.4 161.76 320 ePKPab PKPab 03 57 22.8 +0.4
SMOL Smolenice 161.78 299 ePKP2 PKPab 03 57 24.3 +1.5
SMOL Smolenice 161.78 299 ePKP PKPab 03 57 24.3 +1.5
KRLC Kraliky 161.80 304 ePKIKP PKPdf 03 56 36.7 -0.3
KRLC MLR MLR
comp=Z,2μm,23.4s
KRLC Kraliky 161.80 304 ePKPDF PKPdf 03 56 36.7 -0.3
KRLC ePKPAB PKPab 03 57 24.1 +1.2
KRLC epPKP pPKPab 03 57 38.4 +0.2
KRLC AMS AMS 05 07 20.0
comp=Z,2μm,23.4s
KSP Ksiaz 161.86 307 ePKP PKPab 03 57 24.4 +1.4
LNIZ Loecknitz baz=66,slow=4.4 161.89 316 ePKPab PKPab 03 57 23.9 +0.9
MODS Modra-Piesok 161.90 299 ePKIKP PKPdf 03 56 35.4 -1.7
MODS e 03 57 23.0
MODS Modra-Piesok 161.90 299 ePKP PKPdf 03 56 35.4 -1.7
MODS e 03 57 23.0
MODS ePP PP 04 01 18.7 +11
OSTC Ostas 162.00 306 ePKPAB PKPab 03 57 24.4 +0.7
OSTC ex x 03 57 39.4
OSTC AMS AMS 05 12 40.0
comp=Z,2μm,25.6s
DPC Dobruska-Polom 162.00 305 ePKP2 PKPab 03 57 25.1 +1.4
DPC MLR MLR
comp=Z,2μm,24.3s
DPC Dobruska-Polom 162.00 305 ePKPAB PKPab 03 57 25.1 +1.4
DPC epPKP pPKPab 03 57 39.7 +0.6
DPC AMS AMS 05 06 40.0
comp=Z,2μm,24.3s
ZST Bratislava 162.05 298 ePP PP 04 01 22.0 +13
CHVC Chvalec 162.09 306 ePKPAB PKPab 03 57 25.6 +1.5
CHVC AMS AMS 05 08 00.0
comp=Z,2μm,23.9s
VRAC Vranov 162.13 302 ePKP PKPdf 03 56 36.0 -1.3
VRAC e 03 57 24.8
VRAC e 03 57 39.3
VRAC e 04 01 25.6
UPC Upice 162.14 306 ePKP2 PKPab 03 57 25.6 +1.3
UPC MLR MLR
comp=Z,2μm,20.4s
UPC Upice 162.14 306 ePKPAB PKPab 03 57 25.6 +1.3
UPC AMS AMS 05 08 00.0
comp=Z,2μm,20.4s
KRUC Moravsky 162.32 301 ePKP PKPdf 03 56 36.3 -1.1
KRUC e 03 57 24.8
KRUC e 03 57 40.4
KRUC e 04 01 26.0
BLY Banja Luka 162.33 287 eP PKPab 03 57 25.3 0.0
MGRS Mrkonjic Grad 162.40 286 eP PKPab 03 57 23.1 -2.6
BEHE Becsehely 162.52 293 eP PKPab 03 57 29.3 +3.2
MRAK Mrakovica 162.53 288 eP PKPab 03 57 29.4 +3.1
RUE Ruedersdorf baz=66,slow=4.4 162.62 314 ePKPab PKPab 03 57 27.0 +0.8

TREC	Trest	162.83	302	AMS	AMS	05 08 00.0	
	comp=Z,2µm,22.9s						
KOGS	Kog	162.89	293	*i* PKPab	**PKPab**	**03 57 28.3**	**+0.6**
KOGS				*ep*PKPab	**pPKPab**	**03 57 42.1**	**-0.9**
CONA	Conrad Observa	162.92	298	*eP*	**PKPdf**	**03 56 38.9**	**+0.7**
	comp=Z,5.0nm,1.2s						
CONA				*eP*	**PKPab**	**03 57 28.9**	**+1.0**
	comp=Z,15nm,1.5s						
CONA				*eP*	**pPKPab**	**03 57 43.3**	**0.0**
	comp=Z,37nm,1.7s						
PVCC	Panska Ves	163.00	307	*e*PKP2	**PKPab**	**03 57 28.6**	**+0.6**
PVCC				MLR	MLR		
	comp=Z,2µm,22.8s						
PVCC	Panska Ves	163.00	307	*e*PKPAB	**PKPab**	**03 57 28.6**	**+0.6**
PVCC				AMS	AMS	05 09 20.0	
	comp=Z,2µm,22.8s						
PRU	Pruhonice	163.20	305	*e*PKP2	**PKPab**	**03 57 30.2**	**+1.3**
PRU				MLR	MLR		
	comp=Z,2µm,24.9s						
PRU	Pruhonice	163.20	305	*e*PKPAB	**PKPab**	**03 57 30.2**	**+1.3**
PRU				*ep*PKP	**pPKPab**	**03 57 44.8**	**+0.5**
PRU				AMS	AMS	05 11 20.0	
	comp=Z,2µm,24.9s						
BRG	Berggiesshubel	163.23	309	*e*PKPab	**PKPab**	**03 57 30.1**	**+1.1**
	baz=66,slow=4.4						
BRG	Berggiesshubel	163.23	309	Amp		03 49 42.2	
	comp=Z,3.2nm,0.7s						
BRG	Berggiesshubel	163.23	309	⇓PKPf		03 56 40.0	
BRG	Berggiesshubel	163.23	309	Amp		03 56 40.8	
	comp=Z,8.1nm,1.4s						
BRG	Berggiesshubel	163.23	309	Amp		03 56 59.6	
	comp=Z,16nm,1.6s						
BRG	Berggiesshubel	163.23	309	PKPab	**PKPab**	**03 57 29.9**	**+0.9**
BRG	Berggiesshubel	163.23	309	Amp		03 57 31.9	
	comp=Z,119nm,1.4s						
BRG	Berggiesshubel	163.23	309	pPKPab	pPKPab	03 57 44.4	0.0
BRG	Berggiesshubel	163.23	309	Amp		03 57 46.8	
	comp=Z,300nm,1.8s						
BRG	Berggiesshubel	163.23	309	PP	PP	04 01 21.3	+6.6
BRG	Berggiesshubel	163.23	309	Amp		04 01 37.4	
	comp=Z,201nm,2.4s						
PRA	Prague	163.24	306	AMS	AMS	05 12 30.0	
	comp=Z,2µm,26.9s						
ARSA	Arzberg	163.27	296	*eP*	**PKPdf**	**03 56 39.4**	**+0.9**
	comp=Z,2.5nm,0.9s						
ARSA				*i* P	**PKPab**	**03 57 30.7**	**+1.3**
	comp=Z,32nm,1.4s,SNR=5.4						
ARSA				*eP*	**pPKPab**	**03 57 44.8**	**+0.1**
	comp=Z,51nm,1.6s						
SKMB	Sankelmark Bun	163.42	325	*e*PKPab	**PKPab**	**03 57 30.1**	**+0.5**
	baz=66,slow=4.4						
CRES	Cresnjev	163.50	291	*eP*	**PKPab**	**03 57 31.1**	**+0.7**
BSEG	Bad Segeberg	163.54	322	*e*PKPab	**PKPab**	**03 57 30.4**	**+0.2**
	baz=66,slow=4.4						
FBE	Freiberg	163.55	309	*e*PKPab	**PKPab**	**03 57 31.7**	**+1.3**
	baz=66,slow=4.4						
CLL	Collm	163.59	311	*e*PKPdf	**PKPdf**	**03 56 39.0**	**+0.4**
CLL				*e*PKPdiff	**pPKPdf**	**03 56 57.0**	**+2.6**
CLL				*i* PKPab	**PKPab**	**03 57 30.3**	**-0.2**
	comp=Z,49nm,1.2s						
CLL				*i* pPKPab	**pPKPab**	**03 57 43.7**	**-2.2**
	comp=Z,119nm,1.7s						
CLL				*i* sPKPab	**sPKPab**	**03 57 49.9**	**-1.7**
CLL				*e*SKPdf	**SKPdf**	**04 00 05.0**	**-0.9**
CLL				*eP*	**PP**	**04 01 19.0**	**+2.6**
CLL				*i* pPP		04 01 33.8	
	comp=Z,174nm,2.6s						
CLL				*e*SKKSac	**SKKSac**	**04 08 00.0**	**+0.7**
CLL				*e*(PPPrev)		04 09 06.0	
CLL				*e*PSKS		04 11 42.0	
CLL				*e*PPS	PPS	04 14 53.0	
CLL				*e*SS	**SS**	**04 21 42.0**	**+2.1**
CLL				*e*SSS	SSS	04 28 00.0	
CLL				*e*SSSS		04 32 24.0	
CLL	Collm	163.59	311	*e*PKIKP	**PKPdf**	**03 56 39.0**	**+0.4**
CLL				*i*		03 57 30.3	
CLL				pmax	pmax		
	comp=Z,49nm,1.2s						
CLL	Collm	163.59	311	*e*PKPab	**PKPab**	**03 57 31.1**	**+0.6**
	baz=66,slow=4.4						
CLL				*ep*PKPab	**pPKPab**	**03 57 45.0**	**-0.9**
SOKA	Soboth	163.69	294	*eP*	**PKPdf**	**03 56 40.4**	**+1.5**
	comp=Z,8.0nm,1.7s						
SOKA				*eP*	**PKPab**	**03 57 32.9**	**+1.5**
	comp=Z,15nm,1.3s						
SOKA				*eP*	**pPKPab**	**03 57 46.6**	**-0.1**
	comp=Z,39nm,1.7s						
CKRC	Cesky Krumlov	163.71	302	*e*PKPAB	**PKPab**	**03 57 32.8**	**+1.5**
CKRC				AMS	AMS	05 10 20.0	
	comp=Z,2µm,22.3s						
MOA	Molln	163.99	298	*eP*	PKPdf	03 56 57.6	+18
	comp=Z,5.6nm,1.5s						
MOA				*i* P	**PKPab**	**03 57 33.8**	**+1.3**
	comp=Z,29nm,1.4s,SNR=6.1						
MOA				*eP*	pPKPab	03 57 48.0	+0.2
	comp=Z,66nm,1.5s						
FLTG	Flechtingen	164.03	316	*e*PKPab	**PKPab**	**03 57 32.5**	**+0.1**
	baz=66,slow=4.4						
OBKA	Obir	164.04	293	*eP*	**PKPab**	**03 57 33.7**	**+0.8**
	comp=Z,23nm,1.3s						
OBKA				*eP*	**pPKPab**	**03 57 48.1**	**-0.2**
	comp=Z,30nm,1.7s						
KHC	Kasperske Hory	164.07	303	PKIKP	**PKPdf**	**03 56 39.4**	**+0.2**
KHC						03 57 33.1	
KHC	Kasperske Hory	164.07	303	*e*PKPAB	**PKPab**	**03 57 33.1**	**+0.2**
KHC				*ep*PKP	**pPKPab**	**03 57 48.2**	**0.0**
KHC				*ePP*	**PP**	**04 01 18.6**	**-0.7**
KHC				AMS	AMS	05 19 20.0	
	comp=Z,2µm,19.8s						
KHC	Kasperske Hory	164.07	303	PKPdf	**PKPdf**	**03 56 39.4**	**+0.2**
KHC				PKPab	**PKPab**	**03 57 33.1**	**+0.2**
GEC2	GERESS Array S	164.09	302	*e*PKPab	**PKPab**	**03 57 34.2**	**+1.2**
	baz=66,slow=4.4						
GERES	GERESS Array B	164.09	302	PKP	**PKPdf**	**03 56 38.9**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=64,slow=3.1,SNR=4.9						
GERES				PKPab	**PKPab**	**03 57 32.7**	**-0.3**
	comp=Z,5.3nm,0.9s,baz=73,slow=4.6,SNR=8.3						
GERES	GERESS Array B	164.09	302		**PKPdf**	**03 56 38.9**	**-0.4**
GERES					**PKPab**	**03 57 33.8**	**+0.8**
LJU	Ljubljana	164.12	292	*e*PKPdf	**PKPdf**	**03 56 40.5**	**+1.2**
LJU				*ep*PKPdf	**pPKPdf**	**03 56 52.1**	**-2.9**
LJU				*e*PKPab	**PKPab**	**03 57 34.0**	**+0.9**
LJU				*ep*PKPab	**pPKPab**	**03 57 47.5**	**-1.0**
LJU				*ePP*	**PP**	**04 01 20.0**	**+0.3**
LJU				*ep*PP		04 01 34.6	
CEY	Cerknica	164.22	291	*eP*	**PKPab**	**03 57 33.6**	**0.0**
TANN	Tannenbergstha	164.28	309	*e*PKPab	**PKPab**	**03 57 34.8**	**+1.0**
	baz=66,slow=4.4						
TANN				*ep*PKPab	**pPKPab**	**03 57 48.4**	**-0.7**
NEUB	Neuenburg	164.32	312	*e*PKPab	**PKPab**	**03 57 34.6**	**+0.9**
	baz=66,slow=4.4						
WERD	Werda	164.35	309	*e*PKPab	**PKPab**	**03 57 35.0**	**+1.0**
	baz=66,slow=4.4						
NKC	Novy Kostel	164.36	308	*e*PKP2	**PKPab**	**03 57 34.4**	**+0.3**
NKC				MLR	MLR		
	comp=Z,3µm,21.4s						
NKC	Novy Kostel	164.36	308	*e*PKPAB	**PKPab**	**03 57 34.4**	**+0.3**
NKC				*ep*PKP	**pPKPab**	**03 57 49.5**	**+0.1**
NKC				AMS	AMS	05 09 00.0	
	comp=Z,3µm,21.4s						
GUNZ	Gunzen	164.38	308	*e*PKPab	**PKPab**	**03 57 35.3**	**+1.1**
	baz=66,slow=4.4						
GUNZ				*ep*PKPab	**pPKPab**	**03 57 49.1**	**-0.4**
WERN	Wernitzgruen	164.38	308	*e*PKPab	**PKPab**	**03 57 35.4**	**+1.2**
	baz=66,slow=4.4						
PLN	Plauen	164.43	309	*e*PKPab	**PKPab**	**03 57 35.3**	**+1.0**
	baz=66,slow=4.4						
ASSE	Asse, Remlinge	164.44	316	*e*PKPab	**PKPab**	**03 57 34.8**	**+0.7**
	baz=66,slow=4.4						
WET	Wettzell	164.51	304	*e*PKPab	**PKPab**	**03 57 36.4**	**+1.6**
	baz=66,slow=4.4						
NRDL	Niedersach Rie	164.52	318	*e*PKPab	**PKPab**	**03 57 35.1**	**+0.6**
	baz=66,slow=4.4						
MYKA	Terra Mystica	164.65	294	*eP*	PKPab	03 57 50.7	+15
	comp=Z,35nm,1.6s						
MANZ	Manzenberg	164.66	307	*e*PKPab	**PKPab**	**03 57 36.9**	**+1.5**
	baz=66,slow=4.4						
MOX	Moxa	164.67	310	*e*PKPab	**PKPab**	**03 57 36.3**	**+0.9**
	baz=66,slow=4.4						
ROTZ	Rotzenmuhle	164.69	307	*e*PKPab	**PKPab**	**03 57 37.1**	**+1.6**
	baz=66,slow=4.4						
CLZ	Clausthal	164.75	316	*e*PKPab	**PKPab**	**03 57 36.4**	**+0.7**
	baz=66,slow=4.4						
CLZ				*ep*PKPab	**pPKPab**	**03 57 50.4**	**-0.7**
KBA	Koelnbreinsper	164.76	296	*eP*	**PKPab**	**03 57 36.8**	**+0.7**
	comp=Z,16nm,0.9s						
AQU	L'Aquila	164.96	278	*eP*	**PKPab**	**03 57 37.1**	**+0.1**
RJOB	Jochberg	164.97	299	*e*PKPab	**PKPab**	**03 57 37.6**	**+0.7**
	baz=66,slow=4.4						
GTTG	Gottingen	165.12	315	*e*PKPab	**PKPab**	**03 57 37.9**	**+0.6**
	baz=66,slow=4.4						
GRF	Grafenberg Arr	165.31	307	*e*PKPab	**PKPab**	**03 57 39.7**	**+1.5**
	baz=66,slow=4.4						
GRF				*ep*PKPab	**pPKPab**	**03 57 53.6**	**+0.1**
GRFO	Grafenberg	165.31	307	PKP2	**PKPab**	**03 57 39.6**	**+1.4**
GRFO	Grafenberg	165.31	307	PKPdf	**PKPdf**	**03 56 42.6**	**+2.4**
GRFO				PKPab	**PKPab**	**03 57 39.6**	**+1.4**
ABTA	Abfaltersbach	165.39	295	*eP*	**PKPab**	**03 57 38.3**	**-0.5**
	comp=Z,23nm,1.2s						
ABTA				*eP*	**pPKPab**	**03 57 52.2**	**-1.9**
	comp=Z,52nm,2.0s						
UBBA	Unterbreizbach	165.49	313	*e*PKPab	**PKPab**	**03 57 39.8**	**+1.0**
	baz=66,slow=4.4						
UBBA				*ep*PKPab	**pPKPab**	**03 57 53.4**	**-0.7**
IBBN	Ibbenburen	165.77	321	*e*PKPab	**PKPab**	**03 57 40.3**	**+0.2**
	baz=66,slow=4.4						
FUR	Furstenfeldbru	165.83	301	*e*PKPab	**PKPab**	**03 57 41.7**	**+1.1**
	baz=66,slow=4.4						
WTTA	Wattenberg	165.85	298	*i* P	**PKPab**	**03 57 41.6**	**+0.7**
	comp=Z,46nm,1.2s,SNR=5.2						
WTTA				*eP*	**pPKPab**	**03 57 55.3**	**-1.1**
	comp=Z,119nm,1.5s						
KEST	Kesra	165.86	249	PKPab	**PKPab**	**03 57 41.7**	**+0.6**
	comp=Z,20nm,1.0s,baz=20,slow=2.9,SNR=7.5						
WATA	Walderalm	165.88	298	*i* P	**PKPab**	**03 57 42.1**	**+1.1**
	comp=Z,53nm,1.4s,SNR=6.1						
WATA				*eP*	**pPKPab**	**03 57 55.8**	**-0.6**
	comp=Z,101nm,1.6s						
KASTN	Kahler Asten	166.12	316	*e*PKPab	**PKPab**	**03 57 42.3**	**+0.5**
	baz=66,slow=4.4						
SQTA	Sankt Quirin	166.15	298	*i* P	**PKPab**	**03 57 43.3**	**+1.1**
	comp=Z,50nm,1.3s,SNR=6.7						
SQTA				*eP*	**pPKPab**	**03 57 57.3**	**-0.3**
	comp=Z,88nm,1.5s						
MOTA	Moosalm	166.18	298	P	**PKPdf**	**03 56 42.1**	**+1.0**
	comp=Z,7.4nm,1.2s						
MOTA				*i* P	**PKPab**	**03 57 43.5**	**+1.2**
	comp=Z,52nm,1.2s,SNR=6.6						
MOTA				*eP*	**pPKPab**	**03 57 57.2**	**-0.5**
	comp=Z,67nm,1.3s						
RETA	Reutte	166.37	299	*eP*	**PKPab**	**03 57 44.4**	**+1.3**
	comp=Z,17nm,1.1s						
RETA				*eP*	**pPKPab**	**03 57 57.9**	**-0.5**
	comp=Z,36nm,1.7s						
MILB	Miltenberg	166.37	310	*e*PKPab	**PKPab**	**03 57 43.7**	**+0.9**
	baz=66,slow=4.4						
FETA	Feichten	166.51	297	P	**PKPdf**	**03 56 42.1**	**+0.7**
	comp=Z,5.2nm,1.4s						
FETA				*eP*	**PKPab**	**03 57 44.8**	**+0.9**
	comp=Z,35nm,1.4s						
FETA				*eP*	**pPKPab**	**03 57 59.1**	**-0.1**
	comp=Z,50nm,1.3s						
BUG	Bochum–Univer	166.55	319	*e*PKPab	**PKPab**	**03 57 43.6**	**+0.1**
	baz=66,slow=4.4						
BUG				*ep*PKPab	**pPKPab**	**03 57 57.9**	**-1.0**
TNS	Taunus Mts	166.64	313	*e*PKPab	**PKPab**	**03 57 45.2**	**+1.1**
	baz=66,slow=4.4						
UBR	Ueberruh	166.73	301	*e*PKPab	**PKPab**	**03 57 45.4**	**+0.7**
	baz=66,slow=4.4						
UBR				*ep*PKPab	**pPKPab**	**03 57 58.6**	**-1.4**
STU	Stuttgart	166.90	306	*e*PKPab	**PKPab**	**03 57 46.4**	**+1.1**
	baz=66,slow=4.4						
DAVA	Damuels	167.00	299	*eP*	**PKPdf**	**03 56 42.3**	**+0.4**
	comp=Z,10nm,1.4s						
DAVA				*i* P	**PKPab**	**03 57 47.3**	**+1.3**
	comp=Z,37nm,1.3s,SNR=5.7						
DAVA				*eP*	**pPKPab**	**03 58 01.3**	**0.0**
	comp=Z,73nm,1.6s						
AHRW	Bad Neuenahr-A	167.20	316	*e*PKPab	**PKPab**	**03 57 47.1**	**+0.6**
	baz=66,slow=4.4						
BFO	Black Forest	167.60	305	PKP2	**PKPab**	**03 57 49.0**	**+0.5**
BFO	Black Forest	167.60	305	PKPab	**PKPab**	**03 57 49.0**	**+0.5**
BFO	Black Forest	167.60	305	*e*PKPab	**PKPab**	**03 57 49.3**	**+0.8**
	baz=66,slow=4.4						
PMOZ	Porto Moniz, M	167.65	135	*e*LR	LR	04 54 48.8	
	comp=Z,912nm,20.0s						
BTNL	Ternell	167.65	318	*d*PKPab	**PKPab**	**03 57 47.6**	**-1.0**
BTNL				*dp*PKPab	**pPKPab**	**03 58 03.7**	**-0.1**
MEM	Membach	167.70	318	*d*PKPab	**PKPab**	**03 57 48.5**	**-0.2**
MEM				*dp*PKPab	**pPKPab**	**03 58 02.7**	**-1.3**
BHOU	Houvegnez	167.86	317	*d*PKPab	**PKPab**	**03 57 50.0**	**+0.5**
BHOU				*dp*PKPab	**pPKPab**	**03 58 04.3**	**-0.4**
BHOU				*ds*PKPab	**sPKPab**	**03 58 09.9**	**-0.6**
BSTI	Sart Tilman	167.93	319	*d*PKPab	**PKPab**	**03 57 50.5**	**+0.8**
BSTI				*dp*PKPab	**pPKPab**	**03 58 04.4**	**-0.6**
BCLA	Clavier	168.16	319	*d*PKPab	**PKPab**	**03 57 50.5**	**-0.3**
BCLA				*dp*PKPab	**pPKPab**	**03 58 04.2**	**-1.8**
WLF	Walferdange	168.19	314	*d*PKPab	**PKPab**	**03 57 52.0**	**+1.1**
WLF				*dp*PKPab	**pPKPab**	**03 58 05.5**	**-0.7**
WLF	Walferdange	168.19	314	*e*PKPab	**PKPab**	**03 57 51.7**	**+0.8**
	baz=66,slow=4.4						
BGES	Gesves	168.29	319	*d*PKPab	**PKPab**	**03 57 50.7**	**-0.6**
BGES				*dp*PKPab	**pPKPab**	**03 58 05.7**	**-0.9**
BGES				*ds*PKPab	**sPKPab**	**03 58 10.4**	**-2.0**
BMRD	Maredsous	168.50	319	*d*PKPab	**PKPab**	**03 57 51.4**	**-0.8**
BMRD				*dp*PKPab	**pPKPab**	**03 58 06.3**	**-1.3**
SNF	Seneffe	168.59	321	*d*PKPab	**PKPab**	**03 57 52.8**	**+0.2**
SNF				*dp*PKPab	**pPKPab**	**03 58 06.7**	**-1.2**
DOU	Dourbes	168.72	319	*d*PKPab	**PKPab**	**03 57 52.6**	**-0.6**
DOU				*dp*PKPab	**pPKPab**	**03 58 07.2**	**-1.3**
DOU				*ds*PKPab	**sPKPab**	**03 58 13.4**	**-0.9**
MDT	Midelt	170.55	192	PKPab	**PKPab**	**03 58 02.6**	**+0.8**
	comp=Z,12nm,0.9s,baz=197,slow=3.8,SNR=6.8						
AVE	Averroes	171.20	177	PP	PP	04 01 55.1	+0.5
MAHO	Mahon	171.28	259	PP	PP	04 01 55.2	-1.2
IFR	Ifrane	171.31	190	PP	PP	04 01 54.7	-0.7
MELI	Melilla	172.53	206	PKP	PKPdf	03 56 56.6	+11
CART	Cartagena	173.61	227	PKP	PKPdf	03 56 56.5	+11
CART	Cartagena	173.61	227	PP	PP	04 02 19.7	+12
CEU	Ceuta	173.69	191	PKP	**PKPdf**	**03 56 45.7**	**0.0**
CEU	Ceuta	173.69	191	PP	PP	04 02 06.2	-0.6
EMAL	Malaga-Limoner	174.33	200	PP	PP	04 02 19.2	+9.1
PFVI	Vila Bisbo	174.81	163	*e*SS	SS	04 23 30.2	-0.1
MORF	Marmelete	175.02	164	*e*PKPdf	**PKPdf**	**03 56 46.5**	**+0.4**
MORF				*e*SS	SS	04 23 35.2	+2.8
MORF				IAMs_20	IAMs_20	05 11 41.4	
	comp=N,3µm,19.9s						
MORF	Marmelete	175.02	164	*e*PKIKP	**PKPdf**	**03 56 46.5**	**+0.4**
MORF				*e*SS	SS	04 23 35.2	+2.8
MORF	Marmelete	175.02	164	*e*PKPdf	**PKPdf**	**03 56 46.8**	**+0.7**
MORF				*ep*PKPdf	**pPKPdf**	**03 57 02.2**	**+0.2**
MORF	Marmelete	175.02	164	*e*PKPab	**PKPab**	**03 58 23.9**	**+2.5**
PBDV	Barranco-do-Ve	175.08	170	*ep*PKPdf	pPKPdf	03 57 02.7	+0.7
PBDV	Barranco-do-Ve	175.08	170	*e*PKPab	**PKPab**	**03 58 24.2**	**+2.5**
PBDV				*i* LQ	LQ	03 58 38.3	
PBDV	Barranco-do-Ve	175.08	170	*e*SS	SS	04 23 35.1	+2.3
PTEO	Sao Teotonio	175.23	162	*ep*PKPdf	pPKPdf	03 57 02.6	+0.7
PTEO	Sao Teotonio	175.23	162	*e*PKPab	**PKPab**	**03 58 23.1**	**+0.8**
PTEO				*i* LQ	LQ	03 58 44.6	
PVAQ	Vaqueiros	175.26	172	*ep*PKPdf	pPKPdf	03 57 01.4	-0.6
PVAQ	Vaqueiros	175.26	172	*e*PKPab	**PKPab**	**03 58 23.8**	**+1.4**
PVAQ				*i* LQ	LQ	03 58 43.4	
PVAQ	Vaqueiros	175.26	172	*e*SS	SS	04 25 05.5	+91
PVAQ	Vaqueiros	175.26	172	*e*LR	LR	05 00 12.6	
	comp=N,2µm,22.0s						
PCVE	Castro Verde	175.45	168	*e*PKPdf	**PKPdf**	**03 56 47.8**	**+1.6**
PCVE				*ep*PKPdf	**pPKPdf**	**03 57 02.8**	**+0.8**
PCVE	Castro Verde	175.45	168	*e*PKPab	**PKPab**	**03 58 25.2**	**+1.9**
PCVE	Castro Verde	175.45	168	*e*SS	SS	04 23 41.5	+5.2
PBEJ	Beja	175.86	169	*ep*PKPdf	pPKPdf	03 57 02.5	+0.4
PBAR	Barrancos	176.07	178	*e*PKPdf	**PKPdf**	**03 56 47.6**	**+1.3**
PBAR				*ep*PKPdf	**pPKPdf**	**03 57 03.9**	**+1.8**
PBAR	Barrancos	176.07	178	*e*PKPab	**PKPab**	**03 58 26.9**	**+0.9**
PBAR				*i* LQ	LQ	03 58 42.3	
PBAR	Barrancos	176.07	178	*e*SS	SS	04 23 49.9	+7.8
EVO	Evora	176.33	166	*e*PKPdf	**PKPdf**	**03 56 47.3**	**+1.0**
EVO				*ep*PKPdf	**pPKPdf**	**03 57 04.2**	**+2.0**
EVO				*i* LQ	LQ	03 57 35.7	
EVO	Evora	176.33	166	*e*PKPab	**PKPab**	**03 58 29.5**	**+2.3**
PMAFR	Mafra	176.37	149	*e*SS	SS	04 23 46.8	+1.1
ESDC	Sonseca Array	176.71	223	PKP	**PKPdf**	**03 56 46.7**	**+0.3**
	comp=N,6.5nm,1.1s,baz=347,slow=1.7,SNR=27						
ESDC				PKPab	**PKPab**	**03 58 29.7**	**+0.7**
	comp=N,14nm,1.1s,baz=116,slow=3.2,SNR=15						
ESDC				PP	**PP**	**04 02 29.5**	**+7.4**
	comp=N,1.7nm,1.1s,baz=154,slow=6.6,SNR=4.4						
ESDC				SKKPbc		04 05 29.7	
	comp=N,4.6nm,1.1s,baz=202,slow=1.4,SNR=8.8						
PESTR	Estremoz	176.72	170	*e*PKPdf	**PKPdf**	**03 56 47.7**	**+1.3**
PESTR				*ep*PKPdf	**pPKPdf**	**03 57 02.1**	**-0.2**
PESTR				*i* LQ	LQ	03 57 35.7	
PESTR	Estremoz	176.72	170	*e*SS	SS	04 24 39.9	+51
PESTR	Estremoz	176.72	170		**PKPdf**	**03 56 46.7**	**+0.2**
PESTR					**PKPab**	**03 58 30.3**	**+1.3**
PAB	San Pablo	176.80	218	PKIKP	**PKPdf**	**03 56 47.4**	**+0.9**
PAB	San Pablo	176.80	218		**PKPdf**	**03 56 47.4**	**+0.9**
PMTG	Montargil	176.80	161	*e*PKPdf	**PKPdf**	**03 56 48.3**	**+1.9**
PMTG				*ep*PKPdf	**pPKPdf**	**03 57 03.2**	**+0.9**
PMTG				*i* LQ	LQ	03 58 31.8	
PMTG	Montargil	176.80	161	*e*SS	SS	04 24 51.5	+62
PSBE	So Bento	177.04	150	*ep*PKPdf	**pPKPdf**	**03 57 02.1**	**-0.2**
PSBE				*i* LQ	LQ	03 58 33.0	
PSBE	So Bento	177.04	150	*e*SS	SS	04 24 04.6	+13
PMRV	Marv??o	177.30	172	*e*PKPdf	**PKPdf**	**03 56 47.3**	**+0.8**
PMRV				*i* LQ	LQ	03 58 32.6	
PMRV	Marv??o	177.30	172	*e*SS	SS	04 23 57.6	+3.7
PMRV	Marv??o	177.30	172	*e*LR	LR	04 59 07.6	
	comp=N,2µm,20.0s						
PCAS	Casmilo, Conde	177.62	149	*e*PKPdf	**PKPdf**	**03 56 48.5**	**+2.0**
PCAS				*ep*PKPdf	**sPKPdf**	**03 57 06.1**	**-1.9**
PCAS				*i* LQ	LQ	03 57 26.1	
PCAS	Casmilo, Conde	177.62	149	*e*SS	SS	04 24 03.7	+6.2
PCBR	Castelo Branco	177.69	169	*e*PKPdf	**PKPdf**	**03 56 47.7**	**+1.2**
PCBR				*ep*PKPdf	**pPKPdf**	**03 57 02.7**	**+0.3**
PCBR				*i* LQ	LQ	03 57 19.3	
COI	Coimbra	177.78	148	*ep*PKPdf	**pPKPdf**	**03 57 04.7**	**+2.3**
COI				*i* LQ	LQ	03 58 35.7	
COI	Coimbra	177.78	148	*e*SS	SS	04 24 05.1	+6.0
MTE	Manteigas	178.23	164	*e*PKPdf	**PKPdf**	**03 56 48.5**	**+1.8**
MTE				*ep*PKPdf	**pPKPdf**	**03 57 04.1**	**+1.6**
MTE				*i* LQ	LQ	03 58 37.0	
MTE	Manteigas	178.23	164	*e*SS	SS	04 24 21.5	+19
MTE	Manteigas	178.23	164	*e*LR	LR	05 00 33.6	
	comp=N,3µm,20.0s						
MTE	Manteigas	178.23	164		**PKPdf**	**03 56 47.2**	**+0.5**
PVIS	Viseu	178.42	151	*e*PKPdf	**PKPdf**	**03 56 48.1**	**+1.4**
PVIS				*i* LQ	LQ	03 58 39.1	
PGAV	Gavieira, Arco	178.96	97	*e*SS	SS	04 24 15.2	+2.8
PGAV	Gavieira, Arco	178.96	97	*e*LR	LR	05 01 14.1	
	comp=N,2µm,20.0s						
PVRL	Vila Real	178.97	143	*e*PKPdf	**pPKPdf**	**03 57 03.3**	**+0.8**
PVRL				*i* LQ	LQ	03 58 40.4	
POLO	Lamas de Olo	179.00	137	*i* LQ	LQ	03 58 41.2	
POLO	Lamas de Olo	179.00	137	*e*SS	SS	04 24 21.7	+10
MVO	Moncorvo	179.06	174	*e*PKPdf	**PKPdf**	**03 56 47.8**	**+1.1**
MVO				*ep*PKPdf	**pPKPdf**	**03 57 03.5**	**+0.9**
MVO				*i* LQ	LQ	03 58 40.8	
MVO	Moncorvo	179.06	174	*e*SS	SS	04 24 16.1	+5.7
MVO	Moncorvo	179.06	174	*e*LR	LR	05 00 25.1	
	comp=N,2µm,20.0s						
PCAB	Cabril	179.07	115	*e*PKPdf	**PKPdf**	**03 56 47.8**	**+1.1**
PCAB				*ep*PKPdf	**pPKPdf**	**03 57 04.4**	**+1.9**
PCAB				*i* LQ	LQ	03 58 41.3	
PBRG	Braganca	179.68	201	*e*PKPdf	**PKPdf**	**03 56 47.2**	**+0.5**
PBRG				*i* LQ	LQ	03 58 42.1	

WEL 24 03:38:03.3, 42°S±1°×17°3E±°, h47km±3km, M4.9/6, ML5.1/6, MLv4.9/6 Error ellipse: s-maj=0.0km s-min=0.0km az=70.6, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.34	340	P	Pn	03 38 13.4	+0.9
THZ				S	Sn	03 38 19.7	+0.6
KHZ	Kahutara	0.49	134	P	Pn	03 38 14.8

KRHZ	Kereru	3.51	46	P	Pn	03 47 11.0	-1.7	
NGZ	Ngauruhoe	3.51	34	P	Pn	03 47 13.0	+0.2	
SNVZ	South Ngauruho	3.52	34	P	Pn	03 47 13.1	+0.2	
TWVZ	Taurewa	3.54	31	P	Pn	03 47 13.5	+0.4	
OTVZ	Oturere	3.55	34	P	Pn	03 47 13.4	+0.1	
NNVZ	North Ngauruho	3.55	34	P	Pn	03 47 13.8	+0.4	
WTVZ	West Tongariro	3.56	33	P	Pn	03 47 13.6	+0.2	
ETVZ	East Tongariro	3.59	35	P	Pn	03 47 13.9	0.0	
KRVZ	Karewarewa	3.60	33	P	Pn	03 47 14.7	+0.8	
TMVZ	Te Maari	3.60	34	P	Pn	03 47 14.1	0.0	
NTVZ	North Tongariro	3.61	34	P	Pn	03 47 14.4	+0.3	
KAHZ	Kahuranaki	3.69	52	P	Pn	03 47 14.9	-0.3	
KWHZ	Kaweka Forest	3.70	44	P	Pn	03 47 15.8	+0.5	
JCZ	Jackson Bay	3.71	237	P	Pn	03 47 14.7	-0.8	
KATZ	Kakaramea	3.72	33	P	Pn	03 47 17.9	+2.2	
RATZ	Rangitukua	3.84	33	P	Pn	03 47 21.8	+4.5	
HIZ	Hauiti	3.85	21	P	Pn	03 47 18.1	+0.7	
BKZ	Black Stump Fm	3.93	42	P	Pn	03 47 18.1	-0.4	
WATZ	Wairara	3.96	31	P	Pn	03 47 23.8	+4.9	
NMHZ	Naumai	4.14	44	P	Pn	03 47 21.8	+0.4	
TLZ	Tolley Road	4.23	27	P	Pn	03 47 23.1	+0.5	
MTHZ	Maungataniwha	4.34	42	P	Pn	03 47 24.8	+0.7	
TUZ	Tuapeka	4.57	212	P	Pn	03 47 26.5	-0.7	
RTZ	Ruatahuna	4.59	42	P	Pn	03 47 27.8	+0.1	
MUGZ	Murupara	4.60	39	P	Pn	03 47 26.5	-1.2	
TOZ	Tahuroa Road	4.76	24	P	Pn	03 47 30.0	+0.2	
MWZ	Matawai	5.08	43	P	Pn	03 47 33.7	-0.6	
AWAZ	Awhitu Peninsu	5.20	14	P	Pn	03 47 37.0	+1.2	
WTAZ	Waiatarua	5.31	13	P	Pn	03 47 39.4	+2.0	
ETAZ	East Tamaki Re	5.36	16	P	Pn	03 47 38.8	+0.8	
TWGZ	Tauwhareparae	5.44	45	P	Pn	03 47 38.0	-1.2	
MBAZ	Motutapu North	5.53	15	P	Pn	03 47 41.7	+1.3	
WIAZ	Waiheke Island	5.55	17	P	Pn	03 47 41.6	+0.9	
PKGZ	Pakihiroa	5.71	44	P	Pn	03 47 46.9	+4.0	
KUZ	Kuaotunu	5.75	22	P	Pn	03 47 44.2	+0.8	
WCZ	Waipu Caves	6.25	9	P	Pn	03 47 51.5	+1.1	
OUZ	Omahuta	6.91	3	P	Pn	03 47 59.9	+0.6	

PRU 24 03:47:45.8±0.0, 50°22N×18°97E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.53**	**90**	*e*Pg	Pg	03 47 55.1	-0.9
OJC				*e*Sg	Sg	03 48 02.4	-0.5
MORC	**Moravsky Berou**	**1.02**	**245**	*e*PG	Pg	03 48 05.4	0.0
MORC				*e*SG	Sb	03 48 19.9	-0.5
LANS	**Liptovska Anna**	**1.12**	**163**	*e*PG	Pg	03 48 07.0	-0.2
LANS				*e*SG	Sg	03 48 22.4	+0.7
LANS				*e*LG	Lg	03 48 27.8	
NIE	**Niedzica**	**1.18**	**132**	*e*Pg	Pg	03 48 08.0	-0.3
NIE				*e*Sg	Sb	03 48 25.0	+0.2
KRLC	**Kraliky**	**1.42**	**265**	*e*PG	Pn	03 48 12.0	-0.8
KRLC				*e*SG	Sb	03 48 31.7	0.0
	comp=Z,15nm,0.3s						
JAVC	**Velka Javorina**	**1.60**	**212**	*e*PN	Pn	03 48 15.4	0.0
DPC	**Dobruska-Polom**	**1.70**	**275**	*e*PG	Pn	03 48 16.6	-0.2
DPC				*e*SG	Sg	03 48 40.8	+0.3
	comp=Z,6.6nm,0.4s						
VYHS	**Vyhne**	**1.73**	**183**	*e*PN	Pn	03 48 16.4	-0.7
VYHS				*e*SN	Sn	03 48 39.8	-0.1
VRAC	**Vranov**	**1.79**	**240**	*e*PN	Pn	03 48 18.4	+0.4
VRAC				*e*SG	Sn	03 48 41.7	+0.3
OSTC	**Ostas**	**1.79**	**282**	*e*PG	Pn	03 48 18.0	0.0
OSTC				*e*SG	Sg	03 48 43.4	0.0
KSP	**Ksiaz**	**1.82**	**291**	*e*Pg	Pg	03 48 20.8	+0.1
KSP				*e*Sg	Sg	03 48 45.7	+1.5
CHVC	**Chvalec**	**1.90**	**282**	*e*PG	Pn	03 48 19.1	-0.4
CHVC				*e*SG	Sg	03 48 47.3	+0.4
KRUC	**Moravsky**	**2.04**	**236**	*e*PN	Pn	03 48 22.2	+0.9
KRUC				*e*SG	Sb	03 48 49.2	-0.3
CRVS	**Cervenica-Dubn**	**2.09**	**128**	*e*PN	Pb	03 48 24.2	-0.4
MODS	**Modra-Piesok**	**2.15**	**212**	*e*PG	Pg	03 48 27.6	+0.5
MODS				*e*SG	Sg	03 48 54.5	-0.5
PRU	**Pruhonice**	**2.86**	**267**	*e*SG	Sb	03 49 15.3	+2.1
BRG	**Berggiesshubel**	**3.27**	**283**	Sg	Sg	03 49 32.4	+1.5
CKRC	**Cesky Krumlov**	**3.34**	**247**	*e*SG	Sg	03 49 32.2	-1.0
KHC	**Kasperske Hory**	**3.67**	**255**	*e*PN	Pn	03 48 43.4	-0.4
KHC				*e*PG	Pb	03 48 50.8	-0.7
KHC				*e*SG	Sg	03 49 41.6	-2.0
	comp=Z,5.4nm,0.8s						

*NOU **24** 03:53:34.6, 42°.24S×173°.29E, h66km, MLv4.2, South Island, New Zealand*
WEL 24 03:53:35.2±0.3, 42°S±3°×17°3E±°, h36km±6km, M3.8/30, **ML4.0**/30, **MLv3.8**/30, **Error ellipse: s-maj=0.0km s-min=0.0km az=130.1, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.41**	**132**	P	Pn	03 53 46.6	+2.2
KHZ				S	Sn	03 53 54.6	+3.6
THZ	**Tophouse**	**0.41**	**337**	P	Pn	03 53 45.5	+1.1
THZ				S	Sn	03 53 52.4	+1.1
BSWZ	**Blackbirch Sta**	**0.71**	**53**	P	Pn	03 53 50.1	+1.4
GVZ	**Greta Valley S**	**0.83**	**184**	P	Pn	03 53 51.5	+1.2
GVZ				S	Sn	03 54 02.6	+1.3
LTZ	**Lake Taylor**	**0.90**	**224**	P	Pn	03 53 52.3	+1.0
LTZ				S	Sn	03 54 04.3	+1.3
CMWZ	**Cape Campbell**	**0.90**	**65**	P	Pn	03 53 53.2	+1.9
TUWZ	**Tuamarina**	**0.94**	**41**	P	Pn	03 53 53.0	+1.2
TUWZ				S	Sn	03 54 05.9	+1.8
NNZ	**Nelson**	**0.95**	**12**	P	Pn	03 53 52.9	+1.0
NNZ				S	Sn	03 54 05.7	+1.5
DSZ	**Denniston Nort**	**1.06**	**292**	P	Pn	03 53 54.1	+0.6
DSZ				S	Sn	03 54 07.7	+0.7
AMCZ	**Amberley**	**1.09**	**198**	P	Pn	03 53 54.7	+0.9
TCW	**Tory Channel**	**1.27**	**43**	P	Pn	03 53 57.2	+0.8
INZ	**Inchbonnie**	**1.37**	**244**	P	Pn	03 53 58.5	+0.7
QRZ	**Quartz Range**	**1.39**	**341**	P	Pn	03 53 58.8	+0.8
OXZ	**Oxford**	**1.43**	**214**	P	Pn	03 53 58.4	-0.1
DUWZ	**D'Urville Isla**	**1.47**	**24**	P	Pn	03 54 00.3	+1.2
BHW	**Baring Head**	**1.50**	**61**	P	Pn	03 53 59.7	+0.2
WEL	**Wellington**	**1.50**	**56**	P	Pn	03 54 00.0	+0.5
OKCZ	**Okains Bay**	**1.58**	**182**	P	Pn	03 54 00.6	0.0
MOZ	**McQueen's Vall**	**1.60**	**192**	P	Pn	03 54 00.1	-0.7
PLWZ	**Palliser**	**1.69**	**71**	P	Pn	03 54 01.9	-0.3
AKCZ	**Akaroa Harbour**	**1.73**	**185**	P	Pn	03 54 02.5	-0.2
RACZ	**Rakaia**	**1.74**	**204**	P	Pn	03 54 02.3	-0.5
MSWZ	**Moikau Station**	**1.75**	**66**	P	Pn	03 54 02.6	-0.3
CAW	**Cannon Point**	**1.79**	**55**	P	Pn	03 54 03.6	+0.1
KIW	**Kapiti Island**	**1.86**	**47**	P	Pn	03 54 05.0	+0.6
PAWZ	**Paruwai Farm**	**1.88**	**67**	P	Pn	03 54 04.4	-0.4
WVZ	**Waitaha Valley**	**1.99**	**241**	P	Pn	03 54 06.6	+0.3
WACZ	**Wakanui South**	**2.03**	**207**	P	Pn	03 54 06.5	-0.2
OGWZ	**Otaki Gorge**	**2.03**	**50**	P	Pn	03 54 06.9	+0.1
MTW	**Mount Morrison**	**2.04**	**62**	P	Pn	03 54 06.2	-0.7
TRWZ	**Traveller**	**2.06**	**70**	P	Pn	03 54 07.0	-0.2
RPZ	**Rata Peaks**	**2.19**	**223**	P	Pn	03 54 08.7	-0.2
HOWZ	**Holdsworth Sta**	**2.19**	**56**	P	Pn	03 54 08.3	-0.7
ARCZ	**Arundel**	**2.30**	**218**	P	Pn	03 54 10.1	-0.4
TMWZ	**Te Maipa**	**2.32**	**64**	P	Pn	03 54 09.8	-1.0
MRZ	**Mangatainoka R**	**2.37**	**52**	P	Pn	03 54 11.0	-0.5
GCSZ	**Gaunt Creek Bo**	**2.37**	**239**	P	Pn	03 54 11.7	+0.3
TIWZ	**Tintock**	**2.49**	**58**	P	Pn	03 54 12.7	-0.4
POWZ	**Post Office Ro**	**2.65**	**50**	P	Pn	03 54 15.2	-0.2
PRWZ	**Pori Road**	**2.67**	**54**	P	Pn	03 54 14.8	-0.7
TMZ	**Timaru**	**2.72**	**214**	P	Pn	03 54 15.5	-0.8
BFZ	**Birch Farm**	**2.77**	**59**	P	Pn	03 54 15.4	-1.5
WAZ	**Wanganui**	**2.77**	**31**	P	Pn	03 54 18.8	+1.7
NMEZ	**Namu Road**	**2.79**	**12**	P	Pn	03 54 19.6	+2.4
FOZ	**Fox Glacier**	**2.80**	**239**	P	Pn	03 54 17.4	0.0
LREZ	**Lake Rotokare**	**2.85**	**20**	P	Pn	03 54 21.6	+3.5
PREZ	**Palmer Road**	**2.91**	**16**	P	Pn	03 54 21.3	+2.3
KHEZ	**Kahui Hut**	**2.93**	**14**	P	Pn	03 54 21.0	+1.8
NBEZ	**Newall Road No**	**2.93**	**11**	P	Pn	03 54 21.3	+2.2
DVHZ	**Dannevirke**	**2.94**	**52**	P	Pn	03 54 18.1	-1.3
NEZ	**North Egmont**	**2.96**	**15**	P	Pn	03 54 21.6	+1.9
TSZ	**Takapari Road**	**2.99**	**47**	P	Pn	03 54 19.3	-0.7
PKE	**Pukeiti**	**3.02**	**13**	P	Pn	03 54 22.4	+2.0
DREZ	**Durham Road**	**3.06**	**16**	P	Pn	03 54 23.3	+2.3
LBZ	**Lake Benmore**	**3.10**	**225**	P	Pn	03 54 21.2	-0.3
MHEZ	**Mangahewa**	**3.20**	**17**	P	Pn	03 54 25.3	+2.4
PNHZ	**Pukenui**	**3.22**	**47**	P	Pn	03 54 22.1	-1.2
PRHZ	**Porangahau**	**3.25**	**56**	P	Pn	03 54 22.9	-0.6
WPHZ	**Waipukurau**	**3.26**	**51**	P	Pn	03 54 22.6	-1.0
VRZ	**Vera Road**	**3.26**	**23**	P	Pn	03 54 25.7	+1.9
MTVZ	**Mangateitei**	**3.28**	**34**	P	Pn	03 54 25.2	+1.1
PKVZ	**Pokaka**	**3.31**	**31**	P	Pn	03 54 25.6	+1.1
WNVZ	**Wahianoa**	**3.38**	**35**	P	Pn	03 54 26.3	+0.7
MOVZ	**Moawhango**	**3.39**	**37**	P	Pn	03 54 25.7	+0.2
TRVZ	**Turoa**	**3.39**	**34**	P	Pn	03 54 26.7	+1.0
ODZ	**Otahua Downs**	**3.41**	**211**	P	Pn	03 54 24.8	-1.0
WHVZ	**Whangaehu Hut**	**3.42**	**34**	P	Pn	03 54 27.0	+0.9
FWVZ	**Far West T-bar**	**3.43**	**33**	P	Pn	03 54 27.0	+0.7
TUVZ	**Tukino**	**3.46**	**35**	P	Pn	03 54 27.5	+0.9
BHHZ	**Black Hill Sta**	**3.46**	**41**	P	Pn	03 54 26.3	-0.3
KRHZ	**Kereru**	**3.51**	**46**	P	Pn	03 54 26.0	-1.2
NGZ	**Ngauruhoe**	**3.51**	**33**	P	Pn	03 54 28.1	+0.8
SNVZ	**South Ngauruho**	**3.52**	**34**	P	Pn	03 54 28.2	+0.8
PXZ	**Pawanui**	**3.53**	**54**	P	Pn	03 54 26.7	-0.7
TWVZ	**Taurewa**	**3.54**	**31**	P	Pn	03 54 28.5	+0.8
OTVZ	**Oturere**	**3.55**	**34**	P	Pn	03 54 28.4	+0.5
NNVZ	**North Ngauruho**	**3.56**	**33**	P	Pn	03 54 28.7	+0.8
WTVZ	**West Tongariro**	**3.56**	**33**	P	Pn	03 54 28.6	+0.7
ETVZ	**East Tongariro**	**3.59**	**34**	P	Pn	03 54 28.8	+0.4
KRVZ	**Karewarewa**	**3.60**	**33**	P	Pn	03 54 29.2	+0.7
TMVZ	**Te Maari**	**3.61**	**34**	P	Pn	03 54 29.1	+0.5
NTVZ	**North Tongariro**	**3.61**	**33**	P	Pn	03 54 29.4	+0.7
KAHZ	**Kahuranaki**	**3.69**	**52**	P	Pn	03 54 27.9	-1.7
KWHZ	**Kaweka Forest**	**3.70**	**44**	P	Pn	03 54 31.1	+1.3
JCZ	**Jackson Bay**	**3.71**	**237**	P	Pn	03 54 28.9	-1.2
KATZ	**Kakaramea**	**3.72**	**33**	P	Pn	03 54 32.0	+1.8
MCHZ	**McNeill Hill**	**3.83**	**46**	P	Pn	03 54 32.6	+1.1
RATZ	**Rangitukua**	**3.85**	**33**	P	Pn	03 54 35.9	+4.0
HIZ	**Hauiti**	**3.86**	**21**	P	Pn	03 54 33.1	+1.1
BKZ	**Black Stump Fm**	**3.93**	**42**	P	Pn	03 54 31.7	-1.2
WATZ	**Wairara**	**3.97**	**31**	P	Pn	03 54 35.0	+1.5
ARHZ	**Aropaoanui**	**4.12**	**47**	P	Pn	03 54 36.3	+0.8
MRHZ	**Matea Rd**	**4.15**	**38**	P	Pn	03 54 35.0	-1.1
TLZ	**Tolley Road**	**4.24**	**27**	P	Pn	03 54 37.9	+0.3
MTHZ	**Maungataniwha**	**4.34**	**42**	P	Pn	03 54 37.3	-1.3
MSZ	**Milford Sound**	**4.55**	**235**	P	Pn	03 54 42.8	+1.4
TUZ	**Tuapeka**	**4.56**	**212**	P	Pn	03 54 41.2	-0.4
RTZ	**Ruatahuna**	**4.59**	**41**	P	Pn	03 54 40.7	-1.4
MUGZ	**Murupara**	**4.60**	**38**	P	Pn	03 54 40.3	-1.9
TOZ	**Tahuroa Road**	**4.77**	**23**	P	Pn	03 54 44.7	+0.2
MLZ	**Mavora Lakes**	**4.85**	**227**	P	Pn	03 54 44.0	-1.6
URZ	**Urewera**	**4.94**	**40**	P	Pn	03 54 45.0	-1.8
TKGZ	**Te Karaka**	**5.17**	**46**	P	Pn	03 54 49.3	-0.7
AWAZ	**Awhitu Peninsu**	**5.21**	**14**	P	Pn	03 54 52.0	+1.5
SYZ	**Scrubby Hill**	**5.24**	**212**	P	Pn	03 54 50.7	-0.1
WTAZ	**Waiatarua**	**5.32**	**13**	P	Pn	03 54 54.4	+2.3
ETAZ	**East Tamaki Re**	**5.37**	**16**	P	Pn	03 54 54.1	+1.4
TWGZ	**Tauwhareparae**	**5.43**	**45**	P	Pn	03 54 54.0	+0.3
MBAZ	**Motutapu North**	**5.54**	**15**	P	Pn	03 54 56.4	+1.4
WIAZ	**Waiheke Island**	**5.56**	**17**	P	Pn	03 54 56.6	+1.2
HAZ	**Te Kaha**	**5.66**	**41**	P	Pn	03 54 54.7	-1.9
KUZ	**Kuaotunu**	**5.75**	**21**	P	Pn	03 54 58.2	+0.3
APZ	**The Paps**	**5.95**	**216**	P	Pn	03 54 59.1	-1.7
WCZ	**Waipu Caves**	**6.27**	**9**	P	Pn	03 55 06.4	+1.3
OUZ	**Omahuta**	**6.92**	**3**	P	Pn	03 55 15.5	+1.4
CTZ	**Chatham Island**	**7.70**	**105**	P	Pn	03 55 24.2	-0.4

PRU 24 03:54:49.9±0.0, 50°26N×18°99E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.52**	**94**	*e*Pg	Pg	03 54 59.0	-0.8
OJC				*e*Sg	Sg	03 55 06.0	-0.6
MORC	**Moravsky Berou**	**1.05**	**243**	*e*PG	Pg	03 55 09.8	-0.2
MORC				*e*SG	Sg	03 55 24.0	+0.4
LANS	**Liptovska Anna**	**1.15**	**164**	*e*PG	Pg	03 55 11.4	-0.6
LANS				*e*SG	Sg	03 55 26.2	-0.7
LANS				*e*LG	Lg	03 55 31.9	
NIE	**Niedzica**	**1.20**	**134**	*e*Pg	Pg	03 55 12.5	-0.3
NIE				*e*Sg	Sb	03 55 29.0	-0.4
KRLC	**Kraliky**	**1.43**	**263**	*e*PG	Pn	03 55 16.0	-1.2
KRLC				*e*SG	Sg	03 55 35.7	-0.2
	comp=Z,7.1nm,0.6s						
DPC	**Dobruska-Polom**	**1.71**	**274**	*e*PG	Pn	03 55 20.3	-0.7
DPC				*e*SG	Sg	03 55 45.1	+0.2
	comp=Z,4.8nm,0.6s						
VYHS	**Vyhne**	**1.77**	**183**	*e*SN	Sn	03 55 43.4	-1.6
OSTC	**Ostas**	**1.80**	**281**	*e*PG	Pb	03 55 23.7	0.0
OSTC				*e*SG	Sg	03 55 48.2	+0.5
KHC	**Kasperske Hory**	**3.69**	**254**	*e*SG	Sg	03 56 45.3	-3.1

*DDA **24** 04:08:34.6, 35°.18N×26°.71E, h7km±3km, MW4.1*
*HLW **24** 04:08:36.5, 35°.03N×27°.04E, h7km±14km, Ml4.0*
*ISK **24** 04:08:36.4, 35°.18N×26°.86E, h6km, ML3.9/13*
*THE **24** 04:08:37.4, 35°.14N×26°.80E, h0km±1km, ML3.9/6, Error ellipse: s-maj=4.4km s-min=0.9km az=152.0*
*ATH **24** 04:08:37.5, 35°.17N×26°.79E, h12km±2km, ML3.9/15, Error ellipse: s-maj=3.7km s-min=1.0km az=147.0*
*IDC **24** 04:08:38.8±2.1, 35°.08N×26°.78E, h32km±17km, mb3.8/16, mb1 3.8/22, mb1mx3.7/41, mbtmp3.9/22, ML3.8/6, MS4.0/2, Ms1 4.0/2, ms1mx3.1/51, Error ellipse: s-maj=17.6km s-min=12.9km az=172.0*
*NEIC **24** 04:08:40.2±1.9, 35°.28N±0°.09×26°.90E±0°.01, h30km±6km, Error ellipse: s-maj=12.5km s-min=1.4km az=178.0*
ISC 24 04:08:35.3±1.1, 34°.99N±0°.04×26°.88E±0°.02, h11km±7km, n163, σ1°32/189, mb4.1/22, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.56**	**283**	P	**Pg**	**04 08 46.5**	**+0.4**
ZKR				S	**Sg**	**04 08 53.2**	**-0.3**
ZKR				AML	AML	04 08 58.2	
	comp=N,14102μm,0.4s						
ZKR				AML	AML	04 09 00.8	
	comp=E,23818μm,0.9s						
ZKR	**Zakros**	**0.56**	**283**	P	**Pb**	**04 08 46.7**	**-0.3**
ZKR				S	**Sb**	**04 08 55.3**	**+0.3**
	comp=E,10μm,0.6s						
ZKR	**Zakros**	**0.56**	**283**	PG	**Pb**	**04 08 46.9**	**-0.1**
ZKR				SG	**Sb**	**04 08 55.1**	**+0.1**
KARP	**Karpathos**	**0.60**	**22**	P	**Pg**	**04 08 46.9**	**-0.1**
KARP				S	**Sg**	**04 08 53.0**	**-2.0**
KARP				AML	AML	04 08 57.2	
	comp=N,74007μm,0.4s						
KARP				AML	AML	04 08 57.5	
	comp=E,62828μm,0.3s						
KARP	**Karpathos**	**0.60**	**22**	P	**Pg**	**04 08 46.9**	**-0.1**
KARP				S	**Sg**	**04 08 55.5**	**+0.5**
	comp=E,37μm,0.5s						
KARP	**Karpathos**	**0.60**	**22**	PG	**Pg**	**04 08 46.4**	**-0.6**
KARP	**Karpathos**	**0.60**	**22**		**Pg**	**04 08 46.8**	**-0.3**
STIA	**Sitia Lasithi**	**0.68**	**288**	P	**Pg**	**04 08 47.5**	**-1.0**
STIA				S	**Sb**	**04 08 58.6**	**+0.1**
FRMA	**Ierapetra Chan**	**0.94**	**272**	P	**Pg**	**04 08 51.8**	**-1.6**
FRMA				S	**Sg**	**04 09 05.9**	**+0.2**
	comp=E,3μm,0.5s						
NPS	**Neapolis**	**1.07**	**285**	P	**Pn**	**04 08 56.2**	**-0.1**
NPS				S	**Sb**	**04 09 09.9**	**0.0**
NPS				AML	AML	04 09 18.9	
	comp=E,17466μm,0.5s						
NPS				AML	AML	04 09 21.2	
	comp=N,13903μm,0.8s						
NPS	**Neapolis**	**1.07**	**285**	P	**Pn**	**04 08 56.1**	**-0.1**
NPS				S	**Sn**	**04 09 11.0**	**-0.1**
	comp=N,8μm,0.7s						
LAST	**Lasithi**	**1.16**	**279**	P	**Pb**	**04 08 57.5**	**+0.1**
LAST				AML	AML	04 09 21.4	
	comp=N,6462μm,1.0s						
LAST				AML	AML	04 09 24.4	
	comp=E,10317μm,0.6s						
LAST	**Lasithi**	**1.16**	**279**	P	**Pb**	**04 08 57.5**	**+0.1**
HRKL	**Herakleio**	**1.49**	**283**	P	**Pg**	**04 09 04.1**	**+0.2**
HRKL	**Herakleio**	**1.49**	**283**	PN	**Pg**	**04 09 03.6**	**-0.3**
HRKL				SN	**Sg**	**04 09 23.5**	**+0.2**
IACM	**Heraklion**	**1.52**	**283**	P	**Pb**	**04 09 03.6**	**+0.3**
KSTL	**Kastelli Herak**	**1.52**	**282**	P	**Pn**	**04 09 00.7**	**-1.6**
ARG	**Arkhangelos**	**1.59**	**39**	P	**Pb**	**04 09 04.9**	**+0.2**
ARG				S	**Sn**	**04 09 24.0**	**+0.2**
ARG				AML	AML	04 09 34.4	
	comp=E,7510μm,0.4s						
ARG				AML	AML	04 09 43.7	
	comp=N,5096μm,0.9s						
ARG	**Arkhangelos**	**1.59**	**39**	P	**Pb**	**04 09 05.0**	**+0.4**
ARG				S	**Sb**	**04 09 25.0**	**+0.3**
	comp=N,3μm,0.8s						
ARG	**Arkhangelos**	**1.59**	**39**	PN	**Pn**	**04 09 04.1**	**+0.8**
NIS1	**Nisyros Isl.**	**1.63**	**8**	P	**Pn**	**04 09 04.4**	**+0.6**
NIS1				AML	AML	04 09 35.9	
	comp=E,8516μm,0.6s						
NIS1				AML	AML	04 09 38.9	
	comp=N,8447μm,0.5s						
NIS1	**Nisyros Isl.**	**1.63**	**8**	P	**Pn**	**04 09 04.0**	**+0.1**
NIS1				S	**Sb**	**04 09 25.9**	**+0.1**
	comp=N,4μm,0.5s						
NIS1	**Nisyros Isl.**	**1.63**	**8**	PN	**Pn**	**04 09 03.7**	**-0.2**
NIS1				SN	**Sn**	**04 09 23.5**	**-1.3**
NISR	**Nisiros**	**1.63**	**7**	P	**Pn**	**04 09 03.9**	**0.0**
NISR				S	**Sn**	**04 09 23.5**	**-1.3**
NISR				AML	AML	04 09 30.5	
	comp=N,7058μm,0.5s						
NISR				AML	AML	04 09 31.9	
	comp=E,10300μm,0.4s						
IDI	**Anoyia**	**1.66**	**281**	Pg	**Pg**	**04 09 07.0**	**-0.1**
	comp=E,99nm,0.3s,baz=61,slow=4.6,SNR=36						
IDI				Lg	Lg	04 09 30.1	
	comp=E,142nm,0.3s,baz=320,slow=21,SNR=9.1						
IDI	**Anoyia**	**1.66**	**281**	P	**Pg**	**04 09 06.8**	**-0.2**
IDI				AML	AML	04 09 35.6	
	comp=N,3869μm,0.6s						
IDI				AML	AML	04 09 44.7	
	comp=E,3811μm,0.5s						
IDI	**Anoyia**	**1.66**	**281**	P	**Pg**	**04 09 06.7**	**-0.4**
IDI	**Anoyia**	**1.66**	**281**	PN	**Pb**	**04 09 06.0**	**+0.2**
IDI	**Anoyia**	**1.66**	**281**	Pn	**Pg**	**04 09 07.1**	**0.0**
SIVA	**Sivas**	**1.70**	**272**	P	**Pb**	**04 09 06.8**	**+0.4**
SIVA				AML	AML	04 09 46.4	
	comp=E,8807μm,0.7s						
SIVA				AML	AML	04 09 55.8	
	comp=N,6146μm,0.6s						
SIVA	**Sivas**	**1.70**	**272**	P	**Pg**	**04 09 07.3**	**-0.6**
KOSK	**Kos Island**	**1.76**	**3**	PN	**Pn**	**04 09 05.4**	**-0.2**
SANT	**Santorini**	**1.80**	**320**	P	**Pn**	**04 09 06.5**	**+0.3**
SANT				AML	AML	04 09 34.0	
	comp=N,1684μm,0.3s						
SANT				AML	AML	04 09 43.1	
	comp=E,5607μm,0.4s						
SANT	**Santorini**	**1.80**	**320**	P	**Pn**	**04 09 06.5**	**+0.3**
SANT	**Santorini**	**1.80**	**320**	PN	**Pn**	**04 09 06.5**	**+0.3**
SANT	**Santorini**	**1.80**	**320**	Pn	**Pn**	**04 09 06.4**	**+0.1**
THR8	**Santorini-Mono**	**1.82**	**322**	P	**Pn**	**04 09 06.5**	**+0.1**
THR8	**Santorini-Mono**	**1.82**	**322**	P	**Pn**	**04 09 06.0**	**-0.4**
THR6	**Thira Island,**	**1.82**	**319**	P	**Pn**	**04 09 07.1**	**+0.6**
THR6	**Thira Island,**	**1.82**	**319**	P	**Pn**	**04 09 06.8**	**+0.3**
THR9	**Santorini-Faro**	**1.84**	**318**	P	**Pn**	**04 09 07.3**	**+0.5**
THR9	**Santorini-Faro**	**1.84**	**318**	P	**Pn**	**04 09 07.3**	**+0.5**
SNT1	**Gialos, Santor**	**1.85**	**321**	P	**Pn**	**04 09 07.0**	**+0.1**
THR7	**Fira-Santorini**	**1.85**	**321**	P	**Pn**	**04 09 07.8**	**+0.8**
THR7	**Fira-Santorini**	**1.85**	**321**	P	**Pn**	**04 09 07.7**	**+0.8**
SNT5	**Nea Kammeni, S**	**1.86**	**320**	P	**Pn**	**04 09 07.4**	**+0.4**
THR3	**Thira Island,**	**1.86**	**320**	P	**Pn**	**04 09 07.5**	**+0.5**
THR3	**Thira Island,**	**1.86**	**320**	P	**Pn**	**04 09 07.4**	**+0.4**
THT2	**Imerovigli**	**1.87**	**321**	P	**Pn**	**04 09 07.8**	**+0.7**
THT2				S	**Sn**	**04 09 30.1**	**-0.6**
THT2				AML	AML	04 09 40.7	
	comp=N,10733μm,0.5s						
THT2				AML	AML	04 09 41.2	
	comp=E,10294μm,0.6s						
THT2	**Im

BUCA	**Burdur, Bucak-**	**3.78**	**51**	*i* P	**Pn**	**04 09 37.0**	**+3.5**
BUCA				*i* S	**Sn**	**04 10 22.0**	**+4.0**
BUCA				IAML		04 10 53.0	
	comp=N,76nm,0.7s						
BUCA				IAML		04 10 53.0	
	comp=E,84nm,0.8s						
AKHS	**Akhisar**	**3.95**	**11**	*i* P	**Pn**	**04 09 37.5**	**+1.7**
AKHS				IAML		04 10 33.0	
	comp=N,0.3nm,0.6s						
AKHS				IAML		04 10 54.0	
	comp=E,29nm,1.3s						
ISP	**Isparta**	**4.08**	**45**	Pn	**Pn**	**04 09 39.2**	**+1.6**
ITM	**Ithomi**	**4.57**	**300**	PN	**Pn**	**04 09 46.6**	**+2.3**
ITM	**Ithomi**	**4.57**	**300**	Pn	**Pn**	**04 09 46.2**	**+2.0**
GDZ	**Gediz**	**4.59**	**26**	*i* P	**Pn**	**04 09 44.3**	**-0.4**
DURS	**Dursunbey**	**4.78**	**15**	*i* P	**Pn**	**04 09 47.7**	**+0.5**
DURS				IAML		04 10 47.0	
	comp=N,25nm,0.9s						
DURS				IAML		04 10 55.0	
	comp=E,28nm,0.7s						
ANDZ	**Kutahya, Merke**	**5.11**	**27**	*i* P	**Pn**	**04 09 52.8**	**+0.9**
ANDZ				IAML		04 11 32.0	
	comp=E,15nm,1.6s						
ANDZ				IAML		04 11 55.0	
	comp=N,12nm,2.0s						
CSS	**Mathiatis**	**5.30**	**88**	Pn	**Pn**	**04 09 57.5**	**+3.2**
AGG	**Agios Georgios**	**5.43**	**319**	Pn	**Pn**	**04 09 57.7**	**+1.6**
SWA2		**5.86**	**192**	P	**Pn**	**04 10 04.6**	**+2.6**
	baz=194						
ALN	**Alexandroupoli**	**5.94**	**354**	Pn	**Pn**	**04 10 02.6**	**-0.4**
LIT	**Litokhoron**	**6.18**	**327**	Pn	**Pn**	**04 10 08.0**	**+1.6**
MDUB	**Mudurnu**	**6.45**	**31**	Pn	**Pn**	**04 10 11.8**	**+1.6**
RYAN	**Fayoum**	**6.56**	**153**	P	**Pn**	**04 10 13.3**	**+1.7**
	baz=154						
RYAN				AMP		04 11 00.0	
	baz=154						
RYAN				S	**Sn**	**04 11 23.8**	**-2.6**
	baz=154						
HSAF	**As Saff**	**6.66**	**142**	P	**Pn**	**04 10 13.3**	**+0.3**
	baz=143						
GLL	**Jalalah**	**6.77**	**142**	P	**Pn**	**04 10 15.7**	**+1.1**
	baz=142						
ANTO	**Ankara**	**6.77**	**42**		**Pn**	**04 10 16.1**	**+1.5**
BR131	**Keskin Array S**	**7.16**	**47**	Pn	**Pn**	**04 10 20.8**	**+0.8**
BRTR	**Keskin Array B**	**7.16**	**47**	Pn	**Pn**	**04 10 23.1**	**+3.0**
	comp=N,0.5nm,0.3s,baz=218,slow=13,SNR=3.1						
BRTR	**Keskin Array B**	**7.16**	**47**	Pn	**Pn**	**04 10 22.1**	**+2.1**
SUZ	**Suez**	**7.19**	**134**	P	**Pn**	**04 10 22.1**	**+1.9**
	baz=135						
FNA	**Florina**	**7.24**	**325**	Pn	**Pn**	**04 10 22.6**	**+1.6**
MMAI	**Mount Meron Ar**	**7.35**	**103**	Pn	**Pn**	**04 10 24.7**	**+2.2**
	comp=N,2.0nm,0.3s,baz=304,slow=14,SNR=2.1						
MMAI				Sn	**Sn**	**04 11 44.8**	**-1.1**
	comp=N,4.1nm,0.3s,baz=304,slow=24,SNR=6.3						
HFRF	**Wahat Farafira**	**7.91**	**171**	P	**Pn**	**04 10 32.4**	**+2.2**
	baz=171						
HFRF				S	**Sn**	**04 11 52.4**	**-7.4**
	baz=171						
VTS	**Vitosha**	**8.13**	**341**	Pn	**Pn**	**04 10 34.9**	**+1.6**
EIL	**Elat**	**8.64**	**126**	Pn	**Pn**	**04 10 41.9**	**+1.6**
	comp=N,0.6nm,0.3s,baz=347,slow=3.7,SNR=11						
EIL				Sn	**Sn**	**04 12 14.2**	**-3.6**
	comp=N,1.4nm,0.3s,baz=345,slow=16,SNR=3.3						
VAE	**Valguarnera**	**10.37**	**287**	LR	LR	04 15 46.9	
	comp=N,1µm,19.6ks,baz=355,slow=42						
VYHS	**Vyhne**	**14.76**	**339**	*e*P	**Pn**	**04 12 05.7**	**+1.9**
KVAR	**Kislovodsk Arr**	**15.12**	**49**	LR	LR	04 18 35.0	
	comp=N,482nm,21.1s,baz=198,slow=39						
KBZ	**Khabaz**	**15.14**	**50**	Pn	**P**	**04 12 15.4**	**+1.4**
	comp=N,0.2nm,0.3s,baz=269,slow=8.2,SNR=6.1						
AKASG	**Malin Array Be**	**15.80**	**5**	Pn	**Pn**	**04 12 18.2**	**+0.7**
	comp=N,1.4nm,0.3s,baz=195,slow=11,SNR=8.9						
AKASG	**Malin Array Si**	**15.80**	**5**	Pn	**Pn**	**04 12 17.7**	**+0.2**
AKBB	**Malin Array Si**	**15.80**	**5**	Pn	**Pn**	**04 12 19.4**	**+1.9**
GERES	**GERESS Array B**	**16.93**	**329**	Pn	**P**	**04 12 33.5**	**-0.6**
	comp=N,0.2nm,0.3s,baz=130,slow=12,SNR=7.0						
GERES	**GERESS Array B**	**16.93**	**329**		**Pn**	**04 12 31.9**	**-0.2**
KHC	**Kasperske Hory**	**17.20**	**329**	*e*P	**P**	**04 12 37.0**	**0.0**
KHC	**Kasperske Hory**	**17.20**	**329**	Pn	**P**	**04 12 36.6**	**-0.4**
KHC				IAmb	IAmb	04 12 56.4	
	comp=Z,18nm,1.8s						
SENIN	**Lac Senin/Sane**	**18.64**	**313**	P	**Pn**	**04 12 53.8**	**+0.4**
CLL	**Collm**	**19.14**	**333**	*e*P	**Pn**	**04 13 01.0**	**+1.9**
CLL				*e*		04 13 09.0	
ESDC	**Sonseca Array**	**24.90**	**290**	P	**P**	**04 13 57.7**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=83,slow=9.4,SNR=10						
FINES	**FINESS Array B**	**26.48**	**359**	P	**P**	**04 14 11.5**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=159,slow=16,SNR=2.2						
HFS	**Hagfors**	**26.58**	**345**	P	**P**	**04 14 12.0**	**-1.1**
	comp=Z,2.5nm,0.8s,baz=350,slow=5.9,SNR=1.6						
EKA	**Eskdalemuir Ar**	**29.00**	**324**	P	**P**	**04 14 34.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=118,slow=9.6,SNR=6.7						
TORD	**Torodi Ar. Bea**	**31.48**	**233**	P	**P**	**04 14 58.1**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=35,slow=9.1,SNR=12						
KK31	**Karatay Array**	**34.52**	**63**	P	**P**	**04 15 22.3**	**-1.2**
KK31				IAmb	IAmb	04 15 26.1	
	comp=Z,2.1nm,0.8s						
KKAR	**Karatay Array**	**34.52**	**63**	P	**P**	**04 15 21.5**	**-2.0**
KKAR				IAmb	IAmb	04 15 26.1	
	comp=Z,2.1nm,0.8s						
ARCES	**ARCESS Array B**	**34.61**	**359**	P	**P**	**04 15 22.7**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=169,slow=8.7,SNR=5.1						
AAK	**Ala-Archa**	**37.47**	**64**	P	**P**	**04 15 49.2**	**+0.3**
AAK				IAmb	IAmb	04 15 51.5	
	comp=Z,2.7nm,0.8s						
BOOM	**Boomskoye usch**	**38.55**	**64**	P	**P**	**04 15 59.0**	**+1.1**
KDJ	**Kajisay**	**39.50**	**64**	P	**P**	**04 16 07.3**	**+1.3**
KDJ				IAmb	IAmb	04 16 09.4	
	comp=Z,2.7nm,0.8s						
MK31	**Makanchi Array**	**42.69**	**57**	P	**P**	**04 16 32.7**	**+0.6**
MK31				IAmb	IAmb	04 16 34.2	
	comp=Z,4.2nm,0.9s						
MKAR	**Makanchi Array**	**42.69**	**57**	P	**P**	**04 16 33.2**	**+1.2**
	comp=Z,3.6nm,0.6s,baz=278,slow=7.0,SNR=24						
MKAR	**Makanchi Array**	**42.69**	**57**	P	**P**	**04 16 32.8**	**+0.8**
ZAA0	**Zalesovo Array**	**44.11**	**46**	P	**P**	**04 16 43.1**	**-0.1**
ZAA0				IAmb	IAmb	04 16 53.6	
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**	**04 16 43.5**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=276,slow=8.3,SNR=9.5						
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**	**04 16 43.2**	**-0.1**
SONM	**Songino Array**	**58.50**	**51**	P	**P**	**04 18 31.5**	**0.0**
	comp=Z,1.1nm,0.6s,baz=289,slow=8.6,SNR=6.8						
SONM	**Songino Array**	**58.50**	**51**	P	**P**	**04 18 32.6**	**+1.1**
BOSA	**Boshof**	**63.28**	**182**	P	**P**	**04 19 05.0**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=360,slow=6.9,SNR=1.7						
USRK	**Ussuriysk Ar.**	**75.96**	**46**	P	**P**	**04 20 22.6**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=15,slow=6.0,SNR=4.5						
KSRS	**Korea Array**	**77.26**	**53**	P	**P**	**04 20 30.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=292,slow=4.0,SNR=1.8						
YKA	**Yellowknife Ar**	**78.04**	**343**	P	**P**	**04 20 32.9**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=36,slow=5.2,SNR=4.2						
ILAR	**Eielson Array**	**80.45**	**357**	P	**P**	**04 20 44.7**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=205,slow=4.0,SNR=1.9						
PETK	**Petropavlovsk-**	**82.42**	**27**	P	**P**	**04 20 58.9**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=358,slow=12,SNR=1.7						
MJAR	**Matsushiro Arr**	**84.38**	**49**	P	**P**	**04 21 08.9**	**+1.2**
	comp=Z,1.4nm,0.6s,baz=309,slow=12,SNR=4.5						

IDC 24 04:28:05.7±8.2, 29°03'S×75°95'E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.3/50, mbtmp3.7/2, Error ellipse: s-maj=385.4km s-min=57.8km az=30.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**21.52**	**351**	T	T	04 55 58.9	
	baz=174,slow=76,SNR=57						
H08S1	**Diego Carcia H**	**21.52**	**351**	T	T	04 55 58.9	
	baz=174,slow=76,SNR=17						
H08S3	**Diego Garcia H**	**21.54**	**351**	T	T	04 56 00.2	
	baz=174,slow=76,SNR=98						
ASAR	**Alice Springs**	**51.77**	**98**	P	P	04 37 15.2	-0.2
	0.5nm,0.5s,baz=247,slow=6.9,SNR=8.3						
WRA	**Warramunga Arr**	**53.45**	**94**	P	P	04 37 27.9	+0.1
	0.8nm,0.7s,baz=249,slow=7.4,SNR=7.3						
YKA	**Yellowknife Ar**	**145.82**	**9**	PKPbc	PKPdf	04 47 45.2	-0.4
	0.3nm,0.8s,baz=335,slow=3.4,SNR=3.8						

*NOU **24** 04:29:29.7, 42°.18S×173°.13E, h74km, MLv3.7, South Island, New Zealand*
WEL 24 04:29:29.8±0.3, 42°S±3°×17°3E±°, h32km±6km, M3.3/20, ML3.6/20, MLv3.3/20, Error ellipse: s-maj=0.0km

s-min=0.0km az=123.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.41**	**339**	P	Pn	04 29 40.0	+0.5
THZ				S	Sn	04 29 46.9	+0.8
KHZ	**Kahutara**	**0.42**	**130**	P	Pb	04 29 30.8	-8.4
KHZ				S	Sn	04 29 48.8	+2.5
BSWZ	**Blackbirch Sta**	**0.72**	**54**	P	Pb	04 29 44.6	+0.6
BSWZ				S	Sn	04 29 55.8	+2.1
GVZ	**Greta Valley S**	**0.82**	**183**	P	Pb	04 29 46.0	+0.3
GVZ				S	Sb	04 29 57.4	+0.9
LTZ	**Lake Taylor**	**0.88**	**224**	P	Pb	04 29 46.8	+0.1
LTZ				S	Sb	04 29 58.8	+0.6
CMWZ	**Cape Campbell**	**0.92**	**65**	P	Pb	04 29 48.2	+0.9
NNZ	**Nelson**	**0.95**	**13**	P	Pb	04 29 47.4	-0.4
NNZ				S	Sb	04 29 59.4	+0.1
TUWZ	**Tuamarina**	**0.96**	**42**	P	Pb	04 29 47.5	-0.4
TUWZ				S	Sb	04 30 00.4	+0.2
DSZ	**Denniston Nort**	**1.04**	**292**	P	Pn	04 29 48.7	+0.4
DSZ				S	Sn	04 30 02.2	+0.4
AMCZ	**Amberley**	**1.08**	**198**	P	Pn	04 29 49.2	+0.5
TCW	**Tory Channel**	**1.29**	**44**	P	Pn	04 29 51.9	+0.4
INZ	**Inchbonnie**	**1.35**	**244**	P	Pn	04 29 53.1	+0.7
QRZ	**Quartz Range**	**1.39**	**342**	P	Pn	04 29 53.4	+0.5
OXZ	**Oxford**	**1.41**	**213**	P	Pn	04 29 53.0	-0.3
DUWZ	**D'Urville Isla**	**1.48**	**25**	P	Pn	04 29 54.7	+0.5
BHW	**Baring Head**	**1.52**	**62**	P	Pn	04 29 54.3	-0.4
WEL	**Wellington**	**1.52**	**56**	P	Pn	04 29 54.7	0.0
OKCZ	**Okains Bay**	**1.58**	**181**	P	Pn	04 29 55.3	-0.3
MQZ	**McQueen's Vall**	**1.59**	**192**	P	Pn	04 29 54.7	-1.0
PLWZ	**Palliser**	**1.71**	**71**	P	Pn	04 29 56.4	-1.0
RACZ	**Rakaia**	**1.73**	**204**	P	Pn	04 29 57.0	-0.5
AKCZ	**Akaroa Harbour**	**1.73**	**184**	P	Pn	04 29 57.1	-0.6
MSWZ	**Moikau Station**	**1.77**	**66**	P	Pn	04 29 57.2	-0.9
CAW	**Cannon Point**	**1.81**	**56**	P	Pn	04 29 58.2	-0.5
KIW	**Kapiti Island**	**1.87**	**47**	P	Pn	04 29 59.7	+0.1
PAWZ	**Paruwai Farm**	**1.90**	**67**	P	Pn	04 29 59.1	-0.9
WVZ	**Waitaha Valley**	**1.97**	**241**	P	Pn	04 30 01.2	+0.2
WACZ	**Wakanui South**	**2.02**	**207**	P	Pn	04 30 00.9	-0.6
OGWZ	**Otaki Gorge**	**2.05**	**50**	P	Pn	04 30 01.5	-0.5
MTW	**Mount Morrison**	**2.06**	**62**	P	Pn	04 30 00.9	-1.2
TRWZ	**Traveller**	**2.08**	**70**	P	Pn	04 30 01.8	-0.6
RPZ	**Rata Peaks**	**2.17**	**223**	P	Pn	04 30 03.5	-0.2
HOWZ	**Holdsworth Sta**	**2.20**	**56**	P	Pn	04 30 03.0	-1.2
ARCZ	**Arundel**	**2.29**	**217**	P	Pn	04 30 04.6	-0.7
TMWZ	**Te Maipa**	**2.34**	**65**	P	Pn	04 30 05.0	-1.0
GCSZ	**Gaunt Creek Bo**	**2.35**	**239**	P	Pn	04 30 06.3	+0.1
MRZ	**Mangatainoka R**	**2.38**	**52**	P	Pn	04 30 05.6	-1.0
TIWZ	**Tintock**	**2.50**	**58**	P	Pn	04 30 07.3	-1.0
POWZ	**Post Office Ro**	**2.67**	**50**	P	Pn	04 30 10.5	0.0
TMZ	**Timaru**	**2.71**	**214**	P	Pn	04 30 10.0	-1.1
FOZ	**Fox Glacier**	**2.78**	**239**	P	Pn	04 30 11.9	-0.2
BFZ	**Birch Farm**	**2.78**	**59**	P	Pn	04 30 10.2	-1.9
WAZ	**Wanganui**	**2.79**	**32**	P	Pn	04 30 13.3	+1.1
NMEZ	**Namu Road**	**2.79**	**12**	P	Pn	04 30 14.5	+2.3
PREZ	**Palmer Road**	**2.92**	**16**	P	Pn	04 30 15.8	+1.9
KHEZ	**Kahui Hut**	**2.93**	**14**	P	Pn	04 30 15.8	+1.5
NBEZ	**Newall Road No**	**2.93**	**12**	P	Pn	04 30 16.0	+1.9
DVHZ	**Dannevirke**	**2.96**	**52**	P	Pn	04 30 13.6	-0.9
NEZ	**North Egmont**	**2.97**	**15**	P	Pn	04 30 16.6	+1.8
PKE	**Pukeiti**	**3.03**	**13**	P	Pn	04 30 16.9	+1.5
DREZ	**Durham Road**	**3.07**	**16**	P	Pn	04 30 18.1	+2.1
LBZ	**Lake Benmore**	**3.09**	**223**	P	Pn	04 30 16.1	-0.2
PNHZ	**Pukenui**	**3.24**	**47**	P	Pn	04 30 16.7	-1.7
VRZ	**Vera Road**	**3.27**	**23**	P	Pn	04 30 20.2	+1.4
PKVZ	**Pokaka**	**3.33**	**32**	P	Pn	04 30 20.8	+1.2
WNVZ	**Wahianoa**	**3.40**	**35**	P	Pn	04 30 22.8	+2.1
MOVZ	**Moawhango**	**3.40**	**37**	P	Pn	04 30 21.0	+0.4
ODZ	**Otahua Downs**	**3.40**	**211**	P	Pn	04 30 19.6	-1.0
TUVZ	**Tukino**	**3.47**	**35**	P	Pn	04 30 22.0	+0.3
BHHZ	**Black Hill Sta**	**3.48**	**41**	P	Pn	04 30 20.9	-0.8
KRHZ	**Kereru**	**3.52**	**46**	P	Pn	04 30 21.6	-0.7
NGZ	**Ngauruhoe**	**3.53**	**34**	P	Pn	04 30 22.7	+0.3
SNVZ	**South Ngauruho**	**3.53**	**34**	P	Pn	04 30 22.6	+0.1
OTVZ	**Oturere**	**3.56**	**34**	P	Pn	04 30 22.9	0.0
NNVZ	**North Ngauruho**	**3.57**	**33**	P	Pn	04 30 23.6	+0.5
WTVZ	**West Tongariro**	**3.57**	**33**	P	Pn	04 30 23.2	+0.1
ETVZ	**East Tongariro**	**3.60**	**34**	P	Pn	04 30 23.4	-0.2
KRVZ	**Karewarewa**	**3.61**	**33**	P	Pn	04 30 25.0	+1.4
TMVZ	**Te Maari**	**3.62**	**34**	P	Pn	04 30 23.6	-0.1
NTVZ	**North Tongarir**	**3.62**	**34**	P	Pn	04 30 23.9	+0.2
JCZ	**Jackson Bay**	**3.70**	**237**	P	Pn	04 30 23.4	-1.3
KAHZ	**Kahuranaki**	**3.70**	**52**	P	Pn	04 30 23.8	-1.0
HIZ	**Hauiti**	**3.87**	**21**	P	Pn	04 30 27.6	+0.5
BKZ	**Black Stump Fm**	**3.94**	**42**	P	Pn	04 30 27.8	-0.2
TLZ	**Tolley Road**	**4.25**	**27**	P	Pn	04 30 33.4	+1.2
RZ	**Ruatahuna**	**4.61**	**41**	P	Pn	04 30 38.2	+1.3
TOZ	**Tauroa Road**	**4.78**	**24**	P	Pn	04 30 40.0	+0.5
WIAZ	**Waiheke Island**	**5.57**	**17**	P	Pn	04 30 51.2	+0.7

*NOU **24** 04:37:05.2, 42°.91S×172°.93E, h144km, MLv3.8, South Island, New Zealand*
WEL 24 04:37:16.8±0.4, 42°S±3°×17°3E±°, h46km±8km, M3.1/25, ML3.3/25, MLv3.1/25, Error ellipse: s-maj=0.0km

s-min=0.0km az=129.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.38**	**134**	P	Pn	04 37 28.0	+1.7
KHZ				S	Sn	04 37 36.1	+3.0
THZ	**Tophouse**	**0.44**	**333**	P	Pn	04 37 26.9	-0.3
BSWZ	**Blackbirch Sta**	**0.69**	**50**	P	Pn	04 37 31.3	+1.0
BSWZ				S	Sn	04 37 42.3	+2.3
GVZ	**Greta Valley S**	**0.81**	**187**	P	Pn	04 37 33.1	+1.1
CMWZ	**Cape Campbell**	**0.88**	**63**	P	Pn	04 37 34.4	+1.6
LTZ	**Lake Taylor**	**0.91**	**227**	P	Pn	04 37 34.1	+0.8
LTZ				S	Sn	04 37 46.5	+1.1
TUWZ	**Tuamarina**	**0.93**	**39**	P	Pn	04 37 34.2	+0.7
TUWZ				S	Sn	04 37 47.0	+1.3
NNZ	**Nelson**	**0.95**	**9**	P	Pn	04 37 34.1	+0.3
NNZ				S	Sn	04 37 46.9	+0.6
AMCZ	**Amberley**	**1.09**	**200**	P	Pn	04 37 36.4	+0.8
DSZ	**Denniston Nort**	**1.10**	**292**	P	Pn	04 37 35.8	0.0
DSZ				S	Sn	04 37 49.6	-0.4
TCW	**Tory Channel**	**1.26**	**42**	P	Pn	04 37 38.4	+0.5
INZ	**Inchbonnie**	**1.40**	**246**	P	Pn	04 37 40.4	+0.5
QRZ	**Quartz Range**	**1.42**	**340**	P	Pn	04 37 40.1	0.0
OXZ	**Oxford**	**1.44**	**215**	P	Pn	04 37 40.2	-0.2
DUWZ	**D'Urville Isla**	**1.47**	**23**	P	Pn	04 37 41.4	+0.6
DUWZ				S	Sn	04 38 00.7	+1.8
BHW	**Baring Head**	**1.48**	**60**	P	Pn	04 37 40.9	0.0
WEL	**Wellington**	**1.48**	**54**	P	Pn	04 37 39.4	-1.6
OKCZ	**Okains Bay**	**1.57**	**183**	P	Pn	04 37 42.5	+0.3
MQZ	**McQueen's Vall**	**1.59**	**194**	P	Pn	04 37 41.9	-0.7
PLWZ	**Palliser**	**1.66**	**70**	P	Pn	04 37 43.1	-0.5
MSWZ	**Moikau Station**	**1.72**	**65**	P	Pn	04 37 43.9	-0.4
AKCZ	**Akaroa Harbour**	**1.72**	**186**	P	Pn	04 37 44.2	-0.1
RACZ	**Rakaia**	**1.74**	**205**	P	Pn	04 37 44.1	-0.5
CAW	**Cannon Point**	**1.77**	**54**	P	Pn	04 37 44.8	-0.1
KIW	**Kapiti Island**	**1.84**	**46**	P	Pn	04 37 46.3	+0.3
PAWZ	**Paruwai Farm**	**1.86**	**66**	P	Pn	04 37 45.7	-0.5
MTW	**Mount Morrison**	**2.01**	**61**	P	Pn	04 37 47.4	-0.9
OGWZ	**Otaki Gorge**	**2.01**	**49**	P	Pn	04 37 48.2	-0.1
WVZ	**Waitaha Valley**	**2.02**	**242**	P	Pn	04 37 48.7	+0.3
TRWZ	**Traveller**	**2.03**	**69**	P	Pn	04 37 47.7	-0.8
WACZ	**Wakanui South**	**2.03**	**208**	P	Pn	04 37 48.3	-0.3
HOWZ	**Holdsworth Sta**	**2.16**	**55**	P	Pn	04 37 49.5	-0.9
RPZ	**Rata Peaks**	**2.20**	**224**	P	Pn	04 37 51.1	+0.3
TMWZ	**Te Maipa**	**2.29**	**64**	P	Pn	04 37 51.0	-1.2
ARCZ	**Arundel**	**2.31**	**219**	P	Pn	04 37 52.1	-0.3
MRZ	**Mangatainoka R**	**2.35**	**51**	P	Pn	04 37 52.2	-0.7
GCSZ	**Gaunt Creek Bo**	**2.39**	**240**	P	Pn	04 37 54.2	+0.7
TIWZ	**Tintock**	**2.46**	**57**	P	Pn	04 37 53.5	-1.0
PRWZ	**Pori Road**	**2.65**	**54**	P	Pn	04 37 56.0	-1.0
TMZ	**Timaru**	**2.73**	**215**	P	Pn	04 37 57.9	-0.2
BFZ	**Birch Farm**	**2.74**	**58**	P	Pn	04 37 56.5	-1.8
WAZ	**Wanganui**	**2.77**	**30**	P	Pn	04 38 00.1	+1.4
NMEZ	**Namu Road**	**2.79**	**11**	P	Pn	04 38 01.6	+2.6
FOZ	**Fox Glacier**	**2.82**	**240**	P	Pn	04 37 59.4	0.0
PREZ	**Palmer Road**	**2.91**	**15**	P	Pn	04 38 03.1	+2.5
DVHZ	**Dannevirke**	**2.92**	**52**	P	Pn	04 37 59.3	-1.6
KHEZ	**Kahui Hut**	**2.93**	**13**	P	Pn	04 38 02.7	+1.7
NEZ	**North Egmont**	**2.97**	**14**	P	Pn	04 38 04.8	+3.2
PKE	**Pukeiti**	**3.02**	**12**	P	Pn	04 38 04.2	+1.9
LBZ	**Lake Benmore**	**3.12**	**223**	P	Pn	04 38 03.3	-0.1
PNHZ	**Pukenui**	**3.21**	**47**	P	Pn	04 38 03.4	-1.3
VRZ	**Vera Road**	**3.26**	**22**	P	Pn	04 38 07.0	+1.6
PKVZ	**Pokaka**	**3.31**	**31**	P	Pn	04 38 07.2	+1.0
MOVZ	**Moawhango**	**3.38**	**36**	P	Pn	04 38 06.9	-0.2
ODZ	**Otahua Downs**	**3.42**	**212**	P	Pn	04 38 07.4	-0.2
TUVZ	**Tukino**	**3.45**	**34**	P	Pn	04 38 08.6	+0.5
BHHZ	**Black Hill Sta**	**3.45**	**40**	P	Pn	04 38 07.6	-0.5
KRHZ	**Kereru**	**3.49**	**45**	P	Pn	04 38 07.1	-1.5
NGZ	**Ngauruhoe**	**3.51**	**33**	P	Pn	04 38 09.3	+0.3
SNVZ	**South Ngauruho**	**3.51**	**33**	P	Pn	04 38 09.4	+0.3
OTVZ	**Oturere**	**3.54**	**33**	P	Pn	04 38 09.7	+0.3
NNVZ	**North Ngauruho**	**3.55**	**32**	P	Pn	04 38 10.0	+0.5
WTVZ	**West Tongariro**	**3.55**	**32**	P	Pn	04 38 09.9	+0.3
ETVZ	**East Tongariro**	**3.58**	**33**	P	Pn	04 38 10.2	+0.2
KRVZ	**Karewarewa**	**3.59**	**32**	P	Pn	04 38 13.0	+2.9
TMVZ	**Te Maari**	**3.60**	**33**	P	Pn	04 38 10.3	+0.2
NTVZ	**North Tongarir**	**3.60**	**33**	P	Pn	04 38 10.6	+0.3
KAHZ	**Kahuranaki**	**3.67**	**51**	P	Pn	04 38 09.1	-1.9
KWHZ	**Kaweka Forest**	**3.68**	**43**	P	Pn	04 38 10.2	-1.0
JCZ	**Jackson Bay**	**3.74**	**238**	P	Pn	04 38 12.6	+0.5
HIZ	**Hauiti**	**3.86**	**20**	P	Pn	04 38 14.5	+0.9
BKZ	**Black Stump Fm**	**3.91**	**41**	P	Pn	04 38 12.9	-1.5
TLZ	**Tolley Road**	**4.23**	**26**	P	Pn	04 38 21.6	+2.8
TWGZ	**Tauwhareparae**	**5.42**	**44**	P	Pn	04 38 34.7	-0.4

*NNC **24** 04:41:09.6±8.4, 37°.98N×70°.69E, h140km±122km, mb3.5, mpv4.3, Error ellipse: s-maj=83.8km s-min=50.2km az=171.0*
*IDC **24** 04:41:23.9±3.1, 39°.28N×70°.73E, h80km±24km, mb3.6/6, mb1 3.6/12, mb1mx3.3/60, mbtmp3.8/12, Error ellipse: s-maj=37.3km s-min=19.8km az=164.0*
ISC 24 04:41:24.7±1.2, 39°2N±0°.1×70°62E±0°.08, h100km, n27, σ2s09/29, mb3.9/6, 4C, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.75**	**38**	P	**Pn**	**04 42 19.0**	**-1.8**
	SNR=32						
KK31	**Karatay Array**	**3.91**	**359**	P	**Pn**	**04 42 21.8**	**-0.8**
	3.5nm,0.2s,baz=180,slow=12,SNR=322						
KK31				⇑S	Sn	04 43 28.4	+21
	28nm,0.5s,baz=176,slow=29,SNR=6.8						
EKS2	**Erkin-Say**	**4.21**	**34**	P	**Pn**	**04 42 27.6**	**+0.9**
	SNR=47						
UCH	**Uchtor**	**4.24**	**43**	P	**Pn**	**04 42 25.5**	**-1.9**
	SNR=113						
AAK	**Ala-Archa**	**4.52**	**39**	P	**Pn**	**04 42 29.8**	**-1.2**
	12nm,0.3s,baz=200,slow=5.6,SNR=59						
AAK				S	**Sn**	**04 43 27.5**	**+5.0**
	1.9nm,0.3s,ba

M_{Rh}-0.22±.02; M_{Wb}-0.74±.01; M_{Wb}0.68±.02; Best double couple: M_{o}1.29000×10^{17} NP1:ϕ▶248.00000°,δ43.00000°,λ136.00000°. NP2:ϕ▶13.00000°,δ62.00000°,λ56.00000°. Principal axes: T 1.3140, Plg58.0000°, Azm234.0000°; N -0.0470, Plg29.0000°, Azm30.0000°; P -1.2660, Plg11.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC ***24*** *05:28:07.9±2.1,0.˙20S±0.˙06×124.˚25E±0.˚06,h79km±5km, mb5.1/111 Error ellipse: s-maj=9.6km s-min=7.8km az=157.0*

DJA ***24*** *05:28:08.2±0.1,0.˚S±1.˚×12.˚4E±.˚, h70km±2km, M5.2/69, mB5.6/50, mb5.3/69, MLv5.7/26, Mw(mB)5.1/50, MwMwp5.2/12, Mwp5.4/12*

ISC 24 05:28:08.2±0.4, 0.˚14S±0.˚03×124.˚29E±0.˚03, h75km±2km, h76km; pP-P, n479, σ1§64/531, mb5.0/169, 24C-21D, Fault plane solution: NP1:ϕ▶268.11661°,δ35.62002°, λ137.59819°. **NP2:**ϕ▶34.70401°,δ66.87540°,λ62.11860°. **Principal axes:** T Plg58.4856°, Azm265.4611°; N Plg25.4720°, Azm46.4418°; P Plg17.2836°, Azm144.9658°; **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		
KMSI	**Cibinong**	**0.77**	**337**	P	**Pn**	**05 28 22.1**	**-2.1**
KMSI				S	**Sn**	**05 28 34.2**	**-1.9**
LUWI	**Luwuk**	**1.76**	**239**	Pn	**Pn**	**05 28 35.9**	**-0.9**
LUWI				Sn	**Sn**	**05 28 58.2**	**-0.2**
LUWI	**Luwuk**	**1.76**	**239**	P	**Pn**	**05 28 37.2**	**+0.4**
LUWI				S	**Sn**	**05 29 00.4**	**+1.9**
MRSI	**Marisa**	**2.42**	**285**	P	**Pn**	**05 28 42.9**	**-2.7**
SANI	**Sanana**	**2.55**	**138**	P	**Pn**	**05 28 44.7**	**-2.7**
SANI				S	**Sn**	**05 29 12.0**	**-5.5**
APSI	**Ampana**	**2.75**	**254**	P	**Pn**	**05 28 50.5**	**+0.5**
TNTI	**Ternate**	**3.21**	**74**	Pn	**Pn**	**05 28 56.0**	**-0.3**
TNTI	**Ternate**	**3.21**	**74**	P	**Pn**	**05 28 55.7**	**-0.6**
TNTI				S	**Sn**	**05 29 32.8**	**-0.7**
LBMI	**Labuha**	**3.25**	**99**	P	**Pn**	**05 28 56.2**	**-0.7**
LBMI				S	**Sn**	**05 29 33.1**	**-1.5**
TOLI2	**Tolitoli**	**3.72**	**289**	Pn	**Pn**	**05 29 02.6**	**-0.6**
SGSI	**Sangihe**	**3.99**	**18**	P	**Pn**	**05 29 06.3**	**-0.7**
KDI	**Kendari**	**4.15**	**204**	P	**Pn**	**05 29 07.6**	**-1.5**
NLAI	**Namlea**	**4.17**	**138**	P	**Pn**	**05 29 07.9**	**-1.6**
TTSI	**Tana Toraja**	**5.32**	**237**	P	**Pn**	**05 29 25.2**	**+0.1**
	8.8nm17µm2µm,0.9s						
SPSI	**Sidrap Palu**	**5.90**	**230**	P	**Pn**	**05 29 33.2**	**+0.1**
	4.7nm12µm1µm,0.7s						
BNSI	**Bone**	**5.95**	**225**	P	**Pn**	**05 29 33.6**	**-0.1**
	3.0nm8µm1µm,0.8s						
DDMP	**Don Marcelino,**	**6.36**	**13**	*e*P	**Pn**	**05 29 40.8**	**+1.5**
SKMP	**Bagumbayan, Su**	**6.62**	**2**	*e*P	**Pn**	**05 29 43.5**	**+0.7**
BKSI	**Bulukumba**	**6.62**	**219**	P	**Pn**	**05 29 42.7**	**-0.2**
	2.7nm3µm338nm,0.8s						
KAPI	**Kappang**	**6.63**	**223**	P	**Pn**	**05 29 41.9**	**-1.2**
	54nm,0.3s,baz=19,slow=5.9,SNR=80						
KAPI				S	**Sn**	**05 30 56.5**	**-0.8**
	56nm,0.3s,baz=201,slow=20,SNR=10						
KAPI	**Kappang**	**6.63**	**223**	Pn	**Pn**	**05 29 43.4**	**+0.4**
SGKI	**Sangatta, Kali**	**6.69**	**267**	P	**Pn**	**05 29 46.0**	**+2.1**
	3.9nm10µm5µm607nm,0.8s						
SWI	**Sorong**	**7.01**	**96**	P	**Pn**	**05 29 48.1**	**-0.1**
	1.0nm5µm4µm270nm,1.2s						
SIJI	**Sorong**	**7.02**	**96**	P	**Pn**	**05 29 48.8**	**+0.4**
	18nm,0.3s,baz=292,slow=10,SNR=40						
BSSI	**Bau Bau, Buton**	**7.07**	**212**	P	**Pn**	**05 29 49.2**	**+0.2**
	2.5nm4µm355nm,0.8s						
SMKI	**Samarinda**	**7.08**	**267**	P	**Pn**	**05 29 51.4**	**+2.2**
	3.1nm12µm1µm,0.9s						
BNDI	**Bandanaira**	**7.11**	**128**	P	**Pn**	**05 29 49.6**	**+0.1**
	4.2nm8µm13µm869nm,0.9s						
KCP	**Kidapawan**	**7.14**	**6**	*i*P	**Pn**	**05 29 53.0**	**+3.0**
DAV	**Davao City (W)**	**7.27**	**10**	P	**Pn**	**05 29 52.7**	**+0.8**
	16nm,0.3s,baz=175,slow=1.3,SNR=14						
DAV				LR	LR	05 33 21.8	
	comp=Z,2µm,20.4s,baz=173,slow=43						
DAV	**Davao City (W)**	**7.27**	**10**	Pn	**Pn**	**05 29 53.7**	**+1.9**
MATI	**Mati**	**7.30**	**16**	*e*P	Sn	05 31 24.7	+11
BKB	**Balikpapan**	**7.47**	**261**	Pn	**Pn**	**05 29 55.8**	**+1.2**
BKB	**Balikpapan**	**7.47**	**261**	P	**Pn**	**05 29 56.4**	**+1.8**
	2.5nm10µm7µm667nm,0.8s						
MYLDM	**Lahad Datu**	**7.83**	**312**		**Pn**	**05 30 01.4**	**+2.0**
PAGZ	**Pagadian**	**7.98**	**354**	*e*P	**Pn**	**05 30 02.5**	**+0.9**
BUKP	**Musuan**	**8.00**	**6**	*e*P	**Pn**	**05 30 04.2**	**+2.4**
FAKI	**Fak Fak**	**8.43**	**109**	Pn	**Pn**	**05 30 05.4**	**-2.2**
FAKI	**Fak Fak**	**8.43**	**109**	P	**Pn**	**05 30 05.9**	**-1.7**
	5µm2µm173nm,0.8s						
CGP	**Cagayan de Oro**	**8.54**	**3**	*e*P	Pn	05 30 25.0	+16
MMRI	**Maumere**	**8.69**	**194**	Pn	**Pn**	**05 30 11.4**	**+0.2**
KBKI	**Kotabaru**	**8.70**	**249**	P	**Pn**	**05 30 11.6**	**+0.2**
	0.9nm3µm271nm,0.9s						
MTKI	**Muara Teweh, K**	**9.42**	**265**	P	**Pn**	**05 30 23.2**	**+2.0**
SOEI	**Soe**	**9.56**	**180**	Pn	**Pn**	**05 30 25.6**	**+2.4**
SOEI	**Soe**	**9.56**	**180**	P	**Pn**	**05 30 24.3**	**+1.1**
	4µm3µm126nm,1.1s						
BBKI	**Banjar Baru**	**10.00**	**251**	P	**Pn**	**05 30 31.0**	**+1.9**
	146nm,0.9s						
BATI	**Baumata**	**10.03**	**184**	P	**Pn**	**05 30 30.2**	**+0.8**
	4.8nm,0.3s,baz=54,slow=9.9,SNR=5.1						
BATI				LR	LR	05 34 27.3	
	comp=Z,5µm,21.8s,baz=356,slow=38						
BATI	**Baumata**	**10.03**	**184**	P	**Pn**	**05 30 32.4**	**+2.9**
	975nm70nm,0.8s						
CNOP	**Candoni, Negro**	**10.03**	**351**	*e*P	**Pn**	**05 30 26.5**	**-3.0**
KKM	**Kota Kinabalu**	**10.13**	**307**		**Pn**	**05 30 32.2**	**+1.3**
SAUI	**Saumlaki**	**10.47**	**138**	Pn	**Pn**	**05 30 35.4**	**-0.2**
WBSI	**Waikabubak, Su**	**10.63**	**207**	P	**Pn**	**05 30 37.6**	**-0.1**
	1µm87nm,0.9s						
PLAI	**Plampang**	**10.80**	**217**	P	**Pn**	**05 30 41.5**	**+1.5**
	2µm77nm,1.0s						
BATP	**Bataraza**	**10.97**	**324**	*e*P	**Pn**	**05 30 46.3**	**+3.9**
TWSI	**Taliwang, Sumb**	**11.29**	**221**	P	**Pn**	**05 30 47.4**	**+0.7**
	35nm,1.0s						
SRBI	**Singaraja**	**12.01**	**229**	P	**Pn**	**05 30 58.5**	**+2.1**
	2µm76nm,1.0s						
SBUM	**Sibu**	**12.33**	**282**		**Pn**	**05 31 00.9**	**0.0**
KMMI	**Kalianget**	**12.37**	**236**	P	**Pn**	**05 31 03.3**	**+1.8**
	4µm196nm,1.0s						
ABJI	**Asem Bagus**	**12.58**	**233**	P	**Pn**	**05 31 06.3**	**+2.0**
	4µm76nm,0.9s						
STKI	**Sintang**	**12.81**	**271**	P	**Pn**	**05 31 09.7**	**+2.3**
PBKI	**Pangkalan Bun**	**12.87**	**258**	P	**Pn**	**05 31 09.9**	**+1.7**
	264nm,0.8s						
JAGI	**Jajag, Banyuwa**	**13.06**	**230**		**Pn**	**05 31 09.0**	**-1.8**
JAGI	**Jajag, Banyuwa**	**13.06**	**230**	P	**Pn**	**05 31 12.6**	**+1.9**
	6µm75nm,1.4s						
KSM	**Kuching**	**14.07**	**277**		**Pn**	**05 31 23.7**	**-0.3**
MTN	**Manton Dam**	**14.34**	**152**		**Pn**	**05 31 24.4**	**-3.1**
LUBP	**Lubang**	**14.35**	**344**	*e*P	Pn	05 31 19.9	-7.8
LQP	**Lukban**	**14.41**	**349**	*i*P	**P**	**05 31 33.8**	**+0.3**
MACP	**Maragondon, Ca**	**14.73**	**346**	*e*P	**P**	**05 31 35.2**	**-1.7**
KDU	**Kakadu**	**14.88**	**147**	P	**Pn**	**05 31 32.6**	**-1.9**
	baz=15,SNR=50						
WOJI	**Wonogiri, Jawa**	**15.36**	**240**	P	**P**	**05 31 43.1**	**-0.8**
	60nm,1.1s						
GENI	**Genyem**	**16.06**	**99**	P	**Pn**	**05 31 48.8**	**-0.8**
	3µm222nm,1.6s						
KNRA	**Kununurra**	**16.06**	**164**		**Pn**	**05 31 48.4**	**-1.2**
KNRA				IAmb	IAmb	05 32 10.4	
	comp=Z,116nm,1.1s						
JAY	**Jayapura**	**16.58**	**98**	P	**P**	**05 31 58.6**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=170,slow=2.7,SNR=6.6						
JAY				LR	LR	05 39 59.6	
	comp=Z,965nm,21.7s,baz=202,slow=43						
FITZ	**Fitzroy Crossi**	**17.90**	**176**	P	**Pn**	**05 32 12.3**	**0.0**
	comp=Z,1.7nm,0.3s,baz=9.8,slow=8.6,SNR=31						
FITZ	**Fitzroy Crossi**	**17.90**	**176**	P	**P**	**05 32 10.9**	**-1.0**
	baz=18,SNR=14						
FITZ	**Fitzroy Crossi**	**17.90**	**176**	P	**P**	**05 32 09.4**	**-2.5**
LEM	**Lembang**	**17.91**	**248**	P	**P**	**05 32 10.9**	**-1.3**
	comp=Z,2.3nm,0.3s,baz=42,slow=8.3,SNR=18						
LEM				LR	LR	05 39 49.4	
	comp=Z,3µm,19.7s,baz=54,slow=40						
CISI	**Cisompet, Garu**	**18.00**	**245**	P	**P**	**05 32 12.6**	**-0.6**
CISI	**Cisompet, Garu**	**18.00**	**245**	P	**Pn**	**05 32 15.8**	**+2.2**
	comp=Z,5µmcomp=Z,429nm,1.0s						
CISI				pP	**pP**	**05 32 26.8**	**-0.6**
	comp=Z,5µmcomp=Z,429nm,1.0s						
APYP	**Conner**	**18.13**	**351**	*e*P	**Pn**	**05 32 17.4**	**+2.4**
PPBI	**Pangkal Pinang**	**18.26**	**264**	P	**Pn**	**05 32 17.0**	**+0.4**
	comp=Z,12µmcomp=Z,55nm,1.3s						
CBJI	**Citeko**	**18.48**	**250**	P	**Pn**	**05 32 19.8**	**+0.4**
	comp=Z,6µmcomp=Z,40µmcomp=Z,641nm,0.8s						
CBJI				pP	**pP**	**05 32 33.4**	**+0.8**
	comp=Z,6µmcomp=Z,40µmcomp=Z,641nm,0.8s						
DBJI	**Dramaga**	**18.62**	**250**	P	**Pn**	**05 32 22.6**	**+1.6**
	comp=Z,99nm,0.8s						
DSRI	**Dabo**	**19.71**	**269**	P	**P**	**05 32 32.0**	**+0.2**
	comp=Z,1µmcomp=Z,105nm,0.8s						
DLV	**T Lat**	**19.75**	**308**	P	**P**	**05 32 32.8**	**+0.3**
KASI	**Kota Agung**	**20.47**	**255**	P	Pn	05 32 41.8	-1.0
	comp=Z,129nm,0.9s						
MYKOM	**Kota Tinggi**	**20.52**	**275**	P	**P**	**05 32 40.7**	**+0.1**
MYKOM				IAmb	IAmb	05 32 57.5	
	comp=Z,153nm,1.4s						
LWLI	**Liwa**	**20.77**	**256**	P	Pn	05 32 46.2	-0.3
	comp=Z,8µmcomp=Z,162nm,0.8s						
LHSI	**Lahat**	**21.07**	**260**	P	**P**	**05 32 48.6**	**+2.1**
	comp=Z,4µmcomp=Z,122nm,0.9s						
XMIS	**Christmas Isla**	**21.19**	**240**	P	**P**	**05 32 46.3**	**-1.5**
XMIS				IAmb	IAmb	05 32 53.4	
	comp=Z,143nm,1.0s						
PSA00	**Pilbara Seismi**	**21.74**	**191**	P	**P**	**05 32 52.8**	**-0.8**
PSA00				IAmb	IAmb	05 32 55.4	
	comp=Z,72nm,0.8s						
WB0	**Warramunga Arr**	**21.88**	**154**	P	**P**	**05 32 53.0**	**-2.1**
WB0				IAmb	IAmb	05 32 59.8	
	comp=Z,83nm,0.8s						
WRAB	**Tennant Creek**	**22.01**	**154**	*e*P	**P**	**05 32 54.6**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,142nm,1.3s						
WRAB	**Tennant Creek**	**22.01**	**154**	P	**P**	**05 32 55.1**	**-1.3**
WRAB				IAmb	IAmb	05 33 01.2	
	comp=Z,83nm,0.7s						
WRA	**Warramunga Arr**	**22.01**	**154**	P	**P**	**05 32 55.4**	**-1.1**
	comp=Z,7.5nm,0.5s,baz=330,slow=11,SNR=87						
WRA				PcP	**PcP**	**05 36 53.5**	**+1.1**
	comp=Z,5.1nm,1.0s,baz=328,slow=2.1,SNR=7.2						
WRA				S	**S**	**05 37 01.4**	**+6.2**
	comp=Z,2.9nm,1.0s,baz=310,slow=13,SNR=6.2						
WRA				ScP	**ScP**	**05 40 25.1**	**+1.8**
	comp=Z,4.2nm,1.1s,baz=319,slow=2.9,SNR=4.6						
WRA	**Warramunga Arr**	**22.01**	**154**	P	**P**	**05 32 55.4**	**-1.1**
WB2	**Warramunga Arr**	**22.02**	**154**	P	**P**	**05 32 55.2**	**-1.4**
WC3	**Warramunga Arr**	**22.04**	**154**	P	**P**	**05 32 55.3**	**-1.5**
	baz=22						
WR0	**Warramunga Arr**	**22.11**	**154**	P	**P**	**05 32 56.2**	**-1.4**
WR0				IAmb	IAmb	05 33 02.5	
	comp=Z,54nm,0.7s						
TWG	**Pinlang**	**23.03**	**352**	P	**P**	**05 33 06.6**	**-0.6**
TWG				IAmb	IAmb	05 33 16.9	
	comp=Z,30nm,0.5s						
MANU	**Manus Island**	**23.15**	**95**	P	**P**	**05 33 07.5**	**-1.0**
COEN	**Coen**	**23.20**	**127**	P	**P**	**05 33 08.1**	**-0.8**
	baz=23						
COEN	**Coen**	**23.20**	**127**	P	**P**	**05 33 07.7**	**-1.2**
BKNI	**Bangkinang**	**23.25**	**271**	P	**P**	**05 33 08.9**	**-0.5**
BKNI	**Bangkinang**	**23.25**	**271**	P	**P**	**05 33 11.3**	**+1.9**
	comp=Z,2µmcomp=Z,122nm,1.1s						
TPUB	**Ta-pu**	**23.56**	**352**	P	**P**	**05 33 13.1**	**+0.9**
TPUB				IAmb	IAmb	05 33 16.4	
	comp=Z,94nm,1.0s						
YULB	**Yu-li**	**23.57**	**353**	P	**P**	**05 33 12.7**	**+0.5**
IPM	**Ipoh**	**23.68**	**281**	P	**P**	**05 33 12.5**	**-0.9**
IPM				IAmb	IAmb	05 33 15.0	
	comp=Z,42nm,0.8s						
QIZ	**Qiongzhong**	**23.74**	**324**	P	**P**	**05 33 10.4**	**-3.4**
QIZ				pP	**pP**	**05 33 28.5**	**-2.3**
QIZ				S	**S**	**05 37 22.4**	**-1.3**
QIZ				sS	**sS**	**05 37 54.9**	**+3.1**
QIZ				pmax	pmax		
	comp=Z,230nm,13.7s						
QIZ				LR	LR		
	comp=Z,870nm,8.3s						
QIZ				LR	LR		
	comp=Z,670nm,9.8s						
QIZ				LR	LR		
	comp=Z,870nm,29.4s						
SSLB	**Suanglung**	**24.00**	**352**	P	**P**	**05 33 15.5**	**-0.6**
KULM	**Kulim**	**24.21**	**283**	P	**P**	**05 33 16.9**	**-1.2**
KULM				IAmb	IAmb	05 33 23.0	
	comp=Z,138nm,1.5s						
GIRL	**Giralia**	**24.42**	**203**	P	**P**	**05 33 20.8**	**+1.0**
	baz=24,SNR=9.1						
GUMO	**Guam**	**24.53**	**55**	P	**P**	**05 33 20.6**	**-0.4**
GUMO				pmax	pmax		
	comp=Z,330nm,1.4s						
GUMO	**Guam**	**24.53**	**55**	P	**P**	**05 33 20.6**	**-0.4**
PMG	**Port Moresby**	**24.56**	**113**	*d*iP	**P**	**05 33 21.8**	**+0.5**
	comp=Z,17nm,0.5s,baz=313,slow=5.6,SNR=6.7						
PMG	**Port Moresby**	**24.56**	**113**	*d*iP	**P**	**05 33 21.8**	**+0.5**
PMG				pmax	pmax		
	comp=Z,134nm,2.5s						
PMG	**Port Moresby**	**24.56**	**113**	P	**P**	**05 33 19.9**	**-1.4**
PMG				IAmb	IAmb	05 33 41.7	
	comp=Z,79nm,1.2s						
MNSI	**Mandailing Nat**	**24.72**	**272**	P	**P**	**05 33 23.4**	**+0.7**
	comp=Z,29nm,0.7s						
WRKA	**Warakurna**	**25.06**	**171**	P	**P**	**05 33 25.9**	**+0.2**
	baz=25,SNR=14						
AS31	**Alice Springs**	**25.19**	**159**	P	**P**	**05 33 26.6**	**-0.3**
ASAR	**Alice Springs**	**25.19**	**159**	P	**P**	**05 33 27.2**	**+0.3**
	comp=Z,13nm,0.7s,baz=333,slow=7.5,SNR=97						
ASAR				PcP	**PcP**	**05 37 00.2**	**+1.1**
	comp=Z,4.3nm,0.5s,baz=351,slow=2.4,SNR=7.1						
ASAR				pPcP		05 37 18.5	
	comp=Z,12nm,0.7s,baz=351,slow=2.5,SNR=9.9						
ASAR				S	**S**	**05 37 54.8**	**+7.9**
	comp=Z,9.5nm,1.1s,baz=346,slow=21,SNR=5.7						
ASAR				ScP	**ScP**	**05 40 35.0**	**+3.1**
	comp=Z,1.1nm,0.7s,baz=345,slow=3.0,SNR=4.8						
ASAR				LR	LR	05 45 21.3	
	comp=Z,522nm,18.5s,baz=330,slow=41						
ASAR	**Alice Springs**	**25.19**	**159**	P	**P**	**05 33 26.6**	**-0.3**
QIS	**Mount Isa**	**25.23**	**144**	P	**P**	**05 33 28.4**	**+1.1**
	baz=25,SNR=52						
RPSI	**Rantau Prapat**	**25.51**	**277**	P	**P**	**05 33 28.3**	**-1.6**
RPSI	**Rantau Prapat**	**25.51**	**277**	P	**P**	**05 33 29.3**	**-0.6**
PSI	**Prapat**	**25.52**	**277**	P	**P**	**05 33 29.3**	**-0.8**
	comp=Z,15nm,0.7s,baz=288,slow=0.1,SNR=13						
PSI				LR	LR	05 45 07.1	
	comp=Z,409nm,20.8s,baz=90,slow=40						
SRAK	**Srakaew**	**26.12**	**303**	P	**P**	**05 33 35.5**	**0.0**
	comp=Z,4µmcomp=Z,422nm,0.8s						
MTSU	**Mount Surprise**	**26.60**	**133**	P	**P**	**05 33 40.4**	**+0.6**
	baz=26,SNR=19						
GSI	**Gunungsitoli**	**26.75**	**273**	P	**P**	**05 33 39.9**	**-1.2**
GSI				IAmb	IAmb	05 33 54.4	
	comp=Z,49nm,1.3s						
GSI	**Gunungsitoli**	**26.75**	**273**	P	**P**	**05 33 38.9**	**-2.2**
	comp=Z,26nm,0.5s						
KHON	**Khomkaen**	**26.76**	**309**	P	**P**	**05 33 43.1**	**+1.9**
	comp=Z,5µmcomp=Z,108nm,0.6s						
MEEK	**Meekatharra**	**26.91**	**191**	P	**P**	**05 33 41.5**	**-0.9**
	baz=27,SNR=10						
PKDT	**Phuket**	**27.07**	**288**	P	**P**	**05 33 50.0**	**+6.0**
JOW	**Kunigami**	**27.09**	**8**	P	**P**	**05 33 44.8**	**+0.9**
	comp=Z,21nm,0.7s,baz=200,slow=8.1,SNR=6.3						
JOW				LR	LR	05 45 11.4	
	comp=Z,396nm,20.8s,baz=159,slow=38						
JOW	**Kunigami**	**27.09**	**8**	P	**P**	**05 33 44.5**	**+0.6**
NONG	**Nongkai**	**27.55**	**312**	P	**P**	**05 33 49.7**	**+1.5**
	comp=Z,31nm,0.8s						
PHET	**Kaeng Krachan**	**27.67**	**299**	P	**P**	**05 33 53.6**	**+4.3**
	comp=Z,43nm,0.8s						
MLSI	**Meulaboh, Aceh**	**28.20**	**279**	P	**P**	**05 33 52.5**	**-1.6**
	comp=Z,92nm,0.9s						
SRDT	**SRDT**	**28.76**	**301**	P	**P**	**05 34 03.3**	**+4.3**
	comp=Z,13µmcomp=Z,18nm,1.3s						
UTHA	**Uthaitani**	**29.07**	**304**	P	**P**	**05 34 04.0**	**+2.2**
	comp=Z,374nmcomp=Z,26nm,0.7s						
PHIT	**Phitsanulok**	**29.14**	**307**	P	**P**	**05 34 06.5**	**+4.1**
	comp=Z,142nm,0.9s						
SLVN	**Son La**	**29.18**	**318**	P	**P**	**05 34 01.0**	**-1.7**
CTA	**Charters Tower**	**29.25**	**134**	P	**P**	**05 34 04.2**	**+0.8**
	comp=Z,2.8nm,0.5s,baz=330,slow=13,SNR=6.0						
CTAO	**Charters Tower**	**29.25**	**134**	P	**P**	**05 34 04.4**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,21nm,1.3s						
CTAO	**Charters Tower**	**29.25**	**134**	P	**P**	**05 34 04.4**	**+1.0**
UTTA	**Uttaradit**	**29.34**	**308**	P	**P**	**05 34 06.0**	**+1.9**
	comp=Z,270nmcomp=Z,23nm,0.9s						
KHLT	**Khaolaem Dam**	**29.42**	**301**	P	P	05 34 10.5	+5.6
	comp=Z,20nm,0.9s						
MORW	**Morawa**	**29.83**	**195**	P	**P**	**05 34 09.0**	**+0.6**
	baz=30,SNR=3.8						
NANT	**Nan**	**29.84**	**310**	P	**P**	**05 34 11.4**	**+2.8**
	comp=Z,8µmcomp=Z,406nm,0.5s						
UMPA	**Umpang Tak**	**29.88**	**304**	P	P	05 34 14.1	+5.1
	comp=Z,3µmcomp=Z,36nm,0.9s						
SUKH	**Sukhothai**	**29.92**	**307**	P	**P**	**05 34 11.4**	**+2.1**
	comp=Z,31nm,0.6s						
FORT	**Forrest**	**30.69**	**174**	P	**P**	**05 34 16.0**	**+0.1**
	baz=31,SNR=13						
CM36	**Chiang Mai Arr**	**30.92**	**308**	P	**P**	**05 34 19.0**	**+0.9**
CM04	**Chiang Mai Arr**	**30.95**	**308**	P	**P**	**05 34 21.1**	**+2.7**
	comp=Z,127nmcomp=Z,16nm,0.9s						
CM09	**Chiang Mai Arr**	**30.96**	**308**	P	**P**	**05 34 21.9**	**+3.5**
	comp=Z,119nmcomp=Z,13nm,1.0s						
CM35	**Chiang Mai Arr**	**30.96**	**309**	P	**P**	**05 34 20.0**	**+1.5**
CM01	**Chiang Mai Arr**	**30.97**	**308**	P	**P**	**05 34 20.7**	**+2.1**
	comp=Z,132nmcomp=Z,17nm,0.9s						
CM05	**Chiang Mai Arr**	**30.97**	**308**	P	**P**	**05 34 20.3**	**+1.7**
	comp=Z,116nmcomp=Z,14nm,0.8s						
CM02	**Chiang Mai Arr**	**30.99**	**308**	P	**P**	**05 34 20.0**	**+1.2**
	comp=Z,112nmcomp=Z,15nm,1.0s						
CM31	**Chiang Mai Arr**	**31.01**	**308**	P	**P**	**05 34 23.0**	**+4.1**
	comp=Z,10µmcomp=Z,408nm,0.9s						
CM31	**Chiang Mai Arr**	**31.01**	**308**	P	**P**	**05 34 19.9**	**+1.0**
CM31				IAmb	IAmb	05 34 22.9	
	comp=Z,28nm,1.2s						
CMAR	**Chiang Mai Arr**	**31.01**	**308**	P	**P**	**05 34 19.2**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=137,slow=6.5,SNR=25						
CMAR				PcP	**PcP**	**05 37 15.2**	**+1.7**
	comp=Z,1.8nm,0.3s,baz=164,slow=1.5,SNR=5.2						
CMAR				ScP	**ScP**	**05 40 52.5**	**+2.5**
	comp=Z,4.9nm,0.8s,baz=158,slow=2.5,SNR=19						
CMAR				LR	LR	05 49 46.6	
	comp=Z,236nm,18.9s,baz=162,slow=42						
CMAR	**Chiang Mai Arr**	**31.01**	**308**	P	**P**	**05 34 18.7**	**-0.2**
CM13	**Chiang Mai Arr**	**31.02**	**308**	P	**P**	**05 34 20.0**	**+1.0**
	comp=Z,120nmcomp=Z,15nm,0.8s						
CM15	**Chiang Mai Arr**	**31.02**	**308**	P	**P**	**05 34 21.8**	**+2.8**
	comp=Z,13nm,0.8s						
CM34	**Chiang Mai Arr**	**31.06**	**309**	P	**P**	**05 34 20.0**	**+0.6**
KMBL	**Kambalda**	**31.15**	**184**	P	**P**	**05 34 19.7**	**-0.3**
	baz=31,SNR=5.1						
BLDU	**Ballidu**	**31.16**	**193**	P	**P**	**05 34 19.6**	**-0.4**
	baz=31,SNR=9.8						
CM32	**Chiang Mai Arr**	**31.19**	**308**	P	**P**	**05 34 22.0**	**+1.5**
CMMT	**Chiang Mai Arr**	**31.20**	**309**	P	**P**	**05 34 20.0**	**-0.6**
	comp=Z,252nmcomp=Z,17nm,1.1s						
CHTO	**Chiang Mai**	**31.20**	**309**	P	**P**	**05 34 20.7**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s						
CHTO	**Chiang Mai**	**31.20**	**309**	P	**P**	**05 34 20.7**	**+0.1**
CHTO				IAmb	IAmb	05 34 28.4	
	comp=Z,26nm,0.9s						
CM33	**Chiang Mai Arr**	**31.20**	**309**	P	**P**	**05 34 21.0**	**+0.4**
GYA	**Guiyang**	**31.42**	**329**	§P	**P**	**05 34 24.8**	**+2.2**
GYA				pP	pP	05 34 37.9	-2.0
GYA				PP	**PnPn**	**05 35 30.4**	**+2.1**
GYA				PcP	**PcP**	**05 37 15.8**	**+1.2**
GYA				S	**S**	**05 39 27.5**	**+2.4**
GYA				sS	sS	05 39 56.3	+2.5
GYA				ScP	**ScP**	**05 40 53.8**	**+2.5**
GYA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MHMT	**Maesarieng**	**31.66**	**306**	P	**P**	**05 34 26.5**	**+1.8**
KLBR	**Kellerberrin**	**31.89**	**191**	P	**P**	**05 34 25.9**	**-0.6**
	baz=32,SNR=7.7						
WHN	**Wuhan**	**31.94**	**344**	§P	**P**	**05 34 29.6**	**+2.7**
WHN				LR	LR		
	comp=Z,940nm,13.7s						
WHN				LR	LR		
	comp=Z,600nm,12.4s						
WHN				LR	LR		
	comp=Z,2µm,22.6s						
JCJ	**Chichijima**	**32.08**	**31**	P	**P**	**05 34 28.9**	**+0.7**
	comp=Z,67nm,0.4s,baz=285,slow=12,SNR=17						
JCJ				LR	LR	05 48 36.3	
	comp=Z,64nm,18.9s

ARPS Mount Arapiles 39.92 158 P **P** **05 35 36.2 +1.2**
baz=40,SNR=7.9

SHL Shillong 40.40 312 P **P** **05 35 39.5 +0.1**
SHL pmax pmax
comp=Z,36nm,0.9s
SHL Shillong 40.40 312 P **P** **05 35 39.5 +0.1**
SHL IAmb IAmb 05 36 03.5
comp=Z,36nm,0.9s
BJT Baijiatuau 40.64 350 P **P** **05 35 41.1 +0.1**
BJT pmax pmax
comp=Z,34nm,1.5s
BJT Baijiatuau 40.64 350 P **P** **05 35 41.1 +0.1**
BJT IAmb IAmb 05 35 44.1
comp=Z,34nm,1.5s
BJI Beijing 40.66 350 P **P** **05 35 43.3 +2.2**
BJI ScP **ScP** **05 41 26.6 +1.9**
BJI PcS **PcS** **05 41 31.0 -1.3**
BJI pmax pmax
comp=Z,12nm,0.9s
BJI LR LR
comp=Z,390nm,23.1s
BJI LR LR
comp=Z,290nm,22.7s
BJI LR LR
comp=Z,410nm,18.9s
LZH Lanzhou 40.74 334 *e*P **P** **05 35 44.3 +2.2**
LZH pP pwP 05 36 02.4 +0.6
LZH sP sP 05 36 11.9 +3.6
LZH *e*S **S** **05 41 40.0 -7.4**
LZH sS sS 05 42 20.0 +3.2
LZH pmax pmax
comp=Z,43nm,1.3s
LZH pmax pmax
comp=Z,160nm,5.2s
LZH LR LR
comp=Z,950nm,14.0s
LZH LR LR
comp=Z,700nm,13.7s
LZH LR LR
comp=Z,640nm,16.4s
JMM Marumori 40.77 20 P **P** **05 35 43.2 +1.3**
YNG Young 40.80 149 P **P** **05 35 42.1 -0.3**
baz=41,SNR=7.6
HHC Hu-ho-hao-te 42.40 346 *e*P **P** **05 35 56.4 +0.9**
HHC S **S** **05 42 12.8 +1.2**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,74nm,5.6s
HHC LR LR
comp=Z,800nm,22.4s
HHC LR LR
comp=Z,410nm,18.8s
HHC LR LR
comp=Z,740nm,19.4s
LSA Lhasa 43.33 316 P **P** **05 36 05.3 +1.7**
LSA pmax pmax
comp=Z,110nm,1.7s
LSA Lhasa 43.33 316 P **P** **05 36 04.0 +0.4**
LSA pmax pmax
comp=Z,20nm,0.8s
LSA Lhasa 43.33 316 P **P** **05 36 04.0 +0.4**
LSA IAmb IAmb 05 36 08.6
comp=Z,20nm,0.8s
ODAN Odare 44.49 310 *e*P **P** **05 36 12.7 0.0**
comp=Z,8.8nm,0.4s
TAPN Taplejung 44.50 311 *e*P **P** **05 36 12.6 -0.2**
comp=Z,4.4nm,0.2s
USA0B Ussuriysk Arra 44.67 8 *c*e**P** **P** **05 36 14.2 +0.7**
USA0B Ussuriysk Arra 44.67 8 P **P** **05 36 13.5 0.0**
USA0B IAmb IAmb 05 36 17.6
comp=Z,38nm,0.9s
USRK Ussuriysk Ar. 44.67 8 P **P** **05 36 13.6 +0.1**
comp=Z,22nm,0.6s,baz=190,slow=7.4,SNR=50
USRK ScP **ScP** **05 41 42.6 +1.9**
comp=Z,4.9nm,0.9s,baz=197,slow=2.0,SNR=8.1
USRK Ussuriysk Ar. 44.67 8 P **P** **05 36 13.5 0.0**
MDJ Mudanjiang 44.81 5 P **P** **05 36 15.6 +1.0**
MDJ pP pwP 05 36 33.8 -0.8
MDJ sP sP 05 36 44.3 +3.3
MDJ pmax pmax
comp=Z,19nm,0.6s
MDJ pmax pmax
comp=Z,250nm,4.6s
MDJ LR LR
comp=Z,390nm,22.8s
MDJ LR LR
comp=Z,370nm,24.2s
MDJ LR LR
comp=Z,940nm,28.5s
MDJ Mudanjiang 44.81 5 P **P** **05 36 15.0 +0.4**
MDJ IAmb IAmb 05 36 20.5
comp=Z,26nm,0.9s
RAMN Ramite 45.14 310 *e*P **P** **05 36 18.5 +0.6**
comp=Z,44nm,0.5s
GTA Gaotai 45.28 333 *e*P **P** **05 36 19.4 +0.8**
GTA pP pP 05 36 37.8 +1.7
GTA sP sP 05 36 46.3 +2.0
GTA PcP **PcP** **05 37 58.8 +1.4**
GTA ScP **ScP** **05 41 45.4 +1.8**
GTA PcS **PcS** **05 41 48.6 -2.8**
GTA S **S** **05 42 57.8 +4.1**
GTA ScS **ScS** **05 46 07.3 -1.1**
GTA pmax pmax
comp=Z,15nm,0.9s
GTA pmax pmax
comp=Z,130nm,5.8s
GTA LR LR
comp=Z,430nm,18.5s
GTA LR LR
comp=Z,330nm,19.6s
GTA LR LR
comp=Z,490nm,20.0s
JIRN Jiri 45.82 310 *e*P **P** **05 36 23.4 +0.1**
comp=Z,24nm,0.6s
GUN Gumba 46.18 310 *e*P **P** **05 36 26.3 +0.1**
comp=Z,20nm,0.4s
TEY Ternei 46.28 12↓ *e*P **P** **05 36 25.1 -1.1**
TEY pmax pmax
comp=E,10.0nm,0.8s
TEY pmax pmax
comp=N,20nm,1.1s
TEY pmax pmax
comp=Z,20nm,1.1s
PKI Pulchoki 46.37 310 *e*P **P** **05 36 27.3 -0.3**
comp=Z,14nm,0.5s
PKIN Phulchoki 46.38 310 *e*P **P** **05 36 27.2 -0.5**
comp=Z,13nm,0.4s
DZM Mont Dzumac 46.49 121 *e*LR LR 05 49 04.2
comp=Z,623nm,26.4s
KKN Kakani 46.58 310 *e*P **P** **05 36 29.5 +0.4**
comp=Z,12nm,0.3s
DMN Daman 46.62 310 *e*P **P** **05 36 29.3 -0.2**
comp=Z,14nm,0.5s
ASAJ Asahikawa 46.99 18 P **P** **05 36 32.7 +0.9**
comp=Z,10nm,0.3s,baz=251,slow=5.6,SNR=6.6
GKN Gorkha 47.18 310 *e*P **P** **05 36 33.5 -0.2**
comp=Z,24nm,0.5s
KOLN Koldanda 47.87 309 *e*P **P** **05 36 39.2 +0.1**
comp=Z,56nm,0.6s
DANN Dangsing 48.02 310 *e*P **P** **05 36 40.3 -0.1**
comp=Z,53nm,0.5s
HYB Hyderabad 48.26 294 *i* P **P** **05 36 41.0 -1.1**
PYUN Piuthan 48.50 309 *e*P **P** **05 36 44.1 +0.1**
comp=Z,98nm,0.5s
HIA Hailar 49.37 356↓ *e*P **P** **05 36 50.8 +0.8**
HIA pmax pmax
comp=Z,16nm,0.8s
HIA Hailar 49.37 356 P **P** **05 36 50.2 +0.2**
HIA IAmb IAmb 05 36 55.3
comp=Z,14nm,0.8s
KLR Kul'dur 49.59 6 P **P** **05 36 52.3 +0.6**
comp=Z,13nm,0.5s,baz=194,slow=5.9,SNR=61
KLR Kul'dur 49.59 6 *c i*P **P** **05 36 51.7 0.0**
KLR pmax pmax
comp=Z,30nm,1.3s
YSS Yuzh-Sakhalins 49.61 17 *e*P **P** **05 36 52.9 +1.1**
YSS *e**PP **pwP** **05 37 13.6 -0.3**
YSS *e**SP **sP** **05 37 19.4 +1.7**
YSS *e*S **S** **05 43 55.0 +0.5**
YSS MLR MLR
comp=Z,600nm,18.0s
KUR Kuril'sk 49.76 22↑ *e*P **P** **05 36 54.2 +1.1**
KUR pmax pmax
comp=Z,187nm,1.0s
ULN Ulaanbaatar 50.10 345↑ *e*P **P** **05 36 55.3 -0.5**
ULN pmax pmax
comp=Z,21nm,1.7s
ULN Ulaanbaatar 50.10 345 P **P** **05 36 55.0 -0.8**
SONM Songino Array 50.25 344 P **P** **05 36 56.7 -0.2**
comp=Z,8.5nm,0.9s,baz=158,slow=7.3,SNR=23
SONM ScP **ScP** **05 42 05.9 +1.5**
comp=Z,5.5nm,0.9s,baz=156,slow=4.6,SNR=12
SONM Songino Array 50.25 344 P **P** **05 36 56.8 -0.1**
GRNR Gornyy 51.76 10↓ *i*P **P** **05 37 09.4 +1.4**
GRNR pmax pmax
comp=Z,10.0nm,1.0s
GRNR MLR MLR
comp=E,370nm,17.0s
GRNR MLR MLR
comp=N,280nm,16.0s
GRNR MLR MLR
comp=Z,350nm,19.0s
TYV Tymovskoe 53.16 14 *e*P **P** **05 37 20.4 +2.1**
TYV *e*S **S** **05 44 48.2 +4.9**
TYV pmax pmax
comp=Z,12nm,1.0s
TYV pmax pmax
comp=Z,300nm,4.9s
TYV smax smax
comp=E,600nm,5.1s
ZAK Zakamensk 53.42 343 *e*P **P** **05 37 19.5 -1.0**
ZAK pmax pmax
comp=Z,6.0nm,1.2s
ZEA Zeya 53.74 2 *e*P **P** **05 37 26.0 +3.4**
ZEA pmax pmax
comp=Z,20nm,1.1s
WMQ Urumqi 54.58 328 *e*P **P** **05 37 29.9 +0.9**
WMQ pP pP 05 37 47.4 +0.4
WMQ ScP **ScP** **05 42 24.3 +1.1**
WMQ ScS **ScS** **05 47 09.8 -1.6**
WMQ pmax pmax
comp=Z,19nm,1.5s
WMQ pmax pmax
comp=Z,29nm,3.8s
WMQ LR LR
comp=Z,4μm,28.9s
WMQ LR LR
comp=Z,3μm,29.2s
WMQ LR LR
comp=Z,1μm,25.3s
MOY Mondy 55.23 343 *e*P **P** **05 37 37.7 +4.1**
MOY pmax pmax
comp=Z,20nm,2.0s
BOD Bodaibo 58.36 354 *e*P **P** **05 37 55.3 -0.1**
BOD pmax pmax
comp=Z,21nm,1.0s
NIL Nilore 58.45 310 P **P** **05 37 55.0 -1.6**
NIL pmax pmax
comp=Z,13nm,0.6s
NIL Nilore 58.45 310 P **P** **05 37 55.0 -1.6**
NIL IAmb IAmb 05 37 58.9
comp=Z,13nm,0.6s
ZSN Zaisan 58.49 330 *e*P **P** **05 37 55.7 -0.9**
baz=330
ZSN *e*S **S** **05 45 53.5 -1.0**
baz=330
ZSN Zaisan 58.49 330 *e*P **P** **05 37 55.7 -0.9**
ZSN *e*S **S** **05 45 53.4 -1.0**
DGZ Jazzator, Alta 58.82 333 *d i*P **P** **05 37 58.7 -0.3**
DGZ pmax pmax
comp=Z,7.0nm,1.1s
SHLS Shalkode 58.84 323 *e*P **P** **05 37 57.0 -2.3**
comp=Z,24nm,1.2s,baz=323
SHLS *e*S **S** **05 45 55.3 -4.1**
baz=323
SHLS Shalkode 58.84 323 *e*P **P** **05 37 56.9 -2.3**
SHLS *e*S **S** **05 45 55.2 -4.1**
SHLS pmax pmax
comp=Z,24nm,1.2s
UZB Uzynbulak 59.10 323 *e*P **P** **05 38 00.4 -0.7**
comp=Z,15nm,1.2s,baz=322
UZB Uzynbulak 59.10 323 *e*P **P** **05 38 00.4 -0.7**
UZB pmax pmax
comp=Z,15nm,1.2s
PRZ Przheval'sk 59.11 322 P **P** **05 38 00.7 -0.5**
PRZ pmax pmax
comp=Z,80nm,1.5s
PRZ Przheval'sk 59.11 322 P **P** **05 38 00.7 -0.5**
MK31 Makanchi Array 59.41 328 *c i*P **P** **05 38 02.2 -0.8**
MK31 Makanchi Array 59.41 328 P **P** **05 38 01.9 -1.0**
MK31 IAmb IAmb 05 38 05.3
comp=Z,9.0nm,0.6s
MKAR Makanchi Array 59.41 328 P **P** **05 38 02.4 -0.5**
comp=Z,15nm,0.4s,baz=120,slow=8.5,SNR=88
MKAR ScP **ScP** **05 42 45.5 +1.2**
comp=Z,1.1nm,0.7s,baz=108,slow=6.5,SNR=3.8
MKAR S **S** **05 46 10.2 +3.9**
comp=Z,0.8nm,0.9s,baz=129,slow=12,SNR=3.7
MKAR LR LR 06 04 26.0
comp=Z,321nm,20.5s,baz=102,slow=37
MKAR Makanchi Array 59.41 328 P **P** **05 38 01.9 -1.0**
SATY Saty 59.43 322 *e*P **P** **05 38 02.8 -0.5**
comp=Z,16nm,1.0s,baz=322
SATY *e*S **S** **05 46 06.1 -0.8**
baz=322
SATY Saty 59.43 322 *e*P **P** **05 38 02.8 -0.5**
SATY *e*S **S** **05 46 06.1 -0.8**
SATY pmax pmax
comp=Z,16nm,1.0s
MAKZ Makanchi 59.58 328 P **P** **05 38 02.9 -1.3**
MAKZ pmax pmax
comp=Z,16nm,0.6s
MAKZ Makanchi 59.58 328 P **P** **05 38 02.9 -1.3**
KDJ Kajisay 59.69 321 P **P** **05 38 04.9 -0.3**
KDJ pmax pmax
comp=Z,46nm,1.4s
KDJ Kajisay 59.69 321 P **P** **05 38 04.9 -0.3**
PEA0B Petropavlovsk- 59.91 23↓ *e*P **P** **05 38 06.5 +0.3**
PETK Petropavlovsk- 59.91 23 P **P** **05 38 07.8 +1.5**
comp=Z,19nm,0.8s,baz=198,slow=3.6,SNR=18
PETK pP **pP** **05 38 24.7 0.0**
comp=Z,19nm,0.8s,baz=188,slow=2.7,SNR=7.1
PETK PcP **PcP** **05 38 52.9 +1.0**
comp=Z,5.2nm,0.6s,baz=25,slow=0.5,SNR=4.8
PETK Petropavlovsk- 59.91 23 P **P** **05 38 07.6 +1.4**
RPZ Rata Peaks 60.12 142 P **P** **05 38 06.2 -1.7**
TNSS Tian-Shan 60.31 322 *e*P **P** **05 38 09.2 -0.6**
baz=322
TNSS Tian-Shan 60.31 322 *e*P **P** **05 38 09.1 -0.6**
MDOK Medeo 60.32 322 *e*P **P** **05 38 08.9 -0.6**
baz=322
MDOK Medeo 60.32 322 *e*P **P** **05 38 08.8 -0.6**
ULHL Ulahol 60.34 321 P **P** **05 38 12.3 +2.6**
SNR=11
AAA Alma-Ata 60.42 322 *e*P **P** **05 38 09.6 -0.5**
baz=322
AAA Alma-Ata 60.42 322 *e*P **P** **05 38 09.6 -0.5**
TDK Taldyqorghan 60.51 324 *e*P **P** **05 38 10.2 -0.3**
comp=Z,27nm,1.0s,baz=324
TDK Taldyqorghan 60.51 324 *e*P **P** **05 38 10.2 -0.3**
TDK pmax pmax
comp=Z,27nm,1.0s
ODZ Otahua Downs 60.60 144 P **P** **05 38 10.4 -0.7**
ODZ IAmb IAmb 05 38 35.5
comp=Z,27nm,1.3s
BOOM Boomskoye usch 60.66 321 P **P** **05 38 11.4 -0.4**
BOOM pmax pmax
comp=Z,29nm,1.3s
BOOM Boomskoye usch 60.66 321 P **P** **05 38 11.4 -0.4**
BOOM IAmb IAmb 05 38 14.5
comp=Z,29nm,1.2s
TUWZ Tuamarina 60.77 139 P **P** **05 38 12.3 0.0**
TKM2 Tokmak 2 61.10 321 P **P** **05 38 16.8 +2.0**
SNR=17
UCH Uchtor 61.44 320 P **P** **05 38 17.1 -0.3**
SNR=17
AAK Ala-Archa 61.65 320 P **P** **05 38 18.6 +0.1**
SNR=8.4
AAK Ala-Archa 61.65 320 P **P** **05 38 18.0 -0.5**
AAK pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 61.65 320 P **P** **05 38 18.0 -0.5**
AAK IAmb IAmb 05 38 26.1
comp=Z,8.0nm,0.8s
AML Almayashu 61.92 319 P **P** **05 38 20.6 -0.1**
SNR=21
USP Ospenovka 61.96 321 P **P** **05 38 19.8 -0.6**
SNR=21
SGDS Sogindy 61.98 321 *e*P **P** **05 38 19.3 -1.2**
baz=321
SGDS Sogindy 61.98 321 *e*P **P** **05 38 19.3 -1.2**

KBL Kabul 62.01 310 P **P** **05 38 18.6 -2.5**
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 62.01 310 P **P** **05 38 18.6 -2.5**
KBL IAmb IAmb 05 38 27.2
comp=Z,13nm,0.8s
KBL Kabul 62.01 310 P **P** **05 38 20.4 -0.8**
SNR=8.8
EKS2 Erkin-Say 62.13 320 P **P** **05 38 22.7 +1.0**
SNR=12
YAK Yakutsk 62.14 3 P **P** **05 38 21.4 +0.2**
comp=Z,44nm,0.6s,baz=331,slow=1.6,SNR=11
YAK Yakutsk 62.14 3 *e*P **P** **05 38 21.1 0.0**
YAK *e**PP **pwP** **05 38 42.9 -0.5**
YAK *e* 05 40 39.8
YAK *e*S **S** **05 46 39.7 -0.8**
YAK *e**SS **pS** **05 47 02.1 -1.0**
YAK *e* 05 48 06.6
YAK pmax pmax
comp=Z,107nm,1.1s
YAK pmax pmax
comp=N,33nm,1.4s
YAK pmax pmax
comp=E,19nm,1.3s
YAK pmax pmax
comp=Z,18nm,0.3s
YAK smax smax
comp=N,57nm,1.8s
YAK smax smax
comp=E,6.0nm,1.0s
YAK Yakutsk 62.14 3 P **P** **05 38 21.5 +0.3**
BTK Batken 62.91 316 P **P** **05 38 25.5 -1.4**
BTK pmax pmax
comp=Z,12nm,1.0s
BTK Batken 62.91 316 P **P** **05 38 25.5 -1.4**
BTK IAmb IAmb 05 38 33.4
comp=Z,12nm,1.0s
ZAA0 Zalesovo Array 62.97 335 P **P** **05 38 24.9 -2.0**
ZALV Zalesovo Beam 62.97 335 P **P** **05 38 25.2 -1.6**
comp=Z,3.5nm,0.4s,baz=132,slow=5.8,SNR=12
ZALV LR LR 06 07 40.0
comp=Z,326nm,19.3s,baz=126,slow=38
ZALV Zalesovo Beam 62.97 335 P **P** **05 38 24.9 -2.0**
MA2 Magadan 63.03 15 P **P** **05 38 27.4 +0.2**
comp=Z,29nm,0.6s,baz=203,slow=4.1,SNR=20
MA2 Magadan 63.03 15 *c i*P **P** **05 38 28.5 +1.4**
MA2 pmax pmax
comp=Z,26nm,0.9s
MA2 Magadan 63.03 15 P **P** **05 38 28.1 +0.9**
BTLS Baital 63.14 322 *e*P **P** **05 38 26.8 -1.4**
baz=322
BTLS Baital 63.14 322 *e*P **P** **05 38 26.8 -1.4**
KURBB Kurchatov Arra 63.73 329 P **P** **05 38 30.3 -1.7**
comp=Z,7.8nm,0.4s,baz=117,slow=6.1,SNR=15
KURK Kurchatov 63.74 330 P **P** **05 38 30.3 -1.7**
KURK Kurchatov 63.74 330 P **P** **05 38 30.3 -1.7**
DZA Taraz 63.82 319 *e*P **P** **05 38 32.4 -0.4**
baz=319
DZA Taraz 63.82 319 *e*P **P** **05 38 32.3 -0.4**
IUG Iuzhnay 64.35 318 *e*P **P** **05 38 35.2 -1.1**
baz=318
IUG Iuzhnay 64.35 318 *e*P **P** **05 38 35.2 -1.1**
KK31 Karatay Array 64.45 319 P **P** **05 38 35.7 -1.2**
KK31 pmax pmax
comp=Z,10.0nm,1.2s
KK31 Karatay Array 64.45 319 P **P** **05 38 35.7 -1.2**
KKAR Karatay Array 64.45 319 P **P** **05 38 35.7 -1.2**
KKAR pmax pmax
comp=Z,10.0nm,1.2s
KKAR Karatay Array 64.45 319 P **P** **05 38 35.7 -1.2**
SEY Seymchan 66.33 14 P **P** **05 38 49.2 +0.7**
comp=Z,7.2nm,0.7s,baz=213,slow=6.0,SNR=22
SEY Seymchan 66.33 14↓ *e*P **P** **05 38 50.2 +1.7**
BRZS Berezniki 66.48 327 *e*P **P** **05 38 48.4 -1.4**
baz=326
BRZS Berezniki 66.48 327 *e*P **P** **05 38 48.4 -1.4**
CASY Casey 66.73 186 P **P** **05 38 50.9 -0.1**
CASY IAmb IAmb 05 38 52.8
comp=Z,18nm,1.2s
HRA Herat 67.27 308 P **P** **05 38 53.3 -2.1**
WSAR Wadi Sarin 67.77 295 P **P** **05 38 57.0 -1.5**
comp=Z,4.0nm,0.6s,baz=155,slow=5.2,SNR=6.2
MHTO MHTO 68.01 293 P **P** **05 38 59.5 -0.5**
SNR=5.9
DQM DQM 68.24 291 P **P** **05 39 01.1 -0.4**
SNR=7.0
HOQ Hoqain 69.03 295 P **P** **05 39 06.2 -0.1**
SNR=5.4
BVAR Borovoye Array 69.26 329 P **P** **05 39 05.2 -2.1**
comp=Z,4.8nm,0.5s,baz=186,slow=13,SNR=19
BRVK Borovoye 69.34 329 *c i*P **P** **05 39 06.4 -1.2**
BRVK pmax pmax
comp=Z,20nm,1.3s
BRVK Borovoye 69.34 329 P **P** **05 39 06.5 -1.2**
BRVK IAmb IAmb 05 39 12.4
comp=Z,24nm,1.3s
UOSS Minazif 70.25 297 P **P** **05 39 12.7 -1.2**
ALNE Al Ain 70.51 296 P **P** **05 39 15.6 +0.2**
SNR=16
SOCY Socotra 70.78 283 P **P** **05 39 15.2 -2.2**
SOCY IAmb IAmb 05 39 19.8
comp=Z,29nm,0.8s
SOCY Socotra 70.78 283 P **P** **05 39 14.5 -2.9**
SNR=6.9
ASUD Al Ashush, Dub 70.98 296 P **P** **05 39 17.3 -1.0**
SNR=13
RBK Rabkut 71.07 288 P **P** **05 39 19.1 +0.1**
SNR=5.5
DOK Doka 71.27 290 P **P** **05 39 17.8 -2.3**
SNR=7.4
GEYT Alibeck 71.45 310 P **P** **05 39 19.5 -1.4**
comp=Z,3.6nm,0.6s,baz=157,slow=8.0,SNR=5.7
GEYT Alibeck 71.45 310 P **P** **05 39 19.7 -1.2**
TIXI Tiksi 71.73 2 P **P** **05 39 22.0 +0.1**
comp=Z,11nm,0.3s,baz=165,slow=5.6,SNR=30
TIXI Tiksi 71.73 2 *c e*P **P** **05 39 21.1 -0.7**
TIXI pmax pmax
comp=Z,132nm,1.3s
TIXI Tiksi 71.73 2 P **P** **05 39 21.5 -0.3**
TIXI IAmb IAmb 05 39 23.1
comp=Z,18nm,0.7s
ABTO Aybut 71.92 288 P **P** **05 39 23.2 -0.9**
SNR=7.1
NRIK Noril'sk 73.61 347 P **P** **05 39 32.4 -0.6**
comp=Z,3.9nm,0.5s,baz=133,slow=8.4,SNR=5.6
NRIK LR LR 06 16 24.4
comp=Z,177nm,18.3s,baz=156,slow=39
NRIK Noril'sk 73.61 347 P **P** **05 39 32.5 -0.6**
NRIK pmax pmax
comp=Z,9.0nm,0.7s
NRIK Noril'sk 73.61 347 P **P** **05 39 32.5 -0.6**
ABKAR Akbulak array 73.62 322 P **P** **05 39 31.7 -1.8**
BILL Bilibino 73.89 15↑ *e*P **P** **05 39 35.4 +0.7**
BILL *i* 05 39 50.2
BILL *e**PP **pwP** **05 39 57.5 -0.7**
BILL *e* 05 42 24.0
BILL pmax pmax
comp=Z,19nm,3.6s
BILL MLR MLR
comp=Z,113nm,17.0s
AKTO Aktyubinsk 75.19 323 P **P** **05 39 41.7 -0.9**
comp=Z,8.9nm,0.6s,baz=111,slow=7.9,SNR=18
AKTO LR LR 06 17 35.7
comp=Z,117nm,18.4s,baz=109,slow=40
SVE Sverdlovsk 75.99 329 *e*P **P** **05 39 45.9 -1.1**
SVE pmax pmax
comp=Z,29nm,1.1s
RAR Rarotonga 76.85 112 LR LR 06 12 02.4
comp=Z,84nm,20.0s,baz=315,slow=34
ARU Arti 76.91 329 P **P** **05 39 51.0 -1.2**
comp=Z,2.2nm,0.3s,baz=131,slow=5.9,SNR=10.0
ARU Arti 76.91 329 *d i*P **P** **05 39 50.5 -1.8**
ARU S **S** **05 49 32.2 -2.0**
ARU pmax pmax
comp=Z,24nm,1.4s
ARU Arti 76.91 329 P **P** **05 39 50.4 -1.8**
ABPO Ambohimpanom 77.72 251 P **P** **05 39 56.0 -1.8**
ABPO pmax pmax
comp=Z,34nm,0.8s
ABPO Ambohimpanom 77.72 251 P **P** **05 39 56.0 -1.8**
VOI Vohitsoka 78.35 248 P **P** **05 40 00.5 -0.7**
VOI Vohitsoka 78.35 248 P **P** **05 40 01.3 +0.2**
SNR=6.1
RAYN Ar Rayn 79.77 294 P **P** **05 40 06.6 -2.2**
RAYN pmax pmax
comp=Z,7.0nm,0.7s

RAYN	**Ar Rayn**	**79.77**	**294**	P		**P**		**05 40 06.6**	**-2.2**
VNDA	**Vanda**	**79.94**	**172**	P		**P**		**05 40 08.1**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=307,slow=5.3,SNR=9.5								
SDPT	**Sand Point**	**81.74**	**34**	P				05 40 19.6	
	baz=258								
ANM	**Nome**	**81.77**	**24**	P				05 40 19.8	
	baz=252								
BELG	**Belogornoye**	**81.98**	**323**	P		**P**		**05 40 18.5**	**-1.4**
	comp=Z,20nm,0.8s,baz=309,slow=7.3,SNR=7.7								
BELG	**Belogornoye**	**81.98**	**323**	*de*P		**P**		**05 40 18.6**	**-1.2**
BELG				pmax		pmax			
	comp=Z,9.0nm,1.5s								
KIRV	**Kirov**	**82.26**	**329**	P		**P**		**05 40 20.3**	**-0.8**
	comp=Z,13nm,0.5s,baz=112,slow=6.8,SNR=6.5								
KIRV	**Kirov**	**82.26**	**329**	*de*P		**P**		**05 40 20.2**	**-0.9**
ZEI	**Tsey**	**83.03**	**313**	*e*P		**P**		**05 40 24.6**	**-1.2**
ZEI				pmax		pmax			
	comp=Z,22nm,1.5s								
GEVA	**Gevas**	**83.19**	**308**	P		**P**		**05 40 24.3**	**-2.4**
GEVA				lAmb		lAmb		05 40 48.2	
	comp=Z,21nm,0.9s								
RDOG	**Red Dog Mine**	**83.75**	**21**	P				05 40 29.8	
	baz=254								
KBZ	**Khabaz**	**83.86**	**314**	P		**P**		**05 40 29.1**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=232,slow=4.1,SNR=5.2								
KBZ	**Khabaz**	**83.86**	**314**	*de*P		**P**		**05 40 29.3**	**-0.5**
KBZ				pmax		pmax			
	comp=Z,10.0nm,1.5s								
KIV	**Kislovodsk**	**84.04**	**314**	*e*P		**P**		**05 40 30.0**	**-0.8**
KIV				pmax		pmax			
	comp=Z,21nm,1.0s								
PRGR	**Permogore**	**84.73**	**332**	*e*P		**P**		**05 40 31.7**	**-2.1**
PRGR				*e**PP		**pP**		**05 40 51.8**	**-1.1**
PRGR				pmax		pmax			
	comp=Z,27nm,1.0s								
TTA	**Tatalina**	**85.43**	**27**	P				05 40 38.6	
	baz=261								
SII	**Sitkinak Islan**	**85.43**	**33**	P				05 40 37.9	
	baz=263								
VRH	**Novokhopyorsk**	**85.43**	**321**	*e*P		**P**		**05 40 34.7**	**-2.8**
VRH				pmax		pmax			
	comp=Z,30nm,1.3s								
OHAK	**Old Harbor**	**86.00**	**33**	P				05 40 41.7	
	baz=264								
SOC	**Sochi**	**86.15**	**314**	*e*P		**P**		**05 40 40.6**	**-0.7**
SOC				*e*				05 43 58.0	
SOC				*e*S		S		05 50 58.7	-11
SOC				*e*SS		**SS**		**05 56 46.4**	**-3.8**
PPT2	**Papeete2**	**86.28**	**108**	*e*S		S		05 50 59.3	-13
	comp=Z,259nm,26.5s								
PPT2	**Papeete2**	**86.28**	**108**	*e*LR		LR		06 07 38.7	
	comp=Z,292nm,27.0s								
KDAK	**Kodiak Island**	**86.44**	**32**	LR		LR		06 16 45.2	
	comp=Z,93nm,19.3s,baz=230,slow=34								
TBI	**Tubuai**	**86.50**	**113**	*e*S		S		05 51 03.1	-11
	comp=Z,546nm,28.8s								
TBI	**Tubuai**	**86.50**	**113**	*e*LR		LR		06 07 46.1	
	comp=Z,227nm,27.5s								
A21K	**Barrow**	**86.63**	**18**	P				05 40 44.6	
	baz=260								
IMAR	**Indian Mountai**	**86.84**	**24**	P		**P**		**05 40 43.5**	**-0.7**
VORD	**Divnogorie**	**86.94**	**321**	*e*P		**P**		**05 40 43.6**	**-1.3**
VORD				pmax		pmax			
	comp=Z,10.0nm,0.7s								
SPCR	**Spurr Chakacha**	**86.98**	**29**	P				05 40 45.8	
	baz=264								
KMBO	**Kilima Mbogo**	**87.03**	**269**	P		**P**		**05 40 45.9**	**-0.6**
	comp=Z,3.3nm,0.6s,baz=62,slow=7.9,SNR=8.7								
KMBO	**Kilima Mbogo**	**87.03**	**269**	*i* P		**P**		**05 40 47.2**	**+0.7**
KMBO				pmax		pmax			
	comp=Z,3.0nm,0.6s								
VSR	**Storozhevoye**	**87.04**	**321**	*e*P		**P**		**05 40 44.1**	**-1.3**
VSR				pmax		pmax			
	comp=Z,30nm,1.3s								
HOM	**Homer**	**87.11**	**30**	P				05 40 46.8	
	baz=265								
PPLA	**Purkeypile**	**87.16**	**27**	P				05 40 46.7	
	baz=264								
CHUM	**Lake Minchumin**	**87.20**	**26**	P				05 40 47.5	
	baz=264								
CAST	**Castle Rocks**	**87.26**	**27**	P				05 40 47.8	
	baz=264								
LPSR	**Galich'ya Gora**	**87.28**	**323**	*e*P		**P**		**05 40 45.1**	**-1.4**
LPSR				pmax		pmax			
	comp=Z,30nm,1.3s								
SKT	**Skwentna**	**87.37**	**28**	P				05 40 46.7	
	baz=265								
SKT	**Skwentna**	**87.38**	**28**	P		**P**		**05 40 45.9**	**-1.0**
SKT				lAmb		lAmb		05 40 48.2	
	comp=Z,16nm,1.3s								
CAPN	**Captain Cook N**	**87.45**	**29**	P				05 40 47.6	
	baz=265								
KLMR	**Klimovskoe**	**87.56**	**331**	*e*P		**P**		**05 40 45.6**	**-2.1**
KLMR				pmax		pmax			
	comp=Z,29nm,1.1s								
KLMR	**Klimovskoe**	**87.56**	**331**	*e*P		**P**		**05 40 45.6**	**-2.1**
KLMR				AMP				05 40 51.1	
	comp=Z,29nm,1.1s								
BRSE	**Bradley Lake S**	**87.57**	**30**	P				05 40 48.8	
	baz=266								
SUA	**Susitna One**	**87.70**	**29**	P				05 40 49.1	
	baz=266								
BPAW	**Bear Paw Mtn.**	**87.81**	**26**	P		**P**		**05 40 49.5**	**+0.6**
BPAW	**Bear Paw Mtn.**	**87.81**	**26**	P				05 40 49.8	
	baz=265								
SYO	**Syowa Base**	**87.97**	**201**⇑	*e*PcP		**PcP**		**05 40 51.6**	**+0.4**
MLY	**Manley**	**87.99**	**25**	P				05 40 50.7	
	baz=265								
CUT	**Chulitna**	**88.00**	**28**	P				05 40 50.5	
	baz=266								
TRF	**Throfare Moun**	**88.06**	**27**	P				05 40 50.5	
	baz=266								
RC01	**Rabbit Creek A**	**88.16**	**29**	P				05 40 50.8	
	baz=266								
MOS	**Moscow**	**88.22**	**326**	*e*P		**P**		**05 40 48.9**	**-2.1**
SEW	**Seward**	**88.24**	**30**	P				05 40 51.8	
	baz=267								
COLD	**Coldfoot**	**88.38**	**23**	P		**P**		**05 40 52.9**	**+1.4**
COLD				lAmb		lAmb		05 40 54.7	
	comp=Z,19nm,1.3s								
COLD	**Coldfoot**	**88.38**	**23**	P				05 40 52.4	
	baz=266								
I23K	**Minto, Yukon-K**	**88.58**	**25**	P		**P**		**05 40 52.7**	**+0.2**
I23K				lAmb		lAmb		05 40 54.8	
	comp=Z,26nm,1.5s								
I23K	**Minto, Yukon-K**	**88.58**	**25**	P				05 40 53.3	
	baz=267								
NEA2	**Nenana**	**88.67**	**26**	P				05 40 53.7	
	baz=267								
MCK	**McKinley**	**88.69**	**26**	P				05 40 53.1	
	baz=267								
TOLK	**Toolik Lake Re**	**88.71**	**21**	P		**P**		**05 40 53.3**	**+0.2**
TOLK				lAmb		lAmb		05 40 56.4	
	comp=Z,11nm,1.2s								
TOLK	**Toolik Lake Re**	**88.71**	**21**	P				05 40 54.1	
	baz=266								
KNK	**Knik Glacier**	**88.80**	**29**	P		**P**		**05 40 53.5**	**-0.1**
KNK				lAmb		lAmb		05 40 56.2	
	comp=Z,15nm,0.9s								
KNK	**Knik Glacier**	**88.80**	**29**	P				05 40 54.8	
	baz=268								
OBN	**Obninsk**	**88.80**	**325**⇓	*e*P		**P**		**05 40 52.5**	**-1.2**
OBN				*PP		**pP**		**05 41 11.0**	**-2.0**
OBN				*e*				05 53 21.0	
OBN				pmax		pmax			
	comp=Z,33nm,1.2s								
WAT2	**Susitna Watana**	**88.81**	**27**	P				05 40 53.7	
	baz=267								
PWL	**Port Wells**	**88.83**	**29**	P		**P**		**05 40 52.5**	**-1.3**
PWL				lAmb		lAmb		05 40 59.6	
	comp=Z,12nm,1.1s								
SML	**Sawmill**	**88.88**	**28**	P		**P**		**05 40 53.0**	**-1.1**
SML				lAmb		lAmb		05 40 56.3	
	comp=Z,8.3nm,0.8s								
SML	**Sawmill**	**88.88**	**28**	P				05 40 54.3	
	baz=268								
WAT6	**Susitna Watana**	**89.18**	**28**	P				05 40 55.9	
	baz=268								
TCOL	**CIGO, UAF Yank**	**89.20**	**25**	P				05 40 55.5	
	baz=268								
CCB	**Clear Creek Bu**	**89.22**	**25**	P		**P**		**05 40 54.8**	**-0.7**
CCB				lAmb		lAmb		05 40 55.4	
	comp=Z,12nm,1.4s								
GLI	**Glacier Island**	**89.44**	**29**	P				05 40 56.8	
	baz=269								
HDA	**Harding Lake**	**89.58**	**26**	P				05 40 56.5	
	baz=269								
HDA				P				05 40 56.5	
	baz=269								
ILAR	**Eielson Array**	**89.62**	**25**	P		**P**		**05 40 56.6**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=251,slow=4.8,SNR=18								
ILAR				PKKPbc		**PKKPbc**		**05 58 32.1**	**-1.8**
	comp=Z,0.5nm,0.7s,baz=75,slow=1.6,SNR=5.0								
ILAR	**Eielson Array**	**89.62**	**25**	P		**P**		**05 40 55.5**	**-1.9**
M24K	**Tolsona, Glenn**	**89.90**	**28**	P				05 40 59.8	
	baz=270								
KLU	**Klutina**	**90.02**	**29**	P		**P**		**05 40 59.2**	**-0.2**
KLU	**Klutina**	**90.02**	**29**	P				05 41 00.3	
	baz=270								
PRP	**Porcupine Dome**	**90.20**	**25**	P				05 41 01.3	
	baz=270								
PAX	**Paxson**	**90.23**	**27**	P		**P**		**05 40 59.5**	**-0.9**
PAX				pmax		pmax			
	comp=Z,9.0nm,1.2s								
PAX	**Paxson**	**90.23**	**27**	P		**P**		**05 40 59.5**	**-0.9**
PAX				lAmb		lAmb		05 41 03.0	
	comp=Z,9.1nm,1.2s								
PAX	**Paxson**	**90.23**	**27**	P				05 41 00.9	
	baz=270								
HARP	**HAARP**	**90.38**	**28**	P				05 41 02.3	
	baz=270								
BMAR	**Burnt Mountain**	**90.56**	**23**	P		**P**		**05 41 02.9**	**+1.1**
BRTR	**Keskin Array B**	**90.58**	**310**	P		**P**		**05 41 01.1**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=148,slow=5.8,SNR=4.6								
BRTR				LR		LR		06 31 16.8	
	comp=Z,45nm,18.6s,baz=84,slow=42								
BRTR	**Keskin Array B**	**90.58**	**310**	*i* P		**P**		**05 41 04.0**	**+1.4**
BRTR				pmax		pmax			
	comp=Z,2.0nm,0.6s								
N25K	**Chitina, Valde**	**90.65**	**29**	P		**P**		**05 41 00.8**	**-1.6**
N25K	**Chitina, Valde**	**90.65**	**29**	P				05 41 03.7	
	baz=271								
BMRM	**Bremner River**	**90.66**	**29**	P				05 41 03.3	
	baz=271								
SCRK	**Sand Creek**	**90.88**	**26**	P				05 41 04.5	
	baz=272								
MENT	**Mentasta**	**91.03**	**27**	P		**P**		**05 41 04.2**	**+0.1**
MENT				lAmb		lAmb		05 41 23.2	
	comp=Z,8.9nm,1.2s								
GLB	**Gilahina Butte**	**91.03**	**29**	P		**P**		**05 41 02.5**	**-1.6**
GLB				lAmb		lAmb		05 41 07.1	
	comp=Z,6.4nm,1.1s								
CRQE	**Cirque**	**91.40**	**29**	P				05 41 06.9	
	baz=272								
TGL	**Tana Glacier**	**91.53**	**29**	P		**P**		**05 41 05.8**	**-0.7**
TGL				lAmb		lAmb		05 41 09.1	
	comp=Z,8.2nm,0.8s								
K27K	**Chicken**	**91.72**	**26**	P		**P**		**05 41 07.8**	**+0.6**
K27K				lAmb		lAmb		05 41 10.5	
	comp=Z,8.4nm,0.9s								
K27K	**Chicken**	**91.72**	**26**	P				05 41 08.9	
	baz=273								
L27K	**Beaver Creek,**	**91.89**	**27**	P				05 41 09.6	
	baz=273								
BCAR	**Beaver Creek A**	**91.91**	**27**	P		**P**		**05 41 08.0**	**-0.2**
BARN	**Barnard Glacie**	**92.09**	**29**	P		**P**		**05 41 07.9**	**-1.3**
CTG	**Chitna Glacier**	**92.25**	**29**	P				05 41 11.2	
	baz=274								
CTGM	**Chitina Glacie**	**92.25**	**29**	P		**P**		**05 41 09.3**	**-0.6**
LOGN	**Logan Glacier**	**92.42**	**29**	P		**P**		**05 41 09.0**	**-1.7**
PINM	**Pinnacle**	**92.85**	**30**	P				05 41 13.8	
	baz=275								
ARCES	**ARCESS Array B**	**93.20**	**340**	P		**P**		**05 41 12.5**	**-1.4**
	comp=Z,1.9nm,0.5s,baz=81,slow=7.5,SNR=17								
ARCES				LR		LR		06 27 10.4	
	comp=Z,132nm,18.4s,baz=50,slow=38								
AKASG	**Malin Array Be**	**93.32**	**321**	P		**P**		**05 41 12.6**	**-2.2**
	comp=Z,0.9nm,0.4s,baz=74,slow=4.3,SNR=7.2								
EPYK	**Eagle Plains**	**93.74**	**24**	P		**P**		**05 41 16.9**	**+0.4**
EPYK	**Eagle Plains**	**93.74**	**24**	P				05 41 17.1	
	baz=278								
FINES	**FINESS Array B**	**94.05**	**332**	P		**P**		**05 41 16.0**	**-1.9**
	comp=Z,1.9nm,0.6s,baz=54,slow=4.0,SNR=11								
HYT	**Haines Junctio**	**94.13**	**29**	P		**P**		**05 41 17.3**	**-1.2**
HYT				lAmb		lAmb		05 41 22.4	
	comp=Z,15nm,1.4s								
NACGM	**Naroch**	**94.43**	**325**	*i* P		**P**		**05 41 19.4**	**-0.4**
NACGM				*i* P		**P**		**05 41 19.4**	**-0.4**
NACGM				*i* P		**P**		**05 41 19.4**	**-0.4**
NACGM				*i* SKS				05 51 07.0	
NACGM				*i* S		**SKSac**		**05 51 43.7**	**-4.7**
NACGM				*i* sS		**S**		**05 52 18.9**	**-6.9**
NACGM				*i* SS		SS		05 58 21.5	-28
NACGM				*i* SSS		SSS		06 01 15.9	
INK	**Inuvik**	**94.63**	**21**	P		**P**		**05 41 20.0**	**-0.4**
	comp=Z,3.1nm,0.5s,baz=294,slow=4.0,SNR=36								
INK	**Inuvik**	**94.63**	**21**	P		**P**		**05 41 19.1**	**-1.3**
INK				lAmb		lAmb		05 41 22.1	
	comp=Z,4.3nm,0.8s								
WHY	**Whitehorse**	**95.43**	**29**	P		**P**		**05 41 24.2**	**-0.3**
WHY				lAmb		lAmb		05 41 44.5	
	comp=Z,11nm,0.9s								
LSZ	**Lusaka**	**95.85**	**255**	P		**P**		**05 41 25.8**	**-1.5**
LSZ				pmax		pmax			
	comp=Z,12nm,0.8s								
LSZ	**Lusaka**	**95.85**	**255**	P		**P**		**05 41 25.8**	**-1.5**
BURAR	**Bucovina Array**	**96.22**	**318**	P		**P**		**05 41 26.4**	**-1.9**
BURAR				lAmb		lAmb		05 41 33.5	
	comp=Z,3.1nm,0.8s								
C36M	**Paulatuk**	**97.64**	**19**	P				05 41 34.4	
	baz=290								
BOSA	**Boshof**	**97.87**	**241**	LR		LR		06 22 39.2	
	comp=Z,110nm,18.9s,baz=57,slow=34								
UZH	**Uzhgorod**	**98.02**	**319**	*e*P		**P**		**05 41 35.7**	**-0.6**
UZH				*e*				05 42 00.1	
DLBC	**Dease Lake**	**98.29**	**31**	LR		LR		06 19 42.6	
	comp=Z,94nm,21.0s,baz=334,slow=32								
CRVS	**Cervenica-Dubn**	**98.52**	**319**	*e*P		Pdif		05 41 39.3	+0.7
CRVS	**Cervenica-Dubn**	**98.52**	**319**	*e*PDIFF		Pdif		05 41 39.3	+0.7
NOA	**NORSAR Array B**	**101.11**	**333**	PKKPbc		PKKPbc		05 58 07.7	+4.7
	comp=Z,1.0nm,0.8s,baz=82,slow=7.4,SNR=3.6								
GERES	**GERESS Array B**	**103.53**	**320**	PKiKP		**PKiKP**		**05 46 20.0**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=64,slow=3.1,SNR=3.7								
YKA	**Yellowknife Ar**	**104.00**	**24**	Pdiff		**Pdif**		**05 42 03.9**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=296,slow=4.3,SNR=4.4								
YKA				PKiKP		**PP**		**05 46 20.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=314,slow=1.2,SNR=6.3								
YKA				PKKPbc		**PKKPbc**		**05 57 51.9**	**-2.5**
	comp=Z,0.7nm,0.7s,baz=114,slow=2.7,SNR=6.7								
PDAR	**Pinedale Array**	**115.85**	**41**	PKKPbc		PKKPbc		05 57 19.6	+3.7
	comp=Z,1.2nm,0.7s,baz=112,slow=6.4,SNR=13								
ESDC	**Sonseca Array**	**118.64**	**316**	PKP		**PKiKP**		**05 46 48.9**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=127,slow=2.4,SNR=4.1								
ESDC				PP		**PP**		**05 48 09.5**	**+3.3**
	comp=Z,1.9nm,1.1s,baz=57,slow=4.3,SNR=5.6								
POLO	**Lamas de Olo**	**120.39**	**320**	*e*PKP		**PKiKP**		**05 46 53.0**	**+1.4**
MTE	**Manteigas**	**120.72**	**319**	*e*PKP		**PKiKP**		**05 46 53.6**	**+1.4**
ANMO	**Albuquerque**	**121.41**	**48**	PKP		**PKiKP**		**05 46 55.2**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=349,slow=1.9,SNR=4.4								
PBAR	**Barrancos**	**121.46**	**316**	*e*PKP		**PKiKP**		**05 46 55.1**	**+1.5**
TOA0	**Torodi Ar. Sit**	**121.68**	**285**			**PKiKP**		**05 46 54.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**121.68**	**285**	PKP		**PKPdf**		**05 46 54.4**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=74,slow=1.8,SNR=23								
TORD				PKKPbc		**PKKPab**		**05 56 56.5**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=287,slow=3.4,SNR=5.1								
TORD	**Torodi Ar. Bea**	**121.68**	**285**			**PKiKP**		**05 46 54.6**	**-0.1**
PCVE	**Castro Verde**	**122.41**	**316**	*e*PKP		**PKiKP**		**05 46 56.4**	**+0.9**
MORF	**Marmelete**	**122.99**	**316**	*e*PKP		**PKiKP**		**05 46 58.4**	**+1.7**
TXAR	**Lajitas Array**	**125.87**	**53**	PKP		**PKiKP**		**05 47 03.9**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=329,slow=1.5,SNR=5.0								
DBIC	**Dimbokro**	**128.85**	**278**	PKP		**PKiKP**		**05 47 09.1**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=113,slow=5.6,SNR=4.5								
TKL	**Tuckaleechee C**	**136.05**	**34**	PKP		**PKiKP**		**05 47 23.8**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=163,slow=5.4,SNR=11								
PLCA	**Paso Flores**	**137.14**	**163**	PKP		**PKiKP**		**05 47 25.4**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=282,slow=6.1,SNR=3.3								
VA03	**San Esteban**	**144.41**	**158**			**PKPdf**		**05 47 37.0**	**+0.4**
LCO	**Las Campanas**	**147.67**	**155**	PKP2		**PKiKP**		**05 47 46.6**	**-0.7**
LCO	**Las Campanas**	**147.67**	**155**			**PKiKP**		**05 47 46.6**	**-0.7**
BOAB	**BOACO BROADBAN**	**147.87**	**66**			**PKPbc**		**05 47 46.1**	**+0.3**
AC04	**Llanos de Chal**	**148.21**	**154**			**PKiKP**		**05 47 48.4**	**+0.3**
CPUP	**Villa Florida**	**153.64**	**177**	PKP		**PKPdf**		**05 47 52.7**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=223,slow=1.1,SNR=3.3								
CPUP				PKPbc		**PKiKP**		**05 48 00.9**	**+1.6**
	comp=Z,2.4nm,0.7s,baz=194,slow=2.8,SNR=5.9								
LPAZ	**La Paz**	**159.59**	**144**	PKP		**PKPdf**		**05 48 02.0**	**+1.9**
	comp=Z,3.3nm,1.1s,baz=31,slow=3.1,SNR=6.3								

*IDC **24** 05:39:13.4±4.4,37.°13N×72.°27E,h198km±36km,mb3.5/4, mb1 3.4/10,mb1mx3.0/65,mbtmp4.0/10 Error ellipse: s-maj=48.2km s-min=22.1km az=140.0*

*NEIC **24** 05:39:15.6±1.2,37.°38N±0.°03×72.°2E±0.°1,h208km±7km, mb4.3/6,Error ellipse: s-maj=14.0km s-min=2.9km az=100.0*

*NNC **24** 05:39:17.9±9.3,37.°57N×71.°89E,h134km±232km,mb3.1, mpv3.9,Error ellipse: s-maj=90.7km s-min=59.6km az=0.0*

ISC 24 05:39:14.7±0.6,37.°36N±0.°05×72.°26E±0.°07,h200km,n46, σ1⇟46/51,mb3.9/6,4C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRK	**Karamyk**	**2.15**	**351**		**Pn**	**05 39 56.8**	**+1.7**
BTK	**Batken**	**2.92**	**338**		**Pn**	**05 40 05.6**	**+2.1**
NIL	**Nilore**	**3.79**	**167**		**Pn**	**05 40 16.8**	**+2.8**
KBL	**Kabul**	**3.83**	**224**		**Pn**	**05 40 15.8**	**+1.1**
AAK	**Ala-Archa**	**5.54**	**17**	⇓P	**Pn**	**05 40 37.0**	**+0.8**
	11nm,0.7s						
AAK				⇑S	**Sn**	**05 41 39.3**	**-1.3**
	44nm,0.5s						
AAK	**Ala-Archa**	**5.54**	**17**		**Pn**	**05 40 37.6**	**+1.5**
THN	**Thein Dam**	**5.68**	**149**	*e*P	**Pn**	**05 40 40.5**	**+2.7**
THN				*e*S	**Sn**	**05 41 43.5**	**0.0**
BOOM	**Boomskoye usch**	**5.85**	**28**	Pn	**Pn**	**05 40 41.4**	**+1.2**
KK31	**Karatay Array**	**5.89**	**347**	P	**Pn**	**05 40 40.8**	**+0.3**
	2.0nm,0.3s,baz=155,slow=13,SNR=55						
KK31				⇑S	**Sn**	**05 41 44.1**	**-4.3**
	12nm,0.3s,baz=174,slow=21,SNR=14						
KK31	**Karatay Array**	**5.89**	**347**	Pn	**Pn**	**05 40 40.8**	**+0.3**
KKAR	**Karatay Array**	**5.89**	**347**		**Pn**	**05 40 41.3**	**+0.8**
KKAR	**Karatay Array**	**5.89**	**347**	Pn	**Pn**	**05 40 41.0**	**+0.5**
DHRM	**DHARAMSHALA**	**6.09**	**146**	*e*P	**Pn**	**05 40 43.7**	**+0.3**
DHRM				*e*S	**Sn**	**05 41 50.3**	**-3.1**
DHRM				lAML		05 41 52.5	
	comp=E,276nm,0.2s						
DHRM				lAML		05 41 54.1	
	comp=N,352nm,0.3s						
KDJ	**Kajisay**	**6.09**	**37**	Pn	**Pn**	**05 40 44.5**	**+1.2**
TKM2	**Tokmak 2**	**6.12**	**24**	⇓P	**Pn**	**05 40 44.6**	**+1.0**
TKM2	comp=N,18nm,0.8s						
				⇑S	**Sn**	**05 41 52.5**	**-1.5**
	comp=N,9.2nm,0.6s						
SMLA	**Simla**	**7.43**	**145**	*e*P	**Pn**	**05 41 00.9**	**+0.4**
SMLA				*e*S	**Sn**	**05 42 20.1**	**-4.5**
SMLA				lAML		05 42 25.5	
	comp=N,142nm,0.4s						
SMLA				lAML		05 42 26.1	
	comp=E,111nm,0.4s						
GEYT	**Alibeck**	**11.23**	**277**	P	**Pn**	**05 41 48.8**	**-1.0**
	comp=E,0.6nm,0.3s,baz=113,slow=11,SNR=2.8						
MAKZ	**Makanchi**	**11.88**	**34**	Pn	**Pn**	**05 41 57.4**	**-0.5**
MK31	**Makanchi Array**	**12.01**	**35**	Pn	**Pn**	**05 42 00.3**	**+0.7**
MKAR	**Makanchi Array**	**12.01**	**35**	P	**Pn**	**05 42 00.6**	**+1.0**
	comp=E,0.2nm,0.3s,baz=207,slow=9.3,SNR=3.1						
GKN	**Gorkha**	**13.98**	**128**	*e*P	**P**	**05 42 28.2**	**+1.7**
	comp=E,43nm,0.4s						
KURBB	**Kurchatov Arra**	**14.00**	**17**	P	**P**	**05 42 26.6**	**+0.4**
	comp=E,0.2nm,0.3s,baz=203,slow=11,SNR=6.3						
KURK	**Kurchatov**	**14.11**	**17**	P	**Pn**	**05 42 26.6**	**+0.9**
DMN	**Daman**	**14.55**	**128**	*e*P	**P**	**05 42 34.1**	**+1.1**
	comp=E,6.6nm,0.2s						
PKIN	**Phulchoki**	**14.76**	**128**	*e*P	**P**	**05 42 36.5**	**+1.3**
	comp=E,13nm,0.4s						
BHPL	**Bhopal**	**14.76**	**161**	*e*P	Pn	05 42 27.2	-6.9
PKI	**Pulchoki**	**14.77**	**128**	*e*P	**P**	**05 42 36.8**	**+1.4**
	comp=E,5.4nm,0.2s						
GUN	**Gumba**	**14.84**	**125**	*e*P	**Pn**	**05 42 35.1**	**-0.2**
	comp=E,14nm,0.4s						
AB31	**Akbulak array**	**14.87**	**327**	⇑P	**P**	**05 42 36.8**	**+0.9**
	comp=E,1.1nm,0.6s,baz=150,slow=12,SNR=11						
ABKAR	**Akbulak array**	**14.87**	**327**		**Pn**	**05 42 35.1**	**0.0**
JIRN	**Jiri**	**15.21**	**125**	*e*P	**Pn**	**05 42 39.9**	**0.0**
	comp=E,20nm,0.3s						
BVAR	**Borovoye Array**	**15.72**	**356**	P	**Pn**	**05 42 46.9**	**+1.4**
	comp=E,0.3nm,0.3s,baz=192,slow=13,SNR=2.6						
RAMN	**Ramite**	**15.96**	**126**	*e*P	**P**	**05 42 48.5**	**0.0**
	comp=E,14nm,0.4s						
AKTO	**Aktyubinsk**	**16.58**	**327**	P	**Pn**	**05 42 56.3**	**+0.5**
	comp=E,0.3nm,0.3s,baz=113,slow=14,SNR=2.6						
ZAA0	**Zalesovo Array**	**18.72**	**24**	P	**P**	**05 43 18.0**	**-0.1**
ZAA0				lAmb	lAmb	05 43 19.9	
	comp=Z,10nm,0.9s						
ZALV	**Zalesovo Beam**	**18.72**	**24**	P	**P**	**05 43 18.7**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=221,slow=10,SNR=22						
ZALV

B08A	**Colville Reser**	**2.01 276**	Pn	**Pn**	**05 44 09.5**	**-1.0**
B08A			Pg	**Pb**	**05 44 12.3**	**-0.8**
B08A			Sn	**Sn**	**05 44 34.9**	**-0.8**
B08A			Sg	**Sb**	**05 44 39.3**	**+1.1**
B08A	**Colville Reser**	**2.01 276**	Pn	**Pn**	**05 44 09.8**	**-0.7**
B08A			IAML		05 44 40.7	
	comp=E,2µm,0.6s					
E09A	**Wood Farm, Sta**	**2.06 217**	Pn	**Pn**	**05 44 10.0**	**-1.2**
E09A			IAML		05 44 51.1	
	comp=E,2µm,0.6s					
D08A	**Wollman Farm,**	**2.07 238**	Pn	**Pn**	**05 44 09.9**	**-1.4**
D08A			IAML		05 44 41.3	
	comp=N,2µm,0.6s					
D08A			IAML		05 44 41.8	
	comp=E,2µm,0.4s					
MSO	**Missoula**	**2.11 129**	Pn	**Pn**	**05 44 11.8**	**-0.2**
MSO			IAML		05 44 43.8	
	comp=E,2µm,0.5s					
MSO			IAML		05 44 51.6	
	comp=E,1µm,0.6s					
MSO	**Missoula**	**2.11 129**	P		05 44 11.7	
	baz=309,SNR=791					
MSO			S		05 44 39.4	
	baz=309					
SLMT	**Seeley Lake**	**2.13 115**	Pn	**Pn**	**05 44 12.1**	**-0.2**
F10A	**Beach Ranch, E**	**2.28 196**		**Pn**	**05 44 14.0**	**-0.3**
PNT	**Penticton**	**2.45 299**	Pn	**Pn**	**05 44 16.4**	**-0.2**
PNT			Pg	**Pb**	**05 44 20.4**	**-0.4**
PNT			Sn	**Sn**	**05 44 45.6**	**-1.1**
PNT			Sg	**Sb**	**05 44 53.1**	**+2.1**
E08A	**Dider Farm, El**	**2.50 229**		**Pn**	**05 44 16.9**	**-0.3**
E08A			IAML		05 44 54.3	
	comp=N,1µm,0.5s					
E08A			IAML		05 44 54.4	
	comp=E,2µm,0.5s					
OVMT	**Ovando**	**2.52 115**	Pn	**Pn**	**05 44 17.2**	**-0.4**
BPMT	**Black Pine Rid**	**2.62 130**	Pn	**Pn**	**05 44 19.1**	**0.0**
BPMT			Pg	**Pb**	**05 44 23.9**	**+0.2**
HAWA	**Hanford**	**2.81 232**	Pn	**Pn**	**05 44 20.2**	**-1.3**
HAWA			IAML		05 45 07.9	
	comp=E,1µm,0.5s					
HAWA			IAML		05 45 08.0	
	comp=E,1µm,0.5s					
E07A	**Sunnyside**	**2.88 237**		**Pn**	**05 44 21.4**	**-1.1**
LYMT	**Lyon Mountain**	**2.99 112**	Pn	**Pn**	**05 44 24.3**	**0.0**
PRDA	**Priddis**	**3.01 26**	Pn	**Pn**	**05 44 25.8**	**+1.4**
PRDA			Pg	**Pg**	**05 44 32.6**	**-1.6**
PRDA			Sg	**Sg**	**05 45 12.6**	**-0.6**
LTY	**Liberty**	**3.06 254**	Pn	**Pn**	**05 44 23.8**	**-1.2**
LTY			Pg	**Pb**	**05 44 31.9**	**+0.7**
LTY			Sg	**Sb**	**05 45 10.4**	**+1.8**
LTY	**Liberty**	**3.06 254**		**Pn**	**05 44 24.1**	**-1.0**
LTY			IAML		05 45 15.0	
	comp=N,932nm,0.7s					
LTY			IAML		05 45 21.1	
	comp=E,580nm,0.4s					
C06D	**Leavenworth**	**3.07 267**	P		05 44 24.0	
	baz=85,SNR=9.0					
C06D			S		05 45 01.2	
	baz=85					
ELMT	**Elliston**	**3.09 121**	Pn	**Pn**	**05 44 25.6**	**+0.1**
PLID	**Pearl Lake**	**3.09 176**		**Pn**	**05 44 25.0**	**-0.6**
PLID			IAML		05 45 19.4	
	comp=E,938nm,0.6s					
PLID			IAML		05 45 19.9	
	comp=E,559nm,0.6s					
GPW	**Glacier Peak**	**3.21 271**	Pn	**Pn**	**05 44 26.8**	**-0.4**
GPW			Pg	**Pb**	**05 44 35.5**	**+1.7**
SLEB	**Sale Mountain**	**3.22 339**	Pn	**Pn**	**05 44 28.5**	**+1.2**
SLEB			Pg	**Pg**	**05 44 37.3**	**-0.8**
SLEB			Sg	**Sg**	**05 45 18.0**	**-1.8**
F07A	**Phinny Hill Vi**	**3.35 228**		**Pn**	**05 44 27.9**	**-1.0**
BMO	**Blue Mountains**	**3.39 192**		**Pn**	**05 44 29.5**	**0.0**
HRY	**Holter Researc**	**3.39 114**	Pn	**Pn**	**05 44 29.8**	**+0.2**
HRY	**Holter Researc**	**3.39 114**		**Pn**	**05 44 29.5**	**-0.1**
G08A	**Pilot Rock**	**3.40 213**		**Pn**	**05 44 28.8**	**-0.9**
G08A			IAML		05 45 26.2	
	comp=E,471nm,0.5s					
B06A	**Marblemount**	**3.45 278**	Pn	**Pn**	**05 44 29.8**	**-0.4**
B06A			Sg	**Sb**	**05 45 22.8**	**+3.2**
B06A	**Marblemount**	**3.45 278**	Pn	**Pn**	**05 44 30.1**	**-0.1**
RPW	**Rockport**	**3.46 277**	Pn	**Pn**	**05 44 30.3**	**-0.3**
RPW			Pg	**Pb**	**05 44 39.4**	**+1.5**
HBMT	**Mount Humbug**	**3.49 132**	Pn	**Pn**	**05 44 31.1**	**0.0**
HBMT			Pg	**Pb**	**05 44 40.6**	**+2.1**
LRM	**Limekiln Ridge**	**3.55 130**	Pn	**Pn**	**05 44 31.9**	**0.0**
LRM			Pg	**Pb**	**05 44 41.4**	**+1.9**
LRM	**Limekiln Ridge**	**3.55 130**		**Pn**	**05 44 32.1**	**+0.2**
HOPB	**Hope**	**3.57 292**	Pn	**Pn**	**05 44 32.2**	**+0.2**
HOPB			Pg	**Pb**	**05 44 42.4**	**+2.6**
HOPB			Sn	**Sn**	**05 45 13.7**	**-0.5**
HOPB			Sg	**Sb**	**05 45 26.0**	**+2.9**
JCW	**Jim Creek**	**3.74 272**	Pn	**Pn**	**05 44 34.0**	**-0.3**
MBW	**Mount Baker**	**3.75 281**	Pn	**Pn**	**05 44 34.5**	**-0.1**
DLMT	**Dillon**	**3.81 136**		**Pn**	**05 44 35.5**	**+0.1**
DLMT			IAML		05 45 43.3	
	comp=E,636nm,0.7s					
FMW	**Mount Fremont**	**3.82 253**	Pn	**Pn**	**05 44 34.6**	**-1.0**
B05A	**Bryant**	**3.85 274**	P		05 44 35.4	
	baz=90,SNR=12					
CMW	**Cultus Mountai**	**3.87 276**	Pn	**Pn**	**05 44 35.8**	**-0.3**
A05A	**Maple Falls**	**3.90 284**	Pn	**Pn**	**05 44 36.7**	**+0.2**
A05A			Pg	**Pb**	**05 44 48.0**	**+2.7**
A05A	**Maple Falls**	**3.90 284**		**Pn**	**05 44 35.0**	**-1.5**
D05A	**Enumclaw**	**3.94 258**	Pn	**Pn**	**05 44 36.4**	**-0.6**
D05A			Sg	**Sg**	**05 45 40.2**	**-2.8**
D05A	**Enumclaw**	**3.94 258**		**Pn**	**05 44 36.7**	**-0.3**
D05A			IAML		05 45 48.3	
	comp=E,549nm,1.0s					
D05A			IAML		05 45 49.4	
	comp=N,693nm,0.8s					
LON	**Longmire**	**3.97 251**	Pn	**Pn**	**05 44 36.9**	**-0.7**
LON			Sn	**Sn**	**05 45 23.7**	**-0.5**
LON	**Longmire**	**3.97 251**		**Pn**	**05 44 36.9**	**-0.7**
LON			IAML		05 45 41.4	
	comp=N,354nm,0.7s					
MCMT	**McKenzie Canyo**	**4.12 143**		**Pn**	**05 44 40.0**	**+0.3**
BOZ	**Bozeman (W)**	**4.13 127**		**Pn**	**05 44 39.5**	**-0.3**
BOZ			IAML		05 45 48.5	
	comp=N,279nm,0.9s					
BOZ	**Bozeman (W)**	**4.13 127**	P		05 44 39.6	
	baz=310,SNR=23					
F05D	**White Salmon**	**4.18 239**	P		05 44 39.5	
	baz=55,SNR=11					
MNB	**Mounoet Dainar**	**4.24 343**	Pn	**Pn**	**05 44 43.1**	**+1.8**
MNB			Pg	**Pg**	**05 44 56.0**	**-1.7**
BLBC	**Blue River**	**4.30 335**	Pn	**Pn**	**05 44 43.7**	**+1.4**
BLBC			Pg	**Pg**	**05 44 56.0**	**-2.9**
MCW	**Mount Constitu**	**4.35 279**	Pn	**Pn**	**05 44 43.1**	**+0.4**
MCW			Pg	**Pg**	**05 44 57.2**	**-2.7**
BCYI	**Bear Canyon**	**4.36 151**		**Pn**	**05 44 42.8**	**-0.3**
LLLB	**Lillooet**	**4.37 306**	Pn	**Pn**	**05 44 43.2**	**+0.3**
LLLB			Pg	**Pb**	**05 44 54.3**	**+1.0**
LLLB			Sg	**Sg**	**05 45 52.4**	**-4.2**
GNW	**Green Mountain**	**4.41 264**	Pn	**Pn**	**05 44 42.7**	**-0.7**
GNW			Sn	**Sn**	**05 45 34.2**	**-0.6**
GNW			Sg	**Sb**	**05 45 53.0**	**+5.8**
EGMT	**Eagleton**	**4.42 89**		**Pn**	**05 44 43.8**	**+0.1**
EGMT	**Eagleton**	**4.42 89**	P		05 44 43.5	
	baz=274,SNR=16					
BLN	**Blyn Mountain**	**4.45 270**	Pn	**Pn**	**05 44 43.5**	**-0.5**
MOMT	**Monida**	**4.50 141**	Pn	**Pn**	**05 44 45.7**	**+0.8**
G05D	**Wamic, OR**	**4.51 231**	P		05 44 44.9	
	baz=48					
G05D			S		05 45 36.5	
	baz=48					
HDW	**Hoodsport**	**4.55 266**	Pn	**Pn**	**05 44 45.1**	**-0.3**
SNB	**Saturna Island**	**4.58 280**	Pn	**Pn**	**05 44 45.9**	**0.0**
SNB			Sg	**Sg**	**05 45 59.8**	**-3.8**
D03D	**Eldon**	**4.59 265**	P		05 44 45.2	
	baz=80,SNR=6.5					
D03D			S		05 45 38.9	
	baz=80					
I07A	**Izee**	**4.64 209**		**Pn**	**05 44 46.9**	**+0.1**
I07A			IAML		05 46 12.8	
	comp=N,195nm,0.8s					
VGZ	**Gonzales**	**4.67 276**	Pn	**Pn**	**05 44 47.1**	**+0.2**
VGZ			Pg	**Pb**	**05 44 59.8**	**+1.4**
VGZ			Sg	**Sb**	**05 45 59.2**	**+4.6**
TPMT	**Tepee Creek**	**4.72 135**	Pn	**Pn**	**05 44 49.2**	**+1.2**
WSLR	**Whistler**	**4.74 297**	Pn	**Pn**	**05 44 48.3**	**+0.2**
WSLR			Pg	**Pb**	**05 45 01.2**	**+1.5**
WSLR			Sg	**Sb**	**05 46 01.7**	**+4.8**

PA01	**PA01 North**	**4.76 278**	Sg	**Sb**	**05 46 03.0**	**+5.8**
B011	**North Saanich**	**4.76 278**	Pn	**Pn**	**05 44 49.1**	**+0.9**
B011			Pg	**Pb**	**05 45 00.9**	**+0.9**
B011			Sg	**Sb**	**05 46 03.0**	**+5.8**
QLMT	**Earthquake Lak**	**4.76 133**	Pn	**Pn**	**05 44 49.6**	**+1.1**
QLMT	**Earthquake Lak**	**4.76 133**	Pn	**Pn**	**05 44 48.9**	**+0.5**
PA12	**PA12 Sannich**	**4.76 278**	Pn	**Pn**	**05 44 48.9**	**+0.7**
B009	**North Saanich**	**4.76 278**	Sg	**Sb**	**05 46 02.6**	**+5.3**
B010	**North Saanich**	**4.76 278**	Pn	**Pn**	**05 44 49.9**	**+1.7**
B010			Sg	**Sb**	**05 46 03.1**	**+5.9**
PGC	**Sidney**	**4.76 278**	Pn	**Pn**	**05 44 48.3**	**+0.1**
PGC			Sg	**Sb**	**05 46 03.0**	**+5.8**
PGC	**Sidney**	**4.76 278**	Pn	**Pn**	**05 44 46.4**	**-1.9**
BIB	**Bowen Island**	**4.77 288**	Pn	**Pn**	**05 44 47.9**	**-0.5**
BIB			Pg	**Pb**	**05 44 51.4**	**+1.3**
WPB	**Watts Point**	**4.77 291**	Pn	**Pn**	**05 44 47.0**	**-1.3**
WPB			Pg	**Pb**	**05 45 01.2**	**+1.1**
MFID	**Camas Ranch**	**4.77 176**	Pn	**Pn**	**05 44 48.6**	**0.0**
MFID			IAML		05 46 11.1	
	comp=N,207nm,1.0s					
MFID			IAML		05 46 13.6	
	comp=N,279nm,0.8s					
HLID	**Hailey**	**4.80 163**	Pn	**Pn**	**05 44 48.9**	**-0.1**
HLID			IAML		05 46 13.9	
	comp=N,241nm,0.7s					
HLID			IAML		05 46 14.9	
	comp=N,256nm,1.1s					
HLID	**Hailey**	**4.80 163**	P		05 44 48.8	
	baz=344,SNR=66					
STW	**Striped Peak**	**4.91 272**	Pn	**Pn**	**05 44 48.2**	**-2.1**
J08A	**Circle Bar Ran**	**5.04 198**		**Pn**	**05 44 51.7**	**-0.5**
J08A			IAML		05 46 20.8	
	comp=N,130nm,1.0s					
WISH	**Wishkah**	**5.13 261**	Pg	**Pb**	**05 45 09.4**	**+3.1**
NLWA	**Neilton Lookou**	**5.14 264**	Pn	**Pn**	**05 44 54.9**	**+1.5**
GCMT	**Greycliff**	**5.15 115**		**Pn**	**05 44 54.8**	**+1.1**
I05D	**Terrebonne, OR**	**5.17 224**	P		05 44 53.7	
	baz=40,SNR=8.6					
I05D			S		05 45 52.8	
	baz=40					
E03A	**Lebam**	**5.17 254**	Pn	**Pn**	**05 44 54.6**	**+0.7**
E03A	**Lebam**	**5.17 254**	Pn	**Pn**	**05 44 55.4**	**+1.6**
E03A			IAML		05 46 22.7	
	comp=N,185nm,1.6s					
E03A			IAML		05 46 27.7	
	comp=E,233nm,0.9s					
SHB	**Sechelt**	**5.17 289**	Pn	**Pn**	**05 44 54.7**	**+0.7**
SHB			Pg	**Pb**	**05 45 08.9**	**+1.8**
SHB			Sg	**Sb**	**05 46 14.5**	**+5.3**
NLLB	**Nanaimo Lost L**	**5.17 285**	Pn	**Pn**	**05 44 55.9**	**+2.0**
NLLB			Sg	**Sb**	**05 46 14.3**	**+5.1**
B926	**Mesachie Lake**	**5.22 280**	Pn	**Pn**	**05 44 56.0**	**+1.4**
B926			Sg	**Sb**	**05 46 15.4**	**+4.8**
H04A	**Detroit Lake**	**5.34 231**		**Pn**	**05 44 56.4**	**+0.1**
H04A			IAML		05 46 31.1	
	comp=N,205nm,0.6s					
H04A			IAML		05 46 34.2	
	comp=E,162nm,0.9s					
GHNB	**Nanoose**	**5.35 285**	Sg	**Sb**	**05 46 20.0**	**+5.8**
EDM	**Edmonton**	**5.40 19**	Pn	**Pn**	**05 44 56.7**	**-0.4**
EDM			Pg	**Pb**	**05 45 14.2**	**+3.2**
PINE	**Pine Mountain**	**5.43 218**		**Pn**	**05 44 58.3**	**+0.7**
LKWY	**Lake**	**5.47 129**		**Pn**	**05 44 59.7**	**+1.6**
H17A	**Grant Village**	**5.50 131**		**Pn**	**05 45 00.2**	**+1.6**
TXB	**Texada**	**5.55 289**	Pn	**Pn**	**05 45 00.1**	**+1.0**
MGB	**Mount Grey**	**5.61 282**	Pn	**Pn**	**05 45 01.9**	**+1.9**
FLWY	**Flagg Ranch**	**5.66 134**		**Pn**	**05 45 02.2**	**+1.3**
B927	**Port Alberni**	**5.71 284**	Sg	**Sb**	**05 46 31.3**	**+6.8**
RLMT	**Red Lodge**	**5.74 119**		**Pn**	**05 45 02.8**	**+0.8**
RLMT	**Red Lodge**	**5.74 119**	P		05 45 02.7	
	baz=304,SNR=27					
B928	**Bamfield**	**5.88 280**	Sg	**Sb**	**05 46 36.8**	**+7.2**
BFSB	**Bamfield**	**5.88 280**	Sg	**Sg**	**05 46 40.0**	**-5.3**
MOOW	**Moose Ponds**	**5.89 137**		**Pn**	**05 45 05.0**	**+0.9**
WVOR	**Wild Horse Val**	**5.96 197**		**Pn**	**05 45 05.7**	**+0.8**
J05D	**Fort Rock, OR**	**5.97 217**	P		05 45 05.5	
	baz=33,SNR=17					
COR	**Corvallis**	**6.00 236**	Pn	**Pn**	**05 45 07.2**	**+1.8**
LOHW	**Long Hollow**	**6.07 137**		**Pn**	**05 45 08.3**	**+1.9**
SNOW	**Snow King Moun**	**6.11 138**		**Pn**	**05 45 09.1**	**+2.0**
REDW	**Red Top Meadow**	**6.15 139**		**Pn**	**05 45 09.7**	**+2.1**
ECR	**Eagle Creek**	**6.19 144**		**Pn**	**05 45 10.3**	**+2.1**
BTB	**Buttle Lake**	**6.20 286**	Pn	**Pn**	**05 45 09.9**	**+1.7**
BTB			Sg	**Sg**	**05 46 49.4**	**-6.1**
CBB	**Campbell River**	**6.21 291**	Sg	**Sb**	**05 46 44.2**	**+5.1**
K05A	**Summer Lake**	**6.32 212**		**Pn**	**05 45 11.6**	**+1.8**
AHID	**Auburn Hatcher**	**6.54 144**		**Pn**	**05 45 13.9**	**+1.0**
NCRB	**Newcastle Ridg**	**6.74 293**	Pn	**Pn**	**05 45 17.0**	**+1.5**
UBRB	**Upper Baezaeko**	**6.83 317**	Pn	**Pn**	**05 45 18.7**	**+1.9**
UBRB			Sg	**Sg**	**05 47 09.7**	**-6.0**
MOD	**Modoc Plateau**	**6.87 206**		**Pn**	**05 45 18.1**	**+0.7**
WOSB	**Woss**	**7.00 290**	Pn	**Pn**	**05 45 20.6**	**+1.5**
LAO	**LASA Array**	**7.02 98**		**Pn**	**05 45 20.5**	**+1.1**
LAO	**LASA Array**	**7.02 98**	P		05 45 19.9	
	baz=286					
BW06	**Boulder Array**	**7.20 136**		**Pn**	**05 45 23.9**	**+1.8**
PD31	**Pinedale Array**	**7.20 136**		**Pn**	**05 45 22.8**	**+0.8**
PDAR	**Pinedale Array**	**7.20 136**	Pn	**Pn**	**05 45 25.4**	**+3.3**
	comp=E,0.5nm,0.3s,baz=337,slow=11,SNR=16					
PDAR			Lg	Lg	05 47 24.8	
	comp=E,0.8nm,0.3s,baz=345,slow=28,SNR=8.7					
PDAR	**Pinedale Array**	**7.20 136**		**Pn**	**05 45 23.8**	**+1.8**
HUMO	**Hull Mountain**	**7.25 222**	Pn	**Pn**	**05 45 23.8**	**+1.2**
HWUT	**Hardware Ranch**	**7.38 151**		**Pn**	**05 45 25.8**	**+1.3**
ELK	**Elko**	**7.47 174**	Pn	**Pn**	**05 45 28.6**	**+2.9**
	comp=E,1.5nm,0.3s,baz=346,slow=10,SNR=29					
ELK			Lg	Lg	05 47 32.1	
	comp=E,1.4nm,0.3s,baz=52,slow=23,SNR=7.5					
ELK	**Elko**	**7.47 174**		**Pn**	**05 45 27.5**	**+1.8**
PHC	**Port Hardy**	**7.66 293**	Sg	**Sb**	**05 47 29.3**	**+8.6**
YBH	**Yreka Blue Hor**	**7.86 217**	Pn	**Pn**	**05 45 33.4**	**+2.4**
	comp=E,0.4nm,0.3s,baz=20,slow=13,SNR=8.5					
YBH	**Yreka Blue Hor**	**7.86 217**	Pn	**Pn**	**05 45 31.9**	**+0.9**
NBC4	**NorthernBC 4**	**7.99 342**	Pn	**Pn**	**05 45 34.1**	**+1.5**
DGMT	**Dagmar**	**8.10 83**		**Pn**	**05 45 34.1**	**-0.1**
DGMT	**Dagmar**	**8.10 83**	P		05 45 34.5	
	baz=272					
DUG	**Dugway, Tooele**	**8.37 161**		**Pn**	**05 45 39.5**	**+1.6**
DUG	**Dugway, Tooele**	**8.37 161**	P		05 45 39.2	
	baz=343					
BBB	**Bella Bella**	**8.56 302**	Lg	Lg	05 48 05.2	
	comp=E,0.8nm,0.3s,baz=153,slow=22,SNR=3.1					
BBB	**Bella Bella**	**8.56 302**	Pn	**Pn**	**05 45 39.1**	**-1.2**
BMBC	**Bull Mountain**	**8.65 338**	Pn	**Pn**	**05 45 43.8**	**+2.1**
PAHR	**Pah Rah Range**	**8.74 196**	Pn	**Pn**	**05 45 43.5**	**+0.4**
BEKR	**Beckworth**	**8.79 201**		**Pn**	**05 45 44.2**	**+0.4**
K22A	**Casper**	**8.84 125**		**Pn**	**05 45 45.4**	**+1.0**
RWWY	**Rawlins**	**9.16 132**		**Pn**	**05 45 49.1**	**+0.2**
RSSD	**Black Hills**	**9.45 111**	Pn	**Pn**	**05 45 52.5**	**-0.3**
R11A	**Troy Canyon, C**	**9.83 177**		**Pn**	**05 45 58.9**	**+0.8**
NVAR	**Mina Array Bea**	**9.84 189**	Pn	**Pn**	**05 46 01.3**	**+3.1**
	comp=E,0.3nm,0.3s,baz=0.8,slow=12,SNR=26					
NVAR	**Mina Array Bea**	**9.84 189**		**Pn**	**05 45 58.5**	**+0.3**
O20A	**White River Ci**	**9.91 141**		**Pn**	**05 45 59.6**	**+0.4**
NBC5	**NorthernBC 5**	**10.12 340**	Pn	**Pn**	**05 46 03.5**	**+1.8**
CMB	**Columbia Colle**	**10.55 198**	Pn	**Pn**	**05 46 08.0**	**+0.2**
E28A	**Huff**	**10.73 93**	Pn	**Pn**	**05 46 09.4**	**-0.8**
PV22	**Blue Mesa, Par**	**11.08 148**		**Pn**	**05 46 15.7**	**+0.5**
FFC	**Flin Flon**	**11.10 48**		**Pn**	**05 46 13.7**	**-1.4**
PV14	**Lion Creek, Pa**	**11.14 149**	Pn	**Pn**	**05 46 17.6**	**+1.6**
PV03	**Paradox Valley**	**11.31 148**		**Pn**	**05 46 18.4**	**0.0**
ISCO	**Idaho Springs**	**11.38 133**		**Pn**	**05 46 20.4**	**+1.1**
PV01	**Paradox Valley**	**11.52 148**		**Pn**	**05 46 22.1**	**+0.9**
NBC2	**NorthernBC 2**	**12.17 345**	Pn	**Pn**	**05 46 30.5**	**+0.7**
ULM	**Lac du Bonnet**	**13.54 74**	Pn	**Pn**	**05 46 44.1**	**-4.3**
	comp=E,3nm,0.3s,baz=268,slow=11,SNR=6.2					
ULM	**Lac du Bonnet**	**13.54 74**		**Pn**	**05 46 47.1**	**-1.4**
AGMN	**Agassiz Nation**	**13.65 82**	Pn	**Pn**	**05 46 47.8**	**-2.2**
YKA	**Yellowknife Ar**	**14.39 3**	Pn	**Pn**	**05 46 57.4**	**-2.6**
	comp=E,0.4nm,0.3s,baz=185,slow=13,SNR=18					
ECSD	**EROS Data Cent**	**14.41 101**		**Pn**	**05 46 57.9**	**-2.5**
BGNE	**Belgrade**	**14.56 111**	Pn	**Pn**	**05 46 59.1**	**-3.4**
GLA	**Glamis**	**15.15 175**		**Pn**	**05 47 10.4**	**0.0**
GLA			IAmb	IAmb	05 47 20.6	
	comp=Z,7.4nm,0.8s					
BAR	**Barrett**	**15.48 181**	Pn	**Pn**	**05 47 14.2**	**-0.7**
113A	**Mohawk Valley,**	**15.51 172**	P	**P**	**05 47 18.2**	**-1.4**
SPMN	**Marine on St.**	**16.40 92**	P	**Pn**	**05 47 27.2**	**+0.5**
SPMN			IAmb	IAmb	05 47 30.5	
	comp=Z,7.4nm,0.5s					
N35A	**Tabor**	**16.44 109**	P	**Pn**	**05 47 28.1**	**+0.9**
N35A			IAmb	IAmb	05 47 36.9	

	comp=Z,15nm,0.8s						
FCC	**Fort Churchill**	**16.88 43**		**Pn**	**05 47 30.3**	**-2.3**
D41A	**Chassel**	**18.72 83**	P	**P**	**05 47 54.3**	**-0.8**
D41A			IAmb	IAmb	05 48 01.3	
	comp=Z,33nm,1.3s					
P40A	**Paris**	**19.47 107**	P	**P**	**05 48 03.0**	**-0.3**
P40A			IAmb	IAmb	05 48 07.2	
	comp=Z,21nm,1.4s					
MGMO	**Mountain Grove**	**20.76 113**	P	**P**	**05 48 16.6**	**-0.8**
MGMO			IAmb	IAmb	05 48 23.2	
	comp=Z,7.7nm,0.9s					
W39A	**Magazine**	**21.16 120**	P	**P**	**05 48 21.5**	**-0.2**
W39A			IAmb	IAmb	05 48 26.5	
	comp=Z,23nm,1.4s					
TX31	**Lajitas Ar. Si**	**21.19 148**	P	**P**	**05 48 22.9**	**+0.6**
TX32	**Lajitas Array**	**21.19 148**	P	**P**	**05 48 22.9**	**+0.6**
TX32			IAmb	IAmb	05 48 24.3	
	comp=Z,6.4nm,0.8s					
TXAR	**Lajitas Array**	**21.20 148**	P	**P**	**05 48 23.6**	**+1.4**
	comp=Z,6.9nm,0.7s,baz=344,slow=9.5,SNR=45						
TXAR	**Lajitas Array**	**21.20 148**	P	**P**	**05 48 22.9**	**+0.7**
JCT	**Junction City**	**21.73 138**	P	**P**	**05 48 28.6**	**+0.7**
M24K	**Tolsona, Glenn**	**21.77 321**	P	**P**	**05 48 26.8**	**-1.3**
Z38A	**Mt. Pleasant**	**21.89 125**	P	**P**	**05 48 28.9**	**-0.6**
INK	**Inuvik**	**21.96 343**	P	**P**	**05 48 33.5**	**+3.4**
	comp=Z,1.0nm,0.6s,baz=145,slow=9.0,SNR=7.0						
INK	**Inuvik**	**21.96 343**	P	**P**	**05 48 29.3**	**-0.7**
X40A	**Basin Creek Fa**	**22.21 119**	P	**P**	**05 48 32.1**	**-0.9**
X40A			IAmb	IAmb	05 48 37.4	
	comp=Z,6.9nm,1.1s					
S44A	**Carbondale**	**22.32 108**	P	**P**	**05 48 33.3**	**-0.8**
S44A			IAmb	IAmb	05 48 33.8	
	comp=Z,8.4nm,0.7s					
SIUC	**Southern Illin**	**22.33 108**	P	**P**	**05 48 34.7**	**+0.5**
SIUC			IAmb	IAmb	05 48 36.0	
	comp=Z,8.7nm,0.7s					
ILAR	**Eielson Array**	**23.32 327**	P	**P**	**05 48 47.0**	**+2.5**
	comp=Z,1.0nm,0.8s,baz=126,slow=8.2,SNR=8.9						
P48A	**Milroy**	**23.81 100**	P	**P**	**05 48 47.8**	**-1.6**
P48A			IAmb	IAmb	05 48 50.8	
	comp=Z,11nm,1.3s					
MDM	**Murphy Dome**	**23.91 326**	P	**P**	**05 48 48.3**	**-1.9**
BWN	**Browne**	**24.02 324**	P	**P**	**05 48 49.9**	**-1.3**
TRF	**Thorofare Moun**	**24.05 322**	P	**P**	**05 48 49.6**	**-2.0**
TRF			IAmb	IAmb	05 48 58.2	
	comp=Z,5.8nm,0.8s					
ACSO	**Alum Creek Sta**	**25.04 96**	P	**P**	**05 49 00.7**	**0.0**
KURBB	**Kurchatov Arra**	**80.76 350**	P	**P**	**05 55 51.1**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=7.2,slow=5.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**97.97 60**	LR	LR	06 41 02.3		
	comp=Z,78nm,19.1s,baz=35,slow=35						

NNC 24 06:01:36.0±3.4, 53.46N×88.13E, h0km, mb3.6, mpv3.2, 3C-5D, Error ellipse: s-maj=27.6km s-min=16.7km az=63.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**2.03**	**285**	⇑Pn	Pn	06 02 10.6	-0.9
	4.6nm,0.8s						
ZAA0				⇓Sn	Sb	06 02 38.7	-0.8
	4.7nm,0.3s						
KURBB	**Kurchatov Arra**	**6.57**	**248**	⇓Pn	Pn	06 03 15.5	+1.7
	3.6nm,0.3s						
KURBB				⇓Sn	Sn	06 04 30.4	+1.0
	5.1nm,0.6s						
KURBB				⇑Lg	Lg	06 05 04.7	
	7.2nm,0.6s						
MK31	**Makanchi Array**	**7.66**	**212**	⇑Pn	Pn	06 03 30.7	+1.9
	0.4nm,0.5s,baz=27,slow=14,SNR=13						
MK31				⇓Sn	Sn	06 04 54.3	-1.9
	0.4nm,0.4s,baz=18,slow=31,SNR=3.9						
MK31				⇓Lg	Lg	06 05 39.1	
	0.4nm,0.3s,baz=35,slow=29,SNR=3.9						

WEL 24 06:13:21.6±0.5, 33.5S±4.×17.9W±1.0, h142km±14km, M4.3/51, mB4.9/43, ML4.9/31, MLv4.8/51, Mw(mB)4.2/43, Error ellipse: s-maj=0.0km s-min=0.0km az=108.3, South of Kermadec Islands

| Code | Station Name | Δ° | AZ° | Phase |

TSZ	**Takapari Road**	**8.44**	**210**	P	Pn	06 15 19.9	-1.1
DVHZ	**Dannevirke**	**8.56**	**208**	P	Pn	06 15 22.1	-0.5
ANWZ	**Angora Road**	**8.58**	**206**	P	Pn	06 15 22.4	-0.4
WAZ	**Wanganui**	**8.64**	**215**	P	Pn	06 15 23.7	+0.1
NEZ	**North Egmont**	**8.75**	**221**	P	Pn	06 15 27.1	+2.0
PKE	**Pukeiti**	**8.76**	**222**	P	Pn	06 15 27.0	+1.9
POWZ	**Post Office Ro**	**8.80**	**210**	P	Pn	06 15 24.9	-0.8
KHEZ	**Kahui Hut**	**8.81**	**221**	P	Pn	06 15 28.0	+2.1
PRWZ	**Pori Road**	**8.86**	**208**	P	Pn	06 15 24.7	-1.7
BFZ	**Birch Farm**	**8.86**	**207**	P	Pn	06 15 25.7	-0.7
TIWZ	**Tintock**	**9.08**	**208**	P	Pn	06 15 28.8	-0.7
MRZ	**Mangatainoka R**	**9.11**	**210**	P	Pn	06 15 27.9	-1.8
HOWZ	**Holdsworth Sta**	**9.33**	**209**	P	Pn	06 15 30.3	-2.5
TMWZ	**Te Maipa**	**9.36**	**207**	P	Pn	06 15 30.6	-2.6
OGWZ	**Otaki Gorge**	**9.41**	**211**	P	Pn	06 15 31.7	-2.1
MTW	**Mount Morrison**	**9.56**	**208**	P	Pn	06 15 33.5	-2.3
TRWZ	**Traveller**	**9.69**	**207**	P	Pn	06 15 36.0	-1.6
CAW	**Cannon Point**	**9.69**	**210**	P	Pn	06 15 35.0	-2.6
PAWZ	**Paruwai Farm**	**9.78**	**208**	P	Pn	06 15 37.0	-1.8
MSWZ	**Moikau Station**	**9.88**	**208**	P	Pn	06 15 37.6	-2.4
WEL	**Wellington**	**9.97**	**211**	P	Pn	06 15 39.0	-2.3
PLWZ	**Palliser**	**10.01**	**208**	P	Pn	06 15 39.0	-2.8
BHW	**Baring Head**	**10.03**	**210**	P	Pn	06 15 39.2	-2.7
CTZ	**Chatham Island**	**10.97**	**173**	P	Pn	06 16 10.0	+16
CTZ				S	Sn	06 18 00.1	+4.6

*IDC **24** 06:13:41.6±3.3, 45°.87N×129°.80W, h0km, mb3.0/1, mb1 3.5/5, mb1mx3.3/53, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=53.2km s-min=24.0km az=53.0*
*NEIC **24** 06:13:43.6±1.6, 45°.95N±0°.07×129°.9W±0°.2, h10km±1km, ML3.5/8, Error ellipse: s-maj=23.0km s-min=6.1km az=244.0*

ISC 24 06:13:39.1±8.0, 46°.0N±0°.1×130°.4W±0°.6, h10km, n28, σ0s76/19, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLWA	**Neilton Lookou**	**4.72**	**71**	Pn	**Pn**	**06 14 49.7**	**-0.6**
E03A	**Lebam**	**4.79**	**81**	Pn	**Pn**	**06 14 51.1**	**-0.1**
E03A	comp=E,44nm,3.0s			IAML		06 16 45.2	
E03A	comp=N,52nm,3.2s			IAML		06 17 38.4	
COR	**Corvallis**	**5.22**	**103**	Pn	**Pn**	**06 14 56.9**	**-0.3**
PGC	**Sidney**	**5.43**	**58**	Pn	**Pn**	**06 14 59.8**	**-0.2**
PGC	comp=N,26nm,4.0s			IAML		06 15 54.5	
PGC	comp=E,23nm,4.7s			IAML		06 17 40.9	
D05A	**Enumclaw**	**5.93**	**75**	Pn	**Pn**	**06 15 07.7**	**+0.7**
H04A	**Detroit Lake**	**5.96**	**100**	Pn	**Pn**	**06 15 08.1**	**+0.7**
LON	**Longmire**	**6.01**	**80**		**Pn**	**06 15 07.9**	**-0.2**
HUMO	**Hull Mountain**	**6.34**	**120**	Pn	**Pn**	**06 15 14.1**	**+1.4**
BBB	**Bella Bella**	**6.37**	**13**	Pn	Pn	06 15 18.8	+5.9
	comp=E,1.2nm,0.3s,baz=193,slow=14,SNR=8.9						
A05A	**Maple Falls**	**6.39**	**59**	Pn	**Pn**	**06 15 13.5**	**+0.2**
KRMB	**Red Mountain**	**6.51**	**131**	Pn	**Pn**	**06 15 14.3**	**-0.7**
B06A	**Marblemount**	**6.58**	**64**	Pn	**Pn**	**06 15 16.8**	**+1.0**
LTY	**Liberty**	**6.83**	**76**	Pn	**Pn**	**06 15 20.0**	**+0.6**
B08A	**Colville Reser**	**7.91**	**69**		**Pn**	**06 15 34.3**	**+0.1**
C09A	**Chrisman Ranch**	**8.51**	**73**	Pn	**Pn**	**06 15 42.7**	**+0.3**
BMO	**Blue Mountains**	**9.30**	**92**	Pn	**Pn**	**06 15 52.5**	**-0.7**
NEW	**Newport**	**9.35**	**71**	Pn	**Pn**	**06 15 52.5**	**-1.3**
	comp=E,0.2nm,0.3s,baz=284,slow=12,SNR=3.5						
PAHR	**Pah Rah Range**	**10.26**	**124**	Pn	**Pn**	**06 16 05.5**	**-0.9**
MFID	**Camas Ranch**	**10.71**	**99**	Pn	**Pn**	**06 16 12.7**	**+0.1**
NVAR	**Mina Array Bea**	**11.74**	**126**	Pn	**Pn**	**06 16 27.4**	**+0.6**
	comp=E,0.1nm,0.3s,baz=307,slow=12,SNR=1.2						
YKA	**Yellowknife Ar**	**18.83**	**23**	P	P	06 18 01.4	+2.6
	comp=E,0.0nm,0.3s,baz=218,slow=11,SNR=3.3						
ILAR	**Eielson Array**	**20.88**	**340**	P	P	06 18 27.2	+6.2
	comp=E,0.6nm,0.9s,baz=150,slow=10,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**57.18**	**265**	T	T	07 25 45.2	
	baz=49						
H11N3	**WAKE ISLAND Hy**	**57.18**	**265**	T	T	07 25 45.6	
	baz=49						
H11N1	**WAKE ISLAND Hy**	**57.20**	**265**	T	T	07 25 47.2	
	baz=49						
H11S1	**WAKE ISLAND Hy**	**58.14**	**264**	T	T	07 27 02.2	
	baz=47,slow=75,SNR=48						
H11S2	**WAKE ISLAND Hy**	**58.15**	**264**	T	T	07 27 02.8	
	baz=47,slow=75,SNR=64						
H11S3	**WAKE ISLAND Hy**	**58.16**	**264**	T	T	07 27 00.4	
	baz=47,slow=75,SNR=28						

NOU 24 06:13:53.3, 35°.15S×179°.95E, h229km, mb3.9, Off E. Coast of N. Island, N.Z., Off east coast of North Island

*NEIC **24** 06:15:50.2±0.8, 36°.739N±0°.006×97°.58W±0°.01, h4km±7km, mb_Lg3.2/106, Error ellipse: s-maj=1.8km s-min=0.7km az=71.0*
*ANF **24** 06:15:50.4±0.2, 36°.73N×97°.58W, h5km, ML3.8/16, Error ellipse: s-maj=2.8km s-min=2.5km az=129.0*
*IDC **24** 06:15:51.6±1.9, 36°.75N×97°.62W, h0km, mb1 3.4/3, mb1mx3.2/55, mbtmp3.1/3, ML3.7/2, Error ellipse: s-maj=28.8km s-min=11.9km az=103.0*

ISC 24 06:15:50.2±1.1, 36°.74N±0°.02×97°.57W±0°.02, h2km±9km, n115, σ0s51/92, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.26**	**295**		**Pg**	**06 15 55.3**	**+0.1**
GC02				Sg	**Sg**	**06 15 58.8**	**+0.3**
KAN13	**South Haven SW**	**0.28**	**15**	Pg	**Pg**	**06 15 55.8**	**+0.2**
KAN13				Sg	**Sg**	**06 15 59.7**	**+0.4**
KAN17	**Caldwell West**	**0.34**	**333**		**Pg**	**06 15 56.7**	**0.0**
KAN14	**Manchester OK**	**0.38**	**304**	Pg	**Pg**	**06 15 57.5**	**0.0**
KAN14				Sg	**Sg**	**06 16 02.7**	**+0.3**
KAN09	**Caldwell North**	**0.40**	**354**		**Pg**	**06 15 57.9**	**+0.1**
KAN09				Sg	**Sg**	**06 16 03.1**	**+0.2**
CROK	**Carrier**	**0.41**	**235**		**Pg**	**06 15 58.2**	**+0.3**
CROK				Sg	**Sg**	**06 16 03.9**	**+0.6**
KAN01	**Argonia South**	**0.44**	**340**		**Pg**	**06 15 58.6**	**0.0**
KAN05	**Bluff City Nor**	**0.44**	**327**		**Pg**	**06 15 58.6**	**0.0**
KAN05				Sg	**Sg**	**06 16 04.6**	**+0.2**
KS20	**Mayfield South**	**0.49**	**1**		**Pg**	**06 15 59.4**	**-0.1**
KS20				Sg	**Sg**	**06 16 06.0**	**+0.1**
OK032	**Salt Plains WL**	**0.52**	**277**		**Pg**	**06 16 00.1**	**0.0**
OK032				Sg	**Sg**	**06 16 07.1**	**+0.3**
KAN10	**Anthony SW Sta**	**0.57**	**312**		**Pg**	**06 16 01.0**	**-0.1**
KAN10				Sg	**Sg**	**06 16 08.4**	**0.0**
KAN08	**Anthony NE Sta**	**0.58**	**327**		**Pg**	**06 16 01.2**	**-0.1**
KAN08				Sg	**Sg**	**06 16 09.2**	**+0.3**
KAN16	**Harper SW Stat**	**0.63**	**321**		**Pg**	**06 16 02.0**	**-0.1**
KAN16				Sg	**Sg**	**06 16 10.5**	**+0.2**
KAN12	**Harper NE Stat**	**0.65**	**328**		**Pg**	**06 16 02.4**	**-0.3**
T35A	**Sooner Cattle**	**0.87**	**78**		**Pg**	**06 16 06.6**	**-0.1**
T35A				Sg	**Sg**	**06 16 18.3**	**+0.3**
T35B	**Sooner Cattle**	**0.87**	**78**	P	**Pg**	**06 16 06.6**	**-0.2**
	baz=259,SNR=112						
T35B				S	**Sg**	**06 16 18.2**	**+0.2**
	baz=259						
T35B	**Sooner Cattle**	**0.87**	**78**	P		06 16 06.6	
	baz=259,SNR=112						
T35B				S		06 16 18.2	
	baz=259						
QUOK	**Quay**	**0.90**	**129**		**Pg**	**06 16 07.3**	**-0.1**
QUOK				Sg	**Sg**	**06 16 18.3**	**-0.6**
OK029	**Liberty Lake**	**0.95**	**174**		**Pg**	**06 16 08.2**	**-0.1**
OK029				Sg	**Sg**	**06 16 21.3**	**+0.8**
OK031	**S. Brethren Rd**	**0.98**	**143**		**Pg**	**06 16 08.9**	**0.0**
OK031				Sg	**Sg**	**06 16 21.9**	**+0.2**
OK030	**Cody Creek RV**	**1.03**	**142**		**Pg**	**06 16 09.8**	**-0.1**
BCOK	**Bluff Creek, N**	**1.08**	**182**		**Pg**	**06 16 10.7**	**-0.2**
BCOK				Sg	**Sg**	**06 16 25.5**	**+0.6**
OK025	**Westminster Rd**	**1.17**	**171**		**Pg**	**06 16 12.3**	**-0.3**
OK025				Sg	**Sg**	**06 16 28.4**	**+0.5**
U32A	**Winter Ranch,**	**1.21**	**253**		**Pg**	**06 16 12.5**	**-0.8**
U32A	**Winter Ranch,**	**1.21**	**253**	P	**Pg**	**06 16 12.6**	**-0.8**
	baz=72,SNR=35						
U32A				S	**Sg**	**06 16 29.0**	**+0.1**
	baz=72						
U32A	**Winter Ranch,**	**1.21**	**253**	P		06 16 12.6	
	baz=72,SNR=35						
U32A				S		06 16 29.0	
	baz=72						
OKCFA	**Oklahoma City**	**1.33**	**176**		**Pn**	**06 16 15.0**	**-0.7**
OKCFA	**Oklahoma City**	**1.33**	**176**	P	**Pn**	**06 16 15.0**	**-0.7**
	baz=356,SNR=31						
OKCFA				S	**Sb**	**06 16 33.3**	**+0.1**
	baz=356						
OKCFA	**Oklahoma City**	**1.33**	**176**	P		06 16 15.0	
	baz=356,SNR=31						
OKCFA				S		06 16 33.3	
	baz=356						
OKCSW	**OKLAHOMA CITY**	**1.34**	**175**		**Pn**	**06 16 15.4**	**-0.5**
FNO	**Franklin**	**1.49**	**175**		**Pb**	**06 16 18.4**	**-0.1**
TUL1	**Leonard**	**1.66**	**119**	P	**Pn**	**06 16 20.2**	**0.0**
	baz=301,SNR=78						
TUL1				S	**Sb**	**06 16 42.7**	**0.0**
	baz=301						
TUL1	**Leonard**	**1.66**	**119**	P		06 16 20.2	
	baz=301,SNR=78						
TUL1				S		06 16 42.7	
	baz=301						
R32A	**Long Quarter,**	**1.91**	**332**		**Pn**	**06 16 23.9**	**+0.1**
R32A	**Long Quarter,**	**1.91**	**332**	P	**Pn**	**06 16 23.9**	**+0.1**
	baz=151,SNR=200						
R32A				S	**Sn**	**06 16 49.1**	**+0.7**
	baz=151						
R32A	**Long Quarter,**	**1.91**	**332**	P		06 16 23.9	
	baz=151,SNR=200						
R32A				S		06 16 49.1	
	baz=151						
WMOK	**Wichita Mounta**	**2.23**	**207**		**Pn**	**06 16 28.4**	**+0.3**
WMOK	**Wichita Mounta**	**2.23**	**207**	P	**Pn**	**06 16 28.3**	**+0.1**
	baz=26,SNR=34						
WMOK				S	**Sn**	**06 16 57.2**	**+1.0**
	baz=26						
WMOK	**Wichita Mounta**	**2.23**	**207**	P		06 16 28.3	
	baz=26,SNR=34						
WMOK				S		06 16 57.2	
	baz=26						
KSU1	**Kansas State U**	**2.48**	**18**		**Pn**	**06 16 31.9**	**+0.4**
KSU1	**Kansas State U**	**2.48**	**18**	P	**Pn**	**06 16 31.8**	**+0.2**
	baz=198						
KSU1				S	**Sn**	**06 17 02.9**	**+0.6**
	baz=198						
KSU1	**Kansas State U**	**2.48**	**18**	P		06 16 31.8	
	baz=198						
KSU1				S		06 17 02.9	
	baz=198						
U38A	**Gravette**	**2.58**	**96**		**Pn**	**06 16 33.5**	**+0.6**
U38A	**Gravette**	**2.58**	**96**	P	**Pn**	**06 16 33.6**	**+0.6**
	baz=278,SNR=44						
U38A	**Gravette**	**2.58**	**96**	P		06 16 33.6	
	baz=278,SNR=44						
CBKS	**Cedar Bluff**	**2.69**	**321**		**Pn**	**06 16 34.0**	**-0.5**
CBKS	**Cedar Bluff**	**2.69**	**321**	S	**Sb**	**06 17 12.5**	**0.0**
	baz=140						
CBKS	**Cedar Bluff**	**2.69**	**321**	S		06 17 12.5	
	baz=140						
X37A	**Clayton**	**2.79**	**140**		**Pn**	**06 16 36.3**	**+0.4**
X37A	**Clayton**	**2.79**	**140**	P	**Pn**	**06 16 36.6**	**+0.7**
	baz=321,SNR=75						
X37A	**Clayton**	**2.79**	**140**	P		06 16 36.6	
	baz=321,SNR=75						
HHAR	**Hobbs**	**2.96**	**98**	P	**Pn**	**06 16 38.9**	**+0.7**
	baz=280,SNR=11						
HHAR	**Hobbs**	**2.96**	**98**	P		06 16 38.9	
	baz=280,SNR=11						
Z35A	**Perchaven, San**	**3.41**	**176**	S	**Sn**	**06 17 25.9**	**+0.5**
	baz=356						
Z35A	**Perchaven, San**	**3.41**	**176**	S		06 17 25.9	
	baz=356						
S39A	**Bolivar**	**3.52**	**73**		**Pn**	**06 16 45.7**	**-0.1**
S39A	**Bolivar**	**3.52**	**73**	P	**Pn**	**06 16 46.0**	**+0.1**
	baz=256,SNR=11						
S39A	**Bolivar**	**3.52**	**73**	P		06 16 46.0	
	baz=256,SNR=11						
U40A	**Yellville**	**3.82**	**94**		**Pn**	**06 16 49.8**	**-0.2**
U40A	**Yellville**	**3.82**	**94**	P	**Pn**	**06 16 50.2**	**+0.2**
	baz=277,SNR=12						
U40A	**Yellville**	**3.82**	**94**	P		06 16 50.2	
	baz=277,SNR=12						
U40A				P		06 16 50.2	
	baz=277,SNR=12						
MIAR	**Mount Ida**	**3.92**	**123**	IAmb_Lg		06 17 58.5	
	comp=Z,100nm,1.0s						
MIAR	**Mount Ida**	**3.92**	**123**	P	**Pn**	**06 16 51.9**	**+0.5**
	baz=305						
MIAR	**Mount Ida**	**3.92**	**123**	P		06 16 51.9	
	baz=305						
N33A	**J Bar L Exete**	**3.99**	**1**	IAmb_Lg		06 18 02.2	
	comp=Z,51nm,0.7s						
Z38A	**Mt. Pleasant**	**4.07**	**148**	IAmb_Lg		06 18 02.3	
	comp=Z,61nm,0.9s						
MGMO	**Mountain Grove**	**4.27**	**83**	IAmb_Lg		06 18 04.2	
	comp=Z,58nm,0.8s						
P38A	**Dawn**	**4.29**	**47**	Pn	**Pn**	**06 16 57.1**	**+0.6**
N35A	**Tabor**	**4.38**	**20**	Pn	**Pn**	**06 16 58.3**	**+0.6**
N35A	**Tabor**	**4.38**	**20**	S	**Sn**	**06 17 49.6**	**+0.3**
	baz=201						
N35A	**Tabor**	**4.38**	**20**	S		06 17 49.6	
	baz=201						
ABTX	**Abilene, Hawle**	**4.45**	**203**	IAmb_Lg		06 18 11.8	
	comp=Z,42nm,0.9s						
X40A	**Basin Creek Fa**	**4.46**	**119**	Pn	**Pn**	**06 16 59.0**	**+0.2**
X40A				IAmb_Lg		06 18 20.0	
	comp=Z,47nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.48**	**99**	IAmb_Lg		06 18 10.0	
	comp=Z,64nm,0.7s						
R40A	**Maddies Statio**	**4.49**	**68**	Pn	**Pn**	**06 16 59.2**	**0.0**
R40A	**Maddies Statio**	**4.49**	**68**	P	**Pn**	**06 16 59.0**	**-0.2**
	baz=251,SNR=15						
R40A	**Maddies Statio**	**4.49**	**68**	P		06 16 59.0	
	baz=251,SNR=15						
WHAR	**Wooly Hollow**	**4.52**	**107**	IAmb_Lg		06 18 20.2	
	comp=Z,32nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.60**	**301**	IAmb_Lg		06 18 22.6	
	comp=Z,60nm,0.8s						
BGNE	**Belgrade**	**4.68**	**355**	IAmb_Lg		06 18 30.6	
	comp=Z,79nm,0.8s						
WHTX	**Lake Whitney,**	**4.74**	**179**	P	**Pn**	**06 17 02.4**	**-0.2**
	baz=359,SNR=11						
WHTX	**Lake Whitney,**	**4.74**	**179**	P		06 17 02.4	
	baz=359,SNR=11						
237A	**Washetta, Mont**	**4.95**	**162**	Pn	**Pn**	**06 17 05.2**	**-0.2**
237A				IAmb_Lg		06 18 40.8	
	comp=Z,36nm,0.9s						
CCM	**Cathedral Cave**	**5.20**	**73**	IAmb_Lg		06 18 40.0	
	comp=Z,43nm,0.8s						
LCAR	**Lake Charles**	**5.22**	**95**	IAmb_Lg		06 18 39.5	
	comp=Z,40nm,0.8s						
N38A	**Joes South For**	**5.28**	**39**	IAmb_Lg		06 18 49.3	
	comp=Z,58nm,0.8s						
OGNE	**Ogallala**	**5.46**	**322**	Pn	**Pn**	**06 17 13.3**	**+0.8**
OGNE				IAmb_Lg		06 18 52.3	
	comp=Z,31nm,0.8s						
T25A	**Trinidad**	**5.50**	**276**	IAmb_Lg		06 18 52.8	
	comp=Z,45nm,0.8s						
CCAR	**Cane Creek**	**5.51**	**119**	IAmb_Lg		06 19 00.4	
	comp=Z,65nm,0.8s						
FVM	**French Village**	**5.82**	**76**	Pn	**Pn**	**06 17 18.3**	**+0.8**
FVM				IAmb_Lg		06 18 53.1	
	comp=Z,60nm,0.9s						
435B	**Jarrell**	**5.94**	**180**	IAmb_Lg		06 19 10.4	
	comp=Z,37nm,0.8s						
SLM	**Saint Louis**	**6.12**	**70**	IAmb_Lg		06 19 05.9	
	comp=Z,27nm,0.8s						
143A	**Socs Landing,**	**6.48**	**127**	IAmb_Lg		06 19 29.6	
	comp=Z,26nm,0.9s						
JCT	**Junction City**	**6.52**	**197**	P		06 17 26.2	
	baz=16,SNR=5.4						
JCT	**Junction City**	**6.52**	**197**	Pn	**Pn**	**06 17 26.6**	**-0.5**
JCT				IAmb_Lg		06 19 32.7	
	comp=Z,44nm,0.8s						
JCT	**Junction City**	**6.52**	**197**	P	**Pn**	**06 17 26.2**	**-0.9**
	baz=16,SNR=5.4						
N41A	**Harden Midland**	**6.58**	**51**	IAmb_Lg		06 19 22.7	
	comp=Z,38nm,0.7s						
P43A	**Skaggs, Pawnee**	**6.97**	**63**	IAmb_Lg		06 19 37.4	
	comp=Z,29nm,0.7s						
OXF	**Oxford**	**7.01**	**106**	IAmb_Lg		06 19 35.6	
	comp=Z,34nm,0.8s						
ECSD	**EROS Data Cent**	**7.02**	**6**	Pn	**Pn**	**06 17 32.1**	**-1.9**
ECSD				IAmb_Lg		06 19 34.1	
	comp=Z,18nm,0.8s						
Y45A	**Yeager Farm, C**	**7.16**	**111**	IAmb_Lg		06 19 49.0	
	comp=Z,42nm,0.9s						
L40A	**Anamosa**	**7.24**	**41**	Pn	**Pn**	**06 17 36.1**	**-0.8**
L40A				IAmb_Lg		06 19 39.9	
	comp=Z,39nm,0.8s						
ANMO	**Albuquerque**	**7.44**	**259**	Pg	Pb	06 18 05.9	+5.8
	comp=Z,0.8nm,0.3s,baz=80,slow=17,SNR=10						
ANMO				Lg	Lg	06 19 42.1	
	comp=Z,1.3nm,0.3s,baz=5.2,slow=15,SNR=5.8						
HDIL	**Hopedale**	**7.51**	**57**	Pn	**Pn**	**06 17 39.9**	**-0.8**
HDIL				IAmb_Lg		06 20 06.9	
	comp=Z,36nm,0.7s						
SUSD	**Miller**	**7.77**	**353**	IAmb_Lg		06 20 01.5	
	comp=Z,26nm,0.8s						
O44A	**Mansfield**	**7.91**	**62**	IAmb_Lg		06 20 02.5	
	comp=Z,21nm,0.7s						
I37A	**Lemond, Waseca**	**7.93**	**22**	IAmb_Lg		06 20 13.3	
	comp=Z,28nm,0.9s						
L42A	**Oliver, Polo**	**8.06**	**47**	IAmb_Lg		06 20 11.4	
	comp=Z,33nm,0.8s						
Y22D	**IRIS PASSCAL I**	**8.09**	**254**	IAmb_Lg		06 20 28.9	
	comp=Z,36nm,0.9s						
146A	**Union**	**8.12**	**118**	IAmb_Lg		06 20 28.6	
	comp=Z,17nm,0.7s						
MNTX	**Cornudas Mount**	**8.19**	**234**	Pn	**Pn**	**06 17 50.2**	**+0.1**
JFWS	**Jewell Farm**	**8.35**	**40**	IAmb_Lg		06 20 12.5	
	comp=Z,25nm,0.7s						
T47A	**Sharon Grove**	**8.39**	**85**	IAmb_Lg		06 20 14.9	
	comp=Z,18nm,0.8s						
P46A	**Rosedale**	**8.65**	**67**	IAmb_Lg		06 20 26.1	
	comp=Z,26nm,0.9s						
M44A	**Midewin, Midew**	**8.74**	**55**	IAmb_Lg		06 20 30.6	
	comp=Z,26nm,1.2s						
V48A	**Smith Brothers**	**8.74**	**93**	IAmb_Lg		06 20 24.2	
	comp=Z,15nm,1.0s						
RSSD	**Black Hills**	**8.87**	**328**	Pn	**Pn**	**06 17 59.3**	**-0.1**
X48A	**Hartselle**	**8.87**	**102**	IAmb_Lg		06 20 30.6	
	comp=Z,14nm,0.8s						
I40A	**Norwalk**	**8.90**	**34**	IAmb_Lg		06 20 48.5	
	comp=Z,18nm,0.8s						
SFIN	**Lafayette**	**8.97**	**63**	IAmb_Lg		06 20 42.0	
	comp=Z,22nm,0.8s						
TXAR	**Lajitas Array**	**8.98**	**216**	Pn	**Pn**	**06 18 00.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=39,slow=11,SNR=11						
TXAR				Pg	Pg	06 18 29.7	-13
	comp=Z,0.2nm,0.3s,baz=44,slow=13,SNR=5.8						
TXAR				Lg	Lg	06 20 29.4	
	comp=Z,0.4nm,0.3s,baz=41,slow=23,SNR=1.7						
BLO	**Bloomington**	**9.06**	**71**	IAmb_Lg		06 20 36.0	
	comp=Z,24nm,0.7s						
K22A	**Casper**	**9.08**	**313**	IAmb_Lg		06 20 44.1	
	comp=Z,13nm,0.8s						
CLTN	**Cedars of Leba**	**9.08**	**91**	IAmb_Lg		06 20 39.7	
	comp=Z,22nm,1.1s						
WCI	**Wyandotte Cave**	**9.09**	**77**	IAmb_Lg		06 20 42.6	
	comp=Z,19nm,0.8s						
F33A	**5 Mile Ranch,**	**9.14**	**6**	IAmb_Lg		06 20 36.3	
	comp=Z,17nm,1.0s						
SPMN	**Marine on St.**	**9.21**	**22**	IAmb_Lg		06 20 48.7	
	comp=Z,15nm,0.9s						
L44A	**Lake County Fo**	**9.23**	**51**	IAmb_Lg		06 20 46.4	
	comp=Z,33nm,1.1s						
K43A	**Burlington**	**9.28**	**47**	IAmb_Lg		06 20 54.0	
	comp=Z,24nm,0.9s						
LRAL	**Lakeview Retre**	**9.44**	**110**	IAmb_Lg		06 20 49.4	
	comp=Z,14nm,1.1s						
I42A	**Draeger Farm,**	**9.73**	**40**	IAmb_Lg		06 21 10.3	
	comp=Z,14nm,0.8s						
FPAL	**Fort Paine**	**9.98**	**99**	IAmb_Lg		06 21 13.3	
	comp=Z,14nm,0.8s						
PDAR	**Pinedale Array**	**11.01**	**307**	Pn	**Pn**	**06 18 30.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=117,slow=16,SNR=2.0						
PDAR				Pg		06 19 16.7	
	comp=Z,0.3nm,0.3s,baz=112,slow=20,SNR=5.9						
PDAR				Lg	Lg	06 21 35.5	
	comp=Z,0.4nm,0.3s,baz=139,slow=28,SNR=6.6						
ULM	**Lac du Bonnet**	**13.56**	**5**	Pn	**Pn**	**06 19 01.9**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=211,slow=12,SNR=3.1						
ULM				Sn	Sn	06 21 21.8	-13
	comp=Z,0.3nm,0.3s,baz=233,slow=2.9,SNR=4.2						
ULM				Lg	Lg	06 22 49.0	
	comp=Z,0.2nm,0.3s,baz=265,slow=20,SNR=3.2						

*IDC **24** 06:20:41.1±0.6, 36°.03N×68°.91E, h0km, mb4.2/24, mb1 4.3/29, mb1mx4.1/62, mbtmp4.2/29, ML3.6/5, MS3.7/13, Ms1 3.7/13, ms1mx3.3/56, Error ellipse: s-maj=13.8km s-min=12.6km az=13.0*
*NNC **24** 06:20:44.8±2.2, 36°.55N×68°.49E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=23.6km s-min=10.7km az=158.0*
*MOS **24** 06:20:45.4±1.2, 36°.33N×68°.76E, h33km, mb4.5/15, Error ellipse: s-maj=7.3km s-min=3.9km az=70.7*
*BJI **24** 06:20:45.6±0.0, 36°.64N×68°.52E, h43km, mB4.7/23, mb4.6/33, ML4.3/1, Ms4.0/7, Ms7 3.8/9*
*NEIC **24** 06:20:47.0±2.7, 36°.28N±0°.05×68°.64E±0°.07, h37km±6km, mb4.6/24, Error ellipse: s-maj=8.9km s-min=6.7km az=117.0*

ISC 24 06:20:46.0±0.3, 36°.23N±0°.03×68°.63E±0°.04, h30km, n202, σ2s06/227, mb4.4/44, MS3.6/15, 17C-8D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.72**	**169**	PN	**Pb**	**06 21 17.5**	**+0.4**
KBL						06 21 39.9	
KBL	**Kabul**	**1.72**	**169**		**Pb**	**06 21 17.5**	**+0.4**
KBL				Sn	**Sb**	**06 21 39.9**	**+1.6**
CEP	**Cherat**	**3.60**	**131**	P	**Pn**	**06 21 43.4**	**+3.4**
CEP				S	**Sn**	**06 22 27.0**	**+5.4**
DRK	**Karamyk**	**4.10**	**37**		**Pn**	**06 21 49.0**	**+2.1**
BTK	**Batken**	**4.19**	**24**

BOOM Boomskoye usch 8.43 40 P **Pn** 06 22 46.6 +0.4
BOOM Boomskoye usch 8.43 40 Pn **Pn** 06 22 46.6 +0.4
SGDS Sogindy 8.56 31 *e*P **Pn** 06 22 46.8 -1.2
comp=E,4.6nm,0.5s,baz=31
SGDS Sogindy 8.56 31 *e*P **Pn** 06 22 46.7 -1.2
SGDS pmax pmax
comp=Z,5.0nm,0.5s
GEYT Alibeck 8.57 285 Pn **Pn** 06 22 48.7 +0.6
comp=Z,3.2nm,0.3s,baz=108,slow=9.8,SNR=11
GEYT Sn **Sn** 06 24 23.1 -0.7
comp=Z,4.9nm,0.3s,baz=307,slow=44,SNR=2.5
GEYT Alibeck 8.57 285 **Pn** 06 22 47.7 -0.4
GYA0 ALIBECK ARRAY 8.57 285 P **Pn** 06 22 48.5 +0.4
GYA0 06 24 23.4
GYA0B ALIBECK ARRAY 8.57 285 ⇓Pn **Pn** 06 22 48.5 +0.4
GYA0B ⇑Sn **Sn** 06 24 23.5 -0.3
GYA0B ALIBECK ARRAY 8.57 285 **Pn** 06 22 48.5 +0.4
TKM2 Tokmak 2 8.57 37 P **Pn** 06 22 48.6 +0.3
SNR=14
TKM2 Tokmak 2 8.57 37 ⇑Pn **Pn** 06 22 48.2 0.0
comp=Z,17nm,0.6s
TKM2 ⇓Sn **Sn** 06 24 22.8 -1.2
comp=Z,14nm,0.6s
TKM2 Tokmak 2 8.57 37 P **Pn** 06 22 48.2 0.0
TKM2 06 24 22.7
SMLA Simla 8.74 123 *e*P **Pn** 06 22 52.7 +2.4
SMLA *e*S **Sn** 06 24 25.3 -2.6
SMLA IAML 06 24 27.9
comp=E,205nm,0.6s
SMLA IAML 06 24 28.7
comp=N,235nm,0.5s
KDJ Kajisay 8.87 46 P **Pn** 06 22 52.2 -0.1
KDJ Kajisay 8.87 46 **Pn** 06 22 52.2 -0.1
TNSS Tian-Shan 9.34 41 *e*P **Pn** 06 22 57.9 -1.1
baz=42
TNSS Tian-Shan 9.34 41 *e*P **Pn** 06 22 57.9 -1.1
AAA Alma-Ata 9.45 40 *e*P **Pn** 06 22 59.5 -0.6
baz=41
AAA LR LR 06 26 23.3
comp=N,187nm,12.8s,baz=41
AAA Alma-Ata 9.45 40 *e*P **Pn** 06 22 59.4 -0.6
AAA MLR MLR
comp=Z,187nm,13.0s
MDOK Medeo 9.48 41 *e*P **Pn** 06 23 00.2 -0.5
baz=41
MDOK LR LR 06 26 20.5
comp=Z,192nm,12.3s,baz=41
MDOK Medeo 9.48 41 ⇑Pn **Pn** 06 23 00.3 -0.5
comp=Z,19nm,0.6s
MDOK Medeo 9.48 41 *e*P **Pn** 06 23 00.1 -0.5
MDOK MLR MLR
comp=Z,192nm,12.0s
BTLS Baital 9.71 23 *e*P **Pn** 06 23 03.8 +0.2
baz=24
BTLS Baital 9.71 23 *e*P **Pn** 06 23 03.8 +0.2
PRZ Przheval'sk 9.80 47 P **Pn** 06 23 04.6 -0.5
PRZ Przheval'sk 9.80 47 Pn **Pn** 06 23 04.6 -0.5
SATY Saty 10.16 45 *e*P **Pn** 06 23 09.2 -0.7
baz=46
SATY Saty 10.16 45 *e*P **Pn** 06 23 09.2 -0.7
UZB Uzynbulak 10.57 46 *e*P **Pn** 06 23 14.3 -1.3
baz=47
UZB Uzynbulak 10.57 46 *e*P **Pn** 06 23 14.2 -1.3
SHLS Shalkode 10.83 47 *e*P **Pn** 06 23 20.5 +1.4
baz=49
SHLS Shalkode 10.83 47 *e*P **Pn** 06 23 20.5 +1.4
TDK Taldyqorghan 11.48 37 *e*P **Pn** 06 23 25.7 -2.1
comp=Z,6.1nm,0.5s,baz=38
TDK LR LR 06 27 37.4
comp=Z,145nm,12.2s,baz=38
TDK Taldyqorghan 11.48 37 *e*P **Pn** 06 23 25.7 -2.1
TDK pmax pmax
comp=Z,6.0nm,0.5s
TDK MLR MLR
comp=Z,145nm,12.0s
BRZS Berezniki 14.06 11 *e*P **Pn** 06 24 01.0 -2.0
baz=11
BRZS Berezniki 14.06 11 *e*P **Pn** 06 24 01.0 -2.0
AB31 Akbulak array 14.48 337 ⇑Pn **Pn** 06 24 06.8 -2.0
comp=Z,5.0nm,0.5s,baz=154,slow=12,SNR=127
AB31 Sn **Sn** 06 26 42.1 -6.1
comp=Z,6.9nm,0.8s,baz=155,slow=22,SNR=3.2
AB31 Akbulak array 14.48 337 *i* P **Pn** 06 24 06.8 -2.0
AB31 *e* 06 26 42.1
ABKAR Akbulak array 14.48 337 Pn **Pn** 06 24 07.3 -1.5
ABKAR Akbulak array 14.48 337 **Pn** 06 24 06.2 -2.6
MAKZ Makanchi 14.53 39 P **P** 06 24 15.3 -0.4
MAKZ Makanchi 14.53 39 **P** 06 24 15.3 -0.4
PYUN Piuthan 14.60 120 *e*P **Pn** 06 24 11.6 +0.8
comp=Z,9.2nm,0.4s
MK31 Makanchi Array 14.68 40 ⇓Pn **Pn** 06 24 08.7 -2.8
comp=Z,4.3nm,0.6s,baz=200,slow=7.3,SNR=24
MK31 Makanchi Array 14.68 40 P **P** 06 24 16.6 -0.8
MK31 Makanchi Array 14.68 40 **P** 06 24 16.6 -0.8
MKAR Makanchi Array 14.68 40 Pn **Pn** 06 24 08.7 -2.8
comp=Z,0.1nm,0.3s,baz=231,slow=14,SNR=32
MKAR LR LR 06 30 29.0
comp=Z,239nm,18.8s,baz=224,slow=40
MKAR Makanchi Array 14.68 40 **P** 06 24 17.2 -0.2
DANN Dangsing 15.00 117 *e*P **Pn** 06 24 17.7 +1.5
comp=Z,11nm,0.5s
BHPL Bhopal 15.02 147 *e*P **Pn** 06 24 15.2 -1.0
BHPL *e*S **Sn** 06 26 52.3 -9.3
KOLN Koldanda 15.23 119 *e*P **Pn** 06 24 19.3 +0.1
comp=Z,3.4nm,0.3s
GKN Gorkha 15.83 117 *e*P **P** 06 24 28.7 -1.8
comp=Z,14nm,0.4s
KURBB Kurchatov Arra 16.06 23 Pn **Pn** 06 24 25.5 -4.0
comp=Z,0.1nm,0.3s,baz=214,slow=11,SNR=8.4
KURBB Kurchatov Arra 16.06 23 ⇑Pn **Pn** 06 24 25.5 -4.0
comp=Z,9.6nm,0.7s
KURBB Kurchatov Arra 16.06 23 P **Pn** 06 24 25.4 -4.0
AKTO Aktyubinsk 16.14 335 Pn **Pn** 06 24 29.6 -0.9
comp=Z,0.5nm,0.3s,baz=150,slow=13,SNR=11
AKTO Sn **Sn** 06 27 22.6 -5.9
comp=Z,0.2nm,0.3s,baz=168,slow=22,SNR=1.7
AKTO Aktyubinsk 16.14 335 ⇑Pn **Pn** 06 24 29.0 -1.5
comp=Z,11nm,0.8s
AKTO ⇑Sn **Sn** 06 27 22.5 -5.9
comp=Z,9.5nm,0.8s
AKTO Aktyubinsk 16.14 335 P **Pn** 06 24 29.0 -1.5
AKTO 06 27 22.5
KURK Kurchatov 16.17 23 P **Pn** 06 24 25.5 -5.4
DMN Daman 16.40 117 *e*P **P** 06 24 35.5 -1.4
comp=Z,18nm,0.6s
KKN Kakani 16.42 116 *e*P **P** 06 24 35.9 -1.1
comp=Z,51nm,0.8s
WMQ Urumqi 16.43 57 *e*P **P** 06 24 36.3 -0.6
WMQ pP sP 06 24 47.5 -1.5
WMQ S **Sn** 06 27 33.4 -2.4
WMQ SS **SnSn** 06 27 54.1 +5.3
WMQ pmax pmax
comp=Z,15nm,1.3s
WMQ pmax pmax
comp=Z,130nm,4.3s
WMQ LR LR
comp=Z,380nm,29.0s
ZSN Zaisan 16.46 42 *e*P **Pn** 06 24 34.9 +0.3
baz=42
ZSN Zaisan 16.46 42 *e*P **Pn** 06 24 34.9 +0.3
SEM Semipalatinsk 16.47 27 *e*P **Pn** 06 24 34.1 -0.9
baz=27
SEM *i* LR LR 06 30 36.8
comp=Z,76nm,11.8s,baz=27
SEM Semipalatinsk 16.47 27 *e*P **Pn** 06 24 34.1 -0.9
SEM MLR MLR
comp=Z,76nm,12.0s
PKIN Phulchoki 16.63 117 *e*P **P** 06 24 38.4 -1.0
comp=Z,7.5nm,0.2s
PKI Pulchoki 16.64 117 *e*P **Pn** 06 24 38.3 +0.9
comp=Z,21nm,0.6s
GUN Gumba 16.79 115 *e*P **P** 06 24 40.9 -0.4
comp=Z,12nm,0.4s
BVAR Borovoye Array 16.84 4 Pn **Pn** 06 24 36.6 -2.8
comp=Z,0.2nm,0.3s,baz=160,slow=14,SNR=4.8
BVAR Sn **Sn** 06 27 44.1 -1.3
comp=Z,0.4nm,0.3s,baz=186,slow=26,SNR=3.2
BRVK Borovoye 16.87 3 *c*e*P* **Pn** 06 24 37.3 -2.4
BRVK pmax pmax
comp=Z,9.0nm,2.5s
BRVK Borovoye 16.87 3 P **Pn** 06 24 39.7 0.0
JIRN Jiri 17.16 115 *e*P **P** 06 24 45.5 +0.1
comp=Z,23nm,0.4s
MAK Makhachkala 17.59 299 *e*P **Pn** 06 24 48.3 -0.5
MAK *e*S **Sn** 06 28 04.1 +0.3
MAK pmax pmax
comp=Z,18nm,0.3s
MAK MLR MLR
comp=Z,231nm,17.0s
RAMN Ramite 17.86 116 *e*P **Pn** 06 24 52.6 +0.1
comp=Z,24nm,0.4s
TAPN Taplejung 18.45 113 *e*P **Pn** 06 25 00.9 +1.1
comp=Z,18nm,0.4s
ODAN Odare 18.49 115 *e*P **P** 06 24 59.7 -0.2
comp=Z,10nm,0.5s
GNI Garni 19.17 289 *i* P **Pn** 06 25 09.4 +1.2
DGZ Jazzator, Alta 19.18 40 *i* P **P** 06 25 06.9 -0.3
HYB Hyderabad 20.70 152 *i* P **P** 06 25 20.0 -3.9
ZAA0 Zalesovo Array 20.99 27 P **P** 06 25 26.0 -0.7
ZAA0 IAmb IAmb 06 25 30.9
comp=Z,16nm,0.7s
ZALV Zalesovo Beam 20.99 27 P **P** 06 25 26.0 -0.7
comp=Z,14nm,0.5s,baz=221,slow=11,SNR=62
ZALV S **S** 06 29 16.2 -2.6
comp=Z,0.6nm,0.5s,baz=222,slow=19,SNR=1.5
ZALV LR LR 06 34 36.2
comp=Z,234nm,19.3s,baz=308,slow=40
ZALV Zalesovo Beam 20.99 27 P **P** 06 25 26.0 -0.7
ZALV Zalesovo Beam 20.99 27 P **P** 06 25 25.3 -1.4
KBZ Khabaz 21.04 299 P **P** 06 25 30.0 +2.7
comp=Z,1.2nm,0.7s,baz=193,slow=11,SNR=1.6
KBZ LR LR 06 35 41.6
comp=Z,128nm,21.5s,baz=91,slow=42
KBZ Khabaz 21.04 299 P **P** 06 25 30.0 +2.7
KIV Kislovodsk 21.24 299 *e*P **P** 06 25 31.9 +2.3
KIV *e*S **S** 06 29 26.6 +2.5
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,290nm,14.0s
ARU Arti 21.32 345 P **P** 06 25 32.8 +2.6
comp=Z,0.7nm,0.4s,baz=292,slow=22,SNR=1.7
ARU S **S** 06 29 21.3 -4.0
comp=Z,0.6nm,0.3s,baz=134,slow=22,SNR=1.5
ARU LR LR 06 34 55.2
comp=Z,214nm,19.1s,baz=149,slow=40
ARU Arti 21.32 345 *c i*P **P** 06 25 30.8 +0.6
ARU 06 25 46.8
ARU S **S** 06 29 27.6 +2.3
ARU SS **SnSn** 06 29 51.0 +2.3
ARU pmax pmax
comp=Z,5.0nm,1.5s
ARU Arti 21.32 345 P **P** 06 25 30.1 -0.1
ARU IAmb IAmb 06 25 42.7
comp=Z,10nm,0.6s
BELG Belogornoye 21.94 324 P **P** 06 25 38.0 +1.1
comp=Z,15nm,0.7s,baz=250,slow=2.2,SNR=5.2
BELG S **S** 06 29 35.9 -1.5
comp=Z,6.0nm,0.7s,baz=356,slow=11,SNR=1.7
BELG Belogornoye 21.94 324 P **P** 06 25 38.0 +1.1
MARD Mardin 22.31 281 P **P** 06 25 40.2 -1.0
SHL Shillong 22.55 112 P **P** 06 25 42.4 -1.5
SHL pmax pmax
comp=Z,52nm,1.4s
SHL Shillong 22.55 112 P **P** 06 25 42.4 -1.5
GTA Gaotai 24.77 73 *e*P **P** 06 26 05.8 +0.5
GTA pP sP 06 26 15.8 -2.0
GTA sP pP 06 26 19.4 +5.3
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,39nm,4.0s
GTA LR LR
comp=Z,130nm,16.4s
GTA LR LR
comp=Z,150nm,18.5s
GTA LR LR
comp=Z,150nm,18.2s
LZH Lanzhou 28.34 80 *e*P **P** 06 26 35.5 -1.9
LZH pP pP 06 26 45.8 -0.5
LZH sP sP 06 26 51.3 +1.3
LZH pmax pmax
comp=Z,23nm,1.2s
ZAK Zakamensk 28.61 49 *e*P **P** 06 26 40.0 +0.3
ZAK pmax pmax
comp=Z,3.0nm,1.4s
OBN Obninsk 28.92 321 LR LR 06 40 01.7
comp=Z,42nm,19.8s,baz=218,slow=40
OBN Obninsk 28.92 321 *e*P **P** 06 26 44.3 +2.2
OBN *e*PP **sP** 06 26 53.9 -1.0
OBN *e* 06 27 41.7
OBN *e*S **S** 06 31 22.9 -7.7
OBN pmax pmax
comp=Z,5.0nm,0.6s
OBN MLR MLR
comp=Z,191nm,18.0s
TLY Talaya 29.22 47 LR LR 06 39 11.7
comp=Z,81nm,18.4s,baz=240,slow=38
TLY Talaya 29.22 47 *i* P **P** 06 26 45.7 +0.8
TLY pmax pmax
comp=Z,2.0nm,0.7s
SONM Songino Array 30.06 55 P **P** 06 26 52.7 +0.2
comp=Z,4.7nm,0.9s,baz=259,slow=9.8,SNR=15
SONM LR LR 06 40 08.9
comp=Z,209nm,21.5s,baz=334,slow=39
SONM Songino Array 30.06 55 P **P** 06 26 53.5 +0.9
SONM pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 30.06 55 P **P** 06 26 53.5 +0.9
ULN Ulaanbaatar 30.50 56 *c*e*P* **P** 06 26 57.3 +0.8
ULN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 30.50 56 P **P** 06 26 55.4 -1.1
AKASG Malin Array Be 31.64 310 P **P** 06 27 08.5 +2.3
comp=Z,0.9nm,0.5s,baz=89,slow=7.1,SNR=4.9
AKASG LR LR 06 42 30.4
comp=Z,99nm,18.2s,baz=55,slow=41
AKASG Malin Array Be 31.64 310 *c*e*P* **P** 06 27 09.1 +2.9
AKASG pmax pmax
comp=Z,1.0nm,0.5s
CHTO Chiang Mai 31.81 115 P **P** 06 27 06.5 -1.6
CHTO pmax pmax
comp=Z,9.0nm,1.5s
CHTO Chiang Mai 31.81 115 P **P** 06 27 06.5 -1.6
CHTO IAmb IAmb 06 27 17.6
comp=Z,8.5nm,1.5s
CMAR Chiang Mai Arr 32.03 115 P **P** 06 27 08.5 -1.5
comp=Z,1.1nm,0.3s,baz=291,slow=7.7,SNR=4.9
CMAR LR LR 06 43 49.1
comp=Z,91nm,18.4s,baz=30,slow=44
CMAR Chiang Mai Arr 32.03 115 *c*e*P* **P** 06 27 11.1 +1.0
CMAR pmax pmax
comp=Z,1.0nm,0.3s
MLR Muntele Rosu 33.25 300 P **P** 06 27 24.3 +3.7
comp=Z,1.7nm,0.7s,baz=175,slow=24,SNR=2.4
HHC Hu-ho-hao-te 33.65 69 *e*P **P** 06 27 26.0 +1.9
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,75nm,6.0s
NRIK Noril'sk 34.76 12 P **P** 06 27 34.6 +1.4
comp=Z,4.5nm,0.5s,baz=184,slow=7.3,SNR=5.6
NRIK LR LR 06 44 20.9
comp=Z,152nm,18.9s,baz=248,slow=41
NRIK Noril'sk 34.76 12 *c*e*P* **P** 06 27 34.3 +1.1
NRIK pmax pmax
comp=Z,4.0nm,0.4s
NRIK Noril'sk 34.76 12 **P** 06 27 33.4 +0.2
NRIK IAmb IAmb 06 27 44.1
comp=Z,8.8nm,1.1s
FINES FINESS Array B 36.66 327 P **P** 06 27 53.1 +3.6
comp=Z,1.1nm,0.6s,baz=103,slow=10,SNR=1.6
BOD Bodaibo 36.77 40 *e*P **P** 06 27 49.7 -0.9
BOD pmax pmax
comp=Z,27nm,1.3s
ARCES ARCESS Array B 40.68 338 P **P** 06 28 24.7 +1.5
comp=Z,2.1nm,0.7s,baz=91,slow=6.2,SNR=6.0
NJ2 Nanjing 41.41 81 *e*P **P** 06 28 30.3 +0.6
KULM Kulim 42.56 129 P **P** 06 28 38.2 -1.0
KULM IAmb IAmb 06 28 39.5
comp=Z,10nm,1.1s
NC602 NORSAR Array S 43.25 323 P **P** 06 28 42.7 -1.7
IPM Ipoh 43.42 129 P **P** 06 28 45.2 -1.1
IPM IAmb IAmb 06 28 46.2
comp=Z,8.6nm,0.6s
NOA NORSAR Array B 43.45 323 P **P** 06 28 47.1 +1.1
comp=Z,0.5nm,0.6s,baz=120,slow=5.9,SNR=3.1
MDJ Mudanjiang 46.20 60 P **P** 06 29 07.0 -1.0
MDJ pmax pmax
comp=Z,9.0nm,1.0s
MDJ pmax pmax
comp=Z,50nm,4.1s
TIXI Tiksi 46.74 22 P **P** 06 29 11.4 -0.5
comp=Z,5.9nm,0.6s,baz=278,slow=4.2,SNR=25
TIXI Tiksi 46.74 22 *c*e*P* **P** 06 29 12.3 +0.4
TIXI pmax pmax
comp=Z,45nm,1.0s
TIXI Tiksi 46.74 22 P **P** 06 29 11.6 -0.3
KSAR Wonju Array Be 46.74 70 P **P** 06 29 10.8 -1.6
KSAR Wonju Array Be 46.74 70 P **P** 06 29 10.8 -1.6
KSRS Korea Array 46.77 70 P **P** 06 29 10.5 -2.1
comp=Z,1.9nm,0.6s,baz=276,slow=7.3,SNR=6.9
KSRS LR LR 06 51 17.4
comp=Z,90nm,19.2s,baz=30,slow=39
KLR Kul'dur 46.84 53 *c*e*P* **P** 06 29 13.1 +0.1
KLR pmax pmax
comp=Z,3.0nm,0.8s
ESDC Sonseca Array 55.89 297 P **P** 06 30 23.1 +2.1
comp=Z,1.2nm,0.8s,baz=52,slow=7.1,SNR=6.9
ESDC Sonseca Array 55.89 297 IAmb IAmb 06 30 24.7
comp=Z,0.9nm,0.9s
BILL Bilibino 59.68 26 ⇑*e*P **P** 06 30 48.2 +1.1
BILL *e**PP **pP** 06 30 56.8 +0.2
BILL *e**SP **sP** 06 31 03.1 +2.9
BILL S **S** 06 39 04.0 +8.6
BILL SS **SS** 06 42 58.0 +7.4
BILL pmax pmax
comp=Z,4.0nm,0.8s
BILL MLR MLR
comp=Z,74nm,15.0s
TOAO Torodi Ar. Sit 63.80 267 P **P** 06 31 16.1 +0.5
TORD Torodi Ar. Bea 63.80 267 P **P** 06 31 16.1 +0.5
comp=Z,5.5nm,0.8s,baz=44,slow=6.2,SNR=41
TORD Torodi Ar. Bea 63.80 267 P **P** 06 31 15.9 +0.2
TORD IAmb IAmb 06 31 17.3
comp=Z,5.9nm,0.8s
TULEG Thule 64.37 350 P **P** 06 31 18.4 -0.1
TULEG IAmb IAmb 06 31 28.8
comp=Z,4.8nm,0.8s
KOWA Kowa 67.67 272 P **P** 06 31 40.5 -0.1
TOLK Toolik Lake Re 71.65 14 P **P** 06 32 01.9 -2.5
DBIC Dimbokro 72.77 266 P **P** 06 32 12.8 +1.0
comp=Z,7.4nm,0.8s,baz=49,slow=9.3,SNR=8.5
IMAR Indian Mountai 73.00 17 P **P** 06 32 11.2 -1.2
BMAR Burnt Mountain 73.64 13 P **P** 06 32 16.1 -0.1
BMAR **pP** 06 32 26.7 +0.8
C36M Paulatuk 74.32 5 P **P** 06 32 20.4 +0.3
INK Inuvik 74.46 8 P **P** 06 32 21.9 +1.0
comp=Z,2.2nm,0.6s,baz=355,slow=7.9,SNR=19
INK Inuvik 74.46 8 P **P** 06 32 20.6 -0.3
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 74.46 8 P **P** 06 32 20.6 -0.3
NEA2 Nenana 75.23 16 P **P** 06 32 25.0 -0.4
NEA2 IAmb IAmb 06 32 26.6
comp=Z,5.9nm,0.9s
TCOL CIGO, UAF Yank 75.25 15 P **P** 06 32 25.3 -0.2
TCOL IAmb IAmb 06 32 26.9
comp=Z,6.7nm,0.7s
COLA College 75.25 15 P **P** 06 32 25.5 0.0
COLA pmax pmax
comp=Z,7.0nm,0.8s
COLA College 75.25 15 P **P** 06 32 25.5 0.0
COLA IAmb IAmb 06 32 26.9
comp=Z,6.6nm,0.8s
ILAR Eielson Array 75.55 15 P **P** 06 32 27.2 -0.1
comp=Z,1.0nm,0.8s,baz=301,slow=4.7,SNR=11
ILAR Eielson Array 75.55 15 P **P** 06 32 26.2 -1.1
ILAR Eielson Array 75.55 15 P **P** 06 32 26.2 -1.1
KTH Kantishna Hill 75.70 17 P **P** 06 32 27.7 -0.5
KTH IAmb IAmb 06 32 47.8
comp=Z,13nm,1.4s
FITZ Fitzroy Crossi 76.29 125 P **P** 06 32 29.5 -2.6
comp=Z,2.8nm,0.8s,baz=323,slow=5.1,SNR=2.9
BOSA Boshof 76.33 218 P **P** 06 32 32.6 +0.3
comp=Z,4.3nm,0.8s,baz=19,slow=4.5,SNR=6.4
BCAR Beaver Creek A 78.09 14 P **P** 06 32 40.8 -0.9
YKA Yellowknife Ar 81.58 2 P **P** 06 33 01.0 +0.5
comp=Z,1.3nm,0.7s,baz=352,slow=5.0,SNR=28
WRA Warramunga Arr 83.49 120 P **P** 06 33 08.9 -2.2
comp=Z,1.6nm,0.6s,baz=321,slow=4.8,SNR=21
DLBC Dease Lake 84.40 10 LR LR 07 15 26.0
comp=Z,74nm,18.5s,baz=115,slow=39
ASAR Alice Springs 85.69 123 P **P** 06 33 20.1 -2.0
comp=Z,1.4nm,0.6s,baz=310,slow=5.1,SNR=22
NEW Newport 95.72 4 LR LR 07 21 51.8
comp=Z,71nm,20.1s,baz=330,slow=38
PLCA Paso Flores 147.94 249 PKPbc **PKPbc** 06 40 28.2 0.0
comp=Z,1.3nm,0.7s,baz=180,slow=5.1,SNR=6.7

IDC ***24*** *06:22:48.5±3.2, 45.84N×129.94W, h0km, mb2.9/2, mb1 3.5/6, mb1mx3.3/56, mbtmp3.1/6, ML3.4/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/13, Error ellipse: s-maj=65.2km s-min=21.2km az=59.0*
NEIC ***24*** *06:22:53.3±1.5, 46.10N±0.09×129.44W±0.04, h10km±2km, ML3.4/12, Error ellipse: s-maj=14.9km s-min=4.9km az=186.0*
ISC 24 06:22:51.8±1.6**, 46.07N**±0.09×**129.6W**±0.2**, h10**km**, n33, σ1s10/26, Off coast of Washington**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLWA	**Neilton Lookou**	**4.17**	**69**	Pn	**Pn**	**06 23 54.1**	**-1.3**
NLWA				IAML		06 24 25.6	
	42nm,3.0s						
E03A	**Lebam**	**4.22**	**81**	Pn	**Pn**	**06 23 56.4**	**+0.3**
E03A				IAML		06 26 21.9	
	comp=E,52nm,3.2s						
PGC	**Sidney**	**4.92**	**56**	Pn	**Pn**	**06 24 04.2**	**-1.5**
PGC				IAML		06 26 43.8	
	comp=E,26nm,3.2s						
PGC				IAML		06 26 50.0	
	comp=N,27nm,5.0s						
D05A	**Enumclaw**	**5.37**	**75**	Pn	**Pn**	**06 24 10.9**	**-1.0**
H04A	**Detroit Lake**	**5.41**	**102**	Pn	**Pn**	**06 24 13.1**	**+0.6**
H04A				IAML		06 25 22.2	
	comp=N,19nm,4.2s						
H04A				IAML		06 25 53.1	
	comp=E,19nm,4.7s						
LON	**Longmire**	**5.44**	**80**		**Pn**	**06 24 13.1**	**+0.2**
A05A	**Maple Falls**	**5.88**	**57**	Pn	**Pn**	**06 24 18.8**	**-0.1**
HUMO	**Hull Mountain**	**5.89**	**124**	Pn	**Pn**	**06 24 18.9**	**-0.2**
KRMB	**Red Mountain**	**6.13**	**136**	Pn	**Pn**	**06 24 23.4**	**+0.9**
BBB	**Bella Bella**	**6.20**	**9**	Pn	**Pn**	**06 24 24.2**	**+0.9**
	comp=E,0.7nm,0.3s,baz=193,slow=14,SNR=5.8						
LTY	**Liberty**	**6.27**	**76**	Pn	**Pn**	**06 24 24.5**	**+0.2**
YBH	**Yreka Blue Hor**	**6.60**	**129**	Pn	**Pn**	**06 24 29.0**	**0.0**
KHMM	**Horse Mountain**	**6.72**	**138**	Pn	**Pn**	**06 24 32.6**	**+1.9**
B08A	**Colville Reser**	**7.37**	**68**	Pn	**Pn**	**06 24 39.8**	**+0.4**
D08A	**Wollman Farm,**	**7.44**	**78**	Pn	**Pn**	**06 24 40.1**	**-0.1**
E09A	**Wood Farm, Sta**	**7.96**	**83**	Pn	**Pn**	**06 24 47.5**	**+0.1**
NEW	**Newport**	**8.79**	**71**	LR	LR	06 28 40.2	
	comp=E,163nm,19.1s,baz=330,slow=39						
MCCM	**Marconi Confer**	**9.36**	**145**		**Pn**	**06 25 07.4**	**+0.8**
MFID	**Camas Ranch**	**10.16**	**100**	Pn	**Pn**	**06 25 18.9**	**+1.2**
WAKR	**Walker**	**10.66**	**132**	Pn	**Pn**	**06 25 24.0**	**-0.7**
MSO	**Missoula**	**10.84**	**80**	Pn	**Pn**	**06 25 28.9**	**+1.8**
NVAR	**Mina Array Bea**	**11.32**	**128**	Pn	**Pn**	**06 25 34.0**	**+0.2**
	baz=304,slow=13,SNR=3.7						
PDAR	**Pinedale Array**	**14.70**	**96**	Pn	**P**	**06 26 24.3**	**-1.9**
	comp=E,0.1nm,0.3s,baz=293,slow=12,SNR=1.6						
YKA	**Yellowknife Ar**	**18.56**	**22**	P	**Pn**	**06 27 10.9**	**+2.3**
	comp=E,0.0nm,0.3s,baz=218,slow=10,SNR=4.0						
ILAR	**Eielson Array**	**21.02**	**339**	P	**P**	**06 27 33.9**	**-1.3**
	comp=E,0.3nm,0.8s,baz=147,slow=10,SNR=2.7						
TXAR	**Lajitas Array**	**26.29**	**120**	P	**P**	**06 28 27.5**	**0.0**
	comp=E,0.2nm,0.8s,baz=310,slow=7.0,SNR=2.3						
TXAR	**Lajitas Array**	**26.29**	**120**	P	**P**	**06 28 28.2**	**+0.6**
H11N3	**WAKE ISLAND Hy**	**57.75**	**265**	T	T	07 34 55.6	
	baz=47,slow=75,SNR=33						
H11N2	**WAKE ISLAND Hy**	**57.75**	**265**	T	T	07 34 51.2	
	baz=47,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**57.77**	**265**	T	T	07 34 54.5	
	baz=47,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**58.71**	**264**	T	T	07 36 05.4	
	baz=47,slow=75,SNR=59						
H11S2	**WAKE ISLAND Hy**	**58.72**	**264**	T	T	07 36 06.5	
	baz=47,slow=75,SNR=62						
H11S3	**WAKE ISLAND Hy**	**58.73**	**264**	T	T	07 36 06.9	
	baz=47,slow=75,SNR=38						

IDC ***24*** *06:32:05.1±2.5, 46.08N×129.56W, h0km, mb3.3/3, mb1 3.7/9, mb1mx3.5/42, mbtmp3.4/9, ML3.2/5, MS3.2/5,*

Ms1 3.3/5,ms1mx2.9/21,Error ellipse: s-maj=43.8km s-min=18.0km az=58.0
*NEIC **24** 06:32:05.9±2.2,46.14N±0.06×129.62W±0.10,h10km±2km, mb3.7/24,ML3.4/8,Error ellipse: s-maj=13.4km s-min=7.9km az=306.0*
ISC 24 06:32:06.0±1.1,46.12N±0.10×129.6W±0.1,h10km,n78, σ1s28/71,Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLWA	**Neilton Lookou**	**4.16**	**70**	**Pn**	**Pn**	**06 33 08.6**	**-0.8**
NLWA					IAML	06 34 09.9	
	49nm,2.6s						
E03A	**Lebam**	**4.22**	**82**	**Pn**	**Pn**	**06 33 09.3**	**-0.9**
E03A					IAML	06 34 09.5	
	comp=E,50nm,2.9s						
E03A					IAML	06 34 49.6	
	comp=N,51nm,4.6s						
PGC	**Sidney**	**4.90**	**57**	**Pn**	**Pn**	**06 33 19.1**	**-0.4**
PGC					IAML	06 34 59.4	
	comp=E,29nm,4.1s						
D05A	**Enumclaw**	**5.37**	**76**		**Pn**	**06 33 26.6**	**+0.5**
H04A	**Detroit Lake**	**5.43**	**103**	**Pn**	**Pn**	**06 33 27.1**	**+0.1**
LON	**Longmire**	**5.44**	**81**	**Pn**	**Pn**	**06 33 27.6**	**+0.5**
A05A	**Maple Falls**	**5.86**	**58**		**Pn**	**06 33 32.5**	**-0.2**
HUMO	**Hull Mountain**	**5.93**	**124**	**Pn**	**Pn**	**06 33 33.9**	**0.0**
B06A	**Marblemount**	**6.03**	**64**		**Pn**	**06 33 34.4**	**-0.8**
BBB	**Bella Bella**	**6.15**	**9**	**Pn**	**Pn**	**06 33 38.9**	**+2.1**
	comp=E,1.6nm,0.3s,baz=194,slow=19,SNR=12						
LTY	**Liberty**	**6.26**	**76**	**Pn**	**Pn**	**06 33 39.0**	**+0.5**
PINE	**Pine Mountain**	**6.59**	**108**	**Pn**	**Pn**	**06 33 44.0**	**+1.0**
YBH	**Yreka Blue Hor**	**6.65**	**129**	**LR**	**LR**	06 36 01.2	
	comp=E,203nm,18.2s,baz=320,slow=36						
YBH	**Yreka Blue Hor**	**6.65**	**129**	**Pn**	**Pn**	**06 33 45.3**	**+1.6**
HAWA	**Hanford**	**7.00**	**84**	**Pn**	**Pn**	**06 33 50.5**	**+2.0**
B08A	**Colville Reser**	**7.36**	**69**	**Pn**	**Pn**	**06 33 51.9**	**-1.5**
D08A	**Wollman Farm,**	**7.44**	**79**	**Pn**	**Pn**	**06 33 52.2**	**-2.2**
MOD	**Modoc Plateau**	**7.93**	**119**	**Pn**	**Pn**	**06 34 02.6**	**+1.2**
E09A	**Wood Farm, Sta**	**7.96**	**83**	**Pn**	**Pn**	**06 34 02.4**	**+0.8**
NEW	**Newport**	**8.78**	**71**	**Pn**	**Pn**	**06 34 12.4**	**-0.6**
	baz=254,slow=12,SNR=1.6						
NEW				LR	LR	06 37 46.2	
	comp=E,119nm,18.4s,baz=300,slow=39						
NEW	**Newport**	**8.78**	**71**	**Pn**	**Pn**	**06 34 12.8**	**-0.2**
BEKR	**Beckworth**	**9.22**	**129**	**Pn**	**Pn**	**06 34 21.0**	**+1.8**
PLID	**Pearl Lake**	**9.61**	**91**		**Pn**	**06 34 24.3**	**-0.2**
PAHR	**Pah Rah Range**	**9.87**	**127**	**Pn**	**Pn**	**06 34 27.6**	**-0.4**
VCNR	**Virginia City**	**10.02**	**129**	**Pn**	**Pn**	**06 34 32.3**	**+2.3**
MFID	**Camas Ranch**	**10.18**	**100**	**Pn**	**Pn**	**06 34 34.1**	**+1.9**
PNTR	**Pine Nut**	**10.19**	**130**	**Pn**	**Pn**	**06 34 33.7**	**+1.2**
CMB	**Columbia Colle**	**10.60**	**136**	**Pn**	**Pn**	**06 34 38.9**	**+1.0**
JTMT	**Jette**	**10.62**	**76**		**Pn**	**06 34 38.3**	**+0.1**
MSO	**Missoula**	**10.85**	**81**	**Pn**	**Pn**	**06 34 40.8**	**-0.4**
KVN	**Kaiserville**	**11.04**	**126**	**Pn**	**Pn**	**06 34 46.0**	**+1.9**
HLID	**Hailey**	**11.10**	**98**		**Pn**	**06 34 46.4**	**+1.5**
NVAR	**Mina Array Bea**	**11.37**	**129**	**Pn**	**Pn**	**06 34 51.3**	**+2.8**
	comp=E,0.0nm,0.3s,baz=294,slow=12,SNR=5.9						
NVAR				LR	LR	06 38 59.2	
	comp=E,160nm,19.1s,baz=283,slow=36						
NV11	**Mina Array Sit**	**11.45**	**128**	**Pn**	**Pn**	**06 34 50.1**	**+0.5**
BCYI	**Bear Canyon**	**11.59**	**93**	**Pn**	**Pn**	**06 34 53.2**	**+1.6**
ELK	**Elko**	**11.75**	**112**	**Pn**	**Pn**	**06 34 56.3**	**+2.5**
	comp=E,0.1nm,0.3s,baz=300,slow=10,SNR=4.9						
ELK				LR	LR	06 39 31.7	
	comp=E,152nm,18.1s,baz=330,slow=38						
ELK	**Elko**	**11.75**	**112**		**Pn**	**06 34 55.0**	**+1.1**
TPH	**Tonopah**	**12.22**	**127**		**Pn**	**06 35 01.5**	**+1.4**
QLMT	**Earthquake Lak**	**12.84**	**89**	**Pn**	**Pn**	**06 35 09.3**	**+0.6**
BESE	**Bessie Mountai**	**12.87**	**348**	**Pn**	**Pn**	**06 35 08.0**	**-0.9**
R11A	**Troy Canyon, C**	**12.97**	**122**	**Pn**	**Pn**	**06 35 10.6**	**+0.2**
DUG	**Dugway, Tooele**	**13.62**	**110**	**Pn**	**Pn**	**06 35 19.0**	**-0.2**
SHPR	**Sheep Range**	**14.49**	**126**	**Pn**	**Pn**	**06 35 29.4**	**-1.8**
PDAR	**Pinedale Array**	**14.72**	**96**	**Pn**	**P**	**06 35 38.5**	**-2.1**
	comp=E,0.0nm,0.3s,baz=286,slow=11,SNR=5.8						
BCPM	**Bancas Point**	**15.08**	**340**	**P**	**Pn**	**06 35 42.3**	**+3.5**
HYT	**Haines Junctio**	**15.44**	**345**	**Pn**	**Pn**	**06 35 42.8**	**-0.9**
HYT				IAmb	IAmb	06 35 55.3	
	comp=Z,7.5nm,1.5s						
LAO	**LASA Array**	**16.14**	**80**		**Pn**	**06 35 50.4**	**-2.5**
LAO				IAmb	IAmb	06 36 01.5	
	comp=Z,12nm,1.3s						
U15A	**North Rim**	**16.20**	**121**		**Pn**	**06 35 52.6**	**-1.3**
U15A				IAmb	IAmb	06 36 02.9	
	comp=Z,6.6nm,1.2s						
W13A	**Hualapai Mount**	**16.22**	**127**		**Pn**	**06 35 52.6**	**-1.4**
W13A				IAmb	IAmb	06 36 02.1	
	comp=Z,7.4nm,1.3s						
SUCK	**Suckling Hills**	**16.30**	**334**	**Pn**	**Pn**	**06 35 53.4**	**-1.3**
PV14	**Lion Creek, Pa**	**17.08**	**110**	**P**	**Pn**	**06 36 05.8**	**+0.8**
PV14				IAmb	IAmb	06 36 10.6	
	comp=Z,5.1nm,1.1s						
PV13	**Radium Mtn., P**	**17.33**	**110**	**P**	**Pn**	**06 36 09.3**	**+1.2**
PV13				IAmb	IAmb	06 36 13.4	
	comp=Z,7.3nm,1.3s						
WUAZ	**Wupatki**	**17.37**	**121**	**P**	**Pn**	**06 36 09.3**	**+0.8**
PV01	**Paradox Valley**	**17.50**	**110**	**P**	**Pn**	**06 36 11.3**	**+1.0**
PV01				IAmb	IAmb	06 36 15.4	
	comp=Z,5.8nm,1.1s						
Y14A	**Wickenburg**	**17.57**	**128**	**P**	**Pn**	**06 36 12.0**	**+1.1**
MVCO	**Mesa Verde**	**18.08**	**112**	**P**	**Pn**	**06 36 17.6**	**+0.2**
X16A	**Lo Mia Camp, P**	**18.10**	**124**	**P**	**Pn**	**06 36 18.1**	**+0.5**
KDAK	**Kodiak Island**	**18.23**	**318**	**P**	**Pn**	**06 36 18.8**	**-0.1**
OHAK	**Old Harbor**	**18.30**	**316**	**P**	**Pn**	**06 36 20.9**	**+1.3**
L27K	**Beaver Creek,**	**18.33**	**342**	**P**	**Pn**	**06 36 18.5**	**-1.6**
YKA	**Yellowknife Ar**	**18.51**	**22**	**P**	**Pn**	**06 36 23.0**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=214,slow=12,SNR=3.6						
ISCO	**Idaho Springs**	**18.64**	**101**		**P**	**06 36 24.2**	**+0.2**
RC01	**Rabbit Creek A**	**19.03**	**329**	**P**	**P**	**06 36 27.6**	**-0.3**
FFC	**Flin Flon**	**19.50**	**54**	**P**	**P**	**06 36 33.4**	**+0.4**
TUC	**Tucson**	**20.02**	**127**	**P**	**P**	**06 36 37.6**	**-1.2**
TUC				IAmb	IAmb	06 36 43.2	
	comp=Z,6.6nm,1.4s						
EPYK	**Eagle Plains**	**20.65**	**352**	**P**	**P**	**06 36 45.1**	**-0.4**
EPYK				IAmb	IAmb	06 36 49.7	
	comp=Z,6.8nm,1.1s						
ANMO	**Albuquerque**	**20.77**	**114**	**P**	**P**	**06 36 47.5**	**+0.3**
	comp=Z,2.1nm,1.0s,baz=309,slow=11,SNR=6.2						
ANMO	**Albuquerque**	**20.77**	**114**	**P**	**P**	**06 36 47.1**	**-0.2**
ANMO				IAmb	IAmb	06 36 50.7	
	comp=Z,3.9nm,1.1s						
T25A	**Trinidad**	**20.80**	**107**	**P**	**P**	**06 36 47.4**	**-0.2**
T25A				IAmb	IAmb	06 36 51.9	
	comp=Z,6.2nm,0.9s						
ILAR	**Eielson Array**	**20.96**	**339**	**P**	**P**	**06 36 49.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=156,slow=10,SNR=5.7						
ILAR				LR	LR	06 43 40.6	
	comp=Z,55nm,18.0s,baz=339,slow=33						
BNM	**Barren Site**	**21.18**	**116**	**P**	**P**	**06 36 51.5**	**-0.2**
TXAR	**Lajitas Array**	**26.33**	**120**	**P**	**P**	**06 37 41.7**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=314,slow=7.5,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**57.74**	**265**	**T**	**T**	07 44 11.3	
	baz=47,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**57.74**	**265**	**T**	**T**	07 44 11.8	
	baz=47,slow=76,SNR=64						
H11N1	**WAKE ISLAND Hy**	**57.76**	**265**	**T**	**T**	07 44 08.8	
	baz=47,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**58.71**	**264**	**T**	**T**	07 45 21.7	
	baz=47,slow=75,SNR=60						
H11S2	**WAKE ISLAND Hy**	**58.72**	**264**	**T**	**T**	07 45 22.3	
	baz=47,slow=75,SNR=70						
H11S3	**WAKE ISLAND Hy**	**58.73**	**264**	**T**	**T**	07 45 22.4	
	baz=47,slow=75,SNR=34						

*IDC **24** 06:32:37.6±1.0,4.48N×125.28E,h0km,mb4.0/6, mb1 4.2/8,mb1mx3.8/39,mbtmp4.0/8,ML4.2/2,MS3.3/2, Ms1 3.3/2,ms1mx2.6/43,Error ellipse: s-maj=41.3km s-min=16.1km az=70.0*
*MAN **24** 06:32:44.9,4.87N×126.08E,h9km,MS3.6*
ISC 24 06:32:38.6±0.7,4.66N±0.05×125.7E±0.1,h10km,n19, σ1s30/19,mb3.9/6,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.44**	**2**	***e*P**	**Pg**	**06 33 07.2**	**+1.0**
DDMP				*e*S	**Sg**	**06 33 25.8**	**+1.0**
SKMP	**Bagumbayan, Su**	**2.16**	**329**	***e*P**	**Pg**	**06 33 21.7**	**+1.6**
SKMP				*e*S	**Sg**	**06 33 51.4**	**+3.2**
MATI	**Mati**	**2.34**	**14**	***e*P**	**Pn**	**06 33 18.2**	**+1.0**
DAV	**Davao City (W)**	**2.40**	**358**	**Pn**	**Pb**	**06 33 22.3**	**+0.4**
	75nm,0.3s,baz=120,slow=2.4,SNR=2.2						
DAV				Sn	**Sg**	**06 33 54.9**	**-0.7**
	103nm,0.3s,baz=40,slow=21,SNR=1.8						
DAV				LR	LR	06 34 18.7	
	comp=Z,220nm,19.0s,baz=314,slow=39						
KCP	**Kidapawan**	**2.41**	**346**	***i*P**	**Pg**	**06 33 24.6**	**-0.1**
KCP				*i* S	**Sg**	**06 33 55.4**	**-0.5**
BUKP	**Musuan**	**3.26**	**349**	***e*P**	**Pb**	**06 33 36.1**	**-0.5**
BUKP				*e*S	**Sb**	**06 34 14.7**	**-1.6**
BUTP	**Butuan**	**4.28**	**359**	***e*P**	Pn	06 33 49.5	+5.6
SIJI	**Sorong**	**7.83**	**134**	Pn	**Pn**	**06 34 34.0**	**+1.2**
	2.1nm,0.3s,baz=139,slow=24,SNR=2.6						
FITZ	**Fitzroy Crossi**	**22.61**	**180**	P	**P**	**06 37 39.9**	**+0.2**
	4.9nm,0.6s,baz=13,slow=9.6,SNR=16						
WRA	**Warramunga Arr**	**25.89**	**161**	P	**P**	**06 38 11.1**	**+0.2**
	2.7nm,0.3s,baz=343,slow=10,SNR=47						
ASAR	**Alice Springs**	**29.28**	**164**	P	**P**	**06 38 41.4**	**+0.1**
	0.7nm,0.6s,baz=338,slow=7.2,SNR=9.0						
CMAR	**Chiang Mai Arr**	**29.50**	**300**	P	**P**	**06 38 41.2**	**-2.1**
	0.8nm,0.3s,baz=128,slow=5.8,SNR=4.9						
STKA	**Stephens Creek**	**39.37**	**158**	P	**P**	**06 40 07.8**	**-0.7**
	0.9nm,0.4s,baz=338,slow=7.1,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**42.83**	**66**	T	T	07 26 18.6	
	baz=255,slow=75,SNR=26						
H11N2	**WAKE ISLAND Hy**	**42.84**	**66**	T	T	07 26 18.3	
	baz=255,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**42.85**	**66**	T	T	07 26 17.9	
	baz=255,slow=75,SNR=29						
MKAR	**Makanchi Array**	**56.20**	**325**	P	**P**	**06 42 17.9**	**-0.9**
	0.3nm,0.4s,baz=107,slow=9.2,SNR=2.0						
RAR	**Rarotonga**	**77.37**	**113**	LR	LR	07 15 34.3	
	comp=Z,92nm,18.1s,baz=275,slow=33						
TORD	**Tordi Ar. Bea**	**121.63**	**288**	PKP	**PKiKP**	**06 51 34.2**	**+0.3**
	0.3nm,0.7s,baz=67,slow=2.0,SNR=1.8						

IDC 24 07:06:19.5±1.3,7.58S×128.29E,h0km,mb3.8/3, mb1 4.2/7,mb1mx3.9/47,mbtmp4.1/7,ML4.2/4,Error ellipse: s-maj=34.7km s-min=21.5km az=83.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.27**	**240**	Pn	Pn	07 07 41.3	+1.7
	4.2nm,0.3s,baz=72,slow=6.4,SNR=2.2						
BATI					Sn	Sn	07 08 42.6	+1.5
	6.4nm,0.3s,baz=75,slow=21,SNR=2.2						
FITZ	**Fitzroy Crossi**	**10.77**	**194**	Pn	Pn	07 08 54.9	-0.2
	2.4nm,0.3s,baz=25,slow=11,SNR=45						
FITZ					Sn	Sn	07 10 47.0	-10
	1.3nm,0.3s,baz=271,slow=23,SNR=3.2						
WRA	**Warramunga Arr**	**13.62**	**155**	Pn	Pn	07 09 33.3	-0.8
	1.2nm,0.3s,baz=336,slow=14,SNR=57						
WRA					Sn	Sn	07 11 53.2	-13
	1.8nm,0.3s,baz=332,slow=24,SNR=9.5						
ASAR	**Alice Springs**	**16.88**	**162**	Pn	Pn	07 10 17.4	-0.1
	0.5nm,0.3s,baz=335,slow=10,SNR=19						
ASAR					Sn	Sn	07 13 13.5	-12
	0.4nm,0.3s,baz=329,slow=23,SNR=5.2						
STKA	**Stephens Creek**	**27.17**	**155**	P	P	07 12 05.0	+0.2
	1.4nm,0.6s,baz=336,slow=12,SNR=1.4						
KSRS	**Korea Array**	**44.80**	**360**	P	P	07 14 36.4	+1.3
	0.7nm,0.4s,baz=180,slow=9.1,SNR=4.1						
MKAR	**Makanchi Array**	**67.79**	**328**	P	P	07 17 17.9	-1.4
	0.2nm,0.4s,baz=118,slow=8.0,SNR=4.6						

*TAP **24** 07:11:07.5,24.37N×122.83E,h57km±1km,ML3.3,C*
*JMA **24** 07:11:07.0±0.1,24.42N×122.86E,h65km±1km,M2.7*
ISC 24 07:11:07.6±1.2,24.35N±0.04×122.87E±0.02,h60km±7km, n83,σ0s99/147,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.12**	**34**	P	**Pn**	**07 11 16.6**	**-0.1**
JYNG				S	**Sn**	**07 11 23.6**	**+0.4**
YOJ	**Yonaguni jima**	**0.17**	**49**	P	**Pn**	**07 11 16.8**	**-0.1**
YOJ				S	**Sn**	**07 11 23.8**	**+0.3**
YOJ	**Yonaguni jima**	**0.17**	**49**	*i* P	**Pn**	**07 11 16.7**	**-0.1**
	baz=58						
YOJ				S	**Sn**	**07 11 23.9**	**+0.3**
	baz=58						
IRIF	**Iriomote-Funau**	**0.78**	**91**	P	**Pn**	**07 11 22.8**	**0.0**
IRIF				S	**Sn**	**07 11 34.3**	**+0.3**
HATJ	**Hateruma jima**	**0.90**	**109**	P	**Pn**	**07 11 24.8**	**+0.5**
HATJ				*e*S	**Sn**	**07 11 38.0**	**+1.3**
EWUT	**Wuta**	**1.00**	**275**	P	**Pn**	**07 11 25.5**	**-0.2**
	baz=274						
EWUT				S	**Sn**	**07 11 39.1**	**+0.1**
	baz=274						
TWB1	**Santiao Chiao**	**1.04**	**309**	P	**Pn**	**07 11 26.0**	**-0.1**
	baz=309						
TWB1				S	**Sn**	**07 11 39.1**	**-0.7**
	baz=309						
JKRS	**Kuro-shima**	**1.04**	**96**	P	**Pn**	**07 11 26.4**	**+0.2**
JKRS				*e*S	**Sn**	**07 11 41.0**	**+1.0**
NTC	**Toucheng**	**1.07**	**298**	*i* P	**Pn**	**07 11 26.4**	**-0.2**
	baz=297						
NTC				*i* S	**Sn**	**07 11 40.2**	**-0.5**
	baz=297						
NDS	**Dongshan**	**1.09**	**285**	*i* P	**Pn**	**07 11 26.7**	**-0.1**
	baz=284						
NDS				S	**Sn**	**07 11 40.9**	**-0.2**
	baz=284						
TIPB	**Shuangxi**	**1.14**	**303**	*i* P	**Pn**	**07 11 27.1**	**-0.3**
	baz=303						
TIPB				S	**Sn**	**07 11 41.7**	**-0.5**
	baz=303						
JIJ	**Ishigaki jima**	**1.16**	**89**	P	**Pn**	**07 11 27.3**	**-0.4**
JIJ				S	**Sn**	**07 11 42.1**	**-0.6**
TWE	**Neicheng**	**1.16**	**289**	P	**Pn**	**07 11 27.4**	**-0.3**
	baz=288						
TWE				S	**Sn**	**07 11 42.2**	**-0.5**
	baz=288						
NACB	**Ninganchiao**	**1.18**	**262**	*i* P	**Pn**	**07 11 27.7**	**-0.4**
	baz=260						
NACB				*i* S	**Sn**	**07 11 42.8**	**-0.4**
	baz=260						
TWD	**Chiawan**	**1.20**	**257**	P	**Pn**	**07 11 27.9**	**-0.4**
	baz=255						
TWD				S	**Sn**	**07 11 43.2**	**-0.5**
	baz=255						
NWF	**Wu-fen Shan**	**1.22**	**306**	P	**Pn**	**07 11 28.6**	**-0.1**
	baz=306						
WFSB	**Wu-fen Shan**	**1.22**	**306**	*i* P	**Pn**	**07 11 28.6**	**0.0**
	baz=306						
WFSB				*e*S	**Sn**	**07 11 43.9**	**-0.3**
	baz=306						
ENTT	**Nioudou**	**1.23**	**284**	P	**Pn**	**07 11 29.2**	**+0.5**
	baz=283						
ENTT				S	**Sn**	**07 11 44.5**	**+0.1**
	baz=283						
NDT	**Datong Townshi**	**1.27**	**282**	P	**Pn**	**07 11 29.9**	**+0.8**
	baz=280						
NDT				S	**Sn**	**07 11 46.2**	**+1.0**
	baz=280						
ETLH	**Xiulin Townshi**	**1.28**	**264**	*i* P	**Pn**	**07 11 29.1**	**-0.3**
	baz=262						
ETLH				*i* S	**Sn**	**07 11 45.6**	**-0.1**
	baz=262						
NWLT	**Wulai**	**1.32**	**289**	P	**Pn**	**07 11 30.1**	**+0.3**
	baz=288						
NWLT				S	**Sn**	**07 11 46.4**	**-0.1**
	baz=288						
JISG	**Ishigakijimahi**	**1.33**	**80**	P	**Pn**	**07 11 29.5**	**-0.5**
JISG				*e*S	**Sn**	**07 11 46.2**	**-0.6**
NNSB	**Datong**	**1.36**	**273**	P	**Pn**	**07 11 30.7**	**+0.1**
	baz=272						
NNSB				S	**Sn**	**07 11 47.4**	**-0.3**
	baz=272						
NNSH	**Datong**	**1.36**	**273**	*i* P	**Pn**	**07 11 30.6**	**+0.1**
	baz=272						
NNSH				S	**Sn**	**07 11 47.6**	**-0.1**
	baz=272						
NNS	**Nan Shan**	**1.37**	**274**	P	**Pn**	**07 11 30.9**	**+0.2**
	baz=272						
NNS				S	**Sn**	**07 11 48.0**	**+0.1**
	baz=272						
YHNB	**Yeheng**	**1.40**	**283**	*i* P	**Pn**	**07 11 31.7**	**+0.7**
	baz=282						
YHNB				S	**Sn**	**07 11 48.2**	**-0.4**
	baz=282						
TATO	**Taipei**	**1.41**	**296**	*e*P	**Pn**	**07 11 30.9**	**-0.1**
	baz=296						
TATO				*e*S	**Sn**	**07 11 47.9**	**-0.7**
	baz=296						
ESL	**Shilin**	**1.42**	**248**	P	**Pn**	**07 11 30.5**	**-0.7**
	baz=246						
ESL				S	**Sn**	**07 11 48.1**	**-0.9**
	baz=246						
YM01	**YM01**	**1.42**	**304**	P	**Pn**	**07 11 31.3**	**-0.1**
	baz=303						
YM01				S	**Sn**	**07 11 48.3**	**-0.8**
	baz=303						
PCYT	**Pengchaiyu**	**1.46**	**330**	*i* P	**Pn**	**07 11 32.2**	**+0.4**
	baz=331						
WHF	**Hehuan Shan**	**1.48**	**262**	P	**Pn**	**07 11 32.2**	**-0.3**
	baz=260						
WHF				*e*S	**Sn**	**07 11 50.9**	**-0.2**
	baz=260						
EGFH	**Guangfu**	**1.49**	**243**	*e*P	**Pn**	**07 11 32.2**	**0.0**
	baz=241						
EGFH				S	**Sn**	**07 11 50.3**	**-0.3**
	baz=241						
FUSS	**Fushou**	**1.49**	**266**	P	**Pn**	**07 11 32.7**	**+0.3**
	baz=265						
FUSS				*e*S	**Sn**	**07 11 50.8**	**-0.2**
	baz=265						
TWT	**Tachien**	**1.55**	**267**	*e*P	**Pn**	**07 11 34.2**	**+1.1**
	baz=265						
TWT				*e*S	**Sn**	**07 11 53.5**	**+1.0**
	baz=265						
TDCB	**Techi**	**1.57**	**267**	P	**Pn**	**07 11 34.0**	**+0.6**
	baz=265						
TDCB				*e*S	**Sn**	**07 11 53.1**	**+0.3**
	baz=265						
CHGB	**Renai**	**1.58**	**260**	P	**Pn**	**07 11 33.7**	**+0.1**
	baz=258						
CHGB				S	**Sn**	**07 11 53.1**	**0.0**
	baz=258						
HGSD	**Ruisui**	**1.58**	**237**	*e*P	**Pn**	**07 11 33.1**	**-0.2**
	baz=235						
HGSD				*e*S	**Sn**	**07 11 52.0**	**-0.8**
	baz=235						
OWD	**Renai**	**1.60**	**256**	*e*P	**Pn**	**07 11 33.7**	**-0.1**
	baz=254						
OWD				*e*S	**Sn**	**07 11 52.9**	**-0.6**
	baz=254						
JTJ	**Tarama**	**1.69**	**80**	P	**Pn**	**07 11 35.1**	**+0.3**
JTJ				S	**Sn**	**07 11 55.3**	**-0.2**
VWDT	**VWDT**	**1.69**	**250**	P	**Pn**	**07 11 35.1**	**+0.3**
	baz=248						
VWDT				*e*S	**Sn**	**07 11 55.1**	**-0.4**
	baz=248						
LIOB	**Emei**	**1.72**	**280**	*e*P	**Pn**	**07 11 36.0**	**+0.7**
	baz=279						
NSTT	**Nanjuang**	**1.73**	**280**	*e*P	**Pn**	**07 11 36.2**	**+0.8**
	baz=278						
NSTT				*e*S	**Sn**	**07 11 56.9**	**+0.5**
	baz=278						
YULB	**Yu-li**	**1.73**	**237**	P	**Pn**	**07 11 35.1**	**-0.3**
	baz=235						
YULB				S	**Sn**	**07 11 55.4**	**-1.2**
	baz=235						
EYUL	**Yuli**	**1.74**	**235**	*e*P	**Pn**	**07 11 36.6**	**+1.1**
	baz=233						
EYUL				*e*S	**Sn**	**07 11 56.2**	**-0.5**
	baz=233						
TWF1	**Yuli**	**1.75**	**236**	*e*P	**Pn**	**07 11 35.6**	**-0.1**
	baz=233						
TWF1				*e*S	**Sn**	**07 11 56.4**	**-0.6**
	baz=233						
WHP	**Taichung City**	**1.76**	**268**	*e*P	**Pn**	**07 11 37.1**	**+1.2**
	baz=266						
WHP				*e*S	**Sn**	**07 11 57.8**	**+0.5**
	baz=266						
WPL	**Puli Township**	**1.78**	**259**	*e*P	**Pn**	**07 11 36.8**	**+0.6**
	baz=258						
DPDB	**Guoxing**	**1.81**	**260**	*e*P	**Pn**	**07 11 37.3**	**+0.8**
	baz=259						
DPDB				*e*S	**Sn**	**07 11 58.6**	**+0.2**
	baz=259						
SSLB	**Suanglung**	**1.84**	**253**	*e*P	**Pn**	**07 11 37.8**	**+0.9**
	baz=251						
SSLB				*e*S	**Sn**	**07 11 59.4**	**+0.2**
	baz=251						
FULB	**Fuli**	**1.85**	**232**	*e*P	**Pn**	**07 11 37.0**	**-0.1**
	baz=230						
FULB				*e*S	**Sn**	**07 11 58.2**	**-1.2**
	baz=230						
CHKT	**Chengkung**	**1.86**	**228**	*e*S	**Sn**	**07 11 58.2**	**-1.5**
	baz=226						
SMLT	**Sun Moon Lake**	**1.86**	**256**	P	**Pn**	**07 11 37.9**	**+0.6**
	baz=254						
SMLT				*e*S	**Sn**	**07 12 00.1**	**+0.2**
	baz=254						
TYC	**Yuchr**	**1.90**	**257**	*e*P	**Pn**	**07 11 38.4**	**+0.7**
	baz=255						
TYC				*e*S	**Sn**	**07 12 00.4**	**-0.1**
	baz=255						
YUS	**Yu-Shan**	**1.96**	**244**	*e*P	**Pn**	**07 11 39.4**	**+0.5**
	baz=242						
YUS				*e*S	**Sn**	**07 12 02.1**	**-0.6**
	baz=242						
EDH	**Donghe**	**1.99**	**227**	P	**Pn**	**07 11 40.5**	**+1.5**
	baz=225						
EDH				*e*S	**Sn**	**07 12 00.6**	**-2.2**
	baz=225						
WJS	**Zhushan**	**2.03**	**255**	*e*S	**Sn**	**07 12 05.4**	**+1.6**
	baz=254						
WNT1	**Nantou City**	**2.05**	**258**	*e*S	**Sn**	**07 12 06.5**	**+2.1**
	baz=256						
WNT	**Mingjian**	**2.06**	**257**	*e*S	**Sn**	**07 12 05.6**	**+1.2**
	baz=255						
ELDTW	**Lidau**	**2.06**	**236

MASBT				*e*S	**Sn**	**07 12 20.8**	**+0.9**
	baz=229						
EAST	**Anshuo**	**2.70**	**224**	*e*P	**Pn**	**07 11 48.4**	**-0.3**
	baz=222						
EAST				*e*S	**Sn**	**07 12 19.1**	**-1.2**
	baz=222						
VWUC	**VWUC**	**3.18**	**282**	*e*P	**Pn**	**07 11 54.5**	**-0.6**
	baz=281						
VWUC				*e*S	**Sn**	**07 12 28.6**	**-3.2**
	baz=281						
VCHM	**Qimei**	**3.35**	**251**	*e*S	**Sn**	**07 12 35.5**	**-0.7**
	baz=249						
AXDP	**Jialang**	**4.50**	**278**	*e*P	**Pn**	**07 12 12.3**	**-0.9**
	baz=276						

IDC ***24*** *07:11:48.8±2.8, 32°.63S×178°.33W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/24, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=63.2km s-min=44.2km az=124.0*

ISC 24 07:11:54.4±1.8, 33°.85S±0°.10×179°.2W±0°.2, h10km, n23, σ2§01/24, mb3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**4.41**	**206**	P	**Pg**	**07 13 18.5**	**-0.4**
PKGZ	**Pakihiroa**	**4.60**	**208**	P	**Pb**	**07 13 17.7**	**+2.4**
HAZ	**Te Kaha**	**4.61**	**211**	P	**Pb**	**07 13 18.7**	**+3.3**
PUZ	**Puketiti**	**4.69**	**206**	P	**Pb**	**07 13 19.0**	**+2.2**
TWGZ	**Tauwhareparae**	**4.89**	**207**	P	**Pb**	**07 13 23.1**	**+2.9**
CNGZ	**Carnagh Station**	**5.08**	**204**	P	**Pb**	**07 13 26.8**	**+3.4**
MWZ	**Matawai**	**5.21**	**210**	P	**Pb**	**07 13 24.8**	**-0.8**
URZ	**Urewera**	**5.32**	**213**	Pn	**Pb**	**07 13 28.8**	**+1.2**
	0.9nm,0.3s,baz=302,slow=23,SNR=12						
URZ				Sn	**Sg**	**07 14 42.9**	**-2.5**
	0.4nm,0.3s,baz=126,slow=23,SNR=1.5						
URZ	**Urewera**	**5.32**	**213**	P	**Pb**	**07 13 29.0**	**+1.4**
RAGZ	**Rawiri**	**5.39**	**210**	P	**Pb**	**07 13 28.1**	**-0.6**
RIGZ	**Rimuhau**	**5.43**	**206**	P	**Pb**	**07 13 30.1**	**+0.7**
MUGZ	**Murupara**	**5.66**	**214**	P	**Pb**	**07 13 34.3**	**+1.0**
SNGZ	**Shannon Statio**	**5.66**	**209**	P	**Pb**	**07 13 33.5**	**+0.2**
RTZ	**Ruatahuna**	**5.67**	**212**	P	**Pb**	**07 13 32.8**	**-0.8**
TOZ	**Tahuroa Road**	**5.80**	**227**	P	**Pg**	**07 13 47.1**	**+1.6**
MTHZ	**Maungataniwha**	**5.93**	**212**	P	**Pb**	**07 13 38.0**	**+0.1**
BKZ	**Black Stump Fm**	**6.34**	**212**	P	**Pb**	**07 13 43.4**	**-1.6**
OTVZ	**Oturere**	**6.73**	**217**	P	**Pb**	**07 13 48.8**	**-2.8**
LREZ	**Lake Rotokare**	**7.61**	**221**	P	**Pb**	**07 14 06.9**	**+0.5**
CTA	**Charters Tower**	**33.55**	**285**	P	**P**	**07 18 35.5**	**+0.9**
	1.5nm,0.5s,baz=126,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**42.05**	**271**	P	**P**	**07 19 47.8**	**+1.3**
	0.9nm,0.7s,baz=109,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	**43.35**	**276**	P	**P**	**07 19 57.1**	**0.0**
	0.7nm,0.3s,baz=114,slow=7.6,SNR=15						
FINES	**FINESS Array B**	**147.99**	**337**	PKPbc	**PKPdf**	**07 31 32.3**	**-3.8**
	1.9nm,0.5s,baz=64,slow=4.4,SNR=9.1						

IDC ***24*** *07:37:47.3±0.6, 36°.35N×142°.93E, h0km, mb4.2/21, mb1 4.3/29, mb1mx4.1/49, mbtmp4.2/29, ML3.9/7, MS3.3/12, Ms1 3.4/12, ms1mx3.1/34, Error ellipse: s-maj=14.9km s-min=13.8km az=119.0*

NIED ***24*** *07:37:51.4, 36°.50N×142°.74E, h57km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr=2.73; Mθθ=1.15; Mφφ=1.58; Mrθ=0.53; Mθφ=1.38; Mφr=0.57; Fault plane solution: M=2.85000×10^15 NP1: φs=221.00000°, δ=53.00000°, λ=-89.00000°. NP2: φs=40.00000°, δ=37.00000°, λ=-91.00000°.*

JMA ***24*** *07:37:51.4±0.2, 36°.50N×142°.74E, h57km, M4.5*

NEIC ***24*** *07:37:52.8±2.1, 36°.50N±0°.07×142°.80E±0°.03, h38km±7km, mb4.6/38, Error ellipse: s-maj=10.5km s-min=2.9km az=171.0*

ISC 24 07:37:51.2±2.9, 36°.43N±0°.05×142°.87E±0°.06, h26km±20km, n128, σ1§43/128, mb4.4/45, MS3.4/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.79**	**247**	P	**Pn**	**07 38 19.7**	**-0.6**
CHOJ				*e*S	**Sn**	**07 38 40.3**	**-1.8**
ONAJ	**Iwakimizuishiy**	**1.79**	**292**	P	**Pn**	**07 38 18.9**	**-1.5**
JHYU	**Hitachinakayam**	**1.85**	**268**	P	**Pn**	**07 38 20.1**	**-1.0**
JHYU				*e*S	**Sn**	**07 38 40.7**	**-2.9**
JFK	**Kawauchi**	**1.85**	**301**	P	**Pn**	**07 38 19.6**	**-1.6**
JFK				*e*S	**Sn**	**07 38 40.6**	**-3.2**
JHO	**Hitachi**	**1.86**	**276**	P	**Pn**	**07 38 20.0**	**-1.3**
JHO				*e*S	**Sn**	**07 38 41.1**	**-2.9**
JYT	**Yasato**	**2.17**	**265**		**Pn**	**07 38 24.9**	**-0.7**
JMM	**Marumori**	**2.19**	**311**		**Pn**	**07 38 24.7**	**-1.2**
JFT	**Otama**	**2.30**	**299**	P	**Pn**	**07 38 26.7**	**-0.7**
JFT				*e*S	**Sn**	**07 38 52.9**	**-2.0**
BSO1	**Boso 1**	**2.35**	**222**	P	**Pn**	**07 38 27.3**	**-0.3**
JAG	**Ashikaga**	**2.76**	**271**	P	**Pn**	**07 38 33.2**	**-0.4**
JMK	**Ichinoseki**	**2.84**	**333**	P	**Pn**	**07 38 33.3**	**-1.4**
JMK				S	**Sn**	**07 39 05.2**	**-2.8**
JYK	**Kaneyama**	**3.18**	**322**	P	**Pn**	**07 38 38.3**	**-1.2**
JRY	**Ryogami san**	**3.24**	**264**	P	**Pn**	**07 38 39.5**	**-0.8**
JOM	**Ohasama**	**3.28**	**338**	P	**Pn**	**07 38 39.5**	**-1.4**
JOM				*e*S	**Sn**	**07 39 16.6**	**-2.4**
JOD2	**Odawara 2**	**3.29**	**250**	P	**Pn**	**07 38 40.5**	**-0.4**
JOD2				*e*S	**Sn**	**07 39 16.8**	**-2.4**
JYN	**Shimob**	**3.63**	**256**	P	**Pn**	**07 38 46.0**	**+0.3**
MJAR	**Matsushiro Arr**	**3.76**	**273**	Pn	**Pn**	**07 38 47.8**	**+0.3**
	1.6nm,0.3s,baz=83,slow=8.7,SNR=44						
MJAR				Sn	**Sn**	**07 39 25.8**	**-5.0**
	1.2nm,0.3s,baz=114,slow=28,SNR=4.9						
MAJO	**Matsushiro**	**3.76**	**273**	Pn	**Pn**	**07 38 47.5**	**+0.1**
MAT	**Matsushiro**	**3.76**	**273**	P	**Pn**	**07 38 48.0**	**+0.5**
MAT				*e*S	**Sn**	**07 39 30.8**	**-0.1**
MAT	**Matsushiro**	**3.76**	**273**	P	**Pn**	**07 38 47.8**	**+0.3**
JSD	**Sado**	**4.01**	**295**	P	**Pn**	**07 38 50.2**	**-0.7**
JSD	**Sado**	**4.01**	**295**	Pn	**Pn**	**07 38 50.8**	**-0.1**
JHJ2	**Mitsune**	**4.16**	**218**	Pn	**Pn**	**07 38 52.1**	**-0.7**
JHJ	**Hachijo jima 2**	**4.17**	**218**	Pn	**Pn**	**07 38 53.1**	**0.0**
	73nm,0.3s,baz=246,slow=22,SNR=9.3						
JHJ				Sn	**Sn**	**07 39 35.9**	**-5.0**
	110nm,0.3s,baz=216,slow=22,SNR=6.6						
JSG	**Sagara**	**4.20**	**247**	Pn	**Pn**	**07 38 53.3**	**-0.2**
JGF	**Kuroka**	**4.55**	**261**	Pn	**Pn**	**07 38 59.8**	**+1.5**
JTM	**Tenmabayashi**	**4.57**	**343**	Pn	**Pn**	**07 38 57.3**	**-1.3**
ERM	**Erimo**	**5.58**	**2**		**Pn**	**07 39 10.2**	**-2.2**
JWT	**Wachi**	**6.17**	**261**	Pn	**Pn**	**07 39 21.6**	**+1.1**
JKA	**Kamikawa-asahi**	**7.68**	**359**	Pn	Pn	07 39 38.1	-3.1
ASAJ	**Asahikawa**	**7.68**	**359**	Pn	**Pn**	**07 39 39.6**	**-1.6**
	3.1nm,0.3s,baz=229,slow=7.3,SNR=9.4						
ASAJ				Sn	**Sn**	**07 41 03.5**	**-3.8**
	0.9nm,0.3s,baz=52,slow=27,SNR=6.0						
JMN	**Monobe**	**7.85**	**253**	Pn	**Pn**	**07 39 44.7**	**+1.1**
JHS	**Saijyo**	**8.06**	**263**		**Pn**	**07 39 48.5**	**+2.0**
JCJ	**Chichijima**	**9.33**	**184**	Pn	Pn	07 39 60.0	-3.9
	7.1nm,0.3s,baz=261,slow=18,SNR=11						
JCJ				Sn	Sn	07 41 36.7	-11
	27nm,0.3s,baz=274,slow=23,SNR=9.1						
JNU	**Nakatsue**	**10.40**	**255**	Pn	**Pn**	**07 40 16.9**	**-1.8**
	0.4nm,0.3s,baz=354,slow=14,SNR=3.8						
JNU				LR	LR	07 44 06.1	
	comp=Z,126nm,19.8s,baz=76,slow=36						
USRK	**Ussuriysk Ar.**	**11.36**	**316**	Pn	**Pn**	**07 40 34.0**	**+2.4**
	baz=109,slow=16,SNR=2.4						
USRK				LR	LR	07 44 30.1	
	comp=Z,167nm,21.1s,baz=156,slow=35						
KSRS	**Korea Array**	**12.01**	**279**	Pn	**Pn**	**07 40 42.7**	**+2.2**
	0.3nm,0.3s,baz=91,slow=13,SNR=8.2						
KSRS				LR	LR	07 45 19.3	
	comp=Z,110nm,21.2s,baz=94,slow=37						
MDJ	**Mudanjiang**	**12.98**	**313**	P	**Pn**	**07 40 57.1**	**+3.3**
MDJ				sP	P	07 41 19.8	+16
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,86nm,5.2s						
KLR	**Kul'dur**	**15.15**	**331**	Pn	**Pn**	**07 41 25.4**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=140,slow=13,SNR=8.1						
KLR				LR	LR	07 47 47.2	
	comp=Z,97nm,19.3s,baz=6.0,slow=39						
PETK	**Petropavlovsk-**	**19.65**	**27**	LR	LR	07 51 58.7	
	comp=Z,56nm,18.9s,baz=243,slow=43						
NJ2	**Nanjing**	**20.31**	**265**	*e*P	**P**	**07 42 25.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIA	**Tai'an**	**20.73**	**277**	P	Pn	07 42 34.1	+2.0
TIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MA2	**Magadan**	**23.72**	**10**	LR	LR	07 52 56.7	
	comp=Z,53nm,18.7s,baz=142,slow=38						
HHC	**Hu-ho-hao-te**	**24.77**	**290**	*e*P	**P**	**07 43 11.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,66nm,5.5s						
H11N2	**WAKE ISLAND Hy**	**26.84**	**122**	T	T	08 11 36.8	
	baz=314,slow=75,SNR=5.7						
H11N1	**WAKE ISLAND Hy**	**26.84**	**122**	T	T	08 11 36.9	
	baz=314,slow=75,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**26.85**	**122**	T	T	08 11 49.3	
	baz=314,slow=75,SNR=8.8						
YAK	**Yakutsk**	**26.92**	**346**	LR	LR	07 55 09.8	
	comp=Z,72nm,18.5s,baz=91,slow=39						
SEY	**Seymchan**	**27.17**	**10**	P	**P**	**07 43 32.8**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=222,slow=8.1,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	**27.55**	**124**	T	T	08 12 34.1	
	baz=316						
H11S3	**WAKE ISLAND Hy**	**27.55**	**124**	T	T	08 12 31.7	
	baz=316						
H11S2	**WAKE ISLAND Hy**	**27.57**	**124**	T	T	08 12 38.6	
	baz=316						
ULN	**Ulaanbaatar**	**28.66**	**305**	P	**P**	**07 43 46.4**	**+0.6**
ULN				IAmb	IAmb	07 43 50.9	
	comp=Z,14nm,1.5s						
SONM	**Songino Array**	**29.09**	**305**	P	**P**	**07 43 51.6**	**+2.1**
	comp=Z,4.8nm,0.7s,baz=101,slow=8.9,SNR=22						
SONM	**Songino Array**	**29.09**	**305**	P	**P**	**07 43 48.8**	**-0.8**
LZH	**Lanzhou**	**31.33**	**281**	*e*P	**P**	**07 44 10.4**	**+0.9**
LZH				pP	pP	07 44 17.1	+1.6
LZH				sP	sP	07 44 23.3	+5.5
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
TLY	**Talaya**	**31.61**	**311**	P	**P**	**07 44 09.3**	**-2.3**
GYA	**Guiyang**	**32.29**	**262**	*e*P	**P**	**07 44 20.8**	**+2.8**
GYA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GTA	**Gaotai**	**33.86**	**288**	*e*P	**P**	**07 44 32.9**	**+1.3**
GTA				pP	sP	07 44 43.3	+3.4
GTA				sP	pwP	07 44 47.8	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,38nm,5.8s						
GTA				LR	LR		
	comp=N,85nm,14.9s						
GTA				LR	LR		
	comp=E,73nm,15.6s						
GTA				LR	LR		
	comp=Z,67nm,16.0s						
WMQ	**Urumqi**	**42.16**	**298**	*e*P	**P**	**07 45 41.9**	**+0.5**
WMQ				pP	pP	07 45 49.4	+1.9
WMQ				sP	pwP	07 45 59.3	+3.9
WMQ				ScP	**ScP**	**07 51 26.8**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.9s						
WMQ				LR	LR		
	comp=N,580nm,29.2s						
WMQ				LR	LR		
	comp=E,540nm,29.3s						
WMQ				LR	LR		
	comp=Z,190nm,28.9s						
CMAR	**Chiang Mai Arr**	**42.49**	**257**	P	**P**	**07 45 43.2**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=61,slow=7.3,SNR=2.4						
CMAR				LR	LR	08 06 55.7	
	comp=Z,39nm,18.2s,baz=149,slow=41						
ZAA0	**Zalesovo Array**	**43.18**	**313**	P	**P**	**07 45 47.2**	**-2.2**
ZALV	**Zalesovo Beam**	**43.18**	**313**	P	**P**	**07 45 49.8**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=95,slow=7.4,SNR=4.9						
ZALV				PcP	**PcP**	**07 47 38.8**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=90,slow=3.0,SNR=4.4						
ZALV				LR	LR	08 04 21.3	
	comp=Z,47nm,18.9s,baz=72,slow=37						
ZALV	**Zalesovo Beam**	**43.18**	**313**	P	**P**	**07 45 49.0**	**-0.5**
NRIK	**Noril'sk**	**44.30**	**335**	P	**P**	**07 45 57.2**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=80,slow=7.1,SNR=3.8						
NRIK	**Noril'sk**	**44.30**	**335**	IAmb	IAmb	07 46 14.6	
	comp=Z,10nm,1.4s						
MK31	**Makanchi Array**	**45.43**	**303**	P	**P**	**07 46 06.8**	**-0.9**
MKAR	**Makanchi Array**	**45.43**	**303**	P	**P**	**07 46 09.8**	**+2.1**
	comp=Z,3.3nm,0.9s,baz=78,slow=10.0,SNR=3.6						
MKAR	**Makanchi Array**	**45.43**	**303**	P	**P**	**07 46 06.3**	**-1.3**
A21K	**Barrow**	**46.55**	**23**	P	**P**	**07 46 15.9**	**-0.2**
KURK	**Kurchatov**	**47.22**	**309**	P	**P**	**07 46 22.4**	**+0.8**
KURBB	**Kurchatov Arra**	**47.29**	**309**	P	**P**	**07 46 22.4**	**+0.3**
	comp=Z,5.3nm,0.6s,baz=82,slow=7.7,SNR=16						
MLY	**Manley**	**47.74**	**32**	P	**P**	**07 46 26.1**	**+0.5**
MLY				IAmb	IAmb	07 46 27.9	
	comp=Z,5.4nm,1.0s						
NEA2	**Nenana**	**48.44**	**32**	P	**P**	**07 46 31.0**	**+0.1**
NEA2				IAmb	IAmb	07 46 32.9	
	comp=Z,6.3nm,1.0s						
MDM	**Murphy Dome**	**48.80**	**32**	P	**P**	**07 46 33.8**	**+0.1**
PWL	**Port Wells**	**48.82**	**37**	P	**P**	**07 46 33.5**	**-0.4**
PWL				IAmb	IAmb	07 46 35.0	
	comp=Z,6.9nm,1.0s						
PRZ	**Przheval'sk**	**49.08**	**298**	P	**P**	**07 46 36.8**	**+0.5**
POKR	**Poker Plat Res**	**49.14**	**32**	P	**P**	**07 46 36.9**	**+0.6**
IL31		**49.38**	**32**	P	**P**	**07 46 37.5**	**-0.5**
IL31				IAmb	IAmb	07 46 40.8	
	comp=Z,5.1nm,1.1s						
ILAR	**Eielson Array**	**49.38**	**32**	P	**P**	**07 46 38.4**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=268,slow=6.8,SNR=24						
ILAR	**Eielson Array**	**49.38**	**32**	P	**P**	**07 46 37.4**	**-0.6**
M24K	**Tolsona, Glenn**	**49.79**	**36**	P	**P**	**07 46 40.3**	**-1.0**
FYU	**Fort Yukon**	**50.05**	**30**	P	**P**	**07 46 41.9**	**-1.2**
KDJ	**Kajisay**	**50.05**	**298**	P	**P**	**07 46 43.5**	**-0.2**
BMAR	**Burnt Mountain**	**50.30**	**29**	P	**P**	**07 46 45.2**	**+0.2**
SCRK	**Sand Creek**	**50.67**	**33**	P	**P**	**07 46 48.0**	**0.0**
SCRK				IAmb	IAmb	07 46 49.5	
	comp=Z,5.5nm,1.1s						
BOOM	**Boomskoye usch**	**50.83**	**299**	P	**P**	**07 46 49.8**	**+0.2**
BCAR	**Beaver Creek A**	**51.73**	**34**	P	**P**	**07 46 55.8**	**-0.1**
BVAR	**Borovoye Array**	**51.84**	**313**	P	**P**	**07 46 57.6**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=174,slow=6.9,SNR=3.6						
EPYK	**Eagle Plains**	**53.47**	**30**	P	**P**	**07 47 09.3**	**+0.6**
EPYK				IAmb	IAmb	07 47 11.1	
	comp=Z,9.3nm,0.9s						
KK31	**Karatay Array**	**54.44**	**301**	P	**P**	**07 47 16.1**	**-0.1**
KK31				IAmb	IAmb	07 47 18.2	
	comp=Z,9.2nm,1.2s						
KKAR	**Karatay Array**	**54.44**	**301**	P	**P**	**07 47 16.1**	**-0.1**
KKAR				IAmb	IAmb	07 47 18.2	
	comp=Z,9.2nm,1.2s						
KKAR	**Karatay Array**	**54.44**	**301**	P	**P**	**07 47 15.6**	**-0.5**
WB0	**Warramunga Arr**	**56.47**	**190**	P	**P**	**07 47 30.3**	**-0.5**
WB2	**Warramunga Arr**	**56.64**	**190**	P	**P**	**07 47 31.8**	**-0.2**
WB2				IAmb	IAmb	07 47 46.5	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**56.65**	**190**	P	**P**	**07 47 31.6**	**-0.5**
	comp=Z,3.2nm,0.9s,baz=7.3,slow=6.9,SNR=14						
WRA	**Warramunga Arr**	**56.65**	**190**	P	**P**	**07 47 31.6**	**-0.5**
ARU	**Arti**	**57.58**	**319**	P	**P**	**07 47 39.0**	**+0.7**
	comp=Z,2.2nm,0.2s,baz=45,slow=9.9,SNR=7.3						
ARU	**Arti**	**57.58**	**319**	P	**P**	**07 47 38.3**	**-0.1**
KBL	**Kabul**	**58.73**	**292**	P	**P**	**07 47 46.8**	**-0.1**
KBL				IAmb	IAmb	07 47 48.3	
	comp=Z,4.4nm,0.9s						
ABKAR	**Akbulak array**	**59.22**	**311**	P	**P**	**07 47 48.8**	**-1.1**
ABKAR				IAmb	IAmb	07 47 50.8	
	comp=Z,4.7nm,0.9s						
ABKAR	**Akbulak array**	**59.22**	**311**	P	**P**	**07 47 48.7**	**-1.1**
AKTO	**Aktyubinsk**	**59.95**	**313**	P	**P**	**07 47 55.4**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=74,slow=13,SNR=3.0						
ASAR	**Alice Springs**	**60.37**	**189**	P	**P**	**07 47 57.8**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=6.4,slow=6.2,SNR=10						
ASAR				LR	LR	08 15 20.9	
	comp=Z,17nm,19.2s,baz=201,slow=37						
RES	**Resolute Bay**	**62.89**	**15**	P	**P**	**07 48 14.2**	**-0.1**
RES				IAmb	IAmb	07 48 15.6	
	comp=Z,5.1nm,0.9s						
YKA	**Yellowknife Ar**	**63.74**	**30**	P	**P**	**07 48 20.5**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=299,slow=6.4,SNR=14						
HRA	**Herat**	**63.83**	**295**	P	**P**	**07 48 21.6**	**+0.1**
HRA				IAmb	IAmb	07 48 22.7	
	comp=Z,3.0nm,0.8s						
ARCES	**ARCESS Array B**	**64.97**	**340**	LR	LR	08 21 45.9	
	comp=Z,33nm,18.1s,baz=295,slow=41						
TULEG	**Thule**	**65.54**	**8**	P	**P**	**07 48 31.3**	**-0.4**
TULEG				IAmb	IAmb	07 48 32.4	
	comp=Z,4.4nm,0.8s						
FINES	**FINESS Array B**	**69.89**	**333**	P	**P**	**07 48 59.9**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=46,slow=8.2,SNR=5.1						
KBZ	**Khabaz**	**72.18**	**311**	P	**P**	**07 49 14.0**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=40,slow=3.4,SNR=5.0						
LRM	**Limekiln Ridge**	**73.75**	**45**	P	**P**	**07 49 23.8**	**+0.6**
LHV	**Little Huntoon**	**74.38**	**54**	P	**P**	**07 49 26.8**	**+0.2**
LHV				IAmb	IAmb	07 49 29.4	
	comp=Z,9.4nm,1.3s						
NVAR	**Mina Array Bea**	**74.41**	**54**	P	**P**	**07 49 28.5**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=285,slow=6.2,SNR=16						
NVAR	**Mina Array Bea**	**74.41**	**54**	P	**P**	**07 49 26.6**	**-0.5**
NOA	**NORSAR Array B**	**75.19**	**338**	P	**P**	**07 49 31.8**	**+0.8**
	comp=Z,4.8nm,1.1s,baz=38,slow=5.8,SNR=5.2						
NOA				LR	LR	08 26 52.9	
	comp=Z,43nm,18.1s,baz=315,slow=39						
AKASG	**Malin Array Be**	**75.48**	**323**	P	**P**	**07 49 33.0**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=45,slow=5.9,SNR=7.3						
AKBB	**Malin Array Si**	**75.48**	**323**	P	**P**	**07 49 32.3**	**-0.5**
AKBB				IAmb	IAmb	07 49 47.4	
	comp=Z,6.4nm,1.1s						
TPNV	**Topopah Spring**	**76.59**	**54**	P	**P**	**07 49 39.1**	**-0.5**
PDAR	**Pinedale Array**	**77.25**	**46**	P	**P**	**07 49 43.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=328,slow=6.4,SNR=3.7						
PV05	**Paradox Valley**	**80.44**	**50**	P	**P**	**07 50 00.9**	**+0.1**
PV05				IAmb	IAmb	07 50 03.0	
	comp=Z,11nm,1.1s						
VYHS	**Vyhne**	**81.88**	**326**	*e*P	**P**	**07 50 07.9**	**-0.2**
TX31	**Lajitas Ar. Si**	**89.55**	**53**	P	**P**	**07 50 44.0**	**-2.5**
TX31				IAmb	IAmb	07 50 50.0	
	comp=Z,5.6nm,1.0s						
TX32	**Lajitas Array**	**89.55**	**53**	P	**P**	**07 50 44.7**	**-1.9**
TXAR	**Lajitas Array**	**89.55**	**53**	P	**P**	**07 50 47.5**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=292,slow=3.4,SNR=14						
TXAR	**Lajitas Array**	**89.55**	**53**	P	**P**	**07 50 45.9**	**-0.7**
U40A	**Yellville**	**91.01**	**42**	P	**P**	**07 50 52.2**	**-0.9**
LPAZ	**La Paz**	**145.96**	**62**	PKPbc	**PKPdf**	**07 57 29.5**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=4.5,slow=6.2,SNR=9.5						

IDC 24 07:40:15.2±3.5, 53°.74N×90°.95E, h0km, mb1 3.3/3, mb1mx3.1/45, mbtmp3.3/3, ML2.6/3, Error ellipse: s-maj=34.2km s-min=24.6km az=25.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.64**	**276**	*i*		08 04 00.0	
	baz=90,slow=315,SNR=3.2						
ZALV	**Zalesovo Beam**	**3.64**	**276**	Pn	Pn	07 41 13.3	+0.6
	0.3nm,0.3s,baz=96,slow=14,SNR=3.2						
ZALV				Lg	Lg	07 42 09.4	
	3.3nm,0.3s,baz=93,slow=24,SNR=9.4						
KURBB	**Kurchatov Arra**	**8.25**	**253**	Pn	Pn	07 42 15.6	-0.4
	0.1nm,0.3s,baz=65,slow=14,SNR=12						
KURBB				Sn	Sn	07 43 48.7	-1.1
	0.1nm,0.3s,baz=67,slow=27,SNR=12						
KURBB				Lg	Lg	07 44 38.1	
	0.1nm,0.3s,baz=59,slow=30,SNR=4.2						
MKAR	**Makanchi Array**	**8.89**	**222**	Pn	Pn	07 42 25.6	+0.7
	0.3nm,0.3s,baz=37,slow=13,SNR=7.4						
MKAR				Lg	Lg	07 44 56.0	
	0.1nm,0.3s,baz=33,slow=29,SNR=2.2						

IDC ***24*** *08:28:28.8±1.1, 48°.00N×116°.43W, h0km, mb2.9/1, mb1 3.3/4, mb1mx3.1/57, mbtmp2.9/4, ML3.1/3, Error ellipse: s-maj=20.5km s-min=5.7km az=39.0*

NEIC ***24*** *08:28:28.9±1.6, 48°.20N±0°.06×116°.37W±0°.01, h10km±2km, ML3.3/57, Md3.5(BUT), ML3.3(OTT), Error ellipse: s-maj=10.1km s-min=3.0km az=6.0*

BUT ***24*** *08:28:28.8±2.0, 48°.12N±0°.06×116°.35W±0°.04, h10km±6km, Error ellipse: s-maj=9.0km s-min=3.6km az=182.0*

PGC ***24*** *08:28:29.2, 48°.10N×116°.37W, h7km, ML3.4/10, 90km Ene of Spokane, Wa Western Idaho*

ISC 24 08:28:28.7±0.7, 48°.16N±0°.03×116°.34W±0°.02, h10km, n92, σ1§63/120, Western Idaho

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEW	**Newport**	**0.54**	**282**	Pg	**Pg**	**08 28 38.5**	**-0.6**
	34nm,0.3s,baz=92,slow=17,SNR=654						
NEW				Lg	Lg	08 28 45.5	
	109nm,0.3s,baz=101,slow=10,SNR=39						
NEW	**Newport**	**0.54**	**282**	Pg	**Pg**	**08 28 38.8**	**-0.3**
NEW			

F07A					IAML		08 30 32.8	
	comp=N,103nm,0.8s							
BMO	**Blue Mountains**	**3.37**	**192**			**Pn**	**08 29 22.2**	**+0.7**
BMO					IAML		08 30 20.7	
	comp=N,51nm,0.5s							
BMO					IAML		08 30 21.2	
	comp=N,51nm,0.9s							
HRY	**Holter Researc**	**3.38**	**114**	Pn		**Pn**	**08 29 21.9**	**+0.3**
HRY				Pg		**Pb**	**08 29 31.5**	**+2.7**
HRY	**Holter Researc**	**3.38**	**114**	Pn		**Pn**	**08 29 22.6**	**+0.9**
G08A	**Pilot Rock**	**3.39**	**213**			**Pn**	**08 29 22.1**	**+0.4**
G08A					IAML		08 30 19.8	
	comp=N,52nm,0.4s							
B06A	**Marblemount**	**3.45**	**278**	Pn		**Pn**	**08 29 23.2**	**+0.7**
B06A	**Marblemount**	**3.45**	**278**			**Pn**	**08 29 21.4**	**-1.0**
RPW	**Rockport**	**3.47**	**277**	Pn		**Pn**	**08 29 22.7**	**0.0**
RPW				Pg		**Pb**	**08 29 32.0**	**+1.8**
HBMT	**Mount Humbug**	**3.48**	**131**	Pn		**Pn**	**08 29 23.8**	**+0.8**
LRM	**Limekiln Ridge**	**3.54**	**130**	Pn		**Pn**	**08 29 24.5**	**+0.6**
LRM	**Limekiln Ridge**	**3.54**	**130**			**Pn**	**08 29 24.4**	**+0.6**
HOPB	**Hope**	**3.58**	**292**	Pg		**Pb**	**08 29 33.5**	**+1.4**
HOPB				Sg		**Sb**	**08 30 18.5**	**+2.9**
JCW	**Jim Creek**	**3.74**	**273**	Pn		**Pn**	**08 29 26.7**	**+0.2**
MBW	**Mount Baker**	**3.75**	**282**	Pn		**Pn**	**08 29 27.2**	**+0.4**
DLMT	**Dillon**	**3.80**	**136**			**Pn**	**08 29 28.4**	**+1.0**
DLMT					IAML		08 30 35.7	
	comp=N,73nm,0.7s							
FMW	**Mount Fremont**	**3.82**	**253**	Pn		**Pn**	**08 29 27.2**	**-0.4**
A05A	**Maple Falls**	**3.91**	**285**	Pn		**Pn**	**08 29 29.1**	**+0.3**
A05A				Sg		**Sg**	**08 30 30.1**	**-4.0**
A05A	**Maple Falls**	**3.91**	**285**			**Pn**	**08 29 29.2**	**+0.5**
D05A	**Enumclaw**	**3.94**	**258**	Pn		**Pn**	**08 29 29.0**	**-0.1**
D05A				Sg		**Sg**	**08 30 32.7**	**-2.5**
D05A	**Enumclaw**	**3.94**	**258**	Pn		**Pn**	**08 29 29.1**	**-0.1**
D05A					IAML		08 30 40.7	
	comp=E,40nm,0.9s							
D05A					IAML		08 30 41.9	
	comp=N,43nm,0.8s							
LON	**Longmire**	**3.97**	**251**	Pn		**Pn**	**08 29 29.6**	**-0.1**
LON				Sn		**Sn**	**08 30 16.1**	**-0.1**
LON				Sg		**Sg**	**08 30 32.8**	**-3.3**
LON	**Longmire**	**3.97**	**251**	Pn		**Pn**	**08 29 29.5**	**-0.1**
MCMT	**McKenzie Canyo**	**4.11**	**143**			**Pn**	**08 29 33.0**	**+1.2**
BOZ	**Bozeman (W)**	**4.12**	**127**			**Pn**	**08 29 32.5**	**+0.8**
BOZ					IAML		08 30 40.9	
	comp=N,29nm,0.4s							
MNB	**Mounoet Dainar**	**4.25**	**343**	Pn		**Pn**	**08 29 35.7**	**+2.0**
MNB				Pg		**Pg**	**08 29 48.3**	**-1.8**
HNBB	**Haney**	**4.28**	**288**	Sg		**Sb**	**08 30 40.3**	**+4.6**
BLBC	**Blue River**	**4.32**	**335**	Pn		**Pn**	**08 29 36.5**	**+2.0**
BLBC				Pg		**Pg**	**08 29 48.6**	**-2.7**
LLLB	**Lillooet**	**4.38**	**306**	Pg		**Pb**	**08 29 47.8**	**+2.2**
LLLB				Sg		**Sb**	**08 30 42.9**	**+4.5**
GNW	**Green Mountain**	**4.41**	**265**	Pn		**Pn**	**08 29 35.7**	**+0.1**
EGMT	**Eagleton**	**4.41**	**89**			**Pn**	**08 29 36.0**	**+0.3**
BLN	**Blyn Mountain**	**4.45**	**271**	Pn		**Pn**	**08 29 36.4**	**+0.2**
HDW	**Hoodsport**	**4.55**	**266**	Pn		**Pn**	**08 29 37.6**	**0.0**
I07A	**Izee**	**4.63**	**210**	Pn		**Pn**	**08 29 40.6**	**+1.8**
TPMT	**Tepee Creek**	**4.71**	**135**	Pg		**Pg**	**08 29 56.5**	**-2.3**
QLMT	**Earthquake Lak**	**4.75**	**133**	Pn		**Pn**	**08 29 41.1**	**+0.6**
WSLR	**Whistler**	**4.75**	**297**	Sg		**Sb**	**08 30 54.0**	**+4.8**
MFID	**Camas Ranch**	**4.76**	**176**			**Pn**	**08 29 42.5**	**+2.0**
MFID					IAML		08 31 04.4	
	comp=N,26nm,0.4s							
MFID					IAML		08 31 12.5	
	comp=N,23nm,0.6s							
BIB	**Bowen Island**	**4.78**	**288**	Pg		**Pb**	**08 29 54.0**	**+1.6**
WPB	**Watts Point**	**4.78**	**291**	Pg		**Pb**	**08 29 53.9**	**+1.5**
HLID	**Hailey**	**4.79**	**163**			**Pn**	**08 29 41.8**	**+0.8**
HLID					IAML		08 31 05.2	
	comp=N,23nm,0.6s							
HLID					IAML		08 31 07.3	
	comp=N,24nm,0.6s							
J08A	**Circle Bar Ran**	**5.03**	**198**	Pn		**Pn**	**08 29 45.0**	**+0.8**
J08A					IAML		08 31 10.6	
	comp=E,15nm,2.3s							
NLWA	**Neilton Lookou**	**5.14**	**264**	Pn		**Pn**	**08 29 46.5**	**+0.9**
GCMT	**Greycliff**	**5.14**	**115**	Pn		**Pn**	**08 29 47.4**	**+1.6**
E03A	**Lebam**	**5.17**	**255**	Pn		**Pn**	**08 29 47.2**	**+1.1**
SHB	**Sechelt**	**5.18**	**289**	Sg		**Sb**	**08 31 07.0**	**+5.4**
EDM	**Edmonton**	**5.41**	**19**	Pn		**Pn**	**08 29 49.6**	**+0.2**
EDM				Pg		**Pg**	**08 30 07.5**	**-4.8**
PINE	**Pine Mountain**	**5.42**	**218**	Pn		**Pn**	**08 29 51.5**	**+1.9**
H17A	**Grant Village**	**5.49**	**131**	Pn		**Pn**	**08 29 51.4**	**+0.8**
RLMT	**Red Lodge**	**5.74**	**119**	Pn		**Pn**	**08 29 55.5**	**+1.4**
MOOW	**Moose Ponds**	**5.88**	**136**			**Pn**	**08 29 58.2**	**+2.1**
LOHW	**Long Hollow**	**6.05**	**137**			**Pn**	**08 30 00.4**	**+2.0**
SNOW	**Snow King Moun**	**6.10**	**138**			**Pn**	**08 30 00.6**	**+1.5**
REDW	**Red Top Meadow**	**6.14**	**139**	Pn		**Pn**	**08 30 01.4**	**+1.8**
PDAR	**Pinedale Array**	**7.19**	**136**	Pn		**Pn**	**08 30 17.2**	**+3.1**
	comp=E,0.1nm,0.3s,baz=317,slow=14,SNR=2.2							
PDAR				Lg		Lg	08 32 14.9	
	comp=E,0.1nm,0.3s,baz=282,slow=29,SNR=2.1							
ELK	**Elko**	**7.45**	**174**	Pn		**Pn**	**08 30 16.9**	**-0.7**
	comp=E,0.1nm,0.3s,baz=339,slow=15,SNR=1.6							
ELK				Lg		Lg	08 32 16.0	
	comp=E,0.1nm,0.3s,baz=195,slow=20,SNR=1.6							
K22A	**Casper**	**8.83**	**125**			**Pn**	**08 30 37.0**	**+0.6**
YKA	**Yellowknife Ar**	**14.40**	**3**	Pn		**Pn**	**08 31 49.4**	**-2.9**
	comp=E,0.1nm,0.3s,baz=184,slow=13,SNR=3.7							
YKA				Lg		Lg	08 35 55.2	
	comp=E,0.1nm,0.3s,baz=180,slow=28,SNR=3.6							
TXAR	**Lajitas Array**	**21.18**	**148**	P		**P**	**08 33 16.1**	**+1.9**
	comp=E,0.4nm,0.6s,baz=343,slow=10.0,SNR=7.3							

*IDC **24** 09:01:01.8±1.0,51°.34N×178°.15W, h0km, mb3.3/7, mb1 3.7/10, mb1mx3.5/61, mbtmp3.5/10, ML3.2/3, Error ellipse: s-maj=35.0km s-min=19.1km az=160.0*
*NEIC **24** 09:01:02.8±1.7,51°.32N±0°.04×178°.09W±0°.04, h4km±5km, Error ellipse: s-maj=6.2km s-min=3.4km az=193.0*
*AEIC **24** 09:01:03±2.9,51°.49N±0°.06×178°.10W±0°.04, h0km±5km, ML3.9, mb3.8/7(NEIC), Error ellipse: s-maj=9.3km s-min=3.6km az=173.0*

ISC 24 09:01:03.6±0.8, 51°.38N±0°.09×178°.13W±0°.03, h10km, n49, σ1§18/43, mb3.8/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.46**	**7**		**Pg**	**09 01 12.4**	**-0.2**
TAFP	**Tanaga Falls P**	**0.53**	**10**		**Pg**	**09 01 13.4**	**-0.5**
GALAA	**Gareloi Lava P**	**0.56**	**314**		**Pb**	**09 01 14.9**	**-0.5**
KIMD	**Kanaga Island**	**0.68**	**55**		**Pg**	**09 01 16.6**	**-0.1**
KIWB	**Kanaga Island**	**0.77**	**52**		**Pg**	**09 01 16.7**	**-1.8**
KIKV	**Kanaga Island**	**0.78**	**50**		**Pg**	**09 01 18.2**	**-0.5**
KICM	**Kanaga Island**	**0.80**	**47**		**Pg**	**09 01 18.6**	**-0.3**
ADK	**Adak**	**1.03**	**60**		**Pg**	**09 01 22.2**	**-1.3**
ADK					**Sn**	**09 01 38.8**	**+0.1**
ADAG	**Mount Adagdak**	**1.13**	**57**		**Pb**	**09 01 24.5**	**-0.6**
ETKA	**Kagalaska Isla**	**1.18**	**65**		**Pb**	**09 01 25.1**	**-0.9**
GSTD	**Great Sitkin T**	**1.41**	**60**		**Pn**	**09 01 28.6**	**-0.8**
GSTD					**Sb**	**09 01 47.9**	**-0.1**
GSMY	**Great Sitkin M**	**1.45**	**62**		**Pn**	**09 01 29.4**	**-0.6**
CERAA	**Semis' Rag'd T**	**1.46**	**292**		**Pn**	**09 01 30.2**	**+0.1**
GSTR	**Great Sitkin T**	**1.47**	**60**		**Pn**	**09 01 30.0**	**-0.2**
CESW	**Semis' Southwe**	**1.53**	**291**		**Pn**	**09 01 31.4**	**+0.4**
CEAP	**Semis' Anvil P**	**1.56**	**295**		**Pn**	**09 01 31.6**	**+0.3**
AMKA	**Amchitka**	**1.61**	**271**		**Pn**	**09 01 32.5**	**+0.5**
LSPA	**Little Sitkin**	**2.13**	**287**		**Pn**	**09 01 40.7**	**+1.4**
LSPA					**Sb**	**09 02 09.3**	**+0.5**
LSNW	**Little Sitkin**	**2.17**	**287**		**Pn**	**09 01 40.8**	**+1.1**
ATKA	**Atka Island**	**2.58**	**70**		**Pn**	**09 01 46.5**	**+1.2**
ATKA					**Sn**	**09 02 18.2**	**+1.5**
KOWE	**Korovin West**	**2.60**	**66**		**Pn**	**09 01 47.0**	**+1.3**
KOFP	**Korovin Flat P**	**2.66**	**69**		**Pn**	**09 01 47.9**	**+1.3**
MAPS	**Pakushin South**	**7.24**	**66**		**Pn**	**09 02 51.8**	**+2.5**
MGOD	**Makushin Gods**	**7.27**	**66**		**Pn**	**09 02 52.4**	**+2.5**
MSW	**Makushin Switc**	**7.36**	**65**		**Pn**	**09 02 53.5**	**+2.5**
PETK	**Petropavlovsk-**	**14.89**	**286**	Pn	**Pn**	**09 04 33.8**	**-0.1**
	0.1nm,0.3s,baz=79,slow=16,SNR=1.9						
KDAK	**Kodiak Island**	**16.07**	**57**	Pn	**Pn**	**09 04 47.2**	**-2.2**
	0.3nm,0.3s,baz=220,slow=7.6,SNR=1.6						
SEY	**Seymchan**	**19.53**	**318**	P	**P**	**09 05 30.6**	**-0.2**
	0.1nm,0.3s,baz=9.7,slow=23,SNR=2.6						
MDM	**Murphy Dome**	**20.55**	**37**	P	Pn	09 05 43.8	-0.3
MDM				IAmb	IAmb	09 05 55.7	
	comp=Z,4.8nm,1.0s						
PAX	**Paxson**	**20.90**	**44**	P	**P**	**09 05 46.7**	**+0.9**
PAX				IAmb	IAmb	09 05 56.7	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**20.98**	**38**	P	**P**	**09 05 47.2**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=260,slow=11,SNR=3.1						
EGAK	**Eagle**	**23.27**	**41**	P	**P**	**09 06 11.2**	**+0.2**
EGAK				IAmb	IAmb	09 06 22.8	
	comp=Z,3.2nm,1.1s						
INK	**Inuvik**	**27.22**	**35**	P	**P**	**09 06 50.4**	**+3.3**
KLR	**Kul'dur**	**31.58**	**286**	P	**P**	**09 07 25.5**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=359,slow=9.6,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**33.71**	**206**	T	T	09 43 24.8	
	baz=17,slow=76,SNR=769						
H11N3	**WAKE ISLAND Hy**	**33.72**	**206**	T	T	09 43 24.1	
	baz=17,slow=76,SNR=502						
H11N1	**WAKE ISLAND Hy**	**33.73**	**206**	T	T	09 43 26.0	
	baz=17,slow=76,SNR=494						
YKA	**Yellowknife Ar**	**34.93**	**47**	P	**P**	**09 07 55.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=285,slow=8.1,SNR=1.8						
H11S1	**WAKE ISLAND Hy**	**34.93**	**206**	T	T	09 44 58.9	
	baz=17,slow=76,SNR=890						
H11S2	**WAKE ISLAND Hy**	**34.94**	**206**	T	T	09 44 56.5	
	baz=17,slow=76,SNR=386						
H11S3	**WAKE ISLAND Hy**	**34.95**	**206**	T	T	09 44 57.9	
	baz=17,slow=76,SNR=650						
NVAR	**Mina Array Bea**	**43.13**	**83**	P	**P**	**09 09 04.5**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=298,slow=7.7,SNR=2.1						
PDAR	**Pinedale Array**	**45.91**	**73**	P	**P**	**09 09 25.8**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=310,slow=4.5,SNR=2.8						
WRA	**Warramunga Arr**	**82.31**	**224**	P	**P**	**09 13 24.4**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=32,slow=5.7,SNR=4.6						
ASAR	**Alice Springs**	**85.77**	**223**	P	**P**	**09 13 43.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=26,slow=5.0,SNR=7.6						
H03N2	**Juan Fernandez**	**120.74**	**106**	T	T	11 31 53.0	
	baz=317,slow=78,SNR=54						
H03N1	**Juan Fernandez**	**120.75**	**106**	T	T	11 32 08.2	
	baz=317,slow=78,SNR=67						
H03N3	**Juan Fernandez**	**120.76**	**106**	T	T	11 32 24.5	
	baz=317,slow=78,SNR=62						
BOSA	**Boshof**	**151.28**	**313**	PKPbc	**PKPbc**	**09 20 57.2**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=16,slow=7.4,SNR=1.5						

*NEIC **24** 09:08:40.9±1.4,53°.39N±0°.04×165°.86W±0°.08, h27km±8km, Error ellipse: s-maj=8.4km s-min=4.0km az=132.0*
*AEIC **24** 09:08:40±1.6,53°.38N±0°.04×165°.85W±0°.07, h20km±5km, ML3.3, mb3.6/3(NEIC), Error ellipse: s-maj=6.6km s-min=5.8km az=162.0*
*IDC **24** 09:08:42.1±4.7,53°.37N×164°.75W, h0km, mb3.0/3, mb1 3.4/5, mb1mx3.2/46, mbtmp3.1/5, ML2.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/12, Error ellipse: s-maj=79.1km s-min=34.9km az=93.0*

ISC 24 09:08:39.6±1.3, 53°.32N±0°.08×165°.84W±0°.05, h19km±5km, n60, σ1§10/59, mb3.1/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAT	**Makushin Natee**	**0.76**	**319**		**Pg**	**09 08 54.7**	**+0.1**
MNAT					**Sb**	**09 09 04.5**	**+0.4**
MGOD	**Makushin Gods**	**0.78**	**308**		**Pg**	**09 08 55.0**	**0.0**
ZRO	**Akutan Zero**	**0.78**	**354**		**Pb**	**09 08 54.6**	**0.0**
AKMO	**Akutan Morgan**	**0.78**	**353**		**Pb**	**09 08 54.6**	**-0.1**
AKMO					**Sb**	**09 09 04.6**	**-0.2**
AKBBA	**Akutan Broad B**	**0.79**	**356**		**Pb**	**09 08 54.6**	**-0.1**
MAPS	**Pakushin South**	**0.82**	**307**		**Pg**	**09 08 55.6**	**-0.1**
AKUT	**Akutan**	**0.82**	**3**		**Pg**	**09 08 54.9**	**-0.3**
AKUT					**Sb**	**09 09 05.5**	**-0.5**
MSW	**Makushin Switc**	**0.82**	**317**		**Pb**	**09 08 55.6**	**+0.3**
MSW					**Sn**	**09 09 07.6**	**-0.2**
AKSA	**Akutan Strait**	**0.83**	**6**		**Pb**	**09 08 54.9**	**-0.4**
AKSA	**Akutan Strait**	**0.83**	**6**		**Pb**	**09 08 54.7**	**-0.6**
AKRB	**Akutan Reef Bi**	**0.83**	**351**		**Pb**	**09 08 55.4**	**0.0**
AKLV	**Akutan Long Va**	**0.85**	**355**		**Pb**	**09 08 55.3**	**-0.5**
AKLV					**Sb**	**09 09 06.2**	**-0.6**
AKGG	**Akutan Green G**	**0.89**	**354**		**Pb**	**09 08 56.1**	**-0.3**
OKFG	**Magazine Ridge**	**1.25**	**275**		**Pn**	**09 09 02.4**	**+0.4**
WESP	**Westdahl Peak**	**1.35**	**29**		**Pn**	**09 09 03.5**	**0.0**
WESP					**Sn**	**09 09 20.9**	**-0.1**
OKSO	**Okmok South**	**1.39**	**273**		**Pn**	**09 09 04.4**	**+0.4**
SSLS	**Shishaldin Sou**	**1.77**	**37**		**Pn**	**09 09 09.8**	**+0.5**
SSBA	**Shishaldin**	**1.78**	**34**		**Pn**	**09 09 09.5**	**+0.2**
SSBA					**Sn**	**09 09 32.2**	**+0.8**
NIKH	**Nikolski High**	**1.85**	**260**		**Pn**	**09 09 10.7**	**+0.5**
FALS	**False Pass**	**2.10**	**42**		**Pn**	**09 09 13.5**	**-0.3**
DT1	**Dutton Round H**	**2.76**	**48**		**Pn**	**09 09 23.4**	**+0.6**
SDPT	**Sand Point**	**3.74**	**55**		**Pn**	**09 09 37.1**	**+0.8**
OHAK	**Old Harbor**	**8.16**	**56**	Pn	**Pn**	**09 10 37.9**	**+1.0**
KDAK	**Kodiak Island**	**8.74**	**54**	Pn	**Pn**	**09 10 43.6**	**-1.2**
	0.2nm,0.3s,baz=244,slow=5.2,SNR=2.1						
KDAK					Sn	09 12 13.8	-8.9
	0.1nm,0.3s,baz=301,slow=13,SNR=1.9						
KDAK	**Kodiak Island**	**8.74**	**54**		**Pn**	**09 10 42.6**	**-2.3**
RSO	**Redoubt South**	**10.11**	**40**		**Pn**	**09 11 06.0**	**+2.3**
CNPM	**China Poot**	**10.19**	**47**	Pn	**Pn**	**09 11 05.1**	**+0.4**
TTA	**Tatalina**	**10.94**	**24**	Pn	**Pn**	**09 11 11.9**	**-3.0**
SEW	**Seward**	**11.26**	**46**	Pn	**Pn**	**09 11 18.4**	**-0.9**
SUA	**Susitna One**	**11.50**	**39**	Pn	**Pn**	**09 11 23.1**	**+0.3**
RC01	**Rabbit Creek A**	**11.67**	**42**	Pn	**Pn**	**09 11 24.9**	**0.0**
PWL	**Port Wells**	**12.12**	**45**	Pn	**Pn**	**09 11 30.2**	**-0.9**
TNA	**Tin City**	**12.33**	**356**	Pn	**Pn**	**09 11 35.4**	**+1.6**
KTH	**Kantishna Hill**	**12.86**	**31**	Pn	**Pn**	**09 11 39.0**	**-2.1**
TRF	**Thorofare Moun**	**12.98**	**32**	Pn	**Pn**	**09 11 40.1**	**-2.9**
SCM	**Sheep Creek Mo**	**13.05**	**42**	Pn	**Pn**	**09 11 42.8**	**-1.0**
EYAK	**Cordova Ski Ar**	**13.11**	**48**	Pn	**Pn**	**09 11 42.7**	**-1.7**
RND	**Reindeer**	**13.43**	**34**	Pn	**Pn**	**09 11 48.7**	**-0.2**
KLU	**Klutina**	**13.45**	**45**	Pn	**Pn**	**09 11 47.3**	**-2.0**
RAGM	**Ragged Mountai**	**13.53**	**50**	Pn	**Pn**	**09 11 51.4**	**+1.1**
M24K	**Tolsona, Glenn**	**13.66**	**42**	Pn	**Pn**	**09 11 50.8**	**-1.2**
HMT	**Hamilton**	**13.70**	**51**	Pn	**Pn**	**09 11 50.7**	**-2.0**
N25K	**Chitina, Valde**	**14.07**	**45**	Pn	**Pn**	**09 11 57.1**	**-0.6**
VRDI	**Verde Repeater**	**14.41**	**48**	Pn	**Pn**	**09 12 03.3**	**+0.9**
MCARA	**McCarthy VSAT**	**14.66**	**48**	Pn	**Pn**	**09 12 04.1**	**-1.6**
ILAR	**Eielson Array**	**14.98**	**33**	Pn	**Pn**	**09 12 08.8**	**-1.2**
	0.0nm,0.3s,baz=220,slow=13,SNR=1.5						
GRNC	**Granite Creek**	**15.00**	**51**	Pn	**Pn**	**09 12 10.0**	**-0.6**
BARN	**Barnard Glacie**	**15.15**	**50**	Pn	**Pn**	**09 12 11.8**	**-0.8**
BARN				IAmb	IAmb	09 12 35.6	
	comp=Z,6.0nm,1.3s						
CTGM	**Chitina Glacie**	**15.27**	**50**	Pn	**Pn**	**09 12 13.0**	**-1.0**
CTGM				IAmb	IAmb	09 12 27.8	
	comp=Z,4.0nm,1.2s						
DLBC	**Dease Lake**	**20.56**	**61**	LR	LR	09 19 52.4	
	comp=Z,61nm,19.4s,baz=161,slow=34						
INK	**Inuvik**	**21.38**	**33**	P	**P**	**09 13 25.4**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=230,slow=8.9,SNR=4.8						
INK	**Inuvik**	**21.38**	**33**	IAmb	IAmb	09 13 31.6	
	comp=Z,2.1nm,1.1s						
NVAR	**Mina Array Bea**	**35.58**	**95**	P	**P**	**09 15 35.3**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=302,slow=10,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**39.57**	**223**	T	T	09 58 58.3	
	baz=25,slow=76,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**39.57**	**223**	T	T	09 59 04.0	
	baz=25,slow=76,SNR=10						
H11N1	**WAKE ISLAND Hy**	**39.58**	**223**	T	T	09 59 04.0	
	baz=25,slow=76,SNR=9.7						
H11S1	**WAKE ISLAND Hy**	**40.74**	**222**	T	T	10 00 22.5	
	baz=25,slow=76,SNR=17						
H11S2	**WAKE ISLAND Hy**	**40.76**	**222**	T	T	10 00 25.4	
	baz=25,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**40.76**	**222**	T	T	10 00 19.9	
	baz=25,slow=76,SNR=15						
TXAR	**Lajitas Array**	**50.62**	**92**	P	**P**	**09 17 38.1**	**+0.8**
	comp=Z,0.2nm,0.9s,baz=310,slow=5.6,SNR=1.0						

*IDC **24** 09:09:43.1±1.2,26°.57S×70°.34W, h69km±8km, mb3.4/3, mb1 3.7/5, mb1mx3.4/26, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.7/9, Error ellipse: s-maj=32.8km s-min=18.8km az=108.0*
*GUC **24** 09:09:43.7±0.4,26°.62S×70°.59W, h67km±6km, ML4.0*

ISC 24 09:09:42.3±0.7, 26°.59S±0°.04×70°.65W±0°.08, h69km±7km, n20, σ1§52/27, mb3.4/3, 1C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC01	**Pan de Azucar**	**0.44**	**7**	*i*P	**Pn**	**09 09 55.6**	**+1.0**
AC01				*i* S	**Sn**	**09 10 04.4**	**+0.9**
AC01				IAML		09 10 05.0	
	comp=E,7μm,0.4s						
GO03	**Copiap**	**1.07**	**160**	ǁ*i*P	**Pn**	**09 10 02.5**	**+0.8**
GO03				*i* S	**Sn**	**09 10 16.9**	**+0.6**
GO03				IAML		09 10 19.5	
	comp=E,3μm,0.3s						
AC02	**Maricunga**	**1.39**	**101**	*e*P	**Pn**	**09 10 06.8**	**+0.6**
AC02				*i* S	**Sn**	**09 10 24.4**	**+0.3**
AC02				IAML		09 10 25.0	
	comp=E,10μm,0.3s						
AC04	**Llanos de Chal**	**1.66**	**193**	ǁ*i*P	**Pn**	**09 10 09.4**	**+0.1**
AC04				*i* S	**Sn**	**09 10 29.7**	**0.0**
AC04				IAML		09 10 31.3	
	comp=E,3μm,0.2s						
GO02	**Mina Guanaco**	**1.71**	**34**	ǁ*i*P	**Pn**	**09 10 10.6**	**+0.2**
GO02				*i* S	**Sn**	**09 10 31.3**	**-0.3**
GO02				IAML		09 10 33.2	
	comp=N,3μm,0.4s						
GO04	**Tololo Observa**	**3.58**	**182**	*e*P	**Pn**	**09 10 35.9**	**+0.3**
LVC	**Limon Verde**	**4.26**	**22**	P	**Pn**	**09 10 45.0**	**-0.1**
	comp=N,3.6nm,0.3s,baz=217,slow=10,SNR=122						
LVC				S	**Sn**	**09 11 32.4**	**-1.4**
	comp=N,12nm,0.3s,baz=245,slow=11,SNR=4.9						
LVC				Lg	Lg	09 11 49.2	
	comp=N,32nm,0.3s,baz=142,slow=23,SNR=5.8						
H03N1	**Juan Fernandez**	**9.89**	**224**	P	**Pn**	**09 11 59.6**	**-1.9**
	baz=110,slow=16,SNR=17						
H03N1				T	T	09 21 42.1	
	baz=52,slow=71,SNR=96						
H03N2	**Juan Fernandez**	**9.90**	**224**	P	**Pn**	**09 12 01.8**	**+0.2**
	baz=110,slow=16,SNR=9.2						
H03N2				T	T	09 21 58.0	
	baz=52,slow=71,SNR=57						
H03N3	**Juan Fernandez**	**9.91**	**224**	P	**Pn**	**09 11 59.2**	**-2.5**
	baz=110,slow=16,SNR=26						
H03N3				T	T	09 21 41.5	
	baz=52,slow=71,SNR=254						
H03S3	**Juan Fernandez**	**10.15**	**223**	P	**Pn**	**09 12 03.1**	**-1.8**
	baz=33,slow=19,SNR=19						
H03S1	**Juan Fernandez**	**10.16**	**223**	P	**Pn**	**09 12 02.5**	**-2.5**
	baz=33,slow=19,SNR=9.2						
H03S2	**Juan Fernandez**	**10.17**	**223**	P	**Pn**	**09 12 01.6**	**-3.5**
	baz=33,slow=19,SNR=11						
LPAZ	**La Paz**	**10.51**	**13**	P	**Pn**	**09 12 09.4**	**-1.4**
	comp=N,0.3nm,0.3s,baz=188,slow=4.1,SNR=8.2						
SIV	**San Ignacio**	**13.81**	**42**	P	Pn	09 12 48.4	-6.6
	comp=N,0.8nm,0.3s,baz=246,slow=12,SNR=8.9						
ATAH	**Atahualpa**	**20.70**	**338**	LR	LR	09 22 41.2	
	comp=N,60nm,18.1s,baz=358,slow=37						
TXAR	**Lajitas Array**	**63.98**	**328**	P	**P**	**09 20 10.3**	**+1.8**
	comp=N,0.2nm,0.5s,baz=155,slow=8.7,SNR=4.3						
TXAR				pP	**pP**	**09 20 28.8**	**+2.1**
	comp=N,0.1nm,0.6s,baz=156,slow=6.4,SNR=2.0						
NVAR	**Mina Array Bea**	**78.56**	**324**	P	**P**	**09 21 37.5**	**+1.0**
	comp=N,0.4nm,0.8s,baz=163,slow=4.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**80.57**	**70**	P	**P**	**09 21 47.2**	**-0.4**
	comp=N,1.4nm,0.8s,baz=234,slow=4.1,SNR=6.5						
TORD				pP	**pP**	**09 22 04.6**	**-2.2**
	comp=N,0.6nm,0.7s,baz=235,slow=4.1,SNR=2.8						
ZALV	**Zalesovo Beam**	**147.20**	**27**	PKPbc	**PKPbc**	**09 29 17.8**	**+0.5**
	comp=N,0.7nm,0.4s,baz=343,slow=1.5,SNR=1.2						
ZALV				pPKPbc	**p

KRER eS Sn **09 33 31.2 +2.1**
KRX Arik 2.41 240 PN Pn **09 33 02.2 +1.0**
KRX S Sn **09 33 30.7 +1.2**
KRX Arik 2.41 240 eP Pn **09 33 02.2 +1.0**
KRX eS Sn **09 33 30.7 +1.2**
UGLR Uglovaya 2.41 235 PN Pn **09 33 02.3 +1.1**
UGLR S Sn **09 33 30.8 +1.3**
UGLR Uglovaya 2.41 235 eP Pn **09 33 02.3 +1.1**
UGLR eS Sn **09 33 30.8 +1.3**
AVH Avacha 2.42 237 PN Pn **09 33 02.8 +1.5**
AVH S Sn **09 33 31.4 +1.8**
AVH Avacha 2.42 237 eP Pn **09 33 02.8 +1.5**
AVH eS Sn **09 33 31.4 +1.8**
KOK Koryaka 2.45 238 PN Pn **09 33 03.2 +1.4**
KOK S Sn **09 33 31.3 +0.8**
KOK Koryaka 2.45 238 eP Pn **09 33 03.2 +1.4**
KOK eS Sn **09 33 31.3 +0.8**
DALK Dalny 2.55 233 PN Pn **09 33 03.5 +0.4**
DALK S Sn **09 33 33.2 +0.3**
DALK Dalny 2.55 233 eP Pn **09 33 03.5 +0.4**
DALK eS Sn **09 33 33.2 +0.3**
PET Petropavlovsk 2.60 233 ⇓*i*PN Pn **09 33 04.7 +0.9**
PET eS Sn **09 33 34.7 +0.6**
PET pmax pmax
comp=Z,237nm,0.5s
PET smax smax
comp=E,2μm,0.5s
PET MLR MLR
comp=Z,200nm,19.0s
PET Petropavlovsk 2.60 233 eP Pn **09 33 04.9 +1.1**
PET eS Sn **09 33 34.7 +0.6**
PET Petropavlovsk 2.60 233 Pn **09 33 04.6 +0.8**
GNL Ganaly 2.63 251 PN Pn **09 33 05.5 +1.3**
GNL S Sn **09 33 36.9 +2.1**
GNL Ganaly 2.63 251 eP Pn **09 33 05.5 +1.3**
GNL eS Sn **09 33 36.9 +2.1**
KRMR Karymshinskiy 2.97 234 PN Pn **09 33 11.5 +2.7**
KRMR S Sn **09 33 46.2 +3.0**
KRMR Karymshinskiy 2.97 234 eP Pn **09 33 11.5 +2.7**
KRMR eS Sn **09 33 46.2 +3.0**
PEA0B Petropavlovsk- 3.02 242 ePN Pn **09 33 10.8 +1.2**
PEA0B Petropavlovsk- 3.02 242 Pn **09 33 10.7 +1.2**
PETK Petropavlovsk- 3.02 242 Pn Pn **09 33 10.7 +1.1**
comp=Z,7.2nm,0.3s,baz=74,slow=19,SNR=64
PETK Sn Sn **09 33 47.8 +3.3**
comp=Z,40nm,0.3s,baz=271,slow=19,SNR=6.7
PETK Petropavlovsk- 3.02 242 Pn **09 33 09.7 +0.2**
RUS Russkaya 3.07 226 PN Pn **09 33 11.1 +0.9**
RUS S Sn **09 33 45.0 -0.7**
RUS Russkaya 3.07 226 eP Pn **09 33 11.1 +0.9**
RUS eS Sn **09 33 45.0 -0.7**
MTVR Mutnovka 3.18 229 PN Pn **09 33 13.3 +1.5**
MTVR S Sn **09 33 49.6 +1.1**
MTVR Mutnovka 3.18 229 eP Pn **09 33 13.3 +1.5**
MTVR eS Sn **09 33 49.6 +1.1**
GRL Gorelyy 3.18 231 PN Pn **09 33 13.8 +2.0**
GRL S Sn **09 33 50.6 +2.1**
GRL Gorelyy 3.18 231 eP Pn **09 33 13.8 +2.0**
GRL eS Sn **09 33 50.6 +2.1**
APC Apacha 3.40 242 PN Pn **09 33 16.9 +2.2**
APC S Sn **09 33 56.7 +3.0**
APC Apacha 3.40 242 eP Pn **09 33 16.9 +2.2**
APC eS Sn **09 33 56.7 +3.0**
PAU Pauzhetka 4.50 228 PN Pn **09 33 33.2 +3.4**
PAU Pauzhetka 4.50 228 eP Pn **09 33 33.2 +3.4**
OSSR Ossora 4.67 6 PN Pn **09 33 32.6 +0.6**
OSSR Ossora 4.67 6 eP Pn **09 33 32.6 +0.6**
SKR Severo-Kuril's 5.38 225 ePN Pn 09 33 47.4 +5.6
SKR eS Sn **09 34 46.4 +4.0**
SKR smax smax
comp=N,109nm,0.7s
SKR smax smax
comp=E,117nm,0.7s
SKR MLR MLR
comp=Z,300nm,16.0s
MA2 Magadan 7.92 313 Pn Pn **09 34 17.0 +0.3**
comp=Z,0.4nm,0.3s,baz=146,slow=21,SNR=1.3
MA2 LR LR 09 37 44.7
comp=Z,173nm,18.0s,baz=149,slow=42
MA2 Magadan 7.92 313 PN Pn **09 34 17.0 +0.3**
MA2 Magadan 7.92 313 Pn **09 34 12.2 -4.4**
SEY Seymchan 9.73 333 *i* PN Pn **09 34 38.8 -2.6**
BILL Bilibino 13.60 7⇑*eP* Pn **09 35 36.0 +1.7**
BILL pmax pmax
comp=Z,6.0nm,1.1s
BILL MLR MLR
comp=Z,74nm,16.0s
BILL Bilibino 13.60 7 Pn **09 35 34.2 -0.1**
JKA Kamikawa-asahi 16.44 238 Pn Pn **09 36 12.0 +0.3**
JKA IAmb IAmb 09 36 14.8
comp=Z,56nm,1.5s
ASAJ Asahikawa 16.44 238 Pn Pn **09 36 11.6 -0.1**
comp=Z,0.2nm,0.3s,baz=60,slow=8.1,SNR=2.0
ASAJ Asahikawa 16.44 238 P Pn **09 36 12.0 +0.3**
ASAJ pmax pmax
comp=Z,56nm,1.5s
ERM Erimo 17.76 233 P P **09 36 28.8 +0.2**
ERM pmax pmax
comp=Z,115nm,1.3s
ERM Erimo 17.76 233 P **09 36 28.8 +0.2**
YAK Yakutsk 18.41 307 LR LR 09 44 16.6
comp=Z,50nm,20.4s,baz=90,slow=39
KLR Kul'dur 19.39 266 P P **09 36 45.2 -1.2**
comp=Z,0.1nm,0.3s,baz=35,slow=9.1,SNR=1.3
KLR LR LR 09 45 09.6
comp=Z,43nm,18.4s,baz=50,slow=40
USRK Ussuriysk Ar. 22.04 254 LR LR 09 45 38.0
comp=Z,39nm,18.8s,baz=107,slow=36
JMM Marumori 22.18 230 P P **09 37 16.1 -0.5**
JMM IAmb IAmb 09 37 27.6
comp=Z,32nm,1.2s
TIXI Tiksi 22.23 333 P P **09 37 15.1 -1.7**
comp=Z,1.9nm,0.5s,baz=104,slow=9.5,SNR=5.4
TIXI LR LR 09 46 40.1
comp=Z,53nm,20.9s,baz=200,slow=39
TIXI Tiksi 22.23 333 P P **09 37 14.3 -2.6**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 22.23 333 P P **09 37 14.3 -2.6**
TTA Tatalina 22.85 52 P P **09 37 26.0 +2.4**
TTA pmax pmax
comp=Z,5.0nm,1.4s
TTA Tatalina 22.85 52 P P **09 37 26.0 +2.4**
JSD Sado 23.20 234 P P **09 37 26.8 -0.4**
MAJO Matsushiro 24.44 232 *i* P P **09 37 40.6 +1.7**
MAJO pmax pmax
comp=Z,6.0nm,1.1s
MAJO Matsushiro 24.44 232 P P **09 37 41.0 +2.1**
MAJO IAmb IAmb 09 37 41.2
comp=Z,14nm,1.4s
MJAR Matsushiro Arr 24.44 232 P P **09 37 40.1 +1.2**
comp=Z,0.6nm,0.4s,baz=34,slow=10,SNR=2.7
MJAR LR LR 09 48 16.6
comp=Z,32nm,21.7s,baz=250,slow=39
KDAK Kodiak Island 25.03 64 LR LR 09 46 31.2
comp=Z,54nm,18.1s,baz=115,slow=34
COLD Coldfoot 25.61 42 P P **09 37 50.1 +0.9**
I23K Minto, Yukon-K 25.83 47 P P **09 37 52.9 +1.6**
I23K IAmb IAmb 09 38 08.7
comp=Z,5.3nm,1.4s
TOLK Toolik Lake Re 26.02 39 P P **09 37 54.6 +1.6**
TOLK IAmb IAmb 09 38 16.6
comp=Z,5.0nm,1.2s
WRH Wood River Hil 26.38 48 P P **09 37 58.7 +2.5**
COLA College 26.47 47 *i* P P **09 37 57.3 +0.3**
COLA pmax pmax
comp=Z,4.0nm,1.2s
CCB Clear Creek Bu 26.50 48 P P **09 37 59.1 +1.8**
PWL Port Wells 26.61 56 P P **09 38 01.2 +2.9**
PWL IAmb IAmb 09 38 05.4
comp=Z,21nm,1.4s
JWT Wachi 26.78 235 P P **09 37 58.8 -1.3**
JWT IAmb IAmb 09 38 22.8
comp=Z,13nm,1.2s
ILAR Eielson Array 26.89 47 P P **09 38 00.1 -0.8**
comp=Z,0.3nm,0.7s,baz=261,slow=7.8,SNR=4.3
ILAR Eielson Array 26.89 47 *eP* P **09 38 02.2 +1.4**
GLI Glacier Island 27.20 56 P P **09 38 01.9 -1.8**
GLI IAmb IAmb 09 38 02.5
comp=Z,9.4nm,1.0s
PRP Porcupine Dome 27.44 46 P P **09 38 04.0 -1.9**
BMAR Burnt Mountain 27.80 42 P P **09 38 09.9 +1.0**
KSRS Korea Array 28.91 248 LR LR 09 49 46.8
comp=Z,26nm,18.5s,baz=180,slow=36
INK Inuvik 31.92 39 P P **09 38 45.9 +0.6**
comp=Z,0.5nm,0.4s,baz=307,slow=7.2,SNR=5.8
INK Inuvik 31.92 39 P P **09 38 45.1 -0.2**
INK pmax pmax
comp=Z,4.0nm,1.3s
INK Inuvik 31.92 39 P P **09 38 45.1 -0.2**
INK IAmb IAmb 09 39 04.0
comp=Z,3.7nm,1.3s
TLY Talaya 34.32 290 LR LR 09 54 04.0
comp=Z,68nm,18.3s,baz=48,slow=38
SONM Songino Array 34.73 282 P P **09 39 11.7 +1.5**
comp=Z,0.2nm,0.4s,baz=66,slow=8.7,SNR=1.9
SONM LR LR 09 52 48.8
comp=Z,33nm,21.5s,baz=260,slow=36
H11N2 WAKE ISLAND Hy 35.02 172 T T 10 16 32.1
baz=355,slow=76,SNR=447
H11N3 WAKE ISLAND Hy 35.04 172 T T 10 16 33.1
baz=355,slow=76,SNR=540
H11N1 WAKE ISLAND Hy 35.04 172 T T 10 16 26.0
baz=355,slow=76,SNR=580
H11S1 WAKE ISLAND Hy 36.22 173 T T 10 17 57.7
baz=352,slow=74
H11S3 WAKE ISLAND Hy 36.23 173 T T 10 17 54.7
baz=352,slow=74
H11S2 WAKE ISLAND Hy 36.24 173 T T 10 18 05.6
baz=352,slow=74
EUNU Eureka 40.17 15 P P **09 39 57.1 +1.3**
EUNU IAmb IAmb 09 39 57.9
comp=Z,7.7nm,0.7s
YKA Yellowknife Ar 41.22 44 P P **09 40 04.8 +0.2**
comp=Z,0.9nm,0.6s,baz=299,slow=7.6,SNR=12
YKA Yellowknife Ar 41.22 44 *eP* P **09 40 06.2 +1.7**
YKA pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 42.97 302 LR LR 09 58 21.9
comp=Z,32nm,18.3s,baz=63,slow=36
SPA0 Spitsbergen Ar 45.82 351 P P **09 40 42.6 +1.2**
SPITS Spitsbergen Ar 45.82 351 P P **09 40 40.8 -0.6**
comp=Z,8.5nm,0.8s,baz=35,slow=5.3,SNR=8.3
KURK Kurchatov 47.95 302 P P **09 40 58.0 -0.2**
KURBB Kurchatov Arra 48.05 302 P P **09 40 58.0 -1.1**
comp=Z,0.7nm,0.2s,baz=56,slow=7.9,SNR=1.8
MKAR Makanchi Array 48.57 296 P P **09 41 02.2 -1.0**
comp=Z,0.5nm,0.6s,baz=61,slow=6.9,SNR=5.2
ARCES ARCESS Array B 52.20 342 P P **09 41 29.6 -0.7**
comp=Z,1.9nm,0.8s,baz=27,slow=8.1,SNR=2.2
ARCES ARCESS Array B 52.20 342 IAmb IAmb 09 41 37.8
comp=Z,11nm,1.3s
ARU Arti 53.08 318 P P **09 41 36.2 -0.7**
comp=Z,1.6nm,0.2s,baz=36,slow=21,SNR=3.5
ARU Arti 53.08 318 IAmb IAmb 09 41 37.3
comp=Z,3.9nm,0.9s
NVAR Mina Array Bea 54.11 72 P P **09 41 46.2 +1.2**
comp=Z,0.5nm,0.7s,baz=302,slow=7.2,SNR=6.4
SFJD Kangerlussuaq 56.23 15 P P **09 41 59.6 +0.1**
comp=Z,2.6nm,0.5s,baz=292,slow=9.2,SNR=1.9
FIA1 FINESS Array S 59.18 337 P P **09 42 20.3 -0.1**
FINES FINESS Array B 59.18 337 P P **09 42 19.8 -0.5**
comp=Z,3.1nm,0.5s,baz=33,slow=8.5,SNR=23
FINES FINESS Array B 59.18 337 *eP* P **09 42 20.4 +0.1**
FINES pmax pmax
comp=Z,3.0nm,0.5s
FINES FINESS Array B 59.18 337 P P **09 42 20.7 +0.3**
CMAR Chiang Mai Arr 59.66 259 LR LR 10 09 33.4
comp=Z,17nm,19.4s,baz=320,slow=38
HNR Honiara 63.84 182 LR LR 10 09 29.1
comp=Z,27nm,18.3s,baz=332,slow=35
NACGM Naroch 64.83 333 *i* P P **09 42 56.2 -2.2**
NACGM *i* P P **09 42 56.2 -2.2**
NACGM *i* P P **09 42 56.2 -2.2**
NACGM *i* PP PP **09 45 18.4 -2.3**
NACGM *i* PPP PPP 09 46 50.0
NACGM *i* S S **09 51 30.7 -5.3**
NACGM *i* SS SS 09 56 10.1 +23
NACGM *i* SSS SSS 09 59 52.0
NACGM *i* LQ LQ 10 06 33.6
NACGM *i* LR LR 10 09 41.2
AKASG Malin Array Be 67.90 330 P P **09 43 17.3 -0.8**
comp=Z,0.8nm,0.4s,baz=28,slow=6.5,SNR=4.0
AKASG Malin Array Be 67.90 330 IAmb IAmb 09 43 19.2
comp=Z,1.9nm,1.4s
TX31 Lajitas Ar. Si 68.95 69 P P **09 43 23.9 -1.2**
TX32 Lajitas Array 68.95 69 P P **09 43 23.7 -1.4**
TX32 IAmb IAmb 09 43 39.8
comp=Z,3.9nm,1.5s
TXAR Lajitas Array 68.95 69 P P **09 43 26.4 +1.3**
comp=Z,0.2nm,0.7s,baz=281,slow=6.2,SNR=5.2
TXAR Lajitas Array 68.95 69 P P **09 43 25.6 +0.5**
TXAR Lajitas Array 68.95 69 P P **09 43 25.6 +0.5**
EKA Eskdalemuir Ar 69.74 351 P P **09 43 29.2 -0.2**
comp=Z,31nm,0.5s,baz=14,slow=5.8,SNR=7.8
GERES GERESS Array B 73.53 339 P P **09 43 52.9 +0.5**
comp=Z,0.2nm,0.3s,baz=29,slow=6.7,SNR=4.8
MLR Muntele Rosu 73.55 329 P P **09 43 52.9 +0.2**
comp=Z,2.2nm,0.6s,baz=117,slow=8.9,SNR=3.5
MLR Muntele Rosu 73.55 329 P P **09 43 52.2 -0.5**
MLR pmax pmax
comp=Z,11nm,1.5s
MLR Muntele Rosu 73.55 329 P P **09 43 52.2 -0.5**
BRTR Keskin Array B 76.18 322 P P **09 44 08.0 0.0**
comp=Z,1.1nm,0.7s,baz=46,slow=4.2,SNR=3.0
BRTR Keskin Array B 76.18 322 P P **09 44 08.0 0.0**
WRA Warramunga Arr 77.98 207 P P **09 44 19.5 +1.5**
comp=Z,0.4nm,0.7s,baz=20,slow=5.9,SNR=2.0
ASAR Alice Springs 81.66 206 P P **09 44 39.2 +1.4**
comp=Z,0.5nm,0.7s,baz=14,slow=5.4,SNR=8.1

*SOME **24** 09:38:32.7, 43.6°N 69.7°E*
*KRNET **24** 09:38:33.2±0.1, 43.82°N 69.46°E, mb2.8*
*NNC **24** 09:38:36.9±2.8, 43.57°N 69.95°E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=19.0km s-min=6.6km az=133.0, Suspected Mining explosion.*

ISC 24 09:38:34.2±2.2, 43.62°N±0.07° 69.98°E±0.09, h0km, n16, σ1s56/23, 3C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.64**	**143**	⇓P	**Pb**	**09 38 47.4**	**-0.9**
	1.3nm,0.3s,baz=320,slow=17,SNR=78						
KK31				⇑S	**Sb**	**09 38 58.6**	**+0.8**
	12nm,0.4s,baz=324,slow=31,SNR=138						
DZA	**Taraz**	**1.22**	**126**	P	**Pg**	**09 38 57.1**	**-0.5**
DZA	79nm,0.1s			S	**Sg**	**09 39 14.5**	**+1.1**
	166nm,0.2s						
IUG	**Iuzhnay**	**1.47**	**179**	P	**Pb**	**09 39 01.8**	**-0.6**
IUG	483nm,0.3s			S	**Sb**	**09 39 22.9**	**+1.2**
	72nm,0.3s						
MNAS	**Manas**	**2.17**	**121**	⇑*i*P	**Pg**	**09 39 15.7**	**0.0**
	baz=20						
MNAS				⇑*i*S	**Sg**	**09 39 46.5**	**+2.7**
	baz=20						
TRKS	**Terek-Say**	**2.25**	**157**	⇓*i*P	**Pg**	**09 39 16.6**	**-0.7**
	baz=51						
TRKS				⇓*i*S	**Sg**	**09 39 48.5**	**+2.0**
	baz=51						
MRKS	**Merke**	**2.53**	**109**	Pg	**Pg**	**09 39 22.9**	**+0.2**
MRKS	4.0nm,0.2s			Lg	Lg	09 39 59.2	
	15nm,0.2s						
BTLS	**Baital**	**3.25**	**63**	Pg	**Pg**	**09 39 37.3**	**+0.9**
BTLS	8.1nm,0.3s			Lg	Lg	09 40 23.9	
	2.5nm,0.3s						
SGDS	**Sogindy**	**3.38**	**91**	Pg	**Pg**	**09 39 39.1**	**+0.1**
SGDS	2.6nm,0.3s			Lg	Lg	09 40 26.9	
	7.9nm,0.3s						
AAK	**Ala-Archa**	**3.45**	**105**	⇓P	**Pb**	**09 39 35.9**	**-0.3**
AAK	2.6nm,0.5s			⇓S	**Sb**	**09 40 21.4**	**+2.8**
	2.9nm,0.5s						
ARLS	**Aral**	**3.65**	**117**	⇓*i*P	**Pb**	**09 39 36.8**	**-2.8**
	baz=17						
ARLS				⇓*i*S	**Sb**	**09 40 21.8**	**-2.6**
	baz=17						
KRBS	**Karabastau**	**4.13**	**87**	Pg	**Pg**	**09 39 53.6**	**+0.3**
KRBS	2.8nm,0.2s			Lg	Lg	09 40 51.4	
	7.7nm,0.3s						
DGS	**Degeres**	**4.24**	**93**	Pg	**Pg**	**09 39 53.9**	**-1.4**
DGS	3.5nm,0.3s			Lg	Lg	09 40 52.5	
	6.7nm,0.5s						
KST	**Kastek**	**4.40**	**95**	Pg	**Pg**	**09 39 57.5**	**-1.0**
	6.2nm,0.5s						
KST				Lg	Lg	09 40 58.4	
	7.4nm,0.3s						
MTBS	**Maitube**	**4.73**	**94**	Pg	**Pg**	**09 40 03.2**	**-1.5**
	1.6nm,0.2s						
MTBS				Lg	Lg	09 41 08.5	
	6.7nm,0.2s						
KTBS	**Karatobe**	**4.86**	**87**	Pg	**Pg**	**09 40 06.7**	**-0.7**
	2.3nm,0.3s						
KTBS				Lg	Lg	09 41 13.7	
	14nm,0.2s						
TNSS	**Tian-Shan**	**5.12**	**94**	Pg	**Pg**	**09 40 10.6**	**-1.6**
	1.8nm,0.3s						
TNSS				Lg	Lg	09 41 20.7	
	2.0nm,0.3s						

PGC 24 09:38:40.6±0.1, 51.57°N×130.97°W, h10km, MLSn3.2/16, Mw3.9/16, 195km Sse of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG4B	**Hotspring**	**0.74**	**349**	P	Pg	09 38 54.2	-0.7
HG4B				S	Sg	09 39 02.8	-1.8
BNB	**Barry Inlet**	**1.12**	**335**	P	Pb	09 39 00.1	-2.0
BNB				S	Sg	09 39 14.6	-2.0
HG1B	**Mitchell Dam**	**1.54**	**333**	Pn	Pn	09 39 07.2	-0.9
HG1B				Sg	Sb	09 39 28.9	0.0
MOBC	**Moresby Island**	**1.69**	**339**	Pn	Pn	09 39 08.2	-2.1
MOBC				Sn	Sn	09 39 29.4	-2.6
MOBC				Sg	Sb	09 39 33.6	+0.4
BBB	**Bella Bella**	**1.88**	**70**	Pn	Pn	09 39 10.4	-2.3
BBB				Sn	Sn	09 39 32.8	-3.6
DIB	**Dawson Inlet,**	**1.88**	**331**	Pn	Pn	09 39 10.7	-2.1
DIB				Sg	Sb	09 39 38.5	0.0
BNAB	**Bonilla**	**1.94**	**6**	Pn	Pn	09 39 11.9	-1.7
BNAB				Sn	Sn	09 39 38.5	+0.5
HOLB	**Holberg**	**2.02**	**116**	Pn	Pn	09 39 13.3	-1.4
HOLB				Sn	Sn	09 39 36.4	-3.6
HWKB	**Hawksbury Isla**	**2.31**	**28**	Pn	Pn	09 39 17.5	-1.3
HWKB				Sg	Sn	09 39 49.0	+1.7
GRNB	**Grenville Isla**	**2.36**	**15**	Pn	Pn	09 39 18.1	-1.3
GRNB				Sg	Sb	09 39 51.0	-1.5
PHC	**Port Hardy**	**2.39**	**110**	Pn	Pn	09 39 17.4	-2.4
PHC				Sg	Sb	09 39 52.6	-0.6
MAYB	**Maynard**	**2.67**	**114**	Pn	Pn	09 39 22.2	-1.6
RUBB	**Prince Rupert**	**2.80**	**9**	Pn	Pn	09 39 24.2	-1.2
RUBB				Sg	Sb	09 40 04.5	-0.3
KITB	**Kitimat**	**2.88**	**28**	Pn	Pn	09 39 25.8	-0.8
KITB				Sg	Sb	09 40 05.4	-2.0
WOSB	**Woss**	**3.12**	**115**	Pn	Pn	09 39 29.0	-1.0
NCRB	**Newcastle Ridg**	**3.32**	**109**	Pn	Pn	09 39 31.4	-1.3
GDR	**Gold River**	**3.62**	**118**	Pn	Pn	09 39 36.8	+0.2
CBB	**Campbell River**	**3.87**	**111**	Pn	Pn	09 39 41.5	+1.3
CBB				Sg	Sb	09 40 35.2	-0.7
BTB	**Buttle Lake**	**4.06**	**119**	Pn	Pn	09 39 45.3	+2.3
UBRB	**Upper Baezaeko**	**4.44**	**70**	Pn	Pn	09 39 47.8	-0.2
UBRB				Sg	Sb	09 40 53.6	+1.4
TXB	**Texada**	**4.56**	**112**	Pn	Pn	09 39 51.3	+1.7
BMBC	**Bull Mountain**	**6.89**	**46**	Pn	Pn	09 40 22.9	+1.2
DLBC	**Dease Lake**	**6.91**	**4**	Pn	Pn	09 40 23.8	+1.9

*IDC **24** 09:40:36.6±0.7, 66.76°N×13.40°E, h0km, mb3.8/12, mb1 3.9/18, mb1mx3.7/48, mbtmp3.8/18, ML3.5/6, MS3.0/4, Ms1 3.0/4, ms1mx2.6/51, Error ellipse: s-maj=12.5km s-min=9.2km az=102.0*
*NAO **24** 09:40:37.0±0.7, 66.65°N×13.49°E, ML3.7*
*BER **24** 09:40:37.7±0.4, 66.65°N×13.44°E, h4km, ML3.2, ML3.3(UPP), Confirmed Earthquake*
*UPP **24** 09:40:38.0±1.1, 66.63°N×13.46°E, h4km, ML3.3, Confirmed Earthquake*
*HEL **24** 09:40:38.7±0.3, 66.66°N×13.40°E, h10km, ML3.4, ML3.3(UPP), Confirmed Earthquake*
*IEPN **24** 09:40:38.0, 66.44°N×13.52°E, h10km*
*DNK **24** 09:40:38.4±2.1, 66.67°N×13.50°E, h4km, ML3.4, ML3.3(UPP), Probable volcanic*

ISC 24 09:40:36.8±0.9, 66.64°N±0.02× 13.47°E±0.02, h8km±6km, n179, σ1s83/256, mb3.7/12, 8C-8D, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NBB15	**Halsa Church**	**0.11**	**22**⇑*eP*		**Pg**	**09 40 39.6**	**+0.3**
NBB15	**Halsa Church**	**0.11**	**22**	IAML		09 40 44.4	
	comp=Z,7μm,0.5s						
KONS	**Konsvik**	**0.20**	**225**	*i* P	**Pg**	**09 40 41.2**	**+0.3**
KONS				eS	**Sg**	**09 40 44.1**	**+0.5**
NBB40	**Tonnes**	**0.23**	**235**	ASPG		09 40 41.2	
	comp=Z,453nm,0.3s						
NBB40				⇑*eP*	**Pg**	**09 40 41.6**	**+0.3**
NBB40				ATPG		09 40 43.0	
	comp=Z,2μm,0.3s						
NBB40				ASSG		09 40 44.1	
	comp=Z,2μm,0.3s						
NBB40				*e*S	**Sg**	**09 40 44.5**	**+0.2**
NBB40				ATSG		09 40 45.1	
	comp=Z,6μm,0.3s						
NBB40				IAML		09 40 46.0	
	comp=Z,6μm,0.3s						
NBB17	**Glomfjord BYr**	**0.26**	**48**	ASPG		09 40 42.2	
NBB17	comp=Z,156nm,0.5s			*e*P	**Pg**	**09 40 42.6**	**+0.6**
NBB17	**Glomfjord BYr**	**0.26**	**48**	ATPG		09 40 44.4	
	comp=Z,598nm,0.4s						
NBB17	**Glomfjord BYr**	**0.26**	**48**	ASSG		09 40 46.0	
	comp=Z,1μm,0.3s						
NBB17				*e*S	**Sg**	**09 40 46.4**	**+0.9**
NBB17				ATSG		09 40 47.0	
	comp=Z,5μm,0.4s						
NBB17	**Glomfjord BYr**	**0.26**	**48**	IAML		09 40 48.2	
	comp=Z,5μm,0.4s						
NBB14	**Nordeng Farm**	**0.34**	**190**	ASPG		09 40 43.6	
	comp=Z,174nm,0.3s						
NBB14				⇑*i*P	**Pg**	**09 40 44.0**	**+0.5**
NBB14	**Nordeng Farm**	**0.34**	**190**	ATPG		09 40 45.6	
	comp=Z,632nm,0.3s						
NBB14	**Nordeng Farm**	**0.34**	**190**	ASSG		09 40 48.2	
	comp=Z,608nm,0.3s						
NBB14	**Nordeng Farm**	**0.34**	**190**	*e*S	**Sg**	**09 40 48.6**	**+0.5**
NBB14				IAML		09 40 49.4	
	comp=Z,8μm,0.3s						
NBB14				ATSG		09 40 49.9	
	comp=Z,2μm,0.4s						
NBB30	**Finnes**	**0.35**	**17**	ASPG		09 40 43.5	
	comp=Z,49nm,0.3s						
NBB30				⇓*i*P	**Pg**	**09 40 44.0**	**+0.3**
NBB30				ATPG		09 40 45.8	
	comp=Z,216nm,0.3s						
NBB30				ASSG		09 40 48.4	
	comp=Z,361nm,0.3s						
NBB30				*e*S	**Sg**	**09 40 48.8**	**+0.5**
NBB30				IAML		09 40 49.3	
	comp=Z,2μm,0.3s						
NBB30				ATSG		09 40 49.5	
	comp=Z,1μm,0.3s						
STOK	**Stokkvaagen**	**0.36**	**211**	Pg	**Pg**	**09 40 44.3**	**+0.5**
STOK				Lg	Lg	09 40 49.4	
STOK	**Stokkvaagen**	**0.36**	**211**	*e*P	**Pg**	**09 40 44.2**	**+0.4**
STOK				*e*S	**Sg**	**09 40 49.2**	**+0.7**
NBB05	**Inndyr**	**0.46**	**29**	ASPG		09 40 46.1	
	comp=Z,26nm,0.3s						
NBB05				*e*P	**Pg**	**09 40 46.2**	**+0.6**
NBB05				ATPG		09 40 47.7	
	comp=Z,91nm,0.3s						
NBB05	**Inndyr**	**0.46**	**29**	ASSG		09 40 52.4	
	comp=Z,648nm,0.3s						
NBB05				*e*S	**Sg**	**09 40 52.6**	**+1.1**
NBB05	**Inndyr**	**0.46**	**29**	IAML		09 40 53.0	
	comp=Z,2μm,0.5s						
NBB05	**Inndyr**	**0.46**	**29**	ATSG		09 40 53.6	
	comp=Z,2μm,0.3s						
MOR8	**Moi Rana**	**0.61**	**140**	Pg	**Pg**	**09 40 48.8**	**+0.2**
MOR8				Lg	Lg	09 40 57.4	
MOR8	**Moi Rana**	**0.61**	**140**	ASPG		09 40 48.2	
	comp=Z,26nm,0.3s						
MOR8				⇑*eP*	**Pg**	**09 40 48.6**	**+0.1**
MOR8				ATPG		09 40 49.4	
	comp=Z,77nm,0.4s						
MOR8				ASSG		09 40 56.9	
	comp=Z,245nm,0.3s						

MOR8					*e*S		**Sg**	**09 40 57.3**	**+0.8**
MOR8					ATSG			09 40 58.6	
	comp=Z,721nm,0.3s								
MOR8					IAML			09 40 59.0	
	comp=Z,2µm,0.7s								
NBB28	**Valnes**	**0.68**	**35**		ASPG			09 40 49.7	
	comp=Z,22nm,0.5s								
NBB28				⇓	*e*P		**Pg**	**09 40 49.9**	**+0.1**
NBB28					ATPG			09 40 51.1	
	comp=Z,54nm,0.4s								
NBB28	**Valnes**	**0.68**	**35**		ASSG			09 40 58.4	
	comp=Z,92nm,0.5s								
NBB28					*e*S		**Sg**	**09 40 58.8**	**+0.2**
NBB28					ATSG			09 41 00.2	
	comp=Z,259nm,0.3s								
NBB28					IAML			09 41 00.5	
	comp=Z,1µm,0.4s								
NBB03	**Karbol**	**0.75**	**51**		ASPG			09 40 50.7	
	comp=Z,46nm,0.3s								
NBB03				⇓	*e*P		**Pg**	**09 40 51.1**	**-0.1**
NBB03	**Karbol**	**0.75**	**51**		ATPG			09 40 52.9	
	comp=Z,189nm,0.4s								
NBB03	**Karbol**	**0.75**	**51**		ASSG			09 41 00.4	
	comp=Z,234nm,0.3s								
NBB03					*e*S		**Sg**	**09 41 00.8**	**-0.2**
NBB03					ATSG			09 41 02.4	
	comp=Z,849nm,0.3s								
NBB03					IAML			09 41 04.0	
	comp=Z,1µm,0.3s								
NBB29	**Rokland skole**	**0.82**	**64**		ASPG			09 40 53.2	
	comp=Z,48nm,0.3s								
NBB29					*e*P		**Pb**	**09 40 53.6**	**+0.5**
NBB29					ATPG			09 40 55.3	
	comp=Z,157nm,0.3s								
NBB29	**Rokland skole**	**0.82**	**64**		ASSG			09 41 04.7	
	comp=Z,786nm,0.3s								
NBB29					*e*S		**Sn**	**09 41 06.0**	**-0.7**
NBB29					ATSG			09 41 06.7	
	comp=Z,3µm,0.3s								
NBB29					IAML			09 41 19.6	
	comp=Z,6µm,0.4s								
NBB08	**Skaug oppvekst**	**0.88**	**31**		ASPG			09 40 53.2	
	comp=Z,52nm,0.3s								
NBB08					*e*P		**Pg**	**09 40 53.6**	**0.0**
NBB08	**Skaug oppvekst**	**0.88**	**31**		ATPG			09 40 55.2	
	comp=Z,206nm,0.3s								
NBB08	**Skaug oppvekst**	**0.88**	**31**		ASSG			09 41 06.1	
	comp=Z,490nm,0.3s								
NBB08					*e*S		**Sb**	**09 41 06.5**	**+0.5**
NBB08					ATSG			09 41 07.3	
	comp=Z,1µm,0.3s								
NBB08					IAML			09 41 18.4	
	comp=E,4µm,0.3s								
N2RO	**R˛st**	**1.03**	**330**	⇓	*e*P		**Pg**	**09 40 56.0**	**-0.5**
N2RO					*e*S		**Sg**	**09 41 10.0**	**+0.2**
N2RO					IAML			09 41 13.8	
	comp=Z,416nm,0.3s								
N2VA	**Vr˛y**	**1.07**	**344**		*e*P		**Pg**	**09 40 56.5**	**-0.8**
N2VA					*e*S		**Sb**	**09 41 11.7**	**+0.1**
N2VA					IAML			09 41 19.4	
	comp=Z,240nm,0.3s								
N2ST	**Straumen**	**1.10**	**49**		*e*P		**Pg**	**09 40 57.3**	**-0.5**
N2ST					*e*S		**Sb**	**09 41 12.5**	**+0.2**
N2ST					IAML			09 41 22.9	
	comp=Z,442nm,0.2s								
N2TV	**TÝrnvik**	**1.13**	**34**	⇓	*e*P		**Pg**	**09 40 57.8**	**-0.7**
N2TV					*e*S		**Sn**	**09 41 14.3**	**-0.2**
N2TV					IAML			09 41 21.6	
	comp=Z,1µm,0.3s								
N2SV	**S˛rvÅgen**	**1.27**	**352**		*e*P		**Pn**	**09 40 59.8**	**-0.9**
N2SV					*e*S		**Sg**	**09 41 17.9**	**+0.4**
N2SV					IAML			09 41 18.5	
	comp=Z,414nm,0.5s								
N2NF	**Nordfold**	**1.32**	**31**	⇓	*e*P		**Pn**	**09 41 01.2**	**-0.2**
N2NF					*e*S		**Sn**	**09 41 19.5**	**+0.4**
N2NF					IAML			09 41 23.5	
	comp=Z,439nm,0.3s								
STEI	**Steigen**	**1.47**	**27**		*e*P		**Pn**	**09 41 03.8**	**+0.4**
STEI					*e*Sg		**Sg**	**09 41 24.5**	**+0.7**
STEI					IAML			09 41 28.4	
	comp=Z,383nm,0.4s								
STEI	**Steigen**	**1.47**	**27**		*e*P		**Pn**	**09 41 03.8**	**+0.4**
STEI					*e*S		**Sg**	**09 41 24.6**	**+0.7**
LOF	**Lofoten**	**1.50**	**1**		Pg		**Pn**	**09 41 02.5**	**-1.4**
LOF					Lg		Lg	09 41 25.0	
LOF	**Lofoten**	**1.50**	**1**		*e*P		**Pn**	**09 41 02.8**	**-1.1**
LOF					*e*S		**Sn**	**09 41 23.7**	**+0.2**
LOF					IAML			09 41 27.3	
	comp=Z,491nm,0.4s								
N2IH	**Innhavet**	**1.64**	**35**		*e*P		**Pb**	**09 41 06.7**	**-0.5**
N2IH					*e*Sg		**Sg**	**09 41 30.6**	**+1.2**
N2IH					IAML			09 41 34.2	
	comp=Z,936nm,0.3s								
N2HS	**Hamsund**	**1.67**	**27**	⇓	*e*P		**Pn**	**09 41 07.0**	**+0.8**
N2HS					*e*Sg		**Sg**	**09 41 30.9**	**+0.6**
N2HS					IAML			09 41 37.6	
	comp=Z,575nm,0.6s								
N2DI	**Digermulen**	**1.78**	**18**		*e*P		**Pn**	**09 41 08.0**	**+0.3**
N2DI					*e*Sg		**Sg**	**09 41 33.9**	**0.0**
N2DI					IAML			09 41 38.5	
	comp=Z,371nm,0.5s								
N2LO	**L˛dingen**	**2.01**	**27**		*e*Pg		**Pb**	**09 41 13.1**	**-0.4**
N2LO					*e*Sg		**Sg**	**09 41 41.4**	**+0.2**
N2LO					IAML			09 41 46.1	
	comp=Z,327nm,0.4s								
SALU	**Saltoluokta**	**2.11**	**67**		P		**Pb**	**09 41 14.9**	**-0.4**
SALU					S		**Sb**	**09 41 41.5**	**-0.1**
SALU	**Saltoluokta**	**2.11**	**67**		P		**Pb**	**09 41 14.9**	**-0.4**
SALU					S		**Sb**	**09 41 41.5**	**-0.1**
SALU	**Saltoluokta**	**2.11**	**67**		P		**Pb**	**09 41 14.9**	**-0.4**
SALU					S		**Sb**	**09 41 41.5**	**-0.1**
SALU	**Saltoluokta**	**2.11**	**67**		*e*P		**Pb**	**09 41 14.9**	**-0.4**
SALU					*e*S		**Sb**	**09 41 41.5**	**-0.1**
NSS	**Namsos**	**2.21**	**197**		Pn		**Pb**	**09 41 16.4**	**-0.5**
NSS					Lg		Lg	09 41 46.5	
NSS	**Namsos**	**2.21**	**197**		*e*Pg		**Pb**	**09 41 16.1**	**-0.8**
NSS					*e*Sg		**Sb**	**09 41 45.6**	**+1.3**
NSS	**Namsos**	**2.21**	**197**		*e*P		**Pb**	**09 41 15.9**	**-1.0**
NSS					*e*S		**Sb**	**09 41 44.3**	**0.0**
N2SO	**Sortland**	**2.21**	**19**		*e*P		**Pn**	**09 41 14.1**	**+0.4**
N2SO					*e*Sg		**Sg**	**09 41 46.4**	**-1.4**
N2SO					IAML			09 41 49.9	
	comp=Z,184nm,0.3s								
N2HA	**Harstad**	**2.45**	**27**		*e*P		**Pn**	**09 41 18.5**	**+1.5**
N2HA					*e*Sg		**Sg**	**09 41 55.3**	**-0.2**
N2HA					IAML			09 41 58.4	
	comp=Z,282nm,0.5s								
NIKU	**Nikkaluokta**	**2.49**	**58**		P		**Pn**	**09 41 18.9**	**+1.5**
NIKU					S		**Sb**	**09 41 50.7**	**-1.6**
NIKU	**Nikkaluokta**	**2.49**	**58**		P		**Pn**	**09 41 18.9**	**+1.5**
NIKU					S		**Sb**	**09 41 50.7**	**-1.6**
NIKU	**Nikkaluokta**	**2.49**	**58**		P		**Pn**	**09 41 18.9**	**+1.5**
NIKU					S		**Sb**	**09 41 50.7**	**-1.6**
NIKU	**Nikkaluokta**	**2.49**	**58**		*e*P		**Pn**	**09 41 18.9**	**+1.5**
NIKU					*e*S		**Sb**	**09 41 50.7**	**-1.6**
DUNU	**Dundret**	**2.84**	**77**		P		**Pn**	**09 41 23.9**	**+1.5**
DUNU					S		**Sn**	**09 41 59.4**	**+2.7**
DUNU	**Dundret**	**2.84**	**77**		P		**Pn**	**09 41 23.9**	**+1.5**
DUNU					S		**Sn**	**09 41 59.4**	**+2.7**
DUNU	**Dundret**	**2.84**	**77**		P		**Pn**	**09 41 23.9**	**+1.5**
DUNU					S		**Sn**	**09 41 59.4**	**+2.7**
DUNU	**Dundret**	**2.84**	**77**		*e*P		**Pn**	**09 41 23.9**	**+1.5**
DUNU					*e*S		**Sn**	**09 41 59.4**	**+2.7**
LILU	**Lilltraesk**	**2.94**	**115**		P		**Pn**	**09 41 25.5**	**+1.8**
LILU					S		**Sn**	**09 42 01.9**	**+2.8**
LILU	**Lilltraesk**	**2.94**	**115**		P		**Pn**	**09 41 25.5**	**+1.8**
LILU					S		**Sn**	**09 42 01.9**	**+2.8**
LILU	**Lilltraesk**	**2.94**	**115**		P		**Pn**	**09 41 25.5**	**+1.8**
LILU					S		**Sn**	**09 42 01.9**	**+2.8**
LILU	**Lilltraesk**	**2.94**	**115**		*e*P		**Pn**	**09 41 25.5**	**+1.8**
LILU					*e*S		**Sn**	**09 42 01.9**	**+2.8**
KOVU	**Salmi**	**3.03**	**55**		P		**Pn**	**09 41 27.3**	**+2.4**
KOVU	**Salmi**	**3.03**	**55**		P		**Pn**	**09 41 27.3**	**+2.4**
KOVU	**Salmi**	**3.03**	**55**		P		**Pn**	**09 41 27.3**	**+2.4**
KOVU	**Salmi**	**3.03**	**55**		*e*P		**Pn**	**09 41 27.3**	**+2.4**
HARU	**Harads**	**3.06**	**96**		P		**Pn**	**09 41 27.0**	**+1.7**
HARU					S		**Sn**	**09 42 04.6**	**+2.7**
HARU	**Harads**	**3.06**	**96**		P		**Pn**	**09 41 27.0**	**+1.7**
HARU					S		**Sn**	**09 42 04.6**	**+2.7**
HARU	**Harads**	**3.06**	**96**		P		**Pn**	**09 41 27.0**	**+1.7**
HARU					S		**Sn**	**09 42 04.6**	**+2.7**
HARU	**Harads**	**3.06**	**96**		*e*P		**Pn**	**09 41 27.0**	**+1.7**
HARU					*e*S		**Sn**	**09 42 04.6**	**+2.7**
SVAU	**Svanoeiden**	**3.33**	**128**		P		**Pn**	**09 41 29.9**	**+0.9**
SVAU					S		**Sn**	**09 42 10.3**	**+1.7**
SVAU	**Svanoeiden**	**3.33**	**128**		P		**Pn**	**09 41 29.9**	**+0.9**
SVAU					S		**Sn**	**09 42 10.3**	**+1.7**
SVAU	**Svanoeiden**	**3.33**	**128**		P		**Pn**	**09 41 29.9**	**+0.9**
SVAU					S		**Sn**	**09 42 10.3**	**+1.7**
SVAU	**Svanoeiden**	**3.33**	**128**		*e*P		**Pn**	**09 41 29.9**	**+0.9**
SVAU					*e*S		**Sn**	**09 42 10.3**	**+1.7**
BREU	**Bredtraesk**	**3.50**	**140**		P		**Pn**	**09 41 32.9**	**+1.6**
BREU					S		**Sn**	**09 42 13.8**	**+1.0**
BREU	**Bredtraesk**	**3.50**	**140**		P		**Pn**	**09 41 32.9**	**+1.6**
BREU					S		**Sn**	**09 42 13.8**	**+1.0**
BREU	**Bredtraesk**	**3.50**	**140**		P		**Pn**	**09 41 32.9**	**+1.6**
BREU					S		**Sn**	**09 42 13.8**	**+1.0**
BREU	**Bredtraesk**	**3.50**	**140**		*e*P		**Pn**	**09 41 32.9**	**+1.6**
BREU					*e*S		**Sn**	**09 42 13.8**	**+1.0**
SJUU	**Sjulsmark**	**3.50**	**105**		P		**Pn**	**09 41 33.1**	**+1.7**
SJUU					S		**Sn**	**09 42 14.9**	**+2.0**
SJUU	**Sjulsmark**	**3.50**	**105**		P		**Pn**	**09 41 33.1**	**+1.7**
SJUU					S		**Sn**	**09 42 14.9**	**+2.0**
SJUU	**Sjulsmark**	**3.50**	**105**		P		**Pn**	**09 41 33.1**	**+1.7**
SJUU					S		**Sn**	**09 42 14.9**	**+2.0**
SJUU	**Sjulsmark**	**3.50**	**105**		*e*P		**Pn**	**09 41 33.1**	**+1.7**
SJUU					*e*S		**Sn**	**09 42 14.9**	**+2.0**
LANU	**Lannavaara**	**3.59**	**63**		P		**Pn**	**09 41 34.2**	**+1.6**
LANU	**Lannavaara**	**3.59**	**63**		P		**Pn**	**09 41 34.2**	**+1.6**
LANU	**Lannavaara**	**3.59**	**63**		P		**Pn**	**09 41 34.2**	**+1.6**
LANU	**Lannavaara**	**3.59**	**63**		*e*P		**Pn**	**09 41 35.4**	**+2.9**
LANU					*e*S		**Sn**	**09 42 18.8**	**+3.8**
TRO	**Tromso**	**3.63**	**32**		*e*P		**Pn**	**09 41 35.1**	**+1.9**
TRO					IAML			09 42 37.8	
	comp=Z,92nm,0.5s								
TRO	**Tromso**	**3.63**	**32**		*e*P		**Pn**	**09 41 35.3**	**+2.2**
TRO					*e*S		**Sn**	**09 42 20.7**	**+4.6**
KIF	**Kilpisjarvi**	**3.65**	**46**		Pn		**Pn**	**09 41 35.0**	**+1.6**
KIF					Pg		**Pg**	**09 41 45.7**	**-1.0**
KIF					Lg		Lg	09 42 31.8	
KIF	**Kilpisjarvi**	**3.65**	**46**		*e*P		**Pn**	**09 41 35.2**	**+1.8**
KIF	**Kilpisjarvi**	**3.65**	**46**		*e*P		**Pn**	**09 41 36.1**	**+2.7**
KIF					*e*S		**Sb**	**09 42 22.2**	**-3.6**
KIF					MSG			09 42 38.8	
	comp=Z,158nm,0.4s								
TBLU	**Trondheim**	**3.67**	**203**		*e*P		**Pn**	**09 41 34.9**	**+1.3**
TBLU					*e*S		**Sn**	**09 42 17.2**	**+0.3**
ODEU	**Stanfors**	**3.76**	**123**	⇑	P		**Pn**	**09 41 36.3**	**+1.4**
ODEU					S		**Sn**	**09 42 20.7**	**+1.5**
ODEU	**Stanfors**	**3.76**	**123**	⇑	P		**Pn**	**09 41 36.3**	**+1.4**
ODEU					S		**Sn**	**09 42 20.7**	**+1.5**
ODEU	**Stanfors**	**3.76**	**123**	⇑	P		**Pn**	**09 41 36.3**	**+1.4**
ODEU					S		**Sn**	**09 42 20.7**	**+1.5**
ODEU	**Stanfors**	**3.76**	**123**	⇑	*e*P		**Pn**	**09 41 36.3**	**+1.4**
ODEU					*e*S		**Sn**	**09 42 20.7**	**+1.5**
SOLU	**Sollefteaa**	**3.77**	**153**		P		**Pn**	**09 41 36.8**	**+1.7**
SOLU	**Sollefteaa**	**3.77**	**153**		P		**Pn**	**09 41 36.8**	**+1.7**
SOLU	**Sollefteaa**	**3.77**	**153**		*e*P		**Pn**	**09 41 36.8**	**+1.7**
PAJU	**Pajala**	**3.83**	**80**		P		**Pn**	**09 41 37.7**	**+1.8**
PAJU	**Pajala**	**3.83**	**80**		P		**Pn**	**09 41 37.7**	**+1.8**
PAJU	**Pajala**	**3.83**	**80**		P		**Pn**	**09 41 37.7**	**+1.8**
PAJU	**Pajala**	**3.83**	**80**		*e*P		**Pn**	**09 41 37.7**	**+1.8**
BURU	**Burvik**	**3.88**	**119**		*e*P		**Pn**	**09 41 38.2**	**+1.7**
BURU					*e*S		**Sn**	**09 42 23.9**	**+1.8**
JETT	**Jettan, Norway**	**3.91**	**38**	⇓	*e*P		**Pn**	**09 41 38.7**	**+1.7**
JETT					Sn		**Sn**	**09 42 26.6**	**+3.4**
HEF	**Hetta**	**4.29**	**61**		*e*P		**Pn**	**09 41 42.9**	**+0.7**
HEF					*e*S		**Sn**	**09 42 33.5**	**+1.1**
HEF	**Hetta**	**4.29**	**61**		*e*P		**Pn**	**09 41 44.1**	**+1.8**
HEF					*e*S		**Sn**	**09 42 32.8**	**+0.3**
HEF	**Hetta**	**4.29**	**61**		*e*P		**Pn**	**09 41 43.1**	**+0.8**
HEF					*e*S		**Sn**	**09 42 33.7**	**+1.3**
HEF					MSG			09 42 56.6	
	comp=Z,68nm,0.3s								
KTK1	**Kautokeino**	**4.40**	**53**		*e*P		**Pn**	**09 41 44.7**	**+1.0**
KTK1					*e*S		**Sn**	**09 42 36.7**	**+1.7**
KTK1					IAML			09 42 57.2	
	comp=Z,136nm,0.6s								
TOF	**Tornio**	**4.41**	**92**		MSG			09 42 59.6	
	comp=Z,58nm,0.3s								
MOL	**Molde**	**4.82**	**215**		*e*P		**Pn**	**09 41 49.1**	**-0.3**
OBF0	**Syolatti, Pyha**	**4.96**	**111**		MSG			09 43 23.2	
	comp=Z,64nm,0.3s								
DOMB	**Dombas**	**5.00**	**205**		*e*P		**Pn**	**09 41 53.3**	**+1.3**
OBF4	**Vikkela, Lumij**	**5.14**	**106**		MSG			09 43 28.3	
	comp=Z,87nm,0.5s								
ARNU	**Arnoeviken**	**5.25**	**159**		*e*P		**Pn**	**09 41 56.8**	**+1.4**
ARNU					*e*S		**Sn**	**09 42 57.7**	**+1.7**
AKN	**Aaknes**	**5.28**	**215**		Pn		**Pn**	**09 41 57.0**	**+1.2**
AKN					Sn		**Sn**	**09 42 57.5**	**+0.6**
AKN	**Aaknes**	**5.28**	**215**		*e*P		**Pn**	**09 41 57.3**	**+1.5**
AKN					*e*Sn		**Sn**	**09 42 57.5**	**+0.6**
OUL	**Oulu**	**5.33**	**101**		*e*P		**Pn**	**09 41 57.3**	**+0.9**
OUL					*e*S		**Sn**	**09 42 56.1**	**-1.8**
ARA0	**ARCESS Array S**	**5.36**	**52**		Pn		**Pn**	**09 41 56.8**	**0.0**
	baz=237,slow=14								
ARA0					Sn		**Sn**	**09 42 57.2**	**-1.5**
	baz=246,slow=22								
ARA0					Lg		Lg	09 43 23.3	
	baz=240,slow=28								
ARA0	**ARCESS Array S**	**5.36**	**52**		Pn		**Pn**	**09 41 56.8**	**0.0**
ARA0					Sn		**Sn**	**09 42 57.2**	**-1.5**
ARA0					Sg		**Sg**	**09 43 23.3**	**-5.3**
ARCES	**ARCESS Array B**	**5.36**	**52**		Pn		**Pn**	**09 41 56.5**	**-0.4**
	baz=236,slow=14,SNR=87								
ARCES					Sn		**Sn**	**09 42 58.9**	**+0.2**
	baz=241,slow=19,SNR=11								
ARCES					Lg		Lg	09 43 21.1	
	baz=232,slow=26,SNR=12								
HAMF	**Hammerfest**	**5.48**	**38**		*e*P		**Pn**	**09 42 00.5**	**+2.0**
HAMF	**Hammerfest**	**5.48**	**38**		*e*P		**Pn**	**09 41 59.8**	**+1.3**
HAMF					*e*S		**Sn**	**09 43 03.5**	**+2.0**
NB2	**NORSAR Subarra**	**5.71**	**191**		Pn		**Pn**	**09 42 04.3**	**+2.5**
	baz=7.0,slow=14								
NB2					Lg		Lg	09 43 34.5	
	baz=6.0,slow=37								
NB2	**NORSAR Subarra**	**5.71**	**191**		Pn		**Pn**	**09 42 04.3**	**+2.5**
NB2					Sg		**Sg**	**09 43 34.5**	**-5.5**
NOA	**NORSAR Array B**	**5.71**	**191**		Pn		**Pn**	**09 42 03.4**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=5.8,slow=13,SNR=18								
NOA					Sn		**Sn**	**09 43 13.1**	**+5.7**
	comp=Z,0.6nm,0.3s,baz=15,slow=13,SNR=2.7								
NOA					Lg		Lg	09 43 32.9	
	comp=Z,1.8nm,0.3s,baz=15,slow=15,SNR=4.3								
KEV	**Kevo**	**5.93**	**52**		*e*P		**Pn**	**09 42 04.8**	**+0.1**
KEV					*e*S		**Sn**	**09 43 11.4**	**-1.1**
NRA0	**NORESS Array S**	**5.99**	**189**		Pn		**Pn**	**09 42 07.0**	**+1.5**
	baz=5.5,slow=14								
NRA0					Sn		**Sn**	**09 43 11.3**	**-2.9**
	baz=12,slow=22								
NRA0					Lg		Lg	09 43 41.7	
	baz=1.8,slow=37								
NRA0	**NORESS Array S**	**5.99**	**189**		Pn		**Pn**	**09 42 07.0**	**+1.5**
NRA0					Sn		**Sn**	**09 43 11.3**	**-2.9**
	slow=22								
NRA0					Sg		**Sg**	**09 43 41.7**	**-7.2**
	slow=37								
HYA	**Hoyanger**	**6.36**	**214**		*e*P		**Pn**	**09 42 12.9**	**+2.3**
HFC2	**Hagfors New Ar**	**6.53**	**179**		*e*P		**Pn**	**09 42 15.1**	**+2.1**
HFC2					*e*S		**Sn**	**09 43 28.0**	**+0.4**
HFS	**Hagfors**	**6.53**	**179**		Pn		**Pn**	**09 42 15.1**	**+2.1**
	comp=Z,2.3nm,0.3s,baz=6.0,slow=12,SNR=35								
HFS					Pg		**Pb**	**09 42 31.1**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=2.5,slow=13,SNR=6.8								
HFS					Sn		**Sn**	**09 43 27.9**	**+0.3**
	comp=Z,4.7nm,0.3s,baz=15,slow=25,SNR=7.3								
HFS					Lg		Lg	09 44 00.6	
	comp=Z,13nm,0.3s,baz=355,slow=31,SNR=9.8								
HFS	**Hagfors**	**6.53**	**179**		Pn		**Pn**	**09 42 14.4**	**+1.4**
	baz=347,slow=14								
HFS					Sn		**Sn**	**09 43 25.6**	**-1.9**
	baz=10,slow=22								
HFS					Lg		Lg	09 44 00.7	
	slow=37								
HFS	**Hagfors**	**6.53**	**179**		Pn		**Pn**	**09 42 14.4**	**+1.4**
	slow=14								
HFS					Sn		**Sn**	**09 43 25.6**	**-1.9**
	slow=22								
HFS					Sg		**Sg**	**09 44 00.7**	**-5.6**
	slow=37								
ASK	**Askoy**	**7.20**	**215**		*e*P		**Pn**	**09 42 22.5**	**+0.4**
FIA0	**FINESS Array S**	**7.59**	**127**		Pn		**Pn**	**09 42 28.2**	**+0.7**
	baz=320,slow=14								
FIA0	**FINESS Array S**	**7.59**	**127**		Pn		**Pn**	**09 42 28.2**	**+0.7**
	slow=14								
FINES	**FINESS Array B**	**7.59**	**127**		Pn		**Pn**	**09 42 27.8**	**+0.4**
	comp=Z,2.1nm,0.3s,baz=322,slow=12,SNR=14								
FINES					Sn		**Sn**	**09 43 52.5**	**-1.0**
	comp=Z,7.6nm,0.3s,baz=328,slow=25,SNR=17								
FINES					LR		LR	09 44 31.1	
	comp=Z,37nm,20.5s,baz=12,slow=30								
FINES					Lg		Lg	09 44 31.6	
	comp=Z,8.5nm,0.3s,baz=328,slow=25,SNR=14								
STRU	**Stroemstad**	**7.71**	**189**		*i* P		**Pn**	**09 42 28.7**	**-0.3**
STRU					*i* S		**Sn**	**09 43 53.6**	**-2.7**
JOF	**Joensuu**	**8.47**	**108**		*e*P		**Pn**	**09 42 39.6**	**+0.1**
JOF					*e*S		**Sn**	**09 44 11.3**	**-3.8**
TJOU	**Tjoern**	**8.68**	**187**		*i* P		**Pn**	**09 42 44.3**	**+1.8**
HOMB	**Homborsund**	**8.71**	**198**		*i* P		**Sn**	**09 44 19.0**	**-1.9**
BORU	**Boraas**	**9.05**	**182**		*i* P		**Pn**	**09 42 48.4**	**+1.0**
SLVR	**Solovky**	**9.24**	**90**		*e*P		**Pn**	**09 42 48.6**	**-1.5**
	comp=Z,9.9nm,0.4s								
SLVR					*e*S		**Sn**	**09 44 27.0**	**-7.0**
MTSE	**Matsula**	**9.25**	**144**		*e*P		**Pn**	**09 42 51.0**	**+0.8**
MTSE					*e*S		Sn	09 45 23.4	+49
ONAU	**Onsala**	**9.31**	**185**		*i* P		**Pn**	**09 42 52.0**	**+1.1**
DEL	**Delary**	**10.21**	**179**		*i* P		**Pn**	**09 43 04.0**	**+0.7**
DEL					IAML			09 46 03.1	
	comp=Z,7.2nm,0.5s								
MUD	**Monsted U'grnd**	**10.42**	**193**		*i* P			09 46 11.0	
BLEU	**Blekinge**	**10.43**	**173**		*i* P		**Pn**	**09 43 05.8**	**-0.6**
LUNU	**Lund**	**11.05**	**180**		*i* P		**Pn**	**09 43 15.7**	**+0.8**
BSD	**Bornholm Skovb**	**11.59**	**176**		IAML			09 46 53.2	
	comp=Z,8.1nm,0.4s								
SPA0	**Spitsbergen Ar**	**11.63**	**3**		*e*P		**Pn**	**09 43 23.4**	**+0.8**
SPA0					S		**Sn**	**09 45 27.8**	**-4.7**
SPITS	**Spitsbergen Ar**	**11.63**	**3**		Pn		**Pn**	**09 43 23.3**	**+0.6**
	baz=180,slow=20,SNR=1.4								
KLMR	**Klimovskoe**	**12.83**	**105**		*e*P		Pn	09 43 34.1	-5.0
	comp=Z,18nm,1.5s								
KLMR					*e*S		Sn	09 45 47.9	-14
IDID	**Didziasalis**	**13.02**	**144**		*e*P		**P**	**09 43 49.6**	**-2.7**
LSH	**Leshukonskoye**	**13.28**	**83**		*e*P		**Pn**	**09 43 41.5**	**-3.8**
	comp=Z,77nm,2.6s								
LSH					*e*S		Sn	09 46 00.6	-12
VRAC	**Vranov**	**17.46**	**173**		LR		LR	09 50 57.3	
	comp=Z,45nm,19.3s,baz=350,slow=35								
AMDE	**Amderma**	**17.78**	**58**		*e*P		**Pn**	**09 44 41.4**	**-2.8**
	comp=Z,2.9nm,0.7s								
AMDE					*e*S		Sn	09 47 45.6	-16
GERES	**GERESS Array B**	**17.85**	**180**		P		**P**	**09 44 47.7**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=8.2,slow=12,SNR=7.3								
AKASG	**Malin Array Be**	**17.86**	**146**		Pn		**Pn**	**09 44 40.6**	**-4.7**
	comp=Z,0.9nm,0.3s,baz=339,slow=12,SNR=2.6								
DAVOX	**Davos/Dischmat**	**20.00**	**187**		LR		LR	09 53 12.7	
	comp=Z,70nm,18.3s,baz=265,slow=38								
BELG	**Belogornoye**	**22.04**	**114**		P		**P**	**09 45 32.0**	**+0.7**
	comp=Z,7.2nm,0.5s,baz=187,slow=1.0,SNR=6.3								
ARU	**Arti**	**23.23**	**94**		P		**P**	**09 45 44.3**	**+0.4**
	comp=Z,1.6nm,0.2s,baz=310,slow=8.9,SNR=6.0								
SFJD	**Kangerlussuaq**	**24.25**	**301**		LR		LR	09 53 49.7	
	comp

ellipse: s-maj=5.0km s-min=1.8km az=149.0

ISC 24 09:47:35.9±1.4,**35°32′N**±0°05×**27°68′E**±0°04,**h8**km±10km, **n39**,σ1°**21**/54,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.48**	**299**	P	**Pg**	**09 47 45.2**	**0.0**
KARP				S	**Sb**	**09 47 52.3**	**-1.6**
KARP				AML	AML	09 47 53.9	
	comp=E,2758μm,0.3s						
KARP				AML	AML	09 47 56.7	
	comp=N,1786μm,0.3s						
KARP	**Karpathos**	**0.48**	**299**	P	**Pg**	**09 47 45.3**	**0.0**
KARP				S	**Sb**	**09 47 52.1**	**-1.8**
	comp=N,1μm,0.4s						
KARP	**Karpathos**	**0.48**	**299**	PG	**Pb**	**09 47 45.5**	**-1.1**
KARP				SG	**Sg**	**09 47 51.9**	**+0.4**
ARG	**Arkhangelos**	**0.97**	**22**	P	**Pg**	**09 47 50.9**	**-3.6**
ARG				AML	AML	09 48 14.9	
	comp=E,414μm,0.6s						
ARG				AML	AML	09 48 18.8	
	comp=N,274μm,0.4s						
ARG	**Arkhangelos**	**0.97**	**22**	P	**Pn**	**09 47 55.6**	**-0.2**
ARG				S	**Sn**	**09 48 09.8**	**0.0**
	comp=N,185nm,0.6s						
ZKR	**Zakros**	**1.21**	**261**	P	**Pg**	**09 47 58.7**	**-0.5**
ZKR				S	**Sn**	**09 48 17.3**	**+1.4**
ZKR				AML	AML	09 48 21.4	
	comp=E,637μm,0.9s						
ZKR				AML	AML	09 48 21.5	
	comp=N,428μm,0.5s						
ZKR	**Zakros**	**1.21**	**261**	P	**Pg**	**09 47 58.5**	**-0.7**
ZKR				S	**Sn**	**09 48 16.3**	**+0.5**
	comp=N,282nm,0.6s						
ZKR	**Zakros**	**1.21**	**261**	PN	**Pn**	**09 47 58.9**	**-0.3**
ZKR				SN	**Sb**	**09 48 14.6**	**-0.4**
TURN	**Turunc**	**1.52**	**17**	*i* P	**Pg**	**09 48 06.1**	**+0.9**
TURN				*i* S	**Sg**	**09 48 27.9**	**+2.9**
TURN				IAML		09 48 33.0	
	comp=N,52nm,0.6s						
TURN				IAML		09 48 39.0	
	comp=E,40nm,0.9s						
TURN	**Turunc**	**1.52**	**17**	PN	**Pg**	**09 48 06.3**	**+1.1**
TURN				SN	**Sg**	**09 48 27.7**	**+2.8**
NPS	**Neapolis**	**1.69**	**269**	P	**Pg**	**09 48 07.7**	**-0.7**
NPS				AML	AML	09 48 41.9	
	comp=E,378μm,0.5s						
NPS				AML	AML	09 48 44.7	
	comp=N,309μm,0.7s						
NPS	**Neapolis**	**1.69**	**269**	P	**Pb**	**09 48 07.2**	**-0.1**
DALY	**Dalyan (Mula)**	**1.69**	**28**	*i* P	**Pg**	**09 48 09.2**	**+0.8**
DALY				*i* S	**Sn**	**09 48 27.6**	**0.0**
DALY				IAML		09 48 41.0	
	comp=N,35nm,1.1s						
DALY	**Dalyan (Mula)**	**1.69**	**28**	PN	**Pg**	**09 48 09.0**	**+0.7**
BODT	**Bodrum**	**1.77**	**350**	PN	**Pg**	**09 48 09.1**	**-0.7**
LAST	**Lasithi**	**1.81**	**266**	P	**Pb**	**09 48 09.0**	**-0.3**
LAST				AML	AML	09 48 40.9	
	comp=E,129μm,0.7s						
LAST				AML	AML	09 48 49.1	
	comp=N,150μm,1.0s						
LAST	**Lasithi**	**1.81**	**266**	P	**Pb**	**09 48 09.1**	**-0.2**
AKAS	**Kas**	**1.81**	**59**	*i* P	**Pn**	**09 48 07.2**	**-0.4**
AKAS				*i* S	**Sg**	**09 48 34.8**	**+0.6**
AKAS				IAML		09 48 49.0	
	comp=N,27nm,1.0s						
YER	**Yerkesik**	**1.88**	**15**	P	**Pb**	**09 48 11.1**	**+0.6**
YER	**Yerkesik**	**1.88**	**15**	PN	**Pg**	**09 48 11.4**	**-0.5**
MULA	**Mugla, Merkez-**	**2.00**	**15**	*i* P	**Pn**	**09 48 11.4**	**+1.2**
MULA				*i* S	**Sg**	**09 48 42.1**	**+1.8**
MULA				IAML		09 48 48.0	
	comp=E,30nm,0.8s						
SANT	**Santorini**	**2.09**	**301**	P	**Pn**	**09 48 12.0**	**+0.8**
SANT	**Santorini**	**2.09**	**301**	PN	**Pb**	**09 48 12.6**	**-1.4**
THR6	**Thira Island,**	**2.12**	**300**	P	**Pn**	**09 48 12.5**	**+0.8**
THR6	**Thira Island,**	**2.12**	**300**	P	**Pn**	**09 48 12.6**	**+0.9**
THR3	**Thira Island,**	**2.15**	**301**	P	**Pn**	**09 48 12.5**	**+0.5**
THR3	**Thira Island,**	**2.15**	**301**	P	**Pn**	**09 48 12.4**	**+0.4**
SNT5	**Nea Kammeni, S**	**2.15**	**301**	P	**Pn**	**09 48 12.8**	**+0.8**
THR9	**Santorini-Faro**	**2.15**	**299**	P	**Pn**	**09 48 13.0**	**+0.9**
THR5	**Thira Island,**	**2.19**	**301**	P	**Pb**	**09 48 14.2**	**-1.5**
IDI	**Anoyia**	**2.28**	**270**	P	**Pb**	**09 48 16.6**	**-0.8**
IDI				AML	AML	09 48 53.4	
	comp=E,82μm,0.5s						
IDI				AML	AML	09 48 56.4	
	comp=N,81μm,0.6s						
IDI	**Anoyia**	**2.28**	**270**	PN	**Pn**	**09 48 15.0**	**+1.1**
AYDN	**Tasoluk**	**2.34**	**4**	*i* P	**Pb**	**09 48 17.0**	**-1.4**
AYDN				*i* S	**Sn**	**09 48 43.8**	**0.0**
AYDN				IAML		09 49 00.0	
	comp=N,7.2nm,0.5s						
TAVA	**DENIZLI_Tavas**	**2.36**	**25**	*i* P	**Pb**	**09 48 19.4**	**+0.6**
TAVA				*i* S	**Sg**	**09 48 50.7**	**-1.2**
GOLH	**Golhisar**	**2.45**	**38**	*i* P	**Pb**	**09 48 19.7**	**-0.5**
GOLH				*i* S	**Sg**	**09 48 53.1**	**-1.4**
APE	**Apeiranthos**	**2.46**	**316**	P	**Pn**	**09 48 17.2**	**+0.8**
APE	**Apeiranthos**	**2.46**	**316**	PN	**Pn**	**09 48 17.7**	**+1.3**
GVDS	**Gavdos**	**2.98**	**262**	PN	**Pn**	**09 48 25.2**	**+1.7**
IMMV	**Iera Moni Meta**	**3.02**	**274**	PN	**Pn**	**09 48 25.5**	**+1.4**

IDC 24 09:49:52.4±2.8,**53°97N**×**86°62E**,**h0**km,**mb1 3.1**/2, **mb1mx3.0**/52,**mbtmp3.1**/2,**ML2.8**/2,**Error ellipse: s-maj=22.6km s-min=13.1km az=59.0**,**Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.06**	**270**	*i*		09 57 20.0	
	baz=87,slow=320,SNR=1.7						
ZALV	**Zalesovo Beam**	**1.06**	**270**	Pg	Pg	09 50 12.5	-0.2
	1.0nm,0.3s,baz=85,slow=16,SNR=9.6						
ZALV				Lg	Lg	09 50 27.8	
	1.7nm,0.3s,baz=93,slow=32,SNR=10						
ZALV				Rg	Rg	09 50 33.1	
	12nm,0.9s,baz=91,slow=28,SNR=6.7						
KURBB	**Kurchatov Arra**	**5.99**	**239**	Pn	Pn	09 51 22.6	+0.5
	0.2nm,0.3s,baz=56,slow=14,SNR=5.8						
KURBB				Lg	Lg	09 53 02.1	
	0.2nm,0.3s,baz=49,slow=30,SNR=1.6						
MKAR	**Makanchi Array**	**7.70**	**203**	Pn	Pn	09 51 46.8	+1.1
	0.2nm,0.3s,baz=22,slow=13,SNR=6.7						
MKAR				Sn	Sn	09 53 13.8	+0.3
	0.1nm,0.3s,baz=14,slow=18,SNR=1.4						
MKAR				Lg	Lg	09 53 52.9	
	baz=14,slow=31,SNR=1.7						

*ISK **24** 10:05:39.5,39°80N×25°60E,h7km,ML2.7/24*
*THE **24** 10:05:40.8,39°82N×25°59E,h12km±1km,ML2.2/7,Error ellipse: s-maj=2.0km s-min=0.7km az=227.0*
*ATH **24** 10:05:40.7,39°81N×25°60E,h14km±2km,ML2.3/6,Error ellipse: s-maj=2.6km s-min=0.9km az=233.0*
*DDA **24** 10:05:41.1,39°81N×25°67E,h7km±2km,ML2.5*

ISC 24 10:05:40.5±0.9,**39°81N**±0°02×**25°60E**±0°02,**h14**km±8km, **n60**,σ0°**46**/89,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LIA	**Limnos Island**	**0.33**	**285**	P	**Pg**	**10 05 47.5**	**+0.2**
LIA				S	**Sg**	**10 05 51.8**	**-0.2**
LIA				AML	AML	10 05 52.7	
	comp=E,1177μm,0.4s						
LIA				AML	AML	10 05 53.8	
	comp=N,1084μm,0.2s						
LIA	**Limnos Island**	**0.33**	**285**	P	**Pg**	**10 05 47.5**	**+0.2**
LIA				S	**Sg**	**10 05 52.4**	**+0.5**
	comp=N,622nm,0.4s						
BOZC	**Bozcaada**	**0.35**	**85**	*i* P	**Pg**	**10 05 47.4**	**-0.2**
BOZC				IAML		10 05 52.0	
	comp=N,378nm,0.3s						
BOZC				*i* S	**Sg**	**10 05 52.4**	**-0.1**
BOZC	**Bozcaada**	**0.35**	**85**	PG	**Pg**	**10 05 47.0**	**-0.7**
GADA	**Gvkgeada**	**0.44**	**31**	PG	**Pg**	**10 05 48.8**	**-0.6**
GADA				SG	**Sg**	**10 05 55.6**	**+0.3**
GOKA	**anakkale-Gk**	**0.45**	**32**	*i* P	**Pg**	**10 05 49.4**	**-0.1**
GOKA				*i* S	**Sg**	**10 05 56.0**	**+0.6**
ECEA	**Canakkale, Ece**	**0.50**	**62**	*i* P	**Pg**	**10 05 50.1**	**-0.3**
ECEA				*i* S	**Sg**	**10 05 57.6**	**+0.5**
ECEA				IAML		10 06 11.0	
	comp=N,163nm,0.4s						
KOCA	**Canakkale, Ayv**	**0.52**	**127**	*i* P	**Pg**	**10 05 50.6**	**-0.1**
KOCA				IAML		10 05 58.0	
	comp=N,681nm,0.3s						
KOCA				IAML		10 05 58.0	
	comp=E,431nm,0.4s						
KOCA				*i* S	**Sg**	**10 05 58.0**	**+0.4**
EFSA	**Agios Efstrati**	**0.55**	**240**	P	**Pg**	**10 05 50.5**	**-0.7**
EFSA				S	**Sb**	**10 05 59.4**	**-0.2**
EZN	**Ezine**	**0.56**	**88**	PG	**Pg**	**10 05 50.9**	**-0.6**
EZN				SG	**Sg**	**10 05 58.9**	**0.0**
SIGR	**SIGRI**	**0.63**	**162**	P	**Pg**	**10 05 52.5**	**-0.4**
SIGR				S	**Sg**	**10 06 01.7**	**+0.4**
SIGR	**SIGRI**	**0.63**	**162**	P	**Pg**	**10 05 52.5**	**-0.4**
SIGR				S	**Sb**	**10 06 02.1**	**0.0**
	comp=E,240nm,0.4s						
SIGR	**SIGRI**	**0.63**	**162**	PG	**Pg**	**10 05 52.0**	**-0.9**
SMTH	**Samothraki Isl**	**0.66**	**355**	P	**Pg**	**10 05 53.3**	**-0.1**
SMTH				S	**Sg**	**10 06 02.2**	**0.0**
SMTH				AML	AML	10 06 06.5	
	comp=E,354μm,0.2s						
SMTH				AML	AML	10 06 06.7	
	comp=N,357μm,0.1s						
SMTH	**Samothraki Isl**	**0.66**	**355**	P	**Pg**	**10 05 53.3**	**-0.1**
SMTH				S	**Sg**	**10 06 02.3**	**+0.1**
	comp=N,178nm,0.1s						
BAYC	**CANAKKALE_Bayr**	**0.73**	**95**	*i* P	**Pg**	**10 05 54.2**	**-0.6**
BAYC				*i* S	**Sg**	**10 06 03.9**	**-0.6**
PRK	**Paraskevi**	**0.77**	**137**	P	**Pb**	**10 05 56.5**	**+0.8**
PRK				S	**Sb**	**10 06 06.4**	**+0.4**
PRK				AML	AML	10 06 09.8	
	comp=E,1532μm,0.6s						
PRK				AML	AML	10 06 10.4	
	comp=N,1350μm,0.4s						
PRK	**Paraskevi**	**0.77**	**137**	P	**Pb**	**10 05 56.3**	**+0.6**
PRK				S	**Sb**	**10 06 07.0**	**+1.0**
	comp=N,740nm,0.7s						
GELI	**Tayfur-Gelibol**	**0.89**	**49**	PG	**Pg**	**10 05 57.2**	**-0.6**
AYVA	**Ayvalik**	**0.98**	**120**	*i* P	**Pg**	**10 05 59.7**	**+0.2**
AYVA				*i* S	**Sg**	**10 06 12.2**	**-0.1**
ENEZ	**Enez**	**1.01**	**24**	PG	**Pb**	**10 05 59.6**	**-0.3**
ENEZ				SG	**Sg**	**10 06 14.3**	**+0.9**
THAS	**Thassos island**	**1.04**	**320**	P	**Pb**	**10 06 00.3**	**-0.1**
THAS				S	**Sb**	**10 06 14.2**	**+0.3**
THAS				AML	AML	10 06 15.6	
	comp=N,411μm,0.2s						
THAS				AML	AML	10 06 16.9	
	comp=E,270μm,0.2s						
THAS	**Thassos island**	**1.04**	**320**	P	**Pb**	**10 06 00.4**	**0.0**
THAS				S	**Sb**	**10 06 14.0**	**+0.1**
	comp=E,192nm,0.3s						
LPK	**Lapseki**	**1.05**	**57**	PG	**Pb**	**10 05 59.2**	**-1.4**
LPK				SG	**Sg**	**10 06 15.2**	**+0.6**
ERIK	**Erikli-Kesan**	**1.11**	**39**	PN	**Pb**	**10 06 01.3**	**-0.2**
ALN	**Alexandroupoli**	**1.14**	**17**	P	**Pb**	**10 06 01.6**	**-0.4**
ALN				S	**Sb**	**10 06 17.1**	**+0.4**
ALN				AML	AML	10 06 18.4	
	comp=N,158μm,0.4s						
ALN				AML	AML	10 06 18.5	
	comp=E,226μm,0.4s						
ALN	**Alexandroupoli**	**1.14**	**17**	P	**Pb**	**10 06 01.6**	**-0.4**
ALN				S	**Sb**	**10 06 17.1**	**+0.4**
	comp=E,92nm,0.5s						
ALN	**Alexandroupoli**	**1.14**	**17**	PN	**Pb**	**10 06 01.8**	**-0.2**
BUHA	**Balikesir, Bur**	**1.18**	**105**	*i* P	**Pn**	**10 06 02.5**	**-0.2**
BUHA				*i* S	**Sb**	**10 06 17.0**	**-0.9**
BUHA				IAML		10 06 24.0	
	comp=N,68nm,0.6s						
BUHA				IAML		10 06 27.0	
	comp=E,89nm,0.8s						
DKL	**Dikili**	**1.25**	**126**	PN	**Pn**	**10 06 03.7**	**0.0**
CAND	**Candarli**	**1.27**	**132**	PN	**Pn**	**10 06 03.8**	**0.0**
RDO	**Rodhopi**	**1.33**	**358**	P	**Pn**	**10 06 04.7**	**-0.1**
RDO	**Rodhopi**	**1.33**	**358**	P	**Pn**	**10 06 04.5**	**-0.3**
RDO	**Rodhopi**	**1.33**	**358**	PN	**Pn**	**10 06 04.8**	**0.0**
OUR	**Ouranopolis**	**1.35**	**293**	P	**Pn**	**10 06 04.9**	**-0.1**
OUR	**Ouranopolis**	**1.35**	**293**	PN	**Pn**	**10 06 05.1**	**+0.1**
ZEDA	**zmir-Bergama**	**1.42**	**126**	*i* P	**Pn**	**10 06 02.4**	**+0.2**
ZEDA				*i* S	**Sn**	**10 06 24.2**	**-0.3**
ZEDA				IAML		10 06 28.0	
	comp=E,54nm,0.3s						
ZEDA				IAML		10 06 29.0	
	comp=N,66nm,0.4s						
KRBG	**Karabiga-Canak**	**1.43**	**65**	PN	**Pn**	**10 06 06.2**	**+0.2**
KAVA	**Kavala**	**1.45**	**325**	P	**Pn**	**10 06 06.2**	**-0.2**
KAVA				AML	AML	10 06 24.4	
	comp=E,177μm,0.2s						
KAVA				AML	AML	10 06 24.6	
	comp=N,194μm,0.2s						
KAVA	**Kavala**	**1.45**	**325**	P	**Pn**	**10 06 06.3**	**0.0**
KAVA				S	**Sn**	**10 06 24.2**	**-0.9**
	comp=N,75nm,0.1s						
CHOS	**Chios island**	**1.47**	**166**	P	**Pn**	**10 06 06.5**	**-0.2**
CHOS	**Chios island**	**1.47**	**166**	P	**Pn**	**10 06 06.5**	**-0.2**
CHOS	**Chios island**	**1.47**	**166**	PN	**Pn**	**10 06 06.6**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.49**	**54**	PN	**Pn**	**10 06 07.3**	**+0.3**
KNL	**Balıkesir**	**1.55**	**72**	*i* P	**Pn**	**10 06 08.6**	**+0.9**
KNL				IAML	**Sb**	**10 06 29.0**	**+0.5**
	comp=N,154nm,1.2s						
KNL				*i* S	**Sb**	**10 06 29.0**	**+0.5**
KNL				IAML		10 06 47.0	
	comp=E,115nm,1.2s						
MAR6	**Marsite Statio**	**1.56**	**54**	PN	**Pn**	**10 06 08.1**	**+0.2**
BALY	**Balya**	**1.56**	**92**	*i* P	**Pn**	**10 06 07.5**	**-0.4**
BALY				*i* S	**Sn**	**10 06 28.7**	**+0.7**
BALY				IAML		10 06 30.0	
	comp=E,55nm,0.7s						
BALY				IAML		10 06 35.0	
	comp=N,84nm,0.6s						
MAR2	**Marsite Statio**	**1.59**	**55**	PN	**Pn**	**10 06 08.6**	**+0.3**
MAR3	**Marsite Statio**	**1.59**	**54**	PN	**Pn**	**10 06 08.7**	**+0.3**
GZKV	**Gazikoy-Tekird**	**1.62**	**54**	PN	**Pn**	**10 06 09.1**	**+0.4**
MAR4	**Marsite Statio**	**1.62**	**53**	PN	**Pn**	**10 06 09.1**	**+0.2**
URLA	**Izmir**	**1.64**	**152**	PN	**Pn**	**10 06 08.4**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.66**	**225**	P	**Pb**	**10 06 11.3**	**+0.4**
MRMT	**Marmara Adasi**	**1.72**	**62**	PN	**Pn**	**10 06 10.4**	**+0.2**
BALB	**Balikesir**	**1.77**	**95**	PN	**Pn**	**10 06 10.9**	**+0.2**
MAR9	**Marsite Statio**	**1.80**	**63**	PN	**Pn**	**10 06 11.6**	**+0.4**
EDC	**Edincik**	**1.82**	**72**	PN	**Pn**	**10 06 11.9**	**+0.5**
KDZ	**Kurdzhali**	**1.84**	**356**	PN	**Pn**	**10 06 11.8**	**0.0**
KCTX	**Karacabey (Bur**	**2.16**	**77**	PN	**Pn**	**10 06 16.6**	**+0.4**
EDRB	**Edirne**	**2.21**	**23**	PN	**Pn**	**10 06 17.5**	**+0.6**

IDC 24 10:08:28.4±7.9,**30°20N**×**141°41E**,**h0**km,**mb3.5**/3, **mb1 3.6**/4,**mb1mx3.4**/45,**mbtmp3.5**/4,**ML3.2**/1,**Error ellipse: s-maj=290.5km s-min=30.4km az=65.0**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.17**	**167**	Pn	Pn	10 09 19.1	-0.4
	2.6nm,0.3s,baz=251,slow=23,SNR=7.7						
JCJ				Sn	Sn	10 09 55.8	-2.1
	6.1nm,0.3s,baz=279,slow=23,SNR=6.2						
MKAR	**Makanchi Array**	**48.02**	**308**	P	P	10 17 09.1	-0.1
	0.1nm,0.4s,baz=82,slow=10,SNR=1.4						
WRA	**Warramunga Arr**	**50.31**	**189**	P	P	10 17 26.4	-0.6
	0.7nm,0.6s,baz=6.8,slow=7.4,SNR=7.4						
ASAR	**Alice Springs**	**54.04**	**189**	P	P	10 17 55.0	+0.4
	0.3nm,0.4s,baz=1.3,slow=5.8,SNR=10						

*JMA **24** 10:19:38.4±0.1,23°73N×121°54E,h4km,M3.0*
*TAP **24** 10:19:38.6,23°75N×121°53E,h6km,ML3.6,C*

ISC 24 10:19:38.6±1.0,**23°73N**±0°01×**121°56E**±0°02,**h5**km±8km, **n106**,σ0°**81**/172,**3C-16D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.13**	**245**	P	**Pg**	**10 19 41.4**	**+0.1**
	baz=239						
EGFH				*e*S	**Sg**	**10 19 43.0**	**-0.1**
	baz=239						
ESL	**Shilin**	**0.15**	**307**	⇓*i*P	**Pg**	**10 19 41.3**	**-0.3**
	baz=306						
ESL				*i* S	**Sg**	**10 19 42.9**	**-0.6**
	baz=306						
HGSD	**Ruisui**	**0.26**	**208**	*i* P	**Pb**	**10 19 44.9**	**-1.0**
	baz=195						
HGSD				S	**Sb**	**10 19 50.0**	**-0.7**
	baz=195						
TWD	**Chiawan**	**0.35**	**5**	⇓*i*P	**Pg**	**10 19 45.9**	**+0.4**
	baz=356						
TWD				S	**Sg**	**10 19 51.2**	**+1.1**
	baz=356						
VWDT	**VWDT**	**0.39**	**274**	⇓*i*P	**Pg**	**10 19 46.1**	**+0.1**
	baz=270						
VWDT				S	**Sg**	**10 19 51.6**	**+0.5**
YULB	**Yu-li**	**0.41**	**216**	P	**Pg**	**10 19 46.8**	**+0.2**
	baz=223						
YULB				S	**Sg**	**10 19 53.1**	**+1.3**
	baz=223						
OWD	**Renai**	**0.42**	**303**	⇓*i*P	**Pg**	**10 19 46.6**	**-0.1**
	baz=300						
OWD				S	**Sg**	**10 19 52.0**	**-0.2**
	baz=300						
EYUL	**Yuli**	**0.44**	**211**	*e*P	**Pb**	**10 19 48.3**	**-0.5**
	baz=218						
TWF1	**Yuli**	**0.44**	**213**	*i* P	**Pg**	**10 19 47.5**	**+0.3**
	baz=223						
TWF1				S	**Sg**	**10 19 54.1**	**+1.2**
	baz=223						
NACB	**Ninganchiao**	**0.45**	**4**	⇓*i*P	**Pg**	**10 19 47.3**	**0.0**
	baz=354						
NACB				*e*S	**Sg**	**10 19 52.9**	**-0.2**
	baz=354						
ETLH	**Xiulin Townshi**	**0.48**	**352**	*i* P	**Pg**	**10 19 47.9**	**-0.1**
	baz=350						
ETLH				S	**Sg**	**10 19 54.9**	**+0.6**
	baz=350						
CHGB	**Renai**	**0.49**	**313**	⇓*i*P	**Pg**	**10 19 48.0**	**0.0**
	baz=311						
CHGB				S	**Sg**	**10 19 54.2**	**-0.2**
	baz=311						
WHF	**Hehuan Shan**	**0.50**	**327**	⇓*i*P	**Pg**	**10 19 48.1**	**-0.1**
	baz=314						
WHF				S	**Sg**	**10 19 55.4**	**+0.6**
	baz=314						
SSLB	**Suanglung**	**0.56**	**277**	⇓*i*P	**Pg**	**10 19 49.2**	**-0.2**
	baz=274						
SSLB				S	**Sg**	**10 19 56.0**	**-0.6**
	baz=274						
FULB	**Fuli**	**0.58**	**205**	*e*P	**Pb**	**10 19 51.5**	**+0.2**
	baz=218						
FUSS	**Fushou**	**0.59**	**331**	P	**Pg**	**10 19 50.1**	**0.0**
	baz=318						
FUSS				S	**Sg**	**10 19 57.6**	**-0.3**
	baz=318						
YUS	**Yu-Shan**	**0.60**	**247**	*i* P	**Pg**	**10 19 50.4**	**+0.1**
	baz=254						
YUS				S	**Sg**	**10 19 58.4**	**+0.2**
	baz=254						
WPL	**Puli Township**	**0.62**	**298**	*e*P	**Pg**	**10 19 50.8**	**+0.2**
	baz=304						
SMLT	**Sun Moon Lake**	**0.62**	**285**	⇓*i*P	**Pg**	**10 19 50.5**	**-0.1**
	baz=282						
SMLT				*e*S	**Sg**	**10 19 59.4**	**+0.6**
	baz=282						
TWT	**Tachien**	**0.63**	**326**	*i* P	**Pg**	**10 19 51.1**	**+0.3**
	baz=314						
TWT				*e*S	**Sg**	**10 19 59.3**	**+0.3**
	baz=314						
TDCB	**Techi**	**0.64**	**325**	P	**Pg**	**10 19 51.1**	**+0.1**
	baz=325						
CHKT	**Chengkung**	**0.65**	**196**	*e*P	**Pb**	**10 19 52.6**	**+0.2**
	baz=195						
CHKT				*e*S	**Sn**	**10 20 04.5**	**-0.7**
	baz=195						
DPDB	**Guoxing**	**0.66**	**298**	P	**Pg**	**10 19 51.5**	**+0.3**
	baz=296						
DPDB				*e*S	**Sg**	**10 19 59.6**	**-0.1**
	baz=296						
TYC	**Yuchr**	**0.67**	**286**	P	**Pg**	**10 19 51.2**	**-0.2**
	baz=284						
NNSB	**Datong**	**0.72**	**347**	⇓*i*P	**Pg**	**10 19 52.5**	**+0.1**
	baz=346						
NNSB				*e*S	**Sg**	**10 20 01.8**	**0.0**
	baz=346						
NNSH	**Datong**	**0.72**	**347**	P	**Pg**	**10 19 52.5**	**+0.1**
	baz=345						
NNSH				*e*S	**Sg**	**10 20 01.4**	**-0.4**
	baz=345						
ALS	**Alishan**	**0.72**	**253**	⇓*i*P	**Pg**	**10 19 52.9**	**+0.3**
	baz=251						
ALS				S	**Sg**	**10 20 02.3**	**+0.3**
	baz=251						
ELDTW	**Lidau**	**0.73**	**223**	P	**Pg**	**10 19 52.4**	**-0.2**
	baz=230						
NNS	**Nan Shan**	**0.73**	**347**	⇓*i*P	**Pg**	**10 19 52.8**	**+0.1**
	baz=346						
NNS				S	**Sg**	**10 20 01.9**	**-0.3**
	baz=346						
EWUT	**Wuta**	**0.74**	**15**	*e*P	**Pg**	**10 19 52.9**	**0.0**
	baz=6.0						
WJS	**Zhushan**	**0.77**	**277**	P	**Pb**	**10 19 54.7**	**+0.2**
	baz=281						
WJS				S	**Sn**	**10 20 07.0**	**-1.2**
	baz=281						
EDH	**Donghe**	**0.79**	**198**	*e*P	**Pb**	**10 19 55.0**	**+0.2**
	baz=184						
EDH				*e*S	**Sn**	**10 20 07.6**	**-1.0**
	baz=184						
WHP	**Taichung City**	**0.79**	**315**	P	**Pg**	**10 19 53.9**	**+0.2**
	baz=312						
WHP				*e*S	**Sb**	**10 20 06.3**	**+0.4**
	baz=312						
WNT	**Mingjian**	**0.82**	**281**	P	**Pn**	**10 19 55.8**	**-1.0**
	baz=284						
WNT				*e*S	**Sn**	**10 20 08.6**	**-0.8**
	baz=284						
CHN5	**Tsauling**	**0.82**	**261**	⇓*i*P	**Pb**	**10 19 55.0**	**-0.4**
	baz=252						
CHN5				S	**Sn**	**10 20 08.6**	**-0.9**
	baz=252						
NDT	**Datong Townshi**	**0.88**	**357**	*e*P	**Pb**	**10 19 55.9**	**-0.5**
	baz=357						
LONT	**Longtian**	**0.91**	**206**	*e*P	**Pg**	**10 19 56.2**	**+0.3**
	baz=217						
STYH	**Taoyuan**	**0.91**	**233**	*e*P	**Pg**	**10 19 56.0**	**0.0**
	baz=227						
STYH				*e*S	**Sg**	**10 20 08.1**	**+0.3**
	baz=227						
ENTT	**Nioudou**	**0.91**	**0**	⇑*i*P	**Pg**	**10 19 56.4**	**+0.3**
	baz=350						
ENTT				S	**Sb**	**10 20 09.4**	**0.0**
	baz=350						
TCU	**Taichung**	**0.91**	**298**	*e*P	**Pb**	**10 19 56.9**	**-0.1**
	baz=295						
TCU				*e*S	**Sn**	**10 20 10.5**	**-1.2**
	baz=295						
NDS	**Dongshan**	**0.92**	**9**	*e*P	**Pg**	**10 19 56.4**	**+0.2**
	baz=7.0						
NDS				*e*S	**Sb**	**10 20 08.7**	**-0

TWE				*e*S		**Sn**	**10 20 12.7**	**-1.1**
	baz=4.0								
NSY	**Sanyi**	**1.00**	**313**	*e*P		**Pn**	**10 19 59.8**	**+0.4**
	baz=311								
NSY				*e*S		**Sn**	**10 20 14.9**	**+0.9**
	baz=311								
TWGBT	**Beinan**	**1.00**	**206**	*e*P		**Pb**	**10 19 58.5**	**-0.1**
	baz=204								
TWG	**Pinlang**	**1.01**	**207**	*e*P		**Pb**	**10 19 58.5**	**0.0**
	baz=204								
CHN2	**Minshiung**	**1.01**	**259**	*e*P		**Pn**	**10 20 00.2**	**+0.7**
	baz=258								
CHN2				*e*S		**Sn**	**10 20 14.6**	**+0.4**
	baz=258								
NSTT	**Nanjuang**	**1.04**	**331**	*e*P		**Pg**	**10 19 58.6**	**+0.1**
	baz=317								
LIOB	**Emei**	**1.04**	**332**	*e*P		**Pn**	**10 19 59.5**	**-0.5**
	baz=318								
WDJ	**Dajia District**	**1.04**	**307**	*e*P		**Pn**	**10 20 00.3**	**+0.3**
	baz=305								
NWLT	**Wulai**	**1.05**	**357**	P		**Pb**	**10 19 59.0**	**-0.4**
	baz=354								
NWLT				S		**Sb**	**10 20 13.2**	**-0.2**
	baz=354								
LDUT	**Ludao**	**1.05**	**185**	*e*P		**Pg**	**10 19 58.1**	**-0.6**
	baz=172								
CHY	**Chiayi**	**1.07**	**258**	*e*P		**Pn**	**10 19 60.0**	**-0.3**
	baz=257								
CHY				*e*S		**Sn**	**10 20 15.8**	**+0.3**
	baz=257								
NMLH	**Miaoli**	**1.07**	**319**	*e*P		**Pn**	**10 20 00.6**	**+0.3**
	baz=317								
WTK	**Tuku**	**1.07**	**268**	*e*P		**Pn**	**10 20 00.2**	**-0.2**
	baz=267								
WTK				*e*S		**Sn**	**10 20 15.2**	**-0.5**
	baz=267								
CHN1	**Nanshi**	**1.09**	**241**	P		**Pn**	**10 20 00.4**	**-0.2**
	baz=241								
CHN1				S		**Sn**	**10 20 16.0**	**-0.1**
	baz=241								
WRL	**Guolierlin Hig**	**1.10**	**279**	*e*P		**Pn**	**10 20 01.7**	**+1.0**
	baz=277								
WRL				*e*S		**Sn**	**10 20 15.3**	**-1.0**
	baz=277								
SNST	**Tainan City**	**1.10**	**243**	*e*P		**Pn**	**10 20 00.7**	**0.0**
	baz=243								
SNST				*e*S		**Sn**	**10 20 16.6**	**+0.3**
	baz=243								
SGST	**Jiashian**	**1.10**	**235**	ǁ *i*P		**Pg**	**10 19 59.5**	**-0.3**
	baz=235								
SGST				S		**Sn**	**10 20 16.0**	**-0.4**
	baz=235								
SLGT	**Liugui**	**1.11**	**229**	*e*P		**Pb**	**10 20 00.2**	**-0.2**
	baz=227								
NTC	**Toucheng**	**1.15**	**12**	*e*P		**Pn**	**10 20 01.1**	**-0.3**
	baz=357								
EGS		**1.17**	**17**	*e*P		**Pn**	**10 20 01.8**	**+0.1**
	baz=2.0								
NHDH	**Xindian Distri**	**1.23**	**359**	*e*P		**Pn**	**10 20 03.3**	**+0.7**
	baz=357								
TWA	**Mucha**	**1.25**	**1**	*e*P		**Pn**	**10 20 03.2**	**+0.4**
ECL	**Taimali**	**1.25**	**207**	*e*P		**Pb**	**10 20 02.3**	**-0.5**
	baz=194								
TIPB	**Shuangxi**	**1.27**	**11**	P		**Pg**	**10 20 03.2**	**+0.3**
	baz=358								
TIPB				*e*S		**Sn**	**10 20 19.8**	**-0.7**
	baz=358								
NCUH	**Zhongli**	**1.28**	**345**	*e*P		**Pg**	**10 20 05.2**	**+2.0**
	baz=1.0								
SCST	**Cishan**	**1.29**	**230**	*e*P		**Pg**	**10 20 04.7**	**+1.4**
	baz=232								
SCST				*e*S		**Sn**	**10 20 26.0**	**+5.0**
	baz=232								
SSD	**Sandimen**	**1.29**	**221**	P		**Pn**	**10 20 03.1**	**-0.3**
	baz=216								
SSD				*e*S		**Sn**	**10 20 22.6**	**+1.5**
	baz=216								
TSMG	**Majia**	**1.32**	**220**	*e*P		**Pb**	**10 20 03.7**	**-0.2**
	baz=208								
TWB1	**Santiao Chiao**	**1.34**	**17**	*e*P		**Pg**	**10 20 06.3**	**+2.1**
	baz=354								
TWB1				*e*S		**Sn**	**10 20 24.9**	**+2.7**
	baz=354								
NWF	**Wu-fen Shan**	**1.35**	**9**	*e*P		**Pg**	**10 20 06.0**	**+1.4**
	baz=7.0								
WFSB	**Wu-fen Shan**	**1.35**	**9**	P		**Pg**	**10 20 06.0**	**+1.3**
WFSB				*e*S		**Sn**	**10 20 22.6**	**-0.1**
TWS1	**Kuangyinshan**	**1.38**	**355**	*e*P		**Pn**	**10 20 04.2**	**-0.4**
	baz=5.0								
TWS1				*e*S		**Sn**	**10 20 26.3**	**+3.1**
	baz=5.0								
TWM1	**Shoushan**	**1.38**	**230**	*e*P		**Pg**	**10 20 06.1**	**+1.1**
	baz=227								
MASBT	**Mashibuluo**	**1.40**	**218**	*e*P		**Pn**	**10 20 04.4**	**-0.4**
	baz=215								
MASBT				*e*S		**Sg**	**10 20 25.0**	**+1.5**
	baz=215								
YM01	**YM01**	**1.42**	**0**	*e*P		**Pg**	**10 20 05.9**	**+0.1**
	baz=358								
ANP	**Anpu**	**1.46**	**359**	P		**Pg**	**10 20 06.9**	**+0.4**
	baz=357								
JYNG	**Yonagunijimaku**	**1.46**	**60**	P		**Pn**	**10 20 05.7**	**0.0**
JYNG				S		**Sn**	**10 20 24.6**	**-0.6**
EAST	**Anshuo**	**1.49**	**206**	*e*P		**Pn**	**10 20 06.0**	**-0.2**
	baz=196								
TAW	**Tawu**	**1.49**	**204**	*e*P		**Pg**	**10 20 07.5**	**+0.3**
	baz=193								
YOJ	**Yonaguni jima**	**1.52**	**61**	P		**Pn**	**10 20 05.9**	**-0.5**
YOJ				*e*S		**Sn**	**10 20 25.6**	**-1.0**
YOJ	**Yonaguni jima**	**1.52**	**61**	P		**Pn**	**10 20 05.9**	**-0.5**
	baz=62								
YOJ				S		**Sn**	**10 20 26.1**	**-0.6**
	baz=62								
SSPT	**Xinbi**	**1.54**	**217**	*e*P		**Pb**	**10 20 07.3**	**-0.2**
	baz=206								
SCZT	**Fangliau**	**1.60**	**213**	*e*P		**Pb**	**10 20 08.2**	**-0.5**
	baz=200								
SLIU	**Shizi**	**1.66**	**205**	*e*P		**Pb**	**10 20 09.4**	**-0.2**
	baz=196								
LAY	**Lan-yu**	**1.68**	**180**	*e*P		**Pn**	**10 20 06.6**	**-2.1**
	baz=172								
WLCH	**Liuqiu**	**1.75**	**219**	*e*P		**Pg**	**10 20 12.7**	**+0.6**
	baz=219								
WDGT	**Dungji**	**1.81**	**256**	*e*P		**Pn**	**10 20 09.6**	**-0.8**
	baz=256								
WDGT				*e*S		**Sb**	**10 20 34.2**	**-0.9**
	baz=256								
PNG	**Penghu**	**1.84**	**266**	*e*P		**Pn**	**10 20 11.2**	**+0.2**
	baz=264								
PNG				*e*S		**Sb**	**10 20 35.5**	**-0.8**
	baz=264								
TWK1	**Hengchun**	**1.91**	**202**	*e*P		**Pg**	**10 20 14.9**	**-0.3**
	baz=191								
TWKBT	**Hengchun**	**1.91**	**201**	*e*P		**Pb**	**10 20 13.2**	**-0.7**
	baz=191								
IRIF	**Iriomote-Funau**	**2.08**	**73**	P		**Pn**	**10 20 13.9**	**-0.2**
IRIF				*e*S		**Sn**	**10 20 41.3**	**+0.9**
JKRS	**Kuro-shima**	**2.30**	**77**	*e*S		**Sn**	**10 20 47.5**	**+1.6**
JIJ	**Ishigaki jima**	**2.44**	**74**	P		**Pn**	**10 20 20.0**	**+0.8**
JIJ				S		**Sn**	**10 20 48.5**	**-1.1**
JISG	**Ishigakijimahi**	**2.66**	**71**	P		**Pn**	**10 20 21.5**	**-0.6**
JISG				*e*S		**Sn**	**10 20 54.4**	**-0.3**
JTJ	**Tarama**	**3.01**	**72**	S		**Sn**	**10 21 04.3**	**+0.8**

*IDC **24** 10:27:01.2±0.9,34˚.62N×28˚.43E, h0km, mb3.9/10, mb1 3.9/15,mb1mx3.7/45,mbtmp3.8/15, ML3.4/5, Error ellipse: s-maj=22.2km s-min=15.5km az=149.0*
*NEIC **24** 10:27:03.6±2.4,34˚.56N±0˚.09×28˚.40E±0˚.04, h10km±1km, mb3.7/9, Error ellipse: s-maj=15.2km s-min=5.2km az=193.0*
*NIC **24** 10:27:04.9±0.0,34˚.56N×28˚.52E, h17km±5km, Ml3.9/5*
*HLW **24** 10:27:04.3,34˚.42N×28˚.65E, h4km±14km, Md4.3, Ml4.4*
*THE **24** 10:27:05.5,34˚.52N×28˚.64E, h23km±14km, ML3.4/2, Error ellipse: s-maj=16.8km s-min=2.1km az=147.0*
*DDA **24** 10:27:05.7,34˚.89N×28˚.49E, h11km±2km, ML3.3*
*ISK **24** 10:27:07.0,34˚.81N×28˚.35E, h9km, ML3.5/16*
ISC 24 10:27:04.9±1.4,**34˚.55N**±0˚.03×**28˚.44E**±0˚.03,**h28**km±11km, **n131**,σ1°**73**/177, **mb3.8**/12, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.45**	**314**	P	**Pb**	**10 27 31.0**	**-0.2**
KARP				S	**Sb**	**10 27 50.9**	**+1.7**
	912nm,0.5s						
KARP	**Karpathos**	**1.45**	**314**	PN	**Pb**	**10 27 30.3**	**-0.9**
KARP				SN	**Sn**	**10 27 47.4**	**+0.1**
KARP	**Karpathos**	**1.45**	**314**	Pn	**Pb**	**10 27 30.7**	**-0.5**
KARP	**Karpathos**	**1.45**	**314**	P	**Pb**	**10 27 31.2**	**0.0**
KARP				AML	AML	10 28 01.6	
	2.2nm,0.5s						
KARP				AML	AML	10 28 13.0	
	2.1nm,0.7s						
ARG	**Arkhangelos**	**1.68**	**351**	PN	**Pn**	**10 27 32.8**	**+0.4**
ARG				SN	**Sn**	**10 27 52.0**	**-1.0**
ARG	**Arkhangelos**	**1.68**	**351**	P	**Pn**	**10 27 33.7**	**+1.3**
KSL	**Kastellorizon**	**1.84**	**30**	P	**Pn**	**10 27 35.1**	**+0.4**
ZKR	**Zakros**	**1.92**	**288**	P	**Pn**	**10 27 37.0**	**+1.4**
ZKR				S	**Sb**	**10 28 01.7**	**-1.0**
	602nm,0.5s						
ZKR	**Zakros**	**1.92**	**288**	PN	**Pb**	**10 27 37.5**	**-1.7**
ZKR				SN	**Sn**	**10 27 59.8**	**+1.0**
ZKR	**Zakros**	**1.92**	**288**	P	**Pn**	**10 27 37.1**	**+1.4**
ZKR				AML	AML	10 28 09.2	
	1.3nm,0.4s						
ZKR				AML	AML	10 28 09.6	
	0.9nm,0.7s						
AKAS	**Kas**	**1.93**	**29**	*i* P	**Pn**	**10 27 35.2**	**-0.7**
AKAS				*i* S	**Sn**	**10 27 58.2**	**-1.0**
AKAS				IAML		10 28 10.0	
	comp=N,348nm,0.5s						
AKAS				IAML		10 28 10.0	
	comp=E,240nm,0.5s						
AKAS	**Kas**	**1.93**	**29**	PN	**Pn**	**10 27 37.2**	**+1.3**
AKAS				SN	**Sn**	**10 27 59.3**	**0.0**
AKAS	**Kas**	**1.93**	**29**	Pn	**Pn**	**10 27 36.4**	**+0.5**
FETY	**Fethiye**	**2.14**	**14**	P	**Pn**	**10 27 38.3**	**-0.5**
FETY				S	**Sn**	**10 28 03.4**	**-1.1**
TURN	**Turunc**	**2.22**	**356**	*i* P	**Pn**	**10 27 41.0**	**+1.2**
TURN				*i* S	**Sn**	**10 28 07.4**	**+1.0**
TURN				IAML		10 28 19.0	
	comp=E,168nm,0.4s						
TURN				IAML		10 28 25.0	
	comp=N,175nm,0.5s						
TURN	**Turunc**	**2.22**	**356**	PN	**Pn**	**10 27 40.0**	**+0.1**
TURN				SN	**Sn**	**10 28 04.1**	**-2.3**
DALY	**Dalyan (Mula)**	**2.27**	**4**	*i* P	**Pn**	**10 27 40.8**	**+0.4**
DALY				*i* S	**Sn**	**10 28 07.7**	**+0.3**
DALY				IAML		10 28 28.0	
	comp=N,168nm,0.6s						
DALY	**Dalyan (Mula)**	**2.27**	**4**	PN	**Pn**	**10 27 40.8**	**+0.4**
DALY				SN	**Sn**	**10 28 05.4**	**-2.0**
NPS	**Neapolis**	**2.43**	**288**	P	**Pn**	**10 27 45.1**	**+2.3**
ELL	**Elmali**	**2.49**	**28**	PN	**Pn**	**10 27 44.7**	**+1.0**
ELL	**Elmali**	**2.49**	**28**	P	**Pn**	**10 27 46.2**	**+2.5**
ELL	**Elmali**	**2.49**	**28**	P	**Pn**	**10 27 45.4**	**+1.6**
LAST	**Lasithi**	**2.51**	**285**	P	**Pn**	**10 27 46.0**	**+2.0**
OSC1	**CSNet OBS 1**	**2.58**	**113**	P	**Pn**	**10 27 44.8**	**+0.1**
OSC1				S	**Sn**	**10 28 16.6**	**+1.5**
YER	**Yerkesik**	**2.58**	**357**	P	**Pn**	**10 27 46.7**	**+1.8**
BDRM	**Kayabasi**	**2.63**	**342**	*i* P	**Pn**	**10 27 46.0**	**+0.4**
BDRM				*i* S	**Sn**	**10 28 13.4**	**-3.2**
BDRM				IAML		10 28 30.0	
	comp=N,223nm,0.4s						
BDRM				IAML		10 28 33.0	
	comp=E,111nm,0.6s						
CAEL	**Denizli, Camel**	**2.66**	**15**	*i* P	**Pn**	**10 27 47.8**	**+1.7**
CAEL				*i* S	**Sn**	**10 28 16.4**	**-1.0**
CAEL				IAML		10 28 28.0	
	comp=N,493nm,0.6s						
CAEL				IAML		10 28 34.0	
	comp=E,356nm,0.7s						
BODT	**Bodrum**	**2.67**	**340**	P	**Pn**	**10 27 45.3**	**-0.7**
BODT	**Bodrum**	**2.67**	**340**	PN	**Pn**	**10 27 45.5**	**-0.5**
BODT				SN	**Sn**	**10 28 14.2**	**-3.2**
MULA	**Mugla, Merkez-**	**2.70**	**358**	*i* P	**Pn**	**10 27 48.2**	**+1.7**
MULA				*i* S	**Sn**	**10 28 20.3**	**+2.0**
MULA				IAML		10 28 31.0	
	comp=N,126nm,0.6s						
MULA				IAML		10 28 40.0	
	comp=E,166nm,0.7s						
GOLH	**Golhisar**	**2.83**	**18**	*i* P	**Pn**	**10 27 50.2**	**+1.9**
GOLH				*i* S	**Sn**	**10 28 23.0**	**+1.5**
GOLH				IAML		10 28 36.0	
	comp=N,254nm,0.5s						
KORT	**Korkueli**	**2.89**	**32**	*i* P	**Pn**	**10 27 51.6**	**+2.4**
KORT				*i* S	**Sn**	**10 28 24.2**	**+1.1**
KORT				IAML		10 28 48.0	
	comp=N,161nm,0.9s						
KORT				IAML		10 28 50.0	
	comp=E,156nm,0.6s						
KORT	**Korkueli**	**2.89**	**32**	PN	**Pn**	**10 27 50.2**	**+1.0**
IDI	**Anoyia**	**3.01**	**285**	Pn	**Pn**	**10 27 53.0**	**+2.2**
	comp=E,9.1nm,0.3s,baz=115,slow=15,SNR=57						
IDI				Sn	**Sn**	**10 28 27.6**	**+1.6**
	comp=E,13nm,0.3s,baz=226,slow=20,SNR=4.4						
IDI	**Anoyia**	**3.01**	**285**	P	**Pn**	**10 27 52.8**	**+2.0**
IDI	**Anoyia**	**3.01**	**285**	PN	**Pn**	**10 27 52.3**	**+1.5**
IDI	**Anoyia**	**3.01**	**285**	Pn	**Pn**	**10 27 52.0**	**+1.2**
SIVA	**Sivas**	**3.03**	**280**	P	**Pn**	**10 27 53.1**	**+2.2**
SANT	**Santorini**	**3.04**	**308**	Pn	**Pn**	**10 27 51.4**	**+0.3**
THR8	**Santorini-Mono**	**3.04**	**308**	P	**Pn**	**10 27 52.2**	**+1.0**
DDIM	**Aydin, Didim**	**3.06**	**342**	*i* P	**Pn**	**10 27 51.8**	**+0.5**
DDIM				*i* S	**Sb**	**10 28 36.5**	**+1.0**
DDIM				IAML		10 28 39.0	
	comp=N,192nm,0.8s						
DDIM				IAML		10 28 44.0	
	comp=E,118nm,0.6s						
THR2	**Thira island,**	**3.10**	**308**	P	**Pn**	**10 27 53.3**	**+1.4**
THR3	**Thira Island,**	**3.10**	**308**	P	**Pn**	**10 27 52.9**	**+1.0**
THR9	**Santorini-Faro**	**3.10**	**306**	P	**Pn**	**10 27 53.3**	**+1.4**
SNT5	**Nea Kammeni, S**	**3.10**	**307**	P	**Pn**	**10 27 52.8**	**+0.9**
AYDN	**Tasoluk**	**3.13**	**352**	*i* P	**Pn**	**10 27 53.0**	**+0.5**
AYDN				*i* S	**Sn**	**10 28 28.7**	**-0.3**
AYDN				IAML		10 28 41.0	
	comp=E,77nm,0.5s						
THR5	**Thira Island,**	**3.14**	**307**	P	**Pn**	**10 27 53.6**	**+1.1**
AKMS	**Akamas**	**3.24**	**81**	P	**Pn**	**10 27 54.0**	**+0.1**
AKMS				AML	AML	10 28 30.9	
	comp=E,1.0nm,0.3s						
AKMS				AML	AML	10 28 30.9	
	comp=E,1.0nm,0.3s						
AKMS				S	**Sn**	**10 28 31.2**	**-0.3**
BUCA	**Burdur, Bucak-**	**3.26**	**31**	*i* P	**Pn**	**10 27 57.2**	**+3.0**
BUCA				*i* S	**Sn**	**10 28 31.9**	**-0.1**
BUCA				IAML		10 28 47.0	
	comp=E,124nm,0.6s						
BUCA				IAML		10 28 52.0	
	comp=N,87nm,0.6s						
MATC	**Matruh**	**3.36**	**198**	P	**Pn**	**10 27 57.1**	**+1.6**
	baz=202						
BRDR	**BURDUR-Merkez**	**3.40**	**22**	*i* P	**Pn**	**10 27 58.6**	**+2.5**
BRDR				*i* S	**Sn**	**10 28 35.7**	**+0.1**
BRDR				IAML		10 28 48.0	
	comp=N,97nm,0.6s						
BRDR				IAML		10 28 48.0	
	comp=E,68nm,0.7s						
NATA	**Nata**	**3.41**	**85**	P	**Pn**	**10 27 57.0**	**+0.8**
NATA				S	**Sn**	**10 28 36.5**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**3.42**	**353**	PN	**Pn**	**10 27 56.2**	**-0.2**
APE	**Apeiranthos**	**3.45**	**318**	P	**Pn**	**10 27 57.6**	**+0.8**
APE	**Apeiranthos**	**3.45**	**318**	PN	**Pn**	**10 27 56.7**	**-0.1**
ALFC	**Alefka**	**3.47**	**79**	P	**Pn**	**10 27 56.8**	**-0.2**
ALFC				AML	AML	10 28 36.1	
	comp=E,0.7nm,0.2s						
ALFC				AML	AML	10 28 36.6	
	comp=E,1.1nm,0.4s						
KEPZ	**Antalya-Kepez**	**3.48**	**47**	*i* P	**Pn**	**10 27 58.5**	**+1.3**
KEPZ				*i* S	**Sn**	**10 28 35.2**	**-2.2**
KEPZ				IAML		10 28 48.0	
	comp=E,224nm,0.7s						
KEPZ				IAML		10 28 49.0	
	comp=N,163nm,0.7s						
OSC2	**CSNet OBS 4**	**3.51**	**114**	P	**Pn**	**10 27 58.1**	**+0.6**
OSC2				S	**Sn**	**10 28 40.5**	**+2.4**
GAZI	**Gazipasa**	**3.58**	**61**	*i* P	**Pn**	**10 27 57.6**	**-0.9**
GAZI				*i* S	**Sn**	**10 28 36.9**	**-3.0**
GAZI				IAML		10 28 47.0	
	comp=N,136nm,0.6s						
GAZI				IAML		10 28 56.0	
	comp=E,109nm,0.9s						
GAZI	**Gazipasa**	**3.58**	**61**	PN	**Pn**	**10 28 01.0**	**+2.4**
VAM	**Vamos**	**3.59**	**285**	P	**Pn**	**10 28 00.6**	**+1.9**
GVDS	**Gavdos**	**3.60**	**276**	P	**Pn**	**10 28 00.7**	**+1.9**
SZAC	**Souni**	**3.66**	**86**	P	**Pn**	**10 28 00.6**	**+0.9**
SZAC				AML	AML	10 28 42.6	
	comp=E,0.8nm,0.3s						
SZAC				AML	AML	10 28 43.1	
	comp=E,0.8nm,0.2s						
ISP	**Isparta**	**3.67**	**27**	Pn	**Pn**	**10 28 01.9**	**+2.1**
DGB	**zmir**	**3.71**	**341**	*i* P	**Pn**	**10 28 00.4**	**+0.1**
IMMV	**Iera Moni Meta**	**3.77**	**285**	P	**Pn**	**10 28 03.5**	**+2.3**
IMMV	**Iera Moni Meta**	**3.77**	**285**	PN	**Pn**	**10 28 02.4**	**+1.2**
BAGO	**Egridir - ISPA**	**3.92**	**28**	*i* P	**Pn**	**10 28 07.7**	**+4.4**
BAGO				*i* S	**Sn**	**10 28 46.3**	**-2.1**
MANT	**Manisa**	**3.93**	**1**	*i* P	**Pn**	**10 28 03.9**	**+0.3**
MANT				*i* S	**Sn**	**10 28 47.4**	**-1.4**
MANT				IAML		10 28 59.0	
	comp=N,49nm,0.5s						
KZIL	**AFYON_Kizioren**	**3.94**	**20**	*i* P	**Pn**	**10 28 04.7**	**+1.1**
KZIL				*i* S	**Sn**	**10 28 43.8**	**-5.2**
SEDI	**Konya, Seydise**	**3.94**	**42**	*i* P	**Pn**	**10 28 06.0**	**+2.3**
SEDI				*i* S	**Sn**	**10 28 49.3**	**+0.2**
SEDI				IAML		10 29 01.0	
	comp=E,202nm,0.5s						
SEDI				IAML		10 29 01.0	
	comp=N,243nm,0.5s						
KULA	**Kula-Manisa**	**3.96**	**2**	PN	**Pn**	**10 28 03.3**	**-0.5**
ASGA	**Asgata**	**3.97**	**85**	P	**Pn**	**10 28 04.7**	**+0.8**
CSS	**Mathiatis**	**4.04**	**83**	Pn	**Pn**	**10 28 07.1**	**+2.1**
URLA	**Izmir**	**4.08**	**339**	*i* P	**Pn**	**10 28 03.4**	**-2.0**
URLA	**Izmir**	**4.08**	**339**	PN	**Pn**	**10 28 04.8**	**-0.7**
USAK	**Uak-Merkez**	**4.18**	**6**	*i* P	**Pn**	**10 28 07.1**	**+0.3**
USAK				*i* S	**Sn**	**10 28 53.1**	**-1.6**
USAK				IAML		10 29 02.0	
	comp=E,39nm,0.8s						
USAK				IAML		10 29 22.0	
	comp=N,56nm,1.5s						
ERMK	**Ermenek**	**4.20**	**59**	*i* P	**Pn**	**10 28 08.6**	**+1.4**
ERMK				*i* S	**Sn**	**10 28 56.4**	**+1.0**
ERMK				IAML		10 29 07.0	
	comp=N,197nm,0.6s						
ERMK				IAML		10 29 15.0	
	comp=E,148nm,0.6s						
CHOS	**Chios island**	**4.28**	**334**	PN	**Pn**	**10 28 07.5**	**-0.8**
MVOU	**Mavrovouni**	**4.29**	**82**	P	**Pn**	**10 28 09.7**	**+1.4**
YVAC	**Isparta, Yalva**	**4.34**	**30**	*i* P	**Pn**	**10 28 12.3**	**+3.2**
YVAC				*i* S	**Sn**	**10 29 00.2**	**+1.4**
YVAC				IAML		10 29 10.0	
	comp=E,44nm,0.8s						
DOGA	**KONYA_Doganhis**	**4.40**	**35**	*i* P	**Pn**	**10 28 13.1**	**+3.1**
DOGA				*i* S	**Sn**	**10 29 02.5**	**+2.2**
DOGA				IAML		10 29 12.0	
	comp=N,210nm,1.0s						
DOGA				IAML		10 29 14.0	
	comp=E,143nm,0.5s						
KKBE	**Karaman, Kazim**	**4.52**	**53**	*i* P	**Pn**	**10 28 13.2**	**+1.6**
KKBE				*i* S	**Sn**	**10 29 03.5**	**+0.3**
KKBE				IAML		10 29 15.0	
	comp=E,83nm,0.8s						
KKBE				IAML		10 29 21.0	
	comp=N,65nm,0.6s						
GDZ	**Gediz**	**4.60**	**10**	*i* P	**Pn**	**10 28 12.2**	**-0.5**
GDZ				*i* S	**Sn**	**10 28 57.5**	**-7.8**
KONT	**Konya--Tatoy**	**4.63**	**42**	*i* P	**Pn**	**10 28 15.3**	**+2.3**
KONT				*i* S	**Sn**	**10 29 08.7**	**+2.7**
KONT				IAML		10 29 09.0	
	comp=N,66nm,1.1s						
KONT				IAML		10 29 20.0	
	comp=E,71nm,0.9s						
KONT	**Konya--Tatoy**	**4.63**	**42**	PN	**Pn**	**10 28 14.1**	**+1.0**
TVSB	**Tavsanli**	**4.95**	**9**	PN	**Pn**	**10 28 16.8**	**-0.7**
BALB	**Balikesir**	**5.10**	**355**	PN	**Pn**	**10 28 18.6**	**-0.8**
HMYD	**Mayadein**	**5.15**	**157**	P	**Pn**	**10 28 20.5**	**+0.4**
	baz=157						
ALIN	**Konya, Altinte**	**5.17**	**42**	*i* P	**Pn**	**10 28 21.5**	**+1.0**
ALIN				*i* S	Sn	10 29 07.8	-11
HNAT	**Natroun**	**5.24**	**159**	P	**Pn**	**10 28 22.6**	**+1.2**
	baz=160						
KOT	**Kottamia**	**5.43**	**147**	P	**Pn**	**10 28 23.9**	**-0.1**
	baz=148						
KOT				S	**Sn**	**10 29 20.5**	**-5.1**
	baz=148						
HHAG	**Hagoal**	**5.53**	**145**	P	**Pn**	**10 28 24.8**	**-0.6**
	baz=145						
HHAG				AMP		10 29 00.0	
	baz=145						
HHAG				S	**Sn**	**10 29 23.6**	**-4.6**
	baz=145						
GLL	**Jalalah**	**5.68**	**150**	P	**Pn**	**10 28 27.6**	**0.0**
	baz=150						
SWA2		**5.87**	**206**	P	**Pn**	**10 28 30.7**	**+0.6**
	baz=209						
ITM	**Ithomi**	**5.91**	**298**	Pn	**Pn**	**10 28 31.9**	**+1.4**
MMAI	**Mount Meron Ar**	**5.99**	**103**	Pn	**Pn**	**10 28 32.0**	**+0.2**
	comp=E,1.6nm,0.3s,baz=281,slow=10.0,SNR=1.9						
MMAI				Sn	**Sn**	**10 29 37.3**	**-2.2**
	comp=E,6.5nm,0.3s,baz=286,slow=21,SNR=2.8						
MDUB	**Mudurnu**	**6.30**	**20**	Pn	**Pn**	**10 28 36.9**	**+0.9**
ALN	**Alexandroupoli**	**6.61**	**344**	Pn	**Pn**	**10 28 40.9**	**+0.7**
BRTR	**Keskin Array B**	**6.62**	**37**	Pn	**Pn**	**10 28 40.9**	**+0.5**
	comp=E,0.2nm,0.3s,baz=207,slow=16,SNR=2.1						
BRTR				Sn	**Sn**	**10 29 52.2**	**-2.8**
	comp=E,0.8nm,0.3s,baz=191,slow=16,SNR=7.6						
AGG	**Agios Georgios**	**6.63**	**314**	Pn	**Pn**	**10 28 41.9**	**+1.4**
GHAJ	**Ghor Haditha**	**6.81**	**116**	Pn	**Pn**	**10 28 44.2**	**+1.3**
LIT	**Litokhoron**	**7.29**	**321**	Pn	**Pn**	**10 28 49.5**	**0.0**
EIL	**Elat**	**7.36**	**130**	Pn	**Pn**	**10 28 50.7**	**+0.2**
	comp=E,1.5nm,0.3s,baz=335,slow=1.9,SNR=41						
EIL				Sn	**Sn**	**10 30 07.9**	**-5.2**
	comp=E,2.9nm,0.3s,baz=343,slow=10,SNR=9.2						
**

s-maj=12.0km s-min=9.0km az=180.0
ISC 24 10:27:13.5±0.6, 34°53N±0.07×28°45E±0.05, h31km, n59, σ1§43/61, mb3.9/12, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**1.46**	**314**	Pn	**Pb**	**10 27 38.7**	**-1.4**
AKAS	**Kas**	**1.94**	**29**	Pn	**Pn**	**10 27 43.9**	**-0.6**
ELL	**Elmali**	**2.51**	**28**	Pn	**Pn**	**10 27 50.7**	**-1.6**
IDI	**Anoyia**	**3.02**	**285**	Pn	**Pn**	**10 28 01.5**	**+2.3**
	31nm,0.3s,baz=105,slow=16,SNR=18						
IDI				Sn	**Sn**	**10 28 34.8**	**+0.4**
	40nm,0.3s,baz=348,slow=23,SNR=6.8						
IDI	**Anoyia**	**3.02**	**285**	Pn	**Pn**	**10 27 58.2**	**-1.0**
SANT	**Santorini**	**3.05**	**308**	Pn	**Pn**	**10 27 59.2**	**-0.4**
ISP	**Isparta**	**3.69**	**27**	Pn	**Pn**	**10 28 10.3**	**+1.8**
DGB	**zmir**	**3.73**	**341**	*i* S	**Pn**	**10 28 09.5**	**+0.5**
MANT	**Manisa**	**3.95**	**1**	Pn	**Pn**	**10 28 11.8**	**-0.4**
CSS	**Mathiatis**	**4.04**	**83**	Pn	**Pn**	**10 28 15.3**	**+2.0**
ITM	**Ithomi**	**5.92**	**298**	Pn	**Pn**	**10 28 39.5**	**+0.5**
MMAI	**Mount Meron Ar**	**5.99**	**103**	Pn	**Pn**	**10 28 40.3**	**+0.2**
	4.6nm,0.3s,baz=277,slow=10.0,SNR=9.5						
MMAI				Sn	**Sn**	**10 29 45.0**	**-2.6**
	15nm,0.3s,baz=121,slow=26,SNR=5.7						
MDUB	**Mudurnu**	**6.32**	**19**	Pn	**Pn**	**10 28 46.2**	**+1.6**
ALN	**Alexandroupoli**	**6.63**	**344**	Pn	**Pn**	**10 28 47.6**	**-1.2**
BR131	**Keskin Array S**	**6.64**	**37**	Pn	**Pn**	**10 28 50.1**	**+1.1**
BRTR	**Keskin Array B**	**6.64**	**37**	Pn	**Pn**	**10 28 49.8**	**+0.8**
	0.6nm,0.3s,baz=213,slow=38,SNR=6.4						
BRTR				Sn	**Sn**	**10 30 01.6**	**-2.1**
	1.4nm,0.3s,baz=212,slow=25,SNR=11						
BRTR	**Keskin Array B**	**6.64**	**37**			**10 28 49.7**	**+0.7**
AGG	**Agios Georgios**	**6.64**	**314**	Pn	**Pn**	**10 28 49.1**	**+0.2**
GHAJ	**Ghor Haditha**	**6.80**	**116**	Pn	**Pn**	**10 28 52.4**	**+1.3**
LIT	**Litokhoron**	**7.30**	**321**	Pn	**Pn**	**10 28 59.3**	**+1.2**
EIL	**Elat**	**7.35**	**130**	Pn	**Pn**	**10 28 59.0**	**+0.4**
	3.7nm,0.3s,baz=300,slow=3.7,SNR=18						
EIL				Sn	**Sn**	**10 30 15.4**	**-5.5**
	7.3nm,0.3s,baz=169,slow=18,SNR=6.9						
GAZ	**Gaziantep**	**7.59**	**67**	Pn	**Pn**	**10 29 03.2**	**+1.2**
FNA	**Florina**	**8.38**	**320**	Pn	**Pn**	**10 29 12.1**	**-0.8**
TIRR	**Tirgusor**	**9.91**	**360**	Pn	**Pn**	**10 29 33.8**	**0.0**
TIP	**Timpagrande**	**10.45**	**300**	Pn	**Pn**	**10 29 39.4**	**-1.7**
CEL	**Celeste**	**10.78**	**294**	Pn	**Pn**	**10 29 43.7**	**-2.0**
SGRT	**San Giovanni R**	**12.32**	**310**	Pn	**Pn**	**10 30 05.4**	**-1.3**
CORL	**Corleone**	**12.68**	**290**	Pn	**Pn**	**10 30 11.1**	**-0.6**
AQU	**L'Aquila**	**14.13**	**308**	Pn	**Pn**	**10 30 31.6**	**+0.2**
KBZ	**Khabaz**	**14.48**	**46**	Pn	**Pn**	**10 30 39.0**	**+2.9**
	0.1nm,0.3s,baz=18,slow=21,SNR=2.3						
KIV	**Kislovodsk**	**14.48**	**45**	Pn	**Pn**	**10 30 36.3**	**0.0**
PSZ	**Piszkesteto**	**14.82**	**337**	Pn	**Pn**	**10 30 38.9**	**-2.0**
KEST	**Kesra**	**15.68**	**280**	Pn	**Pn**	**10 30 51.4**	**-0.8**
	0.2nm,0.3s,baz=231,slow=14,SNR=2.1						
AKASG	**Malin Array Be**	**16.17**	**2**	Pn	**P**	**10 31 02.2**	**+1.0**
	1.3nm,0.3s,baz=200,slow=12,SNR=6.1						
AKBB	**Malin Array Si**	**16.17**	**2**	Pn	**Pn**	**10 30 57.0**	**-1.3**
AKBB				IAmb	IAmb	10 31 05.7	
	comp=Z,4.8nm,0.6s						
GERES	**GERESS Array B**	**18.00**	**327**	P	**P**	**10 31 21.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=143,slow=12,SNR=6.1						
RAYN	**Ar Rayn**	**18.49**	**122**		**Pn**	**10 31 30.2**	**+2.8**
RAYN				IAmb	IAmb	10 31 31.8	
	comp=Z,4.6nm,0.7s						
DAVOX	**Davos/Dischmat**	**18.60**	**317**	P	**Pn**	**10 31 28.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=135,slow=13,SNR=2.5						
SENIN	**Lac Senin/Sane**	**19.90**	**313**	P	**P**	**10 31 42.6**	**+0.1**
SENIN				IAmb	IAmb	10 31 51.1	
	comp=Z,6.1nm,0.6s						
CLL	**Collm**	**20.15**	**331**	P	**P**	**10 31 43.2**	**-1.8**
CLL				IAmb	IAmb	10 31 44.1	
	comp=Z,14nm,1.3s						
BFO	**Black Forest**	**20.35**	**319**	P	**P**	**10 31 46.0**	**-1.2**
BFO				IAmb	IAmb	10 31 58.1	
	comp=Z,8.0nm,1.1s						
ECH	**Echery**	**20.93**	**317**	P	**P**	**10 31 53.3**	**-0.2**
ECH				IAmb	IAmb	10 31 59.8	
	comp=Z,4.7nm,1.0s						
ESDC	**Sonseca Array**	**26.27**	**291**	P	**P**	**10 32 46.9**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=79,slow=9.4,SNR=10						
FINES	**FINESS Array B**	**26.97**	**357**	P	**P**	**10 32 51.4**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=157,slow=10,SNR=6.2						
HFS	**Hagfors**	**27.36**	**344**	P	**P**	**10 32 55.9**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=148,slow=11,SNR=3.0						
NOA	**NORSAR Array B**	**28.75**	**343**	P	**P**	**10 33 08.5**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=154,slow=9.7,SNR=1.7						
TOA0	**Torodi Ar. Sit**	**32.26**	**235**	P	**P**	**10 33 38.3**	**-1.0**
TOA0				IAmb	IAmb	10 33 42.0	
	comp=Z,5.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**32.26**	**235**	P	**P**	**10 33 39.8**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=37,slow=9.2,SNR=15						
ARCES	**ARCESS Array B**	**35.09**	**358**	P	**P**	**10 34 04.3**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=184,slow=9.8,SNR=2.2						
KOWA	**Kowa**	**35.41**	**244**	P	**P**	**10 34 07.1**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=55,slow=23,SNR=4.2						
DBIC	**Dimbokro**	**41.37**	**236**	P	**P**	**10 34 57.1**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=18,slow=10,SNR=4.1						
DBIC	**Dimbokro**	**41.37**	**236**	IAmb	IAmb	10 35 03.5	
	comp=Z,22nm,1.4s						
MAKZ	**Makanchi**	**41.65**	**56**	P	**P**	**10 34 59.6**	**+0.7**
MK31	**Makanchi Array**	**41.87**	**56**	P	**P**	**10 35 01.8**	**+1.1**
MK31				IAmb	IAmb	10 35 03.1	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**41.87**	**56**	P	**P**	**10 35 02.0**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=283,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**43.50**	**46**	P	**P**	**10 35 13.8**	**0.0**
	comp=Z,0.7nm,0.3s,baz=259,slow=11,SNR=3.9						
SONM	**Songino Array**	**57.78**	**51**	P	**P**	**10 37 02.5**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=295,slow=9.2,SNR=8.7						
SONM	**Songino Array**	**57.78**	**51**	IAmb	IAmb	10 37 04.8	
	comp=Z,1.3nm,0.8s						
ASAR	**Alice Springs**	**115.28**	**102**	PKP	**PKiKP**	**10 45 53.1**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=283,slow=1.0,SNR=4.4						

*NOU **24** 10:58:46.3, 38°.03S×179°.05E, h0km, MLv3.8, Off E. Coast of N. Island, N.Z.*
WEL 24 10:58:52.6, 38°S±2°×17°8E±°, h12km±1km, M3.2/32, ML3.5/32, MLv3.2/32, Error ellipse: s-maj=0.0km s-min=0.0km az=70.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.11**	**13**	P	Pb	10 58 56.2	-0.4
WMGZ				S	Sg	10 58 59.4	+1.7
PUZ	**Puketiti**	**0.18**	**215**	P	Pb	10 58 57.4	-0.4
PUZ				S	Sg	10 59 01.2	+1.9
PKGZ	**Pakihiroa**	**0.25**	**279**	P	Pb	10 58 58.5	-0.5
PKGZ				S	Sg	10 59 03.2	+1.9
MXZ	**Matakaoa Point**	**0.37**	**350**	P	Pb	10 59 00.8	-0.2
TWGZ	**Tauwhareparae**	**0.41**	**232**	P	Pb	10 59 02.4	+0.7
HAZ	**Te Kaha**	**0.51**	**289**	P	Pb	10 59 03.1	-0.2
HAZ				S	Sb	10 59 10.9	+0.3
CNGZ	**Carnagh Statio**	**0.57**	**194**	P	Pn	10 59 06.6	0.0
TKGZ	**Te Karaka**	**0.66**	**219**	P	Pn	10 59 07.1	-0.7
MWZ	**Matawai**	**0.79**	**239**	P	Pb	10 59 08.8	+0.6
RIGZ	**Rimuhau**	**0.92**	**212**	P	Pn	10 59 11.3	0.0
RAGZ	**Rawiri**	**0.95**	**233**	P	Pn	10 59 12.1	+0.3
WIZ	**White Island**	**1.03**	**292**	P	Pn	10 59 13.9	+1.2
URZ	**Urewera**	**1.06**	**251**	P	Pn	10 59 13.6	+0.5
PRGZ	**Paritu Road**	**1.07**	**201**	P	Pb	10 59 13.1	0.0
SNGZ	**Shannon Statio**	**1.19**	**224**	P	Pb	10 59 15.0	+0.1
KNZ	**Kokohu**	**1.23**	**207**	P	Pn	10 59 14.6	-0.9
MHGZ	**Mahia Peninsul**	**1.28**	**197**	P	Pn	10 59 15.6	-0.6
RTZ	**Ruatahuna**	**1.30**	**238**	P	Pg	10 59 17.4	-0.2
EDRZ	**Edgecumbe**	**1.31**	**262**	P	Pg	10 59 18.7	+0.9
MARZ	**Manawahe**	**1.35**	**267**	P	Pg	10 59 19.7	+1.1
MUGZ	**Murupara**	**1.39**	**246**	P	Pg	10 59 18.9	-0.3
RAHZ	**Arahi**	**1.42**	**225**	P	Pg	10 59 19.0	0.0
OPRZ	**Ohinepanea**	**1.45**	**273**	P	Pb	10 59 19.0	-0.4
WHHZ	**Waihua**	**1.46**	**218**	P	Pn	10 59 18.6	-0.1
TARZ	**Mount Tarawera**	**1.51**	**258**	P	Pg	10 59 21.2	-0.5
MTHZ	**Maungataniwha**	**1.52**	**232**	P	Pb	10 59 20.4	-0.4
OMRZ	**Omania**	**1.60**	**263**	P	Pg	10 59 25.6	+2.3
TGRZ	**Tauranga**	**1.69**	**276**	P	Pn	10 59 22.5	+0.6
KARZ	**Kaharoa**	**1.69**	**266**	P	Pn	10 59 21.7	-0.2
NMHZ	**Naumai**	**1.70**	**226**	P	Pb	10 59 23.4	-0.4
HRRZ	**Handcock Road**	**1.72**	**254**	P	Pg	10 59 26.5	+1.0
ARHZ	**Arapaoanui**	**1.72**	**219**	P	Pn	10 59 22.9	+0.6
ALRZ	**Allen Road**	**1.73**	**248**	P	Pb	10 59 24.4	+0.1
MRHZ	**Matea Rd**	**1.79**	**239**	P	Pn	10 59 24.3	+0.9
BKZ	**Black Stump Fm**	**1.93**	**230**	P	Pn	10 59 25.5	+0.2
MCHZ	**McNeill Hill**	**2.01**	**221**	P	Pn	10 59 26.2	-0.1
HATZ	**Hinemaiaia**	**2.04**	**241**	P	Pb	10 59 28.5	-1.1
KWHZ	**Kaweka Forest**	**2.14**	**225**	P	Pn	10 59 27.8	-0.4
KAHZ	**Kahuranaki**	**2.21**	**212**	P	Pn	10 59 27.6	-1.4
TOZ	**Tahuroa Road**	**2.29**	**274**	P	Pn	10 59 30.6	+0.5
KRHZ	**Kereru**	**2.33**	**222**	P	Pn	10 59 30.3	-0.4
KATZ	**Kakaramea**	**2.36**	**243**	P	Pn	10 59 32.8	+1.7
BHHZ	**Black Hill Sta**	**2.39**	**229**	P	Pn	10 59 31.4	-0.2
TMVZ	**Te Maari**	**2.41**	**240**	P	Pn	10 59 32.6	+0.6
ETVZ	**East Tongariro**	**2.42**	**239**	P	Pn	10 59 32.6	+0.6
NTVZ	**North Tongarir**	**2.42**	**240**	P	Pn	10 59 32.9	+0.8
KUZ	**Kuaotunu**	**2.43**	**298**	P	Pn	10 59 32.1	+0.1
OTVZ	**Oturere**	**2.46**	**239**	P	Pn	10 59 33.3	+0.6
NNVZ	**North Ngauruho**	**2.48**	**240**	P	Pn	10 59 33.8	+0.8
SNVZ	**South Ngauruho**	**2.49**	**239**	P	Pn	10 59 33.7	+0.6
WTVZ	**West Tongariro**	**2.49**	**241**	P	Pg	10 59 39.0	-1.4
NGZ	**Ngauruhoe**	**2.51**	**239**	P	Pn	10 59 34.0	+0.6
MOVZ	**Moawhango**	**2.54**	**234**	P	Pn	10 59 34.0	+0.4
PNHZ	**Pukenui**	**2.62**	**220**	P	Pn	10 59 33.5	-1.2
HIZ	**Hauiti**	**2.84**	**257**	P	Pn	10 59 39.3	+1.6
TSZ	**Takapari Road**	**2.85**	**221**	P	Pn	10 59 36.2	-1.6
ETAZ	**East Tamaki Re**	**2.92**	**288**	P	Pn	10 59 39.8	+1.0
DVHZ	**Dannevirke**	**2.93**	**215**	P	Pn	10 59 37.5	-1.5
EPAZ	**Eden Park BICE**	**3.08**	**289**	P	Pn	10 59 42.4	+1.4
VRZ	**Vera Road**	**3.08**	**246**	P	Pn	10 59 42.3	+1.3
HBAZ	**Herne Bay Bore**	**3.10**	**289**	P	Pn	10 59 42.8	+1.5
POWZ	**Post Office Ro**	**3.19**	**219**	P	Pn	10 59 40.8	-1.8
BFZ	**Birch Farm**	**3.21**	**210**	P	Pn	10 59 40.6	-2.3
WAZ	**Wanganui**	**3.22**	**234**	P	Pn	10 59 43.4	+0.5
PRWZ	**Pori Road**	**3.23**	**215**	P	Pn	10 59 42.0	-1.0
RVAZ	**Riverhead Bore**	**3.24**	**290**	P	Pn	10 59 44.9	+1.7
NEZ	**North Egmont**	**3.62**	**247**	P	Pn	10 59 50.7	+2.2
PKE	**Pukeiti**	**3.67**	**248**	P	Pn	10 59 51.7	+2.5
KHEZ	**Kahui Hut**	**3.69**	**247**	P	Pn	10 59 51.7	+2.3
WCZ	**Waipu Caves**	**3.79**	**300**	P	Pn	10 59 51.8	+1.0
OUZ	**Omahuta**	**4.71**	**304**	P	Pn	11 00 05.0	+1.7
CTZ	**Chatham Island**	**6.93**	**148**	P	Pn	11 00 33.4	-0.5

*IDC **24** 11:11:12.8±2.7, 46°.21N×129°.38W, h0km, mb3.3/3, mb1 3.6/8, mb1mx3.4/40, mbtmp3.3/8, ML2.9/5, MS3.0/8, Ms1 3.0/8, ms1mx2.9/16, Error ellipse: s-maj=60.3km s-min=20.4km az=55.0*
*NEIC **24** 11:11:15.1±2.4, 46°.26N±0°.06×129°.6W±0°.1, h10km±2km, mb3.8/10, ML3.4/8, Error ellipse: s-maj=18.0km s-min=4.5km az=299.0*
ISC 24 11:11:14.0±1.4, 46°.2N±0°.1×129°.7W±0°.1, h10km, n51, σ1§19/41, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLWA	**Neilton Lookou**	**4.17**	**71**	Pn	**Pn**	**11 12 16.5**	**-1.3**
NLWA				IAML		11 13 58.5	
	43nm,3.1s						
NLWA				IAML		11 14 18.8	
	44nm,2.2s						
PGC	**Sidney**	**4.90**	**57**	Pn	**Pn**	**11 12 26.5**	**-1.1**
PGC				IAML		11 13 49.8	
	comp=N,29nm,3.1s						
PGC				IAML		11 14 26.2	
	comp=E,32nm,4.7s						
D05A	**Enumclaw**	**5.39**	**76**		**Pn**	**11 12 33.8**	**-0.6**
LON	**Longmire**	**5.47**	**81**		**Pn**	**11 12 34.5**	**-1.0**
H04A	**Detroit Lake**	**5.48**	**103**	Pn	**Pn**	**11 12 35.6**	**-0.1**
B06A	**Marblemount**	**6.04**	**64**		**Pn**	**11 12 43.3**	**-0.1**
BBB	**Bella Bella**	**6.11**	**9**	LR	LR	11 14 44.0	
	comp=E,74nm,18.7s,baz=248,slow=35						
LTY	**Liberty**	**6.29**	**77**		**Pn**	**11 12 46.2**	**-0.7**
YBH	**Yreka Blue Hor**	**6.70**	**129**	Pn	**Pn**	**11 12 52.5**	**0.0**
	comp=E,0.1nm,0.3s,baz=202,slow=16,SNR=2.0						
YBH				LR	LR	11 15 08.8	
	comp=E,129nm,19.7s,baz=324,slow=36						
H02S1	**DAWSON INLET T**	**7.28**	**347**	T	T	11 19 34.4	
	SNR=195						
B08A	**Colville Reser**	**7.37**	**69**	Pn	**Pn**	**11 13 01.1**	**-0.5**
BMO	**Blue Mountains**	**8.79**	**94**		**Pn**	**11 13 22.7**	**+1.5**
NEW	**Newport**	**8.80**	**72**	LR	LR	11 16 17.9	
	comp=E,0nm,19.7s,baz=262,slow=36						
BEKR	**Beckworth**	**9.28**	**129**	Pn	**Pn**	**11 13 29.1**	**+1.2**
PLID	**Pearl Lake**	**9.64**	**91**	Pn	**Pn**	**11 13 35.0**	**+2.0**
PAHR	**Pah Rah Range**	**9.93**	**127**		**Pn**	**11 13 38.8**	**+2.0**
VCNR	**Virginia City**	**10.07**	**129**		**Pn**	**11 13 40.8**	**+2.0**
MFID	**Camas Ranch**	**10.22**	**101**	Pn	**Pn**	**11 13 42.5**	**+1.7**
KVN	**Kaiserville**	**11.10**	**126**	Pn	**Pn**	**11 13 54.7**	**+1.9**
HLID	**Hailey**	**11.14**	**98**	Pn	**Pn**	**11 13 54.4**	**+0.9**
NVAR	**Mina Array Bea**	**11.42**	**129**	Pn	**Pn**	**11 13 57.0**	**-0.3**
	comp=E,0.1nm,0.3s,baz=299,slow=11,SNR=4.5						
NVAR				LR	LR	11 18 16.3	
	comp=E,68nm,18.4s,baz=276,slow=37						
BCYI	**Bear Canyon**	**11.62**	**93**	Pn	**Pn**	**11 14 01.4**	**+1.3**
ELK	**Elko**	**11.80**	**112**	Pn	**Pn**	**11 14 03.8**	**+1.3**
	comp=E,0.0nm,0.3s,baz=308,slow=12,SNR=3.3						
ELK				LR	LR	11 18 31.2	
	comp=E,81nm,21.4s,baz=326,slow=38						
ELK	**Elko**	**11.80**	**112**	Pn	**Pn**	**11 14 02.7**	**+0.2**
DLMT	**Dillon**	**11.96**	**88**		**Pn**	**11 14 05.0**	**+0.4**
QLMT	**Earthquake Lak**	**12.87**	**89**		**Pn**	**11 14 19.3**	**+2.1**
PRN	**Pahroc Range**	**13.97**	**124**		**Pn**	**11 14 34.2**	**+2.1**
SHPR	**Sheep Range**	**14.54**	**126**		**Pn**	**11 14 40.2**	**+0.3**
PDAR	**Pinedale Array**	**14.76**	**96**	Pn	**Pn**	**11 14 44.4**	**+1.6**
	comp=E,0.1nm,0.3s,baz=293,slow=7.7,SNR=4.1						
U15A	**North Rim**	**16.26**	**121**		**Pn**	**11 15 02.4**	**-0.2**
U15A				IAmb	IAmb	11 15 07.4	
	comp=Z,7.0nm,1.3s						
W13A	**Hualapai Mount**	**16.27**	**127**		**Pn**	**11 15 03.0**	**+0.3**
PV01	**Paradox Valley**	**17.55**	**110**	P	**P**	**11 15 20.7**	**+0.7**
PV01				IAmb	IAmb	11 15 22.2	
	comp=Z,8.3nm,1.5s						
YKA	**Yellowknife Ar**	**18.49**	**22**	P	**P**	**11 15 29.3**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=211,slow=12,SNR=7.5						
YKA				LR	LR	11 21 58.8	
	comp=Z,58nm,19.8s,baz=0.0,slow=35						
ISCO	**Idaho Springs**	**18.68**	**101**		**Pn**	**11 15 32.8**	**0.0**
SCM	**Sheep Creek Mo**	**18.71**	**333**	P	**Pn**	**11 15 33.9**	**+1.1**
SCM				IAmb	IAmb	11 15 35.3	
	comp=Z,7.2nm,0.7s						
FFC	**Flin Flon**	**19.50**	**54**	P	**P**	**11 15 41.5**	**+0.4**
FFC				IAmb	IAmb	11 15 42.7	
	comp=Z,12nm,1.3s						
ANMO	**Albuquerque**	**20.82**	**114**	P	**P**	**11 15 55.2**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=316,slow=13,SNR=4.0						
ANMO	**Albuquerque**	**20.82**	**114**	P	**P**	**11 15 56.5**	**+0.7**
ANMO				IAmb	IAmb	11 15 58.8	
	comp=Z,4.2nm,1.2s						
ILAR	**Eielson Array**	**20.91**	**339**	P	**P**	**11 15 56.5**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=152,slow=9.7,SNR=6.8						
319A	**Douglas**	**21.61**	**126**	P	**P**	**11 16 03.9**	**-0.3**
ULM	**Lac du Bonnet**	**22.77**	**67**	LR	LR	11 25 23.2	
	comp=Z,60nm,21.1s,baz=137,slow=38						
ECSD	**EROS Data Cent**	**23.43**	**84**	P	**P**	**11 16 22.6**	**-0.7**
WMOK	**Wichita Mounta**	**25.97**	**105**	P	**P**	**11 16 46.1**	**-0.6**
WMOK				IAmb	IAmb	11 16 46.8	
	comp=Z,5.0nm,1.1s						
TXAR	**Lajitas Array**	**26.38**	**120**	P	**P**	**11 16 48.6**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=290,slow=8.1,SNR=5.5						
TXAR				LR	LR	11 27 51.0	
	comp=Z,50nm,18.7s,baz=0.0,slow=38						
TXAR	**Lajitas Array**	**26.38**	**120**	P	**P**	**11 16 48.9**	**-1.7**
H11N2	**WAKE ISLAND Hy**	**57.71**	**265**	T	T	12 23 14.2	
	baz=47,slow=75,SNR=98						
H11N3	**WAKE ISLAND Hy**	**57.71**	**265**	T	T	12 23 16.6	
	baz=47,slow=75,SNR=164						
H11N1	**WAKE ISLAND Hy**	**57.73**	**265**	T	T	12 23 18.5	
	baz=47,slow=75,SNR=94						
H11S1	**WAKE ISLAND Hy**	**58.68**	**264**	T	T	12 24 28.0	
	baz=46,slow=75,SNR=359						
H11S2	**WAKE ISLAND Hy**	**58.69**	**264**	T	T	12 24 29.6	
	baz=46,slow=75,SNR=336						
H11S3	**WAKE ISLAND Hy**	**58.70**	**264**	T	T	12 24 29.4	
	baz=46,slow=75,SNR=164						

*NOU **24** 11:14:45.2, 38°.06S×178°.89E, h0km, MLv3.6, Off E. Coast of N. Island, N.Z.*
WEL 24 11:14:50.0, 38°S±1°×17°8E±°, h12km±1km, M2.9/22, ML3.1/22, MLv2.9/22, Error ellipse: s-maj=0.0km s-min=0.0km az=66.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.11**	**17**	P	Pb	11 14 53.5	-0.6
WMGZ				S	Sg	11 14 56.7	+1.8
PUZ	**Puketiti**	**0.17**	**212**	P	Pb	11 14 54.8	-0.4
PUZ				S	Sg	11 14 58.4	+1.8
PKGZ	**Pakihiroa**	**0.24**	**279**	P	Pg	11 14 53.9	-1.1
PKGZ				S	Sg	11 15 00.2	+1.9
MXZ	**Matakaoa Point**	**0.37**	**352**	P	Pb	11 14 58.1	-0.3
MXZ				S	Sb	11 15 04.6	+0.4
TWGZ	**Tauwhareparae**	**0.40**	**231**	P	Pb	11 14 59.7	+0.6
HAZ	**Te Kaha**	**0.50**	**290**	P	Pb	11 15 00.5	-0.2
HAZ				S	Sb	11 15 08.1	+0.2
CNGZ	**Carnagh Statio**	**0.57**	**193**	P	Pn	11 15 03.9	-0.1
TKGZ	**Te Karaka**	**0.66**	**219**	P	Pn	11 15 04.4	-0.8
MWZ	**Matawai**	**0.78**	**238**	P	Pb	11 15 06.2	+0.6
RIGZ	**Rimuhau**	**0.92**	**212**	P	Pn	11 15 08.7	-0.1
RAGZ	**Rawiri**	**0.94**	**233**	P	Pn	11 15 09.4	+0.2
URZ	**Urewera**	**1.05**	**251**	P	Pn	11 15 10.9	+0.3
PRGZ	**Paritu Road**	**1.07**	**201**	P	Pb	11 15 10.4	-0.1
SNGZ	**Shannon Statio**	**1.18**	**223**	P	Pb	11 15 12.2	-0.2
KNZ	**Kokohu**	**1.23**	**206**	P	Pn	11 15 11.8	-1.2
MHGZ	**Mahia Peninsul**	**1.28**	**196**	P	Pn	11 15 12.9	-0.9
RTZ	**Ruatahuna**	**1.29**	**237**	P	Pg	11 15 14.7	-0.2
EDRZ	**Edgecumbe**	**1.30**	**262**	P	Pg	11 15 15.8	+0.8
MARZ	**Manawahe**	**1.34**	**267**	P	Pg	11 15 18.8	+3.0
MUGZ	**Murupara**	**1.38**	**246**	P	Pg	11 15 16.2	-0.3
RAHZ	**Arahi**	**1.42**	**225**	P	Pg	11 15 18.0	+0.9
OPRZ	**Ohinepanea**	**1.44**	**273**	P	Pn	11 15 16.2	+0.3
TARZ	**Mount Tarawera**	**1.51**	**258**	P	Pb	11 15 18.4	+0.5
MTHZ	**Maungataniwha**	**1.52**	**232**	P	Pn	11 15 17.4	+0.3
NMHZ	**Naumai**	**1.70**	**226**	P	Pb	11 15 20.5	-0.7
HRRZ	**Handcock Road**	**1.71**	**254**	P	Pg	11 15 24.6	+1.7
MRHZ	**Matea Rd**	**1.79**	**239**	P	Pb	11 15 21.9	-0.8
BKZ	**Black Stump Fm**	**1.93**	**229**	P	Pn	11 15 22.8	+0.1
MCHZ	**McNeill Hill**	**2.00**	**220**	P	Pn	11 15 23.6	-0.1
KWHZ	**Kaweka Forest**	**2.14**	**225**	P	Pn	11 15 25.3	-0.3
KAHZ	**Kahuranaki**	**2.20**	**212**	P	Pn	11 15 24.9	-1.6
BHHZ	**Black Hill Sta**	**2.39**	**228**	P	Pn	11 15 28.7	-0.4
TMVZ	**Te Maari**	**2.41**	**240**	P	Pn	11 15 29.9	+0.5
ETVZ	**East Tongariro**	**2.41**	**239**	P	Pn	11 15 30.0	+0.5
NTVZ	**North Tongarir**	**2.42**	**240**	P	Pn	11 15 30.1	+0.6
KUZ	**Kuaotunu**	**2.42**	**298**	P	Pn	11 15 29.3	-0.1
OTVZ	**Oturere**	**2.46**	**239**	P	Pn	11 15 30.5	+0.4
SNVZ	**South Ngauruho**	**2.48**	**239**	P	Pn	11 15 30.9	+0.4
TSZ	**Takapari Road**	**2.84**	**221**	P	Pn	11 15 33.5	-1.7
ETAZ	**East Tamaki Re**	**2.91**	**288**	P	Pn	11 15 37.0	+0.8
VRZ	**Vera Road**	**3.08**	**246**	P	Pn	11 15 39.5	+1.1
RVAZ	**Riverhead Bore**	**3.24**	**290**	P	Pn	11 15 41.9	+1.3
NEZ	**North Egmont**	**3.61**	**247**	P	Pn	11 15 47.8	+1.9
WCZ	**Waipu Caves**	**3.79**	**300**	P	Pn	11 15 49.3	+1.1
OUZ	**Omahuta**	**4.70**	**304**	P	Pn	11 16 02.2	+1.5
CTZ	**Chatham Island**	**6.94**	**148**	P	Pn	11 16 30.8	-0.6

DNK 24 11:38:08.6±0.6, 57.73N×18.67E, h0km, ML1.4(UPP), Explosion, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOTU	**Gotland**	**0.07**	**229**	P	Pg	11 38 09.9	-0.1
GOTU				S	Sg	11 38 11.0	+0.1

MKAR	**Makanchi Array**	**41.20**	**309**	P		**P**	**11 47 20.5**	**-1.4**
	1.1nm,0.7s,baz=112,slow=9.8,SNR=3.5							
WRA	**Warramunga Arr**	**49.19**	**176**	P		**P**	**11 48 26.1**	**+0.7**
	1.0nm,1.1s,baz=351,slow=8.1,SNR=3.2							
ASAR	**Alice Springs**	**52.86**	**176**	P		**P**	**11 48 54.6**	**+1.6**
	0.3nm,0.7s,baz=7.0,slow=14,SNR=1.5							
ILAR	**Eielson Array**	**60.58**	**29**	P		**P**	**11 49 48.8**	**+1.4**
	0.2nm,0.6s,baz=273,slow=7.1,SNR=2.0							
AKASG	**Malin Array Be**	**74.58**	**320**	LR		LR	12 28 39.5	
	comp=Z,37nm,19.9s,baz=75,slow=40							
YKA	**Yellowknife Ar**	**74.70**	**26**	P		**P**	**11 51 18.2**	**+1.7**
	0.2nm,0.7s,baz=306,slow=5.8,SNR=1.7							

*IDC **24** 11:49:01.3±0.7,28°.17N×104°.79E, h0km, mb4.0/24, mb1 4.1/26, mb1mx3.9/61, mbtmp4.0/26, ML4.0/2, MS3.6/9, Ms1 3.6/9, ms1mx3.2/46, Error ellipse: s-maj=17.1km s-min=13.8km az=54.0*

*BJI **24** 11:49:04.0±0.0, 28°.16N×104°.76E, h10km, mB4.5/13, mb4.2/18, ML4.3/24, Ms3.9/12, Ms7 3.8/21*

*NEIC **24** 11:49:06.1±1.7, 28°.15N±0°.05×104°.84E±0°.08, h30km±3km, mb4.2/22, Error ellipse: s-maj=10.3km s-min=7.3km az=93.0*

ISC 24 11:49:03.4±0.4, 28°.17N±0°.03×104°.80E±0°.04, h10km, n81, σ1§43/88, mb4.1/31, MS3.5/7, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.37**	**135**	Pn	**Pn**	**11 49 44.3**	**-2.0**
GYA				Pg	**Pg**	**11 49 49.8**	**+0.9**
GYA				Sn	**Sb**	**11 50 14.8**	**-0.9**
GYA				Sg	**Sg**	**11 50 22.5**	**+2.8**
GYA				smax	smax		
	comp=N,360nm,0.9s						
GYA				smax	smax		
	comp=E,460nm,0.9s						
CD2	**Chengdu**	**2.88**	**342**	Pn	**Pn**	**11 49 50.6**	**+1.2**
CD2				Pg	**Pg**	**11 49 58.9**	**+0.3**
CD2				Sn	**Sn**	**11 50 27.0**	**+2.8**
CD2				Sg	**Sg**	**11 50 38.0**	**+2.0**
CD2				smax	smax		
	comp=N,2μm,1.5s						
CD2				smax	smax		
	comp=E,3μm,1.2s						
CD2	**Chengdu**	**2.88**	**342**	Pn	**Pn**	**11 49 50.3**	**+0.9**
CD2				Pg	**Pg**	**11 49 58.9**	**+0.3**
CD2				Sn	**Sn**	**11 50 27.0**	**+2.8**
CD2				Sg	**Sg**	**11 50 35.1**	**-0.9**
CD2				smax	smax		
	comp=E,2μm,1.6s						
CD2				smax	smax		
	comp=E,3μm,1.4s						
KMI	**Kunming**	**3.55**	**212**	Pn	**Pn**	**11 49 58.3**	**-0.5**
KMI				Pg	**Pg**	**11 50 09.5**	**-1.9**
KMI				Sn	**Sn**	**11 50 41.3**	**+0.4**
KMI				Sg	**Sg**	**11 50 56.3**	**-1.1**
KMI				smax	smax		
	comp=E,100nm,1.0s						
KMI				smax	smax		
	comp=E,160nm,1.2s						
KMI				LR	LR		
	comp=E,3μm,8.7s						
KMI	**Kunming**	**3.55**	**212**	Pn	**Pn**	**11 49 58.8**	**+0.1**
ENH	**Enshi**	**4.60**	**62**		**Pn**	**11 50 15.1**	**+2.1**
ENH				Sn	**Sn**	**11 51 07.2**	**+0.7**
XAN	**Xi'an**	**6.83**	**30**	Pn	**Pn**	**11 50 44.5**	**+0.8**
XAN				Pg	Pg	11 51 09.4	-4.9
XAN				Sn	**Sn**	**11 52 01.4**	**-0.2**
XAN				Sg	**Sg**	**11 52 41.0**	**-1.8**
XAN				smax	smax		
	comp=E,650nm,1.3s						
XAN				smax	smax		
	comp=E,640nm,1.2s						
XAN				LR	LR		
	comp=E,730nm,6.7s						
XAN	**Xi'an**	**6.83**	**30**		**Pn**	**11 50 43.6**	**-0.1**
XAN				Sn	**Sn**	**11 52 01.2**	**-0.4**
LZH	**Lanzhou**	**7.94**	**354**	*e*P	**Pn**	**11 51 02.3**	**+3.3**
LZH				*e*S	**Sn**	**11 52 27.8**	**-1.1**
LZH				pmax	pmax		
	comp=E,27nm,1.0s						
LZH				pmax	pmax		
	comp=E,110nm,4.3s						
LZH				smax	smax		
	comp=E,94nm,1.1s						
LZH				smax	smax		
	comp=E,170nm,1.2s						
LZH				LR	LR		
	comp=E,890nm,7.9s						
WHN	**Wuhan**	**8.66**	**72**	‖P	**Pn**	**11 51 09.3**	**+0.6**
WHN				S	**Sn**	**11 52 43.5**	**-3.0**
WHN				LR	LR		
	comp=E,3μm,7.8s						
QIZ	**Qiongzhong**	**10.20**	**152**	P	**Pn**	**11 51 31.1**	**+1.2**
QIZ				S	**Sn**	**11 53 27.8**	**+3.4**
QIZ				pmax	pmax		
	comp=E,25nm,1.6s						
QIZ				LR	LR		
	comp=E,660nm,10.8s						
QIZ				LR	LR		
	comp=E,440nm,8.2s						
QIZ	**Qiongzhong**	**10.20**	**152**	Pn	**Pn**	**11 51 28.2**	**-1.7**
CM34	**Chiang Mai Arr**	**10.62**	**210**	P	Pn	11 51 41.0	+5.3
CM35	**Chiang Mai Arr**	**10.77**	**210**	P	Pn	11 51 42.0	+4.2
CM36	**Chiang Mai Arr**	**10.94**	**210**	P	Pn	11 51 44.0	+4.0
CM09	**Chiang Mai Arr**	**11.05**	**210**	P	Pn	11 51 47.0	+5.4
CMAR	**Chiang Mai Arr**	**11.06**	**210**	Pn	**Pn**	**11 51 41.6**	**-0.1**
	comp=E,0.4nm,0.3s,baz=42,slow=11,SNR=16						
CMAR				Lg	Lg	11 54 53.9	
	comp=E,0.6nm,0.3s,baz=21,slow=27,SNR=1.6						
CMAR				LR	LR	11 56 23.0	
	comp=E,236nm,20.5s,baz=70,slow=40						
CMAR	**Chiang Mai Arr**	**11.06**	**210**		**Pn**	**11 51 44.0**	**+2.3**
CM02	**Chiang Mai Arr**	**11.08**	**210**	P	Pn	11 51 47.0	+5.0
CM04	**Chiang Mai Arr**	**11.10**	**210**	P	Pn	11 51 47.0	+4.8
CM05	**Chiang Mai Arr**	**11.11**	**210**	P	Pn	11 51 47.2	+4.8
GTA	**Gaotai**	**11.95**	**341**	*e*P	**Pn**	**11 51 55.4**	**+1.4**
GTA				pP		11 51 59.4	
GTA				sP		11 52 03.3	
GTA				pmax	pmax		
	comp=E,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=E,52nm,4.4s						
GTA				LR	LR		
	comp=E,630nm,10.9s						
GTA				LR	LR		
	comp=E,460nm,16.0s						
LSA	**Lhasa**	**12.06**	**281**	Pn	**Pn**	**11 51 58.4**	**+2.6**
TIA	**Tai'an**	**13.15**	**49**	P	**Pn**	**11 52 14.0**	**+3.8**
TIA				pmax	pmax		
	comp=E,3.0nm,0.5s						
TIA				pmax	pmax		
	comp=E,52nm,4.0s						
TIA				LR	LR		
	comp=E,300nm,7.1s						
TIA				LR	LR		
	comp=E,250nm,8.3s						
SONM	**Songino Array**	**19.68**	**3**	P	**P**	**11 53 31.9**	**-0.7**
	comp=E,0.3nm,0.3s,baz=192,slow=13,SNR=17						
SONM				LR	LR	12 01 53.0	
	comp=E,254nm,18.0s,baz=167,slow=39						
SONM	**Songino Array**	**19.68**	**3**	P	**P**	**11 53 33.1**	**+0.4**
ULN	**Ulaanbaatar**	**19.74**	**4**	P	**P**	**11 53 33.9**	**+0.5**
ULN				IAmb	IAmb	11 53 40.2	
	comp=Z,8.6nm,1.1s						
SURT	**Suratani**	**19.93**	**198**	P	**Pn**	**11 53 41.6**	**+4.5**
WMQ	**Urumqi**	**20.81**	**323**	*e*P	**P**	**11 53 45.6**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.5s						
WMQ				LR	LR		
	comp=Z,150nm,7.5s						
KSAR	**Wonju Array Be**	**21.45**	**59**	P	**P**	**11 53 52.3**	**+0.5**
KS19	**Wonju Array Si**	**21.45**	**58**	P	**P**	**11 53 51.0**	**-0.8**
KS19				IAmb	IAmb	11 54 07.9	
	comp=Z,13nm,1.4s						
KSRS	**Korea Array**	**21.48**	**59**	P	**P**	**11 53 51.5**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=248,slow=10.0,SNR=7.1						
JNU	**Nakatsue**	**22.95**	**71**	P	**P**	**11 54 07.3**	**-0.6**
	comp=Z,7.6nm,0.8s,baz=294,slow=7.7,SNR=3.1						
JNU	**Nakatsue**	**22.95**	**71**	IAmb	IAmb	11 54 31.4	
	comp=Z,26nm,1.3s						
TLY	**Talaya**	**23.50**	**358**	P	**P**	**11 54 13.6**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=258,slow=20,SNR=1.4						
TLY				LR	LR	12 04 22.8	
	comp=Z,189nm,21.4s,baz=150,slow=39						
MK31	**Makanchi Array**	**25.64**	**323**	P	**P**	**11 54 33.3**	**+0.2**
MKAR	**Makanchi Array**	**25.64**	**323**	P	**P**	**11 54 32.9**	**-0.1**
	comp=Z,3.2nm,1.0s,baz=119,slow=9.9,SNR=14						
MKAR	**Makanchi Array**	**25.64**	**323**	P	**P**	**11 54 32.5**	**-0.6**
MAKZ	**Makanchi**	**25.81**	**322**	P	**P**	**11 54 34.8**	**+0.1**
MAKZ				IAmb	IAmb	11 54 45.4	
	comp=Z,5.9nm,1.2s						
PSI	**Prapat**		**25.84 194**	LR	LR	12 06 11.1	
	comp=Z,89nm,18.6s,baz=290,slow=40						
USRK	**Ussuriysk Ar.**	**26.99**	**46**	P	**P**	**11 54 45.5**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=250,slow=9.3,SNR=6.9						
USRK	**Ussuriysk Ar.**	**26.99**	**46**	P	**P**	**11 54 45.9**	**+0.6**
KLR	**Kul'dur**	**29.48**	**37**	LR	LR	12 08 41.3	
	comp=Z,54nm,18.4s,baz=228,slow=40						
ZAA0	**Zalesovo Array**	**29.63**	**336**	P	**P**	**11 55 08.6**	**-0.2**
ZALV	**Zalesovo Beam**	**29.63**	**336**	P	**P**	**11 55 07.5**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=137,slow=7.9,SNR=5.5						
ZALV				LR	LR	12 07 51.9	
	comp=Z,100nm,19.7s,baz=124,slow=38						
ZALV	**Zalesovo Beam**	**29.63**	**336**	P	**P**	**11 55 08.2**	**-0.5**
KURBB	**Kurchatov Arra**	**29.97**	**326**	P	**P**	**11 55 11.6**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=130,slow=9.8,SNR=12						
KURK	**Kurchatov**	**29.98**	**326**	P	**P**	**11 55 11.6**	**-0.3**
ASAJ	**Asahikawa**	**34.08**	**52**	P	**P**	**11 55 48.3**	**+0.4**
	comp=Z,5.0nm,0.9s,baz=70,slow=24,SNR=1.1						
BVAR	**Borovoye Array**	**35.49**	**324**	P	**P**	**11 55 59.3**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=100,slow=7.9,SNR=2.4						
GEYT	**Alibeck**	**39.97**	**296**	P	**P**	**11 56 37.8**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=82,slow=11,SNR=2.0						
GEYT				LR	LR	12 15 23.6	
	comp=Z,95nm,20.1s,baz=225,slow=40						
ABKAR	**Akbulak array**	**40.11**	**314**	P	**P**	**11 56 39.9**	**+0.8**
AKTO	**Aktyubinsk**	**41.62**	**315**	P	**P**	**11 56 49.5**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=78,slow=14,SNR=1.5						
NRIK	**Noril'sk**	**42.42**	**351**	P	**P**	**11 56 57.0**	**-0.7**
	comp=Z,2.3nm,0.6s,baz=147,slow=10,SNR=4.4						
NRIK	**Noril'sk**	**42.42**	**351**	P	**P**	**11 56 57.1**	**-0.7**
NRIK				IAmb	IAmb	11 57 11.8	
	comp=Z,3.5nm,0.8s						
TIXI	**Tiksi**	**45.51**	**10**	P	**P**	**11 57 20.6**	**-2.0**
	comp=Z,1.6nm,0.5s,baz=219,slow=3.6,SNR=5.5						
TIXI	**Tiksi**	**45.51**	**10**	P	**P**	**11 57 21.5**	**-1.1**
TIXI				IAmb	IAmb	11 57 25.2	
	comp=Z,4.4nm,1.1s						
KBZ	**Khabaz**	**51.33**	**305**	LR	LR	12 25 02.7	
	comp=Z,35nm,18.3s,baz=86,slow=42						
RAYN	**Ar Rayn**	**53.12**	**279**	P	**P**	**11 58 22.2**	**+0.6**
RAYN				IAmb	IAmb	11 58 38.8	
	comp=Z,2.4nm,0.9s						
WB0	**Warramunga Arr**	**55.58**	**146**	P	**P**	**11 58 38.4**	**-1.0**
WRAB	**Tennant Creek**	**55.70**	**146**	P	**P**	**11 58 39.8**	**-0.4**
WRA	**Warramunga Arr**	**55.71**	**146**	P	**P**	**11 58 39.2**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=334,slow=8.5,SNR=31						
WRA	**Warramunga Arr**	**55.71**	**146**	P	**P**	**11 58 39.4**	**-0.8**
WB2	**Warramunga Arr**	**55.71**	**146**	P	**P**	**11 58 39.7**	**-0.6**
WR0	**Warramunga Arr**	**55.82**	**146**	P	**P**	**11 58 39.4**	**-1.6**
WR0				IAmb	IAmb	11 58 39.9	
	comp=Z,6.3nm,1.1s						
AS31	**Alice Springs**	**58.67**	**149**	P	**P**	**11 59 01.5**	**+0.3**
AS31				IAmb	IAmb	11 59 11.6	
	comp=Z,1.2nm,0.9s						
ASAR	**Alice Springs**	**58.67**	**149**	P	**P**	**11 59 00.7**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=328,slow=7.1,SNR=23						
AKASG	**Malin Array Be**	**59.85**	**315**	P	**P**	**11 59 08.3**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=66,slow=6.9,SNR=1.8						
ARCES	**ARCESS Array B**	**60.18**	**337**	P	**P**	**11 59 10.9**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=76,slow=7.5,SNR=1.4						
ARCES				LR	LR	12 29 09.2	
	comp=Z,81nm,18.7s,baz=210,slow=40						
FINES	**FINESS Array B**	**60.35**	**327**	P	**P**	**11 59 11.0**	**-1.2**
	comp=Z,2.3nm,1.0s,baz=82,slow=10,SNR=1.7						
HFS	**Hagfors**	**66.55**	**327**	P	**P**	**11 59 53.4**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=106,slow=4.7,SNR=4.1						
NOA	**NORSAR Array B**	**67.46**	**328**	P	**P**	**11 59 58.5**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=74,slow=6.7,SNR=2.3						
BPAW	**Bear Paw Mtn.**	**70.93**	**27**	P	**P**	**12 00 18.3**	**-2.3**
PPLA	**Purkeypile**	**70.95**	**28**	P	**P**	**12 00 20.0**	**-0.8**
ILAR	**Eielson Array**	**72.22**	**25**	P	**P**	**12 00 27.2**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=300,slow=4.5,SNR=1.7						
PRP	**Porcupine Dome**	**72.36**	**24**	P	**P**	**12 00 30.1**	**+0.7**
PRP				IAmb	IAmb	12 00 36.1	
	comp=Z,4.0nm,1.1s						
PMR	**Palmer**	**72.81**	**29**	P	**P**	**12 00 32.0**	**+0.2**
PMR				IAmb	IAmb	12 00 36.3	
	comp=Z,3.6nm,1.1s						
DAVOX	**Davos/Dischmat**	**73.20**	**314**	P	**P**	**12 00 34.9**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=316,slow=19,SNR=1.9						
INK	**Inuvik**	**74.72**	**19**	P	**P**	**12 00 43.4**	**+0.4**
	comp=Z,1.8nm,1.0s,baz=311,slow=6.0,SNR=5.0						
INK	**Inuvik**	**74.72**	**19**	IAmb	IAmb	12 00 46.0	
	comp=Z,3.9nm,1.1s						
YKA	**Yellowknife Ar**	**84.31**	**17**	P	**P**	**12 01 33.7**	**-1.5**
	comp=Z,0.4nm,0.6s,baz=330,slow=4.8,SNR=6.4						

*ISK **24** 11:55:26.1, 38°.89N×43°.59E, h5km, ML2.7/11*

*DDA **24** 11:55:27.4, 38°.96N×43°.52E, h7km±4km, ML2.3*

ISC 24 11:55:27.0±1.3, 38°.85N±0°.04×43°.56E±0°.03, h0km±15km, n19, σ0§76/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERCV	**ERCIS-VAN**	**0.24**	**315**	PG	**Pg**	**11 55 31.8**	**+0.2**
ERCV				SG	**Sg**	**11 55 36.1**	**+1.3**
VANB	**Van**	**0.29**	**207**	PG	**Pb**	**11 55 35.4**	**+0.3**
VANB				SG	**Sb**	**11 55 42.0**	**+1.5**
TVAN	**Van**	**0.34**	**200**	*i* P	**Pb**	**11 55 35.5**	**-0.6**
OZAP	**Van, Ozalp-Mer**	**0.39**	**119**	*i* P	**Pb**	**11 55 36.8**	**-0.1**
OZAP				*i* S	**Sb**	**11 55 44.7**	**+1.1**
OZAP				IAML		11 55 46.0	
	comp=N,227nm,0.9s						
OZAP				IAML		11 55 47.0	
	comp=E,314nm,0.7s						
CLDR	**Caldiran**	**0.41**	**44**	*i* P	**Pg**	**11 55 34.1**	**-0.7**
CLDR				*i* S	**Sg**	**11 55 40.5**	**+0.4**
CLDR				IAML		11 55 47.0	
	comp=N,400nm,0.4s						
CLDR				IAML		11 55 49.0	
	comp=E,354nm,0.5s						
CLDR	**Caldiran**	**0.41**	**44**	PG	**Pg**	**11 55 34.3**	**-0.5**
CLDR				SG	**Sg**	**11 55 40.4**	**+0.4**
ADCV	**BITLIS_Adilcev**	**0.65**	**267**	*i* P	**Pg**	**11 55 40.2**	**+0.7**
ADCV				IAML		11 55 50.0	
	comp=E,403nm,0.4s						
ADCV				*i* S	**Sb**	**11 55 50.0**	**-1.0**
ADCV				IAML		11 55 51.0	
	comp=N,438nm,0.2s						
AKDM	**Akdamar-Van**	**0.69**	**221**	PG	**Pb**	**11 55 40.9**	**-1.1**
AKDM				SG	**Sb**	**11 55 52.8**	**+0.7**
MLAZ	**Malazgirt-MUS**	**0.84**	**291**	PG	**Pg**	**11 55 43.6**	**+0.5**
MLAZ				SG	**Sb**	**11 55 56.3**	**-0.1**
AGRB	**Hanur-Agry**	**0.85**	**329**	PG	**Pg**	**11 55 43.0**	**-0.3**
BASK	**Baskale_VAN**	**0.87**	**156**	*i* P	**Pb**	**11 55 45.0**	**-0.1**
BASK				IAML		11 56 02.0	
	comp=E,80nm,0.3s						
BASK				IAML		11 56 02.0	
	comp=N,80nm,0.4s						
IGDI	**IGDIR**	**1.09**	**21**	*i* P	**Pg**	**11 55 48.3**	**+0.3**
IGDI				IAML		11 56 08.0	
	comp=N,82nm,0.5s						
IGDI				IAML		11 56 09.0	
	comp=E,76nm,0.5s						
BLIS	**Bitlis-Merkez**	**1.21**	**249**	*i* P	**Pg**	**11 55 49.4**	**-0.8**
BLIS				*i* S	**Sg**	**11 56 04.9**	**-1.0**
BLIS				IAML		11 56 10.0	
	comp=E,66nm,0.4s						
BLIS				IAML		11 56 11.0	
	comp=N,82nm,0.4s						
GURO	**Guroymak-BITLI**	**1.23**	**256**	PN	**Pg**	**11 55 50.4**	**-0.2**
SRTM	**Siirt_Merkez**	**1.54**	**237**	*i* P	**Pn**	**11 55 55.3**	**-0.5**
SRTM				IAML		11 56 23.0	
	comp=E,42nm,0.7s						
SRTM				IAML		11 56 29.0	
	comp=N,89nm,0.7s						
GNI	**Garni**	**1.59**	**35**	PN	**Pn**	**11 55 55.8**	**-0.7**
SIRT	**Sirnak**	**1.61**	**214**	PN	**Pb**	**11 55 57.4**	**-0.2**
SENK	**Senkaya-Erzuru**	**1.95**	**332**	PN	**Pn**	**11 56 01.3**	**-0.2**
BNGB	**Bingl**	**2.25**	**274**	PN	**Pn**	**11 56 06.5**	**+0.9**

*NEIC **24** 12:00:17.9±2.6, 24°.07N±0°.04×122°.33E±0°.02, h10km±1km, mb4.4/28, ML4.4(TAP), Error ellipse: s-maj=6.5km s-min=2.8km az=172.0*

*BJI **24** 12:00:18.3±0.0, 24°.17N×122°.18E, h11km, mB4.4/15, mb4.2/17, ML3.8/5, Ms3.9/17, Ms7 3.9/17*

*JMA **24** 12:00:20.6±0.1, 24°.04N×122°.29E, h26km±3km, M4.4*

*NIED **24** 12:00:20.7, 24°.04N×122°.29E, h26km, MW4.3, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr=0.79; Mθθ=1.11; Mϕϕ=1.90; Mrθ=1.68; Mθϕ=0.43; Mϕr=1.35; Fault plane solution: M0=2.74000×10¹⁵ NP1: ϕs=225.00000°, δ=80.00000°, λ=-56.00000°. NP2: ϕs=330.00000°, δ=35.00000°, λ=-162.00000°.*

*TAP **24** 12:00:20.8, 24°.12N×122°.27E, h24km, ML4.4, D*

*IDC **24** 12:00:21.7±3.0, 24°.26N×122°.41E, h37km±26km, mb3.8/16, mb1 3.9/17, mb1mx3.7/60, mbtmp4.1/17, ML4.0/1, MS3.6/14, Ms1 3.6/14, ms1mx3.3/41, Error ellipse: s-maj=24.9km s-min=12.3km az=64.0*

ISC 24 12:00:19.2±0.8, 24°.09N±0°.02×122°.30E±0°.01, h20km±3km, n226, σ0§95/344, mb4.3/27, MS3.7/11, 26C-10D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.60**	**307**	P	**Pn**	**12 00 31.9**	**-0.8**
	baz=313						
EWUT				S	**Sg**	**12 00 39.8**	**+0.6**
	baz=313						
TWD	**Chiawan**	**0.65**	**270**	⇑*i* P	**Pn**	**12 00 33.0**	**-0.3**
	baz=252						
TWD				S	**Sg**	**12 00 41.3**	**+0.5**
	baz=252						
HWA	**Hwalien**	**0.65**	**260**	P	**Pn**	**12 00 33.6**	**+0.4**
	baz=257						
HWA				*e*S	**Sn**	**12 00 42.9**	**-0.1**
	baz=257						
NACB	**Ninganchiao**	**0.65**	**278**	⇑*i* P	**Pn**	**12 00 33.2**	**-0.2**
	baz=260						
NACB				*e*S	**Sn**	**12 00 42.3**	**-0.8**
	baz=260						
NACB	**Ninganchiao**	**0.65**	**278**		**Pn**	**12 00 33.2**	**-0.2**
NACB				Sg	**Sn**	**12 00 44.0**	**+0.9**
TWC	**Suao**	**0.67**	**322**	⇓*i* P	**Pg**	**12 00 32.6**	**+0.2**
	baz=321						
TWC				*i* S	**Sb**	**12 00 40.2**	**-0.7**
	baz=321						
JYNG	**Yonagunijimaku**	**0.69**	**58**	P	**Pn**	**12 00 34.2**	**+0.3**
JYNG				S	**Sn**	**12 00 43.6**	**-0.4**
YOJ	**Yonaguni jima**	**0.75**	**60**	P	**Pn**	**12 00 35.3**	**+0.7**
YOJ				S	**Sn**	**12 00 45.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.75**	**60**	⇓*i* P	**Pn**	**12 00 35.4**	**+0.7**
	baz=62						
YOJ				S	**Sn**	**12 00 44.7**	**-0.7**
	baz=62						
YOJ	**Yonaguni jima**	**0.75**	**60**		**Pn**	**12 00 35.4**	**+0.8**
YOJ				Sg	**Sn**	**12 00 44.9**	**-0.6**
ETLH	**Xiulin Townshi**	**0.76**	**279**	P	**Pn**	**12 00 34.9**	**0.0**
	baz=277						
ETLH				S	**Sn**	**12 00 46.1**	**+0.2**
	baz=277						
NDS	**Dongshan**	**0.76**	**316**	⇑*i* P	**Pn**	**12 00 34.9**	**0.0**
	baz=319						
NDS				S	**Sg**	**12 00 44.6**	**+0.2**
	baz=319						
EGS		**0.83**	**336**	P	**Pn**	**12 00 36.3**	**+0.5**
	baz=327						
EGS				S	**Sn**	**12 00 47.4**	**0.0**
	baz=327						
ESL	**Shilin**	**0.84**	**251**	⇑*i* P	**Pg**	**12 00 35.5**	**-0.2**
	baz=240						
ESL				S	**Sg**	**12 00 46.4**	**-0.5**
	baz=240						
ILA	**Ilan**	**0.84**	**323**	P	**Pn**	**12 00 36.5**	**+0.5**
	baz=323						
ILA				S	**Sn**	**12 00 47.7**	**-0.1**
	baz=323						
TWE	**Neicheng**	**0.86**	**318**	⇑*i* P	**Pn**	**12 00 36.5**	**+0.3**
	baz=324						
TWE				S	**Sg**	**12 00 47.4**	**0.0**
	baz=324						
ENTT	**Nioudou**	**0.87**	**310**	⇓*i* P	**Pn**	**12 00 37.0**	**+0.7**
	baz=315						
ENTT				S	**Sg**	**12 00 47.8**	**0.0**
	baz=315						
NTC	**Toucheng**	**0.88**	**331**	P	**Pn**	**12 00 36.7**	**+0.2**
	baz=330						
NTC				S	**Sn**	**12 00 48.5**	**-0.2**
	baz=330						
NDT	**Datong Townshi**	**0.89**	**306**	⇑*i* P	**Pn**	**12 00 37.6**	**+1.0**
	baz=315						
NDT				*i* S	**Sn**	**12 00 48.3**	**-0.6**
	baz=315						
EGFH	**Guangfu**	**0.90**	**243**	P	**Pn**	**12 00 36.7**	**-0.1**
	baz=230						
EGFH				S	**Sb**	**12 00 47.9**	**+0.1**
	baz=230						
NNSB	**Datong**	**0.91**	**292**	⇑*i* P	**Pn**	**12 00 37.5**	**+0.5**
	baz=290						
NNSB				S	**Sg**	**12 00 48.5**	**-0.5**
	baz=290						
NNSH	**Datong**	**0.91**	**292**	*i* P	**Pn**	**12 00 37.4**	**+0.4**
	baz=290						
NNSH				S	**Sg**	**12 00 48.5**	**-0.5**
	baz=290						
NNS	**Nan Shan**	**0.92**	**293**	⇑*i* P	**Pn**	**12 00 37.6**	**+0.5**
	baz=291						
NNS				*e*S	**Sn**	**12 00 50.5**	**+0.7**
	baz=291						
WHF	**Hehuan Shan**	**0.95**	**274**	⇑*i* P	**Pn**	**12 00 37.9**	**+0.1**
	baz=258						
TWB1	**Santiao Chiao**	**0.96**	**343**	⇑*i* P	**Pg**	**12 00 38.1**	**+0.1**
	baz=330						
TWB1				S	**Sn**	**12 00 50.4**	**-0.3**
	baz=330						
FUSS	**Fushou**	**0.98**	**280**	P	**Pg**	**12 00 38.9**	**+0.5**
	baz=278						
FUSS				S	**Sg**	**12 00 51.2**	**-0.1**
	baz=278						
TIPB	**Shuangxi**	**0.98**	**334**	⇑*i* P	**Pg**	**12 00 38.9**	**+0.5**
	baz=333						
TIPB				S	**Sg**	**12 00 50.6**	**-0.8**
	baz=333						
HGSD	**Ruisui**	**1.00**	**234**	P	**Pn**	**12 00 38.0**	**-0.2**
	baz=232

baz=332
YULB Yu-li 1.15 233 P **Pn** 12 00 40.3 0.0
baz=248
YULB *e*S **Sb** 12 00 53.1 -1.9
baz=248
YULB Yu-li 1.15 233 Pn **Pn** 12 00 40.2 0.0
TATO Taipei 1.16 320 P **Pg** 12 00 41.4 -0.2
baz=318
TATO S **Sn** 12 00 55.5 0.0
baz=318
TATO Taipei 1.16 320 **Pg** 12 00 41.8 +0.2
TATO **Sg** 12 00 56.3 -0.5
EYUL Yuli 1.16 231 P **Pb** 12 00 40.9 +0.3
baz=246
EYUL *e*S **Sb** 12 00 55.3 0.0
baz=246
TNOU National Taiwa 1.16 336 *e*P **Pg** 12 00 41.0 -0.9
baz=350
TWF1 Yuli 1.18 232⇑*i*P **Pb** 12 00 40.9 0.0
baz=247
TWF1 S **Sn** 12 00 56.8 +0.7
baz=247
TAP Taipei 1.19 323 P **Pg** 12 00 43.0 +0.6
baz=321
TAP S **Sg** 12 00 57.7 -0.4
baz=321
WPL Puli Township 1.23 267 *e*P **Pb** 12 00 42.3 +0.4
baz=265
YM01 YM01 1.25 328 P **Pb** 12 00 42.3 +0.1
baz=341
YM01 *e*S **Sg** 12 00 59.1 -0.7
baz=341
WHP Taichung City 1.25 279 P **Pg** 12 00 43.4 -0.1
baz=266
WHP *e*S **Sg** 12 01 00.2 +0.2
baz=266
NWRT Kuosheng 1.26 332 *e*P **Pg** 12 00 43.9 +0.3
baz=345
DPDB Guoxing 1.26 268 *e*P **Pg** 12 00 43.0 -0.6
baz=266
SSLB Suanglung 1.27 257⇑*i*P **Pb** 12 00 42.6 +0.1
baz=255
SSLB S **Sb** 12 00 57.6 -0.8
baz=255
SSLB Suanglung 1.27 257 Pn **Pb** 12 00 42.6 +0.1
YM08 YM08 1.27 330 *e*P **Pb** 12 00 42.3 -0.3
baz=343
FULB Fuli 1.28 227 P **Pn** 12 00 42.0 -0.1
baz=213
FULB S **Sn** 12 00 57.5 -1.1
baz=213
NJD Zhudong 1.28 301 *e*P **Pg** 12 00 44.0 0.0
baz=299
TWS1 Kuangyinshan 1.29 322⇑*i*P **Pg** 12 00 43.9 -0.4
baz=331
TWS1 S **Sg** 12 01 01.9 +0.8
baz=331
SMLT Sun Moon Lake 1.30 261⇑*i*P **Pb** 12 00 43.4 +0.3
baz=250
SMLT S **Sb** 12 00 59.8 +0.5
baz=250
LIOB Emei 1.30 296⇑*i*P **Pg** 12 00 44.3 -0.1
baz=294
LIOB *e*S **Sg** 12 01 00.4 -1.0
baz=294
CHKT Chengkung 1.30 221⇓*i*P **Pn** 12 00 42.1 -0.3
baz=210
CHKT S **Sn** 12 00 57.5 -1.7
baz=210
NSTT Nanjuang 1.30 295⇑*i*P **Pg** 12 00 44.2 -0.3
baz=293
NSTT *e*S **Sg** 12 01 02.0 +0.4
baz=293
ANP Anpu 1.31 327 *e*P **Pg** 12 00 44.1 -0.4
baz=326
IRIF Iriomote-Funau 1.33 79 P **Pg** 12 00 44.8 -0.1
IRIF S **Sg** 12 01 02.5 +0.2
TYC Yuchr 1.33 262⇑*i*P **Pb** 12 00 43.8 +0.2
baz=261
TYC S **Sb** 12 01 00.1 -0.1
baz=261
NCUH Zhongli 1.34 311 *e*P **Pg** 12 00 44.8 -0.5
baz=309
TWY Chenhua 1.35 332 P **Pg** 12 00 44.6 -0.7
baz=330
TWY *e*S **Sg** 12 01 02.1 -0.8
baz=330
HSN1 Hsinchu 1.36 301 *e*P **Pg** 12 00 45.2 -0.3
baz=299
YUS Yu-Shan 1.37 245⇓*i*P **Pb** 12 00 44.7 +0.2
baz=244
YUS S **Sn** 12 01 01.3 -0.3
baz=244
HATJ Hateruma jima 1.37 91 P **Pg** 12 00 45.4 -0.4
HATJ S **Sg** 12 01 04.9 +1.1
WHYT Xinyi Township 1.38 254 *e*P **Pg** 12 00 45.5 -0.4
baz=243
WHYT *e*S **Sg** 12 01 03.0 -1.0
baz=243
SBCB Hsinchu 1.39 301 P **Pg** 12 00 45.2 -0.9
baz=299
SBCB *e*S **Sg** 12 01 05.5 +1.2
baz=299
HSN Hsinchu 1.41 301 *e*P **Pg** 12 00 45.5 -1.0
baz=301
TWQ1 Liyutan 1.42 281⇑*i*P **Pg** 12 00 46.2 -0.5
baz=280
TWQ1 S **Sg** 12 01 04.4 -0.9
baz=280
NJN Zhunan 1.44 295 *e*P **Pg** 12 00 47.2 +0.3
baz=293
EDH Donghe 1.44 220 P **Pn** 12 00 44.0 -0.2
baz=209
EDH S **Sn** 12 01 00.7 -1.8
baz=209
NSY Sanyi 1.45 283 P **Pg** 12 00 46.8 -0.4
baz=282
NSY S **Sg** 12 01 05.4 -0.6
baz=282
NMLH Miaoli 1.45 288 *e*P **Pg** 12 00 46.7 -0.5
baz=287
NMLH *e*S **Sb** 12 01 03.4 -0.2
baz=287
WJS Zhushan 1.46 260 P **Pg** 12 00 46.7 -0.8
baz=259
WJS *e*S **Sg** 12 01 08.1 +1.4
baz=259
WWF Wufeng 1.47 269 *e*P **Pg** 12 00 47.6 +0.1
baz=268
WWF *e*S **Sg** 12 01 07.2 +0.5
baz=268
ELDTW Lidau 1.48 233⇓*i*P **Pn** 12 00 45.0 +0.1
baz=220
ELDTW *e*S **Sn** 12 01 03.2 -0.5
baz=220
ALS Alishan 1.49 248⇓*i*P **Pb** 12 00 46.8 +0.4
baz=247
ALS S **Sb** 12 01 04.7 -0.2
baz=247
TCU Taichung 1.49 273 *e*P **Pg** 12 00 47.5 -0.5
baz=272
TCU *e*S **Sg** 12 01 07.5 +0.2
baz=272
WNT1 Nantou City 1.49 263 *e*P **Pg** 12 00 47.7 -0.4
baz=248
WNT1 *e*S **Sg** 12 01 07.1 -0.5
baz=248
WNT Mingjian 1.50 262 *e*P **Pg** 12 00 47.5 -0.6
baz=261
WNT *e*S **Sg** 12 01 06.7 -0.9
baz=261
WDJ Dajia District 1.54 280 P **Pb** 12 00 47.7 +0.6
baz=279
PCYT Pengchaiyu 1.55 352 P **Pb** 12 00 46.6 -0.7
baz=351
CHN5 Tsauling 1.56 252⇑*i*P **Pb** 12 00 48.0 +0.5
baz=252
CHN5 *i* S **Sb** 12 01 07.3 +0.3
baz=252
JKRS Kuro-shima 1.57 84 P **Pb** 12 00 48.2 +0.7
JKRS *e*S **Sb** 12 01 08.1 +1.2
LONT Longtian 1.59 223 *e*P **Pn** 12 00 46.6 +0.3
baz=223
LONT *e*S **Sn** 12 01 05.8 -0.6
baz=223
WCHH Zhanghua 1.59 270 *e*P **Pb** 12 00 48.7 +0.7
baz=269
WCHH S **Sg** 12 01 10.4 -0.4

baz=269
LDUT Ludao 1.60 209 P **Pn** 12 00 46.0 -0.4
baz=209
LDUT S **Sn** 12 01 04.0 -2.6
baz=209
WGK Gukeng 1.64 256 *e*P **Pb** 12 00 49.5 +0.7
baz=256
WGK *e*S **Sb** 12 01 10.4 +1.3
baz=256
WDLH Douliu 1.66 257 P **Pb** 12 00 49.7 +0.5
baz=243
WDLH S **Sb** 12 01 10.9 +1.1
baz=243
STYH Taoyuan 1.67 237 P **Pb** 12 00 48.8 -0.5
baz=237
STYH *e*S **Sn** 12 01 09.2 +0.9
baz=237
STYT Tauyuan 1.69 237⇓*i*P **Pb** 12 00 49.2 -0.5
baz=237
STYT *e*S **Sb** 12 01 09.8 -0.7
baz=237
TWGBT Beinan 1.69 222 P **Pn** 12 00 47.6 0.0
baz=233
TWGBT S **Sn** 12 01 08.2 -0.5
baz=233
TWG Pinlang 1.69 222 **Pn** 12 00 47.6 -0.1
TTN Taitung 1.70 219 *e*P **Pb** 12 00 49.9 +0.1
baz=209
TTN *e*S **Sb** 12 01 10.2 -0.6
baz=209
JIJ Ishigaki jima 1.70 80 P **Pb** 12 00 49.4 -0.5
JIJ S **Sb** 12 01 11.1 +0.2
TPUB Ta-pu 1.72 243 P **Pb** 12 00 50.2 -0.1
baz=243
TPUB S **Sb** 12 01 11.2 -0.3
baz=243
TPUB Ta-pu 1.72 243 **Pb** 12 00 50.1 -0.1
CHN4 Tsushan 1.73 245 P **Pb** 12 00 51.1 +0.7
baz=235
CHN4 S **Sb** 12 01 12.1 +0.4
baz=235
WTP Ta-pu 1.76 242⇓*i*P **Pb** 12 00 50.9 0.0
baz=242
WTP S **Sb** 12 01 13.2 +0.6
baz=242
CHN2 Minshiung 1.76 252 *e*P **Pb** 12 00 51.8 +0.9
baz=252
CHN2 *e*S **Sb** 12 01 14.2 +1.6
baz=252
WRL Guolierlin Hig 1.77 264 *e*P **Pb** 12 00 51.4 +0.4
baz=264
WRL *e*S **Sb** 12 01 12.0 -0.8
baz=264
WTK Tuku 1.80 258 P **Pb** 12 00 51.8 +0.3
baz=245
WTK S **Sb** 12 01 14.6 +1.0
baz=245
CHY Chiayi 1.82 252 *e*P **Pb** 12 00 52.0 +0.2
baz=251
CHY *e*S **Sb** 12 01 15.4 +1.3
baz=251
CHN1 Nanshi 1.86 241 P **Pb** 12 00 52.6 0.0
baz=241
CHN1 S **Sb** 12 01 15.6 +0.2
baz=241
WTCT Ta-ch'eng 1.86 264 *e*S **Sb** 12 01 16.1 +0.7
baz=263
SNST Tainan City 1.87 243 *e*P **Pb** 12 00 53.2 +0.6
baz=243
SNST *e*S **Sb** 12 01 16.3 +0.7
baz=243
SGST Jiashian 1.87 238 P **Pb** 12 00 51.6 -1.1
baz=238
SGST S **Sb** 12 01 15.6 0.0
baz=238
SLGT Liugui 1.87 235 *e*P **Pb** 12 00 53.1 +0.3
baz=225
SLGT *e*S **Sb** 12 01 17.0 +1.3
baz=225
JISG Ishigakijimahi 1.90 74 P **Pb** 12 00 52.0 -1.2
JISG S **Sb** 12 01 15.4 -1.1
ECL Taimali 1.93 220 P **Pn** 12 00 51.0 0.0
baz=221
ECL *e*S **Sn** 12 01 12.4 -2.3
baz=221
WSF Szhu 1.96 257 *e*P **Pb** 12 00 53.5 -0.7
baz=257
WSF S **Sb** 12 01 19.2 +1.0
baz=257
ICHU Yijhu 1.99 249 *e*P **Pb** 12 00 54.0 -0.8
baz=249
ICHU *e*S **Sb** 12 01 18.9 -0.3
baz=249
SSD Sandimen 2.03 229 P **Pb** 12 00 55.4 -0.2
baz=223
SSD S **Sb** 12 01 21.1 +0.7
baz=223
CHN3 Shinhua 2.04 241 *e*P **Pb** 12 00 56.5 +0.9
baz=241
CHN3 *e*S **Sg** 12 01 23.3 -1.7
baz=241
SCST Cishan 2.05 235 *e*P **Pb** 12 00 56.0 +0.3
baz=223
SCST *e*S **Sb** 12 01 20.0 -0.8
baz=223
TSMG Majia 2.05 228 *e*P **Pb** 12 00 56.0 +0.2
baz=222
TSMG *e*S **Sb** 12 01 20.1 -0.8
baz=222
CHN8 Yiju 2.05 249 *e*P **Pb** 12 00 55.0 -0.9
baz=249
CHN8 *e*S **Sb** 12 01 20.4 -0.6
baz=249
MASBT Mashibuluo 2.12 227 *e*P **Pb** 12 00 55.6 -1.4
baz=219
MASBT *e*S **Sb** 12 01 21.8 -1.2
baz=219
TWM1 Shoushan 2.13 234 *e*P **Pb** 12 00 58.3 +1.0
baz=233
TWM1 *e*S **Sb** 12 01 24.9 +1.6
baz=233
SCLT Jiali 2.14 245 *e*S **Sb** 12 01 23.2 -0.1
baz=245
LAY Lan-yu 2.15 199 P **Pn** 12 00 53.6 -0.5
baz=209
LAY S **Sn** 12 01 17.6 -2.6
baz=209
TAW Tawu 2.15 217 *e*P **Pn** 12 00 55.6 +1.6
baz=218
TAW *e*S **Sn** 12 01 19.6 -0.6
baz=218
EAST Anshuo 2.16 219 P **Pn** 12 00 54.3 +0.2
baz=218
SNJT Kaohsiung City 2.24 234 *e*P **Pb** 12 00 59.0 0.0
baz=234
SSPT Xinbi 2.26 225 *e*P **Pb** 12 00 59.2 -0.1
baz=219
SSPT *e*S **Sb** 12 01 26.8 0.0
baz=219
JTJ Tarama 2.26 75 P **Pb** 12 00 57.4 -1.9
JTJ S **Sb** 12 01 24.8 -2.0
SCZT Fangliau 2.30 223 P **Pb** 12 00 59.5 -0.7
baz=217
SCZT S **Sb** 12 01 27.2 -0.9
baz=217
SLIU Shizi 2.32 217 *e*P **Pn** 12 00 56.8 +0.5
baz=217
WLCH Liuqiu 2.47 226 *e*P **Pb** 12 01 03.7 +0.7
baz=227
HEN Hengchun 2.52 215 *e*P **Pn** 12 01 00.8 +1.6
baz=217
HEN *e*S **Sn** 12 01 31.8 +2.5
baz=217
TSEB Hengchuen, Pin 2.53 211 *e*P **Pn** 12 01 01.1 +1.8
baz=214
TSEB *e*S **Sn** 12 01 30.9 +1.4
baz=214
TWKBT Hengchun 2.54 213 *e*P **Pn** 12 01 00.4 +1.0
baz=215
TWKBT *e*S **Sn** 12 01 30.8 +1.1
baz=215
TWK1 Hengchun 2.54 213 *e*P **Pn** 12 01 00.5 +1.2
baz=215
TWK1 *e*S **Sn** 12 01 30.6 +0.9
baz=215
WDGT Dungji 2.56 252 *e*P **Pn** 12 01 01.3 +1.7
baz=239
WDGT *e*S **Sn** 12 01 30.5 +0.3

baz=239
PNG Penghu 2.57 259 P **Pn** 12 01 00.8 +1.1
baz=259
PNG S **Sn** 12 01 31.7 +1.3
baz=259
JIRB Irabujima 2.72 74 P **Pn** 12 01 03.8 +2.0
JIRB *e*S **Sn** 12 01 35.7 +1.6
VWUC VWUC 2.75 290 *e*P **Pn** 12 01 02.6 +0.4
baz=289
VWUC *e*S **Sn** 12 01 33.6 -1.3
baz=289
VCHM Qimei 2.77 252 *e*P **Pn** 12 01 03.7 +1.1
baz=252
JIKM Ikemajima 2.81 72 P **Pn** 12 01 05.7 +2.7
JIKM *e*S **Sn** 12 01 37.4 +1.0
JMJ Miyako jima 2 2.82 74 *e*P **Pn** 12 01 04.6 +1.4
baz=74
JMJ2 Miyako jima3 2.83 76 P **Pb** 12 01 06.2 -3.0
JMJ2 *e*S **Sn** 12 01 39.7 +2.7
JOGS Gusukube 2.91 76 P **Pb** 12 01 07.6 -2.8
JOGS S **Sn** 12 01 42.0 +3.2
MATB Ma-tsu 2.96 314 *e*P **Pn** 12 01 05.3 +0.1
baz=313
PTMZ Houxiangcun 3.05 289 *e*P **Pn** 12 01 06.2 -0.1
baz=288
LYJJ Jianjiangzhen 3.36 317 *e*P **Pn** 12 01 10.8 +0.1
baz=316
XPSS Dashiqiu 3.42 326 *e*P **Pn** 12 01 11.7 +0.4
baz=334
QZH Quanzhou 3.48 285 Pn **Pn** 12 01 12.3 0.0
QZH Sn **Sn** 12 01 51.5 -1.6
QZH smax smax
comp=N,160nm,0.8s
QZH smax smax
comp=E,140nm,0.8s
KNM Kinmen 3.55 276 *e*P **Pn** 12 01 15.4 +2.2
baz=275
MHZQ Yeshan 3.58 305 *e*P **Pn** 12 01 13.5 -0.2
baz=303
KNMB Chin-men Tao 3.59 277 *e*P **Pn** 12 01 13.8 0.0
baz=276
KNMB Chin-men Tao 3.59 277 Pn **Pn** 12 01 14.2 +0.4
AXDP Jialang 4.03 282 *e*P **Pn** 12 01 20.6 +0.8
baz=281
JOW Kunigami 6.05 62 Pn **Pn** 12 01 47.2 -0.4
8.2nm,0.3s,baz=140,slow=24,SNR=43
JOW Sn **Sn** 12 02 56.5 +0.2
baz=266,slow=29,SNR=1.1
JOW Kunigami 6.05 62 Pn **Pn** 12 01 48.0 +0.4
JMZ Minamidaito 2 8.28 76 Pn **Pn** 12 02 16.2 -2.0
WHN Wuhan 9.56 314 ⇓P Pn 12 02 48.9 +13
WHN S Sn 12 04 36.8 +14
WHN LR LR
comp=N,360nm,3.6s
WHN LR LR
comp=E,620nm,3.6s
WHN LR LR
comp=Z,1μm,12.5s
JNU Nakatsue 11.73 38 LR LR 12 08 09.1
comp=Z,90nm,20.7s,baz=212,slow=40
QIZ Qiongzhong 12.63 249 P **Pn** 12 03 18.0 +0.1
QIZ S **Sn** 12 05 38.9 +0.7
QIZ LR LR
comp=Z,230nm,18.4s
QIZ LR LR
comp=Z,220nm,19.6s
QIZ LR LR
comp=Z,150nm,14.7s
KSRS Korea Array 14.17 19 Pn **Pn** 12 03 40.9 +2.1
comp=Z,0.2nm,0.3s,baz=204,slow=13,SNR=3.4
KSRS LR LR 12 09 31.0
comp=Z,137nm,19.0s,baz=184,slow=39
DAV Davao City (W) 17.21 169 LR LR 12 10 46.9
comp=Z,122nm,20.5s,baz=358,slow=36
JCJ Chichijima 18.18 76 LR LR 12 10 41.2
comp=Z,45nm,21.7s,baz=246,slow=34
HHC Hu-ho-hao-te 18.98 334 *e*P **Pn** 12 04 40.8 +0.4
HHC S **Sn** 12 08 09.0 -3.5
HHC pmax pmax
comp=Z,16nm,1.1s
HHC pmax pmax
comp=Z,130nm,5.8s
HHC LR LR
comp=Z,350nm,14.7s
HHC LR LR
comp=Z,220nm,12.6s
HHC LR LR
comp=Z,410nm,14.9s
LZH Lanzhou 19.91 311 *e*P P 12 04 42.8 -7.1
LZH sP Pn 12 04 47.1 -4.5
LZH pmax pmax
comp=Z,19nm,1.0s
USRK Ussuriysk Ar. 21.57 19 LR LR 12 13 22.2
comp=Z,101nm,20.2s,baz=178,slow=36
CMAR Chiang Mai Arr 22.46 260 P **P** 12 05 19.5 +2.1
comp=Z,0.3nm,0.3s,baz=70,slow=8.8,SNR=4.8
CMAR LR LR 12 14 48.4
comp=Z,74nm,18.2s,baz=126,slow=38
GTOI Gorontalo 23.32 178 P **P** 12 05 24.9 -1.3
SBUM Sibu 23.61 206 P **P** 12 05 28.3 -0.8
SBUM IAmb IAmb 12 05 47.6
comp=Z,4.6nm,0.6s
MTKI Muara Teweh, K 25.90 197 P **P** 12 05 51.0 +0.9
MTKI pP **pP** 12 05 54.0 -1.0
ULN Ulaanbaatar 26.65 337 P **P** 12 05 56.4 -0.4
SONM Songino Array 26.86 336 P **P** 12 05 58.4 -0.3
comp=Z,5.9nm,0.7s,baz=149,slow=10,SNR=42
SONM LR LR 12 17 27.7
comp=Z,127nm,20.7s,baz=148,slow=38
SONM Songino Array 26.86 336 P **P** 12 05 58.6 -0.1
SONM IAmb IAmb 12 05 59.4
comp=Z,5.7nm,0.8s
FAKI Fak Fak 28.54 159 P **P** 12 06 13.6 -0.1
TLY Talaya 31.05 337 P **P** 12 06 35.3 -0.5
comp=Z,3.7nm,0.7s,baz=146,slow=5.9,SNR=7.3
TLY Talaya 31.05 337 P **P** 12 06 35.3 -0.5
TLY IAmb IAmb 12 06 36.2
comp=Z,4.0nm,0.8s
WMQ Urumqi 34.46 313 *e*P **P** 12 07 09.9 +4.1
WMQ pP sP 12 07 12.0 -0.9
WMQ sP pwP 12 07 13.8 -1.1
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,110nm,4.1s
WMQ LR LR
comp=Z,130nm,8.7s
WMQ LR LR
comp=Z,320nm,8.7s
WMQ LR LR
comp=Z,180nm,28.9s
MTN Manton Dam 37.70 166 P **P** 12 07 33.3 -0.3
MK31 Makanchi Array 39.12 316 P **P** 12 07 45.5 +0.1
MKAR Makanchi Array 39.12 316 P **P** 12 07 45.4 +0.1
comp=Z,0.6nm,0.4s,baz=99,slow=9.3,SNR=14
MKAR LR LR 12 25 17.4
comp=Z,116nm,18.2s,baz=99,slow=38
MKAR Makanchi Array 39.12 316 P **P** 12 07 45.6 +0.3
MAKZ Makanchi 39.33 315 P **P** 12 07 47.5 +0.4
KNRA Kununurra 40.02 170 P **P** 12 07 53.0 0.0
KNRA IAmb IAmb 12 07 53.9
comp=Z,18nm,1.4s
ZAA0 Zalesovo Array 40.88 327 P **P** 12 07 58.6 -1.3
ZALV Zalesovo Beam 40.88 327 P **P** 12 07 58.5 -1.3
comp=Z,2.5nm,0.5s,baz=115,slow=8.8,SNR=14
ZALV LR LR 12 26 16.2
comp=Z,132nm,18.6s,baz=116,slow=38
ZALV Zalesovo Beam 40.88 327 P **P** 12 07 58.2 -1.6
KURK Kurchatov 42.82 320 P **P** 12 08 15.0 -0.7
KURBB Kurchatov Arra 42.84 320 P **P** 12 08 15.0 -0.8
comp=Z,0.6nm,0.6s,baz=113,slow=9.1,SNR=6.5
COEN Coen 42.96 149 P **P** 12 08 18.7 +1.5
WB0 Warramunga Arr 45.15 164 P **P** 12 08 35.7 +1.0
WB0 IAmb IAmb 12 08 36.1
comp=Z,5.3nm,1.0s
WRA Warramunga Arr 45.31 164 P **P** 12 08 36.5 +0.6
comp=Z,3.1nm,0.7s,baz=345,slow=8.7,SNR=35
WRA Warramunga Arr 45.31 164 P **P** 12 08 36.0 +0.1
WB2 Warramunga Arr 45.31 164 P **P** 12 08 36.9 +0.9
WB2 IAmb IAmb 12 08 41.3
comp=Z,8.1nm,1.1s
WR0 Warramunga Arr 45.38 164 P **P** 12 08 37.3 +0.9
WR0 IAmb IAmb 12 08 38.0
comp=Z,5.9nm,0.8s
PSA00 Pilbara Seismi 45.45 183 P **P** 12 08 36.8 -0.2
PSA00 Pilbara Seismi 45.45 183 P **P** 12 08 36.9 -0.1

PSA00					IAmb	IAmb	12 08 48.7	
	comp=Z,26nm,1.2s							
KKAR	**Karatay Array**	**46.34**	**307**	P		**P**	**12 08 43.0**	**-1.0**
BVAR	**Borovoye Array**	**48.40**	**321**	P		**P**	**12 08 59.0**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=170,slow=9.8,SNR=4.0							
BVAR					ScP	**ScP**	**12 14 18.3**	**-1.5**
	comp=Z,0.4nm,0.5s,baz=123,slow=5.3,SNR=2.7							
BRVK	**Borovoye**	**48.47**	**321**	P		**P**	**12 08 59.8**	**-0.5**
BRVK					IAmb	IAmb	12 09 01.7	
	comp=Z,2.4nm,0.8s							
AS31	**Alice Springs**	**48.78**	**166**	P		**P**	**12 09 04.5**	**+1.5**
AS31					IAmb	IAmb	12 09 10.0	
	comp=Z,3.8nm,1.4s							
ASAR	**Alice Springs**	**48.79**	**166**	P		**P**	**12 09 04.5**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=345,slow=7.2,SNR=42							
ASAR					PcP	**PcP**	**12 10 27.0**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=337,slow=3.9,SNR=1.3							
ASAR	**Alice Springs**	**48.79**	**166**	P		**P**	**12 09 04.0**	**+0.9**
CTA	**Charters Tower**	**49.72**	**150**	P		**P**	**12 09 11.8**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=331,slow=10,SNR=4.3							
CTAO	**Charters Tower**	**49.72**	**150**	P		**P**	**12 09 08.8**	**-1.5**
CTAO					IAmb	IAmb	12 09 16.0	
	comp=Z,8.5nm,1.4s							
NRIK	**Noril'sk**	**49.76**	**345**	LR		LR	12 32 03.7	
	comp=Z,90nm,18.2s,baz=144,slow=38							
ABKAR	**Akbulak array**	**54.24**	**314**	P		**P**	**12 09 43.3**	**-0.4**
ABKAR					IAmb	IAmb	12 09 44.6	
	comp=Z,2.6nm,0.8s							
GEYT	**Alibeck**	**55.73**	**301**	LR		LR	12 38 01.8	
	comp=Z,59nm,19.6s,baz=30,slow=41							
ARU	**Arti**	**55.80**	**323**	P		**P**	**12 09 54.4**	**-0.4**
ARU					IAmb	IAmb	12 09 60.0	
	comp=Z,3.6nm,0.9s							
NWAO	**Narrogin (SRO)**	**56.90**	**185**	P		**P**	**12 10 03.3**	**+0.5**
STKA	**Stephens Creek**	**58.63**	**161**	P		**P**	**12 10 16.1**	**+1.1**
	comp=Z,4.2nm,0.8s,baz=355,slow=7.5,SNR=5.9							
STKA	**Stephens Creek**	**58.63**	**161**	P		**P**	**12 10 16.3**	**+1.3**
DZM	**Mont Dzumac**	**62.82**	**133**	LR		LR	12 37 32.3	
	comp=Z,48nm,18.7s,baz=24,slow=36							
TTA	**Tatalina**	**65.08**	**30**	P		**P**	**12 10 58.6**	**+0.4**
TTA					IAmb	IAmb	12 11 06.5	
	comp=Z,5.1nm,1.4s							
TOO	**Toolangi**	**65.09**	**160**	P		**P**	**12 11 00.7**	**+2.2**
ARCES	**ARCESS Array B**	**70.01**	**338**	P		**P**	**12 11 28.6**	**-0.6**
	comp=Z,3.1nm,1.0s,baz=75,slow=7.6,SNR=1.9							
BCAR	**Beaver Creek A**	**71.43**	**29**	P		**P**	**12 11 37.6**	**-0.4**
FINES	**FINESS Array B**	**72.04**	**330**	P		**P**	**12 11 41.2**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=64,slow=9.4,SNR=1.7							
FINES					LR	LR	12 46 58.4	
	comp=Z,117nm,19.0s,baz=190,slow=39							
INK	**Inuvik**	**72.93**	**22**	P		**P**	**12 11 45.9**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=281,slow=3.0,SNR=3.1							
INK	**Inuvik**	**72.93**	**22**	P		**P**	**12 11 46.7**	**-0.1**
INK					IAmb	IAmb	12 12 08.7	
	comp=Z,3.0nm,1.2s							
BRTR	**Keskin Array B**	**74.05**	**307**	P		**P**	**12 11 53.2**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=68,slow=3.9,SNR=3.0							
NOA	**NORSAR Array B**	**78.79**	**332**	LR		LR	12 50 52.6	
	comp=Z,75nm,20.1s,baz=350,slow=38							
YKA	**Yellowknife Ar**	**82.66**	**23**	P		**P**	**12 12 38.8**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=317,slow=5.0,SNR=6.4							

BEO 24 12:01:28.8±0.3, 43°22N×20°88E, h0km, ML1.7/12, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SELS	**Selova**	**0.18**	**88**	*e*Pg	Pg	12 01 32.1	-0.1
SELS				*e*Sg	Sg	12 01 34.4	-0.1
IVAS	**Ivanjica**	**0.64**	**305**	*e*Pg	Pg	12 01 39.9	-1.1
IVAS				*e*Sg	Sg	12 01 48.5	-0.8
GRUS	**Gruza**	**0.68**	**350**	*e*Pg	Pg	12 01 41.5	-0.4
GRUS				*e*Sg	Sg	12 01 50.8	0.0
BARS	**Barje**	**0.80**	**120**	*e*Pg	Pg	12 01 42.5	-1.6
BARS				*e*Sg	Sg	12 01 53.0	-1.4
TRUS	**Trudelj**	**1.06**	**342**	*e*Pg	Pg	12 01 48.1	-1.1
TRUS				*e*Sg	Sg	12 02 03.5	+0.5
SVIS	**Svilajnac**	**1.08**	**13**	*e*Pg	Pg	12 01 48.5	-1.0
SVIS				*e*Sg	Sg	12 02 03.7	+0.2
DIVS	**Divibare**	**1.09**	**324**	*e*Pg	Pg	12 01 48.5	-1.2
DIVS				*e*Sg	Sg	12 02 03.9	0.0
PRVS	**Prvonek**	**1.13**	**128**	*e*Pg	Pg	12 01 50.4	-0.1
PRVS				*e*Sg	Sg	12 02 05.4	+0.3
ZAGS	**Zajecar**	**1.15**	**58**	*e*Pg	Pg	12 01 49.2	-1.7
ZAGS				*e*Sg	Sg	12 02 05.0	-0.9
BBLS	**Lazići**	**1.25**	**302**	*e*Pg	Pg	12 01 50.6	-2.2
BBLS				*e*Sg	Sg	12 02 07.8	-1.2
ZAPS	**Zavoj**	**1.29**	**87**	*e*Pg	Pg	12 01 52.6	-0.8
ZAPS				*e*Sg	Sg	12 02 09.8	-0.3
KUBS	**Kucevo**	**1.33**	**26**	*e*Pg	Pg	12 01 52.9	-1.4
KUBS				*e*Sg	Sg	12 02 09.2	-2.3
BOSS	**Bosilegrad**	**1.38**	**121**	*e*Pg	Pg	12 01 53.7	-1.6
BOSS				*e*Sg	Sg	12 02 11.7	-1.5

BUC 24 12:02:16.1±0.8, 44°74N×21°84E, h9km±5km, ml1.1/2, 6C-10D, Error ellipse: s-maj=4.4km s-min=2.0km az=17.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDVR	**Moldovita**	**0.10**	**296**	⇑P	Pg	12 02 18.6	0.0
MDVR				⇑S	Sg	12 02 20.9	+0.3
MDVR	**Moldovita**	**0.10**	**296**	⇑P	Pg	12 02 18.6	0.0
MDVR				⇑S	Sg	12 02 20.9	+0.3
HERR	**Herculane**	**0.43**	**70**	⇓P	Pg	12 02 24.2	-0.3
HERR				⇓S	Sg	12 02 30.5	+0.2
HERR	**Herculane**	**0.43**	**70**	⇓P	Pg	12 02 24.2	-0.3
HERR				⇓S	Sg	12 02 30.5	+0.2
BZS	**Buzias**	**0.89**	**350**	⇓P	Pg	12 02 33.2	-0.1
BZS				⇓S	Sb	12 02 45.6	-0.2
BZS	**Buzias**	**0.89**	**350**	⇓P	Pg	12 02 33.2	-0.1
BZS				⇓S	Sb	12 02 45.6	-0.2
GZR	**Gura Zlata**	**0.93**	**45**	⇓P	Pb	12 02 34.7	+0.3
GZR				⇑S	Sb	12 02 47.3	+0.4
GZR	**Gura Zlata**	**0.93**	**45**	⇓P	Pb	12 02 34.7	+0.3
GZR				⇑S	Sb	12 02 47.3	+0.4

*KRNET **24** 12:02:48.3±0.1, 43°.19N×74°.33E, h23km, mb2.3*
*KNET **24** 12:02:48.2±0.4, 43°.17N×74°.35E, h18km±2km, ml1.4, Error ellipse: s-maj=3.1km s-min=2.7km az=128.0*
*SOME **24** 12:02:48.5, 43°.20N×74°.30E, h15km*
*NNC **24** 12:02:49.0±0.6, 43°.18N×74°.39E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=4.1km s-min=2.7km az=97.0*
ISC 24 12:02:47.8±1.0, 43°22N±0°02×74°31E±0°02, h16km±8km, n43, σ°80/82, 28C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	**0.14**	**72**	⇑*i*P	**Pb**	**12 02 52.8**	**+0.6**
	baz=60						
USP				⇑*i*S	**Sb**	**12 02 55.8**	**+0.7**
	baz=60						
USP	**Ospenovka**	**0.14**	**72**	P	**Pb**	**12 02 52.8**	**+0.6**
	6.5nm,0.1s,SNR=96						
USP				⇑S	**Sb**	**12 02 55.7**	**+0.7**
	96nm,0.1s						
SGDS	**Sogindy**	**0.32**	**45**	P	**Pb**	**12 02 55.8**	**+0.5**
	26nm,0.0s						
SGDS				S	**Sb**	**12 03 00.8**	**+0.4**
	40nm,0.1s						
CHMS	**Chumysh**	**0.39**	**125**	⇑*i*P	**Pg**	**12 02 55.9**	**0.0**
	baz=22						
CHMS				⇑*i*S	**Sg**	**12 03 01.2**	**-0.1**
	baz=22						
CHMS	**Chumysh**	**0.39**	**125**	⇑P	**Pg**	**12 02 55.9**	**0.0**
	4.6nm,0.1s,SNR=18						
CHMS				⇑S	**Sg**	**12 03 01.1**	**-0.1**
	35nm,0.1s						
FRU1	**Bishkek**	**0.47**	**151**	⇓*i*P	**Pg**	**12 02 57.2**	**-0.2**
	baz=49						
FRU1				⇓*i*S	**Sg**	**12 03 03.4**	**-0.4**
	baz=49						
AAK	**Ala-Archa**	**0.60**	**167**	⇑*i*P	**Pg**	**12 02 59.6**	**-0.2**
	baz=68						
AAK				⇑*i*S	**Sg**	**12 03 07.8**	**0.0**
	baz=68						
AAK	**Ala-Archa**	**0.60**	**167**	⇓P	**Pg**	**12 02 59.7**	**0.0**
	2.7nm,0.1s,SNR=11						
AAK				⇑S	**Sg**	**12 03 07.9**	**0.0**
	42nm,0.2s						
AAK	**Ala-Archa**	**0.60**	**167**	⇑P	**Pg**	**12 02 59.6**	**-0.2**
	0.3nm,0.2s						
AAK				⇑S	**Sg**	**12 03 07.8**	**0.0**
	7.5nm,0.3s						
EKS2	**Erkin-Say**	**0.69**	**215**	⇑*i*P	**Pg**	**12 03 01.3**	**0.0**
	baz=17						
EKS2				⇑*i*S	**Sg**	**12 03 10.7**	**+0.3**
	baz=17						
EKS2	**Erkin-Say**	**0.69**	**215**	⇓P	**Pb**	**12 03 01.4**	**-0.1**
	2.0nm,0.1s,SNR=14						
EKS2				⇑S	**Sb**	**12 03 11.0**	**+0.2**
	4.4nm,0.1s						
KBK	**Karagaybulak**	**0.73**	**140**	⇑*i*P	**Pg**	**12 03 02.0**	**-0.2**
	baz=39						
KBK				⇑*i*S	**Sg**	**12 03 11.8**	**-0.1**
	baz=39						
MRKS	**Merke**	**0.93**	**239**	*e*P	**Pg**	**12 03 05.7**	**-0.2**
	baz=41						
MRKS				*e*S	**Sb**	**12 03 18.0**	**+0.2**
	baz=41						
MRKS	**Merke**	**0.93**	**239**	*e*P	**Pg**	**12 03 05.7**	**-0.2**
	4.9nm,0.1s						
MRKS				*e*S	**Sb**	**12 03 18.0**	**+0.2**
	9.3nm,0.1s						
UCH	**Uchtor**	**1.01**	**172**	⇑*i*P	**Pb**	**12 03 06.7**	**-0.5**
	baz=72						
UCH				⇑*i*S	**Sg**	**12 03 20.1**	**-0.6**
	baz=72						
UCH	**Uchtor**	**1.01**	**172**	⇓P	**Pb**	**12 03 06.9**	**-0.3**
	2.5nm,0.2s,SNR=11						
UCH				⇑S	**Sg**	**12 03 19.8**	**-0.8**
	18nm,0.2s						
DGS	**Degeres**	**1.07**	**89**	*e*P	**Pb**	**12 03 08.1**	**+0.1**
	baz=87						
DGS				*e*S	**Sg**	**12 03 22.3**	**-0.2**
	baz=87						
DGS	**Degeres**	**1.07**	**89**	*e*P	**Pb**	**12 03 08.1**	**+0.1**
	2.7nm,0.2s						
DGS				*e*S	**Sg**	**12 03 22.2**	**-0.2**
	7.4nm,0.2s						
DGS	**Degeres**	**1.07**	**89**	P	**Pb**	**12 03 08.1**	**+0.1**
	2.7nm,0.2s						
DGS				S	**Sg**	**12 03 22.2**	**-0.2**
	7.4nm,0.2s						
KRBS	**Karabastau**	**1.10**	**64**	*e*P	**Pg**	**12 03 09.2**	**+0.1**
	baz=62						
KRBS				*e*S	**Sn**	**12 03 23.7**	**+0.2**
	baz=62						
KRBS	**Karabastau**	**1.10**	**64**	*e*P	**Pg**	**12 03 09.2**	**+0.1**
	1.6nm,0.1s						
KRBS				*e*S	**Sn**	**12 03 23.7**	**+0.2**
	4.9nm,0.1s						
KRBS	**Karabastau**	**1.10**	**64**	P	**Pg**	**12 03 09.1**	**+0.1**
	1.8nm,0.1s						
KRBS				S	**Sn**	**12 03 23.5**	**0.0**
	4.9nm,0.1s						
AML	**Almayashu**	**1.18**	**203**	⇑*i*P	**Pb**	**12 03 09.8**	**-0.3**
	baz=4.0						
AML				⇑*i*S	**Sb**	**12 03 25.5**	**+0.1**
	baz=4.0						
AML	**Almayashu**	**1.18**	**203**	⇓P	**Pb**	**12 03 10.1**	**-0.1**
	1.7nm,0.1s,SNR=12						
KST	**Kastek**	**1.22**	**98**	*e*P	**Pb**	**12 03 10.8**	**+0.2**
	baz=97						
KST				*e*S	**Sn**	**12 03 27.0**	**+0.4**
	baz=97						
KST	**Kastek**	**1.22**	**98**	*e*P	**Pb**	**12 03 10.8**	**+0.2**
	2.6nm,0.2s						
KST				*e*S	**Sn**	**12 03 27.0**	**+0.4**
	5.0nm,0.4s						
KST	**Kastek**	**1.22**	**98**	P	**Pn**	**12 03 10.5**	**+0.1**
	2.6nm,0.2s						
KST				S	**Sn**	**12 03 27.0**	**+0.4**
	5.0nm,0.4s						
BOOM	**Boomskoye usch**	**1.40**	**121**	⇑*i*P	**Pb**	**12 03 13.5**	**-0.2**
	baz=20						
BOOM				⇑*i*S	**Sb**	**12 03 31.7**	**+0.2**
	baz=20						
MNAS	**Manas**	**1.52**	**242**	⇑*i*P	**Pb**	**12 03 15.8**	**+0.1**
	baz=43						
MNAS				⇑*i*S	**Sb**	**12 03 35.7**	**+0.9**
	baz=43						
ULHL	**Ulahol**	**1.72**	**124**	⇑*i*P	**Pb**	**12 03 18.7**	**-0.6**
	baz=23						
ULHL				⇑*i*S	**Sb**	**12 03 40.9**	**+0.1**
	baz=23						
KTBS	**Karatobe**	**1.79**	**73**	*e*P	**Pb**	**12 03 20.8**	**+0.5**
	baz=72						
KTBS				*e*S	**Sg**	**12 03 44.2**	**-1.4**
	baz=72						
KTBS	**Karatobe**	**1.79**	**73**	*e*P	**Pb**	**12 03 20.8**	**+0.5**
	1.9nm,0.2s						
KTBS				*e*S	**Sg**	**12 03 44.2**	**-1.4**
	11nm,0.3s						
KTBS	**Karatobe**	**1.79**	**73**	P	**Pb**	**12 03 20.7**	**+0.3**
	1.9nm,0.2s						
KTBS				S	**Sg**	**12 03 44.2**	**-1.4**
	11nm,0.3s						
BTLS	**Baital**	**1.83**	**354**	*e*P	**Pg**	**12 03 22.4**	**-0.6**
	1.2nm,0.3s						
BTLS				*e*S	**Sg**	**12 03 46.5**	**-0.2**
	7.6nm,0.3s						
BTLS	**Baital**	**1.83**	**354**	P	**Pg**	**12 03 22.4**	**-0.6**
	1.2nm,0.3s						
BTLS				S	**Sg**	**12 03 46.5**	**-0.2**
	7.6nm,0.3s						
TNSS	**Tian-Shan**	**1.94**	**95**	*e*P	**Pb**	**12 03 23.8**	**+0.8**
	0.9nm,0.2s						
TNSS				*e*S	**Sg**	**12 03 48.9**	**-1.3**
	3.1nm,0.4s						
TNSS	**Tian-Shan**	**1.94**	**95**	P	**Pb**	**12 03 23.8**	**+0.8**
	0.9nm,0.2s						
TNSS				S	**Sg**	**12 03 48.9**	**-1.3**
	3.1nm,0.4s						
KOTS	**Kotyrbulak**	**2.04**	**89**	*e*P	**Pb**	**12 03 25.4**	**+0.7**
	3.5nm,0.4s						
KOTS				*e*S	**Sb**	**12 03 51.7**	**+1.8**
	5.0nm,0.3s						
KOTS	**Kotyrbulak**	**2.04**	**89**	Pg	**Pb**	**12 03 25.4**	**+0.7**
	3.5nm,0.4s						
KOTS				Lg	Lg	12 03 51.7	
	5.0nm,0.3s						
ARXS	**Arharly**	**2.73**	**68**	*e*P	**Pg**	**12 03 38.5**	**-1.7**
	2.1nm,0.4s						
ARXS				*e*S	**Sg**	**12 04 14.1**	**-1.5**
	5.6nm,0.2s						
ARXS	**Arharly**	**2.73**	**68**	Pg	**Pg**	**12 03 38.5**	**-1.7**
	2.1nm,0.4s						
ARXS				Lg	Lg	12 04 14.1	
	5.6nm,0.2s						
UZB	**Uzynbulak**	**3.44**	**90**	*e*P	**Pb**	**12 03 50.6**	**+2.1**
	2.1nm,0.3s						
UZB				*e*S	**Sg**	**12 04 35.1**	**-3.4**
	1.1nm,0.2s						
UZB	**Uzynbulak**	**3.44**	**90**	Pg	**Pb**	**12 03 50.6**	**+2.1**
	2.1nm,0.3s						
UZB				Lg	Lg	12 04 35.1	
	1.1nm,0.2s						

IDC 24 12:21:07.4±2.9, 16°98S×71°11W, h133km±26km, mb3.0/2, mb1 3.3/5, mb1mx3.1/27, mbtmpg3.6/5, Error ellipse: s-maj=34.0km s-min=16.9km az=111.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.94**	**77**	P	Pn	12 21 55.0	+1.0
	30nm,0.3s,baz=263,slow=11,SNR=608						
LPAZ				S	Sn	12 22 30.1	+0.3
	1.6nm,0.3s,baz=80,slow=10.0,SNR=4.1						
LVC	**Limon Verde**	**5.97**	**160**	P	Pn	12 22 35.0	+1.1
	0.9nm,0.3s,baz=340,slow=11,SNR=20						
LVC				S	Sn	12 23 40.9	-0.5
	2.4nm,0.3s,baz=256,slow=23,SNR=11						
SIV	**San Ignacio**	**9.68**	**86**	P	Pn	12 23 22.8	-0.8
	0.4nm,0.3s,baz=282,slow=16,SNR=2.9						
TXAR	**Lajitas Array**	**55.75**	**325**	P	P	12 30 30.1	-0.6
	0.1nm,0.5s,baz=150,slow=9.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**77.88**	**72**	P	P	12 32 51.4	+0.3
	0.4nm,0.4s,baz=263,slow=4.8,SNR=6.7						

*TUL **24** 12:32:57.9±1.0, 35°.59N±0°.02×97°.37W±0°.03, h7km±4km, ML3.6, mb_Lg3.3/89(NEIC), Error ellipse: s-maj=3.4km s-min=2.6km az=134.0*
*IASPEI **24** 12:32:58.0±1.0, 35°.60N±0°.03×97°.37W±0°.03, h9km±7km, Error ellipse: s-maj=4.6km s-min=4.0km az=108.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*NEIC **24** 12:32:58.3±1.1, 35°.62N±0°.02×97°.40W±0°.03, h5km±1km, Error ellipse: s-maj=4.5km s-min=2.9km az=124.0*
*ANF **24** 12:32:58.0±0.7, 35°.60N×97°.40W, h7km±4km, ML3.9/16, Error ellipse: s-maj=3.7km s-min=3.5km az=126.0*
ISC 24 12:32:58.1±0.8, 35°.60N±0°.02×97°.39W±0°.02, h9km±6km, n96, σ°49/75, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK009	**Oakdale Elemen**	**0.04**	**237**		**Pg**	**12 32 59.5**	**-0.3**
OK025	**Westminster Rd**	**0.04**	**118**		**Pg**	**12 32 59.5**	**-0.4**
OK001	**Jones High Sch**	**0.09**	**117**	Pg	**Pg**	**12 33 00.2**	**-0.2**
BCOK	**Bluff Creek, N**	**0.19**	**287**		**Pg**	**12 33 02.4**	**+0.3**
BCOK				Sg	**Sg**	**12 33 05.7**	**+0.9**
OKCFA	**Oklahoma City**	**0.19**	**196**		**Pg**	**12 33 02.0**	**-0.1**
OKCFA				Sg	**Sg**	**12 33 05.2**	**+0.3**
OKCFA	**Oklahoma City**	**0.19**	**196**	P	**Pg**	**12 33 02.0**	**-0.1**
	baz=16,SNR=216						
OKCFA				S	**Sg**	**12 33 05.1**	**+0.3**
	baz=16						
OKCFA	**Oklahoma City**	**0.19**	**196**	P		12 33 02.0	
	baz=16,SNR=216						
OKCFA				S		12 33 05.1	
	baz=16						
OKCSW	**OKLAHOMA CITY**	**0.20**	**193**		**Pg**	**12 33 02.1**	**-0.1**
OKCSW				Sg	**Sg**	**12 33 05.3**	**+0.3**
OK029	**Liberty Lake**	**0.20**	**344**		**Pg**	**12 33 02.7**	**+0.4**
OK029				Sg	**Sg**	**12 33 06.2**	**+1.1**
FNO	**Franklin**	**0.34**	**182**		**Pg**	**12 33 05.5**	**+0.5**
OK031	**S. Brethren Rd**	**0.57**	**51**		**Pg**	**12 33 08.9**	**-0.2**
OK031				Sg	**Sg**	**12 33 17.0**	**+0.5**
OK030	**Cody Creek RV**	**0.59**	**56**		**Pg**	**12 33 09.2**	**-0.3**
QUOK	**Quay**	**0.79**	**44**		**Pg**	**12 33 12.8**	**-0.5**
QUOK				Sg	**Sg**	**12 33 24.0**	**+0.3**
CROK	**Carrier**	**1.02**	**332**		**Pg**	**12 33 17.5**	**-0.3**
CROK				Sg	**Sb**	**12 33 31.5**	**-0.2**
GC02	**Grant County #**	**1.30**	**343**		**Pn**	**12 33 22.6**	**-0.1**
GC02				Sg	**Sg**	**12 33 40.0**	**-0.2**
TUL1	**Leonard**	**1.33**	**76**	P	**Pn**	**12 33 21.6**	**-1.4**
	baz=258,SNR=46						
TUL1				S	**Sb**	**12 33 40.2**	**-0.4**
	baz=258						
TUL1	**Leonard**	**1.33**	**76**	P		12 33 21.6	
	baz=258,SNR=46						
TUL1				S		12 33 40.2	
	baz=258						
OK032	**Salt Plains WL**	**1.37**	**331**		**Pn**	**12 33 23.4**	**-0.2**
OK032				Sn	**Sn**	**12 33 42.0**	**+0.1**
KAN13	**South Haven SW**	**1.41**	**357**	Pn	**Pn**	**12 33 24.3**	**+0.2**
KAN14	**Manchester OK**	**1.43**	**341**		**Pn**	**12 33 24.4**	**+0.2**
WMOK	**Wichita Mounta**	**1.43**	**233**	Pn	**Pn**	**12 33 23.6**	**-0.7**
WMOK	**Wichita Mounta**	**1.43**	**233**	P	**Pn**	**12 33 23.7**	**-0.7**
	baz=52,SNR=314						
WMOK				S	**Sb**	**12 33 42.9**	**-0.5**
	baz=52						
WMOK	**Wichita Mounta**	**1.43**	**233**	P		12 33 23.7	
	baz=52,SNR=314						
WMOK				S		12 33 42.9	
	baz=52						
KAN17	**Caldwell West**	**1.47**	**348**		**Pn**	**12 33 25.3**	**+0.4**
T35A	**Sooner Cattle**	**1.49**	**28**	Pn	**Pn**	**12 33 24.8**	**-0.3**
T35B	**Sooner Cattle**	**1.49**	**28**	P	**Pn**	**12 33 25.0**	**-0.2**
	baz=209						
T35B				S	**Sb**	**12 33 45.6**	**+0.5**
	baz=209						
T35B	**Sooner Cattle**	**1.49**	**28**	P		12 33 25.0	
	baz=209						
T35B				S		12 33 45.6	
	baz=209						
U32A	**Winter Ranch,**	**1.52**	**301**		**Pn**	**12 33 25.9**	**+0.2**
U32A	**Winter Ranch,**	**1.52**	**301**	P	**Pn**	**12 33 25.8**	**+0.2**
	baz=120						
U32A				S	**Sg**	**12 33 47.0**	**-0.1**
	baz=120						
U32A	**Winter Ranch,**	**1.52**	**301**	P		12 33 25.8	
	baz=120						
U32A				S		12 33 47.0	
	baz=120						
KAN09	**Caldwell North**	**1.54**	**353**	Pn	**Pb**	**12 33 26.7**	**-0.3**
KAN05	**Bluff City Nor**	**1.56**	**345**	Pn	**Pb**	**12 33 26.6**	**-0.5**
KAN01	**Argonia South**	**1.58**	**349**		**Pn**	**12 33 26.8**	**+0.4**
KAN10	**Anthony SW Sta**	**1.62**	**340**	Pn	**Pn**	**12 33 27.3**	**+0.3**
KS20	**Mayfield South**	**1.63**	**355**	Pn	**Pb**	**12 33 28.1**	**-0.3**
KAN08	**Anthony NE Sta**	**1.69**	**344**		**Pb**	**12 33 28.7**	**-0.7**
KS21	**Milan North St**	**1.70**	**352**	IAmb_Lg		12 33 54.7	
	comp=Z,99nm,0.8s						
KAN16	**Harper SW Stat**	**1.71**	**342**		**Pb**	**12 33 29.2**	**-0.6**
KAN12	**Harper NE Stat**	**1.76**	**344**		**Pb**	**12 33 30.1**	**-0.6**
X37A	**Clayton**	**1.94**	**121**		**Pn**	**12 33 31.7**	**+0.4**
X37A				IAmb_Lg		12 34 02.9	
	comp=Z,147nm,0.9s						
X37A	**Clayton**	**1.94**	**121**	P	**Pn**	**12 33 31.5**	**+0.2**
	baz=303,SNR=281						
X37A				S	**Sb**	**12 33 57.8**	**-0.1**
	baz=303						
X37A	**Clayton**	**1.94**	**121**	P		12 33 31.5	
	baz=303,SNR=281						
X37A				S		12 33 57.8	
	baz=303						
Z35A	**Perchaven, San**	**2.27**	**177**		**Pn**	**12 33 36.8**	**+0.9**
Z35A	**Perchaven, San**	**2.27**	**177**	P	**Pn**	**12 33 36.6**	**+0.8**
	baz=357,SNR=21						
Z35A				S	**Sb**	**12 34 06.6**	**-0.9**
	baz=357						
Z35A	**Perchaven, San**	**2.27**	**177**	P		12 33 36.6	
	baz=357,SNR=21						
Z35A				S		12 34 06.6	
	baz=357						
U38A	**Gravette**	**2.57**	**70**		**Pn**	**12 33 40.9**	**+0.9**
U38A	**Gravette**	**2.57**	**70**	S	**Sb**	**12 34 16.3**	**+0.1**
	baz=252						
U38A	**Gravette**	**2.57**	**70**	S		12 34 16.3	
	baz=252						
W39A	**Magazine**	**2.97**	**97**		**Pn**	**12 33 45.6**	**+0.1**
W39A				IAmb_Lg		12 34 39.

S39A				IAmb_Lg			12 35 05.2	
	comp=Z,46nm,0.7s							
S39A	**Bolivar**	**3.88**	**56**	P		**Pn**	**12 33 57.9**	**0.0**
	baz=239							
S39A	**Bolivar**	**3.88**	**56**	P			12 33 57.9	
	baz=239							
X40A	**Basin Creek Fa**	**3.90**	**105**	Pn		**Pn**	**12 33 58.8**	**+0.6**
X40A				IAmb_Lg			12 35 06.2	
	comp=Z,74nm,0.9s							
WHAR	**Wooly Hollow**	**4.17**	**93**			**Pn**	**12 34 02.1**	**+0.1**
WHAR				IAmb_Lg			12 35 09.3	
	comp=Z,34nm,0.8s							
W41B	**Gary Mavity, V**	**4.22**	**94**	P		**Pn**	**12 34 02.9**	**+0.2**
	baz=278,SNR=12							
W41B	**Gary Mavity, V**	**4.22**	**94**	P			12 34 02.9	
	baz=278,SNR=12							
FCAR	**Ozark Folk Cen**	**4.29**	**85**	IAmb_Lg			12 35 21.8	
	comp=Z,42nm,0.8s							
MGMO	**Mountain Grove**	**4.41**	**68**	IAmb_Lg			12 35 19.6	
	comp=Z,101nm,0.7s							
MSTX	**Muleshoe**	**4.72**	**251**	IAmb_Lg			12 35 32.6	
	comp=Z,36nm,0.8s							
435B	**Jarrell**	**4.81**	**182**	IAmb_Lg			12 35 35.8	
	comp=Z,54nm,0.7s							
R40A	**Maddies Statio**	**4.90**	**55**	IAmb_Lg			12 35 34.8	
	comp=Z,49nm,0.7s							
CCAR	**Cane Creek**	**4.92**	**108**	IAmb_Lg			12 35 45.2	
	comp=Z,44nm,1.1s							
P38A	**Dawn**	**5.05**	**36**	IAmb_Lg			12 35 42.1	
	comp=Z,33nm,0.8s							
LCAR	**Lake Charles**	**5.08**	**83**	IAmb_Lg			12 35 41.0	
	comp=Z,33nm,0.9s							
N33A	**J Bar K, Exete**	**5.13**	**359**	IAmb_Lg			12 35 47.7	
	comp=Z,42nm,0.8s							
N35A	**Tabor**	**5.43**	**14**	IAmb_Lg			12 36 00.7	
	comp=Z,78nm,0.7s							
JCT	**Junction City**	**5.50**	**202**	IAmb_Lg			12 36 03.5	
	comp=Z,41nm,0.8s							
CCM	**Cathedral Cave**	**5.50**	**62**	IAmb_Lg			12 36 02.2	
	comp=Z,45nm,0.7s							
LPAR	**Lepanto**	**5.77**	**88**	IAmb_Lg			12 36 12.9	
	comp=Z,68nm,0.7s							
T25A	**Trinidad**	**5.87**	**287**	IAmb_Lg			12 36 20.5	
	comp=Z,36nm,0.9s							
FVM	**French Village**	**6.07**	**65**	IAmb_Lg			12 36 18.2	
	comp=Z,35nm,0.8s							
N38A	**Joes South For**	**6.13**	**31**	IAmb_Lg			12 36 15.3	
	comp=Z,44nm,0.7s							
SLM	**Saint Louis**	**6.46**	**60**	IAmb_Lg			12 36 22.8	
	comp=Z,64nm,1.2s							
OGNE	**Ogallala**	**6.47**	**327**	IAmb_Lg			12 36 35.8	
	comp=Z,63nm,0.8s							
OXF	**Oxford**	**6.63**	**97**	IAmb_Lg			12 36 32.9	
	comp=Z,20nm,0.8s							
SCIA	**State Center**	**7.09**	**26**	IAmb_Lg			12 36 46.4	
	comp=Z,39nm,0.9s							
K31A	**O'Neill**	**7.09**	**352**	IAmb_Lg			12 36 50.0	
	comp=Z,56nm,0.7s							
K38A	**Parkersburg**	**7.89**	**26**	IAmb_Lg			12 37 14.5	
	comp=Z,35nm,1.1s							
L40A	**Anamosa**	**8.04**	**35**	IAmb_Lg			12 37 31.7	
	comp=Z,16nm,0.7s							
ECSD	**EROS Data Cent**	**8.14**	**4**	IAmb_Lg			12 37 21.6	
	comp=Z,14nm,1.1s							
USIN	**University of**	**8.15**	**70**	IAmb_Lg			12 37 25.2	
	comp=Z,34nm,0.8s							
O44A	**Mansfield**	**8.39**	**55**	IAmb_Lg			12 37 23.7	
	comp=Z,45nm,1.0s							
PHWY	**Pilot Hill**	**8.51**	**314**	IAmb_Lg			12 37 33.4	
	comp=Z,15nm,0.9s							
L42A	**Oliver, Polo**	**8.78**	**41**	IAmb_Lg			12 37 41.0	
	comp=Z,28nm,0.9s							
SUSD	**Miller**	**8.91**	**353**	IAmb_Lg			12 37 51.0	
	comp=Z,36nm,0.8s							
121A	**Cookes Peak, D**	**9.15**	**253**	IAmb_Lg			12 37 52.7	
	comp=Z,13nm,1.0s							
JFWS	**Jewell Farm**	**9.16**	**35**	IAmb_Lg			12 38 04.6	
	comp=Z,18nm,0.7s							
WCI	**Wyandotte Cave**	**9.26**	**70**	IAmb_Lg			12 37 56.3	
	comp=Z,30nm,0.8s							
BLO	**Bloomington**	**9.35**	**64**	IAmb_Lg			12 38 00.7	
	comp=Z,39nm,0.8s							
SFIN	**Lafayette**	**9.42**	**57**	IAmb_Lg			12 37 56.4	
	comp=Z,24nm,0.8s							
L44A	**Lake County Fo**	**9.88**	**45**	IAmb_Lg			12 38 21.3	
	comp=Z,39nm,1.1s							
RSSD	**Black Hills**	**9.92**	**331**	IAmb_Lg			12 38 33.1	
	comp=Z,11nm,0.8s							
K43A	**Burlington**	**9.98**	**42**	IAmb_Lg			12 38 26.3	
	comp=Z,26nm,1.0s							

TAP ***24*** *12:33:58.4,23.˙74N×121.˙52E,h7km,ML3.2,C*
JMA ***24*** *12:33:58.1±0.1,23.˙72N×121.˙50E,h4km,M2.7*
ISC 24 12:33:58.3±0.9,23.˙72N±0.˙01×121.˙53E±0.˙02,h8km±6km,
n89,σ0s98/143,1C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGFH	**Guangfu**	**0.11**	**241**	⇓*i* P		**Pg**	**12 34 01.0**	**+0.1**
	baz=239							
EGFH				S		**Sg**	**12 34 02.7**	**+0.1**
	baz=239							
ESL	**Shilin**	**0.13**	**315**	⇓*i* P		**Pg**	**12 34 01.1**	**-0.1**
	baz=314							
ESL				S		**Sg**	**12 34 02.7**	**-0.4**
	baz=314							
HGSD	**Ruisui**	**0.25**	**204**	P		**Pg**	**12 34 04.6**	**+1.3**
	baz=203							
HWA	**Hwalien**	**0.26**	**15**	*e*P		**Pb**	**12 34 04.8**	**-0.6**
	baz=7.0							
HWA				*e*S		**Sb**	**12 34 11.3**	**+1.3**
	baz=7.0							
TWD	**Chiawan**	**0.36**	**9**	⇓*i* P		**Pg**	**12 34 05.8**	**+0.4**
	baz=358							
TWD				S		**Sg**	**12 34 10.9**	**+0.7**
	baz=358							
VWDT	**VWDT**	**0.36**	**275**	⇓*i* P		**Pb**	**12 34 05.8**	**-1.2**
	baz=272							
VWDT				*e*S		**Sb**	**12 34 11.3**	**-1.5**
	baz=272							
YULB	**Yu-li**	**0.39**	**213**	⇓*i* P		**Pg**	**12 34 06.2**	**+0.2**
	baz=223							
YULB				S		**Sb**	**12 34 12.5**	**-1.3**
	baz=223							
OWD	**Renai**	**0.40**	**305**	⇓*i* P		**Pg**	**12 34 06.4**	**+0.2**
	baz=303							
OWD				S		**Sg**	**12 34 11.8**	**+0.3**
	baz=303							
EYUL	**Yuli**	**0.42**	**208**	*e*P		**Pb**	**12 34 07.8**	**-0.3**
	baz=217							
TWF1	**Yuli**	**0.43**	**210**	P		**Pg**	**12 34 06.9**	**+0.3**
	baz=221							
TWF1				S		**Sg**	**12 34 13.3**	**+1.0**
	baz=221							
NACB	**Ninganchiao**	**0.45**	**7**	*i* P		**Pg**	**12 34 07.2**	**+0.1**
	baz=356							
NACB				S		**Sg**	**12 34 13.4**	**+0.3**
	baz=356							
CHGB	**Renai**	**0.47**	**316**	⇓*i* P		**Pg**	**12 34 07.8**	**+0.3**
	baz=313							
CHGB				S		**Sb**	**12 34 14.5**	**-1.7**
	baz=313							
ETLH	**Xiulin Townshi**	**0.48**	**354**	P		**Pg**	**12 34 07.8**	**0.0**
	baz=355							
WHF	**Hehuan Shan**	**0.49**	**330**	⇓*i* P		**Pg**	**12 34 07.9**	**+0.1**
	baz=316							
WHF				S		**Sg**	**12 34 14.0**	**-0.4**
	baz=316							
SSLB	**Suanglung**	**0.54**	**277**	⇓*i* P		**Pg**	**12 34 08.9**	**+0.2**
	baz=275							
SSLB				S		**Sg**	**12 34 15.6**	**-0.1**
	baz=275							
FULB	**Fuli**	**0.57**	**203**	P		**Pb**	**12 34 11.3**	**+0.8**
	baz=218							
YUS	**Yu-Shan**	**0.58**	**247**	⇓*i* P		**Pb**	**12 34 10.0**	**-1.0**
	baz=255							
YUS				S		**Sb**	**12 34 18.2**	**-1.5**
	baz=255							
FUSS	**Fushou**	**0.59**	**333**	P		**Pg**	**12 34 10.0**	**+0.3**
	baz=330							
FUSS				*e*S		**Sb**	**12 34 18.3**	**-1.3**
	baz=330							
WPL	**Puli Township**	**0.60**	**299**	P		**Pb**	**12 34 10.4**	**-0.7**
	baz=297							
WPL				*e*S		**Sb**	**12 34 18.3**	**-1.5**
	baz=297							
SMLT	**Sun Moon Lake**	**0.60**	**286**	⇓*i* P		**Pb**	**12 34 10.3**	**-0.9**
	baz=284							
SMLT				S		**Sb**	**12 34 18.9**	**-1.1**
	baz=284							
TWT	**Tachien**	**0.62**	**328**	P		**Pb**	**12 34 10.9**	**-0.7**
	baz=325							
TWT				*e*S		**Sg**	**12 34 18.6**	**+0.1**
	baz=325							
TDCB	**Techi**	**0.63**	**327**	⇓*i* P		**Pb**	**12 34 10.9**	**-0.8**
	baz=318							
TDCB				*e*S		**Sg**	**12 34 18.0**	**-0.8**
	baz=318							
DPDB	**Guoxing**	**0.64**	**299**	*e*P		**Pb**	**12 34 11.2**	**-0.6**
	baz=298							
CHKT	**Chengkung**	**0.64**	**194**	P		**Pb**	**12 34 12.0**	**+0.2**
	baz=195							
CHKT				*e*S		**Sn**	**12 34 22.9**	**-1.2**
	baz=195							
TYC	**Yuchr**	**0.65**	**286**	⇓*i* P		**Pb**	**12 34 10.9**	**-0.9**
	baz=285							
TYC				*e*S		**Sb**	**12 34 20.9**	**-0.1**
	baz=285							
ALS	**Alishan**	**0.70**	**253**	*i* P		**Pb**	**12 34 12.5**	**-0.5**
	baz=251							
ALS				*e*S		**Sb**	**12 34 21.7**	**-1.2**
	baz=251							
ELDTW	**Lidau**	**0.71**	**222**	⇑*i* P		**Pg**	**12 34 11.9**	**-0.2**
	baz=222							
ELDTW				*e*S		**Sg**	**12 34 20.7**	**-0.7**
	baz=222							
NNSB	**Datong**	**0.72**	**349**	⇓*i* P		**Pg**	**12 34 12.4**	**+0.2**
	baz=347							
NNSB				S		**Sg**	**12 34 21.4**	**-0.1**
	baz=347							
NNSH	**Datong**	**0.72**	**349**	P		**Pg**	**12 34 12.3**	**+0.2**
	baz=340							
NNSH				*e*S		**Sg**	**12 34 21.8**	**+0.3**
	baz=340							
NNS	**Nan Shan**	**0.73**	**348**	⇓*i* P		**Pg**	**12 34 12.6**	**+0.2**
	baz=347							
NNS				S		**Sg**	**12 34 22.3**	**+0.4**
	baz=347							
WJS	**Zhushan**	**0.74**	**278**	*e*P		**Pn**	**12 34 14.3**	**-0.9**
	baz=282							
WJS				*e*S		**Sn**	**12 34 26.6**	**-0.1**
	baz=282							
EWUT	**Wuta**	**0.75**	**17**	*e*P		**Pg**	**12 34 12.7**	**-0.1**
	baz=5.0							
EWUT				*e*S		**Sb**	**12 34 23.9**	**-0.2**
	baz=5.0							
WHP	**Taichung City**	**0.77**	**316**	*e*P		**Pb**	**12 34 13.7**	**-0.4**
	baz=315							
EDH	**Donghe**	**0.78**	**196**	P		**Pb**	**12 34 14.3**	**+0.2**
	baz=184							
EDH				S		**Sn**	**12 34 27.1**	**-0.4**
	baz=184							
WNT	**Mingjian**	**0.79**	**281**	*e*P		**Pn**	**12 34 15.2**	**-0.6**
	baz=286							
WNT				*e*S		**Sn**	**12 34 26.4**	**-1.5**
	baz=286							
CHN5	**Tsauling**	**0.79**	**261**	⇓*i* P		**Pb**	**12 34 14.7**	**+0.2**
	baz=253							
CHN5				S		**Sn**	**12 34 27.9**	**-0.2**
	baz=253							
NDT	**Datong Townshi**	**0.88**	**359**	*e*P		**Pg**	**12 34 15.3**	**+0.1**
	baz=359							
STYH	**Taoyuan**	**0.89**	**232**	*e*P		**Pb**	**12 34 15.5**	**-0.5**
	baz=235							
TCU	**Taichung**	**0.89**	**299**	*e*P		**Pn**	**12 34 17.4**	**+0.2**
	baz=297							
LONT	**Longtian**	**0.89**	**205**	*e*P		**Pb**	**12 34 15.9**	**-0.2**
	baz=217							
STYT	**Tauyuan**	**0.91**	**232**	P		**Pb**	**12 34 15.8**	**-0.5**
	baz=227							
STYT				*e*S		**Sn**	**12 34 29.6**	**-1.1**
	baz=227							
WDLH	**Douliu**	**0.91**	**268**	*e*P		**Pn**	**12 34 17.4**	**-0.1**
	baz=267							
WDLH				*e*S		**Sn**	**12 34 31.4**	**+0.6**
	baz=267							
ENTT	**Nioudou**	**0.91**	**2**	*e*P		**Pg**	**12 34 16.1**	**+0.2**
	baz=2.0							
NDS	**Dongshan**	**0.92**	**10**	P		**Pb**	**12 34 16.3**	**-0.3**
	baz=8.0							
NDS				S		**Sb**	**12 34 28.8**	**-0.3**
	baz=8.0							
TWC	**Suao**	**0.93**	**18**	*e*P		**Pg**	**12 34 16.4**	**+0.2**
	baz=7.0							
TWC				*e*S		**Sb**	**12 34 30.0**	**+0.7**
	baz=7.0							
TPUB	**Ta-pu**	**0.93**	**243**	P		**Pb**	**12 34 16.9**	**+0.1**
	baz=251							
TPUB				S		**Sb**	**12 34 29.6**	**+0.3**
	baz=251							
TWQ1	**Liyutan**	**0.93**	**312**	P		**Pn**	**12 34 18.2**	**+0.4**
	baz=311							
CHN4	**Tsaushan**	**0.94**	**247**	*i* P		**Pn**	**12 34 17.6**	**-0.2**
	baz=247							
CHN4				S		**Sn**	**12 34 32.3**	**+0.8**
	baz=247							
YHNB	**Yeheng**	**0.95**	**351**	P		**Pg**	**12 34 16.8**	**+0.1**
	baz=338							
YHNB				S		**Sg**	**12 34 28.4**	**-0.7**
	baz=338							
NSK	**Sanguang**	**0.96**	**350**	⇓*i* P		**Pb**	**12 34 17.1**	**-0.2**
	baz=338							
NSK				S		**Sg**	**12 34 28.6**	**-0.7**
	baz=338							
WTP	**Ta-pu**	**0.97**	**241**	P		**Pb**	**12 34 17.7**	**+0.2**
	baz=249							
WTP				S		**Sb**	**12 34 30.8**	**+0.4**
	baz=249							
NSY	**Sanyi**	**0.99**	**315**	*e*P		**Pn**	**12 34 19.4**	**+0.9**
	baz=314							
TWG	**Pinlang**	**0.99**	**205**	*e*P		**Pb**	**12 34 17.8**	**0.0**
	baz=204							
TWGBT	**Beinan**	**0.99**	**205**	*e*P		**Pg**	**12 34 16.4**	**-1.0**
	baz=204							
WDJ	**Dajia District**	**1.03**	**307**	*e*P		**Pn**	**12 34 19.8**	**+0.7**
	baz=304							
WDJ				*e*S		**Sn**	**12 34 36.1**	**+2.4**
	baz=304							
NSTT	**Nanjuang**	**1.03**	**332**	*e*P		**Pn**	**12 34 18.9**	**-0.1**
	baz=331							
LIOB	**Emei**	**1.03**	**333**	*e*P		**Pn**	**12 34 19.4**	**+0.2**
	baz=332							
CHY	**Chiayi**	**1.04**	**258**	*e*P		**Pn**	**12 34 19.6**	**+0.4**
	baz=258							
CHY				*e*S		**Sn**	**12 34 35.5**	**+1.4**
	baz=258							
LDUT	**Ludao**	**1.05**	**183**	*e*P		**Pg**	**12 34 17.5**	**-0.9**
	baz=170							
NWLT	**Wulai**	**1.05**	**358**	*e*P		**Pb**	**12 34 18.9**	**0.0**
	baz=358							
NMLH	**Miaoli**	**1.06**	**320**	*e*P		**Pn**	**12 34 20.1**	**+0.6**
	baz=324							
NMLH				*e*S		**Sn**	**12 34 36.2**	**+1.7**
	baz=324							
CHN1	**Nanshi**	**1.07**	**240**	P		**Pn**	**12 34 19.8**	**+0.1**
	baz=238							
SGST	**Jiashian**	**1.08**	**234**	P		**Pb**	**12 34 19.1**	**-0.2**
	baz=235							
SGST				S		**Sn**	**12 34 36.0**	**+0.9**
	baz=235							
SLGT	**Liugui**	**1.09**	**228**	*e*P		**Pb**	**12 34 19.6**	**+0.1**
	baz=226							
SLGT				*e*S		**Sn**	**12 34 36.0**	**+0.7**
	baz=226							
WSF	**Szhu**	**1.21**	**266**	*e*P		**Pn**	**12 34 22.3**	**+0.7**
	baz=265							
WSF				*e*S		**Sn**	**12 34 39.6**	**+1.5**
	baz=265							
ICHU	**Yijhu**	**1.21**	**253**	*e*P		**Pn**	**12 34 22.2**	**+0.7**
	baz=254							
ICHU				*e*S		**Sn**	**12 34 39.5**	**+1.4**
	baz=254							
ECL	**Taimali**	**1.24**	**206**	*e*P		**Pg**	**12 34 21.3**	**-0.8**
	baz=188							
CHN3	**Shinhua**	**1.25**	**239**	*e*P		**Pg**	**12 34 21.1**	**-1.2**
	baz=238							
TWA	**Mucha**	**1.25**	**2**	*e*P		**Pn**	**12 34 23.7**	**+1.5**
	baz=2.0							
SCST	**Cishan**	**1.27**	**229**	*e*P		**Pn**	**12 34 24.3**	**+1.9**
	baz=233							
SCST				*e*S		**Sn**	**12 34 44.3**	**+4.7**
	baz=233							
CHN8	**Yiju**	**1.27**	**253**	*e*P		**Pn**	**12 34 22.6**	**+0.2**
	baz=255							
CHN8				*e*S		**Sn**	**12 34 42.0**	**+2.4**
	baz=255							
TIPB	**Shuangxi**	**1.27**	**12**	*e*P		**Pb**	**12 34 22.9**	**+0.3**
	baz=11							
SSD	**Sandimen**	**1.28**	**221**	*e*P		**Pb**	**12 34 23.5**	**+0.8**
	baz=211							
TSMG	**Majia**	**1.30**	**219**	*e*P		**Pg**	**12 34 23.6**	**+0.3**
	baz=217							
TSMG				*e*S		**Sn**	**12 34 42.9**	**+2.4**
	baz=217							
TWM1	**Shoushan**	**1.36**	**229**	*e*P		**Pg**	**12 34 25.7**	**+1.3**
	baz=228							
WFSB	**Wu-fen Shan**	**1.36**	**10**	*e*P		**Pn**	**12 34 22.1**	**-1.6**
	baz=8.0							
MASBT	**Mashibuluo**	**1.38**	**217**	P		**Pn**	**12 34 23.7**	**-0.3**
	baz=216							
EAST	**Anshuo**	**1.48**	**205**	*e*P		**Pb**	**12 34 25.8**	**-0.3**
	baz=190							
JYNG	**Yonagunijimaku**	**1.48**	**60**	P		**Pn**	**12 34 25.9**	**+0.6**
JYNG				*e*S		**Sn**	**12 34 45.2**	**+0.3**
YOJ	**Yonaguni jima**	**1.54**	**61**	P		**Pn**	**12 34 26.4**	**+0.3**
YOJ				*e*S		**Sn**	**12 34 47.2**	**+0.9**
YOJ	**Yonaguni jima**	**1.54**	**61**	*e*P		**Pn**	**12 34 23.2**	**-2.9**
	baz=60							
SCZT	**Fangliau**	**1.59**	**212**	*e*P		**Pg**	**12 34 28.6**	**-0.2**
	baz=212							
LAY	**Lan-yu**	**1.68**	**179**	*e*P		**Pn**	**12 34 25.9**	**-2.1**
	baz=170							
TWKBT	**Hengchun**	**1.89**	**201**	*e*P		**Pn**	**12 34 31.9**	**+0.9**
	baz=188							
IRIF	**Iriomote-Funau**	**2.10**	**73**	P		**Pn**	**12 34 34.2**	**+0.4**
IRIF				*e*S		**Sn**	**12 35 00.5**	**+0.3**
JKRS	**Kuro-shima**	**2.32**	**77**	*e*S		**Sn**	**12 35 07.3**	**+1.6**
JIJ	**Ishigaki jima**	**2.47**	**75**	P		**Pn**	**12 34 39.0**	**+0.1**
JIJ				*e*S		**Sn**	**12 35 09.1**	**-0.2**
JISG	**Ishigakijimahi**	**2.68**	**71**	P		**Pn**	**12 34 40.7**	**-1.1**
JISG				*e*S		**Sn**	**12 35 13.4**	**-1.1**
JTJ	**Tarama**	**3.04**	**72**	*e*S		**Sn**	**12 35 25.1**	**+1.8**

JMA ***24*** *13:08:21.6±0.2,23.˙94N×122.˙36E,h13km±3km,M2.9*
TAP ***24*** *13:08:22.6,24.˙04N×122.˙34E,h25km,ML3.1,D*
ISC 24 13:08:21.8±1.2,23.˙97N±0.˙02×122.˙36E±0.˙02,h20km±4km,
n111,σ0s68/206,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HWA	**Hwalien**	**0.69**	**271**	P		**Pg**	**13 08 35.7**	**+0.4**
	baz=252							
HWA				*e*S		**Sg**	**13 08 45.6**	**+1.1**
	baz=252							
TWD	**Chiawan**	**0.70**	**279**	*i* P		**Pb**	**13 08 35.5**	**+0.2**
	baz=274							
TWD				*i* S		**Sg**	**13 08 45.4**	**+0.3**
	baz=274							
EWUT	**Wuta**	**0.71**	**312**	P		**Pb**	**13 08 34.9**	**-0.5**
	baz=316							
EWUT				*e*S		**Sb**	**13 08 44.8**	**0.0**
	baz=316							
JYNG	**Yonagunijimaku**	**0.72**	**48**	P		**Pb**	**13 08 35.7**	**0.0**
JYNG				S		**Sb**	**13 08 44.9**	**-0.3**
NACB	**Ninganchiao**	**0.72**	**287**	P		**Pb**	**13 08 35.9**	**+0.1**
	baz=268							
NACB				S		**Sg**	**13 08 45.9**	**+0.1**
	baz=268							
YOJ	**Yonaguni jima**	**0.77**	**50**	P		**Pb**	**13 08 36.6**	**0.0**
YOJ				*e*S		**Sb**	**13 08 47.0**	**+0.3**
YOJ	**Yonaguni jima**	**0.77**	**50**	P		**Pg**	**13 08 36.9**	**-0.1**
	baz=62							
YOJ				*e*S		**Sn**	**13 08 48.1**	**-0.6**
	baz=62							
ETLH	**Xiulin Townshi**	**0.83**	**287**	P		**Pb**	**13 08 37.7**	**+0.1**
	baz=270							
ETLH				S		**Sb**	**13 08 48.7**	**+0.2**
	baz=270							
ESL	**Shilin**	**0.86**	**260**	P		**Pb**	**13 08 37.7**	**-0.3**
	baz=247							
ESL				*e*S		**Sb**	**13 08 49.5**	**+0.4**
	baz=247							
NDS	**Dongshan**	**0.88**	**319**	P		**Pb**	**13 08 38.1**	**-0.3**
	baz=315							
NDS				*e*S		**Sb**	**13 08 49.8**	**-0.1**
	baz=315							
EGFH	**Guangfu**	**0.90**	**251**	*e*P		**Pb**	**13 08 38.7**	**0.0**
	baz=247							
EGFH				*e*S		**Sb**	**13 08 50.9**	**+0.5**
	baz=247							
EGS		**0.95**	**336**	P		**Pb**	**13 08 39.6**	**-0.1**
	baz=326							
EGS				*e*S		**Sb**	**13 08 51.2**	**-0.7**
	baz=326							
ILA	**Ilan**	**0.97**	**325**	*e*P		**Pb**	**13 08 39.9**	**0.0**
	baz=322							
ILA				*e*S		**Sb**	**13 08 52.2**	**-0.1**
	baz=322							
HGSD	**Ruisui**	**0.98**	**241**	P		**Pb**	**13 08 39.8**	**-0.2**
	baz=238							
HGSD				S		**Sb**	**13 08 53.0**	**+0.5**
	baz=238							
TWE	**Neicheng**	**0.98**	**320**	P		**Pb**	**13 08 39.7**	**-0.3**
	baz=325							
TWE				*e*S		**Sb**	**13 08 52.0**	**-0.5**
	baz=325							
ENTT	**Nioudou**	**0.98**	**313**	P		**Pb**	**13 08 40.1**	**-0.1**
	baz=309							
ENTT				*e*S		**Sb**	**13 08 53.0**	**+0.2**
	baz=309							
NDT	**Datong Townshi**	**1.00**	**310**	*e*P		**Pn**	**13 08 40.7**	**+0.1**
	baz=306							
NDT				*e*S		**Sb**	**13 08 52.5**	**-0.6**
	baz=306							
NNSB	**Datong**	**1.00**	**297**	P		**Pb**	**13 08 40.7**	**+0.2**
	baz=282							
NNSB				S		**Sb**	**13 08 53.8**	**+0.4**
	baz=282							
NNSH	**Datong**	**1.00**	**297**	P		**Pb**	**13 08 40.6**	**+0.1**
	baz=282							
NNSH				S		**Sb**	**13 08 53.6**	**+0.2**
	baz=282							
NTC	**Toucheng**	**1.00**	**332**	P		**Pb**	**13 08 40.2**	**-0.3**
	baz=328							
NTC				*e*S		**Sb**	**13 08 53.7**	**+0.4**
	baz=328							
NNS	**Nan Shan**	**1.01**	**298**	P		**Pn**	**13 08 41.1**	**+0.1**
	baz=294							
NNS				S		**Sn**	**13 08 54.3**	**-0.5**
	baz=294							
WHF	**Hehuan Shan**	**1.01**	**280**	P		**Pb**	**13 08 40.7**	**-0.2**
	baz=264							
WHF				S		**Sb**	**13 08 54.0**	**0.0**
	baz=264							
FUSS	**Fushou**	**1.05**	**286**	P		**Pn**	**13 08 41.8**	**+0.1**
	baz=281							
FUSS				S		**Sb**	**13 08 55.2**	**+0.2**
	baz=281							
OWD	**Renai**	**1.08**	**270**	*e*P		**Pb**	**13 08 41.7**	**-0.2**
	baz=266							
OWD				*e*S		**Sb**	**13 08 55.4**	**-0.2**
	baz=266							
CHGB	**Renai**	**1.08**	**275**	P		**Pb**	**13 08 41.8**	**-0.2**
	baz=259							
CHGB				S		**Sb**	**13 08 56.2**	**+0.3**
	baz=259							
TWB1	**Santiao Chiao**	**1.09**	**342**	*e*P		**Pn**	**13 08 41

EYUL	**Yuli**	**1.13 237**	P	**Pn**	**13 08 42.5**	**0.0**
	baz=235					
EYUL			S	**Sb**	**13 08 57.0**	**0.0**
	baz=235					
YHNB	**Yeheng**	**1.14 308**	P	**Pn**	**13 08 42.7**	**0.0**
	baz=304					
YHNB			S	**Sb**	**13 08 56.2**	**-0.9**
	baz=304					
TWF1	**Yuli**	**1.15 238**	P	**Pn**	**13 08 42.8**	**0.0**
	baz=224					
TWF1			S	**Sn**	**13 08 57.9**	**0.0**
	baz=224					
WFSB	**Wu-fen Shan**	**1.22 335**	*eP*	**Pb**	**13 08 44.2**	**+0.1**
	baz=331					
WFSB			*eS*	**Sb**	**13 08 59.1**	**-0.3**
	baz=331					
TWA	**Mucha**	**1.23 325**	P	**Pb**	**13 08 45.0**	**+0.6**
	baz=322					
TWA			*eS*	**Sn**	**13 08 60.0**	**0.0**
	baz=322					
FULB	**Fuli**	**1.24 232**	P	**Pn**	**13 08 43.6**	**-0.4**
	baz=218					
FULB			*eS*	**Sn**	**13 09 00.5**	**+0.3**
	baz=218					
NHDH	**Xindian Distri**	**1.25 323**	*eP*	**Pb**	**13 08 45.3**	**+0.6**
	baz=319					
NHDH			*eS*	**Sn**	**13 09 00.4**	**0.0**
	baz=319					
CHKT	**Chengkung**	**1.25 227**	*eP*	**Pn**	**13 08 43.6**	**-0.6**
	baz=214					
CHKT			*eS*	**Sn**	**13 08 58.6**	**-1.9**
	baz=214					
TATO	**Taipei**	**1.28 322**	P	**Pb**	**13 08 45.6**	**+0.5**
	baz=318					
TATO			*eS*	**Sn**	**13 09 00.8**	**-0.3**
	baz=318					
WPL	**Puli Township**	**1.28 272**	P	**Pb**	**13 08 45.0**	**-0.2**
	baz=269					
TNOU	**National Taiwa**	**1.29 336**	*eP*	**Pb**	**13 08 45.3**	**-0.1**
	baz=333					
TNOU			*eS*	**Sn**	**13 09 00.8**	**-0.7**
	baz=333					
SSLB	**Suanglung**	**1.30 262**	P	**Pn**	**13 08 45.0**	**+0.2**
	baz=259					
SSLB			*eS*	**Sn**	**13 09 01.3**	**-0.4**
	baz=259					
IRIF	**Iriomote-Funau**	**1.31 73**	P	**Pb**	**13 08 45.9**	**+0.2**
DPDB	**Guoxing**	**1.31 273**	P	**Pb**	**13 08 45.6**	**-0.2**
	baz=261					
DPDB			*eS*	**Sn**	**13 09 01.7**	**-0.3**
	baz=261					
WHP	**Taichung City**	**1.32 284**	*eP*	**Pb**	**13 08 45.9**	**-0.1**
	baz=269					
WHP			*eS*	**Sn**	**13 09 02.3**	**-0.1**
	baz=269					
HATJ	**Hateruma jima**	**1.33 86**	P	**Pb**	**13 08 45.9**	**-0.1**
SMLT	**Sun Moon Lake**	**1.33 267**	P	**Pn**	**13 08 45.9**	**+0.4**
	baz=253					
SMLT			S	**Sn**	**13 09 02.3**	**-0.4**
	baz=253					
YUS	**Yu-Shan**	**1.37 250**	P	**Pn**	**13 08 46.7**	**+0.4**
	baz=247					
YUS			S	**Sn**	**13 09 04.3**	**+0.2**
	baz=247					
TYC	**Yuchr**	**1.37 268**	P	**Pn**	**13 08 46.3**	**+0.5**
	baz=264					
TYC			S	**Sn**	**13 09 03.2**	**-0.2**
	baz=264					
YM01	**YM01**	**1.37 329**	*eP*	**Pb**	**13 08 46.8**	**0.0**
	baz=342					
YM01			*eS*	**Sn**	**13 09 03.5**	**-0.1**
	baz=342					
EDH	**Donghe**	**1.38 224**	P	**Pn**	**13 08 45.2**	**-0.7**
	baz=214					
EDH			S	**Sn**	**13 09 02.0**	**-1.7**
	baz=214					
LIOB	**Emei**	**1.40 299**	P	**Pb**	**13 08 47.6**	**+0.4**
	baz=296					
LIOB			*eS*	**Sb**	**13 09 04.7**	**+0.1**
	baz=296					
NSTT	**Nanjuang**	**1.40 298**	P	**Pb**	**13 08 47.6**	**+0.4**
	baz=295					
NSTT			S	**Sb**	**13 09 04.9**	**+0.2**
	baz=295					
YM08	**YM08**	**1.40 330**	*eP*	**Pn**	**13 08 46.6**	**+0.4**
	baz=327					
YM08			*eS*	**Sn**	**13 09 04.3**	**+0.1**
	baz=327					
ANP	**Anpu**	**1.43 328**	*eP*	**Pn**	**13 08 47.1**	**+0.3**
	baz=327					
ANP			*eS*	**Sn**	**13 09 04.2**	**-0.9**
	baz=327					
ELDTW	**Lidau**	**1.45 238**	P	**Pn**	**13 08 46.8**	**-0.3**
	baz=236					
ELDTW			*eS*	**Sn**	**13 09 04.5**	**-1.1**
	baz=236					
TWY	**Chenhua**	**1.47 332**	*eP*	**Pn**	**13 08 47.7**	**+0.5**
	baz=329					
TWY			S	**Sn**	**13 09 06.1**	**+0.2**
	baz=329					
ALS	**Alishan**	**1.49 253**	P	**Pb**	**13 08 48.6**	**-0.4**
	baz=250					
ALS			S	**Sb**	**13 09 07.4**	**-0.2**
	baz=250					
TWQ1	**Liyutan**	**1.50 285**	*eP*	**Pb**	**13 08 49.4**	**+0.5**
	baz=281					
TWQ1			S	**Sb**	**13 09 08.6**	**+1.2**
	baz=281					
WJS	**Zhushan**	**1.50 265**	*eP*	**Pb**	**13 08 49.4**	**+0.5**
	baz=262					
WJS			*eS*	**Sb**	**13 09 09.0**	**+1.5**
	baz=262					
WWF	**Wufeng**	**1.52 273**	*eP*	**Pg**	**13 08 50.6**	**-0.4**
	baz=269					
WWF			*eS*	**Sg**	**13 09 09.6**	**-1.3**
	baz=269					
NSY	**Sanyi**	**1.52 287**	*eS*	**Sb**	**13 09 09.6**	**+1.3**
	baz=283					
LDUT	**Ludao**	**1.52 212**	P	**Pn**	**13 08 47.7**	**-0.2**
	baz=212					
LDUT			S	**Sn**	**13 09 05.6**	**-1.6**
	baz=212					
WNT	**Mingjian**	**1.53 267**	*eP*	**Pb**	**13 08 50.3**	**+0.8**
	baz=264					
WNT			*eS*	**Sb**	**13 09 09.8**	**+1.3**
	baz=264					
JKRS	**Kuro-shima**	**1.53 80**	P	**Pb**	**13 08 49.3**	**-0.2**
WNT1	**Nantou City**	**1.54 268**	*eP*	**Pb**	**13 08 49.3**	**-0.2**
	baz=265					
WNT1			*eS*	**Sg**	**13 09 10.2**	**-1.2**
	baz=265					
LONT	**Longtian**	**1.54 227**	P	**Pn**	**13 08 48.1**	**-0.1**
	baz=238					
LONT			S	**Sn**	**13 09 07.2**	**-0.5**
	baz=238					
TCU	**Taichung**	**1.55 277**	*eS*	**Sg**	**13 09 10.8**	**-1.0**
	baz=273					
CHN5	**Tsauling**	**1.58 257**	*eP*	**Pb**	**13 08 50.6**	**+0.2**
	baz=244					
CHN5			*eS*	**Sb**	**13 09 10.6**	**+0.6**
	baz=244					
TWGBT	**Beinan**	**1.64 226**	P	**Pn**	**13 08 50.2**	**+0.7**
	baz=237					
TWGBT			S	**Sn**	**13 09 09.0**	**-1.0**
	baz=237					
TWG	**Pinlang**	**1.64 226**	P	**Pn**	**13 08 49.5**	**0.0**
	baz=237					
TWG			*eS*	**Sn**	**13 09 09.3**	**-0.8**
	baz=237					
WCHH	**Zhanghua**	**1.65 274**	*eS*	**Sb**	**13 09 11.3**	**-0.5**
	baz=271					
STYH	**Taoyuan**	**1.65 242**	P	**Pn**	**13 08 50.6**	**+0.9**
	baz=230					
STYH			S	**Sn**	**13 09 10.8**	**+0.5**
	baz=230					
STYT	**Tauyuan**	**1.67 242**	*eP*	**Pn**	**13 08 50.6**	**+0.6**
	baz=230					
STYT			*eS*	**Sn**	**13 09 11.8**	**+0.9**
	baz=230					
PCYT	**Pengchaiyu**	**1.67 351**	*eP*	**Pn**	**13 08 50.0**	**0.0**
	baz=335					
JIJ	**Ishigaki jima**	**1.68 76**	P	**Pb**	**13 08 51.5**	**-0.5**
JIJ			*eS*	**Sb**	**13 09 12.8**	**+0.1**
WDLH	**Douliu**	**1.69 261**	P	**Pb**	**13 08 52.2**	**+0.1**
	baz=258					
WDLH			S	**Sb**	**13 09 13.8**	**+0.8**
	baz=258					
TPUB	**Ta-pu**	**1.72 248**	P	**Pb**	**13 08 52.5**	**-0.2**
	baz=245					
TPUB			S	**Sb**	**13 09 13.8**	**-0.1**
	baz=245					
CHN4	**Tsaushan**	**1.73 250**	P	**Pb**	**13 08 53.0**	**+0.1**
	baz=247					
CHN4			S	**Sb**	**13 09 14.9**	**+0.7**
	baz=247					
WTP	**Ta-pu**	**1.75 246**	*eP*	**Pb**	**13 08 53.2**	**-0.1**
	baz=244					
WTP			S	**Sb**	**13 09 15.6**	**+0.6**
	baz=244					
WRL	**Guolierlin Hig**	**1.81 268**	*eS*	**Sb**	**13 09 15.6**	**-1.0**
	baz=265					
WTK	**Tuku**	**1.82 262**	P	**Pb**	**13 08 54.1**	**-0.4**
	baz=259					
WTK			S	**Sb**	**13 09 17.5**	**+0.6**
	baz=259					
CHY	**Chiayi**	**1.83 256**	*eP*	**Pb**	**13 08 54.5**	**-0.1**
	baz=253					
CHY			*eS*	**Sb**	**13 09 17.3**	**+0.2**
	baz=253					
SLGT	**Liugui**	**1.84 239**	*eP*	**Pb**	**13 08 54.0**	**-0.8**
	baz=229					
SLGT			*eS*	**Sb**	**13 09 17.5**	**-0.1**
	baz=229					
CHN1	**Nanshi**	**1.85 245**	P	**Pb**	**13 08 54.7**	**-0.2**
	baz=244					
CHN1			S	**Sb**	**13 09 17.4**	**-0.3**
	baz=244					
SGST	**Jiashian**	**1.85 242**	P	**Pb**	**13 08 54.0**	**-1.0**
	baz=229					
SGST			*eS*	**Sb**	**13 09 17.4**	**-0.3**
	baz=229					
SNST	**Tainan City**	**1.86 247**	*eP*	**Pb**	**13 08 54.2**	**-0.9**
	baz=245					
SNST			*eS*	**Sb**	**13 09 18.6**	**+0.6**
	baz=245					
ECL	**Taimali**	**1.88 224**	*eP*	**Pn**	**13 08 52.6**	**-0.2**
	baz=223					
ECL			*eS*	**Sn**	**13 09 14.4**	**-1.5**
	baz=223					
JISG	**Ishigakijimahi**	**1.89 71**	P	**Pn**	**13 08 53.5**	**+0.6**
JISG			*eS*	**Sn**	**13 09 17.5**	**+1.3**
WSF	**Szhu**	**1.98 261**	*eP*	**Pb**	**13 08 56.1**	**-1.1**
	baz=258					
WSF			*eS*	**Sb**	**13 09 20.8**	**-0.7**
	baz=258					
SSD	**Sandimen**	**2.00 233**	*eP*	**Pn**	**13 08 56.1**	**+1.7**
	baz=226					
SSD			*eS*	**Sb**	**13 09 20.6**	**-1.3**
	baz=226					
TSMG	**Majia**	**2.01 232**	*eP*	**Pn**	**13 08 55.9**	**+1.2**
	baz=225					
TSMG			*eS*	**Sn**	**13 09 19.7**	**+0.4**
	baz=225					
SCST	**Cishan**	**2.02 238**	*eP*	**Pb**	**13 08 57.3**	**-0.5**
	baz=225					
SCST			*eS*	**Sb**	**13 09 22.2**	**-0.4**
	baz=225					
MASBT	**Mashibuluo**	**2.08 230**	P	**Pn**	**13 08 56.7**	**+1.1**
	baz=224					
MASBT			S	**Sn**	**13 09 21.3**	**+0.3**
	baz=224					
EAST	**Anshuo**	**2.10 222**	*eP*	**Pn**	**13 08 56.8**	**+0.9**
	baz=221					
EAST			*eS*	**Sn**	**13 09 20.6**	**-0.9**
	baz=221					
SSPT	**Xinbi**	**2.21 228**	*eP*	**Pn**	**13 08 58.4**	**+1.1**
	baz=223					
SSPT			*eS*	**Sn**	**13 09 25.8**	**+1.7**
	baz=223					
JTJ	**Tarama**	**2.24 72**	P	**Pn**	**13 08 59.5**	**+1.7**
JTJ			*eS*	**Sb**	**13 09 27.4**	**-1.6**
SCZT	**Fangliau**	**2.25 226**	*eP*	**Pn**	**13 08 59.5**	**+1.6**
	baz=225					
SLIU	**Shizi**	**2.26 220**	*eP*	**Pn**	**13 08 58.2**	**+0.2**
	baz=220					
SLIU			*eS*	**Sn**	**13 09 25.5**	**+0.2**
	baz=220					
HEN	**Hengchun**	**2.46 218**	*eP*	**Pn**	**13 09 02.0**	**+1.3**
	baz=218					
HEN			*eS*	**Sn**	**13 09 31.8**	**+1.5**
	baz=218					
TWKBT	**Hengchun**	**2.47 215**	*eP*	**Pn**	**13 09 02.5**	**+1.5**
	baz=216					
TWKBT			*eS*	**Sn**	**13 09 30.6**	**+0.1**
	baz=216					
TWK1	**Hengchun**	**2.47 216**	*eP*	**Pn**	**13 09 01.6**	**+0.7**
	baz=216					
TWK1			*eS*	**Sn**	**13 09 31.3**	**+0.7**
	baz=216					
WDGT	**Dungji**	**2.57 255**	*eP*	**Pn**	**13 09 04.0**	**+1.7**
	baz=253					
PNG	**Penghu**	**2.60 262**	*eP*	**Pn**	**13 09 03.8**	**+1.1**
	baz=259					
PNG			*eS*	**Sn**	**13 09 34.5**	**+0.8**
	baz=259					
VCHM	**Qimei**	**2.79 255**	*eS*	**Sn**	**13 09 40.2**	**+1.7**
	baz=253					
VWUC	**VWUC**	**2.84 292**	*eP*	**Pn**	**13 09 05.9**	**-0.1**
	baz=289					
MATB	**Ma-tsu**	**3.08 315**	*eP*	**Pn**	**13 09 09.2**	**-0.1**
	baz=312					
PTMZ	**Houxiangcun**	**3.13 291**	*eP*	**Pn**	**13 09 09.9**	**-0.2**
	baz=288					
AXDP	**Jialang**	**4.10 284**	*eP*	**Pn**	**13 09 24.1**	**+0.7**
	baz=268					
AXDP			*eS*	**Sn**	**13 10 09.7**	**-1.1**
	baz=268					

*IDC **24** 13:33:20.7±1.3,34°.62N×27°.11E,h0km,mb3.6/4, mb1 3.6/5,mb1mx3.4/40,mbtmp3.6/5,ML2.9/1,MS2.2/2, Ms1 2.2/2,ms1mx2.0/58,Error ellipse: s-maj=32.9km s-min=21.3km az=172.0*

*THE **24** 13:33:26.2,35°.12N×26°.74E,h0km±3km,ML3.2/4,Error ellipse: s-maj=12.9km s-min=1.2km az=155.0*

*ISK **24** 13:33:27.2,35°.21N×26°.74E,h12km,ML2.9/10*

ISC 24 13:33:24.9±1.9,**34°.98N**±0°.09×**26°.87E**±0°.05,**h23**km±12km, **n28**,σ1°.**11**/**35**,**mb3.6**/4,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.56**	**284**	P	**Pb**	**13 33 34.8**	**-1.2**
ZKR				S	**Sb**	**13 33 43.3**	**-0.2**
	5μm,0.4s						
ZKR	**Zakros**	**0.56**	**284**	PG	**Pb**	**13 33 36.3**	**+0.3**
ZKR				SG	**Sb**	**13 33 43.1**	**-0.4**
KARP	**Karpathos**	**0.61**	**23**	P	**Pb**	**13 33 37.1**	**+0.1**
KARP				S	**Sn**	**13 33 46.5**	**-0.9**
	5μm,0.6s						
KARP	**Karpathos**	**0.61**	**23**	PG	**Pb**	**13 33 37.0**	**+0.1**
STIA	**Sitia Lasithi**	**0.68**	**289**	P	**Pb**	**13 33 36.1**	**-1.9**
STIA				S	**Sb**	**13 33 45.5**	**-1.5**
NPS	**Neapolis**	**1.07**	**285**	P	**Pb**	**13 33 44.6**	**-0.1**
NPS				S	**Sn**	**13 33 58.7**	**0.0**
	2μm,0.5s						
LAST	**Lasithi**	**1.16**	**279**	P	**Pb**	**13 33 47.0**	**+0.7**
LAST				S	**Sn**	**13 34 01.3**	**+0.4**
	682nm,0.8s						
HRKL	**Herakleio**	**1.49**	**283**	PN	**Pb**	**13 33 52.3**	**+0.5**
HRKL				SN	**Sb**	**13 34 10.8**	**+0.5**
ARG	**Arkhangelos**	**1.60**	**39**	PN	**Pb**	**13 33 54.7**	**+1.0**
NIS1	**Nisyros Isl.**	**1.63**	**9**	PN	**Pb**	**13 33 53.7**	**-0.6**
NIS1				SN	**Sn**	**13 34 12.9**	**+0.3**
IDI	**Anoyia**	**1.65**	**281**	Pn	**Pb**	**13 33 55.1**	**+0.4**
	9.7nm,0.3s,baz=103,slow=17,SNR=23						
IDI				Sn	**Sb**	**13 34 17.5**	**+2.3**
	25nm,0.3s,baz=340,slow=12,SNR=12						
IDI				LR	LR	13 34 50.9	
	comp=Z,85nm,21.3s,baz=82,slow=46						
IDI	**Anoyia**	**1.65**	**281**	PN	**Pb**	**13 33 54.8**	**+0.1**
KOSK	**Kos Island**	**1.77**	**3**	PN	**Pn**	**13 33 55.2**	**+1.2**
KOSK				SN	**Sn**	**13 34 15.6**	**-0.2**
SANT	**Santorini**	**1.80**	**321**	PN	**Pn**	**13 33 55.4**	**+0.8**
THT2	**Imerovigli**	**1.87**	**321**	PN	**Pn**	**13 33 56.3**	**+0.8**
BODT	**Bodrum**	**2.10**	**10**	PN	**Pn**	**13 34 00.2**	**+1.5**
TURN	**Turunc**	**2.11**	**31**	PN	**Pb**	**13 34 01.5**	**-0.8**
DALY	**Dalyan (Mula)**	**2.33**	**38**	PN	**Pb**	**13 34 04.8**	**-1.4**
APE	**Apeiranthos**	**2.35**	**333**	PN	**Pn**	**13 34 03.1**	**+1.0**
IMMV	**Iera Moni Meta**	**2.42**	**282**	PN	**Pb**	**13 34 05.6**	**-2.0**
KTHA	**Kythira Island**	**3.35**	**293**	PN	**Pn**	**13 34 18.4**	**+2.5**
BRTR	**Keskin Array B**	**7.17**	**47**	LR	LR	13 38 57.6	
	comp=Z,40nm,20.2s,baz=220,slow=46						
EIL	**Elat**	**8.64**	**126**	Pn	Pn	13 35 21.7	-6.9
	0.1nm,0.3s,baz=270,slow=10,SNR=1.4						
EIL				Sn	Sn	13 36 57.4	-8.0
	0.2nm,0.3s,baz=347,slow=21,SNR=1.0						
ASF	**Jabal al Asfar**	**8.82**	**106**	LR	LR	13 40 28.4	
	comp=Z,7.5nm,20.4s,baz=294,slow=50						
TORD	**Torodi Ar. Bea**	**31.48**	**233**	P	**P**	**13 39 43.5**	**-1.5**
	0.2nm,0.3s,baz=34,slow=8.9,SNR=4.5						
MKAR	**Makanchi Array**	**42.70**	**57**	P	**P**	**13 41 20.1**	**+0.2**
	0.5nm,0.4s,baz=275,slow=9.4,SNR=4.7						
ZALV	**Zalesovo Beam**	**44.11**	**46**	P	**P**	**13 41 30.4**	**-0.8**
	1.5nm,0.6s,baz=265,slow=7.7,SNR=5.9						
SONM	**Songino Array**	**58.51**	**51**	P	**P**	**13 43 19.7**	**+0.3**
	0.3nm,0.5s,baz=267,slow=9.4,SNR=3.0						

*IDC **24** 13:38:06.2±2.0,1°.13N×126°.37E,h0km,mb3.2/3, mb1 3.5/3,mb1mx3.3/39,mbtmp3.3/3,MS3.5/1,Ms1 3.5/1, ms1mx2.3/23,Error ellipse: s-maj=173.4km s-min=25.7km az=65.0*

*DJA **24** 13:38:13.0±0.5,1°.N±7°×12°.6E±°,h10km,M3.1/6,MLv3.1/6*

ISC 24 13:38:14.2±1.2,**0°.9N**±0°.1×**126°.21E**±0°.06,**h44**km,**n9**, **o2s56**/**9**,**mb3.3**/**3**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.16**	**97**	P	**Pn**	**13 38 36.6**	**+2.6**
KMSI	**Cibinong**	**2.26**	**262**	P	**Pn**	**13 38 48.8**	**-0.2**
KMSI				S	**Sn**	**13 39 15.6**	**-0.1**
SANI	**Sanana**	**2.95**	**184**	P	**Pn**	**13 38 59.2**	**+0.7**
GTOI	**Gorontalo**	**3.21**	**265**	P	**Pn**	**13 39 05.2**	**+3.0**
APSI	**Ampana**	**4.91**	**248**	P	**Pn**	**13 39 29.3**	**+3.8**
WRA	**Warramunga Arr**	**22.20**	**159**	P	**P**	**13 43 05.5**	**-1.4**
	0.9nm,0.8s,baz=338,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**25.55**	**163**	P	**P**	**13 43 38.7**	**-0.4**
	0.3nm,0.6s,baz=344,slow=11,SNR=10.0						
CTA	**Charters Tower**	**28.66**	**138**	LR		13 57 18.9	
	comp=Z,103nm,21.0s,baz=300,slow=40						
MKAR	**Makanchi Array**	**59.59**	**326**	P	**P**	**13 48 11.1**	**-2.5**
	0.2nm,0.4s,baz=118,slow=8.0,SNR=5.6						

*PGC **24** 13:54:07.0±0.0,51°.46N×131°.10W,h10km,ML4.2/20, MLSn4.3/22,Mw4.9/22,204km Sse of Sandspit, Bc Haida Gwaii Region*

*IDC **24** 13:54:09.7±1.3,51°.69N×130°.63W,h0km,mb3.5/3, mb1 3.8/8,mb1mx3.6/39,mbtmp3.5/8,ML3.7/5,Error ellipse: s-maj=17.4km s-min=13.0km az=61.0*

ISC 24 13:54:08.3±0.7,**51°.63N**±0°.04×**130°.86W**±0°.04,**h10**km,**n54**, **o2s35**/**70**,**mb3.4**/**3**,**Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.69**	**343**	P	**Pb**	**13 54 21.5**	**-1.0**
HG4B				S	**Sb**	**13 54 31.8**	**-0.3**
BNB	**Barry Inlet**	**1.09**	**330**	P	**Pb**	**13 54 27.5**	**-1.8**
BNB				S	**Sg**	**13 54 42.1**	**-1.3**
HG1B	**Mitchell Dam**	**1.52**	**330**	Pn	**Pn**	**13 54 33.4**	**-2.1**
MOBC	**Moresby Island**	**1.66**	**336**	Pn	**Pn**	**13 54 35.4**	**-2.0**
MOBC				Sn	**Sn**	**13 54 56.5**	**-2.3**
BBB	**Bella Bella**	**1.79**	**71**	Pn	**Pn**	**13 54 38.4**	**-0.8**
	34nm,0.3s,baz=256,slow=12,SNR=74						
BBB				Sn	**Sn**	**13 55 01.2**	**-0.7**
	271nm,0.3s,baz=161,slow=22,SNR=14						
BBB	**Bella Bella**	**1.79**	**71**	Pn	**Pn**	**13 54 37.8**	**-1.4**
BBB				Sn	**Sb**	**13 55 01.9**	**-1.6**
DIB	**Dawson Inlet,**	**1.86**	**328**	Pn	**Pn**	**13 54 38.0**	**-2.1**
DIB				Sn	**Sn**	**13 55 00.1**	**-3.5**
DIB				Sg	**Sg**	**13 55 07.3**	**-0.6**
BNAB	**Bonilla**	**1.87**	**4**	Pn	**Pn**	**13 54 39.7**	**-0.6**
BNAB				Sn	**Sn**	**13 55 02.4**	**-1.5**
HOLB	**Holberg**	**1.99**	**119**	Pn	**Pn**	**13 54 39.8**	**-2.1**
HOLB				Sn	**Sn**	**13 55 04.1**	**-2.8**
HOLB				Sg	**Sg**	**13 55 09.9**	**-2.1**
HWKB	**Hawksbury Isla**	**2.23**	**27**	Pn	**Pn**	**13 54 44.8**	**-0.5**
GRNB	**Grenville Isla**	**2.29**	**14**	Pn	**Pn**	**13 54 45.5**	**-0.5**
GRNB				Sg	**Sg**	**13 55 20.5**	**-1.1**
PHC	**Port Hardy**	**2.35**	**112**	Pn	**Pn**	**13 54 44.9**	**-2.0**
PHC				Sn	**Sn**	**13 55 13.4**	**-2.3**
MAYB	**Maynard**	**2.64**	**116**	Pn	**Pn**	**13 54 49.1**	**-1.9**
RUBB	**Prince Rupert**	**2.72**	**8**	Pn	**Pn**	**13 54 51.3**	**-0.7**
RUBB				Sg	**Sg**	**13 55 33.8**	**-1.9**
KITB	**Kitimat**	**2.80**	**28**	Pn	**Pn**	**13 54 52.8**	**-0.1**
KITB				Sn	**Sn**	**13 55 27.5**	**+0.8**
FHRB	**Fair Harbour**	**2.85**	**122**	Pn	**Pn**	**13 54 52.4**	**-1.3**
WOSB	**Woss**	**3.09**	**117**	Pn	**Pn**	**13 54 56.0**	**-1.2**
NCRB	**Newcastle Ridg**	**3.28**	**110**	Pn	**Pn**	**13 54 58.7**	**-1.1**
GDR	**Gold River**	**3.59**	**119**	Pg	**Pb**	**13 55 07.6**	**-4.1**
CBB	**Campbell River**	**3.84**	**113**	Pn	**Pn**	**13 55 05.7**	**-1.6**
CBB				Pg	**Pg**	**13 55 17.6**	**-4.1**
CBB				Sg	**Sb**	**13 56 05.1**	**+2.7**
TOFB	**Tofino**	**4.03**	**126**	Pg	**Pb**	**13 55 17.6**	**-1.6**
BTB	**Buttle Lake**	**4.04**	**120**	Pn	**Pn**	**13 55 07.7**	**-2.5**
BTB				Pg	**Pb**	**13 55 17.8**	**-1.7**
BTB				Sg	**Sg**	**13 56 19.5**	**+1.7**
UBRB	**Upper Baezaeko**	**4.35**	**71**	Pn	**Pn**	**13 55 14.7**	**+0.2**
UBRB				Sg	**Sg**	**13 56 23.9**	**-3.9**
TXB	**Texada**	**4.52**	**113**	Pg	**Pg**	**13 55 33.5**	**-1.3**
MGB	**Mount Grey**	**4.75**	**121**	Pn	**Pn**	**13 55 20.7**	**+0.7**
MGB				Pg	**Pg**	**13 55 41.7**	**+2.5**
GHNB	**Nanoose**	**4.83**	**116**	Sg	**Sg**	**13 56 38.9**	**-4.3**
FSB	**Fort Saint Jam**	**4.86**	**52**	Pn	**Pn**	**13 55 21.1**	**-0.4**
SHB	**Sechelt**	**4.89**	**112**	Pn	**Pn**	**13 55 23.0**	**+1.0**
SHB				Pg	**Pb**	**13 55 36.2**	**+2.1**
NLLB	**Nanaimo Lost L**	**5.01**	**116**	Pn	**Pn**	**13 55 22.2**	**-1.3**
WSLR	**Whistler**	**5.25**	**104**	Sg	**Sg**	**13 56 52.8**	**-3.8**
SNB	**Saturna Island**	**5.71**	**117**	Sg	**Sg**	**13 57 07.6**	**-3.7**
BMBC	**Bull Mountain**	**6.80**	**46**	Pn	**Pn**	**13 55 50.2**	**+2.2**
BMBC				Sg	**Sg**	**13 57 45.5**	**-0.7**
DLBC	**Dease Lake**	**6.84**	**4**	Pn	**Pn**	**13 55 51.2**	**+2.7**
	1.5nm,0.3s,baz=186,slow=13,SNR=25						
DLBC	**Dease Lake**	**6.84**	**4**	Pn	**Pn**	**13 55 51.7**	**+3.1**
DLBC				Sg	**Sg**	**13 57 38.7**	**-8.8**
NBC5	**NorthernBC 5**	**7.58**	**36**	Pn	**Pn**	**13 56 01.6**	**+2.9**
MNB	**Mounoet Dainar**	**7.74**	**81**	Pn	**Pn**	**13 56 03.6**	**+2.4**
MNB				Sg	**Sg**	**13 56 15.9**	**-6.7**
PLBC	**Pleasant Camp**	**8.44**	**341**	Pn	**Pn**	**13 56 10.6**	**+0.2**
WHY	**Whitehorse**	**9.32**	**348**	Pn	**Pn**	**13 56 22.6**	**0.0**
YBH	**Yreka Blue Hor**	**11.37**	**147**	Pn	Pn	13 56 54.1	+3.4
	0.1nm,0.3s,baz=217,slow=11,SNR=1.8						
YKA	**Yellowknife Ar**	**13.97**	**33**	Pn	**Pn**	**13 57 28.8**	**+2.8**
	0.1nm,0.3s,baz=222,slow=12,SNR=8.2						
ELK	**Elko**	**15.31**	**129**	Pn	**P**	**13 57 49.7**	**+0.3**
	0.1nm,0.3s,baz=328,slow=13,SNR=7.2						
ILAR	**Eielson Array**	**15.57**	**334**	Pn	**P**	**13 57 54.5**	**+2.6**
	baz=143,slow=11,SNR=1.9						
NVAR	**Mina Array Bea**	**15.88**	**141**	Pn	**P**	**13 57 55.9**	**+0.2**
	0.1nm,0.3s,baz=342,slow=36,SNR=2.8						
DHRN	**Dharma Camp**	**

*NEIC **24** 13:56:15.2±2.5,51.62N±0.04×130.77W±0.08,h8km±1km, mb5.6/112,Ms_20 6.3/589,Mwb6.2/91,Mww6.2, Mwc6.3(GCMT),Mwr6.3(OTT),Error ellipse: s-maj=8.2km s-min=6.0km az=286.0*

*NEIC **24** 13:56:15.5,51.50N×131.00W,h9km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.12; $M_{\theta\theta}$=3.95; $M_{\phi\phi}$ 1.95; $M_{r\theta}$=-1.12; $M_{\theta\phi}$ 1.77; $M_{\phi r}$-0.94; Fault plane solution: M_{o}3.90000×10^{18} NP1:ϕ_s243.00000°, δ81.00000°,λ25.00000°. NP2:ϕ_s149.00000°,δ66.00000°, λ170.00000°. Principal axes: T 3.5954, Plg24.0000°, Azm108.0000°; N 0.3699, Plg64.0000°, Azm262.0000°; P -3.9654, Plg10.0000°, Azm14.0000°;*

*NEIC **24** 13:56:16,51.76N×130.70W,h9km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.34; $M_{\theta\theta}$-1.73; $M_{\phi\phi}$ 1.38; $M_{r\theta}$=0.90; $M_{\theta\phi}$ 1.06; $M_{\phi r}$0.33; Fault plane solution: M_{o}2.14000×10^{18} NP1:ϕ_s332.09000°, δ62.23000°,λ176.24000°. NP2:ϕ_s63.85000°,δ86.67000°, λ27.82000°. Principal axes: T 1.9443, Plg22.0000°, Azm292.0000°; N 0.3409, Plg62.0000°, Azm70.0000°; P -2.2852, Plg17.0000°, Azm195.0000°;*

*DNK **24** 13:56:17.0±2.1,51.50N×131.05W,h23km±33km,mb5.6, Ms6.6*

*BGR **24** 13:56:20.4±0.0,52.16N×131.02W,h10km,mb5.9,Ms6.4*

*GCMT **24** 13:56:21.2±0.0,51.69N×130.85W,h12km,MW6.2/169, Moment Tensor Solution. s166,c389; s169,c688; Duration: 3?2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.58±.01; $M_{\theta\theta}$-2.41±.01; $M_{\phi\phi}$ 1.83±.01; $M_{r\theta}$0.85±.03; $M_{\theta\phi}$ 1.59±.01; $M_{\phi r}$0.01±.03; Best double couple: M_{o}2.76200×10^{18} NP1:ϕ_s334.00000°,δ75.00000°, λ-178.00000°. NP2:ϕ_s244.00000°,δ88.00000°, λ-15.00000°. Principal axes: T 2.4070, Plg9.0000°, Azm290.0000°; N 0.7060, Plg74.0000°, Azm56.0000°; P -3.1170, Plg12.0000°, Azm198.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **24** 13:56:22,51.64N×130.86W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.51; $M_{\theta\theta}$-2.59; $M_{\phi\phi}$ 2.07; $M_{r\theta}$=2.09; $M_{\theta\phi}$ 1.68; $M_{\phi r}$0.12; Fault plane solution: M_{o}3.58000×10^{18} NP1:ϕ_s336.00000°, δ56.00000°,λ-179.00000°. NP2:ϕ_s245.00000°, δ89.00000°,λ-34.00000°. Principal axes: T 2.9316, Plg23.0000°, Azm296.0000°; N 1.0614, Plg56.0000°, Azm64.0000°; P -3.9930, Plg24.0000°, Azm195.0000°;*

*NEIC **24** 13:56:24,51.84N×130.59W,h14km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}=0.28; $M_{\theta\theta}$-1.91; $M_{\phi\phi}$ 1.63; $M_{r\theta}$=1.40; $M_{\theta\phi}$ 1.37; $M_{\phi r}$0.23; Fault plane solution: M_{o}2.67000×10^{18} NP1:ϕ_s335.00000°, δ59.00000°,λ-179.00000°. NP2:ϕ_s245.00000°, δ89.00000°,λ-31.00000°. Principal axes: T 2.3611, Plg21.0000°, Azm295.0000°; N 0.5295, Plg59.0000°, Azm64.0000°; P -2.8906, Plg22.0000°, Azm196.0000°;*

ISC 24 13:56:15.6±0.4,51.64N±0.02×130.86W±0.02,h6km±1km, h8km:pP-P,n1539,σ2?21/1522,mb5.7/245,MS6.3/424, 151C-86D,Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.69**	**342**	P	**Pg**	**13 56 27.5**	**-1.3**
HG4B				S	**Sg**	**13 56 37.9**	**+0.2**
BNB	**Barry Inlet**	**1.09**	**330**	P	**Pg**	**13 56 33.3**	**-3.1**
BNB				S	**Sg**	**13 56 48.8**	**-1.7**
HG1B	**Mitchell Dam**	**1.51**	**329**	Pn	**Pn**	**13 56 39.5**	**-3.7**
HG1B				Sn	**Sn**	**13 56 60.0**	**-3.1**
MOBC	**Moresby Island**	**1.65**	**336**	Pn	**Pn**	**13 56 41.5**	**-3.7**
MOBC				Sn	**Sn**	**13 57 04.2**	**-2.4**
MOBC	**Moresby Island**	**1.65**	**336**	Pn	**Pn**	**13 56 41.7**	**-3.5**
BBB	**Bella Bella**	**1.79**	**71**	Pn	**Pn**	**13 56 44.9**	**-2.0**
	1μm,0.3s,baz=252,slow=9.5,SNR=39						
BBB				Sn	**Sn**	**13 57 07.7**	**-2.1**
	10μm,0.3s,baz=152,slow=23,SNR=12						
BBB	**Bella Bella**	**1.79**	**71**	Pn	**Pn**	**13 56 43.5**	**-3.4**
BBB				Sn	**Sn**	**13 57 07.3**	**-2.5**
BBB	**Bella Bella**	**1.79**	**71**	Pn	**Pn**	**13 56 43.3**	**-3.6**
BBB				Sn	**Sn**	**13 57 06.2**	**-3.6**
BBB	**Bella Bella**	**1.79**	**71**	↑P	**Pn**	**13 56 43.3**	**-3.6**
DIB	**Dawson Inlet,**	**1.85**	**328**	Pn	**Pn**	**13 56 44.1**	**-3.7**
DIB				Sn	**Sn**	**13 57 06.5**	**-4.9**
DIB				Sg	**Sb**	**13 57 12.5**	**-0.6**
DIB	**Dawson Inlet,**	**1.85**	**328**	Pn	**Pn**	**13 56 44.5**	**-3.3**
BNAB	**Bonilla**	**1.86**	**4**	Pn	**Pn**	**13 56 45.3**	**-2.6**
BNAB				Sn	**Sn**	**13 57 09.0**	**-2.7**
BNAB	**Bonilla**	**1.86**	**4**	Pn	**Pn**	**13 56 45.3**	**-2.6**
BNAB				Sg	**Sb**	**13 57 12.5**	**-0.9**
HOLB	**Holberg**	**1.99**	**119**	Pn	**Pn**	**13 56 45.1**	**-4.7**
HOLB				Sn	**Sn**	**13 57 08.0**	**-7.0**
HOLB	**Holberg**	**1.99**	**119**	Pn	**Pn**	**13 56 45.1**	**-4.7**
HOLB				Sn	**Sn**	**13 57 08.0**	**-7.0**
HWKB	**Hawksbury Isla**	**2.22**	**27**	Pn	**Pn**	**13 56 50.4**	**-2.5**
HWKB				Sn	**Sn**	**13 57 18.5**	**-2.1**
HWKB	**Hawksbury Isla**	**2.22**	**27**	Pn	**Pn**	**13 56 50.1**	**-2.8**
HWKB				Sg	**Sb**	**13 57 23.6**	**-0.2**
GRNB	**Grenville Isla**	**2.28**	**14**	Pn	**Pn**	**13 56 51.3**	**-2.4**
GRNB				Sn	**Sn**	**13 57 20.5**	**-1.5**
GRNB	**Grenville Isla**	**2.28**	**14**	Sg	**Sb**	**13 57 24.8**	**-0.6**
PHC	**Port Hardy**	**2.35**	**112**	Pn	**Pn**	**13 56 50.0**	**-4.7**
PHC				Sn	**Sn**	**13 57 18.1**	**-5.7**
PHC				Sg	**Sb**	**13 57 26.5**	**-1.0**
MASB	**Masset**	**2.48**	**344**	Pn	**Pn**	**13 56 53.8**	**-2.6**
MASB	**Masset**	**2.48**	**344**	Pn	**Pn**	**13 56 54.5**	**-2.0**
MAYB	**Maynard**	**2.64**	**117**	Pn	**Pn**	**13 56 54.4**	**-4.4**
MAYB	**Maynard**	**2.64**	**117**	Pn	**Pn**	**13 56 54.5**	**-4.2**
NDB	**Naden**	**2.64**	**332**	Pn	**Pn**	**13 56 55.5**	**-3.2**
RUBB	**Prince Rupert**	**2.71**	**8**	Pn	**Pn**	**13 56 57.7**	**-2.0**
RUBB				Sn	**Sn**	**13 57 30.3**	**-2.4**
RUBB				Sg	**Sb**	**13 57 39.0**	**+1.0**
RUBB	**Prince Rupert**	**2.71**	**8**	Pn	**Pn**	**13 56 57.8**	**-1.9**
RUBB				Sg	**Sb**	**13 57 39.0**	**+1.0**
KITB	**Kitimat**	**2.79**	**28**	Pn	**Pn**	**13 56 58.7**	**-1.9**
KITB				Sn	**Sn**	**13 57 34.5**	**0.0**
KITB	**Kitimat**	**2.79**	**28**	Pn	**Pn**	**13 56 58.3**	**-2.3**
KITB				Sg	**Sb**	**13 57 39.8**	**-0.3**
LIB	**Langara Island**	**2.94**	**334**	Pn	**Pn**	**13 56 59.7**	**-3.0**
EDB	**Eliza Dome**	**2.96**	**125**	Pn	Pn	13 56 58.2	-4.8
WOSB	**Woss**	**3.09**	**117**	Pn	**Pn**	**13 57 00.7**	**-4.2**
WOSB	**Woss**	**3.09**	**117**	Pn	**Pn**	**13 57 01.2**	**-3.7**
NCRB	**Newcastle Ridg**	**3.28**	**110**	Pn	**Pn**	**13 57 03.9**	**-3.6**
NCRB	**Newcastle Ridg**	**3.28**	**110**	Pn	**Pn**	**13 57 04.0**	**-3.6**
ETB	**Estevan Point**	**3.57**	**128**	Pn	**Pn**	**13 57 07.1**	**-4.3**
GDR	**Gold River**	**3.59**	**119**	Pn	**Pn**	**13 57 08.4**	**-3.3**
CBB	**Campbell River**	**3.84**	**113**	Pn	**Pn**	**13 57 12.0**	**-3.1**
KEMF	**NEPTUNE Canada**	**3.87**	**162**	Pn	Pn	13 57 10.2	-5.0
NC89	**ODP889**	**3.94**	**138**	Pn	**Pn**	**13 57 13.9**	**-2.4**
NC89				Sn	**Sn**	**13 57 55.4**	**-7.2**
NC89	**ODP889**	**3.94**	**138**	Pn	**Pn**	**13 57 14.5**	**-1.8**
TOFB	**Tofino**	**4.03**	**126**	Pn	**Pn**	**13 57 14.1**	**-3.6**
TOFB	**Tofino**	**4.03**	**126**	Pn	**Pn**	**13 57 13.9**	**-3.8**
BTB	**Buttle Lake**	**4.04**	**121**	Pn	**Pn**	**13 57 15.2**	**-2.8**
CRAG	**Craig**	**4.07**	**341**	Pn	**Pn**	**13 57 15.2**	**-3.0**
CRAG	**Craig**	**4.07**	**341**	⇓P	**Pn**	**13 57 16.3**	**-1.9**
CRAG	**Craig**	**4.07**	**341**	P		13 57 16.0	
	baz=162,SNR=20						
UBRB	**Upper Baezaeko**	**4.35**	**71**	Pn	**Pn**	**13 57 20.6**	**-1.6**
UBRB				Sg	**Sb**	**13 58 29.1**	**+4.1**
UBRB	**Upper Baezaeko**	**4.35**	**71**	Pn	**Pn**	**13 57 21.4**	**-0.8**
UBRB				Sg	**Sb**	**13 58 29.1**	**+4.1**
OZB	**Mount Ozzard**	**4.36**	**126**	Pn	**Pn**	**13 57 19.4**	**-3.0**
TXB	**Texada**	**4.53**	**113**	Pn	**Pn**	**13 57 22.0**	**-2.5**
B927	**Port Alberni**	**4.56**	**120**	Pn	**Pn**	**13 57 23.2**	**-1.8**
B927	**Port Alberni**	**4.56**	**120**	Pn	**Pn**	**13 57 23.7**	**-1.4**
B928	**Bamfield**	**4.63**	**125**	Pn	**Pn**	**13 57 24.0**	**-1.9**
B928	**Bamfield**	**4.63**	**125**	Pn	**Pn**	**13 57 24.0**	**-1.9**
MGB	**Mount Grey**	**4.75**	**121**	Pn	**Pn**	**13 57 25.8**	**-2.0**
GHNB	**Nanoose**	**4.83**	**116**	Pn	**Pn**	**13 57 26.8**	**-2.0**
GHNB	**Nanoose**	**4.83**	**116**	Pn	**Pn**	**13 57 26.8**	**-2.0**
FSB	**Fort Saint Jam**	**4.86**	**52**	Pn	**Pn**	**13 57 27.7**	**-1.4**
WRAK	**Wrangell Islan**	**4.87**	**350**	Pn	**Pn**	**13 57 28.4**	**-0.8**
WRAK	**Wrangell Islan**	**4.87**	**350**	P		13 57 27.3	
	baz=171						
SHB	**Sechelt**	**4.89**	**112**	Pn	**Pn**	**13 57 28.0**	**-1.7**
SHB				Sg	**Sb**	**13 58 46.2**	**+5.4**
NLLB	**Nanaimo Lost L**	**5.01**	**116**	Pn	**Pn**	**13 57 28.8**	**-2.4**
NLLB				Sg	**Sb**	**13 58 46.4**	**+2.3**
NLLB	**Nanaimo Lost L**	**5.01**	**116**	Pn	**Pn**	**13 57 28.8**	**-2.4**
NLLB				Sg	**Sb**	**13 58 46.4**	**+2.3**
B926	**Mesachie Lake**	**5.16**	**121**	Pn	**Pn**	**13 57 32.3**	**-1.0**
B926				Sg	**Sb**	**13 58 52.0**	**+3.8**
B926	**Mesachie Lake**	**5.16**	**121**	Pn	**Pn**	**13 57 32.7**	**-0.5**
B926				Sg	**Sb**	**13 58 52.0**	**+3.8**
CLRS	**Cowichan Lake**	**5.16**	**121**	Pn	**Pn**	**13 57 32.8**	**-0.4**
OCP	**Olym-Cheeka Pk**	**5.23**	**127**	Pn	**Pn**	**13 57 33.4**	**-0.9**
WSLR	**Whistler**	**5.25**	**104**	Pn	**Pn**	**13 57 33.2**	**-1.4**
WSLR				Sn	**Sn**	**13 58 30.9**	**-4.5**
WSLR				Sg	**Sb**	**13 58 51.2**	**+0.2**
WSLR	**Whistler**	**5.25**	**104**	Pn	**Pn**	**13 57 33.4**	**-1.2**
WSLR				Sg	**Sb**	**13 58 51.2**	**+0.2**
WPB	**Watts Point**	**5.26**	**109**	Pn	**Pn**	**13 57 33.1**	**-1.5**
BIB	**Bowen Island**	**5.31**	**112**	Pn	**Pn**	**13 57 33.5**	**-1.8**
GOBB	**Galiano Island**	**5.43**	**117**	Pn	**Pn**	**13 57 36.2**	**-0.7**
GOBB	**Galiano Island**	**5.43**	**117**	Pn	**Pn**	**13 57 36.7**	**-0.2**
B010	**North Saanich**	**5.62**	**119**	Pn	**Pn**	**13 57 38.3**	**-1.4**
B010	**North Saanich**	**5.62**	**119**	Pn	**Pn**	**13 57 38.3**	**-1.4**
PGC	**Sidney**	**5.62**	**119**	Pn	**Pn**	**13 57 38.0**	**-1.6**
PGC				Sn	**Sn**	**13 58 35.8**	**-8.6**
PGC	**Sidney**	**5.62**	**119**		**Pn**	**13 57 39.7**	**+0.1**
B009	**North Saanich**	**5.63**	**119**	Pn	**Pn**	**13 57 37.9**	**-1.7**
B009	**North Saanich**	**5.63**	**119**	Pn	**Pn**	**13 57 38.6**	**-1.0**
B011	**North Saanich**	**5.63**	**119**	Pn	**Pn**	**13 57 37.4**	**-2.2**
B011				Sg	**Sb**	**13 59 06.1**	**+4.4**
B011	**North Saanich**	**5.63**	**119**	Pn	**Pn**	**13 57 39.2**	**-0.5**
B011				Sg	**Sb**	**13 59 06.1**	**+4.4**
PA12	**PA12 Sannich**	**5.63**	**119**	Pn	**Pn**	**13 57 37.5**	**-2.2**
PA12	**PA12 Sannich**	**5.63**	**119**	Pn	**Pn**	**13 57 38.3**	**-1.3**
OBC	**Olympics--Boni**	**5.68**	**127**	Pn	**Pn**	**13 57 39.0**	**-1.5**
SNB	**Saturna Island**	**5.71**	**117**	Pn	**Pn**	**13 57 39.9**	**-0.9**
LLLB	**Lillooet**	**5.75**	**97**	Pn	**Pn**	**13 57 41.2**	**-0.2**
LLLB	**Lillooet**	**5.75**	**97**	Pn	**Pn**	**13 57 41.4**	**0.0**
STW	**Striped Peak**	**5.81**	**124**	Pn	**Pn**	**13 57 40.7**	**-1.5**
VGZ	**Gonzales**	**5.83**	**121**	Pn	**Pn**	**13 57 42.0**	**-0.4**
MCW	**Mount Constitu**	**5.95**	**117**	Pn	**Pn**	**13 57 43.6**	**-0.6**
A04D	**Lummi Island**	**6.00**	**116**	P		13 57 44.8	
	baz=300						
OSD	**Olympics--Snow**	**6.01**	**127**	Pn	**Pn**	**13 57 44.7**	**-0.5**
SIT	**Sitka**	**6.02**	**336**	P	**Pn**	**13 57 41.3**	**-3.7**
SIT	**Sitka**	**6.02**	**336**	Pn	**Pn**	**13 57 41.3**	**-3.7**
SIT	**Sitka**	**6.02**	**336**	P		13 57 42.5	
	baz=154,SNR=7.8						
A05A	**Maple Falls**	**6.21**	**112**	Pn	**Pn**	**13 57 48.2**	**+0.5**
A05A	**Maple Falls**	**6.21**	**112**	Pn	**Pn**	**13 57 46.6**	**-1.1**
NLWA	**Neilton Lookou**	**6.23**	**130**	Pn	**Pn**	**13 57 47.5**	**-0.5**
NLWA	**Neilton Lookou**	**6.23**	**130**	⇑P	**Pn**	**13 57 47.5**	**-0.5**
BLM	**Blyn Mountain**	**6.27**	**122**	Pn	**Pn**	**13 57 47.9**	**-0.6**
MBW	**Mount Baker**	**6.42**	**113**	Pn	**Pn**	**13 57 48.5**	**-2.3**
HOPB	**Hope**	**6.43**	**107**	Pn	**Pn**	**13 57 48.9**	**-1.8**
HOPB	**Hope**	**6.43**	**107**	Pn	**Pn**	**13 57 50.4**	**-0.2**
HDW	**Hoodsport**	**6.45**	**125**	Pn	**Pn**	**13 57 50.3**	**-0.8**
WISH	**Wishkah**	**6.47**	**132**	Pn	**Pn**	**13 57 48.9**	**-2.4**
WISH	**Wishkah**	**6.47**	**132**	Pn	**Pn**	**13 57 49.7**	**-1.6**
CMW	**Cultus Mountai**	**6.49**	**116**	Pn	**Pn**	**13 57 50.5**	**-1.0**
D03D	**Eldon**	**6.51**	**126**	P		13 57 52.1	
	baz=310						
D03D				S		13 59 09.9	
	baz=310						
B05A	**Bryant**	**6.59**	**117**	P		13 57 52.6	
	baz=302						
GNW	**Green Mountain**	**6.62**	**125**	Pn	**Pn**	**13 57 51.1**	**-2.3**
JCW	**Jim Creek**	**6.72**	**117**	Pn	**Pn**	**13 57 53.1**	**-1.6**
BMBC	**Bull Mountain**	**6.79**	**46**	Pn	**Pn**	**13 57 55.3**	**-0.4**
BMBC				Sg	**Sg**	**13 59 47.6**	**-5.7**
BMBC	**Bull Mountain**	**6.79**	**46**	Pn	**Pn**	**13 57 55.8**	**+0.1**
BMBC				LR	LR	13 59 47.6	
B06A	**Marblemount**	**6.79**	**114**	Pn	**Pn**	**13 57 54.6**	**-1.0**
B06A	**Marblemount**	**6.79**	**114**	Pn	**Pn**	**13 57 55.5**	**-0.2**
RPW	**Rockport**	**6.81**	**114**	Pn	**Pn**	**13 57 54.9**	**-1.2**
DLBC	**Dease Lake**	**6.83**	**4**	Pn	**Pn**	**13 57 56.6**	**+0.4**
	107nm,0.3s,baz=220,slow=9.3,SNR=96						
DLBC				Sn	**Sn**	**13 59 14.9**	**+0.8**
	31nm,0.3s,baz=3.6,slow=17,SNR=5.0						
DLBC				Lg	Lg	13 59 47.7	
	58nm,0.3s,baz=104,slow=26,SNR=4.7						
DLBC				LR	LR	14 00 34.2	
	comp=Z,475μm,21.9s,baz=187,slow=38						
DLBC	**Dease Lake**	**6.83**	**4**	Pn	**Pn**	**13 57 57.0**	**+0.8**
DLBC				Sn	**Sn**	**13 59 12.2**	**-1.9**
DLBC				Sg	**Sg**	**13 59 47.0**	**-7.6**
DLBC	**Dease Lake**	**6.83**	**4**	Pn	**Pn**	**13 57 54.7**	**-1.5**
D04E	**Lakebay**	**6.91**	**127**	P		13 57 58.3	
	baz=311						
JIS	**Juneau Island**	**6.95**	**344**	Pn	**Pn**	**13 57 56.7**	**-1.1**
E03A	**Lebam**	**6.99**	**134**	Pn	**Pn**	**13 57 55.5**	**-2.9**
E03A	**Lebam**	**6.99**	**134**	Pn	**Pn**	**13 57 60.0**	**+1.5**
J28D	**J28D**	**7.06**	**158**	P	**Pn**	**13 58 00.7**	**+1.7**
J28D				S	**Sn**	**13 59 24.4**	**+5.1**
GPW	**Glacier Peak**	**7.20**	**116**	Pn	**Pn**	**13 58 00.7**	**-0.8**
BLBC	**Blue River**	**7.21**	**82**	Pn	**Pn**	**13 57 57.3**	**-4.3**
BLBC	**Blue River**	**7.21**	**82**	Pn	**Pn**	**13 57 57.3**	**-4.3**
NBC4	**NorthernBC 4**	**7.29**	**52**	Pn	**Pn**	**13 58 02.7**	**+0.2**
NBC4				Sg	**Sg**	**14 00 04.0**	**-5.4**
NBC4	**NorthernBC 4**	**7.29**	**52**	Pn	**Pn**	**13 58 03.4**	**+0.9**
NBC4				LR		14 00 04.0	
D05A	**Enumclaw**	**7.30**	**124**	Pn	**Pn**	**13 58 03.0**	**+0.3**
D05A	**Enumclaw**	**7.30**	**124**		**Pn**	**13 58 03.8**	**+1.1**
BESE	**Bessie Mountai**	**7.32**	**343**	Pn	**Pn**	**13 58 01.9**	**-1.0**
BESE				Sg	Sb	13 59 59.6	+9.2
BESE	**Bessie Mountai**	**7.32**	**343**	Pn	**Pn**	**13 58 01.4**	**-1.5**
J27D	**J27D**	**7.44**	**154**	P	**Pn**	**13 58 07.7**	**+3.4**
J27D				S	**Sn**	**13 59 34.2**	**+5.5**
C06D	**Leavenworth**	**7.45**	**116**	P		13 58 05.0	
	baz=302						
E04D	**Cinebar**	**7.45**	**130**	P		13 58 05.5	
	baz=314,SNR=8.4						
PNT	**Penticton**	**7.54**	**104**	Pn	**Pn**	**13 58 04.6**	**-1.4**
PNT				Sn	**Sn**	**13 59 28.4**	**-3.3**
NBC5	**NorthernBC 5**	**7.57**	**36**	Pn	**Pn**	**13 58 06.1**	**-0.3**
NBC5				Sg	**Sg**	**14 00 13.1**	**-5.1**
NBC5	**NorthernBC 5**	**7.57**	**36**	Pn	**Pn**	**13 58 06.9**	**+0.5**
NBC5				LR		14 00 13.1	
F04D	**Rainier, OR**	**7.59**	**134**	P		13 58 07.2	
	baz=318,SNR=9.0						
FMW	**Mount Fremont**	**7.63**	**125**	Pn	**Pn**	**13 58 06.8**	**-0.6**
LON	**Longmire**	**7.69**	**126**	Pn	**Pn**	**13 58 06.9**	**-1.1**
LON	**Longmire**	**7.69**	**126**	P	**Pn**	**13 58 07.4**	**-0.6**
LON	**Longmire**	**7.69**	**126**		**Pn**	**13 58 07.4**	**-0.6**
J20D	**J20D**	**7.71**	**160**	P	**Pn**	**13 58 07.0**	**-0.9**
J20D				S	**Sn**	**13 59 32.1**	**-3.0**
MNB	**Mounoet Dainar**	**7.74**	**81**	Pn	**Pn**	**13 58 07.4**	**-1.5**
LTY	**Liberty**	**7.96**	**119**	Pn	**Pn**	**13 58 10.0**	**-1.7**
LTY	**Liberty**	**7.96**	**119**		**Pn**	**13 58 11.2**	**-0.6**
SLEB	**Sale Mountain**	**7.97**	**88**	Pn	**Pn**	**13 58 11.4**	**-0.7**
SLEB				Sg	**Sg**	**14 00 27.5**	**-4.0**
SLEB	**Sale Mountain**	**7.97**	**88**	Pn	**Pn**	**13 58 11.7**	**-0.4**
SLEB				LR		14 00 27.5	
J19D	**J19D**	**8.08**	**156**	P	**Pn**	**13 58 16.8**	**+3.9**
J19D				S	Sn	13 59 53.2	+9.0
B08A	**Colville Reser**	**8.12**	**109**	Pn	**Pn**	**13 58 12.4**	**-1.5**
B08A	**Colville Reser**	**8.12**	**109**	Pn	**Pn**	**13 58 13.2**	**-0.8**
G03D	**McMinnville, O**	**8.18**	**139**	P		13 58 15.4	
	baz=323,SNR=8.3						
G03D				S		13 59 41.0	
	baz=323						
SKAG	**Skagway**	**8.23**	**344**		**Pn**	**13 58 14.7**	**-0.7**
PLBC	**Pleasant Camp**	**8.43**	**340**	Pn	**Pn**	**13 58 16.8**	**-1.3**
PLBC				Sg	Sg	14 00 36.9	-8.9
PLBC	**Pleasant Camp**	**8.43**	**340**	Pn	**Pn**	**13 58 17.0**	**-1.0**
F05D	**White Salmon**	**8.47**	**129**	P		13 58 20.0	
	baz=315,SNR=24						
FNBB	**Fort Nelson**	**8.53**	**29**	Pn	**Pn**	**13 58 21.6**	**+2.1**
FNBB	**Fort Nelson**	**8.53**	**29**	Pn	**Pn**	**13 58 21.6**	**+2.1**
J11D	**J11D**	**8.65**	**158**	P	**Pn**	**13 58 23.2**	**+2.4**
J11D				S	Sn	14 00 07.3	+8.9
COR	**Corvallis**	**8.68**	**141**	P	**Pn**	**13 58 22.8**	**+1.3**
COR	**Corvallis**	**8.68**	**141**		**Pn**	**13 58 22.8**	**+1.3**
COR	**Corvallis**	**8.68**	**141**	⇑P	**Pn**	**13 58 22.5**	**+0.9**
E07A	**Sunnyside**	**8.83**	**121**		**Pn**	**13 58 23.8**	**+0.2**
I02D	**Swisshome**	**8.89**	**145**	P		13 58 27.3	
	baz=329						
H04D	**Lebanon**	**8.96**	**140**	P		13 58 27.1	
	baz=324,SNR=17						
NBC1	**NorthernBC 1**	**8.96**	**24**	Pn	**Pn**	**13 58 25.2**	**-0.1**
NBC1				Sn	**Sn**	**14 00 09.8**	**+3.4**
NBC1				Sg	**Sg**	**14 00 57.1**	**-5.7**
NBC1	**NorthernBC 1**	**8.96**	**24**	Pn	**Pn**	**13 58 26.2**	**+0.9**
G05D	**Wamic, OR**	**9.01**	**132**	P		13 58 28.1	
	baz=317,SNR=22						
C09A	**Chrisman Ranch**	**9.01**	**110**	Pn	**Pn**	**13 58 24.1**	**-2.0**
C09A	**Chrisman Ranch**	**9.01**	**110**	Pn	**Pn**	**13 58 25.7**	**-0.5**
D08A	**Wollman Farm,**	**9.04**	**116**	Pn	**Pn**	**13 58 25.7**	**-0.8**
H04A	**Detroit Lake**	**9.05**	**137**	Pn	**Pn**	**13 58 26.6**	**-0.2**
HAWA	**Hanford**	**9.11**	**121**	Pn	**Pn**	**13 58 26.4**	**-1.0**
HAWA	**Hanford**	**9.11**	**121**	⇓P	**Pn**	**13 58 26.8**	**-0.6**
F07A	**Phinny Hill Vi**	**9.22**	**124**		**Pn**	**13 58 30.0**	**+1.0**
E08A	**Dider Farm, El**	**9.30**	**119**		**Pn**	**13 58 30.1**	**0.0**
WHY	**Whitehorse**	**9.31**	**348**	Pn	**Pn**	**13 58 29.7**	**-0.6**
WHY				Sg	Sn	14 01 02.9	+48
WHY	**Whitehorse**	**9.31**	**348**		**Pn**	**13 58 29.7**	**-0.6**
WHY	**Whitehorse**	**9.31**	**348**	⇑P	**Pn**	**13 58 28.4**	**-1.8**
G37D	**G37D**	**9.34**	**164**	P	**Pn**	**13 58 30.9**	**+0.7**
G37D				S	Sn	14 00 31.9	+17
PNL	**Peninsula**	**9.37**	**332**	Pn	**Pn**	**13 58 30.7**	**-0.3**
NBC2	**NorthernBC 2**	**9.42**	**27**	Pn	**Pn**	**13 58 30.8**	**-0.8**
NBC2				Sg	Sn	14 01 10.2	+53
NBC2	**NorthernBC 2**	**9.42**	**27**	Pn	**Pn**	**13 58 33.0**	**+1.4**
I03D	**Drain, OR**	**9.42**	**145**	P		13 58 33.0	
	baz=329,SNR=14						
NEW	**Newport**	**9.48**	**106**	Pn	**Pn**	**13 58 32.4**	**-0.1**
	1.7nm,0.3s,baz=293,slow=12,SNR=15						
NEW				Lg	Lg	14 01 02.1	
	2.8nm,0.3s,baz=258,slow=19,SNR=4.2						
NEW				LR	LR	14 02 33.8	
	comp=Z,144μm,19.4s,baz=280,slow=40						
NEW	**Newport**	**9.48**	**106**	P	**Pn**	**13 58 32.0**	**-0.5**
NEW	**Newport**	**9.48**	**106**	Pn	**Pn**	**13 58 32.0**	**-0.5**
NEW	**Newport**	**9.48**	**106**	P		13 58 31.8	
	baz=295,SNR=19						
G36D	**G36D**	**9.57**	**162**	P	**Pn**	**13 58 35.1**	**+1.8**
G36D				S	Sn	14 00 36.8	+16
G35D	**G35D**	**9.58**	**160**	P	**Pn**	**13 58 36.5**	**+3.0**
G35D				S	**Sn**	**14 00 27.7**	**+6.4**
G29D	**G29D**	**9.69**	**165**	P	**Pn**	**13 58 38.0**	**+3.0**
G29D				S	Sn	14 00 38.3	+14
I04A	**Tendick Farm,**	**9.69**	**141**	P		13 58 36.0	
	baz=326,SNR=26						
J01E	**Myrtle Point**	**9.69**	**148**	P		13 58 36.6	
	baz=332						
I05D	**Terrebonne, OR**	**9.70**	**135**	P		13 58 36.2	
	baz=321,SNR=12						
YUK7	**Dusty Glacier**	**9.79**	**338**	Pn	**Pn**	**13 58 36.6**	**-0.3**
YUK7				Sg	Sn	14 01 23.1	+56
YUK7	**Dusty Glacier**	**9.79**	**338**	Pn	**Pn**	**13 58 36.6**	**-0.3**
E09A	**Wood Farm, Sta**	**9.79**	**117**	Pn	**Pn**	**13 58 34.8**	**-2.0**
KEBM	**Edson Butte**	**9.83**	**151**		**Pn**	**13 58 39.5**	**+2.1**
NBC3	**Northern

	FS44D	**FS44D**	**11.68**	**156**	P		Pn	13 59 14.5	+12
	FS44D				S		Sn	14 01 31.0	+18
	G05D7	**G05D7**	**11.69**	**168**	P		Pn	13 59 13.8	+12
	G05D7				S		Sn	14 01 34.5	+22
	SWMT	**Swartz Lake**	**11.70**	**104**	Pn		**Pn**	**13 59 02.3**	**-0.7**
	Q23K	**Middleton Isla**	**11.72**	**318**	P			13 59 01.5	
		baz=126							
	Q23K				S			14 01 15.7	
		baz=126							
	G09D	**G09D**	**11.77**	**157**	P		**Pn**	**13 59 06.1**	**+2.4**
	G09D				S		Sn	14 01 24.7	+9.5
	J08A	**Circle Bar Ran**	**11.77**	**130**			**Pn**	**13 59 05.0**	**+1.0**
	FS41D	**FS41D**	**11.82**	**157**	S		Sn	14 01 33.1	+17
	MCARA	**McCarthy VSAT**	**11.83**	**330**			**Pn**	**13 59 05.3**	**+0.7**
	MCARA	**McCarthy VSAT**	**11.83**	**330**	P			13 59 03.3	
		baz=141							
	MCARA				S			14 01 12.5	
		baz=141							
	G04D	**G04D**	**11.83**	**165**	P		Pn	13 59 18.1	+14
	G04D				S		Sn	14 01 39.5	+23
	VRDI	**Verde Repeater**	**11.84**	**329**			**Pn**	**13 59 05.4**	**+0.5**
	PLID	**Pearl Lake**	**11.85**	**118**	Pn		**Pn**	**13 59 03.5**	**-1.7**
	FS16D	**FS16D**	**11.88**	**157**	P		Pn	13 59 13.1	+7.9
	FS16D				S		Sn	14 01 35.2	+17
	FS13D	**FS13D**	**11.91**	**157**	P		Pn	13 59 17.3	+12
	FS13D				S		Sn	14 01 30.3	+12
	FS09D	**FS09D**	**11.96**	**157**	S		Sn	14 01 36.6	+17
	FS10D	**FS10D**	**11.99**	**157**	P		Pn	13 59 18.1	+11
	FS10D				S		Sn	14 01 37.4	+17
	FS06D	**FS06D**	**12.03**	**157**	S		Sn	14 01 35.9	+15
	G03D7	**G03D7**	**12.04**	**162**	P		Pn	13 59 17.3	+10
	G03D7				S		Sn	14 01 35.2	+14
	BMRM	**Bremner River**	**12.04**	**326**	P			13 59 05.6	
		baz=136,SNR=19							
	BMRM				S			14 01 12.3	
		baz=136							
	MSO	**Missoula**	**12.05**	**107**			**Pn**	**13 59 07.5**	**-0.4**
	MSO	**Missoula**	**12.05**	**107**	P			13 59 07.2	
		baz=299,SNR=67							
	N02D	**Trinity Center**	**12.06**	**149**	P			13 59 10.0	
		baz=334,SNR=40							
	N02D				S			14 01 22.3	
		baz=334							
	BVCY	**Beaver Creek**	**12.07**	**337**	Pn		**Pn**	**13 59 07.6**	**-0.4**
	FS07D	**FS07D**	**12.09**	**157**	S		Sn	14 01 40.9	+18
	GLB	**Gilahina Butte**	**12.12**	**329**			**Pn**	**13 59 10.6**	**+2.0**
	MOD	**Modoc Plateau**	**12.12**	**139**	Pn		**Pn**	**13 59 08.3**	**-0.5**
	EYAK	**Cordova Ski Ar**	**12.17**	**323**	P			13 59 07.7	
		baz=132							
	EYAK				S			14 01 20.5	
		baz=132							
	FS04D	**FS04D**	**12.21**	**156**	P		Pn	13 59 20.9	+11
	FS04D				S		Sn	14 01 44.4	+18
	WVOR	**Wild Horse Val**	**12.41**	**133**	⇑P		**Pn**	**13 59 14.4**	**+1.7**
	G01D	**G01D**	**12.43**	**157**	S		Sn	14 01 47.9	+17
	G01D				P		Pn	13 59 23.7	+11
	WDC	**Whiskeytown Da**	**12.47**	**149**	P		**Pn**	**13 59 12.9**	**-0.5**
	WDC	**Whiskeytown Da**	**12.47**	**149**			**Pn**	**13 59 12.9**	**-0.5**
	WDC	**Whiskeytown Da**	**12.47**	**149**	⇓P		**Pn**	**13 59 15.1**	**+1.7**
	N25K	**Chitina, Valde**	**12.49**	**328**	Pn		**Pn**	**13 59 14.7**	**+0.9**
	N25K	**Chitina, Valde**	**12.49**	**328**	P			13 59 12.0	
		baz=138,SNR=28							
	N25K				S			14 01 31.1	
		baz=138							
	OVMT	**Ovando**	**12.51**	**104**	Pn		**Pn**	**13 59 12.8**	**-1.3**
	FID	**Port Fidalgo**	**12.57**	**323**	Pn		**Pn**	**13 59 16.1**	**+1.4**
	O02D	**Mt. Diablo Mer**	**12.76**	**151**	P			13 59 19.3	
		baz=336,SNR=32							
	O02D				S			14 01 41.3	
		baz=336							
	BCAR	**Beaver Creek A**	**12.86**	**337**			**Pn**	**13 59 19.1**	**+0.4**
	KLU	**Klutina**	**12.86**	**326**			**Pn**	**13 59 19.9**	**+1.1**
	L27K	**Beaver Creek,**	**12.86**	**337**	Pn		**Pn**	**13 59 18.4**	**-0.3**
	L27K	**Beaver Creek,**	**12.86**	**337**	P			13 59 16.5	
		baz=149,SNR=11							
	KLU	**Klutina**	**12.86**	**326**	P			13 59 17.3	
		baz=134,SNR=23							
	KLU				S			14 01 42.4	
		baz=134							
	GLI	**Glacier Island**	**12.89**	**322**	P			13 59 17.5	
		baz=130,SNR=22							
	GLI				S			14 01 35.3	
		baz=130							
	O03E	**Paynes Creek**	**12.97**	**148**	P			13 59 21.1	
		baz=333,SNR=9.5							
	O03E				S			14 01 43.9	
		baz=333							
	DAWY	**Dawson**	**13.24**	**343**	Pn		**Pn**	**13 59 23.3**	**-0.6**
	DAWY	**Dawson**	**13.24**	**343**	Pn		**Pn**	**13 59 24.0**	**+0.1**
	PWL	**Port Wells**	**13.36**	**320**			**Pn**	**13 59 25.9**	**+0.4**
	M24K	**Tolsona, Glenn**	**13.38**	**328**	P			13 59 24.7	
		baz=136,SNR=15							
	HRY	**Holter Researc**	**13.38**	**104**			**Pn**	**13 59 26.5**	**+0.5**
	SEW	**Seward**	**13.40**	**316**	Pn		**Pn**	**13 59 25.2**	**-0.9**
	SEW	**Seward**	**13.40**	**316**	P			13 59 24.7	
		baz=122,SNR=16							
	SEW				S			14 01 51.4	
		baz=122							
	LRM	**Limekiln Ridge**	**13.46**	**108**			**Pn**	**13 59 28.2**	**+1.0**
	SCM	**Sheep Creek Mo**	**13.59**	**325**	P		**Pn**	**13 59 29.6**	**+0.9**
	SCM	**Sheep Creek Mo**	**13.59**	**325**			**Pn**	**13 59 29.6**	**+0.9**
	DLMT	**Dillon**	**13.62**	**110**			**Pn**	**13 59 29.4**	**+0.1**
	HLID	**Hailey**	**13.70**	**120**	Pn		**Pn**	**13 59 30.2**	**-0.3**
	HLID	**Hailey**	**13.70**	**120**	P			13 59 30.6	
		baz=311,SNR=73							
	O22K	**Cooper Landing**	**13.71**	**318**	P			13 59 29.1	
		baz=123,SNR=6.9							
	O22K				S			14 01 55.8	
		baz=123							
	KNK	**Knik Glacier**	**13.74**	**322**	P			13 59 29.6	
		baz=128							
	KNK				S			14 01 56.0	
		baz=128							
	K27K	**Chicken**	**13.75**	**339**			**Pn**	**13 59 31.1**	**+0.3**
	BCYI	**Bear Canyon**	**13.78**	**115**			**Pn**	**13 59 31.4**	**-0.1**
	PAX	**Paxson**	**13.78**	**331**	Pn		**Pn**	**13 59 31.5**	**+0.1**
	PAX	**Paxson**	**13.78**	**331**	P		**Pn**	**13 59 30.8**	**-0.5**
	PAX	**Paxson**	**13.78**	**331**			**Pn**	**13 59 30.8**	**-0.5**
	PAX	**Paxson**	**13.78**	**331**	P			13 59 29.9	
		baz=140,SNR=11							
	PAX				S			14 01 54.7	
		baz=140							
	MCMT	**McKenzie Canyo**	**13.78**	**113**			**Pn**	**13 59 32.5**	**+0.9**
	BRSE	**Bradley Lake S**	**13.79**	**314**	P			13 59 30.3	
		baz=118							
	BEKR	**Beckworth**	**13.85**	**144**	Pn		**Pn**	**13 59 34.4**	**+1.9**
	BRLK	**Bradley Lake**	**13.87**	**314**			**Pn**	**13 59 31.0**	**-1.4**
	DOT	**Dot Lake**	**13.92**	**335**	Pn		**Pn**	**13 59 33.1**	**0.0**
	DOT	**Dot Lake**	**13.92**	**335**			**Pn**	**13 59 33.3**	**+0.2**
	CNPM	**China Poot**	**13.92**	**312**	Pn		**Pn**	**13 59 31.9**	**-1.3**
	SML	**Sawmill**	**13.94**	**324**	P			13 59 32.2	
		baz=130,SNR=30							
	KDAK	**Kodiak Island**	**13.95**	**305**	Pn		**Pn**	**13 59 34.0**	**+0.6**
		1.6nm,0.3s,baz=119,slow=9.4,SNR=30							
	KDAK				Sn		**Sn**	**14 02 00.4**	**-8.0**
		0.1nm,0.3s,baz=350,slow=20,SNR=0.5							
	KDAK				LR		LR	14 03 42.2	
		comp=Z,241µm,19.9s,baz=150,slow=32							
	KDAK	**Kodiak Island**	**13.95**	**305***c i*	P		**Pn**	**13 59 33.5**	**+0.1**
	KDAK	**Kodiak Island**	**13.95**	**305**			**Pn**	**13 59 34.1**	**+0.6**
	KDAK	**Kodiak Island**	**13.95**	**305**	⇑P		**Pn**	**13 59 33.6**	**+0.1**
	KDAK	**Kodiak Island**	**13.95**	**305**	P			13 59 33.2	
		baz=108							
	YKA	**Yellowknife Ar**	**13.96**	**33**	Pn		**Pn**	**13 59 31.1**	**-2.6**
		2.1nm,0.3s,baz=219,slow=11,SNR=55							
	YKA				Sn		Sn	14 01 58.5	-10
		0.8nm,0.3s,baz=134,slow=55,SNR=2.7							
	YKA				Lg		Lg	14 03 34.8	
		2.8nm,0.3s,baz=137,slow=31,SNR=7.9							
	YKA				LR		LR	14 05 24.3	
		comp=Z,104µm,21.7s,baz=0.0,slow=39							
	RC01	**Rabbit Creek A**	**14.05**	**320**	Pn		**Pn**	**13 59 33.6**	**-1.3**
	RC01	**Rabbit Creek A**	**14.05**	**320**	P			13 59 33.4	
		baz=125,SNR=15							
	BOZ	**Bozeman (W)**	**14.06**	**108**	P		**Pn**	**13 59 34.0**	**-1.3**
	BOZ	**Bozeman (W)**	**14.06**	**108**			**Pn**	**13 59 34.0**	**-1.3**
	BOZ	**Bozeman (W)**	**14.06**	**108**	P			13 59 35.6	
		baz=302,SNR=25							
	EGMT	**Eagleton**	**14.08**	**97**			**Pn**	**13 59 35.2**	**-0.3**
	EGMT	**Eagleton**	**14.08**	**97**	P			13 59 35.3	
		baz=292,SNR=45							
	PMR	**Palmer**	**14.10**	**322**	P		**Pn**	**13 59 35.2**	**-0.4**
	PMR	**Palmer**	**14.10**	**322**			**Pn**	**13 59 35.2**	**-0.4**
	PMR	**Palmer**	**14.10**	**322**	P			13 59 34.7	
		baz=128,SNR=26							
	GHO	**Glory Hole Cre**	**14.13**	**323**			**Pn**	**13 59 35.9**	**-0.3**
	OHAK	**Old Harbor**	**14.16**	**302**			**Pn**	**13 59 35.5**	**-0.9**
	OHAK	**Old Harbor**	**14.16**	**302**	P			13 59 36.0	
		baz=105,SNR=28							
	SCRK	**Sand Creek**	**14.16**	**336**	Pn		**Pn**	**13 59 36.4**	**-0.1**
	SCRK	**Sand Creek**	**14.16**	**336**	P			13 59 35.2	
		baz=146,SNR=30							
	HOM	**Homer**	**14.17**	**313**	P			13 59 36.2	
		baz=116							
	EGAK	**Eagle**	**14.21**	**342**			**Pn**	**13 59 37.3**	**+0.1**
	EGAK	**Eagle**	**14.22**	**342**	P			13 59 36.3	
		baz=154,SNR=84							
	WAT6	**Susitna Watana**	**14.23**	**327**	P			13 59 35.9	
		baz=134,SNR=14							
	CAPN	**Captain Cook N**	**14.47**	**317**	P			13 59 40.3	
		baz=121,SNR=13							
	MCCM	**Marconi Confer**	**14.62**	**154**	⇑P		**Pn**	**13 59 43.7**	**+0.9**
	SUA	**Susitna One**	**14.67**	**320**	P			13 59 41.5	
		baz=124,SNR=24							
	WAT2	**Susitna Watana**	**14.78**	**327**	P			13 59 43.6	
		baz=133							
	CUT	**Chulitna**	**15.02**	**323**	P			13 59 47.1	
		baz=128,SNR=59							
	EPYK	**Eagle Plains**	**15.07**	**351**	P			13 59 48.3	
		baz=166,SNR=88							
	SPCR	**Spurr Chakacha**	**15.13**	**318**	P			13 59 47.5	
		baz=121,SNR=20							
	GCMT	**Greycliff**	**15.14**	**104**	P		**Pn**	**13 59 50.5**	**+0.6**
	RND	**Reindeer**	**15.17**	**328**	P		**Pn**	**13 59 51.6**	**+1.4**
	RND				pmax	pmax			
		comp=Z,315nm,1.1s							
	RND	**Reindeer**	**15.17**	**328**	Pn		**Pn**	**13 59 51.5**	**+1.4**
	RND				lAmb	lAmb		14 00 05.5	
		comp=Z,315nm,1.1s							
	SKT	**Skwentna**	**15.26**	**321**	P			13 59 49.3	
		baz=124,SNR=38							
	HDA	**Harding Lake**	**15.31**	**333**	P			13 59 50.5	
		baz=140,SNR=41							
	HDA				P			13 59 50.5	
		baz=140,SNR=41							
	ELK	**Elko**	**15.32**	**129**	Pn		**Pn**	**13 59 51.9**	**-0.5**
		comp=Z,0.2nm,0.3s,baz=310,slow=11,SNR=30							
	ELK				LR		LR	14 06 06.2	
		comp=Z,128µm,19.1s,baz=324,slow=39							
	ELK	**Elko**	**15.32**	**129**	P		**Pn**	**13 59 52.3**	**-0.1**
	ELK				pmax	pmax			
		comp=Z,55nm,0.8s							
	ELK	**Elko**	**15.32**	**129**	Pn		**Pn**	**13 59 52.3**	**-0.1**
	H17A	**Grant Village**	**15.36**	**110**	P			13 59 55.6	
		baz=304,SNR=92							
	MCK	**McKinley**	**15.42**	**329**	P			13 59 52.1	
		baz=134,SNR=67							
	KVN	**Kaiserville**	**15.43**	**140**	P		**Pn**	**13 59 55.0**	**+1.2**
	KVN				pmax	pmax			
		comp=Z,123nm,1.0s							
	KVN	**Kaiserville**	**15.43**	**140**	Pn		**Pn**	**13 59 55.0**	**+1.2**
	FLWY	**Flagg Ranch**	**15.47**	**111**	P		**Pn**	**13 59 55.5**	**+1.2**
	FLWY				lAmb	lAmb		14 00 22.2	
		comp=Z,454nm,1.4s							
	IL31		**15.56**	**334**			**Pn**	**13 59 55.9**	**+0.7**
	IL31				lAmb	lAmb		14 00 10.0	
		comp=Z,1µm,1.9s							
	ILAR	**Eielson Array**	**15.56**	**334**	Pn		**Pn**	**13 59 55.0**	**-0.3**
		comp=Z,0.1nm,0.3s,baz=144,slow=9.3,SNR=23							
	ILAR				Lg		Lg	14 04 21.4	
		comp=Z,0.2nm,0.3s,baz=114,slow=9.7,SNR=3.2							
	ILAR				LR		LR	14 05 20.0	
		comp=Z,84µm,20.4s,baz=144,slow=35							
	RYN	**Ryan**	**15.62**	**142**	P		**Pn**	**13 59 56.6**	**+0.2**
	MOOW	**Moose Ponds**	**15.64**	**112**	P		**Pn**	**13 59 56.6**	**0.0**
	TRF	**Thorofare Moun**	**15.68**	**326**			**Pn**	**13 59 58.7**	**+1.7**
	TRF				lAmb	lAmb		14 00 14.4	
		comp=Z,541nm,1.2s							
	TRF	**Thorofare Moun**	**15.68**	**326**	P			13 59 55.8	
		baz=131,SNR=48							
	RLMT	**Red Lodge**	**15.73**	**106**			**Pn**	**13 59 58.0**	**+0.2**
	RLMT	**Red Lodge**	**15.73**	**106**	P			13 59 58.5	
		baz=301,SNR=32							
	PRP	**Porcupine Dome**	**15.81**	**337**	P			13 59 57.9	
		baz=145							
	REDW	**Red Top Meadow**	**15.82**	**114**	P		**Pn**	**14 00 00.7**	**+1.8**
	NVAR	**Mina Array Bea**	**15.88**	**141**	Pn		**Pn**	**13 59 59.7**	**-0.1**
		comp=Z,0.4nm,0.3s,baz=315,slow=10,SNR=44							
	NVAR				LR		LR	14 06 00.6	
		comp=Z,49µm,18.9s,baz=332,slow=37							
	NVAR	**Mina Array Bea**	**15.88**	**141**	P		**Pn**	**14 00 00.6**	**+0.8**
	COLA	**College**	**15.91**	**333***d i*	P		**Pn**	**13 59 59.1**	**-0.7**
	COLA	**College**	**15.91**	**333**	⇑P		**Pn**	**13 59 57.7**	**-2.0**
	COLA	**College**	**15.91**	**333**	P			13 59 57.9	
		baz=139							
	TCOL	**CIGO, UAF Yank**	**15.92**	**333**	P			13 59 57.5	
		baz=139,SNR=41							
	NV11	**Mina Array Sit**	**15.94**	**141**			**Pn**	**14 00 01.4**	**+0.9**
	LHV	**Little Huntoon**	**15.96**	**142**	P		**Pn**	**14 00 01.6**	**+1.1**
	POKR	**Poker Plat Res**	**15.98**	**334**	P			13 59 59.5	
		baz=141,SNR=38							
	PPLA	**Purkeypile**	**16.03**	**323**			**Pn**	**14 00 02.8**	**+1.3**
	PPLA				lAmb	lAmb		14 00 19.4	
		comp=Z,1µm,1.5s							
	PPLA	**Purkeypile**	**16.03**	**323**	P			13 59 59.9	
		baz=126,SNR=28							
	NEA2	**Nenana**	**16.07**	**331**	P			14 00 00.1	
		baz=136,SNR=63							
	SAO	**San Andreas Ge**	**16.31**	**152**	⇑P		**P**	**14 00 09.9**	**+1.8**
	BPAW	**Bear Paw Mtn.**	**16.34**	**328**			**Pn**	**14 00 06.0**	**+0.6**
	BPAW				lAmb	lAmb		14 00 13.6	
		comp=Z,524nm,1.2s							
	BPAW	**Bear Paw Mtn.**	**16.34**	**328**	P			14 00 04.0	
		baz=131,SNR=74							
	MLAC	**Mammoth, Mammo**	**16.38**	**144**	P			14 00 08.3	
		baz=332							
	DHRN	**Dharma Camp**	**16.44**	**16**	Pn		**Pn**	**14 00 04.6**	**-1.9**
	I23K	**Minto, Yukon-K**	**16.55**	**332**	P			14 00 07.0	
		baz=137,SNR=66							
	HWUT	**Hardware Ranch**	**16.57**	**120**			**Pn**	**14 00 07.3**	**-1.3**
	CHUM	**Lake Minchumin**	**16.66**	**326**	P			14 00 07.8	
		baz=128,SNR=93							
	INK	**Inuvik**	**16.77**	**357**	Pn		**Pn**	**14 00 09.5**	**-1.2**
		comp=Z,0.3nm,0.3s,baz=171,slow=15,SNR=22							
	INK				Lg		Lg	14 04 58.4	
		comp=Z,0.8nm,0.3s,baz=249,slow=32,SNR=6.6							
	INK				LR		LR	14 07 22.1	
		comp=Z,92µm,19.1s,baz=172,slow=40							
	INK	**Inuvik**	**16.77**	**357**	Pn		**Pn**	**14 00 09.5**	**-1.2**
	INK	**Inuvik**	**16.77**	**357**	P		**Pn**	**14 00 10.1**	**-0.6**
	INK				pmax	pmax			
		comp=Z,592nm,1.5s							
	INK	**Inuvik**	**16.77**	**357**			**Pn**	**14 00 10.1**	**-0.6**
	INK				lAmb	lAmb		14 00 25.3	
		comp=Z,592nm,1.5s							
	INK	**Inuvik**	**16.77**	**357**	⇑P		**Pn**	**14 00 09.2**	**-1.5**
	LAO	**LASA Array**	**16.82**	**97**			**Pn**	**14 00 09.1**	**-2.4**
	LAO	**LASA Array**	**16.82**	**97**	P			14 00 10.8	
		baz=295,SNR=26							
	MLY	**Manley**	**16.88**	**330**	P			14 00 11.0	
		baz=134,SNR=228							
	BW06	**Boulder Array**	**16.93**	**113**	P		**Pn**	**14 00 13.5**	**+0.4**
	BW06	**Boulder Array**	**16.93**	**113**	P			14 00 14.8	
		baz=308,SNR=106							
	PD31	**Pinedale Array**	**16.93**	**113**	P		**Pn**	**14 00 13.8**	**+0.7**
	PD31	**Pinedale Array**	**16.93**	**113**	⇑P		**Pn**	**14 00 13.8**	**+0.7**
	PDAR	**Pinedale Array**	**16.93**	**113**	Pn		**Pn**	**14 00 13.2**	**+0.1**
		comp=Z,2.3nm,0.3s,baz=310,slow=10.0,SNR=50							
	PDAR				Lg		Lg	14 05 05.7	
		comp=Z,0.0nm,0.3s,baz=336,slow=3.3,SNR=1.5							
	PDAR				LR		LR	14 06 35.6	
		comp=Z,35µm,19.8s,baz=316,slow=37							
	PDAR	**Pinedale Array**	**16.93**	**113**	P		**P**	**14 00 14.0**	**-1.2**
	DUG	**Dugway, Tooele**	**16.94**	**125**	P		**Pn**	**14 00 13.4**	**+0.2**
	DUG				pmax	pmax			
		comp=Z,972nm,2.1s							
	DUG	**Dugway, Tooele**	**16.94**	**125**			**Pn**	**14 00 13.4**	**+0.2**
	DUG				lAmb	lAmb		14 00 33.5	
		comp=Z,972nm,2.1s							
	DUG	**Dugway, Tooele**	**16.94**	**125**	P			14 00 13.1	
		baz=318,SNR=34							
	R11A	**Troy Canyon, C**	**17.08**	**135**	P			14 00 15.4	
		baz=325,SNR=18							
	TIN	**Tinemaha, Big**	**17.11**	**144**	P			14 00 16.9	
		baz=332,SNR=8.2							
	BMAR	**Burnt Mountain**	**17.22**	**342**	P		**P**	**14 00 18.7**	**+0.7**
	VOG	**Valley Oaks Go**	**17.37**	**147**	P			14 00 19.0	
		baz=335							
	DGMT	**Dagmar**	**17.38**	**90**	P			14 00 18.1	
		baz=290							
	GRAC	**Grapevine Rang**	**17.49**	**142**	P			14 00 20.6	
		baz=330,SNR=26							
	FFC	**Flin Flon**	**17.52**	**69**	P		**Pn**	**14 00 18.0**	**-2.2**
	FFC				pmax	pmax			
		comp=Z,488nm,1.2s							
	FFC	**Flin Flon**	**17.52**	**69**	P		**Pn**	**14 00 18.0**	**-2.2**
	FFC				lAmb	lAmb		14 00 29.3	
		comp=Z,488nm,1.2s							
	TTA	**Tatalina**	**17.54**	**320**	P		**Pn**	**14 00 20.2**	**-0.3**
	TTA				pmax	pmax			
		comp=Z,477nm,1.3s							
	TTA	**Tatalina**	**17.54**	**320**			**Pn**	**14 00 20.2**	**-0.3**
	TTA				lAmb	lAmb		14 00 32.1	
		comp=Z,477nm,1.3s							
	TTA	**Tatalina**	**17.54**	**320**	⇑P		**Pn**	**14 00 18.5**	**-1.9**
	TTA	**Tatalina**	**17.54**	**320**	P			14 00 18.9	
		baz=119,SNR=55							
	CWC	**Cottonwood Cre**	**17.72**	**144**	P			14 00 23.9	
		baz=332							
	VES	**Vestal, Richgr**	**17.90**	**147**	P			14 00 25.6	
		baz=335							
	SDPT	**Sand Point**	**17.94**	**294**	P			14 00 26.0	
		baz=90,SNR=14							
	KUKN	**Kugluktuk,NWT**	**17.97**	**20**	P		**Pn**	**14 00 24.4**	**-1.2**
	TPNV	**Topopah Spring**	**17.98**	**139**	⇓P		**P**	**14 00 26.4**	**-0.3**
	TPNV	**Topopah Spring**	**17.98**	**139**	P			14 00 26.2	
		baz=329,SNR=40							
	C36M	**Paulatuk**	**18.05**	**8**	P		**Pn**	**14 00 25.4**	**-1.2**
	C36M	**Paulatuk**	**18.05**	**8**	P		**Pn**	**14 00 25.9**	**-0.8**
	C36M	**Paulatuk**	**18.05**	**8**	P			14 00 24.1	
		baz=194,SNR=34							
	SMMC	**Simmler**	**18.09**	**150**	P			14 00 28.2	
		baz=337							
	PRN	**Pahroc Range**	**18.10**	**136**	P		**P**	**14 00 28.6**	**+0.6**
	PRN	**Pahroc Range**	**18.10**	**136**	⇑P		**Pn**	**14 00 27.1**	**-0.4**
	FURC	**Furnace Creek,**	**18.15**	**141**	P			14 00 29.0	
		baz=330,SNR=9.5							
	ISA	**Isabella, Lake**	**18.27**	**146**	P			14 00 30.3	
		baz=334,SNR=19							
	COLD	**Coldfoot**	**18.32**	**336**	P		**Pn**	**14 00 27.9**	**-2.1**
	COLD	**Coldfoot**	**18.32**	**336**	P			14 00 30.2	
		baz=140,SNR=96							
	IMAR	**Indian Mountai**	**18.46**	**330**	P		**Pn**	**14 00 32.3**	**+0.7**
	PKM	**Mcpherson Peak**	**18.54**	**150**	P			14 00 33.9	
		baz=337,SNR=12							
	ARVC	**Arvin**	**18.64**	**148**	P			14 00 33.9	
		baz=335							
	LRMC	**Laurel Mtn Rad**	**18.72**	**145**	P			14 00 35.6	
		baz=333,SNR=5.7							
	K22A	**Casper**	**18.76**	**109**	P			14 00 35.3	
		baz=306,SNR=5.5							
	SHOC	**Shoshone, Teco**	**18.88**	**141**	P			14 00 36.7	
		baz=330,SNR=7.7							
	SBC	**Santa Barbara**	**18.98**	**151**	P			14 00 38.5	
		baz=338							
	OSI	**Osito Audit: C**	**19.14**	**148**	P			14 00 38.7	
		baz=336							
	EDW2	**Edwards Air Fo**	**19.14**	**146**	P			14 00 39.2	
		baz=334,SNR=12							
	TOLK	**Toolik Lake Re**	**19.27**	**339**			**Pn**	**14 00 42.9**	**+1.3**
	TOLK	**Toolik Lake Re**	**19.27**	**339**	P			14 00 40.8	
		baz=143,SNR=373							
	O20A	**White River Ci**	**19.41**	**117**	P			14 00 43.0	
		baz=313,SNR=68							
	RSSD	**Black Hills**	**19.42**	**102**	P		**P**	**14 00 42.1**	**-0.5**
	RSSD				pmax	pmax			
		comp=Z,948nm,2.3s							
	RSSD	**Black Hills**	**19.42**	**102**	P		**P**	**14 00 42.1**	**-0.5**
	RSSD				lAmb	lAmb		14 00 49.7	
		comp=Z,948nm,2.2s							
	RSSD	**Black Hills**	**19.42**	**102**	⇓P		**P**	**14 00 42.6**	**0.0**
	RSSD	**Black Hills**	**19.42**	**102**	P			14 00 43.3	
		baz=302							
	TUQ	**Turquoise Moun**	**19.42**	**141**	P			14 00 42.2	
		baz=330							
	SCZ2	**Santa Cruz Isl**	**19.42**	**151**	P			14 00 43.3	
		baz=338,SNR=6.3							
	RRX	**Edison Barstow**	**19.51**	**144**	P			14 00 43.7	
		baz=333							
	DECC	**Green Verdugo**	**19.60**	**148**	P			14 00 44.7	
		baz=336							
	FALS	**False Pass**	**19.64**	**292**	P			14 00 41.8	
		baz=87							
	HEC	**Hector,Ludlow**	**19.80**	**142**

IKP In-Ko-Pah, Jac 21.83 145 P 14 01 07.9
baz=334,SNR=45

S22A 4UR Ranch, Cre 21.89 120 P 14 01 09.4
baz=317,SNR=38

FCC Fort Churchill 21.93 57 P **P** **14 01 08.1 -1.2**
FCC Fort Churchill 21.93 57 P **P** **14 01 08.9 -0.5**
FCC pmax pmax
comp=Z,387nm,1.3s

FCC Fort Churchill 21.93 57 P **P** **14 01 08.9 -0.5**
FCC lAmb lAmb 14 01 20.0
comp=Z,387nm,1.2s

CBX Cerro Bola 21.94 146 P **P** **14 01 09.6 -0.1**
GLA Glamis 21.95 142 P 14 01 09.6
baz=332,SNR=23

Q24A Divide 21.95 115 P 14 01 10.0
baz=313,SNR=22

ULM Lac du Bonnet 21.96 80 P **P** **14 01 07.2 -2.6**
comp=Z,49nm,0.8s,baz=289,slow=11,SNR=30
ULM S **S** **14 05 14.0 +1.7**
comp=Z,8.7nm,0.9s,baz=219,slow=19,SNR=0.9
ULM Lg Lg 14 07 37.6
comp=Z,33nm,1.0s,baz=29,slow=22,SNR=2.7
ULM LR LR 14 08 38.3
comp=Z,64µm,20.3s,baz=288,slow=34

ULM Lac du Bonnet 21.96 80 P **P** **14 01 07.7 -2.1**
ULM Lac du Bonnet 21.96 80 *c i*P **P** **14 01 07.8 -2.0**
ULM Lac du Bonnet 21.96 80 P **P** **14 01 08.4 -1.4**
ULM lAmb lAmb 14 01 40.2
comp=Z,331nm,1.3s

ULM Lac du Bonnet 21.96 80 ⇑P **P** **14 01 07.8 -2.0**
ANM Nome 22.00 319 P **P** **14 01 10.9 +0.8**
ANM pmax pmax
comp=Z,538nm,1.5s

ANM MLR MLR
comp=Z,140µm,18.0s

ANM Nome 22.00 319 P **P** **14 01 10.8 +0.8**
ANM lAmb lAmb 14 01 22.0
comp=Z,538nm,1.5s

ANM IAMs_20 IAMs_20 14 09 36.9
comp=Z,140µm,18.0s

ANM Nome 22.00 319 P 14 01 09.9
baz=110,SNR=90

SUSD Miller 22.38 96 IAMs_20 IAMs_20 14 10 04.6
comp=Z,130µm,18.0s

SUSD Miller 22.38 96 P 14 01 14.2
baz=300

W18A Petrified Fore 22.42 129 P 14 01 13.8
baz=323,SNR=22

OGNE Ogallala 22.46 107 P 14 01 15.4
baz=308,SNR=17

RDOG Red Dog Mine 22.59 329 IAMs_20 IAMs_20 14 10 00.5
comp=Z,139µm,18.0s

RDOG Red Dog Mine 22.59 329 P 14 01 15.7
baz=121

SDCO Great Sand Dun 22.61 118 IAMs_20 IAMs_20 14 10 16.3
comp=Z,86µm,20.0s

SDCO Great Sand Dun 22.61 118 P 14 01 17.0
baz=316,SNR=67

AGMN Agassiz Nation 22.62 85 P **P** **14 01 13.6 -3.3**
AGMN lAmb lAmb 14 01 25.1
comp=Z,549nm,1.6s

AGMN Agassiz Nation 22.62 85 P 14 01 14.4
baz=291,SNR=20

X18A Snowflake 22.80 130 P **P** **14 01 18.2 -0.8**
A21K Barrow 22.89 339 P **P** **14 01 21.6 +2.1**
A21K IAMs_20 IAMs_20 14 10 10.8
comp=Z,93µm,19.0s

A21K Barrow 22.89 339 P 14 01 19.9
baz=136,SNR=129

NIKH Nikolski High 23.10 288 P 14 01 21.9
baz=78

SPIA Saint Paul Isl 23.33 299 IAMs_20 IAMs_20 14 09 23.3
comp=Z,92µm,19.0s

SPIA Saint Paul Isl 23.33 299 P 14 01 23.5
baz=87

TNA Tin City 23.35 321 P **P** **14 01 25.3 +1.1**
TNA lAmb lAmb 14 02 37.4
comp=Z,336nm,1.3s

TNA Tin City 23.35 321 ⇓P **P** **14 01 28.9 +4.6**
TNA Tin City 23.35 321 P 14 01 23.9
baz=109,SNR=15

KSCO Kaye Shedlock' 23.36 112 P 14 01 23.3
baz=312,SNR=6.1

EPLO Experimental L 23.46 80 P **P** **14 01 23.4 -2.2**
K31A O'Neill 23.47 100 IAMs_20 IAMs_20 14 10 30.6
comp=Z,83µm,20.0s

T25A Trinidad 23.65 117 IAMs_20 IAMs_20 14 10 49.8
comp=Z,80µm,21.0s

T25A Trinidad 23.65 117 P 14 01 26.8
baz=316,SNR=20

214A Organ Pipe Nat 23.71 139 P 14 01 27.3
baz=331,SNR=15

B35A Bob, Littlefor 23.92 83 P **P** **14 01 27.8 -2.2**
B35A lAmb lAmb 14 01 43.6
comp=Z,203nm,1.1s

B35A IAMs_20 IAMs_20 14 11 00.8
comp=Z,155µm,22.0s

ECSD EROS Data Cent 24.19 96 P **P** **14 01 30.4 -2.2**
ECSD lAmb lAmb 14 01 43.5
comp=Z,223nm,1.0s

ECSD EROS Data Cent 24.19 96 IAMs_20 IAMs_20 14 11 01.5
comp=Z,128µm,20.0s

ECSD EROS Data Cent 24.19 96 P 14 01 32.3
baz=301,SNR=39

ANMO Albuquerque 24.20 124 P **P** **14 01 32.5 -0.4**
comp=Z,15nm,0.8s,baz=311,slow=11,SNR=24
ANMO S **S** **14 05 51.6 +0.2**
comp=Z,6.1nm,1.1s,baz=348,slow=11,SNR=1.6
ANMO LR LR 14 11 23.0
comp=Z,37µm,20.7s,baz=320,slow=38

ANMO Albuquerque 24.20 124 *ce*P **P** **14 01 32.1 -0.8**
ANMO pmax pmax
comp=Z,50nm,1.7s

ANMO MLR MLR
comp=Z,41µm,21.0s

ANMO Albuquerque 24.20 124 P **P** **14 01 31.6 -1.4**
ANMO lAmb lAmb 14 02 58.1
comp=Z,196nm,1.7s

ANMO Albuquerque 24.20 124 ⇓P **P** **14 01 31.8 -1.1**
ANMO Albuquerque 24.20 124 P 14 01 32.1
baz=321

TUC Tucson 24.27 135 ⇓P **P** **14 01 32.9 -0.6**
TUC Tucson 24.27 135 P 14 01 33.6
baz=328

SOLO Sioux Lookout 24.36 78 P **P** **14 01 32.8 -1.3**
BGNE Belgrade 24.53 102 IAMs_20 IAMs_20 14 11 13.8
comp=Z,75µm,18.0s

BGNE Belgrade 24.53 102 P 14 01 34.4
baz=305

Y22D IRIS PASSCAL I 24.64 126 P 14 01 37.2
baz=322

PKLO Pickle Lake 24.95 74 P **P** **14 01 38.0 -1.4**
ATKO Atikokan Iron 25.06 81 P **P** **14 01 39.2 -1.2**
F36A Milaca 25.08 88 P **P** **14 01 39.9 -0.8**
F36A lAmb lAmb 14 01 50.4
comp=Z,197nm,1.1s

F36A IAMs_20 IAMs_20 14 11 13.8
comp=Z,86µm,21.0s

CBKS Cedar Bluff 25.18 108 ⇑P **P** **14 01 42.7 +1.1**
CBKS Cedar Bluff 25.18 108 P 14 01 40.8
baz=310

L34A Svendsen Farm, 25.30 99 IAMs_20 IAMs_20 14 11 26.9
comp=Z,69µm,22.0s

N33A J Bar K, Exete 25.35 102 IAMs_20 IAMs_20 14 11 40.6
comp=Z,68µm,20.0s

EYMN Ely 25.46 83 P **P** **14 01 43.6 -0.5**
EYMN Ely 25.46 83 IAMs_20 IAMs_20 14 12 12.5
comp=Z,97µm,19.0s

EYMN Ely 25.46 83 P 14 01 43.1
baz=293,SNR=98

121A Cookes Peak, D 25.46 130 P 14 01 44.8
baz=325,SNR=22

SPMN Marine on St. 25.83 89 P 14 01 45.2
baz=298,SNR=15

I37A Lemond, Waseca 26.05 92 IAMs_20 IAMs_20 14 12 42.4
comp=Z,123µm,19.0s

N35A Tabor 26.38 100 IAMs_20 IAMs_20 14 12 11.8
comp=Z,74µm,21.0s

TBO Thunder Bay 26.48 80 P **P** **14 01 52.6 -0.7**
EPT El Paso 26.70 129 IAMs_20 IAMs_20 14 12 54.3
comp=Z,85µm,19.0s

KSU1 Kansas State U 26.87 104 IAMs_20 IAMs_20 14 12 40.8
comp=Z,66µm,20.0s

KSU1 Kansas State U 26.87 104 ⇑P **P** **14 01 59.0 +2.1**
KSU1 Kansas State U 26.87 104 P 14 01 56.1
baz=309,SNR=5.3

MSTX Muleshoe 26.89 120 P 14 01 56.3
baz=319

SCIA State Center 27.28 96 P 14 02 00.2
baz=304

MNTX Cornudas Mount 27.32 127 IAMs_20 IAMs_20 14 13 11.6
comp=Z,55µm,20.0s

MNTX Cornudas Mount 27.32 127 P 14 02 00.7
baz=324,SNR=30

RES Resolute Bay 27.37 20 P **P** **14 02 00.7 -0.4**
comp=Z,11nm,0.7s,baz=232,slow=10,SNR=24
RES S **S** **14 06 42.9 +2.0**
comp=Z,12nm,1.0s,baz=234,slow=12,SNR=1.5
RES LR LR 14 13 32.0
comp=Z,115µm,18.4s,baz=238,slow=38

RES Resolute Bay 27.37 20 P **P** **14 02 00.5 -0.5**
RES Resolute Bay 27.37 20 P **P** **14 02 01.0 0.0**
RES pmax pmax
comp=Z,475nm,1.8s

RES Resolute Bay 27.37 20 P **P** **14 02 00.9 0.0**
RES Resolute Bay 27.37 20 ⇑P **P** **14 02 00.5 -0.5**
GTO Geraldton 27.56 76 P **P** **14 02 01.8 -1.2**
D41A Chassel 27.64 83 P **P** **14 02 03.2 -0.5**
COWI Conover 27.70 85 P **P** **14 02 02.8 -1.6**
COWI lAmb lAmb 14 02 11.9
comp=Z,97nm,0.9s

COWI PcP **PcP** **14 05 18.2 -2.7**
COWI IAMs_20 IAMs_20 14 13 09.9
comp=Z,120µm,21.0s

N38A Joes South For 27.91 98 IAMs_20 IAMs_20 14 13 18.9
comp=Z,69µm,19.0s

ADK Adak 28.00 289 P **P** **14 02 07.0 +0.1**
ADK pmax pmax
comp=Z,822nm,2.0s

ADK Adak 28.00 289 P **P** **14 02 07.0 +0.1**
PNPO Pukaskwa Natio 28.41 78 P **P** **14 02 09.6 -0.9**
P38A Dawn 28.42 100 IAMs_20 IAMs_20 14 13 25.6
comp=Z,65µm,22.0s

VIMO Victor Mine 28.48 69 P **P** **14 02 10.2 -0.9**
WMOK Wichita Mounta 28.54 114 P **P** **14 02 11.2 -0.7**
WMOK pmax pmax
comp=Z,76nm,1.0s

WMOK MLR MLR
comp=Z,38µm,20.0s

WMOK Wichita Mounta 28.54 114 P **P** **14 02 11.2 -0.7**
WMOK lAmb lAmb 14 02 31.3
comp=Z,76nm,1.0s

WMOK Wichita Mounta 28.54 114 ⇑P **P** **14 02 11.5 -0.4**
WMOK Wichita Mounta 28.54 114 P 14 02 10.6
baz=316,SNR=35

JFWS Jewell Farm 28.58 92 P 14 02 10.9
baz=302

I42A Draeger Farm, 28.91 89 IAMs_20 IAMs_20 14 13 34.9
comp=Z,84µm,20.0s

E43A Lone Tree Farm 28.91 83 P **P** **14 02 13.7 -1.3**
E43A lAmb lAmb 14 02 23.5
comp=Z,98nm,1.2s

E43A IAMs_20 IAMs_20 14 12 33.5
comp=Z,61µm,19.0s

P40A Paris 29.39 99 IAMs_20 IAMs_20 14 14 04.9
comp=Z,70µm,20.0s

N41A Harden Midland 29.43 96 IAMs_20 IAMs_20 14 14 14.9
comp=Z,107µm,20.0s

TUL1 Leonard 29.45 108 P 14 02 19.1
baz=313

ABTX Abilene, Hawle 29.62 118 P 14 02 19.8
baz=319

S39A Bolivar 29.75 103 IAMs_20 IAMs_20 14 14 27.0
comp=Z,67µm,18.0s

R40A Maddies Statio 30.02 101 IAMs_20 IAMs_20 14 14 25.7
comp=Z,63µm,21.0s

TX31 Lajitas Ar. Si 30.10 127 ⇓P **P** **14 02 25.3 -0.5**
TX32 Lajitas Array 30.10 127 P **P** **14 02 24.6 -1.2**
TXAR Lajitas Array 30.10 127 P **P** **14 02 25.7 -0.1**
comp=Z,14nm,0.9s,baz=327,slow=7.6,SNR=47
TXAR S **S** **14 07 26.2 +1.5**
comp=Z,0.1nm,0.3s,baz=136,slow=26,SNR=0.8
TXAR LR LR 14 15 13.5
comp=Z,46µm,18.3s,baz=0.0,slow=38

HHAR Hobbs 30.31 106 IAMs_20 IAMs_20 14 14 47.8
comp=Z,47µm,20.0s

KAPO Kapuskasing 30.36 75 P **P** **14 02 26.8 -1.0**
KAPO Kapuskasing 30.36 75 ⇑P **P** **14 02 32.1 +4.2**
L44A Lake County Fo 30.43 91 P 14 02 26.1
baz=303

HDIL Hopedale 30.48 95 P 14 02 27.6
baz=305

MGMO Mountain Grove 30.74 103 IAMs_20 IAMs_20 14 14 58.1
comp=Z,64µm,19.0s

CCM Cathedral Cave 30.79 100 IAMs_20 IAMs_20 14 14 58.2
comp=Z,64µm,19.0s

CCM Cathedral Cave 30.79 100 ⇑P **P** **14 02 30.8 -1.0**
CCM Cathedral Cave 30.79 100 P 14 02 30.6
baz=309

P43A Skaggs, Pawnee 30.88 96 IAMs_20 IAMs_20 14 15 10.3
comp=Z,92µm,20.0s

U40A Yellville 30.91 105 P **P** **14 02 31.5 -1.3**
U40A lAmb lAmb 14 02 44.0
comp=Z,168nm,1.2s

U40A IAMs_20 IAMs_20 14 15 05.6
comp=Z,53µm,20.0s

U40A Yellville 30.91 105 P 14 02 31.8
baz=311,SNR=44

SLM Saint Louis 31.05 99 IAMs_20 IAMs_20 14 15 05.9
comp=Z,71µm,20.0s

GLMI Grayling 31.11 84 IAMs_20 IAMs_20 14 15 00.7
comp=Z,87µm,19.0s

GLMI Grayling 31.11 84 P 14 02 33.0
baz=299

W39A Magazine 31.14 107 P 14 02 36.0
baz=313

JCT Junction City 31.18 121 IAMs_20 IAMs_20 14 15 38.0
comp=Z,71µm,19.0s

JCT Junction City 31.18 121 ⇓P **P** **14 02 36.5 +1.2**
JCT Junction City 31.18 121 P 14 02 33.0
baz=321

WHTX Lake Whitney, 31.31 116 P 14 02 34.4
baz=318

FVM French Village 31.34 100 IAMs_20 IAMs_20 14 15 16.7
comp=Z,61µm,19.0s

Q44A Meyer Farm, Va 31.64 97 IAMs_20 IAMs_20 14 15 34.4
comp=Z,76µm,19.0s

FCAR Ozark Folk Cen 31.66 105 P **P** **14 02 38.0 -1.4**
FCAR lAmb lAmb 14 02 47.5
comp=Z,80nm,0.9s

LPIG La Paz 31.70 142 LR LR 14 14 27.9
comp=Z,25µm,20.6s,baz=332,slow=35

MIAR Mount Ida 31.71 108 P **P** **14 02 38.7 -1.1**
MIAR pmax pmax
comp=Z,63nm,1.1s

MIAR MLR MLR
comp=Z,46µm,19.0s

MIAR Mount Ida 31.71 108 P **P** **14 02 38.7 -1.1**
MIAR lAmb lAmb 14 02 51.9
comp=Z,63nm,1.1s

MIAR IAMs_20 IAMs_20 14 16 45.0
comp=Z,46µm,19.0s

MIAR Mount Ida 31.71 108 ⇓P **P** **14 02 41.5 +1.6**
MIAR Mount Ida 31.71 108 P 14 02 40.2
baz=314,SNR=18

SFIN Lafayette 31.95 93 P 14 02 41.0
baz=305,SNR=18

WHAR Wooly Hollow 31.96 106 IAMs_20 IAMs_20 14 16 20.6
comp=Z,59µm,18.0s

EUNU Eureka 32.05 13 P **P** **14 02 42.7 +0.2**
EUNU Eureka 32.05 13 P **P** **14 02 42.2 -0.3**
EUNU lAmb lAmb 14 04 10.1
comp=Z,207nm,1.6s

W41B Gary Mavity, V 32.07 106 P 14 02 42.5
baz=313

LCAR Lake Charles 32.13 103 IAMs_20 IAMs_20 14 15 51.8
comp=Z,58µm,18.0s

435B Jarrell 32.15 117 P 14 02 43.8
baz=320

X40A Basin Creek Fa 32.19 107 IAMs_20 IAMs_20 14 16 37.7
comp=Z,64µm,18.0s

X40A Basin Creek Fa 32.19 107 P 14 02 42.7
baz=314

S44A Carbondale 32.24 99 IAMs_20 IAMs_20 14 15 53.5
comp=Z,59µm,20.0s

SIUC Southern Illin 32.25 99 IAMs_20 IAMs_20 14 15 54.5
comp=Z,57µm,19.0s

SUNO Sudbury Onapin 32.26 79 P **P** **14 02 42.8 -1.8**
OLIL Olney 32.31 97 IAMs_20 IAMs_20 14 15 55.6
comp=Z,69µm,21.0s

P46A Rosedale 32.33 94 IAMs_20 IAMs_20 14 15 43.6
comp=Z,72µm,19.0s

KILO Kirkland Lake 32.43 75 P **P** **14 02 45.1 -0.9**
PARMO Parma 32.59 101 IAMs_20 IAMs_20 14 16 04.0
comp=Z,58µm,19.0s

L48A N Adams 32.73 89 IAMs_20 IAMs_20 14 15 51.8
comp=Z,66µm,22.0s

HENM Henderson Moun 32.73 101 IAMs_20 IAMs_20 14 16 08.1
comp=Z,57µm,19.0s

HBAR Harrisburg 32.77 104 IAMs_20 IAMs_20 14 16 12.8
comp=Z,57µm,18.0s

PVMO Portageville 32.79 101 IAMs_20 IAMs_20 14 16 10.1
comp=Z,58µm,20.0s

PENMO Penman 32.81 101 IAMs_20 IAMs_20 14 16 10.7
comp=Z,58µm,20.0s

PEBM Pemiscott Bayo 32.88 102 IAMs_20 IAMs_20 14 16 13.7
comp=Z,53µm,20.0s

GNAR Gosnell 32.89 102 IAMs_20 IAMs_20 14 16 12.8
comp=Z,52µm,21.0s

LPAR Lepanto 32.96 103 IAMs_20 IAMs_20 14 16 16.7
comp=Z,50µm,19.0s

HICK Hickman 32.99 101 IAMs_20 IAMs_20 14 16 16.5
comp=Z,55µm,19.0s

AAM Ann Arbor 33.02 88 P 14 02 50.7
baz=303

T45A Paducah 33.04 100 IAMs_20 IAMs_20 14 16 17.8
comp=Z,69µm,19.0s

USIN University of 33.05 97 IAMs_20 IAMs_20 14 16 27.8
comp=Z,79µm,19.0s

NATX Nacogdoches 33.07 113 P 14 02 51.1
baz=317

Z41A Richland Creek 33.07 109 P 14 02 50.9
baz=315

833A Chaparral WMA, 33.10 123 P 14 02 52.1
baz=323,SNR=7.1

LNXT Lenox 33.12 102 IAMs_20 IAMs_20 14 16 20.9
comp=Z,55µm,21.0s

GLAT Glass 33.13 101 IAMs_20 IAMs_20 14 16 21.3
comp=Z,56µm,21.0s

MATQ Matagami 33.15 72 P 14 02 52.4
baz=294

CCAR Cane Creek 33.22 107 IAMs_20 IAMs_20 14 17 19.9
comp=Z,57µm,18.0s

HALT Halls 33.34 102 IAMs_20 IAMs_20 14 16 27.7
comp=Z,51µm,22.0s

X43A Marvell 33.34 105 P 14 02 53.3
baz=313

HDBT Hernando Brdge 33.40 103 IAMs_20 IAMs_20 14 16 29.6
comp=Z,39µm,19.0s

CLRN Clyde River 33.48 33 P **P** **14 02 54.6 -0.4**
MET Memphis--Engin 33.50 103 IAMs_20 IAMs_20 14 16 33.1
comp=Z,44µm,20.0s

EEO Eldee 33.65 78 P **P** **14 02 55.2 -1.5**
LG4Q La Grande 4 33.73 64 P **P** **14 02 56.3 -1.0**
WCI Wyandotte Cave 33.74 96 P 14 02 56.1
baz=308

BILL Bilibino 33.74 323 *d i*P **P** **14 02 56.4 -0.9**
BILL *e**PP **sP** **14 03 00.9 +1.6**
BILL *e**SP **pP** **14 03 03.8 +5.1**
BILL *i* 14 04 13.0
BILL *i* PPP PPP 14 04 21.6
BILL *i* S **S** **14 08 18.9 -1.7**
BILL *e*SS **SnSn** **14 10 28.7 +4.5**
BILL pmax pmax
comp=Z,153nm,1.7s

BILL MLR MLR
comp=Z,42µm,17.0s

BILL Bilibino 33.74 323 IAMs_20 IAMs_20 14 16 36.3
comp=Z,41µm,19.0s

LSQQ Lebel-sur-Quev 33.83 73 P 14 02 58.2
baz=295

I51A Listowel 33.85 83 P 14 02 55.0
baz=301

P49A Miami Univ. Ec 33.93 92 P 14 02 58.8
baz=306

W45A Hickory Valley 33.93 103 IAMs_20 IAMs_20 14 16 46.5
comp=Z,44µm,22.0s

VLDQ Val d'Or 33.96 74 P **P** **14 02 56.6 -2.8**
VLDQ Val d'Or 33.96 74 IAMs_20 IAMs_20 14 15 06.8
comp=Z,59µm,18.0s

FRB Frobisher Bay 33.98 45 P **P** **14 02 59.2 -0.1**
FRB Frobisher Bay 33.98 45 ⇑P **P** **14 03 00.7 +1.3**
T47A Sharon Grove 34.01 98 IAMs_20 IAMs_20 14 16 47.3
comp=Z,68µm,20.0s

TULEG Thule 34.02 22 ⇑*i*P **P** **14 02 60.0 +0.3**
TULEG *i* 14 04 14.8
TULEG IAMs_20 IAMs_20 14 17 03.4
comp=Z,131µm,16.1s

TULEG Thule 34.02 22 P **P** **14 02 57.0 -2.6**
TULEG lAmb lAmb 14 03 01.6
comp=Z,172nm,1.6s

TULEG IAMs_20 IAMs_20 14 16 29.6
comp=Z,78µm,19.0s

TULEG Thule 34.02 22 ⇑P **P** **14 02 59.8 +0.1**
WVT Waverly 34.12 100 IAMs_20 IAMs_20 14 17 01.2
comp=Z,57µm,20.0s

WVT Waverly 34.12 100 P 14 03 01.0
baz=310

OXF Oxford 34.23 104 IAMs_20 IAMs_20 14 17 07.4
comp=Z,53µm,18.0s

OXF Oxford 34.23 104 P 14 03 00.8
baz=313,SNR=10

143A Socs Landing, 34.29 108 IAMs_20 IAMs_20 14 18 22.3
comp=Z,40µm,18.0s

M51A Elyria 34.47 88 P 14 03 03.1
baz=304

KVTX Kingsville 34.51 121 IAMs_20 IAMs_20 14 17 33.3
comp=Z,54µm,18.0s

SADO Sadowa 34.52 81 LR LR 14 16 16.4
comp=Z,35µm,19.5s,baz=324,slow=35

SADO Sadowa 34.52 81 P **P** **14 03 03.4 -0.9**
Y45A Yeager Farm, C 34.59 105 IAMs_20 IAMs_20 14 17 17.1
comp=Z,49µm,19.0s

ACSO Alum Creek Sta 34.60 90 P 14 03 03.1
baz=305

ALGO Algonquin Park 34.60 78 P 14 03 01.9
baz=299

PLAL Pickwick Lake 34.72 102 IAMs_20 IAMs_20 14 17 19.4
comp=Z,46µm,20.0s

G54A Lake Saint Pet 34.85 79 P 14 03 06.5
baz=300

H53A Bobcaygeon 34.96 81 P 14 03 05.6
baz=300

V48A Smith Brothers 34.99 100 IAMs_20 IAMs_20 14 17 29.3
comp=Z,65µm,19.0s

CHGQ Chibougamau 35.00 70 P 14 03 06.3
baz=295

CLTN Cedars of Leba 35.06 99 IAMs_20 IAMs_20 14 17 30.2
comp=Z,66µm,21.0s

U49A Red Boiling Sp 35.13 98 IAMs_20 IAMs_20 14 17 34.0
comp=Z,71µm,20.0s

VBMS Vicksburg 35.16 108 IAMs_20 IAMs_20 14 18 48.3
comp=Z,45µm,20.0s

VBMS Vicksburg 35.16 108 P 14 03 09.2
baz=315

L53A Girard 35.32 86 P 14 03 09.8
baz=303

M53A WI Miller and 35.35 87 P 14 03 10.6
baz=304

O52A Adamsville 35.38 89 IAMs_20 IAMs_20 14 17 25.0
comp=Z,76µm,22.0s

ERPA Erie 35.40 85 IAMs_20 IAMs_20 14 16 41.2
comp=Z,41µm,20.0s

ERPA Erie 35.40 85 P 14 03 11.6
baz=303

P52A Corning 35.48 90 IAMs_20 IAMs_20 14 16 56.7
comp=Z,42µm,21.0s

P52A Corning 35.48 90 P 14 03 10.4
baz=306

N53A Lisbon 35.60 88 IAMs_20 IAMs_20 14 17 28.8
comp=Z,65µm,20.0s

J54A Appleton 35.61 83 IAMs_20 IAMs_20 14 16 59.6
comp=Z,67µm,20.0s

GRQ Grand Remous 35.62 76 P **P** **14 03 13.1 -0.7**
PLVO Plevna 35.65 79 P **P** **14 03 13.2 -0.8**
PLVO IAMs_20 IAMs_20 14 16 25.6
comp=Z,66µm,18.0s

D55A Sainte-Anne-du 35.65 75 P 14 03 10.6
baz=298

O53A New Philadelph 35.69 89 P 14 03 11.3
baz=305

X48A Hartselle 35.71 101 P **P** **14 03 11.6 -3.0**
X48A IAMs_20 IAMs_20 14 17 50.4
comp=Z,42µm,22.0s

146A Union 35.73 106 IAMs_20 IAMs_20 14 18 17.4
comp=Z,47µm,19.0s

MEDO Medina 35.78 83 IAMs_20 IAMs_20 14 17 04.2
comp=Z,63µm,20.0s

SWET Sewanee 35.88 99 IAMs_20 IAMs_20 14 17 55.9
comp=Z,71µm,20.0s

M54A Oil Creek Stat 35.94 86 P **P** **14 03 14.4 -2.2**

M54A IAMs_20 IAMs_20 14 17 50.5
comp=Z,66µm,18.0s
M54A Oil Creek Stat 35.94 86 P 14 03 13.2
baz=304
Z47A Carrollton 35.94 104 IAMs_20 IAMs_20 14 18 09.7
comp=Z,48µm,18.0s
P53A Whipple 36.03 90 IAMs_20 IAMs_20 14 17 41.2
comp=Z,73µm,21.0s
N54A Moraine State 36.04 87 P 14 03 15.4
baz=304
D56A ZEC Mazanza, M 36.07 75 P 14 03 16.1
baz=298
VABQ Val Des Bois 36.11 77 P **P 14 03 16.2 -1.8**
J55A Hilton 36.12 82 IAMs_20 IAMs_20 14 16 14.1
comp=Z,47µm,19.0s
E56A St. Veronique 36.15 76 P 14 03 15.1
baz=299
W50A Signal Mountai 36.27 99 IAMs_20 IAMs_20 14 18 08.3
comp=Z,74µm,21.0s
GAC Glen Almond 36.29 77 P **P 14 03 17.8 -1.7**
OTT Ottawa 36.30 78 P **P 14 03 18.8 -0.8**
Q53A Leroy 36.32 91 P 14 03 19.1
baz=307,SNR=6.5
MMNY Mt. Morris Dam 36.35 83 IAMs_20 IAMs_20 14 17 22.3
comp=Z,71µm,19.0s
346A Big Creek Wild 36.38 108 IAMs_20 IAMs_20 14 19 48.6
comp=Z,43µm,18.0s
KGNO Kingston 36.42 80 P **P 14 03 20.3 -0.3**
V51A Loudon 36.47 97 IAMs_20 IAMs_20 14 18 26.4
comp=Z,66µm,19.0s
Y49A Blount Mountai 36.49 102 IAMs_20 IAMs_20 14 18 15.3
comp=Z,49µm,22.0s
FPAL Fort Paine 36.53 100 IAMs_20 IAMs_20 14 18 16.0
comp=Z,58µm,22.0s
TRQ Mont Tremblant 36.59 76 P **P 14 03 21.5 -0.7**
CPCT Cooper Cave 36.60 98 IAMs_20 IAMs_20 14 18 28.7
comp=Z,61µm,19.0s
Q54A Coxs Mills 36.67 90 IAMs_20 IAMs_20 14 18 15.3
comp=Z,75µm,20.0s
LRAL Lakeview Retre 36.70 103 IAMs_20 IAMs_20 14 18 32.9
comp=Z,45µm,19.0s
LRAL Lakeview Retre 36.70 103 P 14 03 21.7
baz=314
J56A Wolcott 36.70 81 P 14 03 20.8
baz=302
F57A Harrington 36.71 76 P 14 03 20.2
baz=306
K56A Middlesex 36.73 82 P 14 03 20.8
baz=303
WBO Williamsburg 36.77 78 P **P 14 03 23.0 -0.6**
KIP Kipapa 36.81 225 IAMs_20 IAMs_20 14 13 49.2
comp=Z,45µm,20.0s
M56A Emporium 36.87 85 P **P 14 03 23.0 -1.5**
M56A Emporium 36.87 85 P 14 03 24.4
baz=304
MCWV Mont Chateau 36.89 88 P 14 03 25.7
baz=306
G57A Newington 36.89 78 P 14 03 24.4
baz=301
L56A Greenwood 36.89 83 P 14 03 23.4
baz=303
TKL Tuckaleechee C 36.92 97 LR LR 14 18 50.6
comp=Z,57µm,21.0s,baz=313,slow=37
TKL Tuckaleechee C 36.92 97 IAMs_20 IAMs_20 14 18 39.3
comp=Z,65µm,20.0s
X51A Calhoun 36.97 99 IAMs_20 IAMs_20 14 18 29.8
comp=Z,67µm,22.0s
H57A Richville 36.98 79 P 14 03 24.9
baz=301,SNR=5.4
R54A Victor 37.06 91 P 14 03 23.7
baz=308,SNR=21
I57A Carthage 37.09 80 P 14 03 26.3
baz=302
LATQ La Tuque 37.09 73 P 14 03 25.6
baz=298
S54A Dingess, Beckl 37.10 92 P 14 03 24.6
baz=308
N56A West Decatur 37.12 86 P 14 03 25.2
baz=305
D58A Chemin du LacG 37.17 73 P 14 03 26.3
baz=299
W52A Murphy 37.20 98 IAMs_20 IAMs_20 14 18 47.6
comp=Z,59µm,21.0s
K57A Scipio Center 37.21 82 P 14 03 27.0
baz=303
E58A La Victoria 37.29 75 P 14 03 26.9
baz=300
UPNV Upernavik 37.30 28 *i* P **P 14 03 27.9 +0.2**
O56A Blue Knob Stat 37.33 87 P **P 14 03 26.2 -2.2**
O56A IAmb IAmb 14 05 06.3
comp=Z,144nm,1.5s
O56A Blue Knob Stat 37.33 87 P 14 03 26.0
baz=305
LONY Lake Ozonia 37.39 78 P 14 03 27.6
baz=301
L57A Andrews Acres 37.41 83 P 14 03 27.3
baz=304
DPQ Saint Jean 37.43 74 P **P 14 03 28.6 -0.6**
G58A Ormstown 37.44 77 P 14 03 28.9
baz=301
SSPA Standing Stone 37.54 86 P 14 03 28.5
baz=305
R55A Marlinton 37.54 90 IAMs_20 IAMs_20 14 18 51.4
comp=Z,50µm,19.0s
R55A Marlinton 37.54 90 P 14 03 31.1
baz=307,SNR=8.3
M57A Sunshine Farm, 37.61 84 P **P 14 03 29.1 -1.7**
P56A Dayton Farm, R 37.61 88 P 14 03 29.2
baz=306
M57A Sunshine Farm, 37.61 84 P 14 03 29.2
baz=304
Z51A Franklin 37.62 101 IAMs_20 IAMs_20 14 18 59.0
comp=Z,44µm,19.0s
I58A Old Forge 37.64 80 P 14 03 29.3
baz=302
Q56A Snyder Ridge, 37.67 89 P **P 14 03 29.7 -1.6**
Q56A IAmb IAmb 14 05 07.4
comp=Z,141nm,1.4s
Q56A Snyder Ridge, 37.67 89 P 14 03 30.4
baz=307
N57A Milroy 37.68 85 P 14 03 30.1
baz=305
K58A Earlville 37.73 81 P 14 03 31.3
baz=303
H58A Gabriels 37.74 78 P 14 03 31.3
baz=302
BINY Binghamton 37.83 82 IAMs_20 IAMs_20 14 18 46.4
comp=Z,62µm,19.0s
BINY Binghamton 37.83 82 P 14 03 31.3
baz=304
D59A Saint-Raymond 37.84 73 P 14 03 32.4
baz=299
250A Grady 37.88 104 IAMs_20 IAMs_20 14 19 20.1
comp=Z,43µm,18.0s
BG3 Lake Jocassee 37.88 97 IAMs_20 IAMs_20 14 19 10.6
comp=Z,49µm,20.0s
FRNY Flat Rock 37.88 77 IAMs_20 IAMs_20 14 18 01.5
comp=Z,38µm,19.0s
R56A Bull Pasture M 37.91 90 P 14 03 32.3
baz=307
H59A Cadyville 37.92 77 P 14 03 32.1
baz=301
Y52A Lilburn 37.93 99 IAMs_20 IAMs_20 14 19 10.2
comp=Z,66µm,21.0s
O57A Amberson 37.94 86 P 14 03 32.4
baz=306
NCB Newcomb 37.95 79 IAMs_20 IAMs_20 14 17 35.4
comp=Z,52µm,18.0s
BRAL Brewton 37.98 105 IAMs_20 IAMs_20 14 19 36.8
comp=Z,56µm,19.0s
BRAL Brewton 37.98 105 P 14 03 32.4
baz=315
L58A Harry Jones Me 38.00 82 P 14 03 32.7
baz=304
M58A Price's Panora 38.00 84 P 14 03 31.6
baz=304
BLA Blacksburg 38.02 92 P 14 03 34.3
baz=308,SNR=16
J59A Piesco 38.05 80 IAMs_20 IAMs_20 14 17 05.1
comp=Z,52µm,21.0s
J59A Piesco 38.05 80 P 14 03 33.3
baz=302,SNR=5.8
NEEM North Greenlan 38.06 20 ⇑*i* P **P 14 03 34.9 +0.3**
NEEM IAmb IAmb 14 03 36.1
comp=Z,182nm,1.2s
NEEM IAMs_20 IAMs_20 14 19 20.6
comp=Z,87µm,19.9s
NEEM North Greenlan 38.06 20 ⇑P **P 14 03 34.5 0.0**

P57A Homestead Farm 38.13 87 P 14 03 34.1
baz=306,SNR=8.0
N58A Sunbury 38.15 85 P **P 14 03 33.3 -2.0**
N58A IAmb IAmb 14 03 42.8
comp=Z,82nm,1.0s
N58A Sunbury 38.15 85 P 14 03 33.6
baz=305
Q57A Strasburg 38.15 88 P 14 03 33.8
baz=307
K59A Cooperstown 38.21 81 P 14 03 35.6
baz=303
I59A Olmsteadville 38.26 79 P 14 03 34.8
baz=302
S56A Natural Bridge 38.26 91 P 14 03 35.7
baz=308
F60A Warwick 38.29 75 P 14 03 34.6
baz=300
152A Waverly Hall 38.34 101 IAMs_20 IAMs_20 14 19 09.2
comp=Z,44µm,22.0s
E60A Ste Agathe de 38.39 74 P 14 03 35.6
baz=300
L59A Walton 38.42 82 P 14 03 35.7
baz=304
D60A Saint Jean D'O 38.43 73 P 14 03 36.6
baz=300
O58A Lewisberry 38.44 86 P 14 03 36.7
baz=306
MOQ Mont Orford 38.44 76 P **P 14 03 37.9 0.0**
MOQ Mont Orford 38.44 76 P **P 14 03 36.6 -1.2**
G60A Masonville 38.51 76 P 14 03 36.2
baz=301
R57A Stanardsville 38.53 89 P 14 03 37.5
baz=307
M59A Waymart 38.54 83 P 14 03 36.6
baz=304
H60A Morristown 38.56 77 P 14 03 37.5
baz=302
I60A Shoreham 38.59 78 P 14 03 37.2
baz=302
S57A Dark Hollow, R 38.59 90 P 14 03 38.0
baz=308
GOGA Godfrey 38.60 99 IAMs_20 IAMs_20 14 19 30.0
comp=Z,66µm,20.0s
GOGA Godfrey 38.60 99 P 14 03 38.1
baz=312
ACCN Adirondack Com 38.60 79 IAMs_20 IAMs_20 14 18 06.8
comp=Z,58µm,19.0s
VT1 Waterbury 38.65 77 IAMs_20 IAMs_20 14 18 05.1
comp=Z,48µm,18.0s
Q58A Fox Den Farm, 38.66 88 P 14 03 38.8
baz=307
N59A State Game Lan 38.69 84 P 14 03 38.8
baz=305,SNR=5.6
KMSC Kings Mountain 38.77 95 P 14 03 40.0
baz=311
O59A Robesonia 38.78 85 P 14 03 39.2
baz=306
HODGE Hodges 38.80 97 IAMs_20 IAMs_20 14 19 37.0
comp=Z,67µm,20.0s
J60A Lant Hill Farm 38.83 79 P 14 03 39.3
baz=303
F61A St Evariste 38.86 74 P 14 03 39.8
baz=301
T57A Hurt 38.88 91 IAMs_20 IAMs_20 14 19 33.7
comp=Z,60µm,19.0s
G61A St-Isidore-de- 38.90 75 P 14 03 39.2
baz=301
SDMD Soldier's Deli 38.91 87 IAMs_20 IAMs_20 14 19 59.2
comp=Z,65µm,20.0s
E61A Lac Etchemin 38.93 73 P 14 03 41.8
baz=300
L60A Shokan 39.04 81 P 14 03 40.4
baz=304
352A Blakely 39.04 103 IAMs_20 IAMs_20 14 19 54.8
comp=Z,36µm,22.0s
P59A Jarrettsville 39.04 86 P 14 03 40.9
baz=306
H61A Lyndonville 39.05 77 P 14 03 41.3
baz=302
451A Vernon 39.15 105 IAMs_20 IAMs_20 14 20 12.9
comp=Z,38µm,21.0s
M60A Port Jervis 39.16 82 P 14 03 42.7
baz=305
I61A Oroboro, Fairl 39.20 77 P 14 03 42.3
baz=302
LBNH Lisbon 39.20 77 IAMs_20 IAMs_20 14 18 11.5
comp=Z,50µm,18.0s
K61A Williamstown 39.24 80 P 14 03 43.7
baz=304
S58A Poland Farm, P 39.24 90 P 14 03 43.5
baz=308
O60A Telford 39.26 84 P 14 03 42.7
baz=306
JSRW J. Sargeant Re 39.30 89 P **P 14 03 42.2 -2.8**
CBN Corbin Frederi 39.30 88 IAMs_20 IAMs_20 14 19 17.8
comp=Z,58µm,21.0s
CBN Corbin Frederi 39.30 88 P 14 03 42.2
baz=308
J61A Chester 39.31 78 P 14 03 44.5
baz=303
ODNJ Ogdensburg 39.31 83 IAMs_20 IAMs_20 14 20 32.8
comp=Z,60µm,18.0s
WUPA West Chester U 39.36 85 P **P 14 03 43.3 -2.3**
WUPA IAMs_20 IAMs_20 14 19 20.2
comp=Z,60µm,21.0s
154A Montrose 39.37 100 IAMs_20 IAMs_20 14 20 04.2
comp=Z,57µm,21.0s
JSC Jenkinsville 39.38 96 IAMs_20 IAMs_20 14 20 16.4
comp=Z,52µm,19.0s
P60A Greenville 39.42 85 P 14 03 44.5
baz=306
H62A Milan 39.49 76 P 14 03 45.2
baz=302
TRNY Table Rock, Ra 39.51 82 IAMs_20 IAMs_20 14 18 09.0
comp=Z,41µm,21.0s
G62A West of Eustis 39.53 75 P 14 03 44.7
baz=302
BRNJ Basking Ridge 39.57 83 IAMs_20 IAMs_20 14 19 58.5
comp=Z,59µm,18.0s
M61A Granite Spring 39.70 82 P 14 03 45.8
baz=305
I62A Tamworth 39.76 77 IAMs_20 IAMs_20 14 18 38.2
comp=Z,48µm,20.0s
I62A Tamworth 39.76 77 P 14 03 46.8
baz=303
FFD Franklin Falls 39.79 78 IAMs_20 IAMs_20 14 17 58.0
comp=Z,56µm,21.0s
PAL Palisades 39.79 82 IAMs_20 IAMs_20 14 17 56.3
comp=Z,36µm,19.0s
J62A Henniker 39.83 78 P 14 03 48.0
baz=303
K62A Royalston 39.88 79 IAMs_20 IAMs_20 14 18 43.4
comp=Z,48µm,19.0s
TIGA Tifton 39.88 102 P 14 03 49.4
baz=314
L62A Suffield 39.97 80 IAMs_20 IAMs_20 14 20 47.0
comp=Z,64µm,21.0s
H63A New Sharon 40.12 75 P 14 03 51.3
baz=305
F63A Nahmakanta, Br 40.13 73 IAMs_20 IAMs_20 14 21 03.8
comp=Z,60µm,19.0s
F63A Nahmakanta, Br 40.13 73 P 14 03 52.7
baz=301
G63A Kingsbury 40.13 74 P 14 03 50.4
baz=302
553A Crawfordville 40.25 104 IAMs_20 IAMs_20 14 20 22.0
comp=Z,39µm,22.0s
K63A Dunstable 40.30 79 IAMs_20 IAMs_20 14 18 55.5
comp=Z,49µm,18.0s
HRV Adam Dziewonsk 40.38 79 IAMs_20 IAMs_20 14 19 07.7
comp=Z,42µm,18.0s
SEY Seymchan 40.47 317 LR LR 14 21 25.9
comp=Z,68µm,18.3s,baz=68,slow=37
SEY Seymchan 40.47 317 *c i* P **P 14 03 55.2 +0.8**
SFJD Kangerlussuaq 40.47 37 *i* P **P 14 03 54.9 +0.5**
SFJD *i* 14 05 31.6
SFJD IAMs_20 IAMs_20 14 18 35.6
comp=Z,39µm,14.2s
SFJD Kangerlussuaq 40.47 37 *i* P **P 14 03 54.9 +0.5**
SFJD *i* 14 05 31.5
SFJD MLR MLR
comp=Z,39µm,14.0s
SFJD Kangerlussuaq 40.47 37 P **P 14 03 53.7 -0.7**
SFJD IAmb IAmb 14 04 03.1
comp=Z,154nm,1.1s
SFJD Kangerlussuaq 40.47 37 ⇑P **P 14 03 54.9 +0.5**
F64A Sherman 40.49 73 P **P 14 03 52.1 -2.7**
F64A Sherman 40.49 73 P 14 03 53.6
baz=302
E64A Bridgewater 40.51 72 P 14 03 54.7
baz=301
WES Weston 40.59 79 IAMs_20 IAMs_20 14 19 15.4
comp=Z,44µm,19.0s
H64A Troy 40.62 75 P 14 03 55.9
baz=302
UNM Universidad Na 40.70 130 IAMs_20 IAMs_20 14 22 01.1
comp=Z,46µm,19.0s
L63A North Scituate 40.71 80 IAMs_20 IAMs_20 14 19 23.6
comp=Z,48µm,18.0s
L63A North Scituate 40.71 80 P 14 03 54.5
baz=305
BCX Boston College 40.71 79 IAMs_20 IAMs_20 14 19 18.6
comp=Z,44µm,19.0s
NHSC New Hope 40.84 97 P 14 03 57.0
baz=312
CNNC Cliffs of the 40.85 92 IAMs_20 IAMs_20 14 20 45.0
comp=Z,50µm,20.0s
NUUK Nuuk 41.01 41 *i* P **P 14 03 60.0 +1.1**
NUUK IAMs_20 IAMs_20 14 21 12.2
comp=Z,68µm,14.4s
NUUK Nuuk 41.01 41 ⇓P **P 14 04 00.3 +1.5**
257A Skidaway Islan 41.08 99 IAMs_20 IAMs_20 14 21 07.6
comp=Z,46µm,20.0s
M64A Tiverton 41.14 80 IAMs_20 IAMs_20 14 22 26.8
comp=Z,25µm,18.0s
L64A Middleborough 41.14 79 IAMs_20 IAMs_20 14 20 19.9
comp=Z,45µm,18.0s
V61A Roper 41.31 91 IAMs_20 IAMs_20 14 20 56.1
comp=Z,55µm,20.0s
G65A Princeton 41.31 73 P 14 03 59.2
baz=302
456A Hilliard 41.34 101 IAMs_20 IAMs_20 14 21 16.6
comp=Z,43µm,19.0s
M65A Busby, Falmout 41.48 80 IAMs_20 IAMs_20 14 18 56.8
comp=Z,34µm,21.0s
PET Petropavlovsk 41.49 301 *ce* P **P 14 04 04.0 +1.0**
PET pmax pmax
PET MLR MLR
comp=Z,392nm,1.7s
comp=Z,15µm,16.0s
PET Petropavlovsk 41.49 301 P **P 14 04 03.1 +0.2**
PET IAMs_20 IAMs_20 14 19 30.7
comp=Z,36µm,20.0s
PET Petropavlovsk 41.49 301 ⇑P **P 14 04 03.9 +0.9**
EMMW East Machias 41.64 74 IAMs_20 IAMs_20 14 20 42.9
comp=Z,31µm,19.0s
GGN Saint George 41.79 73 P **P 14 04 04.4 -1.1**
GGN Saint George 41.79 73 IAMs_20 IAMs_20 14 22 35.0
comp=Z,48µm,18.0s
PEA0B Petropavlovsk- 41.97 301 P **P 14 04 07.5 +0.6**
PEA0B pmax pmax
comp=Z,334nm,1.4s
PEA0B Petropavlovsk- 41.97 301 P **P 14 04 07.5 +0.6**
PEA0B IAmb IAmb 14 04 09.2
comp=Z,334nm,1.4s
PEA0B IAMs_20 IAMs_20 14 19 28.0
comp=Z,33µm,20.0s
PETK Petropavlovsk- 41.97 301 P **P 14 04 06.7 -0.2**
comp=Z,82nm,1.1s,baz=72,slow=11,SNR=29
PETK LR LR 14 19 49.3
comp=Z,33µm,20.8s,baz=58,slow=34
PETK Petropavlovsk- 41.97 301 P **P 14 04 06.9 0.0**
PETK Petropavlovsk- 41.97 301 P **P 14 04 06.9 0.0**
656A Willston 41.99 103 IAMs_20 IAMs_20 14 21 34.9
comp=Z,30µm,22.0s
DY2G Dye2 42.28 36 *i* P **P 14 04 09.8 +0.2**
DY2G IAMs_20 IAMs_20 14 21 33.0
comp=Z,60µm,17.5s
DY2G Dye2 42.28 36 ⇑P **P 14 04 09.7 +0.2**
SUMG Summit 42.45 26 ⇑*i* P **P 14 04 11.1 +0.1**
SUMG IAmb IAmb 14 04 19.5
comp=Z,164nm,1.3s
SUMG IAMs_20 IAMs_20 14 22 11.4
comp=Z,50µm,16.5s
SUMG Summit 42.45 26 P **P 14 04 09.5 -1.5**
SUMG pmax pmax
comp=Z,2µm,2.7s
SUMG MLR MLR
comp=Z,50µm,18.0s
SUMG Summit 42.45 26 P **P 14 04 09.5 -1.5**
SUMG IAMs_20 IAMs_20 14 22 17.0
comp=Z,50µm,18.0s
SUMG Summit 42.45 26 ⇑P **P 14 04 10.9 -0.1**
MA2 Magadan 42.51 312 LR LR 14 21 54.0
comp=Z,30µm,18.4s,baz=70,slow=36
MA2 Magadan 42.51 312 *ce* P **P 14 04 12.2 +1.0**
MA2 pmax pmax
comp=Z,317nm,1.7s
MA2 MLR MLR
comp=Z,27µm,17.0s
MA2 Magadan 42.51 312 IAMs_20 IAMs_20 14 22 57.7
comp=Z,31µm,18.0s
MA2 Magadan 42.51 312 ⇑P **P 14 04 12.2 +1.0**
LMN Caledonia Moun 42.60 71 P **P 14 04 11.4 -0.7**
NOR Nord 42.60 11 *i* P **P 14 04 12.1 +0.3**
NOR *i* 14 05 56.9
NOR IAMs_20 IAMs_20 14 23 05.2
comp=Z,142µm,20.4s
NOR Nord 42.60 11 *i* P **P 14 04 12.0 +0.3**
NOR *i* 14 05 56.8
NOR MLR MLR
comp=Z,140µm,20.0s
ICESG Greenland Ices 43.51 31 ⇑*i* P **P 14 04 19.7 +0.1**
ICESG *i* 14 06 09.5
ICESG IAMs_20 IAMs_20 14 22 22.4
comp=Z,46µm,17.6s
ICESG Greenland Ices 43.51 31 ⇑P **P 14 04 19.1 -0.5**
DWPF Disney Wildern 43.56 103 IAMs_20 IAMs_20 14 22 46.6
comp=Z,25µm,20.0s
HAL Halifax 43.98 71 IAMs_20 IAMs_20 14 23 17.6
comp=Z,48µm,18.0s
SKR Severo-Kuril's 44.01 299 *ce* P **P 14 04 23.3 -0.1**
NRS Narsarsuaq 44.92 43 IAMs_20 IAMs_20 14 22 28.0
comp=Z,61µm,14.0s
NRS Narsarsuaq 44.92 43 IAMs_20 IAMs_20 14 22 07.1
comp=Z,43µm,19.0s
DRLN Deer Lake 44.94 63 P **P 14 04 30.4 -0.5**
DRLN Deer Lake 44.94 63 ⇑P **P 14 04 34.9 +4.0**
060A Indiantown 44.99 103 IAMs_20 IAMs_20 14 22 44.5
comp=Z,26µm,21.0s
DAG Danmarks Havn 45.02 18 ⇑*i* P **P 14 04 30.4 -0.8**
DAG IAmb IAmb 14 04 32.1
comp=Z,61nm,1.0s
DAG IAMs_20 IAMs_20 14 23 52.1
comp=Z,120µm,19.3s
DAG Danmarks Havn 45.02 18 ⇑*i* P **P 14 04 30.4 -0.8**
DAG pmax pmax
comp=Z,61nm,1.0s
DAG MLR MLR
comp=Z,120µm,19.0s
TIXI Tiksi 45.04 334 *ce* P **P 14 04 31.2 -0.2**
TIXI pmax pmax
comp=Z,482nm,2.5s
TIXI Tiksi 45.04 334 IAMs_20 IAMs_20 14 26 43.0
comp=Z,41µm,20.0s
TIXI Tiksi 45.04 334 ⇑P **P 14 04 31.1 -0.2**
ISOG Isortoq, Green 45.36 36 *i* P **P 14 04 33.8 -0.2**
ISOG IAMs_20 IAMs_20 14 23 39.6
comp=Z,52µm,15.2s
061Z Ochoppi 45.53 105 IAMs_20 IAMs_20 14 24 10.7
comp=Z,35µm,21.0s
TEIG Tepich 45.60 117 ⇑P **P 14 04 38.4 +2.0**
ANGG Ammassalik, Gr 45.81 35 ⇑*i* P **P 14 04 36.7 -0.8**
ANGG IAMs_20 IAMs_20 14 23 52.8
comp=Z,59µm,16.8s
ANGG Ammassalik, Gr 45.81 35 ⇑P **P 14 04 36.9 -0.7**
DBG Daneborg 46.15 21 ⇑*i* P **P 14 04 40.2 +0.1**
DBG IAmb IAmb 14 04 41.4
comp=Z,81nm,1.0s
DBG IAMs_20 IAMs_20 14 26 46.0
comp=Z,68µm,12.6s
DBG Daneborg 46.15 21 ⇑P **P 14 04 39.9 -0.3**
SOR Soroa 46.59 110 P **P 14 04 42.6 -1.7**
SOR pmax pmax
comp=Z,96nm,1.2s
SOR MLR MLR
comp=Z,8µm,18.0s
SOR Soroa 46.59 110 P **P 14 04 42.6 -1.7**
SOR IAmb IAmb 14 04 55.6
comp=Z,96nm,1.2s
KBS Kingsbay 47.83 9 IAMs_20 IAMs_20 14 26 04.8
comp=Z,111µm,17.0s
KBS Kingsbay 47.83 9 *i* P **P 14 04 52.4 -0.8**
KBS pmax pmax

	comp=Z,91nm,1.6s									
KBS	**Kingsbay**	**47.83**	**9**		IAMs_20	IAMs_20	14 26 00.8			
	comp=Z,40µm,19.0s									
KBS	**Kingsbay**	**47.83**	**9**	*eP*		**P**	**14 04 53.6**	**+0.4**		
KBS				IVmB_BB			14 05 03.0			
	comp=Z,3µm,5.3s									
KBS				*e*PP		**PP**	**14 06 44.5**	**-0.1**		
KBS				*e*S		**S**	**14 11 50.5**	**+0.7**		
KBS				IVMs_BB		IVMs_BB	14 27 43.2			
	comp=Z,19µm,15.1s									
SCO	**Scoresbysund**	**48.03**	**25**	*i* P		**P**	**14 04 55.0**	**+0.2**		
SCO				IAMs_20		IAMs_20	14 25 52.3			
	comp=Z,69µm,15.4s									
SCO	**Scoresbysund**	**48.03**	**25**	*i* P		**P**	**14 04 55.0**	**+0.2**		
SCO				MLR		MLR				
	comp=Z,69µm,15.0s									
SJNN	**Saint John's**	**48.54**	**62**	P		**P**	**14 04 58.6**	**-0.5**		
SPA0	**Spitsbergen Ar**	**48.91**	**9**	*e*P		**P**	**14 05 01.5**	**0.0**		
SPA0				*e*S		**S**	**14 12 03.6**	**-1.5**		
SPA0				IVMs_BB		IVMs_BB	14 28 42.1			
	comp=Z,17µm,13.9s									
HSPB	**Hornsund (broa**	**49.88**	**9**	*e*P		**P**	**14 05 11.2**	**+2.2**		
HSPB				*e*PP		PP	14 07 11.1	+7.8		
HSPB				*e*S		**S**	**14 12 26.3**	**+7.5**		
HSPB				*e*L		L	14 27 01.9			
	comp=Z,43µm,19.7s									
HSPB	**Hornsund (broa**	**49.88**	**9**	*e*P		**P**	**14 05 09.8**	**+0.8**		
HSPB				*e*S		**S**	**14 12 20.7**	**+2.0**		
HSPB				IVMs_BB		IVMs_BB	14 27 09.7			
	comp=Z,14µm,20.5s									
YAK	**Yakutsk**	**50.10**	**323**	*c i*P		**P**	**14 05 10.9**	**+0.1**		
YAK				*e**PP		**pwP**	**14 05 19.3**	**+4.5**		
YAK				*e*			14 07 06.8			
YAK				*e*S		**S**	**14 12 23.9**	**+1.8**		
YAK				*e**SS		sS	14 12 43.3	+18		
YAK				*e*SSS		SSS	14 17 13.6			
YAK				pmax		pmax				
	comp=Z,211nm,1.3s									
YAK				pmax		pmax				
	comp=N,109nm,1.5s									
YAK				pmax		pmax				
	comp=E,130nm,1.3s									
YAK				pmax		pmax				
	comp=Z,6µm,7.5s									
YAK				pmax		pmax				
	comp=N,2µm,6.1s									
YAK				pmax		pmax				
	comp=E,2µm,6.1s									
YAK				smax		smax				
	comp=N,2µm,7.9s									
YAK				smax		smax				
	comp=E,7µm,10.9s									
YAK				MLR		MLR				
	comp=Z,45µm,15.0s									
YAK				MLR		MLR				
	comp=E,25µm,13.0s									
YAK				MLR		MLR				
	comp=N,13µm,12.0s									
YAK	**Yakutsk**	**50.10**	**323**	P		**P**	**14 05 10.5**	**-0.3**		
YAK				IAMs_20		IAMs_20	14 26 36.5			
	comp=Z,33µm,20.0s									
YAK	**Yakutsk**	**50.10**	**323**	⇑P		**P**	**14 05 10.8**	**0.0**		
NKL	**Nikolayevsk**	**50.62**	**309**	*e*P		**P**	**14 05 14.3**	**-0.6**		
NKL				*e*			14 07 13.8			
NKL				*e*S		**S**	**14 12 27.0**	**-2.6**		
NKL				pmax		pmax				
	comp=E,52nm,0.8s									
NKL				pmax		pmax				
	comp=N,100nm,0.7s									
NKL				pmax		pmax				
	comp=Z,135nm,1.5s									
NKL				smax		smax				
	comp=E,255nm,3.4s									
NKL				smax		smax				
	comp=N,1.0nm,4.7s									
BBSR	**BB Station**	**50.96**	**85**	IAMs_20		IAMs_20	14 26 56.3			
	comp=Z,30µm,18.0s									
JMIC	**Jan Mayen**	**50.98**	**21**	*e*P		**P**	**14 05 17.5**	**+0.1**		
JMIC				*e*S		**S**	**14 12 42.3**	**+8.2**		
JMIC				IVMs_BB		IVMs_BB	14 26 49.1			
	comp=Z,13µm,15.0s									
TYV	**Tymovskoe**	**51.01**	**306**	*e*P		**P**	**14 05 17.4**	**-0.4**		
TYV				*e*S		**S**	**14 12 37.1**	**+2.1**		
TYV				pmax		pmax				
	comp=Z,52nm,1.5s									
TYV				pmax		pmax				
	comp=Z,3µm,6.3s									
TYV				smax		smax				
	comp=N,23nm,2.1s									
TYV				smax		smax				
	comp=E,10µm,10.0s									
TYV				MLR		MLR				
	comp=N,20µm,14.0s									
TYV				MLR		MLR				
	comp=Z,25µm,14.0s									
HOPEN	**Hopen**	**51.19**	**7**	*e*P		**P**	**14 05 18.8**	**0.0**		
HOPEN				*e*PP		**PP**	**14 07 16.7**	**+1.6**		
HOPEN				*e*S		**S**	**14 12 37.0**	**+0.1**		
HOPEN				IVMs_BB		IVMs_BB	14 28 28.7			
	comp=Z,14µm,14.1s									
BORG	**Borgarnes**	**51.89**	**31**	IAMs_20		IAMs_20	14 27 57.5			
	comp=Z,26µm,18.0s									
BJO1	**Bjornoya**	**52.52**	**10**	*e*P		**P**	**14 05 28.4**	**-0.4**		
BJO1				*e*S		**S**	**14 12 57.8**	**+2.6**		
MTDJ	**Mount Denham**	**53.35**	**108**	⇑P		**P**	**14 05 37.2**	**+1.5**		
YSS	**Yuzh-Sakhalins**	**53.37**	**302**	*e*P		**P**	**14 05 35.1**	**-0.3**		
YSS				*e*			14 07 44.2			
YSS				*e*PPP		PPP	14 08 42.2			
YSS				*e*S		**S**	**14 13 02.9**	**-4.5**		
YSS				pmax		pmax				
	comp=Z,5µm,6.1s									
YSS				smax		smax				
	comp=E,7µm,13.4s									
YSS				MLR		MLR				
	comp=Z,21µm,16.0s									
YSS				MLR		MLR				
	comp=E,14µm,14.0s									
YSS	**Yuzh-Sakhalins**	**53.37**	**302**	IAMs_20		IAMs_20	14 31 04.4			
	comp=Z,26µm,18.0s									
YSS	**Yuzh-Sakhalins**	**53.37**	**302**	⇑P		**P**	**14 05 35.2**	**-0.2**		
BOAB	**BOACO BROADBAN**	**53.38**	**120**	P		**P**	**14 05 32.5**	**-3.4**		
BOAB				PcP		**PcP**	**14 06 41.9**	**-1.3**		
BOAB				IAMs_20		IAMs_20	14 29 24.3			
	comp=Z,23µm,21.0s									
BOAB	**BOACO BROADBAN**	**53.38**	**120**	⇑P		**P**	**14 05 37.4**	**+1.5**		
GTBY	**Guantanamo Bay**	**53.49**	**105**	IAMs_20		IAMs_20	14 28 33.7			
	comp=Z,28µm,22.0s									
GTBY	**Guantanamo Bay**	**53.49**	**105**	⇑P		**P**	**14 05 39.7**	**+3.1**		
YUK	**Yuzh-Kuril'sk**	**53.53**	**297**	*e*P		**P**	**14 05 37.3**	**+0.6**		
YUK				*e*			14 07 39.3			
YUK				*e*PPP		PPP	14 08 46.7			
YUK				*e*S		**S**	**14 13 10.9**	**+1.2**		
YUK				*i* SS		**SKiKP**	**14 16 50.5**	**-1.8**		
YUK				pmax		pmax				
	comp=Z,778nm,4.1s									
YUK				pmax		pmax				
	comp=E,85nm,0.5s									
YUK				MLR		MLR				
	comp=N,10µm,12.0s									
YUK				MLR		MLR				
	comp=Z,9µm,13.0s									
YUK				MLR		MLR				
	comp=E,2µm,8.0s									
GRNR	**Gornyy**	**54.17**	**309**	⇑*i*P		**P**	**14 05 41.5**	**+0.2**		
GRNR				*e*S		**S**	**14 13 22.6**	**+4.4**		
GRNR				pmax		pmax				
	comp=N,20nm,1.2s									
GRNR				pmax		pmax				
	comp=E,20nm,1.2s									
GRNR				pmax		pmax				
	comp=Z,50nm,1.1s									
GRNR				smax		smax				
	comp=N,1.0nm,1.0s									
GRNR				MLR		MLR				
	comp=E,11µm,15.0s									
GRNR				MLR		MLR				
	comp=N,9µm,18.0s									
GRNR				MLR		MLR				
	comp=Z,14µm,17.0s									
XMAS	**Kiritimati**	**54.22**	**213**	IAMs_20		IAMs_20	14 23 44.3			
	comp=Z,22µm,20.0s									
GRTK	**Grand Turk**	**54.71**	**100**	IAMs_20		IAMs_20	14 29 07.8			
	comp=Z,29µm,20.0s									
JTS	**Las Juntas de**	**55.56**	**121**	*i* P		**P**	**14 05 48.5**	**-3.3**		
JTS				pmax		pmax				
	comp=Z,14nm,1.0s									
JTS				MLR		MLR				
	comp=Z,7µm,20.0s									
NRIK	**Noril'sk**	**56.09**	**345**	P		**P**	**14 05 53.7**	**-1.2**		
	comp=Z,97nm,1.2s,baz=36,slow=7.1,SNR=86									
NRIK				S		**S**	**14 13 43.6**	**+0.1**		
	comp=Z,1.2nm,0.4s,baz=310,slow=0.8,SNR=1.4									
NRIK				LR		LR	14 33 35.0			
	comp=Z,11µm,18.1s,baz=48,slow=40									
NRIK	**Noril'sk**	**56.09**	**345**	*ce*P		**P**	**14 05 54.1**	**-0.7**		
NRIK				pmax		pmax				
	comp=Z,170nm,1.4s									
NRIK	**Noril'sk**	**56.09**	**345**	P		**P**	**14 05 53.5**	**-1.4**		
ERM	**Erimo**	**56.35**	**297**	*ce*P		**P**	**14 05 56.5**	**-0.6**		
ERM				pmax		pmax				
	comp=Z,35nm,1.0s									
ERM				MLR		MLR				
	comp=Z,14µm,17.0s									
ZEA	**Zeya**	**56.44**	**316**	*e*P		**P**	**14 05 57.2**	**-0.3**		
ZEA				*e*			14 08 05.0			
ZEA				*e*			14 09 26.8			
ZEA				*e*S		**S**	**14 13 55.7**	**+7.2**		
ZEA				*e*SS		**SS**	**14 17 39.0**	**+4.3**		
ZEA				pmax		pmax				
	comp=E,20nm,1.2s									
ZEA				pmax		pmax				
	comp=N,20nm,1.4s									
ZEA				pmax		pmax				
	comp=Z,50nm,1.3s									
ZEA				pmax		pmax				
	comp=E,900nm,6.5s									
ZEA				pmax		pmax				
	comp=N,700nm,7.3s									
ZEA				pmax		pmax				
	comp=Z,2µm,6.7s									
ZEA				pmax		pmax				
	comp=E,700nm,7.5s									
ZEA				pmax		pmax				
	comp=N,400nm,7.2s									
ZEA				pmax		pmax				
	comp=Z,1µm,7.3s									
ZEA				smax		smax				
	comp=N,2µm,11.0s									
ZEA				smax		smax				
	comp=E,4µm,14.3s									
ZEA				MLR		MLR				
	comp=E,9µm,15.0s									
ZEA				MLR		MLR				
	comp=N,12µm,14.0s									
ZEA				MLR		MLR				
	comp=Z,21µm,15.0s									
SDDR	**Presa de Saban**	**56.53**	**102**	IAMs_20		IAMs_20	14 29 31.0			
	comp=Z,27µm,22.0s									
SDDR	**Presa de Saban**	**56.53**	**102**	⇑P		**P**	**14 05 57.6**	**-1.1**		
HAMF	**Hammerfest**	**56.65**	**10**	IVmB_BB			14 06 05.1			
	comp=Z,4µm,3.1s									
HAMF				*e*S		**S**	**14 13 49.5**	**-1.3**		
HAMF				IVMs_BB		IVMs_BB	14 29 44.7			
	comp=Z,11µm,22.9s									
JEW	**Eniwo**	**56.75**	**298**	⇓P		**P**	**14 06 04.0**	**+4.0**		
TRO	**Tromso**	**57.04**	**12**	*e*P		**P**	**14 06 01.4**	**-0.2**		
TRO				*e*PP		**PP**	**14 08 10.3**	**+2.7**		
TRO				*e*S		**S**	**14 13 57.1**	**+1.2**		
TRO				IVMs_BB		IVMs_BB	14 29 14.1			
	comp=Z,11µm,24.4s									
JETT	**Jettan, Norway**	**57.30**	**12**	*e*P		**P**	**14 06 03.5**	**0.0**		
KLR	**Kul'dur**	**57.45**	**310**	*ce*P		**P**	**14 06 04.5**	**-0.3**		
KLR				pmax		pmax				
	comp=Z,218nm,2.5s									
KLR				MLR		MLR				
	comp=Z,20µm,18.0s									
H11N2	**WAKE ISLAND Hy**	**57.60**	**261**	T		T	15 08 36.8			
	baz=40,slow=76									
H11N3	**WAKE ISLAND Hy**	**57.60**	**261**	T		T	15 08 36.0			
	baz=40,slow=76									
H11N1	**WAKE ISLAND Hy**	**57.62**	**261**	T		T	15 08 38.1			
	baz=40,slow=76									
LOF	**Lofoten**	**57.63**	**15**	*e*P		**P**	**14 06 06.1**	**+0.3**		
LOF				IVmB_BB			14 06 11.1			
	comp=Z,6µm,5.9s									
LOF				*e*S		**S**	**14 14 03.6**	**-0.2**		
LOF				*e*S		S	14 14 06.7	+2.9		
LOF				IVMs_BB		IVMs_BB	14 30 55.1			
	comp=Z,15µm,18.1s									
KEV	**Kevo**	**57.84**	**9**	P		**P**	**14 06 06.2**	**-1.0**		
KEV				pmax		pmax				
	comp=Z,118nm,1.5s									
KEV				MLR		MLR				
	comp=Z,33µm,19.0s									
KEV	**Kevo**	**57.84**	**9**	P		**P**	**14 06 06.2**	**-1.0**		
KEV				IAmb		IAmb	14 06 20.6			
	comp=Z,118nm,1.5s									
KEV				IAMs_20		IAMs_20	14 32 11.2			
	comp=Z,33µm,19.0s									
KEV	**Kevo**	**57.84**	**9**	⇓P		**P**	**14 06 06.5**	**-0.7**		
TEY	**Ternei**	**57.86**	**303**	⇑*e*P		**P**	**14 06 07.0**	**-0.7**		
TEY				*e*			14 14 11.2			
TEY				pmax		pmax				
	comp=Z,20nm,1.6s									
TEY				pmax		pmax				
	comp=E,200nm,13.4s									
TEY				pmax		pmax				
	comp=N,100nm,6.3s									
TEY				pmax		pmax				
	comp=Z,500nm,5.9s									
TEY				pmax		pmax				
	comp=E,300nm,13.1s									
TEY				pmax		pmax				
	comp=Z,200nm,18.7s									
TEY				MLR		MLR				
	comp=E,300nm,22.0s									
TEY				MLR		MLR				
	comp=N,300nm,20.0s									
TEY				MLR		MLR				
	comp=Z,600nm,20.0s									
ARCES	**ARCESS Array B**	**57.90**	**10**	P		**P**	**14 06 05.9**	**-1.8**		
	comp=Z,10nm,0.8s,baz=347,slow=5.3,SNR=15									
ARCES				S		**S**	**14 14 09.0**	**+1.7**		
	comp=Z,3.1nm,1.0s,baz=313,slow=14,SNR=1.3									
ARCES				LR		LR	14 31 53.0			
	comp=Z,25µm,21.1s,baz=345,slow=37									
ARCES	**ARCESS Array B**	**57.90**	**10**	P		**P**	**14 06 06.4**	**-1.3**		
ARCES				pmax		pmax				
	comp=Z,66nm,1.6s									
ARCES	**ARCESS Array B**	**57.90**	**10**	P		**P**	**14 06 06.4**	**-1.3**		
ARCES				IAmb		IAmb	14 07 08.8			
	comp=Z,66nm,1.6s									
STEI	**Steigen**	**58.09**	**14**	*e*P		**P**	**14 06 08.7**	**-0.2**		
STEI				*e*S		**S**	**14 14 09.7**	**0.0**		
STEI				*e*SS		**SS**	**14 18 04.2**	**+4.2**		
STEI				IVMs_BB		IVMs_BB	14 31 29.4			
	comp=Z,16µm,18.8s									
KTK1	**Kautokeino**	**58.15**	**11**	*e*P		**P**	**14 06 09.1**	**-0.4**		
KTK1				*e*S		**S**	**14 14 08.1**	**-2.6**		
JTM	**Tenmabayashi**	**58.34**	**297**	⇑P		**P**	**14 06 09.8**	**-1.4**		
FAUS	**Fauske**	**58.59**	**15**	*e*P		**P**	**14 06 12.2**	**-0.3**		
FAUS				*e*S		**S**	**14 14 18.2**	**+1.8**		
FAUS				*e*SS		**SS**	**14 18 14.8**	**+6.8**		
FAUS				IVMs_BB		IVMs_BB	14 31 35.4			
	comp=Z,17µm,18.1s									
H11S1	**WAKE ISLAND Hy**	**58.64**	**260**	T		T	15 09 52.9			
	baz=40,slow=76									
H11S2	**WAKE ISLAND Hy**	**58.65**	**260**	T		T	15 09 57.6			
	baz=40,slow=76									
H11S3	**WAKE ISLAND Hy**	**58.66**	**260**	T		T	15 10 00.7			
	baz=40,slow=76									
BOD	**Bodaibo**	**58.73**	**325**	⇓*i*P		**P**	**14 06 12.1**	**-1.5**		
BOD				pmax		pmax				
	comp=Z,174nm,1.5s									
KONS	**Konsvik**	**59.05**	**16**	*e*P		**P**	**14 06 16.0**	**+0.3**		
STOK	**Stokkvaagen**	**59.18**	**16**	*e*S		**S**	**14 14 30.5**	**+6.5**		
MOR8	**Moi Rana**	**59.57**	**16**	*e*P		**P**	**14 06 19.5**	**+0.2**		
MOR8				*e*S		**S**	**14 14 33.0**	**+3.9**		
MOR8				IVMs_BB		IVMs_BB	14 32 00.9			
	comp=Z,16µm,15.1s									
OBIP	**Obispado Ponce**	**60.11**	**99**	P		**P**	**14 06 21.9**	**-1.8**		
OBIP				IAmb		IAmb	14 06 30.4			
	comp=Z,97nm,1.1s									
OBIP				IAMs_20		IAMs_20	14 31 12.1			
	comp=Z,19µm,22.0s									
ICMP	**Isla Caja de M**	**60.28**	**99**	P		**P**	**14 06 22.1**	**-2.7**		
LVZ	**Lovozero**	**60.29**	**6**	*ce*P		**P**	**14 06 23.5**	**-0.8**		
LVZ				pmax		pmax				
	comp=Z,107nm,1.3s									
LVZ				MLR		MLR				
	comp=Z,24µm,18.0s									
LVZ	**Lovozero**	**60.29**	**6**	IAMs_20		IAMs_20	14 34 18.0			
	comp=Z,25µm,18.0s									
SJG	**San Juan**	**60.34**	**98**	*e*P		**P**	**14 06 24.2**	**-1.0**		
SJG	**San Juan**	**60.34**	**98**	⇑P		**P**	**14 06 27.4**	**+2.2**		
PDPR	**Patillas Dam,**	**60.49**	**98**	P		**P**	**14 06 24.4**	**-1.8**		
PDPR				IAmb		IAmb	14 06 32.8			
	comp=Z,57nm,1.0s									
HUMP	**Col San Antoni**	**60.50**	**98**	P		**P**	**14 06 25.1**	**-1.2**		
JMM	**Marumori**	**60.51**	**295**	⇓P		**P**	**14 06 25.7**	**-0.5**		
JMM				⇓P		**pP**	**14 06 25.9**	**-1.8**		
APA	**Apatity**	**60.52**	**7**	⇑⇑*i*P		**P**	**14 06 24.5**	**-1.3**		
APA				*i*			14 07 03.7			
APA				*i*			14 08 44.0			
APA				*i* PPP		PPP	14 10 03.0			
APA				*i* S		**S**	**14 14 34.0**	**-7.3**		
APA				pmax		pmax				
	comp=Z,67nm,0.7s									
NSS	**Namsos**	**60.62**	**17**	*e*P		**P**	**14 06 22.2**	**-4.3**		
NSS				*e*S		**S**	**14 14 42.9**	**+0.3**		
NSS				IVMs_BB		IVMs_BB	14 33 44.8			
	comp=Z,15µm,15.0s									
TAOE	**Nuku Hiva Isla**	**60.78**	**191**	*e*P		**P**	**14 06 32.2**	**+3.9**		
	comp=Z,414nm,1.4s									
TAOE				*e*S		**S**	**14 14 47.9**	**+2.0**		
	comp=Z,29µm,27.3s									
TAOE				*e*SS		**SS**	**14 18 44.6**	**-0.4**		
	comp=Z,4µm,27.7s									
TAOE				*e*LR		LR	14 24 27.4			
	comp=Z,45µm,28.3s,baz=15									
TAOE	**Nuku Hiva Isla**	**60.78**	**191**	*e*T		T	15 12 18.7			
	comp=Z,416nm,0.3s									
USA0B	**Ussuriysk Arra**	**60.82**	**305**	*c i*P		**P**	**14 06 27.8**	**-0.4**		
USA0B	**Ussuriysk Arra**	**60.82**	**305**	P		**P**	**14 06 25.4**	**-2.8**		
USA0B				IAMs_20		IAMs_20	14 33 33.8			
	comp=Z,26µm,20.0s									
USRK	**Ussuriysk Ar.**	**60.82**	**305**	P		**P**	**14 06 27.8**	**-0.5**		
	comp=Z,16nm,0.9s,baz=48,slow=5.7,SNR=45									
USRK				S		**S**	**14 14 47.1**	**+1.4**		
	comp=Z,0.9nm,0.6s,baz=148,slow=37,SNR=1.3									
USRK				LR		LR	14 33 44.6			
	comp=Z,23µm,18.9s,baz=36,slow=37									
USRK	**Ussuriysk Ar.**	**60.82**	**305**	P		**P**	**14 06 26.9**	**-1.3**		
USRK	**Ussuriysk Ar.**	**60.82**	**305**	P		**P**	**14 06 26.9**	**-1.3**		
SMRC	**Santa Marta, M**	**60.87**	**110**	*e*P		**P**	**14 06 32.4**	**+3.5**		
SJCC	**San Jacinto, C**	**61.33**	**112**	*e*P		**P**	**14 06 28.3**	**-3.8**		
TBLU	**Trondheim**	**61.45**	**19**	*e*P		**P**	**14 06 32.5**	**+0.3**		
TBLU				*e*S		**S**	**14 14 56.9**	**+3.7**		
TBLU				IVMs_BB		IVMs_BB	14 31 18.3			
	comp=Z,12µm,18.9s									
MOL	**Molde**	**61.49**	**20**	*e*P		**P**	**14 06 33.5**	**+1.1**		
MOL				*e*S		**S**	**14 14 57.7**	**+4.0**		
MOL				IVMs_BB		IVMs_BB	14 38 02.0			
	comp=Z,8µm,16.2s									
AKN	**Aaknes**	**61.71**	**21**	*e*P		**P**	**14 06 33.7**	**-0.3**		
AKN				*e*S		**S**	**14 14 58.6**	**+1.9**		
AKN				IVMs_BB		IVMs_BB	14 36 02.4			
	comp=Z,10µm,18.0s									
MDJ	**Mudanjiang**	**61.73**	**307**	P		**P**	**14 06 33.6**	**-0.8**		
MDJ				S		**S**	**14 14 54.8**	**-2.5**		
MDJ				pmax		pmax				
	comp=Z,19nm,1.3s									
MDJ				pmax		pmax				
	comp=Z,4µm,6.4s									
MDJ				LR		LR				
	comp=Z,17µm,19.0s									
MDJ				LR		LR				
	comp=Z,20µm,19.4s									
MDJ				LR		LR				
	comp=Z,41µm,21.5s									
MDJ	**Mudanjiang**	**61.73**	**307**	IAMs_20		IAMs_20	14 31 27.6			
	comp=Z,32µm,21.0s									
URIC	**Uribia, Colomb**	**61.76**	**108**	*e*P		**P**	**14 06 31.1**	**-3.8**		
CRJC	**Cerrejon, Guaj**	**61.77**	**109**	*e*P		P	14 06 29.7	-5.5		
FOO	**Floro**	**61.77**	**22**	*e*P		**P**	**14 06 32.6**	**-1.8**		
FOO				*e*S		**S**	**14 14 58.7**	**+1.4**		
FOO				IVMs_BB		IVMs_BB	14 32 29.1			
	comp=Z,10µm,23.2s									
MOTC	**Monteria, Cord**	**61.96**	**113**	*e*P		**P**	**14 06 33.2**	**-3.0**		
SUE	**Sulen**	**62.18**	**23**	*e*P		**P**	**14 06 37.9**	**+0.8**		
SUE				IVmBBB			14 06 46.0			
	comp=Z,3µm,4.3s									
SUE				*e*S		**S**	**14 15 04.7**	**+2.3**		
SUE				IVMs_BB		IVMs_BB	14 31 55.2			
	comp=Z,11µm,22.2s									
DOMB	**Dombas**	**62.28**	**20**	*e*P		**P**	**14 06 37.3**	**-0.6**		
DOMB				*e*S		**S**	**14 15 07.5**	**+3.6**		
DOMB				IVMs_BB		IVMs_BB	14 36 07.4			
	comp=Z,10µm,18.6s									
MSHR	**Mys Shultsa**	**62.40**	**304**	*ce*P		**P**	**14 06 38.3**	**-0.6**		
MSHR				pmax		pmax				
	comp=Z,167nm,2.5s									
HYA	**Hoyanger**	**62.42**	**22**	*e*P		**P**	**14 06 38.4**	**-0.3**		
HYA				*e*S		**S**	**14 15 05.8**	**+0.4**		
KAC	**Achnashellach**	**62.44**	**30**	*e*P		**P**	**14 06 38.1**	**-0.8**		
KPL	**Plockton**	**62.46**	**30**	*e*P		**P**	**14 06 38.6**	**-0.4**		
KPL				IAmb		IAmb	14 06 39.8			
	comp=Z,85nm,1.4s									
KPL				IAMs_20		IAMs_20	14 33 34.5			
	comp=Z,27µm,15.7s									
LL2C	**La Loma 2 Cana**	**62.62**	**111**	*e*P		**P**	**14 06 37.3**	**-3.4**		
SEUS	**St. Eustatius**	**62.77**	**96**	*e*P		**P**	**14 06 42.5**	**+0.8**		
SEUS	**St. Eustatius**	**62.77**	**96**	IAMs_20		IAMs_20	14 34 05.3			
	comp=Z,20µm,20.0s									
SMLC	**San Martn de**	**62.85**	**112**	*e*P		**P**	**14 06 43.2**	**+1.0**		
UREC	**San Jos de Ur**	**62.86**	**114**	*e*P		**P**	**14 06 41.9**	**-0.5**		
MJAR	**Matsushiro Arr**	**62.90**	**295**	P		**P**	**14 06 41.4**	**-1.0**		
	comp=Z,15nm,1.0s,baz=30,slow=5.9,SNR=32									
MJAR				LR		LR	14 30 06.2			
	comp=Z,9µm,21.7s,baz=70,slow=32									
MAJO	**Matsushiro**	**62.90**	**295**	*c i*P		**P**	**14 06 41.2**	**-1.2**		
MAJO				pmax		pmax				
	comp=Z,122nm,2.4s									
MAJO				MLR		MLR				
	comp=Z,5µm,18.0s									
**MA

PIZC **Pizarro, Choco** 64.12 117 *e*P P **14 06 53.1 +2.5**
CBOC **Ciudad Bolivar** 64.13 115 *e*P P **14 06 52.8 +1.9**
HELC **Santa Helena** 64.14 115 *e*P P **14 06 52.7 +1.5**
CLGH **Cloghs, Cushen** 64.17 32 *e*P P **14 06 49.7 -0.7**
CLGH IAMs_20 IAMs_20 14 33 21.0
comp=Z,34µm,17.7s
CN2 Changchun 64.36 309 *e*P P **14 06 50.6 -1.3**
CN2 *e*S S **14 15 32.6 +2.3**
CN2 pmax pmax
comp=Z,60nm,1.4s
CN2 LR LR
comp=Z,18µm,17.6s
CN2 LR LR
comp=Z,16µm,17.6s
CN2 LR LR
comp=Z,18µm,20.0s
PTBC PUERTO BERRIO, 64.46 113 *e*P P **14 06 51.4 -1.6**
ABD La Joyeuse, An 64.46 96 *e*P P 14 06 44.7 -8.2
OSL Oslo 64.54 20 *e*P P **14 06 54.4 +1.7**
OSL IVmB_BB 14 06 58.5
comp=Z,3µm,6.2s
OSL *e*S S **14 15 36.7 +4.8**
OSL IVMs_BB IVMs_BB 14 36 30.3
comp=Z,9µm,13.9s
KONO Kongsberg 64.55 21*c e*P P **14 06 53.0 +0.2**
KONO pmax pmax
comp=Z,89nm,2.5s
KONO MLR MLR
comp=Z,17µm,18.0s
KONO Kongsberg 64.55 21 IAMs_20 IAMs_20 14 36 28.3
comp=Z,17µm,19.0s
KONO Kongsberg 64.55 21 *e*P P **14 06 50.7 -2.1**
KONO *e*S S **14 15 35.8 +3.7**
KONO IVMs_BB IVMs_BB 14 39 14.4
comp=Z,9µm,15.9s
EBL Broad Law 64.57 30 *e*P P **14 06 52.5 -0.5**
CBE Ff, Capester 64.70 96 *e*P P **14 06 52.7 -1.7**
NEWG New Galloway 64.75 31 *e*P P **14 06 53.5 -0.8**
NEWG IAMs_20 IAMs_20 14 38 59.5
comp=Z,26µm,16.7s
PAMC Pamplona, Colo 64.83 111 *e*P P **14 06 54.5 -1.4**
TDBA Terre de Bas, 64.85 96 *e*P P 14 06 50.2 -5.2
ESK Eskdalemuir 64.90 30 P P **14 06 54.1 -1.1**
ESK pmax pmax
comp=Z,515nm,2.8s
ESK Eskdalemuir 64.90 30 P P **14 06 54.1 -1.1**
ESK Eskdalemuir 64.90 30 IAMs_20 IAMs_20 14 32 46.5
comp=Z,21µm,22.0s
MAGL Barre de l'ile 64.99 96 *e*P P **14 06 55.8 -0.5**
GUY2C **Guyana, Caldas** 65.02 115 *e*P P **14 06 52.8 -4.3**
NORC Norcasia 65.02 114 *e*P P **14 06 53.5 -3.1**
BARC Barichara 65.15 112 *e*P P **14 06 56.1 -1.6**
SNART **Snartemo** 65.17 23 *e*P P **14 06 57.1 +0.2**
SNART *e*S S **14 15 45.1 +5.4**
DSLB Salisbury 65.29 96 *e*P P **14 06 59.3 +1.0**
SPBC San Pablo de B 65.41 114 *e*P P **14 06 59.6 +0.5**
WIM Isle of Man 65.42 31 *e*P P **14 06 58.1 -0.5**
DLPL La Plaine 65.48 96 IAMs_20 IAMs_20 14 33 54.1
comp=Z,23µm,22.0s
YOTC Yotoco, Valle 65.49 117 *e*P P **14 06 56.0 -3.7**
HOMB Homborsund 65.54 22 *e*P P **14 06 59.3 0.0**
HOMB *e*S S **14 15 48.1 +3.8**
HOMB IVMs_BB IVMs_BB 14 35 14.1
comp=Z,11µm,18.8s
EDMD Edmundbyers 65.70 30 *e*P P **14 06 59.6 -0.8**
EDMD IAmb IAmb 14 07 07.7
comp=Z,270nm,2.1s
EDMD IAMs_20 IAMs_20 14 35 42.9
comp=Z,27µm,18.2s
FIA1 FINESS Array S 65.77 12 P P **14 07 00.1 -0.6**
FINES FINESS Array B 65.77 12 P P **14 07 00.4 -0.3**
comp=Z,8.9nm,0.6s,baz=1.3,slow=7.1,SNR=46
FINES LR LR 14 36 06.6
comp=Z,23µm,19.7s,baz=345,slow=36
FINES FINESS Array B 65.77 12 P P **14 06 59.9 -0.8**
RUSC La Rusia 65.78 113 *e*P P **14 07 02.2 +0.2**
ROSC El Rosal 65.93 114 P P **14 07 02.0 -0.8**
comp=Z,23nm,0.7s,baz=196,slow=7.8,SNR=12
ROSC LR LR 14 39 25.5
comp=Z,8µm,21.4s,baz=342,slow=39
ROSC El Rosal 65.93 114 *e*P P **14 07 03.5 +0.7**
UPP Uppsala 65.98 17 *e*P P **14 07 01.2 -0.9**
FDF Fort de France 66.00 97 *e*P P **14 07 00.0 -2.9**
FDF Fort de France 66.00 97 IAMs_20 IAMs_20 14 34 20.9
comp=Z,24µm,22.0s
AAL Aland 66.08 15 *e*P P **14 07 01.2 -1.6**
TAMC Tame, Arauca 66.08 111 *e*P P **14 07 01.8 -1.6**
ORTC Ortega, Tolima 66.17 116 *e*P P **14 07 01.4 -2.6**
YRC Rhoscolyn 66.20 32 *e*P P **14 07 03.6 0.0**
BIM Bigot 66.21 97 *e*P P **14 07 01.9 -2.4**
BAUV El Baul 66.29 106 *e*P P **14 07 04.7 -0.1**
MPOM Morne Pois Mar 66.40 97 *e*P P **14 07 09.3 +3.9**
CHIC Chingaza 66.43 114 *e*P P **14 07 06.5 +0.4**
IRK Irkutsk 66.56 327 *e*P P **14 07 05.0 -1.0**
IRK *e* 14 07 30.3
IRK *e*S S **14 16 04.8 +7.8**
IRK pmax pmax
comp=Z,476nm,2.8s
SLBI Saint Lucia, B 66.65 97 *e*P P **14 07 05.2 -1.8**
SNY Shenyang 66.75 308 ⇑P P **14 07 06.9 -0.4**
SNY PP PP **14 09 35.3 +1.5**
SNY S S **14 16 03.0 +3.5**
SNY SS SS **14 20 15.1 -1.3**
SNY pmax pmax
comp=Z,54nm,1.3s
SNY pmax pmax
comp=Z,3µm,5.3s
SNY LR LR
comp=Z,10µm,15.1s
SNY LR LR
comp=Z,27µm,14.3s
SNY LR LR
comp=Z,22µm,19.8s
GOET G??ttrup 66.82 22 *e*P P **14 07 11.1 +3.5**
GOET *i*S S **14 15 59.4 -0.5**
GOET IAMs_20 IAMs_20 14 36 08.2
comp=Z,32µm,20.0s
PCON Cinco Dias 66.83 118 *e*P P **14 07 11.5 +2.7**
SOTA Rioblanco 66.87 118 *e*P P **14 07 08.0 -1.0**
MCLT Moule a Chique 66.91 97 IAMs_20 IAMs_20 14 34 37.7
comp=Z,23µm,22.0s
FOEL Foel Wylfa 66.95 31 *e*P P **14 07 07.0 -1.5**
FOEL IAmb IAmb 14 07 13.3
comp=Z,67nm,1.1s
FOEL IAMs_20 IAMs_20 14 35 34.7
comp=Z,31µm,16.9s
LBWR Ladybower, Pea 66.99 30 *e*P P **14 07 08.0 -0.7**
LBWR IAmb IAmb 14 07 15.1
comp=Z,67nm,0.8s
LBWR IAMs_20 IAMs_20 14 40 20.5
comp=Z,23µm,14.4s
PRGR Permogore 67.04 2 *e*P P **14 07 07.1 -1.7**
PRGR pmax pmax
comp=Z,120nm,1.1s
SVB Belmont 67.06 98 *e*P P **14 07 06.0 -3.7**
BETC Betania 67.07 117 *e*P P **14 07 07.6 -2.1**
STNC Stoke 67.10 31 *e*P P **14 07 09.0 -0.4**
STNC IAMs_20 IAMs_20 14 36 02.5
comp=Z,24µm,14.2s
RSBS Rosebush, Pemb 67.23 33 *e*P P **14 07 09.6 -0.6**
RSBS IAMs_20 IAMs_20 14 33 55.9
comp=Z,46µm,19.1s
TLY Talaya 67.25 327 *i*P P **14 07 10.5 +0.1**
TLY *e* 14 09 33.6
TLY *e*PPP PPP 14 11 21.7
TLY *e*S S **14 16 05.9 +0.6**
TLY *i*SS SS **14 20 25.9 +2.3**
TLY pmax pmax
comp=Z,370nm,1.5s
TLY MLR MLR
comp=Z,61µm,19.0s
MUD Monsted U'grnd 67.33 23 *i*P P **14 07 11.0 +0.3**
MUD IAMs_20 IAMs_20 14 39 44.7
comp=Z,31µm,16.0s
MUD Monsted U'grnd 67.33 23 *i*P P **14 07 11.0 +0.3**
MUD MLR MLR
comp=Z,31µm,16.0s
GARC Garzon, Huila 67.45 117 *e*P P **14 07 15.4 +3.0**
OTAV Otavalo 67.46 121 *e*P P **14 07 13.1 +0.4**
OTAV Otavalo 67.46 121 *e*P P **14 07 12.8 +0.1**
GCMP Grenada, Carri 67.55 98 *e*P P 14 07 18.3 +5.5
KLMR Klimovskoe 67.59 5 *e*P P **14 07 08.4 -3.9**
KLMR *e*S S **14 16 04.7 -4.3**
KLMR *e*SS SS **14 20 25.9 -2.5**
KLMR pmax pmax
comp=Z,172nm,1.4s
KLMR MLR MLR
comp=Z,20µm,16.0s
KLMR Klimovskoe 67.59 5 *e*P P **14 07 08.5 -3.9**
KLMR AMP 14 07 21.5
comp=Z,172nm,1.4s
KLMR *e*S S **14 16 04.7 -4.3**
KLMR *e*S S **14 16 04.7 -4.3**
KLMR *e*SS SS **14 20 25.9 -2.5**
KLMR *e*SS SS **14 20 25.9 -2.5**
KLMR *e*SSS SSS 14 23 38.7
KLMR *e*SSS SSS 14 23 38.7
KLMR LQ LQ 14 31 30.6
KLMR LQ LQ 14 31 30.6
KLMR LR LR 14 35 43.9
KLMR AMP 14 40 42.9
comp=Z,20µm,16.2s
GRGR Grenville 67.69 99 *e*P P **14 07 13.8 +0.2**
GRGR Grenville 67.69 99 IAMs_20 IAMs_20 14 35 47.7
comp=Z,14µm,20.0s
CWF Charnwood Fore 67.69 30 *e*P P **14 07 11.6 -1.5**
CWF IAMs_20 IAMs_20 14 36 21.9
comp=Z,29µm,15.1s
MCH1 Michaelchurch 67.77 32 *e*P P **14 07 12.9 -0.7**
MCH1 IAmb IAmb 14 07 14.3
comp=Z,36nm,1.0s
MCH1 IAMs_20 IAMs_20 14 35 40.0
comp=Z,32µm,17.2s
KSRS Korea Array 67.84 303 P P **14 07 14.1 -0.3**
comp=Z,11nm,1.1s,baz=48,slow=5.9,SNR=32
KSRS S S **14 16 14.6 +1.8**
comp=Z,0.4nm,0.9s,baz=124,slow=41,SNR=1.3
KSRS LR LR 14 36 33.9
comp=Z,7µm,19.6s,baz=26,slow=36
MONM Monmouth 67.97 32 *e*P P **14 07 14.3 -0.6**
MONM IAmb IAmb 14 07 19.3
comp=Z,766nm,2.9s
MONM IAMs_20 IAMs_20 14 33 53.6
comp=Z,34µm,20.5s
MTSE Matsula 68.08 14 *e*P P **14 07 13.8 -1.6**
MOY Mondy 68.15 328 *e*P P **14 07 16.6 +0.4**
MOY pmax pmax
comp=Z,493nm,2.6s
VAH Vaihoa 68.18 197 *e*T T 15 21 33.7
comp=Z,72nm,0.4s
BBGH Gun Hill 68.20 96 IAMs_20 IAMs_20 14 40 36.2
comp=Z,23µm,19.0s
STRD Stroud 68.23 31 *e*P P **14 07 15.4 -1.1**
STRD IAMs_20 IAMs_20 14 34 14.2
comp=Z,33µm,20.7s
MACC Macarena, Meta 68.40 116 *e*P P **14 07 17.5 -0.6**
ZAK Zakamensk 68.46 326 *e*P P **14 07 16.9 -1.3**
ZAK pmax pmax
comp=Z,39nm,1.9s
INCN Inchon 68.50 303 IAMs_20 IAMs_20 14 38 51.2
comp=Z,13µm,18.0s
VSU Vasula 68.74 12 *e*P P **14 07 18.7 -0.9**
COP Copenhagen 68.80 21 IAMs_20 IAMs_20 14 41 11.8
comp=Z,11µm,14.9s
TJN Taejon 68.95 302*c e*P P **14 07 20.6 -0.7**
SKMB Sankelmark Bun 68.97 23 *e*P P **14 07 21.8 +0.7**
comp=Z,442nm,2.1s,baz=337,slow=5.9
TOSP Speyside 69.02 98 IAMs_20 IAMs_20 14 36 55.1
comp=Z,16µm,21.0s
HLG Helgoland 69.06 25 *e*P P **14 07 21.8 +0.2**
comp=Z,281nm,1.4s,baz=337,slow=5.9
ULN Ulaanbaatar 69.19 322*c i*P P **14 07 22.0 -0.8**
ULN pmax pmax
comp=Z,95nm,2.7s
ULN MLR MLR
comp=Z,28µm,21.0s
ULN Ulaanbaatar 69.19 322 IAMs_20 IAMs_20 14 38 05.3
comp=Z,28µm,22.0s
SONM Songino Array 69.46 323 P P **14 07 24.4 -0.1**
comp=Z,19nm,1.1s,baz=48,slow=3.9,SNR=83
SONM S S **14 16 33.8 +1.7**
comp=Z,0.2nm,0.4s,baz=26,slow=44,SNR=1.1
SONM PKPPKP P'P'df 14 35 30.8 -8.9
comp=Z,0.3nm,0.3s,baz=270,slow=1.2,SNR=4.6
SONM LR LR 14 39 34.6
comp=Z,28µm,18.3s,baz=24,slow=37
PTLC Puerto Leguiza 69.50 118 *e*P P **14 07 26.6 +1.7**
JNU Nakatsue 69.50 298 P P **14 07 24.2 -0.6**
BSD Bornholm Skovb 69.87 20 *e*P P **14 07 24.9 -1.7**
BSD Bornholm Skovb 69.87 20 *e*P P **14 07 25.9 -0.8**
BSD IAMs_20 IAMs_20 14 39 30.7
comp=Z,16µm,17.7s
BSD Bornholm Skovb 69.87 20 *e*P P **14 07 25.8 -0.8**
BSD MLR MLR
comp=Z,16µm,18.0s
BSEG Bad Segeberg 69.90 23 *e*P P **14 07 27.2 +0.4**
comp=Z,182nm,1.6s,baz=337,slow=5.9
DL2 Dalian 69.95 308 ⇑*i*P P **14 07 27.3 -0.1**
DL2 S S **14 16 41.3 +3.6**
DL2 SS SS **14 21 09.6 +3.8**
DL2 pmax pmax
comp=Z,48nm,1.5s
DL2 pmax pmax
comp=Z,2µm,7.7s
DL2 LR LR
comp=Z,12µm,18.4s
DL2 LR LR
comp=Z,24µm,19.2s
DL2 LR LR
comp=Z,26µm,18.8s
RGN Rugen 70.05 21 IAMs_20 IAMs_20 14 37 57.6
comp=Z,17µm,20.0s
RGN Rugen 70.05 21 *e*P P **14 07 28.5 +0.8**
comp=Z,360nm,1.6s,baz=337,slow=5.9
KIRV Kirov 70.13 360*c i*P P **14 07 26.9 -1.3**
JVM Valle D.L. Mar 70.41 33 *e*P P **14 07 29.3 -0.7**
JLP Les Platons 70.42 33 *e*P P **14 07 29.2 -0.9**
JQE Queens East 70.48 33 *e*P P **14 07 29.7 -0.7**
ZALV Zalesovo Beam 70.63 339 P P **14 07 30.7 -0.6**
comp=Z,17nm,0.6s,baz=18,slow=6.1,SNR=94
ZALV PKPPKP **P'P'df** **14 35 31.3 -6.8**
comp=Z,0.4nm,0.3s,baz=72,slow=0.5,SNR=4.0
ZALV LR LR 14 42 27.1
comp=Z,24µm,18.6s,baz=14,slow=39
ZALV Zalesovo Beam 70.63 339 P P **14 07 30.9 -0.5**
IBBN Ibbenburen 70.72 25 *e*P P **14 07 32.1 +0.3**
comp=Z,246nm,1.7s,baz=337,slow=5.9
TIAR Tiarei 70.77 199 *e*T T 15 24 48.5
comp=Z,33nm,0.2s
PPT Papeete 70.83 199 LR LR 14 30 46.0
comp=Z,9µm,21.6s,baz=4.0,slow=29
MEH Mehetia 70.84 197 *e*T T 15 24 52.9
comp=Z,51nm,0.3s
PPTF Pamatai, Papee 70.85 199 IAMs_20 IAMs_20 14 31 16.4
comp=Z,11µm,20.0s
PPT2 Papeete2 70.85 199 *e*S S **14 16 48.0 -0.5**
comp=Z,5µm,28.8s
PPT2 *e*LQ LQ 14 25 36.6
comp=Z,8µm,26.8s
PPT2 *e*LR LR 14 29 03.2
comp=Z,36µm,27.2s,baz=8.1
PPT2 Papeete2 70.85 199 *e*T T 15 24 54.1
comp=Z,40nm,0.2s
PAE Paea 70.92 199 *e*P P **14 07 37.6 +4.2**
comp=Z,34nm,1.4s
PAE Paea 70.92 199 *e*T T 15 24 58.8
comp=Z,19nm,0.2s
JSU Suzuyama 70.95 297 P P **14 07 32.7 -1.0**
UCC Uccle 71.11 28 *d*P P **14 07 33.8 -0.5**
NRDL Niedersach Rie 71.16 24 *e*P P **14 07 34.6 +0.1**
comp=Z,507nm,2.6s,baz=337,slow=5.9
PABE Paberze 71.19 15 *e*P P **14 07 34.9 +0.2**
PABE Paberze 71.19 15 IAMs_20 IAMs_20 14 39 03.1
comp=Z,17µm,19.0s
LNIZ Loecknitz 71.22 21 *e*P P **14 07 35.1 +0.2**
comp=Z,206nm,1.5s,baz=337,slow=5.9
SNF Seneffe 71.34 28 *d*P P **14 07 35.0 -0.7**
BUG Bochum--Univer 71.36 26 *e*P P **14 07 35.4 -0.4**
comp=Z,158nm,1.5s,baz=337,slow=5.9
ISAL Salakas 71.46 14 *e*P P **14 07 36.8 +0.5**
SVE Sverdlovsk 71.48 353*de*P P **14 07 35.7 -0.7**
SVE *e*S S **14 16 57.2 +2.2**
SVE *e* 14 17 31.7
SVE pmax pmax
comp=Z,139nm,1.6s
BEBN Eben Emael 71.49 27 *b*P P **14 07 36.4 -0.3**
BEBN *d*x x 14 07 42.8
BEBN *d*PcP PcP **14 07 55.2 -0.9**
FLTG Flechtingen 71.59 23 *e*P P **14 07 36.7 -0.5**
comp=Z,130nm,1.5s,baz=337,slow=5.9
ASSE Asse, Remlinge 71.63 24 *e*P P **14 07 37.3 -0.1**
comp=Z,396nm,2.4s,baz=337,slow=5.9
BSTI Sart Tilman 71.65 28 *d*P P **14 07 37.2 -0.3**
BSTI *d*x x 14 07 43.9
BJI Beijing 71.67 312 P P **14 07 37.3 -0.5**
BJI PP PP **14 10 17.0 +0.7**
BJI S S **14 16 55.0 -2.7**
BJI pmax pmax
comp=Z,23nm,1.4s
BJI pmax pmax
comp=Z,3µm,5.0s
BJI LR LR
comp=Z,11µm,15.3s
BJI LR LR
comp=Z,18µm,17.1s
BJI LR LR
comp=Z,11µm,23.7s
BMRD Maredsous 71.67 28 *d*P P **14 07 37.6 -0.1**
BMRD *d*x x 14 07 44.1
IIGN Ignalina 71.69 14 *e*P P **14 07 38.3 +0.6**
BGES Gesves 71.69 28 *d*P P **14 07 37.4 -0.4**
BGES *d*x x 14 07 43.9
BGES *d*PcP PcP **14 07 56.2 -0.7**
BJT Baijiatuau 71.69 312 IAMs_20 IAMs_20 14 40 39.7
comp=Z,17µm,18.0s
BCLA Clavier 71.72 28 *b*P P **14 07 37.8 -0.2**
BCLA *d*x x 14 07 44.3
BCLA *d*x x 14 07 52.3
MEM Membach 71.76 27 *b*P P **14 07 38.2 0.0**
MEM *d*x x 14 07 44.4
MEM *d*PcP PcP **14 07 57.5 +0.3**
DOU Dourbes 71.80 28 *d*P P **14 07 38.3 -0.2**
DOU *d*x x 14 07 44.5
BTNL Ternell 71.81 27 *d*P P **14 07 38.5 -0.1**
BTNL *d*x x 14 07 44.9
CLZ Clausthal 71.82 24 *e*P P **14 07 39.1 +0.4**
comp=Z,647nm,2.6s,baz=337,slow=5.9
KASTN Kahler Asten 71.89 26 *e*P P **14 07 38.9 -0.2**
comp=Z,117nm,1.6s,baz=337,slow=5.9
RCHB Rochefort 71.94 28 *d*P P **14 07 38.5 -0.8**
RCHB *d*x x 14 07 45.6
RCHB *d*PcP PcP **14 07 57.2 -0.8**
BHOU Houvegnez 71.98 27 *d*P P **14 07 39.5 -0.1**
GTTG Gottingen 71.99 25 *e*P P **14 07 39.7 +0.1**
comp=Z,235nm,1.8s,baz=337,slow=5.9
ARU Arti 72.01 355*c i*P P **14 07 38.6 -1.1**
ARU 14 07 56.8
ARU 14 10 16.3
ARU PPP PPP 14 12 03.2
ARU S S **14 17 02.0 +0.9**
ARU 14 17 37.3
ARU SS SS **14 21 43.8 +7.3**
ARU SSS SSS 14 24 44.8
ARU pmax pmax
comp=Z,141nm,1.6s
ARU MLR MLR
comp=Z,19µm,20.0s
ARU Arti 72.01 355 P P **14 07 38.7 -0.9**
ARU IAmb IAmb 14 07 48.6
comp=Z,86nm,1.1s
ARU IAMs_20 IAMs_20 14 42 02.2
comp=Z,19µm,20.0s
AHRW Bad Neuenahr-A 72.12 27 *e*P P **14 07 40.6 +0.2**
comp=Z,120nm,1.3s,baz=337,slow=5.9
NACGM **Naroch** 72.20 13 *i*P P **14 07 40.8 0.0**
NACGM *i*P P **14 07 40.8 0.0**
NACGM *i*P P **14 07 40.8 0.0**
NACGM *i*PcP PcP **14 07 56.5 -2.5**
NACGM *i*PP PP **14 10 24.7 +4.3**
NACGM *i*PPP PPP 14 12 09.8
NACGM *i*S S **14 17 08.9 +5.6**
NACGM *i*SS SS 14 21 16.4 -23
NACGM *i*SSS SSS 14 25 07.4
NACGM *i*LQ LQ 14 34 18.1
NACGM *i*LR LR 14 41 10.4
SUW Suwalki 72.50 16 *e*P P **14 07 42.0 -0.6**
SUW *es*P **pwP** **14 07 46.9 +0.2**
SUW *e*S **SKiKP** **14 17 14.6 -2.9**
SUW *e*L L 14 39 23.0
comp=Z,17µm,20.9s
SUW Suwalki 72.50 16 *e*P P **14 07 41.3 -1.2**
SUW Suwalki 72.50 16 IAMs_20 IAMs_20 14 39 22.6
comp=Z,17µm,20.0s
MOS Moscow 72.56 7 *e*P P **14 07 39.9 -3.0**
MOS *e*S S **14 17 07.9 +0.5**
MOS pmax pmax
comp=Z,139nm,1.8s
MOS pmax pmax
comp=Z,3µm,5.1s
MOS MLR MLR
comp=Z,19µm,18.0s
WLF Walferdange 72.64 28 *d*P P **14 07 42.9 -0.6**
WLF *d*x x 14 07 50.0
WLF Walferdange 72.64 28 *e*P P **14 07 43.7 +0.2**
comp=Z,110nm,1.7s,baz=337,slow=5.9
UBBA Unterbreizbach 72.66 25 *e*P P **14 07 43.6 +0.1**
comp=Z,130nm,1.6s,baz=337,slow=5.9
MNK Minsk 72.75 13 *e*P P **14 07 43.0 -1.1**
MNK *e* 14 10 22.0
MNK *e*S S **14 17 09.0 -0.6**
MNK *e*SS SS **14 21 49.0 +1.2**
MNK pmax pmax
comp=Z,370nm,1.5s
MNK MLR MLR
comp=Z,32µm,21.0s
MNK Minsk 72.75 13 *i*P P **14 07 43.8 -0.2**
comp=E,7.0nm,1.3s
MNK *i*P P **14 07 43.8 -0.2**
comp=N,82nm,1.4s
MNK *i*P P **14 07 43.8 -0.2**
comp=Z,75nm,1.2s
MNK *i*PP PP **14 10 26.2 +1.2**
MNK *i*PPP PPP 14 12 10.8
MNK *i*S S **14 17 11.7 +2.1**
MNK *i*SS SS **14 21 53.8 +6.0**
MNK *i*SSS SSS 14 25 14.5
MNK *i*LQ LQ 14 33 32.0
MNK *i*LR LR 14 35 45.6
MNK *i*LRM MLR 14 37 56.5
comp=N,23µm,23.9s
MNK *i*LRM MLR 14 38 32.3
comp=Z,19µm,19.6s
MNK *i*LRM MLR 14 38 54.0
comp=E,2µm,18.5s
NEUB Neuenburg 72.75 24 *e*P P **14 07 44.2 0.0**
comp=E,144nm,1.4s,baz=337,slow=5.9
TNS Taunus Mts 72.79 26 *e*P P **14 07 44.4 -0.1**
comp=E,89nm,1.5s,baz=337,slow=5.9
CLL Collm 72.97 23 ⇑*i*P P **14 07 45.0 -0.4**
comp=Z,69nm,1.6s
CLL *e*Pmax 14 07 50.0
CLL *i* 14 07 52.6
comp=Z,95nm,1.5s
CLL *e*PP PP **14 10 28.0 +1.0**
CLL *e*S **SKiKP** **14 17 18.0 -0.3**
CLL *e*SS SS **14 21 54.0 +2.7**
CLL *e*SSS SSS 14 25 24.0
CLL LmV 14 40 00.0
comp=Z,22µm,19.7s
CLL Lmax 14 40 00.0
CLL Collm 72.97 23 ⇑*i*P P **14 07 45.0 -0.4**
CLL *i* 14 07 52.6
CLL *e*S **SKiKP** **14 17 18.0 -0.3**
CLL pmax pmax
comp=Z,69nm,1.6s
CLL MLR MLR
comp=Z,22µm,19.7s
CLL Collm 72.97 23 IAMs_20 IAMs_20 14 40 14.8
comp=Z,21µm,20.0s
CLL Collm 72.97 23 *e*P P **14 07 45.1 -0.4**
comp=Z,95nm,1.6s,baz=337,slow=5.9
HHC Hu-ho-hao-te 73.10 315 ⇑*i*P P **14 07 46.0 -0.5**
HHC pP pwP 14 07 51.0 +0.5
HHC PP PP **14 10 31.0 +2.4**
HHC S S **14 17 11.8 -2.5**
HHC sS SKiKP 14 17 19.8 +0.8
HHC SKS **SKSac** **14 17 46.6 -6.2**
HHC pmax pmax
comp=Z,70nm,1.1s
HHC pmax pmax
comp=Z,4µm,5.9s
HHC LR LR
comp=Z,34µm,16.5s
HHC LR LR

comp=Z,28µm,15.3s
HHC LR LR
comp=Z,55µm,16.3s
OBN Obninsk 73.10 8 *c iP* **P 14 07 45.4 -0.7**
OBN *i* *PP **sP** **14 07 48.9 +0.8**
OBN *i* *SP **pwP** **14 07 53.5 +3.3**
OBN *e* 14 08 06.4
OBN 14 10 32.0
OBN *i* S **SKiKP** **14 17 18.2 -0.2**
OBN *e* 14 17 39.8
OBN *i* SS **SS** **14 21 54.3 +1.2**
OBN pmax pmax
comp=Z,168nm,1.6s
OBN MLR MLR
comp=Z,17µm,16.0s
OBN Obninsk 73.10 8 IAMs_20 IAMs_20 14 43 02.6
comp=Z,17µm,18.0s
MOX Moxa 73.23 24 *eP* **P 14 07 46.9 -0.2**
comp=Z,76nm,1.4s,baz=337,slow=5.9
MOX *eL* L 14 39 10.4
comp=Z,16µm,21.2s
MILB Miltenberg 73.37 26 *eP* **P 14 07 48.2 +0.3**
comp=Z,168nm,1.4s,baz=337,slow=5.9
FBE Freiberg 73.41 23 *eP* **P 14 07 48.1 +0.1**
comp=Z,372nm,2.3s,baz=337,slow=5.9
PLN Plauen 73.52 24 *eP* **P 14 07 48.4 -0.3**
comp=Z,59nm,1.5s,baz=337,slow=5.9
WERD Werda 73.59 24 *eP* **P 14 07 48.5 -0.6**
comp=Z,41nm,1.2s,baz=337,slow=5.9
BRG Berggiesshubel 73.59 22 *i P* **P 14 07 48.9 -0.2**
BRG Amp 14 07 50.8
comp=Z,93nm,1.6s
BRG *ex* x 14 07 54.4
BRG Amp 14 07 59.2
comp=Z,123nm,1.5s
BRG *ex* x 14 08 07.4
BRG Amp 14 08 08.4
comp=Z,52nm,1.3s
BRG PP PP 14 10 40.0 +7.6
BRG Amp 14 10 46.0
comp=Z,2µm,25.0s
BRG Berggiesshubel 73.59 22 S **S** **14 17 26.0 +6.7**
BRG Berggiesshubel 73.59 22 SS SS 14 22 06.0 +5.1
BRG Amp 14 41 31.0
comp=N,17nm,18.4s
BRG Amp 14 41 34.0
comp=E,5.5nm,17.5s
BRG Amp 14 41 36.0
comp=Z,23nm,16.8s
BRG Berggiesshubel 73.59 22 *eP* **P 14 07 49.0 -0.2**
comp=Z,123nm,1.5s,baz=337,slow=5.9
TANN Tannenbergstha 73.66 23 *eP* **P 14 07 49.2 -0.4**
comp=Z,59nm,1.4s,baz=337,slow=5.9
GUNZ Gunzen 73.67 24 *eP* **P 14 07 49.4 -0.2**
comp=Z,44nm,1.4s,baz=337,slow=5.9
WERN Wernitzgruen 73.75 24 *eP* **P 14 07 50.0 -0.1**
comp=Z,263nm,2.4s,baz=337,slow=5.9
NKC Novy Kostel 73.82 24 *eP* **P 14 07 50.3 -0.2**
NKC *e* 14 10 37.2
NKC MLR MLR
comp=Z,19µm,15.9s
NKC Novy Kostel 73.82 24 *eP* **P 14 07 50.3 -0.2**
NKC *ePP* **PP** **14 10 37.2 +2.8**
NKC AMS AMS 14 43 20.0
comp=Z,19µm,15.9s
DGZ Jazzator, Alta 73.90 335 *c iP* **P 14 07 51.2 0.0**
DGZ pmax pmax
comp=Z,194nm,1.4s
DGZ MLR MLR
comp=Z,33µm,18.0s
MANZ Manzenberg 73.96 24 *eP* **P 14 07 50.9 -0.5**
comp=Z,57nm,1.5s,baz=337,slow=5.9
BTO Baotou 73.97 316 P **P 14 07 49.8 -1.9**
GRA1 Grafenberg Arr 74.01 25 IAMs_20 IAMs_20 14 39 58.4
comp=Z,25µm,21.0s
GRF Grafenberg Arr 74.01 25 *eP* **P 14 07 51.9 +0.3**
comp=Z,194nm,1.9s,baz=337,slow=5.9
GRF *eL* L 14 39 47.1
comp=Z,25µm,21.4s
PVCC Panska Ves 74.06 22 AMS AMS 14 42 40.0
comp=Z,18µm,15.6s
BEL Belsk 74.15 18 *eP* **P 14 07 53.5 +1.1**
BEL *es*P **pwP** **14 07 57.3 +0.9**
BEL *eS* S 14 17 35.1 +10
BEL *eL* L 14 39 29.9
comp=Z,35µm,22.6s
KSP Ksiaz 74.16 21 *eP* **P 14 07 52.7 +0.2**
KSP *es*P **pwP** **14 07 57.2 +0.6**
KSP *eS* S 14 17 34.4 +8.7
KSP *eL* L 14 40 21.2
comp=Z,23µm,21.1s
BRVK Borovoye 74.17 347 P **P 14 07 50.6 -1.9**
BRVK pmax pmax
comp=Z,215nm,1.6s
BRVK Borovoye 74.17 347 P **P 14 07 50.6 -1.9**
BRVK Borovoye 74.17 347 IAMs_20 IAMs_20 14 46 32.9
comp=Z,20µm,19.0s
ROTZ Rotzenmuhle 74.19 24 *eP* **P 14 07 52.5 -0.2**
comp=Z,230nm,2.4s,baz=337,slow=5.9
ECH Echery 74.24 28 IAMs_20 IAMs_20 14 40 24.4
comp=Z,24µm,21.0s
TIA Tai'an 74.27 309 P **P 14 07 52.6 -0.8**
TIA S **S** **14 17 31.3 +3.9**
TIA pmax pmax
comp=Z,38nm,1.5s
TIA pmax pmax
comp=Z,480nm,3.6s
TIA LR LR
comp=Z,8µm,19.6s
TIA LR LR
comp=Z,12µm,22.1s
PGAV Gavieira, Arco 74.29 41 *eP* **P 14 07 52.7 -0.8**
comp=Z,148nm,1.6s
PGAV *eS* **S** **14 17 31.2 +3.5**
PGAV *eSS* **SS** **14 22 17.6 +5.4**
PGAV *eLQ* LQ 14 28 29.7
PGAV *eLR* LR 14 31 26.8
comp=Z,16µm,18.0s
AFI Afiamalu 74.31 221 LR LR 14 35 46.5
comp=Z,6µm,18.3s,baz=22,slow=32
CHVC Chvalec 74.35 21 *eP* **P 14 07 53.3 -0.3**
CHVC AMS AMS 14 41 40.0
comp=Z,22µm,17.7s
OSTC Ostas 74.41 21 *eP* **P 14 07 53.8 -0.2**
OSTC AMS AMS 14 41 50.0
comp=Z,22µm,17.4s
UPC Upice 74.41 21 *eP* **P 14 07 53.0 -1.0**
UPC *eS* **S** **14 17 33.7 +5.1**
UPC MLR MLR
comp=Z,21µm,18.0s
UPC Upice 74.41 21 *eP* **P 14 07 53.0 -1.0**
UPC *eS* **S** **14 17 33.7 +5.1**
UPC AMS AMS 14 42 00.0
comp=Z,21µm,18.0s
PRA Prague 74.45 22 AMS AMS 14 41 40.0
comp=Z,21µm,16.7s
BFO Black Forest 74.47 27 *eP* **P 14 07 54.3 0.0**
comp=Z,195nm,1.5s,baz=337,slow=5.9
RKT Rikitea 74.52 184 *eP* **P 14 07 59.0 +4.3**
comp=Z,137nm,1.4s
RKT *eS* **S** **14 17 33.1 +3.0**
comp=Z,2µm,28.2s
RKT Rikitea 74.52 184 *eLR* LR 14 30 45.0
comp=Z,30µm,28.8s
RKT Rikitea 74.52 184 *eT* T 15 29 26.8
comp=Z,19nm,0.3s
PRU Pruhonice 74.56 22 *eP* **P 14 07 54.5 -0.3**
PRU *eS* **S** **14 17 35.7 +5.5**
PRU MLR MLR
comp=Z,24µm,17.4s
PRU Pruhonice 74.56 22 *eP* **P 14 07 54.5 -0.3**
PRU *eS* **S** **14 17 35.7 +5.5**
PRU AMS AMS 14 41 40.0
comp=Z,24µm,17.4s
PCAB Cabril 74.60 41 *eP* **P 14 07 55.1 -0.2**
comp=Z,121nm,1.8s
DPC Dobruska-Polom 74.63 21 *eP* **P 14 07 55.3 0.0**
DPC *e* 14 08 01.6
DPC *eS* **S** **14 17 35.3 +4.2**
DPC MLR MLR
comp=Z,21µm,18.3s
DPC Dobruska-Polom 74.63 21 *eP* **P 14 07 55.3 0.0**
DPC *epP* **pwP** **14 08 01.6 +2.2**
DPC *eS* **S** **14 17 35.3 +4.2**
DPC AMS AMS 14 42 00.0
comp=Z,21µm,18.3s

WET Wettzell 74.94 24 *eP* **P 14 07 56.8 -0.2**
comp=Z,67nm,1.6s,baz=337,slow=5.9
SEM Semipalatinsk 74.95 340 ⇑ *iP* **P 14 07 56.1 -1.2**
comp=Z,61nm,1.4s,baz=340
SEM *eS* **S** **14 17 34.6 -0.4**
baz=340
SEM *eLR* LR 14 42 20.0
comp=Z,5µm,17.5s,baz=340
SEM Semipalatinsk 74.95 340 *c iP* **P 14 07 56.1 -1.2**
SEM *eS* **S** **14 17 34.6 -0.4**
SEM pmax pmax
comp=Z,61nm,1.4s
SEM MLR MLR
comp=Z,5µm,18.0s
POLO Lamas de Olo 74.98 41 *eP* **P 14 07 57.0 -0.5**
comp=Z,91nm,1.5s
POLO *eS* **S** **14 17 37.6 +2.2**
POLO *eSS* **SS** **14 22 26.1 +3.4**
KRLC Kraliky 74.99 21 *eP* **P 14 07 57.4 0.0**
KRLC *e* 14 08 03.9
KRLC *eS* **S** **14 17 40.6 +5.4**
KRLC MLR MLR
comp=Z,20µm,18.0s
KRLC Kraliky 74.99 21 *eP* **P 14 07 57.4 0.0**
KRLC *ex* x 14 08 03.9
KRLC *eS* **S** **14 17 40.6 +5.4**
KRLC AMS AMS 14 42 50.0
comp=Z,20µm,18.0s
PBRG Braganca 75.04 40 *eP* **P 14 07 57.1 -0.7**
comp=Z,136nm,1.5s
PBRG *eS* **S** **14 17 42.5 +6.5**
PVRL Vila Real 75.10 41 *eP* **P 14 07 57.9 -0.2**
comp=Z,167nm,1.6s
KURBB Kurchatov Arra 75.10 341 P **P 14 07 56.7 -1.2**
KHC Kasperske Hory 75.12 23 *eP* **P 14 07 58.2 +0.1**
KHC *e* 14 08 03.7
KHC *e* 14 10 53.5
KHC *eS* **S** **14 17 42.5 +5.9**
KHC MLR MLR
comp=Z,20µm,18.7s
KHC Kasperske Hory 75.12 23 *eP* **P 14 07 58.2 +0.1**
KHC *epP* **pwP** **14 08 03.7 +1.5**
KHC *ePP* PP 14 10 53.5 +8.1
KHC *eS* **S** **14 17 42.5 +5.9**
KHC AMS AMS 14 41 20.0
comp=Z,20µm,18.7s
TIY Taiyuan 75.27 313 *eP* **P 14 07 59.1 -0.1**
GEC2 GERESS Array S 75.42 23 *eP* **P 14 07 59.7 -0.2**
comp=Z,88nm,1.5s,baz=337,slow=5.9
GERES GERESS Array B 75.42 23 P **P 14 07 59.2 -0.7**
comp=Z,6.1nm,0.7s,baz=346,slow=4.3,SNR=34
GERES LR LR 14 42 10.0
comp=Z,14µm,19.9s,baz=338,slow=36
GERES GERESS Array B 75.42 23 P **P 14 07 59.7 -0.2**
GERES GERESS Array B 75.42 23 P **P 14 07 59.7 -0.2**
FUR Furstenfeldbru 75.42 25 *eP* **P 14 08 00.2 +0.3**
comp=Z,208nm,1.6s,baz=337,slow=5.9
TREC Trest 75.43 22 *eS* **S 14 17 45.5 +5.5**
TREC AMS AMS 14 42 20.0
comp=Z,31µm,17.5s
MORC Moravsky Berou 75.44 21 *eP* **P 14 07 59.6 -0.4**
MORC *eS* S 14 17 48.8 +8.7
MVO Moncorvo 75.47 40 *eP* **P 14 07 59.7 -0.6**
comp=Z,176nm,1.4s
MVO *eS* **S** **14 17 45.6 +4.8**
MVO *eSS* **SS** **14 22 37.0 +6.9**
MVO *eLQ* LQ 14 27 43.8
MVO *eLR* LR 14 32 07.7
comp=Z,11µm,20.0s
PVIS Viseu 75.49 41 *eP* **P 14 07 59.9 -0.5**
comp=Z,129nm,1.7s
OJC Ojcow 75.50 19 *eP* **P 14 07 59.9 -0.3**
OJC *es*P **pwP** **14 08 04.8 +0.6**
OJC *eS* **S** **14 17 49.0 +8.4**
OJC *eL* L 14 38 55.1
comp=Z,25µm,25.7s
OKC Ostrava-Krasne 75.51 20 *eP* **P 14 08 00.3 0.0**
OKC *eS* **S** **14 17 46.5 +5.7**
OKC MLR MLR
comp=Z,19µm,17.8s
OKC Ostrava-Krasne 75.51 20 *eP* **P 14 08 00.3 0.0**
OKC *eS* **S** **14 17 46.5 +5.7**
OKC AMS AMS 14 43 20.0
comp=Z,19µm,17.8s
UBR Ueberruh 75.56 26 *eP* **P 14 08 01.1 +0.4**
comp=Z,153nm,1.5s,baz=337,slow=5.9
CKRC Cesky Krumlov 75.59 23 *eP* **P 14 08 00.5 -0.3**
CKRC *eS* **S** **14 17 49.7 +7.9**
CKRC AMS AMS 14 42 00.0
comp=Z,20µm,18.1s
VRAC Vranov 75.67 21 ⇑ *iP* **P 14 08 01.3 +0.1**
VRAC Vranov 75.67 21 *eP* **P 14 08 01.1 -0.1**
VRAC *eS* **S** **14 17 49.4 +6.8**
COI Coimbra 75.71 42 *eP* **P 14 08 01.7 +0.1**
comp=Z,371nm,1.5s
COI *eS* **S** **14 17 48.2 +4.9**
COI *eSS* **SS** **14 22 37.7 +4.2**
LPSR Galich'ya Gora 75.77 6 *eP* **P 14 08 00.6 -1.1**
LPSR *eS* **S** **14 17 43.6 0.0**
LPSR pmax pmax
comp=Z,80nm,1.8s
LPSR smax smax
comp=N,2µm,9.2s
LPSR MLR MLR
comp=Z,13µm,16.0s
PCAS Casmilo, Conde 75.80 42 *eP* **P 14 08 01.3 -0.8**
comp=Z,321nm,1.5s
PCAS *eS* **S** **14 17 48.2 +3.8**
DAVA Damuels 75.85 26 *i P* **P 14 08 03.0 +0.4**
comp=Z,64nm,1.6s,SNR=16
KRUC Moravsky 75.86 22 *eP* **P 14 08 02.0 -0.3**
KRUC *eS* **S** **14 17 45.1 +0.4**
MTE Manteigas 75.90 41 *eP* **P 14 08 02.5 -0.3**
comp=Z,110nm,1.5s
MTE *eS* **S** **14 17 52.3 +6.7**
MTE *eSS* **SS** **14 22 39.9 +3.2**
MTE *eLQ* LQ 14 28 00.0
MTE *eLR* LR 14 32 17.9
comp=Z,18µm,18.0s
MTE Manteigas 75.90 41 IAMs_20 IAMs_20 14 45 59.5
comp=Z,18µm,20.0s
RETA Reutte 75.91 26 *i P* **P 14 08 02.5 -0.3**
comp=Z,18nm,1.1s,SNR=11
GUMO Guam 75.93 274 IAMs_20 IAMs_20 14 36 14.8
comp=Z,10µm,20.0s
PSBE So Bento 76.13 42 *eP* **P 14 08 03.8 -0.2**
comp=Z,185nm,1.8s
PSBE *eS* **S** **14 17 54.0 +6.0**
PSBE *eSS* **SS** **14 22 45.4 +5.4**
MOTA Moosalm 76.13 26 *i P* **P 14 08 04.0 -0.1**
comp=Z,38nm,1.5s,SNR=15
RJOB Jochberg 76.22 24 *eP* **P 14 08 04.2 -0.2**
comp=Z,171nm,1.2s,baz=337,slow=5.9
WATA Walderalm 76.27 25 *i P* **P 14 08 04.9 +0.1**
comp=Z,48nm,1.5s,SNR=13
SQTA Sankt Quirin 76.28 26 *i P* **P 14 08 05.0 +0.1**
comp=Z,46nm,1.3s,SNR=13
SSE Sheshan 76.28 303 P **P 14 08 04.8 -0.2**
SSE S **S** **14 17 48.3 -1.5**
SSE pmax pmax
comp=Z,36nm,0.8s
SSE pmax pmax
comp=Z,1µm,6.9s
SSE LR LR
comp=Z,2µm,13.1s
SSE LR LR
comp=Z,5µm,18.7s
FETA Feichten 76.33 26 *i P* **P 14 08 05.0 -0.2**
comp=Z,24nm,1.1s,SNR=12
BELG Belogornoye 76.33 1 *c iP* **P 14 08 03.6 -1.3**
BELG pmax pmax
comp=Z,30nm,1.2s
BELG MLR MLR
comp=Z,4µm,19.0s
JAVC Velka Javorina 76.33 21 *eP* **P 14 08 05.7 +0.6**
JAVC *eS* **S** **14 17 53.0 +2.9**
WTTA Wattenberg 76.35 25 *i P* **P 14 08 05.4 0.0**
comp=Z,60nm,1.6s,SNR=17
NIE Niedzica 76.36 19 *eP* **P 14 08 05.6 +0.4**
NIE *es*P **pwP** **14 08 10.2 +0.9**
NIE *eS* **S** **14 17 58.4 +8.1**
NIE *eL* L 14 40 42.2
comp=Z,15µm,24.5s
PMAFR Mafra 76.39 43 *eP* **P 14 08 04.9 -0.6**
comp=Z,320nm,1.8s

PMAFR *eS* **S** **14 17 57.2 +6.3**
PMAFR *eSS* **SS** **14 22 54.0 +10**
PCBR Castelo Branco 76.40 41 *eP* **P 14 08 04.8 -0.7**
comp=Z,86nm,1.5s
TBI Tubuai 76.43 198 *eS* **S 14 17 51.0 -0.2**
comp=Z,3µm,35.2s
TBI Tubuai 76.43 198 *eLQ* LQ 14 28 26.5
comp=Z,3µm,29.8s
TBI *eLR* LR 14 31 40.0
comp=Z,26µm,30.5s,baz=7.7
TBI Tubuai 76.43 198 *eT* T 15 31 52.3
comp=Z,91nm,0.3s
LANS Liptovska Anna 76.44 20 *eP* **P 14 08 06.2 +0.5**
LANS Liptovska Anna 76.44 20 *eP* **P 14 08 06.2 +0.5**
MOA Molln 76.48 23 *i P* **P 14 08 05.7 -0.2**
comp=Z,25nm,1.9s,SNR=13
SMOL Smolenice 76.60 21 *eP* **P 14 08 07.1 +0.5**
SMOL pmax pmax
comp=Z,55nm,1.5s
SMOL Smolenice 76.60 21 *eP* **P 14 08 07.0 +0.5**
PMST Lisbon--Monsan 76.61 43 *eP* **P 14 08 06.3 -0.5**
comp=Z,265nm,1.5s
AKASG Malin Array Be 76.64 13 P **P 14 08 05.7 -1.0**
comp=Z,14nm,0.7s,baz=340,slow=5.0,SNR=16
AKASG LR LR 14 42 42.6
comp=Z,18µm,18.1s,baz=335,slow=36
AKASG Malin Array Be 76.64 13 P **P 14 08 06.3 -0.4**
AKASG pmax pmax
comp=Z,46nm,1.4s
AKASG Malin Array Be 76.64 13 P **P 14 08 06.3 -0.4**
AKBB Malin Array Si 76.64 13 *ceP* **P 14 08 05.8 -0.9**
AKBB Malin Array Si 76.64 13 P **P 14 08 06.3 -0.4**
LIS Lisbon 76.65 43 *eP* **P 14 08 06.2 -0.7**
LIS *eS* **S** **14 17 52.3 -1.3**
LIS IAMs_20 IAMs_20 14 39 55.5
comp=E,17µm,16.4s
LIS Lisbon 76.65 43 *eP* **P 14 08 06.2 -0.7**
LIS *eS* **S** **14 17 52.3 -1.3**
LVV L'vov 76.68 16 *eP* **P 14 08 06.0 -1.0**
LVV *eS* **S** **14 17 51.0 -2.7**
LVV MLR MLR
comp=Z,21µm,20.0s
MODS Modra-Piesok 76.70 21 *eP* **P 14 08 06.5 -0.6**
MODS pmax pmax
comp=Z,157nm,1.4s
MODS Modra-Piesok 76.70 21 *eP* **P 14 08 06.5 -0.6**
MODS *eS* **S** **14 17 58.4 +4.4**
MODS *eSS* **SS** **14 22 52.1 +3.9**
MODS *eL* L 14 42 02.9
VORR Voronezh 76.72 6 *eP* **P 14 08 04.0 -3.1**
VORR pmax pmax
comp=Z,250nm,1.4s
NJ2 Nanjing 76.73 305 ⇑ *iP* **P 14 08 06.6 -0.9**
NJ2 pP **pP** **14 08 09.8 +0.8**
NJ2 PP **PP** **14 11 00.0 +0.5**
NJ2 S **S** **14 17 53.3 -1.4**
NJ2 pmax pmax
comp=Z,60nm,1.3s
NJ2 pmax pmax
comp=Z,3µm,5.1s
NJ2 LR LR
comp=Z,16µm,18.3s
NJ2 LR LR
comp=Z,13µm,17.3s
NJ2 LR LR
comp=Z,16µm,17.3s
PMTG Montargil 76.74 42 *eP* **P 14 08 06.7 -0.8**
comp=Z,124nm,1.6s
PMTG *eS* **S** **14 18 00.3 +5.6**
PMTG *eSS* **SS** **14 22 54.0 +4.8**
KOLL Kolacno 76.76 20 *eP* **P 14 08 07.5 +0.1**
PMRV Marv??o 76.79 42 *eP* **P 14 08 06.9 -0.9**
comp=Z,89nm,1.6s
PMRV *eS* **S** **14 18 00.9 +5.7**
PMRV *eSS* **SS** **14 22 54.7 +4.7**
PMRV *eLQ* LQ 14 28 10.7
PMRV *eLR* LR 14 30 48.1
BRZS Berezniki 76.79 345 ⇑ *iP* **P 14 08 06.5 -1.2**
comp=Z,67nm,1.7s,baz=345
BRZS *eS* **S** **14 17 54.8 -0.2**
baz=345
BRZS Berezniki 76.79 345 *c iP* **P 14 08 06.4 -1.2**
BRZS *eS* **S** **14 17 54.7 -0.2**
BRZS pmax pmax
comp=Z,67nm,1.7s
CONA Conrad Observa 76.79 22 *i P* **P 14 08 07.9 +0.2**
comp=Z,46nm,1.7s,SNR=18
ZST Bratislava 76.83 21 *eP* **P 14 08 08.4 +0.6**
ZST pmax pmax
comp=Z,867nm,2.3s
ZST Bratislava 76.83 21 *eP* **P 14 08 08.4 +0.6**
ZST *eS* **S** **14 17 57.6 +2.2**
RAR Rarotonga 76.84 208 IAMs_20 IAMs_20 14 36 23.6
comp=Z,12µm,20.0s
VYHS Vyhne 76.93 20 *eP* **P 14 08 07.9 -0.5**
VYHS pmax pmax
comp=Z,279nm,2.5s
VYHS Vyhne 76.93 20 *eP* **P 14 08 07.9 -0.5**
VYHS *eS* **S** **14 18 04.0 +7.5**
VYHS *eL* L 14 44 39.7
KBA Koelnbreinsper 76.97 24 *i P* **P 14 08 08.6 -0.2**
comp=Z,55nm,1.7s,SNR=18
ABTA Abfaltersbach 77.06 25 *i P* **P 14 08 09.2 0.0**
comp=Z,32nm,1.9s,SNR=8.5
CRVS Cervenica-Dubn 77.08 18 *eP* **P 14 08 09.1 -0.2**
CRVS pmax pmax
comp=Z,450nm,2.3s
CRVS Cervenica-Dubn 77.08 18 *eP* **P 14 08 09.1 -0.2**
CRVS *eS* **S** **14 18 05.3 +7.1**
CRVS *eL* L 14 41 26.8
VSR Storozhevoye 77.17 6 *eP* **P 14 08 08.0 -1.7**
VSR *eS* **S** **14 17 55.1 -3.8**
VSR pmax pmax
comp=Z,90nm,1.3s
VSR smax smax
comp=N,2µm,10.4s
VSR MLR MLR
comp=Z,13µm,15.0s
PESTR Estremoz 77.18 42 *eS* **S** **14 18 02.5 +3.0**
PESTR *eSS* **SS** **14 23 02.1 +6.2**
CZSB Cruzeiro do Su 77.21 120 *eP* **P 14 08 08.3 -2.0**
EVO Evora 77.28 42 ⇓ *iP* **P 14 08 09.8 -0.7**
EVO *i* S **S** **14 18 04.7 +4.0**
EVO Evora 77.28 42 *eP* **P 14 08 10.0 -0.5**
comp=Z,165nm,1.7s
KECS Kecovo 77.29 19 *eP* **P 14 08 10.3 -0.1**
KECS pmax pmax
comp=Z,37nm,1.3s
KECS Kecovo 77.29 19 *eP* **P 14 08 10.3 -0.1**
VRH Novokhopyorsk 77.34 5 *eP* **P 14 08 09.3 -1.3**
VRH *eS* **S** **14 17 55.1 -5.7**
VRH pmax pmax
comp=Z,110nm,1.7s
VRH smax smax
comp=N,3µm,11.5s
VRH MLR MLR
comp=Z,18µm,17.0s
ARSA Arzberg 77.35 23 *i P* **P 14 08 11.1 +0.3**
comp=Z,63nm,1.9s,SNR=18
ZOU Zoufplan 77.36 25 P **P 14 08 10.2 -0.9**
VORD Divnogorie 77.43 6 *eP* **P 14 08 09.6 -1.5**
VORD *eS* **S** **14 18 00.8 -0.9**
VORD pmax pmax
comp=Z,80nm,1.5s
VORD smax smax
comp=N,700nm,7.2s
VORD MLR MLR
comp=Z,8µm,16.0s
MYKA Terra Mystica 77.46 24 *eP* **P 14 08 11.2 -0.3**
comp=Z,27nm,2.0s
SRO Srobarova 77.46 21 *eP* **P 14 08 12.3 +0.9**
SRO Srobarova 77.46 21 *eP* **P 14 08 12.3 +0.9**
UZH Uzhgorod 77.50 18 *eP* **P 14 08 11.3 -0.3**
UZH *e* 14 08 17.9
UZH *e* 14 11 12.7
UZH *eS* **S** **14 18 00.3 -2.3**
UZH *e* 14 18 56.3
UZH *eSS* **SS** **14 23 03.1 +3.0**
UZH MLR MLR
comp=Z,3µm,21.0s
UCM Universidad Co 77.69 38 ⇓ *iP* **P 14 08 13.8 +0.9**
UCM *i* S **S** **14 18 10.0 +4.9**
PSZ Piszkesteto 77.70 20 ⇓ P **P 14 08 12.9 +0.1**
PSZ Piszkesteto 77.70 20 IAMs_20 IAMs_20 14 45 53.2

comp=Z,18µm,18.0s
SOKA Soboth 77.76 23 *i* P **P 14 08 12.8 -0.4**
comp=Z,60nm,1.4s,SNR=25
PBEJ Beja 77.77 43 *e*P **P 14 08 12.5 -0.8**
comp=Z,21nm,1.4s
PMOZ Porto Moniz, M 77.80 52 *e*P **P 14 08 12.8 -0.9**
comp=Z,131nm,1.4s
PMOZ Porto Moniz, M 77.80 52 *e*S S 14 18 17.0 +10
PMOZ Porto Moniz, M 77.80 52 *e*LR LR 14 33 02.6
comp=Z,15µm,18.0s
OBKA Obir 77.80 24 *i* P **P 14 08 12.8 -0.6**
comp=Z,33nm,0.8s,SNR=12
PTEO Sao Teotonio 77.81 44 *e*P **P 14 08 17.1 +3.6**
comp=Z,149nm,1.7s
PERS Pernice 77.82 23 *i* P **P 14 08 13.2 -0.3**
PERS *i* pP **sP 14 08 16.8 +1.3**
MK31 Makanchi Array 77.89 337 *i* P **P 14 08 12.4 -1.4**
MKAR Makanchi Array 77.89 337 P **P 14 08 12.9 -1.0**
comp=Z,12nm,0.6s,baz=35,slow=5.1,SNR=96
MKAR LR LR 14 47 45.8
comp=Z,23µm,18.6s,baz=8.0,slow=40
MKAR Makanchi Array 77.89 337 P **P 14 08 13.4 -0.5**
MKAR Makanchi Array 77.89 337 P **P 14 08 13.4 -0.5**
PAB San Pablo 77.92 39 P **P 14 08 12.7 -1.5**
PAB pmax pmax
comp=Z,142nm,1.7s
PAB MLR MLR
comp=Z,13µm,20.0s
PAB San Pablo 77.92 39 P **P 14 08 12.7 -1.5**
PAB IAmb IAmb 14 08 23.2
comp=Z,142nm,1.7s
PAB San Pablo 77.92 39 IAMs_20 IAMs_20 14 45 52.9
comp=Z,13µm,20.0s
MAKZ Makanchi 77.95 338 P **P 14 08 13.7 -0.5**
MAKZ pmax pmax
comp=Z,334nm,1.5s
MAKZ Makanchi 77.95 338 P **P 14 08 13.7 -0.5**
MAKZ IAMs_20 IAMs_20 14 47 48.9
comp=Z,18µm,20.0s
ESBB Sonseca Array 77.96 39 P **P 14 08 14.1 -0.3**
ESBB IAmb IAmb 14 08 23.3
comp=Z,142nm,1.6s
ESDC Sonseca Array 77.96 39 P **P 14 08 13.9 -0.5**
comp=Z,16nm,0.8s,baz=323,slow=5.3,SNR=38
ESDC LR LR 14 39 16.6
comp=Z,13µm,20.0s,baz=330,slow=33
ESDC Sonseca Array 77.96 39 P **P 14 08 13.9 -0.5**
ESDC IAmb IAmb 14 08 23.4
comp=Z,62nm,1.4s
PBAR Barrancos 77.99 42 *e*P **P 14 08 13.8 -0.7**
comp=Z,91nm,1.6s
PBAR *e*S **S 14 18 12.9 +4.6**
PMAR Madeira 78.02 52 *e*P **P 14 08 17.9 +2.9**
comp=Z,346nm,1.5s
AKTO Aktyubinsk 78.02 354 P **P 14 08 12.2 -2.3**
PCVE Castro Verde 78.03 43 *e*P **P 14 08 13.7 -1.0**
comp=Z,101nm,1.6s
PCVE Castro Verde 78.03 43 *e*S **S 14 18 14.6 +5.9**
PCVE *e*SS **SS 14 23 16.5 +7.8**
MORF Marmelete 78.04 44 *e*P **P 14 08 14.0 -0.9**
MORF *e*S **S 14 18 07.7 -1.3**
MORF IAMs_20 IAMs_20 14 38 52.1
comp=N,23µm,17.9s
MORF Marmelete 78.04 44 *e*P **P 14 08 14.0 -0.9**
MORF *e*S **S 14 18 07.7 -1.3**
MORF Marmelete 78.04 44 *e*P **P 14 08 14.2 -0.7**
comp=N,236nm,1.4s
MORF *e*S **S 14 18 13.1 +4.1**
PFVI Vila Bisbo 78.11 44 *e*P **P 14 08 15.1 -0.1**
comp=N,269nm,1.6s
PFVI *e*S **S 14 18 13.1 +3.5**
PFVI *e*SS **SS 14 23 17.2 +7.2**
LJU Ljubljana 78.23 24 *e*P **P 14 08 15.0 -0.8**
LJU *e*pP **sP 14 08 18.4 +0.7**
LJU *e*S **S 14 18 12.2 +1.5**
LJU *e*SS **SS 14 23 15.1 +3.9**
PVAQ Vaqueiros 78.36 43 *e*P **P 14 08 15.8 -0.8**
comp=N,175nm,1.6s
PVAQ *e*S **S 14 18 15.4 +3.1**
PVAQ Vaqueiros 78.36 43 *e*LQ LQ 14 30 03.4
PVAQ *e*LR LR 14 32 32.6
comp=N,23µm,18.0s
PVAQ Vaqueiros 78.36 43 P **P 14 08 15.9 -0.7**
PBDV Barranco-do-Ve 78.40 43 *e*P **P 14 08 16.4 -0.5**
comp=N,126nm,1.9s
PBDV Barranco-do-Ve 78.40 43 *e*S **S 14 18 17.5 +4.7**
PBDV *e*SS SS 14 23 25.4 +11
NNA Nana 78.65 126 IAMs_20 IAMs_20 14 42 24.8
comp=Z,10µm,20.0s
PTGA Pitinga 78.81 106 P **P 14 08 17.9 -1.4**
PTGA IAmb IAmb 14 08 26.1
comp=Z,92nm,1.2s
PTGA IAMs_20 IAMs_20 14 42 41.9
comp=Z,10µm,22.0s
BOJS Bojanci 78.92 24 *i* P **P 14 08 19.0 -0.4**
BOJS *i* pP **sP 14 08 22.5 +1.0**
BURAR Bucovina Array 79.02 16 ⇑P **P 14 08 20.0 -0.1**
BURAR Bucovina Array 79.02 16 P **P 14 08 20.3 +0.2**
SORM Soroca 79.02 14 ⇓P **P 14 08 19.6 -0.4**
MORH Mrgy, Hungar 79.05 21 ⇓P **P 14 08 20.2 0.0**
AB31 Akbulak array 79.06 353 *i* P **P 14 08 19.1 -1.1**
ABKAR Akbulak array 79.06 353 P **P 14 08 19.5 -0.7**
GTA Gaotai 79.13 322 ⇑P **P 14 08 20.3 -0.6**
GTA pP pwP 14 08 25.6 +0.6
GTA sP PcP 14 08 29.1 -0.3
GTA PP **PP 14 11 20.6 +1.1**
GTA S **S 14 18 17.3 -3.4**
GTA sS sS 14 18 26.8 +3.6
GTA pmax pmax
comp=Z,20nm,1.7s
GTA pmax pmax
comp=Z,2µm,5.8s
GTA LR LR
comp=Z,20µm,18.2s
GTA LR LR
comp=Z,17µm,17.8s
GTA LR LR
comp=Z,30µm,18.2s
WMQ Urumqi 79.23 333 P **P 14 08 21.8 +0.5**
WMQ pP sP 14 08 24.6 +1.2
WMQ sP PcP 14 08 29.5 -0.1
WMQ PP **PP 14 11 20.9 +0.9**
WMQ sS sS 14 18 35.3 +11
WMQ pmax pmax
comp=Z,78nm,1.9s
WMQ pmax pmax
comp=Z,5µm,4.9s
WMQ LR LR
comp=Z,8µm,19.3s
WMQ LR LR
comp=Z,16µm,21.5s
WMQ LR LR
comp=Z,14µm,25.1s
DRGR 79.35 18 ⇑P **P 14 08 21.6 -0.4**
ARCR ARCALIA 79.37 17 ⇓P **P 14 08 22.4 +0.4**
SIRR Siria 79.64 19 ⇓P **P 14 08 23.3 -0.1**
SFS San Fernando 79.79 42 *e*P **P 14 08 23.0 -1.4**
SFS *i* S **S 14 18 33.5 +6.0**
BIZ Bicaz 79.82 16 ⇑P **P 14 08 24.9 +0.5**
XAN Xi'an 79.90 313 P **P 14 08 23.9 -1.2**
XAN PP **PP 14 11 26.3 +0.3**
XAN S **S 14 18 28.6 -0.3**
XAN pmax pmax
comp=Z,83nm,2.2s
XAN pmax pmax
comp=Z,4µm,4.8s
XAN LR LR
comp=Z,28µm,17.6s
XAN LR LR
comp=Z,14µm,22.8s
XAN LR LR
comp=Z,31µm,19.5s
KIS Kishinev 80.20 14 ⇓*i* P **P 14 08 26.6 +0.2**
comp=Z,690nm,5.1s
KIS Kishinev 80.20 14 *e*PcP **PcP 14 08 35.0 +1.3**
KIS Kishinev 80.20 14 *e*PP PP 14 11 32.0 +4.1
KIS *e*S **S 14 18 30.0 -1.5**
comp=Z,1µm,15.1s
KIS Kishinev 80.20 14 *e*LR LR 14 38 03.0
comp=Z,4µm,17.0s
KIS Kishinev 80.20 14*d* *i*P **P 14 08 26.6 +0.2**
KIS *e* 14 08 35.0
KIS *e* 14 11 32.0
KIS *e*S **S 14 18 30.0 -1.5**
KIS *e*PS **PnS 14 19 11.0 -3.9**
KIS pmax pmax
comp=Z,690nm,5.1s
KIS smax smax
comp=E,1µm,17.0s
KIS Kishinev 80.20 14 *e*PS 14 19 11.0
KIS Kishinev 80.20 14 *e*LQ LQ 14 28 05.0
comp=E,1µm,29.0s
WHN Wuhan 80.21 307 ⇑P **P 14 08 25.6 -1.1**
WHN S **S 14 18 32.8 +0.7**
WHN sS **SKSac 14 18 44.5 -0.3**
WHN pmax pmax
comp=E,240nm,1.7s
WHN pmax pmax
comp=E,5µm,5.9s
WHN LR LR
comp=E,35µm,17.1s
WHN LR LR
comp=E,24µm,15.4s
WHN LR LR
comp=E,38µm,18.9s
CASP Castiglione de 80.25 28 P **P 14 08 25.7 -1.2**
CASP IAmb IAmb 14 08 35.6
comp=Z,150nm,1.4s
BZS Buzias 80.25 19 ⇑P **P 14 08 26.4 -0.4**
EMAL Malaga-Limoner 80.28 41 ⇓*i* P **P 14 08 28.0 +1.0**
EMAL *i* S **S 14 18 33.9 +1.3**
FRGS Fruska Gora 80.31 21 ⇓P **P 14 08 26.9 -0.2**
MACA Manacapuru-AM 80.32 108 *e*P **P 14 08 26.7 -0.8**
TESR Tescani 80.33 16 ⇓P **P 14 08 27.2 0.0**
LZH Lanzhou 80.39 318 ⇑P **P 14 08 27.3 -0.6**
LZH pP sP 14 08 31.1 +1.2
LZH sP pwP 14 08 32.8 +0.9
LZH PP **PP 14 11 30.6 +0.6**
LZH S **S 14 18 32.3 -1.9**
LZH sS SKSac 14 18 42.4 -3.9
LZH SS **SS 14 23 45.3 +0.9**
LZH pmax pmax
comp=Z,69nm,1.3s
LZH pmax pmax
comp=Z,3µm,6.8s
LZH LR LR
comp=Z,29µm,15.7s
LZH LR LR
comp=Z,25µm,15.7s
LZH LR LR
comp=Z,23µm,17.4s
VASR Vaslui 80.39 15 ⇓P **P 14 08 27.2 -0.3**
TDK Taldyqorghan 80.47 339 *e*P **P 14 08 27.4 -0.6**
comp=Z,62nm,1.4s,baz=340
TDK *e*S **S 14 18 34.6 +0.1**
baz=340
TDK *e*LR LR 14 46 18.1
comp=Z,10µm,16.6s,baz=340
TDK Taldyqorghan 80.47 339 *e*P **P 14 08 27.4 -0.6**
TDK *e*S **S 14 18 34.6 +0.1**
TDK pmax pmax
comp=Z,62nm,1.4s
TDK MLR MLR
comp=Z,10µm,17.0s
OZUR 80.58 16 ⇑P **P 14 08 28.4 -0.2**
CEU Ceuta 80.63 42 ⇓*i* P **P 14 08 30.1 +1.2**
CEU *i* S **S 14 18 41.6 +5.3**
DOPR Dopca 80.64 17 ⇑P **P 14 08 28.9 0.0**
GZR Gura Zlata 80.70 18 ⇑P **P 14 08 28.8 -0.4**
MAHO Mahon 80.80 33 ⇓*i* P **P 14 08 30.8 +1.1**
MAHO *i* S **S 14 18 43.5 +5.5**
LOT Lotru 80.84 18 ⇑P **P 14 08 29.1 -0.3**
NRCA Norcia 80.84 26 P **P 14 08 29.9 -0.2**
NRCA IAmb IAmb 14 08 39.3
comp=Z,109nm,1.4s
CART Cartagena 80.92 38 ⇓*i* P **P 14 08 30.2 -0.3**
CART *i* S **S 14 18 44.5 +5.2**
CART Cartagena 80.92 38 IAMs_20 IAMs_20 14 49 55.3
comp=Z,12µm,19.0s
VRI Vrincioaia 80.97 16 ⇑P **P 14 08 30.5 -0.1**
PLOR Plostina 80.97 16 ⇑P **P 14 08 30.5 -0.1**
MDVR Moldovita 81.07 19 ⇑P **P 14 08 30.8 -0.5**
ARR Arges 81.08 17 ⇓P **P 14 08 31.5 +0.2**
VOIR 81.09 17 ⇑P **P 14 08 31.1 -0.2**
HERR Herculane 81.12 19 ⇑P **P 14 08 30.9 -0.5**
MLR Muntele Rosu 81.20 16 ⇓P **P 14 08 32.3 +0.3**
YHNB Yeheng 81.28 299 IAMs_20 IAMs_20 14 47 36.2
comp=Z,9µm,21.0s
NEHR Nehoiu 81.32 16 ⇑P **P 14 08 31.9 -0.7**
BTLS Baital 81.32 342 ⇓*i* P **P 14 08 31.6 -0.9**
comp=Z,62nm,2.1s,baz=343
BTLS *e*S **S 14 18 43.4 0.0**
baz=343
BTLS Baital 81.32 342*d* *i*P **P 14 08 31.6 -0.9**
BTLS *e*S **S 14 18 43.3 0.0**
BTLS pmax pmax
comp=Z,62nm,2.1s
DIVS Divibare 81.36 21 IAMs_20 IAMs_20 14 45 30.8
comp=Z,13µm,20.0s
SRE Strehaia 81.49 18 ⇑P **P 14 08 33.0 -0.4**
ISR Istrita 81.66 16 ⇑P **P 14 08 34.4 0.0**
PVLZ Peæn de 81.69 42 ⇓*i* P **P 14 08 33.6 -1.0**
PVLZ *i* S **S 14 18 48.8 +1.4**
CFR Carcaliu 81.87 15 ⇓P **P 14 08 35.3 0.0**
TLCR 81.97 14 ⇓P **P 14 08 35.7 -0.1**
AVE Averroes 81.97 45 ⇓*i* P **P 14 08 36.1 0.0**
AVE *i* S **S 14 18 54.0 +3.6**
SHLS Shalkode 81.98 338 ⇑*i* P **P 14 08 35.4 -0.8**
comp=Z,163nm,2.2s,baz=338
SHLS *e*S **S 14 18 50.0 -0.6**
baz=338
SHLS Shalkode 81.98 338*c* *i*P **P 14 08 35.3 -0.9**
SHLS *e*S **S 14 18 49.9 -0.6**
SHLS pmax pmax
comp=Z,163nm,2.2s
UZB Uzynbulak 82.10 338 ⇑*i* P **P 14 08 36.1 -0.8**
comp=Z,95nm,2.5s,baz=339
UZB *e*S **S 14 18 51.8 0.0**
baz=339
UZB Uzynbulak 82.10 338*c* *i*P **P 14 08 36.0 -0.8**
UZB *e*S **S 14 18 51.7 0.0**
UZB pmax pmax
comp=Z,95nm,2.5s
MELI Melilla 82.15 41 ⇓*i* P **P 14 08 33.8 -3.2**
MELI *i* S **S 14 18 52.8 +0.6**
BOVS Bovan 82.17 20 ⇑P **P 14 08 37.2 +0.2**
MSVF Nonsavu 82.17 228 LR LR 14 40 18.0
comp=Z,9µm,18.7s,baz=15,slow=32
MSVF Nonsavu 82.17 228 IAMs_20 IAMs_20 14 37 01.5
comp=Z,10µm,20.0s
TPGR Topolog 82.23 15 ⇑P **P 14 08 37.0 -0.3**
HARR Harsova 82.31 15 ⇑P **P 14 08 37.4 -0.3**
SATY Saty 82.32 339 ⇑*i* P **P 14 08 37.3 -0.7**
comp=Z,78nm,1.9s,baz=339
SATY *e*S **S 14 18 54.0 0.0**
baz=339
SATY Saty 82.32 339*c* *i*P **P 14 08 37.3 -0.7**
SATY *e*S **S 14 18 53.9 0.0**
SATY pmax pmax
comp=Z,78nm,1.9s
ETMB Extrema 82.50 116 *e*P **P 14 08 36.3 -2.7**
AAA Alma-Ata 82.50 340 ⇑*i* P **P 14 08 38.3 -0.5**
comp=Z,58nm,1.4s,baz=340
AAA *i* S **S 14 18 56.2 +0.4**
baz=340
AAA LR LR 14 47 42.3
comp=Z,7µm,17.0s,baz=340
AAA Alma-Ata 82.50 340*c* *i*P **P 14 08 38.3 -0.5**
AAA *i* S **S 14 18 56.1 +0.4**
AAA pmax pmax
comp=Z,57nm,1.4s
MDOK Medeo 82.52 340 *i* P **P 14 08 38.1 -1.0**
baz=340
MDOK *e*S **S 14 18 55.8 -0.3**
baz=340
MDOK LR LR 14 47 37.0
comp=Z,7µm,16.0s,baz=340
MDOK Medeo 82.52 340 *i* P **P 14 08 38.0 -1.0**
MDOK *e*S **S 14 18 55.8 -0.3**
QZH Quanzhou 82.56 301 ⇑*i* P **P 14 08 37.3 -2.0**
QZH sP **pwP 14 08 43.5 +0.2**
QZH PP **PP 14 11 48.8 +0.7**
QZH S **S 14 18 52.1 -4.6**
QZH pmax pmax
comp=Z,2µm,8.4s
QZH LR LR
comp=Z,6µm,12.8s
QZH LR LR
comp=Z,7µm,18.1s
QZH LR LR
comp=Z,10µm,14.1s
TNSS Tian-Shan 82.66 340 ⇑*e*P **P 14 08 39.0 -1.1**
baz=340
TNSS Tian-Shan 82.66 340 ⇑*e*P **P 14 08 39.0 -1.1**
SGDS Sogindy 82.74 342 ⇑*i* P **P 14 08 39.5 -0.6**
comp=Z,73nm,2.1s,baz=342
SGDS *e*S **S 14 18 58.4 +0.2**
baz=342
SGDS Sogindy 82.74 342*c* *i*P **P 14 08 39.5 -0.6**
SGDS *e*S **S 14 18 58.3 +0.2**
SGDS pmax pmax
comp=Z,73nm,2.1s
IFR Ifrane 82.77 43 ⇓*i* P **P 14 08 41.1 +0.5**
IFR *i* S **S 14 19 01.9 +2.9**
TPUB Ta-pu 82.78 299 IAMs_20 IAMs_20 14 51 46.0
comp=Z,9µm,18.0s
ENH Enshi 82.79 311 IAMs_20 IAMs_20 14 45 01.4
comp=Z,19µm,22.0s
SIM Simferopol' 82.92 11 *e*P **P 14 08 44.8 +4.0**
SIM *e*S **S 14 19 03.0 +3.3**
SIM pmax pmax
comp=Z,57nm,1.1s
SIM MLR MLR
comp=Z,10µm,21.0s
PLVB Pleven 82.99 18 ⇓P **P 14 08 40.8 -0.5**
TKM2 Tokmak 2 83.06 341 P **P 14 08 41.1 -0.8**
SNR=41
TKM2 Tokmak 2 83.06 341 P **P 14 08 40.9 -1.0**
MALB Monte Alegre 83.15 102 *e*P **P 14 08 40.9 -1.5**
CHMS Chumysh 83.15 341 P **P 14 08 41.8 -0.4**
SNR=11
MCPB Macapa, AP 83.33 99 *e*P **P 14 08 41.5 -1.9**
BOOM Boomskoye usch 83.40 340 P **P 14 08 43.1 -0.5**
BOOM pmax pmax
comp=Z,92nm,1.5s
BOOM Boomskoye usch 83.40 340 P **P 14 08 43.1 -0.5**
BOOM IAmb IAmb 14 08 53.1
comp=Z,92nm,1.5s
ANN Anapa 83.41 8 *e*P **P 14 08 39.5 -3.8**
ANN *e*S **S 14 19 00.1 -4.5**
ANN *e*SS **SS 14 24 31.0 +2.8**
ANN pmax pmax
comp=Z,82nm,1.1s
ANN pmax pmax
comp=Z,3µm,6.3s
KBK Karagaybulak 83.44 341 P **P 14 08 43.3 -0.5**
SNR=18
VTS Vitosha 83.46 19 ⇑P **P 14 08 43.1 -0.8**
GOF Gofitskoye 83.54 4 ⇑*i* P **P 14 08 43.6 -0.4**
GOF pmax pmax
comp=Z,185nm,1.5s
AAK Ala-Archa 83.55 341 P **P 14 08 43.8 -0.6**
SNR=15
AAK Ala-Archa 83.55 341 P **P 14 08 43.3 -1.1**
EKS2 Erkin-Say 83.67 342 P **P 14 08 44.7 -0.2**
SNR=24
SKO Skopje 83.70 20 *i* P **P 14 08 44.1 -0.9**
SKO *i* S **S 14 19 11.3 +3.5**
SKO *i* S **ScS 14 19 20.8 -0.1**
KK31 Karatay Array 83.83 344 *i* P **P 14 08 44.3 -1.3**
KKAR Karatay Array 83.83 344 P **P 14 08 44.4 -1.2**
KKAR Karatay Array 83.83 344 P **P 14 08 44.4 -1.2**
MATE Matera 83.84 24 ⇑P **P 14 08 45.3 -0.3**
DZA Taraz 83.89 344 ⇑*i* P **P 14 08 45.3 -0.8**
comp=Z,18nm,1.5s,baz=344
DZA *e*S **S 14 19 07.5 -2.3**
baz=344
DZA Taraz 83.89 344*c* *i*P **P 14 08 45.2 -0.8**
DZA *e*S **S 14 19 07.5 -2.3**
DZA pmax pmax
comp=Z,18nm,1.5s
UCH Uchtor 83.94 341 P **P 14 08 46.3 -0.5**
SNR=9.2
STIP Stip 84.13 20 *i* P **P 14 08 46.3 -0.9**
AML Almayashu 84.20 342 P **P 14 08 47.9 -0.1**
SNR=25
ITTB Itaituba 84.24 104 *e*P **P 14 08 46.1 -1.9**
OHR Ohrid 84.38 21 *i* P **P 14 08 47.7 -0.9**
OHR *i* S **S 14 19 21.4 +6.7**
VAY Valandovo 84.57 20 *i* P **P 14 08 48.6 -0.8**
VAY *i* S **S 14 19 24.7 +8.3**
KIV Kislovodsk 84.62 5 ⇓P **P 14 08 49.8 +0.1**
KIV Kislovodsk 84.62 5 *e*P **P 14 08 49.3 -0.4**
KIV *e* 14 12 04.9
KIV *e*PPP PPP 14 13 57.7
KIV *e*SS SS 14 24 49.7 +3.3
KIV *e*SSS SSS 14 28 20.8
KIV pmax pmax
comp=Z,147nm,1.0s
KIV pmax pmax
comp=Z,409nm,4.3s
KIV MLR MLR
comp=Z,32µm,20.0s
KIV Kislovodsk 84.62 5 IAMs_20 IAMs_20 14 48 38.5
comp=Z,11µm,18.0s
KNT Kendrikon 84.79 20 P **P 14 08 50.3 -0.2**
SOC Sochi 84.80 7 *e*P **P 14 08 48.8 -1.7**
SOC *e*S **S 14 19 12.5 -6.2**
SOC *e*SS **SS 14 24 49.9 +1.0**
SOC pmax pmax
comp=Z,83nm,1.2s
NVR Nevrokopi 84.81 19 P **P 14 08 50.3 -0.3**
FNA Florina 84.82 21 P **P 14 08 48.1 -2.7**
FNA Florina 84.82 21 P **P 14 08 49.3 -1.5**
FNA pmax pmax
comp=Z,115nm,1.3s
FNA Florina 84.82 21 P **P 14 08 49.3 -1.5**
SHA1 Shidzhatmaz 84.83 5*c* *i*P **P 14 08 50.3 -0.7**
IUG luzhnay 84.84 345 ⇑*i*P **P 14 08 50.6 -0.3**
baz=345
IUG *e*S **S 14 19 14.1 -5.4**
baz=345
IUG luzhnay 84.84 345*c* *i*P **P 14 08 50.6 -0.3**
IUG *e*S **S 14 19 14.0 -5.4**
KBN Korca 84.84 21 P **P 14 08 49.4 -1.5**
KBZ Khabaz 84.86 5 P **P 14 08 50.0 -0.8**
comp=Z,8.3nm,1.0s,baz=9.3,slow=3.1,SNR=20
KBZ LR LR 14 49 10.1
comp=Z,9µm,19.4s,baz=344,slow=37
KBZ Khabaz 84.86 5*c* *i*P **P 14 08 50.5 -0.2**
KBZ pmax pmax
comp=Z,87nm,1.6s
KBZ MLR MLR
comp=Z,14µm,18.0s
CD2 Chengdu 84.86 315 P **P 14 08 50.8 -0.3**
CD2 PP **PP 14 12 04.5 -2.2**
CD2 SKS **SKSac 14 19 08.4 -7.5**
CD2 S **S 14 19 19.8 0.0**
CD2 pmax pmax
comp=Z,70nm,1.9s
CD2 pmax pmax
comp=Z,3µm,6.3s
CD2 LR LR
comp=Z,28µm,15.8s
CD2 LR LR
comp=Z,22µm,18.7s
CD2 LR LR
comp=Z,43µm,15.8s
EDRB Edirne 84.87 17 P **P 14 08 50.5 -0.4**
GRG Griva 84.88 20 P **P 14 08 50.5 -0.5**
NEST Nestorio 85.10 21 P **P 14 08 51.5 -0.7**
NCK Nalchik 85.12 4 *i* P **P 14 08 51.1 -1.1**
NCK pmax pmax
comp=Z,197nm,2.8s
NCK MLR MLR
comp=Z,14µm,18.0s
SOH Sokhos 85.21 19 P **P 14 08 52.0 -0.7**
TIP Timpagrande 85.23 25 ⇓P **P 14 08 52.4 -0.5**
TIP Timpagrande 85.23 25 P **P 14 08 51.4 -1.5**
TIP IAMs_20 IAMs_20 14 47 09.4
comp=Z,15µm,20.0s
KAVA Kavala 85.28 18 P **P 14 08 52.4 -0.5**
NEY Neytrino 85.33 5*d* *i*P **P 14 08 53.2 -0.2**
NEY pmax pmax
comp=Z,35nm,1.7s
RDO Rodhopi 85.33 18 P **P 14 08 53.1 -0.1**
PENT Pentalofos 85.33 21 P **P 14 08 52.8 -0.6**
KZN Kozani 85.37 21 P **P 14 08 52.1 -1.4**
HORT Hortiatis 85.37 20 P **P 14 08 52.5 -1.0**
KEK Kerkira 85.48 22 P **P 14 08 58.0 +4.0**
GROC Groznyy 85.49 2 *e*P **P 14 08 57.1 +3.1**
GROC *e* 14 12 13.3
GROC *e*S **S 14 19 24.5 -1.0**

GROC pmax pmax
comp=Z,38nm,0.5s
KPRO Kipourio 85.61 21 P **P** **14 08 54.0 -0.7**
PLG Polygyros 85.66 19 P **P** **14 08 53.8 -1.1**
ALN Alexandroupoli 85.67 17 P **P** **14 08 52.9 -2.0**
THAS Thassos island 85.69 18 P **P** **14 08 54.2 -0.8**
LIT Litokhoron 85.72 20 P **P** **14 08 52.5 -2.7**
LIT Litokhoron 85.72 20 P **P** **14 08 54.4 -0.8**
LIT pmax pmax
comp=Z,88nm,1.1s
LIT Litokhoron 85.72 20 P **P** **14 08 54.4 -0.8**
LIT IAmb IAmb 14 09 03.7
comp=Z,88nm,1.1s
MAK Makhachkala 85.77 1 *e*P P 14 08 49.4 -5.9
MAK *e* 14 12 15.4
MAK *e* 14 19 11.3
MAK *e*SSS SSS 14 28 30.0
MAK pmax pmax
comp=Z,314nm,1.8s
IGT Igoumenitsa 85.78 22 P **P** **14 08 54.5 -1.0**
JAN Janina 85.78 22 P **P** **14 08 54.9 -0.6**
OUR Ouranopolis 85.81 19 P **P** **14 08 54.1 -1.5**
CHVG Ch'k'valeri 85.82 5 ⇓P **P** **14 08 55.6 -0.1**
ZEI Tsey 85.84 4 *e*P **P** **14 08 53.8 -2.2**
ZEI pmax pmax
comp=Z,23nm,1.6s
CEL Celeste 85.87 26 IAMs_20 IAMs_20 14 49 54.2
comp=Z,16µm,18.0s
SMTH Samothraki Isl 85.98 18 P **P** **14 08 55.7 -0.8**
ISK Istanbul-Kandi 86.03 15 P **P** **14 08 55.9 -0.8**
THL Klokotos Trika 86.13 21 P **P** **14 08 55.8 -1.4**
KDZE Karadeniz Ereo 86.15 13 ⇓P **P** **14 08 57.1 -0.2**
KSH Kashi 86.24 340 P **P** **14 08 59.3 +1.4**
KSH pP pwP 14 09 03.4 +1.4
KSH PP **PP** **14 12 21.3 +3.6**
KSH S **S** **14 19 31.0 -2.3**
KSH pmax pmax
comp=Z,28nm,1.8s
KSH pmax pmax
comp=Z,2µm,4.8s
KSH LR LR
comp=Z,5µm,18.5s
KSH LR LR
comp=Z,6µm,17.5s
KSH LR LR
comp=Z,6µm,18.8s
KEST Kesra 86.26 31 P **P** **14 08 57.2 -0.8**
comp=Z,34nm,1.0s,baz=337,slow=2.1,SNR=9.8
KEST LR LR 14 48 52.9
comp=Z,19µm,18.1s,baz=290,slow=37
KEST Kesra 86.26 31 P **P** **14 08 57.9 -0.1**
KEST IAmb IAmb 14 09 08.2
comp=Z,93nm,1.2s
DIKM Dikmen 86.30 10 ⇑P **P** **14 08 58.4 +0.4**
GADA Gvkgeada 86.32 18 P **P** **14 08 57.6 -0.5**
LIA Limnos Island 86.47 18 P **P** **14 08 57.9 -0.9**
LKD2 Lefkada island 86.56 22 P **P** **14 08 56.4 -3.0**
XOR Xorichti 86.58 20 P **P** **14 08 58.1 -1.4**
NPGB Novo Progresso 86.59 106 *e*P **P** **14 08 57.4 -2.4**
NEO Neokhori 86.64 20 P **P** **14 08 58.2 -1.6**
MAKR Makrakomi, Fth 86.69 21 P **P** **14 08 58.9 -1.1**
EVR Evrytania 86.70 21 P **P** **14 08 58.4 -1.8**
AGG Agios Georgios 86.72 21 P **P** **14 08 57.7 -2.5**
AGG Agios Georgios 86.72 21 P **P** **14 08 58.9 -1.3**
AGG pmax pmax
comp=Z,473nm,2.9s
AGG Agios Georgios 86.72 21 P **P** **14 08 58.9 -1.3**
EZN Ezine 86.76 17 P **P** **14 08 59.2 -1.1**
LPAZ La Paz 86.78 121 P **P** **14 08 58.9 -2.4**
comp=Z,6.4nm,0.9s,baz=345,slow=3.6,SNR=15
LPAZ LR LR 14 50 34.1
comp=Z,4µm,18.9s,baz=324,slow=38
LPAZ La Paz 86.78 121 P **P** **14 09 00.8 -0.5**
LPAZ pmax pmax
comp=Z,41nm,1.1s
LPAZ La Paz 86.78 121 P **P** **14 09 00.8 -0.5**
LPAZ IAmb IAmb 14 09 09.1
comp=Z,41nm,1.1s
LPAZ La Paz 86.78 121 *e*P **P** **14 08 59.2 -2.1**
GZH Guangzhou 86.83 304 P **P** **14 08 59.3 -1.6**
GZH S **S** **14 19 32.6 -6.6**
GZH LR LR
comp=Z,6µm,17.1s
GZH LR LR
comp=Z,10µm,20.8s
FSK Fiskardo 86.86 22 P **P** **14 08 59.3 -1.5**
PVO Paravola 86.93 21 P **P** **14 09 00.5 -0.6**
KEF5 Kardakata, Kep 87.01 22 P **P** **14 09 00.1 -1.5**
AXAR Agios Charalam 87.04 20 P **P** **14 08 59.9 -1.8**
ANX Ano Chora 87.04 21 P **P** **14 09 00.7 -1.1**
ATAL Atalanti 87.19 20 P **P** **14 09 00.4 -2.0**
AKH Akhalkalaki 87.20 4 ⇓P **P** **14 09 03.2 +0.5**
LKR Lokris 87.22 20 P **P** **14 09 00.1 -2.5**
SIGR SIGRI 87.26 18 P **P** **14 09 01.5 -1.2**
TRIZ Trizonia 87.29 21 P **P** **14 09 05.3 +2.4**
PRK Paraskevi 87.31 18 P **P** **14 09 02.8 -0.2**
GYA Guiyang 87.33 311 ⇑P **P** **14 09 02.3 -1.1**
GYA PP **PP** **14 12 32.8 +5.9**
GYA S **S** **14 19 47.9 +3.7**
GYA pmax pmax
comp=Z,390nm,5.5s
GYA LR LR
comp=Z,2µm,19.6s
GYA LR LR
comp=Z,2µm,25.1s
GYA LR LR
comp=Z,3µm,22.0s
SKY Skiros Island 87.33 19 P **P** **14 09 01.5 -1.6**
TMAB Tom-Au,PA,Br 87.35 97 *e*P **P** **14 09 03.5 +0.1**
LAKA Lakka 87.39 21 P **P** **14 09 02.7 -0.7**
RLS Riolos of Patr 87.45 22 P **P** **14 09 02.9 -0.8**
KYMI Kymi, Euboea I 87.47 19 P **P** **14 09 02.1 -1.7**
DRO Drossia 87.61 21 P **P** **14 09 03.5 -1.0**
KLV Kalavryta, Ach 87.62 21 P **P** **14 09 02.6 -2.0**
EREA Eretria 87.64 20 P **P** **14 09 03.0 -1.6**
ANTO Ankara 87.75 13 IAMs_20 IAMs_20 14 53 35.3
comp=Z,9µm,20.0s
VILL Villia 87.76 20 P **P** **14 09 03.0 -2.2**
LTK Loutraki 87.82 20 P **P** **14 09 03.0 -2.5**
LOUT Loutraki 87.85 20 P **P** **14 09 02.9 -2.7**
DION Dionisos Attik 87.97 20 P **P** **14 09 04.5 -1.7**
PTL Penteli 87.98 20 P **P** **14 09 04.4 -1.9**
BRTR Keskin Array B 88.01 12 P **P** **14 09 05.3 -1.2**
comp=Z,5.9nm,0.9s,baz=318,slow=1.9,SNR=17
BRTR LR LR 14 50 48.1
comp=Z,13µm,21.9s,baz=358,slow=37
BRTR Keskin Array B 88.01 12 P **P** **14 09 06.0 -0.5**
BRTR Keskin Array B 88.01 12 P **P** **14 09 06.0 -0.5**
ATHU Athens Univers 88.05 20 P **P** **14 09 04.6 -2.0**
CHOS Chios island 88.10 18 P **P** **14 09 04.1 -2.8**
VLY Voula,Athens 88.16 20 P **P** **14 09 04.9 -2.2**
VLX Vlachokerasia 88.31 21 P **P** **14 09 06.7 -1.3**
ITM Ithomi 88.39 21 P **P** **14 09 05.6 -2.6**
ITM Ithomi 88.39 21 P **P** **14 09 06.1 -2.1**
ITM IAmb IAmb 14 09 16.2
comp=Z,76nm,1.6s
KULA Kula-Manisa 88.45 16 P **P** **14 09 07.1 -1.4**
VILB Vilhena 88.45 113 *e*P **P** **14 09 07.0 -1.6**
GNI Garni 88.50 3 *c i*P **P** **14 09 09.1 +0.2**
GNI pmax pmax
comp=Z,94nm,1.4s
GNI MLR MLR
comp=Z,11µm,21.0s
GNI Garni 88.50 3 IAMs_20 IAMs_20 14 50 29.4
comp=Z,11µm,21.0s
PYL PYLOS 88.62 22 P **P** **14 09 05.5 -3.8**
SACV Santiago Islan 88.73 67 IAMs_20 IAMs_20 14 43 01.9
comp=Z,10µm,21.0s
PB11 IPOC Station P 88.86 124 P **P** **14 09 09.0 -1.7**
PB11 IAmb IAmb 14 09 18.6
comp=Z,46nm,1.1s
SMG Samos 88.90 18 P **P** **14 09 08.8 -1.8**
VLI Veliai 89.06 21 P **P** **14 09 08.3 -3.1**
PRPB Paraupebas 89.26 101 *e*P **P** **14 09 10.6 -1.9**
APE Apeiranthos 89.27 19 P **P** **14 09 09.5 -2.9**
CLDB Colider 89.36 108 *e*P **P** **14 09 12.1 -0.9**
ISP Isparta 89.43 15 IAMs_20 IAMs_20 14 51 19.0
comp=Z,15µm,21.0s
KTHA Kythira Island 89.53 21 P **P** **14 09 11.7 -1.9**
BODT Bodrum 89.62 17 P P 14 09 09.1 -4.9
YER Yerkesik 89.73 17 P **P** **14 09 13.0 -1.5**
SANT Santorini 89.93 19 IAMs_20 IAMs_20 14 53 37.8
comp=Z,13µm,18.0s

KMI Kunming 90.28 313 ⇑P **P** **14 09 16.3 -1.3**
KMI pP sP 14 09 20.8 +1.2
KMI PP **PP** **14 12 52.1 +1.4**
KMI SKS **SKSac** **14 19 47.8 -1.7**
KMI S **S** **14 20 07.6 -4.8**
KMI sS pS 14 20 14.8 +0.5
KMI SS **SS** **14 26 09.6 -0.9**
KMI pmax pmax
comp=Z,11nm,1.6s
KMI pmax pmax
comp=Z,1µm,8.6s
KMI LR LR
comp=Z,11µm,15.5s
KMI LR LR
comp=Z,15µm,16.9s
KMI LR LR
comp=Z,14µm,16.7s
KMI Kunming 90.28 313 IAMs_20 IAMs_20 14 51 20.0
comp=Z,13µm,20.0s
GEYT Alibeck 90.46 353 P **P** **14 09 16.8 -1.1**
comp=Z,3.7nm,0.9s,baz=330,slow=5.6,SNR=11
GEYT LR LR 14 54 09.7
comp=Z,11µm,20.4s,baz=355,slow=38
GYA0 ALIBECK ARRAY 90.46 353 P **P** **14 09 16.8 -1.1**
RAO Raoul Island 90.53 220 LR LR 14 41 05.3
comp=Z,6µm,21.5s,baz=16,slow=30
RAO Raoul Island 90.53 220 IAMs_20 IAMs_20 14 41 38.5
comp=Z,7µm,19.0s
IDI Anoyia 90.86 20 P **P** **14 09 17.1 -2.8**
IDI Anoyia 90.86 20 IAMs_20 IAMs_20 14 55 15.4
comp=Z,9µm,18.0s
LSA Lhasa 90.99 324 P **P** **14 09 21.6 +0.5**
LSA PP **PP** **14 12 54.4 -2.0**
LSA S **S** **14 20 16.4 -2.8**
LSA pmax pmax
comp=Z,34nm,1.1s
LSA LR LR
comp=Z,17µm,17.1s
LSA LR LR
comp=Z,10µm,24.2s
LSA LR LR
comp=Z,39µm,17.1s
KARP Karpathos 91.06 18 IAMs_20 IAMs_20 14 51 33.8
comp=Z,11µm,21.0s
PTLB Pontes e Lacer 91.06 114 *e*P **P** **14 09 19.0 -1.8**
LKP Lekhapani 91.31 320 *e*P **P** **14 09 23.1 +1.1**
LKP IAmb IAmb 14 09 27.1
comp=Z,303nm,2.1s
DZM Mont Dzumac 91.55 236 *e*SKSac **SKSac** **14 19 56.4 +0.4**
comp=Z,2µm,28.9s
DZM *e*S **S** **14 20 22.8 -0.5**
comp=Z,4µm,26.0s
DZM Mont Dzumac 91.55 236 *e*PS PS 14 21 37.1 +4.1
comp=Z,2µm,26.9s
DZM *e*SS SS 14 26 34.4 +4.2
comp=Z,7µm,29.1s
DZM *e*LQ LQ 14 33 58.5
comp=Z,12µm,29.6s
DZM *e*LR LR 14 38 41.4
comp=Z,11µm,27.7s
DZM Mont Dzumac 91.55 236 LR LR 14 43 00.6
comp=Z,5µm,19.9s,baz=42,slow=31
DIBR DIBRUGARH 91.57 320 ⇑*e*P **P** **14 09 24.6 +1.4**
LVC Limon Verde 91.61 125 *e*P **P** **14 09 21.8 -1.8**
ZIRO ZIRO 91.93 321 ⇑*e*P **P** **14 09 26.5 +1.4**
ZIRO IAmb IAmb 14 09 30.0
comp=Z,192nm,2.6s
QIZ Qiongzhong 92.00 304 P **P** **14 09 25.3 0.0**
QIZ PP **PP** **14 13 03.8 -0.4**
QIZ S **S** **14 20 28.0 +0.3**
QIZ SS **SS** **14 26 35.8 +0.5**
QIZ pmax pmax
comp=Z,1µm,8.2s
QIZ LR LR
comp=Z,5µm,23.0s
QIZ LR LR
comp=Z,11µm,19.6s
QIZ LR LR
comp=Z,7µm,19.6s
QIZ Qiongzhong 92.00 304 IAMs_20 IAMs_20 14 56 11.3
comp=Z,9µm,20.0s
PMG Port Moresby 92.36 258 *i*P **P** **14 09 26.4 -0.5**
PMG pmax pmax
comp=Z,33nm,1.4s
PMG MLR MLR
comp=Z,3µm,18.0s
NIL Nilore 92.47 340 IAMs_20 IAMs_20 14 54 14.8
comp=Z,7µm,18.0s
JORH JORHAT 92.48 321 *e*P **P** **14 09 30.4 +3.1**
CSS Mathiatis 92.65 13 IAMs_20 IAMs_20 14 54 28.0
comp=Z,13µm,20.0s
SMTB Santa Maria do 92.72 101 *e*P **P** **14 09 27.4 -1.2**
MOKO MOKOCHONG 92.75 320 ⇑*e*P **P** **14 09 29.6 +0.7**
MOKO IAmb IAmb 14 09 44.2
comp=Z,25nm,1.0s
MBO M'Bour 92.95 63 IAMs_20 IAMs_20 14 44 56.6
comp=Z,14µm,21.0s
SLVN Son La 93.00 310 IAMs_20 IAMs_20 14 56 48.1
comp=Z,15µm,20.0s
NBMO Morrinhos-CE 93.08 91 *e*P **P** **14 09 28.7 -1.6**
DHRM DHARAMSHALA 93.12 337 *e*P **P** **14 09 28.6 -2.0**
DHRM IAmb IAmb 14 09 38.5
comp=Z,126nm,1.8s
TEZP TEZPUR 93.16 322 *e*P **P** **14 09 30.6 +0.1**
KOHI KOHIMA 93.45 320 ⇑*e*P **P** **14 09 30.6 -1.5**
GUWA GUWAHATI 93.96 322 *e*P **P** **14 09 29.6 -4.6**
SMLA Simla 93.98 336 *e*P **P** **14 09 33.1 -1.1**
SMLA IAmb IAmb 14 09 42.9
comp=Z,167nm,1.7s
SHL Shillong 94.45 322 *e*P **P** **14 09 38.5 +1.8**
SHL IAmb IAmb 14 09 48.2
comp=Z,44nm,1.8s
DDI Dehra Dun 94.52 335 ⇑*e*P **P** **14 09 37.5 +0.7**
PEXB Peixe 94.82 103 *e*P **P** **14 09 36.1 -2.1**
NBCL Cascavel-CE 94.88 91 *e*P **P** **14 09 37.2 -1.4**
NBPB Pedra_Branca-C 95.10 92 *e*P **P** **14 09 37.6 -2.0**
PPTB Ponte de Pedra 95.22 112 *e*P **P** **14 09 39.2 -0.7**
ARAG Araguaina, MT 95.53 108 *e*P **P** **14 09 40.4 -1.0**
LCO Las Campanas 96.07 130 IAMs_20 IAMs_20 14 50 54.3
comp=Z,7µm,18.0s
AGT Agartala 96.22 322 *e*P **P** **14 09 44.6 +0.1**
TAM Tamanrasset 96.61 40 IAMs_20 IAMs_20 14 54 30.8
comp=Z,10µm,18.0s
BELO BELONIA 96.71 321 *e*P **P** **14 09 48.2 +1.4**
NBPA Parau_RN 96.80 91 *e*P **P** **14 09 46.3 -1.0**
SDBA SAO DESIDERIO 97.13 101 *e*P **P** **14 09 47.1 -1.6**
CMMT Chiang Mai 97.48 313 P Pdif 14 09 56.0 +5.5
CHTO Chiang Mai 97.48 313 IAMs_20 IAMs_20 14 56 20.6
comp=Z,13µm,20.0s
RCBR Riachuelo 97.61 90 IAMs_20 IAMs_20 14 49 05.1
comp=Z,15µm,21.0s
RCBR Riachuelo 97.61 90 *e*P **P** **14 09 50.1 -1.0**
BDFB Brasilia 97.75 105 LR LR 14 58 16.4
comp=Z,8µm,18.1s,baz=323,slow=38
BDFB Brasilia 97.75 105 IAMs_20 IAMs_20 14 55 26.2
comp=Z,10µm,21.0s
CM09 Chiang Mai Arr 97.78 313 P Pdif 14 09 53.6 +1.8
CM31 Chiang Mai Arr 97.80 313 P Pdif 14 09 59.2 +7.4
CMAR Chiang Mai Arr 97.80 313 P **P** **14 09 50.9 -0.9**
comp=Z,1.3nm,0.7s,baz=7.3,slow=4.6,SNR=16
CMAR LR LR 14 57 10.1
comp=Z,9µm,19.0s,baz=58,slow=37
CM15 Chiang Mai Arr 97.81 313 P Pdif 14 09 54.5 +2.6
CM02 Chiang Mai Arr 97.81 313 P Pdif 14 09 55.0 +3.1
CM01 Chiang Mai Arr 97.82 313 P Pdif 14 09 52.6 +0.7
CM04 Chiang Mai Arr 97.83 313 P Pdif 14 09 53.2 +1.2
CM05 Chiang Mai Arr 97.84 313 P Pdif 14 09 57.1 +5.0
CM13 Chiang Mai Arr 97.84 313 P Pdif 14 09 54.6 +2.5
NBLI Livramento-PB 98.15 92 *e*P **P** **14 09 51.2 -2.2**
DLV T Lat 98.63 302 IAMs_20 IAMs_20 14 57 20.5
comp=Z,8µm,19.0s
OUZ Omahuta 99.23 223 IAMs_20 IAMs_20 14 44 08.0
comp=Z,11µm,22.0s
MXZ Matakaoa Point 99.33 219 IAMs_20 IAMs_20 14 47 18.4
comp=Z,8µm,20.0s
PEL Peldehue 99.53 132 IAMs_20 IAMs_20 14 51 50.9
comp=Z,6µm,19.0s
URZ Urewera 100.40 219 IAMs_20 IAMs_20 14 47 24.8
comp=Z,8µm,20.0s
BKZ Black Stump Fm 101.42 219 IAMs_20 IAMs_20 14 48 16.9
comp=Z,7µm,21.0s
HIZ Hauiti 101.52 221 IAMs_20 IAMs_20 14 47 17.4
comp=Z,8µm,20.0s
BFZ Birch Farm 102.82 218 IAMs_20 IAMs_20 14 52 11.9
comp=Z,9µm,20.0s

UOSS Minazif 103.49 353 IAMs_20 IAMs_20 15 04 53.4
comp=Z,7µm,21.0s
TORD Torodi Ar. Bea 103.52 48 PP **PKiKP** **14 14 31.5 -4.5**
comp=Z,3.2nm,1.1s,baz=324,slow=7.1,SNR=4.8
SNZO South Karori 103.96 219 IAMs_20 IAMs_20 14 47 33.1
comp=Z,10µm,22.0s
SPB Sao Paulo 104.23 110 IAMs_20 IAMs_20 15 00 03.4
comp=Z,14µm,21.0s
NNZ Nelson 104.41 220 IAMs_20 IAMs_20 14 48 40.0
comp=Z,9µm,22.0s
QRZ Quartz Range 104.42 221 IAMs_20 IAMs_20 14 48 02.4
comp=Z,11µm,22.0s
THZ Tophouse 105.06 220 IAMs_20 IAMs_20 14 48 59.3
comp=Z,11µm,22.0s
RAYN Ar Rayn 105.09 3 IAMs_20 IAMs_20 15 03 31.7
comp=Z,9µm,22.0s
KHZ Kahutara 105.36 219 IAMs_20 IAMs_20 14 48 24.2
comp=Z,8µm,22.0s
HYB Hyderabad 106.59 331 *i*P **Pdif** **14 10 36.0 +5.0**
OXZ Oxford 106.72 220 IAMs_20 IAMs_20 14 52 26.2
comp=Z,10µm,20.0s
MQZ McQueen's Vall 106.80 219 IAMs_20 IAMs_20 14 51 46.2
comp=Z,8µm,21.0s
POO Poona 106.86 336 *ex* x 14 14 46.0
LPA La Plata 107.17 125 PKIKP **PKiKP** **14 14 42.2 +0.2**
LPA pPP 14 15 00.1
LPA PPP PPP 14 17 14.7
LPA PKIKS 14 18 17.8
LPA SKS SKSdf 14 21 12.0 -42
LPA PKIKS 14 21 50.7
LPA SDIFF **Sdif** **14 22 33.1 -2.4**
LPA PS **PS** **14 24 21.4 +1.0**
LPA PSP PSP 14 25 15.9
LPA SS **SS** **14 29 59.2 -9.2**
LPA SSS SSS 14 33 51.9
RPZ Rata Peaks 107.44 220 IAMs_20 IAMs_20 14 49 34.2
comp=Z,12µm,22.0s
FOZ Fox Glacier 107.79 221 IAMs_20 IAMs_20 14 55 34.6
comp=Z,7µm,19.0s
WRAB Tennant Creek 108.30 261 IAMs_20 IAMs_20 14 53 18.8
comp=Z,7µm,21.0s
WRA Warramunga Arr 108.32 261 PP **PP** **14 15 03.7 -5.2**
comp=Z,2.3nm,1.1s,baz=32,slow=6.7,SNR=5.3
KULM Kulim 108.33 305 IAMs_20 IAMs_20 15 02 57.8
comp=Z,9µm,20.0s
LBZ Lake Benmore 108.35 220 IAMs_20 IAMs_20 14 49 59.2
comp=Z,11µm,22.0s
ODZ Otahua Downs 108.71 220 IAMs_20 IAMs_20 14 51 21.7
comp=Z,12µm,21.0s
IPM Ipoh 108.83 304 IAMs_20 IAMs_20 15 07 23.6
comp=Z,6µm,18.0s
WKZ Wanaka 109.19 221 IAMs_20 IAMs_20 14 53 14.4
comp=Z,6µm,20.0s
LHMI Lhok Sumawe 110.24 308 IAMs_20 IAMs_20 15 09 53.4
comp=Z,9µm,18.0s
DCZ Deep Cove 110.47 222 IAMs_20 IAMs_20 14 51 56.4
comp=Z,7µm,22.0s
WHZ Wether Hill Ro 110.49 221 IAMs_20 IAMs_20 14 54 22.9
comp=Z,6µm,20.0s
PYZ Puysegur Point 111.23 221 IAMs_20 IAMs_20 14 51 45.6
comp=Z,8µm,22.0s
ASAR Alice Springs 111.37 259 PP **PP** **14 15 28.9 -2.1**
comp=Z,1.5nm,1.1s,baz=40,slow=7.3,SNR=4.7
RPSI Rantau Prapat 111.43 305 IAMs_20 IAMs_20 15 05 03.4
comp=Z,6µm,20.0s
BKNI Bangkinang 112.34 302 IAMs_20 IAMs_20 15 09 08.8
comp=Z,7µm,18.0s
ASCN Ascension 112.50 74 IAMs_20 IAMs_20 14 57 49.7
comp=Z,7µm,20.0s
PMBI Palembang 113.02 296 IAMs_20 IAMs_20 15 11 42.0
comp=Z,6µm,18.0s
GSI Gunungsitoli 113.31 305 IAMs_20 IAMs_20 15 07 42.5
comp=Z,7µm,20.0s
PALK Pallekele 115.36 325 IAMs_20 IAMs_20 15 10 22.2
comp=Z,7µm,20.0s
ATD Arta Tunnel 116.85 7 IAMs_20 IAMs_20 15 13 19.1
comp=Z,5µm,19.0s
FURI Furi 119.03 12 IAMs_20 IAMs_20 15 11 33.9
comp=Z,8µm,20.0s
EFI East Falkland 119.82 137 IAMs_20 IAMs_20 15 17 11.5
comp=Z,6µm,22.0s
LODK Lodwar 123.90 17 IAMs_20 IAMs_20 15 11 05.8
comp=Z,6µm,20.0s
SHEL Horse Pasture 123.95 72 IAMs_20 IAMs_20 15 01 31.5
comp=Z,5µm,19.0s
COCO West Island 125.04 298 IAMs_20 IAMs_20 15 16 48.0
comp=Z,4µm,20.0s
KMBO Kilima Mbogo 128.68 15 PKP **PKPdf** **14 15 22.4 -1.7**
comp=Z,1.2nm,0.4s,baz=337,slow=3.9,SNR=1.8
DGAR Diego Garcia 131.90 328 IAMs_20 IAMs_20 15 17 24.2
comp=Z,5µm,20.0s
VNDA Vanda 135.32 197 PKP **PKPdf** **14 15 32.4 -2.0**
comp=Z,0.8nm,0.7s,baz=104,slow=3.0,SNR=2.6
QSPA South Pole Qui 141.45 180 PKPpre 14 15 40.8
QSPA South Pole Qui 141.45 180 IAMs_20 IAMs_20 15 07 12.0
comp=Z,7µm,20.0s
CASY Casey 146.72 220 PKPdf **PKPdf** **14 15 55.3 +0.2**
CASY Casey 146.72 220 IAMs_20 IAMs_20 15 19 39.7
comp=Z,3µm,19.0s
OPO Ambohidratompo 146.96 3 PKPbc **PKPdf** **14 15 57.8 +0.6**
comp=Z,11nm,1.0s,baz=323,slow=2.8,SNR=3.2
ABPO Ambohimpanom 147.41 3 IAMs_20 IAMs_20 15 29 14.1
comp=Z,7µm,20.0s
VNA3 Neumayer Olymp 147.61 149 PKPdf **PKPdf** **14 15 57.4 +0.9**
VNA3 Neumayer Olymp 147.61 149 PP PP 14 19 27.9 +1.3
LBTB Lobatse 147.91 43 PKP2 **PKPbc** **14 16 00.9 -0.6**
LBTB Lobatse 147.91 43 PKPbc **PKPbc** **14 16 00.9 -0.6**
VNA1 Neumayer--Stat 148.13 148 PKPdf **PKPbc** **14 15 58.8 -1.8**
VNA1 Neumayer--Stat 148.13 148 PP PP 14 19 31.0 +1.3
VNA2 Neumayer--Watz 148.39 148 PKPab **PKPab** **14 16 07.1 +2.4**
VNA2 Neumayer--Watz 148.39 148 PKPdf **PKPbc** **14 16 00.3 -1.0**
RER Riviere de l'E 149.14 348 IAMs_20 IAMs_20 15 25 08.2
comp=Z,5µm,21.0s
SNAA Sanae 149.70 150 PKPdf **PKPdf** **14 15 58.6 -1.4**
SNAA Sanae 149.70 150 IAMs_20 IAMs_20 15 26 55.5
comp=Z,6µm,20.0s
BOSA Boshof 150.88 47 PKPbc **PKPdf** **14 16 05.3 +2.1**
comp=Z,11nm,0.8s,baz=351,slow=1.3,SNR=20
BOSA Boshof 150.88 47 PKIKP **PKPbc** **14 16 07.7 -1.2**
BOSA Boshof 150.88 47 PKPbc **PKPbc** **14 16 07.7 -1.2**
SUR Sutherland 151.76 58 PKP **PKPbc** **14 16 10.3 -0.6**
SYO Syowa Base 161.99 169 ⇓*ep*PKPdf pPKPdf 14 16 18.6 +0.9
SYO Syowa Base 161.99 169 ⇓*ep*PKPab pPKPab 14 17 05.4 +1.4

TRN 24 14:01:59.0, 10°.16N×60°.71W, h80km, MD3.7, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.48**	**312**	*e*P	Pn	14 02 13.0	+0.5
TBH				*e*S	Sn	14 02 23.1	+0.5
TRN	**Trinidad (W)**	**0.84**	**305**	*e*P	Pn	14 02 16.1	-0.1
TRN				*e*S	Sn	14 02 28.6	-0.3
TOSP	**Speyside**	**1.15**	**8**	*e*P	Pn	14 02 19.4	-0.5
TOSP				*e*S	Sn	14 02 34.7	-0.7
GRGR	**Grenville**	**2.17**	**335**	*e*P	Pn	14 02 34.2	+1.0
GRGR				*e*S	Sn	14 02 59.5	+0.2
GCMP	**Grenada, Carri**	**2.42**	**343**	*e*P	Pn	14 02 36.6	+0.1
GCMP				*e*S	Sn	14 03 04.0	-1.2
SVB	**Belmont**	**3.14**	**350**	*e*P	Pn	14 02 47.2	+0.9
SVB				*e*S	Sn	14 03 21.6	-1.2
MCLT	**Moule a Chique**	**3.54**	**356**	*e*P	Pn	14 02 52.5	+0.8
MCLT				*e*S	Sn	14 03 30.7	-1.7
SLBI	**Saint Lucia, B**	**3.85**	**356**	*e*P	Pn	14 02 57.0	+1.1
SLBI				*e*S	Sn	14 03 38.0	-2.0
MPOM	**Morne Pois Mar**	**4.26**	**358**	*e*P	Pn	14 03 01.7	+0.2
MPOM	**Morne Pois Mar**	**4.26**	**358**	*e*S	Sn	14 03 47.7	-2.4
BIM	**Bigot**	**4.35**	**355**	*e*S	Sn	14 03 50.5	-1.7
BAUV	**El Baul**	**7.33**	**261**	*e*P	Pn	14 03 43.5	0.0
BAUV	**El Baul**	**7.33**	**261**	*e*S	Sn	14 05 00.2	-5.1

WEL 24 14:03:18.6±1.1, 35°S±16'×18°0E±2°?, h284km±14km, M4.0/11, mB4.0/1, MLv4.0/11, Mw(mB)3.0/1, Error ellipse: s-maj=0.0km s-min=0.0km az=124.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.99**	**203**	S	S	14 04 54.9	-1.6
WMGZ	**Waiomatatini S**	**3.19**	**200**	P	Pn	14 04 16.8	+1.7
WMGZ				S	S	14 05 01.7	+1.4
HAZ	**Te Kaha**	**3.35**	**208**	P	Pn	14 04 15.7	-1.0
HAZ				S	S	14 05 03.5	+0.3
PKGZ	**Pakihiroa**	**3.36**	**204**	P	Pn	14 04 17.7	+0.7

PKGZ				S	S	14 05 03.0	-0.6
PUZ	**Puketiti**	**3.47**	**200**	P	Pn	14 04 17.4	-0.7
PUZ				S	S	14 05 06.1	+0.4
TWGZ	**Tauwhareparae**	**3.65**	**203**	P	Pn	14 04 19.9	-0.2
TWGZ				S	S	14 05 10.1	+0.8
CNGZ	**Carnagh Statio**	**3.87**	**199**	S	S	14 05 13.9	+0.4
MWZ	**Matawai**	**3.95**	**207**	P	Pn	14 04 22.7	-0.6
MWZ				S	S	14 05 16.0	+0.8
OPRZ	**Ohinepanea**	**3.99**	**220**	P	Pn	14 04 24.2	+0.4
URZ	**Urewera**	**4.05**	**211**	P	Pn	14 04 24.6	+0.2
URZ				S	S	14 05 18.4	+1.2
MUGZ	**Murupara**	**4.38**	**213**	P	Pn	14 04 28.7	+0.5
MUGZ				S	S	14 05 24.3	+0.3
KWHZ	**Kaweka Forest**	**5.33**	**209**	P	Pn	14 04 39.0	-0.3
KWHZ				S	S	14 05 44.6	+0.5
OTVZ	**Oturere**	**5.45**	**216**	P	Pn	14 04 40.6	-0.3
OTVZ				S	S	14 05 47.6	+0.7
TSZ	**Takapari Road**	**6.05**	**209**	P	Pn	14 04 47.1	-0.9
TSZ				S	S	14 05 58.9	-1.1
BFZ	**Birch Farm**	**6.49**	**205**	P	Pn	14 04 53.6	+0.3
BFZ				S	S	14 06 10.3	+0.7

ROM 24 14:06:44.2±0.0, 43°33'0"N±0°0'02"×12°55'3"E±0°0'03, h8km, ML1.5/16, 5C, Error ellipse: s-maj=0.2km s-min=0.1km az=30.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.04**	**20**	⇑P	Pg	14 06 46.0	+0.1
ATFO				S	Sg	14 06 47.4	+0.2
ATFO				AML	AML		
	comp=N,1595μm,0.1s						
ATFO				AML	AML		
	comp=E,2200μm,0.2s						
MURB	**Monte Urbino**	**0.07**	**197**	⇑P	Pg	14 06 46.5	+0.3
MURB				S	Sg	14 06 48.1	+0.4
MURB				AML	AML		
	comp=N,4050μm,0.3s						
MURB				AML	AML		
	comp=N,4055μm,0.3s						
MURB				AML	AML		
	comp=E,3370μm,1.4s						
MURB				AML	AML		
	comp=E,3765μm,1.3s						
MURB				AML	AML		
	comp=N,4495μm,0.3s						
ATVO	**AVT- Monte Val**	**0.12**	**296**	⇑P	Pg	14 06 47.3	+0.4
ATVO				S	Sg	14 06 49.6	+0.8
ATVO				AML	AML		
	comp=E,582μm,0.2s						
ATVO				AML	AML		
	comp=N,456μm,0.2s						
ATVO				AML	AML		
	comp=E,582μm,0.2s						
FOSV	**Fossato di Vic**	**0.16**	**103**	P	Pg	14 06 48.2	+0.7
FOSV				S	Sg	14 06 51.1	+1.3
FOSV				AML	AML		
	comp=E,146μm,0.6s						
FOSV				AML	AML		
	comp=N,202μm,0.5s						
FOSV				AML	AML		
	comp=E,147μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.16**	**156**	P	Pg	14 06 48.3	+0.7
ATCC				S	Sg	14 06 51.4	+1.6
ATCC				AML	AML		
	comp=N,343μm,0.3s						
ATCC				AML	AML		
	comp=N,342μm,0.3s						
ATCC				AML	AML		
	comp=E,555μm,0.6s						
ATPI	**Pietralunga -**	**0.16**	**318**	P	Pg	14 06 48.3	+0.6
ATPI				S	Sg	14 06 51.1	+1.0
ATPI				AML	AML		
	comp=E,106μm,0.5s						
ATPI				AML	AML		
	comp=N,148μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.20**	**228**	P	Pg	14 06 48.8	+0.5
ATTE				S	Sg	14 06 52.2	+1.2
ATTE				AML	AML		
	comp=E,143μm,1.2s						
ATTE				AML	AML		
	comp=N,133μm,0.2s						
SSFR	**Montelago di S**	**0.20**	**57**	P	Pg	14 06 48.9	+0.6
SSFR				S	Sg	14 06 52.5	+1.4
SSFR				AML	AML		
	comp=E,622μm,0.9s						
SSFR				AML	AML		
	comp=N,328μm,0.9s						
SSFR				AML	AML		
	comp=N,516μm,1.2s						
SSFR				AML	AML		
	comp=E,560μm,0.1s						
ATMI	**Monte Miggiano**	**0.21**	**271**	S	Sg	14 06 52.7	+1.4
FRON	**Frontone**	**0.23**	**34**	P	Pg	14 06 49.4	+0.6
FRON				S	Sg	14 06 53.4	+1.5
FRON				AML	AML		
	comp=E,161μm,0.2s						
FRON				AML	AML		
	comp=N,344μm,0.1s						
NARO	**Abbazia di Nar**	**0.28**	**4**	P	Pg	14 06 50.4	+0.6
NARO				S	Sb	14 06 55.2	-1.2
NARO				AML	AML		
	comp=N,55μm,0.1s						
NARO				AML	AML		
	comp=E,77μm,1.1s						
BADI	**Badiali**	**0.29**	**309**	⇑P	Pb	14 06 51.0	-0.7
BADI				S	Sb	14 06 55.7	-1.0
BADI				AML	AML		
	comp=N,107μm,1.0s						
BADI				AML	AML		
	comp=E,93μm,0.8s						
SNTG	**Esanatoglia**	**0.29**	**105**	P	Pg	14 06 50.6	+0.6
SNTG				S	Sb	14 06 55.3	-1.4
SNTG				AML	AML		
	comp=E,107μm,0.9s						
SNTG				AML	AML		
	comp=N,114μm,0.5s						
SNTG				AML	AML		
	comp=E,107μm,0.9s						
SNTG				AML	AML		
	comp=N,115μm,0.5s						
ASSB	**Assisi San Ben**	**0.30**	**165**	P	Pg	14 06 50.5	+0.4
ASSB				S	Sb	14 06 55.5	-1.4
ASSB				AML	AML		
	comp=N,190μm,0.3s						
ASSB				AML	AML		
	comp=E,162μm,0.1s						
ARVD	**Arcevia**	**0.33**	**59**	⇑P	Pg	14 06 51.3	+0.6
ARVD				S	Sb	14 06 56.7	-1.1
ARVD				AML	AML		
	comp=E,72μm,0.7s						
ARVD				AML	AML		
	comp=N,46μm,0.1s						
MPAG	**Monte Paganucc**	**0.34**	**27**	P	Pg	14 06 51.4	+0.6
MPAG				S	Sb	14 06 57.2	-0.9
PE3	**Peglio**	**0.37**	**354**	P	Pb	14 06 52.8	-0.3
PE3				S	Sb	14 06 58.8	-0.2
PE3				AML	AML		
	comp=N,69μm,1.1s						
PE3				AML	AML		
	comp=E,55μm,1.5s						
FSSB	**Fossombrone**	**0.40**	**24**	P	Pg	14 06 52.5	+0.6
FSSB				S	Sb	14 06 59.2	-0.6
FSSB				AML	AML		
	comp=N,119μm,0.5s						
FSSB				AML	AML		
	comp=E,148μm,0.3s						
EL6	**Elcito**	**0.40**	**90**	P	Pg	14 06 52.7	+0.6
EL6				S	Sb	14 06 59.3	-0.6
CESI	**CESI - Serrava**	**0.41**	**141**	P	Pg	14 06 53.0	+0.7
CESI				S	Sb	14 06 59.9	-0.4
CAFI	**Castiglion Fio**	**0.43**	**270**	P	Pg	14 06 53.2	+0.6
CAFI				S	Sb	14 06 59.7	-1.0
CAFI				AML	AML		
	comp=N,30μm,0.9s						
CAFI				AML	AML		
	comp=E,27μm,1.2s						
FDMO	**Fiordimonte**	**0.49**	**127**	P	Pg	14 06 54.1	+0.4
FDMO				S	Sb	14 07 02.0	-0.4
MOMA	**Monte Martano**	**0.53**	**179**	P	Pb	14 06 55.3	-0.4
MOMA				S	Sb	14 07 02.8	-0.7
MGAB	**Montegabbione**	**0.53**	**218**	P	Pg	14 06 54.8	+0.4
MGAB				S	Sb	14 07 03.3	-0.2
MGAB				AML	AML		
	comp=N,111μm,0.4s						
MGAB				AML	AML		
	comp=E,98μm,0.4s						
CSP1	**Cessapalombo**	**0.53**	**116**	P	Pg	14 06 55.0	+0.5
CSP1				S	Sb	14 07 03.5	-0.2

*IDC **24** 14:09:30.3±0.9, 51°.83N×130°.81W, h0km, mb3.9/8, mb1 4.1/12, mb1mx3.9/50, mbtmp3.9/12, ML4.4/3, Error ellipse: s-maj=15.9km s-min=10.6km az=34.0*
*PGC **24** 14:09:30.2±0.3, 51°.50N×130°.97W, h10km, MLSn4.4/21, Mw5.1, 202km Sse of Sandspit, Bc Haida Gwaii Region*
*NEIC **24** 14:09:32.5±2.5, 51°.64N±0°.04×130°.89W±0°.07, h21km±6km, mb4.6/5, ML4.5/8, ML4.4(OTT), Error ellipse: s-maj=9.3km s-min=1.1km az=225.0*

ISC 24 14:09:30.0±0.6, 51°.59N±0°.03×130°.81W±0°.04, h10km, n111, σ1°96/129, mb4.0/11, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG4B	**Hotspring**	**0.74**	**341**	P	Pg	14 09 43.8	-0.5
HG4B				S	Sg	14 09 53.9	-0.2
BNB	**Barry Inlet**	**1.15**	**330**	P	Pb	14 09 49.3	-2.6
BNB				S	Sb	14 10 05.2	-1.7
HG1B	**Mitchell Dam**	**1.57**	**329**	P	Pn	14 09 56.1	-1.8
HG1B				S	Sn	14 10 16.1	-2.1
HG1B	**Mitchell Dam**	**1.57**	**329**		Sb	14 10 18.7	-0.3
MOBC	**Moresby Island**	**1.71**	**336**	Pn	Pn	14 09 58.4	-1.5
MOBC				Sn	Sn	14 10 19.3	-2.6
MOBC	**Moresby Island**	**1.71**	**336**	Pn	Pn	14 09 58.4	-1.5
MOBC				Sg	Sb	14 10 22.8	-0.3
BBB	**Bella Bella**	**1.78**	**69**	Pn	Pn	14 10 00.8	+0.1
	112nm,0.3s,baz=192,slow=1.3,SNR=16						
BBB				Sn	Sn	14 10 22.8	-0.5
	1μm,0.3s,baz=332,slow=22,SNR=20						
BBB	**Bella Bella**	**1.78**	**69**	Pn	Pn	14 10 00.6	-0.1
BBB				Sn	Sn	14 10 22.4	-0.9
BBB	**Bella Bella**	**1.78**	**69**		Pn	14 09 59.8	-0.9
BBB				IAML		14 10 28.4	
	comp=E,5μm,0.6s						
BNAB	**Bonilla**	**1.91**	**3**	Pn	Pn	14 10 02.2	-0.4
BNAB				Sn	Sn	14 10 27.1	+0.5
BNAB	**Bonilla**	**1.91**	**3**	Pn	Pn	14 10 02.6	+0.1
BNAB				Sn	Sn	14 10 27.2	+0.5
DIB	**Dawson Inlet,**	**1.91**	**328**	Pn	Pn	14 10 01.1	-1.4
DIB				Pg	Pb	14 10 03.2	-1.7
DIB				Sn	Sn	14 10 24.7	-1.9
DIB	**Dawson Inlet,**	**1.91**	**328**		Pn	14 10 01.5	-1.0
HOLB	**Holberg**	**1.94**	**118**	Pn	Pn	14 10 01.6	-1.3
HOLB				Sn	Sn	14 10 25.4	-2.0
HOLB	**Holberg**	**1.94**	**118**	Pn	Pn	14 10 01.4	-1.6
HOLB				Sn	Sn	14 10 25.4	-2.0
HWKB	**Hawksbury Isla**	**2.25**	**26**	Sn	Sn	14 10 35.3	+0.2
HWKB	**Hawksbury Isla**	**2.25**	**26**	Sg	Sb	14 10 38.4	-0.3
PHC	**Port Hardy**	**2.31**	**111**	Pn	Pn	14 10 07.7	-0.2
PHC				Sn	Sn	14 10 34.3	-2.0
GRNB	**Grenville Isla**	**2.32**	**13**	Pn	Pn	14 10 08.6	+0.4
GRNB				Sg	Sb	14 10 41.2	+0.6
GRNB	**Grenville Isla**	**2.32**	**13**	Pn	Pn	14 10 08.6	+0.4
GRNB				Sg	Sb	14 10 41.0	+0.4
MASB	**Masset**	**2.54**	**344**	Pg	Pb	14 10 15.4	-0.2
MASB	**Masset**	**2.54**	**344**	Pg	Pb	14 10 15.4	-0.2
MAYB	**Maynard**	**2.59**	**116**	Pn	Pn	14 10 10.6	-1.4
MAYB	**Maynard**	**2.59**	**116**	Pn	Pn	14 10 11.9	-0.1
RUBB	**Prince Rupert**	**2.76**	**7**	Pn	Pn	14 10 13.5	-0.7
RUBB				Sn	Sn	14 10 46.3	-1.3
RUBB	**Prince Rupert**	**2.76**	**7**	Pn	Pn	14 10 13.6	-0.6
RUBB				Sn	Sb	14 10 51.3	-1.9
KITB	**Kitimat**	**2.82**	**27**	Pn	Pn	14 10 15.0	0.0
KITB				Sg	Sb	14 10 55.8	+0.9
KITB	**Kitimat**	**2.82**	**27**	Pn	Pn	14 10 15.6	+0.5
KITB				Sg	Sb	14 10 55.8	+0.9
EDB	**Eliza Dome**	**2.91**	**125**	Pn	Pn	14 10 15.1	-1.1
LIB	**Langara Island**	**3.00**	**334**	Pn	Pn	14 10 15.6	-1.8
WOSB	**Woss**	**3.04**	**116**	Pn	Pn	14 10 17.4	-0.8
WOSB	**Woss**	**3.04**	**116**	Pn	Pn	14 10 17.6	-0.6
NCRB	**Newcastle Ridg**	**3.23**	**110**	Pn	Pn	14 10 20.6	-0.2
NCRB	**Newcastle Ridg**	**3.23**	**110**	Pn	Pn	14 10 20.8	0.0
GDR	**Gold River**	**3.54**	**119**	Pn	Pn	14 10 23.6	-1.3
CBB	**Campbell River**	**3.79**	**112**	Pn	Pn	14 10 27.4	-1.0
CBB				Sg	Sb	14 11 23.7	+0.8
NC89	**ODP889**	**3.88**	**137**	Pn	Pn	14 10 28.2	-1.2
TOFB	**Tofino**	**3.97**	**126**	Pn	Pn	14 10 29.6	-1.3
BTB	**Buttle Lake**	**3.99**	**120**	Pn	Pn	14 10 29.8	-1.5
CRAG	**Craig**	**4.12**	**341**		Pn	14 10 32.0	-0.9
CRAG				IAML		14 12 07.8	
	comp=E,651nm,2.2s						
CRAG				IAML		14 12 18.8	
	comp=N,580nm,4.8s						
UBRB	**Upper Baezaeko**	**4.34**	**70**	Pn	Pn	14 10 35.7	-0.3
UBRB				Sg	Sg	14 11 44.3	-4.8
UBRB	**Upper Baezaeko**	**4.34**	**70**	Pn	Pn	14 10 36.7	+0.7
UBRB				Sg	Sg	14 11 44.3	-4.8
TXB	**Texada**	**4.48**	**113**	Pn	Pn	14 10 37.2	-0.7
MGB	**Mount Grey**	**4.70**	**121**	Pn	Pn	14 10 40.7	-0.6
SHB	**Sechelt**	**4.85**	**112**	Pn	Pn	14 10 42.7	-0.3
SHB				Pg	Pg	14 11 00.6	-2.2
SHB				Sg	Sg	14 11 59.2	-6.4
FSB	**Fort Saint Jam**	**4.87**	**51**	Pn	Pn	14 10 43.3	+0.1
WRAK	**Wrangell Islan**	**4.92**	**350**		Pn	14 10 44.8	+0.9
WRAK				IAML		14 12 15.8	
	comp=N,374nm,2.5s						
NLLB	**Nanaimo Lost L**	**4.96**	**116**	Pg	Pg	14 11 04.0	-1.0
NLLB				Sg	Sg	14 12 03.3	-5.9
NLLB	**Nanaimo Lost L**	**4.96**	**116**	Pg	Pg	14 11 04.0	-1.0
B926	**Mesachie Lake**	**5.11**	**120**	Pn	Pn	14 10 46.2	-0.3
B926				Sg	Sg	14 12 08.8	-5.0
WSLR	**Whistler**	**5.21**	**103**	Sn	Sn	14 11 46.5	-1.6
WSLR	**Whistler**	**5.21**	**103**	Sg	Sb	14 12 06.8	+3.1
WPB	**Watts Point**	**5.21**	**109**	Pn	Pn	14 10 47.2	-0.7
BIB	**Bowen Island**	**5.26**	**112**	Pn	Pn	14 10 48.3	-0.3
B010	**North Saanich**	**5.57**	**119**	Pn	Pn	14 10 52.7	-0.1
PGC	**Sidney**	**5.57**	**119**		Pn	14 10 58.0	+5.1
B011	**North Saanich**	**5.58**	**119**	Sg	Sg	14 12 24.9	-3.9
B011	**North Saanich**	**5.58**	**119**	Sg	Sg	14 12 24.9	-3.9
SNB	**Saturna Island**	**5.66**	**117**	Sg	Sg	14 12 28.9	-2.6
NLWA	**Neilton Lookou**	**6.17**	**130**	Pn	Pn	14 11 03.8	+2.6
B06A	**Marblemount**	**6.75**	**113**	Pn	Pn	14 11 10.9	+2.0
BMBC	**Bull Mountain**	**6.80**	**46**	Pn	Pn	14 11 10.6	+0.8
DLBC	**Dease Lake**	**6.88**	**3**	Pn	Pn	14 11 10.4	-0.4
	comp=N,2.9nm,0.3s,baz=217,slow=7.8,SNR=24						
DLBC				Sn	Sn	14 12 30.0	+0.9
	comp=N,1.6nm,0.3s,baz=194,slow=18,SNR=1.3						
DLBC				Lg	Lg	14 12 59.8	
	comp=N,1.8nm,0.3s,baz=181,slow=20,SNR=4.3						
DLBC	**Dease Lake**	**6.88**	**3**	Pn	Pn	14 11 10.3	-0.6
DLBC				Sg	Sg	14 13 04.2	-6.3
DLBC	**Dease Lake**	**6.88**	**3**		Pn	14 11 11.3	+0.4
JIS	**Juneau Island**	**7.01**	**344**	Pn	Pn	14 11 13.7	+1.1
NBC4	**NorthernBC 4**	**7.30**	**52**	Sn	Sn	14 12 37.6	-1.7
BESE	**Bessie Mountai**	**7.38**	**343**	Pn	Pn	14 11 17.6	-0.1
NBC5	**NorthernBC 5**	**7.59**	**35**	Pn	Pn	14 11 21.8	+1.1
LON	**Longmire**	**7.63**	**126**	Pn	Pn	14 11 22.8	+1.6
LON	**Longmire**	**7.63**	**126**		Pn	14 11 23.4	+2.2
MNB	**Mounoet Dainar**	**7.72**	**81**	Pn	Pn	14 11 23.1	+0.6
LTY	**Liberty**	**7.91**	**119**	Pn	Pn	14 11 27.3	+2.4
PLBC	**Pleasant Camp**	**8.49**	**340**	Pn	Pn	14 11 31.4	-1.4
H04A	**Detroit Lake**	**8.99**	**137**	Pn	Pn	14 11 45.5	+5.6
HAWA	**Hanford**	**9.05**	**121**	Pn	Pn	14 11 44.0	+3.4
WHY	**Whitehorse**	**9.37**	**348**	Pn	Pn	14 11 44.4	-0.6
WHY				Sn	Sn	14 13 29.0	-1.4
NEW	**Newport**	**9.44**	**105**	Lg	Lg	14 14 16.6	
	comp=N,0.2nm,0.3s,baz=234,slow=19,SNR=1.3						
HUMO	**Hull Mountain**	**10.45**	**146**	Pn	Pn	14 12 04.3	+4.4
KRMB	**Red Mountain**	**11.13**	**152**	Pn	Pn	14 12 13.2	+4.1
BMO	**Blue Mountains**	**11.24**	**122**	Pn	Pn	14 12 14.0	+3.3
YBH	**Yreka Blue Hor**	**11.31**	**147**	Pn	Pn	14 12 16.6	+4.9
	comp=N,0.1nm,0.3s,baz=80,slow=18,SNR=2.6						
JTMT	**Jette**	**11.38**	**103**	Pn	Pn	14 12 14.7	+2.1
YKA	**Yellowknife Ar**	**13.99**	**32**	Pn	Pn	14 12 47.1	-0.9
	comp=N,0.2nm,0.3s,baz=229,slow=14,SNR=1.5						
YKA				Lg	Lg	14 16 46.9	
	comp=N,0.2nm,0.3s,baz=146,slow=26,SNR=4.2						
ELK	**Elko**	**15.26**	**129**	Pn	P	14 13 13.3	+2.8
	comp=N,0.2nm,0.3s,baz=328,slow=13,SNR=6.7						
ELK	**Elko**	**15.26**	**129**	P	P	14 13 11.3	+0.7
ILAR	**Eielson Array**	**15.63**	**334**	Pn	P	14 13 13.8	-0.4
	comp=N,0.1nm,0.3s,baz=144,slow=11,SNR=3.5						
NVAR	**Mina Array Bea**	**15.82**	**141**	Pn	P	14 13 15.5	-1.3
	comp=N,0.1nm,0.3s,baz=316,slow=10,SNR=3.6						
PD31	**Pinedale Array**	**16.88**	**113**	P	P	14 13 29.8	+1.3
PDAR	**Pinedale Array**	**16.88**	**113**	Pn	P	14 13 29.9	+1.3
	comp=N,0.5nm,0.3s,baz=290,slow=9.2,SNR=15						
PDAR	**Pinedale Array**	**16.88**	**113**	P	P	14 13 30.2	+1.7
BMAR	**Burnt Mountain**	**17.28**	**342**	P	P	14 13 32.2	-0.3
RSSD	**Black Hills**	**19.38**	**102**	P	Pn	14 13 58.6	+1.4
FCC	**Fort Churchill**	**21.93**	**57**	P	P	14 14 28.2	+5.0
FCC				IAmb	IAmb	14 14 34.6	
	comp=Z,46nm,1.3s						
ULM	**Lac du Bonnet**	**21.94**	**80**	P	P	14 14 28.4	+5.0
ULM				IAmb	IAmb	14 14 33.8	
	comp=Z,24nm,1.1s						
EYMN	**Ely**	**25.44**	**83**	P	P	14 14 58.0	+0.4
TX32	**Lajitas Array**	**30.04**	**127**	P	P	14 15 41.5	+2.4
TX32				IAmb	IAmb	14 15 48.4	
	comp=Z,11nm,1.4s						
TXAR	**Lajitas Array**	**30.04**	**127**	P	P	14 15 42.0	+2.9
	comp=Z,0.3nm,0.5s,baz=316,slow=5.2,SNR=6.5						
SEY	**Seymchan**	**40.53**	**317**	P	P	14 17 09.8	+1.1
	comp=Z,3.4nm,1.0s,baz=63,slow=6.7,SNR=6.8						
H11N2	**WAKE ISLAND Hy**	**57.62**	**261**	T	T	15 21 50.2	
	baz=40,slow=76,SNR=58						
H11N3	**WAKE ISLAND Hy**	**57.62**	**261**	T	T	15 21 49.1	
	baz=40,slow=76,SNR=64						
H11N1	**WAKE ISLAND Hy**	**57.64**	**261**	T	T	15 21 51.0	
	baz=40,slow=76,SNR=64						
H11S1	**WAKE ISLAND Hy**	**58.66**	**260**	T	T	15 23 06.9	
	baz=40,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**58.67**	**260**	T	T	15 23 08.4	
	baz=40,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**58.68**	**260**	T	T	15 23 08.2	
	baz=40,slow=76,SNR=14						
FINES	**FINESS Array B**	**65.81**	**12**	P	P	14 20 14.2	-0.6
	comp=Z,2.8nm,1.1s,baz=348,slow=7.3,SNR=1.4						
SONM	**Songino Array**	**69.52**	**323**	P	P	14 20 40.1	+1.4
	comp=Z,0.7nm,1.0s,baz=55,slow=5.2,SNR=4.4						
ZALV	**Zalesovo Beam**	**70.69**	**339**	P	P	14 20 46.5	+1.0
	comp=Z,0.7nm,0.6s,baz=46,slow=6.2,SNR=2.0						
AKASG	**Malin Array Be**	**76.69**	**13**	P	P	14 21 19.7	-1.0
	comp=Z,0.7nm,0.5s,baz=336,slow=5.4,SNR=1.9						
MKAR	**Makanchi Array**	**77.95**	**337**	P	P	14 21 28.2	+0.3
	comp=Z,0.7nm,0.8s,baz=39,slow=6.4,SNR=6.0						
ESDC	**Sonseca Array**	**77.98**	**39**	P	P	14 21 28.9	+0.6
	comp=Z,0.7nm,0.8s,baz=314,slow=4.5,SNR=2.9						

*KRNET **24** 14:09:49.6±0.1, 41°.40N×70°.86E, h7km, mb2.7*

ISC 24 14:09:50.3±1.6, 41°.34N±0°.05×70°.98E±0°.07, h0km±17km, n5, σ0°85/10, 5C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say**	**0.22**	**32**	⇑*i*P	Pg	14 09 54.4	-0.2
	baz=75						
TRKS				⇑*i*S	Sg	14 09 57.8	+0.4
	baz=75						
BTK	**Batken**	**1.29**	**186**	⇓*e*P	Pg	14 10 15.1	0.0
	baz=82						
BTK				⇓*i*S	Sn	14 10 34.1	+0.4
	baz=82						
MNAS	**Manas**	**1.61**	**44**	⇓*i*P	Pb	14 10 20.4	-0.6
	baz=48						
MNAS				⇓*i*S	Sg	14 10 43.4	+1.4
	baz=48						
KK31	**Karatay Array**	**1.79**	**349**	⇓Pn	Pb	14 10 23.7	-0.3
	1.8nm,0.3s,baz=166,slow=14,SNR=38						
KK31				⇑Sn	Sg	14 10 48.0	0.0
	1.4nm,0.3s,baz=164,slow=26,SNR=8.1						
AML	**Almayashu**	**2.17**	**68**	⇑*e*P	Pb	14 10 29.6	-1.2
	baz=70						
AML				⇑*i*S	Sb	14 10 59.0	+0.6
	baz=70						

*NEIC **24** 14:16:09.4±2.9, 6°.48S±0°.08×130°.1E±0°.1, h177km±8km, mb4.0/8, Error ellipse: s-maj=18.0km s-min=11.4km az=85.0*
*IDC **24** 14:16:10.2±1.8, 6°.46S×129°.98E, h166km±18km, mb3.7/4, mb1 3.7/7, mb1mx3.3/37, mbtmp4.2/7, MS4.6/1, Ms1 4.6/1, ms1mx3.4/47, Error ellipse: s-maj=26.3km s-min=16.4km az=76.0*

ISC 24 14:16:07.5±0.7, 6°.62S±0°.06×130°.05E±0°.08, h146km, n31, σ2°88/34, mb3.9/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.28**	**31**		Pn	14 17 12.8	+1.5
SIJI	**Sorong**	**5.83**	**12**	P	Pn	14 17 32.3	+0.3
	2.6nm,0.3s,baz=186,slow=18,SNR=25						
SIJI				S	Sn	14 18 32.4	-5.7
	12nm,0.3s,baz=212,slow=23,SNR=7.6						
MTN	**Manton Dam**	**6.28**	**170**		Pn	14 17 42.1	+4.1
SOEI	**Soe**	**6.52**	**241**	Pn	Pn	14 17 45.0	+3.8
BATI	**Baumata**	**7.26**	**240**	P	Pn	14 17 53.8	+2.8
	6.5nm,0.3s,baz=90,slow=2.3,SNR=12						
BATI				S	Sn	14 19 10.8	-1.4
	9.2nm,0.3s,baz=150,slow=19,SNR=14						
KNRA	**Kununurra**	**9.09**	**188**		Pn	14 18 17.9	+2.4
FITZ	**Fitzroy Crossi**	**12.20**	**200**	P	Pn	14 18 57.5	+1.1
	0.2nm,0.3s,baz=31,slow=12,SNR=23						
FITZ				S	Sn	14 21 04.0	-7.3
	0.6nm,0.3s,baz=38,slow=22,SNR=3.0						
FITZ	**Fitzroy Crossi**	**12.20**	**200**		Pn	14 18 58.3	+1.8
WB0	**Warramunga Arr**	**13.74**	**163**		Pn	14 19 17.5	+1.1
WRAB	**Tennant Creek**	**13.88**	**163**	Pn	Pn	14 19 19.3	+1.1
WRA	**Warramunga Ar**	**13.89**	**163**	P	Pn	14 19 19.4	+1.1
	0.6nm,0.3s,baz=333,slow=12,SNR=32						
WRA				S	Sn	14 21 45.9	-6.2
	1.4nm,0.3s,baz=334,slow=22,SNR=9.2						
WRA	**Warramunga Arr**	**13.89**	**163**		Pn	14 19 19.6	+1.4
WB2	**Warramunga Arr**	**13.89**	**163**	Pn	Pn	14 19 19.8	+1.5
WR0	**Warramunga Arr**	**13.96**	**162**	Pn	Pn	14 19 20.6	+1.4
COEN	**Coen**	**14.83**	**121**	P	P	14 19 34.6	+2.4
AS31	**Alice Spring

MAR4	**Marsite Statio**	**1.19**	**164**	PN	**Pn**	**14 18 27.4**	**-0.3**
MAR4				SN	**Sn**	**14 18 44.3**	**0.0**
ALN	**Alexandroupoli**	**1.20**	**211**	PN	**Pg**	**14 18 27.2**	**-0.1**
ALN				SN	**Sb**	**14 18 43.2**	**-0.1**
ROIA	**ROIAK**	**1.22**	**18** *i*	P	**Pn**	**14 18 28.5**	**+0.4**
MAR3	**Marsite Statio**	**1.23**	**164**	PN	**Pn**	**14 18 28.1**	**-0.1**
MAR3				SN	**Sn**	**14 18 45.7**	**+0.5**
GZKV	**Gazikoy-Tekird**	**1.23**	**163**	PN	**Pn**	**14 18 28.3**	**+0.1**
GZKV				SN	**Sn**	**14 18 45.8**	**+0.6**
RDO	**Rodhopi**	**1.27**	**232**	PN	**Pn**	**14 18 28.5**	**-0.1**
RDO				SN	**Sn**	**14 18 46.4**	**+0.4**
ERIK	**Erikli-Kesan**	**1.29**	**192**	PN	**Pb**	**14 18 28.8**	**-0.2**
ENEZ	**Enez**	**1.31**	**204**	PN	**Pg**	**14 18 29.2**	**-0.1**
PRD	**Provadia**	**1.33**	**17** *i*	P	**Pg**	**14 18 29.6**	**-0.2**
CTKS	**Kestanelik-??a**	**1.42**	**119**	PN	**Pb**	**14 18 30.8**	**-0.4**
MRMT	**Marmara Adasi**	**1.44**	**157**	PN	**Pn**	**14 18 31.0**	**-0.1**
MAR9	**Marsite Statio**	**1.46**	**154**	PN	**Pb**	**14 18 31.4**	**-0.5**
LPK	**Lapseki**	**1.56**	**183**	PN	**Pn**	**14 18 32.9**	**+0.2**

IDC 24 14:33:49.1±437.0,**59°29N**×**27°23E**,**h0**km,**Error ellipse: s-maj=128.1km s-min=33.6km az=162.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON 5.90**		**112**	*i*		15 06 30.0	
	baz=304,slow=317,SNR=1.2						
I37NO	**I37NO**	**10.50**	**343**	*i*		15 44 20.0	
	baz=155,slow=330,SNR=2.9						
I26DE	**FREYUNG INFRAS13.10**		**223**	*i*		16 00 20.0	
	baz=34,slow=332,SNR=1.2						

*NOU **24** 14:35:21.9, 42°.37S×173°.17E, h99km, MLv4.6, South Island, New Zealand*
*IDC **24** 14:35:24.6±1.4, 42°.07S×173°.21E, h67km±9km, mb3.5/2, mb1 3.8/4, mb1mx3.6/22, mbtmp3.8/4, Error ellipse: s-maj=31.8km s-min=26.1km az=144.0*
*NEIC **24** 14:35:24.7±1.0, 42°.18S±0°.04×173°.11E±0°.06, h69km±9km, mb4.2/5, Error ellipse: s-maj=8.7km s-min=1.7km az=135.0*
*WEL **24** 14:35:25.4±0.4, 42°.3'×17°.3'E±', h47km±7km, M4.1/21, ML4.3/21, MLv4.1/21, Error ellipse: s-maj=0.0km s-min=0.0km az=127.5*

ISC 24 14:35:24.3±0.8,**42°.17S**±0°.03×**173°.11E**±0°.04,**h76**km±6km, **n170**,σ1¶**09**/180,**mb4.1**/6,**South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.40**	**127**	Pn	**Pn**	**14 35 37.6**	**+0.7**
KHZ	**Kahutara**	**0.40**	**127**	P	**Pn**	**14 35 37.5**	**+0.7**
KHZ				S	**Sn**	**14 35 46.3**	**+0.3**
THZ	**Tophouse**	**0.44**	**340**	Pn	**Pn**	**14 35 36.6**	**-0.7**
THZ	**Tophouse**	**0.44**	**340**	P	**Pn**	**14 35 36.6**	**-0.7**
THZ				S	**Sn**	**14 35 43.9**	**-2.8**
BSWZ	**Blackbirch Sta**	**0.73**	**52**		**Pn**	**14 35 40.7**	**+0.7**
BSWZ	**Blackbirch Sta**	**0.73**	**52**	P	**Pn**	**14 35 41.0**	**+0.9**
BSWZ				S	**Sn**	**14 35 53.4**	**+1.7**
GVZ	**Greta Valley S**	**0.80**	**184**	P	**Pn**	**14 35 41.8**	**+1.1**
GVZ				S	**Sn**	**14 35 53.5**	**+0.6**
LTZ	**Lake Taylor**	**0.87**	**225**	Pn	**Pn**	**14 35 41.9**	**+0.3**
LTZ	**Lake Taylor**	**0.87**	**225**	P	**Pn**	**14 35 42.0**	**+0.3**
LTZ				S	**Sn**	**14 35 53.9**	**-0.5**
CMWZ	**Cape Campbell**	**0.93**	**63**	Pn	**Pn**	**14 35 43.8**	**+1.5**
CMWZ	**Cape Campbell**	**0.93**	**63**	P	**Pn**	**14 35 44.0**	**+1.7**
TUWZ	**Tuamarina**	**0.97**	**40**		**Pn**	**14 35 43.3**	**+0.5**
TUWZ	**Tuamarina**	**0.97**	**40**	P	**Pn**	**14 35 43.3**	**+0.5**
NNZ	**Nelson**	**0.98**	**12**		**Pn**	**14 35 43.0**	**+0.1**
NNZ	**Nelson**	**0.98**	**12**	P	**Pn**	**14 35 43.0**	**+0.1**
AMCZ	**Amberley**	**1.06**	**198**	P	**Pn**	**14 35 44.7**	**+0.9**
DSZ	**Denniston Nort**	**1.06**	**293**	P	**Pn**	**14 35 43.6**	**-0.4**
DSZ				S	**Sn**	**14 35 56.9**	**-1.7**
TCW	**Tory Channel**	**1.30**	**43**	P	**Pn**	**14 35 47.4**	**+0.5**
INZ	**Inchbonnie**	**1.35**	**245**	P	**Pn**	**14 35 47.9**	**+0.4**
OXZ	**Oxford**	**1.39**	**214**		**Pn**	**14 35 47.9**	**-0.2**
OXZ	**Oxford**	**1.39**	**214**	P	**Pn**	**14 35 48.0**	**-0.1**
OXZ				S	**Sn**	**14 36 05.3**	**-0.7**
QRZ	**Quartz Range**	**1.42**	**342**		**Pn**	**14 35 48.3**	**-0.1**
QRZ	**Quartz Range**	**1.42**	**342**	P	**Pn**	**14 35 48.4**	**-0.1**
SNZO	**South Karori**	**1.48**	**55**		**Pn**	**14 35 49.6**	**+0.5**
DUWZ	**D'Urville Isla**	**1.50**	**24**	P	**Pn**	**14 35 50.5**	**+1.0**
BHW	**Baring Head**	**1.52**	**60**	Pn	**Pn**	**14 35 50.0**	**+0.3**
BHW	**Baring Head**	**1.52**	**60**	P	**Pn**	**14 35 50.2**	**+0.4**
WEL	**Wellington**	**1.53**	**55**	P	**Pn**	**14 35 50.5**	**+0.6**
OKCZ	**Okains Bay**	**1.55**	**181**	P	**Pn**	**14 35 50.8**	**+0.7**
MQZ	**McQueen's Vall**	**1.57**	**192**	Pn	**Pn**	**14 35 50.1**	**-0.2**
MQZ	**McQueen's Vall**	**1.57**	**192**	P	**Pn**	**14 35 49.1**	**-1.2**
AKCZ	**Akaroa Harbour**	**1.70**	**185**	P	**Pn**	**14 35 52.4**	**+0.2**
RACZ	**Rakaia**	**1.71**	**204**	P	**Pn**	**14 35 52.1**	**-0.1**
PLWZ	**Palliser**	**1.71**	**70**	Pn	**Pn**	**14 35 52.1**	**-0.3**
PLWZ	**Palliser**	**1.71**	**70**	P	**Pn**	**14 35 52.4**	**+0.1**
MSWZ	**Moikau Station**	**1.77**	**65**		**Pn**	**14 35 53.3**	**+0.2**
MSWZ	**Moikau Station**	**1.77**	**65**	P	**Pn**	**14 35 53.3**	**+0.2**
CAW	**Cannon Point**	**1.81**	**55**	P	**Pn**	**14 35 53.9**	**+0.3**
KIW	**Kapiti Island**	**1.89**	**46**	P	**Pn**	**14 35 55.2**	**+0.7**
PAWZ	**Paruwai Farm**	**1.91**	**66**	P	**Pn**	**14 35 54.9**	**0.0**
WVZ	**Waitaha Valley**	**1.97**	**242**	P	**Pn**	**14 35 55.9**	**+0.3**
WACZ	**Wakanui South**	**2.00**	**207**	P	**Pn**	**14 35 55.8**	**-0.2**
OGWZ	**Otaki Gorge**	**2.06**	**49**	P	**Pn**	**14 35 57.2**	**+0.3**
MTW	**Mount Morrison**	**2.08**	**56**	P	**Pn**	**14 35 56.7**	**-0.2**
TRWZ	**Traveller**	**2.08**	**69**	P	**Pn**	**14 35 57.0**	**-0.2**
RPZ	**Rata Peaks**	**2.15**	**224**	P	**Pn**	**14 35 58.2**	**0.0**
	17nm,0.3s,baz=243,slow=0.7,SNR=93						
RPZ				S	**Sn**	**14 36 23.2**	**-0.8**
	100nm,0.3s,baz=1.8,slow=20,SNR=7.6						
RPZ	**Rata Peaks**	**2.15**	**224**	P	**Pn**	**14 35 58.1**	**0.0**
HOWZ	**Holdsworth Sta**	**2.21**	**56**	P	**Pn**	**14 35 58.7**	**-0.3**
ARCZ	**Arundel**	**2.27**	**218**	P	**Pn**	**14 35 59.7**	**0.0**
TMWZ	**Te Maipa**	**2.34**	**64**	P	**Pn**	**14 36 00.3**	**-0.5**
GCSZ	**Gaunt Creek Bo**	**2.34**	**240**	P	**Pn**	**14 36 01.0**	**+0.3**
MRZ	**Mangatainoka R**	**2.40**	**52**	P	**Pn**	**14 36 01.2**	**-0.2**
TIWZ	**Tintock**	**2.51**	**57**	P	**Pn**	**14 36 02.5**	**-0.5**
OHWZ	**Ohakea**	**2.58**	**47**	P	**Pn**	**14 36 05.7**	**+1.2**
CPWZ	**Castlepoint**	**2.64**	**62**	P	**Pn**	**14 36 05.2**	**+0.5**
POWZ	**Post Office Ro**	**2.68**	**49**	P	**Pn**	**14 36 04.9**	**-0.4**
TMZ	**Timaru**	**2.69**	**214**	P	**Pn**	**14 36 05.1**	**-0.3**
PRWZ	**Pori Road**	**2.69**	**54**	P	**Pn**	**14 36 05.1**	**-0.4**
FOZ	**Fox Glacier**	**2.77**	**240**	Pn	**Pn**	**14 36 06.5**	**0.0**
FOZ	**Fox Glacier**	**2.77**	**240**	P	**Pn**	**14 36 06.7**	**+0.2**
BFZ	**Birch Farm**	**2.79**	**59**	Pn	**Pn**	**14 36 06.3**	**-0.4**
BFZ	**Birch Farm**	**2.79**	**59**	P	**Pn**	**14 36 05.7**	**-1.1**
WAZ	**Wanganui**	**2.81**	**31**	P	**Pn**	**14 36 08.6**	**+1.6**
NMEZ	**Namu Road**	**2.82**	**12**	P	**Pn**	**14 36 08.6**	**+1.5**
LREZ	**Lake Rotokare**	**2.88**	**20**	P	**Pn**	**14 36 10.0**	**+2.0**
PREZ	**Palmer Road**	**2.94**	**16**	P	**Pn**	**14 36 10.4**	**+1.6**
KHEZ	**Kahui Hut**	**2.96**	**14**	P	**Pn**	**14 36 10.5**	**+1.4**
NBEZ	**Newall Road No**	**2.96**	**12**	P	**Pn**	**14 36 10.6**	**+1.5**
DVHZ	**Dannevirke**	**2.97**	**52**	P	**Pn**	**14 36 08.3**	**-1.0**
NEZ	**North Egmont**	**3.00**	**15**	P	**Pn**	**14 36 10.8**	**+1.2**
TSZ	**Takapari Road**	**3.02**	**47**	P	**Pn**	**14 36 09.3**	**-0.6**
PKE	**Pukeiti**	**3.05**	**13**	P	**Pn**	**14 36 11.9**	**+1.6**
ANWZ	**Angora Road**	**3.06**	**57**	P	**Pn**	**14 36 09.5**	**-0.9**
LBZ	**Lake Benmore**	**3.07**	**223**	Pn	**Pn**	**14 36 10.8**	**+0.2**
LBZ	**Lake Benmore**	**3.07**	**223**	P	**Pn**	**14 36 10.5**	**0.0**
DREZ	**Durham Road**	**3.10**	**16**	P	**Pn**	**14 36 12.3**	**+1.4**
MHEZ	**Mangahewa**	**3.23**	**17**	P	**Pn**	**14 36 14.7**	**+2.0**
PNHZ	**Pukenui**	**3.25**	**47**	P	**Pn**	**14 36 12.2**	**-0.9**
PRHZ	**Porangahau**	**3.27**	**56**	P	**Pn**	**14 36 12.1**	**-1.2**
WPHZ	**Waipukurau**	**3.28**	**51**	P	**Pn**	**14 36 12.5**	**-0.9**
VRZ	**Vera Road**	**3.29**	**23**	P	**Pn**	**14 36 15.3**	**+1.6**
MTVZ	**Mangateitei**	**3.31**	**34**	P	**Pn**	**14 36 14.9**	**+0.9**
PKVZ	**Pokaka**	**3.35**	**31**	P	**Pn**	**14 36 15.0**	**+0.6**
ODZ	**Otahua Downs**	**3.38**	**211**		**Pn**	**14 36 14.4**	**-0.3**
ODZ	**Otahua Downs**	**3.38**	**211**	P	**Pn**	**14 36 14.5**	**-0.3**
WNVZ	**Wahianoa**	**3.42**	**34**	P	**Pn**	**14 36 16.3**	**+0.9**
MOVZ	**Moawhango**	**3.42**	**37**	P	**Pn**	**14 36 15.2**	**-0.1**
TRVZ	**Turoa**	**3.42**	**34**	P	**Pn**	**14 36 16.4**	**+0.9**
WHVZ	**Whangaehu Hut**	**3.45**	**34**	P	**Pn**	**14 36 16.8**	**+0.8**
FWVZ	**Far West T-bar**	**3.46**	**33**	P	**Pn**	**14 36 16.9**	**+0.9**
TUVZ	**Tukino**	**3.49**	**35**	P	**Pn**	**14 36 17.2**	**+0.8**
BHHZ	**Black Hill Sta**	**3.50**	**41**	P	**Pn**	**14 36 16.3**	**-0.1**
KRHZ	**Kereru**	**3.54**	**45**	P	**Pn**	**14 36 15.9**	**-1.0**
NGZ	**Ngauruhoe**	**3.54**	**33**	P	**Pn**	**14 36 17.8**	**+0.6**
SNVZ	**South Ngauruho**	**3.55**	**34**	P	**Pn**	**14 36 18.0**	**+0.8**
PXZ	**Pawanui**	**3.56**	**54**	P	**Pn**	**14 36 15.9**	**-1.2**
TWVZ	**Taurewa**	**3.57**	**31**	P	**Pn**	**14 36 18.0**	**+0.5**
OTVZ	**Oturere**	**3.58**	**34**	P	**Pn**	**14 36 18.3**	**+0.6**
NNVZ	**North Ngauruho**	**3.59**	**33**	P	**Pn**	**14 36 18.3**	**+0.6**
WTVZ	**West Tongariro**	**3.59**	**33**	P	**Pn**	**14 36 18.3**	**+0.5**
ETVZ	**East Tongariro**	**3.62**	**34**	P	**Pn**	**14 36 18.7**	**+0.5**
KRVZ	**Karewarewa**	**3.63**	**33**	P	**Pn**	**14 36 18.8**	**+0.5**
TMVZ	**Te Maari**	**3.64**	**34**	P	**Pn**	**14 36 18.9**	**+0.5**
NTVZ	**North Tongarir**	**3.64**	**33**	P	**Pn**	**14 36 19.2**	**+0.7**
JCZ	**Jackson Bay**	**3.69**	**238**	P	**Pn**	**14 36 18.5**	**-0.6**
KAHZ	**Kahuranaki**	**3.71**	**51**	P	**Pn**	**14 36 18.0**	**-1.3**
KWHZ	**Kaweka Forest**	**3.73**	**44**	P	**Pn**	**14 36 18.6**	**-0.9**
KATZ	**Kakaramea**	**3.75**	**33**	P	**Pn**	**14 36 20.3**	**+0.3**
RITZ	**Rihia Road**	**3.82**	**34**	P	**Pn**	**14 36 21.1**	**+0.3**
MCHZ	**McNeill Hill**	**3.85**	**46**	P	**Pn**	**14 36 20.3**	**-0.9**
RATZ	**Rangitukua**	**3.88**	**32**	P	**Pn**	**14 36 22.3**	**+0.7**
HIZ	**Hauiti**	**3.89**	**21**	Pn	**Pn**	**14 36 22.4**	**+0.6**
HIZ	**Hauiti**	**3.89**	**21**	P	**Pn**	**14 36 22.6**	**+0.9**
BKZ	**Black Stump Fm**	**3.96**	**42**		**Pn**	**14 36 21.4**	**-1.3**
BKZ	**Black Stump Fm**	**3.96**	**42**	P	**Pn**	**14 36 21.5**	**-1.1**
WKZ	**Wanaka**	**3.98**	**227**	P	**Pn**	**14 36 21.4**	**-1.6**
HATZ	**Hinemaiaia**	**3.99**	**36**	P	**Pn**	**14 36 22.4**	**-0.7**
WATZ	**Wairara**	**4.00**	**31**	P	**Pn**	**14 36 23.8**	**+0.5**
EAZ	**Earnscleugh**	**4.11**	**221**	P	**Pn**	**14 36 23.8**	**-0.9**
WHTZ	**Whakaora**	**4.12**	**33**	P	**Pn**	**14 36 25.5**	**+0.5**
HHSZ	**Highcliff Hill**	**4.13**	**205**	P	**Pn**	**14 36 24.9**	**0.0**
ARHZ	**Aropaoanui**	**4.15**	**47**	P	**Pn**	**14 36 24.1**	**-1.1**
NMHZ	**Naumai**	**4.17**	**44**	P	**Pn**	**14 36 24.6**	**-0.9**
MRHZ	**Matea Rd**	**4.18**	**38**	P	**Pn**	**14 36 24.5**	**-1.2**
TLZ	**Tolley Road**	**4.27**	**27**	P	**Pn**	**14 36 27.0**	**+0.1**
MTHZ	**Maungataniwha**	**4.37**	**42**	P	**Pn**	**14 36 26.9**	**-1.4**
ALRZ	**Allen Road**	**4.37**	**35**	P	**Pn**	**14 36 27.3**	**-1.0**
WHHZ	**Waihua**	**4.41**	**47**	P	**Pn**	**14 36 27.8**	**-1.0**
RAHZ	**Arahi**	**4.45**	**44**	P	**Pn**	**14 36 28.1**	**-1.3**
GRRZ	**Galatos Road**	**4.46**	**32**	P	**Pn**	**14 36 29.4**	**-0.1**
MSZ	**Milford Sound**	**4.53**	**135**	P	**Pn**	**14 36 30.5**	**+0.2**
TUZ	**Tuapeka**	**4.53**	**212**	P	**Pn**	**14 36 30.5**	**+0.1**
HSRZ	**Hossack Road**	**4.54**	**33**	P	**Pn**	**14 36 30.5**	**-0.1**
MUGZ	**Murupara**	**4.63**	**38**	P	**Pn**	**14 36 29.9**	**-1.9**
SNGZ	**Shannon Statio**	**4.68**	**45**	P	**Pn**	**14 36 30.5**	**-2.0**
KNZ	**Kokohu**	**4.69**	**49**	P	**Pn**	**14 36 30.3**	**-2.3**
MHGZ	**Mahia Peninsul**	**4.74**	**52**	P	**Pn**	**14 36 31.3**	**-2.0**
MLZ	**Mavora Lakes**	**4.82**	**227**	P	**Pn**	**14 36 33.7**	**-0.7**
PRGZ	**Paritu Road**	**4.88**	**50**	P	**Pn**	**14 36 33.5**	**-1.7**
RAGZ	**Rawiri**	**4.93**	**43**	P	**Pn**	**14 36 33.7**	**-2.3**
RIGZ	**Rimuhau**	**4.96**	**47**	P	**Pn**	**14 36 34.0**	**-2.3**
URZ	**Urewera**	**4.97**	**39**	P	**Pn**	**14 36 33.7**	**-2.7**
	3.3nm,0.3s,baz=300,slow=23,SNR=23						
URZ				S	**Sn**	**14 37 27.3**	**-5.1**
	46nm,0.3s,baz=71,slow=18,SNR=15						
TGRZ	**Tauranga**	**5.06**	**30**	P	**Pn**	**14 36 37.4**	**-0.2**
TKGZ	**Te Karaka**	**5.20**	**46**	P	**Pn**	**14 36 37.6**	**-1.9**
SYZ	**Scrubby Hill**	**5.21**	**212**	P	**Pn**	**14 36 39.9**	**+0.3**
AWAZ	**Awhitu Peninsu**	**5.24**	**14**	P	**Pn**	**14 36 41.1**	**+1.0**
WHZ	**Wether Hill Ro**	**5.26**	**223**	P	**Pn**	**14 36 38.8**	**-1.6**
WTAZ	**Waiatarua**	**5.36**	**13**	P	**Pn**	**14 36 43.1**	**+1.4**
ETAZ	**East Tamaki Re**	**5.40**	**16**	P	**Pn**	**14 36 43.1**	**+0.8**
MYRZ	**Mayor Island**	**5.45**	**27**	P	Pn	14 36 49.3	+6.3
HBAZ	**Herne Bay Bore**	**5.46**	**14**	P	**Pn**	**14 36 45.0**	**+1.9**
TWGZ	**Tauwhareparae**	**5.46**	**45**	P	**Pn**	**14 36 41.5**	**-1.8**
RVAZ	**Riverhead Bore**	**5.52**	**12**	P	**Pn**	**14 36 45.0**	**+1.1**
MBAZ	**Motutapu North**	**5.57**	**15**	P	**Pn**	**14 36 45.6**	**+0.9**
WIAZ	**Waiheke Island**	**5.60**	**17**	P	**Pn**	**14 36 46.2**	**+1.2**
PUZ	**Puketiti**	**5.69**	**46**	P	**Pn**	**14 36 44.1**	**-2.1**
KUZ	**Kuaotunu**	**5.79**	**21**	P	**Pn**	**14 36 48.1**	**+0.5**
APZ	**The Paps**	**5.92**	**216**	P	**Pn**	**14 36 48.8**	**-0.6**
WCZ	**Waipu Caves**	**6.30**	**9**	P	**Pn**	**14 36 56.0**	**+1.4**
OUZ	**Omahuta**	**6.96**	**3**	P	**Pn**	**14 37 04.5**	**+0.9**
CTZ	**Chatham Island**	**7.70**	**105**	P	**Pn**	**14 37 15.5**	**-0.1**
AS31	**Alice Springs**	**37.33**	**287**	P	**P**	**14 42 29.8**	**+0.3**
AS31				IAmb	IAmb	14 42 39.1	
	comp=Z,2.3nm,1.4s						
ASAR	**Alice Springs**	**37.33**	**287**	P	**P**	**14 42 30.8**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=127,slow=7.1,SNR=16						
ASAR				pP	**pP**	**14 42 47.0**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=126,slow=7.5,SNR=2.5						
WR0	**Warramunga Arr**	**39.31**	**292**	P	**P**	**14 42 46.9**	**+0.8**
WR0				IAmb	IAmb	14 43 03.8	
	comp=Z,8.0nm,1.4s						
WB2	**Warramunga Arr**	**39.45**	**292**	P	**P**	**14 42 48.6**	**+1.3**
WB2				IAmb	IAmb	14 42 50.1	
	comp=Z,4.1nm,1.0s						
WRA	**Warramunga Arr**	**39.46**	**292**	P	**P**	**14 42 48.8**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=129,slow=8.5,SNR=39						
WRA				pP	**pP**	**14 43 05.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=128,slow=7.8,SNR=3.0						
WRA	**Warramunga Arr**	**39.46**	**292**	P	**P**	**14 42 49.0**	**+1.7**
WB0	**Warramunga Arr**	**39.54**	**292**	P	**P**	**14 42 49.6**	**+1.6**
CMAR	**Chiang Mai Arr**	**91.03**	**294**	pP	pP	14 48 40.7	-0.7
	comp=Z,0.3nm,0.3s,baz=133,slow=4.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**150.13**	**197**	PKPbc	**PKiKP**	**14 55 08.7**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=185,slow=1.8,SNR=2.7						
TORD				pPKPbc	**pPKPbc**	**14 55 27.7**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=162,slow=1.7,SNR=4.9						

*NEIC **24** 14:45:36.6±2.5, 45°.98N±0°.09×129°.9W±0°.2, h10km±2km, mb4.2/3, Error ellipse: s-maj=21.4km s-min=14.8km az=248.0*
*IDC **24** 14:45:37.3±2.6, 46°.05N×129°.63W, h0km, mb3.3/4, mb1 3.7/10, mb1mx3.6/45, mbtmp3.5/10, ML3.5/6, Error ellipse: s-maj=44.1km s-min=18.6km az=57.0*

ISC 24 14:45:36.9±1.6,**46°.0N**±0°.1×**129°.8W**±0°.2,**h10**km,**n36**, σ1¶**46**/30,**mb3.3**/4,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLWA	**Neilton Lookou**	**4.32**	**69**	Pn	**Pn**	**14 46 43.3**	**+0.6**
PGC	**Sidney**	**5.08**	**56**	Pn	**Pn**	**14 46 53.1**	**+0.1**
LON	**Longmire**	**5.58**	**79**		**Pn**	**14 47 00.7**	**+0.7**
BBB	**Bella Bella**	**6.30**	**10**	Pn	**Pn**	**14 47 10.8**	**+1.0**
	1.8nm,0.3s,baz=215,slow=13,SNR=3.2						
BBB	**Bella Bella**	**6.30**	**10**		**Pn**	**14 47 09.7**	**-0.1**
LTY	**Liberty**	**6.42**	**75**		**Pn**	**14 47 10.6**	**-0.9**
YBH	**Yreka Blue Hor**	**6.66**	**127**	Pn	**Pn**	**14 47 15.7**	**+0.8**
B08A	**Colville Reser**	**7.52**	**68**		**Pn**	**14 47 26.2**	**-0.4**
NEW	**Newport**	**8.94**	**71**	Pn	**Pn**	**14 47 46.4**	**+0.3**
	0.2nm,0.3s,baz=280,slow=8.4,SNR=2.9						
NEW	**Newport**	**8.94**	**71**		**Pn**	**14 47 46.1**	**0.0**
MCCM	**Marconi Confer**	**9.37**	**144**	Pn	**Pn**	**14 47 51.9**	**-0.1**
PLID	**Pearl Lake**	**9.73**	**90**	Pn	**Pn**	**14 47 57.2**	**+0.1**
PAHR	**Pah Rah Range**	**9.89**	**126**	Pn	**Pn**	**14 47 59.2**	**0.0**
PNTR	**Pine Nut**	**10.20**	**129**	Pn	**Pn**	**14 48 05.5**	**+1.9**
YERR	**Yerington**	**10.47**	**128**	Pn	**Pn**	**14 48 05.1**	**-2.2**
NVAR	**Mina Array Bea**	**11.38**	**127**	Pn	**Pn**	**14 48 22.8**	**+3.1**
	0.1nm,0.3s,baz=296,slow=34,SNR=2.2						
ELK	**Elko**	**11.82**	**111**	Pn	**Pn**	**14 48 28.5**	**+2.8**
	0.1nm,0.3s,baz=305,slow=20,SNR=4.2						
PMPB	**Monarch Peak**	**11.88**	**142**	Pn	**Pn**	**14 48 23.9**	**-2.5**
TPH	**Tonopah**	**12.24**	**126**	Pn	**Pn**	**14 48 29.6**	**-1.8**
BW06	**Boulder Array**	**14.83**	**95**	Pn	**Pn**	**14 49 04.8**	**-2.0**
PD31	**Pinedale Array**	**14.83**	**95**	Pn	**Pn**	**14 49 05.7**	**-1.1**
PDAR	**Pinedale Array**	**14.83**	**95**	Pn	**P**	**14 49 12.3**	**-0.4**
	0.2nm,0.3s,baz=266,slow=14,SNR=1.9						
YKA	**Yellowknife Ar**	**18.68**	**22**	P	**Pn**	**14 49 55.4**	**+0.1**
	0.1nm,0.3s,baz=212,slow=12,SNR=8.3						
ANMO	**Albuquerque**	**20.83**	**114**	P	**P**	**14 50 19.2**	**+0.4**
	1.4nm,0.7s,baz=288,slow=3.2,SNR=2.8						
ANMO	**Albuquerque**	**20.83**	**114**	P	**P**	**14 50 19.6**	**+0.8**
ANMO				IAmb	IAmb	14 50 23.1	
	comp=Z,3.8nm,1.2s						
T25A	**Trinidad**	**20.89**	**106**	P	**P**	**14 50 18.0**	**-1.4**
T25A				IAmb	IAmb	14 50 28.7	
	comp=Z,15nm,1.2s						
ILAR	**Eielson Array**	**21.04**	**339**	P	**P**	**14 50 21.7**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=153,slow=9.5,SNR=10						
319A	**Douglas**	**21.58**	**125**	P	**P**	**14 50 29.1**	**+2.3**
319A				IAmb	IAmb	14 50 33.1	
	comp=Z,23nm,1.5s						
ULM	**Lac du Bonnet**	**22.92**	**67**	P	**P**	**14 50 40.3**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=256,slow=12,SNR=1.9						
TXAR	**Lajitas Array**	**26.37**	**120**	P	**P**	**14 51 15.3**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=302,slow=6.9,SNR=3.2						
H11N3	**WAKE ISLAND Hy**	**57.61**	**265**	T	T	15 57 40.7	
	baz=47,slow=75,SNR=41						
H11N2	**WAKE ISLAND Hy**	**57.61**	**265**	T	T	15 57 40.7	
	baz=47,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy**	**57.62**	**265**	T	T	15 57 40.4	
	baz=47,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	**58.57**	**264**	T	T	15 58 52.6	
	baz=46,slow=76,SNR=30						
H11S2	**WAKE ISLAND Hy**	**58.58**	**264**	T	T	15 58 52.9	
	baz=46,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**58.59**	**264**	T	T	15 58 53.6	
	baz=46,slow=76,SNR=19						

*IDC **24** 14:47:23.2±1.9, 32°.82S×178°.17W, h0km, mb4.5/3, mb1 4.6/4, mb1mx4.0/35, mbtmp4.4/4, ML3.8/1, Error ellipse: s-maj=50.1km s-min=32.1km az=132.0*
*NEIC **24** 14:47:29.9±1.6, 33°.0S±0°.1×178°.1W±0°.2, h62km±18km, mb4.5/14, Error ellipse: s-maj=32.0km s-min=4.2km az=129.0*

ISC 24 14:47:26.4±1.1,**32°.86S**±0°.08×**177°.9W**±0°.1,**h34**km,**n70**, σ1¶**87**/69,**mb4.5/9**,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**5.81**	**210**	P	**Pn**	**14 48 53.0**	**+2.8**
PKGZ	**Pakihiroa**	**6.01**	**212**	P	**Pn**	**14 48 52.8**	**-0.2**
HAZ	**Te Kaha**	**6.04**	**215**	P	**Pn**	**14 48 52.9**	**-0.4**
PUZ	**Puketiti**	**6.09**	**210**	P	**Pn**	**14 48 53.9**	**-0.1**
TWGZ	**Tauwhareparae**	**6.29**	**211**	P	**Pn**	**14 48 56.8**	**-0.1**
CNGZ	**Carnagh Statio**	**6.46**	**208**	P	**Pn**	**14 48 58.3**	**-0.7**
TKGZ	**Te Karaka**	**6.57**	**211**	P	**Pn**	**14 49 01.7**	**+1.0**
MWZ	**Matawai**	**6.63**	**213**	P	**Pn**	**14 49 00.4**	**-1.1**
URZ	**Urewera**	**6.76**	**216**	Pn	**Pn**	**14 49 01.8**	**-1.5**
	1.9nm,0.3s,baz=120,slow=23,SNR=19						
URZ				Sn	**Sn**	**14 50 18.7**	**-0.5**
	2.0nm,0.3s,baz=119,slow=20,SNR=5.8						
URZ	**Urewera**	**6.76**	**216**		**Pn**	**14 49 03

OHR	**Ohrid**	**0.83**	**59**	*i* Pg	**Pg**	15 00 40.6	-0.8
OHR				*i* Sg	**Sb**	15 00 54.5	+0.5
OHR				*e*Lg	Lg	15 00 56.8	
	comp=N,125nm,0.6s						
OHR				*e*Lg	Lg	15 00 57.0	
	comp=E,189nm,0.7s						
KEK	**Kerkira**	**0.97**	**183**	P	**Pg**	15 00 43.2	-1.0
KEK				S	**Sb**	15 00 58.6	+0.6
	comp=E,290nm,0.4s						
FNA	**Florina**	**1.15**	**85**	P	**Pg**	15 00 46.4	-1.3
FNA				S	**Sg**	15 01 03.0	+0.4
	comp=E,418nm,0.5s						
FNA	**Florina**	**1.15**	**85**	P	**Pg**	15 00 46.6	-1.1
	baz=84						
FNA				S	**Sb**	15 01 03.4	0.0
	baz=84						
IGT	**Igoumenitsa**	**1.21**	**163**	P	**Pg**	15 00 47.8	-0.9
IGT				S	**Sb**	15 01 05.2	+0.5
	comp=E,342nm,0.6s						
IGT	**Igoumenitsa**	**1.21**	**163**	P	**Pg**	15 00 48.4	-0.3
	baz=164						
SCTE	**Santa Cesarea**	**1.23**	**241**	P	**Pb**	15 00 49.0	-0.3
	baz=242						
SCTE				S	**Sn**	15 01 07.4	+1.0
	baz=242						
JAN	**Janina**	**1.27**	**143**	P	**Pn**	15 00 48.9	-1.2
JAN				S	**Sn**	15 01 08.9	+1.3
	comp=E,295nm,0.4s						
ULC	**Ulcinj**	**1.36**	**340**	*e*Pg	**Pn**	15 00 49.3	-2.0
ULC				*i* Sg	**Sb**	15 01 09.3	0.0
DRME	**Dracevica, Mon**	**1.59**	**341**	⇑*i*Pg	**Pn**	15 00 53.4	-1.0
DRME				*i* Sg	**Sg**	15 01 16.7	+0.2
BCI	**Bajram Curri**	**1.69**	**5**	P	**Pb**	15 00 57.5	+0.4
	baz=3.0						
BCI				S	**Sg**	15 01 20.5	+0.7
	baz=3.0						
BCI				AMP			
	comp=E,1.2nm,0.6s,baz=3.0						
SKO	**Skopje**	**1.75**	**42**	*i* Pg	**Pb**	15 00 57.8	-0.4
SKO				*i* Sg	**Sg**	15 01 23.0	+1.2
BUM	**Brajici-Budva**	**1.77**	**336**	⇑*i*Pn	**Pn**	15 00 56.4	-0.6
BUM				*i* Sn	**Sb**	15 01 20.9	-0.3
PDG	**Podgorica**	**1.80**	**346**	*e*Pg	**Pb**	15 00 58.3	-0.8
PDG				*e*Sg	**Sg**	15 01 23.8	+0.3
PDG	**Podgorica**	**1.80**	**346**	⇑P	**Pb**	15 00 58.8	-0.3
PDG				⇓S	**Sn**	15 01 21.2	+0.6
TTG	**Podgorica**	**1.80**	**346**	⇓*i*Pn	**Pn**	15 00 57.5	+0.2
TTG				*i* Sn	**Sb**	15 01 22.3	+0.3
PVY	**Plav**	**1.91**	**2**	⇑*i*Pn	**Pn**	15 00 59.8	+0.9
PVY				*i* Sn	**Sg**	15 01 26.3	-0.7
LKD2	**Lefkada island**	**1.99**	**162**	P	**Pn**	15 00 59.9	0.0
CEME	**Cevo**	**1.99**	**339**	*e*Pn	**Pn**	15 00 59.5	-0.5
CEME				*i* Sn	**Sb**	15 01 26.5	-1.0
STIP	**Stip**	**2.02**	**59**	*i* Pn	**Pg**	15 01 04.0	-0.3
STIP				*i* Sg	**Sg**	15 01 38.4	+7.9
HCY	**Herceg Novi**	**2.04**	**330**	*e*Pn	**Pn**	15 00 59.7	-0.9
HCY				*i* Sn	**Sn**	15 01 27.0	+0.5
NYDR	**Nydri-Lefkada**	**2.07**	**162**	P	**Pn**	15 01 00.8	-0.2
VAY	**Valandovo**	**2.14**	**72**	*e*Pn	**Pb**	15 01 04.9	0.0
VAY				*i* Sg	**Sg**	15 01 33.7	-0.7
VAY				*e*Lg	Lg	15 01 37.1	
	comp=E,16nm,0.6s						
VAY				*e*Lg	Lg	15 01 38.5	
	comp=N,14nm,0.4s						
KOME	**Kolasin**	**2.18**	**353**	⇑*i*Pn	**Pn**	15 01 03.1	+0.5
KOME				*i* Sn	**Sb**	15 01 31.9	-1.0
IVA	**Berane**	**2.19**	**1**	⇑*i*Pn	**Pn**	15 01 03.5	+0.8
IVA				*i* Sn	**Sb**	15 01 32.7	-0.4
NKME	**Niksic**	**2.19**	**342**	⇓*i*Pn	**Pn**	15 01 02.8	+0.1
NKME				*i* Sn	**Sn**	15 01 31.4	+1.2
NKY	**Niksic**	**2.23**	**343**	*e*Pn	**Pn**	15 01 03.3	+0.1
NKY				*i* Sn	**Sn**	15 01 32.3	+1.1
MATE	**Matera**	**2.40**	**270**	⇑P	**Pb**	15 01 08.8	-0.5
MATE				⇑S	**Sb**	15 01 38.4	-0.8
BRY	**Bratogost**	**2.43**	**336**	⇑*i*Pn	**Pn**	15 01 05.8	-0.2
BRY				*i* Sn	**Sn**	15 01 36.7	+0.5
PRVS	**Prvonek**	**2.46**	**42**	*e*Pn	**Pn**	15 01 07.6	+1.1
PRVS				*e*Sn	**Sn**	15 01 37.3	+0.3
BARS	**Barje**	**2.58**	**34**	*e*Pn	**Pn**	15 01 07.5	-0.6
UPM	**Unac-Piva**	**2.62**	**344**	⇓*i*Pn	**Pn**	15 01 08.8	+0.1
UPM				*i* Sn	**Sn**	15 01 41.9	+0.9
PLE	**Pljevlja**	**2.67**	**353**	*e*Pn	**Pn**	15 01 09.8	+0.5
PLE				*i* Sn	**Sn**	15 01 43.7	+1.6
BOSS	**Bosilegrad**	**2.67**	**46**	*e*Pn	**Pn**	15 01 09.8	+0.5
BOSS				*e*Sn	**Sn**	15 01 40.9	-1.1
SELS	**Selova**	**2.70**	**20**	*e*Pn	**Pn**	15 01 09.4	-0.3
IVAS	**Ivanjica**	**2.90**	**4**	*e*Pn	**Pn**	15 01 12.0	-0.4
IVAS				*e*Sn	**Sn**	15 01 47.0	-0.7
VTS	**Vitosha**	**3.18**	**51**	*e*Pn	**Pn**	15 01 16.8	+0.4
VTS				*e*Sn	**Sn**	15 01 52.2	-2.6
VTS	**Vitosha**	**3.18**	**51**	⇑P	**Pn**	15 01 17.6	+1.2
VTS				⇑S	**Sn**	15 01 55.9	+1.1
BBLS	**Lazići**	**3.20**	**354**	*e*Pn	**Pn**	15 01 17.1	+0.5
BBLS				*e*Sn	**Sn**	15 01 54.0	-1.1
ZAPS	**Zavoj**	**3.31**	**38**	*e*Pn	**Pn**	15 01 19.4	+1.3
ZAPS				*e*Sn	**Sn**	15 01 55.5	-2.3
DIVS	**Divibare**	**3.41**	**2**	*e*Pn	**Pn**	15 01 19.8	+0.3
DIVS				*e*Sn	**Sn**	15 01 59.4	-1.0
ZAGS	**Zajecar**	**3.59**	**29**	*e*Pn	**Pn**	15 01 22.3	+0.5
BLKB	**Belogradchik**	**3.60**	**35**	⇓S	**Sn**	15 02 05.1	0.0
BZS	**Buzias**	**5.09**	**14**	⇑P	**Pn**	15 01 43.5	+1.0
BZS				⇑S	**Sn**	15 02 41.4	-0.3
GZR	**Gura Zlata**	**5.17**	**23**	⇑P	**Pn**	15 01 44.2	+0.6
GZR				⇓S	**Sn**	15 02 45.4	+1.8
LOT	**Lotru**	**5.55**	**30**	⇓P	**Pn**	15 01 49.7	+0.7

*JMA **24** 15:01:03.6,24°.44N×122°.22E,h32km±4km,M2.4*
*TAP **24** 15:01:03.4,24°.50N×122°.15E,h5km,ML3.0,C*
ISC 24 15:01:03.0±1.0,24°.50N±0°.02×122°.22E±0°.02,h10km±9km,
n103,σ0°83/196,1C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.35**	**288**	⇓*i*P	**Pb**	15 01 10.2	-1.2
	baz=291						
TWC				S	**Sb**	15 01 15.0	-2.0
	baz=291						
EWUT	**Wuta**	**0.41**	**262**	⇓*i*P	**Pb**	15 01 11.5	-0.7
	baz=260						
EWUT				S	**Sb**	15 01 16.6	-1.9
	baz=260						
EGS		**0.43**	**323**	P	**Pb**	15 01 12.0	-0.6
	baz=331						
EGS				S	**Sb**	15 01 19.4	+0.2
	baz=331						
NDS	**Dongshan**	**0.48**	**286**	*i* P	**Pb**	15 01 12.8	-0.7
	baz=288						
NDS				S	**Sb**	15 01 18.9	-1.7
	baz=288						
NTC	**Toucheng**	**0.50**	**315**	P	**Pb**	15 01 13.4	-0.5
	baz=320						
NTC				*e*S	**Sb**	15 01 21.0	-0.2
	baz=320						
ILA	**Ilan**	**0.51**	**302**	P	**Pb**	15 01 14.2	+0.3
	baz=306						
ILA				S	**Sb**	15 01 20.9	-0.3
	baz=306						
TWB1	**Santiao Chiao**	**0.55**	**337**	P	**Pg**	15 01 14.3	+0.6
	baz=344						
TWB1				*e*S	**Sb**	15 01 23.2	+0.6
	baz=344						
TWE	**Neicheng**	**0.55**	**294**	P	**Pb**	15 01 14.1	-0.6
	baz=296						
TWE				S	**Sb**	15 01 20.9	-1.6
	baz=296						
TIPB	**Shuangxi**	**0.59**	**323**	P	**Pb**	15 01 15.1	-0.3
	baz=327						
TIPB				S	**Sb**	15 01 23.9	0.0
	baz=327						
ENTT	**Nioudou**	**0.61**	**283**	P	**Pb**	15 01 15.4	-0.4
	baz=284						
ENTT				S	**Sb**	15 01 24.4	0.0
	baz=284						
NDT	**Datong Townshi**	**0.65**	**279**	⇑*i*P	**Pb**	15 01 16.1	-0.3
	baz=279						
NDT				S	**Sb**	15 01 25.8	+0.2
	baz=279						
NACB	**Ninganchiao**	**0.66**	**241**	⇓*i*P	**Pb**	15 01 16.0	-0.5
	baz=236						
NACB				*e*S	**Sb**	15 01 26.3	+0.6
	baz=236						
JYNG	**Yonagunijimaku**	**0.66**	**94**	P	**Pg**	15 01 16.2	+0.4
JYNG				S	**Sg**	15 01 25.8	+1.3
WFSB	**Wu-fen Shan**	**0.69**	**325**	P	**Pb**	15 01 17.9	+0.7
	baz=329						
WFSB				*e*S	**Sb**	15 01 26.6	-0.2
	baz=329						
TWD	**Chiawan**	**0.71**	**234**	P	**Pb**	15 01 17.1	-0.3
	baz=229						
TWD				*e*S	**Sb**	15 01 26.6	-0.5
	baz=229						
NWLT	**Wulai**	**0.71**	**293**	P	**Pb**	15 01 18.2	+0.8
	baz=294						
NWLT				S	**Sb**	15 01 27.8	+0.6
	baz=294						
YOJ	**Yonaguni jima**	**0.72**	**93**	P	**Pg**	15 01 17.2	+0.3
YOJ				S	**Sg**	15 01 26.2	-0.2
YOJ	**Yonaguni jima**	**0.72**	**93**	*e*P	**Pg**	15 01 18.4	+1.5
	baz=92						
YOJ				*e*S	**Sb**	15 01 30.1	+2.5
	baz=92						
ETLH	**Xiulin Townshi**	**0.73**	**247**	P	**Pb**	15 01 17.5	-0.4
	baz=244						
ETLH				S	**Sb**	15 01 28.1	+0.1
	baz=244						
TWA	**Mucha**	**0.75**	**310**	*e*P	**Pb**	15 01 18.0	-0.1
	baz=313						
TWA				S	**Sb**	15 01 28.2	-0.2
	baz=313						
TNOU	**National Taiwa**	**0.76**	**328**	*e*P	**Pb**	15 01 19.0	+0.7
	baz=331						
TNOU				*e*S	**Sb**	15 01 29.5	+0.7
	baz=331						
NNSH	**Datong**	**0.77**	**265**	*e*P	**Pb**	15 01 18.5	0.0
	baz=263						
NNSH				*e*S	**Sb**	15 01 28.3	-0.6
	baz=263						
NNSB	**Datong**	**0.77**	**265**	*e*P	**Pb**	15 01 18.1	-0.3
	baz=263						
NNSB				*e*S	**Sb**	15 01 29.8	+0.9
	baz=263						
NNS	**Nan Shan**	**0.77**	**266**	P	**Pb**	15 01 18.2	-0.4
	baz=264						
NNS				*e*S	**Sb**	15 01 29.0	-0.2
	baz=264						
NHDH	**Xindian Distri**	**0.78**	**306**	*e*P	**Pn**	15 01 20.0	0.0
	baz=308						
NHDH				*e*S	**Sb**	15 01 29.8	+0.5
	baz=308						
YHNB	**Yeheng**	**0.79**	**283**	P	**Pb**	15 01 18.6	-0.1
	baz=283						
YHNB				*e*S	**Sb**	15 01 29.2	-0.3
	baz=283						
NSK	**Sanguang**	**0.80**	**283**	P	**Pb**	15 01 19.2	+0.1
	baz=283						
NSK				*e*S	**Sb**	15 01 29.1	-0.9
	baz=283						
TATO	**Taipei**	**0.82**	**306**	P	**Pn**	15 01 21.1	+0.6
	baz=308						
TATO				*e*S	**Sn**	15 01 31.6	-1.0
	baz=308						
TAP	**Taipei**	**0.84**	**310**	*e*P	**Pg**	15 01 18.3	-0.9
	baz=312						
TAP				*e*S	**Sb**	15 01 31.6	+0.6
	baz=312						
NWRT	**Kuosheng**	**0.86**	**324**	*e*P	**Pb**	15 01 20.3	+0.2
	baz=327						
NWRT				*e*S	**Sb**	15 01 32.9	+1.2
	baz=327						
YM01	**YM01**	**0.87**	**318**	*e*P	**Pb**	15 01 20.9	+0.7
	baz=320						
YM01				*e*S	**Sb**	15 01 32.6	+0.6
	baz=320						
YM08	**YM08**	**0.89**	**320**	P	**Pb**	15 01 20.8	+0.3
	baz=323						
YM08				S	**Sb**	15 01 33.1	+0.6
	baz=323						
FUSS	**Fushou**	**0.93**	**254**	*e*P	**Pb**	15 01 21.5	+0.2
	baz=252						
FUSS				*e*S	**Sb**	15 01 34.2	+0.6
	baz=252						
ANP	**Anpu**	**0.93**	**317**	*e*P	**Pb**	15 01 21.5	+0.3
	baz=320						
ANP				*e*S	**Sb**	15 01 34.6	+0.9
	baz=320						
WHF	**Hehuan Shan**	**0.94**	**248**	*e*P	**Pb**	15 01 21.3	-0.3
	baz=245						
WHF				*e*S	**Sb**	15 01 34.9	+0.6
	baz=245						
TWS1	**Kuangyinshan**	**0.94**	**310**	*e*P	**Pn**	15 01 22.4	+0.2
	baz=312						
TWS1				*e*S	**Sn**	15 01 35.1	-0.7
	baz=312						
NTY	**Taoyuan**	**0.98**	**301**	*e*P	**Pb**	15 01 22.2	+0.3
	baz=302						
NTY				*e*S	**Sn**	15 01 36.5	-0.1
	baz=302						
TWT	**Tachien**	**0.98**	**256**	*e*P	**Pn**	15 01 22.8	-0.2
	baz=254						
TWT				*e*S	**Sb**	15 01 35.2	-0.1
	baz=254						
ESL	**Shilin**	**0.99**	**227**	*e*P	**Pb**	15 01 22.5	+0.3
	baz=223						
ESL				*e*S	**Sn**	15 01 36.4	-0.5
	baz=223						
TDCB	**Techi**	**1.00**	**256**	*e*P	**Pb**	15 01 22.7	+0.3
	baz=254						
TDCB				*e*S	**Sb**	15 01 35.3	-0.4
	baz=254						
CHGB	**Renai**	**1.05**	**246**	*e*P	**Pb**	15 01 23.3	0.0
	baz=243						
CHGB				*e*S	**Sn**	15 01 37.8	-0.9
	baz=243						
NCU	**National Centr**	**1.05**	**297**	*e*P	**Pb**	15 01 23.0	-0.2
	baz=298						
NCU				*e*S	**Sn**	15 01 38.3	-0.1
	baz=298						
NCUH	**Zhongli**	**1.05**	**297**	*e*P	**Pn**	15 01 24.0	+0.3
	baz=297						
NCUH				*e*S	**Sn**	15 01 38.5	+0.1
	baz=297						
NJD	**Zhudong**	**1.06**	**283**	*e*P	**Pn**	15 01 24.8	+1.0
	baz=283						
NJD				*e*S	**Sn**	15 01 37.8	-0.7
	baz=283						
OWD	**Renai**	**1.10**	**241**	*e*P	**Pb**	15 01 24.3	+0.2
	baz=238						
OWD				*e*S	**Sn**	15 01 39.3	-0.4
	baz=238						
EGFH	**Guangfu**	**1.10**	**221**	*e*P	**Pn**	15 01 25.0	+0.6
	baz=218						
EGFH				*e*S	**Sn**	15 01 40.5	+0.9
	baz=218						
LIOB	**Emei**	**1.11**	**278**	*e*P	**Pn**	15 01 25.1	+0.6
	baz=277						
LIOB				*e*S	**Sn**	15 01 39.2	-0.6
	baz=277						
NSTT	**Nanjuang**	**1.12**	**277**	*e*P	**Pn**	15 01 24.9	+0.3
	baz=276						
NSTT				*e*S	**Sn**	15 01 40.1	+0.1
	baz=276						
HSN1	**Hsinchu**	**1.13**	**284**	*e*P	**Pn**	15 01 25.4	+0.7
	baz=284						
HSN1				*e*S	**Sn**	15 01 40.0	-0.3
	baz=284						
PCYT	**Pengchaiyu**	**1.13**	**353**	*e*P	**Pg**	15 01 24.2	-0.6
	baz=356						
SBCB	**Hsinchu**	**1.16**	**285**	*e*P	**Pn**	15 01 25.5	+0.3
	baz=285						
SBCB				*e*S	**Sn**	15 01 40.7	-0.4
	baz=285						
NHW	**Xinwu Township**	**1.18**	**296**	*e*P	**Pn**	15 01 25.9	+0.4
	baz=296						
NHW				*e*S	**Sn**	15 01 41.1	-0.5
	baz=296						
WHP	**Taichung City**	**1.18**	**259**	*e*P	**Pn**	15 01 26.3	+0.7
	baz=258						
WHP				*e*S	**Sn**	15 01 41.5	-0.3
	baz=258						
VWDT	**VWDT**	**1.23**	**233**	*e*P	**Pn**	15 01 27.1	+0.8
	baz=230						
VWDT				*e*S	**Sn**	15 01 43.4	+0.5
	baz=230						
HGSD	**Ruisui**	**1.24**	**216**	*e*P	**Pg**	15 01 26.1	-0.7
	baz=213						
HGSD				*e*S	**Sn**	15 01 45.2	+2.1
	baz=213						
NJN	**Zhunan**	**1.24**	**279**	*e*S	**Sn**	15 01 43.3	+0.2
	baz=278						
WPL	**Puli Township**	**1.25**	**247**	*e*P	**Pn**	15 01 26.7	+0.3
	baz=245						
WPL				*e*S	**Sn**	15 01 43.6	+0.2
	baz=245						
DPDB	**Guoxing**	**1.27**	**249**	*e*P	**Pn**	15 01 27.6	+0.8
	baz=247						
DPDB				*e*S	**Sb**	15 01 43.3	0.0
	baz=247						
NMLH	**Miaoli**	**1.30**	**272**	*e*P	**Pn**	15 01 28.3	+1.1
	baz=271						
NMLH				*e*S	**Sn**	15 01 45.9	+1.2
	baz=271						
TWQ1	**Liyutan**	**1.33**	**264**	*e*P	**Pn**	15 01 29.0	+1.5
	baz=262						
TWQ1				*e*S	**Sn**	15 01 45.9	+0.7
	baz=262						
NSY	**Sanyi**	**1.33**	**267**	*e*P	**Pg**	15 01 27.8	-0.8
	baz=265						
NSY				*e*S	**Sn**	15 01 46.0	+0.7
	baz=265						
SMLT	**Sun Moon Lake**	**1.35**	**243**	*e*P	**Pb**	15 01 28.9	+0.5
	baz=241						
SMLT				*e*S	**Sn**	15 01 47.2	+1.2
	baz=241						
SSLB	**Suanglung**	**1.36**	**239**	*e*P	**Pb**	15 01 28.8	+0.4
	baz=236						
SSLB				*e*S	**Sn**	15 01 47.0	+1.0
	baz=236						
TYC	**Yuchr**	**1.38**	**245**	*e*P	**Pg**	15 01 29.1	-0.4
	baz=242						
TYC				*e*S	**Sn**	15 01 47.4	+1.0
	baz=242						
IRIF	**Iriomote-Funau**	**1.39**	**96**	P	**Pn**	15 01 26.7	-1.6
IRIF				*e*S	**Sb**	15 01 44.1	-2.6
YULB	**Yu-li**	**1.39**	**218**	*e*P	**Pn**	15 01 28.1	-0.3
	baz=215						
YULB				*e*S	**Sn**	15 01 47.8	+1.0
	baz=215						
EYUL	**Yuli**	**1.41**	**216**	*e*P	**Pg**	15 01 30.5	+0.4
	baz=213						
EYUL				*e*S	**Sn**	15 01 49.7	+2.3
	baz=213						
TWF1	**Yuli**	**1.42**	**217**	*e*P	**Pn**	15 01 28.3	-0.5
	baz=213						
TWF1				*e*S	**Sg**	15 01 48.0	-0.8
	baz=213						
WDJ	**Dajia District**	**1.45**	**264**	*e*S	**Sn**	15 01 48.6	+0.4
	baz=263						
TCU	**Taichung**	**1.45**	**256**	*e*P	**Pn**	15 01 29.4	+0.2
	baz=255						
TCU				*e*S	**Sn**	15 01 49.3	+1.0
	baz=255						
WHYT	**Xinyi Township**	**1.48**	**238**	*e*P	**Pg**	15 01 31.4	0.0
	baz=235						
WHYT				*e*S	**Sg**	15 01 50.5	-0.2
	baz=235						
HATJ	**Hateruma jima**	**1.51**	**107**	*e*S	**Sn**	15 01 47.9	-1.9
WJS	**Zhushan**	**1.52**	**244**	*e*P	**Pg**	15 01 32.9	+0.7
	baz=242						
WJS				*e*S	**Sg**	15 01 51.8	-0.1
	baz=242						
WNT	**Mingjian**	**1.53**	**247**	*e*P	**Pg**	15 01 32.7	+0.3
	baz=244						
WNT				*e*S	**Sg**	15 01 51.3	-1.0
	baz=244						
FULB	**Fuli**	**1.55**	**213**	*e*P	**Pb**	15 01 31.8	+0.1
	baz=211						
FULB				*e*S	**Sg**	15 01 52.4	-0.4
	baz=211						
ALS	**Alishan**	**1.63**	**233**	*e*P	**Pb**	15 01 33.2	-0.1
	baz=230						
ALS				*e*S	**Sn**	15 01 53.4	+0.4
	baz=230						
JKRS	**Kuro-shima**	**1.65**	**99**	P	**Pn**	15 01 31.2	-0.8
JKRS				S	**Sn**	15 01 52.2	-1.0
CHN5	**Tsauling**	**1.67**	**238**	*e*P	**Pg**	15 01 34.3	-0.7
	baz=236						
CHN5				*e*S	**Sb**	15 01 55.0	+0.1
	baz=236						
ELDTW	**Lidau**	**1.71**	**220**	*e*P	**Pn**	15 01 33.1	+0.2
	baz=218						
ELDTW				*e*S	**Sn**	15 01 55.4	+0.6
	baz=218						
WDLH	**Douliu**	**1.74**	**243**	*e*P	**Pb**	15 01 34.5	-0.4
	baz=241						
JIJ	**Ishigaki jima**	**1.76**	**94**	P	**Pn**	15 01 32.9	-0.5
WTK	**Tuku**	**1.86**	**245**	*e*P	**Pb**	15 01 36.2	-0.8
	baz=243						
WTK				*e*S	**Sb**	15 02 00.2	0.0
	baz=243						
STYH	**Taoyuan**	**1.87**	**225**	*e*P	**Pn**	15 01 35.3	+0.3
	baz=223						
STYH				*e*S	**Sn**	15 01 59.8	+1.2
	baz=223						
LONT	**Longtian**	**1.88**	**212**	*e*P	**Pn**	15 01 35.8	+0.7
	baz=210						
LONT				*e*S	**Sn**	15 01 58.7	0.0
	baz=210						
WTCT	**Ta-ch'eng**	**1.88**	**251**	*e*P	**Pn**	15 01 35.6	+0.5
	baz=249						
TPUB	**Ta-pu**	**1.88**	**231**	*e*P	**Pn**	15 01 36.2	+1.0
	baz=229						
TPUB				*e*S	**Sn**	15 01 59.6	+0.6
	baz=229						
STYT	**Tauyuan**	**1.89**	**225**	*e*P	**Pb**	15 01 37.1	-0.5
	baz=223						
STYT				*e*S	**Sn**	15 02 00.1	+0.9
	baz=223						
JISG	**Ishigakijimahi**	**1.91**	**87**	P	**Pn**	15 01 34.3	-1.2
WTP	**Ta-pu**	**1.93**	**230**	*e*P	**Pb**	15 01 37.5	-0.8
	baz=228						
WTP				*e*S	**Sb**	15 02 01.8	-0.6
	baz=228						
LDUT	**Ludao**	**1.94**	**201**	*e*P	**Pn**	15 01 37.3	+1.3
	baz=198						
CHN1	**Nanshi**	**2.03**	**230**	*e*P	**Pn**	15 01 38.2	+1.0
	baz=228						
CHN1				*e*S	**Sb**	15 02 05.0	-0.2
	baz=228						
SGST	**Jiashian**	**2.06**	**227**	*e*P	**Pn**	15 01 37.6	0.0
	baz=225						
SGST				*e*S	**Sn**	15 02 04.3	+1.0
	baz=225						
SLGT	**Liugui**	**2.08**	**224**	*e*P	**Pb**	15 01 40.0	-0.8
	baz=222						
SLGT				*e*S	**Sn**	15 02 04.5	+0.7
	baz=222						
SCST	**Cishan**	**2.25**	**225**	*e*P	**Pn**	15 01 41.8	+1.6
	baz=223						
SCST				*e*S	**Sb**	15 02 10.2	-1.5
	baz=223						
SSD	**Sandimen**	**2.27**	**220**	*e*P	**Pn**	15 01 40.7	+0.2
	baz=218						
SSD				*e*S	**Sn**	15 02 09.3	+0.7
	baz=218						
TSMG	**Majia**	**2.30**	**219**	*e*P	**Pn**	15 01 42.0	+1.2
	baz=217						
TSMG				*e*S	**Sn**	15 02 10.6	+1.4
	baz=217						
MASBT	**Mashibuluo**	**2.38**	**218**	*e*P	**Pn**	15 01 42.0	+0.1
	baz=216						
MASBT				*e*S	**Sn**	15 02 11.4	+0.3
	baz=216						
VWUC	**VWUC**	**2.57**	**282**	*e*P	**Pn**	15 01 44.4	-0.1
	baz=281						
VWUC				*e*S	**Sn**	15 02 15.1	-0.7
	baz=281						
MATB	**Ma-tsu**	**2.63**	**309**	*e*P	**Pn**	15 01 44.8	-0.7
	baz=309						
MATB				*e*S	**Sn**	15 02 19.9	+2.4
	baz=309						
PTMZ	**Houxiangcun**	**2.87**	**281**	*e*P	**Pn**	15 01 48.6	-0.1
	baz=280						
PTM

smi:scs/0.6/alpes_taup-2.11 preliminary
IDC ***24*** *15:02:50.9±0.7, 44.20N×12.07E, h0km, mb4.1/11, mb1 4.1/20, mb1mx3.9/59, mbtmp3.9/20, ML3.6/6, Error ellipse: s-maj=15.2km s-min=12.0km az=96.0*
NEIC ***24*** *15:02:53.3±1.8, 44.28N±0.04×11.92E±0.06, h16km±5km, Error ellipse: s-maj=5.9km s-min=5.7km az=75.0*
IASPEI ***24*** *15:02:53.8±1.0, 44.23N±0.02×11.91E±0.02, h21km±1km, mb4.2/14, Error ellipse: s-maj=3.4km s-min=2.5km az=49.2, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
ROM ***24*** *15:02:53.6±0.1, 44.250N±0.004×11.909E±0.005, h22km, ML4.0/90, Error ellipse: s-maj=0.4km s-min=0.1km az=42.0*
PDG ***24*** *15:02:53.4±1.2, 44.29N×12.00E, h23km±1km, ML4.4/14, Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
BGR ***24*** *15:02:53.8±0.4, 44.13N×12.08E, h20km, ML4.4, Error ellipse: s-maj=8.9km s-min=6.7km az=1.0*
PRU ***24*** *15:02:54.0±0.0, 44.41N×12.17E, h0km, M4.5*
LDG ***24*** *15:02:55.9±0.1, 44.22N×11.91E, h21km, Md3.8/2, Ml3.9/40, Error ellipse: s-maj=4.0km s-min=2.4km az=42.0*

ISC 24 15:02:53.5±0.7, 44.23N±0.01×11.89E±0.01, h20km±2km, n542, σ2s02/700, mb4.2/14, 33C-69D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAEN	**Faenza**	**0.06**	**354**	⇑P	**Pg**	**15 02 57.4**	**+0.3**
FAEN				S	**Sg**	**15 03 01.2**	**+1.7**
IMOL	**Imola, Italy**	**0.17**	**321**	P	**Pg**	**15 02 58.9**	**+0.8**
IMOL				S	**Sg**	**15 03 03.6**	**+2.4**
BRIS	**BRISIGHELLA**	**0.28**	**253**	⇑P	**Pg**	**15 02 57.6**	**-2.3**
BRIS				S	**Sg**	**15 03 01.0**	**-3.2**
SFI	**Santa Sofia**	**0.33**	**185**	⇓P	**Pb**	**15 03 00.8**	**+0.2**
SFI				S	**Sb**	**15 03 06.9**	**+1.4**
SFI				AML	AML		
	comp=E,70700μm,0.4s						
SFI				AML	AML		
	comp=E,70700μm,0.4s						
SFI				AML	AML		
	comp=E,72450μm,0.4s						
SFI				AML	AML		
	comp=N,44050μm,1.3s						
SFI				AML	AML		
	comp=E,70700μm,0.4s						
SFI				AML	AML		
	comp=N,39900μm,0.6s						
SFI				AML	AML		
	comp=E,72450μm,0.4s						
SFI				AML	AML		
	comp=E,70700μm,0.4s						
SFI				AML	AML		
	comp=N,44000μm,1.3s						
SFI				AML	AML		
	comp=N,39900μm,0.6s						
MTRZ	**Monterenzio**	**0.34**	**296**	⇓P	**Pb**	**15 03 01.9**	**+1.1**
MTRZ				S	**Sb**	**15 03 07.8**	**+2.0**
MTRZ				AML	AML		
	comp=E,28800μm,0.6s						
MTRZ				AML	AML		
	comp=E,28200μm,0.6s						
MTRZ				AML	AML		
	comp=N,26450μm,0.7s						
MTRZ				AML	AML		
	comp=N,26900μm,0.6s						
MTRZ				AML	AML		
	comp=E,28200μm,0.6s						
MTRZ				AML	AML		
	comp=N,26450μm,0.7s						
MTRZ				AML	AML		
	comp=E,28200μm,0.6s						
MTRZ				AML	AML		
	comp=N,26900μm,0.6s						
MTRZ				AML	AML		
	comp=E,28800μm,0.6s						
CMPO	**Campotto Po**	**0.35**	**351**	P	**Pb**	**15 03 01.3**	**+0.2**
SEI	**Scarperia**	**0.42**	**245**	⇓P	**Pb**	**15 03 02.4**	**+0.1**
SEI				S	**Sb**	**15 03 09.9**	**+1.6**
SEI				AML	AML		
	comp=E,42150μm,0.3s						
SEI				AML	AML		
	comp=N,72850μm,0.3s						
SEI				AML	AML		
	comp=N,72850μm,0.3s						
SEI				AML	AML		
	comp=E,42150μm,0.3s						
BLLA	**Bellaria**	**0.43**	**102**	P	**Pb**	**15 03 02.6**	**+0.2**
BLLA				S	**Sb**	**15 03 09.3**	**+0.9**
BLLA				AML	AML		
	comp=E,34150μm,1.3s						
BLLA				AML	AML		
	comp=N,30100μm,1.4s						
BLLA				AML	AML		
	comp=E,34050μm,1.3s						
BLLA				AML	AML		
	comp=N,30050μm,1.4s						
BLLA				AML	AML		
	comp=E,34100μm,1.3s						
BLLA				AML	AML		
	comp=N,30100μm,1.4s						
BLLA				AML	AML		
	comp=E,34100μm,1.3s						
ASQU	**Asqua**	**0.44**	**189**	⇓P	**Pb**	**15 03 02.7**	**0.0**
ASQU				S	**Sb**	**15 03 09.9**	**+1.1**
ASQU				AML	AML		
	comp=E,31500μm,1.2s						
ASQU				AML	AML		
	comp=N,31550μm,0.9s						
ASQU				AML	AML		
	comp=E,31450μm,1.2s						
ASQU				AML	AML		
	comp=E,31450μm,1.2s						
ASQU				AML	AML		
	comp=N,31550μm,0.9s						
RUFI	**Rufina**	**0.48**	**215**	⇓P	**Pb**	**15 03 03.4**	**+0.2**
RUFI				S	**Sn**	**15 03 11.8**	**-1.1**
RUFI				AML	AML		
	comp=E,14400μm,0.6s						
RUFI				AML	AML		
	comp=N,18200μm,0.7s						
RUFI				AML	AML		
	comp=N,18250μm,0.7s						
RUFI				AML	AML		
	comp=N,18250μm,0.7s						
RUFI				AML	AML		
	comp=E,14400μm,0.6s						
FIU	**Minerbio Fiu**	**0.50**	**325**	AML	AML		
	comp=E,32450μm,1.2s						
FIU				AML	AML		
	comp=E,32450μm,1.2s						
FIU				AML	AML		
	comp=N,21050μm,1.3s						
FIU				AML	AML		
	comp=N,27150μm,0.8s						
FIU				AML	AML		
	comp=E,32450μm,1.2s						
FIU				AML	AML		
	comp=N,27150μm,0.8s						
RSM	**Repubblica di**	**0.51**	**126**	⇓P	**Pb**	**15 03 03.8**	**+0.1**
RSM				S	**Sb**	**15 03 10.6**	**0.0**
RSM				AML	AML		
	comp=E,11700μm,0.8s						
RSM				AML	AML		
	comp=E,12600μm,1.0s						
RSM				AML	AML		
	comp=N,22250μm,0.5s						
CPGN	**Carpegna, Ital**	**0.53**	**144**	⇓P	**Pb**	**15 03 04.6**	**+0.5**
CPGN				S	**Sb**	**15 03 12.8**	**+1.4**
CPGN				AML	AML		
	comp=E,41450μm,0.7s						
CPGN				AML	AML		
	comp=N,39450μm,0.7s						
CPGN				AML	AML		
	comp=E,41500μm,0.8s						
CPGN				AML	AML		
	comp=N,23700μm,1.2s						
CPGN				AML	AML		
	comp=E,30500μm,0.5s						
CPGN				AML	AML		
	comp=N,39500μm,0.7s						
CPGN				AML	AML		
	comp=E,41500μm,0.7s						
CPGN				AML	AML		
	comp=E,30550μm,0.5s						
CPGN				AML	AML		
	comp=N,23650μm,1.2s						
CPGN				AML	AML		
	comp=E,30550μm,0.5s						
CPGN				AML	AML		
	comp=N,39450μm,0.7s						
FNVD	**Fontana Vidola**	**0.55**	**264**	⇓P	**Pg**	**15 03 04.8**	**+0.2**
FNVD				S	**Sn**	**15 03 14.1**	**-0.9**
FNVD				AML	AML		
	comp=E,13350μm,0.7s						
FNVD				AML	AML		
	comp=N,21750μm,0.5s						
PARC	**Parchiule**	**0.64**	**156**	⇓P	**Pg**	**15 03 05.8**	**-0.3**
PARC				S	**Sn**	**15 03 15.7**	**-1.3**
PARC				AML	AML		
	comp=E,16600μm,0.5s						
PARC				AML	AML		
	comp=E,16600μm,0.5s						
PARC				AML	AML		
	comp=N,14650μm,0.6s						
ZCCA	**Zocca**	**0.66**	**281**		**Pn**	**15 03 08.0**	**+0.2**
ZCCA	**Zocca**	**0.66**	**281**	P	**Pg**	**15 03 06.8**	**+0.2**
ZCCA				AML	AML		
	comp=E,4385μm,0.5s						
ZCCA				AML	AML		
	comp=E,4865μm,0.7s						
ZCCA				AML	AML		
	comp=N,5450μm,0.9s						
ZCCA				AML	AML		
	comp=N,5160μm,0.9s						
ZCCA				AML	AML		
	comp=E,5100μm,0.8s						
ZCCA				AML	AML		
	comp=E,5160μm,0.8s						
ZCCA				AML	AML		
	comp=N,5445μm,0.9s						
MTCR	**Monte La Croce**	**0.67**	**253**	⇓P	**Pg**	**15 03 06.8**	**0.0**
MTCR				S	**Sg**	**15 03 16.1**	**+0.3**
MTCR				AML	AML		
	comp=E,8495μm,0.6s						
MTCR				AML	AML		
	comp=N,12350μm,0.6s						
MTCR				AML	AML		
	comp=E,8510μm,0.6s						
SSP9	**Sansepolcro**	**0.68**	**165**	⇓P	**Pg**	**15 03 06.7**	**-0.2**
SSP9				S	**Sg**	**15 03 16.2**	**+0.2**
SSP9				AML	AML		
	comp=N,22600μm,0.5s						
SSP9				AML	AML		
	comp=E,13450μm,0.5s						
SSP9				AML	AML		
	comp=N,22550μm,0.5s						
PE3	**Peglio**	**0.69**	**140**	P	**Pg**	**15 03 06.9**	**-0.3**
PE3				S	**Sn**	**15 03 17.7**	**-0.7**
FERS	**Ferrara-Casagl**	**0.72**	**340**	P	**Pg**	**15 03 08.1**	**+0.5**
FERS				S	**Sg**	**15 03 17.3**	**+0.2**
PESA	**Pesaro**	**0.75**	**113**	P	**Pg**	**15 03 08.1**	**-0.1**
PESA				AML	AML		
	comp=E,26900μm,0.5s						
PESA				AML	AML		
	comp=N,18200μm,0.5s						
PESA				AML	AML		
	comp=N,18200μm,0.5s						
PESA				AML	AML		
	comp=E,26900μm,0.5s						
RAVA	**Ravarino**	**0.76**	**314**	AML	AML		
	comp=E,16650μm,0.9s						
RAVA				AML	AML		
	comp=N,24350μm,0.7s						
RAVA				AML	AML		
	comp=E,16600μm,0.9s						
RAVA				AML	AML		
	comp=E,16600μm,0.9s						
RAVA				AML	AML		
	comp=N,24400μm,0.7s						
BADI	**Badiali**	**0.77**	**160**	⇓P	**Pb**	**15 03 08.1**	**-0.1**
BADI				AML	AML		
	comp=E,17950μm,0.5s						
BADI				AML	AML		
	comp=N,13850μm,0.4s						
BADI				AML	AML		
	comp=E,17950μm,0.5s						
APEC	**Apecchio**	**0.78**	**150**	P	**Pb**	**15 03 08.2**	**-0.1**
APEC				S	**Sg**	**15 03 19.4**	**+0.4**
APEC				AML	AML		
	comp=E,2650μm,0.5s						
APEC				AML	AML		
	comp=E,15100μm,0.9s						
APEC				AML	AML		
	comp=E,2655μm,0.5s						
APEC				AML	AML		
	comp=N,26650μm,0.9s						
APEC				AML	AML		
	comp=N,26650μm,0.9s						
APEC				AML	AML		
	comp=N,5410μm,0.5s						
CRMI	**Carmignano**	**0.80**	**237**	P	**Pn**	**15 03 09.2**	**-0.4**
CRMI				S	**Sn**	**15 03 20.5**	**-0.4**
CRMI				AML	AML		
	comp=E,8510μm,0.6s						
CRMI				AML	AML		
	comp=E,3520μm,0.6s						
CRMI				AML	AML		
	comp=N,10550μm,0.6s						
CRMI				AML	AML		
	comp=N,4380μm,0.6s						
NARO	**Abbazia di Nar**	**0.80**	**141**	P	**Pb**	**15 03 08.5**	**-0.2**
NARO				S	**Sn**	**15 03 20.6**	**-0.3**
NARO				AML	AML		
	comp=E,6965μm,0.7s						
NARO				AML	AML		
	comp=N,8880μm,0.4s						
NARO				AML	AML		
	comp=E,6960μm,0.7s						
POPM	**Popiglio**	**0.83**	**257**	⇓P	**Pg**	**15 03 09.7**	**-0.1**
POPM				S	**Sn**	**15 03 21.4**	**-0.4**
POPM				AML	AML		
	comp=N,9315μm,1.2s						
POPM				AML	AML		
	comp=E,11200μm,0.8s						
FSSB	**Fossombrone**	**0.84**	**130**	P	**Pb**	**15 03 09.5**	**+0.1**
FSSB				AML	AML		
	comp=N,29550μm,1.5s						
FSSB				AML	AML		
	comp=E,21000μm,0.9s						
FSSB				AML	AML		
	comp=N,29550μm,1.5s						
OSSC	**Osservatorio P**	**0.85**	**213**		**Pg**	**15 03 09.8**	**-0.2**
OSSC	**Osservatorio P**	**0.85**	**213**	P	**Pn**	**15 03 10.1**	**-0.2**
OSSC				AML	AML		
	comp=E,11185μm,0.5s						
OSSC				AML	AML		
	comp=N,10970μm,0.5s						
OSSC				AML	AML		
	comp=N,13400μm,0.7s						
OSSC				AML	AML		
	comp=E,11180μm,0.5s						
OSSC				AML	AML		
	comp=E,13300μm,0.6s						
ATPI	**Pietralunga -**	**0.86**	**154**	⇓P	**Pb**	**15 03 09.8**	**0.0**
ATPI				AML	AML		
	comp=E,13650μm,0.7s						
ATPI				AML	AML		
	comp=N,13650μm,0.6s						
CSNT	**Castellina Chi**	**0.87**	**210**	P	**Pg**	**15 03 10.3**	**-0.2**
CSNT				AML	AML		
	comp=E,9600μm,0.9s						
CSNT				AML	AML		
	comp=N,13500μm,0.7s						
CSNT				AML	AML		
	comp=E,9605μm,0.9s						
MPAG	**Monte Paganucc**	**0.87**	**133**	P	**Pb**	**15 03 10.0**	**0.0**
MPAG				AML	AML		
	comp=E,9405μm,0.8s						
MPAG				AML	AML		
	comp=N,12650μm,0.8s						
MPAG				AML	AML		
	comp=E,9315μm,0.8s						
MPAG				AML	AML		
	comp=N,13050μm,0.8s						
MPAG				AML	AML		
	comp=E,9325μm,0.8s						
MPAG				AML	AML		
	comp=E,9415μm,0.8s						
SERM	**Sermide**	**0.89**	**332**	P	**Pg**	**15 03 10.7**	**-0.1**
SERM				S	**Sg**	**15 03 22.8**	**+0.3**
SERM				AML	AML		
	comp=N,19300μm,0.7s						
SERM				AML	AML		
	comp=E,26250μm,1.0s						
CAVE	**Cavezzo**	**0.90**	**315**	AML	AML		
	comp=E,19600μm,1.2s						
CAVE				AML	AML		
	comp=N,15700μm,0.8s						
CAVE				AML	AML		
	comp=N,15700μm,0.8s						
CAFI	**Castiglion Fio**	**0.90**	**176**	⇓P	**Pg**	**15 03 10.7**	**-0.4**
CAFI				AML	AML		
	comp=E,12250μm,0.6s						
CAFI				AML	AML		
	comp=N,10500μm,0.6s						
CAFI				AML	AML		
	comp=E,12500μm,0.6s						
CAFI				AML	AML		
	comp=N,9920μm,0.6s						
ATVO	**AVT- Monte Val**	**0.93**	**156**	⇓P	**Pb**	**15 03 10.9**	**0.0**
ATVO				AML	AML		
	comp=E,18350μm,0.6s						
ATVO				AML	AML		
	comp=N,16250μm,0.5s						
FRON	**Frontone**	**0.94**	**139**	P	**Pb**	**15 03 10.9**	**-0.1**
ATMI	**Monte Miggiano**	**0.94**	**163**	P	**Pg**	**15 03 11.6**	**-0.2**
ATMI				AML	AML		
	comp=N,19150μm,0.6s						
ATMI				AML	AML		
	comp=E,19450μm,0.5s						
ATMI				AML	AML		
	comp=N,19150μm,0.6s						
ATMI				AML	AML		
	comp=E,19450μm,0.5s						
BDI	**Bagni Di Lucca**	**0.94**	**260**	P	**Pb**	**15 03 11.4**	**+0.2**
BDI				AML	AML		
	comp=E,8295μm,0.8s						
BDI				AML	AML		
	comp=E,9025μm,1.1s						
BDI				AML	AML		
	comp=N,8420μm,0.5s						
BDI				AML	AML		
	comp=N,8645μm,0.5s						
ATFO	**Monte Foce - G**	**1.00**	**150**	P	**Pb**	**15 03 12.2**	**+0.1**
ATFO				AML	AML		
	comp=E,9670μm,0.5s						
ATFO				AML	AML		
	comp=N,10600μm,1.0s						
COR1	**Corinaldo**	**1.00**	**126**	AML	AML		
	comp=E,10730μm,1.3s						
COR1				AML	AML		
	comp=N,20100μm,1.6s						
COR1				AML	AML		
	comp=N,20100μm,1.6s						
COR1				AML	AML		
	comp=E,19950μm,1.3s						
COR1				AML	AML		
	comp=N,19050μm,1.6s						
NOVE	**Novellara**	**1.01**	**305**	P	**Pn**	**15 03 12.5**	**0.0**
NOVE				AML	AML		
	comp=E,9095μm,0.7s						
NOVE				AML	AML		
	comp=N,12700μm,1.2s						
SSFR	**Montelago di S**	**1.03**	**140**	P	**Pn**	**15 03 12.6**	**-0.2**
SSFR				AML	AML		
	comp=N,23300μm,0.3s						
SSFR				AML	AML		
	comp=E,14650μm,0.2s						
SSFR				AML	AML		
	comp=N,23050μm,0.4s						
SSFR				AML	AML		
	comp=E,18900μm,1.6s						
SSFR				AML	AML		
	comp=N,23050μm,0.4s						
SSFR				AML	AML		
	comp=N,23300μm,0.3s						
CARD	**Cardoso**	**1.03**	**259**	P	**Pg**	**15 03 13.8**	**+0.3**
CARD	**Cardoso**	**1.03**	**259**	P	**Pg**	**15 03 13.5**	**0.0**
CARD				AML	AML		
	comp=E,3205μm,0.5s						
CARD				AML	AML		
	comp=N,4670μm,0.7s						
MAIM	**Mastiano**	**1.05**	**253**	P	**Pg**	**15 03 13.7**	**-0.2**
MAIM	**Mastiano**	**1.05**	**253**	P	**Pg**	**15 03 13.4**	**-0.5**
MAIM				AML	AML		
	comp=N,2665μm,0.7s						
MAIM				AML	AML		
	comp=E,2350μm,0.8s						
ARVD	**Arcevia**	**1.06**	**133**	P	**Pg**	**15 03 13.7**	**-0.4**
ARVD				AML	AML		
	comp=E,5725μm,0.6s						
ARVD				AML	AML		
	comp=N,5240μm,0.3s						
SARO	**Sassorosso**	**1.07**	**268**	P	**Pg**	**15 03 14.7**	**+0.4**
SARO	**Sassorosso**	**1.07**	**268**	P	**Pg**	**15 03 13.9**	**-0.4**
SARO				AML	AML		
	comp=N,2715μm,0.6s						
SARO				AML	AML		
	comp=E,2060μm,0.6s						
MURB	**Monte Urbino**	**1.07**	**154**		**Pg**	**15 03 13.8**	**-0.5**
MURB	**Monte Urbino**	**1.07**	**154**	P	**Pn**	**15 03 13.6**	**+0.1**
MURB				AML	AML		
	comp=N,17700μm,0.3s						
MURB				AML	AML		
	comp=N,18050μm,0.3s						
MURB				AML	AML		
	comp=E,22550μm,1.3s						
MURB				AML	AML		
	comp=N,18050μm,0.3s						
MURB				AML	AML		
	comp=N,17700μm,0.3s						
MURB				AML	AML		
	comp=E,25250μm,1.3s						
ERBM	**Eremo**	**1.07**	**281**	P	**Pg**	**15 03 14.4**	**+0.1**
ERBM				S	**Sg**	**15 03 28.7**	**+0.2**
ERBM				AML	AML		
	comp=E,4350μm,1.0s						
ERBM				AML	AML		
	comp=N,4640μm,1.2s						
VLC	**Villacollemand**	**1.08**	**267**		**Pg**	**15 03 14.3**	**-0.1**
VLC	**Villacollemand**	**1.08**	**267**	P	**Pg**	**15 03 14.4**	**-0.1**
VLC				AML	AML		
	comp=N,3790μm,0.9s						
VLC				AML	AML		
	comp=E,4695μm,0.9s						
VLC				AML	AML		
	comp=N,3730μm,0.9s						
VLC				AML	AML		
	comp=E,4895μm,0.9s						
ATTE	**AVT- Monte Tez**	**1.09**	**162**	P	**Pn**	**15 03 13.7**	**0.0**
ATTE				AML	AML		
	comp=N,6995μm,1.0s						
ATTE				AML	AML		
	comp=E,9245μm,0.5s						
PII	**Pisa**	**1.11**	**243**	P	**Pb**	**15 03 14.1**	**+0.2**
PII				AML	AML		
	comp=E,8045μm,1.0s						
PII				AML	AML		
	comp=N,7215μm,0.4s						
TEOL	**Teolo**	**1.14**	**352**	*e*Pg	**Pn**	**15 03 14.0**	**-0.3**
TEOL				*e*Sg	**Sn**	**15 03 29.7**	**+0.3**
TEOL	**Teolo**	**1.14**	**352**		**Pn**	**15 03 13.8**	**-0.6**
TEOL	**Teolo**	**1.14**	**352**	P	**Pn**	**15 03 14.1**	**-0.3**
TEOL				S	**Sb**	**15 03 29.0**	**+0.1**
TEOL				AML	AML		
	comp=N,23150μm,0.9s						
TEOL				AML	AML		
	comp=E,33250μm,1.0s						
TEOL				AML	AML		
	comp=N,23150μm,0.9s						
FROS	**Frosini**	**1.15**	**208**	P	**Pg**	**15 03 15.1**	**-0.7**
FROS				AML	AML		
	comp=E,6470μm,1.6s						
FROS				AML	AML		
	comp=N,6470μm,0.8s						
ATCC	**AVT- Casa Cast**	**1.18**	**152**	⇑P	**Pg**	**15 03 15.9**	**-0.4**
ATCC				AML	AML		
	comp=E,12500μm,0.5s						
ATCC				AML	AML		
	comp=N,8255μm,1.1s						
OPPE	**Oppeano**	**1.19**	**335**	P	**Pb**	**15 03 15.7**	**+0.3**
VENL	**Venezia Lido**	**1.24**	**16**	P	**Pn**	**15 03 15.8**	**+0.1**
SNTG	**Esanatoglia**	**1.24**	**142**	P	**Pb**	**15 03 16.2**	**-0.1**
SNTG				AML	AML		
	comp=N,890μm,1.3s						
SNTG				AML	AML		
	comp=N,7455μm,0.8s						

SNTG AML AML
comp=E,814µm,0.5s
SNTG AML AML
comp=E,6525µm,0.5s
PRMA PARMA 1.25 296 Pb 15 03 16.2 0.0
EQUI Equi 1.25 268 P **Pg 15 03 17.8 +0.2**
EQUI Equi 1.25 268 P **Pg 15 03 17.1 -0.5**
EQUI AML AML
comp=N,3600µm,1.0s
EQUI AML AML
comp=E,2340µm,1.1s
ZOVE Zovencedo 1.25 347 P **Pn 15 03 15.7 -0.2**
ZOVE AML AML
comp=E,9670µm,0.6s
ZOVE AML AML
comp=N,13600µm,0.9s
EL6 Elcito 1.26 135 ⇓P **Pb 15 03 17.1 +0.5**
EL6 AML AML
comp=E,10070µm,1.4s
EL6 AML AML
comp=N,10335µm,0.8s
ASSB Assisi San Ben 1.31 154 P **Pb 15 03 17.6 +0.1**
ASSB AML AML
comp=E,4425µm,0.6s
ASSB AML AML
comp=N,5260µm,0.5s
TRIF Trifonti 1.32 213 P **Pb 15 03 17.3 -0.4**
TRIF AML AML
comp=E,2465µm,1.0s
TRIF AML AML
comp=N,2260µm,0.6s
MGAB Montegabbione 1.33 173 P **Pb 15 03 17.7 0.0**
MGAB AML AML
comp=E,7675µm,0.5s
MGAB AML AML
comp=N,8685µm,0.6s
MGAB AML AML
comp=N,8690µm,0.6s
MGAB AML AML
comp=E,9020µm,0.6s
GRAM Graiana 1.33 282 P **Pg 15 03 19.9 +0.6**
GRAM Graiana 1.33 282 P **Pg 15 03 18.7 -0.5**
GRAM AML AML
comp=E,3975µm,1.3s
GRAM AML AML
comp=N,4685µm,1.0s
IESO Jesolo 1.37 20 *e*Pg **Pn 15 03 17.0 -0.5**
SACS San Casciano d 1.38 179 P **Pb 15 03 18.3 -0.4**
SACS AML AML
comp=E,4725µm,1.0s
SACS AML AML
comp=N,4935µm,0.8s
SACS AML AML
comp=E,4630µm,0.9s
SACS AML AML
comp=N,4890µm,0.9s
TREG Tregnago 1.39 338 P **Pn 15 03 17.7 -0.1**
TREG AML AML
comp=N,10215µm,0.8s
TREG AML AML
comp=E,9885µm,0.4s
ARCI Arcidosso 1.41 192 P **Pn 15 03 18.4 +0.3**
ARCI AML AML
comp=E,2825µm,1.0s
ARCI AML AML
comp=N,4585µm,0.9s
AOI Ancona 1.42 118 P **Pb 15 03 19.2 0.0**
AOI AML AML
comp=N,3695µm,1.1s
AOI AML AML
comp=E,2330µm,0.4s
CESI CESI - Serrava 1.43 149 P **Pb 15 03 19.5 0.0**
CESI AML AML
comp=N,2820µm,0.8s
CESI AML AML
comp=E,814µm,1.1s
MCIV Monte Civitell 1.46 186 P **Pb 15 03 19.9 -0.1**
MCIV AML AML
comp=E,1750µm,1.1s
MCIV AML AML
comp=N,1975µm,0.7s
PLMA Palmaria, Port 1.48 264 P **Pb 15 03 19.8 -0.4**
PLMA AML AML
comp=E,1730µm,0.6s
PLMA AML AML
comp=N,1960µm,1.2s
FDMO Fiordimonte 1.48 143 P **Pb 15 03 20.3 0.0**
FDMO AML AML
comp=E,3475µm,0.8s
FDMO AML AML
comp=N,4115µm,0.4s
MARN Marana (Italy) 1.49 341 *e*Pg **Pn 15 03 19.0 -0.1**
MARN *e*Sg **Sb 15 03 38.9 0.0**
CSP1 Cessapalombo 1.49 140 P **Pb 15 03 20.5 0.0**
CSP1 AML AML
comp=E,8190µm,0.5s
CSP1 AML AML
comp=N,12050µm,0.6s
BRJN Brijuni 1.49 63 *i* Pn **Pn 15 03 18.6 -0.6**
BRJN Sg **Sn 15 03 37.5 -0.6**
MOMA Monte Martano 1.51 161 P **Pb 15 03 20.8 -0.1**
MOMA AML AML
comp=N,3130µm,0.9s
MOMA AML AML
comp=N,3220µm,0.5s
MOMA AML AML
comp=E,4165µm,0.9s
MOMA AML AML
comp=E,3935µm,0.9s
PP3 Marolino 1.51 124 P **Pb 15 03 21.1 +0.3**
PP3 AML AML
comp=N,7120µm,0.6s
PP3 AML AML
comp=E,7925µm,1.0s
PP3 AML AML
comp=N,7605µm,0.6s
PP3 AML AML
comp=E,8120µm,1.0s
ROVR Rover Verones 1.53 338 P **Pn 15 03 19.6 -0.2**
ROVR AML AML
comp=E,5285µm,0.4s
ROVR AML AML
comp=N,3610µm,0.2s
ROVR AML AML
comp=E,2025µm,0.4s
ROVR AML AML
comp=N,8855µm,0.2s
ASOL Asolo 1.57 0 P **Pn 15 03 20.1 -0.1**
MTLO Montello 1.59 5 *e*Pg **Pn 15 03 20.1 -0.4**
CASP Castiglione de 1.62 208 Pn **Pn 15 03 21.1 +0.2**
CASP Castiglione de 1.62 208 P **Pn 15 03 21.0 +0.1**
CASP S **Sb 15 03 42.9 +0.2**
CASP AML AML
comp=N,3640µm,0.8s
CASP AML AML
comp=E,2065µm,0.6s
BALD Monte Baldo 1.64 333 *e*Pg **Pn 15 03 21.5 +0.1**
ED06 Collalto TV 1.64 8 *e*Pg **Pn 15 03 20.6 -0.6**
CGRP Cima Grappa 1.65 358 *e*Pg **Pn 15 03 20.9 -0.7**
CGRP *e*Sg **Sn 15 03 41.9 -0.4**
GROG Isola di Gorgo 1.65 242 P **Pb 15 03 22.2 -1.0**
GROG AML AML
comp=N,1400µm,0.7s
GROG AML AML
comp=E,1470µm,0.6s
NRCA Norcia 1.66 147 Pb 15 03 23.5 +0.1
NRCA Norcia 1.66 147 AML AML
comp=E,2905µm,0.5s
NRCA AML AML
comp=N,2115µm,1.6s
SALO Salr 1.69 326 Pn **Pn 15 03 22.5 +0.6**
SALO Salr 1.69 326 P **Pn 15 03 22.6 +0.6**
SALO AML AML
comp=N,5575µm,1.1s
SALO AML AML
comp=E,18400µm,0.9s
SALO AML AML
comp=N,13450µm,1.1s
SALO AML AML
comp=E,6695µm,0.9s
SALO AML AML
comp=E,18400µm,0.9s
CESX Cesi 1.70 162 P **Pb 15 03 23.5 -0.5**
CESX AML AML
comp=N,3640µm,0.5s
CESX AML AML
comp=E,4085µm,0.5s
GARGN Gargnano BS 1.70 330 *e*Pg **Pn 15 03 22.4 +0.4**
MSSA Maissana 1.70 274 Pb 15 03 23.7 -0.5
MSSA Maissana 1.70 274 P **Pb 15 03 24.8 +0.6**
MSSA AML AML
comp=E,1720µm,0.8s
MSSA AML AML
comp=N,2510µm,0.8s
VOBA Vobarno 1.72 326 AML AML
comp=N,3485µm,0.9s
VOBA AML AML
comp=E,2995µm,0.9s
DOSS Dosso del Somm 1.72 344 *e*Pg **Pn 15 03 22.4 -0.1**
ARRO Arrone 1.77 158 AML AML
comp=N,2265µm,0.7s
ARRO AML AML
comp=E,2135µm,1.1s
MAGA Magasa 1.78 330 P **Pn 15 03 23.3 0.0**
MAGA AML AML
comp=N,10950µm,0.4s
MAGA AML AML
comp=E,13050µm,0.5s
CAE Caneva 1.82 12 *e*Pg **Pn 15 03 22.9 -0.9**
CTI Castel Tesino 1.82 355 Pn **Pn 15 03 23.4 -0.5**
CTI Castel Tesino 1.82 355 AML AML
comp=N,4260µm,0.3s
CTI AML AML
comp=E,4880µm,1.2s
LNSS Leonessa 1.83 152 AML AML
comp=N,3125µm,0.6s
LNSS AML AML
comp=E,3560µm,0.7s
OFFI Offida 1.84 134 AML AML
comp=N,11100µm,0.6s
OFFI AML AML
comp=E,8580µm,1.5s
POLC Polcenigo 1.85 13 AML AML
comp=N,10205µm,0.5s
POLC AML AML
comp=E,9930µm,0.8s
PANI Panarotta 1.86 348 *e*Pg **Pn 15 03 24.4 -0.1**
GUMA Gualdo di Mace 1.89 127 P **Pn 15 03 22.2 -2.4**
GUMA AML AML
comp=E,21650µm,0.6s
GUMA AML AML
comp=N,17050µm,0.4s
GUMA AML AML
comp=E,21650µm,0.6s
GUMA AML AML
comp=N,15600µm,1.4s
GUMA AML AML
comp=E,19000µm,0.5s
GUMA AML AML
comp=N,17050µm,0.4s
GORR Gorreto 1.90 282 P **Pb 15 03 27.8 +0.3**
GORR Gorreto 1.90 282 AML AML
comp=E,2725µm,0.9s
GORR AML AML
comp=N,2425µm,0.8s
TLI Talmassons 1.90 27 *e*Pg **Pn 15 03 24.0 -0.7**
SMA1 SAN MARTINO 1.92 146 AML AML
comp=E,3815µm,0.8s
SMA1 AML AML
comp=N,4565µm,0.7s
RM33 Pellescritta (1.98 150 AML AML
comp=N,2360µm,0.4s
RM33 AML AML
comp=E,2575µm,0.5s
MLNI Malnisio 1.99 15 *e*Pg **Pn 15 03 25.1 -0.9**
TRI Trieste 1.99 41 Pn **Pn 15 03 24.6 -1.4**
SKDS Skadanscina 2.00 48 *i* Pn **Pn 15 03 25.0 -1.3**
TERO Teramo 2.04 142 AML AML
comp=N,2080µm,1.6s
TERO AML AML
comp=N,856µm,1.6s
TERO AML AML
comp=E,3210µm,0.7s
TERO AML AML
comp=E,1320µm,0.5s
SRES S.Oreste - Sor 2.04 167 AML AML
comp=N,1044µm,0.6s
SRES AML AML
comp=E,759µm,0.5s
MABI Malga Bissina 2.07 332 AML AML
comp=N,883µm,1.6s
MABI AML AML
comp=E,864µm,0.9s
STAL STALIGIAL 2.11 16 Pn **Pn 15 03 26.7 -1.1**
STAL STALIGIAL 2.11 16 P **Pn 15 03 26.6 -1.1**
STAL AML AML
comp=N,3520µm,0.2s
STAL AML AML
comp=E,3840µm,0.7s
STAL AML AML
comp=E,3830µm,0.7s
STAL AML AML
comp=N,3580µm,1.3s
SABO M.te Sabotino 2.13 34 P **Pn 15 03 27.4 -0.6**
SABO AML AML
comp=E,3925µm,0.8s
SABO AML AML
comp=N,7070µm,0.6s
RIY Rijeka 2.15 58 *e*Pn **Pn 15 03 27.9 -0.2**
RIY Sn **Sn 15 03 51.9 -2.4**
FIAM Fiamignano 2.16 155 AML AML
comp=N,1640µm,0.7s
FIAM AML AML
comp=E,2475µm,0.6s
GIGS Gran Sasso 2.16 145 AML AML
comp=N,124µm,0.6s
GIGS AML AML
comp=E,156µm,0.8s
TOLF Tolfa 2.17 178 AML AML
comp=E,660µm,0.7s
TOLF AML AML
comp=N,595µm,0.7s
AQU L'Aquila 2.18 149 *e*Pn **Pb 15 03 31.5 -0.7**
AQU L'Aquila 2.18 149 Pb 15 03 31.0 -1.2
MDI Monti di Nese 2.18 316 P **Pn 15 03 28.5 -0.3**
MDI AML AML
comp=E,1460µm,1.3s
MDI AML AML
comp=N,1400µm,1.6s
MDI AML AML
comp=E,1485µm,1.3s
MDI AML AML
comp=N,1535µm,1.6s
KNDS Knezji Dol 2.20 53 *i* Pn **Pn 15 03 28.0 -1.0**
KNDS IAML 15 04 15.7
comp=Z,809nm,0.5s
VINO Villanova 2.25 25 P **Pn 15 03 28.8 -0.8**
VINO AML AML
comp=N,1650µm,0.9s
VINO AML AML
comp=E,1720µm,0.5s
JAVS Javornik 2.27 42 *i* Pn **Pn 15 03 28.8 -1.2**
JAVS IAML 15 04 09.3
comp=Z,575nm,0.4s
VOJS Vojsko 2.29 37 *i* Pn **Pn 15 03 29.1 -1.1**
VOJS IAML 15 04 10.5
comp=Z,859nm,0.6s
APPI Appiano 2.29 349 AML AML
comp=N,2280µm,0.7s
APPI AML AML
comp=E,2145µm,0.9s
MTCE Montecelio 2.29 164 AML AML
comp=N,710µm,0.5s
MTCE AML AML
comp=E,974µm,0.6s
DUGI Dugi Otok 2.30 95 *e*Pn **Pn 15 03 30.3 +0.1**
DUGI Sn **Sn 15 03 56.5 -1.4**
FAGN Fagnano 2.32 147 AML AML
comp=E,3970µm,0.5s
FAGN AML AML
comp=N,3215µm,0.5s
VCEL Villa Celiera 2.33 141 AML AML
comp=E,2740µm,0.5s
VCEL AML AML
comp=N,2630µm,1.6s
CEY Cerknica 2.35 49 *e*Pn **Pn 15 03 29.8 -1.2**
CADS Cadrg 2.39 33 *i* Pn **Pn 15 03 30.6 -0.9**
CADS IAML 15 04 26.4
comp=Z,808nm,0.5s
PTCC Patocco-Chiusa 2.41 25 AML AML
comp=N,1310µm,1.2s
PTCC AML AML
comp=E,1475µm,0.8s
PCP Piancastagn 2.42 279 AML AML
comp=N,488µm,1.2s
PCP AML AML
comp=E,540µm,0.9s
CERT Cerreto 2.42 160 AML AML
comp=E,1450µm,0.5s
CERT AML AML
comp=N,716µm,1.5s
T0110 Collepietro 2.44 145 AML AML
comp=N,1935µm,0.6s
T0110 AML AML
comp=E,2535µm,1.3s
FVI Forni Avoltri 2.45 15 AML AML
comp=N,2150µm,1.1s
FVI AML AML
comp=E,1495µm,0.8s
ZOU Zoufplan 2.45 18 Pn **Pn 15 03 32.0 -0.5**
GBRS Gornja Briga 2.45 57 *i* Pn **Pn 15 03 31.9 -0.5**
PTQR Pietraquaria 2.47 153 AML AML
comp=N,704µm,1.4s
PTQR AML AML
comp=E,590µm,0.8s
BRMO Bormio 2.48 335 AML AML
comp=N,1002µm,0.9s
BRMO AML AML
comp=E,824µm,0.8s
GBAS Gorenja Brezov 2.49 46 *i* Pn **Pn 15 03 31.9 -1.0**
GBAS IAML 15 04 13.4
comp=Z,404nm,0.5s
CRNS Crni Vrh 2.50 41 *i* Pn **Pn 15 03 32.2 -0.8**
CRNS IAML 15 04 20.8
comp=Z,650nm,0.5s
ABSI Aberstueckl 2.53 351 AML AML
comp=N,3105µm,1.0s
ABSI AML AML
comp=E,3615µm,1.1s
ABTA Abfaltersbach 2.56 10 Pn **Pn 15 03 34.1 +0.2**
comp=E,87nm,0.4s,SNR=103
ABTA *e*Sn **Sn 15 04 05.2 +0.7**
comp=E,671nm,0.8s
ABTA Abfaltersbach 2.56 10 Pn 15 03 34.1 +0.2
ABTA **Sn 15 04 05.2 +0.7**
GORS Gorjuse 2.56 35 *i* Pn **Pn 15 03 33.1 -0.9**
GORS IAML 15 04 21.4
comp=Z,390nm,0.3s
MOSI Grossmontoni 2.56 339 AML AML
comp=E,3075µm,1.4s
MOSI AML AML
comp=N,4035µm,0.8s
ACOM Acomizza, Ital 2.58 26 AML AML
comp=E,2410µm,1.0s
ACOM AML AML
comp=N,2125µm,0.6s
LJU Ljubljana 2.60 45 *i* Pn **Pn 15 03 34.1 -0.4**
LJU *e*Sn **Sn 15 04 05.4 -0.1**
VISS Visnje 2.62 52 *i* Pn **Pn 15 03 34.2 -0.5**
VISS IAML 15 04 22.8
comp=Z,403nm,0.4s
MUGIO Muggio 2.63 311 AML AML
comp=N,694µm,0.7s
MUGIO AML AML
comp=E,615µm,0.6s
INTR Introdacqua 2.67 146 Pn **Pn 15 03 37.1 +1.8**
VVLD Villa Vallelon 2.68 151 AML AML
comp=E,267µm,0.7s
VVLD AML AML
comp=N,282µm,0.8s
PGF Pioggiola 2.69 232 *e*Pn **Pn 15 03 36.9 +1.1**
PGF Pioggiola 2.69 232 *e*Pg **Pg 15 03 44.3 -0.8**
PGF *e*Sn **Sn 15 04 08.9 +1.0**
comp=N,198nm,0.5s
PGF Pioggiola 2.69 232 AML AML
comp=E,770µm,0.6s
PGF AML AML
comp=N,574µm,0.6s
MYKA Terra Mystica 2.70 27 Pn **Pn 15 03 35.7 -0.1**
comp=N,26nm,0.4s,SNR=18
MYKA *e*Sn **Sn 15 04 09.3 +1.3**
comp=N,250nm,0.6s
MYKA Terra Mystica 2.70 27 Pn 15 03 35.7 -0.1
MYKA **Sn 15 04 09.3 +1.3**
BOJS Bojanci 2.71 61 *i* Pn **Pn 15 03 35.6 -0.3**
ROSI Rosskopf 2.72 353 AML AML
comp=E,3510µm,1.1s
ROSI AML AML
comp=N,3240µm,1.5s
RISI Rein 2.72 3 AML AML
comp=N,3755µm,0.6s
RISI AML AML
comp=E,3585µm,0.7s
VNDS Vrh nad Dolski 2.73 46 *i* Pn **Pn 15 03 35.9 -0.3**
VNDS IAML 15 04 31.4
comp=Z,483nm,0.5s
MOZS Mozjanca 2.74 40 *i* Pn **Pn 15 03 35.9 -0.5**
VARE Varese 2.75 308 AML AML
comp=E,1010µm,0.9s
VARE AML AML
comp=N,1064µm,1.0s
RORO Rocca Rossa 2.75 269 AML AML
comp=N,228µm,1.6s
RORO AML AML
comp=E,232µm,0.6s
ZIRJ Zirje 2.77 101 *e*Pn **Pn 15 03 37.1 +0.4**
ZIRJ Sn **Sn 15 04 08.4 -1.3**
MORI Morici 2.78 96 *e*Pn **Pn 15 03 38.1 +1.2**
MORI Sn **Sn 15 04 08.0 -1.8**
LATB Latina 2.85 164 AML AML
comp=N,105µm,1.4s
LATB AML AML
comp=E,112µm,1.6s
GIUL Giuliano Di Ro 2.85 159 AML AML
comp=N,340µm,0.9s
GIUL AML AML
comp=E,322µm,0.8s
SMPL Sampolo 2.86 223 AML AML
comp=N,350µm,0.9s
SMPL AML AML
comp=E,375µm,0.7s
PDKS Podkum 2.86 49 *i* Pn **Pn 15 03 37.6 -0.5**
TUE Stuetta 2.87 322 Pn **Pn 15 03 39.0 +0.8**
TUE Stuetta 2.87 322 AML AML
comp=E,581µm,1.5s
TUE AML AML
comp=E,723µm,1.5s
TUE AML AML
comp=N,838µm,1.0s
TUE AML AML
comp=N,1123µm,1.0s
IMI Imperia 2.90 265 AML AML
comp=N,448µm,0.9s
IMI AML AML
comp=E,386µm,1.2s
FETA Feichten 2.91 344 *e*Pn **Pn 15 03 40.6 +1.9**
comp=E,55nm,0.6s,SNR=80
FETA *e*Sn **Sn 15 04 15.9 +2.7**
comp=E,174nm,1.1s
FETA Feichten 2.91 344 Pn 15 03 40.6 +1.9
FETA **Sn 15 04 15.8 +2.7**
GBOS Grotte di Boss 2.91 272 AML AML
comp=N,333µm,0.6s
GBOS AML AML
comp=E,202µm,1.2s
DAVOX Davos/Dischmat 2.91 332 Pn **Pn 15 03 40.9 +2.0**
comp=E,11nm,0.3s,baz=179,slow=18,SNR=78
DAVOX Sn **Sn 15 04 15.9 +2.5**
comp=E,20nm,0.3s,baz=222,slow=21,SNR=7.9
DAVOX Lg Lg 15 04 26.3
comp=E,36nm,0.3s,baz=77,slow=22,SNR=4.2
DAVOX Davos/Dischmat 2.91 332 AML AML
comp=N,799µm,0.7s
DAVOX AML AML
comp=E,610µm,1.0s
OBKA Obir 2.95 39 *e*Pn **Pn 15 03 39.1 -0.2**
comp=E,13nm,0.2s,SNR=11
OBKA *e*Sn **Sn 15 04 16.6 +2.4**
comp=E,770nm,0.6s
OBKA Obir 2.95 39 Pn 15 03 39.1 -0.2
OBKA **Sn 15 04 16.6 +2.4**
OBKA Obir 2.95 39 *e*Pn **Pn 15 03 38.9 -0.4**
OBKA *e*Pg **Pb 15 03 47.1 +1.6**
OBKA *e*Sg **Sg 15 04 27.8 -0.5**
OBKA Obir 2.95 39 *e*Pn **Pn 15 03 38.9 -0.4**
OBKA *e*Pg **Pb 15 03 47.1 +1.6**
OBKA *e*Sg **Sg 15 04 27.8 -0.5**
CRES Cresnjev 2.99 57 *e*Pn **Pn 15 03 39.5 -0.3**
KBA Koelnbreinsper 3.03 19 *i* Pn **Pn 15 03 40.7 +0.3**

KBA eSn **Sn** 15 04 16.3 +0.1
comp=E,246nm,0.7s
KBA Koelnbreinsper 3.03 19 **Pn** 15 03 40.7 +0.3
KBA **Sn** 15 04 16.3 +0.1
KBA Koelnbreinsper 3.03 19 ePn **Pn** 15 03 40.7 +0.3
KBA eSn **Sn** 15 04 15.0 -1.2
KBA Koelnbreinsper 3.03 19 ePn **Pn** 15 03 40.7 +0.3
KBA eSn **Sn** 15 04 15.0 -1.2
SQTA Sankt Quirin 3.03 351 *i* Pn **Pn** 15 03 41.8 +1.4
comp=E,92nm,0.2s,SNR=84
SQTA eSn **Sn** 15 04 17.1 +1.0
comp=E,111nm,0.3s
SQTA Sankt Quirin 3.03 351 **Pn** 15 03 41.8 +1.4
SQTA **Sn** 15 04 17.1 +1.0
WTTA Wattenberg 3.04 357 *i* Pn **Pn** 15 03 42.0 +1.4
comp=E,17nm,0.2s,SNR=18
WTTA eSn **Sn** 15 04 18.4 +2.0
comp=E,227nm,0.4s
WTTA Wattenberg 3.04 357 **Pn** 15 03 42.0 +1.4
WTTA **Sn** 15 04 18.4 +2.0
WTTA Wattenberg 3.04 357 ePn **Pn** 15 03 42.0 +1.4
WTTA ePg **Pg** 15 03 49.9 -1.8
WTTA eSn **Sn** 15 04 18.7 +2.2
WTTA eSg **Sg** 15 04 31.1 0.0
WTTA Wattenberg 3.04 357 AML AML
comp=N,2745µm,0.8s
WTTA AML AML
comp=E,1765µm,0.9s
CERA Filignano 3.06 149 AML AML
comp=E,681µm,0.7s
CERA AML AML
comp=E,664µm,0.7s
CERA AML AML
comp=N,621µm,1.5s
CERA AML AML
comp=N,603µm,0.6s
WATA Walderalm 3.11 356 *i* Pn **Pn** 15 03 43.3 +1.7
comp=N,29nm,0.2s,SNR=30
WATA eSn **Sn** 15 04 20.7 +2.5
comp=N,355nm,0.7s
WATA Walderalm 3.11 356 **Pn** 15 03 43.3 +1.7
WATA **Sn** 15 04 20.7 +2.5
MIDA Miranda 3.12 145 AML AML
comp=N,395µm,1.0s
MIDA AML AML
comp=E,395µm,1.4s
SAOF Saorge 3.13 267 P **Pn** 15 03 43.7 +2.0
SAOF S **Sn** 15 04 21.0 +2.5
SAOF Saorge 3.13 267 AML AML
comp=E,636µm,0.9s
SAOF AML AML
comp=N,692µm,0.9s
MOTA Moosalm 3.16 350 *i* Pn **Pn** 15 03 43.9 +1.6
comp=N,14nm,0.5s,SNR=46
MOTA eSn **Sn** 15 04 22.8 +3.3
comp=N,177nm,0.4s
MOTA Moosalm 3.16 350 **Pn** 15 03 43.9 +1.6
MOTA **Sn** 15 04 22.8 +3.3
FUSIO Fusio 3.18 316 AML AML
comp=N,548µm,1.3s
FUSIO AML AML
comp=E,802µm,0.7s
TRAV Traversella 3.21 295 AML AML
comp=N,490µm,0.5s
TRAV AML AML
comp=E,608µm,1.3s
SBF Sospel 3.23 265 ePn **Pn** 15 03 44.7 +1.6
SBF Sospel 3.23 265 ePg **Pg** 15 03 53.9 -1.5
SBF eSn **Sn** 15 04 21.3 +0.2
comp=E,329nm,0.6s
AJAC Base Areonaval 3.25 226 AML AML
comp=N,526µm,0.8s
AJAC AML AML
comp=E,328µm,0.7s
TURF col de Turini 3.25 267 P **Pn** 15 03 45.3 +1.8
TURF S **Sn** 15 04 24.4 +2.8
KIJV Kijevo 3.26 92 ePn **Pn** 15 03 44.6 +1.1
KIJV Sn **Sn** 15 04 20.3 -1.5
SATI Passo dei Sala 3.29 301 AML AML
comp=N,440µm,1.0s
SATI AML AML
comp=E,342µm,0.9s
SOKA Soboth 3.30 41 *i* Pn **Pn** 15 03 43.8 -0.3
comp=E,2.5nm,0.2s,SNR=24
SOKA eSn **Sn** 15 04 21.6 -1.2
comp=E,220nm,0.5s
SOKA Soboth 3.30 41 **Pn** 15 03 43.8 -0.3
SOKA **Sn** 15 04 21.6 -1.2
MMK Mattmark 3.32 305 AML AML
comp=N,378µm,1.1s
MMK AML AML
comp=E,434µm,0.6s
PLONS Plons/SG 3.32 329 ePn **Pn** 15 03 46.8 +2.4
PLONS eSn **Sn** 15 04 25.9 +2.6
PLONS Plons/SG 3.32 329 ePn **Pn** 15 03 46.8 +2.4
PLONS eSn **Sn** 15 04 25.9 +2.6
PLONS Plons/SG 3.32 329 AML AML
comp=N,453µm,0.8s
PLONS AML AML
comp=E,368µm,0.9s
PTJ Puntijarka 3.34 58 ePn **Pn** 15 03 44.5 -0.2
PTJ Sn **Sn** 15 04 21.6 -2.2
RETA Reutte 3.35 347 *i* Pn **Pn** 15 03 46.5 +1.8
comp=E,25nm,0.4s,SNR=21
RETA eSn **Sn** 15 04 26.0 +2.0
comp=E,42nm,0.3s
RETA Reutte 3.35 347 **Pn** 15 03 46.5 +1.8
RETA **Sn** 15 04 26.0 +2.0
DAVA Damuels 3.36 336 *i* Pn **Pn** 15 03 47.5 +2.5
comp=E,23nm,0.2s,SNR=37
DAVA eSn **Sn** 15 04 26.8 +2.4
comp=E,103nm,0.3s
DAVA Damuels 3.36 336 **Pn** 15 03 47.5 +2.5
DAVA **Sn** 15 04 26.8 +2.4
DAVA Damuels 3.36 336 ePn **Pn** 15 03 47.5 +2.5
DAVA eSn **Sn** 15 04 26.5 +2.1
DAVA Damuels 3.36 336 ePn **Pn** 15 03 47.5 +2.5
DAVA eSn **Sn** 15 04 26.5 +2.1
SGG Gregorio Mates 3.38 146 ⇑P **Pn** 15 03 48.2 +3.0
SGG AML AML
comp=N,434µm,1.3s
SGG AML AML
comp=E,378µm,0.6s
TREM Isole Tremiti 3.39 127 AML AML
comp=N,1380µm,0.7s
TREM AML AML
comp=E,1615µm,0.6s
MELA Melanico ??? S 3.47 136 AML AML
comp=N,798µm,0.8s
MELA AML AML
comp=N,828µm,1.0s
MELA AML AML
comp=E,784µm,0.6s
MELA AML AML
comp=E,736µm,0.6s
HVAR Hvar 3.47 106 ePn **Pn** 15 03 47.4 +1.1
HVAR Sn **Sn** 15 04 25.7 -1.2
ISO Isola 3.48 271 P **Pn** 15 03 48.1 +1.6
ISO S **Sn** 15 04 29.9 +2.7
RJOB Jochberg 3.56 10 ePn **Pn** 15 03 48.4 +0.7
RJOB eSn **Sn** 15 04 29.9 +0.6
RJOB Jochberg 3.56 10 ePn **Pn** 15 03 48.4 +0.7
RJOB eSn **Sn** 15 04 29.9 +0.6
BNALP Bannalp 3.59 319 P **Pn** 15 03 50.1 +2.0
BNALP AML AML
comp=E,417µm,0.9s
BNALP AML AML
comp=N,464µm,0.9s
SURF Saint Ours 3.65 276 P **Pn** 15 03 50.0 +1.1
MRAK Mrakovica 3.66 76 ePn **Pn** 15 03 49.8 +0.7
UBR Ueberruh 3.67 341 ePn **Pn** 15 03 50.5 +1.4
UBR eSn **Sn** 15 04 32.4 +0.7
UBR Ueberruh 3.67 341 ePn **Pn** 15 03 50.5 +1.4
UBR eSn **Sn** 15 04 32.4 +0.7
MBDF Montbardon 3.69 279 ePn **Pn** 15 03 49.9 +0.3
MBDF Montbardon 3.69 279 ePg **Pg** 15 04 02.9 -1.3
MBDF eSn **Sn** 15 04 31.5 -1.1
comp=N,148nm,0.6s
PSB1 Pescosannita 3.70 143 P **Pn** 15 03 52.7 +3.2
PSB1 AML AML
comp=N,304µm,1.6s
PSB1 AML AML
comp=E,308µm,0.9s
REMY Saint-Rhmy-en 3.72 297 ⇓P **Pn** 15 03 54.1 +4.1
MOSL Moslavina 3.72 67 ePn **Pn** 15 03 48.8 -1.1
MOSL Sn **Sn** 15 04 29.1 -4.0
MGRS Mrkonjic Grad 3.73 85 ePn **Pn** 15 03 49.8 -0.2
MOCO Biccari - m.te 3.74 139 P **Pn** 15 03 51.5 +1.3
MOCO AML AML
comp=E,241µm,1.6s
MOCO AML AML
comp=N,194µm,1.3s
KALN Kalnik 3.75 58 ePn **Pn** 15 03 49.5 -0.7
KALN Sn **Sn** 15 04 30.3 -3.5
SGRT San Giovanni R 3.76 130 Pn **Pn** 15 03 50.2 -0.2
SGRT San Giovanni R 3.76 130 AML AML
comp=N,366µm,0.4s
SGRT AML AML
comp=E,430µm,1.2s
PAOL Paolisi 3.76 147 Pn **Pn** 15 03 50.8 +0.4
WILA Wila 3.80 328 ePn **Pn** 15 03 52.5 +1.5
WILA eSn **Sn** 15 04 35.4 +0.2
WILA Wila 3.80 328 ePn **Pn** 15 03 52.5 +1.5
WILA eSn **Sn** 15 04 35.4 +0.2
BNI Bardonecchia 3.81 284 Pn **Pn** 15 03 51.5 +0.4
BNI Bardonecchia 3.81 284 P **Pn** 15 03 52.2 +1.1
BNI AML AML
comp=N,117µm,1.3s
BNI AML AML
comp=N,114µm,0.9s
BNI AML AML
comp=E,97µm,0.8s
BNI AML AML
comp=E,102µm,1.3s
BLY Banja Luka 3.83 80 ePn **Pn** 15 03 51.5 +0.3
MAKA Makarska 3.84 102 ePn **Pn** 15 03 52.6 +1.2
MAKA Sn **Sn** 15 04 35.8 -0.1
FRF La Foret Royal 3.85 262 ePn **Pn** 15 03 52.9 +1.4
FRF La Foret Royal 3.85 262 ePg **Pg** 15 04 05.6 -1.5
FRF eSn **Sn** 15 04 33.9 -2.2
comp=E,42nm,0.3s
LPG La Plagne 3.86 291 ePn **Pn** 15 03 54.0 +2.0
LPG La Plagne 3.86 291 ePg **Pg** 15 04 06.2 -1.3
LPG eSn **Sn** 15 04 36.1 -0.9
comp=E,124nm,0.5s
RICI Ricice 3.87 99 ePn **Pn** 15 03 52.9 +1.1
RICI Sn **Sn** 15 04 34.8 -1.8
OVO Vesuviano 3.88 151 ⇓P **Pb** 15 04 01.6 +0.4
SENIN Lac Senin/Sane 3.88 305 Pn **Pn** 15 03 53.7 +1.6
MSAG Monte S. Angel 3.88 129 ⇑P **Pn** 15 03 51.9 -0.2
MSAG AML AML
comp=E,378µm,0.9s
MSAG AML AML
comp=N,660µm,0.7s
MSAG AML AML
comp=N,658µm,0.7s
MSAG AML AML
comp=E,411µm,0.9s
LPL La Plagne 3.88 291 ePn **Pn** 15 03 52.5 +0.3
LPL La Plagne 3.88 291 ePg **Pg** 15 04 06.2 -1.6
LPL eSn **Sn** 15 04 34.9 -2.5
comp=E,81nm,0.4s
ARSA Arzberg 3.95 39 *i* Pn **Pn** 15 03 52.4 -0.6
comp=E,9.2nm,0.3s,SNR=17
ARSA eSn **Sn** 15 04 40.6 +1.9
comp=E,40nm,0.4s
ARSA Arzberg 3.95 39 **Pn** 15 03 52.4 -0.6
ARSA **Sn** 15 04 40.6 +1.9
ARSA Arzberg 3.95 39 ePn **Pn** 15 03 52.4 -0.6
ARSA Arzberg 3.95 39 ePn **Pn** 15 03 52.4 -0.6
ARSA Arzberg 3.95 39 ⇓P **Pn** 15 03 52.4 -0.6
ARSA AML AML
comp=E,212µm,0.7s
ARSA AML AML
comp=N,187µm,0.8s
FUR Furstenfeldbru 3.96 354 ePn **Pn** 15 03 53.9 +0.9
FUR Furstenfeldbru 3.96 354 ePn **Pn** 15 03 53.9 +0.9
MOA Molln 3.98 24 *i* Pn **Pn** 15 03 53.6 +0.2
comp=N,34nm,0.2s,SNR=42
MOA eSn **Sn** 15 04 39.6 +0.2
comp=N,81nm,0.4s
MOA Molln 3.98 24 **Pn** 15 03 53.6 +0.2
MOA **Sn** 15 04 39.6 +0.2
MOA Molln 3.98 24 ePn **Pn** 15 03 53.6 +0.2
MOA eSn **Sn** 15 04 38.1 -1.4
MOA Molln 3.98 24 ePn **Pn** 15 03 53.6 +0.2
MOA eSn **Sn** 15 04 38.1 -1.4
LMR La Mourre 4.00 259 ePn **Pn** 15 03 54.8 +1.2
LMR La Mourre 4.00 259 ePg **Pg** 15 04 08.4 -1.6
LMR eSn **Sn** 15 04 40.2 +0.4
comp=N,34nm,0.4s
RSL Roselend 4.01 293 P **Pn** 15 03 56.0 +2.1
WALHA Wallhausen, DE 4.01 332 ePn **Pn** 15 03 55.0 +1.2
WALHA eSn **Sn** 15 04 39.2 -1.1
WALHA Wallhausen, DE 4.01 332 ePn **Pn** 15 03 55.0 +1.2
WALHA eSn **Sn** 15 04 39.2 -1.1
SGTA Sant Agata di 4.02 139 ⇑P **Pn** 15 03 55.4 +1.4
SGTA AML AML
comp=E,246nm,1.6s
SGTA AML AML
comp=N,220µm,1.3s
CAFE Carife 4.04 141 ⇓P **Pn** 15 03 56.3 +2.0
CAFE AML AML
comp=E,274µm,1.6s
CAFE AML AML
comp=N,219µm,1.4s
BEHE Becsehely 4.11 55 ePn **Pn** 15 03 56.5 +1.4
SNAL S. Angelo Dei 4.12 142 ⇓P **Pn** 15 03 56.8 +1.5
SNAL AML AML
comp=N,296µm,1.6s
SNAL AML AML
comp=E,360µm,1.6s
SNAL AML AML
comp=N,326µm,1.6s
SNAL AML AML
comp=E,367µm,1.6s
SULZ Cheisacher 4.22 323 ePn **Pn** 15 03 57.5 +0.8
SULZ Cheisacher 4.22 323 ePn **Pn** 15 03 57.5 +0.8
CAPA Cerignola FG 4.22 135 P **Pn** 15 03 56.8 +0.1
CAPA AML AML
comp=N,518µm,1.1s
CAPA AML AML
comp=E,786µm,1.3s
GDM Grand'Maison 4.23 285 P **Pn** 15 03 59.5 +2.6
EMING Emmingen-Lipti 4.23 331 ePn **Pn** 15 03 57.6 +0.8
EMING eSn **Sn** 15 04 43.8 -1.9
EMING Emmingen-Lipti 4.23 331 ePn **Pn** 15 03 57.6 +0.8
EMING eSn **Sn** 15 04 43.8 -1.9
SLE Schleitheim 4.25 327 ePn **Pn** 15 03 57.7 +0.6
SLE eSn **Sn** 15 04 43.6 -2.6
SLE Schleitheim 4.25 327 ePn **Pn** 15 03 57.7 +0.6
SLE eSn **Sn** 15 04 43.6 -2.6
BALST Balsthal 4.27 318 ePn **Pn** 15 03 57.9 +0.5
BALST Balsthal 4.27 318 ePn **Pn** 15 03 57.9 +0.5
METMA Mettma DE 4.30 325 ePn **Pn** 15 03 58.2 +0.3
METMA eSn **Sn** 15 04 44.4 -3.1
METMA Mettma DE 4.30 325 ePn **Pn** 15 03 58.2 +0.3
METMA eSn **Sn** 15 04 44.4 -3.1
ORIF Oris-en-Rattie 4.35 281 ePn **Pn** 15 04 00.0 +1.5
ORIF Oris-en-Rattie 4.35 281 ePg **Pg** 15 04 14.6 -2.1
ORIF eSn **Sn** 15 04 50.7 +2.1
comp=E,90nm,0.6s
ORIF Oris-en-Rattie 4.35 281 P **Pn** 15 04 00.4 +1.9
ORIF S **Sn** 15 04 50.5 +1.9
ORIF Oris-en-Rattie 4.35 281 P **Pn** 15 04 00.8 +2.3
ASEAF Site Antares, 4.40 253 P **Pn** 15 04 01.1 +2.3
STON Ston 4.44 106 ePn **Pn** 15 04 00.4 +0.7
STON Sn **Sn** 15 04 49.7 -1.0
ARTF Artigues 4.44 264 P **Pn** 15 04 01.9 +2.2
PALZ Palazzo San Ge 4.45 136 ⇑P **Pn** 15 04 00.3 +0.4
PALZ AML AML
comp=N,422µm,1.0s
PALZ AML AML
comp=E,666µm,1.3s
MRVN Minervino Murg 4.49 133 ⇑P **Pn** 15 04 00.4 0.0
MRVN AML AML
comp=E,131µm,0.6s
MRVN AML AML
comp=N,129µm,0.9s
GRN Grenoble 4.49 285 P **Pn** 15 04 02.4 +1.9
SMRF Simiane la Rot 4.55 269 ePn **Pn** 15 04 03.8 +2.5
SMRF eSn **Sb** 15 05 02.4 -4.7
comp=N,38nm,0.5s
ACER Acerenza 4.56 138 ⇓P **Pn** 15 04 02.3 +0.8
ACER AML AML
comp=E,231µm,0.9s
ACER AML AML
comp=N,220µm,0.5s
OGSM Saint Maurice 4.61 290 P **Pn** 15 04 03.1 +1.1
OGSM S **Sn** 15 04 54.0 -0.9
CONA Conrad Observa 4.62 35 *i* Pn **Pn** 15 04 01.8 -0.4
comp=N,1.6nm,0.2s,SNR=19
CONA eSn **Sn** 15 04 54.1 -1.2
comp=N,46nm,0.6s
CONA Conrad Observa 4.62 35 **Pn** 15 04 01.8 -0.4
CONA **Sn** 15 04 54.1 -1.2
RUSF Rustrel 4.62 269 P **Pn** 15 04 04.5 +2.3
CABF La Chapelle 4.72 302 ePn **Pn** 15 04 04.3 +0.6
CABF La Chapelle 4.72 302 ePg **Pg** 15 04 21.4 -2.5
CABF eSn **Sn** 15 04 56.7 -1.2
comp=N,129nm,0.8s
GEC2 GERESS Array S 4.78 15 Pn **Pn** 15 04 03.5 -1.0
GEC2 GERESS Array S 4.78 15 ePg **Pg** 15 04 22.3 -2.7
GEC2 eSn **Sn** 15 04 55.6 -3.7
GEC2 GERESS Array S 4.78 15 ePg **Pg** 15 04 22.3 -2.7
GEC2 eSn **Sn** 15 04 55.6 -3.7
GERES GERESS Array B 4.78 15 Pn **Pn** 15 04 03.6 -0.8
comp=N,6.2nm,0.3s,baz=189,slow=14,SNR=126
GERES Pg **Pg** 15 04 21.8 -3.2
comp=N,9.1nm,0.3s,baz=187,slow=16,SNR=21
GERES Sn **Sn** 15 04 56.7 -2.6
comp=N,18nm,0.3s,baz=189,slow=22,SNR=9.7
GERES Lg Lg 15 05 24.0
comp=N,2.0nm,0.3s,baz=190,slow=34,SNR=1.2
GERES GERESS Array B 4.78 15 **Pn** 15 04 03.1 -1.3
BFO Black Forest 4.78 330 Pn **Pn** 15 04 05.0 +0.5
BFO Black Forest 4.78 330 ePg **Pg** 15 04 25.9 +0.9
BFO Black Forest 4.78 330 ePg **Pg** 15 04 25.9 +0.9
AMUR Altamura 4.81 132 ⇓P **Pn** 15 04 04.8 0.0
AMUR AML AML
comp=E,309µm,0.3s
AMUR AML AML
comp=N,254µm,0.4s
OG35 Corcelles 4.82 294 P **Pn** 15 04 06.1 +1.1
OG35 S **Sn** 15 04 59.7 -0.6
CKRC Cesky Krumlov 4.88 19 ePN **Pn** 15 04 05.2 -0.6
TREB Trebinje 4.94 106 ePn **Pn** 15 04 06.8 +0.2
MIGL Miglionico 4.95 136 ⇓P **Pn** 15 04 07.4 +0.7
WET Wettzell 4.96 8 eSn **Sn** 15 05 00.8 -2.9
WET Wettzell 4.96 8 eSn **Sn** 15 05 00.8 -2.9
BRY Bratogost 5.01 103 ePn **Pn** 15 04 08.3 +0.6
BRY Bratogost 5.01 103 ⇓*i* Pn **Pn** 15 04 08.0 +0.3
BRY *i* Sn **Sn** 15 05 03.8 -1.3
HINF Hinteralfeld 5.01 317 ePn **Pn** 15 04 07.5 -0.1
HINF Hinteralfeld 5.01 317 ePg **Pg** 15 04 27.5 -1.9
HINF eSn **Sn** 15 05 01.7 -3.3
comp=N,61nm,0.3s
KHC Kasperske Hory 5.04 13 ePN **Pn** 15 04 06.9 -1.0
KHC ex x 15 04 25.0
KHC eSN **Sn** 15 05 03.0 -2.5
KHC Kasperske Hory 5.04 13 Pn **Pn** 15 04 06.8 -1.1
KHC Kasperske Hory 5.04 13 eSn **Sn** 15 05 02.0 -3.5
KHC Kasperske Hory 5.04 13 eSn **Sn** 15 05 02.0 -3.5
MATE Matera 5.05 133 ⇓P **Pn** 15 04 08.0 0.0
MATE ⇑S **Sn** 15 05 05.6 -0.2
HAPS Han Pijesak,Bl 5.08 89 ePn **Pn** 15 04 09.5 +0.8
VSL Villasalto 5.09 202 ⇑P **Pn** 15 04 12.1 +3.5
HCY Herceg Novi 5.14 108 ePn **Pn** 15 04 09.5 +0.2
HCY Herceg Novi 5.14 108 ⇑*i* Pn **Pn** 15 04 09.8 +0.5
HCY *i* Sn **Sn** 15 05 07.0 -1.0
NOCI Noci 5.15 130 P **Pn** 15 04 09.2 -0.2
ECH Echery 5.16 322 Pn **Pn** 15 04 10.0 +0.4
ECH Echery 5.16 322 ePn **Pn** 15 04 10.1 +0.5
ECH eSn **Sn** 15 05 04.1 -4.5
ECH Echery 5.16 322 ePn **Pn** 15 04 10.1 +0.5
ECH eSn **Sn** 15 05 04.1 -4.5
MORH Mrgy, Hungar 5.17 65 ⇑P **Pn** 15 04 05.3 -4.3
MORH ⇓S **Sn** 15 05 03.0 -5.7
MORH Mrgy, Hungar 5.17 65 ePn **Pn** 15 04 08.0 -1.7
UPM Unac-Piva 5.19 99 ePn **Pn** 15 04 11.5 +1.3
UPM Unac-Piva 5.19 99 ⇓*i* Pn **Pn** 15 04 10.3 +0.1
UPM *i* Sn **Sn** 15 05 07.9 -1.6
VIVF Saint-Julien-l 5.19 279 ePn **Pn** 15 04 10.5 +0.4
VIVF eSn **Sn** 15 05 09.5 +0.1
comp=N,22nm,0.3s
CGL Cagliari Serpe 5.24 203 ⇑P **Pn** 15 04 14.1 +3.4
CDF Champ du Feu 5.26 324 ePn **Pn** 15 04 11.2 +0.2
CDF eSn **Sn** 15 05 08.6 -2.5
comp=N,59nm,0.4s
SSB Saint Sauveur 5.33 284 Pn **Pn** 15 04 11.9 -0.1
NKME Niksic 5.34 103 ePn **Pn** 15 04 12.5 +0.3
NKME *i* Sn **Sn** 15 05 11.8 -1.4
NKY Niksic 5.36 103 ePn **Pn** 15 04 12.8 +0.4
NKY *i* Sn **Sn** 15 05 12.1 -1.5
ZST Bratislava 5.37 41 ePN **Pn** 15 04 11.6 -0.8
ZST *e* 15 04 23.1
ZST Bratislava 5.37 41 eSN **Sn** 15 05 09.9 -3.7
HAU Haudompre 5.39 316 ePn **Pn** 15 04 12.8 0.0
HAU eSn **Sn** 15 05 12.2 -2.0
comp=N,169nm,0.4s
CEME Cevo 5.39 106 ⇑*i* Pn **Pn** 15 04 13.3 +0.5
CEME *i* Sn **Sn** 15 05 11.6 -2.8
BBLS Lazići 5.43 91 ePn **Pn** 15 04 13.6 +0.2
BUM Brajici-Budva 5.47 108 ⇓*i* Pn **Pn** 15 04 14.3 +0.4
BUM *i* Sn **Sn** 15 05 14.9 -1.3
GRFO Grafenberg 5.48 355 ePg **Pg** 15 04 36.9 -1.4
GRFO Grafenberg 5.48 355 ePg **Pg** 15 04 36.9 -1.4
GRA1 Grafenberg Arr 5.48 355 **Pn** 15 04 13.2 -0.8
PLE Pijevlja 5.51 97 ePn **Pn** 15 04 14.6 +0.2
PLE *i* Sn **Sn** 15 05 15.5 -1.7
ROTZ Rotzenmuhle 5.54 2 ePn **Pn** 15 04 13.6 -1.2
ROTZ ePg **Pg** 15 04 37.3 -2.2
ROTZ eSn **Sn** 15 05 12.4 -5.5
ROTZ Rotzenmuhle 5.54 2 ePn **Pn** 15 04 13.6 -1.2
ROTZ ePg **Pg** 15 04 37.3 -2.2
ROTZ eSn **Sn** 15 05 12.4 -5.5
MODS Modra-Piesok 5.58 40 ePN **Pn** 15 04 13.6 -1.7
MODS *e* 15 04 24.7
MODS Modra-Piesok 5.58 40 eSN **Sn** 15 05 13.8 -5.0
TREC Trest 5.64 25 ePn **Pn** 15 04 15.2 -0.9
TREC Trest 5.64 25 ePn **Pn** 15 04 15.2 -0.9
PBCC Pribram 5.64 14 ePN **Pn** 15 04 15.6 -0.6
PDG Podgorica 5.67 106 ⇓P **Pn** 15 04 14.5 -2.1
PDG ⇑S **Sn** 15 05 18.0 -3.0
PDG Podgorica 5.67 106 ePn **Pn** 15 04 16.7 +0.2
PDG Podgorica 5.67 106 Pn **Pn** 15 04 16.8 +0.2
TTG Podgorica 5.67 106 ⇑*i* Pn **Pn** 15 04 17.1 +0.6
TTG *i* Sn **Sn** 15 05 19.7 -1.3
DRME Dracevica, Mon 5.71 108 ePn **Pn** 15 04 16.6 -0.6
DRME Dracevica, Mon 5.71 108 ⇑*i* Pn **Pn** 15 04 17.7 +0.5
DRME *i* Sn **Sn** 15 05 20.6 -1.3
KOME Kolasin 5.71 101 ePn **Pn** 15 04 17.7 +0.4
KOME *i* Sn **Sn** 15 05 20.6 -1.7
FRGS Fruska Gora 5.72 78 ⇑P **Pn** 15 04 13.6 -3.7
FRGS ⇑S **Sn** 15 05 16.3 -6.2
FRGS Fruska Gora 5.72 78 ePn **Pn** 15 04 17.4 +0.1
KRUC Moravsky 5.74 31 ePN **Pn** 15 04 16.1 -1.5
KRUC Moravsky 5.74 31 ePn **Pn** 15 04 16.4 -1.2
KRUC Moravsky 5.74 31 ePn **Pn** 15 04 16.4 -1.2
SMOL Smolenice 5.75 40 ePn **Pn** 15 04 16.7 -0.9
SMOL ePG **Pg** 15 04 45.3 +1.9
MANZ Manzenberg 5.76 1 ePn **Pn** 15 04 16.4 -1.4
MANZ Manzenberg 5.76 1 ePn **Pn** 15 04 16.4 -1.4
LASF Ste Croix 5.78 271 ePn **Pn** 15 04 19.5 +1.4
LASF Ste Croix 5.78 271 ePg **Pg** 15 04 41.3 -2.8
LASF eSn **Sn** 15 05 22.0 -1.8
comp=N,11nm,0.5s
DIVS Divibare 5.83 88 ePn **Pn** 15 04 17.7 -1.2
DIVS Divibare 5.83 88 Pn **Pn** 15 04 18.9 0.0
ULC Ulcinj 5.84 110 ePn **Pn** 15 04 19.6 +0.6
ULC *i* Sn **Sn** 15 05 24.1 -1.3
MILB Miltenberg 5.87 343 ePn **Pn** 15 04 19.0 -0.3
MILB eSn **Sn** 15 05 20.4 -5.7
MILB Miltenberg 5.87 343 ePn **Pn** 15 04 19.0 -0.3
MILB eSn **Sn** 15 05 20.4 -5.7
IVA Berane 5.97 100 ⇓*i* Pn **Pn** 15 04 21.2 +0.3
IVA *i* Sn **Sn** 15 05 26.9 -1.8
NKC Novy Kostel 6.02 3 eSN **Sn** 15 05 25.4 -4.2
NKC Novy Kostel 6.02 3 ePn **Pn** 15 04 18.5 -2.9
NKC eSn **Sn** 15 05 24.0 -5.7
NKC Novy Kostel 6.02 3 ePn **Pn** 15 04 18.5 -2.9
NKC eSn **Sn** 15 05 24.0 -5.7
VRAC Vranov 6.02 31 Pn **Pn** 15 04 19.1 -2.3
comp=N,1.4nm,0.3s,baz=228,slow=12,SNR=11
VRAC Sn **Sn** 15 05 25.3 -4.3

comp=N,5.4nm,0.3s,baz=6.2,slow=6.9,SNR=6.0
VRAC Lg Lg 15 06 02.7
comp=N,1.4nm,0.3s,baz=24,slow=21,SNR=1.1
VRAC Vranov 6.02 31 ⇓P **Pn** **15 04 18.9 -2.5**
VRAC ⇑S **Sn** **15 05 25.6 -4.1**
VRAC Vranov 6.02 31 *e*PN **Pn** **15 04 19.5 -1.9**
VRAC Vranov 6.02 31 *e*Pn **Pn** **15 04 19.8 -1.6**
VRAC Vranov 6.02 31 *e*Pn **Pn** **15 04 19.8 -1.6**
PRU Pruhonice 6.04 17 *e*PN **Pn** **15 04 20.4 -1.2**
PRU Pruhonice 6.04 17 *e*Pn **Pn** **15 04 20.7 -0.9**
PRU Pruhonice 6.04 17 *e*Pn **Pn** **15 04 20.7 -0.9**
PAGF Fort de Pagny 6.07 318 *e*Pn **Pn** **15 04 23.4 +1.3**
PAGF *e*Sn **Sn** **15 05 27.2 -3.7**
comp=N,82nm,0.6s
PVY Plav 6.10 103 ⇑*i*Pn **Pn** **15 04 23.1 +0.5**
PVY *i* Sn **Sn** **15 05 30.0 -1.9**
JAVC Velka Javorina 6.11 39 *e*PN **Pn** **15 04 22.2 -0.5**
JAVC Velka Javorina 6.11 39 *e*Pn **Pn** **15 04 22.6 -0.1**
JAVC Velka Javorina 6.11 39 *e*Pn **Pn** **15 04 22.6 -0.1**
SMF Signal de Mont 6.15 296 *e*Pn **Pn** **15 04 23.4 +0.2**
SMF Signal de Mont 6.15 296 *e*Pg **Pg** **15 04 47.5 -3.7**
SMF *e*Sn **Sn** **15 05 31.5 -1.5**
comp=N,85nm,0.5s
SFTF Sexfontaines 6.19 312 *e*Pn **Pn** **15 04 24.1 +0.3**
SFTF *e*Sn **Sn** **15 05 32.5 -1.5**
comp=N,34nm,0.5s
MEZF Maizieres J'vi 6.37 314 *e*Pn **Pn** **15 04 27.1 +0.9**
MEZF *e*Sn **Sn** **15 05 33.9 -4.4**
comp=N,57nm,0.7s
LOR Lormes 6.38 301 *e*Pn **Pn** **15 04 26.3 -0.1**
LOR *e*Sn **Sn** **15 05 36.4 -2.3**
comp=N,72nm,0.3s
SAVF Savonnieres en 6.41 316 *e*Pn **Pn** **15 04 28.1 +1.4**
SAVF *e*Sn **Sn** **15 05 35.6 -3.6**
comp=N,20nm,0.4s
SCTE Santa Cesarea 6.42 128 Pn **Pn** **15 04 26.6 -0.2**
MOX Moxa 6.42 358 *e*Pn **Pn** **15 04 25.2 -1.7**
MOX *e*Sn **Sn** **15 05 34.2 -5.3**
MOX Moxa 6.42 358 *e*Pn **Pn** **15 04 25.2 -1.7**
MOX *e*Sn **Sn** **15 05 34.2 -5.3**
VYHS Vyhne 6.42 46 *e*PN **Pn** **15 04 25.7 -1.2**
VYHS *e*SN **Sn** **15 05 33.2 -6.5**
TNS Taunus Mts 6.43 340 *e*Pn **Pn** **15 04 27.5 +0.4**
TNS *e*Sn **Sn** **15 05 35.1 -4.9**
TNS Taunus Mts 6.43 340 *e*Pn **Pn** **15 04 27.5 +0.4**
TNS *e*Sn **Sn** **15 05 35.1 -4.9**
AVF Avril sur Loir 6.52 296 *e*Pn **Pn** **15 04 28.8 +0.6**
AVF *e*Sn **Sn** **15 05 34.3 -7.7**
comp=N,18nm,0.5s
SSF Saint Saulge 6.52 299 *e*Pn **Pn** **15 04 28.0 -0.2**
SSF *e*Sn **Sn** **15 05 34.7 -7.3**
comp=N,64nm,0.7s
TIR Tirane 6.54 113 ⇓P **Pn** **15 04 26.6 -1.9**
TIR ⇑S **Sn** **15 05 40.3 -2.2**
TIR Tirane 6.54 113 Pn **Pn** **15 04 28.6 +0.1**
PVCC Panska Ves 6.56 15 *e*Pn **Pn** **15 04 28.1 -0.7**
PVCC *e*Sn Sn 15 05 34.1 -8.8
PVCC Panska Ves 6.56 15 *e*Pn **Pn** **15 04 28.1 -0.7**
PVCC *e*Sn Sn 15 05 34.1 -8.8
PSZ Piszkesteto 6.68 54 ⇑P **Pn** **15 04 26.5 -3.9**
PSZ ⇑S **Sn** **15 05 41.9 -4.1**
PSZ Piszkesteto 6.68 54 Pn **Pn** **15 04 29.8 -0.7**
WLF Walferdange 6.70 326 *d*Pn **Pb** **15 04 46.6 -2.6**
WLF *d*Sn Sn 15 05 37.5 -9.0
KRLC Kraliky 6.73 28 *e*PN **Pn** **15 04 29.7 -1.5**
MORC Moravsky Berou 6.76 33 *e*PN **Pn** **15 04 29.8 -2.3**
MORC Moravsky Berou 6.76 33 Pn **Pn** **15 04 30.7 -0.8**
MORC Moravsky Berou 6.76 33 *e*Pn **Pn** **15 04 30.6 -1.0**
MORC Moravsky Berou 6.76 33 *e*Pn **Pn** **15 04 30.6 -1.0**
BGF Bois d'Agland 6.78 293 *e*Pn **Pn** **15 04 32.1 +0.3**
BGF *e*Sn **Sn** **15 05 45.2 -3.1**
comp=N,53nm,0.4s
BRG Berggiesshubel 6.79 11 Pn **Pn** **15 04 30.6 -1.3**
BRG Amp 15 04 32.6
comp=Z,19nm,0.6s
BRG Berggiesshubel 6.79 11 Pg **Pg** **15 05 00.9 -2.5**
BRG Amp 15 05 02.0
comp=Z,34nm,0.8s
BRG Berggiesshubel 6.79 11 Sn **Sn** **15 05 42.7 -5.9**
BRG Amp 15 05 44.2
comp=Z,44nm,1.0s
BRG *ex* x 15 06 24.2
BRG Amp 15 06 26.9
comp=Z,22nm,0.8s
BRG *ex* x 15 06 36.7
BRG Amp 15 06 52.9
comp=Z,61nm,1.0s
DPC Dobruska-Polom 6.82 25 *e*PN **Pn** **15 04 30.4 -2.0**
DPC Dobruska-Polom 6.82 25 *e*Pn **Pn** **15 04 30.5 -1.9**
DPC Dobruska-Polom 6.82 25 *e*Pn **Pn** **15 04 30.5 -1.9**
CHVC Chvalec 6.96 22 *e*PN **Pn** **15 04 32.4 -1.9**
OSTC Ostas 6.98 23 *e*PN **Pn** **15 04 32.7 -1.8**
BZS Buzias 7.04 75 ⇓P **Pn** **15 04 32.3 -3.2**
BZS ⇓S **Sn** **15 05 50.0 -5.0**
MDVR Moldovita 7.05 82 ⇑P **Pn** **15 04 32.1 -3.5**
MDVR ⇑S **Sn** **15 05 49.1 -6.0**
CAF Calviac 7.05 279 *e*Pn **Pn** **15 04 36.1 +0.6**
CAF *e*Sn **Sn** **15 05 54.6 -0.5**
comp=Z,7.4nm,0.5s
MTLF Montolieu 7.05 266 *e*Pn **Pn** **15 04 37.8 +2.2**
MTLF *e*Sn **Sn** **15 05 52.9 -2.3**
comp=Z,11nm,0.5s
AHRW Bad Neuenahr-A 7.11 334 *e*Pn **Pn** **15 04 37.5 +1.2**
AHRW Bad Neuenahr-A 7.11 334 *e*Pn **Pn** **15 04 37.5 +1.2**
CLL Collm 7.12 6 *e*Pn **Pn** **15 04 35.0 -1.4**
CLL *e* 15 04 43.0
CLL *i* Pg **Pg** **15 05 10.0 +0.4**
CLL *e*Sn **Sn** **15 05 49.0 -7.7**
CLL *e* 15 06 05.0
CLL *e*Sg **Sg** **15 06 42.0 +0.3**
comp=Z,78nm,1.0s
CLL Collm 7.12 6 Pn **Pn** **15 04 36.0 -0.4**
TCF Toulx Ste Croi 7.13 290 *e*Pn **Pn** **15 04 36.0 -0.7**
TCF *e*Sn **Sn** **15 05 51.8 -5.3**
comp=Z,26nm,0.5s
HYF Humbligny 7.15 298 *e*Pn **Pn** **15 04 36.5 -0.3**
HYF *e*Sn **Sn** **15 05 56.6 -0.8**
FNEB Nbias 7.23 263 P **Pn** **15 04 39.0 +1.5**
BHOU Houvegnez 7.31 329 *d*Pn **Pn** **15 04 41.6 +2.5**
KEK Kerkira 7.42 125 ⇓P **Pn** **15 04 40.5 -0.2**
SRN Sarande 7.44 123 P **Pn** **15 04 40.9 +0.1**
BTNL Ternell 7.46 330 *d*Pn **Pn** **15 04 42.3 +1.1**
BTNL *d*Pb **Pb** **15 05 00.6 -1.5**
BTNL *d*Sn **Sn** **15 05 59.6 -5.5**
RJF Les Rejaudoux 7.46 282 *e*Pn **Pn** **15 04 41.8 +0.7**
RJF *e*Sn **Sn** **15 06 02.3 -2.8**
comp=Z,18nm,0.7s
MEM Membach 7.52 330 *d*Pn **Pn** **15 04 44.6 +2.6**
MEM *d*PnPn **PnPn** **15 04 48.7 -0.8**
MEM *d*Sn **Sn** **15 06 02.8 -3.8**
HERR Herculane 7.55 81 ⇑P **Pn** **15 04 38.5 -3.8**
HERR ⇑S **Sn** **15 06 01.7 -5.7**
GIVF Givet 7.59 323 *e*Pn **Pn** **15 04 45.2 +2.3**
GIVF *e*Sn **Sn** **15 06 02.6 -5.7**
BCLA Clavier 7.63 326 *d*Pn **Pn** **15 04 46.0 +2.5**
BCLA *d*Pb **Pb** **15 05 05.6 +0.5**
BCLA *d*Sn **Sn** **15 06 05.1 -4.3**
BCLA *d*SnSn **SnSn** **15 06 19.0 -1.8**
BSTI Sart Tilman 7.66 328 *d*Sn **Sn** **15 06 05.5 -4.6**
DOU Dourbes 7.69 322 *d*PnPn Pn 15 04 52.9 +8.7
DOU *d*Sn **Sn** **15 06 06.5 -4.1**
DOU *d*SnSn **SnSn** **15 06 20.1 -1.9**
DOU *d*Sb **Sb** **15 06 34.7 -2.4**
BGES Gesves 7.69 326 *d*Pn **Pn** **15 04 46.8 +2.5**
BGES *d*PnPn **PnPn** **15 04 52.2 +0.4**
BGES *d*Pg Pb 15 05 21.6 +15
BGES *d*Sn **Sn** **15 06 07.1 -3.7**
BGES *d*SnSn **SnSn** **15 06 22.6 +0.3**
BGES *d*Sb **Sb** **15 06 36.0 -1.3**
BMRD Maredsous 7.76 324 *d*Pn **Pn** **15 04 45.6 +0.3**
BMRD *d*Pb Pb 15 05 02.9 -4.4
BMRD *d*Sn **Sn** **15 06 08.3 -4.3**
FNA Florina 7.81 113 Pn **Pn** **15 04 46.5 +0.4**
BLKB Belogradchik 7.81 91 ⇑S **Sn** **15 06 09.2 -4.7**
BAIF Baives 7.83 321 *e*Pn **Pn** **15 04 48.3 +2.1**
BAIF *e*Sn **Sn** **15 06 10.3 -3.9**
GZR Gura Zlata 7.83 78 ⇓P **Pn** **15 04 43.6 -2.7**
GZR ⇓S **Sn** **15 06 09.5 -4.9**
DRGR 8.02 68 ⇑P **Pn** **15 04 46.1 -2.8**
DRGR ⇑S **Sn** **15 06 12.5 -6.6**
VTS Vitosha 8.42 97 ⇓P **Pn** **15 04 51.0 -3.4**
VTS ⇑S **Sn** **15 06 25.3 -3.6**
VTS Vitosha 8.42 97 Pn **Pn** **15 04 55.3 +0.9**
EPF Esparros 8.46 266 *e*Pn **Pn** **15 04 56.0 +1.1**
EPF *e*Sn **Sn** **15 06 25.7 -4.2**
KEST Kesra 8.71 194 Pn Pn 15 05 04.5 +6.1
comp=Z,1.5nm,0.3s,baz=328,slow=3.1,SNR=15
KEST Sn **Sn** **15 06 39.9 +3.8**
comp=Z,0.1nm,0.3s,baz=146,slow=21,SNR=1.5
MFF Saint Martin d 8.79 290 *e*Pn **Pn** **15 05 00.7 +1.3**
MFF *e*Sn **Sn** **15 06 33.1 -4.7**
comp=Z,7.3nm,0.4s
ETSF Etsaut 9.13 266 *e*Pn Pn 15 05 10.0 +5.8
ARR Arges 9.14 78 ⇓P **Pn** **15 04 59.8 -4.4**
LDF La Druitiere 9.37 302 *e*Pn **Pn** **15 05 08.5 +1.2**
LDF *e*Sn **Sn** **15 06 48.4 -3.6**
comp=Z,5.5nm,0.4s
AGG Agios Georgios 9.39 120 Pn **Pn** **15 05 07.8 +0.1**
SJPF Ste Jean 9.57 268 *e*Pn **Pn** **15 05 10.4 +0.3**
FLN La Foliniere 9.66 302 *e*Pn **Pn** **15 05 12.7 +1.5**
FLN *e*Sn **Sn** **15 06 54.5 -4.5**
comp=Z,6.4nm,0.4s
GRR Gorron 9.75 300 *e*Pn **Pn** **15 05 12.3 -0.2**
GRR *e*Sn **Sn** **15 06 56.7 -4.6**
comp=Z,7.1nm,0.4s
BUR08 Bucovina Ar. S 9.88 65 Pn **Pn** **15 05 12.8 -1.6**
BURAR Bucovina Array 9.89 65 ⇑P **Pn** **15 05 10.2 -4.3**
BURAR ⇓S **Sn** **15 06 59.8 -5.1**
BURAR Bucovina Array 9.89 65 Pn **Pn** **15 05 14.6 +0.1**
SGMF Saint Gilles 10.78 297 *e*Pn **Pn** **15 05 26.3 -0.3**
SGMF *e*Sn **Sn** **15 07 19.7 -6.9**
comp=Z,4.5nm,0.4s
ALN Alexandroupoli 10.96 103 Pn **Pn** **15 05 27.5 -1.6**
QUIF Quistinic 11.09 295 *e*Pn **Pn** **15 05 30.0 -0.8**
QUIF *e*Sn **Sn** **15 07 28.7 -5.4**
comp=Z,2.6nm,0.4s
ROSF Rostrenen 11.26 297 *e*Pn **Pn** **15 05 33.0 -0.2**
ROSF *e*Sn **Sn** **15 07 33.1 -5.3**
comp=Z,4.9nm,0.4s
ESDC Sonseca Array 12.64 254 Pn **Pn** **15 05 51.7 -0.5**
baz=63,slow=13,SNR=8.8
AKASG Malin Array Be 13.38 55 Pn **Pn** **15 06 00.0 -2.1**
baz=243,slow=12,SNR=1.6
KARP Karpathos 14.57 121 P **P** **15 06 25.7 +0.8**
EKA Eskdalemuir Ar 14.72 324 Pn **Pn** **15 06 19.6 -0.8**
baz=188,slow=28,SNR=4.9
HFS Hagfors 15.96 3 Pn **Pn** **15 06 36.9 +0.2**
baz=175,slow=18,SNR=1.6
NOA NORSAR Array B 16.84 359 Pn **Pn** **15 06 45.5 -2.4**
comp=Z,0.0nm,0.3s,baz=178,slow=11,SNR=8.7
NB201 NORSAR Array S 16.85 359 P **P** **15 06 51.6 +1.6**
MDT Midelt 17.18 234 P **P** **15 06 54.5 +0.6**
comp=Z,0.1nm,0.3s,baz=70,slow=11,SNR=1.7
FINES FINESS Array B 19.18 21 P **P** **15 07 15.6 +0.1**
comp=Z,0.4nm,0.3s,baz=194,slow=11,SNR=6.1
TOA0 Torodi Ar. Sit 32.19 199 P **P** **15 09 19.8 -0.3**
TOA0 IAmb IAmb 15 09 20.8
comp=Z,6.9nm,0.8s
TORD Torodi Ar. Bea 32.19 199 P **P** **15 09 19.7 -0.3**
comp=Z,6.3nm,0.7s,baz=9.4,slow=9.3,SNR=40
TORD PcP **PcP** **15 12 08.2 -0.4**
comp=Z,0.5nm,0.7s,baz=320,slow=2.5,SNR=2.6
TORD Torodi Ar. Bea 32.19 199 P **P** **15 09 19.6 -0.5**
TORD IAmb IAmb 15 09 20.8
comp=Z,3.5nm,0.8s
TORD PcP **PcP** **15 12 07.2 -1.4**
MKAR Makanchi Array 47.88 61 P **P** **15 11 29.8 -0.1**
comp=Z,1.4nm,0.8s,baz=283,slow=6.6,SNR=10
MKAR PcP **PcP** **15 12 58.7 +0.5**
comp=Z,0.6nm,0.7s,baz=291,slow=4.0,SNR=2.7
MKAR Makanchi Array 47.88 61 P **P** **15 11 30.6 +0.7**
EUNU Eureka 48.20 347 P **P** **15 11 33.2 +1.1**
EUNU IAmb IAmb 15 11 40.6
comp=Z,2.6nm,0.8s
SONM Songino Array 61.60 50 P **P** **15 13 10.2 +0.7**
comp=Z,0.8nm,0.7s,baz=289,slow=8.9,SNR=5.6
YKA Yellowknife Ar 65.34 336 P **P** **15 13 35.0 +1.3**
comp=Z,2.8nm,0.6s,baz=44,slow=6.1,SNR=65
ILAR Eielson Array 70.07 350 P **P** **15 14 05.2 +1.7**
comp=Z,0.7nm,0.8s,baz=9.8,slow=7.4,SNR=11
BCAR Beaver Creek A 71.01 348 P **P** **15 14 11.2 +1.9**
SUA Susitna One 73.72 351 P **P** **15 14 27.7 +2.0**
SUA IAmb IAmb 15 14 35.1
comp=Z,6.2nm,0.8s
CMAR Chiang Mai Arr 75.30 79 P **P** **15 14 35.9 +0.5**
comp=Z,1.6nm,0.8s,baz=306,slow=7.2,SNR=17
PDAR Pinedale Array 78.81 320 P **P** **15 14 55.8 +0.7**
comp=Z,1.0nm,0.7s,baz=60,slow=5.0,SNR=10
KSRS Korea Array 80.22 47 P **P** **15 15 02.6 +0.1**
comp=Z,0.6nm,0.8s,baz=325,slow=5.9,SNR=2.3
ELK Elko 82.97 322 P **P** **15 15 19.7 +2.3**
comp=Z,1.2nm,0.8s,baz=23,slow=7.6,SNR=5.0
ANMO Albuquerque 83.34 313 P **P** **15 15 21.0 +1.7**
comp=Z,1.7nm,0.9s,baz=89,slow=4.4,SNR=3.9
TXAR Lajitas Array 86.10 308 P **P** **15 15 35.1 +1.9**
comp=Z,6.6nm,0.9s,baz=63,slow=4.0,SNR=23
ASAR Alice Springs 128.82 86 PKP **PKPdf** **15 21 59.9 +0.3**
comp=Z,0.8nm,0.8s,baz=323,slow=1.3,SNR=8.4

*SOF **24** 15:06:02.4, 40.95N±0.02×22.13E±0.02, h2km, MD2.8*
*SKO **24** 15:06:03.8, 40.86N±0.02×22.36E±0.02, h15km*
*THE **24** 15:06:04.8, 40.86N±0.02×22.37E±0.02, h0km±2km, ML2.1/7, Error ellipse: s-maj=2.0km s-min=0.6km az=287.0*
*ATH **24** 15:06:04.4, 40.87N±0.02×22.32E±0.02, h8km±3km, ML2.5/4, Error ellipse: s-maj=4.4km s-min=1.5km az=319.0*
ISC 24 15:06:04.3±0.9, 40.86N±0.02×22.35E±0.02, h7km±7km, n32, σ0.957/50, 2C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRG	**Griva**	**0.10**	**20**	P	**Pg**	**15 06 06.7**	**0.0**
GRG				S	**Sg**	**15 06 08.6**	**+0.3**
GRG				AML	AML	15 06 09.2	
	comp=N,30146μm,0.4s						
GRG				AML	AML	15 06 10.0	
	comp=E,27513μm,0.4s						
GRG	**Griva**	**0.10**	**20**	P	**Pg**	**15 06 06.7**	**0.0**
GRG				S	**Sg**	**15 06 08.2**	**-0.1**
GRG	**Griva**	**0.10**	**20**	⇑*i*Pg	**Pg**	**15 06 06.7**	**0.0**
GRG				*i* Sg	**Sg**	**15 06 08.2**	**-0.1**
VAY	**Valandovo**	**0.49**	**19**	⇑*i*Pg	**Pg**	**15 06 13.7**	**-0.1**
VAY				*i* Sg	**Sg**	**15 06 21.1**	**+1.0**
VAY				*e*Lg	Lg	15 06 24.7	
	comp=N,1μm,0.9s						
VAY				*e*Lg	Lg	15 06 25.1	
	comp=E,487nm,0.8s						
KNT	**Kendrikon**	**0.51**	**54**	P	**Pg**	**15 06 14.5**	**+0.3**
KNT				S	**Sb**	**15 06 22.3**	**-1.0**
KNT				AML	AML	15 06 22.6	
	comp=E,766μm,0.7s						
KNT				AML	AML	15 06 25.1	
	comp=N,675μm,0.4s						
KNT	**Kendrikon**	**0.51**	**54**	P	**Pg**	**15 06 14.4**	**+0.3**
KNT				S	**Sb**	**15 06 22.2**	**-1.0**
	comp=N,395nm,0.5s						
KNT	**Kendrikon**	**0.51**	**54**	⇓*i*Pg	**Pg**	**15 06 14.5**	**+0.3**
KNT				*i* Sg	**Sb**	**15 06 22.1**	**-1.2**
THE	**Thessaloniki**	**0.52**	**116**	P	**Pg**	**15 06 14.3**	**0.0**
THE	**Thessaloniki**	**0.52**	**116**	P	**Pg**	**15 06 14.3**	**0.0**
THE				S	**Sg**	**15 06 21.7**	**+0.7**
	comp=N,90nm,0.4s						
THE	**Thessaloniki**	**0.52**	**116**	*i* Pg	**Pg**	**15 06 14.2**	**0.0**
HORT	**Hortiatis**	**0.62**	**115**	P	**Pg**	**15 06 16.0**	**-0.3**
HORT				AML	AML	15 06 31.0	
	comp=E,384μm,0.7s						
HORT				AML	AML	15 06 31.4	
	comp=N,427μm,0.8s						
HORT	**Hortiatis**	**0.62**	**115**	P	**Pg**	**15 06 16.5**	**+0.2**
HORT				S	**Sb**	**15 06 25.8**	**-0.8**
	comp=N,208nm,0.7s						
KZN	**Kozani**	**0.71**	**219**	P	**Pg**	**15 06 18.2**	**+0.2**
KZN	**Kozani**	**0.71**	**219**	P	**Pg**	**15 06 17.9**	**-0.1**
KZN				S	**Sb**	**15 06 29.2**	**+0.2**
	comp=N,165nm,0.7s						
FNA	**Florina**	**0.75**	**264**	*i* Pg	**Pg**	**15 06 18.7**	**+0.1**
FNA				*i* Sg	**Sb**	**15 06 29.8**	**-0.3**
SOH	**Sokhos**	**0.76**	**93**	P	**Pg**	**15 06 18.8**	**-0.2**
SOH				S	**Sb**	**15 06 30.7**	**+0.2**
SOH				AML	AML	15 06 35.5	
	comp=E,1168μm,0.6s						
SOH				AML	AML	15 06 35.7	
	comp=N,890μm,0.6s						
SOH	**Sokhos**	**0.76**	**93**	P	**Pg**	**15 06 18.7**	**-0.2**
SOH				S	**Sb**	**15 06 30.4**	**-0.1**
	comp=N,418nm,0.5s						
SOH	**Sokhos**	**0.76**	**93**	*i* Pg	**Pg**	**15 06 18.8**	**-0.2**
SOH				*i* Sg	**Sb**	**15 06 29.8**	**-0.6**
LIT	**Litokhoron**	**0.77**	**172**	P	**Pg**	**15 06 19.4**	**+0.4**
LIT	**Litokhoron**	**0.77**	**172**	P	**Pg**	**15 06 18.9**	**-0.1**
LIT				S	**Sb**	**15 06 30.4**	**-0.2**
	comp=N,100nm,0.4s						
LIT	**Litokhoron**	**0.77**	**172**	*i* Pg	**Pg**	**15 06 19.6**	**+0.5**
STIP	**Stip**	**0.84**	**351**	*e*Pg	**Pb**	**15 06 21.8**	**+0.5**
KKB	**Krupnik**	**1.15**	**28**	*i* P	**Pg**	**15 06 25.4**	**-0.9**
OHR	**Ohrid**	**1.20**	**283**	*i* Pg	**Pb**	**15 06 27.0**	**-0.5**
OHR				*i* Sg	**Sn**	**15 06 44.2**	**-0.1**
OHR				*e*Lg	Lg	15 06 45.4	
	comp=N,87nm,0.6s						
OHR				*e*Lg	Lg	15 06 47.9	
	comp=E,108nm,0.6s						
NVR	**Nevrokopi**	**1.24**	**66**	P	**Pb**	**15 06 27.6**	**-0.4**
MMB	**Musomiste**	**1.27**	**54**	*i* P	**Pg**	**15 06 29.3**	**+0.7**
SKO	**Skopje**	**1.31**	**329**	*e*Pg	**Pn**	**15 06 29.0**	**0.0**
SKO				*i* Sg	**Sb**	**15 06 45.7**	**-0.5**
KAVA	**Kavala**	**1.64**	**85**	P	**Pb**	**15 06 34.7**	**-0.2**
KAVA	**Kavala**	**1.64**	**85**	P	**Pb**	**15 06 34.6**	**-0.2**
KAVA				S	**Sg**	**15 06 56.8**	**-0.3**
	comp=E,68nm,0.7s						
THAS	**Thassos island**	**1.81**	**97**	P	**Pb**	**15 06 37.1**	**-0.7**
VTS	**Vitosha**	**1.88**	**20**	*e*P	**Pn**	**15 06 37.6**	**+0.6**
RZN	**Rozhen**	**1.96**	**64**	*i* P	**Pg**	**15 06 44.1**	**+2.2**

*ROM **24** 15:11:18.3±0.1, 44.241N±0.008×11.91E±0.01, h21km±1km, ML2.4/33, Error ellipse: s-maj=0.9km s-min=0.6km az=43.0*
*PRU **24** 15:11:19.9±0.0, 44.47N×12.27E, h0km*
*LDG **24** 15:11:19.3±0.5, 44.22N×12.03E, h24km, Ml2.8/13, Error ellipse: s-maj=10.2km s-min=6.9km az=78.0*
ISC 24 15:11:16.3±0.9, 44.29N±0.02×12.02E±0.02, h15km±8km, n83, σ1.970/103, 1C-4D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAEN	**Faenza**	**0.10**	**271**	P	**Pb**	**15 11 21.9**	**+1.8**
FAEN				S	**Sb**	**15 11 25.7**	**+3.2**
IMOL	**Imola, Italy**	**0.21**	**290**	P	**Pb**	**15 11 24.0**	**+2.1**
IMOL				S	**Sb**	**15 11 27.9**	**+2.2**
CMPO	**Campotto Po**	**0.33**	**332**	P	**Pn**	**15 11 26.0**	**-0.6**
BRIS	**BRISIGHELLA**	**0.39**	**250**	⇑P	**Pg**	**15 11 22.1**	**-2.1**
BRIS				S	**Sg**	**15 11 25.4**	**-4.2**
BRIS				AML	AML		
	comp=N,2945μm,0.5s						
BRIS				AML	AML		
	comp=E,3965μm,1.3s						
SFI	**Santa Sofia**	**0.40**	**198**	P	**Pg**	**15 11 25.3**	**+0.9**
SFI				S	**Sg**	**15 11 31.4**	**+1.5**
SFI				AML	AML		
	comp=E,1325μm,0.2s						
SFI				AML	AML		
	comp=N,920μm,0.8s						
SFI				AML	AML		
	comp=E,1140μm,0.7s						
SFI				AML	AML		
	comp=N,1198μm,0.9s						
SFI				AML	AML		
	comp=N,922μm,0.8s						
SFI				AML	AML		
	comp=E,1135μm,0.7s						
SFI				AML	AML		
	comp=N,1196μm,0.9s						
SFI				AML	AML		
	comp=N,1194μm,0.9s						
MTRZ	**Monterenzio**	**0.41**	**283**	⇓P	**Pb**	**15 11 26.6**	**+1.3**
MTRZ				S	**Sg**	**15 11 31.0**	**+0.9**
MTRZ				AML	AML		
	comp=E,765μm,0.3s						
MTRZ				AML	AML		
	comp=N,866μm,0.4s						
MTRZ				AML	AML		
	comp=E,804μm,0.3s						
MTRZ				AML	AML		
	comp=N,888μm,0.4s						
MTRZ				AML	AML		
	comp=N,866μm,0.4s						
MTRZ				AML	AML		
	comp=E,803μm,0.3s						
MTRZ				AML	AML		
	comp=N,888μm,0.4s						
MTRZ				AML	AML		
	comp=E,766μm,0.3s						
RSM	**Repubblica di**	**0.47**	**139**	P	**Pn**	**15 11 28.8**	**+0.2**
ASQU	**Asqua**	**0.52**	**199**	⇓P	**Pg**	**15 11 27.2**	**+0.6**
ASQU				S	**Sg**	**15 11 34.8**	**+1.3**
ASQU				AML	AML		
	comp=N,762μm,0.2s						
ASQU				AML	AML		
	comp=E,550μm,1.5s						
CPGN	**Carpegna, Ital**	**0.53**	**156**	P	**Pn**	**15 11 29.3**	**-0.2**
CPGN				AML	AML		
	comp=E,484μm,0.8s						
CPGN				AML	AML		
	comp=N,549μm,0.5s						
SEI	**Scarperia**	**0.53**	**244**	P	**Pg**	**15 11 27.0**	**+0.1**
SEI				S	**Sg**	**15 11 34.3**	**+0.4**
SEI				AML	AML		
	comp=E,1565μm,0.6s						
SEI				AML	AML		
	comp=N,2450μm,0.7s						
SEI				AML	AML		
	comp=N,2455μm,0.7s						
RUFI	**Rufina**	**0.58**	**220**	⇓P	**Pg**	**15 11 27.9**	**+0.2**
RUFI				S	**Sg**	**15 11 35.9**	**+0.5**
RUFI				AML	AML		
	comp=E,944μm,0.3s						
RUFI				AML	AML		
	comp=N,630μm,0.3s						
RUFI				AML	AML		
	comp=N,630μm,0.3s						
RUFI				AML	AML		
	comp=N,942μm,0.3s						
RUFI				AML	AML		
	comp=N,628μm,0.3s						
PARC	**Parchiule**	**0.66**	**166**	P	**Pb**	**15 11 30.4**	**+1.0**
PARC				AML	AML		
	comp=E,232μm,0.5s						
PARC				AML	AML		
	comp=N,232μm,0.2s						
PARC				AML	AML		
	comp=E,231μm,0.5s						
PARC				AML	AML		
	comp=N,232μm,0.2s						
FNVD	**Fontana Vidola**	**0.66**	**260**	P	**Pg**	**15 11 29.6**	**+0.4**
FNVD				AML	AML		
	comp=N,549μm,0.5s						
FNVD				AML	AML		
	comp=E,520μm,0.8s						
PE3	**Peglio**	**0.68**	**150**	P	**Pn**	**15 11 32.1**	**+0.7**
PE3				AML	AML		
	comp=E,1248μm,0.4s						
PE3				AML	AML		
	comp=E,1250μm,0.4s						
PE3				AML	AML		
	comp=N,824μm,0.5s						
SSP9	**Sansepolcro**	**0.72**	**174**	P	**Pb**	**15 11 31.4**	**+0.9**
SSP9				AML	AML		
	comp=E,212μm,0.6s						
SSP9				AML	AML		
	comp=N,512μm,0.5s						
MTCR	**Monte La Croce**	**0.78**	**251**	P	**Pb**	**15 11 31.6**	**-0.1**
NARO	**Abbazia di Nar**	**0.79**	**149**	AML	AML		
	comp=N,196μm,0.3s						
NARO				AML	AML		
	comp=E,184μm,0.7s						
BADI	**Badiali**	**0.79**	**168**	P	**Pg**	**15 11 32.7**	**+1.0**
BADI				AML	AML		
	comp=N,260μm,1.0s						
BADI				AML	AML		
	comp=E,459μm,0.5s						
BADI				AML	AML		
	comp=N,260μm,1.6s						
FSSB	**Fossombrone**	**0.81**	**137**	AML	AML		
	comp=E,493μm,1.6s						
FSSB				AML	AML		
	comp=N,528μm,0.3s						
MPAG	**Monte Paganucc**	**0.85**	**141**	AML	AML		
	comp=N,299μm,0.4s						
MPAG				AML	AML		
	comp=E,224μm,0.6s						

CRMI	**Carmignano**	**0.91 237**	P	**Pb**	**15 11 34.1 +0.3**
CRMI			AML	AML	
	comp=N,74µm,0.6s				
CRMI			AML	AML	
	comp=E,78µm,0.4s				
POPM	**Popiglio**	**0.94 256**	P	**Pn**	**15 11 36.0 +1.0**
POPM			S	**Sn**	**15 11 50.9 +2.6**
POPM	**Popiglio**	**0.94 256**	AML	AML	
	comp=N,254µm,1.0s				
POPM			AML	AML	
	comp=E,249µm,0.7s				
POPM			AML	AML	
	comp=E,250µm,0.7s				
ATVO	**AVT- Monte Val**	**0.95 163**	P	**Pn**	**15 11 35.7 +0.6**
ATVO			AML	AML	
	comp=E,385µm,1.0s				
ATVO			AML	AML	
	comp=N,237µm,0.5s				
OSSC	**Osservatorio P**	**0.95 217**	AML	AML	
	comp=N,203µm,0.4s				
OSSC			AML	AML	
	comp=E,234µm,0.5s				
OSSC			AML	AML	
	comp=N,345µm,0.8s				
OSSC			AML	AML	
	comp=E,290µm,0.6s				
CAFI	**Castiglion Fio**	**0.96 183**	P	**Pb**	**15 11 35.1 +0.5**
CAFI			AML	AML	
	comp=N,210µm,0.7s				
CAFI			AML	AML	
	comp=E,218µm,0.5s				
CAFI			AML	AML	
	comp=N,210µm,0.7s				
ATMI	**Monte Miggiano**	**0.97 169**	AML	AML	
	comp=E,360µm,0.4s				
ATMI			AML	AML	
	comp=N,459µm,0.4s				
CSNT	**Castellina Chi**	**0.97 213**	P	**Pb**	**15 11 35.8 +0.9**
CSNT			AML	AML	
	comp=E,197µm,0.6s				
CSNT			AML	AML	
	comp=N,208µm,1.2s				
CSNT			AML	AML	
	comp=E,198µm,0.6s				
ARVD	**Arcevia**	**1.03 140**	AML	AML	
	comp=N,104µm,1.1s				
ARVD			AML	AML	
	comp=E,115µm,0.3s				
ARVD			AML	AML	
	comp=N,105µm,1.1s				
ARVD			AML	AML	
	comp=E,114µm,0.3s				
BDI	**Bagni Di Lucca**	**1.05 258**	P	**Pg**	**15 11 37.9 +1.3**
BDI			AML	AML	
	comp=E,196µm,1.1s				
BDI			AML	AML	
	comp=N,170µm,1.1s				
TEOL	**Teolo**	**1.10 347**	P	**Pg**	**15 11 38.5 +1.0**
TEOL			AML	AML	
	comp=E,472µm,0.8s				
TEOL			AML	AML	
	comp=N,616µm,1.3s				
ATTE	**AVT- Monte Tez**	**1.11 168**	AML	AML	
	comp=N,128µm,1.0s				
ATTE			AML	AML	
	comp=E,194µm,0.5s				
MAIM	**Mastiano**	**1.17 252**	P	**Pb**	**15 11 38.9 +0.8**
MAIM	**Mastiano**	**1.17 252**	P	**Pn**	**15 11 38.7 +0.6**
MAIM			AML	AML	
	comp=E,53µm,0.8s				
MAIM			AML	AML	
	comp=N,80µm,0.4s				
VLC	**Villacollemand**	**1.18 264**	AML	AML	
	comp=E,105µm,0.9s				
VLC			AML	AML	
	comp=N,71µm,0.6s				
PII	**Pisa**	**1.22 243**	AML	AML	
	comp=E,230µm,0.9s				
PII			AML	AML	
	comp=N,216µm,0.3s				
ASSB	**Assisi San Ben**	**1.33 159**	AML	AML	
	comp=N,92µm,0.5s				
ASSB			AML	AML	
	comp=E,80µm,0.7s				
EQUI	**Equi**	**1.35 265**	P	**Pg**	**15 11 43.6 +1.4**
MGAB	**Montegabbione**	**1.38 177**	P	**Pg**	**15 11 43.1 +0.4**
MGAB			AML	AML	
	comp=E,181µm,0.4s				
MGAB			AML	AML	
	comp=N,165µm,0.9s				
MGAB			AML	AML	
	comp=E,165µm,0.4s				
MGAB			AML	AML	
	comp=N,158µm,0.9s				
BRJN	**Brijuni**	**1.38 63**	*e*Pg	**Pg**	**15 11 43.2 +0.4**
BRJN			Sg	**Sg**	**15 12 02.3 +1.5**
GRAM	**Graiana**	**1.42 279**	AML	AML	
	comp=N,99µm,0.3s				
GRAM			AML	AML	
	comp=E,112µm,0.4s				
ROVR	**Rover Verones**	**1.52 334**	P	**Pb**	**15 11 44.3 0.0**
CASP	**Castiglione de**	**1.72 210**	AML	AML	
	comp=E,63µm,1.5s				
CASP			AML	AML	
	comp=N,76µm,0.3s				
MAGA	**Magasa**	**1.79 327**	AML	AML	
	comp=N,396µm,0.3s				
MAGA			AML	AML	
	comp=E,397µm,1.0s				
STAL	**STALIGIAL**	**2.03 14**	AML	AML	
	comp=E,165µm,1.3s				
STAL			AML	AML	
	comp=N,142µm,0.3s				
MABI	**Malga Bissina**	**2.06 329**	P	**Pn**	**15 11 52.4 +1.8**
MABI			AML	AML	
	comp=E,36µm,1.3s				
MABI			AML	AML	
	comp=N,29µm,0.5s				
DUGI	**Dugi Otok**	**2.20 97**	*e*Pn	**Pb**	**15 11 54.7 -1.1**
DUGI			Sn	**Sb**	**15 12 21.7 -1.3**
EUCT	**Pavia**	**2.25 295**	P	**Pg**	**15 11 59.6 +0.2**
FAGN	**Fagnano**	**2.32 150**	P	**Pg**	**15 12 01.8 +1.1**
ABTA	**Abfaltersbach**	**2.48 8**	*e*Pn	**Pb**	**15 11 59.2 -1.5**
	comp=N,0.1nm,0.1s				
ABTA			*e*Sn	**Sb**	**15 12 28.7 -2.4**
	comp=N,3.6nm,0.4s				
MYKA	**Terra Mystica**	**2.60 25**	*e*Pn	**Pn**	**15 12 00.1 +2.1**
	comp=N,1.1nm,0.3s				
MYKA			*e*Sn	**Sb**	**15 12 33.7 -0.9**
	comp=N,1.8nm,0.2s				
VVLD	**Villa Vallelon**	**2.68 154**	⇓P	**Pn**	**15 12 01.6 +2.6**
VVLD			AML	AML	
	comp=E,12µm,1.1s				
VVLD			AML	AML	
	comp=N,11µm,1.0s				
MORI	**Morici**	**2.69 98**	*e*Pn	**Pb**	**15 12 02.3 -1.8**
MORI			Sn	**Sb**	**15 12 34.4 -2.5**
PGF	**Pioggiola**	**2.81 233**	*e*Pn	**Pn**	**15 12 01.9 +1.2**
PGF			*e*Sn	**Sn**	**15 12 32.2 -2.2**
	comp=N,8.6nm,0.4s				
PGF			*e*S	**Sb**	**15 12 37.2 -3.2**
OBKA	**Obir**	**2.85 38**	*e*Pn	**Pn**	**15 12 03.6 +2.4**
	comp=N,0.4nm,0.3s				
OBKA			*e*Sn	**Sb**	**15 12 39.1 -2.4**
	comp=N,5.7nm,0.7s				
FETA	**Feichten**	**2.88 342**	*e*Pn	**Pb**	**15 12 05.2 -2.3**
	comp=N,0.7nm,0.3s				
FETA			*e*Sn	**Sb**	**15 12 39.6 -3.0**
	comp=N,2.9nm,0.5s				
KBA	**Koelnbreinsper**	**2.94 18**	*e*Pn	**Pn**	**15 12 04.0 +1.3**
	comp=N,0.4nm,0.1s				
KBA			*e*Sn	**Sn**	**15 12 39.1 +1.3**
	comp=N,2.0nm,0.3s				
SQTA	**Sankt Quirin**	**2.99 349**	*e*Pn	**Pn**	**15 12 04.1 +0.8**
	comp=N,0.5nm,0.1s				
SQTA			*e*Sn	**Sn**	**15 12 40.5 +1.6**
	comp=N,3.0nm,0.3s				
WTTA	**Wattenberg**	**2.99 355**	*e*Pn	**Pn**	**15 12 05.6 +2.3**
	comp=N,0.7nm,0.2s				
WTTA			*e*Sn	**Sn**	**15 12 42.2 +3.2**
	comp=N,5.5nm,0.4s				
WATA	**Walderalm**	**3.06 354**	*e*Pn	**Pn**	**15 12 05.4 +1.0**
	comp=N,1.6nm,0.2s				
WATA			*e*Sn	**Sn**	**15 12 43.2 +2.4**
	comp=N,1.4nm,0.3s				
MOTA	**Moosalm**	**3.12 348**	*e*Pn	**Pn**	**15 12 06.3 +1.1**
	comp=N,0.3nm,0.1s				
MOTA			*e*Sn	**Sb**	**15 12 46.2 -3.4**
	comp=N,4.0nm,0.3s				
SOKA	**Soboth**	**3.19 40**	*e*Pn	**Pn**	**15 12 07.9 +1.8**
	comp=N,0.3nm,0.2s				
SOKA			*e*Sn	**Sn**	**15 12 46.9 +3.0**
	comp=N,1.5nm,0.4s				
SBF	**Sospel**	**3.33 264**	*e*Pn	**Pn**	**15 12 09.7 +1.7**
SBF			*e*Sn	**Sn**	**15 12 45.4 -1.9**
	comp=N,3.2nm,0.2s				
DAVA	**Damuels**	**3.35 334**	*e*Pn	**Pn**	**15 12 09.4 +1.0**
	comp=N,0.5nm,0.2s				
DAVA			*e*Sn	**Sn**	**15 12 49.4 +1.4**
	comp=N,3.1nm,0.2s				
SGG	**Gregorio Mates**	**3.38 148**	S	**Sg**	**15 13 04.0 -0.7**
MBDF	**Montbardon**	**3.78 279**	*e*Pn	**Pn**	**15 12 15.3 +1.1**
FRF	**La Foret Royal**	**3.95 261**	*e*Pn	**Pn**	**15 12 17.5 +1.1**
FRF			*e*Sn	**Sn**	**15 13 01.1 -1.4**
	comp=N,1.1nm,0.2s				
LPL	**La Plagne**	**3.96 290**	*e*Pn	**Pn**	**15 12 17.0 +0.4**
LPL			*e*Sn	**Sn**	**15 13 00.9 -2.0**
	comp=N,4.3nm,0.4s				
LMR	**La Mourre**	**4.10 258**	*e*Pn	**Pn**	**15 12 19.5 +1.0**
LMR			*e*Sn	**Sn**	**15 13 03.2 -3.0**
	comp=N,1.9nm,0.2s				
MCRV	**Calabrutti - M**	**4.20 145**	S	**Sn**	**15 13 09.0 +0.1**
CONA	**Conrad Observa**	**4.51 35**	*e*Pn	**Pn**	**15 12 25.7 +1.5**
	comp=N,0.2nm,0.1s				
CONA			*e*Sn	**Sn**	**15 13 18.1 +1.6**
	comp=N,1.4nm,0.4s				
CABF	**La Chapelle**	**4.78 301**	*e*Pn	**Pn**	**15 12 29.5 +1.7**
MCEL	**Monticello**	**4.85 143**	P	**Pb**	**15 12 39.0 -2.0**
KHC	**Kasperske Hory**	**4.96 12**	*e*SN	**Sn**	**15 13 26.3 -1.1**
HINF	**Hinteralfeld**	**5.04 316**	*e*Pn	**Pn**	**15 12 32.3 +0.9**
HINF			*e*Sn	**Sn**	**15 13 27.6 -1.8**
	comp=N,1.9nm,0.2s				
CDF	**Champ du Feu**	**5.27 323**	*e*Pn	**Pn**	**15 12 35.6 +1.0**
CDF			*e*Sn	**Sn**	**15 13 33.5 -1.7**
	comp=N,1.6nm,0.2s				
VIVF	**Saint-Julien-l**	**5.28 279**	*e*Pn	**Pn**	**15 12 34.9 +0.2**
VIVF			*e*Sn	**Sn**	**15 13 32.8 -2.5**
	comp=N,2.6nm,0.4s				
HAU	**Haudompre**	**5.42 315**	*e*Pn	**Pn**	**15 12 38.2 +1.6**
HAU			*e*Sn	**Sn**	**15 13 36.9 -1.8**
	comp=N,8.5nm,0.4s				
LASF	**Ste Croix**	**5.88 271**	*e*Pn	**Pn**	**15 12 43.6 +0.7**
SMF	**Signal de Mont**	**6.22 295**	*e*Pn	**Pn**	**15 12 48.2 +0.7**
SMF			*e*Sn	**Sn**	**15 13 56.0 -2.4**
	comp=N,2.2nm,0.3s				
LOR	**Lormes**	**6.44 300**	*e*Sn	**Sn**	**15 14 01.2 -2.6**
	comp=N,2.9nm,0.3s				
SSF	**Saint Saulge**	**6.58 298**	*e*Pn	**Pn**	**15 12 54.2 +1.7**
AVF	**Avril sur Loir**	**6.58 295**	*e*Pn	**Pn**	**15 12 53.4 +0.9**

STR ***24*** *15:12:28.2±0.8, 45°N±8°×°±1°2, h11km, MLv0.8/4, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

LDG 24 15:12:28.4±0.0, 44°51N×6°63E, h2km, Md1.3/1, Ml1.5/4, Error ellipse: s-maj=1.0km s-min=0.6km az=72.0, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OGAG	**Argentiere**	**0.08**	**227**	Pg	Pg	15 12 34.1	+4.0
OGAG				Sg	Sg	15 12 37.9	+6.7
MBDF	**Montbardon**	**0.24**	**26**	*e*Pg	Pg	15 12 33.5	+0.5
MBDF				*e*Sg	Sg	15 12 36.5	+0.3
	3.6nm,0.2s						
ISO	**Isola**	**0.45**	**137**	Pg	Pg	15 12 37.2	+0.2
ISO				Sg	Sg	15 12 42.9	+0.1
ORIF	**Oris-en-Rattie**	**0.67**	**308**	*e*Pg	Pg	15 12 41.4	+0.2
ORIF				*e*Sg	Sg	15 12 49.7	-0.2
	1.3nm,0.2s						
TURF	**col de Turini**	**0.77**	**134**	Pg	Pg	15 12 42.9	-0.3
TURF				Sg	Sg	15 12 53.7	+0.6
GDM	**Grand'Maison**	**0.78**	**333**	Pg	Pg	15 12 43.2	-0.1
GDM				Sg	Sg	15 12 53.6	+0.1
SMRF	**Simiane la Rot**	**0.93**	**235**	*e*Pg	Pg	15 12 45.9	-0.2
SMRF				*e*Sn	Sb	15 13 00.0	0.0
	0.8nm,0.2s						
FRF	**La Foret Royal**	**0.95**	**179**	*e*Pg	Pg	15 12 46.3	-0.3
FRF				*e*Sg	Sg	15 12 58.5	-0.4
	0.7nm,0.2s						
LMR	**La Mourre**	**1.18**	**184**	*e*Pg	Pg	15 12 50.5	-0.5
LMR				*e*Sg	Sg	15 13 05.9	-0.4
	1.2nm,0.2s						

PGC ***24*** *15:17:26.5±0.0, 51°68N×130°76W, h28km, ML3.5/14, 188km west of Bella Bella, Bc Haida Gwaii Region*
IDC ***24*** *15:17:27.8±1.9, 51°78N×130°76W, h0km, mb3.5/2, mb1 3.6/5, mb1mx3.4/33, mbtmp3.4/5, ML3.7/3, Error ellipse: s-maj=24.2km s-min=14.6km az=31.0*

ISC 24 15:17:25.2±0.9, 51°60N±0°05×130°87W±0°04, h10km, n32, σ1s71/41, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.72**	**344**	P	**Pb**	**15 17 38.9**	**-1.0**
HG4B				S	**Sb**	**15 17 49.0**	**-0.8**
BNB	**Barry Inlet**	**1.12**	**331**	P	**Pb**	**15 17 45.0**	**-1.7**
BNB				S	**Sg**	**15 18 00.1**	**-1.1**
HG1B	**Mitchell Dam**	**1.54**	**330**	Pn	**Pn**	**15 17 51.6**	**-1.1**
HG1B				Sg	**Sg**	**15 18 14.4**	**-0.4**
MOBC	**Moresby Island**	**1.69**	**337**	Pn	**Pn**	**15 17 53.1**	**-1.7**
MOBC				Sg	**Sg**	**15 18 17.9**	**-1.5**
BBB	**Bella Bella**	**1.80**	**70**	Pn	**Pb**	**15 17 56.8**	**-1.5**
	45nm,0.3s,baz=258,slow=15,SNR=37						
BBB				Sn	**Sb**	**15 18 20.8**	**-0.1**
	216nm,0.3s,baz=342,slow=22,SNR=24						
BBB	**Bella Bella**	**1.80**	**70**	Pg	**Pb**	**15 17 56.8**	**-1.5**
BBB				Sg	**Sb**	**15 18 20.2**	**-0.6**
DIB	**Dawson Inlet,**	**1.88**	**329**	Pn	**Pn**	**15 17 55.4**	**-2.0**
DIB				Sg	**Sb**	**15 18 23.4**	**+0.2**
BNAB	**Bonilla**	**1.90**	**4**	Pn	**Pn**	**15 17 56.8**	**-0.8**
BNAB				Sg	**Sb**	**15 18 23.4**	**-0.2**
HOLB	**Holberg**	**1.97**	**118**	Pn	**Pn**	**15 17 57.5**	**-1.2**
HOLB				Sn	**Sn**	**15 18 21.6**	**-1.9**
HWKB	**Hawksbury Isla**	**2.25**	**27**	Pn	**Pn**	**15 18 01.7**	**-0.9**
HWKB				Sg	**Sb**	**15 18 34.3**	**+0.4**
GRNB	**Grenville Isla**	**2.31**	**13**	Pn	**Pn**	**15 18 02.6**	**-0.8**
GRNB				Sg	**Sb**	**15 18 35.7**	**0.0**
PHC	**Port Hardy**	**2.34**	**111**	Pn	**Pn**	**15 18 02.3**	**-1.4**
MAYB	**Maynard**	**2.62**	**116**	Pn	**Pn**	**15 18 07.0**	**-0.8**
RUBB	**Prince Rupert**	**2.75**	**8**	Pn	**Pn**	**15 18 09.1**	**-0.3**
RUBB				Sg	**Sb**	**15 18 50.2**	**+2.0**
KITB	**Kitimat**	**2.82**	**28**	Pn	**Pn**	**15 18 10.3**	**0.0**
KITB				Sg	**Sb**	**15 18 52.0**	**+1.7**
WOSB	**Woss**	**3.08**	**116**	Pn	**Pn**	**15 18 13.6**	**-0.4**
NCRB	**Newcastle Ridg**	**3.27**	**110**	Pn	**Pn**	**15 18 16.1**	**-0.5**
CBB	**Campbell River**	**3.83**	**112**	Sg	**Sb**	**15 19 21.9**	**+2.8**
BTB	**Buttle Lake**	**4.02**	**120**	Sg	**Sg**	**15 19 33.2**	**-1.2**
UBRB	**Upper Baezaeko**	**4.36**	**70**	Pn	**Pn**	**15 18 32.8**	**+1.2**
UBRB				Sg	**Sg**	**15 19 41.8**	**-3.4**
MGB	**Mount Grey**	**4.74**	**121**	Pg	**Pg**	**15 18 53.1**	**-2.8**
FSB	**Fort Saint Jam**	**4.88**	**51**	Pn	**Pn**	**15 18 38.1**	**-0.5**
DLBC	**Dease Lake**	**6.87**	**4**	Pn	**Pn**	**15 19 07.0**	**+1.1**
	1.0nm,0.3s,baz=188,slow=17,SNR=7.0						
DLBC				Lg	Lg	15 20 59.8	
	0.8nm,0.3s,baz=83,slow=27,SNR=5.7						
NEW	**Newport**		**9.47 105**	Lg	Lg	15 22 23.5	
	0.2nm,0.3s,baz=44,slow=8.4,SNR=2.5						
YKA	**Yellowknife Ar**	**14.00**	**33**	Pn	**Pn**	**15 20 43.1**	**-0.2**
	0.1nm,0.3s,baz=218,slow=12,SNR=5.7						
YKA				Lg	Lg	15 24 42.0	
	0.1nm,0.3s,baz=218,slow=29,SNR=4.5						
ILAR	**Eielson Array**	**15.60**	**334**	Pn	**P**	**15 21 12.2**	**+3.1**
	0.0nm,0.3s,baz=152,slow=8.2,SNR=3.2						
PDAR	**Pinedale Array**	**16.92**	**113**	Pn	**P**	**15 21 28.0**	**+3.9**
	0.2nm,0.3s,baz=304,slow=6.4,SNR=8.5						
ULM	**Lac du Bonnet**	**21.97**	**80**	P	**P**	**15 22 23.1**	**+4.1**
	1.0nm,0.6s,baz=288,slow=20,SNR=1.8						
H11N2	**WAKE ISLAND Hy**	**57.59**	**261**	T	T	16 29 49.7	
	baz=40,slow=76,SNR=93						
H11N3	**WAKE ISLAND Hy**	**57.59**	**261**	T	T	16 29 49.8	
	baz=40,slow=76,SNR=119						
H11N1	**WAKE ISLAND Hy**	**57.60**	**261**	T	T	16 29 50.8	
	baz=40,slow=76,SNR=77						
MKAR	**Makanchi Array**	**77.92**	**337**	P	P	15 29 27.5	+4.5
	0.4nm,0.7s,baz=29,slow=6.6,SNR=4.5						

IDC 24 15:24:14.8±434.0, 59°13N×27°07E, h0km, Error ellipse: s-maj=126.6km s-min=30.5km az=162.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**5.92**	**110**	*i*		15 57 10.0	
	baz=302,slow=316,SNR=1.0						
I37NO	**I37NO**	**10.63**	**343**	*i*		16 35 50.0	
	baz=156,slow=332,SNR=1.8						
I26DE	**FREYUNG INFRAS**	**12.92**	**223**	*i*		16 49 00.0	
	baz=33,slow=329,SNR=0.6						

IDC ***24*** *15:34:33.6±1.6, 44°22N×12°25E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.2/38, mbtmp3.4/4, ML3.4/2, Error ellipse: s-maj=29.3km s-min=15.0km az=100.0*
STR ***24*** *15:34:34.1±0.6, 44°N±2°×1°2E±°, h13km±7km, mB5.7/2, mb3.4/4, MLv3.5/17, Mw(mB)5.2/2, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
VIE ***24*** *15:34:36.5±0.3, 44°32N×12°03E, h10km, mb2.6/15, ml3.4/18, Error ellipse: s-maj=2.5km s-min=1.4km az=162.0 57 km NW of San Marino*
BGR ***24*** *15:34:37.1±0.5, 44°15N×12°00E, h10km, ML3.5/8, Error ellipse: s-maj=8.9km s-min=5.6km az=163.0*
ROM ***24*** *15:34:37.4±0.1, 44°237N±0°008×11°92E±0°01, h20km±1km, ML3.1/61, Error ellipse: s-maj=1.1km s-min=0.2km az=229.0*
PRU ***24*** *15:34:38.0±0.0, 44°40N×12°18E, h0km*
LDG ***24*** *15:34:39.6±0.2, 44°34N×11°75E, h9km, Ml3.4/28, Error ellipse: s-maj=4.0km s-min=3.3km az=140.0*

ISC 24 15:34:37.3±0.8, 44°30N±0°02×11°92E±0°02, h25km±5km, n235, σ1s98/300, 2C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAEN	**Faenza**	**0.03**	**258**	P	**Pb**	**15 34 40.7**	**-0.8**
FAEN				S	**Sb**	**15 34 44.5**	**+0.1**
IMOL	**Imola, Italy**	**0.14**	**297**	P	**Pb**	**15 34 44.0**	**+1.7**
IMOL				S	**Sb**	**15 34 47.6**	**+1.9**
CMPO	**Campotto Po**	**0.30**	**344**	P	**Pn**	**15 34 44.7**	**-1.3**
BRIS	**BRISIGHELLA**	**0.33**	**244**	⇑P	**Pb**	**15 34 41.0**	**-3.7**
BRIS				S	**Sb**	**15 34 44.3**	**-5.5**
BRIS				AML	AML		
	comp=E,34300µm,0.4s						
BRIS				AML	AML		
	comp=E,34300µm,0.4s						
BRIS				AML	AML		
	comp=N,21850µm,0.5s						
MTRZ	**Monterenzio**	**0.33**	**284**	P	**Pn**	**15 34 45.4**	**-1.2**
MTRZ				AML	AML		
	comp=E,7160µm,1.5s						
MTRZ				AML	AML		
	comp=N,7485µm,1.1s						
MTRZ				AML	AML		
	comp=E,7530µm,1.6s						
MTRZ				AML	AML		
	comp=N,7600µm,1.1s						
MTRZ				AML	AML		
	comp=E,7165µm,1.5s						
MTRZ				AML	AML		
	comp=E,7535µm,1.6s						
SFI	**Santa Sofia**	**0.39**	**187**	⇓P	**Pb**	**15 34 44.3**	**-1.5**
SFI				S	**Sb**	**15 34 50.1**	**-1.4**
SFI				AML	AML		
	comp=N,6635µm,0.5s						
SFI				AML	AML		
	comp=E,4870µm,0.4s						
SFI				AML	AML		
	comp=N,6635µm,0.5s						
SFI				AML	AML		
	comp=E,5055µm,0.9s						
SFI				AML	AML		
	comp=N,6630µm,0.5s						
SFI				AML	AML		
	comp=E,4865µm,0.4s						
SFI				AML	AML		
	comp=N,7415µm,0.4s						
SFI				AML	AML		
	comp=N,7420µm,0.4s						
FIU	**Minerbio Fiu**	**0.46**	**319**	P	**Pn**	**15 34 48.6**	**+0.3**
FIU				AML	AML		
	comp=E,5615µm,0.6s						
FIU				AML	AML		
	comp=N,4925µm,0.5s						
SEI	**Scarperia**	**0.47**	**239**	P	**Pb**	**15 34 45.8**	**-1.2**
SEI				S	**Sb**	**15 34 53.0**	**-0.6**
SEI				AML	AML		
	comp=N,14050µm,0.6s						
SEI				AML	AML		
	comp=E,9765µm,0.5s						
ASQU	**Asqua**	**0.51**	**191**	⇓P	**Pb**	**15 34 46.1**	**-1.6**
ASQU				S	**Sb**	**15 34 53.5**	**-1.2**
ASQU				AML	AML		
	comp=N,2655µm,0.5s						
ASQU				AML	AML		
	comp=E,2810µm,0.4s						
RSM	**Repubblica di**	**0.53**	**133**	P	**Pn**	**15 34 48.0**	**-1.3**
RSM				AML	AML		
	comp=E,914µm,0.8s						
RSM				AML	AML		
	comp=N,1092µm,0.7s						
RUFI	**Rufina**	**0.54**	**213**	P	**Pb**	**15 34 46.8**	**-1.4**
RUFI				S	**Sb**	**15 34 54.8**	**-0.8**
RUFI				AML	AML		
	comp=N,2475µm,0.5s						
RUFI				AML	AML		
	comp=N,2480µm,0.5s						
RUFI				AML	AML		
	comp=E,2790µm,1.0s						
RUFI				AML	AML		
	comp=E,2794µm,1.0s						
RUFI				AML	AML		
	comp=N,2470µm,0.5s						
CPGN	**Carpegna, Ital**	**0.57**	**149**	P	**Pb**	**15 34 48.2**	**-0.6**
CPGN				AML	AML		
	comp=E,1650µm,0.6s						
CPGN				AML	AML		
	comp=N,1390µm,0.6s						
CPGN				AML	AML		
	comp=E,1740µm,0.6s						
CPGN				AML	AML		
	comp=E,1740µm,0.6s						
CPGN				AML	AML		
	comp=N,1445µm,0.6s						
CPGN				AML	AML		
	comp=N,1446µm,0.6s						
CPGN				AML	AML		
	comp=N,1385µm,0.6s						
CPGN				AML	AML		
	comp=E,1738µm,0.6s						
CPGN				AML	AML		
	comp=E,1650µm,0.5s						
FNVD	**Fontana Vidola**	**0.58**	**258**	P	**Pb**	**15 34 48.3**	**-0.7**
FNVD				S	**Sn**	**15 34 57.9**	**-1.0**
FNVD				AML	AML		
	comp=E,6495µm,0.4s						
FNVD				AML	AML		
	comp=N,3975µm,1.2s						
ZCCA	**Zocca**	**0.68**	**275**	P	**Pn**	**15 34 52.0**	**+0.7**
ZCCA				AML	AML		
	comp=N,842µm,0.4s						
ZCCA				AML	AML		
	comp=E,1080µm,0.5s						
ZCCA				AML	AML		
	comp=E,1075µm,0.5s						
ZCCA				AML	AML		
	comp=N,781µm,0.9s						
ZCCA				AML	AML		
	comp=E,1080µm,0.5s						
ZCCA				AML	AML		
	comp=N,840µm,0.4s						
PARC	**Parchiule**	**0.69**	**160**	P	**Pb**	**15 34 49.3**	**-1.4**
PARC				AML	AML		
	comp=E,922µm,0.5s						
PARC				AML	AML		
	comp=N,754µm,0.7s						
PARC				AML	AML		
	comp=N,754µm,0.7s						
MTCR	**Monte La Croce**	**0.71**	**248**	P	**Pb**	**15 34 50.3**	**-0.9**
MTCR				AML	AML		
	comp=E,1350µm,0.6s						
MTCR				AML	AML		
	comp=N,1805µm,0.5s						
MTCR				AML	AML		
	comp=E,1355µm,0.6s						

MTCR AML AML
comp=N,1800μm,0.5s
PE3 Peglio 0.73 145 P Pn 15 34 51.1 -0.9
PE3 AML AML
comp=E,2905μm,0.5s
PE3 AML AML
comp=E,2910μm,0.5s
PE3 AML AML
comp=N,3145μm,0.5s
SSP9 Sansepolcro 0.74 168 P Pb 15 34 50.2 -1.2
SSP9 AML AML
comp=E,852μm,0.4s
SSP9 AML AML
comp=N,1469μm,0.7s
SSP9 AML AML
comp=E,854μm,0.4s
SSP9 AML AML
comp=N,1465μm,1.6s
PESA Pesaro 0.75 118 P Pn 15 34 52.8 +0.5
PESA AML AML
comp=E,1900μm,0.5s
PESA AML AML
comp=N,1115μm,1.2s
BADI Badiali 0.82 163 P Pb 15 34 51.6 -1.2
BADI AML AML
comp=E,1725μm,0.7s
BADI AML AML
comp=N,1115μm,0.8s
BADI AML AML
comp=N,1110μm,0.8s
NARO Abbazia di Nar 0.84 145 P Pb 15 34 52.2 -1.0
NARO AML AML
comp=E,582μm,0.5s
NARO AML AML
comp=N,520μm,0.9s
SERM Sermide 0.84 328 AML AML
comp=N,3805μm,0.7s
SERM AML AML
comp=E,2200μm,0.7s
SERM AML AML
comp=N,2040μm,0.6s
SERM AML AML
comp=E,2980μm,0.8s
SERM AML AML
comp=E,2985μm,0.8s
SERM AML AML
comp=N,3815μm,0.7s
SERM AML AML
comp=E,2205μm,0.7s
SERM AML AML
comp=N,2035μm,0.6s
CRMI Carmignano 0.85 234 P Pb 15 34 52.8 -0.6
CRMI AML AML
comp=E,361μm,0.4s
CRMI AML AML
comp=N,544μm,0.5s
CRMI AML AML
comp=N,544μm,0.5s
CRMI AML AML
comp=E,360μm,0.4s
FSSB Fossombrone 0.87 134 ⇑P Pn 15 34 53.5 -0.4
FSSB AML AML
comp=E,1480μm,0.7s
FSSB AML AML
comp=N,1420μm,0.7s
POPM Popiglio 0.87 254 P Pn 15 34 53.7 -0.3
POPM AML AML
comp=N,2075μm,1.1s
POPM AML AML
comp=E,1425μm,0.7s
MPAG Monte Paganucc 0.90 137 P Pn 15 34 54.0 -0.4
MPAG AML AML
comp=E,712μm,0.6s
MPAG AML AML
comp=E,706μm,0.6s
MPAG AML AML
comp=N,873μm,0.7s
MPAG AML AML
comp=E,705μm,0.6s
MPAG AML AML
comp=N,874μm,0.7s
MPAG AML AML
comp=E,712μm,0.6s
MPAG AML AML
comp=N,855μm,0.7s
OSSC Osservatorio P 0.91 212 P Pn 15 34 54.1 -0.4
OSSC AML AML
comp=N,1565μm,0.6s
OSSC AML AML
comp=N,1365μm,0.8s
OSSC AML AML
comp=N,1560μm,0.6s
OSSC AML AML
comp=E,1485μm,0.6s
OSSC AML AML
comp=E,1375μm,0.8s
OSSC AML AML
comp=N,1360μm,0.8s
CAFI Castiglion Fio 0.97 178 P Pb 15 34 54.1 -1.3
CAFI AML AML
comp=E,840μm,0.5s
CAFI AML AML
comp=N,744μm,0.5s
CAFI AML AML
comp=E,854μm,0.5s
CAFI AML AML
comp=N,159μm,0.4s
ATVO AVT- Monte Val 0.98 159 P Pb 15 34 54.5 -1.1
ATVO AML AML
comp=E,1820μm,0.7s
ATVO AML AML
comp=N,1155μm,0.6s
ATFO Monte Foce - G 1.04 153 AML AML
comp=E,967μm,0.9s
ATFO AML AML
comp=N,878μm,1.0s
TEOL Teolo 1.08 351 P Pb 15 34 57.6 +0.3
TEOL AML AML
comp=E,3680μm,0.8s
TEOL AML AML
comp=N,3560μm,1.2s
ERBM Eremo 1.09 277 P Pb 15 35 00.3 +2.8
ERBM AML AML
comp=N,394μm,1.4s
ERBM AML AML
comp=E,422μm,1.4s
ARVD Arcevia 1.09 137 AML AML
comp=E,338μm,0.7s
ARVD AML AML
comp=E,338μm,0.7s
ARVD AML AML
comp=N,362μm,1.2s
ARVD AML AML
comp=N,361μm,1.2s
MAIM Mastiano 1.10 250 P Pb 15 34 57.7 +0.2
MAIM Mastiano 1.10 250 P Pb 15 34 57.7 +0.2
MAIM AML AML
comp=E,392μm,1.0s
MAIM AML AML
comp=N,596μm,0.8s
SARO Sassorosso 1.10 265 P Pb 15 34 58.7 +1.1
SARO AML AML
comp=N,412μm,0.5s
SARO AML AML
comp=E,373μm,0.7s
ATTE AVT- Monte Tez 1.14 164 P Pb 15 34 57.6 -0.7
ATTE AML AML
comp=N,590μm,0.6s
ATTE AML AML
comp=E,704μm,1.2s
PII Pisa 1.16 241 P Pb 15 34 58.2 -0.4
PII AML AML
comp=E,1530μm,1.1s
PII AML AML
comp=N,1480μm,0.6s
FOSV Fossato di Vic 1.17 148 P Pb 15 34 58.2 -0.6
FOSV AML AML
comp=N,492μm,1.2s
FOSV AML AML
comp=E,499μm,0.6s
EQUI Equi 1.27 265 P Pb 15 35 01.5 +0.9
EQUI Equi 1.27 265 AML AML
comp=E,334μm,0.6s
EQUI AML AML
comp=N,438μm,0.6s
GRAM Graiana 1.34 279 P Pb 15 35 03.4 +1.6
GRAM Graiana 1.34 279 P Pb 15 35 03.4 +1.6
GRAM AML AML
comp=N,684μm,1.1s
GRAM AML AML
comp=E,942μm,0.3s
ASSB Assisi San Ben 1.36 157 AML AML
comp=E,304μm,0.8s
ASSB AML AML
comp=N,342μm,0.6s
MGAB Montegabbione 1.39 174 AML AML
comp=E,816μm,0.5s
MGAB AML AML
comp=N,584μm,0.7s
MGAB AML AML
comp=E,707μm,0.5s
MGAB AML AML
comp=N,556μm,0.6s
BRJN Brijuni 1.44 64 ePg Pb 15 35 02.1 -1.3
BRJN Sg Sn 15 35 20.1 +0.2
SACS San Casciano d 1.45 180 P Pb 15 35 03.3 -0.2
SACS AML AML
comp=E,362μm,0.7s
SACS AML AML
comp=N,376μm,0.7s
CESI CESI - Serrava 1.48 151 AML AML
comp=N,192μm,0.6s
CESI AML AML
comp=E,59μm,0.6s
PLMA Palmaria, Port 1.51 261 AML AML
comp=N,346μm,0.7s
PLMA AML AML
comp=E,278μm,0.7s
FDMO Fiordimonte 1.52 146 AML AML
comp=N,386μm,0.6s
FDMO AML AML
comp=E,254μm,0.7s
MOMA Monte Martano 1.56 162 AML AML
comp=E,312μm,0.5s
MOMA AML AML
comp=N,290μm,0.8s
SALO Salr 1.65 324 AML AML
comp=E,889μm,0.8s
SALO AML AML
comp=N,741μm,0.7s
SALO AML AML
comp=N,1870μm,0.7s
SALO AML AML
comp=E,2355μm,0.8s
NRCA Norcia 1.70 149 AML AML
comp=E,204μm,1.4s
NRCA AML AML
comp=N,178μm,0.6s
MSSA Maissana 1.72 272 P Pb 15 35 08.4 +0.2
MSSA AML AML
comp=N,300μm,1.1s
MSSA AML AML
comp=E,259μm,0.5s
MAGA Magasa 1.74 329 P Pb 15 35 06.9 -1.7
MAGA AML AML
comp=E,2645μm,0.6s
MAGA AML AML
comp=N,2120μm,0.3s
CTI Castel Tesino 1.76 354 P Pn 15 35 07.1 +0.8
CTI AML AML
comp=E,1290μm,0.3s
CTI AML AML
comp=N,1185μm,1.0s
GORR Gorreto 1.91 280 P Pb 15 35 11.3 0.0
MABI Malga Bissina 2.02 331 P Pb 15 35 11.2 -2.2
MABI AML AML
comp=N,186μm,0.5s
MABI AML AML
comp=E,148μm,1.5s
TERO Teramo 2.08 143 P Pb 15 35 11.7 -2.6
TERO AML AML
comp=N,78μm,0.8s
TERO AML AML
comp=E,111μm,0.6s
MDI Monti di Nese 2.15 314 P Pb 15 35 13.7 -1.9
MDI AML AML
comp=E,268μm,0.3s
MDI AML AML
comp=N,210μm,1.6s
JAVS Javornik 2.21 43 iPn Pn 15 35 12.3 0.0
JAVS IAML 15 35 56.2
comp=Z,55nm,0.3s
APPI Appiano 2.24 348 P Pb 15 35 14.6 -2.4
APPI AML AML
comp=N,548μm,0.3s
APPI AML AML
comp=E,546μm,0.3s
BOSI Bolzano 2.24 349 AML AML
comp=E,992μm,0.8s
BOSI AML AML
comp=N,1235μm,0.6s
DUGI Dugi Otok 2.28 97 ePn Pn 15 35 13.6 +0.3
DUGI Sn Sn 15 35 40.2 -0.4
ABTA Abfaltersbach 2.49 9 ePn Pn 15 35 17.5 +1.3
comp=N,6.0nm,0.4s,SNR=9.7
ABTA eSn Sn 15 35 48.0 +2.1
comp=N,36nm,0.5s
MOSI Grossmontoni 2.51 338 AML AML
comp=E,450μm,1.5s
MOSI AML AML
comp=N,673μm,0.5s
ACOM Acomizza, Ital 2.52 26 AML AML
comp=N,388μm,0.4s
ACOM AML AML
comp=E,424μm,1.6s
MYKA Terra Mystica 2.63 27 ePn Pn 15 35 18.3 +0.1
comp=E,1.3nm,0.2s
MYKA eSn Sn 15 35 50.0 +0.7
comp=E,17nm,0.3s
ROSI Rosskopf 2.66 353 AML AML
comp=E,474μm,1.6s
ROSI AML AML
comp=N,566μm,1.6s
PGF Pioggiola 2.75 232 ePn Pn 15 35 20.8 +0.9
PGF Pioggiola 2.75 232 ePg Pb 15 35 29.4 +3.6
PGF eSn Sn 15 35 52.6 +0.3
comp=N,33nm,0.3s
PGF Pioggiola 2.75 232 S Sn 15 35 53.3 +1.0
PGF Pioggiola 2.75 232 P Pn 15 35 20.7 +0.8
PGF Pioggiola 2.75 232 S Sn 15 35 53.3 +1.0
PGF Pioggiola 2.75 232 P Pn 15 35 20.7 +0.8
PGF Pioggiola 2.75 232 AML AML
comp=N,85μm,0.5s
PGF AML AML
comp=E,120μm,0.6s
MORI Morici 2.77 98 ePn Pn 15 35 21.6 +1.7
MORI Sn Sn 15 35 53.5 +1.1
ZIRJ Zirje 2.77 102 ePn Pn 15 35 21.9 +1.9
ZIRJ Sn Sn 15 35 52.3 -0.2
TUE Stuetta 2.83 321 AML AML
comp=E,215μm,0.5s
TUE AML AML
comp=E,172μm,0.6s
TUE AML AML
comp=N,163μm,0.5s
TUE AML AML
comp=N,217μm,0.5s
FETA Feichten 2.85 343 ePn Pn 15 35 22.5 +1.2
comp=N,1.4nm,0.3s,SNR=5.9
FETA eSn Sb 15 35 58.3 -3.7
comp=N,15nm,0.4s
DAVOX Davos/Dischmat 2.87 331 Pn Pb 15 35 24.9 -3.0
comp=N,4.7nm,0.3s,baz=150,slow=16,SNR=22
DAVOX Sn Sb 15 35 58.7 -3.9
comp=N,6.2nm,0.3s,baz=241,slow=23,SNR=6.4
DAVOX Lg Lg 15 36 09.8
comp=N,6.1nm,0.3s,baz=257,slow=19,SNR=4.8
DAVOX Davos/Dischmat 2.87 331 AML AML
comp=N,98μm,0.5s
DAVOX AML AML
comp=E,100μm,0.7s
OBKA Obir 2.89 39 ePn Pn 15 35 21.9 +0.2
comp=E,1.4nm,0.2s,SNR=10
OBKA eSn Sn 15 35 57.1 +1.4
comp=E,101nm,0.8s
OBKA Obir 2.89 39 ePn Pn 15 35 22.8 +1.1
OBKA ePg Pb 15 35 31.4 +3.3
OBKA eSg Sb 15 36 11.1 +8.1
SMPL Sampolo 2.92 222 P Pn 15 35 23.2 +1.0
SMPL S Sn 15 35 59.0 +2.5
SMPL Sampolo 2.92 222 P Pn 15 35 23.2 +1.0
SMPL S Sn 15 35 59.0 +2.5
KBA Koelnbreinsper 2.96 19 Pn Pn 15 35 23.0 +0.3
comp=E,5.3nm,0.3s,SNR=4.3
KBA eSn Sn 15 35 59.0 +1.5
comp=E,10nm,0.3s
KBA Koelnbreinsper 2.96 19 ePn Pn 15 35 24.4 +1.6
KBA eSn Sn 15 35 59.5 +2.0
KBA eSg Sb 15 36 15.1 +10
SQTA Sankt Quirin 2.97 351 ePn Pn 15 35 22.7 -0.1
comp=E,0.7nm,0.2s,SNR=18
SQTA eSn Sn 15 36 00.1 +2.4
comp=E,44nm,0.5s
WTTA Wattenberg 2.98 356 ePn Pn 15 35 23.5 +0.5
comp=E,0.8nm,0.2s,SNR=7.5
WTTA eSn Sn 15 36 00.5 +2.6
comp=E,52nm,0.5s
WTTA Wattenberg 2.98 356 ePn Pn 15 35 25.9 +2.9
WTTA ePg Pb 15 35 34.2 +4.5
WTTA eSn Sb 15 36 01.7 -4.0
WTTA eSg Sn 15 36 15.2 +17
WTTA Wattenberg 2.98 356 AML AML
comp=N,350μm,0.5s
WTTA AML AML
comp=E,356μm,0.5s
WATA Walderalm 3.05 356 ePn Pn 15 35 24.7 +0.7
comp=E,3.6nm,0.2s
WATA eSn Sn 15 36 01.5 +1.7
comp=E,22nm,0.3s
MOTA Moosalm 3.10 350 ePn Pn 15 35 25.2 +0.4
comp=E,2.5nm,0.3s
MOTA eSn Sn 15 36 03.8 +2.7
comp=E,26nm,0.3s
FUSIO Fusio 3.15 314 AML AML
comp=E,130μm,0.6s
FUSIO AML AML
comp=N,64μm,1.6s
SAOF Saorge 3.15 266 P Pn 15 35 27.3 +1.9
SAOF S Sn 15 36 03.8 +1.6
SAOF Saorge 3.15 266 P Pn 15 35 27.3 +1.9
SAOF S Sn 15 36 03.8 +1.6
SOKA Soboth 3.24 42 ePn Pn 15 35 26.5 -0.1
comp=N,1.1nm,0.4s
SOKA eSn Sn 15 36 05.0 +0.7
comp=N,5.4nm,0.5s
KIJV Kijevo 3.24 94 ePn Pn 15 35 27.9 +1.4
KIJV Sn Sn 15 36 04.1 -0.3
SBF Sospel 3.26 264 ePn Pn 15 35 28.1 +1.3
SBF Sospel 3.26 264 ePg Pb 15 35 37.1 +2.7
SBF eSn Sn 15 36 03.2 -1.6
comp=N,16nm,0.2s
TURF col de Turini 3.27 266 P Pn 15 35 29.0 +1.9
TURF S Sn 15 36 07.8 +2.5
TURF col de Turini 3.27 266 P Pn 15 35 29.0 +1.9
TURF S Sn 15 36 07.8 +2.5
PLONS Plons/SG 3.28 328 ePn Pn 15 35 30.2 +3.1
PLONS eSn Sn 15 36 09.1 +3.8
RETA Reutte 3.29 346 ePn Pn 15 35 28.3 +1.0
comp=N,4.2nm,0.3s
RETA eSn Sn 15 36 08.4 +2.8
comp=N,14nm,0.3s
DAVA Damuels 3.31 335 ePn Pn 15 35 28.6 +0.9
comp=N,3.7nm,0.2s
DAVA eSn Sn 15 36 09.5 +3.3
comp=N,25nm,0.5s
DAVA Damuels 3.31 335 ePn Pb 15 35 31.2 -4.2
DAVA eSn Sb 15 36 11.3 -4.0
EMBD Embd, Matterta 3.47 305 P Pn 15 35 31.1 +1.4
EMBD Embd, Matterta 3.47 305 S Sn 15 36 11.1 +1.2
EMBD Embd, Matterta 3.47 305 P Pn 15 35 31.1 +1.4
EMBD Embd, Matterta 3.47 305 S Sn 15 36 11.1 +1.2
HVAR Hvar 3.47 107 ePn Pn 15 35 30.6 +1.0
HVAR Sn Sn 15 36 09.8 -0.1
ISO Isola 3.50 270 P Pn 15 35 31.8 +1.7
ISO S Sn 15 36 13.4 +2.7
ISO Isola 3.50 270 P Pn 15 35 31.8 +1.7
ISO S Sn 15 36 13.4 +2.7
BNALP Bannalp 3.56 318 AML AML
comp=E,57μm,0.6s
BNALP AML AML
comp=N,64μm,0.5s
UBR Ueberruh 3.61 340 ePn Pn 15 35 34.2 +2.6
UBR eSn Sn 15 36 16.0 +2.4
CALF Calern 3.64 263 P Pn 15 35 34.5 +2.3
CALF S Sn 15 36 16.0 +1.6
CALF Calern 3.64 263 P Pn 15 35 34.5 +2.3
CALF S Sn 15 36 16.0 +1.6
DIX Grande Dixence 3.65 301 P Pn 15 35 34.5 +2.1
DIX Grande Dixence 3.65 301 S Sn 15 36 15.9 +1.1
DIX Grande Dixence 3.65 301 P Pn 15 35 34.5 +2.1
DIX Grande Dixence 3.65 301 S Sn 15 36 15.9 +1.1
SURF Saint Ours 3.66 275 P Pn 15 35 33.9 +1.4
SURF S Sn 15 36 19.6 +4.7
SURF Saint Ours 3.66 275 P Pn 15 35 33.9 +1.4
SURF S Sn 15 36 19.6 +4.7
MOSL Moslavina 3.68 67 ePn Pn 15 35 33.0 +0.5
MOSL Sn Sn 15 36 14.4 -0.7
MBDF Montbardon 3.71 278 ePn Pn 15 35 34.9 +1.9
MBDF eSn Sn 15 36 13.0 -3.0
comp=N,14nm,0.5s
WILA Wila 3.76 327 ePn Pn 15 35 36.1 +2.4
WILA eSn Sn 15 36 19.1 +1.9
RICI Ricice 3.85 100 ePn Pn 15 35 36.4 +1.4
RICI Sn Sn 15 36 19.2 -0.2
LPG La Plagne 3.86 290 ePn Pn 15 35 38.2 +2.9
LPG La Plagne 3.86 290 ePg Pb 15 35 48.3 +3.5
LPG eSn Sn 15 36 18.3 -1.7
comp=N,24nm,0.4s
FRF La Foret Royal 3.88 261 ePn Pn 15 35 36.4 +1.2
FRF eSn Sn 15 36 17.6 -2.4
comp=N,14nm,0.3s
LPL La Plagne 3.88 290 ePn Pn 15 35 35.9 +0.4
LPL eSn Sn 15 36 18.7 -1.7
comp=N,24nm,0.5s
ARSA Arzberg 3.88 39 ePn Pn 15 35 35.7 +0.3
comp=N,1.2nm,0.2s
ARSA eSn Sn 15 36 20.6 +0.4
comp=N,5.2nm,0.4s
MOA Molln 3.91 24 iPn Pn 15 35 35.8 +0.1
comp=N,2.8nm,0.2s,SNR=7.1
MOA eSn Sn 15 36 22.1 +1.3
comp=N,27nm,0.5s
MOA Molln 3.91 24 ePn Pn 15 35 37.4 +1.7
MOA eSn Sn 15 36 22.4 +1.6
WALHA Wallhausen, DE 3.97 332 ePn Pn 15 35 38.9 +2.4
WALHA eSn Sn 15 36 23.3 +1.1
LMR La Mourre 4.03 258 ePn Pn 15 35 38.7 +1.4
LMR La Mourre 4.03 258 ePg Pb 15 35 51.7 +4.2
LMR eSn Sn 15 36 22.9 -0.8
comp=N,9.6nm,0.3s
AIGLE Aigle 4.05 302 P Pn 15 35 40.2 +2.4
AIGLE Aigle 4.05 302 S Sn 15 36 25.3 +0.9
AIGLE Aigle 4.05 302 P Pn 15 35 40.2 +2.4
AIGLE Aigle 4.05 302 S Sn 15 36 25.3 +0.9
SULZ Cheisacher 4.18 322 P Pn 15 35 41.4 +1.9
SULZ Cheisacher 4.18 322 S Sn 15 36 26.7 -0.9
SULZ Cheisacher 4.18 322 P Pn 15 35 41.4 +1.9
SULZ Cheisacher 4.18 322 S Sn 15 36 26.7 -0.9
SULZ Cheisacher 4.18 322 ePn Pn 15 35 41.7 +2.2
SULZ eSn Sn 15 36 27.4 -0.2
EMING Emmingen-Lipti 4.18 330 ePn Pn 15 35 41.3 +1.8
GDM Grand'Maison 4.23 284 P Pn 15 35 42.8 +2.5
GDM S Sn 15 36 32.5 +3.6
GDM Grand'Maison 4.23 284 P Pn 15 35 42.8 +2.5
GDM S Sn 15 36 32.5 +3.6
BALST Balsthal 4.24 317 P Pn 15 35 41.5 +1.3
BALST Balsthal 4.24 317 P Pn 15 35 41.5 +1.3
BALST Balsthal 4.24 317 ePn Pn 15 35 41.8 +1.5
METMA Mettma DE 4.26 325 ePn Pn 15 35 42.2 +1.6
METMA eSn Sn 15 36 27.8 -1.7
ORIF Oris-en-Rattie 4.36 280 ePn Pn 15 35 44.6 +2.7
ORIF Oris-en-Rattie 4.36 280 ePg Pb 15 35 57.3 +4.2
ORIF eSn Sn 15 36 30.4 -1.5
comp=N,21nm,0.4s
ORIF Oris-en-Rattie 4.36 280 P Pn 15 35 44.1 +2.2
ORIF Oris-en-Rattie 4.36 280 P Pn 15 35 44.1 +2.2
ASEAF Site Antares, 4.44 252 P Pn 15 35 44.4 +1.7
ASEAF Site Antares, 4.44 252 P Pn 15 35 44.4 +1.7
FELD Feldberg im Sc 4.50 324 P Pn 15 35 44.7 +0.8
FELD Feldberg im Sc 4.50 324 S Sn 15 36 33.4 -2.1
FELD Feldberg im Sc 4.50 324 P Pn 15 35 44.7 +0.8
FELD Feldberg im Sc 4.50 324 S Sn 15 36 33.4 -2.1
BOURR Bourrignon 4.51 315 P Pn 15 35 45.0 +1.0
BOURR Bourrignon 4.51 315 P Pn 15 35 45.0 +1.0
BSTF la Bastide-des 4.54 267 P Pn 15 35 47.1 +2.8
BSTF la Bastide-des 4.54 267 P Pn 15 35 47.1 +2.8
CONA Conrad Observa 4.55 36 ePn Pn 15 35 44.5 -0.1

	comp=N,0.8nm,0.2s							
CONA				*e*Sn		**Sn**	15 36 36.6	**-0.1**
	comp=N,9.6nm,0.5s							
SMRF	**Simiane la Rot**	**4.58**	**268**	*e*Pn		**Pn**	**15 35 45.2**	**+0.3**
SMRF	**Simiane la Rot**	**4.58**	**268**	*e*Pg		Pb	15 36 01.6	+4.8
SMRF				*e*Sn		**Sn**	**15 36 35.2**	**-2.1**
	comp=N,7.3nm,0.5s							
KIZ	**Kirchzarten**	**4.60**	**324**	P		**Pn**	**15 35 46.4**	**+1.2**
KIZ	**Kirchzarten**	**4.60**	**324**	S		**Sn**	**15 36 36.1**	**-1.6**
KIZ	**Kirchzarten**	**4.60**	**324**	P		**Pn**	**15 35 46.4**	**+1.2**
KIZ	**Kirchzarten**	**4.60**	**324**	S		**Sn**	**15 36 36.1**	**-1.6**
OGSM	**Saint Maurice**	**4.61**	**289**	P		**Pn**	**15 35 46.4**	**+1.1**
OGSM				S		**Sn**	**15 36 37.8**	**-0.2**
OGSM	**Saint Maurice**	**4.61**	**289**	P		**Pn**	**15 35 46.4**	**+1.1**
OGSM				S		**Sn**	**15 36 37.8**	**-0.2**
BRANT	**Les Verrieres**	**4.64**	**307**	P		**Pn**	**15 35 47.0**	**+1.1**
BRANT	**Les Verrieres**	**4.64**	**307**	S		**Sn**	**15 36 38.0**	**-1.0**
BRANT	**Les Verrieres**	**4.64**	**307**	P		**Pn**	**15 35 47.0**	**+1.1**
BRANT	**Les Verrieres**	**4.64**	**307**	S		**Sn**	**15 36 38.0**	**-1.0**
LOMF	**Lomont**	**4.69**	**312**	P		**Pn**	**15 35 47.1**	**+0.7**
LOMF	**Lomont**	**4.69**	**312**	P		**Pn**	**15 35 47.1**	**+0.7**
CABF	**La Chapelle**	**4.71**	**301**	*e*Pn		**Pn**	**15 35 48.2**	**+1.4**
CABF				*e*Sn		**Sn**	**15 36 39.0**	**-1.6**
	comp=N,8.3nm,0.4s							
GEC2	**GERESS Array S**	**4.71**	**14**	*e*Pn		**Pn**	**15 35 47.2**	**+0.3**
GEC2				*e*Pg		Pb	15 36 06.0	+6.8
GEC2				*e*Sn		**Sn**	**15 36 39.7**	**-1.0**
GERES	**GERESS Array B**	**4.71**	**14**	Pn		**Pn**	**15 35 46.9**	**0.0**
	comp=N,1.0nm,0.3s,baz=190,slow=14,SNR=18							
GERES				Pg		Pb	15 36 05.4	+6.2
	comp=N,1.4nm,0.3s,baz=188,slow=18,SNR=9.5							
GERES				Sn		**Sn**	**15 36 40.2**	**-0.5**
	comp=N,5.9nm,0.3s,baz=196,slow=24,SNR=18							
GERES				Lg		Lg	15 37 05.8	
	baz=205,slow=31,SNR=1.3							
BFO	**Black Forest**	**4.74**	**330**	*e*Pn		**Pn**	**15 35 48.7**	**+1.6**
BFO				*e*Pg		Pb	15 36 09.5	+10
BFO				*e*Sn		**Sn**	**15 36 38.3**	**-2.9**
CKRC	**Cesky Krumlov**	**4.82**	**19**	*e*SN		**Sn**	**15 36 42.4**	**-0.7**
MOF	**Molkenrain**	**4.87**	**319**	P		**Pn**	**15 35 50.2**	**+1.2**
MOF	**Molkenrain**	**4.87**	**319**	P		**Pn**	**15 35 50.2**	**+1.2**
WET	**Wettzell**	**4.89**	**7**	*e*Sn		**Sn**	**15 36 43.6**	**-1.4**
OPP	**Oppenau**	**4.93**	**330**	P		**Pn**	**15 35 51.2**	**+1.5**
OPP				S		**Sn**	**15 36 43.3**	**-2.7**
OPP	**Oppenau**	**4.93**	**330**	P		**Pn**	**15 35 51.2**	**+1.5**
OPP				S		**Sn**	**15 36 43.3**	**-2.7**
KHC	**Kasperske Hory**	**4.97**	**13**	*e*PN		**Pn**	**15 35 50.3**	**0.0**
KHC				*e*SN		**Sn**	**15 36 45.6**	**-1.3**
HINF	**Hinteralfeld**	**4.98**	**317**	*e*Pn		**Pn**	**15 35 51.0**	**+0.6**
HINF				*e*Sn		**Sn**	**15 36 44.8**	**-2.4**
	comp=N,16nm,0.2s							
ECH	**Echery**	**5.12**	**322**	P		**Pn**	**15 35 53.5**	**+1.1**
ECH				S		**Sn**	**15 36 49.4**	**-1.3**
ECH	**Echery**	**5.12**	**322**	P		**Pn**	**15 35 53.5**	**+1.1**
ECH				S		**Sn**	**15 36 49.4**	**-1.3**
ECH	**Echery**	**5.12**	**322**	*e*Pn		**Pn**	**15 35 53.7**	**+1.3**
ECH				*e*Sn		**Sn**	**15 36 48.8**	**-1.9**
WLS	**Welschbruch**	**5.19**	**324**	P		**Pn**	**15 35 54.5**	**+1.2**
WLS				S		**Sn**	**15 36 49.5**	**-2.8**
WLS	**Welschbruch**	**5.19**	**324**	P		**Pn**	**15 35 54.5**	**+1.2**
WLS				S		**Sn**	**15 36 49.5**	**-2.8**
VIVF	**Saint-Julien-l**	**5.21**	**279**	*e*Pn		**Pn**	**15 35 54.3**	**+0.8**
VIVF	**Saint-Julien-l**	**5.21**	**279**	*e*Pg		Pb	15 36 12.5	+4.9
VIVF				*e*Sn		**Sn**	**15 36 50.9**	**-1.9**
	comp=N,5.8nm,0.3s							
CDF	**Champ du Feu**	**5.22**	**324**	*e*Pn		**Pn**	**15 35 54.2**	**+0.4**
CDF				*e*Sn		**Sn**	**15 36 50.1**	**-3.1**
	comp=N,9.6nm,0.2s							
SSB	**Saint Sauveur**	**5.34**	**283**	P		**Pn**	**15 35 56.0**	**+0.7**
SSB	**Saint Sauveur**	**5.34**	**283**	P		**Pn**	**15 35 56.0**	**+0.7**
HAU	**Haudompre**	**5.36**	**316**	*e*Pn		**Pn**	**15 35 56.4**	**+0.8**
HAU				*e*Sn		**Sn**	**15 36 53.8**	**-2.7**
	comp=N,31nm,0.4s							
MODS	**Modra-Piesok**	**5.51**	**40**	*e*SN		**Sn**	**15 36 57.5**	**-2.8**
LASF	**Ste Croix**	**5.80**	**271**	*e*Pn		**Pn**	**15 36 03.2**	**+1.5**
LASF				*e*Sn		**Sn**	**15 37 05.7**	**-1.7**
	comp=N,2.0nm,0.3s							
PAGF	**Fort de Pagny**	**6.04**	**317**	*e*Sn		**Sn**	**15 37 10.9**	**-2.3**
	comp=N,6.2nm,0.3s							
SMF	**Signal de Mont**	**6.15**	**295**	*e*Pn		**Pn**	**15 36 07.0**	**+0.6**
SMF	**Signal de Mont**	**6.15**	**295**	*e*Pg		Pb	15 36 30.2	+6.7
SMF				*e*Sn		**Sn**	**15 37 13.2**	**-2.7**
	comp=N,18nm,0.3s							
SFTF	**Sexfontaines**	**6.17**	**312**	*e*Pn		**Pn**	**15 36 07.0**	**+0.3**
	baz=131							
SFTF	**Sexfontaines**	**6.17**	**312**	*e*Pg		Pb	15 36 30.9	+7.0
SFTF				*e*Sn		**Sn**	**15 37 13.4**	**-2.9**
	comp=N,6.0nm,0.2s							
MOX	**Moxa**	**6.36**	**358**	*e*Pn		**Pn**	**15 36 11.4**	**+2.2**
MOX				*e*Sn		**Sn**	**15 37 18.0**	**-3.0**
LOR	**Lormes**	**6.37**	**301**	*e*Pn		**Pn**	**15 36 09.5**	**0.0**
	baz=122							
LOR	**Lormes**	**6.37**	**301**	*e*Pg		Pb	15 36 33.9	+6.5
LOR				*e*Sn		**Sn**	**15 37 19.7**	**-1.7**
	comp=N,18nm,0.3s							
LOR	**Lormes**	**6.37**	**301**	P		**Pn**	**15 36 10.3**	**+0.8**
LOR	**Lormes**	**6.37**	**301**	P		**Pn**	**15 36 10.3**	**+0.8**
TNS	**Taunus Mts**	**6.38**	**340**	*e*Pn		**Pn**	**15 36 11.5**	**+1.8**
TNS				*e*Sn		**Sn**	**15 37 18.3**	**-3.4**
SSF	**Saint Saulge**	**6.51**	**298**	*e*Pn		**Pn**	**15 36 11.7**	**+0.3**
SSF				*e*Sn		**Sn**	**15 37 19.8**	**-5.0**
	comp=N,12nm,0.5s							
AVF	**Avril sur Loir**	**6.51**	**296**	*e*Pn		**Pn**	**15 36 11.8**	**+0.4**
AVF	**Avril sur Loir**	**6.51**	**296**	*e*Pg		Pb	15 36 36.7	+7.0
AVF				*e*Sn		**Sn**	**15 37 20.1**	**-4.7**
	comp=N,2.5nm,0.2s							
BRG	**Berggiesshubel**	**6.72**	**11**	Pn		**Pn**	**15 36 15.5**	**+1.2**
BRG				Pg		Pb	15 36 44.7	+11
BRG				Sn		**Sn**	**15 37 26.4**	**-3.6**
BRG				*ex*		x	15 38 08.3	
BRG				*ex*		x	15 38 15.1	
BRG				Amp			15 38 32.4	
	comp=Z,8.3nm,1.0s							
BGF	**Bois d'Agland**	**6.77**	**293**	*e*Pn		**Pn**	**15 36 15.2**	**+0.2**
BGF				*e*Sn		**Sn**	**15 37 28.3**	**-3.0**
	comp=Z,11nm,0.3s							
CLL	**Collm**	**7.05**	**6**	*e*Pg		Pb	15 36 54.0	+15
CLL				*e*			15 37 03.0	
CLL				*e*Sn		**Sn**	**15 37 31.0**	**-7.1**
CLL				*e*			15 37 50.0	
CLL				*e*Sg		Sb	15 38 24.0	+21
	comp=Z,6.0nm,0.8s							
CAF	**Calviac**	**7.06**	**279**	*e*Pn		**Pn**	**15 36 20.0**	**+1.0**
CAF				*e*Sn		**Sn**	**15 37 33.6**	**-4.8**
	comp=Z,1.0nm,0.2s							
MTLF	**Montolieu**	**7.08**	**266**	*e*Pn		**Pn**	**15 36 20.8**	**+1.5**
MTLF				*e*Sn		**Sn**	**15 37 36.7**	**-2.2**
	comp=Z,2.0nm,0.5s							
TCF	**Toulx Ste Croi**	**7.13**	**290**	*e*Pn		**Pn**	**15 36 20.7**	**+0.8**
TCF	**Toulx Ste Croi**	**7.13**	**290**	*e*Pg		Pb	15 36 48.3	+8.0
TCF				*e*Sn		**Sn**	**15 37 35.9**	**-4.2**
	comp=Z,5.6nm,0.4s							
RJF	**Les Rejaudoux**	**7.47**	**281**	*e*Pn		**Pn**	**15 36 25.6**	**+1.1**
GIVF	**Givet**	**7.55**	**323**	*e*Pn		**Pn**	**15 36 25.8**	**+0.1**
GIVF	**Givet**	**7.55**	**323**	*e*Pg		Pb	15 36 56.6	+9.2
KEST	**Kesra**	**8.78**	**194**	Pn		Pn	15 36 50.2	+7.6
	comp=Z,0.2nm,0.3s,baz=3.5,slow=19,SNR=1.9							
TORD	**Torodi Ar. Bea**	**32.25**	**199**	P		**P**	**15 41 02.7**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=9.5,slow=8.3,SNR=1.8							
YKA	**Yellowknife Ar**	**65.29**	**336**	P		**P**	**15 45 18.5**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=45,slow=6.1,SNR=7.8							

*NEIC **24** 15:56:18.3±2.7, 51.27°N±0.09×131.0°W±0.1, h10km±2km, ML4.1/8, Error ellipse: s-maj=19.9km s-min=5.0km az=221.0*
*IDC **24** 15:56:22.5±1.6, 51.66°N×130.81°W, h0km, mb3.5/2, mb1 3.8/6, mb1mx3.5/36, mbtmp3.6/6, ML3.9/4, Error ellipse: s-maj=20.4km s-min=14.6km az=42.0*
*PGC **24** 15:56:23.1±0.0, 51.69°N×130.75°W, h29km, ML3.8/18, 187km west of Bella Bella, Bc Haida Gwaii Region*
ISC 24 15:56:23.2±1.4, 51.60N±0.05×131.06W±0.06, h19km±5km, n54, σ1°76/63, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.70**	**353**	P	**Pb**	**15 56 35.5**	**-1.2**
HG4B				S	**Sb**	**15 56 45.9**	**0.0**
BNB	**Barry Inlet**	**1.07**	**337**	P	**Pb**	**15 56 41.6**	**-1.4**
BNB				S	**Sb**	**15 56 56.8**	**+0.2**
HG1B	**Mitchell Dam**	**1.49**	**334**	Pn	**Pn**	**15 56 48.1**	**-0.8**
HG1B				Sg	**Sg**	**15 57 10.9**	**-0.4**
MOBC	**Moresby Island**	**1.64**	**341**	Pn	**Pn**	**15 56 49.7**	**-1.3**
MOBC				Sg	**Sg**	**15 57 15.5**	**-0.8**
DIB	**Dawson Inlet,**	**1.82**	**332**	Pn	**Pn**	**15 56 52.3**	**-1.1**
DIB				Sg	**Sg**	**15 57 20.5**	**-1.4**
DIB	**Dawson Inlet,**	**1.82**	**332**		**Pn**	**15 56 53.0**	**-0.4**
DIB				Sn	**Sg**	**15 57 20.5**	**-1.4**
DIB				IAML		15 57 22.9	
	comp=E,1μm,0.7s						
BNAB	**Bonilla**	**1.91**	**8**	Pn	**Pn**	**15 56 53.9**	**-0.8**
BNAB				Sg	**Sb**	**15 57 21.2**	**+0.4**
BBB	**Bella Bella**	**1.92**	**71**	Pn	**Pn**	**15 56 52.5**	**-2.2**
	comp=E,38nm,0.3s,baz=252,slow=7.5,SNR=78						
BBB				Sn	**Sn**	**15 57 16.6**	**-1.7**
	comp=E,476nm,0.3s,baz=155,slow=22,SNR=44						
BBB	**Bella Bella**	**1.92**	**71**	Pn	**Pn**	**15 56 52.1**	**-2.6**
BBB				Sg	**Sn**	**15 57 16.4**	**-1.8**
BBB	**Bella Bella**	**1.92**	**71**		**Pn**	**15 56 52.1**	**-2.6**
BBB				Sn	**Sn**	**15 57 16.6**	**-1.7**
BBB				IAML		15 57 19.6	
	comp=E,1μm,0.5s						
HOLB	**Holberg**	**2.08**	**116**	Pn	**Pn**	**15 56 54.3**	**-2.7**
HOLB				Sg	**Sb**	**15 57 24.4**	**-1.3**
HWKB	**Hawksbury Isla**	**2.31**	**29**	Pn	**Pn**	**15 56 59.4**	**-0.9**
HWKB				Sg	**Sb**	**15 57 31.3**	**-1.2**
GRNB	**Grenville Isla**	**2.35**	**16**	Pn	**Pn**	**15 57 00.1**	**-0.6**
GRNB				Sg	**Sb**	**15 57 33.2**	**-0.2**
PHC	**Port Hardy**	**2.45**	**110**	Pn	**Pn**	**15 56 58.8**	**-3.2**
PHC				Sn	**Sn**	**15 57 26.9**	**-4.6**
MAYB	**Maynard**	**2.73**	**115**	Pn	**Pn**	**15 57 03.5**	**-2.6**
RUBB	**Prince Rupert**	**2.77**	**10**	Pn	**Pn**	**15 57 05.9**	**-0.6**
RUBB				Sg	**Sb**	**15 57 46.7**	**+1.2**
KITB	**Kitimat**	**2.88**	**30**	Pn	**Pn**	**15 57 07.0**	**-0.9**
KITB				Sg	**Sb**	**15 57 48.8**	**+0.1**
WOSB	**Woss**	**3.19**	**115**	Pn	**Pn**	**15 57 10.3**	**-2.0**
NCRB	**Newcastle Ridg**	**3.38**	**109**	Pn	**Pn**	**15 57 13.5**	**-1.4**
GDR	**Gold River**	**3.68**	**118**	Pn	**Pn**	**15 57 18.3**	**-0.7**
CBB	**Campbell River**	**3.94**	**111**	Sg	**Sb**	**15 58 19.7**	**+0.6**
CRAG	**Craig**	**4.07**	**343**		**Pn**	**15 57 24.6**	**+0.4**
CRAG				IAML		15 58 49.7	
	comp=E,192nm,2.3s						
BTB	**Buttle Lake**	**4.13**	**119**	Pn	**Pn**	**15 57 24.9**	**-0.4**
UBRB	**Upper Baezaeko**	**4.48**	**70**	Pn	**Pn**	**15 57 29.6**	**-0.4**
UBRB				Sg	**Sb**	**15 58 34.9**	**+0.2**
WRAK	**Wrangell Islan**	**4.89**	**352**	Pn	**Pn**	**15 57 35.9**	**+0.4**
WRAK				IAML		15 59 06.1	
	comp=E,145nm,1.1s						
FSB	**Fort Saint Jam**	**4.98**	**52**	Pn	**Pn**	**15 57 36.1**	**-0.7**
SHB	**Sechelt**	**5.00**	**111**	Sg	**Sb**	**15 58 52.5**	**+2.9**
NLLB	**Nanaimo Lost L**	**5.11**	**115**	Sg	**Sb**	**15 58 57.0**	**+4.3**
A05A	**Maple Falls**	**6.31**	**111**	Pn	**Pn**	**15 57 52.1**	**-3.0**
DLBC	**Dease Lake**	**6.88**	**5**	Pn	**Pn**	**15 58 05.0**	**+2.0**
	comp=E,3.1nm,0.3s,baz=184,slow=12,SNR=12						
DLBC				Lg	Lg	15 59 55.6	
	comp=E,1.4nm,0.3s,baz=274,slow=6,SNR=5.2						
DLBC	**Dease Lake**	**6.88**	**5**	Pn	**Pn**	**15 58 05.2**	**+2.3**
DLBC	**Dease Lake**	**6.88**	**5**		**Pn**	**15 58 04.8**	**+1.9**
BMBC	**Bull Mountain**	**6.91**	**46**	Pn	**Pn**	**15 58 04.4**	**+1.1**
BESE	**Bessie Mountai**	**7.32**	**344**	Pn	**Pn**	**15 58 10.8**	**+1.8**
NBC5	**NorthernBC 5**	**7.67**	**36**	Pn	**Pn**	**15 58 15.6**	**+1.8**
FMW	**Mount Fremont**	**7.71**	**124**	Pn	**Pn**	**15 58 17.0**	**+2.5**
WHY	**Whitehorse**	**9.33**	**348**		**Pn**	**15 58 38.4**	**+1.9**
NEW	**Newport**	**9.59**	**105**	Lg	Lg	16 01 14.8	
	comp=E,0.2nm,0.3s,baz=36,slow=18,SNR=2.4						
MOD	**Modoc Plateau**	**12.17**	**139**	Pn	Pn	15 59 06.3	-9.2
KLU	**Klutina**	**12.83**	**326**	Pn	**Pn**	**15 59 23.5**	**-0.8**
DAWY	**Dawson**	**13.24**	**344**	Pn	**Pn**	**15 59 31.5**	**+1.5**
YKA	**Yellowknife Ar**	**14.06**	**33**	Pn	**Pn**	**15 59 41.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=6.3						
YKA				Lg	Lg	16 03 40.3	
	comp=E,0.1nm,0.3s,baz=219,slow=30,SNR=7.8						
ELK	**Elko**	**15.39**	**129**	Pn	**P**	**16 00 02.1**	**-1.7**
	comp=E,0.1nm,0.3s,baz=208,slow=16,SNR=1.8						
ILAR	**Eielson Array**	**15.55**	**334**	Pn	**P**	**16 00 06.0**	**+0.8**
	comp=E,0.1nm,0.3s,baz=144,slow=7.8,SNR=2.4						
NVAR	**Mina Array Bea**	**15.93**	**141**	Pn	**P**	**16 00 09.9**	**+0.1**
	comp=E,0.1nm,0.3s,baz=332,slow=13,SNR=1.9						
PDAR	**Pinedale Array**	**17.03**	**113**	Pn	**P**	**16 00 23.8**	**+1.8**
	comp=E,0.1nm,0.3s,baz=316,slow=14,SNR=14						
ULM	**Lac du Bonnet**	**22.09**	**80**	P	**P**	**16 01 18.4**	**+1.5**
	comp=E,4.0nm,0.8s,baz=292,slow=11,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**57.47**	**261**	T	T	17 08 47.8	
	baz=40,slow=76,SNR=335						
H11N3	**WAKE ISLAND Hy**	**57.47**	**261**	T	T	17 08 42.7	
	baz=40,slow=76,SNR=444						
H11N1	**WAKE ISLAND Hy**	**57.49**	**261**	T	T	17 08 44.5	
	baz=40,slow=76,SNR=278						
H11S1	**WAKE ISLAND Hy**	**58.51**	**260**	T	T	17 10 02.8	
	baz=49,slow=74,SNR=34						
H11S2	**WAKE ISLAND Hy**	**58.52**	**260**	T	T	17 10 06.9	
	baz=49,slow=74,SNR=39						
H11S3	**WAKE ISLAND Hy**	**58.53**	**260**	T	T	17 10 05.6	
	baz=49,slow=74,SNR=28						
MKAR	**Makanchi Array**	**77.88**	**337**	P	**P**	**16 08 21.2**	**+2.0**
	comp=E,0.2nm,0.6s,baz=4.3,slow=5.8,SNR=2.3						

*IDC **24** 16:18:06.6±4.8, 5.06N×127.33E, h71km±51km, mb3.3/5, mb1 3.5/6, mb1mx3.1/48, mbtmp3.6/6, ML3.8/1, Error ellipse: s-maj=78.3km s-min=22.0km az=62.0*
*MAN **24** 16:18:07.5, 5.61N×127.47E, h1km, MS2.9*
ISC 24 16:17:57.9±1.0, 5.6N±0.1×128.0E±0.1, h10km, n11, σ2°62/16, mb3.6/5, 1C, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**2.20**	**307**	*e*P	**Pg**	**16 18 39.9**	**-0.2**
MATI				*e*S	**Sb**	**16 19 03.8**	**-1.3**
DDMP	**Don Marcelino,**	**2.35**	**282**	*e*P	**Pb**	**16 18 40.3**	**-0.1**
DDMP				*e*S	**Sn**	**16 19 04.1**	**-1.4**
BUKP	**Musuan**	**3.70**	**308**	*e*P	**Pb**	**16 19 00.9**	**-2.6**
BUKP				*e*S	**Sn**	**16 19 41.7**	**+2.7**
CGP	**Cagayan de Oro**	**4.34**	**311**	*e*P	**Pb**	**16 19 11.0**	**-3.4**
CGP				*e*S	**Sn**	**16 19 57.5**	**+2.7**
SIJI	**Sorong**	**7.21**	**153**	P	**Pn**	**16 19 47.3**	**+3.8**
	1.5nm,0.3s,baz=303,slow=23,SNR=12						
SIJI				S	**Sn**	**16 21 00.3**	**-5.1**
	0.5nm,0.3s,baz=330,slow=23,SNR=1.8						
WRA	**Warramunga Arr**	**26.14**	**166**	P	**P**	**16 23 31.8**	**-0.7**
	0.1nm,0.5s,baz=347,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**29.66**	**169**	P	**P**	**16 24 01.8**	**-2.2**
	0.5nm,1.0s,baz=354,slow=7.3,SNR=4.1						
CMAR	**Chiang Mai Arr**	**31.11**	**297**	P	**P**	**16 24 16.3**	**-0.6**
	0.6nm,0.6s,baz=106,slow=6.7,SNR=6.3						
MKAR	**Makanchi Array**	**56.78**	**324**	P	**P**	**16 27 43.2**	**+0.9**
	0.5nm,0.6s,baz=122,slow=8.5,SNR=7.0						
KURBB	**Kurchatov Arra**	**60.88**	**326**	P	**P**	**16 28 12.0**	**+1.3**
	0.4nm,0.3s,baz=128,slow=6.1,SNR=4.5						
KIBA	**Kibaya**	**91.94**	**265**	*i* P	**P**	**16 31 09.7**	**+1.9**

*NOU **24** 16:31:45.4, 42.24S×173.36E, h72km, MLv4.2, South Island, New Zealand*
WEL 24 16:31:46.2, 42.1S±1.0×17.3E±, h53km±2km, M3.8/9, ML4.1/9, MLv3.8/9, Error ellipse: s-maj=0.0km s-min=0.0km az=80.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.37**	**338**	P	Pn	16 31 56.9	+0.6
THZ				S	Sn	16 32 04.5	+0.9
KHZ	**Kahutara**	**0.45**	**133**	P	Pn	16 31 57.7	+0.6
KHZ				S	Sn	16 32 05.6	+0.7
BSWZ	**Blackbirch Sta**	**0.70**	**56**	P	Pn	16 32 01.0	+0.9
BSWZ				S	Sn	16 32 12.0	+1.9
GVZ	**Greta Valley S**	**0.86**	**183**	P	Pn	16 32 02.8	+0.7
CMWZ	**Cape Campbell**	**0.91**	**67**	P	Pn	16 32 04.2	+1.4
LTZ	**Lake Taylor**	**0.91**	**222**	P	Pn	16 32 03.9	+1.0
LTZ				S	Sn	16 32 16.3	+1.9
NNZ	**Nelson**	**0.91**	**14**	P	Pn	16 32 04.1	+1.3
NNZ				S	Sn	16 32 17.1	+2.0
TUWZ	**Tuamarina**	**0.93**	**44**	P	Pn	16 32 03.9	+0.9
TUWZ				S	Sn	16 32 17.2	+1.8
DSZ	**Denniston Nort**	**1.03**	**290**	P	Pn	16 32 05.8	+1.4
DSZ				S	Sn	16 32 19.6	+1.8
AMCZ	**Amberley**	**1.12**	**197**	P	Pn	16 32 06.0	+0.5
TCW	**Tory Channel**	**1.26**	**45**	P	Pn	16 32 08.0	+0.6
QRZ	**Quartz Range**	**1.35**	**341**	P	Pn	16 32 10.1	+1.5
QRZ				S	Sn	16 32 27.5	+2.0
INZ	**Inchbonnie**	**1.37**	**243**	P	Pn	16 32 10.1	+1.2
INZ				S	Sn	16 32 27.8	+1.8
DUWZ	**D'Urville Isla**	**1.44**	**26**	P	Pn	16 32 11.2	+1.2
DUWZ				S	Sn	16 32 30.3	+2.5
OXZ	**Oxford**	**1.45**	**212**	P	Pn	16 32 09.9	-0.1
WEL	**Wellington**	**1.50**	**57**	P	Pn	16 32 11.0	+0.3
BHW	**Baring Head**	**1.50**	**63**	P	Pn	16 32 10.6	-0.1
OKCZ	**Okains Bay**	**1.62**	**181**	P	Pn	16 32 12.2	-0.1
OKCZ				S	Sn	16 32 31.5	-0.6
MQZ	**McQueen's Vall**	**1.63**	**191**	P	Pn	16 32 11.5	-1.1
MQZ				S	Sn	16 32 30.4	-2.0
PLWZ	**Palliser**	**1.70**	**72**	P	Pn	16 32 12.7	-0.8
MSWZ	**Moikau Station**	**1.75**	**68**	P	Pn	16 32 13.6	-0.6
RACZ	**Rakaia**	**1.77**	**203**	P	Pn	16 32 13.7	-0.6
AKCZ	**Akaroa Harbour**	**1.77**	**184**	P	Pn	16 32 13.9	-0.6
CAW	**Cannon Point**	**1.79**	**57**	P	Pn	16 32 14.5	-0.1
KIW	**Kapiti Island**	**1.85**	**48**	P	Pn	16 32 15.9	+0.4
PAWZ	**Paruwai Farm**	**1.89**	**68**	P	Pn	16 32 15.4	-0.7
WVZ	**Waitaha Valley**	**1.99**	**240**	P	Pn	16 32 18.2	+0.8
OGWZ	**Otaki Gorge**	**2.02**	**51**	P	Pn	16 32 17.9	0.0
MTW	**Mount Morrison**	**2.04**	**63**	P	Pn	16 32 17.1	-1.0
WACZ	**Wakanui South**	**2.05**	**206**	P	Pn	16 32 17.5	-0.8
TRWZ	**Traveller**	**2.07**	**71**	P	Pn	16 32 18.0	-0.5
HOWZ	**Holdsworth Sta**	**2.18**	**57**	P	Pn	16 32 19.3	-0.8
RPZ	**Rata Peaks**	**2.20**	**222**	P	Pn	16 32 20.1	-0.1
ARCZ	**Arundel**	**2.31**	**217**	P	Pn	16 32 21.6	-0.3
TMWZ	**Te Maipa**	**2.32**	**65**	P	Pn	16 32 20.7	-1.3
MRZ	**Mangatainoka R**	**2.36**	**53**	P	Pn	16 32 21.9	-0.6
GCSZ	**Gaunt Creek Bo**	**2.37**	**238**	P	Pn	16 32 23.1	+0.5
TIWZ	**Tintock**	**2.48**	**59**	P	Pn	16 32 23.1	-1.2
OHWZ	**Ohakea**	**2.53**	**42**	P	Pn	16 32 25.8	+1.0
POWZ	**Post Office Ro**	**2.65**	**51**	P	Pn	16 32 25.8	-0.6
PRWZ	**Pori Road**	**2.66**	**55**	P	Pn	16 32 25.7	-0.9
TMZ	**Timaru**	**2.74**	**213**	P	Pn	16 32 26.8	-0.9
WAZ	**Wanganui**	**2.75**	**32**	P	Pn	16 32 29.9	+2.0
NMEZ	**Namu Road**	**2.75**	**13**	P	Pn	16 32 30.6	+2.7
BFZ	**Birch Farm**	**2.77**	**60**	P	Pn	16 32 26.2	-1.8
FOZ	**Fox Glacier**	**2.80**	**238**	P	Pn	16 32 28.9	+0.4
LREZ	**Lake Rotokare**	**2.82**	**21**	P	Pn	16 32 32.0	+3.2
PREZ	**Palmer Road**	**2.88**	**17**	P	Pn	16 32 32.5	+2.9
KHEZ	**Kahui Hut**	**2.90**	**14**	P	Pn	16 32 32.2	+2.3
NBEZ	**Newall Road No**	**2.90**	**12**	P	Pn	16 32 32.3	+2.4
NEZ	**North Egmont**	**2.93**	**15**	P	Pn	16 32 32.4	+2.0
DVHZ	**Dannevirke**	**2.94**	**53**	P	Pn	16 32 29.0	-1.5
TSZ	**Takapari Road**	**2.98**	**48**	P	Pn	16 32 30.1	-0.9
PKE	**Pukeiti**	**2.99**	**13**	P	Pn	16 32 33.6	+2.5
ANWZ	**Angora Road**	**3.03**	**58**	P	Pn	16 32 30.6	-1.1
DREZ	**Durham Road**	**3.03**	**16**	P	Pn	16 32 34.6	+2

JKB	**Kayabe**	**5.84**	**246**	P		**Pn**	**16**	**59**	**47.4 +1.4**
JKB				*e*S		**Sn**	**17**	**00**	**52.1 -0.9**

*IDC **24** 17:01:40.5±0.6,7°.28S×120°.78E,h528km±6km,mb3.7/21, mb1 3.9/27,mb1mx3.8/40,mbtmp4.6/27,Error ellipse: s-maj=13.2km s-min=6.6km az=65.0*
*NEIC **24** 17:01:40.1±1.5,7°.31S±0°.07×120°.69E±0°.06,h528km±7km, mb4.5/64,Error ellipse: s-maj=12.4km s-min=4.2km az=138.0*
*DJA **24** 17:01:40.7±0.2,7°.S±2°×12°.1E±°,h518km±3km,M4.3/25, mB4.8/15,mb4.7/25,MLv4.8/24,Mw(mB)4.1/15*
ISC 24 17:01:40.1±0.5,**7°.32S**±0°.04×**120°.77E**±0°.05,**h528**km±5km, **n168,**σ1°.**14**/191,**mb4.4**/60,**2C,Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.95**	**132**	P	**P**	**17 02 46.8**	**-0.8**
MMRI	**Maumere**	**1.95**	**132**	P	**P**	**17 02 46.8**	**-0.8**
KAPI	**Kappang**	**2.51**	**336**	P	**P**	**17 02 52.0**	**+1.5**
	36nm,0.3s,baz=135,slow=3.2,SNR=48						
KAPI				S	**S**	**17 03 47.4**	**-0.1**
	14nm,0.3s,baz=162,slow=14,SNR=4.2						
KAPI	**Kappang**	**2.51**	**336**	P	**P**	**17 02 52.1**	**+1.6**
WBSI	**Waikabubak, Su**	**2.67**	**211**	P	**P**	**17 02 50.5**	**-0.9**
BASI	**Baing, Sumba**	**2.88**	**184**	P	**P**	**17 02 51.8**	**-0.8**
BASI				S	**S**	**17 03 49.9**	**-1.7**
BNSI	**Bone**	**2.98**	**347**	P	**P**	**17 02 53.9**	**+0.6**
BNSI				S	**S**	**17 03 52.7**	**+0.1**
PLAI	**Plampang**	**3.32**	**243**	P	**P**	**17 02 54.5**	**-1.0**
SPSI	**Sidrap Palu**	**3.48**	**343**	P	**P**	**17 02 57.4**	**+0.7**
BATI	**Baumata**	**4.05**	**135**	P	**P**	**17 03 01.6**	**+0.7**
	122nm,0.3s,baz=318,slow=3.9,SNR=134						
BATI				S	**S**	**17 04 01.6**	**-5.0**
	108nm,0.3s,baz=289,slow=3.4,SNR=12						
BATI	**Baumata**	**4.05**	**135**	P	**P**	**17 03 00.7**	**-0.2**
TWSI	**Taliwang, Sumb**	**4.10**	**250**	P	**P**	**17 03 00.4**	**-0.8**
SOEI	**Soe**	**4.22**	**125**	P	**P**	**17 03 02.9**	**+0.5**
SOEI	**Soe**	**4.22**	**125**	P	**P**	**17 03 02.2**	**-0.1**
TTSI	**Tana Toraja**	**4.35**	**347**	P	**P**	**17 03 04.2**	**+0.9**
SRBI	**Singaraja**	**5.56**	**262**	P	**P**	**17 03 13.5**	**-0.1**
	0.6nm57nm,0.7s						
DNP	**Denpasar**	**5.67**	**256**	P	**P**	**17 03 17.9**	**+3.3**
KBKI	**Kotabaru**	**6.08**	**311**	P	**P**	**17 03 19.0**	**+0.5**
	0.7nm2µm200nm,0.8s						
APSI	**Ampana**	**6.43**	**8**	P	**P**	**17 03 22.6**	**+0.7**
	0.3nm1µm86nm,1.0s						
LUWI	**Luwuk**	**6.55**	**18**	P	**P**	**17 03 23.8**	**+0.8**
LUWI	**Luwuk**	**6.55**	**18**	P	**P**	**17 03 24.4**	**+1.4**
	0.6nm2µm164nm,0.8s						
JAGI	**Jajag, Banyuwa**	**6.65**	**260**		**P**	**17 03 22.4**	**-1.6**
JAGI	**Jajag, Banyuwa**	**6.65**	**260**	P	**P**	**17 03 22.2**	**-1.8**
	0.5nm2µm102nm,0.5s						
BBKI	**Banjar Baru**	**7.04**	**303**	P	**P**	**17 03 27.9**	**+0.2**
	0.4nm1µm123nm,0.9s						
BKB	**Balikpapan**	**7.15**	**327**	P	**P**	**17 03 32.8**	**+3.9**
SANI	**Sanana**	**7.38**	**45**	P	**P**	**17 03 31.7**	**+0.6**
	0.2nm534nm66nm,0.8s						
MRSI	**Marisa**	**7.84**	**9**	P	**P**	**17 03 36.4**	**+0.7**
	0.9nm2µm271nm,0.9s						
GTOI	**Gorontalo**	**8.22**	**16**	P	**P**	**17 03 41.1**	**+1.6**
	0.6nm2µm148nm,0.7s						
TOLI2	**Tolitoli**	**8.38**	**0**	P	**P**	**17 03 41.5**	**+0.3**
KMSI	**Cibinong**	**8.48**	**22**	P	**P**	**17 03 44.2**	**+2.1**
	0.8nm2µm179nm,0.6s						
MTKI	**Muara Teweh, K**	**8.63**	**317**	P	**P**	**17 03 44.1**	**+0.4**
	0.4nm1µm113nm,0.8s						
PBKI	**Pangkalan Bun**	**10.16**	**296**	P	**P**	**17 04 00.7**	**+1.2**
	4µm291nm,0.9s						
UGM	**Wanagama**	**10.17**	**266**	P	**P**	**17 03 58.8**	**-0.9**
TNTI	**Ternate**	**10.39**	**40**	P	**P**	**17 04 02.1**	**+0.2**
SAUI	**Saumlaki**	**10.46**	**94**	P	**P**	**17 04 02.9**	**+0.2**
KNRA	**Kununurra**	**11.41**	**137**	P	**P**	**17 04 12.6**	**+0.1**
MTN	**Manton Dam**	**11.58**	**119**	P	**P**	**17 04 14.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**11.71**	**157**	P	**P**	**17 04 16.4**	**+0.8**
	9.1nm,0.3s,baz=348,slow=8.8,SNR=316						
FAKI	**Fak Fak**	**12.24**	**70**	P	**P**	**17 04 21.5**	**+0.1**
SIJI	**Sorong**	**12.28**	**59**	P	**P**	**17 04 22.6**	**+0.9**
	1.4nm,0.3s,baz=277,slow=15,SNR=4.4						
SIJI				S	**S**	**17 06 34.8**	**+0.2**
	0.3nm,0.3s,baz=256,slow=22,SNR=1.6						
MYLDM	**Lahad Datu**	**12.62**	**350**	P	**P**	**17 04 26.9**	**+1.6**
CISI	**Cisompet, Garu**	**12.85**	**268**	P	**P**	**17 04 25.4**	**-2.2**
SBUM	**Sibu**	**12.92**	**318**	P	**P**	**17 04 29.1**	**+0.7**
LEM	**Lembang**	**13.06**	**271**	P	**P**	**17 04 29.7**	**-0.3**
	3.1nm,0.3s,baz=18,slow=9.4,SNR=5.5						
LEM				S	**S**	**17 06 54.3**	**+4.4**
	0.3nm,0.3s,baz=338,slow=15,SNR=6.0						
KSM	**Kuching**	**13.61**	**310**	P	**P**	**17 04 35.7**	**+0.1**
KKM	**Kota Kinabalu**	**14.04**	**341**	P	**P**	**17 04 39.6**	**-0.5**
PSA00	**Pilbara Seismi**	**14.19**	**184**	P	**P**	**17 04 41.1**	**-0.5**
PSA00	**Pilbara Seismi**	**14.19**	**184**	P	**P**	**17 04 39.8**	**-1.8**
GIRL	**Giralia**	**16.48**	**202**	P	**P**	**17 05 05.0**	**0.0**
WB0	**Warramunga Arr**	**18.10**	**134**	P	**P**	**17 05 20.5**	**+0.3**
WRA	**Warramunga Arr**	**18.18**	**135**	P	**P**	**17 05 21.5**	**+0.6**
	7.5nm,0.3s,baz=314,slow=10,SNR=444						
WRA				S	**S**	**17 08 19.4**	**-1.3**
	0.2nm,0.3s,baz=314,slow=18,SNR=6.3						
WRA	**Warramunga Arr**	**18.18**	**135**	P	**P**	**17 05 20.6**	**-0.3**
WRAB	**Tennant Creek**	**18.18**	**135**	P	**P**	**17 05 21.4**	**+0.5**
WB2	**Warramunga Arr**	**18.19**	**135**	P	**P**	**17 05 21.4**	**+0.4**
WR0	**Warramunga Arr**	**18.34**	**135**	P	**P**	**17 05 22.8**	**+0.5**
MYKOM	**Kota Tinggi**	**19.16**	**298**	P	**P**	**17 05 31.2**	**+1.4**
MYKOM				IAmb	IAmb	17 05 32.1	
	comp=Z,10nm,0.8s						
AS31	**Alice Springs**	**20.57**	**144**	P	**P**	**17 05 42.9**	**+0.3**
AS31				IAmb	IAmb	17 05 44.3	
	comp=Z,8.0nm,0.6s						
ASAR	**Alice Springs**	**20.57**	**144**	P	**P**	**17 05 43.2**	**+0.6**
	comp=Z,18nm,0.5s,baz=318,slow=8.2,SNR=614						
ASAR				S	**S**	**17 09 00.1**	**+1.0**
	comp=Z,3.3nm,0.7s,baz=338,slow=24,SNR=6.3						
ASAR				PcP	**PcP**	**17 09 30.2**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=331,slow=1.4,SNR=8.4						
ASAR				ScP	**ScP**	**17 12 16.6**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=325,slow=1.8,SNR=6.7						
ASAR	**Alice Springs**	**20.57**	**144**	P	**P**	**17 05 42.1**	**-0.5**
ASAR					**PcP**	**17 09 28.8**	**-1.3**
ASAR					**ScP**	**17 12 16.1**	**-0.9**
MORW	**Morawa**	**22.08**	**191**	P	**P**	**17 05 56.0**	**-0.1**
MORW				IAmb	IAmb	17 06 11.6	
	comp=Z,25nm,1.2s						
COEN	**Coen**	**22.98**	**109**	P	**P**	**17 06 04.5**	**+0.2**
FORT	**Forrest**	**24.31**	**165**	P	**P**	**17 06 16.4**	**+0.4**
NWAO	**Narrogin (SRO)**	**25.69**	**187**	P	**P**	**17 06 28.1**	**0.0**
	comp=Z,5.8nm,0.6s,baz=25,slow=8.3,SNR=6.3						
NWAO	**Narrogin (SRO)**	**25.69**	**187**	P	**P**	**17 06 28.1**	**0.0**
NWAO	**Narrogin (SRO)**	**25.69**	**187**	P	**P**	**17 06 28.1**	**0.0**
NWAO				IAmb	IAmb	17 06 48.4	
	comp=Z,69nm,1.4s						
CTA	**Charters Tower**	**27.77**	**120**	P	**P**	**17 06 47.4**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=283,slow=12,SNR=5.3						
CTA				PcP	**PcP**	**17 09 47.0**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=342,slow=6.4,SNR=2.8						
CTAO	**Charters Tower**	**27.77**	**120**	P	**P**	**17 06 48.0**	**+1.4**
BBOO	**Buckleboo**	**29.07**	**153**	P	**P**	**17 06 58.1**	**+0.4**
STKA	**Stephens Creek**	**31.20**	**144**	P	**P**	**17 07 16.9**	**+0.7**
	comp=Z,23nm,0.5s,baz=321,slow=8.9,SNR=82						
STKA				PcP	**PcP**	**17 09 54.6**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=344,slow=1.4,SNR=3.0						
STKA	**Stephens Creek**	**31.20**	**144**	P	**P**	**17 07 17.2**	**+1.0**
STKA				IAmb	IAmb	17 07 17.7	
	comp=Z,5.1nm,0.6s						
YHNB	**Yeheng**	**31.80**	**1**	P	**P**	**17 07 20.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**33.47**	**320**	P	**P**	**17 07 35.9**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=148,slow=5.1,SNR=4.6						
CMAR				PcP	**PcP**	**17 10 02.3**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=164,slow=2.9,SNR=5.0						
JOW	**Kunigami**	**34.73**	**12**	P	**P**	**17 07 47.8**	**+1.7**
JOW				IAmb	IAmb	17 08 05.0	
	comp=Z,26nm,1.2s						
ARMA	**Armidale**	**36.93**	**132**	P	**P**	**17 08 07.4**	**+2.9**
ARMA				IAmb	IAmb	17 08 27.8	
	comp=Z,32nm,1.6s						
TOO	**Toolangi**	**37.55**	**147**	P	**P**	**17 08 11.3**	**+1.9**
TOO				IAmb	IAmb	17 08 32.4	
	comp=Z,22nm,1.5s						
CAN	**Canberra**	**38.04**	**141**	P	**P**	**17 08 15.4**	**+2.0**
CAN				IAmb	IAmb	17 08 24.8	
	comp=Z,33nm,1.5s						
NJ2	**Nanjing**	**39.20**	**357**	*e*P	**P**	**17 08 25.0**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JCJ	**Chichijima**	**40.02**	**30**	P	**P**	**17 08 28.7**	**-0.8**
XAN	**Xi'an**	**42.64**	**345**	P	**P**	**17 08 48.0**	**-2.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JHS	**Saijyo**	**43.68**	**15**	P	**P**	**17 08 58.4**	**+0.1**
JHS				IAmb	IAmb	17 09 38.6	
	comp=Z,20nm,1.4s						
JWT	**Wachi**	**44.57**	**17**	P	**P**	**17 09 04.6**	**-0.5**
JWT				IAmb	IAmb	17 09 34.7	
	comp=Z,25nm,1.6s						
KSRS	**Korea Array**	**45.04**	**8**	P	**P**	**17 09 08.2**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=189,slow=8.1,SNR=17						
KSRS				PcP	**PcP**	**17 10 39.4**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=181,slow=3.2,SNR=14						
JGF	**Kuroka**	**45.47**	**19**	P	**P**	**17 09 11.3**	**-0.7**
JGF				IAmb	IAmb	17 09 14.2	
	comp=Z,10nm,1.3s						
LZH	**Lanzhou**	**46.02**	**341**	⇑P	**P**	**17 09 18.3**	**+1.9**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
MAJO	**Matsushiro**	**46.60**	**19**	P	**P**	**17 09 20.1**	**-0.6**
MAJO				IAmb	IAmb	17 09 21.2	
	comp=Z,5.3nm,0.5s						
MAT	**Matsushiro**	**46.60**	**19**	P	**P**	**17 09 19.3**	**-1.3**
MJAR	**Matsushiro Arr**	**46.60**	**19**	P	**P**	**17 09 19.4**	**-1.3**
	comp=Z,5.0nm,0.7s,baz=199,slow=8.7,SNR=9.5						
MJAR				PcP	**PcP**	**17 10 44.6**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=230,slow=2.2,SNR=4.3						
ODAN	**Odare**	**46.92**	**318**	*e*P	**P**	**17 09 22.7**	**-0.7**
	comp=Z,8.1nm,0.7s						
TAPN	**Taplejung**	**47.03**	**318**	*e*P	**P**	**17 09 24.0**	**-0.4**
	comp=Z,15nm,0.5s						
BJI	**Beijing**	**47.32**	**355**	P	**P**	**17 09 25.6**	**-0.3**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
RAMN	**Ramite**	**47.51**	**317**	*e*P	**P**	**17 09 27.6**	**-0.3**
	comp=Z,12nm,0.6s						
JSD	**Sado**	**47.98**	**19**	P	**P**	**17 09 30.3**	**-0.6**
JSD				IAmb	IAmb	17 09 31.1	
	comp=Z,18nm,0.7s						
JIRN	**Jiri**	**48.24**	**318**	*e*P	**P**	**17 09 33.0**	**-0.6**
	comp=Z,6.6nm,0.5s						
GUN	**Gumba**	**48.62**	**318**	*e*P	**P**	**17 09 35.7**	**-0.6**
HHC	**Hu-ho-hao-te**	**48.68**	**351**	*e*P	**P**	**17 09 36.8**	**+0.6**
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,6.0s						
JMM	**Marumori**	**48.69**	**21**	P	**P**	**17 09 36.9**	**+0.8**
JMM				PcP	**PcP**	**17 10 51.5**	**+0.1**
PKIN	**Phulchoki**	**48.73**	**317**	*e*P	**P**	**17 09 35.9**	**-1.1**
	comp=Z,8.2nm,0.5s						
KKN	**Kakani**	**48.94**	**317**	*e*P	**P**	**17 09 37.7**	**-0.9**
GTA	**Gaotai**	**50.39**	**339**	⇑P	**P**	**17 09 49.8**	**+0.9**
GTA				PcP	**PcP**	**17 10 59.3**	**+1.3**
GTA				pP	pP	17 11 37.5	+8.7
GTA				sP	sP	17 12 39.3	+13
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,73nm,5.5s						
GTA				LR	LR		
	comp=N,100nm,17.4s						
GTA				LR	LR		
	comp=E,100nm,17.8s						
GTA				LR	LR		
	comp=Z,150nm,18.2s						
USA0B	**Ussuriysk Arra**	**52.28**	**10**	P	**P**	**17 10 01.7**	**-0.6**
USRK	**Ussuriysk Ar.**	**52.28**	**10**	P	**P**	**17 10 01.8**	**-0.5**
	comp=Z,5.0nm,0.5s,baz=188,slow=7.0,SNR=29						
MDJ	**Mudanjiang**	**52.31**	**8**	P	**P**	**17 10 02.4**	**-0.1**
MDJ				sP	sP	17 12 39.8	-1.9
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,120nm,8.4s						
JKA	**Kamikawa-asahi**	**54.87**	**19**	P	**P**	**17 10 21.1**	**+0.4**
ULN	**Ulaanbaatar**	**56.27**	**349**	P	**P**	**17 10 30.6**	**+0.1**
SONM	**Songino Array**	**56.37**	**348**	P	**P**	**17 10 31.1**	**0.0**
	comp=Z,6.8nm,0.7s,baz=166,slow=8.4,SNR=50						
SONM				PcP	**PcP**	**17 11 20.8**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=171,slow=4.8,SNR=4.4						
SONM	**Songino Array**	**56.37**	**348**	P	**P**	**17 10 31.2**	**0.0**
SONM				PcP	**PcP**	**17 11 20.5**	**-0.3**
YSS	**Yuzh-Sakhalins**	**57.46**	**18**	P	**P**	**17 10 38.4**	**-0.1**
YSS				IAmb	IAmb	17 11 05.4	
	comp=Z,31nm,1.3s						
WMQ	**Urumqi**	**59.05**	**333**	*e*P	**P**	**17 10 50.4**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.9s						
WMQ				LR	LR		
	comp=N,510nm,29.1s						
WMQ				LR	LR		
	comp=E,2µm,29.1s						
WMQ				LR	LR		
	comp=Z,160nm,29.2s						
BKZ	**Black Stump Fm**	**59.07**	**132**	P	**P**	**17 10 50.9**	**+1.1**
BKZ				IAmb	IAmb	17 11 09.7	
	comp=Z,33nm,1.4s						
CASY	**Casey**	**59.29**	**185**	P	**P**	**17 10 50.7**	**+0.1**
TLY	**Talaya**	**60.59**	**348**	P	**P**	**17 10 59.6**	**+0.2**
NIL	**Nilore**	**60.73**	**315**	P	**P**	**17 10 59.5**	**-1.2**
NIL				IAmb	IAmb	17 11 00.3	
	comp=Z,15nm,0.5s						
KSH	**Kashi**	**62.34**	**322**	P	**P**	**17 11 11.3**	**0.0**
KSH				S	**S**	**17 18 51.4**	**-5.6**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,91nm,4.5s						
KSH				LR	LR		
	comp=N,200nm,6.8s						
KSH				LR	LR		
	comp=E,190nm,6.4s						
KSH				LR	LR		
	comp=Z,110nm,6.2s						
PRZ	**Przheval'sk**	**62.81**	**326**	P	**P**	**17 11 15.2**	**+0.8**
PRZ				IAmb	IAmb	17 11 55.4	
	comp=Z,6.5nm,0.7s						
KDJ	**Kajisay**	**63.27**	**325**	P	**P**	**17 11 17.2**	**-0.1**
MK31	**Makanchi Array**	**63.80**	**332**	P	**P**	**17 11 20.2**	**-0.2**
MK31				IAmb	IAmb	17 11 21.3	
	comp=Z,9.0nm,0.7s						
MK31				PcP	**PcP**	**17 11 50.1**	**-0.6**
MKAR	**Makanchi Array**	**63.80**	**332**	P	**P**	**17 11 20.5**	**+0.1**
	comp=Z,14nm,0.7s,baz=139,slow=7.6,SNR=142						
MKAR				PcP	**PcP**	**17 11 50.5**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=152,slow=5.1,SNR=2.2						
MAKZ	**Makanchi**	**63.96**	**331**	P	**P**	**17 11 20.9**	**-0.5**
MAKZ				IAmb	IAmb	17 11 22.1	
	comp=Z,5.6nm,0.8s						
KBL	**Kabul**	**64.17**	**314**	P	**P**	**17 11 22.5**	**-0.7**
KBL				IAmb	IAmb	17 11 23.2	
	comp=Z,7.9nm,0.6s						
BOOM	**Boomskoye usch**	**64.21**	**325**	P	**P**	**17 11 22.9**	**-0.4**
TKM2	**Tokmak 2**	**64.67**	**325**	P	**P**	**17 11 26.3**	**0.0**
	SNR=9.4						
KBK	**Karagaybulak**	**64.88**	**324**	P	**P**	**17 11 27.9**	**+0.4**
	SNR=5.2						
DRK	**Karamyk**	**64.93**	**320**	P	**P**	**17 11 28.2**	**+0.2**
DRK				IAmb	IAmb	17 11 29.0	
	comp=Z,7.7nm,0.7s						
AAK	**Ala-Archa**	**65.14**	**324**	P	**P**	**17 11 29.4**	**+0.2**
	SNR=11						
AAK	**Ala-Archa**	**65.14**	**324**	P	**P**	**17 11 29.2**	**+0.1**
AAK				IAmb	IAmb	17 11 30.3	
	comp=Z,7.7nm,0.6s						
AML	**Almayashu**	**65.30**	**323**	P	**P**	**17 11 30.7**	**+0.2**
	SNR=18						
USP	**Ospenovka**	**65.52**	**325**	P	**P**	**17 11 31.0**	**-0.4**
	SNR=5.2						
BTK	**Batken**	**65.88**	**320**	P	**P**	**17 11 33.3**	**-0.5**
KK31	**Karatay Array**	**67.77**	**323**	P	**P**	**17 11 44.7**	**-0.6**
KKAR	**Karatay Array**	**67.77**	**323**	P	**P**	**17 11 44.5**	**-0.9**
KKAR	**Karatay Array**	**67.77**	**323**	P	**P**	**17 11 44.6**	**-0.7**
KKAR				IAmb	IAmb	17 11 45.9	
	comp=Z,3.1nm,0.6s						
PEA0B	**Petropavlovsk-**	**67.85**	**23**	P	**P**	**17 11 46.6**	**+1.1**
PETK	**Petropavlovsk-**	**67.85**	**23**	P	**P**	**17 11 46.4**	**+0.8**
	comp=Z,6.6nm,0.5s,baz=196,slow=1.4,SNR=19						
PETK	**Petropavlovsk-**	**67.85**	**23**	P	**P**	**17 11 46.6**	**+1.0**
ZAA0	**Zalesovo Array**	**68.13**	**338**	P	**P**	**17 11 45.9**	**-1.3**
ZAA0				IAmb	IAmb	17 11 46.9	
	comp=Z,8.6nm,0.8s						
ZALV	**Zalesovo Beam**	**68.13**	**338**	P	**P**	**17 11 46.1**	**-1.1**
	comp=Z,8.5nm,0.4s,baz=136,slow=4.6,SNR=38						
ZALV	**Zalesovo Beam**	**68.13**	**338**	P	**P**	**17 11 45.8**	**-1.3**
PET	**Petropavlovsk**	**68.16**	**24**	P	**P**	**17 11 48.3**	**+1.0**
PET				IAmb	IAmb	17 12 08.0	
	comp=Z,26nm,1.2s						
SOCY	**Socotra**	**69.16**	**286**	P	**P**	**17 11 53.4**	**-0.9**
SOCY				IAmb	IAmb	17 12 05.0	
	comp=Z,19nm,1.4s						
YAK	**Yakutsk**	**69.49**	**4**	P	**P**	**17 11 53.7**	**-1.5**
MA2	**Magadan**	**70.84**	**16**	P	**P**	**17 12 03.8**	**+0.5**
	comp=Z,13nm,0.7s,baz=173,slow=7.5,SNR=9.5						
MA2	**Magadan**	**70.84**	**16**	P	**P**	**17 12 04.3**	**+1.0**
MA2				IAmb	IAmb	17 12 05.1	
	comp=Z,14nm,0.7s						
VOI	**Vohitsoka**	**72.47**	**249**	P	**P**	**17 12 14.0**	**+0.2**
VOI				IAmb	IAmb	17 12 54.7	
	comp=Z,30nm,1.5s						
VNDA	**Vanda**	**73.37**	**171**	P	**P**	**17 12 18.6**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=45,slow=6.3,SNR=2.1						
VNDA	**Vanda**	**73.37**	**171**	P	**P**	**17 12 19.3**	**+1.6**
GEYT	**Alibeck**	**73.57**	**313**	P	**P**	**17 12 19.7**	**0.0**
	comp=Z,3.7nm,0.7s,baz=163,slow=5.7,SNR=8.7						
GEYT	**Alibeck**	**73.57**	**313**	P	**P**	**17 12 19.9**	**+0.3**
BRVK	**Borovoye**	**73.74**	**331**	P	**P**	**17 12 19.5**	**-0.7**
BRVK				IAmb	IAmb	17 12 20.5	
	comp=Z,16nm,1.6s						
SEY	**Seymchan**	**74.11**	**14**	P	**P**	**17 12 22.4**	**+0.3**
	comp=Z,12nm,0.6s,baz=218,slow=4.5,SNR=80						
ABKAR	**Akbulak array**	**77.22**	**324**	P	**P**	**17 12 38.8**	**-0.9**
ABKAR	**Akbulak array**	**77.22**	**324**	P	**P**	**17 12 38.7**	**-0.9**
ABKAR				IAmb	IAmb	17 12 39.6	
	comp=Z,4.2nm,0.7s						
TIXI	**Tiksi**	**78.99**	**3**	P	**P**	**17 12 47.9**	**-0.8**
TIXI				IAmb	IAmb	17 12 48.8	
	comp=Z,8.1nm,0.6s						
RAYN	**Ar Rayn**	**79.55**	**295**	P	**P**	**17 12 53.4**	**+0.6**
NRIK	**Noril'sk**	**79.86**	**349**	P	**P**	**17 12 53.0**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=171,slow=19,SNR=2.0						
ATKA	**Atka Island**	**80.92**	**34**	P	**P**	**17 12 58.9**	**-0.3**
QSPA	**South Pole Qui**	**82.66**	**180**	P	**P**	**17 13 08.4**	**+0.3**
QSPA				IAmb	IAmb	17 13 22.3	
	comp=Z,13nm,1.6s						
KMBO	**Kilima Mbogo**	**83.43**	**270**	P	**P**	**17 13 13.2**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=35,slow=21,SNR=4.4						
KBZ	**Khabaz**	**86.34**	**315**	P	**P**	**17 13 25.7**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=147,slow=3.6,SNR=5.0						
BOSA	**Boshof**	**91.34**	**241**	P	**P**	**17 13 50.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=82,slow=4.3,SNR=4.8						
AKASG	**Malin Array Be**	**96.59**	**320**	P	**P**	**17 14 12.1**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=89,slow=3.9,SNR=2.3						
ILAR	**Eielson Array**	**97.58**	**26**	P	Pdif	17 14 15.6	-1.9
	comp=Z,0.4nm,0.6s,baz=254,slow=5.0,SNR=5.8						
YKA	**Yellowknife Ar**	**111.95**	**24**	PKiKP	**PKiKP**	**17 19 14.6**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=310,slow=1.5,SNR=17						
NVAR	**Mina Array Bea**	**118.61**	**50**	PKP	**PKiKP**	**17 19 29.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=332,slow=1.4,SNR=6.7						
TORD	**Torodi Ar. Bea**	**119.88**	**281**	PKP	**PKPdf**	**17 19 30.9**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=66,slow=1.9,SNR=14						
PDAR	**Pinedale Array**	**123.51**	**43**	PKP	**PKPdf**	**17 19 38.1**	**0.0**
	comp=Z,0.5nm,0.5s,baz=129,slow=1.3,SNR=6.7						
TXAR	**Lajitas Array**	**132.86**	**57**	PKP	**PKiKP**	**17 19 57.8**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=212,slow=1.4,SNR=8.7						
CPUP	**Villa Florida**	**146.50**	**183**	PKPbc	**PKPbc**	**17 20 23.4**	**+0.4**
	comp=Z,5.7nm,0.7s,baz=181,slow=3.5,SNR=13						
LPAZ	**La Paz**	**154.94**	**159**	PKPab	**PKPab**	**17 21 02.8**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=188,slow=2.1,SNR=6.8						

PGC 24 17:38:18.5±0.0,**51°.46N**×**130°.77W,h1**km,**ML3.6**/14, **198km Wsw of Bella Bella, Bc Haida Gwaii Region, Queen Charlotte Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HG4B	**Hotspring**	**0.88**	**343**	P	Pg	17 38 33.7	-1.7
HG4B				S	Sg	17 38 46.0	-0.8
BNB	**Barry Inlet**	**1.28**	**332**	P	Pg	17 38 41.0	-2.0
**H

	baz=285								
ENTT				eS	Sn	17 41 47.0	+0.3		
	baz=285								
WFSB	**Wu-fen Shan**	1.11	309	P	Pn	17 41 31.7	0.0		
	baz=310								
WFSB				eS	Sn	17 41 47.0	0.0		
	baz=310								
NDT	**Datong Townshi**	1.14	282	eP	Pn	17 41 32.3	+0.2		
	baz=282								
NDT				eS	Sn	17 41 47.9	+0.4		
	baz=282								
ETLH	**Xiulin Townshi**	1.16	262	eP	Pn	17 41 32.3	-0.1		
	baz=262								
ETLH				eS	Sn	17 41 47.7	-0.4		
	baz=262								
JKRS	**Kuro-shima**	1.17	96	P	Pn	17 41 32.1	-0.3		
JKRS				S	Sn	17 41 48.8	+0.6		
NWLT	**Wulai**	1.19	290	eS	Sn	17 41 48.7	-0.1		
	baz=291								
NNSB	**Datong**	1.23	273	eP	Pn	17 41 33.6	+0.3		
	baz=273								
NNSB				eS	Sn	17 41 49.5	-0.4		
	baz=273								
NNSH	**Datong**	1.23	273	eP	Pn	17 41 33.5	+0.1		
	baz=273								
NNSH				eS	Sn	17 41 49.8	-0.1		
	baz=273								
NNS	**Nan Shan**	1.25	273	eS	Sn	17 41 49.3	-0.9		
	baz=273								
YHNB	**Yeheng**	1.27	284	eP	Pn	17 41 34.2	+0.4		
	baz=284								
YHNB				eS	Sn	17 41 50.4	-0.3		
	baz=284								
JIJ	**Ishigaki jima**	1.28	90	P	Pn	17 41 33.7	-0.1		
JIJ				S	Sn	17 41 50.0	-0.8		
TATO	**Taipei**	1.28	298	eS	Sn	17 41 48.7	-2.1		
	baz=299								
NSK	**Sanguang**	1.29	284	eP	Pn	17 41 34.1	+0.1		
	baz=284								
NSK				eS	Sn	17 41 50.6	-0.5		
	baz=284								
YM01	**YM01**	1.31	306	eP	Pn	17 41 34.0	-0.3		
	baz=307								
YM01				eS	Sn	17 41 50.4	-1.1		
	baz=307								
ESL	**Shilin**	1.31	245	eP	Pn	17 41 33.9	-0.4		
	baz=244								
ESL				eS	Sn	17 41 50.6	-0.9		
	baz=244								
YM08	**YM08**	1.32	308	eP	Pn	17 41 34.9	+0.6		
	baz=309								
WHF	**Hehuan Shan**	1.36	261	eP	Pn	17 41 35.0	-0.3		
	baz=260								
WHF				eS	Sn	17 41 52.8	-0.4		
	baz=260								
FUSS	**Fushou**	1.37	265	eP	Pn	17 41 35.3	+0.2		
	baz=265								
FUSS				eS	Sn	17 41 52.8	-0.3		
	baz=265								
EGFH	**Guangfu**	1.39	240	eP	Pn	17 41 34.9	-0.3		
	baz=239								
EGFH				eS	Sn	17 41 52.7	-0.4		
	baz=239								
TDCB	**Techi**	1.44	266	eS	Sn	17 41 54.2	-0.5		
	baz=265								
JISG	**Ishigakijimahi**	1.45	81	P	Pn	17 41 35.6	-0.4		
JISG				S	Sn	17 41 53.8	-0.8		
CHGB	**Renai**	1.46	258	eP	Pn	17 41 36.3	0.0		
	baz=257								
CHGB				eS	Sn	17 41 54.6	-0.5		
	baz=257								
OWD	**Renai**	1.48	254	eP	Pn	17 41 36.4	-0.1		
	baz=253								
OWD				eS	Sn	17 41 55.1	-0.5		
	baz=253								
HGSD	**Ruisui**	1.49	234	eP	Pn	17 41 36.2	-0.3		
	baz=233								
HGSD				eS	Sn	17 41 54.7	-0.7		
	baz=233								
VWDT	**VWDT**	1.58	247	eP	Pn	17 41 38.0	+0.3		
	baz=246								
VWDT				eS	Sn	17 41 57.7	+0.1		
	baz=246								
LIOB	**Emei**	1.59	280	eS	Sn	17 41 58.5	+0.6		
	baz=280								
NSTT	**Nanjuang**	1.60	280	eS	Sn	17 41 58.1	-0.1		
	baz=279								
WHP	**Taichung City**	1.64	267	eP	Pn	17 41 39.6	+1.1		
	baz=267								
WHP				eS	Sn	17 41 60.0	+0.9		
	baz=267								
YULB	**Yu-li**	1.64	234	eP	Pn	17 41 38.0	-0.5		
	baz=232								
YULB				eS	Sn	17 41 58.1	-0.9		
	baz=232								
EYUL	**Yuli**	1.65	232	eP	Pn	17 41 38.9	+0.3		
	baz=231								
TWF1	**Yuli**	1.66	233	eP	Pn	17 41 38.7	-0.1		
	baz=231								
TWF1				eS	Sn	17 41 59.0	-0.5		
	baz=231								
SSLB	**Suanglung**	1.73	251	eP	Pn	17 41 39.8	+0.1		
	baz=250								
SSLB				eS	Sn	17 42 00.6	-0.6		
	baz=250								
SMLT	**Sun Moon Lake**	1.75	254	eP	Pn	17 41 40.3	+0.3		
	baz=253								
FULB	**Fuli**	1.76	229	eP	Pn	17 41 39.7	-0.5		
	baz=227								
FULB				eS	Sn	17 42 01.6	-0.4		
	baz=227								
CHKT	**Chengkung**	1.78	225	eP	Pn	17 41 39.6	-0.8		
	baz=223								
CHKT				eS	Sn	17 42 00.5	-1.9		
	baz=223								
JTJ	**Tarama**	1.81	81	S	Sn	17 42 02.3	-0.7		
YUS	**Yu-Shan**	1.85	242	eP	Pn	17 41 42.2	+0.5		
	baz=241								
YUS				eS	Sn	17 42 04.1	-0.7		
	baz=241								
EDH	**Donghe**	1.91	224	eP	Pn	17 41 41.5	-0.6		
	baz=222								
EDH				eS	Sn	17 42 04.2	-1.2		
	baz=222								
ALS	**Alishan**	1.96	245	eP	Pn	17 41 43.9	+0.8		
	baz=243								
ELDTW	**Lidau**	1.97	234	eP	Pn	17 41 42.6	-0.3		
	baz=232								
ELDTW				eS	Sn	17 42 06.6	-0.3		
	baz=232								
CHN5	**Tsauling**	2.03	248	eP	Pn	17 41 45.7	+1.9		
	baz=247								
LDUT	**Ludao**	2.05	215	eP	Pn	17 41 43.3	-0.6		
	baz=213								
LDUT				eS	Sn	17 42 07.3	-1.5		
	baz=213								
LONT	**Longtian**	2.07	226	eP	Pn	17 41 44.3	+0.1		
	baz=224								
STYH	**Taoyuan**	2.16	237	eP	Pn	17 41 46.3	+1.0		
	baz=235								
STYH				eS	Sn	17 42 12.3	+1.1		
	baz=235								
STYT	**Tauyuan**	2.18	237	eP	Pn	17 41 46.5	+0.9		
	baz=235								
STYT				eS	Sn	17 42 12.8	+1.0		
	baz=235								
TPUB	**Ta-pu**	2.20	242	eP	Pn	17 41 47.6	+1.7		
	baz=240								
TPUB				eS	Sn	17 42 14.7	+2.3		
	baz=240								
WTP	**Ta-pu**	2.24	240	eP	Pn	17 41 48.1	+1.6		
	baz=239								
SLGT	**Liugui**	2.36	235	eP	Pn	17 41 49.4	+1.3		
	baz=234								
SLGT				eS	Sn	17 42 18.4	+2.3		
	baz=234								

*PGC **24** 17:50:32.3±0.0,51°.48N×130°.96W,h19km,ML3.7/16, 205km Sse of Sandspit, Bc Haida Gwaii Region*
*IDC **24** 17:50:37.9±1.1,51°.79N×130°.38W,h0km,mb3.8/8, mb1 3.9/14,mb1mx3.7/57,mbtmp3.7/14,ML3.5/5,MS3.5/15, Ms1 3.5/15,ms1mx3.3/41,Error ellipse: s-maj=20.2km s-min=11.8km az=52.0*
*NEIC **24** 17:50:37.2±2.8,51°.8N±0°.1×130°.3W±0°.2,h2km±6km,Error ellipse: s-maj=18.9km s-min=9.4km az=46.0*

*NEIC **24** 17:50:39.9,51°.86N×130°.29W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; Mrr=0.20; Mθθ=0.77; Mφφ=-0.57; Mrθ=0.25; Mrφ=1.63; Mθφ=0.35; Fault plane solution: M0 1.82000×10^{15} NP1:ϕs 11.01000°, δ86.64000°, λ168.04000°. NP2:ϕs 101.72000°, δ78.06000°, λ3.43000°. Principal axes: T 1.9361, Plg11.0000°, Azm326.0000°; N -0.2585, Plg78.0000°, Azm176.0000°; P -1.6776, Plg6.0000°, Azm57.0000°;*
ISC 24 17:50:37.5±0.6,51.73N±0°.05×130°.52W±0°.04,h10km, n133,σ1°81/119,mb3.9/13,MS3.5/8,Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HG4B	**Hotspring**	**0.70**	**324**	**P**		**Pg**	**17 50 47.7**	**-3.4**
HG4B				S		**Sg**	**17 50 59.4**	**-0.9**
BNB	**Barry Inlet**	**1.14**	**319**	P		Pb	17 50 53.7	-5.6
BNB				S		**Sb**	**17 51 10.1**	**-4.0**
BBB	**Bella Bella**	**1.56**	**72**	Pg		**Pn**	**17 51 03.9**	**-1.3**
	56nm,0.3s,baz=272,slow=15,SNR=145							
BBB				Lg		Lg	17 51 26.8	
	360nm,0.3s,baz=131,slow=20,SNR=15							
BBB	**Bella Bella**	**1.56**	**72**	Pn		**Pn**	**17 51 02.9**	**-2.4**
BBB				Sn		**Sg**	**17 51 27.1**	**-0.5**
BBB	**Bella Bella**	**1.56**	**72**			**Pn**	**17 51 02.9**	**-2.4**
BBB				IAML			17 51 30.2	
	comp=E,1μm,0.5s							
HG1B	**Mitchell Dam**	**1.56**	**321**	Pn		Pn	17 51 00.5	-4.8
HG1B				Sg		**Sn**	**17 51 22.7**	**-2.7**
MOBC	**Moresby Island**	**1.67**	**329**	Pn		Pn	17 51 02.1	-4.7
MOBC				Sg		**Sn**	**17 51 28.0**	**-0.3**
BNAB	**Bonilla**	**1.77**	**358**	Pn		**Pn**	**17 51 05.4**	**-2.7**
BNAB				Sg		**Sg**	**17 51 33.1**	**-1.2**
HOLB	**Holberg**	**1.86**	**125**	Pn		Pn	17 51 04.5	-4.9
HOLB				Sn		**Sn**	**17 51 26.7**	**-6.2**
DIB	**Dawson Inlet,**	**1.90**	**322**	Pn		Pn	17 51 04.6	-5.3
DIB				Sg		**Sn**	**17 51 32.9**	**-1.0**
DIB	**Dawson Inlet,**	**1.90**	**322**	Pn		Pn	17 51 04.4	-5.5
DIB				IAML			17 51 37.2	
	comp=N,865nm,0.5s							
HWKB	**Hawksbury Isla**	**2.05**	**23**	Pn		**Pn**	**17 51 10.1**	**-2.0**
HWKB				Sg		**Sg**	**17 51 43.6**	**+0.3**
GRNB	**Grenville Isla**	**2.15**	**9**	Pn		**Pn**	**17 51 10.7**	**-2.8**
GRNB				Sg		**Sg**	**17 51 45.9**	**-0.6**
PHC	**Port Hardy**	**2.20**	**117**	Pn		**Pn**	**17 51 10.0**	**-4.0**
PHC				Sn		**Sn**	**17 51 38.2**	**-3.0**
MAYB	**Maynard**	**2.50**	**121**	Pn		**Pn**	**17 51 13.9**	**-4.4**
RUBB	**Prince Rupert**	**2.61**	**3**	Pn		**Pn**	**17 51 18.0**	**-1.7**
RUBB				Sg		**Sg**	**17 51 59.5**	**-1.7**
KITB	**Kitimat**	**2.61**	**25**	Pn		**Pn**	**17 51 18.6**	**-1.2**
KITB				Sg		**Sg**	**17 51 59.8**	**-1.6**
WOSB	**Woss**	**2.95**	**121**	Pn		**Pn**	**17 51 20.3**	**-4.2**
NCRB	**Newcastle Ridg**	**3.12**	**113**	Pn		**Pn**	**17 51 22.9**	**-3.9**
GDR	**Gold River**	**3.46**	**123**	Pn		**Pn**	**17 51 29.4**	**-1.9**
BTB	**Buttle Lake**	**3.91**	**123**	Pn		**Pn**	**17 51 35.7**	**-2.0**
CRAG	**Craig**	**4.05**	**339**	Pn		**Pn**	**17 51 36.9**	**-2.6**
CRAG				IAML			17 52 55.9	
	comp=E,158nm,1.7s							
UBRB	**Upper Baezaeko**	**4.12**	**71**	Pn		**Pn**	**17 51 40.7**	**+0.2**
UBRB				Sg		**Sg**	**17 52 45.7**	**-4.0**
MGB	**Mount Grey**	**4.62**	**124**	Sg		**Sb**	**17 52 59.0**	**+4.5**
FSB	**Fort Saint Jam**	**4.64**	**51**	Pn		**Pn**	**17 51 47.5**	**-0.1**
SHB	**Sechelt**	**4.74**	**114**	Pn		**Pn**	**17 51 47.9**	**-1.1**
WRAK	**Wrangell Islan**	**4.82**	**348**			**Pn**	**17 51 49.4**	**-0.6**
WRAK				IAML			17 53 34.8	
	comp=E,118nm,0.9s							
PGC	**Sidney**	**5.49**	**121**	Pn		Pn	17 51 53.9	-5.3
SIT	**Sitka**	**6.03**	**334**	Pn		**Pn**	**17 52 06.0**	**-0.6**
A05A	**Maple Falls**	**6.05**	**114**	Pn		Pn	17 52 01.3	-5.7
NLWA	**Neilton Lookou**	**6.13**	**133**	Pn		**Pn**	**17 52 07.7**	**-0.4**
BMBC	**Bull Mountain**	**6.58**	**46**	Pn		**Pn**	**17 52 15.2**	**+0.9**
DLBC	**Dease Lake**	**6.73**	**2**	Pn		**Pn**	**17 52 17.9**	**+1.5**
	comp=E,1.0nm,0.3s,baz=191,slow=17,SNR=20							
DLBC				Lg		Lg	17 54 07.3	
	comp=E,1.2nm,0.3s,baz=278,slow=23,SNR=4.4							
DLBC				LR		LR	17 54 54.6	
	comp=E,312nm,21.4s,baz=242,slow=38							
DLBC	**Dease Lake**	**6.73**	**2**	Pn		**Pn**	**17 52 16.8**	**+0.4**
BESE	**Bessie Mountai**	**7.30**	**342**	Pn		**Pn**	**17 52 23.2**	**-0.9**
NBC5	**NorthernBC 5**	**7.37**	**35**	Pn		**Pn**	**17 52 26.6**	**+1.4**
LON	**Longmire**	**7.57**	**128**	Pn		**Pn**	**17 52 26.2**	**-1.7**
LTY	**Liberty**	**7.82**	**121**	Pn		**Pn**	**17 52 30.7**	**-0.6**
H04A	**Detroit Lake**	**8.98**	**138**	Pn		**Pn**	**17 52 45.4**	**-1.8**
WHY	**Whitehorse**	**9.27**	**347**	Pn		**Pn**	**17 52 51.5**	**+0.2**
WHY	**Whitehorse**	**9.27**	**347**			**Pn**	**17 52 51.5**	**+0.2**
NEW	**Newport**	**9.30**	**107**	LR		LR	17 56 17.0	
	comp=E,225nm,18.4s,baz=318,slow=37							
HYT	**Haines Junctio**	**9.90**	**340**	Pn		**Pn**	**17 52 57.7**	**-2.2**
PCA	**Pinnacle**	**10.00**	**331**	Pn		**Pn**	**17 53 00.5**	**-0.7**
F10A	**Beach Ranch, E**	**10.48**	**118**	Pn		**Pn**	**17 53 07.7**	**-0.1**
LOGN	**Logan Glacier**	**10.80**	**332**	Pn		**Pn**	**17 53 12.4**	**+0.2**
CTGM	**Chitina Glacie**	**11.01**	**331**	Pn		**Pn**	**17 53 15.5**	**+0.5**
JTMT	**Jette**	**11.24**	**104**	Pn		**Pn**	**17 53 16.8**	**-1.4**
PLID	**Pearl Lake**	**11.71**	**119**	Pn		**Pn**	**17 53 22.9**	**-1.8**
MFID	**Camas Ranch**	**12.93**	**124**	Pn		**Pn**	**17 53 39.4**	**-1.9**
HLID	**Hailey**	**13.57**	**121**	Pn		**Pn**	**17 53 49.9**	**-0.2**
MCMT	**McKenzie Canyo**	**13.63**	**114**	Pn		**Pn**	**17 53 49.7**	**-1.2**
YKA	**Yellowknife Ar**	**13.77**	**32**	Pn		**Pn**	**17 53 51.1**	**-1.5**
	comp=E,0.1nm,0.3s,baz=222,slow=12,SNR=25							
YKA				LR		LR	17 59 40.7	
	comp=E,218nm,18.8s,baz=0.0,slow=40							
BOZ	**Bozeman (W)**	**13.89**	**109**	Pn		**Pn**	**17 53 54.5**	**+0.1**
KDAK	**Kodiak Island**	**14.07**	**304**	LR		LR	17 57 49.5	
	comp=E,254nm,21.3s,baz=165,slow=31							
QLMT	**Earthquake Lak**	**14.44**	**111**			**Pn**	**17 54 03.9**	**+1.8**
SUA	**Susitna One**	**14.73**	**319**	P		**Pn**	**17 54 07.0**	**+1.1**
GCMT	**Greycliff**	**14.96**	**105**	P		**P**	**17 54 15.5**	**+0.9**
H17A	**Grant Village**	**15.19**	**111**	P		**Pn**	**17 54 11.6**	**-0.6**
H17A				IAmb		IAmb	17 54 24.9	
	comp=E,7.6nm,1.1s							
LKWY	**Lake**	**15.19**	**110**	P		**Pn**	**17 54 12.0**	**-0.2**
LKWY				IAmb		IAmb	17 54 23.7	
	comp=E,7.1nm,0.9s							
ELK	**Elko**	**15.21**	**130**	Pn		**P**	**17 54 18.9**	**+1.3**
	comp=E,0.1nm,0.3s,baz=312,slow=9.9,SNR=7.4							
ELK	**Elko**	**15.21**	**130**	P		**P**	**17 54 18.8**	**+1.3**
KVN	**Kaiserville**	**15.36**	**141**			**P**	**17 54 19.6**	**+0.4**
KVN				IAmb		IAmb	17 54 23.9	
	comp=E,6.3nm,1.2s							
MOOW	**Moose Ponds**	**15.48**	**113**	P		**P**	**17 54 19.8**	**-0.7**
MOOW				IAmb		IAmb	17 54 25.1	
	comp=E,8.8nm,1.0s							
RLMT	**Red Lodge**	**15.55**	**107**	P		**P**	**17 54 22.0**	**+0.7**
ILAR	**Eielson Array**	**15.58**	**333**	Pn		**P**	**17 54 20.3**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=148,slow=10,SNR=2.2							
ILAR				LR		LR	17 59 49.4	
	comp=Z,128nm,20.6s,baz=135,slow=35							
LOHW	**Long Hollow**	**15.65**	**113**	P		**P**	**17 54 20.7**	**-1.7**
LOHW				IAmb		IAmb	17 54 27.8	
	comp=Z,13nm,1.2s							
SNOW	**Snow King Moun**	**15.65**	**114**	P		**P**	**17 54 21.9**	**-0.6**
SNOW				IAmb		IAmb	17 54 27.9	
	comp=Z,7.7nm,0.9s							
REDW	**Red Top Meadow**	**15.66**	**115**	P		**P**	**17 54 21.6**	**-0.9**
REDW				IAmb		IAmb	17 54 27.4	
	comp=Z,12nm,1.1s							
TRF	**Thorofare Moun**	**15.73**	**326**			**P**	**17 54 22.6**	**-0.5**
TRF				IAmb		IAmb	17 54 39.6	
	comp=Z,17nm,1.5s							
NVAR	**Mina Array Bea**	**15.82**	**142**	LR		LR	17 59 25.2	
	comp=Z,96nm,21.7s,baz=3.0,slow=33							
PPLA	**Purkeypile**	**16.09**	**322**	P		**P**	**17 54 29.2**	**+2.2**
PPLA				IAmb		IAmb	17 54 31.8	
	comp=Z,10.0nm,1.1s							
NEA2	**Nenana**	**16.09**	**330**			**P**	**17 54 29.1**	**+2.2**
MDM	**Murphy Dome**	**16.10**	**332**	P		**P**	**17 54 28.4**	**+1.3**
HWUT	**Hardware Ranch**	**16.44**	**121**			**Pn**	**17 54 29.6**	**+1.3**
FYU	**Fort Yukon**	**16.60**	**339**	P		**P**	**17 54 33.0**	**+0.5**
SVW2	**Sparrevohn**	**16.63**	**314**			**Pn**	**17 54 31.2**	**+0.7**
INK	**Inuvik**	**16.70**	**356**	Pn		**P**	**17 54 32.6**	**-0.9**
	baz=280,slow=21,SNR=1.7							
BW06	**Boulder Array**	**16.77**	**114**	P		**P**	**17 54 34.6**	**-0.2**
BW06				IAmb		IAmb	17 54 40.2	
	comp=Z,8.1nm,0.9s							
PD31	**Pinedale Array**	**16.77**	**114**	P		**P**	**17 54 35.0**	**+0.2**
PD31				IAmb		IAmb	17 54 40.2	
	comp=Z,7.8nm,1.0s							
PDAR	**Pinedale Array**	**16.77**	**114**	Pn		**P**	**17 54 36.1**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=309,slow=9.4,SNR=32							
PDAR				LR		LR	18 00 57.4	
	comp=Z,78nm,19.1s,baz=358,slow=37							
PDAR	**Pinedale Array**	**16.77**	**114**			**P**	**17 54 34.3**	**-0.5**
DUG	**Dugway, Tooele**	**16.82**	**126**			**Pn**	**17 54 31.8**	**-1.3**
FFC	**Flin Flon**	**17.30**	**69**	P		**Pn**	**17 54 38.2**	**-0.7**
FFC				IAmb		IAmb	17 54 45.4	
	comp=Z,28nm,2.0s							
K22A	**Casper**	**18.59**	**110**	P		**P**	**17 54 52.8**	**-2.1**
K22A				IAmb		IAmb	17 54 58.5	
	comp=Z,14nm,1.2s							
RSSD	**Black Hills**	**19.24**	**103**	P		**P**	**17 55 01.0**	**-0.9**
TOLK	**Toolik Lake Re**	**19.27**	**339**			**Pn**	**17 55 05.3**	**+2.4**
TOLK				IAmb		IAmb	17 55 08.2	
	comp=Z,11nm,1.3s							
O20A	**White River Ci**	**19.27**	**118**	P		**Pn**	**17 55 04.6**	**+1.3**
O20A				IAmb		IAmb	17 55 13.0	
	comp=Z,13nm,1.2s							
PHWY	**Pilot Hill**	**20.06**	**111**	P		**P**	**17 55 09.1**	**-2.0**
PHWY				IAmb		IAmb	17 55 51.8	
	comp=Z,5.1nm,0.9s							
PV14	**Lion Creek, Pa**	**20.13**	**123**	P		**P**	**17 55 09.5**	**-2.3**
PV22	**Blue Mesa, Par**	**20.13**	**122**	P		**P**	**17 55 11.9**	**+0.2**
PV17	**East Wray Mesa**	**20.23**	**123**	P		**P**	**17 55 11.4**	**-1.4**
PV05	**Paradox Valley**	**20.31**	**124**	P		**P**	**17 55 14.5**	**+0.8**
PV13	**Radium Mtn., P**	**20.39**	**123**	P		**P**	**17 55 15.2**	**+0.6**
PV02	**Paradox Valley**	**20.40**	**123**	P		**P**	**17 55 14.3**	**-0.4**
W13A	**Hualapai Mount**	**20.47**	**138**	P		**P**	**17 55 16.7**	**+1.2**
SMCO	**Snowmass**	**20.64**	**118**	P		Pn	17 55 19.4	-0.4
PFO	**Pinyon Flats O**	**20.79**	**145**	LR		LR	18 04 05.1	
	comp=Z,109nm,18.6s,baz=306,slow=39							
ISCO	**Idaho Springs**	**20.96**	**115**			Pn	17 55 22.2	-1.2
ISCO				IAmb		IAmb	17 55 36.2	
	comp=Z,5.1nm,1.2s							
ISCO						Sn	17 59 17.4	-2.8
MVCO	**Mesa Verde**	**21.28**	**124**	P		**P**	**17 55 25.4**	**+1.2**
MVCO				IAmb		IAmb	17 55 41.1	
	comp=Z,11nm,1.4s							
FCC	**Fort Churchill**	**21.71**	**57**	P		**P**	**17 55 27.9**	**-0.4**
ULM	**Lac du Bonnet**	**21.74**	**80**	LR		LR	18 04 14.1	
	comp=Z,149nm,19.3s,baz=115,slow=38							
ULM	**Lac du Bonnet**	**21.74**	**80**	P		**P**	**17 55 29.0**	**+0.2**
ULM				IAmb		IAmb	17 55 42.3	
	comp=Z,5.6nm,1.1s							
ANM	**Nome**	**22.07**	**319**	P		**P**	**17 55 33.2**	**+1.0**
ANM				IAmb		IAmb	17 55 38.8	
	comp=Z,7.2nm,1.5s							
OGNE	**Ogallala**	**22.29**	**108**	P		**P**	**17 55 34.1**	**-0.7**
X18A	**Snowflake**	**22.70**	**131**	P		**P**	**17 55 40.8**	**+1.4**
ANMO	**Albuquerque**	**24.07**	**125**	LR		LR	18 05 23.2	
	comp=Z,163nm,20.2s,baz=332,slow=37							
RES	**Resolute Bay**	**27.22**	**20**	LR		LR	18 07 11.5	
	comp=Z,146nm,19.5s,baz=77,slow=37							
TX31	**Lajitas Ar. Si**	**29.98**	**128**	P		**P**	**17 56 45.6**	**-0.5**
TX32	**Lajitas Array**	**29.98**	**128**	P		**P**	**17 56 45.5**	**-0.7**
TX32				IAmb		IAmb	17 56 48.8	
	comp=Z,2.5nm,1.2s							
TXAR	**Lajitas Array**	**29.98**	**128**	P		**P**	**17 56 46.4**	**+0.2**
	comp=Z,0.6nm,1.0s,baz=343,slow=3.9,SNR=5.2							
TXAR	**Lajitas Array**	**29.98**	**128**	P		**P**	**17 56 45.8**	**-0.4**
PETK	**Petropavlovsk-**	**42.10**	**301**	LR		LR	18 14 18.7	
	comp=Z,82nm,18.7s,baz=45,slow=34							
MA2	**Magadan**	**42.60**	**312**	LR		LR	18 15 22.2	
	comp=Z,57nm,19.2s,baz=93,slow=35							
ARCES	**ARCESS Array B**	**57.78**	**10**	LR		LR	18 28 23.8	
	comp=Z,44nm,18.3s,baz=275,slow=39							
H11N2	**WAKE ISLAND Hy**	**57.82**	**261**	T		T	19 02 54.9	
	baz=40,slow=76,SNR=217							
H11N3	**WAKE ISLAND Hy**	**57.82**	**261**	T		T	19 02 55.0	
	baz=40,slow=76,SNR=256							
H11N1	**WAKE ISLAND Hy**	**57.84**	**261**	T		T	19 02 56.1	
	baz=40,slow=76,SNR=104							
H11S1	**WAKE ISLAND Hy**	**58.87**	**260**	T		T	19 04 23.8	
	baz=49,slow=76,SNR=21							
H11S2	**WAKE ISLAND Hy**	**58.88**	**260**	T		T	19 04 19.9	
	baz=49,slow=76,SNR=17							
H11S3	**WAKE ISLAND Hy**	**58.88**	**260**	T		T	19 04 21.5	
	baz=49,slow=76,SNR=13							
NOA	**NORSAR Array B**	**63.49**	**20**	P		**P**	**18 01 10.2**	**+3.0**
	comp=Z,0.6nm,0.8s,baz=333,slow=6.4,SNR=3.3							
ZALV	**Zalesovo Beam**	**70.62**	**339**	P		**P**	**18 01 54.0**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=34,slow=5.6,SNR=4.6							
ZALV	**Zalesovo Beam**	**70.62**	**339**	P		**P**	**18 01 53.4**	**+0.7**
HHC	**Hu-ho-hao-te**	**73.18**	**316**	eP		**P**	**18 02 10.3**	**+1.9**
HHC				pmax		pmax		
	comp=Z,17nm,1.1s							
HHC				pmax		pmax		
	comp=Z,99nm,5.5s							
BVAR	**Borovoye Array**	**74.15**	**347**	P		**P**	**18 02 15.4**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=77,slow=6.7,SNR=4.6							
KURK	**Kurchatov**	**74.98**	**341**			pwP	18 02 21.1	-0.6
KURBB	**Kurchatov Arra**	**75.09**	**341**	P		**P**	**18 02 21.1**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=23,slow=5.6,SNR=6.3							

KNK S 18 05 56.4
baz=144
DIV Divide 0.94 58 Pg 18 05 44.3 -0.2
KLU Klutina 1.12 39 Pg 18 05 46.2 -1.7
KLU Sg **Sg 18 06 00.5 -2.0**
KLU IAML 18 06 04.1
comp=E,616nm,0.3s
KLU IAML 18 06 04.4
comp=N,700nm,0.4s
KLU Klutina 1.12 39 P 18 05 46.1
baz=222,SNR=68
KLU S 18 06 01.7
baz=222
SEW Seward 1.15 243 Pg **Pn 18 05 48.6 +0.4**
SEW Seward 1.15 243 **Sn 18 06 04.2 +0.3**
SEW Seward 1.15 243 P 18 05 48.6
baz=60,SNR=32
SEW S 18 06 04.1
baz=60
O22K Cooper Landing 1.15 263 Pn 18 05 48.6 +0.3
O22K Sg **Sn 18 06 04.2 +0.2**
O22K Cooper Landing 1.15 263 P 18 05 48.6
baz=79,SNR=64
O22K S 18 06 04.8
baz=79
SCM Sheep Creek Mo 1.20 2 Pg 18 05 48.2 -1.2
SCM Sg **Sg 18 06 04.3 -0.7**
SCM IAML 18 06 08.5
comp=E,665nm,0.7s
RC01 Rabbit Creek A 1.23 293 Pg 18 05 49.3 -0.6
RC01 Sg **Sg 18 06 05.4 -0.4**
RC01 IAML 18 06 09.8
comp=E,799nm,0.3s
RC01 Rabbit Creek A 1.23 293 P 18 05 49.4
baz=109,SNR=97
RC01 S 18 06 06.6
baz=109
SML Sawmill 1.26 340 P 18 05 49.5
baz=158,SNR=148
SML S 18 06 06.2
baz=158
PMR Palmer 1.27 320 Pg 18 05 49.5 -1.2
PMR Palmer 1.27 320 P 18 05 49.2
baz=137,SNR=83
PMR S 18 06 07.0
baz=137
Q23K Middleton Isla 1.32 156 Pn **Pn 18 05 51.4 +0.8**
Q23K IAML 18 06 20.3
comp=E,413nm,0.6s
Q23K Middleton Isla 1.32 156 P 18 05 50.9
baz=338,SNR=6.4
GOAT Goat Mountain 1.32 91 Pg 18 05 51.3 -0.4
MID Middleton Isla 1.33 156 Pn 18 05 51.5 +0.9
MID IAML 18 06 13.6
comp=E,415nm,0.8s
GHO Glory Hole Cre 1.36 328 Pn 18 05 50.8 -0.4
GHO IAML 18 06 12.7
comp=E,719nm,0.9s
GHO IAML 18 06 14.8
comp=N,608nm,0.8s
RAGM Ragged Mountai 1.38 99 Pn 18 05 51.7 +0.3
SLKM Skilak Lake 1.39 266 Pb 18 05 52.5 +0.1
SLKM **Sn 18 06 10.8 +0.7**
BMRM Bremner River 1.42 75 Pn 18 05 52.1 +0.1
BMRM IAML 18 06 16.6
comp=N,743nm,0.8s
BMRM Bremner River 1.42 75 Sg 18 06 10.7 -1.1
BMRM Bremner River 1.42 75 Pb 18 05 52.1
baz=259,SNR=120
BMRM S 18 06 10.4
baz=259
FIS Fire Island 1.47 292 Pg 18 05 54.1 -0.3
HMT Hamilton 1.59 100 Pn 18 05 54.5 +0.1
M24K Tolsona, Glenn 1.59 21 Pn 18 05 54.7 +0.3
M24K IAML 18 06 22.8
comp=E,372nm,1.3s
M24K IAML 18 06 27.1
comp=N,312nm,1.0s
M24K Tolsona, Glenn 1.59 21 Pb 18 05 54.8
baz=203,SNR=36
M24K Sb 18 06 16.5
baz=203
KAIM Kayak Island 1.65 114 Pn 18 05 55.6 +0.4
KAIM Kayak Island 1.65 114 P 18 05 55.3
baz=298
N25K Chitina, Valde 1.68 53 Pn **Pn 18 05 55.7 +0.1**
N25K IAML 18 06 19.3
comp=E,280nm,0.3s
N25K Chitina, Valde 1.68 53 P 18 05 55.7
baz=236,SNR=107
N25K S 18 06 16.8
baz=236
PS11 TAPS Pump St11 1.72 32 Pn 18 05 56.7 +0.5
NICHA Nichawak Mount 1.75 102 Pn 18 05 56.7 +0.1
SUA Susitna One 1.82 299 Pn 18 05 58.3 +0.6
SUA IAML 18 06 28.1
comp=E,224nm,0.7s
SUA IAML 18 06 28.0
comp=N,204nm,0.6s
SUA Susitna One 1.82 299 P 18 05 58.4
baz=114,SNR=76
CAPN Captain Cook N 1.85 276 Pn **Pb 18 05 59.7 -0.3**
CAPN Captain Cook N 1.85 276 Pb 18 06 00.2
baz=91
CAPN Sb 18 06 25.8
baz=91
BERG Berg Lake 1.85 96 Pn 18 05 58.2 +0.2
BRSE Bradley Lake S 1.89 243 Pn 18 05 59.2 +0.7
BRSE Bradley Lake S 1.89 243 P 18 05 59.3
baz=59
BRSE S 18 06 23.3
baz=59
SUCK Suckling Hills 1.89 106 Pn 18 05 58.4 -0.1
SUCK IAML 18 06 29.5
comp=N,244nm,0.5s
GLB Gilahina Butte 1.93 64 Pn **Pn 18 05 59.5 +0.5**
GLB IAML 18 06 25.9
comp=E,297nm,0.6s
BRLK Bradley Lake 1.94 245 Pn 18 06 00.2 +1.0
WAT6 Susitna Watana 1.96 356 Pn 18 05 59.6 0.0
WAT6 Susitna Watana 1.96 356 P 18 05 59.6
baz=175,SNR=87
WAT6 S 18 06 23.4
baz=175
VRDI Verde Repeater 2.02 71 Pn 18 06 00.6 +0.2
VRDI IAML 18 06 30.4
comp=N,170nm,1.0s
GRIN Grindle Hills 2.06 98 Pn 18 06 00.9 +0.1
KHIT Khitrov Hills 2.06 94 Pn 18 06 01.1 +0.1
CRQM Cirque 2.10 85 Pn 18 06 01.9 +0.4
CRQM IAML 18 06 37.0
comp=N,287nm,0.4s
CRQM IAML 18 06 38.0
comp=E,245nm,0.8s
BGLC Bering Glacier 2.11 102 Pn 18 06 02.0 +0.6
CNPM China Poot 2.22 242 Pb 18 06 04.4 -2.0
CNPM IAML 18 06 40.0
comp=N,136nm,0.6s
CUT Chulitna 2.24 324 Pn 18 06 04.5 +1.3
CUT Chulitna 2.24 324 P 18 06 04.5
baz=140,SNR=65
MCARA McCarthy VSAT 2.26 69 Pn 18 06 04.0 +0.4
MCARA IAML 18 06 38.4
comp=E,264nm,0.4s
MCARA McCarthy VSAT 2.26 69 P 18 06 04.1
baz=253
WAT1 Susitna Watana 2.27 347 Pn 18 06 04.6 +0.9
SNH Sunshine Point 2.31 99 Pn 18 06 04.5 +0.2
STLK Strandline Lak 2.32 294 Pn 18 06 05.1 +0.7
HOM Homer 2.33 247 Pn **Pn 18 06 05.4 +0.8**
KULT Kultieth River 2.36 97 Pn 18 06 04.9 -0.1
SPCP Crater Peak Br 2.40 287 Pn 18 06 06.3 +0.7
CRP Crater Peak 2.40 287 Pn 18 06 06.2 +0.5
WAT2 Susitna Watana 2.40 347 Pn 18 06 06.6 +1.0
WAT2 Susitna Watana 2.40 347 P 18 06 06.5
baz=166
SKT Skwentna 2.40 306 Pn 18 06 05.9 +0.4
SKT IAML 18 06 41.5
comp=N,219nm,0.5s
SKT IAML 18 06 45.9
comp=E,192nm,0.5s
SKT Skwentna 2.40 306 P 18 06 06.0
baz=121,SNR=116
SPCN Chakachatna No 2.41 286 Pn 18 06 06.4 +0.8
SPCR Spurr Chakacha 2.41 286 Pn 18 06 06.2 +0.5
SPCR Spurr Chakacha 2.41 286 P 18 06 06.0
baz=100,SNR=14
PTPK Patty Peak 2.48 75 Pn 18 06 07.5 +0.8
KIAG Kiagna River 2.49 81 Pn 18 06 07.2 +0.2
SPBG Spurr Blockage 2.50 287 Pn 18 06 07.5 +0.6
BALM Baldy 2.51 79 Pn 18 06 07.5 +0.4
PAX Paxson 2.52 21 Pn 18 06 08.5 +1.3
PAX Paxson 2.52 21 P 18 06 08.5
baz=202,SNR=28
HUR Hurricane 2.58 337 Pn 18 06 09.4 +1.5
DFR Drift River 2.60 271 Pn 18 06 08.1 -0.2
RSO Redoubt South 2.65 269 Pn 18 06 09.4 +0.4
RED Redoubt Volcan 2.66 268 Pn 18 06 09.2 +0.1
NCT North Crescent 2.72 271 Pn 18 06 10.2 +0.2
GRNC Granite Creek 2.78 86 Pn 18 06 11.1 +0.1
GRNC Granite Creek 2.78 86 IAML 18 07 03.4
comp=N,104nm,0.8s
BARN Barnard Glacie 2.85 79 Pn 18 06 12.3 +0.5
BARN IAML 18 07 02.0
comp=N,80nm,0.8s
BARN IAML 18 07 02.7
comp=E,86nm,0.6s
IVE Iliamna Volcan 2.86 260 Pn 18 06 12.2 +0.3
RND Reindeer 2.86 347 Pn 18 06 13.2 +1.3
RND IAML 18 06 55.2
comp=E,95nm,0.5s
RND IAML 18 06 59.4
comp=N,102nm,0.6s
MENT Mentasta 2.90 36 Pn 18 06 13.7 +1.3
MENT IAML 18 06 56.5
comp=E,152nm,0.4s
MENT IAML 18 07 13.8
comp=N,102nm,0.8s
CTG Chitna Glacier 2.99 81 P 18 06 14.3
baz=267
CTGM Chitina Glacie 3.00 81 Pn **Pn 18 06 14.2 +0.5**
TABL Table Mountain 3.10 91 Pn 18 06 15.4 +0.1
TABL IAML 18 07 00.5
comp=E,68nm,0.6s
TABL IAML 18 07 04.3
comp=N,70nm,0.8s
TRF Thorofare Moun 3.13 336 Pn **Pn 18 06 16.9 +1.3**
TRF IAML 18 07 08.6
comp=E,93nm,1.1s
TRF IAML 18 07 10.5
comp=N,81nm,1.0s
TRF Thorofare Moun 3.13 336 P 18 06 16.9
baz=153,SNR=29
LOGN Logan Glacier 3.15 84 Pn 18 06 16.4 +0.5
MCK McKinley 3.19 348 Pn 18 06 17.8 +1.5
MCK IAML 18 07 08.7
comp=N,101nm,0.9s
MCK IAML 18 07 08.9
comp=E,108nm,0.8s
MCK McKinley 3.19 348 P 18 06 17.8
baz=166,SNR=31
PPLA Purkeypile 3.21 317 Pn 18 06 16.9 +0.2
PPLA Purkeypile 3.21 317 P 18 06 16.8
baz=132,SNR=20
SAMH Samovar Hills 3.33 96 Pn 18 06 19.7 +1.4
KTH Kantishna Hill 3.36 332 Pn **Pn 18 06 20.0 +1.2**
KTH IAML 18 07 17.5
comp=N,92nm,0.9s
KTH IAML 18 07 17.6
comp=E,85nm,0.6s
YUK2 White River 3.38 67 Pn 18 06 20.1 +1.1
DOT Dot Lake 3.41 26 Pn 18 06 20.5 +1.2
YUK3 Moose Creek 3.55 68 Pn 18 06 22.4 +0.9
PCA Pinnacle 3.59 96 Pn 18 06 22.2 +0.3
L27K Beaver Creek, 3.59 45 Pn **Pn 18 06 22.8 +0.9**
L27K Beaver Creek, 3.59 45 P 18 06 22.5
baz=230
PINM Pinnacle 3.60 96 P 18 06 22.1
baz=282
BVCY Beaver Creek 3.61 58 Pn 18 06 23.4 +1.3
BC03 3.61 45 Pn 18 06 23.3 +1.2
SCRK Sand Creek 3.71 24 Pn **Pn 18 06 24.7 +1.0**
HDA Harding Lake 3.79 3 Pn 18 06 25.5 +0.9
HDA Harding Lake 3.79 3 P 18 06 25.4
baz=183,SNR=22
HDA P 18 06 25.4
baz=183,SNR=22
BPAW Bear Paw Mtn. 3.85 336 Pn **Pn 18 06 26.1 +0.7**
BPAW IAML 18 07 28.9
comp=N,73nm,0.9s
BPAW Bear Paw Mtn. 3.85 336 P 18 06 26.0
baz=152,SNR=50
WRH Wood River Hil 3.86 356 Pn **Pn 18 06 26.5 +0.9**
WRH IAML 18 07 31.1
comp=N,37nm,0.9s
WRH IAML 18 07 32.3
comp=E,53nm,1.1s
KDAK Kodiak Island 3.91 225 Pn **Pn 18 06 27.0 +0.9**
comp=E,1.6nm,0.3s,baz=52,slow=9.5,SNR=16
KDAK Sn **Sn 18 07 10.1 -1.8**
comp=E,0.8nm,0.3s,baz=234,slow=14,SNR=6.1
KDAK Kodiak Island 3.91 225 Pn **Pn 18 06 26.8 +0.6**
KDAK IAML 18 07 37.2
comp=E,32nm,3.4s
KDAK IAML 18 07 39.2
comp=E,39nm,3.9s
KDAK Kodiak Island 3.91 225 P 18 06 27.0
baz=40
BCPM Bancas Point 3.93 97 Pn **Pn 18 06 26.0 -0.5**
PS08 TAPS Pump Stn8 3.93 4 Pn 18 06 27.0 +0.5
CHUM Lake Minchumin 3.98 327 Pn 18 06 28.1 +0.9
CHUM Lake Minchumin 3.98 327 P 18 06 27.9
baz=142,SNR=15
SVW2 Sparrevohn 4.02 280 Pn 18 06 30.8 +3.1
SVW2 IAML 18 07 40.5
comp=N,40nm,0.8s
CCB Clear Creek Bu 4.03 358 Pn 18 06 28.3 +0.5
CCB IAML 18 07 27.6
comp=E,34nm,0.7s
NEA2 Nenana 4.05 350 Pn 18 06 28.8 +0.7
NEA2 IAML 18 07 34.9
comp=N,41nm,1.5s
NEA2 IAML 18 07 37.0
comp=E,30nm,1.6s
NEA2 Nenana 4.05 350 P 18 06 28.8
baz=168,SNR=6.8
PNL Peninsula 4.12 100 Pn 18 06 29.5 +0.3
IL31 4.16 3 Pn 18 06 30.0 +0.4
ILAR Eielson Array 4.16 3 Pn **Pn 18 06 29.9 +0.3**
comp=E,1.2nm,0.3s,baz=190,slow=13,SNR=40
ILAR Sn **Sn 18 07 15.3 -2.8**
comp=E,1.6nm,0.3s,baz=188,slow=16,SNR=5.3
K27K Chicken 4.22 34 Pn 18 06 31.5 +1.1
TCOL CIGO, UAF Yank 4.26 357 Pn 18 06 32.0 +1.0
COLA College 4.26 357 Pn 18 06 32.2 +1.3
COLA College 4.26 357 P 18 06 32.0
baz=177
TCOL CIGO, UAF Yank 4.26 357 P 18 06 31.8
baz=177,SNR=9.7
YUK4 Talbot Arm 4.33 77 Pn 18 06 33.7 +1.6
MDM Murphy Dome 4.36 355 Pn 18 06 33.0 +0.7
MDM IAML 18 07 46.6
comp=E,44nm,0.9s
MDM IAML 18 07 46.6
comp=N,39nm,1.0s
YUK6 Outpost Mounta 4.45 82 Pn 18 06 34.7 +0.9
POKR Poker Plat Res 4.50 360 Pn **Pn 18 06 34.9 +0.6**
POKR IAML 18 07 53.0
comp=E,26nm,0.9s
POKR IAML 18 07 53.4
comp=N,26nm,0.7s
POKR Poker Plat Res 4.50 360 P 18 06 34.7
baz=180
YUK7 Dusty Glacier 4.57 87 Pn 18 06 37.0 +1.5
OHAK Old Harbor 4.58 224 Pn **Pn 18 06 35.7 +0.3**
I23K Minto, Yukon-K 4.62 350 Pn 18 06 37.0 +1.2
I23K IAML 18 07 59.6
comp=E,30nm,0.8s
I23K Minto, Yukon-K 4.62 350 P 18 06 36.8
baz=168,SNR=15
MLY Manley 4.67 342 Pn **Pn 18 06 37.8 +1.1**
MLY Manley 4.67 342 P 18 06 37.7
baz=159,SNR=13
TT01 Tatalina 4.68 303 Pn 18 06 36.4 -0.4
TTA Tatalina 4.69 303 Pn 18 06 36.4 -0.5
TTA IAML 18 07 57.6
comp=N,21nm,1.2s
TTA IAML 18 07 59.7
comp=E,27nm,1.1s
TTA Tatalina 4.69 303 P 18 06 36.3
baz=115,SNR=5.6
HYT Haines Junctio 4.87 83 Pn **Pn 18 06 40.7 +1.3**
PRP Porcupine Dome 4.97 9 Pn **Pn 18 06 39.0 -1.9**
PRP IAML 18 07 48.5
comp=E,24nm,0.6s
EGAK Eagle 5.05 32 Pn **Pn 18 06 43.0 +1.1**
EGAK IAML 18 08 55.2
comp=E,27nm,0.1s
EGAK IAML 18 09 54.8
comp=E,27nm,0.1s
DAWY Dawson 5.08 44 Pn **Pn 18 06 43.1 +0.8**
FYU Fort Yukon 6.03 8 Pn 18 06 54.4 -0.9
IM03 6.08 335 Pn 18 06 56.7 +0.8
WHY Whitehorse 6.16 84 Pn **Pn 18 06 57.8 +0.5**
WHY Whitehorse 6.16 84 P 18 06 57.7
baz=276
BESE Bessie Mountai 6.70 102 Pn **Pn 18 07 05.2 +0.8**
COLD Coldfoot 6.73 351 Pn **Pn 18 07 05.8 +0.9**
COLD Coldfoot 6.73 351 P 18 07 05.7
baz=168,SNR=6.5
BM03 Burnt Mountain 6.92 9 Pn 18 07 07.3 -0.2
TOLK Toolik Lake Re 8.09 354 Pn **Pn 18 07 25.9 +2.4**
INK Inuvik 9.73 32 Pn **Pn 18 07 52.8 +6.9**
comp=E,0.1nm,0.3s,baz=220,slow=7.5,SNR=1.7
YKA Yellowknife Ar 15.64 69 Pn **P 18 09 11.3 +0.9**
comp=E,0.1nm,0.3s,baz=276,slow=9.9,SNR=13
TXAR Lajitas Array 42.69 117 P P 18 13 31.5 +8.5
comp=E,0.3nm,0.7s,baz=342,slow=6.8,SNR=4.0

IDC 24 18:14:38.7±2.7, 3.38S×137.19E, h0km, mb3.3/2, mb1 3.8/3, mb1mx3.4/28, mbtmpg3.6/3, ML3.9/1, Error ellipse: s-maj=96.4km s-min=30.5km az=81.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.70**	**189**	Pn	P	18 18 35.7	-1.0
	0.4nm,0.3s,baz=12,slow=12,SNR=36						
WRA				Sn	Sn	18 21 22.0	-19
	0.1nm,0.3s,baz=0.9,slow=23,SNR=4.6						
ASAR	**Alice Springs**	**20.42**	**189**	P	P	18 19 17.0	-0.6
	0.5nm,0.4s,baz=10,slow=11,SNR=17						
MKAR	**Makanchi Array**	**69.40**	**323**	P	P	18 25 48.6	+0.1
	0.2nm,0.4s,baz=114,slow=7.9,SNR=6.0						

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*IDC **24** 18:23:34.1±0.8, 36.33N×141.29E, h0km, mb3.8/9, mb1 3.9/14, mb1mx3.7/47, mbtmp3.8/14, ML3.4/4, MS2.9/4, Ms1 3.0/4, ms1mx2.7/31, Error ellipse: s-maj=20.7km s-min=15.5km az=85.0*

*NEIC **24** 18:23:35.4±2.4, 36.42N±0.02×141.26E±0.05, h9km±5km, mb4.2/12, Error ellipse: s-maj=5.8km s-min=2.8km az=109.0*

*JMA **24** 18:23:39.0±0.1, 36.44N×141.01E, h45km±1km, M3.8*

JMA Felt I J1.

*NIED **24** 18:23:39.0, 36.44N×141.01E, h45km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_m8.26; $M_{\theta\theta}$-6.86; $M_{\phi\phi}$-1.39; $M_{r\theta}$-4.06; $M_{r\phi}$-3.90; $M_{\theta\phi}$1.97; Fault plane solution: $M_0$9.68000×10^{14} NP1: ϕ_s263.00000°, δ57.00000°, λ114.00000°. NP2: ϕ_s43.00000°, δ40.00000°, λ58.00000°.*

ISC 24 18:23:35.0±1.6, 36.38N±0.04×141.28E±0.05, h9km±9km, n69, σ1.977/73, mb3.9/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.56**	**266**	P	**Pn**	**18 23 48.3**	**-0.8**
JHYU				S	**Sb**	**18 23 54.6**	**-0.5**
JHO	**Hitachi**	**0.62**	**292**	P	**Pb**	**18 23 48.6**	**+0.6**
JHO				S	**Sg**	**18 23 55.0**	**0.0**
JIHU	**Itakohorinouch**	**0.74**	**236**	P	**Pn**	**18 23 52.1**	**+0.5**
JIHU				S	**Sb**	**18 24 01.4**	**+1.2**
ONAJ	**Iwakimizuishiy**	**0.81**	**332**	P	**Pn**	**18 23 51.9**	**-0.8**
ONAJ				S	**Sg**	**18 24 01.1**	**-0.3**
JYT	**Yasato**	**0.89**	**260**	P	**Pg**	**18 23 52.4**	**+0.2**
JYT				S	**Sg**	**18 24 01.9**	**-1.8**
JYT	**Yasato**	**0.89**	**260**		**Pg**	**18 23 52.4**	**+0.2**
JYT				Sg	**Sg**	**18 24 01.7**	**-2.0**
JFK	**Kawauchi**	**1.03**	**342**	P	**Pb**	**18 23 55.1**	**0.0**
JFK				S	**Sg**	**18 24 06.7**	**-1.7**
JFT	**Otama**	**1.36**	**327**	P	**Pb**	**18 24 00.5**	**-0.2**
JFT				S	**Sb**	**18 24 15.9**	**-2.3**
JAG	**Ashikaga**	**1.47**	**272**	P	**Pn**	**18 24 00.4**	**-1.3**
JAG				S	**Sn**	**18 24 16.2**	**-4.9**
JMM	**Marumori**	**1.53**	**345**	P	**Pn**	**18 24 02.5**	**0.0**
JMM				S	**Sn**	**18 24 19.9**	**-2.6**
JMM	**Marumori**	**1.53**	**345**		**Pn**	**18 24 02.5**	**0.0**
JMM				Sn	**Sn**	**18 24 20.0**	**-2.5**
JFY	**Yanaizu**	**1.62**	**309**	P	**Pn**	**18 24 03.3**	**-0.5**
JKT	**Katashina**	**1.68**	**284**	P	**Pn**	**18 24 03.8**	**-0.8**
JKT				S	**Sn**	**18 24 22.2**	**-4.1**
MJAR	**Matsushiro Arr**	**2.48**	**275**	Pn	**Pn**	**18 24 15.6**	**0.0**
	1.9nm,0.3s,baz=103,slow=9.6,SNR=108						
MJAR				Sn	**Sn**	**18 24 47.6**	**+1.6**
	1.9nm,0.3s,baz=103,slow=17,SNR=6.2						
MJAR				LR	LR	18 24 50.8	
	comp=Z,54nm,19.4s,baz=105,slow=31						
MAJO	**Matsushiro**	**2.48**	**275**		**Pn**	**18 24 15.9**	**+0.3**
MAT	**Matsushiro**	**2.48**	**275**	P	**Pn**	**18 24 15.8**	**+0.2**
MAT				*eS*	**Sn**	**18 24 44.8**	**-1.2**
MJB9	**Matsu-Tunnel**	**2.48**	**275**	Pn	**Pn**	**18 24 15.9**	**+0.3**
JSD	**Sado**	**2.92**	**305**		**Pn**	**18 24 21.0**	**-0.6**
JSG	**Sagara**	**3.04**	**237**	Pn	**Pn**	**18 24 24.4**	**+1.1**
JGF	**Kuroka**	**3.27**	**257**		**Pn**	**18 24 28.3**	**+1.8**
JHJ2	**Mitsune**	**3.48**	**201**	Pn	**Pn**	**18 24 31.4**	**+2.2**
JHJ2				Sn	**Sn**	**18 25 11.4**	**+0.9**
JHJ	**Hachijo jima 2**	**3.48**	**201**	Pn	**Pn**	**18 24 30.6**	**+1.2**
	19nm,0.3s,baz=329,slow=20,SNR=13						
JHJ				Sn	**Sn**	**18 25 11.4**	**+0.7**
	61nm,0.3s,baz=234,slow=22,SNR=15						
JHJ				LR	LR	18 26 03.6	
	comp=Z,98nm,19.8s,baz=136,slow=44						
JTM	**Tenmabayashi**	**4.40**	**358**		**Pn**	**18 24 44.2**	**+2.3**
JWT	**Wachi**	**4.90**	**259**		**Pn**	**18 24 50.6**	**+1.8**
ERM	**Erimo**	**5.81**	**14**	Pn	**Pn**	**18 25 02.0**	**+0.8**
JEW	**Eniwo**	**6.45**	**1**	Pn	**Pn**	**18 25 09.4**	**-0.7**
JMN	**Monobe**	**6.62**	**249**	Pn	**Pn**	**18 25 12.5**	**0.0**
JHS	**Saijyo**	**6.79**	**261**	Pn	**Pn**	**18 25 18.6**	**+3.9**
ASAJ	**Asahikawa**	**7.79**	**7**	Pn	**Pn**	**18 25 28.7**	**+0.2**
	1.4nm,0.3s,baz=202,slow=11,SNR=17						
ASAJ				Sn	**Sn**	**18 26 56.7**	**-0.1**
	0.5nm,0.3s,baz=252,slow=20,SNR=0.9						
JKA	**Kamikawa-asahi**	**7.79**	**7**		**Pn**	**18 25 27.6**	**-0.9**
JCJ	**Chichijima**	**9.29**	**175**	Pn	**Pn**	**18 25 48.7**	**-0.4**
	9.8nm,0.3s,baz=343,slow=22,SNR=9.3						
JCJ				Sn	**Sn**	**18 27 26.2**	**-7.6**
	5.0nm,0.3s,baz=288,slow=20,SNR=2.1						
JCJ	**Chichijima**	**9.29**	**175**	Pn	**Pn**	**18 25 49.6**	**+0.5**
USA0B	**Ussuriysk Arra**	**10.54**	**321**		Pn	18 26 11.8	+5.6
USRK	**Ussuriysk Ar.**	**10.54**	**321**	Pn	**Pn**	**18 26 10.6**	**+4.4**
	baz=130,slow=12,SNR=13						
USRK	**Ussuriysk Ar.**	**10.54**	**321**		Pn	18 26 11.3	+5.1
KSRS	**Korea Array**	**10.75**	**280**	Pn	**Pn**	**18 26 10.2**	**+1.2**
	0.1nm,0.3s,baz=96,slow=14,SNR=11						
KLR	**Kul'dur**	**14.60**	**335**	Pn	**P**	**18 27 06.3**	**-1.9**
	0.1nm,0.3s,baz=128,slow=12,SNR=11						
H11N2	**WAKE ISLAND Hy**	**27.91**	**120**	T	T	18 59 18.1	
	baz=313,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**27.92**	**120**	T	T	18 59 32.9	
	baz=313,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**27.93**	**120**	T	T	18 59 28.0	
	baz=313,slow=75,SNR=29						
SONM	**Songino Array**	**28.06**	**305**	P	**P**	**18 29 28.2**	**+1.4**
	2.1nm,0.7s,baz=105,slow=9.3,SNR=20						
SONM	**Songino Array**	**28.06**	**305**	P	**P**	**18 29 27.5**	**+0.7**
SONM				IAmb	IAmb	18 29 29.6	
	comp=Z,1.7nm,0.7s						
H11S1	**WAKE ISLAND Hy**	**28.60**	**122**	T	T	18 59 42.3	
	baz=314,slow=76,SNR=58						
H11S3	**WAKE ISLAND Hy**	**28.60**	**122**	T	T	18 59 42.3	
	baz=314,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**28.62**	**122**	T	T	18 59 43.0	
	baz=314,slow=76,SNR=33						
ZAA0	**Zalesovo Array**	**42.28**	**313**	P	**P**	**18 31 28.7**	**+0.1**
ZALV	**Zalesovo Beam**	**42.28**	**313**	P	**P**	**18 31 27.7**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=93,slow=5.0,SNR=5.6						
ZALV	**Zalesovo Beam**	**42.28**	**313**	P	**P**	**18 31 27.4**	**-1.1**
MK31	**Makanchi Array**	**44.38**	**303**	P	**P**	**18 31 46.2**	**+0.5**
MK31				IAmb	IAmb	18 31 56.9	
	comp=Z,2.1nm,1.3s						

MKAR	**Makanchi Array**	**44.38**	**303**	P	**P**	**18 31 46.5**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=88,slow=9.8,SNR=4.8						
MAKZ	**Makanchi**	**44.59**	**303**	P	**P**	**18 31 47.5**	**+0.2**
MAKZ				IAmb	IAmb	18 32 07.7	
	comp=Z,3.9nm,1.6s						
MTN	**Manton Dam**	**49.89**	**193**	P	**P**	**18 32 27.9**	**-0.9**
ILAR	**Eielson Array**	**50.10**	**32**	P	**P**	**18 32 31.1**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=274,slow=5.4,SNR=5.8						
GSI	**Gununguitoli**	**53.38**	**239**	P	**P**	**18 32 54.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**56.17**	**198**	P	**P**	**18 33 16.6**	**+1.5**
WB0	**Warramunga Arr**	**56.22**	**188**	P	**P**	**18 33 15.3**	**-0.2**
WR0	**Warramunga Arr**	**56.40**	**188**	P	**P**	**18 33 16.4**	**-0.3**
WR0				IAmb	IAmb	18 33 39.2	
	comp=Z,4.8nm,1.1s						
WB2	**Warramunga Arr**	**56.40**	**188**	P	**P**	**18 33 16.7**	**-0.1**
WB2				IAmb	IAmb	18 33 38.0	
	comp=Z,12nm,1.6s						
WRA	**Warramunga Arr**	**56.40**	**188**	P	**P**	**18 33 16.5**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=4.5,slow=7.4,SNR=24						
WRA	**Warramunga Arr**	**56.40**	**188**	IAmb	IAmb	18 33 17.2	
	comp=Z,0.1nm,0.8s						
ASAR	**Alice Springs**	**60.13**	**188**	P	**P**	**18 33 42.6**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=9.9,slow=6.3,SNR=7.3						
ARCES	**ARCESS Array B**	**64.57**	**339**	LR	LR	19 09 32.4	
	comp=Z,23nm,18.5s,baz=260,slow=43						
FINES	**FINESS Array B**	**69.34**	**332**	P	**P**	**18 34 43.6**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=350,slow=4.2,SNR=1.3						
AKASG	**Malin Array Be**	**74.75**	**322**	P	**P**	**18 35 16.9**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=46,slow=6.4,SNR=1.2						
NVAR	**Mina Array Bea**	**75.46**	**53**	LR	LR	19 07 52.6	
	comp=Z,19nm,19.0s,baz=277,slow=35						
PDAR	**Pinedale Array**	**78.20**	**45**	P	**P**	**18 35 36.2**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=280,slow=5.1,SNR=2.7						
H03N2	**Juan Fernandez**	**147.06**	**97**	T	T	21 28 11.9	
	baz=291,slow=76,SNR=3.0						
H03N3	**Juan Fernandez**	**147.07**	**97**	T	T	21 28 21.2	
	baz=291,slow=76,SNR=4.1						
H03N1	**Juan Fernandez**	**147.07**	**97**	T	T	21 28 18.4	
	baz=291,slow=76,SNR=4.4						

DJA 24 19:15:15.5±0.9, 8°S±4°×107°9E±°, h29km±10km, M4.0/7, mb4.4/1, MLv3.9/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**1.36**	**67**	P	Pn	19 15 38.8	+0.2
UGM				S	Sn	19 15 55.4	-0.3
CISI	**Cisompet, Garu**	**1.68**	**302**	P	Pn	19 15 42.9	-0.2
SMRI	**Semarang**	**1.82**	**40**	P	Pn	19 15 45.2	+0.3
SMRI				S	Sn	19 16 07.5	+0.5
SRBI	**Singaraja**	**5.90**	**87**	P	Pn	19 16 40.7	-0.4

*NIED **24** 19:29:47.4, 38°.92N×142°.11E, h44km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.23; $M_{\theta\theta}$-0.48; $M_{\phi\phi}$-0.75; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.92; $M_{r\phi}$2.31; Fault plane solution: $M_0$2.75000×10^{14} NP1:ϕ_s16.00000°, δ76.00000°, λ74.00000°. NP2:ϕ_s245.00000°, δ21.00000°, λ138.00000°.*
*JMA **24** 19:29:47.3±0.1, 38°.92N×142°.11E, h44km±1km, M3.8*
JMA Felt I J1.
*IDC **24** 19:29:48.8±2.3, 38°.89N×142°.23E, h64km±21km, mb3.3/5, mb1 3.5/9, mb1mx3.2/43, mbtmp3.6/9, MS3.0/3, Ms1 3.0/3, ms1mx2.4/25, Error ellipse: s-maj=34.7km s-min=15.1km az=92.0*

ISC 24 19:29:46.7±1.1, 38°.85N±0°.05×142°.18E±0°.09, h39km±7km, n29, σ1$\hat{s}$15/30, mb3.7/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.46**	**300**	P	**Pn**	**19 29 57.0**	**+0.2**
OFUJ				S	**Sn**	**19 30 03.5**	**-0.5**
JKMT	**Kesennumamotoy**	**0.55**	**266**	P	**Pn**	**19 29 58.2**	**+0.1**
JKMT				S	**Sn**	**19 30 05.7**	**-0.5**
JMK	**Ichinoseki**	**0.75**	**278**	P	**Pn**	**19 30 00.8**	**-0.1**
JMK				S	**Sn**	**19 30 10.4**	**-0.7**
JIO	**Ouri**	**0.76**	**239**	P	**Pn**	**19 30 01.3**	**+0.3**
JIO				S	**Sn**	**19 30 10.7**	**-0.5**
JOM	**Ohasama**	**0.93**	**312**	P	**Pn**	**19 30 03.1**	**-0.2**
JOM				S	**Sn**	**19 30 14.3**	**-1.1**
JTH	**Tanohata**	**1.11**	**347**	P	**Pn**	**19 30 05.3**	**-0.5**
JTH				*e*S	**Sn**	**19 30 19.1**	**-0.8**
JOU	**Okura**	**1.28**	**248**	P	**Pn**	**19 30 08.5**	**+0.4**
JOU				S	**Sn**	**19 30 24.5**	**+0.4**
JRG	**Rokugo**	**1.32**	**295**	P	**Pn**	**19 30 08.6**	**0.0**
JYK	**Kaneyama**	**1.42**	**273**	P	**Pn**	**19 30 10.3**	**+0.3**
JMM	**Marumori**	**1.47**	**228**	P	**Pn**	**19 30 11.0**	**+0.3**
JMM				*e*S	**Sn**	**19 30 28.3**	**-0.3**
JANG	**Nango**	**1.60**	**342**	P	**Pn**	**19 30 12.2**	**-0.4**
MJAR	**Matsushiro Arr**	**3.90**	**235**	P	**Pn**	**19 30 46.9**	**+2.8**
	0.4nm,0.3s,baz=35,slow=13,SNR=18						
ASAJ	**Asahikawa**	**5.27**	**3**	P	**Pn**	**19 31 04.2**	**+1.3**
	0.7nm,0.3s,baz=211,slow=16,SNR=9.7						
ASAJ				S	**Sn**	**19 32 04.3**	**+2.0**
	0.6nm,0.3s,baz=345,slow=20,SNR=1.5						
JHJ	**Hachijo jima 2**	**6.04**	**199**	P	**Pn**	**19 31 16.1**	**+2.6**
	2.9nm,0.3s,baz=72,slow=20,SNR=1.3						
JHJ				S	**Sn**	**19 32 19.1**	**-2.2**
	8.8nm,0.3s,baz=288,slow=20,SNR=2.4						
USRK	**Ussuriysk Ar.**	**9.32**	**308**	P	**Pn**	**19 32 00.5**	**+2.1**
	baz=112,slow=14,SNR=4.6						
KLR	**Kul'dur**	**12.79**	**328**	LR	LR	19 37 34.6	
	comp=Z,22nm,18.4s,baz=200,slow=36						
SONM	**Songino Array**	**27.32**	**301**	P	**P**	**19 35 28.0**	**+0.1**
	0.2nm,0.4s,baz=107,slow=7.7,SNR=2.3						
H11N2	**WAKE ISLAND Hy**	**28.62**	**125**	T	T	20 06 02.0	
	baz=317,slow=75,SNR=686						
H11N1	**WAKE ISLAND Hy**	**28.63**	**125**	T	T	20 06 02.8	
	baz=317,slow=75,SNR=631						
H11N3	**WAKE ISLAND Hy**	**28.64**	**125**	T	T	20 06 03.5	
	baz=317,slow=75,SNR=668						
H11S1	**WAKE ISLAND Hy**	**29.40**	**127**	T	T	20 07 01.3	
	baz=319,slow=76,SNR=81						
H11S3	**WAKE ISLAND Hy**	**29.40**	**127**	T	T	20 06 57.9	
	baz=319,slow=76,SNR=137						
H11S2	**WAKE ISLAND Hy**	**29.41**	**127**	T	T	20 07 03.2	
	baz=319,slow=76,SNR=109						
TLY	**Talaya**	**29.64**	**308**	LR	LR	19 47 25.3	
	comp=Z,24nm,18.6s,baz=85,slow=36						
ZALV	**Zelesovo Beam**	**41.16**	**311**	P	**P**	**19 37 26.6**	**-0.3**
	0.8nm,0.5s,baz=90,slow=8.4,SNR=4.5						
MKAR	**Makanchi Array**	**43.69**	**301**	P	**P**	**19 37 47.3**	**-0.4**
	1.0nm,0.6s,baz=83,slow=11,SNR=12						
WRA	**Warramunga Arr**	**58.94**	**189**	P	**P**	**19 39 41.6**	**-0.4**
	0.3nm,0.4s,baz=2.6,slow=4.0,SNR=2.1						
ARCES	**ARCESS Array B**	**62.51**	**339**	LR	LR	20 13 27.3	
	comp=Z,34nm,18.2s,baz=210,slow=42						
ASAR	**Alice Springs**	**62.67**	**189**	P	**P**	**19 40 07.2**	**-0.1**
	0.4nm,0.7s,baz=1.0,slow=6.7,SNR=4.7						

TAP 24 19:41:44.5, 24°.36N×121°.99E, h18km±2km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.21**	**294**	*e*P	Pb	19 41 50.3	+0.5
	baz=294						
EWUT				*e*S	Sb	19 41 54.2	+0.9
	baz=294						
ENA	**Nanau**	**0.24**	**287**	P	Pb	19 41 50.7	+0.4
	baz=287						
ENA				*e*S	Sb	19 41 54.7	+0.6
	baz=287						
TWC	**Suao**	**0.28**	**333**	*e*P	Pb	19 41 51.5	+0.5
	baz=334						
TWC				*e*S	Sb	19 41 55.9	+0.4
	baz=334						
NDS	**Dongshan**	**0.37**	**318**	P	Pb	19 41 53.0	+0.4
	baz=317						
NDS				*e*S	Sb	19 41 58.4	+0.3
	baz=317						
NACB	**Ninganchiao**	**0.40**	**243**	*e*P	Pg	19 41 52.6	-0.2
	baz=242						
NACB				*e*S	Sb	19 42 00.1	+1.0
	baz=242						
TWD	**Chiawan**	**0.45**	**232**	*e*P	Pb	19 41 53.9	-0.1
	baz=231						
TWD				*e*S	Sb	19 42 01.8	+1.4
	baz=231						
ILA	**Ilan**	**0.46**	**332**	*e*P	Pb	19 41 54.8	+0.6
	baz=332						
ILA				*e*S	Sb	19 42 01.3	+0.6
	baz=332						
TWE	**Neicheng**	**0.47**	**321**	*e*P	Pb	19 41 54.2	0.0
	baz=322						
TWE				*e*S	Sb	19 42 01.6	+0.8
	baz=322						
ENTT	**Nioudou**	**0.48**	**306**	P	Pb	19 41 55.1	+0.6
	baz=306						
ENTT				*e*S	Sb	19 42 01.9	+0.8
	baz=306						
ETLH	**Xiulin Townshi**	**0.49**	**252**	P	Pg	19 41 54.4	+0.1
	baz=251						
ETLH				*e*S	Sb	19 42 02.8	+1.2
	baz=251						
NDT	**Datong Townshi**	**0.50**	**299**	*e*P	Pb	19 41 55.5	+0.8
	baz=299						
NDT				*e*S	Sb	19 42 02.7	+1.0
	baz=299						
NNSB	**Datong**	**0.56**	**277**	*e*P	Pb	19 41 56.1	+0.3
	baz=277						
NNSB				*e*S	Sb	19 42 04.4	+0.9
	baz=277						
NNSH	**Datong**	**0.56**	**277**	P	Pg	19 41 55.3	-0.4
	baz=277						
NNSH				*e*S	Sb	19 42 04.5	+1.0
	baz=277						
NNS	**Nan Shan**	**0.57**	**278**	*e*P	Pb	19 41 56.5	+0.4
	baz=278						
NNS				*e*S	Sb	19 42 04.8	+0.9
	baz=278						
TIPB	**Shuangxi**	**0.63**	**346**	*e*P	Pb	19 41 57.1	0.0
	baz=346						
TIPB				*e*S	Sb	19 42 06.9	+1.3
	baz=346						
YHNB	**Yeheng**	**0.64**	**299**	*e*P	Pn	19 41 58.1	-0.7
	baz=298						
YHNB				*e*S	Sn	19 42 07.5	-1.1
	baz=298						
FUSS	**Fushou**	**0.69**	**261**	*e*P	Pb	19 41 58.2	0.0
	baz=260						
FUSS				*e*S	Sn	19 42 09.3	-0.7
	baz=260						
WHF	**Hehuan Shan**	**0.69**	**252**	*e*P	Pg	19 41 58.1	-0.2
	baz=251						
WHF				*e*S	Sb	19 42 08.6	+0.8
	baz=251						
CHGB	**Renai**	**0.80**	**248**	*e*P	Pb	19 42 00.0	-0.1
	baz=248						
CHGB				*e*S	Sn	19 42 13.0	+0.2
	baz=248						

JMA 24 19:41:51.1±0.2, 24°.27N×123°.73E, h18km±2km, M0.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.07**	**0**	P	Pg	19 41 54.6	+0.1
IRIF				S	Sg	19 41 56.9	+0.2
HATJ	**Hateruma jima**	**0.22**	**162**	P	Pg	19 41 56.3	-0.1
HATJ				*e*S	Sg	19 41 59.8	-0.2
JKRS	**Kuro-shima**	**0.26**	**97**	P	Pg	19 41 57.0	+0.1
JKRS				S	Sb	19 42 01.2	+0.1
JIJ	**Ishigaki jima**	**0.39**	**76**	P	Pg	19 41 58.9	-0.3
JIJ				S	Sg	19 42 04.1	-0.5
JISG	**Ishigakijimahi**	**0.62**	**59**	P	Pb	19 42 03.0	-0.3
JISG				*e*S	Sb	19 42 12.1	+0.5

*ISU **24** 20:08:01, 41°.50N×72°.50E, h5km*
*KRNET **24** 20:08:09.5±0.1, 41°.25N×71°.91E, h35km, mb2.2*
*NNC **24** 20:08:12.3±0.8, 41°.43N×72°.06E, h0km, mb2.6, mpv2.2, Error ellipse: s-maj=8.5km s-min=3.6km az=9.0*

ISC 24 20:08:09.4±1.4, 41°.25N±0°.03×71°.98E±0°.04, h4km±12km, n19, σ1$\hat{s}$60/20, 22C-9D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANR	**Andizhan**	**0.57**	**150**	*e*P	Pg	20 08 17.0	-3.4
ANR				*e*S	**Sg**	**20 08 28.0**	**+0.2**
TRKS	**Terek-Say**	**0.69**	**294**	⇑*i*P	Pg	20 08 21.8	-0.9
	baz=91						
TRKS				⇑*i*S	**Sg**	**20 08 30.5**	**-1.1**
	baz=91						
OHH	**Osh**	**0.95**	**140**	⇑*i*P	**Pg**	**20 08 27.9**	**+0.3**
	baz=37						
OHH				⇑*i*S	**Sg**	**20 08 41.5**	**+1.6**
	baz=37						
MNAS	**Manas**	**1.30**	**17**	⇑*i*P	Pg	20 08 33.3	-1.0
	baz=20						
MNAS				⇑*i*S	**Sg**	**20 08 50.5**	**-0.6**
	baz=20						
BTK	**Batken**	**1.48**	**217**	⇑*e*P	Pn	20 08 35.5	-1.4
	baz=15						
BTK				⇑*i*S	**Sg**	**20 08 54.4**	**-2.6**
	baz=15						
BTK	**Batken**	**1.48**	**217**	*i* P	Pn	20 08 36.0	-0.9
BTK				*i* S	**Sg**	**20 08 55.0**	**-2.0**
AML	**Almayashu**	**1.56**	**55**	⇑*i*P	Pn	20 08 37.8	-0.4
	baz=56						
AML				⇑*i*S	**Sg**	**20 08 58.2**	**-1.2**
	baz=56						
CHRV	**Charvak**	**1.57**	**285**	*e*P	Pn	20 08 39.0	+0.8
CHRV				*e*S	**Sn**	**20 09 01.0**	**+2.0**
SFK	**Sufi-Kurgan**	**1.69**	**136**	⇓*i*P	Pn	20 08 38.8	-1.2
	baz=35						
SFK				⇓*i*S	**Sn**	**20 09 01.6**	**-0.6**
	baz=35						
DRK	**Karamyk**	**1.77**	**184**	⇑*e*P	Pn	20 08 40.3	-0.8
	baz=83						
DRK				⇑*e*S	**Sn**	**20 09 02.6**	**-1.7**
	baz=83						
ARLS	**Aral**	**1.86**	**70**	⇑*i*P	Pn	20 08 41.6	-0.6
	baz=71						
ARLS				⇑*i*S	**Sn**	**20 09 05.0**	**-1.3**
	baz=71						
EKS2	**Erkin-Say**	**1.95**	**43**	⇓*i*P	Pn	20 08 43.0	-0.3
	baz=44						
EKS2				⇓*i*S	**Sn**	**20 09 07.1**	**-1.2**
	baz=44						
UCH	**Uchtor**	**2.13**	**62**	⇓*i*P	Pn	20 08 45.7	-0.5
	baz=63						
UCH				⇓*i*S	**Sn**	**20 09 12.4**	**-1.0**
	baz=63						
KK31	**Karatay Array**	**2.15**	**330**	Pn	**Pn**	**20 08 47.7**	**+1.7**
	0.6nm,0.3s,baz=143,slow=13,SNR=10						
KK31				⇓Lg	Lg	20 09 16.6	
	3.2nm,0.3s,baz=147,slow=29,SNR=13						
AAK	**Ala-Archa**	**2.33**	**53**	⇑*i*P	Pn	20 08 48.2	-0.5
	baz=53						
AAK				⇑*i*S	**Sn**	**20 09 16.3**	**-1.6**
	baz=53						
AAK	**Ala-Archa**	**2.33**	**53**	⇓Pn	**Pn**	**20 08 50.0**	**+1.3**
	1.1nm,0.6s						
AAK				⇑Lg	Lg	20 09 22.0	
	2.5nm,0.6s						
KBK	**Karagaybulak**	**2.62**	**57**	⇑*i*P	Pn	20 08 52.3	-0.4
	baz=57						
KBK				⇑*i*S	**Sn**	**20 09 23.8**	**-1.3**
	baz=57						
USP	**Ospenovka**	**2.75**	**42**	⇑*i*P	Pn	20 08 54.0	-0.3
	baz=43						
USP				⇑*i*S	**Sn**	**20 09 26.3**	**-1.7**
	baz=43						
TKM2	**Tokmak 2**	**3.17**	**57**	⇓Pn	**Pn**	**20 09 01.4**	**+1.2**
	0.5nm,0.5s						
TKM2				⇑Lg	Lg	20 09 47.7	
	1.8nm,0.5s						

IDC 24 20:37:21.2±7.6, 19°.38S×173°.99W, h0km, mb4.3/3, mb1 4.6/3, mb1mx3.9/25, mbtmp4.3/3, Error ellipse: s-maj=325.7km s-min=39.2km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.45**	**255**	P	P	20 46 06.2	+0.3
	10nm,0.7s,baz=94,slow=7.1,SNR=150						
WRA	**Warramunga Arr**	**48.50**	**260**	P	P	20 46 05.7	-0.6
	1.6nm,0.4s,baz=98,slow=6.8,SNR=68						
ILAR	**Eielson Array**	**86.44**	**11**	P	P	20 50 05.3	0.0
	0.3nm,0.4s,baz=218,slow=5.4,SNR=4.7						

FUNV 24 21:19:16.6, 11°.65N×65°.03W, h32km, MW3.6, Caribbean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCRV	**Puerto La Cruz**	**1.51**	**165**	*e*P	Pn	21 19 41.9	+0.4
PCRV				*e*S	Sn	21 20 00.2	0.0
BIRV	**Birongo**	**1.68**	**226**	*e*P	Pn	21 19 42.5	-1.3
BIRV				*e*S	Sn	21 20 02.4	-1.9
TACV	**Tcata**	**2.47**	**233**	*e*P	Pn	21 19 54.0	-0.6
TACV				*e*S	Sn	21 20 21.8	-2.0
MERV	**Las Mercedes**	**2.69**	**208**	*e*P	Pn	21 19 57.3	-0.3
MERV				*e*S	Sn	21 20 27.1	-1.9
TURV	**Turiamo**	**3.00**	**247**	*e*P	Pn	21 20 00.3	-1.7
TURV				*e*S	Sn	21 20 33.1	-3.7
MAPV	**Macapo**	**3.82**	**242**	*e*P	Pn	21 20 11.9	-1.4
MAPV				*e*S	Sn	21 20 53.4	-3.7
BAUV	**El Baul**	**4.00**	**228**	*e*P	Pn	21 20 14.6	-1.0
BAUV				*e*S	Sn	21 20 57.0	-4.4
MONV	**Montecano**	**4.84**	**274**	*e*P	Pn	21 20 26.0	-1.3
MONV				*e*S	Sn	21 21 17.4	-4.9
CURV	**Curarigua**	**5.11**	**252**	*e*P	Pn	21 20 29.0	-2.0
DABV	**Dabajuro**	**5.54**	**263**	*e*P	Pn	21 20 35.3	-1.7

*IDC **24** 21:43:25.8±2.6, 17°.22S×173°.26W, h0km, mb3.9/3, mb1 4.3/4, mb1mx3.8/26, mbtmp4.0/4, ML4.4/1, Error ellipse: s-maj=116.2km s-min=26.3km az=141.0*
*NEIC **24** 21:43:35.3±2.0, 16°.71S±0°.08×173°.2W±0°.1, h89km±17km, mb4.3/11, Error ellipse: s-maj=18.7km s-min=10.8km az=69.0*

ISC 24 21:43:33.8±0.8, 16°.76S±0°.06×173°.28W±0°.08, h50km, n18, σ1$\hat{s}$98/20, mb4.3/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.18**	**27**	Pn	**Pn**	**21 44 22.8**	**+1.4**
	30nm,0.3s,baz=225,slow=13,SNR=25						
AFI				Sn	**Sn**	**21 44 56.6**	**-1.6**
	65nm,0.3s,baz=264,slow=22,SNR=12						
AFI	**Afiamalu**	**3.18**	**27**	Pn	**Pn**	**21 44 23.0**	**+1.5**
AFI				Sn	**Sn**	**21 44 57.0**	**-1.2**
NIUE	**Niue**	**3.93**	**126**		**Pn**	**21 44 33.5**	**+1.9**
NIUE				Sn	**Sn**	**21 45 14.3**	**-2.2**
MSVF	**Nonsavu**	**8.35**	**262**	Pn	**Pn**	**21 45 34.7**	**+2.4**
URZ	**Urewera**	**23.02**	**200**	P	**P**	**21 48 34.4**	**-0.1**
URZ				IAmb	IAmb	21 48 34.7	
	comp=Z,23nm,1.2s						
BKZ	**Black Stump Fm**	**24.04**	**200**	P	**P**	**21 48 45.5**	**+1.2**
QRZ	**Quartz Range**	**26.94**	**204**	P	**P**	**21 49 12.4**	**+2.0**
THZ	**Tophouse**	**27.60**	**203**	P	**P**	**21 49 18.8**	**+2.3**
THZ				IAmb	IAmb	21 49 22.8	
	comp=Z,7.5nm,0.7s						
MLZ	**Mavora Lakes**	**32.50**	**205**	P	P	21 49 55.9	-3.8
ARMA	**Armidale**	**34.76**	**241**	P	**P**	**21 50 18.0**	**-1.7**
ARMA				IAmb	IAmb	21 50 29.7	
	comp=Z,3.7nm,1.1s						
TOO	**Toolangi**	**41.71**	**232**	P	**P**	**21 51 15.7**	**-2.3**
TOO				IAmb	IAmb	21 51 15.9	
	comp=Z,2.5nm,0.8s						
WR0	**Warramunga Arr**	**49.47**	**258**	P	**P**	**21 52 17.4**	**-2.1**
WR0				IAmb	IAmb	21 52 26.1	
	comp=Z,3.3nm,1.1s						
WB2	**Warramunga Arr**	**49.65**	**258**	P	**P**	**21 52 18.8**	**-2.1**
WB2				IAmb	IAmb	21 52 38.0	
	comp=Z,3.1nm,1.1s						
WRA	**Warramunga Arr**	**49.66**	**258**	P	**P**	**21 52 18.9**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=96,slow=7.0,SNR=9.0						
WRA	**Warramunga Arr**	**49.66**	**258**	P	**P**	**21 52 19.2**	**-1.7**
AS31	**Alice Springs**	**49.81**	**253**	P	**P**	**21 52 20.2**	**-1.9**
AS31				IAmb	IAmb	21 52 21.3	
	comp=Z,1.6nm,0.6s						
ASAR	**Alice Springs**	**49.82**	**253**	P	**P**	**21 52 20.2**	**-1.9**
	comp=Z,4.4nm,0.5s,baz=88,slow=8.5,SNR=91						
PDAR	**Pinedale Array**	**83.20**	**42**	P	**P**	**21 55 56.0**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=216,slow=4.1,SNR=4.5						

*IDC **24** 22:14:43.1±0.7, 38°.60N×29°.42W, h0km, mb4.0/17, mb1 4.1/18, mb1mx3.9/55, mbtmp3.9/18, ML4.1/1, MS3.9/40, Ms1 3.9/40, ms1mx3.8/55, Error ellipse: s-maj=20.4km s-min=15.3km az=5.0*
*NEIC **24** 22:14:44.8±2.8, 38°.6N±0°.1×29°.12W±0°.06, h10km±1km, mb4.6/15, Error ellipse: s-maj=22.2km s-min=8.0km az=176.0*
*GCMT **24** 22:14:50.8±0.2, 38°.64N±0°.02×28°.99W±0°.03, h14km, MW4.9/106, Moment Tensor Solution. s39,c49; s106,c158; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.21±.14; $M_{\theta\theta}$2.11±.10; $M_{\phi\phi}$0.10±.07; $M_{r\theta}$-1.06±.20; $M_{\theta\phi}$-1.06±.07; $M_{r\phi}$-0.25±.22; Best double couple: $M_0$2.63800×10^{16} NP1:ϕ_s310.00000°, δ37.00000°, λ-64.00000°. NP2:ϕ_s98.00000°, δ57.00000°, λ-109.00000°. Principal axes: T 2.7260, Plg10.0000°, Azm201.0000°; N -0.1720, Plg16.0000°, Azm108.0000°; P -2.5510, Plg71.0000°, Azm323.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:14:44.8±1.5, 38°.70N±0°.06×29°.10W±0°.05, h10km±8km, n113, σ1$\hat{s}$84/100, mb4.2/37, MS3.9/41, 3D, Azores Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.32**	**102**	*e*P	**Pb**	**22 14 53.0**	**+0.4**
PCED				*e*S	**Sb**	**22 14 59.5**	**+1.7**
CALA	**Caldeira**	**0.33**	**110**	⇓*i*P	**Pb**	**22 14 53.4**	**+0.5**
PFCBR	**Castelo Branco**	**0.34**	**120**	*e*P	**Pb**	**22 14 53.6**	**+0.5**
PFCBR				*e*S	**Sb**	**22 14 59.7**	**+1.1**
PFCBR				A	A	22 15 01.0	
	9µm,0.3s						
HOR	**Horta**	**0.40**	**114**	⇓*i*P	**Pb**	**22 14 54.5**	**+0.5**
HOR				*e*S	**Sb**	**22 15 01.4**	**+1.1**
PCAN	**Candelaria**	**0.53**	**115**	⇓*i*P	**Pb**	**22 14 56.3**	**0.0**
PCAN				*e*S	**Sb**	**22 15 04.7**	**+0.7**
PCAN				A	A	22 15 06.6	
	39µm,0.3s						
PICO	**Pico**	**0.56**	**110**	*e*P	**Pb**	**22 14 56.9**	**+0.1**
PICO				*e*S	**Sb**	**22 15 05.7**	**+0.8**
PICO				A	A	22 15 07.5	
	64µm,0.2s						
ROSA	**Rosais**	**0.67**	**88**	*e*P	**Pg**	**22 14 58.3**	**+0.5**
ROSA				*e*S	**Sb**	**22 15 08.0**	**0.0**
ROSA				A	A	22 15 09.7	
	18µm,0.3s						
ROSA	**Rosais**	**0.67**	**88**		**Pg**	**22 14 57.8**	**0.0**
PMAN	**Manadas**	**0.79**	**94**	*e*P	**Pg**	**22 15 00.1**	**0.0**
PMAN				*e*S	**Sg**	**22 15 11.2**	**+0.8**
PMAN				A	A	22 15 13.4	

GRON A A 22 16 10.7
358nm,0.4s
CMLA Cha da Macela 2.96 107 *eP* **Pn 22 15 30.6 -1.4**
CMLA *eS* **Sn 22 16 04.0 -3.6**
CMLA A A 22 16 09.1
825nm,0.3s
CMLA Cha da Macela 2.96 107 Pn 22 15 30.8 -1.2
PCALD Caldeiras da R 2.98 106 *eP* **Pn 22 15 31.0 -1.2**
PCALD *eS* **Sn 22 16 04.3 -3.7**
PCALD A A 22 16 08.2
276nm,0.3s
BART Pico Bartolome 3.23 105 *eP* **Pn 22 15 34.3 -1.3**
BART *eS* **Sn 22 16 11.0 -3.2**
BART A A 22 16 15.8
300nm,0.4s
PSMA Santa Maria 3.57 117 *eP* **Pn 22 15 38.5 -1.8**
PSMA *eS* **Sn 22 16 18.4 -4.1**
PSMA A A 22 16 20.5
241nm,0.2s
PSMN Pico do Norte, 3.61 117 *eP* **Pn 22 15 39.1 -1.7**
PSMN *eS* **Sn 22 16 19.5 -4.0**
PSMN A A 22 16 22.3
150nm,0.2s
PMOZ Porto Moniz, M 11.30 118 *eP* **Pn 22 17 26.4 -0.1**
PMOZ Porto Moniz, M 11.30 118 Pn 22 17 25.6 -0.9
PMAR Madeira 11.55 117 *eP* **Pn 22 17 29.3 -0.7**
FUL Funchal 11.61 118 *eP* **Pn 22 17 30.7 +0.1**
PMPS Porto Santo 11.78 115 *eP* **Pn 22 17 32.1 -0.8**
MACI Morro de la Ar 14.78 131 Pn **Pn 22 18 13.0 -1.1**
PCVE Castro Verde 16.60 87 *eP* **P 22 18 44.2 +4.1**
PAB San Pablo 19.21 80 P **P 22 19 09.8 +0.8**
ESDC Sonseca Array 19.50 79 P **Pn 22 19 14.6 +1.3**
0.1nm,0.3s,baz=270,slow=9.8,SNR=12
ESDC LR LR 22 26 05.8
comp=Z,139nm,18.0s,baz=255,slow=34
ESDC Sonseca Array 19.50 79 P **Pn 22 19 13.0 -0.3**
MDT Midelt 20.70 99 P Pn 22 19 27.5 0.0
4.7nm,0.8s,baz=328,slow=10,SNR=8.5
EKA Eskdalemuir Ar 24.07 38 P **P 22 20 02.4 +2.2**
1.1nm,0.7s,baz=249,slow=7.0,SNR=4.3
BORG Borgarnes 26.49 7 LR LR 22 28 07.9
comp=Z,420nm,18.8s,baz=201,slow=30
DAVOX Davos/Dischmat 29.50 61 LR LR 22 30 53.8
comp=Z,153nm,19.9s,baz=265,slow=33
FETA Feichten 30.09 61 *eP* **P 22 20 56.2 +1.7**
2.4nm,1.1s
MOTA Moosalm 30.35 60 *eP* **P 22 20 57.9 +1.1**
2.5nm,1.1s
SQTA Sankt Quirin 30.42 61 *eP* **P 22 20 59.6 +2.2**
2.1nm,0.9s
WATA Walderalm 30.67 60 *eP* **P 22 21 01.3 +1.6**
4.7nm,1.3s
WTTA Wattenberg 30.71 60 *eP* **P 22 21 01.6 +1.5**
6.1nm,1.2s
SFJD Kangerlussuaq 30.84 344 LR LR 22 30 20.1
comp=Z,244nm,20.3s,baz=153,slow=30
KBA Koelnbreinsper 31.88 61 *eP* **P 22 21 13.8 +3.5**
3.1nm,0.6s
CLL Collm 31.88 53 *eS* **S 22 26 19.0 -1.7**
CLL *eSSS* SSS 22 28 24.0
CLL Lm MLR 22 31 00.0
comp=Z,300nm,21.6s
MYKA Terra Mystica 32.09 62 *eP* **P 22 21 14.1 +2.1**
comp=Z,2.4nm,0.9s
GERES GERESS Array B 32.14 58 P **P 22 21 14.9 +2.4**
comp=Z,0.3nm,0.4s,baz=263,slow=7.7,SNR=3.8
GERES LR LR 22 33 56.2
comp=Z,104nm,18.2s,baz=274,slow=36
MOA Molln 32.50 59 *eP* **P 22 21 16.8 +1.2**
comp=Z,4.7nm,0.9s
KOWA Kowa 32.72 131 P **P 22 21 18.5 +0.8**
KOWA IAmb IAmb 22 21 20.2
comp=Z,15nm,1.4s
OBKA Obir 32.72 62 *eP* **P 22 21 15.1 -2.5**
comp=Z,4.9nm,1.4s
NOA NORSAR Array B 33.46 35 P **P 22 21 26.6 +2.8**
comp=Z,1.4nm,0.9s,baz=247,slow=9.1,SNR=3.0
NOA LR LR 22 33 17.5
comp=Z,325nm,19.7s,baz=250,slow=33
CONA Conrad Observa 33.57 59 *eP* **P 22 21 21.0 -4.1**
comp=Z,1.5nm,1.2s
TOA0 Torodi Ar. Sit 37.29 125 P **P 22 21 57.9 +0.7**
TOA0 IAmb IAmb 22 21 59.7
comp=Z,16nm,1.4s
TORD Torodi Ar. Bea 37.29 125 P **P 22 21 57.8 +0.6**
comp=Z,4.5nm,0.9s,baz=320,slow=6.9,SNR=13
TORD LR LR 22 34 18.8
comp=Z,43nm,20.8s,baz=290,slow=31
SADO Sadowa 37.35 296 LR LR 22 36 38.1
comp=Z,71nm,18.0s,baz=100,slow=35
SJG San Juan 38.16 248 LR LR 22 33 38.4
comp=Z,111nm,19.9s,baz=66,slow=30
DBIC Dimbokro 38.68 139 P **P 22 22 09.7 +0.8**
comp=Z,5.1nm,0.7s,baz=312,slow=9.3,SNR=5.9
DBIC LR LR 22 36 17.7
comp=Z,121nm,20.6s,baz=302,slow=33
MDP Montagnes des 39.68 219 LR LR 22 35 18.4
comp=Z,114nm,18.9s,baz=32,slow=31
ITM Ithomi 39.85 76 P **P 22 22 18.9 +0.4**
ITM IAmb IAmb 22 22 26.7
comp=Z,14nm,1.1s
FINES FINESS Array B 40.47 37 P **P 22 22 25.1 +1.8**
comp=Z,3.1nm,0.9s,baz=269,slow=5.6,SNR=4.1
FINES LR LR 22 37 45.4
comp=Z,369nm,19.2s,baz=266,slow=34
FINES FINESS Array B 40.47 37 P **P 22 22 24.7 +1.4**
ARCES ARCESS Array B 42.08 25 LR LR 22 36 50.1
comp=Z,164nm,21.7s,baz=280,slow=31
AKASG Malin Array Be 42.11 54 P **P 22 22 38.9 +2.0**
comp=Z,3.4nm,0.9s,baz=274,slow=8.3,SNR=1.3
AKASG LR LR 22 39 59.7
comp=Z,139nm,18.2s,baz=270,slow=36
E38A The Farm, Brul 45.54 301 P **P 22 23 03.2 -1.4**
I40A Norwalk 45.58 297 P **P 22 23 04.1 -0.9**
I40A IAmb IAmb 22 23 04.9
comp=Z,7.7nm,1.1s
ULM Lac du Bonnet 47.51 307 LR LR 22 42 02.6
comp=Z,56nm,18.3s,baz=11,slow=35
BRTR Keskin Array B 47.72 68 LR LR 22 42 53.4
comp=Z,70nm,21.7s,baz=301,slow=35
H10N2 ASCENSION HYDR 48.24 160 T T 23 14 34.9
baz=345,slow=75,SNR=154
H10N3 ASCENSION HYDR 48.25 160 T T 23 14 35.5
baz=345,slow=75,SNR=157
H10N1 ASCENSION HYDR 48.26 160 T T 23 14 36.3
baz=345,slow=75,SNR=162
LCAR Lake Charles 48.54 287 P **P 22 23 25.2 -3.0**
H10S3 ASCENSION HYDR 49.27 161 T T 23 15 52.2
baz=345,slow=74,SNR=32
H10S2 ASCENSION HYDR 49.28 161 T T 23 15 54.1
baz=235,slow=74,SNR=22
ECSD EROS Data Cent 49.77 299 P **P 22 23 37.5 -0.1**
ECSD IAmb IAmb 22 23 40.6
comp=Z,9.1nm,1.2s
KIRV Kirov 52.27 40 LR LR 22 44 38.7
comp=Z,242nm,21.3s,baz=284,slow=34
KBZ Khabaz 52.83 60 P **P 22 24 02.5 +2.1**
comp=Z,2.2nm,0.9s,baz=301,slow=7.6,SNR=4.5
KBZ LR LR 22 46 55.5
comp=Z,42nm,18.9s,baz=320,slow=36
BELG Belogornoye 52.98 48 LR LR 22 46 06.2
comp=Z,302nm,20.1s,baz=307,slow=35
YKA Yellowknife Ar 54.56 325 P **P 22 24 12.3 -0.4**
comp=Z,0.2nm,0.7s,baz=73,slow=7.2,SNR=4.0
YKA LR LR 22 44 47.0
comp=Z,64nm,18.7s,baz=0.0,slow=33
BDFB Brasilia 56.88 202 LR LR 22 45 03.0
comp=Z,271nm,20.7s,baz=322,slow=32
ARU Arti 57.63 41 LR LR 22 47 56.2
comp=Z,136nm,20.4s,baz=264,slow=34
PDAR Pinedale Array 58.89 302 P **P 22 24 42.9 -1.3**
comp=Z,1.1nm,1.0s,baz=79,slow=7.7,SNR=6.1
PDAR LR LR 22 49 36.5
comp=Z,104nm,18.4s,baz=77,slow=36
PDAR Pinedale Array 58.89 302 P **P 22 24 41.9 -2.2**
AKTO Aktyubinsk 59.74 48 LR LR 22 50 53.5
comp=Z,193nm,18.6s,baz=301,slow=36
TXAR Lajitas Array 60.97 286 P **P 22 24 56.6 -1.9**
comp=Z,2.5nm,1.0s,baz=88,slow=6.0,SNR=11
NEW Newport 61.23 310 P **P 22 24 58.7 -1.2**
comp=Z,1.1nm,0.4s,baz=84,slow=8.6,SNR=3.9
NEW LR LR 22 49 44.7
comp=Z,142nm,20.6s,baz=60,slow=34
NEW Newport 61.23 310 IAmb IAmb 22 25 03.8
comp=Z,6.3nm,1.3s
PLID Pearl Lake 62.01 307 P **P 22 25 04.8 -0.6**
PLID IAmb IAmb 22 25 08.9
comp=Z,5.0nm,1.2s
NRIK Noril'sk 62.77 21 LR LR 22 51 06.1
comp=Z,52nm,21.8s,baz=338,slow=35
ELK Elko 63.59 302 LR LR 22 52 06.6
comp=Z,60nm,18.6s,baz=358,slow=35
LPAZ La Paz 65.78 222 P **P 22 25 29.9 -1.0**
comp=Z,1.7nm,0.9s,baz=59,slow=5.9,SNR=4.3
LPAZ LR LR 22 51 50.1
comp=Z,134nm,20.8s,baz=20,slow=34
ILAR Eielson Array 66.03 335 LR LR 22 50 30.1
comp=Z,89nm,19.0s,baz=112,slow=32
KVN Kaiserville 66.34 302 P **P 22 25 33.1 -0.8**
KVN IAmb IAmb 22 25 36.7
comp=Z,4.1nm,1.2s
NVAR Mina Array Bea 66.80 301 LR LR 22 53 45.9
comp=Z,67nm,19.3s,baz=228,slow=35
PFO Pinyon Flats O 68.09 296 LR LR 22 55 29.6
comp=Z,68nm,18.0s,baz=163,slow=36
TIXI Tiksi 68.85 7 LR LR 22 52 11.2
comp=Z,32nm,20.5s,baz=355,slow=33
CPUP Villa Florida 69.88 207 LR LR 22 53 12.7
comp=Z,90nm,21.1s,baz=38,slow=33
KKAR Karatay Array 70.84 50 P **P 22 26 01.8 0.0**
ZALV Zalesovo Beam 71.66 35 P **P 22 26 08.4 +1.9**
comp=Z,0.6nm,0.6s,baz=328,slow=5.1,SNR=2.4
ZALV LR LR 22 57 13.2
comp=Z,97nm,20.6s,baz=318,slow=36
AAK Ala-Archa 73.47 48 LR LR 22 59 17.1
comp=Z,82nm,18.4s,baz=325,slow=36
MK31 Makanchi Array 75.15 41 P **P 22 26 27.7 +0.5**
MK31 IAmb IAmb 22 26 34.6
comp=Z,3.9nm,1.4s
MKAR Makanchi Array 75.15 41 P **P 22 26 27.2 0.0**
comp=Z,0.8nm,0.7s,baz=316,slow=5.5,SNR=8.5
MKAR LR LR 23 00 00.2
comp=Z,190nm,18.2s,baz=309,slow=36
MKAR Makanchi Array 75.15 41 P **P 22 26 27.6 +0.3**
LSZ Lusaka 75.81 123 P **P 22 26 32.1 +0.7**
WMQ Urumqi 79.96 41 *eP* **P 22 26 56.1 +1.8**
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,130nm,3.6s
WMQ LR LR
comp=N,1μm,29.0s
WMQ LR LR
comp=E,1μm,29.2s
WMQ LR LR
comp=Z,280nm,29.3s
BOSA Boshof 84.01 134 LR LR 23 00 39.0
comp=Z,68nm,21.7s,baz=278,slow=33
SONM Songino Array 85.18 28 P **P 22 27 22.0 +0.6**
comp=Z,0.5nm,0.7s,baz=313,slow=4.3,SNR=6.3
SONM LR LR 23 07 23.1
comp=Z,42nm,19.0s,baz=334,slow=37
SONM Songino Array 85.18 28 P **P 22 27 21.8 +0.4**
PLCA Paso Flores 87.65 210 LR LR 23 05 27.8
comp=Z,91nm,20.5s,baz=54,slow=35
PETK Petropavlovsk- 88.38 356 LR LR 23 05 59.8
comp=Z,42nm,19.8s,baz=29,slow=35
HHC Hu-ho-hao-te 93.06 29 *eP* **P 22 27 58.6 -0.4**
HHC pmax pmax
comp=Z,9.0nm,1.1s
HHC pmax pmax
comp=Z,110nm,5.9s
XAN Xi'an 97.82 34 P Pdif 22 28 22.9 +2.1
XAN pP pwP 22 28 30.8 +5.0
XAN pmax pmax
comp=Z,6.0nm,1.2s

TUL ***24*** *22:23:42.7*$_{\pm}$*1.0,35°.75N*$_{\pm}$*0°.03×97°.38W*$_{\pm}$*0°.05,h5*$^{km}_{\pm}$*6km, ML3.2,mb_Lg3.3/125(NEIC),Error ellipse: s-maj=5.9km s-min=3.0km az=59.0*
NEIC ***24*** *22:23:43.0*$_{\pm}$*1.3,35°.79N*$_{\pm}$*0°.03×97°.40W*$_{\pm}$*0°.04,h7*$^{km}_{\pm}$*6km, Error ellipse: s-maj=5.8km s-min=2.9km az=49.0*
ANF ***24*** *22:23:42.5*$_{\pm}$*0.3,35°.78N×97°.39W,h5*^{km}*,ML3.8/12,Error ellipse: s-maj=3.1km s-min=2.4km az=121.0*
ISC 24 22:23:42.9$_{\pm}$**0.9,35.77N**$_{\pm}$**0°.02×97.40W**$_{\pm}$**0°.02,h7**$^{km}_{\pm}$**7km, n101,**$_{\sigma}$**0°65/62, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OK029	**Liberty Lake**	**0.05**	**296**	Pg		**Pg**	**22 23 44.9**	**+0.4**
OK009	**Oakdale Elemen**	**0.19**	**186**	Pg		**Pg**	**22 23 46.5**	**-0.4**
OK025	**Westminster Rd**	**0.20**	**166**	Pg		**Pg**	**22 23 46.5**	**-0.4**
OK025						**Sg**	**22 23 49.3**	**-0.4**
BCOK	**Bluff Creek, N**	**0.21**	**236**	Pg		**Pg**	**22 23 47.0**	**-0.1**
BCOK				Sg		**Sg**	**22 23 50.4**	**+0.4**
OK001	**Jones High Sch**	**0.23**	**157**	Pg		**Pg**	**22 23 47.0**	**-0.5**
OK001				Sg		**Sg**	**22 23 50.3**	**-0.3**
OKCFA	**Oklahoma City**	**0.36**	**187**	Pg		**Pg**	**22 23 49.5**	**-0.5**
OKCFA	**Oklahoma City**	**0.36**	**187**	P		**Pg**	**22 23 49.5**	**-0.5**
	baz=9.9,SNR=41							
OKCFA				S		**Sg**	**22 23 54.5**	**-0.2**
	baz=9.9							
OKCFA	**Oklahoma City**	**0.36**	**187**	P			22 23 49.5	
	baz=9.9,SNR=41							
OKCFA				S			22 23 54.5	
	baz=9.9							
OKCSW	**OKLAHOMA CITY**	**0.37**	**185**	Pg		**Pg**	**22 23 49.6**	**-0.5**
OK031	**S. Brethren Rd**	**0.49**	**68**			**Pg**	**22 23 52.3**	**0.0**
FNO	**Franklin**	**0.52**	**180**	Pg		**Pg**	**22 23 53.0**	**+0.1**
OK030	**Cody Creek RV**	**0.52**	**73**			**Pg**	**22 23 52.9**	**-0.1**
QUOK	**Quay**	**0.69**	**54**			**Pg**	**22 23 56.0**	**-0.1**
CROK	**Carrier**	**0.87**	**327**			**Pb**	**22 23 59.8**	**-0.6**
GC02	**Grant County #**	**1.14**	**341**			**Pg**	**22 24 04.5**	**-0.3**
OK032	**Salt Plains WL**	**1.22**	**328**			**Pg**	**22 24 05.8**	**-0.5**
KAN13	**South Haven SW**	**1.24**	**357**	Pg		**Pg**	**22 24 06.4**	**-0.3**
KAN14	**Manchester OK**	**1.27**	**339**			**Pg**	**22 24 06.7**	**-0.5**
KAN17	**Caldwell West**	**1.30**	**347**			**Pb**	**22 24 07.6**	**-0.2**
TUL1	**Leonard**	**1.31**	**84**	P		**Pn**	**22 24 06.1**	**-1.6**
	baz=263							
TUL1				S		**Sg**	**22 24 24.1**	**-1.0**
	baz=263							
TUL1	**Leonard**	**1.31**	**84**	P			22 24 06.1	
	baz=263							
TUL1				S			22 24 24.1	
	baz=263							
T35A	**Sooner Cattle**	**1.34**	**32**			**Pn**	**22 24 07.7**	**-0.5**
T35B	**Sooner Cattle**	**1.34**	**32**	P		**Pn**	**22 24 07.7**	**-0.4**
	baz=211							
T35B				S		**Sn**	**22 24 26.3**	**0.0**
	baz=211							
T35B	**Sooner Cattle**	**1.34**	**32**	P			22 24 07.7	
	baz=211							
T35B				S			22 24 26.3	
	baz=211							
KAN09	**Caldwell North**	**1.37**	**353**			**Pb**	**22 24 08.8**	**-0.2**
KAN05	**Bluff City Nor**	**1.39**	**344**			**Pg**	**22 24 09.2**	**-0.4**
KAN05				IAmb_Lg			22 24 29.5	
	comp=Z,137nm,0.9s							
U32A	**Winter Ranch,**	**1.43**	**295**	Pn		**Pn**	**22 24 09.5**	**+0.1**
U32A	**Winter Ranch,**	**1.43**	**295**	P		**Pn**	**22 24 09.4**	**0.0**
	baz=115,SNR=27							
U32A				S		**Sg**	**22 24 29.5**	**+0.5**
	baz=115							
U32A	**Winter Ranch,**	**1.43**	**295**	P			22 24 09.4	
	baz=115,SNR=27							
U32A				S			22 24 29.5	
	baz=115							
KAN08	**Anthony NE Sta**	**1.52**	**342**	Pn		**Pb**	**22 24 11.2**	**-0.3**
KAN08				IAmb_Lg			22 24 33.1	
	comp=Z,246nm,1.3s							
KS21	**Milan North St**	**1.52**	**352**	IAmb_Lg			22 24 36.0	
	comp=Z,282nm,0.8s							
WMOK	**Wichita Mounta**	**1.53**	**228**			**Pn**	**22 24 10.2**	**-0.6**
WMOK	**Wichita Mounta**	**1.53**	**228**	P		**Pn**	**22 24 10.1**	**-0.6**
	baz=48,SNR=188							
WMOK				S		**Sn**	**22 24 30.9**	**-0.1**
	baz=48							
WMOK	**Wichita Mounta**	**1.53**	**228**	P			22 24 10.1	
	baz=48,SNR=188							
WMOK				S			22 24 30.9	
	baz=48							
KAN16	**Harper SW Stat**	**1.54**	**340**			**Pn**	**22 24 11.2**	**+0.3**
KAN12	**Harper NE Stat**	**1.59**	**343**	Pn		**Pn**	**22 24 11.5**	**-0.1**
X37A	**Clayton**	**2.04**	**125**			**Pn**	**22 24 17.8**	**+0.1**
X37A				IAmb_Lg			22 24 50.5	
	comp=Z,171nm,1.1s							
X37A	**Clayton**	**2.04**	**125**	P		**Pn**	**22 24 17.3**	**-0.3**
	baz=306,SNR=98							
X37A				S			22 24 44.5	
	baz=306							
Z35A	**Perchaven, San**	**2.44**	**177**	Pn		**Pn**	**22 24 23.0**	**-0.2**
Z35A				IAmb_Lg			22 25 00.7	
	comp=Z,73nm,0.8s							
Z35A	**Perchaven, San**	**2.44**	**177**	P		**Pn**	**22 24 23.4**	**+0.3**
	baz=358							
Z35A				S		**Sn**	**22 24 54.9**	**+1.6**
	baz=358							
Z35A	**Perchaven, San**	**2.44**	**177**	P			22 24 23.4	
	baz=358							
Z35A				S			22 24 54.9	
	baz=358							
U38A	**Gravette**	**2.53**	**74**	Pn		**Pn**	**22 24 25.9**	**+1.5**
U38A				IAmb_Lg			22 25 01.2	
	comp=Z,86nm,0.7s							
U38A	**Gravette**	**2.53**	**74**	P		**Pn**	**22 24 25.0**	**+0.6**
	baz=255,SNR=63							
U38A	**Gravette**	**2.53**	**74**	P			22 24 25.0	
	baz=255,SNR=63							
R32A	**Long Quarter,**	**2.84**	**339**			**Pg**	**22 24 36.1**	**-1.3**
W39A	**Magazine**	**3.00**	**100**			**Pn**	**22 24 31.0**	**+0.1**
W39A				IAmb_Lg			22 25 23.7	
	comp=Z,148nm,1.0s							
W39A	**Magazine**	**3.00**	**100**	P		**Pn**	**22 24 31.2**	**+0.3**
	baz=282,SNR=8.8							
W39A	**Magazine**	**3.00**	**100**	P			22 24 31.2	
	baz=282,SNR=8.8							
Z38A	**Mt. Pleasant**	**3.20**	**141**			**Pn**	**22 24 33.2**	**-0.5**
Z38A				IAmb_Lg			22 25 30.2	
	comp=Z,109nm,1.0s							
MIAR	**Mount Ida**	**3.36**	**110**	Pn		**Pn**	**22 24 36.5**	**+0.6**
MIAR				IAmb_Lg			22 25 35.4	
	comp=Z,102nm,0.8s							
MIAR	**Mount Ida**	**3.36**	**110**	P		**Pn**	**22 24 36.0**	**+0.2**
	baz=292,SNR=8.2							
MIAR	**Mount Ida**	**3.36**	**110**	P			22 24 36.0	
	baz=292,SNR=8.2							
KSU1	**Kansas State U**	**3.38**	**10**			**Pn**	**22 24 36.5**	**+0.4**
KSU1				IAmb_Lg			22 25 36.6	
	comp=Z,107nm,0.8s							
KSU1	**Kansas State U**	**3.38**	**10**	P		**Pn**	**22 24 36.6**	**+0.5**
	baz=191							
KSU1				S		**Sn**	**22 25 16.8**	**+0.3**
	baz=191							
KSU1	**Kansas State U**	**3.38**	**10**	P			22 24 36.6	
	baz=191							
KSU1				S			22 25 16.8	
	baz=191							
CBKS	**Cedar Bluff**	**3.56**	**329**			**Pn**	**22 24 39.4**	**+0.7**
CBKS				IAmb_Lg			22 25 44.8	
	comp=Z,120nm,0.9s							
ABTX	**Abilene, Hawle**	**3.65**	**211**	IAmb_Lg			22 25 40.8	
	comp=Z,94nm,1.0s							
U40A	**Yellville**	**3.73**	**80**	IAmb_Lg			22 25 48.2	
	comp=Z,74nm,0.7s							
WHTX	**Lake Whitney,**	**3.77**	**181**	Pn		**Pn**	**22 24 42.5**	**+1.0**
S39A	**Bolivar**	**3.79**	**58**	Pn		**Pn**	**22 24 43.7**	**+1.9**
S39A	**Bolivar**	**3.79**	**58**	P		**Pn**	**22 24 42.2**	**+0.5**
	baz=240,SNR=10							
S39A	**Bolivar**	**3.79**	**58**	P			22 24 42.2	
	baz=240,SNR=10							
X40A	**Basin Creek Fa**	**3.95**	**108**	P		**Pn**	**22 24 44.6**	**+0.6**
	baz=290							
X40A	**Basin Creek Fa**	**3.95**	**108**	P			22 24 44.6	
	baz=290							
X40A				P			22 24 44.6	
	baz=290							
237A	**Washetta, Mont**	**3.99**	**160**	Pn		**Pn**	**22 24 43.9**	**-0.6**
237A				IAmb_Lg			22 25 58.2	
	comp=Z,58nm,0.8s							
WHAR	**Wooly Hollow**	**4.19**	**95**	IAmb_Lg			22 25 55.9	
	comp=Z,84nm,0.8s							
FCAR	**Ozark Folk Cen**	**4.29**	**87**	IAmb_Lg			22 26 02.6	
	comp=Z,62nm,0.7s							
NATX	**Nacogdoches**	**4.61**	**150**	Pn		**Pn**	**22 24 53.9**	**+0.9**
MSTX	**Muleshoe**	**4.77**	**249**	IAmb_Lg			22 26 18.4	
	comp=Z,49nm,1.0s							
R40A	**Maddies Statio**	**4.81**	**57**	IAmb_Lg			22 26 14.4	
	comp=Z,34nm,0.7s							
P38A	**Dawn**	**4.92**	**37**	IAmb_Lg			22 26 23.0	
	comp=Z,37nm,0.9s							
LCAR	**Lake Charles**	**5.08**	**85**	IAmb_Lg			22 26 27.0	
	comp=Z,54nm,0.9s							
KSCO	**Kaye Shedlock'**	**5.27**	**309**	IAmb_Lg			22 26 42.5	
	comp=Z,64nm,0.9s							
CCM	**Cathedral Cave**	**5.43**	**63**	IAmb_Lg			22 26 40.5	
	comp=Z,35nm,0.7s							
BGNE	**Belgrade**	**5.66**	**354**	IAmb_Lg			22 26 52.5	
	comp=Z,75nm,0.7s							
143A	**Socs Landing,**	**5.83**	**120**	IAmb_Lg			22 26 55.5	
	comp=Z,36nm,0.8s							
FVM	**French Village**	**6.01**	**66**	IAmb_Lg			22 26 58.1	
	comp=Z,41nm,1.0s							
OGNE	**Ogallala**	**6.32**	**326**	IAmb_Lg			22 27 10.7	
	comp=Z,41nm,0.7s							
SLM	**Saint Louis**	**6.39**	**61**	IAmb_Lg			22 27 03.3	
	comp=Z,47nm,0.8s							
W45A	**Hickory Valley**	**6.73**	**93**	IAmb_Lg			22 27 28.9	
	comp=Z,48nm,0.8s							
Y45A	**Yeager Farm, C**	**6.74**	**104**	IAmb_Lg			22 27 26.4	
	comp=Z,42nm,0.7s							
SDCO	**Great Sand Dun**	**6.80**	**289**	IAmb_Lg			22 27 25.3	
	comp=Z,29nm,0.9s							
S44A	**Carbondale**	**6.81**	**71**	IAmb_Lg			22 27 14.8	
	comp=Z,64nm,0.9s							
SCIA	**State Center**	**6.94**	**27**	IAmb_Lg			22 27 22.9	
	comp=Z,62nm,0.7s							
Q44A	**Meyer Farm, Va**	**7.37**	**62**	IAmb_Lg			22 27 57.5	
	comp=Z,47nm,0.8s							
WVT	**Waverly**	**7.77**	**85**	IAmb_Lg			22 27 49.5	
	comp=Z,20nm,0.8s							
L40A	**Anamosa**	**7.91**	**36**	IAmb_Lg			22 27 57.8	
	comp=Z,41nm,0.9s							
ECSD	**EROS Data Cent**	**7.97**	**4**	IAmb_Lg			22 27 60.0	
	comp=Z,34nm,1.1s							
USIN	**University of**	**8.10**	**71**	IAmb_Lg			22 28 03.9	
	comp=Z,40nm,0.9s							
Z47A	**Carrollton**	**8.12**	**106**	IAmb_Lg			22 28 08.2	
	comp=Z,20nm,0.9s							
O44A	**Mansfield**	**8.30**	**56**	IAmb_Lg			22 28 09.9	
	comp=Z,45nm,0.8s							
SMCO	**Snowmass**	**8.34**	**297**	IAmb_Lg			22 28 28.4	
	comp=Z,17nm,1.1s							
PHWY	**Pilot Hill**	**8.38**	**314**	IAmb_Lg			22 28 14.6	
	comp=Z,28nm,1.0s							
T47A	**Sharon Grove**	**8.39**	**79**	IAmb_Lg			22 28 18.5	
	comp=Z,31nm,1.0s							
V48A	**Smith Brothers**	**8.60**	**87**	IAmb_Lg			22 28 19.1	
	comp=Z,26nm,1.1s							
L42A	**Oliver, Polo**	**8.66**	**42**	IAmb_Lg			22 28 32.3	
	comp=Z,40nm,0.8s							
P46A	**Rosedale**	**8.94**	**62**	IAmb_Lg			22 28 28.0	
	comp=Z,42nm,0.7s							
CLTN	**Cedars of Leba**	**8.98**	**85**	IAmb_Lg			22 28 28.8	
	comp=Z,17nm,0.8s							
JFWS	**Jewell Farm**	**9.03**	**36**	IAmb_Lg			22 28 40.1	
	comp=Z,31nm,0.8s							
121A	**Cookes Peak, D**	**9.20**	**252**	IAmb_Lg			22 28 55.9	
	comp=Z,28nm,1.2s							
WCI	**Wyandotte Cave**	**9.21**	**71**	IAmb_Lg			22 28 36.5	
	comp=Z,19nm,0.8s							
Y49A	**Blount Mountai**	**9.23**	**99**	IAmb_Lg			22 28 41.7	
	comp=Z,15nm,0.8s							
BLO	**Bloomington**	**9.29**	**65**	IAmb_Lg			22 28 42.4	
	comp=Z,36nm,0.8s							
SFIN	**Lafayette**	**9.33**	**57**	IAmb_Lg			22 28 52.9	
	comp=Z,25nm,0.8s							
PV12	**Saucer Basin,**	**9.46**	**289**	IAmb_Lg			22 28 56.8	
	comp=Z,30nm,1.3s							
PV11	**David Mesa, Pa**	**9.52**	**289**	IAmb_Lg			22 28 52.5	
	comp=Z,23nm,1.1s							
PV04	**Paradox Valley**	**9.56**	**289**	IAmb_Lg			22 29 01.6	
	comp=Z,16nm,1.0s							
I40A	**Norwalk**	**9.63**	**31**	IAmb_Lg			22 29 01.6	
	comp=Z,27nm,0.9s							
PV10	**Paradox Valley**	**9.66**	**289**	IAmb_Lg			22 28 44.9	
	comp=Z,30nm,1.2s							
RWWY	**Rawlins**	**9.67**	**311**	IAmb_Lg			22 28 55.5	
	comp=Z,20nm,1.1s							
FPAL	**Fort Paine**	**9.73**	**94**	IAmb_Lg			22 29 09.4	
	comp=Z,19nm,0.8s							
K22A	**Casper**	**9.86**	**317**	IAmb_Lg			22 29 24.3	
	comp=Z,21nm,1.1s							
250A	**Grady**	**10.00**	**109**	IAmb_Lg			22 29 18.7	
	comp=Z,19nm,1.1s							

TRN ***24*** *22:25:43.8, 10.80N×62.37W, h71km, MD3.6*
TRN Felt in Trinidad, MMI III.
FUNV ***24*** *22:25:43.8, 10.76N±62.25W, h23km, MW3.9*

ISC 24 22:25:42.6±1.2, 10.74N±0.05×62.33W±0.04, h90km±18km, n28, σ1§22/24, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRUV	**Carupano**	**0.90**	**266**	⇓*iP*	Pn	22 26 01.5	+0.4
CRUV				*eS*	**Sn**	**22 26 13.9**	**-1.1**
TRN	**Trinidad (W)**	**0.91**	**95**	*eP*	Pn	22 26 02.2	+1.0
TRN				*eS*	**Sn**	**22 26 14.9**	**-0.4**
TPP	**Pointe-a-Pierr**	**0.96**	**116**	*eP*	Pn	22 26 03.8	+2.0
TBH	**Brigand Hill**	**1.26**	**101**	*eP*	Pn	22 26 07.1	+1.7
GRGR	**Grenville**	**1.54**	**25**	*eP*	**Pn**	**22 26 08.5**	**-0.3**
GRGR				*eS*	**Sn**	**22 26 27.9**	**-0.7**
GRGR	**Grenville**	**1.54**	**25**	*eP*	**Pn**	**22 26 08.5**	**-0.3**
GRGR				*eS*	**Sn**	**22 26 27.4**	**-1.2**
TPR	**Prospect**	**1.58**	**73**	*eP*	Pn	22 26 10.9	+1.5
TPR				*eS*	**Sn**	**22 26 30.9**	**+1.0**
BOT	**Bacolet**	**1.64**	**75**	*eP*	**Pn**	**22 26 10.5**	**+0.4**
TOSP	**Speyside**	**1.84**	**72**	*eP*	Pn	22 26 13.7	+0.9
TOSP				*eS*	**Sn**	**22 26 35.3**	**-0.5**
GCMP	**Grenada, Carri**	**1.95**	**27**	*eP*	**Pn**	**22 26 14.4**	**+0.2**
GCMP				*eS*	**Sn**	**22 26 37.0**	**-1.2**
PCRV	**Puerto La Cruz**	**2.34**	**256**	*eP*	Pn	22 26 21.2	+1.8
PCRV				*eS*	**Sn**	**22 26 48.1**	**+0.6**
RIOV	**Rio Grande**	**2.70**	**169**	*eP*	Pn	22 26 26.2	+2.0
RIOV				*eS*	**Sn**	**22 26 56.2**	**+0.2**
SVB	**Belmont**	**2.73**	**23**	*eP*	Pn	22 26 25.8	+1.2
SVV	**Soufriere Volc**	**2.79**	**23**	*eP*	Pn	22 26 26.9	+1.6
BIRV	**Birongo**	**3.89**	**267**	*eP*	Pn	22 26 42.4	+2.2
BIRV				*eS*	**Sn**	**22 27 25.6**	**+0.9**
MERV	**Las Mercedes**	**4.18**	**250**	*eP*	Pn	22 26 45.5	+1.3
MERV				*eS*	**Sn**	**22 27 31.8**	**-0.1**
TACV	**Tcata**	**4.66**	**263**	*eP*	Pn	22 26 53.4	+2.7
TACV				*eS*	**Sn**	**22 27 43.9**	**+0.2**
LUEV	**Luepa**	**4.94**	**170**	*eP*	**Pn**	**22 26 55.5**	**+0.8**
LUEV				*eS*	**Sn**	**22 27 47.5**	**-3.0**
TURV	**Turiamo**	**5.43**	**267**	*eP*	Pn	22 27 02.8	+1.7
BAUV	**El Baul**	**5.91**	**253**	*eP*	Pn	22 27 08.6	+0.9
BAUV	**El Baul**	**5.91**	**253**	*eS*	**Sn**	**22 28 11.3**	**-2.7**
BAUV	**El Baul**	**5.91**	**253**	*eP*	**Pn**	**22 27 08.3**	**+0.7**
BAUV				*eS*	**Sn**	**22 28 12.1**	**-1.9**
MAPV	**Macapo**	**6.10**	**262**	*eP*	Pn	22 27 11.4	+1.1
TEPV	**Terepaima**	**6.80**	**264**	*eP*	Pn	22 27 21.0	+1.1
PAYV	**Puerto Ayacuch**	**7.47**	**225**	*eP*	**Pn**	**22 27 29.6**	**+0.7**
CURV	**Curarigua**	**7.55**	**265**	*eP*	Pn	22 27 31.4	+1.3
MONV	**Montecano**	**7.59**	**280**	*eP*	**Pn**	**22 27 31.4**	**+0.7**
SOCV	**Socops**	**8.76**	**255**	*eP*	**Pn**	**22 27 46.9**	**+0.3**

WEL 24 22:39:47.4±1.2, 31°S±12°×18°0E±2°3, h475km±40km, M4.3/13, mB4.3/4, ML4.6/10, MLv4.6/13, Mw(mB)3.5/4, Error ellipse: s-maj=0.0km s-min=0.0km az=86.9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WCZ	**Waipu Caves**	**6.40**	**223**	P	P	22 41 27.0	+0.5
OUZ	**Omahuta**	**6.42**	**232**	P	P	22 41 26.8	+0.1
HAZ	**Te Kaha**	**6.55**	**194**	P	P	22 41 28.4	+0.5
HAZ				S	S	22 42 51.2	+0.7
PKGZ	**Pakihiroa**	**6.62**	**192**	P	P	22 41 29.6	+0.9
PKGZ				S	S	22 42 53.1	+1.1
PUZ	**Puketiti**	**6.77**	**190**	P	P	22 41 29.9	-0.4
PUZ				S	S	22 42 53.9	-0.8
TWGZ	**Tauwhareparae**	**6.92**	**192**	P	P	22 41 33.1	+1.3
TWGZ				S	S	22 42 57.6	+0.1
MWZ	**Matawai**	**7.16**	**194**	P	P	22 41 34.0	-0.2
URZ	**Urewera**	**7.19**	**197**	P	P	22 41 33.6	-0.9
URZ				S	S	22 43 01.3	-1.1
TKGZ	**Te Karaka**	**7.20**	**192**	P	P	22 41 35.4	+0.8
TKGZ				S	S	22 43 03.6	+0.9
RAGZ	**Rawiri**	**7.34**	**195**	P	P	22 41 35.9	-0.3
RIGZ	**Rimuhau**	**7.47**	**192**	P	P	22 41 36.7	-0.8
RIGZ				S	S	22 43 09.2	+1.2
MUGZ	**Murupara**	**7.48**	**198**	P	P	22 41 37.0	-0.6
MUGZ				S	S	22 43 08.8	+0.8
SNGZ	**Shannon Statio**	**7.63**	**194**	P	P	22 41 39.8	+0.6
RAHZ	**Arahi**	**7.82**	**196**	P	P	22 41 41.5	+0.4
NMHZ	**Naumai**	**8.05**	**197**	P	P	22 41 43.6	-0.1
NMHZ				S	S	22 43 20.7	+1.4

IDC ***24*** *22:40:57.6±1.9, 51.50N×130.64W, h0km, mb1 3.6/4, mb1mx3.2/53, mbtmp3.2/4, ML3.4/4, Error ellipse: s-maj=21.2km s-min=12.1km az=180.0*
PGC ***24*** *22:40:57.9±0.1, 51.57N×130.67W, h6km, ML3.4/16, 186km Wsw of Bella Bella, Bc Haida Gwaii Region*

ISC 24 22:40:57.0±1.4, 51.66N±0.04×130.62W±0.04, h1km±12km, n31, σ1§54/44, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.72**	**331**	P	**Pg**	**22 41 11.8**	**+0.9**
HG4B				S	**Sb**	**22 41 22.7**	**-0.2**
BNB	**Barry Inlet**	**1.15**	**323**	P	**Pg**	**22 41 17.2**	**-1.7**
BNB				S	**Sg**	**22 41 33.1**	**-0.8**
HG1B	**Mitchell Dam**	**1.57**	**325**	Pn	**Pn**	**22 41 26.3**	**+0.3**
HG1B				Sn	**Sb**	**22 41 47.8**	**+0.5**
BBB	**Bella Bella**	**1.64**	**70**	Pn	**Pb**	**22 41 27.9**	**-0.1**
	49nm,0.3s,baz=240,slow=16,SNR=6.6						
BBB				Lg	Lg	22 41 50.9	
	242nm,0.3s,baz=331,slow=21,SNR=13						
BBB	**Bella Bella**	**1.64**	**70**	Pn	**Pb**	**22 41 27.9**	**-0.1**
BBB				Sg	**Sg**	**22 41 50.6**	**+1.0**
MOBC	**Moresby Island**	**1.70**	**331**	Pn	**Pb**	**22 41 29.2**	**+0.2**
MOBC				Sg	**Sg**	**22 41 52.1**	**+0.5**
HOLB	**Holberg**	**1.87**	**122**	Pn	**Pn**	**22 41 29.5**	**-0.7**
HOLB				Sn	**Sn**	**22 41 52.1**	**-2.4**
DIB	**Dawson Inlet,**	**1.92**	**324**	Pg	**Pb**	**22 41 32.9**	**+0.2**
DIB				Sg	**Sg**	**22 41 59.0**	**+0.5**
HWKB	**Hawksbury Isla**	**2.14**	**24**	Pn	**Pb**	**22 41 36.1**	**-0.4**
HWKB				Sg	**Sg**	**22 42 07.2**	**+1.6**
GRNB	**Grenville Isla**	**2.23**	**10**	Sg	**Sg**	**22 42 09.4**	**+0.9**
PHC	**Port Hardy**	**2.23**	**114**	Pg	**Pb**	**22 41 37.8**	**-0.2**
PHC				Sg	**Sb**	**22 42 05.9**	**-0.1**
MAYB	**Maynard**	**2.52**	**119**	Pn	**Pn**	**22 41 39.6**	**+0.4**
RUBB	**Prince Rupert**	**2.68**	**5**	Pn	**Pb**	**22 41 43.9**	**-1.8**
RUBB				Sg	**Sg**	**22 42 23.8**	**+0.8**
KITB	**Kitimat**	**2.70**	**26**	Pn	**Pn**	**22 41 42.8**	**+1.2**
KITB				Sg	**Sg**	**22 42 24.1**	**+0.4**
WOSB	**Woss**	**2.97**	**119**	Pn	**Pn**	**22 41 44.4**	**-1.0**
NCRB	**Newcastle Ridg**	**3.15**	**112**	Pg	**Pb**	**22 41 53.9**	**+0.1**
CBB	**Campbell River**	**3.71**	**114**	Pg	**Pb**	**22 42 03.3**	**0.0**
BTB	**Buttle Lake**	**3.92**	**122**	Pg	**Pb**	**22 42 07.0**	**0.0**
UBRB	**Upper Baezaeko**	**4.20**	**70**	Sg	**Sg**	**22 43 09.2**	**-2.6**
OZB	**Mount Ozzard**	**4.26**	**127**	Pg	**Pb**	**22 42 14.4**	**+1.8**
TXB	**Texada**	**4.40**	**114**	Pg	**Pb**	**22 42 17.0**	**+2.0**
MGB	**Mount Grey**	**4.64**	**123**	Pg	**Pb**	**22 42 20.4**	**+1.1**
MGB				Sg	**Sg**	**22 43 26.5**	**+0.5**
SHB	**Sechelt**	**4.77**	**113**	Pg	**Pb**	**22 42 23.5**	**+2.1**
SHB				Sg	**Sg**	**22 43 27.7**	**-2.3**
DLBC	**Dease Lake**	**6.80**	**3**	Pn	**Pn**	**22 42 41.2**	**+3.3**
	0.7nm,0.3s,baz=181,slow=11,SNR=7.6						
DLBC				Lg	Lg	22 44 32.0	
	0.6nm,0.3s,baz=131,slow=16,SNR=4.4						
DLBC	**Dease Lake**	**6.80**	**3**	Pn	**Pn**	**22 42 41.4**	**+3.5**
DLBC				Sg	**Sg**	**22 44 30.5**	**-4.7**
NBC5	**NorthernBC 5**	**7.46**	**35**	Pg	**Pg**	**22 43 19.7**	**-0.2**
NBC6	**NorthernBC 6**	**8.73**	**34**	Sg	**Sg**	**22 45 37.5**	**+0.4**
NEW	**Newport**	**9.34**	**106**	Lg	Lg	22 45 51.2	
	0.1nm,0.3s,baz=288,slow=20,SNR=2.6						
YKA	**Yellowknife Ar**	**13.87**	**32**	Pn	**Pn**	**22 44 13.7**	**-0.7**
	0.1nm,0.3s,baz=225,slow=12,SNR=5.6						
YKA				Lg	Lg	22 48 13.0	
	0.0nm,0.3s,baz=229,slow=27,SNR=2.8						
ILAR	**Eielson Array**	**15.61**	**334**	Pn	**P**	**22 44 42.0**	**-0.3**
	0.0nm,0.3s,baz=149,slow=11,SNR=1.2						
PDAR	**Pinedale Array**	**16.80**	**114**	Pn	**P**	**22 44 55.5**	**-0.4**
	0.1nm,0.3s,baz=312,slow=8.1,SNR=13						

KISR ***24*** *22:55:46.2±0.8, 30.55N×49.93E, h31km±185km, ML3.7, Hypocentre not reviewed by the ISC*
TEH ***24*** *22:55:46.9, 30.51N×49.82E, h14km, ML3.6*
THR ***24*** *22:55:46.3±0.3, 30.69N×49.73E, h15km, ML3.4*

ISC 24 22:55:48.8±1.3, 30.51N±0.07×49.83E±0.05, h25km, n31, σ1§69/31, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.38**	**75**	*e*Pg	**Pb**	**22 55 54.5**	**-2.5**
ABEH				*e*Sg	**Sb**	**22 56 02.2**	**-0.4**
AHWZ	**Ahwaz**	**1.31**	**309**	*e*Pg	**Pn**	**22 56 12.1**	**+0.6**
KLNJ	**Kolanjah**	**1.60**	**71**	*e*Pn	**Pn**	**22 56 16.6**	**+0.8**
KLNJ				*e*		22 56 48.2	
	comp=Z,7μm,1.3s						
KAZ1	**Kazerun**	**1.80**	**119**	*e*Pn	**Pb**	**22 56 19.6**	**-1.5**
KAZ1				*e*		22 56 55.5	
	comp=Z,6μm,0.8s						
SHK1	**Shahrekord**	**2.03**	**26**	*e*Pn	**Pn**	**22 56 23.4**	**+1.8**
UMR	**Umm Al-Rimmam**	**2.06**	**243**	*e*P		22 56 22.9	
UMR				*e*S		22 56 50.3	
AHBU	**AHRAM**	**2.07**	**142**	*e*Pn	**Pb**	**22 56 25.2**	**-0.5**
IPIR	**Pirpir**	**2.35**	**22**	*e*Pn	**Pn**	**22 56 28.0**	**+1.9**
IPIR				*e*		22 57 06.0	
	comp=Z,3μm,0.5s						
QRN	**Al-Qurain**	**2.42**	**224**	*e*P		22 56 27.9	
QRN				*e*S		22 56 58.9	
QRN				IAML		22 57 07.5	
	comp=Z,431nm,0.5s						
SHI	**Shiraz**	**2.48**	**110**	*e*Pn	**Pn**	**22 56 28.7**	**+0.9**
RDF	**Al-Radifah**	**2.53**	**232**	*e*P		22 56 29.7	
RDF				*e*S		22 57 02.6	
RDF				IAML		22 57 03.5	
	comp=Z,307nm,0.6s						
IRAM	**Ramesheh**	**2.54**	**59**	*e*Pn	**Pn**	**22 56 30.8**	**+2.1**
IRAM				*e*		22 56 37.5	
	comp=Z,1μm,0.4s						
RST	**Umm Al-Ruwaisa**	**2.65**	**249**	*e*P		22 56 30.8	
IGAR	**Gharneh**	**2.67**	**44**	*e*Pn	**Pn**	**22 56 32.2**	**+1.7**
IGAR				*e*		22 57 17.5	
	comp=Z,1μm,0.5s						
DHL1	**Dehloran**	**3.07**	**316**	*e*Pn	**Pn**	**22 56 37.3**	**+1.6**
IKLH	**Kolahrood**	**3.17**	**27**	*e*Pn	**Pn**	**22 56 39.8**	**+2.4**
IKLH				*e*		22 56 50.3	
	comp=Z,870nm,0.3s						
IZEF	**Zefreh**	**3.19**	**41**	*e*Pn	**Pn**	**22 56 39.5**	**+1.8**
KHMZ	**Khomeyn**	**3.23**	**2**	*e*Pn	**Pn**	**22 56 36.1**	**-2.0**
QAM	**Ghamsar**	**3.52**	**22**	*e*Pn	**Pn**	**22 56 44.5**	**+2.4**
QAM				*e*		22 56 48.9	
	comp=Z,3μm,0.4s						
KRSH	**Karshahi**	**3.97**	**29**	*e*Pn	**Pn**	**22 56 50.1**	**+1.9**
ASAO	**Ashtian**	**4.03**	**2**	*e*Pn	**Pn**	**22 56 47.6**	**-1.6**
ASAO				IAML		22 57 42.7	
	comp=N,41nm,0.5s						
IMEH	**Mehriz**	**4.20**	**77**	*e*Pn	**Pn**	**22 56 52.9**	**+1.4**
ANAR	**Anarak**	**4.26**	**50**	*e*Pn	**Pn**	**22 56 54.0**	**+1.8**
ICHK	**Chekchek**	**4.28**	**65**	*e*Pn	**Pn**	**22 56 54.1**	**+1.5**
ISFB	**Sefidab**	**4.34**	**27**	*e*Pn	**Pn**	**22 56 54.6**	**+1.3**
HAGD	**Aghdareh**	**4.34**	**352**	*e*Pn	**Pn**	**22 56 55.7**	**+2.3**
YZKH	**Yazd**	**4.48**	**64**	*e*Pn	**Pn**	**22 56 56.0**	**+0.8**
YZKH	**Yazd**	**4.48**	**64**	*e*Pn	**Pn**	**22 56 56.0**	**+0.8**
IALM	**Almabolaq**	**4.56**	**343**	*e*Pn	**Pn**	**22 56 58.0**	**+1.5**
IGHG	**Ghaleghazi**	**4.71**	**325**	*e*Pn	**Pn**	**22 56 59.5**	**+1.1**
IRAZ	**Razeghan**	**4.89**	**1**	*e*Pn	**Pn**	**22 57 02.9**	**+2.0**
SNGE	**Sanandaj**	**5.03**	**336**	*e*Pn	Pn	22 57 00.7	-2.2
IDHR	**Dehrash**	**5.09**	**326**	*e*Pn	**Pn**	**22 57 04.4**	**+0.7**
KHGB	**Koh Gabri**	**5.74**	**90**	*e*Pn	**Pn**	**22 57 13.5**	**+0.9**
NGRK	**Negar Kerman**	**6.04**	**96**	*e*Pn	**Pn**	**22 57 18.5**	**+1.6**

OMAN 24 23:00:09.2, 29.66N×52.26E, h10km, mb4.6/4, ml3.3/2, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHME	**Shamm**	**4.97**	**135**	P	Pn	23 01 23.1	-0.8
BANOM	**Banah**	**5.16**	**135**	P	Pn	23 01 25.7	-0.8
	SNR=7.7						
BANOM				S	Sn	23 02 27.9	+1.7
MASF	**Masafi**	**5.49**	**140**	P	Pn	23 01 30.9	-0.3
MASF				S	Sn	23 02 34.7	+0.2
MDH	**Madha**	**5.63**	**139**	P	Pn	23 01 32.4	+0.3
ASUD	**Al Ashush, Dub**	**5.71**	**151**	P	Pn	23 01 35.0	+1.0
	SNR=12						
ASUD				S	Sn	23 02 42.7	+3.1
UOSS	**Minazif**	**5.86**	**142**	P	Pn	23 01 35.7	-0.4
UOSS				S	Sn	23 02 46.1	+2.7
HATD	**Hatta, Dubai**	**5.92**	**143**	P	Pn	23 01 36.2	-0.8
HATD				S	Sn	23 02 47.3	+2.5
ALNE	**Al Ain**	**6.39**	**150**	P	Pn	23 01 44.5	+1.1
ALNE				S	Sn	23 02 57.1	+0.7
ARQ	**Araqi**	**7.36**	**148**	P	Pn	23 01 57.3	+0.5
ARQ				S	Sn	23 03 23.3	+2.9
SMDO	**Samad**	**8.37**	**140**	P	Pn	23 02 10.2	-0.5
SMDO				S	Sn	23 03 47.9	+2.5
WSAR	**Wadi Sarin**	**8.56**	**137**	P	Pn	23 02 12.5	-0.8
DOK	**Doka**	**11.12**	**171**	P	Pn	23 02 49.8	+1.5
DOK				S	Sn	23 04 53.1	+0.3
WHFO	**Wadi Hawf**	**11.76**	**173**	P	Pn	23 02 58.6	+1.4
	SNR=6.3						
ABTO	**Aybut**	**12.28**	**175**	P	Pn	23 03 05.7	+1.4
ABTO				S	Sn	23 05 22.6	+1.3

NOU ***24*** *23:21:20.5, 39.69S×175.65E, h3km, MLv3.3, North Island, New Zealand*

WEL 24 23:21:21.0±0.2, 40°S±1°×176°E±°, h6km±2km, M3.4/70, ML3.6/70, MLv3.4/70, Error ellipse: s-maj=0.0km s-min=0.0km az=78.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOVZ	**Moawhango**	**0.30**	**10**	P	Pg	23 21 27.4	+0.4
MOVZ				S	Sg	23 21 31.8	+0.8
MTVZ	**Mangateitei**	**0.36**	**333**	P	Pg	23 21 28.9	+0.9
MTVZ				S	Sb	23 21 34.6	-1.2
BHHZ	**Black Hill Sta**	**0.36**	**54**	P	Pg	23 21 28.0	-0.1
BHHZ				S	Sg	23 21 34.3	+1.4
WNVZ	**Wahianoa**	**0.38**	**350**	P	Pg	23 21 29.1	+0.6
WNVZ				S	Sg	23 21 34.9	+1.4
TSZ	**Takapari Road**	**0.41**	**149**	P	Pg	23 21 29.7	+0.7
TSZ				S	Sg	23 21 35.5	+1.1
TRVZ	**Turoa**	**0.42**	**345**	P	Pg	23 21 29.9	+0.8
TRVZ				S	Sg	23 21 36.0	+1.3
WHVZ	**Whangaehu Hut**	**0.43**	**350**	P	Pg	23 21 29.9	+0.6
WHVZ				S	Sg	23 21 35.3	+0.4
TUVZ	**Tukino**	**0.44**	**357**	P	Pg	23 21 30.1	+0.6
TUVZ				S	Sg	23 21 36.2	+1.0
PNHZ	**Pukenui**	**0.45**	**118**	P	Pg	23 21 30.0	+0.3
PNHZ				S	Sg	23 21 36.5	+1.0
FWVZ	**Far West T-bar**	**0.46**	**347**	P	Pg	23 21 30.4	+0.5
FWVZ				S	Sg	23 21 36.6	+0.6
PKVZ	**Pokaka**	**0.49**	**328**	P	Pg	23 21 31.0	+0.6
SNVZ	**South Ngauruho**	**0.52**	**356**	P	Pg	23 21 31.4	+0.3
SNVZ				S	Sg	23 21 38.4	+0.6
KRHZ	**Kereru**	**0.53**	**84**	P	Pg	23 21 31.2	0.0
NGZ	**Ngauruhoe**	**0.53**	**353**	P	Pg	23 21 31.6	+0.3
WAZ	**Wanganui**	**0.54**	**265**	P	Pb	23 21 32.5	-0.4
OTVZ	**Oturere**	**0.54**	**358**	P	Pg	23 21 31.7	+0.3
ETVZ	**East Tongariro**	**0.57**	**2**	P	Pg	23 21 32.1	+0.2
NNVZ	**North Ngauruho**	**0.57**	**355**	P	Pg	23 21 32.4	+0.3
OHWZ	**Ohakea**	**0.57**	**209**	P	Pb	23 21 32.8	-0.7
TMVZ	**Te Maari**	**0.59**	**2**	P	Pg	23 21 32.4	+0.1
WTVZ	**West Tongariro**	**0.59**	**353**	P	Pg	23 21 32.7	+0.2
NTVZ	**North Tongariro**	**0.61**	**359**	P	Pg	23 21 32.7	0.0
KRVZ	**Karewarewa**	**0.61**	**357**	P	Pg	23 21 32.8	+0.1
KWHZ	**Kaweka Forest**	**0.64**	**64**	P	Pg	23 21 32.9	-0.3
TWVZ	**Taurewa**	**0.66**	**343**	P	Pg	23 21 33.6	-0.1
WPHZ	**Waipukurau**	**0.68**	**122**	P	Pb	23 21 34.8	-0.6
POWZ	**Post Office Ro**	**0.69**	**175**	P	Pg	23 21 34.6	+0.3
DVHZ	**Dannevirke**	**0.70**	**148**	P	Pg	23 21 34.8	+0.4
KATZ	**Kakaramea**	**0.73**	**1**	P	Pg	23 21 34.9	-0.1
RITZ	**Rihia Road**	**0.74**	**11**	P	Pg	23 21 35.0	-0.2
MCHZ	**McNeill Hill**	**0.82**	**72**	P	Pb	23 21 37.6	-0.2
BKZ	**Black Stump Fm**	**0.83**	**50**	P	Pg	23 21 36.1	-0.8
RATZ	**Rangitukua**	**0.84**	**5**	P	Pg	23 21 37.0	-0.1
HATZ	**Hinemaiaia**	**0.87**	**21**	P	Pg	23 21 36.8	-0.9
PRWZ	**Pori Road**	**0.88**	**166**	P	Pb	23 21 38.2	-0.4
PRHZ	**Porangahau**	**0.92**	**128**	P	Pb	23 21 39.4	0.0
VRZ	**Vera Road**	**0.92**	**309**	P	Pg	23 21 38.8	+0.1
KAHZ	**Kahuranaki**	**0.92**	**96**	P	Pg	23 21 39.5	+0.1
MRZ	**Mangatainoka R**	**0.96**	**185**	P	Pg	23 21 39.1	-0.3
PXZ	**Pawanui**	**0.96**	**110**	P	Pb	23 21 40.1	0.0
ANWZ	**Angora Road**	**0.97**	**141**	P	Pn	23 21 40.8	-0.4
WATZ	**Wairara**	**1.00**	**2**	P	Pg	23 21 39.9	-0.2
MRHZ	**Matea Rd**	**1.04**	**33**	P	Pg	23 21 39.7	-1.3
WHTZ	**Whakaora**	**1.06**	**12**	P	Pg	23 21 41.3	0.0
NMHZ	**Naumai**	**1.06**	**55**	P	Pg	23 21 41.4	0.0
BFZ	**Birch Farm**	**1.07**	**156**	P	Pb	23 21 41.7	-0.2
CKHZ	**Cape Kidnapper**	**1.08**	**88**	P	Pb	23 21 42.2	+0.1
TIWZ	**Tintock**	**1.08**	**172**	P	Pg	23 21 41.8	+0.1
ARHZ	**Aropaoanui**	**1.11**	**67**	P	Pb	23 21 42.8	+0.3
OGWZ	**Otaki Gorge**	**1.18**	**199**	P	Pg	23 21 42.7	-0.9
HOWZ	**Holdsworth Sta**	**1.20**	**186**	P	Pg	23 21 43.6	-0.4
MHEZ	**Mangahewa**	**1.23**	**300**	P	Pn	23 21 45.0	+0.2
PREZ	**Palmer Road**	**1.23**	**287**	P	Pg	23 21 44.6	0.0
MTHZ	**Maungataniwha**	**1.24**	**47**	P	Pg	23 21 43.4	-1.4
ALRZ	**Allen Road**	**1.25**	**24**	P	Pg	23 21 43.4	-1.6
DREZ	**Durham Road**	**1.26**	**294**	P	Pn	23 21 45.2	0.0
CPWZ	**Castlepoint**	**1.27**	**162**	P	Pb	23 21 46.2	+0.9
KIW	**Kapiti Island**	**1.30**	**207**	P	Pn	23 21 44.2	-1.6
NEZ	**North Egmont**	**1.30**	**289**	P	Pn	23 21 45.4	-0.4
RAHZ	**Arahi**	**1.34**	**55**	P	Pn	23 21 46.3	0.0
HIZ	**Hauiti**	**1.35**	**331**	P	Pn	23 21 45.0	-1.5
KHEZ	**Kahui Hut**	**1.35**	**287**	P	Pb	23 21 46.9	0.0
WHHZ	**Waihua**	**1.36**	**63**	P	Pb	23 21 46.8	0.0
TLZ	**Tolley Road**	**1.38**	**355**	P	Pn	23 21 46.0	-0.9
HRRZ	**Handcock Road**	**1.39**	**20**	P	Pn	23 21 46.6	-0.5
TMWZ	**Te Maipa**	**1.41**	**174**	P	Pn	23 21 46.1	-1.2
PKE	**Pukeiti**	**1.41**	**291**	P	Pn	23 21 47.4	+0.2
MTW	**Mount Morrison**	**1.46**	**185**	P	Pn	23 21 46.7	-1.2
HSRZ	**Hossack Road**	**1.46**	**18**	P	Pb	23 21 48.3	-0.2
CAW	**Cannon Point**	**1.48**	**198**	P	Pn	23 21 47.6	-0.6
RTZ	**Ruatahuna**	**1.48**	**43**	P	Pn	23 21 48.0	-0.3
MUGZ	**Murupara**	**1.49**	**35**	P	Pn	23 21 46.7	-1.7
SNGZ	**Shannon Statio**	**1.58**	**55**	P	Pn	23 21 49.5	-0.1
TARZ	**Mount Tarawera**	**1.60**	**24**	P	Pn	23 21 50.2	+0.3
OMRZ	**Omania**	**1.69**	**19**	P	Pb	23 21 51.9	-0.6
PAWZ	**Paruwai Farm**	**1.69**	**187**	P	Pn	23 21 49.5	-1.6
KNZ	**Kokohia**	**1.69**	**67**	P	Pn	23 21 49.8	-1.2
TRWZ	**Traveller**	**1.69**	**180**	P	Pn	23 21 49.5	-1.6
WEL	**Wellington**	**1.73**	**204**	P	Pn	23 21 50.9	-0.7
DUWZ	**D'Urville Isla**	**1.74**	**230**	P	Pn	23 21 50.5	-1.3
MSWZ	**Moikau Station**	**1.74**	**191**	P	Pn	23 21 50.2	-1.6
EDRZ	**Edgecumbe**	**1.80**	**28**	P	Pn	23 21 53.4	+0.7
RAGZ	**Rawiri**	**1.81**	**49**	P	Pn	23 21 52.6	-0.2
BHW	**Baring Head**	**1.81**	**200**	P	Pn	23 21 51.4	-1.3
URZ	**Urewera**	**1.82**	**38**	P	Pn	23 21 52.5	-0.4
TCW	**Tory Channel**	**1.85**	**215**	P	Pn	23 21 52.6	-0.7
PLWZ	**Palliser**	**1.89**	**190**	P	Pn	23 21 52.1	-1.8
RIGZ	**Rimuhau**	**1.90**	**59**	P	Pn	23 21 53.9	-0.1
TOZ	**Tahuroa Road**	**1.98**	**356**	P	Pn	23 21 55.9	+0.9
MWZ	**Matawai**	**1.98**	**47**	P	Pn	23 21 54.7	-0.5
TUWZ	**Tuamarina**	**2.17**	**217**	P	Pn	23 21 56.9	-0.9
NNZ	**Nelson**	**2.32**	**229**	P	Pn	23 21 59.4	-0.3
TWGZ	**Tauwhareparae**	**2.35**	**50**	P	Pn	23 22 00.1	-0.2
BSWZ	**Blackbirch Sta**	**2.43**	**214**	P	Pn	23 22 00.4	-0.9
HAZ	**Te Kaha**	**2.55**	**41**	P	Pn	23 22 02.8	-0.1
QRZ	**Quartz Range**	**2.66**	**244**	P	Pn	23 22 03.6	-0.9
THZ	**Tophouse**	**2.95**	**225**	P	Pn	23 22 07.4	-1.1
**

NEST S Sn 00 25 29.0 +0.1
comp=E,1μm,0.4s
BCI Bajram Curri 1.09 353 P Pg 00 25 12.7 -1.6
baz=351
BCI S Sb 00 25 29.0 +0.5
baz=351
BCI AMP
comp=N,3.9nm,0.9s,baz=351
SKO Skopje 1.14 52 *e*Pg Pg 00 25 13.3 -1.7
SKO *i* Sg Sg 00 25 29.0 -0.8
LSK Leskovik 1.16 166 P Pg 00 25 14.1 -1.4
baz=168
LSK S Sn 00 25 32.5 +1.1
baz=168
LSK AMP
comp=E,4.9nm,0.8s,baz=168
DRME Dracevica, Mon 1.20 319 *e*Pn Pb 00 25 14.2 -1.8
DRME Dracevica, Mon 1.20 319 *e*Pg Pb 00 25 14.0 -2.0
DRME *i* Sg Sn 00 25 34.4 +2.1
PVY Plav 1.33 351 ⇓*i*Pg Sn 00 25 16.5 -1.4
PVY *i* Sg Sn 00 25 39.1 +3.4
PDG Podgorica 1.36 328 *e*Pg Pn 00 25 17.3 -0.9
PDG eSg Sg 00 25 39.9 +2.9
PDG Podgorica 1.36 328 ⇑S Sg 00 25 39.1 +2.1
PDG Podgorica 1.36 328 *e*Pn Pn 00 25 17.1 -1.1
PDG Podgorica 1.36 328 *i* Pg Pn 00 25 17.2 -1.1
TTG Podgorica 1.36 328 *e*Pg Pn 00 25 17.0 -1.1
TTG *i* Sg Sg 00 25 40.0 +2.9
SRN Sarande 1.41 187 P Pg 00 25 19.8 -0.4
SRN S Sg 00 25 41.3 +2.8
comp=E,445nm,0.8s
SRN Sarande 1.41 187 P Pg 00 25 19.8 -0.4
baz=190
SRN S Sg 00 25 41.2 +2.8
baz=190
SRN AMP
comp=N,1.8nm,0.8s,baz=190
BUM Brajici-Budva 1.43 316 ⇑*i*Pg Pn 00 25 18.2 -1.0
BUM *i* Sg Sg 00 25 42.1 +2.8
KZN Kozani 1.52 129 P Pb 00 25 21.1 -0.2
KZN S Sg 00 25 42.5 +0.6
comp=N,810nm,0.6s
STIP Stip 1.52 73 ⇓*e*Pn Pg 00 25 22.9 +0.6
STIP *i* Sg Sg 00 25 47.0 +4.9
KPRO Kipourio 1.57 147 P Pb 00 25 22.1 -0.3
KEK Kerkira 1.60 192 P Pb 00 25 22.9 +0.2
KEK S Sg 00 25 45.7 +1.2
comp=N,368nm,0.6s
CEME Cevo 1.60 323 ⇓*i*Pn Pn 00 25 21.4 -0.2
CEME *i* Sn Sg 00 25 47.3 +2.5
BEY Berane 1.61 351 *i* Pg Pn 00 25 21.6 0.0
IVA Berane 1.61 351 ⇑*i*Pn Pn 00 25 21.7 0.0
IVA *i* Sn Sg 00 25 47.7 +2.7
KOME Kolasin 1.66 341 ⇓*i*Pn Pn 00 25 22.6 +0.2
KOME *i* Sn Sg 00 25 48.8 +2.2
GRG Griva 1.67 100 P Pn 00 25 22.2 -0.1
GRG S Sb 00 25 44.7 -0.2
comp=N,505nm,1.1s
GRG Griva 1.67 100 *i* Pn Pn 00 25 22.2 -0.1
KTI Kastanea 1.68 121 P Pn 00 25 23.0 +0.4
JAN Janina 1.69 164 P Pb 00 25 24.3 +0.1
IGT Igoumenitsa 1.75 178 P Pb 00 25 25.7 +0.5
baz=179
IGT S Sg 00 25 52.4 +3.1
baz=179
HCY Herceg Novi 1.75 312 *e*Pn Pn 00 25 24.1 +0.6
HCY Herceg Novi 1.75 312 *e*Pn Pn 00 25 23.9 +0.4
HCY *i* Sn Sg 00 25 50.6 +1.2
VAY Valandovo 1.76 88 *e*Pn Pn 00 25 23.4 -0.2
VAY eSg Sb 00 25 47.8 +0.3
VAY Valandovo 1.76 88 *i* Pn Pn 00 25 23.3 -0.2
VAY *i* Sg Sb 00 25 47.5 0.0
VAY eLg Lg 00 25 48.6
comp=N,275nm,0.9s
VAY eLg Lg 00 25 50.3
comp=E,173nm,0.6s
NKME Niksic 1.77 328 ⇓*i*Pn Pn 00 25 24.3 +0.5
NKME *i* Sn Sg 00 25 51.3 +1.3
NKY Niksic 1.79 329 *e*Pn Pn 00 25 24.6 +0.4
NKY *i* Sn Sg 00 25 51.9 +1.1
PRVS Prvonek 1.84 48 *e*Pn Pn 00 25 25.1 +0.3
PRVS eSn Sn 00 25 49.3 +1.1
BARS Barje 1.94 37 *e*Pn Pn 00 25 26.0 -0.1
BARS eSn Sb 00 25 53.8 +1.1
BARS Barje 1.94 37 *e*Pn Pn 00 25 24.9 -1.2
KNT Kendrikon 2.01 92 P Pn 00 25 26.9 -0.2
KNT S Sn 00 25 53.0 +0.7
comp=E,198nm,1.0s
KNT Kendrikon 2.01 92 *e*Pn Pn 00 25 27.1 0.0
TREB Trebinje 2.01 316 *e*Pn Pn 00 25 28.7 +1.6
SELS Selova 2.05 18 *e*Pn Pn 00 25 26.9 -0.7
SELS eSn Sb 00 25 56.2 +0.3
BRY Bratogost 2.06 323 *e*Pn Pn 00 25 29.4 +1.6
BRY Bratogost 2.06 323 *e*Pn Pn 00 25 28.2 +0.4
BRY *i* Sn Sg 00 25 58.1 -1.2
BOSS Bosilegrad 2.07 53 *e*Pn Pn 00 25 27.8 -0.1
BOSS eSn Sb 00 25 55.8 -0.7
PLE Pljevlja 2.15 343 *e*Pn Pn 00 25 29.5 +0.5
PLE *i* Sn Sb 00 26 00.3 +1.5
UPM Unac-Piva 2.16 333 *e*Pn Pb 00 25 32.3 -0.2
UPM Unac-Piva 2.16 333 *e*Pn Pn 00 25 29.7 +0.3
UPM *i* Sn Sb 00 26 00.8 +1.4
THE Thessaloniki 2.16 106 P Pn 00 25 29.4 +0.2
THE Thessaloniki 2.16 106 *e*Pn Pn 00 25 29.3 +0.1
HORT Hortiatis 2.27 106 P Pn 00 25 30.8 +0.1
LRSO Larissa Observ 2.30 134 P Pn 00 25 32.1 +1.1
IVAS Ivanjica 2.30 358 *e*Pn Pn 00 25 31.5 +0.4
IVAS eSn Sb 00 26 01.7 -1.4
SOH Sokhos 2.40 100 *e*Pn Pn 00 25 32.6 +0.1
RUDO Rudo 2.42 345 *e*Pn Pn 00 25 34.1 +1.3
LKD2 Lefkada island 2.51 172 P Pn 00 25 35.8 +1.9
NYDR Nydri-Lefkada 2.59 172 P Pn 00 25 36.6 +1.7
BOVS Bovan 2.59 24 *e*Pn Pn 00 25 37.2 +2.1
BOVS eSn Sn 00 26 08.7 +2.1
BOVS Bovan 2.59 24 ⇓P Pn 00 25 37.3 +2.2
BOVS ⇑S Sb 00 26 09.6 -1.9
PLG Polygyros 2.60 109 P Pn 00 25 35.5 +0.3
DRAG Dragano-Lefkad 2.60 174 P Pn 00 25 36.6 +1.4
VTS Vitosha 2.61 58 *e*Pn Pn 00 25 35.4 0.0
VTS eSn Sn 00 26 08.4 -0.8
VTS Vitosha 2.61 58 ⇓P Pn 00 25 36.9 +1.5
VTS ⇓S Sn 00 26 09.7 +2.6
VTS Vitosha 2.61 58 *e*Pn Pn 00 25 35.8 +0.4
GRUS Gruza 2.63 8 *e*Pn Pn 00 25 36.0 +0.4
GRUS eSn Sb 00 26 10.9 -1.8
BBLS Lazići 2.66 347 *e*Pn Pn 00 25 37.8 +1.7
BBLS eSn Sn 00 26 10.9 +2.6
BBLS Lazići 2.66 347 *e*Pn Pn 00 25 38.3 +2.2
ZAPS Zavoj 2.67 41 *e*Pn Pn 00 25 37.8 +1.6
ZAPS eSn Sn 00 26 10.1 +1.5
EVGI Lefkada island 2.67 173 P Pn 00 25 37.6 +1.4
MAKR Makrakomi, Fth 2.69 147 P Pn 00 25 37.8 +1.4
MATE Matera 2.75 258 ⇑P Pn 00 25 38.4 +1.2
MATE ⇓S Sn 00 26 11.8 +1.5
AGG Agios Georgios 2.77 144 P Pn 00 25 38.4 +0.9
DIVS Divibare 2.83 356 *e*Pn Pn 00 25 38.9 +0.6
DIVS eSn Sn 00 26 13.5 +1.0
DIVS Divibare 2.83 356 *e*Pn Pn 00 25 39.2 +0.9
ZAGS Zajecar 2.93 30 *e*Pn Pn 00 25 41.4 +1.7
ZAGS eSn Sn 00 26 16.9 +2.0
TRUS Trudelj 2.95 2 *e*Pn Pn 00 25 41.5 +1.6
TRUS eSn Sn 00 26 17.0 +1.7
PAIG Paliouri 2.95 116 P Pn 00 25 40.2 +0.3
BLKB Belogradchik 2.96 37 ⇑S Sb 00 26 19.8 -2.3
XOR Xorichti 2.96 129 P Pn 00 25 40.6 +0.5
HAPS Han Pijesak,BI 2.96 342 *e*Pn Pn 00 25 40.9 +0.6
ANX Ano Chora 2.98 154 P Pn 00 25 42.1 +1.6
OUR Ouranopolis 2.99 107 P Pn 00 25 41.2 +0.6
SVIS Svilajnac 3.07 13 *e*Pn Pn 00 25 43.4 +1.8
SVIS eSn Sn 00 26 20.6 +2.2
AXAR Agios Charalam 3.12 143 P Pn 00 25 43.2 +0.8
KUBS Kucevo 3.31 18 *e*Pn Pn 00 25 44.6 -0.3
KUBS eSn Sn 00 26 25.1 +0.9
TEKS Tekeris 3.31 351 *e*Pn Pn 00 25 45.4 +0.4
TEKS Tekeris 3.31 351 *e*Pn Pn 00 25 44.0 -1.0
ATAL Atalanti 3.35 139 P Pn 00 25 46.1 +0.6
TIP Timpagrande 3.39 233 ⇓P Pn 00 25 46.4 +0.3
TIP ⇑S Sn 00 26 28.1 +1.7
DRO Drossia 3.51 161 P Pn 00 25 49.8 +2.1
PUNG Punghina 3.59 33 ⇑P Pn 00 25 51.5 +2.7
MDVR Moldovita 3.67 17 ⇑P Pn 00 25 52.4 +2.6
MDVR ⇓S Sn 00 26 36.7 +3.6
PLVB Pleven 3.87 56 ⇓P Pn 00 25 55.2 +2.5
PLVB ⇓S Sn 00 26 41.3 +3.2
FRGS Fruska Gora 3.89 356 *e*Pn Pn 00 25 54.8 +1.8
FRGS eSn Sn 00 26 39.4 +0.8
FRGS Fruska Gora 3.89 356 ⇑P Pn 00 25 55.0 +2.0
FRGS ⇓S Sn 00 26 41.7 +3.0
FRGS Fruska Gora 3.89 356 *e*Pn Pn 00 25 54.7 +1.8
MGRS Mrkonjic Grad 3.90 325 *e*Pn Pn 00 25 55.5 +2.4
HERR Herculane 3.94 23 ⇓P Pn 00 25 56.5 +3.0
HERR ⇑S Sn 00 26 43.4 +3.6
BLY Banja Luka 4.13 328 *e*Pn Pn 00 25 57.9 +1.7
BANR Banloc 4.16 9 ⇑P Pn 00 25 58.3 +1.8
BANR ⇑S Sn 00 26 48.0 +2.9
BZS Buzias 4.45 13 ⇑P Pn 00 26 02.8 +2.2
BZS ⇑S Sn 00 26 56.4 +3.9
MRAK Mrakovica 4.46 328 *e*Pn Pn 00 26 02.7 +1.9
GZR Gura Zlata 4.51 23 ⇑P Pn 00 26 02.6 +1.1
GZR ⇑S Sn 00 26 58.6 +4.6
MORH Mrgy, Hungar 5.07 347 ⇓P Pn 00 26 10.3 +1.3
MORH ⇑S Sn 00 27 11.2 +3.6
MORH Mrgy, Hungar 5.07 347 *e*Pn Pn 00 26 09.9 +0.8
SIRR Siria 5.09 11 ⇓P Pn 00 26 11.4 +1.9
SIRR ⇑S Sn 00 27 11.4 +3.1
ARR Arges 5.20 37 ⇓P Pn 00 26 13.2 +2.3
ARR ⇓S Sn 00 27 15.0 +4.2
AQU L'Aquila 5.22 284 *e*Pn Pn 00 26 12.6 +1.4
VOIR 5.44 39 ⇑P Pn 00 26 17.2 +2.9
VOIR ⇑S Sn 00 27 20.5 +3.6
CRES Cresnjev 5.72 324 *e*Pn Pn 00 26 18.6 +0.5
BEHE Becsehely 5.76 335 *e*Pn Pn 00 26 21.3 +2.7
MLR Muntele Rosu 5.92 43 Pn Pn 00 26 22.7 +1.9
comp=E,0.5nm,0.3s,baz=139,slow=12,SNR=7.2
MLR Sn Sn 00 27 29.0 +0.2
comp=E,0.2nm,0.3s,baz=137,slow=20,SNR=1.8
MLR Muntele Rosu 5.92 43 ⇑P Pn 00 26 23.2 +2.3
MLR ⇑S Sn 00 27 31.9 +3.2
DOPR Dopca 6.00 37 ⇓P Pn 00 26 23.7 +1.8
DOPR ⇓S Sn 00 27 34.6 +4.1
CEY Cerknica 6.14 318 *e*Pn Pn 00 26 24.5 +0.6
SOKA Soboth 6.57 327 *i* Pn Pn 00 26 31.5 +1.7
comp=E,4.0nm,0.3s
VRI Vrincioaia 6.58 44 ⇓P Pn 00 26 32.3 +2.5
VRI ⇑S Sn 00 27 47.8 +3.0
PSZ Piszkesteto 6.64 358 ⇑P Pn 00 26 32.4 +1.6
OBKA Obir 6.65 324 *e*Pn Pn 00 26 32.3 +1.5
comp=E,3.7nm,0.5s
OBKA *e*Sn Sn 00 27 48.8 +2.1
comp=E,7.2nm,0.5s
ARSA Arzberg 6.86 332 *e*Pn Pn 00 26 36.3 +2.6
comp=E,3.2nm,0.5s
ARSA *e*Sn Sn 00 27 55.0 +3.2
comp=E,2.6nm,0.6s
IDI Anoyia 7.01 147 Pn Pn 00 26 33.3 -2.5
comp=E,0.6nm,0.3s,baz=4.2,slow=4.9,SNR=10
IDI Sn Sn 00 27 53.1 -2.4
comp=E,0.0nm,0.3s,baz=313,slow=16,SNR=1.0
IDI Anoyia 7.01 147 ⇓P Pn 00 26 37.7 +1.8
TRPA Tarpa 7.04 13 ⇑P Pn 00 26 38.8 +2.6
MYKA Terra Mystica 7.16 321 *e*Pn Pn 00 26 39.4 +1.6
comp=E,2.2nm,0.3s
MYKA *e*Sn Sn 00 28 02.8 +3.6
comp=E,2.8nm,0.4s
KECS Kecovo 7.21 1 *e*PN Pn 00 26 40.9 +2.5
BURAR Bucovina Array 7.27 28 ⇑P Pn 00 26 41.8 +2.5
VYHS Vyhne 7.28 353 *e*PN Pn 00 26 43.9 +4.4
VYHS *e*SN Sn 00 28 04.9 +2.7
CONA Conrad Observa 7.34 336 *i* Pn Pn 00 26 42.4 +1.9
comp=E,1.2nm,0.5s
CONA *e*Sn Sn 00 28 09.4 +5.6
comp=E,2.1nm,0.6s
MODS Modra-Piesok 7.40 344 *e*PN Pn 00 26 45.0 +3.9
MODS *e*SN Sn 00 28 07.1 +2.0
KOLL Kolacno 7.42 351 *e*SN Sn 00 28 08.6 +3.2
SMOL Smolenice 7.50 346 *e*PN Pn 00 26 46.9 +4.4
SMOL *e*SN Sn 00 28 10.8 +3.2
CRVS Cervenica-Dubn 7.67 6 *e*PN Pn 00 26 47.9 +3.0
ABTA Abfaltersbach 7.80 317 *e*Pn Pn 00 26 48.0 +1.3
comp=E,1.1nm,0.2s,SNR=4.7
ABTA *e*Sn Sn 00 28 15.9 +0.9
comp=E,8.9nm,0.8s
MOA Molln 7.83 329 *i* Pn Pn 00 26 48.6 +1.6
comp=E,1.7nm,0.3s
MOA *i* Sn Sn 00 28 20.1 +4.5
comp=E,2.6nm,0.5s
PGF Pioggiola 8.48 282 *e*Pn Pn 00 26 56.7 +0.7
PGF *e*Sn Sn 00 28 22.8 -8.9
WTTA Wattenberg 8.59 317 *e*Pn Pn 00 26 58.4 +0.8
comp=E,1.7nm,0.3s
WTTA *e*Sn Sn 00 28 34.9 +0.3
comp=E,8.4nm,0.6s
WATA Walderalm 8.67 317 *i* Pn Pn 00 27 00.6 +1.9
comp=E,1.4nm,0.2s
WATA *e*Sn Sn 00 28 38.5 +2.0
comp=E,5.8nm,0.5s
GERES GERESS Array B 8.87 331 Pn Pn 00 27 02.8 +1.6
comp=E,0.2nm,0.3s,baz=153,slow=15,SNR=10
GERES Sn Sn 00 28 43.2 +2.1
comp=E,0.2nm,0.3s,baz=155,slow=24,SNR=2.6
MOTA Moosalm 8.92 316 *e*Pn Pn 00 27 03.2 +1.1
comp=E,1.1nm,0.3s
MOTA *e*Sn Sn 00 28 41.5 -1.2
comp=E,4.1nm,0.6s
FETA Feichten 8.92 313 *e*Pn Pn 00 27 04.1 +1.9
comp=E,0.5nm,0.2s
FETA *e*Sn Sn 00 28 41.5 -1.2
comp=E,2.0nm,0.6s
KHC Kasperske Hory 9.15 331 *e*PN Pn 00 27 03.7 -1.4
KHC *e*SN Sn 00 28 50.6 +2.6
RETA Reutte 9.19 316 *e*Pn Pn 00 27 07.8 +2.1
comp=E,0.9nm,0.4s
RETA *e*Sn Sn 00 28 49.6 +0.4
comp=E,2.6nm,0.4s
DAVOX Davos/Dischmat 9.27 310 Pn Pn 00 27 08.8 +2.0
comp=E,0.4nm,0.3s,baz=133,slow=19,SNR=3.7
DAVOX Sn Sn 00 28 48.8 -2.4
comp=E,0.3nm,0.3s,baz=184,slow=22,SNR=1.8
DAVA Damuels 9.55 312 *e*Sn Sn 00 28 57.3 -0.8
comp=E,2.4nm,0.4s
SBF Sospel 9.79 290 *e*Pn Pn 00 27 13.4 -0.6
FRF La Foret Royal 10.31 287 *e*Pn Pn 00 27 20.0 -0.9
BRTR Keskin Array B 10.33 94 LR LR 00 31 51.0
comp=E,34nm,20.6s,baz=290,slow=41
LMR La Mourre 10.38 286 *e*Pn Pn 00 27 21.4 -0.5
MBDF Montbardon 10.45 294 *e*Pn Pn 00 27 21.4 -1.6
LPG La Plagne 10.68 298 *e*Pn Pn 00 27 25.1 -1.2
LPG *e*Sn Sn 00 29 18.3 -7.7
comp=E,3.9nm,0.6s
LPL La Plagne 10.70 298 *e*Pn Pn 00 27 24.9 -1.6
LPL *e*Sn Sn 00 29 17.5 -8.9
comp=E,2.8nm,0.6s
ORIF Oris-en-Rattie 11.11 294 *e*Pn Pn 00 27 30.1 -1.9
SMRF Simiane la Rot 11.14 289 *e*Pn Pn 00 27 29.1 -3.2
CABF La Chapelle 11.51 302 *e*Pn Pn 00 27 34.8 -2.6
HINF Hinteralfeld 11.56 309 *e*Pn Pn 00 27 36.5 -1.7
CDF Champ du Feu 11.63 312 *e*Pn Pn 00 27 36.7 -2.4
HAU Haudompre 11.95 309 *e*Pn Pn 00 27 40.2 -3.3
PAGF Fort de Pagny 12.59 310 *e*Pn Pn 00 27 49.1 -3.0
SAVF Savonnieres en 12.96 310 *e*Pn Pn 00 27 54.7 -2.5
SMF Signal de Mont 12.97 300 *e*Pn Pn 00 27 54.4 -2.9
LOR Lormes 13.17 303 *e*Pn Pn 00 27 56.5 -3.5
LOR *e*Sn Sn 00 30 17.2 -9.2
comp=E,1.2nm,0.3s
SSF Saint Saulge 13.32 301 *e*Pn Pn 00 27 59.0 -3.1
AVF Avril sur Loir 13.33 300 *e*Pn Pn 00 27 58.2 -4.1
TCF Toulx Ste Croi 13.95 297 *e*Pn Pn 00 28 07.9 -2.8
MMAI Mount Meron Ar 14.62 119 Pn Pn 00 28 17.3 -2.8
comp=E,0.1nm,0.3s,baz=320,slow=15,SNR=2.1
LFF La Frestale 14.70 291 *e*Pn Pn 00 28 18.2 -2.8
MFF Saint Martin d 15.60 297 *e*Pn Pn 00 28 30.8 -2.2
LDF La Druitiere 16.14 304 *e*Pn Pn 00 28 35.7 -4.1
FLN La Foliniere 16.42 304 *e*Pn Pn 00 28 43.1 -0.3
GRR Gorron 16.54 303 *e*Pn Pn 00 28 41.1 -3.8
ROSF Rostrenen 18.07 301 *e*Pn Pn 00 28 57.0 -7.1
HFS Hagfors 19.31 350 P Pn 00 29 19.1 0.0
comp=E,0.2nm,0.3s,baz=172,slow=11,SNR=7.7
FINES FINESS Array B 20.50 8 P P 00 29 30.9 0.0
comp=E,1.1nm,0.7s,baz=185,slow=11,SNR=3.8
NOA NORSAR Array B 20.54 347 P P 00 29 32.0 +0.5
comp=E,1.2nm,0.9s,baz=164,slow=10,SNR=4.2
NOA LR LR 00 38 17.6
comp=E,15nm,19.0s,baz=245,slow=39
EKA Eskdalemuir Ar 20.84 320 P P 00 29 35.2 +0.6
comp=E,0.4nm,0.5s,baz=112,slow=9.4,SNR=1.7
ARCES ARCESS Array B 28.46 4 P P 00 30 48.8 +1.0
comp=E,1.5nm,0.9s,baz=189,slow=11,SNR=2.0
TORD Torodi Ar. Bea 32.37 215 P P 00 31 23.9 +1.2
comp=E,0.5nm,0.6s,baz=30,slow=9.8,SNR=5.7
ZALV Zalesovo Beam 43.84 50 P P 00 32 59.7 +0.6
comp=E,0.5nm,0.4s,baz=281,slow=8.7,SNR=4.6
MKAR Makanchi Array 43.93 61 P P 00 33 00.0 +0.1
comp=E,0.2nm,0.4s,baz=275,slow=7.6,SNR=4.3
SONM Songino Array 58.69 52 P P 00 34 51.7 +1.0
comp=E,0.2nm,0.4s,baz=289,slow=9.0,SNR=1.8
CMAR Chiang Mai Arr 69.70 83 P P 00 36 01.7 -1.6
comp=E,1.2nm,0.3s,baz=288,slow=3.7,SNR=1.4

BJI ***25*** *00:37:39.6±0.0, 13.83N×145.22E, h155km, mB4.8/42, mb4.9/70*
MOS ***25*** *00:37:40.9±1.0, 13.89N×144.76E, h148km, mb4.9/46, MS4.1/4, Error ellipse: s-maj=9.2km s-min=5.0km az=107.3*
NEIC ***25*** *00:37:42.2±1.5, 13.85N±0.07×144.84E±0.08, h140km±4km, mb5.1/358, Error ellipse: s-maj=12.0km s-min=10.1km az=83.0*
IDC ***25*** *00:37:42.2±0.6, 13.89N×144.82E, h145km±4km, mb4.5/38, mb1 4.6/41, mb1mx4.6/48, mbtmp5.0/41, MS3.7/22, Ms1 3.7/22, ms1mx3.6/39, Error ellipse: s-maj=11.4km s-min=6.0km az=83.0*
GCMT ***25*** *00:37:45.2±0.2, 13.72N±0.01×144.94E±0.01, h144km±1km, MW5.2/120, Moment Tensor Solution. s80,c101; s120,c206; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.85±.13; Mθθ0.90±.16; Mϕϕ-0.05±.16; Mrθ4.85±.10; Mrϕ-5.20±.13; Mθϕ-0.73±.10; Best double couple: Mo7.12600×10¹⁶ NP1:ϕs178.00000°, δ46.00000°, λ-4.00000°. NP2:ϕs271.00000°, δ87.00000°, λ-136.00000°. Principal axes: T 7.7270, Plg27.0000°, Azm36.0000°; N -1.2020, Plg46.0000°, Azm274.0000°; P -6.5250, Plg32.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***25*** *00:37:49.3±1.1, 14.14N±4.4×14.15E±.7, h212km±11km, M5.0/38, mB5.5/16, mb5.2/38, Mw(mB)5.0/16, MwMwp4.8/1, Mwp5.2/1*
ISC 25 00:37:42.1±0.4, 13.85N±0.03×144.91E±0.04, h146km±3km, h147km:pP-P,n547,σ1.34/512, mb5.0/263, 91C-75D, Fault plane solution: NP1:ϕs208.52673°, δ26.60932°, λ15.56815°. NP2:ϕs104.53923°, δ83.09574°, λ115.76134°.
Principal axes: T Plg45.8248°, Azm40.7081°; N Plg25.5610°, Azm281.2191°; P Plg33.1758°, Azm172.9976°; **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.26**	**189**	Pn	**Pn**	**00 38 01.4**	**-0.6**
GUMO				Sn	**Sn**	**00 38 15.2**	**-2.0**
GUMO	**Guam**	**0.26**	**189**	P	**Pn**	**00 38 01.7**	**-0.3**
ANA2	**Anatahan**	**2.59**	**17**		**Pn**	**00 38 25.4**	**+1.2**
SARN	**Sarigan**	**2.96**	**16**	P	**Pn**	**00 38 30.6**	**+1.8**
JCJ	**Chichijima**	**13.42**	**349**	P	**Pn**	**00 40 47.0**	**+0.2**
	26nm,0.3s,baz=269,slow=19,SNR=18						
JCJ				S	**Sn**	**00 43 19.2**	**+3.9**
	2.6nm,0.3s,baz=313,slow=21,SNR=1.3						
JCJ				LR	LR	00 43 49.9	
	comp=Z,395nm,21.2s,baz=130,slow=28						
JCJ	**Chichijima**	**13.42**	**349**	Pn	**Pn**	**00 40 46.5**	**-0.4**
PATS	**Pohnpei**	**14.91**	**117**	P	**P**	**00 41 06.7**	**-1.0**
MANU	**Manus Island**	**15.98**	**171**	P	**Pn**	**00 41 18.7**	**-0.2**
JAY	**Jayapura**	**16.79**	**195**	P	**P**	**00 41 28.2**	**-0.3**
	1.1nm,0.3s,baz=14,slow=8.3,SNR=8.7						
GENI	**Genyem**	**17.00**	**196**	P	**Pn**	**00 41 33.9**	**+2.6**
JMZ	**Minamidaito 2**	**17.52**	**315**	P	**P**	**00 41 35.6**	**-0.8**
JMZ				IAmb	IAmb	00 41 40.2	
	comp=Z,115nm,0.9s						
RABL	**Rabaul**	**19.31**	**158**	P	**Pn**	**00 41 58.2**	**-0.5**
JHJ2	**Mitsune**	**19.73**	**347**	P	**P**	**00 42 00.8**	**+0.4**
JHJ	**Hachijo jima 2**	**19.74**	**347**	P	**P**	**00 42 01.9**	**+1.4**
	comp=Z,21nm,0.3s,baz=188,slow=13,SNR=3.7						
JHJ				LR	LR	00 47 31.9	
	comp=Z,437nm,21.0s,baz=358,slow=30						
SWI	**Sorong**	**19.91**	**224**	P	**Pn**	**00 42 05.4**	**-0.3**
	comp=Z,1μmcomp=Z,2μmcomp=Z,206nm,1.1s						
SIJI	**Sorong**	**19.92**	**224**	P	**Pn**	**00 42 05.0**	**-0.8**
	comp=Z,4.3nm,0.3s,baz=31,slow=9.9,SNR=41						
JOW	**Kunigami**	**20.22**	**312**	P	Pn	00 42 07.8	-1.4
	comp=Z,185nm,0.9s,baz=138,slow=11,SNR=26						
JOW	**Kunigami**	**20.22**	**312**	P	**P**	**00 42 07.3**	**+1.6**
FAKI	**Fak Fak**	**20.86**	**218**	P	**P**	**00 42 14.1**	**+1.3**
FAKI	**Fak Fak**	**20.86**	**218**	P	**P**	**00 42 14.3**	**+1.6**
	comp=Z,3μmcomp=Z,281nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**21.41**	**75**	T	T	01 04 06.6	
	baz=263,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**21.43**	**75**	T	T	01 04 07.8	
	baz=263,slow=75,SNR=14						
H11S2	**WAKE ISLAND Hy**	**21.43**	**75**	T	T	01 04 08.0	
	baz=263,slow=75,SNR=9.3						
WAKE	**Wake Island**	**21.52**	**73**	P	**P**	**00 42 20.6**	**+0.9**
JSG	**Sagara**	**21.61**	**345**	P	**P**	**00 42 20.2**	**-0.3**
JSG				IAmb	IAmb	00 42 22.7	
	comp=Z,82nm,0.8s						
TNTI	**Ternate**	**21.69**	**235**	P	**P**	**00 42 20.3**	**-1.3**
TNTI				IAmb	IAmb	00 42 24.8	
	comp=Z,61nm,1.1s						
TNTI	**Ternate**	**21.69**	**235**	P	**P**	**00 42 21.9**	**+0.4**
H11N1	**WAKE ISLAND Hy**	**21.83**	**72**	T	T	01 05 41.8	
	baz=256,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**21.84**	**71**	T	T	01 05 41.6	
	baz=256,slow=75,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**21.84**	**72**	T	T	01 05 43.3	
	baz=256,slow=75,SNR=12						
JSU	**Suzuyama**	**22.02**	**325**	P	**P**	**00 42 24.6**	**-0.2**
JSU				IAmb	IAmb	00 42 33.0	
	comp=Z,39nm,0.8s						
JMN	**Monobe**	**22.18**	**335**	P	**P**	**00 42 25.9**	**-0.6**
JYT	**Yasato**	**22.68**	**350**	P	**P**	**00 42 30.4**	**-0.8**
JYT				IAmb	IAmb	00 42 45.1	
	comp=Z,41nm,0.7s						
JGF	**Kuroka**	**22.70**	**344**	P	**P**	**00 42 30.5**	**-0.9**
JGF				IAmb	IAmb	00 42 33.0	
	comp=Z,72nm,0.9s						
JWT	**Wachi**	**23.00**	**340**	P	**P**	**00 42 33.8**	**-0.3**
JNU	**Nakatsue**	**23.05**	**329**	P	**P**	**00 42 35.1**	**+0.4**
	comp=Z,49nm,0.8s,baz=105,slow=2.7,SNR=20						
JNU				PcP	**PcP**	**00 46 20.1**	**+0.6**
	comp=Z,18nm,1.0s,baz=180,slow=3.0,SNR=3.7						
JNU	**Nakatsue**	**23.05**	**329**	P	**P**	**00 42 34.8**	**0.0**
JNU				IAmb	IAmb	00 42 37.1	
	comp=Z,96nm,1.1s						
YOJ	**Yonaguni jima**	**23.19**	**300**	P	**P**	**00 42 36.0**	**0.0**
YOJ				pmax	pmax		
	comp=Z,90nm,1.1s						
YOJ	**Yonaguni jima**	**23.19**	**300**	P	**P**	**00 42 36.0**	**0.0**
YOJ				IAmb	IAmb	00 42 41.1	
	comp=Z,90nm,1.1s						
PMG	**Port Moresby**	**23.21**	**174**	P	**P**	**00 42 36.0**	**-0.3**
	comp=Z,239nm,0.8s,baz=358,slow=7.0,SNR=62						
PMG	**Port Moresby**	**23.21**	**174**	*ce*P	**P**	**00 42 35.6**	**-0.7**
PMG				pmax	pmax		
	comp=Z,336nm,1.0s						
PMG	**Port Moresby**	**23.21**	**174**	P	**P**	**00 42 36.0**	**-0.3**
TGY	**Tagaytay City**	**23.27**	**274**	P	**P**	**00 42 39.8**	**+2.9**
	comp=Z,170nm,0.3s,baz=132,slow=10,SNR=5.5						
MJAR	**Matsushiro Arr**	**23.38**	**346**	P	**P**	**00 42 35.7**	**-2.0**
	comp=Z,17nm,0.7s,baz=171,slow=9.6,SNR=37						
MJAR				PcP	**PcP**	**00 46 20.7**	**+0.6**
	comp=Z,8.8nm,0.7s,baz=168,slow=3.7,SNR=6.6						
MJAR				ScP	**ScP**	**00 49 43.6**	**-1.1**
	comp=Z,5.3nm,0.8s,baz=153,slow=3.2,SNR=8.4						
MJAR	**Matsushiro Arr**	**23.38**	**346**	P	**P**	**00 42 36.4**	**-1.3**
MJAR					**PcP**	**00 46 21.0**	**+0.9**
MAJO	**Matsushiro**	**23.38**	**346**	*c*	*i*P **P**	**00 42 36.4**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,44nm,0.8s						
MAJO	**Matsushiro**	**23.38**	**346**	P	**P**	**00 42 36.8**	**-0.9**
MAJO				IAmb	IAmb	00 42 37.6	
	comp=Z,39nm,0.8s						
MAT	**Matsushiro**	**23.38**	**346**	P	**P**	**00 42 36.6**	**-1.1**
MAT				S	**S**	**00 46 36.7**	**-3.0**
JHS	**Saijyo**	**23.60**	**335**	P	**P**	**00 42 39.9**	**+0.2**
JHS			

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NACB Ninganchiao      24.28 298  P    P    00 42 42.7 -3.2
TWG  Pinlang          24.30 295  P    P    00 42 45.6 -0.5
TWG                              IAmb IAmb 00 42 57.3
     comp=Z,40nm,0.9s
SANI Sanana           24.53 231  P    P    00 42 48.7 +0.4
     comp=Z,20nm,0.8s
SSLB Suanglung        24.70 297  P    P    00 42 50.5 +0.7
SSLB                             IAmb IAmb 00 42 55.8
     comp=Z,87nm,1.0s
JSD  Sado             24.80 347  P    P    00 42 49.8 -0.7
JSD                              IAmb IAmb 00 42 51.9
     comp=Z,76nm,1.0s
GTOI Gorontalo        25.34 241  P    P    00 42 57.8 +2.1
     comp=Z,434nmcomp=Z,18nm,0.9s
MRSI Marisa           26.34 242  P    P    00 43 04.0 -0.6
     comp=Z,2µmcomp=Z,38nm,0.7s
LUWI Luwuk            26.46 238  P    P    00 43 04.3 -1.5
LUWI                             IAmb IAmb 00 43 05.0
     comp=Z,67nm,0.7s
LUWI Luwuk            26.46 238  P    P    00 43 03.7 -2.1
     comp=Z,9µmcomp=Z,100nm,0.8s
JTM  Tenmabayashi     27.05 354  P    P    00 43 11.3 +0.6
JTM                              IAmb IAmb 00 43 14.6
     comp=Z,53nm,1.1s
TJN  Taejon           27.40 328  iP   P    00 43 14.7 +0.8
HNR  Honiara          27.52 146  LR   LR   00 53 58.5
     comp=Z,193nm,18.1s,baz=326,slow=35
COEN Coen             27.68 184  P    P    00 43 16.4 -0.2
KSRS Korea Array      27.96 330  P    P    00 43 18.4 -0.4
     comp=Z,9.3nm,0.8s,baz=142,slow=9.8,SNR=40
KSRS                             PcP  PcP  00 46 31.8 +1.3
     comp=Z,11nm,1.0s,baz=157,slow=2.3,SNR=17
KSRS                             ScP  ScP  00 49 58.5 +0.6
     comp=Z,5.4nm,0.9s,baz=153,slow=3.3,SNR=18
KSRS                             LR   LR   00 52 47.2
     comp=Z,189nm,21.3s,baz=146,slow=32
KSAR Wonju Array Be   27.97 330  P    P    00 43 18.2 -0.8
KSAR Wonju Array Be   27.97 330  P    P    00 43 18.2 -0.8
KS19 Wonju Array Si   28.02 330  P    P    00 43 18.7 -0.8
JEW  Eniwo            29.04 355  P    P    00 43 29.9 +1.4
KKM  Kota Kinabalu    29.28 257  P    P    00 43 30.6 -0.4
ASAJ Asahikawa        30.23 357  P    P    00 43 41.0 +2.1
     comp=Z,11nm,0.5s,baz=227,slow=17,SNR=5.2
ASAJ                             PcP  PcP  00 46 36.7 +0.6
     comp=Z,7.1nm,0.7s,baz=131,slow=3.1,SNR=3.9
MSHR Mys Shultsa      31.00 340ceP    P    00 43 45.4 -0.3
MSHR                             pmax pmax
     comp=Z,40nm,2.5s
SOEI Soe              31.14 222  P    P    00 43 47.8 +0.4
SOEI                             IAmb IAmb 00 43 57.1
     comp=Z,41nm,0.9s
SOEI Soe              31.14 222  P    P    00 43 48.6 +1.2
     comp=Z,53nm,0.8s
KAPI Kappang          31.22 235  P    P    00 43 47.1 -0.8
     comp=Z,7.1nm,0.5s,baz=60,slow=7.3,SNR=4.2
KAPI                             PcP  PcP  00 46 39.6 +0.3
     comp=Z,9.4nm,0.8s,baz=155,slow=8.8,SNR=2.5
KAPI Kappang          31.22 235  P    P    00 43 46.0 -2.0
MMRI Maumere          31.71 226  P    P    00 43 51.5 -0.8
MMRI                             IAmb IAmb 00 43 54.0
     comp=Z,37nm,1.0s
BATI Baumata          31.87 223  P    P    00 43 51.9 -1.8
     comp=Z,19nm,0.3s,baz=149,slow=2.2,SNR=5.4
BATI Baumata          31.87 223  P    P    00 43 53.3 -0.4
     comp=Z,28nm,1.0s
USA0B Ussuriysk Arra  32.20 342  P    P    00 43 56.1 -0.1
USA0B                            pmax pmax
     comp=Z,8.0nm,1.0s
USA0B Ussuriysk Arra  32.20 342  P    P    00 43 56.1 -0.1
USRK Ussuriysk Ar.    32.20 342  P    P    00 43 56.5 +0.3
     comp=Z,3.5nm,0.6s,baz=153,slow=8.7,SNR=13
USRK                             ScP  ScP  00 50 10.1 -1.5
     comp=Z,3.2nm,0.8s,baz=199,slow=5.2,SNR=8.1
USRK                             LR   LR   00 55 54.1
     comp=Z,101nm,18.2s,baz=138,slow=34
USRK Ussuriysk Ar.    32.20 342  P    P    00 43 56.1 -0.1
USRK                             ScP  ScP  00 50 11.5 -0.1
DL2  Dalian           32.34 325  P    P    00 43 58.3 +0.8
DL2                              pP   pP   00 44 27.5  0.0
DL2                              S    S    00 49 01.1 +0.5
DL2                              pmax pmax
     comp=Z,52nm,0.8s
WHN  Wuhan            32.66 306 ⇑P   P    00 44 02.9 +2.5
YSS  Yuzh-Sakhalins   33.05 357ceP   P    00 44 04.8 +1.3
YSS                              pmax pmax
     comp=Z,9.0nm,0.3s
YSS  Yuzh-Sakhalins   33.05 357  P    P    00 44 02.8 -0.8
MDJ  Mudanjiang       33.33 340  P    P    00 44 06.6 +0.6
MDJ                              pP   pP   00 44 36.6 +0.4
MDJ                              sP   sP   00 44 52.8 +0.3
MDJ                              PP   PnPn 00 45 21.9 -0.5
MDJ                              S    S    00 49 17.1 +1.3
MDJ                              sS   sS   00 50 10.9 +0.8
MDJ                              ScS  ScS  00 54 16.1 -0.4
MDJ                              pmax pmax
     comp=Z,11nm,0.7s
MDJ                              pmax pmax
     comp=Z,140nm,5.0s
MDJ                              LR   LR
     comp=Z,320nm,17.8s
MDJ                              LR   LR
     comp=Z,320nm,17.1s
MDJ                              LR   LR
     comp=Z,380nm,24.2s
MDJ  Mudanjiang       33.33 340  P    P    00 44 05.1 -0.9
KNRA Kununurra        33.40 209  P    P    00 44 06.4 -0.5
KNRA                             IAmb IAmb 00 44 07.4
     comp=Z,47nm,0.7s
TIA  Tai'an           33.40 317  P    P    00 44 06.8  0.0
TIA                              pmax pmax
     comp=Z,9.0nm,0.8s
CTA  Charters Tower   33.75 178  P    P    00 44 10.8 +0.9
     comp=Z,29nm,0.8s,baz=0.3,slow=9.9,SNR=68
CTA                              ScP  ScP  00 50 16.9 -0.4
     comp=Z,4.2nm,1.0s,baz=147,slow=21,SNR=3.5
CTAO Charters Tower   33.75 178  P    P    00 44 10.8 +0.9
CTAO                             pmax pmax
     comp=Z,53nm,1.0s
CTAO Charters Tower   33.75 178  P    P    00 44 10.8 +0.9
CTAO                             IAmb IAmb 00 44 11.4
     comp=Z,53nm,0.9s
QIZ  Qiongzhong       33.99 284  P    P    00 44 11.6 -0.5
QIZ                              S    S    00 49 31.3 +4.6
QIZ                              sS   sS   00 50 22.1 +1.1
QIZ                              SS   SS   00 51 52.3 -7.8
QIZ                              LR   LR
     comp=Z,200nm,16.7s
QIZ                              LR   LR
     comp=Z,170nm,21.6s
QIZ                              LR   LR
     comp=Z,150nm,19.6s
CN2  Changchun        34.19 335  eP   P    00 44 12.8 -0.7
CN2                              eS   S    00 49 31.5 +2.3
CN2                              SS   SnSn 00 51 48.3 -6.8
CN2                              pmax pmax
     comp=Z,10.0nm,0.5s
CN2                              pmax pmax
     comp=Z,100nm,6.0s
CN2                              LR   LR
     comp=Z,200nm,18.0s
CN2                              LR   LR
     comp=Z,200nm,18.0s
CN2                              LR   LR
     comp=Z,200nm,18.0s
SBUM Sibu             34.23 254  P    P    00 44 13.9 -0.3
WB0  Warramunga Arr   34.97 197  P    P    00 44 19.8 -0.6
WRAB Tennant Creek    35.14 197ceP    P    00 44 21.7 -0.2
WRAB                             pmax pmax
     comp=Z,121nm,0.7s
WRAB Tennant Creek    35.14 197  P    P    00 44 21.7 -0.2
WRA  Warramunga Arr   35.15 197  P    P    00 44 21.9 -0.1
     comp=Z,95nm,0.8s,baz=18,slow=9.5,SNR=349
WRA                              S    S    00 49 41.9 -2.6
     comp=Z,3.4nm,0.9s,baz=18,slow=16,SNR=4.8
WRA                              ScP  ScP  00 50 22.2 -0.2
     comp=Z,12nm,0.9s,baz=20,slow=4.0,SNR=15
WRA  Warramunga Arr   35.15 197  iP   P    00 44 21.8 -0.2
WRA                              pmax pmax
     comp=Z,101nm,0.8s
WRA  Warramunga Arr   35.15 197  P    P    00 44 20.8 -1.3
BJT  Baijiatuao       36.26 321  P    P    00 44 31.3 +0.1
BJT                              pmax pmax
     comp=Z,15nm,0.8s
BJT  Baijiatuao       36.26 321  P    P    00 44 31.3 +0.1
BJT                              IAmb IAmb 00 44 32.5
     comp=Z,16nm,0.8s
BJI  Beijing          36.27 321  P    P    00 44 31.5 +0.2
BJI                              S    S    00 50 01.6 +0.6
BJI                              ScP  ScP  00 50 27.3 +1.1
BJI                              pmax pmax
     comp=Z,21nm,0.7s
BJI                              LR   LR
     comp=Z,240nm,15.8s
BJI                              LR   LR
     comp=Z,160nm,16.1s
KSM  Kuching          36.36 253  P    P    00 44 31.2 -1.3
KSM                              IAmb IAmb 00 44 32.5
     comp=Z,24nm,0.9s
ENH  Enshi            36.48 303  P    P    00 44 33.6 +0.2
ENH                              IAmb IAmb 00 44 36.6
     comp=Z,35nm,0.9s
KLR  Kul'dur          36.91 346  P    P    00 44 36.1 -0.5
     comp=Z,7.0nm,0.7s,baz=146,slow=7.9,SNR=22
KLR                              PcP  PcP  00 46 55.4 +0.4
     comp=Z,11nm,0.9s,baz=305,slow=1.9,SNR=5.2
KLR  Kul'dur          36.91 346⇑eP   P    00 44 35.8 -0.8
KLR                              pmax pmax
     comp=Z,15nm,1.2s
FITZ Fitzroy Crossi   37.00 211  P    P    00 44 37.5 -0.2
     comp=Z,53nm,0.9s,baz=36,slow=9.0,SNR=63
FITZ                             PcP  PcP  00 46 57.2 +1.4
     comp=Z,7.1nm,0.7s,baz=296,slow=6.2,SNR=3.6
FITZ                             ScP  ScP  00 50 29.5 +0.3
     comp=Z,4.3nm,0.8s,baz=346,slow=12,SNR=4.3
FITZ Fitzroy Crossi   37.00 211  IAmb IAmb 00 44 38.7
     comp=Z,60nm,0.9s
TIY  Taiyuan          37.37 315  eP   P    00 44 42.1 +1.3
TIY                              pmax pmax
     comp=Z,26nm,0.7s
GRNR Gornyy           37.46 351⇑ iP   P    00 44 41.2 -0.1
GRNR                             pmax pmax
     comp=Z,3.0nm,0.7s
GRNR                             MLR  MLR
     comp=N,410nm,19.0s
GRNR                             MLR  MLR
     comp=E,670nm,19.0s
GRNR                             MLR  MLR
     comp=Z,100nm,15.0s
SKR  Severo-Kuril's   37.85  12 eP   P    00 45 03.2 +19
SKR                              pmax pmax
     comp=Z,100nm,3.3s
SKR                              MLR  MLR
     comp=Z,200nm,14.0s
GYA  Guiyang          37.89 295  P    P    00 44 47.1 +1.7
GYA                              pP   pP   00 45 17.5 +1.5
GYA                              pmax pmax
     comp=Z,2.0nm,0.7s
XAN  Xi'an            38.27 308  P    P    00 44 48.8 +0.4
XAN                              pP   pP   00 45 19.5 +0.5
XAN                              S    S    00 50 30.3 -1.3
XAN                              pmax pmax
     comp=Z,20nm,0.8s
XAN                              pmax pmax
     comp=Z,68nm,3.9s
XAN                              LR   LR
     comp=Z,340nm,22.8s
XAN                              LR   LR
     comp=Z,240nm,22.4s
XAN                              LR   LR
     comp=Z,250nm,16.3s
XAN  Xi'an            38.27 308  P    P    00 44 48.7 +0.4
XAN                              pmax pmax
     comp=Z,13nm,0.7s
XAN  Xi'an            38.27 308  P    P    00 44 48.7 +0.3
AS31 Alice Springs    38.81 196  IAmb IAmb 00 44 54.5
     comp=Z,14nm,0.6s
ASAR Alice Springs    38.81 196  P    P    00 44 52.8 -0.1
     comp=Z,25nm,0.8s,baz=18,slow=6.4,SNR=210
ASAR                             PcP  PcP  00 47 02.6 +1.3
     comp=Z,5.2nm,1.0s,baz=12,slow=4.7,SNR=4.5
ASAR                             ScP  ScP  00 50 35.8 -0.2
     comp=Z,4.2nm,0.8s,baz=30,slow=3.9,SNR=11
ASAR Alice Springs    38.81 196  P    P    00 44 52.6 -0.2
EIDS Eidsvold         39.44 171  P    P    00 44 57.9 -0.2
EIDS                             IAmb IAmb 00 44 59.1
     comp=Z,33nm,0.6s
HHC  Hu-ho-hao-te     39.60 319  eP   P    00 44 58.9 -0.5
HHC                              S    S    00 50 52.6 +1.0
HHC                              sS   sS   00 51 50.3 +3.5
HHC                              pmax pmax
     comp=Z,29nm,0.9s
HHC                              pmax pmax
     comp=Z,76nm,8.7s
PETK Petropavlovsk-   40.46  12 P    P    00 45 06.1  0.0
     comp=Z,3.1nm,0.7s,baz=161,slow=7.4,SNR=9.9
PETK                             PcP  PcP  00 47 05.7 -0.4
     comp=Z,5.9nm,0.7s,baz=180,slow=2.6,SNR=5.9
PETK                             LR   LR   01 01 20.4
     comp=Z,103nm,19.2s,baz=208,slow=35
PETK Petropavlovsk-   40.46  12 P    P    00 45 06.8 +0.6
HIA  Hailar           40.92 335  P    P    00 45 10.1  0.0
HIA                              pmax pmax
     comp=Z,28nm,1.0s
HIA  Hailar           40.92 335  P    P    00 45 10.1  0.0
HIA                              IAmb IAmb 00 45 11.4
     comp=Z,28nm,1.0s
KMI  Kunming          41.15 292 ⇓P   P    00 45 13.6 +1.1
KMI                              pmax pmax
     comp=Z,6.0nm,0.5s
KMI                              pmax pmax
     comp=Z,90nm,4.0s
KMI                              LR   LR
     comp=Z,270nm,15.4s
KMI                              LR   LR
     comp=Z,140nm,17.7s
KMI                              LR   LR
     comp=Z,140nm,21.7s
CD2  Chengdu          41.40 301  P    P    00 45 12.5 -1.7
CD2                              pmax pmax
     comp=Z,40nm,0.5s
DZM  Mont Dzumac      41.48 149  eP   P    00 45 16.9 +2.0
     comp=Z,412nm,1.1s
DZM  Mont Dzumac      41.48 149  eLR  LR   00 56 51.3
     comp=Z,240nm,33.2s
DZM  Mont Dzumac      41.48 149  P    P    00 45 17.0 +2.0
     comp=Z,177nm,0.8s,baz=322,slow=4.7,SNR=94
DZM                              PcP  PcP  00 47 11.8 +1.8
     comp=Z,12nm,0.7s,baz=270,slow=4.0,SNR=3.1
DZM  Mont Dzumac      41.48 149  P    P    00 45 16.5 +1.6
ZEA  Zeya             42.17 344  eP   P    00 45 19.5 -0.6
ZEA                              e    e    00 45 51.2
ZEA                              pmax pmax
     comp=N,20nm,0.8s
ZEA                              pmax pmax
     comp=Z,20nm,0.8s
MYKOM Kota Tinggi     42.32 257  P    P    00 45 21.2 -0.7
MYKOM                            IAmb IAmb 00 45 25.4
     comp=Z,35nm,0.9s
LZH  Lanzhou          42.89 309 ⇓P   P    00 45 28.3 +1.9
LZH                              S    S    00 51 41.1 +0.7
LZH                              sS   sS   00 52 38.0 +1.7
LZH                              pmax pmax
     comp=Z,40nm,1.2s
LZH                              pmax pmax
     comp=Z,120nm,5.7s
PSA00 Pilbara Seismi  42.95 215  P    P    00 45 26.5 -0.3
PSA00 Pilbara Seismi  42.95 215  P    P    00 45 25.9 -0.9
PSA00                            IAmb IAmb 00 45 29.1
     comp=Z,41nm,1.1s
UTHA Uthaitani        43.95 278  P    P    00 45 37.8 +2.9
CM09 Chiang Mai Arr   44.26 282  P    P    00 45 45.3 +7.9
CM04 Chiang Mai Arr   44.27 282  P    P    00 45 40.0 +2.5
CM01 Chiang Mai Arr   44.29 282  P    P    00 45 42.0 +4.3
CHTO Chiang Mai       44.30 283  P    P    00 45 36.8 -0.9
CHTO                             pmax pmax
     comp=Z,2.0nm,0.8s
CHTO Chiang Mai       44.30 283  P    P    00 45 36.8 -0.9
CM02 Chiang Mai Arr   44.30 282  P    P    00 45 40.9 +3.1
CM05 Chiang Mai Arr   44.30 282  P    P    00 45 40.4 +2.6
CMAR Chiang Mai Arr   44.30 282  P    P    00 45 38.0 +0.2
     comp=Z,5.1nm,0.8s,baz=86,slow=6.1,SNR=11
CMAR                             pP   pP   00 46 10.0 +0.8
     comp=Z,2.2nm,0.4s,baz=80,slow=6.0,SNR=1.8
CMAR                             ScP  ScP  00 50 58.8 +0.6
     comp=Z,1.6nm,0.4s,baz=96,slow=2.4,SNR=9.5
CMAR Chiang Mai Arr   44.30 282  P    P    00 45 38.1 +0.3
CM15 Chiang Mai Arr   44.32 282  P    P    00 45 42.0 +4.1
CM13 Chiang Mai Arr   44.34 282  P    P    00 45 40.0 +2.0
KULM Kulim            44.40 263  P    P    00 45 38.4 -0.2
ARMA Armidale         44.48 172  P    P    00 45 39.5 +0.5
ARMA                             IAmb IAmb 00 45 41.1
     comp=Z,53nm,0.8s
MHMT Maesarieng       45.27 282  P    P    00 45 52.8 +7.3
MSVF Nonsavu          45.32 133  P    P    00 45 47.6 +1.8
     comp=Z,36nm,1.0s,baz=294,slow=7.1,SNR=8.9
MSVF                             ScP  ScP  00 51 03.9 +1.6
     comp=Z,7.4nm,0.8s,baz=251,slow=1.8,SNR=4.5
MSVF Nonsavu          45.32 133  P    P    00 45 46.8 +1.0
MSVF                             pmax pmax
     comp=Z,46nm,1.1s
MSVF Nonsavu          45.32 133  P    P    00 45 46.8 +1.0
MSVF                             IAmb IAmb 00 45 48.8
     comp=Z,46nm,1.1s
STKA Stephens Creek   45.58 184  P    P    00 45 47.4 -0.1
     comp=Z,34nm,0.7s,baz=352,slow=8.3,SNR=41
STKA                             S    S    00 52 18.3 -0.5
     comp=Z,4.4nm,0.8s,baz=100,slow=14,SNR=3.4
STKA                             LR   LR   01 05 31.9
     comp=Z,90nm,19.0s,baz=15,slow=37
STKA Stephens Creek   45.58 184  P    P    00 45 47.4 -0.1
XMIS Christmas Isla   45.84 240  P    P    00 45 48.8 -1.1
XMIS                             IAmb IAmb 00 45 49.1
     comp=Z,41nm,0.8s
MA2  Magadan          45.85  4   P    P    00 45 49.5 +0.2
     comp=Z,14nm,0.7s,baz=142,slow=5.2,SNR=4.6
MA2  Magadan          45.85  4   IAmb IAmb 00 45 53.7
     comp=Z,21nm,1.0s
ULN  Ulaanbaatar      46.19 325ceP    P    00 45 52.9 +0.4
ULN                              pmax pmax
     comp=Z,13nm,1.3s
ULN  Ulaanbaatar      46.19 325  P    P    00 45 52.8 +0.4
SONM Songino Array    46.54 325  P    P    00 45 55.6 +0.5
     comp=Z,5.2nm,0.8s,baz=138,slow=8.8,SNR=23
SONM                             pP   pP   00 46 27.4 +0.5
     comp=Z,3.3nm,0.8s,baz=135,slow=7.1,SNR=2.5
SONM                             PcP  PcP  00 47 27.7 +0.7
     comp=Z,2.2nm,0.5s,baz=160,slow=3.7,SNR=5.1
SONM                             ScP  ScP  00 51 06.4 -0.5
     comp=Z,5.8nm,0.9s,baz=135,slow=3.2,SNR=14
SONM                             LR   LR   01 05 25.5
     comp=Z,92nm,18.6s,baz=100,slow=36
SONM Songino Array    46.54 325  P    P    00 45 55.6 +0.5
AMKA Amchitka         46.55  29  P    P    00 45 55.9 +1.0
PSI  Prapat           46.72 261  P    P    00 45 56.2 -0.7
     comp=Z,4.3nm,0.6s,baz=2.8,slow=2.4,SNR=3.4
GTA  Gaotai           47.03 311 ⇑P   P    00 46 00.0 +0.9
GTA                              pP   pP   00 46 30.8 -0.1
GTA                              ScP  ScP  00 51 09.8 +0.6
GTA                              S    S    00 52 39.4 -0.5
GTA                              ScS  ScS  00 55 37.4 -1.2
GTA                              pmax pmax
     comp=Z,12nm,1.0s
GTA                              pmax pmax
     comp=Z,49nm,5.1s
GTA                              LR   LR
     comp=Z,180nm,16.0s
GTA                              LR   LR
     comp=Z,140nm,17.8s
GTA                              LR   LR
     comp=Z,200nm,16.4s
BBOO Buckleboo        47.16 190  P    P    00 45 59.5 -0.3
FORT Forrest          47.24 200  P    P    00 46 01.0 +0.5
GSI  Gunungsitoli     48.44 259  P    P    00 46 08.4 -1.7
CAN  Canberra         49.05 176  P    P    00 46 14.9 +0.5
CAN                              pmax pmax
     comp=Z,33nm,0.7s
CAN  Canberra         49.05 176  P    P    00 46 14.9 +0.5
CAN                              IAmb IAmb 00 46 16.2
     comp=Z,33nm,0.7s
SEY  Seymchan         49.30  4   P    P    00 46 16.1 +0.2
     comp=Z,6.8nm,0.6s,baz=172,slow=6.4,SNR=13
YAK  Yakutsk          49.34 351  P    P    00 46 14.0 -2.2
     comp=Z,14nm,0.4s,baz=228,slow=0.9,SNR=5.1
YAK                              ScP  ScP  00 51 18.4 +0.2
     comp=Z,9.2nm,0.4s,baz=166,slow=1.3,SNR=1.4
YAK  Yakutsk          49.34 351ceP    P    00 46 16.1 -0.1
YAK                              pmax pmax
     comp=Z,35nm,0.8s
YAK  Yakutsk          49.34 351  P    P    00 46 15.6 -0.5
YAK                              IAmb IAmb 00 46 27.6
     comp=Z,41nm,0.7s
ZAK  Zakamensk        49.65 326  eP   P    00 46 17.4 -1.5
ZAK                              pmax pmax
     comp=Z,7.0nm,1.3s
ZAK                              pmax pmax
     comp=Z,14nm,1.6s
BOD  Bodaibo          49.69 339  eP   P    00 46 18.4 -0.5
TLY  Talaya           50.16 328  P    P    00 46 23.3 +0.7
     comp=Z,3.6nm,0.6s,baz=130,slow=4.5,SNR=6.3
TLY  Talaya           50.16 328  eP   P    00 46 21.4 -1.2
TLY                              eS   S    00 53 30.1 +7.0
TLY                              pmax pmax
     comp=Z,12nm,0.6s
TLY                              MLR  MLR
     comp=Z,313nm,15.0s
TLY  Talaya           50.16 328  P    P    00 46 23.0 +0.4
SHL  Shillong         50.97 292  P    P    00 46 28.1 -1.3
SHL                              pmax pmax
     comp=Z,14nm,1.2s
SHL  Shillong         50.97 292  P    P    00 46 28.1 -1.3
MORW Morawa           50.98 213  P    P    00 46 28.1 -0.9
MORW                             IAmb IAmb 00 46 29.1
     comp=Z,33nm,0.9s
TOO  Toolangi         51.15 179  P    P    00 46 31.3 +1.2
TOO                              pmax pmax
     comp=Z,109nm,0.9s
TOO  Toolangi         51.15 179  P    P    00 46 31.3 +1.2
LSA  Lhasa            51.91 297  P    P    00 46 37.1 +0.5
LSA                              pmax pmax
     comp=Z,21nm,0.9s
LSA  Lhasa            51.91 297  P    P    00 46 37.1 +0.5
LSA                              IAmb IAmb 00 46 42.0
     comp=Z,21nm,0.9s
NIKH Nikolski High    53.43  33  P    P    00 46 47.2
     baz=241
NWAO Narrogin (SRO)   53.51 209  P    P    00 46 46.9 -0.7
     comp=Z,9.7nm,0.7s,baz=45,slow=8.1,SNR=8.1
NWAO Narrogin (SRO)   53.51 209  IAmb IAmb 00 46 50.0
     comp=Z,11nm,0.8s
SPIA Saint Paul Isl   54.93  28  P    P    00 46 58.4
     baz=237
OUZ  Omahuta          55.87 152  P    P    00 47 05.3 +0.8
BILL Bilibino         55.90  10d iP   P    00 47 03.4 -0.9
BILL                             pmax pmax
     comp=Z,17nm,0.7s
BILL Bilibino         55.90  10  P    P    00 47 03.7 -0.7
BILL                             IAmb IAmb 00 47 04.8
     comp=Z,18nm,0.7s
TAU  Tasmania Unive   56.52 178  P    P    00 47 09.5 +0.5
TAU                              pmax pmax
     comp=Z,82nm,1.2s
TAU  Tasmania Unive   56.52 178  P    P    00 47 09.5 +0.5
WMQ  Urumqi           56.99 313  eP   P    00 47 13.9 +1.3
WMQ                              pP   pP   00 47 45.4 -0.2
WMQ                              pmax pmax
     comp=Z,28nm,1.1s
WMQ                              pmax pmax
     comp=Z,60nm,3.7s
WMQ                              LR   LR
     comp=Z,320nm,12.1s
WMQ                              LR   LR
     comp=Z,250nm,12.1s
WMQ                              LR   LR
     comp=Z,260nm,25.7s
WMQ  Urumqi           56.99 313  P    P    00 47 13.3 +0.7
WMQ                              pmax pmax
     comp=Z,17nm,0.9s
WMQ  Urumqi           56.99 313  P    P    00 47 13.3 +0.7
WMQ                              IAmb IAmb 00 47 14.7
     comp=Z,17nm,0.9s
FALS False Pass       57.16  33  P    P    00 47 13.6 +0.2
FALS False Pass       57.16  33  P         00 47 13.1
     baz=245
GAMB Gambell          58.22  21  P    P    00 47 19.6 -1.1
GAMB                             IAmb IAmb 00 47 20.2
     comp=Z,9.8nm,0.7s
TIXI Tiksi            58.58 354  P    P    00 47 21.9 -1.2
     comp=Z,6.1nm,0.5s,baz=132,slow=5.4,SNR=14
TIXI                             ScP  ScP  00 51 55.7 -2.8
     comp=Z,1.5nm,0.4s,baz=124,slow=3.7,SNR=4.8
TIXI Tiksi            58.58 354  P    P    00 47 21.9 -1.2
DGZ  Jazzator, Alta   58.67 320⇑ iP   P    00 47 24.9 +0.6
DGZ                              pmax pmax
     comp=Z,11nm,0.8s
SDPT Sand Point       58.90  33  P    P    00 47 25.6 +0.1
SDPT Sand Point       58.90  33  P         00 47 25.8
     baz=248
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HIZ **Hauiti** 59.15 153 P **P** 00 47 27.6 +0.1
URZ **Urewera** 59.98 151 P **P** 00 47 33.7 +0.6
comp=Z,38nm,1.0s,baz=300,slow=23,SNR=10
URZ **Urewera** 59.98 151 P **P** 00 47 32.9 -0.3
URZ IAmb IAmb 00 47 35.0
comp=Z,36nm,1.0s
QRZ **Quartz Range** 60.12 156 P **P** 00 47 34.7 +0.7
TNA **Tin City** 60.59 20 P **P** 00 47 36.3 -0.6
TNA **Tin City** 60.59 21 P 00 47 36.2
baz=235
ANM **Nome** 60.94 22 IAmb IAmb 00 47 41.0
comp=Z,10nm,0.7s
ANM **Nome** 60.94 22 P 00 47 38.5
baz=238,SNR=14
MK31 **Makanchi Array** 61.33 316 P **P** 00 47 42.8 +0.4
MK31 pmax pmax
comp=Z,8.0nm,0.9s
MK31 **Makanchi Array** 61.33 316 P **P** 00 47 42.8 +0.4
MKAR **Makanchi Array** 61.33 316 P **P** 00 47 42.8 +0.4
comp=Z,9.8nm,0.8s,baz=94,slow=8.8,SNR=86
MKAR pP **pP** 00 48 15.6 -0.2
comp=Z,2.4nm,0.5s,baz=89,slow=9.8,SNR=2.2
MKAR ScP **ScP** 00 52 10.2 -1.1
comp=Z,1.3nm,0.8s,baz=96,slow=5.6,SNR=3.9
MKAR LR LR 01 15 57.0
comp=Z,65nm,19.5s,baz=96,slow=38
MKAR PKP2bc 01 17 04.0
comp=Z,2.1nm,1.0s,baz=298,slow=2.6,SNR=9.5
MKAR **Makanchi Array** 61.33 316 P **P** 00 47 42.5 +0.1
SNZO **South Karori** 61.41 155 P **P** 00 47 42.5 -0.2
BSWZ **Blackbirch Sta** 61.41 156 P **P** 00 47 43.1 +0.3
ZAA0 **Zalesovo Array** 61.44 324 P **P** 00 47 41.6 -1.3
ZALV **Zalesovo Beam** 61.44 324 P **P** 00 47 41.9 -0.9
comp=Z,2.4nm,0.6s,baz=107,slow=7.1,SNR=14
ZALV PcP **PcP** 00 48 23.5 0.0
comp=Z,2.4nm,0.5s,baz=128,slow=4.3,SNR=5.5
ZALV ScP **ScP** 00 52 09.9 -1.7
comp=Z,2.4nm,0.7s,baz=108,slow=4.8,SNR=6.1
ZALV LR LR 01 14 55.9
comp=Z,83nm,20.0s,baz=90,slow=36
ZALV PKPPKP **P'P'df** 01 16 55.3 -0.6
comp=Z,0.5nm,0.5s,baz=270,slow=4.4,SNR=3.7
ZALV **Zalesovo Beam** 61.44 324 *i* P **P** 00 47 42.2 -0.7
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV **Zalesovo Beam** 61.44 324 P **P** 00 47 42.1 -0.8
ZALV **ScP** 00 52 10.3 -1.2
FOZ **Fox Glacier** 61.48 160 P **P** 00 47 43.6 +0.5
MAKZ **Makanchi** 61.55 316 P **P** 00 47 44.3 +0.5
MAKZ pmax pmax
comp=Z,14nm,0.8s
MAKZ **Makanchi** 61.55 316 P **P** 00 47 44.3 +0.5
MAKZ IAmb IAmb 00 47 45.2
comp=Z,14nm,0.8s
BHW **Baring Head** 61.56 155 P **P** 00 47 43.6 -0.2
CMWZ **Cape Campbell** 61.57 155 P **P** 00 47 44.0 +0.1
LTZ **Lake Taylor** 61.70 157 P **P** 00 47 44.9 +0.1
PLWZ **Palliser** 61.85 155 P **P** 00 47 46.0 +0.2
KHZ **Kahutara** 61.87 156 P **P** 00 47 44.9 -0.9
RPZ **Rata Peaks** 62.07 159 P **P** 00 47 47.1 -0.1
comp=Z,73nm,0.8s,baz=324,slow=1.7,SNR=13
RPZ **Rata Peaks** 62.07 159 P **P** 00 47 46.9 -0.2
OXZ **Oxford** 62.08 158 P **P** 00 47 46.2 -1.0
LBZ **Lake Benmore** 62.36 160 P **P** 00 47 49.1 0.0
MLZ **Mavora Lakes** 62.57 162 P **P** 00 47 50.3 -0.2
MLZ IAmb IAmb 00 47 51.8
comp=Z,26nm,0.8s
MQZ **McQueen's Vall** 62.63 158 P **P** 00 47 51.1 +0.2
MQZ IAmb IAmb 00 47 52.7
comp=Z,47nm,1.0s
SII **Sitkinak Islan** 62.64 33 P **P** 00 47 51.4 +0.5
SII **Sitkinak Islan** 62.64 33 P 00 47 51.7
baz=253
OHAK **Old Harbor** 63.30 32 P **P** 00 47 55.8 +0.6
OHAK IAmb IAmb 00 47 58.9
comp=Z,28nm,1.0s
OHAK **Old Harbor** 63.30 32 P 00 47 55.6
baz=253
SVW2 **Sparrevohn** 63.43 28 P **P** 00 47 56.7 +0.7
SVW2 IAmb IAmb 00 47 59.8
comp=Z,10nm,0.7s
RDOG **Red Dog Mine** 63.62 19 IAmb IAmb 00 47 58.4
comp=Z,16nm,0.6s
RDOG **Red Dog Mine** 63.62 19 P 00 47 57.2
baz=239
KDAK **Kodiak Island** 63.83 32 P **P** 00 47 58.4 -0.2
comp=Z,11nm,0.5s,baz=286,slow=2.7,SNR=21
TTA **Tatalina** 63.91 26 P **P** 00 47 58.8 -0.4
TTA pmax pmax
comp=Z,6.0nm,0.9s
TTA **Tatalina** 63.91 26 P **P** 00 47 58.8 -0.4
TTA **Tatalina** 63.91 26 P 00 47 58.7
baz=248
KDJ **Kajisay** 64.36 310 P **P** 00 48 02.1 -0.6
KDJ pmax pmax
comp=Z,7.0nm,1.1s
KDJ **Kajisay** 64.36 310 P **P** 00 48 02.1 -0.6
KSH **Kashi** 65.12 307 P **P** 00 48 10.8 +3.2
KSH pP pP 00 48 43.1 +1.8
KSH S **S** 00 56 43.1 +4.2
KSH sS sS 00 57 43.1 +5.4
KSH pmax pmax
comp=Z,3.0nm,0.2s
KSH pmax pmax
comp=Z,54nm,4.3s
KSH LR LR
comp=Z,160nm,8.9s
KSH LR LR
comp=Z,120nm,5.7s
KSH LR LR
comp=Z,160nm,5.4s
BRLK **Bradley Lake** 65.22 30 IAmb IAmb 00 48 08.1
comp=Z,43nm,1.2s
BRSE **Bradley Lake S** 65.29 30 P 00 48 07.2
baz=255
PPLA **Purkeypile** 65.54 27 IAmb IAmb 00 48 17.0
comp=Z,16nm,0.9s
PPLA **Purkeypile** 65.54 27 P 00 48 09.4
baz=252
SKT **Skwentna** 65.55 28 P 00 48 08.4
baz=253,SNR=8.0
SUA **Susitna One** 65.76 28 P 00 48 10.3
baz=254
CHUM **Lake Minchumin** 65.80 26 P 00 48 11.1
baz=251,SNR=9.0
NRIK **Noril'sk** 65.90 341 P **P** 00 48 10.8 -1.0
comp=Z,7.7nm,0.5s,baz=108,slow=7.9,SNR=34
NRIK LR LR 01 14 53.8
comp=Z,133nm,20.7s,baz=120,slow=34
NRIK **Noril'sk** 65.90 341 *ce* P **P** 00 48 10.9 -1.0
NRIK pmax pmax
comp=Z,30nm,1.5s
NRIK **Noril'sk** 65.90 341 P **P** 00 48 11.0 -0.9
NRIK IAmb IAmb 00 48 12.4
comp=Z,17nm,1.1s
IMAR **Indian Mountai** 65.94 23 P **P** 00 48 11.2 -1.0
O22K **Cooper Landing** 65.97 30 P 00 48 12.6
baz=255
SEW **Seward** 66.01 30 IAmb IAmb 00 48 13.7
comp=Z,37nm,1.0s
SEW **Seward** 66.01 30 P 00 48 11.9
baz=256
RC01 **Rabbit Creek A** 66.13 29 IAmb IAmb 00 48 14.8
comp=Z,30nm,0.6s
RC01 **Rabbit Creek A** 66.13 29 P 00 48 12.5
baz=255,SNR=8.3
CUT **Chulitna** 66.24 27 IAmb IAmb 00 48 15.0
comp=Z,22nm,0.9s
CUT **Chulitna** 66.24 27 P 00 48 12.3
baz=254
KTH **Kantishna Hill** 66.28 26 IAmb IAmb 00 48 16.6
comp=Z,13nm,0.8s
AAK **Ala-Archa** 66.37 311 *ce* P **P** 00 48 15.3 -0.3
AAK pmax pmax
comp=Z,9.0nm,1.7s
BPAW **Bear Paw Mtn.** 66.42 26 P 00 48 14.2
baz=252,SNR=23
TRF **Thorofare Moun** 66.53 26 P 00 48 14.8
baz=253,SNR=11
PMR **Palmer** 66.54 28 IAmb IAmb 00 48 17.5
comp=Z,18nm,0.8s
PMR **Palmer** 66.54 28 P 00 48 14.7
baz=255,SNR=7.4
GHO **Glory Hole Cre** 66.68 28 IAmb IAmb 00 48 18.8
comp=Z,21nm,0.7s
MLY **Manley** 66.81 25 IAmb IAmb 00 48 19.3
comp=Z,12nm,0.6s
MLY **Manley** 66.81 25 P 00 48 17.2
baz=252,SNR=27
SML **Sawmill** 66.96 28 P 00 48 17.7
baz=256,SNR=22
A21K **Barrow** 67.12 17 IAmb IAmb 00 48 20.8
comp=Z,22nm,0.8s
A21K **Barrow** 67.12 17 P 00 48 19.1
baz=244
MCK **McKinley** 67.19 26 P 00 48 19.2
baz=255
NIL **Nilore** 67.29 301 P **P** 00 48 21.5 +0.1
NIL pmax pmax
comp=Z,14nm,0.8s
NIL **Nilore** 67.29 301 P **P** 00 48 21.5 +0.1
NIL IAmb IAmb 00 48 24.1
comp=Z,14nm,0.8s
GLI **Glacier Island** 67.33 29 IAmb IAmb 00 48 22.1
comp=Z,16nm,0.6s
GLI **Glacier Island** 67.33 29 P 00 48 20.5
baz=258,SNR=12
NEA2 **Nenana** 67.36 25 P 00 48 20.4
baz=254,SNR=6.2
I23K **Minto, Yukon-K** 67.40 25 IAmb IAmb 00 48 23.1
comp=Z,14nm,0.8s
I23K **Minto, Yukon-K** 67.40 25 P 00 48 20.8
baz=254,SNR=25
WAT6 **Susitna Watana** 67.42 28 P 00 48 20.7
baz=256,SNR=16
FID **Port Fidalgo** 67.59 30 IAmb IAmb 00 48 23.8
comp=Z,30nm,0.7s
COLD **Coldfoot** 67.69 22 P 00 48 23.1
baz=252,SNR=19
WRH **Wood River Hil** 67.74 26 IAmb IAmb 00 48 24.4
comp=Z,17nm,0.6s
MDM **Murphy Dome** 67.81 25 IAmb IAmb 00 48 26.4
comp=Z,11nm,0.6s
EYAK **Cordova Ski Ar** 67.91 30 IAmb IAmb 00 48 26.2
comp=Z,19nm,0.8s
EYAK **Cordova Ski Ar** 67.91 30 P 00 48 24.4
baz=259
TCOL **CIGO, UAF Yank** 67.94 25 IAmb IAmb 00 48 27.6
comp=Z,16nm,0.6s
TCOL **CIGO, UAF Yank** 67.94 25 P 00 48 25.5
baz=255
COLA **College** 67.94 25 P **P** 00 48 25.5 +0.7
COLA pmax pmax
comp=Z,18nm,0.5s
COLA **College** 67.94 25 P **P** 00 48 25.5 +0.7
COLA IAmb IAmb 00 48 27.6
comp=Z,18nm,0.5s
KLU **Klutina** 68.01 29 IAmb IAmb 00 48 27.0
comp=Z,15nm,0.7s
KLU **Klutina** 68.01 29 P 00 48 25.2
baz=258,SNR=18
M24K **Tolsona, Glenn** 68.02 28 P 00 48 25.9
baz=258
HDA **Harding Lake** 68.20 26 P 00 48 26.4
baz=256
HDA P 00 48 26.4
baz=256
ILAR **Eielson Array** 68.32 25 P **P** 00 48 25.2 -2.0
comp=Z,16nm,0.6s,baz=251,slow=5.5,SNR=172
ILAR LR LR 01 14 57.1
comp=Z,33nm,21.9s,baz=242,slow=33
TOLK **Toolik Lake Re** 68.36 21 IAmb IAmb 00 48 29.1
comp=Z,10nm,0.5s
TOLK **Toolik Lake Re** 68.36 21 P 00 48 27.5
baz=252,SNR=21
RAGM **Ragged Mountai** 68.40 30 P **P** 00 48 28.0 +0.2
KAIM **Kayak Island** 68.44 31 P 00 48 28.4
baz=260
PAX **Paxson** 68.52 27 IAmb IAmb 00 48 29.8
comp=Z,14nm,0.6s
PAX **Paxson** 68.52 27 P 00 48 27.8
baz=258,SNR=19
BMRM **Bremner River** 68.54 30 IAmb IAmb 00 48 30.9
comp=Z,24nm,0.8s
BMRM **Bremner River** 68.54 30 P 00 48 28.8
baz=260,SNR=14
HARP **HAARP** 68.55 28 P 00 48 28.4
baz=259
HMT **Hamilton** 68.59 30 IAmb IAmb 00 48 30.6
comp=Z,22nm,0.7s
N25K **Chitina, Valde** 68.66 29 P 00 48 29.3
baz=260,SNR=12
BERG **Berg Lake** 68.88 30 P **P** 00 48 31.6 +0.9
GLB **Gilahina Butte** 69.00 29 IAmb IAmb 00 48 33.1
comp=Z,26nm,1.0s
PRP **Porcupine Dome** 69.05 25 P 00 48 29.9
baz=257
VRDI **Verde Repeater** 69.13 29 IAmb IAmb 00 48 33.8
comp=Z,22nm,0.7s
CRQM **Cirque** 69.21 30 IAmb IAmb 00 48 35.6
comp=Z,34nm,0.7s
CRQE **Cirque** 69.23 30 P 00 48 32.5
baz=261
DOT **Dot Lake** 69.28 27 IAmb IAmb 00 48 34.2
comp=Z,26nm,0.6s
KK31 **Karatay Array** 69.31 311 P **P** 00 48 33.7 -0.1
KK31 pmax pmax
comp=Z,5.0nm,1.1s
KK31 **Karatay Array** 69.31 311 P **P** 00 48 33.7 -0.1
KKAR **Karatay Array** 69.31 311 P **P** 00 48 33.6 -0.2
KKAR **Karatay Array** 69.31 311 P **P** 00 48 33.6 -0.2
KKAR **Karatay Array** 69.31 311 IAmb IAmb 00 48 35.7
comp=Z,5.2nm,1.1s
TGL **Tana Glacier** 69.36 30 IAmb IAmb 00 48 35.4
comp=Z,18nm,0.9s
MCARA **McCarthy VSAT** 69.36 29 IAmb IAmb 00 48 35.7
comp=Z,29nm,0.8s
MCARA **McCarthy VSAT** 69.36 29 P 00 48 33.5
baz=261
SCRK **Sand Creek** 69.38 26 P 00 48 32.5
baz=259,SNR=21
FYU **Fort Yukon** 69.40 24 P **P** 00 48 33.7 -0.1
FYU IAmb IAmb 00 48 36.4
comp=Z,18nm,0.8s
BRVK **Borovoye** 69.81 322 *ce* P **P** 00 48 36.0 -0.7
BRVK pmax pmax
comp=Z,13nm,1.0s
BRVK **Borovoye** 69.81 322 P **P** 00 48 36.6 -0.1
YAH **Yahtse** 69.83 30 IAmb IAmb 00 48 38.7
comp=Z,36nm,0.7s
BMAR **Burnt Mountain** 69.85 23 P **P** 00 48 36.0 -0.6
CTG **Chitna Glacier** 70.11 30 P 00 48 38.3
baz=263
CTGM **Chitina Glacie** 70.11 30 IAmb IAmb 00 48 40.4
comp=Z,42nm,0.7s
L27K **Beaver Creek,** 70.17 28 P 00 48 38.2
baz=262,SNR=24
BCAR **Beaver Creek A** 70.19 28 P **P** 00 48 38.2 -0.7
K27K **Chicken** 70.22 27 P 00 48 38.4
baz=261,SNR=19
PCA **Pinnacle** 70.54 31 IAmb IAmb 00 48 42.6
comp=Z,31nm,0.8s
PINM **Pinnacle** 70.54 31 P 00 48 41.1
baz=264,SNR=11
EGAK **Eagle** 70.72 26 IAmb IAmb 00 48 44.0
comp=Z,12nm,0.7s
EGAK **Eagle** 70.72 26 P 00 48 41.8
baz=262,SNR=16
PPT **Papeete** 71.78 114 LR LR 01 15 28.7
comp=Z,71nm,19.2s,baz=218,slow=32
PPT2 **Papeete2** 71.79 114 *e* LR LR 01 10 59.6
comp=Z,82nm,22.5s
HYT **Haines Junctio** 71.96 30 IAmb IAmb 00 48 51.9
comp=Z,32nm,0.7s
EPYK **Eagle Plains** 72.75 24 IAmb IAmb 00 48 55.6
comp=Z,23nm,0.6s
EPYK **Eagle Plains** 72.75 24 P 00 48 53.5
baz=265,SNR=24
SKAG **Skagway** 72.98 32 P **P** 00 48 56.3 +0.8
SKAG **Skagway** 72.98 32 P 00 48 56.1
baz=268
BESE **Bessie Mountai** 73.21 33 P **P** 00 48 57.3 +0.4
WHY **Whitehorse** 73.24 30 IAmb IAmb 00 48 59.3
comp=Z,17nm,0.8s
WHY **Whitehorse** 73.24 30 P 00 48 57.6
baz=268,SNR=15
JIS **Juneau Island** 73.45 33 IAmb IAmb 00 48 60.0
comp=Z,24nm,0.6s
INK **Inuvik** 74.11 22 IAmb IAmb 00 49 03.5
comp=Z,18nm,0.8s
INK **Inuvik** 74.11 22 P 00 49 00.8
baz=268,SNR=26
WRAK **Wrangell Islan** 74.58 35 P **P** 00 49 05.2 +0.3
WRAK IAmb IAmb 00 49 07.0
comp=Z,36nm,0.8s
WRAK **Wrangell Islan** 74.58 35 P 00 49 06.2
baz=272,SNR=7.1
DIB **Dawson Inlet,** 74.62 38 IAmb IAmb 00 49 06.7
comp=Z,44nm,0.7s
DLBC **Dease Lake** 75.74 33 IAmb IAmb 00 49 13.5
comp=Z,17nm,0.6s
HRA **Herat** 76.33 302 P **P** 00 49 15.1 -0.6
ABKAR **Akbulak array** 76.38 318 P **P** 00 49 14.5 -0.8
ABKAR **Akbulak array** 76.38 318 IAmb IAmb 00 49 15.6
comp=Z,6.3nm,0.8s
ARU **Arti** 76.58 325 *c i* P **P** 00 49 15.5 -0.8
ARU *PP **pP** 00 49 49.6 -1.5
ARU S **S** 00 58 51.8 +1.4
ARU pmax pmax
comp=Z,5.0nm,0.8s
ARU **Arti** 76.58 325 P **P** 00 49 15.9 -0.4
C36M **Paulatuk** 77.51 21 P 00 49 21.1
baz=276
GEYT **Alibeck** 79.13 306 P **P** 00 49 31.1 +0.2
comp=Z,2.5nm,0.9s,baz=197,slow=4.6,SNR=4.2
GEYT pP **pP** 00 50 07.6 +1.8
comp=Z,3.8nm,0.8s,baz=151,slow=3.4,SNR=4.1
GEYT LR LR 01 29 03.8
comp=Z,34nm,18.6s,baz=205,slow=39
GEYT **Alibeck** 79.13 306 P **P** 00 49 34.4 +3.5
GYA0B **ALIBECK ARRAY** 79.13 306 P **P** 00 49 28.9 -1.9
NLWA **Neilton Lookou** 80.77 43 P **P** 00 49 39.8 +0.3
NLWA IAmb IAmb 00 49 42.0
comp=Z,24nm,0.7s
PGC **Sidney** 80.81 42 P **P** 00 49 39.6 0.0
PGC IAmb IAmb 00 49 42.1
comp=Z,20nm,0.8s
KIRV **Kirov** 81.15 328 *ce* P **P** 00 49 39.8 -1.3
D03D **Eldon** 81.26 43 P 00 49 43.3
baz=281
KEBM **Edson Butte** 81.27 48 P **P** 00 49 42.4 +0.2
J01E **Myrtle Point** 81.50 48 P 00 49 44.9
baz=281
G03D **McMinnville, O** 81.58 46 P 00 49 45.8
baz=281
A05A **Maple Falls** 81.64 42 P **P** 00 49 44.3 +0.4
B05A **Bryant** 81.77 42 P 00 49 45.6
baz=282
K02D **Willamette Mer** 81.78 48 P 00 49 46.0
baz=281,SNR=5.5
E04D **Cinebar** 81.80 44 P 00 49 46.7
baz=282
I03D **Drain, OR** 81.82 47 P 00 49 46.2
baz=281
L02E **Cave Junction** 81.93 49 P 00 49 47.2
baz=281,SNR=7.2
D05A **Enumclaw** 82.06 43 P **P** 00 49 47.1 +0.9
D05A IAmb IAmb 00 49 51.4
comp=Z,34nm,1.2s
H04D **Lebanon** 82.08 46 P 00 49 47.8
baz=282
KHMM **Horse Mountain** 82.09 50 P **P** 00 49 47.3 +0.6
KMRM **Mail Ridge** 82.24 51 P **P** 00 49 48.0 +0.6
KMRM IAmb IAmb 00 49 50.2
comp=Z,52nm,1.1s
LON **Longmire** 82.27 44 P **P** 00 49 47.8 +0.4
LON pmax pmax
comp=Z,12nm,1.2s
LON **Longmire** 82.27 44 P **P** 00 49 47.8 +0.4
PRGR **Permogore** 82.29 332 *eP* **P** 00 49 45.2 -1.8
PRGR *eS* **S** 00 59 42.0 -8.3
PRGR pmax pmax
comp=Z,10.0nm,0.6s
HUMO **Hull Mountain** 82.31 48 P **P** 00 49 48.2 +0.5
HUMO IAmb IAmb 00 49 50.1
comp=Z,35nm,1.0s
H04A **Detroit Lake** 82.44 46 P **P** 00 49 48.3 0.0
H04A IAmb IAmb 00 49 49.9
comp=Z,30nm,1.0s
KCPM **Cahto Peak** 82.44 51 P **P** 00 49 49.4 +0.9
I04A **Tendick Farm,** 82.46 47 P 00 49 49.1
baz=282
YKA **Yellowknife Ar** 82.61 27 P **P** 00 49 47.5 -1.2
comp=Z,7.5nm,0.7s,baz=285,slow=4.9,SNR=84
YKA LR LR 01 27 43.0
comp=Z,30nm,18.8s,baz=0.0,slow=36
M02C **Callahan** 82.64 49 P 00 49 51.0
baz=282,SNR=25
YBH **Yreka Blue Hor** 82.67 49 P **P** 00 49 50.8 +1.2
YBH pmax pmax
comp=Z,50nm,0.9s
YBH **Yreka Blue Hor** 82.67 49 P **P** 00 49 50.8 +1.2
YBH IAmb IAmb 00 49 52.0
comp=Z,50nm,0.9s
F05D **White Salmon** 82.69 45 P 00 49 50.6
baz=282
J04D **Umpqua Nationa** 82.79 47 P 00 49 51.7
baz=282,SNR=7.0
N02D **Trinity Center** 82.83 50 P 00 49 52.1
baz=282,SNR=16
L04D **Klamath Falls** 82.87 48 P 00 49 51.6
baz=282,SNR=12
O02D **Mt. Diablo Mer** 82.94 50 P 00 49 52.8
baz=282,SNR=22
HOPS **Hopland Field** 82.97 52 IAmb IAmb 00 49 53.3
comp=Z,61nm,1.1s
WDC **Whiskeytown Da** 83.04 50 IAmb IAmb 00 49 53.1
comp=Z,19nm,0.8s
I05D **Terrebonne, OR** 83.10 46 P 00 49 52.5
baz=283
PNT **Penticton** 83.15 41 P P 00 50 05.9 +14
PNT pmax pmax
comp=Z,46nm,0.7s
K04D **Chiloquin, OR** 83.18 48 P 00 49 53.3
baz=282,SNR=6.2
GDXM **Geysers** 83.22 52 P **P** 00 49 53.1 +0.7
GDXM IAmb IAmb 00 49 55.2
comp=Z,45nm,1.1s
M04C **Macdoel** 83.30 49 P 00 49 54.2
baz=283,SNR=26
J05D **Fort Rock, OR** 83.41 47 P 00 49 54.6
baz=283,SNR=21
BELG **Belogornoye** 83.54 322 *i* P **P** 00 49 51.2 -2.5
BELG pmax pmax
comp=Z,5.0nm,1.1s
B08A **Colville Reser** 83.55 42 IAmb IAmb 00 49 55.6
comp=Z,16nm,0.8s
E07A **Sunnyside** 83.63 44 IAmb IAmb 00 50 01.5
comp=Z,16nm,0.9s
O03E **Paynes Creek** 83.65 50 P 00 49 55.3
baz=283,SNR=29
K05A **Summer Lake** 83.78 48 P **P** 00 49 56.4 +1.0
K05A IAmb IAmb 00 49 57.5
comp=Z,53nm,0.9s
CASY **Casey** 83.87 193 P **P** 00 49 55.4 +0.5
ORV **Oroville** 84.04 51 IAmb IAmb 00 49 58.2
comp=Z,41nm,1.1s
C09A **Chrisman Ranch** 84.38 42 IAmb IAmb 00 49 59.7
comp=Z,17nm,0.8s
MOD **Modoc Plateau** 84.39 48 IAmb IAmb 00 50 00.2
comp=Z,26nm,0.9s
I07A **Izee** 84.45 46 P **P** 00 49 58.8 +0.1
AFDM **Forest Hills D** 84.58 51 IAmb IAmb 00 50 01.2
comp=Z,29nm,1.0s
SAO **San Andreas Ge** 84.71 54 P **P** 00 50 01.4 +1.4
SAO pmax pmax
comp=Z,41nm,1.2s
SAO **San Andreas Ge** 84.71 54 P **P** 00 50 01.4 +1.4
SAO IAmb IAmb 00 50 02.0
comp=Z,41nm,1.1s
E09A **Wood Farm, Sta** 84.78 44 IAmb IAmb 00 50 02.0
comp=Z,24nm,1.1s
NEW **Newport** 85.01 42 IAmb IAmb 00 50 03.5
comp=Z,26nm,1.0s
NEW **Newport** 85.01 42 P 00 50 01.6
baz=285,SNR=23
CMB **Columbia Colle** 85.23 52 IAmb IAmb 00 50 04.5
comp=Z,36nm,0.9s
KLMR **Klimovskoe** 85.34 332 *eP* **P** 00 49 59.9 -2.6
KLMR *e*PP **pP** 00 50 37.6 -0.9
KLMR pmax pmax
comp=Z,15nm,1.3s
KLMR **Klimovskoe** 85.34 332 *eP* **P** 00 50 00.0 -2.6
KLMR AMP 00 50 04.6
comp=Z,15nm,1.3s
KLMR *ep*P **pP** 00 50 37.7 -0.8
PMPB **Monarch Peak** 85.34 54 P **P** 00 50 03.3 +0.1
PMPB IAmb IAmb 00 50 05.6
comp=Z,41nm,0.9s

J08A **Circle Bar Ran** 85.35 47 P **P** 00 50 03.3 +0.1
J08A IAmb IAmb 00 50 05.7
comp=Z,30nm,1.1s
WVOR **Wild Horse Val** 85.46 48 IAmb IAmb 00 50 05.6
comp=Z,33nm,1.1s
VCNR **Virginia City** 85.49 51 P **P** 00 50 04.3 +0.2
VCNR IAmb IAmb 00 50 06.1
comp=Z,22nm,0.9s
PNTR **Pine Nut** 85.58 51 P **P** 00 50 05.8 +1.3
PAHR **Pah Rah Range** 85.59 50 P **P** 00 50 04.5 0.0
PAHR IAmb IAmb 00 50 05.8
comp=Z,22nm,0.8s
BMO **Blue Mountains** 85.78 45 IAmb IAmb 00 50 06.8
comp=Z,38nm,1.1s
WAKR **Walker** 85.85 52 P **P** 00 50 06.3 +0.5
WAKR IAmb IAmb 00 50 08.1
comp=Z,19nm,0.7s
PAGB **Antelope Grade** 85.89 54 P **P** 00 50 06.8 +0.9
MDPB **Devils Postpil** 86.34 52 P **P** 00 50 09.0 +0.7
MDPB IAmb IAmb 00 50 10.3
comp=Z,19nm,0.8s
PKM **Mcpherson Peak** 86.44 55 P 00 50 10.4
baz=284,SNR=34
RYN **Ryan** 86.51 51 P **P** 00 50 09.9 +0.8
RYN IAmb IAmb 00 50 11.2
comp=Z,32nm,0.8s
PLID **Pearl Lake** 86.61 44 IAmb IAmb 00 50 11.1
comp=Z,17nm,0.8s
LHV **Little Huntoon** 86.62 52 P **P** 00 50 10.8 +1.5
LHV IAmb IAmb 00 50 11.4
comp=Z,19nm,0.8s
KVN **Kaiserville** 86.72 51 IAmb IAmb 00 50 12.1
comp=Z,38nm,0.8s
NVAR **Mina Array Bea** 86.73 51 P **P** 00 50 11.3 +1.2
comp=Z,32nm,0.7s,baz=265,slow=5.9,SNR=163
NVAR PP **PP** 00 53 32.5 -1.8
comp=Z,1.3nm,0.5s,baz=272,slow=9.3,SNR=4.3
NVAR LR LR 01 27 48.2
comp=Z,29nm,18.7s,baz=244,slow=35
VES **Vestal, Richgr** 86.78 54 P 00 50 10.7
baz=285,SNR=11
WALA **Waterton Lakes** 86.83 40 IAmb IAmb 00 50 12.5
comp=Z,14nm,0.7s
NV11 **Mina Array Sit** 86.84 51 IAmb IAmb 00 50 12.8
comp=Z,35nm,0.9s
ARCES **ARCESS Array B** 86.85 342 P **P** 00 50 09.4 -0.4
comp=Z,15nm,0.9s,baz=70,slow=7.9,SNR=23
ARCES PKIKP **PKiKP** 00 55 15.3 +0.6
comp=Z,3.0nm,1.1s,baz=2.9,slow=4.9,SNR=3.6
ARCES LR LR 01 30 49.7
comp=Z,91nm,21.3s,baz=60,slow=37
TIN **Tinemaha, Big** 87.14 53 P 00 50 13.1
baz=285
ARVC **Arvin** 87.17 55 P 00 50 13.5
baz=285
ISA **Isabella, Lake** 87.31 54 IAmb IAmb 00 50 15.0
comp=Z,17nm,1.0s
ISA **Isabella, Lake** 87.31 54 P 00 50 13.4
baz=285,SNR=15
VRH **Novokhopyorsk** 87.39 322 *e*P **P** 00 50 10.2 -2.6
VRH pmax pmax
comp=Z,10.0nm,0.7s
CWC **Cottonwood Cre** 87.42 53 P 00 50 14.4
baz=285
MSO **Missoula** 87.48 42 P 00 50 13.7
baz=288
DECC **Green Verdugo** 87.79 55 P 00 50 16.3
baz=285
EDW2 **Edwards Air Fo** 87.89 55 P 00 50 17.2
baz=285,SNR=12
PASC **Pasadena Art C** 87.93 55 IAmb IAmb 00 50 17.6
comp=Z,35nm,0.9s
CIS **Catalina Islan** 87.94 56 P 00 50 16.9
baz=285,SNR=7.6
FMP **Fort Macarthur** 87.96 56 P 00 50 17.3
baz=285
HLID **Hailey** 88.14 46 IAmb IAmb 00 50 18.7
comp=Z,27nm,0.9s
HLID **Hailey** 88.14 46 P 00 50 17.6
baz=287,SNR=56
BFSC **Mount Baldy Ra** 88.33 55 P 00 50 18.8
baz=286,SNR=7.9
FURC **Furnace Creek,** 88.35 53 P 00 50 19.1
baz=286,SNR=15
LPSR **Galich'ya Gora** 88.55 324 *e*P **P** 00 50 16.1 -2.1
LPSR pmax pmax
comp=Z,20nm,0.8s
RRX **Edison Barstow** 88.68 55 P 00 50 20.8
baz=286
TPNV **Topopah Spring** 88.69 52 P 00 50 20.6
baz=286,SNR=65
R11A **Troy Canyon, C** 88.80 51 IAmb IAmb 00 50 22.3
comp=Z,27nm,1.0s
R11A **Troy Canyon, C** 88.80 51 P 00 50 21.2
baz=287,SNR=26
MURC **Murrieta** 88.87 56 P 00 50 21.3
baz=286,SNR=6.0
VSR **Storozhevoye** 88.90 323 *e*P **P** 00 50 17.7 -2.2
VSR pmax pmax
comp=Z,9.0nm,0.6s
OBN **Obninsk** 88.91 327 *e*P **P** 00 50 19.0 -0.8
OBN pmax pmax
comp=Z,12nm,1.3s
SHOC **Shoshone, Teco** 88.97 53 P 00 50 21.9
baz=286,SNR=7.8
KBZ **Khabaz** 89.01 315 P **P** 00 50 20.4 -0.2
comp=Z,2.5nm,0.9s,baz=255,slow=3.2,SNR=5.6
KIV **Kislovodsk** 89.08 315 *e*P **P** 00 50 20.7 -0.4
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,134nm,20.0s
109C **Camp Elliot, M** 89.14 56 P 00 50 23.0
baz=286,SNR=8.0
HEC **Hector,Ludlow** 89.22 54 P 00 50 23.5
baz=286,SNR=5.6
TUQ **Turquoise Moun** 89.37 54 P 00 50 24.1
baz=287,SNR=7.1
BOZ **Bozeman (W)** 89.39 43 P 00 50 23.6
baz=289,SNR=13
PFO **Pinyon Flats O** 89.46 56 P **P** 00 50 23.7 +0.6
PFO pmax pmax
comp=Z,52nm,1.1s
PFO **Pinyon Flats O** 89.46 56 P **P** 00 50 23.7 +0.6
PFO **Pinyon Flats O** 89.46 56 P 00 50 24.1
baz=286,SNR=8.5
PRN **Pahroc Range** 89.48 52 IAmb IAmb 00 50 25.6
comp=Z,37nm,1.0s
TKX **Tecate** 89.63 57 P **P** 00 50 24.7 +0.8
CBX **Cerro Bola** 89.65 57 P **P** 00 50 25.1 +1.0
CBX IAmb IAmb 00 50 26.3
comp=Z,15nm,0.7s
SHPR **Sheep Range** 89.66 53 P **P** 00 50 25.1 +1.0
MONP2 **Monument Peak** 89.69 56 P 00 50 25.5
baz=286,SNR=21
BELC **Belle Mtn. Jos** 89.72 55 P 00 50 25.3
baz=287,SNR=34
GMRC **Granite Mounta** 89.77 54 P 00 50 25.8
baz=287,SNR=57
EGMT **Eagleton** 89.78 40 P 00 50 25.2
baz=291
HVU **Hansel Valley** 89.83 47 IAmb IAmb 00 50 27.0
comp=Z,36nm,1.0s
BGU **Big Grassy Mou** 89.92 48 P **P** 00 50 25.4 +0.3
BGU IAmb IAmb 00 50 26.9
comp=Z,13nm,0.9s
YHL **Hebgen Lake** 89.93 44 IAmb IAmb 00 50 29.9
comp=Z,20nm,0.9s
YHB **Horse Butte** 89.96 44 P **P** 00 50 25.9 +0.5
YHB IAmb IAmb 00 50 28.0
comp=Z,24nm,1.1s
IKP **In-Ko-Pah, Jac** 90.01 56 P 00 50 26.9
baz=286,SNR=9.3
SWSC **Sam W. Stewart** 90.18 56 P 00 50 27.9
baz=287
BC3 **Big Chuckawall** 90.25 55 P 00 50 28.4
baz=287,SNR=12
DUG **Dugway, Tooele** 90.30 48 P 00 50 27.8
baz=288,SNR=28
IRM **Iron Mountain** 90.35 55 P 00 50 28.6
baz=287,SNR=18
H17A **Grant Village** 90.50 44 P 00 50 30.6
baz=290,SNR=20
FLWY **Flagg Ranch** 90.52 44 IAmb IAmb 00 50 31.7
comp=Z,12nm,0.8s
LKWY **Lake** 90.56 44 IAmb IAmb 00 50 31.9
comp=Z,17nm,1.1s

NEE2 **Needles Airpor** 90.59 54 P 00 50 30.0
baz=287,SNR=6.1
MOOW **Moose Ponds** 90.60 45 IAmb IAmb 00 50 30.4
comp=Z,12nm,1.1s
YMP **Mirror Lake Pl** 90.66 44 P **P** 00 50 30.2 +1.5
YMP IAmb IAmb 00 50 33.0
comp=Z,18nm,0.8s
YNE **Yellowstone No** 90.67 43 P **P** 00 50 28.3 -0.4
AHID **Auburn Hatcher** 90.69 46 P **P** 00 50 29.0 +0.2
SNOW **Snow King Moun** 90.69 45 P **P** 00 50 28.7 -0.1
CCUT **Cedar City** 90.72 51 P **P** 00 50 29.3 +0.2
CCUT IAmb IAmb 00 50 31.6
comp=Z,19nm,0.9s
CTU **Camp Tracy** 90.91 48 P **P** 00 50 30.3 +0.5
CTU IAmb IAmb 00 50 31.5
comp=Z,23nm,1.0s
SZCU **Shurtz Canyon** 90.91 51 P **P** 00 50 30.6 +0.7
SZCU IAmb IAmb 00 50 32.1
comp=Z,17nm,0.9s
NLU **North Lily Min** 90.92 49 P **P** 00 50 30.6 +0.7
NLU IAmb IAmb 00 50 31.7
comp=Z,20nm,0.9s
GLA **Glamis** 90.93 56 P **P** 00 50 31.0 +1.1
GLA pmax pmax
comp=Z,59nm,0.8s
GLA **Glamis** 90.93 56 P **P** 00 50 31.0 +1.1
GLA **Glamis** 90.93 56 P 00 50 31.7
baz=287,SNR=6.7
FINES **FINESS Array B** 90.94 335 P **P** 00 50 27.3 -1.9
comp=Z,5.1nm,0.6s,baz=70,slow=4.7,SNR=36
FINES LR LR 01 32 09.7
comp=Z,56nm,19.8s,baz=48,slow=36
FINES **FINESS Array B** 90.94 335 P **P** 00 50 27.0 -2.2
LCMT **Little Creek M** 90.97 52 P **P** 00 50 30.6 +0.5
LCMT IAmb IAmb 00 50 32.5
comp=Z,25nm,0.9s
SPX **San Pedro Mart** 90.99 58 P **P** 00 50 31.1 +0.6
SPX IAmb IAmb 00 50 33.0
comp=Z,12nm,0.9s
TCUT **Toone Canyon** 91.02 47 P **P** 00 50 30.4 0.0
TCUT IAmb IAmb 00 50 31.9
comp=Z,22nm,0.9s
W13A **Hualapai Mount** 91.06 54 P **P** 00 50 31.7 +1.0
PDMCI **Parker Dam,Lak** 91.10 54 P 00 50 32.0
baz=288,SNR=17
RLMT **Red Lodge** 91.12 43 IAmb IAmb 00 50 33.8
comp=Z,11nm,1.0s
RLMT **Red Lodge** 91.12 43 P 00 50 32.6
baz=291,SNR=14
JLU **Jordanelle** 91.16 48 P **P** 00 50 31.3 +0.3
MPU **Maple Canyon** 91.22 48 P **P** 00 50 31.4 +0.2
MPU IAmb IAmb 00 50 33.0
comp=Z,15nm,1.0s
SOC **Sochi** 91.24 315 *e*P **P** 00 50 28.5 -2.5
SOC *e* 00 54 06.5
SOC *e*S S 01 00 46.7 -30
SOC *e*SS **SS** 01 07 21.5 -3.2
SOC *e*SSS SSS 01 11 02.3
SOC pmax pmax
comp=Z,15nm,0.9s
KNB **Kanab** 91.29 51 P **P** 00 50 32.5 +0.8
KNB pmax pmax
comp=Z,45nm,0.9s
KNB **Kanab** 91.29 51 P **P** 00 50 32.5 +0.8
MTPU **Mount Pierson** 91.45 50 P **P** 00 50 33.1 +0.5
MTPU IAmb IAmb 00 50 35.1
comp=Z,9.3nm,0.9s
PKCU **Pink Cliffs** 91.55 51 P **P** 00 50 33.8 +0.8
PKCU IAmb IAmb 00 50 36.8
comp=Z,28nm,1.1s
FFC **Flin Flon** 91.57 32 P **P** 00 50 32.4 +0.1
FFC pmax pmax
comp=Z,4.0nm,0.7s
FFC **Flin Flon** 91.57 32 P **P** 00 50 32.4 +0.1
VNDA **Vanda** 91.72 176 P **P** 00 50 33.5 +1.1
comp=Z,15nm,0.9s,baz=323,slow=5.4,SNR=35
VNDA **Vanda** 91.72 176 IAmb IAmb 00 50 34.6
comp=Z,21nm,1.0s
BW06 **Boulder Array** 91.75 45 P 00 50 33.8
baz=291,SNR=8.1
PDAR **Pinedale Array** 91.75 45 P **P** 00 50 33.5 -0.2
comp=Z,3.0nm,0.6s,baz=251,slow=1.5,SNR=34
PDAR PP **PP** 00 54 12.7 -1.4
comp=Z,1.8nm,1.0s,baz=276,slow=4.3,SNR=7.7
PDAR PKKPbc **PKKPbc** 01 07 51.6 -1.1
comp=Z,0.2nm,0.5s,baz=80,slow=5.6,SNR=1.7
PDAR LR LR 01 28 12.4
comp=Z,16nm,18.8s,baz=315,slow=33
PDAR **Pinedale Array** 91.75 45 P **P** 00 50 33.1 -0.6
PDAR PP **PP** 00 54 12.3 -1.8
TMUT **Trail Mountain** 91.76 49 P **P** 00 50 34.2 +0.3
TMUT IAmb IAmb 00 50 35.8
comp=Z,11nm,0.9s
113A **Mohawk Valley,** 91.86 56 P **P** 00 50 34.3 +0.2
U15A **North Rim** 91.89 52 P **P** 00 50 34.8 +0.3
Q16A **Castle Valley** 91.92 49 P **P** 00 50 35.2 +0.7
Q16A IAmb IAmb 00 50 36.7
comp=Z,21nm,1.0s
P17A **Butcher Ranch,** 92.05 49 P **P** 00 50 35.8 +0.8
P17A IAmb IAmb 00 50 36.9
comp=Z,18nm,1.0s
Y14A **Wickenburg** 92.11 54 P **P** 00 50 36.3 +1.0
LAO **LASA Array** 92.50 41 P 00 50 38.5
baz=293,SNR=7.0
214A **Organ Pipe Nat** 92.88 56 P 00 50 40.7
baz=288,SNR=18
WUAZ **Wupatki** 92.88 53 P 00 50 40.6
baz=289,SNR=21
X16A **Lo Mia Camp, P** 93.19 54 P **P** 00 50 41.5 +1.1
X16A IAmb IAmb 00 50 43.1
comp=Z,8.8nm,0.9s
O20A **White River Ci** 93.62 47 IAmb IAmb 00 50 43.6
comp=Z,19nm,1.0s
O20A **White River Ci** 93.62 47 P 00 50 42.6
baz=292,SNR=8.3
PV05 **Paradox Valley** 93.73 49 IAmb IAmb 00 50 44.4
comp=Z,14nm,0.9s
PV22 **Blue Mesa, Par** 93.80 49 IAmb IAmb 00 50 45.2
comp=Z,13nm,1.1s
K22A **Casper** 93.88 45 P **P** 00 50 43.7 +0.3
K22A IAmb IAmb 00 50 49.4
comp=Z,11nm,0.9s
K22A **Casper** 93.88 45 P 00 50 43.9
baz=293
PV13 **Radium Mtn., P** 93.91 49 IAmb IAmb 00 50 45.0
comp=Z,20nm,0.9s
PV07 **Paradox Valley** 93.94 49 P **P** 00 50 44.1 +0.3
PV07 IAmb IAmb 00 50 45.7
comp=Z,13nm,1.0s
PV02 **Paradox Valley** 93.95 49 P **P** 00 50 44.1 +0.1
PV02 IAmb IAmb 00 50 45.7
comp=Z,17nm,0.8s
PV01 **Paradox Valley** 94.10 49 IAmb IAmb 00 50 45.8
comp=Z,16nm,0.9s
X18A **Snowflake** 94.31 53 IAmb IAmb 00 50 47.9
comp=Z,9.7nm,0.9s
TUC **Tucson** 94.40 55 P **P** 00 50 47.5 +1.6
TUC pmax pmax
comp=Z,14nm,1.0s
TUC **Tucson** 94.40 55 P **P** 00 50 47.5 +1.6
TUC IAmb IAmb 00 50 48.5
comp=Z,14nm,0.9s
TUC **Tucson** 94.40 55 P 00 50 47.8
baz=289
MVCO **Mesa Verde** 94.48 50 IAmb IAmb 00 50 48.1
comp=Z,14nm,1.1s
MVCO **Mesa Verde** 94.48 50 P 00 50 47.0
baz=291,SNR=6.1
AKASG **Malin Array Be** 94.83 325 P **P** 00 50 44.9 -2.5
comp=Z,0.6nm,0.6s,baz=43,slow=4.6,SNR=4.4
AKASG PKKPbc **PKKPdf** 01 07 43.5 +0.1
comp=Z,0.4nm,0.3s,baz=266,slow=3.1,SNR=4.9
AKASG **Malin Array Be** 94.83 325 *i* P **P** 00 50 46.4 -0.9
AKASG pmax pmax
comp=Z,1.0nm,0.6s
SMCO **Snowmass** 94.88 48 P **P** 00 50 48.6 +0.2
SMCO IAmb IAmb 00 50 50.0
comp=Z,11nm,0.9s
RSSD **Black Hills** 94.95 42 P **P** 00 50 48.3 -0.1
RSSD pmax pmax
comp=Z,9.0nm,0.7s
RSSD **Black Hills** 94.95 42 P **P** 00 50 48.3 -0.1
RSSD IAmb IAmb 00 50 49.2
comp=Z,9.4nm,0.7s
RSSD **Black Hills** 94.95 42 P 00 50 48.5
baz=295

N23A **Red Feather La** 94.95 46 P 00 50 49.5
baz=293,SNR=10
PHWY **Pilot Hill** 95.13 45 P **P** 00 50 48.7 -0.7
PHWY IAmb IAmb 00 50 50.9
comp=Z,6.5nm,1.1s
S22A **4UR Ranch, Cre** 95.52 49 P 00 50 52.0
baz=292,SNR=13
ISCO **Idaho Springs** 95.61 47 P 00 50 51.8
baz=293
319A **Douglas** 95.92 56 P **P** 00 50 53.8 +0.9
319A IAmb IAmb 00 50 55.6
comp=Z,11nm,0.8s
SDCO **Great Sand Dun** 96.50 49 P **P** 00 50 55.2 -0.5
SDCO IAmb IAmb 00 50 56.9
comp=Z,3.9nm,0.8s
SDCO **Great Sand Dun** 96.50 49 P 00 50 56.3
baz=293,SNR=6.6
121A **Cookes Peak, D** 96.70 54 P **P** 00 50 57.2 +0.7
121A IAmb IAmb 00 50 58.8
comp=Z,6.0nm,0.9s
121A **Cookes Peak, D** 96.70 54 P 00 50 58.3
baz=291,SNR=5.3
NOA **NORSAR Array B** 96.82 339 P **P** 00 50 53.1 -3.2
comp=Z,0.9nm,0.6s,baz=45,slow=4.4,SNR=5.3
NOA LR LR 01 38 18.9
comp=Z,37nm,19.0s,baz=20,slow=38
ANMO **Albuquerque** 96.85 52 PP **PP** 00 54 51.3 -2.6
comp=Z,2.8nm,1.0s,baz=299,slow=9.1,SNR=6.4
ANMO **Albuquerque** 96.85 52 *e*P **P** 00 50 58.0 +0.8
ANMO pmax pmax
comp=Z,6.0nm,0.8s
ANMO **Albuquerque** 96.85 52 P **P** 00 50 57.6 +0.4
ANMO IAmb IAmb 00 50 59.0
comp=Z,5.1nm,0.8s
ANMO **Albuquerque** 96.85 52 P 00 50 58.2
baz=292
BRTR **Keskin Array B** 96.91 314 LR LR 01 37 28.7
comp=Z,28nm,21.9s,baz=82,slow=37
ULM **Lac du Bonnet** 97.01 34 P **P** 00 50 56.4 -0.9
comp=Z,2.0nm,0.7s,baz=300,slow=8.2,SNR=4.5
ULM PP **PP** 00 54 51.1 -3.1
comp=Z,1.7nm,0.9s,baz=35,slow=9.2,SNR=3.1
ULM LR LR 01 30 45.7
comp=Z,31nm,19.4s,baz=0.5,slow=33
BNM **Barren Site** 97.02 52 P **P** 00 50 58.1 +0.1
T25A **Trinidad** 97.53 49 P 00 51 01.0
baz=294
FRB **Frobisher Bay** 98.47 14 PKKPbc PKKPbc 01 07 31.0 -4.3
comp=Z,2.5nm,0.9s,baz=55,slow=4.4,SNR=3.3
BURAR **Bucovina Array** 98.65 324 **P** 00 51 03.8 -1.1
MNTX **Cornudas Mount** 98.91 54 **P** 00 51 06.2 -0.1
MNTX IAmb IAmb 00 51 09.0
comp=Z,4.7nm,0.8s
MNTX **Cornudas Mount** 98.91 54 Pdiff 00 51 07.5
baz=292,SNR=5.1
MAW **Mawson** 99.68 203 P **Pdif** 00 51 11.4 +2.8
comp=Z,1.4nm,0.8s,baz=27,slow=4.5,SNR=1.4
CRVS **Cervenica-Dubn** 100.05 326 *e*P **Pdif** 00 51 11.6 +0.6
CRVS **Cervenica-Dubn** 100.05 326 *e*PDIFF **Pdif** 00 51 11.6 +0.6
CRVS **Cervenica-Dubn** 100.05 326 *e*PDIFF 01 02 59.9
TXAR **Lajitas Array** 101.18 56 P **Pdif** 00 51 17.9 +1.4
comp=Z,1.6nm,0.8s,baz=268,slow=5.1,SNR=22
TXAR PP **PP** 00 55 26.1 -0.8
comp=Z,1.2nm,0.9s,baz=298,slow=5.5,SNR=7.6
GERES **GERESS Array B** 104.13 329 PKiKP **PKiKP** 00 55 45.3 -0.2
comp=Z,0.4nm,0.6s,baz=75,slow=4.2,SNR=5.5
W39A **Magazine** 106.07 47 PKiKP 00 55 49.7
baz=300
U40A **Yellville** 106.13 45 PKiKP 00 55 49.3
baz=301
CCM **Cathedral Cave** 106.32 43 PKiKP 00 55 49.9
baz=303
MIAR **Mount Ida** 106.55 47 PKiKP 00 55 50.9
baz=300
SYO **Syowa Base** 108.32 201 ‖ *e*Pdiff **Pdif** 00 51 50.0 +2.9
SYO **Syowa Base** 108.32 201 ‖ *e*PPdiff pPdif 00 52 26.0 +1.8
WVT **Waverly** 109.66 43 PKiKP 00 55 56.0
baz=305
D56A **ZEC Mazanza, M** 109.74 28 PKiKP 00 55 55.3
baz=319
M54A **Oil Creek Stat** 111.26 34 PKiKP 00 55 58.8
baz=313
LRAL **Lakeview Retre** 111.98 45 PKiKP 00 56 01.2
baz=305
M56A **Emporium** 112.08 34 PKiKP 00 56 00.4
baz=314
N56A **West Decatur** 112.42 34 PKiKP 00 56 01.2
baz=314
J59A **Piesco** 112.54 30 PKiKP 00 56 01.3
baz=318
TKL **Tuckaleechee C** 112.59 41 PKiKP **PKiKP** 00 56 02.0 +0.4
comp=Z,3.9nm,0.6s,baz=160,slow=5.7,SNR=12
M57A **Sunshine Farm,** 112.75 33 PKiKP 00 56 01.8
baz=315
S54A **Dingess, Beckl** 112.78 38 PKiKP 00 56 01.5
baz=311
L58A **Harry Jones Me** 112.91 32 PKiKP 00 56 01.9
baz=317
Q58A **Fox Den Farm,** 114.13 35 P 00 56 04.6
baz=314
KEST **Kesra** 115.21 321 PKP **PKPdf** 00 56 07.1 +0.4
comp=Z,3.3nm,0.7s,baz=45,slow=1.0,SNR=7.1
LSZ **Lusaka** 118.94 260 PKiKP **PKiKP** 00 56 15.1 +0.6
LSZ **Lusaka** 118.94 260 **PKiKP** 00 56 15.1 +0.6
SNAA **Sanae** 119.05 191 PKiKP **PKPdf** 00 56 13.0 0.0
SNAA **Sanae** 119.05 191 **PKPdf** 00 56 13.0 0.0
PGAV **Gavieira, Arco** 119.21 337 *e*PKPdf **PKiKP** 00 56 15.0 +0.6
ESDC **Sonseca Array** 119.37 333 PKP **PKiKP** 00 56 15.0 +0.3
comp=Z,1.9nm,0.8s,baz=28,slow=1.9,SNR=16
ESDC PP **PP** 00 57 34.5 -2.3
comp=Z,1.2nm,1.0s,baz=25,slow=7.6,SNR=5.5
ESDC PKKPbc **PKKPbc** 01 06 28.6 +0.2
comp=Z,1.0nm,1.0s,baz=235,slow=3.1,SNR=4.5
ESDC **Sonseca Array** 119.37 333 **PKiKP** 00 56 15.2 +0.5
MVO **Moncorvo** 119.42 336 *e*PKPdf **PKiKP** 00 56 15.6 +0.8
POLO **Lamas de Olo** 119.54 337 *e*PKPdf **PKiKP** 00 56 15.7 +0.7
PVRL **Vila Real** 119.59 337 *e*PKPdf **PKiKP** 00 56 15.9 +0.8
PVIS **Viseu** 120.14 336 *e*PKPdf **PKiKP** 00 56 16.7 +0.5
MTE **Manteigas** 120.27 336 *e*PKPdf **PKiKP** 00 56 17.2 +0.8
VNA2 **Neumayer--Watz** 120.49 190 PKiKP **PKiKP** 00 56 17.7 +1.9
VNA3 **Neumayer Olymp** 120.59 189 PKiKP **PKiKP** 00 56 17.7 +1.7
PCBR **Castelo Branco** 120.72 335 *e*PKPdf **PKiKP** 00 56 17.9 +0.7
VNA1 **Neumayer--Stat** 120.88 190 PKiKP **PKiKP** 00 56 18.8 +2.2
PCAS **Casmilo, Conde** 120.95 336 *e*PKPdf **PKiKP** 00 56 18.1 +0.4
PMRV **Marv??o** 121.04 335 *e*PKPdf **PKiKP** 00 56 18.5 +0.6
PMTG **Montargil** 121.68 336 *e*PKPdf **PKiKP** 00 56 19.5 +0.4
PBAR **Barrancos** 121.95 334 *e*PKPdf **PKiKP** 00 56 20.2 +0.5
EVO **Evora** 122.06 335 *e*PKPdf **PKiKP** 00 56 20.4 +0.5
LBTB **Lobatse** 122.11 249 PKiKP **PKiKP** 00 56 21.6 +1.2
LBTB **Lobatse** 122.11 249 PKPdf **PKiKP** 00 56 21.6 +1.2
PMAFR **Mafra** 122.20 336 *e*PKPdf **PKiKP** 00 56 22.4 +2.2
BOSA **Boshof** 122.40 245 PKP **PKPdf** 00 56 20.6 -0.1
comp=Z,1.7nm,0.6s,baz=46,slow=3.6,SNR=3.7
BOSA PKKPbc **PKKPbc** 01 06 16.5 0.0
comp=Z,1.0nm,0.8s,baz=237,slow=1.7,SNR=4.0
PCVE **Castro Verde** 122.83 335 *e*PKPdf **PKiKP** 00 56 22.3 +0.8
PVAQ **Vaqueiros** 122.89 334 *e*PKPdf **PKiKP** 00 56 22.2 +0.6
PBDV **Barranco-do-Ve** 123.12 334 *e*PKPdf **PKiKP** 00 56 23.6 +1.5
PTEO **Sao Teotonio** 123.19 335 *e*PKPdf **PKiKP** 00 56 24.1 +2.0
MORF **Marmelete** 123.36 335 *e*PKPdf **PKiKP** 00 56 23.3 +0.7
PFVI **Vila Bisbo** 123.58 335 *e*PKPdf **PKiKP** 00 56 23.9 +0.9
TAM **Tamanrasset** 126.08 312 PKiKP **PKiKP** 00 56 29.4 +0.9
TAM **Tamanrasset** 126.08 312 PKPdf **PKiKP** 00 56 29.4 +0.9
PMPST **Porto Santo, M** 130.01 339 *e*PKPdf PKPpre 00 56 28.7
PMPS **Porto Santo** 130.03 339 *e*PKPdf PKPpre 00 56 29.2
PMAR **Madeira** 130.54 340 *e*PKPdf **PKiKP** 00 56 37.9 +0.7
SJCC **San Jacinto, C** 133.75 61 *e*P **PKiKP** 00 56 45.7 +1.7
TOA0 **Torodi Ar. Sit** 134.75 305 PKPdf **PKiKP** 00 56 45.3 -0.6
TORD **Torodi Ar. Bea** 134.75 305 PKhKP PKPpre 00 56 33.9
comp=Z,1.1nm,0.7s,baz=28,slow=5.7,SNR=7.0
TORD PKP **PKPdf** 00 56 43.0 -1.5
comp=Z,3.8nm,0.6s,baz=48,slow=1.6,SNR=31
TORD SKPbc **SKPbc** 01 00 00.1 -1.2
comp=Z,12nm,1.2s,baz=34,slow=2.9,SNR=20
TORD **Torodi Ar. Bea** 134.75 305 PKPpre 00 56 33.8
TORD PKPdf **PKPdf** 00 56 45.0 +0.5
OTAV **Otavalo** 134.84 76 *e*P **PKPdf** 00 56 42.3 -3.0
CBOC **Ciudad Bolivar** 134.91 67 *e*P PKPpre 00 56 36.3
YOTC **Yotoco, Valle** 135.40 70 *e*P **PKPdf** 00 56 44.9 -1.0
H03N2 **Juan Fernandez** 135.74 124 T T 03 28 29.7
baz=257
H03N3 **Juan Fernandez** 135.75 124 T T 03 28 23.7
baz=257
H03N1 **Juan Fernandez** 135.76 124 T T 03 28 25.2
baz=257

GUY2C **Guyana, Caldas** 135.76 67 *eP* PKPpre 00 56 37.6
SOTA Rioblanco 135.88 72 *eP* **PKiKP 00 56 49.8 +0.9**
PDPR Patillas Dam, 136.03 45 **PKPdf 00 56 47.5 +0.7**
ORTC Ortega, Tolima 136.43 69 *eP* PKPpre 00 56 38.1
STVI Saint Thomas 136.52 43 **PKPdf 00 56 47.3 -0.3**
LL01 San Ignacio de 137.06 139 **PKiKP 00 56 49.0 -0.8**
PAMC Pamplona, Colo 137.14 63 *eP* PKPpre 00 56 38.9
CHIC Chingaza 137.49 67 *eP* PKPpre 00 56 39.4
RUSC La Rusia 137.49 65 *eP* PKPpre 00 56 39.1
SDV Santo Domingo 138.11 59 PKPpre 00 56 41.5
SDV PKPdf **PKPdf 00 56 48.6 -2.4**
KOWA Kowa 138.30 311 PKPpre 00 56 45.2
KOWA PKPdf **PKPdf 00 56 51.6 +0.6**
PLCA Paso Flores 139.10 138 PKPdf PKPpre 00 56 44.0
comp=Z,1.2nm,0.6s,baz=249,slow=2.4,SNR=5.1
PLCA PKP **PKPdf 00 56 51.4 -0.5**
comp=Z,6.3nm,0.8s,baz=233,slow=2.6,SNR=12
PLCA SKPbc **SKiKP 01 00 15.2 -1.6**
comp=Z,6.1nm,0.8s,baz=221,slow=3.2,SNR=11
PLCA Paso Flores 139.10 138 PKPdf **PKiKP 00 56 54.0 -0.2**
DBIC Dimbokro 143.72 302 PKP PKPbc 00 56 59.0 +0.2
comp=Z,8.4nm,0.5s,baz=45,slow=4.7,SNR=18
DBIC SKPbc **SKPbc 01 00 26.2 +0.1**
comp=Z,5.0nm,0.7s,baz=3.2,slow=3.7,SNR=4.4
DBIC Dimbokro 143.72 302 PKIKP PKPbc 00 56 59.0 +0.3
DBIC Dimbokro 143.72 302 PKPbc 00 56 58.8 +0.1
GO03 Copiap 144.54 118 PKPdf **PKPdf 00 57 02.4 +0.4**
ZON Zonda 144.55 125 PKIKP **PKPdf 00 57 02.3 +0.4**
ZON Zonda 144.55 125 PKPdf **PKPdf 00 57 02.3 +0.4**
GO02 Mina Guanaco 145.69 114 **PKPab 00 57 06.4 +1.0**
AC02 Maricunga 145.69 117 **PKPab 00 57 06.5 +0.9**
LVC Limon Verde 146.78 110 PKP2 **PKPab 00 57 10.2 +0.4**
LVC Limon Verde 146.78 110 PKPab **PKPab 00 57 10.2 +0.4**
LPAZ La Paz 148.02 99 PKPbc **PKPbc 00 57 11.6 -0.5**
comp=Z,5.7nm,0.4s,baz=306,slow=2.0,SNR=35
LPAZ PP **PP 01 00 41.4 0.0**
comp=Z,2.0nm,1.0s,baz=333,slow=11,SNR=2.3
CPUP Villa Florida 155.75 124 PKP **PKPdf 00 57 21.3 +2.0**
comp=Z,1.3nm,0.6s,baz=259,slow=4.5,SNR=3.1
CPUP PKPab **PKPab 00 57 47.3 +0.8**
comp=Z,2.0nm,0.7s,baz=232,slow=4.1,SNR=4.2

NEIC ***25*** *00:49:07.6±2.4, 7.66S±0.06×127.53E±0.06, h168km±5km, mb4.7/56 Error ellipse: s-maj=9.0km s-min=8.9km az=202.0*

IDC ***25*** *00:49:08.2±1.3, 7.62S×127.48E, h172km±11km, mb4.1/17, mb1 4.2/21,mb1mx4.1/30,mbtmp4.6/21,MS2.9/4, Ms1 2.9/4,ms1mx2.7/28,Error ellipse: s-maj=12.0km s-min=8.9km az=86.0*

DJA ***25*** *00:49:08.5±0.2, 8.3S±2.2×12.8E±.7, h178km±3km, M4.8/40, mb4.8/40,mB5.2/22,MLv5.3/13,Mw(mB)4.6/22, MwMwp4.7/1,Mwp5.0/1*

ISC 25 00:49:06.6±0.3, 7.70S±0.04×127.53E±0.04, h162km, n207, σ1§50/211, mb4.7/52, 4D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.75**	**95**		**Pn**	**00 50 06.7**	**+2.8**
SAUI				Sn	**Sn**	**00 50 48.6**	**+0.1**
SAUI	**Saumlaki**	**3.75**	**95**	P	**Pn**	**00 50 05.9**	**+2.0**
SOEI	**Soe**	**3.82**	**237**		**Pn**	**00 50 07.5**	**+2.4**
NLAI	**Namlea**	**4.45**	**354**	P	**Pn**	**00 50 17.1**	**+4.0**
BATI	**Baumata**	**4.56**	**237**	P	**Pn**	**00 50 17.3**	**+2.7**
	858nm,0.3s,baz=120,slow=2.0,SNR=640						
BATI				S	**Sn**	**00 51 08.8**	**+1.1**
	304nm,0.3s,baz=18,slow=15,SNR=10						
BATI				LR	LR	00 52 28.8	
	comp=Z,83nm,18.7s,baz=340,slow=44						
MMRI	**Maumere**	**5.32**	**260**	Pn	**Pn**	**00 50 26.7**	**+2.2**
MMRI	**Maumere**	**5.32**	**260**	P	**Pn**	**00 50 27.1**	**+2.6**
	2.2nm3µm7µm561nm,0.6s						
MMRI				S	**Sn**	**00 51 30.0**	**+4.5**
	2.2nm3µm7µm561nm,0.6s						
SANI	**Sanana**	**5.81**	**345**	P	**Pn**	**00 50 34.9**	**+3.9**
	0.1nm687nm43nm,0.7s						
MTN	**Manton Dam**	**6.22**	**146**	Pn	**Pn**	**00 50 36.9**	**+0.5**
MTN				Sn	**Sn**	**00 51 45.5**	**-1.5**
FAKI	**Fak Fak**	**6.67**	**45**	Pn	**Pn**	**00 50 42.1**	**-0.4**
FAKI				Sn	**Sn**	**00 51 55.4**	**-2.4**
FAKI	**Fak Fak**	**6.67**	**45**	P	**Pn**	**00 50 42.6**	**+0.1**
	0.4nm2µm102nm,0.7s						
BASI	**Baing, Sumba**	**7.31**	**249**	P	**Pn**	**00 50 51.5**	**+0.6**
	3.0nm5µm300nm,0.6s						
SIJI	**Sorong**	**7.74**	**29**	P	**Pn**	**00 50 57.1**	**+0.5**
	62nm,0.3s,baz=274,slow=21,SNR=60						
SIJI				S	**Sn**	**00 52 21.7**	**-1.4**
	baz=128,slow=23,SNR=1.0						
SIJI				LR	LR	00 53 39.3	
	comp=Z,84nm,21.2s,baz=78,slow=35						
SWI	**Sorong**	**7.74**	**29**	P	**Pn**	**00 50 57.4**	**+0.8**
	1.6nm7µm329nm,0.5s						
KNRA	**Kununurra**	**8.02**	**171**	Pn	**Pn**	**00 51 00.6**	**+0.3**
KNRA					**Sn**	**00 52 26.6**	**-3.4**
BNSI	**Bone**	**8.08**	**293**	P	**Pn**	**00 51 04.4**	**+3.3**
	58nm,0.7s						
LUWI	**Luwuk**	**8.13**	**324**	Pn	**Pn**	**00 51 04.8**	**+2.9**
KAPI	**Kappang**	**8.18**	**289**	P	Pn	00 51 09.1	+6.7
	1.5nm,0.3s,baz=131,slow=12,SNR=5.1						
KAPI				S	**Sn**	**00 52 28.6**	**-5.1**
	1.8nm,0.3s,baz=129,slow=20,SNR=5.3						
KAPI	**Kappang**	**8.18**	**289**	Pn	**Pn**	**00 51 04.4**	**+2.0**
WBSI	**Waikabubak, Su**	**8.28**	**256**	P	**Pn**	**00 51 05.3**	**+1.5**
	2.0nm4µm227nm,0.6s						
TNTI	**Ternate**	**8.41**	**359**		**Pn**	**00 51 07.5**	**+2.0**
TNTI	**Ternate**	**8.41**	**359**	P	Pn	00 51 11.2	+5.7
APSI	**Ampana**	**8.93**	**319**	P	Pn	00 51 17.9	+5.5
	429nm36nm,1.2s						
GTOI	**Gorontalo**	**9.42**	**331**	P	Pn	00 51 25.9	+7.0
	19nm,0.8s						
PLAI	**Plampang**	**9.72**	**263**	P	**Pn**	**00 51 22.7**	**-0.1**
	2µm178nm,0.7s						
MRSI	**Marisa**	**9.85**	**325**	P	**Pn**	**00 51 28.6**	**+4.1**
	24nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.50**	**190**	P	**Pn**	**00 51 31.5**	**-1.6**
	20nm,0.3s,baz=9.5,slow=9.7,SNR=306						
FITZ				S	**Sn**	**00 53 22.4**	**-7.2**
	16nm,0.3s,baz=57,slow=11,SNR=12						
TWSI	**Taliwang, Sumb**	**10.59**	**264**	P	**Pn**	**00 51 34.8**	**+0.5**
	749nm20nm,0.5s						
TOLI2	**Tolitoli**	**11.04**	**322**	Pn	**Pn**	**00 51 43.0**	**+2.9**
BKB	**Balikpapan**	**12.38**	**301**	Pn	**P**	**00 52 01.4**	**-1.6**
JAGI	**Jajag, Banyuwa**	**13.27**	**260**	Pn	**Pn**	**00 52 09.7**	**+0.8**
BBKI	**Banjar Baru**	**13.31**	**288**	P	**P**	**00 52 13.9**	**+0.5**
	3µm63nm,0.9s						
WB0	**Warramunga Arr**	**13.72**	**152**	Pn	**Pn**	**00 52 13.3**	**-1.4**
WRAB	**Tennant Creek**	**13.85**	**152**		**Pn**	**00 52 14.9**	**-1.3**
WRA	**Warramunga Arr**	**13.85**	**152**	P	**Pn**	**00 52 14.7**	**-1.5**
	6.0nm,0.3s,baz=342,slow=12,SNR=70						
WRA				S	Sn	00 54 40.8	-9.3
	8.2nm,0.3s,baz=328,slow=23,SNR=20						
WRA	**Warramunga Arr**	**13.85**	**152**	Pn	**Pn**	**00 52 16.2**	**-0.1**
WB2	**Warramunga Arr**	**13.85**	**152**	Pn	**Pn**	**00 52 14.9**	**-1.4**
WR0	**Warramunga Arr**	**13.96**	**152**	Pn	**Pn**	**00 52 15.7**	**-1.9**
JAY	**Jayapura**	**14.09**	**69**	P	**Pn**	**00 52 19.2**	**-0.1**
	0.4nm,0.3s,baz=237,slow=11,SNR=7.3						
MTKI	**Muara Teweh, K**	**14.27**	**297**	P	**P**	**00 52 26.2**	**+2.2**
	5µm57nm,0.9s						
MYLDM	**Lahad Datu**	**15.64**	**325**		**P**	**00 52 41.1**	**+1.8**
PSA00	**Pilbara Seismi**	**15.66**	**207**		**Pn**	**00 52 38.9**	**+0.1**
PSA00	**Pilbara Seismi**	**15.66**	**207**		**Pn**	**00 52 38.8**	**+0.1**
PSA00				IAmb	IAmb	00 52 54.2	
	comp=Z,21nm,0.7s						
COEN	**Coen**	**16.57**	**113**		**Pn**	**00 52 49.8**	**-0.1**
COEN				IAmb	IAmb	00 52 52.8	
	comp=Z,20nm,0.7s						
UGM	**Wanagama**	**16.85**	**268**	P	**P**	**00 52 53.0**	**+0.3**
UGM				IAmb	IAmb	00 52 59.0	
	comp=Z,84nm,1.1s						
AS31	**Alice Springs**	**17.02**	**160**		**Pn**	**00 52 56.2**	**+1.0**
ASAR	**Alice Springs**	**17.02**	**160**	P	**Pn**	**00 52 56.0**	**+0.9**
	comp=Z,4.3nm,0.3s,baz=333,slow=10,SNR=152						
ASAR				S	**S**	**00 55 58.1**	**-5.5**
	comp=Z,3.3nm,0.3s,baz=325,slow=22,SNR=7.9						
ASAR	**Alice Springs**	**17.02**	**160**	P	**Pn**	**00 52 56.5**	**+1.3**
KKM	**Kota Kinabalu**	**17.71**	**320**		**Pn**	**00 53 04.0**	**+0.4**
KKM				IAmb	IAmb	00 53 13.2	
	comp=Z,58nm,1.0s						
SBUM	**Sibu**	**18.30**	**303**	P	**Pn**	**00 53 11.5**	**+1.1**
KSM	**Kuching**	**19.44**	**297**	P	**P**	**00 53 22.4**	**+1.5**
PMG	**Port Moresby**	**19.48**	**96**	P	**Pn**	**00 53 22.9**	**-1.4**
	comp=Z,4.2nm,0.3s,baz=275,slow=3.8,SNR=20						
PMG	**Port Moresby**	**19.48**	**96**	P	**P**	**00 53 22.6**	**+1.3**

CISI Cisompet, Garu 19.54 269 P **Pn** **00 53 23.9 -1.2**
GIRL Giralia 19.61 219 P **Pn** **00 53 24.8 -0.9**
MANU Manus Island 20.54 75 P **P** **00 53 34.3 +1.7**
XMIS Christmas Isla 21.78 261 P **P** **00 53 46.5 +0.7**
CTA Charters Tower 21.93 126 P **P** **00 53 48.4 +1.1**
comp=Z,3.0nm,0.8s,baz=311,slow=13,SNR=5.1
CTAO Charters Tower 21.93 126 P **P** **00 53 48.6 +1.3**
PPBI Pangkal Pinang 22.00 283 P **P** **00 53 49.4 +1.2**
comp=Z,74nm,0.7s
TGY Tagaytay City 22.62 343 P **P** **00 53 55.8 +1.7**
comp=Z,269nm,0.4s,baz=170,slow=1.3,SNR=8.0
FORT Forrest 22.97 179 P **P** **00 53 58.3 +1.2**
FORT IAmb IAmb 00 54 09.6
comp=Z,49nm,1.0s
MORW Morawa 23.86 206 P **P** **00 54 07.0 +1.8**
BBOO Buckleboo 26.21 164 P **P** **00 54 27.6 +1.1**
BBOO IAmb IAmb 00 54 35.5
comp=Z,24nm,1.1s
NWAO Narrogin (SRO) 26.86 199 P **P** **00 54 33.6 +1.3**
comp=Z,13nm,0.5s,baz=30,slow=8.5,SNR=15
NWAO Narrogin (SRO) 26.86 199 P **P** **00 54 33.8 +1.6**
NWAO IAmb IAmb 00 54 34.2
comp=Z,15nm,0.7s
NWAO Narrogin (SRO) 26.86 199 P **P** **00 54 33.7 +1.4**
NWAO IAmb IAmb 00 54 34.2
comp=Z,12nm,0.7s
STKA Stephens Creek 27.40 153 P **P** **00 54 38.7 +1.7**
comp=Z,2.4nm,0.4s,baz=331,slow=8.5,SNR=6.5
STKA Stephens Creek 27.40 153 P **P** **00 54 38.6 +1.5**
MNSI Mandailing Nat 29.12 286 P **P** **00 54 51.5 -1.1**
comp=Z,45nm,0.9s
KULM Kulim 29.76 295 P **P** **00 54 58.6 +0.5**
RPSI Rantau Prapat 30.35 289 P **P** **00 55 03.7 +0.3**
GSI Gunungsitoli 31.19 285 P **P** **00 55 09.6 -1.1**
GSI IAmb IAmb 00 55 18.4
comp=Z,12nm,0.7s
LHMI Lhok Sumawe 33.10 292 P **P** **00 55 27.3 -0.2**
UTHA Uthaitani 36.17 310 P **P** **00 55 54.2 +0.5**
UTTA Uttaradit 36.73 314 P **P** **00 55 59.0 +0.5**
UMPA Umpang Tak 37.01 310 P **P** **00 56 00.7 -0.2**
SLVN Son La 37.02 322 P **P** **00 56 01.0 +0.1**
CM36 Chiang Mai Arr 38.28 313 P **P** **00 56 12.0 +0.4**
CM04 Chiang Mai Arr 38.29 313 P **P** **00 56 12.0 +0.3**
CM09 Chiang Mai Arr 38.31 313 P **P** **00 56 12.6 +0.7**
CM05 Chiang Mai Arr 38.31 313 P **P** **00 56 12.2 +0.4**
CM01 Chiang Mai Arr 38.32 313 P **P** **00 56 12.4 +0.5**
CM02 Chiang Mai Arr 38.34 313 P **P** **00 56 12.0 0.0**
CM31 Chiang Mai Arr 38.35 313 P **P** **00 56 13.0 +0.8**
CM31 Chiang Mai Arr 38.35 313 P **P** **00 56 12.2 0.0**
CM31 IAmb IAmb 00 56 13.6
comp=Z,11nm,0.6s
CMAR Chiang Mai Arr 38.35 313 P **P** **00 56 12.4 +0.3**
comp=Z,9.1nm,0.6s,baz=141,slow=6.7,SNR=50
CMAR PcP **PcP** **00 58 23.7 +1.0**
comp=Z,3.2nm,0.6s,baz=164,slow=2.8,SNR=9.3
CMAR ScP **S** **01 01 53.5 -1.3**
comp=Z,1.1nm,0.3s,baz=132,slow=1.3,SNR=5.5
CMAR Chiang Mai Arr 38.35 313 P **P** **00 56 11.9 -0.3**
CM13 Chiang Mai Arr 38.36 313 P **P** **00 56 12.0 -0.2**
CM15 Chiang Mai Arr 38.36 313 P **P** **00 56 12.8 +0.6**
CM34 Chiang Mai Arr 38.46 314 P **P** **00 56 13.0 -0.1**
CM32 Chiang Mai Arr 38.55 313 P **P** **00 56 15.0 +1.2**
CMMT Chiang Mai 38.58 313 P **P** **00 56 13.3 -0.7**
CHTO Chiang Mai 38.58 313 P **P** **00 56 13.9 -0.1**
CHTO IAmb IAmb 00 56 15.0
comp=Z,12nm,0.7s
CM33 Chiang Mai Arr 38.58 313 P **P** **00 56 14.0 -0.1**
GYA Guiyang 39.53 330 ⇓P **P** **00 56 22.6 +0.6**
GYA pmax pmax
comp=Z,3.0nm,0.7s
NJ2 Nanjing 40.38 349 *eP* **P** **00 56 31.5 +2.8**
NJ2 pmax pmax
comp=Z,12nm,0.5s
KMI Kunming 40.58 324 ⇓P **P** **00 56 32.5 +1.7**
KMI pmax pmax
comp=Z,12nm,0.7s
KMI pmax pmax
comp=Z,90nm,3.8s
KMI LR LR
comp=N,270nm,15.4s
KMI LR LR
comp=E,140nm,17.7s
KMI LR LR
comp=Z,140nm,21.7s
KMI Kunming 40.58 324 P **P** **00 56 31.9 +1.1**
JWT Wachi 43.39 9 P **P** **00 56 52.1 -1.0**
KSRS Korea Array 44.91 0 P **P** **00 57 05.7 +0.5**
comp=Z,1.6nm,0.6s,baz=181,slow=11,SNR=7.7
XAN Xi'an 45.10 338 P **P** **00 57 05.6 -1.2**
XAN pP pP 00 57 43.0 +1.7
XAN pmax pmax
comp=Z,12nm,0.8s
XAN Xi'an 45.10 338 P **P** **00 57 05.8 -1.1**
KOHI KOHIMA 46.47 317 *eP* **P** **00 57 16.5 -1.3**
KOHI IAmb IAmb 00 57 19.8
comp=Z,24nm,0.7s
SHL Shillong 47.91 315 P **P** **00 57 28.8 -0.1**
SHL IAmb IAmb 00 57 31.9
comp=Z,14nm,0.5s
TEZP TEZPUR 47.94 317 *eP* **P** **00 57 27.9 -1.1**
TEZP IAmb IAmb 00 57 29.2
comp=Z,5.8nm,0.7s
LZH Lanzhou 48.92 334 ⇓P **P** **00 57 37.3 +0.8**
LZH pP pwP 00 58 17.0 -0.7
LZH sP sP 00 58 30.3 +1.3
LZH pmax pmax
comp=Z,24nm,1.1s
PALK Pallekele 49.01 287 LR LR 01 21 12.6
comp=Z,36nm,18.1s,baz=212,slow=39
HHC Hu-ho-hao-te 50.49 344 *eP* **P** **00 57 50.3 +2.0**
HHC pmax pmax
comp=Z,16nm,1.1s
HHC pmax pmax
comp=Z,94nm,7.9s
LSA Lhasa 51.05 318 P **P** **00 57 53.4 +0.3**
LSA IAmb IAmb 00 57 56.6
comp=Z,14nm,0.7s
USRK Ussuriysk Ar. 51.81 4 P **P** **00 57 58.8 +0.9**
comp=Z,2.5nm,0.6s,baz=174,slow=8.9,SNR=7.5
TUWZ Tuamarina 53.02 137 P **P** **00 58 07.8 +0.9**
BSWZ Blackbirch Sta 53.10 137 P **P** **00 58 08.4 +0.9**
KHZ Kahutara 53.19 138 P **P** **00 58 08.9 +0.8**
KHZ IAmb IAmb 00 58 27.1
comp=Z,26nm,1.1s
GTA Gaotai 53.44 333 ⇓P **P** **00 58 10.6 +0.5**
GTA pP pwP 00 58 49.4 -2.5
GTA sP sP 00 59 05.6 +2.6
GTA pmax pmax
comp=Z,18nm,0.7s
GTA pmax pmax
comp=Z,47nm,6.2s
GTA LR LR
comp=N,65nm,16.0s
GTA LR LR
comp=E,82nm,15.6s
GTA LR LR
comp=Z,63nm,17.1s
HYB Hyderabad 54.45 298 *eP* **P** **00 58 14.9 -2.7**
HYB IAmb IAmb 00 58 15.6
comp=Z,9.5nm,0.6s
KLR Kul'dur 56.80 3 LR LR 01 26 47.6
comp=Z,7.5nm,18.4s,baz=186,slow=40
BHPL Bhopal 57.83 304 *eP* **P** **00 58 39.1 -2.5**
BHPL IAmb IAmb 00 58 40.1
comp=Z,20nm,0.7s
SONM Songino Array 58.36 343 P **P** **00 58 45.2 +0.2**
comp=Z,3.4nm,0.7s,baz=164,slow=7.3,SNR=20
SONM PcP **PcP** **00 59 33.7 -0.4**
comp=Z,2.9nm,1.0s,baz=157,slow=5.6,SNR=3.6
SONM Songino Array 58.36 343 P **P** **00 58 45.0 +0.1**
CASY Casey 59.66 188 P **P** **00 58 54.9 +1.4**
SMLA Simla 61.72 311 *eP* **P** **00 59 07.2 -0.8**
SMLA IAmb IAmb 00 59 09.6
comp=Z,36nm,0.9s
WMQ Urumqi 62.67 329 *eP* **P** **00 59 16.3 +2.1**
DHRM DHARAMSHALA 62.92 312 *eP* **P** **00 59 14.4 -1.8**
PETK Petropavlovsk- 65.77 19 P **P** **00 59 34.5 +0.5**
comp=Z,3.9nm,0.9s,baz=131,slow=4.1,SNR=4.1
NIL Nilore 65.84 312 P **P** **00 59 34.8 -0.2**
MK31 Makanchi Array 67.49 328 IAmb IAmb 00 59 45.7
comp=Z,7.5nm,0.8s
MKAR Makanchi Array 67.49 328 P **P** **00 59 44.8 -0.3**
comp=Z,11nm,0.7s,baz=129,slow=8.0,SNR=107
MKAR Makanchi Array 67.49 328 P **P** **00 59 44.7 -0.4**
KDJ Kajisay 67.57 322 IAmb IAmb 00 59 48.6
comp=Z,9.9nm,0.8s
MAKZ Makanchi 67.66 328 P **P** **00 59 45.9 -0.3**
MAKZ IAmb IAmb 00 59 46.6
comp=Z,6.6nm,0.8s
TKM2 Tokmak 2 68.98 322 P **P** **00 59 54.4 -0.4**
SNR=10
AAK Ala-Archa 69.51 321 P **P** **00 59 58.2 +0.3**
SNR=8.7
AAK Ala-Archa 69.51 321 *i* P **P** **00 59 58.3 +0.3**
SNR=9.9
AAK Ala-Archa 69.51 321 P **P** **00 59 58.5 +0.5**
AAK IAmb IAmb 00 59 59.0
comp=Z,6.5nm,0.7s
AML Almayashu 69.75 320 P **P** **00 59 59.9 +0.2**
SNR=17
USP Ospenovka 69.85 322 P **P** **01 00 00.0 +0.2**
SNR=8.6
EKS2 Erkin-Say 69.97 321 P **P** **01 00 01.1 +0.4**
SNR=5.8
ZAA0 Zalesovo Array 71.14 335 P **P** **01 00 06.5 -0.9**
ZAA0 IAmb IAmb 01 00 08.0
comp=Z,8.1nm,0.7s
ZALV Zalesovo Beam 71.14 335 P **P** **01 00 06.2 -1.2**
comp=Z,9.6nm,0.7s,baz=135,slow=5.2,SNR=36
VNDA Vanda 72.07 173 P **P** **01 00 14.0 +1.4**
comp=Z,4.7nm,0.6s,baz=321,slow=6.7,SNR=47
VNDA Vanda 72.07 173 P **P** **01 00 14.1 +1.4**
KK31 Karatay Array 72.27 320 P **P** **01 00 14.7 +0.3**
KKAR Karatay Array 72.27 320 P **P** **01 00 15.1 +0.7**
KKAR Karatay Array 72.27 320 P **P** **01 00 14.2 -0.2**
MAW Mawson 73.42 201 P **P** **01 00 22.4 +1.7**
comp=Z,3.9nm,0.7s,baz=96,slow=6.1,SNR=7.4
HRA Herat 74.46 309 IAmb IAmb 01 00 29.0
comp=Z,12nm,0.9s
SHAO Shalim 75.41 291 P **P** **01 00 32.9 -0.2**
SOCY Socotra 75.72 285 P **P** **01 00 33.8 -1.3**
SOCY IAmb IAmb 01 00 34.8
comp=Z,17nm,0.7s
SOHO SOHO 76.07 297 *i* P **P** **01 00 36.4 -0.4**
SNR=12
UOSS Minazif 76.57 298 P **P** **01 00 38.6 -1.0**
UOSS Minazif 76.57 298 P **P** **01 00 39.3 -0.3**
UOSS IAmb IAmb 01 00 39.5
comp=Z,10.0nm,0.9s
HATD Hatta, Dubai 76.60 298 *i* P **P** **01 00 38.9 -0.9**
SNR=6.3
ALNE Al Ain 76.74 297 *i* P **P** **01 00 40.3 -0.3**
SNR=6.4
BANOM Banah 76.74 299 P **P** **01 00 40.9 +0.3**
SHME Shamm 76.91 299 P **P** **01 00 41.5 0.0**
FAQ Al Faqa, Dubai 77.06 298 P **P** **01 00 42.2 -0.1**
NAZ Nazwa, Dubai 77.06 298 P **P** **01 00 42.1 -0.2**
ASUD Al Ashush, Dub 77.26 297 P **P** **01 00 43.4 0.0**
BRVK Borovoye 77.43 329 P **P** **01 00 43.2 -0.6**
BRVK IAmb IAmb 01 00 45.1
comp=Z,8.7nm,0.8s
VOI Vohitsoka 78.61 249 P **P** **01 00 51.7 +0.5**
VOI IAmb IAmb 01 00 52.9
comp=Z,16nm,0.6s
GEYT Alibeck 78.81 311 P **P** **01 00 51.6 -0.1**
comp=Z,2.0nm,0.6s,baz=160,slow=5.5,SNR=9.0
TIXI Tiksi 79.18 0 P **P** **01 00 52.5 -0.5**
comp=Z,1.9nm,0.5s,baz=260,slow=3.2,SNR=4.9
ABKAR Akbulak array 81.54 322 P **P** **01 01 05.8 -0.3**
ABKAR Akbulak array 81.54 322 IAmb IAmb 01 01 06.3
comp=Z,4.9nm,0.8s
NRIK Noril'sk 81.65 347 P **P** **01 01 06.2 0.0**
comp=Z,6.1nm,0.8s,baz=138,slow=6.5,SNR=17
ARU Arti 85.01 329 P **P** **01 01 22.9 -0.8**
ARU IAmb IAmb 01 01 24.5
comp=Z,6.2nm,0.6s
RAYN Ar Rayn 85.79 294 *i* P **P** **01 01 27.8 -0.6**
SNR=13
RAYN Ar Rayn 85.79 294 P **P** **01 01 28.2 -0.2**
RAYN IAmb IAmb 01 01 28.8
comp=Z,13nm,0.8s
BELA Belgrano 2 93.98 184 P **P** **01 02 06.2 +0.5**
BELA IAmb IAmb 01 02 06.7
comp=Z,3.7nm,0.6s
SNAA Sanae 94.41 194 P **P** **01 02 09.2 +1.4**
ILAR Eielson Array 95.02 25 P **P** **01 02 09.4 -1.2**
comp=Z,0.4nm,0.8s,baz=242,slow=1.9,SNR=2.9
KLMR Klimovskoe 95.69 331 *eP* **P** **01 02 09.7 -4.0**
KLMR AMP 01 02 11.8
comp=Z,6.0nm,0.8s
VNA2 Neumayer--Watz 96.00 194 P **P** **01 02 15.7 +0.7**
BOSA Boshof 97.00 240 P Pdif 01 02 21.1 +0.4
comp=Z,2.2nm,0.9s,baz=163,slow=2.8,SNR=3.5
AKASG Malin Array Be 101.17 320 P **Pdif** **01 02 37.6 -0.9**
comp=Z,0.2nm,0.3s,baz=79,slow=5.8,SNR=1.9
ARCES ARCESS Array B 101.37 339 P **Pdif** **01 02 37.5 -1.5**
comp=Z,1.1nm,0.8s,baz=72,slow=7.9,SNR=4.0
FINES FINESS Array B 102.19 331 P **Pdif** **01 02 40.6 -2.1**
comp=Z,3.6nm,1.1s,baz=23,slow=10,SNR=4.6
FINES PKiKP **PKiKP** **01 07 03.8 -0.3**
comp=Z,0.9nm,0.6s,baz=101,slow=1.9,SNR=4.8
BURAR Bucovina Array 103.94 317 Pdif **Pdif** **01 02 50.8 -0.3**
NOA NORSAR Array B 109.27 332 PKiKP **PKiKP** **01 07 16.0 -1.2**
comp=Z,0.3nm,0.6s,baz=264,slow=3.2,SNR=3.9
YKA Yellowknife Ar 109.44 26 PKiKP **PKiKP** **01 07 16.9 -0.5**
comp=Z,1.1nm,0.6s,baz=297,slow=1.3,SNR=22
YKA PKKPbc **PKKPbc** **01 18 22.8 -2.7**
comp=Z,0.7nm,0.7s,baz=109,slow=5.5,SNR=11
GERES GERESS Array B 111.37 320 PKiKP **PKiKP** **01 07 21.2 -0.4**
comp=Z,1.4nm,0.6s,baz=71,slow=2.1,SNR=15
ABTA Abfaltersbach 112.63 318 *i* P **PKiKP** **01 07 23.1 -0.9**
comp=Z,1.9nm,0.6s
WTTA Wattenberg 113.09 318 *i* P **PKiKP** **01 07 24.6 -0.5**
comp=Z,6.6nm,0.5s
WATA Walderalm 113.11 318 *eP* **PKiKP** **01 07 24.2 -0.9**
comp=Z,2.5nm,0.6s
MOTA Moosalm 113.42 318 *i* P **PKiKP** **01 07 24.8 -0.8**
comp=Z,2.4nm,0.5s
RETA Reutte 113.61 319 *i* P **PKiKP** **01 07 25.3 -0.6**
comp=Z,1.0nm,0.5s
FETA Feichten 113.75 318 *i* P **PKiKP** **01 07 25.9 -0.4**
comp=Z,2.4nm,0.8s
DAVA Damuels 114.24 319 *i* P PKPdf 01 07 26.8 -0.5
comp=Z,3.0nm,0.6s
KEST Kesra 117.27 306 PKP **PKiKP** **01 07 33.4 0.0**
comp=Z,2.9nm,0.8s,baz=358,slow=3.1,SNR=4.5
PDAR Pinedale Array 119.11 45 PKP **PKPdf** **01 07 36.1 -0.8**
comp=Z,1.0nm,0.7s,baz=179,slow=2.3,SNR=12
PDAR PKKPbc **PKKPab** **01 17 54.0 +0.7**
comp=Z,0.7nm,0.7s,baz=106,slow=5.3,SNR=8.0
PDAR Pinedale Array 119.11 45 PKPdf **PKiKP** **01 07 37.1 +0.2**
FRB Frobisher Bay 122.87 8 PKP **PKPdf** **01 07 42.7 -0.4**
comp=Z,4.5nm,0.7s,baz=20,slow=4.3,SNR=8.4
ANMO Albuquerque 123.68 53 PKP **PKiKP** **01 07 46.9 +0.8**
comp=Z,1.7nm,0.9s,baz=216,slow=3.9,SNR=5.6
ULM Lac du Bonnet 124.35 32 PKP **PKPdf** **01 07 45.6 -0.8**
comp=Z,4.5nm,0.7s,baz=306,slow=4.0,SNR=9.9
ESDC Sonseca Array 126.25 314 PKP **PKPdf** **01 07 49.5 -0.9**
comp=Z,1.6nm,0.8s,baz=9.8,slow=3.0,SNR=9.4
TORD Torodi Ar. Bea 126.54 281 PKP **PKPdf** **01 07 51.5 -0.1**
comp=Z,3.7nm,0.7s,baz=42,slow=2.5,SNR=22
TXAR Lajitas Array 127.38 59 PKP **PKPdf** **01 07 53.1 +0.2**
comp=Z,0.4nm,0.7s,baz=282,slow=1.7,SNR=6.2
P38A Dawn 131.43 43 PKPdf **PKiKP** **01 08 01.1 -0.1**
DBIC Dimbokro 132.77 272 PKP **PKPdf** **01 08 03.4 -0.1**
comp=Z,2.6nm,0.5s,baz=117,slow=1.9,SNR=5.8
TKL Tuckaleechee C 140.07 41 PKP **PKPdf** **01 08 15.8 -0.6**
comp=Z,2.0nm,0.7s,baz=169,slow=6.8,SNR=5.7
LVC Limon Verde 145.85 152 **PKPab** **01 08 30.0 +1.2**
CPUP Villa Florida 145.85 172 PKPbc **PKPab** **01 08 28.1 -0.1**
comp=Z,4.8nm,0.5s,baz=188,slow=2.1,SNR=16
JTS Las Juntas de 147.82 83 **PKiKP** **01 08 34.5 -0.9**
PB11 IPOC Station P 147.90 148 **PKPbc** **01 08 34.6 +0.8**
LPAZ La Paz 151.57 147 PKPbc **PKiKP** **01 08 43.8 0.0**
comp=Z,3.3nm

*IDC **25** 01:15:23.8±1.8, 4°.21N×94°.37E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.5/41, mbtmp3.7/7, ML4.1/2, Error ellipse: s-maj=71.8km s-min=21.2km az=52.0*

ISC 25 01:15:31.1±1.6, 4°.7N±0°.2×95°.0E±0°.2, h35km, n10, σ1$=40/8, mb3.6/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PSI	**Prapat**	**4.39**	**115**	Pn	**Pn**	**01**	**16**	**37.6**	**+2.3**
	1.2nm,0.3s,baz=0.3,slow=14,SNR=4.8								
PSI				Sn	**Sn**	**01**	**17**	**23.5**	**-1.8**
	1.1nm,0.3s,baz=180,slow=22,SNR=2.5								
CMAR	**Chiang Mai Arr**	**14.23**	**16**	Pn	**P**	**01**	**18**	**57.0**	**-0.1**
	1.0nm,0.3s,baz=214,slow=12,SNR=4.9								
H08S2	**Diego Garcia H**	**25.54**	**241**	T	T	01	48	10.9	
	baz=62,slow=76,SNR=12								
H08S3	**Diego Garcia H**	**25.54**	**241**	T	T	01	48	08.4	
	baz=62,slow=76,SNR=9.5								
H08S1	**Diego Garcia H**	**25.55**	**241**	T	T	01	48	09.2	
	baz=62,slow=76,SNR=8.2								
MKAR	**Makanchi Array**	**43.35**	**347**	P	**P**	**01**	**23**	**29.9**	**-0.1**
	0.7nm,0.6s,baz=162,slow=8.2,SNR=8.3								
WRA	**Warramunga Arr**	**45.80**	**124**	P	**P**	**01**	**23**	**49.5**	**-0.4**
	0.4nm,0.7s,baz=283,slow=8.3,SNR=2.3								
ASAR	**Alice Springs**	**47.29**	**128**	P	**P**	**01**	**24**	**00.5**	**-1.1**
	0.2nm,0.4s,baz=299,slow=7.9,SNR=6.8								
ZALV	**Zalesovo Beam**	**49.80**	**352**	P	**P**	**01**	**24**	**20.3**	**0.0**
	0.6nm,0.4s,baz=165,slow=6.0,SNR=2.3								
FINES	**FINESS Array B**	**75.89**	**332**	P	**P**	**01**	**27**	**13.8**	**-0.1**
	0.7nm,0.7s,baz=110,slow=8.3,SNR=5.4								

*JMA **25** 01:24:48.8±0.3, 23°.93N×122°.42E, h18km±5km, M3.2*
*TAP **25** 01:24:49.6, 23°.99N×122°.41E, h27km, ML3.7, D*

ISC 25 01:24:49.0±1.3, 23°.94N±0°.02×122°.42E±0°.02, h21km±4km, n120, σ1$00/220, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
JYNG	**Yonaguni jima**	**0.70**	**43**	P	**Pb**	**01**	**25**	**02.4**	**-0.2**
JYNG				S	**Sb**	**01**	**25**	**10.6**	**-1.3**
HWA	**Hwalien**	**0.75**	**273**	P	**Pb**	**01**	**25**	**03.8**	**+0.4**
	baz=256								
HWA				*i* S	**Sn**	**01**	**25**	**15.2**	**+0.1**
	baz=256								
YOJ	**Yonaguni jima**	**0.75**	**46**	P	**Pb**	**01**	**25**	**03.2**	**-0.2**
YOJ				S	**Sb**	**01**	**25**	**12.3**	**-0.9**
YOJ	**Yonaguni jima**	**0.75**	**46**	P	**Pb**	**01**	**25**	**03.5**	**+0.1**
	baz=57								
YOJ				S	**Sb**	**01**	**25**	**12.5**	**-0.8**
	baz=57								
TWD	**Chiawan**	**0.77**	**281**	*i* P	**Pb**	**01**	**25**	**03.5**	**-0.1**
	baz=277								
TWD				*i* S	**Sb**	**01**	**25**	**14.1**	**+0.4**
	baz=277								
EWUT	**Wuta**	**0.78**	**311**	*i* P	**Pb**	**01**	**25**	**03.5**	**-0.4**
	baz=308								
EWUT				*i* S	**Sn**	**01**	**25**	**14.7**	**-1.1**
	baz=308								
NACB	**Ninganchiao**	**0.79**	**288**	P	**Pb**	**01**	**25**	**03.9**	**-0.2**
	baz=270								
NACB				S	**Sb**	**01**	**25**	**14.6**	**+0.3**
	baz=270								
TWC	**Suao**	**0.85**	**322**	*i* P	**Pb**	**01**	**25**	**04.4**	**-0.7**
	baz=320								
TWC				*i* S	**Sb**	**01**	**25**	**15.3**	**-0.8**
	baz=320								
ETLH	**Xiulin Townshi**	**0.90**	**288**	P	**Pb**	**01**	**25**	**05.7**	**-0.3**
	baz=273								
ETLH				S	**Sn**	**01**	**25**	**18.8**	**-0.2**
	baz=273								
ESL	**Shilin**	**0.91**	**263**	*i* P	**Pb**	**01**	**25**	**05.2**	**-1.0**
	baz=249								
ESL				S	**Sb**	**01**	**25**	**17.7**	**-0.1**
	baz=249								
EGFH	**Guangfu**	**0.95**	**254**	*e*P	**Pb**	**01**	**25**	**06.7**	**-0.1**
	baz=250								
EGFH				*e*S	**Sb**	**01**	**25**	**19.1**	**+0.3**
	baz=250								
NDS	**Dongshan**	**0.95**	**317**	*i* P	**Pb**	**01**	**25**	**06.2**	**-0.5**
	baz=315								
NDS				S	**Sb**	**01**	**25**	**18.1**	**-0.8**
	baz=315								
EGS		**1.01**	**334**	*i* P	**Pn**	**01**	**25**	**08.2**	**+0.2**
	baz=324								
EGS				*i* S	**Sn**	**01**	**25**	**22.1**	**+0.6**
	baz=324								
HGSD	**Ruisui**	**1.01**	**244**	P	**Pn**	**01**	**25**	**07.0**	**-1.1**
	baz=241								
HGSD				*e*S	**Sb**	**01**	**25**	**19.7**	**-1.1**
	baz=241								
TWE	**Neicheng**	**1.04**	**319**	*i* P	**Pb**	**01**	**25**	**08.6**	**+0.3**
	baz=317								
TWE				*e*S	**Sn**	**01**	**25**	**22.0**	**-0.3**
	baz=317								
ENTT	**Nioudou**	**1.05**	**312**	*i* P	**Pb**	**01**	**25**	**08.4**	**-0.1**
	baz=294								
ENTT				*i* S	**Sn**	**01**	**25**	**22.2**	**-0.3**
	baz=294								
NDT	**Datong Townshi**	**1.06**	**309**	P	**Pb**	**01**	**25**	**08.7**	**0.0**
	baz=306								
NDT				S	**Sn**	**01**	**25**	**23.2**	**+0.3**
	baz=306								
NTC	**Toucheng**	**1.06**	**330**	P	**Pb**	**01**	**25**	**09.0**	**+0.3**
	baz=328								
NTC				S	**Sb**	**01**	**25**	**21.5**	**-0.6**
	baz=328								
NNSB	**Datong**	**1.07**	**298**	P	**Pn**	**01**	**25**	**08.6**	**-0.3**
	baz=284								
NNSH	**Datong**	**1.07**	**298**	*i* P	**Pb**	**01**	**25**	**08.9**	**+0.1**
	baz=284								
WHF	**Hehuan Shan**	**1.08**	**281**	*i* P	**Pn**	**01**	**25**	**08.6**	**-0.7**
	baz=265								
WHF				*i* S	**Sb**	**01**	**25**	**22.8**	**-0.2**
	baz=265								
NNS	**Nan Shan**	**1.08**	**298**	*i* P	**Pn**	**01**	**25**	**08.9**	**-0.2**
	baz=282								
NNS				*i* S	**Sb**	**01**	**25**	**22.5**	**-0.3**
	baz=282								
FUSS	**Fushou**	**1.12**	**286**	*i* P	**Pn**	**01**	**25**	**09.7**	**-0.1**
	baz=283								
FUSS				S	**Sn**	**01**	**25**	**25.7**	**+1.1**
	baz=283								
OWD	**Renai**	**1.14**	**271**	P	**Pn**	**01**	**25**	**09.5**	**-0.4**
	baz=267								
OWD				S	**Sb**	**01**	**25**	**23.9**	**-0.6**
	baz=267								
TWB1	**Santiao Chiao**	**1.14**	**340**	*i* P	**Pn**	**01**	**25**	**09.6**	**-0.2**
	baz=356								
TWB1				S	**Sn**	**01**	**25**	**25.8**	**+1.0**
	baz=356								
CHGB	**Renai**	**1.15**	**276**	P	**Pn**	**01**	**25**	**09.7**	**-0.4**
	baz=262								
CHGB				S	**Sn**	**01**	**25**	**25.4**	**+0.1**
	baz=262								
YULB	**Yu-li**	**1.16**	**243**	P	**Pn**	**01**	**25**	**09.9**	**-0.2**
	baz=239								
YULB				S	**Sn**	**01**	**25**	**24.6**	**-0.8**
	baz=239								
TIPB	**Shuangxi**	**1.17**	**332**	*i* P	**Pb**	**01**	**25**	**10.2**	**-0.3**
	baz=331								
TIPB				*i* S	**Sn**	**01**	**25**	**25.6**	**+0.1**
	baz=331								
EYUL	**Yuli**	**1.17**	**240**	P	**Pn**	**01**	**25**	**09.9**	**-0.3**
	baz=237								
EYUL				S	**Sn**	**01**	**25**	**25.2**	**-0.3**
	baz=237								
TWF1	**Yuli**	**1.18**	**241**	P	**Pn**	**01**	**25**	**10.1**	**-0.3**
	baz=237								
TWF1				S	**Sn**	**01**	**25**	**25.4**	**-0.5**
	baz=237								
NWLT	**Wulai**	**1.19**	**315**	P	**Pn**	**01**	**25**	**09.3**	**-1.1**
	baz=313								
NWLT				S	**Sb**	**01**	**25**	**24.7**	**-1.0**
	baz=313								
VWDT	**VWDT**	**1.19**	**261**	P	**Pn**	**01**	**25**	**10.5**	**+0.1**
	baz=258								
VWDT				S	**Sn**	**01**	**25**	**25.2**	**-0.7**
	baz=258								
TDCB	**Techi**	**1.20**	**286**	P	**Pn**	**01**	**25**	**10.4**	**-0.3**
	baz=272								
YHNB	**Yeheng**	**1.20**	**308**	P	**Pn**	**01**	**25**	**10.8**	**0.0**
	baz=305								
YHNB				S	**Sb**	**01**	**25**	**26.6**	**+0.3**
	baz=305								
IRIF	**Iriomote-Funau**	**1.26**	**71**	P	**Pb**	**01**	**25**	**12.3**	**+0.2**
IRIF				*e*S	**Sb**	**01**	**25**	**28.9**	**+1.0**
FULB	**Fuli**	**1.27**	**235**	P	**Pn**	**01**	**25**	**11.2**	**-0.4**
	baz=232								
HATJ	**Hateruma jima**	**1.27**	**84**	P	**Pn**	**01**	**25**	**12.0**	**+0.4**
HATJ				*e*S	**Sb**	**01**	**25**	**29.0**	**+0.8**
NWF	**Wu-fen Shan**	**1.27**	**333**	*i* P	**Pn**	**01**	**25**	**11.7**	**0.0**
	baz=331								
NWF				*i* S	**Sb**	**01**	**25**	**28.2**	**-0.1**
	baz=331								
WFSB	**Wu-fen Shan**	**1.27**	**333**	*i* P	**Pn**	**01**	**25**	**11.3**	**-0.3**
	baz=331								
WFSB				S	**Sb**	**01**	**25**	**28.2**	**0.0**
	baz=331								
CHKT	**Chengkung**	**1.28**	**230**	*e*P	**Pn**	**01**	**25**	**11.6**	**0.0**
	baz=227								
CHKT				*e*S	**Sn**	**01**	**25**	**26.1**	**-2.0**
	baz=227								
TWA	**Mucha**	**1.29**	**324**	*i* P	**Pb**	**01**	**25**	**13.3**	**+0.7**
	baz=322								
TWA				*e*S	**Sb**	**01**	**25**	**31.9**	**+3.2**
	baz=322								
NHDH	**Xindian Distri**	**1.31**	**322**	*i* P	**Pb**	**01**	**25**	**13.1**	**+0.2**
	baz=319								
NHDH				S	**Sb**	**01**	**25**	**29.9**	**+0.6**
	baz=319								
TATO	**Taipei**	**1.34**	**321**	P	**Pb**	**01**	**25**	**13.8**	**+0.3**
	baz=302								
TATO				S	**Sb**	**01**	**25**	**31.3**	**+1.1**
	baz=302								
WPL	**Puli Township**	**1.34**	**274**	*e*P	**Pb**	**01**	**25**	**13.5**	**+0.1**
	baz=261								
WPL				S	**Sb**	**01**	**25**	**30.0**	**-0.2**
	baz=261								
TNOU	**National Taiwa**	**1.35**	**334**	P	**Pb**	**01**	**25**	**13.2**	**-0.3**
	baz=333								
TNOU				S	**Sn**	**01**	**25**	**29.6**	**-0.3**
	baz=333								
SSLB	**Suanglung**	**1.35**	**264**	*e*P	**Pn**	**01**	**25**	**10.8**	**-2.0**
	baz=261								
SSLB				S	**Sn**	**01**	**25**	**29.0**	**-1.0**
	baz=261								
DPDB	**Guoxing**	**1.37**	**274**	P	**Pb**	**01**	**25**	**13.8**	**-0.2**
	baz=272								
BACT	**New Taipei Cit**	**1.38**	**320**	*e*P	**Pb**	**01**	**25**	**14.7**	**+0.5**
	baz=318								
BACT				*e*S	**Sn**	**01**	**25**	**27.5**	**-3.3**
	baz=318								
WHP	**Taichung City**	**1.39**	**285**	*e*P	**Pb**	**01**	**25**	**15.3**	**+0.9**
	baz=270								
WHP				*e*S	**Sb**	**01**	**25**	**33.5**	**+1.9**
	baz=270								
SMLT	**Sun Moon Lake**	**1.39**	**268**	P	**Pn**	**01**	**25**	**13.9**	**+0.5**
	baz=265								
SMLT				*e*S	**Sb**	**01**	**25**	**32.2**	**+0.5**
	baz=265								
EDH	**Donghe**	**1.40**	**227**	P	**Pn**	**01**	**25**	**12.7**	**-0.7**
	baz=216								
EDH				*e*S	**Sn**	**01**	**25**	**28.8**	**-2.5**
	baz=216								
TYC	**Yuchr**	**1.43**	**269**	*i* P	**Pn**	**01**	**25**	**14.0**	**+0.2**
	baz=266								
TYC				S	**Sb**	**01**	**25**	**32.6**	**-0.2**
	baz=266								
WHYT	**Xinyi Township**	**1.46**	**261**	*e*P	**Pb**	**01**	**25**	**16.1**	**+0.7**
	baz=246								
WHYT				*e*S	**Sb**	**01**	**25**	**35.1**	**+1.6**
	baz=246								
YM08	**YM08**	**1.46**	**329**	P	**Pn**	**01**	**25**	**14.6**	**+0.4**
	baz=327								
YM08				*e*S	**Sb**	**01**	**25**	**34.0**	**+0.4**
	baz=327								
NSTT	**Nanjuang**	**1.47**	**298**	*i* P	**Pb**	**01**	**25**	**15.5**	**-0.2**
	baz=283								
NSTT				*i* S	**Sb**	**01**	**25**	**34.4**	**+0.5**
	baz=283								
TWS1	**Kuangyinshan**	**1.48**	**322**	P	**Pb**	**01**	**25**	**15.4**	**-0.4**
	baz=337								
JKRS	**Kuro-shima**	**1.48**	**78**	P	**Pb**	**01**	**25**	**15.6**	**-0.3**
JKRS				S	**Sb**	**01**	**25**	**34.7**	**+0.4**
ELDTW	**Lidau**	**1.49**	**240**	P	**Pn**	**01**	**25**	**13.4**	**-1.2**
	baz=237								
ELDTW				S	**Sn**	**01**	**25**	**32.6**	**-0.9**
	baz=237								
ANP	**Anpu**	**1.49**	**327**	*i* P	**Pb**	**01**	**25**	**15.7**	**-0.4**
	baz=325								
LDUT	**Ludao**	**1.53**	**215**	P	**Pn**	**01**	**25**	**14.3**	**-0.8**
	baz=213								
LDUT				*e*S	**Sn**	**01**	**25**	**31.1**	**-3.3**
	baz=213								
TWY	**Chenhua**	**1.53**	**331**	*e*P	**Pb**	**01**	**25**	**16.6**	**-0.1**
	baz=329								
TWY				S	**Sb**	**01**	**25**	**35.1**	**-0.5**
	baz=329								
ALS	**Alishan**	**1.54**	**254**	P	**Pn**	**01**	**25**	**16.1**	**+0.6**
	baz=251								
ALS				S	**Sn**	**01**	**25**	**35.0**	**0.0**
	baz=251								
WJS	**Zhushan**	**1.55**	**266**	*e*P	**Pb**	**01**	**25**	**18.5**	**+1.4**
	baz=263								
WJS				S	**Sb**	**01**	**25**	**38.1**	**+1.8**
	baz=263								
TWQ1	**Liyutan**	**1.56**	**286**	P	**Pb**	**01**	**25**	**16.8**	**-0.4**
	baz=282								
TWQ1				S	**Sb**	**01**	**25**	**37.4**	**+0.9**
	baz=282								
LONT	**Longtian**	**1.57**	**229**	*e*P	**Pn**	**01**	**25**	**15.6**	**-0.1**
	baz=241								
LONT				S	**Sn**	**01**	**25**	**35.3**	**-0.1**
	baz=241								
WWF	**Wufeng**	**1.58**	**274**	P	**Pb**	**01**	**25**	**18.2**	**+0.7**
	baz=266								
WWF				S	**Sb**	**01**	**25**	**39.4**	**+2.3**
	baz=266								
WNT	**Mingjian**	**1.59**	**268**	P	**Pb**	**01**	**25**	**18.3**	**+0.6**
	baz=265								
WNT				S	**Sb**	**01**	**25**	**38.2**	**+0.8**
	baz=265								
WNT1	**Nantou City**	**1.59**	**269**	P	**Pb**	**01**	**25**	**18.2**	**+0.4**
	baz=266								
WNT1				S	**Sb**	**01**	**25**	**38.0**	**+0.5**
	baz=266								
TCU	**Taichung**	**1.61**	**278**	P	**Pb**	**01**	**25**	**18.2**	**+0.1**
	baz=274								
TCU				*e*S	**Sb**	**01**	**25**	**39.5**	**+1.6**
	baz=274								
JIJ	**Ishigaki jima**	**1.63**	**74**	P	**Pn**	**01**	**25**	**16.7**	**+0.2**
JIJ				*e*S	**Sn**	**01**	**25**	**37.6**	**+0.7**
CHN5	**Tsauling**	**1.63**	**258**	P	**Pb**	**01**	**25**	**18.4**	**-0.1**
	baz=245								
CHN5				S	**Sb**	**01**	**25**	**38.6**	**0.0**
	baz=245								
TWGBT	**Beinan**	**1.66**	**228**	P	**Pn**	**01**	**25**	**16.4**	**-0.5**
	baz=239								
TWGBT				*e*S	**Sn**	**01**	**25**	**36.5**	**-1.2**
	baz=239								
STYH	**Taoyuan**	**1.69**	**244**	P	**Pn**	**01**	**25**	**18.3**	**+0.9**
	baz=232								
STYH				S	**Sn**	**01**	**25**	**39.5**	**+1.1**
	baz=232								
STYT	**Tauyuan**	**1.71**	**244**	P	**Pn**	**01**	**25**	**18.5**	**+0.8**
	baz=231								
STYT				S	**Sn**	**01**	**25**	**40.0**	**+1.1**
	baz=231								
WCHH	**Zhanghua**	**1.71**	**275**	P	**Pb**	**01**	**25**	**19.6**	**-0.2**
	baz=272								
WCHH				*e*S	**Sb**	**01**	**25**	**42.7**	**+1.9**
	baz=272								
PCYT	**Pengchaiyu**	**1.72**	**349**	P	**Pn**	**01**	**25**	**17.9**	**+0.2**
	baz=333								
PCYT				*e*S	**Sn**	**01**	**25**	**39.1**	**+0.1**
	baz=333								
WGK	**Gukeng**	**1.72**	**262**	P	**Pb**	**01**	**25**	**20.1**	**+0.2**
	baz=259								
WGK				*e*S	**Sb**	**01**	**25**	**44.3**	**+3.2**
	baz=259								
WDLH	**Douliu**	**1.74**	**262**	P	**Pb**	**01**	**25**	**19.8**	**-0.5**
	baz=259								
WDLH				S	**Sb**	**01**	**25**	**42.2**	**+0.5**
	baz=259								
TPUB	**Ta-pu**	**1.76**	**249**	*e*P	**Pn**	**01**	**25**	**19.0**	**+0.7**
	baz=246								
TPUB				*e*S	**Sb**	**01**	**25**	**42.6**	**+0.3**
	baz=246								
WTP	**Ta-pu**	**1.79**	**248**	*e*P	**Pb**	**01**	**25**	**21.2**	**0.0**
	baz=235								
WTP				*e*S	**Sb**	**01**	**25**	**45.4**	**+2.1**
	baz=235								
JISG	**Ishigakijimahi**	**1.84**	**69**	P	**Pn**	**01**	**25**	**19.6**	**+0.2**
JISG				S	**Sn**	**01**	**25**	**41.8**	**-0.3**
WRL	**Guolierlin Hig**	**1.87**	**269**	P	**Pb**	**01**	**25**	**21.9**	**-0.6**
	baz=280								
WRL				S	**Sb**	**01**	**25**	**45.6**	**+0.2**
	baz=280								
WTK	**Tuku**	**1.88**	**263**	P	**Pb**	**01**	**25**	**21.9**	**-0.7**
	baz=260								
WTK				S	**Sb**	**01**	**25**	**45.7**	**+0.1**
	baz=260								
SLGT	**Liugui**	**1.88**	**240**	*e*P	**Pb**	**01**	**25**	**22.7**	**0.0**
	baz=230								
SLGT				*e*S	**Sb**	**01**	**25**	**45.9**	**+0.2**
	baz=230								
CHY	**Chiayi**	**1.88**	**257**	*e*P	**Pb**	**01**	**25**	**24.5**	**+1.9**
	baz=254								
CHY				S	**Sb**	**01**	**25**	**45.4**	**-0.3**
	baz=254								
SGST	**Jiashian**	**1.89**	**244**	P	**Pn**	**01**	**25**	**21.6**	**+1.5**
	baz=232								
SGST				S	**Sb**	**01**	**25**	**46.1**	**+0.2**
	baz=232								
CHN1	**Nanshi**	**1.89**	**247**	P	**Pb**	**01**	**25**	**22.5**	**-0.4**
	baz=244								
CHN1				*e*S	**Sb**	**01**	**25**	**47.0**	**+0.9**
	baz=244								
ECL	**Taimali**	**1.90**	**226**	*e*P	**Pn**	**01**	**25**	**20.5**	**+0.4**
	baz=235								
SNST	**Tainan City**	**1.90**	**248**	*e*P	**Pb**	**01**	**25**	**23.0**	**0.0**
	baz=246								
SNST				*e*S	**Sb**	**01**	**25**	**47.7**	**+1.4**
	baz=246								
WTCT	**Ta-ch'eng**	**1.96**	**268**	S	**Sb**	**01**	**25**	**48.4**	**+0.4**
	baz=278								
SSD	**Sandimen**	**2.03**	**235**	*e*P	**Pb**	**01**	**25**	**24.6**	**-0.5**
	baz=227								
SSD				*e*S	**Sb**	**01**	**25**	**49.4**	**-0.6**
	baz=227								
WSF	**Szhu**	**2.04**	**262**	*e*S	**Sb**	**01**	**25**	**50.3**	**+0.2**
	baz=259								
TSMG	**Majia**	**2.04**	**233**	*e*P	**Pb**	**01**	**25**	**25.4**	**0.0**
	baz=226								
TSMG				*e*S	**Sn**	**01**	**25**	**48.6**	**+1.6**
	baz=226								
ICHU	**Yijhu**	**2.04**	**254**	P	**Pn**	**01**	**25**	**23.9**	**+1.6**
	baz=251								
ICHU				S	**Sn**	**01**	**25**	**48.7**	**+1.6**
	baz=251								
LAY	**Lan-yu**	**2.05**	**203**	P	**Pn**	**01**	**25**	**21.7**	**-0.6**
	baz=203								
LAY				*e*S	**Sn**	**01**	**25**	**44.8**	**-2.5**
	baz=203								
SCST	**Cishan**	**2.06**	**240**	P	**Pb**	**01**	**25**	**24.8**	**-0.8**
	baz=226								
SCST				S	**Sb**	**01**	**25**	**52.4**	**+1.6**
	baz=226								
MASBT	**Mashibuluo**	**2.11**	**232**	P	**Pn**	**01**	**25**	**24.0**	**+0.9**
	baz=224								
MASBT				*e*S	**Sb**	**01**	**25**	**52.0**	**-0.2**
	baz=224								
CHN8	**Yiju**	**2.11**	**254**	*e*S	**Sb**	**01**	**25**	**51.1**	**-1.2**
	baz=251								
SCLT	**Jiali**	**2.18**	**250**	*e*P	**Pb**	**01**	**25**	**27.1**	**-0.6**
	baz=247								
SCLT				S	**Sb**	**01**	**25**	**53.1**	**-1.2**
	baz=247								
JTJ	**Tarama**	**2.20**	**71**	S	**Sn**	**01**	**25**	**52.4**	**+1.5**
SSPT	**Xinbi**	**2.23**	**230**	*e*P	**Pb**	**01**	**25**	**27.8**	**-0.8**
	baz=223								
SSPT				*e*S	**Sb**	**01**	**25**	**54.8**	**-1.1**
	baz=223								
SLIU	**Shizi**	**2.27**	**221**	*e*P	**Pn**	**01**	**25**	**27.6**	**+2.3**
	baz=229								
SLIU				*e*S	**Sn**	**01**	**25**	**51.4**	**-1.3**
	baz=229								
SCZT	**Fangliau**	**2.27**	**227**	*e*P	**Pb**	**01**	**25**	**28.1**	**-1.3**
	baz=219								
SCZT				*e*S	**Sn**	**01**	**25**	**54.7**	**+2.0**
	baz=219								
WLCH	**Liuqiu**	**2.45**	**230**	*e*P	**Pn**	**01**	**25**	**30.1**	**+2.3**
	baz=244								
TSEB	**Hengchuen, Pin**	**2.46**	**215**	*e*P	**Pb**	**01**	**25**	**31.7**	**-0.9**
	baz=223								
TSEB				*e*S	**Sn**	**01**	**25**	**59.4**	**+1.9**
	baz=223								
HEN	**Hengchun**	**2.47**	**219**	*e*P	**Pn**	**01**	**25**	**30.6**	**+2.6**
	baz=218								
HEN				S	**Sn**	**01**	**25**	**58.4**	**+0.8**
	baz=218								
TWKBT	**Hengchun**	**2.48**	**217**	P	**Pn**	**01**	**25**	**28.7**	**+0.5**
	baz=216								
TWKBT				S	**Sn**	**01**	**25**	**57.4**	**-0.4**
	baz=216								
TWK1	**Hengchun**	**2.48**	**217**	P	**Pn**	**01**	**25**	**29.9**	**+1.7**
	baz=216								
TWK1				*e*S	**Sn**	**01**	**25**	**57.0**	**-0.9**
	baz=216								
WDGT	**Dungji**	**2.62**	**256**	P	**Pn**	**01**	**25**	**31.3**	**+1.2**
	baz=253								
WDGT				S	**Sn**	**01**	**26**	**02.0**	**+0.7**
	baz=253								
PNG	**Penghu**	**2.65**	**263**	*i* P	**Pn**	**01**	**25**	**31.6**	**+1.1**
	baz=260								
PNG				S	**Sn**	**01**	**26**	**03.0**	**+0.9**
	baz=260								
VCHM	**Qimei**	**2.84**	**256**	P	**Pn**	**01**	**25**	**33.9**	**+0.7**
	baz=253								
VCHM				S	**Sn**	**01**	**26**	**06.9**	**+0.2**
	baz=253								
VWUC	**VWUC**	**2.90**	**292**	*e*P	**Pn**	**01**	**25**	**33.6**	**-0.4**
	baz=288								
VWUC				*e*S	**Sn**	**01**	**26**	**05.6**	**-2.7**
	baz=288								
PTMZ	**Houxiangcun**	**3.20**	**291**	*e*P	**Pn**	**01**	**25**	**37.4**	**-0.7**
	baz=286								
PTMZ				*e*S	**Sn**	**01**	**26**	**14.2**	**-1.5**
	baz=286								
LYJJ	**Jianjiangzhen**	**3.55**	**318**	*e*P	**Pn**	**01**	**25**	**42.4**	**-0.5**
	baz=315								
XPSS	**Dashiqiu**	**3.60**	**326**	*e*P	**Pn**	**01**	**25**	**43.4**	**-0.2**
	baz=334								
KNM	**Kinmen**	**3.67**	**278**	*e*P	**Pn**	**01**	**25**	**46.3**	**+1.7**
	baz=277								
KNMB	**Chin-men Tao**	**3.72**	**279**	*e*P	**Pn**	**01**	**25**	**44.9**	**-0.3**
	baz=277								
MHZQ	**Yeshan**	**3.76**	**306**	*e*P	**Pn**	**01**	**25**	**45.4**	**-0.4**
	baz=303								
AXDP	**Jialang**	**4.17**	**284**	*i* P	**Pn**	**01**	**25**	**51.6**	**+0.2**
	baz=282								
ZPLA	**Ao Xicun**	**4.27**	**271**	P	**Pn**	**01**	**25**	**53.1**	**+0.2**
	baz=270								

*LDG **25** 02:00:44.7±0.1, 38°.55N×12°.75E, h10km, Error

IACL	**Alicudi**	**1.12 86**	P	**Pn**	**02 01 06.5**	**-1.4**
PETRA	**Petralia Sopra**	**1.13 124**	P	**Pn**	**02 01 07.5**	**-0.7**
RESU	**Resuttano**	**1.22 132**	P	**Pb**	**02 01 10.1**	**+0.7**
RESU			AML	AML		
	comp=N,392μm,0.6s					
RESU			AML	AML		
	comp=E,425μm,0.6s					
IFIL	**Filicudi i Eol**	**1.29 85**	P	**Pn**	**02 01 08.8**	**-1.4**
MSFR	**San Fratello**	**1.38 108**	P	**Pn**	**02 01 10.3**	**-1.1**
GALF	**Gagliano Caste**	**1.50 120**	P	**Pn**	**02 01 14.2**	**+1.1**
GALF			AML	AML		
	comp=E,228μm,0.6s					
GALF			AML	AML		
	comp=N,154μm,0.7s					
CAGR	**Agira**	**1.50 124**	P	**Pb**	**02 01 15.5**	**+1.2**
CAGR			AML	AML		
	comp=N,314μm,0.6s					
CAGR			AML	AML		
	comp=E,345μm,0.6s					
EPZF	**Pizzo Felice**	**1.66 112**	P	**Pn**	**02 01 16.1**	**+0.8**
EPZF			AML	AML		
	comp=E,446μm,1.2s					
EPZF			AML	AML		
	comp=N,406μm,0.9s					
RAFF	**Raffo Rosso**	**1.69 137**	P	**Pn**	**02 01 16.6**	**+1.0**
RAFF			AML	AML		
	comp=N,148μm,1.6s					
RAFF			AML	AML		
	comp=E,152μm,0.6s					
HLNI	**Lentini**	**1.91 125**	P	**Pn**	**02 01 19.0**	**+0.5**
HLNI			AML	AML		
	comp=E,75μm,0.7s					
HLNI			AML	AML		
	comp=N,84μm,0.6s					
MEU	**Monte Lauro**	**2.10 130**	P	**Pn**	**02 01 21.2**	**-0.1**
MEU			AML	AML		
	comp=N,285μm,1.1s					
MEU			AML	AML		
	comp=E,202μm,0.6s					
HMDC	**Modica**	**2.11 135**	P	**Pn**	**02 01 21.4**	**-0.1**
HAGA	**Augusta**	**2.12 123**	P	**Pn**	**02 01 22.0**	**+0.4**
SSY	**Sortino**	**2.15 127**	P	**Pn**	**02 01 22.3**	**+0.3**
SSY			AML	AML		
	comp=E,145μm,1.6s					
SSY			AML	AML		
	comp=N,220μm,0.3s					
PGF	**Pioggiola**	**5.05 325**	*e*P	**Pn**	**02 02 01.3**	**-0.6**
PGF	**Pioggiola**	**5.05 325**	*e*Pg	**Pb**	**02 02 15.6**	**+0.8**
SBF	**Sospel**	**6.79 324**	*e*P	**Pn**	**02 02 25.0**	**-0.8**
SBF	**Sospel**	**6.79 324**	*e*Pg	Pb	02 02 47.8	+3.4
LMR	**La Mourre**	**6.87 317**	*e*P	**Pn**	**02 02 25.3**	**-1.5**
FRF	**La Foret Royal**	**6.95 319**	*e*P	**Pn**	**02 02 27.0**	**-1.0**
MBDF	**Montbardon**	**7.76 326**	*e*Pn	Pn	02 02 33.8	-5.4
MBDF	**Montbardon**	**7.76 326**	*e*P	**Pn**	**02 02 38.4**	**-0.8**
LPL	**La Plagne**	**8.41 329**	*e*Pn	Pn	02 02 42.0	-6.2
LPL	**La Plagne**	**8.41 329**	*e*P	**Pn**	**02 02 48.9**	**+0.7**

DSN ***25*** *02:41:09.3±1.2,28°.23N×55°.44E,h10km,ML4.3/9,Error ellipse: s-maj=16.8km s-min=5.1km az=42.0*
IDC ***25*** *02:41:10.9±0.7,27°.81N×55°.36E,h0km,mb3.8/18, mb1 3.9/21,mb1mx3.8/55,mbtmp3.8/21,ML3.7/3,MS2.9/2, Ms1 2.9/2,ms1mx2.4/56,Error ellipse: s-maj=17.3km s-min=16.0km az=151.0*
THR ***25*** *02:41:12.9±0.6,27°.73N×55°.34E,h15km,ML3.8*
TEH ***25*** *02:41:13.2,27°.81N×55°.40E,h8km,ML3.9*
OMAN ***25*** *02:41:16.4,27°.68N×55°.28E,h18km,mb5.3/3,ml3.8/15*
ISC 25 02:41:14.5±1.2,27°.84N±0°.03×55°.39E±0°.03,h22km±10km, n114,σ1§91/122,mb3.7/21,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.82**	**122**	*e*Pg	**Pb**	**02 41 29.1**	**-1.1**
LAR1	**LAR**	**0.92**	**260**	*e*Pg	**Pb**	**02 41 31.4**	**-0.3**
JHRM	**Jahrom**	**1.73**	**293**	*e*Pg	**Pb**	**02 41 45.7**	**0.0**
SHME	**Shamm**	**1.90**	**159**	*e*P	**Pn**	**02 41 45.9**	**+0.3**
	SNR=6.1						
SHME				S	**Sb**	**02 42 15.0**	**+3.2**
SHME	**Shamm**	**1.90**	**159**	*e*Pn	**Pn**	**02 41 46.4**	**+0.8**
SHME	**Shamm**	**1.90**	**159**	P	**Pb**	**02 41 47.0**	**-1.5**
	SNR=6.1						
SHME				S	**Sb**	**02 42 11.0**	**-0.8**
LMD1	**Lamerd**	**2.04**	**256**	*e*Pn	**Pb**	**02 41 50.6**	**-0.2**
KHNJ	**Kahnooj**	**2.05**	**86**	*e*Pn	**Pn**	**02 41 49.1**	**+1.4**
BANOM	**Banah**	**2.07**	**157**	*e*P	**Pn**	**02 41 49.0**	**+1.0**
	SNR=44						
BANOM				S	**Sb**	**02 42 20.3**	**+3.5**
BANOM	**Banah**	**2.07**	**157**	*e*Pn	**Pn**	**02 41 49.0**	**+1.0**
BANOM	**Banah**	**2.07**	**157**	P	**Pn**	**02 41 49.0**	**+1.0**
	SNR=44						
BANOM				S	**Sb**	**02 42 14.7**	**-2.0**
NGRK	**Negar Kerman**	**2.15**	**33**	*e*Pn	**Pb**	**02 41 51.5**	**-1.5**
QIR1	**Qir**	**2.17**	**288**	*e*Pn	**Pb**	**02 41 52.0**	**-1.1**
KRBR	**Kerman**	**2.45**	**29**	*e*Pn	**Pb**	**02 41 56.3**	**-1.8**
KRBR				IAML		02 42 36.3	
	comp=E,355nm,0.6s						
KRBR	**Kerman**	**2.45**	**29**	*e*Pn	**Pb**	**02 41 56.3**	**-1.8**
TVBK	**TV Kerman**	**2.46**	**29**	*e*Pn	**Pb**	**02 41 56.6**	**-1.5**
MASF	**Masafi**	**2.55**	**164**	P	**Pn**	**02 41 56.4**	**+1.9**
	SNR=6.9						
MSFE	**Esma-Masafi**	**2.56**	**164**	*e*P	**Pn**	**02 41 56.4**	**+1.7**
	SNR=6.9						
MSFE	**Esma-Masafi**	**2.56**	**164**	*e*Pn	**Pn**	**02 41 56.6**	**+1.9**
MDH	**Madha**	**2.66**	**162**	*i* P	**Pn**	**02 41 57.1**	**+1.1**
	SNR=7.2						
MDH	**Madha**	**2.66**	**162**	*e*Pn	**Pn**	**02 41 57.4**	**+1.5**
MDH	**Madha**	**2.66**	**162**	P	**Pn**	**02 41 57.1**	**+1.1**
	SNR=6.9						
MDH				S	**Sn**	**02 42 29.4**	**+1.9**
KHGB	**Koh Gabri**	**2.70**	**20**	*e*Pn	**Pb**	**02 42 00.0**	**-2.3**
CHMN	**Cheshme madani**	**2.76**	**43**	*e*Pn	**Pb**	**02 42 00.8**	**-2.5**
NAZ	**Nazwa, Dubai**	**2.85**	**175**	*i* P	**Pn**	**02 42 01.0**	**+2.4**
	SNR=7.7						
NAZ	**Nazwa, Dubai**	**2.85**	**175**	*e*Pn	**Pn**	**02 42 01.0**	**+2.4**
NAZ	**Nazwa, Dubai**	**2.85**	**175**	P	**Pn**	**02 41 59.9**	**+1.3**
	SNR=7.7						
UOSS	**Minazif**	**2.97**	**166**	*i* P	**Pn**	**02 42 01.6**	**+1.2**
	SNR=16						
UOSS	**Minazif**	**2.97**	**166**	*e*Pn	**Pn**	**02 42 01.5**	**+1.2**
UOSS	**Minazif**	**2.97**	**166**	P	**Pn**	**02 42 01.8**	**+1.5**
KBAM	**BAM**	**2.99**	**64**	*e*Pn	**Pn**	**02 42 03.5**	**+2.9**
HATD	**Hatta, Dubai**	**3.07**	**167**	*i* P	**Pn**	**02 42 04.0**	**+2.3**
	SNR=11						
HATD	**Hatta, Dubai**	**3.07**	**167**	*e*Pn	**Pn**	**02 42 03.5**	**+1.8**
HATD	**Hatta, Dubai**	**3.07**	**167**	P	**Pn**	**02 42 03.4**	**+1.7**
	SNR=11						
FAQ	**Al Faqa, Dubai**	**3.08**	**177**	*i* P	**Pn**	**02 42 03.4**	**+1.6**
	SNR=8.6						
FAQ	**Al Faqa, Dubai**	**3.08**	**177**	*e*Pn	**Pn**	**02 42 04.0**	**+2.1**
FAQ	**Al Faqa, Dubai**	**3.08**	**177**	P	**Pn**	**02 42 04.0**	**+2.1**
	SNR=8.5						
SHI	**Shiraz**	**3.10**	**306**	*e*Pn	**Pn**	**02 42 04.1**	**+1.9**
ASUD	**Al Ashush, Dub**	**3.20**	**181**	P	**Pn**	**02 42 06.1**	**+2.7**
ASUD	**Al Ashush, Dub**	**3.20**	**181**	*e*Pn	**Pn**	**02 42 05.9**	**+2.5**
IMEH	**Mehriz**	**3.60**	**349**	*e*Pn	**Pn**	**02 42 12.3**	**+3.1**
IBAF	**Bafgh**	**3.74**	**2**	*e*Pn	**Pn**	**02 42 13.5**	**+2.5**
SOHO	**SOHO**	**3.83**	**164**	P	**Pn**	**02 42 13.3**	**+1.2**
SOHO	**SOHO**	**3.83**	**164**	*e*Pn	**Pn**	**02 42 13.9**	**+1.8**
SOHO	**SOHO**	**3.83**	**164**	P	**Pn**	**02 42 12.8**	**+0.7**
ICHK	**Chekchek**	**4.47**	**349**	*e*Pn	**Pn**	**02 42 23.9**	**+2.7**
HOQ	**Hoqain**	**4.58**	**157**	P	**Pn**	**02 42 22.5**	**+0.1**
KLNJ	**Kolanjah**	**4.58**	**315**	*e*Pn	**Pn**	**02 42 25.1**	**+2.4**
YZKH	**Yazd**	**4.59**	**352**	*e*Pn	**Pn**	**02 42 25.7**	**+3.1**
YZKH	**Yazd**	**4.59**	**352**	*e*Pn	**Pn**	**02 42 25.7**	**+3.1**
ARQ	**Araqi**	**4.60**	**167**	P	**Pn**	**02 42 24.1**	**+1.4**
	SNR=37						
ARQ				S	**Sn**	**02 43 15.8**	**+0.3**
IRAM	**Ramesheh**	**4.74**	**327**	*e*Pn	**Pn**	**02 42 27.5**	**+2.6**
TRNA	**Turayna**	**4.86**	**231**	S	**Sn**	**02 43 20.3**	**-1.5**
BIDO	**Bidbid**	**4.96**	**150**	P	**Pn**	**02 42 28.3**	**+0.7**
	SNR=8.7						
BIDO				S	**Sn**	**02 43 25.0**	**+0.8**
ZHSF	**Zahedan**	**5.05**	**68**	*e*Pn	**Pn**	**02 42 32.0**	**+3.0**
ZHSF	**Zahedan**	**5.05**	**68**	*e*Pn	**Pn**	**02 42 32.0**	**+3.0**
CHBR	**Chabahar**	**5.07**	**115**	*e*Pn	**Pn**	**02 42 30.4**	**+1.2**
CHBR	**Chabahar**	**5.07**	**115**	*e*Pn	**Pn**	**02 42 30.4**	**+1.2**
BSRN	**Basiran**	**5.24**	**37**	*e*Pn	**Pn**	**02 42 33.9**	**+2.3**
BSRN	**Basiran**	**5.24**	**37**	*e*Pn	**Pn**	**02 42 33.9**	**+2.3**
TPRV	**Parvadeh(Tabas**	**5.29**	**12**	*e*Pn	**Pn**	**02 42 35.4**	**+3.1**
BSY	**Bisya**	**5.33**	**162**	P	**Pn**	**02 42 34.0**	**+1.2**
SMDO	**Samad**	**5.33**	**153**	P	**Pn**	**02 42 33.9**	**+1.1**
	SNR=9.7						
SMDO				S	**Sn**	**02 43 33.9**	**+0.3**
NHDN	**Nehbandan**	**5.38**	**48**	*e*Pn	**Pn**	**02 42 36.4**	**+2.8**
NASN	**Na'in**	**5.42**	**336**	*e*Pn	**Pn**	**02 42 37.0**	**+2.7**
NASN	**Na'in**	**5.42**	**336**	*e*Pn	**Pn**	**02 42 37.0**	**+2.7**
WSAR	**Wadi Sarin**	**5.43**	**147**	Pn	**Pn**	**02 42 34.7**	**+0.6**
	comp=E,7.9nm,0.3s,baz=321,slow=5.4,SNR=67						
WSAR				Sn	**Sn**	**02 43 34.5**	**-1.5**
	comp=E,3.0nm,0.3s,baz=13,slow=20,SNR=5.8						
WSAR	**Wadi Sarin**	**5.43**	**147**	P	**Pn**	**02 42 34.8**	**+0.6**
	SNR=42						
ANAR	**Anarak**	**5.52**	**345**	*e*Pn	**Pn**	**02 42 38.1**	**+2.6**
IKOO	**Kooshah**	**5.54**	**34**	*e*Pn	**Pn**	**02 42 38.6**	**+2.8**
IZEF	**Zefreh**	**5.69**	**333**	*e*Pn	**Pn**	**02 42 39.5**	**+1.6**
ITEG	**Tejag**	**5.82**	**29**	*e*Pn	**Pn**	**02 42 44.0**	**+4.4**
TKDS	**Koohdasht(Taba**	**5.95**	**14**	*e*Pn	**Pn**	**02 42 45.7**	**+4.4**
JMDO	**Jabal Madar**	**5.97**	**155**	P	**Pn**	**02 42 42.2**	**+0.6**
JMDO				S	**Sn**	**02 43 49.4**	**+0.1**
WBK	**Wadi Bani Khal**	**6.13**	**147**	P	**Pn**	**02 42 44.0**	**+0.2**
	SNR=64						
IPIR	**Pirpir**	**6.20**	**322**	*e*Pn	**Pn**	**02 42 46.6**	**+1.6**
IKLH	**Kolahrood**	**6.38**	**330**	*e*Pn	**Pn**	**02 42 51.2**	**+3.9**
AFRZ	**Afriz**	**6.38**	**28**	*e*Pn	**Pn**	**02 42 50.6**	**+3.3**
QRN	**Al-Qurain**	**6.65**	**280**	*e*P		02 42 50.3	
KRSH	**Karshahi**	**6.72**	**336**	*e*Pn	**Pn**	**02 42 54.9**	**+2.9**
RDF	**Al-Radifah**	**6.99**	**281**	*e*P		02 42 55.8	
SHRT	**Shahrakht**	**7.16**	**35**	*e*Pn	**Pn**	**02 43 01.7**	**+3.8**
SHRT	**Shahrakht**	**7.16**	**35**	*e*Pn	**Pn**	**02 43 01.4**	**+3.5**
MHTO	**MHTO**	**7.21**	**160**	P	**Pn**	**02 43 00.1**	**+1.5**
RST	**Umm Al-Ruwaisa**	**7.56**	**285**	*e*P		02 43 03.6	
DQM	**DQM**	**8.11**	**166**	P	**Pn**	**02 43 10.8**	**-0.2**
HSAM	**Samen**	**8.62**	**319**	*e*Pn	**Pn**	**02 43 18.9**	**+0.8**
IBZA	**Bozab**	**9.23**	**318**	*e*Pn	**Pn**	**02 43 28.4**	**+1.8**
RAYN	**Ar Rayn**	**9.90**	**246**	P	**Pn**	**02 43 34.2**	**-1.3**
IGHG	**Ghaleghazi**	**9.95**	**313**	*e*Pn	**Pn**	**02 43 37.2**	**+0.9**
IDHR	**Dehrash**	**10.30**	**314**	*e*Pn	**Pn**	**02 43 40.9**	**-0.2**
GNI	**Garni**	**15.11**	**327**	Pn	**P**	**02 44 51.6**	**-0.1**
	comp=E,0.3nm,0.3s,baz=140,slow=18,SNR=1.5						
MMAI	**Mount Meron Ar**	**17.99**	**292**	P	**Pn**	**02 45 20.5**	**-2.7**
	comp=E,0.3nm,0.3s,baz=312,slow=43,SNR=2.0						
EIL	**Elat**	**18.02**	**281**	LR	LR	02 52 40.6	
	comp=E,31nm,19.9s,baz=109,slow=38						
KBZ	**Khabaz**	**18.78**	**331**	P	**Pn**	**02 45 33.2**	**+0.5**
	comp=E,0.0nm,0.3s,baz=144,slow=17,SNR=1.7						
AAK	**Ala-Archa**	**21.41**	**41**	P	**P**	**02 46 02.0**	**+1.0**
	comp=E,1.1nm,0.3s,baz=228,slow=12,SNR=6.1						
BRTR	**Keskin Array B**	**21.56**	**309**	P	**P**	**02 46 03.4**	**+0.8**
	comp=E,2.0nm,0.8s,baz=133,slow=12,SNR=4.5						
BRTR				LR	LR	02 55 20.2	
	comp=E,38nm,19.1s,baz=123,slow=39						
AKTO	**Aktyubinsk**	**22.66**	**4**	P	**P**	**02 46 14.3**	**+0.4**
	comp=E,0.6nm,0.4s,baz=153,slow=14,SNR=4.8						
BVAR	**Borovoye Array**	**27.51**	**20**	P	**P**	**02 46 59.4**	**+0.2**
	comp=E,0.9nm,0.4s,baz=169,slow=17,SNR=6.0						
MKAR	**Makanchi Array**	**28.34**	**41**	P	**P**	**02 47 07.0**	**+0.3**
	comp=E,0.2nm,0.5s,baz=227,slow=6.4,SNR=4.4						
KURBB	**Kurchatov Arra**	**28.74**	**31**	P	**P**	**02 47 10.4**	**+0.2**
	comp=E,0.2nm,0.4s,baz=230,slow=9.0,SNR=1.9						
AKASG	**Malin Array Be**	**30.24**	**326**	P	**P**	02 47 30.6	+7.2
	comp=E,0.3nm,0.3s,baz=134,slow=8.2,SNR=1.9						
ZALV	**Zalesovo Beam**	**33.84**	**31**	P	**P**	**02 47 53.5**	**-1.5**
	comp=E,1.3nm,0.4s,baz=245,slow=9.8,SNR=4.8						
GERES	**GERESS Array B**	**38.23**	**315**	P	**P**	**02 48 31.3**	**-1.4**
	comp=E,0.2nm,0.4s,baz=115,slow=6.9,SNR=1.9						
FINES	**FINESS Array B**	**38.88**	**338**	P	**P**	**02 48 37.9**	**-0.1**
	comp=E,1.2nm,0.6s,baz=141,slow=9.3,SNR=7.0						
SQTA	**Sankt Quirin**	**39.40**	**312**	*i* P	**P**	**02 48 42.0**	**-0.6**
	comp=E,1.4nm,0.4s						
DAVA	**Damuels**	**40.29**	**311**	*i* P	**P**	**02 48 49.4**	**-0.7**
	comp=E,3.4nm,0.5s						
SONM	**Songino Array**	**44.05**	**49**	P	**P**	**02 49 21.2**	**+0.5**
	comp=E,0.4nm,0.6s,baz=262,slow=8.3,SNR=2.7						
NOA	**NORSAR Array B**	**44.37**	**331**	P	**P**	**02 49 21.9**	**-1.0**
	comp=E,0.5nm,0.6s,baz=117,slow=7.8,SNR=3.9						
ESDC	**Sonseca Array**	**49.93**	**300**	P	**P**	**02 50 06.7**	**+0.1**
	comp=E,1.2nm,1.2s,baz=79,slow=6.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**51.99**	**265**	P	**P**	**02 50 21.8**	**-0.6**
	comp=E,2.5nm,0.6s,baz=61,slow=7.0,SNR=21						
KSRS	**Korea Array**	**60.47**	**61**	P	**P**	**02 51 22.2**	**-0.4**
	comp=E,0.4nm,0.3s,baz=288,slow=5.0,SNR=1.3						
BOSA	**Boshof**	**63.12**	**210**	P	**P**	**02 51 40.5**	**-0.1**
	comp=E,2.8nm,0.4s,baz=32,slow=7.0,SNR=9.6						
YKA	**Yellowknife Ar**	**89.63**	**355**	P	**P**	**02 54 10.8**	**+0.7**
	comp=E,0.3nm,0.7s,baz=8.5,slow=5.1,SNR=5.8						
WRA	**Warramunga Arr**	**89.87**	**113**	P	**P**	**02 54 10.7**	**-1.3**
	comp=E,0.3nm,0.7s,baz=316,slow=4.1,SNR=4.6						
ASAR	**Alice Springs**	**91.36**	**116**	P	**P**	**02 54 18.7**	**-0.2**
	comp=E,0.6nm,0.8s,baz=301,slow=5.0,SNR=3.6						
TXAR	**Lajitas Array**	**119.72**	**339**	PKP	**PKiKP**	**03 00 05.1**	**+1.7**
	comp=E,0.2nm,0.8s,baz=32,slow=3.6,SNR=2.7						

NSSP ***25*** *03:02:30.1,41°.15N×47°.83E,h12km,Ms3.0*
MOS ***25*** *03:02:32.5±0.0,41°.18N×47°.86E,h7km,MPVA3.8*
ISC 25 03:02:33.7±2.5,41°.18N±0°.06×48°.0E±0°.1,h6km±11km,n19, σ1§55/37,1D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKT	**Akhty**	**0.37**	**325**	*i* Pg	**Pg**	**03 02 40.5**	**-0.6**
AKT				*e*Sg	**Sg**	**03 02 46.2**	**+0.2**
URKR	**Urkarakh**	**1.03**	**344**	*e*Pg	**Pb**	**03 02 52.7**	**-1.3**
URKR				*e*Sg	**Sn**	**03 03 08.0**	**-1.6**
GNBR	**Gunib**	**1.44**	**327**	*e*Pg	**Pn**	**03 02 60.0**	**-0.5**
GNBR				*e*Sg	**Sg**	**03 03 20.9**	**+0.7**
ARKR	**Arakani**	**1.62**	**332**	*e*Pg	**Pn**	**03 03 03.4**	**+0.6**
ARKR				*e*Sg	**Sg**	**03 03 26.5**	**+0.8**
BUJR	**Buynaksk**	**1.78**	**338**	*e*Pg	**Pb**	**03 03 07.2**	**+0.4**
BUJR				*e*Sg	**Sg**	**03 03 32.0**	**+1.0**
KRNR	**Karanay**	**1.84**	**334**	*e*Pg	**Pn**	**03 03 07.8**	**+1.8**
KRNR				*e*Sg	**Sg**	**03 03 33.3**	**+0.3**
DLMR	**Dylym**	**2.15**	**332**	*e*Pg	**Pn**	**03 03 12.6**	**+2.4**
DLMR				*e*Sg	**Sg**	**03 03 41.3**	**-1.7**
DVE	**Vedeno**	**2.27**	**322**	*e*Pg	**Pn**	**03 03 12.7**	**+0.9**
DVE				*e*Sg	**Sb**	**03 03 43.2**	**-0.2**
GROC	**Groznyy**	**2.61**	**322**	*e*Pn	**Pn**	**03 03 17.5**	**+1.1**
GROC				*e*Sn	**Sn**	**03 03 47.1**	**-1.3**
KAPZ	**Kaputan**	**2.66**	**252**	*e*P	**Pn**	**03 03 18.7**	**+1.4**
KAPZ				*e*S	**Sb**	**03 03 55.8**	**+1.0**
GNI	**Garni**	**2.69**	**249**	*e*P	**Pn**	**03 03 19.1**	**+1.3**
GNI				*e*S	**Sb**	**03 03 57.4**	**+1.6**
GNI	**Garni**	**2.69**	**249**	*e*Pn	**Pn**	**03 03 17.4**	**-0.3**
GNI				*e*Sn	**Sn**	**03 03 53.0**	**+2.3**
STE	**Stepanavan**	**2.76**	**268**	*i* P	**Pn**	**03 03 18.3**	**-0.3**
STE				⇓*i*S	**Sn**	**03 03 51.3**	**-1.1**
NRKZ	**NAREK**	**2.81**	**246**	*e*P	**Pn**	**03 03 20.0**	**+0.7**
NRKZ				*e*S	**Sb**	**03 03 59.0**	**-0.1**
ARUZ	**Aruch**	**3.11**	**255**	*e*P	Pn	03 03 18.2	-5.2
ARUZ				*e*S	**Sn**	**03 03 55.3**	**-5.7**
LACR	**Lac**	**3.23**	**302**	*e*Pn	**Pn**	**03 03 25.6**	**+0.6**
LACR				*e*Sn	**Sn**	**03 04 04.1**	**+0.3**
ZEI	**Tsey**	**3.46**	**299**	*e*Pn	**Pn**	**03 03 29.5**	**+1.2**
ZEI				*e*Sn	**Sn**	**03 04 10.7**	**+0.9**
ONI	**Oni**	**3.69**	**294**	*e*Pn	**Pn**	**03 03 31.3**	**0.0**
ONI				*e*Sn	**Sn**	**03 04 16.6**	**+1.5**
DIGR	**Digorskoe uzhe**	**3.73**	**299**	*e*Pn	**Pn**	**03 03 32.9**	**+0.9**
DIGR				*e*Sn	**Sn**	**03 04 14.6**	**-1.7**

DJA 25 03:04:52.8±0.4,9°.S±14°.×12°.0E±°,h88km±9km,M3.7/7, mb4.0/2,MLv3.5/7,Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.33**	**243**	P	Pn	03 05 07.4	+1.2
WBSI				S	Sn	03 05 18.7	+2.5
BASI	**Baing, Sumba**	**1.14**	**130**	P	Pn	03 05 15.0	+1.0
PLAI	**Plampang**	**2.00**	**289**	P	Pn	03 05 25.5	+0.5
PLAI				S	Sn	03 05 49.5	0.0
TWSI	**Taliwang, Sumb**	**2.87**	**285**	P	Pn	03 05 37.5	+0.9
TWSI				S	Sn	03 06 11.4	+1.1
BATI	**Baumata**	**3.98**	**101**	P	Pn	03 05 52.2	+0.6
SOEI	**Soe**	**4.52**	**94**	P	Pn	03 05 59.6	+0.6
JAGI	**Jajag, Banyuwa**	**5.56**	**280**	P	Pn	03 06 12.7	-0.4
	0.2nm42nm,1.4s						

IDC ***25*** *03:06:19.8±0.8,15°.21N×147°.47E,h0km,mb3.9/12, mb1 4.1/12,mb1mx3.9/43,mbtmp3.9/12,Error ellipse: s-maj=27.9km s-min=17.4km az=112.0*
NEIC ***25*** *03:06:20.8±1.7,15°.20N±0°.09×147°.45E±0°.09,h10km±1km, mb4.3/8,Error ellipse: s-maj=15.8km s-min=14.1km az=174.0*
ISC 25 03:06:22.1±0.6,15°.2N±0°.1×147°.5E±0°.1,h18km,n30, σ0§96/23,mb4.1/15,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**2.07**	**304**	Pn	**Pn**	**03 06 54.9**	**-1.2**
PATS	**Pohnpei**	**13.46**	**127**		**Pn**	**03 09 31.3**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**18.65**	**77**	T	T	03 30 08.6	
	baz=263,slow=73,SNR=13						
H11S1	**WAKE ISLAND Hy**	**18.66**	**77**	T	T	03 30 09.8	
	baz=263,slow=73,SNR=6.8						
H11S2	**WAKE ISLAND Hy**	**18.67**	**77**	T	T	03 30 10.5	
	baz=263,slow=73,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**19.03**	**74**	T	T	03 30 37.8	
	baz=250,slow=75						
H11N2	**WAKE ISLAND Hy**	**19.04**	**74**	T	T	03 30 41.5	
	baz=250						
H11N3	**WAKE ISLAND Hy**	**19.05**	**74**	T	T	03 30 51.0	
	baz=250,slow=75						
SIJI	**Sorong**	**22.64**	**227**	P	**P**	**03 11 24.2**	**+1.8**
	5.5nm,0.3s,baz=28,slow=12,SNR=9.1						
KSRS	**Korea Array**	**28.16**	**326**	P	**P**	**03 12 12.9**	**-0.5**
	0.6nm,0.5s,baz=141,slow=8.8,SNR=2.3						
WRA	**Warramunga Arr**	**37.24**	**201**	P	**P**	**03 13 33.6**	**+0.8**
	2.1nm,0.8s,baz=22,slow=9.5,SNR=9.2						
ASAR	**Alice Springs**	**40.84**	**199**	P	**P**	**03 14 02.0**	**-1.1**
	0.3nm,0.6s,baz=30,slow=7.7,SNR=5.9						
PSA00	**Pilbara Seismi**	**45.51**	**217**	P	**P**	**03 14 40.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**46.49**	**281**	P	**P**	**03 14 49.2**	**+0.5**
	0.7nm,0.3s,baz=75,slow=6.3,SNR=4.8						
SONM	**Songino Array**	**46.96**	**323**	P	**P**	**03 14 52.2**	**+0.1**
	0.7nm,0.6s,baz=116,slow=6.8,SNR=5.0						
TIXI	**Tiksi**	**57.54**	**353**	P	**P**	**03 16 10.6**	**+0.5**
TIXI				IAmb	IAmb	03 16 12.8	
	comp=Z,6.3nm,1.5s						
ZALV	**Zalesovo Beam**	**61.84**	**323**	P	**P**	**03 16 39.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=116,slow=9.8,SNR=2.4						
MK31	**Makanchi Array**	**62.14**	**315**	P	**P**	**03 16 41.1**	**-1.2**
MKAR	**Makanchi Array**	**62.14**	**315**	P	**P**	**03 16 42.2**	**0.0**
	comp=Z,1.0nm,0.6s,baz=94,slow=9.0,SNR=6.6						
MKAR	**Makanchi Array**	**62.14**	**315**	P	**P**	**03 16 42.0**	**-0.3**
MAKZ	**Makanchi**	**62.36**	**315**	P	**P**	**03 16 42.6**	**-1.2**
IL31		**66.04**	**25**	P	**P**	**03 17 08.7**	**+1.2**
IL31				IAmb	IAmb	03 17 09.0	
	comp=Z,2.4nm,1.1s						
ILAR	**Eielson Array**	**66.04**	**25**	P	**P**	**03 17 08.7**	**+1.2**
	comp=Z,1.8nm,1.1s,baz=264,slow=4.3,SNR=7.4						
ILAR	**Eielson Array**	**66.04**	**25**	P	**P**	**03 17 07.3**	**-0.2**
KK31	**Karatay Array**	**70.34**	**311**	P	**P**	**03 17 34.8**	**-0.2**
KK31				IAmb	IAmb	03 17 35.5	
	comp=Z,2.8nm,1.1s						
KKAR	**Karatay Array**	**70.34**	**311**	P	**P**	**03 17 34.8**	**-0.2**
INK	**Inuvik**	**71.92**	**23**	P	**P**	**03 17 45.9**	**+1.9**
	comp=Z,1.9nm,0.9s,baz=271,slow=2.4,SNR=6.2						
INK	**Inuvik**	**71.92**	**23**	I

AAK	**Ala-Archa**	**2.15**	**28**	⇓Pn	**Pn**	**03 21 22.9**	**+0.3**
	16nm,0.3s							
AAK				⇓Sn	**Sn**	**03 21 51.3**	**+1.9**
	136nm,0.4s							
KBK	**Karagaybulak**	**2.35**	**35**	⇓*iP*	**Pn**	**03 21 25.2**	**-0.1**
KBK	baz=34							
				⇓*iS*	**Sn**	**03 21 54.5**	**+0.2**
	baz=34							
KBK	**Karagaybulak**	**2.35**	**35**	P	**Pn**	**03 21 26.1**	**+0.8**
	SNR=24							
FRU1	**Bishkek**	**2.35**	**28**	⇑*iP*	**Pn**	**03 21 25.5**	**+0.2**
	baz=26							
FRU1				⇑*iS*	**Sn**	**03 21 55.0**	**+0.7**
	baz=26							
CHMG	**Chimgan**	**2.50**	**290**	*eP*	**Pb**	**03 21 32.0**	**+0.5**
CHMG				*eS*	**Sb**	**03 22 02.0**	**-0.4**
DZA	**Taraz**	**2.54**	**328**	*eP*	**Pb**	**03 21 32.0**	**-0.3**
	170nm,0.1s							
DZA				*eS*	**Sb**	**03 22 05.7**	**+2.1**
	414nm,0.3s							
DZA	**Taraz**	**2.54**	**328**	Pg	**Pb**	**03 21 32.0**	**-0.3**
	170nm,0.1s							
DZA				Lg	Lg	03 22 05.7		
	414nm,0.3s							
CHMS	**Chumysh**	**2.56**	**28**	⇓*iP*	**Pn**	**03 21 28.0**	**-0.1**
	baz=27							
CHMS				⇓*iS*	**Sn**	**03 21 59.6**	**+0.3**
	baz=27							
CHMS	**Chumysh**	**2.56**	**28**	P	**Pn**	**03 21 28.9**	**+0.8**
	SNR=6.8							
CHRV	**Charvak**	**2.57**	**292**	*eP*	**Pb**	**03 21 33.0**	**+0.3**
CHRV				*eS*	**Sb**	**03 22 04.0**	**-0.4**
USP	**Ospenovka**	**2.73**	**21**	⇑*iP*	**Pn**	**03 21 30.3**	**0.0**
	baz=21							
USP				⇑*iS*	**Sn**	**03 22 03.5**	**+0.1**
	baz=21							
USP	**Ospenovka**	**2.73**	**21**	P	**Pn**	**03 21 30.6**	**+0.2**
	SNR=14							
IUG	**Iuzhnay**	**2.73**	**302**	*eP*	**Pb**	**03 21 34.8**	**-0.6**
	1μm,0.6s							
IUG				*eS*	**Sb**	**03 22 10.6**	**+1.6**
	237nm,0.5s							
IUG	**Iuzhnay**	**2.73**	**302**	Pg	**Pb**	**03 21 34.8**	**-0.6**
	1μm,0.6s							
IUG				Lg	Lg	03 22 10.6		
	237nm,0.5s							
BOOM	**Boomskoye usch**	**2.73**	**49**	⇓*iP*	**Pn**	**03 21 30.3**	**-0.3**
	baz=49							
BOOM				⇓*iS*	**Sn**	**03 22 03.6**	**-0.2**
	baz=49							
ULHL	**Ulahol**	**2.78**	**56**	⇑*iP*	**Pn**	**03 21 30.6**	**-0.6**
	baz=56							
ULHL				⇑*iS*	**Sn**	**03 22 04.7**	**-0.2**
	baz=56							
ULHL	**Ulahol**	**2.78**	**56**	P	**Pn**	**03 21 30.7**	**-0.6**
	SNR=8.7							
TKM2	**Tokmak 2**	**2.85**	**39**	⇓*iP*	**Pn**	**03 21 32.2**	**0.0**
	baz=39							
TKM2				⇓*iS*	**Sn**	**03 22 06.7**	**-0.1**
	baz=39							
TKM2	**Tokmak 2**	**2.85**	**39**	P	**Pn**	**03 21 32.4**	**+0.2**
	SNR=17							
TKM2	**Tokmak 2**	**2.85**	**39**	⇓Pn	**Pn**	**03 21 32.3**	**0.0**
	3.8nm,0.2s							
TKM2				⇓Lg	Lg	03 22 14.8		
	20nm,0.4s							
SGDS	**Sogindy**	**2.93**	**22**	Pg	**Pb**	**03 21 36.9**	**-2.0**
	10nm,0.7s							
SGDS				Lg	Lg	03 22 14.7		
	62nm,0.6s							
TAS	**Tashkent**	**2.97**	**283**	⇑*iP*	**Pn**	**03 21 34.8**	**+1.2**
	baz=82							
TAS				⇑*iS*	**Sn**	**03 22 10.9**	**+1.6**
	baz=82							
TAS	**Tashkent**	**2.97**	**283**	*eS*	**Sg**	**03 22 21.0**	**-0.8**
KK31	**Karatay Array**	**3.07**	**321**	⇓Pn	**Pn**	**03 21 35.8**	**+0.7**
	0.6nm,0.3s							
KK31				⇓Pg	**Pb**	**03 21 40.5**	**-0.7**
	7.2nm,0.3s,baz=143,slow=7.8,SNR=96							
KK31				⇑Lg	Lg	03 22 21.5		
	40nm,0.5s,baz=142,slow=28,SNR=8.7							
KST	**Kastek**	**3.12**	**42**	*eP*	**Pb**	**03 21 41.1**	**-1.0**
	10nm,0.2s							
KST				*eS*	**Sb**	**03 22 21.8**	**+1.5**
	27nm,0.4s							
KST	**Kastek**	**3.12**	**42**	Pg	**Pb**	**03 21 41.1**	**-1.0**
	10nm,0.2s							
KST				Lg	Lg	03 22 21.8		
	27nm,0.4s							
DGS	**Degeres**	**3.18**	**37**	*eP*	**Pb**	**03 21 42.5**	**-0.7**
	16nm,0.5s							
DGS				*eS*	**Sb**	**03 22 23.7**	**+1.7**
	62nm,0.6s							
DGS	**Degeres**	**3.18**	**37**	Pg	**Pb**	**03 21 42.5**	**-0.7**
	16nm,0.5s							
DGS				Lg	Lg	03 22 23.7		
	62nm,0.6s							
KDJ	**Kajisay**	**3.34**	**64**	⇓*iP*	**Pn**	**03 21 38.9**	**-0.1**
	baz=64							
KDJ				⇓*iS*	**Sn**	**03 22 18.4**	**-0.4**
	baz=64							
MTBS	**Maitube**	**3.43**	**45**	*eP*	**Pb**	**03 21 45.9**	**-1.4**
	8.8nm,0.2s							
MTBS				*eS*	**Sb**	**03 22 29.7**	**+0.7**
	27nm,0.3s							
MTBS	**Maitube**	**3.43**	**45**	Pg	**Pb**	**03 21 45.9**	**-1.4**
	8.8nm,0.2s							
MTBS				Lg	Lg	03 22 29.7		
	27nm,0.3s							
IZV	**Izvestkoviy**	**3.46**	**47**	*eP*	**Pb**	**03 21 47.7**	**-0.3**
	11nm,0.5s							
IZV				*eS*	**Sb**	**03 22 32.7**	**+2.5**
	56nm,0.5s							
IZV	**Izvestkoviy**	**3.46**	**47**	Pg	**Pb**	**03 21 47.7**	**-0.3**
	11nm,0.5s							
IZV				Lg	Lg	03 22 32.7		
	56nm,0.5s							
KRBS	**Karabastau**	**3.51**	**32**	*eP*	**Pb**	**03 21 47.1**	**-1.6**
	7.7nm,0.6s							
KRBS				*eS*	**Sb**	**03 22 31.6**	**+0.3**
	37nm,0.3s							
KRBS	**Karabastau**	**3.51**	**32**	Pg	**Pb**	**03 21 47.1**	**-1.6**
	7.7nm,0.6s							
KRBS				Lg	Lg	03 22 31.6		
	37nm,0.3s							
TNSS	**Tian-Shan**	**3.66**	**50**	*eP*	**Pb**	**03 21 50.5**	**-0.9**
	7.8nm,0.4s							
TNSS				*eS*	**Sb**	**03 22 38.0**	**+2.0**
	22nm,0.4s							
TNSS	**Tian-Shan**	**3.66**	**50**	Pg	**Pb**	**03 21 50.5**	**-0.9**
	7.8nm,0.4s							
TNSS				Lg	Lg	03 22 38.0		
	22nm,0.4s							
AAA	**Alma-Ata**	**3.75**	**47**	*eP*	**Pb**	**03 21 53.1**	**+0.4**
	28nm,0.1s							
AAA				*eS*	**Sb**	**03 22 41.8**	**+3.5**
	38nm,0.3s							
AAA	**Alma-Ata**	**3.75**	**47**	Pg	**Pb**	**03 21 53.1**	**+0.4**
	28nm,0.1s							
AAA				Lg	Lg	03 22 41.8		
	38nm,0.3s							
MDOK	**Medeo**	**3.79**	**49**	*eP*	**Pb**	**03 21 53.1**	**-0.4**
	11nm,0.5s							
MDOK				*eS*	**Sb**	**03 22 42.1**	**+2.5**
	39nm,0.7s							
MDOK	**Medeo**	**3.79**	**49**	⇑Pn	**Pn**	**03 21 45.3**	**+0.2**
	3.5nm,0.5s							
MDOK				⇑Pg	**Pb**	**03 21 54.7**	**+1.1**
	9.9nm,0.6s							
MDOK				⇑Lg	Lg	03 22 43.0		
	38nm,0.6s							
MDOK	**Medeo**	**3.79**	**49**	Pg	**Pb**	**03 21 53.2**	**-0.4**
	11nm,0.5s							
MDOK				Lg	Lg	03 22 42.1		
	39nm,0.7s							
KOTS	**Kotyrbulak**	**3.87**	**49**	*eP*	**Pb**	**03 21 55.4**	**+0.4**
	18nm,0.4s							
KOTS				*eS*	**Sb**	**03 22 45.9**	**+3.9**
	67nm,0.5s							
KOTS	**Kotyrbulak**	**3.87**	**49**	Pg	**Pb**	**03 21 55.4**	**+0.4**
	18nm,0.4s							
KOTS				Lg	Lg	03 22 45.9		
	67nm,0.5s							
ANVS	**Anan'yevo**	**3.96**	**57**	⇑*iP*	**Pn**	**03 21 47.4**	**0.0**
	baz=57							
ANVS				⇑*iS*	**Sn**	**03 22 33.1**	**-0.9**
	baz=57							
KTBS	**Karatobe**	**3.97**	**40**	*eP*	**Pb**	**03 21 56.3**	**-0.3**
	7.1nm,0.4s							
KTBS				*eS*	**Sb**	**03 22 47.4**	**+2.7**
	54nm,0.5s							
KTBS	**Karatobe**	**3.97**	**40**	Pg	**Pb**	**03 21 56.3**	**-0.3**
	7.1nm,0.4s							
KTBS				Lg	Lg	03 22 47.4		
	54nm,0.5s							
PRZ	**Przheval'sk**	**4.31**	**64**	⇑*iP*	**Pn**	**03 21 52.6**	**+0.3**
	baz=64							
PRZ				⇑*iS*	**Sn**	**03 22 41.9**	**-0.9**
	baz=64							
BTLS	**Baital**	**4.35**	**9**	*eP*	**Pb**	**03 22 03.5**	**+0.5**
	3.1nm,0.3s							
BTLS				*eS*	**Sb**	**03 22 59.8**	**+4.2**
	5.8nm,0.5s							
BTLS	**Baital**	**4.35**	**9**	Pg	**Pb**	**03 22 03.5**	**+0.5**
	3.1nm,0.3s							
BTLS				Lg	Lg	03 22 59.8		
	5.8nm,0.5s							
SATY	**Saty**	**4.56**	**58**	*eP*	**Pb**	**03 22 07.4**	**+0.6**
	5.4nm,0.2s							
SATY				*eS*	**Sb**	**03 23 06.9**	**+5.1**
	36nm,0.7s							
SATY	**Saty**	**4.56**	**58**	Pg	**Pb**	**03 22 07.4**	**+0.6**
	5.4nm,0.2s							
SATY				Lg	Lg	03 23 06.9		
	36nm,0.7s							
ARXS	**Arharly**	**4.91**	**43**	*eP*	**Pb**	**03 22 13.0**	**+0.4**
	8.7nm,0.6s							
ARXS				*eS*	**Sb**	**03 23 15.7**	**+4.1**
	28nm,0.5s							
ARXS	**Arharly**	**4.91**	**43**	Pg	**Pb**	**03 22 13.0**	**+0.4**
	8.7nm,0.6s							
ARXS				Lg	Lg	03 23 15.7		
	28nm,0.5s							
UZB	**Uzynbulak**	**5.00**	**59**	*eP*	**Pb**	**03 22 14.2**	**-0.1**
	4.5nm,0.3s							
UZB				*eS*	**Sb**	**03 23 18.6**	**+4.0**
	30nm,0.5s							
UZB	**Uzynbulak**	**5.00**	**59**	Pg	**Pb**	**03 22 14.2**	**-0.1**
	4.5nm,0.3s							
UZB				Lg	Lg	03 23 18.6		
	30nm,0.5s							
SHLS	**Shalkode**	**5.30**	**61**	*eP*	**Pg**	**03 22 25.6**	**-2.4**
	13nm,0.4s							
SHLS				*eS*	**Sg**	**03 23 38.1**	**+1.5**
	48nm,0.7s							
SHLS	**Shalkode**	**5.30**	**61**	Pg	**Pg**	**03 22 25.6**	**-2.4**
	13nm,0.4s							
SHLS				Lg	Lg	03 23 38.1		
	48nm,0.7s							
PDGK	**Podgornoye**	**5.39**	**59**	Pg	**Pb**	**03 22 21.4**	**+0.6**
	1.6nm,0.5s							
PDGK				Lg	Lg	03 23 31.0		
	7.3nm,0.5s							
KTMS	**Ketmen**	**6.01**	**61**	Pg	**Pb**	**03 22 33.3**	**+1.9**
	0.2nm,0.1s							
KTMS				Lg	Lg	03 23 51.2		
	14nm,0.7s							
DJR	**Jarkent**	**6.09**	**52**	Pg	**Pb**	**03 22 34.4**	**+1.8**
	3.7nm,0.7s							
DJR				Lg	Lg	03 23 52.8		
	11nm,0.5s							

*IDC **25** 03:24:53.9±1.9, 1°.55N×127°.16E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/40, mbtmp3.6/4, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/34, Error ellipse: s-maj=115.3km s-min=24.3km az=69.0*
*DJA **25** 03:25:09.1±0.8, 1°.N±6°×12°.7E±°, h115km±10km, M4.0/6, MLv4.0/6*
ISC 25 03:25:06.0±1.4, **1°.48N**±0°.09×**127°.4E**±0°.2, **h100**km, **n8,**
σ1=**54**/8, **mb3.7**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**2.90**	**319**	P	**Pn**	**03 25 52.0**	**+1.6**
SANI	**Sanana**	**3.79**	**202**	P	**Pn**	**03 26 02.9**	**+0.6**
GTOI	**Gorontalo**	**4.49**	**259**	P	**Pn**	**03 26 12.8**	**+1.0**
NLAI	**Namlea**	**4.70**	**184**	P	**Pn**	**03 26 16.8**	**+2.2**
FITZ	**Fitzroy Crossi**	**19.53**	**185**	P	**P**	**03 29 24.4**	**-1.3**
	0.1nm,0.3s,baz=14,slow=13,SNR=1.5						
FITZ				LR	LR	03 38 25.0	
	comp=Z,25nm,18.4s,baz=137,slow=41						
WRA	**Warramunga Arr**	**22.34**	**163**	P	**P**	**03 29 55.4**	**-0.4**
	1.1nm,0.3s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**25.78**	**166**	P	**P**	**03 30 27.5**	**-0.2**
	0.3nm,0.6s,baz=354,slow=7.9,SNR=6.1						
MKAR	**Makanchi Array**	**59.79**	**326**	P	**P**	**03 34 59.5**	**-1.2**
	0.4nm,0.4s,baz=122,slow=7.6,SNR=6.4						

*JMA **25** 03:46:24.1±0.4, 38°.15N×134°.16E, h440km±4km, M2.9*
*IDC **25** 03:46:25.4±1.5, 38°.09N×134°.17E, h435km±31km, mb2.6/5, mb1 2.9/8, mb1mx2.6/47, mbtmp3.6/8, Error ellipse: s-maj=49.6km s-min=16.5km az=57.0*
ISC 25 03:46:25.4±0.9, **38°.1N**±0°.1×**134°.4E**±0°.10, **h450**km, **n19,**
σ1=**09**/21, **mb3.0**/5, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**2.39**	**137**	P	**P**	**03 47 27.4**	**-0.8**
JSZ	**Suzu**	**2.47**	**103**	P	**P**	**03 47 28.3**	**-0.4**
JWT	**Wachi**	**2.90**	**162**	P	**P**	**03 47 31.1**	**-0.6**
JWT				eS	**S**	**03 48 23.4**	**-2.1**
JSD	**Sado**	**3.10**	**89**	P	**P**	**03 47 32.6**	**-0.5**
JSD				S	**S**	**03 48 26.0**	**-2.1**
JYTA	**Yamagatataniai**	**3.12**	**141**	P	**P**	**03 47 32.9**	**-0.5**
MAT	**Matsushiro**	**3.44**	**115**	P	**P**	**03 47 35.4**	**-0.4**
MJAR	**Matsushiro Arr**	**3.44**	**115**	P	**P**	**03 47 35.9**	**+0.1**
	0.3nm,0.3s,baz=296,slow=10,SNR=29						
JIE	**Ise**	**4.13**	**152**	P	**P**	**03 47 41.9**	**+0.2**
JRY	**Ryogami san**	**4.18**	**118**	P	**P**	**03 47 42.6**	**+0.4**
JOD2	**Odawara 2**	**4.73**	**125**	P	**P**	**03 47 47.8**	**+0.6**
JMK	**Ichinoseki**	**5.47**	**78**	P	**P**	**03 47 54.7**	**+0.4**
JMK				S	**S**	**03 49 05.9**	**-1.0**
USRK	**Ussuriysk Ar.**	**6.39**	**345**	P	**P**	**03 48 02.6**	**-0.9**
	baz=176,slow=11,SNR=28						
ASAJ	**Asahikawa**	**8.69**	**43**	P	**P**	**03 48 29.2**	**+1.2**
	1.5nm,0.3s,baz=245,slow=9.6,SNR=9.7						
SONM	**Songino Array**	**22.56**	**305**	P	**P**	**03 50 50.4**	**+0.5**
	0.4nm,0.6s,baz=104,slow=11,SNR=2.2						
PANO	**Nakornpanom**	**33.35**	**240**	P	P	03 52 32.3	+7.6
MKAR	**Makanchi Array**	**38.78**	**300**	P	**P**	**03 53 09.9**	**+0.3**
	0.3nm,0.5s,baz=89,slow=9.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**40.90**	**306**	P	**P**	**03 53 25.7**	**-0.9**
	0.4nm,0.3s,baz=85,slow=8.3,SNR=6.3						
WRA	**Warramunga Arr**	**57.69**	**190**	P	**P**	**03 55 32.9**	**+1.2**
	0.3nm,0.5s,baz=354,slow=7.6,SNR=5.5						
ASAR	**Alice Springs**	**61.40**	**180**	P	**P**	**03 55 58.5**	**+2.0**
	0.4nm,0.9s,baz=8.9,slow=9.6,SNR=2.1						

*IDC **25** 04:27:02.4±2.5, 21°.58N×143°.16E, h295km±22km, mb3.1/5, mb1 3.3/6, mb1mx2.9/38, mbtmp3.8/6, Error ellipse: s-maj=48.8km s-min=20.2km az=90.0*
ISC 25 04:27:04.0±1.3, **21°.7N**±0°.1×**143°.1E**±0°.4, **h311**km, **n6,**
σ1=**08**/7, **mb3.5**/4, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.47**	**352**	P	**Pn**	**04 28 26.7**	**-0.6**
	7.8nm,0.3s,baz=99,slow=23,SNR=12						
JCJ				S	**S**	**04 29 33.5**	**-1.0**
	5.0nm,0.3s,baz=280,slow=21,SNR=1.3						
KSRS	**Korea Array**	**20.48**	**324**	P	**P**	**04 31 20.2**	**+1.3**
	0.6nm,0.4s,baz=151,slow=8.9,SNR=1.9						
WRA	**Warramunga Arr**	**42.22**	**192**	P	**P**	**04 34 26.6**	**-0.8**
	0.4nm,0.6s,baz=16,slow=9.4,SNR=5.9						
YKA	**Yellowknife Ar**	**76.55**	**28**	P	**P**	**04 38 20.7**	**+0.6**
	0.2nm,0.4s,baz=291,slow=5.6,SNR=4.8						
ARCES	**ARCESS Array B**	**78.92**	**341**	P	**P**	**04 38 33.7**	**+0.7**
	1.0nm,0.7s,baz=72,slow=8.6,SNR=7.1						
FINES	**FINESS Array B**	**83.17**	**334**	P	**P**	**04 38 55.2**	**-0.1**
	1.1nm,0.5s,baz=66,slow=6.8,SNR=10						

*INET **25** 05:07:14.8, 12°.97N×88°.95W, h48km, MW2.7*
*SNET **25** 05:07:15.1±0.5, 13°.06N×88°.92W, h58km±3km, ML3.6*
*UCR **25** 05:07:15.2±0.5, 13°.06N×88°.92W, h57km±3km, ML3.7*
ISC 25 05:07:14.9±2.3, **13°.0N**±0°.1×**88°.94W**±0°.06, **h51**km±16km,
n24, σ0=**35**/40, **6D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.50**	**46**	*eP*	**Pn**	**05 07 26.2**	**-0.1**
ALJI				*eS*	**Sn**	**05 07 34.8**	**+0.3**
ALJI	**Alcalda de J**	**0.50**	**46**	*eP*	**Pn**	**05 07 26.2**	**-0.1**
ALJI				*eS*	**Sn**	**05 07 34.8**	**+0.3**
LALI	**Alcalda de L**	**0.63**	**324**	*eP*	**Pn**	**05 07 27.5**	**-0.4**
LALI				*eS*	**Sn**	**05 07 37.6**	**+0.4**
LALI	**Alcalda de L**	**0.63**	**324**	*eP*	**Pn**	**05 07 27.5**	**-0.4**
LALI				*eS*	**Sn**	**05 07 37.6**	**+0.4**
COEG	**Centro de Oper**	**0.64**	**5**	⇓*eP*	**Pn**	**05 07 27.7**	**-0.4**
COEG				*eS*	**Sn**	**05 07 37.6**	**0.0**
COEG				IAML		05 07 42.2	
	comp=Z,2μm,0.4s						
COEG	**Centro de Oper**	**0.64**	**5**	⇓*eP*	**Pn**	**05 07 27.7**	**-0.4**
COEG				*eS*	**Sn**	**05 07 37.6**	**0.0**
COEG				IAML		05 07 42.2	
	comp=Z,2μm,0.4s						
COEB	**Comit de Eme**	**0.65**	**38**	⇓*eP*	**Pn**	**05 07 28.2**	**-0.1**
COEB				*eS*	**Sn**	**05 07 38.3**	**+0.3**
COEB				IAML		05 07 43.0	
	comp=Z,2μm,0.2s						
COEB	**Comit de Eme**	**0.65**	**38**	⇓*eP*	**Pn**	**05 07 28.2**	**-0.1**
COEB				*eS*	**Sn**	**05 07 38.3**	**+0.3**
COEB				IAML		05 07 43.0	
	comp=Z,2μm,0.2s						
LFRS	**El Faro**	**0.65**	**350**	*eP*	**Pn**	**05 07 27.8**	**-0.5**
LFRS	**El Faro**	**0.65**	**350**	*eP*	**Pn**	**05 07 27.8**	**-0.5**
TECA	**Tecapa**	**0.67**	**40**	*eP*	**Pn**	**05 07 28.4**	**-0.2**
TECA	**Tecapa**	**0.67**	**40**	*eP*	**Pn**	**05 07 28.4**	**-0.2**
PAVA	**Las Pavas**	**0.73**	**0**	⇓*eP*	**Pn**	**05 07 29.3**	**0.0**
PAVA				*eS*	**Sn**	**05 07 40.1**	**+0.4**
PAVA				IAML		05 07 41.5	
	comp=Z,3μm,0.2s						
PAVA	**Las Pavas**	**0.73**	**0**	⇓*eP*	**Pn**	**05 07 29.3**	**0.0**
PAVA				*eS*	**Sn**	**05 07 40.1**	**+0.4**
PAVA				IAML		05 07 41.5	
	comp=Z,3μm,0.2s						
LBRS	**Las Brisas**	**0.76**	**352**	*eP*	**Pn**	**05 07 29.5**	**-0.1**
LBRS	**Las Brisas**	**0.76**	**352**	*eP*	**Pn**	**05 07 29.5**	**-0.1**
LCND	**La Caada**	**1.07**	**72**	*eP*	**Pn**	**05 07 33.4**	**-0.3**
LCND				*eS*	**Sn**	**05 07 48.0**	**+0.4**
LCND	**La Caada**	**1.07**	**72**	*eP*	**Pn**	**05 07 33.4**	**-0.3**
LCND				*eS*	**Sn**	**05 07 48.0**	**+0.4**
FAGO	**Alcalda de S**	**1.08**	**49**	*eP*	**Pn**	**05 07 33.6**	**-0.2**
FAGO				*eS*	**Sn**	**05 07 47.3**	**-0.5**
FAGO	**Alcalda de S**	**1.08**	**49**	*eP*	**Pn**	**05 07 33.6**	**-0.2**
FAGO				*eS*	**Sn**	**05 07 47.3**	**-0.5**
CNCH	**Conchagua**	**1.12**	**74**	*eS*	**Sn**	**05 07 49.4**	**+0.6**
CNCH	**Conchagua**	**1.12**	**74**	*eS*	**Sn**	**05 07 49.4**	**+0.6**
MTO3	**Montecristo**	**1.47**	**344**	*eP*	**Pn**	**05 07 39.3**	**0.0**
MTO3				*eS*	**Sn**	**05 07 57.9**	**+0.3**
MTO3	**Montecristo**	**1.47**	**344**	*eP*	**Pn**	**05 07 39.3**	**0.0**
MTO3				*eS*	**Sn**	**05 07 57.9**	**+0.3**

*IDC **25** 05:21:08.9±1.3, 30°.14S×75°.56E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/41, mbtmp3.9/9, MS3.7/10, Ms1 3.7/10, ms1mx3.6/36, Error ellipse: s-maj=46.1km s-min=25.2km az=10.0*
ISC 25 05:21:10.3±1.3, **30°.2S**±0°.3×**75°.6E**±0°.2, **h10**km, **n20,**
σ1=**01**/10, **mb3.9**/9, **MS3.7**/10, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**22.59**	**352**	T	T	05 49 18.7	
	baz=174,slow=75,SNR=281						
H08S1	**Diego Carcia H**	**22.59**	**352**	T	T	05 49 21.4	
	baz=174,slow=75,SNR=154						
H08S3	**Diego Garcia H**	**22.61**	**352**	T	T	05 49 20.2	
	baz=174,slow=75,SNR=225						
MAW	**Mawson**	**38.22**	**188**	LR	LR	05 41 03.8	
	comp=Z,103nm,18.6s,baz=55,slow=31						
PSI	**Prapat**	**39.67**	**38**	LR	LR	05 40 59.4	
	comp=Z,149nm,20.6s,baz=138,slow=30						
BOSA	**Boshof**	**43.57**	**259**	LR	LR	05 43 32.2	
	comp=Z,85nm,20.2s,baz=144,slow=31						
LSZ	**Lusaka**	**45.82**	**278**	P	**P**	**05 29 33.1**	**+0.3**
	1.2nm,0.3s,baz=120,slow=8.0,SNR=4.0						
FITZ	**Fitzroy Crossi**	**46.92**	**87**	LR	LR	05 47 23.8	
	comp=Z,62nm,19.4s,baz=270,slow=34						
KAPI	**Kappang**	**48.55**	**68**	LR	LR	05 46 45.6	
	comp=Z,96nm,21.0s,baz=228,slow=32						
ASAR	**Alice Springs**	**51.95**	**98**	P	**P**	**05 30 21.1**	**+1.4**
	1.1nm,1.0s,baz=240,slow=7.4,SNR=5.3						
ASAR				LR	LR	05 50 04.5	
	comp=Z,64nm,18.7s,baz=268,slow=33						
CMAR	**Chiang Mai Arr**	**53.34**	**28**	P	**P**	**05 30 30.8**	**+0.9**
	0.5nm,0.3s,baz=206,slow=8.0,SNR=1.5						
CMAR				LR	LR	05 52 26.9	
	comp=Z,52nm,18.1s,baz=210,slow=35						
WRA	**Warramunga Arr**	**53.71**	**94**	P	**P**	**05 30 31.2**	**-1.6**
	2.1nm,1.1s,baz=250,slow=6.9,SNR=4.8						
WRA				LR	LR	05 51 03.0	
	comp=Z,117nm,20.0s,baz=260,slow=33						
STKA	**Stephens Creek**	**55.80**	**110**	LR	LR	05 51 52.8	
	comp=Z,46nm,18.4s,baz=211,slow=33						
VNDA	**Vanda**	**59.38**	**165**	LR	LR	05 54 24.2	
	comp=Z,38nm,18.1s,baz=259,slow=33						
MKAR	**Makanchi Array**	**76.85**	**5**	P	**P**	**05 33 01.8**	**-0.3**
	1.0nm,0.8s,baz=188,slow=7.5,SNR=12						
SONM	**Songino Array**	**82.44**	**20**	P	**P**	**05 33 33.1**	**+0.4**
	0.4nm,0.4s,baz=207,slow=4.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**83.03**	**289**	P	**P**	**05 33 36.4**	**+0.1**
	0.6nm,0.9s,baz=111,slow=37,SNR=2.7						
ZALV	**Zalesovo Beam**	**84.15**	**5**	P	**P**	**05 33 40.6**	**-0.5**
	1.3nm,0.7s,baz=163,slow=5.7,SNR=5.5						
AKASG	**Malin Array Be**	**90.33**	**333**	P	**P**	**05 34 10.9**	**-0.3**
	0.1nm,0.3s,baz=122,slow=4.5,SNR=4.6						
YKA	**Yellowknife Ar**	**147.00**	**9**	PKPbc	**PK

KNRA					IAmb	IAmb	05 39 27.8	
	comp=Z,14nm,0.6s							
FITZ	**Fitzroy Crossi**	**26.51**	**181**		P	**P**	**05 39 44.8**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=11,slow=13,SNR=3.6							
FITZ	**Fitzroy Crossi**	**26.51**	**181**		P	**P**	**05 39 44.5**	**-1.6**
WRA	**Warramunga Arr**	**29.54**	**164**		P	**P**	**05 40 12.9**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=338,slow=9.4,SNR=5.6							
WRA	**Warramunga Arr**	**29.54**	**164**		P	**P**	**05 40 11.9**	**-1.3**
ASAR	**Alice Springs**	**33.00**	**166**		P	**P**	**05 40 44.6**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=340,slow=7.1,SNR=17							
ASAR	**Alice Springs**	**33.00**	**166**		P	**P**	**05 40 42.0**	**-1.7**
USA0B	**Ussuriysk Arra**	**35.88**	**8**		P	**P**	**05 41 09.7**	**+1.3**
USA0B					IAmb	IAmb	05 41 13.6	
	comp=Z,7.0nm,0.9s							
USRK	**Ussuriysk Ar.**	**35.88**	**8**		P	**P**	**05 41 09.3**	**+0.9**
	comp=Z,6.1nm,0.8s,baz=203,slow=7.2,SNR=11							
SHL	**Shillong**	**36.47**	**302**		P	**P**	**05 41 15.1**	**+1.2**
JEM	**Erimo**	**36.63**	**22**		P	P	05 41 29.2	+14
KLR	**Kul'dur**	**40.81**	**6**		P	**P**	**05 41 50.0**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=175,slow=11,SNR=1.8							
STKA	**Stephens Creek**	**42.94**	**160**		P	**P**	**05 42 05.5**	**-1.9**
MK31	**Makanchi Array**	**53.14**	**324**		P	**P**	**05 43 28.4**	**+2.1**
MKAR	**Makanchi Array**	**53.14**	**324**		P	P	05 43 21.6	-4.8
	comp=Z,0.6nm,0.9s,baz=108,slow=9.4,SNR=5.3							
MKAR	**Makanchi Array**	**53.14**	**324**		P	**P**	**05 43 27.1**	**+0.8**
MAKZ	**Makanchi**	**53.33**	**324**		P	**P**	**05 43 29.2**	**+1.5**
MAKZ					IAmb	IAmb	05 43 33.6	
	comp=Z,3.0nm,1.1s							
NIL	**Nilore**	**54.37**	**305**		P	**P**	**05 43 35.5**	**-0.1**
NIL					IAmb	IAmb	05 43 42.0	
	comp=Z,6.1nm,0.8s							
ZALV	**Zalesovo Beam**	**55.92**	**332**		P	**P**	**05 43 45.4**	**-0.9**
KBL	**Kabul**	**57.98**	**305**		P	**P**	**05 44 00.7**	**-0.9**
KBL					IAmb	IAmb	05 44 15.4	
	comp=Z,5.4nm,1.0s							
KKAR	**Karatay Array**	**59.17**	**315**		P	**P**	**05 44 09.5**	**0.0**
KKAR	**Karatay Array**	**59.17**	**315**		P	**P**	**05 44 10.4**	**+0.9**
KKAR					IAmb	IAmb	05 44 14.7	
	comp=Z,3.8nm,1.2s							
ADK	**Adak**	**63.50**	**36**		P	**P**	**05 44 37.3**	**-1.3**
POKR	**Poker Plat Res**	**80.88**	**25**		P	**P**	**05 46 22.4**	**0.0**
POKR					IAmb	IAmb	05 46 31.3	
	comp=Z,9.0nm,0.8s							
ILAR	**Eielson Array**	**81.12**	**26**		P	**P**	**05 46 22.3**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=244,slow=5.6,SNR=4.2							
BMAR	**Burnt Mountain**	**81.96**	**23**		P	**P**	**05 46 27.6**	**-0.5**
CTGM	**Chitina Glacie**	**83.92**	**29**		P	**P**	**05 46 38.7**	**+0.2**
TABL	**Table Mountain**	**84.07**	**30**		P	**P**	**05 46 39.8**	**+0.4**
EPYK	**Eagle Plains**	**85.16**	**24**		P	**P**	**05 46 44.8**	**+0.2**
EPYK					IAmb	IAmb	05 46 50.2	
	comp=Z,8.7nm,1.1s							
FINES	**FINESS Array B**	**87.19**	**332**		P	**P**	**05 46 52.7**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=46,slow=4.0,SNR=3.8							
YKA	**Yellowknife Ar**	**95.45**	**24**		P	**P**	**05 47 32.3**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=302,slow=3.7,SNR=2.1							

*UCR **25** 05:38:24.3±1.4, 7°.73N×83°.14W, h16km±8km, MW3.8*
*UPA **25** 05:38:25.0±1.1, 7°.77N×83°.10W, h14km±4km, MW4.0*
ISC 25 05:38:23.2±2.1, 7°.77N±0°.08×83°.10W±0°.04, h9km±11km, n32, σ0°76/46, 1C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SBAR3	**San Bartolo, C**	**0.59**	**21**	*eP*		**Pb**	**05 38 36.9**	**+1.1**
PIRO	**Carate, Puerto**	**0.68**	**340**	*eP*		**Pb**	**05 38 37.6**	**+0.4**
PIRO				*eS*		**Sb**	**05 38 47.4**	**+0.7**
PIRO	**Carate, Puerto**	**0.68**	**340**	*eP*		**Pb**	**05 38 37.4**	**+0.1**
PTJ1	**Puerto Jimnez**	**0.79**	**345**	*eP*		**Pb**	**05 38 39.8**	**+0.5**
PTJ1				*eS*		**Sn**	**05 38 51.9**	**-0.7**
PTJ1	**Puerto Jimnez**	**0.79**	**345**	*eP*		**Pb**	**05 38 39.7**	**+0.5**
PTJ1				*eS*		**Sn**	**05 38 51.8**	**-0.8**
CDITO	**Canoas**	**0.83**	**16**	*eP*		**Pb**	**05 38 40.0**	**+0.1**
CDITO				*eS*		**Sb**	**05 38 50.6**	**-0.7**
BAGA3	**Bagala, Chiriq**	**0.90**	**39**	*eP*		**Pb**	**05 38 41.7**	**+0.7**
DVD	**David**	**0.92**	**44**	*eP*		**Pg**	**05 38 41.6**	**+0.6**
DVD				*eS*		**Sb**	**05 38 54.4**	**+0.5**
LOCO3	**Loma Colorada,**	**0.93**	**46**	*eP*		**Pb**	**05 38 42.1**	**+0.5**
CHIR3	**Chiriqui UPA,**	**0.98**	**51**	*eP*		**Pg**	**05 38 42.8**	**+0.7**
CHIR3				*eS*		**Sb**	**05 38 56.0**	**+0.3**
RIOS	**Rincon, Osa**	**1.02**	**336**	*eP*		**Pg**	**05 38 42.5**	**-0.2**
RIOS				*eS*		**Sb**	**05 38 56.1**	**-0.5**
EDSV	**San Vito**	**1.05**	**7**	*eP*		**Pb**	**05 38 44.2**	**+0.4**
MLIR3	**Monte Lirio, C**	**1.06**	**15**	*eP*		**Pn**	**05 38 44.7**	**+0.3**
BRU2	**Volcan**	**1.10**	**22**	*ǁiP*		**Pb**	**05 38 44.8**	**+0.2**
BRU2				*eS*		**Sn**	**05 39 00.7**	**+0.3**
BRU2	**Volcan**	**1.10**	**22**	*eP*		**Pb**	**05 38 44.7**	**+0.2**
BCO2	**Palmira**	**1.10**	**31**	*eP*		**Pg**	**05 38 44.8**	**+0.3**
BCO2				*eS*		**Sn**	**05 39 00.2**	**-0.3**
BC3P	**Paso Ancho**	**1.15**	**25**	*eP*		**Pg**	**05 38 45.5**	**+0.2**
EDPN	**Palmar Norte**	**1.24**	**343**	*eP*		**Pg**	**05 38 46.6**	**-0.5**
EDPN				*eS*		**Sn**	**05 39 03.4**	**-0.3**
LPLA	**Las Palmas La**	**1.26**	**4**	*ǁeP*		**Pg**	**05 38 47.0**	**-0.4**
LPLA				*eS*		**Sn**	**05 39 04.9**	**+0.5**
POTG	**Potrero Grande**	**1.28**	**359**	*eP*		**Pg**	**05 38 47.5**	**-0.3**
DRK0	**Durika**	**1.50**	**354**	*eP*		**Pn**	**05 38 50.6**	**+0.1**
DRK0				*eS*		**Sn**	**05 39 09.9**	**-0.3**
DRK0	**Durika**	**1.50**	**354**	*eP*		**Pn**	**05 38 50.4**	**-0.1**
EDLM	**Las Mercedes**	**1.58**	**342**	*ǁeP*		**Pn**	**05 38 52.2**	**+0.7**
PEZE	**Perez Zeledon,**	**1.71**	**340**	*eP*		**Pn**	**05 38 54.1**	**+0.8**
CNI2	**El Empalme, Bo**	**1.76**	**21**	*eP*		**Pb**	**05 38 55.5**	**-0.3**
CNI2				*eS*		**Sg**	**05 39 18.6**	**-1.2**
GMAL	**Guarumal, Vera**	**1.85**	**90**	*eP*		**Pn**	**05 38 55.4**	**+0.2**
GMAL				*eS*		**Sn**	**05 39 16.0**	**-2.8**
CDM	**Cerro de Muert**	**1.89**	**340**	*eP*		**Pn**	**05 38 56.7**	**+0.5**
MRVA	**Moravia de Chi**	**2.07**	**351**	*eP*		**Pn**	**05 38 59.3**	**+0.9**
RIMA	**Rio Macho**	**2.13**	**339**	*eP*		**Pn**	**05 38 59.8**	**+0.6**
LCR2	**La Lucha 2**	**2.16**	**336**	*eP*		**Pn**	**05 39 00.4**	**+0.8**
BATAN	**Batan**	**2.33**	**353**	*eP*		**Pb**	**05 39 04.6**	**-0.9**
JTS	**Las Juntas de**	**3.11**	**324**	*eP*		**Pn**	**05 39 14.2**	**+1.7**

*IDC **25** 06:03:27.0±1.6, 29°.83S×179°.13E, h0km, mb4.4/3,*
mb1 4.6/5, mb1mx4.0/33, mbtmp4.5/5, ML4.7/2, Error ellipse: s-maj=47.3km s-min=26.2km az=173.0
*NOU **25** 06:03:34.0, 30°.81S×178°.29W, h228km, mb4.2, Kermadec Islands, New Zealand*
*NEIC **25** 06:03:35.3±0.9, 30°.64S±0°.05×179°.4W±0°.2, h176km±11km, mb4.3/15, Error ellipse: s-maj=23.1km s-min=2.4km az=109.0*
ISC 25 06:03:34.8±0.6, 30°.60S±0°.06×179°.50W±0°.09, h150km, n58, σ2°59/65, mb4.3/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GLKZ	**Green Lake**	**1.91**	**46**	P		**Pn**	**06 04 10.9**	**+2.0**
GLKZ				S		**Sn**	**06 04 40.1**	**+5.1**
RIZ	**Raoul Island**	**1.92**	**46**	P		**Pn**	**06 04 11.4**	**+2.4**
RIZ				S		**Sn**	**06 04 41.0**	**+5.8**
RAO	**Raoul Island**	**1.92**	**46**	Pn		**Pn**	**06 04 11.0**	**+2.0**
	551nm,0.3s,baz=117,slow=0.3,SNR=18							
RAO				Sn		**Sn**	**06 04 31.3**	**-3.9**
	407nm,0.3s,baz=148,slow=12,SNR=5.9							
RAO	**Raoul Island**	**1.92**	**46**	Sn		**Sn**	**06 04 36.7**	**+1.4**
RAO	**Raoul Island**	**1.92**	**46**	Pn		**Pn**	**06 04 11.2**	**+2.2**
RAO	**Raoul Island**	**1.92**	**46**	P		**Pn**	**06 04 11.2**	**+2.2**
GRZ	**Great Barrier**	**7.04**	**215**	P		Pn	06 05 25.2	+10
MXZ	**Matakaoa Point**	**7.18**	**194**	P		**Pn**	**06 05 18.5**	**+1.4**
MXZ				S		**Sn**	**06 06 44.5**	**+7.0**
WMGZ	**Waiomatatini S**	**7.41**	**193**	P		**Pn**	**06 05 18.9**	**-1.2**
WMGZ				S		**Sn**	**06 06 49.9**	**+7.0**
HAZ	**Te Kaha**	**7.49**	**197**	P		**Pn**	**06 05 23.7**	**+2.5**
HAZ				S		**Sn**	**06 06 49.7**	**+4.9**
PKGZ	**Pakihiroa**	**7.54**	**195**	P		**Pn**	**06 05 23.3**	**+1.2**
PKGZ				S		**Sn**	**06 06 45.8**	**-0.5**
PUZ	**Puketiti**	**7.68**	**193**	P		**Pn**	**06 05 24.5**	**+0.6**
PUZ				S		**Sn**	**06 06 52.2**	**+2.6**
TWGZ	**Tauwhareparae**	**7.84**	**195**	P		**Pn**	**06 05 28.4**	**+2.3**
TWGZ				S		**Sn**	**06 06 57.1**	**+3.6**
CNGZ	**Carnagh Statio**	**8.09**	**193**	P		**Pn**	**06 05 30.3**	**+1.1**
MWZ	**Matawai**	**8.10**	**197**	P		**Pn**	**06 05 30.5**	**+1.1**
TKGZ	**Te Karaka**	**8.12**	**195**	P		**Pn**	**06 05 30.3**	**+0.6**
URZ	**Urewera**	**8.14**	**199**	Pn		**Pn**	**06 05 31.8**	**+1.9**
	2.4nm,0.3s,baz=121,slow=23,SNR=16							
URZ				Sn		**Sn**	**06 07 04.4**	**+4.0**
	7.8nm,0.3s,baz=112,slow=22,SNR=3.0							
URZ	**Urewera**	**8.14**	**199**	P		**Pn**	**06 05 31.2**	**+1.3**
RIGZ	**Rimuhau**	**8.39**	**195**	P		**Pn**	**06 05 33.3**	**-0.1**
MUGZ	**Murupara**	**8.44**	**200**	P		**Pn**	**06 05 35.2**	**+1.3**
RTZ	**Ruatahuna**	**8.51**	**199**	P		**Pn**	**06 05 34.9**	**-0.1**
SNGZ	**Shannon Statio**	**8.57**	**197**	P		**Pn**	**06 05 35.7**	**0.0**
MTHZ	**Maungataniwha**	**8.77**	**199**	P		**Pn**	**06 05 39.3**	**+1.0**
MHGZ	**Mahia Peninsul**	**8.79**	**193**	P		**Pn**	**06 05 38.8**	**+0.1**
NMHZ	**Naumai**	**9.00**	**199**	P		**Pn**	**06 05 42.1**	**+0.6**
ARHZ	**Aropaoanui**	**9.11**	**197**	P		**Pn**	**06 05 42.6**	**-0.3**
BKZ	**Black Stump Fm**	**9.16**	**200**	Pn		**Pn**	**06 05 42.7**	**-0.9**
BKZ	**Black Stump Fm**	**9.16**	**200**	P		**Pn**	**06 05 43.6**	**0.0**
TMVZ	**Te Maari**	**9.36**	**204**	P		**Pn**	**06 05 47.3**	**+1.0**
KWHZ	**Kaweka Forest**	**9.42**	**200**	P		**Pn**	**06 05 46.9**	**-0.1**
BFZ	**Birch Farm**	**10.64**	**198**	Pn		**Pn**	**06 06 01.7**	**-1.4**
MSWZ	**Moikau Station**	**11.60**	**200**	Pn		**Pn**	**06 06 15.1**	**-0.7**
BHW	**Baring Head**	**11.71**	**201**	Pn		**Pn**	**06 06 17.1**	**+0.1**
MSVF	**Nonsavu**	**13.00**	**350**	Pn		**Pn**	**06 06 34.9**	**+0.7**
MSVF	**Nonsavu**	**13.00**	**350**	P		**Pn**	**06 06 34.9**	**+0.7**
LTZ	**Lake Taylor**	**13.82**	**206**	Pn		**Pn**	**06 06 43.8**	**-0.6**
YATNC	**Mamie plateau,**	**14.86**	**302**	P		P	06 07 04.9	+5.4
DZM	**Mont Dzumac**	**15.19**	**301**	P		**P**	**06 07 08.7**	**+5.5**
NOUC	**Port Laguerre**	**15.27**	**300**	P		**P**	**06 07 09.0**	**+4.9**
CTAO	**Charters Tower**	**32.56**	**281**	P		**P**	**06 09 52.6**	**+0.7**
STKA	**Stephens Creek**	**33.17**	**258**	P		**P**	**06 09 58.0**	**+0.8**
	3.1nm,0.5s,baz=106,slow=7.4,SNR=6.9							
STKA	**Stephens Creek**	**33.17**	**258**	IAmb		IAmb	06 10 00.8	
	comp=Z,4.7nm,1.5s							
AS31	**Alice Springs**	**41.81**	**268**	P		**P**	**06 11 08.3**	**-1.5**
ASAR	**Alice Springs**	**41.81**	**268**	P		**P**	**06 11 08.4**	**-1.4**
	comp=Z,2.3nm,0.6s,baz=102,slow=7.1,SNR=36							
ASAR	**Alice Springs**	**41.81**	**268**	P		**P**	**06 11 08.3**	**-1.5**
WR0	**Warramunga Arr**	**42.63**	**273**	P		**P**	**06 11 15.0**	**-1.6**
WR0				IAmb		IAmb	06 11 16.3	
	comp=Z,8.8nm,1.2s							
WB2	**Warramunga Arr**	**42.80**	**273**	P		**P**	**06 11 16.4**	**-1.5**
WB2				IAmb		IAmb	06 11 18.9	
	comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**42.81**	**273**	P		**P**	**06 11 16.4**	**-1.6**
	comp=Z,2.3nm,0.3s,baz=111,slow=8.0,SNR=49							
WRA	**Warramunga Arr**	**42.81**	**273**	P		**P**	**06 11 16.2**	**-1.8**
WB0	**Warramunga Arr**	**42.84**	**273**	P		**P**	**06 11 16.7**	**-1.5**
WB0				IAmb		IAmb	06 11 17.2	
	comp=Z,9.6nm,1.2s							
FORT	**Forrest**	**44.74**	**256**	P		**P**	**06 11 31.3**	**-2.0**
SBA	**Scott Base**	**47.75**	**184**	P		**P**	**06 11 56.2**	**+0.2**
SBA				IAmb		IAmb	06 12 08.7	
	comp=Z,27nm,1.5s							
VNDA	**Vanda**	**47.77**	**185**	P		**P**	**06 11 56.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**51.07**	**271**	P		**P**	**06 12 20.5**	**-1.5**
FITZ				IAmb		IAmb	06 12 42.7	
	comp=Z,16nm,1.5s							
CASY	**Casey**	**54.36**	**208**	P		**P**	**06 12 43.0**	**-2.5**
CASY				IAmb		IAmb	06 12 49.4	
	comp=Z,2.3nm,0.9s							
QSPA	**South Pole Qui**	**59.51**	**180**	P		**P**	**06 13 19.6**	**-2.4**
QSPA				IAmb		IAmb	06 13 20.1	
	comp=Z,6.0nm,0.8s							
UGM	**Wanagama**	**68.80**	**273**	P		**P**	**06 14 19.6**	**-3.6**
SNAA	**Sanae**	**77.99**	**179**	P		**P**	**06 15 11.8**	**-4.2**
SNAA				IAmb		IAmb	06 15 24.8	
	comp=Z,8.8nm,1.4s							

*IDC **25** 06:05:35.7±2.9, 35°.38N×141°.39E, h0km, mb3.5/5,*
mb1 3.7/7, mb1mx3.4/54, mbtmp3.6/7, ML3.4/2, MS2.7/2,
Ms1 2.7/2, ms1mx2.4/65, Error ellipse: s-maj=95.9km s-min=20.3km az=64.0
*JMA **25** 06:05:40.0±0.1, 35°.31N×141°.23E, h36km±2km, M3.4*
ISC 25 06:05:40.9±1.3, 35°.31N±0°.06×141°.3E±0°.1, h35km, n26, σ1°36/19, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOJ	**Chosi**	**0.52**	**319**	P		**Pn**	**06 05 50.3**	**-1.5**
CHOJ				S		**Sn**	**06 05 58.2**	**-1.2**
BSO1	**Boso 1**	**0.70**	**201**	P		**Pn**	**06 05 53.2**	**-0.6**
JSMT	**Sammumatsuo**	**0.76**	**296**	P		**Pn**	**06 05 54.0**	**-1.0**
KTR	**Katsuura**	**0.81**	**259**	P		**Pn**	**06 05 54.4**	**-1.3**
KTR				S		**Sn**	**06 06 04.4**	**-2.0**
BSO3	**Boso 3**	**0.81**	**231**	P		**Pn**	**06 05 54.7**	**-0.8**
BSO3				X			06 06 06.9	
BSO4	**Boso 4**	**0.83**	**248**	P		**Pn**	**06 05 55.1**	**-0.9**
BSO4				*eX*			06 06 06.0	
JCN	**Nagara**	**0.89**	**277**	P		**Pn**	**06 06 56.3**	**-0.5**
JYT	**Yasato**	**1.27**	**316**	P		**Pn**	**06 06 01.4**	**-0.7**
MJAR	**Matsushiro Arr**	**2.78**	**297**	Pn		**Pn**	**06 06 23.5**	**+0.6**
	0.9nm,0.3s,baz=117,slow=9.7,SNR=17							
MJAR				LR		LR	06 07 27.6	
	comp=Z,94nm,19.0s,baz=205,slow=40							
MAT	**Matsushiro**	**2.78**	**297**	P		**Pn**	**06 06 24.9**	**+2.0**
MAT				*eS*		**Sn**	**06 06 57.5**	**+2.3**
JCJ	**Chichijima**	**8.23**	**174**	Pn		**Pn**	**06 07 37.0**	**-0.8**
	3.4nm,0.3s,baz=266,slow=21,SNR=1.9							
KSRS	**Korea Array**	**10.98**	**285**	LR		LR	06 12 10.1	
	comp=Z,47nm,19.6s,baz=224,slow=36							
H11N2	**WAKE ISLAND Hy**	**27.40**	**118**	T		T	06 40 11.4	
	baz=310,slow=75,SNR=70							
H11N1	**WAKE ISLAND Hy**	**27.41**	**118**	T		T	06 40 29.2	
	baz=310,slow=75,SNR=63							
H11N3	**WAKE ISLAND Hy**	**27.42**	**118**	T		T	06 40 11.3	
	baz=310,slow=75,SNR=66							
H11S1	**WAKE ISLAND Hy**	**28.05**	**120**	T		T	06 40 59.8	
	baz=312,slow=75,SNR=252							
H11S3	**WAKE ISLAND Hy**	**28.05**	**120**	T		T	06 41 00.0	
	baz=312,slow=75,SNR=208							
H11S2	**WAKE ISLAND Hy**	**28.07**	**120**	T		T	06 41 00.0	
	baz=312,slow=75,SNR=224							
ZALV	**Zalesovo Beam**	**43.01**	**314**	P		**P**	**06 13 37.4**	**+0.7**
	0.4nm,0.4s,baz=112,slow=6.4,SNR=1.7							
MKAR	**Makanchi Array**	**44.96**	**304**	P		**P**	**06 13 53.1**	**+0.7**
	0.3nm,0.6s,baz=83,slow=9.1,SNR=3.7							
KURBB	**Kurchatov Arra**	**46.99**	**309**	P		**P**	**06 14 06.9**	**-1.4**
	0.8nm,0.5s,baz=81,slow=7.5,SNR=12							
WRA	**Warramunga Arr**	**55.34**	**188**	P		**P**	**06 15 11.2**	**0.0**
	0.9nm,0.4s,baz=1.7,slow=7.5,SNR=12							
ASAR	**Alice Springs**	**59.07**	**188**	P		**P**	**06 15 39.4**	**+1.8**
	0.2nm,0.5s,baz=5.3,slow=8.5,SNR=2.1							
H03N2	**Juan Fernandez**	**146.91**	**99**	T		T	09 09 53.2	
	baz=289,slow=76,SNR=13							
H03N3	**Juan Fernandez**	**146.93**	**99**	T		T	09 09 38.2	
	baz=289,slow=76,SNR=18							
H03N1	**Juan Fernandez**	**146.93**	**99**	T		T	09 09 56.2	
	baz=289,slow=76,SNR=14							

IDC 25 06:07:28.2±56.0, 19°.82S×176°.95W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/36, mbtmp4.0/3, Error ellipse: s-maj=1042.0km s-min=172.4km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**38.97**	**244**	P		P	06 14 55.5	-0.8
	1.1nm,0.6s,baz=45,slow=13,SNR=1.2							
ASAR	**Alice Springs**	**45.64**	**256**	P		P	06 15 50.6	-0.2
	1.7nm,0.6s,baz=90,slow=8.5,SNR=13							
WRA	**Warramunga Arr**	**45.67**	**261**	P		P	06 15 51.5	+0.3
	0.6nm,0.3s,baz=95,slow=8.1,SNR=13							

*DNK **25** 06:11:19.3±2.3, 27°.43N×85°.00E, h0km±37km, Ms7.8*
*BGR **25** 06:11:22.7±0.0, 27°.05N×83°.73E, h10km, mb7.1, Ms7.5*
*MOS **25** 06:11:23.6±0.9, 28°.19N×84°.73E, h10km, mb6.8/45, MS7.6/62, Error ellipse: s-maj=5.2km s-min=3.0km az=116.8 Broadband fault plane solution: P waves. M0 3.20000×10²⁰ NP1:φ=281.00000°, δ19.00000°, λ-94.00000°. NP2:φ=98.00000°, δ71.00000°, λ-89.00000°. Principal axes: T Plg64.0000°, Azm6.0000°; N Plg1.0000°, Azm98.0000°; P Plg26.0000°, Azm189.0000°;*
*IDC **25** 06:11:23.9±0.3, 28°.16N×84°.70E, h0km, mb6.0/52, mb1 6.0/55, mb1mx5.9/58, mbtmp6.0/55, ML5.0/3, MS7.8/40, Ms1 7.8/40, ms1mx7.4/58 Error ellipse: s-maj=9.5km s-min=7.2km az=39.0*
*BJI **25** 06:11:23.5±0.0, 28°.15N×84°.65E, h20km, mB7.1/70, mb6.2/64, Ms8.2/91, Ms7 8.2/83*
*NEIC **25** 06:11:25.9±1.9, 28°.23N±0°.07×84°.73E±0°.07, h8km±2km, mb7.1/297, Ms_20 7.9/489, Mwc7.8/140, Mww7.8, Mwc7.9(GCMT), Error ellipse: s-maj=11.0km s-min=8.3km az=205.0*
*DMN **25** 06:11:25.0±0.1, 28°.22N×84°.77E, h2km, MI7.6/5, Error ellipse: s-maj=3.6km s-min=1.0km az=21.0*
*NDI **25** 06:11:27.6±4.4, 28°.11N×84°.58E, h10km, mb7.1, ML6.7, mb7.1(NEIC)*
*NEIC **25** 06:11:56, 27°.77N×85°.18E, h24km, Moment Tensor Solution. Moment tensor: Scale 10²⁰Nm; Mrr1.60; Mθθ-1.62; Mφφ0.02; Mrθ6.34; Mrφ0.43; Mθφ-0.94; Fault plane solution: M0 6.62000×10²⁰ NP1:φ=290.00000°, δ7.00000°, λ101.00000°. NP2:φ=99.00000°, δ83.00000°, λ89.00000°. Principal axes: T 6.5672, Plg52.0000°, Azm7.0000°; N 0.1094, Plg1.0000°, Azm99.0000°; P -6.6766, Plg38.0000°, Azm190.0000°;*
*NEIC **25** 06:11:58, 27°.77N×85°.37E, h12km, Moment Tensor Solution. Moment tensor: Scale 10²⁰Nm; Mrr1.73; Mθθ-1.79; Mφφ0.06; Mrθ7.52; Mrφ0.45; Mθφ-0.59; Fault plane solution: M0 7.76000×10²⁰ NP1:φ=293.00000°, δ7.00000°, λ108.00000°. NP2:φ=95.00000°, δ83.00000°, λ88.00000°. Principal axes: T 7.6987, Plg52.0000°, Azm2.0000°; N 0.1191, Plg2.0000°, Azm95.0000°; P -7.8178, Plg38.0000°, Azm187.0000°;*
*GCMT **25** 06:11:58.3±0.1, 27°.91N×85°.33E, h12km, MW7.9/174, Moment Tensor Solution. s174,c469; s172,c860; Duration: 21s3 Moment tensor: Scale 10²⁰Nm; Mrr1.76±.00; Mθθ-1.82±.00; Mφφ0.05±.00; Mrθ8.04±.04; Mrφ0.47±.00; Mθφ-1.51±.05; Best double couple: M0 8.38600×10²⁰ NP1:φ=287.00000°, δ6.00000°, λ96.00000°. NP2:φ=101.00000°, δ84.00000°, λ89.00000°. Principal axes: T 8.3020, Plg51.0000°, Azm10.0000°; N 0.1660, Plg1.0000°, Azm101.0000°; P -8.4710, Plg39.0000°, Azm191.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*
*NEIC **25** 06:12:06.3, 28°.20N×85°.19E, h10km, Moment Tensor Solution. Moment tensor: Scale 10²⁰Nm; Mrr1.92; Mθθ-1.94; Mφφ0.02; Mrθ5.04; Mrφ0.56; Mθφ-0.52; Fault plane solution: M0 5.45000×10²⁰ NP1:φ=294.65000°, δ11.23000°, λ107.85000°. NP2:φ=96.47000°, δ79.32000°, λ86.52000°. Principal axes: T 5.3881, Plg56.0000°, Azm2.0000°; N 0.1190, Plg3.0000°, Azm97.0000°; P -5.5070, Plg34.0000°, Azm189.0000°;*
ISC 25 06:11:26.6±0.3, 28°.13N±0°.03×84°.72E±0°.02, h13km±1km, h13km:pP-P, n2182, σ2°08/2215, mb6.9/449, MS7.9/423, 217C-101D, Fault plane solution: NP1:φ=265.02683°, δ14.46814°, λ80.84402°. NP2:φ=94.47736°, δ75.72014°, λ92.35111°. Principal axes: T Plg59.2152°, Azm7.7264°; N Plg2.2784°, Azm273.8971°; P Plg30.6817°, Azm182.5444°; Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GKN	**Gorkha**	**0.14**	**209**	*e*Pg		**Pg**	**06 11 30.0**	**-0.4**
KKN	**Kakani**	**0.60**	**124**	*e*Pg		**Pg**	**06 11 36.7**	**-1.8**
DMN	**Daman**	**0.62**	**146**	*e*Pg		**Pg**	**06 11 37.6**	**-1.3**
PKIN	**Phulchoki**	**0.82**	**132**	*e*Pg		**Pg**	**06 11 41.1**	**-1.4**
PKI	**Pulchoki**	**0.83**	**132**	*e*Pg		**Pg**	**06 11 41.2**	**-1.6**
DANN	**Dangsing**	**0.87**	**285**	*e*Pg		**Pg**	**06 11 41.8**	**-1.8**
GUN	**Gumba**	**1.05**	**102**	*e*Pg		**Pb**	**06 11 44.6**	**-2.3**
KOLN	**Koldanda**	**1.05**	**250**	*e*Pg		**Pg**	**06 11 46.7**	**-0.3**
JIRN	**Jiri**	**1.39**	**109**	*e*Pg		**Pn**	**06 11 51.1**	**-0.9**
PYUN	**Piuthan**	**1.53**	**269**	*e*Pg		**Pb**	**06 11 54.9**	**0.0**
RAMN	**Ramite**	**2.04**	**125**	*e*Pg		**Pb**	**06 12 02.6**	**-1.1**
ODAN	**Odare**	**2.69**	**117**	*e*Pg		**Pb**	**06 12 15.8**	**+0.7**
BHMN	**Bhimchula**	**2.70**	**282**	*e*Pg		**Pb**	**06 12 15.8**	**+0.9**
BHMN				*e*Sg		**Sg**	**06 12 50.9**	**-2.5**
HARN	**Harre

PRZ pmax pmax
comp=Z,11µm,1.3s
PRZ Przheval'sk 15.21 342 Pn 06 14 59.0 -2.3
PRZ IAmb IAmb 06 15 28.2
comp=Z,11µm,1.3s
KDJ Kajisay 15.26 338 P Pn 06 14 59.0 -2.9
KDJ pmax pmax
comp=Z,5µm,1.0s
KDJ Kajisay 15.26 338 Pn 06 14 59.0 -2.9
KDJ IAmb IAmb 06 15 53.3
comp=Z,5µm,0.9s
SHLS Shalkode 15.59 346⇑ *i*P **Pn 06 15 02.4 -3.7**
comp=Z,2µm,1.5s,baz=346
SHLS Shalkode 15.59 346 *c i*P **Pn 06 15 02.4 -3.7**
SHLS pmax pmax
comp=Z,2µm,1.5s
MHMT Maesarieng 15.67 126 P **Pn 06 15 05.9 -1.2**
UZB Uzynbulak 15.68 344⇑ *i*P **Pn 06 15 04.9 -2.4**
comp=Z,4µm,2.2s,baz=344
UZB Uzynbulak 15.68 344 *c i*P **Pn 06 15 04.9 -2.4**
UZB pmax pmax
comp=Z,4µm,2.2s
ULHL Ulahol 15.68 336 P **Pn 06 15 04.3 -3.1**
SNR=345
SATY Saty 15.75 343⇑ *i*P **Pn 06 15 05.7 -2.6**
baz=342
SATY Saty 15.75 343 *c i*P **Pn 06 15 05.6 -2.6**
WMQ Urumqi 15.84 8 P **Pn 06 15 06.5 -2.8**
WMQ pP P 06 15 12.4 -0.7
WMQ sP pP 06 15 15.8 -1.6
WMQ PP **sP 06 15 25.0 +5.4**
WMQ S **Sn 06 18 11.0 +6.2**
WMQ SS **S 06 18 20.3 +1.1**
WMQ pmax pmax
comp=Z,18µm,3.7s
WMQ LR LR
comp=Z,3220µm,15.3s
WMQ LR LR
comp=Z,978µm,17.5s
WMQ LR LR
comp=Z,3830µm,24.5s
WMQ Urumqi 15.84 8 P **Pn 06 15 07.6 -1.7**
WMQ Urumqi 15.84 8 **Pn 06 15 07.6 -1.7**
WMQ IAmb IAmb 06 15 37.8
comp=Z,19µm,1.2s
CHTO Chiang Mai 16.00 122 P **Pn 06 15 09.0 -2.5**
CHTO pmax pmax
comp=Z,13µm,1.3s
CHTO Chiang Mai 16.00 122 Pn **Pn 06 15 09.0 -2.5**
CHTO IAmb IAmb 06 15 44.6
comp=Z,13µm,1.3s
CHTO Chiang Mai 16.00 122 P **Pn 06 15 10.1 -1.3**
CHTO P **Pn 06 15 10.1 -1.3**
CHTO P **Pn 06 15 10.1 -1.3**
CMMT Chiang Mai 16.00 122 P **Pn 06 15 09.4 -2.1**
BOOM Boomskoye usch 16.00 336 P **Pn 06 15 08.5 -3.0**
BOOM pmax pmax
comp=Z,6µm,1.1s
BOOM Boomskoye usch 16.00 336 **Pn 06 15 08.5 -3.0**
CM32 Chiang Mai Arr 16.02 123 P **Pn 06 15 10.6 -1.2**
CM34 Chiang Mai Arr 16.13 122 P **Pn 06 15 11.9 -1.2**
TNSS Tian-Shan 16.15 339⇑ *i*P **Pn 06 15 10.3 -3.3**
baz=339
TNSS Tian-Shan 16.15 339⇑ *i*P **Pn 06 15 10.3 -3.3**
CM13 Chiang Mai Arr 16.21 124 P **Pn 06 15 13.4 -0.8**
CM31 Chiang Mai Arr 16.22 123 **Pn 06 15 12.3 -2.0**
CM31 Chiang Mai Arr 16.22 123 P **Pn 06 15 13.6 -0.7**
SNR=807
CM31 P **Pn 06 15 13.6 -0.7**
SNR=807
CMAR Chiang Mai Arr 16.22 123 Pn **Pn 06 15 12.2 -2.1**
comp=Z,2.2nm,0.3s,baz=308,slow=13,SNR=41
CMAR Sn **Sn 06 18 14.8 +0.7**
baz=288,slow=22,SNR=2.4
CMAR LR LR 06 23 47.4
comp=Z,6914µm,18.4s,baz=348,slow=46
CMAR Chiang Mai Arr 16.22 123 **Pn 06 15 15.4 +1.1**
MDOK Medeo 16.23 340 *i* P **Pn 06 15 11.3 -3.1**
baz=339
MDOK LR LR 06 21 40.6
comp=Z,927µm,10.3s,baz=339
MDOK Medeo 16.23 340 *i* P **Pn 06 15 11.3 -3.1**
MDOK MLR MLR
comp=Z,927µm,10.0s
CM02 Chiang Mai Arr 16.23 123 P **Pn 06 15 13.0 -1.5**
CM01 Chiang Mai Arr 16.25 123 P **Pn 06 15 13.0 -1.8**
CM05 Chiang Mai Arr 16.25 124 P **Pn 06 15 13.8 -1.0**
CM03 Chiang Mai Arr 16.26 123 P **Pn 06 15 13.4 -1.4**
CM04 Chiang Mai Arr 16.28 123 P **Pn 06 15 13.6 -1.4**
CM36 Chiang Mai Arr 16.29 123 P **Pn 06 15 14.7 -0.6**
CRAI Chiangrai 16.30 115 P **Pn 06 15 14.3 -1.0**
KNDC Almaty 16.30 339 P **Pn 06 15 15.9 +0.6**
AAA Alma-Ata 16.31 339 *e*P **Pn 06 15 12.7 -2.8**
baz=339
AAA LR LR 06 21 41.8
comp=Z,517µm,9.3s,baz=339
AAA Alma-Ata 16.31 339 *e*P **Pn 06 15 12.6 -2.8**
AAA MLR MLR
comp=Z,517µm,9.0s
UCH Uchtor 16.33 332 P **Pn 06 15 13.5 -2.6**
SNR=1575
KMI Kunming 16.39 96 ⇑P **Pn 06 15 14.6 -2.1**
KMI pP P 06 15 20.8 +1.3
KMI sP pP 06 15 22.6 -1.1
KMI PP **sP 06 15 30.6 +5.0**
KMI S **Sn 06 18 13.8 -4.8**
KMI sS S 06 18 30.5 -0.5
KMI SS **SnSn 06 18 38.6 +7.0**
KMI LR LR
comp=Z,9030µm,13.6s
KMI LR LR
comp=Z,12500µm,16.4s
KMI Kunming 16.39 96 P **Pn 06 15 14.5 -2.1**
KMI pmax pmax
comp=Z,7µm,1.2s
KMI Kunming 16.39 96 **Pn 06 15 14.5 -2.2**
TKM2 Tokmak 2 16.50 336 P **Pn 06 15 15.9 -2.0**
SNR=173
KBK Karagaybulak 16.52 334 P **Pn 06 15 17.2 -0.9**
SNR=179
AML Almayashu 16.60 330 P **Pn 06 15 16.9 -2.6**
SNR=42
AAK Ala-Archa 16.68 333 Pn **Pn 06 15 17.0 -3.2**
comp=Z,2.0nm,0.3s,baz=154,slow=14,SNR=120
AAK LR LR 06 23 12.8
comp=Z,2031µm,21.3s,baz=133,slow=43
AAK Ala-Archa 16.68 333 P **Pn 06 15 19.1 -1.1**
SNR=145
AAK Ala-Archa 16.68 333 *i* P **Pn 06 15 17.5 -2.7**
SNR=626
AAK Ala-Archa 16.68 333 P **Pn 06 15 17.7 -2.5**
AAK pmax pmax
comp=Z,8µm,1.3s
AAK Ala-Archa 16.68 333 **Pn 06 15 17.7 -2.5**
AAK Ala-Archa 16.68 333 P **Pn 06 15 19.5 -0.7**
AAK P **Pn 06 15 19.5 -0.7**
AAK P **Pn 06 15 19.5 -0.7**
DGPR DIGLIPUR 16.73 151 *e*P **Pn 06 15 19.6 -1.2**
DGPR IAmb IAmb 06 15 46.4
comp=Z,4µm,0.8s
FRU1 Bishkek 16.77 333 P **Pn 06 15 19.6 -1.6**
FRU1 pmax pmax
comp=Z,12µm,1.3s
FRU1 Bishkek 16.77 333 Pn **Pn 06 15 19.6 -1.6**
FRU1 IAmb IAmb 06 16 09.8
comp=Z,12µm,1.2s
CD2 Chengdu 16.80 76 P **Pn 06 15 20.3 -1.4**
CD2 sP sP 06 15 31.3 +1.4
CD2 S **Sn 06 18 22.3 -6.0**
CD2 pmax pmax
comp=Z,10µm,0.9s
CD2 LR LR
comp=Z,16978µm,17.2s
CD2 LR LR
comp=Z,19348µm,14.4s
CD2 LR LR
comp=Z,22921µm,13.7s
GTA Gaotai 16.83 44 ⇑P **Pn 06 15 17.6 -4.5**
GTA pP P 06 15 23.3 -0.9
GTA sP pP 06 15 25.8 -2.8
GTA S **Sn 06 18 23.8 -5.2**
GTA SS **SnSn 06 18 43.5 +1.3**
GTA pmax pmax
comp=Z,17µm,6.9s
GTA LR LR
comp=Z,4674µm,17.8s
GTA LR LR
comp=Z,6211µm,19.6s
GTA LR LR
comp=Z,8884µm,20.0s
CHMS Chumysh 16.89 334 P **Pn 06 15 20.8 -1.9**
SNR=156
EKS2 Erkin-Say 17.00 331 P **Pn 06 15 22.3 -1.9**
SNR=181
USP Ospenovka 17.21 334 P **Pn 06 15 24.5 -2.3**
SNR=152
SGDS Sogindy 17.32 335 *e*P **Pn 06 15 25.0 -3.2**
baz=334
SGDS LR LR 06 22 21.2
comp=Z,288µm,10.8s,baz=334
SGDS Sogindy 17.32 335 *e*P **Pn 06 15 24.9 -3.2**
SGDS MLR MLR
comp=Z,288µm,11.0s
NANT Nan 17.34 119 P **Pn 06 15 26.2 -2.2**
SUKH Sukhothai 17.34 125 P **Pn 06 15 28.0 -0.5**
TDK Taldyqorghan 17.57 345 *e*P **Pn 06 15 28.9 -2.4**
comp=Z,1µm,1.7s,baz=345
TDK Taldyqorghan 17.57 345 *e*P **Pn 06 15 28.8 -2.4**
TDK pmax pmax
comp=Z,1µm,1.7s
LZH Lanzhou 18.02 59 ⇑P **Pn 06 15 33.6 -3.4**
LZH pP P 06 15 38.8 +1.4
LZH sP pP 06 15 40.8 -1.1
LZH S **Sn 06 18 53.8 -4.1**
LZH sS S 06 19 06.1 +2.1
LZH SS **SnSn 06 19 20.8 +9.3**
LZH pmax pmax
comp=Z,820nm,1.0s
LZH pmax pmax
comp=Z,288µm,6.5s
LZH LR LR
comp=Z,7728µm,12.7s
LZH LR LR
comp=Z,8484µm,13.0s
LZH LR LR
comp=Z,10000µm,14.6s
PHIT Phitsanulok 18.10 124 P **Pn 06 15 37.6 -0.2**
TAS Tashkent 18.24 320 P **Pn 06 15 35.9 -3.5**
TAS Tashkent 18.24 320 P **Pn 06 15 35.9 -3.5**
TAS IAmb IAmb 06 16 11.4
comp=Z,27µm,1.4s
DZA Taraz 18.29 327 LR LR 06 22 39.7
comp=Z,220µm,11.1s,baz=327
IUG Iuzhnay 18.39 323 *i* P **P 06 15 37.8 -3.7**
baz=323
IUG Iuzhnay 18.39 323 *i* P **P 06 15 37.7 -3.7**
SLVN Son La 18.69 107 P **P 06 15 43.1 -1.6**
MK31 Makanchi Array 18.73 355 *c i*P **P 06 15 42.9 -2.1**
MK31 Makanchi Array 18.73 355 **P 06 15 42.9 -2.1**
MKAR Makanchi Array 18.73 355 P **P 06 15 43.0 -1.9**
comp=Z,10nm,0.3s,baz=174,slow=10,SNR=394
MKAR S **S 06 19 18.9 +1.0**
baz=166,slow=19,SNR=1.1
MKAR LR LR 06 24 55.7
comp=Z,2546µm,20.5s,baz=160,slow=43
MKAR Makanchi Array 18.73 355 P **P 06 15 44.3 -0.6**
MKAR Makanchi Array 18.73 355 **P 06 15 44.3 -0.6**
CHM Chimkent 18.74 323 LR LR 06 22 41.0
comp=Z,98µm,9.3s,baz=323
MAKZ Makanchi 18.77 354 P **P 06 15 43.7 -1.7**
MAKZ Makanchi 18.77 354 P **P 06 15 43.5 -1.9**
KK31 Karatay Array 18.84 326 P **P 06 15 43.6 -2.6**
KK31 pmax pmax
comp=Z,13µm,1.8s
KK31 Karatay Array 18.84 326 **P 06 15 43.6 -2.6**
KKAR Karatay Array 18.84 326 P **P 06 15 43.2 -3.0**
KKAR pmax pmax
comp=Z,13µm,1.8s
KKAR Karatay Array 18.84 326 **P 06 15 43.2 -3.0**
KKAR Karatay Array 18.84 326 P **P 06 15 43.2 -3.0**
BTLS Baital 18.90 336 *i* P **P 06 15 45.4 -1.4**
baz=336
BTLS Baital 18.90 336 *i* P **P 06 15 45.3 -1.4**
GYA Guiyang 19.58 90 ⇑P **P 06 15 53.8 -0.7**
GYA S **S 06 19 26.9 -8.5**
GYA LR LR
comp=Z,660µm,12.8s
GYA LR LR
comp=Z,724µm,11.1s
GYA LR LR
comp=Z,1460µm,18.0s
NONG Nongkai 19.67 117 P **P 06 15 54.9 -0.5**
CHAI Chaiyaphum 20.08 124 P Pn 06 16 01.0 -0.7
HRA Herat 20.18 294 **P 06 16 00.2 -1.0**
KHON Khomkaen 20.43 121 P **P 06 16 03.8 +0.1**
PHET Kaeng Krachan 20.57 134 P **P 06 16 05.5 +0.3**
NAYO Nakonayok 20.67 128 P **P 06 16 06.6 +0.3**
ZHSF Zahedan 21.01 280 *e*P **P 06 16 12.1 +2.0**
ZHSF Zahedan 21.01 280 *e*P **P 06 16 11.8 +1.7**
PALK Pallekele 21.09 191 P **P 06 16 10.3 -0.6**
comp=Z,253nm,0.8s,baz=110,slow=12,SNR=52
PALK S **S 06 20 00.5 -4.9**
comp=Z,318nm,0.5s,baz=160,slow=15,SNR=1.7
PALK LR LR 06 25 44.0
comp=Z,1598µm,18.8s,baz=145,slow=41
PALK Pallekele 21.09 191 P **P 06 16 11.2 +0.3**
PALK Pallekele 21.09 191 P **P 06 16 13.5 +2.6**
PALK P **P 06 16 13.5 +2.6**
PATY Pattaya 21.35 132 P **P 06 16 14.3 +0.6**
XAN Xi'an 21.53 68 P **P 06 16 13.3 -2.2**
XAN pP pP 06 16 17.4 -2.3
XAN PP **PnPn 06 16 37.0 +1.1**
XAN S **S 06 20 11.3 -2.6**
XAN pmax pmax
comp=Z,3µm,1.0s
XAN pmax pmax
comp=Z,437µm,8.3s
XAN LR LR
comp=Z,18600µm,21.1s
XAN LR LR
comp=Z,5641µm,20.6s
XAN LR LR
comp=Z,16210µm,21.6s
XAN Xi'an 21.53 68 P **P 06 16 13.6 -1.9**
XAN Xi'an 21.53 68 P **P 06 16 13.6 -1.9**
DGZ Jazzator, Alta 21.64 5 *c i*P **P 06 16 16.5 -0.2**
DGZ pmax pmax
comp=Z,7µm,0.8s
DGZ MLR MLR
comp=Z,3102µm,20.0s
SHRT Shahrakht 21.65 291 *e*P **P 06 16 18.2 +1.3**
SHRT Shahrakht 21.65 291 *e*P **P 06 16 20.6 +3.8**
ENH Enshi 21.72 78 P **P 06 16 16.9 -0.7**
CHBR Chabahar 21.76 269 *e*P **P 06 16 20.7 +2.7**
CHBR Chabahar 21.76 269 *e*P **P 06 16 21.9 +3.9**
CHBR IAmb IAmb 06 16 57.4
comp=Z,6µm,0.9s
BSRN Basiran 22.46 286 *e*P **P 06 16 26.4 +0.7**
BSRN Basiran 22.46 286 *e*P **P 06 16 28.2 +2.5**
SEM Semipalatinsk 22.51 353⇑ *i*P **P 06 16 24.6 -1.5**
comp=Z,1µm,1.0s,baz=352
SEM Semipalatinsk 22.51 353 *c i*P **P 06 16 24.5 -1.5**
SEM pmax pmax
comp=Z,1µm,1.0s
MNCY Minicoy 22.63 211 *e*P **P 06 16 30.2 +2.8**
MNCY *e*S Sn 06 20 60.0 +11
KURBB Kurchatov Arra 22.95 350 P **P 06 16 29.0 -1.5**
comp=Z,396nm,0.7s,baz=171,slow=9.6,SNR=372
KURBB S **S 06 20 44.2 +4.0**
comp=Z,301nm,1.2s,baz=168,slow=22,SNR=2.1
KURBB Kurchatov Arra 22.95 350 P **P 06 16 29.7 -0.7**
KURK Kurchatov 23.03 350 P **P 06 16 29.0 -2.2**
KURK Kurchatov 23.03 350 P **P 06 16 29.0 -2.2**
UBPT Khong Chiam 23.09 119 P **P 06 16 32.4 +0.2**
UBPT Khong Chiam 23.09 119 P **P 06 16 31.7 -0.5**
UBPT IAmb IAmb 06 17 18.0
comp=Z,7µm,1.2s
SURT Suratani 23.23 142 P **P 06 16 33.8 +0.1**
BRZS Berezniki 23.68 340⇑ *i*P **P 06 16 37.5 -0.4**
comp=Z,1µm,1.2s,baz=340
BRZS Berezniki 23.68 340 *c i*P **P 06 16 37.4 -0.4**
BRZS pmax pmax
comp=Z,1µm,1.2s
WBK Wadi Bani Khal 23.88 263 P **P 06 16 42.2 +2.1**
SNR=237
WBK P **P 06 16 42.2 +2.1**
SNR=237
WBK P **P 06 16 42.2 +2.1**
SNR=237
PKDT Phuket 23.89 145 P **P 06 16 41.7 +1.6**
WSAR Wadi Sarin 23.99 264 P **P 06 16 41.3 +0.3**
comp=Z,442nm,1.1s,baz=108,slow=9.3,SNR=49
WSAR Wadi Sarin 23.99 264 P **P 06 16 43.7 +2.6**
SNR=237
KRAB Krabi 24.06 143 P **P 06 16 43.4 +1.7**
ASHT Ashkhabad 24.08 301 P **P 06 16 42.7 +1.0**
ASHT pmax pmax
comp=Z,5µm,0.9s
ASHT Ashkhabad 24.08 301 P **P 06 16 42.7 +1.0**
ASHT IAmb IAmb 06 17 11.8
comp=Z,5µm,0.9s
BTO Baotou 24.22 52 P **P 06 16 41.0 -2.1**
BTO pmax pmax
comp=Z,2µm,2.1s
GEYT Alibeck 24.28 301 P **P 06 16 43.9 +0.2**
comp=Z,258nm,0.9s,baz=136,slow=11,SNR=118
GEYT Alibeck 24.28 301 P **P 06 16 43.5 -0.1**
GYA0B ALIBECK ARRAY 24.28 301 P **P 06 16 43.8 +0.2**
GYA0B IAmb IAmb 06 17 42.7
comp=Z,3µm,0.9s
BIDO Bidbid 24.35 265 P **P 06 16 46.9 +2.5**
SNR=273
BIDO P **P 06 16 46.9 +2.5**
SNR=273
BIDO P **P 06 16 46.9 +2.5**
SNR=273
KRBR Kerman 24.49 281 *e*P **P 06 16 47.1 +1.2**
KRBR Kerman 24.49 281 *e*P **P 06 16 47.7 +1.8**
SMDO Samad 24.55 264 P **P 06 16 47.8 +1.5**
SNR=352
SMDO P **P 06 16 47.8 +1.5**
SNR=352
SMDO P **P 06 16 47.8 +1.5**
SNR=352
QIZ Qiongzhong 24.71 106 P **P 06 16 47.0 -0.6**
QIZ sP **sP 06 16 56.0 +2.0**
QIZ S **S 06 21 07.8 -1.4**
QIZ SS **SnSn 06 22 03.3 +7.8**
QIZ PcS **PcS 06 24 05.1 +0.1**
QIZ pmax pmax
comp=Z,138µm,7.8s
QIZ LR LR
comp=Z,2653µm,25.5s
QIZ LR LR
comp=Z,3125µm,19.1s
QIZ LR LR
comp=Z,4084µm,16.7s
QIZ Qiongzhong 24.71 106 P **P 06 16 46.8 -0.8**
QIZ IAmb IAmb 06 17 45.0
comp=Z,7µm,1.5s
QIZ Qiongzhong 24.71 106 IAMs_20 IAMs_20 06 27 54.6
comp=Z,3671µm,20.0s
JMDO Jabal Madar 24.72 263 P **P 06 16 50.3 +2.6**
SNR=221
JMDO P **P 06 16 50.3 +2.6**
SNR=221
JMDO P **P 06 16 50.3 +2.6**
SNR=221
BJRD Bojnurd 24.76 300 *e*P **P 06 16 50.6 +2.5**
BJRD Bojnurd 24.76 300 *e*P **P 06 16 49.4 +1.3**
HOQ Hoqain 25.05 266 P **P 06 16 52.8 +2.1**
SNR=269
HOQ P **P 06 16 52.8 +2.1**
SNR=269
HOQ P **P 06 16 52.8 +2.1**
SNR=269
TIY Taiyuan 25.07 60 *e*P **P 06 16 49.9 -1.0**
TIY pP **sP 06 17 01.3 +4.1**
TIY S **S 06 21 17.5 +2.4**
TIY pmax pmax
comp=Z,130nm,0.9s
TIY pmax pmax
comp=Z,2µm,4.1s
TIY LR LR
comp=Z,3235µm,11.7s
TIY LR LR
comp=Z,9915µm,22.8s
MHTO MHTO 25.31 260 P **P 06 16 54.3 +1.2**
SNR=357
MHTO P **P 06 16 54.3 +1.2**
SNR=357
MHTO P **P 06 16 54.3 +1.2**
SNR=357
BANOM Banah 25.39 272 P **P 06 16 55.4 +1.6**
BANOM Banah 25.39 272 P **P 06 16 56.2 +2.5**
SNR=89
BANOM P **P 06 16 56.2 +2.5**
SNR=89
BSY Bisya 25.39 264 P **P 06 16 57.0 +3.1**
SNR=268
BSY P **P 06 16 57.0 +3.1**
SNR=268
BSY P **P 06 16 57.0 +3.1**
SNR=268
HHC Hu-ho-hao-te 25.40 53 *e*P **P 06 16 53.8 0.0**
HHC sP sP 06 17 04.3 +4.2
HHC S **S 06 21 22.9 +2.7**
HHC pmax pmax
comp=Z,640nm,1.2s
HHC pmax pmax
comp=Z,25µm,5.5s
HHC LR LR
comp=Z,4755µm,12.9s
SHRO Shahrood 25.50 295 *e*P **P 06 16 56.1 +1.4**
SHRO Shahrood 25.50 295 *e*P **P 06 16 55.4 +0.6**
SHME Shamm 25.50 272 *i* P **P 06 16 56.2 +1.4**
SNR=106
SHME Shamm 25.50 272 P **P 06 16 56.8 +2.1**
SNR=83
SHME P **P 06 16 56.8 +2.1**
SNR=83
MDH Madha 25.52 270 P **P 06 16 56.5 +1.6**
MDH Madha 25.52 270 P **P 06 16 56.2 +1.2**
SNR=160
MDH P **P 06 16 56.2 +1.2**
SNR=160
LHMI Lhok Sumawe 25.57 151 P **P 06 16 56.5 +1.1**
LHMI Lhok Sumawe 25.57 151 P **P 06 16 57.4 +2.0**
comp=Z,416µmcomp=Z,6µm,0.8s
SOHO SOHO 25.59 268 P **P 06 16 57.4 +1.8**
SOHO SOHO 25.59 268 P **P 06 16 56.9 +1.4**
SOHO P **P 06 16 56.9 +1.4**
MASF Masafi 25.62 270 P **P 06 16 57.4 +1.5**
SNR=135
MSFE Esma-Masafi 25.63 270 *i* P **P 06 16 58.0 +2.0**
SNR=101
UOSS Minazif 25.68 270 *i* P **P 06 16 58.2 +1.8**
SNR=62
UOSS Minazif 25.68 270 P **P 06 16 57.3 +0.9**
UOSS Minazif 25.68 270 P **P 06 16 57.8 +1.4**
UOSS P **P 06 16 57.8 +1.4**
HATD Hatta, Dubai 25.77 269 *i* P **P 06 16 59.4 +2.1**
SNR=34
HATD Hatta, Dubai 25.77 269 P **P 06 16 59.1 +1.8**
SNR=175
HATD P **P 06 16 59.1 +1.8**
SNR=175
ZAA0 Zalesovo Array 25.79 0 P **P 06 16 56.2 -0.9**
ZALV Zalesovo Beam 25.79 0 P **P 06 16 56.5 -0.6**
comp=Z,732nm,1.0s,baz=184,slow=10.0,SNR=404
ZALV S S 06 21 40.5 +15
comp=Z,176nm,1.1s,baz=187,slow=13,SNR=1.1
ZALV LR LR 06 29 36.6
comp=Z,673µm,18.1s,baz=182,slow=42
ZALV P3KPbc 06 49 53.6
comp=Z,7.7nm,0.8s,baz=354,slow=7.4,SNR=5.4
ARQ Araqi 25.81 266 P **P 06 17 00.1 +2.5**
SNR=180
ARQ P **P 06 17 00.1 +2.5**
SNR=180
ARQ P **P 06 17 00.1 +2.5**
SNR=180
SONM Songino Array 25.90 35 P **P 06 16 58.3 -0.1**
comp=Z,395nm,1.0s,baz=219,slow=9.5,SNR=194
SONM LR LR 06 29 02.1
comp=Z,779µm,19.6s,baz=220,slow=41
SONM P3KPbc 06 49 52.5
comp=Z,9.7nm,0.9s,baz=54,slow=2.6,SNR=12
SONM Songino Array 25.90 35 P **P 06 16 57.5 -0.9**
WHN Wuhan 25.91 77 ⇑P **P 06 16 56.8 -1.6**
WHN S **S 06 21 27.3 -1.0**
WHN pmax pmax
comp=Z,1µm,1.3s
WHN pmax pmax
comp=Z,6µm,6.2s
DQM DQM 26.09 258 P **P 06 17 03.0 +2.8**

DQM P P 06 17 03.0 +2.8
DQM P P 06 17 03.0 +2.8
DQM P P 06 17 03.0 +2.8
SNR=136
DQM P P 06 17 03.0 +2.8
SNR=136
DQM P P 06 17 03.0 +2.8
SNR=136
NAZ Nazwa, Dubai 26.15 270 *i* P P 06 17 03.4 +2.7
SNR=82
NAZ Nazwa, Dubai 26.15 270 P P 06 17 04.9 +4.2
SNR=138
NAZ P P 06 17 04.9 +4.2
SNR=138
MLSI Meulaboh, Aceh 26.21 153 P P 06 17 00.8 -0.4
comp=Z,72µmcomp=Z,2µm,1.0s
MLSI pP sP 06 17 08.8 +1.2
comp=Z,72µmcomp=Z,2µm,1.0s
ULN Ulaanbaatar 26.25 35*ce*P P 06 17 00.5 -1.1
ULN pmax pmax
comp=Z,261nm,1.7s
ULN MLR MLR
comp=Z,5690µm,17.0s
ULN Ulaanbaatar 26.25 35 P P 06 17 02.3 +0.7
FAQ Al Faqa, Dubai 26.27 269 *i* P P 06 17 03.8 +2.1
SNR=71
FAQ Al Faqa, Dubai 26.27 269 P P 06 17 04.0 +2.3
SNR=164
FAQ P P 06 17 04.0 +2.3
SNR=164
GZH Guangzhou 26.27 95⇑*i*P P 06 17 02.4 +0.7
GZH sP sP 06 17 13.3 +5.2
GZH S S 06 21 35.6 +1.6
GZH LR LR
comp=Z,4074µm,12.0s
ALNE Al Ain 26.30 268 *i* P P 06 17 03.5 +1.5
SNR=34
ALNE Al Ain 26.30 268 P P 06 17 04.6 +2.6
SNR=249
ALNE P P 06 17 04.6 +2.6
SNR=249
ALNE P P 06 17 04.6 +2.6
SNR=249
YZKH Yazd 26.32 287 *e*P P 06 17 03.5 +1.2
YZKH Yazd 26.32 287 *e*P P 06 17 04.1 +1.8
ZAK Zakamensk 26.32 27 *e*P P 06 17 02.3 +0.2
ZAK pmax pmax
comp=Z,3µm,1.4s
MOY Mondy 26.50 23 *e*P P 06 17 04.2 +0.5
MOY pmax pmax
comp=Z,4µm,1.8s
ASUD Al Ashush, Dub 26.53 269 *i* P P 06 17 05.9 +1.8
SNR=37
ASUD Al Ashush, Dub 26.53 269 P P 06 17 06.7 +2.6
SNR=36
ASUD P P 06 17 06.7 +2.6
SNR=36
ASUD P P 06 17 06.7 +2.6
SNR=36
MCO Taipa Grande 26.75 96 P P 06 17 08.0 +1.9
BVAR Borovoye Array 27.04 341 P P 06 17 07.3 -1.1
comp=Z,68nm,0.9s,baz=144,slow=23,SNR=84
BVAR P3KPbc 06 49 48.4
comp=Z,5.9nm,0.9s,baz=34,slow=11,SNR=5.0
BRVK Borovoye 27.10 341 P P 06 17 08.1 -0.8
BRVK pmax pmax
comp=Z,2µm,1.1s
BRVK MLR MLR
comp=Z,1513µm,20.0s
BRVK Borovoye 27.10 341 P P 06 17 08.1 -0.8
BRVK Borovoye 27.10 341 P P 06 17 09.4 +0.5
BRVK P P 06 17 09.4 +0.5
BRVK P P 06 17 09.4 +0.5
UMZA Um Al Zommool 27.20 265 P P 06 17 12.0 +1.9
UMZA P P 06 17 12.0 +1.9
UMZA P P 06 17 12.0 +1.9
HKC Hong Kong Obse 27.23 96⇑P P 06 17 11.0 +0.5
KULM Kulim 27.30 143 P P 06 17 10.2 -0.8
KULM IAMs_20 IAMs_20 06 29 18.8
comp=Z,4726µm,22.0s
TPTI 27.44 152 P P 06 17 12.1 -0.2
comp=Z,843µmcomp=Z,45µmcomp=Z,546nm,1.1s
DLV T Lat 27.45 121 P P 06 17 11.7 -1.0
TLY Talaya 27.48 26 P P 06 17 11.9 -0.5
comp=Z,45nm,0.9s,baz=227,slow=9.2,SNR=30
TLY Talaya 27.48 26 *e*P P 06 17 15.3 +2.9
TLY pmax pmax
comp=Z,1µm,1.5s
TLY MLR MLR
comp=Z,9680µm,24.0s
TLY Talaya 27.48 26 P P 06 17 12.3 -0.1
TLY IAmb IAmb 06 17 51.6
comp=Z,7µm,2.2s
TLY IAMs_20 IAMs_20 06 29 34.4
comp=Z,3424µm,22.0s
TSI Tuntungan 27.82 149 P P 06 17 16.4 +0.7
comp=Z,100µmcomp=Z,1µm,1.1s
NASN Na'in 27.83 288 *e*P P 06 17 16.7 +0.5
MZWR Madinat Zayed 28.03 268 P P 06 17 19.0 +1.5
MZWR P P 06 17 19.0 +1.5
MZWR P P 06 17 19.0 +1.5
IRK Irkutsk 28.16 26 *e*P P 06 17 18.2 -0.3
IRK pmax pmax
comp=Z,6µm,2.7s
IPM Ipoh 28.18 144 P P 06 17 18.2 -0.8
IPM IAmb IAmb 06 18 06.3
comp=Z,5µm,1.4s
AB31 Akbulak array 28.39 325 *i* P P 06 17 20.3 -0.2
ABKAR Akbulak array 28.39 325 P P 06 17 19.4 -1.1
ABKAR Akbulak array 28.39 325 P P 06 17 20.4 -0.2
ABKAR IAmb IAmb 06 17 51.4
comp=Z,1µm,0.8s
BJT Baijiatuan 28.48 57 P P 06 17 20.6 -0.8
BJT pmax pmax
comp=Z,1µm,1.1s
BJT Baijiatuan 28.48 57 P P 06 17 20.6 -0.8
BJI Beijing 28.49 57 P P 06 17 20.8 -0.7
BJI S S 06 22 09.4 +0.7
BJI pmax pmax
comp=Z,63nm,1.0s
BJI pmax pmax
comp=Z,7µm,10.6s
BJI LR LR
comp=Z,931µm,14.5s
TIA Tai'an 28.49 65 P P 06 17 20.3 -1.3
TIA pmax pmax
comp=Z,300nm,1.3s
TIA pmax pmax
comp=Z,110µm,10.3s
TIA LR LR
comp=Z,3604µm,16.2s
TIA LR LR
comp=Z,8279µm,20.1s
TIA LR LR
comp=Z,14478µm,20.6s
SHAO Shalim 28.53 256 P P 06 17 24.4 +2.3
SHAO Shalim 28.53 256 P P 06 17 25.2 +3.2
SNR=36
SHAO P P 06 17 25.2 +3.2
SNR=36
SHAO P P 06 17 25.2 +3.2
SNR=36
PSI Prapat 28.61 149 P P 06 17 23.2 +0.3
comp=Z,14nm,0.5s,baz=341,slow=0.3,SNR=18
PSI LR LR 06 30 54.9
comp=Z,3044µm,21.1s,baz=274,slow=41
RPSI Rantau Prapat 28.70 149 P P 06 17 23.2 -0.4
RPSI Rantau Prapat 28.70 149 P P 06 17 22.7 -0.8
RPSI IAmb IAmb 06 18 08.5
comp=Z,893nm,1.0s
RPSI IAMs_20 IAMs_20 06 30 43.4
comp=Z,3511µm,22.0s
DMTO DMTO 29.24 256 P P 06 17 32.0 +3.6
SNR=56
DMTO P P 06 17 32.0 +3.6
SNR=56
GSI Gunungsitoli 29.38 153 P P 06 17 30.1 +0.5
GSI IAMs_20 IAMs_20 06 30 15.5
comp=Z,3745µm,22.0s
GSI Gunungsitoli 29.38 153 P P 06 17 30.4 +0.8
comp=Z,178µmcomp=Z,4µm,1.5s
CHTH Charan 29.41 294 *e*P P 06 17 30.9 +0.8
CHTH Charan 29.41 294 *e*P P 06 17 31.2 +1.1
DOK Doka 29.56 258 P P 06 17 33.3 +2.0
SNR=157
DOK P P 06 17 33.3 +2.0
SNR=157
THKV Tehran--Karaj 29.61 294 *e*P P 06 17 32.2 +0.4
KHOR Al-Khor Airpor 29.67 273 P P 06 17 33.9 +1.7
KHOR P P 06 17 33.9 +1.7
KHOR P P 06 17 33.9 +1.7
NJ2 Nanjing 29.72 74⇑P P 06 17 31.9 -0.6
NJ2 pP pP 06 17 36.4 -0.6
NJ2 sP sP 06 17 41.3 +2.4
NJ2 S S 06 22 26.8 -1.5
NJ2 sS sS 06 22 36.4 +0.5
NJ2 SS SnSn 06 24 05.5 +7.8
NJ2 pmax pmax
comp=Z,260nm,1.2s
NJ2 pmax pmax
comp=Z,9µm,3.5s
NJ2 LR LR
comp=Z,13337µm,14.4s
SLWR Sila 29.88 270 P P 06 17 35.6 +1.6
SLWR P P 06 17 35.6 +1.6
SLWR P P 06 17 35.6 +1.6
RBK Rabkut 29.97 256 P P 06 17 36.0 +1.1
SNR=142
RBK P P 06 17 36.0 +1.1
SNR=142
RBK P P 06 17 36.0 +1.1
SNR=142
AKTO Aktyubinsk 30.10 325 P P 06 17 35.0 -0.7
comp=Z,142nm,0.8s,baz=140,slow=7.1,SNR=122
AKTO S S 06 22 54.9 +21
comp=Z,213nm,1.1s,baz=232,slow=13,SNR=1.8
AKTO LR LR 06 32 13.8
comp=Z,1486µm,22.0s,baz=133,slow=42
TRNA Turayna 30.14 271 P P 06 17 37.8 +1.6
TRNA P P 06 17 37.8 +1.6
TRNA P P 06 17 37.8 +1.6
WHFO Wadi Hawf 30.16 257 P P 06 17 36.8 +0.2
SNR=285
WHFO P P 06 17 36.8 +0.2
SNR=285
WHFO P P 06 17 36.8 +0.2
SNR=285
ASAO Ashtian 30.21 291 *e*P P 06 17 38.6 +1.4
ASAO IAmb IAmb 06 17 57.2
comp=Z,4µm,1.2s
KHMZ Khomeyn 30.24 289 *e*P P 06 17 38.6 +1.2
KNMB Chin-men Tao 30.35 89 P P 06 17 37.5 -0.6
KNMB IAmb IAmb 06 18 37.7
comp=Z,3µm,1.3s
QZH Quanzhou 30.42 88⇑*i*P P 06 17 38.8 +0.1
QZH S S 06 22 40.3 +1.0
QZH pmax pmax
comp=Z,870nm,1.8s
QZH pmax pmax
comp=Z,57µm,10.1s
QZH LR LR
comp=Z,6123µm,17.1s
QZH LR LR
comp=Z,1232µm,16.1s
QZH LR LR
comp=Z,5674µm,13.1s
MNSI Mandailing Nat 30.68 150 P P 06 17 40.4 -0.7
comp=Z,59µmcomp=Z,1µm,0.9s
ABTO Aybut 30.81 256 P P 06 17 44.2 +1.8
SNR=157
ABTO P P 06 17 44.2 +1.8
SNR=157
ABTO P P 06 17 44.2 +1.8
SNR=157
PBSI Pulau Batu 30.89 153 P P 06 17 45.3 +2.3
comp=Z,104µmcomp=Z,3µm,1.3s
ZNJK Zanjan 31.45 295 *e*P P 06 17 48.9 +0.8
ZNJK Zanjan 31.45 295 *e*P P 06 17 49.1 +1.1
SSE Sheshan 31.75 76 P P 06 17 50.4 -0.1
SSE S S 06 23 00.3 +0.1
SSE pmax pmax
comp=Z,89nm,1.1s
SSE pmax pmax
comp=Z,1.0nm,2.8s
SSE Sheshan 31.75 76 P P 06 17 50.0 -0.5
SSE IAmb IAmb 06 18 09.8
comp=Z,4µm,1.3s
BKNI Bangkinang 31.76 148 P P 06 17 50.0 -0.7
BKNI Bangkinang 31.76 148 P P 06 17 50.7 0.0
comp=Z,93µmcomp=Z,6µm,1.0s
MYKOM Kota Tinggi 31.95 142 P P 06 17 52.7 +0.4
MYKOM IAMs_20 IAMs_20 06 32 13.2
comp=Z,3532µm,22.0s
CIT Chita 32.13 34 *e*P P 06 17 54.6 +1.0
CIT *e* 06 19 03.9
CIT *e* 06 19 21.2
CIT *e* 06 23 10.8
CIT pmax pmax
comp=Z,4µm,3.4s
QRN Al-Qurain 32.28 280 *e*P 06 17 55.5
UMR Umm Al-Rimmam 32.36 282 *e*P 06 17 55.8
SISI Saibi 32.38 152 P P 06 17 57.6 +1.6
comp=Z,637µmcomp=Z,52µmcomp=Z,1µm,1.7s
DL2 Dalian 32.40 61 P P 06 17 55.0 -1.1
DL2 S S 06 23 06.8 -3.2
DL2 pmax pmax
comp=Z,2µm,1.0s
DL2 pmax pmax
comp=Z,70µm,10.7s
DL2 LR LR
comp=Z,3494µm,15.6s
DL2 LR LR
comp=Z,9028µm,17.7s
DL2 LR LR
comp=Z,13024µm,17.7s
RDF Al-Radifah 32.58 280 *e*P 06 17 57.5
TPUB Ta-pu 32.63 90 P P 06 17 56.5 -1.8
TPUB IAmb IAmb 06 18 32.1
comp=Z,2µm,1.1s
SOCY Socotra 32.79 247 P P 06 17 58.5 -1.3
SOCY Socotra 32.79 247 P P 06 17 60.0 +0.2
SNR=437
SSLB Suanglung 32.79 89 P P 06 17 59.6 -0.1
YHNB Yeheng 32.94 87 P P 06 18 01.7 +0.6
TATO Taipei 32.96 87 P P 06 18 01.0 -0.2
TATO IAmb IAmb 06 18 43.9
comp=Z,6µm,2.1s
TATO Taipei 32.96 87 P P 06 17 58.2 -2.9
TATO P P 06 17 58.2 -2.9
TATO P P 06 17 58.2 -2.9
RST Umm Al-Ruwaisa 32.98 282 *e*P 06 18 00.8
SDSI Sungai Dareh 33.05 148 P P 06 18 02.2 +0.3
comp=Z,868µmcomp=Z,32µmcomp=Z,533nm,0.8s
TWG Pinlang 33.16 91 P P 06 18 03.2 +0.3
TWG IAmb IAmb 06 18 37.9
comp=Z,3µm,1.3s
YULB Yu-li 33.20 90 P P 06 18 02.4 -0.9
YULB IAmb IAmb 06 18 26.9
comp=Z,3µm,1.0s
NACB Ninganchiao 33.26 88 P P 06 18 03.4 -0.3
SVE Sverdlovsk 33.38 336*de*P P 06 18 04.7 +0.3
SVE *e*S S 06 23 32.2 +7.3
SVE pmax pmax
comp=Z,2µm,0.9s
SVE MLR MLR
comp=N,349µm,14.0s
SVE MLR MLR
comp=E,583µm,15.0s
SVE MLR MLR
comp=Z,792µm,17.0s
MAK Makhachkala 33.40 306*c* *i*P P 06 18 06.2 +1.4
MAK *e* 06 19 12.4
MAK *e*PPP PPP 06 19 25.7
MAK *e*S S 06 23 31.6 +6.1
MAK *e*SS SnSn 06 25 26.2 -0.7
MAK pmax pmax
comp=Z,23µm,5.0s
MAK pmax pmax
comp=Z,1µm,0.9s
MAK MLR MLR
comp=Z,443µm,15.0s
MAK MLR MLR
comp=E,809µm,17.0s
MAK MLR MLR
comp=N,381µm,12.0s
ARU Arti 33.86 334 P P 06 18 08.2 -0.4
comp=N,79nm,0.6s,baz=137,slow=4.7,SNR=150
ARU LR LR 06 33 57.5
comp=N,1161µm,20.8s,baz=125,slow=40
ARU P3KPbc 06 49 19.4
comp=N,4.1nm,0.8s,baz=23,slow=4.8,SNR=3.8
ARU Arti 33.86 334*c* *i*P P 06 18 08.1 -0.5
ARU 06 19 17.3
ARU PPP PPP 06 19 32.4
ARU S S 06 23 33.4 +1.0
ARU pmax pmax
comp=Z,445nm,0.9s
ARU pmax pmax
comp=Z,40µm,10.4s
ARU MLR MLR
comp=Z,1031µm,18.0s
ARU Arti 33.86 334 P P 06 18 08.0 -0.6
ARU IAmb IAmb 06 18 29.7
comp=Z,2µm,0.6s
KRJI Kerinci 34.09 149 P P 06 18 11.5 +0.4
comp=Z,95µmcomp=Z,5µm,0.8s
HIA Hailar 34.09 42 P P 06 18 10.5 -0.3
HIA pmax pmax
comp=Z,2µm,1.2s
HIA Hailar 34.09 42 P P 06 18 10.5 -0.3
HIA IAmb IAmb 06 18 32.4
comp=Z,2µm,1.2s
DSRI Dabo 34.24 143 P P 06 18 13.5 +1.2
comp=Z,31µmcomp=Z,826nm,1.2s
SNY Shenyang 34.35 56⇑P P 06 18 11.5 -1.6
SNY S S 06 23 38.8 -1.5
SNY pmax pmax
comp=Z,53nm,0.9s
SNY pmax pmax
comp=Z,2µm,4.3s
SNY LR LR
comp=Z,2945µm,16.3s
SNY LR LR
comp=Z,2568µm,24.9s
SNY LR LR
comp=Z,4095µm,24.3s
YOJ Yonaguni jima 34.43 87 P P 06 18 12.1 -1.8
YOJ pmax pmax
comp=Z,2µm,1.2s
YOJ Yonaguni jima 34.43 87 P P 06 18 12.1 -1.8
YOJ IAmb IAmb 06 18 35.8
comp=Z,2µm,1.2s
SZP Santa 34.46 100 P P 06 18 12.6 -1.7
SZP IAMs_20 IAMs_20 06 32 58.5
comp=Z,2733µm,20.0s
GROC Groznyy 34.68 306 *e*P P 06 18 14.6 -1.3
GROC *e* 06 19 29.2
GROC *e*S S 06 23 46.9 +1.6
GROC *e* 06 28 31.7
GROC pmax pmax
comp=Z,2µm,0.8s
JMBI JAMBI 34.73 145 P P 06 18 18.7 +2.1
comp=Z,426µmcomp=Z,70µmcomp=Z,3µm,1.1s
MAKU Maku 34.86 299 *e*P P 06 18 18.6 +0.9
GNI Garni 34.92 301 P P 06 18 18.9 +0.7
GNI Garni 34.92 301 *e*P P 06 18 19.7 +1.6
GNI Garni 34.92 301*c* *i*P P 06 18 19.4 +1.2
GNI pmax pmax
comp=Z,4µm,1.5s
GNI MLR MLR
comp=Z,200µm,17.0s
GNI Garni 34.92 301 P P 06 18 19.2 +1.0
GNI IAmb IAmb 06 18 57.2
comp=Z,4µm,1.3s
GNI Garni 34.92 301 P P 06 18 19.8 +1.6
GNI P P 06 18 19.8 +1.6
GNI P P 06 18 19.8 +1.6
TASB TASBURUN-IGDIR 35.28 300 *e*P P 06 18 22.6 +1.4
MASI Maura Aman, Be 35.37 149 P P 06 18 23.5 +1.4
comp=Z,792µmcomp=Z,49µmcomp=Z,3µm,0.8s
CLDR Caldiran 35.43 299 *e*P P 06 18 23.1 +0.3
RAYN Ar Rayn 35.49 272 *i* P P 06 18 22.8 -0.3
SNR=115
RAYN Ar Rayn 35.49 272 P P 06 18 22.9 -0.3
RAYN pmax pmax
comp=Z,777nm,1.1s
RAYN MLR MLR
comp=Z,314µm,20.0s
RAYN Ar Rayn 35.49 272 P P 06 18 22.9 -0.3
CUKT Cukurca 35.54 296 *e*P P 06 18 23.5 -0.1
VANB Van 35.80 298 *e*P P 06 18 27.1 +1.4
ZEI Tsey 35.95 305 *e*P P 06 18 25.6 -1.5
ZEI pmax pmax
comp=Z,825nm,0.8s
KSI Kapahiang 35.98 149 P P 06 18 28.1 +0.7
comp=Z,55µmcomp=Z,3µm,1.0s
AKH Akhalkalaki 36.03 303⇓P P 06 18 29.8 +2.0
AKH Akhalkalaki 36.03 303 *e*P P 06 18 29.8 +2.0
GEVA Gevas 36.04 297 P P 06 18 29.7 +1.8
BOD Bodaibo 36.06 26 *e*P P 06 18 27.0 -0.5
BOD pmax pmax
comp=Z,4µm,1.6s
KSM Kuching 36.07 133 P P 06 18 27.9 -0.3
KSM IAMs_20 IAMs_20 06 35 56.1
comp=Z,2377µm,19.0s
CN2 Changchun 36.09 53 *e*P P 06 18 25.8 -2.2
CN2 *e*S S 06 24 05.3 -1.7
CN2 SS SnSn 06 26 23.3 -8.8
CN2 pmax pmax
comp=Z,68µm,11.2s
CN2 LR LR
comp=Z,1988µm,19.0s
CN2 LR LR
comp=Z,5340µm,19.0s
AKDM Akdamar-Van 36.10 297 *e*P P 06 18 30.7 +2.3
AGRB Hanur-Agry 36.19 299 *e*P P 06 18 30.9 +1.7
INCN Inchon 36.20 64 P P 06 18 27.6 -1.5
INCN pmax pmax
comp=Z,7µm,1.5s
INCN Inchon 36.20 64 P P 06 18 27.6 -1.5
INCN Inchon 36.20 64 P P 06 18 26.9 -2.1
INCN P P 06 18 26.9 -2.1
INCN P P 06 18 26.9 -2.1
NCK Nalchik 36.31 306⇓*i*P P 06 18 30.5 +0.6
NCK pmax pmax
comp=Z,1µm,0.8s
NCK MLR MLR
comp=Z,412µm,18.0s
TGY Tagaytay City 36.40 105 P P 06 18 31.4 +0.3
comp=Z,860nm,0.8s,baz=225,slow=6.2,SNR=11
TGY LR LR 06 35 25.2
comp=Z,1354µm,18.4s,baz=311,slow=40
PMBI Palembang 36.41 145 P P 06 18 31.0 0.0
PMBI Palembang 36.41 145 P P 06 18 31.2 +0.2
comp=Z,895µmcomp=Z,132µmcomp=Z,12µm,1.2s
SIRT Sirnak 36.48 296 *e*P P 06 18 32.3 +0.7
MLAZ Malazgirt-MUS 36.49 299 *e*P P 06 18 33.3 +1.6
LHSI Lahat 36.57 147 P P 06 18 32.2 -0.2
comp=Z,751µmcomp=Z,33µmcomp=Z,1µm,1.3s
SBUM Sibu 36.62 129 P P 06 18 32.9 +0.1
BELG Belogornoye 36.65 322 P P 06 18 31.6 -1.1
comp=Z,302nm,0.9s,baz=303,slow=3.1,SNR=60
BELG LR LR 06 36 04.3
comp=Z,1486µm,21.9s,baz=112,slow=40
BELG Belogornoye 36.65 322*c* *i*P P 06 18 31.5 -1.1
BELG pmax pmax
comp=Z,519nm,1.2s
BELG MLR MLR
comp=Z,197µm,21.0s
TJN Taejon 36.75 66*ce*P P 06 18 31.7 -2.1
MNAI Manna 36.77 149 P P 06 18 32.2 -1.9
MNAI IAmb IAmb 06 19 16.4
comp=Z,2µm,0.8s
MNAI IAMs_20 IAMs_20 06 34 25.4
comp=Z,2158µm,22.0s
MNAI Manna 36.77 149 P P 06 18 34.3 +0.2
comp=Z,883µmcomp=Z,80µmcomp=Z,2µm,0.9s
SENK Senkaya-Erzuru 36.78 301 *e*P P 06 18 36.0 +1.8
KBZ Khabaz 36.85 306 P P 06 18 34.1 -0.4
comp=Z,101nm,0.8s,baz=131,slow=6.8,SNR=92
KBZ Khabaz 36.85 306*ce*P P 06 18 34.3 -0.2
KBZ pmax pmax
comp=Z,1µm,1.7s
KBZ MLR MLR
comp=Z,367µm,17.0s
NEY Neytrino 36.89 305*d* *i*P P 06 18 37.3 +2.2
NEY pmax pmax
comp=Z,1µm,1.8s
GOF Gofitskoye 37.02 308⇑*e*P P 06 18 36.3 +0.3
GOF *e*S S 06 24 27.5 +6.3
GOF pmax pmax
comp=Z,2µm,1.1s
SHA1 Shidzhatmaz 37.02 306*c* *i*P P 06 18 36.0 -0.3
KIV Kislovodsk 37.04 307⇑P P 06 18 36.6 +0.3

KIV **Kislovodsk** 37.04 307 *i* P P 06 18 36.0 -0.3
SNR=19
KIV **Kislovodsk** 37.04 307 *e*P P 06 18 36.6 +0.3
KIV **Kislovodsk** 37.04 307 *e*P P 06 18 35.8 -0.5
KIV *e*S S 06 24 23.3 +1.6
KIV pmax pmax
comp=Z,3μm,4.5s
KIV pmax pmax
comp=Z,766nm,1.1s
KIV MLR MLR
comp=Z,513μm,16.0s
KIV **Kislovodsk** 37.04 307 P P 06 18 36.3 0.0
KKM **Kota Kinabalu** 37.06 120 P P 06 18 37.1 +0.3
KKM IAmb IAmb 06 19 17.6
comp=Z,7μm,1.6s
KS19 **Wonju Array Si** 37.18 64 P P 06 18 35.6 -1.8
KS19 IAmb IAmb 06 18 60.0
comp=Z,3μm,1.6s
KSAR **Wonju Array Be** 37.19 64 P P 06 18 35.0 -2.5
KSAR **Wonju Array Be** 37.19 64 P P 06 18 35.0 -2.5
KSRS **Korea Array** 37.22 64 P P 06 18 35.5 -2.2
comp=Z,53nm,0.7s,baz=261,slow=7.8,SNR=44
KSRS S S 06 24 25.2 +0.9
comp=Z,8.8nm,0.9s,baz=270,slow=15,SNR=1.4
KSRS LR LR 06 35 16.4
comp=Z,4962μm,21.4s,baz=266,slow=38
DGAR **Diego Garcia** 37.27 200 P P 06 18 39.2 +1.0
DGAR MLR MLR
comp=Z,1514μm,18.0s
DGAR **Diego Garcia** 37.27 200 P P 06 18 39.2 +1.0
DGAR **Diego Garcia** 37.27 200 IAMs_20 IAMs_20 06 34 11.1
comp=Z,1514μm,18.0s
DGAR **Diego Garcia** 37.27 200 P P 06 18 40.1 +1.8
DGAR P P 06 18 40.1 +1.8
DGAR P P 06 18 40.1 +1.8
VRTB **Varto-Mus** 37.34 299 *e*P P 06 18 41.0 +2.0
H08S3 **Diego Garcia H** 37.46 200 P P 06 18 43.6 +4.0
baz=8.1,slow=13,SNR=655
H08S2 **Diego Garcia H** 37.48 200 P P 06 18 43.9 +4.2
baz=8.1,slow=13,SNR=607
H08S1 **Diego Garcia H** 37.48 200 P P 06 18 43.7 +3.9
baz=8.1,slow=13,SNR=1206
SVAN **Silvan-Diyarba** 37.49 297 *e*P P 06 18 41.4 +1.3
KARO **Karliova-Bingo** 37.67 299 *e*P P 06 18 43.2 +1.4
MARD **Mardin** 37.80 295 P P 06 18 41.9 -0.9
MARD IAmb IAmb 06 19 20.9
comp=Z,6μm,1.7s
TPI **Tanjungpandan** 37.81 141 P P 06 18 43.4 +0.5
comp=Z,38μmcomp=Z,897nm,1.1s
LWLI **Liwa** 37.87 147 P P 06 18 41.7 -1.8
comp=Z,25μmcomp=Z,2μm,0.8s
STKI **Sintang** 37.90 133 P P 06 18 44.3 +0.6
comp=Z,642nmcomp=Z,484nm,1.8s
BNGB **Bingl** 37.94 298 *e*P P 06 18 45.3 +1.4
YEDI **Yedisu-Bingol** 38.07 299 *e*P P 06 18 46.1 +1.0
MAZI **Mazidag** 38.07 296 *e*P P 06 18 45.8 +0.7
KOPT **Kop Dagi** 38.14 300 P P 06 18 47.5 +1.6
DYBB **Diyarbakir** 38.32 297 *e*P P 06 18 48.4 +1.3
JTU **Tsushima** 38.46 69 P P 06 18 47.2 -1.0
JTU IAmb IAmb 06 19 07.5
comp=Z,5μm,1.6s
JOW **Kunigami** 38.51 81 P P 06 18 47.3 -1.6
comp=Z,228nm,0.7s,baz=1.3,slow=1.6,SNR=27
JOW **Kunigami** 38.51 81 P P 06 18 47.2 -1.6
KASI **Kota Agung** 38.52 147 P P 06 18 46.2 -2.6
comp=Z,690μmcomp=Z,27μmcomp=Z,2μm,0.7s
ERZN **Erzincan** 38.71 299 *e*P P 06 18 50.9 +0.4
BLSI **Bandar Lampung** 38.74 146 P P 06 18 50.7 -0.1
comp=Z,29μmcomp=Z,870nm,0.7s
KTUT **Trabzon** 38.77 301 ⇑P P 06 18 51.9 +1.1
KTUT **Trabzon** 38.77 301 *e*P P 06 18 51.7 +0.9
KIRV **Kirov** 39.01 331 P P 06 18 51.8 -0.7
comp=Z,733nm,0.7s,baz=124,slow=3.4,SNR=114
KIRV LR LR 06 37 10.0
comp=Z,1092μm,21.1s,baz=129,slow=40
SOC **Sochi** 39.10 305 *e*P P 06 18 53.4 -0.1
SOC *e*PPP PPP 06 20 42.4
SOC *e*S S 06 24 56.0 +3.3
SOC pmax pmax
comp=Z,501nm,0.8s
MDJ **Mudanjiang** 39.17 53 P P 06 18 52.3 -1.8
MDJ pP pP 06 18 57.0 -1.6
MDJ sP sP 06 18 58.9 -1.5
MDJ pmax pmax
comp=Z,700nm,0.8s
MDJ pmax pmax
comp=Z,7μm,10.6s
MDJ LR LR
comp=Z,2094μm,19.9s
MDJ LR LR
comp=Z,4736μm,21.4s
MDJ LR LR
comp=Z,8319μm,21.4s
MDJ **Mudanjiang** 39.17 53 P P 06 18 52.3 -1.8
URFA **Urfa** 39.36 296 *e*P P 06 18 55.8 -0.1
MYLDM **Lahad Datu** 39.36 119 P P 06 18 56.7 +0.7
MYLDM IAmb IAmb 06 19 37.3
comp=Z,4μm,1.4s
VRH **Novokhopyorsk** 39.56 318 *e*P P 06 18 56.3 -0.9
VRH *e* 06 18 58.1
VRH *e*S S 06 25 02.9 +3.5
VRH *e*SSS SSS 06 28 57.8
VRH pmax pmax
comp=Z,3μm,0.6s
VRH smax smax
comp=N,101μm,14.4s
VRH MLR MLR
comp=Z,702μm,18.0s
ILIC **ilic-Erzincan** 39.59 299 *e*P P 06 18 59.4 +1.5
JSU **Suzuyama** 39.61 74 P P 06 18 58.1 +0.1
JNU **Nakatsue** 39.79 71 P P 06 18 59.4 -0.1
comp=Z,135nm,1.0s,baz=290,slow=4.1,SNR=20
JNU LR LR 06 37 08.7
comp=Z,2990μm,18.1s,baz=274,slow=39
JNU **Nakatsue** 39.79 71 P P 06 18 60.0 +0.5
MSHR **Mys Shultsa** 40.03 56*ce*P P 06 19 00.4 -0.9
MSHR pmax pmax
comp=Z,2μm,1.1s
MSHR MLR MLR
comp=Z,3422μm,17.0s
TNG **Tangerang** 40.14 145 P P 06 19 02.7 +0.3
comp=Z,394μmcomp=Z,23μmcomp=Z,798nm,0.8s
PBKI **Pangkalan Bun** 40.15 135 P P 06 19 02.7 +0.2
comp=Z,653μmcomp=Z,60μmcomp=Z,2μm,1.0s
ZEA **Zeya** 40.19 38 *e*P P 06 19 03.1 +0.7
ZEA *e* 06 21 02.7
ZEA *e*S S 06 25 06.6 -2.2
ZEA pmax pmax
comp=E,110nm,1.1s
ZEA pmax pmax
comp=N,90nm,1.2s
ZEA pmax pmax
comp=Z,210nm,1.2s
ZEA smax smax
comp=N,10μm,9.9s
ZEA smax smax
comp=E,13μm,10.5s
ZEA MLR MLR
comp=E,3490μm,18.0s
ZEA MLR MLR
comp=N,2096μm,17.0s
DARE **Darende-Malaty** 40.42 297 *e*P P 06 19 06.0 +1.3
DBJI **Dramaga** 40.52 145 P P 06 19 06.2 +0.7
comp=N,653μmcomp=N,35μmcomp=N,1μm,1.3s
GAZ **Gaziantep** 40.65 295 *e*P P 06 19 07.4 +0.8
GAZ **Gaziantep** 40.65 295 P P 06 19 07.0 +0.4
GAZ IAmb IAmb 06 20 00.1
comp=Z,3μm,1.0s
SKJI **Sukabumi** 40.80 146 P P 06 19 07.1 -0.8
comp=Z,555μmcomp=Z,25μmcomp=Z,1μm,0.7s
USA0B **Ussuriysk Arra** 40.81 54*c* *i*P P 06 19 05.9 -1.8
USA0B **Ussuriysk Arra** 40.81 54 P P 06 19 06.2 -1.5
USRK **Ussuriysk Ar.** 40.81 54 P P 06 19 06.7 -1.0
comp=Z,90nm,0.9s,baz=258,slow=8.1,SNR=68
USRK LR LR 06 38 49.2
comp=Z,952μm,19.7s,baz=263,slow=40
USRK PKPPKP P'P'df 06 51 26.8 -3.6
comp=Z,8.6nm,1.1s,baz=54,slow=4.0,SNR=4.6
USRK **Ussuriysk Ar.** 40.81 54 P P 06 19 06.0 -1.7
SVSK **Karacayir** 40.82 299 *e*P P 06 19 08.9 +1.1
KMRS **Kahramanmaras** 40.89 296 *e*P P 06 19 09.4 +0.9
ANN **Anapa** 40.90 307 *d*P P 06 19 08.6 +0.2
ANN *i* *PP pP 06 19 11.7 -1.2
ANN *i* 06 20 46.2
ANN *i* 06 21 02.6
ANN *i* S S 06 25 23.2 +3.7
ANN *i* SS SS 06 28 19.9 -1.0
ANN *i* SSS SSS 06 28 51.2
ANN pmax pmax
comp=N,104nm,0.8s
ANN pmax pmax
comp=E,281nm,1.6s
ANN pmax pmax
comp=Z,182nm,0.8s
ANN pmax pmax
comp=N,77nm,0.8s
ANN pmax pmax
comp=E,47nm,0.7s
MTKI **Muara Teweh, K** 40.91 130 P P 06 19 10.5 +1.7
comp=E,335μmcomp=E,33μmcomp=E,772nm,1.5s
VORD **Divnogorie** 40.95 317 *e*P P 06 19 07.4 -1.3
VORD *e* 06 19 09.5
VORD *e*S S 06 25 17.1 -3.0
VORD pmax pmax
comp=Z,1μm,0.7s
VORD smax smax
comp=N,22μm,10.5s
VORD MLR MLR
comp=Z,218μm,13.0s
VSR **Storozhevoye** 41.09 317 *e*P P 06 19 09.1 -0.8
VSR *e* 06 19 11.3
VSR *e*S S 06 25 20.0 -2.3
VSR *e*SSS SSS 06 29 04.5
VSR smax smax
comp=N,108μm,17.2s
TOKT **Tokat** 41.18 300 *e*P P 06 19 11.7 +0.8
LEM **Lembang** 41.19 144 P P 06 19 11.4 +0.2
comp=N,32nm,0.7s,baz=336,slow=23,SNR=2.5
LEM **Lembang** 41.19 144 P P 06 19 11.1 -0.2
comp=N,361μmcomp=N,17μmcomp=N,226nm,1.3s
VORR **Voronezh** 41.20 318 *e*P P 06 19 09.0 -1.8
VORR pmax pmax
comp=Z,1μm,1.6s
TOKA **Tokat** 41.23 300 P P 06 19 09.5 -1.9
JCJI **Jatiwangi** 41.25 143 P P 06 19 13.4 +1.8
comp=Z,1μm,1.6s
SARI **SarD1z-Kayseri** 41.26 297 *e*P P 06 19 11.7 0.0
NRIK **Noril'sk** 41.27 2 P P 06 19 10.7 -0.5
comp=Z,492nm,0.9s,baz=176,slow=5.9,SNR=118
NRIK LR LR 06 39 12.8
comp=Z,3160μm,19.6s,baz=182,slow=40
NRIK **Noril'sk** 41.27 2*ce*P P 06 19 10.9 -0.2
NRIK pmax pmax
comp=Z,5μm,1.3s
NRIK MLR MLR
comp=Z,3013μm,19.0s
NRIK **Noril'sk** 41.27 2 P P 06 19 11.0 -0.2
NRIK IAmb IAmb 06 19 58.2
comp=Z,6μm,1.1s
JMZ **Minamidaito 2** 41.32 82 P P 06 19 09.9 -2.2
JHS **Saijyo** 41.48 68 P P 06 19 12.7 -0.7
TAHT **Tahtakopru-Hat** 41.50 294 *e*P P 06 19 14.4 +0.9
KLR **Kul'dur** 41.51 46 P P 06 19 12.3 -1.1
comp=Z,54nm,0.9s,baz=257,slow=9.4,SNR=56
KLR **Kul'dur** 41.51 46*c* *i*P P 06 19 12.2 -1.2
KLR pmax pmax
comp=Z,2μm,1.0s
KLR MLR MLR
comp=Z,1233μm,15.0s
KVT **Kavak** 41.59 301 *e*P P 06 19 14.7 +0.5
LPSR **Galich'ya Gora** 41.64 319 *e*P P 06 19 13.5 -0.9
LPSR *e* 06 19 15.4
LPSR *e*S S 06 25 34.2 +3.8
LPSR *e*SSS SSS 06 29 08.3
LPSR smax smax
comp=N,95μm,11.5s
LPSR MLR MLR
comp=Z,691μm,17.0s
BNN **Bunyan** 41.70 298 *e*P P 06 19 14.9 -0.4
KOZT **Kozan** 41.74 296 *e*P P 06 19 16.1 +0.6
CEYT **Ceyhan** 41.82 295 *e*P P 06 19 17.3 +1.2
HWQ **Hawqa** 41.84 291 *e*P P 06 19 18.0 +1.5
CISI **Cisompet, Garu** 41.91 144 P P 06 19 16.5 -0.6
CISI **Cisompet, Garu** 41.91 144 P P 06 19 17.1 0.0
comp=Z,685μmcomp=Z,25μmcomp=Z,619nm,0.8s
RCY **Rachaya** 42.02 290 *e*P P 06 19 19.8 +1.9
SHBL **Chebaa** 42.11 290 *e*P P 06 19 20.5 +1.8
BHL **Bhannes** 42.12 290 *e*P P 06 19 20.2 +1.5
KRTS **Karatas** 42.14 294 *e*P P 06 19 21.7 +3.0
SMKI **Samarinda** 42.16 127 P P 06 19 18.6 -0.5
comp=Z,527μmcomp=Z,72μmcomp=Z,1μm,1.8s
DIKM **Dikmen** 42.20 302 ⇑P P 06 19 19.5 +0.3
DIKM **Dikmen** 42.20 302 *e*P P 06 19 19.2 0.0
DQRL **Deir Qamar** 42.21 290 *e*P P 06 19 21.8 +2.3
JMN **Monobe** 42.22 70 P P 06 19 19.2 -0.3
JMN IAmb IAmb 06 20 04.9
comp=Z,2μm,0.8s
SNOP **Sinop** 42.26 303 *e*P P 06 19 19.6 0.0
CMRD **Camardi-Nigde** 42.40 296 *e*P P 06 19 21.8 +0.8
MMAI **Mount Meron Ar** 42.43 289 LR LR 06 39 59.7
comp=Z,263μm,21.8s,baz=70,slow=40
ATD **Arta Tunnel** 42.46 256 P P 06 19 22.4 +0.8
ATD IAmb IAmb 06 19 58.7
comp=Z,9μm,2.3s
ATD **Arta Tunnel** 42.46 256 P P 06 19 23.7 +2.1
SNR=116
ATD **Arta Tunnel** 42.46 256 *i* P P 06 19 27.7 +6.1
ATD *e*S S 06 25 48.4 +4.9
ATD **Arta Tunnel** 42.46 256 *i* P P 06 19 22.8 +1.2
ATD IAmb IAmb 06 19 57.6
comp=Z,10μm,2.4s
ATD IVMs_BB IVMs_BB 06 37 15.2
comp=Z,130μm,16.6s
BKB **Balikpapan** 42.52 128 P P 06 19 22.6 +0.7
BKB IAmb IAmb 06 20 37.0
comp=Z,5μm,1.3s
BKB **Balikpapan** 42.52 128 P P 06 19 22.4 +0.4
comp=Z,577μmcomp=Z,96μmcomp=Z,2μm,2.2s
CORM **Corum** 42.64 300 *e*P P 06 19 22.5 -0.5
BBKI **Banjar Baru** 42.74 132 P P 06 19 24.9 +1.1
comp=Z,357μmcomp=Z,51μmcomp=Z,2μm,1.4s
MERS **Mersin** 42.81 295 *e*P P 06 19 24.9 +0.6
SMRI **Semarang** 42.90 141 P P 06 19 25.9 +0.8
SMRI IAmb IAmb 06 40 09.2
comp=Z,1837μm,20.0s
SMRI **Semarang** 42.90 141 P P 06 19 27.2 +2.1
comp=Z,757μmcomp=Z,171μmcomp=Z,5μm,0.9s
KIZK **Mersin** 43.14 294 *e*P P 06 19 27.0 +0.2
BZK **Bozkurt** 43.15 302 ⇑P P 06 19 27.3 +0.4
BZK **Bozkurt** 43.15 302 *e*P P 06 19 27.3 +0.4
EREN **Erenkoy** 43.19 293 *e*P P 06 19 27.9 +0.6
SIM **Simferopol'** 43.26 307 *e*P P 06 19 26.5 -1.2
SIM *e*S S 06 26 01.6 +7.2
JWT **Wachi** 43.32 67 P P 06 19 27.3 -1.0
JWT IAmb IAmb 06 19 48.1
comp=Z,7μm,1.5s
SILI **Silifke-Mersin** 43.32 294 *e*P P 06 19 28.6 +0.3
EIL **Elat** 43.33 284 LR LR 06 41 39.6
comp=Z,320μm,19.2s,baz=90,slow=42
EIL **Elat** 43.33 284 *e*P P 06 19 30.8 +2.3
ILGA **Ilgaz** 43.35 301 P P 06 19 29.4 +0.6
KAMT **Kaman** 43.35 299 *e*P P 06 19 28.7 0.0
MOS **Moscow** 43.38 323 *e*P P 06 19 27.8 -0.7
MOS *i* 06 21 09.6
MOS *i*S S 06 25 58.9 +3.1
MOS *i*SS SnSn 06 29 20.9 -6.3
MOS pmax pmax
comp=Z,35μm,2.6s
MOS pmax pmax
comp=Z,9μm,1.9s
MOS pmax pmax
comp=E,15μm,3.1s
MOS pmax pmax
comp=N,8μm,2.6s
MOS smax smax
comp=N,52μm,7.0s
MOS MLR MLR
comp=Z,1127μm,22.0s
MOS MLR MLR
comp=N,490μm,21.0s
MOS MLR MLR
comp=E,960μm,21.0s
XMIS **Christmas Isla** 43.40 149 P P 06 19 28.2 -0.9
XMIS IAmb IAmb 06 39 42.1
comp=Z,1410μm,22.0s
BR131 **Keskin Array S** 43.41 299*c* *i*P P 06 19 28.6 -0.6
BR131 **Keskin Array S** 43.41 299 P P 06 19 29.3 +0.1
BR131 **Keskin Array S** 43.41 299 P P 06 19 29.1 0.0
SNR=241
BR131 P P 06 19 29.1 0.0
SNR=241
BRTR **Keskin Array B** 43.41 299 P P 06 19 28.8 -0.4
comp=Z,67nm,0.7s,baz=120,slow=11,SNR=87
BRTR **Keskin Array B** 43.41 299 *e*P P 06 19 28.9 -0.3
BRTR **Keskin Array B** 43.41 299 P P 06 19 28.6 -0.6
SERE **Sereflikochisa** 43.48 298 *e*P P 06 19 29.9 +0.2
KBKI **Kotabaru** 43.50 131 P P 06 19 31.7 +1.8
comp=Z,9μmcomp=Z,22μmcomp=Z,2μm,1.1s
IKL **Isikli** 43.52 294 *e*P P 06 19 29.8 -0.2
UGM **Wanagama** 43.66 141 IAMs_20 IAMs_20 06 39 50.2
comp=Z,1764μm,22.0s
UGM **Wanagama** 43.66 141 P P 06 19 30.9 -0.3
comp=Z,672μmcomp=Z,38μmcomp=Z,1μm,1.3s
TOLI2 **Tolitoli** 43.71 122 P P 06 19 30.9 -0.7
TOLI2 IAmb IAmb 06 20 00.1
comp=Z,3μm,1.4s
LFK **Lefkose** 43.73 293 *e*P P 06 19 32.0 +0.3
OBN **Obninsk** 43.74 322 ⇓P P 06 19 31.0 -0.4
OBN **Obninsk** 43.74 322*ce*P P 06 19 30.6 -0.9
OBN *e* 06 21 17.5
OBN *e*PPP PPP 06 21 50.2
OBN *i* S S 06 25 59.2 -2.0
OBN *i* SSS SSS 06 30 01.5
OBN pmax pmax
comp=Z,3μm,1.1s
OBN pmax pmax
comp=Z,4μm,1.3s
OBN MLR MLR
comp=Z,1045μm,19.0s
OBN **Obninsk** 43.74 322 P P 06 19 30.5 -0.9
AFSR **Afar-Bala (An** 43.85 299 *e*P P 06 19 31.8 -0.9
BERE **Bereket-Mersin** 43.89 294 *e*P P 06 19 33.5 +0.4
KULU **Kulu** 43.91 298 *e*P P 06 19 33.3 +0.1
DAV **Davao City (W)** 43.92 111 P P 06 19 34.0 +0.6
comp=Z,196nm,0.3s,baz=314,slow=2.3,SNR=8.4
DAV LR LR 06 39 40.7
comp=Z,1467μm,21.1s,baz=301,slow=39
DAV **Davao City (W)** 43.92 111 IAMs_20 IAMs_20 06 39 29.8
comp=Z,1433μm,21.0s
DAV **Davao City (W)** 43.92 111 P P 06 19 29.7 -3.7
DAV P P 06 19 29.7 -3.7
DAV P P 06 19 29.7 -3.7
CSS **Mathiatis** 43.92 292 *e*P P 06 19 33.5 +0.2
CSS **Mathiatis** 43.92 292 P P 06 19 32.9 -0.4
CSS IAmb IAmb 06 20 20.9
comp=Z,2μm,1.2s
CHBY **Cihanbeyli** 44.02 298 *e*P P 06 19 33.8 -0.3
ANTO **Ankara** 44.06 299 *e*P P 06 19 34.3 0.0
ANTO **Ankara** 44.06 299 P P 06 19 34.4 +0.1
ANTO pmax pmax
comp=Z,1μm,0.9s
ANTO **Ankara** 44.06 299 P P 06 19 34.4 +0.1
BR231 **Keskin MP Arra** 44.07 299 P P 06 19 34.3 -0.2
LOD **Lodumlu** 44.08 299 *e*P P 06 19 33.5 -1.0
KURC **Kurucasile-Bar** 44.09 302 *e*P P 06 19 32.3 -2.1
TEY **Ternei** 44.17 53 ⇓*e*P P 06 19 35.1 +0.1
TEY *e* 06 26 22.4
TEY pmax pmax
comp=E,340nm,1.2s
TEY pmax pmax
comp=E,40μm,13.2s
TEY pmax pmax
comp=Z,75μm,13.4s
TEY MLR MLR
comp=E,3421μm,18.0s
TEY MLR MLR
comp=Z,3563μm,18.0s
LEF **Lefka** 44.27 293 ⇓P P 06 19 37.2 +1.2
LEF **Lefka** 44.27 293 *e*P P 06 19 36.5 +0.5
LADK **Ladik-KONYA** 44.45 297 *e*P P 06 19 36.4 -1.1
KONT **Konya--Tatoy** 44.47 297 *e*P P 06 19 37.8 +0.2
KLMR **Klimovskoe** 44.47 330*c* *i*P P 06 19 36.3 -0.9
KLMR *e*S S 06 26 13.0 +1.4
KLMR *e*SS ScS 06 29 34.4 -0.2
KLMR pmax pmax
comp=Z,2μm,1.3s
KLMR **Klimovskoe** 44.47 330 ⇑*i*P P 06 19 36.4 -0.8
KLMR *i*P P 06 19 36.4 -0.8
KLMR *i*P P 06 19 36.4 -0.8
KLMR AMP 06 19 47.3
comp=Z,2μm,1.3s
KLMR *e*S S 06 26 13.0 +1.4
KLMR *e*S S 06 26 13.0 +1.4
KLMR *e*SS ScS 06 29 34.5 -0.2
KLMR *e*SS ScS 06 29 34.5 -0.2
KLMR LQ LQ 06 34 20.4
KLMR LQ LQ 06 34 20.4
KLMR LQ LQ 06 34 20.4
KLMR LR LR 06 38 27.9
GAZI **Gazipasa** 44.63 294 *e*P P 06 19 38.6 -0.3
GRNR **Gornyy** 44.78 45 ⇓*i*P P 06 19 41.8 +2.0
GRNR *e*S S 06 26 24.4 +7.9
GRNR pmax pmax
comp=E,100nm,1.0s
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,170nm,1.1s
GRNR smax smax
comp=N,30nm,1.0s
GRNR MLR MLR
comp=N,264μm,13.0s
GRNR MLR MLR
comp=E,958μm,13.0s
GRNR MLR MLR
comp=Z,1393μm,13.0s
JGF **Kuroka** 44.88 67 P P 06 19 39.2 -1.7
YAK **Yakutsk** 44.91 28 P P 06 19 39.6 -1.0
comp=Z,328nm,0.8s,baz=191,slow=0.3,SNR=48
YAK LR LR 06 40 16.8
comp=Z,1991μm,20.1s,baz=240,slow=39
YAK **Yakutsk** 44.91 28 *e*P P 06 19 40.6 -0.1
YAK *e*S S 06 26 16.0 -2.0
YAK *e*SSS SSS 06 30 32.5
YAK pmax pmax
comp=Z,685nm,0.9s
YAK pmax pmax
comp=N,101nm,1.0s
YAK pmax pmax
comp=E,122nm,0.8s
YAK pmax pmax
comp=Z,39μm,7.2s
YAK pmax pmax
comp=N,10μm,4.6s
YAK pmax pmax
comp=E,10μm,5.3s
YAK smax smax
comp=E,201μm,11.1s
YAK smax smax
comp=N,57μm,10.5s
YAK MLR MLR
comp=Z,1686μm,17.0s
YAK MLR MLR
comp=N,383μm,21.0s
YAK MLR MLR
comp=E,1184μm,23.0s
YAK **Yakutsk** 44.91 28 P P 06 19 39.3 -1.4
YAK IAmb IAmb 06 20 03.1
comp=Z,3μm,0.9s
KMMI **Kalianget** 44.96 137 P P 06 19 41.0 -0.6
comp=Z,626μmcomp=Z,84μmcomp=Z,2μm,1.0s
MRSI **Marisa** 45.00 121 P P 06 19 42.5 +0.5
comp=Z,388μmcomp=Z,56μmcomp=Z,2μm,1.7s
AUSIV **SIVRIHISAR** 45.04 299 *e*P P 06 19 41.8 -0.4
SVRH **Sivrihisar-ESK** 45.05 299 *e*P P 06 19 41.8 -0.5
KDZE **Karadeniz Ereo** 45.06 301 ⇓P P 06 19 43.0 +0.8
KDZE **Karadeniz Ereo** 45.06 301 *e*P P 06 19 41.6 -0.7
MDUB **Mudurnu** 45.27 300 *e*P P 06 19 42.7 -1.3
MDUB **Mudurnu** 45.27 300 P P 06 19 42.7 -1.3
JSD **Sado** 45.40 63 P P 06 19 42.8 -2.1
JSD IAmb IAmb 06 20 04.0
comp=Z,2μm,1.1s
CIFT **Cifteler, Eski** 45.41 299 *e*P P 06 19 46.1 +1.0
DESE **Dese** 45.42 257 *i* P P 06 19 53.4 +7.7
DESE *e*S S 06 26 15.4 -12
MAJO **Matsushiro** 45.48 65*c* *i*P P 06 19 43.5 -2.1
MAJO pmax pmax
comp=Z,3μm,1.7s
MAJO MLR MLR
comp=Z,2025μm,22.0s
MAJO **Matsushiro** 45.48 65 P P 06 19 43.8 -1.8
MAT **Matsushiro** 45.48 65 P P 06 19 43.6 -2.0
MAT S S 06 26 28.2 +1.2
MJAR **Matsushiro Arr** 45.48 65 P P 06 19 44.8 -0.9

comp=Z,192nm,1.1s,baz=283,slow=9.0,SNR=48
MJAR LR LR 06 40 12.3
comp=Z,1010μm,18.1s,baz=280,slow=38
JSG Sagara 45.66 68 P **P** **06 19 45.6 -1.4**
JSG IAmb IAmb 06 20 09.6
comp=Z,4μm,1.3s
APSI Ampana 45.70 123 P **P** **06 19 48.3 +0.8**
comp=Z,221μmcomp=Z,38μmcomp=Z,925nm,1.4s
ABJI Asem Bagus 45.70 137 P **P** **06 19 48.2 +0.7**
comp=Z,623μmcomp=Z,98μmcomp=Z,3μm,1.0s
GTOI Gorontalo 45.71 120 P **P** **06 19 46.5 -1.1**
comp=Z,198μmcomp=Z,28μmcomp=Z,878nm,1.2s
SRCK Saricakaya, Es 45.72 300 *e*P **P** **06 19 46.9 -0.5**
GULT Gulveren 45.79 300 *e*P **P** **06 19 47.8 -0.3**
SGSI Sangihe 45.81 115 P **P** **06 19 49.0 +0.6**
comp=Z,4μmcomp=Z,11μmcomp=Z,827nm,1.2s
TTSI Tana Toraja 45.83 127 P **P** **06 19 48.8 +0.3**
comp=Z,435μmcomp=Z,64μmcomp=Z,3μm,1.3s
SHUT Suhut-Afyon 45.85 298 *e*P **P** **06 19 48.5 -0.2**
BORA Eskisehir 45.85 299 *e*P **P** **06 19 48.0 -0.6**
ANTB Antalya 45.90 295 *e*P **P** **06 19 47.6 -1.3**
BCK Bucak 45.90 296 *e*P **P** **06 19 49.1 +0.1**
SAUV Serdivan-Sakar 45.92 301 *e*P **P** **06 19 48.2 -0.8**
ISP Isparta 45.93 297 *e*P **P** **06 19 48.6 -0.7**
ISP Isparta 45.93 297 P **P** **06 19 48.2 -1.1**
ISP pmax pmax
comp=Z,3μm,1.5s
ISP Isparta 45.93 297 P **P** **06 19 48.2 -1.1**
ISP IAmb IAmb 06 20 24.5
comp=Z,3μm,1.5s
KORT Korkueli 46.13 296 *e*P **P** **06 19 50.5 -0.4**
AUBOZ BOZOYUK 46.18 300 *e*P **P** **06 19 49.5 -1.7**
JAGI Jajag, Banyuwa 46.19 138 P **P** **06 19 51.2 -0.2**
JAGI IAmb IAmb 06 20 24.9
comp=Z,4μm,1.7s
JAGI Jajag, Banyuwa 46.19 138 P **P** **06 19 51.7 +0.3**
comp=Z,587μmcomp=Z,45μmcomp=Z,1μm,0.9s
BASM Basmaki-Afyon 46.29 297 *e*P **P** **06 19 52.8 +0.7**
ADVT Abdulvahap 46.38 300 *e*P **P** **06 19 52.0 -0.6**
HRT Hereke 46.42 301 *e*P **P** **06 19 52.5 -0.5**
SILT Sile 46.42 301 *e*P **P** **06 19 52.4 -0.6**
SPSI Sidrap Palu 46.44 128 P **P** **06 19 53.6 +0.2**
comp=Z,466μmcomp=Z,58μmcomp=Z,1μm,1.6s
KMSI Cibinong 46.49 119 P **P** **06 19 54.9 +1.1**
comp=Z,4μmcomp=Z,37μmcomp=Z,3μm,1.0s
ELL Elmali 46.51 295 *e*P **P** **06 19 53.9 0.0**
ELL Elmali 46.51 295 P **P** **06 19 53.8 -0.1**
ELL MLR MLR
comp=Z,334μm,22.0s
ELL Elmali 46.51 295 P **P** **06 19 53.8 -0.1**
SRBI Singaraja 46.53 136 P **P** **06 19 54.8 +0.8**
comp=Z,562μmcomp=Z,88μmcomp=Z,4μm,2.0s
LUWI Luwuk 46.62 122 P **P** **06 19 55.2 +0.5**
LUWI IAMs_20 IAMs_20 06 43 13.4
comp=Z,1323μm,21.0s
LUWI Luwuk 46.62 122 P **P** **06 19 54.9 +0.1**
comp=Z,369μmcomp=Z,60μmcomp=Z,2μm,1.1s
TVSB Tavsanli 46.64 299 *e*P **P** **06 19 53.7 -1.2**
GEMT Gemlik 46.80 300 *e*P **P** **06 19 55.4 -0.5**
AKAS Kas 46.81 295 *e*P **P** **06 19 53.9 -2.3**
AKAS Kas 46.81 295 P **P** **06 19 54.3 -1.9**
KAVV Kandilli-Istan 46.87 301 *e*P **P** **06 19 56.0 -0.5**
ISK Istanbul-Kandi 46.87 301 *e*P **P** **06 19 55.9 -0.6**
KLYT Kilyos 46.88 301 *e*P **P** **06 19 56.1 -0.4**
BNSI Bone 46.99 128 P **P** **06 19 57.9 +0.3**
comp=Z,411μmcomp=Z,37μmcomp=Z,436nm,1.4s
DNP Denpasar 46.99 137 P **P** **06 19 57.6 0.0**
comp=Z,559μmcomp=Z,73μmcomp=Z,2μm,0.7s
TLCR 47.02 307 ⇑P **P** **06 19 57.8 +0.2**
SIMA Simav-Kutahya 47.04 298 *e*P **P** **06 19 56.2 -1.7**
BGKT Bogazkoy 47.08 301 *e*P **P** **06 19 57.9 -0.2**
KIS Kishinev 47.09 309 ⇑*i*P **P** **06 19 58.5 +0.4**
comp=Z,20μm,13.5s
KIS *i* S **S** **06 26 49.0 -0.8**
comp=Z,61μm,19.4s
KIS *e*SS **SS** **06 30 09.0 -7.6**
KIS *e*SSS SSS 06 31 11.0
KIS *e*LR LR 06 41 52.0
comp=Z,143μm,19.0s
KIS Kishinev 47.09 309 ⇑P **P** **06 19 58.7 +0.6**
KIS Kishinev 47.09 309*c* *i*P **P** **06 19 58.5 +0.4**
KIS *i* S **S** **06 26 49.0 -0.8**
KIS *e*SS **SS** **06 30 09.0 -7.6**
KIS *e* 06 31 26.0
KIS pmax pmax
comp=Z,20μm,13.5s
JYT Yasato 47.10 65 P **P** **06 19 56.3 -2.0**
TSCT Constanta Port 47.12 305 ⇑P **P** **06 19 59.6 +1.3**
AKASG Malin Array Be 47.15 314 P **P** **06 19 56.7 -1.7**
comp=Z,168nm,0.8s,baz=76,slow=7.5,SNR=82
AKASG PP PP 06 22 10.8 +22
comp=Z,366nm,0.9s,baz=79,slow=4.2,SNR=4.1
AKASG LR LR 06 44 46.3
comp=Z,296μm,19.6s,baz=85,slow=42
AKASG Malin Array Be 47.15 314 P **P** **06 19 57.0 -1.5**
AKASG Malin Array Be 47.15 314 P **P** **06 19 57.0 -1.5**
AKBB Malin Array Si 47.15 314 P **P** **06 19 57.2 -1.3**
AKBB pmax pmax
comp=Z,2μm,1.1s
AKBB Malin Array Si 47.15 314 P **P** **06 19 57.1 -1.3**
AKBB IAmb IAmb 06 20 43.5
comp=Z,2μm,1.1s
KAPI Kappang 47.18 129 LR LR 06 45 54.5
comp=Z,1062μm,18.3s,baz=314,slow=44
KAPI Kappang 47.18 129 P **P** **06 19 58.5 -0.6**
KAPI pmax pmax
comp=Z,2μm,1.2s
KAPI MLR MLR
comp=Z,1933μm,22.0s
KAPI Kappang 47.18 129 P **P** **06 19 58.5 -0.6**
KAPI IAmb IAmb 06 20 44.4
comp=Z,2μm,1.2s
AAE Adis Abeba 47.18 255 *i* P P 06 20 06.0 +6.4
AAE *e*S **S** **06 26 56.5 +4.1**
FETY Fethiye 47.18 295 *e*P **P** **06 19 56.3 -2.7**
JHJ Hachijo jima 2 47.20 70 LR LR 06 41 27.6
comp=Z,2026μm,19.6s,baz=282,slow=38
JHJ2 Mitsune 47.23 70 P **P** **06 19 58.1 -1.2**
CTKS Kestenelik-??a 47.28 301 *e*P **P** **06 19 59.2 -0.4**
MFTR Murfatlar 47.28 305 ⇓P **P** **06 20 00.9 +1.3**
TIRR Tirgusor 47.29 306 P **P** **06 19 58.8 -0.9**
TIRR pmax pmax
comp=Z,4μm,1.3s
TIRR Tirgusor 47.29 306 P **P** **06 19 58.8 -0.9**
TPGR Topolog 47.29 306 ⇓P **P** **06 19 59.9 +0.1**
FURI Furi 47.32 255 *e*P P 06 27 07.3 +6.6
FURI *e*S S 06 27 04.7 +10
FURI Furi 47.32 255 *i* P **P** **06 20 04.0 +3.2**
FURI IAmb IAmb 06 20 51.8
comp=Z,6μm,1.9s
FURI IVMs_BB IVMs_BB 06 43 16.7
comp=Z,98μm,15.4s
KULA Kula-Manisa 47.33 298 *e*P **P** **06 19 59.6 -0.6**
JMM Marumori 47.41 63 P **P** **06 19 59.1 -1.6**
JTM Tenmabayashi 47.41 59 P **P** **06 19 57.8 -2.8**
MANT Manisa 47.42 298 P **P** **06 20 00.4 -0.7**
KCTX Karacabey (Bur 47.44 300 *e*P **P** **06 20 00.5 -0.5**
GIUM Giurgiulesti 47.45 307 ⇑P **P** **06 20 02.4 +1.5**
SORM Soroca 47.47 311 ⇑P **P** **06 20 00.8 -0.3**
CFR Carcaliu 47.50 307 ⇑P **P** **06 20 01.1 -0.2**
SLVT Silivri 47.50 301 *e*P **P** **06 20 01.2 -0.2**
DALY Dalyan (Mula) 47.51 295 *e*P **P** **06 20 00.4 -1.1**
TLBR Topalu 47.56 306 ⇓P **P** **06 20 02.1 +0.3**
JEW Eniwo 47.62 56 P **P** **06 20 00.5 -1.8**
HARR Harsova 47.64 306 ⇓P **P** **06 20 02.5 +0.1**
VARL Varlezi 47.72 308 ⇑P **P** **06 20 03.9 +0.9**
YER Yerkesik 47.77 296 *e*P **P** **06 20 02.6 -1.0**
NKL Nikolayevsk 47.77 42 *e*P **P** **06 20 03.6 +0.4**
NKL *e* 06 21 53.2
NKL pmax pmax
comp=E,93nm,1.2s
NKL pmax pmax
comp=N,95nm,0.7s
NKL pmax pmax
comp=Z,813nm,1.2s
NKL MLR MLR
comp=Z,1759μm,16.0s
VASR Vaslui 47.78 309 ⇓P **P** **06 20 03.7 +0.2**
EDC Edincik 47.81 300 *e*P **P** **06 20 03.4 -0.5**
TUDR 47.84 307 ⇑P **P** **06 20 05.1 +1.2**
TURN Turunc 47.84 295 *e*P **P** **06 20 03.5 -0.5**
BALB Balikesir 47.85 299 *e*P **P** **06 20 03.6 -0.5**
IAS Iasi 47.96 310 ⇓P **P** **06 20 05.3 +0.5**
AYDB Zeytinkoy-Aydi 47.99 297 *e*P **P** **06 20 04.2 -1.2**

ARG Arkhangelos 48.00 295 *e*P **P** **06 20 04.2 -1.1**
PHSR Pinarhisar 48.00 302 *e*P **P** **06 20 05.0 -0.3**
MRMT Marmara Adasi 48.00 301 *e*P **P** **06 20 04.6 -0.8**
GHRR 48.03 308 ⇑P **P** **06 20 06.6 +1.2**
AMRR Amara 48.06 306 ⇑P **P** **06 20 06.2 +0.5**
TWSI Taliwang, Sumb 48.06 135 P **P** **06 20 05.5 -0.5**
comp=Z,304μmcomp=Z,14μmcomp=Z,273nm,0.8s
PETR Petresti 48.14 308 ⇓P **P** **06 20 07.3 +1.1**
GZKV Gazikoy-Tekird 48.20 301 *e*P **P** **06 20 05.9 -0.9**
MAR2 Marsite Statio 48.21 301 *e*P **P** **06 20 07.6 +0.7**
MAR4 Marsite Statio 48.21 301 *e*P **P** **06 20 06.1 -0.9**
MAR3 Marsite Statio 48.22 301 *e*P **P** **06 20 06.0 -1.0**
MARS Marsite Statio 48.25 301 *e*P **P** **06 20 07.7 +0.5**
ODBI Odobesti 48.27 308 ⇑P **P** **06 20 09.3 +2.0**
PGOR Pogoanele 48.31 306 ⇓P **P** **06 20 09.6 +2.0**
RKY Sarkoy-Tekirda 48.31 301 *e*P **P** **06 20 06.9 -0.9**
GRER 48.32 307 ⇓P **P** **06 20 09.2 +1.5**
PUL Pulkovo 48.34 327*c* *i*P **P** **06 20 08.0 +0.4**
PUL pmax pmax
comp=Z,4μm,0.8s
ASAJ Asahikawa 48.43 55 LR LR 06 42 41.6
comp=Z,1669μm,18.3s,baz=280,slow=39
ASAJ Asahikawa 48.43 55 P **P** **06 20 07.7 -0.8**
ASAJ pmax pmax
comp=Z,2μm,1.1s
JKA Kamikawa-asahi 48.43 55 P **P** **06 20 07.7 -0.8**
JKA IAmb IAmb 06 20 58.6
comp=Z,2μm,1.1s
MNK Minsk 48.49 319 ⇑*i*P **P** **06 20 09.0 +0.2**
MNK *e* 06 21 32.0
MNK *e* 06 22 00.0
MNK *e*PPP PPP 06 22 48.0
MNK *e*S **S** **06 27 10.0 +0.6**
MNK *e*SSS SSS 06 31 46.0
MNK pmax pmax
comp=Z,4μm,1.5s
MNK Minsk 48.49 319 *i* P **P** **06 20 08.1 -0.7**
comp=E,73nm,0.9s
MNK *i* P **P** **06 20 08.1 -0.7**
comp=N,49nm,0.7s
MNK *i* P **P** **06 20 08.1 -0.7**
comp=Z,910nm,1.0s
MNK *i* PcP **PcP** **06 21 33.6 -1.1**
MNK *i* PP **PP** **06 22 01.0 -0.4**
MNK *i* PPP PPP 06 22 49.9
MNK *i* S **S** **06 27 09.6 +0.1**
MNK *i* ScS **ScS** **06 30 00.9 -0.2**
MNK *i* SS **SS** **06 30 42.0 +3.0**
MNK *i* SSS SSS 06 31 53.2
MNK *i* LQ LQ 06 37 07.4
MNK *i* LR LR 06 40 49.2
MNK *i* LRM MLR 06 43 02.8
comp=E,66μm,20.4s
MNK *i* LRM MLR 06 43 56.4
comp=N,144μm,17.2s
MNK *i* LRM MLR 06 44 05.4
comp=Z,130μm,14.7s
BSSI Bau Bau, Buton 48.50 129 P **P** **06 20 09.2 -0.2**
comp=Z,276μmcomp=Z,33μmcomp=Z,1μm,1.0s
VRI Vrincioaia 48.50 308 ⇓P **P** **06 20 10.1 +1.0**
VRI Vrincioaia 48.50 308 *e*P **P** **06 20 09.4 +0.3**
BISRR Bisoca 48.51 307 ⇓P **P** **06 20 10.4 +1.2**
GCAM G?zelcaml? 48.53 297 *e*P **P** **06 20 08.9 -0.5**
BODT Bodrum 48.55 296 *e*P **P** **06 20 07.7 -1.9**
YSS Yuzh-Sakhalins 48.55 51*c* *i*P **P** **06 20 07.7 -1.7**
YSS pmax pmax
comp=Z,4μm,1.2s
YSS MLR MLR
comp=Z,4303μm,19.0s
YSS Yuzh-Sakhalins 48.55 51 P **P** **06 20 07.5 -1.9**
PLOR Plostina 48.55 308 ⇓P **P** **06 20 10.2 +0.6**
TESR Tescani 48.56 309 ⇓P **P** **06 20 09.6 0.0**
EDRB Edirne 48.57 302 *e*P **P** **06 20 10.6 +0.9**
ISR Istrita 48.63 307 ⇑P **P** **06 20 11.2 +1.0**
DKL Dikili 48.65 299 *e*P **P** **06 20 09.6 -0.7**
LPK Lapseki 48.65 300 *e*P **P** **06 20 09.0 -1.3**
PLAI Plampang 48.70 134 P **P** **06 20 10.1 -0.8**
comp=Z,519μmcomp=Z,36μmcomp=Z,694nm,1.2s
TYV Tymovskoe 48.71 46 *e*P P 06 20 19.6 +9.0
TYV pmax pmax
comp=Z,732nm,1.4s
TYV pmax pmax
comp=Z,41μm,9.0s
TYV MLR MLR
comp=E,2281μm,15.0s
TYV MLR MLR
comp=Z,3142μm,15.0s
NIS1 Nisyros Isl. 48.71 295 *e*P **P** **06 20 09.6 -1.2**
NEHR Nehoiu 48.80 307 ⇓P **P** **06 20 12.7 +1.3**
ERIK Erikli-Kesan 48.82 301 *e*P **P** **06 20 11.6 0.0**
SULR 48.84 306 ⇓P **P** **06 20 12.9 +1.2**
KOSK Kos Island 48.85 296 *e*P **P** **06 20 12.3 +0.5**
KARP Karpathos 48.86 294 *e*P **P** **06 20 11.5 -0.5**
KARP Karpathos 48.86 294 P **P** **06 20 11.6 -0.5**
GELI Tayfur-Gelibol 48.87 300 *e*P **P** **06 20 11.9 -0.1**
PRAR RASCA 48.87 310 ⇓P **P** **06 20 12.0 +0.1**
ERM Erimo 48.91 57*c* *i*P **P** **06 20 11.0 -1.3**
ERM pmax pmax
comp=Z,2μm,1.6s
ERM Erimo 48.91 57 P **P** **06 20 10.2 -2.1**
ERM IAmb IAmb 06 20 46.7
comp=Z,1μm,0.8s
BIZ Bicaz 48.94 309 ⇑P **P** **06 20 13.0 +0.5**
URLA Izmir 48.96 298 *e*P **P** **06 20 11.2 -1.6**
PLAR PLOIESTI 48.99 306 ⇑P **P** **06 20 13.8 +0.9**
TNTI Ternate 49.02 116 P **P** **06 20 13.6 +0.2**
TNTI IAmb IAmb 06 20 59.0
comp=Z,2μm,1.3s
TNTI Ternate 49.02 116 P **P** **06 20 13.2 -0.2**
comp=Z,142μmcomp=Z,25μmcomp=Z,787nm,1.7s
EZN Ezine 49.03 300 *e*P **P** **06 20 12.8 -0.4**
SGRR Singureni 49.05 306 ⇑P **P** **06 20 14.4 +1.1**
MLR Muntele Rosu 49.05 307 ⇑P **P** **06 20 15.0 +1.6**
ENEZ Enez 49.09 301 *e*P **P** **06 20 13.3 -0.3**
ALN Alexandroupoli 49.16 301 *e*P **P** **06 20 13.9 -0.3**
ALN Alexandroupoli 49.16 301 P **P** **06 20 13.4 -0.8**
ALN pmax pmax
comp=Z,6μm,1.9s
ALN Alexandroupoli 49.16 301 P **P** **06 20 13.4 -0.8**
OZUR 49.16 308 ⇓P **P** **06 20 14.7 +0.5**
NACGM Naroch 49.18 320 *i* P **P** **06 20 14.3 +0.2**
NACGM *i* P **P** **06 20 14.3 +0.2**
NACGM *i* P **P** **06 20 14.3 +0.2**
NACGM *i* PP **PP** **06 22 11.4 +3.7**
NACGM *i* PPP PPP 06 22 59.6
NACGM *i* S S **06 27 20.5 +1.4**
NACGM *i* SS SKiKP 06 31 26.2 -31
NACGM *i* SSS SSS 06 32 54.0
NACGM *i* LQ LQ 06 38 09.6
NACGM *i* LR LR 06 41 48.5
BOZC Bozcaada 49.24 300 *e*P **P** **06 20 15.6 +0.8**
IDID Didziasalis 49.27 320 *e*P **P** **06 20 14.9 +0.1**
GADA Gvkgeada 49.33 300 *e*P **P** **06 20 16.5 +1.0**
CHOS Chios island 49.38 298 *e*P **P** **06 20 15.8 -0.2**
DOPR Dopca 49.43 308 ⇑P **P** **06 20 16.3 +0.1**
SIGR SIGRI 49.45 299 *e*P **P** **06 20 17.0 +0.6**
ZIMR 49.50 305 ⇑P **P** **06 20 17.6 +0.9**
RDO Rodhopi 49.52 301 *e*P **P** **06 20 16.5 -0.4**
LVZ Lovozero 49.56 338*c* *i*P **P** **06 20 15.7 -1.2**
LVZ pmax pmax
comp=Z,3μm,1.0s
LVZ Lovozero 49.56 338 P **P** **06 20 15.8 -1.2**
LVZ IAmb IAmb 06 20 47.8
comp=Z,3μm,1.0s
BURAR Bucovina Array 49.56 310 ⇑P **P** **06 20 16.9 -0.4**
BURAR Bucovina Array 49.56 310 P **P** **06 20 16.6 -0.7**
IIGN Ignalina 49.56 320 *e*P **P** **06 20 18.1 +1.0**
BUR08 Bucovina Ar. S 49.57 310 P **P** **06 20 16.9 -0.5**
KDZ Kurdzhali 49.58 302 *e*P **P** **06 20 17.4 0.0**
ISAL Salakas 49.65 321 *e*P **P** **06 20 18.2 +0.5**
MTUR Matau 49.67 307 ⇑P **P** **06 20 19.3 +1.2**
VOIR 49.68 307 ⇓P **P** **06 20 18.1 -0.1**
ZKR Zakros 49.69 294 *e*P **P** **06 20 18.1 -0.3**
SANI Sanana 49.70 120 P **P** **06 20 18.2 -0.4**
comp=Z,310μmcomp=Z,50μmcomp=Z,644nm,1.4s
HUMR Humele 49.75 306 ⇓P **P** **06 20 19.0 +0.3**
STFAR Stefanesti-Arg 49.75 306 ⇓P **P** **06 20 19.7 +0.9**
TIXI Tiksi 49.79 17 P **P** **06 20 17.5 -1.0**
comp=Z,394nm,0.8s,baz=230,slow=4.3,SNR=195
TIXI LR LR 06 43 15.2
comp=Z,1617μm,21.9s,baz=243,slow=38
TIXI Tiksi 49.79 17 P **P** **06 20 17.4 -1.1**

TIXI pmax pmax
comp=Z,2μm,0.8s
TIXI MLR MLR
comp=Z,1696μm,22.0s
TIXI Tiksi 49.79 17 P **P** **06 20 17.4 -1.1**
TIXI IAMs_20 IAMs_20 06 42 52.8
comp=Z,1696μm,22.0s
VSU Vasula 49.83 324 *e*P **P** **06 20 19.6 +0.6**
APA Apatity 49.84 337 ⇓*i*P **P** **06 20 18.9 0.0**
APA *i* 06 22 19.0
APA *i* S **S** **06 27 25.0 -3.0**
APA *i* SS SS 06 30 48.0 -12
APA pmax pmax
comp=Z,349nm,0.7s
APA MLR MLR
comp=Z,596μm,13.0s
APE Apeiranthos 49.96 296 *e*P **P** **06 20 19.4 -1.0**
ARR Arges 49.97 307 ⇑P **P** **06 20 20.0 -0.4**
PLVB Pleven 50.06 304 ⇓P **P** **06 20 20.7 -0.3**
PLD Plovdiv 50.08 303 *e*P **P** **06 20 20.8 -0.4**
SANT Santorini 50.11 295 *e*P **P** **06 20 20.1 -1.5**
SANT Santorini 50.11 295 P **P** **06 20 20.3 -1.3**
SANT IAmb IAmb 06 20 50.2
comp=Z,2μm,0.7s
MDB Medias 50.13 308 ⇓P **P** **06 20 22.5 +0.9**
ARCR ARCALIA 50.14 309 ⇑P **P** **06 20 22.1 +0.5**
VLAD Vladila 50.18 305 ⇓P **P** **06 20 22.0 +0.1**
WBSI Waikabubak, Su 50.34 133 P **P** **06 20 23.4 -0.1**
comp=Z,426μmcomp=Z,39μmcomp=Z,863nm,0.8s
LVV L'vov 50.40 313 *e*P **P** **06 20 22.7 -0.8**
LVV *e* 06 21 35.0
LVV *e* 06 22 14.6
LVV *e*PPP PPP 06 23 21.8
LVV *e*S **S** **06 27 34.9 -1.5**
LVV pmax pmax
comp=Z,2μm,1.4s
LVV MLR MLR
comp=N,155μm,16.0s
LVV MLR MLR
comp=E,309μm,16.0s
LVV MLR MLR
comp=Z,307μm,16.0s
JCJ Chichijima 50.51 77 LR LR 06 41 57.5
comp=Z,701μm,20.7s,baz=280,slow=36
JCJ Chichijima 50.51 77 P **P** **06 20 23.4 -1.3**
JCJ IAmb IAmb 06 20 44.8
comp=Z,3μm,1.1s
LOT Lotru 50.58 307 ⇑P **P** **06 20 26.3 +1.2**
LOT Lotru 50.58 307 *e*P **P** **06 20 24.7 -0.4**
CJR Cluj-Napoca 50.66 309 ⇓P **P** **06 20 26.1 +0.4**
BMR Baia Mare 50.72 310 ⇑P **P** **06 20 26.4 +0.4**
IDI Anoyia 50.74 294 *e*P **P** **06 20 25.1 -1.3**
IDI Anoyia 50.74 294 P **P** **06 20 25.4 -1.0**
OUR Ouranopolis 50.77 301 *e*P **P** **06 20 25.8 -0.6**
YUK Yuzh-Kuril'sk 50.78 55*d* *i*P **P** **06 20 25.9 -0.5**
YUK *e* 06 21 44.3
YUK *e*PPP PPP 06 23 23.1
YUK *i* S **S** **06 27 41.5 -0.3**
YUK *e*SSS SSS 06 32 40.6
YUK pmax pmax
comp=Z,18μm,2.2s
YUK pmax pmax
comp=Z,8μm,1.1s
YUK pmax pmax
comp=N,3μm,1.2s
YUK MLR MLR
comp=Z,2044μm,24.0s
FIA1 FINESS Array S 50.79 328 P **P** **06 20 25.4 -0.8**
FINES FINESS Array B 50.79 328 P **P** **06 20 25.4 -0.9**
comp=Z,267nm,0.7s,baz=110,slow=7.7,SNR=386
FINES LR LR 06 44 06.5
comp=Z,986μm,18.7s,baz=104,slow=39
FINES FINESS Array B 50.79 328 P **P** **06 20 25.3 -0.9**
FINES **sP** **06 20 32.8 +0.1**
PABE Paberze 50.86 320 *e*P **P** **06 20 26.9 +0.1**
PABE Paberze 50.86 320 P **P** **06 20 25.4 -1.4**
BAIL Bailesti 50.95 305 ⇓P **P** **06 20 28.5 +0.8**
VTS Vitosha 51.12 304 ⇓P **P** **06 20 29.9 +0.6**
VTS Vitosha 51.12 304 P **P** **06 20 28.9 -0.3**
VTS pmax pmax
comp=Z,2μm,0.8s
VTS Vitosha 51.12 304 P **P** **06 20 28.9 -0.3**
VTS IAmb IAmb 06 20 51.2
comp=Z,2μm,0.8s
SUW Suwalki 51.17 318 *e*P **P** **06 20 27.8 -1.4**
SUW *e*S **S** **06 27 51.0 +4.1**
SUW *e*L L 06 44 20.9
comp=Z,1021μm,24.0s
SUW Suwalki 51.17 318 *e*P **P** **06 20 28.9 -0.3**
SUW Suwalki 51.17 318 P **P** **06 20 28.2 -1.0**
SUW pmax pmax
comp=Z,6μm,1.2s
SUW MLR MLR
comp=Z,638μm,22.0s
SUW Suwalki 51.17 318 P **P** **06 20 28.2 -1.0**
DEV Deva 51.17 308 ⇓P **P** **06 20 29.8 +0.4**
PUNG Punghina 51.23 306 ⇓P **P** **06 20 30.1 +0.3**
KWP Kalwaria Pacla 51.26 313 *e*P **P** **06 20 29.6 -0.5**
KWP *e*S **S** **06 27 52.8 +4.5**
KWP *e*L L 06 45 06.0
comp=Z,388μm,20.6s
KWP Kalwaria Pacla 51.26 313 P **P** **06 20 29.5 -0.5**
KWP pmax pmax
comp=Z,4μm,1.0s
KWP Kalwaria Pacla 51.26 313 P **P** **06 20 29.5 -0.5**
DRGR 51.27 309 ⇑P **P** **06 20 30.2 0.0**
NLAI Namlea 51.32 120 P **P** **06 20 31.3 +0.5**
comp=Z,38μmcomp=Z,687nm,0.8s
TRPA Tarpa 51.37 311 ⇓P **P** **06 20 31.5 +0.7**
MTSE Matsula 51.38 324 *e*P **P** **06 20 32.0 +1.4**
HORT Hortiatis 51.41 301 *e*P **P** **06 20 30.3 -1.1**
IMMV Iera Moni Meta 51.44 294 *e*P **P** **06 20 31.2 -0.4**
GVDS Gavdos 51.46 294 *e*P **P** **06 20 31.5 -0.2**
GVD Gavdhos 51.46 294 *e*P **P** **06 20 30.3 -1.4**
MMRI Maumere 51.49 130 P **P** **06 20 31.6 -0.5**
MMRI IAmb IAmb 06 21 19.9
comp=Z,3μm,1.2s
MMRI Maumere 51.49 130 P **P** **06 20 29.3 -2.8**
comp=Z,438μmcomp=Z,46μmcomp=Z,2μm,0.8s
KNT Kendrikon 51.51 302 *e*P **P** **06 20 31.0 -1.0**
UZH Uzhgorod 51.52 311 *e*P **P** **06 20 30.0 -2.0**
UZH *i* 06 20 35.2
UZH *i* 06 22 27.5
UZH *e*S **S** **06 27 45.0 -7.0**
UZH *i* 06 27 59.0
UZH MLR MLR
comp=Z,43μm,14.0s
BASI Baing, Sumba 51.55 133 P **P** **06 20 32.1 -0.4**
comp=Z,269μmcomp=Z,35μmcomp=Z,2μm,1.0s
HERR Herculane 51.56 307 ⇑P **P** **06 20 33.1 +0.8**
VAY Valandovo 51.73 302 *i* P **P** **06 20 32.7 -1.0**
VAY *e*S **S** **06 28 01.0 +6.0**
LTVH Ltavrtes, Hu 51.81 310 ⇑P **P** **06 20 35.0 +0.9**
GRG Griva 51.90 302 *e*P **P** **06 20 33.9 -1.1**
LIT Litokhoron 51.93 300 P **P** **06 20 33.9 -1.3**
LIT pmax pmax
comp=Z,3μm,1.6s
LIT MLR MLR
comp=Z,89μm,21.0s
LIT Litokhoron 51.93 300 P **P** **06 20 33.9 -1.3**
LIT IAmb IAmb 06 21 09.7
comp=Z,3μm,1.6s
STIP Stip 51.98 302 ⇑*i*P **P** **06 20 33.1 -2.5**
STIP *e*S **S** **06 28 03.8 +5.3**
SIRR Siria 52.02 308 ⇑P **P** **06 20 36.1 +0.3**
SLIT Silitere, Latvi 52.03 323 *e*P **P** **06 20 36.3 +0.8**
KTHA Kythira Island 52.04 296 *e*P **P** **06 20 34.3 -1.8**
PBUR Paburge 52.06 321 *e*P **P** **06 20 36.4 +0.6**
MDVR Moldovita 52.06 306 ⇑P **P** **06 20 36.4 +0.2**
CRVS Cervenica-Dubn 52.07 312 *e*P **P** **06 20 35.6 -0.5**
CRVS pmax pmax
comp=Z,1μm,1.4s
CRVS MLR MLR
comp=Z,387μm,20.9s
CRVS Cervenica-Dubn 52.07 312 *e*P **P** **06 20 35.6 -0.5**
CRVS *e* 06 21 07.1
CRVS *e*PP PP 06 23 07.3 +33
CRVS *e*S S 06 28 21.7 +22
CRVS *e*L L 06 47 43.8
BZS Buzias 52.08 307 ⇑P **P** **06 20 36.0 -0.2**
KUR Kuril'sk 52.14 53*c* *i*P **P** **06 20 37.1 +0.5**
KUR *e*S S 06 28 20.1 +20
KUR pmax pmax

comp=Z,3µm,1.4s
KUR pmax pmax
comp=Z,63µm,7.0s
KUR MLR MLR
comp=Z,1101µm,18.0s
KUR MLR MLR
comp=N,566µm,16.0s
KUR MLR MLR
comp=E,772µm,18.0s
BOVS Bovan 52.16 305 ⇓P P 06 20 37.4 +0.6
AGG Agios Georgios 52.19 299 *eP* **P 06 20 35.3 -1.8**
AGG Agios Georgios 52.19 299 P **P 06 20 35.4 -1.8**
AGG pmax pmax
comp=Z,2µm,0.9s
AGG Agios Georgios 52.19 299 P **P 06 20 35.4 -1.8**
AGG IAmb IAmb 06 21 21.5
comp=Z,2µm,0.9s
BANR Banloc 52.43 307 ⇑P P 06 20 39.6 +0.8
BEL Belsk 52.51 315 *eP* **P 06 20 40.0 +0.8**
BEL *eS* S 06 28 19.2 +14
BEL *eL* L 06 46 01.9
comp=Z,567µm,26.2s
SKO Skopje 52.51 303 *i* P **P 06 20 38.5 -1.0**
SKO *eS* **S 06 28 10.6 +4.9**
AMBH Ambrzfalva 52.66 308 ⇑P P 06 20 41.3 +0.8
FNA Florina 52.69 301 *eP* **P 06 20 39.3 -1.6**
FNA Florina 52.69 301 P **P 06 20 39.9 -1.0**
FNA pmax pmax
comp=Z,3µm,1.4s
FNA Florina 52.69 301 P **P 06 20 39.9 -1.0**
FNA IAmb IAmb 06 21 16.3
comp=Z,3µm,1.4s
KECS Kecovo 52.73 311 *eP* **P 06 20 40.8 -0.2**
KECS pmax pmax
comp=Z,249nm,1.5s
KECS Kecovo 52.73 311 *eP* **P 06 20 40.8 -0.2**
ITM Ithomi 52.79 297 *eP* **P 06 20 38.8 -2.8**
ITM Ithomi 52.79 297 P **P 06 20 39.8 -1.8**
NIE Niedzica 52.83 312 *eP* **P 06 20 41.9 +0.2**
NIE *eS* S 06 28 19.6 +10
NIE *eL* L 06 46 23.1
comp=Z,224µm,19.7s
KEV Kevo 52.85 338 P **P 06 20 40.9 -0.6**
KEV pmax pmax
comp=Z,2µm,0.7s
KEV Kevo 52.85 338 P **P 06 20 40.9 -0.6**
KEV IAmb IAmb 06 21 24.3
comp=Z,2µm,0.7s
BSZH Besenyszg 52.92 310 ⇑P P 06 20 43.2 +0.8
LODK Lodwar 52.98 252 P **P 06 20 43.5 +0.2**
LODK Lodwar 52.98 252 P **P 06 20 44.0 +0.7**
SNR=143
OHR Ohrid 53.09 302 *i* P **P 06 20 42.9 -0.9**
OHR *eS* **S 06 28 18.2 +4.4**
SWI Sorong 53.10 115 P **P 06 20 42.1 -2.0**
comp=Z,207µmcomp=Z,34µmcomp=Z,824nm,1.5s
OJC Ojcow 53.13 313 *eP* **P 06 20 42.9 -1.1**
OJC *eS* **S 06 28 20.9 +6.9**
OJC *eL* L 06 43 35.1
comp=Z,233µm,26.2s
OJC Ojcow 53.13 313 P **P 06 20 42.8 -1.1**
OJC pmax pmax
comp=Z,4µm,1.9s
OJC Ojcow 53.13 313 P **P 06 20 42.8 -1.2**
OJC IAmb IAmb 06 21 29.0
comp=Z,4µm,1.9s
PSZ Piszkesteto 53.15 310 ⇑P P 06 20 44.0 -0.1
PSZ Piszkesteto 53.15 310 P **P 06 20 43.6 -0.5**
PSZ pmax pmax
comp=Z,7µm,2.0s
PSZ Piszkesteto 53.15 310 P **P 06 20 43.6 -0.5**
ARA0 ARCESS Array S 53.27 338 *eP* **P 06 20 44.3 -0.4**
ARCES ARCESS Array B 53.27 338 P **P 06 20 43.9 -0.8**
comp=Z,364nm,0.8s,baz=99,slow=7.6,SNR=244
ARCES LR LR 06 46 28.3
comp=Z,345µm,20.2s,baz=95,slow=40
ARCES PKP2ab 06 51 46.6
comp=Z,8.6nm,1.0s,baz=296,slow=3.9,SNR=3.8
ARCES ARCESS Array B 53.27 338 *eP* **P 06 20 44.1 -0.6**
ARCES pmax pmax
comp=Z,2µm,0.8s
ARCES ARCESS Array B 53.27 338 P **P 06 20 44.0 -0.6**
ARCES IAmb IAmb 06 21 27.6
comp=Z,2µm,0.8s
SBV Sambava 53.34 224 P **P 06 20 47.9 +2.1**
SNR=17
DIVS Divibare 53.35 306 ⇑*iP* **P 06 20 44.8 -0.9**
DIVS Divibare 53.35 306 P **P 06 20 44.9 -0.8**
LANS Liptovska Anna 53.38 312 *eP* **P 06 20 46.2 +0.4**
LANS pmax pmax
comp=Z,95nm,1.0s
LANS Liptovska Anna 53.38 312 *eP* **P 06 20 46.2 +0.4**
FRGS Fruska Gora 53.38 307 ⇑P P 06 20 45.7 -0.2
FRGS Fruska Gora 53.38 307 ⇑*iP* **P 06 20 45.1 -0.8**
PVY Plav 53.53 304 ⇑*iP* **P 06 20 46.4 -0.7**
IVA Berane 53.55 304 ⇑*iP* **P 06 20 46.8 -0.4**
BATI Baumata 53.59 130 LR LR 06 50 39.8
comp=Z,832µm,18.3s,baz=324,slow=44
BATI Baumata 53.59 130 P **P 06 20 47.3 -0.4**
comp=Z,206µmcomp=Z,21µmcomp=Z,986nm,0.7s
TEKS Tekeris 53.64 306 *iP* **P 06 20 47.2 -0.5**
SOEI Soe 53.68 129 P **P 06 20 45.6 -2.9**
SOEI IAMs_20 IAMs_20 06 46 12.5
comp=Z,1024µm,19.0s
SOEI Soe 53.68 129 P **P 06 20 46.3 -2.2**
comp=Z,409µmcomp=Z,66µmcomp=Z,6µm,0.8s
TIR Tirane 53.75 302 P **P 06 20 47.3 -1.3**
TIR pmax pmax
comp=Z,2µm,0.9s
TIR MLR MLR
comp=Z,190µm,22.0s
TIR Tirane 53.75 302 P **P 06 20 47.3 -1.3**
TIR IAmb IAmb 06 21 34.2
comp=Z,2µm,0.9s
BBLS Lazići 53.79 305 *iP* **P 06 20 48.4 -0.6**
VYHS Vyhne 53.82 311 *eP* **P 06 20 48.3 -0.7**
VYHS *eS* **S 06 28 22.9 -0.6**
VYHS pmax pmax
comp=Z,322nm,1.3s
VYHS MLR MLR
comp=Z,337µm,19.5s
VYHS Vyhne 53.82 311 *eP* **P 06 20 48.3 -0.7**
VYHS *e* 06 21 20.2
VYHS *eP* PP 06 23.1 +33
VYHS *eS* **S 06 28 22.9 -0.6**
VYHS *eL* L 06 48 55.3
KOME Kolasin 53.83 304 ⇑*iP* **P 06 20 48.4 -0.8**
RUDO Rudo 53.84 305 *eP* **P 06 20 49.6 +0.3**
PLE Pljevlja 53.86 305 ⇑*iP* **P 06 20 49.9 +0.4**
KTK1 Kautokeino 53.88 337 *eP* **P 06 20 48.6 -0.5**
KTK1 *es*P **sP 06 20 55.5 0.0**
KTK1 *eS* **S 06 28 26.9 +3.3**
KMBO Kilima Mbogo 54.00 246 P **P 06 20 50.6 -0.4**
comp=Z,170nm,0.9s,baz=42,slow=9.8,SNR=62
KMBO Kilima Mbogo 54.00 246 *i* P **P 06 20 51.0 0.0**
KMBO pmax pmax
comp=Z,179nm,1.0s
PDG Podgorica 54.07 304 ⇑*iP* **P 06 20 49.5 -1.3**
PDG Podgorica 54.07 304 P **P 06 20 49.3 -1.6**
PDG IAmb IAmb 06 21 36.3
comp=Z,1µm,0.9s
TTG Podgorica 54.07 304 ⇑*iP* **P 06 20 49.6 -1.3**
KIBK Kibwezi 54.09 244 P **P 06 20 50.9 -0.6**
KIBK IAmb IAmb 06 21 30.0
comp=Z,4µm,2.3s
KIBK Kibwezi 54.09 244 P **P 06 20 52.6 +1.1**
SNR=73
HAPS Han Pijesak,BI 54.10 306 ⇑*iP* **P 06 20 50.0 -1.2**
MORH Mrgy, Hungar 54.11 308 ⇑P P 06 20 50.7 -0.5
MORH Mrgy, Hungar 54.11 308 ⇑*iP* **P 06 20 50.3 -0.8**
MA2 Magadan 54.11 35 P **P 06 20 49.9 -1.0**
comp=Z,203nm,0.8s,baz=271,slow=6.9,SNR=33
MA2 Magadan 54.11 35c *iP* **P 06 20 50.3 -0.6**
MA2 pmax pmax
comp=Z,2µm,1.0s
MA2 Magadan 54.11 35 P **P 06 20 50.0 -1.0**
MA2 IAmb IAmb 06 21 26.3
comp=Z,2µm,0.9s
ULC Ulcinj 54.13 303 ⇑*iP* **P 06 20 49.8 -1.6**
DRME Dracevica, Mon 54.15 303 ⇑*iP* **P 06 20 50.0 -1.5**
DRME Dracevica, Mon 54.15 303 ⇑*iP* **P 06 20 50.1 -1.5**
SRO2 Moca 54.16 310 *eP* **P 06 20 50.9 -0.6**
SRO2 pmax pmax
comp=Z,1µm,0.9s

SRO2 Moca 54.16 310 *eP* **P 06 20 50.9 -0.6**
RAC Raciborz 54.17 313 *eP* **P 06 20 51.4 -0.1**
RAC *eS* **S 06 28 25.1 -2.9**
RAC MLR MLR
comp=Z,223µm,22.5s
OKC Ostrava-Krasne 54.21 313 *eP* **P 06 20 51.5 -0.3**
OKC *e* 06 20 58.9
OKC MLR MLR
comp=Z,216µm,14.3s
OKC Ostrava-Krasne 54.21 313 *eP* **P 06 20 51.5 -0.3**
OKC *ex* x 06 20 58.9
OKC AMS AMS 06 47 00.0
comp=Z,216µm,14.3s
HAMF Hammerfest 54.21 339 *eP* **P 06 20 51.4 0.0**
HAMF IVmB_BB 06 21 12.1
comp=Z,43µm,0.6s
HAMF *eS* **S 06 28 29.9 +1.9**
HAMF IVMs_BB IVMs_BB 06 45 40.3
comp=Z,176µm,13.4s
NKY Niksic 54.21 304 ⇑*iP* **P 06 20 51.4 -0.7**
SRO Srobarova 54.21 310 *eP* **P 06 20 52.0 +0.1**
SRO pmax pmax
comp=Z,1µm,1.2s
SRO Srobarova 54.21 310 *eP* **P 06 20 52.0 +0.1**
UPM Unac-Piva 54.23 305 *eP* **P 06 20 51.7 -0.6**
UPM Unac-Piva 54.23 305 ⇑*iP* **P 06 20 51.8 -0.6**
NKME Niksic 54.25 304 ⇑*iP* **P 06 20 51.1 -1.2**
BNDI Bandanaira 54.28 119 P **P 06 20 50.6 -2.1**
comp=Z,283µmcomp=Z,66µmcomp=Z,2µm,1.5s
CEME Cevo 54.30 304 ⇑*iP* **P 06 20 51.4 -1.3**
BUM Brajici-Budva 54.35 304 ⇑*iP* **P 06 20 52.0 -1.0**
BRY Bratogost 54.53 304 *eP* **P 06 20 53.3 -1.2**
BRY Bratogost 54.53 304 ⇑*iP* **P 06 20 53.8 -0.7**
JAVC Velka Javorina 54.57 312 ⇑*iP* **P 06 20 54.7 +0.1**
JAVC *eS* **S 06 28 41.5 +7.8**
JAVC *e*PKKP **PKKPdf 06 42 47.8 +3.7**
MORC Moravsky Berou 54.60 313 ⇑*iP* **P 06 20 54.0 -0.8**
MORC *eS* **S 06 28 39.6 +5.6**
MORC *e*PKKP **PKKPdf 06 42 46.3 +2.3**
MORC Moravsky Berou 54.60 313 P **P 06 20 53.9 -0.8**
MORC pmax pmax
comp=Z,2µm,1.3s
MORC Moravsky Berou 54.60 313 P **P 06 20 53.9 -0.9**
MORC IAmb IAmb 06 21 40.4
comp=Z,2µm,1.3s
HCY Herceg Novi 54.62 304 *eP* **P 06 20 53.7 -1.3**
HCY Herceg Novi 54.62 304 ⇑*iP* **P 06 20 53.7 -1.3**
UPP Uppsala 54.66 325 *eP* **P 06 20 55.0 +0.1**
GKP Gorka Klasztor 54.68 317 *eP* **P 06 20 55.5 +0.4**
GKP *eS* **S 06 28 42.4 +7.7**
GKP *eL* L 06 46 32.2
comp=Z,913µm,23.0s
GKP Gorka Klasztor 54.68 317 *eP* **P 06 20 56.4 +1.2**
TREB Trebinje 54.69 304 *eP* **P 06 20 54.3 -1.2**
SMOL Smolenice 54.76 311 *eP* **P 06 20 55.8 0.0**
SMOL pmax pmax
comp=Z,106nm,1.1s
SMOL Smolenice 54.76 311 *eP* **P 06 20 55.8 0.0**
MODS Modra-Piesok 54.87 311 *eP* **P 06 20 55.1 -1.5**
MODS *eS* **S 06 28 39.8 +2.3**
MODS pmax pmax
comp=Z,339nm,1.3s
MODS MLR MLR
comp=Z,412µm,20.0s
MODS Modra-Piesok 54.87 311 *eP* **P 06 20 55.1 -1.5**
MODS *e* 06 21 25.8
MODS *e*PP PP 06 23 32.1 +33
MODS *eS* **S 06 28 39.8 +2.3**
MODS *eL* L 06 49 30.8
SCTE Santa Cesarea 54.99 301 P **P 06 20 56.1 -1.6**
SCTE IAmb IAmb 06 21 42.0
comp=Z,2µm,0.9s
JETT Jettan, Norway 54.99 337 *eP* **P 06 20 56.7 -0.5**
JETT *eS* **S 06 28 39.0 +0.3**
JETT IVMs_BB IVMs_BB 06 45 57.3
comp=Z,279µm,14.2s
ZST Bratislava 55.00 311 *eP* **P 06 20 57.2 -0.3**
ZST pmax pmax
comp=Z,721nm,1.1s
ZST Bratislava 55.00 311 *eP* **P 06 20 57.2 -0.3**
ZST *eS* **S 06 28 44.7 +5.5**
KRLC Kraliky 55.08 313 *eP* **P 06 20 57.9 -0.3**
KRLC *eS* **S 06 28 49.3 +8.9**
KRLC MLR MLR
comp=Z,272µm,15.7s
KRLC Kraliky 55.08 313 *eP* **P 06 20 57.9 -0.3**
KRLC *eS* **S 06 28 49.3 +8.9**
KRLC AMS AMS 06 49 10.0
comp=Z,272µm,15.7s
FAKI Fak Fak 55.12 116 P **P 06 20 57.2 -1.7**
FAKI IAmb IAmb 06 22 09.6
comp=Z,2µm,1.2s
FAKI Fak Fak 55.12 116 P **P 06 20 59.0 +0.1**
comp=Z,249µmcomp=Z,36µmcomp=Z,1µm,1.6s
SEY Seymchan 55.21 31 P **P 06 20 58.4 -0.4**
comp=Z,335nm,0.9s,baz=258,slow=7.3,SNR=158
SEY LR LR 06 46 53.6
comp=Z,2671µm,21.5s,baz=256,slow=39
SEY Seymchan 55.21 31 *iP* **P 06 20 58.5 -0.3**
VRAC Vranov 55.25 312 ⇓P P 06 20 59.6 +0.2
VRAC Vranov 55.25 312 ⇑*iP* **P 06 20 58.6 -0.8**
VRAC *eS* **S 06 28 49.8 +7.2**
VRAC *e*PKKP **PKKPdf 06 42 44.7 +1.5**
BLY Banja Luka 55.28 307 ⇑*iP* **P 06 20 59.1 -0.6**
KSP Ksiaz 55.35 314 *eP* **P 06 20 59.2 -0.9**
KSP *eS* **S 06 28 48.6 +4.8**
KSP *eL* L 06 47 48.4
comp=Z,463µm,24.1s
DPC Dobruska-Polom 55.36 314 *eP* **P 06 21 00.0 -0.2**
DPC *e* 06 21 07.4
DPC MLR MLR
comp=Z,364µm,16.0s
DPC Dobruska-Polom 55.36 314 *eP* **P 06 21 00.0 -0.2**
DPC *ex* x 06 21 07.4
DPC AMS AMS 06 47 30.0
comp=Z,364µm,16.0s
BEHE Becsehely 55.38 309 ⇑*iP* **P 06 21 01.8 +1.5**
MGRS Mrkonjic Grad 55.39 306 *eP* **P 06 21 00.3 -0.2**
KRUC Moravsky 55.40 312 ⇑*iP* **P 06 20 59.6 -0.8**
KRUC *eS* **S 06 28 51.2 +6.6**
OSTC Ostas 55.41 314 *eP* **P 06 21 00.3 -0.2**
OSTC *ex* x 06 21 07.5
OSTC AMS AMS 06 47 40.0
comp=Z,487µm,16.0s
MRAK Mrakovica 55.45 307 *eP* **P 06 21 00.9 -0.1**
BLEU Blekinge 55.49 321 *iP* **P 06 20 59.9 -1.1**
CHVC Chvalec 55.51 314 *eP* **P 06 21 01.1 -0.2**
CHVC AMS AMS 06 47 50.0
comp=Z,528µm,16.0s
TRO Tromso 55.52 337 *eP* **P 06 21 01.2 +0.3**
TRO IVmB_BB 06 21 32.8
comp=Z,26µm,2.1s
TRO *eS* **S 06 28 50.6 +5.1**
TRO IVMs_BB IVMs_BB 06 46 14.9
comp=Z,305µm,14.8s
UPC Upice 55.55 314 *eP* **P 06 21 01.1 -0.4**
UPC *e* 06 21 08.9
UPC MLR MLR
comp=Z,531µm,16.3s
UPC Upice 55.55 314 *eP* **P 06 21 01.1 -0.4**
UPC *ex* x 06 21 08.9
UPC AMS AMS 06 47 50.0
comp=Z,531µm,16.3s
KOGS Kog 55.74 309 *iP* **P 06 21 02.5 -0.4**
KOGS IAML 06 49 23.9
comp=Z,248µm,14.2s
RKPI Ransiki, Papua 55.84 113 P **P 06 21 04.0 0.0**
comp=Z,173µmcomp=Z,42µmcomp=Z,810nm,1.3s
CONA Conrad Observa 55.85 311 *eP* **P 06 21 03.0 -0.8**
comp=Z,2µm,1.8s,SNR=313
CONA *eS* **S 06 28 49.5 -1.3**
comp=Z,76µm,13.9s
HOPEN Hopen 55.91 346 *eP* **P 06 21 04.3 +0.7**
HOPEN *eS* **S 06 28 54.8 +4.2**
HOPEN IVMs_BB IVMs_BB 06 49 57.9
comp=Z,351µm,21.0s
TREC Trest 55.97 312 *eP* **P 06 21 04.4 -0.2**
TREC MLR MLR
comp=Z,306µm,15.7s
TREC Trest 55.97 312 *eP* **P 06 21 04.4 -0.2**
TREC AMS AMS 06 48 10.0
comp=Z,306µm,15.7s
BSD Bornholm Skovb 56.01 319 *eP* **P 06 21 04.8 +0.1**

BSD Bornholm Skovb 56.01 319 *i* P **P 06 21 04.0 -0.7**
BSD IAMs_20 IAMs_20 06 47 22.5
comp=Z,684µm,18.5s
BSD Bornholm Skovb 56.01 319 *i* P **P 06 21 04.0 -0.7**
BSD MLR MLR
comp=Z,680µm,18.0s
ARSA Arzberg 56.15 310 *i* P **P 06 21 05.2 -0.7**
comp=Z,3µm,3.2s,SNR=108
ARSA S **S 06 28 55.4 +0.7**
comp=Z,174µm,21.9s
GOLS Golise 56.22 308 *i* P **P 06 21 05.9 -0.5**
N2IH Innhavet 56.29 335 *eP* **P 06 21 05.9 -0.6**
N2IH IVmB_BB 06 21 38.5
comp=Z,31µm,2.4s
N2ST Straumen 56.34 334 ⇑*iP* **P 06 21 07.0 +0.2**
N2ST *e*ScS ScS 06 30 53.2 -2.2
CRES Cresnjev 56.36 308 ⇑*iP* **P 06 21 06.5 -0.9**
NBB29 Rokland skole 56.39 334 *eP* **P 06 21 07.7 +0.5**
RER Riviere de l'E 56.43 213 P **P 06 21 07.2 -0.9**
RER IAmb IAmb 06 21 44.5
comp=Z,2µm,1.0s
RER IAMs_20 IAMs_20 06 44 26.3
comp=Z,733µm,18.0s
RER Riviere de l'E 56.43 213 P **P 06 21 10.5 +2.3**
SNR=22
TIP Timpagrande 56.45 300 P **P 06 21 06.8 -1.4**
TIP IAmb IAmb 06 22 26.7
comp=Z,4µm,1.8s
FAUS Fauske 56.46 334 *eP* **P 06 21 06.9 -0.8**
FAUS *eS* **S 06 28 56.4 -1.7**
FAUS IVMs_BB IVMs_BB 06 47 15.3
comp=Z,316µm,25.0s
PVCC Panska Ves 56.46 314 *eP* **P 06 21 07.9 -0.1**
PVCC MLR MLR
comp=Z,536µm,16.0s
PVCC Panska Ves 56.46 314 *eP* **P 06 21 07.9 -0.1**
PVCC AMS AMS 06 48 20.0
comp=Z,536µm,16.0s
LNIZ Loecknitz 56.48 318 *eP* **P 06 21 07.2 -0.9**
comp=Z,12µm,2.3s,baz=85,slow=6.9
PRU Pruhonice 56.52 313 *eP* **P 06 21 08.2 -0.3**
PRU *e* 06 21 15.5
PRU *eS* **S 06 29 08.5 +8.9**
PRU MLR MLR
comp=Z,429µm,15.4s
PRU Pruhonice 56.52 313 *eP* **P 06 21 08.2 -0.3**
PRU *ex* x 06 21 15.5
PRU *eS* **S 06 29 08.5 +8.9**
PRU AMS AMS 06 48 30.0
comp=Z,429µm,15.4s
BOJS Bojanci 56.54 308 *i* P **P 06 21 07.9 -0.8**
BOJS *e* 06 21 30.9
BOJS *e*PP **PP 06 23 10.8 -3.6**
BOJS *eS* **S 06 29 04.9 +4.9**
N2TV TÝrnvik 56.54 334 *eP* **P 06 21 07.7 -0.6**
SOKA Soboth 56.55 309 *iP* **P 06 21 08.0 -0.8**
comp=Z,2µm,1.5s,SNR=243
SOKA S **S 06 28 57.7 -2.4**
comp=Z,195µm,20.8s
STEI Steigen 56.55 335 *eP* **P 06 21 07.1 -1.2**
STEI *eS* **S 06 29 05.8 +6.6**
STEI IVMs_BB IVMs_BB 06 47 31.0
comp=Z,267µm,16.0s
DEL Delary 56.57 321 *iP* **P 06 21 07.6 -1.0**
PRA Prague 56.59 313 *eP* **P 06 21 08.8 -0.1**
PRA MLR MLR
comp=Z,412µm,15.0s
PRA Prague 56.59 313 *eP* **P 06 21 08.8 -0.1**
PRA AMS AMS 06 48 20.0
comp=Z,412µm,15.0s
MOR8 Moi Rana 56.66 333 *eP* **P 06 21 07.7 -1.5**
MOR8 IVmB_BB 06 21 40.4
comp=Z,23µm,2.2s
MOR8 *eS* **S 06 29 00.3 -0.5**
MOR8 IVMs_BB IVMs_BB 06 47 20.1
comp=Z,234µm,14.4s
BJO1 Bjornoya 56.67 343 *eP* **P 06 21 08.7 -0.5**
BJO1 IVmB_BB 06 21 10.5
comp=Z,6µm,0.7s
BJO1 *eS* **S 06 29 01.9 +1.1**
BJO1 IVMs_BB IVMs_BB 06 51 32.2
comp=Z,217µm,16.1s
NBB08 Skaug oppvekst 56.71 334 *eP* **P 06 21 08.7 -0.8**
SGRT San Giovanni R 56.75 303 P **P 06 21 09.4 -1.0**
SGRT IAmb IAmb 06 21 39.0
comp=Z,2µm,1.2s
NBB28 Valnes 56.75 334 ⇑*iP* **P 06 21 09.1 -0.7**
NBB28 *es*P **sP 06 21 16.2 -0.1**
NBB28 *eS* **S 06 29 02.0 0.0**
CKRC Cesky Krumlov 56.79 312 *eP* **P 06 21 09.9 -0.5**
CKRC AMS AMS 06 48 50.0
comp=Z,236µm,14.0s
RUE Ruedersdorf 56.80 316 *eP* **P 06 21 09.5 -0.8**
comp=Z,4µm,1.5s,baz=85,slow=6.9
BRG Berggiesshubel 56.83 314 ⇑*iP* **P 06 21 09.8 -0.9**
BRG Amp 06 21 14.1
comp=Z,352nm,1.2s
BRG *i* x x 06 21 17.3
BRG Amp 06 21 18.9
comp=Z,532nm,1.3s
BRG *ex* x 06 21 30.3
BRG Amp 06 21 31.2
comp=Z,567nm,0.9s
BRG *ex* x 06 21 57.4
BRG Amp 06 21 58.3
comp=Z,592nm,1.0s
BRG Berggiesshubel 56.83 314 S **S 06 29 11.0 +7.5**
BRG Berggiesshubel 56.83 314 *eP* **P 06 21 09.8 -0.9**
comp=Z,2µm,1.6s,baz=85,slow=6.9
LUNU Lund 56.83 320 *iP* **P 06 21 11.0 +0.5**
OBKA Obir 56.90 309 *iP* **P 06 21 10.7 -0.7**
comp=Z,1µm,1.4s,SNR=152
OBKA S **S 06 29 08.1 +3.3**
comp=Z,213µm,20.8s
NBB05 Inndyr 56.91 334 *eP* **P 06 21 11.2 +0.3**
PBCC Pribram 56.91 313 *eP* **P 06 21 10.9 -0.3**
PBCC *ex* x 06 21 17.7
PBCC *eS* S 06 29 14.8 +10
NBB17 Glomfjord BÝr 56.91 334 *eP* **P 06 21 10.0 -0.9**
NBB17 *es*P **sP 06 21 17.4 0.0**
NBB17 IVmB_BB 06 21 42.9
comp=Z,40µm,2.2s
MOA Molln 56.93 311 *iP* **P 06 21 10.4 -1.0**
comp=Z,979nm,1.4s,SNR=140
MOA S **S 06 29 04.4 -0.6**
comp=Z,155µm,22.7s
RGN Rugen 56.95 319 P **P 06 21 11.5 +0.1**
RGN Rugen 56.95 319 *eP* **P 06 21 12.8 +1.4**
comp=Z,4µm,1.1s,baz=85,slow=6.9
LJU Ljubljana 56.97 309 *iP* **P 06 21 11.2 -0.5**
LJU *e*PP **PP 06 23 14.9 -3.3**
LJU *eS* **S 06 29 11.5 +5.9**
LJU IAML 06 51 18.9
comp=Z,237µm,14.8s
NBB30 Finnes 57.02 334 *eP* **P 06 21 11.4 -0.3**
NBB30 *es*P **sP 06 21 18.1 0.0**
NBB30 *eS* **S 06 29 03.4 -2.1**
BJUU Bjuv 57.05 321 *iP* **P 06 21 12.1 0.0**
CEY Cerknica 57.09 308 ⇑*iP* **P 06 21 11.8 -0.8**
FABU Falkenberg 57.19 322 *iP* **P 06 21 12.2 -0.8**
GEC2 GERESS Array S 57.19 312 P **P 06 21 12.5 -0.8**
GEC2 IAmb IAmb 06 21 47.8
comp=Z,3µm,1.9s
GEC2 GERESS Array S 57.19 312 *eP* **P 06 21 12.2 -1.1**
comp=Z,3µm,1.9s,baz=85,slow=6.9
GERES GERESS Array B 57.19 312 P **P 06 21 12.4 -1.0**
comp=Z,24nm,0.5s,baz=96,slow=8.2,SNR=93
GERES LR LR 06 49 34.0
comp=Z,210µm,20.0s,baz=75,slow=40
GERES PKP2bc 06 51 17.6
comp=Z,2.9nm,0.9s,baz=207,slow=1.5,SNR=3.7
GERES GERESS Array B 57.19 312 P **P 06 21 11.7 -1.7**
FBE Freiberg 57.20 314 *eP* **P 06 21 12.6 -0.6**
comp=Z,3µm,1.6s,baz=85,slow=6.9
LOF Lofoten 57.21 335 *eP* **P 06 21 11.7 -1.3**
LOF IVmB_BB 06 21 44.1
comp=Z,28µm,2.1s
LOF *eS* **S 06 29 08.5 +0.5**
LOF IVMs_BB IVMs_BB 06 48 20.6
comp=Z,239µm,15.5s
KONS Konsvik 57.22 333 *eP* **P 06 21 12.3 -0.8**
KONS *eS* **S 06 29 11.9 +3.8**
KHC Kasperske Hory 57.23 312 *cP* **P 06 21 12.8 -0.9**
KHC pmax pmax

KHC **Kasperske Hory** 57.23 312 *e*P P 06 21 13.0 -0.6
comp=Z,2µm,1.5s
KHC *ex* x 06 21 20.4
KHC *e*PP **PP** **06 23 13.7 -6.8**
KHC *e*S **S** **06 29 12.2 +3.1**
KHC AMS AMS 06 48 50.0
comp=Z,356µm,17.6s
KHC Kasperske Hory 57.23 312 P P **06 21 12.7 -0.9**
TEBE Entebbe 57.23 250 *i* P P **06 21 15.8 +1.6**
SKR Severo-Kuril's 57.24 46 *e*P P **06 21 11.7 -1.8**
SKR *e*S S **06 29 14.8 +5.9**
SKR pmax pmax
comp=Z,24µm,13.0s
SKR pmax pmax
comp=Z,419nm,1.0s
SKR pmax pmax
comp=Z,29µm,12.9s
SKR smax smax
comp=N,40µm,13.2s
SKR smax smax
comp=N,29µm,13.5s
SKR smax smax
comp=E,61µm,12.5s
SKR smax smax
comp=E,50µm,13.2s
SKR MLR MLR
comp=Z,1996µm,15.0s
SKR MLR MLR
comp=Z,2057µm,15.0s
STOK Stokkvaagen 57.24 333 *e*P P **06 21 12.2 -1.1**
STOK *e*P *p*P **06 21 12.9 -5.4**
STOK *e*S S **06 29 06.0 -2.5**
NBB40 Tonnes 57.26 333 *e*P P **06 21 12.9 -0.4**
CEL Celeste 57.29 299 P P **06 21 13.8 -0.4**
CEL IAmb IAmb 06 22 00.9
comp=Z,2µm,1.0s
CLL Collm 57.38 315 *e*P P **06 21 14.0 -0.5**
comp=Z,2µm,1.7s
CLL *e*P(2) 06 21 33.0
CLL *e*Pmax 06 21 46.0
comp=Z,2µm,1.7s
CLL *e*Plp 06 21 59.0
comp=Z,52µm,40.4s
CLL *e*Pmax 06 22 06.0
CLL *e*PP **PP** **06 23 20.0 -1.7**
CLL *e* 06 24 07.0
CLL *e*S S **06 29 15.0 +4.2**
CLL *e*S(2) 06 29 38.0
CLL *e*Smax 06 30 08.0
comp=N,175µm,41.1s
CLL *e*Smax 06 30 08.0
comp=E,252µm,57.0s
CLL *e* 06 30 27.0
CLL *e* 06 31 48.0
CLL *e*SS SS **06 33 06.0 +6.1**
CLL *e*(SSS) 06 35 06.0
CLL LmV 06 49 00.0
comp=Z,510µm,21.3s
CLL Lmax 06 49 00.0
CLL *e*PKPPKPdf **P'P'df** **06 51 09.0 +0.9**
CLL Collm 57.38 315 *e*P P **06 21 14.0 -0.5**
CLL *e*S S 06 29 32.0 +21
CLL pmax pmax
comp=Z,2µm,1.7s
CLL Collm 57.38 315 P P **06 21 13.1 -1.4**
CLL Collm 57.38 315 *e*P P **06 21 13.5 -1.1**
comp=Z,2µm,1.7s,baz=85,slow=6.9
N2SV S,rvÑgen 57.38 335⇑ *i*P P **06 21 13.6 -0.6**
N2SV *e*S S **06 29 09.8 -0.4**
COP Copenhagen 57.40 320 *i* P S **06 21 14.0 -0.5**
COP *e*S S 06 29 22.2 +11
COP IAMs_20 IAMs_20 06 48 02.0
comp=Z,524µm,18.6s
COP Copenhagen 57.40 320 *i* P P **06 21 14.0 -0.5**
COP MLR MLR
comp=Z,520µm,19.0s
N2VA Vr¸y 57.48 334 *e*P P **06 21 13.9 -1.0**
N2VA *e*ScS ScS 06 31 04.1 +0.4
MYKA Terra Mystica 57.50 309 *i* P P **06 21 14.2 -1.4**
comp=Z,1µm,2.1s,SNR=38
MYKA S S **06 29 13.8 +1.1**
comp=Z,152µm,18.2s
GUMO Guam 57.53 91 P P **06 21 16.0 0.0**
comp=Z,98nm,0.9s,baz=20,slow=3.2,SNR=3.5
GUMO Guam 57.53 91 IAMs_20 IAMs_20 06 49 47.2
comp=Z,914µm,19.0s
TRI Trieste 57.55 308 P P **06 21 14.6 -1.2**
TRI pmax pmax
comp=Z,2µm,1.2s
TRI Trieste 57.55 308 P P **06 21 14.6 -1.2**
TRI IAmb IAmb 06 22 01.5
comp=Z,2µm,1.2s
SAUI Saumlaki 57.55 122 P P **06 21 16.5 +0.3**
comp=Z,296µmcomp=Z,81µmcomp=Z,3µm,1.9s
NSS Namsos 57.58 331 *e*P P **06 21 15.3 -0.4**
NSS *e*S S **06 29 17.6 +4.7**
NSS IVMs_BB IVMs_BB 06 47 51.6
comp=Z,297µm,17.1s
ONAU Onsala 57.61 322 *i* P P **06 21 15.8 -0.1**
NC405 NORSAR Array S 57.63 327 P P **06 21 14.8 -1.3**
KBA Koelnbreinsper 57.64 310 *e*P P **06 21 15.3 -1.4**
comp=Z,577nm,1.1s,SNR=42
KBA S S **06 29 14.9 +0.1**
comp=Z,120µm,18.8s
N2RO R¸st 57.69 334⇑ *i*P P **06 21 16.0 -0.4**
WET Wettzell 57.69 312 *e*P P **06 21 15.9 -0.9**
comp=Z,5µm,2.1s,baz=85,slow=6.9
NC602 NORSAR Array S 57.72 326 P P **06 21 15.6 -1.2**
NC602 IAmb IAmb 06 22 00.6
comp=Z,3µm,1.2s
NC602 NORSAR Array S 57.72 326 *e*P P **06 21 15.7 -1.0**
NC602 IVmB_BB 06 21 23.3
comp=Z,7µm,2.9s
NC602 *e*S S **06 29 16.6 +1.7**
NC602 IVMs_BB IVMs_BB 06 47 43.0
comp=Z,292µm,16.7s
SRPI Serui, Papua 57.72 112 P P **06 21 18.2 +0.8**
comp=Z,150µmcomp=Z,41µmcomp=Z,590nm,0.8s
TJOU Tjoern 57.74 323 *i* P P **06 21 16.6 -0.3**
PAOL Paolisi 57.75 303 P P **06 21 16.3 -1.1**
NC303 NORSAR Array S 57.80 327 P P **06 21 16.2 -1.1**
NC303 IAmb IAmb 06 22 01.1
comp=Z,2µm,1.2s
TANN Tannenbergstha 57.81 314 *e*P P **06 21 16.6 -1.1**
comp=Z,2µm,1.6s,baz=85,slow=6.9
NB201 NORSAR Array S 57.84 327 P P **06 21 16.2 -1.4**
NB201 NORSAR Array S 57.84 327 *e*P P **06 21 16.5 -1.1**
NKC Novy Kostel 57.84 314 *e*P P **06 21 17.2 -0.6**
NKC MLR MLR
comp=Z,634µm,16.5s
NKC Novy Kostel 57.84 314 *e*P P **06 21 17.2 -0.6**
NKC AMS AMS 06 49 10.0
comp=Z,634µm,16.5s
NB2 NORSAR Subarra 57.87 327 P P **06 21 16.5 -1.4**
baz=89,slow=7.4
NOA NORSAR Array B 57.87 327 P P **06 21 16.2 -1.7**
comp=Z,148nm,0.9s,baz=89,slow=7.0,SNR=177
NOA LR LR 06 48 08.9
comp=Z,765µm,19.3s,baz=85,slow=38
NOA PKP2ab 06 51 32.4
comp=Z,6.3nm,1.1s,baz=286,slow=2.3,SNR=3.6
WERN Wernitzgruen 57.88 314 *e*P P **06 21 17.3 -0.9**
comp=Z,2µm,1.8s,baz=85,slow=6.9
GUNZ Gunzen 57.90 314 *e*P P **06 21 17.7 -0.6**
comp=Z,2µm,1.5s,baz=85,slow=6.9
WERD Werda 57.91 314 *e*P P **06 21 17.3 -1.0**
comp=Z,2µm,1.6s,baz=85,slow=6.9
RJOB Jochberg 57.92 311 *e*P P **06 21 17.2 -1.3**
comp=Z,13µm,2.0s,baz=85,slow=6.9
STRU Stroemstad 57.93 324 *i* P P **06 21 18.1 -0.2**
GIRL Giralia 57.96 148 P P **06 21 19.8 +0.9**
ZOU Zoufplan 57.97 309 P P **06 21 17.4 -1.6**
ZOU IAmb IAmb 06 22 20.0
comp=Z,2µm,1.6s
PEA0B Petropavlovsk- 57.99 43*c* *i*P P **06 21 18.6 -0.2**
PEA0B Petropavlovsk- 57.99 43 P P **06 21 18.6 -0.2**
PEA0B IAmb IAmb 06 21 49.4
comp=Z,2µm,1.2s
PETK Petropavlovsk- 57.99 43 P P **06 21 17.8 -1.1**
comp=Z,126nm,0.9s,baz=236,slow=1.5,SNR=36
PETK PKP2bc 06 51 13.5
comp=Z,29nm,1.1s,baz=72,slow=5.2,SNR=3.5
PLN Plauen 58.00 314 *e*P P **06 21 18.1 -0.8**
comp=Z,4µm,2.1s,baz=85,slow=6.9
NAO01 NORSAR Array S 58.04 326 P P **06 21 17.3 -1.7**
NAO01 IAmb IAmb 06 22 02.5
comp=Z,3µm,1.2s
NAO01 NORSAR Array S 58.04 326 *e*P P **06 21 17.3 -1.7**
ROTZ Rotzenmuhle 58.05 313 *e*P P **06 21 18.8 -0.5**
comp=Z,1µm,1.1s,baz=85,slow=6.9
INTR Introdacqua 58.06 304 P P **06 21 18.4 -1.1**
NBO00 NORSAR Array S 58.09 327 P P **06 21 17.8 -1.6**
NBO00 IAmb IAmb 06 22 03.0
comp=Z,3µm,1.2s
MANZ Manzenberg 58.09 313 *e*P P **06 21 19.0 -0.6**
comp=Z,4µm,1.8s,baz=85,slow=6.9
NC204 NORSAR Array S 58.09 327 P P **06 21 18.1 -1.3**
HSPB Hornsund (broa 58.14 346 *e*P P **06 21 18.9 -0.5**
HSPB *e*S S 06 29 48.0 +28
HSPB *e*L L 06 49 44.6
comp=Z,831µm,23.7s
HSPB Hornsund (broa 58.14 346 *e*P P **06 21 18.9 -0.5**
HSPB *e*S S **06 29 24.2 +4.3**
OSL Oslo 58.14 325 *e*P P **06 21 19.9 +0.2**
OSL *e*S S **06 29 21.4 +0.9**
OSL IVMs_BB IVMs_BB 06 47 57.8
comp=Z,318µm,18.4s
NEUB Neuenburg 58.16 315 *e*P P **06 21 19.1 -0.9**
comp=Z,4µm,1.6s,baz=85,slow=6.9
STAL STALIGIAL 58.19 309 P P **06 21 18.6 -1.8**
STAL IAmb IAmb 06 21 58.3
comp=Z,1µm,0.9s
DODT Dodoma, Tanzan 58.25 242 *i* P P **06 21 22.9 +1.7**
ABTA Abfaltersbach 58.26 310 *e*P P **06 21 18.7 -2.1**
comp=Z,393nm,1.1s,SNR=75
ABTA S S **06 29 22.3 -0.3**
comp=Z,66µm,18.9s
SPA0 Spitsbergen Ar 58.26 347 P P **06 21 20.2 -0.1**
SPA0 IAmb IAmb 06 21 49.1
comp=Z,2µm,0.9s
SPA0 Spitsbergen Ar 58.26 347 *e*P P **06 21 20.2 -0.1**
SPITS Spitsbergen Ar 58.26 347 PKP2ab 06 51 29.9
comp=Z,32nm,1.1s,baz=20,slow=7.4,SNR=4.4
TBLU Trondheim 58.31 329 *e*P P **06 21 19.7 -1.2**
TBLU *e*S S **06 29 18.3 -4.2**
TBLU IVMs_BB IVMs_BB 06 48 13.0
comp=Z,275µm,16.2s
MOX Moxa 58.32 314 *e*P P **06 21 20.2 -1.0**
comp=Z,3µm,1.7s,baz=85,slow=6.9
MOX *e*L L 06 50 30.9
comp=Z,265µm,21.2s
AQU L'Aquila 58.36 304 P P **06 21 21.0 -0.7**
AQU pmax pmax
comp=Z,2µm,1.1s
AQU L'Aquila 58.36 304⇑ *i*P P **06 21 20.8 -0.9**
AQU L'Aquila 58.36 304 P P **06 21 21.0 -0.7**
AQU IAmb IAmb 06 22 19.5
comp=Z,2µm,1.1s
FLTG Flechtingen 58.37 316 *e*P P **06 21 20.1 -1.3**
comp=Z,2µm,1.4s,baz=85,slow=6.9
NRCA Norcia 58.48 305 P P **06 21 21.1 -1.4**
NRCA IAmb IAmb 06 22 06.8
comp=Z,1µm,0.8s
PET Petropavlovsk 58.57 43α *i*P P **06 21 22.2 -0.6**
PET *i*S S **06 29 23.5 -2.8**
PET pmax pmax
comp=Z,904nm,1.6s
PET pmax pmax
comp=Z,67µm,15.3s
PET pmax pmax
comp=Z,70µm,12.8s
PET MLR MLR
comp=Z,2110µm,15.0s
PET Petropavlovsk 58.57 43 P P **06 21 21.7 -1.1**
PET IAmb IAmb 06 21 43.0
comp=Z,2µm,1.6s
PET IAMs_20 IAMs_20 06 51 18.3
comp=Z,1039µm,20.0s
GRA1 Grafenberg Arr 58.69 313 P P **06 21 23.1 -0.6**
GRA1 IAmb IAmb 06 22 11.2
comp=Z,3µm,1.5s
GRF Grafenberg Arr 58.69 313 P P **06 21 23.2 -0.6**
GRF pmax pmax
comp=Z,3µm,1.5s
GRF MLR MLR
comp=Z,572µm,21.0s
GRF Grafenberg Arr 58.69 313 *e*P P **06 21 23.6 -0.2**
comp=Z,5µm,1.8s,baz=85,slow=6.9
GRF *e*L L 06 50 02.0
comp=Z,547µm,20.0s
GRFO Grafenberg 58.70 313 P P **06 21 23.6 -0.2**
GRFO IAmb IAmb 06 22 11.2
comp=Z,3µm,1.5s
RAFF Raffo Rosso 58.70 298 P P **06 21 22.5 -1.5**
KONO Kongsberg 58.72 325*c* *i*P P **06 21 22.3 -1.5**
KONO pmax pmax
comp=Z,1µm,1.3s
KONO Kongsberg 58.72 325 P P **06 21 22.5 -1.3**
KONO Kongsberg 58.72 325 IAMs_20 IAMs_20 06 48 27.2
comp=Z,949µm,21.0s
KONO Kongsberg 58.72 325 *e*P P **06 21 23.4 -0.3**
KONO *e*S S **06 29 32.9 +4.8**
KONO IVMs_BB IVMs_BB 06 48 25.7
comp=Z,336µm,14.2s
ASSE Asse, Remlinge 58.74 316 *e*P P **06 21 22.7 -1.2**
comp=Z,4µm,1.9s,baz=85,slow=6.9
BSEG Bad Segeberg 58.76 318 *e*P P **06 21 23.5 -0.6**
comp=Z,5µm,1.4s,baz=85,slow=6.9
WTTA Wattenberg 58.77 310 *i* P P **06 21 22.6 -1.9**
comp=Z,742nm,1.2s,SNR=114
WTTA S S **06 29 27.2 -2.3**
comp=Z,36µm,9.4s
WATA Walderalm 58.80 310 *i* P P **06 21 22.6 -2.1**
comp=Z,653nm,1.2s,SNR=60
WATA S S **06 29 31.5 +1.7**
comp=Z,103µm,18.2s
MURB Monte Urbino 58.83 306 P P **06 21 24.6 -0.3**
FUR Furstenfeldbru 58.87 311 *e*P P **06 21 24.4 -0.7**
comp=Z,5µm,1.7s,baz=85,slow=6.9
DOMB Dombas 58.88 328 *e*P P **06 21 24.6 -0.3**
DOMB *e*sP **sP** **06 21 31.0 -0.4**
DOMB IVmB_BB 06 22 00.9
comp=Z,16µm,2.2s
DOMB *e*S S **06 29 28.3 -1.9**
DOMB IVMs_BB IVMs_BB 06 48 27.8
comp=Z,349µm,16.2s
CLZ Clausthal 58.95 316 *e*P P **06 21 24.8 -0.8**
comp=Z,4µm,1.5s,baz=85,slow=6.9
CTI Castel Tesino 58.95 309 P P **06 21 24.2 -1.6**
CTI pmax pmax
comp=Z,2µm,1.5s
CTI Castel Tesino 58.95 309 P P **06 21 24.2 -1.6**
CTI IAmb IAmb 06 22 06.7
comp=Z,2µm,1.5s
MBAR Mbarara 59.04 251*c* *i*P P **06 21 25.7 -1.1**
MBAR pmax pmax
comp=Z,1µm,1.5s
MBAR Mbarara 59.04 251 P P **06 21 25.9 -0.9**
MBAR IAmb IAmb 06 22 12.2
comp=Z,1µm,1.4s
MBAR Mbarara 59.04 251 P P **06 21 28.3 +1.5**
MBAR P P **06 21 28.3 +1.5**
MBAR P P **06 21 28.3 +1.5**
MBAR Mbarara 59.04 251 *i* P P **06 21 27.4 +0.6**
MBAR *e*S S 06 29 10.6 -23
MBAR Mbarara 59.04 251 *e*P P **06 21 27.9 +1.1**
MBAR Mbarara 59.04 251 *i* P P **06 21 27.5 +0.7**
MBAR IAmb IAmb 06 22 11.4
comp=Z,1µm,1.4s
MBAR IVMs_BB IVMs_BB 06 57 10.0
comp=Z,131µm,18.6s
NRDL Niedersach Rie 59.04 317 *e*P P **06 21 25.6 -0.4**
comp=Z,2µm,1.5s,baz=85,slow=6.9
TEOL Teolo 59.06 308 P P **06 21 25.1 -1.3**
SQTA Sankt Quirin 59.06 310 *e*P P **06 21 24.6 -2.0**
comp=Z,833nm,1.4s,SNR=96
SQTA S S **06 29 33.6 +0.4**
comp=Z,97µm,17.7s
GOET G??ttrup 59.09 322 *i* P P **06 21 26.9 +0.6**
GOET IAMs_20 IAMs_20 06 48 50.2
comp=Z,885µm,20.4s
MOTA Moosalm 59.12 311 *i* P P **06 21 24.9 -2.0**
comp=Z,395nm,0.8s,SNR=131
MOTA S S **06 29 34.5 +0.6**
comp=Z,53µm,14.3s
MUD Monsted U'grnd 59.17 321 *i* P P **06 21 26.2 -0.7**
MUD IAMs_20 IAMs_20 06 48 53.6
comp=Z,842µm,21.8s
MUD Monsted U'grnd 59.17 321 *i* P P **06 21 26.2 -0.7**
MUD MLR MLR
comp=Z,840µm,22.0s
SKMB Sankelmark Bun 59.19 319 *e*P P **06 21 28.7 +1.6**
comp=Z,7µm,1.4s,baz=85,slow=6.9
KIL Kilembe 59.21 252 *e*P P **06 21 29.9 +1.8**
KIL *e*S S **06 29 34.8 -1.1**
GTTG Gottingen 59.24 315 *e*P P **06 21 26.7 -0.8**
comp=Z,4µm,1.6s,baz=85,slow=6.9
ABPO Ambohimpanom 59.26 222 P P **06 21 28.2 0.0**
ABPO pmax pmax
comp=Z,6µm,2.2s
ABPO Ambohimpanom 59.26 222 P P **06 21 28.2 0.0**
ABPO Ambohimpanom 59.26 222 *i* P P **06 21 29.6 +1.4**
ABPO IAmb IAmb 06 22 05.7
comp=Z,6µm,2.1s
ABPO IVMs_BB IVMs_BB 06 45 02.1
comp=Z,585µm,16.8s
KBS Kingsbay 59.29 348 *i* P P **06 21 27.0 -0.4**
KBS IAMs_20 IAMs_20 06 53 07.8
comp=Z,1630µm,18.0s
KBS Kingsbay 59.29 348*c* *i*P P **06 21 26.4 -1.0**
KBS pmax pmax
comp=Z,1µm,0.7s
KBS Kingsbay 59.29 348 P P **06 21 27.0 -0.4**
KBS IAmb IAmb 06 21 47.8
comp=Z,1µm,0.8s
KBS Kingsbay 59.29 348 *e*P P **06 21 27.8 +0.3**
KBS IVmB_BB 06 21 29.8
comp=Z,4µm,0.6s
KBS IVMs_BB IVMs_BB 06 55 19.1
comp=Z,277µm,14.5s
SKAR Skarslia 59.31 326 *e*P P **06 21 28.4 +0.5**
SKAR *e*S S **06 29 31.3 -4.5**
SKAR IVMs_BB IVMs_BB 06 48 43.0
comp=Z,243µm,16.8s
UBBA Unterbreizbach 59.32 315 *e*P P **06 21 26.7 -1.2**
comp=Z,3µm,1.9s,baz=85,slow=6.9
RETA Reutte 59.32 311 *e*P P **06 21 26.5 -1.8**
comp=Z,1µm,1.7s,SNR=93
RETA S S **06 29 37.4 +0.9**
comp=Z,39µm,13.7s
CORL Corleone 59.36 299 P P **06 21 27.4 -1.3**
HOMB Homborsund 59.38 323 *i* P P **06 21 28.6 +0.3**
HOMB Homborsund 59.38 323 *e*P P **06 21 28.6 +0.3**
HOMB *e*S S **06 29 37.8 +1.3**
HOMB IVMs_BB IVMs_BB 06 48 49.7
comp=Z,348µm,16.5s
FETA Feichten 59.42 310 *e*P P **06 21 26.8 -2.3**
comp=Z,677nm,1.2s,SNR=93
FETA S S **06 29 38.8 +1.0**
comp=Z,123µm,20.3s
LATE Laterza 59.47 305 P P **06 21 27.3 -2.0**
CLTB Caltabellotta 59.51 299 P P **06 21 28.0 -1.7**
CLTB IAmb IAmb 06 22 20.4
comp=Z,1µm,1.1s
MBWA Marble Bar 59.55 142 IAMs_20 IAMs_20 06 51 00.3
comp=Z,782µm,21.0s
MOL Molde 59.57 328 *e*P P **06 21 29.1 -0.4**
MOL *e*S S **06 29 42.2 +3.3**
MOL IVMs_BB IVMs_BB 06 48 57.6
comp=Z,351µm,17.2s
OSSC Osservatorio P 59.69 306 P P **06 21 29.3 -1.5**
ZCCA Zocca 59.73 307 P P **06 21 30.3 -0.8**
UBR Ueberruh 59.73 311 *e*P P **06 21 29.3 -1.8**
comp=Z,3µm,1.9s,baz=85,slow=6.9
SALO Salr 59.80 309 P P **06 21 30.3 -1.3**
PSAD1 Pilbara Seismi 59.84 142 IAMs_20 IAMs_20 06 52 06.6
comp=Z,909µm,21.0s
AKN Aaknes 59.85 328 *e*P P **06 21 31.2 -0.3**
AKN *e*S S **06 29 43.1 +0.5**
AKN IVMs_BB IVMs_BB 06 49 07.8
comp=Z,364µm,16.5s
PSAC1 Pilbara Seismi 59.89 142 IAMs_20 IAMs_20 06 52 06.9
comp=Z,1014µm,21.0s
MILB Miltenberg 59.91 314 *e*P P **06 21 31.0 -1.2**
comp=Z,3µm,1.9s,baz=85,slow=6.9
PSAB1 Pilbara Seismi 59.92 142 IAMs_20 IAMs_20 06 52 07.9
comp=Z,968µm,21.0s
PSAA2 Pilbara Seismi 59.93 142 IAMs_20 IAMs_20 06 52 20.1
comp=Z,930µm,21.0s
PSAB2 Pilbara Seismi 59.94 142 IAMs_20 IAMs_20 06 52 19.1
comp=Z,936µm,21.0s
PSAA1 Pilbara Seismi 59.94 142 IAMs_20 IAMs_20 06 52 20.3
comp=Z,963µm,21.0s
PSA00 Pilbara Seismi 59.94 142 P P **06 21 32.8 +0.1**
PSA00 IAmb IAmb 06 22 12.5
comp=Z,4µm,2.1s
PSA00 IAMs_20 IAMs_20 06 52 20.3
comp=Z,936µm,21.0s
PSA00 Pilbara Seismi 59.94 142 P P **06 21 32.0 -0.7**
PSA00 IAmb IAmb 06 22 54.0
comp=Z,554nm,0.7s
DAVA Damuels 59.95 311 *e*P P **06 21 30.9 -1.8**
comp=Z,1µm,1.2s,SNR=167
DAVA S S **06 29 44.8 +0.1**
comp=Z,143µm,22.4s
PSAA3 Pilbara Seismi 59.95 142 IAMs_20 IAMs_20 06 52 20.0
comp=Z,959µm,21.0s
PSAD3 Pilbara Seismi 59.96 142 IAMs_20 IAMs_20 06 52 08.9
comp=Z,1026µm,21.0s
PSAB3 Pilbara Seismi 59.96 142 IAMs_20 IAMs_20 06 52 19.9
comp=Z,985µm,21.0s
PSAC2 Pilbara Seismi 59.96 142 IAMs_20 IAMs_20 06 52 20.9
comp=Z,988µm,22.0s
PSAC3 Pilbara Seismi 59.97 142 IAMs_20 IAMs_20 06 52 20.1
comp=Z,916µm,21.0s
PSAD2 Pilbara Seismi 60.04 142 IAMs_20 IAMs_20 06 52 23.0
comp=Z,1032µm,22.0s
SNART Snartemo 60.05 324 *i* P P **06 21 31.8 -1.2**
SNART Snartemo 60.05 324 *e*P P **06 21 31.9 -1.1**
SNART *e*S S **06 29 45.5 +0.3**
PRMA PARMA 60.11 308 P P **06 21 33.0 -0.7**
CASP Castiglione de 60.11 305 P P **06 21 31.7 -2.1**
STU Stuttgart 60.15 312 P P **06 21 33.3 -0.5**
STU pmax pmax
comp=Z,2µm,1.5s
STU MLR MLR
comp=Z,565µm,20.0s
STU Stuttgart 60.15 312 P P **06 21 33.3 -0.5**
STU IAmb IAmb 06 22 18.8
comp=Z,2µm,1.5s
STU Stuttgart 60.15 312 *e*P P **06 21 32.8 -1.1**
comp=Z,4µm,1.9s,baz=85,slow=6.9
HLG Helgoland 60.15 319 *e*P P **06 21 34.7 +1.0**
comp=Z,4µm,1.7s,baz=85,slow=6.9
VLC Villacollemand 60.18 307 P P **06 21 33.1 -1.0**
VLC IAmb IAmb 06 22 20.3
comp=Z,2µm,1.1s
ODD1 Odda 60.20 325 *e*P P **06 21 33.6 -0.4**
ODD1 *e*S S **06 29 50.5 +3.2**
ODD1 IVMs_BB IVMs_BB 06 49 21.4
comp=Z,359µm,14.5s
KASTN Kahler Asten 60.25 315 *e*P P **06 21 33.5 -1.0**
comp=Z,3µm,2.1s,baz=85,slow=6.9
HYA Hoyanger 60.31 327 *e*P P **06 21 34.1 -0.5**
HYA *e*S S **06 29 47.2 -1.2**
BLS5 Blasjo 60.33 325 *e*P P **06 21 34.1 -0.8**
BLS5 *e*S S **06 29 50.5 +1.5**
BLS5 IVMs_BB IVMs_BB 06 49 25.3
comp=Z,299µm,15.8s
TNS Taunus Mts 60.39 314 *e*P P **06 21 34.6 -0.9**
comp=Z,1µm,1.1s,baz=85,slow=6.9
TUE Stuetta 60.45 310 P P **06 21 34.4 -1.8**
TUE IAmb IAmb 06 22 31.0
comp=Z,3µm,1.5s
IBBN Ibbenburen 60.49 317 *e*P P **06 21 35.2 -0.9**
comp=Z,6µm,1.6s,baz=85,slow=6.9
MFRI Mfriga 60.53 239 *i* P P **06 21 38.0 +0.9**
MFRI IAmb IAmb 06 22 20.6
comp=Z,1µm,1.3s
MFRI IVMs_BB IVMs_BB 06 52 01.8
comp=Z,134µm,17.0s
BAKO Makambako 60.63 240 *i* P P **06 21 39.0 +1.2**
BAKO IAmb IAmb 06 22 03.8
comp=Z,2µm,1.6s
BAKO IVMs_BB IVMs_BB 06 56 33.3
comp=Z,122µm,17.6s
MTN Manton Dam 60.64 126 P P **06 21 36.2 -1.4**
FITZ Fitzroy Crossi 60.67 134 PKP2bc 06 50 55.2
comp=Z,5.1nm,0.9s,baz=341,slow=4.8,SNR=3.1
FITZ Fitzroy Crossi 60.67 134 P P **06 21 37.1 -0.5**
FITZ IAmb IAmb 06 22 03.9
comp=Z,872nm,0.9s
KIDE Kidegembe 60.74 240 *i* P P **06 21 38.8 +0.3**
KIDE IAmb IAmb 06 22 20.2
comp=Z,528nm,1.1s
KIDE IVMs_BB IVMs_BB 06 50 58.4
comp=Z,158µm,17.5s

MSSA Maissana 60.76 307 P **P** **06 21 36.4 -1.8**
MSSA IAmb IAmb 06 22 24.5
comp=Z,964nm,0.8s
BFO Black Forest 60.79 312 P **P** **06 21 36.9 -1.4**
BFO pmax pmax
comp=Z,509nm,1.2s
BFO MLR MLR
comp=Z,464μm,22.0s
BFO Black Forest 60.79 312 P **P** **06 21 36.9 -1.4**
BFO Black Forest 60.79 312 *e*P **P** **06 21 36.5 -1.7**
comp=Z,866nm,1.5s,baz=85,slow=6.9
BANG Mbangamawe 60.79 238 *i* P **P** **06 21 40.6 +1.8**
BANG IAmb IAmb 06 22 17.3
comp=Z,40μm,4.0s
BANG IVMs_BB IVMs_BB 06 56 24.7
comp=Z,132μm,20.1s
BER Bergen 60.80 326 *e*P **P** **06 21 37.9 -0.1**
BER IVmB_BB 06 22 10.6
comp=Z,18μm,2.6s
BER *e*S **S** **06 29 54.3 -0.5**
BER IVMs_BB IVMs_BB 06 49 38.3
comp=Z,261μm,17.1s
FOO Floro 60.81 327 *e*P **P** **06 21 37.2 -0.9**
FOO *e*S **S** **06 29 55.4 +0.5**
FOO IVMs_BB IVMs_BB 06 49 37.2
comp=Z,286μm,17.0s
WINO Wino 60.83 239 *i* P **P** **06 21 39.8 +0.6**
WINO IAmb IAmb 06 22 23.1
comp=Z,692nm,0.9s
WINO IVMs_BB IVMs_BB 06 51 57.7
comp=Z,133μm,17.2s
ASK Askoy 60.86 326 *e*P **P** **06 21 37.9 -0.5**
ASK *e*S **S** **06 29 57.2 +1.7**
ASK IVMs_BB IVMs_BB 06 49 40.2
comp=Z,537μm,16.2s
KIMO Ikongo 60.87 238 *i* P **P** **06 21 40.4 +1.1**
KIMO IAmb IAmb 06 22 16.6
comp=Z,3μm,1.6s
KIMO IVMs_BB IVMs_BB 06 48 28.2
comp=Z,150μm,18.2s
GAWA Igawa 60.90 241 *i* P **P** **06 21 40.8 +1.2**
GAWA IAmb IAmb 06 22 21.1
comp=Z,2μm,1.8s
GAWA IVMs_BB IVMs_BB 06 51 08.9
comp=Z,98μm,17.7s
BUG Bochum--Univer 60.93 316 *e*P **P** **06 21 38.2 -0.9**
comp=Z,4μm,1.6s,baz=85,slow=6.9
KNRA Kununurra 60.95 130 P **P** **06 21 38.9 -0.7**
KMY Karmoy 60.97 325 *e*P **P** **06 21 39.2 0.0**
KMY *e*S **S** **06 30 00.6 +3.6**
KMY IVMs_BB IVMs_BB 06 50 09.1
comp=Z,258μm,14.9s
SUE Sulen 61.01 327 *e*P **P** **06 21 39.9 +0.5**
SUE *es*P **sP** **06 21 45.6 -0.3**
SUE IVmB_BB 06 22 11.8
comp=Z,20μm,2.4s
SUE *e*S **S** **06 29 59.6 +2.2**
SUE IVMs_BB IVMs_BB 06 51 01.7
comp=Z,264μm,16.0s
UWEM Njombe 61.04 240 *i* P **P** **06 21 41.6 +0.9**
UWEM IAmb IAmb 06 22 24.7
comp=Z,565nm,1.2s
UWEM IAMs_20 IAMs_20 06 51 09.7
comp=Z,508μm,17.6s
BILL Bilibino 61.09 25*d* *i*P **P** **06 21 39.7 -0.3**
BILL *e* 06 22 16.3
BILL *e* 06 23 51.6
BILL *e*PPP PPP 06 25 19.5
BILL *i* S **S** **06 30 02.3 +3.9**
BILL pmax pmax
comp=Z,1μm,1.6s
BILL pmax pmax
comp=Z,23μm,6.3s
BILL MLR MLR
comp=Z,611μm,18.0s
BILL Bilibino 61.09 25 P **P** **06 21 40.1 +0.1**
BILL IAmb IAmb 06 22 02.7
comp=Z,2μm,1.1s
NGEA Songea 61.14 238 *i* P **P** **06 21 41.7 +0.5**
NGEA IAmb IAmb 06 22 19.3
comp=Z,28μm,3.6s
NGEA IVMs_BB IVMs_BB 06 48 35.4
comp=Z,146μm,18.6s
KIPE Kipengere 61.20 240 *i* P **P** **06 21 42.2 +0.5**
KIPE IAmb IAmb 06 22 23.6
comp=Z,648nm,1.2s
KIPE IVMs_BB IVMs_BB 06 51 46.5
comp=Z,123μm,17.0s
AHRW Bad Neuenahr-A 61.20 315 *e*P **P** **06 21 40.3 -0.7**
comp=Z,2μm,1.2s,baz=85,slow=6.9
CHML Chimala 61.22 241 *i* P **P** **06 21 42.6 +0.9**
CHML IAmb IAmb 06 22 19.9
comp=Z,3μm,1.2s
CHML IVMs_BB IVMs_BB 06 54 13.8
comp=Z,119μm,15.4s
ZINI Mgazini 61.25 238 *i* P **P** **06 21 43.6 +1.7**
ZINI IAmb IAmb 06 22 28.8
comp=Z,1μm,1.6s
ZINI IVMs_BB IVMs_BB 06 52 19.1
comp=Z,142μm,16.6s
TOLA Matola 61.27 240 *i* P **P** **06 21 43.5 +1.3**
TOLA IAmb IAmb 06 22 07.8
comp=Z,2μm,1.8s
TOLA IVMs_BB IVMs_BB 06 51 06.1
comp=Z,145μm,17.6s
BUMI Ibumi 61.34 239 *i* P **P** **06 21 44.9 +2.4**
BUMI IAmb IAmb 06 22 26.4
comp=Z,798nm,0.9s
BUMI IVMs_BB IVMs_BB 06 51 34.6
comp=Z,134μm,16.7s
GENI Genyem 61.36 110 P **P** **06 21 43.1 +0.5**
comp=Z,144μmcomp=Z,62μmcomp=Z,1μm,1.3s
MAKE Makete 61.44 240 *i* P **P** **06 21 44.1 +0.7**
MAKE IAmb IAmb 06 22 09.4
comp=Z,1μm,1.3s
MAKE IVMs_BB IVMs_BB 06 52 45.1
comp=Z,133μm,16.6s
LIGA Liganga 61.46 238 *i* P **P** **06 21 45.2 +1.9**
LIGA IAmb IAmb 06 22 20.6
comp=Z,4μm,2.2s
LIGA IVMs_BB IVMs_BB 06 44 00.3
comp=Z,134μm,26.9s
UKWA Ukwama 61.47 240 *i* P **P** **06 21 45.5 +2.0**
UKWA IAmb IAmb 06 22 29.8
comp=Z,2μm,1.7s
UKWA IVMs_BB IVMs_BB 06 51 12.3
comp=Z,128μm,17.9s
JILO Lwanjilo 61.51 241 *i* P **P** **06 21 44.8 +0.9**
JILO IAmb IAmb 06 22 26.7
comp=Z,1μm,1.2s
JILO IVMs_BB IVMs_BB 06 52 42.5
comp=Z,127μm,17.6s
UNDA Madunda 61.52 240 *i* P **P** **06 21 44.9 +1.0**
UNDA IAmb IAmb 06 22 09.6
comp=Z,1μm,1.3s
UNDA IVMs_BB IVMs_BB 06 51 20.1
comp=Z,128μm,17.4s
ECH Echery 61.58 312 P **P** **06 21 42.0 -1.6**
ECH pmax pmax
comp=Z,794nm,1.2s
ECH MLR MLR
comp=Z,474μm,21.0s
ECH Echery 61.58 312 P **P** **06 21 42.0 -1.6**
LOSI Makongolosi 61.61 242 *i* P **P** **06 21 43.9 -0.5**
LOSI IAmb IAmb 06 22 23.3
comp=Z,8μm,2.6s
LOSI IVMs_BB IVMs_BB 06 50 08.6
comp=Z,128μm,17.4s
NIND Nindi 61.62 239 *i* P **P** **06 21 46.1 +1.6**
NIND IAmb IAmb 06 22 21.6
comp=Z,5μm,2.5s
NIND IVMs_BB IVMs_BB 06 44 46.3
comp=Z,122μm,26.0s
KURU Muhukuru 61.64 238 *i* P **P** **06 21 45.8 +1.3**
KURU IAmb IAmb 06 22 28.3
comp=Z,786nm,1.1s
KURU IVMs_BB IVMs_BB 06 52 35.0
comp=Z,117μm,17.6s
NKAL Nkalisi 61.64 241 *i* P **P** **06 21 45.7 +1.1**
NKAL IAmb IAmb 06 22 27.3
comp=Z,2μm,1.1s
NKAL IVMs_BB IVMs_BB 06 52 43.1
comp=Z,131μm,17.0s
JAY Jayapura 61.76 110 P **P** **06 21 45.2 -0.1**
comp=Z,20μmcomp=Z,335nm,1.7s
VOI Vohitsoka 61.77 220 P **P** **06 21 45.0 -0.2**
VOI IAMs_20 IAMs_20 06 46 07.9
comp=Z,906μm,18.0s
VOI Vohitsoka 61.77 220 P **P** **06 21 47.3 +2.1**
SNR=36
BTNL Ternell 61.78 315 *d*P **P** **06 21 43.9 -1.1**
BTNL *ds*P **sP** **06 21 51.0 -0.5**
BTNL *dx* x 06 22 18.0
TIRI Matiri 61.79 238 *i* P **P** **06 21 46.0 +0.4**
TIRI IAmb IAmb 06 22 23.7
comp=Z,27μm,3.7s
TIRI IVMs_BB IVMs_BB 06 51 57.0
comp=Z,126μm,17.7s
MZUN Kiwira 61.81 241 *i* P **P** **06 21 48.4 +2.6**
MZUN IAmb IAmb 06 22 31.0
comp=Z,1μm,1.0s
MZUN IVMs_BB IVMs_BB 06 53 49.7
comp=Z,136μm,16.0s
MEM Membach 61.86 315 *d*P **P** **06 21 44.6 -0.8**
MEM *ds*P **sP** **06 21 51.6 -0.3**
MEM *dS* **S** **06 30 16.0 +7.4**
SENIN Lac Senin/Sane 61.86 310 P **P** **06 21 44.4 -1.4**
SENIN IAmb IAmb 06 22 32.3
comp=Z,2μm,1.0s
BHOU Houvegnez 61.91 315 *d*P **P** **06 21 45.1 -0.6**
BHOU *ds*P **sP** **06 21 52.3 0.0**
PDHT Panda Hill 61.92 241 *i* P **P** **06 21 49.4 +2.9**
PDHT IAmb IAmb 06 22 29.2
comp=Z,2μm,1.6s
PDHT IVMs_BB IVMs_BB 06 53 05.2
comp=Z,122μm,17.2s
WLF Walferdange 61.95 314 *d*P **P** **06 21 45.8 -0.2**
WLF *ds*P **sP** **06 21 53.0 +0.5**
WLF Walferdange 61.95 314 P **P** **06 21 45.6 -0.4**
WLF pmax pmax
comp=Z,2μm,1.2s
WLF MLR MLR
comp=Z,304μm,21.0s
WLF Walferdange 61.95 314 P **P** **06 21 45.6 -0.4**
WLF Walferdange 61.95 314 *e*P **P** **06 21 45.4 -0.6**
comp=Z,4μm,1.6s,baz=85,slow=6.9
VSL Villasalto 61.96 302 P **P** **06 21 45.2 -1.1**
VSL IAmb IAmb 06 22 31.9
comp=Z,888nm,1.1s
MKIL Mkili 62.01 238 *i* P **P** **06 21 49.1 +2.1**
MKIL IAmb IAmb 06 22 24.5
comp=Z,7μm,2.1s
MKIL IVMs_BB IVMs_BB 06 52 04.8
comp=Z,142μm,16.9s
BEBN Eben Emael 62.03 315 *d*P **P** **06 21 47.4 +0.9**
BEBN *ds*P **sP** **06 21 52.9 -0.2**
ILOM Ilombo 62.03 241 *i* P **P** **06 21 49.3 +1.9**
ILOM IAmb IAmb 06 22 26.9
comp=Z,20μm,3.3s
ILOM IVMs_BB IVMs_BB 06 53 56.5
comp=Z,153μm,16.7s
BSTI Sart Tilman 62.14 315 *d*P **P** **06 21 45.9 -1.4**
BSTI *ds*P **sP** **06 21 53.5 -0.3**
BSTI *dx* x 06 22 20.3
MBAM Mbamba Bay 62.17 238 *i* P **P** **06 21 48.6 +0.6**
MBAM IAmb IAmb 06 22 32.1
comp=Z,719nm,1.0s
MBAM IVMs_BB IVMs_BB 06 49 07.7
comp=Z,133μm,18.4s
ITUM Tunduma 62.22 241 *i* P **P** **06 21 50.3 +1.8**
ITUM IAmb IAmb 06 22 15.5
comp=Z,2μm,1.7s
ITUM IVMs_BB IVMs_BB 06 54 00.0
comp=Z,150μm,17.3s
BCLA Clavier 62.34 315 *d*P **P** **06 21 47.6 -1.0**
BCLA *dp*P **pP** **06 21 52.8 -0.5**
BCLA *ds*P **sP** **06 21 55.0 -0.1**
RCHB Rochefort 62.44 314 *d*P **P** **06 21 48.3 -0.9**
RCHB *ds*P **sP** **06 21 55.8 0.0**
RCHB *d*PcP **PcP** **06 22 32.0 +3.4**
BGES Gesves 62.48 315 *d*P **P** **06 21 48.9 -0.7**
BGES *dp*P **pP** **06 21 53.5 -0.8**
BGES *ds*P **sP** **06 21 55.8 -0.3**
BNI Bardonecchia 62.58 309 P **P** **06 21 49.0 -1.5**
BNI pmax pmax
comp=Z,2μm,1.2s
BNI MLR MLR
comp=Z,170μm,21.0s
BNI Bardonecchia 62.58 309 P **P** **06 21 49.0 -1.5**
BNI IAmb IAmb 06 22 40.4
comp=Z,2μm,1.2s
BMRD Maredsous 62.70 315 *d*P **P** **06 21 49.9 -1.1**
BMRD *ds*P **sP** **06 21 56.8 -0.7**
DOU Dourbes 62.85 315 *d*P **P** **06 21 50.8 -1.2**
DOU *ds*P **sP** **06 21 58.1 -0.4**
DOU *dx* x 06 26 06.1
UCC Uccle 62.85 315 *d*P **P** **06 21 51.6 -0.4**
UCC *ds*P **sP** **06 21 57.8 -0.7**
UCC Uccle 62.85 315 P **P** **06 21 50.9 -1.1**
UCC pmax pmax
comp=Z,1μm,1.5s
UCC Uccle 62.85 315 P **P** **06 21 50.9 -1.1**
SNF Seneffe 62.95 315 *d*P **P** **06 21 51.9 -0.9**
SNF *ds*P **sP** **06 21 59.0 -0.2**
KEST Kesra 62.99 298 P **P** **06 21 52.6 -0.7**
comp=Z,385nm,0.9s,baz=20,slow=2.3,SNR=133
KEST Kesra 62.99 298 P **P** **06 21 53.0 -0.3**
KEST Kesra 62.99 298 P **P** **06 21 53.4 0.0**
SNR=206
KEST P **P** **06 21 53.4 0.0**
SNR=206
KEST P **P** **06 21 53.4 0.0**
SNR=206
SSB Saint Sauveur 63.99 309 P **P** **06 21 57.9 -1.9**
SSB pmax pmax
comp=Z,1μm,1.0s
SSB Saint Sauveur 63.99 309 P **P** **06 21 57.9 -1.9**
SSB IAmb IAmb 06 22 45.1
comp=Z,1μm,1.0s
NOR Nord 64.01 351 *i* P **P** **06 21 58.1 -1.1**
NOR IAMs_20 IAMs_20 06 55 18.5
comp=Z,1219μm,17.8s
NOR Nord 64.01 351 *i* P **P** **06 21 58.1 -1.1**
NOR MLR MLR
comp=Z,1200μm,18.0s
CMAH Djebel Manchou 64.23 299 P **P** **06 22 02.0 +0.5**
ABSA Djebel Ababsia 64.28 299 P **P** **06 22 02.0 +0.1**
MORW Morawa 64.29 150 P **P** **06 22 00.6 -1.1**
MORW IAmb IAmb 06 22 42.1
comp=Z,2μm,1.1s
ZOMB Zomba 64.46 234 *i* P **P** **06 22 04.3 +1.1**
ZOMB IAmb IAmb 06 22 43.6
comp=Z,835nm,1.6s
ZOMB IVMs_BB IVMs_BB 06 56 15.0
comp=Z,43μm,18.8s
WACR West Acre 64.69 318⇑ *e*P **P** **06 22 02.3 -1.8**
WACR IAMs_20 IAMs_20 06 53 01.9
comp=Z,780μm,23.5s
JMIC Jan Mayen 64.73 339 *e*P **P** **06 22 05.5 +1.4**
JMIC *e*S S 06 30 54.5 +11
JMIC IVMs_BB IVMs_BB 06 55 05.2
comp=Z,50μm,18.1s
CKFL Kef-Lekhel 64.83 299 P **P** **06 22 05.9 +0.4**
CASM Ain Smara 65.05 299 P **P** **06 22 07.4 +0.5**
LMK Market Rasen 65.07 319 *e*P **P** **06 22 05.6 -0.9**
LMK IAMs_20 IAMs_20 06 53 20.7
comp=Z,530μm,19.8s
GDLE Glaisdale, N Y 65.11 320 *e*P **P** **06 22 05.6 -1.3**
GDLE IAMs_20 IAMs_20 06 53 07.1
comp=Z,497μm,19.6s
CTEI Djebel Teioual 65.17 299 P **P** **06 22 09.8 +2.0**
HMNX Herstmonceux 65.31 316 *e*P **P** **06 22 07.4 -0.8**
HMNX IAMs_20 IAMs_20 06 54 00.9
comp=Z,689μm,19.7s
DRUM Mains of Drumt 65.43 323 *e*P **P** **06 22 07.4 -1.4**
DRUM IAMs_20 IAMs_20 06 52 43.0
comp=Z,479μm,21.2s
DFRA Djebel Bou Aff 65.44 300 P **P** **06 22 10.1 +0.7**
MLA1 Latheron 65.55 325 *e*P **P** **06 22 08.6 -1.0**
MAHO Mahon 65.65 304 *e*P **P** **06 22 08.7 -1.9**
MAHO *e*S **S** **06 30 58.2 +2.2**
EDMD Edmundbyers 65.66 321 *e*P **P** **06 22 09.2 -1.2**
EDMD IAMs_20 IAMs_20 06 53 20.9
comp=Z,592μm,21.2s
MCD Coleburn Disti 65.67 324 *e*P **P** **06 22 08.7 -1.7**
HPK Haverah Park 65.69 320 *e*P **P** **06 22 09.5 -1.1**
HPK IAMs_20 IAMs_20 06 53 36.0
comp=Z,430μm,21.1s
ESY Stoneypath 65.75 322 *e*P **P** **06 22 10.4 -0.5**
BIGH Upper Bighouse 65.78 325 *e*P **P** **06 22 10.2 -0.9**
BIGH IAMs_20 IAMs_20 06 52 46.4
comp=Z,1465μm,20.3s
CWF Charnwood Fore 65.82 318 *e*P **P** **06 22 10.2 -1.3**
CWF IAMs_20 IAMs_20 06 53 44.5
comp=Z,583μm,22.5s
DAG Danmarks Havn 65.83 346 *i* P **P** **06 22 11.4 +0.3**
DAG IAMs_20 IAMs_20 06 56 18.3
comp=Z,759μm,20.9s
DAG Danmarks Havn 65.83 346 *i* P **P** **06 22 11.4 +0.3**
DAG MLR MLR
comp=Z,760μm,21.0s
LBWR Ladybower, Pea 65.89 319 *e*P **P** **06 22 11.1 -0.8**
LBWR IAMs_20 IAMs_20 06 53 54.9
comp=Z,403μm,18.7s
SET Setif 65.91 299 P **P** **06 22 12.0 -0.5**
AIS Amsterdam Isla 65.92 186 P **P** **06 22 12.0 0.0**
AIS IAMs_20 IAMs_20 06 48 28.2
comp=Z,669μm,20.0s
EBL Broad Law 66.02 322 *e*P **P** **06 22 12.0 -0.7**
EDI Edinburgh 66.06 322 *e*P **P** **06 22 11.6 -1.3**
EDI IAMs_20 IAMs_20 06 53 05.7
comp=Z,835μm,22.6s
EBH Black Hill 66.14 322 *e*P **P** **06 22 11.9 -1.6**
WOL Wolverton 66.15 317 *e*P **P** **06 22 12.1 -1.5**
WOL IAMs_20 IAMs_20 06 54 12.0
comp=Z,898μm,22.8s
ESK Eskdalemuir 66.22 321 P **P** **06 22 13.1 -0.9**
ESK pmax pmax
comp=Z,2μm,1.3s
ESK MLR MLR
comp=Z,626μm,21.0s
ESK Eskdalemuir 66.22 321 P **P** **06 22 13.1 -0.9**
ESK IAmb IAmb 06 22 57.8
comp=Z,2μm,1.3s
ESK Eskdalemuir 66.22 321 IAMs_20 IAMs_20 06 53 49.9
comp=Z,626μm,21.0s
STNC Stoke 66.25 319⇑ *e*P **P** **06 22 13.4 -0.9**
STNC IAMs_20 IAMs_20 06 54 06.8
comp=Z,417μm,20.0s
MDO Dochfour 66.28 324 *e*P **P** **06 22 12.8 -1.5**
KESW Keswick, Cumbr 66.36 321 *e*P **P** **06 22 14.1 -0.8**
KESW IAMs_20 IAMs_20 06 53 53.3
comp=Z,557μm,20.8s
INVG Invergeldie, C 66.39 323 *e*P **P** **06 22 15.1 +0.1**
INVG IAMs_20 IAMs_20 06 53 11.6
comp=Z,617μm,22.2s
SWN1 Swindon 66.44 317⇑ *e*P **P** **06 22 16.0 +0.6**
SWN1 IAMs_20 IAMs_20 06 54 20.1
comp=Z,895μm,22.6s
STRD Stroud 66.59 317⇑ *e*P **P** **06 22 14.8 -1.6**
STRD IAMs_20 IAMs_20 06 54 23.3
comp=Z,873μm,22.6s
EAB Aberfoyle 66.61 322 *e*P **P** **06 22 15.4 -1.0**
KAC Achnashellach 66.75 324 *e*P **P** **06 22 15.9 -1.5**
PGBU Glenifferbraes 66.79 322 *e*P **P** **06 22 16.6 -1.0**
PGBU IAMs_20 IAMs_20 06 53 37.8
comp=Z,829μm,22.5s
NEWG New Galloway 66.84 321⇑ *e*P **P** **06 22 16.8 -1.2**
NEWG IAMs_20 IAMs_20 06 53 28.9
comp=Z,696μm,23.3s
OLDB Oldbury-Upon-S 66.85 317⇑ *e*P **P** **06 22 17.9 -0.2**
OLDB IAMs_20 IAMs_20 06 54 31.7
comp=Z,923μm,23.2s
FOEL Foel Wylfa 66.89 319 *e*P **P** **06 22 16.7 -1.6**
FOEL IAMs_20 IAMs_20 06 54 25.3
comp=Z,362μm,20.2s
MONM Monmouth 66.95 318⇑ *e*P **P** **06 22 17.0 -1.7**
MONM IAMs_20 IAMs_20 06 54 21.5
comp=Z,902μm,25.2s
KPL Plockton 66.98 324⇑ *e*P **P** **06 22 17.6 -1.2**
KPL IAMs_20 IAMs_20 06 53 34.9
comp=Z,726μm,19.0s
DBG Daneborg 67.09 343 *i* P **P** **06 22 18.7 -0.5**
DBG IAMs_20 IAMs_20 07 02 17.7
comp=Z,202μm,19.5s
LLW Llanuwychllyn 67.17 319 *e*P **P** **06 22 19.2 -0.9**
GAL1 Galloway 67.18 321 *e*P **P** **06 22 18.6 -1.5**
GAL1 IAMs_20 IAMs_20 06 53 38.4
comp=Z,685μm,24.7s
JLP Les Platons 67.27 315 *e*P **P** **06 22 18.9 -1.9**
IOMK Kirk Michael 67.28 321 *e*P **P** **06 22 21.4 +0.6**
IOMK IAMs_20 IAMs_20 06 54 19.4
comp=Z,1213μm,23.5s
JSA Saint Aubin 67.33 315 IAMs_20 IAMs_20 06 55 06.9
comp=Z,318μm,18.9s
JVM Valle D.L. Mar 67.34 315 *e*P **P** **06 22 19.6 -1.6**
WIM Isle of Man 67.37 320⇑ *e*P **P** **06 22 20.0 -1.3**
LEWI Lewis, Hebride 67.38 325 *e*P **P** **06 22 21.1 -0.2**
LEWI IAMs_20 IAMs_20 06 54 37.8
comp=Z,556μm,15.8s
WME Myndd Eilian 67.38 320 *e*P **P** **06 22 20.0 -1.4**
WLF1 Llynfaes 67.46 319 IAMs_20 IAMs_20 06 53 53.5
comp=Z,731μm,21.7s
WPS Cemaes, Angles 67.49 320 IAMs_20 IAMs_20 06 53 41.9
comp=Z,402μm,22.9s
ABA Alger-Bouzarea 67.52 301 P **P** **06 22 22.0 -0.7**
YRC Rhoscolyn 67.58 319⇑ *e*P **P** **06 22 21.7 -1.0**
WB0 Warramunga Arr 67.63 129 P **P** **06 22 22.6 -0.8**
WB0 IAmb IAmb 06 22 58.3
comp=Z,1μm,0.8s
WRA Warramunga Arr 67.71 129 P **P** **06 22 23.2 -0.8**
comp=Z,278nm,0.8s,baz=323,slow=6.1,SNR=150
WRA S **S** **06 31 22.3 +0.8**
comp=Z,6.1nm,0.9s,baz=327,slow=9.0,SNR=1.0
WRA PKP2bc 06 50 48.7
comp=Z,25nm,0.9s,baz=130,slow=2.2,SNR=8.6
WRA LR LR 06 54 28.4
comp=Z,786μm,21.6s,baz=305,slow=38
WRA Warramunga Arr 67.71 129 P **P** **06 22 22.6 -1.4**
WRAB Tennant Creek 67.72 129*d* *i*P **P** **06 22 21.1 -2.9**
WRAB pmax pmax
comp=Z,4μm,1.8s
WRAB Tennant Creek 67.72 129 P **P** **06 22 23.0 -1.0**
WRAB Tennant Creek 67.72 129 IAMs_20 IAMs_20 06 54 05.8
comp=Z,916μm,22.0s
WB2 Warramunga Arr 67.72 129 P **P** **06 22 23.4 -0.6**
SMY Shemya 67.78 41 P **P** **06 22 22.7 -1.2**
SMY pmax pmax
comp=Z,2μm,1.0s
SMY Shemya 67.78 41 P **P** **06 22 22.7 -1.2**
WR0 Warramunga Arr 67.86 129 P **P** **06 22 24.0 -0.9**
WR0 IAmb IAmb 06 23 00.3
comp=Z,2μm,1.1s
CLGH Cloghs, Cushen 67.89 322 IAMs_20 IAMs_20 06 54 22.4
comp=Z,779μm,21.9s
DYA Yadsworthy 68.04 316 *e*P **P** **06 22 24.7 -0.9**
DYA IAMs_20 IAMs_20 06 55 22.0
comp=Z,764μm,23.8s
RSBS Rosebush, Pemb 68.07 318⇑ *e*P **P** **06 22 24.4 -1.4**
RSBS IAMs_20 IAMs_20 06 55 04.6
comp=Z,521μm,23.0s
NWAO Narrogin (SRO) 68.12 151 LR LR 06 52 45.9
comp=Z,838μm,21.9s,baz=336,slow=36
NWAO Narrogin (SRO) 68.12 151 P **P** **06 22 24.4 -1.8**
NWAO pmax pmax
comp=Z,2μm,1.1s
NWAO Narrogin (SRO) 68.12 151 P **P** **06 22 24.4 -1.8**
NWAO IAmb IAmb 06 23 06.0
comp=Z,2μm,1.1s
HTL Hartland 68.21 317 *e*P **P** **06 22 25.4 -1.3**
HTL IAMs_20 IAMs_20 06 55 24.5
comp=Z,880μm,22.5s
ILTH Belurgan, Co L 68.34 321 *e*P **P** **06 22 27.6 +0.2**
H01W3 Cape Leeuwin H 68.57 154 P **P** **06 22 31.8 +3.2**
baz=316,slow=5.5,SNR=11
H01W2 Cape Leeuwin H 68.58 154 P **P** **06 22 32.5 +3.8**
baz=316,slow=5.5,SNR=14
H01W1 Cape Leeuwin H 68.58 154 P **P** **06 22 33.0 +4.3**
baz=316,slow=5.5,SNR=13
DSB Dublin 68.61 320 P **P** **06 22 27.4 -1.7**
DSB IAmb IAmb 06 23 03.0
comp=Z,3μm,2.2s
EBNR Beni Rached 68.84 301 P **P** **06 22 32.1 +1.1**
CCA1 Carnmenellis 68.91 316⇑ *e*P **P** **06 22 29.6 -1.5**
CCA1 IAMs_20 IAMs_20 06 55 46.6
comp=Z,722μm,23.7s
ECHA Ech Chlef 69.01 301 P **P** **06 22 32.3 +0.4**
SCO Scoresbysund 69.11 340 *i* P **P** **06 22 32.5 +0.6**
SCO IAMs_20 IAMs_20 06 54 16.4
comp=Z,183μm,19.6s
SCO Scoresbysund 69.11 340 P **P** **06 22 31.4 -0.5**
SCO pmax pmax
comp=Z,1μm,1.5s
SCO Scoresbysund 69.11 340 P **P** **06 22 31.4 -0.5**
SCO IAmb IAmb 06 23 05.5

comp=Z,1µm,1.5s
IWEX Carrickbyrne, 69.12 319 eP P **06 22 32.8 +0.4**
IWEX IAMs_20 IAMs_20 06 54 51.5
comp=Z,355µm,20.9s
LSZ Lusaka 69.68 239 P P **06 22 35.1 -1.3**
LSZ pmax pmax
comp=Z,915nm,1.1s
LSZ MLR MLR
comp=Z,439µm,20.0s
LSZ Lusaka 69.68 239 P P **06 22 35.1 -1.3**
LSZ Lusaka 69.68 239 *i* P P **06 22 35.5 -0.9**
LSZ IAmb IAmb 06 23 14.1
comp=Z,26µm,3.5s
LSZ IVMs_BB IVMs_BB 06 57 41.7
comp=Z,151µm,17.6s
OJGS Djebel Guires 69.70 300 P P **06 22 38.0 +1.6**
OJBR Djebel Berber 69.98 300 P P **06 22 36.0 -2.1**
AS31 Alice Springs 70.00 132 P P **06 22 37.4 -0.8**
ASAR Alice Springs 70.00 132 P P **06 22 37.0 -1.1**
comp=Z,59nm,0.8s,baz=316,slow=5.8,SNR=148
ASAR PKP2bc 06 50 42.0
comp=Z,9.1nm,0.8s,baz=138,slow=4.8,SNR=7.8
ASAR LR LR 06 58 02.8
comp=Z,767µm,21.5s,baz=306,slow=40
ASAR Alice Springs 70.00 132 P P **06 22 37.1 -1.0**
IGLA Glengowla, Co 70.24 321 eP P **06 22 39.6 +0.4**
IGLA IAMs_20 IAMs_20 06 55 27.7
comp=Z,636µm,24.7s
CART Cartagena 70.29 303 eP P **06 22 38.7 -1.1**
CART eS S **06 31 48.5 -3.1**
CART Cartagena 70.29 303 P P **06 22 39.1 -0.7**
CART IAmb IAmb 06 23 08.2
comp=Z,2µm,0.9s
COEN Coen 70.36 119 P P **06 22 39.5 -0.9**
TAM Tamanrasset 70.52 286 P P **06 22 40.7 -1.0**
TAM pmax pmax
comp=Z,1µm,1.1s
TAM Tamanrasset 70.52 286 P P **06 22 40.7 -1.0**
TAM IAmb IAmb 06 23 28.8
comp=Z,1µm,1.1s
USTO Oran 70.61 301 P P **06 22 43.0 +1.2**
GAMB Gambell 70.85 27 P P **06 22 42.7 0.0**
GAMB IAmb IAmb 06 23 05.7
comp=Z,1µm,1.3s
GAMB Gambell 70.85 27 P 06 22 42.5
baz=295
PMG Port Moresby 70.91 112*c i*P P **06 22 42.7 -1.2**
PMG pmax pmax
comp=Z,1µm,1.6s
PMG Port Moresby 70.91 112 P P **06 22 43.6 -0.3**
PMG IAmb IAmb 06 23 19.0
comp=Z,999nm,1.1s
UCM Universidad Co 70.96 306 eP P **06 22 44.0 0.0**
UCM eS S **06 32 00.9 +1.4**
AMKA Amchitka 71.26 41 P P **06 22 45.0 -0.5**
NEEM North Greenlan 71.39 351 *i* P P **06 22 45.5 -0.7**
NEEM IAMs_20 IAMs_20 06 58 23.8
comp=Z,818µm,19.3s
TNA Tin City 71.53 25 P P **06 22 47.1 +0.3**
TNA Tin City 71.53 25 P 06 22 46.7
baz=297
TNA S 06 32 01.8
baz=297
ITZ Itezhi-Tezhi 71.62 240 *i* P P **06 22 49.3 +1.1**
ITZ *i* 06 22 49.4
ITZ Itezhi-Tezhi 71.62 240 *i* P P **06 22 49.3 +1.1**
ITZ *i* 06 22 49.4
FORT Forrest 71.70 142 P P **06 22 46.8 -1.5**
ESBB Sonseca Array 71.70 306 P P **06 22 47.9 -0.6**
ESBB IAmb IAmb 06 23 22.6
comp=Z,2µm,1.3s
ESDC Sonseca Array 71.70 306 P P **06 22 47.3 -1.1**
comp=Z,71nm,0.9s,baz=57,slow=6.1,SNR=130
ESDC PKP2bc 06 50 49.4
comp=Z,4.0nm,1.1s,baz=292,slow=1.9,SNR=4.9
ESDC LR LR 07 01 01.8
comp=Z,137µm,18.2s,baz=40,slow=42
ESDC Sonseca Array 71.70 306 P P **06 22 47.2 -1.3**
ESDC **sP** **06 22 54.7 -0.3**
ESDC IAmb IAmb 06 23 23.4
comp=Z,2µm,1.6s
EUNU Eureka 71.93 358 P P **06 22 48.6 -0.6**
PAB San Pablo 72.03 306 P P **06 22 49.9 -0.6**
PAB pmax pmax
comp=Z,4µm,1.7s
PAB MLR MLR
comp=Z,170µm,22.0s
PAB San Pablo 72.03 306 P P **06 22 49.9 -0.6**
PAB IAmb IAmb 06 23 25.4
comp=Z,4µm,1.7s
RDOG Red Dog Mine 72.05 21 P P **06 22 49.3 -0.7**
RDOG IAMs_20 IAMs_20 06 58 55.3
comp=Z,808µm,19.0s
RDOG Red Dog Mine 72.05 21 P 06 22 49.8
baz=301
RDOG S 06 32 12.7
baz=301
A21K Barrow 72.09 17 P P **06 22 49.1 -1.0**
A21K Barrow 72.09 17 P 06 22 49.8
baz=306,SNR=87
A21K S 06 32 10.3
baz=306
PATS Pohnpei 72.35 92 P P **06 22 52.3 -0.3**
PATS IAMs_20 IAMs_20 06 57 02.3
comp=Z,588µm,21.0s
SUMG Summit 72.44 345 *i* P P **06 22 53.7 +1.0**
SUMG IAMs_20 IAMs_20 07 01 25.5
comp=Z,632µm,18.2s
SUMG Summit 72.44 345 P P **06 22 52.0 -0.7**
SUMG pmax pmax
comp=Z,5µm,1.2s
SUMG Summit 72.44 345 P P **06 22 52.0 -0.7**
MELI Melilla 72.58 301 eP P **06 22 53.5 -0.2**
MELI eS S **06 32 18.3 +0.2**
PBRG Braganca 72.86 309 eP P **06 22 55.8 +0.5**
comp=Z,2µm,1.8s
PBRG Braganca 72.86 309 ePcP PcP **06 23 18.7 +6.3**
PBRG eS SKiKP **06 32 29.6 +1.0**
ANM Nome 72.95 25 P P **06 22 55.4 0.0**
ANM pmax pmax
comp=Z,2µm,1.6s
ANM Nome 72.95 25 P P **06 22 55.4 0.0**
ANM IAmb IAmb 06 23 18.4
comp=Z,2µm,1.6s
ANM IAMs_20 IAMs_20 07 01 13.4
comp=Z,629µm,18.0s
ANM Nome 72.95 25 P 06 22 55.8
baz=300
ANM S 06 32 26.4
baz=300
EMAL Malaga-Limoner 73.14 303 eP P **06 22 55.6 -1.4**
EMAL eS S **06 32 22.9 -1.6**
MVO Moncorvo 73.31 308 eP P **06 22 57.1 -0.9**
comp=Z,2µm,1.8s
MVO Moncorvo 73.31 308 ePcP PcP **06 23 21.6 +7.2**
MVO eS S **06 32 24.7 -1.8**
MVO Moncorvo 73.31 308 eLR LR 06 53 20.8
comp=Z,132µm,20.0s
ADK Adak 73.37 40 IAMs_20 IAMs_20 06 57 37.4
comp=Z,801µm,20.0s
PVLZ Peæn de 73.66 301 eP P **06 22 58.0 -2.0**
PVLZ eS SKiKP **06 32 28.9 -0.9**
PVRL Vila Real 73.74 308 eP P **06 23 01.3 +0.8**
comp=Z,2µm,1.6s
PVRL Vila Real 73.74 308 ePcP PcP **06 23 22.6 +6.4**
POLO Lamas de Olo 73.76 308 eP P **06 23 01.2 +0.5**
comp=Z,476nm,1.7s
POLO Lamas de Olo 73.76 308 ePcP PcP 06 23 24.1 +7.7
POLO eS S **06 32 35.9 +4.3**
PCAB Cabril 73.78 309 eP P **06 23 00.3 -0.5**
comp=Z,3µm,1.6s
PCAB Cabril 73.78 309 ePcP PcP 06 23 24.3 +7.9
LIJA Lijar 73.80 303 eP P **06 23 00.4 -0.7**
REAL Reales 73.82 303 eP P **06 22 60.0 -1.3**
PGAV Gavieira, Arco 73.85 309 eP P **06 23 02.0 +0.8**
comp=Z,2µm,1.8s
PGAV Gavieira, Arco 73.85 309 ePcP PcP 06 23 25.1 +8.4
PGAV eS S **06 32 38.2 +5.5**
PGAV Gavieira, Arco 73.85 309 eLR LR 06 53 41.2
comp=Z,95µm,20.0s
MTE Manteigas 73.97 307 eP P **06 23 01.5 -0.4**
comp=Z,3µm,2.3s
MTE Manteigas 73.97 307 ePcP PcP 06 23 26.0 +8.8
MTE eS S **06 32 37.1 +3.1**
MTE Manteigas 73.97 307 eLR LR 06 55 49.7
comp=Z,95µm,18.0s
MTE Manteigas 73.97 307 P P **06 23 00.6 -1.3**
MTE IAmb IAmb 06 23 47.6
comp=Z,2µm,1.3s
PVIS Viseu 74.09 308 eP P **06 23 02.4 -0.2**
comp=Z,2µm,1.8s
PVIS Viseu 74.09 308 ePcP PcP 06 23 26.0 +8.3
ALJ Aljibe 74.13 303 eP P **06 23 01.4 -1.5**
PCBR Castelo Branco 74.14 307 eP P **06 23 02.5 -0.3**
comp=Z,2µm,1.7s
PCBR Castelo Branco 74.14 307 ePcP PcP 06 23 26.4 +8.5
CEU Ceuta 74.18 302 eP P 06 22 58.1 -5.0
CEU eS S **06 32 34.6 -1.7**
PMRV Marv??o 74.25 306 eP P **06 23 03.0 -0.5**
comp=Z,1µm,1.7s
PMRV Marv??o 74.25 306 ePcP PcP 06 23 27.1 +8.7
PMRV eS S **06 32 37.0 0.0**
PMRV Marv??o 74.25 306 eLR LR 06 57 52.5
comp=Z,89µm,20.0s
TULEG Thule 74.29 354 *i* P P **06 23 01.1 -1.9**
TULEG IAMs_20 IAMs_20 07 01 45.1
comp=Z,601µm,17.5s
TULEG Thule 74.29 354 P P **06 23 01.3 -1.8**
TULEG IAMs_20 IAMs_20 07 01 43.3
comp=Z,565µm,18.0s
H11N2 WAKE ISLAND Hy 74.30 76 P P **06 23 06.9 +3.0**
baz=274,slow=7.3,SNR=19
H11N1 WAKE ISLAND Hy 74.30 76 P P **06 23 06.8 +3.0**
baz=274,slow=7.3,SNR=18
H11N3 WAKE ISLAND Hy 74.32 76 P P **06 23 06.6 +2.7**
baz=274,slow=7.3,SNR=12
SPIA Saint Paul Isl 74.42 33 S 06 32 40.7
baz=298
PBAR Barrancos 74.49 305 eP P **06 23 04.2 -0.7**
comp=Z,4µm,1.8s
PBAR Barrancos 74.49 305 ePcP PcP 06 23 28.7 +9.3
PBAR eS S **06 32 43.0 +3.2**
CNIL Conil 74.50 303 eP P **06 23 03.9 -1.1**
SFS San Fernando 74.57 303 P P **06 23 05.0 -0.4**
SFS pmax pmax
comp=Z,10µm,1.7s
SFS San Fernando 74.57 303 eP P **06 23 04.2 -1.2**
SFS eS S **06 32 39.9 -0.7**
SFS San Fernando 74.57 303 P P **06 23 05.0 -0.4**
PESTR Estremoz 74.61 306 eS S **06 32 42.3 +1.2**
PESTR Estremoz 74.61 306 P P **06 23 04.8 -0.9**
H11S3 WAKE ISLAND Hy 74.64 77 P P **06 23 07.6 +1.8**
baz=261,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 74.64 77 P P **06 23 07.7 +1.8**
baz=261,slow=75,SNR=8.5
COI Coimbra 74.65 308 P P **06 23 05.2 -0.6**
COI pmax pmax
comp=Z,5µm,2.0s
COI MLR MLR
comp=Z,202µm,21.0s
COI Coimbra 74.65 308 eP P **06 23 06.7 +0.9**
comp=Z,2µm,1.8s
COI Coimbra 74.65 308 ePcP PcP 06 23 29.6 +10
COI eS S **06 32 45.7 +4.2**
COI Coimbra 74.65 308 P P **06 23 05.2 -0.6**
COI IAmb IAmb 06 23 41.0
comp=Z,5µm,1.9s
H11S2 WAKE ISLAND Hy 74.65 77 P P **06 23 07.7 +1.8**
baz=261,slow=75,SNR=9.3
PCAS Casmilo, Conde 74.78 307 eP P **06 23 07.2 +0.7**
comp=Z,1µm,1.8s
PCAS Casmilo, Conde 74.78 307 ePcP PcP 06 23 30.3 +10
PCAS eS S **06 32 46.0 +3.1**
IFR Ifrane 74.94 300 eP P **06 23 07.8 0.0**
IFR eS S **06 32 48.4 +3.1**
PMTG Montargil 74.98 306 eP P **06 23 06.8 -0.9**
comp=Z,2µm,1.5s
PMTG Montargil 74.98 306 ePcP PcP 06 23 31.2 +10
PMTG eS S **06 32 49.5 +4.3**
ICESG Greenland Ices 75.00 342 *i* P P **06 23 07.7 -0.1**
ICESG IAMs_20 IAMs_20 07 03 02.0
comp=Z,195µm,19.1s
EVO Evora 75.05 306 eP P **06 23 08.1 -0.1**
EVO eS S **06 32 47.9 +1.9**
EVO Evora 75.05 306 eP P **06 23 07.5 -0.6**
comp=Z,2µm,1.5s
EVO Evora 75.05 306 ePcP PcP 06 23 31.8 +10
EKNA AfricaArray - 75.13 267⇑ eP P 06 23 15.7 +6.6
PBEJ Beja 75.15 305 eP P **06 23 08.4 -0.3**
comp=Z,347nm,1.4s
PBEJ Beja 75.15 305 ePcP PcP 06 23 33.0 +11
PSBE So Bento 75.20 307 eP P **06 23 08.5 -0.6**
comp=Z,4µm,1.7s
PSBE So Bento 75.20 307 ePcP PcP 06 23 33.1 +11
PSBE eS S **06 32 48.9 +1.2**
PVAQ Vaqueiros 75.30 305 eP P **06 23 08.9 -0.7**
comp=Z,3µm,1.7s
PVAQ Vaqueiros 75.30 305 ePcP PcP 06 23 33.2 +10
PVAQ eS S **06 32 51.8 +3.0**
PVAQ Vaqueiros 75.30 305 eLR LR 06 57 42.5
comp=Z,134µm,20.0s
PVAQ Vaqueiros 75.30 305 P P **06 23 08.2 -1.4**
PVAQ IAmb IAmb 06 23 43.9
comp=Z,2µm,1.2s
PCVE Castro Verde 75.44 305 eP P **06 23 09.6 -0.8**
comp=Z,2µm,1.8s
PCVE Castro Verde 75.44 305 ePcP PcP 06 23 34.2 +11
PCVE eS S **06 32 54.2 +3.9**
PBDV Barranco-do-Ve 75.52 305 eP P **06 23 10.6 -0.3**
comp=Z,5µm,1.7s
PBDV Barranco-do-Ve 75.52 305 ePcP PcP 06 23 35.0 +11
PBDV eS S **06 32 54.5 +3.2**
TOLK Toolik Lake Re 75.67 18 P P **06 23 10.8 -0.4**
TOLK IAmb IAmb 06 23 23.4
comp=Z,2µm,0.9s
TOLK IAMs_20 IAMs_20 07 03 05.4
comp=Z,742µm,21.0s
TOLK Toolik Lake Re 75.67 18 P 06 23 11.2
baz=312
TOLK S 06 32 50.9
baz=312
PMAFR Mafra 75.78 307 eP P **06 23 12.0 -0.3**
comp=Z,3µm,1.7s
PMAFR Mafra 75.78 307 ePcP PcP 06 23 36.1 +11
PMAFR eS S **06 32 54.8 +0.7**
LIS Lisbon 75.78 306 eP P **06 23 12.4 +0.1**
LIS eS S **06 32 54.6 +0.5**
LIS IAMs_20 IAMs_20 07 01 32.9
comp=E,181µm,19.9s
LIS Lisbon 75.78 306 eP P **06 23 12.4 +0.1**
LIS eS S **06 32 54.6 +0.5**
LIS Lisbon 75.78 306 eP P **06 23 13.4 +1.1**
comp=E,3µm,1.7s
LIS Lisbon 75.78 306 ePcP PcP 06 23 36.3 +11
PMST Lisbon--Monsan 75.80 306 eP P **06 23 12.2 -0.2**
comp=E,3µm,1.7s
PMST Lisbon--Monsan 75.80 306 ePcP PcP 06 23 36.4 +11
UPNV Upernavik 75.89 349 *i* P P **06 23 11.2 -1.2**
UPNV IAMs_20 IAMs_20 07 02 39.9
comp=Z,947µm,17.9s
PTEO Sao Teotonio 75.97 305 eP P **06 23 13.7 +0.3**
comp=Z,3µm,1.7s
PTEO Sao Teotonio 75.97 305 ePcP PcP 06 23 37.3 +12
MORF Marmelete 76.01 305 eP P **06 23 13.8 +0.1**
MORF eS S **06 32 57.2 +0.4**
MORF IAMs_20 IAMs_20 07 03 31.6
comp=E,200µm,18.6s
MORF Marmelete 76.01 305 eP P **06 23 13.8 +0.1**
MORF eS S **06 32 57.2 +0.4**
MORF Marmelete 76.01 305 eP P **06 23 13.9 +0.1**
comp=E,2µm,1.6s
MORF Marmelete 76.01 305 ePcP PcP 06 23 37.6 +12
MORF eS S **06 33 02.4 +5.6**
RTC Rabat Centre 76.06 301 P P **06 23 13.1 -1.0**
IMAR Indian Mountai 76.18 21 P P **06 23 13.3 -0.8**
PFVI Vila Bisbo 76.21 305 eP P **06 23 14.4 -0.4**
comp=E,3µm,1.7s
PFVI Vila Bisbo 76.21 305 ePcP PcP 06 23 38.9 +12
PFVI eS S **06 33 02.0 +3.1**
PFVI Vila Bisbo 76.21 305 P P **06 23 13.6 -1.2**
PFVI IAmb IAmb 06 23 49.5
comp=Z,2µm,1.3s
CTA Charters Tower 76.38 122 S S **06 33 07.0 +6.0**
comp=Z,13nm,1.0s,baz=109,slow=23,SNR=1.5
CTAO Charters Tower 76.38 122 P P **06 23 14.9 -1.0**
CTAO pmax pmax
comp=Z,2µm,1.2s
CTAO MLR MLR
comp=Z,718µm,22.0s
CTAO Charters Tower 76.38 122 P P **06 23 14.9 -1.0**
CTAO IAmb IAmb 06 23 48.6
comp=Z,2µm,1.1s
CTAO Charters Tower 76.38 122 IAMs_20 IAMs_20 07 00 06.1
comp=Z,718µm,22.0s
COLD Coldfoot 76.44 19 P P **06 23 15.2 -0.4**
COLD IAmb IAmb 06 23 30.0
comp=Z,2µm,1.1s
COLD Coldfoot 76.44 19 P 06 23 15.5
baz=312,SNR=701
COLD S 06 32 59.0
baz=312
ANGG Ammassalik, Gr 76.67 339 *i* P P **06 23 17.2 +0.4**
ANGG IAMs_20 IAMs_20 07 01 15.6
comp=Z,182µm,20.0s
ANGG Ammassalik, Gr 76.67 339 P P **06 23 16.1 -0.8**
ANGG IAmb IAmb 06 23 49.4
comp=Z,2µm,1.4s
AVE Averroes 76.77 301 eP P **06 23 16.9 -1.1**
AVE eS S **06 33 05.7 +0.5**
ISOG Isortoq, Green 77.14 339 *i* P P **06 23 18.3 -1.2**
ISOG IAMs_20 IAMs_20 07 02 43.6
comp=Z,208µm,18.3s
NIKH Nikolski High 77.15 37 P P **06 23 18.0 -1.8**
NIKH Nikolski High 77.15 37 P 06 23 19.1
baz=300
NIKH S 06 33 05.7
baz=300
TTA Tatalina 77.32 24 P 06 23 20.9
baz=308
TTA S 06 33 10.7
baz=308
RES Resolute Bay 77.44 360 P P **06 23 19.6 -1.5**
RES pmax pmax
comp=Z,2µm,1.7s
RES Resolute Bay 77.44 360 P P **06 23 19.6 -1.5**
RES IAmb IAmb 06 23 52.8
comp=Z,2µm,1.6s
LBTB Lobatse 77.64 233 P P **06 23 21.9 -1.2**
LBTB pmax pmax
comp=Z,1µm,1.0s
LBTB Lobatse 77.64 233 P P **06 23 21.9 -1.2**
LBTB IAmb IAmb 06 24 04.6
comp=Z,1µm,0.9s
LBTB Lobatse 77.64 233 *i* P P **06 23 23.4 +0.4**
LBTB IAmb IAmb 06 24 00.3
comp=Z,30µm,3.3s
LBTB IVMs_BB IVMs_BB 07 03 42.3
comp=Z,137µm,16.4s
MLY Manley 77.75 21 IAMs_20 IAMs_20 07 01 53.1
comp=Z,565µm,21.0s
MLY Manley 77.76 21 P 06 23 22.8
baz=312
MLY S 06 33 15.6
baz=312
TOA0 Torodi Ar. Sit 77.85 278 P P **06 23 22.6 -1.7**
TOA0 Torodi Ar. Sit 77.85 278 P P **06 23 24.5 +0.1**
SNR=48
TOA0 P P **06 23 24.5 +0.1**
SNR=48
TORD Torodi Ar. Bea 77.85 278 P P **06 23 22.8 -1.6**
comp=Z,223nm,0.8s,baz=61,slow=3.4,SNR=192
TORD PKKPbc **PKKPbc 06 42 25.6 +0.9**
comp=Z,2.4nm,0.8s,baz=255,slow=1.0,SNR=2.4
TORD Torodi Ar. Bea 77.85 278 P P **06 23 22.5 -1.9**
BMAR Burnt Mountain 77.86 17 P P **06 23 23.7 +0.1**
CHUM Lake Minchumin 78.00 22 P 06 23 24.6
baz=311
CHUM S 06 33 12.9
baz=311
I23K Minto, Yukon-K 78.11 20 IAMs_20 IAMs_20 07 02 16.4
comp=Z,480µm,20.0s
I23K Minto, Yukon-K 78.11 20 P 06 23 24.8
baz=313
I23K S 06 33 14.0
baz=313
AKUT Akutan 78.13 35 P P **06 23 23.6 -1.6**
AKUT IAmb IAmb 06 23 53.7
comp=Z,1µm,1.3s
PAF Port-aux-Franc 78.21 190 IAMs_20 IAMs_20 07 02 28.3
comp=Z,633µm,18.0s
BPAW Bear Paw Mtn. 78.30 22 IAMs_20 IAMs_20 07 02 44.5
comp=Z,752µm,20.0s
BPAW Bear Paw Mtn. 78.30 22 P 06 23 25.9
baz=312
BPAW S 06 33 18.7
baz=312
FYU Fort Yukon 78.31 18 P P **06 23 26.1 +0.1**
NEA2 Nenana 78.58 21 IAMs_20 IAMs_20 07 04 53.9
comp=Z,621µm,18.0s
NEA2 Nenana 78.58 21 P 06 23 27.1
baz=313
NEA2 S 06 33 21.2
baz=313
MDM Murphy Dome 78.58 20 IAMs_20 IAMs_20 07 04 06.0
comp=Z,466µm,18.0s
DY2G Dye2 78.64 342 *i* P P **06 23 27.8 -0.4**
DY2G IAMs_20 IAMs_20 07 05 31.4
comp=Z,455µm,18.3s
KTH Kantishna Hill 78.69 22 IAMs_20 IAMs_20 07 03 24.8
comp=Z,670µm,19.0s
PPLA Purkeypile 78.69 23 P 06 23 28.3
baz=311
PPLA S 06 33 28.1
baz=311
POKR Poker Plat Res 78.72 20 P 06 23 28.0
baz=315
POKR S 06 33 20.4
baz=315
BWN Browne 78.74 21 IAMs_20 IAMs_20 07 02 55.6
comp=Z,547µm,19.0s
TCOL CIGO, UAF Yank 78.76 20 P 06 23 27.6
baz=314
TCOL S 06 33 21.2
baz=314
COLA College 78.76 20*c i*P P **06 23 28.0 -0.5**
COLA pmax pmax
comp=Z,1µm,1.0s
COLA College 78.76 20 P 06 23 27.7
baz=314
FALS False Pass 78.90 33 P P **06 23 27.0 -2.4**
FALS False Pass 78.90 33 P 06 23 28.8
baz=303
FALS S 06 33 24.7
baz=303
CCB Clear Creek Bu 78.93 20 IAMs_20 IAMs_20 07 05 19.3
comp=Z,456µm,19.0s
TRF Thorofare Moun 78.97 22 P 06 23 28.9
baz=313
TRF S 06 33 26.5
baz=313
WRH Wood River Hil 78.97 21 IAMs_20 IAMs_20 07 02 51.2
comp=Z,508µm,20.0s
PRP Porcupine Dome 78.99 19 IAMs_20 IAMs_20 07 03 45.7
comp=Z,601µm,21.0s
PRP Porcupine Dome 78.99 19 P 06 23 28.0
baz=316
PRP S 06 33 25.0
baz=316
ILAR Eielson Array 79.12 20 P P **06 23 30.0 -0.6**
comp=Z,260nm,0.9s,baz=306,slow=4.5,SNR=54
ILAR PP PP **06 26 33.3 +4.1**
comp=Z,101nm,0.8s,baz=305,slow=7.7,SNR=2.9
ILAR PKKPbc **PKKPbc 06 42 25.2 +2.3**
comp=Z,4.5nm,0.8s,baz=186,slow=2.7,SNR=5.4
ILAR LR LR 07 02 19.5
comp=Z,612µm,21.9s,baz=303,slow=39
ILAR Eielson Array 79.12 20 P P **06 23 29.6 -1.0**
ILAR Eielson Array 79.12 20 P P **06 23 29.6 -1.0**
MCK McKinley 79.22 21 IAMs_20 IAMs_20 07 05 24.4
comp=Z,581µm,22.0s
MCK McKinley 79.22 21 P 06 23 30.0
baz=314
MCK S 06 33 27.8
baz=314
HDA Harding Lake 79.37 20 P 06 23 30.1
baz=315
HDA P 06 23 30.1
baz=315
HDA S 06 33 32.8
baz=315
HDA S 06 33 32.8
baz=315
SFJD Kangerlussuaq 79.38 344 *i* P P **06 23 30.1 -1.7**
SFJD eS S **06 33 30.4 -1.5**
SFJD IAMs_20 IAMs_20 07 03 45.0
comp=Z,190µm,21.5s
SFJD Kangerlussuaq 79.38 344 P P **06 23 30.4 -1.4**

SFJD pmax pmax
comp=Z,2µm,1.2s
SFJD Kangerlussuaq 79.38 344 P P 06 23 30.4 -1.4
SFJD IAmb IAmb 06 24 03.8
comp=Z,2µm,1.1s
RND Reindeer 79.47 22 IAMs_20 IAMs_20 07 05 40.4
comp=Z,696µm,19.0s
SKT Skwentna 79.53 24 P 06 23 31.9
baz=312
SKT S 06 33 28.0
baz=312
CUT Chulitna 79.69 23 P 06 23 32.4
baz=313
CUT S 06 33 32.5
baz=313
INK Inuvik 79.78 14 P P 06 23 33.3 -0.7
comp=Z,374nm,0.9s,baz=350,slow=7.7,SNR=28
INK Inuvik 79.78 14 P P 06 23 33.6 -0.4
INK pmax pmax
comp=Z,4µm,1.6s
INK Inuvik 79.78 14 P P 06 23 33.6 -0.4
INK IAmb IAmb 06 24 04.9
comp=Z,4µm,1.6s
INK Inuvik 79.78 14 P 06 23 33.5
baz=326
INK S 06 33 35.5
baz=326
SPCR Spurr Chakacha 79.81 24 P 06 23 33.9
baz=311
WAT2 Susitna Watana 79.86 22 P 06 23 33.4
baz=314
CRZF Crozet Islands 79.95 202 IAMs_20 IAMs_20 06 54 16.6
comp=Z,583µm,20.0s
SDPT Sand Point 80.02 32 P P 06 23 35.4 -0.1
SDPT Sand Point 80.02 32 P 06 23 34.8
baz=306
BOSA Boshof 80.15 230 P P 06 23 35.5 -1.2
comp=Z,195nm,0.8s,baz=48,slow=5.6,SNR=80
BOSA Boshof 80.15 230 P P 06 23 35.5 -1.2
BOSA pmax pmax
comp=Z,2µm,1.4s
BOSA Boshof 80.15 230 P P 06 23 35.5 -1.2
BOSA IAmb IAmb 06 24 21.7
comp=Z,2µm,1.4s
BOSA Boshof 80.15 230 *i* P **P 06 23 34.5 -2.3**
BOSA IAmb IAmb 06 24 16.4
comp=Z,3µm,1.6s
BOSA IVMs_BB IVMs_BB 06 58 51.1
comp=Z,140µm,17.9s
TSUM Tsumeb 80.15 242 P P 06 23 35.6 -1.4
TSUM Tsumeb 80.15 242 *i* P **P 06 23 37.3 +0.3**
TSUM IVMs_BB IVMs_BB 07 09 29.8
comp=Z,137µm,18.1s
SUA Susitna One 80.16 24 IAMs_20 IAMs_20 07 03 20.7
comp=Z,574µm,19.0s
SUA Susitna One 80.16 24 P 06 23 35.9
baz=312
CAPN Captain Cook N 80.48 24 IAMs_20 IAMs_20 07 04 51.3
comp=Z,475µm,19.0s
CAPN Captain Cook N 80.48 24 P 06 23 38.0
baz=312
STKA Stephens Creek 80.56 134 P P 06 23 37.4 -1.3
comp=Z,327nm,1.2s,baz=318,slow=4.9,SNR=62
STKA S S **06 33 48.8 +3.4**
comp=Z,18nm,1.2s,baz=318,slow=23,SNR=1.4
STKA PKKPbc **PKKPbc 06 42 20.8 +0.4**
comp=Z,16nm,1.0s,baz=122,slow=1.9,SNR=6.0
STKA LR LR 07 03 57.1
comp=Z,917µm,21.5s,baz=298,slow=39
STKA Stephens Creek 80.56 134 P P 06 23 37.6 -1.1
STKA pmax pmax
comp=Z,212nm,1.0s
STKA Stephens Creek 80.56 134 P P 06 23 37.6 -1.1
FIS Fire Island 80.56 24 IAMs_20 IAMs_20 07 04 47.5
comp=Z,663µm,19.0s
C36M Paulatuk 80.57 10 P P 06 23 37.0 -1.3
C36M IAmb IAmb 06 24 08.6
comp=Z,4µm,1.4s
C36M Paulatuk 80.57 10 P 06 23 36.9
baz=334
SCRK Sand Creek 80.57 20 P 06 23 38.2
baz=318
PMR Palmer 80.64 23 P 06 23 38.2
baz=314
EPYK Eagle Plains 80.66 16 P P 06 23 37.9 -1.0
EPYK IAmb IAmb 06 23 52.4
comp=Z,2µm,1.0s
EPYK IAMs_20 IAMs_20 07 05 26.1
comp=Z,466µm,19.0s
EPYK Eagle Plains 80.66 16 P 06 23 38.1
baz=324
SML Sawmill 80.76 23 P 06 23 39.0
baz=314
RC01 Rabbit Creek A 80.77 24 IAMs_20 IAMs_20 07 05 03.9
comp=Z,572µm,18.0s
RC01 Rabbit Creek A 80.77 24 P 06 23 38.7
baz=313
EGAK Eagle 80.78 18 P P 06 23 38.8 -0.6
EGAK IAmb IAmb 06 24 20.3
comp=Z,2µm,1.1s
EGAK IAMs_20 IAMs_20 07 03 19.8
comp=Z,544µm,22.0s
EGAK Eagle 80.78 18 P 06 23 38.9
baz=320,SNR=534
PAX Paxson 80.86 21 IAMs_20 IAMs_20 07 04 28.9
comp=Z,515µm,21.0s
PAX Paxson 80.86 21 P 06 23 39.2
baz=317
KNK Knik Glacier 80.99 23 P 06 23 40.2
baz=314
HOM Homer 81.04 25 IAMs_20 IAMs_20 07 04 04.2
comp=Z,504µm,20.0s
HOM Homer 81.05 25 P 06 23 40.6
baz=312
SCM Sheep Creek Mo 81.08 22 IAMs_20 IAMs_20 07 03 48.0
comp=Z,649µm,20.0s
K27K Chicken 81.09 19 IAMs_20 IAMs_20 07 03 57.2
comp=Z,577µm,20.0s
K27K Chicken 81.09 19 P 06 23 41.1
baz=319
O22K Cooper Landing 81.19 24 P 06 23 41.1
baz=313
BRLK Bradley Lake 81.26 25 IAMs_20 IAMs_20 07 04 25.9
comp=Z,492µm,20.0s
M24K Tolsona, Glenn 81.26 22 P 06 23 40.8
baz=316
CNPM China Poot 81.29 25 IAMs_20 IAMs_20 07 04 22.7
comp=Z,590µm,21.0s
BRSE Bradley Lake S 81.33 25 P 06 23 41.7
baz=313
SEW Seward 81.55 24 P 06 23 43.0
baz=314
HNR Honiara 81.62 105 P P 06 23 44.5 -0.2
comp=Z,228nm,1.0s,baz=200,slow=7.3,SNR=15
HNR Honiara 81.62 105 P P 06 23 43.2 -1.5
HNR pmax pmax
comp=Z,5µm,1.7s
HNR Honiara 81.62 105 P P 06 23 43.2 -1.5
DAWY Dawson 81.81 18 P P 06 23 44.2 -0.9
DAWY IAmb IAmb 06 24 15.7
comp=Z,2µm,1.4s
GLI Glacier Island 81.84 23 P 06 23 44.7
baz=316
NUUK Nuuk 81.87 342 *i* P **P 06 23 42.8 -2.5**
NUUK IAMs_20 IAMs_20 07 05 43.0
comp=Z,401µm,19.6s
L27K Beaver Creek, 81.90 20 IAMs_20 IAMs_20 07 04 25.6
comp=Z,560µm,21.0s
L27K Beaver Creek, 81.90 20 P 06 23 45.8
baz=320
KDAK Kodiak Island 81.93 27 P 06 23 45.5
baz=311
OHAK Old Harbor 82.01 28 P 06 23 45.7
baz=311
SII Sitkinak Islan 82.07 29 P 06 23 46.4
baz=310
N25K Chitina, Valde 82.14 21 IAMs_20 IAMs_20 07 04 51.1
comp=Z,529µm,19.0s
N25K Chitina, Valde 82.14 21 P 06 23 46.4
baz=318
KOWA Kowa 82.21 282 P P 06 23 47.0 -0.9
NRS Narsarsuaq 82.29 338 *i* P **P 06 23 47.0 -0.5**
NRS *eS* **S 06 34 07.4 +4.9**
NRS IAMs_20 IAMs_20 07 09 14.9
comp=Z,295µm,17.9s
NRS Narsarsuaq 82.29 338 *i* P **P 06 23 47.0 -0.5**
NRS *eS* **S 06 34 07.4 +4.9**
NRS MLR MLR
comp=Z,300µm,18.0s
EYAK Cordova Ski Ar 82.54 23 P 06 23 48.6
baz=317
BMRM Bremner River 82.61 22 P 06 23 48.9
baz=318
VRDI Verde Repeater 82.79 21 IAMs_20 IAMs_20 07 07 55.3
comp=Z,496µm,20.0s
MCARA McCarthy VSAT 82.81 21 P 06 23 50.2
baz=319
EIDS Eidsvold 83.08 123 P P 06 23 51.3 -0.9
EIDS IAmb IAmb 06 24 28.8
comp=Z,3µm,1.8s
Q23K Middleton Isla 83.14 24 P P 06 23 51.7 -0.3
Q23K IAmb IAmb 06 24 33.9
comp=Z,939nm,1.1s
Q23K Middleton Isla 83.14 24 P 06 23 52.0
baz=316
CRQE Cirque 83.27 21 P 06 23 52.2
baz=319
KAIM Kayak Island 83.44 23 P 06 23 53.2
baz=318
PMPST Porto Santo, M 83.53 304 *eP* **P 06 23 55.0 +0.4**
comp=Z,2µm,1.8s
PMPST Porto Santo, M 83.53 304 *eP*cP PcP 06 24 17.9 +19
PMPST *eS* **S 06 34 09.9 -6.4**
PMPS Porto Santo 83.54 304 *eP* **P 06 23 55.3 +0.7**
comp=Z,2µm,2.0s
PMPS Porto Santo 83.54 304 *eP*cP PcP 06 24 18.0 +19
SUCK Suckling Hills 83.55 22 P P 06 23 52.5 -1.6
CTG Chitna Glacier 83.66 21 P 06 23 54.8
baz=320
BGLC Bering Glacier 83.68 22 P 06 23 54.6
baz=319
GRNC Granite Creek 83.71 21 IAMs_20 IAMs_20 07 06 30.5
comp=Z,482µm,20.0s
LOGN Logan Glacier 83.87 21 IAMs_20 IAMs_20 07 07 00.8
comp=Z,424µm,18.0s
YAH Yahtse 84.00 21 IAMs_20 IAMs_20 07 06 47.1
comp=Z,625µm,19.0s
TABL Table Mountain 84.13 21 IAMs_20 IAMs_20 07 05 22.6
comp=Z,733µm,22.0s
PMAR Madeira 84.13 304 *eP* **P 06 23 58.9 +1.0**
comp=Z,4µm,1.6s
PMAR Madeira 84.13 304 *eP*cP PcP 06 24 21.5 +20
FUL Funchal 84.15 304 *eP* **P 06 23 59.7 +2.0**
comp=Z,2µm,1.8s
FUL Funchal 84.15 304 *eP*cP PcP 06 24 21.8 +20
PMOZ Porto Moniz, M 84.29 304 *eP* **P 06 23 55.0 -3.6**
comp=Z,2µm,1.5s
PMOZ Porto Moniz, M 84.29 304 *eS* **S 06 34 30.6 +6.5**
PMOZ Porto Moniz, M 84.29 304 *eLR* LR 07 04 51.4
comp=Z,64µm,18.0s
PMOZ Porto Moniz, M 84.29 304 P **P 06 23 57.2 -1.3**
PINM Pinnacle 84.68 21 P 06 24 00.1
baz=321,SNR=22
HYT Haines Junctio 84.93 19 IAMs_20 IAMs_20 07 08 02.3
comp=Z,435µm,20.0s
BCPM Bancas Point 84.98 21 P P 06 24 01.3 -0.1
BCPM IAmb IAmb 06 24 41.4
comp=Z,2µm,1.3s
BCPM IAMs_20 IAMs_20 07 06 19.1
comp=Z,483µm,21.0s
SUR Sutherland 85.48 230 P P 06 24 04.7 +0.2
SUR Sutherland 85.48 230 IAMs_20 IAMs_20 07 00 23.1
comp=Z,557µm,20.0s
SUR Sutherland 85.48 230 *i* P **P 06 24 04.5 +0.1**
WHY Whitehorse 85.81 18 P P 06 24 05.0 -0.7
WHY IAmb IAmb 06 24 37.6
comp=Z,3µm,1.7s
WHY Whitehorse 85.81 18 P 06 24 04.9
baz=326,SNR=198
MACI Morro de la Ar 86.03 300 P P 06 24 07.1 -0.4
MACI IAmb IAmb 06 24 53.3
comp=Z,2µm,1.5s
ARMA Armidale 86.39 127 P P 06 24 09.1 +0.1
ARMA IAmb IAmb 06 24 45.4
comp=Z,805nm,1.1s
DBIC Dimbokro 86.52 276 P P 06 24 08.4 -1.4
comp=Z,238nm,0.8s,baz=47,slow=5.7,SNR=64
DBIC Dimbokro 86.52 276 P P 06 24 09.3 -0.5
DBIC pmax pmax
comp=Z,2µm,1.5s
DBIC Dimbokro 86.52 276 P P 06 24 09.3 -0.5
DBIC IAmb IAmb 06 24 59.9
comp=Z,2µm,1.5s
SKAG Skagway 86.68 19 P P 06 24 08.3 -1.4
SKAG IAmb IAmb 06 24 58.7
comp=Z,714nm,0.9s
SKAG Skagway 86.68 19 P
baz=325,SNR=95 06 24 09.9
TOO Toolangi 86.68 136 P P 06 24 10.0 -0.1
TOO pmax pmax
comp=Z,1µm,1.2s
TOO Toolangi 86.68 136 P P 06 24 10.0 -0.1
TOO IAmb IAmb 06 24 33.0
comp=Z,1µm,1.2s
BART Pico Bartolome 87.25 312 *eP* **P 06 24 14.1 +1.0**
comp=Z,684nm,1.5s
PCALD Caldeiras da R 87.44 312 *eP* **P 06 24 14.7 +0.7**
comp=Z,689nm,1.7s
CMLA Cha da Macela 87.49 312 *eP* **P 06 24 15.0 +0.8**
comp=Z,1µm,1.7s
CMLA Cha da Macela 87.49 312 *eS* **SKSac 06 34 39.7 -2.2**
GRON Grota Negra 87.49 312 *eP* **P 06 24 14.6 +0.3**
comp=Z,342nm,1.5s
CAN Canberra 87.51 132 P P 06 24 13.0 -1.2
CAN pmax pmax
comp=Z,2µm,1.4s
CAN Canberra 87.51 132 P P 06 24 13.0 -1.2
BESE Bessie Mountai 87.54 20 P P 06 24 13.9 -0.2
BESE IAmb IAmb 06 24 29.4
comp=Z,1µm,1.2s
PSET Sete Cidades 87.58 312 *eP* **P 06 24 15.3 +0.6**
comp=Z,762nm,1.8s
PSET Sete Cidades 87.58 312 *eS* **SKSac 06 34 39.4 -3.1**
PSMN Pico do Norte, 87.61 311 *eP* **P 06 24 15.2 +0.4**
comp=Z,729nm,1.7s
PSMN Pico do Norte, 87.61 311 *eS* **SKSac 06 34 38.4 -4.3**
PSMA Santa Maria 87.65 311 *eP* **P 06 24 15.4 +0.4**
comp=Z,1µm,1.7s
PSMA Santa Maria 87.65 311 *eS* **SKSac 06 34 39.4 -3.5**
JIS Juneau Island 87.93 19 P P 06 24 16.3 +0.5
JIS IAmb IAmb 06 24 30.7
comp=Z,1µm,1.1s
PAGU Agualva, Azore 88.00 313 *eP* **P 06 24 17.9 +1.3**
comp=Z,320nm,1.3s
PAGU Agualva, Azore 88.00 313 *eS* **SKSac 06 34 42.8 -2.2**
PGRA Graciosa 88.36 314 *eP* **P 06 24 18.9 +0.6**
comp=Z,499nm,1.4s
PGRA Graciosa 88.36 314 *eS* **SKSac 06 34 44.9 -2.2**
YKA Yellowknife Ar 88.37 9 P P 06 24 16.4 -1.5
comp=Z,75nm,0.8s,baz=340,slow=4.5,SNR=114
YKA PKKPbc **PKKPbc 06 42 00.5 -1.1**
comp=Z,5.4nm,0.9s,baz=143,slow=2.5,SNR=6.9
YKA PKPPKP 06 50 07.4
comp=Z,3.9nm,0.9s,baz=147,slow=2.6,SNR=9.3
YKA LR LR 07 07 42.6
comp=Z,331µm,19.5s,baz=0.0,slow=38
PMAN Manadas 88.65 314 *eP* **P 06 24 20.3 +0.6**
comp=Z,273nm,1.1s
SIT Sitka 88.66 21 P 06 24 19.3
baz=325,SNR=14
ROSA Rosais 88.70 314 *eP* **P 06 24 20.7 +0.8**
comp=Z,971nm,1.2s
ROSA Rosais 88.70 314 *eS* **SKSac 06 34 46.1 -3.1**
ROSA Rosais 88.70 314 P **P 06 24 19.5 -0.4**
ROSA IAmb IAmb 06 25 06.1
comp=Z,1µm,1.0s
PID Ribeirinha 88.78 314 *eP* **P 06 24 21.0 +0.6**
comp=Z,360nm,1.4s
PICO Pico 88.94 314 *eP* **P 06 24 21.6 +0.4**
comp=Z,512nm,1.5s
PCAN Candelaria 89.00 314 *eP* **P 06 24 22.8 +1.4**
comp=Z,472nm,1.6s
DLBC Dease Lake 89.02 17 P P 06 24 20.5 -0.6
comp=Z,79nm,1.0s,baz=314,slow=6.0,SNR=80
DLBC Dease Lake 89.02 17 P P 06 24 21.0 -0.1
DLBC IAmb IAmb 06 24 52.6
comp=Z,3µm,2.0s
PCED Cedros 89.05 314 *eP* **P 06 24 22.5 +0.9**
comp=Z,419nm,0.8s
CALA Caldeira 89.07 314 *eP* **P 06 24 22.6 +0.8**
comp=Z,512nm,1.1s
WRAK Wrangell Islan 90.10 20 P P 06 24 26.4 +0.3
WRAK Wrangell Islan 90.10 20 IAMs_20 IAMs_20 07 09 30.3
comp=Z,555µm,20.0s
WRAK Wrangell Islan 90.10 20 P 06 24 25.9
baz=328,SNR=37
CRAG Craig 90.67 20 P P 06 24 28.0 -0.8
CRAG Craig 90.67 20 P 06 24 29.1
baz=327,SNR=12
DIB Dawson Inlet, 92.78 21 P P 06 24 37.5 -1.1
H02S1 DAWSON INLET T 92.78 21 P P 06 24 41.9 +3.3
H02S1 PP PP 06 29 29.3 +9.5
MBO M'Bour 93.28 288 P P 06 24 40.8 -0.8
DZM Mont Dzumac 93.29 113 *eP* **P 06 24 43.8 +2.3**
comp=Z,1µm,1.4s
DZM Mont Dzumac 93.29 113 *eS* **S 06 35 47.5 -1.5**
comp=Z,463µm,30.3s
DZM *e*SS **SS 06 42 08.7 +3.3**
comp=Z,486µm,30.1s
DZM Mont Dzumac 93.29 113 *e*LR LR 06 54 38.4
comp=Z,1110µm,23.4s
DZM Mont Dzumac 93.29 113 P P 06 24 41.0 -0.5
DZM IAmb IAmb 06 25 31.8
comp=Z,605nm,1.2s
FCC Fort Churchill 93.43 359 P P 06 24 39.8 -1.7
FCC pmax pmax
comp=Z,1µm,1.3s
FCC Fort Churchill 93.43 359 P P 06 24 39.8 -1.7
FCC IAmb IAmb 06 25 13.3
comp=Z,1µm,1.3s
BBB Bella Bella 95.01 20 P P 06 24 48.5 -0.4
comp=Z,18nm,0.8s,baz=323,slow=4.1,SNR=5.9
BBB Bella Bella 95.01 20 P P 06 24 45.8 -3.0
JOHN Johnston Islan 95.48 68 IAMs_20 IAMs_20 07 11 08.9
comp=Z,358µm,19.0s
DRLN Deer Lake 95.91 336 P P 06 24 51.9 -1.2
DRLN IAmb IAmb 06 25 47.4
comp=Z,646nm,1.1s
CASY Casey 96.16 170 P P 06 24 52.2 -1.2
CASY Casey 96.16 170 IAMs_20 IAMs_20 07 09 39.8
comp=Z,452µm,19.0s
MAW Mawson 96.84 188 P P 06 24 56.1 -0.4
comp=Z,52nm,0.9s,baz=21,slow=6.8,SNR=16
MAW PKKP **PKKPbc 06 41 40.2 -0.8**
comp=Z,13nm,0.9s,baz=280,slow=7.0,SNR=4.4
MAW Mawson 96.84 188 P P 06 24 55.9 -0.6
MAW pmax pmax
comp=Z,47nm,1.1s
MAW Mawson 96.84 188 P P 06 24 55.9 -0.6
FFC Flin Flon 97.28 4 P P 06 24 57.8 -1.4
FFC pmax pmax
comp=Z,900nm,1.5s
FFC MLR MLR
comp=Z,310µm,21.0s
FFC Flin Flon 97.28 4 P P 06 24 57.8 -1.4
FFC IAmb IAmb 06 25 29.8
comp=Z,900nm,1.5s
FUNA Funafuti 97.89 95 IAMs_20 IAMs_20 07 10 24.3
comp=Z,465µm,20.0s
PGC Sidney 99.51 19 Pdif 06 25 06.7 -2.6
A04D Lummi Island 99.66 18 Pdiff 06 25 09.6
baz=336
CHGQ Chibougamau 100.11 346 Pdiff 06 25 12.3
baz=19
B05A Bryant 100.24 18 Pdiff 06 25 13.2
baz=336
NLWA Neilton Lookou 100.53 19 IAMs_20 IAMs_20 07 16 06.3
comp=Z,410µm,21.0s
D03D Eldon 100.63 19 Pdiff 06 25 14.2
baz=335
C06D Leavenworth 100.87 17 Pdiff 06 25 15.7
baz=337
MATQ Matagami 100.89 348 Pdiff 06 25 15.5
baz=16
D63A Stockholm 101.26 341 Pdiff 06 25 18.4
baz=24
LSQQ Lebel-sur-Quev 101.44 348 Pdiff 06 25 16.7
baz=16
NEW Newport 101.47 15 P Pdif 06 25 17.5 -0.5
comp=Z,4.8nm,0.7s,baz=11,slow=7.7,SNR=8.1
NEW PP PP 06 29 17.2 -9.4
comp=Z,20nm,0.9s,baz=349,slow=9.3,SNR=3.7
NEW Newport 101.47 15 Pdiff 06 25 18.6
baz=340
J28D J28D 101.60 22 Pdiff Pdif 06 25 45.2 +27
J28D PP PKiKP 06 29 50.9 +9.2
J28D PS **PS 06 38 43.9 +13**
J28D SS SS 06 44 47.7 +49
E04D Cinebar 101.67 19 Pdiff 06 25 17.6
baz=336
D61A St Aubert, Com 101.67 343 Pdiff 06 25 18.0
baz=22
E64A Bridgewater 101.74 341 Pdiff 06 25 15.8
baz=24
E63A Oxbow 101.91 341 Pdiff 06 25 18.6
baz=24
ULM Lac du Bonnet 101.97 0 P Pdif 06 25 19.6 -0.5
comp=Z,12nm,1.0s,baz=352,slow=5.1,SNR=13
ULM PP PP 06 29 17.8 -12
comp=Z,34nm,0.9s,baz=31,slow=3.2,SNR=3.0
ULM PKKPbc **PKKPbc 06 41 25.0 -0.3**
comp=Z,15nm,1.1s,baz=221,slow=3.9,SNR=3.0
F04D Rainier, OR 101.97 19 Pdiff 06 25 19.4
baz=335
J27D J27D 102.05 22 Pdiff Pdif 06 25 45.2 +25
J27D PP PKiKP 06 29 52.1 +10
J27D PS PS 06 38 50.1 +14
J27D SS SS 06 44 43.6 +39
D60A Saint Jean D'O 102.13 343 Pdiff 06 25 19.6
baz=22
LATQ La Tuque 102.15 345 Pdiff 06 25 20.1
baz=20
J20D J20D 102.21 23 Pdiff Pdif 06 25 46.4 +26
J20D PP PKiKP 06 29 52.1 +9.2
J20D PS PS 06 38 50.1 +13
J20D SS SS 06 44 55.4 +48
D59A Saint-Raymond 102.27 344 Pdiff 06 25 20.7
baz=21
SYO Syowa Base 102.30 195 ‖ *ep*Pdiff pPdif 06 25 25.6 -0.3
SYO Syowa Base 102.30 195 ‖ *i*PP **PKiKP 06 29 35.8 -6.8**
SYO Syowa Base 102.30 195 ‖ *i*PKiKP **PKiKP 06 29 43.0 +0.4**
F64A Sherman 102.40 341 Pdiff 06 25 18.7
baz=24
D58A Chemin du LacG 102.44 345 Pdiff 06 25 22.4
baz=20
E61A Lac Etchemin 102.47 343 Pdiff 06 25 20.1
baz=22
F05D White Salmon 102.59 18 Pdiff 06 25 22.4
baz=337
J19D J19D 102.65 22 Pdiff Pdif 06 25 48.7 +26
J19D PP PKiKP 06 29 58.0 +14
J19D PS **PS 06 38 56.4 +14**
J19D SS SS 06 45 03.2 +50
G03D McMinnville, O 102.69 20 Pdiff 06 25 24.4
baz=335
F63A Nahmakanta, Br 102.76 342 Pdiff 06 25 22.5
baz=24
E60A Ste Agathe de 102.77 343 Pdiff 06 25 23.2
baz=21
G65A Princeton 102.77 340 Pdiff 06 25 23.4
baz=25
D56A ZEC Mazanza, M 102.91 346 Pdiff 06 25 23.8
baz=18
E59A St. Maurice 102.93 344 Pdiff 06 25 23.9
baz=20
F61A St Evariste 103.02 343 Pdiff 06 25 20.4
baz=22
H66A Whiting 103.07 340 Pdiff 06 25 20.7
baz=25
G64A Maxfield 103.07 341 Pdiff 06 25 21.7
baz=24
EGMT Eagleton 103.09 10 IAMs_20 IAMs_20 07 19 39.5
comp=Z,349µm,21.0s
EGMT Eagleton 103.09 10 Pdiff 06 25 20.7
baz=347
D55A Sainte-Anne-du 103.09 346 Pdiff 06 25 21.8
baz=18
J11D J11D 103.18 23 Pdiff Pdif 06 25 51.1 +26
J11D PP PKiKP 06 30 04.0 +19
J11D PS PS 06 39 03.9 +16
J11D SS SS 06 45 07.2 +47
E58A La Victoria 103.21 345 Pdiff 06 25 23.4
baz=20
PKME Peaks-Kenny Pk 103.22 341 Pdiff 06 25 22.4
baz=23
G05D Wamic, OR 103.22 19 Pdiff 06 25 23.5
baz=337
COR Corvallis 103.24 20 IAMs_20 IAMs_20 07 13 49.0
comp=Z,338µm,22.0s

F60A	Warwick baz=21	103.27	344	Pdiff				06 25 22.6		
DGMT	Dagmar comp=Z,396µm,20.0s	103.33	6	IAMs_20	IAMs_20			07 21 33.9		
DGMT	Dagmar baz=352	103.33	6	Pdiff				06 25 25.0		
H65A	Eastbrook baz=24	103.43	341	Pdiff				06 25 24.4		
G63A	Kingsbury baz=23	103.44	342	Pdiff				06 25 24.5		
E56A	St. Veronique baz=18	103.45	346	Pdiff				06 25 26.6		
H04D	Lebanon baz=335	103.47	20	Pdiff				06 25 25.7		
I02D	Swisshome baz=334	103.50	21	Pdiff				06 25 27.0		
MSO	Missoula baz=343	103.51	13	Pdiff				06 25 23.6		
F59A	Saint Guilaume baz=20	103.58	344	Pdiff				06 25 26.1		
G62A	West of Eustis comp=Z,330µm,21.0s	103.60	342	IAMs_20	IAMs_20			07 18 25.9		
G62A	West of Eustis baz=22	103.60	342	Pdiff				06 25 26.2		
G37D	G37D	103.66	24	Pdiff	Pdif			06 25 52.3	+25	
G37D				PP	PKiKP			06 30 07.5	+22	
G37D				PS	PS			06 39 12.6	+20	
G37D				SS	SS			06 45 12.2	+45	
E55A	Montcerf-Lytto baz=17	103.75	346	Pdiff				06 25 26.9		
H64A	Troy baz=24	103.77	341	Pdiff				06 25 28.1		
G61A	St-Isidore-de- baz=21	103.80	343	Pdiff				06 25 24.9		
F58A	St-Lin Laurent baz=19	103.82	345	Pdiff				06 25 27.2		
G29D	G29D	103.91	24	Pdiff	Pdif			06 25 54.7	+26	
G29D				PP	PKiKP			06 30 11.1	+25	
G29D				PS	PS			06 39 11.3	+16	
G29D				SS	SS			06 45 14.8	+44	
AGMN	Agassiz Nation comp=Z,386µm,20.0s	103.92	0	IAMs_20	IAMs_20			07 17 47.5		
AGMN	Agassiz Nation baz=360	103.92	0	Pdiff				06 25 25.4		
G36D	G36D	103.95	24	Pdiff	Pdif			06 25 53.5	+25	
G36D				PP	PKiKP			06 30 12.3	+26	
G36D				PS	**PS**			**06 39 10.1**	**+14**	
G36D				SS	SS			06 45 14.1	+43	
H63A	New Sharon baz=23	103.98	342	Pdiff				06 25 29.0		
I03D	Drain, OR baz=335	104.03	21	Pdiff				06 25 31.5		
G35D	G35D	104.04	23	Pdiff	Pdif			06 25 54.7	+26	
G35D				PP	PKiKP			06 30 12.3	+26	
G35D				PS	PS			06 39 12.6	+16	
I05D	Terrebonne, OR baz=336	104.05	19	Pdiff				06 25 29.3		
F57A	Harrington baz=19	104.07	345	Pdiff				06 25 29.4		
G60A	Masonville baz=21	104.18	343	Pdiff				06 25 28.8		
EYMN	Ely comp=Z,382µm,21.0s	104.20	357	IAMs_20	IAMs_20			07 17 17.8		
EYMN	Ely baz=3.5	104.20	357	Pdiff				06 25 29.9		
I04A	Tendick Farm, baz=336	104.23	20	Pdiff				06 25 30.2		
MDND	Maddock baz=356	104.28	3	Pdiff				06 25 31.3		
J01E	Myrtle Point baz=334	104.33	21	Pdiff				06 25 31.7		
H62A	Milan comp=Z,465µm,20.0s	104.36	342	IAMs_20	IAMs_20			07 18 56.1		
H62A	Milan baz=22	104.36	342	Pdiff				06 25 29.6		
G22D	G22D	104.44	25	Pdiff	Pdif			06 25 57.0	+26	
G22D				PP	PP			06 30 13.5	+25	
G22D				PS	PS			06 39 11.3	+10	
G33D	G33D	104.49	22	PP	PKiKP			06 30 14.7	+27	
G33D				SS	SS			06 45 26.4	+47	
I64A	Boothbay baz=23	104.55	341	Pdiff				06 25 30.4		
G58A	Ormstown baz=19	104.55	345	Pdiff				06 25 32.6		
HUH	Hualalai comp=Z,361µm,21.0s	104.60	58	IAMs_20	IAMs_20			07 09 38.9		
H61A	Lyndonville baz=21	104.60	343	Pdiff				06 25 32.8		
ALGO	Algonquin Park baz=16	104.62	348	Pdiff				06 25 31.8		
BMO	Blue Mountains comp=Z,343µm,19.0s	104.64	16	IAMs_20	IAMs_20			07 19 00.8		
I63A	Otisfield baz=22	104.69	342	Pdiff				06 25 30.0		
PLID	Pearl Lake comp=Z,411µm,19.0s	104.72	15	IAMs_20	IAMs_20			07 21 41.0		
H60A	Morristown baz=20	104.77	344	Pdiff				06 25 32.5		
POHA	Pohakuloa comp=Z,363µm,22.0s	104.78	58	IAMs_20	IAMs_20			07 09 45.0		
G57A	Newington baz=18	104.81	345	Pdiff				06 25 29.4		
J04D	Umpqua Nationa baz=336	104.82	20	Pdiff				06 25 32.8		
K02D	Willamette Mer baz=334	104.83	21	Pdiff				06 25 29.6		
G20D	G20D	104.85	24	Pdiff	Pdif			06 25 59.4	+27	
G20D				PP	PP			06 30 15.9	+24	
G20D				PS	PS			06 39 17.6	+12	
LBNH	Lisbon comp=Z,407µm,21.0s	104.87	343	IAMs_20	IAMs_20			07 18 57.4		
LBNH	Lisbon baz=21	104.88	343	Pdiff				06 25 28.6		
LAO	LASA Array baz=350	104.88	8	Pdiff				06 25 32.9		
MWH	Moku'aweowe comp=Z,413µm,22.0s	104.90	58	IAMs_20	IAMs_20			07 09 45.9		
HMH	Humu'ula Sheep comp=Z,354µm,22.0s	104.92	58	IAMs_20	IAMs_20			07 09 59.2		
G21D	G21D	104.92	25	Pdiff	Pdif			06 25 59.4	+26	
G21D				PP	PP			06 30 15.9	+24	
G21D				PS	PS			06 39 16.3	+10	
G21D				SS	SS			06 45 25.1	+41	
H59A	Cadyville baz=20	104.94	344	Pdiff				06 25 31.1		
VT1	Waterbury comp=Z,451µm,20.0s	105.00	343	IAMs_20	IAMs_20			07 20 04.3		
J05D	Fort Rock, OR baz=336	105.04	19	Pdiff				06 25 33.8		
MLH	Mauna Loa comp=Z,416µm,22.0s	105.05	58	IAMs_20	IAMs_20			07 09 50.9		
I62A	Tamworth comp=Z,431µm,20.0s	105.06	342	IAMs_20	IAMs_20			07 19 27.6		
I62A	Tamworth baz=22	105.06	342	Pdiff				06 25 31.6		
G13D	G13D	105.07	25	Pdiff	Pdif			06 25 57.0	+23	
G13D				PP	PP			06 30 15.9	+23	
G13D				PS	PS			06 39 20.1	+12	
AIN	Ainahou comp=Z,431µm,22.0s	105.07	58	IAMs_20	IAMs_20			07 10 12.5		
BOZ	Bozeman (W) baz=345	105.13	12	Pdiff				06 25 30.8		
HUMO	Hull Mountain comp=Z,390µm,22.0s	105.14	21	IAMs_20	IAMs_20			07 15 45.2		
UWE	Uwekahuna comp=Z,429µm,22.0s	105.17	58	IAMs_20	IAMs_20			07 09 52.9		
G54A	Lake Saint Pet baz=16	105.17	348	Pdiff				06 25 31.0		
LONY	Lake Ozonia comp=Z,424µm,22.0s	105.17	345	IAMs_20	IAMs_20			07 18 14.1		
WRMHI	West Rim comp=Z,390µm,22.0s	105.17	58	IAMs_20	IAMs_20			07 10 06.0		
LONY	Lake Ozonia baz=19	105.17	345	Pdiff				06 25 31.0		
OBL	Observatory Le comp=Z,430µm,22.0s	105.18	58	IAMs_20	IAMs_20			07 09 54.1		
UWB	Uwekahuna B comp=Z,382µm,22.0s	105.18	58	IAMs_20	IAMs_20			07 10 06.2		
DLMT	Dillon comp=Z,356µm,19.0s	105.18	13	IAMs_20	IAMs_20			07 19 58.9		
NPH	North Pit comp=Z,382µm,22.0s	105.18	58	IAMs_20	IAMs_20			07 10 05.3		
SBLHI	Steaming Bluff comp=Z,374µm,22.0s	105.18	58	IAMs_20	IAMs_20			07 10 06.3		
SDHHI	Sand Hill comp=Z,421µm,22.0s	105.19	58	IAMs_20	IAMs_20			07 09 54.4		
HATHI	Halema'uma'u T	105.19	58	IAMs_20	IAMs_20			07 09 54.5		
	comp=Z,430µm,22.0s									
BYL	Byron's Ledge comp=Z,421µm,22.0s	105.20	58	IAMs_20	IAMs_20			07 09 55.7		
RIM	Rim comp=Z,421µm,22.0s	105.20	58	IAMs_20	IAMs_20			07 09 54.7		
KKO	Keanakako'i comp=Z,417µm,22.0s	105.20	58	IAMs_20	IAMs_20			07 09 55.8		
HLP	Hilina Pali comp=Z,438µm,22.0s	105.23	58	IAMs_20	IAMs_20			07 10 16.6		
I61A	Oroboro, Fairl baz=21	105.24	343	Pdiff				06 25 33.5		
PUH	Pauahi comp=Z,422µm,22.0s	105.25	58	IAMs_20	IAMs_20			07 09 56.2		
H58A	Gabriels baz=19	105.27	344	Pdiff				06 25 33.6		
NPOC	North of Pu'u comp=Z,421µm,22.0s	105.32	58	IAMs_20	IAMs_20			07 09 59.0		
JCUZ	Jacuzzi comp=Z,426µm,22.0s	105.33	58	IAMs_20	IAMs_20			07 09 59.3		
L02E	Cave Junction baz=334	105.34	21	Pdiff				06 25 33.9		
M16D	M16D	105.38	23	PP	PKiKP			06 30 09.9	+21	
M16D				PS	PS			06 39 32.5	+21	
K04D	Chiloquin, OR baz=336	105.49	20	Pdiff				06 25 31.0		
H57A	Richville baz=18	105.50	345	Pdiff				06 25 31.0		
J63A	Strafford baz=22	105.54	342	Pdiff				06 25 38.4		
I60A	Shoreham baz=20	105.59	344	Pdiff				06 25 34.3		
G05D7	G05D7	105.64	25	Pdiff	Pdif			06 26 00.6	+25	
G05D7				PP	PP			06 30 27.7	+31	
G05D7				PS	PS			06 39 28.8	+16	
L04D	Klamath Falls baz=336	105.69	21	Pdiff				06 25 32.4		
I59A	Olmsteadville baz=20	105.78	344	Pdiff				06 25 35.7		
J62A	Henniker baz=21	105.79	342	Pdiff				06 25 35.7		
J61A	Chester baz=21	105.87	343	Pdiff				06 25 35.9		
G10D	G10D	105.90	23	Pdiff	Pdif			06 26 01.8	+24	
G10D				PP	PP			06 30 23.0	+24	
G10D				PS	PS			06 39 37.5	+21	
COWI	Conover comp=Z,364µm,21.0s	105.91	356	IAMs_20	IAMs_20			07 20 45.2		
SADO	Sadowa comp=Z,16nm,0.8s,baz=25,slow=7.2,SNR=3.0	105.97	348	PP	**PKiKP**			**06 29 56.0**	**+5.7**	
RLMT	Red Lodge comp=Z,413µm,20.0s	105.99	10	IAMs_20	IAMs_20			07 23 27.4		
RLMT	Red Lodge baz=347	105.99	10	Pdiff				06 25 35.0		
YBH	Yreka Blue Hor comp=Z,1.5nm,0.9s,baz=270,slow=3.0,SNR=2.2	106.00	21	Pdiff	**Pdif**			**06 25 39.1**	**+0.7**	
YBH	comp=Z,34nm,1.3s,baz=160,slow=9.2,SNR=3.9			PP	**PP**			**06 29 55.9**	**-4.8**	
YBH	Yreka Blue Hor comp=Z,380µm,21.0s	106.00	21	IAMs_20	IAMs_20			07 16 08.3		
G04D	G04D	106.01	25	Pdiff	Pdif			06 26 06.5	+29	
G04D				PP	PP			06 30 24.2	+24	
G04D				PS	PS			06 39 28.8	+12	
H53A	Bobcaygeon baz=15	106.06	348	Pdiff				06 25 36.2		
I57A	Carthage baz=18	106.06	345	Pdiff				06 25 37.3		
I58A	Old Forge baz=19	106.14	345	Pdiff				06 25 36.4		
J60A	Lant Hill Farm baz=20	106.19	344	Pdiff				06 25 39.6		
K63A	Dunstable comp=Z,428µm,20.0s	106.21	342	IAMs_20	IAMs_20			07 20 03.1		
K63A	Dunstable baz=22	106.21	342	Pdiff				06 25 37.6		
FS44D	FS44D	106.22	23	Pdiff	Pdif			06 26 06.5	+27	
FS44D				PP	PP			06 30 31.3	+29	
FS44D				PS	**PS**			**06 39 31.3**	**+11**	
FS44D				SS	SS			06 45 57.9	+55	
M04C	Macdoel baz=336	106.23	20	Pdiff				06 25 38.7		
J59A	Piesco comp=Z,439µm,21.0s	106.24	344	IAMs_20	IAMs_20			07 19 52.9		
J59A	Piesco baz=19	106.25	344	Pdiff				06 25 36.6		
M02C	Callahan baz=335	106.27	21	Pdiff				06 25 39.8		
G09D	G09D	106.30	23	PP	PKiKP			06 30 25.4	+35	
G09D				PS	PS			06 39 31.3	+10	
G09D				SS	SS			06 45 54.7	+51	
G03D7	G03D7	106.33	24	Pdiff	Pdif			06 26 06.5	+27	
G03D7				PP	PP			06 30 25.4	+23	
G03D7				PS	PS			06 39 36.3	+16	
G03D7				SS	SS			06 45 54.7	+51	
FS41D	FS41D	106.34	23	Pdiff	Pdif			06 26 03.0	+23	
FS41D				PP	PP			06 30 27.7	+25	
FS41D				PS	PS			06 39 30.0	+8.7	
MFID	Camas Ranch comp=Z,301µm,20.0s	106.35	15	IAMs_20	IAMs_20			07 20 17.0		
HRV	Adam Dziewonsk comp=Z,414µm,20.0s	106.39	342	IAMs_20	IAMs_20			07 20 07.8		
HRV	Adam Dziewonsk baz=22	106.39	342	Pdiff				06 25 40.0		
JCC	Jacoby Creek, comp=Z,242µm,18.0s	106.40	22	IAMs_20	IAMs_20			07 17 43.8		
FS16D	FS16D	106.40	23	Pdiff	Pdif			06 26 06.5	+27	
FS16D				PP	PP			06 30 30.1	+27	
FS16D				PS	PS			06 39 38.8	+17	
FS16D				SS	SS			06 45 59.2	+54	
L65A	Cape Cod Natio baz=23	106.40	341	Pdiff				06 25 41.0		
FS13D	FS13D	106.42	23	Pdiff	Pdif			06 26 04.2	+24	
FS13D				PP	PP			06 30 27.7	+24	
FS13D				PS	PS			06 39 28.8	+6.9	
FS13D				SS	SS			06 45 59.2	+54	
K62A	Royalston baz=21	106.42	342	Pdiff				06 25 36.9		
WES	Weston comp=Z,402µm,20.0s	106.44	342	IAMs_20	IAMs_20			07 20 11.1		
BCX	Boston College comp=Z,343µm,20.0s	106.44	342	IAMs_20	IAMs_20			07 20 03.2		
FS09D	FS09D	106.47	23	Pdiff	Pdif			06 26 07.7	+28	
FS09D				PS	PS			06 39 35.0	+13	
FS09D				SS	SS			06 45 59.8	+54	
H17A	Grant Village baz=346	106.48	11	Pdiff				06 25 41.2		
FS10D	FS10D	106.52	23	PP	PKiKP			06 30 28.9	+38	
FS10D				PS	**PS**			**06 39 33.8**	**+11**	
FS10D				SS	SS			06 45 59.2	+53	
HLID	Hailey comp=Z,380µm,19.0s	106.53	14	IAMs_20	IAMs_20			07 19 26.7		
HLID	Hailey baz=342	106.53	14	Pdiff				06 25 40.2		
FS06D	FS06D	106.53	23	PP	PKiKP			06 30 31.3	+40	
FS06D				PS	PS			06 39 41.3	+18	
FS06D				SS	SS			06 45 57.3	+51	
WVOR	Wild Horse Val comp=Z,398µm,22.0s	106.56	18	IAMs_20	IAMs_20			07 16 50.7		
MOD	Modoc Plateau comp=Z,264µm,19.0s	106.58	19	IAMs_20	IAMs_20			07 18 49.4		
FS07D	FS07D	106.61	23	Pdiff	Pdif			06 26 10.1	+29	
FS07D				PP	PP			06 30 31.3	+26	
FS07D				PS	PS			06 39 32.5	+8.5	
FS07D				SS	SS			06 46 00.5	+53	
J57A	Williamstown comp=Z,372µm,20.0s	106.64	345	IAMs_20	IAMs_20			07 20 54.3		
J57A	Williamstown baz=18	106.64	345	Pdiff				06 25 41.5		
K61A	Williamstown baz=20	106.69	343	Pdiff				06 25 40.5		
N02D	Trinity Center baz=335	106.69	21	Pdiff				06 25 43.7		
L64A	Middleborough baz=22	106.72	341	Pdiff				06 25 40.6		
TRY	Troy comp=Z,445µm,20.0s	106.73	344	IAMs_20	IAMs_20			07 21 04.8		
FS04D	FS04D	106.74	23	Pdiff	Pdif			06 26 08.9	+27	
FS04D				PP	PP			06 30 23.0	+17	
FS04D				PS	PS			06 39 40.0	+14	
FS04D				SS	SS			06 46 03.1	+53	
L61B	Northampton baz=21	106.74	343	Pdiff				06 25 40.6		
GLMI	Grayling baz=9.8	106.75	352	Pdiff				06 25 41.6		
FLWY	Flagg Ranch comp=Z,328µm,20.0s	106.76	12	IAMs_20	IAMs_20			07 21 10.8		
K60A	Five Rivers En	106.89	344	Pdiff				06 25 38.8		
	baz=20									
BRYW	Bryant College comp=Z,405µm,20.0s	106.93	342	IAMs_20	IAMs_20			07 20 25.2		
G01D	G01D	106.93	23	Pdiff	Pdif			06 26 10.1	+28	
G01D				PP	PP			06 30 34.9	+28	
G01D				PS	PS			06 39 40.0	+13	
G01D				SS	SS			06 46 05.6	+53	
J56A	Wolcott comp=Z,351µm,21.0s	106.95	346	IAMs_20	IAMs_20			07 20 10.6		
J56A	Wolcott baz=17	106.95	346	Pdiff				06 25 42.0		
SPMN	Marine on St. baz=2.3	106.96	358	Pdiff				06 25 40.0		
K59A	Cooperstown baz=19	106.98	344	Pdiff				06 25 36.9		
L63A	North Scituate comp=Z,385µm,20.0s	107.00	342	IAMs_20	IAMs_20			07 20 27.0		
L63A	North Scituate baz=22	107.00	342	Pdiff				06 25 36.9		
M65A	Busby, Falmout comp=Z,316µm,20.0s	107.01	341	IAMs_20	IAMs_20			07 22 08.2		
M65A	Busby, Falmout baz=23	107.01	341	Pdiff				06 25 41.1		
HIZ	Hauiti comp=Z,308µm,20.0s	107.01	125	IAMs_20	IAMs_20			07 21 23.2		
MOOW	Moose Ponds comp=Z,395µm,22.0s	107.08	12	IAMs_20	IAMs_20			07 19 01.2		
L62A	Suffield comp=Z,275µm,20.0s	107.13	343	IAMs_20	IAMs_20			07 21 12.3		
L62A	Suffield baz=21	107.13	343	Pdiff				06 25 42.4		
K58A	Earlville comp=Z,347µm,20.0s	107.17	345	IAMs_20	IAMs_20			07 21 50.5		
K58A	Earlville baz=18	107.18	345	Pdiff				06 25 40.4		
M64A	Tiverton comp=Z,332µm,19.0s	107.18	341	IAMs_20	IAMs_20			07 20 35.7		
M64A	Tiverton baz=22	107.18	341	Pdiff				06 25 42.5		
L61A	Hillsdale 1, H baz=20	107.21	343	Pdiff				06 25 42.5		
I51A	Listowel baz=13	107.23	349	Pdiff				06 25 42.6		
LOHW	Long Hollow comp=Z,389µm,22.0s	107.24	12	IAMs_20	IAMs_20			07 19 06.3		
SNOW	Snow King Moun comp=Z,424µm,22.0s	107.36	12	IAMs_20	IAMs_20			07 19 20.5		
O02D	Mt. Diablo Mer baz=335	107.39	22	Pdiff				06 25 42.9		
K57A	Scipio Center baz=17	107.40	346	Pdiff				06 25 41.8		
REDW	Red Top Meadow comp=Z,382µm,21.0s	107.43	12	IAMs_20	IAMs_20			07 19 34.6		
M63A	Gales Ferry comp=Z,319µm,21.0s	107.55	342	IAMs_20	IAMs_20			07 20 51.5		
M63A	Gales Ferry baz=21	107.55	342	Pdiff				06 25 44.2		
KHZ	Kahutara comp=Z,377µm,20.0s	107.56	129	IAMs_20	IAMs_20			07 22 26.7		
L60A	Shokan baz=19	107.57	344	Pdiff				06 25 43.2		
L59A	Walton comp=Z,291µm,20.0s	107.58	344	IAMs_20	IAMs_20			07 22 06.2		
L59A	Walton baz=19	107.58	344	Pdiff				06 25 44.3		
O03E	Paynes Creek baz=336	107.60	21	Pdiff				06 25 42.2		
K56A	Middlesex baz=17	107.61	346	Pdiff				06 25 42.2		
RSSD	Black Hills baz=352	107.66	7	Pdiff				06 25 43.3		
SUSD	Miller baz=357	107.70	3	Pdiff				06 25 44.5		
M62A	Hamden baz=21	107.74	343	Pdiff				06 25 43.5		
BINY	Binghamton comp=Z,361µm,21.0s	107.79	345	IAMs_20	IAMs_20			07 21 32.4		
BINY	Binghamton baz=18	107.79	345	Pdiff				06 25 42.6		
L58A	Harry Jones Me baz=18	107.91	345	Pdiff				06 25 44.9		
AHID	Auburn Hatcher comp=Z,251µm,18.0s	107.97	12	IAMs_20	IAMs_20			07 23 24.7		
N63A	Mattituck baz=21	108.06	342	Pdiff				06 25 45.2		
M61A	Granite Spring baz=20	108.09	343	Pdiff				06 25 44.2		
WSPT	Westport, CT comp=Z,425µm,20.0s	108.11	343	IAMs_20	IAMs_20			07 21 49.3		
L57A	Andrews Acres baz=17	108.17	346	Pdiff				06 25 47.5		
L56A	Greenwood comp=Z,423µm,21.0s	108.19	346	IAMs_20	IAMs_20			07 20 35.4		
L56A	Greenwood baz=16	108.19	346	Pdiff				06 25 47.5		
BW06	Boulder Array comp=Z,422µm,21.0s	108.24	11	IAMs_20	IAMs_20			07 20 05.8		
PDAR	Pinedale Array comp=Z,0.1nm,0.4s,baz=40,slow=3.5,SNR=2.0	108.24	11	Pdiff	**Pdif**			**06 25 47.5**	**-1.1**	
PDAR	comp=Z,17nm,0.9s,baz=78,slow=3.5,SNR=7.5			PP	**PP**			**06 30 10.1**	**-7.1**	
PDAR	comp=Z,3.2nm,0.6s,baz=139,slow=4.8,SNR=8.9			PKKPbc	**PKKPbc**			**06 41 06.2**	**-0.3**	
BW06	Boulder Array baz=347	108.24	11	Pdiff				06 25 47.6		
M59A	Waymart baz=18	108.29	344	Pdiff				06 25 44.5		
M60A	Port Jervis baz=19	108.29	344	Pdiff				06 25 44.6		
HOPS	Hopland Field comp=Z,417µm,22.0s	108.36	23	IAMs_20	IAMs_20			07 16 26.6		
N62A	Caumsett State baz=20	108.37	343	Pdiff				06 25 45.7		
PAL	Palisades baz=20	108.42	343	Pdiff				06 25 45.8		
BKZ	Black Stump Fm comp=Z,467µm,22.0s	108.44	125	IAMs_20	IAMs_20			07 22 02.0		
ECSD	EROS Data Cent comp=Z,402µm,20.0s	108.48	1	IAMs_20	IAMs_20			07 25 27.0		
ECSD	EROS Data Cent baz=359	108.48	1	Pdiff				06 25 47.0		
ERPA	Erie comp=Z,361µm,19.0s	108.69	348	IAMs_20	IAMs_20			07 21 43.0		
ERPA	Erie baz=14	108.69	348	Pdiff				06 25 48.4		
N61A	South Mountain baz=19	108.75	343	Pdiff				06 25 48.5		
K22A	Casper baz=350	108.81	9	Pdiff				06 25 46.5		
N60A	Cedar Hill Far baz=19	108.84	344	Pdiff				06 25 47.7		
M57A	Sunshine Farm, comp=Z,415µm,20.0s	108.87	346	IAMs_20	IAMs_20			07 21 21.2		
M57A	Sunshine Farm, baz=17	108.87	346	Pdiff				06 25 47.7		
L53A	Girard baz=14	108.90	348	Pdiff				06 25 46.7		
M56A	Emporium comp=Z,321µm,20.0s	108.95	346	IAMs_20	IAMs_20			07 21 06.4		
M56A	Emporium baz=16	108.95	346	Pdiff				06 25 45.8		
N59A	State Game Lan baz=18	108.96	344	Pdiff				06 25 46.8		
HWUT	Hardware Ranch comp=Z,319µm,20.0s	109.00	13	IAMs_20	IAMs_20			07 24 33.0		
ELK	Elko comp=Z,0.9nm,0.9s,baz=254,slow=1.7,SNR=4.8	109.01	16	Pdiff	**Pdif**			**06 25 54.5**	**+2.5**	
ELK	comp=Z,23nm,1.0s,baz=36,slow=7.9,SNR=3.0			PP	**PP**			**06 30 15.1**	**-7.8**	
RAO	Raoul Island comp=Z,373µm,20.0s	109.08	113	IAMs_20	IAMs_20			07 25 43.0		
AAM	Ann Arbor comp=Z,384µm,22.0s	109.10	351	IAMs_20	IAMs_20			07 19 11.8		
AAM	Ann Arbor baz=11	109.10	351	Pdiff				06 25 49.2		
JFWS	Jewell Farm comp=Z,389µm,20.0s	109.16	356	IAMs_20	IAMs_20			07 21 50.0		
JFWS	Jewell Farm baz=4.7	109.16	356	Pdiff				06 25 51.4		
MCCM	Marconi Confer comp=Z,265µm,19.0s	109.19	23	IAMs_20	IAMs_20			07 18 49.6		
MXZ	Matakaoa Point comp=Z,462µm,22.0s	109.19	123	IAMs_20	IAMs_20			07 20 39.9		
M54A	Oil Creek Stat comp=Z,403µm,19.0s	109.22	348	IAMs_20	IAMs_20			07 22 12.1		
M54A	Oil Creek Stat baz=14	109.22	348	Pdiff				06 25 51.5		
N58A	Sunbury	109.25	345	IAMs_20	IAMs_20			07 21 45.4		

comp=Z,398µm,20.0s
N58A Sunbury 109.25 345 Pdiff 06 25 50.5
baz=17
O60A Telford 109.44 344 Pdiff 06 25 50.9
baz=18
O61A Allentown 109.44 343 Pdiff 06 25 47.7
baz=19
M53A WI Miller and 109.47 348 IAMs_20 IAMs_20 07 23 07.7
comp=Z,338µm,20.0s
M53A WI Miller and 109.47 348 Pdiff 06 25 49.9
baz=14
N57A Milroy 109.52 346 Pdiff 06 25 53.1
baz=16
N56A West Decatur 109.52 346 Pdiff 06 25 47.9
baz=16
O59A Robesonia 109.63 345 Pdiff 06 25 50.2
baz=18
SSPA Standing Stone 109.70 346 IAMs_20 IAMs_20 07 21 32.3
comp=Z,351µm,21.0s
SSPA Standing Stone 109.70 346 Pdiff 06 25 51.4
baz=16
L44A Lake County Fo 109.71 354 Pdiff 06 25 52.4
baz=6.9
N54A Moraine State 109.81 348 Pdiff 06 25 52.6
baz=14
M51A Elyria 109.83 350 Pdiff 06 25 54.7
baz=12
P60A Greenville 109.97 344 IAMs_20 IAMs_20 07 23 30.6
comp=Z,375µm,20.0s
P60A Greenville 109.97 344 Pdiff 06 25 51.9
baz=18
O58A Lewisberry 109.98 345 Pdiff 06 25 48.8
baz=17
O57A Amberson 110.06 346 Pdiff 06 25 51.0
baz=16
DUG Dugway, Tooele 110.09 14 IAMs_20 IAMs_20 07 22 30.1
comp=Z,399µm,19.0s
DUG Dugway, Tooele 110.10 14 Pdiff 06 25 52.1
baz=344
CMB Columbia Colle 110.11 21 IAMs_20 IAMs_20 07 19 55.8
comp=Z,325µm,19.0s
O56A Blue Knob Stat 110.20 346 IAMs_20 IAMs_20 07 22 59.4
comp=Z,328µm,19.0s
O56A Blue Knob Stat 110.20 346 Pdiff 06 25 53.3
baz=16
PHWY Pilot Hill 110.28 8 IAMs_20 IAMs_20 07 24 03.7
comp=Z,439µm,21.0s
SCIA State Center 110.29 358 IAMs_20 IAMs_20 07 19 30.9
comp=Z,373µm,21.0s
SCIA State Center 110.29 358 Pdiff 06 25 53.5
baz=1.9
P59A Jarrettsville 110.36 345 Pdiff 06 25 53.6
baz=18
NVAR Mina Array Bea 110.37 19 Pdiff Pdif 06 25 60.0 +1.8
comp=Z,1.0nm,0.8s,baz=349,slow=3.8,SNR=2.2
NVAR PP PP 06 30 32.5 -0.2
comp=Z,25nm,0.7s,baz=306,slow=1.9,SNR=7.9
NVAR PKKPbc PKKPbc 06 41 00.6 +1.0
comp=Z,4.1nm,0.8s,baz=163,slow=2.9,SNR=4.5
N23A Red Feather La 110.62 9 Pdiff 06 25 55.2
baz=350
O53A New Philadelph 110.72 349 IAMs_20 IAMs_20 07 23 44.8
comp=Z,374µm,19.0s
O53A New Philadelph 110.72 349 Pdiff 06 25 54.3
baz=13
BGNE Belgrade 110.76 2 Pdiff 06 25 55.4
baz=357
Q61A Milford 110.78 343 Pdiff 06 25 56.5
baz=19
P57A Homestead Farm 110.83 346 IAMs_20 IAMs_20 07 22 17.3
comp=Z,377µm,21.0s
P57A Homestead Farm 110.83 346 Pdiff 06 25 54.5
baz=16
MLAC Mammoth, Mammo 110.96 20 Pdiff 06 26 00.0
baz=338
P56A Dayton Farm, R 110.99 346 Pdiff 06 26 00.1
baz=16
OGNE Ogallala 110.99 5 Pdiff 06 25 58.0
baz=354
O20A White River Ci 111.02 11 Pdiff 06 25 57.0
baz=348
ACSO Alum Creek Sta 111.03 350 IAMs_20 IAMs_20 07 23 14.9
comp=Z,372µm,20.0s
ACSO Alum Creek Sta 111.03 350 Pdiff 06 25 56.0
baz=12
MCWV Mont Chateau 111.04 347 Pdiff 06 25 58.1
baz=14
R11A Troy Canyon, C 111.19 17 Pdiff 06 25 57.3
baz=341
Q58A Fox Den Farm, 111.28 345 Pdiff 06 25 59.6
baz=17
Q57A Strasburg 111.35 346 Pdiff 06 25 54.5
baz=16
SFIN Lafayette 111.42 353 Pdiff 06 25 56.7
baz=7.7
HDIL Hopedale 111.44 355 Pdiff 06 25 58.8
baz=5.7
P52A Corning 111.48 349 IAMs_20 IAMs_20 07 23 57.8
comp=Z,409µm,20.0s
P52A Corning 111.48 349 Pdiff 06 25 57.8
baz=12
Q56A Snyder Ridge, 111.51 347 IAMs_20 IAMs_20 07 23 21.0
comp=Z,311µm,18.0s
Q56A Snyder Ridge, 111.51 347 Pdiff 06 25 57.9
baz=15
TIN Tinemaha, Big 111.67 20 Pdiff 06 25 59.3
baz=338
ISCO Idaho Springs 111.74 9 IAMs_20 IAMs_20 07 26 00.4
comp=Z,390µm,19.0s
ISCO Idaho Springs 111.74 9 Pdiff 06 25 58.3
baz=350
CBN Corbin Frederi 111.92 345 Pdiff 06 26 02.9
baz=17
P49A Miami Univ. Ec 111.97 351 Pdiff 06 26 01.9
baz=10.0
GRAC Grapevine Rang 111.98 19 Pdiff 06 26 00.9
baz=339
VOG Valley Oaks Go 112.00 21 Pdiff 06 25 59.9
baz=337
R57A Stanardsville 112.08 346 Pdiff 06 26 02.1
baz=16
Q53A Leroy 112.13 348 Pdiff 06 26 03.3
baz=13
R56A Bull Pasture M 112.16 347 Pdiff 06 26 00.2
baz=15
R58B Mineral 112.26 345 Pdiff 06 25 58.3
baz=16
CWC Cottonwood Cre 112.28 20 Pdiff 06 26 02.6
baz=338
TPNV Topopah Spring 112.33 18 Pdiff 06 26 01.6
baz=340
R55A Marlinton 112.43 347 IAMs_20 IAMs_20 07 24 53.4
comp=Z,380µm,20.0s
R55A Marlinton 112.43 347 Pdiff 06 26 02.8
baz=14
VES Vestal, Richgr 112.53 21 Pdiff 06 26 00.9
baz=337
FURC Furnace Creek, 112.61 19 Pdiff 06 26 02.1
baz=340
Q24A Divide 112.62 8 Pdiff 06 26 01.1
baz=351
S57A Dark Hollow, R 112.69 346 IAMs_20 IAMs_20 07 24 09.4
comp=Z,363µm,18.0s
S57A Dark Hollow, R 112.69 346 Pdiff 06 26 03.3
baz=16
R54A Victor 112.69 348 Pdiff 06 26 04.3
baz=14
SMMC Simmler 112.72 22 Pdiff 06 26 05.5
baz=336
KSCO Kaye Shedlock' 112.86 6 Pdiff 06 26 05.7
baz=353
ISA Isabella, Lake 112.88 20 Pdiff 06 26 07.9
baz=338
S56A Natural Bridge 112.90 347 Pdiff 06 26 05.8
baz=15
KSU1 Kansas State U 113.11 1 IAMs_20 IAMs_20 07 25 56.5
comp=Z,423µm,22.0s
KSU1 Kansas State U 113.11 1 Pdiff 06 26 09.3
baz=359
S54A Dingess, Beckl 113.12 348 IAMs_20 IAMs_20 07 24 54.3
comp=Z,365µm,21.0s
S54A Dingess, Beckl 113.12 348 Pdiff 06 26 09.3
baz=13
PKM Mcpherson Peak 113.17 22 Pdiff 06 26 07.4
baz=337
ARVC Arvin 113.27 21 Pdiff 06 26 09.7
baz=338
CBKS Cedar Bluff 113.27 4 IAMs_20 IAMs_20 07 26 56.9
comp=Z,340µm,20.0s
CBKS Cedar Bluff 113.28 4 Pdiff 06 26 09.6
baz=356
LRMC Laurel Mtn Rad 113.29 20 Pdiff 06 26 08.7
baz=339
XMAS Kiritimati 113.30 74 IAMs_20 IAMs_20 07 18 20.1
comp=Z,275µm,20.0s
SHOC Shoshone, Teco 113.31 18 Pdiff 06 26 07.6
baz=340
WCI Wyandotte Cave 113.45 352 Pdiff 06 26 06.8
baz=8.6
BLA Blacksburg 113.52 347 IAMs_20 IAMs_20 07 25 35.9
comp=Z,378µm,19.0s
BLA Blacksburg 113.52 347 Pdiff 06 26 10.1
baz=14
S22A 4UR Ranch, Cre 113.58 10 Pdiff 06 26 12.3
baz=349
SBC Santa Barbara 113.61 22 Pdiff 06 26 09.3
baz=337
EDW2 Edwards Air Fo 113.75 20 Pdiff 06 26 10.6
baz=338
OSI Osito Audit: C 113.77 21 Pdiff 06 26 10.6
baz=338
SDCO Great Sand Dun 113.77 9 Pdiff 06 26 11.6
baz=350
MVCO Mesa Verde 113.83 12 IAMs_20 IAMs_20 07 28 06.8
comp=Z,267µm,19.0s
MVCO Mesa Verde 113.83 12 Pdiff 06 26 11.7
baz=347
TUQ Turquoise Moun 113.84 18 Pdiff 06 26 11.8
baz=340
SCZ2 Santa Cruz Isl 114.05 22 Pdiff 06 26 07.0
baz=337
CCM Cathedral Cave 114.05 357 Pdiff 06 26 10.1
baz=3.9
RRX Edison Barstow 114.06 19 Pdiff 06 26 09.1
baz=339
DECC Green Verdugo 114.23 21 Pdiff 06 26 14.6
baz=338
HEC Hector,Ludlow 114.29 19 Pdiff 06 26 14.7
baz=340
PASC Pasadena Art C 114.35 21 IAMs_20 IAMs_20 07 19 23.2
comp=Z,272µm,22.0s
BFSC Mount Baldy Ra 114.45 20 Pdiff 06 26 14.0
baz=338
T25A Trinidad 114.51 8 IAMs_20 IAMs_20 07 24 32.8
comp=Z,314µm,20.0s
T25A Trinidad 114.51 8 Pdiff 06 26 13.0
baz=351
VNDA Vanda 114.52 167 Pdiff Pdif 06 26 24.6 +9.5
comp=Z,0.8nm,0.7s,baz=106,slow=14,SNR=5.7
VNDA PKP PKiKP 06 30 05.8 +0.5
comp=Z,5.1nm,0.8s,baz=229,slow=2.8,SNR=3.1
VNDA PP PP 06 31 09.0 +6.4
comp=Z,17nm,0.9s,baz=257,slow=5.3,SNR=4.0
VNDA PKKPbc PKKPab 06 40 51.8 +3.5
comp=Z,11nm,1.1s,baz=0.2,slow=1.6,SNR=3.7
VNDA Vanda 114.52 167 Pdif 06 26 14.2 -0.9
GMRC Granite Mounta 114.53 18 Pdiff 06 26 14.1
baz=340
BBRC Big Bear Solar 114.65 20 Pdiff 06 26 16.5
baz=339
FMP Fort Macarthur 114.74 21 Pdiff 06 26 15.6
baz=338
SNCC San Nicolas Is 114.77 22 Pdiff 06 26 17.8
baz=337
NEE2 Needles Airpor 114.83 17 Pdiff 06 26 17.8
baz=341
CNNC Cliffs of the 114.86 344 IAMs_20 IAMs_20 07 23 48.7
comp=Z,401µm,22.0s
CNNC Cliffs of the 114.87 344 Pdiff 06 26 16.9
baz=17
WUAZ Wupatki 114.90 14 Pdiff 06 26 19.0
baz=344
CIS Catalina Islan 114.99 21 Pdiff 06 26 19.2
baz=338
BELC Belle Mtn. Jos 115.17 19 Pdiff 06 26 21.6
baz=340
MURC Murrieta 115.19 20 Pdiff 06 26 20.6
baz=339
IRM Iron Mountain 115.26 18 Pdiff 06 26 20.8
baz=341
SCI2 San Clemente I 115.33 22 Pdiff 06 26 20.9
baz=337
PDMCI Parker Dam,Lak 115.39 17 Pdiff 06 26 11.6
baz=342
PFO Pinyon Flats O 115.39 19 Pdiff Pdif 06 26 26.7 +6.3
comp=Z,5.5nm,1.1s,baz=201,slow=3.0,SNR=3.9
PFO Pinyon Flats O 115.39 19 IAMs_20 IAMs_20 07 20 37.8
comp=Z,340µm,22.0s
PFO Pinyon Flats O 115.40 19 Pdiff 06 26 13.7
baz=339
TPFO Pinon Flats 115.40 19 Pdiff 06 26 14.8
baz=339
CLTN Cedars of Leba 115.57 352 PKPdf 06 30 08.7 0.0
SBA Scott Base 115.62 167 IAMs_20 IAMs_20 07 21 07.4
comp=Z,352µm,19.0s
W18A Petrified Fore 115.63 13 Pdiff 06 26 18.3
baz=346
BC3 Big Chuckawall 115.64 19 Pdiff 06 26 15.2
baz=340
SNAA Sanae 115.66 201 PKPdf PKPdf 06 30 07.6 -0.1
SNAA Sanae 115.66 201 PP PP 06 31 11.7 +0.9
SNAA Sanae 115.66 201 PKKPbc PKKPbc 06 40 46.1 +3.8
comp=Z,14nm,0.8s,baz=222,slow=7.2,SNR=6.7
SNAA Sanae 115.66 201 PKiKP PKiKP 06 30 06.1 -1.6
SNAA Sanae 115.66 201 PKiKP 06 30 06.1 -1.6
SNAA IAMs_20 IAMs_20 07 22 33.5
comp=Z,250µm,18.0s
WVT Waverly 115.70 353 PKiKP PKiKP 06 30 07.6 -1.3
WVT Waverly 115.70 353 PKiKP 06 30 07.6 -1.3
WVT Waverly 115.70 353 Pdiff 06 26 16.3
baz=7.3
KMSC Kings Mountain 115.70 347 PKiKP 06 30 06.8 -2.2
KMSC Kings Mountain 115.70 347 Pdiff 06 26 17.4
baz=14
U32A Winter Ranch, 115.74 3 IAMs_20 IAMs_20 07 25 19.2
comp=Z,273µm,19.0s
U40A Yellville 115.82 358 Pdiff 06 26 19.7
baz=2.4
109C Camp Elliot, M 115.87 20 Pdiff 06 26 18.8
baz=339
CPCT Cooper Cave 115.95 350 PKPdf 06 30 09.8 +0.3
LCAR Lake Charles 116.03 356 PKiKP 06 30 07.4 -2.1
MONP2 Monument Peak 116.08 20 Pdiff 06 26 19.2
baz=339
PAULI Pauline 116.11 348 PKiKP 06 30 08.6 -1.2
SWSC Sam W. Stewart 116.21 19 Pdiff 06 26 21.6
baz=340
Y59A Loris 116.29 345 PKiKP 06 30 08.9 -1.2
TUL1 Leonard 116.30 0 Pdiff 06 26 19.6
baz=360
W50A Signal Mountai 116.31 351 PKiKP 06 30 08.3 -2.0
SWET Sewanee 116.38 351 PKiKP 06 30 09.4 -1.0
ANMO Albuquerque 116.38 10 Pdiff Pdif 06 26 35.6 +11
comp=Z,1.7nm,0.6s,baz=304,slow=2.0,SNR=7.9
ANMO PKP PKiKP 06 30 10.2 -0.4
comp=Z,11nm,1.1s,baz=349,slow=5.9,SNR=3.4
ANMO PP PP 06 31 28.3 +13
comp=Z,72nm,1.1s,baz=353,slow=5.9,SNR=6.0
ANMO PKKPbc PKKPbc 06 40 42.7 +3.3
comp=Z,12nm,1.0s,baz=151,slow=10,SNR=2.8
ANMO Albuquerque 116.38 10 IAMs_20 IAMs_20 07 25 08.3
comp=Z,323µm,19.0s
ANMO Albuquerque 116.38 10 Pdiff 06 26 18.7
baz=349
OK029 Liberty Lake 116.38 2 IAMs_20 IAMs_20 07 25 45.2
comp=Z,390µm,22.0s
GLA Glamis 116.39 18 PKiKP PKiKP 06 30 09.0 -1.4
GLA Glamis 116.39 18 PKiKP 06 30 09.0 -1.4
GLA Glamis 116.39 18 Pdiff 06 26 21.9
baz=341
IKP In-Ko-Pah, Jac 116.40 20 Pdiff 06 26 25.1
baz=340
BCOK Bluff Creek, N 116.52 2 PKPdf 06 30 12.3 +1.8
JSC Jenkinsville 116.52 347 PKiKP PKPdf 06 30 10.2 -0.4
JSC Jenkinsville 116.52 347 PKPdf 06 30 10.2 -0.4
OK025 Westminster Rd 116.60 2 PKPdf 06 30 09.5 -1.2
OK025 IAMs_20 IAMs_20 07 25 53.0
comp=Z,389µm,21.0s
Y57A Sumter 116.60 346 PKPdf 06 30 09.9 -0.8
OKCFA Oklahoma City 116.76 2 PKPdf 06 30 10.8 -0.3
W45A Hickory Valley 116.79 354 PKPdf 06 30 10.5 -0.5
X51A Calhoun 116.87 350 PKPdf 06 30 10.0 -1.2
FNO Franklin 116.92 2 PKPdf PKPdf 06 30 10.6 -0.8
W41B Gary Mavity, V 116.97 357 Pdiff 06 26 24.0
baz=3.0
VNA2 Neumayer--Watz 116.98 202 PKPdf PKiKP 06 30 11.4 +1.2
VNA2 Neumayer--Watz 116.98 202 PP PP 06 31 21.2 +1.2
W39A Magazine 117.00 359 IAMs_20 IAMs_20 07 27 44.6
comp=Z,341µm,20.0s
W39A Magazine 117.00 359 Pdiff 06 26 22.0
baz=1.5
Y22D IRIS PASSCAL I 117.16 11 IAMs_20 IAMs_20 07 25 30.0
comp=Z,337µm,20.0s
Y22D IRIS PASSCAL I 117.16 11 Pdiff 06 26 26.5
baz=348
VNA1 Neumayer--Stat 117.23 202 PKPdf PKiKP 06 30 11.1 +0.4
VNA1 Neumayer--Stat 117.23 202 PP PP 06 31 23.4 +1.7
X48A Hartselle 117.27 352 PKPdf PKPdf 06 30 11.1 -0.9
WMOK Wichita Mounta 117.38 3 IAMs_20 IAMs_20 07 30 38.8
comp=Z,330µm,19.0s
WMOK Wichita Mounta 117.39 3 Pdiff 06 26 23.8
baz=357
NHSC New Hope 117.43 346 IAMs_20 IAMs_20 07 27 19.6
comp=Z,356µm,20.0s
Y52A Lilburn 117.43 349 PKPdf 06 30 09.5 -2.9
NHSC New Hope 117.43 346 Pdiff 06 26 27.0
baz=15
X43A Marvell 117.55 356 Pdiff 06 26 25.5
baz=4.4
X37A Clayton 117.62 0 PKPdf 06 30 12.2 -0.5
MIAR Mount Ida 117.64 358 PKiKP PKPdf 06 30 11.4 -1.3
MIAR Mount Ida 117.64 358 PKPdf PKPdf 06 30 11.4 -1.3
MIAR Mount Ida 117.64 358 Pdiff 06 26 28.0
baz=1.7
X40A Basin Creek Fa 117.68 358 IAMs_20 IAMs_20 07 24 49.6
comp=Z,340µm,22.0s
X40A Basin Creek Fa 117.68 358 Pdiff 06 26 27.0
baz=2.4
VNA3 Neumayer Olymp 117.75 201 PKPdf PKiKP 06 30 11.7 -0.1
VNA3 Neumayer Olymp 117.75 201 PP PP 06 31 25.8 +0.4
GOGA Godfrey 117.78 349 PKiKP PKPdf 06 30 12.7 -0.3
GOGA Godfrey 117.78 349 PKPdf 06 30 12.7 -0.3
GOGA Godfrey 117.78 349 IAMs_20 IAMs_20 07 27 26.5
comp=Z,304µm,19.0s
GOGA Godfrey 117.78 349 Pdiff 06 26 26.1
baz=12
Y49A Blount Mountai 117.78 352 PKPdf 06 30 11.1 -2.0
MSTX Muleshoe 117.83 7 Pdiff 06 26 27.3
baz=353
QSPA South Pole Qui 117.93 180 Pdiff Pdif 06 26 51.0 +20
comp=Z,2.3nm,0.9s,baz=222,slow=1.5,SNR=16
QSPA PKP PKPdf 06 30 11.3 -0.9
comp=Z,28nm,0.9s,baz=269,slow=2.5,SNR=6.9
QSPA PP PP 06 31 42.9 +16
comp=Z,61nm,0.9s,baz=280,slow=2.4,SNR=3.5
QSPA PKKPbc PKKPbc 06 40 34.5 -0.2
comp=Z,33nm,0.9s,baz=73,slow=1.6,SNR=4.4
QSPA South Pole Qui 117.93 180 PKPdf PKPdf 06 30 11.7 -0.5
214A Organ Pipe Nat 117.96 17 Pdiff 06 26 28.7
baz=343
TUC Tucson 118.11 15 IAMs_20 IAMs_20 07 26 31.4
comp=Z,302µm,19.0s
TUC Tucson 118.11 15 Pdiff 06 26 31.1
baz=345
Z51A Franklin 118.14 350 PKPdf 06 30 12.8 -1.0
154A Montrose 118.49 348 PKPdf 06 30 13.4 -1.0
121A Cookes Peak, D 118.51 12 Pdiff 06 26 31.9
baz=348
Z47A Carrollton 118.62 353 PKPdf PKPdf 06 30 13.5 -1.1
LRAL Lakeview Retre 118.67 352 Pdiff 06 26 31.1
baz=8.3
152A Waverly Hall 118.71 350 PKPdf 06 30 13.4 -1.4
Z35A Perchaven, San 118.85 2 PKPdf PKPdf 06 30 12.7 -2.4
Z41A Richland Creek 118.90 358 Pdiff 06 26 33.7
baz=2.5
GDL2 Guadalupe Moun 119.38 9 PKPdf 06 30 15.4 -0.9
143A Socs Landing, 119.39 356 PKiKP 06 30 16.9 +0.8
ABTX Abilene, Hawle 119.44 4 Pdiff 06 26 33.7
baz=356
EPT El Paso 119.48 11 IAMs_20 IAMs_20 07 30 33.4
comp=Z,257µm,19.0s
250A Grady 119.61 351 PKPdf 06 30 16.1 -0.5
TIGA Tifton 119.72 348 PKPdf 06 30 15.1 -1.7
TIGA Tifton 119.72 348 Pdiff 06 26 34.2
baz=12
MNTX Cornudas Mount 119.73 10 Pdiff 06 26 33.1
baz=350
VBMS Vicksburg 119.81 355 Pdiff 06 26 37.6
baz=1.8
352A Blakely 119.91 350 PKPdf 06 30 17.0 -0.2
456A Hilliard 120.12 347 PKPdf 06 30 16.8 -0.7
WHTX Lake Whitney, 120.18 2 Pdiff 06 26 37.2
baz=358
NATX Nacogdoches 120.44 359 PKPdf 06 30 16.5 -1.7
NATX Nacogdoches 120.44 359 Pdiff 06 26 36.7
baz=0.6
BRAL Brewton 120.51 352 Pdiff 06 26 40.1
baz=8.4
346A Big Creek Wild 120.55 354 PKPdf 06 30 17.9 -0.5
342A Flagon Creek P 120.76 357 PKPdf 06 30 16.5 -2.2
NBCL Cascavel-CE 120.94 283 eP PKiKP 06 30 21.4 +1.8
NBLI Livramento-PB 121.31 279 eP PKiKP 06 30 21.9 +1.5
435B Jarrell 121.38 2 PKPdf 06 30 19.8 -0.2
435B Jarrell 121.38 2 Pdiff 06 26 43.9
baz=358
441A DeRidder 121.41 358 PKPdf 06 30 18.6 -1.4
656A Willston 121.54 347 PKPdf 06 30 18.9 -1.5
JCT Junction City 121.56 5 PKiKP PKPdf 06 30 19.9 -0.6
JCT Junction City 121.56 5 PKPdf PKPdf 06 30 19.9 -0.6
JCT IAMs_20 IAMs_20 07 29 21.3
comp=Z,303µm,19.0s
JCT Junction City 121.56 5 Pdiff 06 26 46.4
baz=355
NBAN Anadia - AL 121.78 276 eP PKiKP 06 30 21.4 +0.2
TXAR Lajitas Array 122.30 9 Pdiff Pdif 06 27 03.9 +13
comp=Z,0.7nm,0.8s,baz=25,slow=4.1,SNR=7.0
TXAR PKP PKPdf 06 30 21.5 -0.5
comp=Z,20nm,0.8s,baz=167,slow=0.2,SNR=16
TXAR PP PP 06 31 51.3 -4.6
comp=Z,31nm,0.8s,baz=40,slow=1.5,SNR=1.6
TXAR PKKPbc PKKPbc 06 40 17.4 -0.1
comp=Z,9.2nm,0.9s,baz=154,slow=3.7,SNR=5.9
DWPF Disney Wildern 122.53 345 Pdiff 06 26 51.6
baz=14
NBPB Pedra_Branca-C 122.71 282 eP PKPdf 06 30 21.3 -1.7
NBMA Muriti-CE 122.89 280 eP PKiKP 06 30 23.4 -0.1
NBTA Tacaratu-PE 123.10 278 eP PKiKP 06 30 24.4 +0.5
BELA Belgrano 2 123.36 193 PKPdf PKPdf 06 30 21.2 -1.2
NBLA Lagarto - SE 123.70 276 eP PKPdf 06 30 23.9 -0.9
NBPS Pedro II - PI 123.73 285 eP PKiKP 06 30 25.2 0.0
ANWB Willy Bob 124.10 321 eP PKPdf 06 30 24.9 -0.6
ANWB Willy Bob 124.10 321 PKPdf PKPdf 06 30 24.5 -1.0
HPIG 124.35 11 PKPdf 06 30 25.1 -1.0
ANBD Bethesda, Anti 124.59 320 eP PKiKP 06 30 26.7 -0.1
ABVI Anegada Island 124.62 324 PKPdf 06 30 25.2 -1.3
BPA Boggy Peak 124.64 320 eP PKPdf 06 30 25.9 -0.8
H05N1 Guadeloupe/Mar 124.77 319 PKP PKiKP 06 30 27.2 0.0
ABD La Joyeuse, An 124.89 319 eP PKiKP 06 30 30.1 +2.7
SKI Saint Kitts 124.91 321 eP PKiKP 06 30 29.5 +2.1
SEUS St. Eustatius 124.91 322 eP PKiKP 06 30 55.6 +28
MLYT Lee's Yard 125.09 320 eP PKiKP 06 30 27.9 +0.1
MAGL Barre de l'ile 125.19 319 eP PKiKP 06 30 28.7 +0.8
STVI Saint Thomas 125.26 324 PKPdf 06 30 27.2 -0.5
CBE Ff, Capester 125.28 319 eP PKPdf 06 30 27.6 -0.2
GRTK Grand Turk 125.41 332 PKPdf PKPdf 06 30 27.8 -0.1
CUPR Culebra, Puert 125.46 324 PKPdf PKPdf 06 30 28.1 0.0
TDBA Terre de Bas, 125.47 319 eP PKiKP 06 30 29.9 +1.3
TBG Guadaloupe-3 125.48 319 eP PKiKP 06 30 30.1 +1.6
DLPL La Plaine 125.66 318 eP PKiKP 06 30 29.4 +0.4
CDVI St. Croix 125.66 323 eP PKPdf 06 30 28.6 +0.1
CDVI St. Croix 125.66 323 PKPdf PKPdf 06 30 28.0 -0.5
DSLB Salisbury 125.67 319 eP PKiKP 06 30 29.4 +0.5
NBPN Ponto Novo - B 125.75 277 eP PKPdf 06 30 28.8 +0.1
GCPR Guaynabo City 125.87 325 PKPdf 06 30 27.3 -1.6
ILAM Ilet Lapin Mar 125.87 318 eP PKiKP 06 30 32.8 +3.4
FDF Fort de France 126.07 318 eP PKiKP 06 30 30.0 +0.2
FDF Fort de France 126.07 318 PKiKP PKPdf 06 30 28.8 -0.6
FDF MLR MLR
comp=Z,93µm,21.0s
FDF Fort de France 126.07 318 PKPdf PKPdf 06 30 28.8 -0.6
SJG San Juan 126.07 325 eP PKiKP 06 30 29.9 +0.2
SJG San Juan 126.07 325 PKiKP PKPdf 06 30 28.1 -1.1
SJG MLR MLR
comp=Z,127µm,22.0s
SJG San Juan 126.07 325 PKPdf 06 30 28.1 -1.1
SJG San Juan 126.07 325 eP PKPdf 06 30 22.5 -6.8
PDPR Patillas Dam, 126.08 325 PKPdf 06 30 29.0 -0.3
MPOM Morne Pois Mar 126.12 317 eP PKPdf 06 30 29.3 -0.1
H05S1 Guadeloupe/Mar 126.12 317 PKP PKiKP 06 30 30.3 +0.5
H05S1 PP PP 06 32 28.0 +5.6

SNR=7.6
AOPR Arecibo Observ 126.17 326 eP PKPdf 06 30 29.1 -0.4
AOPR Arecibo Observ 126.17 326 PKPdf 06 30 28.3 -1.2
BIM Bigot 126.19 318 eP PKPdf 06 30 29.4 -0.2
AGPR Aguadilla, PR 126.25 326 PKPdf 06 30 29.1 -0.5
BBSP Saint Philip 126.30 315 eP PKiKP 06 31 03.3 +33
BBGH Gun Hill 126.33 315 eP PKiKP 06 31 03.0 +33
OBIP Obispado Ponce 126.36 325 PKPdf PKPdf 06 30 28.8 -1.0
GDU01 Guandu, BA 126.45 273 eP PKiKP 06 30 30.8 +0.4
ICMP Isla Caja de M 126.45 325 PKPdf PKPdf 06 30 28.8 -1.2
MPR Mayaguez 126.48 326 PKPdf 06 30 29.2 -0.9
SLBI Saint Lucia, B 126.52 317 eP PKiKP 06 30 30.7 0.0
SLBS Sierra La Lagu 126.58 17 IAMs_20 IAMs_20 07 28 10.8
comp=Z,277µm,21.0s
MLPR Magueyes Islan 126.64 326 PKPdf PKPdf 06 30 29.1 -1.3
SLB Belfond 126.72 317 eP PKiKP 06 30 33.2 +2.1
MCLT Moule a Chique 126.75 317 eP PKPdf 06 30 30.6 0.0
PCDR Punta Cana, DR 126.82 328 PKPdf PKPdf 06 30 29.3 -1.4
NBIT Itapeh - BA 126.82 272 eP PKiKP 06 30 31.0 -0.2
CMC01 Camacan, BA 127.07 272 eP PKPdf 06 30 29.7 -1.4
SVB Belmont 127.28 317 eP PKiKP 06 30 33.7 +1.5
SDDR Presa de Saban 127.73 331 IAMs_20 IAMs_20 07 33 25.7
comp=Z,238µm,20.0s
SDDR Presa de Saban 127.73 331 eP PKPdf 06 30 26.4 -6.1
GUA01 Guaratinga, BA 127.81 270 eP PKPdf 06 30 30.1 -2.4
GCMP Grenada, Carri 127.99 316 eP PKiKP 06 30 33.3 -0.3
TMAB Tom-Au,PA,Br 128.24 291 eP PKPdf 06 30 33.1 -0.5
TOSP Speyside 128.35 315 eP PKiKP 06 30 36.0 +1.7
GTBY Guantanamo Bay 128.40 336 eP PKPdf 06 30 32.0 -1.6
GRGR Grenville 128.41 316 eP PKPdf 06 30 33.9 +0.1
NAN01 Guarapari, ES 128.57 269 eP PKPdf 06 30 32.9 -1.1
TPR Prospect 128.59 315 eP PKiKP 06 30 37.3 +2.4
PPT Papeete 129.23 90 PKP PKPdf 06 30 32.7 -2.6
comp=Z,58nm,1.1s,baz=21,slow=7.8,SNR=3.7
PPT2 Papeete2 129.24 90 ePKIKP PKiKP 06 30 36.4 +0.3
comp=Z,247nm,1.3s
PPT2 Papeete2 129.24 90 eSS SS 06 50 03.0 -2.4
comp=Z,515µm,31.0s
PPT2 Papeete2 129.24 90 eLQ LQ 07 05 41.7
comp=Z,298µm,30.2s
PPT2 eLR LR 07 11 12.5
comp=Z,615µm,23.0s
PPTF Pamatai, Papee 129.25 90 IAMs_20 IAMs_20 07 24 01.0
comp=Z,339µm,22.0s
PAE Paea 129.26 90 ePKIKP PKiKP 06 30 36.3 +0.3
comp=Z,48nm,1.3s
RIB01 Linhares ES 129.34 267 eP PKPdf 06 30 34.0 -1.4
TRN Trinidad (W) 129.40 315 eP PKiKP 06 30 37.3 +0.8
TIAR Tiarei 129.43 90 ePKIKP PKiKP 06 30 36.4 0.0
comp=Z,19nm,1.0s
BSFB Barra de Sao F 129.57 268 eP PKPdf 06 30 35.2 -0.7
TPP Pointe-a-Pierr 129.68 315 eP PKPdf 06 30 29.4 -6.8
VAH Vaihoa 130.04 87 ePKIKP PKiKP 06 30 37.7 +0.1
comp=Z,230nm,1.2s
ALF01 Guarapari-ES 130.09 266 eP PKiKP 06 30 37.4 -0.2
CBCY The Bluff, Cay 130.10 341 PKPdf PKPdf 06 30 36.6 -0.3
MCPB Macapa, AP 130.28 296 eP PKPdf 06 30 37.6 +0.2
HOPE Hope Point 130.41 221 IAMs_20 IAMs_20 07 28 11.5
comp=Z,194µm,19.0s
SDBA SAO DESIDERIO 130.57 278 eP PKiKP 06 30 38.4 -0.5
MEH Mehetia 130.68 90 ePKIKP PKiKP 06 30 39.6 +0.7
comp=Z,49nm,1.2s
STH Stony Hill 130.71 337 i P PKiKP 06 30 40.6 +1.6
STH i S SKPbc 06 33 57.3 -4.4
HOJ Hope 130.75 336 i P PKiKP 06 30 44.9 +5.8
MTDJ Mount Denham 130.82 337 PKPdf PKPdf 06 30 36.9 -1.6
MTDJ Mount Denham 130.82 337 eP PKiKP 06 30 39.1 -0.3
H06S1 SOCORRO T 131.00 20 PKP PKPdf 06 30 36.6 -2.0
H06S1 PP PP 06 33 10.3 +17
SNR=2.8
NEJ Negril 131.06 338 i P PKiKP 06 30 40.3 +0.5
MCJ Malvern 131.15 338 i P PKiKP 06 30 41.1 +1.1
JANB Januaria 131.18 274 eP PKiKP 06 30 40.0 0.0
SMTB Santa Maria do 131.24 284 eP PKiKP 06 30 40.4 +0.2
TBI Tubuai 131.29 97 ePKIKP PKiKP 06 30 39.8 -0.1
comp=Z,337nm,1.0s
TBI Tubuai 131.29 97 eSS SS 06 50 28.7 -1.7
comp=Z,537µm,33.0s
TBI Tubuai 131.29 97 eLQ LQ 07 06 24.7
comp=Z,513µm,37.8s
TBI eLR LR 07 12 08.0
comp=Z,603µm,30.0s
CAM01 Campos-RJ 131.30 265 eP PKiKP 06 30 40.4 +0.4
TEIG Tepich 131.45 351 eP PKPdf 06 30 39.6 +0.1
PRPB Paraiupebas 131.75 288 eP PKiKP 06 30 40.9 -0.3
DIAM Diamantina, MG 131.87 270 eP PKPdf 06 30 40.0 -0.5
DUB01 Friburgo-RJ 132.01 265 eP PKiKP 06 30 43.0 +1.5
MALB Monte Alegre 132.93 296 eP PKiKP 06 30 43.3 -0.3
PEXB Peixe 133.40 280 eP PKPdf 06 30 43.4 +0.1
MAN01 Angra dos Reis 133.66 264 eP PKiKP 06 30 45.1 +0.3
TAOE Nuku Hiva Isla 133.66 74 eSS SS 06 50 54.0 -5.1
comp=Z,559µm,32.2s
TAOE Nuku Hiva Isla 133.66 74 eLR LR 07 13 14.2
comp=Z,583µm,21.8s
URIC Uribia, Colomb 134.43 327 eP PKPdf 06 30 44.6 -0.6
URIC Uribia, Colomb 134.43 327 eP PKPdf 06 30 42.1 -3.1
DABV Dabajuro 134.43 325 eP PKPdf 06 30 44.7 -0.6
BDFB Brasilia 134.67 276 PKP PKPdf 06 30 45.8 +0.1
comp=Z,25nm,0.9s,baz=65,slow=5.2,SNR=7.2
BAUV El Baul 134.70 320 eP PKPdf 06 30 45.8 0.0
BOAV Boa Vista 134.87 307 eP PKiKP 06 30 46.8 -0.7
PARB Paraibuna 135.25 264 eP PKiKP 06 30 47.5 -0.6
CRJC Cerrejon, Guaj 135.45 328 eP PKPdf 06 30 43.9 -3.4
SNDB Serra Nova Dou 135.93 282 eP PKPdf 06 30 47.9 0.0
SMRC Santa Marta, M 135.94 330 eP PKPdf 06 30 43.9 -4.2
VAO Valinhos 136.34 265 eP PKPdf 06 30 48.9 +0.3
PRVC Isla de Provid 136.59 340 eP PKPdf 06 30 47.9 -1.4
PRVC Isla de Provid 136.59 340 eP PKPdf 06 30 44.3 -5.0
RCLB Rio Claro- Sao 136.66 266 eP PKiKP 06 30 50.2 -0.8
SOCV Socops 136.78 323 eP PKPdf 06 30 48.3 -1.4
LL3C La Loma 3 Cana 136.82 328 eP PKPdf 06 30 46.8 -2.9
NPGB Novo Progresso 136.84 291 eP PKPdf 06 30 48.5 -1.2
SPB Sao Paulo 136.92 265 IAMs_20 IAMs_20 07 32 33.7
comp=Z,210µm,21.0s
SPB Sao Paulo 136.92 265 eP PKiKP 06 30 53.1 +1.7
PET01 Itanhaem-SP 136.97 264 eP PKiKP 06 30 52.9 +1.4
LL2C La Loma 2 Cana 136.99 327 eP PKPdf 06 30 49.9 -0.1
ELOV Elorza 137.10 321 eP PKPdf 06 30 50.3 0.0
ARGC Ariguani, Magd 137.10 329 eP PKPdf 06 30 51.0 +0.7
BB19B Bebedouro 137.12 269 eP PKPdf 06 30 50.1 +0.1
TGUH Tegucigalpa,Un 137.35 348 IAMs_20 IAMs_20 07 40 15.1
comp=Z,294µm,21.0s
TGUH Tegucigalpa,Un 137.35 348 eP PKPdf 06 30 41.1 -10
SJCC San Jacinto, C 137.49 330 eP PKPdf 06 30 47.4 -3.6
SMLC San Martn de 137.94 328 eP PKPdf 06 30 47.4 -4.4
SNET Serv Nac Est T 138.02 351 IAMs_20 IAMs_20 07 38 08.1
comp=Z,269µm,20.0s
ARAG Araguaiana, MT 138.03 278 eP PKPdf 06 30 47.4 -4.4
ITRB Iturama 138.28 271 eP PKPdf 06 30 49.5 -2.7
ESPN Las Esperanzas 138.53 344 IAMs_20 IAMs_20 07 38 16.9
comp=Z,215µm,20.0s
PAMC Pamplona, Colo 138.53 325 eP PKPdf 06 30 48.5 -5.0
CRIN San Cristobal 138.64 348 IAMs_20 IAMs_20 07 41 49.6
comp=Z,265µm,21.0s
MOTC Monteria, Cord 138.69 330 eP PKPdf 06 30 46.0 -7.1
FRTB Fartura 138.72 266 eP PKPdf 06 30 52.8 -0.2
MACA Manacapuru-AM 138.73 301 eP PKiKP 06 30 55.3 -0.1
LCBC Los crdobas, 138.93 331 eP PKPdf 06 30 53.7 +0.1
ACON Acoyapa 138.95 345 IAMs_20 IAMs_20 07 41 11.2
comp=Z,206µm,21.0s
CLDB Colider 139.24 287 eP PKPdf 06 30 49.4 -4.7
BRRC Barranca, Sant 139.24 326 eP PKPdf 06 30 53.6 -0.6
BARC Barichara 139.42 325 eP PKPdf 06 30 51.0 -3.8
ZARC Zaragoza, Cauc 139.46 328 eP PKPdf 06 30 47.9 -6.7
UREC San Jos de Ur 139.54 329 eP PKPdf 06 30 49.1 -5.6
CAPC Capurgana 139.55 332 eP PKPdf 06 30 54.1 -0.6
TER01 Tubaro-SC 139.57 258 eP PKiKP 06 30 56.4 -0.3
PCMB Pacaembu 139.70 269 eP PKPdf 06 30 52.4 -2.4
UPD2 Meteti 139.90 333 eP PKPdf 06 30 56.4 +1.0
RUSC La Rusia 139.96 324 eP PKPdf 06 30 47.4 -8.7
BCIP Isla Barro Col 140.03 336 eP PKPdf 06 30 54.6 -1.0
UPA Univ. de Panam 140.09 335 eP PKiKP 06 30 57.4 -0.7
PTBC PUERTO BERRIO 140.10 327 eP PKPdf 06 30 50.2 -5.5
JTS Las Juntas de 140.52 344 IAMs_20 IAMs_20 07 39 33.7
comp=Z,230µm,21.0s
JTS Las Juntas de 140.52 344 eP PKiKP 06 31 02.2 +3.1
SPBC San Pablo de B 140.67 325 eP PKPdf 06 30 48.1 -8.7
PNME Penonome 140.83 336 eP PKPdf 06 30 50.2 -6.8
PTGC Puerto Gaitan, 140.88 322 eP PKPdf 06 30 47.8 -9.4
HELC Santa Helena 140.91 328 eP PKPdf 06 30 46.3 -11
PTAC Punta Ardita, 141.08 332 eP PKPdf 06 30 49.1 -8.4
CAO2 Cobano, Puntar 141.14 344 PKPdf 06 30 55.7 -1.9
CNOCA NORCASIA, CALD 141.14 326 eP PKPdf 06 30 57.7 0.0
NORC Norcasia 141.14 326 eP PKPdf 06 30 46.6 -11
CNLB Canela 141.19 257 eP PKPdf 06 30 55.8 -1.5
TRCB Terra Rica 141.27 268 eP PKPdf 06 30 56.5 -1.1
CHIC Chingaza 141.37 324 eP PKPdf 06 30 51.1 -7.4
CBOC Ciudad Bolivar 141.43 328 eP PKPdf 06 30 49.1 -9.2
AZU Azuero 141.46 336 eP PKPdf 06 30 49.1 -9.0
PP1B Ponte de Pedra 141.48 277 eP PKPdf 06 30 56.7 -1.4
CROSA EL ROSAL, CUND 141.49 325 eP PKPdf 06 30 53.4 -5.3
ROSC El Rosal 141.49 325 PKhKP PKPpre 06 30 52.6
comp=Z,113nm,0.8s,baz=12,slow=2.9,SNR=21
ROSC El Rosal 141.49 325 eP PKPdf 06 30 48.6 -10
GUY2C Guyana, Caldas 141.68 327 eP PKPdf 06 30 53.6 -5.6
SOLC Bahia Solano 141.73 330 eP PKiKP 06 31 09.1 +7.5
SOLC Bahia Solano 141.73 330 eP PKPdf 06 30 50.0 -8.7
VILC Villavicencio, 141.79 324 eP PKPdf 06 30 52.8 -6.1
ITAB Concordia 141.92 261 eP PKPdf 06 30 54.2 -4.4
ANIL Santa Ana 142.33 326 eP PKPdf 06 30 54.5 -5.6
GUVC San Jose del G 142.52 321 eP PKPdf 06 30 55.8 -4.3
ORTC Ortega, Tolima 142.76 326 eP PKPdf 06 30 54.6 -5.9
PIZC Pizarro, Choco 142.84 330 eP PKPdf 06 30 59.1 -1.6
YOTC Yotoco, Valle 143.23 327 eP PKPab 06 30 57.5 +0.3
YOTC Yotoco, Valle 143.23 327 eP PKPab 06 30 56.0 -1.1
AQDB Aquidauana 143.25 273 eP PKPbc 06 30 58.2 0.0
MACC Macarena, Meta 143.52 322 eP PKPbc 06 30 59.6 +0.5
MACC Macarena, Meta 143.52 322 eP PKPab 06 30 56.4 -1.8
EFI East Falkland 143.60 219 IAMs_20 IAMs_20 07 25 52.3
comp=Z,187µm,21.0s
MALC Bahia Malaga 143.67 329 eP PKPbc 06 30 60.0 +0.5
MALC Bahia Malaga 143.67 329 eP PKPbc 06 31 00.4 +1.0
PLTB Pedras Altas 143.86 254 eP PKPbc 06 30 59.9 +0.3
BETC Betania 143.91 325 eP PKPab 06 30 58.2 -1.5
RKT Rikitea 143.98 91 ePKIKP PKPdf 06 31 02.0 -0.3
comp=Z,566nm,1.0s
RKT Rikitea 143.98 91 eSS SS 06 53 01.5 +0.5
comp=Z,387µm,35.2s
RKT Rikitea 143.98 91 eLR LR 07 18 11.7
comp=Z,461µm,31.8s
VILB Vilhena 144.00 288 eP PKPbc 06 31 00.8 +0.3
MARP Paez Belalcaza 144.03 326 eP PKPab 06 31 00.5 +0.1
SAML Samuel 144.26 296 PKiKP PKPab 06 31 00.6 -0.3
SAML Samuel 144.26 296 PKPab 06 31 00.6 -0.3
SAML Samuel 144.26 296 IAMs_20 IAMs_20 07 45 12.2
comp=Z,208µm,22.0s
PTLB Pontes e Lacer 144.28 283 eP PKPab 06 31 00.3 -0.6
GARC Garzon, Huila 144.36 325 eP PKPab 06 31 00.0 -1.6
PCON Cinco Dias 144.69 326 eP PKPab 06 31 02.2 -1.1
SOTA Rioblanco 144.96 326 eP PKPab 06 31 02.8 -1.3
CRUC La Cruz 145.62 326 eP PKPbc 06 31 06.0 -0.1
PTLC Puerto Leguiza 145.68 322 eP PKPdf 06 31 03.9 -1.7
CPAS2 Pasto 146.07 326 eP PKPab 06 31 08.8 +0.7
CCUFI Cufio, Nario 146.11 326 eP PKPab 06 31 08.8 +0.4
GCUF Volcan Galeras 146.11 326 eP PKPdf 06 31 06.9 -0.1
ITQB Itaqui 146.22 258 eP PKPab 06 31 07.6 -0.2
CTUM2 Tumaco 146.24 329 eP PKPab 06 31 08.8 +0.6
TUMC Tumaco 146.24 329 eP PKPab 06 31 08.5 +0.2
CPUP Villa Florida 146.29 264 PKPbc PKPdf 06 31 04.9 -1.3
comp=Z,103nm,0.9s,baz=68,slow=2.6,SNR=70
CPUP Villa Florida 146.29 264 eP PKPdf 06 31 06.3 0.0
CPUP Villa Florida 146.29 264 PKPdf PKPdf 06 31 05.3 -0.9
CMBC Cumbal 146.59 327 eP PKPab 06 31 11.0 +0.9
ETMB Extrema 147.16 298 eP PKPdf 06 31 08.6 +0.6
OTAV Otavalo 147.50 327 PKP2 PKPbc 06 31 10.5 -1.3
OTAV Otavalo 147.50 327 PKPbc 06 31 10.5 -1.3
OTAV Otavalo 147.50 327 eP PKPdf 06 31 07.9 -1.3
OTAV Otavalo 147.50 327 eP PKPbc 06 31 11.1 -0.7
LPA La Plata 147.59 248 PKiKP PKPdf 06 31 02.2 -5.9
LPA La Plata 147.59 248 PKP PKPab 06 31 13.7 +0.7
LPA PP PP 06 34 37.3 -0.4
LPA PKiKS 06 34 49.9
LPA PPP PPP 06 37 46.3
LPA SKiKS 06 38 19.4
LPA PPS PPS 06 47 23.6
LPA SS SS 06 53 52.3 +11
LPA SSS SSS 06 59 15.1
MG02 Cerro Sombrero 148.71 211 eP PKPbc 06 31 13.0 -0.2
MG02 Cerro Sombrero 148.71 211 PKPbc 06 31 13.0 -0.2
GO10 Punta Arenas 149.25 209 eP PKPdf 06 31 10.4 +0.1
GO10 Punta Arenas 149.25 209 PKPbc 06 31 14.2 -0.5
MG04 Isla Riesco 149.69 209 eP PKPbc 06 31 14.0 -1.6
MG04 Isla Riesco 149.69 209 PKPbc 06 31 14.7 -0.9
CZSB Cruzeiro do Su 150.56 309 eP PKPdf 06 31 12.9 -0.7
GO09 Cerro Castillo 151.15 210 eP PKPbc 06 31 17.0 -2.2
PAYG Puerto Ayora 152.28 349 IAMs_20 IAMs_20 07 39 15.8
comp=Z,263µm,22.0s
PAYG Puerto Ayora 152.28 349 eP PKPdf 06 31 15.9 -0.3
LPAZ La Paz 152.31 289 PKP PKPdf 06 31 15.0 -1.9
comp=Z,17nm,0.9s,baz=55,slow=5.6,SNR=28
LPAZ PKPbc PKiKP 06 31 24.6 +0.6
comp=Z,186nm,0.9s,baz=73,slow=1.5,SNR=37
LPAZ La Paz 152.31 289 PKiKP PKPdf 06 31 15.0 -1.9
LPAZ La Paz 152.31 289 eP PKPdf 06 31 16.6 -0.3
LPAZ La Paz 152.31 289 ePKPdf 06 31 17.3 +0.4
GO08 Villa O'Higgin 153.16 215 eP PKPbc 06 31 23.5 -0.3
CYA Choya 154.06 262 i P PKPdf 06 31 18.8 +0.4
MNMC Minye Minye 154.86 285 IAMs_20 IAMs_20 07 48 15.3
comp=Z,234µm,22.0s
PB08 IPOC Station P 154.90 283 IAMs_20 IAMs_20 07 54 22.5
comp=Z,229µm,22.0s
PB11 IPOC Station P 155.18 284 eP PKPdf 06 31 20.8 +0.5
PB11 IPOC Station P 155.18 284 IAMs_20 IAMs_20 07 55 53.8
comp=Z,173µm,20.0s
PSGCX Pisagua 155.51 285 IAMs_20 IAMs_20 07 56 13.5
comp=Z,183µm,21.0s
PB01 IPOC Station P 155.53 281 eP PKPdf 06 31 22.7 +2.0
PB01 IPOC Station P 155.53 281 IAMs_20 IAMs_20 07 53 29.5
comp=Z,164µm,21.0s
LVC Limon Verde 155.57 277 IAMs_20 IAMs_20 07 54 02.9
comp=Z,194µm,21.0s
LVC Limon Verde 155.57 277 eP PKPdf 06 31 22.2 +1.2
LL02 Futaleuf 155.86 225 eP PKPdf 06 31 21.4 +1.0
LL02 Futaleuf 155.86 225 PKPdf PKPdf 06 31 19.9 -0.5
PATCX Punta Patache 156.03 282 IAMs_20 IAMs_20 07 46 49.4
comp=Z,196µm,22.0s
PB07 IPOC Station P 156.13 280 IAMs_20 IAMs_20 07 53 24.5
comp=Z,235µm,21.0s
PLCA Paso Flores 156.13 232 PKP PKPdf 06 31 19.2 -1.7
comp=Z,23nm,0.9s,baz=148,slow=2.5,SNR=29
PLCA Paso Flores 156.13 232 eP PKPdf 06 31 21.7 +0.8
PB06 IPOC Station P 156.18 277 IAMs_20 IAMs_20 07 50 27.8
comp=Z,186µm,21.0s
PB15 IPOC Station P 156.24 276 IAMs_20 IAMs_20 07 54 31.2
comp=Z,192µm,20.0s
NNA Nana 156.43 309 PKiKP PKPdf 06 31 22.5 +0.5
NNA Nana 156.43 309 PKPdf 06 31 22.5 +0.5
NNA Nana 156.43 309 IAMs_20 IAMs_20 07 47 36.2
comp=Z,205µm,22.0s
PB04 IPOC Station P 156.56 279 IAMs_20 IAMs_20 07 45 04.9
comp=Z,244µm,21.0s
LL01 San Ignacio de 156.62 227 eP PKPdf 06 31 22.4 +1.0
LL01 San Ignacio de 156.62 227 PKPdf 06 31 21.1 -0.3
GO07 Milladen Hill, 157.02 224 eP PKPdf 06 31 22.4 +0.5
BL02 Petrohue 157.22 229 eP PKPdf 06 31 22.5 +0.3
LL03 Petrohue 157.22 229 PKPdf 06 31 22.6 +0.4
PB10 IPOC Station P 157.28 276 eP PKPdf 06 31 23.7 +0.9
PB10 IPOC Station P 157.28 276 PKPab 06 31 53.4 -0.6
PB10 IAMs_20 IAMs_20 07 54 05.7
comp=Z,183µm,20.0s
LL04 Puerto Octay 157.32 230 PKPdf 06 31 22.9 +0.6
PB14 IPOC Station P 157.45 273 eP PKPdf 06 31 23.6 +0.2
PB14 IPOC Station P 157.45 273 IAMs_20 IAMs_20 07 53 54.3
comp=Z,255µm,22.0s
LL05 Los Muermos 157.80 228 PKPdf PKPdf 06 31 23.0 +0.2
BI02 San Fabin de 158.06 241 PKPdf PKPdf 06 31 23.6 +0.1
MT03 Universidad Ad 158.08 250 PKPdf 06 31 23.5 -0.1
BO02 Sierra Bellavi 158.10 246 PKPdf 06 31 23.0 -0.6
PEL Peldehue 158.27 251 eP PKPdf 06 31 23.4 -0.4
PEL Peldehue 158.27 251 PKiKP PKPdf 06 31 24.0 +0.2
PEL Peldehue 158.27 251 PKPdf PKPdf 06 31 24.0 +0.2
MT05 Renca 158.29 250 PKPdf 06 31 23.8 -0.1
BO01 Tunca 158.42 247 PKPdf PKPdf 06 31 23.4 -0.5
CO03 El Pedregal 158.43 257 PKPdf PKPdf 06 31 24.1 -0.1
MT09 Talagante 158.44 249 PKPdf 06 31 23.5 -0.6
GO04 Tololo Observa 158.53 259 PKPdf 06 31 24.2 -0.3
ROCH El Roble 158.56 251 i P PKPdf 06 31 25.1 +0.7
PT02 Curacav 158.63 250 PKPdf 06 31 23.2 -1.0
MT02 IAMs_20 IAMs_20 07 43 09.8
comp=Z,160µm,21.0s
MT01 Popeta 158.64 249 PKPdf 06 31 23.4 -0.8
CO02 Combarbal 158.69 256 PKPdf 06 31 23.4 -1.0
VA05 Santo Domingo 158.97 249 PKPdf 06 31 22.5 -2.0
VA01 Torpederas 159.09 251 PKPdf PKPdf 06 31 24.3 -0.4
RPN Rapa Nui 167.50 89 PP PP 06 36 40.9 +13
comp=Z,22nm,0.4s,baz=323,slow=2.9,SNR=1.5

NOU ***25*** *06:13:41.5, 42°.21S × 173°.33E, h54km, MLv3.8, South Island, New Zealand*
WEL 25 06:13:41.4±0.3, 42°.3S±3° × 17°.3E±°, h34km±5km, M3.3/23, ML3.6/23, MLv3.3/23, Error ellipse: s-maj=0.0km s-min=0.0km az=129.0, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHZ	Kahutara	0.38	138	P	Pn	06 13 52.2	+1.7
KHZ				S	Sb	06 13 59.6	+3.3
THZ	Tophouse	0.43	329	P	Pn	06 13 51.6	+0.3
THZ				S	Sn	06 13 58.4	+0.4
BSWZ	Blackbirch Sta	0.66	50	P	Pb	06 13 55.5	+0.9
BSWZ				S	Sb	06 14 06.6	+3.0
GVZ	Greta Valley S	0.84	188	P	Pb	06 13 57.7	+0.1
CMWZ	Cape Campbell	0.85	63	P	Pb	06 13 59.0	+1.2
TUWZ	Tuamarina	0.90	38	P	Pb	06 13 58.4	-0.2
TUWZ				S	Sb	06 14 10.8	+0.5
NNZ	Nelson	0.93	8	P	Pb	06 13 58.6	-0.5
NNZ				S	Sb	06 14 11.5	+0.4
LTZ	Lake Taylor	0.94	227	P	Pb	06 13 59.0	-0.4
LTZ				S	Sb	06 14 11.6	+0.1
DSZ	Denniston Nort	1.11	290	P	Pb	06 14 01.0	+0.4
DSZ				S	Sb	06 14 16.2	-0.2
AMCZ	Amberley	1.11	201	P	Pn	06 14 01.1	+0.6
TCW	Tory Channel	1.23	41	P	Pn	06 14 02.6	+0.5
TCW				S	Sn	06 14 18.1	+0.6
QRZ	Quartz Range	1.40	339	P	Pn	06 14 05.2	+0.7
INZ	Inchbonnie	1.43	245	P	Pn	06 14 05.5	+0.7
DUWZ	D'Urville Isla	1.44	22	P	Pn	06 14 05.7	+0.7
BHW	Baring Head	1.45	60	P	Pn	06 14 05.0	-0.1
WEL	Wellington	1.45	55	P	Pn	06 14 05.4	+0.2
OXZ	Oxford	1.46	215	P	Pn	06 14 05.0	-0.4
OKCZ	Okains Bay	1.59	184	P	Pn	06 14 07.3	+0.2
MQZ	McQueen's Vall	1.62	194	P	Pn	06 14 06.5	-0.9
PLWZ	Palliser	1.64	70	P	Pn	06 14 07.2	-0.5
MSWZ	Moikau Station	1.69	66	P	Pn	06 14 08.0	-0.6
CAW	Cannon Point	1.74	54	P	Pn	06 14 08.9	-0.2
AKCZ	Akaroa Harbour	1.75	187	P	Pn	06 14 08.9	-0.4
RACZ	Rakaia	1.77	206	P	Pn	06 14 08.9	-0.7
KIW	Kapiti Island	1.81	46	P	Pn	06 14 10.5	+0.4
PAWZ	Paruwai Farm	1.83	66	P	Pn	06 14 08.8	-1.6
MTW	Mount Morrison	1.98	61	P	Pn	06 14 11.6	-0.9
OGWZ	Otaki Gorge	1.98	49	P	Pn	06 14 12.4	-0.1
TRWZ	Traveller	2.00	69	P	Pn	06 14 11.9	-0.9
WVZ	Waitaha Valley	2.04	242	P	Pn	06 14 14.1	+0.8
WACZ	Wakanui South	2.06	208	P	Pn	06 14 13.0	-0.6
HOWZ	Holdsworth Sta	2.13	55	P	Pn	06 14 13.7	-0.9
RPZ	Rata Peaks	2.23	224	P	Pn	06 14 17.8	+1.9
TMWZ	Te Maipa	2.27	64	P	Pn	06 14 15.1	-1.3
MRZ	Mangatainoka R	2.32	51	P	Pn	06 14 16.4	-0.7
ARCZ	Arundel	2.34	219	P	Pn	06 14 17.2	-0.2
GCSZ	Gaunt Creek Bo	2.42	240	P	Pn	06 14 19.7	+1.2
POWZ	Post Office Ro	2.60	49	P	Pn	06 14 20.0	-1.1
PRWZ	Pori Road	2.62	54	P	Pn	06 14 20.2	-1.1
BFZ	Birch Farm	2.71	59	P	Pn	06 14 20.7	-1.8
WAZ	Wanganui	2.74	30	P	Pn	06 14 24.5	+1.6
TMZ	Timaru	2.76	215	P	Pn	06 14 22.9	-0.2
NMEZ	Namu Road	2.77	11	P	Pn	06 14 25.5	+2.3
FOZ	Fox Glacier	2.85	240	P	Pn	06 14 25.4	+1.0
PREZ	Palmer Road	2.89	15	P	Pn	06 14 28.0	+3.0
DVHZ	Dannevirke	2.90	52	P	Pn	06 14 23.5	-1.6
KHEZ	Kahui Hut	2.91	13	P	Pn	06 14 27.2	+1.9
NBEZ	Newall Road No	2.91	10	P	Pn	06 14 27.3	+2.1
NEZ	North Egmont	2.94	14	P	Pn	06 14 28.2	+2.4
TSZ	Takapari Road	2.94	46	P	Pn	06 14 24.7	-1.0
PKE	Pukeiti	3.00	12	P	Pn	06 14 28.7	+2.2
DREZ	Durham Road	3.04	15	P	Pn	06 14 29.3	+2.2
LBZ	Lake Benmore	3.15	223	P	Pn	06 14 28.8	+0.3
PNHZ	Pukenui	3.18	47	P	Pn	06 14 27.6	-1.3
VRZ	Vera Road	3.23	22	P	Pn	06 14 31.9	+2.2
MOVZ	Moawhango	3.35	36	P	Pn	06 14 37.6	-2.4
BHHZ	Black Hill Sta	3.42	40	P	Pn	06 14 32.0	-0.4
ODZ	Otahua Downs	3.45	212	P	Pn	06 14 31.9	-0.8
KRHZ	Kereru	3.46	45	P	Pn	06 14 31.3	-1.6
OTVZ	Oturere	3.51	33	P	Pn	06 14 34.2	+0.5
NNVZ	North Ngauruho	3.52	32	P	Pn	06 14 34.6	+0.8
WTVZ	West Tongariro	3.52	32	P	Pn	06 14 38.3	+4.5
TMVZ	Te Maari	3.57	33	P	Pn	06 14 34.9	+0.4
HIZ	Hauiti	3.83	20	P	Pn	06 14 38.9	+1.0
TLZ	Tolley Road	4.20	26	P	Pn	06 14 44.7	+1.6
TOZ	Tahuroa Road	4.74	23	P	Pn	06 14 51.3	+0.9
AWAZ	Awhitu Peninsu	5.19	13	P	Pn	06 14 58.4	+1.9
ETAZ	East Tamaki Re	5.35	15	P	Pn	06 14 59.6	+0.8
WIAZ	Waiheke Island	5.54	16	P	Pn	06 15 02.6	+1.2
WCZ	Waipu Caves	6.25	9	P	Pn	06 15 12.5	+1.3

IDC ***25*** *06:15:03.1±11.0, 27°.44N × 85°.07E, h0km, mb5.8/4, mb1 5.9/4, mb1mx5.1/56, mbtmp5.8/4, Error ellipse: s-maj=232.2km s-min=58.9km az=171.0*
ISC 25 06:15:12.3±2.2, 28°.4N±0°.2 × 85°.0E±0°.2, h10km, n10, σ1s74/10, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	Dangsing	1.07	268	eSg	Sn	06 15 48.0	-0.7
	37µm,0.3s						
DANN	Dangsing	1.07	268	ePg	Pn	06 15 36.3	+2.7
KOLN	Koldanda	1.36	243	eSg	Sb	06 15 53.1	-2.4
	55µm,0.4s						
KOLN	Koldanda	1.36	243	ePg	Pg	06 15 39.3	+0.9
PYUN	Piuthan	1.77	261	eSg	Sn	06 16 04.5	-1.4
	41µm,0.4s						
PYUN	Piuthan	1.77	261	ePg	Pb	06 15 45.1	+0.1
ZALV	Zalesovo Beam	25.54	360	P	P	06 20 42.0	+1.0
	112nm,0.5s,baz=182,slow=9.8,SNR=1.6						
SONM	Songino Array	25.56	35	P	P	06 20 40.4	-1.0
	94nm,0.8s,baz=223,slow=10,SNR=1.1						
FINES	FINESS Array B	50.69	328	P	P	06 24 10.6	-1.1
	166nm,0.9s,baz=99,slow=8.6,SNR=1.5						
ARCES	ARCESS Array B	53.12	338	P	P	06 24 28.4	-1.3
	51nm,0.6s,baz=99,slow=8.3,SNR=1.2						

DMN ***25*** *06:15:19.7±0.2, 28°.18N × 84°.82E, h30km, Ml6.0/5, Error ellipse: s-maj=8.0km s-min=2.4km az=15.0*
NEIC ***25*** *06:15:22.9±2.1, 27°.63N±0°.08 × 85°.54E±0°.07, h10km±1km, mb6.1/48, Error ellipse: s-maj=14.2km s-min=10.3km az=164.0*
*ID

GSI	Gunungsitoli	28.63	154	P		P	06 21 18.7	-1.3
BKNI	Bangkinang	30.99	149	P		P	06 21 39.0	-1.9
TPUB	Ta-pu	31.96	90	P		P	06 21 48.1	-1.4
TPUB				IAmb		IAmb	06 21 59.9	
	comp=Z,198nm,1.1s							
HIA	Hailar	34.01	41	P		P	06 22 05.8	-1.4
KSM	Kuching	35.24	133	P		P	06 22 18.3	+0.2
MNAI	Manna	36.00	149	P		P	06 22 23.7	-0.9
JTU	Tsushima	38.01	68	P		P	06 22 41.2	-0.3
JSU	Suzuyama	39.11	73	P		P	06 22 49.9	-1.0
GAZ	Gaziantep	41.47	296	P		P	06 23 08.8	-1.6
JWT	Wachi	42.90	67	P		P	06 23 22.4	+0.4
GHAJ	Ghor Haditha	43.31	287	P		P	06 23 25.6	+0.3
GHAJ				IAmb		IAmb	06 23 28.9	
	comp=Z,288nm,1.1s							
JSD	Sado	45.02	63	P		P	06 23 39.1	+0.1
JSD				IAmb		IAmb	06 23 41.2	
	comp=Z,192nm,1.1s							
JAGI	Jajag, Banyuwa	45.37	138	P		P	06 23 42.3	+0.3
JAGI				IAmb		IAmb	06 23 57.6	
	comp=Z,208nm,1.1s							
LUWI	Luwuk	45.79	122	P		P	06 23 46.1	+0.8
JMM	Marumori	47.03	63	P		P	06 23 54.5	-0.3
JMM				IAmb		IAmb	06 24 05.6	
	comp=Z,250nm,1.1s							
AKASG	Malin Array Be	47.97	315	P		P	06 24 02.0	0.0
JCJ	Chichijima	49.97	77	P		P	06 24 18.9	+1.3
JCJ				IAmb		IAmb	06 24 26.8	
	comp=Z,319nm,1.1s							
BUR08	Bucovina Ar. S	50.40	310	P		P	06 24 20.1	-0.7
BUR08				IAmb		IAmb	06 24 23.7	
	comp=Z,334nm,1.1s							
MMRI	Maumere	50.66	130	P		P	06 24 22.5	-0.4
MMRI				IAmb		IAmb	06 24 33.4	
	comp=Z,227nm,1.1s							
FIA1	FINESS Array S	51.56	328	P		P	06 24 30.2	+1.1
FIA1				IAmb		IAmb	06 24 35.3	
	comp=Z,334nm,1.1s							
FINES	FINESS Array B	51.56	328	P		P	06 24 31.0	+1.9
	comp=Z,63nm,0.6s,baz=99,slow=8.6,SNR=1.1							
ARCES	ARCESS Array B	53.98	338	P		P	06 24 48.3	+1.4
	comp=Z,41nm,0.5s,baz=96,slow=6.5,SNR=1.4							
MORC	Moravsky Berou	55.43	313	P		P	06 24 57.9	+0.1
MORC				IAmb		IAmb	06 24 58.7	
	comp=Z,169nm,1.1s							
GUMO	Guam	56.84	91	P		P	06 25 07.4	-0.9
GUMO				IAmb		IAmb	06 25 13.0	
	comp=Z,285nm,1.1s							
CLL	Collm	58.21	315	*e*P		P	06 25 16.0	-1.4
NAO01	NORSAR Array S	58.82	327	P		P	06 25 21.3	-0.2
NBO00	NORSAR Array S	58.87	327	P		P	06 25 22.3	+0.4
NC204	NORSAR Array S	58.87	327	P		P	06 25 21.8	-0.2
SPA0	Spitsbergen Ar	58.89	347	P		P	06 25 22.8	+1.0
STAL	STALIGIÁL	59.03	309	P		P	06 25 24.0	+0.7
STAL				IAmb		IAmb	06 25 33.6	
	comp=Z,143nm,0.9s							
PSA00	Pilbara Seismi	59.14	142	P		P	06 25 23.6	-0.6
PSA00				IAmb		IAmb	06 25 25.3	
	comp=Z,205nm,1.1s							
KBS	Kingsbay	59.91	348	P		P	06 25 28.7	-0.1
KBS				IAmb		IAmb	06 25 40.5	
	comp=Z,221nm,1.1s							
KNRA	Kununurra	60.12	130	P		P	06 25 29.4	-1.6
KNRA				IAmb		IAmb	06 25 35.1	
	comp=Z,208nm,1.1s							
CORL	Corleone	60.19	300	P		P	06 25 31.2	-0.3
VLC	Villacollemand	61.01	307	P		P	06 25 37.0	+0.1
VLC				IAmb		IAmb	06 25 44.5	
	comp=Z,186nm,1.1s							
VOI	Vohitsoka	61.84	221	P		P	06 25 42.3	-0.5
SENIN	Lac Senin/Sane	62.70	310	P		P	06 25 48.0	-0.4
SENIN				IAmb		IAmb	06 26 06.9	
	comp=Z,180nm,1.1s							
UCC	Uccle	63.67	316	P		P	06 25 54.4	-0.2
WRA	Warramunga Arr	66.88	130	P		P	06 26 14.1	-1.7
WRAB	Tennant Creek	66.88	130	P		P	06 26 16.9	+1.1
ESK	Eskdalemuir	67.03	322	P		P	06 26 16.6	+0.4
ESK				IAmb		IAmb	06 26 31.5	
	comp=Z,153nm,1.1s							
SMY	Shemya	67.72	41	P		P	06 26 21.0	+0.4
SMY				IAmb		IAmb	06 26 22.9	
	comp=Z,156nm,1.0s							
LSZ	Lusaka	70.01	240	P		P	06 26 34.0	-1.6
LSZ				IAmb		IAmb	06 26 42.7	
	comp=Z,120nm,1.0s							
PRP	Porcupine Dome	79.24	19	P		P	06 27 28.0	-0.4
PRP				IAmb		IAmb	06 27 39.3	
	comp=Z,182nm,1.2s							
SYO	Syowa Base	102.00	195	*e*Pdiff		Pdif	06 29 17.0	+0.3
PB16	IPOC Station P	155.22	287	PKPdf		PKPdf	06 35 19.0	+0.9
PB08	IPOC Station P	155.66	282	PKPab		PKPab	06 35 44.6	0.0

*IDC **25** 06:17:57.4±1.9,27.64N×85.76E,h0km,mb5.3/6, mb1 5.4/6,mb1mx4.9/58,mbtmp5.3/6,Error ellipse: s-maj=52.8km s-min=27.4km az=67.0*
ISC 25 06:17:59.5±1.2,27.7N±0.2×85.90E±0.06,h10km,n10, σ0s43/10,mb5.3/6,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GKN	Gorkha	1.16	285	*e*Sg		Sn	Sn	06 18 37.6	-0.3
DANN	Dangsing	2.00	289	*e*Sg		Sn	Sn	06 18 58.4	-0.4
	17µm,0.4s								
KOLN	Koldanda	2.04	272	*e*Sg		Sg	Sg	06 19 05.6	+0.4
	35µm,0.4s								
PYUN	Piuthan	2.61	279	*e*Sg		Sb	Sb	06 19 18.9	+0.3
	16µm,0.3s								
SONM	Songino Array	25.66	33	P		P	P	06 23 29.7	+0.1
	20nm,0.7s,baz=213,slow=11,SNR=1.0								
ZALV	Zalesovo Beam	26.23	359	P		P	P	06 23 34.6	+0.2
	37nm,0.6s,baz=176,slow=9.7,SNR=1.3								
KSRS	Korea Array	36.46	64	P		P	P	06 25 05.2	+0.5
	75nm,1.1s,baz=265,slow=7.3,SNR=6.0								
ARCES	ARCESS Array B	54.05	338	P		P	P	06 27 23.3	-0.5
	42nm,0.8s,baz=135,slow=9.0,SNR=1.5								
WRA	Warramunga Arr	66.64	130	P		P	P	06 28 50.5	-0.1
	38nm,1.0s,baz=317,slow=5.8,SNR=1.7								
ASAR	Alice Springs	68.94	133	P		P	P	06 29 04.7	-0.3
	3.6nm,0.5s,baz=306,slow=6.0,SNR=1.4								

*NEIC **25** 06:18:10.9±1.6,27.69N±0.09×86.02E±0.06,h10km±1km, mb5.6/30,Error ellipse: s-maj=15.3km s-min=8.3km az=163.0*
*IDC **25** 06:18:12.5±1.8,27.86N×86.10E,h0km,mb5.4/8, mb1 5.5/8,mb1mx4.9/59,mbtmp5.4/8,Error ellipse: s-maj=46.4km s-min=26.5km az=70.0*
*DMN **25** 06:18:30.2±0.8,28.19N×84.76E,h2km,Ml5.7/3,Error ellipse: s-maj=13.9km s-min=6.7km az=52.0*
ISC 25 06:18:12.6±0.4,27.70N±0.08×85.96E±0.05,h19km,n51, σ1s74/51,mb5.6/22,2C,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GKN	Gorkha	1.21	285	*e*Pg		Pb	Pb	06 18 34.2	-0.8
KOLN	Koldanda	2.09	273	*e*Pg		Pg	Pg	06 18 51.5	-1.4
PYUN	Piuthan	2.66	279	*e*Pg		Pb	Pb	06 18 59.6	-0.2
NIL	Nilore	12.44	302	Pn		Pn	Pn	06 21 09.2	+0.4
KMI	Kunming	15.25	96	Pn		Pn	Pn	06 21 46.3	-1.0
AAK	Ala-Archa	17.58	331	P		P	P	06 22 18.4	+0.7
AAK				IAmb		IAmb	IAmb	06 22 19.7	
	comp=Z,571nm,1.1s								
KKAR	Karatay Array	19.82	325	P		P	P	06 22 40.5	-1.6
XAN	Xi'an	20.68	67	P		P	P	06 22 48.5	-3.1
PALK	Pallekele	20.91	195	P		P	P	06 22 52.0	-2.2
HRA	Herat	21.36	294	P		P	P	06 22 58.8	-0.3
MNCI	Minicoy	22.84	215	P		P	P	06 23 15.7	+0.9
LHMI	Lhok Sumawe	24.67	153	P		P	P	06 23 32.4	0.0
LHMI				IAmb		IAmb	IAmb	06 23 44.5	
	comp=Z,189nm,0.8s								
SONM	Songino Array	25.65	33	P		P	P	06 23 43.2	+2.0
	comp=Z,100nm,0.7s,baz=220,slow=10,SNR=5.9								
ZALV	Zalesovo Beam	26.24	358	P		P	P	06 23 48.1	+1.8
	comp=Z,71nm,0.9s,baz=170,slow=6.9,SNR=1.3								
ZALV	Zalesovo Beam	26.24	358	P		P	P	06 23 46.2	-0.1
UOSS	Minazif	26.78	271	P		P	P	06 23 51.5	0.0
UOSS				IAmb		IAmb	IAmb	06 23 55.3	
	comp=Z,191nm,1.0s								
BJT	Baijiatuau	27.80	56	P		P	P	06 23 58.8	-1.7
KSRS	Korea Array	36.42	64	P		P	P	06 25 16.6	+0.6
	comp=Z,28nm,0.6s,baz=265,slow=8.2,SNR=4.8								
DGAR	Diego Garcia	37.27	202	P		P	P	06 25 24.0	+0.6
DGAR				IAmb		IAmb	IAmb	06 25 43.6	
	comp=Z,160nm,0.9s								
MARD	Mardin	38.98	296	P		P	P	06 25 37.4	-0.4
USA0B	Ussuriysk Arra	40.18	53	P		P	P	06 25 46.5	-1.1
USRK	Ussuriysk Ar.	40.18	53	P		P	P	06 25 48.0	+0.4
	comp=Z,46nm,1.0s,baz=298,slow=6.8,SNR=5.0								
NRIK	Noril'sk	41.69	1	P		P	P	06 26 00.1	+0.4
NRIK				IAmb		IAmb	IAmb	06 26 10.5	
	comp=Z,156nm,1.1s								
GAZ	Gaziantep	41.83	296	P		P	P	06 26 01.5	+0.1
GAZ				IAmb		IAmb	IAmb	06 26 05.5	
	comp=Z,143nm,1.2s								
XMIS	Christmas Isla	42.48	151	P		P	P	06 26 06.0	-0.7
TOLI2	Tolitoli	42.55	122	P		P	P	06 26 06.6	-0.7
BR131	Keskin Array S	44.58	300	P		P	P	06 26 23.4	-0.2
BR131				IAmb		IAmb	IAmb	06 26 36.4	
	comp=Z,97nm,1.1s								
BRTR	Keskin Array B	44.58	300	P		P	P	06 26 24.1	+0.5
JYT	Yasato	46.28	65	P		P	P	06 26 37.5	+0.4
JYT				IAmb		IAmb	IAmb	06 26 44.0	
	comp=Z,103nm,1.0s								
JHJ2	Mitsune	46.35	70	P		P	P	06 26 37.0	-0.6
MDUB	Mudurnu	46.43	301	P		P	P	06 26 38.4	0.0
JEW	Eniwo	46.94	56	P		P	P	06 26 41.5	-0.7
ERM	Erimo	48.22	57	P		P	P	06 26 51.2	-0.8
ERM				IAmb		IAmb	IAmb	06 26 57.9	
	comp=Z,58nm,0.9s								
ARCES	ARCESS Array B	54.09	338	P		P	P	06 27 37.2	+1.5
	comp=Z,26nm,0.8s,baz=104,slow=5.1,SNR=1.1								
ARCES	ARCESS Array B	54.09	338	P		P	P	06 27 36.1	+0.4
KIBK	Kibwezi	54.90	245	P		P	P	06 27 43.2	+0.7
SEY	Seymchan	55.02	31	P		P	P	06 27 44.1	+1.6
	comp=Z,32nm,0.8s,baz=354,slow=9.2,SNR=2.3								
PDG	Podgorica	55.22	304	P		P	P	06 27 44.5	+0.2
PDG				IAmb		IAmb	IAmb	06 27 51.1	
	comp=Z,46nm,1.0s								
CLL	Collm	58.46	315	P		P	P	06 28 07.7	+0.5
CLL				IAmb		IAmb	IAmb	06 28 26.6	
	comp=Z,54nm,1.1s								
MBAR	Mbarara	59.94	252	P		P	P	06 28 18.4	+0.2
MBAR				IAmb		IAmb	IAmb	06 28 27.7	
	comp=Z,56nm,1.1s								
CTI	Castel Tesino	60.08	309	P		P	P	06 28 19.9	+1.2
ECH	Echery	62.69	312	P		P	P	06 28 36.1	0.0
ECH				IAmb		IAmb	IAmb	06 28 49.3	
	comp=Z,36nm,1.0s								
WRA	Warramunga Arr	66.59	130	P		P	P	06 29 05.2	+3.3
	comp=Z,22nm,0.6s,baz=325,slow=6.2,SNR=2.5								
WRAB	Tennant Creek	66.59	130	P		P	P	06 28 59.8	-2.1
ASAR	Alice Springs	68.90	133	P		P	P	06 29 19.7	+3.3
	comp=Z,31nm,0.9s,baz=313,slow=6.7,SNR=3.0								
TNA	Tin City	71.46	25	P		P	P	06 29 30.2	-1.3
SUMG	Summit	73.15	345	P		P	P	06 29 40.8	-1.2
SUMG				IAmb		IAmb	IAmb	06 29 42.1	
	comp=Z,100nm,1.1s								
SUA	Susitna One	80.11	24	P		P	P	06 30 19.7	-1.5
SUA				IAmb		IAmb	IAmb	06 30 20.7	
	comp=Z,57nm,0.9s								
SYO	Syowa Base	102.17	195	*i*Pdiff		Pdif	Pdif	06 32 07.0	+1.6
SYO	Syowa Base	102.17	195	*es*Pdiff		Pdif	P	06 32 13.4	+8.0
SAML	Samuel	145.44	297	PKPdf		PKPbc	PKPbc	06 37 49.0	-1.1

IDC 25 06:20:20.0±6.7,28.02N×84.41E,h0km,mb4.9/4, mb1 5.0/5,mb1mx4.4/63,mbtmp4.9/5,ML4.8/1,Error ellipse: s-maj=131.6km s-min=48.8km az=168.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	18.81	355	P		P	Pn	06 24 41.4	-0.2
	2.6nm,0.3s,baz=186,slow=13,SNR=1.7								
SONM	Songino Array	26.14	35	P		P	P	06 25 55.9	0.0
	13nm,0.7s,baz=226,slow=10.0,SNR=1.0								
AKASG	Malin Array Be	47.03	314	P		P	P	06 28 53.1	0.0
	2.1nm,0.4s,baz=84,slow=7.0,SNR=1.0								
FINES	FINESS Array B	50.74	328	P		P	P	06 29 21.1	-0.2
	32nm,0.9s,baz=118,slow=6.8,SNR=1.2								
ARCES	ARCESS Array B	53.27	338	P		P	P	06 29 40.0	-0.2
	7.2nm,0.5s,baz=94,slow=5.0,SNR=0.8								

*NEIC **25** 06:20:40.3±1.8,28.21N±0.03×84.49E±0.08,h10km±1km, mb5.4/20,Error ellipse: s-maj=12.4km s-min=3.8km az=250.0*
*DMN **25** 06:20:47.7±0.2,28.08N×85.03E,h10km,Ml5.8/5,Error ellipse: s-maj=4.6km s-min=1.5km az=28.0*
*IDC **25** 06:20:51.1±6.2,28.49N×83.91E,h0km,mb4.9/5, mb1 5.0/6,mb1mx4.5/63,mbtmp5.0/6,ML4.2/1,Error ellipse: s-maj=118.7km s-min=46.4km az=166.0*
ISC 25 06:20:40.4±0.5,28.20N±0.07×84.62E±0.07,h10km,n52, σ2s02/47,mb5.3/14,1C-1D,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKN	Kakani	0.71	125	*e*Sg		Sg	Sg	06 20 59.9	-3.6
DMN	Daman	0.73	144	*e*Pg		Pg	Pg	06 20 57.7	+0.7
DMN				*e*Sg		Sg	Sg	06 21 03.9	-0.2
PKIN	Phulchoki	0.93	132	*e*Sg		Sg	Sg	06 21 07.2	-3.1
PKI	Pulchoki	0.94	132	*e*Sg		Sg	Sg	06 21 07.9	-2.8
ODAN	Odare	2.80	118	*e*Sg		Sb	Sb	06 22 03.9	-1.1
	12µm,0.5s								
TAPN	Taplejung	2.86	107	*e*Sg		Sb	Sb	06 22 06.7	-0.3
	10µm,0.5s								
LSA	Lhasa	5.91	74	Pn		Pn	Pn	06 22 08.7	+0.3
SHL	Shillong	6.99	110	Pn		Pn	Pn	06 22 23.4	+0.4
NIL	Nilore	11.17	302	Pn		Pn	Pn	06 23 20.1	-0.1
PRZ	Przheval'sk	15.12	342			P	Pn	06 24 19.4	-0.1
WMQ	Urumqi	15.78	8	Pn		Pn	Pn	06 24 22.7	0.0
BOOM	Boomskoye usch	15.90	336	Pn		Pn	Pn	06 24 22.8	-1.6
BOOM				IAmb		IAmb	IAmb	06 24 25.9	
	comp=Z,171nm,1.0s								
MKAR	Makanchi Array	18.65	355	P		Pn		06 25 07.7	+9.1
	comp=Z,0.8nm,0.3s,baz=181,slow=12,SNR=1.6								
KKAR	Karatay Array	18.74	326	P		P	P	06 24 58.5	-0.9
KKAR	Karatay Array	18.74	326	P		P	P	06 24 58.4	-0.9
KKAR				IAmb		IAmb	IAmb	06 24 59.4	
	comp=Z,320nm,1.1s								
ZALV	Zalesovo Beam	25.72	0	P		P		06 26 19.5	+8.8
	comp=Z,43nm,1.0s,baz=185,slow=8.6,SNR=1.4								
SONM	Songino Array	25.89	35	P		P		06 26 26.4	+14
	comp=Z,23nm,0.8s,baz=228,slow=9.2,SNR=2.1								
ULN	Ulaanbaatar	26.25	36	P		P	P	06 26 17.5	+1.7
BRVK	Borovoye	27.01	341	P		P	P	06 26 22.8	+0.4
BRVK				IAmb		IAmb	IAmb	06 26 28.0	
	comp=Z,31nm,0.8s								
ABKAR	Akbulak array	28.28	325	P		P	P	06 26 34.0	+0.2
YHNB	Yeheng	33.02	88	P		P	P	06 27 18.5	+2.5
ARU	Arti	33.76	334	P		P	P	06 27 21.2	-0.8
KSM	Kuching	36.18	133	P		P	P	06 27 44.0	+0.6
SBUM	Sibu	36.73	129	P		P	P	06 27 48.8	+0.7
KIV	Kislovodsk	36.93	307	P		P	P	06 27 47.2	-2.4
KIV				IAmb		IAmb	IAmb	06 27 49.7	
	comp=Z,100nm,1.1s								
JSU	Suzuyama	39.67	74	P		P	P	06 28 12.9	+0.1
AKASG	Malin Array Be	47.04	314	P		P	P	06 29 19.5	+7.6
	comp=Z,3.6nm,0.4s,baz=81,slow=7.4,SNR=1.6								
LVZ	Lovozero	49.46	338	P		P	P	06 29 28.9	-1.6
FINES	FINESS Array B	50.69	328	P		P	P	06 29 47.7	+8.0
	comp=Z,8.5nm,0.5s,baz=118,slow=8.9,SNR=0.8								
ARCES	ARCESS Array B	53.17	338	P		P		06 30 06.2	+8.0
	comp=Z,37nm,0.9s,baz=102,slow=8.1,SNR=5.6								
DIVS	Divibare	53.24	306	P		P	P	06 29 58.1	-1.1
PET	Petropavlovsk	58.58	43	P		P	P	06 30 37.5	+0.4
PET				IAmb		IAmb	IAmb	06 30 48.2	
	comp=Z,56nm,1.1s								
MURB	Monte Urbino	58.72	306	P		P	P	06 30 37.7	-0.7
MURB				IAmb		IAmb	IAmb	06 30 49.7	
	comp=Z,60nm,1.1s								
TEOL	Teolo	58.95	308	P		P	P	06 30 39.4	-0.6
TEOL				IAmb		IAmb	IAmb	06 30 58.6	
	comp=Z,25nm,0.9s								
OSSC	Osservatorio P	59.59	306	P		P	P	06 30 45.1	+0.7
ZCCA	Zocca	59.62	307	P		P	P	06 30 45.4	+0.7
ZCCA				IAmb		IAmb	IAmb	06 30 56.5	
	comp=Z,26nm,0.9s								
SALO	Salr	59.70	309	P		P	P	06 30 46.0	+0.8
MSSA	Maissana	60.65	307	P		P	P	06 30 51.7	-0.1
MSSA				IAmb		IAmb	IAmb	06 31 03.9	
	comp=Z,53nm,1.1s								
FITZ	Fitzroy Crossi	60.77	134	P		P	P	06 30 51.8	-0.9
SENIN	Lac Senin/Sane	61.75	310	P		P	P	06 30 59.3	-0.1
MANU	Manus Island	67.21	106	P		P	P	06 31 35.3	+0.1
WB0	Warramunga Arr	67.74	129	P		P	P	06 31 38.2	-0.3
SMY	Shemya	67.78	41	P		P	P	06 31 39.0	+0.8
NWAO	Narrogin (SRO)	68.23	151	P		P	P	06 31 42.5	+1.3
DSB	Dublin	68.50	320	P		P	P	06 31 41.8	-1.0
ASAR	Alice Springs	70.11	132	P		P	P	06 31 52.8	-0.3
ASAR	Alice Springs	70.11	132	S		P	P	06 31 52.8	-0.3
	comp=Z,35nm,1.1s,baz=305,slow=11,SNR=4.8								
AMKA	Amchitka	71.26	41	P		P	P	06 32 00.7	+0.9
IL31		79.09	20	P		P	P	06 32 44.9	+0.3
IL31				IAmb		IAmb	IAmb	06 32 53.7	
	comp=Z,18nm,0.9s								
SYO	Syowa Base	102.34	195	*e*Pdiff		Pdif	Pdif	06 34 37.2	+1.8
SYO	Syowa Base	102.34	195	*eX*		Pdif	P	06 34 46.0	+11
PTCN	Pitcairn Islan	148.87	92	PKPbc		PKPbc	PKPbc	06 40 28.9	+0.1

*ANF **25** 06:21:53.9±0.4,60.06N×153.56W,h159km±6km,ML4.7/37, ML4.7/38,Error ellipse: s-maj=5.2km s-min=3.5km az=104.0,Hypocentre not reviewed by the ISC*
*NEIC **25** 06:21:53.4±1.4,60.08N±0.05×153.6W±0.1,h174km±4km, Error ellipse: s-maj=8.2km s-min=6.4km az=109.0*
AEIC 25 06:21:54±1.5,60.07N±0.03×153.5W±0.1,h170km±3km, ML4.7,ML4.6/94(NEIC),Error ellipse: s-maj=8.2km s-min=4.3km az=92.0,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILS	Iliamna Low So	0.24	117				Pn	06 22 16.7	-0.2
IVE	Iliamna Volcan	0.25	102				Pn	06 22 16.7	-0.2
IVE							Sn	06 22 34.2	-0.3
OPT	Oil Point	0.44	162				Pn	06 22 17.8	+0.4
OPT							Sn	06 22 34.6	-0.8
RED	Redoubt Volcan	0.51	45				Pn	06 22 17.8	+0.1
RED							Sn	06 22 35.3	-0.7
RSO	Redoubt South	0.54	43				Pn	06 22 18.1	+0.1
REF	Redoubt East F	0.58	43				Pn	06 22 18.4	+0.2
AUL	Augustine Lava	0.69	177				Pn	06 22 19.0	+0.4
AUL							Sn	06 22 37.2	-0.3
AU22	Augustine Moun	0.70	174				Pn	06 22 19.0	+0.4
AU22							Sn	06 22 37.0	-0.6
AUH	Augustine H	0.71	178				Pn	06 22 19.2	+0.4
AUCH	Augustine Cone	0.71	178				Pn	06 22 19.1	+0.3
HOM	Homer	1.02	113				Pn	06 22 21.4	+0.6
HOM				IAML				06 22 43.0	
	comp=E,6µm,0.4s								
HOM				IAML				06 22 43.2	
	comp=N,6µm,0.4s								
HOM	Homer	1.02	113				Sn	06 22 41.2	-0.2
HOM	Homer	1.02	113	P				06 22 21.5	
	baz=294,SNR=32								
HOM				S				06 22 41.2	
	baz=294								
CNPM	China Poot	1.27	114				Pn	06 22 23.2	+0.3
CNPM				IAML				06 22 46.1	
	comp=N,3µm,0.4s								
SPCR	Spurr Chakacha	1.30	29				Pn	06 22 23.6	+0.3
SPCR	Spurr Chakacha	1.30	29	P				06 22 23.7	
	baz=209,SNR=75								
SPCR				S				06 22 45.0	
	baz=209								
SPCN	Chakachatna No	1.33	29				Pn	06 22 24.0	+0.6
SPCN							Sn	06 22 46.5	+0.1
BRLK	Bradley Lake	1.35	102				Pn	06 22 24.2	+0.5
BRLK				IAML				06 22 47.2	
	comp=N,6µm,0.4s								
BRLK				IAML				06 22 47.6	
	comp=E,5µm,0.4s								
BRLK	Bradley Lake	1.35	102				Sn	06 22 45.1	-1.5
CAPN	Captain Cook N	1.36	58	P			Pn	06 22 25.1	+1.4
CAPN				IAML				06 22 49.7	
	comp=E,4µm,0.7s								
CAPN				IAML				06 23 00.1	
	comp=N,4µm,0.5s								
CAPN	Captain Cook N	1.36	58	P				06 22 25.2	
	baz=239								
CAPN				S				06 22 46.3	
	baz=239								
SPCP	Crater Peak Br	1.37	28				Pn	06 22 24.5	+0.5
SPCP							Sn	06 22 47.2	-0.1
BRSE	Bradley Lake S	1.43	102				Pn	06 22 24.8	+0.4
BRSE	Bradley Lake S	1.43	102	P				06 22 25.0	
	baz=284								
BRSE				S				06 22 46.4	
	baz=284								
SVW2	Sparrevohn	1.46	316				Pn	06 22 24.2	-0.4
STLK	Strandline Lak	1.65	29				Pn	06 22 27.0	+0.3
SLKM	Skilak Lake	1.69	73				Pn	06 22 27.3	+0.2
SLKM							Sn	06 22 50.7	-1.9
O22K	Cooper Landing	1.93	76				Pn	06 22 30.0	+0.6
O22K				IAML				06 22 56.8	
	comp=E,4µm,0.4s								
O22K				IAML				06 24 13.7	
	comp=N,4µm,1.2s								
O22K	Cooper Landing	1.93	76	P				06 22 29.4	
	baz=

OHAK				IAML		06 23 15.2			
	comp=E,1μm,0.4s								
OHAK	**Old Harbor**	**2.86**	**178**		Sn	06 23 13.3	-3.1		
OHAK	**Old Harbor**	**2.86**	**178**	P		06 22 39.0			
	baz=358,SNR=34								
OHAK				S		06 23 13.1			
	baz=358								
PPLA	**Purkeypile**	**2.91**	**12**		Pn	06 22 42.4	+1.3		
PPLA	**Purkeypile**	**2.91**	**12**		Sn	06 23 19.1	+1.3		
PPLA	**Purkeypile**	**2.91**	**12**	P		06 22 42.1			
	baz=193,SNR=110								
SML	**Sawmill**	**3.07**	**53**		Pn	06 22 41.6	-1.4		
SML				IAML		06 24 25.5			
	comp=E,1μm,1.2s								
SML				IAML		06 24 36.4			
	comp=N,1μm,1.7s								
SML	**Sawmill**	**3.07**	**53**	P		06 22 42.0			
	baz=237,SNR=21								
SML				S		06 23 17.9			
	baz=237								
TT01	**Tatalina**	**3.10**	**338**		Pn	06 22 43.4	+0.1		
TTA	**Tatalina**	**3.12**	**338**		Pn	06 22 43.1	-0.5		
TTA	**Tatalina**	**3.12**	**338**	P		06 22 43.5			
	baz=156								
GLI	**Glacier Island**	**3.27**	**73**		Pn	06 22 44.7	-0.8		
GLI				IAML		06 23 25.3			
	comp=E,1μm,0.6s								
GLI	**Glacier Island**	**3.27**	**73**		Sn	06 23 23.2	-2.4		
GLI	**Glacier Island**	**3.27**	**73**	P		06 22 44.0			
	baz=258								
GLI				S		06 23 23.6			
	baz=258								
CAST	**Castle Rocks**	**3.43**	**11**	Pn	Pn	06 22 47.9	+0.4		
HUR	**Hurricane**	**3.46**	**31**		Pn	06 22 47.6	-0.2		
SCM	**Sheep Creek Mo**	**3.49**	**57**		Pn	06 22 47.9	-0.4		
SCM				IAML		06 24 20.1			
	comp=N,1μm,1.8s								
SCM				IAML		06 24 26.1			
	comp=E,1μm,2.1s								
SII	**Sitkinak Islan**	**3.54**	**186**		Pn	06 22 47.0	-1.8		
SII				IAML		06 24 19.5			
	comp=N,680nm,1.3s								
SII				IAML		06 25 12.1			
	comp=E,775nm,3.6s								
SII	**Sitkinak Islan**	**3.54**	**186**	P		06 22 47.7			
	baz=5.6,SNR=6.5								
SII				S		06 23 28.2			
	baz=5.6								
FID	**Port Fidalgo**	**3.55**	**76**		Pn	06 22 48.5	-0.5		
WAT7	**Susitna Watana**	**3.56**	**37**		Pn	06 22 48.7	-0.5		
WAT1	**Susitna Watana**	**3.65**	**38**		Pn	06 22 49.8	-0.5		
VMT	**TAPS Tl Valdez**	**3.66**	**71**		Pn	06 22 51.1	+0.8		
Q23K	**Middleton Isla**	**3.67**	**97**		Pn	06 22 50.8	+0.3		
Q23K	**Middleton Isla**	**3.67**	**97**	IAML		06 24 49.2			
	comp=N,800nm,2.6s								
Q23K				IAML		06 24 53.8			
	comp=E,670nm,1.8s								
Q23K	**Middleton Isla**	**3.67**	**97**	P		06 22 50.5			
	baz=283								
MID	**Middleton Isla**	**3.68**	**97**		Pn	06 22 50.7	+0.2		
MID	**Middleton Isla**	**3.68**	**97**	IAML		06 24 49.1			
	comp=N,747nm,2.5s								
MID				IAML		06 25 29.9			
	comp=E,582nm,3.9s								
KTH	**Kantishna Hill**	**3.71**	**18**		Pn	06 22 51.3	+0.4		
KTH				IAML		06 24 26.9			
	comp=N,758nm,2.7s								
KTH				IAML		06 24 47.0			
	comp=E,568nm,1.9s								
TRF	**Thorofare Moun**	**3.72**	**23**		Pn	06 22 51.1	-0.2		
TRF				IAML		06 24 57.3			
	comp=N,684nm,2.2s								
TRF				IAML		06 24 59.4			
	comp=E,701nm,3.1s								
TRF	**Thorofare Moun**	**3.72**	**23**	P		06 22 50.8			
	baz=206,SNR=96								
WAT2	**Susitna Watana**	**3.74**	**37**		Pn	06 22 51.0	-0.4		
WAT2	**Susitna Watana**	**3.74**	**37**	P		06 22 51.2			
	baz=221								
WAT2				S		06 23 32.9			
	baz=221								
WAT6	**Susitna Watana**	**3.75**	**45**		Pn	06 22 51.0	-0.6		
WAT6	**Susitna Watana**	**3.75**	**45**	P		06 22 51.1			
	baz=230,SNR=73								
WAT6				S		06 23 33.5			
	baz=230								
CHUM	**Lake Minchumin**	**3.87**	**8**		Pn	06 22 53.5	+0.5		
CHUM	**Lake Minchumin**	**3.87**	**8**	P		06 22 53.3			
	baz=189,SNR=73								
EYAK	**Cordova Ski Ar**	**3.88**	**80**	Pn	Pn	06 22 52.7	-0.5		
EYAK	**Cordova Ski Ar**	**3.88**	**80**	P		06 22 53.5			
	baz=266								
DIV	**Divide**	**3.96**	**71**		Pn	06 22 53.8	-0.4		
KLU	**Klutina**	**3.98**	**66**		Pn	06 22 54.6	+0.2		
KLU				IAML		06 23 42.2			
	comp=E,679nm,0.4s								
KLU				IAML		06 23 43.8			
	comp=N,809nm,0.6s								
KLU	**Klutina**	**3.98**	**66**	P		06 22 54.1			
	baz=252,SNR=114								
RND	**Reindeer**	**4.01**	**31**		Pn	06 22 54.7	-0.2		
RND				IAML		06 24 11.0			
	comp=N,594nm,2.1s								
M24K	**Tolsona, Glenn**	**4.10**	**57**		Pn	06 22 55.6	-0.4		
M24K	**Tolsona, Glenn**	**4.10**	**57**	P		06 22 56.3			
	baz=243,SNR=62								
BPAW	**Bear Paw Mtn.**	**4.21**	**15**		Pn	06 22 56.7	-0.7		
BPAW				IAML		06 24 15.2			
	comp=E,407nm,1.8s								
BPAW	**Bear Paw Mtn.**	**4.21**	**15**	P		06 22 57.0			
	baz=197,SNR=265								
MCK	**McKinley**	**4.26**	**28**		Pn	06 22 57.5	-0.5		
MCK				IAML		06 24 12.1			
	comp=E,400nm,2.9s								
MCK				IAML		06 24 31.9			
	comp=N,637nm,2.1s								
MCK	**McKinley**	**4.26**	**28**	P		06 22 57.8			
	baz=212,SNR=107								
PS12	**TAPS Pump St12**	**4.33**	**67**		Pn	06 22 58.9	-0.1		
PS11	**TAPS Pump St11**	**4.39**	**59**		Pn	06 23 00.0	+0.4		
GOAT	**Goat Mountain**	**4.39**	**79**		Pn	06 22 59.6	-0.2		
RAGM	**Ragged Mountai**	**4.41**	**82**		Pn	06 22 59.1	-0.9		
BMRM	**Bremner River**	**4.49**	**75**		Pn	06 23 01.5	+0.5		
BMRM	**Bremner River**	**4.49**	**75**	P		06 23 01.1			
	baz=262,SNR=17								
BWN	**Browne**	**4.53**	**23**		Pn	06 23 01.4	-0.1		
KAIM	**Kayak Island**	**4.56**	**88**		Pn	06 23 02.4	+0.5		
KAIM	**Kayak Island**	**4.56**	**88**	P		06 23 02.7			
	baz=276								
HMT	**Hamilton**	**4.62**	**83**		Pn	06 23 02.8	+0.2		
N25K	**Chitina, Valde**	**4.62**	**67**		Pn	06 23 03.7	+0.9		
N25K	**Chitina, Valde**	**4.62**	**67**	P		06 23 02.8			
	baz=254,SNR=43								
NICHA	**Nichawak Mount**	**4.77**	**84**		Pn	06 23 05.1	+0.5		
PAX	**Paxson**	**4.82**	**49**		Pn	06 23 05.5	+0.1		
PAX	**Paxson**	**4.82**	**49**	P		06 23 05.6			
	baz=236,SNR=58								
SUCK	**Suckling Hills**	**4.87**	**86**		Pn	06 23 06.4	+0.5		
GLB	**Gilahina Butte**	**4.95**	**70**		Pn	06 23 07.7	+0.7		
NEA2	**Nenana**	**4.99**	**23**		Pn	06 23 06.0	-1.4		
NEA2				IAML		06 24 03.7			
	comp=N,333nm,1.3s								
NEA2				IAML		06 24 15.4			
	comp=E,462nm,1.3s								
NEA2	**Nenana**	**4.99**	**23**	P		06 23 06.7			
	baz=206,SNR=125								
VRDI	**Verde Repeater**	**5.08**	**72**		Pn	06 23 08.6	-0.3		
GRIN	**Grindle Hills**	**5.09**	**83**		Pn	06 23 09.1	+0.3		
WRH	**Wood River Hil**	**5.09**	**27**		Pn	06 23 07.6	-1.2		
WRH				IAML		06 24 17.7			
	comp=E,308nm,4.5s								
WRH				IAML		06 24 27.4			
	comp=N,260nm,2.1s								
KHIT	**Khitrov Hills**	**5.12**	**81**		Pn	06 23 09.7	+0.4		
MLY	**Manley**	**5.14**	**13**		Pn	06 23 08.4	-1.1		
MLY				IAML		06 23 57.1			
	comp=E,398nm,2.3s								
MLY				IAML		06 24 10.2			
	comp=N,388nm,2.1s								
MLY	**Manley**	**5.14**	**13**	P		06 23 08.8			
	baz=196,SNR=109								
CRQM	**Cirque**	**5.18**	**78**		Pn	06 23 10.8	+0.6		
CRQE	**Cirque**	**5.20**	**78**	P		06 23 11.0			
	baz=267								
CCB	**Clear Creek Bu**	**5.30**	**28**		Pn	06 23 10.6	-0.9		

MCARA	**McCarthy VSAT**	**5.31**	**71**		Pn	06 23 12.2	+0.6		
MCARA	**McCarthy VSAT**	**5.31**	**71**	P		06 23 12.5			
	baz=260								
HDA	**Harding Lake**	**5.32**	**32**		Pn	06 23 11.4	-0.4		
HDA	**Harding Lake**	**5.32**	**32**	P		06 23 11.4			
	baz=218,SNR=313								
HDA				P		06 23 11.4			
	baz=218,SNR=313								
KULT	**Kultieth River**	**5.39**	**83**		Pn	06 23 12.9	+0.2		
I23K	**Minto, Yukon-K**	**5.44**	**19**		Pn	06 23 12.8	-0.5		
I23K	**Minto, Yukon-K**	**5.44**	**19**	P		06 23 12.7			
	baz=202,SNR=229								
PS08	**TAPS Pump Stn8**	**5.46**	**32**		Pn	06 23 13.2	-0.5		
MDM	**Murphy Dome**	**5.48**	**24**		Pn	06 23 12.9	-1.0		
TCOL	**CIGO, UAF Yank**	**5.48**	**26**		Pn	06 23 13.6	-0.3		
TCOL	**CIGO, UAF Yank**	**5.48**	**26**	P		06 23 13.4			
	baz=211,SNR=27								
COLA	**College**	**5.49**	**26**		Pn	06 23 13.6	-0.3		
COLA	**College**	**5.49**	**26**	P		06 23 13.4			
	baz=211								
MENT	**Mentasta**	**5.50**	**54**		Pn	06 23 14.2	+0.1		
PTPK	**Pantsy Peak**	**5.55**	**74**		Pn	06 23 15.7	+0.7		
KIAG	**Kiagna River**	**5.57**	**76**		Pn	06 23 16.1	+0.7		
BALM	**Baldy**	**5.59**	**75**		Pn	06 23 15.9	+0.4		
IL31		**5.63**	**30**		Pn	06 23 15.1	-0.7		
DOT	**Dot Lake**	**5.73**	**47**		Pn	06 23 17.1	-0.1		
PS07	**TAPS Pump Stn7**	**5.78**	**22**		Pn	06 23 17.6	-0.2		
POKR	**Poker Plat Res**	**5.79**	**26**		Pn	06 23 17.2	-0.8		
POKR	**Poker Plat Res**	**5.79**	**26**	P		06 23 17.4			
	baz=212,SNR=39								
BARN	**Barnard Glacie**	**5.92**	**75**		Pn	06 23 20.9	+1.0		
SCRK	**Sand Creek**	**5.95**	**45**		Pn	06 23 19.5	-0.6		
SCRK	**Sand Creek**	**5.95**	**45**	P		06 23 19.7			
	baz=233,SNR=42								
SDPT	**Sand Point**	**6.03**	**221**	P		06 23 19.9			
	baz=36								
PS06	**TAPS Pump Stn6**	**6.06**	**15**		Pn	06 23 21.4	0.0		
CTG	**Chitna Glacier**	**6.07**	**76**	P		06 23 22.4			
	baz=267								
CTGM	**Chitina Glacie**	**6.08**	**76**		Pn	06 23 22.6	+0.8		
TABL	**Table Mountain**	**6.16**	**81**		Pn	06 23 24.0	+0.9		
LOGN	**Logan Glacier**	**6.23**	**78**		Pn	06 23 24.5	+0.5		
L27K	**Beaver Creek,**	**6.33**	**57**		Pn	06 23 25.7	+0.6		
L27K	**Beaver Creek,**	**6.33**	**57**	P		06 23 26.2			
	baz=247,SNR=46								
BC03		**6.35**	**57**		Pn	06 23 25.3	+0.1		
YUK2	**White River**	**6.41**	**69**		Pn	06 23 27.1	+0.9		
PS4A	**Pavlof South-4**	**6.51**	**227**		Pn	06 23 28.4	+0.8		
PRP	**Porcupine Dome**	**6.57**	**30**		Pn	06 23 27.2	-1.2		
YUK3	**Moose Creek**	**6.58**	**69**		Pn	06 23 29.5	+0.9		
PCA	**Pinnacle**	**6.63**	**84**		Pn	06 23 30.0	+0.9		
PINM	**Pinnacle**	**6.63**	**84**	P		06 23 29.9			
	baz=275,SNR=11								
K27K	**Chicken**	**6.68**	**49**		Pn	06 23 29.6	-0.1		
K27K	**Chicken**	**6.68**	**49**	P		06 23 29.9			
	baz=238								
DT1	**Dutton Round H**	**6.85**	**227**		Pn	06 23 31.8	-0.3		

IDC ***25*** *06:22:01.5±1.1, 27.°70N×85.°16E, h0km, mb5.0/12, mb1 5.1/13, mb1mx4.6/64, mbtmp5.0/13, ML4.7/1, Error ellipse: s-maj=43.4km s-min=18.2km az=61.0*
NEIC ***25*** *06:22:02.8±1.7, 27.°80N±0.°08×85.°11E±0.°07, h10km±1km, mb5.1/19, Error ellipse: s-maj=13.3km s-min=10.6km az=343.0*
DMN ***25*** *06:22:03.2±0.1, 27.°81N×85.°13E, h10km, Ml5.2/1, Error ellipse: s-maj=3.5km s-min=2.2km az=23.0*

ISC 25 06:22:03.2±0.9, 27.°79N±0.°05×85.°15E±0.°05, h12km±5km, n52, σ0s87/54, mb5.1/20, 1D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.12**	**89**	*e*Pg	**Pg**	**06 22 06.6**	**+0.1**
KKN				*e*Sg	**Sg**	**06 22 08.9**	**0.0**
DMN	**Daman**	**0.18**	**191**	*e*Pg	**Pg**	**06 22 07.6**	**+0.1**
DMN				*e*Sg	**Sg**	**06 22 11.0**	**+0.6**
PKI	**Pulchoki**	**0.32**	**133**	*e*Pg	**Pb**	**06 22 10.5**	**-0.5**
PKI				*e*Sg	**Sg**	**06 22 15.1**	**+0.8**
GKN	**Gorkha**	**0.50**	**296**	*e*Sg	**Sb**	**06 22 19.7**	**-1.6**
DANN	**Dangsing**	**1.35**	**295**	*e*Sg	**Sb**	**06 22 45.0**	**-0.8**
	5μm,0.3s						
LSA	**Lhasa**	**5.61**	**69**	Pn	**Pn**	**06 23 26.9**	**0.0**
SHL	**Shillong**	**6.42**	**109**	Pn	**Pn**	**06 23 38.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**15.71**	**123**		**Pn**	**06 25 42.7**	**-1.8**
BOOM	**Boomskoye usch**	**16.47**	**335**	Pn	**Pn**	**06 25 52.2**	**-2.0**
AAK	**Ala-Archa**	**17.16**	**332**	Pn	**Pn**	**06 26 02.0**	**-0.9**
MK31	**Makanchi Array**	**19.10**	**354**	P	**P**	**06 26 25.9**	**0.0**
MKAR	**Makanchi Array**	**19.10**	**354**	P	**Pn**	**06 26 27.3**	**+0.7**
	2.1nm,0.3s,baz=170,slow=10,SNR=2.4						
MAKZ	**Makanchi**	**19.15**	**353**	P	**P**	**06 26 26.1**	**-0.2**
KKAR	**Karatay Array**	**19.34**	**326**	P	**P**	**06 26 27.7**	**-0.7**
SONM	**Songino Array**	**25.97**	**34**	P	**P**	**06 27 37.4**	**+1.7**
	65nm,0.7s,baz=226,slow=10,SNR=7.7						
SONM	**Songino Array**	**25.97**	**34**	P	**P**	**06 27 36.2**	**+0.5**
SONM				IAmb	IAmb	06 27 41.1	
	comp=Z,47nm,0.8s						
ZALV	**Zalesovo Beam**	**26.14**	**360**	P	**P**	**06 27 37.6**	**+0.6**
	comp=Z,29nm,1.0s,baz=183,slow=8.5,SNR=1.2						
BVAR	**Borovoye Array**	**27.49**	**341**	P	**P**	**06 27 49.9**	**+0.7**
	comp=Z,25nm,1.0s,baz=225,slow=3.4,SNR=1.5						
BJT	**Baijiatuau**	**28.35**	**56**	P	**P**	**06 27 55.9**	**-1.2**
HIA	**Hailar**	**34.09**	**42**	P	**P**	**06 28 47.4**	**-0.2**
HIA				IAmb	IAmb	06 28 47.6	
	comp=Z,24nm,1.1s						
GNI	**Garni**	**35.41**	**301**	P	**P**	**06 28 58.9**	**-0.4**
GNI				IAmb	IAmb	06 29 05.7	
	comp=Z,26nm,0.9s						
SBUM	**Sibu**	**36.11**	**130**	P	**P**	**06 29 05.6**	**+0.3**
NRIK	**Noril'sk**	**41.61**	**1**	P	**P**	**06 29 52.1**	**+1.5**
	comp=Z,81nm,1.2s,baz=171,slow=7.4,SNR=4.3						
NRIK	**Noril'sk**	**41.61**	**1**	P	**P**	**06 29 51.1**	**+0.4**
NRIK				IAmb	IAmb	06 30 02.9	
	comp=Z,53nm,0.8s						
AKASG	**Malin Array Be**	**47.65**	**315**	P	**P**	**06 30 40.9**	**+1.7**
	comp=Z,4.9nm,0.5s,baz=83,slow=6.2,SNR=1.5						
AKASG	**Malin Array Be**	**47.65**	**315**	IAmb	IAmb	06 30 44.2	
	comp=Z,12nm,1.0s						
TIXI	**Tiksi**	**50.01**	**17**	P	**P**	**06 30 57.7**	**+0.7**
FINES	**FINESS Array B**	**51.28**	**328**	P	**P**	**06 31 07.5**	**+0.8**
	comp=Z,46nm,1.2s,baz=116,slow=9.4,SNR=1.1						
ARCES	**ARCESS Array B**	**53.73**	**338**	P	**P**	**06 31 25.4**	**+0.7**
	comp=Z,23nm,1.1s,baz=92,slow=3.8,SNR=3.9						
NB201	**NORSAR Array S**	**58.33**	**327**	P	**P**	**06 31 58.1**	**+0.3**
STAL	**STALIGIAL**	**58.70**	**309**	P	**P**	**06 32 01.9**	**+1.2**
STAL				IAmb	IAmb	06 32 15.4	
	comp=Z,26nm,1.2s						
CORL	**Coleone**	**59.86**	**300**	P	**P**	**06 32 08.9**	**0.0**
WRA	**Warramunga Arr**	**67.20**	**129**	P	**P**	**06 32 57.8**	**+0.3**
	comp=Z,15nm,0.7s,baz=322,slow=6.4,SNR=5.9						
SMY	**Shemya**	**67.79**	**41**	P	**P**	**06 33 00.5**	**-0.3**
ASAR	**Alice Springs**	**69.49**	**133**	P	**P**	**06 33 11.9**	**+0.1**
	comp=Z,12nm,0.7s,baz=315,slow=6.3,SNR=2.1						
TCOL	**CIGO, UAF Yank**	**78.94**	**20**	P	**P**	**06 34 05.8**	**-0.6**
TCOL				IAmb	IAmb	06 34 18.2	
	comp=Z,20nm,1.1s						
COLA	**College**	**78.95**	**20**	P	**P**	**06 34 05.5**	**-0.8**
COLA				IAmb	IAmb	06 34 18.2	
	comp=Z,24nm,1.1s						
ILAR	**Eielson Array**	**79.31**	**20**	P	**P**	**06 34 07.7**	**-0.7**
	comp=Z,3.0nm,0.6s,baz=301,slow=3.3,SNR=1.2						
SKT	**Skwentna**	**79.69**	**24**	P	**P**	**06 34 09.8**	**-0.7**
SKT				IAmb	IAmb	06 34 21.9	
	comp=Z,20nm,1.2s						
STKA	**Stephens Creek**	**80.05**	**134**	P	**P**	**06 34 12.3**	**-0.4**
	comp=Z,24nm,1.0s,baz=234,slow=22,SNR=4.6						
SUA	**Susitna One**	**80.31**	**24**	P	**P**	**06 34 12.5**	**-1.5**
SUA				IAmb	IAmb	06 34 30.8	
	comp=Z,21nm,1.2s						
DAWY	**Dawson**	**82.02**	**18**		**P**	**06 34 23.0**	**0.0**
SKAG	**Skagway**	**86.87**	**19**	P	**P**	**06 34 48.5**	**+1.0**
SKAG				IAmb	IAmb	06 34 54.2	
	comp=Z,18nm,1.0s						
YKA	**Yellowknife Ar**	**88.65**	**9**	P	**P**	**06 34 55.4**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=183,slow=20,SNR=2.0						
SYO	**Syowa Base**	**102.07**	**195**	∥iPdiff	**Pdif**	**06 35 55.6**	**-1.1**
SNAA	**Sanae**	**115.47**	**201**		**PKiKP**	**06 40 44.0**	**-0.1**
W57A	**Gilead**	**115.84**	**346**		**PKPdf**	**06 40 46.1**	**0.0**
CLTN	**Cedars of Leba**	**115.96**	**352**		**PKiKP**	**06 40 45.5**	**-0.8**
U38A	**Gravette**	**116.11**	**360**		**PKPdf**	**06 40 48.1**	**+1.5**
X16A	**Lo Mia Camp, P**	**116.17**	**15**		**PKiKP**	**06 40 46.3**	**-0.7**
V48A	**Smith Brothers**	**116.36**	**353**		**PKiKP**	**06 40 46.8**	**-0.3**
X18A	**Snowflake**	**116.39**	**14**		**PKiKP**	**06 40 47.0**	**-0.4**

IDC ***25*** *06:22:11.8±2.8, 27.°76N×85.°08E, h0km, mb5.0/9, mb1 5.1/10, mb1mx4.6/64, mbtmp5.0/10, ML5.0/1, MS7.1/1, Ms1 7.1/1, ms1mx5.4/57, Error ellipse: s-maj=61.5km s-min=44.0km az=6.0*

ISC 25 06:22:14.4±2.4, 27.°9N±0.°3×85.°1E±0.°3, h12km, n11, σ0s61/10, mb4.9/9, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.02**	**354**	P	**Pn**	**06 26 36.5**	**-0.3**
	4.6nm,0.3s,baz=180,slow=10,SNR=4.2						
ZALV	**Zalesovo Beam**	**26.06**	**360**	P	**P**	**06 27 47.5**	**-0.1**
	34nm,0.8s,baz=181,slow=9.6,SNR=1.9						
BVAR	**Borovoye Array**	**27.39**	**341**	P	**P**	**06 27 59.6**	**+0.1**
	23nm,0.9s,baz=158,slow=12,SNR=2.1						
KIRV	**Kirov**	**39.38**	**331**	P	**P**	**06 29 44.7**	**+1.1**
	72nm,1.1s,baz=135,slow=7.1,SNR=2.0						
ATD	**Arta Tunnel**	**42.68**	**256**	LR	LR	06 46 31.0	
	comp=Z,262μm,21.8s,baz=68,slow=34						
AKASG	**Malin Array Be**	**47.54**	**315**	P	**P**	**06 30 48.5**	**-1.0**
	2.0nm,0.4s,baz=78,slow=6.7,SNR=2.3						
ARCES	**ARCESS Array B**	**53.63**	**338**	P	**P**	**06 31 35.2**	**0.0**
	26nm,0.7s,baz=101,slow=6.3,SNR=5.2						
ESDC	**Sonseca Array**	**72.10**	**306**	P	**P**	**06 33 39.0**	**+0.2**
	7.2nm,1.1s,baz=50,slow=5.9,SNR=1.9						
ILAR	**Eielson Array**	**79.28**	**20**	P	**P**	**06 34 19.0**	**-0.4**
	8.1nm,0.8s,baz=308,slow=4.5,SNR=5.3						
KDAK	**Kodiak Island**	**82.03**	**27**	P	**P**	**06 34 34.2**	**0.0**
	32nm,0.8s,baz=307,slow=8.5,SNR=3.0						
YKA	**Yellowknife Ar**	**88.59**	**9**	P	**P**	**06 35 07.0**	**+0.1**
	5.0nm,0.7s,baz=339,slow=4.2,SNR=3.9						

IDC ***25*** *06:22:20.4±0.5, 27.°80N×85.°44E, h0km, mb5.1/29, mb1 5.2/31, mb1mx4.9/66, mbtmp5.1/31, ML4.7/2, Error ellipse: s-maj=16.8km s-min=11.7km az=58.0*

ISC 25 06:22:23.4±0.5, 27.°83N±0.°10×85.°5E±0.°1, h18km, n31, σ0s54/31, mb5.0/29, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.51**	**124**	Pn	**Pn**	**06 26 01.6**	**+0.3**
	0.5nm,0.3s,baz=114,slow=29,SNR=1.1						
MKAR	**Makanchi Array**	**19.09**	**353**	P	**Pn**	**06 26 45.2**	**-0.7**
	6.8nm,0.3s,baz=179,slow=9.2,SNR=8.9						
KURBB	**Kurchatov Arra**	**23.36**	**349**	P	**P**	**06 27 31.0**	**+0.3**
	22nm,0.9s,baz=171,slow=13,SNR=9.1						
GEYT	**Alibeck**	**24.99**	**301**	P	**P**	**06 27 46.9**	**+0.8**
	64nm,1.1s,baz=98,slow=8.9,SNR=2.2						
SONM	**Songino Array**	**25.78**	**34**	P	**P**	**06 27 54.1**	**+0.8**
	27nm,0.5s,baz=221,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**26.10**	**359**	P	**P**	**06 27 56.2**	**+0.3**
	22nm,0.4s,baz=182,slow=10.0,SNR=11						
BVAR	**Borovoye Array**	**27.54**	**340**	P	**P**	**06 28 10.0**	**+1.1**
	30nm,1.0s,baz=166,slow=13,SNR=4.5						
KLR	**Kul'dur**	**41.25**	**46**	P	**P**	**06 30 07.0**	**-0.3**
	16nm,0.8s,baz=257,slow=12,SNR=4.8						
NRIK	**Noril'sk**	**41.56**	**1**	P	**P**	**06 30 10.2**	**+0.6**
	24nm,0.5s,baz=200,slow=4.3,SNR=15						
BRTR	**Keskin Array B**	**44.12**	**299**	P	**P**	**06 30 31.1**	**+0.2**
	17nm,1.1s,baz=115,slow=7.6,SNR=1.3						
AKASG	**Malin Array Be**	**47.82**	**314**	P	**P**	**06 30 59.3**	**-0.5**
	9.3nm,0.7s,baz=102,slow=10,SNR=6.4						
FINES	**FINESS Array B**	**51.39**	**328**	P	**P**	**06 31 26.9**	**+0.1**
	41nm,0.4s,baz=103,slow=7.3,SNR=29						
ARCES	**ARCESS Array B**	**53.79**	**338**	P	**P**	**06 31 45.0**	**+0.5**
	69nm,0.6s,baz=104,slow=7.8,SNR=36						
GERES	**GERESS Array B**	**57.87**	**312**	P	**P**	**06 32 14.3**	**+0.1**
	3.4nm,0.4s,baz=77,slow=6.9,SNR=14						
NOA	**NORSAR Array B**	**58.48**	**327**	P	**P**	**06 32 17.5**	**-0.7**
	2.6nm,0.6s,baz=168,slow=8.8,SNR=9.9						
OPO	**Ambohidratompo**	**59.16**	**223**	P	**P**	**06 32 23.4**	**-0.2**
	3.3nm,0.3s,baz=91,slow=14,SNR=9.2						
FITZ	**Fitzroy Crossi**	**59.99**	**135**	P	**P**	**06 32 29.7**	**+0.7**
	26nm,1.0s,baz=77,slow=20,SNR=2.5						
KEST	**Kesra**	**63.71**	**298**	P	**P**	**06 32 55.0**	**+0.9**
	63nm,1.0s,baz=36,slow=2.2,SNR=7.9						
**

mb4.6/7,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.33**	**122**	Pn	**Pn**	**06 29 11.1**	**-0.1**
	1.0nm,0.3s,baz=45,slow=48,SNR=1.8						
MKAR	**Makanchi Array**	**19.57**	**354**	P	**P**	**06 30 01.7**	**-0.9**
	1.5nm,0.3s,baz=172,slow=11,SNR=4.7						
SONM	**Songino Array**	**26.25**	**33**	P	**P**	**06 31 10.5**	**+0.5**
	7.8nm,0.6s,baz=223,slow=9.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.59**	**359**	P	**P**	**06 31 12.5**	**-0.3**
	4.5nm,0.5s,baz=179,slow=9.0,SNR=1.7						
FINES	**FINESS Array B**	**51.75**	**328**	P	**P**	**06 34 42.0**	**+0.1**
	5.5nm,0.5s,baz=106,slow=6.9,SNR=3.9						
ARCES	**ARCESS Array B**	**54.21**	**338**	P	**P**	**06 35 00.6**	**+0.6**
	4.6nm,0.5s,baz=90,slow=7.2,SNR=6.7						
NOA	**NORSAR Array B**	**58.84**	**327**	P	**P**	**06 35 33.1**	**-0.1**
	7.2nm,1.2s,baz=101,slow=7.2,SNR=1.5						
WRA	**Warramunga Arr**	**66.79**	**129**	P	**P**	**06 36 26.3**	**-0.4**
	3.7nm,1.0s,baz=322,slow=6.5,SNR=1.7						
ASAR	**Alice Springs**	**69.06**	**133**	P	**P**	**06 36 41.1**	**+0.2**
	3.5nm,1.0s,baz=322,slow=4.7,SNR=1.3						

*IDC **25** 06:25:53.2±0.6,27.°65N×85.°48E,h0km,mb4.8/32, mb1 4.9/33,mb1mx4.7/67,mbtmp4.8/33,ML4.9/1,Error ellipse: s-maj=16.4km s-min=12.0km az=43.0*
*NEIC **25** 06:25:55.3±1.3,27.°69N±0.°08×85.°59E±0.°07,h10km±1km, mb5.0/57, Error ellipse: s-maj=14.4km s-min=10.9km az=189.0*
*DMN **25** 06:25:55.1±0.1,27.°77N×85.°64E,h10km,Ml5.7/5,Error ellipse: s-maj=3.0km s-min=1.0km az=11.0*

ISC 25 06:25:56.0±0.9,27.°70N±0.°05×85.°58E±0.°03,h16km±5km, n130,σ0s91/134,mb5.0/56,1D,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKI	**Pulchoki**	**0.20**	**230**	*e*Pg	**Pg**	**06 26 01.1**	**+0.2**
PKI				*e*Sg	**Sg**	**06 26 05.0**	**+0.8**
PKIN	**Phulchoki**	**0.20**	**233**	*e*Pg	**Pg**	**06 26 01.1**	**+0.2**
KKN	**Kakani**	**0.28**	**289**	*e*Pg	**Pg**	**06 26 01.7**	**-0.4**
KKN				*e*Sg	**Sg**	**06 26 05.9**	**-0.4**
DMN	**Daman**	**0.43**	**258**	*e*Pg	**Pb**	**06 26 05.2**	**-0.2**
DMN				*e*Sg	**Sb**	**06 26 12.0**	**+0.3**
GKN	**Gorkha**	**0.89**	**290**	*e*Sg	**Sg**	**06 26 24.4**	**-0.5**
	26μm,0.3s						
DANN	**Dangsing**	**1.73**	**292**	*e*Pg	**Pg**	**06 26 28.0**	**-1.3**
DANN				*e*Sg	**Sg**	**06 26 50.9**	**-1.0**
	19μm,0.3s						
KOLN	**Koldanda**	**1.75**	**273**	*e*Sg	**Sg**	**06 26 51.8**	**-0.8**
	15μm,0.4s						
ODAN	**Odare**	**1.82**	**117**	*e*Sg	**Sg**	**06 26 52.7**	**-1.8**
	5μm,0.3s						
TAPN	**Taplejung**	**1.93**	**100**	*e*Pg	**Pb**	**06 26 30.7**	**-0.2**
TAPN				*e*Sg	**Sb**	**06 26 55.0**	**+0.2**
PYUN	**Piuthan**	**2.33**	**280**	*e*Pg	**Pg**	**06 26 39.6**	**-1.0**
PYUN				*e*Sg	**Sg**	**06 27 09.2**	**-1.6**
	17μm,0.4s						
LSA	**Lhasa**	**5.28**	**67**	Pn	**Pn**	**06 27 14.2**	**-0.6**
SHL	**Shillong**	**6.03**	**109**	Pn	**Pn**	**06 27 23.8**	**-0.9**
NIL	**Nilore**	**12.15**	**302**	Pn	**Pn**	**06 28 49.5**	**+0.9**
PRZ	**Przheval'sk**	**15.87**	**340**	Pn	**Pn**	**06 29 37.3**	**-1.5**
MK31	**Makanchi Array**	**19.24**	**353**	P	**Pn**	**06 30 20.2**	**-0.3**
MKAR	**Makanchi Array**	**19.24**	**353**	P	**P**	**06 30 19.7**	**+0.2**
	3.9nm,0.3s,baz=175,slow=12,SNR=7.6						
MKAR	**Makanchi Array**	**19.24**	**353**	P	**P**	**06 30 20.0**	**+0.5**
MAKZ	**Makanchi**	**19.29**	**352**	P	**Pn**	**06 30 21.2**	**+0.1**
XAN	**Xi'an**	**20.99**	**67**	P	**P**	**06 30 38.5**	**-0.2**
ENH	**Enshi**	**21.06**	**77**	P	**P**	**06 30 39.7**	**+0.1**
ENH				IAmb	IAmb	06 30 48.5	
	comp=Z,65nm,1.0s						
KURBB	**Kurchatov Arra**	**23.51**	**349**	P	**P**	**06 31 05.7**	**+0.6**
	comp=Z,14nm,0.7s,baz=170,slow=10,SNR=5.3						
KURK	**Kurchatov**	**23.59**	**349**	P	**P**	**06 31 05.7**	**-0.2**
GEYT	**Alibeck**	**25.15**	**301**	P	**P**	**06 31 20.5**	**-0.1**
SONM	**Songino Array**	**25.83**	**33**	P	**P**	**06 31 27.9**	**+1.2**
	comp=Z,31nm,0.6s,baz=224,slow=9.6,SNR=16						
SONM	**Songino Array**	**25.83**	**33**	P	**P**	**06 31 28.6**	**+1.9**
SONM				IAmb	IAmb	06 31 28.9	
	comp=Z,24nm,0.7s						
ULN	**Ulaanbaatar**	**26.18**	**34**	P	**P**	**06 31 31.4**	**+1.6**
ZALV	**Zalesovo Beam**	**26.23**	**359**	P	**P**	**06 31 30.1**	**0.0**
	comp=Z,20nm,0.7s,baz=186,slow=8.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.23**	**359**	P	**P**	**06 31 29.9**	**-0.2**
KULM	**Kulim**	**26.50**	**145**	P	**P**	**06 31 34.3**	**+1.4**
BVAR	**Borovoye Array**	**27.70**	**340**	P	**P**	**06 31 42.8**	**-0.5**
	comp=Z,14nm,0.9s,baz=159,slow=10,SNR=7.5						
ABKAR	**Akbulak array**	**29.18**	**324**	P	**P**	**06 31 58.3**	**+1.7**
NACB	**Ninganchiao**	**32.51**	**88**	P	**P**	**06 32 25.4**	**-0.7**
SOCY	**Socotra**	**33.34**	**248**	P	**P**	**06 32 32.8**	**+0.8**
HIA	**Hailar**	**33.91**	**41**	P	**P**	**06 32 39.4**	**+1.2**
ARU	**Arti**	**34.58**	**334**	P	**P**	**06 32 45.1**	**+1.2**
	comp=Z,4.7nm,0.6s,baz=160,slow=6.0,SNR=3.9						
ARU	**Arti**	**34.58**	**334**	P	**P**	**06 32 45.4**	**+1.5**
KKM	**Kota Kinabalu**	**36.19**	**121**	P	**P**	**06 32 57.1**	**-1.2**
KSRS	**Korea Array**	**36.72**	**64**	P	**P**	**06 33 02.9**	**+0.4**
	comp=Z,2.3nm,0.4s,baz=254,slow=7.5,SNR=2.8						
JNU	**Nakatsue**	**39.21**	**71**	P	**P**	**06 33 24.3**	**+0.7**
	comp=Z,11nm,0.7s,baz=318,slow=6.2,SNR=4.5						
USRK	**Ussuriysk Ar.**	**40.45**	**53**	P	**P**	**06 33 33.9**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=261,slow=9.9,SNR=5.3						
JMN	**Monobe**	**41.66**	**69**	P	**P**	**06 33 43.0**	**-0.9**
NRIK	**Noril'sk**	**41.69**	**1**	P	**P**	**06 33 43.8**	**+0.2**
	comp=Z,30nm,0.8s,baz=134,slow=5.2,SNR=6.7						
NRIK	**Noril'sk**	**41.69**	**1**	P	**P**	**06 33 44.7**	**+1.1**
NRIK				IAmb	IAmb	06 33 49.3	
	comp=Z,23nm,0.9s						
BRTR	**Keskin Array B**	**44.28**	**300**	P	**P**	**06 34 05.2**	**0.0**
	comp=Z,4.9nm,0.9s,baz=115,slow=7.7,SNR=2.0						
YAK	**Yakutsk**	**44.93**	**28**	P	**P**	**06 34 10.8**	**+1.0**
YAK				IAmb	IAmb	06 34 22.1	
	comp=Z,25nm,0.9s						
MJAR	**Matsushiro Arr**	**44.97**	**65**	P	**P**	**06 34 09.9**	**-0.6**
	comp=Z,3.8nm,0.8s,baz=267,slow=10.0,SNR=2.7						
ELL	**Elmali**	**47.38**	**296**	P	**P**	**06 34 30.3**	**+0.6**
AKASG	**Malin Array Be**	**47.99**	**315**	P	**P**	**06 34 33.1**	**-1.0**
	comp=Z,9.5nm,0.8s,baz=83,slow=6.3,SNR=4.1						
AKBB	**Malin Array Si**	**47.99**	**315**	P	**P**	**06 34 33.3**	**-0.7**
ERM	**Erimo**	**48.50**	**57**	P	**P**	**06 34 38.6**	**+0.5**
ERM				IAmb	IAmb	06 34 44.2	
	comp=Z,12nm,1.0s						
JEM	**Erimo**	**48.50**	**57**	P	**P**	**06 34 34.7**	**-3.4**
JEM				IAmb	IAmb	06 34 44.3	
	comp=Z,12nm,1.0s						
MLR	**Muntele Rosu**	**49.91**	**308**	P	**P**	**06 34 50.8**	**+1.7**
TIXI	**Tiksi**	**49.98**	**16**	P	**P**	**06 34 48.5**	**-0.5**
	comp=Z,19nm,0.6s,baz=227,slow=5.4,SNR=10						
TIXI	**Tiksi**	**49.98**	**16**	P	**P**	**06 34 48.9**	**-0.1**
TIXI				IAmb	IAmb	06 34 49.7	
	comp=Z,17nm,0.6s						
IDID	**Didziasalis**	**50.08**	**320**	*e*P	P	06 34 42.5	-7.5
IIGN	**Ignalina**	**50.38**	**320**	*e*P	**P**	**06 34 50.0**	**-2.2**
ISAL	**Salakas**	**50.47**	**321**	*e*P	**P**	**06 34 52.4**	**-0.5**
FINES	**FINESS Array B**	**51.56**	**328**	P	**P**	**06 35 00.9**	**-0.1**
	comp=Z,12nm,0.6s,baz=104,slow=8.0,SNR=5.1						
PABE	**Paberze**	**51.68**	**320**	*e*P	**P**	**06 35 00.3**	**-1.6**
MTSE	**Matsula**	**52.17**	**324**	*e*P	**P**	**06 35 04.5**	**-1.1**
SOEI	**Soe**	**52.81**	**129**	P	**P**	**06 35 11.2**	**+0.1**
ARCES	**ARCESS Array B**	**53.95**	**338**	P	**P**	**06 35 18.8**	**+0.2**
	comp=Z,18nm,0.8s,baz=101,slow=6.3,SNR=4.1						
MA2	**Magadan**	**54.03**	**35**	P	**P**	**06 35 19.4**	**+0.1**
	comp=Z,22nm,1.0s,baz=213,slow=23,SNR=2.7						
MA2	**Magadan**	**54.03**	**35**	IAmb	IAmb	06 35 24.2	
	comp=Z,44nm,1.1s						
PDG	**Podgorica**	**54.94**	**304**	P	**P**	**06 35 26.1**	**-0.1**
PDG				IAmb	IAmb	06 35 26.6	
	comp=Z,19nm,0.9s						
SEY	**Seymchan**	**55.19**	**31**	P	**P**	**06 35 28.2**	**+0.6**
	comp=Z,8.0nm,0.8s,baz=117,slow=12,SNR=2.9						
UPP	**Uppsala**	**55.45**	**325**	*e*P	**P**	**06 35 28.7**	**-0.9**
MORC	**Moravsky Berou**	**55.45**	**313**	P	**P**	**06 35 29.6**	**-0.3**
SGRT	**San Giovanni R**	**57.62**	**304**	P	**P**	**06 35 45.7**	**+0.2**
SGRT				IAmb	IAmb	06 35 56.8	
	comp=Z,21nm,1.1s						
GERES	**GERESS Array B**	**58.04**	**312**	P	**P**	**06 35 47.8**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=84,slow=7.1,SNR=3.4						
GERES	**GERESS Array B**	**58.04**	**312**	P	**P**	**06 35 48.4**	**0.0**
KHC	**Kasperske Hory**	**58.09**	**313**	P	**P**	**06 35 48.8**	**+0.2**
TRI	**Trieste**	**58.41**	**309**	P	**P**	**06 35 50.6**	**-0.3**
TRI				IAmb	IAmb	06 35 50.9	
	comp=Z,12nm,0.7s						
NC602	**NORSAR Array S**	**58.50**	**326**	P	**P**	**06 35 51.2**	**0.0**
NOA	**NORSAR Array B**	**58.65**	**327**	P	**P**	**06 35 51.5**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=103,slow=7.0,SNR=4.4						
NRCA	**Norcia**	**59.35**	**305**	P	**P**	**06 35 57.4**	**-0.1**
NRCA				IAmb	IAmb	06 35 58.4	
	comp=Z,16nm,0.9s						
MURB	**Monte Urbino**	**59.70**	**306**	P	**P**	**06 36 00.6**	**+0.7**
FITZ	**Fitzroy Crossi**	**59.82**	**135**	P	**P**	**06 36 01.1**	**+0.3**
	comp=Z,7.3nm,1.0s,baz=348,slow=7.3,SNR=3.2						
SALO	**Salr**	**60.67**	**309**	P	**P**	**06 36 06.8**	**+0.3**
TUE	**Stuetta**	**61.31**	**310**	P	**P**	**06 36 11.0**	**-0.1**
MSSA	**Maissana**	**61.62**	**308**	P	**P**	**06 36 12.3**	**-0.7**
MSSA				IAmb	IAmb	06 36 16.8	
	comp=Z,9.6nm,0.7s						
SENIN	**Lac Senin/Sane**	**62.72**	**310**	P	**P**	**06 36 19.7**	**-0.8**
VSL	**Villasalto**	**62.84**	**302**	P	**P**	**06 36 21.0**	**-0.2**
KEST	**Kesra**	**63.86**	**298**	P	**P**	**06 36 27.9**	**-0.2**
	comp=Z,33nm,0.6s,baz=354,slow=1.8,SNR=20						
KEST	**Kesra**	**63.86**	**298**	P	**P**	**06 36 28.7**	**+0.6**
WB0	**Warramunga Arr**	**66.77**	**130**	P	**P**	**06 36 47.5**	**+0.5**
WRA	**Warramunga Arr**	**66.85**	**130**	P	**P**	**06 36 47.9**	**+0.4**
	comp=Z,14nm,0.8s,baz=322,slow=6.6,SNR=10						
WRA	**Warramunga Arr**	**66.85**	**130**	P	**P**	**06 36 47.8**	**+0.3**
WR0	**Warramunga Arr**	**67.00**	**130**	P	**P**	**06 36 48.7**	**+0.3**
WR0				IAmb	IAmb	06 37 06.3	
	comp=Z,18nm,1.1s						
NWAO	**Narrogin (SRO)**	**67.38**	**151**	P	**P**	**06 36 49.9**	**-0.7**
NWAO				IAmb	IAmb	06 36 50.1	
	comp=Z,10nm,0.8s						
AS31	**Alice Springs**	**69.15**	**133**	P	**P**	**06 37 02.0**	**+0.1**
ASAR	**Alice Springs**	**69.15**	**133**	P	**P**	**06 37 02.1**	**+0.3**
	comp=Z,13nm,0.6s,baz=315,slow=6.4,SNR=16						
SCO	**Scoresbysund**	**69.77**	**340**	P	**P**	**06 37 06.3**	**+1.3**
LSZ	**Lusaka**	**70.12**	**240**	P	**P**	**06 37 08.5**	**+0.4**
A21K	**Barrow**	**72.27**	**17**	P	**P**	**06 37 20.6**	**+0.4**
A21K				IAmb	IAmb	06 37 40.2	
	comp=Z,17nm,1.1s						
EUNU	**Eureka**	**72.38**	**359**	P	**P**	**06 37 21.6**	**+0.7**
EUNU				IAmb	IAmb	06 37 26.0	
	comp=Z,20nm,1.1s						
ESDC	**Sonseca Array**	**72.57**	**306**	P	**P**	**06 37 22.3**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=64,slow=5.3,SNR=5.4						
PAB	**San Pablo**	**72.90**	**306**	P	**P**	**06 37 24.7**	**+0.1**
PAB				IAmb	IAmb	06 37 29.3	
	comp=Z,11nm,0.9s						
ANM	**Nome**	**73.02**	**25**	P	**P**	**06 37 26.5**	**+1.7**
ANM				IAmb	IAmb	06 37 32.0	
	comp=Z,11nm,1.2s						
TULEG	**Thule**	**74.80**	**354**	P	**P**	**06 37 34.7**	**-0.3**
TULEG				IAmb	IAmb	06 37 35.2	
	comp=Z,13nm,0.8s						
CTA	**Charters Tower**	**75.51**	**122**	P	**P**	**06 37 40.0**	**+0.1**
	comp=Z,8.7nm,0.9s,baz=281,slow=6.6,SNR=3.8						
CTAO	**Charters Tower**	**75.51**	**122**	P	**P**	**06 37 40.7**	**+0.8**
CTAO				IAmb	IAmb	06 37 40.9	
	comp=Z,12nm,0.9s						
BBOO	**Buckleboo**	**76.95**	**138**	P	**P**	**06 37 47.9**	**0.0**
BBOO				IAmb	IAmb	06 37 49.2	
	comp=Z,16nm,0.9s						
LBTB	**Lobatse**	**77.99**	**233**	P	**P**	**06 37 53.9**	**-0.1**
LBTB				IAmb	IAmb	06 37 56.5	
	comp=Z,15nm,1.1s						
BMAR	**Burnt Mountain**	**78.04**	**18**	P	**P**	**06 37 55.3**	**+1.7**
I23K	**Minto, Yukon-K**	**78.24**	**21**	P	**P**	**06 37 53.6**	**-1.1**
I23K				IAmb	IAmb	06 37 57.7	
	comp=Z,12nm,1.1s						
TORD	**Torodi Ar. Bea**	**78.67**	**279**	P	**P**	**06 37 56.4**	**-1.5**
	comp=Z,4.5nm,0.8s,baz=64,slow=4.0,SNR=4.4						
NEA2	**Nenana**	**78.71**	**21**	P	**P**	**06 37 57.8**	**+0.5**
MDM	**Murphy Dome**	**78.72**	**21**	P	**P**	**06 37 58.1**	**+0.7**
MDM				IAmb	IAmb	06 38 01.0	
	comp=Z,14nm,1.0s						
IL31		**79.27**	**20**	P	**P**	**06 38 01.2**	**+0.9**
ILAR	**Eielson Array**	**79.27**	**20**	P	**P**	**06 38 00.3**	**0.0**
	comp=Z,3.1nm,0.7s,baz=305,slow=4.5,SNR=7.0						
MCK	**McKinley**	**79.34**	**22**	P	**P**	**06 38 01.6**	**+0.8**
STKA	**Stephens Creek**	**79.71**	**134**	P	**P**	**06 38 03.1**	**-0.1**
	comp=Z,7.8nm,0.6s,baz=317,slow=5.6,SNR=6.9						
STKA	**Stephens Creek**	**79.71**	**134**	P	**P**	**06 38 03.2**	**+0.1**
SUA	**Susitna One**	**80.24**	**24**	P	**P**	**06 38 05.9**	**+0.1**
SUA				IAmb	IAmb	06 38 23.9	
	comp=Z,15nm,0.9s						
BOSA	**Boshof**	**80.46**	**231**	P	**P**	**06 38 06.7**	**-0.8**
	comp=Z,5.2nm,0.8s,baz=68,slow=2.0,SNR=3.5						
BOSA	**Boshof**	**80.46**	**231**	P	**P**	**06 38 07.7**	**+0.2**
KNK	**Knik Glacier**	**81.09**	**23**	P	**P**	**06 38 10.9**	**+0.6**
KNK				IAmb	IAmb	06 38 15.8	
	comp=Z,13nm,0.7s						
SCM	**Sheep Creek Mo**	**81.18**	**23**	P	**P**	**06 38 11.4**	**+0.6**
SCM				IAmb	IAmb	06 38 15.7	
	comp=Z,14nm,0.9s						
KDAK	**Kodiak Island**	**81.96**	**27**	P	**P**	**06 38 15.1**	**+0.2**
	comp=Z,19nm,0.7s,baz=269,slow=2.9,SNR=6.5						
KDAK	**Kodiak Island**	**81.96**	**27**	P	**P**	**06 38 15.5**	**+0.6**
KDAK				IAmb	IAmb	06 38 23.2	
	comp=Z,17nm,1.0s						
OHAK	**Old Harbor**	**82.03**	**28**	P	**P**	**06 38 16.1**	**+0.8**
KAIM	**Kayak Island**	**83.55**	**23**	P	**P**	**06 38 24.2**	**+1.1**
KAIM				IAmb	IAmb	06 38 24.8	
	comp=Z,13nm,0.8s						
HYT	**Haines Junctio**	**85.08**	**20**	P	**P**	**06 38 32.0**	**+1.0**
FRB	**Frobisher Bay**	**86.60**	**349**	P	**P**	**06 38 37.8**	**-0.5**
	comp=Z,7.9nm,1.0s,baz=19,slow=5.5,SNR=4.6						
YKA	**Yellowknife Ar**	**88.67**	**9**	P	**P**	**06 38 48.0**	**-0.3**
	comp=Z,3.9nm,0.7s,baz=332,slow=4.9,SNR=6.6						
SYO	**Syowa Base**	**102.08**	**195**	*e*X	**Pdif**	**06 39 45.2**	**-3.7**
SAML	**Samuel**	**145.13**	**296**	PKPbc	**PKPbc**	**06 45 32.8**	**-0.2**
OTAV	**Otavalo**	**148.27**	**328**		**PKPbc**	**06 45 43.4**	**+0.5**
MG02	**Cerro Sombrero**	**148.72**	**210**	PKPab	**PKPab**	**06 45 45.7**	**-0.2**

*IDC **25** 06:26:15.0±1.0,27.°38N×85.°58E,h0km,mb4.5/12, mb1 4.7/13,mb1mx4.3/67,mbtmp4.5/13,ML4.6/1,Error ellipse: s-maj=36.0km s-min=18.8km az=53.0*

ISC 25 06:26:15.4±1.0,27.°2N±0.°2×85.°4E±0.°2,h10km,n15, σ1s69/15,mb4.5/12,1C,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.74**	**354**	P	**P**	**06 30 45.0**	**-0.3**
	1.9nm,0.3s,baz=176,slow=10,SNR=1.0						
KURBB	**Kurchatov Arra**	**24.00**	**349**	P	**P**	**06 31 30.7**	**+0.7**
	6.3nm,0.7s,baz=164,slow=11,SNR=1.8						
ZALV	**Zalesovo Beam**	**26.75**	**359**	P	**P**	**06 31 54.4**	**-0.6**
	8.4nm,0.5s,baz=188,slow=9.1,SNR=2.1						
BVAR	**Borovoye Array**	**28.15**	**341**	P	**P**	**06 32 07.6**	**0.0**
	6.1nm,0.8s,baz=161,slow=14,SNR=1.6						
KSRS	**Korea Array**	**37.07**	**63**	P	**P**	**06 33 26.2**	**+0.5**
	3.1nm,0.6s,baz=263,slow=8.8,SNR=5.2						
FINES	**FINESS Array B**	**51.93**	**328**	P	**P**	**06 35 24.1**	**+0.1**
	3.9nm,0.5s,baz=95,slow=8.3,SNR=2.0						
ARCES	**ARCESS Array B**	**54.39**	**338**	P	**P**	**06 35 41.8**	**-0.3**
	7.3nm,0.8s,baz=108,slow=8.6,SNR=2.1						
GERES	**GERESS Array B**	**58.30**	**312**	P	**P**	**06 36 12.3**	**+1.8**
	2.9nm,0.9s,baz=98,slow=7.0,SNR=1.9						
NOA	**NORSAR Array B**	**59.02**	**327**	P	**P**	**06 36 15.4**	**+0.2**
	2.5nm,0.8s,baz=101,slow=7.2,SNR=1.7						
WRA	**Warramunga Arr**	**66.62**	**129**	P	**P**	**06 37 08.2**	**+1.9**
	7.3nm,1.1s,baz=322,slow=6.3,SNR=8.6						
ASAR	**Alice Springs**	**68.89**	**133**	P	**P**	**06 37 21.3**	**+0.7**
	3.6nm,0.7s,baz=312,slow=6.5,SNR=2.1						
ILAR	**Eielson Array**	**79.80**	**20**	P	**P**	**06 38 22.1**	**-1.5**
	2.2nm,0.6s,baz=311,slow=4.1,SNR=6.0						
KDAK	**Kodiak Island**	**82.48**	**27**	P	**P**	**06 38 37.5**	**-0.4**
	9.8nm,0.7s,baz=283,slow=2.3,SNR=4.7						
SYO	**Syowa Base**	**101.55**	**195**	*e*X	**PKiKP**	**06 44 25.8**	**-4.8**
CPUP	**Villa Florida**	**146.82**	**263**	PKPbc	**PKPab**	**06 46 00.1**	**+0.5**
	3.7nm,0.8s,baz=37,slow=2.9,SNR=3.3						

*IDC **25** 06:26:58.0±1.4,26.°62N×83.°91E,h0km,mb4.5/12, mb1 4.6/13,mb1mx4.2/68,mbtmp4.5/13,Error ellipse: s-maj=37.9km s-min=20.0km az=51.0*

ISC 25 06:26:59.7±1.4,26.°6N±0.°2×84.°0E±0.°2,h10km,n13, σ0s86/13,mb4.5/11,Northern India

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.04**	**117**	Pn	**Pn**	**06 30 44.7**	**-0.8**
	baz=294,slow=14,SNR=1.1						
MKAR	**Makanchi Array**	**20.16**	**357**	P	**P**	**06 31 33.4**	**-0.8**
	28nm,0.6s,baz=179,slow=12,SNR=8.8						
KURBB	**Kurchatov Arra**	**24.31**	**352**	P	**P**	**06 32 18.0**	**+0.7**
	8.6nm,0.8s,baz=176,slow=10,SNR=5.3						
ZALV	**Zalesovo Beam**	**27.29**	**1**	P	**P**	**06 32 44.6**	**+0.5**
	15nm,0.7s,baz=182,slow=8.5,SNR=2.9						
SONM	**Songino Array**	**27.50**	**34**	P	**P**	**06 32 46.3**	**0.0**
	12nm,0.8s,baz=226,slow=10,SNR=4.5						
KSRS	**Korea Array**	**38.48**	**63**	P	**P**	**06 34 22.1**	**+0.2**
	2.5nm,0.6s,baz=262,slow=8.1,SNR=5.2						
USRK	**Ussuriysk Ar.**	**42.23**	**53**	P	**P**	**06 34 52.5**	**-0.5**
	3.5nm,0.9s,baz=250,slow=8.6,SNR=1.6						
FINES	**FINESS Array B**	**51.71**	**329**	P	**P**	**06 36 06.5**	**-0.2**
	5.4nm,0.5s,baz=102,slow=7.6,SNR=3.6						
ARCES	**ARCESS Array B**	**54.40**	**338**	P	**P**	**06 36 24.9**	**-1.7**
	3.6nm,0.5s,baz=87,slow=8.6,SNR=1.6						
NOA	**NORSAR Array B**	**58.75**	**327**	P	**P**	**06 36 57.4**	**-0.3**
	0.4nm,0.3s,baz=94,slow=4.7,SNR=1.3						
WRA	**Warramunga Arr**	**67.30**	**128**	P	**P**	**06 37 55.2**	**+0.2**
	1.1nm,0.3s,baz=323,slow=6.3,SNR=1.0						
ASAR	**Alice Springs**	**69.50**	**131**	P	**P**	**06 38 08.9**	**+0.2**
	2.8nm,0.7s,baz=318,slow=5.8,SNR=1.8						
ILAR	**Eielson Array**	**80.75**	**20**	P	**P**	**06 39 14.5**	**+1.5**
	1.7nm,0.7s,baz=305,slow=4.9,SNR=1.9						

*IDC **25** 06:28:04.3±0.7,27.°80N×85.°41E,h0km,mb4.6/19, mb1 4.7/21,mb1mx4.4/69,mbtmp4.6/21,ML4.4/2,Error ellipse: s-maj=20.9km s-min=14.9km az=51.0*
*NEIC **25** 06:28:05.8±2.0,27.°70N±0.°09×85.°50E±0.°06,h10km±1km, mb4.8/41, Error ellipse: s-maj=15.8km s-min=9.2km az=178.0*
*DMN **25** 06:28:05.5±0.1,27.°83N×85.°63E,h10km,Ml5.2/4,Error ellipse: s-maj=4.2km s-min=2.0km az=166.0*

ISC 25 06:28:05.9±0.9,27.°81N±0.°05×85.°58E±0.°03,h11km±6km, n88,σ1s14/88,mb4.8/36,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.26**	**267**	*e*Pg	**Pg**	**06 28 12.4**	**+1.0**
KKN				*e*Sg	**Sg**	**06 28 16.2**	**+1.1**
PKI	**Pulchoki**	**0.28**	**212**	*e*Pg	**Pg**	**06 28 12.6**	**+0.9**
PKI				*e*Sg	**Sg**	**06 28 16.1**	**+0.5**
GUN	**Gumba**	**0.29**	**69**	*e*Pg	**Pg**	**06 28 10.9**	**-1.0**
GUN				*e*Sg	**Sg**	**06 28 13.8**	**-2.1**
DMN	**Daman**	**0.46**	**245**	*e*Pg	**Pb**	**06 28 15.8**	**-0.4**
DMN				*e*Sg	**Sb**	**06 28 22.0**	**-1.2**
GKN	**Gorkha**	**0.85**	**284**	*e*Sg	**Sb**	**06 28 33.6**	**-0.8**
	6μm,0.3s						
DANN	**Dangsing**	**1.69**	**289**	*e*Sg	**Sg**	**06 29 00.5**	**0.0**
	4μm,0.3s						
KOLN	**Koldanda**	**1.75**	**269**	*e*Sg	**Sg**	**06 29 02.2**	**-0.1**
	3μm,0.3s						
PYUN	**Piuthan**	**2.31**	**278**	*e*Sg	**Sg**	**06 29 20.4**	**+0.3**
	3μm,0.3s						
LSA	**Lhasa**	**5.24**	**68**	Pn	**Pn**	**06 29 26.2**	**+1.4**
NIL	**Nilore**	**12.09**	**302**	Pn	**Pn**	**06 30 57.5**	**-0.8**
CMAR	**Chiang Mai Arr**	**15.41**	**124**	Pn	**P**	**06 31 46.5**	**-1.5**
	0.6nm,0.3s,baz=316,slow=12,SNR=2.3						
KMI	**Kunming**	**15.60**	**96**	P	**Pn**	**06 31 47.3**	**+1.2**
KBL	**Kabul**	**15.65**	**299**	Pn	**Pn**	**06 31 44.4**	**-2.3**
KBL				IAmb	IAmb	06 32 02.9	
	comp=Z,55nm,1.1s			

comp=Z,9.6nm,0.9s
BMAR Burnt Mountain 77.94 18 P P 06 40 05.5 +1.7
TORD Torodi Ar. Bea 78.65 279 P P 06 40 07.8 -0.7
comp=Z,5.8nm,1.0s,baz=64,slow=6.5,SNR=3.2
TORD Torodi Ar. Bea 78.65 279 P P 06 40 06.2 -2.3
TORD IAmb IAmb 06 40 08.8
comp=Z,4.6nm,0.8s
PPLA Purkeypile 78.69 23 P P 06 40 09.4 +1.3
PPLA IAmb IAmb 06 40 16.8
comp=Z,6.0nm,0.9s
POKR Poker Plat Res 78.76 20 P P 06 40 08.8 +0.5
POKR IAmb IAmb 06 40 24.3
comp=Z,6.5nm,0.8s
STKA Stephens Creek 79.78 134 P P 06 40 14.7 +0.4
comp=Z,4.9nm,0.5s,baz=320,slow=4.3,SNR=5.1
STKA Stephens Creek 79.78 134 P P 06 40 14.5 +0.2
BOSA Boshof 80.53 231 P P 06 40 18.1 -0.4
comp=Z,4.6nm,0.8s,baz=27,slow=2.8,SNR=3.4
EIDS Eidsvold 82.27 124 P P 06 40 28.1 +0.4
KOWA Kowa 83.02 283 P P 06 40 31.0 -0.9
KOWA IAmb IAmb 06 40 36.6
comp=Z,13nm,1.0s
WHY Whitehorse 85.88 19 P P 06 40 47.0 +1.3
YKA Yellowknife Ar 88.57 9 P P 06 40 59.3 +0.7
comp=Z,2.3nm,0.8s,baz=333,slow=5.3,SNR=4.0
SAML Samuel 145.08 296 PKPbc PKPbc 06 47 42.8 -0.9

*IDC **25** 06:29:45.1±1.9,27.°90N×85.°08E,h0km,mb4.3/6, mb1 4.4/7,mb1mx3.9/67,mbtmp4.3/7,ML4.5/1,Error ellipse: s-maj=98.5km s-min=22.5km az=63.0*
*NEIC **25** 06:29:46.1±1.2,27.°85N±0.°09×85.°07E±0.°07,h10km±1km, mb4.7/12,Error ellipse: s-maj=15.8km s-min=10.4km az=187.0*
*DMN **25** 06:29:48.4±0.3,28.°02N×85.°32E,h10km,Ml5.0/3,Error ellipse: s-maj=6.1km s-min=2.0km az=46.0*

ISC 25 06:29:48.3±0.8,27.°92N±0.°06×85.°27E±0.°04,h23km±6km, n40,σ1°45/46,mb4.4/10,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	Kakani	0.13	177	*e*Pg	Pb	06 29 53.0	-0.2
KKN				*e*Sg	Sb	06 29 56.3	-0.1
DMN	Daman	0.34	206	*e*Pg	Pb	06 29 57.3	+1.3
DMN				*e*Sg	Sn	06 30 04.4	0.0
PKI	Pulchoki	0.36	161	*e*Pg	Pb	06 29 57.8	+1.4
PKI				*e*Sg	Sb	06 30 04.0	+2.1
GKN	Gorkha	0.57	279	*e*Pg	Pn	06 30 00.4	-0.7
GKN				*e*Sg	Sb	06 30 08.0	+0.5
	13μm,0.2s						
DANN	Dangsing	1.40	288	*e*Pg	Pb	06 30 15.3	+1.3
DANN				*e*Sg	Sb	06 30 33.7	+2.1
	2μm,0.2s						
KOLN	Koldanda	1.49	265	*e*Pg	Pb	06 30 17.2	+1.8
KOLN				*e*Sg	Sb	06 30 37.5	+3.6
	2μm,0.2s						
PYUN	Piuthan	2.03	276	*e*Pg	Pb	06 30 26.8	+2.3
PYUN				*e*Sg	Sb	06 30 52.7	+3.3
	2μm,0.2s						
LSA	Lhasa	5.45	70	Pn	Pn	06 31 10.2	+1.6
NIL	Nilore	11.81	302	Pn	Pn	06 32 32.8	-2.5
KBL	Kabul	15.37	299	Pn	Pn	06 33 21.4	-2.4
KBL				IAmb	IAmb	06 33 27.3	
	comp=Z,30nm,0.8s						
KDJ	Kajisay	15.64	337	Pn	Pn	06 33 27.1	-0.2
BOOM	Boomskoye usch	16.40	335	Pn	Pn	06 33 35.7	-1.4
MK31	Makanchi Array	18.99	354	P	P	06 34 07.2	-0.9
MKAR	Makanchi Array	18.99	354	P	Pn	06 34 08.6	-0.3
	comp=Z,1.3nm,0.3s,baz=174,slow=11,SNR=4.3						
MAKZ	Makanchi	19.04	353	P	P	06 34 08.6	0.0
KKAR	Karatay Array	19.29	326	P	Pn	06 34 11.8	-0.8
KURBB	Kurchatov Arra	23.25	349	P	P	06 34 53.8	0.0
	comp=Z,5.2nm,1.0s,baz=180,slow=11,SNR=2.2						
ZAA0	Zalesovo Array	26.01	359	P	P	06 35 19.9	+0.6
ZAA0				IAmb	IAmb	06 35 20.3	
	comp=Z,8.4nm,0.7s						
ZALV	Zalesovo Beam	26.01	359	P	P	06 35 19.4	+0.1
	comp=Z,8.6nm,0.5s,baz=180,slow=9.4,SNR=3.9						
ABKAR	Akbulak array	28.85	324	P	P	06 35 44.2	-0.6
SOCY	Socotra	33.16	248	P	P	06 36 20.7	-2.6
TIXI	Tiksi	49.85	17	P	P	06 38 40.2	+1.0
FINES	FINESS Array B	51.23	328	P	P	06 38 49.3	-0.4
	comp=Z,3.5nm,0.9s,baz=105,slow=8.8,SNR=1.5						
SOEI	Soe	53.16	129	P	P	06 39 04.7	-0.2
ITM	Ithomi	53.32	297	P	P	06 39 04.8	-0.9
ARCES	ARCESS Array B	53.65	338	P	P	06 39 07.8	+0.2
	comp=Z,2.6nm,0.6s,baz=106,slow=8.9,SNR=2.2						
SPA0	Spitsbergen Ar	58.57	347	P	P	06 39 43.1	+0.5
CTI	Castel Tesino	59.47	309	P	P	06 39 48.5	-1.0
WRA	Warramunga Arr	67.20	130	P	P	06 40 42.1	+1.3
	comp=Z,1.4nm,0.6s,baz=322,slow=6.4,SNR=2.0						
NWAO	Narrogin (SRO)	67.70	151	P	P	06 40 43.0	-0.8
NWAO	Narrogin (SRO)	67.70	151	P	P	06 40 43.6	-0.1
ASAR	Alice Springs	69.49	133	P	P	06 40 56.4	+1.2
	comp=Z,2.4nm,0.9s,baz=316,slow=5.5,SNR=1.7						
ASAR	Alice Springs	69.49	133	P	P	06 40 56.0	+0.9
TOLK	Toolik Lake Re	75.72	18	P	P	06 41 33.1	+1.5
BMAR	Burnt Mountain	77.91	18	P	P	06 41 45.8	+1.8
POKR	Poker Plat Res	78.75	20	P	P	06 41 49.8	+1.2
POKR				IAmb	IAmb	06 41 50.8	
	comp=Z,9.0nm,0.8s						
SUA	Susitna One	80.15	24	P	P	06 41 56.3	-0.2
SUA				IAmb	IAmb	06 42 00.4	
	comp=Z,12nm,1.0s						
EPYK	Eagle Plains	80.73	16	P	P	06 41 60.0	+0.6
EPYK				IAmb	IAmb	06 42 10.4	
	comp=Z,3.6nm,0.7s						
SAML	Samuel	144.79	296	PKPdf	PKPbc	06 49 23.5	+0.5
OTAV	Otavalo	147.94	328	PKPab	PKiKP	06 49 34.6	-0.4

*IDC **25** 06:30:48.2±6.1,27.°76N×85.°34E,h0km,mb4.0/5, mb1 4.2/6,mb1mx3.7/68,mbtmp4.0/6,ML3.9/1,Error ellipse: s-maj=123.2km s-min=47.4km az=163.0*

ISC 25 06:30:50.9±4.8,27.°8N±0.°6×85.°4E±0.°4,h18km,n6,σ0°70/6, mb4.0/5,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.14	354	P	P	06 35 13.2	+0.1
	0.4nm,0.3s,baz=172,slow=12,SNR=1.3						
SONM	Songino Array	25.88	34	P	P	06 36 21.9	+0.2
	2.7nm,0.7s,baz=228,slow=10,SNR=2.2						
FINES	FINESS Array B	51.39	328	P	P	06 39 54.4	+0.1
	1.3nm,0.6s,baz=90,slow=7.6,SNR=1.3						
ARCES	ARCESS Array B	53.81	338	P	P	06 40 12.4	+0.2
	4.3nm,0.9s,baz=102,slow=8.2,SNR=6.7						
GERES	GERESS Array B	57.84	312	P	P	06 40 42.1	+0.6
	0.4nm,0.2s,baz=65,slow=28,SNR=4.1						
NOA	NORSAR Array B	58.48	327	P	P	06 40 44.7	-1.0
	0.9nm,0.8s,baz=71,slow=7.2,SNR=1.7						

IDC 25 06:31:30.6±6.5,28.°59N×84.°49E,h0km,mb3.9/4, mb1 4.0/5,mb1mx3.6/67,mbtmp3.9/5,ML3.7/1,Error ellipse: s-maj=127.3km s-min=52.2km az=170.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.25	355	P	Pn	06 35 45.2	-0.1
	0.2nm,0.3s,baz=180,slow=12,SNR=2.1						
SONM	Songino Array	25.64	36	P	P	06 37 01.9	-0.1
	3.4nm,0.9s,baz=230,slow=9.5,SNR=1.7						
FINES	FINESS Array B	50.29	328	P	P	06 40 28.4	-0.2
	1.3nm,0.6s,baz=110,slow=10,SNR=3.6						
ARCES	ARCESS Array B	52.77	338	P	P	06 40 47.6	+0.5
	1.7nm,0.9s,baz=100,slow=8.2,SNR=0.8						
NOA	NORSAR Array B	57.38	326	P	P	06 41 20.2	-0.4
	0.5nm,0.6s,baz=87,slow=7.4,SNR=1.5						

IDC 25 06:32:08.2±23.0,27.°82N×84.°36E,h0km,mb4.4/2, mb1 4.3/3,mb1mx3.6/66,mbtmp4.2/3,ML4.0/1,Error ellipse: s-maj=534.4km s-min=117.9km az=121.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.02	356	P	P	06 36 31.7	+0.1
	0.4nm,0.3s,baz=174,slow=11,SNR=1.7						
FINES	FINESS Array B	50.89	328	P	P	06 41 10.6	-0.1
	2.7nm,0.9s,baz=83,slow=5.7,SNR=2.4						
ARCES	ARCESS Array B	53.44	338	P	P	06 41 29.5	-0.1
	5.4nm,1.1s,baz=101,slow=7.8,SNR=2.0						

*IDC **25** 06:32:30.7±20.0,28.°03N×85.°64E,h0km,mb4.2/2, mb1 4.1/3,mb1mx3.5/66,mbtmp4.1/3,ML3.7/1,Error ellipse: s-maj=494.6km s-min=123.0km az=116.0*

ISC 25 06:32:33.6±5.0,28.°3N±0.°5×85.°8E±0.°2,h10km,n5,σ0°68/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	Dangsing	1.78	273	*e*Sg	Sg	06 33 30.6	-0.3
	2μm,0.4s						
PYUN	Piuthan	2.46	267	*e*Sg	Sn	06 33 44.9	+0.5
	1μm,0.3s						
MKAR	Makanchi Array	18.69	353	P	Pn	06 36 52.7	+0.3
	0.2nm,0.3s,baz=168,slow=10,SNR=1.3						
FINES	FINESS Array B	51.17	328	P	P	06 41 36.0	-0.7
	3.0nm,0.9s,baz=112,slow=8.3,SNR=3.3						
ARCES	ARCESS Array B	53.49	338	P	P	06 41 54.0	+0.2
	2.5nm,0.6s,baz=102,slow=5.9,SNR=6.8						

*IDC **25** 06:32:47.1±0.9,27.°60N×85.°60E,h0km,mb4.5/15, mb1 4.6/17,mb1mx4.2/67,mbtmp4.5/17,ML4.6/2,Error ellipse: s-maj=30.5km s-min=15.4km az=54.0*
*NEIC **25** 06:32:48.9±2.2,27.°72N±0.°09×85.°95E±0.°06,h10km±1km, mb4.6/19,Error ellipse: s-maj=16.0km s-min=9.4km az=173.0*
*DMN **25** 06:33:06.3±0.0,28.°65N×84.°27E,h60km,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 25 06:32:48.7±0.6,27.°69N±0.°09×85.°78E±0.°05,h10km,n54, σ1°29/55,mb4.7/23,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DANN	Dangsing	1.91	291	*e*Pg	Pn	06 33 20.5	-1.0
KOLN	Koldanda	1.94	273	*e*Pg	Pg	06 33 26.3	+0.5
KOLN				*e*Sg	Sn	06 33 41.4	-4.9
	4μm,0.3s						
LSA	Lhasa	5.12	66	Pn	Pn	06 34 02.4	-3.5
SHL	Shillong	5.86	110	Pn	Pn	06 34 12.4	-3.3
CMAR	Chiang Mai Arr	15.19	124	Pn	Pn	06 36 25.4	+2.0
	1.4nm,0.3s,baz=209,slow=28,SNR=4.9						
KBL	Kabul	15.87	300	Pn	Pn	06 36 31.6	-0.8
KBL				IAmb	IAmb	06 36 42.4	
	comp=Z,29nm,1.1s						
PRZ	Przheval'sk	15.94	340	Pn	Pn	06 36 31.6	-1.6
WMQ	Urumqi	16.17	5	Pn	Pn	06 36 33.6	-2.5
BOOM	Boomskoye usch	16.80	334	P	Pn	06 36 42.2	-2.0
MK31	Makanchi Array	19.27	353	P	Pn	06 37 14.1	-0.3
MKAR	Makanchi Array	19.27	353	P	Pn	06 37 14.2	-0.2
	comp=Z,0.9nm,0.3s,baz=178,slow=9.6,SNR=6.2						
MKAR	Makanchi Array	19.27	353	P	P	06 37 13.3	-0.1
MAKZ	Makanchi	19.32	352	P	P	06 37 14.6	+0.6
XAN	Xi'an	20.83	67	P	P	06 37 31.2	+0.7
KURBB	Kurchatov Arra	23.56	348	P	P	06 37 59.4	+0.2
	comp=Z,7.5nm,0.8s,baz=165,slow=11,SNR=9.6						
SONM	Songino Array	25.74	33	P	P	06 38 20.9	+1.5
	comp=Z,14nm,0.7s,baz=220,slow=9.7,SNR=14						
SONM	Songino Array	25.74	33	P	P	06 38 19.0	-0.4
SONM				IAmb	IAmb	06 38 31.8	
	comp=Z,12nm,0.8s						
ULN	Ulaanbaatar	26.08	34	P	P	06 38 22.8	+0.2
ULN				IAmb	IAmb	06 38 34.8	
	comp=Z,22nm,0.8s						
ZAA0	Zalesovo Array	26.25	359	P	P	06 38 24.4	+0.6
ZAA0				IAmb	IAmb	06 38 32.1	
	comp=Z,11nm,0.9s						
ZALV	Zalesovo Beam	26.25	359	P	P	06 38 24.4	+0.7
	comp=Z,5.7nm,0.6s,baz=185,slow=8.4,SNR=5.4						
ZALV	Zalesovo Beam	26.25	359	P	P	06 38 24.6	+0.8
UOSS	Minazif	26.62	271	P	P	06 38 27.3	-0.2
BVAR	Borovoye Array	27.77	340	P	P	06 38 38.7	+1.2
	comp=Z,1.6nm,0.8s,baz=149,slow=20,SNR=1.9						
ABKAR	Akbulak array	29.30	324	P	P	06 38 51.9	+0.7
ARU	Arti	34.67	333	P	P	06 39 38.9	+0.7
	comp=Z,2.6nm,0.5s,baz=121,slow=4.8,SNR=6.9						
ARU	Arti	34.67	333	P	P	06 39 39.2	+1.0
KIRV	Kirov	39.85	331	P	P	06 40 22.7	+0.6
	comp=Z,18nm,0.6s,baz=250,slow=1.7,SNR=4.4						
NRIK	Noril'sk	41.70	1	P	P	06 40 38.4	+1.2
	comp=Z,26nm,0.8s,baz=175,slow=6.7,SNR=14						
NRIK	Noril'sk	41.70	1	P	P	06 40 38.9	+1.7
NRIK				IAmb	IAmb	06 40 39.6	
	comp=Z,6.0nm,0.8s						
ELL	Elmali	47.55	296	P	P	06 41 25.3	+0.7
AKASG	Malin Array Be	48.13	315	P	P	06 41 27.7	-1.0
	comp=Z,5.0nm,0.7s,baz=80,slow=6.9,SNR=6.8						
TIXI	Tiksi	49.94	16	P	P	06 41 42.6	+0.3
	comp=Z,1.6nm,0.3s,baz=238,slow=5.5,SNR=4.1						
MLR	Muntele Rosu	50.06	308	P	P	06 41 44.3	+0.5
MLR				IAmb	IAmb	06 41 46.5	
	comp=Z,18nm,0.9s						
BURAR	Bucovina Array	50.57	310	P	P	06 41 47.4	-0.1
BURAR				IAmb	IAmb	06 41 49.7	
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	51.66	328	P	P	06 41 55.1	-0.2
	comp=Z,3.5nm,0.7s,baz=103,slow=8.6,SNR=4.8						
PABE	Paberze	51.80	320	P	P	06 41 56.6	+0.1
KEV	Kevo	53.61	338	P	P	06 42 10.3	+0.6
ARCES	ARCESS Array B	54.03	338	P	P	06 42 12.1	-0.7
	comp=Z,8.4nm,0.7s,baz=108,slow=7.8,SNR=7.8						
ARCES	ARCESS Array B	54.03	338	P	P	06 42 13.4	+0.6
OJC	Ojcow	54.12	314	P	P	06 42 14.2	+0.5
NC405	NORSAR Array S	58.52	327	P	P	06 42 44.8	-0.2
NC303	NORSAR Array S	58.68	327	P	P	06 42 46.2	+0.1
NOA	NORSAR Array B	58.76	327	P	P	06 42 46.0	-0.7
	comp=Z,3.0nm,0.7s,baz=89,slow=6.9,SNR=8.5						
PSA00	Pilbara Seismi	59.01	143	P	P	06 42 49.2	+0.4
PSA00				IAmb	IAmb	06 42 59.3	
	comp=Z,7.3nm,1.0s						
STAL	STALIGIAL	59.20	309	P	P	06 42 50.0	0.0
STAL				IAmb	IAmb	06 42 50.1	
	comp=Z,6.8nm,0.8s						
NRCA	Norcia	59.51	305	P	P	06 42 52.7	+0.5
NRCA				IAmb	IAmb	06 43 03.1	
	comp=Z,8.8nm,1.1s						
KBS	Kingsbay	59.92	348	P	P	06 42 55.2	+0.8
KNRA	Kununurra	59.95	131	P	P	06 42 56.0	+0.6
KNRA				IAmb	IAmb	06 43 14.0	
	comp=Z,6.8nm,1.1s						
KEST	Kesra	64.03	298	P	P	06 43 22.7	-0.1
	comp=Z,8.2nm,0.8s,baz=318,slow=5.5,SNR=4.6						
WRA	Warramunga Arr	66.71	130	P	P	06 43 40.8	+0.6
	comp=Z,5.2nm,0.5s,baz=323,slow=6.4,SNR=13						
WRA	Warramunga Arr	66.71	130	P	P	06 43 41.1	+0.9
WB2	Warramunga Arr	66.71	130	P	P	06 43 40.9	+0.7
ASAR	Alice Springs	69.01	133	P	P	06 43 55.0	+0.3
	comp=Z,3.9nm,0.9s,baz=316,slow=5.9,SNR=7.7						
SAML	Samuel	145.30	297	PKPbc	PKPdf	06 52 27.9	+0.4

*BJI **25** 06:35:41.3±0.0,32.°84N×140.°84E,h88km,mB5.2/2, mb5.5/24,Ms5.3/1*
*IDC **25** 06:35:46.0±0.5,32.°88N×140.°28E,h83km±3km,mb4.9/44, mb1 4.9/47,mb1mx4.8/63,mbtmp5.2/47,Error ellipse: s-maj=11.2km s-min=7.6km az=88.0*
*JMA **25** 06:35:46.3,32.°97N×140.°55E,h81km±2km,M5.1*
JMA Felt II J1.
*MOS **25** 06:35:46.2±0.7,32.°87N×140.°32E,h105km,mb5.4/40, Error ellipse: s-maj=8.2km s-min=4.8km az=116.1*
*NEIC **25** 06:35:46.3±1.9,32.°87N±0.°06×140.°41E±0.°08,h86km±4km, mb5.2/119,Error ellipse: s-maj=10.3km s-min=8.8km az=80.0*

ISC 25 06:35:46.1±0.5,32.°88N±0.°03×140.°48E±0.°05,h89km±4km, n518,σ1°27/533,mb5.2/136,27C-57D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.60	293	↑P	Pn	06 36 01.7	+0.1
JHJ2				S	Sn	06 36 12.8	-0.4
JHJ2	Mitsune	0.60	293		Pn	06 36 01.3	-0.3
JHJ2	Mitsune	0.60	293	↑P	Pn	06 36 01.7	+0.1
JHCJ	Hachijojimakas	0.60	289	↑P	Pn	06 36 01.5	-0.2
JHCJ				S	Sn	06 36 12.4	-0.9
JHJ	Hachijo jima 2	0.63	292	P	Pn	06 36 01.4	-0.5
	31μm,0.3s,baz=164,slow=8.8,SNR=1950						
JHJ				S	Sn	06 36 11.9	-1.8
	13μm,0.3s,baz=193,slow=6.3,SNR=16						
JAOM	Aogashimamukai	0.73	236	↑P	Pn	06 36 03.7	+0.8
JAOM				S	Sn	06 36 16.4	+1.0
JMKN	Mikurajimanish	1.25	324	↑P	Pn	06 36 08.4	-0.4
JMKN				S	Sn	06 36 24.5	-1.4
JKO	Kozu shima	1.72	320	↓P	Pn	06 36 14.8	+0.1
JKO				S	Sn	06 36 35.9	-0.4
JSKK	Shikinejimakit	1.80	324	↓P	Pn	06 36 15.6	0.0
BSO1	Boso 1	1.82	13	P	Pn	06 36 14.8	-0.6
BSO3	Boso 3	1.92	1	↓P	Pn	06 36 16.7	-0.3
JTHY	Toshimahigashi	1.92	329	P	Pn	06 36 17.4	+0.2
JIM2	Oshima 3	2.03	335	P	Pn	06 36 18.4	-0.3
JIM2				S	Sn	06 36 42.1	-1.5
BSO4	Boso 4	2.11	357	P	Pn	06 36 19.5	-0.1
JIZS	Izushimoda	2.27	324	↓P	Pn	06 36 22.2	+0.4
JIZS				*e*S	Sn	06 36 48.1	-1.0
JKUC	kamogawauchiur	2.29	354	P	Pn	06 36 21.5	-0.6
JHTM	Izuhatsuma	2.41	330	↓P	Pn	06 36 23.8	+0.1
TK02	Tokai 2	2.51	296	↓P	Pn	06 36 26.2	+1.3
TK02				S	Sn	06 36 56.9	+2.2
JSG	Sagara	2.62	314	↓P	Pn	06 36 27.8	+1.3
JSG	Sagara	2.62	314		Pn	06 36 27.1	+0.6
JSG	Sagara	2.62	314	↓P	Pn	06 36 27.9	+1.3
TK04	Tokai 4	2.64	305	↓P	Pn	06 36 28.0	+1.3
JOD2	Odawara 2	2.64	334	↓P	Pn	06 36 26.9	0.0
JOD2				*e*S	Sn	06 36 57.0	-1.2
JFNN	Fujinakano	2.75	328	P	Pn	06 36 29.1	+0.9
SHZ3	Shizuoka 3	2.88	320	P	Pn	06 36 31.2	+1.1
JSGW	Sagamiharawaka	2.91	339	↓P	Pn	06 36 30.0	-0.5
TTO2	TONANKAI O.B.S	3.02	287	↓P	Pn	06 36 32.9	+1.4
HMMJ	Hamamatsu 2	3.03	311	↓P	Pn	06 36 32.6	+0.6
JYN	Shimob	3.07	329	↓P	Pn	06 36 33.4	+0.8
JYZW	Yoshizawa	3.11	314	P	Pn	06 36 33.8	+0.7
TTO1	TONANKAI O.B.S	3.18	284	↓P	Pn	06 36 35.1	+1.3
JSSY	Shinshiroyabe	3.20	310	↓P	Pn	06 36 35.1	+0.8
JAA	Atsumi	3.28	303	↓P	Pn	06 36 36.2	+0.8
JNY	Yasuok	3.29	319	↓P	Pn	06 36 36.9	+1.3
JYT	Yasato	3.35	356	Pn	Pn	06 36 35.7	-0.6
JYT	Yasato	3.35	356	↑P	Pn	06 36 36.0	-0.4
JIE	Ise	3.49	297	↓P	Pn	06 36 39.0	+0.8
JNT	Takato	3.56	328	↓P	Pn	06 36 40.6	+1.3
JAO	Obara	3.58	313	↓P	Pn	06 36 40.6	+1.1
JAG	Ashikaga	3.64	347	↓P	Pn	06 36 38.8	-1.4
JGF	Kuroka	3.75	317	Pn	Pn	06 36 43.0	+1.2
JGF	Kuroka	3.75	317	↓P	Pn	06 36 43.0	+1.2
JMMH	Miemihama	3.84	285	↓P	Pn	06 36 43.7	+0.7
JEG	Eigenji	4.08	305	↓P	Pn	06 36 47.7	+1.5
MJAR	Matsushiro Arr	4.11	334	P	Pn	06 36 46.5	-0.1
	9.0nm,0.3s,baz=163,slow=12,SNR=193						
MJAR				S	Sn	06 37 31.8	-1.7
	9.7nm,0.3s,baz=63,slow=8.6,SNR=6.0						
MJAR	Matsushiro Arr	4.11	334	Pn	Pn	06 36 46.2	-0.4
MAJO	Matsushiro	4.11	334	↓*i*P	Pn	06 36 46.8	+0.2
MAJO	Matsushiro	4.11	334	Pn	Pn	06 36 47.0	+0.3
MAJO	Matsushiro	4.11	334	↓P	Pn	06 36 46.8	+0.2
MAT	Matsushiro	4.11	334	P	Pn	06 36 46.7	+0.1
MAT				S	Sn	06 37 32.0	-1.5
JYTA	Yamagatataniai	4.12	312	↓P	Pn	06 36 47.9	+1.2
JGN	Niukaw	4.24	323	↓P	Pn	06 36 50.0	+1.6
JHE	Heguri	4.37	295	↓P	Pn	06 36 51.2	+1.1
JWM	Minabe	4.40	284	↓P	Pn	06 36 51.7	+1.2
JFM	Mihama	4.57	307	↓P	Pn	06 36 53.9	+1.1
JMST	Minamisoumatoc	4.85	4	P	Pn	06 36 54.3	-2.3
JWT	Wachi	4.85	301	Pn	Pn	06 36 56.8	+0.1
JWT	Wachi	4.85	301	↓P	Pn	06 36 58.0	+1.4
JMM	Marumori	4.98	3	↓P	Pn	06 36 56.5	-2.0
JMM	Marumori	4.98	3	Pn	Pn	06 36 56.8	-1.6
JMM	Marumori	4.98	3	↓P	Pn	06 36 56.5	-2.0
JYAR	Yonezawaarcadi	5.03	357	P	Pn	06 36 58.5	-0.6
JAI	Aioi	5.13	282	↓P	Pn	06 37 01.9	+1.4
JSD	Sado	5.46	341	Pn	Pn	06 37 03.3	-1.6
JSD	Sado	5.46	341	↓P	Pn	06 37 03.0	-2.0
JIKH	Ishinomakikobu	5.48	8	↓P	Pn	06 37 02.8	-2.4
JKSM	Kasumi	5.52	301	P	Pn	06 37 06.8	+1.0
JMN	Monobe	5.59	281	Pn	Pn	06 37 07.7	+0.9
JMN	Monobe	5.59	281	↓P	Pn	06 37 06.8	0.0
JCJ	Chichijima	5.95	165	P	Pn	06 37 09.6	-2.2
	180nm,0.3s,baz=296,slow=22,SNR=109						
JCJ				S	Sn	06 38 12.3	-6.2
	116nm,0.3s,baz=112,slow=23,SNR=7.4						
JCJ	Chichijima	5.95	165	Pn	Pn	06 37 10.9	-0.8
JKMT	Kesennumamotoy	5.97	7	↓P	Pn	06 37 09.5	-2.4
JHS	Saijyo	6.47	291	Pn	Pn	06 37 20.3	+1.5
JHS	Saijyo	6.47	291	↓P	Pn	06 37 20.6	+1.8
JTM	Tenmabayashi	7.91	3	Pn	Pn	06 37 36.0	-2.3
JTM	Tenmabayashi	7.91	3	↑P	Pn	06 37 35.8	-2.5
JNU	Nakatsue	8.07	274	Pn	Pn	06 37 42.5	+1.9
JSU	Suzuyama	8.61	264	Pn	Pn	06 37 49.8	+1.9
JSU	Suzuyama	8.61	264	↑P	Pn	06 37 51.2	+3.3
ERM	Erimo	9.36	12	*e*P	Pn	06 37 56.7	-1.4
ERM	Erimo	9.36	12	Pn	Pn	06 37 54.5	-3.6
ERM	Erimo	9.36	12	↑P	Pn	06 37 54.9	-3.2
ERM				↓S	Sn	06 39 34.1	-7.5
JTU	Tsushima	9.38	283	Pn	Pn	06 37 59.5	+1.2

GUMO Guam 19.61 167 P Pn 06 40 08.8 -0.8
comp=Z,5.7nm,0.3s,baz=15,slow=5.3,SNR=3.5
TWG Pinlang 19.84 245 P P 06 40 09.7 -0.2
TWG IAmb IAmb 06 40 23.5
comp=Z,51nm,0.6s
TPUB Ta-pu 19.92 246 P P 06 40 10.8 +0.1
TPUB IAmb IAmb 06 40 24.4
comp=Z,126nm,1.2s
BJT Baijiatuau 20.78 297 P P 06 40 17.9 -2.0
BJT pmax pmax
comp=Z,13nm,0.4s
BJT Baijiatuau 20.78 297 P P 06 40 17.9 -2.0
HIA Hailar 22.52 323 P P 06 40 36.4 -2.0
HIA IAmb IAmb 06 40 37.4
comp=Z,43nm,0.6s
ZEA Zeya 22.89 340 eP P 06 40 42.2 +0.1
ZEA pmax pmax
comp=N,440nm,0.9s
ZEA pmax pmax
comp=Z,830nm,0.9s
PETK Petropavlovsk- 23.70 26 P P 06 40 50.9 +1.2
comp=Z,8.8nm,0.8s,baz=215,slow=5.5,SNR=3.3
PETK Petropavlovsk- 23.70 26 P P 06 40 51.3 +1.6
PETK Petropavlovsk- 23.70 26 P P 06 40 51.3 +1.6
HHC Hu-ho-hao-te 24.39 297 eP P 06 40 59.3 +3.2
XAN Xi'an 26.30 281 P P 06 41 12.2 -1.3
XAN pmax pmax
comp=Z,22nm,0.5s
XAN Xi'an 26.30 281 P P 06 41 12.2 -1.3
ENH Enshi 26.49 273 P P 06 41 14.0 -1.2
ENH IAmb IAmb 06 41 15.8
comp=Z,79nm,0.8s
H11N2 WAKE ISLAND Hy 26.97 112 T T 07 10 23.8
baz=305,slow=75,SNR=141
H11N1 WAKE ISLAND Hy 26.98 113 T T 07 10 09.8
baz=305,slow=75,SNR=86
H11N3 WAKE ISLAND Hy 26.99 112 T T 07 10 24.7
baz=305,slow=75,SNR=92
H11S3 WAKE ISLAND Hy 27.52 115 T T 07 11 01.2
baz=305,slow=75,SNR=33
H11S1 WAKE ISLAND Hy 27.52 115 T T 07 10 53.7
baz=305,slow=75,SNR=28
H11S2 WAKE ISLAND Hy 27.54 115 T T 07 10 48.5
baz=305,slow=75,SNR=22
MA2 Magadan 27.57 11⇑iP P 06 41 25.1 +0.7
MA2 pmax pmax
comp=Z,141nm,2.8s
MA2 Magadan 27.57 11 P P 06 41 24.8 +0.4
ULN Ulaanbaatar 29.27 311⇑iP P 06 41 40.6 +0.7
ULN pmax pmax
comp=Z,50nm,0.8s
ULN Ulaanbaatar 29.27 311 P P 06 41 40.6 +0.7
ULN Ulaanbaatar 29.27 311 ⇓P P 06 41 40.4 +0.5
SONM Songino Array 29.68 310 P P 06 41 43.5 0.0
comp=Z,36nm,0.7s,baz=112,slow=8.5,SNR=51
SONM ScP ScP 06 48 18.7 -0.8
comp=Z,4.3nm,0.9s,baz=96,slow=3.0,SNR=4.2
SONM Songino Array 29.68 310 P P 06 41 44.2 +0.7
SONM pmax pmax
comp=Z,30nm,0.9s
SONM Songino Array 29.68 310 P P 06 41 44.2 +0.7
YAK Yakutsk 29.98 350 P P 06 41 45.6 -0.2
comp=Z,13nm,0.4s,baz=165,slow=2.7,SNR=7.5
YAK Yakutsk 29.98 350⇓iP P 06 41 45.3 -0.5
YAK pmax pmax
comp=Z,314nm,2.3s
YAK Yakutsk 29.98 350 IAmb IAmb 06 41 46.2
comp=Z,110nm,1.1s
BOD Bodaibo 30.74 332 eP P 06 41 52.3 -0.2
BOD pmax pmax
comp=Z,45nm,0.9s
SEY Seymchan 31.01 11 P P 06 41 55.5 +0.7
comp=Z,6.2nm,0.8s,baz=212,slow=8.7,SNR=5.0
CD2 Chengdu 31.14 276 P P 06 41 54.0 -2.5
ZAK Zakamensk 32.42 314 eP P 06 42 06.7 -0.8
ZAK e 06 43 34.7
ZAK pmax pmax
comp=Z,50nm,1.1s
ZAK pmax pmax
comp=Z,24nm,0.9s
TLY Talaya 32.64 316 P P 06 42 10.1 +0.7
comp=Z,94nm,0.9s,baz=135,slow=4.7,SNR=86
TLY Talaya 32.64 316⇓iP P 06 42 10.0 +0.7
TLY pmax pmax
comp=Z,120nm,1.0s
TLY Talaya 32.64 316 P P 06 42 10.2 +0.9
TLY Talaya 32.64 316 ⇓P P 06 42 09.9 +0.6
SLVN Son La 34.37 260 P P 06 42 24.8 +0.1
SWI Sorong 34.67 196 P P 06 42 26.9 -0.3
UBPT Khong Chiam 36.23 250 P P 06 42 40.0 -0.6
UBPT Khong Chiam 36.23 250 P P 06 42 40.4 -0.3
FAKI Fak Fak 36.45 194 P P 06 42 42.5 +0.1
FAKI IAmb IAmb 06 42 59.7
comp=Z,28nm,1.2s
MRSI Marisa 36.65 212 P P 06 42 43.9 -0.3
APSI Ampana 38.02 212 P P 06 42 54.3 -1.5
BILL Bilibino 38.22 15⇓iP P 06 42 57.3 +0.4
BILL e 06 44 25.9
BILL pmax pmax
comp=Z,43nm,1.4s
BILL Bilibino 38.22 15 P P 06 42 57.8 +0.8
BILL IAmb IAmb 06 43 04.9
comp=Z,47nm,1.3s
TIXI Tiksi 39.33 354 P P 06 43 05.7 -0.4
comp=Z,33nm,0.5s,baz=137,slow=6.5,SNR=36
TIXI Tiksi 39.33 354 P P 06 43 06.1 +0.1
TIXI Tiksi 39.33 354 P P 06 43 06.1 +0.1
TIXI Tiksi 39.33 354 ⇓P P 06 43 05.7 -0.4
CHTO Chiang Mai 39.66 260 P P 06 43 08.3 -1.3
CHTO pmax pmax
comp=Z,63nm,1.1s
CHTO Chiang Mai 39.66 260 P P 06 43 08.2 -1.3
CHTO IAmb IAmb 06 43 09.6
comp=Z,63nm,1.1s
CM31 Chiang Mai Arr 39.84 259 P P 06 43 09.9 -1.1
CMAR Chiang Mai Arr 39.84 259 P P 06 43 09.8 -1.2
comp=Z,111nm,0.8s,baz=46,slow=8.0,SNR=6.7
SBUM Sibu 40.23 227 P P 06 43 12.7 -1.5
WMQ Urumqi 42.17 301 eP P 06 43 30.8 +0.9
WMQ PcS PcS 06 49 08.0 -6.5
WMQ S S 06 49 42.0 -1.3
WMQ sS sS 06 50 16.0 -3.0
WMQ pmax pmax
comp=Z,150nm,1.1s
WMQ Urumqi 42.17 301 P P 06 43 30.6 +0.7
WMQ pmax pmax
comp=Z,64nm,0.8s
WMQ Urumqi 42.17 301 P P 06 43 30.6 +0.7
KSM Kuching 42.18 228 P P 06 43 29.4 -0.9
KSM IAmb IAmb 06 43 31.2
comp=Z,42nm,0.9s
KAPI Kappang 42.51 211 P P 06 43 30.9 -2.0
comp=Z,6.0nm,0.5s,baz=347,slow=10,SNR=4.9
KAPI Kappang 42.51 211 P P 06 43 31.7 -1.1
KAPI pmax pmax
comp=Z,8.0nm,0.6s
KAPI Kappang 42.51 211 P P 06 43 31.7 -1.1
ZALV Zalesovo Beam 44.24 316 P P 06 43 45.8 -0.6
comp=Z,43nm,0.7s,baz=110,slow=7.0,SNR=9.5
ZALV PcP PcP 06 45 29.1 -0.3
comp=Z,18nm,0.6s,baz=116,slow=2.6,SNR=5.1
ZALV ScP ScP 06 49 11.8 -1.5
comp=Z,7.4nm,0.8s,baz=93,slow=6.4,SNR=5.5
TNA Tin City 44.86 28 P P 06 43 53.3 +2.2
TNA Tin City 44.86 28 P 06 43 53.6
baz=249
ANM Nome 45.56 29 P P 06 43 58.8 +2.1
ANM pmax pmax
comp=Z,35nm,1.2s
ANM Nome 45.56 29 P P 06 43 58.8 +2.1
ANM IAmb IAmb 06 44 00.2
comp=Z,35nm,1.2s
ANM Nome 45.56 29 P 06 43 59.2
baz=253
MK31 Makanchi Array 45.79 305⇓iP P 06 43 58.7 -0.1
MK31 Makanchi Array 45.79 305 P P 06 43 58.7 -0.1
MKAR Makanchi Array 45.79 305 P P 06 43 58.4 -0.4
comp=Z,118nm,0.7s,baz=87,slow=8.8,SNR=50
MKAR Makanchi Array 45.79 305 P P 06 43 58.8 0.0
MKAR Makanchi Array 45.79 305 P P 06 43 58.8 0.0
KDU Kakadu 45.95 191 ⇑P P 06 44 00.4 +0.2
MAKZ Makanchi 46.00 305 P P 06 44 00.5 0.0
MAKZ pmax pmax
comp=Z,147nm,0.9s
MAKZ Makanchi 46.00 305 P P 06 44 00.5 0.0

SDPT Sand Point 46.31 43 P P 06 44 03.2 +0.5
SDPT IAmb IAmb 06 44 06.2
comp=Z,54nm,1.0s
MTN Manton Dam 46.33 193 P P 06 44 02.3 -0.9
MTN IAmb IAmb 06 44 09.6
comp=Z,64nm,1.4s
MTN Manton Dam 46.33 193 ⇓P P 06 44 02.9 -0.3
IPM Ipoh 46.40 241 P P 06 44 03.0 -0.9
COEN Coen 46.64 176 P P 06 44 07.2 +1.6
COEN Coen 46.64 176 ⇑P P 06 44 07.2 +1.6
NRIK Noril'sk 46.75 337 P P 06 44 05.5 -0.5
comp=Z,31nm,0.3s,baz=120,slow=5.6,SNR=47
NRIK Noril'sk 46.75 337⇓iP P 06 44 05.8 -0.1
NRIK pmax pmax
comp=Z,110nm,1.2s
NRIK Noril'sk 46.75 337 P P 06 44 06.0 0.0
SEM Semipalatinsk 46.96 311 eP P 06 44 06.4 -1.8
comp=Z,20nm,0.7s,baz=310
SEM Semipalatinsk 46.96 311 eP P 06 44 06.3 -1.8
SEM pmax pmax
comp=Z,20nm,0.7s
RDOG Red Dog Mine 47.57 25 P 06 44 13.8
baz=252
KURK Kurchatov 47.98 311 P P 06 44 15.5 -0.2
KURK Kurchatov 47.98 311 P P 06 44 15.5 -0.2
KURBB Kurchatov Arra 48.04 311 P P 06 44 15.5 -0.7
comp=Z,66nm,0.7s,baz=90,slow=7.5,SNR=22
SHLS Shalkode 48.20 301 eP P 06 44 14.2 -3.6
comp=Z,22nm,0.8s,baz=301
SHLS Shalkode 48.20 301 eP P 06 44 14.1 -3.6
SHLS pmax pmax
comp=Z,22nm,0.8s
UZB Uzynbulak 48.52 301 eP P 06 44 19.0 -1.3
comp=Z,25nm,0.9s,baz=301
UZB Uzynbulak 48.52 301 eP P 06 44 18.9 -1.3
UZB pmax pmax
comp=Z,25nm,0.9s
TDK Taldyqorghan 48.67 303 eP P 06 44 20.5 -0.7
comp=Z,37nm,0.6s,baz=303
TDK Taldyqorghan 48.67 303 eP P 06 44 20.5 -0.7
TDK pmax pmax
comp=Z,37nm,0.6s
SATY Saty 48.97 301 eP P 06 44 22.4 -1.3
baz=301
SATY Saty 48.97 301 eP P 06 44 22.3 -1.4
PSI Prapat 49.07 241 P P 06 44 23.3 -1.4
comp=Z,31nm,0.7s,baz=0.0,slow=5.9,SNR=15
RPSI Rantau Prapat 49.14 241 P P 06 44 23.7 -1.3
RPSI IAmb IAmb 06 44 24.1
comp=Z,33nm,0.7s
RPSI Rantau Prapat 49.14 241 P P 06 44 23.3 -1.8
BKNI Bangkinang 49.24 237 P P 06 44 25.4 -0.4
comp=Z,346nm,2.7s
TTA Tatalina 49.30 33 P P 06 44 26.8 +1.0
TTA pmax pmax
comp=Z,21nm,1.4s
TTA Tatalina 49.30 33 P P 06 44 26.8 +1.0
KNRA Kununurra 49.56 195 P P 06 44 28.2 0.0
KNRA IAmb IAmb 06 44 28.8
comp=Z,15nm,0.7s
MDOK Medeo 49.94 301 eP P 06 44 30.3 -0.7
baz=301
MDOK Medeo 49.94 301 eP P 06 44 30.3 -0.7
AAA Alma-Ata 50.02 301 eP P 06 44 31.2 -0.4
comp=Z,53nm,0.6s,baz=301
AAA Alma-Ata 50.02 301 eP P 06 44 31.1 -0.4
AAA pmax pmax
comp=Z,53nm,0.6s
TNSS Tian-Shan 50.03 301 eP P 06 44 31.7 -0.4
baz=301
TNSS Tian-Shan 50.03 301 eP P 06 44 31.6 -0.4
KDJ Kajisay 50.03 300 P P 06 44 31.2 -0.6
KDJ Kajisay 50.03 300 P P 06 44 31.2 -0.6
LEM Lembang 50.35 224 P P 06 44 33.4 -1.0
comp=Z,42nm,0.7s,baz=293,slow=21,SNR=6.5
OHAK Old Harbor 50.37 40 P P 06 44 34.8 +1.0
OHAK IAmb IAmb 06 44 37.6
comp=Z,17nm,0.9s
OHAK Old Harbor 50.37 40 P 06 44 35.2
baz=271
LHSI Lahat 50.57 231 P P 06 44 34.9 -1.0
A21K Barrow 50.58 22 P P 06 44 37.1 +1.9
A21K IAmb IAmb 06 44 37.7
comp=Z,28nm,0.8s
A21K Barrow 50.58 22 P 06 44 36.9
baz=256
IMAR Indian Mountai 50.63 29 P P 06 44 37.0 +1.3
RSO Redoubt South 50.67 36 P P 06 44 37.6 +1.3
KDAK Kodiak Island 50.74 40 P P 06 44 37.6 +1.0
comp=Z,34nm,0.9s,baz=287,slow=2.2,SNR=13
KDAK Kodiak Island 50.74 40 P P 06 44 37.7 +1.0
KDAK pmax pmax
comp=Z,42nm,1.0s
KDAK Kodiak Island 50.74 40 P P 06 44 37.7 +1.1
KDAK IAmb IAmb 06 44 38.7
comp=Z,42nm,1.0s
SPCR Spurr Chakacha 50.96 35 P 06 44 40.2
baz=268
PPLA Purkeypile 51.04 33 P P 06 44 39.9 +0.9
PPLA IAmb IAmb 06 44 41.9
comp=Z,20nm,0.8s
PPLA Purkeypile 51.04 33 P 06 44 41.0
baz=267
CHUM Lake Minchumin 51.04 32 P 06 44 40.3
baz=266
GSI Gunungsitoli 51.07 241 P P 06 44 38.2 -1.4
GSI Gunungsitoli 51.07 241 ⇑P P 06 44 38.5 -1.1
GSI Gunungsitoli 51.07 241 P P 06 44 38.6 -1.1
SKT Skwentna 51.30 34 P P 06 44 42.5 +1.6
SKT IAmb IAmb 06 44 43.1
comp=Z,17nm,1.0s
SKT Skwentna 51.30 34 P 06 44 42.3
baz=268
SGDS Sogindy 51.61 302 eP P 06 44 42.4 -1.2
comp=Z,16nm,0.9s,baz=302
SGDS Sogindy 51.61 302 eP P 06 44 42.3 -1.2
SGDS pmax pmax
comp=Z,16nm,0.9s
BPAW Bear Paw Mtn. 51.64 31 P P 06 44 44.6 +1.3
BPAW IAmb IAmb 06 44 46.3
comp=Z,31nm,1.4s
BPAW Bear Paw Mtn. 51.64 31 P 06 44 45.5
baz=267
SUA Susitna One 51.67 35 P P 06 44 44.4 +0.7
SUA IAmb IAmb 06 44 49.8
comp=Z,32nm,1.0s
SUA Susitna One 51.67 35 P 06 44 45.4
baz=270
BRSE Bradley Lake S 51.67 37 P 06 44 45.9
baz=271
BTLS Baital 51.72 304 eP P 06 44 43.3 -0.8
comp=Z,54nm,0.8s,baz=304
BTLS Baital 51.72 304 eP P 06 44 43.3 -0.8
BTLS pmax pmax
comp=Z,54nm,0.8s
MLY Manley 51.80 30 P P 06 44 46.6 +2.1
MLY IAmb IAmb 06 44 47.7
comp=Z,19nm,1.1s
MLY Manley 51.80 30 P 06 44 46.3
baz=267
BRZS Berezniki 51.84 311 eP P 06 44 43.9 -1.1
comp=Z,27nm,0.9s,baz=310
BRZS Berezniki 51.84 311 eP P 06 44 43.9 -1.1
BRZS pmax pmax
comp=Z,27nm,0.9s
AAK Ala-Archa 51.88 301 P P 06 44 45.2 -0.4
comp=Z,27nm,0.7s,baz=84,slow=5.6,SNR=4.9
RC01 Rabbit Creek A 52.16 35 P P 06 44 48.7 +1.5
RC01 IAmb IAmb 06 45 13.4
comp=Z,52nm,1.3s
RC01 Rabbit Creek A 52.16 35 P 06 44 47.8
baz=271
SEW Seward 52.32 37 P 06 44 49.3
baz=272
PMR Palmer 52.44 35 P P 06 44 50.0 +0.8
PMR pmax pmax
comp=Z,23nm,1.2s
PMR Palmer 52.44 35 P P 06 44 50.0 +0.8
PMR IAmb IAmb 06 45 15.5
comp=Z,23nm,1.2s
PMR Palmer 52.44 35 P 06 44 50.4
baz=271
NEA2 Nenana 52.49 31 P P 06 44 51.6 +2.1
NEA2 IAmb IAmb 06 44 52.4
comp=Z,23nm,0.9s
NEA2 Nenana 52.49 31 P 06 44 51.8
baz=268
TOLK Toolik Lake Re 52.52 26 P P 06 44 51.6 +1.8
TOLK IAmb IAmb 06 44 53.3
comp=Z,29nm,0.8s
TOLK Toolik Lake Re 52.52 26 P 06 44 52.0
baz=265
MCK McKinley 52.53 32 P 06 44 52.8
baz=269
GHO Glory Hole Cre 52.54 34 P P 06 44 51.4 +1.3
GHO IAmb IAmb 06 44 59.1
comp=Z,24nm,0.9s
FITZ Fitzroy Crossi 52.64 198 P P 06 44 51.3 +0.2
comp=Z,5.8nm,0.6s,baz=29,slow=3.9,SNR=12
WB0 Warramunga Arr 52.67 187 P P 06 44 51.7 +0.3
WB0 IAmb IAmb 06 44 52.1
comp=Z,20nm,0.6s
WAT2 Susitna Watana 52.69 33 P 06 44 51.9
baz=270
KNK Knik Glacier 52.77 35 P 06 44 53.1
baz=272
SML Sawmill 52.82 34 P 06 44 53.5
baz=271
WRAB Tennant Creek 52.84 187 ⇑P P 06 44 52.8 +0.2
WR0 Warramunga Arr 52.85 187 P P 06 44 52.9 +0.3
WRA Warramunga Arr 52.85 187 P P 06 44 52.7 0.0
comp=Z,16nm,0.5s,baz=2.2,slow=7.5,SNR=76
WRA PcP PcP 06 46 01.8 +1.0
comp=Z,7.8nm,0.6s,baz=358,slow=4.0,SNR=4.7
BVAR Borovoye Array 52.87 315 P P 06 44 52.4 -0.1
comp=Z,15nm,0.5s,baz=312,slow=33,SNR=18
BRVK Borovoye 52.93 315⇑iP P 06 44 53.1 +0.1
BRVK pmax pmax
comp=Z,51nm,1.0s
BRVK Borovoye 52.93 315⇓P P 06 44 53.5 +0.5
WAT6 Susitna Watana 53.08 33 P 06 44 55.4
baz=271
POKR Poker Plat Res 53.20 30 P 06 44 55.4
baz=270
SCM Sheep Creek Mo 53.29 34 P P 06 44 57.2 +1.6
SCM pmax pmax
comp=Z,38nm,0.8s
SCM Sheep Creek Mo 53.29 34 P P 06 44 57.2 +1.6
SCM IAmb IAmb 06 44 58.1
comp=Z,38nm,0.8s
HDA Harding Lake 53.41 31 P 06 44 56.8
baz=271
HDA P 06 44 56.8
baz=271
ILAR Eielson Array 53.43 31 P P 06 44 57.1 +0.7
comp=Z,7.4nm,0.7s,baz=262,slow=6.9,SNR=20
ILAR Eielson Array 53.43 31 P P 06 44 57.5 +1.0
ILAR Eielson Array 53.43 31 P P 06 44 57.5 +1.0
GLI Glacier Island 53.45 35 P 06 44 57.5
baz=273
M24K Tolsona, Glenn 53.83 34 P 06 45 01.6
baz=273
KLU Klutina 53.98 35 P 06 45 01.8
baz=274
DZA Taraz 54.09 302 eP P 06 45 00.9 -0.8
comp=Z,27nm,0.6s,baz=302
DZA Taraz 54.09 302 eP P 06 45 00.8 -0.8
DZA pmax pmax
comp=Z,27nm,0.6s
PAX Paxson 54.11 33 P 06 45 03.3
baz=273
EYAK Cordova Ski Ar 54.13 36 P 06 45 03.6
baz=274
HARP HAARP 54.29 34 P 06 45 04.2
baz=274
N25K Chitina, Valde 54.61 34 P 06 45 06.9
baz=275
KKAR Karatay Array 54.62 302 P P 06 45 05.5 -0.1
KKAR Karatay Array 54.62 302 P P 06 45 05.5 -0.1
KKAR Karatay Array 54.62 302 ⇑P P 06 45 05.4 -0.1
KKAR ⇑P P 06 45 05.4 -0.1
BMRM Bremner River 54.66 35 P P 06 45 07.3 +1.7
BMRM IAmb IAmb 06 45 34.1
comp=Z,30nm,0.9s
BMRM Bremner River 54.66 35 P 06 45 07.1
baz=276
SCRK Sand Creek 54.72 32 P 06 45 07.0
baz=274
KAIM Kayak Island 54.85 37 P 06 45 09.1
baz=276
IUG Iuzhnay 55.21 301 eP P 06 45 09.6 -0.3
baz=301
IUG Iuzhnay 55.21 301 eP P 06 45 09.5 -0.3
MCARA McCarthy VSAT 55.38 35 P 06 45 12.6
baz=276
BGLC Bering Glacier 55.40 36 P 06 45 11.5
baz=277
CRQE Cirque 55.42 35 P 06 45 13.2
baz=276
CHM Chimkent 55.47 302 eP P 06 45 10.3 -1.3
baz=302
CHM Chimkent 55.47 302 eP P 06 45 10.3 -1.3
K27K Chicken 55.55 31 P 06 45 13.5
baz=275
L27K Beaver Creek, 55.76 33 P 06 45 14.8
baz=276
CTG Chitna Glacier 56.24 35 P 06 45 18.4
baz=278
AS31 Alice Springs 56.58 187 P P 06 45 19.9 +0.3
AS31 IAmb IAmb 06 45 21.6
comp=Z,8.7nm,0.6s
ASAR Alice Springs 56.58 187 P P 06 45 19.4 -0.2
comp=Z,12nm,0.5s,baz=0.9,slow=6.4,SNR=83
ASAR Alice Springs 56.58 187 P P 06 45 19.9 +0.3
ASAR Alice Springs 56.58 187 P P 06 45 19.9 +0.3
EPYK Eagle Plains 57.52 28 P P 06 45 27.7 +1.8
EPYK Eagle Plains 57.52 28 P 06 45 27.7
baz=278
SVE Sverdlovsk 57.80 320 eP P 06 45 28.0 +0.2
HYT Haines Junctio 58.11 35 P P 06 45 32.2 +2.1
HYT IAmb IAmb 06 45 33.9
comp=Z,29nm,1.2s
INK Inuvik 58.44 26 P P 06 45 33.0 +0.9
comp=Z,9.1nm,0.6s,baz=300,slow=6.9,SNR=10.0
INK Inuvik 58.44 26 P P 06 45 33.3 +1.2
INK pmax pmax
comp=Z,12nm,0.7s
INK Inuvik 58.44 26 P P 06 45 33.3 +1.2
INK IAmb IAmb 06 45 34.1
comp=Z,12nm,0.7s
INK Inuvik 58.44 26 P 06 45 33.8
baz=280
WRKA Warakurna 58.75 193 ⇑P P 06 45 35.4 +0.5
EIDS Eidsvold 58.80 169 P P 06 45 36.2 +1.2
EIDS IAmb IAmb 06 46 00.0
comp=Z,18nm,0.8s
ARU Arti 59.01 320 P P 06 45 35.3 -1.0
comp=Z,15nm,0.3s,baz=114,slow=3.0,SNR=16
ARU Arti 59.01 320⇓iP P 06 45 35.6 -0.7
ARU pmax pmax
comp=Z,78nm,0.9s
ARU Arti 59.01 320 P P 06 45 35.5 -0.7
WHY Whitehorse 59.41 35 P P 06 45 40.8 +1.7
WHY IAmb IAmb 06 45 43.2
comp=Z,22nm,1.1s
WHY Whitehorse 59.41 35 P 06 45 41.2
baz=283
SKAG Skagway 59.47 36 P 06 45 41.4
baz=284
BESE Bessie Mountai 59.92 37 P P 06 45 44.0 +1.4
BESE IAmb IAmb 06 45 46.5
comp=Z,36nm,1.4s
ABKAR Akbulak array 60.08 312 P P 06 45 43.1 -0.6
ABKAR Akbulak array 60.08 312 P P 06 45 43.4 -0.4
JIS Juneau Island 60.24 37 P P 06 45 47.0 +2.4
JIS IAmb IAmb 06 45 48.7
comp=Z,36nm,1.3s
C36M Paulatuk 61.52 24 P P 06 45 54.0 +0.9
C36M IAmb IAmb 06 45 54.8
comp=Z,17nm,0.7s
C36M Paulatuk 61.52 24 P 06 45 54.1
baz=288
DLBC Dease Lake 62.39 36 P P 06 46 01.7 +2.4
KIRV Kirov 63.12 324 P P 06 46 04.0 -0.1
comp=Z,244nm,0.5s,baz=78,slow=2.1,SNR=32
KIRV Kirov 63.12 324⇓iP P 06 46 04.1 +0.1
HRA Herat 63.54 295 P P 06 46 07.8 +0.3
FORT Forrest 64.39 192 P P 06 46 13.6 +1.0
EUNU Eureka 64.40 8 P P 06 46 12.7 +0.5
EUNU IAmb IAmb 06 46 18.7
comp=Z,18nm,0.8s
STKA Stephens Creek 64.42 179 P P 06 46 13.7 +1.0

comp=Z,5.9nm,0.7s,baz=0.2,slow=9.5,SNR=10
SPA0 Spitsbergen Ar 64.44 349 P **P** **06 46 13.4 +0.9**
SPA0 IAmb IAmb 06 46 18.4
comp=Z,37nm,1.1s
SPA0 Spitsbergen Ar 64.44 349 *eP* **P** **06 46 13.4 +0.9**
KBS Kingsbay 64.61 350 P **P** **06 46 14.6 +1.1**
KBS pmax pmax
comp=Z,60nm,1.4s
KBS Kingsbay 64.61 350 P **P** **06 46 14.6 +1.1**
KBS IAmb IAmb 06 46 20.5
comp=Z,60nm,1.4s
KBS Kingsbay 64.61 350 *eP* **P** **06 46 14.4 +0.9**
GEYT Alibeck 65.22 300 P **P** **06 46 17.9 -0.3**
comp=Z,25nm,0.8s,baz=96,slow=1.5,SNR=8.0
GEYT Alibeck 65.22 300 P **P** **06 46 18.6 +0.4**
GEYT IAmb IAmb 06 46 19.2
comp=Z,29nm,0.9s
HSPB Hornsund (broa 65.34 348 *eP* **P** **06 46 18.6 +0.3**
BBOO Buckleboo 65.47 184 P **P** **06 46 20.0 +0.5**
BBOO IAmb IAmb 06 46 27.5
comp=Z,72nm,1.5s
LVZ Lovozero 65.59 336 P **P** **06 46 19.8 -0.3**
LVZ pmax pmax
comp=Z,83nm,1.4s
LVZ Lovozero 65.59 336 P **P** **06 46 19.8 -0.3**
LVZ IAmb IAmb 06 46 20.8
comp=Z,83nm,1.4s
MORW Morawa 65.83 203 P **P** **06 46 22.8 +0.8**
APA Apatity 66.17 336 *iP* **P** **06 46 22.9 -0.8**
APA pmax pmax
comp=Z,28nm,1.0s
APA MLR MLR
comp=Z,125μm,17.0s
BELG Belogornoye 66.34 318 P **P** **06 46 24.8 -0.2**
comp=Z,55nm,0.5s,baz=289,slow=1.0,SNR=35
RES Resolute Bay 66.81 14 P **P** **06 46 28.3 +0.7**
RES pmax pmax
comp=Z,15nm,1.0s
RES Resolute Bay 66.81 14 P **P** **06 46 28.3 +0.7**
KEV Kevo 67.06 340 P **P** **06 46 29.5 +0.2**
KEV pmax pmax
comp=Z,7.0nm,0.5s
KEV Kevo 67.06 340 P **P** **06 46 29.5 +0.2**
HAMF Hammerfest 67.49 341 *eP* **P** **06 46 31.9 -0.1**
ARCES ARCESS Array B 67.62 340 P **P** **06 46 33.0 +0.2**
comp=Z,21nm,0.9s,baz=50,slow=6.8,SNR=29
ARCES ARCESS Array B 67.62 340 P **P** **06 46 33.1 +0.2**
ARCES pmax pmax
comp=Z,15nm,0.8s
ARCES ARCESS Array B 67.62 340 P **P** **06 46 33.0 +0.2**
ARCES IAmb IAmb 06 46 38.4
comp=Z,15nm,0.8s
YKA Yellowknife Ar 67.79 29 P **P** **06 46 34.5 +0.4**
comp=Z,4.2nm,0.9s,baz=292,slow=5.7,SNR=7.3
KTK1 Kautokeino 68.58 340 *eP* **P** **06 46 39.2 +0.3**
NWAO Narrogin (SRO) 69.03 201 P **P** **06 46 42.5 +0.5**
comp=Z,48nm,0.6s,baz=25,slow=6.2,SNR=56
NWAO Narrogin (SRO) 69.03 201 P **P** **06 46 42.7 +0.7**
NWAO pmax pmax
comp=Z,42nm,0.7s
NWAO Narrogin (SRO) 69.03 201 P **P** **06 46 42.7 +0.7**
NWAO IAmb IAmb 06 46 43.4
comp=Z,42nm,0.7s
NWAO Narrogin (SRO) 69.03 201 P **P** **06 46 42.0 0.0**
NWAO IAmb IAmb 06 46 43.4
comp=Z,53nm,0.7s
TRO Tromso 69.39 341 *eP* **P** **06 46 44.0 +0.1**
NEEM North Greenlan 69.71 3 *iP* **P** **06 46 46.4 +0.3**
NEEM IAmb IAmb 06 46 47.1
comp=Z,9.2nm,0.5s
PGC Sidney 69.79 45 P **P** **06 46 48.8 +2.1**
PGC IAmb IAmb 06 46 56.1
comp=Z,41nm,1.4s
DAG Danmarks Havn 69.84 355 *iP* **P** **06 46 46.4 -0.1**
DAG IAmb IAmb 06 46 47.3
comp=Z,8.9nm,0.6s
DAG Danmarks Havn 69.84 355 *iP* **P** **06 46 46.4 -0.1**
DAG pmax pmax
comp=Z,9.0nm,0.6s
NLWA Neilton Lookou 70.11 46 P **P** **06 46 51.0 +2.2**
NLWA IAmb IAmb 06 46 55.9
comp=Z,51nm,1.4s
A04D Lummi Island 70.20 44 P 06 46 51.3
baz=298
MAK Makhachkala 70.44 309 *eP* **P** **06 46 49.3 -1.5**
MAK *e**PP **PcP** **06 47 11.7 0.0**
MAK *e**SP **sP** **06 47 24.4 +1.2**
MAK *eS* **S** **06 55 53.5 -3.0**
MAK *e**SS **sS** **06 56 37.5 +2.7**
MAK pmax pmax
comp=Z,340nm,1.5s
D03D Eldon 70.52 46 P 06 46 53.4
baz=298
E03A Lebam 70.69 47 P **P** **06 46 53.8 +1.6**
E03A IAmb IAmb 06 46 58.2
comp=Z,69nm,1.3s
B05A Bryant 70.77 45 P 06 46 54.6
baz=298
AKT Akhty 70.96 307 *eP* **P** **06 46 54.0 -0.2**
AKT *e* 06 47 13.2
AKT *e**SP **sP** **06 47 25.6 -1.0**
AKT pmax pmax
comp=Z,180nm,0.6s
OBN Obninsk 70.97 324 *eP* **P** **06 46 53.3 -0.5**
OBN *e* 06 47 15.9
OBN *e*PPP PPP 06 51 15.4
OBN pmax pmax
comp=Z,87nm,1.6s
WSAR Wadi Sarin 71.23 286 P **P** **06 46 55.8 -0.1**
comp=Z,47nm,0.7s,baz=121,slow=5.0,SNR=18
STEI Steigen 71.53 341 *eP* **P** **06 46 57.0 0.0**
BANOM Banah 71.83 289 P **P** **06 46 59.7 +0.1**
LOF Lofoten 71.85 342 *eP* **P** **06 46 59.7 +0.8**
FAUS Fauske 71.90 341 *eP* **P** **06 46 59.5 +0.3**
SHME Shamm 71.90 290 *iP* **P** **06 47 00.4 +0.5**
SNR=46
FIA1 FINESS Array S 72.13 333 P **P** **06 47 00.6 0.0**
FINES FINESS Array B 72.14 333 P **P** **06 47 00.4 -0.3**
comp=Z,27nm,0.6s,baz=58,slow=5.8,SNR=91
FINES FINESS Array B 72.14 333 P **P** **06 47 00.3 -0.4**
MSFE Esma-Masafi 72.21 289 *iP* **P** **06 47 02.0 +0.2**
SNR=19
GOF Gofitskoye 72.31 312 *eP* **P** **06 47 02.3 +0.3**
DBG Daneborg 72.32 355 *iP* **P** **06 47 01.4 -0.1**
DBG IAmb IAmb 06 47 07.7
comp=Z,5.7nm,0.9s
B08A Colville Reser 72.34 44 P **P** **06 47 04.3 +2.1**
UOSS Minazif 72.37 289 *iP* **P** **06 47 02.4 -0.4**
SNR=16
UOSS Minazif 72.37 289 **P** **06 47 02.9 +0.1**
HATD Hatta, Dubai 72.49 289 *iP* **P** **06 47 04.0 +0.5**
SNR=31
SOHO SOHO 72.50 288 P **P** **06 47 03.5 0.0**
NAZ Nazwa, Dubai 72.79 289 P **P** **06 47 05.3 +0.1**
ZEI Tsey 72.86 310 *eP* **P** **06 47 04.4 -1.2**
ZEI pmax pmax
comp=Z,22nm,0.6s
FAQ Al Faqa, Dubai 72.96 289 *iP* **P** **06 47 06.0 -0.2**
SNR=16
MOR8 Moi Rana 72.99 340 *eP* **P** **06 47 04.5 -1.2**
KBZ Khabaz 73.04 311 P **P** **06 47 06.7 +0.3**
comp=Z,68nm,0.9s,baz=81,slow=2.6,SNR=24
KVAR Kislovodsk Arr 73.06 312 P **P** **06 47 08.1 +1.4**
comp=Z,25nm,0.7s,baz=271,slow=22,SNR=5.3
KIV Kislovodsk 73.06 312 *iP* **P** **06 47 07.7 +1.0**
KIV Kislovodsk 73.06 312 *iP* **P** **06 47 08.3 +1.6**
SNR=9.1
KIV Kislovodsk 73.06 312 *eP* **P** **06 47 05.2 -1.5**
KIV pmax pmax
comp=Z,260nm,1.1s
KONS Konsvik 73.13 341 *iP* **P** **06 47 07.3 +0.8**
ALNE Al Ain 73.16 288 *iP* **P** **06 47 07.5 0.0**
SNR=16
ASUD Al Ashush, Dub 73.22 289 *iP* **P** **06 47 08.0 +0.2**
SNR=22
GNI Garni 73.59 307 P **P** **06 47 10.1 +0.2**
comp=Z,35nm,0.7s,baz=166,slow=2.4,SNR=5.4
GNI Garni 73.59 307 P **P** **06 47 10.6 +0.7**
GNI Garni 73.59 307 P **P** **06 47 10.5 +0.6**
SUMG Summit 74.83 360 *iP* **P** **06 47 18.0 +1.2**
SUMG IAmb IAmb 06 47 18.7
comp=Z,12nm,0.7s
SUMG Summit 74.83 360 P **P** **06 47 18.1 +1.4**
SUMG IAmb IAmb 06 47 23.8
comp=Z,42nm,0.8s

NSS Namsos 74.89 339 *eP* **P** **06 47 17.1 +0.3**
SCO Scoresbysund 76.16 354 *i* P **P** **06 47 25.3 +1.4**
SCO IAmb IAmb 06 47 26.8
comp=Z,8.5nm,0.9s
SCO Scoresbysund 76.16 354 P **P** **06 47 25.1 +1.2**
SCO IAmb IAmb 06 47 30.8
comp=Z,22nm,0.9s
SHAO Shalim 76.23 283 P **P** **06 47 25.1 -0.2**
CMB Columbia Colle 76.94 53 P **P** **06 47 30.0 +1.0**
AKASG Malin Array Be 77.12 323 P **P** **06 47 29.6 0.0**
comp=Z,7.0nm,0.3s,baz=52,slow=5.4,SNR=8.8
AKASG Malin Array Be 77.12 323 IAmb IAmb 06 47 30.5
comp=Z,15nm,1.4s
AKBB Malin Array Si 77.12 323 P **P** **06 47 29.7 +0.1**
AKBB IAmb IAmb 06 47 30.4
comp=Z,66nm,1.4s
NC405 NORSAR Array S 77.50 337 P **P** **06 47 31.6 -0.1**
NC303 NORSAR Array S 77.53 337 P **P** **06 47 32.0 +0.2**
HFS Hagfors 77.55 336 P **P** **06 47 31.5 -0.4**
comp=Z,18nm,0.5s,baz=122,slow=1.9,SNR=59
DOMB Dombas 77.63 339 *eP* **P** **06 47 32.4 0.0**
NB201 NORSAR Array S 77.68 337 P **P** **06 47 32.8 +0.1**
NC204 NORSAR Array S 77.68 338 P **P** **06 47 32.8 +0.1**
MARD Mardin 77.70 306 P **P** **06 47 34.2 +0.9**
NOA NORSAR Array B 77.72 337 P **P** **06 47 32.6 -0.2**
comp=Z,11nm,0.8s,baz=42,slow=5.5,SNR=58
NC602 NORSAR Array S 77.84 337 *eP* **P** **06 47 33.1 -0.4**
NBO00 NORSAR Array S 77.86 337 P **P** **06 47 33.6 -0.1**
KVN Kaiserville 77.92 51 P **P** **06 47 37.0 +2.3**
NAO01 NORSAR Array S 77.97 337 P **P** **06 47 33.9 -0.4**
FCC Fort Churchill 78.06 26 P **P** **06 47 34.7 0.0**
NVAR Mina Array Bea 78.12 52 P **P** **06 47 37.3 +1.5**
comp=Z,3.7nm,0.8s,baz=281,slow=5.5,SNR=8.8
AKN Aaknes 78.14 340 *eP* **P** **06 47 35.9 +0.7**
SKAR Skarsla 78.92 338 *eP* **P** **06 47 40.0 +0.5**
DIKM Dikmen 78.92 313 *iP* **P** **06 47 40.7 +0.9**
BKZ Black Stump Fm 79.09 152 P **P** **06 47 41.9 +1.3**
FOO Floro 79.17 340 *eP* **P** **06 47 41.2 +0.4**
HYA Hoyanger 79.18 339 *eP* **P** **06 47 41.2 +0.3**
STRU Stroemstad 79.23 336 *iP* **P** **06 47 41.2 0.0**
KONO Kongsberg 79.30 337 P **P** **06 47 41.2 -0.3**
KONO Kongsberg 79.30 337 *eP* **P** **06 47 41.8 +0.2**
BLEU Blekinge 79.52 332 *iP* **P** **06 47 41.9 -0.9**
BORU Boraas 79.71 334 *iP* **P** **06 47 43.5 -0.3**
TJOU Tjoern 79.83 335 *iP* **P** **06 47 44.3 -0.1**
ASK Askoy 80.02 339 *eP* **P** **06 47 46.0 +0.6**
ODD1 Odda 80.04 338 *eP* **P** **06 47 46.0 +0.4**
BER Bergen 80.06 339 *eP* **P** **06 47 46.2 +0.6**
SFJD Kangerlussuaq 80.08 4 *iP* **P** **06 47 46.1 +0.5**
SFJD IAmb IAmb 06 47 46.6
comp=Z,2.7nm,0.6s
DEL Delary 80.16 333 *iP* **P** **06 47 45.6 -0.6**
ONAU Onsala 80.20 335 *iP* **P** **06 47 45.6 -0.7**
FABU Falkenberg 80.20 334 *iP* **P** **06 47 45.9 -0.5**
TPNV Topopah Spring 80.29 52 P **P** **06 47 49.7 +2.1**
BLS5 Blasjo 80.48 338 *eP* **P** **06 47 48.5 +0.5**
SOCY Socotra 80.58 278 P **P** **06 47 47.7 -1.6**
HOMB Homborsund 80.72 337 *iP* **P** **06 47 49.4 +0.2**
HOMB Homborsund 80.72 337 *eP* **P** **06 47 49.4 +0.2**
BSD Bornholm Skovb 80.73 332 *iP* **P** **06 47 49.4 +0.1**
BJUU Bjuv 80.77 333 *iP* **P** **06 47 49.5 0.0**
PSUT Pine Spring 80.97 50 P **P** **06 47 52.2 +1.0**
BR131 Keskin Array S 81.03 312 P **P** **06 47 51.6 +0.1**
BRTR Keskin Array B 81.03 312 P **P** **06 47 51.5 +0.1**
comp=Z,43nm,0.9s,baz=118,slow=4.3,SNR=33
SNART Snartemo 81.09 337 *iP* **P** **06 47 51.7 +0.5**
SNART Snartemo 81.09 337 *eP* **P** **06 47 50.9 -0.3**
PDAR Pinedale Array 81.14 44 P **P** **06 47 53.1 +1.0**
comp=Z,2.4nm,0.6s,baz=53,slow=2.0,SNR=7.6
COP Copenhagen 81.28 333 *eP* **P** **06 47 52.5 +0.3**
ANTO Ankara 81.48 312 P **P** **06 47 54.3 +0.6**
MURC Murrieta 81.51 56 P 06 47 55.4
baz=304
RAYN Ar Rayn 81.52 292 *iP* **P** **06 47 54.3 +0.1**
SNR=33
RAYN Ar Rayn 81.52 292 P **P** **06 47 54.2 0.0**
GMRC Granite Mounta 81.90 54 P 06 47 58.1
baz=304
PFO Pinyon Flats O 82.01 55 P **P** **06 47 57.8 +1.1**
PFO IAmb IAmb 06 48 07.0
comp=Z,39nm,1.5s
MDUB Mudurnu 82.11 313 P **P** **06 47 56.6 -0.4**
BELC Belle Mtn. Jos 82.11 55 P 06 47 58.7
baz=304
CRVS Cervenica-Dubn 82.15 324 *eP* **P** **06 47 57.5 +0.5**
IRM Iron Mountain 82.61 54 P 06 48 01.4
baz=305
NUUK Nuuk 82.79 5 *iP* **P** **06 48 01.1 +1.2**
NUUK IAmb IAmb 06 48 04.8
comp=Z,7.9nm,0.6s
LANS Liptovska Anna 82.94 325 *eP* **P** **06 48 03.3 +2.2**
LANS pmax pmax
comp=Z,15nm,0.8s
LANS Liptovska Anna 82.94 325 *eP* **P** **06 48 03.3 +2.2**
MORC Moravsky Berou 83.41 327 *eP* **P** **06 48 03.7 +0.1**
MORC Moravsky Berou 83.41 327 P **P** **06 48 03.7 +0.1**
MORC Moravsky Berou 83.41 327 P **P** **06 48 03.6 +0.1**
KRLC Kraliky 83.55 327 *eP* **P** **06 48 04.5 +0.3**
KRLC Kraliky 83.55 327 *eP* **P** **06 48 04.5 +0.3**
DPC Dobruska-Polom 83.56 328 *eP* **P** **06 48 05.1 +0.8**
DPC Dobruska-Polom 83.56 328 *eP* **P** **06 48 05.1 +0.8**
UPC Upice 83.58 328 *eP* **P** **06 48 04.7 +0.3**
UPC Upice 83.58 328 *eP* **P** **06 48 04.7 +0.3**
VYHS Vyhne 83.70 325 *eP* **P** **06 48 05.8 +0.8**
VYHS pmax pmax
comp=Z,41nm,1.1s
VYHS Vyhne 83.70 325 *eP* **P** **06 48 05.8 +0.8**
MMAI Mount Meron Ar 83.74 305 P **P** **06 48 05.9 +0.4**
comp=Z,31nm,0.8s,baz=40,slow=6.6,SNR=23
JAVC Velka Javorina 84.00 326 *eP* **P** **06 48 07.8 +1.2**
CSS Mathiatis 84.01 308 P **P** **06 48 06.9 +0.1**
PV14 Lion Creek, Pa 84.12 48 P **P** **06 48 09.4 +1.7**
PV14 IAmb IAmb 06 48 10.3
comp=Z,41nm,0.8s
VRAC Vranov 84.18 327 *eP* **P** **06 48 07.8 +0.4**
PVCC Panska Ves 84.21 329 *eP* **P** **06 48 08.0 +0.5**
PVCC Panska Ves 84.21 329 *eP* **P** **06 48 08.0 +0.5**
CLL Collm 84.31 330 *iP* **P** **06 48 07.9 -0.1**
comp=Z,55nm,1.0s
CLL Collm 84.31 330 *iP* **P** **06 48 07.9 -0.1**
CLL pmax pmax
comp=Z,55nm,1.0s
SMOL Smolenice 84.35 326 *eP* **P** **06 48 09.5 +1.1**
SMOL Smolenice 84.35 326 *eP* **P** **06 48 09.4 +1.1**
KRUC Moravsky 84.45 327 *eP* **P** **06 48 08.7 -0.1**
MODS Modra-Piesok 84.52 326 *eP* **P** **06 48 09.2 0.0**
MODS Modra-Piesok 84.52 326 *eP* **P** **06 48 09.2 0.0**
PRA Prague 84.60 328 *eP* **P** **06 48 10.1 +0.6**
PRA Prague 84.60 328 *eP* **P** **06 48 10.1 +0.6**
PRU Pruhonice 84.61 328 *eP* **P** **06 48 09.7 +0.1**
PRU Pruhonice 84.61 328 *eP* **P** **06 48 09.7 +0.1**
ZST Bratislava 84.73 326 *eP* **P** **06 48 10.7 +0.5**
ZST Bratislava 84.73 326 *eP* **P** **06 48 10.7 +0.5**
PBCC Pribram 85.08 328 *eP* **P** **06 48 12.1 +0.2**
NKC Novy Kostel 85.34 330 *eP* **P** **06 48 13.4 +0.1**
NKC Novy Kostel 85.34 330 *eP* **P** **06 48 13.4 +0.1**
KHC Kasperske Hory 85.67 328 P **P** **06 48 15.2 +0.3**
KHC pmax pmax
comp=Z,13nm,0.6s
KHC Kasperske Hory 85.67 328 *eP* **P** **06 48 14.8 -0.1**
KHC Kasperske Hory 85.67 328 P **P** **06 48 15.2 +0.3**
KHC IAmb IAmb 06 48 15.8
comp=Z,13nm,0.6s
GEC2 GERESS Array S 85.83 328 P **P** **06 48 15.8 0.0**
GERES GERESS Array B 85.83 328 P **P** **06 48 15.4 -0.4**
comp=Z,4.9nm,0.6s,baz=44,slow=5.8,SNR=10.0
GERES GERESS Array B 85.83 328 P **P** **06 48 16.2 +0.4**
EIL Elat 85.98 303 P **P** **06 48 17.1 +0.3**
comp=Z,21nm,1.1s,baz=11,slow=5.5,SNR=5.0
MOA Molln 86.30 327 *eP* **P** **06 48 18.5 +0.5**
comp=Z,8.9nm,0.8s
LIT Litokhoron 87.49 317 P **P** **06 48 23.2 -0.8**
LIT pmax pmax
comp=Z,14nm,0.7s
LIT Litokhoron 87.49 317 P **P** **06 48 23.2 -0.8**
LIT IAmb IAmb 06 48 23.3
comp=Z,14nm,0.7s
ABTA Abfaltersbach 87.92 327 *eP* **P** **06 48 26.1 +0.2**
comp=Z,7.6nm,0.6s
WTTA Wattenberg 87.93 328 *iP* **P** **06 48 27.3 +1.1**
comp=Z,7.1nm,0.6s
RETA Reutte 88.15 329 *iP* **P** **06 48 27.0 0.0**
comp=Z,6.6nm,0.5s

DSB Dublin 89.52 341 P **P** **06 48 33.4 +0.2**
DSB IAmb IAmb 06 48 58.7
comp=Z,36nm,1.3s
ITM Ithomi 89.78 315 P **P** **06 48 33.8 -1.0**
ATD Arta Tunnel 90.13 284 P **P** **06 48 37.0 +0.2**
comp=Z,7.5nm,0.6s,baz=44,slow=5.0,SNR=5.2
ATD Arta Tunnel 90.13 284 IAmb IAmb 06 48 38.6
comp=Z,57nm,1.5s
TX31 Lajitas Ar. Si 93.27 52 P **P** **06 48 53.2 +2.0**
TX32 Lajitas Array 93.27 52 P **P** **06 48 52.9 +1.7**
TX32 IAmb IAmb 06 48 58.5
comp=Z,21nm,1.1s
TXAR Lajitas Array 93.27 52 P **P** **06 48 52.6 +1.4**
comp=Z,9.0nm,0.8s,baz=285,slow=1.9,SNR=24
TXAR Lajitas Array 93.27 52 P **P** **06 48 53.2 +1.9**
TORD Torodi Ar. Bea 119.64 312 PKP **PKPdf** **06 54 25.4 -0.9**
comp=Z,1.5nm,0.5s,baz=23,slow=1.1,SNR=12
SYO Syowa Base 124.14 205 *ep*Pdiff pPdif 06 51 32.0 +0.9
BOSA Boshof 124.94 256 PKP **PKiKP** **06 54 36.6 0.0**
comp=Z,2.7nm,0.6s,baz=77,slow=0.5,SNR=4.8
DBIC Dimbokro 128.69 314 PKP **PKPdf** **06 54 43.3 -0.4**
comp=Z,7.9nm,1.0s,baz=122,slow=13,SNR=3.2
SAML Samuel 147.67 48 PKP2 **PKPbc** **06 55 21.9 +1.0**
SAML Samuel 147.67 48 **PKPbc** **06 55 21.9 +1.0**
LPAZ La Paz 149.32 64 PKPbc **PKiKP** **06 55 27.4 +0.4**
comp=Z,12nm,0.8s,baz=318,slow=2.7,SNR=24
LPAZ La Paz 149.32 64 PKP2 **PKiKP** **06 55 27.6 +0.5**
LPAZ La Paz 149.32 64 **PKiKP** **06 55 27.6 +0.5**
PB16 IPOC Station P 149.45 69 **PKiKP** **06 55 28.1 +0.9**
PLCA Paso Flores 154.04 116 PKPbc **PKiKP** **06 55 36.8 +1.3**
comp=Z,2.5nm,0.8s,baz=252,slow=3.0,SNR=6.3

IDC ***25*** *06:36:22.8±1.9,27.81N×85.11E,h0km,mb4.1/8, mb1 4.3/10,mb1mx3.9/67,mbtmp4.1/10,ML4.3/2,Error ellipse: s-maj=45.6km s-min=34.3km az=99.0*
DMN ***25*** *06:36:24.8±0.6,27.92N×85.55E,h10km,ML4.9/2,Error ellipse: s-maj=10.6km s-min=4.7km az=47.0*
ISC 25 06:36:24.8±0.8,27.91N±0.06×85.52E±0.07,h18km,n15, σ0s81/18,mb4.0/8,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.24**	**241**	*e*Pg	**Pg**	**06 36 30.5**	**0.0**
KKN				*e*Sg	**Sg**	**06 36 34.2**	**-0.2**
PKI	**Pulchoki**	**0.35**	**196**	*e*Pg	**Pg**	**06 36 32.5**	**+0.2**
PKI				*e*Sg	**Sg**	**06 36 37.2**	**-0.2**
DMN	**Daman**	**0.47**	**231**	*e*Pg	**Pg**	**06 36 35.0**	**+0.6**
DMN				*e*Sg	**Sg**	**06 36 42.1**	**+1.2**
	8μm,0.2s						
DANN	**Dangsing**	**1.61**	**286**	*e*Sg	**Sg**	**06 37 17.3**	**+0.3**
	2μm,0.2s						
PYUN	**Piuthan**	**2.24**	**276**	*e*Sg	**Sg**	**06 37 35.7**	**-1.3**
	910nm,0.2s						
CMAR	**Chiang Mai Arr**	**15.51**	**124**	Pn	**P**	**06 40 06.2**	**-0.8**
	0.4nm,0.3s,baz=312,slow=11,SNR=2.0						
MKAR	**Makanchi Array**	**19.02**	**353**	P	**Pn**	**06 40 46.9**	**+0.4**
	1.2nm,0.3s,baz=172,slow=11,SNR=7.9						
KURBB	**Kurchatov Arra**	**23.30**	**349**	P	**P**	**06 41 32.9**	**+1.4**
	4.2nm,0.7s,baz=170,slow=10,SNR=8.1						
ZALV	**Zalesovo Beam**	**26.02**	**359**	P	**P**	**06 41 58.1**	**+1.4**
	2.6nm,0.4s,baz=179,slow=10,SNR=6.5						
FINES	**FINESS Array B**	**51.35**	**328**	P	**P**	**06 45 28.1**	**+0.2**
	3.9nm,0.6s,baz=109,slow=8.2,SNR=8.2						
ARCES	**ARCESS Array B**	**53.74**	**338**	P	**P**	**06 45 46.0**	**+0.4**
	5.7nm,0.6s,baz=98,slow=5.2,SNR=16						
GERES	**GERESS Array B**	**57.86**	**312**	P	**P**	**06 46 15.0**	**-0.5**
	0.4nm,0.4s,baz=64,slow=6.8,SNR=1.9						
NOA	**NORSAR Array B**	**58.45**	**327**	P	**P**	**06 46 18.8**	**-0.6**
	0.4nm,0.5s,baz=101,slow=7.2,SNR=5.4						
ESDC	**Sonseca Array**	**72.41**	**306**	P	**P**	**06 47 49.6**	**-0.5**
	0.5nm,0.6s,baz=54,slow=6.5,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.58**	**279**	P	**P**	**06 48 25.2**	**-0.7**
	0.7nm,0.5s,baz=62,slow=4.3,SNR=6.2						

IDC 25 06:37:29.4±5.9,27.66N×85.37E,h0km,mb4.0/4, mb1 4.0/5,mb1mx3.6/61,mbtmp4.0/5,ML4.2/1,Error ellipse: s-maj=107.2km s-min=53.9km az=168.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.25**	**354**	P	P	06 41 55.4	0.0
	0.7nm,0.3s,baz=176,slow=10.0,SNR=2.9						
KURBB	**Kurchatov Arra**	**23.51**	**349**	P	P	06 42 40.9	-0.1
	1.7nm,0.5s,baz=162,slow=10,SNR=4.4						
SONM	**Songino Array**	**25.97**	**34**	P	P	06 43 03.8	0.0
	2.0nm,0.5s,baz=220,slow=9.2,SNR=1.7						
FINES	**FINESS Array B**	**51.49**	**328**	P	P	06 46 36.5	0.0
	1.7nm,0.5s,baz=107,slow=7.8,SNR=5.4						
HFS	**Hagfors**	**57.36**	**326**	P	P	06 47 19.0	-0.2
	1.7nm,0.6s,baz=72,slow=4.7,SNR=1.8						

BJI ***25*** *06:37:55.9±0.0,27.42N×85.60E,h28km,mB5.3/4, mb5.2/27*
IDC ***25*** *06:37:56.8±0.5,27.67N×85.81E,h0km,mb4.9/39, mb1 4.9/42,mb1mx4.8/64,mbtmp4.9/42,ML4.6/3,Error ellipse: s-maj=13.6km s-min=10.1km az=16.0*
NDI ***25*** *06:37:57.5±2.4,27.89N×85.64E,h10km,ML4.8, mb5.1(NEIC)*
NEIC ***25*** *06:37:58.7±1.3,27.74N±0.08×85.83E±0.03,h10km±1km, mb5.1/101,Error ellipse: s-maj=13.3km s-min=3.1km az=166.0*
MOS ***25*** *06:37:58.7±1.0,27.85N×85.79E,h19km,mb5.2/30,Error ellipse: s-maj=7.5km s-min=3.8km az=114.4*
DMN ***25*** *06:37:58.9±0.1,27.85N×85.84E,h20km,Ml5.7/4,Error ellipse: s-maj=3.8km s-min=1.4km az=9.0*
ISC 25 06:37:59.5±0.7,27.80N±0.04×85.81E±0.02,h15km±4km, n448,σ1s30/457,mb5.1/117,29C-53D,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**0.13**	**30**	*e*Pg	**Pg**	**06 38 03.0**	**-0.4**
GUN				*e*Sg	**Sg**	**06 38 06.5**	**+0.5**
PKI	**Pulchoki**	**0.42**	**237**	*e*Pg	**Pg**	**06 38 08.6**	**+0.6**
PKIN	**Phulchoki**	**0.43**	**239**	*e*Pg	**Pg**	**06 38 08.6**	**+0.5**
KKN	**Kakani**	**0.47**	**269**	*e*Pg	**Pb**	**06 38 09.7**	**+0.1**
KKN				*e*Sg	**Sg**	**06 38 15.9**	**+0.7**
DMN	**Daman**	**0.65**	**253**	*e*Pg	**Pb**	**06 38 13.0**	**+0.3**
ODAN	**Odare**	**1.69**	**123**	*e*Pg	**Pb**	**06 38 31.0**	**+0.5**
ODAN				*e*Sg	**Sg**	**06 38 53.4**	**-0.6**
	16μm,0.4s						
TAPN	**Taplejung**	**1.75**	**104**	*e*Pg	**Pb**	**06 38 31.7**	**+0.2**
TAPN				*e*Sg	**Sb**	**06 38 53.8**	**+0.4**
	8μm,0.3s						
DANN	**Dangsing**	**1.89**	**287**	*e*Pg	**Pb**	**06 38 34.5**	**+0.6**
DANN				*e*Sg	**Sg**	**06 38 59.1**	**-1.3**
	10μm,0.3s						
KOLN	**Koldanda**	**1.96**	**270**	*e*Pg	**Pb**	**06 38 35.8**	**+0.8**
KOLN				*e*Sg	**Sg**	**06 39 01.7**	**-0.8**
	11μm,0.3s						
PYUN	**Piuthan**	**2.51**	**277**	*e*Pg	**Pb**	**06 38 46.1**	**+1.7**
PYUN				*e*Sg	**Sg**	**06 39 18.3**	**-1.9**
GTK	**Tadong**	**2.53**	**100**	*e*P	**Pb**	**06 38 42.6**	**-2.1**
GTK				*e*S	**Sn**	**06 39 13.1**	**+2.3**
GTK				IAML		06 39 17.2	
	comp=N,6μm,0.6s						
GTK				IAML		06 39 18.6	
	comp=E,6μm,0.2s						
DHUB	**DHUBRI**	**4.14**	**114**	*e*P	**Pn**	**06 39 02.0**	**-0.2**
DHUB				*e*S	**Sn**	**06 39 53.3**	**+3.0**
LSA	**Lhasa**	**5.06**	**67**	Pn	**Pn**	**06 39 19.8**	**+4.6**
LSA	**Lhasa**	**5.06**	**67**	P	**Pn**	**06 39 17.2**	**+2.0**
LSA	**Lhasa**	**5.06**	**67**	Pn	**Pn**	**06 39 17.2**	**+2.0**
GUWA	**GUWAHATI**	**5.49**	**106**	*e*P	**Pn**	**06 39 21.6**	**+0.9**
GUWA				*e*S	**Sn**	**06 40 21.8**	**-1.9**
GUWA				IAML		06 40 25.7	
	comp=N,632nm,0.3s						
SHL	**Shillong**	**5.87**	**111**	P	**Pn**	**06 39 25.3**	**-0.9**
SHL	**Shillong**	**5.87**	**111**	*e*P	**Pn**	**06 39 25.2**	**-0.9**
SHL				*e*S	**Sn**	**06 40 30.1**	**-3.3**
SHL				IAML		06 40 35.7	
	comp=N,507nm,0.2s						
SHL	**Shillong**	**5.87**	**111**		**Pn**	**06 39 25.3**	**-0.9**
ITAN	**ITANAGAR**	**7.06**	**93**	*e*P	**Pn**	**06 39 42.7**	**+0.3**
ITAN				*e*S	**Sn**	**06 40 59.1**	**-3.3**
ZIRO	**ZIRO**	**7.14**	**90**	*e*P	**Pn**	**06 39 43.9**	**+0.4**
ZIRO				*e*S	**Sn**	**06 41 00.7**	**-3.9**
ZIRO				IAML		06 41 08.9	
	comp=E,4μm,0.4s						
ZIRO				IAML		06 41 09.4	
	comp=N,4μm,0.3s						

NIL Nilore 12.27 301 P Pn **06 40 52.8 -1.0**
NIL Nilore 12.27 301 Pn Pn **06 40 52.8 -1.0**
HYB Hyderabad 12.31 214 *i* P Pn **06 40 51.0 -3.4**
MHMT Maesarieng 14.70 128 P P **06 41 36.8 +3.7**
CM33 Chiang Mai Arr 15.01 124 P P **06 41 36.0 -0.6**
CHTO Chiang Mai 15.01 124 P Pn **06 41 32.8 +1.6**
CHTO Chiang Mai 15.01 124 P Pn **06 41 32.8 +1.6**
CMMT Chiang Mai 15.01 124 P P **06 41 39.4 +2.8**
CM34 Chiang Mai Arr 15.14 123 P P **06 41 38.0 0.0**
CM15 Chiang Mai Arr 15.22 125 P Pn **06 41 35.9 +1.8**
comp=N,78nm,0.9s
CM13 Chiang Mai Arr 15.23 125 P Pn **06 41 35.0 +0.8**
comp=N,65nm,0.8s
CM31 Chiang Mai Arr 15.23 125 P P **06 41 45.1 +6.0**
CM31 Chiang Mai Arr 15.23 125 Pn **06 41 34.5 +0.2**
CMAR Chiang Mai Arr 15.23 125 Pn Pn **06 41 30.9 -3.3**
comp=N,0.3nm,0.3s,baz=302,slow=13,SNR=14
CM02 Chiang Mai Arr 15.25 125 P Pn **06 41 35.0 +0.6**
comp=N,87nm,0.9s
CM01 Chiang Mai Arr 15.27 125 P Pn **06 41 36.5 +1.8**
comp=N,74nm,0.8s
CM05 Chiang Mai Arr 15.27 125 P Pn **06 41 36.0 +1.3**
comp=N,56nm,0.9s
CM09 Chiang Mai Arr 15.28 125 P P **06 41 39.2 -0.4**
comp=N,65nm,0.9s
CM04 Chiang Mai Arr 15.30 125 P Pn **06 41 36.0 +1.0**
comp=N,66nm,0.8s
CM36 Chiang Mai Arr 15.31 124 P P **06 41 40.0 +0.1**
KBL Kabul 15.84 299 P Pn **06 41 40.8 -1.3**
KBL pmax pmax
comp=Z,257nm,1.1s
KBL Kabul 15.84 299 Pn **06 41 40.8 -1.3**
KBL IAmb IAmb 06 41 58.5
comp=Z,257nm,1.1s
PRZ Przheval'sk 15.84 340 P Pn **06 41 43.0 +0.9**
PRZ pmax pmax
comp=Z,92nm,0.9s
PRZ Przheval'sk 15.84 340 Pn **06 41 43.0 +0.9**
PRZ IAmb IAmb 06 41 49.6
comp=Z,92nm,0.8s
KDJ Kajisay 15.94 336 P Pn **06 41 43.1 -0.3**
KDJ pmax pmax
comp=Z,76nm,0.9s
KDJ Kajisay 15.94 336 Pn Pn **06 41 43.0 -0.3**
CD2 Chengdu 15.96 74 P Pn **06 41 42.5 -1.0**
WMQ Urumqi 16.06 5 *e*P P **06 41 47.0 -1.2**
WMQ pmax pmax
comp=Z,190nm,2.1s
WMQ Urumqi 16.06 5 P Pn **06 41 45.6 +0.8**
WMQ pmax pmax
comp=Z,218nm,1.2s
WMQ Urumqi 16.06 5 Pn **06 41 45.6 +0.8**
WMQ IAmb IAmb 06 41 59.8
comp=Z,218nm,1.2s
SHLS Shalkode 16.16 343 *e*P Pn **06 41 43.4 -2.8**
baz=344
SHLS *i* S Sn **06 44 39.7 -5.5**
baz=344
SHLS Shalkode 16.16 343 *e*P Pn **06 41 43.4 -2.8**
UZB Uzynbulak 16.27 342 *e*P Pn **06 41 45.5 -2.1**
baz=342
UZB *i* S Sn **06 44 44.9 -3.0**
baz=342
UZB *i* LR LR 06 47 44.4
baz=342
UZB *i* LRM MLR 06 48 49.2
baz=342
UZB Uzynbulak 16.27 342 *e*P Pn **06 41 45.4 -2.1**
NANT Nan 16.34 120 P P **06 41 52.9 +1.5**
comp=Z,496nm,0.7s
SATY Saty 16.36 340 *e*P Pn **06 41 46.9 -1.9**
baz=340
SATY Saty 16.36 340 *e*P Pn **06 41 46.9 -1.9**
SUKH Sukhothai 16.36 126 P P **06 41 59.0 +7.4**
ULHL Ulahol 16.39 334 P P **06 41 54.7 +2.8**
SNR=8.2
GTA Gaotai 16.41 42 ⇑P P **06 41 52.5 +0.3**
GTA pP sP 06 41 57.5 -1.7
GTA sP pP 06 42 00.5 +3.6
GTA pmax pmax
comp=Z,87nm,0.9s
UMPA Umpang Tak 16.70 131 P P **06 42 00.2 +4.8**
comp=Z,65nm,0.7s
BOOM Boomskoye usch 16.71 334 P Pn **06 41 53.8 +0.5**
BOOM pmax pmax
comp=Z,51nm,0.8s
BOOM Boomskoye usch 16.71 334 Pn Pn **06 41 53.8 +0.5**
TNSS Tian-Shan 16.81 337 *e*P Pn **06 41 53.4 -1.3**
baz=337
TNSS Tian-Shan 16.81 337 *e*P Pn **06 41 53.4 -1.3**
UTTA Uttaradit 16.87 123 P P **06 42 00.0 +2.8**
comp=Z,63nm,0.8s
MDOK Medeo 16.89 337 *e*P Pn **06 41 54.4 -1.1**
baz=337
MDOK Medeo 16.89 337 *e*P Pn **06 41 54.3 -1.1**
AAA Alma-Ata 16.98 337 *e*P Pn **06 41 55.9 -0.6**
baz=337
AAA Alma-Ata 16.98 337 *e*P Pn **06 41 55.9 -0.6**
UCH Uchtor 17.09 330 P Pn **06 41 58.3 +0.1**
SNR=5.1
PHIT Phitsanulok 17.12 125 P P **06 42 04.0 +4.0**
comp=Z,430nm,1.0s
KBK Karagaybulak 17.25 332 P P **06 42 04.4 +2.9**
SNR=22
LZH Lanzhou 17.38 57 ⇓P P **06 42 04.0 +1.1**
LZH pP pP 06 42 06.0 -1.7
LZH pmax pmax
comp=Z,100nm,1.0s
AAK Ala-Archa 17.43 331 P P **06 42 03.0 -0.5**
comp=Z,1.6nm,0.3s,baz=52,slow=5.4,SNR=12
AAK Ala-Archa 17.43 331 P P **06 42 04.8 +1.4**
SNR=5.6
AAK Ala-Archa 17.43 331 *i* P Pn **06 42 02.3 +0.1**
AAK pmax pmax
comp=Z,58nm,0.9s
AAK Ala-Archa 17.43 331 Pn **06 42 02.3 +0.1**
AAK Ala-Archa 17.43 331 ⇑P P **06 42 03.7 +0.2**
UTHA Uthaitani 17.56 131 P P **06 42 05.0 +0.1**
comp=Z,106nm,0.9s
EKS2 Erkin-Say 17.76 330 P P **06 42 07.5 +0.5**
SNR=8.0
SGDS Sogindy 18.04 333 *e*P Pn **06 42 09.1 -0.7**
baz=333
SGDS Sogindy 18.04 333 *e*P Pn **06 42 09.0 -0.7**
TDK Taldyqorghan 18.16 343 *e*P Pn **06 42 10.0 -1.0**
comp=Z,94nm,0.9s,baz=343
TDK Taldyqorghan 18.16 343 *e*P Pn **06 42 10.0 -1.0**
TDK pmax pmax
comp=Z,95nm,0.9s
GYA Guiyang 18.61 89 *e*P Pn **06 42 17.5 +0.6**
GYA pmax pmax
comp=Z,16nm,0.6s
DZA Taraz 19.09 326 *i* P P **06 42 19.5 -2.1**
baz=326
CHAI Chaiyaphum 19.10 125 P Pn **06 42 27.3 +4.6**
comp=Z,106nm,1.2s
MK31 Makanchi Array 19.16 353 ⇓*i*P Pn **06 42 23.5 +0.3**
MK31 Makanchi Array 19.16 353 P Pn **06 42 23.5 +0.3**
MK31 IAmb IAmb 06 42 33.4
comp=Z,86nm,0.8s
MKAR Makanchi Array 19.16 353 P Pn **06 42 23.6 +0.3**
comp=Z,7.3nm,0.3s,baz=175,slow=11,SNR=42
MKAR Makanchi Array 19.16 353 P Pn **06 42 23.1 -0.1**
MAKZ Makanchi 19.21 352 P Pn **06 42 24.0 +0.1**
MAKZ pmax pmax
comp=Z,108nm,0.8s
MAKZ Makanchi 19.21 352 P Pn **06 42 23.9 +0.1**
MAKZ IAmb IAmb 06 42 33.6
comp=Z,108nm,0.8s
IUG Iuzhnay 19.24 322 *e*P P **06 42 22.1 -1.3**
baz=322
IUG Iuzhnay 19.24 322 *e*P P **06 42 22.0 -1.3**
KHON Khomkaen 19.44 122 P Pn **06 42 31.0 +4.3**
comp=Z,117nm,1.0s
CHM Chimkent 19.59 322 *e*P P **06 42 26.7 -0.4**
baz=322
CHM Chimkent 19.59 322 *e*P P **06 42 26.7 -0.4**
BTLS Baital 19.60 334 *e*P P **06 42 26.3 -0.9**
baz=334
BTLS Baital 19.60 334 *e*P P **06 42 26.2 -0.9**
KK31 Karatay Array 19.66 325 P Pn **06 42 29.1 -0.1**
KK31 pmax pmax
comp=Z,40nm,1.0s
KK31 Karatay Array 19.66 325 P Pn **06 42 29.1 -0.1**
KKAR Karatay Array 19.66 325 P Pn **06 42 28.8 -0.4**
KKAR pmax pmax
comp=Z,40nm,1.0s
KKAR Karatay Array 19.66 325 P P **06 42 28.4 +0.6**
KKAR Karatay Array 19.66 325 P Pn **06 42 28.8 -0.4**
KKAR IAmb IAmb 06 42 41.2
comp=Z,40nm,0.9s
KKAR Karatay Array 19.66 325 ⇓P Pn **06 42 28.9 -0.4**
SRAK Srakaew 20.42 129 P Pn 06 42 46.2 +7.8
comp=Z,2µm,0.8s
XAN Xi'an 20.76 67 P P **06 42 40.1 +0.2**
XAN pmax pmax
comp=Z,22nm,0.7s
XAN Xi'an 20.76 67 P P **06 42 40.1 +0.2**
ENH Enshi 20.84 78 P P **06 42 41.1 +0.3**
ENH IAmb IAmb 06 42 47.5
comp=Z,40nm,0.5s
HRA Herat 21.20 294 P P **06 42 44.6 -0.2**
DGZ Jazzator, Alta 21.90 3 ⇑*i*P P **06 42 54.1 +1.9**
SEM Semipalatinsk 22.97 351 *e*P P **06 43 02.1 -1.6**
baz=351
SEM Semipalatinsk 22.97 351 *e*P P **06 43 02.0 -1.6**
KURBB Kurchatov Arra 23.45 348 P P **06 43 09.3 +1.1**
comp=Z,35nm,0.6s,baz=167,slow=10.0,SNR=54
KURK Kurchatov 23.53 349 P P **06 43 09.3 +0.4**
BRZS Berezniki 24.32 339 *e*P P **06 43 15.6 -0.9**
comp=Z,25nm,0.9s,baz=339
BRZS Berezniki 24.32 339 *e*P P **06 43 15.6 -0.9**
BRZS pmax pmax
comp=Z,25nm,0.9s
HHC Hu-ho-hao-te 24.83 52 *e*P P **06 43 20.3 -1.1**
WSAR Wadi Sarin 24.92 266 P P **06 43 22.8 +0.6**
comp=Z,4.7nm,0.7s,baz=93,slow=9.1,SNR=2.6
GEYT Alibeck 25.27 301 P P **06 43 26.7 +1.4**
comp=Z,14nm,0.6s,baz=119,slow=12,SNR=12
GYA0B ALIBECK ARRAY 25.27 301 P P **06 43 24.7 -0.6**
SONM Songino Array 25.64 33 P P **06 43 29.9 +1.3**
comp=Z,72nm,0.8s,baz=222,slow=9.7,SNR=34
SONM Songino Array 25.64 33 P P **06 43 28.7 +0.1**
SONM pmax pmax
comp=Z,62nm,0.9s
SONM Songino Array 25.64 33 P P **06 43 28.7 +0.1**
SONM IAmb IAmb 06 43 44.8
comp=Z,62nm,0.9s
ULN Ulaanbaatar 25.98 34 ⇑*i*P P **06 43 32.6 +0.9**
ULN pmax pmax
comp=Z,64nm,0.6s
ULN Ulaanbaatar 25.98 34 P P **06 43 32.0 +0.3**
ULN P **06 43 32.7 +0.9**
ULN Ulaanbaatar 25.98 34 ⇑P P **06 43 33.2 +1.5**
ZAA0 Zalesovo Array 26.13 359 P P **06 43 33.0 +0.1**
ZALV Zalesovo Beam 26.13 359 P P **06 43 34.3 +1.5**
comp=Z,36nm,0.6s,baz=185,slow=9.2,SNR=32
ZALV Zalesovo Beam 26.13 359 P P **06 43 33.3 +0.5**
KULM Kulim 26.47 145 P P **06 43 35.8 -0.4**
KULM IAmb IAmb 06 43 37.1
comp=Z,30nm,0.9s
KULM Kulim 26.47 145 ⇑P P **06 43 36.5 +0.3**
BVAR Borovoye Array 27.68 340 P P **06 43 47.3 +0.6**
comp=Z,4.4nm,0.5s,baz=166,slow=14,SNR=12
BRVK Borovoye 27.74 340 *e*P P **06 43 45.8 -1.5**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BRVK Borovoye 27.74 340 P P **06 43 47.4 +0.1**
GSI Gunungsitoli 28.66 155 P P **06 43 55.6 -0.2**
GSI Gunungsitoli 28.66 155 P P 06 44 09.9 +14
ABKAR Akbulak array 29.22 324 P P **06 44 01.5 +1.0**
ABKAR IAmb IAmb 06 44 02.8
comp=Z,26nm,0.6s
ABKAR Akbulak array 29.22 324 ⇓P P **06 44 01.9 +1.4**
MNSI Mandailing Nat 29.92 151 P P **06 44 06.7 -0.3**
AKTO Aktyubinsk 30.93 325 P P **06 44 15.8 +0.2**
comp=Z,37nm,0.8s,baz=118,slow=7.3,SNR=8.8
NACB Ninganchiao 32.30 88 P P **06 44 28.7 +0.6**
NACB IAmb IAmb 06 44 35.0
comp=Z,16nm,0.8s
SOCY Socotra 33.56 249 P P **06 44 37.5 -1.7**
SOCY Socotra 33.56 249 ⇑P P **06 44 38.8 -0.4**
HIA Hailar 33.70 41 ⇓*i*P P **06 44 40.6 +0.6**
HIA pmax pmax
comp=Z,82nm,2.3s
HIA Hailar 33.70 41 P P **06 44 40.6 +0.6**
HIA IAmb IAmb 06 44 55.0
comp=Z,24nm,1.0s
AKT Akhty 33.89 304 *e*P P **06 44 43.6 +1.7**
AKT *e* 06 45 56.8
AKT pmax pmax
comp=Z,26nm,0.7s
ARU Arti 34.58 333 P P **06 44 48.5 +1.1**
comp=Z,16nm,0.5s,baz=127,slow=4.5,SNR=37
ARU Arti 34.58 333 ⇑*i*P P **06 44 48.6 +1.1**
ARU pmax pmax
comp=Z,27nm,0.8s
ARU Arti 34.58 333 P P **06 44 48.6 +1.1**
ARU Arti 34.58 333 ⇑P P **06 44 48.6 +1.1**
GROC Groznyy 35.65 306 *e*P P **06 44 56.8 -0.1**
GROC pmax pmax
comp=Z,34nm,0.6s
GNI Garni 35.91 301 *e*P P **06 45 01.4 +2.0**
GNI pmax pmax
comp=Z,17nm,1.0s
KS19 Wonju Array Si 36.45 64 P P **06 45 03.5 -0.3**
KSRS Korea Array 36.50 64 P P **06 45 04.0 -0.2**
comp=Z,6.9nm,0.5s,baz=267,slow=8.3,SNR=20
KSRS Korea Array 36.50 64 P P **06 45 04.0 -0.2**
ZEI Tsey 36.93 305 *e*P P **06 45 09.2 +1.1**
ZEI pmax pmax
comp=Z,59nm,1.4s
BELG Belogornoye 37.50 322 P P **06 45 12.6 +0.1**
comp=Z,28nm,0.5s,baz=347,slow=2.7,SNR=14
BELG Belogornoye 37.50 322 ⇑*i*P P **06 45 12.9 +0.4**
BELG pmax pmax
comp=Z,14nm,1.3s
JOW Kunigami 37.61 81 P P **06 45 13.3 -0.5**
JOW IAmb IAmb 06 45 31.9
comp=Z,7.8nm,0.2s
KBZ Khabaz 37.82 306 P P **06 45 16.4 +1.1**
comp=Z,6.1nm,0.7s,baz=118,slow=7.6,SNR=9.0
KBZ Khabaz 37.82 306 ⇓*i*P P **06 45 16.6 +1.2**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KIV Kislovodsk 38.01 307 P P **06 45 18.0 +0.9**
KIV pmax pmax
comp=Z,24nm,1.2s
KIV Kislovodsk 38.01 307 P P **06 45 18.0 +0.9**
MARD Mardin 38.81 296 P P **06 45 25.4 +1.4**
MARD IAmb IAmb 06 45 26.5
comp=Z,27nm,0.6s
JNU Nakatsue 38.98 71 P P **06 45 25.1 -0.3**
comp=Z,11nm,0.5s,baz=346,slow=4.4,SNR=6.4
JNU Nakatsue 38.98 71 P P **06 45 25.2 -0.2**
KIRV Kirov 39.76 331 P P **06 45 32.4 +1.0**
comp=Z,75nm,0.6s,baz=114,slow=2.2,SNR=24
USA0B Ussuriysk Arra 40.23 53 P P **06 45 35.5 0.0**
USA0B Ussuriysk Arra 40.23 53 P P **06 45 35.5 0.0**
USRK Ussuriysk Ar. 40.23 53 P P **06 45 35.6 +0.1**
comp=Z,5.5nm,0.5s,baz=259,slow=8.3,SNR=18
KLR Kul'dur 41.05 46 P P **06 45 42.9 +0.6**
comp=Z,4.2nm,0.6s,baz=264,slow=9.0,SNR=4.9
JMN Monobe 41.43 70 P P **06 45 46.6 +0.9**
JMN Monobe 41.43 70 ⇓P P **06 45 46.6 +0.9**
NRIK Noril'sk 41.58 1 P P **06 45 47.8 +1.4**
comp=Z,93nm,0.5s,baz=185,slow=5.4,SNR=26
NRIK Noril'sk 41.58 1 P P **06 45 47.1 +0.7**
NRIK pmax pmax
comp=Z,120nm,0.6s
NRIK Noril'sk 41.58 1 P P **06 45 47.1 +0.7**
JWT Wachi 42.56 67 P P **06 45 55.5 +0.7**
MMAI Mount Meron Ar 43.45 290 P P **06 46 02.2 +0.1**
comp=Z,3.4nm,0.6s,baz=41,slow=9.4,SNR=7.0
BZK Bozkurt 44.14 303 ⇓P P **06 46 09.1 +1.6**
BR131 Keskin Array S 44.41 299 P P **06 46 10.3 +0.5**
BR131 pmax pmax
comp=Z,17nm,1.5s
BR131 Keskin Array S 44.41 299 P P **06 46 10.3 +0.5**
BRTR Keskin Array B 44.41 299 P P **06 46 10.1 +0.2**
comp=Z,3.7nm,0.6s,baz=115,slow=7.2,SNR=7.9
BRTR Keskin Array B 44.41 299 P P **06 46 10.8 +1.0**
OBN Obninsk 44.60 322 *e*P P **06 46 11.2 +0.3**
OBN pmax pmax
comp=Z,55nm,0.9s
MJAR Matsushiro Arr 44.74 65 P P **06 46 12.4 0.0**
comp=Z,5.6nm,1.0s,baz=278,slow=10,SNR=6.3
YAK Yakutsk 44.75 28 P P **06 46 11.8 -0.2**
comp=Z,24nm,0.4s,baz=222,slow=3.5,SNR=7.4
YAK Yakutsk 44.75 28 P P **06 46 12.9 +0.9**
YAK pmax pmax
comp=Z,47nm,0.7s
YAK Yakutsk 44.75 28 P P **06 46 12.9 +0.9**
TTSI Tana Toraja 44.86 128 P P 06 46 22.7 +9.2
CSS Mathiatis 44.94 293 P P **06 46 14.7 +0.7**
CSS IAmb IAmb 06 46 24.2
comp=Z,15nm,0.8s
ANTO Ankara 45.06 300 P P **06 46 16.0 +1.1**
ANTO pmax pmax
comp=Z,16nm,0.9s
ANTO Ankara 45.06 300 P P **06 46 16.0 +1.1**
ANTO IAmb IAmb 06 46 28.9
comp=Z,16nm,0.9s
KLMR Klimovskoe 45.23 330 *e*P P **06 46 14.8 -1.1**
KLMR pmax pmax
comp=Z,57nm,0.8s
KLMR Klimovskoe 45.23 330 *e*P P **06 46 14.8 -1.1**
KLMR AMP 06 46 28.4
comp=Z,57nm,0.8s
LEF Lefka 45.28 293 ⇓P P **06 46 18.4 +1.7**
ELL Elmali 47.52 296 P P **06 46 35.4 +1.0**
ELL pmax pmax
comp=Z,263nm,0.8s
ELL Elmali 47.52 296 P P **06 46 35.4 +1.0**
ASAJ Asahikawa 47.83 54 P P **06 46 36.5 -0.1**
JKA Kamikawa-asahi 47.83 54 P P **06 46 36.5 -0.1**
TLCR 47.99 307 ⇓P P **06 46 38.5 +0.8**
TLCR 47.99 307 ⇓P P **06 46 38.5 +0.8**
AKASG Malin Array Be 48.06 314 P P **06 46 38.0 -0.3**
comp=Z,12nm,0.5s,baz=82,slow=6.7,SNR=50
AKASG Malin Array Be 48.06 314 P P **06 46 38.0 -0.3**
AKASG Malin Array Be 48.06 314 P P **06 46 38.0 -0.3**
AKBB Malin Array Si 48.06 314 P P **06 46 38.0 -0.2**
AKBB pmax pmax
comp=Z,19nm,0.6s
AKBB Malin Array Si 48.06 314 P P **06 46 38.0 -0.2**
AKBB IAmb IAmb 06 46 43.7
comp=Z,19nm,0.6s
TPGR Topolog 48.26 307 ⇑P P **06 46 40.7 +0.8**
SORM Soroca 48.42 311 ⇑P P **06 46 40.0 -1.0**
SORM Soroca 48.42 311 ⇑P P **06 46 40.0 -1.0**
TLBR Topalu 48.53 306 ⇑P P **06 46 43.1 +1.2**
HARR Harsova 48.61 306 ⇓P P **06 46 43.6 +1.0**
HARR Harsova 48.61 306 ⇓P P **06 46 43.6 +1.0**
VRI Vrincioaia 49.46 308 ⇑P P **06 46 50.7 +1.6**
VRI Vrincioaia 49.46 308 ⇑P P **06 46 50.7 +1.6**
PLOR Plostina 49.52 308 ⇑P P **06 46 51.2 +1.6**
PLOR Plostina 49.52 308 ⇑P P **06 46 51.2 +1.6**
NEHR Nehoiu 49.77 307 ⇓P P **06 46 53.6 +2.2**
TIXI Tiksi 49.83 16 P P **06 46 51.5 +0.1**
comp=Z,25nm,0.5s,baz=232,slow=4.4,SNR=22
TIXI Tiksi 49.83 16 IAmb IAmb 06 47 10.5
comp=Z,28nm,0.9s
TIXI Tiksi 49.83 16 ⇓P P **06 46 51.7 +0.2**
KARP Karpathos 49.88 294 P P **06 46 52.9 +0.4**
MLR Muntele Rosu 50.01 307 ⇑P P **06 46 55.2 +1.8**
MLR Muntele Rosu 50.01 307 P P **06 46 53.8 +0.3**
LVZ Lovozero 50.23 337 P P **06 46 55.0 +0.3**
LVZ pmax pmax
comp=Z,18nm,0.6s
LVZ Lovozero 50.23 337 P P **06 46 55.0 +0.3**
LVZ IAmb IAmb 06 46 56.7
comp=Z,18nm,0.6s
BURAR Bucovina Array 50.51 310 ⇑P P **06 46 57.8 +0.7**
BURAR Bucovina Array 50.51 310 ⇑P P **06 46 57.8 +0.7**
BURAR Bucovina Array 50.51 310 P P **06 46 57.5 +0.4**
BURAR IAmb IAmb 06 46 58.5
comp=Z,14nm,0.7s
APA Apatity 50.52 337 ⇓*i*P P **06 46 57.1 +0.4**
APA pmax pmax
comp=Z,30nm,0.8s
BUR08 Bucovina Ar. S 50.52 310 P P **06 46 57.2 -0.1**
VOIR 50.64 307 ⇑P P **06 46 58.6 +0.4**
VOIR 50.64 307 ⇑P P **06 46 58.6 +0.4**
VSU Vasula 50.65 324 ⇓P P **06 46 58.4 +0.5**
ARR Arges 50.94 307 ⇑P P **06 47 01.3 +0.9**
SANT Santorini 51.12 296 P P **06 47 01.6 -0.2**
LVV L'vov 51.33 313 *e*P P **06 47 03.2 0.0**
BMR Baia Mare 51.67 310 ⇓P P **06 47 07.3 +1.5**
BMR Baia Mare 51.67 310 ⇓P P **06 47 07.3 +1.5**
PABE Paberze 51.73 320 P P **06 47 06.0 0.0**
IDI Anoyia 51.75 294 P P **06 47 05.8 -0.8**
comp=Z,11nm,0.7s,baz=2.5,slow=9.1,SNR=4.1
VTS Vitosha 52.11 304 ⇓P P **06 47 10.6 +1.3**
VTS Vitosha 52.11 304 ⇓P P **06 47 10.4 +1.1**
DEV Deva 52.13 308 ⇓P P **06 47 10.9 +1.7**
KWP Kalwaria Pacla 52.19 313 P P **06 47 09.9 +0.3**
DRGR 52.23 309 ⇓P P **06 47 10.9 +0.9**
GZR Gura Zlata 52.24 307 ⇓P P **06 47 10.7 +0.5**
HERR Herculane 52.53 307 ⇓P P **06 47 12.5 +0.3**
SIRR Siria 52.98 309 ⇓P P **06 47 16.3 +0.8**
MDVR Moldovita 53.03 307 ⇓P P **06 47 17.0 +1.0**
AGG Agios Georgios 53.20 299 P P **06 47 16.2 -1.1**
AGG IAmb IAmb 06 47 29.0
comp=Z,20nm,0.8s
AGG Agios Georgios 53.20 299 ⇓P P **06 47 16.4 -0.8**
KEV Kevo 53.51 338 ⇓P P **06 47 19.9 +0.9**
FNA Florina 53.69 302 P P **06 47 20.4 -0.4**
ARCES ARCESS Array B 53.94 338 P P **06 47 23.1 +0.8**
comp=Z,46nm,0.6s,baz=99,slow=7.5,SNR=28
ARCES ARCESS Array B 53.94 338 P P **06 47 23.0 +0.8**
PSZ Piszkesteto 54.09 311 ⇓P P **06 47 24.6 +0.9**
PSZ Piszkesteto 54.09 311 ⇓P P **06 47 24.6 +0.9**
FRGS Fruska Gora 54.35 307 ⇓P P **06 47 26.6 +1.0**
KMBO Kilima Mbogo 54.75 247 P P **06 47 31.0 +1.9**
comp=Z,2.1nm,0.3s,baz=53,slow=8.4,SNR=6.7
PDG Podgorica 55.05 304 ⇑P P **06 47 30.6 0.0**
PDG Podgorica 55.05 304 ⇓P P **06 47 30.6 0.0**
JAVC Velka Javorina 55.51 312 *e*P P **06 47 36.4 +2.4**
MORC Moravsky Berou 55.53 313 *e*P P **06 47 34.7 +0.6**
MORC Moravsky Berou 55.53 313 ⇓P P **06 47 34.9 +0.7**
KRLC Kraliky 56.01 313 *e*P P **06 47 37.9 +0.4**
VRAC Vranov 56.18 313 ⇓P P **06 47 39.9 +1.2**
VRAC Vranov 56.18 313 *e*P P **06 47 39.5 +0.8**
DPC Dobruska-Polom 56.28 314 *e*P P **06 47 40.2 +0.8**
DPC *e*pP pP **06 47 44.6 -0.3**
KRUC Moravsky 56.33 312 *e*P P **06 47 39.9 +0.1**
UPC Upice 56.47 314 *e*P P **06 47 41.5 +0.8**
CONA Conrad Observa 56.79 311 *i* P P **06 47 43.5 +0.3**
comp=Z,14nm,0.8s,SNR=14
ARSA Arzberg 57.10 310 *e*P P **06 47 45.6 +0.3**
comp=Z,6.0nm,0.6s,SNR=4.2
PRU Pruhonice 57.45 314 *e*P P **06 47 47.5 -0.2**
PRU *e*pP pP **06 47 52.2 -0.6**
HFS Hagfors 57.46 326 P P **06 47 47.6 0.0**
comp=Z,28nm,0.7s,baz=91,slow=7.4,SNR=14
SOKA Soboth 57.50 310 *e*P P **06 47 48.7 +0.5**
comp=Z,19nm,0.8s,SNR=4.3
PETK Petropavlovsk- **57.58 43** P P **06 47 47.6 -0.9**
comp=Z,6.0nm,0.9s,baz=205,slow=6.6,SNR=1.8
LUNU Lund 57.70 320 *i* P P **06 47 50.2 +0.9**
BRG Berggiesshubel 57.75 315 *e*P P **06 47 51.0 +1.2**
BRG Amp 06 47 51.3
comp=Z,10nm,0.6s
BRG *i* x x 06 47 54.9
BRG Amp 06 47 55.2
comp=Z,4.7nm,0.5s
BRG *i* x x 06 48 07.9
BRG Amp 06 48 08.5
comp=Z,17nm,0.9s
BRG Amp 06 48 52.0
comp=E,460nm,16.2s
BRG Amp 06 48 56.0
comp=N,159nm,16.3s
BRG Amp 06 48 57.0
comp=Z,595nm,17.8s
OBKA Obir 57.85 309 *e*P P **06 47 51.3 +0.6**
comp=Z,16nm,0.8s,SNR=10
MOA Molln 57.87 311 *i* P P **06 47 50.8 +0.1**
comp=Z,11nm,0.7s,SNR=9.4
GEC2 GERESS Array S 58.12 312 P P **06 47 52.5 -0.1**
GERES GERESS Array B 58.12 312 P P **06 47 52.3 -0.3**
comp=Z,2.6nm,0.5s,baz=91,slow=7.3,SNR=11
GERES GERESS Array B 58.12 312 P P **06 47 52.5 -0.1**
KHC Kasperske Hory 58.17 313 *e*P P **06 47 53.0 +0.2**
KHC *e*pP pP **06 47 56.9 -1.0**
KHC Kasperske Hory 58.17 313 ⇓P P **06 47 53.3 +0.5**
TRI Trieste 58.51 309 ⇑P P **06 47 54.9 -0.2**
NOA NORSAR Array B 58.68 327 P P **06 47 55.1 -1.0**
comp=Z,9.1nm,0.6s,baz=88,slow=7.0,SNR=14
PTCC Patococ-Chiusa 58.69 309 ⇓P P **06 47 56.4 -0.1**
STAL STALIGIAL 59.15 309 P P **06 47 59.2 -0.5**
ABTA Abfaltersbach 59.21 310 *i* P P **06 47 59.2 -0.9**

comp=Z,5.0nm,0.8s
FLTG **Flechtingen** 59.27 317 P P 06 48 00.3 0.0
CIMO **Cimolais** 59.33 309 P P 06 48 00.6 -0.3
CIMO IAmb IAmb 06 48 01.3
comp=Z,19nm,0.8s
NRCA **Norcia** 59.46 305 P P 06 48 01.8 -0.1
NRCA IAmb IAmb 06 48 08.8
comp=Z,20nm,0.7s
WTTA **Wattenberg** 59.72 311 *i* P P 06 48 02.9 -0.8
comp=Z,22nm,1.1s
WATA **Walderalm** 59.74 311 *i* P P 06 48 03.0 -0.9
comp=Z,9.4nm,0.7s
MURB **Monte Urbino** 59.80 306 P P 06 48 05.3 +1.0
CTI **Castel Tesino** 59.91 309 P P 06 48 04.7 -0.3
CTI pmax pmax
comp=Z,10.0nm,0.7s
CTI **Castel Tesino** 59.91 309 P P 06 48 04.7 -0.3
CTI IAmb IAmb 06 48 05.6
comp=Z,10nm,0.7s
SQTA **Sankt Quirin** 60.01 311 *e*P P 06 48 04.9 -0.8
comp=Z,16nm,0.8s,SNR=6.2
TEOL **Teolo** 60.02 308 P P 06 48 05.6 0.0
MOTA **Moosalm** 60.06 311 *i* P P 06 48 05.3 -0.8
comp=Z,19nm,0.7s,SNR=6.7
RETA **Reutte** 60.27 311 *e*P P 06 48 06.8 -0.6
comp=Z,6.6nm,0.6s
FETA **Feichten** 60.37 310 *e*P P 06 48 07.4 -0.8
comp=Z,15nm,1.1s,SNR=6.5
SALO **Salr** 60.76 309 P P 06 48 10.5 -0.3
SALO **Salr** 60.76 309 ⇓P P 06 48 11.4 +0.6
DAVA **Damuels** 60.89 311 *i* P P 06 48 11.3 -0.5
comp=Z,26nm,0.8s,SNR=11
BILL **Bilibino** 60.98 25 *e*P P 06 48 23.9 +12
BILL pmax pmax
comp=Z,24nm,1.0s
TUE **Stuetta** 61.40 310 P P 06 48 14.6 -0.7
TUE IAmb IAmb 06 48 16.7
comp=Z,20nm,0.9s
TUE **Stuetta** 61.40 310 ⇑P P 06 48 15.3 0.0
BOB **Bobbio (Coli)** 61.68 308 ⇓P P 06 48 18.0 +1.0
MSSA **Maissana** 61.72 308 P P 06 48 16.5 -0.8
MSSA IAmb IAmb 06 48 23.6
comp=Z,16nm,0.6s
BTNL **Ternell** 62.70 315 *d*P P 06 48 24.0 +0.3
BTNL *d*PcP PcP 06 49 02.2 -0.2
MEM **Membach** 62.77 315 *d*P P 06 48 24.1 -0.1
SENIN **Lac Senin/Sane** 62.81 310 P P 06 48 24.3 -0.5
BHOU **Houvegnez** 62.82 315 *d*P P 06 48 25.4 +0.9
WLF **Walferdange** 62.87 314 *d*P P 06 48 25.8 +1.0
BEBN **Eben Emael** 62.94 315 *d*P P 06 48 24.5 -0.8
BSTI **Sart Tilman** 63.05 315 *d*P P 06 48 25.8 -0.2
BCLA **Clavier** 63.25 315 *b*P P 06 48 26.4 -0.9
BGES **Gesves** 63.39 315 *d*P P 06 48 26.8 -1.5
BNI **Bardonecchia** 63.53 309 P P 06 48 29.1 -0.4
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI **Bardonecchia** 63.53 309 P P 06 48 29.1 -0.4
BNI IAmb IAmb 06 48 41.3
comp=Z,9.2nm,0.8s
BNI **Bardonecchia** 63.53 309 ⇑P P 06 48 29.3 -0.2
BMRD **Maredsous** 63.61 315 *d*P P 06 48 27.9 -1.8
DOU **Dourbes** 63.76 315 *d*P P 06 48 28.9 -1.8
DOU *d*PcP PcP 06 49 06.1 -0.5
SNF **Seneffe** 63.87 315 *d*P P 06 48 28.1 -3.3
KEST **Kesra** 63.99 298 P P 06 48 33.2 +0.6
comp=Z,27nm,0.8s,baz=267,slow=1.2,SNR=17
KEST **Kesra** 63.99 298 P P 06 48 33.5 +0.8
NOR **Nord** 64.49 351 *i* P P 06 48 35.4 +0.3
NOR IAmb IAmb 06 48 35.8
comp=Z,8.1nm,0.7s
NOR **Nord** 64.49 351 *i* P P 06 48 35.3 +0.3
SSB **Saint Sauveur** 64.94 310 P P 06 48 38.4 -0.2
SSB pmax pmax
comp=Z,17nm,1.0s
SSB **Saint Sauveur** 64.94 310 P P 06 48 38.4 -0.2
SSB IAmb IAmb 06 48 52.7
comp=Z,17nm,1.0s
SSB **Saint Sauveur** 64.94 310 ⇓P P 06 48 38.6 0.0
DAG **Danmarks Havn** 66.39 346 *i* P P 06 48 48.0 +0.7
DAG IAmb IAmb 06 48 49.0
comp=Z,14nm,1.0s
DAG **Danmarks Havn** 66.39 346 P P 06 48 48.0 +0.7
WB0 **Warramunga Arr** 66.68 130 P P 06 48 49.7 -0.3
WRA **Warramunga Arr** 66.76 130 P P 06 48 50.5 -0.1
comp=Z,7.8nm,0.5s,baz=322,slow=6.5,SNR=19
WB2 **Warramunga Arr** 66.77 130 P P 06 48 50.0 -0.6
DBG **Daneborg** 67.67 344 *i* P P 06 48 56.0 +0.4
DBG IAmb IAmb 06 48 57.7
comp=Z,11nm,0.8s
ASAR **Alice Springs** 69.07 133 P P 06 49 04.9 -0.1
comp=Z,4.9nm,0.6s,baz=314,slow=6.2,SNR=17
SCO **Scoresbysund** 69.75 340 P P 06 49 09.8 +1.3
SCO pmax pmax
comp=Z,20nm,1.3s
SCO **Scoresbysund** 69.75 340 P P 06 49 09.8 +1.3
SCO IAmb IAmb 06 49 19.6
comp=Z,20nm,1.3s
AMKA **Amchitka** 70.87 41 P P 06 49 16.2 +0.5
NEEM **North Greenlan** 71.86 351 *i* P P 06 49 22.2 +0.5
NEEM IAmb IAmb 06 49 23.0
comp=Z,23nm,0.6s
RDOG **Red Dog Mine** 72.00 22 P 06 49 23.0
baz=300
A21K **Barrow** 72.12 17 P P 06 49 23.2 +0.3
A21K IAmb IAmb 06 49 31.4
comp=Z,20nm,1.0s
EUNU **Eureka** 72.28 359 P P 06 49 24.7 +0.8
EUNU IAmb IAmb 06 49 35.3
comp=Z,22nm,1.2s
ESDC **Sonseca Array** 72.68 306 P P 06 49 26.7 -0.3
comp=Z,3.6nm,0.9s,baz=55,slow=5.3,SNR=15
ESDC **Sonseca Array** 72.68 306 P P 06 49 26.2 -0.7
ANM **Nome** 72.84 25 P P 06 49 27.9 +0.6
ANM pmax pmax
comp=Z,10.0nm,1.0s
ANM **Nome** 72.84 25 P P 06 49 27.9 +0.6
ANM IAmb IAmb 06 49 29.5
comp=Z,11nm,1.0s
ANM **Nome** 72.84 25 P 06 49 28.6
baz=299
SUMG **Summit** 73.01 345 *i* P P 06 49 29.5 +0.7
SUMG IAmb IAmb 06 49 30.6
comp=Z,19nm,0.9s
SUMG **Summit** 73.01 345 P P 06 49 29.4 +0.7
SUMG **Summit** 73.01 345 P P 06 49 29.1 +0.4
MVO **Moncorvo** 74.27 308 *e*P P 06 49 36.5 +0.2
POLO **Lamas de Olo** 74.72 309 *e*P P 06 49 39.8 +0.9
TULEG **Thule** 74.72 354 *i* P P 06 49 37.8 -0.4
TULEG IAmb IAmb 06 49 38.7
comp=Z,10nm,0.9s
MTE **Manteigas** 74.93 308 *e*P P 06 49 41.9 +1.8
PCBR **Castelo Branco** 75.11 307 *e*P P 06 49 41.6 +0.5
PMRV **Marv??o** 75.22 307 *e*P P 06 49 45.8 +4.1
PBAR **Barrancos** 75.47 306 *e*P P 06 49 43.5 +0.3
comp=Z,28nm,2.2s
ICESG **Greenland Ices** 75.61 342 *i* P P 06 49 44.6 +0.7
ICESG IAmb IAmb 06 49 45.6
comp=Z,36nm,0.8s
TOLK **Toolik Lake Re** 75.68 18 P P 06 49 44.7 +0.8
TOLK IAmb IAmb 06 49 56.0
comp=Z,16nm,0.8s
TOLK **Toolik Lake Re** 75.68 18 P 06 49 44.7
baz=311
EVO **Evora** 76.02 306 *e*P P 06 49 46.4 0.0
PSBE **So Bento** 76.17 307 *e*P P 06 49 49.5 +2.3
PVAQ **Vaqueiros** 76.28 305 *e*P P 06 49 48.2 +0.4
PCVE **Castro Verde** 76.41 305 *e*P P 06 49 48.8 +0.2
COLD **Coldfoot** 76.44 19 P 06 49 49.1
baz=311
PBDV **Barranco-do-Ve** 76.50 305 *e*P P 06 49 51.8 +2.7
comp=Z,52nm,1.6s
PTEO **Sao Teotonio** 76.94 306 *e*P P 06 49 50.4 -1.2
PFVI **Vila Bisbo** 77.19 305 *e*P P 06 49 56.7 +3.7
TTA **Tatalina** 77.22 24 P 06 49 54.2
baz=307
MLY **Manley** 77.71 21 P 06 49 56.0 +0.5
MLY IAmb IAmb 06 49 57.4
comp=Z,13nm,0.9s
MLY **Manley** 77.72 21 P 06 49 56.4
baz=311,SNR=9.5
BMAR **Burnt Mountain** 77.88 18 P P 06 49 57.6 +1.3
CHUM **Lake Minchumin** 77.94 23 P 06 49 58.0
baz=310
I23K **Minto, Yukon-K** 78.07 21 P P 06 49 58.0 +0.6
I23K IAmb IAmb 06 50 16.2
comp=Z,13nm,1.0s
I23K **Minto, Yukon-K** 78.08 21 P 06 49 58.3
baz=312,SNR=5.1
BPAW **Bear Paw Mtn.** 78.24 22 P 06 49 58.9 +0.5
BPAW IAmb IAmb 06 50 00.8
comp=Z,14nm,0.8s
BPAW **Bear Paw Mtn.** 78.25 22 P 06 49 59.0
baz=311,SNR=8.9
NEA2 **Nenana** 78.54 21 P P 06 50 00.6 +0.6
NEA2 IAmb IAmb 06 50 01.5
comp=Z,23nm,0.9s
NEA2 **Nenana** 78.54 21 P 06 50 00.7
baz=312,SNR=14
MDM **Murphy Dome** 78.56 21 P P 06 50 00.2 +0.1
MDM IAmb IAmb 06 50 01.7
comp=Z,40nm,1.4s
PPLA **Purkeypile** 78.62 23 P 06 50 01.6
baz=310
POKR **Poker Plat Res** 78.69 20 P 06 50 01.7
baz=314
TCOL **CIGO, UAF Yank** 78.73 21 P 06 50 01.7
baz=313
COLA **College** 78.73 21 P 06 50 01.7
baz=313
TOA0 **Torodi Ar. Sit** 78.85 279 P P 06 50 01.7 -0.8
TORD **Torodi Ar. Bea** 78.85 279 P P 06 50 01.8 -0.7
comp=Z,3.4nm,0.7s,baz=46,slow=4.1,SNR=8.1
TORD **Torodi Ar. Bea** 78.85 279 P P 06 50 01.9 -0.7
CCB **Clear Creek Bu** 78.90 21 P P 06 50 01.4 -0.5
PRP **Porcupine Dome** 78.98 19 P P 06 50 03.9 +1.3
PRP IAmb IAmb 06 50 04.7
comp=Z,17nm,0.9s
PRP **Porcupine Dome** 78.98 19 P 06 50 03.7
baz=315
IL31 79.10 20 P P 06 50 03.0 0.0
ILAR **Eielson Array** 79.10 20 P P 06 50 03.0 0.0
comp=Z,6.3nm,0.7s,baz=309,slow=4.7,SNR=32
ILAR PP PP 06 53 01.4 -0.3
comp=Z,3.6nm,0.8s,baz=303,slow=6.0,SNR=5.8
ILAR **Eielson Array** 79.10 20 P P 06 50 02.9 -0.2
ILAR **Eielson Array** 79.10 20 P P 06 50 02.9 -0.2
MCK **McKinley** 79.17 22 P 06 50 03.9
baz=313
HDA **Harding Lake** 79.34 21 P 06 50 03.4
baz=314
HDA P 06 50 03.4
baz=314
RND **Reindeer** 79.42 22 P P 06 50 05.0 +0.1
RND pmax pmax
comp=Z,10.0nm,0.7s
RND **Reindeer** 79.42 22 P P 06 50 05.0 +0.1
RND IAmb IAmb 06 50 05.5
comp=Z,10nm,0.7s
SKT **Skwentna** 79.44 24 P P 06 50 05.4 +0.4
SKT **Skwentna** 79.44 24 P 06 50 05.5
baz=311,SNR=16
CUT **Chulitna** 79.61 23 P 06 50 06.2
baz=312
STKA **Stephens Creek** 79.63 134 P P 06 50 05.5 -0.9
comp=Z,3.8nm,0.7s,baz=309,slow=7.0,SNR=3.1
WAT2 **Susitna Watana** 79.81 22 P 06 50 06.5
baz=313
INK **Inuvik** 79.87 14 P P 06 50 07.0 -0.1
comp=Z,7.2nm,0.8s,baz=340,slow=7.4,SNR=9.4
INK **Inuvik** 79.87 14 P P 06 50 07.7 +0.6
INK IAmb IAmb 06 50 19.3
comp=Z,21nm,1.1s
INK **Inuvik** 79.87 14 P 06 50 07.8
baz=325
SFJD **Kangerlussuaq** 79.96 344 *i* P P 06 50 06.7 -1.0
SFJD **Kangerlussuaq** 79.96 344 *i* P P 06 50 06.6 -1.0
SUA **Susitna One** 80.07 24 P P 06 50 09.1 +0.6
SUA IAmb IAmb 06 50 09.8
comp=Z,17nm,0.6s
SUA **Susitna One** 80.07 24 P 06 50 08.8
baz=311,SNR=7.0
WAT6 **Susitna Watana** 80.35 22 P 06 50 10.0
baz=314
SCRK **Sand Creek** 80.55 20 P P 06 50 11.5 +0.4
SCRK IAmb IAmb 06 50 12.4
comp=Z,15nm,0.7s
PMR **Palmer** 80.56 23 P P 06 50 11.4 +0.4
PMR pmax pmax
comp=Z,17nm,0.8s
PMR **Palmer** 80.56 23 P P 06 50 11.3 +0.4
PMR IAmb IAmb 06 50 12.2
comp=Z,18nm,0.8s
SCRK **Sand Creek** 80.56 20 P 06 50 11.6
baz=317,SNR=12
PMR **Palmer** 80.56 23 P 06 50 11.3
baz=313,SNR=8.2
RC01 **Rabbit Creek A** 80.68 24 P 06 50 12.3
baz=312
BOSA **Boshof** 80.68 231 P P 06 50 11.5 -0.7
comp=Z,4.7nm,0.8s,baz=76,slow=7.1,SNR=7.7
BOSA **Boshof** 80.68 231 P P 06 50 11.6 -0.7
BOSA pmax pmax
comp=Z,6.0nm,0.9s
BOSA **Boshof** 80.68 231 P P 06 50 11.6 -0.7
SML **Sawmill** 80.69 23 P 06 50 12.5
baz=313,SNR=12
EPYK **Eagle Plains** 80.71 16 P 06 50 11.7 -0.1
EPYK IAmb IAmb 06 50 26.8
comp=Z,13nm,0.8s
EPYK **Eagle Plains** 80.71 16 P 06 50 12.0
baz=323
C36M **Paulatuk** 80.72 10 P 06 50 12.0
baz=333
EGAK **Eagle** 80.78 18 P P 06 50 12.8 +0.6
EGAK IAmb IAmb 06 50 28.4
comp=Z,15nm,1.1s
EGAK **Eagle** 80.78 18 P 06 50 12.4
baz=319
PAX **Paxson** 80.82 21 P 06 50 12.9
baz=316
KNK **Knik Glacier** 80.92 23 P 06 50 14.0
baz=313
SCM **Sheep Creek Mo** 81.01 23 P P 06 50 14.4 +0.9
SCM pmax pmax
comp=Z,29nm,0.6s
SCM **Sheep Creek Mo** 81.01 23 P P 06 50 14.4 +0.9
K27K **Chicken** 81.08 19 P 06 50 14.8
baz=318
M24K **Tolsona, Glenn** 81.21 22 P P 06 50 15.7 +1.1
M24K IAmb IAmb 06 50 16.2
comp=Z,20nm,0.7s
M24K **Tolsona, Glenn** 81.21 22 P 06 50 15.5
baz=315,SNR=5.7
KLU **Klutina** 81.73 22 P 06 50 18.4
baz=315,SNR=5.9
GLI **Glacier Island** 81.76 23 P 06 50 18.0
baz=314
KDAK **Kodiak Island** 81.78 27 P P 06 50 18.0 +0.5
KDAK pmax pmax
comp=Z,32nm,0.6s
KDAK **Kodiak Island** 81.78 27 P P 06 50 18.0 +0.5
KDAK **Kodiak Island** 81.78 27 P 06 50 18.4
baz=310
OHAK **Old Harbor** 81.85 28 P P 06 50 18.8 +0.9
OHAK **Old Harbor** 81.85 28 P 06 50 18.8
baz=310
L27K **Beaver Creek,** 81.89 20 P P 06 50 18.6 +0.5
L27K IAmb IAmb 06 50 36.2
comp=Z,34nm,1.4s
L27K **Beaver Creek,** 81.89 20 P 06 50 19.5
baz=319,SNR=5.1
SII **Sitkinak Islan** 81.89 29 P 06 50 18.9
baz=309
BCAR **Beaver Creek A** 81.89 20 P P 06 50 19.1 +0.9
N25K **Chitina, Valde** 82.09 22 P 06 50 20.4
baz=316,SNR=6.5
EYAK **Cordova Ski Ar** 82.47 23 P 06 50 22.2
baz=316
BMRM **Bremner River** 82.55 22 P 06 50 22.7
baz=316,SNR=6.5
MCARA **McCarthy VSAT** 82.77 21 P 06 50 23.9
baz=318
CRQE **Cirque** 83.22 22 P 06 50 26.3
baz=318
KAIM **Kayak Island** 83.38 23 P 06 50 26.9
baz=317
CTG **Chitna Glacier** 83.62 21 P 06 50 28.3
baz=319
CTGM **Chitina Glacie** 83.62 21 P P 06 50 28.0 +0.7
CTGM IAmb IAmb 06 50 29.6
comp=Z,16nm,1.0s
LOGN **Logan Glacier** 83.84 21 P P 06 50 29.9 +1.5
LOGN IAmb IAmb 06 50 36.7
comp=Z,24nm,1.2s
PMPST **Porto Santo, M** 84.51 304 *e*P P 06 50 33.5 +1.3
WHY **Whitehorse** 85.82 19 P P 06 50 38.5 +0.1
WHY IAmb IAmb 06 50 51.6
comp=Z,22nm,1.3s
WHY **Whitehorse** 85.82 19 P 06 50 38.8
baz=325
SKAG **Skagway** 86.67 20 P 06 50 43.4
baz=324
DBIC **Dimbokro** 87.52 276 P P 06 50 47.0 -0.3
comp=Z,4.1nm,0.6s,baz=354,slow=6.0,SNR=4.1
YKA **Yellowknife Ar** 88.54 9 P P 06 50 51.4 +0.1
comp=Z,5.4nm,0.9s,baz=144,slow=2.3,SNR=8.3
TXAR **Lajitas Array** 122.47 10 PKP PKPdf 06 56 54.3 -0.6
comp=Z,0.9nm,0.7s,baz=38,slow=0.2,SNR=12
HOPE **Hope Point** 130.79 221 *i* PKIKP PKiKP 06 57 10.5 -0.1
CHIC **Chinigaza** 142.19 325 *e*P PKPdf 06 57 26.2 -6.5
CBOC **Ciudad Bolivar** 142.21 330 *e*P PKPdf 06 57 27.5 -4.9
ROSC **El Rosal** 142.31 326 PKhKP PKPpre 06 57 28.6
comp=Z,6.5nm,0.7s,baz=198,slow=23,SNR=5.6
GUY2C **Guyana, Caldas** 142.47 328 *e*P PKPdf 06 57 28.7 -4.5
ANIL **Santa Ana** 143.13 328 *e*P PKPbc 06 57 31.0 0.0
ANIL **Santa Ana** 143.13 328 *e*P PKPab 06 57 29.8 +0.2
ORTC **Ortega, Tolima** 143.56 327 *e*P PKPab 06 57 29.5 -1.5
ORTC **Ortega, Tolima** 143.56 327 *e*P PKPab 06 57 28.9 -2.1
YOTC **Yotoco, Valle** 144.02 329 *e*P PKPab 06 57 30.7 -2.1
YOTC **Yotoco, Valle** 144.02 329 *e*P PKPab 06 57 31.2 -1.6
MACC **Macarena, Meta** 144.37 323 *e*P PKPab 06 57 33.4 -0.6
MACC **Macarena, Meta** 144.37 323 *e*P PKPab 06 57 32.8 -1.2
MARP **Paez Belalcaza** 144.83 327 *e*P PKPab 06 57 35.5 -0.6
MARP **Paez Belalcaza** 144.83 327 *e*P PKPab 06 57 34.4 -1.6
SAML **Samuel** 145.27 297 PKIKP PKPbc 06 57 37.0 -0.1
SAML **Samuel** 145.27 297 PKPbc 06 57 37.0 -0.1
PCIN **Cinco Dias** 145.49 327 *e*P PKPbc 06 57 36.8 -1.8
SOTA **Rioblanco** 145.76 328 *e*P PKPdf 06 57 38.7 -0.3
SOTA **Rioblanco** 145.76 328 *e*P PKPdf 06 57 38.0 -1.1
CRUC **La Cruz** 146.42 328 *e*P PKPab 06 57 42.2 +0.1
CRUC **La Cruz** 146.42 328 *e*P PKPab 06 57 41.8 -0.2
PTLC **Puerto Leguiza** 146.53 323 *e*P PKPdf 06 57 40.1 +0.4
PTLC **Puerto Leguiza** 146.53 323 *e*P PKPdf 06 57 39.9 +0.2
GCUF **Volcan Galeras** 146.91 328 *e*P PKPdf 06 57 41.4 +0.4
GCUF **Volcan Galeras** 146.91 328 *e*P PKPbc 06 57 43.0 +0.2
CPUP **Villa Florida** 147.22 264 PKPbc PKPdf 06 57 40.3 -0.1
comp=Z,2.4nm,0.8s,baz=17,slow=3.4,SNR=4.6
OTAV **Otavalo** 148.29 329 *e*P PKPdf 06 57 43.7 +0.5

IDC ***25*** *06:38:42.1±1.5,27.51N×85.71E,h0km,mb4.9/9, mb1 5.0/10,mb1mx4.4/63,mbtmp4.9/10,ML4.9/1,Error ellipse: s-maj=42.1km s-min=27.8km az=48.0*

ISC 25 06:38:43.7±1.4,27.5N±0.2×85.7E±0.2,h10km,n10, σ0°56/10,mb4.9/9,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.43**	**353**	P	P	**06 43 09.8**	**-0.3**
	3.7nm,0.3s,baz=174,slow=11,SNR=1.6						
KURBB	**Kurchatov Arra**	**23.71**	**349**	P	P	**06 43 55.5**	**-0.2**
	18nm,0.7s,baz=166,slow=9.9,SNR=4.3						
SONM	**Songino Array**	**25.92**	**33**	P	P	**06 44 15.5**	**-0.6**
	27nm,0.7s,baz=214,slow=11,SNR=1.9						
NRIK	**Noril'sk**	**41.87**	**1**	P	P	**06 46 34.5**	**+0.8**
	50nm,0.7s,baz=184,slow=3.9,SNR=4.9						
AKASG	**Malin Array Be**	**48.20**	**315**	P	P	**06 47 24.6**	**+0.3**
	5.8nm,0.5s,baz=80,slow=7.1,SNR=5.1						
FINES	**FINESS Array B**	**51.77**	**328**	P	P	**06 47 51.5**	**+0.3**
	10nm,0.6s,baz=109,slow=8.0,SNR=1.9						
ARCES	**ARCESS Array B**	**54.16**	**338**	P	P	**06 48 09.3**	**+0.5**
	19nm,0.6s,baz=103,slow=7.8,SNR=5.0						
GERES	**GERESS Array B**	**58.24**	**312**	P	P	**06 48 37.9**	**-0.5**
	4.4nm,0.8s,baz=46,slow=5.8,SNR=4.5						
NOA	**NORSAR Array B**	**58.86**	**327**	P	P	**06 48 41.9**	**-0.5**
	3.9nm,0.6s,baz=89,slow=6.9,SNR=1.7						
WRA	**Warramunga Arr**	**66.65**	**130**	P	P	**06 49 34.9**	**+0.1**
	8.4nm,0.5s,baz=322,slow=6.5,SNR=2.1						

BUC 25 06:39:13.6±0.4,45.78N×26.85E,h111km±3km,ml3.5/24, 76C-28D,Error ellipse: s-maj=2.7km s-min=2.1km az=4.0,Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRI	**Vrincioaia**	**0.12**	**314**	⇓P	Pn	06 39 29.3	+0.4
VRI				⇑S	Sn	06 39 40.8	+0.4
VRI	**Vrincioaia**	**0.12**	**314**	⇓P	Pn	06 39 29.3	+0.4
VRI				⇑S	Sn	06 39 40.8	+0.4
ODBI	**Odobesti**	**0.14**	**98**	⇑P	Pn	06 39 29.8	+0.9
ODBI	**Odobesti**	**0.14**	**98**	⇑P	Pn	06 39 29.8	+0.9
PLOR	**Plostina**	**0.16**	**296**	⇑P	Pn	06 39 29.3	+0.2
PLOR				⇓S	Sn	06 39 41.4	+0.7
PLOR	**Plostina**	**0.16**	**296**	⇑P	Pn	06 39 29.3	+0.2
PLOR				⇓S	Sn	06 39 41.4	+0.7
BISRR	**Bisoca**	**0.26**	**203**	⇓P	Pn	06 39 30.2	+0.8
BISRR	**Bisoca**	**0.26**	**203**	⇓P	Pn	06 39 30.2	+0.8
PETR	**Petresti**	**0.27**	**103**	⇓P	Pn	06 39 29.7	+0.4
PETR				⇑S	Sn	06 39 40.5	-0.6
PETR	**Petresti**	**0.27**	**103**	⇓P	Pn	06 39 29.7	+0.4
PETR				⇑S	Sn	06 39 40.5	-0.6
GRER		**0.41**	**168**	⇑P	Pn	06 39 31.5	+1.5
GRER				⇓S	Sn	06 39 43.1	+0.8
GRER		**0.41**	**168**	⇑P	Pn	06 39 31.5	+1.5
GRER				⇓S	Sn	06 39 43.1	+0.8
GHRR		**0.48**	**54**	⇑P	Pn	06 39 30.9	+0.6
GHRR				⇑S	Sn	06 39 42.9	-0.1
GHRR		**0.48**	**54**	⇑P	Pn	06 39 30.9	+0.6
GHRR				⇑S	Sn	06 39 42.9	-0.1
NEHR	**Nehoiu**	**0.53**	**228**	⇑P	Pn	06 39 31.3	+0.5
NEHR				⇑S	Sn	06 39 44.6	+0.9
NEHR	**Nehoiu**	**0.53**	**228**	⇑P	Pn	06 39 31.3	+0.5
NEHR				⇑S	Sn	06 39 44.6	+0.9
TUDR		**0.60**	**108**	⇑P	Pn	06 39 31.7	+0.4
TUDR				⇑S	Sn	06 39 45.6	+1.1
TUDR		**0.60**	**108**	⇑P	Pn	06 39 31.7	+0.4
TUDR				⇑S	Sn	06 39 45.6	+1.1
ISR	**Istrita**	**0.70**	**198**	⇑P	Pn	06 39 32.9	+0.8
ISR				⇑S	Sn	06 39 46.6	+0.6
ISR	**Istrita**	**0.70**	**198**	⇑P	Pn	06 39 32.9	+0.8
ISR				⇑S	Sn	06 39 46.6	+0.6
MLR	**Muntele Rosu**	**0.70**	**246**	⇑P	Pn	06 39 32.6	+0.5
MLR				⇓S	Sn	06 39 46.7	+0.6
MLR	**Muntele Rosu**	**0.70**	**246**	⇑P	Pn	06 39 32.6	+0.5
MLR				⇓S	Sn	06 39 46.7	+0.6
VARL	**Varlezi**	**0.71**	**80**	⇑P	Pn	06 39 32.4	+0.4
VARL				⇑S	Sn	06 39 46.2	+0.3
VARL	**Varlezi**	**0.71**	**80**	⇑P	Pn	06 39 32.4	+0.4
VARL				⇑S	Sn	06 39 46.2	+0.3
BIR	**Birlad**	**0.72**	**48**	⇑P	Pn	06 39 32.5	+0.3
BIR	**Birlad**	**0.72**	**48**	⇑P	Pn	06 39 32.5	+0.3
TESR	**Tescani**	**0.74**	**349**	⇑P	Pn	06 39 32.0	-0.3
TESR	**Tescani**	**0.74**	**349**	⇑P	Pn	06 39 32.0	-0.3
SCHL	**Schela**	**0.74**	**112**	⇑S	Sn	06 39 46.9	+0.4
SCHL	**Schela**	**0.74**	**112**	⇑S	Sn	06 39 46.9	+0.4
OZUR		**0.81**	**293**	⇓P	Pn	06 39 32.7	-0.2
OZUR				⇓S	Sn	06 39 47.1	-0.5
OZUR		**0.81**	**293**	⇓P	Pn	06 39 32.7	-0.2
OZUR				⇓S	Sn	06 39 47.1	-0.5
SECR		**0.93**	**217**	⇓S	Sn	06 39 51.0	+1.3
SECR		**0.93**	**217**	⇓S	Sn	06 39 51.0	+1.3
DOPR	**Dopca**	**1.04**	**281**	⇑P	Pn	06 39 35.3	+0.1
DOPR				⇑S	Sn	06 39 51.7	+0.1
DOPR	**Dopca**	**1.04**	**281**	⇑P	Pn	06 39 35.3	+0.1
DOPR				⇑S	Sn	06 39 51.7	+0.1
VASR	**Vaslui**	**1.08**	**37**	⇓P	Pn	06 39 35.8	+0.2
VASR				⇑S	Sn	06 39 52.1	-0.2
VASR	**Vaslui**	**1.08**	**37**	⇓P	Pn	06 39 35.8	+0.2
VASR				⇑S	Sn	06 39 52.1	-0.2
CFR	**Carcaliu**	**1.09**	**123**	⇑P	Pn	06 39 35.9	+0.2
CFR				⇑S	Sn	06 39 52.2	-0.2
CFR	**Carcaliu**	**1.09**	**123**	⇑P	Pn	06 39 35.9	+0.2
CFR				⇑S	Sn	06 39 52.2	-0.2
SULR		**1.18**	**201**	⇑P	Pn	06 39 37.1	+0.4
SULR				⇑S	Sn	06 39 55.5	+1.3
SULR		**1.18**	**201**	⇑P	Pn	06 39 37.1	+0.4
SULR				⇑S	Sn	06 39 55.5	+1.3
AMRR	**Amara**	**1.22**	**164**	⇓S	Sn	06 39 56.0	+0.9
AMRR	**Amara**	**1.22**	**164**	⇓S	Sn	06 39 56.0	+0.9
LEHL	**Lehliu**	**1.31**	**181**	⇓S	Sn	06 39 57.5	+0.7
LEHL	**Lehliu**	**1.31**	**181**	⇓S	Sn	06 39 57.5	+0.7
VOIR		**1.31**	**255**	⇑P	Pn	06 39 38.0	-0.3

VOIR			⇑S	Sn	06 39 56.2	-0.8		
VOIR		**1.31 255**	⇑P	Pn	06 39 38.0	-0.3		
VOIR			⇑S	Sn	06 39 56.2	-0.8		
HARR	**Harsova**	**1.33 145**	⇑P	Pn	06 39 38.3	-0.2		
HARR	**Harsova**	**1.33 145**	⇑P	Pn	06 39 38.3	-0.2		
TPGR	**Topolog**	**1.44 129**	⇑P	Pn	06 39 39.4	-0.4		
TPGR			⇑S	Sn	06 39 58.5	-1.1		
TPGR	**Topolog**	**1.44 129**	⇑P	Pn	06 39 39.4	-0.4		
TPGR			⇑S	Sn	06 39 58.5	-1.1		
TLBR	**Topalu**	**1.50 145**	⇓P	Pn	06 39 40.2	-0.2		
TLBR			⇑S	Sn	06 40 00.3	-0.5		
TLBR	**Topalu**	**1.50 145**	⇓P	Pn	06 39 40.2	-0.2		
TLBR			⇑S	Sn	06 40 00.3	-0.5		
TLCR		**1.50 113**	⇑P	Pn	06 39 40.7	+0.2		
TLCR			⇑S	Sn	06 40 00.6	-0.3		
TLCR		**1.50 113**	⇑P	Pn	06 39 40.7	+0.2		
TLCR			⇑S	Sn	06 40 00.6	-0.3		
ARR	**Arges**	**1.61 256**	⇑P	Pn	06 39 42.0	+0.2		
ARR			⇑S	Sn	06 40 03.3	0.0		
ARR	**Arges**	**1.61 256**	⇑P	Pn	06 39 42.0	+0.2		
ARR			⇑S	Sn	06 40 03.3	0.0		
CVDA	**Cernavoda**	**1.68 149**	⇓P	Pn	06 39 43.6	+1.1		
CVDA			⇑S	Sn	06 40 04.5	0.0		
CVDA	**Cernavoda**	**1.68 149**	⇓P	Pn	06 39 43.6	+1.1		
CVDA			⇑S	Sn	06 40 04.5	0.0		
HUMR	**Humele**	**1.82 227**	⇑S	Sn	06 40 06.7	-1.1		
HUMR	**Humele**	**1.82 227**	⇑S	Sn	06 40 06.7	-1.1		

IDC 25 06:41:11.2±11.0, 27.84N×85.26E, h0km, mb4.3/3, mb1 4.4/4, mb1mx3.8/61, mbtmp4.3/4, Error ellipse: s-maj=260.2km s-min=128.3km az=117.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.07**	**354**	P	P	06 45 35.0	-0.2
	baz=178,slow=11,SNR=1.8						
KURBB	**Kurchatov Arra**	**23.33**	**349**	P	P	06 46 21.3	+0.5
	2.9nm,0.2s,baz=170,slow=10,SNR=1.7						
ZALV	**Zalesovo Beam**	**26.09**	**359**	P	P	06 46 46.2	-0.3
	1.3nm,0.3s,baz=188,slow=11,SNR=1.0						
ARCES	**ARCESS Array B**	**53.72**	**338**	P	P	06 50 34.6	-0.1
	7.7nm,1.1s,baz=104,slow=7.8,SNR=1.4						

*IDC **25** 06:44:37.4±1.2, 27.55N×85.46E, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.0/57, mbtmp4.3/10, ML4.3/1, Error ellipse: s-maj=45.6km s-min=20.6km az=58.0*
*DMN **25** 06:44:38.9±0.1, 27.53N×85.62E, h10km, Ml5.0/3, Error ellipse: s-maj=5.9km s-min=1.7km az=18.0*
*NEIC **25** 06:44:39.0±2.3, 27.59N±0.04×85.50E±0.07, h10km±1km, mb4.6/23, Error ellipse: s-maj=10.6km s-min=5.7km az=248.0*
ISC 25 06:44:39.7±0.9, 27.56N±0.07×85.51E±0.05, h15km±6km, n52, σ1°02/54, mb4.5/17, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKI	**Pulchoki**	**0.09**	**280**	*e*Pg	**Pg**	**06 44 43.0**	**-0.3**
PKI				*e*Sg	**Sg**	**06 44 45.9**	**+0.3**
KKN	**Kakani**	**0.31**	**319**	*e*Pg	**Pb**	**06 44 47.0**	**-0.1**
KKN				*e*Sg	**Sb**	**06 44 53.2**	**+1.1**
	31μm,0.3s						
DMN	**Daman**	**0.36**	**278**	*e*Pg	**Pb**	**06 44 48.4**	**+0.4**
DMN				*e*Sg	**Sb**	**06 44 54.4**	**+0.8**
DANN	**Dangsing**	**1.74**	**297**	*e*Pg	**Pg**	**06 45 13.4**	**+0.2**
DANN				*e*Sg	**Sg**	**06 45 37.2**	**+1.4**
	2μm,0.2s						
ODAN	**Odare**	**1.81**	**112**	*e*Sg	**Sn**	**06 45 33.5**	**+0.1**
	6μm,0.6s						
TAPN	**Taplejung**	**1.97**	**95**	*e*Sg	**Sn**	**06 45 37.9**	**+0.6**
	2μm,0.3s						
LSA	**Lhasa**	**5.40**	**65**	Pn	**Pn**	**06 46 00.6**	**+0.5**
SHL	**Shillong**	**6.04**	**108**	Pn	**Pn**	**06 46 08.9**	**+0.2**
NIL	**Nilore**	**12.18**	**303**	Pn	**Pn**	**06 47 31.6**	**-1.1**
KDJ	**Kajisay**	**16.05**	**337**	Pn	**Pn**	**06 48 25.1**	**0.0**
WMQ	**Urumqi**	**16.33**	**6**	P	**P**	**06 48 32.2**	**+0.9**
WMQ				IAmb	IAmb	06 48 35.8	
	comp=Z,37nm,1.1s						
DRK	**Karamyk**	**16.47**	**320**	P	**Pn**	**06 48 31.5**	**+0.9**
DRK				IAmb	IAmb	06 48 43.9	
	comp=Z,37nm,0.7s						
GTA	**Gaotai**	**16.77**	**42**	*e*P	**Pn**	**06 48 31.0**	**-3.2**
GTA				pP	P	06 48 34.3	-2.1
GTA				sP	pP	06 48 36.8	-4.1
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
BOOM	**Boomskoye usch**	**16.82**	**335**	P	**Pn**	**06 48 35.1**	**+0.3**
MK31	**Makanchi Array**	**19.37**	**353**	P	**Pn**	**06 49 06.3**	**+0.4**
MK31				IAmb	IAmb	06 49 12.6	
	comp=Z,26nm,1.1s						
MKAR	**Makanchi Array**	**19.37**	**353**	P	**P**	**06 49 03.8**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=168,slow=12,SNR=8.2						
MKAR	**Makanchi Array**	**19.37**	**353**	P	**Pn**	**06 49 06.1**	**+0.1**
KK31	**Karatay Array**	**19.71**	**326**	P	**P**	**06 49 08.7**	**+0.1**
KKAR	**Karatay Array**	**19.71**	**326**	P	**Pn**	**06 49 09.3**	**-0.7**
LHMI	**Lhok Sumawe**	**24.73**	**152**	P	**P**	**06 50 01.6**	**+1.0**
SONM	**Songino Array**	**25.98**	**33**	P	**P**	**06 50 12.7**	**+0.8**
	comp=Z,17nm,0.9s,baz=221,slow=10,SNR=6.4						
SONM	**Songino Array**	**25.98**	**33**	IAmb	IAmb	06 50 18.8	
	comp=Z,30nm,1.1s						
ZAA0	**Zalesovo Array**	**26.37**	**359**	P	**P**	**06 50 14.7**	**-0.5**
ZAA0				IAmb	IAmb	06 50 19.8	
	comp=Z,35nm,1.1s						
ZALV	**Zalesovo Beam**	**26.37**	**359**	P	**P**	**06 50 14.5**	**-0.6**
	comp=Z,23nm,0.9s,baz=337,slow=5.0,SNR=8.3						
UOSS	**Minazif**	**26.39**	**271**	P	**P**	**06 50 13.5**	**-2.1**
UOSS				IAmb	IAmb	06 50 27.7	
	comp=Z,17nm,0.8s						
TLY	**Talaya**	**27.70**	**25**	P	**P**	**06 50 26.7**	**-0.5**
TLY				IAmb	IAmb	06 50 32.4	
	comp=Z,9.2nm,0.9s						
GSI	**Gunungsitoli**	**28.55**	**154**	P	**P**	**06 50 36.6**	**+1.5**
KSM	**Kuching**	**35.17**	**133**	P	**P**	**06 51 32.0**	**-1.2**
KSM				IAmb	IAmb	06 51 35.3	
	comp=Z,5.3nm,0.9s						
JNU	**Nakatsue**	**39.31**	**70**	P	**P**	**06 52 08.8**	**+0.5**
JNU				IAmb	IAmb	06 52 14.4	
	comp=Z,11nm,1.1s						
USA0B	**Ussuriysk Arra**	**40.59**	**53**	P	**P**	**06 52 18.1**	**-0.6**
JWT	**Wachi**	**42.90**	**67**	P	**P**	**06 52 40.0**	**+2.3**
MJB9	**Matsu-Tunnel**	**45.08**	**65**	P	**P**	**06 52 55.1**	**-0.2**
MANT	**Manisa**	**48.30**	**298**	P	**P**	**06 53 19.3**	**-1.4**
YSS	**Yuzh-Sakhalins**	**48.37**	**50**	P	**P**	**06 53 21.7**	**+0.8**
TIXI	**Tiksi**	**50.14**	**16**	P	**P**	**06 53 35.3**	**+1.3**
LVZ	**Lovozero**	**50.35**	**338**	P	**P**	**06 53 36.3**	**+0.6**
LVZ				IAmb	IAmb	06 53 54.4	
	comp=Z,16nm,1.0s						
FINES	**FINESS Array B**	**51.65**	**328**	P	**P**	**06 53 45.1**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=94,slow=7.6,SNR=3.4						
OJC	**Ojcow**	**54.04**	**314**	P	**P**	**06 54 02.9**	**-0.5**
OJC				IAmb	IAmb	06 54 11.1	
	comp=Z,3.1nm,0.5s						
ARCES	**ARCESS Array B**	**54.06**	**338**	P	**P**	**06 54 03.7**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=108,slow=4.1,SNR=8.1						
TIR	**Tirane**	**54.65**	**303**	P	**P**	**06 54 06.4**	**-1.6**
HFS	**Hagfors**	**57.52**	**326**	P	**P**	**06 54 28.7**	**+0.6**
	comp=Z,4.9nm,0.9s,baz=100,slow=7.4,SNR=5.2						
CEL	**Celeste**	**58.18**	**300**	P	**P**	**06 54 31.9**	**-1.4**
NOA	**NORSAR Array B**	**58.74**	**327**	P	**P**	**06 54 36.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=89,slow=7.2,SNR=1.8						
MURB	**Monte Urbino**	**59.73**	**306**	P	**P**	**06 54 42.4**	**-1.5**
MURB				IAmb	IAmb	06 54 54.4	
	comp=Z,3.0nm,0.9s						
MTN	**Manton Dam**	**59.74**	**126**	P	**P**	**06 54 44.6**	**+0.5**
TEOL	**Teolo**	**59.96**	**309**	P	**P**	**06 54 45.1**	**-0.3**
TUE	**Stuetta**	**61.36**	**310**	P	**P**	**06 54 54.1**	**-1.1**
CLF	**Chambon-Foret**	**65.72**	**313**	P	**P**	**06 55 24.1**	**+0.4**
WRA	**Warramunga Arr**	**66.81**	**130**	P	**P**	**06 55 31.6**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=322,slow=6.5,SNR=2.6						
WRA	**Warramunga Arr**	**66.81**	**130**	IAmb	IAmb	06 55 34.0	
	comp=Z,3.9nm,0.9s						
ASAR	**Alice Springs**	**69.09**	**133**	P	**P**	**06 55 45.4**	**0.0**
	comp=Z,1.7nm,0.7s,baz=317,slow=6.0,SNR=6.1						
YKA	**Yellowknife Ar**	**88.83**	**9**	P	**P**	**06 57 33.4**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=337,slow=4.7,SNR=4.3						

*DMN **25** 06:45:19.4±0.2, 28.23N×84.92E, h10km, Ml6.7/2, Error ellipse: s-maj=5.7km s-min=2.0km az=11.0*
*IDC **25** 06:45:19.1±0.3, 28.15N×84.87E, h0km, mb6.1/55, mb1 6.1/58, mb1mx6.0/60, mbtmp6.0/58, ML5.3/3, MS6.9/9, Ms1 6.9/9, ms1mx5.9/55, Error ellipse: s-maj=8.9km s-min=7.3km az=30.0*
*MOS **25** 06:45:19.0±0.9, 28.21N×84.82E, h10km, mb6.6/112, MS6.7/31, Error ellipse: s-maj=5.7km s-min=3.4km az=111.9*
*BGR **25** 06:45:20.8±0.0, 27.66N×84.70E, h15km, mb6.2, Ms7.0*
*NEIC **25** 06:45:21.3±1.3, 28.22N±0.07×84.82E±0.07, h10km±1km, mb6.6/289, Mww6.6, Mwc6.7(GCMT), Error ellipse: s-maj=12.7km s-min=9.8km az=204.0*
*BJI **25** 06:45:21.2±0.0, 28.22N×84.78E, h30km, mB7.4/26, mb6.1/71, Ms7.1/50, Ms7 6.8/47*
*NDI **25** 06:45:24.4±3.5, 28.00N×84.81E, h5km±60km, mb6.5, ML6.1, mb6.6(NEIC)*
*GCMT **25** 06:45:29.3±0.2, 27.86N±0.02×84.93E±0.02, h21km±1km, MW6.7/117, Moment Tensor Solution. s21,c22; s117,c284; Duration: 5±2 Moment tensor: Scale 10^19 Nm; Mrr0.68±.04; Mθθ-0.74±.03; Mϕϕ0.05±.02; Mrθ0.96±.08; Mθϕ0.25±.01; Mϕr0.19±.05; Best double couple: Mo1.24000×10^19 NP1:ϕs308.00000°, δ23.00000°, λ131.00000°. NP2:ϕs85.00000°, δ73.00000°, λ74.00000°. Principal axes: T 1.2380, Plg59.0000°, Azm332.0000°; N 0.0040, Plg15.0000°, Azm90.0000°; P -1.2420, Plg26.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **25** 06:45:29, 27.92N×84.88E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr0.49; Mθθ-0.61; Mϕϕ0.13; Mrθ1.48; Mθϕ0.25; Mϕr0.12; Fault plane solution: Mo1.61000×10^19 NP1:ϕs314.00000°, δ14.00000°, λ136.00000°. NP2:ϕs86.00000°, δ80.00000°, λ80.00000°. Principal axes: T 1.5559, Plg54.0000°, Azm344.0000°; N 0.0957, Plg10.0000°, Azm88.0000°; P -1.6516, Plg34.0000°, Azm185.0000°;*
*NEIC **25** 06:45:32, 28.29N×84.64E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr5.42; Mθθ-6.23; Mϕϕ0.81; Mrθ6.59; Mθϕ2.35; Mϕr-3.89; Fault plane solution: Mo9.92000×10^18 NP1:ϕs271.00000°, δ21.00000°, λ64.00000°. NP2:ϕs119.00000°, δ71.00000°, λ100.00000°. Principal axes: T 9.2566, Plg63.0000°, Azm44.0000°; N 1.2233, Plg9.0000°, Azm295.0000°; P -10.4799, Plg25.0000°, Azm201.0000°;*
ISC 25 06:45:21.4±0.4, 28.16N±0.03×84.84E±0.02, h15km±2km, h15km:pP-P,n1682,σ1°35/1751, mb6.5/432, MS6.9/61, 511C-313D, Fault plane solution: NP1:ϕs79.59856°, δ69.03243°, λ63.07680°. NP2:ϕs314.42877°, δ33.63590°, λ139.75775°. Principal axes: T Plg57.3253°, Azm313.2240°; N Plg25.0123°, Azm89.8982°; P Plg19.6144°, Azm189.4692°; **Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GKN	**Gorkha**	**0.24**	**229**	*e*Pg	**Pg**	**06 45 26.2**	**-0.5**
GKN				*e*Sg	**Sg**	**06 45 30.4**	**0.0**
KKN	**Kakani**	**0.53**	**134**	*e*Pg	**Pg**	**06 45 29.9**	**-2.1**
KKN				*e*Sg	**Sg**	**06 45 36.2**	**-3.0**
DMN	**Daman**	**0.60**	**157**	*e*Pg	**Pg**	**06 45 31.8**	**-1.4**
PKI	**Pulchoki**	**0.77**	**139**	*e*Pg	**Pg**	**06 45 35.4**	**-1.1**
GUN	**Gumba**	**0.95**	**105**	*e*Pg	**Pb**	**06 45 36.9**	**-2.9**
DANN	**Dangsing**	**0.97**	**281**	*e*Pg	**Pb**	**06 45 38.7**	**-1.5**
KOLN	**Koldanda**	**1.17**	**251**	*e*Pg	**Pb**	**06 45 43.1**	**-0.3**
PYUN	**Piuthan**	**1.64**	**268**	*e*Pg	**Pb**	**06 45 51.8**	**+0.4**
ODAN	**Odare**	**2.61**	**119**	*e*Pg	**Pb**	**06 46 07.0**	**-1.0**
ODAN				*e*Sg	**Sb**	**06 46 41.5**	**+1.6**
	148μm,0.7s						
TAPN	**Taplejung**	**2.67**	**107**	*e*Pg	**Pb**	**06 46 08.6**	**-0.4**
TAPN				*e*Sg	**Sb**	**06 46 42.0**	**+0.3**
	107μm,0.5s						
GTK	**Tadong**	**3.44**	**103**	*e*P	**Pn**	**06 46 18.1**	**+3.5**
GTK				IAmb	IAmb	06 46 41.3	
	comp=Z,23μm,0.8s						
GTK				*e*S	**Sn**	**06 46 54.4**	**-0.7**
GTK				IAML		06 47 12.9	
	comp=N,178μm,0.8s						
DHUB	**DHUBRI**	**5.06**	**114**	*e*P	**Pn**	**06 46 39.1**	**+2.4**
DHUB				IAmb	IAmb	06 47 01.8	
	comp=Z,24μm,0.9s						
LSA	**Lhasa**	**5.74**	**73**	Pn	**Pn**	**06 46 48.5**	**+2.0**
LSA				Sn	**Sn**	**06 47 51.3**	**-1.0**
LSA				LR	LR		
	comp=Z,2811μm,14.2s						
LSA				LR	LR		
	comp=Z,2452μm,10.0s						
LSA				LR	LR		
	comp=Z,4307μm,14.2s						
LSA	**Lhasa**	**5.74**	**73**	*i* P	**Pn**	**06 46 48.9**	**+2.4**
	SNR=30						
LSA	**Lhasa**	**5.74**	**73**	P	**Pn**	**06 46 46.4**	**-0.1**
LSA	**Lhasa**	**5.74**	**73**	Pn	**Pn**	**06 46 46.4**	**-0.1**
DDI	**Dehra Dun**	**6.31**	**292**	⇑*e*P	**Pn**	**06 46 57.2**	**+3.2**
DDI				IAmb	IAmb	06 47 25.1	
	comp=Z,16μm,0.8s						
DDI				*e*S	**Sn**	**06 48 06.4**	**+0.5**
DDI				IAML		06 48 11.7	
	comp=E,42μm,0.3s						
DDI				IAML		06 48 12.2	
	comp=N,43μm,0.5s						
GUWA	**GUWAHATI**	**6.41**	**106**	*e*P	**Pn**	**06 46 56.7**	**+1.5**
GUWA				IAmb	IAmb	06 47 07.1	
	comp=Z,14μm,1.0s						
GUWA				*e*S	**Sn**	**06 48 09.1**	**+1.0**
GUWA				IAML		06 48 15.9	
	comp=E,16μm,0.5s						
SHL	**Shillong**	**6.80**	**111**	P	**Pn**	**06 46 59.5**	**-1.3**
SHL	**Shillong**	**6.80**	**111**	*e*P	**Pn**	**06 47 00.1**	**-0.6**
SHL				IAmb	IAmb	06 47 11.7	
	comp=Z,10μm,0.7s						
SHL	**Shillong**	**6.80**	**111**	Pn	**Pn**	**06 46 59.5**	**-1.3**
AGT	**Agartala**	**7.17**	**125**	*e*P	**Pn**	**06 47 07.6**	**+1.9**
AGT				IAmb	IAmb	06 47 17.8	
	comp=Z,42μm,1.3s						
AGT				*e*S	**Sn**	**06 48 24.3**	**-2.5**
AGT				IAML		06 48 35.4	
	comp=N,32μm,1.1s						
AGT				IAML		06 48 37.2	
	comp=E,21μm,0.7s						
TEZP	**TEZPUR**	**7.24**	**100**	*e*P	**Pn**	**06 47 08.2**	**+1.5**
TEZP				IAmb	IAmb	06 47 28.2	
	comp=Z,7μm,1.1s						
SMLA	**Simla**	**7.31**	**296**	⇑*e*P	**Pn**	**06 47 09.1**	**+1.5**
SMLA				IAmb	IAmb	06 47 21.7	
	comp=Z,5μm,0.7s						
BELO	**BELONIA**	**7.71**	**128**	*e*P	**Pn**	**06 47 13.9**	**+0.8**
ITAN	**ITANAGAR**	**7.94**	**95**	*e*P	**Pn**	**06 47 18.4**	**+2.2**
ITAN				IAmb	IAmb	06 47 35.6	
	comp=Z,4μm,0.9s						
ZIRO	**ZIRO**	**8.00**	**92**	*e*P	**Pn**	**06 47 17.3**	**+0.1**
ZIRO				IAmb	IAmb	06 47 34.8	
	comp=Z,3μm,0.5s						
BHPL	**Bhopal**	**8.29**	**235**	*e*P	**Pn**	**06 47 19.0**	**-2.2**
BHPL				IAmb	IAmb	06 47 47.1	
	comp=Z,6μm,0.8s						
DHRM	**DHARAMSHALA**	**8.44**	**301**	⇑*e*P	**Pn**	**06 47 24.0**	**+0.6**
DHRM				IAmb	IAmb	06 47 32.0	
	comp=Z,8μm,0.7s						
KOHI	**KOHIMA**	**8.62**	**104**	*e*P	**Pn**	**06 47 25.5**	**-0.3**
KOHI				IAmb	IAmb	06 47 49.8	
	comp=Z,6μm,0.7s						
MOKO	**MOKOCHONG**	**8.80**	**100**	*e*P	**Pn**	**06 47 28.1**	**-0.2**
MOKO				IAmb	IAmb	06 48 07.6	
	comp=Z,6μm,0.9s						
LKP	**Lekhapani**	**9.78**	**92**	*e*P	**Pn**	**06 47 41.3**	**-0.3**
LKP				IAmb	IAmb	06 48 00.4	
	comp=Z,5μm,0.7s						
SARP	**Sargodha**	**11.19**	**293**	P	**Pn**	**06 48 00.8**	**-0.1**
CHCP	**Chirah Chowk**	**11.35**	**302**	⇓P	**Pn**	**06 48 03.3**	**+0.2**
NIL	**Nilore**	**11.36**	**302**	P	**Pn**	**06 48 02.2**	**-1.0**
NIL	**Nilore**	**11.36**	**302**		**Pn**	**06 48 02.2**	**-1.0**
NIL	**Nilore**	**11.36**	**302**	⇑P	**Pn**	**06 48 02.5**	**-0.6**
HYB	**Hyderabad**	**12.16**	**210**	*i* P	**Pn**	**06 48 11.0**	**-3.2**
HYB	**Hyderabad**	**12.16**	**210**	*e*P	**Pn**	**06 48 10.7**	**-3.5**
HYB				IAmb	IAmb	06 48 17.2	
	comp=Z,2μm,0.9s						
CEP	**Cherat**	**12.45**	**300**	P	**Pn**	**06 48 16.1**	**-2.1**
POO	**Poona**	**13.91**	**229**	*e*P	**Pn**	**06 48 35.3**	**-2.9**
POO				IAmb	IAmb	06 48 50.8	
	comp=Z,2μm,1.1s						
BHUJ	**Bhuj**	**14.53**	**254**	*e*P	**Pn**	**06 48 44.0**	**-2.6**
BHUJ				IAmb	IAmb	06 49 02.6	
	comp=Z,4μm,1.1s						
KBL	**Kabul**	**14.92**	**299**	P	**Pn**	**06 48 48.1**	**-3.8**
KBL	**Kabul**	**14.92**	**299**	Pn	**Pn**	**06 48 48.1**	**-3.8**
PRZ	**Przheval'sk**	**15.22**	**342**	P	**Pn**	**06 48 55.0**	**-0.9**
PRZ				pmax	pmax		
	comp=Z,3μm,1.0s						
PRZ	**Przheval'sk**	**15.22**	**342**		**Pn**	**06 48 55.0**	**-0.9**
PRZ				IAmb	IAmb	06 49 05.9	
	comp=Z,3μm,0.9s						
KDJ	**Kajisay**	**15.27**	**338**	P	**Pn**	**06 48 55.0**	**-1.6**
KDJ				pmax	pmax		
	comp=Z,2μm,1.2s						
KDJ	**Kajisay**	**15.27**	**338**	Pn	**Pn**	**06 48 55.0**	**-1.6**
SHLS	**Shalkode**	**15.58**	**345**	*e*P	**Pn**	**06 48 57.9**	**-2.8**
	comp=Z,875nm,1.1s,baz=346						
SHLS	**Shalkode**	**15.58**	**345**	*e*P	**Pn**	**06 48 57.8**	**-2.8**
SHLS				pmax	pmax		
	comp=Z,875nm,1.1s						
MHMT	**Maesarieng**	**15.59**	**127**	P	**Pn**	**06 48 59.8**	**-0.9**
	comp=Z,4μm,1.3s						
UZB	**Uzynbulak**	**15.68**	**344**	*e*P	**Pn**	**06 49 00.5**	**-1.4**
	comp=Z,1μm,1.1s,baz=344						
UZB				*e*S	**Sn**	**06 51 55.4**	**0.0**
	baz=344						
UZB	**Uzynbulak**	**15.68**	**344**	*e*P	**Pn**	**06 49 00.5**	**-1.4**
UZB				*e*S	**Sn**	**06 51 55.4**	**0.0**
UZB				pmax	pmax		
	comp=Z,1μm,1.1s						
ULHL	**Ulahol**	**15.70**	**336**	P	**Pn**	**06 49 00.3**	**-1.9**
	SNR=70						
SATY	**Saty**	**15.75**	**342**	*e*P	**Pn**	**06 49 01.3**	**-1.5**
	comp=Z,2μm,1.3s,baz=342						
SATY	**Saty**	**15.75**	**342**	*e*P	**Pn**	**06 49 01.3**	**-1.5**
SATY				pmax	pmax		
	comp=Z,2μm,1.3s						
WMQ	**Urumqi**	**15.80**	**8**	P	**P**	**06 49 05.8**	**-1.3**
WMQ				pP	pP	06 49 09.5	-2.5
WMQ				PP	**sP**	**06 49 13.5**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,3μm,2.1s						
WMQ				pmax	pmax		
	comp=Z,25μm,11.9s						
WMQ				LR	LR		
	comp=Z,167μm,12.9s						
WMQ				LR	LR		
	comp=Z,144μm,16.5s						
WMQ				LR	LR		
	comp=Z,432μm,25.5s						
WMQ	**Urumqi**	**15.80**	**8**	P	**Pn**	**06 49 02.3**	**-1.0**
WMQ				pmax	pmax		
	comp=Z,7μm,1.4s						
WMQ	**Urumqi**	**15.80**	**8**		**Pn**	**06 49 02.3**	**-1.0**
WMQ				IAmb	IAmb	06 49 20.3	
	comp=Z,7μm,1.4s						
CHTO	**Chiang Mai**	**15.92**	**123**	P	**Pn**	**06 49 05.4**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,9μm,1.3s						
CHTO	**Chiang Mai**	**15.92**	**123**		**Pn**	**06 49 05.4**	**+0.4**
CHTO				IAmb	IAmb	06 49 19.1	
	comp=Z,9μm,1.2s						
CHTO	**Chiang Mai**	**15.92**	**123**	⇓S	**Pn**	**06 49 05.4**	**+0.4**
CM33	**Chiang Mai Arr**	**15.92**	**123**	P	**Pn**	**06 49 03.0**	**-2.0**
CMMT	**Chiang Mai**	**15.92**	**123**	P	**Pn**	**06 49 02.6**	**-2.4**
	comp=Z,3μm,1.4s						
CM32	**Chiang Mai Arr**	**15.95**	**123**	P	**Pn**	**06 49 03.0**	**-2.4**
BOOM	**Boomskoye usch**	**16.02**	**335**	P	**Pn**	**06 49 04.5**	**-1.8**
BOOM				pmax	pmax		
	comp=Z,1μm,1.1s						
BOOM	**Boomskoye usch**	**16.02**	**335**	Pn	**Pn**	**06 49 04.5**	**-1.8**
CM34	**Chiang Mai Arr**	**16.05**	**122**	P	**Pn**	**06 49 07.0**	**+0.3**
CM15	**Chiang Mai Arr**	**16.13**	**124**	P	**Pn**	**06 49 07.9**	**+0.2**
	comp=Z,14μmcomp=Z,2μm,0.9s						
CM13	**Chiang Mai Arr**	**16.14**	**124**	P	**Pn**	**06 49 08.0**	**+0.2**
	comp=Z,13μmcomp=Z,2μm,1.0s						
CM31	**Chiang Mai Arr**	**16.14**	**124**	P	**Pn**	**06 49 07.8**	**-0.1**
	comp=Z,50μm,1.1s						
CM31	**Chiang Mai Arr**	**16.14**	**124**		**Pn**	**06 49 07.6**	**-0.2**
CM31				IAmb	IAmb	06 49 22.8	
	comp=Z,6μm,1.3s						
CMAR	**Chiang Mai Arr**	**16.14**	**124**	Pn	**Pn**	**06 49 05.3**	**-2.5**
	comp=Z,1.6nm,0.3s,baz=307,slow=13,SNR=35						
CMAR				Sn	**Sn**	**06 52 10.8**	**+4.1**
	comp=Z,0.7nm,0.3s,baz=288,slow=14,SNR=1.3						
CMAR				LR	LR	06 56 34.2	
	comp=Z,171μm,21.0s,baz=135,slow=42						
CMAR				ScP	**ScP**	**06 57 35.9**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=293,slow=2.6,SNR=7.3						
CMAR				P3KPbc		07 24 32.4	
	comp=Z,1.0nm,0.3s,baz=152,slow=3.7,SNR=7.5						
CMAR	**Chiang Mai Arr**	**16.14**	**124**	P	**Pn**	**06 49 08.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**16.14**	**124**		**Pn**	**06 49 08.1**	**+0.2**
CM02	**Chiang Mai Arr**	**16.16**	**124**	P	**Pn**	**06 49 08.2**	**+0.1**
	comp=Z,19μmcomp=Z,3μm,1.1s						
CM35	**Chiang Mai Arr**	**16.16**	**123**	P	**Pn**	**06 49 09.0**	**+0.9**
TNSS	**Tian-Shan**	**16.16**	**339**	*e*P	**Pn**	**06 49 06.2**	**-2.1**
	baz=339						
TNSS	**Tian-Shan**	**16.16**	**339**	*e*P	**Pn**	**06 49 06.2**	**-2.1**
CM01	**Chiang Mai Arr**	**16.18**	**124**	P	**Pn**	**06 49 08.5**	**+0.2**
	comp=Z,19μmcomp=Z,2μm,1.

comp=Z,3μm,1.2s
FRU1 Bishkek 16.80 333 P **Pn** **06 49 15.4 -0.7**
CHMS Chumysh 16.91 334 P **Pn** **06 49 16.1 -1.4**
SNR=178
EKS2 Erkin-Say 17.03 331 P **Pn** **06 49 18.1 -1.0**
SNR=61
USP Ospenovka 17.23 334 P **Pn** **06 49 20.2 -1.4**
SNR=70
NANT Nan 17.26 119 P **Pn** **06 49 21.0 -1.0**
comp=Z,267μmcomp=Z,35μm,1.1s
SUKH Sukhothai 17.27 125 P **Pn** **06 49 21.0 -1.1**
comp=Z,28μmcomp=Z,3μm,1.2s
SGDS Sogindy 17.34 334 *e*P **Pn** **06 49 21.1 -1.9**
baz=334
SGDS Sogindy 17.34 334 *e*P **Pn** **06 49 21.0 -1.9**
TDK Taldyqorghan 17.57 345 *e*P **Pn** **06 49 24.9 -0.9**
comp=Z,3μm,0.8s,baz=345
TDK LR LR 06 56 31.1
comp=Z,124μm,11.5s,baz=345
TDK Taldyqorghan 17.57 345 *e*P **Pn** **06 49 24.8 -0.9**
TDK pmax pmax
comp=Z,3μm,0.8s
TDK MLR MLR
comp=Z,124μm,11.0s
UMPA Umpang Tak 17.59 130 P **P** **06 49 27.6 +0.6**
comp=Z,16μmcomp=Z,2μm,1.0s
LZH Lanzhou 17.91 59 ⇓P **Pn** **06 49 28.8 -1.3**
LZH pmax pmax
comp=Z,4μm,1.1s
PBA Port Blair 18.01 154 P P 06 49 32.2 +0.5
PBA IAmb IAmb 06 49 43.9
comp=Z,6μm,1.2s
PBA Port Blair 18.01 154 ⇑P P 06 49 33.6 +1.9
TAS Tashkent 18.29 320 P **Pn** **06 49 31.6 -3.0**
TAS pmax pmax
comp=Z,2μm,0.9s
TAS Tashkent 18.29 320 P **Pn** **06 49 31.6 -3.0**
IUG luzhnay 18.44 323 *e*P **P** **06 49 33.6 -2.8**
baz=323
IUG luzhnay 18.44 323 *e*P **P** **06 49 33.6 -2.8**
UTHA Uthaitani 18.44 130 P **Pn** **06 49 37.0 +0.5**
comp=Z,28μmcomp=Z,3μm,1.2s
MK31 Makanchi Array 18.71 355*c e*P **P** **06 49 38.7 -0.6**
MK31 Makanchi Array 18.71 355 P **P** **06 49 38.5 -0.8**
MKAR Makanchi Array 18.71 355 P **P** **06 49 38.7 -0.5**
comp=Z,52nm,0.3s,baz=173,slow=12,SNR=135
MKAR S **S** **06 53 13.4 +1.5**
baz=323,slow=7.6,SNR=1.7
MKAR LR LR 06 58 08.7
comp=Z,355μm,18.1s,baz=154,slow=41
MKAR P3KPbc 07 24 20.7
baz=32,slow=4.8,SNR=5.3
MAKZ Makanchi 18.75 354 P **P** **06 49 39.2 -0.5**
MAKZ pmax pmax
comp=Z,1μm,1.0s
MAKZ Makanchi 18.75 354 P **P** **06 49 39.2 -0.5**
MAKZ Makanchi 18.75 354 ⇑P **P** **06 49 39.2 -0.5**
CHM Chimkent 18.79 323 *e*P **P** **06 49 38.3 -1.8**
baz=323
CHM Chimkent 18.79 323 *e*P **P** **06 49 38.3 -1.8**
KK31 Karatay Array 18.88 326 P **P** **06 49 39.5 -1.7**
KK31 pmax pmax
comp=Z,2μm,1.0s
KK31 Karatay Array 18.88 326 P **P** **06 49 39.5 -1.7**
KKAR Karatay Array 18.88 326 P **P** **06 49 39.1 -2.1**
KKAR pmax pmax
comp=Z,2μm,1.0s
KKAR Karatay Array 18.88 326 P **P** **06 49 39.0 -2.1**
KKAR Karatay Array 18.88 326 P **P** **06 49 39.2 -2.1**
KKAR Karatay Array 18.88 326 ⇑P **P** **06 49 39.0 -2.2**
GYA Guiyang 19.46 90 ⇓P **Pn** **06 49 49.0 0.0**
GYA S **Sn** **06 53 22.0 -5.3**
NONG Nongkai 19.58 117 P **Pn** **06 49 49.7 -0.6**
comp=Z,2μm,1.3s
CHAI Chaiyaphum 20.00 124 P Pn 06 49 55.0 -0.3
comp=Z,30μmcomp=Z,4μm,1.2s
MALK Mahakanadarawa 20.07 192 ⇑P Pn 06 49 55.6 -0.6
HRA Herat 20.27 293 **P** **06 49 56.7 0.0**
KHON Khomkaen 20.35 122 P **P** **06 49 58.0 +0.6**
comp=Z,33μmcomp=Z,4μm,1.2s
PHET Kaeng Krachan 20.51 135 P Pn 06 50 00.3 -1.0
comp=Z,22μmcomp=Z,2μm,0.9s
PALK Pallekele 21.14 191 P **P** **06 50 05.8 -0.1**
comp=Z,179nm,0.9s,baz=110,slow=12,SNR=4.7
PALK S **S** **06 53 55.6 -5.3**
comp=Z,123nm,0.5s,baz=13,slow=20,SNR=2.3
PALK LR LR 06 58 09.3
comp=Z,301μm,21.2s,baz=171,slow=36
PALK Pallekele 21.14 191 P **P** **06 50 06.6 +0.6**
PALK pmax pmax
comp=Z,2μm,1.4s
PALK Pallekele 21.14 191 P **P** **06 50 06.6 +0.6**
PALK IAmb IAmb 06 50 19.8
comp=Z,2μm,1.4s
PATY Pattaya 21.29 132 P **P** **06 50 10.0 +2.4**
comp=Z,39μmcomp=Z,4μm,1.2s
SRAK Srakaew 21.31 128 P **P** **06 50 12.0 +4.3**
comp=Z,230μmcomp=Z,32μm,1.0s
XAN Xi'an 21.41 68 P **P** **06 50 07.5 -1.3**
XAN pmax pmax
comp=Z,2μm,1.5s
XAN LR LR
comp=Z,716μm,17.3s
XAN LR LR
comp=Z,328μm,14.1s
XAN LR LR
comp=Z,309μm,16.3s
XAN Xi'an 21.41 68 P **P** **06 50 07.5 -1.3**
XAN pmax pmax
comp=Z,4μm,1.4s
XAN Xi'an 21.41 68 P **P** **06 50 07.5 -1.3**
XAN IAmb IAmb 06 50 19.8
comp=Z,4μm,1.4s
DGZ Jazzator, Alta 21.60 5*c e*P **P** **06 50 12.0 +1.2**
DGZ MLR MLR
comp=Z,450μm,22.0s
ENH Enshi 21.60 78 P **P** **06 50 10.8 -0.1**
SEM Semipalatinsk 22.49 352 *e*P **P** **06 50 19.3 -1.1**
comp=Z,727nm,1.3s,baz=352
SEM LR LR 06 58 56.0
comp=Z,91μm,13.2s,baz=352
SEM Semipalatinsk 22.49 352 *e*P **P** **06 50 19.3 -1.1**
SEM pmax pmax
comp=Z,727nm,1.3s
SEM MLR MLR
comp=Z,91μm,13.0s
MNCI Minicoy 22.69 212 P **P** **06 50 23.0 +0.5**
MNCI IAmb IAmb 06 50 42.2
comp=Z,3μm,1.1s
KURBB Kurchatov Arra 22.94 350 P **P** **06 50 24.1 -0.8**
comp=Z,487nm,0.8s,baz=169,slow=9.6,SNR=50
KURBB S **S** **06 54 38.2 +3.8**
comp=Z,24nm,0.9s,baz=164,slow=14,SNR=1.2
KURBB ScP **ScP** **06 57 51.8 -0.4**
comp=Z,17nm,1.1s,baz=191,slow=0.9,SNR=4.0
KURBB P3KPbc 07 23 57.8
comp=Z,2.2nm,0.8s,baz=337,slow=5.1,SNR=4.1
KURBB Kurchatov Arra 22.94 350 P **P** **06 50 24.8 -0.1**
UBPT Khong Chiam 23.01 120 P **P** **06 50 25.0 -0.9**
comp=Z,450nm,1.3s
UBPT Khong Chiam 23.01 120 P **P** **06 50 25.6 -0.3**
KURK Kurchatov 23.02 350 P **P** **06 50 24.1 -1.6**
KURK Kurchatov 23.02 350 P **P** **06 50 24.1 -1.6**
SURT Suratani 23.19 143 P **P** **06 50 29.0 +1.3**
comp=Z,1μmcomp=Z,118nm,1.2s
BRZS Berezniki 23.69 340 *e*P **P** **06 50 31.5 -1.0**
comp=Z,784nm,1.1s,baz=340
BRZS Berezniki 23.69 340 *e*P **P** **06 50 31.4 -1.0**
BRZS pmax pmax
comp=Z,784nm,1.1s
KRAB Krabi 24.02 143 P **P** **06 50 39.9 +4.0**
comp=Z,172μmcomp=Z,20μm,1.0s
WSAR Wadi Sarin 24.10 264 P **P** **06 50 37.8 +1.1**
comp=Z,214nm,0.9s,baz=107,slow=9.9,SNR=32
WSAR S **S** **06 54 57.8 +4.0**
comp=Z,74nm,1.0s,baz=129,slow=8.7,SNR=1.9
ASHT Ashkhabad 24.16 301 P **P** **06 50 38.6 +1.6**
ASHT pmax pmax
comp=Z,3μm,0.9s
ASHT Ashkhabad 24.16 301 P **P** **06 50 38.6 +1.6**
GEYT Alibeck 24.36 300 P **P** **06 50 39.6 +0.7**
comp=Z,601nm,1.0s,baz=128,slow=12,SNR=132
GEYT Alibeck 24.36 300 P **P** **06 50 38.2 -0.7**
GEYT IAmb IAmb 06 50 47.0
comp=Z,1μm,1.1s
GYA0B ALIBECK ARRAY 24.36 300 P **P** **06 50 39.6 +0.7**
GYA0B IAmb IAmb 06 50 47.7
comp=Z,2μm,1.1s
QIZ Qiongzhong 24.61 106 P **P** **06 50 41.8 +0.6**
QIZ pP **sP** **06 50 49.8 +1.7**
QIZ S **S** **06 55 04.0 +2.0**
QIZ sS **sS** **06 55 13.3 +2.8**
QIZ pmax pmax
comp=Z,390nm,1.4s
QIZ Qiongzhong 24.61 106 P **P** **06 50 41.9 +0.6**
QIZ IAmb IAmb 06 51 00.9
comp=Z,2μm,1.4s
TRTT Trang 24.61 142 P **P** **06 50 40.0 -1.2**
TIY Taiyuan 24.96 60 *e*P **P** **06 50 44.5 +0.1**
TIY pmax pmax
comp=Z,600nm,0.8s
HHC Hu-ho-hao-te 25.29 53 *e*P **P** **06 50 48.8 +1.4**
HHC pmax pmax
comp=Z,760nm,1.1s
HHC pmax pmax
comp=Z,124μm,10.1s
BANOM Banah 25.50 272 *i* P **P** **06 50 51.7 +2.4**
SNR=8.9
LHMI Lhok Sumawe 25.54 151 P **P** **06 50 50.7 +1.0**
LHMI Lhok Sumawe 25.54 151 ⇑P **P** **06 50 52.2 +2.5**
LHMI Lhok Sumawe 25.54 151 P **P** **06 50 50.9 +1.2**
comp=Z,4μm,1.1s
SHME Shamm 25.61 272 *i* P **P** **06 50 52.5 +2.2**
SNR=9.6
MDH Madha 25.63 270 *i* P **P** **06 50 50.8 +0.3**
SNR=29
SOHO SOHO 25.70 268 *i* P **P** **06 50 53.0 +1.9**
SNR=9.0
MSFE Esma-Masafi 25.74 270 *i* P **P** **06 50 54.3 +2.7**
SNR=35
ZAA0 Zalesovo Array 25.76 360 P **P** **06 50 51.8 +0.5**
ZAA0 IAmb IAmb 06 50 53.4
comp=Z,987nm,0.8s
ZALV Zalesovo Beam 25.76 360 P **P** **06 50 51.8 +0.4**
comp=Z,1μm,0.9s,baz=183,slow=9.5,SNR=196
ZALV P3KPbc 07 23 49.2
comp=Z,3.8nm,0.8s,baz=357,slow=6.2,SNR=4.2
ZALV Zalesovo Beam 25.76 360 P **P** **06 50 51.9 +0.5**
UOSS Minazif 25.79 270 *i* P **P** **06 50 52.9 +1.0**
SNR=11
UOSS Minazif 25.79 270 P **P** **06 50 52.7 +0.7**
UOSS Minazif 25.79 270 ⇓P **P** **06 50 54.8 +2.8**
WHN Wuhan 25.80 78 ⇓P **P** **06 50 52.3 +0.4**
WHN pmax pmax
comp=Z,4μm,1.6s
SONM Songino Array 25.81 35 P **P** **06 50 52.6 +0.5**
comp=Z,761nm,1.0s,baz=218,slow=6.7,SNR=95
SONM P3KPbc 07 23 48.2
comp=Z,3.8nm,0.8s,baz=30,slow=2.7,SNR=4.0
SONM Songino Array 25.81 35 P **P** **06 50 52.3 +0.3**
HATD Hatta, Dubai 25.88 269 *i* P **P** **06 50 55.8 +2.9**
SNR=14
GZH Guangzhou 26.16 95 ⇑*i* P **P** **06 50 56.5 +1.2**
GZH S **S** **06 55 28.5 +1.8**
GZH LR LR
comp=Z,164μm,14.6s
GZH LR LR
comp=Z,172μm,14.7s
ULN Ulaanbaatar 26.17 35 ⇑*i* P **P** **06 50 56.8 +1.5**
ULN pmax pmax
comp=Z,977nm,0.8s
ULN MLR MLR
comp=Z,155μm,15.0s
ULN Ulaanbaatar 26.17 35 P **P** **06 50 55.9 +0.6**
ULN **pP** **06 50 56.0 -4.4**
ULN IAmb IAmb 06 51 09.2
comp=Z,2μm,1.3s
ULN Ulaanbaatar 26.17 35 ⇑P **P** **06 50 56.5 +1.2**
MLSI Meulaboh, Aceh 26.19 153 P **P** **06 50 55.7 +0.2**
comp=Z,853nm,1.1s
ZAK Zakamensk 26.25 27 *e*P **P** **06 50 56.5 +0.6**
ZAK *e* 07 01 45.9
ZAK pmax pmax
comp=Z,764nm,1.4s
NAZ Nazwa, Dubai 26.26 270 *i* P **P** **06 50 59.2 +3.0**
SNR=21
FAQ Al Faqa, Dubai 26.38 269 *i* P **P** **06 51 00.8 +3.5**
SNR=28
ALNE Al Ain 26.41 268 *i* P **P** **06 51 00.2 +2.6**
SNR=25
MOY Mondy 26.43 23 *e*P **P** **06 50 59.3 +1.7**
MOY pmax pmax
comp=Z,3μm,2.6s
ASUD Al Ashush, Dub 26.64 269 *i* P **P** **06 51 02.7 +3.1**
SNR=18
BVAR Borovoye Array 27.05 341 P **P** **06 51 03.0 0.0**
comp=Z,306nm,1.1s,baz=169,slow=12,SNR=83
BVAR P3KPbc 07 23 39.3
comp=Z,2.3nm,0.8s,baz=247,slow=3.1,SNR=3.9
BRVK Borovoye 27.11 341 ⇓*i* P **P** **06 51 04.8 +1.2**
BRVK pmax pmax
comp=Z,1μm,1.4s
BRVK MLR MLR
comp=Z,184μm,16.0s
BRVK Borovoye 27.11 341 P **P** **06 51 04.2 +0.6**
BRVK IAmb IAmb 06 51 15.0
comp=Z,1μm,1.2s
BRVK Borovoye 27.11 341 ⇑P **P** **06 51 04.2 +0.6**
HKC Hong Kong Obse 27.13 96 ⇑P **P** **06 51 04.0 0.0**
KULM Kulim 27.25 144 P **P** **06 51 05.2 +0.1**
KULM IAmb IAmb 06 51 18.2
comp=Z,1μm,0.9s
KULM Kulim 27.25 144 ⇓P **P** **06 51 06.1 +0.9**
DLV T Lat 27.37 121 P **P** **06 51 07.5 +1.1**
DLV IAmb IAmb 06 51 17.9
comp=Z,976nm,1.2s
TLY Talaya 27.40 26 P **P** **06 51 07.2 +0.9**
comp=Z,52nm,0.9s,baz=227,slow=8.8,SNR=22
TLY LR LR 07 03 49.5
comp=Z,202μm,18.2s,baz=98,slow=40
TLY P3KPbc 07 23 44.6
comp=Z,1.4nm,0.3s,baz=1.8,slow=2.5,SNR=7.2
TLY Talaya 27.40 26 ⇑*e*P **P** **06 51 08.3 +2.0**
TLY MLR MLR
comp=Z,158μm,16.0s
TLY Talaya 27.40 26 P **P** **06 51 07.4 +1.1**
TLY Talaya 27.40 26 ⇑P **P** **06 51 08.7 +2.4**
TPTI 27.41 152 P **P** **06 51 05.2 -1.4**
comp=Z,356nm,1.5s
TSI Tuntungan 27.79 149 P **P** **06 51 12.0 +2.0**
comp=Z,819nm,1.1s
IRK Irkutsk 28.09 26 *e*P **P** **06 51 12.9 +0.6**
IRK pmax pmax
comp=Z,2μm,3.0s
IPM Ipoh 28.14 144 P **P** **06 51 13.0 -0.1**
IPM IAmb IAmb 06 51 23.6
comp=Z,2μm,1.4s
BJT Baijiatuau 28.37 57 P **P** **06 51 15.1 +0.2**
BJT pmax pmax
comp=Z,825nm,1.4s
BJT Baijiatuau 28.37 57 P **P** **06 51 15.1 +0.2**
BJI Beijing 28.38 57 P **P** **06 51 16.5 +1.5**
BJI PcS **PcS** **06 58 12.5 +2.9**
BJI ScS ScS 07 02 00.0 -1.0
BJI pmax pmax
comp=Z,160nm,1.1s
BJI LR LR
comp=Z,210μm,15.9s
BJI LR LR
comp=Z,176μm,12.9s
BJI LR LR
comp=Z,147μm,17.1s
TIA Tai'an 28.38 65 P **P** **06 51 16.0 +0.9**
TIA pmax pmax
comp=Z,530nm,1.7s
AB31 Akbulak array 28.43 325 *i* P **P** **06 51 15.2 -0.2**
ABKAR Akbulak array 28.43 325 P **P** **06 51 15.1 -0.3**
ABKAR Akbulak array 28.43 325 ⇑P **P** **06 51 16.4 +0.9**
PSI Prapat 28.57 149 P **P** **06 51 18.6 +1.5**
comp=Z,48nm,0.9s,baz=358,slow=2.4,SNR=17
PSI P3KPbc 07 23 33.5
comp=Z,1.9nm,0.5s,baz=180,slow=7.5,SNR=4.8
SHAO Shalim 28.64 256 *i* P **P** **06 51 20.2 +2.6**
SNR=11
RPSI Rantau Prapat 28.67 150 P **P** **06 51 18.4 +0.6**
GSI Gunungsitoli 29.35 153 P **P** **06 51 24.2 +0.3**
GSI Gunungsitoli 29.35 153 ⇑P **P** **06 51 25.0 +1.1**
GSI Gunungsitoli 29.35 153 P **P** **06 51 24.6 +0.7**
comp=Z,2μm,1.6s
NJ2 Nanjing 29.61 74 *e*P **P** **06 51 27.0 +1.0**
NJ2 pmax pmax
comp=Z,690nm,1.8s
AKTO Aktyubinsk 30.14 325 P **P** **06 51 31.2 +0.6**
comp=Z,162nm,0.7s,baz=121,slow=8.4,SNR=28
AKTO S **S** **06 56 28.7 -0.2**
comp=Z,34nm,0.4s,baz=279,slow=0.4,SNR=10
AKTO LR LR 07 05 06.7
comp=Z,263μm,18.8s,baz=122,slow=39
KNMB Chin-men Tao 30.24 89 P **P** **06 51 31.7 0.0**
KNMB IAmb IAmb 06 51 36.7
comp=Z,746nm,1.2s
QZH Quanzhou 30.30 88 ⇓*i* P **P** **06 51 32.5 +0.2**
QZH S **S** **06 56 24.5 -7.4**
QZH pmax pmax
comp=Z,250nm,1.3s
QZH LR LR
comp=Z,136μm,14.7s
QZH LR LR
comp=Z,204μm,16.1s
QZH LR LR
comp=Z,133μm,13.3s
MNSI Mandailing Nat 30.65 150 P **P** **06 51 36.3 +0.9**
comp=Z,1μm,2.0s
PBSI Pulau Batu 30.87 153 P P 06 51 45.4 +8.1
SSE Sheshan 31.64 76 P **P** **06 51 44.8 +0.8**
SSE pmax pmax
comp=Z,290nm,0.9s
SSE Sheshan 31.64 76 P **P** **06 51 44.6 +0.6**
BKNI Bangkinang 31.73 148 P **P** **06 51 44.9 0.0**
BKNI Bangkinang 31.73 148 ⇓P **P** **06 51 45.3 +0.4**
BKNI Bangkinang 31.73 148 P **P** **06 51 45.4 +0.5**
comp=Z,4μm,1.2s
MYKOM Kota Tinggi 31.90 142 P **P** **06 51 46.8 +0.4**
CIT Chita 32.04 34 *e*P **P** **06 51 48.1 +0.7**
CIT *e* 06 52 52.4
CIT *e* 06 54 40.6
CIT *e* 06 56 51.7
CIT pmax pmax
comp=Z,2μm,3.0s
DL2 Dalian 32.29 61 ⇓P **P** **06 51 50.5 +0.9**
DL2 S **S** **06 57 04.5 +1.8**
DL2 pmax pmax
comp=Z,600nm,1.0s
DL2 LR LR
comp=Z,175μm,12.9s
DL2 LR LR
comp=Z,110μm,13.4s
DL2 LR LR
comp=Z,113μm,10.6s
SISI Saibi 32.35 153 P **P** **06 51 50.5 +0.1**
comp=Z,799nm,1.5s
QRN Al-Qurain 32.39 280 *e*P 06 51 51.2
UMR Umm Al-Rimmam 32.46 282 *e*P 06 51 52.3
TPUB Ta-pu 32.52 90 P **P** **06 51 52.5 +0.6**
SSLB Suanglung 32.68 89 P **P** **06 51 54.0 +0.8**
RDF Al-Radifah 32.68 280 *e*P 06 51 54.2
YHNB Yeheng 32.83 88 P **P** **06 51 53.8 -0.8**
TAIO Taipei 32.85 87 P **P** **06 51 55.3 +0.6**
SOCY Socotra 32.90 247 P **P** **06 51 53.5 -1.9**
SOCY IAmb IAmb 06 52 03.5
comp=Z,1μm,1.4s
SOCY Socotra 32.90 247 ⇓P **P** **06 51 54.2 -1.2**
RGRI Rengat 32.94 146 P **P** **06 51 55.9 +0.4**
comp=Z,75μmcomp=Z,323nm,0.4s
AKT Akhty 32.98 304 *e*P **P** **06 51 57.5 +1.7**
AKT *e* 06 53 08.8
AKT *e* 06 54 46.1
AKT *e*S **S** **06 57 19.6 +5.9**
AKT pmax pmax
comp=Z,1μm,1.1s
SDSI Sungai Dareh 33.02 148 P **P** **06 51 57.4 +1.2**
comp=Z,115nm,0.9s
TWG Pinlang 33.05 91 P **P** **06 51 57.2 +0.7**
TWG IAmb IAmb 06 52 13.0
comp=Z,1μm,1.3s
YULB Yu-li 33.09 90 P **P** **06 51 57.6 +0.8**
RST Umm Al-Ruwaisa 33.09 282 *e*P 06 51 57.4
NACB Ninganchiao 33.14 88 P **P** **06 51 57.2 0.0**
NACB IAmb IAmb 06 52 09.9
comp=Z,895nm,1.0s
SVE Sverdlovsk 33.40 336 ⇓*e*P **P** **06 52 00.5 +1.4**
SVE pmax pmax
comp=Z,2μm,1.1s
MAK Makhachkala 33.47 306 *e*P **P** **06 51 55.5 -4.4**
MAK *e* 06 53 07.6
MAK *e*S **S** **06 57 15.9 -5.2**
MAK *e*SS **SnSn** **06 59 20.0 -3.2**
MAK pmax pmax
comp=Z,1μm,1.9s
ARU Arti 33.88 334 P **P** **06 52 03.8 +0.4**
comp=Z,240nm,0.7s,baz=140,slow=4.3,SNR=121
ARU LR LR 07 07 27.1
comp=Z,230μm,19.8s,baz=95,slow=39
ARU Arti 33.88 334*c i*P **P** **06 52 04.2 +0.9**
ARU 06 53 13.2
ARU S **S** **06 57 31.9 +4.8**
ARU pmax pmax
comp=Z,969nm,0.8s
ARU Arti 33.88 334 P **P** **06 52 03.3 -0.1**
ARU IAmb IAmb 06 52 05.3
comp=Z,882nm,0.8s
ARU Arti 33.88 334 ⇓P **P** **06 52 03.7 +0.4**
HIA Hailar 33.99 42 ⇓*i* P **P** **06 52 06.1 +1.6**
HIA pmax pmax
comp=Z,914nm,1.6s
HIA MLR MLR
comp=Z,268μm,18.0s
DSRI Dabo 34.19 143 P **P** **06 52 07.0 +0.6**
comp=Z,943nm,1.4s
SNY Shenyang 34.24 56 ⇑P **P** **06 52 06.5 -0.1**
SNY S **S** **06 57 30.5 -2.5**
SNY pmax pmax
comp=Z,380nm,1.0s
SNY LR LR
comp=Z,90μm,19.2s
SNY LR LR
comp=Z,217μm,14.3s
SNY LR LR
comp=Z,152μm,17.1s
YOJ Yonaguni jima 34.32 87 P **P** **06 52 07.5 0.0**
YOJ pmax pmax
comp=Z,740nm,1.1s
YOJ Yonaguni jima 34.32 87 P **P** **06 52 07.5 0.0**
YOJ IAmb IAmb 06 52 22.4
comp=Z,740nm,1.1s
YOJ Yonaguni jima 34.32 87 ⇓P **P** **06 52 11.7 +4.2**
SZP Santa 34.36 100 P **P** **06 52 07.1 -0.8**
BOLP Bolinao 34.38 102 *e*P **P** **06 52 07.0 -1.1**
ABRA Dolores 34.54 100 *e*P **P** **06 52 10.5 +1.0**
JMBI JAMBI 34.69 146 P **P** **06 52 12.7 +1.9**
comp=Z,2μm,1.4s
GROC Groznyy 34.75 306 *e*P **P** **06 52 10.5 -0.5**
GROC *e*S **S** **06 57 38.9 -1.9**
GROC pmax pmax
comp=Z,913nm,0.8s
APYP Conner 34.92 99 *e*P **P** **06 52 13.4 +0.6**
GNI Garni 35.00 301 P **P** **06 52 14.6 +1.2**
comp=Z,178nm,0.9s,baz=143,slow=1.5,SNR=54
GNI Garni 35.00 301 P **P** **06 52 15.9 +2.5**
GNI Garni 35.00 301 *e*P **P** **06 52 16.4 +3.0**
GNI Garni 35.00 301*c e*P **P** **06 52 15.6 +2.2**
GNI pmax pmax
comp=Z,2μm,1.6s
GNI MLR MLR
comp=Z,55μm,16.0s
GNI Garni 35.00 301 P **P** **06 52 11.6 -1.9**
GNI Garni 35.00 301 ⇓P **P** **06 52 16.3 +2.9**
MASI Maura Aman, Be 35.34 149 P **P** **06 52 15.8 -0.6**
comp=Z,1μm,1.1s
TASB TASBURUN-IGDIR 35.36 300 *e*P **P** **06 52 18.0 +1.6**
CLDR Calderan 35.52 299 *e*P **P** **06 52 20.1 +2.1**
RAYN Ar Rayn 35.60 272 *i* P **P** **06 52 19.2 +0.6**
SNR=16
RAYN Ar Rayn 35.60 272 P **P** **06 52 18.4 -0.2**
RAYN pmax pmax
comp=Z,569nm,1.4s
RAYN Ar Rayn 35.60 272 P **P** **06 52 18.4 -0.2**
CUKT Cukurca 35.63 295 *e*P **P** **06 52 19.1 +0.2**
VANB Van 35.88 298 *e*P P 06 52 27.1 +6.1
LUBP Lubang 35.89 106 *e*P **P** **06 52 20.0 -1.1**
BOD Bodaibo 35.98 26 *e*P **P** **06 52 21.9 +0.5**
BOD pmax pmax
comp=Z,1μm,1.5s
CN2 Changchun 35.98 53 *e*P **P** **06 52 21.3 -0.3**
CN2 pmax pmax
comp=Z,200nm,1.2s

KSM **Kuching** 36.01 133 P **P** 06 52 22.9 +0.8
KSM IAmb IAmb 06 52 33.8
comp=Z,1μm,1.5s
KSM Kuching 36.01 133 ⇓P **P** 06 52 26.9 +4.8
ZEI Tsey 36.03 305 *e*P **P** 06 52 22.0 -0.3
ZEI pmax pmax
comp=Z,714nm,1.4s
MACP Maragondon, Ca 36.04 105 *e*P **P** 06 52 21.9 -0.5
INCN Inchon 36.08 64 P **P** 06 52 22.0 -0.6
INCN pmax pmax
comp=Z,1μm,1.3s
INCN Inchon 36.08 64 P **P** 06 52 22.0 -0.6
INCN IAmb IAmb 06 52 35.2
comp=Z,1μm,1.2s
INCN Inchon 36.08 64 ⇑P **P** 06 52 22.3 -0.3
AKH Akhalkalaki 36.11 303 ⇓P **P** 06 52 26.2 +3.3
AKH Akhalkalaki 36.11 303 *e*P **P** 06 52 25.7 +2.7
AKDM Akdamar-Van 36.19 297 *e*P **P** 06 52 27.1 +3.4
AGRB Hanur-Agry 36.27 299 *e*P **P** 06 52 27.7 +3.3
TGY Tagaytay City 36.30 105 P **P** 06 52 25.7 +1.0
comp=Z,776nm,0.9s,baz=295,slow=3.5,SNR=7.1
TGY S **S** 06 58 04.6 -0.7
comp=Z,246nm,0.4s,baz=179,slow=15,SNR=2.2
PMBI Palembang 36.37 145 P **P** 06 52 24.9 -0.3
PMBI Palembang 36.37 145 ⇓P **P** 06 52 29.9 +4.7
PMBI Palembang 36.37 145 P **P** 06 52 25.5 +0.3
comp=Z,9μm,1.2s
NCK Nalchik 36.38 306 ⇑*i*P **P** 06 52 26.4 +1.3
NCK pmax pmax
comp=Z,2μm,2.2s
NCK MLR MLR
comp=Z,64μm,16.0s
BATP Bataraza 36.53 115 *e*P **P** 06 52 25.0 -1.5
LHSI Lahat 36.54 148 P **P** 06 52 28.9 +2.3
comp=Z,758nm,1.4s
SBUM Sibu 36.55 130 P **P** 06 52 25.9 -0.9
SBUM IAmb IAmb 06 52 38.5
comp=Z,2μm,1.5s
SBUM Sibu 36.55 130 ⇓P **P** 06 52 28.0 +1.2
BELG Belogornoye 36.69 322 LR LR 07 09 39.8
comp=Z,220μm,18.7s,baz=83,slow=40
BELG Belogornoye 36.69 322 *d*⇓*i*P **P** 06 52 27.9 +0.4
BELG pmax pmax
comp=Z,216nm,1.2s
MNAI Manna 36.74 149 ⇑P P 06 52 34.2 +5.9
MNAI Manna 36.74 149 P P 06 52 37.6 +9.2
LQP Lukban 36.81 105 *e*P **P** 06 52 28.7 -0.6
POLP Polilio Island 36.87 103 *e*P **P** 06 52 30.2 +0.8
KBZ Khabaz 36.92 306 P **P** 06 52 30.4 +0.7
comp=Z,175nm,0.8s,baz=105,slow=7.2,SNR=89
KBZ Khabaz 36.92 306 ⇑*i*P **P** 06 52 30.3 +0.7
KBZ pmax pmax
comp=Z,278nm,0.9s
KBZ MLR MLR
comp=Z,86μm,19.0s
GURO Guroymak-BITLI 36.94 298 *e*P **P** 06 52 32.3 +2.2
NEY Neytrino 36.96 305 *ce*P **P** 06 52 32.6 +2.4
NEY pmax pmax
comp=Z,769nm,1.8s
NEY MLR MLR
comp=Z,29μm,14.0s
KKM Kota Kinabalu 36.98 121 ⇑P **P** 06 52 32.9 +2.3
KS19 Wonju Array Si 37.06 64 P **P** 06 52 30.0 -0.9
KSAR Wonju Array Be 37.08 64 P **P** 06 52 30.3 -0.7
KSAR Wonju Array Be 37.08 64 P **P** 06 52 30.3 -0.7
KSRS Korea Array 37.11 64 P **P** 06 52 30.4 -0.9
comp=Z,65nm,0.8s,baz=260,slow=8.0,SNR=100
KSRS PP **PnPn** 06 53 59.1 +2.9
comp=Z,168nm,1.2s,baz=264,slow=8.3,SNR=4.5
KSRS PcP **PcP** 06 54 51.0 -0.6
comp=Z,21nm,0.8s,baz=274,slow=3.6,SNR=5.3
KSRS S **S** 06 58 15.4 -1.6
comp=Z,10nm,1.1s,baz=264,slow=7.3,SNR=1.8
KIV Kislovodsk 37.11 307 ⇓P **P** 06 52 33.0 +1.6
KIV Kislovodsk 37.11 307 *i*P **P** 06 52 32.6 +1.2
SNR=36
KIV Kislovodsk 37.11 307 *e*P **P** 06 52 32.5 +1.1
KIV Kislovodsk 37.11 307 P **P** 06 52 30.2 -1.2
KIV pmax pmax
comp=Z,530nm,1.3s
KIV Kislovodsk 37.11 307 P **P** 06 52 30.2 -1.2
KIV Kislovodsk 37.11 307 ⇑P **P** 06 52 32.5 +1.1
SJMP San Jose 37.26 107 *e*P **P** 06 52 33.5 +0.7
DGAR Diego Garcia 37.34 201 P **P** 06 52 34.6 +1.2
DGAR pmax pmax
comp=Z,1μm,1.4s
DGAR Diego Garcia 37.34 201 P **P** 06 52 34.6 +1.2
DGAR IAmb IAmb 06 52 52.5
comp=Z,1μm,1.4s
VRTB Varto-Mus 37.43 299 *e*P **P** 06 52 36.5 +2.3
SVAN Silvan-Diyarba 37.58 297 *e*P **P** 06 52 37.9 +2.5
JCNP Jose Panganiba 37.72 104 *e*P **P** 06 52 34.9 -1.8
TPI Tanjungpandan 37.76 141 P **P** 06 52 36.7 -0.3
comp=Z,734nm,1.6s
LWLI Liwa 37.83 148 P **P** 06 52 39.4 +1.7
comp=Z,862nm,1.0s
STKI Sintang 37.83 133 P P 06 52 43.6 +5.9
MARD Mardin 37.89 295 P **P** 06 52 37.2 -0.9
CUYO Cuyo Island 38.01 110 *e*P **P** 06 52 39.0 -0.2
BNGB Bingl 38.02 298 *e*P **P** 06 52 41.0 +1.8
CHOM Cayeli-Rize 38.11 302 *e*P **P** 06 52 41.9 +2.1
JTU Tsushima 38.34 69 P **P** 06 52 41.4 -0.4
JTU IAmb IAmb 06 52 54.0
comp=Z,1μm,1.5s
JOW Kunigami 38.40 82 P **P** 06 52 42.2 -0.2
comp=Z,370nm,0.8s,baz=288,slow=6.1,SNR=35
JOW Kunigami 38.40 82 P **P** 06 52 41.7 -0.7
KASI Kota Agung 38.48 147 P **P** 06 52 43.9 +0.8
comp=Z,569nm,1.2s
BLSI Bandar Lampung 38.71 146 P **P** 06 52 46.4 +1.4
comp=Z,750nm,1.4s
ERZN Erzincan 38.79 299 *e*P **P** 06 52 47.4 +1.7
KTUT Trabzon 38.85 301 ⇓P **P** 06 52 48.2 +2.2
KTUT Trabzon 38.85 301 *e*P **P** 06 52 47.2 +1.2
KIRV Kirov 39.03 331 P **P** 06 52 47.5 +0.3
comp=Z,1μm,0.8s,baz=123,slow=4.5,SNR=207
KIRV S **S** 06 58 43.9 -1.7
comp=Z,51nm,1.0s,baz=111,slow=15,SNR=2.0
KIRV Kirov 39.03 331 *c*⇓*i*P **P** 06 52 48.0 +0.8
MDJ Mudanjiang 39.06 53 P **P** 06 52 48.0 +0.3
MDJ pmax pmax
comp=Z,190nm,1.0s
MDJ pmax pmax
comp=Z,8μm,10.1s
MDJ Mudanjiang 39.06 53 P **P** 06 52 47.5 -0.2
SOC Sochi 39.18 305 *e*P **P** 06 52 48.4 -0.3
SOC *e* 06 54 19.6
SOC *e*PPP PPP 06 54 43.4
SOC *e*S **S** 06 58 50.6 +2.4
SOC *e*SSS SSS 07 02 02.2
SOC pmax pmax
comp=Z,143nm,0.7s
SOC MLR MLR
comp=Z,86μm,17.0s
MYLDM **Lahad Datu** 39.28 119 P **P** 06 52 50.0 +0.2
GUIM Jordan 39.43 109 *e*P **P** 06 52 50.6 -0.5
URFA Urfa 39.45 296 *e*P **P** 06 52 52.0 +0.9
JSU Suzuyama 39.49 74 P **P** 06 52 51.2 -0.3
VRH Novokhopyorsk 39.61 318 *e*P **P** 06 52 52.6 +0.4
VRH pmax pmax
comp=Z,1μm,0.7s
JNU Nakatsue 39.67 71 P **P** 06 52 53.2 +0.2
comp=Z,161nm,0.8s,baz=295,slow=3.6,SNR=19
JNU S **S** 06 58 49.7 -6.3
comp=Z,28nm,1.1s,baz=250,slow=2.2,SNR=3.5
JNU Nakatsue 39.67 71 P **P** 06 52 53.3 +0.2
ILIC ilic-Erzincan 39.68 299 *e*P **P** 06 52 55.5 +2.4
MALT Malatya 39.76 297 *e*P **P** 06 52 56.6 +2.8
CNOP Candoni, Negro 39.90 110 *e*P **P** 06 52 53.8 -1.1
MSHR Mys Shultsa 39.92 56 ⇓*e*P **P** 06 52 55.3 +0.4
MSHR MLR MLR
comp=Z,130μm,16.0s
PBKI Pangkalan Bun 40.09 136 P P 06 53 02.4 +5.9
ZEA Zeya 40.10 38 *e*P **P** 06 52 58.2 +2.0
ZEA pmax pmax
comp=N,130nm,1.9s
ZEA pmax pmax
comp=E,160nm,1.9s
ZEA pmax pmax
comp=Z,390nm,1.4s
ZEA MLR MLR
comp=E,104μm,14.0s
ZEA MLR MLR
comp=N,100μm,16.0s
ZEA MLR MLR
comp=Z,148μm,16.0s
DBJI Dramaga 40.48 145 P **P** 06 53 00.8 +1.1
comp=Z,874nm,1.5s
RSDY Resadiye-TOKAT 40.67 300 *e*P **P** 06 53 02.8 +1.6
USA0B Ussuriysk Arra 40.70 54 P **P** 06 53 00.7 -0.6
USA0B pmax pmax
comp=Z,579nm,1.5s
USA0B Ussuriysk Arra 40.70 54 P **P** 06 53 00.7 -0.6
USRK Ussuriysk Ar. 40.70 54 P **P** 06 53 01.2 -0.1
comp=Z,102nm,0.9s,baz=263,slow=8.3,SNR=76
USRK PP **PnPn** 06 54 39.1 -0.1
comp=Z,37nm,0.9s,baz=257,slow=5.8,SNR=1.3
USRK Ussuriysk Ar. 40.70 54 P **P** 06 53 00.7 -0.6
GAZ Gaziantep 40.74 295 *e*P **P** 06 53 02.8 +1.0
GAZ Gaziantep 40.74 295 P **P** 06 53 01.2 -0.6
GAZ IAmb IAmb 06 53 04.7
comp=Z,1μm,1.1s
LLP Lapu-Lapu 40.75 108 *e*P **P** 06 53 02.6 +0.6
MTKI Muara Teweh, K 40.84 130 P **P** 06 53 03.6 +0.8
comp=Z,491nm,2.1s
SVSK Karacayir 40.90 299 *e*P **P** 06 53 05.2 +2.2
OCLP Ormoc 40.91 107 *e*P **P** 06 53 04.1 +0.7
ANN Anapa 40.97 307 *e*P **P** 06 53 03.9 +0.4
ANN *i* 06 54 39.0
ANN *e*S **S** 06 59 16.9 +1.9
ANN pmax pmax
comp=Z,463nm,0.7s
ANN MLR MLR
comp=E,88μm,14.0s
ANN MLR MLR
comp=N,97μm,15.0s
ANN MLR MLR
comp=Z,111μm,14.0s
VORD Divnogorie 41.00 317 *e*P **P** 06 53 03.8 +0.1
VORD pmax pmax
comp=Z,630nm,0.8s
LEM Lembang 41.15 144 P **P** 06 53 06.5 +1.0
JMZ Minamidaito 2 41.20 82 P **P** 06 53 05.6 -0.1
JMZ IAmb IAmb 06 53 22.0
comp=Z,908nm,1.1s
JMZ Minamidaito 2 41.20 82 ⇑P **P** 06 53 10.4 +4.7
NRIK Noril'sk 41.24 1 P **P** 06 53 06.1 +0.6
comp=Z,694nm,1.0s,baz=176,slow=6.5,SNR=78
NRIK Noril'sk 41.24 1⇑*e*P **P** 06 53 06.7 +1.3
NRIK pmax pmax
comp=Z,2μm,1.5s
NRIK MLR MLR
comp=Z,268μm,15.0s
NRIK Noril'sk 41.24 1 P **P** 06 53 05.4 -0.1
NRIK IAmb IAmb 06 53 10.1
comp=Z,1μm,1.2s
VORR Voronezh 41.25 318 *e*P **P** 06 53 06.0 +0.2
VORR pmax pmax
comp=Z,250nm,2.0s
TOKT Tokat 41.26 300 *e*P **P** 06 53 07.6 +1.5
SARI SarD1z-Kayseri 41.34 297 *e*P **P** 06 53 08.5 +1.6
JHS Saijyo 41.37 68 P **P** 06 53 06.8 -0.2
JHS Saijyo 41.37 68 ⇓P **P** 06 53 06.5 -0.5
KLR Kul'dur 41.41 46 P **P** 06 53 07.0 -0.1
comp=Z,50nm,0.9s,baz=266,slow=11,SNR=17
KLR PcP **PcP** 06 55 04.8 -0.2
comp=Z,172nm,1.1s,baz=248,slow=2.4,SNR=3.8
KLR Kul'dur 41.41 46⇑*e*P **P** 06 53 07.6 +0.5
KLR pmax pmax
comp=Z,1μm,2.2s
KLR MLR MLR
comp=Z,129μm,16.0s
PAGZ Pagadian 41.59 112 *e*P **P** 06 53 08.8 -0.2
TAHT Tahtakopru-Hat 41.59 294 *e*P **P** 06 53 11.1 +2.3
MSLP Maasin 41.59 108 *e*P **P** 06 53 09.4 +0.4
KVT Kavak 41.67 301 *e*P **P** 06 53 11.6 +2.2
LPSR Galich'ya Gora 41.69 319 *e*P **P** 06 53 09.7 +0.3
LPSR pmax pmax
comp=Z,2μm,0.8s
BNN Bunyan 41.79 298 *e*P **P** 06 53 11.1 +0.6
KOZT Kozan 41.83 296 *e*P **P** 06 53 12.4 +1.7
CISI Cisompet, Garu 41.87 145 ⇑P P 06 53 16.9 +5.6
CISI Cisompet, Garu 41.87 145 P **P** 06 53 10.1 -1.2
comp=Z,351nm,1.3s
CEYT Ceyhan 41.91 295 *e*P **P** 06 53 13.9 +2.5
HWQ Hawqa 41.94 291 *e*P **P** 06 53 13.8 +2.0
SMKI Samarinda 42.09 127 P **P** 06 53 13.7 +0.7
JMN Monobe 42.11 70 P **P** 06 53 13.2 +0.1
JMN IAmb IAmb 06 53 19.6
comp=Z,619nm,0.8s
JMN Monobe 42.11 70 ⇓P **P** 06 53 13.6 +0.5
RCY Rachaya 42.11 290 *e*P **P** 06 53 15.3 +2.1
KRTS Karatas 42.23 294 *e*P **P** 06 53 16.1 +2.1
DIKM Dikmen 42.28 302 ⇓P **P** 06 53 15.9 +1.6
DQRL Deir Qamar 42.31 290 *e*P **P** 06 53 16.9 +2.1
SNOP Sinop 42.34 303 *e*P **P** 06 53 15.4 +0.6
BKB Balikpapan 42.45 128 ⇓S P 06 53 22.3 +6.4
BKB Balikpapan 42.45 128 P P 06 53 22.2 +6.3
CMRD Camardi-Nigde 42.49 296 *e*P **P** 06 53 17.8 +1.6
KOZK Kozakli-Nevseh 42.55 298 *e*P **P** 06 53 17.9 +1.2
ATD Arta Tunnel 42.58 256 P **P** 06 53 18.5 +1.4
comp=Z,107nm,0.8s,baz=28,slow=4.7,SNR=51
ATD Arta Tunnel 42.58 256 P **P** 06 53 16.2 -0.9
ATD Arta Tunnel 42.58 256 ⇑P **P** 06 53 18.4 +1.3
GHAJ Ghor Haditha 42.62 287 P **P** 06 53 17.9 +0.7
BBKI Banjar Baru 42.68 133 P **P** 06 53 20.6 +2.8
comp=Z,2μm,1.5s
BUTP Butuan 42.84 108 *e*P **P** 06 53 22.3 +3.1
GLSP General Luna, 42.84 107 *e*P **P** 06 53 17.9 -1.3
SMRI Semarang 42.85 141 P **P** 06 53 19.6 +0.4
SMRI Semarang 42.85 141 ⇑P P 06 53 24.4 +5.2
SMRI Semarang 42.85 141 P **P** 06 53 20.1 +0.9
comp=Z,3μm,1.4s
MERS Mersin 42.90 295 *e*P **P** 06 53 20.8 +1.3
BUKP Musuan 42.96 110 *e*P **P** 06 53 20.6 +0.4
JWT Wachi 43.21 67 P **P** 06 53 22.0 0.0
JWT IAmb IAmb 06 53 33.6
comp=Z,1μm,1.4s
JWT Wachi 43.21 67 ⇑P **P** 06 53 22.1 +0.2
KIZK Mersin 43.23 294 *e*P **P** 06 53 22.9 +0.8
BZK Bozkurt 43.23 302 ⇑P **P** 06 53 23.5 +1.4
BZK Bozkurt 43.23 302 *e*P **P** 06 53 23.4 +1.4
EREN Erenkoy 43.28 293 *e*P **P** 06 53 23.7 +1.2
SKMP Bagumbayan, Su 43.28 112 *e*P **P** 06 53 22.9 +0.1
SIM Simferopol' 43.33 307 *e*P **P** 06 53 22.7 -0.1
SIM pmax pmax
comp=Z,2μm,1.5s
XMI Christmas Isla 43.36 149 ⇑P P 06 53 30.8 +7.5
SILI Silifke-Mersin 43.41 294 *e*P **P** 06 53 24.0 +0.4
MOS Moscow 43.42 323 *e*P **P** 06 53 20.1 -3.2
MOS *e* 06 55 01.5
MOS *e*S **S** 06 59 47.6 -3.3
MOS pmax pmax
comp=Z,19μm,2.6s
MOS pmax pmax
comp=Z,5μm,1.9s
MOS MLR MLR
comp=E,140μm,16.0s
MOS MLR MLR
comp=Z,157μm,16.0s
EIL Elat 43.43 284 ⇑P **P** 06 53 24.6 +0.8
ILGA Ilgaz 43.43 301 P **P** 06 53 22.5 -1.4
KAMT Kaman 43.44 299 *e*P **P** 06 53 24.1 +0.2
KCP Kidapawan 43.46 111⇑*e*P **P** 06 53 28.9 +4.6
BR131 Keskin Array S 43.49 299 P **P** 06 53 23.7 -0.6
BR131 pmax pmax
comp=Z,799nm,1.3s
BR131 Keskin Array S 43.49 299 P **P** 06 53 23.7 -0.6
BRTR Keskin Array B 43.49 299 P **P** 06 53 25.1 +0.7
comp=Z,157nm,0.9s,baz=110,slow=6.1,SNR=114
BRTR PP **PcP** 06 55 09.4 -2.9
comp=Z,12nm,0.7s,baz=310,slow=27,SNR=2.2
BRTR ScP **ScP** 06 59 01.4 -1.9
comp=Z,39nm,1.0s,baz=123,slow=4.6,SNR=4.8
BRTR Keskin Array B 43.49 299 *e*P **P** 06 53 24.7 +0.3
SERE Sereflikochisa 43.56 298 *e*P **P** 06 53 25.9 +1.0
UGM Wanagama 43.61 142 P **P** 06 53 25.7 +0.3
comp=Z,633nm,1.9s
IKL Isikli 43.61 294 *e*P **P** 06 53 26.3 +1.1
TOLI2 Tolitoli 43.63 122 P **P** 06 53 25.4 -0.2
OBN Obninsk 43.79 322 ⇑P **P** 06 53 26.9 +0.5
OBN Obninsk 43.79 322 *c*⇓*i*P **P** 06 53 26.6 +0.3
OBN *e* 06 55 08.8
OBN *e* 06 55 13.6
OBN *e*PPP PPP 06 55 41.2
OBN *e*S **S** 06 59 55.1 -1.2
OBN *e*SS **ScS** 07 03 20.5 -4.4
OBN *e*SSS SSS 07 03 52.5
OBN pmax pmax
comp=Z,12μm,2.1s
OBN pmax pmax
comp=Z,4μm,1.5s
OBN MLR MLR
comp=Z,112μm,18.0s
OBN Obninsk 43.79 322 ⇑P **P** 06 53 26.6 +0.3
LFK Lefkose 43.82 293 *e*P **P** 06 53 27.5 +0.5
DAV Davao City (W) 43.83 111 P **P** 06 53 28.4 +1.2
comp=Z,119nm,0.3s,baz=334,slow=6.5,SNR=8.4
KRMN Karaman 43.88 295 *e*P **P** 06 53 27.9 +0.4
AFSR Afar-Bala (An 43.93 299 *e*P **P** 06 53 27.9 0.0
BERE Bereket-Mersin 43.98 294 *e*P **P** 06 53 29.3 +1.0
KULU Kulu 44.00 298 *e*P **P** 06 53 29.7 +1.3
CSS Mathiatis 44.02 292 *e*P **P** 06 53 29.7 +1.2
CSS Mathiatis 44.02 292 P **P** 06 53 28.4 -0.2
CSS Mathiatis 44.02 292 ⇑P **P** 06 53 29.4 +0.9
CHBY Cihanbeyli 44.10 298 *e*P **P** 06 53 29.8 +0.5
ANTO Ankara 44.14 299 *e*P **P** 06 53 31.2 +1.7
LOD Lodumlu 44.16 299 *e*P **P** 06 53 30.3 +0.6
KURC Kurucasile-Bar 44.17 302 *e*P **P** 06 53 28.0 -1.6
LEF Lefka 44.36 293 ⇑P **P** 06 53 33.0 +1.7
LEF Lefka 44.36 293 *e*P **P** 06 53 32.7 +1.5
MATI Mati 44.46 110 *e*P **P** 06 53 34.5 +2.3
DDMP Don Marcelino, 44.48 112 *e*P **P** 06 53 30.6 -1.8
LADK Ladik-KONYA 44.54 297 *e*P **P** 06 53 32.5 -0.2
KONT Konya--Tatoy 44.55 297 *e*P **P** 06 53 33.8 +1.0
GRNR Gornyy 44.68 45 ⇓*i*P **P** 06 53 34.3 +0.8
GRNR *e*S **S** 07 00 14.0 +4.6
GRNR pmax pmax
comp=E,20nm,1.1s
GRNR pmax pmax
comp=Z,90nm,1.2s
GRNR smax smax
comp=N,10.0nm,0.9s
GRNR MLR MLR
comp=E,41μm,17.0s
GRNR MLR MLR
comp=N,67μm,14.0s
GRNR MLR MLR
comp=Z,92μm,15.0s
GAZI Gazipasa 44.72 294 *e*P **P** 06 53 34.5 +0.4
JGF Kuroka 44.77 67 P **P** 06 53 33.8 -0.8
JGF Kuroka 44.77 67 ⇑P **P** 06 53 33.6 -0.9
YAK Yakutsk 44.83 28 P **P** 06 53 35.1 +0.5
comp=Z,381nm,0.8s,baz=221,slow=2.7,SNR=42
YAK Yakutsk 44.83 28 P **P** 06 53 35.1 +0.5
YAK IAmb IAmb 06 53 39.8
comp=Z,786nm,0.8s
YAK Yakutsk 44.83 28 ⇑P **P** 06 53 35.1 +0.5
MRSI Marisa 44.92 121 P **P** 06 53 36.0 +0.1
comp=Z,537nm,1.0s
YUVA Yuva-Kibriscik 44.98 300 *e*P **P** 06 53 36.8 +0.6
KDZE Karadeniz Ereo 45.14 301 ⇓P **P** 06 53 38.2 +0.8
KDZE Karadeniz Ereo 45.14 301 *e*P **P** 06 53 37.9 +0.5
JSD Sado 45.28 63 P **P** 06 53 37.7 -0.9
JSD Sado 45.28 63 ⇑P **P** 06 53 37.2 -1.3
MDUB Mudurnu 45.35 300 P **P** 06 53 38.9 -0.3
MJB9 Matsu-Tunnel 45.36 65 P **P** 06 53 38.7 -0.5
MJB9 IAmb IAmb 06 53 54.9
comp=Z,556nm,1.2s
MAJO Matsushiro 45.36 65 ⇑*i*P **P** 06 53 39.0 -0.2
MAJO pmax pmax
comp=Z,1μm,1.6s
MAJO MLR MLR
comp=Z,70μm,17.0s
MAJO Matsushiro 45.36 65 P **P** 06 53 39.2 0.0
MAJO IAmb IAmb 06 53 54.9
comp=Z,578nm,1.2s
MAJO Matsushiro 45.36 65 ⇑P **P** 06 53 38.7 -0.5
MAT Matsushiro 45.36 65 P **P** 06 53 38.6 -0.6
MAT S **S** 07 00 19.1 -0.6
MJAR Matsushiro Arr 45.36 65 P **P** 06 53 39.3 +0.1
comp=Z,341nm,1.2s,baz=282,slow=9.2,SNR=111
MJAR ScP **ScP** 06 59 09.7 -1.2
comp=Z,4.1nm,1.0s,baz=197,slow=39,SNR=1.6
MJAR LR LR 07 11 42.3
comp=Z,125μm,20.7s,baz=225,slow=35
CIFT Cifteler, Eski 45.49 299 *e*P **P** 06 53 37.9 -2.4
JSG Sagara 45.55 68 P **P** 06 53 41.0 +0.3
JSG Sagara 45.55 68 ⇓P **P** 06 53 41.6 +1.0
APSI Ampana 45.62 123 P **P** 06 53 41.9 +0.5
comp=Z,372nm,2.0s
GTOI Gorontalo 45.63 120 P **P** 06 53 39.7 -1.8
comp=Z,290nm,1.0s
ABJI Asem Bagus 45.65 137 P **P** 06 53 42.4 +0.8
comp=Z,1μm,1.5s
SGSI Sangihe 45.72 115 P **P** 06 53 41.6 -0.7
comp=Z,204nm,0.9s
TTSI Tana Toraja 45.76 127 P **P** 06 53 43.0 +0.5
comp=Z,1μm,1.4s
SRCK Saricakaya, Es 45.80 300 *e*P **P** 06 53 42.9 +0.3
SHUT Suhut-Afyon 45.94 298 *e*P **P** 06 53 44.6 +0.7
ANTB Antalya 45.99 295 *e*P **P** 06 53 43.5 -0.6
BCK Bucak 45.99 296 *e*P **P** 06 53 44.9 +0.7
SAUV Serdivan-Sakar 46.00 301 *e*P **P** 06 53 44.6 +0.4
ISP Isparta 46.01 297 *e*P **P** 06 53 44.6 +0.1
ISP Isparta 46.01 297 P **P** 06 53 44.5 +0.1
ISP pmax pmax
comp=Z,983nm,1.2s
ISP Isparta 46.01 297 P **P** 06 53 44.5 0.0
ISP IAmb IAmb 06 53 50.6
comp=Z,983nm,1.2s
JAGI Jajag, Banyuwa 46.14 138 P **P** 06 53 45.9 +0.5
JAGI IAmb IAmb 06 53 54.4
comp=Z,898nm,1.5s
KORT Korkueli 46.22 295 *e*P **P** 06 53 46.9 +0.8
SPSI Sidrap Palu 46.37 128 P **P** 06 53 48.6 +1.3
comp=Z,660nm,1.6s
BASM Basmaki-Afyon 46.38 297 *e*P **P** 06 53 47.4 +0.1
KMSI Cibinong 46.41 119 P **P** 06 53 48.3 +0.6
comp=Z,11μmcomp=Z,980nm,0.9s
ADVT Abdulvahap 46.46 300 *e*P **P** 06 53 48.2 +0.4
SRBI Singaraja 46.47 136 P **P** 06 53 48.3 +0.2
comp=Z,3μm,1.5s
HRT Hereke 46.50 301 *e*P **P** 06 53 48.6 +0.4
SILT Sile 46.51 301 *e*P **P** 06 53 47.8 -0.3
LUWI Luwuk 46.54 122 P **P** 06 53 49.1 +0.4
LUWI IAmb IAmb 06 54 04.4
comp=Z,462nm,1.0s
LUWI Luwuk 46.54 122 ⇓P **P** 06 53 51.8 +3.1
LUWI Luwuk 46.54 122 P **P** 06 53 48.8 +0.1
comp=Z,145μmcomp=Z,777nm,1.0s
ELL Elmali 46.60 295 P **P** 06 53 49.5 +0.4
ELL Elmali 46.60 295 P **P** 06 53 49.5 +0.4
TVSB Tavsanli 46.73 299 *e*P **P** 06 53 49.5 -0.5
TRML Termal-Yalova 46.88 301 *e*P **P** 06 53 50.8 -0.3
AKAS Kas 46.90 295 *e*P **P** 06 53 49.7 -1.8
AKAS Kas 46.90 295 P **P** 06 53 49.8 -1.7
BNSI Bone 46.92 128 P **P** 06 53 50.9 -0.7
comp=Z,391nm,1.2s
DNP Denpasar 46.93 137 P **P** 06 53 54.5 +2.8
comp=Z,846nm,1.5s
ISK Istanbul-Kandi 46.95 301 *e*P **P** 06 53 52.1 +0.5
KAVV Kandilli-Istan 46.95 301 *e*P **P** 06 53 51.6 0.0
JYT Yasato 46.99 65 P **P** 06 53 51.2 -0.7
JYT Yasato 46.99 65 ⇓P **P** 06 53 51.5 -0.5
JURR Jurilovca 47.04 306 ⇓P **P** 06 53 53.1 +0.9
TLCR 47.09 307 ⇑P **P** 06 53 53.1 +0.5
JHJ2 Mitsune 47.11 70 P **P** 06 53 52.8 -0.2
JHJ2 IAmb IAmb 06 53 59.0
comp=Z,745nm,1.0s
JHJ2 Mitsune 47.11 70 ⇑P **P** 06 53 53.7 +0.7
KAPI Kappang 47.11 129 P **P** 06 53 53.1 0.0
comp=Z,61nm,0.9s,baz=323,slow=4.7,SNR=8.3
KAPI Kappang 47.11 129 P **P** 06 53 53.1 0.0
KAPI IAmb IAmb 06 54 03.2
comp=Z,909nm,1.3s
KAPI Kappang 47.11 129 ⇑P **P** 06 53 57.1 +4.0
KAPI ⇑P **sP** 06 54 01.5 +1.2
SIMA Simav-Kutahya 47.12 298 *e*P **P** 06 53 51.6 -1.5
KIS Kishinev 47.16 309 *e*P **P** 06 53 53.0 -0.1
comp=Z,4μm,2.1s
KIS Kishinev 47.16 309 *e*PcP PcP 06 55 40.0 +15
KIS Kishinev 47.16 309 *e*PP PP 06 55 47.0 +3.1
KIS Kishinev 47.16 309 ⇓P **P** 06 53 53.7 +0.5
KIS Kishinev 47.16 309 *e*P **P** 06 53 53.0 -0.1
KIS *e* 06 55 40.0
KIS pmax pmax
comp=Z,4μm,2.1s
BGKT Bogazkoy 47.16 301 *e*P **P** 06 53 53.9 +0.7
TSCT Constanta Port 47.19 305 ⇑P **P** 06 53 54.9 +1.4
AKASG **Malin Array Be** 47.20 314 P **P** 06 53 53.0 -0.5

comp=Z,225nm,0.9s,baz=77,slow=7.2,SNR=333
AKASG PP PP 06 55 42.0 -2.2
comp=Z,153nm,1.1s,baz=84,slow=8.6,SNR=6.1
AKASG ScP ScP 06 59 15.9 -2.3
comp=Z,39nm,0.9s,baz=76,slow=4.0,SNR=4.2
AKASG S S 07 00 43.0 -2.7
comp=Z,16nm,0.8s,baz=87,slow=14,SNR=6.0
AKASG Malin Array Be 47.20 314 P P 06 53 53.0 -0.5
AKASG Malin Array Be 47.20 314 P P 06 53 52.5 -1.0
AKBB Malin Array Si 47.20 314*ce*P P 06 53 53.3 -0.1
AKBB pmax pmax
comp=Z,759nm,0.9s
AKBB MLR MLR
comp=Z,133μm,18.0s
AKBB Malin Array Si 47.20 314 P P 06 53 52.9 -0.6
AKBB IAmb IAmb 06 53 55.6
comp=Z,790nm,1.0s
TSMN Mangalia Port- 47.23 305 ⇓P P 06 53 55.3 +1.5
FETY Fethiye 47.27 295 *eP* P 06 53 52.8 -1.4
JMM Marumori 47.29 63 P P 06 53 53.6 -0.7
JMM Marumori 47.29 63 ⇑P P 06 53 53.3 -1.0
JTM Tenmabayashi 47.30 59 P P 06 53 52.0 -2.3
JTM IAmb IAmb 06 54 01.0
comp=Z,732nm,1.2s
JTM Tenmabayashi 47.30 59 ⇑P P 06 53 53.9 -0.5
MFTR Murfatlar 47.36 305 ⇓P P 06 53 55.7 +1.0
CTKS Kestanelik-??a 47.36 301 *eP* P 06 53 54.9 +0.1
TPGR Topolog 47.37 306 ⇑P P 06 53 55.6 +0.7
TIRR Tirgusor 47.37 306 P P 06 53 54.7 -0.1
TIRR pmax pmax
comp=Z,2μm,1.4s
TIRR Tirgusor 47.37 306 P P 06 53 54.7 -0.1
TIRR Tirgusor 47.37 306 ⇑P P 06 53 55.3 +0.5
JEW Eniwo 47.51 56 P P 06 53 56.2 +0.2
JEW Eniwo 47.51 56 ⇓P P 06 53 56.5 +0.6
GIUM Giurgiulesti 47.52 307 ⇑P P 06 53 57.5 +1.5
SORM Soroca 47.54 311 ⇑P P 06 53 56.1 +0.1
CFR Carcaliu 47.57 307 ⇓P P 06 53 57.4 +1.0
SLVT Silivri 47.58 301 *eP* P 06 53 56.9 +0.3
DALY Dalyan (Mula) 47.59 295 *eP* P 06 53 56.2 -0.5
TLBR Topalu 47.63 306 ⇓P P 06 53 57.8 +0.9
GISR Galati 47.63 307 ⇑P P 06 53 58.2 +1.4
HARR Harsova 47.71 306 ⇓P P 06 53 58.6 +1.1
VARL Varlezi 47.79 308 ⇓P P 06 53 59.5 +1.5
VASR Vaslui 47.85 309 ⇓P P 06 53 59.6 +1.1
YER Yerkesik 47.85 296 *eP* P 06 53 59.3 +0.5
EDC Edincik 47.90 300 *eP* P 06 53 58.9 -0.1
TUDR 47.91 307 ⇓P P 06 54 00.7 +1.7
TURN Turunc 47.92 295 *eP* P 06 53 59.3 +0.1
BALB Balikesir 47.93 299 *eP* P 06 53 59.3 0.0
BIR Birlad 47.95 308 ⇑P P 06 54 01.0 +1.7
TWSI Taliwang, Sumb 48.01 135 P P 06 54 00.5 +0.4
comp=Z,188nm,1.3s
IAS Iasi 48.02 309 ⇑P P 06 54 00.3 +0.4
AYDB Zeytinkoy-Aydi 48.08 297 *eP* P 06 54 00.3 -0.3
PHSR Pinarhisar 48.08 302 *eP* P 06 54 01.1 +0.7
MRMT Marmara Adasi 48.08 301 *eP* P 06 54 01.1 +0.6
ARG Arkhangelos 48.09 295 *eP* P 06 54 00.4 -0.1
ARG Arkhangelos 48.09 295 ⇑P P 06 54 00.5 0.0
GHRR 48.10 308 ⇑P P 06 54 02.2 +1.7
AMRR Amara 48.14 306 ⇑P P 06 54 02.2 +1.4
PETR Petresti 48.22 308 ⇑P P 06 54 03.3 +1.9
GZKV Gazikoy-Tekird 48.28 301 *eP* P 06 54 02.3 +0.4
MAR4 Marsite Statio 48.29 301 *eP* P 06 54 02.6 +0.4
MAR3 Marsite Statio 48.30 301 *eP* P 06 54 02.5 +0.4
ASAJ Asahikawa 48.32 55 P P 06 54 02.4 +0.1
comp=Z,62nm,0.8s,baz=256,slow=5.7,SNR=16
KRBG Karabiga-Canak 48.32 300 *eP* P 06 54 02.2 -0.1
MAR6 Marsite Statio 48.33 301 *eP* P 06 54 02.8 +0.5
ODBI Odobesti 48.34 308 ⇑P P 06 54 04.5 +2.2
PUL Pulkovo 48.38 327*d iP* P 06 54 03.6 +1.2
PUL pmax pmax
comp=Z,1μm,0.7s
PGOR Pogoanele 48.38 306 ⇓P P 06 54 04.9 +2.2
GRER 48.39 307 ⇑P P 06 54 05.1 +2.3
RKY Sarkoy-Tekirda 48.39 301 *eP* P 06 54 03.1 +0.2
BSSI Bau Bau, Buton 48.43 129 P P 06 54 02.9 -0.5
comp=Z,319nm,1.2s
YSS Yuzh-Sakhalins 48.45 51*ce*P P 06 54 03.2 +0.1
YSS pmax pmax
comp=Z,1μm,2.1s
YSS MLR MLR
comp=Z,115μm,17.0s
YSS Yuzh-Sakhalins 48.45 51 P P 06 54 03.5 +0.3
YSS IAmb IAmb 06 54 09.9
comp=Z,1μm,1.4s
YSS Yuzh-Sakhalins 48.45 51 ⇑P P 06 54 03.5 +0.3
LEHL Lehliu 48.51 306 ⇑P P 06 54 05.2 +1.5
MNK Minsk 48.54 319⇑*iP* P 06 54 04.0 +0.3
MNK pmax pmax
comp=Z,6μm,2.0s
MNK Minsk 48.54 319 *i* P P 06 54 04.1 +0.4
comp=E,94nm,0.8s
MNK *i* P P 06 54 04.1 +0.4
comp=N,112nm,1.0s
MNK *i* P P 06 54 04.1 +0.4
comp=Z,983nm,0.8s
MNK *i* S S 07 01 04.6 +0.1
MNK *i* LRM MLR 07 17 39.7
comp=Z,151μm,19.1s
MNK *i* LRM MLR 07 17 40.0
comp=N,92μm,17.2s
MNK *i* LRM MLR 07 17 45.7
comp=E,12μm,18.1s
VRI Vrincioaia 48.57 308 ⇓P P 06 54 05.9 +1.8
VRI Vrincioaia 48.57 308 *eP* P 06 54 05.2 +1.1
BISRR Bisoca 48.58 307 ⇑P P 06 54 06.4 +2.1
TYV Tymovskoe 48.61 46 *eP* P 06 54 05.6 +1.3
TYV *eS* S 07 01 10.4 +4.8
TYV pmax pmax
comp=Z,437nm,1.6s
TYV smax smax
comp=N,91nm,3.6s
GCAM G?zelcaml? 48.62 297 *eP* P 06 54 04.9 +0.3
PLOR Plostina 48.62 308 ⇓P P 06 54 06.2 +1.6
TESR Tescani 48.63 309 ⇑P P 06 54 05.3 +0.7
BODT Bodrum 48.63 296 *eP* P 06 54 03.5 -1.3
PLAI Plampang 48.64 134 P P 06 54 04.9 0.0
comp=N,411nm,1.7s
EDRB Edirne 48.65 302 *eP* P 06 54 05.7 +0.9
ISR Istrita 48.70 307 ⇓P P 06 54 07.2 +2.0
DKL Dikili 48.73 299 *eP* P 06 54 05.4 -0.1
NIS1 Nisyros Isl. 48.80 295 *eP* P 06 54 05.3 -0.7
ERM Erimo 48.80 57*ce*P P 06 54 06.9 +1.0
ERM pmax pmax
comp=Z,341nm,1.7s
ERM Erimo 48.80 57 P P 06 54 05.9 0.0
ERM Erimo 48.80 57 ⇓P P 06 54 06.6 +0.6
NEHR Nehoiu 48.87 307 ⇑P P 06 54 08.8 +2.3
TNTI Ternate 48.93 116 P P 06 54 06.7 -0.6
TNTI Ternate 48.93 116 P P 06 54 06.5 -0.8
comp=Z,199nm,1.3s
PRAR RASCA 48.94 310 ⇓P P 06 54 07.7 +0.8
KARP Karpathos 48.95 294 *eP* P 06 54 07.3 0.0
KARP Karpathos 48.95 294 P P 06 54 07.3 0.0
KARP Karpathos 48.95 294 ⇓P P 06 54 07.5 +0.2
BIZ Bicaz 49.01 309 ⇑P P 06 54 08.4 +0.9
URLA Izmir 49.05 298 *eP* P 06 54 07.2 -0.8
BUC1 Bucharest 49.08 306 ⇑P P 06 54 09.9 +1.9
EZN Ezine 49.11 300 *eP* P 06 54 08.3 -0.1
MLR Muntele Rosu 49.12 307 ⇑P P 06 54 10.6 +2.1
SGRR Singureni 49.12 306 ⇓P P 06 54 09.7 +1.4
ENEZ Enez 49.17 301 *eP* P 06 54 08.9 +0.1
OZUR 49.23 308 ⇓P P 06 54 10.6 +1.4
NACGM Naroch 49.23 320 *i* P P 06 54 09.3 +0.3
NACGM *i* P P 06 54 09.3 +0.3
NACGM *i* P P 06 54 09.3 +0.3
NACGM *i* PP PP 06 56 04.4 +1.7
NACGM *i* PPP PPP 06 57 00.1
NACGM *i* S S 07 01 09.5 -4.8
NACGM *i* SS SS 07 04 56.6 +11
NACGM *i* SSS SSS 07 07 15.9
NACGM *i* LQ LQ 07 12 32.5
NACGM *i* LR LR 07 15 53.0
ALN Alexandroupoli 49.24 301 *eP* P 06 54 09.7 +0.4
ALN Alexandroupoli 49.24 301 P P 06 54 09.5 +0.2
ALN pmax pmax
comp=Z,520nm,1.1s
ALN Alexandroupoli 49.24 301 P P 06 54 09.5 +0.2
ALN IAmb IAmb 06 54 11.2
comp=Z,520nm,1.1s
ALN Alexandroupoli 49.24 301 ⇑P P 06 54 09.6 +0.4
IDID Didziasalis 49.31 320 *eP* P 06 54 09.4 -0.3
BOZC Bozcaada 49.32 300 *eP* P 06 54 10.3 +0.3
CHOS Chios island 49.47 298 *eP* P 06 54 12.1 +0.9
DOPR Dopca 49.50 308 ⇑P P 06 54 12.5 +1.2
SIGR SIGRI 49.53 299 *eP* P 06 54 11.4 -0.2
LVZ Lovozero 49.57 338*ce*P P 06 54 11.7 +0.2
LVZ pmax pmax
comp=Z,1μm,1.2s
LVZ MLR MLR
comp=Z,118μm,14.0s
LVZ Lovozero 49.57 338 P P 06 54 11.4 0.0
LVZ IAmb IAmb 06 54 12.8
comp=Z,984nm,1.1s
LVZ Lovozero 49.57 338 ⇑P P 06 54 11.5 0.0
LVZ ⇓P P 06 54 11.9 +0.3
ZIMR 49.58 305 ⇑P P 06 54 13.1 +1.2
RDO Rodhopi 49.60 301 *eP* P 06 54 12.3 +0.2
RDO Rodhopi 49.60 301 ⇑P P 06 54 12.7 +0.6
IIGN Ignalina 49.61 320 *eP* P 06 54 11.8 -0.2
SANI Sanana 49.62 120 P P 06 54 11.8 -0.8
comp=Z,204nm,1.0s
BURAR Bucovina Array 49.63 310 ⇑P P 06 54 13.2 +0.9
BURAR Bucovina Array 49.63 310 P P 06 54 12.7 +0.3
BUR08 Bucovina Ar. S 49.64 310 P P 06 54 12.6 +0.2
BUR08 IAmb IAmb 06 54 14.2
comp=Z,446nm,1.0s
KDZ Kurdzhali 49.65 302 *eP* P 06 54 12.9 +0.4
ISAL Salakas 49.70 320 *eP* P 06 54 12.4 -0.2
TIXI Tiksi 49.73 17 P P 06 54 12.7 +0.1
comp=Z,309nm,0.7s,baz=231,slow=4.5,SNR=106
TIXI S S 07 01 19.6 -1.2
comp=Z,42nm,1.2s,baz=299,slow=6.8,SNR=3.4
TIXI Tiksi 49.73 17 P P 06 54 12.3 -0.3
TIXI pmax pmax
comp=Z,2μm,1.5s
TIXI Tiksi 49.73 17 P P 06 54 12.3 -0.3
TIXI Tiksi 49.73 17 ⇓P P 06 54 12.5 -0.1
MTUR Matau 49.74 307 ⇓P P 06 54 14.5 +1.2
VOIR 49.75 307 ⇑P P 06 54 13.9 +0.6
ZKR Zakros 49.78 294 *eP* P 06 54 13.8 +0.2
HUMR Humele 49.82 306 ⇓P P 06 54 14.7 +1.0
STFAR Stefanesti-Arg 49.83 306 ⇓P P 06 54 15.5 +1.8
APA Apatity 49.85 337⇑*iP* P 06 54 12.6 -1.0
APA pmax pmax
comp=Z,190nm,0.9s
APA MLR MLR
comp=Z,224μm,16.0s
VSU Vasula 49.87 324 *eP* P 06 54 14.1 +0.3
VSU Vasula 49.87 324 ⇑P P 06 54 13.8 0.0
ARR Arges 50.04 307 ⇓P P 06 54 16.2 +0.7
APE Apeiranthos 50.04 296 ⇓P P 06 54 15.8 +0.2
APE Apeiranthos 50.04 296 *eP* P 06 54 15.2 -0.4
APE Apeiranthos 50.04 296 ⇑P P 06 54 14.0 -1.6
PLVB Pleven 50.13 304 ⇓P P 06 54 17.3 +1.2
PLD Plovdiv 50.15 303 *eP* P 06 54 17.0 +0.7
SANT Santorini 50.20 295 ⇓P P 06 54 16.7 0.0
SANT Santorini 50.20 295 *eP* P 06 54 15.9 -0.9
SANT Santorini 50.20 295 P P 06 54 16.2 -0.6
SANT Santorini 50.20 295 ⇑P P 06 54 15.8 -0.9
MDB Medias 50.20 308 ⇑P P 06 54 18.7 +2.1
ARCR ARCALIA 50.21 309 ⇑P P 06 54 18.4 +1.7
VLAD Vladila 50.26 305 ⇑P P 06 54 17.7 +0.7
WBSI Waikabubak, Su 50.28 133 P P 06 54 17.0 -0.6
comp=Z,485nm,1.1s
JCJ Chichijima 50.40 77 P P 06 54 16.4 -1.9
comp=Z,226nm,0.8s,baz=264,slow=8.7,SNR=12
LVV L'vov 50.46 313⇓*iP* P 06 54 18.6 +0.1
LVV *e* 06 56 14.4
LVV *e*PPP PPP 06 57 12.2
LVV *eS* S 07 01 29.1 -2.5
LVV *e*PS sS 07 01 43.1 +1.6
LVV pmax pmax
comp=Z,1μm,1.6s
LOT Lotru 50.65 307 ⇑P P 06 54 21.4 +1.2
HRKL Herakleio 50.65 294 *eP* P 06 54 20.3 +0.2
YUK Yuzh-Kuril'sk 50.67 55*deP* P 06 54 20.2 +0.1
CJR Cluj-Napoca 50.73 309 ⇑P P 06 54 22.2 +1.6
BMR Baia Mare 50.79 310 ⇓P P 06 54 22.7 +1.7
FIA1 FINESS Array S 50.82 328 P P 06 54 21.2 +0.2
FINES FINESS Array B 50.82 328 P P 06 54 20.6 -0.4
comp=Z,359nm,0.5s,baz=108,slow=8.3,SNR=604
FINES S S 07 01 33.9 -2.4
comp=Z,40nm,0.9s,baz=82,slow=14,SNR=5.1
FINES FINESS Array B 50.82 328 P P 06 54 20.4 -0.6
FINES FINESS Array B 50.82 328 P P 06 54 20.4 -0.6
IDI Anoyia 50.83 294 ⇓P P 06 54 21.7 +0.1
IDI Anoyia 50.83 294 *eP* P 06 54 20.9 -0.7
IDI Anoyia 50.83 294 P P 06 54 20.8 -0.7
IDI IAmb IAmb 06 54 33.1
comp=Z,902nm,1.4s
IDI Anoyia 50.83 294 ⇑S P 06 54 21.2 -0.4
OUR Ouranopolis 50.85 301 *eP* P 06 54 21.0 -0.6
PABE Paberze 50.91 320 *eP* P 06 54 21.7 0.0
BAIL Bailesti 51.02 305 ⇑P P 06 54 24.0 +1.2
SRE Strehaia 51.08 306 ⇓P P 06 54 23.9 +0.7
VTS Vitosha 51.20 304 ⇑P P 06 54 25.6 +1.2
VTS Vitosha 51.20 304 P P 06 54 24.0 -0.4
VTS pmax pmax
comp=Z,891nm,1.0s
VTS Vitosha 51.20 304 P P 06 54 24.0 -0.4
VTS IAmb IAmb 06 54 26.7
comp=Z,891nm,1.0s
VTS Vitosha 51.20 304 ⇑S P 06 54 24.6 +0.3
SUW Suwalki 51.22 318 *eP* P 06 54 24.0 -0.1
SUW Suwalki 51.22 318 *eP* P 06 54 24.0 -0.1
SUW Suwalki 51.22 318 P P 06 54 23.6 -0.5
SUW pmax pmax
comp=Z,957nm,0.8s
SUW Suwalki 51.22 318 P P 06 54 23.6 -0.5
SUW IAmb IAmb 06 54 27.0
comp=Z,957nm,0.8s
SUW Suwalki 51.22 318 ⇑P P 06 54 23.9 -0.2
NLAI Namlea 51.23 121 P P 06 54 27.1 +2.4
comp=Z,356nm,1.1s
DEV Deva 51.24 308 ⇑P P 06 54 25.9 +1.5
PUNG Punghina 51.30 306 ⇓P P 06 54 25.9 +1.0
KWP Kalwaria Pacla 51.32 313 *eP* P 06 54 25.6 +0.1
KWP Kalwaria Pacla 51.32 313 P P 06 54 25.0 +0.1
DRGR 51.34 309 ⇑P P 06 54 26.5 +1.3
GZR Gura Zlata 51.35 307 ⇑P P 06 54 25.8 +0.4
MTSE Matsula 51.42 324 *eP* P 06 54 25.1 -0.4
MMRI Maumere 51.42 130 ⇓P P 06 54 28.7 +2.6
MMRI Maumere 51.42 130 P P 06 54 25.3 -0.8
comp=Z,583nm,1.2s
TRPA Tarpa 51.43 311 ⇓P P 06 54 27.2 +1.4
BASI Baing, Sumba 51.48 133 P P 06 54 25.7 -0.8
comp=Z,713nm,1.5s
HORT Hortiatis 51.49 301 *eP* P 06 54 26.6 +0.1
IMMV Iera Moni Meta 51.53 294 *eP* P 06 54 26.4 -0.4
GVDS Gavdos 51.55 294 *eP* P 06 54 26.5 -0.4
GVD Gavdhos 51.55 294 *eP* P 06 54 26.5 -0.4
KNT Kendrikon 51.58 302 *eP* P 06 54 27.1 0.0
UZH Uzhgorod 51.59 311⇑*iP* P 06 54 26.2 -0.8
UZH *i* 06 54 29.0
UZH *eS* S 07 01 42.2 -5.0
UZH MLR MLR
comp=Z,16μm,18.0s
HERR Herculane 51.63 307 ⇑P P 06 54 27.6 +0.3
KNDR Palaiochora Ch 51.81 294 *eP* P 06 54 28.1 -0.7
VAY Valandovo 51.81 302 *eP* P 06 54 28.9 +0.2
LTVH Ltavrtes, Hu 51.88 310 ⇓P P 06 54 31.2 +2.0
GRG Griva 51.98 302 *eP* P 06 54 29.2 -0.9
LIT Litokhoron 52.01 300 P P 06 54 29.7 -0.6
LIT pmax pmax
comp=Z,432nm,1.1s
LIT Litokhoron 52.01 300 P P 06 54 29.7 -0.6
LIT Litokhoron 52.01 300 ⇑P P 06 54 29.7 -0.6
KUR Kuril'sk 52.03 53⇓*iP* P 06 54 30.4 +0.1
SLIT Slitere, Latvi 52.07 323 *eP* P 06 54 30.2 -0.2
SLIT Slitere, Latvi 52.07 323 ⇑P P 06 54 29.8 -0.6
SIRR Siria 52.09 308 ⇑P P 06 54 32.2 +1.4
PBUR Paburge 52.10 321 *eP* P 06 54 30.7 0.0
KTHA Kythira Island 52.13 296 *eP* P 06 54 29.9 -1.3
CRVS Cervenica-Dubn 52.13 312 *eP* P 06 54 31.6 +0.5
CRVS pmax pmax
comp=Z,3μm,1.9s
CRVS Cervenica-Dubn 52.13 312 *eP* P 06 54 31.6 +0.5
MDVR Moldovita 52.14 306 ⇓P P 06 54 32.1 +0.9
BZS Buzias 52.15 307 ⇑P P 06 54 32.1 +0.8
BOVS Bovan 52.23 305 ⇑P P 06 54 32.3 +0.4
AGG Agios Georgios 52.28 299 *eP* P 06 54 31.1 -1.2
AGG Agios Georgios 52.28 299 P P 06 54 31.4 -0.9
AGG pmax pmax
comp=Z,772nm,1.0s
AGG Agios Georgios 52.28 299 P P 06 54 31.4 -0.9
AGG IAmb IAmb 06 54 32.6
comp=Z,772nm,1.0s
AGG Agios Georgios 52.28 299 ⇑P P 06 54 31.4 -0.9
TIM Timisoara 52.42 308 ⇑P P 06 54 35.3 +2.1
BANR Banloc 52.50 307 ⇓P P 06 54 35.8 +1.9
BEL Belsk 52.56 315 *eP* P 06 54 34.6 +0.4
BEL Belsk 52.56 315 ⇑P P 06 54 34.5 +0.3
SKO Skopje 52.59 303 *eP* P 06 54 34.6 0.0
AMBH Ambrzfalva 52.73 308 ⇑P P 06 54 37.2 +1.7
FNA Florina 52.77 301 *eP* P 06 54 34.5 -1.5
FNA Florina 52.77 301 P P 06 54 35.4 -0.6
FNA pmax pmax
comp=Z,672nm,1.4s
FNA Florina 52.77 301 P P 06 54 35.4 -0.6
FNA IAmb IAmb 06 54 36.9
comp=Z,672nm,1.4s
FNA Florina 52.77 301 ⇑P P 06 54 35.5 -0.6
KECS Kecovo 52.79 311 *eP* P 06 54 36.7 +0.7
KECS pmax pmax
comp=Z,147nm,1.1s
KECS Kecovo 52.79 311 *eP* P 06 54 36.7 +0.7
KEV Kevo 52.86 338 P P 06 54 36.4 +0.3
KEV pmax pmax
comp=Z,736nm,1.0s
KEV Kevo 52.86 338 P P 06 54 36.4 +0.3
KEV IAmb IAmb 06 54 37.8
comp=Z,736nm,1.0s
KEV Kevo 52.86 338 ⇑P P 06 54 36.1 0.0
ITM Ithomi 52.87 297 *eP* P 06 54 35.1 -1.7
ITM Ithomi 52.87 297 P P 06 54 35.5 -1.2
ITM IAmb IAmb 06 54 40.2
comp=Z,848nm,1.5s
ITM Ithomi 52.87 297 ⇑P P 06 54 35.3 -1.4
BSZH Besenyszg 52.99 310 ⇓P P 06 54 39.2 +1.8
SWI Sorong 53.01 115 P P 06 54 37.2 -0.8
comp=Z,286nm,1.5s
OHR Ohrid 53.16 302 *eP* P 06 54 37.9 -1.0
OJC Ojcow 53.19 313 P P 06 54 38.6 -0.3
OJC pmax pmax
comp=Z,239nm,0.8s
OJC Ojcow 53.19 313 P P 06 54 38.6 -0.3
OJC Ojcow 53.19 313 ⇑P P 06 54 38.8 -0.1
PSZ Piszkesteto 53.21 310 ⇑P P 06 54 39.9 +0.8
PSZ Piszkesteto 53.21 310 P P 06 54 39.7 +0.5
PSZ pmax pmax
comp=Z,847nm,1.2s
PSZ Piszkesteto 53.21 310 P P 06 54 39.7 +0.5
PSZ IAmb IAmb 06 54 51.3
comp=Z,847nm,1.2s
PSZ Piszkesteto 53.21 310 ⇑P P 06 54 39.6 +0.5
ARA0 ARCESS Array S 53.28 338 *eP* P 06 54 39.4 +0.1
ARCES ARCESS Array B 53.28 338 P P 06 54 39.5 +0.3
comp=Z,603nm,0.8s,baz=99,slow=7.5,SNR=322
ARCES ARCESS Array B 53.28 338 P P 06 54 39.4 +0.1
ARCES pmax pmax
comp=Z,605nm,0.9s
ARCES ARCESS Array B 53.28 338 P P 06 54 39.4 +0.1
ARCES IAmb IAmb 06 54 41.1
comp=Z,605nm,0.9s
DIVS Divibare 53.42 306 *eP* P 06 54 40.9 +0.1
DIVS Divibare 53.42 306 P P 06 54 40.4 -0.4
DIVS IAmb IAmb 06 54 47.2
comp=Z,781nm,1.4s
DIVS Divibare 53.42 306 ⇑P P 06 54 40.9 +0.1
SBV Sambava 53.43 224 ⇓P P 06 54 46.8 +5.8
LANS Liptovska Anna 53.44 312 *eP* P 06 54 41.9 +1.1
LANS pmax pmax
comp=Z,179nm,1.2s
LANS Liptovska Anna 53.44 312 *eP* P 06 54 41.9 +1.1
FRGS Fruska Gora 53.45 307 ⇑P P 06 54 41.5 +0.6
FRGS Fruska Gora 53.45 307⇑*iP* P 06 54 41.3 +0.4
BATI Baumata 53.52 130 P P 06 54 42.1 +0.4
comp=Z,147nm,0.7s,baz=299,slow=2.8,SNR=10
BATI Baumata 53.52 130 P P 06 54 39.6 -2.1
comp=Z,328nm,1.8s
PVY Plav 53.61 304⇑*iP* P 06 54 42.4 +0.2
SOEI Soe 53.61 129 P P 06 54 42.2 -0.3
SOEI Soe 53.61 129 ⇑P P 06 54 42.0 -0.5
SOEI ⇓S S 07 02 18.5 +2.7
SOEI Soe 53.61 129 P P 06 54 41.6 -0.9
comp=Z,2μm,1.2s
IVA Berane 53.62 304⇑*iP* P 06 54 42.7 +0.4
TEKS Tekeris 53.71 306⇑*iP* P 06 54 43.1 +0.3
TIR Tirane 53.83 302 P P 06 54 42.9 -0.8
TIR pmax pmax
comp=Z,2μm,1.3s
TIR Tirane 53.83 302 P P 06 54 42.9 -0.8
TIR Tirane 53.83 302 ⇓P P 06 54 43.4 -0.3
BBLS Lazići 53.87 305⇑*iP* P 06 54 44.4 +0.4
VYHS Vyhne 53.89 311 *eP* P 06 54 44.5 +0.5
VYHS pmax pmax
comp=Z,1μm,1.7s
VYHS Vyhne 53.89 311 *eP* P 06 54 44.5 +0.5
KTK1 Kautokeino 53.90 337 *eP* P 06 54 43.7 -0.1
KOME Ulasin 53.90 304⇓*iP* P 06 54 44.5 +0.2
RUDO Rudo 53.92 305⇑*iP* P 06 54 44.2 -0.1
PLE Pljevlja 53.94 305⇓*iP* P 06 54 44.4 -0.2
MA2 Magadan 54.02 35 P P 06 54 45.2 +0.4
comp=Z,403nm,1.0s,baz=251,slow=6.0,SNR=10
MA2 Magadan 54.02 35⇑*iP* P 06 54 45.4 +0.5
MA2 pmax pmax
comp=Z,887nm,1.4s
MA2 MLR MLR
comp=Z,76μm,16.0s
MA2 Magadan 54.02 35 P P 06 54 45.1 +0.3
MA2 IAmb IAmb 06 54 49.2
comp=Z,737nm,1.1s
MA2 Magadan 54.02 35 ⇑P P 06 54 45.3 +0.5
KMBO Kilima Mbogo 54.11 246 P P 06 54 47.3 +0.9
comp=Z,63nm,0.9s,baz=43,slow=9.5,SNR=32
KMBO ScP ScP 06 59 47.8 -1.1
comp=Z,21nm,1.0s,baz=43,slow=4.7,SNR=4.6
KEK Kerkira 54.12 300 ⇓P P 06 54 44.4 -1.4
PDG Podgorica 54.14 304 ⇑P P 06 54 45.8 -0.2
PDG Podgorica 54.14 304⇑*iP* P 06 54 45.5 -0.4
PDG Podgorica 54.14 304 P P 06 54 45.6 -0.3
PDG IAmb IAmb 06 54 46.8
comp=Z,642nm,0.9s
PDG Podgorica 54.14 304 ⇑P P 06 54 45.5 -0.4
TTG Podgorica 54.14 304⇓*iP* P 06 54 45.6 -0.4
HAPS Han Pijesak,Bl 54.17 306⇑*iP* P 06 54 45.9 -0.4
MORH Mrgy, Hungar 54.18 308 ⇑P P 06 54 46.5 +0.4
MORH Mrgy, Hungar 54.18 308⇑*iP* P 06 54 46.2 +0.1
BNDI Bandanaira 54.20 120 ⇑P P 06 54 48.9 +2.2
BNDI Bandanaira 54.20 120 P P 06 54 44.6 -2.1
comp=Z,1μm,1.2s
KIBK Kibwezi 54.20 244 P P 06 54 46.9 0.0
KIBK IAmb IAmb 06 54 56.0
comp=Z,595nm,1.5s
ULC Ulcinj 54.21 303⇓*iP* P 06 54 45.3 -1.2
HAMF Hammerfest 54.22 339 *eP* P 06 54 46.5 +0.4
DRME Dracevica, Mon 54.23 303 *eP* P 06 54 46.2 -0.4
DRME Dracevica, Mon 54.23 303⇓*iP* P 06 54 46.4 -0.2
SRO2 Moca 54.23 310 *eP* P 06 54 46.9 +0.4
SRO2 pmax pmax
comp=Z,960nm,1.3s
SRO2 Moca 54.23 310 *eP* P 06 54 46.9 +0.4
OKC Ostrava-Krasne 54.27 313 *eP* P 06 54 47.6 +0.8
OKC Ostrava-Krasne 54.27 313 *eP* P 06 54 47.6 +0.8
OKC *ex* x 06 54 57.5
SRO Srobarova 54.28 310 *eP* P 06 54 48.1 +1.2
SRO pmax pmax
comp=Z,1μm,1.1s
SRO Srobarova 54.28 310 *eP* P 06 54 48.1 +1.2
NKY Niksic 54.29 304⇑*iP* P 06 54 46.9 -0.3
UPM Unac-Piva 54.30 305 *eP* P 06 54 47.3 -0.1
NKME Niksic 54.32 304⇑*iP* P 06 54 47.8 +0.5
CEME Cevo 54.38 304⇓*iP* P 06 54 47.5 -0.3
BUM Brajici-Budva 54.43 304⇑*iP* P 06 54 47.8 -0.3
BRY Bratogost 54.61 304⇑*iP* P 06 54 49.3 -0.2
BRY Bratogost 54.61 304⇓*iP* P 06 54 48.5 -1.0
JAVC Velka Javorina 54.64 312 *eP* P 06 54 50.1 +0.6
MORC Moravsky Berou 54.67 313 *eP* P 06 54 50.0 +0.3
MORC Moravsky Berou 54.67 313 P P 06 54 49.9 +0.3
MORC pmax pmax
comp=Z,372nm,1.1s
MORC Moravsky Berou 54.67 313 P P 06 54 49.9 +0.2
MORC Moravsky Berou 54.67 313 ⇑P P 06 54 50.1 +0.3
HCY Herceg Novi 54.70 304⇑*iP* P 06 54 49.5 -0.5
HCY Herceg Novi 54.70 304⇑*iP* P 06 54 50.2 +0.2

UPP	Uppsala	54.70	325	*e*P		P		06 54 49.9	+0.2
GKP	Gorka Klasztor	54.73	317	*e*P		P		06 54 50.3	+0.2
TREB	Trebinje	54.77	304	*e*P		P		06 54 49.9	-0.6
SMOL	Smolenice	54.82	311	*e*P		P		06 54 51.3	+0.5
SMOL					pmax	pmax			
	comp=Z,310nm,1.7s								
SMOL	Smolenice	54.82	311	*e*P		P		06 54 51.3	+0.5
MODS	Modra-Piesok	54.93	311	*e*P		P		06 54 51.0	-0.7
MODS					pmax	pmax			
	comp=Z,492nm,1.4s								
MODS	Modra-Piesok	54.93	311	*e*P		P		06 54 50.9	-0.7
JETT	Jettan, Norway	55.01	337	*e*P		P		06 54 52.2	+0.3
FAKI	Fak Fak	55.04	116	P		P		06 54 52.4	-0.4
FAKI					IAmb	IAmb		06 55 09.7	
	comp=Z,389nm,1.0s								
FAKI	Fak Fak	55.04	116	⇑P		P		06 54 52.4	-0.4
FAKI	Fak Fak	55.04	116	P		P		06 54 52.4	-0.4
	comp=Z,455nm,1.3s								
ZST	Bratislava	55.06	311	*e*P		P		06 54 53.2	+0.7
ZST					pmax	pmax			
	comp=Z,7μm,2.7s								
ZST	Bratislava	55.06	311	*e*P		P		06 54 53.1	+0.6
SCTE	Santa Cesarea	55.07	301	P		P		06 54 51.3	-1.4
SCTE					IAmb	IAmb		06 54 52.4	
	comp=Z,390nm,0.9s								
SEY	Seymchan	55.12	31	P		P		06 54 53.4	+0.6
	comp=Z,411nm,1.0s,baz=253,slow=5.1,SNR=69								
SEY	Seymchan	55.12	31	⇑*i*P		P		06 54 53.8	+1.1
KRLC	Kraliky	55.14	313	*e*P		P		06 54 53.2	+0.1
KRLC	Kraliky	55.14	313	*e*P		P		06 54 53.2	+0.1
VRAC	Vranov	55.31	312	⇑P		P		06 54 55.2	+0.9
VRAC	Vranov	55.31	312	*e*P		P		06 54 54.9	+0.5
BLY	Banja Luka	55.35	307	⇑*i*P		P		06 54 54.9	+0.2
BLY	Banja Luka	55.35	307	⇑P		P		06 54 54.0	-0.7
KSP	Ksiaz	55.41	314	⇑P		P		06 54 55.3	+0.3
DPC	Dobruska-Polom	55.42	314	*e*P		P		06 54 55.7	+0.6
DPC	Dobruska-Polom	55.42	314	*e*P		P		06 54 55.7	+0.6
BEHE	Becsehely	55.44	309	*e*P		P		06 54 57.7	+2.4
KRUC	Moravsky	55.46	312	*e*P		P		06 54 55.6	+0.2
MGRS	Mrkonjic Grad	55.46	306	⇑*i*P		P		06 54 55.6	+0.1
OSTC	Ostas	55.47	314	*e*P		P		06 54 56.0	+0.5
BLEU	Blekinge	55.53	321	*i*P		P		06 54 55.8	0.0
TRO	Tromso	55.53	337	*e*P		P		06 54 55.3	-0.2
TRO					*e*S	S		07 02 40.2	+0.1
CHVC	Chvalec	55.57	314	*e*P		P		06 54 56.7	+0.5
UPC	Upice	55.60	314	*e*P		P		06 54 57.0	+0.6
UPC	Upice	55.60	314	*e*P		P		06 54 57.0	+0.6
KOGS	Kog	55.81	309	*i*P		P		06 54 58.4	+0.4
HOPEN	Hopen	55.91	346	*e*P		P		06 54 59.5	+1.3
CONA	Conrad Observa	55.91	311	*e*P		P		06 54 59.3	+0.5
	comp=Z,637nm,1.3s,SNR=64								
TREC	Trest	56.04	312	*e*P		P		06 55 00.3	+0.7
TREC	Trest	56.04	312	*e*P		P		06 55 00.3	+0.7
BSD	Bornholm Skovb	56.06	319	*e*P		P		06 54 58.6	-1.0
BSD	Bornholm Skovb	56.06	319	*i*P		P		06 54 58.6	-1.0
BSD				*i*P		P		06 54 58.6	-1.0
BSD					IAmb	IAmb		06 54 60.0	
	comp=Z,204nm,0.9s								
BSD	Bornholm Skovb	56.06	319	*i*P		P		06 54 58.5	-1.1
BSD					pmax	pmax			
	comp=Z,200nm,0.9s								
ARSA	Arzberg	56.21	310	*i*P		P		06 55 01.3	+0.4
	comp=Z,355nm,1.3s,SNR=30								
MATE	Matera	56.30	302	⇑P		P		06 55 01.4	-0.1
MATE	Matera	56.30	302	⇓P		P		06 55 01.1	-0.5
N2IH	Innhavet	56.31	335	*e*P		P		06 54 59.6	-1.5
N2ST	Straumen	56.36	334	*e*P		P		06 55 01.5	0.0
CRES	Cresnjev	56.43	308	⇑*i*P		P		06 55 02.7	+0.3
FAUS	Fauske	56.48	334	*e*P		P		06 55 02.3	-0.1
FAUS					*e*S	S		07 02 52.8	0.0
RER	Riviere de l'E	56.52	213	P		P		06 55 04.3	+1.0
RER					IAmb	IAmb		06 55 11.3	
	comp=Z,688nm,1.2s								
RER	Riviere de l'E	56.52	213	⇑P		P		06 55 05.9	+2.6
PVCC	Panska Ves	56.52	314	*e*P		P		06 55 03.7	+0.7
PVCC	Panska Ves	56.52	314	*e*P		P		06 55 03.7	+0.7
LNIZ	Loecknitz	56.54	317	*e*P		P		06 55 03.2	+0.2
	comp=Z,197nm,0.8s,baz=84,slow=6.9								
PERS	Pernice	56.56	309	*i*P		P		06 55 04.0	+0.6
N2TV	T?rnvik	56.56	334	*e*P		P		06 55 03.0	0.0
STEI	Steigen	56.57	335	*e*P		P		06 55 03.0	0.0
PRU	Pruhonice	56.59	313	*e*P		P		06 55 03.6	+0.2
PRU				*e*				06 55 09.7	
PRU	Pruhonice	56.59	313	*e*P		P		06 55 03.6	+0.2
PRU				*e*pP		pP		06 55 09.7	+0.8
MRVN	Minervino Murg	56.61	302	⇑P		P		06 55 03.3	-0.5
DEL	Delary	56.61	321	*i*P		P		06 55 03.7	+0.2
SOKA	Soboth	56.61	309	*e*P		P		06 55 04.4	+0.6
	comp=Z,994nm,1.6s,SNR=85								
PRA	Prague	56.65	313	*e*P		P		06 55 04.5	+0.6
PRA	Prague	56.65	313	*e*P		P		06 55 04.5	+0.6
BJO1	Bjornoya	56.68	343	*e*P		P		06 55 03.4	-0.3
MOR8	Moi Rana	56.68	333	*e*P		P		06 55 02.9	-1.0
MOR8					*e*S	S		07 02 54.6	-1.0
HFS	Hagfors	56.69	325	P		P		06 55 03.8	-0.2
	comp=Z,837nm,0.8s,baz=90,slow=7.6,SNR=391								
NBB08	Skaug oppvekst	56.73	334	*e*P		P		06 55 04.2	+0.1
SGRT	San Giovanni R	56.83	303	P		P		06 55 04.3	-1.1
SGRT					IAmb	IAmb		06 55 06.3	
	comp=Z,772nm,1.2s								
CKRC	Cesky Krumlov	56.85	312	*e*P		P		06 55 05.9	+0.5
RUE	Ruedersdorf	56.86	316	*e*P		P		06 55 05.6	+0.3
	comp=Z,344nm,0.9s,baz=84,slow=6.9								
RUE	Ruedersdorf	56.86	316	⇑P		P		06 55 05.3	+0.1
LUNU	Lund	56.88	320	*i*P		P		06 55 05.1	-0.3
BRG	Berggiesshubel	56.89	314	⇑*i*P		P		06 55 06.0	+0.4
BRG					Amp			06 55 07.2	
	comp=Z,1μm,1.6s								
BRG				*ex*		x		06 55 20.9	
BRG					Amp			06 55 23.8	
	comp=Z,2μm,2.2s								
BRG	Berggiesshubel	56.89	314	*e*P		P		06 55 06.0	+0.4
	comp=Z,160nm,0.8s,baz=84,slow=6.9								
NBB05	Inndyr	56.93	334	*e*P		P		06 55 05.4	-0.2
NBB17	Glomfjord B¥r	56.94	333	*e*P		P		06 55 05.6	0.0
OBKA	Obir	56.97	309	*i*P		P		06 55 06.9	+0.6
	comp=Z,858nm,2.0s,SNR=42								
PBCC	Pribram	56.97	313	*e*P		P		06 55 06.6	+0.4
MOA	Molln	56.99	311	*i*P		P		06 55 06.4	0.0
	comp=Z,321nm,1.2s,SNR=29								
RGN	Rugen	57.00	319	*e*P		P		06 55 07.1	+0.8
	comp=Z,484nm,0.8s,baz=84,slow=6.9								
RGN	Rugen	57.00	319	⇓P		P		06 55 07.3	+1.0
NBB30	Finnes	57.04	334	*e*P		P		06 55 05.8	-0.5
BJUU	Bjuv	57.10	321	*i*P		P		06 55 06.8	-0.2
SKR	Severo-Kuril's	57.14	46	*e*P		P		06 55 06.7	-0.6
SKR					pmax	pmax			
	comp=Z,168nm,1.2s								
CEY	Cerknica	57.15	308	*e*P		P		06 55 07.8	+0.2
BORU	Boraas	57.18	322	*i*P		P		06 55 08.0	+0.5
LOF	Lofoten	57.23	335	*e*P		P		06 55 06.8	-0.8
FABU	Falkenberg	57.23	322	*i*P		P		06 55 08.2	+0.4
KONS	Konsvik	57.24	333	*e*P		P		06 55 07.5	-0.2
GEC2	GERESS Array S	57.25	312	P		P		06 55 08.7	+0.3
GEC2					IAmb	IAmb		06 55 14.6	
	comp=Z,574nm,1.4s								
GEC2	GERESS Array S	57.25	312	*e*P		P		06 55 08.6	+0.3
	comp=Z,143nm,1.0s,baz=84,slow=6.9								
GERES	GERESS Array B	57.25	312	P		P		06 55 08.1	-0.2
	comp=Z,86nm,0.8s,baz=81,slow=7.1,SNR=159								
GERES				PKPPKP				07 24 58.7	
	comp=Z,0.2nm,0.3s,baz=270,slow=3.7,SNR=3.8								
GERES	GERESS Array B	57.25	312	P		P		06 55 07.7	-0.6
FBE	Freiberg	57.26	314	*e*P		P		06 55 08.9	+0.8
	comp=Z,232nm,0.9s,baz=84,slow=6.9								
STOK	Stokkvaagen	57.27	333	*e*P		P		06 55 08.3	+0.4
NBB40	Tonnes	57.28	333	*e*P		P		06 55 07.8	-0.3
KHC	Kasperske Hory	57.30	312	⇑*i*P		P		06 55 09.1	+0.5
KHC					pmax	pmax			
	comp=Z,1μm,1.7s								
KHC					MLR	MLR			
	comp=Z,149μm,16.0s								
KHC	Kasperske Hory	57.30	312	*e*P		P		06 55 08.5	-0.1
KHC	Kasperske Hory	57.30	312	P		P		06 55 08.5	-0.1
KHC	Kasperske Hory	57.30	312	⇑P		P		06 55 08.7	+0.2
CEL	Celeste	57.37	299	P		P		06 55 08.9	-0.4
CEL	Celeste	57.37	299	⇑P		P		06 55 09.2	0.0
N2SV	S¸rv¥gen	57.40	335	*e*P		P		06 55 08.0	-0.9
CLL	Collm	57.44	315	*i*P		P		06 55 08.9	-0.5
	comp=Z,3μm,2.5s								
CLL				*e*PP		PP		06 57 18.0	+1.3
CLL				*e*PPPP				06 58 56.0	
CLL				*e*S		S		07 03 05.0	-0.9
CLL				*e*PS		PnS		07 03 17.0	-0.1
CLL	Collm	57.44	315	P		P		06 55 08.9	-0.5
CLL					pmax	pmax			
	comp=Z,324nm,1.3s								
CLL	Collm	57.44	315	P		P		06 55 08.9	-0.5
CLL	Collm	57.44	315	*e*P		P		06 55 09.4	0.0
	comp=Z,154nm,1.1s,baz=84,slow=6.9								
COP	Copenhagen	57.45	320	*i*P		P		06 55 10.0	+0.6
COP					IAmb	IAmb		06 55 11.6	
	comp=Z,530nm,1.2s								
COP	Copenhagen	57.45	320	*i*P		P		06 55 10.0	+0.6
COP					pmax	pmax			
	comp=Z,530nm,1.2s								
SAUI	Saumlaki	57.47	122	P		P		06 55 11.7	+1.5
	comp=Z,1μm,1.4s								
N2VA	Vr,y	57.50	334	*e*P		P		06 55 09.0	-0.6
MYKA	Terra Mystica	57.57	309	*e*P		P		06 55 10.3	-0.3
	comp=Z,126nm,0.8s,SNR=18								
NSS	Namsos	57.61	331	*e*P		P		06 55 09.7	-0.7
TRI	Trieste	57.62	308	P		P		06 55 09.9	-0.9
TRI					pmax	pmax			
	comp=Z,719nm,1.2s								
TRI	Trieste	57.62	308	P		P		06 55 09.9	-0.9
TRI					IAmb	IAmb		06 55 11.8	
	comp=Z,719nm,1.2s								
TRI	Trieste	57.62	308	⇑P		P		06 55 10.3	-0.5
ONAU	Onsala	57.65	322	*i*P		P		06 55 10.9	+0.1
NC405	NORSAR Array S	57.67	327	P		P		06 55 10.7	-0.3
KBA	Koelnbreinsper	57.71	310	*i*P		P		06 55 11.3	-0.3
	comp=Z,222nm,1.1s,SNR=28								
N2RO	R¸st	57.71	334	*e*P		P		06 55 10.4	-0.7
WET	Wettzell	57.75	312	*e*P		P		06 55 12.2	+0.4
	comp=Z,126nm,0.9s,baz=84,slow=6.9								
NC602	NORSAR Array S	57.75	326	P		P		06 55 11.1	-0.4
TJOU	Tjoern	57.78	323	*i*P		P		06 55 10.9	-0.8
PTCC	Patocco-Chiusa	57.80	309	⇑P		P		06 55 11.6	-0.6
PAOL	Paolisi	57.83	303	P		P		06 55 11.8	-0.6
PAOL					IAmb	IAmb		06 55 29.7	
	comp=Z,628nm,1.3s								
NC303	NORSAR Array S	57.83	327	P		P		06 55 11.6	-0.5
NB201	NORSAR Array S	57.87	327	P		P		06 55 11.9	-0.5
TANN	Tannenbergstha	57.87	314	*e*P		P		06 55 13.0	+0.4
	comp=Z,123nm,1.0s,baz=84,slow=6.9								
PEA0B	Petropavlovsk-	57.90	43	⇓*e*P		P		06 55 13.0	+0.4
PETK	Petropavlovsk-	57.90	43	P		P		06 55 12.2	-0.4
	comp=Z,173nm,1.0s,baz=210,slow=4.8,SNR=32								
NKC	Novy Kostel	57.90	314	*e*P		P		06 55 12.8	0.0
NKC	Novy Kostel	57.90	314	*e*P		P		06 55 12.8	0.0
NB2	NORSAR Subarra	57.91	327	P		P		06 55 12.1	-0.5
	baz=89,slow=7.4								
NOA	NORSAR Array B	57.91	327	P		P		06 55 12.2	-0.5
	comp=Z,294nm,0.9s,baz=89,slow=6.9,SNR=380								
NOA					S	S		07 03 10.3	-1.7
	comp=Z,7.8nm,1.0s,baz=95,slow=14,SNR=3.7								
GIRL	Giralia	57.93	148	P		P		06 55 13.8	+0.7
GIRL	Giralia	57.93	148	⇓P		P		06 55 17.4	+4.3
WERN	Wernitzgruen	57.94	314	*e*P		P		06 55 13.5	+0.5
	comp=Z,102nm,1.0s,baz=84,slow=6.9								
GUNZ	Gunzen	57.96	314	*e*P		P		06 55 13.7	+0.5
	comp=Z,154nm,1.0s,baz=84,slow=6.9								
WERD	Werda	57.97	314	*e*P		P		06 55 13.6	+0.3
	comp=Z,153nm,1.0s,baz=84,slow=6.9								
STRU	Stroemstad	57.98	324	*i*P		P		06 55 13.0	-0.1
RJOB	Jochberg	57.99	311	*e*P		P		06 55 13.4	-0.1
	comp=Z,492nm,0.9s,baz=84,slow=6.9								
ZOU	Zoufplan	58.04	309	P		P		06 55 13.8	-0.2
NAO01	NORSAR Array S	58.07	326	P		P		06 55 12.9	-0.9
NAO01					IAmb	IAmb		06 55 14.5	
	comp=Z,733nm,1.0s								
NAO01	NORSAR Array S	58.07	326	*e*P		P		06 55 13.2	-0.6
ROTZ	Rotzenmuhle	58.11	313	*e*P		P		06 55 15.1	+0.9
	comp=Z,159nm,0.8s,baz=84,slow=6.9								
HSPB	Hornsund (broa	58.14	346	*e*P		P		06 55 14.6	+0.6
MANZ	Manzenberg	58.15	313	*e*P		P		06 55 15.4	+0.9
	comp=Z,780nm,1.5s,baz=84,slow=6.9								
OSL	Oslo	58.18	325	*e*S		S		07 03 16.1	+0.7
NEUB	Neuenburg	58.22	315	*e*P		P		06 55 15.1	+0.2
	comp=Z,234nm,0.8s,baz=84,slow=6.9								
SPA0	Spitsbergen Ar	58.25	347	P		P		06 55 15.3	+0.6
SPA0					IAmb	IAmb		06 55 17.0	
	comp=Z,1μm,1.1s								
SPA0	Spitsbergen Ar	58.25	347	*e*P		P		06 55 15.3	+0.6
SPITS	Spitsbergen Ar	58.25	347	P		P		06 55 15.6	+0.8
	comp=Z,609nm,0.9s,baz=116,slow=13,SNR=234								
STAL	STALIGIAL	58.26	309	P		P		06 55 14.6	-0.8
STAL					IAmb	IAmb		06 55 26.2	
	comp=Z,581nm,1.0s								
ABTA	Abfaltersbach	58.32	310	*i*P		P		06 55 15.0	-0.9
	comp=Z,234nm,1.2s,SNR=22								
TBLU	Trondheim	58.34	329	*e*P		P		06 55 13.8	-1.8
MOX	Moxa	58.38	314	*e*P		P		06 55 16.5	+0.4
	comp=Z,133nm,0.9s,baz=84,slow=6.9								
MOX				*e*L		L		07 25 46.3	
	comp=Z,119μm,19.8s								
FLTG	Flechtingen	58.42	316	*e*P		P		06 55 16.2	-0.1
	comp=Z,266nm,0.9s,baz=84,slow=6.9								
FLTG	Flechtingen	58.42	316	P		P		06 55 16.1	-0.3
AQU	L'Aquila	58.44	304	P		P		06 55 16.6	-0.1
AQU					pmax	pmax			
	comp=Z,1μm,1.4s								
AQU	L'Aquila	58.44	304	⇑*i*P		P		06 55 16.8	+0.1
AQU	L'Aquila	58.44	304	P		P		06 55 16.6	-0.1
AQU					IAmb	IAmb		06 55 22.1	
	comp=Z,1μm,1.4s								
AQU	L'Aquila	58.44	304	⇑P		P		06 55 16.8	+0.1
PET	Petropavlovsk	58.48	43	⇓*e*P		P		06 55 16.2	-0.5
PET					pmax	pmax			
	comp=Z,914nm,2.7s								
PET					MLR	MLR			
	comp=Z,96μm,15.0s								
PET	Petropavlovsk	58.48	43	P		P		06 55 15.9	-0.7
PET					IAmb	IAmb		06 55 18.6	
	comp=Z,502nm,1.4s								
PET	Petropavlovsk	58.48	43	⇑P		P		06 55 16.1	-0.6
NRCA	Norcia	58.56	305	P		P		06 55 17.3	-0.2
NRCA					IAmb	IAmb		06 55 22.8	
	comp=Z,1μm,1.4s								
GRA1	Grafenberg Arr	58.76	313	P		P		06 55 19.0	+0.2
GRF	Grafenberg Arr	58.76	313	P		P		06 55 19.0	+0.2
GRF					pmax	pmax			
	comp=Z,235nm,1.1s								
GRF	Grafenberg Arr	58.76	313	*e*P		P		06 55 19.6	+0.9
	comp=Z,1μm,1.6s,baz=84,slow=6.9								
GRF				*e*L		L		07 23 09.4	
	comp=Z,121μm,18.5s								
GRFO	Grafenberg	58.76	313	P		P		06 55 19.5	+0.8
GRFO					pmax	pmax			
	comp=Z,453nm,1.4s								
GRFO	Grafenberg	58.76	313	P		P		06 55 19.5	+0.8
GRFO					IAmb	IAmb		06 55 31.2	
	comp=Z,453nm,1.4s								
KONO	Kongsberg	58.76	325	*ce*P		P		06 55 18.6	+0.1
KONO					pmax	pmax			
	comp=Z,1μm,2.5s								
KONO	Kongsberg	58.76	325	P		P		06 55 18.0	-0.5
KONO	Kongsberg	58.76	325	*e*P		P		06 55 18.4	-0.2
KONO				*e*S		S		07 03 23.7	+0.8
KONO	Kongsberg	58.76	325	⇑P		P		06 55 18.3	-0.2
ASSE	Asse, Remlinge	58.79	316	*e*P		P		06 55 18.9	+0.1
	comp=Z,160nm,1.1s,baz=84,slow=6.9								
BSEG	Bad Segeberg	58.81	318	*e*P		P		06 55 19.8	+0.8
	comp=Z,408nm,0.8s,baz=84,slow=6.9								
WTTA	Wattenberg	58.84	310	*i*P		P		06 55 19.1	-0.5
	comp=Z,235nm,1.1s,SNR=24								
WATA	Walderalm	58.87	310	*i*P		P		06 55 18.8	-0.9
	comp=Z,466nm,1.5s,SNR=35								
MURB	Monte Urbino	58.90	306	P		P		06 55 20.3	+0.3
DOMB	Dombas	58.92	328	*e*P		P		06 55 19.2	-0.4
FUR	Furstenfeldbru	58.94	311	*e*P		P		06 55 20.5	+0.4
	comp=Z,190nm,1.0s,baz=84,slow=6.9								
CLZ	Clausthal	59.01	316	*e*P		P		06 55 21.0	+0.5
	comp=Z,447nm,0.8s,baz=84,slow=6.9								
CTI	Castel Tesino	59.02	309	P		P		06 55 20.3	-0.5
CTI					pmax	pmax			
	comp=Z,133nm,0.7s								
CTI	Castel Tesino	59.02	309	P		P		06 55 20.3	-0.5
OPO	Ambohidratompo	59.04	223	P		P		06 55 21.5	+0.3
	comp=Z,41nm,1.0s,baz=35,slow=6.9,SNR=12								
NRDL	Niedersach Rie	59.09	317	*e*P		P		06 55 21.9	+1.0
	comp=Z,525nm,0.9s,baz=84,slow=6.9								
TEOL	Teolo	59.13	308	P		P		06 55 21.0	-0.4
TEOL					IAmb	IAmb		06 55 22.4	
	comp=Z,500nm,0.9s								
SQTA	Sankt Quirin	59.13	310	*i*P		P		06 55 20.7	-0.9
	comp=Z,136nm,0.6s,SNR=20								
GOET	G??ttrup	59.14	322	*i*P		P		06 55 22.2	+1.0
GOET				*i*P		pP		06 55 22.5	-4.1
GOET					IAmb	IAmb		06 55 23.2	
	comp=Z,506nm,0.8s								
MBAR	Mbarara	59.15	251	P		P		06 55 21.8	-0.4
MBAR					pmax	pmax			
	comp=Z,429nm,1.2s								
MBAR	Mbarara	59.15	251	P		P		06 55 21.8	-0.4
MBAR					IAmb	IAmb		06 55 31.2	
	comp=Z,429nm,1.2s								
MOTA	Moosalm	59.18	311	*e*P		P		06 55 21.0	-0.9
	comp=Z,627nm,1.0s,SNR=21								
MUD	Monsted U'grnd	59.22	321	*i*P		P		06 55 22.3	+0.5
MUD				*i*P		pP		06 55 22.5	-4.7
MUD					IAmb	IAmb		06 55 23.7	
	comp=Z,124nm,1.0s								
MUD	Monsted U'grnd	59.22	321	*i*P		P		06 55 22.2	+0.5
MUD					pmax	pmax			
	comp=Z,120nm,1.0s								
SKMB	Sankelmark Bun	59.24	319	*e*P		P		06 55 23.3	+1.4
	comp=Z,1μm,1.3s,baz=84,slow=6.9								
KBS	Kingsbay	59.28	348	*i*P		P		06 55 23.1	+1.2
KBS					IAmb	IAmb		06 55 23.7	
	comp=Z,744nm,0.8s								
KBS	Kingsbay	59.28	348	P		P		06 55 22.1	+0.2
KBS					pmax	pmax			
	comp=Z,421nm,0.9s								
KBS	Kingsbay	59.28	348	P		P		06 55 22.1	+0.2
KBS					IAmb	IAmb		06 55 23.7	
	comp=Z,421nm,0.8s								
KBS	Kingsbay	59.28	348	*e*P		P		06 55 22.4	+0.5
KBS				*e*S		S		07 03 27.8	-1.4
KBS	Kingsbay	59.28	348	⇑P		P		06 55 22.3	+0.4
GTTG	Gottingen	59.30	315	*e*P		P		06 55 22.9	+0.5
	comp=Z,409nm,1.1s,baz=84,slow=6.9								
SKAR	Skarslia	59.35	326	*e*P		P		06 55 23.1	+0.4
ABPO	Ambohimpanom	59.36	222	P		P		06 55 23.4	0.0
ABPO					pmax	pmax			
	comp=Z,543nm,1.3s								
ABPO	Ambohimpanom	59.36	222	P		P		06 55 23.4	0.0
ABPO					IAmb	IAmb		06 55 34.5	
	comp=Z,543nm,1.3s								
UBBA	Unterbreizbach	59.38	315	*e*P		P		06 55 23.1	+0.2
	comp=Z,668nm,1.6s,baz=84,slow=6.9								
RETA	Reutte	59.39	311	*i*P		P		06 55 22.6	-0.6
	comp=Z,389nm,1.2s,SNR=38								
HOMB	Homborsund	59.42	323	*i*P		P		06 55 23.1	0.0
HOMB	Homborsund	59.42	323	*e*P		P		06 55 23.3	+0.2
CORL	Corleone	59.45	299	P		P		06 55 22.7	-1.1
CORL					IAmb	IAmb		06 55 25.9	
	comp=Z,913nm,1.4s								
FETA	Feichten	59.49	310	*e*P		P		06 55 23.3	-0.8
	comp=Z,408nm,1.5s,SNR=23								
MBWA	Marble Bar	59.50	142	⇑P		P		06 55 28.1	+3.9
LATE	Laterza	59.55	305	P		P		06 55 23.9	-0.5
CLTB	Caltabellotta	59.59	299	P		P		06 55 23.7	-1.1
CLTB					IAmb	IAmb		06 55 29.9	
	comp=Z,643nm,1.3s								
CLTB	Caltabellotta	59.59	299	⇑P		P		06 55 24.1	-0.7
MOL	Molde	59.60	328	*e*P		P		06 55 23.5	-0.8
MOL				*e*S		S		07 03 34.3	+0.6
UBR	Ueberruh	59.79	311	*e*P		P		06 55 25.5	-0.5
	comp=Z,91nm,0.8s,baz=84,slow=6.9								
SALO	Salr	59.87	309	⇑P		P		06 55 26.8	+0.2
AKN	Aaknes	59.88	328	*e*P		P		06 55 26.7	+0.4
MIL

comp=Z,664nm,1.1s
WLF Walferdange 62.01 314 P **P** **06 55 41.4 +0.5**
WLF IAmb IAmb 06 55 53.1

comp=Z,664nm,1.1s
WLF Walferdange 62.01 314 *eP* **P** **06 55 41.7 +0.8**
comp=Z,328nm,0.9s,baz=84,slow=6.9
WLF Walferdange 62.01 314 ⇑P **P** **06 55 41.6 +0.8**
VSL Villasalto 62.04 302 P **P** **06 55 41.0 -0.3**
VSL IAmb IAmb 06 55 47.0

comp=Z,777nm,1.5s
VSL Villasalto 62.04 302 ⇓P **P** **06 55 41.1 -0.3**
BEBN Eben Emael 62.09 315 *dP* **P** **06 55 41.7 +0.2**
BSTI Sart Tilman 62.20 315 *dP* **P** **06 55 42.4 +0.2**
BCLA Clavier 62.39 315 *dP* **P** **06 55 43.5 -0.1**
RCHB Rochefort 62.49 314 *dP* **P** **06 55 44.5 +0.3**
BGES Gesves 62.54 315 *dP* **P** **06 55 44.5 0.0**
BNI Bardonecchia 62.64 309 P **P** **06 55 44.8 -0.7**
BNI pmax pmax

comp=Z,588nm,1.3s
BNI Bardonecchia 62.64 309 P **P** **06 55 44.8 -0.7**
BNI IAmb IAmb 06 55 58.6

comp=Z,588nm,1.3s
BNI Bardonecchia 62.64 309 ⇑P **P** **06 55 44.7 -0.7**
BMRD Maredsous 62.75 315 *dP* **P** **06 55 45.8 -0.1**
TAMR Tamra 62.89 299 ⇑P **P** **06 55 47.1 0.0**
DOU Dourbes 62.91 315 *dP* **P** **06 55 46.7 -0.3**
UCC Uccle 62.91 315 *dP* **P** **06 55 46.6 -0.4**
UCC Uccle 62.91 315 P **P** **06 55 46.5 -0.4**
UCC pmax pmax

comp=Z,162nm,1.2s
UCC Uccle 62.91 315 P **P** **06 55 46.5 -0.4**
KEST Kesra 63.07 298 P **P** **06 55 49.1 +0.7**
comp=Z,549nm,0.9s,baz=11,slow=1.7,SNR=166
KEST Kesra 63.07 298 P **P** **06 55 48.7 +0.3**
NOR Nord 64.00 351 *i* P **P** **06 55 54.4 +0.7**
NOR IAmb IAmb 06 55 57.3

comp=Z,287nm,1.0s
NOR Nord 64.00 351 *i* P **P** **06 55 54.4 +0.7**
NOR pmax pmax

comp=Z,290nm,1.0s
SSB Saint Sauveur 64.06 309 ⇑P **P** **06 55 54.1 -0.6**
LRW Lerwick 64.08 326 ⇑*eP* **P** **06 55 54.2 -0.3**
LRW Lerwick 64.08 326 ⇑P **P** **06 55 54.3 -0.3**
MORW Morawa 64.26 150 P **P** **06 55 55.7 -0.3**
MORW Morawa 64.26 150 ⇓P **P** **06 55 54.9 -1.2**
CMAH Djebel Manchou 64.31 299 P **P** **06 55 56.5 0.0**
ABSA Djebel Ababsia 64.37 299 P **P** **06 55 57.5 +0.5**
WACR West Acre 64.74 318 ⇑*eP* **P** **06 55 58.6 -0.3**
WACR IAmb IAmb 06 56 00.2

comp=Z,1μm,0.9s
CKFL Kef-Lekhel 64.91 299 P **P** **06 56 00.7 +0.1**
LMK Market Rasen 65.12 319 ⇑*eP* **P** **06 56 01.4 0.0**
LMK IAMs_20 IAMs_20 07 27 19.1

comp=Z,158μm,15.9s
CASM Ain Smara 65.13 299 P **P** **06 56 02.1 +0.2**
GDLE Glaisdale, N Y 65.16 320 ⇑*eP* **P** **06 56 01.2 -0.5**
GDLE IAMs_20 IAMs_20 07 29 20.4

comp=Z,143μm,14.9s
CTEI Djebel Teioual 65.26 299 P **P** **06 56 03.4 +0.6**
DRUM Mains of Drumt 65.47 323 ⇑*eP* **P** **06 56 03.4 -0.2**
DFRA Djebel Bou Aff 65.52 300 P **P** **06 56 05.0 +0.5**
MLA1 Latheron 65.59 325 ⇑*eP* **P** **06 56 04.3 -0.1**
EDMD Edmundbyers 65.71 321 ⇑*eP* **P** **06 56 04.8 -0.4**
EDMD IAMs_20 IAMs_20 07 27 51.5

comp=Z,162μm,14.4s
MCD Coleburn Disti 65.71 324 ⇑*eP* **P** **06 56 05.3 +0.1**
MAHO Mahon 65.72 304 *eP* **P** **06 56 05.3 -0.3**
MAHO Mahon 65.72 304 ⇑P **P** **06 56 05.5 -0.1**
HPK Haverah Park 65.74 320 ⇑*eP* **P** **06 56 05.2 -0.2**
HPK IAMs_20 IAMs_20 07 29 39.9

comp=Z,127μm,16.3s
ESY Stoneypath 65.79 322 ⇑*eP* **P** **06 56 05.3 -0.5**
BIGH Upper Bighouse 65.82 325 ⇑*eP* **P** **06 56 05.8 0.0**
BIGH IAMs_20 IAMs_20 07 26 17.0

comp=Z,307μm,16.9s
DAG Danmarks Havn 65.83 346 *i* P **P** **06 56 05.8 +0.1**
DAG IAmb IAmb 06 56 07.1

comp=Z,326nm,1.0s
DAG Danmarks Havn 65.83 346 *i* P **P** **06 56 05.7 +0.1**
DAG pmax pmax

comp=Z,330nm,1.0s
DAG Danmarks Havn 65.83 346 ⇓P **P** **06 56 05.4 -0.3**
EDU Dundee 65.85 323 *eP* **P** **06 56 05.1 -0.9**
LBWR Ladybower, Pea 65.94 319 ⇑*eP* **P** **06 56 06.2 -0.5**
AIS Amsterdam Isla 65.97 186 ⇓P P 06 56 14.5 +7.6
SET Setif 65.99 299 P **P** **06 56 08.0 +0.5**
EBL Broad Law 66.06 322 ⇑*eP* **P** **06 56 07.1 -0.4**
EDI Edinburgh 66.10 322 ⇑*eP* **P** **06 56 07.4 -0.3**
EBH Black Hill 66.19 322 ⇑*eP* **P** **06 56 07.3 -1.0**
WOL Wolverton 66.20 317 *eP* **P** **06 56 08.2 -0.2**
ESK Eskdalemuir 66.27 321 P **P** **06 56 08.4 -0.5**
ESK pmax pmax

comp=Z,452nm,1.2s
ESK Eskdalemuir 66.27 321 P **P** **06 56 08.4 -0.5**
ESK IAmb IAmb 06 56 14.7

comp=Z,452nm,1.2s
STNC Stoke 66.30 319 *eP* **P** **06 56 09.4 +0.3**
STNC IAMs_20 IAMs_20 07 27 55.5

comp=Z,106μm,16.5s
MDO Dochfour 66.33 324 ⇑*eP* **P** **06 56 08.8 -0.3**
KESW Keswick, Cumbr 66.41 321 ⇑*eP* **P** **06 56 09.7 -0.1**
KESW IAMs_20 IAMs_20 07 28 06.8

comp=Z,120μm,15.2s
INVG Invergeldie, C 66.43 323 *eP* **P** **06 56 09.3 -0.5**
STRD Stroud 66.64 317 ⇑*eP* **P** **06 56 10.8 -0.4**
STRD IAmb IAmb 06 56 12.2

comp=Z,605nm,1.1s
STRD IAMs_20 IAMs_20 07 28 54.9

comp=Z,177μm,15.3s
EAB Aberfoyle 66.65 322 ⇑*eP* **P** **06 56 11.0 -0.2**
KAC Achnashellach 66.80 324 ⇑*eP* **P** **06 56 11.7 -0.5**
PGBU Glenifferbraes 66.83 322 ⇑*eP* **P** **06 56 12.3 -0.1**
PGBU IAMs_20 IAMs_20 07 32 31.5

comp=Z,142μm,17.7s
NEWG New Galloway 66.89 321 ⇑*eP* **P** **06 56 12.7 0.0**
NEWG IAMs_20 IAMs_20 07 29 08.2

comp=Z,126μm,15.6s
OLDB Oldbury-Upon-S 66.90 317 *eP* **P** **06 56 12.3 -0.6**
OLDB IAMs_20 IAMs_20 07 29 11.0

comp=Z,189μm,15.8s
FOEL Foel Wylfa 66.94 319 ⇑*eP* **P** **06 56 12.2 -0.9**
MONM Monmouth 67.00 318 ⇑*eP* **P** **06 56 13.0 -0.6**
MONM IAmb IAmb 06 56 14.5

comp=Z,464nm,0.9s
KPL Plockton 67.03 324 *eP* **P** **06 56 13.1 -0.5**
KPL IAMs_20 IAMs_20 07 28 51.4

comp=Z,90μm,17.7s
MCH1 Michaelchurch 67.07 318 ⇑*eP* **P** **06 56 13.6 -0.4**
MCH1 IAmb IAmb 06 56 14.6

comp=Z,329nm,0.9s
MCH1 Michaelchurch 67.07 318 ⇑P **P** **06 56 13.8 -0.2**
DBG Daneborg 67.09 343 *i* P **P** **06 56 13.7 -0.1**
DBG IAmb IAmb 06 56 20.3

comp=Z,137nm,1.2s
GAL1 Galloway 67.23 321 ⇑*eP* **P** **06 56 14.7 -0.2**
GAL1 IAMs_20 IAMs_20 07 30 37.7

comp=Z,134μm,15.6s
JQE Queens East 67.30 315 *eP* **P** **06 56 14.8 -0.7**
IOMK Kirk Michael 67.32 321 *eP* **P** **06 56 15.1 -0.4**
IOMK IAMs_20 IAMs_20 07 28 43.9

comp=Z,247μm,15.5s
JLP Les Platons 67.33 315 *eP* **P** **06 56 15.0 -0.7**
JSA Saint Aubin 67.39 315 ⇑P **P** **06 56 14.4 -1.6**
JVM Valle D.L. Mar 67.40 315 *eP* **P** **06 56 15.3 -0.8**
LEWI Lewis, Hebride 67.42 325 *eP* **P** **06 56 16.0 -0.1**
LEWI IAMs_20 IAMs_20 07 27 20.5

comp=Z,129μm,17.7s
WIM Isle of Man 67.42 320 *eP* **P** **06 56 15.8 -0.4**
YLL Llanberis 67.43 319 ⇑*eP* **P** **06 56 16.2 -0.1**
WME Myndd Eilian 67.43 320 ⇑*eP* **P** **06 56 16.1 -0.1**
WRKA Warakurna 67.43 137 ⇑P **P** **06 56 16.6 0.0**
WLF1 Llynfaes 67.51 319 *eP* **P** **06 56 16.7 -0.1**
WLF1 IAmb IAmb 06 56 17.2

comp=Z,5μm,0.7s
WLF1 IAMs_20 IAMs_20 07 30 51.8

comp=Z,272μm,14.5s
WPS Cemaes, Angles 67.54 320 *eP* **P** **06 56 16.6 -0.3**
WPS IAmb IAmb 06 56 17.6

comp=Z,1μm,0.8s
WB0 Warramunga Arr 67.56 129 P **P** **06 56 17.3 -0.3**
YRC Rhoscolyn 67.62 319 ⇑*eP* **P** **06 56 17.5 +0.1**
WRA Warramunga Arr 67.65 129 P **P** **06 56 18.1 0.0**
comp=Z,118nm,0.7s,baz=321,slow=6.3,SNR=98
WRA S **S** **07 05 16.8 +1.8**
comp=Z,23nm,1.4s,baz=296,slow=14,SNR=5.9
WRA PKPPKP **P'P'df** **07 24 36.0 -1.8**
comp=Z,14nm,1.1s,baz=126,slow=3.1,SNR=5.6
WRA Warramunga Arr 67.65 129 ⇓*eP* **P** **06 56 17.8 -0.3**
WRAB Tennant Creek 67.65 129 ⇓*eP* **P** **06 56 17.9 -0.2**
WRAB pmax pmax

comp=Z,2μm,1.6s
WRAB MLR MLR

comp=Z,45μm,17.0s
SMY Shemya 67.69 41 P **P** **06 56 17.9 +0.1**
SMY pmax pmax

comp=Z,659nm,1.0s
SMY Shemya 67.69 41 P **P** **06 56 17.9 +0.1**
SMY IAmb IAmb 06 56 24.2

comp=Z,659nm,1.0s
SMY Shemya 67.69 41 ⇑P **P** **06 56 18.0 +0.1**
NWAO Narrogin (SRO) 68.10 151 P **P** **06 56 19.4 -1.2**
NWAO Narrogin (SRO) 68.10 151 P **P** **06 56 19.4 -1.2**
DYA Yadsworthy 68.10 316 ⇓*eP* **P** **06 56 19.8 -0.7**
DYA IAMs_20 IAMs_20 07 29 45.0

comp=Z,158μm,15.0s
RSBS Rosebush, Pemb 68.12 318 *eP* **P** **06 56 20.2 -0.4**
RSBS IAmb IAmb 06 56 21.8

comp=Z,268nm,0.9s
RSBS IAMs_20 IAMs_20 07 33 22.3

comp=Z,124μm,16.3s
HTL Hartland 68.26 317 *eP* **P** **06 56 21.2 -0.3**
HTL IAMs_20 IAMs_20 07 28 50.7

comp=Z,133μm,17.7s
DSB Dublin 68.66 320 P **P** **06 56 23.9 -0.1**
DSB Dublin 68.66 320 ⇑P **P** **06 56 24.2 +0.2**
EBNR Beni Rached 68.92 301 P **P** **06 56 26.2 +0.2**
CCA1 Carnmenellis 68.97 316 ⇑*eP* **P** **06 56 25.4 -0.6**
CCA1 IAMs_20 IAMs_20 07 30 27.0

comp=Z,234μm,16.3s
ECHA Ech Chlef 69.09 301 P **P** **06 56 27.1 +0.2**
SCO Scoresbysund 69.12 340 *i* P **P** **06 56 27.0 +0.5**
SCO IAmb IAmb 06 56 28.9

comp=Z,62nm,1.1s
SCO Scoresbysund 69.12 340 *i* P **P** **06 56 27.0 +0.5**
SCO pmax pmax

comp=Z,62nm,1.1s
SCO Scoresbysund 69.12 340 P **P** **06 56 27.0 +0.5**
SCO IAmb IAmb 06 56 33.7

comp=Z,444nm,1.5s
LSZ Lusaka 69.79 239 P **P** **06 56 30.8 -0.8**
LSZ pmax pmax

comp=Z,335nm,0.8s
LSZ Lusaka 69.79 239 P **P** **06 56 30.8 -0.8**
LSZ IAmb IAmb 06 56 40.7

comp=Z,334nm,0.8s
AS31 Alice Springs 69.94 132 P **P** **06 56 31.9 -0.4**
ASAR Alice Springs 69.94 132 P **P** **06 56 31.8 -0.5**
comp=Z,54nm,0.7s,baz=316,slow=6.1,SNR=75
ASAR S **S** **07 05 43.1 +1.0**
comp=Z,35nm,1.2s,baz=306,slow=11,SNR=12
ASAR PKPPKP **P'P'df** **07 24 30.9 -2.6**
comp=Z,8.2nm,0.9s,baz=147,slow=2.8,SNR=7.1
ASAR Alice Springs 69.94 132 P **P** **06 56 32.5 +0.2**
COEN Coen 70.28 119 ⇑P **P** **06 56 34.2 -0.3**
CART Cartagena 70.37 303 *eP* **P** **06 56 34.5 -0.3**
CART Cartagena 70.37 303 P **P** **06 56 34.9 +0.1**
CART IAmb IAmb 06 56 35.9

comp=Z,527nm,0.8s
CART Cartagena 70.37 303 ⇑P **P** **06 56 34.5 -0.3**
TAM Tamanrasset 70.62 286 P **P** **06 56 37.0 +0.2**
TAM pmax pmax

comp=Z,389nm,1.0s
TAM Tamanrasset 70.62 286 P **P** **06 56 37.0 +0.2**
TAM IAmb IAmb 06 56 38.7

comp=Z,389nm,1.0s
TAM Tamanrasset 70.62 286 ⇓P **P** **06 56 37.1 +0.3**
PMG Port Moresby 70.82 112 P **P** **06 56 38.1 +0.3**
PMG pmax pmax

comp=Z,361nm,1.0s
PMG Port Moresby 70.82 112 P **P** **06 56 38.1 +0.3**
PMG IAmb IAmb 06 56 48.1

comp=Z,361nm,1.0s
PMG Port Moresby 70.82 112 ⇑P **P** **06 56 38.3 +0.4**
UCM Universidad Co 71.03 306 *eP* **P** **06 56 38.9 0.0**
AMKA Amchitka 71.17 41 P **P** **06 56 39.3 -0.1**
VAL Valentia 71.32 319 ⇑P **P** **06 56 41.0 +0.7**
NEEM North Greenlan 71.38 351 ⇑*iP* **P** **06 56 41.1 +0.5**
NEEM IAmb IAmb 06 56 42.2

comp=Z,980nm,0.9s
TNA Tin City 71.45 25 ⇓P **P** **06 56 42.3 +1.5**
TNA Tin City 71.45 25 P 06 56 42.2
baz=297,SNR=22
FORT Forrest 71.65 142 ⇓P **P** **06 56 42.5 -0.1**
ESDC Sonseca Array 71.78 306 P **P** **06 56 42.8 -0.6**
comp=Z,142nm,0.9s,baz=54,slow=6.4,SNR=247
ESDC PKPPKP **P'P'df** **07 24 33.0 -5.4**
comp=Z,1.2nm,1.2s,baz=313,slow=22,SNR=4.2
ESDC Sonseca Array 71.78 306 P **P** **06 56 43.0 -0.4**
ESDC IAmb IAmb 06 56 49.4

comp=Z,542nm,1.4s
EUNU Eureka 71.90 358 P **P** **06 56 43.3 -0.2**
EUNU IAmb IAmb 06 56 45.6

comp=Z,737nm,0.9s
RDOG Red Dog Mine 71.98 21 P **P** **06 56 44.9 +0.9**
RDOG IAmb IAmb 06 56 54.9

comp=Z,733nm,1.3s
RDOG Red Dog Mine 71.98 21 P 06 56 45.1
baz=301
A21K Barrow 72.03 17 P **P** **06 56 44.5 +0.3**
A21K IAmb IAmb 06 56 46.4

comp=Z,697nm,0.9s
A21K Barrow 72.03 17 P 06 56 45.1
baz=305,SNR=58
PAB San Pablo 72.10 306 P **P** **06 56 45.0 -0.4**
PAB pmax pmax

comp=Z,531nm,1.2s
PAB San Pablo 72.10 306 P **P** **06 56 45.0 -0.4**
PAB IAmb IAmb 06 56 52.2

comp=Z,531nm,1.2s
PAB San Pablo 72.10 306 ⇑P **P** **06 56 45.3 -0.1**
RABL Rabaul 72.21 105 P **P** **06 56 47.1 +0.7**
RABL IAmb IAmb 06 57 05.1

comp=Z,428nm,1.2s
PATS Pohnpei 72.24 92 P **P** **06 56 46.1 -0.4**
SUMG Summit 72.44 345 *iP* **P** **06 56 48.0 +0.8**
SUMG IAmb IAmb 06 56 52.3

comp=Z,668nm,1.0s
SUMG Summit 72.44 345 P **P** **06 56 47.5 +0.2**
SUMG pmax pmax

comp=Z,2μm,1.2s
SUMG Summit 72.44 345 P **P** **06 56 47.5 +0.2**
SUMG Summit 72.44 345 ⇓P **P** **06 56 47.5 +0.2**
MELI Melilla 72.66 301 *eP* **P** **06 56 48.8 +0.1**
ANM Nome 72.88 25 P **P** **06 56 49.9 +0.4**
ANM pmax pmax

comp=Z,681nm,1.3s
ANM Nome 72.88 25 P **P** **06 56 49.9 +0.4**
ANM IAmb IAmb 06 56 57.4

comp=Z,681nm,1.3s
ANM Nome 72.88 25 P 06 56 50.6
baz=300,SNR=94
PBRG Braganca 72.93 309 *eP* **P** **06 56 50.4 +0.1**
comp=Z,546nm,1.8s
EMAL Malaga-Limoner 73.22 303 *eP* **P** **06 56 50.9 -1.1**
MVO Moncorvo 73.38 308 *eP* **P** **06 56 53.3 +0.3**
comp=Z,687nm,1.3s
PVLZ Peæn de 73.74 301 *eP* **P** **06 56 55.9 +0.9**
PVRL Vila Real 73.81 308 *eP* **P** **06 56 55.4 -0.1**
comp=Z,488nm,1.5s
POLO Lamas de Olo 73.83 308 *eP* **P** **06 56 55.8 +0.2**
comp=Z,177nm,1.3s
PCAB Cabril 73.85 309 *eP* **P** **06 56 55.9 +0.2**
comp=Z,883nm,1.5s
PGAV Gavieira, Arco 73.92 309 *eP* **P** **06 56 56.6 +0.4**
comp=Z,748nm,1.6s
MTE Manteigas 74.04 307 *eP* **P** **06 56 57.3 +0.5**
comp=Z,1μm,1.3s
MTE Manteigas 74.04 307 P **P** **06 56 57.0 +0.1**
MTE IAmb IAmb 06 56 58.6

comp=Z,532nm,1.0s
MTE Manteigas 74.04 307 ⇓P **P** **06 56 57.1 +0.3**
PVIS Viseu 74.16 308 *eP* **P** **06 56 58.2 +0.7**
comp=Z,942nm,1.5s
WAKE Wake Island 74.16 76 P **P** **06 56 56.8 -0.9**
PCBR Castelo Branco 74.21 307 *eP* **P** **06 56 58.0 +0.2**
comp=Z,536nm,1.4s
CEU Ceuta 74.25 302 *eP* **P** **06 56 56.4 -1.6**
TULEG Thule 74.28 354 ⇑*iP* **P** **06 56 56.8 -0.6**
TULEG IAmb IAmb 06 56 58.4
comp=Z,504nm,0.9s
TULEG Thule 74.28 354 P **P** **06 56 56.6 -0.9**
TULEG IAmb IAmb 06 57 00.5

comp=Z,470nm,0.9s
PMRV Marv??o 74.32 307 *eP* **P** **06 56 58.7 +0.3**
comp=Z,605nm,1.6s
SPIA Saint Paul Isl 74.33 33 P 06 56 58.6
baz=298
PBAR Barrancos 74.57 305 *eP* **P** **06 57 00.0 +0.1**
comp=Z,2μm,1.5s
SFS San Fernando 74.65 303 P **P** **06 57 00.5 +0.2**
SFS pmax pmax

comp=Z,3μm,1.4s
SFS San Fernando 74.65 303 *eP* **P** **06 56 59.8 -0.5**
SFS San Fernando 74.65 303 P **P** **06 57 00.5 +0.2**
SFS San Fernando 74.65 303 ⇑P **P** **06 57 00.7 +0.3**
PESTR Estremoz 74.68 306 *eP* **P** **06 57 00.6 0.0**
comp=Z,450nm,1.7s
PESTR Estremoz 74.68 306 P **P** **06 57 00.2 -0.4**
PESTR Estremoz 74.68 306 ⇑P **P** **06 56 60.0 -0.6**
COI Coimbra 74.72 308 P **P** **06 57 01.0 +0.3**
COI pmax pmax

comp=Z,594nm,1.2s
COI Coimbra 74.72 308 *eP* **P** **06 57 01.4 +0.7**
comp=Z,1μm,1.7s
COI Coimbra 74.72 308 P **P** **06 57 00.9 +0.3**
COI IAmb IAmb 06 57 07.0

comp=Z,594nm,1.2s
PCAS Casmilo, Conde 74.85 307 *eP* **P** **06 57 01.8 +0.3**
comp=Z,542nm,1.8s
ICESG Greenland Ices 75.01 342 ⇑*iP* **P** **06 57 02.8 +0.5**
ICESG IAmb IAmb 06 57 04.3

comp=Z,840nm,1.0s
IFR Ifrane 75.02 300 *eP* **P** **06 57 03.6 +0.8**
PMTG Montargil 75.06 306 *eP* **P** **06 57 02.7 0.0**
comp=Z,730nm,1.5s
EVO Evora 75.12 306 *eP* **P** **06 57 03.3 +0.3**
EVO Evora 75.12 306 *eP* **P** **06 57 03.6 +0.5**
comp=Z,959nm,1.5s
PBEJ Beja 75.22 305 *eP* **P** **06 57 03.8 +0.1**
comp=Z,168nm,1.2s
PSBE So Bento 75.28 307 *eP* **P** **06 57 04.9 +0.9**
comp=Z,1μm,1.4s
PVAQ Vaqueiros 75.37 305 *eP* **P** **06 57 04.8 +0.2**
comp=Z,2μm,1.4s
PVAQ Vaqueiros 75.37 305 P **P** **06 57 04.7 +0.2**
PVAQ IAmb IAmb 06 57 06.0

comp=Z,687nm,1.0s
PCVE Castro Verde 75.51 305 *eP* **P** **06 57 05.6 +0.3**
comp=Z,644nm,2.0s
PBDV Barranco-do-Ve 75.59 305 *eP* **P** **06 57 06.6 +0.8**
comp=Z,2μm,1.4s
TOLK Toolik Lake Re 75.60 18 P **P** **06 57 06.0 +0.7**
TOLK Toolik Lake Re 75.61 18 P 06 57 06.3
baz=312,SNR=197
PMAFR Mafra 75.85 307 *eP* **P** **06 57 08.1 +0.8**
comp=Z,1μm,1.3s
LIS Lisbon 75.86 306 *eP* **P** **06 57 07.2 -0.1**
LIS IAmb IAmb 06 57 12.5

comp=Z,894nm,1.2s
LIS Lisbon 75.86 306 *eP* **P** **06 57 07.2 -0.1**
LIS Lisbon 75.86 306 *eP* **P** **06 57 08.4 +1.1**
comp=Z,1μm,1.5s
PMST Lisbon--Monsan 75.87 306 *eP* **P** **06 57 08.3 +0.9**
comp=Z,1μm,1.6s
UPNV Upernavik 75.88 349 *i* P **P** **06 57 06.8 0.0**
UPNV IAmb IAmb 06 57 08.2

comp=Z,314nm,1.0s
PTEO Sao Teotonio 76.04 305 *eP* **P** **06 57 09.2 +0.9**
comp=Z,1μm,2.1s
MORF Marmelete 76.09 305 *eP* **P** **06 57 08.7 0.0**
MORF IAmb IAmb 06 57 14.9

comp=Z,791nm,1.5s
MORF Marmelete 76.09 305 *eP* **P** **06 57 08.7 0.0**
MORF Marmelete 76.09 305 *eP* **P** **06 57 09.4 +0.7**
comp=Z,739nm,1.5s
MORF Marmelete 76.09 305 ⇑P **P** **06 57 07.8 -0.9**
IMAR Indian Mountai 76.11 21 P **P** **06 57 08.4 +0.2**
RTC Rabat Centre 76.14 301 P **P** **06 57 09.1 +0.1**
PFVI Vila Bisbo 76.29 305 *eP* **P** **06 57 10.6 +0.8**
comp=Z,1μm,1.6s
PFVI Vila Bisbo 76.29 305 P **P** **06 57 09.7 -0.1**
CTAO Charters Tower 76.30 122 P **P** **06 57 10.4 +0.4**
CTAO Charters Tower 76.30 122 P **P** **06 57 10.3 +0.4**
CTAO Charters Tower 76.30 122 ⇑P **P** **06 57 10.1 +0.1**
COLD Coldfoot 76.38 19 P **P** **06 57 10.2 +0.4**
COLD IAmb IAmb 06 57 12.3

comp=Z,743nm,1.0s
COLD Coldfoot 76.38 19 P 06 57 10.7
baz=312,SNR=232
ANGG Ammassalik, Gr 76.69 339 *i* P **P** **06 57 11.3 -0.1**
ANGG IAmb IAmb 06 57 17.2

comp=Z,1μm,1.3s
AVE Averroes 76.86 301 *eP* **P** **06 57 12.9 -0.1**
AVE Averroes 76.86 301 ⇑P **P** **06 57 13.1 0.0**
ISOG Isortoq, Green 77.15 339 *i* P **P** **06 57 13.6 -0.5**
ISOG IAmb IAmb 06 57 19.4

comp=Z,44nm,1.1s
TTA Tatalina 77.25 24 ⇑P **P** **06 57 15.7 +0.9**
TTA Tatalina 77.25 24 P 06 57 16.2
baz=308,SNR=108
MLY Manley 77.69 21 P 06 57 18.0
baz=312,SNR=235
BBOO Buckleboo 77.73 138 P **P** **06 57 18.2 +0.5**
LBTB Lobatse 77.75 233 P **P** **06 57 18.2 +0.1**
LBTB pmax pmax

comp=Z,1μm,1.3s
LBTB Lobatse 77.75 233 P **P** **06 57 18.2 +0.1**
LBTB IAmb IAmb 06 57 30.0

comp=Z,1000nm,1.2s
CHUM Lake Minchumin 77.93 22 P 06 57 19.8
baz=311,SNR=165
TOA0 Torodi Ar. Sit 77.95 279 P **P** **06 57 18.6 -0.8**
TORD Torodi Ar. Bea 77.95 279 P **P** **06 57 18.8 -0.7**
comp=Z,109nm,0.8s,baz=51,slow=4.8,SNR=144
TORD PP **PP** **07 00 19.9 +4.5**
comp=Z,30nm,1.0s,baz=63,slow=7.2,SNR=3.7
TORD PKPPKP **P'P'df** **07 24 23.8 -1.8**
comp=Z,2.8nm,1.1s,baz=267,slow=3.0,SNR=3.8
TORD Torodi Ar. Bea 77.95 279 P **P** **06 57 18.6 -0.8**
I23K Minto, Yukon-K 78.04 21 P **P** **06 57 19.2 +0.2**
I23K Minto, Yukon-K 78.04 21 P 06 57 20.1
baz=313,SNR=184
AKUT Akutan 78.05 35 ⇓P **P** **06 57 18.3 -1.0**
BPAW Bear Paw Mtn. 78.23 22 P **P** **06 57 21.0 +0.8**
BPAW IAmb IAmb 06 57 27.4

comp=Z,867nm,1.2s
BPAW Bear Paw Mtn. 78.23 22 P 06 57 20.5
baz=312,SNR=177
CAST Castle Rocks 78.32 23 P 06 57 22.3
baz=311,SNR=11
NEA2 Nenana 78.51 21 P **P** **06 57 21.8 +0.1**
NEA2 Nenana 78.51 21 P 06 57 21.9
baz=313,SNR=366
MDM Murphy Dome 78.52 20 P **P** **06 57 21.9 +0.1**
KTH Kantishna Hill 78.62 22 P **P** **06 57 23.1 +0.6**
KTH IAmb IAmb 06 57 30.4

comp=Z,898nm,1.2s
PPLA Purkeypile 78.62 23 P 06 57 23.4
baz=311,SNR=67
DY2G Dye2 78.64 342 ⇑*iP* **P** **06 57 22.8 +0.1**
DY2G IAmb IAmb 06 57 29.1

comp=Z,356nm,1.2s
POKR Poker Plat Res 78.65 20 P **P** **06 57 22.7 +0.3**
POKR IAmb IAmb 06 57 27.2

comp=Z,646nm,0.8s
POKR Poker Plat Res 78.65 20 P 06 57 23.0
baz=315,SNR=118
BWN Browne 78.67 21 P **P** **06 57 23.4 +0.8**
TCOL CIGO, UAF Yank 78.69 20 P 06 57 23.1
baz=314,SNR=80
COLA College 78.69 20 ⇑*iP* **P** **06 57 23.7 +1.0**
COLA pmax pmax

comp=Z,3μm,2.7s
COLA MLR MLR

comp=Z,48μm,17.0s
COLA College 78.69 20 ⇓P **P** **06 57 23.1 +0.5**
COLA College 78.69 20 P 06 57 23.1
baz=314
FALS False Pass 78.82 33 P 06 57 21.8
baz=303
QLP Quilpie 78.83 128 ⇑P **P** **06 57 24.6 +0.5**
CCB Clear Creek Bu 78.87 20 P **P** **06 57 23.2 -0.4**
CCB IAmb IAmb 06 57 30.1

comp=Z,482nm,1.1s

TRF	**Thorofare Moun**	**78.90**	**22**	P		**P**		**06 57 24.0**	**-0.1**
TRF	**Thorofare Moun**	**78.90**	**22**	P				06 57 23.9	
	baz=312,SNR=46								
WRH	**Wood River Hil**	**78.90**	**21**	P		**P**		**06 57 23.3**	**-0.5**
PRP	**Porcupine Dome**	**78.93**	**19**	P		**P**		**06 57 24.5**	**+0.4**
PRP	**Porcupine Dome**	**78.93**	**19**	P				06 57 24.5	
	baz=316								
IL31		**79.06**	**20**	P		**P**		**06 57 24.6**	**-0.1**
IL31				IAmb		IAmb		06 57 26.0	
	comp=Z,377nm,0.9s								
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**		**06 57 24.0**	**-0.7**
	comp=Z,280nm,0.9s,baz=306,slow=4.1,SNR=384								
ILAR				PP		**PP**		**07 00 22.2**	**-1.0**
	comp=Z,61nm,1.0s,baz=308,slow=7.7,SNR=4.7								
ILAR				PKPPKP		P'P'df		07 24 13.7	-12
	comp=Z,2.1nm,1.1s,baz=159,slow=1.4,SNR=5.1								
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**		**06 57 24.6**	**-0.1**
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**		**06 57 24.6**	**-0.1**
MCK	**McKinley**	**79.15**	**21**	P		**P**		**06 57 25.5**	**+0.2**
MCK				pmax		pmax			
	comp=Z,1μm,1.4s								
MCK	**McKinley**	**79.15**	**21**	P		**P**		**06 57 25.5**	**+0.2**
MCK				IAmb		IAmb		06 57 32.9	
	comp=Z,1μm,1.4s								
MCK	**McKinley**	**79.15**	**21**	P				06 57 25.4	
	baz=314,SNR=84								
HDA	**Harding Lake**	**79.30**	**20**	P				06 57 25.1	
	baz=315,SNR=116								
HDA				P				06 57 25.1	
	baz=315,SNR=116								
SFJD	**Kangerlussuaq**	**79.38**	**344**	⇑*i*P		**P**		**06 57 26.3**	**-0.1**
SFJD				IAmb		IAmb		06 57 29.6	
	comp=Z,144nm,0.9s								
SFJD	**Kangerlussuaq**	**79.38**	**344**	⇑*i*P		**P**		**06 57 26.3**	**-0.1**
SFJD				pmax		pmax			
	comp=Z,140nm,0.9s								
SFJD	**Kangerlussuaq**	**79.38**	**344**	P		**P**		**06 57 26.1**	**-0.3**
SFJD				IAmb		IAmb		06 57 29.6	
	comp=Z,396nm,0.9s								
SFJD	**Kangerlussuaq**	**79.38**	**344**	⇓P		**P**		**06 57 26.1**	**-0.3**
SKT	**Skwentna**	**79.46**	**24**	P		**P**		**06 57 26.6**	**-0.3**
SKT	**Skwentna**	**79.46**	**24**	P				06 57 27.0	
	baz=312,SNR=314								
CUT	**Chulitna**	**79.61**	**23**	P		**P**		**06 57 28.0**	**+0.2**
CUT				IAmb		IAmb		06 57 38.5	
	comp=Z,1μm,1.3s								
CUT	**Chulitna**	**79.61**	**23**	P				06 57 28.5	
	baz=313,SNR=34								
INK	**Inuvik**	**79.72**	**14**	P		**P**		**06 57 28.1**	**-0.1**
	comp=Z,434nm,0.9s,baz=338,slow=6.7,SNR=326								
INK	**Inuvik**	**79.72**	**14**	P				06 57 28.2	
	baz=326,SNR=237								
SPCR	**Spurr Chakacha**	**79.73**	**24**	P				06 57 29.8	
	baz=311,SNR=80								
WAT2	**Susitna Watana**	**79.80**	**22**	P				06 57 28.3	
	baz=314								
HTT	**Hallett**	**79.88**	**137**	⇑P		**P**		**06 57 29.5**	**-0.1**
SDPT	**Sand Point**	**79.93**	**32**	P		**P**		**06 57 29.3**	**-0.3**
SDPT	**Sand Point**	**79.93**	**32**	P				06 57 28.9	
	baz=306,SNR=9.8								
RSO	**Redoubt South**	**80.02**	**25**	P		**P**		**06 57 31.1**	**+0.9**
SUA	**Susitna One**	**80.08**	**24**	P		**P**		**06 57 30.6**	**+0.2**
SUA				IAmb		IAmb		06 57 34.9	
	comp=Z,909nm,1.0s								
SUA	**Susitna One**	**80.08**	**24**	P				06 57 30.5	
	baz=312,SNR=173								
BOSA	**Boshof**	**80.25**	**230**	P		**P**		**06 57 30.6**	**-1.3**
	comp=Z,62nm,0.8s,baz=52,slow=4.7,SNR=57								
BOSA				PKPPKP		**P'P'df**		**07 24 21.9**	**+6.0**
	comp=Z,11nm,1.2s,baz=191,slow=3.8,SNR=4.5								
BOSA	**Boshof**	**80.25**	**230**	P		**P**		**06 57 31.4**	**-0.5**
BOSA				pmax		pmax			
	comp=Z,757nm,1.3s								
BOSA	**Boshof**	**80.25**	**230**	P		**P**		**06 57 31.4**	**-0.5**
BOSA				IAmb		IAmb		06 57 43.3	
	comp=Z,757nm,1.3s								
TSUM	**Tsumeb**	**80.27**	**242**	P		**P**		**06 57 31.6**	**-0.5**
TSUM	**Tsumeb**	**80.27**	**242**	⇓P		**P**		**06 57 32.3**	**+0.2**
WAT6	**Susitna Watana**	**80.34**	**22**	P				06 57 31.7	
	baz=315,SNR=152								
CAPN	**Captain Cook N**	**80.41**	**24**	P				06 57 34.7	
	baz=312,SNR=14								
STKA	**Stephens Creek**	**80.50**	**134**	P		**P**		**06 57 32.6**	**-0.3**
	comp=Z,414nm,1.0s,baz=79,slow=0.4,SNR=7.2								
STKA				S		**S**		**07 07 38.0**	**-1.1**
	comp=Z,39nm,1.3s,baz=187,slow=19,SNR=7.0								
STKA				PKPPKP		**P'P'df**		**07 24 21.9**	**+7.1**
	comp=Z,4.5nm,1.0s,baz=133,slow=7.4,SNR=3.2								
SCRK	**Sand Creek**	**80.51**	**20**	P		**P**		**06 57 32.8**	**0.0**
SCRK				IAmb		IAmb		06 57 37.1	
	comp=Z,885nm,0.9s								
SCRK	**Sand Creek**	**80.51**	**20**	P				06 57 32.8	
	baz=318,SNR=440								
GHO	**Glory Hole Cre**	**80.51**	**23**	P		**P**		**06 57 33.2**	**+0.5**
C36M	**Paulatuk**	**80.52**	**10**	P		**P**		**06 57 32.4**	**-0.1**
C36M	**Paulatuk**	**80.52**	**10**	P				06 57 32.2	
	baz=334								
PMR	**Palmer**	**80.56**	**23**	P		**P**		**06 57 32.4**	**-0.5**
PMR				pmax		pmax			
	comp=Z,677nm,1.0s								
PMR	**Palmer**	**80.56**	**23**	P		**P**		**06 57 32.4**	**-0.5**
PMR				IAmb		IAmb		06 57 34.9	
	comp=Z,677nm,1.0s								
PMR	**Palmer**	**80.56**	**23**	P				06 57 32.8	
	baz=314,SNR=227								
EPYK	**Eagle Plains**	**80.60**	**16**	P		**P**		**06 57 32.6**	**-0.5**
EPYK				IAmb		IAmb		06 57 34.7	
	comp=Z,666nm,0.8s								
EPYK	**Eagle Plains**	**80.60**	**16**	P				06 57 32.7	
	baz=324,SNR=252								
SML	**Sawmill**	**80.69**	**23**	P				06 57 33.3	
	baz=314,SNR=377								
RC01	**Rabbit Creek A**	**80.70**	**24**	P		**P**		**06 57 33.7**	**0.0**
RC01	**Rabbit Creek A**	**80.70**	**24**	P				06 57 33.9	
	baz=313,SNR=90								
EGAK	**Eagle**	**80.71**	**18**	P		**P**		**06 57 34.0**	**+0.4**
EGAK				IAmb		IAmb		06 57 40.8	
	comp=Z,587nm,1.0s								
EGAK	**Eagle**	**80.71**	**18**	P				06 57 33.7	
	baz=320,SNR=221								
DOT	**Dot Lake**	**80.73**	**20**	P		**P**		**06 57 33.8**	**0.0**
DOT				IAmb		IAmb		06 57 37.1	
	comp=Z,808nm,1.3s								
PAX	**Paxson**	**80.79**	**21**	P		**P**		**06 57 34.2**	**-0.1**
PAX				pmax		pmax			
	comp=Z,584nm,1.1s								
PAX	**Paxson**	**80.79**	**21**	P		**P**		**06 57 34.2**	**-0.1**
PAX				IAmb		IAmb		06 57 38.0	
	comp=Z,584nm,1.1s								
PAX	**Paxson**	**80.79**	**21**	P				06 57 34.5	
	baz=317,SNR=241								
KNK	**Knik Glacier**	**80.92**	**23**	P				06 57 35.2	
	baz=314								
HOM	**Homer**	**80.97**	**25**	P				06 57 36.4	
	baz=312,SNR=8.7								
K27K	**Chicken**	**81.03**	**19**	P				06 57 36.1	
	baz=319,SNR=349								
O22K	**Cooper Landing**	**81.12**	**24**	P				06 57 36.4	
	baz=313,SNR=63								
BRLK	**Bradley Lake**	**81.18**	**25**	P		**P**		**06 57 36.4**	**+0.1**
M24K	**Tolsona, Glenn**	**81.19**	**22**	P				06 57 37.2	
	baz=316,SNR=98								
CNPM	**China Poot**	**81.21**	**25**	P		**P**		**06 57 36.1**	**-0.3**
BRSE	**Bradley Lake S**	**81.25**	**25**	P				06 57 36.8	
	baz=313								
HARP	**HAARP**	**81.31**	**21**	P				06 57 37.8	
	baz=317								
SEW	**Seward**	**81.48**	**24**	P		**P**		**06 57 38.4**	**+0.6**
SEW	**Seward**	**81.48**	**24**	P				06 57 38.4	
	baz=314,SNR=84								
HNR	**Honiara**	**81.52**	**105**	P		**P**		**06 57 38.3**	**-0.4**
HNR				pmax		pmax			
	comp=Z,770nm,1.2s								
HNR	**Honiara**	**81.52**	**105**	P		**P**		**06 57 38.3**	**-0.4**
HNR				IAmb		IAmb		06 57 48.7	
	comp=Z,770nm,1.2s								
KLU	**Klutina**	**81.72**	**22**	P				06 57 39.7	
	baz=316,SNR=178								
GLI	**Glacier Island**	**81.77**	**23**	P		**P**		**06 57 39.4**	**0.0**
GLI				IAmb		IAmb		06 57 41.4	
	comp=Z,506nm,1.2s								
GLI	**Glacier Island**	**81.77**	**23**	P				06 57 39.8	
	baz=316,SNR=95								
L27K	**Beaver Creek,**	**81.84**	**20**	P				06 57 40.3	
	baz=320,SNR=295								
BCAR	**Beaver Creek A**	**81.84**	**20**	P		**P**		**06 57 40.3**	**+0.5**
KDAK	**Kodiak Island**	**81.85**	**27**	P		**P**		**06 57 40.2**	**+0.4**
KDAK				pmax		pmax			
	comp=Z,2μm,1.5s								
KDAK	**Kodiak Island**	**81.85**	**27**	P		**P**		**06 57 40.2**	**+0.4**
KDAK	**Kodiak Island**	**81.85**	**27**	P				06 57 40.3	
	baz=311								
NUUK	**Nuuk**	**81.88**	**342**	⇑*i*P		**P**		**06 57 39.6**	**-0.3**
NUUK				IAmb		IAmb		06 57 41.0	
	comp=Z,280nm,0.9s								
OHAK	**Old Harbor**	**81.93**	**28**	P				06 57 40.7	
	baz=311,SNR=89								
SII	**Sitkinak Islan**	**81.99**	**29**	P		**P**		**06 57 41.5**	**+0.9**
SII	**Sitkinak Islan**	**81.99**	**29**	P				06 57 41.8	
	baz=310,SNR=17								
FID	**Port Fidalgo**	**82.07**	**23**	P		**P**		**06 57 41.1**	**+0.1**
FID				IAmb		IAmb		06 57 52.5	
	comp=Z,1μm,1.4s								
N25K	**Chitina, Valde**	**82.07**	**22**	P		**P**		**06 57 41.9**	**+0.9**
N25K	**Chitina, Valde**	**82.07**	**22**	P				06 57 41.7	
	baz=318,SNR=450								
NRS	**Narsarsuaq**	**82.30**	**338**	⇑*i*P		**P**		**06 57 41.9**	**-0.2**
NRS				IAmb		IAmb		06 57 47.9	
	comp=Z,143nm,0.9s								
NRS	**Narsarsuaq**	**82.30**	**338**	⇑*i*P		**P**		**06 57 41.8**	**-0.2**
NRS				pmax		pmax			
	comp=Z,140nm,0.9s								
NRS	**Narsarsuaq**	**82.30**	**338**	P		**P**		**06 57 41.9**	**-0.2**
KOWA	**Kowa**	**82.31**	**282**	P		**P**		**06 57 42.6**	**-0.4**
KOWA				IAmb		IAmb		06 57 52.7	
	comp=Z,470nm,0.8s								
GLB	**Gilahina Butte**	**82.45**	**21**	P		**P**		**06 57 43.6**	**+0.6**
EYAK	**Cordova Ski Ar**	**82.46**	**23**	P		**P**		**06 57 44.0**	**+1.0**
EYAK				IAmb		IAmb		06 57 48.0	
	comp=Z,563nm,1.0s								
EYAK	**Cordova Ski Ar**	**82.47**	**23**	P				06 57 43.6	
	baz=317								
BMRM	**Bremner River**	**82.54**	**22**	P		**P**		**06 57 44.4**	**+0.9**
BMRM	**Bremner River**	**82.54**	**22**	P				06 57 43.8	
	baz=318,SNR=199								
VRDI	**Verde Repeater**	**82.72**	**21**	P		**P**		**06 57 45.0**	**+0.5**
MCARA	**McCarthy VSAT**	**82.74**	**21**	P				06 57 45.7	
	baz=319								
EIDS	**Eidsvold**	**83.00**	**123**	P		**P**		**06 57 46.8**	**+0.5**
Q23K	**Middleton Isla**	**83.07**	**24**	P		**P**		**06 57 47.4**	**+1.3**
Q23K				IAmb		IAmb		06 57 58.8	
	comp=Z,446nm,1.1s								
Q23K	**Middleton Isla**	**83.07**	**24**	P				06 57 47.9	
	baz=316								
MID	**Middleton Isla**	**83.07**	**24**	P		**P**		**06 57 47.4**	**+1.3**
MID				pmax		pmax			
	comp=Z,430nm,1.2s								
MID	**Middleton Isla**	**83.07**	**24**	P		**P**		**06 57 47.4**	**+1.3**
MID				IAmb		IAmb		06 57 58.8	
	comp=Z,430nm,1.2s								
HMT	**Hamilton**	**83.12**	**22**	P		**P**		**06 57 47.7**	**+1.2**
HMT				IAmb		IAmb		06 57 51.5	
	comp=Z,641nm,1.2s								
CRQM	**Cirque**	**83.18**	**22**	P		**P**		**06 57 47.9**	**+1.0**
CRQE	**Cirque**	**83.20**	**22**	P				06 57 47.8	
	baz=319								
BERG	**Berg Lake**	**83.27**	**22**	P		**P**		**06 57 46.5**	**-0.7**
KAIM	**Kayak Island**	**83.38**	**23**	P				06 57 48.9	
	baz=318								
MIDW	**Midway**	**83.38**	**62**	P		**P**		**06 57 48.1**	**-0.3**
MIDW				IAmb		IAmb		06 57 58.3	
	comp=Z,576nm,1.2s								
CTG	**Chitna Glacier**	**83.59**	**21**	P				06 57 50.1	
	baz=320								
PMPST	**Porto Santo, M**	**83.61**	**304**	*e*P		**P**		**06 57 49.1**	**-0.4**
	comp=Z,859nm,1.4s								
BGLC	**Bering Glacier**	**83.61**	**22**	P				06 57 51.1	
	baz=319								
PMPS	**Porto Santo**	**83.62**	**304**	*e*P		**P**		**06 57 49.5**	**0.0**
	comp=Z,813nm,1.9s								
YAH	**Yahtse**	**83.93**	**21**	P		**P**		**06 57 51.3**	**+0.4**
PMAR	**Madeira**	**84.21**	**304**	*e*P		**P**		**06 57 53.1**	**+0.3**
	comp=Z,1μm,1.3s								
FUL	**Funchal**	**84.23**	**304**	*e*P		**P**		**06 57 53.2**	**+0.6**
	comp=Z,749nm,1.4s								
PMOZ	**Porto Moniz, M**	**84.36**	**304**	*e*P		**P**		**06 57 53.9**	**+0.4**
	comp=Z,738nm,1.6s								
PMOZ	**Porto Moniz, M**	**84.36**	**304**	⇓P		**P**		**06 57 54.4**	**+1.0**
PCA	**Pinnacle**	**84.61**	**21**	P		**P**		**06 57 55.1**	**+1.0**
PINM	**Pinnacle**	**84.61**	**21**	P				06 57 55.1	
	baz=321,SNR=181								
HYT	**Haines Junctio**	**84.86**	**19**	P		**P**		**06 57 56.0**	**+0.5**
SUR	**Sutherland**	**85.59**	**230**	P		**P**		**06 57 59.8**	**+0.3**
SUR				IAmb		IAmb		06 58 12.9	
	comp=Z,359nm,1.2s								
WHY	**Whitehorse**	**85.75**	**18**	P		**P**		**06 57 59.6**	**-0.3**
WHY				IAmb		IAmb		06 58 01.7	
	comp=Z,398nm,1.1s								
WHY	**Whitehorse**	**85.75**	**18**	P				06 57 59.6	
	baz=326								
ARMA	**Armidale**	**86.32**	**127**	P		**P**		**06 58 03.6**	**+0.5**
ARMA				IAmb		IAmb		06 58 14.0	
	comp=Z,567nm,1.2s								
ARMA	**Armidale**	**86.32**	**127**	⇑P		**P**		**06 58 03.9**	**+0.7**
SKAG	**Skagway**	**86.61**	**19**	P		**P**		**06 58 04.8**	**+0.9**
SKAG				IAmb		IAmb		06 58 09.2	
	comp=Z,384nm,0.8s								
SKAG	**Skagway**	**86.61**	**19**	⇓P		**P**		**06 58 05.3**	**+1.3**
SKAG	**Skagway**	**86.61**	**19**	P				06 58 05.2	
	baz=325								
TOO	**Toolangi**	**86.63**	**136**	P		**P**		**06 58 04.9**	**+0.6**
TOO				pmax		pmax			
	comp=Z,830nm,1.3s								
TOO	**Toolangi**	**86.63**	**136**	P		**P**		**06 58 04.9**	**+0.6**
TOO	**Toolangi**	**86.63**	**136**	⇑P		**P**		**06 58 04.8**	**+0.5**
DBIC	**Dimbokro**	**86.63**	**276**	P		**P**		**06 58 04.8**	**-0.1**
	comp=Z,114nm,1.0s,baz=50,slow=5.9,SNR=55								
DBIC				S		S		07 08 27.4	-14
	comp=Z,11nm,1.1s,baz=241,slow=19,SNR=3.2								
DBIC	**Dimbokro**	**86.63**	**276**	P		**P**		**06 58 04.8**	**-0.1**
DBIC				IAmb		IAmb		06 58 16.6	
	comp=Z,332nm,1.1s								
CAN	**Canberra**	**87.45**	**133**	P		**P**		**06 58 08.8**	**+0.4**
CAN				pmax		pmax			
	comp=Z,889nm,1.3s								
CAN	**Canberra**	**87.45**	**133**	P		**P**		**06 58 08.8**	**+0.4**
CAN	**Canberra**	**87.45**	**133**	⇑P		**P**		**06 58 08.2**	**-0.2**
PCALD	**Caldeiras da R**	**87.51**	**312**	*e*P		**P**		**06 58 10.1**	**+1.3**
	comp=Z,814nm,1.6s								
CMLA	**Cha da Macela**	**87.55**	**312**	*e*P		**P**		**06 58 10.3**	**+1.3**
	comp=Z,1μm,1.6s								
GRON	**Grota Negra**	**87.55**	**312**	*e*P		**P**		**06 58 10.3**	**+1.2**
	comp=Z,1μm,1.8s								
PSET	**Sete Cidades**	**87.64**	**312**	*e*P		**P**		**06 58 11.1**	**+1.6**
	comp=Z,823nm,1.6s								
PDA	**Ponta Delgada**	**87.65**	**312**	*e*P		**P**		**06 58 11.0**	**+1.6**
	comp=Z,1μm,1.3s								
PSMN	**Pico do Norte,**	**87.67**	**311**	*e*P		**P**		**06 58 11.3**	**+1.7**
	comp=Z,858nm,1.8s								
PSMA	**Santa Maria**	**87.72**	**311**	*e*P		**P**		**06 58 11.1**	**+1.3**
	comp=Z,617nm,1.5s								
JIS	**Juneau Island**	**87.87**	**20**	P		**P**		**06 58 10.9**	**+0.9**
JIS				IAmb		IAmb		06 58 15.4	
	comp=Z,510nm,1.1s								
RIV	**Riverview**	**87.99**	**130**	⇓P		**P**		**06 58 12.3**	**+1.4**
PSCM	**Serra do Cume**	**88.05**	**313**	*e*P		**P**		**06 58 12.9**	**+1.5**
	comp=Z,376nm,1.3s								
ADH	**Angra Heroismo**	**88.16**	**313**	*e*P		**P**		**06 58 13.4**	**+1.6**
	comp=Z,441nm,1.3s								
YKA	**Yellowknife Ar**	**88.32**	**9**	P		**P**		**06 58 11.2**	**-1.0**
	comp=Z,149nm,0.9s,baz=339,slow=4.5,SNR=346								
YKA				S		**SKSac**		**07 08 37.2**	**-3.1**
	comp=Z,3.7nm,1.2s,baz=343,slow=9.0,SNR=2.4								
YKA				PKKPbc		**PKKPdf**		**07 15 51.0**	**+1.9**
	comp=Z,1.7nm,0.7s,baz=152,slow=2.6,SNR=8.8								
YKA				PKPPKP		P'P'df		07 24 00.4	-8.1
	comp=Z,2.2nm,0.9s,baz=142,slow=2.6,SNR=9.3								
PGRA	**Graciosa**	**88.42**	**314**	*e*P		**P**		**06 58 14.3**	**+1.2**
	comp=Z,577nm,2.1s								
SIT	**Sitka**	**88.59**	**21**	P		**P**		**06 58 14.9**	**+1.4**
SIT				pmax		pmax			
	comp=Z,437nm,1.3s								
SIT	**Sitka**	**88.59**	**21**	P		**P**		**06 58 14.9**	**+1.4**
SIT				IAmb		IAmb		06 58 21.3	
	comp=Z,437nm,1.3s								
SIT	**Sitka**	**88.59**	**21**	P				06 58 15.1	
	baz=325,SNR=25								
PMAN	**Manadas**	**88.71**	**314**	*e*P		**P**		**06 58 14.7**	**+0.2**
	comp=Z,578nm,1.3s								
ROSA	**Rosais**	**88.76**	**314**	*e*P		**P**		**06 58 14.9**	**+0.2**
	comp=Z,357nm,0.9s								
ROSA	**Rosais**	**88.76**	**314**	P		**P**		**06 58 14.6**	**-0.1**
ROSA				IAmb		IAmb		06 58 17.1	
	comp=Z,362nm,0.9s								
ROSA	**Rosais**	**88.76**	**314**	⇓P		**P**		**06 58 15.2**	**+0.5**
DLBC	**Dease Lake**	**88.95**	**18**	P		**P**		**06 58 16.2**	**+0.8**
DLBC				IAmb		IAmb		06 58 22.9	
	comp=Z,795nm,1.5s								
PICO	**Pico**	**89.00**	**314**	*e*P		**P**		**06 58 16.6**	**+0.6**
	comp=Z,467nm,1.5s								
WRAK	**Wrangell Islan**	**90.03**	**20**	P		**P**		**06 58 21.2**	**+0.9**
WRAK				IAmb		IAmb		06 58 27.8	
	comp=Z,538nm,1.4s								
WRAK	**Wrangell Islan**	**90.03**	**20**	P				06 58 21.3	
	baz=328,SNR=51								
CRAG	**Craig**	**90.60**	**21**	⇑P		**P**		**06 58 24.2**	**+1.3**
CRAG	**Craig**	**90.60**	**21**	P				06 58 24.2	
	baz=327,SNR=14								
KOUNC	**Koumac, New Ca**	**90.70**	**113**	⇑P		**P**		**06 58 24.4**	**+0.5**
DZM	**Mont Dzumac**	**93.20**	**113**	*e*P		**P**		**06 58 36.2**	**+0.6**
	comp=Z,652nm,1.5s								
DZM	**Mont Dzumac**	**93.20**	**113**	⇓P		**P**		**06 58 36.9**	**+1.3**
CASY	**Casey**	**96.17**	**170**	P		**P**		**06 58 48.0**	**-0.1**
MAW	**Mawson**	**96.89**	**188**	P		**P**		**06 58 51.1**	**-0.1**
	comp=Z,24nm,0.9s,baz=336,slow=7.4,SNR=12								
MAW				PKKPbc		**PKKPbc**		**07 15 33.8**	**-1.5**
	comp=Z,6.3nm,0.8s,baz=186,slow=5.1,SNR=8.4								
MAW	**Mawson**	**96.89**	**188**	P		**P**		**06 58 51.3**	**+0.1**
MAW				pmax		pmax			
	comp=Z,20nm,1.1s								
MAW	**Mawson**	**96.89**	**188**	P		**P**		**06 58 51.3**	**+0.1**
MAW	**Mawson**	**96.89**	**188**	⇓P		**P**		**06 58 51.8**	**+0.6**
FFC	**Flin Flon**	**97.25**	**4**	P		**P**		**06 58 52.8**	**-0.7**
FFC				pmax		pmax			
	comp=Z,83nm,1.0s								
FFC	**Flin Flon**	**97.25**	**4**	P		**P**		**06 58 52.8**	**-0.7**
PGC	**Sidney**	**99.45**	**19**			**Pdif**		**06 59 04.5**	**+1.1**
CHGQ	**Chibougamau**	**100.11**	**347**	Pdiff				06 59 06.7	
	baz=18,SNR=15								
B05A	**Bryant**	**100.18**	**18**	Pdiff				06 59 08.0	
	baz=336,SNR=10								
NLWA	**Neilton Lookou**	**100.47**	**19**	⇑P		**Pdif**		**06 59 10.2**	**+2.0**
D03D	**Eldon**	**100.56**	**19**	Pdiff				06 59 10.4	
	baz=335								
MATQ	**Matagami**	**100.88**	**349**	Pdiff				06 59 10.1	
	baz=16,SNR=9.2								
D63A	**Stockholm**	**101.27**	**342**	Pdiff				06 59 12.3	
	baz=24								
NEW	**Newport**	**101.41**	**15**	Pdiff				06 59 13.1	
	baz=340,SNR=12								
LSQQ	**Lebel-sur-Quev**	**101.43**	**348**	Pdiff				06 59 12.7	
	baz=16								
E04D	**Cinebar**	**101.60**	**19**	Pdiff				06 59 14.4	
	baz=336								
D61A	**St Aubert, Com**	**101.68**	**343**	Pdiff				06 59 14.3	
	baz=22								
E63A	**Oxbow**	**101.92**	**341**	Pdiff				06 59 14.9	
	baz=24								
ULM	**Lac du Bonnet**	**101.94**	**0**	P		**Pdif**		**06 59 13.5**	**-1.0**
	comp=Z,13nm,1.0s,baz=344,slow=4.8,SNR=10.0								
ULM				PKKPbc		**PKKPbc**		**07 15 20.0**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=285,slow=2.9,SNR=3.4								
D60A	**Saint Jean D'O**	**102.13**	**343**	Pdiff				06 59 15.7	
	baz=22								
LATQ	**La Tuque**	**102.15**	**345**	Pdiff				06 59 16.3	
	baz=20								
D58A	**Chemin du LacG**	**102.44**	**345**	Pdiff				06 59 17.6	
	baz=20								
E61A	**Lac Etchemin**	**102.47**	**343**	Pdiff				06 59 17.8	
	baz=22								
D56A	**ZEC Mazanza, M**	**102.91**	**346**	Pdiff				06 59 19.5	
	baz=18								
F61A	**St Evariste**	**103.02**	**343**	Pdiff				06 59 20.2	
	baz=22								
EGMT	**Eagleton**	**103.04**	**10**	Pdiff				06 59 19.8	
	baz=347								
D55A	**Sainte-Anne-du**	**103.09**	**346**	Pdiff				06 59 20.8	
	baz=18								
E58A	**La Victoria**	**103.22**	**345**	Pdiff				06 59 21.0	
	baz=20								
DGMT	**Dagmar**	**103.29**	**6**	Pdiff				06 59 21.7	
	baz=352								
E56A	**St. Veronique**	**103.45**	**346**	Pdiff				06 59 21.0	
	baz=18								
MSO	**Missoula**	**103.45**	**13**	Pdiff				06 59 21.5	
	baz=343								
F10A	**Beach Ranch, E**	**103.54**	**16**

	baz=16								
SHOC	Shoshone, Teco	113.25	19	PKiKP			07 03 59.3		
	baz=340								
BFSC	Mount Baldy Ra	114.39	20	P			07 04 01.4		
	baz=338								
GMRC	Granite Mounta	114.46	18	P			07 04 02.3		
	baz=340								
VNDA	Vanda	114.52	167	PKP		PKiKP	07 04 01.4	+1.6	
	comp=Z,6.3nm,0.8s,baz=288,slow=4.9,SNR=7.2								
VNDA				PP		PP	07 04 58.7	+1.6	
	comp=Z,4.4nm,0.9s,baz=293,slow=8.2,SNR=5.7								
VNDA				PKKPbc		PKKPbc	07 14 40.4	-0.4	
	comp=Z,4.4nm,1.0s,baz=128,slow=3.2,SNR=4.5								
WUAZ	Wupatki	114.84	15	P			07 04 01.2		
	baz=344								
BELC	Belle Mtn. Jos	115.10	19	P			07 04 03.6		
	baz=340,SNR=6.4								
MURC	Murrieta	115.12	20	P			07 04 03.0		
	baz=339								
IRM	Iron Mountain	115.19	18	P			07 04 03.8		
	baz=341								
PARMO	Parma	115.32	355			PKiKP	07 04 02.4	-0.3	
PDMCI	Parker Dam,Lak	115.33	17	P			07 04 03.5		
	baz=342								
PFO	Pinyon Flats O	115.33	20	PKKPbc		PKKPbc	07 14 45.9	+8.6	
	comp=Z,5.1nm,0.8s,baz=152,slow=4.1,SNR=3.7								
PFO	Pinyon Flats O	115.33	20	P			07 04 03.7		
	baz=339,SNR=6.6								
V52A	Sevierville	115.41	350			PKiKP	07 04 02.4	-0.5	
V53A	Saluda	115.45	349			PKiKP	07 04 02.5	-0.6	
CLTN	Cedars of Leba	115.55	352			PKiKP	07 04 02.4	-0.7	
W18A	Petrified Fore	115.57	13	P			07 04 03.4		
	baz=346								
BC3	Big Chuckawall	115.58	19	P			07 04 04.4		
	baz=340,SNR=7.4								
WVT	Waverly	115.68	353	P			07 04 02.4		
	baz=7.2								
KMSC	Kings Mountain	115.70	347	P			07 04 03.2		
	baz=14,SNR=5.8								
SNAA	Sanae	115.72	201	PKPdf		PKiKP	07 04 01.4	-1.0	
SNAA	Sanae	115.72	201	PP		PP	07 05 09.9	+4.0	
SNAA	Sanae	115.72	201	⇑P		PKiKP	07 04 01.5	-0.9	
U40A	Yellville	115.79	358	P			07 04 02.7		
	baz=2.3,SNR=8.7								
MONP2	Monument Peak	116.01	20	P			07 04 05.4		
	baz=339								
SWSC	Sam W. Stewart	116.15	19	P			07 04 05.6		
	baz=340								
TUL1	Leonard	116.27	1	P			07 04 04.1		
	baz=359								
GLA	Glamis	116.32	18	P			07 04 06.1		
	baz=341,SNR=6.3								
IKP	In-Ko-Pah, Jac	116.33	20	P			07 04 06.0		
	baz=340								
ANMO	Albuquerque	116.33	10	⇑P		Pdif	07 00 28.2	+9.0	
ANMO	Albuquerque	116.33	10	P			07 04 05.5		
	baz=349								
W41B	Gary Mavity, V	116.95	357	P			07 04 05.3		
	baz=2.9,SNR=5.8								
W39A	Magazine	116.97	359	P			07 04 05.4		
	baz=1.4								
VNA2	Neumayer--Watz	117.05	202	PKPdf		PKPdf	07 04 04.7	-0.1	
VNA2	Neumayer--Watz	117.05	202	PP		PP	07 05 17.7	+2.7	
VNA1	Neumayer--Stat	117.30	202	PKPdf		PKiKP	07 04 05.3	0.0	
VNA1	Neumayer--Stat	117.30	202	PP		PP	07 05 19.9	+3.2	
WMOK	Wichita Mounta	117.35	3	P			07 04 06.4		
	baz=356								
NHSC	New Hope	117.43	346	P			07 04 06.2		
	baz=15								
OXF	Oxford	117.43	355	P			07 04 05.9		
	baz=5.7								
X43A	Marvell	117.53	356	P			07 04 07.7		
	baz=4.3								
X37A	Clayton	117.59	0			PKiKP	07 04 07.2	0.0	
MIAR	Mount Ida	117.62	359	PKiKP		PKiKP	07 04 07.3	+0.1	
MIAR	Mount Ida	117.62	359	PKPdf		PKiKP	07 04 07.3	+0.1	
MIAR	Mount Ida	117.62	359	P			07 04 07.2		
	baz=1.6,SNR=19								
X40A	Basin Creek Fa	117.65	358	P			07 04 06.8		
	baz=2.3								
Y49A	Blount Mountai	117.77	352			PKPdf	07 04 06.8	-0.7	
GOGA	Godfrey	117.77	349	PKiKP		PKPdf	07 04 07.2	-0.3	
GOGA	Godfrey	117.77	349			PKPdf	07 04 07.2	-0.3	
GOGA	Godfrey	117.77	349	P			07 04 07.6		
	baz=12								
MSTX	Muleshoe	117.79	7			PKPdf	07 04 06.8	-0.9	
MSTX	Muleshoe	117.79	7	P			07 04 07.2		
	baz=352								
VNA3	Neumayer Olymp	117.82	201	PKPdf		PKPdf	07 04 04.9	-1.5	
VNA3	Neumayer Olymp	117.82	201	PP		PP	07 05 21.2	+0.9	
214A	Organ Pipe Nat	117.90	17			PKiKP	07 04 08.4	+0.5	
214A	Organ Pipe Nat	117.90	17	P			07 04 08.4		
	baz=342,SNR=5.6								
QSPA	South Pole Qui	117.96	180			PKPdf	07 04 06.0	-0.8	
SPX	San Pedro Mart	118.03	20			PKPdf	07 04 08.3	-0.2	
TUC	Tucson	118.06	15	P			07 04 08.3		
	baz=344								
SFX	San Felipe	118.21	19	PKPdf		PKPdf	07 04 07.7	-0.7	
121A	Cookes Peak, D	118.46	12			PKPdf	07 04 08.9	-0.2	
121A	Cookes Peak, D	118.46	12	P			07 04 09.7		
	baz=347,SNR=8.2								
154A	Montrose	118.48	348			PKPdf	07 04 08.9	0.0	
LRAL	Lakeview Retre	118.65	352			PKPdf	07 04 08.5	-0.7	
LRAL	Lakeview Retre	118.65	352	P			07 04 08.4		
	baz=8.2,SNR=6.4								
152A	Waverly Hall	118.70	350			PKPdf	07 04 08.9	-0.4	
Z35A	Perchaven, San	118.81	2	PKPdf		PKPdf	07 04 08.9	-0.7	
Z41A	Richland Creek	118.88	358	P			07 04 09.7		
	baz=2.4								
Z38A	Mt. Pleasant	118.92	360			PKPdf	07 04 08.7	-1.0	
146A	Union	119.26	354			PKiKP	07 04 10.5	0.0	
143A	Socs Landing,	119.37	356			PKPdf	07 04 10.2	-0.4	
ABTX	Abilene, Hawle	119.40	4			PKPdf	07 04 09.9	-0.8	
ABTX	Abilene, Hawle	119.40	4	P			07 04 10.6		
	baz=356,SNR=6.2								
MNTX	Cornudas Mount	119.68	10	PKPdf		PKiKP	07 04 11.3	0.0	
MNTX	Cornudas Mount	119.68	10	P			07 04 11.6		
	baz=350,SNR=27								
TIGA	Tifton	119.72	349	P			07 04 11.5		
	baz=12								
VBMS	Vicksburg	119.79	355			PKPdf	07 04 10.6	-0.8	
VBMS	Vicksburg	119.79	355	P			07 04 12.0		
	baz=4.7								
352A	Blakely	119.90	350			PKiKP	07 04 11.7	0.0	
WHTX	Lake Whitney,	120.14	2	P			07 04 11.7		
	baz=358,SNR=7.9								
NATX	Nacogdoches	120.41	360			PKPdf	07 04 12.0	-0.6	
NATX	Nacogdoches	120.41	360	P			07 04 13.1		
	baz=0.6,SNR=6.0								
BRAL	Brewton	120.50	352	P			07 04 13.6		
	baz=8.3								
344A	Westbrook Farm	120.57	356	PKPdf		PKiKP	07 04 13.0	0.0	
435B	Jarrell	121.34	2	P			07 04 14.3		
	baz=358,SNR=5.8								
JCT	Junction City	121.52	5	P			07 04 14.6		
	baz=355,SNR=28								
TXAR	Lajitas Array	122.25	9	Pdiff		Pdif	07 00 52.7	+7.2	
	comp=Z,0.4nm,0.6s,baz=28,slow=2.9,SNR=4.6								
TXAR				PKP		PKPdf	07 04 15.8	-0.6	
	comp=Z,18nm,0.9s,baz=19,slow=0.5,SNR=36								
TXAR				PP		PP	07 05 51.2	+1.0	
	comp=Z,22nm,0.9s,baz=347,slow=5.1,SNR=4.8								
TXAR				PKKPbc		PKKPbc	07 14 11.8	-0.4	
	comp=Z,4.2nm,0.8s,baz=172,slow=5.9,SNR=8.5								
DWPF	Disney Wildern	122.52	346	P			07 04 16.7		
	baz=14								
735A	Kenedy	123.25	3			PKPdf	07 04 17.9	-0.3	
833A	Chaparral WMA,	123.69	4	P			07 04 19.4		
	baz=356								
SJG	San Juan	126.11	325	eP		PKPdf	07 04 22.6	-1.3	
FDF	Fort de France	126.12	318	⇓P		PKiKP	07 04 24.4	-0.1	
FDF	Fort de France	126.12	318	⇓P		PKiKP	07 04 24.4	-0.1	
SDDR	Presa de Saban	127.75	331	eP		PKPdf	07 04 26.1	-0.9	
SOR	Soroa	128.01	346	PKiKP		PKPdf	07 04 27.5	+0.1	
SOR	Soroa	128.01	346	PKPdf		PKPdf	07 04 27.5	+0.1	
GTBY	Guantanamo Bay	128.41	336	eP		PKPdf	07 04 26.1	-2.1	
GRGR	Grenville	128.46	316	PKPdf		PKPdf	07 04 28.3	-0.1	
PPT2	Papeete2	129.13	90	ePKiKP		PKPdf	07 04 29.4	-0.2	
	comp=Z,114nm,1.5s								
PAE	Paea	129.15	90	ePKiKP		PKPdf	07 04 29.8	+0.2	
	comp=Z,31nm,1.6s								
BSFB	Barra de Sao F	129.68	268	eP		PKiKP	07 04 31.9	+0.5	
VAH	Vaihoa	129.93	87	ePKiKP		PKPdf	07 04 30.7	-0.4	
	comp=Z,133nm,1.4s								
SJMB	Sao Joao De Ma	129.93	269	eP		PKiKP	07 04 31.6	-0.3	
CBCY	The Bluff, Cay	130.11	341	PKPdf		PKPdf	07 04 31.0	-0.4	
ALF01	Guarapari-ES	130.20	266	eP		PKiKP	07 04 32.5	+0.2	
MCPB	Macapa, AP	130.36	296	eP		PKiKP	07 04 33.7	+0.7	
SDBA	SAO DESIDERIO	130.68	278	eP		PKiKP	07 04 33.8	+0.3	
MTDJ	Mount Denham	130.83	338	eP		PKPdf	07 04 31.6	-1.4	
TBI	Tubuai	131.19	97	ePKiKP		PKPdf	07 04 32.9	-0.4	
	comp=Z,79nm,0.9s								
JANB	Januaria	131.28	274	eP		PKiKP	07 04 34.8	0.0	
SMTB	Santa Maria do	131.34	284	eP		PKiKP	07 04 35.0	+0.1	
CAM01	Campos-RJ	131.42	265	eP		PKiKP	07 04 34.4	-0.3	
TEIG	Tepich	131.44	351	eP		PKPdf	07 04 32.6	-1.3	
PRPB	Parauapebas	131.85	268	eP		PKiKP	07 04 35.8	-0.1	
DUB01	Friburgo-RJ	132.13	265	eP		PKiKP	07 04 36.0	-0.2	
MALB	Monte Alegre	133.01	297	eP		PKPdf	07 04 37.6	+0.5	
VAS01	Vassouras-RJ	133.13	265	eP		PKiKP	07 04 38.1	-0.1	
PEXB	Peixe	133.50	280	eP		PKiKP	07 04 38.6	-0.6	
MAN01	Angra dos Reis	133.77	264	eP		PKiKP	07 04 39.5	-0.1	
BSCB	Bom Sucesso	133.89	267	eP		PKiKP	07 04 39.5	-0.4	
TLIG	Tlapa	134.43	5	PKPdf		PKiKP	07 04 40.6	-0.6	
URIC	Uribia, Colomb	134.47	327	eP		PKPdf	07 04 38.8	-1.0	
DABV	Dabajuro	134.47	325	eP		PKPdf	07 04 39.6	-0.2	
BDFB	Brasilia	134.78	276	PKhKP		PKPpre	07 04 32.7		
	comp=Z,2.4nm,0.6s,baz=175,slow=3.7,SNR=3.3								
BDFB				PKP		PKPdf	07 04 40.2	-0.3	
	comp=Z,14nm,0.9s,baz=184,slow=0.1,SNR=11								
BDFB				PP		PP	07 07 15.7	+1.2	
	comp=Z,13nm,1.0s,baz=64,slow=3.1,SNR=2.0								
PARB	Paraibuna	135.37	264	eP		PKiKP	07 04 42.6	-0.2	
ITTB	Itaituba	135.69	295	eP		PKPdf	07 04 39.2	-2.9	
SMRC	Santa Marta, M	135.97	330	eP		PKPdf	07 04 40.9	-1.7	
PRVC	Isla de Provid	136.60	340	eP		PKPdf	07 04 43.5	-0.3	
RCLB	Rio Claro- Sao	136.77	266	eP		PKiKP	07 04 45.1	-0.6	
SOCV	Socops	136.82	323	eP		PKPdf	07 04 42.4	-1.9	
NPGB	Novo Progresso	136.93	292	eP		PKPpre	07 04 35.1		
SPB	Sao Paulo	137.03	265	eP		PKiKP	07 04 46.9	+0.8	
PET01	Itanhaem-SP	137.09	264	eP		PKiKP	07 04 46.3	+0.1	
ARGC	Ariguani, Magd	137.13	329	eP		PKPdf	07 04 42.6	-2.2	
ELOV	Elorza	137.15	321	eP		PKPpre	07 04 32.7		
BB19B	Bebedouro	137.23	269	eP		PKiKP	07 04 45.8	-0.8	
TGUH	Tegucigalpa,Un	137.34	349	eP		PKiKP	07 04 46.7	-0.5	
SJCC	San Jacinto, C	137.52	330	eP		PKPdf	07 04 45.2	-0.3	
SMLC	San Martn de	137.98	328	eP		PKPpre	07 04 35.9		
ARAG	Araguaiana, MT	138.14	278	eP		PKiKP	07 04 48.0	-0.5	
ITRB	Iturama	138.39	272	eP		PKiKP	07 04 48.4	-0.6	
PAMC	Pamplona, Colo	138.57	325	eP		PKPdf	07 04 47.4	-0.7	
MOTC	Monteria, Cord	138.72	330	eP		PKPdf	07 04 41.3	-6.4	
MACA	Manacapuru-AM	138.81	301	eP		PKPpre	07 04 39.5		
BRRC	Barranca, Sant	139.28	326	eP		PKPpre	07 04 37.3		
BARC	Barichara	139.46	325	eP		PKPpre	07 04 45.2		
ZARC	Zaragoza, Cauc	139.49	328	eP		PKPpre	07 04 39.4		
CAPC	Capurgana	139.57	332	eP		PKPdf	07 04 49.8	+0.5	
UREC	San Jos de Ur	139.57	329	eP		PKPpre	07 04 39.9		
TER01	Tubaro-SC	139.68	258	eP		PKiKP	07 04 50.5	-0.9	
PCMB	Pacaembu	139.81	269	eP		PKiKP	07 04 51.0	-0.9	
UPD2	Meteti	139.92	333	eP		PKPpre	07 04 38.8		
RUSC	La Rusia	140.00	324	eP		PKPpre	07 04 44.9		
BCIP	Isla Barro Col	140.04	336	eP		PKPdf	07 04 46.5	-3.6	
UPA	Univ. de Panam	140.10	335	eP		PKPdf	07 04 49.9	-0.3	
PTBC	PUERTO BERRIO	140.13	327	eP		PKPpre	07 04 42.0		
SPBC	San Pablo de B	140.71	326	eP		PKPpre	07 04 43.8		
PTCC	Puerto Gaitan,	140.93	322	eP		PKPpre	07 04 43.9		
HELC	Santa Helena	140.95	328	eP		PKPpre	07 04 44.9		
NORC	Norcasia	141.18	327	eP		PKPpre	07 04 45.2		
CNLB	Canela	141.31	257	eP		PKPdf	07 04 52.9	+0.9	
TRCB	Terra Rica	141.39	268	eP		PKPdf	07 04 53.4	+1.1	
CHIC	Chingaza	141.41	324	eP		PKPpre	07 04 45.8		
CBOC	Ciudad Bolivar	141.46	328	eP		PKPpre	07 04 46.2		
AZU	Azuero	141.47	336	eP		PKPdf	07 04 43.9	-8.8	
CROSA	EL ROSAL, CUNDI	141.53	325	eP		PKPdf	07 04 48.5	-4.8	
ROSC	El Rosal	141.53	325	PKhKP		PKPpre	07 04 47.8		
	comp=Z,118nm,0.8s,baz=209,slow=2.1,SNR=30								
ROSC	El Rosal	141.53	325	eP		PKPdf	07 04 47.4	-5.9	
PP1B	Ponte de Pedra	141.59	277	eP		PKPdf	07 04 53.8	+1.0	
GUY2C	Guyana, Caldas	141.71	327	eP		PKPdf	07 04 48.5	-5.3	
SOLC	Bahia Solano	141.76	331	eP		PKPdf	07 04 46.7	-6.5	
VILC	Villavicencio,	141.83	324	eP		PKPdf	07 04 47.5	-6.1	
ANIL	Santa Ana	142.37	327	eP		PKPdf	07 04 51.1	-3.6	
GUVC	San Jose del G	142.57	321	eP		PKPdf	07 04 48.8	-5.9	
ORTC	Ortega, Tolima	142.79	326	eP		PKPdf	07 04 50.7	-4.5	
YOTC	Yotoco, Valle	143.26	327	eP		PKPab	07 04 50.6	-1.2	
MACC	Macarena, Meta	143.57	322	eP		PKPab	07 04 52.8	-0.1	
MALC	Bahia Malaga	143.70	329	eP		PKPab	07 04 53.4	+0.1	
MALC	Bahia Malaga	143.70	329	eP		PKPbc	07 04 54.3	+0.2	
RKT	Rikitea	143.87	91	ePKiKP		PKPbc	07 04 54.9	+0.5	
	comp=Z,375nm,1.2s								
MARP	Paez Belalcaza	144.06	326	eP		PKPab	07 04 55.0	-0.1	
GARC	Garzon, Huila	144.40	325	eP		PKPab	07 04 55.7	-0.6	
PCON	Cinco Dias	144.73	326	eP		PKPbc	07 04 58.2	+0.2	
SOTA	Rioblanco	145.00	326	eP		PKPdf	07 04 59.3	-0.3	
CRUC	La Cruz	145.66	326	eP		PKPab	07 05 01.6	+0.6	
PTLC	Puerto Leguiza	145.73	322	eP		PKPab	07 05 01.1	+0.2	
CPAS2	Pasto	146.10	327	eP		PKPab	07 05 02.2	+0.6	
CCUFI	Cerro Cufio,	146.15	327	eP		PKPab	07 05 02.9	-0.1	
GCUF	Volcan Galeras	146.15	327	eP		PKPab	07 05 03.6	+0.5	
CTUM2	Tumaco	146.27	329	eP		PKPab	07 05 03.2	+0.4	
TUMC	Tumaco	146.27	329	eP		PKPab	07 05 03.3	+0.4	
ITQB	Itaqui	146.34	258	eP		PKPbc	07 05 02.1	+0.1	
CPUP	Villa Florida	146.41	264	PKPbc		PKPdf	07 05 00.8	-0.1	
	comp=Z,124nm,1.1s,baz=75,slow=3.5,SNR=67								
CPUP	Villa Florida	146.41	264	PKP2		PKPdf	07 05 00.3	-0.6	
CPUP	Villa Florida	146.41	264	PKPdf		PKPdf	07 05 00.3	-0.6	
CMBC	Cumbal	146.62	327	eP		PKPbc	07 05 03.6	-0.2	
ETMB	Extrema	147.25	298	eP		PKPbc	07 05 04.3	-0.7	
OTAV	Otavalo	147.54	328	eP		PKPbc	07 05 06.2	-0.2	
OTAV	Otavalo	147.54	328	eP		PKPdf	07 05 04.6	+0.7	
MG02	Cerro Sombrero	148.79	211			PKPbc	07 05 07.5	-0.4	
CZSB	Cruzeiro do Su	150.62	310	eP		PKPdf	07 05 09.6	+1.4	
GO09	Cerro Castillo	151.23	210			PKPdf	07 05 08.1	+0.2	
PAYG	Puerto Ayora	152.27	349	eP		PKPbc	07 05 15.5	-1.9	
LPAZ	La Paz	152.40	290	PKP		PKPdf	07 05 11.1	-0.5	
	comp=Z,21nm,1.0s,baz=46,slow=3.3,SNR=34								
LPAZ				PKPbc		PKiKP	07 05 18.5	-0.1	
	comp=Z,95nm,0.8s,baz=63,slow=3.8,SNR=42								
LPAZ	La Paz	152.40	290	PKPdf		PKPdf	07 05 11.2	-0.3	
LPAZ	La Paz	152.40	290	eP		PKPdf	07 05 11.6	0.0	
LPAZ	La Paz	152.40	290	eP		PKPdf	07 05 12.3	+0.8	
MNMC	Minye Minye	154.96	285			PKPdf	07 05 14.6	-0.1	
MNMC	Minye Minye	154.96	285	⇑P		PKPdf	07 05 19.1	+4.3	
PB08	IPOC Station P	155.00	283	PKPdf		PKPdf	07 05 14.7	-0.2	
LVC	Limon Verde	155.68	277	eP		PKPdf	07 05 17.1	+1.4	
PLCA	Paso Flores	156.24	232	PKP		PKPdf	07 05 16.1	+0.6	
	comp=Z,21nm,1.0s,baz=131,slow=1.4,SNR=25								
PLCA	Paso Flores	156.24	232	PKPdf		PKPdf	07 05 15.2	-0.3	
PLCA	Paso Flores	156.24	232	eP		PKPdf	07 05 16.7	+1.1	
NNA	Nana	156.50	310	⇓eP		PKiKP	07 05 17.4	+0.8	
NNA	Nana	156.50	310			PKPdf	07 05 16.5	-0.1	
LL03	Petrohue	157.32	229			PKPdf	07 05 16.6	-0.2	
VA03	San Esteban	158.32	252			PKPdf	07 05 18.3	-0.1	
MT01	Popeta	158.76	249			PKPdf	07 05 18.1	-0.7	
AC04	Llanos de Chal	158.78	264	PKPdf		PKPdf	07 05 19.1	+0.1	
TAPN	Taplejung	2.20	98	ePg		Pb	06 54 22.4	-0.3	
TAPN				eSg		Sb	06 54 49.8	-0.3	
	770nm,0.3s								
LSA	Lhasa	5.55	67	Pn		Pn	06 55 06.5	+0.8	
SHL	Shillong	6.29	108	Pn		Pn	06 55 16.4	+0.8	
KBL	Kabul	15.47	300	Pn		Pn	06 57 19.4	-1.7	
SLVN	Son La	18.10	106	P		Pn	06 57 54.6	+0.3	
TAS	Tashkent	18.88	320	P		P	06 58 01.8	-1.3	
TAS				IAmb		IAmb	06 58 02.9		
	comp=Z,142nm,0.8s								
MK31	Makanchi Array	19.22	354	P		P	06 58 06.2	-0.5	
MKAR	Makanchi Array	19.22	354	P		Pn	06 58 07.3	-0.4	
	comp=Z,1.9nm,0.3s,baz=182,slow=9.8,SNR=5.8								
MKAR	Makanchi Array	19.22	354	P		P	06 58 06.3	-0.5	
MAKZ	Makanchi	19.26	353	P		Pn	06 58 07.7	-0.5	
PALK	Pallekele	20.76	193	P		P	06 58 22.1	-1.6	
KURBB	Kurchatov Arra	23.47	349	P		P	06 58 52.1	-0.1	
	comp=Z,9.9nm,0.8s,baz=184,slow=8.9,SNR=6.7								
KURK	Kurchatov	23.55	349	P		P	06 58 52.1	-0.8	
SONM	Songino Array	26.00	34	P		P	06 59 16.0	+0.3	
	comp=Z,26nm,0.9s,baz=223,slow=10,SNR=7.5								
SONM	Songino Array	26.00	34	IAmb		IAmb	06 59 20.8		
	comp=Z,35nm,1.1s								
ZALV	Zalesovo Beam	26.24	359	P		P	06 59 18.2	+0.6	
ABKAR	Akbulak array	29.03	325	P		P	06 59 43.8	+1.1	
ABKAR				IAmb		IAmb	06 59 58.1		
	comp=Z,31nm,1.1s								
BKNI	Bangkinang	31.13	148	P		P	07 00 02.1	+0.6	
SOCY	Socotra	33.07	248	P		P	07 00 17.9	-0.8	
ARU	Arti	34.47	334	P		P	07 00 30.8	+0.4	
DGAR	Diego Garcia	37.02	201	P		P	07 00 52.9	+0.2	
DGAR				IAmb		IAmb	07 00 53.6		
	comp=Z,24nm,0.8s								
NRIK	Noril'sk	41.71	1	P		P	07 01 31.9	+0.7	
	comp=Z,10.0nm,0.7s,baz=167,slow=8.5,SNR=5.2								
NRIK	Noril'sk	41.71	1	IAmb		IAmb	07 01 32.8		
	comp=Z,12nm,0.8s								
AKASG	Malin Array Be	47.80	315	P		P	07 02 19.5	-0.5	
	comp=Z,1.5nm,0.5s,baz=81,slow=6.5,SNR=2.1								
MLR	Muntele Rosu	49.70	308	P		P	07 02 36.6	+1.7	
TIXI	Tiksi	50.08	17	P		P	07 02 38.6	+1.4	
BUR08	Bucovina Ar. S	50.22	310	P		P	07 02 39.1	+0.2	
BUR08				IAmb		IAmb	07 02 44.0		
	comp=Z,9.8nm,0.9s								
SANT	Santorini	50.73	296	P		P	07 02 41.1	-1.7	
FINES	FINESS Array B	51.42	328	P		P	07 02 47.9	+0.4	
	comp=Z,16nm,0.9s,baz=108,slow=8.9,SNR=1.4								
FINES	FINESS Array B	51.42	328	P		P	07 02 48.5	+1.0	
VTS	Vitosha	51.77	304	P		P	07 02 50.5	-0.1	
AGG	Agios Georgios	52.83	299	P		P	07 02 58.7	+0.3	
AGG				IAmb		IAmb	07 03 10.4		
	comp=Z,20nm,1.1s								
KEV	Kevo	53.44	338	P		P	07 03 03.0	+0.7	
KEV				IAmb		IAmb	07 03 05.8		
	comp=Z,24nm,1.0s								
ARCES	ARCESS Array B	53.86	338	P		P	07 03 05.7	+0.2	
	comp=Z,14nm,0.8s,baz=103,slow=7.1,SNR=7.6								
ZOU	Zoufplan	58.62	310	P		P	07 03 40.0	-0.1	
ZOU				IAmb		IAmb	07 03 49.9		
	comp=Z,12nm,1.1s								
SPA0	Spitsbergen Ar	58.80	347	P		P	07 03 41.4	+0.9	
MTN	Manton Dam	59.99	126	P		P	07 03 49.6	-0.1	
KNRA	Kununurra	60.30	130	P		P	07 03 54.0	+2.3	
KNRA				IAmb		IAmb	07 04 11.2		
	comp=Z,12nm,0.9s								
MSSA	Maissana	61.41	308	P		P	07 03 58.9	-0.2	
MSSA				IAmb		IAmb	07 03 60.0		
	comp=Z,16nm,1.1s								
KEST	Kesra	63.62	298	P		P	07 04 13.9	-0.1	
	comp=Z,15nm,0.8s,baz=357,slow=1.5,SNR=6.5								
KEST	Kesra	63.62	298	IAmb		IAmb	07 04 15.2		
	comp=Z,16nm,0.8s								
MORW	Morawa	63.67	150	P		P	07 04 14.4	+0.3	
MORW				IAmb		IAmb	07 04 17.8		
	comp=Z,14nm,1.1s								
SSB	Saint Sauveur	64.64	310	P		P

az=175.0
DMN ***25*** *06:56:34.5±0.1,27°.85N×85°.75E,h10km,Ml5.8/5,Error ellipse: s-maj=3.7km s-min=1.2km az=5.0*
NDI ***25*** *06:56:36.4±1.8,28°.16N×85°.90E,h10km,ML5.4, mb5.5(NEIC)*
ISC 25 06:56:33.5±0.7,**27°.86N**±0°.04×**85°.71E**±0°.02,**h8**km±4km, **n721**,σ1%**09**/732,**mb5.5**/206,**81C-90D,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.15**	**72**	*e*Pg		**Pg**	**06 56 38.1**	**+1.1**
GUN				*e*Sg		**Sg**	**06 56 40.6**	**+1.1**
KKN	**Kakani**	**0.39**	**259**	*e*Pg		**Pb**	**06 56 43.1**	**+0.3**
KKN				*e*Sg		**Sb**	**06 56 48.9**	**-0.2**
PKI	**Pulchoki**	**0.40**	**223**	*e*Pg		**Pb**	**06 56 43.0**	**0.0**
JIRN	**Jiri**	**0.47**	**116**	*e*Sg		**Sg**	**06 56 49.0**	**+0.1**
DMN	**Daman**	**0.59**	**245**	*e*Pg		**Pb**	**06 56 47.0**	**+0.7**
DMN				*e*Sg		**Sb**	**06 56 54.7**	**-0.3**
	133μm,0.6s							
GKN	**Gorkha**	**0.96**	**279**	*e*Pg		**Pn**	**06 56 53.8**	**+0.3**
GKN				*e*Sg		**Sb**	**06 57 06.2**	**+0.7**
	22μm,0.3s							
DANN	**Dangsing**	**1.79**	**286**	*e*Pg		**Pg**	**06 57 08.8**	**+0.8**
DANN				*e*Sg		**Sg**	**06 57 32.3**	**+1.1**
	10μm,0.2s							
ODAN	**Odare**	**1.79**	**123**	*e*Pg		**Pb**	**06 57 07.1**	**+0.3**
ODAN				*e*Sg		**Sg**	**06 57 30.4**	**-0.9**
	25μm,0.3s							
TAPN	**Taplejung**	**1.84**	**106**	*e*Pg		**Pg**	**06 57 08.3**	**-0.6**
TAPN				*e*Sg		**Sg**	**06 57 32.7**	**-0.2**
	14μm,0.3s							
KOLN	**Koldanda**	**1.88**	**268**	*e*Pg		**Pg**	**06 57 09.9**	**+0.4**
KOLN				*e*Sg		**Sg**	**06 57 34.8**	**+1.0**
	8μm,0.3s							
PYUN	**Piuthan**	**2.42**	**276**	*e*Pg		**Pg**	**06 57 20.0**	**0.0**
PYUN				*e*Sg		**Sg**	**06 57 51.4**	**0.0**
GTK	**Tadong**	**2.62**	**101**	*e*P		**Pb**	**06 57 18.9**	**-1.9**
GTK				*e*S		**Sn**	**06 57 49.1**	**+0.8**
GTK				IAML			06 57 56.9	
	comp=E,8μm,0.2s							
LSA	**Lhasa**	**5.11**	**68**	P		**Pn**	**06 57 50.9**	**+0.1**
LSA	**Lhasa**	**5.11**	**68**	Pn		**Pn**	**06 57 50.9**	**+0.1**
GUWA	**GUWAHATI**	**5.58**	**106**	*e*P		**Pn**	**06 57 58.4**	**+1.5**
SHL	**Shillong**	**5.97**	**111**	P		**Pn**	**06 58 02.4**	**0.0**
SHL	**Shillong**	**5.97**	**111**			**Pn**	**06 58 02.4**	**0.0**
AGT	**Agartala**	**6.37**	**127**	*e*P		**Pn**	**06 58 09.6**	**+1.9**
AGT				*e*S		**Sn**	**06 59 19.8**	**-0.8**
TEZP	**TEZPUR**	**6.43**	**100**	*e*P		**Pn**	**06 58 08.9**	**+0.4**
DDI	**Dehra Dun**	**7.13**	**292**	*e*P		**Pn**	**06 58 21.9**	**+3.6**
DDI				IAmb		IAmb	06 58 25.8	
	comp=Z,704nm,0.5s							
DDI				*e*S		**Sn**	**06 59 38.7**	**-0.8**
DDI				IAML			06 59 43.0	
	comp=E,8μm,0.3s							
DDI				IAML			06 59 44.8	
	comp=N,9μm,0.3s							
ZIRO	**ZIRO**	**7.22**	**91**	*e*P		**Pn**	**06 58 19.8**	**+0.2**
MOKO	**MOKOCHONG**	**7.99**	**99**	*e*P		**Pn**	**06 58 30.5**	**+0.3**
SMLA	**Simla**	**8.13**	**296**	*e*P		**Pn**	**06 58 33.9**	**+2.1**
DHRM	**DHARAMSHALA**	**9.25**	**300**	*e*P		**Pn**	**06 58 47.7**	**+0.2**
DHRM				IAmb		IAmb	06 58 50.9	
	comp=Z,996nm,0.6s							
DHRM				*e*S		**Sn**	**07 00 26.6**	**-5.3**
DHRM				IAML			07 00 31.9	
	comp=N,3μm,0.6s							
DHRM				IAML			07 00 36.4	
	comp=E,2μm,0.5s							
NIL	**Nilore**	**12.17**	**301**	P		**Pn**	**06 59 26.6**	**-0.6**
NIL	**Nilore**	**12.17**	**301**	Pn		**Pn**	**06 59 26.6**	**-0.6**
HYB	**Hyderabad**	**12.32**	**214**	*i* P		**Pn**	**06 59 26.5**	**-2.8**
KSH	**Kashi**	**14.16**	**328**	P		**Pn**	**06 59 52.3**	**-2.2**
CM34	**Chiang Mai Arr**	**15.24**	**123**	P		**P**	**07 00 18.0**	**+3.9**
CM15	**Chiang Mai Arr**	**15.33**	**125**	P		**P**	**07 00 21.0**	**+5.9**
CM31	**Chiang Mai Arr**	**15.34**	**125**	P		**P**	**07 00 20.8**	**+5.6**
CMAR	**Chiang Mai Arr**	**15.34**	**125**	Pn		**Pn**	**07 00 07.3**	**-3.1**
	comp=E,0.7nm,0.3s,baz=312,slow=10,SNR=1.7							
CMAR	**Chiang Mai Arr**	**15.34**	**125**	*i* P		**P**	**07 00 14.3**	**-0.9**
CMAR				pmax		pmax		
	comp=Z,15nm,0.7s							
CMAR	**Chiang Mai Arr**	**15.34**	**125**			**Pn**	**07 00 09.3**	**-1.1**
CM35	**Chiang Mai Arr**	**15.35**	**124**	P		**P**	**07 00 19.0**	**+3.6**
CM02	**Chiang Mai Arr**	**15.36**	**125**	P		**P**	**07 00 21.0**	**+5.6**
CM05	**Chiang Mai Arr**	**15.38**	**125**	P		**P**	**07 00 21.6**	**+6.0**
KMI	**Kunming**	**15.49**	**96**	P		**Pn**	**07 00 11.2**	**-1.4**
KMI				pmax		pmax		
	comp=Z,29nm,0.7s							
KMI	**Kunming**	**15.49**	**96**	Pn		**Pn**	**07 00 11.2**	**-1.4**
KBL	**Kabul**	**15.73**	**299**	P		**Pn**	**07 00 14.8**	**-0.9**
KBL				pmax		pmax		
	comp=Z,215nm,0.9s							
KBL	**Kabul**	**15.73**	**299**	Pn		**Pn**	**07 00 14.8**	**-0.9**
KBL				IAmb		IAmb	07 00 25.6	
	comp=Z,215nm,0.9s							
PRZ	**Przheval'sk**	**15.75**	**340**	P		**Pn**	**07 00 15.1**	**-0.8**
PRZ				pmax		pmax		
	comp=Z,131nm,0.6s							
PRZ	**Przheval'sk**	**15.75**	**340**			**Pn**	**07 00 15.1**	**-0.8**
PRZ				IAmb		IAmb	07 00 25.7	
	comp=Z,132nm,0.6s							
KDJ	**Kajisay**	**15.84**	**336**	P		**Pn**	**07 00 16.1**	**-0.9**
KDJ				pmax		pmax		
	comp=Z,293nm,1.1s							
KDJ	**Kajisay**	**15.84**	**336**			**Pn**	**07 00 16.1**	**-0.9**
KDJ				IAmb		IAmb	07 00 25.2	
	comp=Z,293nm,1.1s							
WMQ	**Urumqi**	**16.00**	**5**	*e*P		**Pn**	**07 00 19.5**	**+0.5**
WMQ				pP		pP	07 00 24.3	-1.3
WMQ	**Urumqi**	**16.00**	**5**	P		**Pn**	**07 00 16.8**	**-2.2**
WMQ				pmax		pmax		
	comp=Z,138nm,0.6s							
WMQ	**Urumqi**	**16.00**	**5**			**Pn**	**07 00 16.8**	**-2.2**
CD2	**Chengdu**	**16.02**	**75**	P		**Pn**	**07 00 19.5**	**+0.3**
CD2				pmax		pmax		
	comp=Z,140nm,1.2s							
SHLS	**Shalkode**	**16.08**	**343**	*e*P		**Pn**	**07 00 18.4**	**-1.7**
	comp=Z,200nm,1.0s,baz=344							
SHLS	**Shalkode**	**16.08**	**343**	*e*P		**Pn**	**07 00 18.3**	**-1.7**
SHLS				pmax		pmax		
	comp=Z,200nm,1.0s							
UZB	**Uzynbulak**	**16.18**	**342**	*e*P		**Pn**	**07 00 21.3**	**-0.1**
	baz=342							
UZB	**Uzynbulak**	**16.18**	**342**	*e*P		**Pn**	**07 00 21.3**	**-0.1**
SATY	**Saty**	**16.28**	**341**	*e*P		**Pn**	**07 00 22.4**	**-0.2**
	baz=341							
SATY	**Saty**	**16.28**	**341**	*e*P		**Pn**	**07 00 22.4**	**-0.2**
GTA	**Gaotai**	**16.42**	**42**	P		**P**	**07 00 27.5**	**+0.2**
GTA				pP		sP	07 00 31.3	-0.2
GTA				sP		pP	07 00 34.5	+4.3
GTA				pmax		pmax		
	comp=Z,200nm,0.9s							
BOOM	**Boomskoye usch**	**16.62**	**334**	P		**Pn**	**07 00 26.0**	**-1.0**
BOOM				pmax		pmax		
	comp=Z,145nm,0.8s							
BOOM	**Boomskoye usch**	**16.62**	**334**	Pn		**Pn**	**07 00 26.0**	**-1.0**
TNSS	**Tian-Shan**	**16.72**	**337**	*e*P		**Pn**	**07 00 28.4**	**-0.1**
	baz=337							
TNSS	**Tian-Shan**	**16.72**	**337**	*e*P		**Pn**	**07 00 28.4**	**-0.1**
MDOK	**Medeo**	**16.80**	**338**	*e*P		**Pn**	**07 00 29.6**	**+0.4**
	baz=338							
MDOK	**Medeo**	**16.80**	**338**	*e*P		**Pn**	**07 00 29.6**	**+0.4**
PHIT	**Phitsanulok**	**17.23**	**125**	P		P	07 00 46.3	+10
AAK	**Ala-Archa**	**17.33**	**331**	P		**P**	**07 00 37.9**	**+0.6**
	comp=Z,3.6nm,0.3s,baz=156,slow=7.4,SNR=13							
AAK	**Ala-Archa**	**17.33**	**331**	⇓*e*P		**P**	**07 00 38.8**	**+1.4**
AAK				pmax		pmax		
	comp=Z,276nm,0.9s							
AAK	**Ala-Archa**	**17.33**	**331**	P		**Pn**	**07 00 33.9**	**-2.0**
AAK	**Ala-Archa**	**17.33**	**331**	⇓P		**P**	**07 00 38.7**	**+1.4**
LZH	**Lanzhou**	**17.41**	**57**	⇑P		**Pn**	**07 00 36.3**	**-0.7**
LZH				pP		P	07 00 38.8	+0.5
LZH				sP		pP	07 00 41.0	-0.2
LZH				pmax		pmax		
	comp=Z,170nm,1.1s							
FRU1	**Bishkek**	**17.41**	**332**	P		**Pn**	**07 00 36.0**	**-0.9**
FRU1				pmax		pmax		
	comp=Z,195nm,1.3s							
FRU1	**Bishkek**	**17.41**	**332**	P		**Pn**	**07 00 36.0**	**-0.9**
SGDS	**Sogindy**	**17.95**	**333**	*e*P		**Pn**	**07 00 43.1**	**-0.3**
	baz=333							
SGDS	**Sogindy**	**17.95**	**333**	*e*P		**Pn**	**07 00 43.1**	**-0.3**
TDK	**Taldyqorghan**	**18.07**	**343**	*e*P		**Pn**	**07 00 44.8**	**-0.1**
	comp=Z,156nm,0.7s,baz=343							
TDK	**Taldyqorghan**	**18.07**	**343**	*e*P		**Pn**	**07 00 44.8**	**-0.1**
TDK				pmax		pmax		
	comp=Z,156nm,0.7s							
GYA	**Guiyang**	**18.70**	**89**	⇑P		**Pn**	**07 00 53.5**	**+0.7**
MK31	**Makanchi Array**	**19.09**	**353**	P		**P**	**07 00 55.1**	**-1.4**
MK31				pmax		pmax		
	comp=Z,13nm,0.7s							
MK31	**Makanchi Array**	**19.09**	**353**			**P**	**07 00 55.1**	**-1.4**
MK31				IAmb		IAmb	07 01 00.7	
	comp=Z,129nm,0.7s							
MKAR	**Makanchi Array**	**19.09**	**353**	P		**Pn**	**07 00 58.1**	**+0.8**
	comp=Z,21nm,0.3s,baz=176,slow=10,SNR=64							
MKAR	**Makanchi Array**	**19.09**	**353**	P		**P**	**07 00 55.5**	**-1.1**
MAKZ	**Makanchi**	**19.14**	**352**	P		**P**	**07 00 56.9**	**-0.2**
MAKZ				pmax		pmax		
	comp=Z,151nm,0.5s							
MAKZ	**Makanchi**	**19.14**	**352**	P		**P**	**07 00 56.9**	**-0.2**
MAKZ				IAmb		IAmb	07 00 59.8	
	comp=Z,151nm,0.5s							
MAKZ	**Makanchi**	**19.14**	**352**	⇓P		**Pn**	**07 00 58.4**	**+0.5**
IUG	**Iuzhnay**	**19.14**	**322**	*e*P		**P**	**07 00 57.1**	**-0.2**
	baz=322							
IUG	**Iuzhnay**	**19.14**	**322**	*e*P		**P**	**07 00 57.0**	**-0.2**
CHM	**Chimkent**	**19.49**	**322**	*e*P		**P**	**07 01 01.1**	**+0.1**
	baz=322							
CHM	**Chimkent**	**19.49**	**322**	*e*P		**P**	**07 01 01.0**	**+0.1**
BTLS	**Baital**	**19.51**	**335**	*e*P		**P**	**07 01 01.2**	**+0.1**
	baz=335							
BTLS	**Baital**	**19.51**	**335**	*e*P		**P**	**07 01 01.2**	**+0.1**
KK31	**Karatay Array**	**19.56**	**325**	P		**P**	**07 01 01.9**	**+0.2**
KK31				pmax		pmax		
	comp=Z,57nm,0.8s							
KK31	**Karatay Array**	**19.56**	**325**	P		**P**	**07 01 01.9**	**+0.2**
KKAR	**Karatay Array**	**19.56**	**325**	P		**P**	**07 01 01.8**	**+0.1**
KKAR				pmax		pmax		
	comp=Z,57nm,0.8s							
KKAR	**Karatay Array**	**19.56**	**325**	P		**P**	**07 01 01.9**	**+0.1**
KKAR	**Karatay Array**	**19.56**	**325**	P		**P**	**07 01 01.8**	**+0.1**
KKAR	**Karatay Array**	**19.56**	**325**	⇑P		**Pn**	**07 01 03.9**	**+0.9**
XAN	**Xi'an**	**20.81**	**67**	P		**P**	**07 01 15.0**	**-0.5**
XAN				pP		Pn	07 01 18.0	+0.1
XAN				pmax		pmax		
	comp=Z,100nm,1.2s							
XAN	**Xi'an**	**20.81**	**67**	P		**P**	**07 01 15.2**	**-0.2**
XAN				pmax		pmax		
	comp=Z,66nm,0.9s							
XAN	**Xi'an**	**20.81**	**67**	P		**P**	**07 01 15.2**	**-0.2**
ENH	**Enshi**	**20.91**	**78**	P		**P**	**07 01 16.8**	**+0.3**
PALK	**Pallekele**	**21.02**	**194**	P		**P**	**07 01 19.0**	**+1.2**
PALK				pmax		pmax		
	comp=Z,219nm,1.1s							
PALK	**Pallekele**	**21.02**	**194**	P		**P**	**07 01 19.0**	**+1.2**
PALK				IAmb		IAmb	07 01 22.3	
	comp=Z,219nm,1.1s							
DGZ	**Jazzator, Alta**	**21.85**	**3**	⇑*i*P		**P**	**07 01 29.2**	**+2.7**
DGZ				pmax		pmax		
	comp=Z,235nm,0.9s							
SEM	**Semipalatinsk**	**22.90**	**351**	*e*P		**P**	**07 01 38.1**	**+0.2**
	comp=Z,38nm,0.6s,baz=351							
SEM	**Semipalatinsk**	**22.90**	**351**	*e*P		**P**	**07 01 38.0**	**+0.2**
SEM				pmax		pmax		
	comp=Z,37nm,0.6s							
KURBB	**Kurchatov Arra**	**23.38**	**348**	P		**P**	**07 01 43.6**	**+1.1**
	comp=Z,79nm,0.6s,baz=168,slow=10,SNR=101							
KURK	**Kurchatov**	**23.45**	**349**	P		**P**	**07 01 43.6**	**+0.4**
QIZ	**Qiongzhong**	**23.79**	**106**	P		**P**	**07 01 47.0**	**+0.2**
QIZ	**Qiongzhong**	**23.79**	**106**	P		**P**	**07 01 47.0**	**+0.2**
BRZS	**Berezniki**	**24.23**	**339**	*e*P		**P**	**07 01 51.2**	**+0.4**
	comp=Z,54nm,1.1s,baz=339							
BRZS	**Berezniki**	**24.23**	**339**	*e*P		**P**	**07 01 51.1**	**+0.4**
BRZS				pmax		pmax		
	comp=Z,54nm,1.1s							
TIY	**Taiyuan**	**24.45**	**60**	*e*P		**P**	**07 01 52.3**	**-0.6**
TIY				pmax		pmax		
	comp=Z,81nm,1.0s							
WSAR	**Wadi Sarin**	**24.84**	**265**	P		**P**	**07 01 58.3**	**+1.8**
	comp=Z,12nm,0.6s,baz=124,slow=6.3,SNR=5.8							
HHC	**Hu-ho-hao-te**	**24.86**	**52**	*e*P		**P**	**07 01 57.8**	**+1.2**
HHC				pmax		pmax		
	comp=Z,190nm,1.1s							
LHMI	**Lhok Sumawe**	**24.92**	**153**	P		**P**	**07 01 57.3**	**+0.1**
LHMI				IAmb		IAmb	07 02 05.7	
	comp=Z,231nm,1.1s							
WHN	**Wuhan**	**25.11**	**77**	⇑P		P	07 02 07.8	+9.0
GEYT	**Alibeck**	**25.17**	**301**	P		**P**	**07 02 01.4**	**+2.0**
	comp=Z,24nm,0.7s,baz=122,slow=13,SNR=6.9							
GYA0B	**ALIBECK ARRAY**	**25.17**	**301**	P		**P**	**07 01 59.3**	**-0.1**
GYA0B				IAmb		IAmb	07 02 09.1	
	comp=Z,106nm,1.3s							
SONM	**Songino Array**	**25.63**	**33**	P		**P**	**07 02 05.1**	**+1.5**
	comp=Z,122nm,0.7s,baz=223,slow=9.4,SNR=55							
SONM	**Songino Array**	**25.63**	**33**	P		**P**	**07 02 03.3**	**-0.2**
SONM				pmax		pmax		
	comp=Z,113nm,0.8s							
SONM	**Songino Array**	**25.63**	**33**	P		**P**	**07 02 03.3**	**-0.2**
SONM				IAmb		IAmb	07 02 07.9	
	comp=Z,113nm,0.8s							
ULN	**Ulaanbaatar**	**25.97**	**34**	⇑*e*P		**P**	**07 02 07.8**	**+1.1**
ULN				pmax		pmax		
	comp=Z,191nm,0.7s							
ULN	**Ulaanbaatar**	**25.97**	**34**	P		**P**	**07 02 05.9**	**-0.8**
ZAA0	**Zalesovo Array**	**26.07**	**359**	P		**P**	**07 02 05.6**	**-1.7**
ZAA0				IAmb		IAmb	07 02 10.8	
	comp=Z,97nm,0.7s							
ZALV	**Zalesovo Beam**	**26.07**	**359**	P		**P**	**07 02 08.5**	**+1.2**
	comp=Z,112nm,0.6s,baz=180,slow=9.5,SNR=44							
ZALV	**Zalesovo Beam**	**26.07**	**359**	P		**P**	**07 02 07.3**	**0.0**
ZALV	**Zalesovo Beam**	**26.07**	**359**	P		**P**	**07 02 07.3**	**0.0**
MOY	**Mondy**	**26.41**	**22**	*e*P		**P**	**07 02 12.2**	**+1.7**
KULM	**Kulim**	**26.57**	**145**	P		**P**	**07 02 11.2**	**-0.9**
KULM				IAmb		IAmb	07 02 21.3	
	comp=Z,74nm,0.8s							
BVAR	**Borovoye Array**	**27.59**	**340**	P		**P**	**07 02 22.3**	**+1.3**
	comp=Z,5.3nm,0.4s,baz=146,slow=17,SNR=18							
BRVK	**Borovoye**	**27.65**	**340**	⇓*e*P		**P**	**07 02 23.1**	**+1.5**
BRVK				pmax		pmax		
	comp=Z,148nm,1.8s							
BRVK	**Borovoye**	**27.65**	**340**	P		**P**	**07 02 22.4**	**+0.9**
GSI	**Gunungsitoli**	**28.75**	**155**	P		**P**	**07 02 32.0**	**+0.3**
GSI				IAmb		IAmb	07 02 39.9	
	comp=Z,167nm,1.3s							
ABKAR	**Akbulak array**	**29.12**	**324**	P		**P**	**07 02 35.7**	**+1.1**
ABKAR				IAmb		IAmb	07 02 37.1	
	comp=Z,55nm,0.6s							
ABKAR	**Akbulak array**	**29.12**	**324**	P		**P**	**07 02 35.2**	**+0.6**
ABKAR	**Akbulak array**	**29.12**	**324**	⇑P		**P**	**07 02 34.9**	**+0.2**
AKTO	**Aktyubinsk**	**30.83**	**325**	P		**P**	**07 02 50.0**	**+0.3**
	comp=Z,39nm,0.7s,baz=33,slow=0.4,SNR=17							
SSE	**Sheshan**	**30.97**	**75**	P		**P**	**07 02 50.8**	**-0.4**
SSE				IAmb		IAmb	07 03 07.5	
	comp=Z,53nm,0.7s							
DL2	**Dalian**	**31.76**	**60**	P		**P**	**07 02 58.5**	**+0.4**
DL2				pmax		pmax		
	comp=Z,88nm,0.7s							
YULB	**Yu-li**	**32.32**	**90**	P		**P**	**07 03 03.4**	**+0.2**
YULB				IAmb		IAmb	07 03 10.3	
	comp=Z,125nm,1.2s							
NACB	**Ninganchiao**	**32.38**	**88**	P		**P**	**07 03 04.2**	**+0.5**
NACB				IAmb		IAmb	07 03 05.6	
	comp=Z,95nm,1.1s							
SOCY	**Socotra**	**33.51**	**249**	P		**P**	**07 03 13.2**	**-0.6**
SOCY	**Socotra**	**33.51**	**249**	⇓P		**P**	**07 03 13.1**	**-0.6**
YOJ	**Yonaguni jima**	**33.56**	**87**	P		**P**	**07 03 13.9**	**-0.2**
YOJ				pmax		pmax		
	comp=Z,180nm,1.5s							
YOJ	**Yonaguni jima**	**33.56**	**87**	P		**P**	**07 03 13.8**	**-0.2**
HIA	**Hailar**	**33.70**	**41**	P		**P**	**07 03 16.5**	**+1.4**
HIA				pmax		pmax		
	comp=Z,46nm,0.8s							
HIA	**Hailar**	**33.70**	**41**	P		**P**	**07 03 16.5**	**+1.4**
HIA				IAmb		IAmb	07 03 16.8	
	comp=Z,46nm,0.8s							
AKT	**Akhty**	**33.79**	**304**	*e*P		**P**	**07 03 18.0**	**+2.0**
AKT				*e*			07 04 29.7	
AKT				pmax		pmax		
	comp=Z,81nm,0.8s							
SVE	**Sverdlovsk**	**33.98**	**335**	⇓*e*P		**P**	**07 03 18.8**	**+1.4**
SVE				pmax		pmax		
	comp=Z,137nm,1.5s							
MAK	**Makhachkala**	**34.27**	**306**	*e*P		P	07 03 14.6	-5.4
MAK				*e*S		**S**	**07 08 40.0**	**-7.2**
MAK				pmax		pmax		
	comp=Z,213nm,1.0s							
ARU	**Arti**	**34.49**	**333**	P		**P**	**07 03 23.0**	**+1.2**
	comp=Z,40nm,0.5s,baz=124,slow=5.7,SNR=56							
ARU	**Arti**	**34.49**	**333**	⇑*e*P		**P**	**07 03 23.1**	**+1.4**
ARU				pmax		pmax		
	comp=Z,120nm,0.7s							
ARU	**Arti**	**34.49**	**333**	P		**P**	**07 03 23.2**	**+1.4**
ARU	**Arti**	**34.49**	**333**	⇓P		**P**	**07 03 23.1**	**+1.4**
CN2	**Changchun**	**35.55**	**53**	*e*P		**P**	**07 03 31.0**	**-0.1**
CN2				pmax		pmax		
	comp=Z,40nm,1.1s							
KSAR	**Wonju Array Be**	**36.51**	**64**	P		**P**	**07 03 39.0**	**-0.4**
KSAR	**Wonju Array Be**	**36.51**	**64**	P		**P**	**07 03 39.0**	**-0.4**
KSRS	**Korea Array**	**36.54**	**64**	P		**P**	**07 03 38.7**	**-0.9**
	comp=Z,6.7nm,0.5s,baz=269,slow=8.5,SNR=20							
ZEI	**Tsey**	**36.83**	**305**	*e*P		**P**	**07 03 43.6**	**+1.3**
ZEI				pmax		pmax		
	comp=Z,36nm,0.5s							
NCK	**Nalchik**	**37.18**	**306**	⇓*i*P		**P**	**07 03 46.6**	**+1.6**
NCK				pmax		pmax		
	comp=Z,65nm,0.6s							
KBZ	**Khabaz**	**37.72**	**306**	P		**P**	**07 03 50.8**	**+1.2**
	comp=Z,14nm,0.8s,baz=110,slow=8.5,SNR=7.0							
JTU	**Tsushima**	**37.73**	**69**	P		**P**	**07 03 49.9**	**+0.2**
KIV	**Kislovodsk**	**37.91**	**307**	*e*P		**P**	**07 03 49.9**	**-1.4**
KIV				pmax		pmax		
	comp=Z,75nm,1.0s							
MYLDM	**Lahad Datu**	**38.46**	**120**	P		**P**	**07 03 55.8**	**-0.3**
MYLDM				IAmb		IAmb	07 04 12.8	
	comp=Z,109nm,1.5s							
MARD	**Mardin**	**38.71**	**296**	P		**P**	**07 03 59.4**	**+1.2**
MARD				IAmb		IAmb	07 04 00.9	
	comp=Z,69nm,0.7s							
JNU	**Nakatsue**	**39.04**	**71**	P		**P**	**07 04 01.2**	**+0.3**
	comp=Z,43nm,0.9s,baz=291,slow=2.3,SNR=12							
JNU	**Nakatsue**	**39.04**	**71**	P		**P**	**07 04 00.1**	**-0.8**
JNU	**Nakatsue**	**39.04**	**71**	⇓P		**P**	**07 04 01.6**	**+0.6**
KIRV	**Kirov**	**39.66**	**331**	P		**P**	**07 04 06.9**	**+1.2**
	comp=Z,180nm,0.5s,baz=123,slow=2.3,SNR=50							
ZEA	**Zeya**	**39.85**	**38**	*e*P		**P**	**07 04 08.5**	**+1.2**
ZEA				pmax		pmax		
	comp=E,20nm,0.7s							
ZEA				pmax		pmax		
	comp=Z,30nm,0.9s							
USA0B	**Ussuriysk Arra**	**40.26**	**54**	P		**P**	**07 04 11.3**	**+0.5**
USA0B				pmax		pmax		
	comp=Z,28nm,1.2s							
USA0B	**Ussuriysk Arra**	**40.26**	**54**	P		**P**	**07 04 11.3**	**+0.5**
USRK	**Ussuriysk Ar.**	**40.26**	**54**	P		**P**	**07 04 11.0**	**+0.1**
	comp=Z,11nm,0.7s,baz=259,slow=8.5,SNR=24							
USRK	**Ussuriysk Ar.**	**40.26**	**54**	P		**P**	**07 04 10.5**	**-0.3**
USRK	**Ussuriysk Ar.**	**40.26**	**54**	P		**P**	**07 04 10.5**	**-0.3**
VRH	**Novokhopyorsk**	**40.35**	**318**	*e*P		**P**	**07 04 11.0**	**-0.5**
VRH				pmax		pmax		
	comp=Z,260nm,0.7s							
JHS	**Saijyo**	**40.76**	**68**	P		**P**	**07 04 14.0**	**-1.2**
KLR	**Kul'dur**	**41.06**	**46**	P		**P**	**07 04 17.9**	**+0.5**
	comp=Z,20nm,0.8s,baz=273,slow=8.7,SNR=12							
KLR	**Kul'dur**	**41.06**	**46**	⇓*e*P		**P**	**07 04 17.9**	**+0.5**
KLR				pmax		pmax		
	comp=Z,56nm,1.0s							
JMN	**Monobe**	**41.49**	**70**	P		**P**	**07 04 19.5**	**-1.7**
JMN				IAmb		IAmb	07 04 27.6	
	comp=Z,64nm,0.8s							
JMN	**Monobe**	**41.49**	**70**	⇓P		**P**	**07 04 21.9**	**+0.7**
NRIK	**Noril'sk**	**41.52**	**1**	P		**P**	**07 04 22.5**	**+1.6**
	comp=Z,215nm,0.7s,baz=169,slow=5.7,SNR=81							
NRIK	**Noril'sk**	**41.52**	**1**	P		**P**	**07 04 21.5**	**+0.6**
NRIK				pmax		pmax		
	comp=Z,242nm,0.7s							
NRIK	**Noril'sk**	**41.52**	**1**	P		**P**	**07 04 21.5**	**+0.6**
VORD	**Divnogorie**	**41.75**	**317**	*e*P		**P**	**07 04 23.0**	**0.0**
VORD				pmax		pmax		
	comp=Z,80nm,0.8s							
VSR	**Storozhevoye**	**41.89**	**317**	*e*P		**P**	**07 04 23.7**	**-0.5**
VSR				pmax		pmax		
	comp=Z,50nm,0.6s							
BBKI	**Banjar Baru**	**41.92**	**133**	P		P	07 04 31.0	+6.2
LPSR	**Galich'ya Gora**	**42.42**	**319**	*e*P		**P**	**07 04 29.1**	**+0.6**
LPSR			

comp=Z,68nm,0.8s
YSS Yuzh-Sakhalins 48.04 51⇓ *eP* **P 07 05 13.6 +0.4**
YSS pmax pmax

comp=Z,107nm,1.3s
YSS Yuzh-Sakhalins 48.04 51 P **P 07 05 12.9 -0.3**
MFTR Murfatlar 48.16 306 ⇓P **P 07 05 15.3 +1.2**
TPGR Topolog 48.16 307 ⇑P **P 07 05 15.1 +0.9**
TIRR Tirgusor 48.16 306 P **P 07 05 14.0 -0.2**
TIRR pmax pmax

comp=Z,49nm,0.8s
TIRR Tirgusor 48.16 306 P **P 07 05 13.9 -0.2**
TIRR IAmb IAmb 07 05 16.4

comp=Z,49nm,0.8s
ERM Erimo 48.31 57 ⇑P **P 07 05 15.7 +0.3**
SORM Soroca 48.31 311 ⇑P **P 07 05 15.4 +0.1**
CFR Carcaliu 48.36 307 ⇑P **P 07 05 16.5 +0.8**
TLBR Topalu 48.42 306 ⇓P **P 07 05 17.2 +1.0**
HARR Harsova 48.51 306 ⇓P **P 07 05 18.0 +1.1**
VARL Varlezi 48.58 308 ⇓P **P 07 05 18.9 +1.5**
VASR Vaslui 48.63 309 ⇑P **P 07 05 18.6 +0.9**
ODBI Odobesti 49.13 308 ⇑P **P 07 05 24.0 +2.4**
VRI Vrincioaia 49.36 308 ⇑P **P 07 05 25.2 +1.8**
PLOR Plostina 49.41 308 ⇑P **P 07 05 25.8 +1.9**
ISR Istrita 49.49 307 ⇓P **P 07 05 26.8 +2.4**
NEHR Nehoiu 49.66 307 ⇑P **P 07 05 27.9 +2.2**
KARP Karpathos 49.78 294 P **P 07 05 26.9 +0.1**
KARP Karpathos 49.78 294 ⇓P **P 07 05 27.4 +0.6**
TIXI Tiksi 49.79 16 P **P 07 05 26.5 +0.3**
TIXI pmax pmax

comp=Z,94nm,0.6s
TIXI Tiksi 49.79 16 P **P 07 05 26.5 +0.3**
TIXI Tiksi 49.79 16 ⇑P **P 07 05 26.5 +0.3**
BIZ Bicaz 49.80 309 ⇑P **P 07 05 27.8 +1.1**
MLR Muntele Rosu 49.91 307 ⇓P **P 07 05 29.9 +2.1**
MLR Muntele Rosu 49.91 307 P **P 07 05 28.7 +0.9**
MLR pmax pmax

comp=Z,166nm,0.8s
MLR Muntele Rosu 49.91 307 P **P 07 05 28.7 +0.9**
NACGM Naroch 49.95 320 *i* P **P 07 05 27.8 +0.1**
NACGM *i* P **P 07 05 27.8 +0.1**
NACGM *i* P **P 07 05 27.8 +0.1**
NACGM *i* PP **PP 07 07 22.1 -0.4**
NACGM *i* PPP PPP 07 08 14.4
NACGM *i* S **S 07 12 37.5 -0.7**
NACGM *i* SS **SS 07 16 10.2 -0.5**
NACGM *i* SSS SSS 07 17 35.1
NACGM *i* LQ LQ 07 22 47.2
NACGM *i* LR LR 07 27 48.6
OZUR 50.01 308 ⇑P **P 07 05 29.4 +1.0**
IDID Didziasalis 50.03 320 *eP* **P 07 05 28.4 +0.1**
ALN Alexandroupoli 50.05 301 P **P 07 05 28.8 +0.1**
ALN pmax pmax

comp=Z,20nm,0.7s
ALN Alexandroupoli 50.05 301 P **P 07 05 28.8 +0.1**
ALN Alexandroupoli 50.05 301 ⇓P **P 07 05 29.5 +0.8**
LVZ Lovozero 50.14 337 P **P 07 05 29.6 +0.5**
LVZ pmax pmax

comp=Z,122nm,1.0s
LVZ Lovozero 50.14 337 P **P 07 05 29.6 +0.5**
LVZ Lovozero 50.14 337 ⇓P **P 07 05 29.5 +0.5**
DOPR Dopca 50.29 308 ⇑P **P 07 05 31.9 +1.4**
IIGN Ignalina 50.33 320 *eP* **P 07 05 30.4 -0.2**
BURAR Bucovina Array 50.41 310 ⇑P **P 07 05 32.5 +1.0**
BURAR Bucovina Array 50.41 310 P **P 07 05 32.1 +0.7**
BURAR IAmb IAmb 07 05 33.3

comp=Z,48nm,0.9s
RDO Rodhopi 50.41 302 ⇓P **P 07 05 32.4 +1.0**
BUR08 Bucovina Ar. S 50.42 310 P **P 07 05 31.4 -0.2**
BUR08 IAmb IAmb 07 05 32.8

comp=Z,33nm,0.7s
ISAL Salakas 50.42 321 *eP* **P 07 05 31.5 +0.2**
APA Apatity 50.43 337⇑ *iP* **P 07 05 30.5 -0.6**
APA pmax pmax

comp=Z,33nm,0.6s
APA MLR MLR

comp=Z,53µm,15.0s
VOIR 50.54 307 ⇑P **P 07 05 33.2 +0.8**
VSU Vasula 50.55 324 *eP* **P 07 05 32.6 +0.4**
VSU Vasula 50.55 324 ⇑P **P 07 05 32.8 +0.5**
ARR Arges 50.83 307 ⇓P **P 07 05 35.8 +1.1**
PLVB Pleven 50.93 305 ⇓P **P 07 05 36.5 +1.2**
ARCR ARCALIA 50.99 309 ⇓P **P 07 05 37.8 +2.0**
SANT Santorini 51.02 296 ⇓P **P 07 05 36.1 -0.1**
SANT Santorini 51.02 296 P **P 07 05 35.1 -1.1**
SANT Santorini 51.02 296 ⇓P **P 07 05 35.9 -0.2**
LVV L'vov 51.23 313 *eP* **P 07 05 37.6 +0.1**
FIA1 FINESS Array S 51.48 328 P **P 07 05 39.0 -0.2**
FIA1 IAmb IAmb 07 05 40.6

comp=Z,82nm,1.0s
FINES FINESS Array B 51.48 328 P **P 07 05 39.7 +0.5**
comp=Z,36nm,0.7s,baz=108,slow=7.8,SNR=23
FINES FINESS Array B 51.48 328 P **P 07 05 39.2 +0.1**
CJR Cluj-Napoca 51.52 309 ⇓P **P 07 05 41.6 +1.8**
BMR Baia Mare 51.57 310 ⇓P **P 07 05 47.7 +1.6**
PABE Paberze 51.63 320 *eP* **P 07 05 40.5 +0.2**
PABE Paberze 51.63 320 P **P 07 05 40.1 -0.2**
IDI Anoyia 51.65 294 ⇑P **P 07 05 41.2 +0.3**
IDI Anoyia 51.65 294 P **P 07 05 40.0 -0.9**
IDI IAmb IAmb 07 05 46.0

comp=Z,74nm,1.2s
SUW Suwalki 51.95 318 *eP* **P 07 05 41.5 -1.3**
SUW Suwalki 51.95 318 P **P 07 05 42.6 -0.2**
SUW pmax pmax

comp=Z,187nm,1.1s
SUW Suwalki 51.95 318 P **P 07 05 42.6 -0.2**
VTS Vitosha 52.00 304 ⇑P **P 07 05 44.6 +1.0**
VTS Vitosha 52.00 304 P **P 07 05 43.8 +0.2**
VTS pmax pmax

comp=Z,68nm,0.9s
VTS Vitosha 52.00 304 P **P 07 05 43.8 +0.2**
VTS IAmb IAmb 07 05 45.7

comp=Z,68nm,0.9s
VTS Vitosha 52.00 304 ⇑P **P 07 05 44.6 +1.0**
DEV Deva 52.03 308 ⇓P **P 07 05 45.2 +1.7**
PUNG Punghina 52.10 306 ⇓P **P 07 05 45.4 +1.4**
MTSE Matsula 52.10 324 *eP* **P 07 05 44.6 +0.7**
DRGR 52.12 309 ⇑P **P 07 05 45.7 +1.4**
GZR Gura Zlata 52.14 307 ⇓P **P 07 05 45.0 +0.6**
UZH Uzhgorod 52.36 311⇑ *iP* **P 07 05 46.7 +0.8**
UZH *e* 07 05 57.6
HERR Herculane 52.43 307 ⇑P **P 07 05 46.6 +0.1**
SLIT Slitere, Latvi 52.77 323 *eP* **P 07 05 48.8 0.0**
SLIT Slitere, Latvi 52.77 323 ⇑P **P 07 05 48.4 -0.4**
PBUR Paburge 52.82 321 *eP* **P 07 05 49.6 +0.4**
LIT Litokhoron 52.83 301 ⇓P **P 07 05 49.4 -0.1**
SOEI Soe 52.83 130 P **P 07 05 49.3 -0.6**
SOEI Soe 52.83 130 ⇓P **P 07 05 53.1 +3.2**
SIRR Siria 52.87 309 ⇑P **P 07 05 51.4 +1.6**
CRVS Cervenica-Dubn 52.91 312 *eP* **P 07 05 51.5 +1.5**
CRVS Cervenica-Dubn 52.91 312 *eP* **P 07 05 51.5 +1.5**
MDVR Moldovita 52.93 307 ⇑P **P 07 05 51.6 +1.3**
BZS Buzias 52.94 308 ⇓P **P 07 05 51.4 +1.1**
BOVS Bovan 53.03 305 ⇓P **P 07 05 51.7 +0.7**
AGG Agios Georgios 53.09 299 P **P 07 05 50.7 -0.9**
AGG pmax pmax

comp=Z,63nm,0.9s
AGG Agios Georgios 53.09 299 P **P 07 05 50.7 -0.9**
AGG IAmb IAmb 07 05 52.0

comp=Z,63nm,0.9s
AGG Agios Georgios 53.09 299 ⇓P **P 07 05 50.9 -0.7**
KEV Kevo 53.42 338 P **P 07 05 54.5 +1.1**
KEV pmax pmax

comp=Z,121nm,0.7s
KEV Kevo 53.42 338 P **P 07 05 54.5 +1.1**
KEV Kevo 53.42 338 ⇑P **P 07 05 54.0 +0.6**
AMBH Ambrzfalva 53.52 309 ⇓P **P 07 05 56.4 +2.0**
KECS Kecovo 53.57 311 *eP* **P 07 05 55.0 +0.2**
KECS pmax pmax

comp=Z,9.0nm,0.8s
KECS Kecovo 53.57 311 *eP* **P 07 05 55.0 +0.2**
FNA Florina 53.58 302 P **P 07 05 55.0 -0.2**
FNA pmax pmax

comp=Z,59nm,1.4s
FNA Florina 53.58 302 P **P 07 05 55.0 -0.2**
FNA IAmb IAmb 07 05 55.7

comp=Z,59nm,1.4s
FNA Florina 53.58 302 ⇓P **P 07 05 55.0 -0.2**
ITM Ithomi 53.69 297 P **P 07 05 55.1 -0.9**
MA2 Magadan 53.83 35 P **P 07 05 56.8 +0.3**
comp=Z,66nm,0.8s,baz=256,slow=7.7,SNR=16
MA2 Magadan 53.83 35 P **P 07 05 57.0 +0.4**
MA2 pmax pmax

comp=Z,87nm,0.9s
MA2 Magadan 53.83 35 P **P 07 05 57.0 +0.4**
MA2 IAmb IAmb 07 05 57.8

comp=Z,88nm,0.9s
MA2 Magadan 53.83 35 ⇓P **P 07 05 57.0 +0.4**
ARA0 ARCESS Array S 53.85 338 *eP* **P 07 05 57.4 +0.8**
ARCES ARCESS Array B 53.85 338 P **P 07 05 57.5 +1.0**
comp=Z,109nm,0.7s,baz=88,slow=7.1,SNR=78
OJC Ojcow 53.96 314 P **P 07 05 57.8 +0.1**
OJC pmax pmax

comp=Z,43nm,0.7s
OJC Ojcow 53.96 314 P **P 07 05 57.8 +0.1**
OJC IAmb IAmb 07 05 59.4

comp=Z,43nm,0.7s
OJC Ojcow 53.96 314 ⇓P **P 07 05 58.1 +0.4**
PSZ Piszkesteto 53.99 311 ⇑P **P 07 05 58.9 +0.9**
PSZ Piszkesteto 53.99 311 P **P 07 05 59.1 +1.1**
PSZ pmax pmax

comp=Z,33nm,0.7s
PSZ Piszkesteto 53.99 311 P **P 07 05 59.1 +1.1**
PSZ IAmb IAmb 07 05 59.7

comp=Z,32nm,0.7s
PSZ Piszkesteto 53.99 311 ⇓P **P 07 05 59.0 +0.9**
LANS Liptovska Anna 54.21 312 *eP* **P 07 06 00.8 +1.2**
LANS pmax pmax

comp=Z,33nm,1.9s
LANS Liptovska Anna 54.21 312 *eP* **P 07 06 00.8 +1.2**
DIVS Divibare 54.22 306⇑ *iP* **P 07 05 59.9 +0.1**
DIVS Divibare 54.22 306 P **P 07 06 00.5 +0.7**
FRGS Fruska Gora 54.25 307 ⇓P **P 07 06 00.9 +1.0**
FRGS Fruska Gora 54.25 307⇑ *iP* **P 07 06 00.3 +0.4**
KTK1 Kautokeino 54.47 337 *eP* **P 07 06 01.9 +0.7**
TEKS Tekeris 54.50 307 *eP* **P 07 06 02.8 +1.0**
VYHS Vyhne 54.66 311 *eP* **P 07 06 03.2 +0.3**
VYHS Vyhne 54.66 311 *eP* **P 07 06 03.1 +0.2**
BBLS Lazići 54.66 306⇑ *iP* **P 07 06 03.4 +0.4**
KMBO Kilima Mbogo 54.70 246 P **P 07 06 04.7 +0.9**
comp=Z,13nm,0.9s,baz=45,slow=11,SNR=5.4
HAMF Hammerfest 54.78 339 *eP* **P 07 06 04.3 +1.1**
PDG Podgorica 54.95 304 ⇓P **P 07 06 05.2 +0.2**
PDG Podgorica 54.95 304⇑ *iP* **P 07 06 04.3 -0.7**
PDG Podgorica 54.95 304 P **P 07 06 05.1 +0.1**
PDG IAmb IAmb 07 06 05.7

comp=Z,75nm,0.8s
PDG Podgorica 54.95 304 ⇓P **P 07 06 05.0 +0.1**
MORH Mrgy, Hungar 54.97 309 ⇑P **P 07 06 05.8 +0.7**
MORH Mrgy, Hungar 54.97 309⇑ *iP* **P 07 06 05.3 +0.2**
HAPS Han Pijesak,BI 54.97 306⇑ *iP* **P 07 06 05.0 -0.3**
SEY Seymchan 54.98 31⇑ *eP* **P 07 06 05.5 +0.6**
SRO2 Moca 55.01 311 *eP* **P 07 06 05.7 +0.4**
SRO2 pmax pmax

comp=Z,114nm,0.6s
SRO2 Moca 55.01 311 *eP* **P 07 06 05.7 +0.4**
DRME Dracevica, Mon 55.03 304 *eP* **P 07 06 04.5 -1.1**
OKC Ostrava-Krasne 55.04 313 *eP* **P 07 06 06.1 +0.6**
OKC Ostrava-Krasne 55.04 313 *eP* **P 07 06 06.1 +0.6**
SRO Srobarova 55.06 311 *eP* **P 07 06 07.2 +1.5**
SRO pmax pmax

comp=Z,81nm,0.7s
SRO Srobarova 55.06 311 *eP* **P 07 06 07.1 +1.4**
UPM Unac-Piva 55.10 305⇑ *iP* **P 07 06 06.4 0.0**
UPP Uppsala 55.38 325 *eP* **P 07 06 07.9 +0.1**
JAVC Velka Javorina 55.41 312 *eP* **P 07 06 09.6 +1.3**
BRY Bratogost 55.41 305⇑ *iP* **P 07 06 08.1 -0.4**
MORC Moravsky Berou 55.43 313 *eP* **P 07 06 09.0 +0.6**
MORC Moravsky Berou 55.43 313 P **P 07 06 08.8 +0.4**
MORC pmax pmax

comp=Z,33nm,0.8s
MORC Moravsky Berou 55.43 313 P **P 07 06 08.8 +0.4**
MORC IAmb IAmb 07 06 10.1

comp=Z,33nm,0.8s
MORC Moravsky Berou 55.43 313 ⇓P **P 07 06 09.3 +0.9**
HCY Herceg Novi 55.50 304⇑ *iP* **P 07 06 06.7 -2.3**
TREB Trebinje 55.57 304⇑ *iP* **P 07 06 08.9 -0.6**
JETT Jettan, Norway 55.58 337 *eP* **P 07 06 10.3 +1.1**
SMOL Smolenice 55.59 312 *eP* **P 07 06 09.8 +0.2**
SMOL Smolenice 55.59 312 *eP* **P 07 06 09.8 +0.2**
MODS Modra-Piesok 55.70 311 *eP* **P 07 06 10.3 -0.1**
MODS Modra-Piesok 55.70 311 *eP* **P 07 06 10.3 -0.1**
ZST Bratislava 55.84 311 *eP* **P 07 06 11.9 +0.6**
ZST pmax pmax

comp=Z,66nm,0.9s
ZST Bratislava 55.84 311 *eP* **P 07 06 11.9 +0.6**
KRLC Kraliky 55.90 313 *eP* **P 07 06 12.6 +0.8**
KRLC Kraliky 55.90 313 *eP* **P 07 06 12.6 +0.8**
VRAC Vranov 56.08 313 ⇑P **P 07 06 14.0 +0.9**
VRAC Vranov 56.08 313 *eP* **P 07 06 13.9 +0.8**
TRO Tromso 56.10 337 *eP* **P 07 06 13.3 +0.5**
BLY Banja Luka 56.15 307⇑ *iP* **P 07 06 13.9 +0.3**
DPC Dobruska-Polom 56.18 314 *eP* **P 07 06 14.5 +0.7**
DPC Dobruska-Polom 56.18 314 *eP* **P 07 06 14.5 +0.7**
BEHE Becsehely 56.23 309 *eP* **P 07 06 16.5 +2.4**
KRUC Mocrsky 56.23 312 *eP* **P 07 06 14.6 +0.5**
OSTC Ostas 56.23 314 *eP* **P 07 06 14.9 +0.8**
BLEU Blekinge 56.25 321 *iP* **P 07 06 13.8 -0.3**
MGRS Mrkonjic Grad 56.26 307 *eP* **P 07 06 15.3 +0.9**
CHVC Chvalec 56.33 314 *eP* **P 07 06 15.4 +0.5**
UPC Upice 56.36 314 *eP* **P 07 06 15.7 +0.6**
UPC Upice 56.36 314 *eP* **P 07 06 15.7 +0.6**
CONA Conrad Observa 56.69 311 *iP* **P 07 06 18.1 +0.5**
comp=Z,59nm,0.9s,SNR=6.2
BSD Bornholm Skovb 56.78 320 *iP* **P 07 06 17.1 -0.9**
BSD IAmb IAmb 07 06 17.7

comp=Z,19nm,0.7s
BSD Bornholm Skovb 56.78 320 *iP* **P 07 06 17.0 -0.9**
BSD pmax pmax

comp=Z,19nm,0.7s
TREC Trest 56.80 313 *eP* **P 07 06 18.9 +0.7**
TREC Trest 56.80 313 *eP* **P 07 06 18.9 +0.7**
ARSA Arzberg 56.99 310 *iP* **P 07 06 20.1 +0.5**
comp=Z,26nm,0.6s
FAUS Fauske 57.08 334 *eP* **P 07 06 20.2 +0.4**
MATE Matera 57.11 302 ⇓P **P 07 06 20.8 +0.3**
MATE Matera 57.11 302 ⇓P **P 07 06 20.6 +0.1**
BJO1 Bjornoya 57.19 343 *eP* **P 07 06 20.6 +0.1**
CRES Cresnjev 57.22 308⇑ *iP* **P 07 06 21.6 +0.4**
LNIZ Loecknitz 57.27 318 *eP* **P 07 06 22.1 +0.6**
comp=Z,34nm,0.8s,baz=83,slow=6.8
PVCC Panska Ves 57.28 314 *eP* **P 07 06 22.3 +0.7**
PVCC Panska Ves 57.28 314 *eP* **P 07 06 22.3 +0.7**
MOR8 Moi Rana 57.30 333 *eP* **P 07 06 20.8 -0.6**
DEL Delary 57.33 321 *iP* **P 07 06 21.7 0.0**
TIP Timpagrande 57.34 300 P **P 07 06 22.3 0.0**
TIP IAmb IAmb 07 06 23.2

comp=Z,50nm,1.1s
PRU Pruhonice 57.35 313 *eP* **P 07 06 22.8 +0.7**
PRU Pruhonice 57.35 313 *eP* **P 07 06 22.8 +0.7**
SOKA Soboth 57.40 310 *iP* **P 07 06 23.3 +0.7**
comp=Z,47nm,0.6s,SNR=9.1
PRA Prague 57.41 314 *eP* **P 07 06 23.5 +1.0**
PRA Prague 57.41 314 *eP* **P 07 06 23.5 +1.0**
MRVN Minervino Murg 57.42 303 ⇑P **P 07 06 22.5 -0.2**
PETK Petropavlovsk- 57.59 43 P **P 07 06 22.9 -0.8**
comp=Z,2.7nm,0.6s,baz=318,slow=6.4,SNR=7.2
PETK Petropavlovsk- 57.59 43 P **P 07 06 23.3 -0.4**
PETK Petropavlovsk- 57.59 43 P **P 07 06 23.3 -0.4**
LUNU Lund 57.60 320 *iP* **P 07 06 24.2 +0.6**
RUE Ruedersdorf 57.60 316 *eP* **P 07 06 24.4 +0.7**
comp=Z,65nm,0.8s,baz=83,slow=6.8
SGRT San Giovanni R 57.63 304 P **P 07 06 24.2 -0.1**
SGRT IAmb IAmb 07 06 25.0

comp=Z,58nm,1.0s
BRG Berggiesshubel 57.65 315⇑ *eP* **P 07 06 24.7 +0.6**
BRG Amp 07 06 25.7

comp=Z,61nm,0.9s
BRG Berggiesshubel 57.65 315 *eP* **P 07 06 25.0 +0.9**
comp=Z,40nm,0.8s,baz=83,slow=6.8
RGN Rugen 57.73 319 *eP* **P 07 06 25.9 +1.3**
comp=Z,58nm,0.8s,baz=83,slow=6.8
PBCC Pribram 57.73 313 *eP* **P 07 06 25.6 +0.8**
OBKA Obir 57.75 309 *iP* **P 07 06 25.8 +0.7**
comp=Z,49nm,0.8s
MOA Molln 57.77 311 *iP* **P 07 06 25.3 +0.2**
comp=Z,36nm,0.6s,SNR=5.4
BJUU Bjuv 57.81 321 *iP* **P 07 06 25.4 +0.2**
LOF Lofoten 57.82 335 *eP* **P 07 06 24.8 -0.2**
KONS Konsvik 57.85 333 *eP* **P 07 06 25.4 +0.2**
BORU Boraas 57.89 323 *iP* **P 07 06 25.7 +0.1**
FABU Falkenberg 57.94 322 *iP* **P 07 06 26.3 +0.2**
CEY Cerknica 57.94 308⇑ *iP* **P 07 06 26.8 +0.5**
FBE Freiberg 58.01 315 *eP* **P 07 06 27.8 +1.1**
comp=Z,42nm,0.8s,baz=83,slow=6.8
GEC2 GERESS Array S 58.02 312 P **P 07 06 27.4 +0.5**
GEC2 IAmb IAmb 07 06 27.8

comp=Z,20nm,0.7s
GEC2 GERESS Array S 58.02 312 *eP* **P 07 06 27.6 +0.7**
comp=Z,15nm,0.7s,baz=83,slow=6.8
GERES GERESS Array B 58.02 312 P **P 07 06 27.2 +0.3**
comp=Z,17nm,0.6s,baz=85,slow=7.3,SNR=63
GERES GERESS Array B 58.02 312 P **P 07 06 26.9 0.0**
KHC Kasperske Hory 58.06 313 P **P 07 06 27.4 +0.2**
KHC pmax pmax

comp=Z,29nm,0.7s
KHC Kasperske Hory 58.06 313 *eP* **P 07 06 27.3 +0.1**
KHC Kasperske Hory 58.06 313 P **P 07 06 27.4 +0.2**
KHC IAmb IAmb 07 06 28.6

comp=Z,29nm,0.7s
KHC Kasperske Hory 58.06 313 ⇓P **P 07 06 27.8 +0.7**
CLL Collm 58.19 315 *eP* **P 07 06 28.0 +0.1**
CLL Collm 58.19 315 *eP* **P 07 06 28.0 +0.1**
CLL Collm 58.19 315 *eP* **P 07 06 28.3 +0.4**
comp=Z,14nm,0.8s,baz=83,slow=6.8
NSS Namsos 58.24 331 *eP* **P 07 06 27.9 -0.2**
NC405 NORSAR Array S 58.34 327 P **P 07 06 28.8 0.0**
NC405 IAmb IAmb 07 06 37.4

comp=Z,17nm,0.6s
MYKA Terra Mystica 58.35 310 *eP* **P 07 06 29.0 -0.2**
comp=Z,17nm,0.7s
ONAU Onsala 58.36 322 *i* P **P 07 06 28.9 -0.1**
TRI Trieste 58.41 309 P **P 07 06 29.7 +0.2**
TRI pmax pmax

comp=Z,72nm,0.8s
TRI Trieste 58.41 309 P **P 07 06 29.7 +0.2**
TRI Trieste 58.41 309 ⇑P **P 07 06 29.5 0.0**
NC602 NORSAR Array S 58.43 326 *eP* **P 07 06 29.4 0.0**
TJOU Tjoern 58.48 323 *iP* **P 07 06 29.7 -0.1**
KBA Koelnbreinsper 58.49 310 *iP* **P 07 06 30.1 -0.3**
comp=Z,19nm,0.5s
WET Wettzell 58.52 313 *eP* **P 07 06 31.0 +0.7**
comp=Z,21nm,0.7s,baz=83,slow=6.8
NB2 NORSAR Subarra 58.58 327 P **P 07 06 30.4 -0.2**
baz=88,slow=6.9
NOA NORSAR Array B 58.58 327 P **P 07 06 30.1 -0.5**
comp=Z,25nm,0.7s,baz=88,slow=7.0,SNR=37
PTCC Patocco-Chiusa 58.58 309 ⇓P **P 07 06 30.8 -0.1**
TANN Tannenbergstha 58.63 314 *eP* **P 07 06 31.9 +0.8**
comp=Z,17nm,0.8s,baz=83,slow=6.8
NKC Novy Kostel 58.66 314 *eP* **P 07 06 32.2 +0.9**
NKC Novy Kostel 58.66 314 *eP* **P 07 06 32.2 +0.9**
STRU Stroemstad 58.66 324 *iP* **P 07 06 31.1 +0.1**
WERN Wernitzgruen 58.70 314 *eP* **P 07 06 32.5 +0.9**
comp=Z,15nm,0.8s,baz=83,slow=6.8
SPA0 Spitsbergen Ar 58.71 347 P **P 07 06 32.5 +1.3**
SPA0 Spitsbergen Ar 58.71 347 *eP* **P 07 06 32.6 +1.4**
GUNZ Gunzen 58.72 314 *eP* **P 07 06 32.6 +0.9**
comp=Z,27nm,0.8s,baz=83,slow=6.8
WERD Werda 58.73 314 *eP* **P 07 06 32.4 +0.7**
comp=Z,25nm,0.8s,baz=83,slow=6.8
RJOB Jochberg 58.76 311 *eP* **P 07 06 32.4 +0.3**
comp=Z,76nm,0.8s,baz=83,slow=6.8
NC204 NORSAR Array S 58.79 327 P **P 07 06 31.9 -0.2**
NC204 IAmb IAmb 07 06 34.2

comp=Z,27nm,0.7s
ZOU Zoufplan 58.82 310 P **P 07 06 32.4 -0.2**
OSL Oslo 58.86 325 *eP* **P 07 06 32.8 +0.4**
ROTZ Rotzenmuhle 58.88 313 *eP* **P 07 06 34.0 +1.3**
comp=Z,40nm,0.8s,baz=83,slow=6.8
MANZ Manzenberg 58.91 314 *eP* **P 07 06 34.1 +1.1**
comp=Z,67nm,1.3s,baz=83,slow=6.8
NEUB Neuenburg 58.97 315 *eP* **P 07 06 34.1 +0.7**
comp=Z,49nm,0.8s,baz=83,slow=6.8
ABTA Abfaltersbach 59.10 310 *iP* **P 07 06 33.7 -0.8**
comp=Z,27nm,0.8s
MOX Moxa 59.14 314 *eP* **P 07 06 35.4 +0.8**
comp=Z,26nm,0.8s,baz=83,slow=6.8
FLTG Flechtingen 59.17 316 *eP* **P 07 06 35.0 +0.3**
comp=Z,36nm,0.8s,baz=83,slow=6.8
FLTG Flechtingen 59.17 316 P **P 07 06 34.9 +0.1**
AQU L'Aquila 59.24 305 *eP* **P 07 06 35.7 +0.2**
AQU L'Aquila 59.24 305 ⇓P **P 07 06 36.2 +0.7**
NRCA Norcia 59.36 305 P **P 07 06 36.6 +0.3**
NRCA IAmb IAmb 07 06 37.5

comp=Z,59nm,0.8s
KONO Kongsberg 59.44 325 P **P 07 06 36.9 +0.4**
KONO pmax pmax

comp=Z,86nm,1.5s
KONO Kongsberg 59.44 325 P **P 07 06 36.9 +0.4**
KONO IAmb IAmb 07 06 54.8

comp=Z,86nm,1.4s
KONO Kongsberg 59.44 325 *eP* **P 07 06 36.6 +0.1**
GRF Grafenberg Arr 59.52 313 *eP* **P 07 06 38.5 +1.2**
comp=Z,16nm,0.7s,baz=83,slow=6.8
ASSE Asse, Remlinge 59.54 316 *eP* **P 07 06 37.7 +0.5**
comp=Z,15nm,1.0s,baz=83,slow=6.8
BSEG Bad Segeberg 59.54 318 *eP* **P 07 06 38.5 +1.2**
baz=83,slow=6.8
DOMB Dombas 59.58 328 *eP* **P 07 06 37.5 0.0**
RAFF Raffo Rosso 59.60 299 P **P 07 06 38.9 +0.9**
WTTA Wattenberg 59.61 311 *iP* **P 07 06 37.7 -0.4**
comp=Z,20nm,0.7s
WATA Walderalm 59.64 311 *eP* **P 07 06 37.7 -0.6**
comp=Z,67nm,1.1s,SNR=5.4
MURB Monte Urbino 59.70 306 P **P 07 06 39.4 +0.7**
FUR Furstenfeldbru 59.71 312 *eP* **P 07 06 38.4 -0.2**
comp=Z,31nm,0.8s,baz=83,slow=6.8
KBS Kingsbay 59.74 348 *iP* **P 07 06 38.8 +0.5**
KBS IAmb IAmb 07 06 39.6

comp=Z,79nm,0.7s
KBS Kingsbay 59.74 348 ⇓P **P 07 06 39.2 +0.9**
CLZ Clausthal 59.76 316 *eP* **P 07 06 39.8 +0.9**
comp=Z,68nm,0.8s,baz=83,slow=6.8
CTI Castel Tesino 59.81 309 P **P 07 06 39.4 0.0**
CTI pmax pmax

comp=Z,52nm,0.6s
CTI Castel Tesino 59.81 309 P **P 07 06 39.4 0.0**
NRDL Niedersach Rie 59.84 317 *eP* **P 07 06 40.7 +1.4**
comp=Z,74nm,0.9s,baz=83,slow=6.8
GOET G??ttrup 59.84 322 *iP* **P 07 06 40.4 +1.1**
SQTA Sankt Quirin 59.91 311 *eP* **P 07 06 39.5 -0.6**
comp=Z,55nm,0.5s,SNR=6.5
TEOL Teolo 59.91 308 P **P 07 06 40.1 +0.1**
MUD Monsted U'grnd 59.93 321 *iP* **P 07 06 40.6 +0.8**
MUD IAmb IAmb 07 06 41.2

comp=Z,22nm,0.5s
MUD Monsted U'grnd 59.93 321 *iP* **P 07 06 40.6 +0.8**
MUD pmax pmax

comp=Z,22nm,0.5s
MOTA Moosalm 59.96 311 *iP* **P 07 06 39.7 -0.8**
comp=Z,52nm,0.7s,SNR=7.4
SKAR Skarslia 60.02 326 *eP* **P 07 06 41.3 +0.8**
GTTG Gottingen 60.05 316 *eP* **P 07 06 41.7 +0.9**
comp=Z,34nm,0.9s,baz=83,slow=6.8
HOMB Homborsund 60.11 324 *iP* **P 07 06 41.1 0.0**
HOMB Homborsund 60.11 324 *eP* **P 07 06 41.4 +0.3**
UBBA Unterbreizbach 60.13 315 *eP* **P 07 06 41.1 -0.2**
comp=Z,8.3nm,0.8s,baz=83,slow=6.8
RETA Reutte 60.16 311 *iP* **P 07 06 41.3 -0.5**
comp=Z,33nm,0.6s
MOL Molde 60.26 329 *eP* **P 07 06 41.5 -0.5**
FETA Feichten 60.26 310 *iP* **P 07 06 42.1 -0.5**
comp=Z,31nm,0.6s
LATE Laterza 60.35 305 P **P 07 06 42.7 -0.3**
LATE IAmb IAmb 07 06 43.2

comp=Z,26nm,0.8s
AKN Aaknes 60.54 328 *eP* **P 07 06 44.6 +0.6**
UBR Ueberruh 60.56 311 *eP* **P 07 06 43.6 -0.9**
comp=Z,36nm,0.7s,baz=83,slow=6.8
SALO Salr 60.66 309 P **P 07 06 45.5 +0.4**
SALO Salr 60.66 309 ⇑P **P 07 06 45.6 +0.4**
MILB Miltenberg 60.73 314 *eP* **P 07 06 46.1 +0.5**
comp=Z,14nm,0.7s,baz=83,slow=6.8
DAVA Damuels 60.79 311 *eP* **P 07 06 46.0 -0.1**
comp=Z,114nm,1.0s,SNR=10
SNART Snartemo 60.79 324 *iP* **P 07 06 46.2 +0.5**
SNART Snartemo 60.79 324 *eP* **P 07 06 46.3 +0.5**
ODD1 Odda 60.92 326 *eP* **P 07 06 46.9 +0.2**
BILL Bilibino 60.96 25 *eP* **P 07 06 47.8 +1.0**
STU Stuttgart 60.98 313 *eP* **P 07 06 47.9 +0.7**
comp=Z,51nm,0.7s,baz=83,slow=6.8
HYA Hoyanger 61.01 327 *eP* **P 07 06 47.8 +0.6**
KASTN Kahler Asten 61.06 315 *eP* **P 07 06 48.6 +0.8**
comp=Z,18nm,0.9s,baz=83,slow=6.8
TNS Taunus Mts 61.20 314 *eP* **P 07 06 49.5 +0.7**
comp=Z,44nm,0.8s,baz=83,slow=6.8
IBBN Ibbenburen 61.29 317 *eP* **P 07 06 50.1 +0.9**
comp=Z,51nm,1.0s,baz=83,slow=6.8
TUE Stuetta 61.30 310 P **P 07 06 49.4 -0.3**
TUE Stuetta 61.30 310 ⇓P **P 07 06 49.5 -0.3**

ASK	Askoy	61.57	326	*e*P		P	07 06 51.4	+0.5
BOB	Bobbio (Coli)	61.57	308	⇓P		P	07 06 52.5	+1.1
MSSA	Maissana	61.62	308	P		P	07 06 51.2	-0.5
BFO	Black Forest	61.62	312	*e*P		P	07 06 51.5	-0.1
	comp=Z,11nm,0.7s,baz=83,slow=6.8							
BFO	Black Forest	61.62	312	P		P	07 06 51.5	-0.1
BUG	Bochum--Univer	61.73	316	*e*P		P	07 06 53.1	+0.8
	comp=Z,46nm,0.9s,baz=83,slow=6.8							
AHRW	Bad Neuenahr-A	62.01	315	*e*P		P	07 06 55.0	+0.8
	comp=Z,41nm,0.9s,baz=83,slow=6.8							
PGF	Pioggiola	62.38	306	P		P	07 06 56.6	-0.3
ECH	Echery	62.41	312	⇓P		P	07 06 57.0	0.0
MONC	Moncucco Torin	62.56	309	⇓P		P	07 06 58.3	+0.3
BTNL	Ternell	62.60	315	*d*P		P	07 06 58.2	+0.1
	comp=Z,33nm,1.0s							
MEM	Membach	62.67	315	*d*P		P	07 06 58.8	+0.3
	comp=Z,33nm,0.9s							
MEM				*d*x		x	07 07 07.0	
SENIN	Lac Senin/Sane	62.71	310	P		P	07 06 59.6	+0.4
BHOU	Houvegnez	62.72	315	*d*P		P	07 06 59.5	+0.6
WLF	Walferdange	62.77	314	*d*P		P	07 07 00.1	+0.9
	comp=Z,50nm,1.0s							
WLF	Walferdange	62.77	314	*e*P		P	07 07 00.5	+1.2
	comp=Z,52nm,0.9s,baz=83,slow=6.8							
WLF	Walferdange	62.77	314	⇓P		P	07 07 00.5	+1.2
BEBN	Eben Emael	62.84	315	*d*P		P	07 07 00.2	+0.5
VSL	Villasalto	62.85	302	⇓P		P	07 06 59.7	-0.3
BCLA	Clavier	63.15	315	*d*P		P	07 07 02.1	+0.3
	comp=Z,23nm,1.0s							
RCHB	Rochefort	63.25	315	*b*P		P	07 07 01.9	-0.6
	comp=Z,25nm,1.1s							
BGES	Gesves	63.29	315	*d*P		P	07 07 02.4	-0.3
BNI	Bardonecchia	63.43	309	⇓P		P	07 07 03.8	-0.1
BMRD	Maredsous	63.51	315	*b*P		P	07 07 04.4	+0.3
	comp=Z,15nm,0.9s							
BMRD				*d*x		x	07 07 10.2	
BMRD				*d*PcP		PcP	07 07 40.6	-0.1
BMRD				*d*PP		PP	07 09 22.9	-0.5
DOU	Dourbes	63.66	315	*d*P		P	07 07 05.1	0.0
SNF	Seneffe	63.77	315	*d*P		P	07 07 06.2	+0.4
	comp=Z,28nm,1.0s							
KEST	Kesra	63.89	298	P		P	07 07 07.8	+0.8
	comp=Z,129nm,0.8s,baz=298,slow=1.4,SNR=56							
NOR	Nord	64.41	351	*i* P		P	07 07 10.0	+0.3
NOR				IAmb		IAmb	07 07 10.6	
	comp=Z,29nm,0.8s							
NOR	Nord	64.41	351	*i* P		P	07 07 09.9	+0.3
NOR				pmax		pmax		
	comp=Z,29nm,0.8s							
NOR	Nord	64.41	351	⇑P		P	07 07 09.9	+0.3
SSB	Saint Sauveur	64.84	310	P		P	07 07 13.0	0.0
SSB				pmax		pmax		
	comp=Z,36nm,0.8s							
SSB	Saint Sauveur	64.84	310	P		P	07 07 13.0	0.0
SSB				IAmb		IAmb	07 07 14.0	
	comp=Z,36nm,0.8s							
SSB	Saint Sauveur	64.84	310	⇑P		P	07 07 13.0	0.0
WACR	West Acre	65.47	318	*e*P		P	07 07 17.0	+0.1
DRUM	Mains of Drumt	66.17	323	*e*P		P	07 07 21.2	-0.2
DAG	Danmarks Havn	66.31	346	*i* P		P	07 07 22.0	+0.1
DAG				IAmb		IAmb	07 07 23.6	
	comp=Z,48nm,0.9s							
DAG	Danmarks Havn	66.31	346	*i* P		P	07 07 22.0	+0.1
DAG				pmax		pmax		
	comp=Z,48nm,0.9s							
DAG	Danmarks Havn	66.31	346	⇑P		P	07 07 22.4	+0.5
MCD	Coleburn Disti	66.40	324	*e*P		P	07 07 23.0	+0.2
EDMD	Edmundbyers	66.42	321	*e*P		P	07 07 23.1	0.0
BIGH	Upper Bighouse	66.50	325	*e*P		P	07 07 23.6	+0.1
LBWR	Ladybower, Pea	66.67	319	*e*P		P	07 07 24.4	-0.2
WRKA	Warakurna	66.69	138	⇑P		P	07 07 25.1	0.0
EBL	Broad Law	66.77	322	*e*P		P	07 07 25.1	-0.2
EDI	Edinburgh	66.81	322	*e*P		P	07 07 25.6	+0.2
WRA	Warramunga Arr	66.86	130	P		P	07 07 25.9	-0.4
	comp=Z,36nm,0.7s,baz=323,slow=6.6,SNR=20							
WRA	Warramunga Arr	66.86	130	*i* P		P	07 07 26.1	-0.2
WRA				pmax		pmax		
	comp=Z,38nm,0.7s							
WRAB	Tennant Creek	66.87	130	⇓*i*P		P	07 07 26.0	-0.3
WRAB				pmax		pmax		
	comp=Z,51nm,0.7s							
WRAB	Tennant Creek	66.87	130	⇑P		P	07 07 26.1	-0.2
WB2	Warramunga Arr	66.87	130	P		P	07 07 26.1	-0.3
ESK	Eskdalemuir	66.98	322	P		P	07 07 26.6	0.0
ESK				pmax		pmax		
	comp=Z,47nm,1.0s							
ESK	Eskdalemuir	66.98	322	P		P	07 07 26.6	0.0
ESK				IAmb		IAmb	07 07 27.7	
	comp=Z,46nm,0.9s							
ESK	Eskdalemuir	66.98	322	⇓P		P	07 07 26.9	+0.3
WR0	Warramunga Arr	67.01	130	P		P	07 07 27.0	-0.3
WR0				IAmb		IAmb	07 07 31.9	
	comp=Z,31nm,0.8s							
MDO	Dochfour	67.02	324	*e*P		P	07 07 26.9	+0.1
EAB	Aberfoyle	67.36	323	*e*P		P	07 07 28.9	0.0
KAC	Achnashellach	67.49	324	*e*P		P	07 07 29.3	-0.5
PGBU	Glenifferbraes	67.54	322	*e*P		P	07 07 30.4	+0.3
DBG	Daneborg	67.59	344	*i* P		P	07 07 31.0	+0.8
DBG				IAmb		IAmb	07 07 32.0	
	comp=Z,34nm,0.9s							
DBG	Daneborg	67.59	344	⇑P		P	07 07 30.9	+0.8
NEWG	New Galloway	67.60	322	*e*P		P	07 07 30.8	+0.3
FOEL	Foel Wylfa	67.67	319	*e*P		P	07 07 30.2	-0.8
KPL	Plockton	67.72	324	*e*P		P	07 07 30.5	-0.7
MCH1	Michaelchurch	67.81	318	⇑P		P	07 07 31.8	0.0
GAL1	Galloway	67.94	321	*e*P		P	07 07 32.6	-0.1
RSBS	Rosebush, Pemb	68.85	318	*e*P		P	07 07 38.4	0.0
ASAR	Alice Springs	69.17	133	P		P	07 07 40.5	-0.3
	comp=Z,24nm,0.7s,baz=316,slow=5.6,SNR=22							
ASAR	Alice Springs	69.17	133	P		P	07 07 40.8	0.0
SCO	Scoresbysund	69.66	340	*i* P		P	07 07 43.8	+0.7
SCO				IAmb		IAmb	07 07 45.1	
	comp=Z,10.0nm,0.8s							
SCO	Scoresbysund	69.66	340	P		P	07 07 44.2	+1.1
SCO				pmax		pmax		
	comp=Z,36nm,1.3s							
SCO	Scoresbysund	69.66	340	P		P	07 07 44.2	+1.1
SCO				IAmb		IAmb	07 07 45.4	
	comp=Z,36nm,1.3s							
SCO	Scoresbysund	69.66	340	⇑P		P	07 07 44.4	+1.3
CART	Cartagena	71.17	303	⇑P		P	07 07 53.2	+0.2
NEEM	North Greenlan	71.79	351	*i* P		P	07 07 56.9	+0.5
NEEM				IAmb		IAmb	07 07 58.7	
	comp=Z,90nm,0.9s							
NEEM	North Greenlan	71.79	351	⇑P		P	07 07 56.9	+0.5
RDOG	Red Dog Mine	71.97	22	P			07 07 57.8	
	baz=300							
A21K	Barrow	72.08	17	P		P	07 07 58.8	+1.0
A21K				IAmb		IAmb	07 07 59.0	
	comp=Z,29nm,0.6s							
A21K	Barrow	72.08	17	P			07 07 58.1	
	baz=304							
EUNU	Eureka	72.22	359	⇓P		P	07 07 59.7	+1.1
ESDC	Sonseca Array	72.57	306	P		P	07 08 01.5	+0.1
	comp=Z,12nm,0.7s,baz=57,slow=5.3,SNR=37							
ESDC	Sonseca Array	72.57	306	P		P	07 08 01.3	-0.1
ANM	Nome	72.82	25	P			07 08 03.1	
	baz=299							
PAB	San Pablo	72.90	306	P		P	07 08 03.5	+0.1
PAB				pmax		pmax		
	comp=Z,24nm,0.9s							
PAB	San Pablo	72.90	306	P		P	07 08 03.5	+0.1
PAB				IAmb		IAmb	07 08 04.5	
	comp=Z,24nm,0.8s							
PAB	San Pablo	72.90	306	⇑P		P	07 08 03.5	+0.1
SUMG	Summit	72.93	345	*i* P		P	07 08 04.0	+0.6
SUMG				IAmb		IAmb	07 08 05.4	
	comp=Z,86nm,0.8s							
SUMG	Summit	72.93	345	P		P	07 08 04.1	+0.7
SUMG				pmax		pmax		
	comp=Z,127nm,0.9s							
SUMG	Summit	72.93	345	P		P	07 08 04.1	+0.7
SUMG	Summit	72.93	345	⇑P		P	07 08 04.2	+0.8
PBRG	Braganca	73.72	309	*e*P		P	07 08 08.1	0.0
MVO	Moncorvo	74.17	308	*e*P		P	07 08 11.1	+0.3
PVRL	Vila Real	74.60	309	*e*P		P	07 08 13.9	+0.6
POLO	Lamas de Olo	74.61	309	*e*P		P	07 08 13.5	+0.1
TULEG	Thule	74.65	354	*i* P		P	07 08 12.0	-0.9
TULEG				*i* P		pP	07 08 12.5	-3.7
TULEG				IAmb		IAmb	07 08 13.6	
	comp=Z,27nm,0.9s							
TULEG	Thule	74.65	354	P		P	07 08 12.8	-0.1
TULEG				IAmb		IAmb	07 08 13.5	
	comp=Z,52nm,1.0s							
TULEG	Thule	74.65	354	⇓P		P	07 08 12.8	-0.1
MTE	Manteigas	74.83	308	*e*P		P	07 08 15.4	+0.7
	comp=Z,65nm,1.1s							
PVIS	Viseu	74.94	308	*e*P		P	07 08 15.9	+0.6
	comp=Z,47nm,1.6s							
PCBR	Castelo Branco	75.01	307	*e*P		P	07 08 16.1	+0.5
PMRV	Marv??o	75.11	307	*e*P		P	07 08 16.4	+0.1
PBAR	Barrancos	75.37	306	*e*P		P	07 08 18.2	+0.5
	comp=Z,54nm,1.6s							
ICESG	Greenland Ices	75.52	342	*i* P		P	07 08 19.5	+1.0
ICESG				IAmb		IAmb	07 08 20.3	
	comp=Z,178nm,0.8s							
ICESG	Greenland Ices	75.52	342	⇑P		P	07 08 19.3	+0.8
TOLK	Toolik Lake Re	75.65	18	P			07 08 19.8	
	baz=311							
PMTG	Montargil	75.85	307	*e*P		P	07 08 20.5	0.0
	comp=Z,42nm,1.6s							
EVO	Evora	75.92	306	*e*P		P	07 08 21.5	+0.6
	comp=Z,48nm,1.5s							
PBEJ	Beja	76.02	306	*e*P		P	07 08 22.2	+0.7
PSBE	So Bento	76.07	307	*e*P		P	07 08 22.5	+0.8
IMAR	Indian Mountai	76.11	21	P		P	07 08 22.0	+0.5
PVAQ	Vaqueiros	76.17	305	*e*P		P	07 08 22.9	+0.6
PVAQ	Vaqueiros	76.17	305	P		P	07 08 22.6	+0.3
PVAQ				IAmb		IAmb	07 08 23.7	
	comp=Z,36nm,0.8s							
PCVE	Castro Verde	76.31	305	*e*P		P	07 08 23.6	+0.5
UPNV	Upernavik	76.32	349	*e*P		P	07 08 22.6	+0.1
PBDV	Barranco-do-Ve	76.39	305	*e*P		P	07 08 24.3	+0.7
	comp=Z,60nm,1.4s							
COLD	Coldfoot	76.40	19	P			07 08 24.1	
	baz=311							
ANGG	Ammassalik, Gr	77.24	339	⇑*i*P		P	07 08 28.9	+1.1
ANGG				IAmb		IAmb	07 08 29.2	
	comp=Z,45nm,0.8s							
MLY	Manley	77.69	21	P		P	07 08 31.1	+0.7
MLY				IAmb		IAmb	07 08 32.4	
	comp=Z,29nm,1.0s							
MLY	Manley	77.69	21	P			07 08 31.1	
	baz=311							
BMAR	Burnt Mountain	77.85	18	P		P	07 08 32.7	+1.5
CHUM	Lake Minchumin	77.91	23	P			07 08 32.4	
	baz=310							
I23K	Minto, Yukon-K	78.05	21	P			07 08 33.1	
	baz=312							
LBTB	Lobatse	78.19	233	⇑P		P	07 08 33.8	-0.1
BPAW	Bear Paw Mtn.	78.22	22	P			07 08 34.4	
	baz=311							
NEA2	Nenana	78.51	21	P		P	07 08 35.5	+0.6
NEA2				IAmb		IAmb	07 08 36.5	
	comp=Z,44nm,0.9s							
NEA2	Nenana	78.51	21	P			07 08 35.4	
	baz=312							
POKR	Poker Flat Res	78.66	20	P			07 08 36.5	
	baz=314							
TCOL	CIGO, UAF Yank	78.70	21	P			07 08 36.3	
	baz=313							
COLA	College	78.70	21	⇓*i*P		P	07 08 36.8	+0.8
COLA				pmax		pmax		
	comp=Z,69nm,1.3s							
COLA	College	78.70	21	⇓P		P	07 08 36.7	+0.8
TORD	Torodi Ar. Bea	78.76	279	P		P	07 08 36.2	-0.9
	comp=Z,8.0nm,0.8s,baz=47,slow=3.3,SNR=8.7							
CCB	Clear Creek Bu	78.87	21	P		P	07 08 36.8	-0.1
PRP	Porcupine Dome	78.95	19	P			07 08 38.7	
	baz=315							
IL31		79.07	20	P		P	07 08 38.0	+0.1
ILAR	Eielson Array	79.07	20	P		P	07 08 37.3	-0.7
	comp=Z,10nm,0.8s,baz=310,slow=4.1,SNR=28							
ILAR				PP		PP	07 11 35.5	-0.9
	comp=Z,7.6nm,0.8s,baz=310,slow=5.5,SNR=11							
ILAR	Eielson Array	79.07	20	P		P	07 08 37.4	-0.6
ILAR	Eielson Array	79.07	20	P		P	07 08 37.4	-0.6
MCK	McKinley	79.14	22	P			07 08 38.7	
	baz=313							
DY2G	Dye2	79.16	342	*i* P		P	07 08 39.3	+0.5
DY2G				IAmb		IAmb	07 08 40.0	
	comp=Z,48nm,0.6s							
DY2G	Dye2	79.16	342	⇑P		P	07 08 39.3	+0.5
HDA	Harding Lake	79.31	21	P			07 08 38.4	
	baz=314							
HDA				P			07 08 38.4	
	baz=314							
SKT	Skwentna	79.42	24	P			07 08 40.2	
	baz=311							
STKA	Stephens Creek	79.74	134	P		P	07 08 41.4	-0.6
	comp=Z,12nm,0.7s,baz=340,slow=5.0,SNR=3.7							
WAT2	Susitna Watana	79.78	22	P			07 08 41.6	
	baz=313							
INK	Inuvik	79.83	14	⇓P		P	07 08 42.6	+0.6
INK	Inuvik	79.83	14	P			07 08 42.4	
	baz=325							
SFJD	Kangerlussuaq	79.88	344	*i* P		P	07 08 42.2	-0.1
SFJD				IAmb		IAmb	07 08 43.3	
	comp=Z,31nm,0.8s							
SFJD	Kangerlussuaq	79.88	344	P		P	07 08 42.6	+0.3
SFJD				pmax		pmax		
	comp=Z,56nm,0.8s							
SFJD	Kangerlussuaq	79.88	344	P		P	07 08 42.6	+0.3
SFJD				IAmb		IAmb	07 08 43.3	
	comp=Z,56nm,0.8s							
SFJD	Kangerlussuaq	79.88	344	⇓P		P	07 08 42.7	+0.4
SUA	Susitna One	80.04	24	P			07 08 44.2	
	baz=312							
WAT6	Susitna Watana	80.33	22	P			07 08 44.9	
	baz=314							
SCRK	Sand Creek	80.53	20	P			07 08 46.4	
	baz=317							
PMR	Palmer	80.53	23	P			07 08 46.0	
	baz=313							
RC01	Rabbit Creek A	80.66	24	P			07 08 46.9	
	baz=312							
BOSA	Boshof	80.66	231	P		P	07 08 46.5	-0.7
	comp=Z,20nm,0.9s,baz=57,slow=5.6,SNR=12							
BOSA	Boshof	80.66	231	P		P	07 08 46.5	-0.7
BOSA				pmax		pmax		
	comp=Z,24nm,1.0s							
BOSA	Boshof	80.66	231	P		P	07 08 46.5	-0.7
SML	Sawmill	80.66	23	P			07 08 47.7	
	baz=313							
EPYK	Eagle Plains	80.67	16	P			07 08 47.0	
	baz=323							
C36M	Paulatuk	80.67	10	P			07 08 46.7	
	baz=334							
KNK	Knik Glacier	80.89	23	P			07 08 48.8	
	baz=313							
SCM	Sheep Creek Mo	80.99	23	P		P	07 08 49.3	+0.7
SCM				pmax		pmax		
	comp=Z,36nm,0.6s							
SCM	Sheep Creek Mo	80.99	23	P		P	07 08 49.2	+0.7
SCM				IAmb		IAmb	07 08 50.1	
	comp=Z,36nm,0.6s							
K27K	Chicken	81.05	19	P		P	07 08 49.7	+1.0
K27K				IAmb		IAmb	07 08 50.9	
	comp=Z,62nm,1.5s							
K27K	Chicken	81.05	19	P			07 08 50.0	
	baz=318							
O22K	Cooper Landing	81.07	24	P			07 08 49.3	
	baz=312							
M24K	Tolsona, Glenn	81.18	22	P			07 08 50.7	
	baz=315							
BRSE	Bradley Lake S	81.19	25	P			07 08 49.8	
	baz=312							
HARP	HAARP	81.31	21	P			07 08 51.4	
	baz=316							
SEW	Seward	81.43	25	P			07 08 50.8	
	baz=313							
KLU	Klutina	81.70	22	P			07 08 52.7	
	baz=316							
GLI	Glacier Island	81.74	23	P			07 08 52.8	
	baz=315							
KDAK	Kodiak Island	81.76	27	⇑P		P	07 08 53.3	+0.8
OHAK	Old Harbor	81.83	28	P			07 08 53.6	
	baz=310							
L27K	Beaver Creek,	81.86	20	P			07 08 54.0	
	baz=319							
FID	Port Fidalgo	82.04	23	P		P	07 08 54.8	+0.8
FID				IAmb		IAmb	07 09 05.6	
	comp=Z,34nm,1.3s							
N25K	Chitina, Valde	82.06	22	P			07 08 54.9	
	baz=317							
NUUK	Nuuk	82.39	343	*i* P		P	07 08 55.7	0.0
NUUK				IAmb		IAmb	07 08 56.9	
	comp=Z,48nm,0.8s							
NUUK	Nuuk	82.39	343	⇑P		P	07 08 56.1	+0.4
BMRM	Bremner River	82.53	22	P			07 08 56.8	
	baz=317							
MCARA	McCarthy VSAT	82.74	21	P			07 08 59.1	
	baz=318							
NRS	Narsarsuaq	82.86	338	*i* P		P	07 08 58.7	+0.4
NRS	Narsarsuaq	82.86	338	*i* P		P	07 08 58.6	+0.4
NRS	Narsarsuaq	82.86	338	⇑P		P	07 08 58.5	+0.3
CRQE	Cirque	83.19	22	P			07 09 01.0	
	baz=318							
CTG	Chitna Glacier	83.59	21	P			07 09 02.7	
	baz=319							
PINM	Pinnacle	84.61	21	P			07 09 08.2	
	baz=320							
WHY	Whitehorse	85.78	19	P			07 09 12.9	
	baz=325							
TOO	Toolangi	85.88	137	P		P	07 09 14.0	+0.1
TOO				pmax		pmax		
	comp=Z,34nm,1.2s							
TOO	Toolangi	85.88	137	P		P	07 09 14.0	+0.1
TOO				IAmb		IAmb	07 09 19.6	
	comp=Z,34nm,1.2s							
SKAG	Skagway	86.64	20	P			07 09 17.9	
	baz=324							
DBIC	Dimbokro	87.43	276	P		P	07 09 21.6	-0.4
	comp=Z,43nm,1.3s,baz=44,slow=6.1,SNR=8.0							
DBIC	Dimbokro	87.43	276	P		P	07 09 21.5	-0.5
DBIC				pmax		pmax		
	comp=Z,18nm,1.1s							
DBIC	Dimbokro	87.43	276	P		P	07 09 21.5	-0.5
DBIC				IAmb		IAmb	07 09 23.5	
	comp=Z,18nm,1.1s							
YKA	Yellowknife Ar	88.49	9	P		P	07 09 26.1	-0.1
	comp=Z,6.9nm,0.8s,baz=341,slow=4.6,SNR=12							
YKA				PP		PP	07 12 50.2	-3.1
	comp=Z,1.5nm,0.7s,baz=340,slow=7.3,SNR=4.2							
SIT	Sitka	88.60	21	P			07 09 27.5	
	baz=324							
FCC	Fort Churchill	93.70	360	P		P	07 09 50.3	-0.2
FCC				pmax		pmax		
	comp=Z,15nm,1.4s							
FCC	Fort Churchill	93.70	360	P		P	07 09 50.3	-0.2
TXAR	Lajitas Array	122.42	10	PKP		PKPdf	07 15 29.2	-0.8
	comp=Z,1.3nm,0.5s,baz=307,slow=0.1,SNR=14							
CHIC	Chingaza	142.10	325	*e*P		PKPdf	07 15 56.0	-12
CBOC	Ciudad Bolivar	142.11	329	*e*P		PKPdf	07 15 57.0	-10
ROSC	El Rosal	142.21	326	PKhKP		PKPpre	07 16 03.4	
	comp=Z,16nm,0.6s,baz=159,slow=22,SNR=6.6							
ROSC	El Rosal	142.21	326	*e*P		PKPdf	07 16 01.1	-6.8
GUY2C	Guyana, Caldas	142.38	328	*e*P		PKPdf	07 16 03.6	-4.7
ANIL	Santa Ana	143.03	328	*e*P		PKPbc	07 16 05.6	-0.3
ORTC	Ortega, Tolima	143.47	327	*e*P		PKPab	07 16 05.0	-0.8
YOTC	Yotoco, Valle	143.92	329	*e*P		PKPab	07 16 06.3	-1.3
MACC	Macarena, Meta	144.27	323	*e*P		PKPab	07 16 08.5	-0.3
MARP	Paez Belalcaza	144.74	327	*e*P		PKPab	07 16 10.5	-0.4
GARC	Garzon, Huila	145.08	326	*e*P		PKPbc	07 16 07.2	-4.8
SAML	Samuel	145.17	297	PKIKP		PKPab	07 16 12.1	+0.1
SAML	Samuel	145.17	297			PKPab	07 16 12.1	+0.1
PCON	Cinco Dias	145.40	327	*e*P		PKPdf	07 16 14.3	+0.7
SOTA	Rioblanco	145.67	327	*e*P		PKPab	07 16 14.8	+0.3
PTLC	Puerto Leguiza	146.43	323	*e*P		PKPdf	07 16 10.8	-3.9
GCUF	Volcan Galeras	146.81	328	*e*P		PKPbc	07 16 17.0	-0.7
CPUP	Villa Florida	147.14	264	PKPbc		PKPdf	07 16 15.1	-0.3
	comp=Z,18nm,1.1s,baz=78,slow=3.8,SNR=6.7							
OTAV	Otavalo	148.19	329	PKP2		PKiKP	07 16 22.7	-0.5
OTAV	Otavalo	148.19	329			PKiKP	07 16 22.7	-0.5
OTAV	Otavalo	148.19	329	⇓P		PKiKP	07 16 22.3	-0.9
MG02	Cerro Sombrero	148.92	210	PKPbc		PKPbc	07 16 21.8	+0.3
LPAZ	La Paz	153.23	290	PKPbc		PKPbc	07 16 32.5	-1.0
	comp=Z,4.7nm,0.8s,baz=163,slow=2.7,SNR=4.9							

IDC ***25*** *06:58:26.0±0.7,27.˚68N×86.˚01E,h0km,mb4.8/28, mb1 4.9/30,mb1mx4.6/60,mbtmp4.9/30,ML4.7/2,Error ellipse: s-maj=18.2km s-min=14.0km az=32.0*
NEIC ***25*** *06:58:27.6±1.1,27.˚72N±0.˚10×86.˚01E±0.05,h10km±1km, mb5.1/55,Error ellipse: s-maj=17.0km s-min=6.3km az=164.0*
DMN ***25*** *06:58:28.7±0.1,27.˚74N×85.˚99E,h10km,Ml5.5/2,Error ellipse: s-maj=5.1km s-min=2.1km az=33.0*

ISC 25 06:58:28.1±0.9,27.70N±0.˚05×85.98E±0.˚04,h13km±5km, n136,s0°72/139,mb5.1/76,1C,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JIRN	Jiri	0.19	103	*e*Pg			Pg	06 58 33.2	+0.4
JIRN				*e*Sg			Sg	06 58 36.0	0.0
GUN	Gumba	0.23	337	*e*Pg			Pg	06 58 33.0	-0.3
GUN				*e*Sg			Sg	06 58 37.2	+0.4
PKI	Pulchoki	0.52	256	*e*Pg			Pg	06 58 38.7	+0.2
PKI				*e*Sg			Sb	06 58 46.9	-0.1
	40μm,0.5s								
ODAN	Odare	1.51	123	*e*Pg			Pg	06 58 57.4	+0.2
ODAN				*e*Sg			Sg	06 59 16.8	-0.1
	21μm,0.8s								
TAPN	Taplejung	1.58	102	*e*Pg			Pg	06 58 58.6	+0.1
TAPN				*e*Sg			Sg	06 59 19.1	+0.1
	19μm,0.6s								
LSA	Lhasa	4.96	65	Pn			Pn	06 59 42.0	-0.8
NIL	Nilore	12.45	302	Pn			Pn	07 01 23.1	-2.0
KBL	Kabul	16.02	299	Pn			Pn	07 02 11.2	-2.2
KDJ	Kajisay	16.09	336	P			P	07 02 16.1	-1.4
KDJ				IAmb			IAmb	07 02 21.1	
	comp=Z,99nm,0.9s								
BOOM	Boomskoye usch	16.86	334	P			Pn	07 02 24.9	+0.9
AAK	Ala-Archa	17.58	331

NRIK	Noril'sk	41.68	1	P		P	07 06 16.9	+0.9
	comp=Z,44nm,0.9s,baz=167,slow=5.7,SNR=4.3							
NRIK	Noril'sk	41.68	1	P		P	07 06 17.3	+1.3
NRIK				IAmb		IAmb	07 06 17.9	
	comp=Z,51nm,0.8s							
JWT	Wachi	42.46	67	P		P	07 06 23.1	+0.2
BRTR	Keskin Array B	44.59	300	P		P	07 06 40.9	+0.7
	comp=Z,2.5nm,0.5s,baz=106,slow=7.9,SNR=2.1							
BRTR	Keskin Array B	44.59	300	P		P	07 06 40.7	+0.5
CSS	Mathiatis	45.12	293	P		P	07 06 45.3	+1.0
CSS				IAmb		IAmb	07 06 46.1	
	comp=Z,14nm,0.8s							
ELL	Elmali	47.70	296	P		P	07 07 05.5	+0.8
JKA	Kamikawa-asahi	47.77	54	P		P	07 07 04.0	-1.0
JKA				IAmb		IAmb	07 07 16.1	
	comp=Z,9.8nm,0.8s							
AKASG	Malin Array Be	48.24	315	P		P	07 07 08.3	-0.2
	comp=Z,4.4nm,0.6s,baz=79,slow=7.3,SNR=5.0							
TIXI	Tiksi	49.88	16	P		P	07 07 20.1	-0.6
	comp=Z,8.7nm,0.4s,baz=276,slow=4.2,SNR=4.6							
TIXI	Tiksi	49.88	16	IAmb		IAmb	07 07 21.8	
	comp=Z,23nm,0.9s							
KARP	Karpathos	50.06	294	P		P	07 07 23.0	+0.3
MLR	Muntele Rosu	50.19	308	P		P	07 07 25.0	+1.3
BUR08	Bucovina Ar. S	50.70	310	P		P	07 07 28.4	+0.9
BUR08				IAmb		IAmb	07 07 43.8	
	comp=Z,16nm,1.1s							
SANT	Santorini	51.30	296	P		P	07 07 31.4	-0.7
FINES	FINESS Array B	51.74	328	P		P	07 07 35.3	+0.4
	comp=Z,13nm,0.7s,baz=113,slow=8.2,SNR=3.3							
PABE	Paberze	51.90	320	P		P	07 07 36.4	+0.3
IDI	Anoyia	51.93	295	P		P	07 07 37.0	+0.1
IDI				IAmb		IAmb	07 07 43.0	
	comp=Z,12nm,0.8s							
AGG	Agios Georgios	53.38	300	P		P	07 07 46.8	-0.7
AGG				IAmb		IAmb	07 07 47.5	
	comp=Z,15nm,0.7s							
ARCES	ARCESS Array B	54.09	338	P		P	07 07 51.6	-0.5
	comp=Z,25nm,0.7s,baz=103,slow=7.9,SNR=5.9							
ARCES	ARCESS Array B	54.09	338	P		P	07 07 52.8	+0.7
PDG	Podgorica	55.23	304	P		P	07 08 00.9	0.0
PDG				IAmb		IAmb	07 08 01.5	
	comp=Z,19nm,0.8s							
KRLC	Kraliky	56.18	314	*e*P		P	07 08 07.9	+0.2
DPC	Dobruska-Polom	56.46	314	*e*P		P	07 08 10.1	+0.5
UPC	Upice	56.64	314	*e*P		P	07 08 12.3	+1.4
CONA	Conrad Observa	56.97	311	*e*P		P	07 08 14.5	+1.2
	comp=Z,36nm,1.6s,SNR=4.0							
TIP	Timpagrande	57.62	301	P		P	07 08 18.2	+0.1
PRU	Pruhonice	57.63	314	*e*P		P	07 08 18.4	+0.6
SOKA	Soboth	57.68	310	*e*P		P	07 08 18.9	+0.6
	comp=Z,17nm,0.9s,SNR=8.3							
MOA	Molln	58.05	311	*i* P		P	07 08 21.0	+0.1
	comp=Z,8.4nm,0.7s							
GEC2	GERESS Array S	58.30	312	P		P	07 08 22.8	+0.1
GERES	GERESS Array B	58.30	312	P		P	07 08 21.8	-0.9
	comp=Z,4.7nm,0.8s,baz=76,slow=7.0,SNR=4.1							
GERES	GERESS Array B	58.30	312	P		P	07 08 22.7	0.0
KHC	Kasperske Hory	58.35	313	*e*P		P	07 08 22.8	-0.2
NC405	NORSAR Array S	58.60	327	P		P	07 08 24.5	0.0
NC405				IAmb		IAmb	07 08 26.9	
	comp=Z,16nm,0.7s							
TRI	Trieste	58.69	309	P		P	07 08 25.1	-0.2
TRI				IAmb		IAmb	07 08 32.7	
	comp=Z,18nm,0.9s							
NOA	NORSAR Array B	58.84	327	P		P	07 08 25.6	-0.6
	comp=Z,6.0nm,0.6s,baz=88,slow=6.9,SNR=4.4							
STAL	STALIGIAL	59.33	309	P		P	07 08 29.7	-0.1
NRCA	Norcia	59.64	305	P		P	07 08 32.1	0.0
NRCA				IAmb		IAmb	07 08 33.2	
	comp=Z,12nm,0.7s							
WTTA	Wattenberg	59.90	311	*i* P		P	07 08 33.3	-0.6
	comp=Z,31nm,1.4s							
CTI	Castel Tesino	60.09	309	P		P	07 08 34.9	-0.2
CTI				IAmb		IAmb	07 08 35.7	
	comp=Z,11nm,0.7s							
SQTA	Sankt Quirin	60.19	311	*i* P		P	07 08 35.2	-0.7
	comp=Z,15nm,0.6s,SNR=4.2							
MOTA	Moosalm	60.24	311	*i* P		P	07 08 35.5	-0.7
	comp=Z,16nm,0.7s,SNR=4.4							
FETA	Feichten	60.55	311	*e*P		P	07 08 37.6	-0.7
	comp=Z,7.7nm,0.6s,SNR=4.2							
DAVA	Damuels	61.07	311	*i* P		P	07 08 41.6	-0.3
	comp=Z,21nm,0.8s,SNR=4.4							
MSSA	Maissana	61.90	308	P		P	07 08 47.2	-0.2
MSSA				IAmb		IAmb	07 08 47.7	
	comp=Z,16nm,0.8s							
SENIN	Lac Senin/Sane	62.99	310	P		P	07 08 54.6	-0.2
SENIN				IAmb		IAmb	07 08 57.2	
	comp=Z,20nm,0.9s							
KEST	Kesra	64.17	298	P		P	07 09 03.5	+0.8
	comp=Z,28nm,0.8s,baz=179,slow=2.5,SNR=4.4							
WB0	Warramunga Arr	66.50	130	P		P	07 09 17.5	-0.2
WB0				IAmb		IAmb	07 09 30.7	
	comp=Z,9.0nm,0.8s							
WRA	Warramunga Arr	66.58	130	P		P	07 09 18.3	0.0
	comp=Z,6.4nm,0.7s,baz=322,slow=6.3,SNR=5.4							
WR0	Warramunga Arr	66.73	130	P		P	07 09 19.8	+0.6
WR0				IAmb		IAmb	07 09 21.2	
	comp=Z,17nm,1.1s							
ASAR	Alice Springs	68.89	133	P		P	07 09 33.3	+0.4
	comp=Z,3.8nm,0.7s,baz=313,slow=6.1,SNR=1.8							
ASAR	Alice Springs	68.89	133	P		P	07 09 32.6	-0.2
SCO	Scoresbysund	69.89	340	P		P	07 09 38.7	+0.4
CART	Cartagena	71.46	303	P		P	07 09 48.5	0.0
ESDC	Sonseca Array	72.86	306	P		P	07 09 56.9	0.0
	comp=Z,9.0nm,0.8s,baz=58,slow=5.7,SNR=12							
PAB	San Pablo	73.18	306	P		P	07 09 59.5	+0.6
PAB				IAmb		IAmb	07 09 60.0	
	comp=Z,10nm,0.8s							
PBRG	Braganca	74.00	309	*e*P		P	07 10 03.8	+0.2
MVO	Moncorvo	74.45	308	*e*P		P	07 10 06.8	+0.6
	comp=Z,46nm,1.6s							
TULEG	Thule	74.83	354	P		P	07 10 07.7	-0.1
TULEG				IAmb		IAmb	07 10 08.1	
	comp=Z,12nm,0.7s							
POLO	Lamas de Olo	74.89	309	*e*P		P	07 10 09.4	+0.5
	comp=Z,42nm,1.4s							
MTE	Manteigas	75.11	308	*e*P		P	07 10 10.9	+0.8
	comp=Z,127nm,1.8s							
PVIS	Viseu	75.23	308	*e*P		P	07 10 11.4	+0.6
	comp=Z,119nm,1.6s							
PCBR	Castelo Branco	75.29	307	*e*P		P	07 10 12.1	+1.1
	comp=Z,61nm,2.0s							
PMRV	Marv??o	75.39	307	*e*P		P	07 10 12.0	+0.3
	comp=Z,106nm,1.8s							
PBAR	Barrancos	75.65	306	*e*P		P	07 10 13.6	+0.5
	comp=Z,118nm,2.0s							
TOLK	Toolik Lake Re	75.73	18	P		P	07 10 12.1	-1.0
TOLK	Toolik Lake Re	75.73	18	P			07 10 11.9	
	baz=311							
PCAS	Casmilo, Conde	75.92	308	*e*P		P	07 10 15.5	+0.8
	comp=Z,107nm,1.5s							
PMTG	Montargil	76.13	307	*e*P		P	07 10 16.0	+0.1
	comp=Z,60nm,2.0s							
EVO	Evora	76.20	306	*e*P		P	07 10 17.0	+0.7
	comp=Z,103nm,2.0s							
PSBE	So Bento	76.35	308	*e*P		P	07 10 17.9	+0.7
	comp=Z,157nm,1.9s							
PVAQ	Vaqueiros	76.46	305	*e*P		P	07 10 18.3	+0.6
	comp=Z,137nm,1.9s							
COLD	Coldfoot	76.48	19	P			07 10 16.1	
	baz=311							
PCVE	Castro Verde	76.59	305	*e*P		P	07 10 18.9	+0.4
	comp=Z,80nm,1.9s							
PBDV	Barranco-do-Ve	76.68	305	*e*P		P	07 10 19.7	+0.7
	comp=Z,157nm,2.0s							
PMAFR	Mafra	76.93	307	*e*P		P	07 10 21.5	+1.1
	comp=Z,210nm,1.7s							
PFVI	Vila Bisbo	77.37	305	*e*P		P	07 10 23.7	+0.8
	comp=Z,170nm,2.1s							
MLY	Manley	77.75	21	P		P	07 10 23.7	-0.8
MLY	Manley	77.75	21	P			07 10 23.7	
	baz=311							
BMAR	Burnt Mountain	77.93	18	P		P	07 10 25.3	-0.2
CHUM	Lake Minchumin	77.97	23	P			07 10 25.1	
	baz=310							
I23K	Minto, Yukon-K	78.11	21	P			07 10 25.9	
	baz=312							
BPAW	Bear Paw Mtn.	78.28	22	P			07 10 26.4	
	baz=311							
NEA2	Nenana	78.58	21	P			07 10 28.2	
	baz=312							
POKR	Poker Plat Res	78.73	20	P			07 10 28.7	
	baz=314							
TCOL	CIGO, UAF Yank	78.77	21	P			07 10 29.3	
	baz=313							
PRP	Porcupine Dome	79.03	19	P			07 10 30.5	
	baz=315							
ILAR	Eielson Array	79.14	20	P		P	07 10 31.8	-0.4
	comp=Z,5.8nm,0.8s,baz=302,slow=4.6,SNR=6.4							
MCK	McKinley	79.20	22	P			07 10 31.7	
	baz=312							
HDA	Harding Lake	79.37	21	P			07 10 31.8	
	baz=314							
HDA				P			07 10 31.8	
	baz=314							
STKA	Stephens Creek	79.46	134	P		P	07 10 34.3	-0.1
	comp=Z,2.2nm,0.3s,baz=152,slow=6.1,SNR=2.3							
SKT	Skwentna	79.47	24	P		P	07 10 33.4	-0.7
SKT	Skwentna	79.47	24	P			07 10 32.6	
	baz=310							
WAT2	Susitna Watana	79.84	22	P			07 10 35.4	
	baz=313							
INK	Inuvik	79.92	14	P			07 10 36.2	
	baz=325							
SUA	Susitna One	80.09	24	P		P	07 10 36.6	-1.0
SUA				IAmb		IAmb	07 10 47.1	
	comp=Z,12nm,0.9s							
SUA	Susitna One	80.09	24	P			07 10 36.6	
	baz=311							
PMR	Palmer	80.58	23	P			07 10 39.7	
	baz=312							
SCRK	Sand Creek	80.59	20	P			07 10 38.8	
	baz=316							
SML	Sawmill	80.72	23	P		P	07 10 40.4	-0.5
SML	Sawmill	80.72	23	P			07 10 39.9	
	baz=313							
BOSA	Boshof	80.74	231	P		P	07 10 41.2	-0.3
	comp=Z,4.4nm,0.9s,baz=148,slow=18,SNR=2.2							
EPYK	Eagle Plains	80.76	16	P			07 10 40.2	
	baz=322							
KNK	Knik Glacier	80.94	23	P		P	07 10 41.3	-0.7
KNK				IAmb		IAmb	07 10 43.7	
	comp=Z,18nm,0.7s							
KNK	Knik Glacier	80.94	23	P			07 10 40.7	
	baz=313							
SCM	Sheep Creek Mo	81.04	23	P		P	07 10 42.0	-0.6
K27K	Chicken	81.13	19	P			07 10 42.1	
	baz=318							
M24K	Tolsona, Glenn	81.24	22	P			07 10 43.4	
	baz=315							
HARP	HAARP	81.37	22	P			07 10 44.1	
	baz=316							
SEW	Seward	81.48	25	P			07 10 44.4	
	baz=312							
KLU	Klutina	81.76	22	P			07 10 45.8	
	baz=315							
GLI	Glacier Island	81.79	23	P			07 10 46.0	
	baz=314							
SII	Sitkinak Islan	81.90	29	P			07 10 46.1	
	baz=309							
L27K	Beaver Creek,	81.93	20	P			07 10 47.1	
	baz=318							
N25K	Chitina, Valde	82.12	22	P			07 10 47.9	
	baz=316							
EYAK	Cordova Ski Ar	82.50	23	P			07 10 50.3	
	baz=315							
BMRM	Bremner River	82.58	22	P		P	07 10 50.5	-0.2
BMRM	Bremner River	82.58	22	P			07 10 50.7	
	baz=316							
MCARA	McCarthy VSAT	82.80	21	P			07 10 52.2	
	baz=318							
CRQE	Cirque	83.25	22	P			07 10 54.1	
	baz=318							
TGL	Tana Glacier	83.33	22	P		P	07 10 54.8	+0.2
KAIM	Kayak Island	83.41	23	P			07 10 55.4	
	baz=317							
CTG	Chitna Glacier	83.66	21	P			07 10 55.7	
	baz=319							
WHY	Whitehorse	85.86	19	P			07 11 07.4	
	baz=324							
SKAG	Skagway	86.71	20	P			07 11 11.0	
	baz=324							
DBIC	Dimbokro	87.68	276	P		P	07 11 16.9	-0.1
	comp=Z,4.3nm,0.7s,baz=325,slow=2.2,SNR=2.0							
DBIC	Dimbokro	87.68	276	IAmb		IAmb	07 11 17.9	
	comp=Z,7.1nm,0.8s							
YKA	Yellowknife Ar	88.61	9	P		P	07 11 20.4	-0.2
	comp=Z,2.9nm,0.8s,baz=338,slow=4.5,SNR=3.7							
SAML	Samuel	145.45	297	PKPdf		PKPab	07 18 07.1	+0.2
SIV	San Ignacio	147.38	284	PKPbc		PKPbc	07 18 12.2	-0.2
	comp=Z,12nm,0.7s,baz=78,slow=5.4,SNR=5.1							
GO09	Cerro Castillo	151.33	209	PKPbc		PKiKP	07 18 21.6	0.0

*ROM **25** 07:02:22.9±0.1,44°.200N±0°.007×10°.901E±0°.009, h10km, ML2.4/4, Error ellipse: s-maj=0.8km s-min=0.6km az=195.0*

*LDG **25** 07:02:27.4±0.5,44°.07N×10°.70E,h15km,Ml2.3/11, Error ellipse: s-maj=9.6km s-min=5.4km az=77.0*

ISC 25 07:02:23.0±1.0,**44°.16N**±0°.03×**10°.87E**±0°.02,**h18**km±2km, **n29,σ1§64/50,3C-1D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
POPM	Popiglio	0.14	214	⇑P		Pg	07 02 27.6	+0.5
POPM				S		Sg	07 02 31.2	+1.3
POPM				AML		AML		
	comp=E,3950μm,0.2s							
POPM				AML		AML		
	comp=N,3135μm,0.3s							
POPM				AML		AML		
	comp=E,3945μm,0.2s							
POPM				AML		AML		
	comp=N,3140μm,0.3s							
MTCR	Monte La Croce	0.17	145	⇓P		Pb	07 02 27.5	+0.5
MTCR				S		Sg	07 02 31.0	+0.3
MTCR				AML		AML		
	comp=E,3365μm,0.3s							
MTCR				AML		AML		
	comp=N,1508μm,0.3s							
MTCR				AML		AML		
	comp=N,1505μm,0.3s							
MTCR				AML		AML		
	comp=E,3370μm,0.3s							
FNVD	Fontana Vidola	0.18	88	P		Pb	07 02 26.6	-0.8
FNVD				S		Sb	07 02 29.9	-0.4
ZCCA	Zocca	0.20	23	⇑P		Pb	07 02 27.4	-0.5
ZCCA				AML		AML		
	comp=E,1789μm,1.1s							
ZCCA				AML		AML		
	comp=N,1765μm,0.4s							
BDI	Bagni Di Lucca	0.22	243	⇑P		Pb	07 02 28.6	+0.5
BDI				S		Sg	07 02 33.3	+1.4
BDI				AML		AML		
	comp=N,1280μm,0.7s							
BDI				AML		AML		
	comp=E,1400μm,1.2s							
BDI				AML		AML		
	comp=N,1485μm,1.3s							
BDI				AML		AML		
	comp=E,1540μm,1.4s							
PTF	Prato	0.25	144	P		Pb	07 02 20.5	-8.3
CARD	Cardoso	0.31	244	P		Pg	07 02 29.9	+0.2
CARD				S		Sb	07 02 36.5	+1.9
SARO	Sassorosso	0.34	274	P		Pg	07 02 30.3	+0.2
SARO				S		Sg	07 02 35.9	+0.8
CRMI	Carmignano	0.38	169	P		Pg	07 02 30.6	-0.3
ERBM	Eremo	0.41	308	P		Pg	07 02 31.4	-0.1
ERBM				S		Sg	07 02 38.6	+1.3
PII	Pisa	0.51	209	P		Pg	07 02 33.4	+0.3
PII				S		Sn	07 02 42.8	-0.7
PII				AML		AML		
	comp=E,476μm,1.1s							
PII				AML		AML		
	comp=N,401μm,0.3s							
EQUI	Equi	0.51	271	P		Pg	07 02 33.2	-0.1
EQUI				S		Sg	07 02 41.4	+1.2
RUFI	Rufina	0.57	125	P		Pg	07 02 34.5	+0.2
RUFI				S		Sb	07 02 42.8	+0.8
GRAM	Graiana	0.66	300	P		Pb	07 02 35.8	-0.2
GRAM				S		Sb	07 02 46.1	+1.3
PGF	Pioggiola	2.11	221	*e*Pn		Pn	07 02 57.9	+0.4
PGF				*e*Sn		Sn	07 03 20.4	-2.9
	comp=N,3.1nm,0.4s							
SBF	Sospel	2.49	264	*e*P		Pb	07 03 06.1	-1.1
SBF				*e*Sn		Sn	07 03 30.0	-2.7
	comp=N,6.2nm,0.3s							
MBDF	Montbardon	2.99	282	*e*P		Pb	07 03 14.9	-0.8
DUGI	Dugi Otok	3.03	92	*e*Pg		Pn	07 03 10.8	+0.9
DUGI				Sg		Sn	07 03 24.5	-21
FRF	La Foret Royal	3.11	260	*e*Pn		Pn	07 03 12.5	+1.4
FRF	La Foret Royal	3.11	260	*e*P		Pb	07 03 16.4	-1.3
FRF				*e*Sn		Sn	07 03 45.1	-2.7
	comp=N,3.0nm,0.3s							
LPG	La Plagne	3.22	296	*e*Pn		Pn	07 03 16.5	+3.7
LPG				*e*Sg		Sg	07 04 07.7	+1.4
LPL	La Plagne	3.24	296	*e*Pg		Pg	07 03 26.0	+1.0
LPL				*e*Sg		Sg	07 04 05.6	-1.3
	comp=N,5.2nm,0.4s							
LMR	La Mourre	3.26	257	*e*Pn		Pn	07 03 14.7	+1.5
LMR	La Mourre	3.26	257	*e*P		Pb	07 03 18.1	-2.2
LMR				*e*Sn		Sn	07 03 47.1	-4.4
	comp=N,1.5nm,0.3s							
ORIF	Oris-en-Rattie	3.64	284	*e*P		Pb	07 03 24.0	-2.9
ORIF				*e*Sg		Sg	07 04 18.6	-1.4
	comp=N,1.6nm,0.3s							
SMRF	Simiane la Rot	3.82	269	*e*Pn		Pn	07 03 22.5	+1.6
SMRF				*e*Sn		Sn	07 04 02.1	-3.2
	comp=N,1.8nm,0.3s							
CABF	La Chapelle	4.16	308	*e*Pn		Pn	07 03 27.0	+1.4
CABF				*e*Sn		Sn	07 04 14.2	+0.4
HINF	Hinteralfeld	4.60	324	*e*Pn		Pn	07 03 32.9	+1.3
HINF				*e*Sn		Sn	07 04 23.2	-1.4
	comp=N,2.4nm,0.4s							
HAU	Haudompre	4.96	322	*e*Pn		Pn	07 03 38.5	+1.9
HAU				*e*Sn		Sn	07 04 32.3	-1.2
	comp=N,3.8nm,0.3s							

IDC 25 07:02:59.2±3.1,**27°.36N**×**85°.38E**,**h0km**,**mb4.0**/2, **mb1 4.1**/3,**mb1mx3.5**/56,**mbtmp3.9**/3,**ML3.7**/1,**Error ellipse: s-maj=182.0km s-min=33.2km az=60.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	Makanchi Array	19.55	354	P		P	07 07 28.4	0.0
	0.2nm,0.3s,baz=182,slow=12,SNR=1.8							
ARCES	ARCESS Array B	54.20	338	P		P	07 12 26.1	0.0
	4.2nm,0.9s,baz=105,slow=8.1,SNR=4.9							
WRA	Warramunga Arr	66.77	129	P		P	07 13 52.6	-0.1
	0.8nm,0.9s,baz=321,slow=6.3,SNR=1.0							

*IDC **25** 07:03:07.3±1.3,27°.32N×85°.91E, h0km, mb4.1/11, mb1 4.2/12, mb1mx3.8/57, mbtmp4.1/12, ML4.1/1, Error ellipse: s-maj=41.5km s-min=20.7km az=56.0*

*NEIC **25** 07:03:09.3±1.9,27°.42N±0°.08×86°.02E±0°.07, h10km±1km, mb4.4/14, Error ellipse: s-maj=17.1km s-min=4.9km az=144.0*

ISC 25 07:03:10.2±0.8,**27°.4N**±0°.1×**86°.03E**±0°.10,**h19**km,**n42,σ1§10/41,mb4.1/17,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	Lhasa	5.06	62	Pn		Pn	07 04 24.5	-1.0
MKAR	Makanchi Array	19.60	352	P		P	07 07 36.5	-0.8
	0.5nm,0.3s,baz=184,slow=10,SNR=3.0							
MK31	Makanchi Array	19.60	352	P		P	07 07 37.3	0.0
KURBB	Kurchatov Arra	23.91	348	P		P	07 08 22.8	+0.1
	1.4nm,0.5s,baz=167,slow=8.5,SNR=3.6							
SONM	Songino Array	25.88	32	P		P	07 08 42.0	+1.1
	3.5nm,0.7s,baz=219,slow=10,SNR=4.5							
SONM	Songino Array	25.88	32	IAmb		IAmb	07 08 45.0	
	comp=Z,3.2nm,0.8s							
ULN	Ulaanbaatar	26.22	33	P		P	07 08 45.0	+1.1
ULN				IAmb		IAmb	07 08 54.9	
	comp=Z,4.2nm,0.9s							
ZALV	Zalesovo Beam	26.56	358	P		P	07 08 47.4	+0.6
	comp=Z,3.9nm,0.7s,baz=178,slow=7.8,SNR=3.3							
ABKAR	Akbulak array	29.68	324	P		P	07 09 15.5	+0.8
ABKAR	Akbulak array	29.68	324	P		P	07 09 15.1	+0.4
KSRS	Korea Array	36.50	63	P		P	07 10 14.5	+0.2
	comp=Z,0.7nm,0.5s,baz=254,slow=7.9,SNR=1.6							
ILGA	Ilgaz	44.73	302	P		P	07 11 21.7	-0.9
JEM	Erimo	48.34	57	P		P	07 11 48.0	-2.6
AKBB	Malin Array Si	48.50	315	P		P	07 11 51.5	-0.2
AKBB				IAmb		IAmb	07 12 10.5	
	comp=Z,8.0nm,1.0s							
FIA1	FINESS Array S	52.04	328	P		P	07 12 18.4	+0.1
FINES	FINESS Array B	52.04	328	P		P	07 12 18.5	+0.2
	comp=Z,1.3nm,0.6s,baz=93,slow=8.4,SNR=3.6							
ITM	Ithomi	54.17	298	P		P	07 12 32.5	-1.9
ARCES	ARCESS Array B	54.40	338	P		P	07 12 36.1	+0.5
	comp=Z,5.1nm,0.9s,baz=106,slow=9.5,SNR=3.4							
MORC	Moravsky Berou	55.97	313	P		P	07 12 46.3	-1.0
NC303	NORSAR Array S	59.06	327	P		P	07 13 08.9	+0.1
NOA	NORSAR Array B	59.14	327	P		P	07 13 08.8	-0.6
	comp=Z,0.5nm,0.5s,baz=113,slow=5.4,SNR=1.9							
MSSA	Maissana	62.14	308	P		P	07 13 30.1	-0.1
ECH	Echery	62.95	313	P		P	07 13 35.8	+0.3
WRA	Warramunga Arr	66.34	130	P		P	07 13 59.2	+1.3
	comp=Z,1.1nm,0.8s,baz=323,slow=6.5,SNR=4.8							
WB2	Warramunga Arr	66.34	130	P		P	07 13 58.7	+0.8
WR0	Warramunga Arr	66.49	130	P		P	07 13 59.1	+0.2
ASAR	Alice Springs	68.63	133	P		P	07 14 11.6	-0.8
	comp=Z,0.6nm,0.9s,baz=310,slow=5.3,SNR=1.5							
LSZ	Lusaka	70.31	240	P		P	07 14 23.7	+0.7
LSZ				IAmb		IAmb	07 14 23.8	
	comp=Z,5.5nm,1.1s							
EUNU	Eureka	72.71	359	P		P	07 14 37.7	+1.3
MLY	Manley	78.03	21	P		P	07 15 09.0	+1.8
I23K	Minto, Yukon-K	78.39	21	P		P	07 15 10.9	+1.8
TRF	Thorofare Moun	79.22	22	P		P	07 15 13.9	0.0
ILAR	Eielson Array	79.42	20	P		P	07 15 15.8	+1.0
	comp=Z,0.9nm,0.6s,baz=303,slow=4.7,SNR=5.9							
RND	Reindeer	79.73	22	P		P	07 15 17.5	+0.9
SKT	Skwentna	79.75	24	P		P	07 15 17.8	+1.1
SUA	Susitna One	80.37	24	P		P	07 15 21.4	+1.2
SUA				IAmb		IAmb	07 15 39.1	
	comp=Z,1.6nm,0.7s							
SCRK	Sand Creek	80.88	20	P		P	07 15 24.0	+1.1
SCRK				IAmb		IAmb	07 15 25.1	
	comp=Z,3.7nm,1.0s							
DOT	Dot Lake	81.10	20	P		P	07 15 25.0	+1.1
KDAK

*IDC **25** 07:03:48.5±0.7,28°.07N×84°.88E,h0^km,mb4.4/23, mb1 4.5/25,mb1mx4.2/58,mbtmp4.4/25,ML4.4/2,Error ellipse: s-maj=19.7km s-min=15.6km az=45.0*
*NEIC **25** 07:03:49.8±0.9,27°.96N±0°.03×84°.68E±0°.07,h10^km±1^km, mb4.4/41,Error ellipse: s-maj=11.7km s-min=4.0km az=251.0*
*DMN **25** 07:03:51.8±0.2,28°.08N×84°.93E,h2^km,Ml4.9/2,Error ellipse: s-maj=5.3km s-min=1.5km az=26.0*

ISC 25 07:03:51.1±1.0,28°.07N±0°.06×84°.89E±0°.03,h15^km±7^km, n92,σ0^s79/96,mb4.4/40,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GKN	**Gorkha**	**0.23**	**254**	*e*Pg		**Pg**	**07 03 56.5**	**+0.1**
GKN				*e*Sg		**Sg**	**07 04 00.1**	**+0.1**
KKN	**Kakani**	**0.44**	**129**	*e*Pg		**Pg**	**07 03 59.7**	**-0.3**
KKN				*e*Sg		**Sg**	**07 04 05.6**	**-0.5**
DMN	**Daman**	**0.49**	**157**	*e*Pg		**Pg**	**07 04 01.4**	**+0.4**
DMN				*e*Sg		**Sb**	**07 04 08.5**	**-0.2**
PKI	**Pulchoki**	**0.67**	**137**	*e*Pg		**Pg**	**07 04 04.5**	**+0.1**
PKI				*e*Sg		**Sb**	**07 04 13.7**	**-0.3**
	5μm,0.4s							
DANN	**Dangsing**	**1.04**	**286**	*e*Pg		**Pn**	**07 04 12.1**	**+0.8**
DANN				*e*Sg		**Sn**	**07 04 26.6**	**+0.9**
	3μm,0.3s							
KOLN	**Koldanda**	**1.18**	**256**	*e*Pg		**Pg**	**07 04 14.8**	**+0.9**
KOLN				*e*Sg		**Sg**	**07 04 30.8**	**+1.5**
	4μm,0.4s							
PYUN	**Piuthan**	**1.68**	**272**	*e*Pn		**Pn**	**07 04 21.4**	**+1.3**
PYUN				*e*Sg		**Sg**	**07 04 46.0**	**+0.7**
LSA	**Lhasa**	**5.72**	**72**	Pn		**Pn**	**07 05 17.8**	**+1.8**
NIL	**Nilore**	**11.44**	**302**	Pn		**Pn**	**07 06 31.8**	**-2.2**
KBL	**Kabul**	**15.00**	**299**	Pn		**Pn**	**07 07 20.6**	**-2.1**
KDJ	**Kajisay**	**15.37**	**338**	Pn		**Pn**	**07 07 26.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**16.05**	**124**	Pn		**P**	**07 07 39.4**	**-0.3**
	0.2nm,0.3s,baz=286,slow=13,SNR=1.3							
BOOM	**Boomskoye usch**	**16.12**	**336**	Pn		**Pn**	**07 07 36.8**	**-0.5**
AAK	**Ala-Archa**	**16.81**	**333**	Pn		**Pn**	**07 07 45.3**	**-0.7**
	0.5nm,0.3s,baz=170,slow=12,SNR=2.4							
AAK	**Ala-Archa**	**16.81**	**333**	IAmb		IAmb	07 07 54.0	
	comp=Z,2.9nm,0.6s							
MK31	**Makanchi Array**	**18.81**	**354**	P		**P**	**07 08 10.0**	**0.0**
MKAR	**Makanchi Array**	**18.81**	**354**	P		**Pn**	**07 08 10.8**	**+0.3**
	comp=Z,3.6nm,0.3s,baz=177,slow=11,SNR=19							
MKAR	**Makanchi Array**	**18.81**	**354**	P		**P**	**07 08 10.0**	**0.0**
MAKZ	**Makanchi**	**18.85**	**354**			**Pn**	**07 08 11.0**	**0.0**
MAKZ				IAmb		IAmb	07 08 12.5	
	comp=Z,14nm,0.6s							
KKAR	**Karatay Array**	**18.98**	**326**	P		**P**	**07 08 09.8**	**-2.2**
KURBB	**Kurchatov Arra**	**23.04**	**350**	P		**P**	**07 08 55.1**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=173,slow=9.7,SNR=15							
ZAA0	**Zalesovo Array**	**25.86**	**360**	P		**P**	**07 09 22.6**	**+0.8**
ZAA0				IAmb		IAmb	07 09 26.9	
	comp=Z,4.5nm,0.7s							
ZALV	**Zalesovo Beam**	**25.86**	**360**	P		**P**	**07 09 22.1**	**+0.2**
	comp=Z,9.3nm,0.6s,baz=182,slow=9.0,SNR=9.2							
ZALV	**Zalesovo Beam**	**25.86**	**360**	P		**P**	**07 09 22.3**	**+0.5**
SONM	**Songino Array**	**25.87**	**34**	P		**P**	**07 09 23.2**	**+1.1**
	comp=Z,7.0nm,0.6s,baz=222,slow=9.7,SNR=12							
SONM	**Songino Array**	**25.87**	**34**	P		**P**	**07 09 23.3**	**+1.1**
SONM				IAmb		IAmb	07 09 25.6	
	comp=Z,4.7nm,0.8s							
ULN	**Ulaanbaatar**	**26.22**	**35**	P		**P**	**07 09 26.7**	**+1.3**
ULN				IAmb		IAmb	07 09 31.0	
	comp=Z,11nm,1.1s							
BVAR	**Borovoye Array**	**27.15**	**341**	P		**P**	**07 09 32.8**	**-0.7**
	comp=Z,2.3nm,0.3s,baz=165,slow=12,SNR=10							
ABKAR	**Akbulak array**	**28.53**	**325**	P		**P**	**07 09 46.2**	**+0.3**
ABKAR	**Akbulak array**	**28.53**	**325**	P		**P**	**07 09 46.4**	**+0.4**
ABKAR				IAmb		IAmb	07 09 46.7	
	comp=Z,4.0nm,0.8s							
RPSI	**Rantau Prapat**	**28.57**	**150**	P		**P**	**07 09 45.8**	**-0.7**
RPSI				IAmb		IAmb	07 09 51.8	
	comp=Z,4.0nm,1.0s							
YHNB	**Yeheng**	**32.79**	**87**	P		**P**	**07 10 25.4**	**+1.5**
ARU	**Arti**	**33.99**	**334**	P		**P**	**07 10 33.9**	**0.0**
	comp=Z,2.8nm,0.5s,baz=139,slow=4.9,SNR=5.9							
ARU	**Arti**	**33.99**	**334**	P		**P**	**07 10 33.9**	**0.0**
ARU				IAmb		IAmb	07 10 45.6	
	comp=Z,3.4nm,1.1s							
BELG	**Belogornoye**	**36.79**	**322**	P		**P**	**07 10 59.4**	**+1.4**
	comp=Z,8.6nm,0.5s,baz=298,slow=1.8,SNR=4.8							
KSRS	**Korea Array**	**37.11**	**64**	P		**P**	**07 10 59.6**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=260,slow=8.0,SNR=7.0							
KIRV	**Kirov**	**39.14**	**331**	P		**P**	**07 11 17.2**	**-0.5**
	comp=Z,9.2nm,0.5s,baz=212,slow=2.3,SNR=3.6							
USRK	**Ussuriysk Ar.**	**40.72**	**54**	P		**P**	**07 11 30.6**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=260,slow=8.6,SNR=3.3							
NRIK	**Noril'sk**	**41.34**	**1**	P		**P**	**07 11 36.6**	**+0.8**
NRIK				IAmb		IAmb	07 11 53.8	
	comp=Z,3.1nm,0.6s							
JWT	**Wachi**	**43.20**	**67**	P		**P**	**07 11 52.0**	**+0.4**
AKASG	**Malin Array Be**	**47.30**	**314**	P		**P**	**07 12 23.0**	**-0.8**
	comp=Z,1.9nm,0.5s,baz=83,slow=6.5,SNR=4.2							
AKASG	**Malin Array Be**	**47.30**	**314**	IAmb		IAmb	07 12 24.9	
	comp=Z,1.1nm,0.7s							
AKBB	**Malin Array Si**	**47.30**	**314**	P		**P**	**07 12 22.9**	**-0.9**
AKBB				IAmb		IAmb	07 12 28.6	
	comp=Z,6.0nm,1.1s							
MLR	**Muntele Rosu**	**49.21**	**307**	P		**P**	**07 12 39.4**	**+0.6**
BURAR	**Bucovina Array**	**49.72**	**310**	P		**P**	**07 12 42.1**	**-0.5**
BURAR				IAmb		IAmb	07 12 43.6	
	comp=Z,2.9nm,1.1s							
BUR08	**Bucovina Ar. S**	**49.73**	**310**	P		**P**	**07 12 41.4**	**-1.4**
TIXI	**Tiksi**	**49.81**	**17**	P		**P**	**07 12 42.7**	**-0.1**
	comp=Z,3.8nm,0.5s,baz=156,slow=7.5,SNR=7.9							
TIXI	**Tiksi**	**49.81**	**17**	P		**P**	**07 12 43.3**	**+0.5**
TIXI				IAmb		IAmb	07 12 45.7	
	comp=Z,5.1nm,1.0s							
FIA1	**FINESS Array S**	**50.92**	**328**	P		**P**	**07 12 50.9**	**-0.5**
FINES	**FINESS Array B**	**50.92**	**328**	P		**P**	**07 12 51.1**	**-0.3**
	comp=Z,7.6nm,0.5s,baz=107,slow=8.3,SNR=23							
FINES	**FINESS Array B**	**50.92**	**328**	P		**P**	**07 12 50.9**	**-0.5**
KEV	**Kevo**	**52.97**	**338**	P		**P**	**07 13 06.5**	**0.0**
KEV				IAmb		IAmb	07 13 25.0	
	comp=Z,7.8nm,1.0s							
ARCES	**ARCESS Array B**	**53.39**	**338**	P		**P**	**07 13 09.5**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=103,slow=8.1,SNR=24							
ARCES	**ARCESS Array B**	**53.39**	**338**	IAmb		IAmb	07 13 10.3	
	comp=Z,7.4nm,0.8s							
GERES	**GERESS Array B**	**57.34**	**312**	P		**P**	**07 13 38.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=119,slow=6.1,SNR=1.3							
NC405	**NORSAR Array S**	**57.77**	**327**	P		**P**	**07 13 40.4**	**-0.9**
NC303	**NORSAR Array S**	**57.94**	**327**	P		**P**	**07 13 41.7**	**-0.7**
NOA	**NORSAR Array B**	**58.01**	**327**	P		**P**	**07 13 41.8**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=89,slow=7.0,SNR=6.1							
SPA0	**Spitsbergen Ar**	**58.35**	**347**	P		**P**	**07 13 45.4**	**+0.3**
KBS	**Kingsbay**	**59.38**	**348**	P		**P**	**07 13 52.5**	**+0.3**
MSSA	**Maissana**	**60.92**	**307**	P		**P**	**07 14 02.3**	**-1.1**
MSSA				IAmb		IAmb	07 14 12.7	
	comp=Z,2.7nm,0.7s							
BILL	**Bilibino**	**61.09**	**25**	P		**P**	**07 14 05.1**	**+1.0**
WB0	**Warramunga Arr**	**67.47**	**129**	P		**P**	**07 14 46.8**	**+0.3**
WB0				IAmb		IAmb	07 15 03.4	
	comp=Z,5.8nm,1.1s							
WRA	**Warramunga Arr**	**67.55**	**129**	P		**P**	**07 14 47.3**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=322,slow=6.4,SNR=7.0							
WB2	**Warramunga Arr**	**67.56**	**129**	P		**P**	**07 14 47.3**	**+0.1**
WB2				IAmb		IAmb	07 14 54.8	
	comp=Z,4.4nm,0.9s							
AS31	**Alice Springs**	**69.84**	**132**	P		**P**	**07 15 01.7**	**+0.4**
ASAR	**Alice Springs**	**69.84**	**132**	P		**P**	**07 15 01.6**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=315,slow=6.1,SNR=2.9							
EUNU	**Eureka**	**72.00**	**358**	P		**P**	**07 15 14.2**	**+0.5**
EUNU				IAmb		IAmb	07 15 14.3	
	comp=Z,5.8nm,0.9s							
A21K	**Barrow**	**72.11**	**17**	P		**P**	**07 15 14.8**	**+0.5**
TOLK	**Toolik Lake Re**	**75.68**	**18**	P		**P**	**07 15 36.1**	**+0.7**
TOLK				IAmb		IAmb	07 15 40.8	
	comp=Z,1.3nm,0.5s							
COLD	**Coldfoot**	**76.45**	**19**	P		**P**	**07 15 40.6**	**+0.9**
MLY	**Manley**	**77.76**	**21**	P		**P**	**07 15 47.5**	**+0.2**
BMAR	**Burnt Mountain**	**77.87**	**17**	P		**P**	**07 15 48.9**	**+1.1**
TORD	**Torodi Ar. Bea**	**78.01**	**279**	P		**P**	**07 15 48.1**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=48,slow=4.5,SNR=2.5							
NEA2	**Nenana**	**78.58**	**21**	P		**P**	**07 15 52.3**	**+0.6**
MDM	**Murphy Dome**	**78.59**	**20**	P		**P**	**07 15 51.8**	**0.0**
ILAR	**Eielson Array**	**79.13**	**20**	P		**P**	**07 15 54.0**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=296,slow=4.2,SNR=7.3							
RND	**Reindeer**	**79.47**	**22**	P		**P**	**07 15 56.9**	**+0.2**
RND				IAmb		IAmb	07 16 10.3	
	comp=Z,6.4nm,1.2s							
INK	**Inuvik**	**79.80**	**14**	P		**P**	**07 15 58.3**	**0.0**
	comp=Z,2.1nm,0.8s,baz=339,slow=5.0,SNR=3.4							
SUA	**Susitna One**	**80.15**	**24**	P		**P**	**07 16 00.8**	**+0.3**
SUA				IAmb		IAmb	07 16 13.6	
	comp=Z,6.7nm,1.0s							
BOSA	**Boshof**	**80.22**	**230**	P		**P**	**07 16 01.7**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=59,slow=9.2,SNR=2.2							
SCRK	**Sand Creek**	**80.58**	**20**	P		**P**	**07 16 02.7**	**0.0**
C36M	**Paulatuk**	**80.60**	**10**	P		**P**	**07 16 01.9**	**-0.7**
C36M				IAmb		IAmb	07 16 09.9	
	comp=Z,2.4nm,0.9s							
EPYK	**Eagle Plains**	**80.68**	**16**	P		**P**	**07 16 03.2**	**0.0**
EPYK				IAmb		IAmb	07 16 12.1	
	comp=Z,9.0nm,1.1s							
KDAK	**Kodiak Island**	**81.91**	**27**	P		**P**	**07 16 09.7**	**-0.1**
	comp=Z,3.7nm,0.6s,baz=270,slow=3.0,SNR=4.2							
KDAK	**Kodiak Island**	**81.91**	**27**	P		**P**	**07 16 09.9**	**+0.1**
BCAR	**Beaver Creek A**	**81.92**	**20**	P		**P**	**07 16 09.7**	**-0.1**
WHY	**Whitehorse**	**85.82**	**18**	P		**P**	**07 16 29.9**	**0.0**
YKA	**Yellowknife Ar**	**88.41**	**9**	P		**P**	**07 16 41.6**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=337,slow=4.7,SNR=3.9							
SAML	**Samuel**	**144.43**	**296**	PKPdf		**PKPab**	**07 23 25.6**	**0.0**
SIV	**San Ignacio**	**146.35**	**284**	PKPbc		**PKPdf**	**07 23 30.8**	**0.0**
	comp=Z,2.0nm,0.6s,baz=89,slow=6.8,SNR=3.7							
CPUP	**Villa Florida**	**146.44**	**264**	PKPbc		**PKPab**	**07 23 33.5**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=125,slow=6.2,SNR=2.9							

*IDC **25** 07:04:58.7±1.1,28°.00N×85°.22E,h0^km,mb4.2/10, mb1 4.3/11,mb1mx3.9/55,mbtmp4.2/11,ML4.5/1,Error ellipse: s-maj=35.5km s-min=19.0km az=58.0*
*NEIC **25** 07:05:00.9±1.4,28°.03N×85°.37E±0°.07,h10^km±1^km, mb4.2/22,Error ellipse: s-maj=11.4km s-min=6.8km az=243.0*

ISC 25 07:05:01.7±0.6,28°.01N±0°.10×85°.28E±0°.09,h18^km,n46, σ0^s93/45,mb4.2/20,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**5.41**	**71**	Pn		**Pn**	**07 06 22.2**	**+0.3**
NIL	**Nilore**	**11.77**	**301**	Pn		**Pn**	**07 07 48.4**	**-0.3**
PRZ	**Przheval'sk**	**15.48**	**341**	Pn		**Pn**	**07 08 40.0**	**+0.6**
CM31	**Chiang Mai Arr**	**15.74**	**124**	Pn		**P**	**07 08 43.9**	**-2.6**
CM31				IAmb		IAmb	07 08 56.5	
	comp=Z,13nm,1.0s							
CMAR	**Chiang Mai Arr**	**15.74**	**124**	Pn		**P**	**07 08 44.9**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=315,slow=13,SNR=1.7							
MK31	**Makanchi Array**	**18.89**	**354**	P		**Pn**	**07 09 21.7**	**-0.2**
MKAR	**Makanchi Array**	**18.89**	**354**	P		**P**	**07 09 20.4**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=177,slow=11,SNR=3.1							
MKAR	**Makanchi Array**	**18.89**	**354**	P		**Pn**	**07 09 21.6**	**-0.3**
MAKZ	**Makanchi**	**18.94**	**353**	P		**Pn**	**07 09 22.3**	**-0.1**
KK31	**Karatay Array**	**19.22**	**325**	P		**Pn**	**07 09 25.3**	**-0.5**
KKAR	**Karatay Array**	**19.22**	**325**	P		**Pn**	**07 09 25.3**	**-0.5**
PALK	**Pallekele**	**21.08**	**193**	P		**P**	**07 09 46.9**	**+1.6**
PALK				IAmb		IAmb	07 09 50.2	
	comp=Z,15nm,0.7s							
KURBB	**Kurchatov Arra**	**23.16**	**349**	P		**P**	**07 10 05.6**	**-1.4**
	comp=Z,5.8nm,0.8s,baz=170,slow=10.0,SNR=4.5							
SONM	**Songino Array**	**25.71**	**34**	P		**P**	**07 10 32.1**	**+1.1**
	comp=Z,4.3nm,0.9s,baz=225,slow=11,SNR=3.1							
SONM	**Songino Array**	**25.71**	**34**	IAmb		IAmb	07 10 35.8	
	comp=Z,3.3nm,1.0s							
ZAA0	**Zalesovo Array**	**25.91**	**359**	P		**P**	**07 10 32.4**	**-0.2**
ZAA0				IAmb		IAmb	07 10 37.8	
	comp=Z,4.6nm,0.8s							
ZALV	**Zalesovo Beam**	**25.91**	**359**	P		**P**	**07 10 32.2**	**-0.4**
	comp=Z,4.2nm,0.6s,baz=191,slow=11,SNR=2.7							
ZALV	**Zalesovo Beam**	**25.91**	**359**	P		**P**	**07 10 32.4**	**-0.2**
KS19	**Wonju Array Si**	**36.78**	**64**	P		**P**	**07 12 09.4**	**+1.0**
KS19				IAmb		IAmb	07 12 14.7	
	comp=Z,6.7nm,1.1s							
KSRS	**Korea Array**	**36.82**	**64**	P		**P**	**07 12 09.1**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=265,slow=8.3,SNR=2.1							
MDUB	**Mudurnu**	**45.76**	**300**	P		**P**	**07 13 23.5**	**+1.2**
AKASG	**Malin Array Be**	**47.59**	**314**	P		**P**	**07 13 35.1**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=83,slow=6.8,SNR=2.4							
FIA1	**FINESS Array S**	**51.15**	**328**	P		**P**	**07 14 04.2**	**+0.9**
FINES	**FINESS Array B**	**51.15**	**328**	P		**P**	**07 14 03.7**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=106,slow=8.8,SNR=1.6							
FINES	**FINESS Array B**	**51.15**	**328**	P		**P**	**07 14 04.0**	**+0.6**
ARCES	**ARCESS Array B**	**53.57**	**338**	P		**P**	**07 14 22.6**	**+1.4**
	comp=Z,3.8nm,0.8s,baz=80,slow=7.7,SNR=2.1							
NC303	**NORSAR Array S**	**58.17**	**327**	P		**P**	**07 14 55.0**	**+0.7**
WRA	**Warramunga Arr**	**67.25**	**130**	P		**P**	**07 15 54.5**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=322,slow=6.4,SNR=5.5							
WB2	**Warramunga Arr**	**67.26**	**130**	P		**P**	**07 15 55.5**	**0.0**
WB2				IAmb		IAmb	07 16 00.2	
	comp=Z,0.9nm,0.7s							
WR0	**Warramunga Arr**	**67.40**	**129**	P		**P**	**07 15 56.1**	**-0.2**
AS31	**Alice Springs**	**69.55**	**133**	P		**P**	**07 16 10.2**	**+0.4**
AS31				IAmb		IAmb	07 16 13.1	
	comp=Z,1.1nm,0.8s							
ASAR	**Alice Springs**	**69.55**	**133**	P		**P**	**07 16 10.6**	**+0.8**
	comp=Z,3.3nm,0.7s,baz=316,slow=6.3,SNR=10							
PATS	**Pohnpei**	**71.85**	**92**	P		**P**	**07 16 25.0**	**+1.1**
PVAQ	**Vaqueiros**	**75.78**	**305**	P		**P**	**07 16 47.3**	**+0.7**
MLY	**Manley**	**77.68**	**21**	P		**P**	**07 16 57.4**	**+0.4**
BMAR	**Burnt Mountain**	**77.82**	**18**	P		**P**	**07 16 58.6**	**+0.9**
MDM	**Murphy Dome**	**78.52**	**20**	P		**P**	**07 17 01.6**	**0.0**
MDM				IAmb		IAmb	07 17 18.3	
	comp=Z,3.7nm,1.1s							
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**	**07 17 03.4**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=294,slow=4.8,SNR=4.2							
SCRK	**Sand Creek**	**80.51**	**20**	P		**P**	**07 17 12.6**	**0.0**
SCRK				IAmb		IAmb	07 17 31.4	
	comp=Z,2.6nm,1.0s							
EPYK	**Eagle Plains**	**80.63**	**16**	P		**P**	**07 17 12.1**	**-1.0**
EPYK				IAmb		IAmb	07 17 26.0	
	comp=Z,1.8nm,0.8s							
KNK	**Knik Glacier**	**80.90**	**23**	P		**P**	**07 17 14.1**	**-0.5**
KNK				IAmb		IAmb	07 17 32.2	
	comp=Z,1.0nm,0.6s							
SCM	**Sheep Creek Mo**	**81.00**	**22**	P		**P**	**07 17 15.5**	**+0.3**
SCM				IAmb		IAmb	07 17 34.2	
	comp=Z,6.1nm,1.2s							
TGL	**Tana Glacier**	**83.27**	**22**	P		**P**	**07 17 27.9**	**+0.8**
SAML	**Samuel**	**144.76**	**296**	PKPdf		**PKPdf**	**07 24 37.3**	**-1.0**
SIV	**San Ignacio**	**146.70**	**284**	PKPbc		**PKPbc**	**07 24 42.3**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=110,slow=2.8,SNR=2.3							
PTCN	**Pitcairn Islan**	**148.28**	**93**	PKPbc		**PKPbc**	**07 24 45.7**	**-1.6**

*IDC **25** 07:05:26.9±0.9,27°.86N×85°.42E,h0^km,mb4.4/16, mb1 4.5/17,mb1mx4.1/54,mbtmp4.4/17,ML4.5/1,Error ellipse: s-maj=24.3km s-min=18.6km az=49.0*
*NEIC **25** 07:05:28.0±1.7,27°.95N±0°.09×85°.58E±0°.04,h10^km±1^km, mb4.3/21,Error ellipse: s-maj=15.8km s-min=4.9km az=169.0*
*DMN **25** 07:05:29.2±0.1,27°.94N×85°.54E,h10^km,Ml4.7/4,Error ellipse: s-maj=2.8km s-min=1.1km az=3.0*

ISC 25 07:05:28.0±1.2,27°.93N±0°.05×85°.54E±0°.03,h10^km±8^km, n67,σ1^s11/72,mb4.4/24,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KKN	**Kakani**	**0.27**	**239**	*e*Pg		**Pb**	**07 05 34.5**	**-0.6**
KKN				*e*Sg		**Sg**	**07 05 38.4**	**+1.1**
GUN	**Gumba**	**0.30**	**93**	*e*Sg		**Sb**	**07 05 40.1**	**-0.7**
	67μm,0.4s							
PKI	**Pulchoki**	**0.38**	**198**	*e*Pg		**Pb**	**07 05 37.1**	**+0.1**
PKI				*e*Sg		**Sb**	**07 05 42.2**	**-0.8**
DMN	**Daman**	**0.50**	**230**	*e*Pg		**Pb**	**07 05 39.6**	**+0.6**
DMN				*e*Sg		**Sb**	**07 05 46.1**	**-0.4**
DANN	**Dangsing**	**1.63**	**285**	*e*Sg		**Sg**	**07 06 21.1**	**+0.7**
	2μm,0.4s							
KOLN	**Koldanda**	**1.73**	**265**	*e*Pg		**Pg**	**07 06 01.2**	**+0.1**
KOLN				*e*Sg		**Sg**	**07 06 23.9**	**+0.4**
	956nm,0.2s							
ODAN	**Odare**	**1.96**	**123**	*e*Pg		**Pg**	**07 06 06.0**	**+0.4**
ODAN				*e*Sg		**Sg**	**07 06 32.0**	**+1.0**
	1μm,0.3s							
TAPN	**Taplejung**	**2.01**	**106**	*e*Pg		**Pg**	**07 06 07.0**	**+0.4**
TAPN				*e*Sg		**Sg**	**07 06 32.9**	**+0.3**
	818nm,0.4s							
PYUN	**Piuthan**	**2.26**	**275**	*e*Sg		**Sg**	**07 06 40.5**	**-0.2**
LSA	**Lhasa**	**5.23**	**69**	Pn		**Pn**	**07 06 45.1**	**-1.6**
CHTO	**Chiang Mai**	**15.28**	**124**	Pn		**Pn**	**07 09 03.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**15.50**	**125**	Pn		**P**	**07 09 10.7**	**-0.6**
	baz=314,slow=9.3,SNR=5.0							
CMAR	**Chiang Mai Arr**	**15.50**	**125**	Pn		**Pn**	**07 09 06.4**	**-0.4**
KBL	**Kabul**	**15.57**	**299**	Pn		**Pn**	**07 09 05.4**	**-2.4**
SLVN	**Son La**	**17.93**	**107**	P		**Pn**	**07 09 35.8**	**-1.9**
MK31	**Makanchi Array**	**19.00**	**353**	P		**P**	**07 09 48.3**	**-1.5**
MKAR	**Makanchi Array**	**19.00**	**353**	P		**Pn**	**07 09 51.2**	**+0.7**
	1.5nm,0.3s,baz=178,slow=11,SNR=6.7							
MKAR	**Makanchi Array**	**19.00**	**353**	P		**P**	**07 09 48.3**	**-1.5**
MAKZ	**Makanchi**	**19.05**	**352**	P		**P**	**07 09 48.6**	**-1.7**
MAKZ				IAmb		IAmb	07 09 53.0	
	comp=Z,10nm,0.7s							
KK31	**Karatay Array**	**19.42**	**325**	P		**P**	**07 09 52.0**	**-2.3**
KKAR	**Karatay Array**	**19.42**	**325**	P		**P**	**07 09 52.5**	**-1.9**
KKAR	**Karatay Array**	**19.42**	**325**	P		**P**	**07 09 52.7**	**-1.6**
KURBB	**Kurchatov Arra**	**23.28**	**349**	P		**P**	**07 10 36.5**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=168,slow=10,SNR=6.0							
SONM	**Songino Array**	**25.66**	**34**	P		**P**	**07 11 00.2**	**+2.2**
	comp=Z,7.6nm,0.6s,baz=218,slow=10,SNR=7.2							
SONM	**Songino Array**	**25.66**	**34**	P		**P**	**07 10 57.7**	**-0.3**
SONM				IAmb		IAmb	07 11 02.8	
	comp=Z,5.7nm,0.8s							
ZAA0	**Zalesovo Array**	**26.00**	**359**	P		**P**	**07 11 00.9**	**+0.1**
ZAA0				IAmb		IAmb	07 11 04.4	
	comp=Z,4.1nm,0.5s							
ZALV	**Zalesovo Beam**	**26.00**	**359**	P		**P**	**07 11 02.4**	**+1.5**
	comp=Z,8.0nm,0.5s,baz=182,slow=9.0,SNR=7.3							
ZALV	**Zalesovo Beam**	**26.00**	**359**	P		**P**	**07 11 00.9**	**+0.1**
ULN	**Ulaanbaatar**	**26.00**	**34**	P		**P**	**07 10 59.0**	**-2.1**
ULN				IAmb		IAmb	07 11 17.7	
	comp=Z,10nm,1.1s							
ABKAR	**Akbulak array**	**28.98**	**324**	P		**P**	**07 11 28.1**	**+0.5**
ABKAR	**Akbulak array**	**28.98**	**324**	P		**P**	**07 11 28.2**	**+0.6**
ABKAR				IAmb		IAmb	07 11 29.2	
	comp=Z,7.1nm,1.1s							
SOCY	**Socotra**	**33.39**	**248**	P		**P**	**07 12 06.1**	**-0.8**
SOCY				IAmb		IAmb	07 12 21.0	
	comp=Z,2.6nm,0.9s							
KLR	**Kul'dur**	**41.13**	**46**	P		**P**	**07 13 12.3**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=260,slow=10.0,SNR=5.2							
NRIK	**Noril'sk**	**41.46**	**1**	P		**P**	**07 13 16.5**	**+1.9**
	comp=Z,3.6nm,0.4s,baz=192,slow=10.0,SNR=4.2							
JTM	**Tenmabayashi**	**46.88**	**59**	P		**P**	**07 13 55.7**	**-2.8**
TIXI	**Tiksi**	**49.77**	**17**	P		**P**	**07 14 21.0**	**+0.7**
	comp=Z,2.3nm,0.4s,baz=194,slow=4.8,SNR=2.4							
BURAR	**Bucovina Array**	**50.25**	**310**	P		**P**	**07 14 24.9**	**+0.5**
FIA1	**FINESS Array S**	**51.34**	**328**	P		**P**	**07 14 32.6**	**+0.3**
FIA1				IAmb		IAmb	07 14 42.3	
	comp=Z,1.9nm,0.7s							

NNSB	**Datong**	**0.89**	**294**	P	**Pn**	**07 07 59.5**	**-0.6**
	baz=290								
NNSB				S	**Sb**	**07 08 11.0**	**-0.7**
	baz=290								
NNSH	**Datong**	**0.89**	**294**	P	**Pn**	**07 07 59.5**	**-0.6**
	baz=290								
NNSH				S	**Sb**	**07 08 11.3**	**-0.4**
	baz=290								
NNS	**Nan Shan**	**0.90**	**295**	P	**Pn**	**07 07 59.8**	**-0.5**
	baz=291								
NNS				S	**Sb**	**07 08 12.5**	**+0.4**
	baz=291								
WHF	**Hehuan Shan**	**0.92**	**275**	P	**Pn**	**07 07 60.0**	**-0.9**
	baz=260								
WHF				eS	**Sb**	**07 08 12.8**	**-0.2**
	baz=260								
FUSS	**Fushou**	**0.96**	**281**	P	**Pn**	**07 08 01.0**	**-0.2**
	baz=278								
FUSS				eS	**Sb**	**07 08 13.7**	**-0.1**
	baz=278								
HGSD	**Ruisui**	**0.96**	**234**	eP	**Pn**	**07 07 59.7**	**-1.3**
	baz=232								
HGSD				eS	**Sb**	**07 08 13.5**	**-0.1**
	baz=232								
TWB1	**Santiao Chiao**	**0.98**	**345**	P	**Pn**	**07 08 00.6**	**-0.6**
	baz=331								
TWB1				S	**Sb**	**07 08 13.0**	**-1.0**
	baz=331								
TIPB	**Shuangxi**	**0.99**	**336**	P	**Pn**	**07 08 01.3**	**-0.2**
	baz=333								
TIPB				S	**Sb**	**07 08 13.0**	**-1.6**
	baz=333								
NWLT	**Wulai**	**1.00**	**316**	P	**Pn**	**07 08 01.4**	**-0.1**
	baz=312								
NWLT				S	**Sb**	**07 08 14.8**	**0.0**
	baz=312								
CHGB	**Renai**	**1.00**	**270**	P	**Pn**	**07 08 01.3**	**-0.5**
	baz=254								
CHGB				S	**Sb**	**07 08 14.3**	**-0.8**
	baz=254								
OWD	**Renai**	**1.01**	**264**	P	**Pn**	**07 08 01.3**	**-0.5**
	baz=261								
OWD				eS	**Sb**	**07 08 14.2**	**-0.9**
	baz=261								
YHNB	**Yeheng**	**1.02**	**307**	P	**Pn**	**07 08 01.7**	**-0.2**
	baz=291								
YHNB				S	**Sn**	**07 08 13.7**	**-1.6**
	baz=291								
TWT	**Tachien**	**1.02**	**281**	P	**Pn**	**07 08 02.2**	**+0.2**
	baz=265								
TWT				eS	**Sb**	**07 08 16.1**	**+0.6**
	baz=265								
TDCB	**Techi**	**1.03**	**281**	P	**Pn**	**07 08 02.0**	**-0.2**
	baz=265								
TDCB				eS	**Sn**	**07 08 15.8**	**-0.1**
	baz=265								
VWDT	**VWDT**	**1.08**	**254**	P	**Pn**	**07 08 02.3**	**-0.4**
	baz=240								
VWDT				eS	**Sn**	**07 08 16.1**	**-0.6**
	baz=240								
NWF	**Wu-fen Shan**	**1.10**	**336**	eP	**Pn**	**07 08 02.9**	**-0.1**
	baz=333								
NWF				eS	**Sn**	**07 08 17.1**	**-0.2**
	baz=333								
WFSB	**Wu-fen Shan**	**1.10**	**336**	P	**Pn**	**07 08 02.8**	**-0.1**
	baz=333								
WFSB				S	**Sn**	**07 08 16.1**	**-1.1**
	baz=333								
TWA	**Mucha**	**1.11**	**326**	P	**Pn**	**07 08 03.7**	**+0.6**
	baz=323								
TWA				S	**Sn**	**07 08 17.9**	**+0.5**
	baz=323								
YULB	**Yu-li**	**1.11**	**233**	eP	**Pn**	**07 08 02.2**	**-0.9**
	baz=247								
YULB				eS	**Sn**	**07 08 16.9**	**-0.8**
	baz=247								
NHDH	**Xindian Distri**	**1.12**	**323**	P	**Pb**	**07 08 04.2**	**+0.1**
	baz=332								
NHDH				S	**Sn**	**07 08 18.2**	**+0.4**
	baz=332								
EYUL	**Yuli**	**1.13**	**231**	eP	**Pn**	**07 08 02.8**	**-0.5**
	baz=246								
EYUL				eS	**Sn**	**07 08 18.1**	**+0.2**
	baz=246								
TWF1	**Yuli**	**1.14**	**232**	P	**Pn**	**07 08 02.8**	**-0.7**
	baz=246								
TWF1				eS	**Sn**	**07 08 18.4**	**+0.1**
	baz=246								
TATO	**Taipei**	**1.16**	**322**	eP	**Pn**	**07 08 03.7**	**+0.1**
	baz=319								
TATO				eS	**Sn**	**07 08 18.8**	**+0.2**
	baz=319								
TNOU	**National Taiwa**	**1.17**	**337**	P	**Pn**	**07 08 03.5**	**-0.4**
	baz=347								
TNOU				S	**Sn**	**07 08 17.4**	**-1.6**
	baz=347								
TAP	**Taipei**	**1.20**	**324**	eP	**Pn**	**07 08 04.4**	**+0.2**
	baz=321								
TAP				eS	**Sn**	**07 08 19.9**	**+0.3**
	baz=321								
WPL	**Puli Township**	**1.20**	**268**	eP	**Pn**	**07 08 04.5**	**+0.2**
	baz=265								
DPDB	**Guoxing**	**1.23**	**269**	eP	**Pn**	**07 08 05.0**	**+0.2**
	baz=258								
DPDB				eS	**Sn**	**07 08 20.4**	**-0.2**
	baz=258								
WHP	**Taichung City**	**1.23**	**280**	P	**Pn**	**07 08 05.1**	**+0.4**
	baz=266								
WHP				eS	**Sn**	**07 08 21.1**	**+0.6**
	baz=266								
SSLB	**Suanglung**	**1.24**	**257**	eP	**Pn**	**07 08 04.9**	**+0.1**
	baz=255								
SSLB				eS	**Sn**	**07 08 20.6**	**-0.1**
	baz=255								
FULB	**Fuli**	**1.24**	**226**	eP	**Pn**	**07 08 04.2**	**-0.7**
	baz=213								
FULB				eS	**Sn**	**07 08 21.1**	**+0.3**
	baz=213								
YM01	**YM01**	**1.25**	**330**	P	**Pn**	**07 08 04.9**	**-0.1**
	baz=341								
YM01				S	**Sn**	**07 08 20.5**	**-0.6**
	baz=341								
NWRT	**Kuosheng**	**1.26**	**334**	eP	**Pn**	**07 08 04.8**	**-0.4**
	baz=331								
NWRT				eS	**Sn**	**07 08 20.8**	**-0.5**
	baz=331								
SMLT	**Sun Moon Lake**	**1.27**	**262**	eP	**Pn**	**07 08 05.6**	**+0.3**
	baz=260								
SMLT				eS	**Sn**	**07 08 22.0**	**+0.4**
	baz=260								
CHKT	**Chengkung**	**1.27**	**221**	eP	**Pn**	**07 08 04.1**	**-1.1**
	baz=209								
CHKT				eS	**Sn**	**07 08 20.2**	**-1.2**
	baz=209								
NJD	**Zhudong**	**1.27**	**302**	eP	**Pn**	**07 08 05.8**	**+0.6**
	baz=299								
NJD				eS	**Sb**	**07 08 22.4**	**-0.1**
	baz=299								
YM08	**YM08**	**1.28**	**331**	eP	**Pn**	**07 08 04.8**	**-0.7**
	baz=328								
YM08				eS	**Sn**	**07 08 21.1**	**-0.6**
	baz=328								
LIOB	**Emei**	**1.28**	**297**	P	**Pb**	**07 08 06.5**	**-0.3**
	baz=294								
LIOB				eS	**Sn**	**07 08 22.4**	**+0.6**
	baz=294								
NTY	**Taoyuan**	**1.29**	**317**	eP	**Pn**	**07 08 06.0**	**+0.5**
	baz=314								
NTY				eS	**Sn**	**07 08 22.8**	**+0.9**
	baz=314								
NSTT	**Nanjuang**	**1.29**	**296**	P	**Pn**	**07 08 06.3**	**+0.8**
	baz=293								
NSTT				eS	**Sb**	**07 08 23.1**	**0.0**
	baz=293								
TWS1	**Kuangyinshan**	**1.29**	**323**	P	**Pn**	**07 08 06.1**	**+0.5**
	baz=331								
TWS1				S	**Sn**	**07 08 22.6**	**+0.6**
	baz=331								
TYC	**Yuchr**	**1.30**	**263**	P	**Pn**	**07 08 06.0**	**+0.2**
	baz=261								
TYC				eS	**Sn**	**07 08 22.8**	**+0.6**
	baz=261								
ANP	**Anpu**	**1.31**	**329**	P	**Pn**	**07 08 05.5**	**-0.4**
	baz=340								
ANP				eS	**Sn**	**07 08 22.2**	**-0.4**
	baz=340								
NTST	**Danshui**	**1.33**	**326**	eP	**Pn**	**07 08 06.3**	**+0.2**
	baz=338								
NTST				eS	**Sn**	**07 08 23.6**	**+0.8**
	baz=338								
YUS	**Yu-Shan**	**1.34**	**245**	P	**Pn**	**07 08 06.4**	**-0.2**
	baz=243								
YUS				S	**Sn**	**07 08 23.4**	**-0.3**
	baz=243								
NCU	**National Centr**	**1.34**	**313**	eP	**Pn**	**07 08 06.5**	**+0.3**
	baz=309								
NCU				eS	**Sn**	**07 08 23.9**	**+0.8**
	baz=309								
NCUH	**Zhongli**	**1.34**	**313**	eP	**Pn**	**07 08 06.7**	**+0.5**
	baz=309								
NCUH				eS	**Sb**	**07 08 24.9**	**+0.4**
	baz=309								
HSN1	**Hsinchu**	**1.35**	**302**	eP	**Pn**	**07 08 07.2**	**+0.9**
	baz=299								
HSN1				eS	**Sb**	**07 08 25.3**	**+0.6**
	baz=299								
WHYT	**Xinyi Township**	**1.35**	**255**	eP	**Pn**	**07 08 06.5**	**+0.1**
	baz=243								
WHYT				eS	**Sb**	**07 08 24.6**	**-0.2**
	baz=243								
TWY	**Chenhua**	**1.35**	**333**	eP	**Pn**	**07 08 06.4**	**0.0**
	baz=330								
TWY				eS	**Sn**	**07 08 23.4**	**-0.1**
	baz=330								
IRIF	**Iriomote-Funau**	**1.36**	**78**	P	**Pn**	**07 08 06.9**	**+0.4**
IRIF				S	**Sb**	**07 08 25.8**	**+0.8**
SBCB	**Hsinchu**	**1.38**	**302**	eP	**Pn**	**07 08 07.7**	**+0.9**
	baz=299								
SBCB				eS	**Sb**	**07 08 26.1**	**+0.5**
	baz=299								
TWQ1	**Liyutan**	**1.40**	**282**	P	**Pn**	**07 08 08.0**	**+1.0**
	baz=279								
TWQ1				eS	**Sb**	**07 08 27.2**	**+1.1**
	baz=279								
HATJ	**Hateruma jima**	**1.40**	**90**	P	**Pn**	**07 08 07.0**	**-0.1**
HATJ				S	**Sb**	**07 08 27.6**	**+1.4**
EDH	**Donghe**	**1.40**	**219**	P	**Pn**	**07 08 05.9**	**-1.2**
	baz=209								
EDH				eS	**Sn**	**07 08 22.6**	**-2.1**
	baz=209								
NSY	**Sanyi**	**1.42**	**285**	eP	**Pb**	**07 08 08.9**	**-0.3**
	baz=282								
NMLH	**Miaoli**	**1.43**	**290**	eP	**Pn**	**07 08 08.5**	**+1.1**
	baz=287								
WJS	**Zhushan**	**1.43**	**261**	eP	**Pb**	**07 08 08.7**	**-0.6**
	baz=259								
WJS				eS	**Sb**	**07 08 28.8**	**+1.7**
	baz=259								
WWF	**Wufeng**	**1.44**	**270**	eP	**Pb**	**07 08 09.4**	**0.0**
	baz=267								
WWF				eS	**Sb**	**07 08 27.7**	**+0.4**
	baz=267								
ELDTW	**Lidau**	**1.44**	**233**	eP	**Pn**	**07 08 06.8**	**-0.9**
	baz=220								
ELDTW				eS	**Sn**	**07 08 25.5**	**-0.4**
	baz=220								
ALS	**Alishan**	**1.45**	**248**	P	**Pn**	**07 08 08.6**	**+0.5**
	baz=247								
ALS				eS	**Sn**	**07 08 26.5**	**+0.2**
	baz=247								
TCU	**Taichung**	**1.46**	**274**	eP	**Pb**	**07 08 09.5**	**-0.3**
	baz=272								
TCU				eS	**Sb**	**07 08 28.3**	**+0.3**
	baz=272								
WNT	**Mingjian**	**1.46**	**263**	eP	**Pb**	**07 08 09.2**	**-0.6**
	baz=261								
WNT				eS	**Sb**	**07 08 28.6**	**+0.6**
	baz=261								
WNT1	**Nantou City**	**1.46**	**264**	eP	**Pb**	**07 08 09.8**	**-0.1**
	baz=248								
WNT1				eS	**Sb**	**07 08 29.4**	**+1.3**
	baz=248								
CHN5	**Tsauling**	**1.53**	**253**	eP	**Pn**	**07 08 09.9**	**+1.0**
	baz=251								
CHN5				eS	**Sb**	**07 08 29.7**	**-0.4**
	baz=251								
LONT	**Longtian**	**1.56**	**223**	eP	**Pn**	**07 08 08.6**	**-0.6**
	baz=223								
LONT				eS	**Sn**	**07 08 27.6**	**-0.9**
	baz=223								
WCHH	**Zhanghua**	**1.57**	**271**	eP	**Pn**	**07 08 10.7**	**+1.4**
	baz=269								
WCHH				eS	**Sb**	**07 08 31.8**	**+0.8**
	baz=269								
LDUT	**Ludao**	**1.57**	**208**	eP	**Pn**	**07 08 08.9**	**-0.5**
	baz=209								
LDUT				eS	**Sn**	**07 08 27.6**	**-1.1**
	baz=209								
PCYT	**Pengchaiyu**	**1.57**	**353**	eP	**Pn**	**07 08 08.6**	**-0.8**
	baz=336								
PCYT				eS	**Sn**	**07 08 28.4**	**-0.4**
	baz=336								
JKRS	**Kuro-shima**	**1.60**	**83**	P	**Pn**	**07 08 10.5**	**+0.8**
JKRS				eS	**Sb**	**07 08 32.0**	**+0.1**
WGK	**Gukeng**	**1.61**	**257**	eP	**Pb**	**07 08 12.2**	**-0.1**
	baz=242								
WGK				eS	**Sb**	**07 08 33.1**	**+0.9**
	baz=242								
WDLH	**Douliu**	**1.63**	**257**	eP	**Pn**	**07 08 11.3**	**+1.1**
	baz=243								
WDLH				eS	**Sb**	**07 08 33.0**	**+0.2**
	baz=243								
STYH	**Taoyuan**	**1.64**	**237**	eP	**Pn**	**07 08 10.8**	**+0.5**
	baz=237								
STYH				eS	**Sn**	**07 08 31.2**	**+0.7**
	baz=237								
STYT	**Tauyuan**	**1.65**	**237**	eP	**Pn**	**07 08 10.7**	**+0.1**
	baz=237								
STYT				eS	**Sb**	**07 08 32.6**	**-1.0**
	baz=237								
TWGBT	**Beinan**	**1.65**	**222**	eP	**Pn**	**07 08 09.2**	**-1.4**
	baz=233								
TWGBT				eS	**Sn**	**07 08 30.7**	**-0.2**
	baz=233								
TWG	**Pinlang**	**1.66**	**222**	eP	**Pn**	**07 08 09.5**	**-1.1**
	baz=233								
TWG				eS	**Sn**	**07 08 30.7**	**-0.3**
	baz=233								
TPUB	**Ta-pu**	**1.69**	**244**	eP	**Pb**	**07 08 12.8**	**-0.9**
	baz=243								
TPUB				eS	**Sb**	**07 08 34.1**	**-0.3**
	baz=243								
WTP	**Ta-pu**	**1.72**	**242**	eP	**Pn**	**07 08 13.0**	**+1.4**
	baz=241								
WTP				eS	**Sb**	**07 08 35.5**	**-0.1**
	baz=241								
CHN2	**Minshiung**	**1.73**	**253**	eS	**Sb**	**07 08 35.6**	**0.0**
	baz=251								
JIJ	**Ishigaki jima**	**1.73**	**80**	P	**Pn**	**07 08 11.6**	**0.0**
JIJ				S	**Sn**	**07 08 33.3**	**+0.4**
WRL	**Guolierlin Hig**	**1.74**	**265**	eP	**Pn**	**07 08 13.2**	**+1.5**
	baz=264								
WRL				eS	**Sb**	**07 08 35.5**	**-0.5**
	baz=264								
WTK	**Tuku**	**1.76**	**258**	eP	**Pb**	**07 08 13.8**	**-1.1**
	baz=245								
WTK				eS	**Sb**	**07 08 36.3**	**-0.3**
	baz=245								
CHY	**Chiayi**	**1.78**	**252**	eP	**Pb**	**07 08 14.4**	**-0.9**
	baz=251								
CHY				eS	**Sn**	**07 08 35.8**	**+1.7**
	baz=251								
CHN1	**Nanshi**	**1.82**	**242**	eP	**Pb**	**07 08 14.8**	**-1.1**
	baz=241								
CHN1				eS	**Sb**	**07 08 38.2**	**-0.2**
	baz=241								
SGST	**Jiashian**	**1.83**	**238**	eP	**Pn**	**07 08 14.2**	**+1.2**
	baz=238								
SGST				eS	**Sb**	**07 08 37.8**	**-0.9**
	baz=238								
WTCT	**Ta-ch'eng**	**1.83**	**264**	eP	**Pn**	**07 08 14.2**	**+1.2**
	baz=263								
WTCT				eS	**Sb**	**07 08 38.2**	**-0.5**
	baz=263								
SLGT	**Liugui**	**1.83**	**235**	eP	**Pn**	**07 08 14.2**	**+1.2**
	baz=224								
SLGT				eS	**Sb**	**07 08 37.8**	**-0.9**
	baz=224								
ECL	**Taimali**	**1.90**	**220**	eP	**Pn**	**07 08 12.8**	**-1.0**
	baz=221								
ECL				eS	**Sn**	**07 08 36.4**	**-0.5**
	baz=221								
WSF	**Szhu**	**1.92**	**258**	eS	**Sb**	**07 08 41.0**	**-0.3**
	baz=257								
JISG	**Ishigakijimahi**	**1.93**	**74**	P	**Pn**	**07 08 14.4**	**+0.1**
JISG				S	**Sn**	**07 08 38.0**	**+0.2**
SSD	**Sandimen**	**2.00**	**229**	eP	**Pn**	**07 08 16.1**	**+0.8**
	baz=223								
SSD				eS	**Sn**	**07 08 41.2**	**+1.8**
	baz=223								
SCST	**Cishan**	**2.01**	**235**	eP	**Pb**	**07 08 18.1**	**-1.1**
	baz=223								
SCST				eS	**Sb**	**07 08 44.3**	**+0.6**
	baz=223								
TSMG	**Majia**	**2.02**	**228**	eP	**Pn**	**07 08 17.1**	**+1.6**
	baz=222								
TSMG				eS	**Sb**	**07 08 42.7**	**-1.2**
	baz=222								
CHN8	**Yiju**	**2.02**	**250**	eP	**Pn**	**07 08 16.7**	**+1.2**
	baz=249								
CHN8				eS	**Sb**	**07 08 42.8**	**-1.2**
	baz=249								
MASBT	**Mashibuluo**	**2.09**	**227**	eP	**Pn**	**07 08 16.8**	**+0.3**
	baz=219								
MASBT				eS	**Sb**	**07 08 44.1**	**-1.9**
	baz=219								
LAY	**Lan-yu**	**2.12**	**198**	eP	**Pn**	**07 08 16.5**	**-0.5**
	baz=209								
LAY				eS	**Sn**	**07 08 41.8**	**-0.7**
	baz=209								
EAST	**Anshuo**	**2.12**	**218**	P	**Pn**	**07 08 16.5**	**-0.6**
	baz=219								
EAST				eS	**Sn**	**07 08 43.1**	**+0.5**
	baz=219								
SSPT	**Xinbi**	**2.22**	**225**	eP	**Pn**	**07 08 19.4**	**+1.0**
	baz=219								
SSPT				eS	**Sn**	**07 08 46.6**	**+1.7**
	baz=219								
SCZT	**Fangliau**	**2.27**	**222**	eP	**Pn**	**07 08 19.4**	**+0.5**
	baz=217								
SCZT				eS	**Sn**	**07 08 47.1**	**+1.0**
	baz=217								
SLIU	**Shizi**	**2.28**	**217**	eP	**Pn**	**07 08 19.6**	**+0.4**
	baz=218								
SLIU				eS	**Sn**	**07 08 47.1**	**+0.7**
	baz=218								
JTJ	**Tarama**	**2.29**	**75**	eS	**Sn**	**07 08 47.5**	**+0.9**
HEN	**Hengchun**	**2.49**	**215**	eP	**Pn**	**07 08 22.7**	**+0.7**
	baz=216								
HEN				eS	**Sn**	**07 08 52.7**	**+1.2**
	baz=216								
TWKBT	**Hengchun**	**2.50**	**213**	eP	**Pn**	**07 08 22.4**	**+0.2**
	baz=215								
TWKBT				eS	**Sn**	**07 08 52.4**	**+0.4**
	baz=215								
PNG	**Penghu**	**2.54**	**259**	eP	**Pn**	**07 08 23.3**	**+0.6**
	baz=259								
PNG				eS	**Sn**	**07 08 53.8**	**+1.1**
	baz=259								
VWUC	**VWUC**	**2.73**	**290**	eP	**Pn**	**07 08 26.2**	**+0.9**
	baz=289								
VWUC				eS	**Sn**	**07 08 58.6**	**+1.1**
	baz=289								
JIRB	**Irabujima**	**2.75**	**73**	P	**Pn**	**07 08 26.5**	**+0.9**
JIKM	**Ikemajima**	**2.84**	**72**	P	**Pn**	**07 08 28.0**	**+1.1**
MATB	**Ma-tsu**	**2.96**	**315**	eP	**Pn**	**07 08 29.3**	**+0.8**
	baz=313								
MSUT	**Lienchiang**	**2.99**	**315**	eP	**Pn**	**07 08 29.7**	**+0.8**
	baz=313								
PTMZ	**Houxiangcun**	**3.03**	**289**	eP	**Pn**	**07 08 30.6**	**+1.1**
	baz=288								
PTMZ				eS	**Sn**	**07 09 06.2**	**+1.3**
	baz=288								
LYJJ	**Jianjiangzhen**	**3.36**	**318**	eP	**Pn**	**07 08 35.0**	**+0.9**
	baz=316								
XPSS	**Dashiqiu**	**3.42**	**327**	eP	**Pn**	**07 08 35.0**	**+0.2**
	baz=335								
KNM	**Kinmen**	**3.52**	**277**	eP	**Pn**	**07 08 38.6**	**+2.4**
	baz=275								
KNM				eS	**Sn**	**07 09 19.8**	**+2.8**
	baz=275								
KNMB	**Chin-men Tao**	**3.57**	**277**	eP	**Pn**	**07 08 37.6**	**+0.8**
	baz=276								
KNMB				eS	**Sn**	**07 09 18.6**	**+0.4**
	baz=276								
MHZQ	**Yeshan**	**3.57**	**305**	eP	**Pn**	**07 08 38.0**	**+1.1**
	baz=303								
AXDP	**Jialang**	**4.01**	**283**	eP	**Pn**	**07 08 44.3**	**+1.4**
	baz=269								
AXDP				eS	**Sn**	**07 09 29.7**	**+0.8**
	baz=269								

BJI ***25*** *07:07:55.9±0.0,27.°41N×85.°71E,h16km,mB4.8/3, mb4.8/27*

IDC ***25*** *07:07:58.2±0.5,27.°67N×85.°94E,h0km,mb4.7/35, mb1 4.8/38,mb1mx4.6/53,mbtmp4.7/38,ML4.6/3,Error ellipse: s-maj=13.0km s-min=10.6km az=24.0*

NEIC ***25*** *07:07:59.9±1.5,27.°79N±0.°08×85.°91E±0.°04,h10km±1km, mb4.9/108,Error ellipse: s-maj=13.3km s-min=6.3km az=170.0*

DMN ***25*** *07:08:01.2±0.1,27.°84N×85.°93E,h10km,Ml5.4/4,Error ellipse: s-maj=5.4km s-min=1.5km az=13.0*

NDI ***25*** *07:08:02.9±2.3,28.°08N×86.°04E,h10km,ML4.6, mb4.9(NEIC)*

ISC 25 07:08:02.3±0.8,27.°82N±0.°05×85.°92E±0.°02,h27km±5km, n306,σ1§42/312,mb4.8/109,20C-11D,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PKI	**Pulchoki**	**0.52**	**241**		*e*Pg		**Pb**	**07 08 11.6**	**-1.5**
PKI					eSg		**Sb**	**07 08 18.3**	**-2.2**
	58μm,0.4s								
KKN	**Kakani**	**0.57**	**267**		*e*Pg		**Pb**	**07 08 12.8**	**-1.1**
KKN					eSg		**Sb**	**07 08 20.6**	**-1.2**
	34μm,0.2s								
DMN	**Daman**	**0.76**	**254**		*e*Pg		**Pb**	**07 08 15.9**	**-1.1**
DMN					eSg		**Sb**	**07 08 26.4**	**-0.6**
	39μm,0.5s								
GKN	**Gorkha**	**1.15**	**279**		*e*Pg		**Pb**	**07 08 23.4**	**-0.2**
GKN					eSg		**Sn**	**07 08 38.0**	**+0.2**
	6μm,0.3s								
ODAN	**Odare**	**1.62**	**126**		*e*Pg		**Pb**	**07 08 31.3**	**-0.4**
ODAN					eSg		**Sb**	**07 08 53.4**	**+1.6**
TAPN	**Taplejung**	**1.66**	**106**		*e*Pg		**Pb**	**07 08 32.7**	**+0.4**
TAPN					eSg		**Sb**	**07 08 54.3**	**+1.4**
	3μm,0.3s								
DANN	**Dangsing**	**1.98**	**286**		*e*Pg		**Pb**	**07 08 38.0**	**+0.1**
DANN					eSg		**Sb**	**07 09 04.1**	**+1.9**
	8μm,0.3s								
KOLN	**Koldanda**	**2.06**	**269**		*e*Pg		**Pb**	**07 08 39.1**	**0.0**
KOLN					eSg		**Sb**	**07 09 05.6**	**+1.2**
	6μm,0.3s								
GTK	**Tadong**	**2.43**	**101**		*e*P		**Pn**	**07 08 41.8**	**+1.3**
GTK					eS		**Sb**	**07 09 12.2**	**-2.9**
GTK						IAML		07 09 17.7	
	comp=N,3μm,0.3s								
GTK						IAML		07 09 18.9	
	comp=E,2μm,0.3s								
PYUN	**Piuthan**	**2.61**	**277**		*e*Pg		**Pb**	**07 08 49.8**	**+1.3**
PYUN					eSg		**Sb**	**07 09 23.0**	**+2.8**
LSA	**Lhasa**	**4.96**	**67**				**Pn**	**07 09 14.7**	**-0.7**
SHL	**Shillong**	**5.79**	**112**		Pn		**Pn**	**07 09 26.1**	**-0.6**
ZIRO	**ZIRO**	**7.04**	**91**		*e*P		**Pn**	**07 09 44.5**	**+0.8**
ZIRO					eS		**Sn**	**07 10 58.6**	**-4.4**
ZIRO						IAML		07 11 14.0	
	comp=N,1μm,0.7s								
ZIRO						IAML		07 11 16.1	
	comp=E,936nm,0.7s								
DDI	**Dehra Dun**	**7.32**	**292**		*e*P		**Pn**	**07 09 49.4**	**+1.8**
DDI					eS		**Sn**	**07 11 09.2**	**-0.6**
DHRM	**DHARAMSHALA**	**9.43**	**300**		*e*P		**Pn**	**07 10 15.9**	**-0.7**
DHRM						IAmb	IAmb	07 10 16.9	
	comp=Z,516nm,0.5s								
NIL	**Nilore**	**12.35**	**301**				**Pn**	**07 10 55.3**	**-1.0**
HYB	**Hyderabad**	**12.39**	**215**		*i* P		Pn	07 10 50.5	-6.5
CM33	**Chiang Mai Arr**	**14.94**	**124**		P		P	07 11 42.0	+4.9
CMMT	**Chiang Mai**	**14.94**	**124**		P		P	07 11 42.1	+4.9
CM32	**Chiang Mai Arr**	**14.97**	**125**		P		P	07 11 50.0	+13
CM15	**Chiang Mai Arr**	**15.15**	**125**		P		**P**	**07 11 41.5**	**+1.9**
CM13	**Chiang Mai Arr**	**15.16**	**125**		P		**P**	**07 11 41.0**	**+1.4**
CMAR	**Chiang Mai Arr**	**15.17**	**125**		Pn		**Pn**	**07 11 32.0**	**-2.8**
	comp=Z,1.0nm,0.3s,baz=302,slow=13,SNR=4.5								
CM35	**Chiang Mai

KBL Kabul 15.91 299 Pn Pn 07 11 41.9 -2.7
KBL IAmb IAmb 07 11 50.2
comp=Z,86nm,0.8s

KDJ Kajisay 15.96 336 Pn Pn 07 11 43.5 -1.6
KDJ IAmb IAmb 07 11 53.2
comp=Z,47nm,0.8s

WMQ Urumqi 16.03 5 *eP* P 07 11 48.0 -1.1
WMQ pmax pmax
comp=Z,100nm,2.1s

WMQ Urumqi 16.03 5 Pn Pn 07 11 42.5 -3.4
UZB Uzynbulak 16.28 342 *eP* Pn 07 11 48.2 -1.0
baz=342

SUKH Sukhothai 16.30 126 P P 07 11 58.0 +5.8
GTA Gaotai 16.33 41 *eP* P 07 11 53.0 +0.4
GTA pP pP 07 11 59.0 -1.8
GTA sP sP 07 12 01.5 -2.7
GTA pmax pmax
comp=Z,12nm,0.9s

SATY Saty 16.38 340 *eP* Pn 07 11 49.2 -1.2
baz=340

BOOM Boomskoye usch 16.73 334 Pn Pn 07 11 53.8 -1.2
UTTA Uttaradit 16.80 124 P P 07 12 07.0 +9.3
MDOK Medeo 16.91 337 *eP* Pn 07 11 56.0 -1.2
baz=337

AAA Alma-Ata 16.99 337 *eP* Pn 07 11 56.8 -1.4
baz=337

LZH Lanzhou 17.28 57 ⇓P P 07 12 04.8 +1.6
LZH pP pP 07 12 07.3 -4.2
LZH sP sP 07 12 09.5 -5.5
LZH pmax pmax
comp=Z,32nm,1.1s

AAK Ala-Archa 17.45 331 P Pn 07 12 04.2 +0.2
comp=Z,0.7nm,0.3s,baz=177,slow=7.8,SNR=7.9

AAK Ala-Archa 17.45 331 P Pn 07 12 02.5 -1.5
UTHA Uthaitani 17.50 131 P P 07 12 12.3 +6.8
SLVN Son La 17.58 108 P Pn 07 12 04.8 -0.8
SGDS Sogindy 18.07 333 *eP* Pn 07 12 10.5 -1.0
baz=333

TDK Taldyqorghan 18.16 343 *eP* Pn 07 12 11.8 -0.8
comp=Z,40nm,0.8s,baz=343

GYA Guiyang 18.51 89 ⇑P Pn 07 12 18.3 +1.2
GYA pmax pmax
comp=Z,24nm,1.8s

DZA Taraz 19.13 326 *eP* P 07 12 21.9 -1.4
baz=326

MK31 Makanchi Array 19.15 352 P P 07 12 23.5 -0.1
MKAR Makanchi Array 19.15 352 P Pn 07 12 25.1 +0.6
comp=Z,3.4nm,0.3s,baz=179,slow=11,SNR=41

MKAR Makanchi Array 19.15 352 P P 07 12 23.6 0.0
TAS Tashkent 19.16 319 P P 07 12 23.5 -0.1
TAS IAmb IAmb 07 12 33.7
comp=Z,71nm,0.8s

MAKZ Makanchi 19.20 352 P P 07 12 24.1 -0.1
IUG Iuzhnay 19.29 322 *eP* P 07 12 23.6 -1.6
baz=322

BTLS Baital 19.62 334 *eP* P 07 12 28.2 -0.5
baz=334

CHM Chimkent 19.64 322 *eP* P 07 12 27.9 -0.9
baz=322

KK31 Karatay Array 19.70 325 P P 07 12 29.6 +0.1
KKAR Karatay Array 19.70 325 P P 07 12 29.2 -0.4
XAN Xi'an 20.66 67 P Pn 07 12 49.8 +7.3
XAN pP sP 07 12 53.5 +1.4
XAN pmax pmax
comp=Z,18nm,1.2s

ENH Enshi 20.74 78 P P 07 12 40.6 -0.4
PALK Palekele 21.03 195 P P 07 12 49.2 +5.0
comp=Z,12nm,0.6s,baz=73,slow=11,SNR=2.5

UBPT Khong Chiam 22.01 121 P P 07 12 52.6 -2.1
SEM Semipalatinsk 22.96 351 *eP* P 07 13 04.7 -0.1
comp=Z,9.5nm,0.7s,baz=351

KURBB Kurchatov Arra 23.45 348 P P 07 13 11.3 +1.9
comp=Z,14nm,0.7s,baz=168,slow=9.6,SNR=27

KURK Kurchatov 23.52 348 P P 07 13 11.3 +1.2
BRZS Berezniki 24.34 339 *eP* P 07 13 17.6 -0.2
comp=Z,9.4nm,0.9s,baz=339

HHC Hu-ho-hao-te 24.74 52 *eP* P 07 13 21.3 -0.4
WSAR Wadi Sarin 25.02 266 P P 07 13 24.6 +0.3
comp=Z,8.0nm,0.8s,baz=147,slow=3.4,SNR=4.6

GEYT Alibeck 25.35 301 P P 07 13 29.3 +2.1
comp=Z,8.0nm,0.5s,baz=119,slow=12,SNR=14

GEYT Alibeck 25.35 301 P P 07 13 28.5 +1.3
GYA0B ALIBECK ARRAY 25.35 301 P P 07 13 27.3 +0.2
GYA0B IAmb IAmb 07 13 37.8
comp=Z,14nm,0.8s

SONM Songino Array 25.56 33 P P 07 13 28.8 -0.3
SONM IAmb IAmb 07 13 34.2
comp=Z,24nm,1.0s

ZAA0 Zalesovo Array 26.11 359 P P 07 13 34.6 +0.8
ZAA0 IAmb IAmb 07 13 38.1
comp=Z,15nm,0.7s

ZALV Zalesovo Beam 26.11 359 P P 07 13 35.4 +1.5
comp=Z,17nm,0.6s,baz=181,slow=9.6,SNR=22

ZALV Zalesovo Beam 26.11 359 P P 07 13 33.6 -0.2
KULM Kulim 26.43 145 P P 07 13 36.6 -0.4
KULM IAmb IAmb 07 13 52.5
comp=Z,19nm,0.9s

BVAR Borovoye Array 27.69 340 P P 07 13 49.3 +1.2
comp=Z,3.3nm,0.7s,baz=188,slow=8.7,SNR=9.4

ABKAR Akbulak array 29.26 324 P P 07 14 03.1 +1.0
ABKAR Akbulak array 29.26 324 P P 07 14 02.7 +0.6
AKTO Aktyubinsk 30.96 324 P P 07 14 18.6 +1.5
comp=Z,19nm,0.8s,baz=122,slow=8.4,SNR=8.7

SOCY Socotra 33.66 249 P P 07 14 39.7 -1.6
SOCY IAmb IAmb 07 14 41.0
comp=Z,13nm,0.6s

RDF Al-Radifah 33.68 281 *eP* 07 14 41.5
RST Umm Al-Ruwaisa 34.09 282 *eP* 07 14 44.5
ARU Arti 34.61 333 P P 07 14 50.3 +1.4
comp=Z,6.0nm,0.5s,baz=132,slow=5.4,SNR=22

ARU Arti 34.61 333 P P 07 14 49.0 +0.1
ARU IAmb IAmb 07 14 50.8
comp=Z,19nm,0.7s

CN2 Changchun 35.42 53 *eP* P 07 14 55.0 -1.1
CN2 pmax pmax
comp=Z,10.0nm,0.9s

KSRS Korea Array 36.40 64 P P 07 15 04.5 0.0
comp=Z,2.1nm,0.6s,baz=255,slow=8.2,SNR=11

AKH Akhalkalaki 37.09 303 ⇑P P 07 15 13.9 +3.3
JOW Kunigami 37.50 81 P P 07 15 13.9 -0.2
JOW IAmb IAmb 07 15 28.0
comp=Z,25nm,1.1s

BELG Belogornoye 37.55 321 P P 07 15 14.9 +0.9
comp=Z,25nm,0.5s,baz=64,slow=2.4,SNR=7.2

JTU Tsushima 37.57 69 P P 07 15 15.4 +0.9
JTU IAmb IAmb 07 15 34.1
comp=Z,20nm,1.1s

KBZ Khabaz 37.89 306 P P 07 15 18.1 +1.0
comp=Z,7.8nm,0.8s,baz=121,slow=6.9,SNR=12

MARD Mardin 38.89 296 P P 07 15 26.7 +0.9
MARD IAmb IAmb 07 15 28.5
comp=Z,37nm,1.1s

KOPT Kop Dagi 39.22 300 P P 07 15 29.1 +0.4
KIRV Kirov 39.79 331 P P 07 15 33.4 +0.6
comp=Z,32nm,0.6s,baz=139,slow=4.3,SNR=9.0

USRK Ussuriysk Ar. 40.13 53 P P 07 15 36.6 +0.8
comp=Z,2.6nm,0.5s,baz=262,slow=7.9,SNR=14

USRK Ussuriysk Ar. 40.13 53 P P 07 15 36.0 +0.2
KLR Kul'dur 40.96 46 P P 07 15 43.5 +0.9
comp=Z,3.7nm,0.8s,baz=273,slow=9.4,SNR=5.6

JMN Monobe 41.33 70 P P 07 15 46.7 +0.8
JMN IAmb IAmb 07 15 48.2
comp=Z,18nm,0.8s

NRIK Noril'sk 41.56 1 P P 07 15 49.1 +1.8
comp=Z,35nm,0.6s,baz=167,slow=5.7,SNR=42

NRIK Noril'sk 41.56 1 P P 07 15 48.8 +1.6
JWT Wachi 42.46 67 P P 07 15 56.4 +1.3
ATD Arta Tunnel 43.42 257 P P 07 16 03.8 +0.6
comp=Z,2.7nm,0.3s,baz=296,slow=5.1,SNR=3.7

ATD Arta Tunnel 43.42 257 IAmb IAmb 07 16 05.0
comp=Z,14nm,1.1s

MMAI Mount Meron Ar 43.54 290 P P 07 16 06.0 +2.0
comp=Z,8.0nm,0.9s,baz=55,slow=7.2,SNR=7.8

BZK Bozkurt 44.22 303 ⇑P P 07 16 10.5 +1.4
BRTR Keskin Array B 44.48 299 P P 07 16 12.3 +0.7
comp=Z,3.0nm,0.8s,baz=134,slow=7.1,SNR=7.8

BRTR Keskin Array B 44.48 299 P P 07 16 11.0 -0.6
MJAR Matsushiro Arr 44.64 65 P P 07 16 13.4 +0.8
comp=Z,2.6nm,0.8s,baz=278,slow=9.9,SNR=6.0

CSS Mathiatis 45.03 293 P P 07 16 16.9 +1.1
CSS IAmb IAmb 07 16 17.7
comp=Z,11nm,0.8s

KLMR Klimovskoe 45.26 330 *eP* P 07 16 15.6 -1.6
KLMR AMP 07 16 19.7
comp=Z,42nm,1.4s

LEF Lefka 45.37 293 ⇓P P 07 16 20.5 +2.0
ELL Elmali 47.60 296 P P 07 16 36.2 +0.1
JURR Jurilovca 48.01 306 ⇑P P 07 16 39.7 +0.8
AKASG Malin Array Be 48.12 314 P P 07 16 39.8 0.0
comp=Z,3.6nm,0.6s,baz=75,slow=7.3,SNR=14

AKASG Malin Array Be 48.12 314 P P 07 16 39.8 0.0
AKBB Malin Array Si 48.12 314 P P 07 16 39.2 -0.5
TPGR Topolog 48.33 307 ⇓P P 07 16 42.4 +0.8
SORM Soroca 48.48 311 ⇑P P 07 16 42.6 0.0
HARR Harsova 48.68 306 ⇑P P 07 16 44.8 +0.7
VRI Vrincioaia 49.53 308 ⇑P P 07 16 52.4 +1.7
BISRR Bisoca 49.54 307 ⇑P P 07 17 01.2 +10
PLOR Plostina 49.58 308 ⇑P P 07 16 53.1 +2.0
TESR Tescani 49.59 309 ⇑P P 07 16 51.9 +0.8
ISR Istrita 49.66 307 ⇓P P 07 16 54.5 +2.7
TIXI Tiksi 49.78 16 P P 07 16 52.6 +0.4
TIXI IAmb IAmb 07 17 05.9
comp=Z,3.5nm,0.5s

NEHR Nehoiu 49.83 307 ⇑P P 07 16 55.2 +2.1
KARP Karpathos 49.96 294 P P 07 16 54.4 +0.2
MLR Muntele Rosu 50.08 307 ⇓P P 07 16 57.0 +1.9
MLR Muntele Rosu 50.08 307 P P 07 16 56.4 +1.4
NACGM Naroch 50.10 320 *i* P P 07 16 55.4 +0.5
NACGM *i* P P 07 16 55.4 +0.5
NACGM *i* P P 07 16 55.4 +0.5
NACGM *i* PP PP 07 18 49.0 -0.9
NACGM *i* PPP PPP 07 19 39.6
NACGM *i* S S 07 22 58.2 -6.3
NACGM *i* SS SS 07 27 31.7 -5.9
NACGM *i* SSS SSS 07 29 26.0
NACGM *i* LQ LQ 07 34 07.9
NACGM *i* LR LR 07 37 49.4
ALN Alexandroupoli 50.23 301 P P 07 16 56.4 +0.3
ALN IAmb IAmb 07 16 57.3
comp=Z,8.5nm,1.0s

BURAR Bucovina Array 50.57 310 ⇑P P 07 16 59.8 +1.0
BURAR Bucovina Array 50.57 310 P P 07 16 59.5 +0.8
BURAR IAmb IAmb 07 17 00.8
comp=Z,12nm,0.8s

BUR08 Bucovina Ar. S 50.58 310 P P 07 16 58.4 -0.4
BUR08 IAmb IAmb 07 17 00.7
comp=Z,12nm,1.0s

VOIR 50.71 307 ⇑P P 07 17 00.5 +0.7
SANT Santorini 51.20 296 ⇑P P 07 17 03.3 -0.2
FIA1 FINESS Array S 51.61 328 P P 07 17 06.7 +0.6
FIA1 IAmb IAmb 07 17 07.6
comp=Z,12nm,0.8s

FINES FINESS Array B 51.61 328 P P 07 17 06.8 +0.7
comp=Z,9.1nm,0.7s,baz=107,slow=10,SNR=18

FINES FINESS Array B 51.61 328 P P 07 17 05.9 -0.2
PABE Paberze 51.77 320 P P 07 17 07.6 +0.1
SUW Suwalki 52.10 318 P P 07 17 09.4 -0.5
VTS Vitosha 52.18 304 ⇑P P 07 17 12.4 +1.5
VTS Vitosha 52.18 304 P P 07 17 11.1 +0.2
VTS IAmb IAmb 07 17 13.2
comp=Z,21nm,1.0s

DEV Deva 52.20 308 ⇑P P 07 17 12.4 +1.7
DRGR 52.29 309 ⇑P P 07 17 12.9 +1.3
LIT Litokhoron 53.01 301 P P 07 17 17.0 +0.1
LIT IAmb IAmb 07 17 22.8
comp=Z,13nm,1.2s

SIRR Siria 53.04 309 ⇑P P 07 17 18.6 +1.5
AGG Agios Georgios 53.27 299 P P 07 17 18.4 -0.4
AGG IAmb IAmb 07 17 19.0
comp=Z,16nm,0.8s

KEV Kevo 53.53 338 P P 07 17 20.8 +0.6
FNA Florina 53.76 302 P P 07 17 22.3 -0.2
FNA IAmb IAmb 07 17 25.4
comp=Z,6.8nm,0.8s

ARCES ARCESS Array B 53.95 338 P P 07 17 24.5 +1.1
comp=Z,25nm,0.7s,baz=99,slow=7.5,SNR=30

ARCES ARCESS Array B 53.95 338 P P 07 17 24.2 +0.8
FRGS Fruska Gora 54.42 307 ⇑P P 07 17 27.4 +0.2
KMBO Kilima Mbogo 54.85 247 P P 07 17 30.9 0.0
comp=Z,5.0nm,0.8s,baz=43,slow=8.9,SNR=7.8

PDG Podgorica 55.12 304 P P 07 17 32.1 -0.1
JAVC Velka Javorina 55.57 312 *eP* P 07 17 36.9 +1.4
MORC Moravsky Berou 55.58 313 *eP* P 07 17 36.1 +0.5
KRLC Kraliky 56.08 313 *eP* P 07 17 39.7 +0.7
VRAC Vranov 56.24 313 ⇑P P 07 17 41.4 +1.2
VRAC Vranov 56.24 313 *eP* P 07 17 41.2 +1.0
DPC Dobruska-Polom 56.34 314 *eP* P 07 17 42.1 +1.2
KRUC Moravsky 56.39 312 *eP* P 07 17 42.0 +0.7
CHVC Chvalec 56.49 314 *eP* P 07 17 43.1 +1.1
UPC Upice 56.52 314 *eP* P 07 17 43.8 +1.6
CONA Conrad Observa 56.85 311 *i* P P 07 17 45.2 +0.5
comp=Z,16nm,1.0s,SNR=6.9

ARSA Arzberg 57.16 310 *i* P P 07 17 47.5 +0.7
comp=Z,7.4nm,0.9s

PRU Pruhonice 57.51 314 *eP* P 07 17 50.2 +1.0
SOKA Soboth 57.56 310 *eP* P 07 17 50.6 +0.9
comp=Z,16nm,0.9s,SNR=6.8

BRG Berggiesshubel 57.80 315 *i* P P 07 17 52.0 +0.7
BRG Amp 07 17 53.2
comp=Z,25nm,1.1s

BRG *ex* x 07 17 57.5
BRG Amp 07 17 58.3
comp=Z,10nm,1.0s

PBCC Pribram 57.89 313 *eP* P 07 17 52.9 +1.0
OBKA Obir 57.92 309 *i* P P 07 17 52.8 +0.6
comp=Z,14nm,0.8s,SNR=5.6

MOA Molln 57.93 311 *i* P P 07 17 52.1 -0.1
comp=Z,9.7nm,0.9s

GEC2 GERESS Array S 58.18 312 P P 07 17 54.4 +0.4
GERES GERESS Array B 58.18 312 P P 07 17 54.6 +0.6
comp=Z,1.4nm,0.5s,baz=77,slow=6.0,SNR=13

GERES GERESS Array B 58.18 312 P P 07 17 53.9 -0.1
KHC Kasperske Hory 58.23 313 *eP* P 07 17 54.9 +0.6
KHC Kasperske Hory 58.23 313 P P 07 17 54.3 0.0
KHC IAmb IAmb 07 17 55.5
comp=Z,12nm,1.1s

CLL Collm 58.35 315 *eP* P 07 17 56.0 +1.0
CEL Celeste 58.37 300 P P 07 17 55.5 0.0
NC405 NORSAR Array S 58.47 327 P P 07 17 55.5 -0.2
NC303 NORSAR Array S 58.63 327 P P 07 17 56.3 -0.6
NOA NORSAR Array B 58.72 327 P P 07 17 57.3 -0.1
comp=Z,3.8nm,0.6s,baz=89,slow=6.9,SNR=18

STAL STALIGIAL 59.21 309 P P 07 18 00.6 -0.5
ABTA Abfaltersbach 59.27 310 *i* P P 07 18 01.8 +0.1
comp=Z,12nm,1.3s

NRCA Norcia 59.53 305 P P 07 18 03.1 -0.3
NRCA IAmb IAmb 07 18 05.3
comp=Z,12nm,0.7s

WTTA Wattenberg 59.78 311 *i* P P 07 18 04.8 -0.4
comp=Z,24nm,1.3s

WATA Walderalm 59.81 311 *eP* P 07 18 04.8 -0.5
comp=Z,12nm,1.0s

MURB Monte Urbino 59.87 306 P P 07 18 06.3 +0.5
CTI Castel Tesino 59.97 309 P P 07 18 06.3 -0.2
CTI IAmb IAmb 07 18 07.3
comp=Z,13nm,0.9s

SQTA Sankt Quirin 60.07 311 *i* P P 07 18 06.8 -0.3
comp=Z,14nm,0.8s

MOTA Moosalm 60.12 311 *i* P P 07 18 07.0 -0.5
comp=Z,24nm,1.1s

RETA Reute 60.33 311 *i* P P 07 18 08.3 -0.6
comp=Z,12nm,1.3s

FETA Feichten 60.43 310 *i* P P 07 18 09.2 -0.5
comp=Z,10nm,1.0s

LATE Laterza 60.52 305 P P 07 18 09.7 -0.5
LATE IAmb IAmb 07 18 10.5
comp=Z,8.1nm,1.0s

SALO Salr 60.83 309 P P 07 18 12.7 +0.5
DAVA Damuels 60.95 311 *eP* P 07 18 13.2 -0.1
comp=Z,24nm,0.9s,SNR=6.4

MSSA Maissana 61.79 308 P P 07 18 18.4 -0.5
BTNL Ternell 62.76 315 *dP* P 07 18 25.9 +0.8
comp=Z,8.8nm,1.0s

MEM Membach 62.83 315 *dP* P 07 18 26.4 +0.8
comp=Z,11nm,0.9s

SENIN Lac Senin/Sane 62.87 310 P P 07 18 26.1 -0.2
WLF Walferdange 62.93 314 *dP* P 07 18 27.6 +1.3
comp=Z,13nm,1.1s

BGES Gesves 63.45 315 *dP* P 07 18 30.5 +0.8
comp=Z,6.8nm,1.1s

BMRD Maredsous 63.67 315 *dP* P 07 18 31.6 +0.5
comp=Z,7.5nm,0.8s

SNF Seneffe 63.92 315 *dP* P 07 18 33.0 +0.2
comp=Z,7.5nm,0.9s

KEST Kesra 64.07 298 P P 07 18 35.2 +1.0
comp=Z,29nm,0.8s,baz=130,slow=0.3,SNR=28

KEST Kesra 64.07 298 P P 07 18 34.6 +0.4
DAG Danmarks Havn 66.39 346 *eP* P 07 18 46.8 -1.6
WB0 Warramunga Arr 66.61 130 P P 07 18 50.5 -0.1

WRA Warramunga Arr 66.70 130 P P 07 18 51.3 +0.1
comp=Z,6.9nm,0.6s,baz=323,slow=6.4,SNR=49

WB2 Warramunga Arr 66.71 130 P P 07 18 51.2 0.0
WR0 Warramunga Arr 66.85 130 P P 07 18 51.9 -0.3
NWAO Narrogin (SRO) 67.34 152 P P 07 18 53.6 -1.4
NWAO IAmb IAmb 07 19 04.6
comp=Z,10nm,0.9s

DBG Daneborg 67.68 344 *i* P P 07 18 57.8 +1.2
DBG IAmb IAmb 07 18 58.9
comp=Z,6.1nm,0.9s

AS31 Alice Springs 69.01 133 P P 07 19 05.6 -0.1
ASAR Alice Springs 69.01 133 P P 07 19 05.8 +0.1
comp=Z,5.2nm,0.7s,baz=316,slow=6.3,SNR=26

SCO Scoresbysund 69.76 340 *i* P P 07 19 10.7 +1.1
SCO IAmb IAmb 07 19 12.4
comp=Z,3.5nm,0.9s

LSZ Lusaka 70.44 240 P P 07 19 14.6 -0.2
LSZ IAmb IAmb 07 19 15.3
comp=Z,8.0nm,0.8s

NEEM North Greenlan 71.86 351 *i* P P 07 19 23.8 +1.1
NEEM IAmb IAmb 07 19 24.9
comp=Z,23nm,0.8s

EUNU Eureka 72.26 359 P P 07 19 25.9 +1.1
EUNU IAmb IAmb 07 19 27.2
comp=Z,12nm,1.1s

ESDC Sonseca Array 72.75 306 P P 07 19 29.0 +0.6
comp=Z,6.4nm,0.9s,baz=50,slow=6.4,SNR=28

ANM Nome 72.78 25 P 07 19 30.1
baz=299

SUMG Summit 73.02 345 *i* P P 07 19 30.5 +0.7
SUMG IAmb IAmb 07 19 33.3
comp=Z,9.8nm,1.1s

SUMG Summit 73.02 345 P P 07 19 29.7 -0.1
SUMG IAmb IAmb 07 19 33.9
comp=Z,15nm,1.0s

PAB San Pablo 73.07 306 P P 07 19 30.9 +0.6
PAB IAmb IAmb 07 19 31.7
comp=Z,12nm,1.0s

MVO Moncorvo 74.33 308 *eP* P 07 19 38.6 +0.9
PGAV Gavieira, Arco 74.87 310 *eP* P 07 19 41.6 +0.8
MTE Manteigas 75.00 308 *eP* P 07 19 42.8 +1.3
PVIS Viseu 75.11 308 *eP* P 07 19 43.4 +1.2
PCBR Castelo Branco 75.18 307 *eP* P 07 19 43.5 +1.0
PMRV Marv??o 75.28 307 *eP* P 07 19 43.5 +0.4
PBAR Barrancos 75.54 306 *eP* P 07 19 45.3 +0.7
ICESG Greenland Ices 75.62 342 *i* P P 07 19 46.2 +1.3
ICESG IAmb IAmb 07 19 47.6
comp=Z,20nm,1.0s

TOLK Toolik Lake Re 75.63 18 P 07 19 45.9
baz=311

PMTG Montargil 76.02 307 *eP* P 07 19 47.8 +0.5
IMAR Indian Mountai 76.08 21 P P 07 19 48.1 +0.9
EVO Evora 76.09 306 *eP* P 07 19 49.0 +1.2
PSBE So Bento 76.24 307 *eP* P 07 19 49.6 +1.0
PVAQ Vaqueiros 76.34 305 *eP* P 07 19 50.0 +0.8
PVAQ Vaqueiros 76.34 305 P P 07 19 49.6 +0.4
COLD Coldfoot 76.38 19 P P 07 19 50.3 +1.4
COLD IAmb IAmb 07 19 51.6
comp=Z,7.5nm,1.0s

COLD Coldfoot 76.38 19 P 07 19 50.4
baz=311

PCVE Castro Verde 76.48 305 *eP* P 07 19 50.6 +0.6
PBDV Barranco-do-Ve 76.57 305 *eP* P 07 19 51.5 +1.0
BBOO Buckleboo 76.84 138 P P 07 19 51.6 -0.3
TTA Tatalina 77.16 24 P 07 19 55.4
baz=307

PFVI Vila Bisbo 77.26 305 *eP* P 07 19 55.2 +0.8
MLY Manley 77.66 21 P P 07 19 57.4 +1.2
MLY IAmb IAmb 07 20 09.5
comp=Z,6.7nm,0.8s

MLY Manley 77.66 21 P 07 19 57.6
baz=311,SNR=9.2

BMAR Burnt Mountain 77.83 18 P P 07 19 58.9 +1.8
CHUM Lake Minchumin 77.88 23 P 07 19 59.2
baz=310

I23K Minto, Yukon-K 78.02 21 P P 07 19 59.0 +0.9
I23K IAmb IAmb 07 20 00.3
comp=Z,6.5nm,0.9s

I23K Minto, Yukon-K 78.02 21 P 07 19 59.7
baz=312

BPAW Bear Paw Mtn. 78.18 22 P P 07 20 00.0 +1.0
BPAW IAmb IAmb 07 20 01.7
comp=Z,12nm,0.9s

BPAW Bear Paw Mtn. 78.19 22 P 07 20 00.5
baz=311,SNR=10

LBTB Lobatse 78.31 234 P P 07 20 00.1 -0.3
LBTB IAmb IAmb 07 20 01.2
comp=Z,18nm,1.0s

NEA2 Nenana 78.48 21 P P 07 20 01.7 +1.0
NEA2 Nenana 78.48 21 P 07 20 02.0
baz=312,SNR=19

MDM Murphy Dome 78.50 21 P P 07 20 01.7 +0.9
MDM IAmb IAmb 07 20 03.7
comp=Z,14nm,1.0s

PPLA Purkeypile 78.55 23 P P 07 20 02.2 +0.9
PPLA IAmb IAmb 07 20 03.4
comp=Z,7.6nm,0.9s

PPLA Purkeypile 78.56 23 P 07 20 02.9
baz=310

POKR Poker Flat Res 78.64 20 P 07 20 03.0
baz=314,SNR=6.2

COLA College 78.67 21 P 07 20 02.9
baz=313

CCB Clear Creek Bu 78.84 21 P P 07 20 02.8 +0.1
PRP Porcupine Dome 78.93 19 P P 07 20 04.7 +1.4
PRP IAmb IAmb 07 20 06.0
comp=Z,14nm,1.0s

PRP Porcupine Dome 78.93 19 P 07 20 05.1
baz=315

TOA0 Torodi Ar. Sit 78.95 279 P P 07 20 04.2 +0.1
TORD Torodi Ar. Bea 78.95 279 P P 07 20 03.4 -0.7
comp=Z,3.1nm,0.8s,baz=63,slow=3.8,SNR=8.0

TORD Torodi Ar. Bea 78.95 279 IAmb IAmb 07 20 04.5
comp=Z,3.2nm,0.8s

IL31 79.04 20 P P 07 20 04.1 +0.4
ILAR Eielson Array 79.04 20 P P 07 20 03.8 0.0
comp=Z,4.4nm,0.8s,baz=301,slow=4.3,SNR=23

ILAR PP PP 07 23 01.9 -0.5
comp=Z,0.8nm,0.8s,baz=317,slow=9.0,SNR=4.8

ILAR Eielson Array 79.04 20 P P 07 20 04.1 +0.3
MCK McKinley 79.11 22 P 07 20 05.1
baz=312

DY2G Dye2 79.25 342 *i* P P 07 20 04.5 -0.7
HDA Harding Lake 79.28 21 P 07 20 04.9
baz=314

HDA P 07 20 04.9
baz=314

RND Reindeer 79.36 22 P P 07 20 06.2 +0.6
RND IAmb IAmb 07 20 06.8
comp=Z,8.5nm,0.8s

SKT Skwentna 79.38 24 P P 07 20 06.4 +0.7
SKT Skwentna 79.38 24 P 07 20 06.8
baz=311,SNR=14

STKA Stephens Creek 79.58 134 P P 07 20 06.2 -0.8
comp=Z,7.4nm,1.0s,baz=301,slow=4.5,SNR=4.9

STKA Stephens Creek 79.58 134 IAmb IAmb 07 20 07.3
comp=Z,2.0nm,1.0s

WAT2 Susitna Watana 79.75 22 P 07 20 08.1
baz=313

INK Inuvik 79.82 14 P P 07 20 07.9 0.0
comp=Z,4.7nm,0.8s,baz=338,slow=5.8,SNR=8.0

INK Inuvik 79.82 14 P 07 20 09.0
baz=325

SUA Susitna One 80.00 24 P P 07 20 10.1 +1.0
SUA IAmb IAmb 07 20 19.4
comp=Z,11nm,1.0s

SUA Susitna One 80.00 24 P 07 20 09.7
baz=311

WAT6 Susitna Watana 80.29 22 P 07 20 11.5
baz=314

PMR Palmer 80.49 23 P P 07 20 12.0 +0.4
PMR IAmb IAmb 07 20 13.5
comp=Z,11nm,0.8s

PMR Palmer 80.49 23 P 07 20 12.7
baz=313,SNR=8.0

SCRK Sand Creek 80.50 20 P P 07 20 12.7 +0.8
SCRK IAmb IAmb 07 20 13.8
comp=Z,15nm,0.9s

SCRK Sand Creek 80.50 20 P 07 20 12.8
baz=317,SNR=12

SML Sawmill 80.62 23 P P 07 20 13.5 +1.1
SML Sawmill 80.63 23 P 07 20 13.8
baz=313,SNR=8.8

EPYK Eagle Plains 80.66 16 P 07 20 13.1
baz=323

C36M	**Paulatuk**	**80.68**	**10**	P			07 20 13.2
	baz=333						
DOT	**Dot Lake**	**80.71**	**20**	P		**P**	**07 20 13.4 +0.6**
EGAK	**Eagle**	**80.73**	**19**	P		**P**	**07 20 14.0 +1.2**
EGAK				IAmb		IAmb	07 20 14.3
	comp=Z,6.3nm,0.9s						
EGAK	**Eagle**	**80.73**	**19**	P			07 20 14.0
	baz=319						
PAX	**Paxson**	**80.76**	**21**	P		**P**	**07 20 13.6 +0.4**
PAX	**Paxson**	**80.76**	**21**	P			07 20 14.3
	baz=316						
BOSA	**Boshof**	**80.78**	**231**	P		**P**	**07 20 13.1 -0.7**
	comp=Z,5.9nm,0.8s,baz=60,slow=3.3,SNR=9.8						
BOSA	**Boshof**	**80.78**	**231**	P		**P**	**07 20 13.0 -0.7**
KNK	**Knik Glacier**	**80.85**	**23**	P			07 20 15.0
	baz=313						
K27K	**Chicken**	**81.03**	**19**	P			07 20 16.4
	baz=318						
M24K	**Tolsona, Glenn**	**81.15**	**22**	P			07 20 17.3
	baz=315						
HARP	**HAARP**	**81.28**	**22**	P			07 20 17.9
	baz=316						
MENT	**Mentasta**	**81.34**	**21**	P		**P**	**07 20 18.0 +1.8**
KLU	**Klutina**	**81.67**	**22**	P			07 20 19.6
	baz=315						
GLI	**Glacier Island**	**81.70**	**23**	P			07 20 19.3
	baz=314						
KDAK	**Kodiak Island**	**81.71**	**27**	P		**P**	**07 20 19.7 +1.6**
	comp=Z,21nm,0.7s,baz=310,slow=3.6,SNR=20						
KDAK	**Kodiak Island**	**81.71**	**27**	P		**P**	**07 20 19.2 +1.1**
KDAK				IAmb		IAmb	07 20 20.4
	comp=Z,17nm,0.9s						
KDAK	**Kodiak Island**	**81.71**	**27**	P			07 20 19.8
	baz=310						
DAWY	**Dawson**	**81.77**	**18**	P		**P**	**07 20 18.9 +0.4**
OHAK	**Old Harbor**	**81.78**	**28**	P		**P**	**07 20 19.6 +1.1**
OHAK	**Old Harbor**	**81.78**	**28**	P			07 20 20.1
	baz=310						
L27K	**Beaver Creek,**	**81.83**	**20**	P			07 20 20.8
	baz=319,SNR=7.2						
BCAR	**Beaver Creek A**	**81.84**	**20**	P		**P**	**07 20 20.2 +1.3**
N25K	**Chitina, Valde**	**82.03**	**22**	P			07 20 21.8
	baz=316,SNR=11						
EYAK	**Cordova Ski Ar**	**82.40**	**23**	P			07 20 23.6
	baz=316						
BMRM	**Bremner River**	**82.49**	**22**	P		**P**	**07 20 23.5 +1.2**
BMRM				IAmb		IAmb	07 20 24.4
	comp=Z,8.9nm,0.8s						
BMRM	**Bremner River**	**82.49**	**22**	P			07 20 23.7
	baz=316,SNR=5.5						
MCARA	**McCarthy VSAT**	**82.71**	**21**	P		**P**	**07 20 25.0 +1.6**
MCARA	**McCarthy VSAT**	**82.71**	**21**	P			07 20 25.4
	baz=318						
CRQM	**Cirque**	**83.14**	**22**	P		**P**	**07 20 27.5 +1.6**
CRQE	**Cirque**	**83.16**	**22**	P			07 20 27.5
	baz=318						
KAIM	**Kayak Island**	**83.31**	**23**	P			07 20 28.7
	baz=317						
BARN	**Barnard Glacie**	**83.39**	**21**	P		**P**	**07 20 28.9 +1.7**
BARN				IAmb		IAmb	07 20 30.1
	comp=Z,16nm,1.1s						
CTG	**Chitna Glacier**	**83.56**	**21**	P			07 20 29.9
	baz=319						
CTGM	**Chitina Glacie**	**83.57**	**21**	P		**P**	**07 20 29.5 +1.5**
CTGM				IAmb		IAmb	07 20 46.1
	comp=Z,4.7nm,1.0s						
LOGN	**Logan Glacier**	**83.78**	**21**	P		**P**	**07 20 29.8 +0.7**
LOGN				IAmb		IAmb	07 20 34.8
	comp=Z,6.2nm,1.0s						
HYT	**Haines Junctio**	**84.86**	**20**	P		**P**	**07 20 35.5 +0.9**
HYT				IAmb		IAmb	07 20 48.4
	comp=Z,7.8nm,0.8s						
WHY	**Whitehorse**	**85.76**	**19**	P		**P**	**07 20 40.0 +1.0**
WHY				IAmb		IAmb	07 20 40.8
	comp=Z,11nm,1.0s						
WHY	**Whitehorse**	**85.76**	**19**	P			07 20 40.0
	baz=325						
SKAG	**Skagway**	**86.61**	**20**	P			07 20 45.1
	baz=324						
YKA	**Yellowknife Ar**	**88.50**	**9**	P		**P**	**07 20 52.5 +0.4**
	comp=Z,2.7nm,0.8s,baz=344,slow=4.6,SNR=16						
TXAR	**Lajitas Array**	**122.43**	**10**	PKP		**PKPdf**	**07 26 55.0 -0.8**
	comp=Z,0.7nm,0.8s,baz=296,slow=0.7,SNR=8.1						
SDV	**Santo Domingo**	**137.03**	**325**	PKP		**PKiKP**	**07 27 26.0 +0.3**
	comp=Z,1.1nm,0.3s,baz=59,slow=5.9,SNR=3.6						
GUY2C	**Guyana, Caldas**	**142.51**	**328**	*e*P		**PKPdf**	**07 27 28.0 -6.2**
ORTC	**Ortega, Tolima**	**143.60**	**327**	*e*P		PKPab	07 27 32.1 0.0
YOTC	**Yotoco, Valle**	**144.05**	**329**	*e*P		**PKPab**	**07 27 33.2 -0.6**
MACC	**Macarena, Meta**	**144.41**	**324**	*e*P		**PKPab**	**07 27 30.1 -5.0**
SAML	**Samuel**	**145.35**	**297**			**PKPbc**	**07 27 38.4 +0.1**
PCON	**Cinco Dias**	**145.53**	**328**	*e*P		**PKPab**	**07 27 40.6 +0.7**
SOTA	**Rioblanco**	**145.80**	**328**	*e*P		**PKPdf**	**07 27 35.7 -4.3**
PTLC	**Puerto Leguiza**	**146.58**	**323**	*e*P		**PKPdf**	**07 27 40.6 -0.1**
SIV	**San Ignacio**	**147.30**	**284**	PKPbc		**PKPbc**	**07 27 43.8 -0.3**
	comp=Z,15nm,0.7s,baz=95,slow=4.3,SNR=25						
CPUP	**Villa Florida**	**147.32**	**264**	PKPbc		**PKPdf**	**07 27 42.2 +0.7**
	comp=Z,7.0nm,0.9s,baz=72,slow=3.0,SNR=13						
GO09	**Cerro Castillo**	**151.41**	**209**	PKPbc		**PKPbc**	**07 27 53.0 -0.3**
LPAZ	**La Paz**	**153.41**	**290**	PKPbc		**PKPbc**	**07 27 58.5 -1.2**
	comp=Z,1.6nm,0.9s,baz=140,slow=13,SNR=4.1						
LPAZ				PKPab		**sPKPbc**	**07 28 10.4 -1.8**
	comp=Z,2.2nm,0.9s,baz=58,slow=5.0,SNR=4.5						
LPAZ	**La Paz**	**153.41**	**290**			**PKPbc**	**07 27 58.2 -1.4**
PLCA	**Paso Flores**	**156.77**	**230**	PKP		**PKPdf**	**07 27 56.3 +1.0**
	comp=Z,1.3nm,0.8s,baz=184,slow=4.1,SNR=3.3						

*BJI **25** 07:13:42.0±0.0,27.57N×85.44E,h8km,mB4.7/1, mb4.6/25*
*IDC **25** 07:13:43.6±0.9,27.69N×85.67E,h0km,mb4.3/23, mb1 4.4/26,mb1mx4.2/55,mbtmp4.3/26,ML4.4/3,Error ellipse: s-maj=21.3km s-min=16.7km az=149.0*
*NEIC **25** 07:13:44.1±1.4,27.62N±0.08×85.73E±0.05,h10km±1km, mb4.8/63, Error ellipse: s-maj=14.4km s-min=6.6km az=162.0*
*DMN **25** 07:13:46.0±0.3,27.88N×85.73E,h10km,Ml4.7/3,Error ellipse: s-maj=4.5km s-min=3.6km az=79.0*

ISC 25 07:13:45.4±0.4,27.72N±0.06×85.71E±0.03,h10km,n181, σ1§10/177,**mb4.6**/65,**17C-1D,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKI	**Pulchoki**	**0.30**	**242**	*e*Sg	**Sb**	**07 13 59.8**	**+1.5**
KKN	**Kakani**	**0.39**	**281**	*e*Pg	**Pg**	**07 13 54.0**	**+0.9**
KKN				*e*Sg	**Sg**	07 13 59.8	+1.5
DMN	**Daman**	**0.54**	**259**	*e*Pg	**Pb**	**07 13 58.0**	**+0.8**
DMN				*e*Sg	**Sb**	**07 14 06.3**	**+1.1**
GKN	**Gorkha**	**0.99**	**287**	*e*Sg	**Sg**	**07 14 16.9**	**-0.5**
	2μm,0.2s						
DANN	**Dangsing**	**1.83**	**291**	*e*Pg	**Pb**	**07 14 19.9**	**+0.7**
DANN				*e*Sg	**Sb**	**07 14 43.1**	**+0.7**
	323nm,0.1s						
KOLN	**Koldanda**	**1.87**	**272**	*e*Pg	**Pg**	**07 14 21.3**	**0.0**
KOLN				*e*Sg	**Sg**	**07 14 46.2**	**+0.7**
	1μm,0.3s						
PYUN	**Piuthan**	**2.44**	**280**	*e*Pg	**Pb**	**07 14 31.3**	**+1.9**
PYUN				*e*Sg	**Sb**	**07 15 01.9**	**+2.3**
LSA	**Lhasa**	**5.17**	**66**	Pn	**Pn**	**07 15 01.0**	**-2.4**
SHL	**Shillong**	**5.93**	**110**	Pn	**Pn**	**07 15 11.0**	**-2.4**
HYB	**Hyderabad**	**12.19**	**214**	*i* P	Pn	07 16 33.5	-5.7
NIL	**Nilore**	**12.24**	**302**	Pn	**Pn**	**07 16 37.6**	**-2.3**
CMMT	**Chiang Mai**	**15.04**	**123**	P	**P**	**07 17 24.5**	**+0.9**
CM32	**Chiang Mai Arr**	**15.06**	**124**	P	P	07 17 35.0	+11
CM34	**Chiang Mai Arr**	**15.17**	**123**	P	**P**	**07 17 26.0**	**+1.1**
CM15	**Chiang Mai Arr**	**15.25**	**124**	P	**P**	**07 17 27.0**	**+1.2**
CM13	**Chiang Mai Arr**	**15.26**	**125**	P	P	07 17 38.2	+12
CMAR	**Chiang Mai Arr**	**15.26**	**124**	Pn	**Pn**	**07 17 22.4**	**+1.4**
	0.7nm,0.3s,baz=302,slow=14,SNR=5.1						
CM02	**Chiang Mai Arr**	**15.28**	**124**	P	**P**	**07 17 28.4**	**+2.2**
CM35	**Chiang Mai Arr**	**15.28**	**123**	P	**P**	**07 17 27.0**	**+0.9**
CM05	**Chiang Mai Arr**	**15.30**	**125**	P	**P**	**07 17 29.1**	**+2.7**
CM09	**Chiang Mai Arr**	**15.30**	**124**	P	P	07 17 34.0	+7.6
CM04	**Chiang Mai Arr**	**15.32**	**124**	P	**P**	**07 17 30.0**	**+3.4**
CM36	**Chiang Mai Arr**	**15.33**	**124**	P	**P**	**07 17 29.0**	**+2.2**
KMI	**Kunming**	**15.48**	**96**	⇑P	**Pn**	**07 17 25.3**	**+1.2**
KMI				pP	P	07 17 27.8	-0.8
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KBL	**Kabul**	**15.80**	**300**	Pn	**Pn**	**07 17 26.1**	**-2.1**
KBL				IAmb	IAmb	07 17 33.4	
	comp=Z,60nm,1.1s						
KDJ	**Kajisay**	**15.98**	**336**		**Pn**	**07 17 30.4**	**0.0**
WMQ	**Urumqi**	**16.15**	**5**	*e*P	**Pn**	**07 17 34.5**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	**Gaotai**	**16.54**	**42**	P	**Pn**	**07 17 39.5**	**+2.0**
GTA				pP	P	07 17 42.5	+2.3
GTA				sP	sP	07 17 45.5	+0.5
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
BOOM	**Boomskoye usch**	**16.75**	**334**	Pn	**Pn**	**07 17 39.8**	**-0.5**
PHIT	**Phitsanulok**	**17.14**	**125**	P	P	07 17 54.9	+8.0
AAK	**Ala-Archa**	**17.46**	**331**	P	**Pn**	**07 17 50.2**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=142,slow=8.1,SNR=3.7						
AAK	**Ala-Archa**	**17.46**	**331**	P	**Pn**	**07 17 50.5**	**+1.4**
UTHA	**Uthaitani**	**17.57**	**131**	P	**P**	**07 17 54.7**	**+3.1**
GYA	**Guiyang**	**18.70**	**89**	*e*P	**Pn**	**07 18 08.0**	**+3.5**
MK31	**Makanchi Array**	**19.23**	**353**	P	**P**	**07 18 10.3**	**+0.6**
MKAR	**Makanchi Array**	**19.23**	**353**	P	**P**	**07 18 09.3**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=175,slow=9.8,SNR=14						
MKAR	**Makanchi Array**	**19.23**	**353**	P	**P**	**07 18 09.5**	**-0.2**
MAKZ	**Makanchi**	**19.28**	**352**	P	**P**	**07 18 10.4**	**+0.1**
XAN	**Xi'an**	**20.88**	**67**	P	Pn	07 18 30.8	+0.6
XAN				pP	sP	07 18 33.8	+1.2
XAN				pmax	pmax		
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**20.88**	**67**	P	Pn	07 18 30.9	+0.7
KURBB	**Kurchatov Arra**	**23.52**	**348**	P	**P**	**07 18 55.2**	**-0.3**
	comp=Z,6.4nm,0.6s,baz=171,slow=10,SNR=27						
KURK	**Kurchatov**	**23.59**	**349**	P	**P**	**07 18 55.2**	**-1.0**
WSAR	**Wadi Sarin**	**24.82**	**266**	P	**P**	**07 19 07.7**	**-0.2**
	comp=Z,4.6nm,0.6s,baz=169,slow=0.4,SNR=4.7						
HHC	**Hu-ho-hao-te**	**24.95**	**52**	*e*P	**P**	**07 19 10.8**	**+1.7**
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
GEYT	**Alibeck**	**25.24**	**301**	P	**P**	**07 19 11.3**	**-0.3**
	comp=Z,3.7nm,0.7s,baz=116,slow=9.2,SNR=5.8						
GEYT	**Alibeck**	**25.24**	**301**	P	**P**	**07 19 12.3**	**+0.6**
SONM	**Songino Array**	**25.75**	**33**	P	**P**	**07 19 16.7**	**+0.4**
	comp=Z,5.1nm,0.7s,baz=220,slow=10,SNR=12						
SONM	**Songino Array**	**25.75**	**33**	P	**P**	**07 19 16.2**	**-0.1**
ULN	**Ulaanbaatar**	**26.10**	**34**	P	**P**	**07 19 20.7**	**+1.3**
ULN				IAmb	IAmb	07 19 29.1	
	comp=Z,13nm,0.9s						
ZAA0	**Zalesovo Array**	**26.22**	**359**	P	**P**	**07 19 20.5**	**+0.3**
ZALV	**Zalesovo Beam**	**26.22**	**359**	P	**P**	**07 19 20.5**	**+0.3**
	comp=Z,4.2nm,0.5s,baz=179,slow=10,SNR=7.1						
ZALV	**Zalesovo Beam**	**26.22**	**359**	P	**P**	**07 19 19.7**	**-0.5**
KULM	**Kulim**	**26.45**	**145**	P	**P**	**07 19 20.1**	**-2.6**
KULM				IAmb	IAmb	07 19 27.7	
	comp=Z,12nm,0.9s						
ABKAR	**Akbulak array**	**29.24**	**324**	P	**P**	**07 19 46.3**	**-1.0**
ABKAR	**Akbulak array**	**29.24**	**324**	P	**P**	**07 19 46.9**	**-0.5**
SOCY	**Socotra**	**33.45**	**249**	P	P	07 20 20.5	-4.4
SOCY				IAmb	IAmb	07 20 29.9	
	comp=Z,6.5nm,1.0s						
ARU	**Arti**	**34.62**	**334**	P	**P**	**07 20 34.1**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=119,slow=10,SNR=5.3						
ARU	**Arti**	**34.62**	**334**	P	**P**	**07 20 33.8**	**-0.6**
ARU				IAmb	IAmb	07 20 35.1	
	comp=Z,4.4nm,0.5s						
INCN	**Inchon**	**35.59**	**64**	P	**P**	**07 20 44.0**	**+0.9**
KSRS	**Korea Array**	**36.61**	**64**	P	**P**	**07 20 51.9**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=268,slow=8.4,SNR=4.8						
MARD	**Mardin**	**38.77**	**296**	P	**P**	**07 21 10.7**	**+0.4**
MARD				IAmb	IAmb	07 21 11.9	
	comp=Z,15nm,0.6s						
KIRV	**Kirov**	**39.79**	**331**	P	**P**	**07 21 18.5**	**+0.2**
	comp=Z,11nm,0.6s,baz=248,slow=2.2,SNR=3.8						
GAZ	**Gaziantep**	**41.62**	**296**	P	**P**	**07 21 33.5**	**-0.3**
GAZ				IAmb	IAmb	07 21 35.9	
	comp=Z,22nm,1.3s						
NRIK	**Noril'sk**	**41.67**	**1**	P	**P**	**07 21 33.9**	**+0.2**
	comp=Z,7.2nm,0.8s,baz=172,slow=6.1,SNR=7.0						
NRIK	**Noril'sk**	**41.67**	**1**	P	**P**	**07 21 33.6**	**-0.1**
MMAI	**Mount Meron Ar**	**43.40**	**290**	P	**P**	**07 21 48.3**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=37,slow=13,SNR=2.7						
ILGA	**Ilgaz**	**44.31**	**301**	P	**P**	**07 21 53.7**	**-2.1**
ILGA				IAmb	IAmb	07 21 59.5	
	comp=Z,13nm,0.7s						
BRTR	**Keskin Array B**	**44.37**	**300**	P	**P**	**07 21 56.1**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=110,slow=5.4,SNR=4.6						
BRTR	**Keskin Array B**	**44.37**	**300**	P	**P**	**07 21 54.4**	**-1.9**
OBN	**Obninsk**	**44.61**	**322**	P	**P**	**07 21 56.9**	**-0.8**
ELL	**Elmali**	**47.48**	**296**	P	**P**	**07 22 19.7**	**-1.1**
AKASG	**Malin Array Be**	**48.06**	**315**	P	**P**	**07 22 24.0**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=78,slow=7.2,SNR=11						
AKASG	**Malin Array Be**	**48.06**	**315**	P	**P**	**07 22 23.7**	**-1.1**
AKASG				IAmb	IAmb	07 22 24.9	
	comp=Z,4.5nm,1.0s						
AKBB	**Malin Array Si**	**48.06**	**315**	P	**P**	**07 22 23.7**	**-1.2**
TPGR	**Topolog**	**48.24**	**307**	⇑P	**P**	**07 22 26.2**	**-0.3**
SORM	**Soroca**	**48.41**	**311**	⇑P	**P**	**07 22 26.5**	**-1.1**
HARR	**Harsova**	**48.59**	**306**	⇑P	**P**	**07 22 29.8**	**+0.5**
VRI	**Vricioaia**	**49.44**	**308**	⇑P	**P**	**07 22 36.2**	**+0.5**
PLOR	**Plostina**	**49.50**	**308**	⇑P	**P**	**07 22 36.9**	**+0.8**
TIXI	**Tiksi**	**49.94**	**16**	P	**P**	**07 22 39.2**	**+0.3**
TIXI				IAmb	IAmb	07 22 45.9	
	comp=Z,6.0nm,0.9s						
MLR	**Muntele Rosu**	**49.99**	**307**	⇑P	**P**	**07 22 41.1**	**+1.1**
MLR	**Muntele Rosu**	**49.99**	**307**	P	**P**	**07 22 40.3**	**+0.3**
DOPR	**Dopca**	**50.38**	**308**	⇑P	**P**	**07 22 43.1**	**+0.3**
IIGN	**Ignalina**	**50.44**	**320**	*e*P	**P**	**07 22 43.2**	**+0.2**
BURAR	**Bucovina Array**	**50.50**	**310**	⇑P	**P**	**07 22 42.8**	**-1.0**
BURAR	**Bucovina Array**	**50.50**	**310**	P	**P**	**07 22 43.1**	**-0.6**
BUR08	**Bucovina Ar. S**	**50.51**	**310**	P	**P**	**07 22 42.4**	**-1.5**
ISAL	**Salakas**	**50.53**	**321**	*e*P	**P**	**07 22 43.8**	**+0.1**
VOIR		**50.62**	**307**	⇑P	**P**	**07 22 44.5**	**-0.2**
VSU	**Vasula**	**50.67**	**324**	*e*P	**P**	**07 22 43.6**	**-1.0**
ARR	**Arges**	**50.92**	**307**	⇑P	**P**	**07 22 46.7**	**-0.2**
SANT	**Santorini**	**51.08**	**296**	P	**P**	**07 22 47.0**	**-1.2**
FIA1	**FINESS Array S**	**51.60**	**328**	P	**P**	**07 22 51.6**	**-0.1**
FIA1				IAmb	IAmb	07 22 53.2	
	comp=Z,8.7nm,0.8s						
FINES	**FINESS Array B**	**51.60**	**328**	P	**P**	**07 22 51.2**	**-0.4**
	comp=Z,4.3nm,0.6s,baz=101,slow=9.9,SNR=11						
FINES	**FINESS Array B**	**51.60**	**328**	P	**P**	**07 22 50.4**	**-1.3**
IDI	**Anoyia**	**51.71**	**294**	P	**P**	**07 22 52.7**	**-0.3**
IDI				IAmb	IAmb	07 22 58.2	
	comp=Z,7.9nm,0.9s						
PABE	**Paberze**	**51.74**	**320**	*e*P	**P**	**07 22 52.7**	**-0.1**
PABE	**Paberze**	**51.74**	**320**	P	**P**	**07 22 52.6**	**-0.1**
SUW	**Suwalki**	**52.06**	**318**	*e*P	**P**	**07 22 54.4**	**-0.8**
VTS	**Vitosha**	**52.08**	**304**	⇑P	**P**	**07 22 56.8**	**+1.0**
DRGR		**52.21**	**309**	⇑P	**P**	**07 22 57.0**	**+0.4**
MTSE	**Matsula**	**52.22**	**324**	*e*P	**P**	**07 22 56.2**	**-0.1**
GZR	**Gura Zlata**	**52.23**	**307**	⇓P	**P**	**07 22 56.4**	**-0.3**
SIRR	**Siria**	**52.96**	**309**	⇑P	**P**	**07 23 02.3**	**+0.3**
AGG	**Agios Georgios**	**53.16**	**300**	P	**P**	**07 23 02.7**	**-1.0**
AGG				IAmb	IAmb	07 23 03.1	
	comp=Z,5.5nm,0.8s						
KEV	**Kevo**	**53.56**	**338**	P	**P**	**07 23 05.9**	**-0.1**
KEV				IAmb	IAmb	07 23 22.7	
	comp=Z,15nm,1.1s						
ITM	**Ithomi**	**53.76**	**297**	P	**P**	**07 23 06.7**	**-1.4**
ITM				IAmb	IAmb	07 23 12.1	
	comp=Z,10nm,1.0s						
ARCES	**ARCESS Array B**	**53.98**	**338**	P	**P**	**07 23 09.1**	**-0.1**
	comp=Z,3.8nm,0.6s,baz=78,slow=6.3,SNR=12						
PDG	**Podgorica**	**55.03**	**304**	⇑P	**P**	**07 23 16.5**	**-0.7**
PDG	**Podgorica**	**55.03**	**304**	P	**P**	**07 23 16.3**	**-0.8**
PDG				IAmb	IAmb	07 23 17.1	
	comp=Z,11nm,0.8s						
MORH	**Mrgy, Hungar**	**55.05**	**309**	⇑P	**P**	**07 23 16.9**	**-0.4**
UPP	**Uppsala**	**55.50**	**325**	*e*P	**P**	**07 23 19.8**	**-0.4**
VRAC	**Vranov**	**56.18**	**313**	⇑P	**P**	**07 23 25.5**	**+0.2**
DPC	**Dobruska-Polom**	**56.28**	**314**	*e*P	**P**	**07 23 26.2**	**+0.1**
CONA	**Conrad Observa**	**56.78**	**311**	*e*P	**P**	**07 23 29.4**	**-0.4**
	comp=Z,5.5nm,0.8s,SNR=6.1						
ARSA	**Arzberg**	**57.08**	**310**	*e*P	**P**	**07 23 31.5**	**-0.4**
	comp=Z,2.7nm,0.7s						
PRU	**Pruhonice**	**57.45**	**314**	*e*P	**P**	**07 23 34.4**	**+0.1**
SOKA	**Soboth**	**57.49**	**310**	*e*P	**P**	**07 23 34.7**	**-0.1**
	comp=Z,8.0nm,1.0s,SNR=6.8						
BRG	**Berggiesshubel**	**57.74**	**315**	*i* P	**P**	**07 23 36.2**	**-0.2**
BRG				Amp		07 23 37.2	
	comp=Z,5.4nm,0.8s						
OBKA	**Obir**	**57.84**	**309**	*e*P	**P**	**07 23 37.2**	**0.0**
	comp=Z,8.7nm,0.9s,SNR=4.7						
MOA	**Molln**	**57.86**	**311**	*e*P	**P**	**07 23 36.5**	**-0.8**
	comp=Z,2.7nm,0.6s,SNR=4.0						
GERES	**GERESS Array B**	**58.11**	**312**	P	**P**	**07 23 38.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=89,slow=6.0,SNR=5.9						
GERES	**GERESS Array B**	**58.11**	**312**	P	**P**	**07 23 38.7**	**-0.5**
KHC	**Kasperske Hory**	**58.16**	**313**	*e*P	**P**	**07 23 38.9**	**-0.5**
KHC	**Kasperske Hory**	**58.16**	**313**	P	**P**	**07 23 39.2**	**-0.2**
NC405	**NORSAR Array S**	**58.46**	**327**	P	**P**	**07 23 40.6**	**-0.6**
TRI	**Trieste**	**58.49**	**309**	P	**P**	**07 23 41.3**	**-0.4**
TRI				IAmb	IAmb	07 23 42.0	
	comp=Z,8.9nm,0.8s						
NOA	**NORSAR Array B**	**58.70**	**327**	P	**P**	**07 23 41.9**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=85,slow=5.0,SNR=3.2						
NC204	**NORSAR Array S**	**58.91**	**327**	P	**P**	**07 23 43.5**	**-1.0**
STAL	**STALIGIAL**	**59.13**	**309**	P	**P**	**07 23 45.3**	**-0.9**
STAL				IAmb	IAmb	07 23 45.9	
	comp=Z,11nm,0.8s						
ABTA	**Abfaltersbach**	**59.19**	**310**	*i* P	**P**	**07 23 45.9**	**-0.8**
	comp=Z,3.1nm,0.9s						
NRCA	**Norcia**	**59.44**	**305**	P	**P**	**07 23 47.2**	**-1.3**
NRCA				IAmb	IAmb	07 23 49.0	
	comp=Z,7.5nm,0.8s						
WTTA	**Wattenberg**	**59.70**	**311**	*e*P	**P**	**07 23 49.2**	**-1.2**
	comp=Z,3.5nm,0.5s						
MURB	**Monte Urbino**	**59.78**	**306**	P	**P**	**07 23 50.3**	**-0.6**
CTI	**Castel Tesino**	**59.90**	**309**	P	**P**	**07 23 50.7**	**-0.9**
CTI				IAmb	IAmb	07 23 54.0	
	comp=Z,3.5nm,0.6s						
SQTA	**Sankt Quirin**	**60.00**	**311**	*e*P	**P**	**07 23 50.9**	**-1.4**
	comp=Z,3.5nm,0.5s						
TEOL	**Teolo**	**60.00**	**308**	P	**P**	**07 23 51.4**	**-0.8**
MOTA	**Moosalm**	**60.05**	**311**	*i* P	**P**	**07 23 51.0**	**-1.7**
	comp=Z,9.1nm,0.8s,SNR=5.4						
FETA	**Feichten**	**60.36**	**311**	*e*P	**P**	**07 23 53.5**	**-1.3**
	comp=Z,5.1nm,0.8s,SNR=4.4						
LATE	**Laterza**	**60.43**	**305**	P	**P**	**07 23 54.5**	**-0.7**
LATE				IAmb	IAmb	07 23 54.8	
	comp=Z,4.5nm,0.9s						
SALO	**Salr**	**60.75**	**309**	P	**P**	**07 23 57.5**	**+0.1**
DAVA	**Damuels**	**60.88**	**311**	*i* P	**P**	**07 23 57.3**	**-1.1**
	comp=Z,13nm,0.9s						
BILL	**Bilibino**	**61.10**	**25**	P	**P**	**07 24 01.0**	**+1.7**
TUE	**Stuetta**	**61.39**	**310**	P	**P**	**07 24 01.9**	**0.0**
TUE				IAmb	IAmb	07 24 04.8	
	comp=Z,6.6nm,0.8s						
MSSA	**Maissana**	**61.71**	**308**	P	**P**	**07 24 03.0**	**-0.9**
MSSA				IAmb	IAmb	07 24 03.3	
	comp=Z,7.7nm,0.6s						
SENIN	**Lac Senin/Sane**	**62.80**	**310**	P	**P**	**07 24 09.6**	**-1.8**
SENIN				IAmb	IAmb	07 24 11.7	
	comp=Z,11nm,0.9s						
BNI	**Bardonecchia**	**63.52**	**309**	P	**P**	**07 24 15.0**	**-1.1**
KEST	**Kesra**	**63.96**	**298**	P	**P**	**07 24 19.5**	**+0.4**
	comp=Z,27nm,0.9s,baz=334,slow=1.7,SNR=16						
KEST	**Kesra**	**63.96**	**298**	P	**P**	**07 24 18.3**	**-0.7**
SSB	**Saint Sauveur**	**64.93**	**310**	P	**P**	**07 24 24.5**	**-0.7**
SSB				IAmb	IAmb	07 24 32.3	
	comp=Z,3.7nm,0.9s						
WB0	**Warramunga Arr**	**66.69**	**130**	P	**P**	**07 24 35.4**	**-1.4**
WRA	**Warramunga Arr**	**66.77**	**130**	P	P	07 24 33.5	-3.8
WRA				IAmb	IAmb	07 24 53.1	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**66.78**	**130**	P	**P**	**07 24 35.5**	**-1.9**
A21K	**Barrow**	**72.22**	**17**	P	**P**	**07 25 09.9**	**-0.3**
EUNU	**Eureka**	**72.37**	**359**	P	**P**	**07 25 10.7**	**-0.4**
EUNU				IAmb	IAmb	07 25 12.4	
	comp=Z,18nm

TAP 25 07:15:23.3, 23°.19N×121°.08E, h7km, ML1.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.06**	**273**	P	Pg	07 15 25.2	+0.2
	baz=271						
ELDTW				S	Sg	07 15 26.4	0.0
	baz=271						
FULB	**Fuli**	**0.19**	**86**	P	Pg	07 15 28.0	+0.8
	baz=79						
FULB				S	Sg	07 15 31.1	+1.3
	baz=79						
TWF1	**Yuli**	**0.26**	**50**	P	Pg	07 15 28.6	+0.2
	baz=51						
TWF1				eS	Sg	07 15 32.8	+0.9
	baz=51						
LONT	**Longtian**	**0.28**	**171**	eP	Pg	07 15 28.5	-0.3
	baz=171						
LONT				eS	Sg	07 15 33.1	+0.6
	baz=171						
STYH	**Taoyuan**	**0.28**	**267**	eP	Pg	07 15 29.3	+0.4
	baz=267						
STYH				S	Sg	07 15 33.7	+1.1
	baz=267						
YULB	**Yu-li**	**0.28**	**44**	P	Pg	07 15 28.8	-0.1
	baz=43						
YULB				S	Sg	07 15 32.7	0.0
	baz=43						
EDH	**Donghe**	**0.29**	**136**	eP	Pg	07 15 29.3	+0.3
	baz=145						
EDH				eS	Sg	07 15 34.1	+1.2
	baz=145						
YUS	**Yu-Shan**	**0.33**	**338**	P	Pg	07 15 30.4	+0.5
	baz=340						
YUS				S	Sg	07 15 34.9	+0.7
	baz=340						
TWG	**Pinlang**	**0.36**	**182**	eP	Pg	07 15 30.4	+0.1
	baz=180						
TWG				eS	Sg	07 15 34.7	-0.5
	baz=180						
TWGBT	**Beinan**	**0.37**	**180**	eP	Pg	07 15 30.2	-0.2
	baz=180						
HGSD	**Ruisui**	**0.44**	**46**	eP	Pg	07 15 32.1	+0.3
	baz=36						
HGSD				eS	Sg	07 15 38.8	+1.3
	baz=36						
VWDT	**VWDT**	**0.57**	**5**	eP	Pg	07 15 34.5	+0.2
	baz=5.0						
VWDT				eS	Sg	07 15 41.9	+0.3
	baz=5.0						
SSLB	**Suanglung**	**0.61**	**349**	eP	Pg	07 15 35.5	+0.5
	baz=349						
SSLB				eS	Sg	07 15 42.8	-0.2
	baz=349						

*IDC **25** 07:16:37.4±1.1, 27°.75N×84°.70E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.6/56, mbtmp4.0/8, ML4.1/1, Error ellipse: s-maj=41.0km s-min=20.8km az=66.0*

ISC 25 07:16:39.0±1.2, 27°.8N±0°.2×84°.7E±0°.2, h10km, n8, σ0°59/8, mb3.9/7, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.09**	**355**	P	**P**	**07 21 01.7**	**-0.1**
	0.5nm,0.3s,baz=180,slow=11,SNR=5.4						
KURBB	**Kurchatov Array**	**23.31**	**350**	P	**P**	**07 21 48.0**	**+1.0**
	2.4nm,0.9s,baz=166,slow=10,SNR=4.6						
ZALV	**Zalesovo Beam**	**26.16**	**0**	P	**P**	**07 22 12.5**	**-0.8**
	1.2nm,0.5s,baz=161,slow=14,SNR=2.2						
SONM	**Songino Array**	**26.20**	**34**	P	**P**	**07 22 14.1**	**+0.1**
	1.5nm,0.8s,baz=101,slow=8.1,SNR=2.5						
ARCES	**ARCESS Array B**	**53.61**	**338**	P	**P**	**07 25 60.0**	**-0.1**
	4.0nm,0.9s,baz=101,slow=8.1,SNR=2.5						
WRA	**Warramunga Arr**	**67.48**	**129**	P	**P**	**07 27 35.4**	**-0.1**
	0.6nm,0.4s,baz=322,slow=6.5,SNR=9.1						
ASAR	**Alice Springs**	**69.75**	**132**	P	**P**	**07 27 49.8**	**+0.2**
	1.4nm,0.7s,baz=328,slow=4.4,SNR=4.9						
TORD	**Torodi Ar. Bea**	**77.90**	**279**	P	**P**	**07 28 37.5**	**-0.1**
	0.8nm,0.8s,baz=56,slow=5.5,SNR=2.1						

*IDC **25** 07:16:53.6±0.6, 27°.70N×85°.60E, h0km, mb4.4/26, mb1 4.5/29, mb1mx4.3/56, mbtmp4.4/29, ML4.3/3, Error ellipse: s-maj=18.6km s-min=12.5km az=50.0*
*BJI **25** 07:16:54.4±0.0, 27°.91N×85°.36E, h5km, mB4.5/2, mb4.6/25*
*NEIC **25** 07:16:55.1±1.7, 27°.88N±0°.08×85°.68E±0°.01, h10km±1km, mb4.7/75, Error ellipse: s-maj=13.9km s-min=2.8km az=174.0*
*DMN **25** 07:16:55.9±0.1, 27°.82N×85°.71E, h10km, Ml5.3/5, Error ellipse: s-maj=4.3km s-min=1.3km az=12.0*

ISC 25 07:16:55.7±1.1, 27°.83N±0°.05×85°.64E±0°.03, h12km±7km, n192, σ1$21/196, mb4.7/71, 23C-9D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.32**	**264**	ePg	**Pb**	**07 17 03.5**	**0.0**
KKN				eSg	**Sb**	**07 17 08.7**	**0.0**
PKI	**Pulchoki**	**0.33**	**219**	ePg	**Pg**	**07 17 03.2**	**+0.8**
PKI				eSg	**Sg**	**07 17 08.3**	**+1.4**
	51μm,0.4s						
DMN	**Daman**	**0.52**	**246**	ePg	**Pb**	**07 17 07.2**	**+0.3**
DMN				eSg	**Sb**	**07 17 15.8**	**+1.3**
GKN	**Gorkha**	**0.91**	**282**	ePg	**Pn**	**07 17 14.6**	**+0.2**
GKN				eSg	**Sn**	**07 17 27.3**	**-0.2**
	9μm,0.3s						
DANN	**Dangsing**	**1.74**	**288**	ePg	**Pg**	**07 17 29.4**	**+0.3**
DANN				eSg	**Sg**	**07 17 53.3**	**+1.5**
	3μm,0.2s						
KOLN	**Koldanda**	**1.81**	**269**	ePg	**Pg**	**07 17 30.1**	**-0.3**
KOLN				eSg	**Sg**	**07 17 54.7**	**+0.8**
	6μm,0.3s						
ODAN	**Odare**	**1.83**	**121**	ePg	**Pb**	**07 17 29.2**	**0.0**
ODAN				eSg	**Sb**	**07 17 51.9**	**-0.3**
	4μm,0.4s						
TAPN	**Taplejung**	**1.90**	**104**	ePg	**Pg**	**07 17 30.7**	**-1.4**
TAPN				eSg	**Sb**	**07 17 54.3**	**+0.1**
	4μm,0.4s						
PYUN	**Piuthan**	**2.36**	**277**	eSg	**Sg**	**07 18 11.7**	**+0.1**
LSA	**Lhasa**	**5.18**	**68**	Pn	**Pn**	**07 18 13.5**	**0.0**
SHL	**Shillong**	**6.02**	**111**		**Pn**	**07 18 24.8**	**+0.1**
NDI	**New Delhi**	**7.48**	**279**	eS	**Sn**	**07 20 06.0**	**+0.1**
NDI	**New Delhi**	**7.48**	**279**	eP	**Pn**	**07 18 47.0**	**-0.1**
NIL	**Nilore**	**12.13**	**302**		**Pn**	**07 19 46.6**	**-1.8**
HYB	**Hyderabad**	**12.25**	**214**	iP	**Pn**	**07 19 47.0**	**-3.0**
CHTO	**Chiang Mai**	**15.15**	**123**	Pn	**Pn**	**07 20 29.1**	**-0.5**
CM31	**Chiang Mai Arr**	**15.37**	**125**	Pn	**Pn**	**07 20 29.5**	**-3.0**
CMAR	**Chiang Mai Arr**	**15.37**	**125**	Pn	**Pn**	**07 20 29.4**	**-3.2**
	0.4nm,0.3s,baz=308,slow=12,SNR=5.4						
KMI	**Kunming**	**15.55**	**96**	↑P	**P**	**07 20 42.0**	**+2.7**
KMI				sP	sP	07 20 44.8	0.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	**Kunming**	**15.55**	**96**	Pn	**Pn**	**07 20 32.9**	**-2.1**
KBL	**Kabul**	**15.69**	**299**	Pn	**Pn**	**07 20 34.9**	**-1.9**
KBL				lAmb	lAmb	07 20 44.2	
	comp=Z,69nm,0.9s						
PRZ	**Przheval'sk**	**15.77**	**340**	Pn	**Pn**	**07 20 37.2**	**-0.5**
KDJ	**Kajisay**	**15.85**	**336**	Pn	**Pn**	**07 20 35.5**	**-3.4**
WMQ	**Urumqi**	**16.05**	**5**	eP	**P**	**07 20 42.5**	**-2.1**
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	**Gaotai**	**16.50**	**42**	⇓P	**P**	**07 20 50.3**	**+0.6**
GTA				pP	sP	07 20 55.0	-0.3
GTA				sP	pP	07 20 57.8	+4.2
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
BOOM	**Boomskoye usch**	**16.62**	**334**	Pn	**Pn**	**07 20 46.7**	**-2.0**
AAK	**Ala-Archa**	**17.33**	**331**	P	**P**	**07 20 58.6**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=175,slow=10.0,SNR=4.4						
AAK	**Ala-Archa**	**17.33**	**331**	P	**Pn**	**07 20 55.9**	**-1.7**
LZH	**Lanzhou**	**17.49**	**57**	⇓P	**P**	**07 21 03.8**	**+3.1**
LZH				pP	sP	07 21 06.0	-0.6
LZH				sP	pP	07 21 08.3	+3.6
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA	**Guiyang**	**18.76**	**89**	⇓P	**Pn**	**07 21 19.0**	**+3.8**
GYA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TAS	**Tashkent**	**19.00**	**319**	P	**P**	**07 21 15.1**	**-2.0**
TAS				lAmb	lAmb	07 21 20.8	
	comp=Z,109nm,1.1s						
MK31	**Makanchi Array**	**19.12**	**353**	P	**P**	**07 21 16.0**	**-2.4**
MKAR	**Makanchi Array**	**19.12**	**353**	P	**Pn**	**07 21 19.5**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=179,slow=10,SNR=12						
MKAR	**Makanchi Array**	**19.12**	**353**	P	**P**	**07 21 17.9**	**-0.6**
MAKZ	**Makanchi**	**19.17**	**352**	P	**P**	**07 21 18.2**	**-0.8**
KK31	**Karatay Array**	**19.55**	**325**	P	**P**	**07 21 22.1**	**-1.2**
KKAR	**Karatay Array**	**19.55**	**325**	P	**P**	**07 21 21.8**	**-1.4**
KKAR	**Karatay Array**	**19.55**	**325**	P	**P**	**07 21 22.1**	**-1.2**
XAN	**Xi'an**	**20.89**	**67**	P	Pn	07 21 44.5	+4.1
XAN				pP	sP	07 21 47.5	+3.8
XAN				pmax	pmax		
	comp=Z,17nm,0.6s						
XAN	**Xi'an**	**20.89**	**67**	P	**P**	**07 21 36.3**	**-1.5**
XAN				lAmb	lAmb	07 21 48.4	
	comp=Z,12nm,0.5s						
ENH	**Enshi**	**20.98**	**78**	P	**P**	**07 21 37.3**	**-1.6**
ENH				lAmb	lAmb	07 21 51.9	
	comp=Z,17nm,0.6s						
HRA	**Herat**	**21.05**	**294**	P	**P**	**07 21 39.6**	**-0.2**
UBPT	**Khong Chiam**	**22.23**	**120**	P	**P**	**07 21 51.7**	**-0.7**
UBPT				lAmb	lAmb	07 22 09.7	
	comp=Z,20nm,1.1s						
SRIT	**Nakonsritamara**	**23.23**	**143**	P	**P**	**07 22 01.5**	**-1.4**
KURBB	**Kurchatov Arra**	**23.40**	**349**	P	**P**	**07 22 05.3**	**+1.1**
	comp=Z,4.5nm,0.6s,baz=171,slow=10,SNR=14						
KURK	**Kurchatov**	**23.48**	**349**	P	**P**	**07 22 05.3**	**+0.3**
WSAR	**Wadi Sarin**	**24.77**	**265**	P	**P**	**07 22 17.9**	**+0.4**
	comp=Z,4.1nm,0.6s,baz=238,slow=1.4,SNR=3.6						
LHMI	**Lhok Sumawe**	**24.91**	**152**	P	**P**	**07 22 20.4**	**+1.7**
HHC	**Hu-ho-hao-te**	**24.93**	**52**	eP	**P**	**07 22 21.8**	**+2.9**
HHC				pmax	pmax		
	comp=Z,36nm,0.9s						
GEYT	**Alibeck**	**25.14**	**301**	P	**P**	**07 22 21.2**	**+0.6**
	comp=Z,3.2nm,0.7s,baz=106,slow=4.7,SNR=3.4						
SONM	**Songino Array**	**25.70**	**33**	P	**P**	**07 22 26.8**	**+1.1**
	comp=Z,6.6nm,0.7s,baz=217,slow=10,SNR=9.9						
SONM	**Songino Array**	**25.70**	**33**	P	**P**	**07 22 26.6**	**+0.9**
SONM				lAmb	lAmb	07 22 33.5	
	comp=Z,9.2nm,0.8s						
ULN	**Ulaanbaatar**	**26.04**	**34**	P	**P**	**07 22 29.5**	**+0.6**
ULN				lAmb	lAmb	07 22 36.9	
	comp=Z,10nm,0.7s						
ZAA0	**Zalesovo Array**	**26.11**	**359**	P	**P**	**07 22 29.5**	**+0.3**
ZAA0				lAmb	lAmb	07 22 38.1	
	comp=Z,12nm,1.0s						
ZALV	**Zalesovo Beam**	**26.11**	**359**	P	**P**	**07 22 30.6**	**+1.4**
	comp=Z,2.6nm,0.3s,baz=185,slow=9.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**26.11**	**359**	P	**P**	**07 22 28.8**	**-0.4**
KULM	**Kulim**	**26.57**	**145**	P	**P**	**07 22 34.1**	**+0.4**
KULM				lAmb	lAmb	07 22 42.6	
	comp=Z,11nm,0.7s						
BVAR	**Borovoye Array**	**27.60**	**340**	P	**P**	**07 22 43.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=124,slow=2.1,SNR=3.1						
ABKAR	**Akbulak array**	**29.11**	**324**	P	**P**	**07 22 56.0**	**-0.1**
ABKAR				lAmb	lAmb	07 22 58.0	
	comp=Z,4.2nm,0.6s						
ABKAR	**Akbulak array**	**29.11**	**324**	P	**P**	**07 22 56.1**	**0.0**
AKTO	**Aktyubinsk**	**30.82**	**325**	P	**P**	**07 23 12.6**	**+1.3**
	comp=Z,2.4nm,0.6s,baz=162,slow=4.9,SNR=5.4						
SOCY	**Socotra**	**33.43**	**249**	P	**P**	**07 23 33.2**	**-1.4**
SOCY				lAmb	lAmb	07 23 45.6	
	comp=Z,4.3nm,0.8s						
ARU	**Arti**	**34.50**	**333**	P	**P**	**07 23 43.8**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=148,slow=9.1,SNR=4.2						
ARU	**Arti**	**34.50**	**333**	P	**P**	**07 23 43.5**	**+0.2**
ARU				lAmb	lAmb	07 23 50.4	
	comp=Z,8.7nm,0.8s						
CN2	**Changchun**	**35.62**	**53**	eP	P	07 23 57.5	+4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	**Korea Array**	**36.62**	**64**	P	**P**	**07 24 04.9**	**+3.1**
	comp=Z,2.3nm,0.6s,baz=263,slow=8.5,SNR=10						
AKH	**Akhalkalaki**	**36.88**	**303**	⇑P	**P**	**07 24 07.2**	**+2.9**
KIRV	**Kirov**	**39.67**	**331**	P	**P**	**07 24 26.7**	**-0.6**
	comp=Z,18nm,0.6s,baz=148,slow=4.7,SNR=5.4						
KLR	**Kul'dur**	**41.14**	**46**	P	**P**	**07 24 42.8**	**+3.2**
	comp=Z,1.3nm,0.6s,baz=276,slow=12,SNR=4.9						
GAZ	**Gaziantep**	**41.52**	**296**	P	**P**	**07 24 43.2**	**+0.2**
GAZ				lAmb	lAmb	07 24 45.2	
	comp=Z,12nm,1.0s						
NRIK	**Noril'sk**	**41.56**	**1**	P	**P**	**07 24 44.1**	**+1.3**
	comp=Z,7.4nm,0.7s,baz=169,slow=6.0,SNR=11						
NRIK	**Noril'sk**	**41.56**	**1**	P	**P**	**07 24 41.9**	**-0.9**
NRIK				lAmb	lAmb	07 24 55.1	
	comp=Z,12nm,0.8s						
JWT	**Wachi**	**42.69**	**67**	P	**P**	**07 24 52.3**	**-0.1**
MMAI	**Mount Meron Ar**	**43.30**	**290**	P	**P**	**07 24 58.8**	**+1.2**
	comp=Z,2.9nm,0.8s,baz=71,slow=5.5,SNR=4.0						
BR131	**Keskin Array S**	**44.27**	**299**	P	**P**	**07 25 05.0**	**-0.4**
BRTR	**Keskin Array B**	**44.27**	**299**	P	**P**	**07 25 04.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=123,slow=5.3,SNR=2.2						
OBN	**Obninsk**	**44.49**	**322**	P	**P**	**07 25 05.7**	**-0.9**
LUWI	**Luwuk**	**45.77**	**123**	P	**P**	**07 25 14.8**	**-2.6**
ELL	**Elmali**	**47.38**	**296**		**P**	**07 25 30.0**	**+0.1**
AKASG	**Malin Array Be**	**47.94**	**314**	P	**P**	**07 25 33.5**	**-0.4**
	comp=Z,7.2nm,0.6s,baz=78,slow=7.0,SNR=10						
AKASG	**Malin Array Be**	**47.94**	**314**	P	**P**	**07 25 33.5**	**-0.4**
AKBB	**Malin Array Si**	**47.94**	**314**	P	**P**	**07 25 32.9**	**-1.0**
AKBB				lAmb	lAmb	07 25 34.2	
	comp=Z,9.3nm,0.8s						
TPGR	**Topolog**	**48.13**	**307**	⇑P	**P**	**07 25 35.8**	**+0.3**
SORM	**Soroca**	**48.29**	**311**	⇑P	**P**	**07 25 36.4**	**-0.2**
CFR	**Carcaliu**	**48.34**	**307**	⇑P	**P**	**07 25 35.7**	**-1.3**
HARR	**Harsova**	**48.48**	**306**	⇑P	**P**	**07 25 39.2**	**+1.1**
RASA	**Rasa**	**49.04**	**306**	⇑P	P	07 25 50.6	+8.1
ODBI	**Odobesti**	**49.10**	**308**	⇑P	**P**	**07 25 45.0**	**+2.0**
VRI	**Vrincioaia**	**49.33**	**308**	⇑P	**P**	**07 25 45.9**	**+1.2**
PLOR	**Plostina**	**49.38**	**308**	⇑P	**P**	**07 25 46.5**	**+1.4**
NEHR	**Nehoiu**	**49.63**	**307**	⇑P	**P**	**07 25 48.7**	**+1.6**
BIZ	**Bicaz**	**49.77**	**309**	⇑P	**P**	**07 25 48.2**	**+0.2**
MLR	**Muntele Rosu**	**49.88**	**307**	⇓P	**P**	**07 25 50.6**	**+1.5**
MLR	**Muntele Rosu**	**49.88**	**307**	P	**P**	**07 25 49.0**	**0.0**
OZUR		**49.99**	**308**	⇑P	P	07 25 44.1	-5.6
DOPR	**Dopca**	**50.26**	**308**	⇑P	**P**	**07 25 51.9**	**+0.1**
IGN	**Ignalina**	**50.32**	**320**	eP	**P**	**07 25 50.5**	**0.0**
BURAR	**Bucovina Array**	**50.38**	**310**	⇑P	**P**	**07 25 53.3**	**+0.5**
BURAR	**Bucovina Array**	**50.38**	**310**	P	**P**	**07 25 52.8**	**0.0**
BURAR				lAmb	lAmb	07 25 54.2	
	comp=Z,5.4nm,0.8s						
BUR08	**Bucovina Ar. S**	**50.39**	**310**	P	**P**	**07 25 52.8**	**-0.1**
BUR08				lAmb	lAmb	07 25 55.5	
	comp=Z,6.5nm,1.1s						
ISAL	**Salakas**	**50.41**	**321**	eP	**P**	**07 25 50.6**	**-0.5**
VSU	**Vasula**	**50.55**	**324**	eP	**P**	**07 25 52.3**	**+0.5**
ARR	**Arges**	**50.81**	**307**	⇓P	**P**	**07 25 55.7**	**-0.3**
ARCR	**ARCALIA**	**50.97**	**310**	⇓P	**P**	**07 25 58.5**	**+1.4**
SANT	**Santorini**	**50.98**	**296**	P	**P**	**07 25 56.8**	**-0.6**
FIA1	**FINESS Array S**	**51.48**	**328**	P	**P**	**07 26 00.9**	**+0.3**
FINES	**FINESS Array B**	**51.48**	**328**	P	**P**	**07 26 00.8**	**+0.1**
	comp=Z,7.9nm,0.7s,baz=101,slow=9.9,SNR=12						
FINES	**FINESS Array B**	**51.48**	**328**	P	**P**	**07 26 00.7**	**0.0**
IDI	**Anoyia**	**51.61**	**294**	⇑P	**P**	**07 25 58.7**	**-3.5**
IDI	**Anoyia**	**51.61**	**294**	P	**P**	**07 26 02.3**	**+0.1**
IDI				lAmb	lAmb	07 26 19.0	
	comp=Z,9.8nm,1.0s						
PABE	**Paberze**	**51.62**	**320**	eP	**P**	**07 26 00.1**	**-0.2**
PABE	**Paberze**	**51.62**	**320**	P	**P**	**07 26 01.9**	**+0.1**
VTS	**Vitosha**	**51.97**	**304**	⇑P	**P**	**07 26 05.6**	**+0.7**
DEV	**Deva**	**52.00**	**308**	⇑P	**P**	**07 26 06.0**	**+1.2**
DRGR		**52.10**	**309**	⇑P	**P**	**07 26 06.4**	**+0.8**
MTSE	**Matsula**	**52.10**	**324**	eP	**P**	**07 26 02.1**	**-1.5**
SLIT	**Slitere, Latvi**	**52.76**	**323**	eP	**P**	**07 26 09.3**	**+0.6**
SIRR	**Siria**	**52.85**	**309**	⇑P	**P**	**07 26 12.4**	**+1.2**
MDVR	**Moldovita**	**52.90**	**307**	⇓P	**P**	**07 26 12.2**	**+0.6**
AGG	**Agios Georgios**	**53.05**	**299**	P	**P**	**07 26 11.8**	**-1.0**
AGG				lAmb	lAmb	07 26 12.1	
	comp=Z,10nm,0.9s						
KEV	**Kevo**	**53.43**	**338**	P	**P**	**07 26 15.4**	**+0.4**
KEV				lAmb	lAmb	07 26 29.5	
	comp=Z,13nm,0.9s						
ITM	**Ithomi**	**53.65**	**297**	P	**P**	**07 26 15.9**	**-1.4**
ITM				lAmb	lAmb	07 26 19.9	
	comp=Z,21nm,1.2s						
ARCES	**ARCESS Array B**	**53.86**	**338**	P	**P**	**07 26 18.9**	**+0.7**
	comp=Z,10nm,0.7s,baz=90,slow=7.3,SNR=15						
PSZ	**Piszkesteto**	**53.96**	**311**	⇑P	**P**	**07 26 19.9**	**+0.5**
PDG	**Podgorica**	**54.91**	**304**	⇑P	**P**	**07 26 25.8**	**-0.5**
MORH	**Mrgy, Hungar**	**54.94**	**309**	⇓P	**P**	**07 26 25.8**	**-0.6**
UPP	**Uppsala**	**55.38**	**325**	eP	**P**	**07 26 28.5**	**+0.8**
KRLC	**Kraliky**	**55.88**	**313**	eP	**P**	**07 26 33.4**	**+0.2**
VRAC	**Vranov**	**56.06**	**313**	⇑P	**P**	**07 26 35.0**	**+0.6**
DPC	**Dobruska-Polom**	**56.16**	**314**	eP	**P**	**07 26 35.6**	**+0.4**
CONA	**Conrad Observa**	**56.67**	**311**	iP	**P**	**07 26 39.3**	**+0.3**
	comp=Z,8.3nm,0.7s,SNR=4.9						
PRU	**Pruhonice**	**57.33**	**313**	eP	**P**	**07 26 43.7**	**+0.3**
SOKA	**Soboth**	**57.37**	**310**	eP	**P**	**07 26 44.5**	**+0.6**
	comp=Z,4.9nm,0.5s,SNR=7.0						
GERES	**GERESS Array B**	**58.00**	**312**	P	**P**	**07 26 48.3**	**0.0**
	comp=Z,2.4nm,0.5s,baz=80,slow=6.9,SNR=13						
GERES	**GERESS Array B**	**58.00**	**312**	P	**P**	**07 26 48.5**	**+0.3**
KHC	**Kasperske Hory**	**58.04**	**313**	eP	**P**	**07 26 48.6**	**+0.1**
CLL	**Colm**	**58.17**	**315**	iP	**P**	**07 26 49.3**	**0.0**
NOA	**NORSAR Array B**	**58.58**	**327**	P	**P**	**07 26 51.2**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=88,slow=7.1,SNR=8.7						
SPA0	**Spitsbergen Ar**	**58.74**	**347**	P	**P**	**07 26 53.2**	**+0.3**
SPA0				lAmb	lAmb	07 27 09.3	
	comp=Z,15nm,1.1s						
STAL	**STALIGIAL**	**59.02**	**309**	P	**P**	**07 26 54.7**	**-0.7**
MURB	**Monte Urbino**	**59.67**	**306**	P	**P**	**07 27 00.5**	**+0.5**
CTI	**Castel Tesino**	**59.78**	**309**	P	**P**	**07 27 00.6**	**-0.2**
CTI				lAmb	lAmb	07 27 00.9	
	comp=Z,7.2nm,0.7s						
FITZ	**Fitzroy Crossi**	**59.87**	**135**	P	**P**	**07 27 03.1**	**+1.6**
FITZ				lAmb	lAmb	07 27 21.9	
	comp=Z,5.7nm,1.1s						
SQTA	**Sankt Quirin**	**59.88**	**311**	iP	**P**	**07 27 00.6**	**-0.9**
	comp=Z,9.2nm,0.5s						
TEOL	**Teolo**	**59.89**	**308**	P	**P**	**07 27 00.7**	**-0.7**
MOTA	**Moosalm**	**59.93**	**311**	iP	**P**	**07 27 01.3**	**-0.5**
	comp=Z,12nm,0.7s						
KNRA	**Kununurra**	**60.13**	**131**	P	**P**	**07 27 04.1**	**+0.8**
KNRA				lAmb	lAmb	07 27 10.9	
	comp=Z,12nm,1.0s						
RETA	**Reutte**	**60.14**	**311**	eP	**P**	**07 27 02.9**	**-0.2**
	comp=Z,11nm,1.2s						
CORL	**Corleone**	**60.22**	**300**	P	**P**	**07 27 03.1**	**-0.8**
CORL				lAmb	lAmb	07 27 15.0	
	comp=Z,9.9nm,0.9s						
FETA	**Feichten**	**60.24**	**310**	iP	**P**	**07 27 03.0**	**-1.0**
	comp=Z,4.0nm,0.6s,SNR=4.7						
DAVA	**Damuels**	**60.76**	**311**	iP	**P**	**07 27 06.9**	**-0.7**
	comp=Z,14nm,0.7s,SNR=6.8						
TUE	**Stuetta**	**61.27**	**310**	P	**P**	**07 27 10.5**	**-0.5**
TUE				lAmb	lAmb	07 27 12.2	
	comp=Z,11nm,0.9s						
MSSA	**Maissana**	**61.59**	**308**	P	**P**	**07 27 12.4**	**-0.7**
ECH	**Echery**	**62.39**	**312**	P	**P**	**07 27 17.7**	**-0.7**
ECH				lAmb	lAmb	07 27 28.6	
	comp=Z,5.0nm,1.0s						
MEM	**Membach**	**62.65**	**315**	dP	**P**	**07 27 20.1**	**+0.2**
SENIN	**Lac Senin/Sane**	**62.68**	**310**	P	**P**	**07 27 20.6**	**0.0**
BNI	**Bardonecchia**	**63.40**	**309**	P	**P**	**07 27 24.6**	**-0.7**
BNI				lAmb	lAmb	07 27 38.6	
	comp=Z,6.4nm,0.8s						
MORW	**Morawa**	**63.62**	**150**	P	**P**	**07 27 28.6**	**+2.0**
KEST	**Kesra**	**63.85**	**298**	P	**P**	**07 27 28.9**	**+0.6**
	comp=Z,23nm,0.9s,baz=179,slow=2.1,SNR=15						
KEST	**Kesra**	**63.85**	**298**	P	**P**	**07 27 28.6**	**+0.2**
WB0	**Warramunga Arr**	**66.81**	**130**	P	**P**	**07 27 47.0**	**-0.5**
WRA	**Warramunga Arr**	**66.89**	**130**	P	**P**	**07 27 47.3**	**-0.7**
	comp=Z,6.5nm,0.7s,baz=323,slow=6.7,SNR=20						
WRAB	**Tennant Creek**	**66.89**	**130**	P	**P**	**07 27 47.8**	**-0.2**
WR0	**Warramunga Arr**	**67.04**	**130**	P	**P**	**07 27 49.0**	**+0.1**
WR0				lAmb	lAmb	07 27 53.4	
	comp=Z,6.9nm,0.8s						
DBG	**Daneborg**	**67.61**	**344**	iP	**P**	**07 27 51.6**	**-0.1**
DBG				lAmb	lAmb	07 27 58.8	
	comp=Z,3.2nm,0.8s						
AS31	**Alice Springs**	**69.19**	**133**	P	**P**	**07 28 02.6**	**+0.1**
AS31				lAmb	lAmb	07 28 07.4	
	comp=Z,2.0nm,0.6s						
ASAR	**Alice Springs**	**69.19**	**133**	P	**P**	**07 28 02.3**	**-0.1**
	comp=Z,5.4nm,0.7s,baz=315,slow=6.3,SNR=24						
NEEM	**North Greenlan**	**71.82**	**351**	iP	**P**	**07 28 18.1**	**+0.1**
NEEM				lAmb	lAmb	07 28 22.2	
	comp=Z,9.5nm,0.9s						
EUNU	**Eureka**	**72.26**	**359**	P	**P**	**07 28 21.1**	**+0.7**
EUNU				lAmb	lAmb	07 28 32.7	
	comp=Z,4.5nm,1.1s						
ESDC	**Sonseca Array**	**72.54**	**306**	P	**P**	**07 28 23.1**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=56,slow=

comp=Z,6.7nm,1.1s
MKAR Makanchi Array 19.14 353 P **Pn** 07 24 49.1 -0.1
comp=Z,0.5nm,0.3s,baz=178,slow=11,SNR=5.0
MKAR Makanchi Array 19.14 353 P **P** 07 24 47.9 -0.5
KKAR Karatay Array 19.50 325 P **P** 07 24 49.9 -2.5
SONM Songino Array 25.81 34 P **P** 07 25 57.9 +1.6
comp=Z,1.4nm,0.6s,baz=224,slow=8.1,SNR=2.2
SONM Songino Array 25.81 34 P **P** 07 25 56.3 -0.1
KULM Kulim 26.62 144 P **P** 07 26 02.8 -1.0
KULM IAmb IAmb 07 26 04.1
comp=Z,3.3nm,0.8s
ABKAR Akbulak array 29.06 324 P **P** 07 26 24.2 -1.2
ABKAR IAmb IAmb 07 26 31.1
comp=Z,3.1nm,0.9s
TPUB Ta-pu 31.96 90 P **P** 07 26 51.6 +0.3
KSAR Wonju Array Be 36.73 64 P **P** 07 27 34.1 +1.6
MDJ Mudanjiang 38.84 52 P **P** 07 27 52.1 +1.9
MDJ IAmb IAmb 07 27 53.4
comp=Z,2.8nm,0.8s
MLR Muntele Rosu 49.79 307 P **P** 07 29 16.7 -1.3
MLR IAmb IAmb 07 29 20.0
comp=Z,1.4nm,0.7s
BURAR Bucovina Array 50.30 310 P **P** 07 29 21.6 -0.1
FINES FINESS Array B 51.44 328 P **P** 07 29 30.2 +0.2
comp=Z,0.8nm,0.5s,baz=111,slow=7.3,SNR=4.5
SOEI Soe 52.94 129 P **P** 07 29 42.2 +0.3
ARCES ARCESS Array B 53.84 338 P **P** 07 29 48.1 +0.4
comp=Z,1.0nm,0.3s,baz=103,slow=7.8,SNR=13
DIVS Divibare 54.10 306 P **P** 07 29 48.3 -1.8
DIVS IAmb IAmb 07 29 58.4
comp=Z,1.2nm,0.6s
NC405 NORSAR Array S 58.29 327 P **P** 07 30 18.8 -0.8
NOA NORSAR Array B 58.53 327 P **P** 07 30 20.8 -0.5
comp=Z,0.3nm,0.5s,baz=84,slow=8.1,SNR=1.5
ZOU Zoufplan 58.71 310 P **P** 07 30 22.1 -0.9
TUE Stuetta 61.19 310 P **P** 07 30 38.6 -1.5
TUE IAmb IAmb 07 30 49.1
comp=Z,0.8nm,0.7s
BFO Black Forest 61.52 312 P **P** 07 30 40.9 -1.2
BFO IAmb IAmb 07 30 57.7
comp=Z,1.4nm,0.7s
WLF Walferdange 62.67 314 P **P** 07 30 48.3 -1.4
WRA Warramunga Arr 66.97 130 P **P** 07 31 19.6 +1.5
comp=Z,0.5nm,0.7s,baz=320,slow=6.4,SNR=1.5
ASAR Alice Springs 69.27 133 P **P** 07 31 34.2 +1.7
comp=Z,0.3nm,0.6s,baz=314,slow=5.9,SNR=1.5
TORD Torodi Ar. Bea 78.56 279 P **P** 07 32 27.4 +0.1
comp=Z,0.2nm,0.6s,baz=55,slow=5.5,SNR=1.3
CPUP Villa Florida 146.93 264 PKPdf **PKPdf** 07 40 04.0 -2.2

*IDC **25** 07:21:59.4± 1.2, 27.81N× 86.04E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.4/58, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=42.5km s-min=23.4km az=60.0*
ISC 25 07:22:02.4± 1.2, 27.8N± 0.2× 86.0E± 0.2, h19km, n8, σ 0.96/8, mb3.5/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.15**	**352**	P		**P**	**P**	**07 26 23.4**	**-1.2**
	0.1nm,0.3s,baz=180,slow=11,SNR=1.9								
KURBB	**Kurchatov Arra**	**23.46**	**348**	P		**P**	**P**	**07 27 09.9**	**-0.7**
	0.4nm,0.6s,baz=164,slow=11,SNR=1.8								
SONM	**Songino Array**	**25.49**	**33**	P		**P**	**P**	**07 27 29.7**	**+0.2**
	0.6nm,0.4s,baz=235,slow=10,SNR=2.0								
FINES	**FINESS Array B**	**51.66**	**328**	P		**P**	**P**	**07 31 08.3**	**+0.6**
	0.7nm,0.7s,baz=111,slow=15,SNR=1.0								
ARCES	**ARCESS Array B**	**53.98**	**338**	P		**P**	**P**	**07 31 26.1**	**+1.4**
	1.3nm,0.7s,baz=104,slow=7.8,SNR=1.0								
WRA	**Warramunga Arr**	**66.62**	**130**	P		**P**	**P**	**07 32 51.5**	**-0.4**
	0.3nm,0.7s,baz=323,slow=6.5,SNR=1.4								
ASAR	**Alice Springs**	**68.94**	**133**	P		**P**	**P**	**07 33 06.8**	**+0.3**
	0.2nm,0.6s,baz=309,slow=5.9,SNR=1.5								
TORD	**Torodi Ar. Bea**	**79.05**	**279**	P		**P**	**P**	**07 34 05.5**	**-0.4**
	0.3nm,0.6s,baz=65,slow=3.3,SNR=1.6								

*IDC **25** 07:22:31.8± 1.4, 27.99N× 85.32E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.4/58, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=64.6km s-min=32.3km az=49.0*
*DMN **25** 07:22:34.0± 0.1, 27.69N× 85.27E, h10km, Ml4.7/3, Error ellipse: s-maj=3.1km s-min=2.1km az=22.0*
ISC 25 07:22:33.7± 0.9, 27.72N± 0.06× 85.27E± 0.04, h14km± 5km, n12, σ 1§31/17, mb3.8/4, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.07**	**10**	*e*Pg		**Pg**	**Pg**	**07 22 37.1**	**+0.2**
KKN				*e*Sg		**Sg**	**Sg**	**07 22 39.3**	**+0.3**
DMN	**Daman**	**0.18**	**232**	*e*Pg		**Pg**	**Pg**	**07 22 38.1**	**-0.1**
DMN				*e*Sg		**Sg**	**Sg**	**07 22 41.0**	**-0.2**
PKI	**Pulchoki**	**0.20**	**139**	*e*Pg		**Pg**	**Pg**	**07 22 38.5**	**0.0**
PKI				*e*Sg		**Sg**	**Sg**	**07 22 40.9**	**-0.8**
GKN	**Gorkha**	**0.62**	**297**	*e*Sg		**Sb**	**Sb**	**07 22 55.0**	**-0.2**
	2µm,0.3s								
DANN	**Dangsing**	**1.47**	**296**	*e*Sg		**Sn**	**Sn**	**07 23 21.8**	**+2.4**
	530nm,0.2s								
KOLN	**Koldanda**	**1.48**	**272**	*e*Pg		**Pb**	**Pb**	**07 23 01.5**	**+0.4**
KOLN				*e*Sg		**Sg**	**Sg**	**07 23 21.1**	**-0.3**
	954nm,0.2s								
PYUN	**Piuthan**	**2.05**	**281**	*e*Pg		**Pg**	**Pg**	**07 23 12.2**	**-0.9**
PYUN				*e*Sg		**Sg**	**Sg**	**07 23 40.0**	**+0.3**
	1µm,0.3s								
MKAR	**Makanchi Array**	**19.18**	**354**	P		**P**	**P**	**07 26 54.5**	**-2.5**
	0.2nm,0.3s,baz=176,slow=11,SNR=3.7								
GERES	**GERESS Array B**	**57.82**	**312**	P		**P**	**P**	**07 32 22.6**	**-2.2**
	0.3nm,0.2s,baz=83,slow=5.5,SNR=6.0								
ASAR	**Alice Springs**	**69.36**	**133**	P		**P**	**P**	**07 33 42.4**	**+1.1**
	0.7nm,0.8s,baz=314,slow=5.9,SNR=2.0								
ESDC	**Sonseca Array**	**72.34**	**306**	P		**P**	**P**	**07 34 00.7**	**+1.4**
	0.8nm,1.0s,baz=78,slow=5.4,SNR=2.5								
TORD	**Torodi Ar. Bea**	**78.39**	**279**	P		**P**	**P**	**07 34 34.9**	**+0.5**
	0.4nm,0.6s,baz=48,slow=4.6,SNR=2.2								

*IDC **25** 07:22:53.9± 1.1, 27.82N× 85.75E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.6/59, mbtmp3.8/9, ML4.0/1, Error ellipse: s-maj=43.0km s-min=21.0km az=58.0*
*NEIC **25** 07:22:55.7± 1.8, 27.89N± 0.08× 85.85E± 0.07, h10km± 1km, mb4.2/15, Error ellipse: s-maj=13.1km s-min=9.6km az=190.0*
ISC 25 07:22:55.2± 0.7, 27.9N± 0.1× 85.85E± 0.09, h10km, n28, σ 1§31/27, mb4.0/15, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.50**	**102**	*ex*		**Sn**	**Sn**	**07 24 03.0**	**-3.7**
NIL	**Nilore**	**12.28**	**301**	Pn		**Pn**	**Pn**	**07 25 48.4**	**-1.9**
MK31	**Makanchi Array**	**19.12**	**353**	P		**P**	**P**	**07 27 19.7**	**+0.6**
MKAR	**Makanchi Array**	**19.12**	**353**	P		**Pn**	**P**	**07 27 19.7**	**+0.5**
	0.4nm,0.3s,baz=179,slow=10,SNR=5.2								
MAKZ	**Makanchi**	**19.17**	**352**	P		**Pn**	**P**	**07 27 20.6**	**+0.8**
KURBB	**Kurchatov Arra**	**23.42**	**348**	P		**P**	**P**	**07 28 05.4**	**+1.1**
	0.9nm,0.5s,baz=167,slow=10,SNR=5.9								
KURK	**Kurchatov**	**23.49**	**348**	P		**P**	**P**	**07 28 05.4**	**+0.4**
KULM	**Kulim**	**26.48**	**145**	P		**P**	**P**	**07 28 33.1**	**+0.2**
KULM				IAmb		IAmb	IAmb	07 28 36.4	
	comp=Z,2.4nm,0.7s								
TWG	**Pinlang**	**32.15**	**91**	P		**P**	**P**	**07 29 23.0**	**-0.2**
SBUM	**Sibu**	**35.67**	**130**	P		**P**	**P**	**07 29 54.8**	**+0.9**
SBUM				IAmb		IAmb	IAmb	07 30 06.2	
	comp=Z,3.0nm,0.7s								
MDJ	**Mudanjiang**	**38.54**	**52**	P		**P**	**P**	**07 30 18.9**	**+0.9**
MDJ				IAmb		IAmb	IAmb	07 30 27.6	
	comp=Z,2.2nm,0.5s								
AKASG	**Malin Array Be**	**48.06**	**314**	P		**P**	**P**	**07 31 33.5**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=83,slow=6.5,SNR=1.0								
TIXI	**Tiksi**	**49.77**	**16**	P		**P**	**P**	**07 31 46.6**	**-1.0**
	comp=Z,3.9nm,0.9s,baz=246,slow=0.9,SNR=8.4								
TIXI	**Tiksi**	**49.77**	**16**	IAmb		IAmb	IAmb	07 31 48.3	
	comp=Z,7.2nm,1.1s								
BUR08	**Bucovina Ar. S**	**50.52**	**310**	P		**P**	**P**	**07 31 54.2**	**+0.4**
FINES	**FINESS Array B**	**51.56**	**328**	P		**P**	**P**	**07 32 01.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=128,slow=9.0,SNR=1.6								
IDI	**Anoyia**	**51.77**	**294**	P		**P**	**P**	**07 32 02.1**	**-1.2**
ARCES	**ARCESS Array B**	**53.91**	**338**	P		**P**	**P**	**07 32 19.4**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=101,slow=8.3,SNR=1.7								
PSZ	**Piszkesteto**	**54.09**	**311**	P		**P**	**P**	**07 32 20.5**	**+0.3**
PSZ				IAmb		IAmb	IAmb	07 32 22.0	
	comp=Z,1.7nm,0.8s								
MSSA	**Maissana**	**61.73**	**308**	P		**P**	**P**	**07 33 13.7**	**-0.2**
MSSA				IAmb		IAmb	IAmb	07 33 17.3	
	comp=Z,5.3nm,1.1s								
WB0	**Warramunga Arr**	**66.68**	**130**	P		**P**	**P**	**07 33 48.1**	**+1.6**
WB0				IAmb		IAmb	IAmb	07 33 50.9	
	comp=Z,0.5nm,0.7s								
WRA	**Warramunga Arr**	**66.76**	**130**	P		**P**	**P**	**07 33 47.8**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=322,slow=6.3,SNR=5.6								
WB2	**Warramunga Ar**	**66.77**	**130**	P		**P**	**P**	**07 33 48.4**	**+1.3**
WB2				IAmb		IAmb	IAmb	07 34 03.4	
	comp=Z,0.8nm,0.8s								
ASAR	**Alice Springs**	**69.07**	**133**	P		**P**	**P**	**07 34 02.8**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=318,slow=6.5,SNR=1.8								
SUMG	**Summit**	**72.98**	**345**	P		**P**	**P**	**07 34 25.1**	**0.0**
TRF	**Thorofare Moun**	**78.85**	**22**	P		**P**	**P**	**07 34 57.2**	**-1.3**
TORD	**Torodi Ar. Bea**	**78.88**	**279**	P		**P**	**P**	**07 34 58.8**	**-0.5**
	comp=Z,0.4nm,1.0s,baz=57,slow=4.3,SNR=1.8								
MCK	**McKinley**	**79.11**	**22**	P		**P**	**P**	**07 35 02.3**	**+2.6**

*IDC **25** 07:23:37.3± 0.7, 27.83N× 85.81E, h0km, mb4.2/20, mb1 4.3/22, mb1mx4.0/60, mbtmp4.2/22, ML4.4/2, Error ellipse: s-maj=21.0km s-min=15.6km az=49.0*
*NEIC **25** 07:23:38.5± 1.5, 27.8N± 0.1× 85.89E± 0.05, h10km± 1km, mb4.4/37, Error ellipse: s-maj=17.4km s-min=6.6km az=172.0*
*DMN **25** 07:23:38.5± 0.4, 27.96N× 85.90E, h10km, Ml5.1/3, Error ellipse: s-maj=8.4km s-min=4.7km az=12.0*
ISC 25 07:23:38.1± 1.3, 27.82N± 0.06× 85.90E± 0.05, h8km± 7km, n79, σ 0§90/80, mb4.3/32, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.09**	**352**	*e*Pg		**Pg**	**Pg**	**07 23 41.1**	**+0.4**
PKI	**Pulchoki**	**0.50**	**240**	*e*Pg		**Pg**	**Pb**	**07 23 50.1**	**+0.8**
PKI				*e*Sg		**Sg**	**Sb**	**07 23 57.5**	**+0.6**
	9µm,0.4s								
KKN	**Kakani**	**0.55**	**267**	*e*Pg		**Pg**	**Pg**	**07 23 49.3**	**+0.6**
KKN				*e*Sg		**Sg**	**Sg**	**07 23 56.6**	**+0.7**
	8µm,0.2s								
DMN	**Daman**	**0.73**	**254**	*e*Pg		**Pg**	**Pb**	**07 23 54.1**	**+0.8**
DMN				*e*Sg		**Sg**	**Sb**	**07 24 04.1**	**+0.5**
	6µm,0.4s								
DANN	**Dangsing**	**1.96**	**286**	*e*Sg		**Sb**		**07 24 40.0**	**+1.0**
	2µm,0.7s								
KOLN	**Koldanda**	**2.03**	**269**	*e*Sg		**Sg**	**Sg**	**07 24 43.5**	**0.0**
	6µm,0.5s								
PYUN	**Piuthan**	**2.58**	**277**	*e*Sg		**Sg**	**Sg**	**07 24 59.4**	**-1.8**
	4µm,0.4s								
SHL	**Shillong**	**5.81**	**111**	Pn		**Pn**	**Pn**	**07 25 02.1**	**-2.7**
NIL	**Nilore**	**12.33**	**301**	Pn		**Pn**	**Pn**	**07 26 32.1**	**-1.9**
CMAR	**Chiang Mai Arr**	**15.18**	**125**	Pn		**Pn**	**Pn**	**07 27 14.1**	**+1.1**
	0.9nm,0.3s,baz=295,slow=11,SNR=4.9								
KBL	**Kabul**	**15.89**	**299**	Pn		**Pn**	**Pn**	**07 27 20.9**	**-1.6**
KBL				IAmb		IAmb	IAmb	07 27 27.7	
	comp=Z,16nm,0.7s								
KDJ	**Kajisay**	**15.95**	**336**	Pn		**Pn**	**Pn**	**07 27 23.1**	**-0.1**
KDJ				IAmb		IAmb	IAmb	07 27 30.6	
	comp=Z,13nm,0.8s								
AAK	**Ala-Archa**	**17.45**	**331**	P		**P**	**P**	**07 27 43.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=157,slow=4.4,SNR=4.2								
AAK	**Ala-Archa**	**17.45**	**331**	P		**Pn**	**P**	**07 27 41.3**	**-0.7**
FRU1	**Bishkek**	**17.53**	**331**	P		**Pn**	**P**	**07 27 42.6**	**-0.4**
MK31	**Makanchi Array**	**19.15**	**352**	P		**Pn**	**P**	**07 28 02.3**	**-0.5**
MKAR	**Makanchi Array**	**19.15**	**352**	P		**Pn**	**P**	**07 28 02.3**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=172,slow=12,SNR=13								
MKAR	**Makanchi Array**	**19.15**	**352**	P		**P**	**P**	**07 28 01.8**	**-0.1**
MAKZ	**Makanchi**	**19.21**	**352**	P		**Pn**	**P**	**07 28 03.2**	**-0.2**
KK31	**Karatay Array**	**19.69**	**325**	P		**P**	**P**	**07 28 06.8**	**-1.0**
KKAR	**Karatay Array**	**19.69**	**325**	P		**P**	**P**	**07 28 07.3**	**-0.5**
KKAR	**Karatay Array**	**19.69**	**325**	P		**P**	**P**	**07 28 06.8**	**-1.0**
KKAR				IAmb		IAmb	IAmb	07 28 09.7	
	comp=Z,6.9nm,1.1s								
KURBB	**Kurchatov Arra**	**23.45**	**348**	P		**P**	**P**	**07 28 48.3**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=166,slow=9.8,SNR=14								
GEYT	**Alibeck**	**25.33**	**301**	P		**P**	**P**	**07 29 06.9**	**+1.3**
	comp=Z,3.1nm,0.7s,baz=128,slow=9.6,SNR=4.6								
GYA0B	**ALIBECK ARRAY**	**25.33**	**301**	P		**P**	**P**	**07 29 05.8**	**+0.3**
SONM	**Songino Array**	**25.58**	**33**	P		**P**	**P**	**07 29 09.2**	**+1.4**
	comp=Z,8.8nm,0.7s,baz=213,slow=10,SNR=14								
SONM	**Songino Array**	**25.58**	**33**	P		**P**	**P**	**07 29 09.0**	**+1.2**
SONM				IAmb		IAmb	IAmb	07 29 12.1	
	comp=Z,6.7nm,0.8s								
ULN	**Ulaanbaatar**	**25.92**	**34**	P		**P**	**P**	**07 29 11.4**	**+0.4**
ULN				IAmb		IAmb	IAmb	07 29 14.7	
	comp=Z,8.5nm,0.8s								
ZAA0	**Zalesovo Array**	**26.12**	**359**	P		**P**	**P**	**07 29 12.7**	**+0.2**
ZAA0				IAmb		IAmb	IAmb	07 29 15.4	
	comp=Z,4.2nm,0.9s								
ZALV	**Zalesovo Beam**	**26.12**	**359**	P		**P**	**P**	**07 29 13.4**	**+0.9**
	comp=Z,2.1nm,0.5s,baz=178,slow=9.3,SNR=5.6								
ZALV	**Zalesovo Beam**	**26.12**	**359**	P		**P**	**P**	**07 29 12.0**	**-0.5**
ABKAR	**Akbulak array**	**29.25**	**324**	P		**P**	**P**	**07 29 41.3**	**+0.7**
ABKAR	**Akbulak array**	**29.25**	**324**	P		**P**	**P**	**07 29 41.3**	**+0.7**
ABKAR				IAmb		IAmb	IAmb	07 29 49.2	
	comp=Z,0.4nm,0.5s								
SOCY	**Socotra**	**33.64**	**249**	P		**P**	**P**	**07 30 16.4**	**-3.2**
SOCY				IAmb		IAmb	IAmb	07 30 25.5	
	comp=Z,3.4nm,0.9s								
ARU	**Arti**	**34.60**	**333**	P		**P**	**P**	**07 30 27.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=169,slow=4.5,SNR=4.5								
ARU	**Arti**	**34.60**	**333**	IAmb		IAmb	IAmb	07 30 28.3	
	comp=Z,4.0nm,0.5s								
INCN	**Inchon**	**35.40**	**64**	P		**P**	**P**	**07 30 34.2**	**-0.4**
NRIK	**Noril'sk**	**41.56**	**1**	P		**P**	**P**	**07 31 26.5**	**+0.6**
	comp=Z,6.5nm,0.7s,baz=154,slow=6.1,SNR=12								
NRIK	**Noril'sk**	**41.56**	**1**	IAmb		IAmb	IAmb	07 31 27.5	
	comp=Z,6.6nm,0.7s								
ELL	**Elmali**	**47.59**	**296**	P		**P**	**P**	**07 32 14.7**	**0.0**
AKASG	**Malin Array Be**	**48.11**	**314**	P		**P**	**P**	**07 32 17.8**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=81,slow=6.9,SNR=7.4								
TIXI	**Tiksi**	**49.79**	**16**	P		**P**	**P**	**07 32 30.8**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=240,slow=3.9,SNR=5.8								
TIXI	**Tiksi**	**49.79**	**16**	P		**P**	**P**	**07 32 31.0**	**0.0**
TIXI				IAmb		IAmb	IAmb	07 32 31.6	
	comp=Z,2.8nm,0.7s								
MLR	**Muntele Rosu**	**50.06**	**307**	P		**P**	**P**	**07 32 35.3**	**+1.7**
BURAR	**Bucovina Array**	**50.56**	**310**	P		**P**	**P**	**07 32 36.8**	**-0.5**
BURAR				IAmb		IAmb	IAmb	07 32 38.1	
	comp=Z,1.8nm,0.7s								
BUR08	**Bucovina Ar. S**	**50.57**	**310**	P		**P**	**P**	**07 32 37.2**	**-0.2**
FIA1	**FINESS Array S**	**51.60**	**328**	P		**P**	**P**	**07 32 44.8**	**0.0**
FIA1				IAmb		IAmb	IAmb	07 33 00.1	
	comp=Z,3.3nm,1.1s								
FINES	**FINESS Array B**	**51.60**	**328**	P		**P**	**P**	**07 32 44.7**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=102,slow=7.6,SNR=9.8								
ARCES	**ARCESS Array B**	**53.95**	**338**	P		**P**	**P**	**07 33 02.2**	**+0.2**
	comp=Z,7.4nm,0.8s,baz=91,slow=7.9,SNR=7.9								
ARCES	**ARCESS Array B**	**53.95**	**338**	P		**P**	**P**	**07 33 02.4**	**+0.3**
GERES	**GERESS Array B**	**58.17**	**312**	P		**P**	**P**	**07 33 32.1**	**-0.5**
	comp=Z,2.3nm,0.2s,baz=100,slow=3.1,SNR=3.6								
NC602	**NORSAR Array S**	**58.55**	**326**	P		**P**	**P**	**07 33 35.4**	**+0.4**
NC303	**NORSAR Array S**	**58.63**	**327**	P		**P**	**P**	**07 33 35.5**	**-0.1**
NOA	**NORSAR Array B**	**58.71**	**327**	P		**P**	**P**	**07 33 35.4**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=88,slow=7.0,SNR=4.4								
NRCA	**Norcia**	**59.51**	**305**	P		**P**	**P**	**07 33 42.4**	**+0.3**
NRCA				IAmb		IAmb	IAmb	07 33 59.4	
	comp=Z,2.6nm,1.0s								
MSSA	**Maissana**	**61.77**	**308**	P		**P**	**P**	**07 33 56.7**	**-0.8**
BNI	**Bardonecchia**	**63.58**	**309**	P		**P**	**P**	**07 34 09.7**	**0.0**
KEST	**Kesra**	**64.05**	**298**	P		**P**	**P**	**07 34 13.7**	**+0.9**
	comp=Z,11nm,0.9s,baz=286,slow=3.6,SNR=10.0								
KEST	**Kesra**	**64.05**	**298**	P		**P**	**P**	**07 34 13.3**	**+0.5**
WB0	**Warramunga Arr**	**66.63**	**130**	P		**P**	**P**	**07 34 30.9**	**+1.3**
WB0				IAmb		IAmb	IAmb	07 34 47.9	
	comp=Z,5.2nm,1.1s								
WRA	**Warramunga Arr**	**66.71**	**130**	P		**P**	**P**	**07 34 31.4**	**+1.4**
	comp=Z,2.4nm,0.6s,baz=324,slow=6.6,SNR=11								
WB2	**Warramunga Ar**	**66.72**	**130**	P		**P**	**P**	**07 34 31.2**	**+1.1**
WB2				IAmb		IAmb	IAmb	07 34 39.8	
	comp=Z,4.3nm,1.0s								
WR0	**Warramunga Arr**	**66.86**	**130**	P		**P**	**P**	**07 34 32.1**	**+1.1**
WR0				IAmb		IAmb	IAmb	07 34 45.8	
	comp=Z,3.0nm,1.1s								
ASAR	**Alice Springs**	**69.02**	**133**	P		**P**	**P**	**07 34 46.0**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=314,slow=5.9,SNR=5.5								
EUNU	**Eureka**	**72.27**	**359**	P		**P**	**P**	**07 35 04.8**	**+1.2**
ESDC	**Sonseca Array**	**72.73**	**306**	P		**P**	**P**	**07 35 06.9**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=50,slow=6.4,SNR=6.5								
PVAQ	**Vaqueiros**	**76.33**	**305**	P		**P**	**P**	**07 35 28.4**	**+0.4**
PVAQ				IAmb		IAmb	IAmb	07 35 29.6	
	comp=Z,7.2nm,1.1s								
TORD	**Torodi Ar. Bea**	**78.92**	**279**	P		**P**	**P**	**07 35 42.5**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=50,slow=3.7,SNR=4.4								
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**	**P**	**07 35 42.1**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=313,slow=3.7,SNR=7.3								
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**	**P**	**07 35 42.7**	**+0.1**
SKT	**Skwentna**	**79.40**	**24**	P		**P**	**P**	**07 35 44.6**	**0.0**
SKT				IAmb		IAmb	IAmb	07 35 46.0	
	comp=Z,7.7nm,1.0s								
INK	**Inuvik**	**79.83**	**14**	P		**P**	**P**	**07 35 46.6**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=332,slow=3.1,SNR=4.9								
SCRK	**Sand Creek**	**80.51**	**20**	P		**P**	**P**	**07 35 50.8**	**+0.1**
SML	**Sawmill**	**80.64**	**23**	P		**P**	**P**	**07 35 52.0**	**+0.6**
SML				IAmb		IAmb	IAmb	07 35 56.0	
	comp=Z,3.9nm,0.8s								
BCAR	**Beaver Creek A**	**81.85**	**20**	P		**P**	**P**	**07 35 58.6**	**+0.9**
DBIC	**Dimbokro**	**87.59**	**276**	P		**P**	**P**	**07 36 27.5**	**0.0**
	comp=Z,1.5nm,0.5s,baz=80,slow=6.1,SNR=1.7								
TXAR	**Lajitas Array**	**122.44**	**10**	PKP		**PKPdf**	**PKPdf**	**07 42 34.2**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=2.7,slow=1.9,SNR=3.6								
SAML	**Samuel**	**145.33**	**297**	PKPbc		**PKPdf**	**PKPdf**	**07 43 17.6**	**+0.2**
CPUP	**Villa Florida**	**147.30**	**264**	PKPbc		**PKPdf**	**PKPdf**	**07 43 21.1**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=80,slow=6.1,SNR=4.1								

IDC 25 07:26:20.1± 1.2, 27.55N× 85.82E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.4/62, mbtmp3.7/5, Error ellipse: s-maj=81.9km s-min=26.6km az=48.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**51.80**	**328**	P		**P**	**P**	**07 35 28.5**	**-0.9**
	1.1nm,0.7s,baz=116,slow=11,SNR=5.1								
ARCES	**ARCESS Array B**	**54.17**	**338**	P		**P**	**P**	**07 35 47.7**	**+0.8**
	3.3nm,1.0s,baz=104,slow=7.8,SNR=2.0								
WRA	**Warramunga Arr**	**66.59**	**130**	P		**P**	**P**	**07 37 12.6**	**+0.1**
	0.5nm,0.8s,baz=328,slow=5.9,SNR=1.3								
ASAR	**Alice Springs**	**68.89**	**133**	P		**P**	**P**	**07 37 26.8**	**-0.2**
	0.2nm,0.5s,baz=313,slow=6.2,SNR=1.7								
TORD	**Torodi Ar. Bea**	**78.90**	**279**	P		**P**	**P**	**07 38 26.1**	**+0.2**
	0.5nm,0.7s,baz=56,slow=3.6,SNR=2.5								

*IDC **25** 07:30:10.9± 1.7, 27.72N× 85.71E, h0km, mb3.9/7, mb1 3.9/8, mb1mx3.5/65, mbtmp3.8/8, ML3.4/1, Error ellipse: s-maj=77.0km s-min=28.2km az=59.0*
ISC 25 07:30:12.6± 1.7, 27.8N± 0.3× 85.8E± 0.5, h10km, n8, σ 0§54/8, mb3.8/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.18**	**353**	P		**P**	**P**	**07 34 35.8**	**-0.5**
	0.1nm,0.3s,baz=171,slow=11,SNR=2.6								
KURBB	**Kurchatov Arra**	**23.47**	**348**	P		**P**	**P**	**07 35 23.2**	**+1.0**
	1.1nm,0.5s,baz=172,slow=9.9,SNR=4.5								
ZALV	**Zalesovo Beam**	**26.16**	**359**	P		**P**	**P**	**07 35 47.0**	**+0.1**
	0.4nm,0.3s,baz=186,slow=12,SNR=1.5								
FINES	**FINESS Array B**	**51.58**	**328**	P		**P**	**P**	**07 39 18.5**	**-0.

MKAR **Makanchi Array** 19.17 354 P P 07 38 12.1 +0.6
comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=6.5
MAKZ **Makanchi** 19.21 353 P P 07 38 11.4 -0.5
KK31 **Karatay Array** 19.39 326 P P 07 38 13.2 -0.7
KKAR **Karatay Array** 19.39 326 P P 07 38 12.5 -1.4
KKAR **Karatay Array** 19.39 326 P P 07 38 13.2 -0.7
KKAR IAmb IAmb 07 38 16.8
comp=Z,6.5nm,1.5s
KURBB **Kurchatov Arra** 23.41 349 P P 07 38 57.0 +0.2
comp=Z,1.9nm,0.9s,baz=173,slow=9.7,SNR=2.7
SONM **Songino Array** 26.01 34 P P 07 39 22.0 +0.9
comp=Z,10nm,0.7s,baz=225,slow=9.5,SNR=24
SONM **Songino Array** 26.01 34 P P 07 39 21.9 +0.9
SONM IAmb IAmb 07 39 25.8
comp=Z,6.5nm,0.7s
ZALV **Zalesovo Beam** 26.20 360 P P 07 39 22.7 +0.3
comp=Z,1.1nm,0.4s,baz=178,slow=9.6,SNR=4.1
ZALV **Zalesovo Beam** 26.20 360 P P 07 39 21.7 -0.7
ULN **Ulaanbaatar** 26.36 34 P P 07 39 25.3 +1.1
KULM **Kulim** 26.74 144 P P 07 39 26.1 -1.6
KULM IAmb IAmb 07 39 33.5
comp=Z,6.7nm,0.8s
TPUB **Ta-pu** 32.24 90 P P 07 40 17.0 +0.4
KSAR **Wonju Array Be** 37.01 64 P P 07 40 59.2 +1.6
JOW **Kunigami** 38.19 81 P P 07 41 08.3 +0.6
NRIK **Noril'sk** 41.67 1 P P 07 41 36.8 +0.7
comp=Z,2.9nm,0.6s,baz=170,slow=7.7,SNR=6.4
NRIK **Noril'sk** 41.67 1 IAmb IAmb 07 41 37.4
comp=Z,5.7nm,1.1s
JEM **Erimo** 48.80 57 P P 07 42 31.1 -1.9
TIXI **Tiksi** 50.06 17 P P 07 42 43.2 +1.0
TIXI IAmb IAmb 07 42 43.2
comp=Z,3.3nm,0.6s
BURAR **Bucovina Array** 50.12 310 P P 07 42 41.4 -1.8
BUR08 **Bucovina Ar. S** 50.13 310 P P 07 42 43.1 -0.2
FINES **FINESS Array B** 51.34 328 P P 07 42 50.8 -1.2
comp=Z,0.9nm,0.6s,baz=104,slow=8.0,SNR=4.6
ARCES **ARCESS Array B** 53.79 338 P P 07 43 10.4 +0.3
comp=Z,3.2nm,0.9s,baz=96,slow=8.3,SNR=1.8
HFS **Hagfors** 57.20 326 P P 07 43 33.6 -1.1
comp=Z,0.9nm,0.4s,baz=99,slow=9.3,SNR=6.2
WB0 **Warramunga Arr** 67.08 129 P P 07 44 42.1 +0.5
WB0 IAmb IAmb 07 44 58.7
comp=Z,4.8nm,1.1s
WRA **Warramunga Arr** 67.16 129 P P 07 44 43.0 +0.9
comp=Z,1.4nm,0.6s,baz=322,slow=6.5,SNR=11
WB2 **Warramunga Arr** 67.17 129 P P 07 44 42.2 +0.1
ASAR **Alice Springs** 69.44 133 P P 07 44 57.1 +0.8
comp=Z,1.0nm,0.6s,baz=315,slow=6.1,SNR=11
ASAR **Alice Springs** 69.44 133 P P 07 44 57.3 +0.9
IMAR **Indian Mountai** 76.41 21 P P 07 45 35.3 -1.7
COLD **Coldfoot** 76.69 19 P P 07 45 39.4 +0.8
COLD IAmb IAmb 07 45 44.7
comp=Z,3.2nm,1.4s
MLY **Manley** 77.99 21 P P 07 45 46.5 +0.4
MLY IAmb IAmb 07 45 54.0
comp=Z,3.1nm,1.4s
BMAR **Burnt Mountain** 78.12 18 P P 07 45 48.3 +1.6
TORD **Torodi Ar. Bea** 78.29 279 P P 07 45 47.1 -1.4
comp=Z,0.5nm,0.8s,baz=48,slow=4.3,SNR=2.4
MDM **Murphy Dome** 78.83 20 P P 07 45 51.3 +0.7
PPLA **Purkeypile** 78.91 23 P P 07 45 52.0 +0.8
ILAR **Eielson Array** 79.37 20 P P 07 45 53.6 +0.1
comp=Z,0.5nm,0.6s,baz=311,slow=5.1,SNR=7.4
SKT **Skwentna** 79.74 24 P P 07 45 55.9 +0.2
SKT IAmb IAmb 07 45 56.6
comp=Z,2.9nm,0.6s
INK **Inuvik** 80.07 14 P P 07 45 57.7 +0.5
comp=Z,0.7nm,0.4s,baz=299,slow=4.5,SNR=4.2
INK **Inuvik** 80.07 14 IAmb IAmb 07 45 58.7
comp=Z,3.5nm,1.2s
SCRK **Sand Creek** 80.82 20 P P 07 46 01.8 +0.3
YKA **Yellowknife Ar** 88.71 9 P P 07 46 40.6 -0.5
comp=Z,0.4nm,0.7s,baz=332,slow=4.5,SNR=6.5

*IDC **25** 07:34:52.9±1.0,27.76N×85.36E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.6/63, mbtmp3.9/12, ML3.9/1, Error ellipse: s-maj=31.6km s-min=18.7km az=55.0*
*NEIC **25** 07:34:55.2±1.1,28.0N±0.1×85.61E±0.05, h10km±1km, mb4.3/16, Error ellipse: s-maj=19.4km s-min=7.3km az=185.0*
ISC 25 07:34:55.8±0.7,**27.8N**±0.1×**85.49E**±0.09,**h18**km,**n36,** σ**0**§**68**/**36,mb4.0**/**18,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	6.15	110	Pn	**Pn**	07 36 25.4	-0.5
NIL	**Nilore**	12.01	302	Pn	**Pn**	07 37 46.8	+0.6
CMAR	**Chiang Mai Arr**	15.49	124	Pn	**P**	07 38 37.8	0.0
	0.4nm,0.3s,baz=317,slow=11,SNR=4.5						
KBL	**Kabul**	15.57	299	Pn	**Pn**	07 38 33.9	-0.8
KBL				IAmb	IAmb	07 38 49.5	
	comp=Z,4.7nm,0.7s						
MKAR	**Makanchi Array**	19.08	353	P	**Pn**	07 39 18.2	0.0
	comp=Z,0.4nm,0.3s,baz=173,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	19.08	353	P	**P**	07 39 16.9	-0.5
ENH	**Enshi**	21.11	78	P	**P**	07 39 38.6	-0.9
ENH				IAmb	IAmb	07 39 40.5	
	comp=Z,7.2nm,0.5s						
KURBB	**Kurchatov Arra**	23.36	349	P	**P**	07 40 03.2	+0.1
	comp=Z,0.4nm,0.5s,baz=160,slow=11,SNR=2.1						
KURK	**Kurchatov**	23.43	349	P	**P**	07 40 03.2	-0.6
SONM	**Songino Array**	25.75	34	P	**P**	07 40 26.8	+1.3
	comp=Z,2.2nm,0.6s,baz=221,slow=9.9,SNR=4.8						
SONM	**Songino Array**	25.75	34	P	**P**	07 40 25.7	+0.3
ZALV	**Zalesovo Beam**	26.08	359	P	**P**	07 40 29.1	+0.9
	comp=Z,0.9nm,0.3s,baz=174,slow=11,SNR=3.9						
ZALV	**Zalesovo Beam**	26.08	359	P	**P**	07 40 28.2	0.0
ABKAR	**Akbulak array**	29.02	324	P	**P**	07 40 53.7	-0.9
KLR	**Kul'dur**	41.22	46	P	**P**	07 42 39.5	+0.1
	comp=Z,0.6nm,0.4s,baz=260,slow=9.2,SNR=3.7						
FIA1	**FINESS Array S**	51.39	328	P	**P**	07 43 59.0	-0.2
FINES	**FINESS Array B**	51.40	328	P	**P**	07 43 59.3	+0.1
	comp=Z,0.9nm,0.4s,baz=107,slow=8.4,SNR=6.6						
PABE	**Paberze**	51.52	320	P	**P**	07 44 00.7	+0.5
PABE				IAmb	IAmb	07 44 15.9	
	comp=Z,12nm,1.1s						
VTS	**Vitosha**	51.85	304	P	**P**	07 44 04.0	+0.8
VTS				IAmb	IAmb	07 44 17.4	
	comp=Z,2.0nm,1.0s						
SOEI	**Soe**	52.96	129	P	**P**	07 44 11.7	0.0
KEV	**Kevo**	53.37	338	P	**P**	07 44 14.3	+0.5
FNA	**Florina**	53.43	302	P	**P**	07 44 15.7	+1.0
FNA				IAmb	IAmb	07 44 30.9	
	comp=Z,3.3nm,0.9s						
ARCES	**ARCESS Array B**	53.79	338	P	**P**	07 44 17.4	+0.5
	comp=Z,0.9nm,0.3s,baz=103,slow=7.5,SNR=15						
HFS	**Hagfors**	57.27	326	P	**P**	07 44 41.9	-0.2
	comp=Z,0.9nm,0.4s,baz=90,slow=7.9,SNR=7.1						
KHC	**Kasperske Hory**	57.94	313	P	**P**	07 44 46.6	-0.4
PET	**Petropavlovsk**	58.31	43	P	**P**	07 44 50.2	+0.7
NOA	**NORSAR Array B**	58.49	327	P	**P**	07 44 49.8	-0.8
	comp=Z,0.4nm,0.6s,baz=77,slow=8.1,SNR=1.6						
WB0	**Warramunga Arr**	66.92	130	P	**P**	07 45 48.0	+0.7
WB0				IAmb	IAmb	07 46 02.9	
	comp=Z,1.1nm,1.1s						
WRA	**Warramunga Arr**	67.00	130	P	**P**	07 45 48.2	+0.4
	comp=Z,1.7nm,0.7s,baz=323,slow=6.5,SNR=6.2						
WB2	**Warramunga Arr**	67.01	130	P	**P**	07 45 48.7	+0.7
WB2				IAmb	IAmb	07 45 53.9	
	comp=Z,5.0nm,1.1s						
ASAR	**Alice Springs**	69.30	133	P	**P**	07 46 02.8	+0.5
	comp=Z,0.8nm,0.6s,baz=314,slow=6.3,SNR=6.2						
ASAR	**Alice Springs**	69.30	133	P	**P**	07 46 03.0	+0.7
AMKA	**Amchitka**	71.02	41	P	**P**	07 46 13.2	+0.7
TULEG	**Thule**	74.65	354	P	**P**	07 46 33.6	+0.1
TULEG				IAmb	IAmb	07 46 41.7	
	comp=Z,2.9nm,0.7s						
TORD	**Torodi Ar. Bea**	78.57	279	P	**P**	07 46 56.1	-0.7
	comp=Z,0.2nm,0.5s,baz=66,slow=5.1,SNR=1.6						
RC01	**Rabbit Creek A**	80.75	24	P	**P**	07 47 06.3	-1.6

*IDC **25** 07:35:51.9±5.8,27.69N×85.82E, h0km, mb3.8/6, mb1 3.8/7, mb1mx3.4/63, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=104.7km s-min=52.9km az=166.0*
ISC 25 07:35:55.1±5.2,**27.7N**±0.7×**85.8E**±0.4,**h19**km,**n7,** σ**0**§**57**/**7,mb3.8**/**6,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	19.22	353	P	**P**	07 40 17.7	-0.3
	0.3nm,0.3s,baz=171,slow=11,SNR=2.8						
KURBB	**Kurchatov Arra**	23.52	348	P	**P**	07 41 04.4	+0.6
	0.7nm,0.5s,baz=168,slow=10,SNR=2.8						
SONM	**Songino Array**	25.67	33	P	**P**	07 41 24.0	+0.2
	0.8nm,0.6s,baz=228,slow=7.6,SNR=1.8						
ZALV	**Zalesovo Beam**	26.19	359	P	**P**	07 41 28.1	-0.3
	1.7nm,0.5s,baz=193,slow=10.0,SNR=3.1						
FINES	**FINESS Array B**	51.64	328	P	**P**	07 45 00.8	+0.6
	0.4nm,0.4s,baz=108,slow=13,SNR=1.7						
ARCES	**ARCESS Array B**	54.00	338	P	**P**	07 45 17.6	+0.1
	0.8nm,0.5s,baz=94,slow=7.3,SNR=1.4						
HFS	**Hagfors**	57.53	326	P	**P**	07 45 42.4	-0.6
	1.6nm,0.8s,baz=111,slow=8.0,SNR=1.7						

*IDC **25** 07:37:24.6±1.8,27.98N×85.07E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.4/60, mbtmp3.9/6, ML3.7/1, Error ellipse: s-maj=97.0km s-min=23.6km az=62.0*
ISC 25 07:37:26.5±1.8,**28.0N**±0.3×**85.1E**±0.5,**h12**km,**n6,** σ**0**§**21**/**6,mb3.9**/**5,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	18.88	354	P	**Pn**	07 41 47.4	+0.1
	0.2nm,0.3s,baz=175,slow=12,SNR=6.9						
ZALV	**Zalesovo Beam**	25.92	360	P	**P**	07 42 58.2	-0.1
	2.0nm,0.3s,baz=178,slow=10.0,SNR=7.1						
FINES	**FINESS Array B**	51.06	328	P	**P**	07 46 28.3	-0.1
	1.3nm,0.8s,baz=99,slow=7.2,SNR=2.3						
ARCES	**ARCESS Array B**	53.50	338	P	**P**	07 46 46.6	+0.2
	3.9nm,0.9s,baz=96,slow=8.2,SNR=2.8						
WRA	**Warramunga Arr**	67.39	129	P	**P**	07 48 21.8	-0.2
	0.5nm,0.7s,baz=321,slow=6.6,SNR=1.9						
ASAR	**Alice Springs**	69.68	133	P	**P**	07 48 36.5	+0.2
	0.3nm,0.6s,baz=317,slow=7.6,SNR=2.4						

*IDC **25** 07:37:51.4±1.3,67.04N×37.18W, h0km, mb3.4/6, mb1 3.8/7, mb1mx3.4/53, mbtmp3.4/7, ML3.4/1, Error ellipse: s-maj=58.4km s-min=20.1km az=27.0*
ISC 25 07:37:52.8±1.1,**67.1N**±0.3×**37.1W**±0.1,**h10**km,**n7,** σ**1**§**30**/**8,mb3.3**/**6,Eastern Kalaallit Nunaat**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	5.29	275	Pn	**Pn**	07 39 11.4	-0.3
	1.3nm,0.3s,baz=122,slow=9.8,SNR=2.8						
SFJD				Sn	**Sn**	07 40 13.3	+0.6
	2.6nm,0.3s,baz=18,slow=2.4,SNR=4.9						
YKA	**Yellowknife Ar**	31.32	299	P	**P**	07 44 11.7	-0.9
	0.1nm,0.5s,baz=50,slow=11,SNR=2.1						
ESDC	**Sonseca Array**	33.05	129	P	**P**	07 44 29.3	+1.1
	0.9nm,0.7s,baz=345,slow=9.3,SNR=4.4						
ILAR	**Eielson Array**	39.24	320	P	**P**	07 45 21.6	+1.0
	0.2nm,0.8s,baz=17,slow=6.6,SNR=1.4						
PDAR	**Pinedale Array**	44.81	275	P	**P**	07 46 05.5	-1.2
	0.3nm,0.6s,baz=52,slow=5.8,SNR=2.6						
TXAR	**Lajitas Array**	54.23	261	P	**P**	07 47 19.9	+1.4
	0.2nm,0.8s,baz=90,slow=4.5,SNR=2.4						
TORD	**Torodi Ar. Bea**	59.65	135	P	**P**	07 47 55.7	-1.3
	0.5nm,0.9s,baz=338,slow=8.7,SNR=2.6						

IDC 25 07:39:02.4±8.1,**27.78N**×**85.74E**,**h0**km,**mb3.7**/4, **mb1 3.7**/5,**mb1mx3.3**/53,**mbtmp3.7**/5,**ML3.6**/1,**Error ellipse: s-maj=139.0km s-min=67.4km az=6.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	19.17	353	P	Pn	07 43 28.0	-0.3
	0.2nm,0.3s,baz=181,slow=11,SNR=2.9						
KURBB	**Kurchatov Arra**	23.46	348	P	P	07 44 13.9	+0.5
	0.4nm,0.6s,baz=168,slow=9.9,SNR=2.2						
SONM	**Songino Array**	25.69	33	P	P	07 44 34.8	+0.6
	0.8nm,0.7s,baz=224,slow=9.5,SNR=2.4						
NRIK	**Noril'sk**	41.60	1	P	P	07 46 49.9	-1.9
	1.4nm,0.5s,baz=182,slow=6.1,SNR=3.7						
ARCES	**ARCESS Array B**	53.93	338	P	P	07 48 28.0	+0.6
	1.4nm,0.8s,baz=99,slow=8.3,SNR=1.3						

IDC 25 07:39:22.7±18.0,**28.16N**×**84.68E**,**h0**km,**mb3.6**/3, **mb1 3.7**/4,**mb1mx3.3**/53,**mbtmp3.6**/4,**ML3.6**/1,**Error ellipse: s-maj=442.1km s-min=96.5km az=116.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	18.69	355	P	P	07 43 42.4	0.0
	0.2nm,0.3s,baz=180,slow=11,SNR=2.8						
KURBB	**Kurchatov Arra**	22.91	350	P	P	07 44 28.0	0.0
	0.4nm,0.6s,baz=170,slow=9.9,SNR=2.2						
FINES	**FINESS Array B**	50.74	328	P	P	07 48 24.3	+0.2
	0.5nm,0.5s,baz=101,slow=7.2,SNR=3.7						
ARCES	**ARCESS Array B**	53.22	338	P	P	07 48 42.1	-0.4
	2.4nm,0.9s,baz=104,slow=7.6,SNR=5.5						

*BJI **25** 07:39:30.2±0.0,27.50N×85.65E, h6km, mB4.7/1, mb4.6/21, Ms4.0/1, Ms7 4.0/1*
*IDC **25** 07:39:32.1±0.6,27.58N×85.62E, h0km, mb4.3/28, mb1 4.4/31, mb1mx4.2/55, mbtmp4.3/31, ML4.1/3, Error ellipse: s-maj=17.4km s-min=12.2km az=39.0*
*NEIC **25** 07:39:34.0±1.3,27.68N±0.08×85.74E±0.05, h10km±1km, mb4.5/51, Error ellipse: s-maj=14.0km s-min=7.1km az=171.0*
*DMN **25** 07:39:34.9±0.1,27.74N×85.73E, h10km, Ml4.8/4, Error ellipse: s-maj=2.4km s-min=1.1km az=4.0*
*NDI **25** 07:39:35.6±2.7,27.45N×85.57E, h5km, ML4.3, mb4.5(NEIC)*
ISC 25 07:39:34.0±0.9,**27.70N**±0.04×**85.70E**±0.02,**h12**km±6km, **n128,** σ**0**§**97**/**149,mb4.5**/**48,2C,Nepal**

Code	Station Name	Δ°	AZ°	Phase		ID	Time	Res
					Op	ISC	h m s	ISC
GUN	**Gumba**	0.27	37	*e*	Pg	**Pg**	07 39 39.8	+0.1
GUN				*e*	Sg	**Sg**	07 39 43.4	-0.1
GUN	**Gumba**	0.27	37	*e*	Pg	**Pg**	07 39 39.4	-0.3
GUN				*e*	Sg	**Sg**	07 39 43.5	-0.1
	64μm,0.2s							
PKI	**Pulchoki**	0.28	244	*e*	Pg	**Pb**	07 39 42.0	+0.8
PKI				*e*	Sg	**Sb**	07 39 45.7	-0.4
	9μm,0.2s							
PKI	**Pulchoki**	0.28	244	*e*	Pg	**Pb**	07 39 41.1	-0.1
PKI				*e*	Sg	**Sb**	07 39 45.8	-0.4
	26μm,0.5s							
KKN	**Kakani**	0.38	284	*e*	Pg	**Pb**	07 39 42.8	0.0
KKN				*e*	Sg	**Sb**	07 39 48.2	-0.6
KKN	**Kakani**	0.38	284	*e*	Pg	**Pb**	07 39 42.9	+0.1
KKN				*e*	Sg	**Sb**	07 39 48.3	-0.6
	7μm,0.2s							
DMN	**Daman**	0.53	261	*e*	Pg	**Pb**	07 39 46.2	+0.8
DMN				*e*	Sg	**Sb**	07 39 54.1	+0.9
	7μm,0.4s							
DMN	**Daman**	0.53	261	*e*	Pg	**Pb**	07 39 45.9	+0.5
DMN				*e*	Sg	**Sb**	07 39 53.7	+0.5
	7μm,0.4s							
GKN	**Gorkha**	0.99	288	*e*	Pg	**Pn**	07 39 54.1	+0.2
GKN	**Gorkha**	0.99	288	*e*	Pg	**Pn**	07 39 53.9	0.0
GKN				*e*	Sg	**Sb**	07 40 06.8	+0.6
	3μm,0.3s							
ODAN	**Odare**	1.72	119	*e*	Pg	**Pg**	07 40 06.7	-0.4
ODAN				*e*	Sg	**Sg**	07 40 29.3	-0.1
	2μm,0.3s							
ODAN	**Odare**	1.72	119	*e*	Pg	**Pb**	07 40 06.6	+0.9
ODAN				*e*	Sg	**Sg**	07 40 28.9	-0.5
	2μm,0.3s							
TAPN	**Taplejung**	1.82	100	*e*	Pg	**Pg**	07 40 08.8	-0.2
TAPN				*e*	Sg	**Sg**	07 40 32.0	-0.7
	1μm,0.3s							
TAPN	**Taplejung**	1.82	100	*e*	Pg	**Pb**	07 40 07.7	+0.2
TAPN				*e*	Sg	**Sg**	07 40 31.9	-0.7
	1μm,0.3s							
DANN	**Dangsing**	1.83	291	*e*	Pg	**Pg**	07 40 09.1	-0.1
DANN				*e*	Sg	**Sg**	07 40 33.0	+0.1
	978nm,0.2s							
DANN	**Dangsing**	1.83	291	*e*	Pg	**Pg**	07 40 08.7	-0.5
DANN				*e*	Sg	**Sg**	07 40 33.0	+0.1
	3μm,0.4s							
KOLN	**Koldanda**	1.86	273	*e*	Pg	**Pg**	07 40 09.7	+0.1
KOLN				*e*	Sg	**Sg**	07 40 34.2	+0.4
	650nm,0.2s							
KOLN	**Koldanda**	1.86	273	*e*	Pg	**Pg**	07 40 09.8	+0.1
KOLN				*e*	Sg	**Sg**	07 40 34.3	+0.4
	4μm,0.3s							
PYUN	**Piuthan**	2.43	280	*e*	Pg	**Pg**	07 40 20.8	+0.2
PYUN				*e*	Sg	**Sg**	07 40 51.8	-0.3

GTK **Tadong** 2.61 98 *e* P **Pb** 07 40 20.1 -0.7
GTK *e* S **Sb** 07 40 54.3 +1.4
GTK IAML 07 40 57.8
comp=N,2μm,0.3s
LSA **Lhasa** 5.19 66 Pn **Pn** 07 40 49.1 -2.9
GUWA **GUWAHATI** 5.56 104 *e* P **Pn** 07 41 00.2 +3.7
GUWA *e* S **Sn** 07 42 00.1 -0.3
SHL **Shillong** 5.93 110 Pn **Pn** 07 41 02.1 +0.2
DDI **Dehra Dun** 7.18 293 *e* P **Pn** 07 41 21.1 +2.2
DDI *e* S **Sn** 07 42 40.5 -0.1
DDI IAML 07 42 44.8
comp=N,554nm,0.3s
DDI IAML 07 42 45.0
comp=E,346nm,0.3s
ZIRO **ZIRO** 7.24 89 *e* S **Sn** 07 42 40.9 -1.1
ZIRO IAML 07 42 44.9
comp=N,438nm,0.5s
SMLA **Simla** 8.19 297 *e* P **Pn** 07 41 34.0 +1.3
SMLA *e* S **Sn** 07 43 01.9 -3.3
SMLA IAML 07 43 05.2
comp=E,182nm,0.4s
BHPL **Bhopal** 8.69 241 *e* P **Pn** 07 41 38.2 -1.5
BHPL *e* S Sn 07 43 08.1 -10
BHPL IAML 07 43 13.7
comp=E,112nm,0.2s
DHRM **DHARAMSHALA** 9.33 301 *e* P **Pn** 07 41 48.4 -0.1
DHRM *e* S **Sn** 07 43 28.4 -5.1
DHRM IAML 07 43 32.8
comp=N,131nm,0.5s
DHRM IAML 07 43 36.2
comp=E,129nm,0.4s
HYB **Hyderabad** 12.17 214 *i* P **Pn** 07 42 25.5 -1.8
NIL **Nilore** 12.24 302 P **Pn** 07 42 26.9 -1.4
CHTO **Chiang Mai** 15.04 123 Pn **Pn** 07 43 03.7 -2.7
CM31 **Chiang Mai Arr** 15.26 124 Pn **Pn** 07 43 09.5 +0.1
CMAR **Chiang Mai Arr** 15.26 124 Pn **Pn** 07 43 09.8 +0.4
comp=E,0.2nm,0.3s,baz=305,slow=13,SNR=9.7
KBL **Kabul** 15.80 300 Pn **Pn** 07 43 18.0 +1.4
KBL IAmb IAmb 07 43 32.1
comp=Z,14nm,0.7s
PRZ **Przheval'sk** 15.90 340 Pn **Pn** 07 43 18.9 +1.0
PRZ IAmb IAmb 07 43 24.7
comp=Z,17nm,0.4s
KDJ **Kajisay** 15.99 336 P **Pn** 07 43 19.9 +0.9
WMQ **Urumqi** 16.17 5 *e*P **Pn** 07 43 21.3 +0.1
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ LR LR
comp=Z,410nm,14.9s
WMQ LR LR
comp=Z,280nm,12.9s
WMQ LR LR
comp=Z,1μm,27.7s
GTA **Gaotai** 16.56 42 ⇑P **P** 07 43 29.8 +1.0
GTA pP sP 07 43 34.3 +0.3
GTA sP pP 07 43 37.0 +4.5
GTA pmax pmax
comp=Z,10.0nm,0.9s
BOOM **Boomskoye usch** 16.76 334 Pn **Pn** 07 43 29.6 +0.8
AAK **Ala-Archa** 17.47 331 P **P** 07 43 38.6 -0.3
comp=Z,0.4nm,0.3s,baz=170,slow=9.6,SNR=3.1
AAK **Ala-Archa** 17.47 331 P **Pn** 07 43 37.3 -0.4
GYA **Guiyang** 18.71 89 ⇑P **Pn** 07 43 54.0 +1.0
MK31 **Makanchi Array** 19.25 353 P **Pn** 07 43 59.0 -0.2
MKAR **Makanchi Array** 19.25 353 P **Pn** 07 43 59.6 +0.3
comp=Z,1.6nm,0.3s,baz=183,slow=11,SNR=26
MKAR **Makanchi Array** 19.25 353 P **P** 07 43 58.4 +0.1
MAKZ **Makanchi** 19.30 352 P **Pn** 07 43 59.8 -0.1
KK31 **Karatay Array** 19.69 325 P **P** 07 44 01.9 -1.1
KKAR **Karatay Array** 19.69 325 P **P** 07 44 02.4 -0.7
KKAR **Karatay Array** 19.69 325 P **Pn** 07 44 04.2 -0.3
XAN **Xi'an** 20.89 67 P **P** 07 44 16.0 -0.3
XAN pP Pn 07 44 19.0 +0.2
XAN pmax pmax
comp=Z,10.0nm,0.6s
XAN **Xi'an** 20.89 67 P **P** 07 44 14.9 -1.4
XAN IAmb IAmb 07 44 20.6
comp=Z,7.7nm,0.7s
ENH **Enshi** 20.96 77 P **P** 07 44 16.1 -0.9
ENH IAmb IAmb 07 44 23.5
comp=Z,11nm,0.9s
KURBB **Kurchatov Arra** 23.54 349 P **P** 07 44 45.1 +1.1
comp=Z,2.3nm,0.3s,baz=174,slow=11,SNR=22
KURK **Kurchatov** 23.61 349 P **P** 07 44 45.1 +0.4
HHC **Hu-ho-hao-te** 24.98 52 *e*P **P** 07 44 57.8 +0.2
HHC pmax pmax
comp=Z,15nm,1.0s
GEYT **Alibeck** 25.24 301 P **P** 07 45 00.5 +0.5
comp=Z,1.4nm,0.5s,baz=98,slow=11,SNR=2.8
SONM **Songino Array** 25.78 33 P **P** 07 45 06.5 +1.7
comp=Z,9.9nm,0.6s,baz=218,slow=10.0,SNR=33
SONM **Songino Array** 25.78 33 P **P** 07 45 05.0 +0.2
SONM IAmb IAmb 07 45 07.2
comp=Z,7.6nm,0.7s
ULN **Ulaanbaatar** 26.12 34 P **P** 07 45 08.1 +0.1
ZAA0 **Zalesovo Array** 26.23 359 P **P** 07 45 09.4 +0.7
ZAA0 IAmb IAmb 07 45 13.5
comp=Z,6.5nm,0.9s
ZALV **Zalesovo Beam** 26.23 359 P **P** 07 45 09.9 +1.2
comp=Z,2.8nm,0.3s,baz=187,slow=10,SNR=15
ZALV **Zalesovo Beam** 26.23 359 P **P** 07 45 09.5 +0.7
KULM **Kulim** 26.44 145 P **P** 07 45 11.8 +0.9
KULM IAmb IAmb 07 45 23.7
comp=Z,15nm,1.2s
BVAR **Borovoye Array** 27.74 340 P **P** 07 45 23.1 +0.8
comp=Z,1.2nm,0.4s,baz=151,slow=25,SNR=7.8
BRVK **Borovoye** 27.80 340 P **P** 07 45 23.3 +0.4
RPSI **Rantau Prapat** 27.89 151 P **P** 07 45 22.8 -1.1
RPSI IAmb IAmb 07 45 39.5
comp=Z,4.8nm,0.9s
ABKAR **Akbulak array** 29.25 324 P **P** 07 45 36.2 +0.5
ABKAR IAmb IAmb 07 45 38.0
comp=Z,3.9nm,0.9s
ABKAR **Akbulak array** 29.25 324 P **P** 07 45 36.4 +0.6
AKTO **Aktyubinsk** 30.95 325 P **P** 07 45 51.8 +0.9
comp=Z,2.2nm,0.7s,baz=138,slow=8.1,SNR=6.9
NACB **Ninganchiao** 32.40 88 P **P** 07 46 03.2 -0.7
SOCY **Socotra** 33.43 249 P **P** 07 46 12.3 -0.7
SOCY IAmb IAmb 07 46 31.1
comp=Z,2.7nm,0.8s
HIA **Hailar** 33.84 41 P **P** 07 46 16.8 +0.6
HIA IAmb IAmb 07 46 17.8
comp=Z,5.9nm,0.5s
ARU **Arti** 34.63 334 P **P** 07 46 23.9 +1.0
KSRS **Korea Array** 36.63 64 P **P** 07 46 40.5 +0.2
comp=Z,1.1nm,0.5s,baz=267,slow=8.5,SNR=5.5
USA0B **Ussuriysk Arra** 40.37 53 P **P** 07 47 12.2 +0.5
USRK **Ussuriysk Ar.** 40.37 53 P **P** 07 47 12.1 +0.4
comp=Z,2.1nm,0.5s,baz=250,slow=8.9,SNR=8.6
KLR **Kul'dur** 41.19 46 P **P** 07 47 19.4 +1.0
comp=Z,1.4nm,0.6s,baz=267,slow=7.4,SNR=6.6
NRIK **Noril'sk** 41.69 1 P **P** 07 47 23.6 +1.4
comp=Z,16nm,0.7s,baz=174,slow=6.1,SNR=26
NRIK **Noril'sk** 41.69 1 P **P** 07 47 23.0 +0.8
LUWI **Luwuk** 45.65 123 P **P** 07 47 54.7 -0.1
ELL **Elmali** 47.48 296 P **P** 07 48 09.0 -0.1
AKASG **Malin Array Be** 48.07 315 P **P** 07 48 13.1 -0.2
comp=Z,1.2nm,0.5s,baz=78,slow=7.0,SNR=4.4
AKBB **Malin Array

KHC	Kasperske Hory	58.17	313	*e*P		P	07 49 27.5	-0.3
NC405	NORSAR Array S	58.47	327	P		P	07 49 29.5	-0.1
NOA	NORSAR Array B	58.71	327	P		P	07 49 31.0	-0.4
	comp=Z,1.8nm,0.6s,baz=88,slow=7.0,SNR=8.6							
SPITS	Spitsbergen Ar	58.87	347	P		P	07 49 33.0	+0.8
	comp=Z,2.6nm,0.6s,baz=134,slow=15,SNR=20							
STAL	STALIGIAL	59.14	309	P		P	07 49 33.9	-0.7
STAL				IAmb		IAmb	07 49 34.5	
	comp=Z,5.0nm,0.8s							
NRCA	Norcia	59.44	305	P		P	07 49 36.9	+0.1
NRCA				IAmb		IAmb	07 49 52.8	
	comp=Z,4.0nm,0.8s							
SENIN	Lac Senin/Sane	62.80	310	P		P	07 50 00.2	+0.5
SENIN				IAmb		IAmb	07 50 06.2	
	comp=Z,5.3nm,0.9s							
KEST	Kesra	63.96	298	P		P	07 50 08.4	+1.0
	comp=Z,9.5nm,0.9s,baz=287,slow=4.9,SNR=7.8							
WRA	Warramunga Arr	66.77	130	P		P	07 50 25.9	+0.3
	comp=Z,2.7nm,0.5s,baz=323,slow=6.5,SNR=25							
WR0	Warramunga AR	66.92	130	P		P	07 50 26.1	-0.5
EKA	Eskdalemuir Ar	67.07	322	P		P	07 50 27.1	0.0
	comp=Z,1.9nm,0.7s,baz=87,slow=7.1,SNR=6.1							
ASAR	Alice Springs	69.07	133	P		P	07 50 40.3	+0.2
	comp=Z,2.7nm,0.7s,baz=315,slow=6.4,SNR=19							
ESDC	Sonseca Array	72.66	306	P		P	07 51 01.8	0.0
	comp=Z,1.1nm,0.8s,baz=54,slow=6.7,SNR=7.0							
SUMG	Summit	73.09	345	P		P	07 51 05.1	+0.9
MLY	Manley	77.85	21	P		P	07 51 31.9	+0.6
MLY				IAmb		IAmb	07 51 33.1	
	comp=Z,6.7nm,1.2s							
MDM	Murphy Dome	78.69	21	P		P	07 51 36.1	+0.2
MDM				IAmb		IAmb	07 51 38.0	
	comp=Z,5.7nm,1.1s							
TORD	Torodi Ar. Bea	78.77	279	P		P	07 51 36.3	-0.8
	comp=Z,0.9nm,0.7s,baz=55,slow=4.4,SNR=4.8							
ILAR	Eielson Array	79.23	20	P		P	07 51 38.5	-0.3
	comp=Z,1.0nm,0.7s,baz=308,slow=4.5,SNR=10.0							
ILAR	Eielson Array	79.23	20	P		P	07 51 37.9	-0.9
STKA	Stephens Creek	79.63	134	P		P	07 51 40.8	-0.6
	comp=Z,3.1nm,0.8s,baz=344,slow=3.4,SNR=3.8							
STKA	Stephens Creek	79.63	134	IAmb		IAmb	07 51 41.7	
	comp=Z,3.6nm,1.4s							
SCRK	Sand Creek	80.69	20	P		P	07 51 47.1	+0.3
SCRK				IAmb		IAmb	07 51 48.2	
	comp=Z,2.8nm,0.8s							
BCAR	Beaver Creek A	82.03	20	P		P	07 51 54.2	+0.4
MCARA	McCarthy VSAT	82.90	21	P		P	07 51 59.1	+0.7
KOWA	Kowa	83.15	283	P		P	07 52 00.4	-0.1
	comp=Z,0.7nm,0.4s,baz=346,slow=6.0,SNR=4.0							
KOWA	Kowa	83.15	283	IAmb		IAmb	07 52 00.6	
	comp=Z,7.5nm,1.2s							
BARN	Barnard Glacie	83.58	21	P		P	07 52 03.3	+1.1
BARN				IAmb		IAmb	07 52 04.5	
	comp=Z,4.6nm,1.0s							
HYT	Haines Junctio	85.05	20	P		P	07 52 10.2	+0.7
HYT				IAmb		IAmb	07 52 11.6	
	comp=Z,4.1nm,0.8s							
DBIC	Dimbokro	87.43	276	P		P	07 52 21.2	-0.8
	comp=Z,1.1nm,0.4s,baz=72,slow=6.4,SNR=1.8							
YKA	Yellowknife Ar	88.66	9	P		P	07 52 26.8	-0.1
	comp=Z,0.8nm,0.8s,baz=342,slow=4.4,SNR=10							
SAML	Samuel	145.23	296	PKPbc		PKPab	07 59 12.1	-0.1
CPUP	Villa Florida	147.11	264	PKPbc		PKPbc	07 59 16.3	-1.1
	comp=Z,1.4nm,0.8s,baz=138,slow=12,SNR=3.1							
PTCN	Pitcairn Islan	147.90	94	PKPbc		PKPbc	07 59 20.2	+0.5

IDC ***25*** *07:39:59.2±0.7,27.79N×85.44E, h0km, mb4.3/20, mb1 4.4/21,mb1mx4.1/51,mbtmp4.3/21,ML4.5/1, Error ellipse: s-maj=22.0km s-min=15.6km az=49.0*

ISC 25 07:40:02.1±0.8,27.8N±0.1×85.5E±0.1, h18km, n21, σ0&62/21, mb4.4/20, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.09	353	P	Pn	07 44 23.7	-0.9
	1.6nm,0.3s,baz=170,slow=12,SNR=9.8						
KURBB	Kurchatov Arra	23.36	349	P	P	07 45 09.8	+0.4
	5.8nm,0.7s,baz=170,slow=9.9,SNR=9.9						
SONM	Songino Array	25.77	34	P	P	07 45 32.4	+0.5
	5.4nm,0.5s,baz=224,slow=9.8,SNR=8.9						
ZALV	Zalesovo Beam	26.10	359	P	P	07 45 34.8	+0.2
	5.9nm,0.6s,baz=186,slow=9.7,SNR=7.9						
AKTO	Aktyubinsk	30.73	325	P	P	07 46 15.6	-0.4
	1.3nm,0.5s,baz=134,slow=8.3,SNR=4.5						
KLR	Kul'dur	41.24	46	P	P	07 47 45.9	0.0
	0.9nm,0.5s,baz=268,slow=11,SNR=6.6						
NRIK	Noril'sk	41.56	1	P	P	07 47 49.0	+0.7
	7.3nm,0.7s,baz=175,slow=9.4,SNR=5.1						
FINES	FINESS Array B	51.40	328	P	P	07 49 05.9	+0.3
	6.6nm,0.5s,baz=104,slow=8.9,SNR=14						
ARCES	ARCESS Array B	53.80	338	P	P	07 49 23.9	+0.7
	9.9nm,0.7s,baz=101,slow=7.9,SNR=15						
HFS	Hagfors	57.27	326	P	P	07 49 48.2	-0.1
	4.5nm,0.5s,baz=99,slow=7.8,SNR=6.8						
GERES	GERESS Array B	57.88	312	P	P	07 49 53.2	+0.2
	0.5nm,0.4s,baz=46,slow=6.3,SNR=3.4						
NOA	NORSAR Array B	58.49	327	P	P	07 49 56.5	-0.5
	0.2nm,0.5s,baz=168,slow=8.2,SNR=4.0						
KEST	Kesra	63.72	298	P	P	07 50 33.6	+0.7
	7.5nm,0.8s,baz=91,slow=6.9,SNR=5.4						
WRA	Warramunga Arr	67.01	130	P	P	07 50 54.6	+0.4
	2.1nm,0.5s,baz=323,slow=6.5,SNR=7.7						
ASAR	Alice Springs	69.30	133	P	P	07 51 09.0	+0.4
	1.4nm,0.5s,baz=315,slow=6.2,SNR=6.3						
ESDC	Sonseca Array	72.42	306	P	P	07 51 28.0	+0.5
	1.4nm,0.8s,baz=52,slow=5.3,SNR=6.9						
TORD	Torodi Ar. Bea	78.55	279	P	P	07 52 01.7	-1.3
	1.1nm,0.6s,baz=64,slow=4.5,SNR=5.4						
ILAR	Eielson Array	79.17	20	P	P	07 52 04.5	-1.0
	0.8nm,0.8s,baz=311,slow=4.9,SNR=4.1						
STKA	Stephens Creek	79.87	134	P	P	07 52 09.4	-0.3
	3.5nm,0.8s,baz=274,slow=9.1,SNR=3.1						
KOWA	Kowa	82.93	283	P	P	07 52 26.4	0.0
	1.1nm,0.4s,baz=31,slow=6.8,SNR=3.7						
YKA	Yellowknife Ar	88.56	9	P	P	07 52 53.0	-0.5
	0.5nm,0.7s,baz=337,slow=4.7,SNR=4.4						

IDC ***25*** *07:42:13.8±1.3,27.71N×85.71E, h0km, mb3.7/7, mb1 3.7/8,mb1mx3.5/45,mbtmp3.6/8,ML3.3/1, Error ellipse: s-maj=51.7km s-min=21.8km az=57.0*

ISC 25 07:42:15.4±1.3,27.7N±0.2×85.7E±0.3, h10km, n8, σ0&62/8, mb3.8/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.21	353	P	Pn	07 46 40.0	-0.3
	0.1nm,0.3s,baz=177,slow=12,SNR=0.9						
KURBB	Kurchatov Arra	23.50	348	P	P	07 47 26.3	+1.1
	0.5nm,0.6s,baz=169,slow=10,SNR=1.9						
SONM	Songino Array	25.73	34	P	P	07 47 45.7	-0.3
	0.6nm,0.4s,baz=240,slow=11,SNR=2.6						
AKASG	Malin Array Be	48.05	315	P	P	07 50 54.2	-0.5
	0.2nm,0.2s,baz=99,slow=5.1,SNR=1.3						
FINES	FINESS Array B	51.59	328	P	P	07 51 21.9	+0.3
	0.8nm,0.5s,baz=95,slow=9.1,SNR=1.5						
ARCES	ARCESS Array B	53.96	338	P	P	07 51 38.9	-0.1
	1.6nm,0.7s,baz=95,slow=8.4,SNR=1.7						
WRA	Warramunga Arr	66.79	130	P	P	07 53 07.3	-0.1
	0.2nm,0.4s,baz=324,slow=6.6,SNR=5.0						
ASAR	Alice Springs	69.09	133	P	P	07 53 22.1	+0.3
	0.5nm,0.7s,baz=305,slow=6.3,SNR=2.9						

IDC ***25*** *07:42:49.0±1.3,27.86N×85.88E, h0km, mb3.7/7, mb1 3.8/8,mb1mx3.5/47,mbtmp3.7/8,ML3.4/1, Error ellipse: s-maj=52.8km s-min=22.2km az=57.0*

ISC 25 07:42:52.2±1.5,27.9N±0.2×85.9E±0.3, h19km, n8, σ0&73/8, mb3.8/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.07	352	P	Pn	07 47 14.4	0.0
	0.1nm,0.3s,baz=175,slow=11,SNR=2.0						
KURBB	Kurchatov Arra	23.38	348	P	P	07 48 00.7	+1.2
	1.1nm,0.6s,baz=168,slow=11,SNR=4.4						
SONM	Songino Array	25.49	33	P	P	07 48 18.7	-0.6
	1.1nm,0.7s,baz=224,slow=7.9,SNR=1.7						
FINES	FINESS Array B	51.55	328	P	P	07 51 56.4	-0.2
	0.7nm,0.5s,baz=110,slow=11,SNR=1.6						
HFS	Hagfors	57.44	326	P	P	07 52 39.1	-0.3
	1.0nm,0.5s,baz=99,slow=7.9,SNR=5.1						
NOA	NORSAR Array B	58.66	327	P	P	07 52 47.2	-0.8
	0.1nm,0.4s,baz=171,slow=8.5,SNR=1.4						
WRA	Warramunga Arr	66.74	130	P	P	07 53 42.7	+0.3
	0.7nm,0.6s,baz=322,slow=6.6,SNR=1.5						
ASAR	Alice Springs	69.06	133	P	P	07 53 57.1	+0.1
	0.5nm,0.7s,baz=324,slow=6.3,SNR=3.4						

DDA 25 07:46:40.8, 40.00N×39.69E, h7km±2km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EUZM	Uzumlu	0.29	179	*i* P	Pg	07 46 46.7	+0.2
EUZM				IAML		07 46 52.0	
	comp=E,77nm,0.3s						
EUZM				IAML		07 46 52.0	
	comp=N,74nm,0.3s						
KELT	Kelkit	0.37	295	*i* P	Pg	07 46 48.8	+0.7
KELT				*i* S	Sg	07 46 53.9	+1.0
KELT				IAML		07 46 54.0	
	comp=E,159nm,0.7s						
KELT				IAML		07 46 55.0	
	comp=N,33nm,0.2s						
BAYB	BAYBURT	0.51	59	*i* P	Pg	07 46 51.0	+0.3
BAYB				*i* S	Sg	07 46 57.8	+0.5
KOPT	Kop Dagi	0.62	88	*i* P	Pg	07 46 53.3	+0.5
KOPT				*i* S	Sb	07 47 03.8	+0.7
KOPT				IAML		07 47 05.0	
	comp=E,54nm,0.4s						
ALUC	Giresun/Alucra	0.79	297	*i* P	Pg	07 46 56.0	+0.1
ALUC				*i* S	Sb	07 47 07.2	-0.7

BJI ***25*** *07:46:58.7±0.0,27.74N×85.51E, h13km, mB5.0/2, mb4.8/47*
IDC ***25*** *07:46:59.9±0.4,27.82N×85.64E, h0km, mb4.8/36, mb1 4.9/39,mb1mx4.8/51,mbtmp4.8/39,ML4.4/3, Error ellipse: s-maj=12.4km s-min=9.5km az=37.0*
BGR ***25*** *07:47:00.5±0.0,27.31N×85.30E, h10km, mb5.0*
MOS ***25*** *07:47:00.7±1.0,27.95N×85.55E, h13km, mb5.2/68, Error ellipse: s-maj=6.2km s-min=3.4km az=114.6*
NEIC ***25*** *07:47:01.5±1.2,27.82N±0.08×85.60E±0.05, h10km±1km, mb5.0/118, Error ellipse: s-maj=13.4km s-min=8.1km az=180.0*
DMN ***25*** *07:47:02.1±0.1,27.99N×85.66E, h10km, Ml5.4/5, Error ellipse: s-maj=4.7km s-min=1.6km az=8.0*
NDI ***25*** *07:47:03.8±3.8,27.74N×85.53E, h10km, ML4.8, mb5.0(NEIC)*

ISC 25 07:47:01.6±0.8,27.87N±0.03×85.60E±0.02, h10km±4km, n625, σ1$42/660, mb5.0/193, 61C-57D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	Gumba	0.25	81	*e*Pg	Pb	07 47 07.6	-0.8
GUN				*e*Sg	Sg	07 47 10.6	+0.2
KKN	Kakani	0.29	254	*e*Pg	Pb	07 47 10.3	+1.2
KKN				*e*Sg	Sb	07 47 15.0	+0.9
PKI	Pulchoki	0.34	209	*e*Pg	Pb	07 47 11.4	+1.4
PKI				*e*Sg	Sb	07 47 17.5	+1.9
DMN	Daman	0.51	239	*e*Pg	Pn	07 47 14.5	-0.6
DMN				*e*Sg	Sn	07 47 24.0	-0.1
	62μm,0.4s						
GKN	Gorkha	0.86	279	*e*Pg	Pn	07 47 19.8	-0.1
GKN				*e*Sg	Sb	07 47 31.3	+1.0
	7μm,0.3s						
DANN	Dangsing	1.69	287	*e*Pg	Pg	07 47 34.1	0.0
DANN				*e*Sg	Sg	07 47 57.2	+1.2
	5μm,0.2s						
KOLN	Koldanda	1.77	267	*e*Pg	Pg	07 47 35.7	+0.1
KOLN				*e*Sg	Sg	07 48 00.6	+2.0
	13μm,0.3s						
ODAN	Odare	1.89	122	*e*Pg	Pg	07 47 37.8	0.0
ODAN				*e*Sg	Sg	07 48 02.2	-0.1
	9μm,0.4s						
TAPN	Taplejung	1.94	105	*e*Pg	Pb	07 47 37.6	+0.3
TAPN	Taplejung	1.94	105	*e*Pg	Pb	07 47 37.9	+0.6
TAPN				*e*Sg	Sg	07 48 03.0	-1.2
	3μm,0.3s						
PYUN	Piuthan	2.32	276	*e*Pg	Pg	07 47 46.2	+0.2
PYUN				*e*Sg	Sg	07 48 16.6	+0.5
GTK	Tadong	2.72	101	*e*P	Pb	07 47 49.6	-0.9
GTK				⇑*e*S	Sb	07 48 25.6	+1.7
GTK				IAML		07 48 27.1	
	comp=N,2μm,0.5s						
GTK				IAML		07 48 28.6	
	comp=E,3μm,0.2s						
GTK				*ex*	x	07 50 23.0	
LSA	Lhasa	5.20	68	P	Pn	07 48 22.0	+2.1
LSA	Lhasa	5.20	68	Pn	Pn	07 48 22.0	+2.1
GUWA	GUWAHATI	5.69	106	*e*P	Pn	07 48 27.6	+1.5
GUWA				*e*S	Sn	07 49 29.5	-2.0
SHL	Shillong	6.07	111	P	Pn	07 48 32.3	+0.7
SHL	Shillong	6.07	111	⇑*e*P	Pn	07 48 32.4	+0.8
SHL				*e*P	Pn	07 48 32.4	+0.8
SHL				*e*S	Sn	07 49 39.0	-2.2
SHL				IAML		07 49 40.5	
	comp=E,2μm,0.3s						
SHL				IAML		07 49 42.5	
	comp=N,2μm,0.3s						
SHL	Shillong	6.07	111	Pn	Pn	07 48 32.3	+0.7
DDI	Dehra Dun	7.04	292	⇑*e*P	Pn	07 48 45.3	+0.6
DDI				*e*S	Sn	07 50 02.1	-2.7
ZIRO	ZIRO	7.32	91	*e*P	Pn	07 48 49.4	+0.6
NDI	New Delhi	7.43	278	*e*P	Pn	07 48 52.0	+1.9
NDI				*e*S	Sn	07 50 12.5	-2.0
SMLA	Simla	8.03	296	*e*S	Sn	07 50 25.9	-3.3
BHPL	Bhopal	8.70	240	*e*P	Pn	07 49 05.7	-1.9
BHPL				*e*S	Sn	07 50 38.0	-7.8
BHPL				IAML		07 50 43.0	
	comp=N,668nm,0.6s						
BHPL				IAML		07 50 43.7	
	comp=E,709nm,0.4s						
DHRM	DHARAMSHALA	9.16	301	*e*P	Pn	07 49 13.2	-0.8
DHRM				*e*S	Sn	07 50 51.0	-6.3
DHRM				IAML		07 50 57.3	
	comp=N,850nm,0.6s						
DHRM				IAML		07 50 57.6	
	comp=E,683nm,0.6s						
AJM	Ajmer	9.85	264	⇓*i* P	Pn	07 49 23.0	-0.4
AJM				*i* S	Sn	07 51 07.0	-7.1
NIL	Nilore	12.07	302	P	Pn	07 49 52.5	-1.3
NIL	Nilore	12.07	302	Pn	Pn	07 49 52.5	-1.3
HYB	Hyderabad	12.27	213	*i* P	Pn	07 49 54.0	-2.4
KSH	Kashi	14.10	328	P	Pn	07 50 18.0	-3.4
KSH				pmax	pmax		
	comp=E,94nm,10.3s						
MHMT	Maesarieng	14.89	128	P	P	07 50 36.0	-2.0
	comp=E,62nm,0.9s						
CM33	Chiang Mai Arr	15.20	124	P	P	07 50 41.0	-0.5
CHTO	Chiang Mai	15.21	124	⇓P	P	07 50 41.8	+0.3
CMMT	Chiang Mai	15.21	124	P	P	07 50 40.4	-1.2
	comp=E,18nm,0.9s						
CM32	Chiang Mai Arr	15.23	124	P	P	07 50 42.0	+0.2
CM34	Chiang Mai Arr	15.33	123	P	P	07 50 42.7	-0.2
CM15	Chiang Mai Arr	15.42	125	P	P	07 50 44.5	+0.6
	comp=E,235nmcomp=E,30nm,0.8s						
CM13	Chiang Mai Arr	15.43	125	P	P	07 50 45.0	+1.0
	comp=E,246nmcomp=E,36nm,0.9s						
CM31	Chiang Mai Arr	15.43	125	P	P	07 50 45.0	+1.1
	comp=E,799nm,1.0s						
CMAR	Chiang Mai Arr	15.43	125	Pn	Pn	07 50 37.2	-2.2
	comp=E,0.4nm,0.3s,baz=303,slow=13,SNR=11						
CMAR	Chiang Mai Arr	15.43	125	*i* P	Pn	07 50 37.2	-2.2
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CM35	Chiang Mai Arr	15.44	123	P	Pn	07 50 41.0	+1.4
CM02	Chiang Mai Arr	15.45	125	P	Pn	07 50 41.0	+1.4
	comp=Z,223nmcomp=Z,30nm,0.9s						
CM01	Chiang Mai Arr	15.46	125	P	P	07 50 45.0	+0.6
	comp=Z,230nmcomp=Z,24nm,0.8s						
CM05	Chiang Mai Arr	15.47	125	P	Pn	07 50 39.7	-0.2
	comp=Z,159nmcomp=Z,18nm,0.8s						
CM09	Chiang Mai Arr	15.47	124	P	P	07 50 45.3	+0.8
	comp=Z,253nmcomp=Z,29nm,0.8s						
CM04	Chiang Mai Arr	15.49	125	P	P	07 50 43.9	-0.8
	comp=Z,211nmcomp=Z,24nm,0.7s						
CM36	Chiang Mai Arr	15.50	124	P	P	07 50 45.0	+0.2
KMI	Kunming	15.59	96	⇑P	Pn	07 50 41.0	-0.7
KMI				pP	P	07 50 44.3	-1.7
KMI				sP	pP	07 50 46.8	-2.6
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
KBL	Kabul	15.64	299	P	Pn	07 50 38.8	-3.5
KBL				pmax	pmax		
	comp=Z,131nm,1.0s						
KBL	Kabul	15.64	299	Pn	Pn	07 50 38.8	-3.5
KBL				IAmb	IAmb	07 50 48.7	
	comp=Z,131nm,0.9s						
PRZ	Przheval'sk	15.71	340	P	Pn	07 50 42.4	-0.7
PRZ				pmax	pmax		
	comp=Z,81nm,1.3s						
PRZ	Przheval'sk	15.71	340		Pn	07 50 42.4	-0.7
PRZ				IAmb	IAmb	07 50 51.6	
	comp=Z,81nm,1.3s						
KDJ	Kajisay	15.79	336	P	Pn	07 50 42.6	-1.6
KDJ				pmax	pmax		
	comp=Z,43nm,0.9s						
KDJ	Kajisay	15.79	336	Pn	Pn	07 50 42.6	-1.6
WMQ	Urumqi	16.00	6	*e*P	P	07 51 00.0	+10
WMQ	Urumqi	16.00	6	*e*P	P	07 50 51.0	+0.7
WMQ				sP	sP	07 50 54.8	-0.6
WMQ				PP	PnPn	07 50 59.0	+3.5
WMQ				S	S	07 53 54.5	-3.7
WMQ				pmax	pmax		
	comp=Z,37nm,0.9s						
SHLS	Shalkode	16.04	344	*e*P	Pn	07 50 43.6	-3.7
	comp=Z,58nm,1.0s,baz=344						
SHLS	Shalkode	16.04	344	*e*P	Pn	07 50 43.6	-3.7
SHLS				pmax	pmax		
	comp=Z,58nm,1.0s						
CD2	Chengdu	16.11	75	P	Pn	07 50 46.0	-2.3
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
UZB	Uzynbulak	16.14	342	*e*P	Pn	07 50 46.6	-2.1
	baz=342						
UZB	Uzynbulak	16.14	342	*e*P	Pn	07 50 46.6	-2.1
SATY	Saty	16.23	341	*e*P	Pn	07 50 47.3	-2.6
	baz=341						
SATY	Saty	16.23	341	*e*P	Pn	07 50 47.2	-2.6
ULHL	Ulahol	16.24	334	P	P	07 50 55.6	+2.5
	SNR=6.0						
GTA	Gaotai	16.48	42	⇓P	P	07 50 55.0	-0.7
GTA				pP	pP	07 50 59.3	0.0
GTA				sP	sP	07 51 02.5	+1.6
GTA				pmax	pmax		
	comp=Z,45nm,1.0s						
SUKH	Sukhothai	16.56	126	P	P	07 50 56.8	+0.3
	comp=Z,36nm,0.7s						
BOOM	Boomskoye usch	16.56	334	P	Pn	07 50 53.3	-0.8
BOOM				pmax	pmax		
	comp=Z,23nm,0.7s						
BOOM	Boomskoye usch	16.56	334	Pn	Pn	07 50 53.3	-0.8
MDOK	Medeo	16.75	338	*e*P	Pn	07 50 54.6	-1.8
	baz=338						
MDOK	Medeo	16.75	338	*e*P	Pn	07 50 54.6	-1.8
AAA	Alma-Ata	16.84	338	*e*P	Pn	07 50 56.0	-1.4
	baz=338						
AAA	Alma-Ata	16.84	338	*e*P	Pn	07 50 56.0	-1.4
UMPA	Umpang Tak	16.89	131	P	P	07 51 06.7	+6.5
	comp=Z,5μmcomp=Z,26nm,0.8s						
UCH	Uchtor	16.93	331	P	Pn	07 50 58.2	-0.8
	SNR=37						
TKM2	Tokmak 2	17.06	334	P	Pn	07 50 59.6	-0.9
	SNR=15						
UTTA	Uttaradit	17.06	123	P	P	07 51 02.3	+0.2
	comp=Z,26nm,1.3s						
KBK	Karagaybulak	17.10	332	P	P	07 51 05.2	+2.7
	SNR=47						
AML	Almayashu	17.22	329	P	Pn	07 51 00.2	-2.3
	SNR=29						
AAK	Ala-Archa	17.27	331	P	Pn	07 51 02.7	-0.3
	comp=Z,0.5nm,0.3s,baz=155,slow=12,SNR=20						
AAK	Ala-Archa	17.27	331	P	P	07 51 05.6	+1.1
	SNR=15						
AAK	Ala-Archa	17.27	331	⇓*e*P	P	07 51 05.1	+0.6
AAK				pmax	pmax		
	comp=Z,73nm,0.9s						
AAK	Ala-Archa	17.27	331		Pn	07 51 03.2	+0.2
AAK	Ala-Archa	17.27	331	⇑P	P	07 51 04.0	-0.5
PHIT	Phitsanulok	17.32	125	P	P	07 51 06.4	+1.5
	comp=Z,105nm,0.9s						
FRU1	Bishkek	17.36	332	P	Pn	07 51 04.0	0.0
FRU1				pmax	pmax		
	comp=Z,30nm,0.6s						
FRU1	Bishkek	17.36	332	P	Pn	07 51 04.0	0.0
LZH	Lanzhou	17.49	58	⇑P	Pn	07 51 04.8	-1.0
LZH				pP	P	07 51 07.5	+0.5
LZH				sP	pP	07 51 10.0	-0.2
LZH				PP	PnPn	07 51 19.5	+3.5
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
EKS2	Erkin-Say	17.60	330	P	P	07 51 09.3	+1.3
	SNR=21						
UTHA	Uthaitani	17.75	131	P	P	07 51 10.0	+0.4
	comp=Z,40nm,1.0s						
USP	Ospenovka	17.79	333	P	Pn	07 51 09.6	+0.3
	SNR=15						
SLVN	Son La	17.87	107		Pn	07 51 10.5	+0.1
SGDS	Sogindy	17.89	333	*e*P	Pn	07 51 08.7	-1.8
	baz=333						
SGDS	Sogindy	17.89	333	*e*P	Pn	07 51 08.7	-1.8
TDK	Taldyqorghan	18.03	343	*e*P	Pn	07 51 10.8	-1.5
	comp=Z,84nm,0.7s,baz=343						
TDK	Taldyqorghan	18.03	343	*e*P	Pn	07 51 10.7	-1.5
TDK				pmax	pmax		
	comp=Z,83nm,0.7s						
GYA	Guiyang	18.80	89	P	P	07 51 21.0	-0.4
GYA				S	Sn	07 54 53.5	+1.2
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
NONG	Nongkai	18.86	117	P	Pn	07 51 23.6	+1.1
	comp=Z,55nm,1.0s						
DZA	Taraz	18.93	326	*e*P	P	07 51 20.8	-1.8
	baz=326						
DZA	Taraz	18.93	326	*e*P	P	07 51 20.7	-1.8
TAS	Tashkent	18.93	319

ENH IAmb IAmb 07 51 49.1
comp=Z,62nm,0.8s
DGZ Jazzator, Alta 21.84 3⇓*i*P P 07 51 55.4 +1.1
UBPT Khong Chiam 22.29 120 P P 07 52 00.9 +1.8
SEM Semipalatinsk 22.87 351 *e*P P 07 52 03.4 -1.9
baz=351
SEM Semipalatinsk 22.87 351 *e*P P 07 52 03.4 -1.9
KURBB Kurchatov Arra 23.35 349 P P 07 52 10.1 +0.2
comp=Z,33nm,0.7s,baz=171,slow=10,SNR=211
KURBB S S 07 56 21.9 -0.7
comp=Z,1.7nm,1.0s,baz=160,slow=19,SNR=3.1
KURBB Kurchatov Arra 23.35 349 P P 07 52 09.9 0.0
KURK Kurchatov 23.42 349 P P 07 52 10.1 -0.5
KURK Kurchatov 23.42 349 P P 07 52 10.1 -0.5
QIZ Qiongzhong 23.89 106 P P 07 52 14.8 -0.7
QIZ pmax pmax
comp=Z,23nm,2.1s
BRZS Berezniki 24.19 339 *e*P P 07 52 16.5 -1.6
comp=Z,21nm,1.0s,baz=339
BRZS Berezniki 24.19 339 *e*P P 07 52 16.4 -1.6
BRZS pmax pmax
comp=Z,21nm,1.0s
WSAR Wadi Sarin 24.74 265 P P 07 52 25.0 +1.6
comp=Z,11nm,0.7s,baz=104,slow=7.1,SNR=8.7
HHC Hu-ho-hao-te 24.93 52 *e*P P 07 52 25.8 +0.7
HHC pmax pmax
comp=Z,22nm,1.0s
GEYT Alibeck 25.08 301 P P 07 52 28.6 +2.3
comp=Z,15nm,1.0s,baz=126,slow=9.3,SNR=18
GYA0B ALIBECK ARRAY 25.08 301 P P 07 52 27.5 +1.2
GYA0B IAmb IAmb 07 52 35.3
comp=Z,26nm,1.1s
WHN Wuhan 25.21 77 ⇓P P 07 52 35.8 +8.3
SONM Songino Array 25.68 34 P P 07 52 33.0 +1.3
comp=Z,36nm,0.8s,baz=220,slow=10.0,SNR=111
SONM Songino Array 25.68 34 P P 07 52 32.5 +0.7
SONM pmax pmax
comp=Z,37nm,0.9s
SONM Songino Array 25.68 34 P P 07 52 32.5 +0.7
SONM IAmb IAmb 07 52 35.9
comp=Z,37nm,0.9s
ULN Ulaanbaatar 26.02 34⇑*i*P P 07 52 35.6 +0.7
ULN pmax pmax
comp=Z,52nm,0.9s
ULN Ulaanbaatar 26.02 34 P P 07 52 35.4 +0.5
ULN IAmb IAmb 07 52 38.9
comp=Z,44nm,0.9s
ULN Ulaanbaatar 26.02 34 ⇑P P 07 52 35.9 +1.0
ZAA0 Zalesovo Array 26.06 359 P P 07 52 35.6 +0.7
ZAA0 IAmb IAmb 07 52 36.6
comp=Z,42nm,1.0s
ZALV Zalesovo Beam 26.06 359 P P 07 52 35.5 +0.6
comp=Z,24nm,0.6s,baz=186,slow=10,SNR=100
ZALV Zalesovo Beam 26.06 359 P P 07 52 35.2 +0.3
ZAK Zakamensk 26.20 26 *e*P P 07 52 37.3 +0.9
ZAK pmax pmax
comp=Z,28nm,1.0s
MOY Mondy 26.44 22 *e*P P 07 52 40.2 +1.6
MOY pmax pmax
comp=Z,38nm,1.8s
UOSS Minazif 26.46 270 P P 07 52 38.6 -0.3
KULM Kulim 26.63 145 P P 07 52 38.7 -1.8
KULM IAmb IAmb 07 52 50.3
comp=Z,36nm,1.1s
KULM Kulim 26.63 145 ⇑P P 07 52 44.7 +4.2
BVAR Borovoye Array 27.55 340 P P 07 52 48.6 +0.2
comp=Z,2.4nm,0.5s,baz=144,slow=18,SNR=18
BRVK Borovoye 27.61 340⇑*e*P P 07 52 49.2 +0.3
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 27.61 340 P P 07 52 48.9 0.0
BRVK Borovoye 27.61 340 ⇓P P 07 52 49.9 +1.0
BJT Baijiatuan 27.96 56 P P 07 52 52.0 -0.3
BJT pmax pmax
comp=Z,11nm,1.2s
BJT Baijiatuan 27.96 56 P P 07 52 52.0 -0.3
BJI Beijing 27.98 56 P P 07 52 53.5 +1.1
BJI pmax pmax
comp=Z,8.0nm,0.7s
IRK Irkutsk 28.06 25 *e*P P 07 52 53.6 +0.6
IRK pmax pmax
comp=Z,26nm,2.1s
AB31 Akbulak array 29.05 324 *i*P P 07 53 02.5 +0.7
ABKAR Akbulak array 29.05 324 P P 07 53 02.7 +0.9
ABKAR IAmb IAmb 07 53 03.9
comp=Z,23nm,1.3s
ABKAR Akbulak array 29.05 324 P P 07 53 02.3 +0.4
ABKAR Akbulak array 29.05 324 ⇑P P 07 53 02.8 +0.9
MNSI Mandailing Nat 30.07 151 P P 07 53 17.0 +5.8
AKTO Aktyubinsk 30.76 325 P P 07 53 16.7 -0.3
SOCY Socotra 33.41 249 P P 07 53 39.1 -1.7
SOCY IAmb IAmb 07 53 41.4
comp=Z,12nm,0.8s
SOCY Socotra 33.41 249 ⇑P P 07 53 40.7 -0.1
AKT Akhty 33.70 304 *e*P P 07 53 44.2 +1.2
AKT *e* 07 54 54.1
AKT pmax pmax
comp=Z,41nm,1.0s
HIA Hailar 33.76 41 P P 07 53 44.5 +1.1
HIA pmax pmax
comp=Z,22nm,0.9s
HIA Hailar 33.76 41 P P 07 53 44.5 +1.1
HIA IAmb IAmb 07 53 44.9
comp=Z,22nm,0.9s
SVE Sverdlovsk 33.93 335 *e*P P 07 53 46.1 +1.4
ARU Arti 34.44 333*c i*P P 07 53 49.7 +0.7
ARU 07 55 01.9
ARU S S 07 59 21.5 +4.5
ARU SS SnSn 08 01 30.3 +3.0
ARU pmax pmax
comp=Z,25nm,0.7s
ARU Arti 34.44 333 P P 07 53 49.8 +0.7
ARU Arti 34.44 333 ⇑P P 07 53 49.8 +0.8
GROC Groznyy 35.46 306 *e*P P 07 53 58.6 +0.6
GROC pmax pmax
comp=Z,39nm,0.5s
INCN Inchon 35.61 64 P P 07 53 59.5 0.0
INCN pmax pmax
comp=Z,21nm,0.9s
INCN Inchon 35.61 64 P P 07 53 59.5 0.0
INCN IAmb IAmb 07 54 00.3
comp=Z,21nm,0.9s
CN2 Changchun 35.62 53 *e*P P 07 53 59.5 0.0
CN2 pmax pmax
comp=Z,20nm,1.2s
GNI Garni 35.72 301⇓*e*P P 07 54 03.1 +2.6
GNI pmax pmax
comp=Z,27nm,1.1s
SBUM Sibu 35.86 130 P P 07 54 02.0 +0.3
BOD Bodaibo 35.94 26 *e*P P 07 53 58.3 -3.7
BOD pmax pmax
comp=Z,29nm,1.1s
RAYN Ar Rayn 36.28 272 P P 07 54 05.0 -0.4
RAYN pmax pmax
comp=Z,10.0nm,1.1s
RAYN Ar Rayn 36.28 272 P P 07 54 05.0 -0.4
KSAR Wonju Array Be 36.60 64 P P 07 54 06.6 -1.3
KSAR Wonju Array Be 36.60 64 P P 07 54 06.5 -1.3
KSRS Korea Array 36.63 64 P P 07 54 07.2 -0.9
comp=Z,2.3nm,0.8s,baz=267,slow=7.6,SNR=13
ZEI Tsey 36.74 305 *e*P P 07 54 10.3 +1.0
ZEI pmax pmax
comp=Z,35nm,1.4s
AKH Akhalkalaki 36.82 303 ⇑P P 07 54 13.1 +3.1
NCK Nalchik 37.09 306⇑*i*P P 07 54 13.5 +1.5
NCK pmax pmax
comp=Z,39nm,0.8s
BELG Belogornoye 37.33 322⇓*i*P P 07 54 14.4 +0.5
BELG pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 37.63 306 P P 07 54 17.2 +0.7
comp=Z,5.6nm,0.9s,baz=157,slow=7.0,SNR=10
KBZ Khabaz 37.63 306⇑*i*P P 07 54 17.0 +0.5
KBZ pmax pmax
comp=Z,10.0nm,1.0s
NEY Neytrino 37.67 306⇓*e*P P 07 54 19.7 +2.5
NEY pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 37.82 307 P P 07 54 19.1 +0.8
KIV pmax pmax
comp=Z,24nm,1.3s
KIV Kislovodsk 37.82 307 P P 07 54 19.1 +0.8
KIV IAmb IAmb 07 54 22.2
comp=Z,24nm,1.3s

KIRV Kirov 39.61 331*ce*P P 07 54 33.4 +0.5
VRH Novokhopyorsk 40.27 318 *e*P P 07 54 38.8 +0.2
VRH pmax pmax
comp=Z,50nm,0.6s
USA0B Ussuriysk Arra 40.33 54 P P 07 54 39.0 -0.2
USA0B pmax pmax
comp=Z,7.0nm,0.9s
USA0B Ussuriysk Arra 40.33 54 P P 07 54 39.0 -0.2
USRK Ussuriysk Ar. 40.33 54 P P 07 54 39.3 +0.1
comp=Z,5.5nm,0.8s,baz=260,slow=5.9,SNR=11
USRK Ussuriysk Ar. 40.33 54 P P 07 54 39.0 -0.3
KLR Kul'dur 41.13 46⇑*e*P P 07 54 45.6 -0.1
KLR pmax pmax
comp=Z,15nm,0.9s
GAZ Gaziantep 41.46 296 P P 07 54 49.0 +0.3
GAZ IAmb IAmb 07 54 51.3
comp=Z,33nm,1.0s
NRIK Noril'sk 41.51 1 P P 07 54 49.7 +1.1
comp=Z,43nm,0.9s,baz=169,slow=6.6,SNR=77
NRIK Noril'sk 41.51 1 P P 07 54 49.8 +1.2
NRIK pmax pmax
comp=Z,42nm,0.9s
NRIK Noril'sk 41.51 1 P P 07 54 49.8 +1.2
NRIK IAmb IAmb 07 54 50.6
comp=Z,42nm,0.8s
VORD Divnogorie 41.67 317 *e*P P 07 54 49.2 -0.9
VORD pmax pmax
comp=Z,20nm,0.6s
VSR Storozhevoye 41.81 317 *e*P P 07 54 50.6 -0.7
VSR pmax pmax
comp=Z,50nm,1.2s
TOKA Tokat 42.03 300 P P 07 54 54.6 +1.3
LPSR Galich'ya Gora 42.35 319 *e*P P 07 54 55.6 0.0
LPSR pmax pmax
comp=Z,80nm,0.8s
JWT Wachi 42.70 67 P P 07 54 58.6 -0.2
MOS Moscow 44.05 323 *e*P P 07 55 07.8 -1.5
MOS pmax pmax
comp=Z,88nm,1.5s
MRSI Marisa 44.20 122 P P 07 55 12.7 +1.7
comp=Z,26nm,0.8s
BR131 Keskin Array S 44.21 299 P P 07 55 10.9 -0.2
BR131 pmax pmax
comp=Z,18nm,1.2s
BR131 Keskin Array S 44.21 299 P P 07 55 10.9 -0.2
BR131 IAmb IAmb 07 55 12.9
comp=Z,18nm,1.2s
BRTR Keskin Array B 44.21 299 P P 07 55 11.6 +0.5
comp=Z,4.3nm,0.8s,baz=116,slow=5.6,SNR=14
OBN Obninsk 44.43 322⇑*i*P P 07 55 12.7 +0.3
OBN *e* 07 56 56.1
OBN pmax pmax
comp=Z,133nm,1.7s
YAK Yakutsk 44.77 28 *e*P P 07 55 15.0 0.0
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.1s
MAJO Matsushiro 44.88 65⇓*e*P P 07 55 16.0 -0.3
MAJO pmax pmax
comp=Z,17nm,1.2s
MAT Matsushiro 44.88 65 P P 07 55 15.9 -0.4
MJAR Matsushiro Arr 44.88 65 P P 07 55 15.7 -0.6
comp=Z,8.5nm,1.0s,baz=279,slow=9.9,SNR=16
MJAR Matsushiro Arr 44.88 65 IAmb IAmb 07 55 21.8
comp=Z,3.5nm,1.4s
TTSI Tana Toraja 45.05 127 P P 07 55 18.4 +0.6
comp=Z,38nm,0.9s
KLMR Klimovskoe 45.08 330 *e*P P 07 55 15.4 -2.1
KLMR *e* 07 56 56.6
KLMR pmax pmax
comp=Z,36nm,0.9s
KLMR Klimovskoe 45.08 330 *e*P P 07 55 15.4 -2.1
KLMR AMP 07 55 18.7
comp=Z,36nm,0.9s
KLMR *e*PcP PcP 07 56 56.6 -1.5
LEF Lefka 45.09 293 ⇓P P 07 55 19.9 +1.9
JMM Marumori 46.83 63 P P 07 55 31.4 -0.3
ELL Elmali 47.32 296 P P 07 55 36.5 +0.8
ELL pmax pmax
comp=Z,275nm,0.9s
ELL Elmali 47.32 296 P P 07 55 36.5 +0.8
JURR Jurilovca 47.74 306 ⇑P P 07 55 39.0 +0.3
TLCR 47.80 307 ⇑P P 07 55 39.2 +0.2
AKASG Malin Array Be 47.88 314 P P 07 55 39.1 -0.5
comp=Z,16nm,0.8s,baz=75,slow=7.0,SNR=42
AKASG PcP PcP 07 57 08.2 0.0
comp=Z,0.5nm,0.3s,baz=73,slow=3.5,SNR=7.3
AKASG PP PP 07 57 31.7 +0.3
comp=Z,2.0nm,0.7s,baz=90,slow=9.9,SNR=6.8
AKASG Malin Array Be 47.88 314 P P 07 55 39.2 -0.5
AKBB Malin Array Si 47.88 314 P P 07 55 39.6 -0.1
AKBB pmax pmax
comp=Z,20nm,0.8s
AKBB Malin Array Si 47.88 314 P P 07 55 39.6 -0.1
TPGR Topolog 48.07 307 ⇓P P 07 55 42.0 +0.8
YSS Yuzh-Sakhalins 48.11 51⇑*e*P P 07 55 41.9 +0.4
YSS pmax pmax
comp=Z,37nm,2.5s
SORM Soroca 48.23 311 ⇑P P 07 55 42.2 -0.2
CFR Carcaliu 48.28 307 ⇓P P 07 55 43.5 +0.7
ERM Erimo 48.39 57⇓*e*P P 07 55 46.1 +2.4
ERM pmax pmax
comp=Z,26nm,0.9s
HARR Harsova 48.42 306 ⇑P P 07 55 44.9 +1.0
MNK Minsk 49.19 319 *i*P P 07 55 48.9 -0.8
comp=E,7.0nm,0.9s
MNK *i*P P 07 55 48.9 -0.8
comp=N,18nm,0.7s
MNK *i*P P 07 55 48.9 -0.8
comp=Z,53nm,1.0s
MNK *i*PP PP 07 57 42.9 -0.4
MNK *i*PPP PPP 07 58 34.3
MNK *i*S S 08 02 55.9 +0.8
MNK *i*SS SS 08 06 28.6 +2.5
MNK *i*SSS SSS 08 07 42.2
MNK *i*LQ LQ 08 13 04.7
MNK *i*LR LR 08 16 49.7
MNK *i*LRM MLR 08 19 59.0
comp=Z,7μm,19.8s
MNK *i*LRM MLR 08 20 05.4
comp=N,11μm,15.3s
MNK *i*LRM MLR 08 20 19.1
comp=E,699nm,13.7s
VRI Vrincioaia 49.27 308 ⇓P P 07 55 52.0 +1.5
PLOR Plostina 49.33 308 ⇑P P 07 55 52.6 +1.7
TESR Tescani 49.33 309 ⇑P P 07 55 51.3 +0.4
NEHR Nehoiu 49.58 307 ⇓P P 07 55 55.0 +2.2
BIZ Bicaz 49.71 309 ⇓P P 07 55 54.8 +1.0
TIXI Tiksi 49.81 17⇑*i*P P 07 55 54.0 -0.1
TIXI Tiksi 49.81 17 P P 07 55 54.0 -0.1
TIXI IAmb IAmb 07 55 55.1
comp=Z,23nm,0.8s
TIXI Tiksi 49.81 17 ⇑P P 07 55 54.1 -0.1
MLR Muntele Rosu 49.82 307 ⇓P P 07 55 56.7 +1.8
MLR Muntele Rosu 49.82 307 P P 07 55 56.2 +1.4
MLR pmax pmax
comp=Z,55nm,0.8s
MLR Muntele Rosu 49.82 307 P P 07 55 56.1 +1.4
NACGM Naroch 49.88 320 *i*P P 07 55 54.7 -0.2
NACGM *i*P P 07 55 54.7 -0.2
NACGM *i*P P 07 55 54.7 -0.2
NACGM *i*PP PP 07 57 48.6 -0.9
NACGM *i*PPP PPP 07 58 40.5
NACGM *i*S S 08 02 56.7 -8.1
NACGM *i*SS SS 08 06 23.6 -14
NACGM *i*SSS SSS 08 08 26.7
NACGM *i*LQ LQ 08 13 10.9
NACGM *i*LR LR 08 17 21.0
IDID Didziasalis 49.96 320 *e*P P 07 55 55.6 +0.1
LVZ Lovozero 50.09 337⇑*e*P P 07 55 57.4 +1.0
LVZ pmax pmax
comp=Z,30nm,0.9s
DOPR Dopca 50.20 308 ⇑P P 07 55 58.7 +1.1
IIGN Ignalina 50.26 320 *e*P P 07 55 57.6 -0.2
BURAR Bucovina Array 50.32 310 ⇑P P 07 55 59.3 +0.7
BURAR Bucovina Array 50.32 310 P P 07 55 59.0 +0.5
BURAR IAmb IAmb 07 56 00.3
comp=Z,15nm,0.8s
BUR08 Bucovina Ar. S 50.33 310 P P 07 55 58.8 +0.2
BUR08 IAmb IAmb 07 56 00.1
comp=Z,12nm,0.9s
ISAL Salakas 50.34 321 *e*P P 07 55 58.2 -0.3
VOIR 50.45 307 ⇓P P 07 56 00.1 +0.5

VSU Vasula 50.49 324 *e*P P 07 55 59.4 -0.1
ARR Arges 50.75 307 ⇑P P 07 56 02.4 +0.6
PLVB Pleven 50.84 305 ⇑P P 07 56 03.2 +0.8
LVV L'vov 51.15 313 *e*P P 07 56 04.6 0.0
LOT Lotru 51.35 307 ⇑P P 07 56 07.4 +1.1
FINES FINESS Array B 51.42 328 P P 07 56 06.7 +0.2
comp=Z,34nm,0.7s,baz=106,slow=8.0,SNR=134
FINES FINESS Array B 51.42 328 P P 07 56 06.9 +0.4
PABE Paberze 51.55 320 *e*P P 07 56 08.0 +0.5
PABE Paberze 51.55 320 P P 07 56 07.8 +0.3
SUW Suwalki 51.88 318 *e*P P 07 56 10.1 +0.1
VTS Vitosha 51.91 304 ⇑P P 07 56 11.6 +0.9
VTS Vitosha 51.91 304 P P 07 56 11.5 +0.9
VTS pmax pmax
comp=Z,26nm,0.9s
VTS Vitosha 51.91 304 P P 07 56 11.5 +0.9
VTS IAmb IAmb 07 56 12.7
comp=Z,26nm,0.9s
VTS Vitosha 51.91 304 ⇑P P 07 56 11.5 +0.9
MTSE Matsula 52.04 324 *e*P P 07 56 11.5 +0.4
DRGR 52.04 309 ⇑P P 07 56 12.5 +1.1
GZR Gura Zlata 52.05 307 ⇓P P 07 56 11.9 +0.3
UZH Uzhgorod 52.28 311 *e*P P 07 56 04.2 -8.9
UZH *i* 07 56 06.4
UZH *i* 07 56 09.2
HERR Herculane 52.34 307 ⇓P P 07 56 13.2 -0.4
LIT Litokhoron 52.73 301 P P 07 56 16.8 +0.2
LIT pmax pmax
comp=Z,16nm,1.2s
LIT Litokhoron 52.73 301 P P 07 56 16.8 +0.2
LIT IAmb IAmb 07 56 17.2
comp=Z,16nm,1.2s
CRVS Cervenica-Dubn 52.82 312 *e*P P 07 56 18.7 +1.6
CRVS Cervenica-Dubn 52.82 312 *e*P P 07 56 18.7 +1.6
CRVS *e* 07 56 31.6
BZS Buzias 52.85 308 ⇓P P 07 56 18.4 +1.0
SOEI Soe 52.91 129 ⇑P P 07 56 16.2 -2.1
SOEI Soe 52.91 129 P P 07 56 17.6 -0.7
comp=Z,53nm,0.8s
AGG Agios Georgios 53.00 299 P P 07 56 17.8 -0.8
AGG pmax pmax
comp=Z,23nm,0.8s
AGG Agios Georgios 53.00 299 P P 07 56 17.8 -0.8
AGG IAmb IAmb 07 56 18.6
comp=Z,23nm,0.8s
AGG Agios Georgios 53.00 299 ⇓P P 07 56 17.9 -0.7
KEV Kevo 53.38 338 P P 07 56 21.2 +0.4
KEV pmax pmax
comp=Z,34nm,0.8s
KEV Kevo 53.38 338 P P 07 56 21.2 +0.4
KEV Kevo 53.38 338 ⇑P P 07 56 21.3 +0.4
ARA0 ARCESS Array S 53.80 338 *e*P P 07 56 24.8 +0.8
ARCES ARCESS Array B 53.80 338 P P 07 56 24.6 +0.6
comp=Z,35nm,0.7s,baz=88,slow=7.0,SNR=92
ARCES ARCESS Array B 53.80 338 P P 07 56 24.6 +0.6
MA2 Magadan 53.88 35*de*P P 07 56 25.1 +0.4
MA2 pmax pmax
comp=Z,81nm,2.5s
PSZ Piszkesteto 53.90 311 ⇓P P 07 56 26.2 +1.0
PSZ Piszkesteto 53.90 311 P P 07 56 25.3 +0.1
PSZ pmax pmax
comp=Z,11nm,0.8s
PSZ Piszkesteto 53.90 311 P P 07 56 25.3 +0.1
PSZ IAmb IAmb 07 56 26.8
comp=Z,11nm,0.8s
DIVS Divibare 54.13 306 P P 07 56 26.8 -0.1
DIVS IAmb IAmb 07 56 29.3
comp=Z,11nm,1.1s
DIVS Divibare 54.13 306 ⇓P P 07 56 27.4 +0.4
AAL Aland 54.16 326 *e*P P 07 56 26.5 -0.1
FRGS Fruska Gora 54.16 307 ⇓P P 07 56 27.8 +0.8
KTK1 Kautokeino 54.42 337 *e*P P 07 56 28.8 +0.3
VYHS Vyhne 54.58 311 *e*P P 07 56 30.7 +0.7
VYHS pmax pmax
comp=Z,13nm,1.0s
VYHS Vyhne 54.58 311 *e*P P 07 56 30.7 +0.7
KMBO Kilima Mbogo 54.61 246 P P 07 56 31.3 +0.4
comp=Z,5.7nm,0.8s,baz=47,slow=12,SNR=8.7
HAMF Hammerfest 54.73 339 *e*P P 07 56 31.4 +0.7
PDG Podgorica 54.86 304 ⇑P P 07 56 31.7 -0.4
PDG Podgorica 54.86 304 P P 07 56 31.9 -0.2
MORH Mrgy, Hungar 54.88 309 ⇑P P 07 56 32.6 +0.4
SRO Srobarova 54.97 311 *e*P P 07 56 34.1 +1.3
SRO Srobarova 54.97 311 *e*P P 07 56 34.1 +1.3
SEY Seymchan 55.03 31⇓*i*P P 07 56 33.9 +0.9
UPP Uppsala 55.31 325 *e*P P 07 56 35.1 +0.1
JAVC Velka Javorina 55.33 312 *e*P P 07 56 36.5 +1.0
MORC Moravsky Berou 55.35 313 *e*P P 07 56 36.1 +0.4
MORC Moravsky Berou 55.35 313 P P 07 56 36.0 +0.4
MORC pmax pmax
comp=Z,14nm,0.9s
MORC Moravsky Berou 55.35 313 P P 07 56 36.0 +0.3
MORC IAmb IAmb 07 56 37.1
comp=Z,14nm,0.9s
MORC Moravsky Berou 55.35 313 ⇓P P 07 56 36.3 +0.7
JETT Jettan, Norway 55.53 337 *e*P P 07 56 37.5 +0.9
MODS Modra-Piesok 55.62 311 *e*P P 07 56 37.0 -0.6
MODS Modra-Piesok 55.62 311 *e*P P 07 56 37.0 -0.6
ZST Bratislava 55.75 311 *e*P P 07 56 39.0 +0.5
ZST Bratislava 55.75 311 *e*P P 07 56 39.0 +0.5
KRLC Kraliky 55.82 313 *e*P P 07 56 39.0 0.0
KRLC Kraliky 55.82 313 *e*P P 07 56 39.0 0.0
VRAC Vranov 56.00 313 P P 07 56 40.8 +0.6
comp=Z,14nm,0.8s,baz=95,slow=6.1,SNR=15
VRAC Vranov 56.00 313 ⇑P P 07 56 40.9 +0.6
VRAC Vranov 56.00 313 *e*P P 07 56 40.8 +0.6
TRO Tromso 56.06 337 *e*P P 07 56 40.9 +0.6
KRUC Moravsky 56.15 312 *e*P P 07 56 41.5 +0.2
CHVC Chvalec 56.25 314 *e*P P 07 56 42.4 +0.4
UPC Upice 56.28 314 *e*P P 07 56 42.8 +0.6
UPC Upice 56.28 314 *e*P P 07 56 42.8 +0.6
CONA Conrad Observa 56.61 311 *i*P P 07 56 45.1 +0.4
comp=Z,25nm,1.0s,SNR=18
BSD Bornholm Skovb 56.71 320 *e*P P 07 56 44.3 -0.9
ARSA Arzberg 56.91 310 *i*P P 07 56 46.5 -0.2
comp=Z,11nm,0.9s
FAUS Fauske 57.03 334 *e*P P 07 56 47.1 -0.1
STEI Steigen 57.11 335 *e*P P 07 56 48.6 +0.8
MOR8 Moi Rana 57.24 333 *e*P P 07 56 48.0 -0.8
PRU Pruhonice 57.27 313 *e*P P 07 56 49.6 +0.4
PRU Pruhonice 57.27 313 *e*P P 07 56 49.6 +0.4
SOKA Soboth 57.31 310 *e*P P 07 56 50.2 +0.5
comp=Z,27nm,1.0s,SNR=19
CKRC Cesky Krumlov 57.54 312 *e*P P 07 56 51.8 +0.6
BRG Berggiesshubel 57.56 315 *e*P P 07 56 52.0 +0.7
comp=Z,15nm,0.8s,baz=83,slow=6.9
PBCC Pribram 57.65 313 *e*P P 07 56 51.7 -0.2
PBCC *e*P pP 07 56 52.0 -3.7
OBKA Obir 57.66 309 *i*P P 07 56 52.6 +0.4
comp=Z,21nm,0.8s,SNR=9.8
MOA Molln 57.68 311 *i*P P 07 56 52.2 -0.1
comp=Z,14nm,0.9s,SNR=10.0
LOF Lofoten 57.77 335 *e*P P 07 56 51.9 -0.5
KONS Konsvik 57.80 333 *e*P P 07 56 52.7 +0.1
FBE Freiberg 57.93 315 *e*P P 07 56 54.9 +1.1
comp=Z,20nm,0.9s,baz=83,slow=6.9
GEC2 GERESS Array S 57.94 312 P P 07 56 54.0 -0.1
GEC2 GERESS Array S 57.94 312 *e*P P 07 56 53.7 -0.4
baz=83,slow=6.9
GERES GERESS Array B 57.94 312 P P 07 56 54.2 +0.1
comp=Z,4.5nm,0.8s,baz=95,slow=7.1,SNR=38
KHC Kasperske Hory 57.98 313⇑*i*P P 07 56 54.5 +0.2
KHC pmax pmax
comp=Z,27nm,0.9s
KHC Kasperske Hory 57.98 313 *e*P P 07 56 54.5 +0.2
KHC Kasperske Hory 57.98 313 P P 07 56 54.2 -0.1
KHC IAmb IAmb 07 56 55.6
comp=Z,10nm,0.8s
CLL Collm 58.11 315 *i*P P 07 56 55.1 0.0
comp=Z,12nm,1.1s
CLL Collm 58.11 315 P P 07 56 55.2 +0.1
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL Collm 58.11 315 P P 07 56 55.2 +0.1
CLL IAmb IAmb 07 56 56.1
comp=Z,9.8nm,0.9s
CLL Collm 58.11 315 *e*P P 07 56 55.4 +0.3
comp=Z,6.6nm,0.8s,baz=83,slow=6.9
NSS Namsos 58.18 331 *e*P P 07 56 55.4 0.0
TRI Trieste 58.32 309 P P 07 56 56.5 -0.2
TRI pmax pmax
comp=Z,31nm,0.9s
TRI Trieste 58.32 309 P P 07 56 56.5 -0.2

KBA Koelnbreinsper 58.41 310 *i* P **P 07 56 56.9 -0.5**
comp=Z,9.1nm,0.9s
WET Wettzell 58.44 313 *eP* **P 07 56 58.1 +0.6**
comp=Z,8.5nm,0.8s,baz=83,slow=6.9
PTCC Patocco-Chiusa 58.50 309 ⇓P **P 07 56 57.8 -0.2**
NB2 NORSAR Subarra 58.52 327 P **P 07 56 56.9 -1.0**
baz=87,slow=6.9
NOA NORSAR Array B 58.52 327 P **P 07 56 57.2 -0.7**
comp=Z,6.1nm,0.7s,baz=88,slow=6.9,SNR=24
TANN Tannenbergstha 58.55 314 *eP* **P 07 56 58.8 +0.5**
comp=Z,8.3nm,0.9s,baz=83,slow=6.9
HSPB Hornsund (broa 58.58 346 *eP* **P 07 56 58.5 +0.5**
WERN Wernitzgruen 58.62 314 *eP* **P 07 56 59.5 +0.8**
comp=Z,6.9nm,0.9s,baz=83,slow=6.9
GUNZ Gunzen 58.64 314 *eP* **P 07 56 59.6 +0.7**
comp=Z,12nm,0.8s,baz=83,slow=6.9
WERD Werda 58.65 314 *eP* **P 07 56 59.5 +0.6**
comp=Z,12nm,0.8s,baz=83,slow=6.9
RJOB Jochberg 58.68 311 *eP* **P 07 56 59.4 +0.1**
comp=Z,27nm,0.8s,baz=83,slow=6.9
SPA0 Spitsbergen Ar 58.68 347 *eP* **P 07 56 59.7 +1.0**
NC204 NORSAR Array S 58.73 327 P **P 07 56 59.0 -0.4**
ZOU Zoufplan 58.73 310 P **P 07 56 59.3 -0.5**
ROTZ Rotzenmuhle 58.79 313 *eP* **P 07 57 01.1 +1.1**
comp=Z,15nm,0.8s,baz=83,slow=6.9
MANZ Manzenberg 58.83 314 *eP* **P 07 57 01.0 +0.8**
comp=Z,7.0nm,0.9s,baz=83,slow=6.9
STAL STALIGIAL 58.96 309 P **P 07 57 00.8 -0.4**
ABTA Abfaltersbach 59.02 310 *i* P **P 07 57 00.7 -1.0**
comp=Z,11nm,0.8s,SNR=7.5
MOX Moxa 59.06 314 *eP* **P 07 57 02.4 +0.7**
comp=Z,10nm,0.8s,baz=83,slow=6.9
FLTG Flechtingen 59.09 316 *eP* **P 07 57 02.0 +0.1**
comp=Z,17nm,0.8s,baz=83,slow=6.9
NRCA Norcia 59.27 305 P **P 07 57 03.8 +0.3**
KONO Kongsberg 59.38 325 *eP* **P 07 57 03.9 +0.1**
GRF Grafenberg Arr 59.44 313 *eP* **P 07 57 05.6 +1.2**
comp=Z,7.0nm,0.8s,baz=83,slow=6.9
ASSE Asse, Remlinge 59.46 314 *eP* **P 07 57 04.8 +0.4**
comp=Z,4.0nm,0.8s,baz=83,slow=6.9
BSEG Bad Segeberg 59.47 318 *eP* **P 07 57 05.5 +1.1**
comp=Z,27nm,0.8s,baz=83,slow=6.9
DOMB Dombas 59.51 328 *eP* **P 07 57 04.8 0.0**
WTTA Wattenberg 59.53 311 *i* P **P 07 57 04.7 -0.6**
comp=Z,30nm,0.9s,SNR=9.4
WATA Walderalm 59.56 311 *i* P **P 07 57 04.7 -0.8**
comp=Z,16nm,0.7s,SNR=7.2
MURB Monte Urbino 59.61 306 P **P 07 57 06.9 +1.1**
FUR Furstenfeldbru 59.63 312 *eP* **P 07 57 06.5 +0.8**
comp=Z,16nm,0.7s,baz=83,slow=6.9
CLZ Clausthal 59.68 316 *eP* **P 07 57 06.8 +0.7**
comp=Z,34nm,0.8s,baz=83,slow=6.9
MBAR Mbarara 59.69 251 *ceP* **P 07 57 07.5 +0.7**
MBAR pmax pmax
comp=Z,12nm,1.3s
MBAR Mbarara 59.69 251 P **P 07 57 06.5 -0.4**
MBAR IAmb IAmb 07 57 07.7
comp=Z,8.6nm,0.7s
CTI Castel Tesino 59.72 309 P **P 07 57 06.5 0.0**
CTI pmax pmax
comp=Z,15nm,0.8s
CTI Castel Tesino 59.72 309 P **P 07 57 06.5 0.0**
CTI IAmb IAmb 07 57 07.0
comp=Z,15nm,0.8s
NRDL Niedersach Rie 59.76 317 *eP* **P 07 57 07.6 +1.1**
comp=Z,34nm,0.9s,baz=83,slow=6.9
SQTA Sankt Quirin 59.82 311 *i* P **P 07 57 06.5 -0.8**
comp=Z,24nm,0.9s,SNR=8.4
TEOL Teolo 59.83 308 P **P 07 57 07.8 +0.6**
MOTA Moosalm 59.87 311 *i* P **P 07 57 06.8 -0.9**
comp=Z,31nm,0.8s,SNR=15
FITZ Fitzroy Crossi 59.93 135 P **P 07 57 08.1 0.0**
comp=Z,5.5nm,0.8s,baz=312,slow=5.9,SNR=7.9
FITZ Fitzroy Crossi 59.93 135 IAmb IAmb 07 57 09.2
comp=Z,13nm,1.1s
SKAR Skarslia 59.95 326 *eP* **P 07 57 08.4 +0.6**
GTTG Gottingen 59.97 316 *eP* **P 07 57 08.8 +0.7**
comp=Z,16nm,0.9s,baz=83,slow=6.9
UBBA Unterbreizbach 60.05 315 *eP* **P 07 57 08.9 +0.4**
comp=Z,3.4nm,0.8s,baz=83,slow=6.9
RETA Reute 60.08 311 *i* P **P 07 57 08.4 -0.5**
comp=Z,17nm,0.9s,SNR=7.0
FETA Feichten 60.18 310 *i* P **P 07 57 09.1 -0.7**
comp=Z,16nm,0.8s,SNR=9.4
MOL Molde 60.19 329 *eP* **P 07 57 09.1 -0.2**
AKN Aaknes 60.48 328 *eP* **P 07 57 11.5 +0.1**
UBR Ueberruh 60.48 311 *eP* **P 07 57 11.5 -0.2**
comp=Z,13nm,0.8s,baz=83,slow=6.9
SALO Salr 60.57 309 P **P 07 57 12.7 +0.4**
MILB Miltenberg 60.65 314 *eP* **P 07 57 13.3 +0.5**
comp=Z,6.0nm,0.7s,baz=83,slow=6.9
DAVA Damuels 60.70 311 *i* P **P 07 57 12.9 -0.4**
comp=Z,44nm,0.9s,SNR=21
KDU Kakadu 60.72 125 ⇓P P 07 57 08.4 -5.1
STU Stuttgart 60.89 313 *eP* **P 07 57 14.9 +0.5**
comp=Z,22nm,0.8s,baz=83,slow=6.9
KASTN Kahler Asten 60.98 315 *eP* **P 07 57 15.6 +0.6**
comp=Z,6.8nm,0.9s,baz=83,slow=6.9
BILL Bilibino 60.99 25⇓*eP* **P 07 57 15.7 +0.9**
BILL pmax pmax
comp=Z,21nm,1.0s
TNS Taunus Mts 61.12 314 *eP* **P 07 57 16.6 +0.6**
comp=Z,20nm,0.8s,baz=83,slow=6.9
IBBN Ibbenburen 61.21 317 *eP* **P 07 57 17.2 +0.7**
comp=Z,18nm,0.8s,baz=83,slow=6.9
TUE Stuetta 61.22 310 P **P 07 57 16.8 -0.1**
TUE Stuetta 61.22 310 ⇓P **P 07 57 16.5 -0.4**
BOB Bobbio (Coli) 61.49 308 ⇑P **P 07 57 19.4 +0.8**
ASK Askoy 61.50 326 *eP* **P 07 57 18.5 +0.3**
MSSA Maissana 61.53 308 P **P 07 57 18.6 -0.3**
BFO Black Forest 61.54 312 *eP* **P 07 57 18.5 -0.3**
comp=Z,4.0nm,0.7s,baz=83,slow=6.9
BUG Bochum-Univer 61.65 316 *eP* **P 07 57 20.1 +0.7**
comp=Z,21nm,0.8s,baz=83,slow=6.9
AHRW Bad Neuenahr-A 61.93 315 *eP* **P 07 57 22.2 +0.9**
comp=Z,22nm,0.8s,baz=83,slow=6.9
PGF Pioggiola 62.29 306 P **P 07 57 23.7 -0.4**
ECH Echery 62.33 312 P **P 07 57 24.1 0.0**
ECH pmax pmax
comp=Z,11nm,0.9s
ECH Echery 62.33 312 P **P 07 57 24.1 0.0**
ECH IAmb IAmb 07 57 24.8
comp=Z,11nm,0.9s
ECH Echery 62.33 312 ⇑P **P 07 57 23.9 -0.2**
BTNL Ternell 62.52 315 *dP* **P 07 57 25.8 +0.4**
comp=Z,14nm,1.0s
MEM Membach 62.59 315 *dP* **P 07 57 26.3 +0.5**
comp=Z,16nm,0.9s
MEM *dx* x 07 57 31.4
MEM *dPcP* **PcP 07 58 05.3 +0.5**
SENIN Lac Senin/Sane 62.62 310 P **P 07 57 26.5 +0.1**
WLF Walferdange 62.69 314 *dP* **P 07 57 27.3 +0.9**
WLF *dx* x 07 57 32.0
WLF Walferdange 62.69 314 *eP* **P 07 57 27.5 +1.1**
comp=Z,24nm,0.9s,baz=83,slow=6.9
BCLA Clavier 63.07 315 *dP* **P 07 57 28.6 -0.3**
comp=Z,12nm,1.0s
BGES Gesves 63.21 315 *dP* **P 07 57 30.2 +0.3**
comp=Z,11nm,1.0s
BNI Bardonecchia 63.34 309 P **P 07 57 30.9 -0.2**
BNI pmax pmax
comp=Z,18nm,1.0s
BNI Bardonecchia 63.34 309 P **P 07 57 30.9 -0.2**
BNI IAmb IAmb 07 57 36.9
comp=Z,18nm,1.0s
BNI Bardonecchia 63.34 309 ⇑P **P 07 57 30.8 -0.3**
BMRD Maredsous 63.43 315 *dP* **P 07 57 31.5 +0.1**
comp=Z,8.4nm,0.9s
DOU Dourbes 63.58 315 *dP* **P 07 57 32.4 0.0**
MORW Morawa 63.68 150 P **P 07 57 33.2 0.0**
SNF Seneffe 63.69 315 *dP* **P 07 57 33.3 +0.3**
comp=Z,18nm,1.0s
KEST Kesra 63.80 298 P **P 07 57 35.0 +0.9**
comp=Z,65nm,0.8s,baz=345,slow=1.2,SNR=54
KEST Kesra 63.80 298 P **P 07 57 35.4 +1.2**
NOR Nord 64.39 351 *i* P **P 07 57 37.0 -0.2**
NOR IAmb IAmb 07 57 37.9
comp=Z,6.4nm,0.8s
NOR Nord 64.39 351 *i* P **P 07 57 36.9 -0.2**
NOR pmax pmax
comp=Z,6.0nm,0.8s
NOR Nord 64.39 351 ⇑P **P 07 57 37.3 +0.1**
SSB Saint Sauveur 64.75 310 P **P 07 57 39.7 -0.5**
SSB pmax pmax
comp=Z,23nm,0.8s
SSB Saint Sauveur 64.75 310 P **P 07 57 39.7 -0.5**

SSB Saint Sauveur 64.75 310 ⇑P **P 07 57 40.2 0.0**
DAG Danmarks Havn 66.27 346 *i* P **P 07 57 48.8 -0.7**
DAG IAmb IAmb 07 57 51.1
comp=Z,12nm,1.1s
DAG Danmarks Havn 66.27 346 *i* P **P 07 57 48.7 -0.7**
DAG pmax pmax
comp=Z,12nm,1.1s
WRKA Warakurna 66.77 138 ⇑P **P 07 57 53.7 +0.3**
WB0 Warramunga Arr 66.87 130 P **P 07 57 54.2 +0.1**
WB0 IAmb IAmb 07 57 55.2
comp=Z,15nm,0.9s
WRA Warramunga Arr 66.95 130 P **P 07 57 54.8 +0.2**
comp=Z,10.0nm,0.8s,baz=322,slow=6.4,SNR=45
WRA PKPPKP **P'P'df 08 26 23.2 +3.4**
comp=Z,1.5nm,0.8s,baz=129,slow=2.7,SNR=6.5
WRA Warramunga Arr 66.95 130 P **P 07 57 54.9 +0.3**
WRAB Tennant Creek 66.95 130⇓*iP* **P 07 57 55.4 +0.8**
WRAB pmax pmax
comp=Z,30nm,2.5s
WRAB Tennant Creek 66.95 130 ⇑P **P 07 57 54.8 +0.2**
WB2 Warramunga Arr 66.96 130 P **P 07 57 54.8 +0.2**
WR0 Warramunga Arr 67.10 130 P **P 07 57 55.6 +0.1**
WR0 IAmb IAmb 07 57 56.7
comp=Z,12nm,0.9s
NWAO Narrogin (SRO) 67.52 151 P **P 07 57 56.8 -1.1**
comp=Z,29nm,0.8s,baz=332,slow=6.4,SNR=17
NWAO Narrogin (SRO) 67.52 151 P **P 07 57 57.1 -0.8**
NWAO pmax pmax
comp=Z,39nm,0.9s
NWAO Narrogin (SRO) 67.52 151 P **P 07 57 57.1 -0.8**
DBG Daneborg 67.55 344 *i* P **P 07 57 58.0 +0.4**
DBG IAmb IAmb 07 57 59.3
comp=Z,7.6nm,0.9s
DBG Daneborg 67.55 344 ⇓P **P 07 57 58.3 +0.7**
AS31 Alice Springs 69.25 133 P **P 07 58 09.3 +0.3**
ASAR Alice Springs 69.25 133 P **P 07 58 09.2 +0.2**
comp=Z,6.6nm,0.7s,baz=318,slow=6.5,SNR=62
ASAR PKPPKP **P'P'df 08 26 17.3 +1.8**
comp=Z,0.9nm,0.9s,baz=142,slow=4.7,SNR=4.9
ASAR Alice Springs 69.25 133 P **P 07 58 09.4 +0.4**
ASAR Alice Springs 69.25 133 P **P 07 58 09.4 +0.4**
SCO Scoresbysund 69.62 340 *i* P **P 07 58 10.3 -0.2**
SCO IAmb IAmb 07 58 12.8
comp=Z,2.8nm,1.2s
SCO Scoresbysund 69.62 340 P **P 07 58 11.6 +1.0**
SCO pmax pmax
comp=Z,12nm,1.3s
SCO Scoresbysund 69.62 340 P **P 07 58 11.6 +1.0**
SCO IAmb IAmb 07 58 12.9
comp=Z,12nm,1.3s
NEEM North Greenlan 71.76 351 *i* P **P 07 58 24.1 +0.1**
NEEM IAmb IAmb 07 58 25.2
comp=Z,39nm,0.7s
NEEM North Greenlan 71.76 351 ⇑P **P 07 58 24.1 +0.1**
RDOG Red Dog Mine 72.00 22 P 07 58 26.1
baz=300
A21K Barrow 72.10 17 P 07 58 26.3
baz=305
EUNU Eureka 72.21 359 P **P 07 58 27.3 +1.0**
ESBB Sonseca Array 72.48 306 P **P 07 58 28.9 +0.2**
ESBB IAmb IAmb 07 58 29.8
comp=Z,9.7nm,0.9s
ESDC Sonseca Array 72.48 306 P **P 07 58 29.1 +0.4**
comp=Z,7.0nm,0.7s,baz=58,slow=5.8,SNR=40
ESDC Sonseca Array 72.48 306 P **P 07 58 28.7 0.0**
ESDC IAmb IAmb 07 58 29.7
comp=Z,7.6nm,0.9s
PAB San Pablo 72.81 306 P **P 07 58 30.9 +0.3**
PAB pmax pmax
comp=Z,15nm,0.9s
PAB San Pablo 72.81 306 P **P 07 58 30.9 +0.3**
PAB IAmb IAmb 07 58 31.8
comp=Z,15nm,0.8s
PAB San Pablo 72.81 306 ⇑P **P 07 58 30.7 +0.1**
ANM Nome 72.85 25 P 07 58 31.3
baz=299
SUMG Summit 72.89 345 *i* P **P 07 58 31.2 +0.3**
SUMG IAmb IAmb 07 58 33.1
comp=Z,26nm,0.9s
SUMG Summit 72.89 345 P **P 07 58 31.6 +0.7**
SUMG pmax pmax
comp=Z,40nm,0.9s
SUMG Summit 72.89 345 P **P 07 58 31.6 +0.7**
SUMG Summit 72.89 345 ⇑P **P 07 58 31.5 +0.7**
SUMG Summit 72.89 345 ⇑P **P 07 58 31.5 +0.7**
MVO Moncorvo 74.08 308 *eP* **P 07 58 38.4 +0.4**
POLO Lamas de Olo 74.53 309 *eP* **P 07 58 41.2 +0.5**
TULEG Thule 74.63 354 *i* P **P 07 58 39.1 -1.4**
TULEG IAmb IAmb 07 58 40.6
comp=Z,13nm,0.8s
TULEG Thule 74.63 354 ⇑P **P 07 58 40.0 -0.5**
MTE Manteigas 74.74 308 *eP* **P 07 58 42.3 +0.4**
MTE Manteigas 74.74 308 P **P 07 58 42.3 +0.4**
MTE IAmb IAmb 07 58 43.4
comp=Z,18nm,0.9s
PVIS Viseu 74.86 308 *eP* **P 07 58 43.3 +0.7**
PCBR Castelo Branco 74.92 307 *eP* **P 07 58 43.5 +0.7**
PMRV Marv??o 75.02 307 *eP* **P 07 58 44.0 +0.5**
comp=Z,28nm,1.7s
PBAR Barrancos 75.28 306 *eP* **P 07 58 45.3 +0.4**
comp=Z,31nm,1.7s
ICESG Greenland Ices 75.48 342 *i* P **P 07 58 46.3 +0.3**
ICESG IAmb IAmb 07 58 47.7
comp=Z,39nm,0.9s
ICESG Greenland Ices 75.48 342 ⇑P **P 07 58 46.6 +0.7**
CTA Charters Tower 75.58 122 P **P 07 58 47.0 +0.2**
comp=Z,6.9nm,0.9s,baz=306,slow=8.9,SNR=9.2
TOLK Toolik Lake Re 75.67 18 P **P 07 58 47.6 +0.9**
TOLK IAmb IAmb 07 58 48.4
comp=Z,18nm,0.8s
TOLK Toolik Lake Re 75.67 18 P 07 58 47.6
baz=311
PMTG Montargil 75.76 307 *eP* **P 07 58 47.6 -0.1**
EVO Evora 75.83 306 *eP* **P 07 58 48.9 +0.8**
PBEJ Beja 75.93 306 *eP* **P 07 58 49.2 +0.5**
PSBE So Bento 75.98 307 *eP* **P 07 58 49.5 +0.5**
comp=Z,84nm,1.8s
PVAQ Vaqueiros 76.08 305 *eP* **P 07 58 50.0 +0.5**
PVAQ Vaqueiros 76.08 305 P **P 07 58 50.0 +0.5**
IMAR Indian Mountai 76.14 21 P **P 07 58 49.6 +0.3**
PCVE Castro Verde 76.22 305 *eP* **P 07 58 50.8 +0.4**
UPNV Upernavik 76.29 349 *i* P **P 07 58 49.7 -0.4**
UPNV IAmb IAmb 07 58 50.6
comp=Z,11nm,0.8s
PBDV Barranco-do-Ve 76.30 305 *eP* **P 07 58 51.6 +0.7**
COLD Coldfoot 76.43 19 P 07 58 51.9
baz=311
TTA Tatalina 77.23 24 P **P 07 58 56.8 +1.1**
TTA pmax pmax
comp=Z,15nm,1.4s
TTA Tatalina 77.23 24 P **P 07 58 56.8 +1.1**
TTA IAmb IAmb 07 58 58.1
comp=Z,15nm,1.4s
TTA Tatalina 77.23 24 ⇓P **P 07 58 57.0 +1.3**
TTA Tatalina 77.23 24 P 07 58 56.7
baz=307
RES Resolute Bay 77.70 0 ⇓P **P 07 58 58.4 +0.4**
MLY Manley 77.71 21 P 07 58 59.1
baz=311,SNR=16
CHUM Lake Minchumin 77.94 23 P 07 59 00.4
baz=310
I23K Minto, Yukon-K 78.07 21 P **P 07 59 01.1 +0.9**
I23K IAmb IAmb 07 59 02.8
comp=Z,8.4nm,0.9s
I23K Minto, Yukon-K 78.07 21 P 07 59 01.3
baz=312,SNR=10.0
LBTB Lobatse 78.11 233 P **P 07 59 01.3 +0.1**
LBTB pmax pmax
comp=Z,19nm,0.9s
LBTB Lobatse 78.11 233 P **P 07 59 01.3 +0.1**
LBTB IAmb IAmb 07 59 02.2
comp=Z,19nm,0.9s
LBTB Lobatse 78.11 233 ⇓P **P 07 59 01.5 +0.3**
BPAW Bear Paw Mtn. 78.25 22 P **P 07 59 01.8 +0.6**
BPAW IAmb IAmb 07 59 02.8
comp=Z,10nm,1.0s
BPAW Bear Paw Mtn. 78.25 22 P 07 59 01.8
baz=311,SNR=14
NEA2 Nenana 78.54 21 P 07 59 03.3
baz=312,SNR=19
MDM Murphy Dome 78.55 21 P **P 07 59 03.5 +0.5**
MDM IAmb IAmb 07 59 05.2
comp=Z,15nm,1.0s
PPLA Purkeypile 78.62 23 P **P 07 59 04.4 +0.9**
PPLA IAmb IAmb 07 59 15.8

comp=Z,31nm,1.4s
PPLA Purkeypile 78.62 23 P 07 59 04.3
baz=310
TOA0 Torodi Ar. Sit 78.66 279 P **P 07 59 03.9 -0.4**
TOA0 IAmb IAmb 07 59 04.8
comp=Z,8.5nm,0.8s
TORD Torodi Ar. Bea 78.66 279 P **P 07 59 03.8 -0.6**
comp=Z,7.9nm,0.7s,baz=52,slow=4.7,SNR=42
TORD Torodi Ar. Bea 78.66 279 P **P 07 59 03.9 -0.4**
TORD IAmb IAmb 07 59 04.8
comp=Z,6.8nm,0.8s
POKR Poker Plat Res 78.69 20 P 07 59 04.5
baz=314
TCOL CIGO, UAF Yank 78.73 20 P 07 59 04.6
baz=314,SNR=5.2
COLA College 78.73 20 P 07 59 04.6
baz=314
CCB Clear Creek Bu 78.90 21 P **P 07 59 04.6 -0.2**
TRF Thorofare Moun 78.91 22 P 07 59 05.6
baz=312
PRP Porcupine Dome 78.98 19 P 07 59 06.6
baz=315
ILAR Eielson Array 79.10 20 P **P 07 59 05.2 -0.6**
comp=Z,6.0nm,1.0s,baz=304,slow=4.5,SNR=34
ILAR PP **PP 08 02 02.9 -1.6**
comp=Z,2.2nm,0.9s,baz=310,slow=7.2,SNR=7.3
ILAR Eielson Array 79.10 20 P **P 07 59 06.0 +0.1**
ILAR Eielson Array 79.10 20 P **P 07 59 06.0 +0.1**
DY2G Dye2 79.12 342 *i* P **P 07 59 06.5 +0.3**
DY2G IAmb IAmb 07 59 07.3
comp=Z,13nm,0.7s
MCK McKinley 79.17 22 P 07 59 06.7
baz=313
HDA Harding Lake 79.33 21 P 07 59 06.3
baz=314
HDA P 07 59 06.3
baz=314
SKT Skwentna 79.45 24 P **P 07 59 08.3 +0.4**
SKT IAmb IAmb 07 59 09.2
comp=Z,26nm,1.0s
SKT Skwentna 79.45 24 P 07 59 08.3
baz=311,SNR=16
WAT2 Susitna Watana 79.81 22 P 07 59 09.4
baz=313
STKA Stephens Creek 79.82 134 P **P 07 59 10.1 -0.2**
comp=Z,5.9nm,0.8s,baz=291,slow=4.8,SNR=7.1
SFJD Kangerlussuaq 79.84 344 *i* P **P 07 59 09.6 -0.2**
SFJD IAmb IAmb 07 59 10.7
comp=Z,11nm,0.8s
SFJD Kangerlussuaq 79.84 344 *i* P **P 07 59 09.6 -0.2**
SFJD pmax pmax
comp=Z,11nm,0.8s
INK Inuvik 79.84 14 P **P 07 59 10.2 +0.4**
comp=Z,5.2nm,0.9s,baz=352,slow=6.4,SNR=18
INK Inuvik 79.84 14 P **P 07 59 10.4 +0.5**
INK pmax pmax
comp=Z,8.0nm,1.1s
INK Inuvik 79.84 14 P **P 07 59 10.3 +0.5**
INK Inuvik 79.84 14 ⇑P **P 07 59 10.0 +0.2**
INK Inuvik 79.84 14 P 07 59 09.6
baz=325
SUA Susitna One 80.08 24 P 07 59 12.0
baz=312,SNR=6.2
WAT6 Susitna Watana 80.36 22 P 07 59 13.0
baz=314
SCRK Sand Creek 80.55 20 P **P 07 59 14.3 +0.3**
SCRK IAmb IAmb 07 59 15.3
comp=Z,14nm,1.0s
SCRK Sand Creek 80.55 20 P 07 59 14.2
baz=317,SNR=18
PMR Palmer 80.56 23 P **P 07 59 14.3 +0.5**
PMR pmax pmax
comp=Z,13nm,1.0s
PMR Palmer 80.56 23 P **P 07 59 14.3 +0.5**
PMR IAmb IAmb 07 59 15.2
comp=Z,13nm,1.0s
PMR Palmer 80.56 23 P 07 59 13.9
baz=313,SNR=6.9
BOSA Boshof 80.59 231 P **P 07 59 14.1 -0.5**
comp=Z,8.4nm,0.8s,baz=45,slow=4.1,SNR=16
BOSA Boshof 80.59 231 P **P 07 59 14.6 0.0**
BOSA pmax pmax
comp=Z,10.0nm,0.9s
BOSA Boshof 80.59 231 P **P 07 59 14.6 0.0**
BOSA IAmb IAmb 07 59 15.1
comp=Z,10nm,0.9s
BOSA Boshof 80.59 231 ⇓P **P 07 59 14.4 -0.2**
C36M Paulatuk 80.68 10 P 07 59 13.9
baz=334
EPYK Eagle Plains 80.69 16 P 07 59 14.6
baz=323
SML Sawmill 80.69 23 P 07 59 15.2
baz=314,SNR=9.6
EGAK Eagle 80.77 18 P **P 07 59 15.5 +0.6**
EGAK Eagle 80.78 18 P 07 59 15.3
baz=319
PAX Paxson 80.82 21 P 07 59 15.7
baz=316
KNK Knik Glacier 80.92 23 P 07 59 16.8
baz=314
SCM Sheep Creek Mo 81.02 23 P **P 07 59 17.3 +0.9**
SCM pmax pmax
comp=Z,17nm,0.9s
SCM Sheep Creek Mo 81.02 23 P **P 07 59 17.3 +0.9**
SCM IAmb IAmb 07 59 18.0
comp=Z,16nm,0.9s
K27K Chicken 81.08 19 P **P 07 59 17.7 +1.1**
K27K IAmb IAmb 07 59 18.8
comp=Z,16nm,1.2s
K27K Chicken 81.08 19 P 07 59 17.9
baz=318
M24K Tolsona, Glenn 81.21 22 P 07 59 18.1
baz=315
HARP HAARP 81.33 21 P 07 59 18.8
baz=316
KLU Klutina 81.73 22 P 07 59 21.1
baz=316
GLI Glacier Island 81.77 23 P 07 59 20.7
baz=315
KDAK Kodiak Island 81.80 27 P **P 07 59 20.9 +0.4**
comp=Z,41nm,1.2s,baz=293,slow=4.5,SNR=27
KDAK Kodiak Island 81.80 27 P 07 59 20.8
baz=311
L27K Beaver Creek, 81.88 20 P 07 59 22.0
baz=319,SNR=10
N25K Chitina, Valde 82.09 22 P **P 07 59 23.0 +0.9**
N25K IAmb IAmb 07 59 24.4
comp=Z,20nm,1.1s
N25K Chitina, Valde 82.09 22 P 07 59 23.3
baz=317,SNR=14
NUUK Nuuk 82.35 343 *i* P **P 07 59 23.0 -0.3**
NUUK IAmb IAmb 07 59 24.3
comp=Z,20nm,0.8s
EYAK Cordova Ski Ar 82.47 23 P 07 59 24.9
baz=316
BMRM Bremner River 82.56 22 P 07 59 25.1
baz=317,SNR=7.1
MCARA McCarthy VSAT 82.77 21 P **P 07 59 26.7 +1.1**
MCARA McCarthy VSAT 82.77 21 P 07 59 27.0
baz=318
KOWA Kowa 83.02 283 P **P 07 59 28.1 +0.4**
comp=Z,13nm,0.9s,baz=45,slow=3.8,SNR=22
KOWA Kowa 83.02 283 P **P 07 59 27.2 -0.5**
CRQM Cirque 83.20 22 P **P 07 59 29.0 +1.0**
CRQM IAmb IAmb 07 59 30.0
comp=Z,17nm,1.0s
CRQE Cirque 83.22 22 P 07 59 28.7
baz=318
CTG Chitna Glacier 83.62 21 P 07 59 31.1
baz=319
PINM Pinnacle 84.64 21 P 07 59 36.4
baz=320
WHY Whitehorse 85.81 19 P 07 59 41.3
baz=325
SKAG Skagway 86.66 20 P 07 59 46.5
baz=324
DBIC Dimbokro 87.32 276 P **P 07 59 49.4 +0.2**
comp=Z,7.9nm,0.8s,baz=48,slow=10,SNR=7.8
DBIC Dimbokro 87.32 276 P **P 07 59 49.3 0.0**
DBIC pmax pmax
comp=Z,14nm,1.0s
DBIC Dimbokro 87.32 276 P **P 07 59 49.3 0.0**
DBIC IAmb IAmb 07 59 50.2
comp=Z,14nm,1.0s
DBIC Dimbokro 87.32 276 ⇓P **P 07 59 49.5 +0.3**
YKA Yellowknife Ar 88.50 9 P **P 07 59 53.6 -0.4**
comp=Z,4.2nm,0.7s,baz=340,slow=4.6,SNR=60

YKA				PP		**PP**	**08 03 19.3**	**-1.8**
	comp=Z,0.2nm,0.2s,baz=348,slow=8.5,SNR=7.7							
YKA				PKKPbc		**PKKPbc**	**08 17 34.0**	**-2.8**
	comp=Z,0.4nm,0.7s,baz=161,slow=2.8,SNR=6.3							
YKA	**Yellowknife Ar**	**88.50**	**9**	*ceP*		**P**	**07 59 53.5**	**-0.5**
YKA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
DLBC	**Dease Lake**	**89.02**	**18**	P		**P**	**07 59 56.7**	**0.0**
	comp=Z,2.4nm,1.1s,baz=334,slow=6.1,SNR=3.1							
DLBC	**Dease Lake**	**89.02**	**18**	IAmb		IAmb	07 59 58.7	
	comp=Z,5.5nm,1.3s							
CASY	**Casey**	**95.77**	**170**	‖P		**P**	**08 00 31.8**	**+4.6**
PDAR	**Pinedale Array**	**108.34**	**12**	PKiKP		**PKiKP**	**08 05 29.5**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=342,slow=3.3,SNR=3.9							
NVAR	**Mina Array Bea**	**110.35**	**20**	PKiKP		**PKiKP**	**08 05 34.6**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=296,slow=2.5,SNR=6.0							
NVAR				PP		**PP**	**08 06 09.0**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=327,slow=4.5,SNR=4.1							
SNAA	**Sanae**	**115.69**	**201**	PKPdf		**PKiKP**	**08 05 42.2**	**-1.1**
VNA2	**Neumayer--Watz**	**117.03**	**202**	PKPdf		**PKiKP**	**08 05 46.5**	**+0.7**
VNA1	**Neumayer--Stat**	**117.28**	**202**	PKPdf		**PKiKP**	**08 05 46.4**	**+0.1**
VNA3	**Neumayer Olymp**	**117.80**	**201**	PKPdf		**PKPdf**	**08 05 46.9**	**-0.4**
MNTX	**Cornudas Mount**	**119.84**	**11**	P			08 05 52.3	
	baz=349							
NATX	**Nacogdoches**	**120.70**	**0**	P			08 05 55.2	
	baz=360							
JCT	**Junction City**	**121.75**	**5**	PKiKP		**PKPdf**	**08 05 55.6**	**-0.7**
JCT	**Junction City**	**121.75**	**5**	PKPdf		**PKPdf**	**08 05 55.6**	**-0.7**
JCT	**Junction City**	**121.75**	**5**	P			08 05 56.0	
	baz=354							
TXAR	**Lajitas Array**	**122.43**	**10**	PKP		**PKPdf**	**08 05 57.2**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=322,slow=0.9,SNR=11							
TXAR				PP		**PP**	**08 07 35.5**	**+3.1**
	comp=Z,0.6nm,1.0s,baz=347,slow=2.7,SNR=4.0							
TXAR				PKKPbc		**PKKPbc**	**08 15 51.9**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=181,slow=5.0,SNR=4.3							
TXAR	**Lajitas Array**	**122.43**	**10**	PKiKP		**PKPdf**	**08 05 57.5**	**-0.2**
TXAR	**Lajitas Array**	**122.43**	**10**	PKPdf		**PKPdf**	**08 05 57.5**	**-0.2**
PTBC	**PUERTO BERRIO**	**140.73**	**328**	*eP*		PKPdf	08 06 23.3	-9.1
SPBC	**San Pablo de B**	**141.32**	**326**	*eP*		**PKPdf**	**08 06 27.2**	**-6.4**
CHIC	**Chinigaza**	**142.03**	**325**	*eP*		**PKPdf**	**08 06 29.0**	**-6.2**
CBOC	**Ciudad Bolivar**	**142.05**	**329**	*eP*		**PKPdf**	**08 06 28.8**	**-6.2**
ROSC	**El Rosal**	**142.14**	**326**	PKhKP		PKPpre	08 06 31.2	
	comp=Z,9.9nm,0.6s,baz=169,slow=22,SNR=7.9							
ROSC	**El Rosal**	**142.14**	**326**	*eP*		**PKPdf**	**08 06 31.1**	**-4.3**
GUY2C	**Guyana, Caldas**	**142.31**	**328**	*eP*		**PKPdf**	**08 06 31.7**	**-4.1**
ANIL	**Santa Ana**	**142.97**	**327**	*eP*		**PKPdf**	**08 06 30.1**	**-6.7**
ORTC	**Ortega, Tolima**	**143.40**	**327**	*eP*		PKPab	08 06 33.1	-0.1
YOTC	**Yotoco, Valle**	**143.86**	**328**	*eP*		PKPab	08 06 34.1	-1.0
MACC	**Macarena, Meta**	**144.20**	**323**	*eP*		**PKPab**	**08 06 36.1**	**-0.1**
BETC	**Betania**	**144.56**	**326**	*eP*		**PKPab**	**08 06 36.6**	**-1.0**
MARP	**Paez Belalcaza**	**144.67**	**327**	*eP*		**PKPab**	**08 06 38.1**	**-0.2**
GARC	**Garzon, Huila**	**145.01**	**326**	*eP*		**PKPab**	**08 06 38.7**	**-0.9**
SAML	**Samuel**	**145.07**	**297**	PKiKP		**PKPab**	**08 06 39.5**	**+0.1**
SAML	**Samuel**	**145.07**	**297**			**PKPab**	**08 06 39.5**	**+0.1**
PCON	**Cinco Dias**	**145.33**	**327**	*eP*		**PKPdf**	**08 06 41.6**	**+0.4**
SOTA	**Rioblanco**	**145.60**	**327**	*eP*		**PKPab**	**08 06 42.2**	**+0.2**
CRUC	**La Cruz**	**146.26**	**327**	*eP*		**PKPab**	**08 06 44.0**	**-0.3**
PTLC	**Puerto Leguiza**	**146.36**	**323**	*eP*		**PKPdf**	**08 06 41.3**	**-1.0**
GCUF	**Volcan Galeras**	**146.75**	**328**	*eP*		**PKPbc**	**08 06 45.8**	**+0.6**
CPUP	**Villa Florida**	**147.04**	**264**	PKPbc		**PKPdf**	**08 06 42.4**	**-0.6**
	comp=Z,7.2nm,0.9s,baz=53,slow=3.2,SNR=14							
CPUP	**Villa Florida**	**147.04**	**264**	PKiKP		**PKPdf**	**08 06 42.6**	**-0.4**
CPUP	**Villa Florida**	**147.04**	**264**	PKPdf		**PKPdf**	**08 06 42.6**	**-0.4**
OTAV	**Otavalo**	**148.13**	**329**	PKP2		**PKPbc**	**08 06 49.8**	**+0.8**
OTAV	**Otavalo**	**148.13**	**329**			**PKPbc**	**08 06 49.8**	**+0.8**
OTAV	**Otavalo**	**148.13**	**329**	*eP*		**PKPdf**	**08 06 46.7**	**+0.9**
LPAZ	**La Paz**	**153.13**	**290**	PKP		**PKPdf**	**08 06 53.5**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=87,slow=3.1,SNR=9.5							
LPAZ				PKPbc		**PKPbc**	**08 07 00.3**	**-0.7**
	comp=Z,6.0nm,0.8s,baz=68,slow=3.1,SNR=18							
LPAZ	**La Paz**	**153.13**	**290**			**PKPbc**	**08 07 00.7**	**-0.3**
PLCA	**Paso Flores**	**156.58**	**231**	PKP		**PKPdf**	**08 06 57.4**	**+0.4**
	comp=Z,2.3nm,1.0s,baz=90,slow=1.0,SNR=3.4							

*IDC **25** 07:55:42.5±0.6,27.°82N×85.°42E, h0km, mb4.3/24, mb1 4.4/27,mb1mx4.1/56,mbtmp4.2/27,ML3.9/2, Error ellipse: s-maj=18.5km s-min=12.0km az=48.0*
*NEIC **25** 07:55:44.1±1.3,27.°85N±0.°04×85.°49E±0.°07, h10km±1km, mb4.4/37,Error ellipse: s-maj=11.4km s-min=3.2km az=237.0*
*DMN **25** 07:55:45.0±0.1,27.°90N×85.°52E, h10km, Ml4.8/4, Error ellipse: s-maj=2.3km s-min=0.9km az=7.0*

ISC 25 07:55:44.6±0.9,27.°87N±0.°04×85.°51E±0.°02,h13km±6km, n86,σ0°62/95,mb4.4/37,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
KKN	**Kakani**	**0.22**	**249**	*eP*	**Pg**	**07**	**55 50.0**	**+0.5**
KKN				*eSg*	**Sg**	**07**	**55 53.3**	**+0.4**
PKI	**Pulchoki**	**0.31**	**197**	*eP*	**Pb**	**07**	**55 52.2**	**0.0**
PKI				*eSg*	**Sb**	**07**	**55 57.5**	**+0.3**
GUN	**Gumba**	**0.33**	**82**	*eP*	**Pg**	**07**	**55 51.7**	**+0.1**
GUN				*eSg*	**Sg**	**07**	**55 56.7**	**+0.4**
DMN	**Daman**	**0.44**	**234**	*eP*	**Pb**	**07**	**55 54.5**	**+0.1**
DMN				*eSg*	**Sb**	**07**	**56 00.3**	**-0.6**
JIRN	**Jiri**	**0.64**	**109**	*eP*	**Pb**	**07**	**55 57.6**	**-0.2**
JIRN				*eSg*	**Sb**	**07**	**56 06.6**	**-0.2**
GKN	**Gorkha**	**0.78**	**280**	*eP*	**Pb**	**07**	**55 59.8**	**-0.4**
GKN				*eSg*	**Sg**	**07**	**56 09.6**	**-0.6**
	3μm,0.2s							
DANN	**Dangsing**	**1.62**	**288**	*eP*	**Pg**	**07**	**56 15.7**	**0.0**
DANN				*eSg*	**Sg**	**07**	**56 36.5**	**-0.3**
	1μm,0.3s							
KOLN	**Koldanda**	**1.69**	**267**	*eP*	**Pg**	**07**	**56 16.8**	**-0.4**
KOLN				*eSg*	**Sg**	**07**	**56 39.4**	**+0.2**
	1μm,0.3s							
ODAN	**Odare**	**1.95**	**120**	*eP*	**Pg**	**07**	**56 21.6**	**-0.5**
ODAN				*eSg*	**Sg**	**07**	**56 47.2**	**-0.2**
	2μm,0.3s							
TAPN	**Taplejung**	**2.02**	**104**	*eP*	**Pg**	**07**	**56 22.7**	**-0.7**
TAPN				*eSg*	**Sg**	**07**	**56 49.0**	**-0.7**
	1μm,0.4s							
PYUN	**Piuthan**	**2.24**	**277**	*eP*	**Pg**	**07**	**56 27.3**	**-0.3**
PYUN				*eSg*	**Sg**	**07**	**56 56.1**	**-0.6**
LSA	**Lhasa**	**5.28**	**68**	Pn	**Pn**	**07**	**57 03.5**	**-0.1**
SHL	**Shillong**	**6.14**	**110**	Pn	**Pn**	**07**	**57 15.9**	**+0.7**
NIL	**Nilore**	**12.01**	**302**	Pn	**Pn**	**07**	**58 34.7**	**-0.9**
CHTO	**Chiang Mai**	**15.27**	**123**		**Pn**	**07**	**59 18.5**	**-1.4**
CHTO				IAmb	IAmb	07	59 25.7	
	comp=Z,7.1nm,0.8s							
CM31	**Chiang Mai Arr**	**15.49**	**124**	Pn	**Pn**	**07**	**59 22.1**	**-0.8**
CM31				IAmb	IAmb	07	59 28.7	
	comp=Z,6.8nm,0.8s							
CMAR	**Chiang Mai Arr**	**15.49**	**124**	Pn	**Pn**	**07**	**59 21.4**	**-1.5**
	baz=300,slow=11,SNR=1.2							
KBL	**Kabul**	**15.57**	**299**	Pn	**Pn**	**07**	**59 23.6**	**-0.4**
KBL				IAmb	IAmb	07	59 29.8	
	comp=Z,20nm,0.8s							
KDJ	**Kajisay**	**15.77**	**337**	P	**P**	**07**	**59 29.5**	**-0.9**
WMQ	**Urumqi**	**16.02**	**6**	P	**P**	**07**	**59 32.2**	**-0.8**
AAK	**Ala-Archa**	**17.24**	**332**	P	**Pn**	**07**	**59 45.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=197,slow=11,SNR=3.9							
AAK	**Ala-Archa**	**17.24**	**332**	P	**P**	**07**	**59 46.6**	**-0.1**
MK31	**Makanchi Array**	**19.06**	**353**	P	**P**	**08**	**00 06.8**	**+0.2**
MKAR	**Makanchi Array**	**19.06**	**353**	P	**Pn**	**08**	**00 07.5**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=171,slow=12,SNR=30							
MKAR	**Makanchi Array**	**19.06**	**353**	P	**Pn**	**08**	**00 07.2**	**-0.2**
MAKZ	**Makanchi**	**19.11**	**353**	P	**P**	**08**	**00 07.4**	**+0.3**
KK31	**Karatay Array**	**19.45**	**325**	P	**P**	**08**	**00 09.9**	**-0.9**
KKAR	**Karatay Array**	**19.45**	**325**	P	**P**	**08**	**00 10.2**	**-0.7**
KKAR	**Karatay Array**	**19.45**	**325**	P	**P**	**08**	**00 09.7**	**-1.2**
KKAR				IAmb	IAmb	08	00 10.3	
	comp=Z,4.0nm,0.9s							
ENH	**Enshi**	**21.09**	**78**		**P**	**08**	**00 28.4**	**-0.4**
ENH				IAmb	IAmb	08	00 32.1	
	comp=Z,38nm,1.4s							
KURBB	**Kurchatov Arra**	**23.34**	**349**	P	**P**	**08**	**00 53.2**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=173,slow=9.9,SNR=21							
SONM	**Songino Array**	**25.73**	**34**	P	**P**	**08**	**01 16.1**	**+1.4**
	comp=Z,6.8nm,0.6s,baz=218,slow=10,SNR=21							
SONM	**Songino Array**	**25.73**	**34**	P	**P**	**08**	**01 15.0**	**+0.2**
SONM				IAmb	IAmb	08	01 18.9	
	comp=Z,5.3nm,0.8s							
ZAA0	**Zalesovo Array**	**26.06**	**359**	P	**P**	**08**	**01 18.2**	**+0.7**
ZAA0				IAmb	IAmb	08	01 18.9	
	comp=Z,6.0nm,0.8s							
ZALV	**Zalesovo Beam**	**26.06**	**359**	P	**P**	**08**	**01 18.2**	**+0.7**
	comp=Z,6.0nm,0.6s,baz=184,slow=9.4,SNR=23							
ZALV	**Zalesovo Beam**	**26.06**	**359**	P	**P**	**08**	**01 17.6**	**0.0**
ULN	**Ulaanbaatar**	**26.07**	**34**	P	**P**	**08**	**01 18.5**	**+0.6**
ULN				IAmb	IAmb	08	01 22.0	
	comp=Z,11nm,0.7s							
BVAR	**Borovoye Array**	**27.52**	**340**	P	**P**	**08**	**01 30.4**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=137,slow=15,SNR=3.3							
RPSI	**Rantau Prapat**	**28.12**	**151**	P	**P**	**08**	**01 36.3**	**-0.1**
RPSI				IAmb	IAmb	08	01 45.5	
	comp=Z,3.0nm,0.9s							
ABKAR	**Akbulak array**	**29.01**	**324**	P	**P**	**08**	**01 44.8**	**+0.8**
ABKAR				IAmb	IAmb	08	01 45.3	
	comp=Z,2.6nm,0.7s							
ABKAR	**Akbulak array**	**29.01**	**324**	P	**P**	**08**	**01 44.4**	**+0.3**
ARU	**Arti**	**34.41**	**334**	P	**P**	**08**	**02 32.5**	**+1.2**
ARU				IAmb	IAmb	08	02 32.8	
	comp=Z,4.3nm,0.7s							
KSRS	**Korea Array**	**36.71**	**64**	P	**P**	**08**	**02 50.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=271,slow=8.5,SNR=7.5							
KLR	**Kul'dur**	**41.19**	**46**	P	**P**	**08**	**03 29.4**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=278,slow=9.1,SNR=9.7							
NRIK	**Noril'sk**	**41.52**	**1**	P	**P**	**08**	**03 31.8**	**+0.6**
	comp=Z,6.1nm,0.7s,baz=176,slow=6.6,SNR=16							
NRIK	**Noril'sk**	**41.52**	**1**	P	**P**	**08**	**03 32.3**	**+1.1**
NRIK				IAmb	IAmb	08	03 33.0	
	comp=Z,7.3nm,0.8s							
MJAR	**Matsushiro Arr**	**44.95**	**65**	P	**P**	**08**	**04 00.2**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=307,slow=4.4,SNR=1.7							
ERM	**Erimo**	**48.46**	**57**	P	**P**	**08**	**04 27.8**	**+1.0**
BURAR	**Bucovina Array**	**50.27**	**310**	P	**P**	**08**	**04 40.3**	**-0.4**
FIA1	**FINESS Array S**	**51.38**	**328**	P	**P**	**08**	**04 48.9**	**+0.2**
FIA1				IAmb	IAmb	08	04 49.7	
	comp=Z,6.3nm,0.8s							
FINES	**FINESS Array B**	**51.38**	**328**	P	**P**	**08**	**04 48.5**	**-0.1**
	comp=Z,4.9nm,0.6s,baz=103,slow=8.2,SNR=23							
KEV	**Kevo**	**53.35**	**338**	P	**P**	**08**	**05 03.5**	**+0.3**
ARCES	**ARCESS Array B**	**53.78**	**338**	P	**P**	**08**	**05 06.5**	**+0.1**
	comp=Z,9.6nm,0.7s,baz=87,slow=7.0,SNR=29							
FAKI	**Fak Fak**	**54.38**	**117**	P	**P**	**08**	**05 11.0**	**-0.5**
GERES	**GERESS Array B**	**57.88**	**312**	P	**P**	**08**	**05 35.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=90,slow=8.0,SNR=4.3							
NC405	**NORSAR Array S**	**58.23**	**327**	P	**P**	**08**	**05 37.9**	**-0.4**
NOA	**NORSAR Array B**	**58.48**	**327**	P	**P**	**08**	**05 39.3**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=88,slow=6.9,SNR=6.9							
FITZ	**Fitzroy Crossi**	**59.98**	**135**	P	**P**	**08**	**05 51.4**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=292,slow=5.1,SNR=5.1							
FITZ	**Fitzroy Crossi**	**59.98**	**135**	IAmb	IAmb	08	05 52.5	
	comp=Z,6.8nm,1.1s							
MSSA	**Maissana**	**61.47**	**308**	P	**P**	**08**	**06 00.5**	**-0.5**
SENIN	**Lac Senin/Sane**	**62.57**	**310**	P	**P**	**08**	**06 08.4**	**-0.1**
KEST	**Kesra**	**63.73**	**298**	P	**P**	**08**	**06 16.5**	**+0.3**
	comp=Z,10nm,0.9s,baz=170,slow=2.4,SNR=8.9							
WB0	**Warramunga Arr**	**66.92**	**130**	P	**P**	**08**	**06 37.2**	**+0.3**
WRA	**Warramunga Arr**	**67.01**	**130**	P	**P**	**08**	**06 38.0**	**+0.5**
	comp=Z,4.6nm,0.6s,baz=323,slow=6.5,SNR=37							
WB2	**Warramunga Arr**	**67.02**	**130**	P	**P**	**08**	**06 38.0**	**+0.5**
WR0	**Warramunga Arr**	**67.16**	**130**	P	**P**	**08**	**06 38.6**	**+0.2**
WR0				IAmb	IAmb	08	06 44.8	
	comp=Z,5.1nm,0.9s							
AS31	**Alice Springs**	**69.31**	**133**	P	**P**	**08**	**06 52.5**	**+0.7**
AS31				IAmb	IAmb	08	06 53.2	
	comp=Z,1.4nm,0.6s							
ASAR	**Alice Springs**	**69.31**	**133**	P	**P**	**08**	**06 52.3**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=315,slow=6.3,SNR=53							
ASAR	**Alice Springs**	**69.31**	**133**	P	**P**	**08**	**06 52.1**	**+0.3**
ESDC	**Sonseca Array**	**72.42**	**306**	P	**P**	**08**	**07 10.0**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=56,slow=6.3,SNR=8.7							
CTA	**Charters Tower**	**75.65**	**122**	P	**P**	**08**	**07 30.1**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=333,slow=9.7,SNR=2.3							
TOLK	**Toolik Lake Re**	**75.70**	**18**	P	**P**	**08**	**07 30.4**	**+1.0**
TOLK				IAmb	IAmb	08	07 31.0	
	comp=Z,3.5nm,0.9s							
BMAR	**Burnt Mountain**	**77.90**	**18**	P	**P**	**08**	**07 43.0**	**+1.2**
TORD	**Torodi Ar. Bea**	**78.58**	**279**	P	**P**	**08**	**07 45.6**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=59,slow=4.3,SNR=10							
ILAR	**Eielson Array**	**79.13**	**20**	P	**P**	**08**	**07 48.4**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=279,slow=3.7,SNR=6.2							
SKT	**Skwentna**	**79.49**	**24**	P	**P**	**08**	**07 51.0**	**+0.3**
SKT				IAmb	IAmb	08	07 57.0	
	comp=Z,4.1nm,1.1s							
INK	**Inuvik**	**79.87**	**14**	P	**P**	**08**	**07 52.9**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=353,slow=10,SNR=4.0							
INK	**Inuvik**	**79.87**	**14**	IAmb	IAmb	08	07 53.4	
	comp=Z,2.7nm,1.1s							
STKA	**Stephens Creek**	**79.87**	**134**	P	**P**	**08**	**07 53.3**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=290,slow=1.9,SNR=4.9							
STKA	**Stephens Creek**	**79.87**	**134**	P	**P**	**08**	**07 53.4**	**+0.4**
SCRK	**Sand Creek**	**80.58**	**20**	P	**P**	**08**	**07 56.7**	**+0.1**
SCRK				IAmb	IAmb	08	07 57.7	
	comp=Z,2.7nm,0.9s							
BCAR	**Beaver Creek A**	**81.92**	**20**	P	**P**	**08**	**08 04.7**	**+1.0**
VRDI	**Verde Repeater**	**82.78**	**22**	P	**P**	**08**	**08 08.3**	**0.0**
VRDI				IAmb	IAmb	08	08 10.3	
	comp=Z,3.4nm,1.0s							
DBIC	**Dimbokro**	**87.25**	**276**	P	**P**	**08**	**08 32.3**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=78,slow=5.4,SNR=3.2							
YKA	**Yellowknife Ar**	**88.52**	**9**	P	**P**	**08**	**08 36.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=337,slow=4.6,SNR=8.3							
SAML	**Samuel**	**145.00**	**296**	PKPbc	**PKPab**	**08**	**15 21.4**	**-0.3**

*NOU **25** 07:58:12.5,36.°72S×178.°63E, h204km, MLv4.5, Off E. Coast of N. Island, N.Z.*
*WEL **25** 07:58:30.9,37.°3°S×17.°7°E,°, h94km±3km, M3.5/48, ML3.8/8, MLv3.5/48, Error ellipse: s-maj=0.0km s-min=0.0km az=143.7*
*IDC **25** 07:58:30.9±1.4,38.°04S×177.°69E, h124km±5km, mb3.4/3, mb1 3.6/4,mb1mx3.4/38,mbtmp3.8/4, Error ellipse: s-maj=32.5km s-min=24.3km az=104.0*

ISC 25 07:58:30.6±1.0,37.°52S±0.°06×177.°50E±0.°05,h112km±6km, n99,σ1°69/105,mb3.6/3,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
HAZ	**Te Kaha**	**0.32**	**136**	P	**Pn**	**07**	**58 45.6**	**-1.0**
HAZ				S	**Sn**	**07**	**58 57.0**	**-1.6**
PKGZ	**Pakihiroa**	**0.59**	**129**	P	**Pn**	**07**	**58 48.2**	**-0.1**
MXZ	**Matakaoa Point**	**0.64**	**94**	P	**Pn**	**07**	**58 48.0**	**-0.6**
TWGZ	**Tauwhareparae**	**0.76**	**150**	P	**Pn**	**07**	**58 50.6**	**+0.9**
TWGZ				S	**Sn**	**07**	**59 07.0**	**+3.0**
WMGZ	**Waiomatatini S**	**0.79**	**112**	P	**Pn**	**07**	**58 50.0**	**+0.2**
WMGZ				S	**Sn**	**07**	**59 05.8**	**+1.5**
URZ	**Urewera**	**0.80**	**202**	P	**Pn**	**07**	**58 50.0**	**+0.1**
	42nm,0.3s,baz=121,slow=24,SNR=1396							
URZ				S	**Sn**	**07**	**59 04.6**	**0.0**
	baz=225,slow=20							
URZ	**Urewera**	**0.80**	**202**	P	**Pn**	**07**	**58 50.1**	**+0.1**
URZ				S	**Sn**	**07**	**59 04.5**	**0.0**
MARZ	**Manawahe**	**0.80**	**235**	P	**Pn**	**07**	**58 49.4**	**-0.6**
MWZ	**Matawai**	**0.81**	**178**	P	**Pn**	**07**	**58 50.7**	**+0.6**
PUZ	**Puketiti**	**0.81**	**133**	P	**Pn**	**07**	**58 50.3**	**+0.2**
OPRZ	**Ohinepanea**	**0.81**	**247**	P	**Pn**	**07**	**58 49.1**	**-0.9**
OPRZ				S	**Sn**	**07**	**59 03.0**	**-1.8**
EDRZ	**Edgecumbe**	**0.84**	**226**	P	**Pn**	**07**	**58 50.2**	**-0.2**
TKGZ	**Te Karaka**	**0.95**	**163**	P	**Pn**	**07**	**58 52.2**	**+0.8**
RAGZ	**Rawiri**	**0.97**	**184**	P	**Pn**	**07**	**58 53.2**	**+1.5**
TGRZ	**Tauranga**	**1.00**	**258**	P	**Pn**	**07**	**58 50.8**	**-1.1**
TARZ	**Mount Tarawera**	**1.06**	**228**	P	**Pn**	**07**	**58 53.6**	**+1.0**
OMRZ	**Omania**	**1.06**	**237**	P	**Pn**	**07**	**58 52.5**	**-0.1**
KARZ	**Kaharoa**	**1.11**	**243**	P	**Pn**	**07**	**58 52.7**	**-0.4**
CNGZ	**Carnagh Statio**	**1.11**	**150**	P	**Pn**	**07**	**58 54.1**	**+1.1**
MUGZ	**Murupara**	**1.11**	**211**	P	**Pn**	**07**	**58 53.6**	**+0.5**
RTZ	**Ruatahuna**	**1.16**	**200**	P	**Pn**	**07**	**58 54.4**	**+0.7**
RIGZ	**Rimuhau**	**1.20**	**170**	P	**Pn**	**07**	**58 54.8**	**+0.8**
UTU	**Utuhina**	**1.22**	**237**	P	**Pn**	**07**	**58 57.4**	**+3.1**
SNGZ	**Shannon Statio**	**1.26**	**186**	P	**Pn**	**07**	**58 55.9**	**+1.1**
HSRZ	**Hossack Road**	**1.27**	**231**	P	**Pn**	**07**	**58 55.9**	**+1.1**
KMRZ	**Kaimai**	**1.28**	**255**	P	**Pn**	**07**	**58 54.2**	**-0.7**
GRRZ	**Galatos Road**	**1.37**	**233**	P	**Pn**	**07**	**58 56.9**	**+0.9**
ALRZ	**Allen Road**	**1.38**	**221**	P	**Pn**	**07**	**58 56.9**	**+0.8**
MTHZ	**Maungataniwha**	**1.42**	**201**	P	**Pn**	**07**	**58 57.6**	**+1.0**
RAHZ	**Arahi**	**1.43**	**193**	P	**Pn**	**07**	**58 58.0**	**+1.4**
KNZ	**Kokohu**	**1.50**	**175**	P	**Pn**	**07**	**58 58.1**	**+0.7**
MRHZ	**Matea Rd**	**1.56**	**213**	P	**Pn**	**07**	**58 59.3**	**+1.0**
WHHZ	**Waihua**	**1.56**	**188**	P	**Pn**	**07**	**58 59.5**	**+1.3**
TOZ	**Tahuroa Road**	**1.60**	**262**	P	**Pn**	**07**	**58 58.0**	**-0.6**
KUTZ	**Kaahu Road**	**1.64**	**233**	P	**Pn**	**07**	**59 00.0**	**+0.9**
MHGZ	**Mahia Peninsul**	**1.66**	**169**	P	**Pn**	**07**	**59 00.5**	**+1.1**
NMHZ	**Naumai**	**1.66**	**199**	P	**Pn**	**07**	**59 01.4**	**+1.8**
WHTZ	**Whakaora**	**1.67**	**226**	P	**Pn**	**07**	**59 01.9**	**+2.4**
TLZ	**Tolley Road**	**1.75**	**242**	P	**Pn**	**07**	**59 00.8**	**+0.3**
HATZ	**Hinemaiaia**	**1.76**	**219**	P	**Pn**	**07**	**59 02.1**	**+1.4**
ARHZ	**Aropaoanui**	**1.78**	**193**	P	**Pn**	**07**	**59 02.2**	**+1.3**
BKZ	**Black Stump Fm**	**1.82**	**205**	P	**Pn**	**07**	**59 02.5**	**+1.1**
WATZ	**Wairara**	**1.83**	**229**	P	**Pn**	**07**	**59 02.6**	**+1.1**
RATZ	**Rangitukua**	**1.91**	**225**	P	**Pn**	**07**	**59 04.1**	**+1.5**
RITZ	**Rihia Road**	**1.94**	**221**	P	**Pn**	**07**	**59 05.2**	**+2.2**
MCHZ	**McNeill Hill**	**2.02**	**198**	P	**Pn**	**07**	**59 05.2**	**+1.3**
KATZ	**Kakaramea**	**2.03**	**224**	P	**Pn**	**07**	**59 06.5**	**+2.4**
KWHZ	**Kaweka Forest**	**2.08**	**204**	P	**Pn**	**07**	**59 05.7**	**+1.0**
TMVZ	**Te Maari**	**2.12**	**221**	P	**Pn**	**07**	**59 07.1**	**+1.7**
ETAZ	**East Tamaki Re**	**2.13**	**285**	P	**Pn**	**07**	**59 04.2**	**-1.0**
NTVZ	**North Tongarir**	**2.13**	**222**	P	**Pn**	**07**	**59 07.3**	**+1.9**
ETVZ	**East Tongariro**	**2.14**	**221**	P	**Pn**	**07**	**59 07.1**	**+1.6**
KRVZ	**Karewarewa**	**2.14**	**222**	P	**Pn**	**07**	**59 07.6**	**+2.0**
CKHZ	**Cape Kidnapper**	**2.16**	**189**	P	**Pn**	**07**	**59 06.1**	**+0.5**
OTVZ	**Oturere**	**2.18**	**221**	P	**Pn**	**07**	**59 07.7**	**+1.6**
NNVZ	**North Ngauruho**	**2.18**	**222**	P	**Pn**	**07**	**59 08.2**	**+2.1**
WTVZ	**West Tongariro**	**2.19**	**223**	P	**Pn**	**07**	**59 08.0**	**+1.9**
MBAZ	**Motutapu North**	**2.21**	**289**	P	**Pn**	**07**	**59 10.7**	**+4.4**
SNVZ	**South Ngauruho**	**2.21**	**221**	P	**Pn**	**07**	**59 08.2**	**+1.7**
NGZ	**Ngauruhoe**	**2.22**	**222**	P	**Pn**	**07**	**59 08.6**	**+2.0**
TWVZ	**Taurewa**	**2.24**	**226**	P	**Pn**	**07**	**59 08.7**	**+1.9**
BHHZ	**

NC303	NORSAR Array S	58.52	327	P		P		08 09 11.4	+0.5
NOA	NORSAR Array B	58.60	327	P		P		08 09 10.6	-0.9
	comp=Z,1.0nm,1.1s,baz=73,slow=6.0,SNR=1.8								
FITZ	Fitzroy Crossi	59.84	135	P		P		08 09 20.1	-0.4
	comp=Z,1.0nm,0.8s,baz=339,slow=8.6,SNR=1.3								
KNRA	Kununurra	60.10	131	P		P		08 09 20.5	-1.8
KNRA				IAmb		IAmb		08 09 33.4	
	comp=Z,6.0nm,0.9s								
OSSC	Osservatorio P	60.57	306	P		P		08 09 25.2	-0.2
MSSA	Maissana	61.63	308	P		P		08 09 31.8	-0.8
KEST	Kesra	63.90	298	P		P		08 09 48.4	+0.5
	comp=Z,4.0nm,0.9s,baz=208,slow=7.5,SNR=3.4								
KEST	Kesra	63.90	298	IAmb		IAmb		08 09 54.3	
	comp=Z,5.9nm,0.9s								
WB0	Warramunga Arr	66.77	130	P		P		08 10 05.9	-0.6
WB0				IAmb		IAmb		08 10 11.1	
	comp=Z,3.7nm,0.9s								
WRA	Warramunga Ar	66.85	130	P		P		08 10 06.8	-0.3
	comp=Z,1.5nm,0.7s,baz=322,slow=6.6,SNR=11								
WB2	Warramunga Arr	66.86	130	P		P		08 10 06.5	-0.6
ASAR	Alice Springs	69.16	133	P		P		08 10 21.1	-0.3
	comp=Z,0.7nm,0.6s,baz=315,slow=6.5,SNR=8.2								
EUNU	Eureka	72.24	359	P		P		08 10 39.7	+0.2
EUNU				IAmb		IAmb		08 10 41.2	
	comp=Z,4.2nm,1.4s								
TOLK	Toolik Lake Re	75.67	18	P		P		08 11 00.0	+0.3
TOLK				IAmb		IAmb		08 11 00.9	
	comp=Z,2.1nm,0.7s								
MLY	Manley	77.71	21	P		P		08 11 11.4	0.0
MLY				IAmb		IAmb		08 11 17.4	
	comp=Z,4.0nm,1.4s								
BMAR	Burnt Mountain	77.87	18	P		P		08 11 13.2	+1.0
MDM	Murphy Dome	78.55	21	P		P		08 11 15.9	-0.1
MDM				IAmb		IAmb		08 11 24.5	
	comp=Z,4.1nm,1.3s								
ILAR	Eielson Array	79.09	20	P		P		08 11 18.1	-0.8
	comp=Z,0.7nm,0.9s,baz=289,slow=4.3,SNR=5.1								
SKT	Skwentna	79.44	24	P		P		08 11 21.1	+0.2
SKT				IAmb		IAmb		08 11 24.4	
	comp=Z,6.5nm,1.3s								
SCRK	Sand Creek	80.55	20	P		P		08 11 26.7	-0.3
SCRK				IAmb		IAmb		08 11 29.2	
	comp=Z,5.7nm,1.3s								
KDAK	Kodiak Island	81.78	27	P		P		08 11 33.3	-0.2
	comp=Z,3.4nm,0.6s,baz=295,slow=2.9,SNR=4.6								
YKA	Yellowknife Ar	88.52	9	P		P		08 12 06.4	-0.8
	comp=Z,0.2nm,0.7s,baz=336,slow=4.3,SNR=3.8								
SAML	Samuel	145.17	297	PKPbc		PKPbc		08 18 52.3	-0.5

*IDC **25** 08:05:36.0±0.6,27.75N×85.79E,h0km,mb4.2/28, mb1 4.4/31,mb1mx4.3/44,mbtmp4.2/31,ML4.1/3,MS5.6/1, Ms1 5.6/1,ms1mx3.9/63,Error ellipse: s-maj=15.3km s-min=11.7km az=32.0*

*BJI **25** 08:05:36.2±0.0,27.78N×85.83E,h6km,mB5.0/2, mb4.6/42*

*NEIC **25** 08:05:38.0±1.5,27.81N±0.0×85.79E±0.03,h10km±1km, mb4.6/90,Error ellipse: s-maj=13.9km s-min=5.4km az=180.0*

*DMN **25** 08:05:39.1±0.1,27.79N×85.81E,h10km,Ml4.9/6,Error ellipse: s-maj=2.5km s-min=1.1km az=4.0*

*NDI **25** 08:05:39.7±3.4,27.61N×85.72E,h10km,ML4.6, mb4.6(NEIC)*

ISC 25 08:05:37.1±0.7,27.74N±0.04×85.78E±0.02,h7km±4km, n193,σ1.52/206,mb4.6/72,2C-6D,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	Gumba	0.19	28	*e*Pg	Pg	08 05 42.9	+1.8
GUN				*e*Sg	Sg	08 05 45.0	+1.1
PKI	Pulchoki	0.37	243	*e*Pg	Pb	08 05 47.6	+1.5
PKI				*e*Sg	Sb	08 05 53.5	+1.3
KKN	Kakani	0.44	277	*e*Pg	Pb	08 05 48.5	+1.1
KKN				*e*Sg	Sb	08 05 54.6	+0.3
	23μm,0.2s						
DMN	Daman	0.61	258	*e*Pg	Pb	08 05 52.1	+1.9
DMN				*e*Sg	Sb	08 06 00.5	+1.4
	40μm,0.4s						
GKN	Gorkha	1.04	285	*e*Pg	Pn	08 05 59.3	+1.0
GKN				*e*Sg	Sb	08 06 12.5	+0.9
	1μm,0.2s						
ODAN	Odare	1.68	121	*e*Pg	Pg	08 06 10.5	+1.2
ODAN				*e*Sg	Sg	08 06 33.1	+2.0
	1μm,0.2s						
TAPN	Taplejung	1.76	102	*e*Pg	Pg	08 06 12.0	+1.2
TAPN				*e*Sg	Sg	08 06 34.3	+0.6
	2μm,0.3s						
DANN	Dangsing	1.88	289	*e*Pg	Pg	08 06 14.1	+0.9
DANN				*e*Sg	Sg	08 06 38.9	+1.2
	2μm,0.4s						
KOLN	Koldanda	1.93	271	*e*Pg	Pg	08 06 15.3	+1.2
KOLN				*e*Sg	Sg	08 06 41.3	+2.2
	1μm,0.2s						
PYUN	Piuthan	2.49	279	*e*Pg	Pg	08 06 26.5	+1.6
PYUN				*e*Sg	Sg	08 06 58.0	+0.8
	10μm,0.5s						
GTK	Tadong	2.54	99	*e*P	Pb	08 06 22.5	-0.7
GTK				*e*S	Sb	08 06 53.4	-1.4
LSA	Lhasa	5.11	66	Pn	Pb	08 07 01.8	-5.3
LSA				Sn	Sn	08 07 57.3	+3.3
LSA				smax	smax		
	comp=N,200nm,0.6s						
LSA				smax	smax		
	comp=E,180nm,0.9s						
LSA	Lhasa	5.11	66	Pn	Pn	08 06 54.3	-0.2
GUWA	GUWAHATI	5.50	105	*e*P	Pn	08 07 01.6	+2.2
GUWA				*e*S	Sn	08 08 03.5	+0.6
SHL	Shillong	5.88	110	*e*P	Pn	08 07 05.7	+0.9
SHL				*e*S	Sn	08 08 09.7	-2.8
SHL	Shillong	5.88	110	Pn	Pn	08 07 05.8	+0.9
ZIRO	ZIRO	7.16	90	*e*P	Pn	08 07 23.4	+0.9
ZIRO				*e*S	Sn	08 08 41.3	-3.0
ZIRO				IAML		08 08 50.2	
	comp=E,810nm,0.7s						
ZIRO				IAML		08 08 51.8	
	comp=N,986nm,0.5s						
DDI	Dehra Dun	7.23	293	*e*P	Pn	08 07 25.8	+2.4
DDI				*e*S	Sn	08 08 45.1	-0.7
DDI				IAML		08 08 49.5	
	comp=E,1μm,0.3s						
DDI				IAML		08 08 50.5	
	comp=N,1μm,0.3s						
SMLA	Simla	8.23	296	*e*P	Pn	08 07 38.7	+1.7
SMLA				*e*S	Sn	08 09 07.6	-2.6
SMLA				IAML		08 09 09.4	
	comp=E,216nm,0.4s						
BHPL	Bhopal	8.77	241	*e*P	Pn	08 07 42.7	-1.7
BHPL				*e*S	Sn	08 09 16.2	-7.5
BHPL				IAML		08 09 20.4	
	comp=E,184nm,0.3s						
BHPL				IAML		08 09 20.6	
	comp=N,243nm,0.3s						
DHRM	DHARAMSHALA	9.37	301	*e*P	Pn	08 07 51.1	-1.6
DHRM				*e*S	Sn	08 09 31.4	-7.1
DHRM				IAML		08 09 36.0	
	comp=N,186nm,0.5s						
DHRM				IAML		08 09 36.1	
	comp=E,311nm,0.7s						
AJM	Ajmer	10.00	265	*e*P	Pn	08 08 01.0	-0.3
AJM				*i* S	Sn	08 09 47.0	-6.8
HYB	Hyderabad	12.24	214	*i* P	Pn	08 08 31.0	-1.0
NIL	Nilore	12.28	302		Pn	08 08 31.8	-0.7
MHMT	Maesarieng	14.68	128	P	P	08 09 20.9	+9.3
CHTO	Chiang Mai	15.00	124		Pn	08 09 08.6	-1.0
CM33	Chiang Mai Arr	15.00	123	P	P	08 09 16.0	+0.8
CMMT	Chiang Mai	15.00	124	P	P	08 09 15.5	+0.3
	comp=E,5.4nm,1.2s						
CM32	Chiang Mai Arr	15.03	124	P	P	08 09 27.0	+12
CM34	Chiang Mai Arr	15.13	123	P	P	08 09 17.0	+0.4
CM13	Chiang Mai Arr	15.22	125	P	P	08 09 20.0	+2.4
	comp=E,6.4nm,0.7s						
CM31	Chiang Mai Arr	15.22	125	Pn	Pn	08 09 13.8	+1.2
CMAR	Chiang Mai Arr	15.22	125	Pn	Pn	08 09 12.2	-0.4
	comp=E,0.4nm,0.3s,baz=306,slow=12,SNR=4.9						
CM35	Chiang Mai Arr	15.24	123	P	P	08 09 18.0	+0.2
CM02	Chiang Mai Arr	15.24	125	P	P	08 09 20.0	+2.1
	comp=E,84nmcomp=E,9.5nm,0.8s						
CM01	Chiang Mai Arr	15.26	125	P	P	08 09 24.1	+6.1
	comp=E,12nm,0.8s						
CM05	Chiang Mai Arr	15.26	125	P	P	08 09 20.1	+2.0
	comp=E,4.5nm,0.7s						
CM09	Chiang Mai Arr	15.27	125	P	P	08 09 25.4	+7.2
	comp=E,9.6nm,0.9s						
CM04	Chiang Mai Arr	15.29	125	P	P	08 09 21.0	+2.6
	comp=E,87nmcomp=E,8.5nm,0.8s						
CM36	Chiang Mai Arr	15.29	124	P	P	08 09 20.0	+1.5
KBL	Kabul	15.84	299		Pn	08 09 20.3	-0.5
KBL				IAmb	IAmb	08 09 35.0	
	comp=Z,62nm,1.2s						
PRZ	Przheval'sk	15.89	340	Pn	Pn	08 09 21.3	-0.1
KDJ	Kajisay	15.98	336		Pn	08 09 21.1	-1.4
CD2	Chengdu	16.00	74	P	Pn	08 09 21.3	-1.4
WMQ	Urumqi	16.12	5	*e*P	Pn	08 09 18.3	-6.0
WMQ				pP	P	08 09 21.3	-6.3
WMQ				sP	pP	08 09 24.5	-5.4
WMQ				PP	sP	08 09 29.0	-2.1
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,9μm,11.8s						
WMQ				smax	smax		
	comp=N,23nm,0.7s						
WMQ				smax	smax		
	comp=E,24nm,0.5s						
WMQ				LR	LR		
	comp=N,36μm,29.5s						
WMQ				LR	LR		
	comp=E,37μm,29.1s						
WMQ				LR	LR		
	comp=Z,25μm,29.0s						
SUKH	Sukhothai	16.35	126	P	P	08 09 39.2	+9.1
GTA	Gaotai	16.48	41	⇓P	P	08 09 32.0	+0.4
GTA				pP	sP	08 09 36.5	+1.4
GTA				sP	pP	08 09 39.5	+5.5
GTA				pmax	pmax		
	comp=Z,24nm,0.9s						
BOOM	Boomskoye usch	16.75	334	Pn	Pn	08 09 31.0	-1.5
LZH	Lanzhou	17.43	57	*e*P	Pn	08 09 40.5	-0.5
LZH				pP	P	08 09 43.3	+1.0
LZH				sP	pP	08 09 45.3	+0.7
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
AAK	Ala-Archa	17.47	331	P	Pn	08 09 41.0	-0.4
	comp=Z,0.2nm,0.3s,baz=140,slow=8.1,SNR=3.2						
AAK	Ala-Archa	17.47	331	P	Pn	08 09 40.4	-0.9
UTHA	Uthaitani	17.54	131	P	P	08 09 46.1	+2.8
FRU1	Bishkek	17.55	332	P	Pn	08 09 42.3	0.0
FRU1				IAmb	IAmb	08 09 50.4	
	comp=Z,45nm,0.6s						
GYA	Guiyang	18.64	89	⇑P	Pn	08 09 57.3	+1.4
GYA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MK31	Makanchi Array	19.22	353		P	08 10 01.2	-0.5
MKAR	Makanchi Array	19.22	353	P	Pn	08 10 02.6	0.0
	comp=Z,1.3nm,0.3s,baz=180,slow=11,SNR=30						
MKAR	Makanchi Array	19.22	353		P	08 10 01.2	-0.5
MAKZ	Makanchi	19.27	352	P	P	08 10 02.2	-0.1
KK31	Karatay Array	19.69	325		P	08 10 05.3	-1.6
KKAR	Karatay Array	19.69	325		P	08 10 06.0	-0.9
KKAR	Karatay Array	19.69	325	P	P	08 10 06.7	-0.2
XAN	Xi'an	20.81	67	P	P	08 10 19.8	+0.7
XAN				pP	pP	08 10 23.0	+1.5
XAN				pmax	pmax		
	comp=Z,20nm,0.6s						
XAN	Xi'an	20.81	67	P	P	08 10 19.9	+0.7
XAN				IAmb	IAmb	08 10 20.8	
	comp=Z,13nm,0.6s						
ENH	Enshi	20.88	77	P	P	08 10 20.3	+0.3
ENH				IAmb	IAmb	08 10 24.2	
	comp=Z,46nm,1.3s						
PALK	Pallekele	20.92	194	P	P	08 10 20.8	+0.4
	comp=Z,1.8nm,0.4s,baz=102,slow=15,SNR=2.9						
HRA	Herat	21.20	294	P	P	08 10 22.9	-0.6
KURBB	Kurchatov Arra	23.51	348	P	P	08 10 47.7	+0.2
	comp=Z,4.8nm,0.8s,baz=170,slow=9.8,SNR=30						
WSAR	Wadi Sarin	24.89	266	P	P	08 11 01.6	+0.9
	comp=Z,3.1nm,0.7s,baz=45,slow=1.4,SNR=2.4						
HHC	Hu-ho-hao-te	24.89	52	*e*P	P	08 11 01.0	+0.3
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
GEYT	Alibeck	25.28	301	P	P	08 11 04.5	+0.3
	comp=Z,2.3nm,0.6s,baz=132,slow=8.2,SNR=4.5						
MLSI	Meulaboh, Aceh	25.45	155	P	P	08 11 06.3	+0.6
	comp=Z,29nm,0.7s						
SONM	Songino Array	25.70	33	P	P	08 11 08.6	+0.6
	comp=Z,17nm,0.8s,baz=221,slow=10,SNR=30						
SONM	Songino Array	25.70	33	P	P	08 11 08.2	+0.2
SONM				IAmb	IAmb	08 11 12.8	
	comp=Z,11nm,0.7s						
ULN	Ulaanbaatar	26.04	34	P	P	08 11 11.3	+0.2
ULN					pP	08 11 11.8	-1.9
ZAA0	Zalesovo Array	26.19	359	P	P	08 11 12.8	+0.6
ZAA0				IAmb	IAmb	08 11 21.5	
	comp=Z,20nm,1.2s						
ZALV	Zalesovo Beam	26.19	359	P	P	08 11 12.7	+0.5
	comp=Z,3.0nm,0.3s,baz=186,slow=8.8,SNR=22						
ZALV	Zalesovo Beam	26.19	359	P	P	08 11 13.3	+1.1
KULM	Kulim	26.43	145	P	P	08 11 15.4	+0.8
KULM				IAmb	IAmb	08 11 28.4	
	comp=Z,10.0nm,0.9s						
BVAR	Borovoye Array	27.73	340	P	P	08 11 25.1	-1.0
	comp=Z,0.7nm,0.4s,baz=159,slow=9.5,SNR=5.9						
ABKAR	Akbulak array	29.25	324	P	P	08 11 40.0	+0.4
ABKAR				IAmb	IAmb	08 11 42.0	
	comp=Z,11nm,1.2s						
ABKAR	Akbulak array	29.25	324	P	P	08 11 40.6	+1.0
SOCY	Socotra	33.51	249	P	P	08 12 17.0	-0.6
SOCY				IAmb	IAmb	08 12 21.8	
	comp=Z,5.4nm,1.0s						
ARU	Arti	34.63	333	P	P	08 12 26.9	+0.2
ARU				IAmb	IAmb	08 12 28.7	
	comp=Z,6.2nm,0.5s						
INCN	Inchon	35.52	64	P	P	08 12 35.2	+0.5
CN2	Changchun	35.58	53	*e*P	P	08 12 37.3	+2.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GNI	Garni	35.92	301	P	P	08 12 39.2	+0.9
GNI				IAmb	IAmb	08 12 42.8	
	comp=Z,7.8nm,1.0s						
KSRS	Korea Array	36.55	64	P	P	08 12 42.6	-0.9
	comp=Z,1.9nm,0.5s,baz=260,slow=7.9,SNR=12						
MARD	Mardin	38.81	296	P	P	08 13 03.8	+0.9
MARD				IAmb	IAmb	08 13 05.8	
	comp=Z,9.5nm,0.6s						
JNU	Nakatsue	39.03	71	P	P	08 13 04.0	-0.5
	comp=Z,8.0nm,0.6s,baz=293,slow=7.8,SNR=5.7						
JNU	Nakatsue	39.03	71	IAmb	IAmb	08 13 07.2	
	comp=Z,13nm,0.8s						
USRK	Ussuriysk Ar.	40.29	53	P	P	08 13 14.6	-0.2
	comp=Z,2.0nm,0.6s,baz=278,slow=6.4,SNR=6.6						
JMZ	Minamidaito 2	40.44	82	P	P	08 13 15.7	-0.7
KLR	Kul'dur	41.11	46	P	P	08 13 21.4	-0.2
	comp=Z,2.5nm,0.8s,baz=271,slow=8.5,SNR=6.7						
JMN	Monobe	41.48	69	P	P	08 13 25.4	+0.5
JMN				IAmb	IAmb	08 13 27.0	
	comp=Z,19nm,1.1s						
NRIK	Noril'sk	41.65	1	P	P	08 13 26.9	+1.2
	comp=Z,14nm,0.5s,baz=172,slow=6.3,SNR=32						
NRIK	Noril'sk	41.65	1	P	P	08 13 26.8	+1.2
JWT	Wachi	42.61	67	P	P	08 13 33.8	-0.2
JWT				IAmb	IAmb	08 13 42.2	
	comp=Z,12nm,1.3s						
BR131	Keskin Array S	44.42	300	P	P	08 13 48.6	-0.1
BRTR	Keskin Array B	44.42	300	P	P	08 13 49.9	+1.2
	comp=Z,0.8nm,0.6s,baz=122,slow=5.2,SNR=1.9						
BRTR	Keskin Array B	44.42	300	P	P	08 13 49.7	+0.9
MJAR	Matsushiro Ar	44.79	65	P	P	08 13 51.5	-0.2
	comp=Z,1.4nm,0.8s,baz=276,slow=13,SNR=4.1						
ELL	Elmali	47.52	296	P	P	08 14 13.5	+0.2
JKA	Kamikawa-asahi	47.89	54	P	P	08 14 16.5	+0.6
AKASG	Malin Array Be	48.09	315	P	P	08 14 16.5	-0.8
	comp=Z,0.9nm,0.5s,baz=76,slow=7.0,SNR=8.1						
AKASG	Malin Array Be	48.09	315	P	P	08 14 16.9	-0.4
AKASG				IAmb	IAmb	08 14 18.3	
	comp=Z,3.0nm,0.8s						
AKBB	Malin Array Si	48.09	315	P	P	08 14 16.2	-1.1
AKBB				IAmb	IAmb	08 14 22.9	
	comp=Z,5.3nm,0.9s						
ERM	Erimo	48.33	57	P	P	08 14 19.8	+0.5
JEM	Erimo	48.33	57	P	P	08 14 17.1	-2.2
VRI	Vrincioaia	49.48	308	⇓P	P	08 14 29.9	+1.8
PLOR	Plostina	49.53	308	⇓P	P	08 14 30.5	+2.0
JCJ	Chichijima	49.69	77	LR	LR	08 35 52.8	
	comp=Z,6μm,20.6s,baz=38,slow=37						
TIXI	Tiksi	49.90	16	P	P	08 14 30.1	-0.7
TIXI				IAmb	IAmb	08 14 38.0	
	comp=Z,11nm,1.0s						
MLR	Muntele Rosu	50.03	307	⇑P	P	08 14 34.9	+2.5
MLR				IAmb	IAmb	08 14 39.6	
	comp=Z,12nm,1.0s						
IIGN	Ignalina	50.46	320	*e*P	P	08 14 35.6	+0.2
BURAR	Bucovina Array	50.53	310	⇓P	P	08 14 36.7	+0.6
BURAR	Bucovina Array	50.53	310	P	P	08 14 36.6	+0.4
BURAR				IAmb	IAmb	08 14 38.6	
	comp=Z,2.5nm,0.6s						
BUR08	Bucovina Ar. S	50.54	310	P	P	08 14 36.3	0.0
BUR08				IAmb	IAmb	08 14 52.6	
	comp=Z,6.2nm,1.2s						
ISAL	Salakas	50.55	321	*e*P	P	08 14 36.1	+0.1
FIA1	FINESS Array S	51.62	328	P	P	08 14 44.3	+0.3
FIA1				IAmb	IAmb	08 15 00.1	
	comp=Z,5.3nm,0.9s						
FINES	FINESS Array B	51.62	328	P	P	08 14 43.8	-0.2
	comp=Z,2.7nm,0.5s,baz=103,slow=8.6,SNR=20						
IDI	Anoyia	51.75	294	P	P	08 14 45.3	-0.2
IDI				IAmb	IAmb	08 14 52.3	
	comp=Z,5.0nm,0.7s						
PABE	Paberze	51.76	320	*e*P	P	08 14 45.7	+0.6
PABE	Paberze	51.76	320	P	P	08 14 45.8	+0.7
MTSE	Matsula	52.24	324	*e*P	P	08 14 47.3	-1.3
DRGR		52.25	309	⇓P	P	08 14 51.5	+2.4
AGG	Agios Georgios	53.20	300	P	P	08 14 55.9	-0.3
AGG				IAmb	IAmb	08 15 07.5	
	comp=Z,6.9nm,1.1s						
KEV	Kevo	53.56	338	P	P	08 14 58.7	+0.5
KEV				IAmb	IAmb	08 15 08.9	
	comp=Z,11nm,1.1s						
ARCES	ARCESS Array B	53.98	338	P	P	08 15 01.6	+0.2
	comp=Z,5.8nm,0.7s,baz=105,slow=8.0,SNR=34						
ARCES	ARCESS Array B	53.98	338	IAmb	IAmb	08 15 03.7	
	comp=Z,11nm,0.9s						
MORH	Mrgy, Hungar	55.09	309	⇓P	P	08 15 10.4	+0.7
UPP	Uppsala	55.52	325	*e*P	P	08 15 12.7	+0.1
PETK	Petropavlovsk-	57.64	43	P	P	08 15 26.2	-1.6
	comp=Z,3.9nm,0.8s,baz=258,slow=12,SNR=1.9						
BRG	Berggiesshubel	57.77	315	*e*P	P	08 15 29.6	+0.8
BRG				Amp		08 15 31.3	
	comp=Z,5.1nm,1.2s						
BRG				*ex*	x	08 15 34.5	
BRG				Amp		08 15 36.3	
	comp=Z,1.9nm,0.5s						
GERES	GERESS Array B	58.14	312	P	P	08 15 30.7	-0.9
	comp=Z,0.7nm,0.5s,baz=80,slow=8.1,SNR=2.7						
GERES	GERESS Array B	58.14	312	P	P	08 15 31.5	-0.1
NC405	NORSAR Array S	58.47	327	P	P	08 15 33.5	0.0
NC405				IAmb	IAmb	08 15 37.2	
	comp=Z,8.1nm,1.4s						
NC602	NORSAR Array S	58.56	326	P	P	08 15 34.2	+0.1
NOA	NORSAR Array B	58.72	327	P	P	08 15 34.5	-0.8
	comp=Z,1.9nm,0.7s,baz=88,slow=7.0,SNR=7.7						
SPA0	Spitsbergen Ar	58.85	347	P	P	08 15 36.8	+0.9
NAO01	NORSAR Array S	58.88	326	P	P	08 15 36.0	-0.4
NC204	NORSAR Array S	58.93	327	P	P	08 15 36.6	-0.2
NRCA	Norcia	59.47	305	P	P	08 15 40.9	0.0
NRCA				IAmb	IAmb	08 15 48.0	
	comp=Z,4.5nm,0.7s						
FITZ	Fitzroy Crossi	59.73	135	P	P	08 15 42.8	+0.1
FITZ				IAmb	IAmb	08 15 45.8	
	comp=Z,8.9nm,1.4s						
KNRA	Kununurra	59.98	131	P	P	08 15 44.1	-0.4
MSSA	Maissana	61.74	308	P	P	08 15 55.6	-0.8
BNI	Bardonecchia	63.55	309	P	P	08 16 08.3	-0.2
BNI				IAmb	IAmb	08 16 15.1	
	comp=Z,4.6nm,0.9s						
KEST	Kesra	64.00	298	P	P	08 16 11.7	+0.1
	comp=Z,4.3nm,0.5s,baz=334,slow=5.2,SNR=5.5						
KEST	Kesra	64.00	298	P	P	08 16 12.0	+0.4
WB0	Warramunga Arr	66.66	130	P	P	08 16 28.6	-0.2
WRA	Warramunga Arr	66.74	130	P	P	08 16 29.8	+0.5
	comp=Z,5.5nm,0.6s,baz=323,slow=6.5,SNR=83						
WRA	Warramunga Arr	66.74	130	P	P	08 16 29.4	+0.1
WB2	Warramunga Arr	66.75	130	P	P	08 16 29.7	+0.4
AS31	Alice Springs	69.04	133	P	P	08 16 44.3	+0.5
ASAR	Alice Springs	69.04	133	P	P	08 16 44.1	+0.4
	comp=Z,3.4nm,0.6s,baz=315,slow=6.2,SNR=45						
NEEM	North Greenlan	71.92	351	*i* P	P	08 17 01.8	+0.8
NEEM				IAmb	IAmb	08 17 03.8	
	comp=Z,5.5nm,0.6s						
A21K	Barrow	72.18	17	P	P	08 17 02.8	+0.7
EUNU	Eureka	72.35	359	P	P	08 17 04.6	+1.4
EUNU				IAmb	IAmb	08 17 09.8	
	comp=Z,5.5nm,1.4s						
ESDC	Sonseca Array	72.69	306	P	P	08 17 05.6	-0.3
	comp=Z,1.3nm,1.1s,baz=59,slow=5.9,SNR=5.3						
SUMG	Summit	73.07	345	*i* P	P	08 17 08.9	+1.0
SUMG				IAmb	IAmb	08 17 10.5	
	comp=Z,5.1nm,1.0s						
SUMG	Summit	73.07	345	P	P	08 17 07.9	-0.1
ICESG	Greenland Ices	75.66	342	*i* P	P	08 17 24.1	+1.1
ICESG				IAmb	IAmb	08 17 25.4	
	comp=Z,9.3nm,0.8s						
TOLK	Toolik Lake Re	75.75	18	P	P	08 17 23.5	+0.3
TOLK				IAmb	IAmb	08 17 25.2	
	comp=Z,6.3nm,1.1s						
COLD	Coldfoot	76.50	19	P	P	08 17 27.5	+0.1
COLD				IAmb	IAmb	08 17 30.1	
	comp=Z,5.3nm,1.3s						
BBOO	Buckleboo	76.86	138	P	P	08 17 29.7	-0.2
MLY	Manley	77.78	21	P	P	08 17 35.0	+0.3
MLY				IAmb	IAmb	08 17 36.9	
	comp=Z,6.7nm,1.2s						
BMAR	Burnt Mountain	77.95	18	P	P	08 17 37.2	+1.6
I23K	Minto, Yukon-K	78.14	21

*LDG **25** 08:07:26.6±0.2,44°.23N×11°.88E,h18km,MI2.6/13,Error ellipse: s-maj=4.2km s-min=2.5km az=53.0*
*ROM **25** 08:07:27.1±0.3,44°.24N±0°.01×11°.90E±0°.01,h18km±2km, ML2.4/11,Error ellipse: s-maj=1.4km s-min=0.4km az=209.0*

ISC 25 08:07:26.8±0.9,**44°.20N**±0°.02×**11°.77E**±0°.02,**h17**km±7km, **n44**,σ2**9**40/76,**1C-3D**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRIS	**BRISIGHELLA**	**0.19**	**256**	⇑P	**Pg**	**08 07 30.4**	**-1.2**
BRIS				S	**Sg**	**08 07 33.8**	**-1.0**
BRIS				AML	AML		
	comp=E,3280μm,0.3s						
BRIS				AML	AML		
	comp=N,3075μm,0.2s						
MTRZ	**Monterenzio**	**0.28**	**309**	P	**Pb**	**08 07 34.8**	**+1.3**
MTRZ				S	**Sb**	**08 07 40.9**	**+3.0**
MTRZ				AML	AML		
	comp=E,874μm,0.3s						
MTRZ				AML	AML		
	comp=N,694μm,0.3s						
SFI	**Santa Sofia**	**0.30**	**170**	⇓P	**Pb**	**08 07 33.7**	**0.0**
SFI				S	**Sb**	**08 07 39.6**	**+1.4**
SFI				AML	AML		
	comp=E,972μm,0.8s						
SFI				AML	AML		
	comp=N,902μm,0.5s						
SFI				AML	AML		
	comp=E,1074μm,0.2s						
SFI				AML	AML		
	comp=E,1071μm,0.2s						
SFI				AML	AML		
	comp=N,1100μm,0.5s						
SEI	**Scarperia**	**0.33**	**245**	P	**Pb**	**08 07 35.4**	**+1.1**
SEI				S	**Sn**	**08 07 42.5**	**-0.7**
SEI				AML	AML		
	comp=E,878μm,0.3s						
SEI				AML	AML		
	comp=N,2065μm,0.6s						
SEI				AML	AML		
	comp=E,876μm,0.3s						
ASQU	**Asqua**	**0.40**	**178**	P	**Pb**	**08 07 35.5**	**0.0**
ASQU				S	**Sb**	**08 07 43.2**	**+1.9**
ASQU				AML	AML		
	comp=N,531μm,0.6s						
ASQU				AML	AML		
	comp=E,466μm,0.3s						
RUFI	**Rufina**	**0.40**	**208**	⇓P	**Pb**	**08 07 36.2**	**+0.7**
RUFI				S	**Sn**	**08 07 44.3**	**-0.7**
FNVD	**Fontana Vidola**	**0.47**	**267**	P	**Pb**	**08 07 37.9**	**+1.3**
FNVD				S	**Sn**	**08 07 47.0**	**+0.3**
FNVD				AML	AML		
	comp=E,728μm,0.3s						
FNVD				AML	AML		
	comp=N,592μm,1.5s						
CPGN	**Carpegna, Ital**	**0.56**	**135**	P	**Pb**	**08 07 38.1**	**-0.1**
CPGN				S	**Sb**	**08 07 46.5**	**+0.6**
MTCR	**Monte La Croce**	**0.58**	**253**	P	**Pb**	**08 07 39.9**	**+1.3**
MTCR				S	**Sn**	**08 07 50.3**	**+0.7**
PARC	**Parchiule**	**0.64**	**148**	P	**Pg**	**08 07 39.0**	**-0.5**
PARC				S	**Sb**	**08 07 49.3**	**+1.0**
PARC				AML	AML		
	comp=E,125μm,0.7s						
PARC				AML	AML		
	comp=N,176μm,0.5s						
PARC				AML	AML		
	comp=E,125μm,0.7s						
BADI	**Badiali**	**0.77**	**153**	P	**Pg**	**08 07 41.4**	**-0.4**
BADI				S	**Sb**	**08 07 51.7**	**-0.1**
OSSC	**Osservatorio P**	**0.77**	**210**	P	**Pn**	**08 07 43.5**	**+0.6**
OSSC				S	**Sn**	**08 07 56.1**	**+1.9**
OSSC				AML	AML		
	comp=N,143μm,0.9s						
OSSC				AML	AML		
	comp=E,208μm,0.9s						
CAFI	**Castiglion Fio**	**0.88**	**171**	P	**Pg**	**08 07 44.2**	**+0.3**
CAFI				AML	AML		
	comp=E,189μm,0.4s						
CAFI				AML	AML		
	comp=N,136μm,0.5s						
FSSB	**Fossombrone**	**0.89**	**124**	P	**Pb**	**08 07 43.5**	**-0.2**
FSSB				AML	AML		
	comp=E,288μm,0.4s						
FSSB				AML	AML		
	comp=N,412μm,0.3s						
PII	**Pisa**	**1.02**	**243**	P	**Pn**	**08 07 47.9**	**+1.6**
PII				AML	AML		
	comp=E,211μm,0.3s						
PII				AML	AML		
	comp=N,205μm,0.3s						
ARVD	**Arcevia**	**1.10**	**129**	P	**Pb**	**08 07 47.2**	**-0.1**
TEOL	**Teolo**	**1.17**	**356**	P	**Pn**	**08 07 47.9**	**-0.4**
TEOL				AML	AML		
	comp=E,438μm,0.9s						
TEOL				AML	AML		
	comp=N,328μm,1.0s						
SMA1	**SAN MARTINO**	**1.94**	**143**	⇓P	**Pg**	**08 08 03.5**	**-0.4**
EUCT	**Pavia**	**2.13**	**299**	S	**Sg**	**08 08 39.0**	**+3.6**
APPI	**Appiano**	**2.31**	**351**	P	**Pn**	**08 08 04.3**	**+0.1**
APPI				AML	AML		
	comp=E,60μm,0.3s						
APPI				AML	AML		
	comp=N,65μm,0.4s						
ABTA	**Abfaltersbach**	**2.60**	**11**	*e*Pn	**Pn**	**08 08 07.8**	**-0.4**
	comp=N,0.5nm,0.2s						
ABTA				*e*Sn	**Sn**	**08 08 38.1**	**-1.3**
	comp=N,3.0nm,0.3s						
PGF	**Pioggiola**	**2.61**	**232**	*e*Pn	**Pn**	**08 08 06.7**	**-1.5**
PGF				*e*Sn	**Sn**	**08 08 36.4**	**-3.1**
	comp=N,4.1nm,0.3s						
MYKA	**Terra Mystica**	**2.77**	**28**	*e*Sn	**Sn**	**08 08 41.5**	**-1.8**
	comp=N,4.0nm,0.2s						
FETA	**Feichten**	**2.92**	**346**	*e*Pn	**Pn**	**08 08 14.3**	**+1.8**
	comp=N,0.3nm,0.1s						
FETA				*e*Sn	**Sn**	**08 08 47.5**	**+0.3**
	comp=N,0.4nm,0.2s						
OBKA	**Obir**	**3.03**	**39**	*e*Pn	**Pn**	**08 08 13.7**	**-0.3**
	comp=N,0.3nm,0.1s						
OBKA				*e*Sg	**Sb**	**08 09 00.7**	**+3.7**
	comp=N,11nm,0.3s						
SQTA	**Sankt Quirin**	**3.05**	**353**	*i* Pn	**Pn**	**08 08 16.3**	**+2.0**
	comp=N,3.7nm,0.1s						
SQTA				*i* Sn	**Sn**	**08 08 50.8**	**+0.3**
	comp=N,12nm,0.4s						
WTTA	**Wattenberg**	**3.07**	**358**	*i* Pn	**Pn**	**08 08 16.3**	**+1.7**
	comp=N,0.8nm,0.1s						
WTTA				*i* Sn	**Sn**	**08 08 51.1**	**+0.1**
	comp=N,6.0nm,0.3s						
WTTA				*e*Sg	**Sg**	**08 09 05.3**	**-0.1**
	comp=N,14nm,0.5s						
WATA	**Walderalm**	**3.14**	**358**	*i* Pn	**Pn**	**08 08 16.7**	**+1.2**
	comp=N,1.3nm,0.1s						
WATA				*i* Sn	**Sn**	**08 08 53.0**	**+0.2**
	comp=N,4.8nm,0.3s						
SBF	**Sospel**	**3.15**	**265**	*e*P	**Pn**	**08 08 17.5**	**+1.9**
SBF				*e*Sn	**Sn**	**08 08 49.2**	**-3.5**
	comp=N,2.2nm,0.2s						
MOTA	**Moosalm**	**3.18**	**352**	*i* Sn	**Sn**	**08 08 54.3**	**+0.6**
	comp=N,4.2nm,0.4s						
MBDF	**Montbardon**	**3.62**	**280**	*e*P	**Pn**	**08 08 23.9**	**+1.7**
MBDF	**Montbardon**	**3.62**	**280**	*e*Pg	**Pg**	**08 08 35.5**	**-0.6**
MBDF				*e*Sn	**Sn**	**08 09 01.2**	**-3.3**
	comp=N,1.6nm,0.3s						
FRF	**La Foret Royal**	**3.76**	**262**	*e*P	**Pn**	**08 08 26.2**	**+2.2**
FRF				*e*Sn	**Sn**	**08 09 03.5**	**-4.3**
	comp=N,2.2nm,0.3s						
LPG	**La Plagne**	**3.80**	**292**	*e*P	**Pn**	**08 08 26.2**	**+1.4**
LPG				*e*Sn	**Sn**	**08 09 03.4**	**-5.8**
	comp=N,1.7nm,0.3s						
LMR	**La Mourre**	**3.91**	**259**	*e*P	**Pn**	**08 08 28.1**	**+2.1**
LMR				*e*Sn	**Sn**	**08 09 07.5**	**-3.9**
	comp=N,1.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.27**	**282**	*e*P	**Pn**	**08 08 32.7**	**+1.6**
ORIF				*e*S	**Sn**	**08 09 23.2**	**+2.6**
	comp=N,3.1nm,0.5s						
VULT	**Monte Vulture**	**4.31**	**137**	P	**Pn**	**08 08 34.4**	**+2.9**
CABF	**La Chapelle**	**4.67**	**303**	*e*Pn	**Pn**	**08 08 34.1**	**-2.5**
CABF				*e*Sn	**Sn**	**08 09 25.8**	**-4.7**
HINF	**Hinteralfeld**	**4.98**	**318**	*e*Pn	**Pn**	**08 08 39.6**	**-1.2**
HINF				*e*Sn	**Sn**	**08 09 33.7**	**-4.3**
	comp=N,1.8nm,0.2s						
VIVF	**Saint-Julien-l**	**5.12**	**280**	*e*Pn	**Pn**	**08 08 43.3**	**+0.6**
CDF	**Champ du Feu**	**5.24**	**325**	*e*Pn	**Pn**	**08 08 43.5**	**-0.9**
CDF				*e*Sn	**Sn**	**08 09 37.6**	**-6.8**
	comp=N,0.7nm,0.2s						
HAU	**Haudompre**	**5.36**	**317**	*e*Pn	**Pn**	**08 08 45.0**	**-0.9**
HAU				*e*Sn	**Sn**	**08 09 42.2**	**-5.0**
	comp=N,3.6nm,0.2s						
LOR	**Lormes**	**6.33**	**302**	*e*Pn	**Pn**	**08 08 57.8**	**-1.5**
LOR				*e*Sn	**Sn**	**08 10 04.9**	**-6.3**
	comp=N,2.5nm,0.4s						
AVF	**Avril sur Loir**	**6.46**	**297**	*e*Pn	**Pn**	**08 08 59.6**	**-1.4**
AVF				*e*Sn	**Sn**	**08 10 08.8**	**-5.5**
	comp=N,0.9nm,0.5s						

OTT 25 08:08:03.0±0.6,**41°.84N**×**55°.55W**,**h18**km,**ML4.2**/4, **Atlantic Ocean. 576km southeast from Louisbourg, Ns, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBN	**Guysborough**	**5.61**	**312**	PN	Pn	08 09 25.0	-0.5
GBN				SN	Sn	08 10 25.1	-4.3
GBN				Trac		08 10 26.8	
	comp=Z,17nm,0.5s						
DRLN	**Deer Lake**	**7.55**	**350**	PN	Pn	08 09 50.5	-1.5
DRLN				SN	Sn	08 11 11.5	-5.5
DRLN				Trac		08 11 17.3	
	comp=Z,33nm,0.9s						
LMN	**Caledonia Moun**	**7.80**	**304**	PN	Pn	08 09 54.4	-1.2
LMN				SN	Sn	08 11 17.5	-6.0
LMN				Trac		08 11 22.7	
SVNB	**Stilesville Qu**	**8.00**	**306**	PN	Pn	08 10 00.8	+2.7
SVNB				SN	Sn	08 11 21.9	-6.2
SVNB				Trac		08 11 28.0	
	comp=Z,115nm,0.7s						
ELNB	**Elgin, New Bru**	**8.02**	**303**	PN	Pn	08 09 57.8	-0.7
ELNB				SN	Sn	08 11 22.7	-6.0
ELNB				Trac		08 11 26.2	
	comp=Z,46nm,1.3s						
WCNB	**Wards Creek**	**8.16**	**301**	SN	Sn	08 11 26.4	-5.7
HKNB	**Havelock Quarr**	**8.22**	**304**	PN	Pn	08 09 58.7	-2.5
HKNB				SN	Sn	08 11 28.3	-5.3
HKNB				Trac		08 11 31.0	
	comp=Z,69nm,1.0s						
SRNB	**Snider Mountai**	**8.31**	**302**	SN	Sn	08 11 30.0	-6.0

*IDC **25** 08:09:23.3±0.8,27°.76N×85°.30E,h0km,mb3.9/14, mb1 4.1/16,mb1mx3.8/42,mbtmp4.0/16,ML4.2/2,Error ellipse: s-maj=25.7km s-min=16.7km az=72.0*
*DMN **25** 08:09:25.4±0.1,27°.90N×85°.53E,h20km,ML4.7/2,Error ellipse: s-maj=3.9km s-min=1.6km az=7.0*

ISC 25 08:09:26.1±1.0,**27°.91N**±0°.05×**85°.50E**±0°.03,**h15**km±7km, **n24**,σ1**9**05/32,**mb3.9**/14,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**0.34**	**90**	*e*Pg	**Pg**	**08 09 32.5**	**-0.7**
GUN				*e*Sg	**Sg**	**08 09 37.8**	**-0.3**
PKI	**Pulchoki**	**0.35**	**194**	*e*Pg	**Pg**	**08 09 33.0**	**-0.4**
PKI				*e*Sg	**Sg**	**08 09 38.3**	**-0.1**
DMN	**Daman**	**0.46**	**229**	*e*Pg	**Pg**	**08 09 35.8**	**+0.4**
DMN				*e*Sg	**Sg**	**08 09 43.0**	**+1.3**
DANN	**Dangsing**	**1.60**	**286**	*e*Pg	**Pg**	**08 09 56.5**	**-0.4**
DANN				*e*Sg	**Sg**	**08 10 18.1**	**+0.3**
	1μm,0.3s						
KOLN	**Koldanda**	**1.69**	**266**	*e*Pg	**Pb**	**08 09 57.6**	**+0.5**
KOLN				*e*Sg	**Sg**	**08 10 20.2**	**-0.4**
	823nm,0.2s						
ODAN	**Odare**	**1.98**	**121**	*e*Pg	**Pb**	**08 10 02.1**	**+0.1**
ODAN				*e*Sg	**Sb**	**08 10 27.7**	**+1.1**
TAPN	**Taplejung**	**2.04**	**105**	*e*Pg	**Pb**	**08 10 03.3**	**+0.2**
TAPN				*e*Sg	**Sb**	**08 10 30.0**	**+1.6**
PYUN	**Piuthan**	**2.23**	**275**	*e*Pg	**Pb**	**08 10 07.3**	**+1.0**
PYUN				*e*Sg	**Sg**	**08 10 36.1**	**-1.8**
CMAR	**Chiang Mai Arr**	**15.52**	**124**	Pn	**Pn**	**08 13 05.7**	**+1.1**
	0.4nm,0.3s,baz=314,slow=11,SNR=1.5						
MKAR	**Makanchi Array**	**19.02**	**353**	P	**Pn**	**08 13 48.4**	**+0.2**
	0.7nm,0.3s,baz=179,slow=11,SNR=9.0						
PALK	**Pallekele**	**21.02**	**193**	P	**P**	**08 14 06.2**	**-3.2**
	4.6nm,0.8s,baz=221,slow=19,SNR=1.6						
KURBB	**Kurchatov Arra**	**23.29**	**349**	P	**P**	**08 14 33.7**	**+0.4**
	2.0nm,0.7s,baz=169,slow=10,SNR=8.4						
SONM	**Songino Array**	**25.69**	**34**	P	**P**	**08 14 57.1**	**+1.4**
	2.1nm,0.7s,baz=214,slow=10,SNR=5.6						
ZALV	**Zalesovo Beam**	**26.02**	**359**	P	**P**	**08 14 59.0**	**+0.5**
	3.0nm,0.6s,baz=186,slow=9.9,SNR=7.5						
TLY	**Talaya**	**27.38**	**25**	P	**P**	**08 15 11.7**	**+0.9**
	1.6nm,0.4s,baz=53,slow=20,SNR=7.1						
NRIK	**Noril'sk**	**41.48**	**1**	P	**P**	**08 17 12.3**	**+0.1**
	0.7nm,0.4s,baz=157,slow=4.2,SNR=4.4						
FINES	**FINESS Array B**	**51.34**	**328**	P	**P**	**08 18 29.6**	**-0.1**
	2.3nm,0.5s,baz=99,slow=8.6,SNR=12						
ARCES	**ARCESS Array B**	**53.73**	**338**	P	**P**	**08 18 47.8**	**+0.5**
	3.4nm,0.6s,baz=102,slow=7.6,SNR=21						
NOA	**NORSAR Array B**	**58.44**	**327**	P	**P**	**08 19 20.4**	**-0.7**
	0.4nm,0.5s,baz=82,slow=4.7,SNR=3.9						
WRA	**Warramunga Arr**	**67.04**	**130**	P	**P**	**08 20 19.2**	**+0.3**
	0.7nm,0.7s,baz=321,slow=6.6,SNR=3.9						
ASAR	**Alice Springs**	**69.34**	**133**	P	**P**	**08 20 32.9**	**-0.5**
	0.8nm,0.7s,baz=323,slow=6.0,SNR=4.8						
ESDC	**Sonseca Array**	**72.39**	**306**	P	**P**	**08 20 50.6**	**-1.2**
	0.2nm,0.4s,baz=246,slow=9.7,SNR=2.8						
TORD	**Torodi Ar. Bea**	**78.56**	**279**	P	**P**	**08 21 26.7**	**-0.9**
	0.5nm,0.6s,baz=69,slow=4.1,SNR=4.6						
ILAR	**Eielson Array**	**79.09**	**20**	P	**P**	**08 21 30.4**	**+0.8**
	0.2nm,0.6s,baz=312,slow=6.7,SNR=1.4						

*BGR **25** 08:16:56.3±0.0,27°.18N×86°.01E,h10km,mb4.7*
*IDC **25** 08:16:57.5±0.4,27°.69N×85°.71E,h0km,mb4.6/43, mb1 4.6/46,mb1mx4.5/58,mbtmp4.5/46,ML4.3/1,Error ellipse: s-maj=11.0km s-min=9.7km az=172.0*
*NDI **25** 08:16:59.8±4.2,27°.52N×85°.68E,h10km±21km,ML4.8, mb4.9(NEIC)*
*BJI **25** 08:16:59.0±0.0,27°.97N×85°.93E,h10km,mb4.8/52*
*NEIC **25** 08:16:59.2±1.1,27°.70N±0°.08×85°.76E±0.05,h10km±1km, mb4.9/123,Error ellipse: s-maj=13.4km s-min=6.7km az=170.0*
*DMN **25** 08:17:00.3±0.1,27°.74N×85°.81E,h10km,MI5.4/4,Error ellipse: s-maj=3.7km s-min=1.8km az=10.0*

ISC 25 08:16:59.5±0.6,**27.71N**±0°.03×**85.75E**±0°.02,**h11**km±3km, **n387**,σ1**9**26/409,**mb4.9**/162,**27C-26D**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**0.23**	**29**	*e*Pg	**Pg**	**08 17 04.4**	**-0.1**
GUN				*e*Sg	**Sg**	**08 17 08.3**	**+0.4**
PKI	**Pulchoki**	**0.33**	**246**	*e*Pg	**Pg**	**08 17 08.6**	**+0.9**
PKI				*e*Sg	**Sb**	**08 17 13.9**	**+0.7**
KKN	**Kakani**	**0.43**	**281**	*e*Pg	**Pb**	**08 17 09.1**	**-0.1**
KKN				*e*Sg	**Sb**	**08 17 16.2**	**+0.5**
DMN	**Daman**	**0.58**	**260**	*e*Pg	**Pn**	**08 17 13.0**	**-1.0**
DMN				*e*Sg	**Sb**	**08 17 21.4**	**+1.1**
	62μm,0.4s						
GKN	**Gorkha**	**1.03**	**287**	*e*Pg	**Pn**	**08 17 20.4**	**+0.3**
RAMN	**Ramite**	**1.07**	**135**	*e*Pg	**Pg**	**08 17 20.0**	**-0.1**
ODAN	**Odare**	**1.69**	**120**	*e*Pg	**Pg**	**08 17 31.5**	**-0.4**
ODAN				*e*Sg	**Sg**	**08 17 52.9**	**-0.9**
	4μm,0.3s						
TAPN	**Taplejung**	**1.78**	**101**	*e*Pg	**Pb**	**08 17 32.5**	**+0.2**
TAPN				*e*Sg	**Sb**	**08 17 55.2**	**+0.5**
	3μm,0.3s						
DANN	**Dangsing**	**1.87**	**290**	*e*Pg	**Pg**	**08 17 35.4**	**-0.1**
DANN				*e*Sg	**Sg**	**08 18 01.1**	**+1.3**
	9μm,0.4s						
KOLN	**Koldanda**	**1.91**	**272**	*e*Pg	**Pg**	**08 17 36.1**	**0.0**
KOLN				*e*Sg	**Sg**	**08 18 02.4**	**+1.5**
	24μm,0.6s						
PYUN	**Piuthan**	**2.48**	**280**	*e*Pn	**Pn**	**08 17 40.5**	**+0.5**
PYUN	**Piuthan**	**2.48**	**280**	*e*Pg	**Pg**	**08 17 47.4**	**+0.4**
PYUN				*e*Sg	**Sg**	**08 18 19.2**	**+0.1**
LSA	**Lhasa**	**5.14**	**66**	Pg	**Pb**	**08 18 27.8**	**-1.9**
LSA				Sn	**Sn**	**08 19 18.3**	**+1.9**
LSA	**Lhasa**	**5.14**	**66**	Pn	**Pn**	**08 18 18.2**	**+1.3**
GUWA	**GUWAHATI**	**5.51**	**105**	*e*P	**Pn**	**08 18 23.6**	**+2.0**
GUWA				*e*S	**Sn**	**08 19 24.8**	**-0.1**
GUWA				IAML		08 19 32.4	
	comp=N,293nm,0.4s						
SHL	**Shillong**	**5.89**	**110**	*e*P	**Pn**	**08 18 27.9**	**+1.0**
SHL				*e*S	**Sn**	**08 19 32.3**	**-2.2**
SHL	**Shillong**	**5.89**	**110**	Pn	**Pn**	**08 18 26.9**	**0.0**
ITAN	**ITANAGAR**	**7.11**	**93**	*e*P	**Pn**	**08 18 44.2**	**+0.7**
ITAN				*e*S	**Sn**	**08 20 06.6**	**+2.3**
ITAN				IAML		08 20 11.9	
	comp=N,478nm,0.5s						
DDI	**Dehra Dun**	**7.22**	**293**	*e*P	**Pn**	**08 18 47.8**	**+2.6**
DDI				*e*S	**Sn**	**08 20 07.1**	**-0.1**
DDI				IAML		08 20 10.8	
	comp=N,2μm,0.3s						
DDI				IAML		08 20 13.1	
	comp=E,625nm,0.3s						
MOKO	**MOKOCHONG**	**7.94**	**98**	*e*P	**Pn**	**08 18 55.2**	**+0.1**
MOKO				*e*S	**Sn**	**08 20 20.0**	**-5.0**
MOKO				IAML		08 20 27.1	
	comp=N,355nm,0.6s						
MOKO				IAML		08 20 27.6	
	comp=E,407nm,0.5s						
SMLA	**Simla**	**8.22**	**297**	*e*P	**Pn**	**08 18 60.0**	**+1.2**
SMLA				*e*S	**Sn**	**08 20 28.6**	**-3.2**
SMLA				IAML		08 20 37.5	
	comp=N,340nm,0.6s						
SMLA				IAML		08 20 39.8	
	comp=E,509nm,0.5s						
BHPL	**Bhopal**	**8.74**	**241**	*e*P	**Pn**	**08 19 03.9**	**-2.1**
BHPL				*e*S	**Sn**	**08 20 36.6**	**-8.0**
BHPL				IAML		08 20 40.3	
	comp=N,425nm,0.5s						
BHPL				IAML		08 20 44.2	
	comp=E,582nm,0.5s						
DHRM	**DHARAMSHALA**	**9.36**	**301**	*e*P	**Pn**	**08 19 14.5**	**-0.1**
DHRM				*e*S	**Sn**	**08 20 53.5**	**-6.6**
DHRM				IAML		08 21 06.4	
	comp=E,5μm,0.6s						
DHRM				IAML		08 21 08.8	
	comp=N,3μm,0.7s						
AJM	**Ajmer**	**9.97**	**265**	*e*P	**Pn**	**08 19 22.0**	**-0.9**
AJM				*i* S	**Sn**	**08 21 08.0**	**-6.9**
HYB	**Hyderabad**	**12.21**	**214**	*i* P	**Pn**	**08 19 51.5**	**-2.0**
NIL	**Nilore**	**12.28**	**302**		**Pn**	**08 19 53.2**	**-1.1**
MHMT	**Maesarieng**	**14.68**	**128**	P	**P**	**08 20 32.5**	**-1.0**
	comp=N,49nm,0.7s						
CHTO	**Chiang Mai**	**15.00**	**123**		**Pn**	**08 20 31.5**	**-0.1**
CHTO	**Chiang Mai**	**15.00**	**123**	⇓P	**P**	**08 20 37.4**	**+0.3**
CM33	**Chiang Mai Arr**	**15.00**	**123**	P	**P**	**08 20 37.0**	**-0.1**
CMMT	**Chiang Mai**	**15.01**	**123**	P	**P**	**08 20 36.1**	**-1.0**
	comp=N,24nm,1.2s						
CM32	**Chiang Mai Arr**	**15.03**	**124**	P	**Pn**	**08 20 32.0**	**0.0**
CM34	**Chiang Mai Arr**	**15.13**	**123**	P	**Pn**	**08 20 35.0**	**+1.7**
CM15	**Chiang Mai Arr**	**15.21**	**124**	P	**P**	**08 20 38.0**	**-1.5**
	comp=N,41nm,0.9s						
CM13	**Chiang Mai Arr**	**15.22**	**125**	P	**Pn**	**08 20 33.5**	**-1.0**
	comp=N,318nmcomp=N,44nm,0.8s						
CM31	**Chiang Mai Arr**	**15.22**	**124**	P	**P**	**08 20 40.4**	**+0.8**
	comp=N,804nm,0.8s						
CM31	**Chiang Mai Arr**	**15.22**	**124**		**Pn**	**08 20 33.2**	**-1.4**
CMAR	**Chiang Mai Arr**	**15.22**	**124**	Pn	**Pn**	**08 20 33.0**	**-1.6**
	baz=303,slow=13,SNR=14						
CM35	**Chiang Mai Arr**	**15.24**	**123**	P	**Pn**	**08 20 36.0**	**+1.2**
CM02	**Chiang Mai Arr**	**15.24**	**124**	P	**Pn**	**08 20 33.5**	**-1.3**
	comp=N,289nmcomp=N,43nm,0.9s						
CM01	**Chiang Mai Arr**	**15.26**	**124**	P	**Pn**	**08 20 34.2**	**-0.8**
	comp=N,197nmcomp=N,30nm,0.8s						
CM05	**Chiang Mai Arr**	**15.26**	**125**	P	**Pn**	**08 20 33.6**	**-1.5**
	comp=N,264nmcomp=N,35nm,0.8s						
CM09	**Chiang Mai Arr**	**15.27**	**124**	P	**P**	**08 20 38.0**	**-2.0**
	comp=N,200nmcomp=N,22nm,0.7s						
CM04	**Chiang Mai Arr**	**15.29**	**125**	P	**Pn**	**08 20 34.1**	**-1.3**
	comp=N,241nmcomp=N,32nm,0.7s						
CM36	**Chiang Mai Arr**	**15.30**	**124**	P	**Pn**	**08 20 35.0**	**-0.5**
KMI	**Kunming**	**15.44**	**96**	⇑P	**P**	**08 20 40.0**	**-2.1**
KMI				sP	pP	08 20 43.5	-2.0
KMI				pmax	pmax		
	comp=N,14nm,0.9s						
KMI	**Kunming**	**15.44**	**96**		**Pn**	**08 20 36.4**	**-1.1**
KMI				IAmb	IAmb	08 20 47.8	
	comp=Z,30nm,0.6s						
KBL	**Kabul**	**15.84**	**300**		**Pn**	**08 20 41.2**	**-1.4**
KBL				IAmb	IAmb	08 20 52.1	
	comp=Z,76nm,0.9s						
KDJ	**Kajisay**	**16.00**	**336**		**Pn**	**08 20 43.3**	**-1.3**
CD2	**Chengdu**	**16.03**	**74**	P	**Pn**	**08 20 43.3**	**-1.7**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
WMQ	**Urumqi**	**16.15**	**5**	*e*P	**Pn**	**08 20 47.3**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
SHLS	**Shalkode**	**16.23**	**343**	*e*P	**Pn**	**08 20 44.7**	**-3.0**
	baz=344						
UZB	**Uzynbulak**	**16.34**	**342**	*e*P	**Pn**	**08 20 47.6**	**-1.4**
	baz=342						
SUKH	**Sukhothai**	**16.35**	**126**	P	**Pn**	**08 20 49.5**	**+0.3**
	comp=Z,41nm,1.0s						
SATY	**Saty**	**16.43**	**341**	*e*P	**Pn**	**08 20 48.8**	**-1.5**
	baz=340						
GTA	**Gaotai**	**16.52**	**41**	⇑P	**P**	**08 20 53.5**	**-0.4**
GTA				pP	sP	08 20 58.5	-0.6
GTA				sP	pP	08 21 01.3	+3.9
GTA				pmax	pmax		
	comp=Z,30nm,1.0s						
UMPA	**Umpang Tak**	**16.68**	**131**	P	**Pn**	**08 20 54.0**	**+0.6**
	comp=Z,3μmcomp=Z,36nm,0.9s						
BOOM	**Boomskoye usch**	**16.77**	**334**		**Pn**	**08 20 53.3**	**-1.3**
UTTA	**Uttaradit**	**16.86**	**123**	P	**P**	**08 20 57.9**	**+0.2**
	comp=Z,33nm,1.0s						
PHIT	**Phitsanulok**	**17.11**	**125**	P	**P**	**08 21 00.1**	**-0.4**
	comp=Z,124nm,1.0s						
LZH	**Lanzhou**	**17.47**	**57**	*e*P	**Pn**	**08 21 03.0**	**-0.3**
LZH				pP	P	08 21 05.5	+1.0
LZH				sP	pP	08 21 07.5	-0.4
LZH				pmax	pmax		
	comp=Z,40nm,1.2s						
AAK	**Ala-Archa**	**17.48**	**331**	P	**Pn**	**08 21 02.1**	**-1.3**
	baz=141,slow=6.5,SNR=2.0						
AAK	**Ala-Archa**	**17.48**	**331**	P	**

QIZ pmax pmax
comp=Z,17nm,1.0s
TRTT Trang 23.77 144 P **P** **08 22 12.8 +0.6**
BRZS Berezniki 24.39 339 *e*P **P** **08 22 17.0 -0.8**
baz=339
WSAR Wadi Sarin 24.86 266 P **P** **08 22 22.5 +0.2**
comp=Z,6.9nm,0.6s,baz=159,slow=14,SNR=2.3
HHC Hu-ho-hao-te 24.93 52 *e*P **P** **08 22 23.5 +0.7**
HHC pmax pmax
comp=Z,24nm,0.9s
WHN Wuhan 25.11 77 ⇑P **P** **08 22 25.3 +0.8**
WHN pmax pmax
comp=Z,56nm,0.9s
GEYT Alibeck 25.28 301 P **P** **08 22 26.9 +1.0**
comp=Z,1.0nm,0.4s,baz=190,slow=7.3,SNR=2.4
GYA0B ALIBECK ARRAY 25.28 301 P **P** **08 22 25.3 -0.6**
GYA0B IAmb IAmb 08 22 34.2
comp=Z,25nm,1.2s
SONM Songino Array 25.74 33 P **P** **08 22 31.4 +1.2**
comp=Z,27nm,0.7s,baz=221,slow=10.0,SNR=81
SONM Songino Array 25.74 33 P **P** **08 22 30.2 0.0**
SONM IAmb IAmb 08 22 34.2
comp=Z,22nm,0.8s
ULN Ulaanbaatar 26.08 34 P **P** **08 22 33.5 +0.2**
ULN Ulaanbaatar 26.08 34 ⇓P **P** **08 22 34.4 +1.1**
ZAA0 Zalesovo Array 26.22 359 P **P** **08 22 34.6 +0.3**
ZAA0 IAmb IAmb 08 22 42.2
comp=Z,24nm,1.1s
ZALV Zalesovo Beam 26.22 359 P **P** **08 22 33.7 -0.6**
comp=Z,8.6nm,0.7s,baz=180,slow=7.4,SNR=34
ZALV Zalesovo Beam 26.22 359 P **P** **08 22 33.3 -0.9**
KULM Kulim 26.42 145 P **P** **08 22 36.5 +0.1**
KULM Kulim 26.42 145 ⇓P **P** **08 22 37.9 +1.5**
TLY Talaya 27.47 24 P **P** **08 22 46.2 +0.7**
comp=Z,1.1nm,0.4s,baz=213,slow=7.4,SNR=3.7
BVAR Borovoye Array 27.75 340 P **P** **08 22 47.9 -0.1**
comp=Z,1.0nm,0.4s,baz=155,slow=14,SNR=6.7
TIA Tai'an 27.84 64 P **P** **08 22 49.8 +0.7**
TIA pmax pmax
comp=Z,19nm,1.4s
RPSI Rantau Prapat 27.88 151 P **P** **08 22 48.1 -1.4**
GSI Gunungsitoli 28.60 155 P **P** **08 22 55.9 -0.1**
NJ2 Nanjing 28.96 73 *e*P **P** **08 22 59.5 +0.5**
NJ2 pmax pmax
comp=Z,15nm,0.5s
ABKAR Akbulak array 29.26 324 P **P** **08 23 01.4 -0.1**
ABKAR Akbulak array 29.26 324 P **P** **08 23 02.3 +0.7**
ABKAR Akbulak array 29.26 324 ⇓P **P** **08 23 02.9 +1.3**
ABKAR ⇑P **PcP** **08 26 14.3 +6.1**
MNSI Mandailing Nat 29.86 151 P **P** **08 23 08.6 +1.4**
DSRI Dabo 33.35 144 P **P** **08 23 40.5 +2.6**
comp=Z,3µmcomp=Z,15nm,1.0s
SOCY Socotra 33.48 249 ⇑P **P** **08 23 42.4 +3.3**
SNY Shenyang 33.83 55 ⇑P **P** **08 23 41.8 0.0**
SNY pmax pmax
comp=Z,14nm,1.0s
ARU Arti 34.64 333 P **P** **08 23 48.5 -0.1**
ARU IAmb IAmb 08 23 50.3
comp=Z,10nm,0.6s
KSM Kuching 35.12 134 P **P** **08 23 53.0 -0.2**
KSM IAmb IAmb 08 23 55.5
comp=Z,21nm,0.9s
CN2 Changchun 35.61 53 *e*P **P** **08 23 57.3 +0.1**
CN2 pmax pmax
comp=Z,20nm,1.0s
KS19 Wonju Array Si 36.54 64 P **P** **08 24 04.8 -0.5**
KSRS Korea Array 36.58 64 P **P** **08 24 04.2 -1.4**
comp=Z,4.3nm,0.6s,baz=261,slow=8.2,SNR=23
BELG Belogornoye 37.54 322 P **P** **08 24 11.8 -1.7**
comp=Z,8.1nm,0.8s,baz=274,slow=18,SNR=4.1
KBZ Khabaz 37.84 307 P **P** **08 24 15.6 -0.5**
comp=Z,2.0nm,0.8s,baz=124,slow=6.3,SNR=3.6
JNU Nakatsue 39.06 71 P **P** **08 24 26.4 -0.3**
comp=Z,19nm,0.8s,baz=306,slow=4.1,SNR=11
JNU Nakatsue 39.06 71 P **P** **08 24 26.6 0.0**
JNU IAmb IAmb 08 24 29.1
comp=Z,21nm,0.8s
JNU Nakatsue 39.06 71 ⇓P **P** **08 24 27.6 +1.0**
KIRV Kirov 39.82 331 P **P** **08 24 31.9 -0.6**
comp=Z,18nm,0.6s,baz=120,slow=5.3,SNR=6.4
USRK Ussuriysk Ar. 40.32 53 P **P** **08 24 36.9 -0.1**
comp=Z,5.5nm,0.8s,baz=253,slow=8.8,SNR=10
USRK Ussuriysk Ar. 40.32 53 P **P** **08 24 37.0 0.0**
KLR Kul'dur 41.15 46 P **P** **08 24 43.5 -0.2**
comp=Z,4.8nm,0.8s,baz=266,slow=9.2,SNR=13
JMN Monobe 41.51 69 P **P** **08 24 46.7 -0.3**
JMN IAmb IAmb 08 24 48.9
comp=Z,38nm,0.9s
JMN Monobe 41.51 69 ⇓P **P** **08 24 48.0 +1.1**
NRIK Noril'sk 41.67 1 P **P** **08 24 48.5 +0.8**
comp=Z,34nm,0.7s,baz=172,slow=6.1,SNR=78
NRIK Noril'sk 41.67 1 P **P** **08 24 47.9 +0.1**
JWT Wachi 42.64 67 ⇑P **P** **08 24 56.9 +0.7**
MMAI Mount Meron Ar 43.43 290 P **P** **08 25 02.3 -0.4**
comp=Z,0.4nm,0.3s,baz=46,slow=12,SNR=1.9
MRSI Marisa 44.00 122 P **P** **08 25 08.8 +1.5**
comp=Z,54nm,0.8s
BRTR Keskin Array B 44.41 300 P **P** **08 25 08.7 -1.8**
comp=Z,1.1nm,0.5s,baz=134,slow=6.2,SNR=2.3
BRTR Keskin Array B 44.41 300 P **P** **08 25 10.7 +0.2**
APSI Ampana 44.70 124 P **P** **08 25 15.0 +2.1**
comp=Z,2µmcomp=Z,12nm,0.9s
MAT Matsushiro 44.82 65 P **P** **08 25 13.1 -0.6**
MJAR Matsushiro Arr 44.82 65 P **P** **08 25 13.6 -0.1**
comp=Z,7.3nm,0.9s,baz=277,slow=9.9,SNR=16
TTSI Tana Toraja 44.85 128 P **P** **08 25 15.9 +1.9**
comp=Z,68nm,0.9s
YAK Yakutsk 44.85 28 P **P** **08 25 13.1 -0.4**
comp=Z,9.8nm,0.5s,baz=230,slow=1.2,SNR=4.9
KLMR Klimovskoe 45.29 330 *e*P **P** **08 25 16.0 -1.0**
KLMR AMP 08 25 22.2
comp=Z,28nm,1.2s
KLMR *e*PcP **PcP** **08 26 56.0 -0.6**
SPSI Sidrap Palu 45.46 128 P **P** **08 25 21.3 +2.4**
comp=Z,26nm,0.9s
ELL Elmali 47.52 296 P **P** **08 25 35.0 0.0**
AKASG Malin Array Be 48.09 315 P **P** **08 25 38.6 -0.5**
comp=Z,1.9nm,0.4s,baz=76,slow=8.0,SNR=16
AKASG PcP **PcP** **08 27 06.4 -0.3**
comp=Z,0.8nm,0.5s,baz=93,slow=5.8,SNR=1.4
AKASG PP **PP** **08 27 34.4 +3.3**
comp=Z,0.3nm,0.3s,baz=96,slow=9.5,SNR=5.1
AKBB Malin Array Si 48.09 315 P **P** **08 25 38.9 -0.2**
AKBB IAmb IAmb 08 25 39.6
comp=Z,9.4nm,0.8s
TPGR Topolog 48.28 307 ⇑P **P** **08 25 41.9 +1.2**
CFR Carcaliu 48.48 307 ⇓P **P** **08 25 43.0 +0.8**
HARR Harsova 48.62 306 ⇑P **P** **08 25 44.4 +1.1**
VRI Vrincioaia 49.48 307 ⇑P **P** **08 25 51.5 +1.6**
PLOR Plostina 49.53 308 ⇑P **P** **08 25 52.1 +1.8**
KARP Karpathos 49.87 294 P **P** **08 25 53.1 +0.1**
BIZ Bicaz 49.92 309 ⇑P **P** **08 25 54.3 +1.1**
TIXI Tiksi 49.93 16 P **P** **08 25 52.8 -0.1**
comp=Z,10nm,0.7s,baz=216,slow=4.0,SNR=37
TIXI Tiksi 49.93 16 P **P** **08 25 52.1 -0.7**
TIXI IAmb IAmb 08 25 58.1
comp=Z,13nm,0.7s
TIXI Tiksi 49.93 16 ⇓P **P** **08 25 53.0 +0.1**
MLR Muntele Rosu 50.03 308 ⇓P **P** **08 25 56.2 +1.9**
MLR Muntele Rosu 50.03 308 P **P** **08 25 54.6 +0.4**
IIGN Ignalina 50.47 320 *e*P **P** **08 25 58.4 +1.1**
BURAR Bucovina Array 50.53 310 ⇑P **P** **08 25 58.7 +0.7**
BUR08 Bucovina Ar. S 50.54 310 P **P** **08 25 58.1 0.0**
ISAL Salakas 50.56 321 *e*P **P** **08 25 58.8 +0.9**
VOIR 50.66 307 ⇑P **P** **08 25 59.5 +0.6**
VSU Vasula 50.70 324 *e*P **P** **08 25 59.3 +0.4**
ARR Arges 50.95 307 ⇓P **P** **08 26 02.1 +1.0**
FIA1 FINESS Array S 51.63 328 P **P** **08 26 06.0 +0.2**
FIA1 IAmb IAmb 08 26 11.1
comp=Z,15nm,1.1s
FINES FINESS Array B 51.63 328 P **P** **08 26 05.9 0.0**
comp=Z,7.3nm,0.6s,baz=113,slow=7.8,SNR=18
IDI Anoyia 51.74 294 P **P** **08 26 07.3 +0.1**
comp=Z,5.2nm,0.7s,baz=39,slow=13,SNR=5.2
PABE Paberze 51.77 320 *e*P **P** **08 26 07.5 +0.6**
PABE Paberze 51.77 320 P **P** **08 26 07.0 +0.1**
VTS Vitosha 52.12 304 ⇑P **P** **08 26 11.7 +1.7**
VTS Vitosha 52.12 304 P **P** **08 26 09.9 -0.1**
VTS IAmb IAmb 08 26 16.0
comp=Z,14nm,0.9s
VTS Vitosha 52.12 304 ⇓P **P** **08 26 11.3 +1.4**
DRGR 52.25 309 ⇓P **P** **08 26 12.1 +1.3**
MTSE Matsula 52.25 324 *e*P **P** **08 26 10.9 +0.4**
GZR Gura Zlata 52.26 307 ⇑P **P** **08 26 11.4 +0.5**
SOEI Soe 52.70 129 P **P** **08 26 13.1 -1.4**
SOEI Soe 52.70 129 ⇓P **P** **08 26 13.3 -1.2**
SOEI Soe 52.70 129 P **P** **08 26 13.7 -0.9**
comp=Z,80nm,0.8s
CRVS Cervenica-Dubn 53.03 312 *e*P **P** **08 26 17.9 +1.4**
AGG Agios Georgios 53.20 300 P **P** **08 26 16.4 -1.5**
AGG IAmb IAmb 08 26 17.9
comp=Z,11nm,0.9s
AGG Agios Georgios 53.20 300 ⇑P **P** **08 26 17.6 -0.3**
ARCES ARCESS Array B 54.00 338 P **P** **08 26 23.9 +0.6**
comp=Z,16nm,0.8s,baz=94,slow=7.8,SNR=29
KMBO Kilima Mbogo 54.67 247 P **P** **08 26 29.3 +0.1**
comp=Z,1.3nm,0.4s,baz=39,slow=11,SNR=4.1
VYHS Vyhne 54.79 311 *e*P **P** **08 26 30.0 +0.6**
PDG Podgorica 55.06 304 ⇑P **P** **08 26 31.0 -0.3**
UPP Uppsala 55.53 325 *e*P **P** **08 26 34.6 +0.2**
JAVC Velka Javorina 55.53 312 *e*P **P** **08 26 36.9 +2.1**
MORC Moravsky Berou 55.56 313 *e*P **P** **08 26 35.4 +0.5**
MODS Modra-Piesok 55.83 311 *e*P **P** **08 26 36.6 -0.3**
KRLC Kraliky 56.03 314 *e*P **P** **08 26 38.9 +0.6**
VRAC Vranov 56.21 313 *e*P **P** **08 26 40.2 +0.6**
DPC Dobruska-Polom 56.31 314 *e*P **P** **08 26 41.3 +1.0**
DPC *e*pP **sP** **08 26 45.0 -0.5**
KRUC Moravsky 56.36 312 *e*P **P** **08 26 41.0 +0.4**
OSTC Ostas 56.36 314 *e*P **P** **08 26 41.7 +1.1**
CHVC Chvalec 56.46 314 *e*P **P** **08 26 42.1 +0.7**
CONA Conrad Observa 56.82 311 *e*P **P** **08 26 44.4 +0.4**
comp=Z,11nm,0.9s,SNR=7.4
ARSA Arzberg 57.12 310 *e*P **P** **08 26 46.2 +0.2**
comp=Z,5.4nm,0.7s
PRU Pruhonice 57.48 314 *e*P **P** **08 26 49.4 +0.9**
PRU *e*pP **sP** **08 26 53.2 -0.6**
SOKA Soboth 57.52 310 *e*P **P** **08 26 49.5 +0.5**
comp=Z,14nm,1.1s,SNR=8.0
PETK Petropavlovsk- 57.68 43 P **P** **08 26 49.7 -0.2**
comp=Z,4.0nm,0.9s,baz=204,slow=6.3,SNR=1.6
RUE Ruedersdorf 57.74 317 *e*P **P** **08 26 51.7 +1.4**
comp=Z,13nm,0.8s,baz=83,slow=6.9
BRG Berggiesshubel 57.78 315 ⇓P **P** **08 26 51.4 +0.8**
BRG Amp 08 26 52.1
comp=Z,7.5nm,0.9s
BRG *i* x x 08 26 55.2
BRG Amp 08 26 56.2
comp=Z,12nm,0.9s
BRG Berggiesshubel 57.78 315 *e*P **P** **08 26 51.4 +0.8**
comp=Z,7.4nm,0.8s,baz=83,slow=6.9
OBKA Obir 57.87 309 *e*P **P** **08 26 51.6 +0.1**
comp=Z,11nm,0.8s
MOA Molln 57.89 311 *i* P **P** **08 26 51.6 +0.1**
comp=Z,5.8nm,0.6s
FBE Freiberg 58.14 315 *e*P **P** **08 26 54.3 +1.1**
comp=Z,9.4nm,0.9s,baz=83,slow=6.9
GEC2 GERESS Array S 58.15 312 P **P** **08 26 53.2 -0.2**
GEC2 GERESS Array S 58.15 312 *e*P **P** **08 26 54.0 +0.6**
comp=Z,3.5nm,0.9s,baz=83,slow=6.9
GERES GERESS Array B 58.15 312 P **P** **08 26 53.3 -0.1**
comp=Z,1.3nm,0.5s,baz=106,slow=8.6,SNR=14
KHC Kasperske Hory 58.19 313 *e*P **P** **08 26 54.2 +0.6**
KHC *e*pP **pP** **08 26 58.1 +0.7**
CLL Collm 58.32 315 *e*P **P** **08 26 55.0 +0.6**
CLL *e*sP **sP** **08 26 59.0 -0.7**
CLL Collm 58.32 315 *e*P **P** **08 26 54.8 +0.3**
comp=Z,3.3nm,0.7s,baz=83,slow=6.9
WET Wettzell 58.65 313 *e*P **P** **08 26 57.5 +0.7**
comp=Z,4.3nm,0.8s,baz=83,slow=6.9
NOA NORSAR Array B 58.73 327 P **P** **08 26 56.8 -0.3**
comp=Z,5.1nm,0.8s,baz=89,slow=6.9,SNR=19
TANN Tannenbergstha 58.76 314 *e*P **P** **08 26 58.3 +0.7**
comp=Z,3.7nm,0.8s,baz=83,slow=6.9
WERN Wernitzgruen 58.83 314 *e*P **P** **08 26 58.9 +0.9**
comp=Z,3.4nm,0.9s,baz=83,slow=6.9
GUNZ Gunzen 58.85 314 *e*P **P** **08 26 59.0 +0.8**
comp=Z,4.8nm,0.8s,baz=83,slow=6.9
WERD Werda 58.86 314 *e*P **P** **08 26 58.9 +0.7**
comp=Z,5.3nm,0.9s,baz=83,slow=6.9
RJOB Jochberg 58.89 311 *e*P **P** **08 26 59.7 +1.1**
comp=Z,15nm,0.7s,baz=83,slow=6.9
ROTZ Rotzenmuhle 59.00 313 *e*P **P** **08 27 00.4 +1.2**
comp=Z,7.9nm,0.8s,baz=83,slow=6.9
MANZ Manzenberg 59.04 314 *e*P **P** **08 27 00.7 +1.2**
comp=Z,15nm,1.3s,baz=83,slow=6.9
STAL STALIGIAL 59.17 309 P **P** **08 26 60.0 -0.5**
ABTA Abfaltersbach 59.23 310 *i* P **P** **08 27 00.7 -0.3**
comp=Z,4.4nm,0.9s
MOX Moxa 59.27 315 *e*P **P** **08 27 01.8 +0.7**
comp=Z,5.6nm,0.9s,baz=83,slow=6.9
FLTG Flechtingen 59.30 317 *e*P **P** **08 27 01.4 +0.2**
comp=Z,7.4nm,0.8s,baz=83,slow=6.9
NRCA Norcia 59.47 305 P **P** **08 27 03.2 +0.5**
NRCA IAmb IAmb 08 27 07.8
comp=Z,11nm,0.8s
BSEG Bad Segeberg 59.68 318 *e*P **P** **08 27 04.9 +1.1**
comp=Z,14nm,0.8s,baz=83,slow=6.9
FITZ Fitzroy Crossi 59.72 135 P **P** **08 27 04.5 +0.1**
FITZ IAmb IAmb 08 27 05.4
comp=Z,8.6nm,0.8s
WTTA Wattenberg 59.74 311 *i* P **P** **08 27 03.7 -0.8**
comp=Z,13nm,1.1s
WATA Walderalm 59.77 311 *i* P **P** **08 27 03.8 -0.9**
comp=Z,7.7nm,0.7s
MURB Monte Urbino 59.82 306 P **P** **08 27 03.7 -1.3**
CLZ Clausthal 59.89 316 *e*P **P** **08 27 06.2 +0.8**
comp=Z,13nm,0.7s,baz=83,slow=6.9
CTI Castel Tesino 59.93 309 P **P** **08 27 05.1 -0.7**
CTI IAmb IAmb 08 27 10.3
comp=Z,6.8nm,0.8s
NRDL Niedersach Rie 59.97 317 *e*P **P** **08 27 07.1 +1.3**
comp=Z,15nm,0.8s,baz=83,slow=6.9
KNRA Kununurra 59.98 131 P **P** **08 27 05.9 -0.4**
SQTA Sankt Quirin 60.03 311 *i* P **P** **08 27 05.9 -0.6**
comp=Z,7.0nm,0.6s
TEOL Teolo 60.04 308 P **P** **08 27 05.7 -0.7**
MOTA Moosalm 60.08 311 *e*P **P** **08 27 06.2 -0.7**
comp=Z,14nm,0.7s,SNR=8.2
GTTG Gottingen 60.19 316 *e*P **P** **08 27 08.1 +0.8**
comp=Z,9.5nm,0.9s,baz=83,slow=6.9
UBBA Unterreizbach 60.26 315 *e*P **P** **08 27 08.6 +0.9**
comp=Z,2.0nm,0.8s,baz=83,slow=6.9
RETA Reutte 60.29 311 *i* P **P** **08 27 07.8 -0.4**
comp=Z,14nm,1.6s
CORL Corleone 60.37 300 P **P** **08 27 08.6 -0.3**
FETA Feichten 60.39 311 *i* P **P** **08 27 08.5 -0.5**
comp=Z,9.4nm,1.2s
CLTB Caltabellotta 60.51 299 P **P** **08 27 09.3 -0.5**
CLTB Caltabellotta 60.51 299 ⇓P **P** **08 27 09.4 -0.5**
UBR Ueberruh 60.69 311 *e*P **P** **08 27 10.8 -0.1**
comp=Z,5.0nm,0.7s,baz=83,slow=6.9
SALO Salr 60.78 309 P **P** **08 27 11.4 -0.1**
DAVA Damuels 60.91 311 *i* P **P** **08 27 12.3 -0.3**
comp=Z,15nm,0.9s,SNR=7.4
DAVOX Davos/Dischmat 61.01 310 P **P** **08 27 12.9 -0.4**
comp=Z,4.8nm,0.6s,baz=99,slow=8.6,SNR=7.5
BILL Bilibino 61.09 25 P **P** **08 27 13.7 +0.5**
BILL IAmb IAmb 08 27 15.4
comp=Z,10nm,1.2s
STU Stuttgart 61.10 313 *e*P **P** **08 27 14.2 +0.5**
baz=83,slow=6.9
KASTN Kahler Asten 61.20 316 *e*P **P** **08 27 15.1 +0.8**
comp=Z,3.3nm,0.8s,baz=83,slow=6.9
TNS Taunus Mts 61.34 314 *e*P **P** **08 27 15.9 +0.7**
comp=Z,7.4nm,0.8s,baz=83,slow=6.9
TUE Stuetta 61.42 310 P **P** **08 27 14.7 -1.4**
TUE IAmb IAmb 08 27 27.0
comp=Z,10nm,1.0s
TUE Stuetta 61.42 310 ⇑P **P** **08 27 15.3 -0.8**
IBBN Ibbenburen 61.42 317 *e*P **P** **08 27 16.5 +0.8**
comp=Z,8.7nm,0.8s,baz=83,slow=6.9
BOB Bobbio (Coli) 61.70 308 ⇑P **P** **08 27 18.9 +1.1**
BUG Bochum--Univer 61.87 316 *e*P **P** **08 27 19.5 +0.8**
comp=Z,8.5nm,0.7s,baz=83,slow=6.9
AHRW Bad Neuenahr-A 62.15 315 *e*P **P** **08 27 21.3 +0.6**
comp=Z,7.5nm,0.8s,baz=83,slow=6.9
ECH Echery 62.54 312 P **P** **08 27 21.8 -1.6**
BTNL Ternell 62.73 315 *d*P **P** **08 27 25.4 +0.8**
comp=Z,7.1nm,1.1s
MEM Membach 62.80 315 *dx* P 08 27 30.2 +5.2
SENIN Lac Senin/Sane 62.83 310 P **P** **08 27 25.6 0.0**
WLF Walferdange 62.96 314 *e*P **P** **08 27 26.9 +1.2**
comp=Z,12nm,0.9s,baz=83,slow=6.9
BNI Bardonecchia 63.55 309 P **P** **08 27 29.6 -0.7**
BNI IAmb IAmb 08 27 40.2
comp=Z,11nm,1.1s
BNI Bardonecchia 63.55 309 ⇓P **P** **08 27 30.2 -0.1**
KEST Kesra 63.99 298 P **P** **08 27 33.6 +0.4**
comp=Z,31nm,0.9s,baz=13,slow=2.8,SNR=15
KEST Kesra 63.99 298 P **P** **08 27 32.9 -0.4**
NOR Nord 64.57 351 *i* P **P** **08 27 35.8 -0.4**
NOR IAmb IAmb 08 27 37.4
comp=Z,3.6nm,0.8s
NOR Nord 64.57 351 ⇑P **P** **08 27 36.3 +0.1**
SSB Saint Sauveur 64.96 310 P **P** **08 27 39.4 0.0**
SSB IAmb IAmb 08 27 44.3
comp=Z,8.8nm,1.0s
DAG Danmarks Havn 66.47 346 *i* P **P** **08 27 48.2 -0.3**
DAG IAmb IAmb 08 27 50.7
comp=Z,9.7nm,0.7s
WRKA Warakurna 66.56 138 ⇓P **P** **08 27 50.5 +0.7**
WB0 Warramunga Arr 66.66 130 P **P** **08 27 50.5 -0.1**
WRA Warramunga Arr 66.74 130 P **P** **08 27 51.5 +0.4**
comp=Z,24nm,0.7s,baz=323,slow=6.6,SNR=236
WRA Warramunga Arr 66.74 130 P **P** **08 27 51.2 +0.1**
WRAB Tennant Creek 66.74 130 P **P** **08 27 50.8 -0.2**
WRAB Tennant Creek 66.74 130 ⇑P **P** **08 27 51.6 +0.5**
WB2 Warramunga Arr 66.75 130 P **P** **08 27 50.9 -0.3**
WR0 Warramunga Arr 66.89 130 P **P** **08 27 52.2 +0.1**
DBG Daneborg 67.75 344 *i* P **P** **08 27 57.0 +0.3**
DBG IAmb IAmb 08 27 58.8
comp=Z,6.4nm,0.8s
DBG Daneborg 67.75 344 ⇓P **P** **08 27 57.6 +0.9**
AS31 Alice Springs 69.04 133 P **P** **08 28 05.5 -0.1**
AS31 IAmb IAmb 08 28 06.7
comp=Z,4.7nm,0.7s
ASAR Alice Springs 69.04 133 P **P** **08 28 06.0 +0.5**
comp=Z,15nm,0.7s,baz=315,slow=6.3,SNR=158
ASAR Alice Springs 69.04 133 P **P** **08 28 05.9 +0.3**
SCO Scoresbysund 69.82 340 *i* P **P** **08 28 10.4 +0.8**
SCO IAmb IAmb 08 28 11.4
comp=Z,2.3nm,0.9s
LSZ Lusaka 70.25 240 P **P** **08 28 13.1 -0.2**
comp=Z,4.1nm,0.5s,baz=48,slow=5.5,SNR=8.5
NEEM North Greenlan 71.95 351 *i* P **P** **08 28 23.0 +0.1**
NEEM IAmb IAmb 08 28 24.7
comp=Z,15nm,0.8s
NEEM North Greenlan 71.95 351 ⇓P **P** **08 28 23.3 +0.4**
RDOG Red Dog Mine 72.10 22 P **P** **08 28 23.7 +0.1**
RDOG IAmb IAmb 08 28 29.4
comp=Z,12nm,1.3s
RDOG Red Dog Mine 72.10 22 P 08 28 24.5
baz=300
EUNU Eureka 72.38 359 P **P** **08 28 25.2 +0.1**
EUNU IAmb IAmb 08 28 27.0
comp=Z,9.1nm,0.9s
EUNU Eureka 72.38 359 ⇓P **P** **08 28 26.0 +0.9**
ESDC Sonseca Array 72.69 306 P **P** **08 28 27.3 -0.4**
comp=Z,1.8nm,0.7s,baz=56,slow=5.6,SNR=13
ANM Nome 72.94 25 P **P** **08 28 29.1 +0.5**
ANM IAmb IAmb 08 28 30.8
comp=Z,6.6nm,0.9s
ANM Nome 72.94 25 P 08 28 30.1
baz=299
SUMG Summit 73.09 345 *i* P **P** **08 28 30.5 +0.6**
SUMG IAmb IAmb 08 28 31.7
comp=Z,13nm,0.9s
SUMG Summit 73.09 345 P **P** **08 28 30.1 +0.3**
SUMG Summit 73.09 345 ⇑P **P** **08 28 30.6 +0.8**
MATP Matopo 73.18 235 P **P** **08 28 30.4 -0.4**
comp=Z,3.8nm,0.7s,baz=51,slow=3.4,SNR=9.0
TULEG Thule 74.81 354 *i* P **P** **08 28 39.1 -0.2**
TULEG IAmb IAmb 08 28 43.9
comp=Z,4.5nm,0.8s
CTAO Charters Tower 75.38 122 P **P** **08 28 43.8 +0.3**
CTAO IAmb IAmb 08 28 45.2
comp=Z,18nm,1.0s
CTAO Charters Tower 75.38 122 ⇓P **P** **08 28 44.4 +0.8**
PBAR Barrancos 75.48 306 *e*P **P** **08 28 44.5 +0.6**
comp=Z,23nm,1.9s
ICESG Greenland Ices 75.68 342 *i* P **P** **08 28 45.6 +0.6**
ICESG IAmb IAmb 08 28 46.6
comp=Z,26nm,0.8s
ICESG Greenland Ices 75.68 342 ⇑P **P** **08 28 44.7 -0.2**
TOLK Toolik Lake Re 75.78 18 P **P** **08 28 45.4 +0.2**
TOLK IAmb IAmb 08 28 46.9
comp=Z,12nm,1.0s
TOLK Toolik Lake Re 75.78 18 P 08 28 46.1
baz=311
MDT Midelt 75.83 300 P **P** **08 28 45.5 -0.6**
comp=Z,1.0nm,0.6s,baz=33,slow=10,SNR=4.0
PSBE So Bento 76.19 307 *e*P **P** **08 28 50.3 +2.3**
PVAQ Vaqueiros 76.29 305 *e*P **P** **08 28 49.4 +0.8**
comp=Z,34nm,1.7s
PBDV Barranco-do-Ve 76.51 305 *e*P **P** **08 28 50.8 +0.9**
COLD Coldfoot 76.54 19 P **P** **08 28 49.4 -0.1**
COLD IAmb IAmb 08 28 51.4
comp=Z,7.9nm,1.0s
COLD Coldfoot 76.54 19 P 08 28 50.4
baz=311
TTA Tatalina 77.33 24 P 08 28 55.4
baz=307
MLY Manley 77.82 21 P **P** **08 28 56.8 +0.1**
MLY IAmb IAmb 08 28 58.6
comp=Z,9.5nm,0.9s
MLY Manley 77.82 21 P 08 28 57.7
baz=311,SNR=11
BMAR Burnt Mountain 77.98 18 P **P** **08 28 58.8 +1.3**
CHUM Lake Minchumin 78.04 23 P 08 28 59.3
baz=310
LBTB Lobatse 78.12 234 P **P** **08 28 58.3 -0.8**
comp=Z,7.6nm,0.8s,baz=59,slow=4.9,SNR=10
LBTB Lobatse 78.12 234 P **P** **08 28 58.0 -1.0**
LBTB IAmb IAmb 08 29 00.6
comp=Z,20nm,1.4s
LBTB Lobatse 78.12 234 ⇓P **P** **08 28 59.6 +0.5**
I23K Minto, Yukon-K 78.18 21 P **P** **08 28 58.5 -0.1**
I23K Minto, Yukon-K 78.18 21 P 08 28 59.6
baz=312,SNR=9.1
BPAW Bear Paw Mtn. 78.35 22 P **P** **08 28 59.1 -0.6**
BPAW IAmb IAmb 08 29 01.7
comp=Z,7.6nm,0.8s
BPAW Bear Paw Mtn. 78.35 22 P 08 29 00.4
baz=311,SNR=9.9
NEA2 Nenana 78.64 21 P **P** **08 29 00.7 -0.5**
NEA2 IAmb IAmb 08 29 03.3
comp=Z,17nm,1.0s
NEA2 Nenana 78.64 21 P 08 29 01.9
baz=312,SNR=20
MDM Murphy Dome 78.66 21 P **P** **08 29 01.0 -0.4**
MDM IAmb IAmb 08 29 03.0
comp=Z,26nm,1.3s
PPLA Purkeypile 78.72 23 P **P** **08 29 02.0 +0.1**
PPLA IAmb IAmb 08 29 12.8
comp=Z,25nm,1.4s
PPLA Purkeypile 78.72 23 P 08 29 02.8
baz=310
KTH Kantishna Hill 78.73 22 P **P** **08 29 02.0 +0.2**
KTH IAmb IAmb 08 29 03.6
comp=Z,12nm,1.3s
POKR Poker Plat Res 78.80 20 P 08 29 03.2
baz=314
TORD Torodi Ar. Bea 78.82 279 P **P** **08 29 02.0 -1.0**
comp=Z,2.1nm,0.8s,baz=53,slow=3.9,SNR=11
TCOL CIGO, UAF Yank 78.83 21 P 08 29 02.8
baz=313
COLA College 78.83 21 P **P** **08 29 02.0 -0.2**
COLA IAmb IAmb 08 29 03.7
comp=Z,9.8nm,0.8s
COLA College 78.83 21 ⇓P **P** **08 29 02.9 +0.7**
COLA College 78.83 21 P 08 29 03.1
baz=313
CCB Clear Creek Bu 79.00 21 P **P** **08 29 02.7 -0.5**
TRF Thorofare Moun 79.01 22 P 08 29 03.6
baz=312
WRH Wood River Hil 79.04 21 P **P** **08 29 03.1 -0.3**
PRP Porcupine Dome 79.09 19 P **P** **08 29 04.4 +0.6**
PRP IAmb IAmb 08 29 06.6
comp=Z,21nm,1.3s
PRP Porcupine Dome 79.09 19 P 08 29 05.3
baz=315
IL31 79.20 20 P **P** **08 29 03.8 -0.5**
IL31 IAmb IAmb 08 29 05.4
comp=Z,18nm,1.5s
ILAR Eielson Array 79.20 20 P **P** **08 29 04.2 -0.2**
comp=Z,3.9nm,0.8s,baz=302,slow=4.5,SNR=39
ILAR PP **PP** **08 32 02.1 -1.0**
comp=Z,1.6nm,0.9s,baz=310,slow=7.0,SNR=6.5
ILAR Eielson Array 79.20 20 P **P** **08 29 03.6 -0.7**
MCK McKinley 79.27 22 P 08 29 05.5
baz=313
DY2G Dye2 79.31 342 *i* P **P** **08 29 05.6 +0.5**
HDA Harding Lake 79.44 21 P 08 29 04.9
baz=314
HDA P 08 29 04.9
baz=314

SKT	Skwentna	79.55	24	P		P	08 29 06.3	0.0
SKT	Skwentna	79.55	24	P			08 29 07.0	
	baz=311,SNR=11							
STKA	Stephens Creek	79.61	134	P		P	08 29 07.0	+0.1
	comp=Z,11nm,0.8s,baz=321,slow=4.9,SNR=15							
STKA	Stephens Creek	79.61	134	P		P	08 29 06.6	-0.3
CUT	Chulitna	79.71	23	P			08 29 07.6	
	baz=312							
WAT2	Susitna Watana	79.91	22	P			08 29 08.2	
	baz=313							
INK	Inuvik	79.97	14	P		P	08 29 08.6	+0.2
INK	Inuvik	79.97	14	⇑P		P	08 29 08.9	+0.6
INK	Inuvik	79.97	14	P			08 29 09.0	
	baz=325							
SUA	Susitna One	80.17	24	P			08 29 10.0	
	baz=311							
WAT6	Susitna Watana	80.46	22	P			08 29 11.2	
	baz=314							
BOSA	Boshof	80.59	231	P		P	08 29 11.9	-0.6
	comp=Z,5.4nm,0.9s,baz=73,slow=4.1,SNR=9.2							
GHO	Glory Hole Cre	80.61	23	P		P	08 29 12.4	+0.4
GHO				IAmb		IAmb	08 29 13.2	
	comp=Z,9.5nm,0.9s							
SCRK	Sand Creek	80.66	20	P		P	08 29 12.5	+0.1
SCRK				IAmb		IAmb	08 29 13.7	
	comp=Z,9.6nm,0.8s							
PMR	Palmer	80.66	23	P		P	08 29 11.9	-0.3
PMR				IAmb		IAmb	08 29 13.5	
	comp=Z,10nm,0.8s							
SCRK	Sand Creek	80.66	20	P			08 29 13.0	
	baz=317,SNR=14							
PMR	Palmer	80.66	23	P			08 29 12.9	
	baz=313,SNR=6.8							
RC01	Rabbit Creek A	80.78	24	P			08 29 13.4	
	baz=312							
SML	Sawmill	80.79	23	P		P	08 29 13.4	+0.4
SML	Sawmill	80.79	23	P			08 29 14.0	
	baz=313,SNR=11							
EPYK	Eagle Plains	80.81	16	P		P	08 29 12.9	-0.1
EPYK				IAmb		IAmb	08 29 14.0	
	comp=Z,6.3nm,0.8s							
EPYK	Eagle Plains	80.81	16	P			08 29 13.3	
	baz=323							
C36M	Paulatuk	80.82	10	P			08 29 12.8	
	baz=334							
DOT	Dot Lake	80.87	20	P		P	08 29 13.0	-0.4
EGAK	Eagle	80.89	18	P		P	08 29 13.3	-0.1
EGAK	Eagle	80.89	18	P			08 29 13.9	
	baz=319							
PAX	Paxson	80.92	21	P		P	08 29 14.0	+0.3
PAX	Paxson	80.92	21	P			08 29 14.3	
	baz=316							
KNK	Knik Glacier	81.02	23	P		P	08 29 14.4	+0.2
KNK				IAmb		IAmb	08 29 15.9	
	comp=Z,14nm,0.7s							
KNK	Knik Glacier	81.02	23	P			08 29 15.2	
	baz=313							
SCM	Sheep Creek Mo	81.12	23	P		P	08 29 15.2	+0.4
SCM				IAmb		IAmb	08 29 16.4	
	comp=Z,14nm,0.7s							
K27K	Chicken	81.19	19	P		P	08 29 16.4	+1.4
K27K				IAmb		IAmb	08 29 17.2	
	comp=Z,16nm,1.2s							
K27K	Chicken	81.19	19	P			08 29 16.3	
	baz=318							
M24K	Tolsona, Glenn	81.31	22	P			08 29 17.0	
	baz=315							
HARP	HAARP	81.44	21	P			08 29 17.9	
	baz=316							
KLU	Klutina	81.83	22	P		P	08 29 19.0	+0.4
KLU				IAmb		IAmb	08 29 21.3	
	comp=Z,15nm,1.3s							
KLU	Klutina	81.83	22	P			08 29 19.8	
	baz=315,SNR=5.3							
GLI	Glacier Island	81.87	23	P			08 29 18.7	
	baz=314							
KDAK	Kodiak Island	81.88	27	P			08 29 19.5	
	baz=310							
DAWY	Dawson	81.93	18	P		P	08 29 18.5	-0.5
OHAK	Old Harbor	81.95	28	P			08 29 20.0	
	baz=310							
L27K	Beaver Creek,	81.99	20	P		P	08 29 19.8	+0.5
L27K				IAmb		IAmb	08 29 21.6	
	comp=Z,10nm,1.1s							
L27K	Beaver Creek,	81.99	20	P			08 29 20.4	
	baz=319,SNR=13							
BCAR	Beaver Creek A	82.00	20	P		P	08 29 20.0	+0.6
EIDS	Eidsvold	82.09	124	P		P	08 29 20.6	+0.3
EIDS				IAmb		IAmb	08 29 21.9	
	comp=Z,12nm,1.3s							
N25K	Chitina, Valde	82.19	22	P		P	08 29 19.3	-1.1
N25K	Chitina, Valde	82.19	22	P			08 29 21.9	
	baz=316,SNR=12							
EYAK	Cordova Ski Ar	82.57	23	P			08 29 23.4	
	baz=316							
GLB	Gilahina Butte	82.57	22	P		P	08 29 22.3	-0.1
GLB				IAmb		IAmb	08 29 24.3	
	comp=Z,8.0nm,1.0s							
BMRM	Bremner River	82.65	22	P		P	08 29 23.0	+0.2
BMRM				IAmb		IAmb	08 29 24.7	
	comp=Z,14nm,1.0s							
BMRM	Bremner River	82.66	22	P			08 29 23.6	
	baz=316,SNR=7.5							
MCARA	McCarthy VSAT	82.87	21	P		P	08 29 24.6	+0.7
MCARA	McCarthy VSAT	82.87	21	P			08 29 25.6	
	baz=318							
KOWA	Kowa	83.19	283	P		P	08 29 25.2	-1.2
	comp=Z,1.6nm,0.5s,baz=129,slow=2.1,SNR=3.6							
KOWA	Kowa	83.19	283	IAmb		IAmb	08 29 31.1	
	comp=Z,4.2nm,0.8s							
CRQE	Cirque	83.32	22	P			08 29 27.6	
	baz=318							
KAIM	Kayak Island	83.48	23	P			08 29 28.7	
	baz=317							
BARN	Barnard Glacie	83.55	21	P		P	08 29 28.2	+0.6
BARN				IAmb		IAmb	08 29 30.0	
	comp=Z,14nm,1.0s							
CTG	Chitna Glacier	83.73	21	P			08 29 29.9	
	baz=319							
GRNC	Granite Creek	83.77	21	P		P	08 29 29.8	+1.0
GRNC				IAmb		IAmb	08 29 31.0	
	comp=Z,9.7nm,0.9s							
LOGN	Logan Glacier	83.94	21	P		P	08 29 29.8	+0.2
LOGN				IAmb		IAmb	08 29 47.6	
	comp=Z,11nm,1.2s							
YAH	Yahtse	84.05	22	P		P	08 29 30.7	+0.4
PCA	Pinnacle	84.74	21	P		P	08 29 34.1	+0.5
PINM	Pinnacle	84.74	21	P			08 29 35.1	
	baz=320							
SUR	Sutherland	85.92	230	P		P	08 29 39.7	-0.2
	comp=Z,5.1nm,0.9s,baz=49,slow=11,SNR=2.1							
SUR	Sutherland	85.92	230	IAmb		IAmb	08 29 45.5	
	comp=Z,8.3nm,1.1s							
WHY	Whitehorse	85.92	19	P		P	08 29 40.2	+0.7
WHY				IAmb		IAmb	08 29 40.8	
	comp=Z,6.3nm,0.8s							
WHY	Whitehorse	85.92	19	P			08 29 40.1	
	baz=325							
SKAG	Skagway	86.77	20	P		P	08 29 44.4	+0.9
SKAG				IAmb		IAmb	08 29 45.9	
	comp=Z,9.3nm,0.8s							
SKAG	Skagway	86.77	20	P			08 29 45.1	
	baz=324							
DBIC	Dimbokro	87.48	276	P		P	08 29 47.3	-0.5
	comp=Z,3.0nm,0.7s,baz=38,slow=5.6,SNR=2.7							
DBIC	Dimbokro	87.48	276	IAmb		IAmb	08 29 50.8	
	comp=Z,18nm,1.4s							
BESE	Bessie Mountai	87.63	20	P		P	08 29 48.4	+0.5
BESE				IAmb		IAmb	08 29 50.1	
	comp=Z,12nm,1.0s							
JIS	Juneau Island	88.02	20	P		P	08 29 49.8	+0.2
JIS				IAmb		IAmb	08 29 52.0	
	comp=Z,8.8nm,0.9s							
YKA	Yellowknife Ar	88.64	9	P		P	08 29 52.0	-0.5
	comp=Z,2.5nm,0.8s,baz=338,slow=4.6,SNR=31							
MNTX	Cornudas Mount	119.98	11	P			08 35 50.3	
	baz=349							
JCT	Junction City	121.90	6	P			08 35 53.8	
	baz=354							
TXAR	Lajitas Array	122.57	10	PKP		PKPdf	08 35 55.1	-0.7
	comp=Z,0.8nm,0.6s,baz=19,slow=0.5,SNR=11							
TXAR	Lajitas Array	122.57	10			PKPdf	08 35 55.5	-0.4
SAML	Samuel	145.26	297			PKPbc	08 36 37.8	0.0
CPUP	Villa Florida	147.16	264	PKPbc		PKPdf	08 36 40.8	-0.2
	comp=Z,4.2nm,0.9s,baz=359,slow=1.1,SNR=9.0							
LPAZ	La Paz	153.31	290	PKPbc		PKPbc	08 36 58.0	-1.2

comp=Z,1.5nm,0.8s,baz=96,slow=6.6,SNR=5.3

DMN 25 08:18:50.7±0.3, 28°01'N×85°36'E, h10km, Ml4.8/3, Error ellipse: s-maj=4.9km s-min=1.8km az=48.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	Kakani	0.23	199	*e*Pg	Pg	08 18 55.5	-0.1
KKN				*e*Sg	Sg	08 18 59.0	+0.2
	13μm,0.2s						
PKI	Pulchoki	0.44	175	*e*Pg	Pg	08 18 59.6	+0.2
PKI				*e*Sg	Sg	08 19 06.0	+0.8
	8μm,0.5s						
DMN	Daman	0.46	210	*e*Pg	Pg	08 18 59.8	0.0
DMN				*e*Sg	Sg	08 19 06.8	+0.9
GKN	Gorkha	0.64	270	*e*Pg	Pg	08 19 03.2	0.0
GKN				*e*Sg	Sg	08 19 11.4	-0.3
	7μm,0.4s						
DANN	Dangsing	1.46	284	*e*Pg	Pg	08 19 18.6	-0.1
DANN				*e*Sg	Sb	08 19 37.0	+0.2
	930nm,0.2s						
KOLN	Koldanda	1.58	262	*e*Pg	Pb	08 19 20.3	+0.2
KOLN				*e*Sg	Sg	08 19 41.0	-0.6
	1μm,0.2s						
PYUN	Piuthan	2.10	273	*e*Sg	Sb	08 19 56.6	+1.3
	1μm,0.3s						

IDC ***25*** *08:20:09.0±0.6, 27°69'N×85°82'E, h0km, mb4.5/36, mb1 4.5/39, mb1mx4.4/67, mbtmp4.5/39, ML4.4/3, Error ellipse: s-maj=15.0km s-min=11.7km az=17.0*

DMN ***25*** *08:20:11.7±0.1, 27°83'N×85°83'E, h20km, Ml5.4/5, Error ellipse: s-maj=3.4km s-min=1.3km az=8.0*

NEIC ***25*** *08:20:11.2±1.5, 27°86'N±0°08×85°79'E±0°02, h10km±1km, mb4.7/76, Error ellipse: s-maj=13.9km s-min=3.1km az=173.0*

BJI ***25*** *08:20:13.0±0.0, 28°04'N×85°96'E, h17km, mB4.7/2, mb4.5/29*

ISC 25 08:20:12.4±0.7, 27°81'N±0°04×85°81'E±0°02, h17km±4km, n207,σ0°90/214, mb4.7/84, 9C-11D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	Gumba	0.12	31	*e*Pg	Pg	08 20 16.2	-0.3
GUN				*e*Sg	Sg	08 20 18.3	-1.0
PKI	Pulchoki	0.43	236	*e*Pg	Pg	08 20 21.3	0.0
PKI				*e*Sg	Sb	08 20 27.6	-0.4
KKN	Kakani	0.47	268	*e*Pg	Pg	08 20 22.1	+0.1
KKN				*e*Sg	Sg	08 20 28.6	+0.2
DMN	Daman	0.66	252	*e*Pg	Pg	08 20 25.6	+0.2
DMN				*e*Sg	Sb	08 20 33.6	-0.9
GKN	Gorkha	1.06	281	*e*Pg	Pb	08 20 32.1	-0.2
GKN				*e*Sg	Sg	08 20 47.0	+0.2
	4μm,0.3s						
ODAN	Odare	1.69	124	*e*Pg	Pb	08 20 43.7	+0.5
ODAN				*e*Sg	Sg	08 21 05.8	-1.2
	14μm,0.5s						
TAPN	Taplejung	1.75	105	*e*Pg	Pb	08 20 44.4	+0.3
TAPN				*e*Sg	Sg	08 21 07.8	-0.9
	6μm,0.6s						
DANN	Dangsing	1.89	287	*e*Pg	Pb	08 20 47.5	+0.9
KOLN	Koldanda	1.96	269	*e*Pg	Pb	08 20 48.4	+0.7
KOLN				*e*Sg	Sg	08 21 14.3	-1.3
	12μm,0.3s						
PYUN	Piuthan	2.51	277	*e*Pg	Pb	08 20 58.7	+1.5
LSA	Lhasa	5.05	67	Pn	Pn	08 21 27.6	-0.1
SHL	Shillong	5.87	111	Pn	Pn	08 21 38.5	-0.2
NIL	Nilore	12.27	301	Pn	Pn	08 23 05.0	-1.4
NIL	Nilore	12.27	301	P	Pn	08 23 05.3	-1.0
CHTO	Chiang Mai	15.01	124	Pn	Pn	08 23 44.2	+0.4
CM31	Chiang Mai Arr	15.24	125	Pn	Pn	08 23 47.3	+0.5
CM31				IAmb	IAmb	08 23 51.4	
	comp=Z,10nm,0.4s						
CMAR	Chiang Mai Arr	15.24	125	Pn	Pn	08 23 44.0	-2.8
	comp=Z,0.6nm,0.3s,baz=311,slow=14,SNR=1.8						
KMI	Kunming	15.39	96	⇑P	P	08 23 52.0	-1.6
KMI				pP	Pn	08 23 54.3	+5.2
KMI				sP	pP	08 23 57.0	-2.2
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PRZ	Przheval'sk	15.83	340	Pn	Pn	08 23 52.9	-1.7
PRZ				IAmb	IAmb	08 24 02.4	
	comp=Z,39nm,1.3s						
KDJ	Kajisay	15.93	336		Pn	08 23 54.2	-1.6
WMQ	Urumqi	16.05	5	*e*P	Pn	08 23 57.5	+0.2
WMQ				pP	P	08 24 00.8	+0.2
WMQ				PP	sP	08 24 09.5	+1.0
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
GTA	Gaotai	16.41	42	⇓P	P	08 24 05.0	+0.4
GTA				pP	pP	08 24 09.0	-1.1
GTA				sP	sP	08 24 11.5	-1.1
GTA				pmax	pmax		
	comp=Z,26nm,1.1s						
BOOM	Boomskoye usch	16.70	334	Pn	Pn	08 24 03.6	-2.1
LZH	Lanzhou	17.37	57	⇓P	Pn	08 24 12.8	-1.3
LZH				pP	P	08 24 15.3	-0.1
LZH				PP	PnPn	08 24 28.8	+4.5
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
AAK	Ala-Archa	17.42	331	P	P	08 24 15.8	-0.1
	comp=Z,0.5nm,0.3s,baz=74,slow=7.4,SNR=3.8						
AAK	Ala-Archa	17.42	331		Pn	08 24 13.8	-0.9
AAK	Ala-Archa	17.42	331	⇑P	P	08 24 19.0	+3.2
GYA	Guiyang	18.61	89	⇑P	Pn	08 24 30.3	+0.9
GYA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MK31	Makanchi Array	19.15	353	P	P	08 24 34.6	-0.2
MKAR	Makanchi Array	19.15	353	P	Pn	08 24 36.0	+0.3
	comp=Z,2.3nm,0.3s,baz=174,slow=12,SNR=14						
MKAR	Makanchi Array	19.15	353	P	P	08 24 34.8	0.0
MAKZ	Makanchi	19.20	352	P	P	08 24 35.2	-0.1
MAKZ				IAmb	IAmb	08 24 37.5	
	comp=Z,15nm,0.5s						
KK31	Karatay Array	19.65	325	P	P	08 24 39.9	-0.4
KKAR	Karatay Array	19.65	325	P	P	08 24 39.9	-0.4
XAN	Xi'an	20.75	67	P	P	08 24 51.8	-0.6
XAN				pP	Pn	08 24 55.0	+0.2
XAN				pmax	pmax		
	comp=Z,19nm,0.7s						
XAN	Xi'an	20.75	67	P	P	08 24 52.1	-0.2
KURBB	Kurchatov Arra	23.45	348	P	P	08 25 21.9	+1.2
	comp=Z,11nm,0.6s,baz=166,slow=10.0,SNR=19						
QIZ	Qiongzhong	23.69	106	P	P	08 25 25.0	+1.7
HHC	Hu-ho-hao-te	24.82	52	*e*P	P	08 25 34.5	+0.7
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
GEYT	Alibeck	25.27	301	P	P	08 25 38.8	+1.0
	comp=Z,4.0nm,0.5s,baz=96,slow=15,SNR=4.0						
GEYT	Alibeck	25.27	301	IAmb	IAmb	08 25 41.3	
	comp=Z,3.8nm,0.7s						
SONM	Songino Array	25.62	33	P	P	08 25 42.2	+1.2
	comp=Z,22nm,0.7s,baz=220,slow=9.7,SNR=19						
SONM	Songino Array	25.62	33	P	P	08 25 40.4	-0.6
SONM				IAmb	IAmb	08 25 45.1	
	comp=Z,17nm,0.8s						
ULN	Ulaanbaatar	25.97	34	P	P	08 25 44.5	+0.4
ZAA0	Zalesovo Array	26.12	359	P	P	08 25 45.8	+0.5
ZAA0				IAmb	IAmb	08 25 47.6	
	comp=Z,24nm,1.2s						
ZALV	Zalesovo Beam	26.12	359	P	P	08 25 46.3	+1.0
	comp=Z,11nm,0.6s,baz=185,slow=9.1,SNR=14						
ZALV	Zalesovo Beam	26.12	359	P	P	08 25 45.4	+0.1
KULM	Kulim	26.47	145	P	P	08 25 49.3	+0.5
KULM				IAmb	IAmb	08 25 58.8	
	comp=Z,8.5nm,0.8s						
BVAR	Borovoye Array	27.67	340	P	P	08 25 58.5	-0.7
	comp=Z,1.0nm,0.4s,baz=148,slow=8.5,SNR=4.9						
BRVK	Borovoye	27.73	340	P	P	08 25 59.4	-0.4
RPSI	Rantau Prapat	27.94	151	P	P	08 26 04.2	+2.3
RPSI				IAmb	IAmb	08 26 06.6	
	comp=Z,8.7nm,1.0s						
NJ2	Nanjing	28.88	73	*e*P	P	08 26 11.0	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ABKAR	Akbulak array	29.21	324	P	P	08 26 12.5	-0.5
ABKAR				IAmb	IAmb	08 26 14.9	
	comp=Z,8.4nm,0.6s						
SOCY	Socotra	33.57	249	P	P	08 26 50.6	-1.1
ARU	Arti	34.58	333	P	P	08 26 59.0	-1.0
INCN	Inchon	35.47	64	P	P	08 27 07.6	-0.3
INCN				IAmb	IAmb	08 27 09.6	
	comp=Z,10nm,0.7s						
KS19	Wonju Array Si	36.45	64	P		P	08 27 15.6	-0.7
KS19				IAmb		IAmb	08 27 23.5	
	comp=Z,21nm,1.8s							
KSAR	Wonju Array Be	36.46	64	P		P	08 27 16.2	-0.2
KSRS	Korea Array	36.49	64	P		P	08 27 15.1	-1.6
	comp=Z,2.6nm,0.6s,baz=261,slow=8.3,SNR=8.8							
BELG	Belogornoye	37.50	322	P		P	08 27 24.1	-0.9
	comp=Z,6.9nm,0.5s,baz=319,slow=2.6,SNR=4.4							
JNU	Nakatsue	38.98	71	P		P	08 27 37.4	-0.4
	comp=Z,4.6nm,0.5s,baz=259,slow=5.0,SNR=4.0							
KIRV	Kirov	39.75	331	P		P	08 27 44.1	+0.3
	comp=Z,28nm,0.6s,baz=150,slow=2.1,SNR=7.1							
USRK	Ussuriysk Ar.	40.22	53	P		P	08 27 47.5	-0.5
	comp=Z,1.9nm,0.7s,baz=256,slow=9.3,SNR=5.0							
KLR	Kul'dur	41.04	46	P		P	08 27 54.2	-0.4
	comp=Z,2.9nm,0.8s,baz=272,slow=8.9,SNR=5.4							
JMN	Monobe	41.43	70	P		P	08 27 58.3	+0.2
JMN				IAmb		IAmb	08 28 07.5	
	comp=Z,30nm,1.4s							
NRIK	Noril'sk	41.57	1	P		P	08 28 00.1	+1.3
	comp=Z,33nm,0.6s,baz=170,slow=5.3,SNR=36							
NRIK	Noril'sk	41.57	1	P		P	08 27 58.9	+0.1
GAZ	Gaziantep	41.66	296	P		P	08 28 00.0	0.0
GAZ				IAmb		IAmb	08 28 02.1	
	comp=Z,14nm,1.1s							
MMAI	Mount Meron Ar	43.45	290	P		P	08 28 15.5	+0.8
	comp=Z,2.0nm,0.5s,baz=69,slow=7.9,SNR=2.6							
BRTR	Keskin Array B	44.41	299	P		P	08 28 22.8	+0.4
	comp=Z,1.3nm,0.5s,baz=108,slow=9.4,SNR=3.3							
OBN	Obninsk	44.59	322	P		P	08 28 23.0	-0.4
JMM	Marumori	46.69	63	P		P	08 28 40.3	+0.1
JMM				IAmb		IAmb	08 28 41.7	
	comp=Z,9.1nm,0.8s							
ELL	Elmali	47.52	296	P		P	08 28 47.2	+0.3
ASAJ	Asahikawa	47.82	54	P		P	08 28 48.2	-0.7
	comp=Z,2.9nm,0.5s,baz=234,slow=19,SNR=1.6							
AKASG	Malin Array Be	48.06	314	P		P	08 28 50.2	-0.5
	comp=Z,2.4nm,0.6s,baz=82,slow=6.7,SNR=13							
AKBB	Malin Array Si	48.06	314	P		P	08 28 49.6	-1.1
AKBB				IAmb		IAmb	08 28 51.1	
	comp=Z,7.4nm,0.7s							
TPGR	Topolog	48.26	307	⇑P		P	08 28 53.0	+0.6
ERM	Erimo	48.27	57	P		P	08 28 52.2	-0.2
CFR	Carcaliu	48.47	307	⇑P		P	08 28 54.4	+0.4
HARR	Harsova	48.61	306	⇑P		P	08 28 56.0	+0.9
VRI	Vrincioaia	49.46	308	⇑P		P	08 29 02.2	+0.6
PLOR	Plostina	49.51	308	⇑P		P	08 29 02.8	+0.8
TIXI	Tiksi	49.82	16	P		P	08 29 03.9	0.0
	comp=Z,8.6nm,0.5s,baz=223,slow=4.3,SNR=13							
TIXI	Tiksi	49.82	16	P		P	08 29 03.4	-0.4
TIXI				IAmb		IAmb	08 29 04.8	
	comp=Z,10nm,0.7s							
BIZ	Bicaz	49.90	309	⇓P		P	08 29 05.8	+0.9
MLR	Muntele Rosu	50.01	307	⇓P		P	08 29 07.6	+1.7
MLR	Muntele Rosu	50.01	307	P		P	08 29 07.3	+1.4
IIGN	Ignalina	50.43	320	*e*P		P	08 29 09.4	+0.7
BURAR	Bucovina Array	50.51	310	⇓P		P	08 29 10.4	+0.8
BUR08	Bucovina Ar. S	50.52	310	P		P	08 29 09.5	-0.2
VOIR		50.64	307	⇓P		P	08 29 11.0	+0.4
ARR	Arges	50.94	307	⇓P		P	08 29 13.5	+0.7
FINES	FINESS Array B	51.57	328	P		P	08 29 17.4	+0.1
	comp=Z,5.6nm,0.6s,baz=103,slow=8.1,SNR=12							
FINES	FINESS Array B	51.57	328	P		P	08 29 16.8	-0.5
PABE	Paberze	51.72	320	*e*P		P	08 29 18.6	+0.1
PABE	Paberze	51.72	320	P		P	08 29 17.9	-0.6
IDI	Anoyia	51.75	294	P		P	08 29 18.7	-0.4
	comp=Z,4.9nm,0.6s,baz=35,slow=13,SNR=2.7							
SUW	Suwalki	52.05	318	P		P	08 29 20.1	-0.8
VTS	Vitosha	52.10	304	⇓P		P	08 29 22.9	+1.1
VTS	Vitosha	52.10	304	P		P	08 29 21.7	-0.1
VTS				IAmb		IAmb	08 29 23.4	
	comp=Z,7.2nm,0.8s							
MTSE	Matsula	52.20	324	*e*P		P	08 29 22.1	+0.1
DRGR		52.23	309	⇓P		P	08 29 23.7	+1.2
GZR	Gura Zlata	52.24	307	⇓P		P	08 29 22.8	+0.1
SOEI	Soe	52.73	130	P		P	08 29 28.8	+2.2
AGG	Agios Georgios	53.20	299	P		P	08 29 27.7	-2.0
AGG				IAmb		IAmb	08 29 29.4	
	comp=Z,5.9nm,0.8s							
KEV	Kevo	53.50	338	P		P	08 29 31.4	-0.1
MA2	Magadan	53.82	35	P		P	08 29 33.9	-0.1
ARA0	ARCESS Array S	53.93	338	*e*P		P	08 29 35.1	+0.5
ARCES	ARCESS Array B	53.93	338	P		P	08 29 35.0	+0.3
	comp=Z,16nm,0.6s,baz=106,slow=7.8,SNR=23							
ARCES	ARCESS Array B	53.93	338	P		P	08 29 33.8	-0.8
KTK1	Kautokeino	54.56	337	*e*P		P	08 29 39.6	+0.4
HAMF	Hammerfest	54.86	339	*e*P		P	08 29 42.2	+0.9
SEY	Seymchan	54.98	31	P		P	08 29 42.7	+0.4
	comp=Z,11nm,0.7s,baz=251,slow=4.4,SNR=18							
PDG	Podgorica	55.05	304	⇓P		P	08 29 42.8	-0.3
UPP	Uppsala	55.47	325	*e*P		P	08 29 46.0	+0.1
MORC	Moravsky Berou	55.53	313	P		P	08 29 45.7	-0.9
MORC				IAmb		IAmb	08 29 47.4	
	comp=Z,5.2nm,1.0s							
JETT	Jettan, Norway	55.66	337	*e*P		P	08 29 48.3	+1.1
KRLC	Kraliky	56.00	313	*e*P		P	08 29 50.3	+0.3
DPC	Dobruska-Polom	56.28	314	*e*P		P	08 29 52.6	+0.7
OSTC	Ostas	56.33	314	*e*P		P	08 29 52.4	+0.1
CONA	Conrad Observa	56.79	311	*e*P		P	08 29 55.7	0.0
	comp=Z,5.7nm,0.9s,SNR=6.2							
ARSA	Arzberg	57.09	310	*i* P		P	08 29 57.2	-0.5
	comp=Z,3.1nm,0.7s							
FAUS	Fauske	57.17	334	*e*P		P	08 29 57.4	-0.4
STEI	Steigen	57.25	335	*e*P		P	08 29 59.0	+0.6
MOR8	Moi Rana	57.38	333	*e*P		P	08 29 58.8	-0.7
PR

LATE IAmb IAmb 08 30 20.8
comp=Z,4.1nm,0.9s
AKN Aaknes 60.63 328 *eP* **P** **08 30 21.8 -0.2**
SALO Salr 60.76 309 P **P** **08 30 23.0 -0.2**
DAVA Damuels 60.89 311 *eP* **P** **08 30 23.5 -0.7**
comp=Z,8.9nm,0.7s,SNR=5.6
DAVOX Davos/Dischmat 60.98 310 P **P** **08 30 24.2 -0.7**
comp=Z,3.4nm,0.8s,baz=124,slow=5.7,SNR=5.2
TUE Stuetta 61.40 310 P **P** **08 30 27.1 -0.7**
TUE IAmb IAmb 08 30 28.9
comp=Z,4.3nm,0.7s
SENIN Lac Senin/Sane 62.81 310 P **P** **08 30 36.3 -0.9**
SENIN IAmb IAmb 08 30 39.8
comp=Z,7.5nm,0.8s
KEST Kesra 63.99 298 P **P** **08 30 45.4 +0.3**
comp=Z,9.9nm,0.8s,baz=313,slow=6.5,SNR=6.7
KEST Kesra 63.99 298 P **P** **08 30 44.1 -1.0**
NOR Nord 64.48 351 *iP* **P** **08 30 47.6 +0.1**
NOR IAmb IAmb 08 30 49.4
comp=Z,2.4nm,0.6s
DAG Danmarks Havn 66.38 346 *iP* **P** **08 31 00.2 +0.4**
DAG IAmb IAmb 08 31 01.3
comp=Z,5.3nm,0.8s
WB0 Warramunga Arr 66.68 130 P **P** **08 31 02.3 -0.2**
WRA Warramunga Arr 66.76 130 P **P** **08 31 02.6 -0.4**
comp=Z,5.6nm,0.6s,baz=324,slow=6.6,SNR=13
WRA Warramunga Arr 66.76 130 P **P** **08 31 02.9 -0.1**
WB2 Warramunga Arr 66.77 130 P **P** **08 31 03.1 0.0**
WB2 IAmb IAmb 08 31 03.6
comp=Z,7.1nm,0.7s
WR0 Warramunga Arr 66.91 130 P **P** **08 31 03.8 -0.2**
WR0 IAmb IAmb 08 31 11.9
comp=Z,5.5nm,0.9s
DBG Daneborg 67.67 344 *iP* **P** **08 31 08.4 +0.4**
DBG IAmb IAmb 08 31 10.0
comp=Z,3.4nm,0.8s
AS31 Alice Springs 69.07 133 P **P** **08 31 17.1 -0.4**
ASAR Alice Springs 69.07 133 P **P** **08 31 16.9 -0.6**
comp=Z,2.7nm,0.6s,baz=316,slow=6.2,SNR=9.3
ASAR Alice Springs 69.07 133 P **P** **08 31 17.5 0.0**
NEEM North Greenlan 71.86 351 *iP* **P** **08 31 34.5 +0.3**
NEEM IAmb IAmb 08 31 35.3
comp=Z,7.6nm,0.7s
EUNU Eureka 72.28 359 P **P** **08 31 36.8 +0.5**
EUNU IAmb IAmb 08 31 38.0
comp=Z,4.3nm,0.8s
ESDC Sonseca Array 72.67 306 P **P** **08 31 39.1 -0.3**
comp=Z,1.1nm,0.7s,baz=58,slow=6.5,SNR=5.4
ANM Nome 72.83 25 P **P** **08 31 40.4 +0.6**
ANM Nome 72.83 25 P 08 31 41.2
baz=299
SUMG Summit 73.01 345 *iP* **P** **08 31 42.5 +1.3**
SUMG IAmb IAmb 08 31 43.3
comp=Z,5.8nm,0.9s
SUMG Summit 73.01 345 P **P** **08 31 41.4 +0.2**
SUMG IAmb IAmb 08 31 43.3
comp=Z,14nm,1.2s
MATP Matopo 73.28 236 P **P** **08 31 42.2 -1.0**
comp=Z,1.9nm,0.8s,baz=14,slow=4.1,SNR=2.5
CTAO Charters Tower 75.39 122 P **P** **08 31 55.0 -0.3**
ICESG Greenland Ices 75.60 342 *iP* **P** **08 31 57.0 +0.7**
TOLK Toolik Lake Re 75.67 18 P **P** **08 31 56.8 +0.5**
TOLK IAmb IAmb 08 31 57.9
comp=Z,5.6nm,0.8s
TOLK Toolik Lake Re 75.67 18 P 08 31 57.2
baz=311
COLD Coldfoot 76.43 19 P 08 32 02.1
baz=311
MLY Manley 77.70 21 P **P** **08 32 08.4 +0.5**
MLY Manley 77.70 21 P 08 32 08.7
baz=311
RES Resolute Bay 77.76 0 P **P** **08 32 07.9 0.0**
comp=Z,1.1nm,1.0s,baz=328,slow=4.3,SNR=2.3
RES Resolute Bay 77.76 0 IAmb IAmb 08 32 11.1
comp=Z,7.6nm,1.8s
BMAR Burnt Mountain 77.87 18 P **P** **08 32 09.7 +0.9**
CHUM Lake Minchumin 77.93 23 P 08 32 10.5
baz=310
I23K Minto, Yukon-K 78.06 21 P **P** **08 32 10.9 +1.1**
I23K IAmb IAmb 08 32 11.6
comp=Z,16nm,1.7s
I23K Minto, Yukon-K 78.06 21 P 08 32 11.0
baz=312
LBTB Lobatse 78.23 234 P **P** **08 32 10.7 -0.8**
comp=Z,1.7nm,0.5s,baz=38,slow=7.9,SNR=3.1
LBTB Lobatse 78.23 234 IAmb IAmb 08 32 16.7
comp=Z,4.4nm,0.9s
BPAW Bear Paw Mtn. 78.23 22 P 08 32 11.5
baz=311
NEA2 Nenana 78.53 21 P 08 32 13.0
baz=312
PPLA Purkeypile 78.61 23 P **P** **08 32 14.2 +1.1**
PPLA IAmb IAmb 08 32 22.9
comp=Z,24nm,1.6s
TORD Torodi Ar. Bea 78.85 279 P **P** **08 32 14.1 -1.0**
comp=Z,1.3nm,0.7s,baz=39,slow=4.7,SNR=3.7
TORD Torodi Ar. Bea 78.85 279 IAmb IAmb 08 32 14.4
comp=Z,1.7nm,0.8s
PRP Porcupine Dome 78.97 19 P 08 32 16.4
baz=315
IL31 79.09 20 P **P** **08 32 14.8 -0.6**
ILAR Eielson Array 79.09 20 P **P** **08 32 15.0 -0.5**
comp=Z,2.3nm,0.8s,baz=310,slow=5.0,SNR=11
MCK McKinley 79.16 22 P 08 32 15.7
baz=313
SKT Skwentna 79.43 24 P **P** **08 32 16.5 -0.9**
SKT IAmb IAmb 08 32 18.6
comp=Z,9.7nm,0.7s
SKT Skwentna 79.44 24 P 08 32 17.8
baz=311,SNR=9.4
WAT2 Susitna Watana 79.80 22 P 08 32 19.1
baz=313
INK Inuvik 79.86 14 P **P** **08 32 19.2 -0.4**
comp=Z,3.1nm,0.8s,baz=356,slow=6.2,SNR=5.9
INK Inuvik 79.86 14 P 08 32 20.4
baz=325
SUA Susitna One 80.06 24 P 08 32 21.3
baz=311
WAT6 Susitna Watana 80.34 22 P 08 32 23.0
baz=314
SCRK Sand Creek 80.54 20 P **P** **08 32 24.2 +0.6**
SCRK IAmb IAmb 08 32 24.8
comp=Z,5.8nm,0.7s
SCRK Sand Creek 80.55 20 P 08 32 23.9
baz=317
PMR Palmer 80.55 23 P 08 32 24.0
baz=313
SML Sawmill 80.68 23 P **P** **08 32 24.7 +0.5**
SML Sawmill 80.68 23 P 08 32 25.1
baz=313,SNR=5.9
EPYK Eagle Plains 80.70 16 P 08 32 24.2
baz=323
C36M Paulatuk 80.71 10 P 08 32 24.4
baz=334
DOT Dot Lake 80.76 20 P **P** **08 32 24.0 -0.5**
DOT IAmb IAmb 08 32 25.4
comp=Z,3.6nm,0.8s
EGAK Eagle 80.78 19 P 08 32 25.2
baz=319
KNK Knik Glacier 80.90 23 P 08 32 26.0
baz=313
K27K Chicken 81.08 19 P 08 32 27.3
baz=318
HARP HAARP 81.32 21 P 08 32 28.7
baz=316
KLU Klutina 81.72 22 P 08 32 31.2
baz=315,SNR=6.3
KDAK Kodiak Island 81.77 27 P 08 32 30.4
baz=310
L27K Beaver Creek, 81.88 20 P 08 32 31.6
baz=319
N25K Chitina, Valde 82.08 22 P 08 32 33.1
baz=316
BMRM Bremner River 82.54 22 P 08 32 34.9
baz=317
MCARA McCarthy VSAT 82.76 21 P 08 32 36.7
baz=318
CRQM Cirque 83.19 22 P **P** **08 32 37.9 +0.4**
CRQM IAmb IAmb 08 32 39.3
comp=Z,7.4nm,0.7s
CRQE Cirque 83.20 22 P 08 32 38.5
baz=318
TGL Tana Glacier 83.29 22 P **P** **08 32 39.3 +1.3**
SKAG Skagway 86.66 20 P 08 32 56.5
baz=324
YKA Yellowknife Ar 88.53 9 P **P** **08 33 03.1 -0.6**
comp=Z,1.4nm,0.9s,baz=342,slow=4.6,SNR=7.3

TXAR Lajitas Array 122.46 10 PKP **PKPdf** **08 39 06.6 -0.7**
comp=Z,0.4nm,0.6s,baz=141,slow=0.2,SNR=7.1
SAML Samuel 145.27 297 **PKPbc** 08 39 49.3 -0.3

*IDC **25** 08:20:46.7±0.4,27.64N×85.16E,h0km,mb4.7/52, mb1 4.8/55,mb1mx4.7/67,mbtmp4.7/55,ML4.3/2,Error ellipse: s-maj=11.1km s-min=8.6km az=142.0*
*NDI **25** 08:20:46.0±3.4,26.64N×84.61E,h10km,ML4.7, mb4.9(NEIC)*
*DMN **25** 08:20:47.3±0.1,27.80N×85.22E,h25km,Ml5.8/5,Error ellipse: s-maj=5.9km s-min=1.5km az=22.0*
*NEIC **25** 08:20:48.8±1.6,27.64N±0.08×85.16E±0.06,h10km±1km, mb4.9/96,Error ellipse: s-maj=13.2km s-min=9.1km az=185.0*
ISC 25 08:20:49.5±0.7,**27.70N**±0.04×**85.13E**±0.03,**h15**km±4km, **n250,σ162/250,mb4.9**/99,**1C-2D,Nepal**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
DMN	**Daman**	**0.09**	**192**	*eP*	g	**Pb**	**08 20 52.6**	**-0.4**
KKN	**Kakani**	**0.16**	**56**	*eP*	g	**Pg**	**08 20 52.3**	**-1.5**
KKN				*eSg*		**Sg**	**08 20 54.7**	**-2.0**
PKI	**Pulchoki**	**0.28**	**117**	*eP*	g	**Pg**	**08 20 54.5**	**-1.2**
PKI				*eSg*		**Sg**	**08 20 59.5**	**-0.4**
	147μm,0.6s							
GKN	**Gorkha**	**0.53**	**305**	*eP*	g	**Pg**	**08 20 58.5**	**-1.6**
GKN				*eSg*		**Sg**	**08 21 06.5**	**-0.7**
KOLN	**Koldanda**	**1.35**	**273**	*eP*	g	**Pb**	**08 21 15.0**	**+0.3**
KOLN				*eSg*		**Sg**	**08 21 33.7**	**+0.4**
	11μm,0.3s							
DANN	**Dangsing**	**1.37**	**299**	*eP*	g	**Pn**	**08 21 12.9**	**-1.5**
DANN				*eSg*		**Sb**	**08 21 33.1**	**+0.6**
	29μm,0.4s							
PYUN	**Piuthan**	**1.93**	**282**	*eP*	g	**Pb**	**08 21 24.6**	**0.0**
PYUN				*eSg*		**Sg**	**08 21 50.9**	**-0.9**
	35μm,0.6s							
ODAN	**Odare**	**2.18**	**112**	*eSg*		**Sb**	**08 21 55.6**	**-0.1**
	22μm,0.6s							
TAPN	**Taplejung**	**2.32**	**98**	*eSg*		**Sb**	**08 21 59.2**	**-0.6**
	20μm,0.8s							
GTK	**Tadong**	**3.11**	**96**	*eS*		**Sb**	**08 22 24.4**	**+2.0**
GTK				IAML			08 22 27.5	
	comp=N,3μm,0.7s							
LSA	**Lhasa**	**5.65**	**68**	Pn		**Pn**	**08 22 13.5**	**+0.1**
GUWA	**GUWAHATI**	**6.05**	**103**	*eP*		**Pn**	**08 22 19.2**	**+0.8**
GUWA				*eS*		**Sn**	**08 23 25.7**	**-1.7**
GUWA				IAML			08 23 28.9	
	comp=E,499nm,0.6s							
GUWA				IAML			08 23 29.6	
	comp=N,397nm,0.7s							
SHL	**Shillong**	**6.41**	**108**	*eP*		**Pn**	**08 22 24.7**	**+1.2**
SHL	**Shillong**	**6.41**	**108**	Pn		**Pn**	**08 22 23.1**	**-0.4**
DDI	**Dehra Dun**	**6.72**	**295**	IAML			08 23 22.6	
	comp=N,3μm,0.4s							
DDI				IAML			08 23 23.5	
	comp=E,1μm,0.3s							
SMLA	**Simla**	**7.74**	**298**	*eP*		**Pn**	**08 22 43.1**	**+1.5**
SMLA				IAML			08 23 43.1	
	comp=E,447nm,0.3s							
BHPL	**Bhopal**	**8.25**	**239**	*eS*		Sn	08 23 50.4	-31
BHPL				IAML			08 23 54.1	
	comp=N,458nm,0.3s							
DHRM	**DHARAMSHALA**	**8.90**	**303**	*eS*		**Sn**	**08 24 31.8**	**-6.0**
DHRM				IAML			08 24 36.8	
	comp=E,958nm,1.0s							
DHRM				IAML			08 24 37.4	
	comp=N,690nm,1.0s							
NIL	**Nilore**	**11.81**	**303**	Pn		**Pn**	**08 23 37.3**	**-0.2**
KBL	**Kabul**	**15.36**	**300**	Pn		**Pn**	**08 24 25.6**	**-0.3**
KBL				IAmb		IAmb	08 24 37.6	
	comp=Z,42nm,0.8s							
CHTO	**Chiang Mai**	**15.46**	**122**	Pn		**Pn**	**08 24 26.7**	**-0.4**
CM33	**Chiang Mai Arr**	**15.46**	**122**	P		**P**	**08 24 35.0**	**+3.4**
CMMT	**Chiang Mai**	**15.47**	**122**	P		**P**	**08 24 34.7**	**+3.1**
CM32	**Chiang Mai Arr**	**15.49**	**123**	P		**P**	**08 24 36.0**	**+4.1**
CM34	**Chiang Mai Arr**	**15.60**	**121**	P		**P**	**08 24 33.0**	**-0.1**
CM15	**Chiang Mai Arr**	**15.67**	**123**	P		**P**	**08 24 37.0**	**+3.1**
CM13	**Chiang Mai Arr**	**15.68**	**123**	P		**P**	**08 24 39.0**	**+5.0**
CM31	**Chiang Mai Arr**	**15.68**	**123**	P		**P**	**08 24 37.0**	**+3.0**
CMAR	**Chiang Mai Arr**	**15.68**	**123**	Pn		**Pn**	**08 24 29.1**	**-0.9**
	baz=312,slow=11,SNR=1.6							
CM02	**Chiang Mai Arr**	**15.70**	**123**	P		**P**	**08 24 38.1**	**+4.0**
CM35	**Chiang Mai Arr**	**15.70**	**122**	P		**P**	**08 24 34.0**	**-0.3**
CM01	**Chiang Mai Arr**	**15.71**	**123**	P		**P**	**08 24 38.8**	**+4.4**
CM05	**Chiang Mai Arr**	**15.72**	**123**	P		**P**	**08 24 38.0**	**+3.6**
CM09	**Chiang Mai Arr**	**15.72**	**123**	P		**P**	**08 24 36.0**	**+1.5**
PRZ	**Przheval'sk**	**15.73**	**341**	Pn		**Pn**	**08 24 30.3**	**-0.5**
CM04	**Chiang Mai Arr**	**15.74**	**123**	P		**P**	**08 24 36.2**	**+1.6**
KMI	**Kunming**	**15.99**	**95**			**Pn**	**08 24 32.1**	**-2.1**
KMI				IAmb		IAmb	08 24 43.8	
	comp=Z,57nm,0.9s							
WMQ	**Urumqi**	**16.22**	**7**			**Pn**	**08 24 37.1**	**+0.2**
WMQ				IAmb		IAmb	08 24 46.0	
	comp=Z,68nm,1.0s							
CD2	**Chengdu**	**16.56**	**74**	P		**Pn**	**08 24 38.5**	**-2.8**
CD2				pmax		pmax		
	comp=Z,60nm,0.8s							
SUKH	**Sukhothai**	**16.80**	**124**	P		**P**	**08 24 52.1**	**+5.7**
GTA	**Gaotai**	**16.89**	**43**	*eP*		**P**	**08 24 47.3**	**-0.2**
GTA				pP		sP	08 24 54.5	+0.2
GTA				sP		pP	08 24 58.0	+5.9
GTA				pmax		pmax		
	comp=Z,100nm,1.2s							
AAK	**Ala-Archa**	**17.23**	**333**	P		**Pn**	**08 24 49.5**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=151,slow=13,SNR=2.1							
UTTA	**Uttaradit**	**17.32**	**122**	P		**P**	**08 24 56.7**	**+4.5**
PBA	**Port Blair**	**17.49**	**154**	P		Pn	08 24 52.1	-0.8
PBA				IAmb		IAmb	08 25 10.1	
	comp=Z,100nm,0.9s							
PHIT	**Phitsanulok**	**17.56**	**123**	P		**P**	**08 25 00.7**	**+5.8**
LZH	**Lanzhou**	**17.94**	**58**	⇓P		**Pn**	**08 24 57.3**	**-1.3**
LZH				pP		pP	08 25 03.0	-0.8
LZH				sP		sP	08 25 06.0	+0.1
LZH				PP		**PnPn**	**08 25 13.3**	**+3.8**
LZH				pmax		pmax		
	comp=Z,21nm,1.0s							
SLVN	**Son La**	**18.21**	**106**	P		**Pn**	**08 25 01.2**	**-0.8**
NONG	**Nongkai**	**19.15**	**116**	P		**Pn**	**08 25 19.3**	**+6.0**
	comp=Z,0.3nmcomp=Z,48nm,0.9s							
MK31	**Makanchi Array**	**19.19**	**354**	P		**Pn**	**08 25 13.2**	**-0.3**
MKAR	**Makanchi Array**	**19.19**	**354**	P		**P**	**08 25 12.8**	**+0.2**
	comp=Z,2.6nm,0.3s,baz=172,slow=11,SNR=11							
MKAR	**Makanchi Array**	**19.19**	**354**	P		**Pn**	**08 25 13.2**	**-0.3**
GYA	**Guiyang**	**19.22**	**89**	⇑P		**Pn**	**08 25 14.5**	**+0.3**
GYA				S		**Sn**	**08 28 46.8**	**-2.6**
GYA				pmax		pmax		
	comp=Z,23nm,0.8s							
MAKZ	**Makanchi**	**19.24**	**353**	P		**P**	**08 25 13.5**	**+0.3**
CHAI	**Chaiyaphum**	**19.54**	**123**	P		Pn	08 25 25.9	+7.9
	comp=Z,0.2nmcomp=Z,416nmcomp=Z,52nm,0.8s							
HRA	**Herat**	**20.69**	**294**	P		**P**	**08 25 29.0**	**-0.2**
PALK	**Pallekele**	**20.74**	**192**	P		**P**	**08 25 28.9**	**-0.9**
	comp=Z,5.4nm,0.4s,baz=342,slow=20,SNR=2.6							
PALK				S		**S**	**08 29 14.9**	**-6.2**
	comp=Z,21nm,0.6s,baz=82,slow=7.1,SNR=4.2							
SRAK	**Srakaew**	**20.83**	**127**	P		Pn	08 25 39.0	+5.9
XAN	**Xi'an**	**21.36**	**67**	P		**P**	**08 25 35.5**	**-0.8**
XAN				pP		pP	08 25 38.5	-2.6
XAN				pmax		pmax		
	comp=Z,59nm,1.0s							
XAN				LR		LR		
	comp=N,5μm,19.5s							
XAN				LR		LR		
	comp=E,8μm,22.8s							
XAN				LR		LR		
	comp=Z,9μm,16.3s							
XAN	**Xi'an**	**21.36**	**67**	P		**P**	**08 25 36.0**	**-0.2**
XAN				IAmb		IAmb	08 25 45.3	
	comp=Z,49nm,0.9s							
ENH	**Enshi**	**21.45**	**77**	P		**P**	**08 25 37.9**	**+0.5**
KURBB	**Kurchatov Arra**	**23.44**	**349**	P		**P**	**08 25 58.0**	**0.0**
	comp=Z,24nm,0.9s,baz=173,slow=9.6,SNR=13							
KURBB				ScP		**ScP**	**08 33 18.0**	**-3.6**
	comp=Z,2.7nm,1.0s,baz=179,slow=1.8,SNR=5.9							
KURK	**Kurchatov**	**23.51**	**350**	P		**P**	**08 25 58.0**	**-0.8**
WBK	**Wadi Bani Khal**	**24.19**	**264**	P		**P**	**08 26 06.9**	**+1.3**
WSAR	**Wadi Sarin**	**24.31**	**265**	P		**P**	**08 26 06.8**	**+0.2**
	comp=Z,17nm,0.7s,baz=111,slow=7.7,SNR=10							
WSAR	**Wadi Sarin**	**24.31**	**265**	P		**P**	**08 26 08.0**	**+1.4**
BIDO	**Bidbid**	**24.68**	**266**	P		**P**	**08 26 11.9**	**+2.0**
	SNR=5.4							
GEYT	**Alibeck**	**24.81**	**301**	P		**P**	**08 26 11.2**	**+0.1**
	comp=Z,7.9nm,0.9s,baz=127,slow=12,SNR=4.2							
GEYT	**Alibeck**	**24.81**	**301**	P		**P**	**08 26 11.6**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**24.81**	**301**	P		**P**	**08 26 11.0**	**0.0**
GYA0B				IAmb		IAmb	08 26 26.6	
	comp=Z,19nm,0.8s							
SMDO	**Samad**	**24.87**	**265**	P		**P**	**08 26 13.6**	**+1.8**
	SNR=9.9							
JMDO	**Jabal Madar**	**25.03**	**264**	P		**P**	**08 26 15.0**	**+1.9**
HOQ	**Hoqain**	**25.39**	**267**	P		**P**	**08 26 17.9**	**+1.6**
MHTO	**MHTO**	**25.60**	**261**	P		**P**	**08 26 19.6**	**+1.3**
WHN	**Wuhan**	**25.66**	**77**	⇓P		**P**	**08 26 18.5**	**-0.2**
BSY	**Bisya**	**25.71**	**265**	P		**P**	**08 26 21.3**	**+1.9**
BANOM	**Banah**	**25.77**	**273**	P		**P**	**08 26 19.3**	**-0.6**
MDH	**Madha**	**25.89**	**271**	P		**P**	**08 26 21.5**	**+0.6**
SOHO	**SOHO**	**25.94**	**269**	P		**P**	**08 26 22.1**	**+0.7**
MASF	**Masafi**	**26.00**	**272**	P		**P**	**08 26 24.8**	**+2.9**
UOSS	**Minazif**	**26.04**	**271**	P		**P**	**08 26 22.9**	**+0.6**
UOSS	**Minazif**	**26.04**	**271**	P		**P**	**08 26 24.6**	**+2.2**
SONM	**Songino Array**	**26.05**	**34**	P		**P**	**08 26 22.5**	**+0.2**
	comp=Z,81nm,0.9s,baz=222,slow=9.4,SNR=24							
SONM				ScP		**ScP**	**08 33 25.9**	**-3.2**
	comp=Z,1.8nm,0.8s,baz=224,slow=2.6,SNR=5.3							
SONM	**Songino Array**	**26.05**	**34**	P		**P**	**08 26 23.5**	**+1.2**
HATD	**Hatta, Dubai**	**26.13**	**270**	P		**P**	**08 26 26.0**	**+2.9**
ARQ	**Araqi**	**26.15**	**267**	P		**P**	**08 26 25.3**	**+2.0**
ZAA0	**Zalesovo Array**	**26.23**	**360**	P		**P**	**08 26 23.6**	**0.0**
ZAA0				IAmb		IAmb	08 26 24.9	
	comp=Z,33nm,0.9s							
ZALV	**Zalesovo Beam**	**26.23**	**360**	P		**P**	**08 26 24.0**	**+0.3**
	comp=Z,35nm,0.9s,baz=184,slow=10.0,SNR=13							
DQM	**DQM**	**26.36**	**259**	P		**P**	**08 26 26.9**	**+1.8**
ULN	**Ulaanbaatar**	**26.40**	**34**	P		**P**	**08 26 26.4**	**+0.9**
ASUD	**Al Ashush, Dub**	**26.89**	**270**	P		**P**	**08 26 30.4**	**+0.5**
UMZA	**Um Al Zommool**	**27.52**	**266**	P		**P**	**08 26 36.7**	**+1.0**
BVAR	**Borovoye Array**	**27.57**	**341**	P		**P**	**08 26 37.1**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=166,slow=13,SNR=1.3							
IPM	**Ipoh**	**27.62**	**144**	P		**P**	**08 26 35.3**	**-1.2**
TLY	**Talaya**	**27.71**	**25**	P		**P**	**08 26 38.1**	**+1.0**
	comp=Z,1.9nm,0.4s,baz=246,slow=12,SNR=4.6							
TLY	**Talaya**	**27.71**	**25**	IAmb		IAmb	08 26 45.7	
	comp=Z,12nm,1.3s							
RPSI	**Rantau Prapat**	**28.14**	**150**	P		**P**	**08 26 40.5**	**-0.7**
BJT	**Baijiatuau**	**28.41**	**56**	P		**P**	**08 26 44.1**	**+0.7**
ABKAR	**Akbulak array**	**28.95**	**325**	P		**P**	**08 26 48.8**	**+0.6**
ABKAR	**Akbulak array**	**28.95**	**325**	P		**P**	**08 26 49.0**	**+0.9**
ABKAR				IAmb		IAmb	08 26 54.3	
	comp=Z,8.7nm,1.0s							
DMTO	**DMTO**	**29.49**	**257**	P		**P**	**08 26 55.0**	**+1.8**
DOK	**Doka**	**29.83**	**259**	P		**P**	**08 26 57.2**	**+1.0**
	SNR=11							
RBK	**Rabkut**	**30.22**	**257**	P		**P**	**08 27 01.1**	**+1.3**
WHFO	**Wadi Hawf**	**30.42**	**258**	P		**P**	**08 27 02.5**	**+0.9**
	SNR=17							
ABTO	**Aybut**	**31.07**	**257**	P		**P**	**08 27 07.8**	**+0.6**
	SNR=8.2							
BKNI	**Bangkinang**	**31.21**	**148**	P		**P**	**08 27 08.1**	**-0.3**
SSE	**Sheshan**	**31.51**	**75**	P		**P**	**08 27 11.5**	**+0.5**
SSE				pmax		pmax		
	comp=Z,21nm,0.6s							
DL2	**Dalian**	**32.29**	**60**	P		**P**	**08 27 18.3**	**+0.6**
DL2				pmax		pmax		
	comp=Z,53nm,0.9s							
UMR	**Umm Al-Rimmam**	**32.80**	**282**	*eP*			08 27 21.9	
SOCY	**Socotra**	**32.96**	**248**	P		**P**	**08 27 22.0**	**-2.0**
SOCY				IAmb		IAmb	08 27 24.0	
	comp=Z,20nm,0.8s							
RST	**Umm Al-Ruwaisa**	**33.43**	**282**	*eP*			08 27 27.2	
HIA	**Hailar**	**34.17**	**41**	P		**P**	**08 27 34.4**	**+0.3**
HIA				IAmb		IAmb	08 27 40.5	
	comp=Z,10nm,0.9s							
CN2	**Changchun**	**36.06**	**53**	*eP*		**P**	**08 27 50.3**	**-0.1**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
KSAR	**Wonju Array Be**	**37.05**	**64**	P		**P**	**08 27 57.9**	**-1.0**
KSRS	**Korea Array**	**37.08**	**64**	P		**P**	**08 27 57.5**	**-1.6**
	comp=Z,3.0nm,0.8s,baz=266,slow=8.6,SNR=8.6							
KSRS				ScP		**ScP**	**08 34 02.5**	**-3.6**
	comp=Z,1.0nm,0.7s,baz=296,slow=3.9,SNR=4.8							
USRK	**Ussuriysk Ar.**	**40.77**	**53**	P		**P**	**08 28 29.9**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=258,slow=9.9,SNR=6.7							
USRK	**Ussuriysk Ar.**	**40.77**	**53**	P		**P**	**08 28 30.1**	**+0.1**
GAZ	**Gaziantep**	**41.16**	**296**	P		**P**	**08 28 34.2**	**+0.8**
KLR	**Kul'dur**	**41.55**	**46**	P		**P**	**08 28 36.2**	**-0.2**
	comp=Z,9.7nm,0.9s,baz=267,slow=9.3,SNR=10							
NRIK	**Noril'sk**	**41.70**	**1**	P		**P**	**08 28 37.5**	**+0.3**
	comp=Z,44nm,0.8s,baz=168,slow=5.5,SNR=14							
NRIK	**Noril'sk**	**41.70**	**1**	IAmb		IAmb	08 28 39.0	
	comp=Z,49nm,0.9s							
ATD	**Arta Tunnel**	**42.71**	**256**	P		**P**	**08 28 46.7**	**+0.5**
	comp=Z,21nm,0.6s,baz=23,slow=4.7,SNR=13							
MMAI	**Mount Meron Ar**	**42.92**	**290**	P		**P**	**08 28 49.4**	**+1.6**
	comp=Z,2.5nm,0.7s,baz=64,slow=11,SNR=1.9							
EIL	**Elat**	**43.78**	**285**	P		**P**	**08 28 55.7**	**+0.9**
	comp=Z,15nm,0.9s,baz=110,slow=22,SNR=6.5							
BRTR	**Keskin Array B**	**43.93**	**300**	P		**P**	**08 28 56.3**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=127,slow=8.8,SNR=5.4							
OBN	**Obninsk**	**44.31**	**322**	P		**P**	**08 28 59.9**	**+1.4**
CSS	**Mathiatis**	**44.42**	**293**	P		**P**	**08 28 60.0**	**+0.1**
MRSI	**Marisa**	**44.47**	**121**	P		**P**	**08 29 01.7**	**+1.4**
	comp=Z,23nm,0.8s							
YAK	**Yakutsk**	**45.12**	**28**	P		**P**	**08 29 04.1**	**-0.8**
	comp=Z,22nm,0.7s,baz=160,slow=0.8,SNR=6.4							
MJAR	**Matsushiro Arr**	**45.33**	**65**	P		**P**	**08 29 06.6**	**-0.5**
	comp=Z,4.2nm,0.9s,baz=277,slow=9.8,SNR=7.4							
MJAR	**Matsushiro Arr**	**45.33**	**65**	IAmb		IAmb	08 29 15.3	
	comp=Z,2.5nm,1.0s							
AKASG	**Malin Array Be**	**47.70**	**315**	P		**P**	**08 29 25.0**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=78,slow=6.3,SNR=4.0							
AKBB	**Malin Array Si**	**47.70**	**315**	P		**P**	**08 29 26.1**	**+0.7**
AKBB				IAmb		IAmb	08 29 39.9	
	comp=Z,10nm,0.8s							
MLR	**Muntele Rosu**	**49.59**	**308**	P		**P**	**08 29 39.9**	**-0.4**
MLR				IAmb		IAmb	08 29 50.4	
	comp=Z,20nm,0.9s							
TIXI	**Tiksi**	**50.10**	**17**	P		**P**	**08 29 43.2**	**-0.2**
	comp=Z,18nm,0.8s,baz=249,slow=4.2,SNR=14							
TIXI	**Tiksi**	**50.10**	**17**	P		**P**	**08 29 43.2**	**-0.2**
JCJ	**Chichijima**	**50.26**	**77**	P		**P**	**08 29 44.0**	**-1.3**
	comp=Z,15nm,0.3s,baz=285,slow=18							
IDI	**Anoyia**	**51.24**	**294**	P		**P**	**08 29 52.6**	**-0.2**
	comp=Z,6.9nm,0.6s,baz=42,slow=10,SNR=2.7							
IDI	**Anoyia**	**51.24**	**294**	IAmb		IAmb	08 29 54.9	
	comp=Z,12nm,1.0s							
FIA1	**FINESS Array S**	**51.34**	**328**	P		**P**	**08 29 55

KNRA IAmb IAmb 08 31 04.5
comp=Z,12nm,0.8s
KEST Kesra 63.51 298 P **P** **08 31 19.8 +0.4**
comp=Z,14nm,0.8s,baz=200,slow=2.1,SNR=5.8
KEST Kesra 63.51 298 P **P** **08 31 19.8 +0.4**
WB0 Warramunga Arr 67.08 129 P **P** **08 31 43.0 +0.5**
WRA Warramunga Arr 67.16 129 P **P** **08 31 43.2 +0.2**
comp=Z,21nm,0.8s,baz=322,slow=6.6,SNR=20
WRA Warramunga Arr 67.16 129 P **P** **08 31 43.8 +0.7**
WR0 Warramunga Arr 67.31 129 P **P** **08 31 44.5 +0.5**
NWAO Narrogin (SRO) 67.57 151 P **P** **08 31 44.5 -0.8**
NWAO Narrogin (SRO) 67.57 151 P **P** **08 31 44.4 -1.0**
NWAO IAmb IAmb 08 31 45.3
comp=Z,37nm,1.4s
AS31 Alice Springs 69.44 133 P **P** **08 31 57.9 +0.6**
AS31 IAmb IAmb 08 32 02.6
comp=Z,5.2nm,0.7s
ASAR Alice Springs 69.44 133 P **P** **08 31 57.7 +0.4**
comp=Z,16nm,0.7s,baz=318,slow=6.3,SNR=21
LSZ Lusaka 69.77 240 P **P** **08 31 59.2 -0.3**
comp=Z,9.9nm,0.6s,baz=54,slow=6.4,SNR=14
LSZ Lusaka 69.77 240 P **P** **08 31 59.4 -0.2**
LSZ IAmb IAmb 08 32 00.0
comp=Z,12nm,0.7s
NEEM North Greenlan 71.87 351 *eP* **P** **08 32 11.1 -0.6**
NEEM IAmb IAmb 08 32 12.6
comp=Z,14nm,0.7s
ESDC Sonseca Array 72.25 306 P **P** **08 32 15.1 +0.7**
comp=Z,4.1nm,0.9s,baz=53,slow=6.5,SNR=13
EUNU Eureka 72.37 358 P **P** **08 32 15.2 +0.8**
EUNU IAmb IAmb 08 32 16.0
comp=Z,8.4nm,0.9s
MATP Matopo 72.72 235 P **P** **08 32 16.9 -0.5**
comp=Z,5.8nm,0.6s,baz=55,slow=5.5,SNR=15
SUMG Summit 72.95 345 *i* **P** **08 32 18.9 +0.6**
SUMG IAmb IAmb 08 32 20.8
comp=Z,8.2nm,0.9s
MVO Moncorvo 73.86 308 *eP* **P** **08 32 27.8 +3.9**
PCBR Castelo Branco 74.69 307 *eP* **P** **08 32 30.1 +1.5**
PBAR Barrancos 75.04 305 *eP* **P** **08 32 33.0 +2.3**
MDT Midelt 75.35 300 P **P** **08 32 32.8 0.0**
comp=Z,1.5nm,0.8s,baz=97,slow=8.1,SNR=3.0
ICESG Greenland Ices 75.52 342 *eP* **P** **08 32 33.5 +0.2**
ICESG IAmb IAmb 08 32 35.6
comp=Z,12nm,0.8s
EVO Evora 75.59 306 *eP* **P** **08 32 36.3 +2.4**
PVAQ Vaqueiros 75.84 305 *eP* **P** **08 32 38.7 +3.4**
CTAO Charters Tower 75.84 122 **P** **08 32 36.9 +1.4**
TOLK Toolik Lake Re 75.96 18 P **P** **08 32 36.2 +0.7**
TOLK IAmb IAmb 08 32 37.2
comp=Z,16nm,0.8s
PCVE Castro Verde 75.98 305 *eP* **P** **08 32 39.9 +3.8**
PBDV Barranco-do-Ve 76.06 305 *eP* P 08 32 41.8 +5.2
IMAR Indian Mountai 76.45 21 P **P** **08 32 39.2 +1.0**
BBOO Buckleboo 77.22 138 P **P** **08 32 42.9 -0.1**
LBTB Lobatse 77.67 233 P **P** **08 32 45.3 -0.5**
comp=Z,17nm,0.7s,baz=55,slow=5.6,SNR=20
LBTB Lobatse 77.67 233 P **P** **08 32 45.6 -0.2**
RES Resolute Bay 77.87 0 P **P** **08 32 45.5 -0.5**
comp=Z,2.0nm,0.9s,baz=26,slow=13,SNR=3.8
RES Resolute Bay 77.87 0 IAmb IAmb 08 32 46.5
comp=Z,3.7nm,1.0s
MLY Manley 78.03 21 P **P** **08 32 47.8 +0.6**
MLY IAmb IAmb 08 32 48.9
comp=Z,9.5nm,0.9s
BMAR Burnt Mountain 78.16 18 P **P** **08 32 49.2 +1.4**
TOA0 Torodi Ar. Sit 78.27 279 P **P** **08 32 48.9 -0.4**
TOA0 IAmb IAmb 08 32 49.4
comp=Z,6.4nm,0.7s
TORD Torodi Ar. Bea 78.27 279 P **P** **08 32 48.5 -0.8**
comp=Z,5.9nm,0.7s,baz=61,slow=4.4,SNR=14
TORD Torodi Ar. Bea 78.27 279 P **P** **08 32 48.8 -0.5**
I23K Makanchi, Yukon-K 78.38 21 P **P** **08 32 50.0 +1.0**
I23K IAmb IAmb 08 32 54.5
comp=Z,7.4nm,0.9s
BPAW Bear Paw Mtn. 78.56 22 P **P** **08 32 50.5 +0.4**
BPAW IAmb IAmb 08 32 51.6
comp=Z,13nm,1.0s
NEA2 Nenana 78.85 21 P **P** **08 32 52.4 +0.7**
NEA2 IAmb IAmb 08 32 53.1
comp=Z,16nm,0.9s
MDM Murphy Dome 78.86 20 P **P** **08 32 52.4 +0.7**
MDM IAmb IAmb 08 32 53.9
comp=Z,10nm,0.9s
KTH Kantishna Hill 78.95 22 P **P** **08 32 53.3 +1.0**
KTH IAmb IAmb 08 32 54.3
comp=Z,9.5nm,1.1s
TCOL CIGO, UAF Yank 79.03 20 P **P** **08 32 52.8 +0.2**
TCOL IAmb IAmb 08 32 54.0
comp=Z,12nm,1.0s
COLA College 79.04 20 P **P** **08 32 53.0 +0.3**
COLA IAmb IAmb 08 32 54.0
comp=Z,12nm,1.0s
CCB Clear Creek Bu 79.21 20 P **P** **08 32 53.2 -0.4**
PRP Porcupine Dome 79.28 19 P **P** **08 32 55.7 +1.5**
PRP IAmb IAmb 08 32 56.2
comp=Z,11nm,0.9s
IL31 79.41 20 P **P** **08 32 54.6 0.0**
ILAR Eielson Array 79.41 20 P **P** **08 32 53.9 -0.8**
comp=Z,4.2nm,0.7s,baz=303,slow=4.5,SNR=12
ILAR Eielson Array 79.41 20 P **P** **08 32 54.1 -0.5**
MCK McKinley 79.48 21 P **P** **08 32 55.5 +0.4**
RND Reindeer 79.73 22 P **P** **08 32 56.6 0.0**
SKT Skwentna 79.78 24 P **P** **08 32 57.6 +0.8**
SKT IAmb IAmb 08 32 58.0
comp=Z,22nm,0.8s
STKA Stephens Creek 80.00 134 P **P** **08 32 57.1 -1.2**
comp=Z,2.0nm,0.6s,baz=306,slow=4.0,SNR=5.2
INK Inuvik 80.11 14 P **P** **08 32 57.8 -0.6**
comp=Z,11nm,0.9s,baz=352,slow=6.8,SNR=17
INK Inuvik 80.11 14 P **P** **08 32 58.8 +0.4**
INK IAmb IAmb 08 32 59.9
comp=Z,17nm,1.1s
BOSA Boshof 80.15 231 P **P** **08 32 58.7 -0.7**
comp=Z,8.2nm,0.8s,baz=42,slow=4.1,SNR=12
BOSA Boshof 80.15 231 P **P** **08 32 58.5 -0.9**
BOSA IAmb IAmb 08 32 59.6
comp=Z,13nm,1.1s
TSUM Tsumeb 80.28 242 P **P** **08 32 59.4 -0.9**
comp=Z,3.2nm,0.9s,baz=120,slow=16,SNR=2.3
TSUM Tsumeb 80.28 242 IAmb IAmb 08 33 00.6
comp=Z,3.7nm,0.8s
SUA Susitna One 80.40 24 P **P** **08 33 01.1 +0.8**
SUA IAmb IAmb 08 33 01.5
comp=Z,13nm,0.8s
GHO Glory Hole Cre 80.83 23 P **P** **08 33 03.0 +0.4**
GHO IAmb IAmb 08 33 07.2
comp=Z,7.7nm,0.8s
SCRK Sand Creek 80.86 20 P **P** **08 33 03.4 +0.7**
SCRK IAmb IAmb 08 33 03.9
comp=Z,12nm,0.8s
PMR Palmer 80.89 23 P **P** **08 33 03.3 +0.6**
PMR IAmb IAmb 08 33 03.9
comp=Z,10nm,0.8s
C36M Paulatuk 80.93 10 P **P** **08 33 02.8 0.0**
SML Sawmill 81.01 23 P **P** **08 33 04.4 +0.9**
EGAK Eagle 81.07 18 P **P** **08 33 04.3 +0.7**
EGAK IAmb IAmb 08 33 05.0
comp=Z,9.0nm,0.9s
DOT Dot Lake 81.07 20 P **P** **08 33 04.0 +0.2**
SCM Sheep Creek Mo 81.34 22 P **P** **08 33 06.1 +0.9**
K27K Chicken 81.38 19 P **P** **08 33 06.7 +1.4**
K27K IAmb IAmb 08 33 07.4
comp=Z,12nm,1.0s
GLI Glacier Island 82.09 23 P **P** **08 33 09.7 +0.5**
GLI IAmb IAmb 08 33 10.3
comp=Z,7.2nm,0.8s
DAWY Dawson 82.11 18 P **P** **08 33 09.8 +0.6**
DAWY IAmb IAmb 08 33 17.1
comp=Z,7.7nm,1.0s
L27K Beaver Creek, 82.18 20 P **P** **08 33 11.0 +1.4**
L27K IAmb IAmb 08 33 11.8
comp=Z,7.4nm,0.9s
BCAR Beaver Creek A 82.19 20 P **P** **08 33 10.6 +0.9**
KOWA Kowa 82.65 282 P **P** **08 33 12.4 -0.5**
comp=Z,6.5nm,0.6s,baz=64,slow=5.5,SNR=12
KOWA Kowa 82.65 282 P **P** **08 33 12.7 -0.1**
KOWA IAmb IAmb 08 33 20.1
comp=Z,12nm,1.0s
MCARA McCarthy VSAT 83.08 21 P **P** **08 33 15.9 +1.6**
RAGM Ragged Mountai 83.28 22 P **P** **08 33 16.7 +1.4**
RAGM IAmb IAmb 08 33 17.4
comp=Z,13nm,0.8s
CRQM Cirque 83.51 22 P **P** **08 33 17.4 +0.7**
TGL Tana Glacier 83.61 22 P **P** **08 33 18.4 +1.2**

CTGM Chitina Glacier 83.94 21 P **P** **08 33 20.3 +1.5**
CTGM IAmb IAmb 08 33 20.5
comp=Z,11nm,1.1s
GRNC Granite Creek 83.98 21 P **P** **08 33 20.1 +0.9**
GRNC IAmb IAmb 08 33 21.1
comp=Z,8.4nm,0.9s
HYT Haines Junctio 85.21 19 P **P** **08 33 26.3 +1.0**
SUR Sutherland 85.48 230 P **P** **08 33 26.1 -0.9**
comp=Z,3.9nm,0.7s,baz=71,slow=1.6,SNR=4.0
DBIC Dimbokro 86.93 276 P **P** **08 33 33.9 -0.5**
comp=Z,10nm,0.7s,baz=28,slow=6.3,SNR=11
DBIC Dimbokro 86.93 276 P **P** **08 33 34.4 0.0**
YKA Yellowknife Ar 88.74 9 P **P** **08 33 41.8 -0.4**
comp=Z,6.1nm,0.8s,baz=341,slow=4.6,SNR=25
MAW Mawson 96.47 188 P **P** **08 34 17.3 -0.1**
comp=Z,3.2nm,0.7s,baz=335,slow=6.0,SNR=4.4
NVAR Mina Array Bea 110.66 19 PKiKP **PKiKP** **08 39 24.2 +2.1**
comp=Z,0.6nm,0.6s,baz=249,slow=2.8,SNR=6.1
TXAR Lajitas Array 122.67 9 PKP **PKiKP** **08 39 45.4 0.0**
comp=Z,0.9nm,0.8s,baz=288,slow=1.2,SNR=5.6
ROSC El Rosal 142.05 325 PKP **PKPdf** **08 40 21.7 -0.7**
comp=Z,6.5nm,0.5s,baz=18,slow=22,SNR=2.6
SAML Samuel 144.77 296 PKPdf PKPbc 08 40 25.7 +0.2
CPUP Villa Florida 146.61 264 PKPbc **PKPdf** **08 40 29.6 +0.2**
comp=Z,4.7nm,0.9s,baz=97,slow=5.7,SNR=4.8

*IDC **25** 08:22:45.6±0.9,27.78N×85.47E, h0km, mb4.3/19, mb1 4.4/20, mb1mx4.1/65, mbtmp4.3/20, ML4.7/1, Error ellipse: s-maj=25.2km s-min=20.1km az=49.0*
*NEIC **25** 08:22:47.6±1.4,27.8N±0.1×85.57E±0.05, h10km±1km, mb4.6/30, Error ellipse: s-maj=20.8km s-min=8.2km az=179.0*
*DMN **25** 08:22:48.4±0.1,27.89N×85.58E, h10km, Ml5.1/4, Error ellipse: s-maj=3.2km s-min=1.2km az=179.0*
ISC 25 08:22:48.0±1.0,**27.85N**±0.05×**85.56E**±0.03,**h13**km±6km, **n67**,σ**0.66**/**73**,**mb4.5**/**33**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.25**	**256**	*e*Pg	**Pb**	**08 22 54.1**	**-0.4**
KKN				*e*Sg	**Sg**	**08 22 57.7**	**+0.6**
GUN	**Gumba**	**0.29**	**78**	*e*Pg	**Pg**	**08 22 54.4**	**+0.2**
GUN				*e*Sg	**Sg**	**08 22 58.1**	**-0.3**
PKI	**Pulchoki**	**0.31**	**205**	*e*Pg	**Pb**	**08 22 55.9**	**+0.3**
PKI				*e*Sg	**Sb**	**08 23 01.0**	**+0.3**
DMN	**Daman**	**0.47**	**239**	*e*Pg	**Pb**	**08 22 58.5**	**+0.3**
DMN				*e*Sg	**Sb**	**08 23 05.2**	**+0.1**
7µm,0.4s							
GKN	**Gorkha**	**0.83**	**281**	*e*Sg	**Sb**	**08 23 16.1**	**+0.6**
DANN	**Dangsing**	**1.66**	**288**	*e*Sg	**Sg**	**08 23 42.1**	**+0.6**
KOLN	**Koldanda**	**1.73**	**268**	*e*Pg	**Pg**	**08 23 21.2**	**-0.1**
KOLN				*e*Sg	**Sg**	**08 23 43.8**	**0.0**
1µm,0.3s							
ODAN	**Odare**	**1.91**	**121**	*e*Pg	**Pg**	**08 23 24.2**	**-0.4**
ODAN				*e*Sg	**Sg**	**08 23 49.8**	**+0.4**
4µm,0.2s							
TAPN	**Taplejung**	**1.98**	**104**	*e*Pg	**Pg**	**08 23 25.4**	**-0.5**
TAPN				*e*Sg	**Sg**	**08 23 51.0**	**-0.6**
3µm,0.3s							
PYUN	**Piuthan**	**2.28**	**277**	*e*Sg	**Sg**	**08 23 59.7**	**-1.7**
5µm,0.5s							
NIL	**Nilore**	**12.05**	**302**	Pn	**Pn**	**08 25 39.2**	**-0.3**
BOOM	**Boomskoye usch**	**16.57**	**334**	Pn	**Pn**	**08 26 39.3**	**-1.0**
MK31	**Makanchi Array**	**19.08**	**353**	P	**P**	**08 27 10.1**	**-0.2**
MKAR	**Makanchi Array**	**19.08**	**353**	P	**P**	**08 27 10.7**	**+0.4**
2.1nm,0.3s,baz=172,slow=11,SNR=4.1							
MAKZ	**Makanchi**	**19.13**	**352**	P	**Pn**	**08 27 11.8**	**+0.1**
KURBB	**Kurchatov Arra**	**23.36**	**349**	P	**P**	**08 27 56.8**	**+0.7**
3.0nm,0.7s,baz=155,slow=10,SNR=4.2							
SONM	**Songino Array**	**25.72**	**34**	P	**P**	**08 28 19.6**	**+1.5**
8.5nm,0.6s,baz=222,slow=10.0,SNR=8.9							
SONM	**Songino Array**	**25.72**	**34**	IAmb	IAmb	08 28 20.4	
comp=Z,4.7nm,0.7s							
ULN	**Ulaanbaatar**	**26.06**	**34**	P	**P**	**08 28 22.0**	**+0.7**
ULN				IAmb	IAmb	08 28 25.8	
comp=Z,8.6nm,0.7s							
ZAA0	**Zalesovo Array**	**26.08**	**359**	P	**P**	**08 28 22.5**	**+1.3**
ZAA0				IAmb	IAmb	08 28 23.0	
comp=Z,7.9nm,0.6s							
ZALV	**Zalesovo Beam**	**26.08**	**359**	P	**P**	**08 28 21.8**	**+0.6**
comp=Z,5.8nm,0.4s,baz=181,slow=10.0,SNR=7.4							
ZALV	**Zalesovo Beam**	**26.08**	**359**	P	**P**	**08 28 22.2**	**+1.1**
ABKAR	**Akbulak array**	**29.05**	**324**	P	**P**	**08 28 48.2**	**+0.4**
ABKAR	**Akbulak array**	**29.05**	**324**	P	**P**	**08 28 48.4**	**+0.5**
ABKAR				IAmb	IAmb	08 28 50.6	
comp=Z,3.9nm,0.6s							
YOJ	**Yonaguni jima**	**33.71**	**87**	P	**P**	**08 29 28.4**	**-0.7**
KLR	**Kul'dur**	**41.17**	**46**	P	**P**	**08 30 31.3**	**-0.8**
comp=Z,2.8nm,0.5s,baz=253,slow=9.2,SNR=4.9							
NRIK	**Noril'sk**	**41.54**	**1**	P	**P**	**08 30 34.1**	**-0.7**
comp=Z,5.8nm,0.5s,baz=173,slow=6.0,SNR=3.4							
NRIK	**Noril'sk**	**41.54**	**1**	P	**P**	**08 30 35.8**	**+1.0**
NRIK				IAmb	IAmb	08 30 36.6	
comp=Z,9.1nm,0.8s							
JMM	**Marumori**	**46.87**	**63**	P	**P**	**08 31 18.4**	**+0.4**
ERM	**Erimo**	**48.44**	**57**	P	**P**	**08 31 30.3**	**+0.2**
MLR	**Muntele Rosu**	**49.80**	**307**	P	**P**	**08 31 41.0**	**+0.3**
MLR				IAmb	IAmb	08 31 50.2	
comp=Z,11nm,1.1s							
TIXI	**Tiksi**	**49.84**	**17**	P	**P**	**08 31 40.1**	**-0.3**
comp=Z,3.2nm,0.5s,baz=242,slow=4.3,SNR=2.4							
TIXI	**Tiksi**	**49.84**	**17**	P	**P**	**08 31 40.8**	**+0.4**
TIXI				IAmb	IAmb	08 31 43.9	
comp=Z,4.6nm,0.8s							
FIA1	**FINESS Array S**	**51.42**	**328**	P	**P**	**08 31 52.5**	**0.0**
FIA1				IAmb	IAmb	08 31 53.0	
comp=Z,8.1nm,0.6s							
FINES	**FINESS Array B**	**51.42**	**328**	P	**P**	**08 31 52.4**	**-0.1**
comp=Z,6.6nm,0.5s,baz=109,slow=8.1,SNR=7.4							
KEV	**Kevo**	**53.38**	**338**	P	**P**	**08 32 07.2**	**+0.3**
KEV				IAmb	IAmb	08 32 07.9	
comp=Z,12nm,0.7s							
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**08 32 10.4**	**+0.4**
comp=Z,8.4nm,0.6s,baz=103,slow=7.8,SNR=20							
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**08 32 10.6**	**+0.5**
SEY	**Seymchan**	**55.07**	**31**	P	**P**	**08 32 19.7**	**+0.4**
comp=Z,4.2nm,0.9s,baz=290,slow=12,SNR=3.0							
GERES	**GERESS Array B**	**57.92**	**312**	P	**P**	**08 32 39.3**	**-0.7**
comp=Z,0.5nm,0.4s,baz=86,slow=7.0,SNR=2.0							
NC303	**NORSAR Array S**	**58.44**	**327**	P	**P**	**08 32 42.7**	**-0.6**
NC303				IAmb	IAmb	08 32 59.8	
comp=Z,6.6nm,0.9s							
NB201	**NORSAR Array S**	**58.48**	**327**	P	**P**	**08 32 42.7**	**-0.9**
NOA	**NORSAR Array B**	**58.51**	**327**	P	**P**	**08 32 42.5**	**-1.4**
comp=Z,1.1nm,0.5s,baz=110,slow=6.6,SNR=5.0							
NAO01	**NORSAR Array S**	**58.68**	**326**	P	**P**	**08 32 44.1**	**-0.9**
SPITS	**Spitsbergen Ar**	**58.69**	**347**	P	**P**	**08 32 44.9**	**+0.1**
comp=Z,14nm,1.1s,baz=116,slow=13,SNR=2.5							
MURB	**Monte Urbino**	**59.59**	**306**	P	**P**	**08 32 52.5**	**+0.9**
TUE	**Stuetta**	**61.20**	**310**	P	**P**	**08 33 02.7**	**-0.1**
TUE				IAmb	IAmb	08 33 05.8	
comp=Z,3.5nm,0.8s							
MSSA	**Maissana**	**61.52**	**308**	P	**P**	**08 33 04.1**	**-0.7**
MSSA				IAmb	IAmb	08 33 15.4	
comp=Z,15nm,1.4s							
BNI	**Bardonecchia**	**63.33**	**309**	P	**P**	**08 33 16.7**	**-0.3**
BNI				IAmb	IAmb	08 33 22.3	
comp=Z,5.0nm,1.1s							
WRA	**Warramunga Arr**	**66.97**	**130**	P	**P**	**08 33 40.6**	**-0.1**
comp=Z,1.6nm,0.6s,baz=323,slow=6.5,SNR=2.0							
WB2	**Warramunga Arr**	**66.97**	**130**	P	**P**	**08 33 40.7**	**0.0**
WB2				IAmb	IAmb	08 33 42.3	
comp=Z,5.8nm,0.9s							
ASAR	**Alice Springs**	**69.26**	**133**	P	**P**	**08 33 55.5**	**+0.4**
comp=Z,1.6nm,0.6s,baz=315,slow=6.1,SNR=1.4							
EUNU	**Eureka**	**72.23**	**359**	P	**P**	**08 34 13.3**	**+0.8**
ESDC	**Sonseca Array**	**72.47**	**306**	P	**P**	**08 34 14.1**	**-0.5**
comp=Z,1.1nm,0.7s,baz=58,slow=4.9,SNR=3.6							
TOLK	**Toolik Lake Re**	**75.70**	**18**	P	**P**	**08 34 33.0**	**+0.1**
TOLK				IAmb	IAmb	08 34 34.4	
comp=Z,2.7nm,0.7s							
MLY	**Manley**	**77.75**	**21**	P	**P**	**08 34 45.1**	**+0.6**
TOA0	**Torodi Ar. Sit**	**78.62**	**279**	P	**P**	**08 34 49.5**	**-0.7**
TOA0				IAmb	IAmb	08 34 54.5	
comp=Z,8.5nm,1.4s							
TORD	**Torodi Ar. Bea**	**78.62**	**279**	P	**P**	**08 34 49.5**	**-0.6**
comp=Z,0.6nm,0.5s,baz=57,slow=4.8,SNR=1.3							
TORD	**Torodi Ar. Bea**	**78.62**	**279**	P	**P**	**08 34 48.9**	**-1.2**
ILAR	**Eielson Array**	**79.13**	**20**	P	**P**	**08 34 51.6**	**-0.5**
comp=Z,0.6nm,0.8s,baz=319,slow=5.3,SNR=1.7							
SKT	**Skwentna**	**79.49**	**24**	P	**P**	**08 34 54.5**	**+0.4**
SKT				IAmb	IAmb	08 35 06.6	
comp=Z,5.8nm,1.1s							

INK Inuvik 79.87 14 P **P** **08 34 56.3 +0.3**
comp=Z,1.1nm,0.8s,baz=333,slow=4.5,SNR=1.4
KDAK Kodiak Island 81.83 27 P **P** **08 35 07.0 +0.3**
YKA Yellowknife Ar 88.53 9 P **P** **08 35 39.3 -0.8**
comp=Z,0.8nm,0.8s,baz=335,slow=4.6,SNR=2.9
TXAR Lajitas Array 122.46 10 PKP **PKPdf** **08 41 43.7 -0.1**
comp=Z,0.3nm,0.6s,baz=50,slow=1.4,SNR=1.7
SAML Samuel 145.05 297 **PKPab** **08 42 25.6 +0.3**
LPAZ La Paz 153.10 290 **PKPdf** **08 42 41.0 +1.5**

*DMN **25** 08:29:22.6±0.1,28.22N×84.88E, h10km, Ml5.6/5, Error ellipse: s-maj=3.9km s-min=1.2km az=17.0*
*IDC **25** 08:29:22.5±0.4,27.93N×84.73E, h0km, mb4.8/47, mb1 4.8/50, mb1mx4.7/60, mbtmp4.8/50, ML4.5/3, Error ellipse: s-maj=10.6km s-min=8.9km az=166.0*
*MOS **25** 08:29:22.8±1.0,28.02N×84.66E, h10km, mb5.1/56, Error ellipse: s-maj=6.1km s-min=3.4km az=110.0*
*BJI **25** 08:29:23.7±0.0,28.10N×84.79E, h10km, mb4.9/63*
*NEIC **25** 08:29:24.6±1.4,27.94N±0.09×84.62E±0.07, h10km±1km, mb5.0/129, Error ellipse: s-maj=16.2km s-min=9.6km az=194.0*
*NDI **25** 08:29:25.7±2.9,27.81N×84.65E, h5km, ML4.7, mb5.0(NEIC)*
ISC 25 08:29:25.0±0.5,**27.91N**±0.04×**84.69E**±0.02,**h15**km±3km, **h16**km:**pP-P, n530,**σ**1**$**42**/554,**mb4.9**/168,**48C-38D, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.10**	**332**	*e*Pg	**Pg**	**08 29 28.2**	**-0.3**
DMN	**Daman**	**0.48**	**129**	*e*Pg	**Pb**	**08 29 35.0**	**-0.2**
DMN	**Daman**	**0.48**	**129**	*e*Pg	**Pb**	**08 29 35.1**	**-0.2**
DMN				*e*Sg	**Sb**	**08 29 43.6**	**+1.5**
39µm,0.6s							
KKN	**Kakani**	**0.54**	**103**	*e*Pg	**Pg**	**08 29 33.4**	**-2.3**
KKN				*e*Sg	**Sg**	**08 29 40.4**	**-2.5**
PKIN	**Phulchoki**	**0.71**	**118**	*e*Pg	**Pg**	**08 29 38.4**	**-0.5**
PKI	**Pulchoki**	**0.72**	**118**	*e*Pg	**Pg**	**08 29 38.7**	**-0.5**
PKI	**Pulchoki**	**0.72**	**118**	*e*Pg	**Pg**	**08 29 38.7**	**-0.5**
PKI				*e*Sg	**Sg**	**08 29 48.4**	**-0.4**
7µm,0.4s							
DANN	**Dangsing**	**0.93**	**298**	*e*Pg	**Pb**	**08 29 41.5**	**-1.5**
DANN				*e*Sg	**Sb**	**08 29 54.6**	**-0.7**
22µm,0.3s							
KOLN	**Koldanda**	**0.98**	**262**	*e*Pg	**Pn**	**08 29 45.2**	**+0.9**
KOLN	**Koldanda**	**0.98**	**262**	*e*Pg	**Pn**	**08 29 46.0**	**+1.7**
KOLN				*e*Sg	**Sn**	**08 30 01.7**	**+3.7**
9µm,0.2s							
PYUN	**Piuthan**	**1.52**	**277**	*e*Pg	**Pg**	**08 29 54.1**	**-0.1**
PYUN	**Piuthan**	**1.52**	**277**	*e*Pg	**Pg**	**08 29 54.4**	**+0.2**
PYUN				*e*Sg	**Sg**	**08 30 15.5**	**+1.6**
30µm,0.6s							
RAMN	**Ramite**	**1.95**	**119**	*e*Pg	**Pb**	**08 30 00.3**	**0.0**
ODAN	**Odare**	**2.62**	**113**	*e*Pg	**Pb**	**08 30 11.2**	**-0.6**
ODAN	**Odare**	**2.62**	**113**	*e*Pg	**Pb**	**08 30 11.6**	**-0.1**
ODAN				*e*Sg	**Sb**	**08 30 45.0**	**+1.2**
7µm,0.6s							
TAPN	**Taplejung**	**2.74**	**101**	*e*Pg	**Pb**	**08 30 11.4**	**-2.4**
TAPN	**Taplejung**	**2.74**	**101**	*e*Pg	**Pb**	**08 30 11.8**	**-2.0**
TAPN				*e*Sg	**Sb**	**08 30 46.7**	**-0.6**
7µm,0.4s							
GTK	**Tadong**	**3.52**	**99**	*e*P	**Pn**	**08 30 22.0**	**+2.8**
GTK				*e*S	**Sn**	**08 31 02.8**	**+2.0**
GTK				IAML		08 31 16.6	
comp=N,3µm,0.4s							
GTK				IAML		08 31 17.0	
comp=E,2µm,0.2s							
LSA	**Lhasa**	**5.94**	**71**	Pn	**Pn**	**08 30 54.5**	**+1.7**
LSA				Sn	**Sn**	**08 32 04.5**	**+3.6**
LSA	**Lhasa**	**5.94**	**71**	P	**Pn**	**08 30 54.2**	**+1.4**
LSA	**Lhasa**	**5.94**	**71**	Pn	**Pn**	**08 30 54.2**	**+1.4**
DDI	**Dehra Dun**	**6.28**	**294**	*e*P	**Pn**	**08 30 59.7**	**+2.6**
DDI				*e*S	**Sn**	**08 32 07.8**	**-0.8**
DDI				IAML		08 32 12.7	
comp=N,1µm,0.2s							
DDI				IAML		08 32 13.1	
comp=E,1µm,0.3s							
GUWA	**GUWAHATI**	**6.47**	**104**	*e*P	**Pn**	**08 31 01.4**	**+1.7**
GUWA				*e*S	**Sn**	**08 32 12.0**	**-1.3**
GUWA				IAML		08 32 13.8	
comp=N,478nm,0.6s							
SHL	**Shillong**	**6.84**	**108**	P	**Pn**	**08 31 04.9**	**-0.1**
SHL	**Shillong**	**6.84**	**108**	*e*P	**Pn**	**08 31 05.4**	**+0.5**
SHL				*e*S	**Sn**	**08 32 17.6**	**-5.1**
SHL	**Shillong**	**6.84**	**108**	Pn	**Pn**	**08 31 04.9**	**-0.1**
SMLA	**Simla**	**7.30**	**298**	*e*P	**Pn**	**08 31 12.8**	**+1.8**
SMLA				IAML		08 32 37.6	
comp=N,390nm,0.3s							
BHPL	**Bhopal**	**8.04**	**236**	*e*P	**Pn**	**08 31 20.0**	**-1.3**
BHPL				*e*S	**Sn**	**08 32 47.5**	**-4.5**
BHPL				IAML		08 32 54.6	
comp=N,479nm,0.3s							
BHPL				IAML		08 32 55.3	
comp=E,354nm,0.2s							
ITAN	**ITANAGAR**	**8.05**	**93**	*e*P	**Pn**	**08 31 23.0**	**+1.6**
ITAN				*e*S	**Sn**	**08 32 51.8**	**-0.5**
ITAN				IAML		08 33 03.5	
comp=N,498nm,0.5s							
ITAN				IAML		08 33 04.5	
comp=E,496nm,0.4s							
ZIRO	**ZIRO**	**8.13**	**91**	*e*P	**Pn**	**08 31 22.2**	**-0.3**
ZIRO				*e*S	**Sn**	**08 32 51.8**	**-2.5**
ZIRO				IAML		08 32 57.9	
comp=E,2µm,0.4s							
ZIRO				IAML		08 32 58.3	
comp=N,2µm,0.6s							
DHRM	**DHARAMSHALA**	**8.46**	**303**	*e*P	**Pn**	**08 31 27.4**	**+0.3**
DHRM				*e*S	**Sn**	**08 32 58.0**	**-4.5**
DHRM				IAML		08 33 06.0	
comp=N,842nm,0.8s							
NIL	**Nilore**	**11.37**	**303**	P	**Pn**	**08 32 06.8**	**-0.1**
NIL	**Nilore**	**11.37**	**303**		**Pn**	**08 32 06.8**	**-0.1**
NIL	**Nilore**	**11.37**	**303**	⇑P	**Pn**	**08 32 07.0**	**+0.1**
HYB	**Hyderabad**	**11.88**	**210**	*i* P	**Pn**	**08 32 12.0**	**-1.9**
KDJ	**Kajisay**	**15.45**	**339**	P	**Pn**	**08 33 01.1**	**-1.4**
KDJ				pmax	pmax		
comp=Z,28nm,1.0s							
KDJ	**Kajisay**	**15.45**	**339**		**Pn**	**08 33 01.1**	**-1.4**
MHMT	**Maesarieng**	**15.56**	**126**	P	**P**	**08 33 07.0**	**-1.1**
comp=Z,73nm,0.8s							
SHLS	**Shalkode**	**15.79**	**346**	*e*P	**Pn**	**08 33 03.0**

CM02 **Chiang Mai Arr** 16.14 123 P P 08 33 14.8 +0.3
comp=Z,387nmcomp=Z,61nm,0.8s
CM35 **Chiang Mai Arr** 16.14 122 P P 08 33 15.0 +0.4
CM01 **Chiang Mai Arr** 16.15 123 P P 08 33 15.0 +0.3
comp=Z,352nmcomp=Z,48nm,0.8s
CM05 **Chiang Mai Arr** 16.16 123 P P 08 33 15.4 +0.6
comp=Z,232nmcomp=Z,40nm,0.9s
CM09 **Chiang Mai Arr** 16.16 123 P P 08 33 15.6 +0.7
comp=Z,316nmcomp=Z,41nm,0.8s
CM04 **Chiang Mai Arr** 16.18 123 P P 08 33 15.8 +0.7
comp=Z,370nmcomp=Z,54nm,0.8s
BOOM **Boomskoye usch** 16.19 336 P Pn 08 33 10.5 -1.6
BOOM pmax pmax
comp=Z,23nm,0.7s
BOOM **Boomskoye usch** 16.19 336 Pn Pn 08 33 10.5 -1.6
CM36 **Chiang Mai Arr** 16.20 122 P P 08 33 15.0 -0.2
TNSS **Tian-Shan** 16.34 339 *eP* Pn 08 33 11.4 -2.8
baz=339
TNSS **Tian-Shan** 16.34 339 *eP* Pn 08 33 11.4 -2.8
KMI **Kunming** 16.39 96 ⇓P P 08 33 16.5 -1.1
KMI pP Pn 08 33 18.0 +3.2
KMI sP pP 08 33 19.5 -2.6
KMI pmax pmax
comp=Z,11nm,0.5s
MDOK **Medeo** 16.43 340 *eP* Pn 08 33 12.3 -2.7
baz=340
MDOK **Medeo** 16.43 340 *eP* Pn 08 33 12.3 -2.7
AAA **Alma-Ata** 16.51 340 *eP* Pn 08 33 13.7 -2.3
baz=340
AAA **Alma-Ata** 16.51 340 *eP* Pn 08 33 13.7 -2.3
UCH **Uchtor** 16.51 333 P Pn 08 33 14.3 -2.1
SNR=28
TKM2 **Tokmak 2** 16.69 336 P Pn 08 33 17.0 -1.5
SNR=6.8
KBK **Karagaybulak** 16.70 334 P Pn 08 33 18.0 -0.6
SNR=9.6
AML **Almayashu** 16.78 331 P Pn 08 33 16.8 -3.0
SNR=20
AAK **Ala-Archa** 16.86 333 Pn Pn 08 33 19.0 -1.6
comp=Z,0.9nm,0.3s,baz=177,slow=4.7,SNR=14
AAK **Ala-Archa** 16.86 333 P Pn 08 33 19.4 -1.2
SNR=10
AAK **Ala-Archa** 16.86 333⇑ *eP* Pn 08 33 19.9 -0.8
AAK pmax pmax
comp=Z,166nm,1.2s
AAK **Ala-Archa** 16.86 333 Pn Pn 08 33 19.7 -1.0
AAK **Ala-Archa** 16.86 333 ⇑P Pn 08 33 19.8 -0.8
CD2 **Chengdu** 16.88 75 P P 08 33 22.0 -0.8
CD2 pmax pmax
comp=Z,100nm,0.7s
FRU1 **Bishkek** 16.96 334 P Pn 08 33 20.5 -1.2
FRU1 pmax pmax
comp=Z,93nm,1.3s
FRU1 **Bishkek** 16.96 334 Pn Pn 08 33 20.5 -1.2
GTA **Gaotai** 17.00 44 ⇑P Pn 08 33 20.3 -2.0
GTA pP P 08 33 25.8 +1.6
GTA sP pP 08 33 28.5 -0.2
GTA pmax pmax
comp=Z,8.0nm,0.9s
CHMS **Chumysh** 17.07 334 P Pn 08 33 21.5 -1.6
SNR=6.3
EKS2 **Erkin-Say** 17.18 332 P Pn 08 33 24.0 -0.5
SNR=7.6
SUKH **Sukhothai** 17.24 124 P P 08 33 27.4 +0.6
comp=Z,32nm,0.7s
NANT **Nan** 17.26 118 P Pn 08 33 26.0 +0.5
comp=Z,510nm,0.7s
USP **Ospenovka** 17.40 334 P Pn 08 33 25.5 -1.7
SNR=6.0
SGDS **Sogindy** 17.50 335 *eP* Pn 08 33 26.3 -2.2
baz=335
SGDS **Sogindy** 17.50 335 *eP* Pn 08 33 26.3 -2.2
UMPA **Umpang Tak** 17.54 129 P P 08 33 35.2 +5.1
comp=Z,13μmcomp=Z,28nm,0.7s
UTTA **Uttaradit** 17.76 121 P P 08 33 33.9 +1.4
comp=Z,60nm,0.7s
TDK **Taldyqorghan** 17.78 345 *eP* Pn 08 33 30.2 -1.6
comp=Z,158nm,0.7s,baz=345
TDK **Taldyqorghan** 17.78 345 *eP* Pn 08 33 30.2 -1.6
TDK pmax pmax
comp=Z,158nm,0.7s
PHIT **Phitsanulok** 18.00 123 P P 08 33 38.8 +3.6
comp=Z,137nm,0.8s
LZH **Lanzhou** 18.15 59 ⇓P Pn 08 33 35.5 -1.2
LZH pP P 08 33 37.5 +0.6
LZH sP pP 08 33 40.3 -1.2
LZH PP PnPn 08 33 48.8 +0.9
LZH pmax pmax
comp=Z,41nm,1.0s
UTHA **Uthaitani** 18.39 129 P Pn 08 33 42.2 +2.8
comp=Z,416nmcomp=Z,34nm,0.8s
DZA **Taraz** 18.46 328 *eP* P 08 33 37.5 -2.6
baz=327
DZA **Taraz** 18.46 328 *eP* P 08 33 37.4 -2.6
IUG **Iuzhnay** 18.56 324 *eP* P 08 33 38.7 -2.6
baz=324
IUG **Iuzhnay** 18.56 324 *eP* P 08 33 38.6 -2.7
CHM **Chimkent** 18.90 323 *eP* P 08 33 43.0 -1.9
baz=323
CHM **Chimkent** 18.90 323 *eP* P 08 33 43.0 -1.9
MK31 **Makanchi Array** 18.94 355 *deP* P 08 33 45.0 -0.4
MK31 **Makanchi Array** 18.94 355 P 08 33 44.5 -0.8
MKAR **Makanchi Array** 18.94 355 P P 08 33 45.0 -0.4
comp=Z,6.0nm,0.3s,baz=172,slow=11,SNR=138
MKAR **Makanchi Array** 18.94 355 P P 08 33 45.0 -0.4
MKAR **Makanchi Array** 18.94 355 P P 08 33 44.5 -0.8
MAKZ **Makanchi** 18.98 354 P P 08 33 45.6 -0.2
MAKZ **Makanchi** 18.98 354 P P 08 33 45.0 -0.8
MAKZ pmax pmax
comp=Z,37nm,0.6s
KK31 **Karatay Array** 19.01 327 P P 08 33 44.7 -1.5
KK31 pmax pmax
comp=Z,33nm,1.0s
KK31 **Karatay Array** 19.01 327 P P 08 33 44.6 -1.5
KKAR **Karatay Array** 19.01 327 P P 08 33 44.8 -1.4
KKAR pmax pmax
comp=Z,33nm,1.0s
KKAR **Karatay Array** 19.01 327 P P 08 33 44.8 -1.4
BTLS **Baital** 19.09 336 *eP* P 08 33 45.7 -1.2
baz=336
BTLS **Baital** 19.09 336 *eP* P 08 33 45.7 -1.2
ZSN **Zaisan** 19.50 0 *eP* P 08 33 50.0 -1.6
baz=0.3
ZSN **Zaisan** 19.50 0 *eP* P 08 33 49.9 -1.6
NONG **Nongkai** 19.59 116 P Pn 08 33 53.9 -0.1
comp=Z,6μmcomp=Z,64nm,0.9s
GYA **Guiyang** 19.60 89 ⇑P Pn 08 33 54.5 +0.3
GYA S Sn 08 37 35.3 +1.2
MALK **Mahakanadarawa** 19.80 192 ⇑P Pn 08 33 59.5 +2.9
CHAI **Chaiyaphum** 19.98 123 P Pn 08 33 59.7 +1.1
comp=Z,1μmcomp=Z,126nm,0.7s
KHON **Khomkaen** 20.34 121 P Pn 08 34 04.1 +1.2
comp=Z,90nm,0.8s
PHET **Kaeng Krachan** 20.43 134 P Pn 08 34 09.0 +5.1
comp=Z,42nm,0.8s
PALK **Pallekele** 20.87 191 P P 08 34 07.6 +1.0
comp=Z,20nm,0.9s,baz=162,slow=9.6,SNR=3.5
PALK S S 08 37 49.6 -9.5
comp=Z,6.6nm,0.8s,baz=49,slow=19,SNR=2.2
SRAK **Srakaew** 21.27 127 P P 08 34 17.0 +6.2
comp=Z,353nm,0.7s
XAN **Xi'an** 21.63 68 P P 08 34 13.8 -0.9
XAN pP pP 08 34 17.0 -2.3
XAN pmax pmax
comp=Z,66nm,0.8s
XAN **Xi'an** 21.63 68 P P 08 34 14.0 -0.7
XAN pmax pmax
comp=Z,41nm,0.8s
XAN **Xi'an** 21.63 68 P P 08 34 14.0 -0.7
XAN IAmb IAmb 08 34 14.7
comp=Z,41nm,0.8s
ENH **Enshi** 21.79 78 P P 08 34 16.7 +0.3
ENH IAmb IAmb 08 34 23.1
comp=Z,42nm,0.7s
DGZ **Jazzator, Alta** 21.86 5 *d iP* P 08 34 18.1 +1.0
DGZ pmax pmax
comp=Z,23nm,0.6s
SEM **Semipalatinsk** 22.72 353 *eP* P 08 34 24.4 -2.0
comp=Z,34nm,0.8s,baz=352
SEM **Semipalatinsk** 22.72 353 *eP* P 08 34 24.4 -2.0
SEM pmax pmax
comp=Z,34nm,0.8s
UBPT **Khong Chiam** 23.00 119 P P 08 34 31.9 +2.5
comp=Z,3μmcomp=Z,18nm,0.9s
UBPT **Khong Chiam** 23.00 119 P P 08 34 29.3 -0.1
UBPT IAmb IAmb 08 34 35.3
comp=Z,22nm,0.7s
SURT **Suratani** 23.08 142 P P 08 34 38.0 +7.8
comp=Z,50nmcomp=Z,1.4nm,1.1s
KURBB **Kurchatov Arra** 23.16 350 P P 08 34 30.4 -0.3
comp=Z,37nm,0.6s,baz=172,slow=9.9,SNR=117
KURBB PcP PcP 08 38 16.7 -2.1
comp=Z,1.9nm,0.7s,baz=181,slow=2.2,SNR=4.0
KURBB **Kurchatov Arra** 23.16 350 P P 08 34 29.0 -1.7
KURK **Kurchatov** 23.23 350 P P 08 34 30.4 -1.0
KURK 08 38 16.7
BRZS **Berezniki** 23.88 341 *eP* P 08 34 36.0 -1.8
comp=Z,15nm,0.8s,baz=340
BRZS **Berezniki** 23.88 341 *eP* P 08 34 36.0 -1.8
BRZS pmax pmax
comp=Z,15nm,0.8s
WSAR **Wadi Sarin** 23.94 265 P P 08 34 40.1 +1.5
comp=Z,2.3nm,0.5s,baz=84,slow=9.2,SNR=1.7
GEYT **Alibeck** 24.37 301 P P 08 34 43.4 +0.8
comp=Z,17nm,1.0s,baz=134,slow=10,SNR=14
GEYT **Alibeck** 24.37 301 P P 08 34 43.6 +1.1
GYA0B **ALIBECK ARRAY** 24.37 301 P P 08 34 43.7 +1.2
GYA0B IAmb IAmb 08 34 50.5
comp=Z,28nm,1.0s
TRTT **Trang** 24.50 142 P P 08 34 47.4 +3.6
QIZ **Qiongzhong** 24.67 106 P P 08 34 46.0 +0.6
QIZ pmax pmax
comp=Z,25nm,1.4s
TIY **Taiyuan** 25.20 60 *eP* P 08 34 51.0 +0.9
TIY pmax pmax
comp=Z,46nm,1.0s
HHC **Hu-ho-hao-te** 25.55 53 *eP* P 08 34 53.5 +0.3
HHC pmax pmax
comp=Z,20nm,0.9s
WHN **Wuhan** 25.98 77 ⇑P P 08 35 09.5 +12
ZAA0 **Zalesovo Array** 26.01 0 P P 08 34 57.4 +0.3
ZAA0 IAmb IAmb 08 34 58.6
comp=Z,39nm,0.8s
ZALV **Zalesovo Beam** 26.01 0 P P 08 34 57.6 +0.5
comp=Z,38nm,0.7s,baz=185,slow=9.6,SNR=113
SONM **Songino Array** 26.09 35 P P 08 34 59.2 +1.1
comp=Z,25nm,0.8s,baz=222,slow=11,SNR=45
SONM **Songino Array** 26.09 35 P P 08 34 58.8 +0.7
SONM IAmb IAmb 08 35 02.4
comp=Z,22nm,0.8s
ULN **Ulaanbaatar** 26.45 35 ⇓*iP* P 08 35 02.3 +0.9
ULN pmax pmax
comp=Z,48nm,0.9s
ULN **Ulaanbaatar** 26.45 35 P P 08 35 01.8 +0.4
ULN IAmb IAmb 08 35 11.9
comp=Z,41nm,0.8s
ULN **Ulaanbaatar** 26.45 35 ⇓P P 08 35 02.8 +1.4
ZAK **Zakamensk** 26.53 27 *eP* P 08 35 02.5 +0.5
ZAK pmax pmax
comp=Z,16nm,1.0s
MOY **Mondy** 26.71 23 *eP* P 08 35 05.0 +1.4
MOY pmax pmax
comp=Z,28nm,1.6s
BVAR **Borovoye Array** 27.24 341 P P 08 35 08.1 -0.1
comp=Z,2.7nm,0.8s,baz=140,slow=17,SNR=9.1
BVAR PcP PcP 08 38 27.1 -0.8
comp=Z,2.4nm,0.5s,baz=222,slow=2.0,SNR=5.0
BRVK **Borovoye** 27.30 341⇑ *eP* P 08 35 09.2 +0.4
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK **Borovoye** 27.30 341 P P 08 35 08.8 0.0
BRVK **Borovoye** 27.30 341 ⇑P P 08 35 15.0 +6.2
AB31 **Akbulak array** 28.55 325 *eP* P 08 35 19.9 -0.1
ABKAR **Akbulak array** 28.55 325 P P 08 35 20.4 +0.4
ABKAR **Akbulak array** 28.55 325 P P 08 35 20.4 +0.4
ABKAR IAmb IAmb 08 35 21.4
comp=Z,9.0nm,0.7s
ABKAR **Akbulak array** 28.55 325 ⇑P P 08 35 20.9 +0.8
BJT **Baijiatuau** 28.61 57 P P 08 35 21.2 +0.5
BJT pmax pmax
comp=Z,11nm,1.1s
BJT **Baijiatuau** 28.61 57 P P 08 35 21.2 +0.5
BJI **Beijing** 28.62 57 P P 08 35 21.8 +1.0
BJI pmax pmax
comp=Z,8.0nm,0.5s
NJ2 **Nanjing** 29.80 74 *eP* P 08 35 30.0 -1.3
NJ2 pmax pmax
comp=Z,17nm,0.5s
SSE **Sheshan** 31.83 75 P P 08 35 50.3 +1.1
SSE pmax pmax
comp=Z,29nm,0.7s
AKT **Akhty** 33.01 304 *eP* P 08 35 58.9 -0.7
AKT *e* 08 37 09.2
AKT pmax pmax
comp=Z,33nm,1.0s
SVE **Sverdlovsk** 33.57 336 *eP* P 08 36 05.1 +1.0
SVE pmax pmax
comp=Z,34nm,1.0s
ARU **Arti** 34.05 334 P P 08 36 08.3 +0.1
comp=Z,6.3nm,0.5s,baz=146,slow=6.3,SNR=26
ARU **Arti** 34.05 334 *iP* P 08 36 08.8 +0.5
ARU pmax pmax
comp=Z,20nm,0.7s
ARU **Arti** 34.05 334 P P 08 36 08.4 +0.1
ARU IAmb IAmb 08 36 09.7
comp=Z,20nm,0.6s
HIA **Hailar** 34.27 42 ⇓*eP* P 08 36 11.4 +1.0
HIA pmax pmax
comp=Z,10.0nm,1.0s
SNY **Shenyang** 34.49 56 ⇓P P 08 36 12.5 +0.2
SNY pmax pmax
comp=Z,22nm,0.8s
GNI **Garni** 35.01 301⇓ *eP* P 08 36 20.2 +3.2
GNI pmax pmax
comp=Z,17nm,0.9s
ZEI **Tsey** 36.06 305 *eP* P 08 36 27.3 +1.2
ZEI pmax pmax
comp=Z,37nm,1.4s
CN2 **Changchun** 36.24 53 *eP* P 08 36 27.3 -0.1
CN2 pmax pmax
comp=Z,20nm,1.0s
BOD **Bodaibo** 36.26 26 *eP* P 08 36 28.1 +0.7
BOD pmax pmax
comp=Z,41nm,1.1s
NCK **Nalchik** 36.42 306⇓ *eP* P 08 36 30.5 +1.6
NCK pmax pmax
comp=Z,11nm,0.2s
SBUM **Sibu** 36.50 129 P P 08 36 30.8 +0.9
BELG **Belogornoye** 36.80 322 P P 08 36 30.9 -1.1
comp=Z,17nm,0.9s,baz=43,slow=2.9,SNR=5.1
BELG **Belogornoye** 36.80 322⇓ *eP* P 08 36 31.9 -0.1
BELG pmax pmax
comp=Z,4.0nm,1.0s
TJN **Taejon** 36.86 66⇓ *eP* P 08 36 31.0 -1.8
KBZ **Khabaz** 36.96 307 P P 08 36 32.5 -1.0
comp=Z,3.5nm,0.7s,baz=123,slow=6.9,SNR=7.4
KBZ PcP PcP 08 38 54.3 -0.3
comp=Z,2.1nm,0.3s,baz=177,slow=2.9,SNR=4.4
KBZ **Khabaz** 36.96 307⇓ *iP* P 08 36 34.8 +1.3
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KIV **Kislovodsk** 37.15 307 *eP* P 08 36 37.0 +1.7
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,20μm,16.0s
KS19 **Wonju Array Si** 37.29 64 P P 08 36 36.0 -0.4
KSAR **Wonju Array Be** 37.30 64 P P 08 36 35.7 -0.8
KSAR **Wonju Array Be** 37.30 64 P P 08 36 35.7 -0.8
KSRS **Korea Array** 37.34 64 P P 08 36 35.4 -1.4
comp=Z,4.8nm,0.7s,baz=266,slow=8.2,SNR=18
KSRS PcP PcP 08 38 54.8 -1.0
comp=Z,1.2nm,0.7s,baz=221,slow=4.6,SNR=6.1
JOW **Kunigami** 38.57 81 P P 08 36 47.1 -0.3
JOW IAmb IAmb 08 36 47.7
comp=Z,32nm,0.7s
KIRV **Kirov** 39.19 331 P P 08 36 52.1 +0.1
comp=Z,28nm,0.6s,baz=142,slow=4.0,SNR=13
KIRV **Kirov** 39.19 331 ⇓*iP* P 08 36 53.0 +1.0
VRH **Novokhopyorsk** 39.70 318 *eP* P 08 36 56.4 -0.1
VRH pmax pmax
comp=Z,50nm,0.9s
JNU **Nakatsue** 39.88 71 P P 08 36 57.8 -0.5
comp=Z,8.0nm,0.9s,baz=284,slow=4.2,SNR=2.3
JNU **Nakatsue** 39.88 71 IAmb IAmb 08 36 58.9
comp=Z,12nm,1.0s
ZEA **Zeya** 40.37 38 *eP* P 08 37 03.4 +1.4
ZEA pmax pmax
comp=E,10.0nm,0.7s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
USA0B **Ussuriysk Arra** 40.96 54⇓ *eP* P 08 37 06.4 -0.6
USA0B **Ussuriysk Arra** 40.96 54 P P 08 37 06.8 -0.2
USRK **Ussuriysk Ar.** 40.96 54 P P 08 37 06.5 -0.5
comp=Z,6.6nm,0.6s,baz=260,slow=7.9,SNR=17
USRK **Ussuriysk Ar.** 40.96 54 P P 08 37 07.4 +0.4
USRK **Ussuriysk Ar.** 40.96 54 P P 08 37 07.4 +0.4
VORD **Divnogorie** 41.09 317 *eP* P 08 37 08.0 0.0
VORD pmax pmax
comp=Z,10.0nm,0.4s
VSR **Storozhevoye** 41.24 317 *eP* P 08 37 08.6 -0.6
VSR pmax pmax
comp=Z,20nm,0.9s
NRIK **Noril'sk** 41.49 2 P P 08 37 11.6 +0.6
comp=Z,20nm,0.8s,baz=169,slow=6.1,SNR=49
NRIK **Noril'sk** 41.49 2 *ceP* P 08 37 12.0 +1.0
NRIK pmax pmax
comp=Z,33nm,0.9s
NRIK **Noril'sk** 41.49 2 P P 08 37 11.2 +0.2
NRIK IAmb IAmb 08 37 12.9
comp=Z,29nm,0.9s
KLR **Kul'dur** 41.68 46 P P 08 37 12.8 -0.1
comp=Z,4.3nm,0.8s,baz=272,slow=9.9,SNR=13
KLR **Kul'dur** 41.68 46 ⇓*iP* P 08 37 13.3 +0.4
KLR pmax pmax
comp=Z,8.0nm,0.9s
LPSR **Galich'ya Gora** 41.79 319 *eP* P 08 37 13.8 +0.1
LPSR pmax pmax
comp=Z,50nm,0.8s
JMN **Monobe** 42.32 70 P P 08 37 19.5 +1.2
JMN IAmb IAmb 08 37 20.5
comp=Z,21nm,0.8s
JMN **Monobe** 42.32 70 ⇑P P 08 37 19.6 +1.2
ATD **Arta Tunnel** 42.39 256 P P 08 37 21.1 +2.0
comp=Z,15nm,0.8s,baz=23,slow=5.0,SNR=5.8
MMAI **Mount Meron Ar** 42.48 289 P P 08 37 21.0 +1.3
comp=Z,5.3nm,0.7s,baz=68,slow=14,SNR=5.4
MMAI PcP PcP 08 39 13.3 +0.8
comp=Z,0.5nm,0.4s,baz=79,slow=7.5,SNR=3.8
EIL **Elat** 43.36 285 P P 08 37 27.1 +0.3
comp=Z,7.2nm,0.7s,baz=134,slow=11,SNR=3.9
JWT **Wachi** 43.43 67 P P 08 37 27.6 +0.4
JWT IAmb IAmb 08 37 29.0
comp=Z,27nm,1.2s
BR131 **Keskin Array S** 43.49 299 P P 08 37 28.6 +0.7
BR131 pmax pmax
comp=Z,15nm,1.0s
BR131 **Keskin Array S** 43.49 299 P P 08 37 28.6 +0.7
BRTR **Keskin Array B** 43.49 299 P P 08 37 27.9 -0.1
comp=Z,9.7nm,1.1s,baz=110,slow=7.1,SNR=14
BRTR **Keskin Array B** 43.49 299 *iP* P 08 37 29.1 +1.2
BRTR pmax pmax
comp=Z,10.0nm,1.0s
BRTR **Keskin Array B** 43.49 299 P P 08 37 28.2 +0.2
MOS **Moscow** 43.53 323 *eP* P 08 37 26.6 -1.2
MOS *e* 08 39 12.7
MOS pmax pmax
comp=Z,52nm,1.1s
OBN **Obninsk** 43.90 322 *eP* P 08 37 31.3 +0.6
OBN *e* 08 37 33.5
OBN pmax pmax
comp=Z,79nm,1.4s
OBN **Obninsk** 43.90 322 P P 08 37 30.9 +0.2
CSS **Mathiatis** 43.99 293 P P 08 37 32.2 +0.4
CSS IAmb IAmb 08 37 39.1
comp=Z,14nm,0.8s
KLMR **Klimovskoe** 44.65 330 *eP* P 08 37 34.4 -2.2
KLMR *e* 08 39 18.3
KLMR pmax pmax
comp=Z,25nm,0.9s
KLMR **Klimovskoe** 44.65 330 *eP* P 08 37 34.5 -2.2
KLMR AMP 08 37 42.0
comp=Z,25nm,0.9s
KLMR *ePP* PcP 08 39 18.4 -0.7
MRSI **Marisa** 44.91 121 P P 08 37 40.7 +1.4
comp=Z,34nm,0.7s
JGF **Kuroka** 44.99 66 P P 08 37 39.6 -0.2
YAK **Yakutsk** 45.11 28 P P 08 37 40.1 -0.2
comp=Z,24nm,0.6s,baz=167,slow=0.3,SNR=12
YAK **Yakutsk** 45.11 28 *ceP* P 08 37 40.6 +0.3
YAK pmax pmax
comp=Z,47nm,0.7s
YAK **Yakutsk** 45.11 28 P P 08 37 40.2 -0.2
JSD **Sado** 45.52 63 P P 08 37 43.3 -0.6
JSD IAmb IAmb 08 37 43.9
comp=Z,11nm,0.7s
MAJO **Matsushiro** 45.59 65 ⇓*eP* P 08 37 44.6 +0.1
MAJO pmax pmax
comp=Z,12nm,0.8s
MAJO **Matsushiro** 45.59 65 P P 08 37 44.1 -0.4
MAJO IAmb IAmb 08 37 45.2
comp=Z,12nm,0.8s
MAT **Matsushiro** 45.59 65 P P 08 37 43.9 -0.6
MJAR **Matsushiro Arr** 45.59 65 P P 08 37 43.7 -0.8
comp=Z,9.1nm,0.9s,baz=279,slow=10,SNR=18
MJAR **Matsushiro Arr** 45.59 65 P P 08 37 45.3 +0.8
MJAR pmax pmax
comp=Z,3.0nm,1.0s
MJAR **Matsushiro Arr** 45.59 65 P P 08 37 45.3 +0.8
TTSI **Tana Toraja** 45.72 127 P P 08 37 45.6 -0.1
comp=Z,40nm,1.0s
ISP **Isparta** 46.00 297 P P 08 37 48.7 +0.8
ISP pmax pmax
comp=Z,16nm,0.9s
ISP **Isparta** 46.00 297 P P 08 37 48.7 +0.8
ISP IAmb IAmb 08 37 52.8
comp=Z,16nm,0.9s
ELL **Elmali** 46.58 295 P P 08 37 52.9 +0.4
ELL pmax pmax
comp=Z,243nm,0.8s
ELL **Elmali** 46.58 295 P P 08 37 52.9 +0.4
AKASG **Malin Array Be** 47.28 315 P P 08 37 57.1 -0.5
comp=Z,4.5nm,0.6s,baz=78,slow=6.9,SNR=45
AKASG **Malin Array Be** 47.28 315 *i* P P 08 37 57.2 -0.4
AKASG pmax pmax
comp=Z,11nm,0.6s
AKASG **Malin Array Be** 47.28 315 P P 08 37 57.2 -0.4
AKBB **Malin Array Si** 47.28 315⇑ *eP* P 08 37 57.2 -0.4
AKBB pmax pmax
comp=Z,25nm,0.9s
AKBB **Malin Array Si** 47.28 315 P P 08 37 57.3 -0.3
JMM **Marumori** 47.53 63 P P 08 37 59.5 -0.2
SORM **Soroca** 47.60 311 ⇑P P 08 38 00.1 0.0
HARR **Harsova** 47.75 306 ⇑P P 08 38 02.6 +1.3
ASAJ **Asahikawa** 48.57 54 P P 08 38 06.8 -0.9
comp=Z,5.4nm,0.7s,baz=254,slow=15,SNR=2.5
VRI **Vrincioaia** 48.61 308 ⇑P P 08 38 09.6 +1.6
MNK **Minsk** 48.64 319 *eP* P 08 38 08.0 0.0
PLOR **Plostina** 48.67 308 ⇑P P 08 38 10.1 +1.6
TESR **Tescani** 48.68 309 ⇓P P 08 38 09.4 +0.9
YSS **Yuzh-Sakhalins** 48.71 51⇑ *eP* P 08 38 08.8 +0.1
YSS pmax pmax
comp=Z,31nm,1.5s
ISR **Istrita** 48.74 307 ⇑P P 08 38 09.9 +0.8
NEHR **Nehoiu** 48.91 307 ⇑P P 08 38 11.6 +1.3
KARP **Karpathos** 48.93 294 P P 08 38 11.3 +0.6
BIZ **Bicaz** 49.06 309 ⇓P P 08 38 12.5 +1.1
MLR **Muntele Rosu** 49.16 307 ⇑P P 08 38 14.3 +1.9
MLR **Muntele Rosu** 49.16 307 P P 08 38 14.5 +2.1
MLR pmax pmax
comp=Z,47nm,0.8s
MLR **Muntele Rosu** 49.16 307 P P 08 38 14.5 +2.1
NACGM **Naroch** 49.33 320 *iP* P 08 38 14.0 +0.7
NACGM *iP* P 08 38 14.0 +0.7
NACGM *iP* P 08 38 14.0 +0.7
NACGM *iPP* PP 08 40 07.6 +0.4
NACGM *iPPP* PPP 08 40 58.0
NACGM *iS* S 08 45 19.0 -0.1
NACGM *iSS* SS 08 49 08.5 +18
NACGM *iSSS* SSS 08 50 57.1
NACGM *iLQ* LQ 08 55 39.0
NACGM *iLR* LR 09 00 31.6
IDID **Didziasalis** 49.42 320 *eP* P 08 38 15.0 +1.0
DOPR **Dopca** 49.55 308 ⇓P P 08 38 16.0 +0.8
BURAR **Bucovina Array** 49.68 310 ⇑P P 08 38 16.9 +0.6
BURAR **Bucovina Array** 49.68 310 P P 08 38 17.2 +0.9
BURAR IAmb IAmb 08 38 18.1
comp=Z,13nm,0.8s
BUR08 **Bucovina Ar. S** 49.69 310 P P 08 38 17.0 +0.6
BUR08 IAmb IAmb 08 38 17.9
comp=Z,12nm,0.9s
IIGN **Ignalina** 49.72 320 *eP* P 08 38 17.4 +1.1
VOIR 49.79 307 ⇓P P 08 38 17.8 +0.7
ISAL **Salakas** 49.80 321 *eP* P 08 38 17.7 +0.8

VSU Vasula 49.99 324 *e*P **P** **08 38 18.6 +0.3**
TIXI Tiksi 50.00 17 P **P** **08 38 18.1 -0.1**
comp=Z,29nm,0.7s,baz=231,slow=3.6,SNR=108
TIXI Tiksi 50.00 17⇑ *e*P **P** **08 38 17.5 -0.7**
TIXI Tiksi 50.00 17 P **P** **08 38 18.8 +0.6**
TIXI Tiksi 50.00 17 ⇑P **P** **08 38 18.4 +0.2**
ARR Arges 50.08 307 ⇑P **P** **08 38 20.1 +0.8**
SANT Santorini 50.18 295 ⇓P **P** **08 38 20.3 +0.1**
SANT Santorini 50.18 295 P **P** **08 38 20.0 -0.2**
LVV L'vov 50.53 313 *e*P **P** **08 38 22.6 0.0**
LOT Lotru 50.69 307 ⇑P **P** **08 38 24.4 +0.4**
IDI Anoyia 50.80 294 P **P** **08 38 23.8 -1.1**
comp=Z,10nm,0.7s,baz=35,slow=12,SNR=11
IDI Anoyia 50.80 294 P **P** **08 38 25.1 +0.2**
IDI IAmb IAmb 08 38 26.2
comp=Z,12nm,0.7s
FIA1 FINESS Array S 50.96 328 P **P** **08 38 25.6 0.0**
FIA1 IAmb IAmb 08 38 31.4
comp=Z,17nm,0.8s
FINES FINESS Array B 50.96 328 P **P** **08 38 25.7 +0.1**
comp=Z,7.8nm,0.6s,baz=109,slow=7.1,SNR=38
PABE Paberze 51.01 320 *e*P **P** **08 38 26.4 +0.3**
VTS Vitosha 51.22 304 ⇑P **P** **08 38 29.4 +1.3**
VTS Vitosha 51.22 304 P **P** **08 38 28.1 0.0**
VTS pmax pmax
comp=Z,21nm,0.9s
VTS Vitosha 51.22 304 P **P** **08 38 28.1 0.0**
VTS IAmb IAmb 08 38 30.2
comp=Z,21nm,0.9s
VTS Vitosha 51.22 304 ⇑P **P** **08 38 29.2 +1.1**
SUW Suwalki 51.31 318 *e*P **P** **08 38 28.4 0.0**
DRGR 51.39 309 ⇑P **P** **08 38 30.2 +1.1**
GZR Gura Zlata 51.39 307 ⇑P **P** **08 38 29.4 +0.2**
MTSE Matsula 51.54 324 *e*P **P** **08 38 29.1 -0.9**
UZH Uzhgorod 51.65 311 *e*P P 08 38 25.5 -5.5
UZH *i* 08 38 31.8
MDVR Moldovita 52.17 307 ⇓P **P** **08 38 36.0 +1.0**
CRVS Cervenica-Dubn 52.20 312 *e*P **P** **08 38 36.7 +1.6**
CRVS pmax pmax
comp=Z,13nm,1.1s
CRVS Cervenica-Dubn 52.20 312 *e*P **P** **08 38 36.7 +1.6**
AGG Agios Georgios 52.28 299 P **P** **08 38 35.2 -0.7**
AGG pmax pmax
comp=Z,16nm,0.8s
AGG Agios Georgios 52.28 299 P **P** **08 38 35.2 -0.7**
AGG IAmb IAmb 08 38 36.0
comp=Z,16nm,0.8s
AGG Agios Georgios 52.28 299 ⇓P **P** **08 38 35.4 -0.5**
KEV Kevo 53.04 338 P **P** **08 38 41.7 +0.7**
KEV pmax pmax
comp=Z,18nm,0.7s
KEV Kevo 53.04 338 P **P** **08 38 41.7 +0.7**
KEV IAmb IAmb 08 38 47.0
comp=Z,18nm,0.7s
PSZ Piszkesteto 53.27 311 ⇑P **P** **08 38 42.6 -0.5**
DIVS Divibare 53.46 306 P **P** **08 38 44.7 +0.1**
ARCES ARCESS Array B 53.46 338 P **P** **08 38 44.3 +0.2**
comp=Z,13nm,0.7s,baz=94,slow=7.9,SNR=39
LANS Liptovska Anna 53.51 312 *e*P **P** **08 38 45.8 +1.0**
LANS pmax pmax
comp=Z,7.0nm,1.7s
LANS Liptovska Anna 53.51 312 *e*P **P** **08 38 45.8 +1.0**
KMBO Kilima Mbogo 53.89 246 P **P** **08 38 48.4 +0.2**
comp=Z,10nm,0.9s,baz=44,slow=8.4,SNR=6.5
VYHS Vyhne 53.95 311 *e*P **P** **08 38 48.8 +0.8**
VYHS pmax pmax
comp=Z,11nm,1.2s
VYHS Vyhne 53.95 311 *e*P **P** **08 38 48.8 +0.8**
PDG Podgorica 54.17 304 ⇓P **P** **08 38 49.6 0.0**
MORH Mrgy, Hungar 54.23 309 ⇑P **P** **08 38 50.3 +0.3**
MA2 Magadan 54.30 35 P **P** **08 38 50.2 -0.2**
comp=Z,22nm,0.6s,baz=280,slow=7.0,SNR=9.8
MA2 Magadan 54.30 35⇑ *e*P **P** **08 38 50.9 +0.5**
MA2 pmax pmax
comp=Z,33nm,0.8s
MA2 Magadan 54.30 35 P **P** **08 38 51.0 +0.6**
JAVC Velka Javorina 54.70 312 *e*P **P** **08 38 54.5 +1.0**
MORC Moravsky Berou 54.73 313 *e*P **P** **08 38 53.9 +0.1**
MORC Moravsky Berou 54.73 313 P **P** **08 38 54.3 +0.5**
MORC pmax pmax
comp=Z,10.0nm,1.1s
MORC Moravsky Berou 54.73 313 P **P** **08 38 54.2 +0.5**
UPP Uppsala 54.83 325 *e*P **P** **08 38 54.3 +0.1**
MODS Modra-Piesok 54.99 311 *e*P **P** **08 38 55.4 -0.2**
MODS Modra-Piesok 54.99 311 *e*P **P** **08 38 55.4 -0.2**
KRLC Kraliky 55.21 313 *e*P **P** **08 38 57.4 +0.2**
KRLC Kraliky 55.21 313 *e*P **P** **08 38 57.4 +0.2**
VRAC Vranov 55.38 312 ⇓P **P** **08 38 59.4 +1.0**
VRAC Vranov 55.38 312 *e*P **P** **08 38 59.0 +0.6**
SEY Seymchan 55.41 31 P **P** **08 38 58.9 +0.6**
comp=Z,18nm,0.9s,baz=265,slow=6.9,SNR=30
SEY Seymchan 55.41 31⇑ *i*P **P** **08 38 59.1 +0.8**
DPC Dobruska-Polom 55.49 314 *e*P **P** **08 38 59.9 +0.7**
DPC Dobruska-Polom 55.49 314 *e*P **P** **08 38 59.9 +0.7**
KRUC Moravsky 55.53 312 *e*P **P** **08 38 59.5 +0.1**
OSTC Ostas 55.55 314 *e*P **P** **08 38 59.9 +0.3**
OSTC *ex* x 08 39 03.0
CHVC Chvalec 55.65 314 *e*P **P** **08 39 00.8 +0.5**
CONA Conrad Observa 55.97 311 *i*P **P** **08 39 03.2 +0.4**
comp=Z,12nm,0.9s,SNR=9.3
ARSA Arzberg 56.27 310 *e*P **P** **08 39 04.9 +0.1**
comp=Z,6.5nm,0.8s
PRU Pruhonice 56.66 313 *e*P **P** **08 39 07.9 +0.4**
PRU Pruhonice 56.66 313 *e*P **P** **08 39 07.9 +0.4**
SOKA Soboth 56.67 309 *i*P **P** **08 39 08.2 +0.5**
comp=Z,11nm,0.9s,SNR=9.6
CKRC Cesky Krumlov 56.92 312 *e*P **P** **08 39 09.7 +0.3**
BRG Berggiesshubel 56.97 314⇑ *i*P **P** **08 39 10.0 +0.3**
BRG Amp 08 39 11.4
comp=Z,10nm,0.7s
OBKA Obir 57.02 309 *i*P **P** **08 39 10.4 +0.2**
comp=Z,8.0nm,0.8s
MOA Molln 57.05 311 *i*P **P** **08 39 10.3 0.0**
comp=Z,11nm,1.1s,SNR=6.3
GEC2 GERESS Array S 57.31 312 P **P** **08 39 12.1 -0.2**
GERES GERESS Array B 57.31 312 P **P** **08 39 12.3 0.0**
comp=Z,1.9nm,0.5s,baz=95,slow=7.4,SNR=18
KHC Kasperske Hory 57.36 312⇑ *e*P **P** **08 39 12.8 +0.2**
KHC pmax pmax
comp=Z,11nm,0.8s
KHC Kasperske Hory 57.36 312 *e*P **P** **08 39 12.6 0.0**
CLL Collm 57.52 315 *e*P **P** **08 39 14.0 +0.5**
CLL *es*P **pP** **08 39 18.0 -0.7**
CLL Collm 57.52 315 *e*P **P** **08 39 14.0 +0.5**
CLL *e* 08 39 18.0
NC405 NORSAR Array S 57.80 327 P **P** **08 39 15.1 -0.3**
NOA NORSAR Array B 58.04 327 P **P** **08 39 16.4 -0.8**
comp=Z,3.9nm,0.7s,baz=89,slow=7.0,SNR=16
PETK Petropavlovsk- 58.17 43 P **P** **08 39 16.8 -1.3**
comp=Z,5.9nm,0.9s,baz=322,slow=2.1,SNR=5.4
PETK Petropavlovsk- 58.17 43 P **P** **08 39 17.9 -0.2**
PETK Petropavlovsk- 58.17 43 P **P** **08 39 17.9 -0.2**
NC204 NORSAR Array S 58.26 327 P **P** **08 39 18.2 -0.5**
NC204 IAmb IAmb 08 39 35.3
comp=Z,32nm,1.4s
NRCA Norcia 58.59 305 P **P** **08 39 21.3 0.0**
NRCA IAmb IAmb 08 39 27.5
comp=Z,13nm,1.0s
WTTA Wattenberg 58.89 310 *i*P **P** **08 39 22.7 -0.8**
comp=Z,6.2nm,0.7s
CTI Castel Tesino 59.07 309 P **P** **08 39 24.0 -0.6**
CTI pmax pmax
comp=Z,5.0nm,0.7s
CTI Castel Tesino 59.07 309 P **P** **08 39 24.0 -0.6**
TEOL Teolo 59.17 308 P **P** **08 39 25.1 -0.1**
SQTA Sankt Quirin 59.19 310 *i*P **P** **08 39 24.5 -0.9**
comp=Z,7.3nm,0.6s
MOTA Moosalm 59.24 311 *i*P **P** **08 39 24.9 -0.9**
comp=Z,8.5nm,0.7s,SNR=6.8
RETA Reutte 59.45 311 *i*P **P** **08 39 26.6 -0.6**
comp=Z,5.4nm,0.8s
FETA Feichten 59.54 310 *i*P **P** **08 39 27.2 -0.8**
comp=Z,8.6nm,1.1s
LATE Laterza 59.58 305 P **P** **08 39 26.8 -1.4**
LATE IAmb IAmb 08 39 33.0
comp=Z,11nm,1.2s
OSSC Osservatorio P 59.80 306 P **P** **08 39 29.1 -0.5**
SALO Salr 59.92 309 P **P** **08 39 30.8 +0.3**
DAVA Damuels 60.07 311 *i*P **P** **08 39 31.1 -0.4**
comp=Z,12nm,0.8s
FITZ Fitzroy Crossi 60.53 134 P **P** **08 39 35.6 +0.8**
FITZ IAmb IAmb 08 39 39.9
comp=Z,12nm,0.8s
BOB Bobbio (Coli) 60.83 308 ⇓P **P** **08 39 37.6 +0.9**

BILL Bilibino 61.30 25 *e*P **P** **08 39 40.7 +1.3**
BILL *e**PP **pP** **08 39 43.7 -0.9**
BILL pmax pmax
comp=Z,26nm,1.3s
BILL Bilibino 61.30 25 P **P** **08 39 40.1 +0.7**
BTNL Ternell 61.92 315 *d*P **P** **08 39 44.3 +0.3**
SENIN Lac Senin/Sane 61.98 310 P **P** **08 39 44.3 -0.3**
SENIN IAmb IAmb 08 39 45.5
comp=Z,10nm,0.8s
MEM Membach 61.99 315 *d*P **P** **08 39 44.7 +0.3**
comp=Z,6.5nm,0.8s
MEM *ds*P **pP** **08 39 48.2 -1.3**
BGES Gesves 62.61 315 *d*P **P** **08 39 49.2 +0.6**
BGES *ds*P **pP** **08 39 52.6 -1.1**
BMRD Maredsous 62.83 315 *d*P **P** **08 39 49.5 -0.5**
comp=Z,4.6nm,0.7s
KEST Kesra 63.07 298 P **P** **08 39 52.5 +0.5**
comp=Z,22nm,0.8s,baz=306,slow=2.2,SNR=23
KEST Kesra 63.07 298 P **P** **08 39 52.7 +0.7**
NOR Nord 64.22 351 *i*P **P** **08 39 58.2 -0.5**
NOR IAmb IAmb 08 39 59.3
comp=Z,5.2nm,0.7s
NOR Nord 64.22 351 *i*P **P** **08 39 58.2 -0.5**
NOR pmax pmax
comp=Z,5.0nm,0.7s
MANU Manus Island 67.08 105 ⇑P P 08 40 26.1 +8.0
DBG Daneborg 67.29 343 *i*P **P** **08 40 18.8 +0.2**
DBG IAmb IAmb 08 40 19.9
comp=Z,3.4nm,0.9s
WRKA Warakurna 67.34 137 ⇓P **P** **08 40 20.5 +0.9**
WB0 Warramunga Arr 67.51 129 P **P** **08 40 21.3 +0.5**
WRA Warramunga Arr 67.59 129 P **P** **08 40 21.9 +0.6**
comp=Z,12nm,0.7s,baz=322,slow=6.4,SNR=82
WRA Warramunga Arr 67.59 129 *i*P **P** **08 40 22.2 +0.9**
WRA pmax pmax
comp=Z,12nm,0.6s
WRA Warramunga Arr 67.59 129 P **P** **08 40 21.7 +0.4**
WRAB Tennant Creek 67.60 129⇑ *i*P **P** **08 40 22.0 +0.7**
WRAB pmax pmax
comp=Z,18nm,0.8s
WRAB Tennant Creek 67.60 129 P **P** **08 40 22.0 +0.7**
WRAB Tennant Creek 67.60 129 ⇑P **P** **08 40 22.2 +1.0**
WB2 Warramunga Arr 67.60 129 P **P** **08 40 21.8 +0.4**
WR0 Warramunga Arr 67.75 129 P **P** **08 40 23.1 +0.9**
LSZ Lusaka 69.55 239 P **P** **08 40 34.0 +0.3**
comp=Z,12nm,0.7s,baz=55,slow=5.7,SNR=11
LSZ Lusaka 69.55 239 P **P** **08 40 34.0 +0.3**
AS31 Alice Springs 69.87 132 P **P** **08 40 36.1 +0.7**
ASAR Alice Springs 69.87 132 P **P** **08 40 35.8 +0.3**
comp=Z,12nm,0.9s,baz=315,slow=6.2,SNR=88
ASAR Alice Springs 69.87 132 P **P** **08 40 36.0 +0.6**
ASAR Alice Springs 69.87 132 P **P** **08 40 36.0 +0.6**
TAM Tamanrasset 70.56 286 P **P** **08 40 39.4 -0.6**
TAM pmax pmax
comp=Z,8.0nm,0.8s
TAM Tamanrasset 70.56 286 P **P** **08 40 39.4 -0.6**
TAM IAmb IAmb 08 40 41.6
comp=Z,7.8nm,0.8s
NEEM North Greenlan 71.60 351 *i*P **P** **08 40 45.6 +0.1**
NEEM IAmb IAmb 08 40 46.2
comp=Z,20nm,0.6s
NEEM North Greenlan 71.60 351 ⇑P **P** **08 40 45.6 +0.1**
ESDC Sonseca Array 71.81 306 P **P** **08 40 46.9 -0.3**
comp=Z,3.5nm,0.8s,baz=56,slow=6.0,SNR=25
PAB San Pablo 72.14 306 P **P** **08 40 49.4 +0.3**
PAB San Pablo 72.14 306 P **P** **08 40 49.4 +0.3**
PAB IAmb IAmb 08 40 49.7
comp=Z,7.1nm,0.8s
EUNU Eureka 72.15 358 P **P** **08 40 49.3 +0.8**
EUNU Eureka 72.15 358 ⇓P **P** **08 40 49.4 +0.9**
RDOG Red Dog Mine 72.26 21 P **P** **08 40 51.0 +0.9**
RDOG IAmb IAmb 08 40 50.7
comp=Z,7.7nm,0.7s
RDOG Red Dog Mine 72.26 21 P 08 40 50.2
baz=301
A21K Barrow 72.30 17 P **P** **08 40 50.3 +0.9**
A21K IAmb IAmb 08 40 51.1
comp=Z,18nm,0.8s
A21K Barrow 72.31 17 P 08 40 50.3
baz=306
MATP Matopo 72.53 235 P **P** **08 40 51.7 0.0**
comp=Z,6.9nm,0.7s,baz=50,slow=5.3,SNR=11
SUMG Summit 72.65 345 *i*P **P** **08 40 52.4 +0.4**
SUMG IAmb IAmb 08 40 54.6
comp=Z,12nm,0.9s
SUMG Summit 72.65 345 P **P** **08 40 51.7 -0.3**
SUMG pmax pmax
comp=Z,14nm,0.8s
SUMG Summit 72.65 345 P **P** **08 40 51.7 -0.3**
SUMG IAmb IAmb 08 40 54.5
comp=Z,14nm,0.8s
SUMG Summit 72.65 345 ⇑P **P** **08 40 52.2 +0.2**
ANM Nome 73.16 25 P 08 40 56.0
baz=300
MVO Moncorvo 73.42 308 *e*P **P** **08 40 57.2 +0.4**
MTE Manteigas 74.08 307 *e*P **P** **08 41 01.4 +0.8**
PVIS Viseu 74.20 308 *e*P **P** **08 41 02.1 +0.8**
PCBR Castelo Branco 74.25 307 *e*P **P** **08 41 02.3 +0.8**
comp=Z,22nm,1.6s
PBAR Barrancos 74.60 305 *e*P **P** **08 41 04.2 +0.6**
comp=Z,20nm,1.4s
PMTG Montargil 75.09 306 *e*P **P** **08 41 07.0 +0.6**
EVO Evora 75.16 306 *e*P **P** **08 41 07.7 +0.9**
comp=Z,23nm,1.4s
PBEJ Beja 75.26 305 *e*P **P** **08 41 08.3 +0.9**
PSBE So Bento 75.32 307 *e*P **P** **08 41 08.6 +0.8**
PVAQ Vaqueiros 75.40 305 *e*P **P** **08 41 08.8 +0.6**
comp=Z,35nm,1.5s
PVAQ Vaqueiros 75.40 305 P **P** **08 41 08.6 +0.3**
PVAQ IAmb IAmb 08 41 13.2
comp=Z,19nm,1.0s
PCVE Castro Verde 75.54 305 *e*P **P** **08 41 09.7 +0.7**
PBDV Barranco-do-Ve 75.62 305 *e*P **P** **08 41 10.3 +0.8**
comp=Z,31nm,1.3s
TOLK Toolik Lake Re 75.88 18 P **P** **08 41 11.5 +1.0**
TOLK Toolik Lake Re 75.88 18 P 08 41 11.6
baz=312
CTAO Charters Tower 76.29 122 P **P** **08 41 14.4 +0.9**
CTAO pmax pmax
comp=Z,11nm,0.8s
CTAO Charters Tower 76.29 122 P **P** **08 41 14.4 +0.9**
CTAO IAmb IAmb 08 41 15.4
comp=Z,11nm,0.8s
CTAO Charters Tower 76.29 122 ⇑P **P** **08 41 14.3 +0.9**
IMAR Indian Mountai 76.39 21 P **P** **08 41 13.8 +0.5**
COLD Coldfoot 76.66 19 P **P** **08 41 15.6 +0.8**
COLD IAmb IAmb 08 41 17.0
comp=Z,22nm,1.0s
COLD Coldfoot 76.66 19 P 08 41 16.1
baz=312
LBTB Lobatse 77.49 233 P **P** **08 41 20.4 +0.2**
LBTB pmax pmax
comp=Z,13nm,0.9s
LBTB Lobatse 77.49 233 P **P** **08 41 20.4 +0.2**
LBTB IAmb IAmb 08 41 25.0
comp=Z,13nm,0.9s
LBTB Lobatse 77.49 233 ⇓P **P** **08 41 20.9 +0.7**
TTA Tatalina 77.53 24 P **P** **08 41 21.4 +1.5**
TTA pmax pmax
comp=Z,17nm,1.4s
TTA Tatalina 77.53 24 P **P** **08 41 21.4 +1.5**
TTA IAmb IAmb 08 41 22.7
comp=Z,17nm,1.4s
TTA Tatalina 77.53 24 P 08 41 21.5
baz=308
TOA0 Torodi Ar. Sit 77.86 279 P **P** **08 41 22.2 -0.3**
TORD Torodi Ar. Bea 77.86 279 P **P** **08 41 22.1 -0.4**
comp=Z,4.6nm,0.7s,baz=50,slow=4.7,SNR=30
MLY Manley 77.97 21 P **P** **08 41 23.6 +1.4**
MLY Manley 77.97 21 P 08 41 23.5
baz=312,SNR=27
CHUM Lake Minchumin 78.21 22 P 08 41 25.3
baz=311,SNR=9.6
I23K Minto, Yukon-K 78.32 20 P **P** **08 41 25.0 +0.9**
I23K IAmb IAmb 08 41 26.2
comp=Z,11nm,0.8s
I23K Minto, Yukon-K 78.32 20 P 08 41 25.3
baz=313,SNR=16
BPAW Bear Paw Mtn. 78.51 22 P **P** **08 41 25.3 0.0**
BPAW IAmb IAmb 08 41 27.5
comp=Z,14nm,0.7s
BPAW Bear Paw Mtn. 78.51 22 P 08 41 26.2
baz=312,SNR=25
NEA2 Nenana 78.79 21 P 08 41 27.8
baz=313,SNR=34

MDM Murphy Dome 78.80 20 P **P** **08 41 27.3 +0.4**
MDM IAmb IAmb 08 41 28.6
comp=Z,16nm,0.7s
PPLA Purkeypile 78.90 23 P **P** **08 41 28.3 +0.7**
PPLA IAmb IAmb 08 41 42.5
comp=Z,15nm,1.0s
PPLA Purkeypile 78.90 23 P 08 41 28.7
baz=311,SNR=6.7
POKR Poker Plat Res 78.93 20 P **P** **08 41 28.8 +1.3**
POKR Poker Plat Res 78.93 20 P 08 41 28.8
baz=315,SNR=9.8
BWN Browne 78.95 21 P **P** **08 41 28.5 +0.8**
TCOL CIGO, UAF Yank 78.97 20 P 08 41 28.7
baz=314,SNR=8.0
COLA College 78.97 20⇑ *e*P **P** **08 41 28.4 +0.7**
COLA pmax pmax
comp=Z,15nm,0.8s
COLA College 78.97 20 ⇓P **P** **08 41 28.7 +1.0**
COLA College 78.97 20 P 08 41 28.7
baz=314
CCB Clear Creek Bu 79.14 20 P **P** **08 41 28.6 -0.1**
CCB IAmb IAmb 08 41 29.5
comp=Z,9.3nm,0.6s
TRF Thorofare Moun 79.18 22 P 08 41 29.4
baz=313
WRH Wood River Hil 79.18 21 P **P** **08 41 29.0 +0.1**
WRH IAmb IAmb 08 41 29.8
comp=Z,7.9nm,0.8s
PRP Porcupine Dome 79.20 19 P **P** **08 41 30.7 +1.5**
PRP IAmb IAmb 08 41 31.6
comp=Z,18nm,0.9s
PRP Porcupine Dome 79.20 19 P 08 41 30.7
baz=316
IL31 79.34 20 P **P** **08 41 29.4 -0.3**
IL31 IAmb IAmb 08 41 30.6
comp=Z,12nm,0.7s
ILAR Eielson Array 79.34 20 P **P** **08 41 29.4 -0.4**
comp=Z,9.5nm,0.6s,baz=303,slow=4.6,SNR=101
ILAR PP **PP** **08 44 26.9 -2.1**
comp=Z,2.7nm,0.9s,baz=311,slow=7.4,SNR=8.5
ILAR Eielson Array 79.34 20 P **P** **08 41 29.1 -0.7**
MCK McKinley 79.43 21 P **P** **08 41 30.2 -0.1**
MCK pmax pmax
comp=Z,9.0nm,0.6s
MCK McKinley 79.43 21 P **P** **08 41 30.2 -0.1**
MCK IAmb IAmb 08 41 31.5
comp=Z,8.9nm,0.6s
MCK McKinley 79.43 21 P 08 41 31.0
baz=314
HDA Harding Lake 79.58 20 P 08 41 30.5
baz=315,SNR=8.5
HDA P 08 41 30.5
baz=315,SNR=8.5
SKT Skwentna 79.74 24 P **P** **08 41 32.4 +0.4**
SKT Skwentna 79.74 24 P 08 41 32.8
baz=312,SNR=20
BOSA Boshof 79.99 230 P **P** **08 41 34.0 +0.1**
comp=Z,4.7nm,0.8s,baz=30,slow=2.5,SNR=7.1
INK Inuvik 79.99 14 P **P** **08 41 33.5 +0.3**
INK pmax pmax
comp=Z,10.0nm,1.1s
INK Inuvik 79.99 14 P **P** **08 41 33.5 +0.3**
INK Inuvik 79.99 14 ⇑P **P** **08 41 33.7 +0.5**
INK Inuvik 79.99 14 P 08 41 33.8
baz=326
TSUM Tsumeb 80.03 242 P **P** **08 41 34.4 0.0**
comp=Z,2.8nm,0.8s,baz=143,slow=5.1,SNR=1.8
WAT2 Susitna Watana 80.08 22 P 08 41 33.6
baz=314
SUA Susitna One 80.36 24 P 08 41 36.2
baz=312,SNR=13
STKA Stephens Creek 80.42 134 P **P** **08 41 35.9 -0.1**
comp=Z,9.3nm,0.7s,baz=341,slow=4.2,SNR=14
STKA Stephens Creek 80.42 134 P **P** **08 41 36.2 +0.2**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 80.42 134 P **P** **08 41 36.2 +0.2**
WAT6 Susitna Watana 80.62 22 P 08 41 37.4
baz=315,SNR=8.4
C36M Paulatuk 80.78 10 P **P** **08 41 36.9 -0.5**
C36M IAmb IAmb 08 41 43.0
comp=Z,28nm,1.4s
SCRK Sand Creek 80.78 20 P **P** **08 41 38.2 +0.4**
C36M Paulatuk 80.78 10 P 08 41 37.1
baz=334
SCRK Sand Creek 80.78 20 P 08 41 38.5
baz=318,SNR=44
GHO Glory Hole Cre 80.79 23 P **P** **08 41 38.2 +0.5**
GHO IAmb IAmb 08 41 39.1
comp=Z,11nm,0.8s
PMR Palmer 80.84 23 P 08 41 38.6
baz=314,SNR=10
EPYK Eagle Plains 80.87 16 P 08 41 38.3
baz=324
SML Sawmill 80.97 23 P 08 41 39.7
baz=314,SNR=24
RC01 Rabbit Creek A 80.98 24 P 08 41 39.6
baz=313,SNR=5.2
EGAK Eagle 80.99 18 P **P** **08 41 39.4 +0.8**
EGAK IAmb IAmb 08 41 40.2
comp=Z,9.4nm,0.8s
EGAK Eagle 80.99 18 P 08 41 39.3
baz=320
DOT Dot Lake 81.00 20 P **P** **08 41 39.5 +0.7**
DOT IAmb IAmb 08 41 40.0
comp=Z,12nm,0.7s
PAX Paxson 81.07 21 P **P** **08 41 40.0 +0.7**
PAX pmax pmax
comp=Z,14nm,1.2s
PAX Paxson 81.07 21 P **P** **08 41 40.0 +0.7**
PAX IAmb IAmb 08 41 42.5
comp=Z,14nm,1.2s
PAX Paxson 81.07 21 P 08 41 39.9
baz=317
KNK Knik Glacier 81.20 23 P 08 41 41.0
baz=314
SCM Sheep Creek Mo 81.29 22 P **P** **08 41 41.6 +1.2**
SCM pmax pmax
comp=Z,41nm,0.6s
SCM Sheep Creek Mo 81.29 22 P **P** **08 41 41.6 +1.2**
K27K Chicken 81.30 19 P 08 41 41.8
baz=319
O22K Cooper Landing 81.40 24 P 08 41 41.7
baz=313
M24K Tolsona, Glenn 81.47 22 P 08 41 43.1
baz=316,SNR=6.1
HARP HAARP 81.59 21 P 08 41 43.6
baz=317
SEW Seward 81.76 24 P 08 41 43.5
baz=314
KLU Klutina 82.00 22 P 08 41 45.3
baz=316,SNR=6.8
DAWY Dawson 82.03 18 P **P** **08 41 44.8 +0.5**
DAWY IAmb IAmb 08 41 45.7
comp=Z,24nm,1.5s
GLI Glacier Island 82.05 23 P 08 41 44.9
baz=316,SNR=6.7
L27K Beaver Creek, 82.11 19 P 08 41 46.1
baz=320,SNR=12
BCAR Beaver Creek A 82.12 19 P **P** **08 41 45.5 +0.7**
KDAK Kodiak Island 82.13 27 P **P** **08 41 45.4 +0.6**
KDAK pmax pmax
comp=Z,15nm,0.7s
KDAK Kodiak Island 82.13 27 P **P** **08 41 45.4 +0.6**
KDAK IAmb IAmb 08 41 46.5
comp=Z,15nm,0.7s
KDAK Kodiak Island 82.13 27 P 08 41 45.8
baz=311
OHAK Old Harbor 82.21 28 P 08 41 46.0
baz=311
KOWA Kowa 82.23 282 P **P** **08 41 46.0 -0.1**
KOWA IAmb IAmb 08 41 47.5
comp=Z,11nm,0.8s
N25K Chitina, Valde 82.35 21 P **P** **08 41 46.9 +0.9**
N25K Chitina, Valde 82.35 21 P 08 41 47.6
baz=318,SNR=18
GLB Gilahina Butte 82.73 21 P **P** **08 41 48.6 +0.7**
GLB IAmb IAmb 08 41 50.1
comp=Z,10nm,1.1s
EYAK Cordova Ski Ar 82.74 23 P **P** **08 41 48.3 +0.3**
EYAK IAmb IAmb 08 41 49.8
comp=Z,12nm,0.7s
EYAK Cordova Ski Ar 82.75 23 P 08 41 49.4
baz=317
BMRM Bremner River 82.82 22 P **P** **08 41 49.6 +1.2**
BMRM IAmb IAmb 08 41 50.5

	comp=Z,15nm,0.8s								
BMRM	**Bremner River**	**82.82**	**22**	P			08 41 49.6		
	baz=318,SNR=8.1								
EIDS	**Eidsvold**	**82.98**	**123**	P		**P**	**08 41 50.8**	**+1.1**	
EIDS				IAmb		IAmb	08 41 51.0		
	comp=Z,7.5nm,0.9s								
VRDI	**Verde Repeater**	**83.00**	**21**	P		**P**	**08 41 50.3**	**+0.7**	
VRDI				IAmb		IAmb	08 41 51.7		
	comp=Z,19nm,1.0s								
MCARA	**McCarthy VSAT**	**83.02**	**21**	P		**P**	**08 41 50.8**	**+1.4**	
MCARA	**McCarthy VSAT**	**83.02**	**21**	P			08 41 50.9		
	baz=319								
RAGM	**Ragged Mountai**	**83.22**	**22**	P		**P**	**08 41 52.0**	**+1.5**	
CRQM	**Cirque**	**83.46**	**21**	P		**P**	**08 41 53.0**	**+1.1**	
CRQE	**Cirque**	**83.48**	**21**	P			08 41 53.1		
	baz=319								
KAIM	**Kayak Island**	**83.65**	**23**	P			08 41 54.4		
	baz=318								
CTG	**Chitna Glacier**	**83.87**	**21**	P			08 41 55.2		
	baz=320								
LOGN	**Logan Glacier**	**84.08**	**21**	P		**P**	**08 41 56.3**	**+1.2**	
LOGN				IAmb		IAmb	08 42 05.0		
	comp=Z,12nm,1.1s								
YAH	**Yahtse**	**84.20**	**21**	P		**P**	**08 41 57.5**	**+1.7**	
PINM	**Pinnacle**	**84.89**	**21**	P			08 42 00.2		
	baz=321								
HYT	**Haines Junctio**	**85.14**	**19**	P		**P**	**08 42 01.8**	**+1.4**	
WHY	**Whitehorse**	**86.03**	**18**	P			08 42 05.2		
	baz=326								
DBIC	**Dimbokro**	**86.52**	**276**	P		**P**	**08 42 07.5**	**-0.4**	
	comp=Z,7.5nm,0.6s,baz=54,slow=5.6,SNR=11								
DBIC	**Dimbokro**	**86.52**	**276**	P		**P**	**08 42 08.2**	**+0.3**	
DBIC				pmax		pmax			
	comp=Z,12nm,0.9s								
DBIC	**Dimbokro**	**86.52**	**276**	P		**P**	**08 42 08.2**	**+0.3**	
DBIC				IAmb		IAmb	08 42 12.5		
	comp=Z,12nm,0.8s								
SKAG	**Skagway**	**86.89**	**19**	P			08 42 10.5		
	baz=325								
YKA	**Yellowknife Ar**	**88.59**	**9**	P		**P**	**08 42 16.5**	**-0.4**	
	comp=Z,2.4nm,0.7s,baz=340,slow=4.6,SNR=30								
ASCN	**Ascension**	**101.64**	**267**	⇑P		**Pdif**	**08 43 09.3**	**-8.1**	
JCT	**Junction City**	**121.78**	**5**	⇓P		**Pdif**	**08 44 43.3**	**-3.5**	
TXAR	**Lajitas Array**	**122.52**	**9**	PKP		**PKPdf**	**08 48 19.6**	**-0.8**	
	comp=Z,0.3nm,0.5s,baz=144,slow=1.6,SNR=5.7								
SMLC	**San Martn de**	**138.12**	**328**	*e*P		**PKPdf**	**08 48 49.7**	**-0.4**	
ZARC	**Zaragoza, Cauc**	**139.63**	**328**	*e*P		**PKPdf**	**08 48 52.3**	**-0.6**	
PTBC	**PUERTO BERRIO**	**140.26**	**326**	*e*P		**PKPdf**	**08 48 53.7**	**-0.4**	
NORC	**Norcasia**	**141.31**	**326**	*e*P		**PKPdf**	**08 48 55.2**	**-0.8**	
CHIC	**Chingaza**	**141.53**	**324**	*e*P		**PKPdf**	**08 48 50.0**	**-6.8**	
ROSC	**El Rosal**	**141.66**	**325**	PKP		**PKPdf**	**08 48 54.3**	**-2.8**	
	comp=Z,13nm,0.7s,baz=162,slow=20,SNR=3.4								
GUY2C	**Guyana, Caldas**	**141.85**	**327**	*e*P		**PKPdf**	**08 48 51.1**	**-6.4**	
ORTC	**Ortega, Tolima**	**142.92**	**325**	*e*P		**PKPdf**	**08 48 55.0**	**-3.9**	
YOTC	**Yotoco, Valle**	**143.40**	**327**	*e*P		PKPab	08 48 56.3	+0.5	
MACC	**Macarena, Meta**	**143.68**	**322**	*e*P		PKPab	08 48 54.1	-2.7	
SAML	**Samuel**	**144.33**	**296**	PKIKP		PKPbc	08 48 59.9	+0.3	
SAML	**Samuel**	**144.33**	**296**			PKPbc	08 48 59.9	+0.3	
PCON	**Cinco Dias**	**144.86**	**326**	*e*P		PKPbc	08 49 02.3	+0.3	
SOTA	**Rioblanco**	**145.13**	**326**	*e*P		**PKPab**	**08 49 03.0**	**+0.1**	
PTLC	**Puerto Leguiza**	**145.84**	**321**	*e*P		**PKPab**	**08 49 05.2**	**+0.3**	
CPUP	**Villa Florida**	**146.25**	**264**	PKPbc		**PKPdf**	**08 49 03.9**	**-0.3**	
	comp=Z,6.2nm,1.0s,baz=53,slow=4.3,SNR=11								
OTAV	**Otavalo**	**147.67**	**327**	*e*P		**PKPdf**	**08 49 08.2**	**+0.7**	
LPAZ	**La Paz**	**152.36**	**289**	PKPbc		**PKPbc**	**08 49 21.6**	**-0.2**	
	comp=Z,2.4nm,0.7s,baz=333,slow=1.3,SNR=8.7								
LPAZ	**La Paz**	**152.36**	**289**	*e*P		**PKPdf**	**08 49 15.5**	**+0.5**	

*IDC **25** 08:31:30.7±1.0,27.°68N×85.°92E, h0km, mb4.1/19, mb1 4.2/20,mb1mx4.0/53,mbtmp4.1/20,ML4.4/1,Error ellipse: s-maj=26.0km s-min=17.9km az=32.0*
*NEIC **25** 08:31:32.4±1.6,27.°7N±0.°1×85.°95E±0.°05, h10km±1km, mb4.6/26, Error ellipse: s-maj=17.8km s-min=6.8km az=163.0*
*DMN **25** 08:31:33.0±0.2,27.°91N×85.°96E, h20km, Ml5.0/4, Error ellipse: s-maj=6.1km s-min=1.6km az=10.0*

ISC 25 08:31:33.1±1.0,27.°75N±0.°06×85.°93E±0.°03, h13km±6km, n64, σ0°95/70, mb4.4/29, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.16**	**345**	*e*Sg	**Sg**	**08 31 40.6**	**+0.4**
PKI	**Pulchoki**	**0.49**	**249**	*e*Pg	**Pn**	**08 31 45.5**	**-0.7**
PKI				*e*Sg	**Sb**	**08 31 52.6**	**+1.5**
KKN	**Kakani**	**0.57**	**274**	*e*Pg	**Pb**	**08 31 45.5**	**+0.3**
KKN				*e*Sg	**Sb**	**08 31 53.2**	**-0.1**
DMN	**Daman**	**0.74**	**259**	*e*Pg	**Pn**	**08 31 49.3**	**-0.2**
DMN				*e*Sg	**Sn**	**08 32 00.3**	**-0.5**
	4μm,0.5s						
ODAN	**Odare**	**1.58**	**124**	*e*Pg	**Pg**	**08 32 03.9**	**+0.4**
ODAN				*e*Sg	**Sg**	**08 32 25.6**	**+1.6**
	4μm,0.3s						
TAPN	**Taplejung**	**1.63**	**104**	*e*Pg	**Pg**	**08 32 04.3**	**-0.2**
TAPN				*e*Sg	**Sg**	**08 32 25.7**	**-0.1**
	2μm,0.2s						
KOLN	**Koldanda**	**2.06**	**271**	*e*Pg	**Pg**	**08 32 11.8**	**-0.9**
KOLN	**Koldanda**	**2.06**	**271**	*e*Pg	**Pg**	**08 32 12.1**	**-0.6**
KOLN				*e*Sg	**Sg**	**08 32 38.7**	**-0.8**
KOLN				*e*Sg	**Sb**	**08 32 39.7**	**+3.5**
	3μm,0.4s						
PYUN	**Piuthan**	**2.62**	**278**	*e*Pg	**Pg**	**08 32 22.6**	**-0.8**
PYUN				*e*Sg	**Sg**	**08 32 56.0**	**-1.4**
	2μm,0.4s						
SHL	**Shillong**	**5.76**	**111**	Pn	**Pn**	**08 32 55.5**	**-2.9**
MK31	**Makanchi Array**	**19.22**	**352**	P	**P**	**08 35 56.5**	**-0.4**
MKAR	**Makanchi Array**	**19.22**	**352**	P	**P**	**08 35 57.1**	**+0.3**
	1.2nm,0.3s,baz=182,slow=9.8,SNR=5.7						
MKAR	**Makanchi Array**	**19.22**	**352**	P	**P**	**08 35 57.0**	**+0.1**
MAKZ	**Makanchi**	**19.27**	**352**	P	**P**	**08 35 57.5**	**0.0**
KURBB	**Kurchatov Arra**	**23.52**	**348**	P	**P**	**08 36 43.7**	**+0.9**
	2.9nm,0.6s,baz=162,slow=9.2,SNR=2.7						
KURK	**Kurchatov**	**23.59**	**348**	P	**P**	**08 36 43.7**	**+0.2**
GEYT	**Alibeck**	**25.39**	**301**	P	**P**	**08 37 01.2**	**+1.0**
	5.3nm,0.8s,baz=110,slow=12,SNR=2.6						
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**08 37 03.1**	**+0.8**
	7.0nm,0.7s,baz=219,slow=9.8,SNR=5.3						
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**08 37 03.2**	**+0.9**
SONM				IAmb	IAmb	08 37 05.8	
	comp=Z,6.0nm,0.8s						
ZALV	**Zalesovo Beam**	**26.18**	**359**	P	**P**	**08 37 08.1**	**+0.9**
	comp=Z,6.1nm,0.6s,baz=186,slow=9.5,SNR=3.5						
ZALV	**Zalesovo Beam**	**26.18**	**359**	P	**P**	**08 37 08.7**	**+1.5**
ABKAR	**Akbulak array**	**29.32**	**324**	P	**P**	**08 37 36.3**	**+1.0**
ABKAR	**Akbulak array**	**29.32**	**324**	P	**P**	**08 37 36.3**	**+1.0**
ABKAR				IAmb	IAmb	08 37 36.9	
	comp=Z,6.9nm,0.5s						
ARU	**Arti**	**34.67**	**333**	P	**P**	**08 38 22.8**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=114,slow=20,SNR=2.3						
ARU	**Arti**	**34.67**	**333**	IAmb	IAmb	08 38 23.4	
	comp=Z,4.4nm,0.5s						
KSRS	**Korea Array**	**36.42**	**64**	P	**P**	**08 38 36.9**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=266,slow=9.4,SNR=1.5						
USRK	**Ussuriysk Ar.**	**40.17**	**53**	P	**P**	**08 39 08.6**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=262,slow=8.1,SNR=4.9						
NRIK	**Noril'sk**	**41.63**	**1**	P	**P**	**08 39 21.5**	**+0.8**
	comp=Z,7.1nm,0.5s,baz=182,slow=6.3,SNR=8.9						
NRIK	**Noril'sk**	**41.63**	**1**	P	**P**	**08 39 21.4**	**+0.8**
NRIK				IAmb	IAmb	08 39 22.3	
	comp=Z,11nm,0.6s						
ELL	**Elmali**	**47.64**	**296**	P	**P**	**08 40 09.6**	**+0.3**
AKASG	**Malin Array Be**	**48.17**	**314**	P	**P**	**08 40 12.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=83,slow=6.2,SNR=2.2						
AKASG	**Malin Array Be**	**48.17**	**314**	IAmb	IAmb	08 40 16.5	
	comp=Z,1.1nm,1.0s						
AKBB	**Malin Array Si**	**48.17**	**314**	P	**P**	**08 40 13.6**	**+0.6**
AKBB				IAmb	IAmb	08 40 21.3	
	comp=Z,4.5nm,0.9s						
TIXI	**Tiksi**	**49.84**	**16**	P	**P**	**08 40 24.4**	**-1.1**
	comp=Z,2.8nm,0.4s,baz=216,slow=6.4,SNR=2.7						
TIXI	**Tiksi**	**49.84**	**16**	P	**P**	**08 40 25.6**	**+0.1**
TIXI				IAmb	IAmb	08 40 25.9	
	comp=Z,3.7nm,0.4s						
FINES	**FINESS Array B**	**51.67**	**328**	P	**P**	**08 40 39.1**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=110,slow=10,SNR=3.6						
KEV	**Kevo**	**53.59**	**338**	P	**P**	**08 40 53.7**	**+0.2**
ARCES	**ARCESS Array B**	**54.02**	**338**	P	**P**	**08 40 56.8**	**+0.1**
	comp=Z,5.0nm,0.7s,baz=104,slow=7.4,SNR=6.9						
SEY	**Seymchan**	**54.98**	**31**	P	**P**	**08 41 03.9**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=235,slow=16,SNR=3.2						
ANA2	**Anatahan**	**56.10**	**88**	P	**P**	**08 41 10.9**	**-1.6**
GERES	**GERESS Array B**	**58.23**	**312**	P	**P**	**08 41 27.0**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=80,slow=7.1,SNR=2.4						
NC405	**NORSAR Array S**	**58.53**	**327**	P	**P**	**08 41 27.9**	**-1.2**
NC303	**NORSAR Array S**	**58.70**	**327**	P	**P**	**08 41 29.6**	**-0.6**
NOA	**NORSAR Array B**	**58.78**	**327**	P	**P**	**08 41 30.0**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=77,slow=8.0,SNR=4.6						
MSSA	**Maissana**	**61.84**	**308**	P	**P**	**08 41 51.3**	**-0.7**
WB0	**Warramunga Arr**	**66.57**	**130**	P	**P**	**08 42 23.4**	**+0.1**
WB0				IAmb	IAmb	08 42 32.9	
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	**66.65**	**130**	P	**P**	**08 42 23.9**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=323,slow=6.6,SNR=1.9						
WB2	**Warramunga Arr**	**66.66**	**130**	P	**P**	**08 42 23.7**	**-0.1**
ASAR	**Alice Springs**	**68.96**	**133**	P	**P**	**08 42 38.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=316,slow=6.1,SNR=1.4						
EUNU	**Eureka**	**72.33**	**359**	P	**P**	**08 42 59.0**	**+0.8**
ESDC	**Sonseca Array**	**72.79**	**306**	P	**P**	**08 43 01.3**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=62,slow=6.0,SNR=2.5						
BMAR	**Burnt Mountain**	**77.89**	**18**	P	**P**	**08 43 31.5**	**+1.1**
ILAR	**Eielson Array**	**79.11**	**20**	P	**P**	**08 43 36.4**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=316,slow=4.5,SNR=3.2						
SKT	**Skwentna**	**79.44**	**24**	P	**P**	**08 43 39.2**	**+0.2**
SKT				IAmb	IAmb	08 43 39.5	
	comp=Z,4.7nm,0.8s						
SCRK	**Sand Creek**	**80.56**	**20**	P	**P**	**08 43 45.1**	**0.0**
SML	**Sawmill**	**80.69**	**23**	P	**P**	**08 43 46.0**	**+0.3**
SML				IAmb	IAmb	08 44 03.2	
	comp=Z,11nm,1.2s						
SCM	**Sheep Creek Mo**	**81.02**	**23**	P	**P**	**08 43 47.8**	**+0.3**
K27K	**Chicken**	**81.09**	**19**	P	**P**	**08 43 48.4**	**+0.6**
K27K				IAmb	IAmb	08 43 52.7	
	comp=Z,3.8nm,1.2s						
L27K	**Beaver Creek,**	**81.89**	**20**	P	**P**	**08 43 53.0**	**+0.9**
L27K				IAmb	IAmb	08 44 00.5	
	comp=Z,4.3nm,1.4s						
BCAR	**Beaver Creek A**	**81.90**	**20**	P	**P**	**08 43 52.8**	**+0.6**
MCARA	**McCarthy VSAT**	**82.77**	**21**	P	**P**	**08 43 58.0**	**+1.3**
MCARA				IAmb	IAmb	08 43 58.6	
	comp=Z,5.6nm,0.8s						
RAGM	**Ragged Mountai**	**82.95**	**23**	P	**P**	**08 43 58.5**	**+0.8**
RAGM				IAmb	IAmb	08 44 17.1	
	comp=Z,5.6nm,1.0s						
TGL	**Tana Glacier**	**83.30**	**22**	P	**P**	**08 44 00.2**	**+0.6**
TGL				IAmb	IAmb	08 44 01.1	
	comp=Z,3.6nm,0.6s						
TXAR	**Lajitas Array**	**122.50**	**10**	PKP	**PKPdf**	**08 50 27.2**	**-1.8**
	comp=Z,0.1nm,0.4s,baz=277,slow=7.2,SNR=1.3						

*IDC **25** 08:36:03.3±0.7,27.°68N×85.°10E, h0km, mb4.0/16, mb1 4.2/19,mb1mx3.9/54,mbtmp4.1/19,ML4.2/3, Error ellipse: s-maj=23.5km s-min=15.3km az=53.0*
*DMN **25** 08:36:04.7±0.1,27.°75N×85.°24E, h10km, Ml5.2/4, Error ellipse: s-maj=2.3km s-min=1.0km az=19.0*
*NEIC **25** 08:36:05.3±1.2,27.°73N±0.°09×85.°17E±0.°06, h10km±1km, mb4.2/33, Error ellipse: s-maj=15.2km s-min=9.3km az=170.0*

ISC 25 08:36:04.9±0.8,27.°75N±0.°04×85.°19E±0.°03, h8km±5km, n76, σ0°66/80, mb4.2/27, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.09**	**65**	*e*Pg	**Pg**	**08 36 07.1**	**-0.2**
KKN				*e*Sg	**Sg**	**08 36 08.6**	**-0.4**
	36μm,0.2s						
DMN	**Daman**	**0.16**	**208**	*e*Pg	**Pg**	**08 36 08.6**	**+0.1**
DMN				*e*Sg	**Sg**	**08 36 12.0**	**+1.1**
	42μm,0.4s						
PKIN	**Phulchoki**	**0.25**	**134**	*e*Pg	**Pg**	**08 36 09.7**	**-0.3**
PKIN				*e*Sg	**Sg**	**08 36 13.4**	**-0.1**
PKI	**Pulchoki**	**0.26**	**133**	*e*Pg	**Pg**	**08 36 10.1**	**-0.2**
PKI				*e*Sg	**Sg**	**08 36 13.6**	**-0.3**
	18μm,0.4s						
GKN	**Gorkha**	**0.55**	**297**	*e*Pg	**Pg**	**08 36 15.8**	**+0.2**
GKN				*e*Sg	**Sb**	**08 36 24.0**	**-1.1**
	11μm,0.4s						
JIRN	**Jiri**	**0.89**	**96**	*e*Pg	**Pg**	**08 36 21.5**	**-0.6**
DANN	**Dangsing**	**1.40**	**295**	*e*Pg	**Pg**	**08 36 31.8**	**0.0**
DANN	**Dangsing**	**1.40**	**295**	*e*Pg	**Pg**	**08 36 32.5**	**+0.7**
DANN				*e*Sg	**Sg**	**08 36 50.9**	**+0.9**
	11μm,0.4s						
KOLN	**Koldanda**	**1.41**	**271**	*e*Pg	**Pg**	**08 36 32.2**	**+0.2**
KOLN				*e*Sg	**Sg**	**08 36 51.3**	**+0.9**
	8μm,0.4s						
RAMN	**Ramite**	**1.49**	**122**	*e*Pg	**Pn**	**08 36 31.8**	**-0.4**
PYUN	**Piuthan**	**1.98**	**281**	*e*Pg	**Pg**	**08 36 41.9**	**-1.0**
PYUN				*e*Sg	**Sg**	**08 37 08.3**	**-0.3**
	10μm,0.4s						
ODAN	**Odare**	**2.15**	**114**	*e*Pg	**Pb**	**08 36 44.4**	**+0.2**
TAPN	**Taplejung**	**2.27**	**100**	*e*Pg	**Pb**	**08 36 46.5**	**+0.2**
TAPN				*e*Sg	**Sb**	**08 37 15.7**	**+1.0**
	798nm,0.4s						
LSA	**Lhasa**	**5.58**	**68**	Pn	**Pn**	**08 37 29.2**	**+0.6**
SHL	**Shillong**	**6.37**	**108**	Pn	**Pn**	**08 37 40.0**	**+0.7**
NIL	**Nilore**	**11.83**	**303**	Pn	**Pn**	**08 38 53.0**	**-1.0**
KBL	**Kabul**	**15.38**	**300**	Pn	**Pn**	**08 39 42.5**	**-0.1**
KBL				IAmb	IAmb	08 39 58.2	
	comp=Z,9.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.66**	**123**	Pn	**Pn**	**08 39 46.6**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=343,slow=30,SNR=3.3						
AAK	**Ala-Archa**	**17.21**	**332**	P	**Pn**	**08 40 06.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=112,slow=4.9,SNR=4.1						
AAK	**Ala-Archa**	**17.21**	**332**	IAmb	IAmb	08 40 10.1	
	comp=Z,7.6nm,1.1s						
MK31	**Makanchi Array**	**19.14**	**354**		**Pn**	**08 40 28.9**	**-0.5**
MKAR	**Makanchi Array**	**19.14**	**354**	P	**Pn**	**08 40 29.4**	**0.0**
	comp=Z,0.7nm,0.3s,baz=173,slow=11,SNR=19						
MKAR	**Makanchi Array**	**19.14**	**354**		**Pn**	**08 40 29.2**	**-0.2**
KK31	**Karatay Array**	**19.39**	**326**	P	**P**	**08 40 30.3**	**-0.9**
KK31				IAmb	IAmb	08 40 35.6	
	comp=Z,5.9nm,0.8s						
KKAR	**Karatay Array**	**19.39**	**326**	P	**P**	**08 40 30.4**	**-0.9**
KKAR	**Karatay Array**	**19.39**	**326**	P	**P**	**08 40 30.5**	**-0.7**
KKAR				IAmb	IAmb	08 40 35.5	
	comp=Z,5.9nm,0.8s						
HRA	**Herat**	**20.72**	**294**	P	**P**	**08 40 45.3**	**-0.7**
KURBB	**Kurchatov Arra**	**23.39**	**349**	P	**P**	**08 41 13.9**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=169,slow=9.7,SNR=8.2						
KURK	**Kurchatov**	**23.47**	**349**	P	**P**	**08 41 13.9**	**-0.8**
GEYT	**Alibeck**	**24.83**	**301**	P	**P**	**08 41 27.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=83,slow=14,SNR=1.3						
GEYT	**Alibeck**	**24.83**	**301**	IAmb	IAmb	08 41 34.2	
	comp=Z,6.7nm,1.3s						
SONM	**Songino Array**	**25.97**	**34**	P	**P**	**08 41 39.1**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=207,slow=10,SNR=8.5						
SONM	**Songino Array**	**25.97**	**34**	P	**P**	**08 41 38.6**	**+0.4**
SONM				IAmb	IAmb	08 41 42.6	
	comp=Z,2.2nm,0.8s						
ZAA0	**Zalesovo Array**	**26.17**	**359**	P	**P**	**08 41 39.8**	**+0.2**
ZAA0				IAmb	IAmb	08 41 41.2	
	comp=Z,3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**26.17**	**359**	P	**P**	**08 41 40.2**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=179,slow=8.8,SNR=8.1						
ZALV	**Zalesovo Beam**	**26.17**	**359**	P	**P**	**08 41 40.0**	**+0.3**
ABKAR	**Akbulak array**	**28.94**	**325**	P	**P**	**08 42 05.3**	**+0.8**
YULB	**Yu-li**	**32.78**	**89**	P	**P**	**08 42 39.2**	**+0.5**
NRIK	**Noril'sk**	**41.64**	**1**	P	**P**	**08 43 54.2**	**+0.9**
	comp=Z,5.4nm,0.6s,baz=152,slow=5.2,SNR=7.7						
NRIK	**Noril'sk**	**41.64**	**1**	P	**P**	**08 43 54.0**	**+0.7**
NRIK				IAmb	IAmb	08 43 55.2	
	comp=Z,5.3nm,0.7s						
ELL	**Elmali**	**47.05**	**296**	P	**P**	**08 44 37.6**	**+0.3**
FURI	**Furi**	**47.64**	**256**	P	**P**	**08 44 40.9**	**-1.4**
AKASG	**Malin Array Be**	**47.71**	**315**	P	**P**	**08 44 41.0**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=81,slow=6.7,SNR=4.1						
AKASG	**Malin Array Be**	**47.71**	**315**	IAmb	IAmb	08 44 41.6	
	comp=Z,1.2nm,1.1s						
AKBB	**Malin Array Si**	**47.71**	**315**	P	**P**	**08 44 41.8**	**-0.2**
AKBB				IAmb	IAmb	08 44 56.1	
	comp=Z,4.4nm,0.9s						
KARP	**Karpathos**	**49.40**	**294**	P	**P**	**08 44 55.3**	**0.0**
MLR	**Muntele Rosu**	**49.61**	**307**	P	**P**	**08 44 58.0**	**+1.2**
MLR				IAmb	IAmb	08 44 58.9	
	comp=Z,4.1nm,0.8s						
TIXI	**Tiksi**	**50.03**	**17**	P	**P**	**08 44 58.9**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=252,slow=2.4,SNR=5.3						
BURAR	**Bucovina Array**	**50.12**	**310**	P	**P**	**08 45 00.6**	**-0.2**
FIA1	**FINESS Array S**	**51.33**	**328**	P	**P**	**08 45 09.3**	**-0.2**
FIA1				IAmb	IAmb	08 45 14.0	
	comp=Z,6.7nm,1.1s						
FINES	**FINESS Array B**	**51.33**	**328**	P	**P**	**08 45 08.8**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=106,slow=6.2,SNR=4.6						
FINES	**FINESS Array B**	**51.33**	**328**	P	**P**	**08 45 09.3**	**-0.2**
ARCES	**ARCESS Array B**	**53.78**	**338**	P	**P**	**08 45 26.9**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=90,slow=7.4,SNR=1.9						
NRCA	**Norcia**	**59.04**	**305**	P	**P**	**08 46 05.4**	**-0.1**
NRCA				IAmb	IAmb	08 46 07.6	
	comp=Z,2.7nm,0.8s						
KEST	**Kesra**	**63.54**	**298**	P	**P**	**08 46 36.3**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=9.1,slow=3.6,SNR=5.6						
KEST	**Kesra**	**63.54**	**298**	P	**P**	**08 46 36.7**	**+0.5**
WB0	**Warramunga Arr**	**67.07**	**129**	P	**P**	**08 46 59.2**	**+0.1**
WB0				IAmb	IAmb	08 47 01.8	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**67.15**	**129**	P	**P**	**08 46 59.1**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=323,slow=6.6,SNR=19						
WRA	**Warramunga Arr**	**67.15**	**129**	IAmb	IAmb	08 47 02.9	
	comp=Z,0.1nm,0.7s						
WB2	**Warramunga Arr**	**67.16**	**129**	P	**P**	**08 46 59.9**	**+0.3**
ASAR	**Alice Springs**	**69.43**	**133**	P	**P**	**08 47 13.9**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=315,slow=5.8,SNR=23						
ASAR	**Alice Springs**	**69.43**	**133**	pP	pP	08 47 15.7	-1.4
ESDC	**Sonseca Array**	**72.26**	**306**	P	**P**	**08 47 30.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=45,slow=4.8,SNR=4.6						
EUNU	**Eureka**	**72.32**	**358**	P	**P**	**08 47 31.6**	**+0.9**
EUNU				IAmb	IAmb	08 47 32.2	
	comp=Z,2.0nm,0.8s						
PVAQ	**Vaqueiros**	**75.86**	**305**	P	**P**	**08 47 52.3**	**+0.4**
BMAR	**Burnt Mountain**	**78.09**	**18**	P	**P**	**08 48 05.7**	**+1.6**
I23K	**Minto, Yukon-K**	**78.31**	**21**	P	**P**	**08 48 05.5**	**+0.3**
I23K				IAmb	IAmb	08 48 08.6	
	comp=Z,2.3nm,1.2s						
TORD	**Torodi Ar. Bea**	**78.32**	**279**	P	**P**	**08 48 05.0**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=53,slow=4.2,SNR=7.2						
MDM	**Murphy Dome**	**78.79**	**20**	P	**P**	**08 48 08.7**	**+0.7**
MDM				IAmb	IAmb	08 48 21.1	
	comp=Z,7.5nm,1.5s						
BWN	**Browne**	**78.94**	**21**	P	**P**	**08 48 09.5**	**+0.8**
ILAR	**Eielson Array**	**79.33**	**20**	P	**P**	**08 48 10.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=301,slow=4.3,SNR=2.8						
SCRK	**Sand Creek**	**80.78**	**20**	P	**P**	**08 48 19.8**	**+0.9**
SCRK				IAmb	IAmb	08 48 32.7	
	comp=Z,1.4nm,1.0s						
K27K	**Chicken**	**81.31**	**19**	P	**P**	**08 48 22.6**	**+1.0**
K27K				IAmb	IAmb	08 48 41.1	
	comp=Z,5.0nm,1.5s						
YKA	**Yellowknife Ar**	**88.68**	**9**	P	**P**	**08 48 58.1**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=338,slow=4.6,SNR=10.0						
TXAR	**Lajitas Array**	**122.61**	**9**	PKP	**PKiKP**	**08 55 02.1**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=26,slow=5.0,SNR=2.2						
SAML	**Samuel**	**144.80**	**296**	PKPdf	**PKPdf**	**08 55 42.2**	**-1.0**

*IDC **25** 08:45:26.7±1.7,28.°06N×85.°18E, h0km, mb3.9/6, mb1 4.0/8,mb1mx3.5/61,mbtmp3.9/8,ML4.1/2, Error ellipse: s-maj=53.9km s-min=22.9km az=58.0*

**ISC 25 08:45:28.5±1.7,28.°1N±0.°2×85.°2E±0.°3, h12km, n8, σ0°46/8, mb3.9

4µm,0.4s
TAPN Taplejung 2.41 99 *e*Pg **Pb** 08 49 52.8 -0.1
TAPN *e*Sg **Sb** 08 50 23.6 +1.0
2µm,0.5s
GTK Tadong 3.20 97 *e*P **Pn** 08 49 59.5 0.0
GTK *e*S **Sn** 08 50 40.3 +2.7
GTK IAML 08 50 46.9
comp=E,588nm,0.6s
LSA Lhasa 5.71 69 Pn **Pn** 08 50 36.1 +1.7
SHL Shillong 6.50 108 *e*P **Pn** 08 50 45.3 +0.2
SHL Shillong 6.50 108 Pn **Pn** 08 50 45.6 +0.6
DDI Dehra Dun 6.62 294 *e*P **Pn** 08 50 50.1 +3.5
DDI *e*S **Sn** 08 52 01.3 -0.8
DDI IAML 08 52 04.2
comp=E,507nm,0.4s
DDI IAML 08 52 08.2
comp=N,493nm,0.2s
SMLA Simla 7.64 298 *e*P **Pn** 08 51 02.2 +1.7
SMLA *e*S **Sn** 08 52 25.9 -1.1
SMLA IAML 08 52 28.9
comp=E,229nm,0.5s
SMLA IAML 08 52 29.9
comp=N,211nm,0.3s
ZIRO ZIRO 7.82 90 *e*P **Pn** 08 51 04.4 +1.2
ZIRO *e*S **Sn** 08 52 28.9 -2.9
ZIRO IAML 08 52 33.0
comp=N,443nm,0.7s
ZIRO IAML 08 52 37.5
comp=E,480nm,0.4s
BHPL Bhopal 8.21 239 *e*P **Pn** 08 51 08.0 -0.3
BHPL *e*S **Sn** 08 52 35.6 -5.5
BHPL IAML 08 52 37.9
comp=N,180nm,0.3s
BHPL IAML 08 52 38.6
comp=E,132nm,0.3s
DHRM DHARAMSHALA 8.80 303 *i* P **Pn** 08 51 16.5 -0.1
DHRM *e*P **Pn** 08 51 16.5 -0.1
DHRM *e*S **Sn** 08 52 51.9 -3.9
NIL Nilore 11.72 303 Pn **Pn** 08 51 54.0 -2.4
KBL Kabul 15.27 300 Pn **Pn** 08 52 42.6 -2.3
KBL IAmb IAmb 08 52 58.6
comp=Z,15nm,1.1s
CHTO Chiang Mai 15.56 122 **Pn** 08 52 50.7 +2.0
PRZ Przheval'sk 15.66 342 Pn **Pn** 08 52 48.9 -1.1
PRZ IAmb IAmb 08 52 57.8
comp=Z,12nm,0.6s
KDJ Kajisay 15.71 338 Pn **Pn** 08 52 50.5 -0.1
CM31 Chiang Mai Arr 15.78 123 Pn **Pn** 08 52 53.0 +1.6
CMAR Chiang Mai Arr 15.78 123 Pn **Pn** 08 52 52.6 +1.2
comp=Z,0.5nm,0.3s,baz=319,slow=11,SNR=15
CMAR Chiang Mai Arr 15.78 123 Pn **Pn** 08 52 53.8 +2.3
WMQ Urumqi 16.18 7 *e*P **Pn** 08 52 56.3 -0.3
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ pmax pmax
comp=Z,46nm,4.3s
WMQ LR LR
comp=Z,410nm,14.9s
WMQ LR LR
comp=Z,280nm,12.9s
WMQ LR LR
comp=Z,1µm,27.7s
BOOM Boomskoye usch 16.46 336 Pn **Pn** 08 52 58.0 -2.3
GTA Gaotai 16.91 43 ⇓P **P** 08 53 08.5 +0.5
GTA pP sP 08 53 13.5 -0.2
GTA sP pP 08 53 16.8 +4.9
GTA pmax pmax
comp=Z,11nm,1.1s
AAK Ala-Archa 17.15 333 P **Pn** 08 53 09.4 +0.5
comp=Z,0.3nm,0.3s,baz=168,slow=14,SNR=4.3
AAK Ala-Archa 17.15 333 P **P** 08 53 10.4 -0.2
FRU1 Bishkek 17.24 333 P **Pn** 08 53 10.2 +0.2
MK31 Makanchi Array 19.13 354 P **P** 08 53 32.1 -0.2
MKAR Makanchi Array 19.13 354 P **P** 08 53 32.8 +0.5
comp=Z,0.9nm,0.3s,baz=170,slow=11,SNR=26
MKAR Makanchi Array 19.13 354 P **P** 08 53 32.3 0.0
MAKZ Makanchi 19.18 354 P **P** 08 53 32.8 0.0
GYA Guiyang 19.30 89 *e*P **Pn** 08 53 40.8 +5.4
GYA pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 19.31 326 P **P** 08 53 32.6 -1.7
KKAR Karatay Array 19.31 326 P **P** 08 53 33.3 -1.0
KKAR IAmb IAmb 08 53 37.0
comp=Z,9.8nm,0.7s
PALK Pallekele 20.78 192 P **P** 08 53 50.6 +0.2
comp=Z,5.8nm,0.8s,baz=113,slow=7.7,SNR=2.2
KURBB Kurchatov Arra 23.37 350 P **P** 08 54 17.8 +0.1
comp=Z,4.9nm,0.7s,baz=173,slow=9.6,SNR=13
KURK Kurchatov 23.45 350 P **P** 08 54 17.8 -0.6
GEYT Alibeck 24.71 301 P **P** 08 54 29.0 -1.5
comp=Z,2.2nm,0.5s,baz=48,slow=2.1,SNR=1.8
SONM Songino Array 26.05 34 P **P** 08 54 44.2 +1.5
comp=Z,19nm,0.8s,baz=219,slow=9.0,SNR=48
SONM Songino Array 26.05 34 P **P** 08 54 43.4 +0.8
SONM IAmb IAmb 08 54 52.4
comp=Z,6.8nm,0.8s
ZAA0 Zalesovo Array 26.17 360 P **P** 08 54 43.5 +0.1
ZAA0 IAmb IAmb 08 54 46.5
comp=Z,4.4nm,0.8s
ZALV Zalesovo Beam 26.17 360 P **P** 08 54 44.0 +0.5
comp=Z,4.4nm,0.6s,baz=181,slow=9.1,SNR=15
ZALV Zalesovo Beam 26.17 360 P **P** 08 54 43.7 +0.3
ULN Ulaanbaatar 26.40 35 P **P** 08 54 47.3 +1.5
BVAR Borovoye Array 27.49 341 P **P** 08 54 56.3 +0.9
comp=Z,0.7nm,0.4s,baz=158,slow=16,SNR=5.0
ABKAR Akbulak array 28.86 325 P **P** 08 55 08.0 +0.4
ABKAR Akbulak array 28.86 325 P **P** 08 55 07.5 -0.1
AKTO Aktyubinsk 30.57 325 P **P** 08 55 23.3 +0.6
comp=Z,1.2nm,0.6s,baz=99,slow=12,SNR=2.8
ARU Arti 34.32 334 P **P** 08 55 55.9 +0.4
comp=Z,0.9nm,0.4s,baz=205,slow=6.8,SNR=4.7
ARU Arti 34.32 334 IAmb IAmb 08 55 59.6
comp=Z,2.9nm,0.6s
KSRS Korea Array 37.13 64 P **P** 08 56 19.7 -0.2
comp=Z,0.8nm,0.7s,baz=267,slow=7.9,SNR=2.1
JNU Nakatsue 39.65 71 P **P** 08 56 41.9 +0.7
USRK Ussuriysk Ar. 40.81 54 P **P** 08 56 51.4 +0.8
comp=Z,0.7nm,0.5s,baz=263,slow=10.0,SNR=2.0
NRIK Noril'sk 41.65 1 P **P** 08 56 58.2 +1.1
comp=Z,8.2nm,0.6s,baz=176,slow=6.5,SNR=20
NRIK Noril'sk 41.65 1 P **P** 08 56 57.5 +0.4
NRIK IAmb IAmb 08 56 59.3
comp=Z,8.9nm,0.7s
MMAI Mount Meron Ar 42.82 290 P **P** 08 57 08.8 +1.4
comp=Z,1.2nm,0.6s,baz=348,slow=6.3,SNR=2.2
BRTR Keskin Array B 43.84 300 P **P** 08 57 16.5 +1.0
comp=Z,1.9nm,0.8s,baz=149,slow=5.9,SNR=2.5
BRTR Keskin Array B 43.84 300 P **P** 08 57 15.6 0.0
JSD Sado 45.32 63 P **P** 08 57 28.9 +1.7
JSD IAmb IAmb 08 57 42.6
comp=Z,15nm,1.4s
ELL Elmali 46.93 296 P **P** 08 57 39.0 -1.1
AKASG Malin Array Be 47.61 315 P **P** 08 57 44.6 -0.4
comp=Z,3.2nm,0.7s,baz=78,slow=7.0,SNR=7.0
AKASG Malin Array Be 47.61 315 P **P** 08 57 44.9 -0.1
AKBB Malin Array Si 47.61 315 P **P** 08 57 44.7 -0.3
AKBB IAmb IAmb 08 57 47.0
comp=Z,4.5nm,0.8s
MLR Muntele Rosu 49.50 307 P **P** 08 57 59.7 -0.1
BURAR Bucovina Array 50.02 310 P **P** 08 58 03.0 -0.7
BURAR IAmb IAmb 08 58 05.7
comp=Z,2.6nm,0.9s
BUR08 Bucovina Ar. S 50.03 310 P **P** 08 58 04.0 +0.2
BUR08 IAmb IAmb 08 58 05.5
comp=Z,4.4nm,1.1s
TIXI Tiksi 50.07 17 P **P** 08 58 03.8 +0.3
FIA1 FINESS Array S 51.26 328 P **P** 08 58 12.2 -0.5
FIA1 IAmb IAmb 08 58 29.4
comp=Z,12nm,1.4s
FINES FINESS Array B 51.26 328 P **P** 08 58 13.1 +0.5
comp=Z,1.9nm,0.6s,baz=109,slow=8.7,SNR=11
VTS Vitosha 51.56 304 P **P** 08 58 15.5 0.0
VTS IAmb IAmb 08 58 18.3
comp=Z,5.0nm,1.1s
PSZ Piszkesteto 53.60 311 P **P** 08 58 29.9 -0.5
PSZ IAmb IAmb 08 58 32.1
comp=Z,3.8nm,1.0s
ARCES ARCESS Array B 53.73 338 P **P** 08 58 32.3 +1.4
comp=Z,2.8nm,0.8s,baz=76,slow=7.5,SNR=10
GERES GERESS Array B 57.65 312 P **P** 08 58 59.3 -0.2
comp=Z,0.2nm,0.3s,baz=100,slow=5.5,SNR=3.8
CEL Celeste 57.72 300 P **P** 08 58 59.7 -0.4
NOA NORSAR Array B 58.34 327 P **P** 08 59 03.7 -0.4
comp=Z,0.8nm,0.6s,baz=89,slow=7.3,SNR=5.5
NRCA Norcia 58.93 305 P **P** 08 59 07.8 -0.7
BILL Bilibino 61.32 25 P **P** 08 59 25.2 +0.8
BILL IAmb IAmb 08 59 32.7
comp=Z,3.5nm,0.9s
SENIN Lac Senin/Sane 62.32 310 P **P** 08 59 30.2 -1.6
SENIN IAmb IAmb 08 59 38.1
comp=Z,5.9nm,1.1s
KEST Kesra 63.41 298 P **P** 08 59 39.2 +0.1
comp=Z,6.1nm,0.8s,baz=286,slow=1.8,SNR=5.3
KEST Kesra 63.41 298 IAmb IAmb 08 59 41.7
comp=Z,7.9nm,1.0s
WRA Warramunga Arr 67.26 129 P **P** 09 00 04.5 +0.6
comp=Z,3.9nm,0.5s,baz=322,slow=6.3,SNR=36
WRA Warramunga Arr 67.26 129 IAmb IAmb 09 00 08.9
comp=Z,0.3nm,1.2s
WRAB Tennant Creek 67.26 129 P **P** 09 00 04.6 +0.6
WB2 Warramunga Arr 67.27 129 P **P** 09 00 04.8 +0.7
WR0 Warramunga Arr 67.41 129 P **P** 09 00 05.6 +0.7
AS31 Alice Springs 69.53 133 P **P** 09 00 18.8 +0.5
AS31 IAmb IAmb 09 00 22.8
comp=Z,1.3nm,0.6s
ASAR Alice Springs 69.54 133 P **P** 09 00 18.7 +0.5
comp=Z,3.1nm,0.5s,baz=314,slow=6.4,SNR=38
ASAR Alice Springs 69.54 133 P **P** 09 00 18.2 0.0
TAM Tamanrasset 70.89 286 P **P** 09 00 25.8 -1.1
TAM IAmb IAmb 09 00 38.5
comp=Z,2.0nm,0.6s
ESDC Sonseca Array 72.15 306 P **P** 09 00 33.8 -0.3
comp=Z,1.8nm,1.0s,baz=64,slow=4.9,SNR=6.8
MATP Matopo 72.68 235 P **P** 09 00 36.5 -1.0
comp=Z,0.9nm,0.7s,baz=68,slow=5.4,SNR=1.5
TOLK Toolik Lake Re 75.94 18 P **P** 09 00 56.2 +0.5
TOLK IAmb IAmb 09 00 57.8
comp=Z,4.0nm,0.7s
LBTB Lobatse 77.64 233 P **P** 09 01 05.3 -0.6
comp=Z,1.7nm,0.6s,baz=119,slow=15,SNR=2.1
BMAR Burnt Mountain 78.14 17 P **P** 09 01 08.3 +0.2
TORD Torodi Ar. Bea 78.18 279 P **P** 09 01 08.0 -1.1
comp=Z,1.2nm,0.7s,baz=67,slow=5.2,SNR=6.5
TORD Torodi Ar. Bea 78.18 279 P **P** 09 01 07.3 -1.9
COLA College 79.02 20 P **P** 09 01 12.5 -0.3
COLA IAmb IAmb 09 01 19.9
comp=Z,7.6nm,1.3s
WRH Wood River Hil 79.22 21 P **P** 09 01 14.9 +0.9
WRH IAmb IAmb 09 01 18.8
comp=Z,3.3nm,1.4s
IL31 79.38 20 P **P** 09 01 14.2 -0.6
ILAR Eielson Array 79.38 20 P **P** 09 01 14.8 0.0
comp=Z,0.9nm,0.7s,baz=301,slow=4.5,SNR=10
ILAR Eielson Array 79.38 20 P **P** 09 01 15.1 +0.2
SKT Skwentna 79.77 24 P **P** 09 01 18.0 +0.9
SKT IAmb IAmb 09 01 19.3
comp=Z,5.0nm,0.7s
INK Inuvik 80.08 14 P **P** 09 01 19.1 +0.5
comp=Z,1.6nm,0.8s,baz=348,slow=5.3,SNR=7.4
INK Inuvik 80.08 14 P **P** 09 01 19.4 +0.9
INK IAmb IAmb 09 01 20.9
comp=Z,3.8nm,1.1s
STKA Stephens Creek 80.09 134 P **P** 09 01 18.3 -0.9
comp=Z,1.3nm,0.5s,baz=180,slow=2.0,SNR=1.6
BOSA Boshof 80.12 230 P **P** 09 01 18.2 -1.4
comp=Z,0.6nm,0.3s,baz=54,slow=17,SNR=1.8
BOSA Boshof 80.12 230 P **P** 09 01 19.4 -0.1
BOSA IAmb IAmb 09 01 30.2
comp=Z,6.6nm,1.4s
SCRK Sand Creek 80.83 20 P **P** 09 01 21.8 -1.1
SCRK IAmb IAmb 09 01 25.2
comp=Z,2.2nm,0.7s
EPYK Eagle Plains 80.94 16 P **P** 09 01 23.3 0.0
EPYK IAmb IAmb 09 01 24.7
comp=Z,4.6nm,0.9s
K27K Chicken 81.36 19 P **P** 09 01 25.7 +0.2
KDAK Kodiak Island 82.13 27 P **P** 09 01 30.2 +0.5
comp=Z,7.7nm,0.9s,baz=320,slow=3.8,SNR=4.5
BCAR Beaver Creek A 82.17 20 P **P** 09 01 28.6 -1.3
KOWA Kowa 82.56 282 P **P** 09 01 32.3 -0.4
comp=Z,1.5nm,0.6s,baz=102,slow=4.8,SNR=4.7
KOWA Kowa 82.56 282 IAmb IAmb 09 01 49.9
comp=Z,8.3nm,1.4s
YKA Yellowknife Ar 88.70 9 P **P** 09 02 02.1 -0.2
comp=Z,1.0nm,0.7s,baz=339,slow=4.5,SNR=15
TXAR Lajitas Array 122.63 9 PKP **PKPdf** 09 08 05.4 -0.1
comp=Z,0.2nm,0.6s,baz=52,slow=12,SNR=4.0
SAML Samuel 144.68 296 PKPdf PKPbc 09 08 46.9 +1.4
SIV San Ignacio 146.55 283 PKPbc **PKPbc** 09 08 51.6 +0.2
comp=Z,1.9nm,0.7s,baz=57,slow=3.7,SNR=4.5

*IDC **25** 08:53:36.9±1.3,27.°79N×85.°66E,h0km,mb3.7/5,*
mb1 3.8/6,mb1mx3.4/62,mbtmp3.7/6,ML3.5/1,Error
ellipse: s-maj=42.9km s-min=25.4km az=70.0
*DMN **25** 08:53:39.6±0.1,27.°85N×85.°75E,h10km,Ml4.5/5,Error*
ellipse: s-maj=4.5km s-min=1.5km az=11.0
ISC 25 08:53:39.1±1.3,27.°87N±0.°07×85.°74E±0.°03,h11km±10km,
n14,σ○85/22,mb3.7/5,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.42**	**260**	*e*Pg	**Pb**	**08 53 48.1**	**-0.5**
KKN				*e*Sg	**Sg**	**08 53 53.7**	**+0.7**
5µm,0.2s							
PKI	**Pulchoki**	**0.42**	**225**	*e*Pg	**Pg**	**08 53 47.7**	**+0.2**
PKI				*e*Sg	**Sg**	**08 53 52.9**	**-0.2**
5µm,0.5s							
DMN	**Daman**	**0.62**	**246**	*e*Sg	**Sb**	**08 54 00.6**	**-0.3**
4µm,0.5s							
ODAN	**Odare**	**1.77**	**124**	*e*Pg	**Pg**	**08 54 12.8**	**-0.4**
ODAN				*e*Sg	**Sg**	**08 54 36.0**	**-0.3**
423nm,0.2s							
DANN	**Dangsing**	**1.82**	**286**	*e*Pg	**Pg**	**08 54 13.7**	**-0.3**
DANN				*e*Sg	**Sg**	**08 54 37.0**	**-0.6**
362nm,0.2s							
TAPN	**Taplejung**	**1.82**	**106**	*e*Pg	**Pb**	**08 54 13.3**	**+0.7**
TAPN				*e*Sg	**Sg**	**08 54 37.5**	**-0.3**
KOLN	**Koldanda**	**1.90**	**268**	*e*Pg	**Pb**	**08 54 14.6**	**+0.7**
KOLN				*e*Sg	**Sg**	**08 54 39.4**	**-0.9**
504nm,0.2s							
KOLN				*e*Sg	**Sb**	**08 54 40.4**	**+2.6**
1µm,0.3s							
PYUN	**Piuthan**	**2.44**	**276**	*e*Pg	**Pg**	**08 54 25.8**	**-0.3**
PYUN				*e*Sg	**Sg**	**08 54 57.0**	**-0.8**
1µm,0.5s							
MKAR	**Makanchi Array**	**19.09**	**353**	P	**P**	**08 58 02.5**	**+0.8**
0.2nm,0.3s,baz=175,slow=11,SNR=3.9							
SONM	**Songino Array**	**25.61**	**33**	P	**P**	**08 59 09.1**	**+0.6**
1.0nm,0.5s,baz=221,slow=8.3,SNR=3.8							
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**08 59 11.9**	**-0.5**
1.1nm,0.4s,baz=161,slow=9.2,SNR=4.1							
WRA	**Warramunga Arr**	**66.85**	**130**	P	**P**	**09 04 30.8**	**-0.5**
0.4nm,0.8s,baz=320,slow=6.5,SNR=5.1							
ASAR	**Alice Springs**	**69.15**	**133**	P	**P**	**09 04 45.7**	**-0.1**
0.4nm,0.7s,baz=309,slow=6.5,SNR=2.6							
TORD	**Torodi Ar. Bea**	**78.78**	**279**	P	**P**	**09 05 41.8**	**-0.6**
0.4nm,0.6s,baz=62,slow=6.5,SNR=2.5							

*IDC **25** 08:54:43.8±1.8,25.°43N×96.°76E,h0km,mb3.6/2,*
mb1 3.6/3,mb1mx3.2/63,mbtmp3.5/3,ML3.9/1,Error
ellipse: s-maj=57.0km s-min=20.3km az=76.0
ISC 25 08:54:45.7±1.1,25.°72N±0.°07×96.°8E±0.°3,h10km,n15,
σ○9/67/12,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMMT	**Chiang Mai**	**7.16**	**163**	P	**Pb**	**08 56 53.6**	**+3.5**
CM32	**Chiang Mai Arr**	**7.29**	**164**	P	**Pb**	**08 56 56.0**	**+3.7**
CM15	**Chiang Mai Arr**	**7.50**	**164**	P	**Pg**	**08 57 05.8**	**-3.5**
CM31	**Chiang Mai Arr**	**7.50**	**164**	P	Pb	08 57 00.3	+4.4
CMAR	**Chiang Mai Arr**	**7.50**	**164**	Pn	**Pn**	**08 56 32.5**	**-2.7**
0.6nm,0.3s,baz=334,slow=13,SNR=1.6							
CMAR				Pg	**Pb**	**08 56 56.6**	**+0.7**
0.3nm,0.3s,baz=342,slow=18,SNR=9.4							
CMAR				Lg		08 58 29.7	
0.5nm,0.3s,baz=341,slow=28,SNR=2.0							
CM02	**Chiang Mai Arr**	**7.52**	**164**	P	**Pb**	**08 57 00.2**	**+3.9**
CM09	**Chiang Mai Arr**	**7.52**	**164**	P	Pb	08 57 01.0	+4.7
CM13	**Chiang Mai Arr**	**7.52**	**164**	P	Pg	08 57 04.0	-5.8
CM01	**Chiang Mai Arr**	**7.54**	**164**	P	**Pb**	**08 57 00.5**	**+3.9**
CM05	**Chiang Mai Arr**	**7.55**	**164**	P	Pb	08 57 03.0	+6.2
CM04	**Chiang Mai Arr**	**7.56**	**164**	P	**Pb**	**08 57 00.6**	**+3.6**
MHMT	**Maesarieng**	**7.58**	**172**	P	**Pg**	**08 57 06.2**	**-4.7**
WMQ	**Urumqi**	**19.52**	**340**	*e*P	**Pn**	**08 59 15.0**	**+0.6**
SONM	**Songino Array**	**23.34**	**16**	P	**P**	**08 59 56.9**	**+2.8**
0.4nm,0.4s,baz=195,slow=10,SNR=2.1							
MKAR	**Makanchi Array**	**23.99**	**335**	P	**P**	**09 00 01.9**	**+1.6**
1.7nm,0.7s,baz=147,slow=9.5,SNR=9.6							

*NEIC **25** 08:55:22.9±2.1,3.°37N×0.°09×83.°19W±0.°09,h10km±1km,*
mb4.5/11,Error ellipse: s-maj=19.0km s-min=11.4km
az=223.0
*IDC **25** 08:55:24.7±1.0,3.°46N×83.°14W,h0km,mb3.7/10,*
mb1 4.0/15,mb1mx3.9/42,mbtmp3.9/15,ML3.1/4,Error
ellipse: s-maj=36.5km s-min=16.0km az=49.0
ISC 25 08:55:26.5±0.7,3.°43N±0.°06×82.°95W±0.°07,h24km,n76,
σ○18/79,mb4.3/15,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIOS	**Rincon, Osa**	**5.26**	**354**		**Pn**	**08 56 40.3**	**-3.5**
OTAV	**Otavalo**	**5.51**	**125**		**Pn**	**08 56 46.8**	**-0.7**
OTAV	**Otavalo**	**5.51**	**125**	*e*P	**Pn**	**08 56 46.8**	**-0.7**
PEZE	**Perez Zeledon,**	**5.95**	**353**		**Pn**	**08 56 50.3**	**-3.1**
GCUF	**Volcan Galeras**	**6.02**	**111**	*e*P	**Pn**	**08 56 54.6**	**+0.1**
GCUF				*e*S	**Sn**	**08 57 57.1**	**-5.9**
GCUF				*i*		08 58 07.7	
comp=Z,32nm,0.4s							
CRUC	**La Cruz**	**6.28**	**107**	*e*P	**Pn**	**08 56 58.1**	**+0.1**
CRUC				*e*S	Sn	08 57 59.4	-10
CRUC				*i*		08 58 16.1	
comp=Z,47nm,0.5s							
SOTA	**Rioblanco**	**6.47**	**101**	*e*P	**Pn**	**08 57 03.3**	**+2.5**
SOTA				*e*S	**Sn**	**08 58 12.7**	**-1.4**
SOTA				*i*		08 58 21.1	
comp=N,197nm,0.6s							
BCIP	**Isla Barro Col**	**6.48**	**28**		**Pn**	**08 57 00.5**	**-0.1**
BCIP	**Isla Barro Col**	**6.48**	**28**	*e*P	**Pn**	**08 57 00.2**	**-0.3**
CAO2	**Cobano, Puntar**	**6.57**	**341**		**Pn**	**08 56 58.3**	**-3.4**
YOTC	**Yotoco, Valle**	**6.62**	**85**	*e*P	**Pn**	**08 57 02.2**	**-0.3**
HDC	**Heredia**	**6.63**	**350**	Pn	**Pn**	**08 57 00.2**	**-2.4**
BATAN	**Batan**	**6.63**	**356**	Pn	**Pn**	**08 57 01.3**	**-1.3**
PCON	**Cinco Dias**	**6.64**	**99**	*e*P	**Pn**	**08 57 05.1**	**+1.9**
MARP	**Paez Belalcaza**	**7.01**	**95**	*e*P	**Pn**	**08 57 10.2**	**+2.2**
MARP				*e*S	**Sn**	**08 58 27.6**	**+0.4**
MARP				*i*		08 58 31.3	
comp=Z,5.9nm,0.6s							
JTS	**Las Juntas de**	**7.10**	**344**	Pn	**Pn**	**08 57 06.3**	**-2.6**
comp=Z,9.2nm,0.3s,baz=174,slow=22,SNR=71							
JTS				Sn	**Sn**	**08 58 25.3**	**-3.7**
baz=356,slow=22,SNR=1.0							
JTS	**Las Juntas de**	**7.10**	**344**		**Pn**	**08 57 06.1**	**-2.9**
ORTG	**Ortega, Santa**	**7.32**	**340**	Pn	**Pn**	**08 57 10.1**	**-2.0**
CBOC	**Ciudad Bolivar**	**7.33**	**71**	*e*P	**Pn**	**08 57 12.3**	**0.0**
CBOC				*e*S	**Sn**	**08 58 30.1**	**-4.8**
CBOC				*i*		08 58 48.9	
comp=Z,5.3nm,0.4s							
COVE	**Coope Vega, Sa**	**7.38**	**349**	Pn	**Pn**	**08 57 11.1**	**-1.8**
ANIL	**Santa Ana**	**7.61**	**82**	*e*P	**Pn**	**08 57 18.5**	**+2.3**
ANIL				*e*S	**Sn**	**08 58 43.9**	**+2.0**
ORTC	**Ortega, Tolima**	**7.71**	**86**	*e*P	**Pn**	**08 57 19.7**	**+2.3**
GUY2C	**Guyana, Caldas**	**7.77**	**77**	*e*P	**Pn**	**08 57 19.6**	**+0.9**
GUY2C				*e*S	**Sn**	**08 58 44.4**	**-1.8**
GUY2C				*i*		08 58 54.6	
comp=Z,13nm,0.6s							
HELC	**Santa Helena**	**7.89**	**69**	*e*P	**Pn**	**08 57 21.6**	**+1.4**
HELC				*e*S	**Sn**	**08 58 46.8**	**-2.1**
NORC	**Norcasia**	**8.33**	**75**	*e*P	**Pn**	**08 57 27.9**	**+1.9**
UREC	**San Jos de Ur**	**8.54**	**60**	*e*P	**Pn**	**08 57 29.8**	**+1.0**
ROSC	**El Rosal**	**8.72**	**80**	Pn	**Pn**	**08 57 33.0**	**+1.3**
comp=Z,2.5nm,0.3s,baz=233,slow=15,SNR=7.1							
ROSC	**El Rosal**	**8.72**	**80**		**Pn**	**08 57 33.5**	**+1.8**
ROSC	**El Rosal**	**8.72**	**80**	*e*P	**Pn**	**08 57 35.7**	**+4.1**
ACON	**Acoyapa**	**8.76**	**346**	Pn	**Pn**	**08 57 30.7**	**-1.1**
PTLC	**Puerto Leguiza**	**8.77**	**112**	*e*P	**Pn**	**08 57 34.2**	**+2.3**
ESPN	**Las Esperanzas**	**8.81**	**351**	Pn	**Pn**	**08 57 30.0**	**-2.4**
MOTC	**Monteria, Cord**	**8.98**	**53**	*e*P	**Pn**	**08 57 38.2**	**+3.3**
PTBC	**PUERTO BERRIO,**	**9.01**	**70**	*e*P	**Pn**	**08 57 37.6**	**+2.4**
ZARC	**Zaragoza, Cauc**	**9.01**	**63**	*e*P	**Pn**	**08 57 36.6**	**+1.4**
SPBC	**San Pablo de B**	**9.12**	**76**	*e*P	**Pn**	**08 57 39.2**	**+2.3**
MACC	**Macarena, Meta**	**9.18**	**98**	*e*P	**Pn**	**08 57 38.2**	**+0.5**
MACC				*e*S	**Sn**	**08 59 17.3**	**-3.1**
MACC				*i*		08 59 27.2	
comp=Z,9.2nm,0.7s							
CHIC	**Chingaza**	**9.28**	**82**	*e*P	**Pn**	**08 57 41.9**	**+2.6**
CHIC				*e*S	**Sn**	**08 59 21.3**	**-1.9**
CHIC				*i*		08 59 34.6	
comp=Z,7.1nm,0.5s							
SJCC	**San Jacinto, C**	**10.04**	**50**	*e*P	**Pn**	**08 57 50.9**	**+1.5**
RUSC	**La Rusia**	**10.13**	**76**	*e*P	**Pn**	**08 57 56.1**	**+5.0**
SMLC	**San Martn de**	**10.31**	**58**	*e*P	**Pn**	**08 57 54.3**	**+1.2**
TGUH	**Tegucigalpa,Un**	**11.38**	**338**	Pn	**Pn**	**08 58 07.6**	**-0.3**
ATAH	**Atahualpa**	**11.44**	**157**	Pn	**Pn**	**08 58 10.1**	**+1.1**
comp=Z,0.3nm,0.3s,baz=20,slow=9.8,SNR=2.1							
SDV	**Santo Domingo**	**13.39**	**66**	Pn	**Pn**	**08 58 36.7**	**+1.4**
comp=Z,0.6nm,0.3s,baz=259,slow=10.0,SNR=4.1							
SDV	**Santo Domingo**	**13.39**	**66**	Pn	**Pn**	**08 58 36.5**	**+1.1**
APG	**El Apazote**	**13.68**	**328**	Pn	**Pn**	**08 58 38.8**	**-0.5**
comp=Z,0.2nm,0.3s,baz=117,slow=16,SNR=2.5							
NNA	**Nana**	**16.48**	**158**	Pn	**P**	**08 59 18.6**	**-0.3**
comp=Z,1.2nm,0.3s,baz=315,slow=8.2,SNR=3.6							
AOPR	**Arecibo Observ**	**21.71**	**46**	P	**P**	**09 00 16.1**	**0.0**
AOPR				IAmb	IAmb	09 00 23.0	
comp=Z,23nm,0.8s							
GCPR	**Guaynabo City**	**22.17**	**47**	P	**P**	**09 00 21.1**	**+0.2**
GCPR				IAmb	IAmb	09 00 29.5	
comp=Z,12nm,0.7s							
SAML	**Samuel**	**23.23**	**122**	P	**P**	**09 00 32.6**	**+0.4**
SAML				IAmb	IAmb	09 00 40.7	
comp=Z,11nm,0.9s							
PTGA	**Pitinga**	**23.34**	**100**	P	**P**	**09 00 38.8**	**+5.4**
comp=Z,9.9nm,1.0s,baz=290,slow=13,SNR=8.3							
PTGA	**Pitinga**	**23.34**	**100**	P	**P**	**09 00 31.9**	**-1.5**
PTGA				IAmb	IAmb	09 00 43.3	
comp=Z,12nm,1.1s							
LPAZ	**La Paz**	**24.47**	**144**	P	**P**	**09 00 47.5**	**+2.8**
comp=Z,4.6nm,1.0s,baz=348,slow=8.2,SNR=11							
LPAZ	**La Paz**	**24.47**	**144**	P	**P**	**09 00 45.0**	**+0.3**
MNMC	**Minye Minye**	**25.99**	**150**	P	**P**	**09 00 54.6**	**-3.5**
MNMC				IAmb	IAmb	09 01 09.3	
comp=Z,9.9nm,1.0s							
PSGCX	**Pisagua**	**26.13**	**152**	P	**P**	**09 00 56.1**	**-3.0**
PB11	**IPOC Station P**	**26.50**	**151**	P	**P**	**09 01 01.5**	**-0.9**
LCAR	**Lake Charles**	**33.35**	**348**	P	**P**	**09 02 02.8**	**-0.1**
LCAR				IAmb	IAmb	09 02 11.4	
comp=Z,7.5nm,1.2s							
H03N2	**Juan Fernandez**	**36.87**	**174**	T	T	09 41 45.7	
baz=354,slow=76							
H03N1	**Juan Fernandez**	**36.87**	**174**	T	T	09 41 47.6	
baz=354,slow=76							
H03N3	**Juan Fernandez**	**36.89**	**174**	T	T	09 41 46.6	
baz=354,slow=76							
PDAR	**Pinedale Array**	**45.77**	**333**	P	**P**	**09 03 48.0**	**+1.4**
comp=Z,0.1nm,0.4s,baz=140,slow=13,SNR=2.1							
PDAR	**Pinedale Array**	**45.77**	**333**	P	**P**	**09 03 44.4**	**-2.1**
NVAR	**Mina Array Bea**	**47.45**	**322**	P	**P**	**09 04 00.7**	**+1.0**
comp=Z,0.6nm,0.8

mb5.2/75,Ms5.3/27,Ms7 5.3/25
NEIC ***25*** *08:55:56.0±1.6,27°.59N±0°.07×85°.51E±0°.06,h10km±1km, mb5.3/168,Error ellipse: s-maj=11.8km s-min=8.6km az=190.0*
DMN ***25*** *08:55:56.4±0.1,27°.65N×85°.55E,h10km,Ml5.8/6,Error ellipse: s-maj=2.5km s-min=0.9km az=9.0*
NDI ***25*** *08:55:56.9±2.8,27°.43N×85°.44E,h5km,ML5.5, mb5.3(NEIC)*
ISC 25 08:55:56.4±0.5,27°.58N±0°.03×85°.55E±0°.02,h13km±2km, h13km:pP-P,n887,σ1%81/948,mb5.2/246,128C-57D, Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PKI	**Pulchoki**	**0.13**	**266**		*e*Pg		**Pg**	**08 56 00.0**	**-0.1**
KKN	**Kakani**	**0.32**	**311**		*e*Pg		**Pg**	**08 56 02.2**	**-0.9**
KKN					*e*Sg		**Sg**	**08 56 06.7**	**-0.9**
DMN	**Daman**	**0.40**	**274**		*e*Pg		**Pg**	**08 56 04.4**	**-0.1**
DMN					*e*Sg		**Sg**	**08 56 10.1**	**+0.2**
GUN	**Gumba**	**0.44**	**41**		*e*Pg		**Pg**	**08 56 04.6**	**-0.6**
GUN					*e*Sg		**Sg**	**08 56 10.1**	**-1.1**
GKN	**Gorkha**	**0.92**	**298**		*e*Pg		**Pg**	**08 56 13.3**	**-0.8**
GKN					*e*Sg		**Sg**	**08 56 25.0**	**-1.2**
	39μm,0.4s								
KOLN	**Koldanda**	**1.74**	**277**		*e*Pg		**Pb**	**08 56 28.8**	**+0.4**
KOLN					*e*Sg		**Sg**	**08 56 51.5**	**-1.1**
	18μm,0.4s								
DANN	**Dangsing**	**1.76**	**296**		*e*Pg		**Pb**	**08 56 28.9**	**+0.1**
DANN					*e*Sg		**Sb**	**08 56 52.0**	**+1.0**
	23μm,0.3s								
ODAN	**Odare**	**1.79**	**113**		*e*Pg		**Pg**	**08 56 30.5**	**-0.2**
ODAN					*e*Sg		**Sg**	**08 56 54.9**	**+1.0**
	20μm,0.4s								
TAPN	**Taplejung**	**1.93**	**96**		*e*Pg		**Pg**	**08 56 32.8**	**-0.7**
TAPN					*e*Sg		**Sg**	**08 56 58.0**	**-0.5**
	18μm,0.5s								
PYUN	**Piuthan**	**2.33**	**283**		*e*Pg		**Pb**	**08 56 39.2**	**+0.8**
PYUN					*e*Sg		**Sb**	**08 57 09.2**	**+2.0**
	17μm,0.3s								
GTK	**Tadong**	**2.72**	**95**		*e*P		**Pb**	**08 56 42.9**	**-2.1**
GTK					*e*S		**Sb**	**08 57 17.0**	**-1.4**
GTK					IAML			08 57 22.9	
	comp=N,23μm,0.7s								
LSA	**Lhasa**	**5.35**	**65**		Pg		**Pg**	**08 57 19.5**	**+3.0**
LSA					Sg		**Sg**	**08 58 43.0**	**-5.3**
LSA					LR		LR		
	comp=N,73μm,7.8s								
LSA					LR		LR		
	comp=N,68μm,10.0s								
LSA					LR		LR		
	comp=N,126μm,10.0s								
LSA	**Lhasa**	**5.35**	**65**		P		**Pn**	**08 57 19.7**	**+3.2**
LSA	**Lhasa**	**5.35**	**65**		P		**Pn**	**08 57 19.2**	**+2.7**
LSA	**Lhasa**	**5.35**	**65**		Pn		**Pn**	**08 57 19.2**	**+2.7**
GUWA	**GUWAHATI**	**5.65**	**103**		*e*P		**Pn**	**08 57 21.7**	**+1.6**
GUWA					*e*S		**Sn**	**08 58 27.4**	**+2.4**
SHL	**Shillong**	**6.01**	**108**		P		**Pn**	**08 57 25.3**	**+0.1**
SHL	**Shillong**	**6.01**	**108**		*e*P		**Pn**	**08 57 25.7**	**+0.5**
SHL					*e*S		**Sn**	**08 58 33.9**	**-0.1**
SHL	**Shillong**	**6.01**	**108**		Pn		**Pn**	**08 57 25.3**	**+0.1**
SHL	**Shillong**	**6.01**	**108**		P		**Pn**	**08 57 26.6**	**+1.4**
	SNR=7.8								
DDI	**Dehra Dun**	**7.12**	**294**		*e*P		**Pn**	**08 57 42.1**	**+1.8**
DDI					*e*S		**Sn**	**08 58 58.2**	**-2.9**
DDI					IAML			08 59 03.3	
	comp=N,10μm,0.6s								
DDI					IAML			08 59 03.8	
	comp=E,5μm,0.3s								
ZIRO	**ZIRO**	**7.36**	**88**		*e*P		**Pn**	**08 57 45.0**	**+1.2**
ZIRO					*e*S		**Sn**	**08 59 06.3**	**-1.1**
ZIRO					IAML			08 59 14.0	
	comp=N,6μm,0.6s								
ZIRO					IAML			08 59 17.3	
	comp=E,4μm,0.7s								
IMP	**Imphal**	**8.02**	**108**	⇑	*e*P		**Pn**	**08 57 54.2**	**+1.4**
MOKO	**MOKOCHONG**	**8.10**	**97**	⇑	*e*P		**Pn**	**08 57 54.9**	**+1.0**
SMLA	**Simla**	**8.13**	**298**		*e*P		**Pn**	**08 57 54.0**	**-0.1**
SMLA					*e*S		**Sn**	**08 59 22.0**	**-3.9**
SMLA					IAML			08 59 29.6	
	comp=N,3μm,0.4s								
SMLA					IAML			08 59 30.6	
	comp=E,4μm,0.5s								
BHPL	**Bhopal**	**8.52**	**241**		*e*P		**Pn**	**08 57 56.8**	**-2.8**
BHPL					*e*S		**Sn**	**08 59 27.6**	**-8.2**
LKP	**Lekhapani**	**9.15**	**89**	⇑	*e*P		**Pn**	**08 58 08.6**	**+0.4**
DHRM	**DHARAMSHALA**	**9.28**	**302**		*e*P		**Pn**	**08 58 09.0**	**-1.1**
DHRM					*e*S		**Sn**	**08 59 48.6**	**-5.9**
DHRM					IAML			08 59 56.5	
	comp=N,3μm,0.6s								
DHRM					IAML			08 59 56.9	
	comp=E,3μm,0.8s								
SARP	**Sargodha**	**12.00**	**294**		P		**Pn**	**08 58 43.7**	**-3.5**
HYB	**Hyderabad**	**12.00**	**214**	*i*	P		**Pn**	**08 58 44.5**	**-2.8**
CHCP	**Chirah Chowk**	**12.19**	**303**		P		**Pn**	**08 58 47.1**	**-2.8**
NIL	**Nilore**	**12.20**	**303**		P		**Pn**	**08 58 47.8**	**-2.1**
NIL	**Nilore**	**12.20**	**303**		Pn		**Pn**	**08 58 47.8**	**-2.1**
NIL	**Nilore**	**12.20**	**303**		P		**Pn**	**08 58 47.8**	**-2.1**
NIL	**Nilore**	**12.20**	**303**	⇓	P		**Pn**	**08 58 47.4**	**-2.6**
CEP	**Cherat**	**13.28**	**301**		P		**Pn**	**08 59 01.2**	**-3.6**
CHTO	**Chiang Mai**	**15.08**	**123**		P		**P**	**08 59 40.5**	**+6.0**
CHTO	**Chiang Mai**	**15.08**	**123**	⇑	P		**P**	**08 59 34.4**	**-0.2**
CM33	**Chiang Mai Arr**	**15.08**	**122**		P		**P**	**08 59 35.0**	**+0.5**
CMMT	**Chiang Mai**	**15.08**	**123**		P		**P**	**08 59 34.3**	**-0.3**
	comp=E,0.2nmcomp=E,49nm,1.1s								
CM32	**Chiang Mai Arr**	**15.10**	**123**		P		**Pn**	**08 59 31.0**	**+1.4**
CM34	**Chiang Mai Arr**	**15.21**	**122**		P		**Pn**	**08 59 31.0**	**0.0**
CM15	**Chiang Mai Arr**	**15.29**	**124**		P		**Pn**	**08 59 31.9**	**-0.2**
	comp=E,0.2nmcomp=E,783nmcomp=E,53nm,0.9s								
CM13	**Chiang Mai Arr**	**15.29**	**124**		P		**Pn**	**08 59 33.2**	**+1.1**
	comp=E,0.2nmcomp=E,385nmcomp=E,51nm,0.7s								
CM31	**Chiang Mai Arr**	**15.30**	**124**		P		**Pn**	**08 59 34.4**	**+2.2**
	comp=E,4.7nmcomp=E,16μmcomp=E,1μm,0.7s								
CM31	**Chiang Mai Arr**	**15.30**	**124**		Pn		**Pn**	**08 59 30.4**	**-1.8**
CMAR	**Chiang Mai Arr**	**15.30**	**124**		Pn		**Pn**	**08 59 30.1**	**-2.1**
	comp=E,0.6nm,0.3s,baz=309,slow=13,SNR=14								
CMAR	**Chiang Mai Arr**	**15.30**	**124**	*i*	P		**Pn**	**08 59 30.7**	**-1.5**
CMAR					pmax		pmax		
	comp=Z,18nm,0.8s								
CMAR	**Chiang Mai Arr**	**15.30**	**124**				**Pn**	**08 59 31.6**	**-0.5**
CM02	**Chiang Mai Arr**	**15.31**	**124**		P		**Pn**	**08 59 33.0**	**+0.6**
	comp=Z,0.3nmcomp=Z,632nmcomp=Z,98nm,0.9s								
CM35	**Chiang Mai Arr**	**15.32**	**122**		P		**Pn**	**08 59 33.0**	**+0.5**
CM01	**Chiang Mai Arr**	**15.33**	**124**		P		**P**	**08 59 35.4**	**-2.0**
	comp=Z,0.2nmcomp=Z,648nmcomp=Z,84nm,0.8s								
CM05	**Chiang Mai Arr**	**15.33**	**124**		P		**Pn**	**08 59 33.4**	**+0.7**
	comp=Z,0.1nmcomp=Z,397nmcomp=Z,49nm,0.9s								
CM09	**Chiang Mai Arr**	**15.34**	**124**		P		**Pn**	**08 59 35.0**	**+2.2**
	comp=Z,0.2nmcomp=Z,696nmcomp=Z,84nm,0.8s								
CM04	**Chiang Mai Arr**	**15.36**	**124**		P		**P**	**08 59 35.9**	**-1.8**
	comp=Z,0.3nmcomp=Z,746nmcomp=Z,88nm,0.8s								
CM36	**Chiang Mai Arr**	**15.37**	**123**		P		**P**	**08 59 38.0**	**+0.2**
KMI	**Kunming**	**15.60**	**95**	⇑	P		**Pn**	**08 59 35.3**	**-1.0**
KMI					pP		P	08 59 39.3	-1.2
KMI					sP		pP	08 59 42.5	-2.1
KMI					pmax		pmax		
	comp=Z,57nm,0.9s								
KMI					LR		LR		
	comp=Z,7μm,17.9s								
KMI					LR		LR		
	comp=Z,8μm,20.3s								
KMI					LR		LR		
	comp=Z,10μm,19.0s								
KMI	**Kunming**	**15.60**	**95**		P		**Pn**	**08 59 35.8**	**-0.5**
KMI					pmax		pmax		
	comp=Z,129nm,0.8s								
KMI	**Kunming**	**15.60**	**95**				**Pn**	**08 59 35.8**	**-0.5**
KMI					IAmb		IAmb	08 59 43.0	
	comp=Z,129nm,0.8s								
KBL	**Kabul**	**15.75**	**300**		P		**Pn**	**08 59 35.0**	**-3.2**
KBL					pmax		pmax		
	comp=Z,272nm,0.7s								
KBL	**Kabul**	**15.75**	**300**		Pn		**Pn**	**08 59 35.0**	**-3.2**
KBL	**Kabul**	**15.75**	**300**		P		**Pn**	**08 59 35.3**	**-2.9**
	SNR=112								
PRZ	**Przheval'sk**	**15.97**	**340**		P		**Pn**	**08 59 39.4**	**-1.6**
PRZ					pmax		pmax		
	comp=Z,79nm,1.0s								
PRZ	**Przheval'sk**	**15.97**	**340**				**Pn**	**08 59 39.4**	**-1.6**
KDJ	**Kajisay**	**16.05**	**337**		P		**Pn**	**08 59 39.8**	**-2.2**
KDJ					pmax		pmax		
	comp=Z,49nm,1.0s								
KDJ	**Kajisay**	**16.05**	**337**				**Pn**	**08 59 39.8**	**-2.2**
CD2	**Chengdu**	**16.23**	**74**		P		**Pn**	**08 59 43.0**	**-1.3**
CD2					pmax		pmax		
	comp=Z,340nm,1.0s								
WMQ	**Urumqi**	**16.30**	**6**		*e*P		**Pn**	**08 59 43.3**	**-1.8**
WMQ					pP		P	08 59 49.0	+1.0
WMQ					sP		pP	08 59 52.3	+0.2
WMQ					PP		**sP**	**08 59 54.0**	**0.0**
WMQ					S		**Sn**	**09 02 47.3**	**+1.5**
WMQ					SS		**S**	**09 02 57.0**	**-1.5**
WMQ					pmax		pmax		
	comp=Z,32nm,1.3s								
WMQ					pmax		pmax		
	comp=Z,8μm,9.1s								
WMQ					LR		LR		
	comp=Z,8μm,16.7s								
WMQ					LR		LR		
	comp=Z,8μm,25.9s								
WMQ					LR		LR		
	comp=Z,66μm,29.2s								
SHLS	**Shalkode**	**16.31**	**344**		*e*P		**Pn**	**08 59 41.9**	**-3.4**
	baz=345								
SHLS	**Shalkode**	**16.31**	**344**		*e*P		**Pn**	**08 59 41.8**	**-3.4**
UZB	**Uzynbulak**	**16.41**	**343**		*e*P		**Pn**	**08 59 44.8**	**-1.8**
	baz=342								
UZB	**Uzynbulak**	**16.41**	**343**		*e*P		**Pn**	**08 59 44.7**	**-1.8**
SUKH	**Sukhothai**	**16.42**	**125**		P		**Pn**	**08 59 46.0**	**-0.7**
	comp=Z,0.3nmcomp=Z,128nm,1.0s								
NANT	**Nan**	**16.43**	**119**		P		**Pn**	**08 59 47.0**	**+0.2**
	comp=Z,2.6nmcomp=Z,38μmcomp=Z,596nm,0.9s								
ULHL	**Ulahol**	**16.49**	**335**		P		**Pn**	**08 59 45.5**	**-2.1**
	SNR=21								
SATY	**Saty**	**16.50**	**341**		*e*P		**Pn**	**08 59 46.2**	**-1.5**
	baz=341								
SATY	**Saty**	**16.50**	**341**		*e*P		**Pn**	**08 59 46.2**	**-1.5**
GTA	**Gaotai**	**16.73**	**42**	⇑	P		**Pn**	**08 59 47.8**	**-2.8**
GTA					pP		P	08 59 53.0	+0.1
GTA					sP		pP	08 59 56.0	-0.9
GTA					pmax		pmax		
	comp=Z,27nm,1.6s								
BOOM	**Boomskoye usch**	**16.81**	**335**		P		**Pn**	**08 59 49.5**	**-2.2**
BOOM					pmax		pmax		
	comp=Z,50nm,1.0s								
BOOM	**Boomskoye usch**	**16.81**	**335**				**Pn**	**08 59 49.5**	**-2.2**
TNSS	**Tian-Shan**	**16.93**	**338**		*e*P		**Pn**	**08 59 51.6**	**-1.9**
	baz=338								
TNSS	**Tian-Shan**	**16.93**	**338**		*e*P		**Pn**	**08 59 51.5**	**-1.9**
UTTA	**Uttaradit**	**16.94**	**122**		P		**P**	**08 59 55.0**	**-0.2**
	comp=Z,1μmcomp=Z,118nm,0.9s								
MDOK	**Medeo**	**17.01**	**338**		*e*P		**Pn**	**08 59 52.3**	**-1.9**
	baz=338								
MDOK	**Medeo**	**17.01**	**338**		*e*P		**Pn**	**08 59 52.2**	**-1.9**
AAA	**Alma-Ata**	**17.09**	**338**		*e*P		**Pn**	**08 59 53.8**	**-1.3**
	baz=338								
AAA	**Alma-Ata**	**17.09**	**338**		*e*P		**P**	**09 00 01.2**	**+4.4**
UCH	**Uchtor**	**17.17**	**331**		P		**Pn**	**08 59 55.2**	**-1.3**
	SNR=70								
PHIT	**Phitsanulok**	**17.18**	**124**		P		**Pn**	**08 59 57.0**	**+0.7**
	comp=Z,3μmcomp=Z,310nm,0.9s								
PBA	**Port Blair**	**17.22**	**156**		P		P	08 59 59.4	+1.1
TKM2	**Tokmak 2**	**17.31**	**335**		P		**Pn**	**08 59 56.5**	**-1.5**
	SNR=17								
KBK	**Karagaybulak**	**17.34**	**333**		P		**P**	**09 00 01.9**	**+2.2**
	SNR=29								
AML	**Almyashu**	**17.45**	**329**		P		**Pn**	**08 59 57.3**	**-2.6**
	SNR=19								
AAK	**Ala-Archa**	**17.51**	**332**		P		**Pn**	**09 00 00.4**	**0.0**
	comp=Z,0.9nm,0.3s,baz=141,slow=13,SNR=16								
AAK					S		**Sn**	**09 03 08.1**	**-7.3**
	comp=Z,0.7nm,0.3s,baz=10,slow=19,SNR=1.8								
AAK	**Ala-Archa**	**17.51**	**332**		P		**P**	**09 00 02.6**	**+1.0**
	SNR=20								
AAK	**Ala-Archa**	**17.51**	**332**	*i*	P		**P**	**09 00 01.5**	**-0.1**
	SNR=28								
AAK	**Ala-Archa**	**17.51**	**332**	⇑	*e*P		**Pn**	**08 59 59.8**	**-0.7**
AAK					pmax		pmax		
	comp=Z,276nm,1.2s								
AAK	**Ala-Archa**	**17.51**	**332**		P		**Pn**	**08 59 59.5**	**-1.0**
AAK	**Ala-Archa**	**17.51**	**332**		P		**P**	**09 00 01.5**	**-0.1**
AAK	**Ala-Archa**	**17.51**	**332**	⇓	P		**Pn**	**09 00 00.2**	**-0.2**
UTHA	**Uthaitani**	**17.59**	**130**		P		**P**	**09 00 02.0**	**-0.4**
	comp=Z,603nmcomp=Z,82nm,0.9s								
FRU1	**Bishkek**	**17.60**	**333**		P		**Pn**	**09 00 00.5**	**-0.9**
FRU1					pmax		pmax		
	comp=Z,81nm,1.1s								
FRU1	**Bishkek**	**17.60**	**333**		Pn		**Pn**	**09 00 00.5**	**-0.9**
LZH	**Lanzhou**	**17.68**	**57**	⇓	P		**Pn**	**09 00 01.5**	**-1.1**
LZH					pP		P	09 00 04.3	+0.8
LZH					sP		pP	09 00 06.5	-1.0
LZH					PP		**PnPn**	**09 00 15.8**	**+2.6**
LZH					pmax		pmax		
	comp=Z,220nm,1.2s								
LZH					pmax		pmax		
	comp=Z,2μm,5.3s								
CHMS	**Chumysh**	**17.71**	**333**		P		**Pn**	**09 00 01.2**	**-1.5**
	SNR=6.3								
SLVN	**Son La**	**17.82**	**106**				**P**	**09 00 05.4**	**+0.4**
EKS2	**Erkin-Say**	**17.84**	**331**		P		**Pn**	**09 00 04.1**	**-0.3**
	SNR=43								
SGDS	**Sogindy**	**18.14**	**334**		*e*P		**Pn**	**09 00 06.8**	**-1.2**
	baz=333								
SGDS	**Sogindy**	**18.14**	**334**		*e*P		**Pn**	**09 00 06.8**	**-1.2**
TDK	**Taldyqorghan**	**18.30**	**344**		*e*P		**Pn**	**09 00 08.7**	**-1.4**
	baz=343								
TDK	**Taldyqorghan**	**18.30**	**344**		*e*P		**Pn**	**09 00 08.6**	**-1.4**
NONG	**Nongkai**	**18.76**	**117**		P		**Pn**	**09 00 16.8**	**+1.0**
	comp=Z,8μmcomp=Z,186nm,1.1s								
GYA	**Guiyang**	**18.84**	**89**	⇓	P		**Pn**	**09 00 18.0**	**+1.2**
GYA					S		**Sn**	**09 03 47.5**	**-0.2**
GYA					pmax		pmax		
	comp=Z,74nm,0.9s								
TAS	**Tashkent**	**19.13**	**320**		P		**P**	**09 00 19.0**	**-0.3**
TAS					pmax		pmax		
	comp=Z,175nm,0.5s								
TAS	**Tashkent**	**19.13**	**320**		P		**P**	**09 00 19.0**	**-0.3**
CHAI	**Chaiyaphum**	**19.16**	**124**		P		**Pn**	**09 00 22.2**	**+1.6**
	comp=Z,1μmcomp=Z,151nm,1.0s								
IUG	**Iuzhnay**	**19.28**	**323**		*e*P		**P**	**09 00 19.4**	**-1.6**
	baz=323								
IUG	**Iuzhnay**	**19.28**	**323**		*e*P		**P**	**09 00 19.4**	**-1.6**
MK31	**Makanchi Array**	**19.35**	**353**	*d*	P		**Pn**	**09 00 22.3**	**-0.4**
MK31	**Makanchi Array**	**19.35**	**353**		P		**P**	**09 00 21.8**	**+0.2**
MKAR	**Makanchi Array**	**19.35**	**353**		P		**P**	**09 00 21.6**	**-0.1**
	comp=Z,6.1nm,0.3s,baz=179,slow=11,SNR=44								
MKAR	**Makanchi Array**	**19.35**	**353**		P		**P**	**09 00 21.3**	**-0.3**
MAKZ	**Makanchi**	**19.40**	**353**		P		**P**	**09 00 22.5**	**+0.4**
MAKZ					pmax		pmax		
	comp=Z,74nm,0.6s								
MAKZ	**Makanchi**	**19.40**	**353**		P		**P**	**09 00 22.5**	**+0.4**
MAKZ					IAmb		IAmb	09 00 28.6	
	comp=Z,74nm,0.6s								
MAKZ	**Makanchi**	**19.40**	**353**	⇑	P		**P**	**09 00 21.3**	**-0.8**
KHON	**Khomkaen**	**19.51**	**121**		P		**Pn**	**09 00 25.5**	**+0.7**
	comp=Z,85nm,0.6s								
CHM	**Chimkent**	**19.63**	**323**	*e*	P		**P**	**09 00 23.7**	**-1.0**
	baz=322								
CHM	**Chimkent**	**19.63**	**323**	*e*	P		**P**	**09 00 23.6**	**-1.0**
PHET	**Kaeng Krachan**	**19.65**	**135**		P		**Pn**	**09 00 30.1**	**+3.6**
	comp=Z,562nmcomp=Z,52nm,0.9s								
MALK	**Mahakanadarawa**	**19.66**	**195**	⇑	P		**Pn**	**09 00 27.5**	**+0.9**
BTLS	**Baital**	**19.70**	**335**	*e*	P		**P**	**09 00 24.2**	**-1.3**
	baz=335								
BTLS	**Baital**	**19.70**	**335**	*e*	P		**P**	**09 00 24.2**	**-1.3**
KK31	**Karatay Array**	**19.71**	**326**		P		**P**	**09 00 24.1**	**-1.5**
KK31					pmax		pmax		
	comp=Z,68nm,1.0s								
KK31	**Karatay Array**	**19.71**	**326**		P		**P**	**09 00 24.1**	**-1.5**
KKAR	**Karatay Array**	**19.71**	**326**		P		**P**	**09 00 24.2**	**-1.4**
KKAR					pmax		pmax		
	comp=Z,68nm,1.0s								
KKAR	**Karatay Array**	**19.71**	**326**				**P**	**09 00 24.4**	**-1.2**
KKAR	**Karatay Array**	**19.71**	**326**		P		**P**	**09 00 24.2**	**-1.4**
KKAR	**Karatay Array**	**19.71**	**326**	⇑	P		**P**	**09 00 24.5**	**-1.1**
ZSN	**Zaisan**	**19.84**	**359**	*e*	P		**P**	**09 00 25.4**	**-1.6**
	comp=Z,57nm,1.2s,baz=358								
ZSN	**Zaisan**	**19.84**	**359**	*e*	P		**P**	**09 00 25.3**	**-1.6**
ZSN					pmax		pmax		
	comp=Z,57nm,1.2s								
PATY	**Pattaya**	**20.43**	**132**		P		Pn	09 00 40.2	+4.4
	comp=Z,14μmcomp=Z,100nm,0.7s								
SRAK	**Srakaew**	**20.46**	**128**		P		Pn	09 00 40.9	+4.9
	comp=Z,5μmcomp=Z,542nm,1.1s								
PALK	**Pallekele**	**20.71**	**194**		P		Pn	09 00 38.6	-0.4
	comp=Z,22nm,0.8s,baz=115,slow=13,SNR=2.7								
PALK					S		**S**	**09 04 18.8**	**-9.1**
	comp=Z,21nm,0.8s,baz=300,slow=22,SNR=3.6								
PALK	**Pallekele**	**20.71**	**194**		P		Pn	09 00 43.6	+4.6
PALK	**Pallekele**	**20.71**	**194**	⇑	P		Pn	09 00 42.3	+3.2
XAN	**Xi'an**	**21.05**	**66**		P		**P**	**09 00 39.8**	**-0.5**
XAN					pP		pP	09 00 43.8	-0.5
XAN					pmax		pmax		
	comp=Z,280nm,0.8s								
XAN					LR		LR		
	comp=Z,7μm,20.6s								
XAN					LR		LR		
	comp=Z,7μm,22.8s								
XAN					LR		LR		
	comp=Z,11μm,21.7s								
XAN	**Xi'an**	**21.05**	**66**		P		**P**	**09 00 39.8**	**-0.5**
XAN					pmax		pmax		
	comp=Z,166nm,0.7s								
XAN	**Xi'an**	**21.05**	**66**		P		**P**	**09 00 39.8**	**-0.5**
HRA	**Herat**	**21.08**	**295**				**P**	**09 00 40.1**	**-0.7**
HRA					IAmb		IAmb	09 00 47.8	
	comp=Z,156nm,1.3s								
ENH	**Enshi**	**21.11**	**77**		P		**P**	**09 00 41.3**	**+0.3**
ENH					IAmb		IAmb	09 00 55.3	
	comp=Z,134nm,0.8s								
DGZ	**Jazzator, Alta**	**22.14**	**3**	⇑	*e*P		**P**	**09 00 52.7**	**+0.8**
DGZ					pmax		pmax		
	comp=Z,208nm,1.4s								
UBPT	**Khong Chiam**	**22.18**	**119**		P		**P**	**09 00 52.5**	**+0.2**
	comp=Z,57nm,0.8s								
UBPT	**Khong Chiam**	**22.18**	**119**		P		**P**	**09 00 52.8**	**+0.4**
UBPT					IAmb		IAmb	09 00 55.7	
	comp=Z,67nm,0.8s								
UBPT	**Khong Chiam**	**22.18**	**119**	⇓	P		**P**	**09 00 52.9**	**+0.5**
SEM	**Semipalatinsk**	**23.15**	**351**		*e*P		**P**	**09 01 01.6**	**-1.1**
	comp=Z,54nm,1.0s,baz=351								
SEM	**Semipalatinsk**	**23.15**	**351**		*e*P		**P**	**09 01 01.5**	**-1.1**
SEM					pmax		pmax		
	comp=Z,54nm,1.0s								
KURBB	**Kurchatov Arra**	**23.63**	**349**		P		**P**	**09 01 07.2**	**+0.1**
	comp=Z,16nm,0.7s,baz=164,slow=9.0,SNR=74								
KURBB					S		**S**	**09 05 21.7**	**+0.4**
	comp=Z,1.3nm,0.2s,baz=169,slow=19,SNR=4.8								
KURBB	**Kurchatov Arra**	**23.63**	**349**		P		**P**	**09 01 06.3**	**-0.8**
KURK	**Kurchatov**	**23.70**	**349**		P		**P**	**09 01 07.2**	**-0.6**
KURK	**Kurchatov**	**23.70**	**349**		P		**P**	**09 01 07.2**	**-0.6**
KURK					S		**S**	**09 05 21.7**	**-0.8**
QIZ	**Qiongzhong**	**23.84**	**106**		P		**P**	**09 01 09.3**	**-0.2**
QIZ					S		**S**	**09 05 25.0**	**-0.3**
QIZ					pmax		pmax		
	comp=Z,76nm,1.3s								
QIZ	**Qiongzhong**	**23.84**	**106**		P		**P**	**09 01 09.8**	**+0.2**
QIZ					IAmb		IAmb	09 01 10.9	
	comp=Z,68nm,0.9s								
BRZS	**Berezniki**	**24.45**	**340**		*e*P		**P**	**09 01 14.2**	**-0.7**
	comp=Z,38nm,0.7s,baz=339								
BRZS	**Berezniki**	**24.45**	**340**		*e*P		**P**	**09 01 14.2**	**-0.7**
BRZS					pmax		pmax		
	comp=Z,38nm,0.7s								
WBK	**Wadi Bani Khal**	**24.56**	**264**		P		**P**	**09 01 17.9**	**+1.7**
	SNR=19								
WBK					P		**P**	**09 01 17.9**	**+1.7**
	SNR=19								
WBK					P		**P**	**09 01 17.9**	**+1.7**
	SNR=19								
WSAR	**Wadi Sarin**	**24.68**	**266**		P		**P**	**09 01 18.4**	**+1.2**
	comp=Z,57nm,0.7s,baz=120,slow=7.3,SNR=51								
WSAR	**Wadi Sarin**	**24.68**	**266**		P		**P**	**09 01 19.1**	**+1.8**
	SNR=21								
TIY	**Taiyuan**	**24.71**	**59**		*e*P		**P**	**09 01 18.0**	**+0.5**
TIY					pmax		pmax		
	comp=Z,100nm,0.6s								
BIDO	**Bidbid**	**25.05**	**267**		P		**P**	**09 01 22.1**	**+1.5**
	SNR=26								
BIDO					P		**P**	**09 01 22.1**	**+1.5**
	SNR=26								
HHC	**Hu-ho-hao-te**	**25

SNR=14
ARQ Araqi 26.52 267 P P 09 01 35.8 +1.8
SNR=9.7
ARQ P P 09 01 35.8 +1.8
SNR=9.7
DLV T Lat 26.53 121 P P 09 01 35.5 +1.3
DLV IAmb IAmb 09 01 37.1
comp=Z,67nm,0.9s
DQM DQM 26.71 260 P P 09 01 37.2 +1.6
SNR=8.3
MOY Mondy 26.72 22 eP P 09 01 37.0 +1.4
MOY pmax pmax
comp=Z,188nm,2.7s
NAZ Nazwa, Dubai 26.90 271 P P 09 01 38.9 +1.6
ALNE Al Ain 27.03 269 i P P 09 01 39.6 +1.1
SNR=8.4
ALNE Al Ain 27.03 269 P P 09 01 40.2 +1.7
SNR=8.2
ALNE P P 09 01 40.2 +1.7
SNR=8.2
IPM Ipoh 27.30 145 P P 09 01 41.2 +0.2
IPM IAmb IAmb 09 01 45.7
comp=Z,57nm,1.4s
TLY Talaya 27.66 25 P P 09 01 43.7 -0.2
comp=Z,10nm,0.8s,baz=227,slow=6.9,SNR=12
TLY Talaya 27.66 25⇑ eP P 09 01 45.8 +1.9
TLY pmax pmax
comp=Z,28nm,1.8s
TLY Talaya 27.66 25 P P 09 01 44.4 +0.5
TLY Talaya 27.66 25 P P 09 01 46.7 +2.8
TLY Talaya 27.66 25 ⇓P P 09 01 46.1 +2.2
PSI Prapat 27.76 150 P P 09 01 45.0 -0.2
comp=Z,1.8nm,0.5s,baz=360,slow=9.9,SNR=1.7
BVAR Borovoye Array 27.81 340 P P 09 01 45.0 -0.2
comp=Z,11nm,0.4s,baz=166,slow=11,SNR=73
BVAR ScP **ScP 09 08 39.0 -2.7**
comp=Z,1.6nm,0.6s,baz=238,slow=8.5,SNR=4.5
BVAR Borovoye Array 27.81 340 P P 09 01 45.0 -0.2
RPSI Rantau Prapat 27.85 150 P P 09 01 45.0 -0.9
BRVK Borovoye 27.87 340⇑ eP P 09 01 46.3 +0.6
BRVK pmax pmax
comp=Z,27nm,1.6s
BRVK Borovoye 27.87 340 P P 09 01 45.2 -0.5
BRVK Borovoye 27.87 340 P P 09 01 46.7 +1.0
BRVK Borovoye 27.87 340 ⇑P P 09 01 46.1 +0.4
TIA Tai'an 28.05 64 P P 09 01 48.3 +0.7
TIA pmax pmax
comp=Z,46nm,1.2s
BJT Baijiatuau 28.16 56 P P 09 01 49.5 +1.0
BJT pmax pmax
comp=Z,19nm,0.7s
BJT Baijiatuau 28.16 56 P P 09 01 49.5 +1.0
BJI Beijing 28.17 56 P P 09 01 49.5 +1.0
BJI pmax pmax
comp=Z,27nm,0.7s
BJI LR LR
comp=Z,4μm,23.3s
BJI LR LR
comp=Z,8μm,22.4s
IRK Irkutsk 28.34 25 eP P 09 01 50.5 +0.5
IRK pmax pmax
comp=Z,85nm,2.2s
NJ2 Nanjing 29.16 73 eP P 09 01 56.0 -1.5
NJ2 pmax pmax
comp=Z,20nm,0.5s
AB31 Akbulak array 29.27 325 P P 09 01 58.3 +0.1
ABKAR Akbulak array 29.27 325 P P 09 01 58.7 +0.6
ABKAR Akbulak array 29.27 325 ⇓P P 09 01 57.1 -1.1
DMTO DMTO 29.83 257 P P 09 02 05.2 +1.7
MNSI Mandailing Nat 29.84 151 P P 09 02 16.4 +13
DOK Doka 30.18 260 P P 09 02 07.6 +1.0
SNR=7.7
DOK P P **09 02 07.6 +1.0**
SNR=7.7
RBK Rabkut 30.57 258 P P 09 02 11.4 +1.4
SNR=8.2
RBK P P **09 02 11.4 +1.4**
SNR=8.2
WHFO Wadi Hawf 30.77 259 P P 09 02 13.0 +1.1
SNR=14
AKTO Aktyubinsk 30.98 325 P P 09 02 13.3 +0.1
comp=Z,7.9nm,0.5s,baz=127,slow=6.5,SNR=21
AKTO S **S 09 07 15.2 -2.3**
comp=Z,2.6nm,0.8s,baz=67,slow=23,SNR=2.0
AKTO ScP **ScP 09 08 48.8 -3.0**
comp=Z,5.0nm,0.7s,baz=118,slow=1.5,SNR=5.0
ABTO Aybut 31.41 258 P P 09 02 18.2 +0.7
SNR=8.9
TPUB Ta-pu 31.89 90 P P 09 02 22.9 +1.2
TPUB IAmb IAmb 09 02 33.6
comp=Z,34nm,1.0s
DL2 Dalian 32.02 60 P P 09 02 23.5 +0.9
DL2 pmax pmax
comp=Z,180nm,0.7s
TWG Pinlang 32.41 90 P P 09 02 27.2 +1.0
TWG IAmb IAmb 09 02 29.7
comp=Z,83nm,1.3s
YULB Yu-li 32.46 89 P P 09 02 26.1 -0.6
NACB Ninganchiao 32.53 88 P P 09 02 27.6 +0.3
UMR Umm Al-Rimmam 33.20 283 eP 09 02 33.6
SOCY Socotra 33.27 249 P P 09 02 31.8 -2.1
SOCY IAmb IAmb 09 02 36.5
comp=Z,21nm,0.8s
SOCY Socotra 33.27 249 P P 09 02 31.8 -2.1
SNR=6.3
SOCY Socotra 33.27 249 ⇓P P 09 02 32.8 -1.1
RST Umm Al-Ruwaisa 33.83 283 eP 09 02 38.5
AKT Akhty 33.83 304 eP P 09 02 39.5 +1.0
AKT e 09 03 53.1
AKT pmax pmax
comp=Z,86nm,0.8s
HIA Hailar 34.01 41 ceP P 09 02 40.7 +0.8
HIA pmax pmax
comp=Z,42nm,0.6s
HIA Hailar 34.01 41 P P 09 02 40.4 +0.5
SNY Shenyang 34.05 55 ⇑P P 09 02 40.5 +0.2
SNY pmax pmax
comp=Z,63nm,1.0s
SNY pmax pmax
comp=Z,4μm,12.0s
SNY LR LR
comp=Z,11μm,22.3s
SNY LR LR
comp=Z,6μm,20.7s
SNY LR LR
comp=Z,17μm,24.6s
SVE Sverdlovsk 34.18 336⇓ eP P 09 02 42.3 +1.0
SVE pmax pmax
comp=Z,47nm,0.7s
MAK Makhachkala 34.32 307 eP P 09 02 35.8 -6.9
MAK e 09 03 52.8
MAK eS S 09 07 59.9 -10
MAK pmax pmax
comp=Z,263nm,1.2s
MAK MLR MLR
comp=Z,8μm,20.0s
ARU Arti 34.68 334 P P 09 02 45.9 +0.3
comp=Z,10nm,0.4s,baz=135,slow=4.8,SNR=29
ARU Arti 34.68 334⇑ iP P 09 02 46.2 +0.6
ARU pmax pmax
comp=Z,31nm,0.6s
ARU Arti 34.68 334 P P 09 02 45.9 +0.3
ARU IAmb IAmb 09 02 50.0
comp=Z,39nm,0.6s
ARU Arti 34.68 334 ⇑P P 09 02 46.2 +0.6
KSM Kuching 35.16 133 P P 09 02 51.4 +1.3
GROC Groznyy 35.60 307 eP P 09 02 53.7 0.0
GROC e 09 04 13.2
GROC eS S **09 08 30.6 +1.2**
GROC pmax pmax
comp=Z,106nm,0.6s
SBUM Sibu 35.70 130 P P 09 02 56.0 +1.2
SBUM IAmb IAmb 09 02 57.8
comp=Z,30nm,1.0s
SBUM Sibu 35.70 130 ⇑P P 09 02 56.6 +1.8
INCN Inchon 35.77 63 P P 09 02 55.6 +0.3
INCN pmax pmax
comp=Z,96nm,1.4s
INCN Inchon 35.77 63 P P 09 02 55.6 +0.3
INCN IAmb IAmb 09 02 59.5
comp=Z,96nm,1.4s
CN2 Changchun 35.83 52 eP P 09 02 55.5 -0.2
CN2 pmax pmax
comp=Z,40nm,0.9s
GNI Garni 35.83 301 P P 09 02 59.0 +3.1
comp=Z,37nm,0.8s,baz=146,slow=5.7,SNR=12
GNI Garni 35.83 301⇓ eP P 09 02 59.1 +3.1
GNI pmax pmax
comp=Z,50nm,0.9s
GNI Garni 35.83 301 ⇑P P 09 03 01.3 +5.4
KKM Kota Kinabalu 36.14 121 P P 09 02 58.5 -0.2
KKM IAmb IAmb 09 03 02.1
comp=Z,69nm,1.1s
BOD Bodaibo 36.23 26 eP P 09 02 59.5 +0.7
BOD pmax pmax
comp=Z,69nm,1.5s
RAYN Ar Rayn 36.25 273 i P P 09 02 59.3 -0.2
SNR=17
RAYN Ar Rayn 36.25 273 P P 09 02 59.4 -0.2
RAYN pmax pmax
comp=Z,48nm,1.3s
RAYN Ar Rayn 36.25 273 P P 09 02 59.4 -0.2
RAYN IAmb IAmb 09 03 03.6
comp=Z,48nm,1.3s
TJN Taejon 36.30 65 ceP P 09 02 59.1 -0.7
KS19 Wonju Array Si 36.75 63 P P 09 03 03.6 -0.1
KSAR Wonju Array Be 36.76 64 P P 09 03 03.1 -0.6
KSAR Wonju Array Be 36.76 64 P P 09 03 03.1 -0.6
KSRS Korea Array 36.80 64 P P 09 03 02.6 -1.3
comp=Z,10nm,0.5s,baz=259,slow=8.3,SNR=56
KSRS ScP **ScP 09 09 08.2 -4.4**
comp=Z,1.8nm,0.8s,baz=273,slow=3.7,SNR=6.1
ZEI Tsey 36.88 305 eP P 09 03 04.2 -0.7
ZEI pmax pmax
comp=Z,66nm,0.8s
AKH Akhalkalaki 36.95 303 ⇑P P 09 03 08.3 +2.8
BELG Belogornoye 37.53 322 P P 09 03 09.6 -0.5
comp=Z,17nm,0.7s,baz=326,slow=2.9,SNR=4.4
BELG Belogornoye 37.53 322⇑ eP P 09 03 09.3 -0.7
BELG pmax pmax
comp=Z,10.0nm,1.1s
KBZ Khabaz 37.77 307 P P 09 03 12.7 +0.5
comp=Z,15nm,0.7s,baz=122,slow=7.8,SNR=34
KBZ Khabaz 37.77 307 ⇓ iP P 09 03 12.4 +0.2
KBZ pmax pmax
comp=Z,20nm,0.8s
NEY Neytrino 37.81 306⇓ eP P 09 03 15.3 +2.5
NEY pmax pmax
comp=Z,9.0nm,0.7s
JOW Kunigami 37.86 81 P P 09 03 13.2 -0.1
JOW Kunigami 37.86 81 ⇓P P 09 03 13.1 -0.1
KVAR Kislovodsk Arr 37.96 307 P P 09 03 15.7 +1.8
comp=Z,5.3nm,0.5s,baz=354,slow=9.2,SNR=2.4
JTU Tsushima 37.96 68 P P 09 03 14.3 +0.3
JTU IAmb IAmb 09 03 26.5
comp=Z,104nm,1.4s
JTU Tsushima 37.96 68 ⇓P P 09 03 14.4 +0.5
KIV Kislovodsk 37.96 307 i P P 09 03 15.0 +1.1
SNR=7.0
KIV Kislovodsk 37.96 307 eP P 09 03 18.1 +4.1
KIV pmax pmax
comp=Z,65nm,1.0s
CHVG Ch'k'valeri 38.18 305 ⇓P P 09 03 19.0 +3.3
CHVG Ch'k'valeri 38.18 305 ⇓P P 09 03 19.0 +3.3
MDJ Mudanjiang 38.91 52 P P 09 03 21.8 0.0
MDJ pmax pmax
comp=Z,32nm,0.9s
MDJ Mudanjiang 38.91 52 P P 09 03 22.0 +0.1
JNU Nakatsue 39.27 71 P P 09 03 25.1 +0.1
JNU IAmb IAmb 09 03 28.6
comp=Z,51nm,0.9s
MSHR Mys Shultsa 39.72 56⇑ eP P 09 03 28.9 +0.3
MSHR pmax pmax
comp=Z,72nm,0.9s
KIRV Kirov 39.84 331 P P 09 03 30.0 +0.7
comp=Z,58nm,0.5s,baz=126,slow=3.0,SNR=18
KIRV Kirov 39.84 331 ceP P 09 03 29.8 +0.5
SOC Sochi 40.02 306 eP P 09 03 33.7 +2.6
SOC ePPP PPP 09 05 25.4
SOC eS S **09 09 40.7 +4.2**
SOC eSS SS **09 12 32.6 -0.9**
SOC pmax pmax
comp=Z,34nm,0.8s
ZEA Zeya 40.16 38 eP P 09 03 33.4 +1.3
ZEA pmax pmax
comp=E,10.0nm,0.5s
ZEA pmax pmax
comp=Z,10.0nm,0.6s
VRH Novokhopyorsk 40.46 318 eP P 09 03 33.9 -0.7
VRH pmax pmax
comp=Z,80nm,0.8s
USA0B Ussuriysk Arra 40.54 53 P P 09 03 35.6 +0.3
USA0B pmax pmax
comp=Z,33nm,0.7s
USA0B Ussuriysk Arra 40.54 53 P P 09 03 35.6 +0.3
USA0B IAmb IAmb 09 03 36.7
comp=Z,33nm,0.7s
USRK Ussuriysk Ar. 40.54 53 P P 09 03 35.6 +0.3
comp=Z,29nm,0.6s,baz=262,slow=8.2,SNR=79
USRK Ussuriysk Ar. 40.54 53 P P 09 03 35.5 +0.1
JHS Saijyo 41.00 67 P P 09 03 39.0 -0.4
JHS IAmb IAmb 09 03 44.7
comp=Z,54nm,1.4s
JHS Saijyo 41.00 67 ⇓P P 09 03 39.3 0.0
KLR Kul'dur 41.36 46 ceP P 09 03 42.3 +0.3
KLR pmax pmax
comp=Z,50nm,1.7s
GAZ Gaziantep 41.55 296 P P 09 03 44.3 +0.4
GAZ IAmb IAmb 09 03 49.2
comp=Z,98nm,1.1s
JMN Monobe 41.72 69 P P 09 03 46.7 +1.4
JMN IAmb IAmb 09 03 47.3
comp=Z,59nm,0.8s
JMN Monobe 41.72 69 ⇑P P 09 03 46.1 +0.8
NRIK Noril'sk 41.81 1 P P 09 03 46.5 +1.0
comp=Z,62nm,0.7s,baz=168,slow=6.5,SNR=117
NRIK Noril'sk 41.81 1 c iP P 09 03 46.3 +0.9
NRIK pmax pmax
comp=Z,128nm,1.1s
NRIK Noril'sk 41.81 1 P P 09 03 45.9 +0.4
NRIK IAmb IAmb 09 03 47.5
comp=Z,76nm,0.8s
ANN Anapa 41.82 307 eP P 09 03 45.7 -0.1
ANN e*PP **pP 09 03 48.6 -1.6**
ANN e 09 05 42.2
ANN eS S **09 10 04.6 +1.5**
ANN MLR MLR
comp=N,6μm,16.0s
ANN MLR MLR
comp=Z,13μm,18.0s
ANN MLR MLR
comp=E,2μm,14.0s
BBKI Banjar Baru 41.83 133 P P 09 03 48.9 +2.7
comp=E,68nm,1.0s
VORD Divnogorie 41.85 317 eP P 09 03 45.7 -0.3
VORD pmax pmax
comp=Z,70nm,1.3s
VSR Storozhevoye 42.00 317 eP P 09 03 46.4 -0.8
VSR pmax pmax
comp=Z,60nm,1.2s
VORR Voronezh 42.10 318 P P 09 03 48.0 -0.1
VORR pmax pmax
comp=Z,250nm,1.4s
LPSR Galich'ya Gora 42.54 319 eP P 09 03 51.3 -0.3
LPSR pmax pmax
comp=Z,60nm,0.7s
KBKI Kotabaru 42.58 131 P P 09 03 55.5 +3.2
comp=Z,2μmcomp=Z,66nm,1.0s
TOLI2 Tolitoli 42.79 122 P P 09 03 55.6 +1.5
TOLI2 IAmb IAmb 09 03 59.5
comp=Z,69nm,1.2s
JWT Wachi 42.85 67 P P 09 03 55.1 +0.6
JWT IAmb IAmb 09 03 59.3
comp=Z,36nm,0.8s
JWT Wachi 42.85 67 ⇑P P 09 03 55.0 +0.6
ATD Arta Tunnel 43.05 257 P P 09 03 57.0 +0.7
comp=Z,41nm,0.9s,baz=5.2,slow=4.9,SNR=14
DIKM Dikmen 43.12 302 ⇑P P 09 04 00.6 +4.0
MMAI Mount Meron Ar 43.31 290 P P 09 03 59.9 +1.6
comp=Z,22nm,0.9s,baz=66,slow=10,SNR=15
TEY Ternei 43.91 53⇑ eP P 09 04 01.9 -0.9
TEY pmax pmax
comp=E,10.0nm,1.2s
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=Z,20nm,1.0s
BZK Bozkurt 44.07 303 ⇑P P 09 04 05.1 +0.9
MRSI Marisa 44.08 121 P P 09 04 06.4 +1.9
comp=Z,32nm,0.8s
EIL Elat 44.18 285 P P 09 04 06.1 +0.9
comp=Z,30nm,0.8s,baz=26,slow=4.2,SNR=17
EIL Elat 44.18 285 ⇑P P 09 04 06.2 +1.0
MOS Moscow 44.26 323 eP P 09 04 06.5 +1.1
MOS e 09 05 52.7
MOS eS S **09 10 34.9 -3.8**
MOS pmax pmax
comp=Z,107nm,1.6s
BR131 Keskin Array S 44.32 300 P P 09 04 05.5 -0.9
BR131 pmax pmax
comp=Z,46nm,1.4s
BR131 Keskin Array S 44.32 300 P P 09 04 05.5 -0.9
BR131 IAmb IAmb 09 04 10.9
comp=Z,46nm,1.4s
BR131 Keskin Array S 44.32 300 P P 09 04 09.8 +3.4
SNR=10
BRTR Keskin Array B 44.32 300 P P 09 04 07.2 +0.8
comp=Z,5.8nm,0.6s,baz=126,slow=8.0,SNR=19
BRTR ScP **ScP 09 09 38.5 -3.8**
comp=Z,2.1nm,0.8s,baz=116,slow=3.4,SNR=4.1
BRTR Keskin Array B 44.32 300 i P P 09 04 09.6 +3.2
BRTR pmax pmax
comp=Z,7.0nm,0.6s
BRTR Keskin Array B 44.32 300 P P 09 04 06.6 +0.2
OBN Obninsk 44.63 322 P P 09 04 08.4 0.0
comp=Z,7.9nm,0.4s,baz=354,slow=2.8,SNR=11
OBN Obninsk 44.63 322 eP P 09 04 08.6 +0.2
OBN e*PP **pP 09 04 13.1 +0.2**
OBN e 09 05 53.6
OBN ePPP PPP 09 06 34.4
OBN Obninsk 44.63 322 P P 09 04 07.7 -0.7
GRNR Gornyy 44.64 45⇑ iP P 09 04 08.9 +0.3
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=E,3μm,16.0s
APSI Ampana 44.77 123 P P 09 04 12.1 +2.1
comp=E,27nm,0.9s
GTOI Gorontalo 44.79 120 P P 09 04 10.0 -0.2
comp=E,25nm,0.9s
CSS Mathiatis 44.82 293 P P 09 04 10.9 +0.6
CSS IAmb IAmb 09 04 30.2
comp=Z,34nm,0.9s
CSS Mathiatis 44.82 293 ⇑P P 09 04 13.9 +3.6
TTSI Tana Toraja 44.91 127 P P 09 04 13.3 +2.2
comp=Z,66nm,1.0s
JSD Sado 44.99 63 P P 09 04 10.7 -0.8
JSD IAmb IAmb 09 04 14.1
comp=Z,20nm,0.7s
JSD Sado 44.99 63 ⇑P P 09 04 10.6 -1.0
MAJO Matsushiro 45.03 65 ceP P 09 04 11.9 -0.1
MAJO pmax pmax
comp=Z,25nm,0.7s
MAJO Matsushiro 45.03 65 P P 09 04 11.6 -0.4
MAJO IAmb IAmb 09 04 12.8
comp=Z,26nm,0.7s
MAJO Matsushiro 45.03 65 ⇑P P 09 04 11.7 -0.3
MAT Matsushiro 45.03 65 P P 09 04 11.4 -0.6
MJAR Matsushiro Arr 45.04 65 P P 09 04 11.9 -0.1
comp=Z,16nm,0.8s,baz=278,slow=10,SNR=36
MJAR Matsushiro Arr 45.04 65 P P 09 04 12.0 0.0
MJAR pmax pmax
comp=Z,7.0nm,0.9s
MJAR Matsushiro Arr 45.04 65 P P 09 04 12.0 0.0
YAK Yakutsk 45.05 28 eP P 09 04 11.3 -0.3
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.0s
YAK pmax pmax
comp=E,11nm,1.0s
YAK Yakutsk 45.05 28 P P 09 04 11.4 -0.2
LEF Lefka 45.16 293 ⇑P P 09 04 14.5 +1.5
KLMR Klimovskoe 45.31 330 eP P 09 04 12.6 -1.1
KLMR e 09 05 50.3
KLMR pmax pmax
comp=Z,36nm,0.6s
KLMR Klimovskoe 45.31 330 eP P 09 04 12.6 -1.1
KLMR AMP 09 04 17.7
comp=Z,36nm,0.6s
KLMR ePcP **PcP 09 05 50.4 -2.8**
SPSI Sidrap Palu 45.52 128 P P 09 04 19.6 +3.6
comp=Z,33nm,1.6s
LUWI Luwuk 45.70 122 P P 09 04 16.9 -0.5
LUWI Luwuk 45.70 122 P P 09 04 26.9 +10
MDUB Mudurnu 46.18 301 P P 09 04 19.8 -1.3
KAPI Kappang 46.26 129 ceP P 09 04 24.0 +2.2
JYT Yasato 46.66 65 P P 09 04 23.7 -1.0
ISP Isparta 46.84 297 P P 09 04 25.0 -1.3
ISP pmax pmax
comp=Z,28nm,0.9s
ISP Isparta 46.84 297 P P 09 04 25.0 -1.3
ISP IAmb IAmb 09 04 31.4
comp=Z,28nm,0.9s
JMM Marumori 47.00 63 P P 09 04 26.3 -1.0
JMM Marumori 47.00 63 ⇑P P 09 04 27.1 -0.3
ELL Elmali 47.42 296 P P 09 04 31.3 +0.4
ELL Elmali 47.42 296 P P 09 04 31.3 +0.4
AKAS Kas 47.71 295 P P 09 04 33.1 0.0
AKAS IAmb IAmb 09 04 43.4
comp=Z,23nm,0.9s
TLCR 47.94 307 ⇑P P 09 04 38.0 +3.4
TLCR 47.94 307 ⇑P P 09 04 38.0 +3.4
AKASG Malin Array Be 48.06 315 P P 09 04 34.8 -0.6
comp=Z,5.9nm,0.4s,baz=77,slow=6.9,SNR=32
AKASG Malin Array Be 48.06 315 i P P 09 04 34.7 -0.8
AKASG pmax pmax
comp=Z,21nm,0.7s
AKASG Malin Array Be 48.06 315 P P 09 04 34.6 -0.8
AKBB Malin Array Si 48.06 315 ⇓ eP P 09 04 34.5 -0.9
AKBB pmax pmax
comp=Z,55nm,1.0s
AKBB Malin Array Si 48.06 315 P P 09 04 34.2 -1.2
ASAJ Asahikawa 48.14 54 P P 09 04 35.2 -1.0
ASAJ pmax pmax
comp=Z,34nm,0.8s
JKA Kamikawa-asahi 48.14 54 P P 09 04 35.2 -1.0
JKA IAmb IAmb 09 04 42.1
comp=Z,34nm,0.8s
TIRR Tirgusor 48.22 306 P P 09 04 35.7 -1.1
TIRR pmax pmax
comp=Z,101nm,1.5s
TIRR Tirgusor 48.22 306 P P 09 04 35.6 -1.1
TPGR Topolog 48.22 307 ⇑P P 09 04 36.2 -0.6
YSS Yuzh-Sakhalins 48.33 50⇑ eP P 09 04 38.0 +0.5
YSS pmax pmax
comp=Z,115nm,1.4s
YSS Yuzh-Sakhalins 48.33 50 P P 09 04 36.9 -0.7
SORM Soroca 48.39 311 ⇑P P 09 04 37.8 -0.3
SORM Soroca 48.39 311 ⇑P P 09 04 37.8 -0.3
CFR Carcaliu 48.42 307 ⇑P P 09 04 40.4 +2.1
CFR Carcaliu 48.42 307 ⇑P P 09 04 40.4 +2.1
HARR Harsova 48.56 307 ⇑P P 09 04 39.3 -0.1
HARR Harsova 48.56 307 ⇑P P 09 04 39.3 -0.1
TYV Tymovskoe 48.56 45 eP P 09 04 39.8 +0.5
TYV pmax pmax
comp=Z,17nm,1.6s
ERM Erimo 48.59 57 ceP P 09 04 40.1 +0.5
ERM pmax pmax
comp=Z,52nm,0.7s
ERM Erimo 48.59 57 P P 09 04 39.3 -0.3
ERM Erimo 48.59 57 ⇑P P 09 04 40.1 +0.5
JEM Erimo 48.59 57 P P 09 04 35.6 -4.0
PUL Pulkovo 49.20 327⇑ eP P 09 04 44.7 +0.6
MNK Minsk 49.39 320 eP P 09 04 47.0 +1.4
VRI Vrincioaia 49.42 308 ⇑P P 09 04 47.2 +1.2
VRI Vrincioaia 49.42 308 ⇑P P 09 04 47.2 +1.2
PLOR Plostina 49.47 308 ⇑P P 09 04 47.8 +1.3
PLOR Plostina 49.47 308 ⇑P P 09 04 47.8 +1.3
TESR Tescani 49.48 309 ⇑P P 09 04 49.6 +3.1
KARP Karpathos 49.77 295 P P 09 04 52.0 +3.2
KARP Karpathos 49.77 295 ⇓P P 09 04 52.0 +3.2
BIZ Bicaz 49.87 309 ⇑P P 09 04 53.1 +3.7
MLR Muntele Rosu 49.97 308 P P 09 04 51.2 +0.8
comp=Z,47nm,0.8s,baz=256,slow=2.1,SNR=24
MLR Muntele Rosu 49.97 308 ⇑P P 09 04 51.7 +1.4
MLR Muntele Rosu 49.97 308 ⇑P P 09 04 51.7 +1.4
MLR Muntele Rosu 49.97 308 P P 09 04 49.6 -0.8
ALN Alexandroupoli 50.08 302 P P 09 04 51.5 +0.5
ALN Alexandroupoli 50.08 302 P P 09 04 50.3 -0.7
ALN pmax pmax
comp=Z,21nm,0.9s
ALN Alexandroupoli 50.08 302 P P 09 04 50.3 -0.7
ALN IAmb IAmb 09 04 55.3

comp=Z,21nm,0.9s
ALN Alexandroupoli 50.08 302 ⇑P **P** 09 04 54.7 +3.6
NACGM Naroch 50.08 320 *i* P **P** 09 04 51.3 +0.5
NACGM *i* P **P** 09 04 51.3 +0.5
NACGM *i* P **P** 09 04 51.3 +0.5
NACGM *i* PcP **PcP** 09 06 12.4 +2.1
NACGM *i* PP **PP** 09 06 45.9 +0.1
NACGM *i* PPP PPP 09 07 38.8
NACGM *i* S **S** 09 12 00.7 -0.9
NACGM *i* SS ScS 09 14 56.6 +15
NACGM *i* SSS SSS 09 16 35.3
NACGM *i* LQ LQ 09 22 18.0
NACGM *i* LR LR 09 26 04.2
TIXI Tiksi 50.10 16 P **P** 09 04 50.3 -0.4
comp=Z,28nm,0.5s,baz=210,slow=3.8,SNR=5.1
TIXI Tiksi 50.10 16*c* *i*P **P** 09 04 50.6 -0.2
TIXI Tiksi 50.10 16 IAmb IAmb 09 04 51.8
comp=Z,38nm,0.6s
TIXI Tiksi 50.10 16 ⇑P **P** 09 04 49.9 -0.8
LVZ Lovozero 50.35 338 ⇓*i*P **P** 09 04 55.6 +2.8
LVZ pmax pmax
comp=Z,83nm,1.1s
DOPR Dopca 50.35 308 ⇑P **P** 09 04 53.9 +0.8
IIGN Ignalina 50.46 320 *e*P **P** 09 04 54.3 +0.6
BURAR Bucovina Array 50.48 310 ⇑P **P** 09 04 54.5 +0.4
BURAR Bucovina Array 50.48 310 ⇑P **P** 09 04 54.5 +0.4
BURAR Bucovina Array 50.48 310 P **P** 09 04 54.4 +0.2
BUR08 Bucovina Ar. S 50.49 310 P **P** 09 04 53.3 -1.0
YUK Yuzh-Kuril'sk 50.50 54⇓*e*P **P** 09 04 53.6 -0.6
ISAL Salakas 50.55 321 *e*P **P** 09 04 55.1 +0.8
ZKR Zakros 50.59 294 P **P** 09 04 54.6 -0.5
VOIR 50.60 308 ⇑P **P** 09 04 55.9 +0.8
VOIR 50.60 308 ⇑P **P** 09 04 55.9 +0.8
APA Apatity 50.63 337 ⇓*i*P **P** 09 04 57.2 +2.4
APA pmax pmax
comp=Z,22nm,0.6s
APA MLR MLR
comp=Z,9μm,18.0s
VSU Vasula 50.70 324 *e*P **P** 09 04 55.5 +0.1
VSU Vasula 50.70 324 ⇑P **P** 09 04 55.5 +0.1
ARR Arges 50.89 307 ⇑P **P** 09 05 00.9 +3.6
SANT Santorini 51.02 296 ⇑P **P** 09 05 01.0 +2.7
SANT Santorini 51.02 296 ⇓P **P** 09 05 00.5 +2.2
NPS Neapolis 51.06 294 P **P** 09 04 58.1 -0.5
ARCR ARCALIA 51.06 310 ⇑P **P** 09 05 01.6 +3.2
LAST Lasithi 51.18 294 P **P** 09 04 59.8 +0.2
LVV L'vov 51.32 313 *e*P **P** 09 05 03.1 +2.8
IDI Anoyia 51.64 295 P **P** 09 05 02.6 -0.4
comp=Z,24nm,0.6s,baz=30,slow=13,SNR=21
IDI Anoyia 51.64 295 P **P** 09 05 02.3 -0.7
IDI Anoyia 51.64 295 ⇓P **P** 09 05 02.9 -0.1
IDI Anoyia 51.64 295 P **P** 09 05 02.6 -0.4
IDI IAmb IAmb 09 05 11.4
comp=Z,28nm,0.7s
IDI Anoyia 51.64 295 ⇑P **P** 09 05 02.9 -0.1
FIA1 FINESS Array S 51.65 328 P **P** 09 05 02.2 -0.4
FINES FINESS Array B 51.65 328 P **P** 09 05 02.5 0.0
comp=Z,49nm,0.5s,baz=109,slow=8.0,SNR=126
FINES FINESS Array B 51.65 328 P **P** 09 05 02.2 -0.4
NVR Nevrokopi 51.68 302 P **P** 09 05 03.5 +0.3
PABE Paberze 51.75 320 *e*P **P** 09 05 03.8 +0.4
PABE Paberze 51.75 320 P **P** 09 05 03.4 0.0
KUR Kuril'sk 51.88 53⇓*e*P **P** 09 05 05.0 +0.5
PAIG Paliouri 51.96 301 P **P** 09 05 05.5 +0.2
VTS Vitosha 52.04 304 ⇑P **P** 09 05 07.0 +1.0
VTS Vitosha 52.04 304 ⇑P **P** 09 05 07.0 +1.0
VTS Vitosha 52.04 304 P **P** 09 05 06.4 +0.4
VTS IAmb IAmb 09 05 10.8
comp=Z,41nm,1.0s
VTS Vitosha 52.04 304 ⇑P **P** 09 05 06.8 +0.8
SUW Suwalki 52.07 318 *e*P **P** 09 05 08.4 +2.6
DRGR 52.19 309 ⇑P **P** 09 05 08.0 +1.0
DRGR 52.19 309 ⇑P **P** 09 05 08.0 +1.0
GZR Gura Zlata 52.20 308 ⇑P **P** 09 05 10.3 +3.2
GZR Gura Zlata 52.20 308 ⇑P **P** 09 05 10.3 +3.2
MTSE Matsula 52.25 324 *e*P **P** 09 05 07.2 +0.2
IMMV Iera Moni Meta 52.34 295 P **P** 09 05 11.2 +3.0
XOR Xorichti 52.40 300 P **P** 09 05 10.8 +2.2
KNT Kendrikon 52.42 302 P **P** 09 05 08.3 -0.4
UZH Uzhgorod 52.44 312 *e*P **P** 09 05 07.4 -1.3
UZH *i* 09 05 11.0
UZH *e* 09 05 13.7
VAY Valandovo 52.65 302 *e*P **P** 09 05 06.5 -3.8
BATI Baumata 52.67 130 P **P** 09 05 10.0 -0.8
comp=Z,36nm,0.7s
SOEI Soe 52.76 129 P **P** 09 05 10.5 -1.1
SOEI Soe 52.76 129 ⇑P **P** 09 05 10.4 -1.1
SOEI Soe 52.76 129 P **P** 09 05 09.8 -1.7
comp=Z,146nm,0.8s
GRG Griva 52.82 302 P **P** 09 05 11.1 -0.6
LIT Litokhoron 52.85 301 P **P** 09 05 10.9 -1.0
LIT pmax pmax
comp=Z,15nm,0.8s
LIT Litokhoron 52.85 301 P **P** 09 05 10.9 -1.0
LIT Litokhoron 52.85 301 ⇑P **P** 09 05 14.0 +2.1
SIRR Siria 52.94 306 ⇑P **P** 09 05 16.6 +4.1
KTHA Kythira Island 52.95 296 P **P** 09 05 11.3 -1.4
PBUR Paburge 52.95 321 *e*P **P** 09 05 12.8 +0.5
CRVS Cervenica-Dubn 52.99 312 *e*P **P** 09 05 15.2 +2.4
CRVS Cervenica-Dubn 52.99 312 *e*P **P** 09 05 15.2 +2.4
BZS Buzias 53.00 308 ⇑P **P** 09 05 16.7 +3.8
BZS Buzias 53.00 308 ⇑P **P** 09 05 16.7 +3.8
AGG Agios Georgios 53.11 300 P **P** 09 05 12.6 -1.2
AGG Agios Georgios 53.11 300 ⇑P **P** 09 05 12.8 -1.0
THL Klokotos Trika 53.28 300 P **P** 09 05 16.8 +1.8
VLX Vlachokerasia 53.31 298 P **P** 09 05 16.2 +0.8
KZN Kozani 53.37 301 P **P** 09 05 16.7 +0.9
KLV Kalavryta, Ach 53.39 298 P **P** 09 05 14.0 -1.9
TRIZ Trizonia 53.40 299 P **P** 09 05 16.1 +0.2
SKO Skopje 53.43 303 *e*P **P** 09 05 15.7 -0.4
ANX Ano Chora 53.49 299 P **P** 09 05 18.0 +1.3
LODK Lodwar 53.52 253 P **P** 09 05 17.0 -0.1
LODK Lodwar 53.52 253 P **P** 09 05 17.7 +0.5
SNR=7.7
EVR Evrytania 53.53 300 P **P** 09 05 18.0 +1.0
FNA Florina 53.61 302 P **P** 09 05 20.4 +2.9
FNA Florina 53.61 302 P **P** 09 05 17.3 -0.2
FNA pmax pmax
comp=Z,14nm,0.9s
FNA Florina 53.61 302 P **P** 09 05 17.3 -0.2
FNA Florina 53.61 302 ⇓P **P** 09 05 19.8 +2.2
KEV Kevo 53.63 338 ⇓P **P** 09 05 17.5 +0.4
ITM Ithomi 53.70 297 P **P** 09 05 16.0 -2.2
ITM IAmb IAmb 09 05 25.7
comp=Z,60nm,1.5s
PENT Pentalofos 53.87 301 P **P** 09 05 19.3 -0.2
RLS Riolos of Patr 53.92 299 P **P** 09 05 20.4 +0.7
AXS Araxos 53.97 299 P **P** 09 05 23.0 +2.9
OHR Ohrid 54.01 302 *e*P **P** 09 05 15.7 -4.7
ARA0 ARCESS Array S 54.06 338 *e*P **P** 09 05 20.6 +0.4
ARCES ARCESS Array B 54.06 338 P **P** 09 05 20.4 +0.1
comp=Z,42nm,0.7s,baz=96,slow=7.7,SNR=48
ARCES ARCESS Array B 54.06 338 P **P** 09 05 20.3 0.0
ARCES pmax pmax
comp=Z,38nm,0.8s
ARCES ARCESS Array B 54.06 338 P **P** 09 05 20.3 0.0
ARCES IAmb IAmb 09 05 24.9
comp=Z,38nm,0.8s
PSZ Piszkesteto 54.06 311 ⇑P **P** 09 05 21.8 +1.0
PSZ Piszkesteto 54.06 311 ⇑P **P** 09 05 21.8 +1.0
MA2 Magadan 54.14 35 P **P** 09 05 19.9 -1.1
comp=Z,29nm,0.6s,baz=288,slow=9.1,SNR=15
MA2 Magadan 54.14 35⇑*e*P **P** 09 05 19.5 -1.5
MA2 pmax pmax
comp=Z,56nm,1.2s
MA2 Magadan 54.14 35 P **P** 09 05 21.0 0.0
MA2 Magadan 54.14 35 ⇓P **P** 09 05 21.6 +0.6
FRGS Fruska Gora 54.31 307 ⇑P **P** 09 05 26.1 +3.6
AAL Aland 54.38 326 *e*P **P** 09 05 22.9 +0.2
KMBO Kilima Mbogo 54.45 247 P **P** 09 05 24.3 +0.1
comp=Z,10nm,0.8s,baz=48,slow=8.4,SNR=9.1
EVGI Lefkada island 54.46 299 P **P** 09 05 24.5 +0.8
VLS Valsamata 54.58 299 P **P** 09 05 25.9 +1.3
TIR Tirane 54.67 303 ⇓P **P** 09 05 26.7 +1.5
TIR Tirane 54.67 303 ⇓P **P** 09 05 26.7 +1.5
KTK1 Kautokeino 54.68 337 *e*P **P** 09 05 25.0 +0.3
VYHS Vyhne 54.74 312 *e*P **P** 09 05 28.8 +3.2
VYHS pmax pmax
comp=Z,20nm,1.4s
VYHS Vyhne 54.74 312 *e*P **P** 09 05 28.8 +3.2
VYHS *e* 09 13 36.1
PDG Podgorica 54.99 304 ⇑P **P** 09 05 29.3 +1.9
PDG Podgorica 54.99 304 P **P** 09 05 27.3 -0.1
PDG IAmb IAmb 09 05 30.9
comp=Z,32nm,0.8s
PDG Podgorica 54.99 304 ⇑P **P** 09 05 28.6 +1.2
HAMF Hammerfest 54.99 339 *e*P **P** 09 05 25.3 -1.7
OKC Ostrava-Krasne 55.13 313 *e*P **P** 09 05 31.3 +3.0
OKC Ostrava-Krasne 55.13 313 *e*P **P** 09 05 31.3 +3.0
SRO Srobarova 55.13 311 *e*P **P** 09 05 31.8 +3.4
SRO Srobarova 55.13 311 *e*P **P** 09 05 31.8 +3.4
SEY Seymchan 55.30 31 P **P** 09 05 29.1 -0.3
comp=Z,16nm,0.9s,baz=263,slow=7.5,SNR=16
SEY Seymchan 55.30 31⇑*e*P **P** 09 05 30.1 +0.8
MORC Moravsky Berou 55.52 313 *e*P **P** 09 05 31.3 +0.1
MORC Moravsky Berou 55.52 313 ⇑P **P** 09 05 34.3 +3.1
UPP Uppsala 55.53 325 *e*P **P** 09 05 31.1 0.0
SMOL Smolenice 55.67 312 *e*P **P** 09 05 35.6 +3.2
SMOL pmax pmax
comp=Z,4.0nm,0.9s
SMOL Smolenice 55.67 312 *e*P **P** 09 05 35.5 +3.2
MODS Modra-Piesok 55.79 311 *e*P **P** 09 05 35.2 +2.1
MODS pmax pmax
comp=Z,12nm,1.0s
MODS Modra-Piesok 55.79 311 *e*P **P** 09 05 35.2 +2.1
JETT Jettan, Norway 55.79 337 *e*P **P** 09 05 33.3 +0.5
ZST Bratislava 55.92 311 *e*P **P** 09 05 36.9 +2.9
ZST pmax pmax
comp=Z,32nm,0.9s
ZST Bratislava 55.92 311 *e*P **P** 09 05 36.9 +2.9
VRAC Vranov 56.17 313 P **P** 09 05 36.0 +0.2
comp=Z,18nm,0.8s,baz=96,slow=8.0,SNR=20
VRAC Vranov 56.17 313 ⇑P **P** 09 05 37.1 +1.3
VRAC Vranov 56.17 313 *e*P **P** 09 05 36.2 +0.4
VRAC Vranov 56.17 313 ⇑P **P** 09 05 37.1 +1.3
DPC Dobruska-Polom 56.27 314 *e*P **P** 09 05 36.9 +0.3
DPC *e* 09 05 40.0
DPC Dobruska-Polom 56.27 314 *e*P **P** 09 05 36.9 +0.3
DPC *e*pP **pP** 09 05 40.0 -1.2
TRO Tromso 56.31 337 *e*P **P** 09 05 36.7 +0.2
KRUC Moravsky 56.32 312 *e*P **P** 09 05 37.3 +0.4
OSTC Ostas 56.33 314 *e*P **P** 09 05 37.3 +0.3
OSTC *e*pP **pP** 09 05 40.0 -1.5
BLEU Blekinge 56.38 321 *e*P **P** 09 05 37.1 -0.1
UPC Upice 56.46 314 *e*P **P** 09 05 38.9 +1.0
UPC Upice 56.46 314 *e*P **P** 09 05 38.9 +1.0
CONA Conrad Observa 56.77 311 *i* P **P** 09 05 40.5 +0.3
comp=Z,32nm,0.9s,SNR=14
BSD Bornholm Skovb 56.91 320 *e*P **P** 09 05 41.1 +0.1
BSD Bornholm Skovb 56.91 320 *i* P **P** 09 05 43.6 +2.6
BSD Bornholm Skovb 56.91 320 *i* P **P** 09 05 43.5 +2.6
ARSA Arzberg 57.07 310 *i* P **P** 09 05 42.3 0.0
comp=Z,14nm,0.8s,SNR=6.6
MATE Matera 57.14 302 ⇑P **P** 09 05 45.8 +2.9
MATE Matera 57.14 302 ⇑P **P** 09 05 44.9 +2.0
FAUS Fauske 57.27 334 *e*P **P** 09 05 44.4 +1.0
STEI Steigen 57.36 335 *e*P **P** 09 05 44.3 +0.3
TIP Timpagrande 57.36 301 ⇑P **P** 09 05 47.5 +2.9
TIP Timpagrande 57.36 301 ⇑P **P** 09 05 47.5 +2.9
LNIZ Loecknitz 57.39 318 *e*P **P** 09 05 47.6 +3.2
comp=Z,19nm,0.7s,baz=83,slow=6.8
PRU Pruhonice 57.44 314 *e*P **P** 09 05 45.0 +0.2
PRU *e* 09 05 48.2
PRU Pruhonice 57.44 314 *e*P **P** 09 05 45.0 +0.2
PRU *e*pP **pP** 09 05 48.2 -1.2
MRVN Minervino Murg 57.45 303 ⇑P **P** 09 05 47.7 +2.6
DEL Delary 57.46 321 *i* P **P** 09 05 44.9 0.0
SOKA Soboth 57.47 310 *e*P **P** 09 05 45.7 +0.5
comp=Z,28nm,1.0s,SNR=11
MOR8 Moi Rana 57.48 333 *e*P **P** 09 05 44.0 -0.9
HFS Hagfors 57.52 326 P **P** 09 05 45.0 -0.2
comp=Z,72nm,0.6s,baz=95,slow=8.0,SNR=54
SGRT San Giovanni R 57.67 304 P **P** 09 05 46.1 -0.6
RUE Ruedersdorf 57.71 317 *e*P **P** 09 05 49.9 +3.3
comp=Z,44nm,0.7s,baz=83,slow=6.8
NBB05 Inndyr 57.73 334 *e*P **P** 09 05 47.0 +0.5
LUNU Lund 57.73 320 *i* P **P** 09 05 47.3 +0.5
BRG Berggiesshubel 57.74 315 *e*P **P** 09 05 47.1 +0.2
BRG Amp 09 05 49.3
comp=Z,4.9nm,0.8s
BRG *ex* x 09 05 50.1
BRG Amp 09 05 51.3
comp=Z,24nm,1.0s
BRG Berggiesshubel 57.74 315 *e*P **P** 09 05 50.5 +3.6
comp=Z,17nm,0.9s,baz=83,slow=6.8
MOA Molln 57.85 311 *e*P **P** 09 05 47.7 -0.1
comp=Z,17nm,0.8s,SNR=8.3
RGN Rugen 57.85 319 *e*P **P** 09 05 51.5 +3.9
comp=Z,55nm,0.7s,baz=83,slow=6.8
PETK Petropavlovsk- 57.89 43 P **P** 09 05 47.8 -0.2
comp=Z,5.7nm,0.6s,baz=321,slow=2.1,SNR=18
BJUU Bjuv 57.95 321 *e*P **P** 09 05 48.8 +0.5
LOF Lofoten 58.02 335 *e*P **P** 09 05 47.6 -0.9
KONS Konsvik 58.04 333 *e*P **P** 09 05 48.8 +0.1
STOK Stokkvaagen 58.07 333 *e*P **P** 09 05 49.0 +0.1
FABU Falkenberg 58.08 322 *e*P **P** 09 05 49.4 +0.2
GEC2 GERESS Array S 58.10 312 P **P** 09 05 49.9 +0.3
GEC2 GERESS Array S 58.10 312 *e*P **P** 09 05 53.0 +3.3
comp=Z,9.0nm,0.7s,baz=83,slow=6.8
GERES GERESS Array B 58.10 312 P **P** 09 05 49.7 0.0
comp=Z,9.4nm,0.8s,baz=86,slow=6.8,SNR=16
GERES GERESS Array B 58.10 312 P **P** 09 05 49.9 +0.3
GERES GERESS Array B 58.10 312 P **P** 09 05 49.9 +0.3
FBE Freiberg 58.11 315 *e*P **P** 09 05 53.4 +3.9
comp=Z,21nm,0.8s,baz=83,slow=6.8
KHC Kasperske Hory 58.15 313⇑*e*P **P** 09 05 50.0 +0.1
KHC pmax pmax
comp=Z,32nm,0.8s
KHC Kasperske Hory 58.15 313 *e*P **P** 09 05 50.1 +0.1
KHC *e*pP **pP** 09 05 53.0 -1.5
KHC Kasperske Hory 58.15 313 P **P** 09 05 49.4 -0.5
KHC IAmb IAmb 09 05 54.0
comp=Z,13nm,0.8s
KHC Kasperske Hory 58.15 313 ⇑P **P** 09 05 53.4 +3.4
CLL Collm 58.29 315 *i* P **P** 09 05 53.5 +2.7
comp=Z,12nm,0.9s
CLL *i* sP **pP** 09 05 55.3 -0.1
comp=Z,16nm,1.1s
CLL Collm 58.29 315 P **P** 09 05 50.5 -0.3
CLL pmax pmax
comp=Z,14nm,1.0s
CLL Collm 58.29 315 P **P** 09 05 50.5 -0.3
CLL Collm 58.29 315 *e*P **P** 09 05 53.9 +3.1
comp=Z,7.6nm,0.8s,baz=83,slow=6.8
NSS Namsos 58.42 331 *e*P **P** 09 05 51.2 -0.2
NC405 NORSAR Array S 58.49 327 P **P** 09 05 51.8 -0.2
WET Wettzell 58.61 313 *e*P **P** 09 05 56.6 +3.5
comp=Z,9.8nm,0.8s,baz=83,slow=6.8
MBWA Marble Bar 58.66 142 P **P** 09 05 53.8 +0.2
PAOL Paolisi 58.67 303 P **P** 09 05 53.7 0.0
PAOL IAmb IAmb 09 05 57.0
comp=Z,24nm,1.2s
TANN Tannenbergstha 58.73 314 *e*P **P** 09 05 56.6 +2.6
comp=Z,7.2nm,0.8s,baz=83,slow=6.8
NB2 NORSAR Subarra 58.74 327 P **P** 09 05 53.0 -0.8
baz=88,slow=7.4
NOA NORSAR Array B 58.74 327 P **P** 09 05 53.0 -0.8
comp=Z,19nm,0.7s,baz=89,slow=7.0,SNR=38
WERN Wernitzgruen 58.80 314 *e*P **P** 09 05 58.0 +3.6
comp=Z,6.8nm,0.8s,baz=83,slow=6.8
GUNZ Gunzen 58.82 314 *e*P **P** 09 05 58.1 +3.6
comp=Z,12nm,0.9s,baz=83,slow=6.8
WERD Werda 58.82 314 *e*P **P** 09 05 58.0 +3.5
comp=Z,11nm,0.8s,baz=83,slow=6.8
RJOB Jochberg 58.84 311 *e*P **P** 09 05 58.7 +3.9
comp=Z,60nm,0.8s,baz=83,slow=6.8
NAO01 NORSAR Array S 58.90 327 *e*P **P** 09 05 54.6 -0.3
SPA0 Spitsbergen Ar 58.96 347 *e*P **P** 09 05 56.2 +1.1
ROTZ Rotzenmuhle 58.97 314 *e*P **P** 09 05 59.6 +4.0
comp=Z,17nm,0.8s,baz=83,slow=6.8
MANZ Manzenberg 59.00 314 *e*P **P** 09 05 59.8 +4.0
comp=Z,7.0nm,0.8s,baz=83,slow=6.8
OSL Oslo 59.01 325 *e* **P** 09 05 59.1 +3.5
NEUB Neuenburg 59.07 315 *e*P **P** 09 05 59.5 +3.3
comp=Z,24nm,0.8s,baz=83,slow=6.8
STAL STALIGIAL 59.11 309 P **P** 09 05 57.1 +0.4
STAL IAmb IAmb 09 06 00.4
comp=Z,32nm,0.8s
MOX Moxa 59.24 315 *e*P **P** 09 06 00.9 +3.5
comp=Z,12nm,0.8s,baz=83,slow=6.8
FLTG Flechtingen 59.28 317 *e*P **P** 09 06 00.6 +3.0
comp=Z,18nm,0.7s,baz=83,slow=6.8
KONO Kongsberg 59.59 325*ce*P **P** 09 06 03.2 +3.5
KONO pmax pmax
comp=Z,57nm,1.7s
KONO Kongsberg 59.59 325 *e*P **P** 09 05 59.7 0.0
KONO Kongsberg 59.59 325 ⇓P **P** 09 06 02.9 +3.2
RAFF Raffo Rosso 59.61 299 P **P** 09 06 01.3 +1.0
ASSE Asse, Remlinge 59.65 316 *e*P **P** 09 06 03.3 +3.3
comp=Z,6.8nm,0.9s,baz=83,slow=6.8
BSEG Bad Segeberg 59.66 319 *e*P **P** 09 06 04.1 +3.9
comp=Z,36nm,0.7s,baz=83,slow=6.8
DOMB Dombas 59.74 328 *e*P **P** 09 06 00.1 -0.6
FITZ Fitzroy Crossi 59.75 135 P **P** 09 06 01.8 +0.6
CLZ Clausthal 59.87 316 *e*P **P** 09 06 05.2 +3.4
comp=Z,43nm,0.7s,baz=83,slow=6.8
NRDL Niedersach Rie 59.95 317 *e*P **P** 09 06 06.2 +4.1
comp=Z,37nm,0.8s,baz=83,slow=6.8
GOET G??ttrup 59.98 322 *i* P **P** 09 06 06.3 +4.0
KBS Kingsbay 59.98 348 *e*P **P** 09 06 02.9 +0.8
KNRA Kununurra 60.03 130 P **P** 09 06 03.6 +0.4
KNRA IAmb IAmb 09 06 07.7
comp=Z,20nm,0.8s
MOTA Moosalm 60.03 311 *i* P **P** 09 06 02.2 -1.0
comp=Z,27nm,0.7s,SNR=7.2
MUD Monsted U'grnd 60.06 321 *i* P **P** 09 06 06.3 +3.4
GTTG Gottingen 60.16 316 *e*P **P** 09 06 07.3 +3.6
comp=Z,16nm,0.7s,baz=83,slow=6.8
SKAR Skarslia 60.18 326 *e* **P** 09 06 06.8 +3.0
UBBA Unterbreizbach 60.23 315 *e*P **P** 09 06 07.1 +3.0
comp=Z,3.0nm,0.8s,baz=83,slow=6.8
HOMB Homborsund 60.26 324 *i* P **P** 09 06 07.0 +2.8
HOMB Homborsund 60.26 324 *i* P **P** 09 06 07.0 +2.8
LATE Laterza 60.39 305 P **P** 09 06 04.5 -1.1
LATE IAmb IAmb 09 06 08.5
comp=Z,18nm,1.0s
CLTB Caltabellotta 60.42 299 P **P** 09 06 05.2 -0.6
MOL Molde 60.42 329 *e*P **P** 09 06 04.7 -0.6
UBR Ueberruh 60.65 311 *e*P **P** 09 06 09.9 +2.7
comp=Z,11nm,0.7s,baz=83,slow=6.8
AKN Aaknes 60.70 328 *e*P **P** 09 06 07.4 +0.2
SALO Salr 60.73 309 P **P** 09 06 07.3 -0.4
MILB Miltenberg 60.83 314 *e*P **P** 09 06 11.5 +3.2
comp=Z,9.1nm,0.8s,baz=83,slow=6.8
DAVA Damuels 60.87 311 *e*P **P** 09 06 08.1 -0.7
comp=Z,40nm,0.8s
DAVOX Davos/Dischmat 60.96 310 P **P** 09 06 08.7 -0.8
comp=Z,13nm,0.8s,baz=114,slow=12,SNR=5.1
STU Stuttgart 61.06 313 *e*P **P** 09 06 13.3 +3.3
comp=Z,30nm,0.8s,baz=83,slow=6.8
ODD1 Odda 61.07 326 *e*P **P** 09 06 10.4 +0.6
KASTN Kahler Asten 61.16 316 *e*P **P** 09 06 14.1 +3.5
comp=Z,9.1nm,0.8s,baz=83,slow=6.8
BILL Bilibino 61.28 25 *e*P **P** 09 06 12.2 +1.1
BILL *e**PP **pP** 09 06 15.3 -0.4
BILL *e* 09 06 53.8
BILL *e* 09 08 26.7
BILL *e*PPP PPP 09 09 51.0
BILL pmax pmax
comp=Z,35nm,1.4s
TNS Taunus Mts 61.30 314 *e*P **P** 09 06 14.2 +2.6
comp=Z,19nm,0.8s,baz=83,slow=6.8
TUE Stuetta 61.37 310 P **P** 09 06 11.3 -1.0
TUE IAmb IAmb 09 06 22.6
comp=Z,26nm,1.0s
IBBN Ibbenburen 61.40 317 *e*P **P** 09 06 15.7 +3.6
comp=Z,20nm,0.8s,baz=83,slow=6.8
FOO Floro 61.68 328 *e*P **P** 09 06 13.3 -0.5
BFO Black Forest 61.71 312 *e*P **P** 09 06 16.1 +1.7
comp=Z,4.7nm,0.8s,baz=83,slow=6.8
BUG Bochum-Univer 61.84 316 *e*P **P** 09 06 18.6 +3.5
comp=Z,28nm,0.8s,baz=83,slow=6.8
VOI Vohitsoka 61.84 221 P **P** 09 06 15.9 +0.3
VOI IAmb IAmb 09 06 19.4
comp=Z,22nm,0.8s
AHRW Bad Neuenahr-A 62.11 315 *e*P **P** 09 06 20.7 +3.7
comp=Z,29nm,0.9s,baz=83,slow=6.8
ECH Echery 62.50 312 ⇑P **P** 09 06 22.4 +2.8
BTNL Ternell 62.70 315 *d*P **P** 09 06 21.0 0.0
BTNL *dx* x 09 06 23.6
BTNL *dx* x 09 06 29.8
MEM Membach 62.77 315 *dx* **P** 09 06 24.4 +3.0
SENIN Lac Senin/Sane 62.78 310 P **P** 09 06 21.8 -0.1
BHOU Houvegnez 62.82 315 *dx* **P** 09 06 25.6 +3.8
BHOU *dx* x 09 06 34.5
WLF Walferdange 62.86 314 *dx* **P** 09 06 25.6 +3.6
WLF Walferdange 62.86 314 *e*P **P** 09 06 26.0 +4.0
comp=Z,37nm,0.9s,baz=83,slow=6.8
VSL Villasalto 62.88 302 P **P** 09 06 22.0 -0.3
VSL IAmb IAmb 09 06 26.0
comp=Z,22nm,1.1s
VSL Villasalto 62.88 302 ⇑P **P** 09 06 25.2 +2.8
BSTI Sart Tilman 63.05 315 *dx* **P** 09 06 26.5 +3.3
BCLA Clavier 63.25 315 *dx* **P** 09 06 27.9 +3.3
BGES Gesves 63.39 315 *dx* **P** 09 06 28.7 +3.2
BNI Bardonecchia 63.50 309 ⇑P **P** 09 06 27.8 +1.3
BMDO Maredsous 63.61 315 *dx* **P** 09 06 30.0 +3.1
DOU Dourbes 63.76 315 *dx* **P** 09 06 31.1 +3.1
SNF Seneffe 63.87 315 *dx* **P** 09 06 31.9 +3.3
KEST Kesra 63.90 298 P **P** 09 06 28.2 -1.0
comp=Z,78nm,0.8s,baz=338,slow=3.8,SNR=13
KEST Kesra 63.90 298 P **P** 09 06 29.9 +0.6
KEST Kesra 63.90 298 P **P** 09 06 30.0 +0.8
SNR=12
NOR Nord 64.67 351 *i* P **P** 09 06 33.0 -0.4
NOR IAmb IAmb 09 06 34.4
comp=Z,12nm,0.6s
NOR Nord 64.67 351 *i* P **P** 09 06 33.0 -0.4
NOR pmax pmax
comp=Z,12nm,0.6s
NOR Nord 64.67 351 ⇓P **P** 09 06 28.3 -5.1
SSB Saint Sauveur 64.91 310 ⇑P **P** 09 06 38.4 +2.8
DAG Danmarks Havn 66.55 346 *i* P **P** 09 06 45.3 -0.3
DAG IAmb IAmb 09 06 50.7
comp=Z,12nm,0.8s
DAG Danmarks Havn 66.55 346 *i* P **P** 09 06 45.3 -0.3
DAG pmax pmax
comp=Z,12nm,0.8s
WRKA Warakurna 66.58 138 ⇑P **P** 09 06 47.3 +0.8
WB0 Warramunga Arr 66.71 129 P **P** 09 06 48.0 +0.6
WRA Warramunga Arr 66.79 130 P **P** 09 06 44.8 -3.2
comp=Z,20nm,0.8s,baz=321,slow=6.3,SNR=26
WRA Warramunga Arr 66.79 130 P **P** 09 06 47.5 -0.5
WRA Warramunga Arr 66.79 130 P **P** 09 06 47.5 -0.5
WRAB Tennant Creek 66.79 130*ce*P **P** 09 06 49.1 +1.1
WRAB pmax pmax
comp=Z,66nm,1.7s
WRAB Tennant Creek 66.79 130 P **P** 09 06 48.4 +0.4
WRAB Tennant Creek 66.79 130 ⇑P **P** 09 06 48.8 +0.8
WB2 Warramunga Arr 66.80 130 P **P** 09 06 48.7 +0.6
WR0 Warramunga Arr 66.94 130 P **P** 09 06 49.4 +0.5
WR0 IAmb IAmb 09 06 50.8
comp=Z,31nm,1.1s
NWAO Narrogin (SRO) 67.29 151 P **P** 09 06 50.0 -0.8
DBG Daneborg 67.82 344 *i* P **P** 09 06 53.8 0.0
DBG IAmb IAmb 09 07 00.1
comp=Z,3.9nm,0.6s
DBG Daneborg 67.82 344 ⇑P **P** 09 06 54.2 +0.5
MCH1 Michaelchurch 67.92 318 ⇑P **P** 09 06 57.7 +2.9
AS31 Alice Springs 69.08 133 P **P** 09 07 02.9 +0.5
ASAR Alice Springs 69.08 133 P **P** 09 06 59.1 -3.2
comp=Z,16nm,0.8s,baz=315,slow=6.3,SNR=15
ASAR Alice Springs 69.08 133 P **P** 09 07 03.0 +0.6
SCO Scoresbysund 69.88 340 *i* P **P** 09 07 09.8 +3.2
SCO Scoresbysund 69.88 340 *i* P **P** 09 07 09.7 +3.2
LSZ Lusaka 70.04 240 P **P** 09 07 08.3 -0.2
LSZ pmax pmax
comp=Z,22nm,0.6s
LSZ Lusaka 70.04 240 P **P** 09 07 08.3 -0.2
LSZ IAmb IAmb 09 07 13.3
comp=Z,22nm,0.6s
NEEM North Greenlan 72.05 351 *i* P **P** 09 07 20.4 +0.4
NEEM IAmb IAmb 09 07 20.9
comp=Z,49nm,0.6s
NEEM North Greenlan 72.05 351 ⇑P **P** 09 07 17.2 -2.8
RDOG Red Dog Mine 72.29 22 P **P** 09 07 22.2 +1.0
RDOG Red Dog Mine 72.29 22 P 09 07 22.2
baz=300
A21K Barrow 72.39 17 P 09 07 22.5
baz=305
EUNU Eureka 72.50 359 P **P** 09 07 23.2 +0.7
EUNU IAmb IAmb 09 07 31.3
comp=Z,31nm,0.9s
ESDC Sonseca Array 72.62 306 P **P** 09 07 23.5 -0.3
comp=Z,14nm,0.9s,baz=56,slow=5.2,SNR=68
PAB San Pablo 72.95 306 ⇓P **P** 09 07 28.8 +3.0
ANM Nome 73.14 25 P 09 07 27.9
baz=299,SNR=11
SUMG Summit 73.17 345 *i* P **P** 09 07 27.3 +0.4
SUMG IAmb IAmb 09 07 32.7

	comp=Z,18nm,1.1s							
SUMG	**Summit**	**73.17**	**345**	P		**P**	**09 07 26.6**	**-0.3**
SUMG				pmax		pmax		
	comp=Z,51nm,1.2s							
SUMG	**Summit**	**73.17**	**345**	P		**P**	**09 07 26.6**	**-0.3**
SUMG				IAmb		IAmb	09 07 36.6	
	comp=Z,50nm,1.2s							
SUMG	**Summit**	**73.17**	**345**	⇓P		**P**	**09 07 27.6**	**+0.7**
PBRG	**Braganca**	**73.78**	**309**	*e*P		**P**	**09 07 34.1**	**+3.4**
	comp=Z,40nm,1.6s							
MVO	**Moncorvo**	**74.23**	**308**	*e*P		**P**	**09 07 36.9**	**+3.6**
PVRL	**Vila Real**	**74.66**	**309**	*e*P		**P**	**09 07 39.8**	**+4.0**
POLO	**Lamas de Olo**	**74.68**	**309**	*e*P		**P**	**09 07 39.6**	**+3.7**
MTE	**Manteigas**	**74.89**	**308**	*e*P		**P**	**09 07 40.8**	**+3.7**
TULEG	**Thule**	**74.92**	**354**	*i* P		**P**	**09 07 36.0**	**-0.5**
TULEG				IAmb		IAmb	09 07 36.6	
	comp=Z,13nm,0.7s							
TULEG	**Thule**	**74.92**	**354**	P		**P**	**09 07 36.3**	**-0.3**
TULEG				IAmb		IAmb	09 07 44.0	
	comp=Z,26nm,0.8s							
TULEG	**Thule**	**74.92**	**354**	⇑P		**P**	**09 07 36.1**	**-0.5**
PVIS	**Viseu**	**75.01**	**308**	*e*P		**P**	**09 07 41.4**	**+3.6**
PCBR	**Castelo Branco**	**75.06**	**307**	*e*P		**P**	**09 07 41.7**	**+3.6**
PMRV	**Marv??o**	**75.17**	**307**	*e*P		**P**	**09 07 40.3**	**+1.6**
PBAR	**Barrancos**	**75.42**	**306**	*e*P		**P**	**09 07 43.8**	**+3.7**
	comp=Z,50nm,2.7s							
CTAO	**Charters Tower**	**75.46**	**122**	P		**P**	**09 07 41.5**	**+1.0**
CTAO				pmax		pmax		
	comp=Z,17nm,0.8s							
CTAO	**Charters Tower**	**75.46**	**122**	P		**P**	**09 07 41.5**	**+1.0**
CTAO				IAmb		IAmb	09 07 42.1	
	comp=Z,17nm,0.8s							
CTAO	**Charters Tower**	**75.46**	**122**	⇑P		**P**	**09 07 41.6**	**+1.0**
PESTR	**Estremoz**	**75.53**	**306**	*e*P		**P**	**09 07 45.3**	**+4.5**
PMTG	**Montargil**	**75.91**	**307**	*e*P		**P**	**09 07 46.7**	**+3.8**
	comp=Z,25nm,1.8s							
TOLK	**Toolik Lake Re**	**75.96**	**18**	P		**P**	**09 07 43.5**	**+0.8**
TOLK				IAmb		IAmb	09 07 50.9	
	comp=Z,20nm,0.7s							
TOLK	**Toolik Lake Re**	**75.96**	**18**	P			09 07 43.6	
	baz=311							
EVO	**Evora**	**75.97**	**306**	*e*P		**P**	**09 07 46.6**	**+3.3**
	comp=Z,43nm,2.4s							
PBEJ	**Beja**	**76.07**	**306**	*e*P		**P**	**09 07 47.6**	**+3.7**
	comp=Z,9.2nm,2.3s							
PSBE	**So Bento**	**76.13**	**307**	*e*P		**P**	**09 07 45.9**	**+1.7**
PVAQ	**Vaqueiros**	**76.22**	**305**	*e*P		**P**	**09 07 48.7**	**+4.0**
	comp=Z,53nm,1.2s							
PCVE	**Castro Verde**	**76.36**	**305**	*e*P		**P**	**09 07 49.3**	**+3.8**
	comp=Z,33nm,2.2s							
IMAR	**Indian Mountai**	**76.42**	**21**	P		**P**	**09 07 46.2**	**+0.8**
PBDV	**Barranco-do-Ve**	**76.44**	**305**	*e*P		**P**	**09 07 50.1**	**+4.1**
	comp=Z,68nm,1.1s							
UPNV	**Upernavik**	**76.57**	**349**	*i* P		**P**	**09 07 45.6**	**-0.4**
COLD	**Coldfoot**	**76.72**	**19**	P			09 07 48.0	
	baz=311							
PTEO	**Sao Teotonio**	**76.89**	**306**	*e*P		**P**	**09 07 53.2**	**+4.7**
	comp=Z,110nm,1.7s							
PFVI	**Vila Bisbo**	**77.14**	**305**	*e*P		**P**	**09 07 54.2**	**+4.3**
TTA	**Tatalina**	**77.52**	**24**	P		**P**	**09 07 52.8**	**+1.1**
TTA				pmax		pmax		
	comp=Z,25nm,1.4s							
TTA	**Tatalina**	**77.52**	**24**	P		**P**	**09 07 52.8**	**+1.1**
TTA				IAmb		IAmb	09 07 57.5	
	comp=Z,25nm,1.4s							
TTA	**Tatalina**	**77.52**	**24**	⇓P		**P**	**09 07 53.1**	**+1.4**
TTA	**Tatalina**	**77.52**	**24**	P			09 07 52.9	
	baz=307,SNR=6.6							
LBTB	**Lobatse**	**77.91**	**233**	P		**P**	**09 07 54.5**	**+0.1**
LBTB				pmax		pmax		
	comp=Z,34nm,0.8s							
LBTB	**Lobatse**	**77.91**	**233**	P		**P**	**09 07 54.5**	**+0.1**
LBTB				IAmb		IAmb	09 07 58.5	
	comp=Z,34nm,0.8s							
LBTB	**Lobatse**	**77.91**	**233**	⇓P		**P**	**09 07 54.4**	**0.0**
QLP	**Quilpie**	**77.98**	**129**	⇑P		**P**	**09 07 56.3**	**+1.6**
RES	**Resolute Bay**	**77.99**	**0**	P		**P**	**09 07 53.2**	**-0.8**
	comp=Z,4.7nm,0.8s,baz=26,slow=4.1,SNR=11							
RES	**Resolute Bay**	**77.99**	**0**	P		**P**	**09 07 54.6**	**+0.6**
RES				pmax		pmax		
	comp=Z,13nm,1.4s							
RES	**Resolute Bay**	**77.99**	**0**	P		**P**	**09 07 54.6**	**+0.6**
RES	**Resolute Bay**	**77.99**	**0**	⇓P		**P**	**09 07 54.5**	**+0.5**
MLY	**Manley**	**78.00**	**21**	P			09 07 55.2	
	baz=311,SNR=26							
BMAR	**Burnt Mountain**	**78.16**	**18**	P		**P**	**09 07 56.7**	**+1.6**
CHUM	**Lake Minchumin**	**78.23**	**23**	P			09 07 57.1	
	baz=310,SNR=7.0							
I23K	**Minto, Yukon-K**	**78.36**	**21**	P		**P**	**09 07 57.0**	**+0.8**
I23K				IAmb		IAmb	09 08 01.5	
	comp=Z,38nm,1.4s							
I23K	**Minto, Yukon-K**	**78.36**	**21**	P			09 07 57.2	
	baz=312,SNR=15							
BPAW	**Bear Paw Mtn.**	**78.53**	**22**	P		**P**	**09 07 57.7**	**+0.5**
BPAW				IAmb		IAmb	09 08 04.9	
	comp=Z,17nm,0.8s							
BPAW	**Bear Paw Mtn.**	**78.53**	**22**	P			09 07 58.1	
	baz=311,SNR=17							
TOA0	**Torodi Ar. Sit**	**78.66**	**279**	P		**P**	**09 07 58.2**	**-0.6**
	SNR=9.6							
TORD	**Torodi Ar. Bea**	**78.66**	**279**	P		**P**	**09 07 57.8**	**-1.0**
	comp=Z,12nm,0.7s,baz=52,slow=4.5,SNR=28							
SVW2	**Sparrevohn**	**78.79**	**26**	P		**P**	**09 08 00.4**	**+1.7**
SVW2				IAmb		IAmb	09 08 04.6	
	comp=Z,37nm,1.4s							
NEA2	**Nenana**	**78.83**	**21**	P			09 07 59.4	
	baz=312,SNR=41							
MDM	**Murphy Dome**	**78.84**	**20**	P		**P**	**09 07 59.2**	**+0.3**
MDM				IAmb		IAmb	09 08 01.4	
	comp=Z,36nm,1.1s							
PPLA	**Purkeypile**	**78.91**	**23**	P			09 08 00.4	
	baz=310,SNR=7.5							
KTH	**Kantishna Hill**	**78.91**	**22**	P		**P**	**09 08 00.2**	**+0.8**
KTH				IAmb		IAmb	09 08 04.3	
	comp=Z,32nm,1.3s							
POKR	**Poker Plat Res**	**78.98**	**20**	P		**P**	**09 08 00.0**	**+0.4**
POKR				IAmb		IAmb	09 08 01.7	
	comp=Z,48nm,1.4s							
POKR	**Poker Plat Res**	**78.98**	**20**	P			09 08 00.2	
	baz=314							
BWN	**Browne**	**78.98**	**21**	P		**P**	**09 08 00.3**	**+0.7**
BWN				IAmb		IAmb	09 08 02.4	
	comp=Z,56nm,1.2s							
TCOL	**CIGO, UAF Yank**	**79.01**	**20**	P		**P**	**09 08 00.6**	**+0.8**
TCOL				IAmb		IAmb	09 08 04.6	
	comp=Z,42nm,1.4s							
TCOL	**CIGO, UAF Yank**	**79.02**	**20**	P			09 08 00.6	
	baz=314,SNR=8.6							
COLA	**College**	**79.02**	**20**	*ce*P		**P**	**09 08 00.5**	**+0.7**
COLA				pmax		pmax		
	comp=Z,40nm,1.7s							
COLA	**College**	**79.02**	**20**	P		**P**	**09 08 00.2**	**+0.4**
COLA				IAmb		IAmb	09 08 04.6	
	comp=Z,38nm,1.3s							
COLA	**College**	**79.02**	**20**	⇓P		**P**	**09 08 00.5**	**+0.7**
COLA	**College**	**79.02**	**20**	P			09 08 00.6	
	baz=314							
HTT	**Hallett**	**79.03**	**137**	⇑P		**P**	**09 08 01.9**	**+1.6**
TRF	**Thorofare Moun**	**79.20**	**22**	P			09 08 01.6	
	baz=312							
WRH	**Wood River Hil**	**79.22**	**21**	P		**P**	**09 08 00.8**	**-0.2**
PRP	**Porcupine Dome**	**79.27**	**19**	P			09 08 02.7	
	baz=315							
IL31		**79.39**	**20**	P		**P**	**09 08 01.4**	**-0.4**
ILAR	**Eielson Array**	**79.39**	**20**	P		**P**	**09 08 00.9**	**-1.0**
	comp=Z,5.7nm,0.6s,baz=302,slow=4.6,SNR=36							
ILAR				PP		**PP**	**09 10 59.3**	**-2.0**
	comp=Z,5.1nm,0.9s,baz=310,slow=7.3,SNR=8.7							
ILAR	**Eielson Array**	**79.39**	**20**	P		**P**	**09 08 01.1**	**-0.7**
ILAR	**Eielson Array**	**79.39**	**20**	P		**P**	**09 08 01.1**	**-0.7**
MCK	**McKinley**	**79.45**	**22**	P			09 08 02.9	
	baz=313,SNR=6.7							
HDA	**Harding Lake**	**79.62**	**21**	P		**P**	09 08 02.3	
	baz=314,SNR=5.3							
HDA				P			09 08 02.3	
	baz=314,SNR=5.3							
STKA	**Stephens Creek**	**79.64**	**134**	P		**P**	**09 08 02.4**	**-1.3**
	comp=Z,17nm,0.9s,baz=314,slow=6.0,SNR=17							
RND	**Reindeer**	**79.70**	**22**	P		**P**	**09 08 03.6**	**-0.1**
RND				pmax		pmax		
	comp=Z,28nm,1.3s							
RND	**Reindeer**	**79.70**	**22**	P		**P**	**09 08 03.5**	**-0.1**
RND				IAmb		IAmb	09 08 07.8	
	comp=Z,28nm,1.3s							
SKT	**Skwentna**	**79.74**	**24**	P		**P**	**09 08 03.9**	**0.0**
SKT				IAmb		IAmb	09 08 05.3	
	comp=Z,54nm,1.1s							
SKT	**Skwentna**	**79.74**	**24**	P			09 08 04.3	
	baz=311,SNR=21							
WAT2	**Susitna Watana**	**80.10**	**22**	P			09 08 05.4	
	baz=313							
INK	**Inuvik**	**80.13**	**14**	P		**P**	**09 08 05.6**	**-0.2**
	comp=Z,7.9nm,0.9s,baz=333,slow=4.9,SNR=20							
INK	**Inuvik**	**80.13**	**14**	P		**P**	**09 08 06.0**	**+0.2**
INK				pmax		pmax		
	comp=Z,22nm,1.3s							
INK	**Inuvik**	**80.13**	**14**	P		**P**	**09 08 06.0**	**+0.2**
INK	**Inuvik**	**80.13**	**14**	⇓P		**P**	**09 08 06.3**	**+0.5**
INK	**Inuvik**	**80.14**	**14**	P			09 08 06.3	
	baz=325,SNR=12							
SUA	**Susitna One**	**80.36**	**24**	P			09 08 07.8	
	baz=312,SNR=7.7							
BOSA	**Boshof**	**80.37**	**231**	P		**P**	**09 08 07.3**	**-0.5**
	comp=Z,15nm,0.8s,baz=35,slow=4.4,SNR=18							
BOSA	**Boshof**	**80.37**	**231**	P		**P**	**09 08 07.4**	**-0.4**
BOSA	**Boshof**	**80.37**	**231**	⇑P		**P**	**09 08 07.6**	**-0.2**
WAT6	**Susitna Watana**	**80.64**	**22**	P			09 08 09.0	
	baz=314,SNR=12							
SCRK	**Sand Creek**	**80.84**	**20**	P		**P**	**09 08 10.5**	**+0.6**
SCRK				IAmb		IAmb	09 08 14.5	
	comp=Z,20nm,1.0s							
SCRK	**Sand Creek**	**80.84**	**20**	P			09 08 10.3	
	baz=317,SNR=27							
PMR	**Palmer**	**80.85**	**23**	P		**P**	**09 08 09.6**	**-0.2**
PMR				pmax		pmax		
	comp=Z,23nm,1.0s							
PMR	**Palmer**	**80.85**	**23**	P		**P**	**09 08 09.6**	**-0.2**
PMR				IAmb		IAmb	09 08 14.4	
	comp=Z,23nm,1.0s							
PMR	**Palmer**	**80.85**	**23**	P			09 08 10.2	
	baz=313,SNR=8.3							
RC01	**Rabbit Creek A**	**80.97**	**24**	P			09 08 10.7	
	baz=312							
C36M	**Paulatuk**	**80.98**	**10**	P			09 08 10.0	
	baz=334,SNR=8.2							
SML	**Sawmill**	**80.98**	**23**	P			09 08 11.4	
	baz=314,SNR=15							
EPYK	**Eagle Plains**	**80.98**	**16**	P		**P**	**09 08 10.4**	**-0.1**
EPYK	**Eagle Plains**	**80.98**	**16**	P			09 08 10.5	
	baz=323,SNR=11							
DOT	**Dot Lake**	**81.06**	**20**	P		**P**	**09 08 11.1**	**+0.2**
DOT				IAmb		IAmb	09 08 12.0	
	comp=Z,26nm,1.4s							
EGAK	**Eagle**	**81.06**	**18**	P		**P**	**09 08 11.2**	**+0.3**
EGAK	**Eagle**	**81.06**	**18**	P			09 08 11.3	
	baz=319,SNR=19							
PAX	**Paxson**	**81.11**	**21**	P			09 08 11.4	
	baz=316,SNR=9.4							
KNK	**Knik Glacier**	**81.21**	**23**	P			09 08 12.4	
	baz=314							
K27K	**Chicken**	**81.37**	**19**	P		**P**	**09 08 13.9**	**+1.3**
K27K				IAmb		IAmb	09 08 21.6	
	comp=Z,15nm,0.8s							
K27K	**Chicken**	**81.37**	**19**	P			09 08 13.6	
	baz=318							
O22K	**Cooper Landing**	**81.39**	**24**	P			09 08 13.1	
	baz=312							
M24K	**Tolsona, Glenn**	**81.50**	**22**	P		**P**	**09 08 14.4**	**+1.1**
M24K				IAmb		IAmb	09 08 15.7	
	comp=Z,34nm,1.2s							
M24K	**Tolsona, Glenn**	**81.50**	**22**	P			09 08 14.8	
	baz=315							
HARP	**HAARP**	**81.62**	**21**	P			09 08 15.3	
	baz=316							
MENT	**Mentasta**	**81.68**	**21**	P		**P**	**09 08 14.7**	**+0.4**
SEW	**Seward**	**81.75**	**24**	P			09 08 15.2	
	baz=313							
KLU	**Klutina**	**82.02**	**22**	P			09 08 17.1	
	baz=316,SNR=11							
GLI	**Glacier Island**	**82.05**	**23**	P			09 08 16.6	
	baz=315							
KDAK	**Kodiak Island**	**82.08**	**27**	P		**P**	**09 08 15.6**	**-0.7**
	comp=Z,31nm,0.8s,baz=7.5,slow=2.8,SNR=22							
KDAK	**Kodiak Island**	**82.08**	**27**	P		**P**	**09 08 17.1**	**+0.7**
KDAK				pmax		pmax		
	comp=Z,62nm,1.1s							
KDAK	**Kodiak Island**	**82.08**	**27**	P		**P**	**09 08 17.1**	**+0.7**
KDAK	**Kodiak Island**	**82.08**	**27**	⇑P		**P**	**09 08 17.1**	**+0.7**
KDAK	**Kodiak Island**	**82.08**	**27**	⇑P		**P**	**09 08 17.1**	**+0.7**
KDAK	**Kodiak Island**	**82.08**	**27**	P			09 08 16.8	
	baz=310							
DAWY	**Dawson**	**82.10**	**18**	P		**P**	**09 08 16.7**	**+0.2**
DAWY				IAmb		IAmb	09 08 21.2	
	comp=Z,21nm,1.3s							
OHAK	**Old Harbor**	**82.15**	**28**	P		**P**	**09 08 17.9**	**+1.1**
OHAK				IAmb		IAmb	09 08 19.4	
	comp=Z,34nm,1.0s							
OHAK	**Old Harbor**	**82.15**	**28**	P			09 08 17.5	
	baz=310							
EIDS	**Eidsvold**	**82.16**	**124**	P		**P**	**09 08 18.2**	**+0.9**
EIDS				IAmb		IAmb	09 08 19.3	
	comp=Z,18nm,1.2s							
L27K	**Beaver Creek,**	**82.17**	**20**	P		**P**	**09 08 18.0**	**+1.1**
L27K				IAmb		IAmb	09 08 22.3	
	comp=Z,26nm,1.3s							
L27K	**Beaver Creek,**	**82.17**	**20**	P			09 08 18.0	
	baz=319,SNR=19							
BCAR	**Beaver Creek A**	**82.18**	**20**	P		**P**	**09 08 17.8**	**+0.9**
N25K	**Chitina, Valde**	**82.38**	**22**	P		**P**	**09 08 19.3**	**+1.3**
N25K				IAmb		IAmb	09 08 23.5	
	comp=Z,35nm,1.1s							
N25K	**Chitina, Valde**	**82.38**	**22**	P			09 08 19.3	
	baz=317,SNR=20							
EYAK	**Cordova Ski Ar**	**82.75**	**23**	P			09 08 21.1	
	baz=316							
BMRM	**Bremner River**	**82.84**	**22**	P			09 08 21.3	
	baz=317,SNR=9.7							
MCARA	**McCarthy VSAT**	**83.05**	**21**	P		**P**	**09 08 22.3**	**+0.9**
MCARA	**McCarthy VSAT**	**83.06**	**21**	P			09 08 22.8	
	baz=318							
CRQE	**Cirque**	**83.50**	**22**	P			09 08 24.9	
	baz=318							
TGL	**Tana Glacier**	**83.58**	**22**	P		**P**	**09 08 25.7**	**+1.4**
KAIM	**Kayak Island**	**83.66**	**23**	P		**P**	**09 08 26.1**	**+1.6**
KAIM				IAmb		IAmb	09 08 26.9	
	comp=Z,25nm,0.8s							
KAIM	**Kayak Island**	**83.67**	**23**	P			09 08 25.7	
	baz=317							
CTG	**Chitna Glacier**	**83.91**	**21**	P			09 08 27.2	
	baz=319							
GRNC	**Granite Creek**	**83.95**	**21**	P		**P**	**09 08 27.6**	**+1.3**
GRNC				IAmb		IAmb	09 08 28.5	
	comp=Z,14nm,1.0s							
YAH	**Yahtse**	**84.23**	**22**	P		**P**	**09 08 28.8**	**+1.0**
PINM	**Pinnacle**	**84.92**	**21**	P			09 08 31.5	
	baz=320							
HYT	**Haines Junctio**	**85.20**	**20**	P		**P**	**09 08 33.6**	**+1.1**
HYT				IAmb		IAmb	09 08 34.5	
	comp=Z,20nm,1.0s							
WHY	**Whitehorse**	**86.10**	**19**	P		**P**	**09 08 37.5**	**+0.6**
WHY	**Whitehorse**	**86.10**	**19**	P			09 08 37.1	
	baz=325							
FRB	**Frobisher Bay**	**86.71**	**349**	⇓P		**P**	**09 08 39.4**	**-0.3**
SKAG	**Skagway**	**86.95**	**20**	P		**P**	**09 08 42.5**	**+1.6**
SKAG				IAmb		IAmb	09 08 46.5	
	comp=Z,15nm,0.8s							
SKAG	**Skagway**	**86.95**	**20**	P			09 08 42.4	
	baz=324							
DBIC	**Dimbokro**	**87.32**	**276**	P		**P**	**09 08 43.4**	**-0.2**
	comp=Z,16nm,0.6s,baz=38,slow=5.8,SNR=18							
DBIC	**Dimbokro**	**87.32**	**276**	P		**P**	**09 08 43.4**	**-0.2**
DBIC				IAmb		IAmb	09 08 47.4	
	comp=Z,19nm,0.7s							
DBIC	**Dimbokro**	**87.32**	**276**	⇓P		**P**	**09 08 44.0**	**+0.4**
YKA	**Yellowknife Ar**	**88.80**	**9**	P		**P**	**09 08 49.3**	**-0.5**
	comp=Z,7.0nm,0.9s,baz=340,slow=4.5,SNR=54							
YKA				PKKPbc		**PKKPbc**	**09 26 28.2**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=153,slow=2.7,SNR=4.6							
YKA	**Yellowknife Ar**	**88.80**	**9**	*i* P		**P**	**09 08 49.5**	**-0.3**
YKA				pmax		pmax		
	comp=Z,7.0nm,0.9s							
DLBC	**Dease Lake**	**89.31**	**18**	P		**P**	**09 08 51.6**	**-0.8**
	comp=Z,3.0nm,0.9s,baz=295,slow=8.6,SNR=8.4							
DLBC				PP		**PP**	**09 12 21.2**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=254,slow=7.6,SNR=3.1							
PDAR	**Pinedale Array**	**108.63**	**12**	PKiKP		**PKiKP**	**09 14 24.3**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=123,slow=1.8,SNR=3.9							
NVAR	**Mina Array Bea**	**110.64**	**20**	PKiKP		**PKiKP**	**09 14 28.7**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=328,slow=3.2,SNR=3.5							
SNAA	**Sanae**	**115.40**	**200**	PKPdf		**PKiKP**	**09 14 36.6**	**-0.5**
VNA2	**Neumayer--Watz**	**116.74**	**202**	PKPdf		**PKiKP**	**09 14 41.1**	**+1.5**
QSPA	**South Pole Qui**	**117.39**	**180**	PKPdf		**PKPdf**	**09 14 40.4**	**-0.7**
VNA3	**Neumayer Olymp**	**117.51**	**201**	PKPdf		**PKPdf**	**09 14 40.6**	**-0.5**
MNTX	**Cornudas Mount**	**120.14**	**11**	PKPdf		**PKPdf**	**09 14 47.3**	**-0.2**
MNTX	**Cornudas Mount**	**120.14**	**11**	P			09 14 47.1	
	baz=349							
451A	**Vernon**	**121.54**	**351**	PKPdf		**PKiKP**	**09 14 50.5**	**+0.2**
NBAN	**Anadia - AL**	**122.58**	**276**	*e*P		**PKiKP**	**09 14 55.9**	**+3.1**
TX31	**Lajitas Ar. Si**	**122.72**	**10**	PKPdf		**PKPdf**	**09 14 52.3**	**-0.3**
TX32	**Lajitas Array**	**122.72**	**10**	PKPdf		**PKPdf**	**09 14 52.3**	**-0.3**
TXAR	**Lajitas Array**	**122.72**	**10**	PKP		**PKPdf**	**09 14 51.8**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=24,slow=0.5,SNR=18							
TXAR	**Lajitas Array**	**122.72**	**10**	PKiKP		**PKPdf**	**09 14 52.3**	**-0.4**
TXAR	**Lajitas Array**	**122.72**	**10**	PKPdf		**PKiKP**	**09 14 52.2**	**-0.4**
RIB01	**Linhares ES**	**130.06**	**267**	*e*P		**PKiKP**	**09 15 09.3**	**+1.9**
SJMB	**Sao Joao De Ma**	**130.55**	**268**	*e*P		**PKiKP**	**09 15 10.7**	**+2.2**
ESAR	**Angra dos Reis**	**134.80**	**264**	*e*P		**PKiKP**	**09 15 18.7**	**+1.8**
UREC	**San Jos de Ur**	**140.39**	**330**	*e*P		**PKPdf**	**09 15 27.4**	**+1.2**
PCMB	**Pacaembu**	**140.44**	**269**	*e*P		**PKiKP**	**09 15 27.6**	**-0.9**
SPBC	**San Pablo de B**	**141.54**	**326**	*e*P		**PKPdf**	**09 15 22.7**	**-5.6**
CNLB	**Canela**	**141.79**	**257**	*e*P		**PKiKP**	**09 15 31.6**	**+0.5**
PTGB	**Pitanga**	**141.98**	**264**	*e*P		**PKiKP**	**09 15 32.3**	**+0.6**
TRCB	**Terra Rica**	**141.99**	**268**	*e*P		**PKiKP**	**09 15 31.6**	**-0.1**
CHIC	**Chingaza**	**142.25**	**325**	*e*P		**PKPdf**	**09 15 27.8**	**-2.2**
CBOC	**Ciudad Bolivar**	**142.28**	**329**	*e*P		**PKPdf**	**09 15 29.7**	**-0.1**
ROSC	**El Rosal**	**142.36**	**326**	PKP		**PKPdf**	**09 15 30.2**	**0.0**
	comp=Z,9.7nm,0.6s,baz=306,slow=19,SNR=2.5							
GUY2C	**Guyana, Caldas**	**142.54**	**328**	*e*P		**PKPdf**	**09 15 26.6**	**-4.0**
ANIL	**Santa Ana**	**143.20**	**327**	*e*P		PKPab	09 15 25.6	-1.5
ORTC	**Ortega, Tolima**	**143.62**	**326**	*e*P		PKPab	09 15 25.4	-3.1
YOTC	**Yotoco, Valle**	**144.09**	**328**	*e*P		**PKPab**	**09 15 26.5**	**-3.9**
MACC	**Macarena, Meta**	**144.41**	**323**	*e*P		**PKPab**	**09 15 30.4**	**-1.0**
SAML	**Samuel**	**145.17**	**296**	PKiKP		**PKPbc**	**09 15 34.0**	**-0.1**
SAML	**Samuel**	**145.17**	**296**			**PKPbc**	**09 15 34.0**	**-0.1**
PCON	**Cinco Dias**	**145.56**	**327**	*e*P		**PKPdf**	**09 15 35.5**	**-0.5**
SOTA	**Rioblanco**	**145.83**	**327**	*e*P		**PKPdf**	**09 15 36.5**	**+0.1**
PTLC	**Puerto Leguiza**	**146.57**	**322**	*e*P		**PKPdf**	**09 15 36.8**	**-0.2**
CPUP	**Villa Florida**	**146.97**	**263**	PKPbc		**PKPbc**	**09 15 39.0**	**-0.2**
	comp=Z,8.6nm,0.8s,baz=64,slow=3.2,SNR=12							
CPUP	**Villa Florida**	**146.97**	**263**	*e*P		**PKPab**	**09 15 40.2**	**-0.4**
GCUF	**Volcan Galeras**	**146.97**	**327**	*e*P		**PKPab**	**09 15 41.2**	**-0.4**
SIV	**San Ignacio**	**147.04**	**283**	PKPbc		**PKPbc**	**09 15 39.3**	**-0.4**
	baz=98,slow=4.6							
ETMB	**Extrema**	**148.08**	**298**	*e*P		**PKPbc**	**09 15 41.8**	**-0.8**
OTAV	**Otavalo**	**148.36**	**328**	PKP2		**PKPbc**	**09 15 44.1**	**+0.1**
OTAV	**Otavalo**	**148.36**	**328**			**PKPbc**	**09 15 44.0**	**+0.1**
OTAV	**Otavalo**	**148.36**	**328**	*e*P		**PKPdf**	**09 15 40.5**	**-0.1**
LPAZ	**La Paz**	**153.19**	**289**	PKPbc		**PKPbc**	**09 15 53.6**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=107,slow=3.8,SNR=4.8							
LPAZ				PKPab		**PKPab**	**09 16 05.0**	**-2.1**
	comp=Z,3.7nm,0.9s,baz=55,slow=5.0,SNR=7.5							
LPAZ	**La Paz**	**153.19**	**289**			**PKiKP**	**09 15 55.6**	**-0.1**
LPAZ	**La Paz**	**153.19**	**289**	*e*P		**PKPbc**	**09 15 52.6**	**-2.9**
LPAZ	**La Paz**	**153.19**	**289**	*e*P		**PKPdf**	**09 15 49.2**	**+1.1**

IDC ***25*** *09:01:50.1±0.8,27.72N×84.96E, h0km, mb4.2/13, mb1 4.3/15, mb1mx3.9/65, mbtmp4.2/15, ML4.1/2, Error ellipse: s-maj=29.6km s-min=16.3km az=55.0*
NEIC ***25*** *09:01:51.5±0.9, 27.81N±0.05×85.07E±0.07, h10km±1km, mb4.4/14, Error ellipse: s-maj=10.8km s-min=9.2km az=284.0*

ISC 25 09:01:51.1±0.7,**27.8N**±0.1×**85.07E**±0.09,**h10**km,**n39,**
σ1§01/39,mb4.3/17,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.68**	**69**	Pn		**Pn**		**09 03 14.3**	**-1.7**
SHL	**Shillong**	**6.47**	**108**	Pn		**Pn**		**09 03 25.1

31µm,0.2s
DANN Dangsing 1.51 288 *e*Pg **Pg** 09 03 45.5 -0.1
DANN *e*Sg **Sg** 09 04 05.4 0.0
10µm,0.3s
KOLN Koldanda 1.59 266 *e*Pg **Pg** 09 03 47.0 -0.2
KOLN *e*Sg **Sg** 09 04 09.1 +1.2
25µm,0.3s
ODAN Odare 2.06 120 *e*Pg **Pb** 09 03 53.2 -0.3
ODAN *e*Sg **Sg** 09 04 20.0 -2.8
2µm,0.3s
TAPN Taplejung 2.13 104 *e*Pg **Pb** 09 03 54.4 -0.4
TAPN *e*Sg **Sb** 09 04 21.5 +0.5
6µm,0.6s
PYUN Piuthan 2.13 276 *e*Pg **Pg** 09 03 57.2 -0.3
PYUN *e*Sg **Sg** 09 04 25.5 +0.3
15µm,0.3s
LSA Lhasa 5.37 69 Pn **Pn** 09 04 34.3 -1.9
SHL Shillong 6.25 110 Pn **Pn** 09 04 47.3 -0.8
NIL Nilore 11.90 302 Pn **Pn** 09 06 02.3 -3.2
KSH Kashi 13.98 328 P **Pn** 09 06 30.0 -3.9
KSH pP P 09 06 35.8 -6.0
KSH pmax pmax
comp=Z,23nm,0.7s
CHTO Chiang Mai 15.37 123 Pn **Pn** 09 06 52.6 -0.1
KBL Kabul 15.46 299 Pn **Pn** 09 06 51.7 -2.4
KBL lAmb lAmb 09 06 59.9
comp=Z,58nm,0.8s
CM34 Chiang Mai Arr 15.50 123 P **P** 09 06 59.0 +0.3
CM15 Chiang Mai Arr 15.58 124 P **P** 09 07 06.0 +6.4
CM31 Chiang Mai Arr 15.59 124 P **P** 09 07 06.2 +6.5
CM31 Chiang Mai Arr 15.59 124 Pn **Pn** 09 06 54.0 -1.6
CMAR Chiang Mai Arr 15.59 124 Pn **Pn** 09 06 54.8 -0.8
comp=Z,1.1nm,0.3s,baz=299,slow=13,SNR=2.1
CM35 Chiang Mai Arr 15.61 123 P **P** 09 07 01.0 +1.1
CM36 Chiang Mai Arr 15.67 124 P **P** 09 07 01.0 +0.4
KDJ Kajisay 15.70 337 **Pn** 09 06 55.5 -1.5
KMI Kunming 15.78 96 ⇑P **P** 09 07 00.3 -1.7
KMI sP pP 09 07 03.8 -3.6
KMI pmax pmax
comp=Z,8.0nm,0.6s
KMI Kunming 15.78 96 Pn **Pn** 09 06 56.1 -2.0
WMQ Urumqi 16.00 6 *e*P **Pn** 09 07 00.3 -0.4
WMQ pP P 09 07 04.0 -0.2
WMQ PP **PnPn** 09 07 16.3 +6.8
WMQ pmax pmax
comp=Z,29nm,1.1s
WMQ Urumqi 16.00 6 **Pn** 09 07 00.3 -0.4
WMQ lAmb lAmb 09 07 06.5
comp=Z,33nm,0.8s
CD2 Chengdu 16.29 75 P **Pn** 09 07 04.5 0.0
CD2 pmax pmax
comp=Z,50nm,0.8s
BOOM Boomskoye usch 16.46 335 Pn **Pn** 09 07 04.6 -2.2
GTA Gaotai 16.59 43 ⇑P **P** 09 07 10.8 0.0
GTA pP sP 09 07 16.3 -2.4
GTA sP pP 09 07 18.8 +2.5
GTA pmax pmax
comp=Z,47nm,1.0s
ARSB Arslanbob 16.82 326 Pn **Pn** 09 07 09.2 -2.1
AAK Ala-Archa 17.16 332 P **P** 09 07 16.6 -0.6
comp=Z,0.8nm,0.3s,baz=131,slow=6.3,SNR=5.7
AAK Ala-Archa 17.16 332 **Pn** 09 07 13.9 -1.7
PHIT Phitsanulok 17.48 124 P **P** 09 07 22.5 +1.9
comp=Z,105nm,1.1s
LZH Lanzhou 17.64 58 *e*P **Pn** 09 07 21.0 -0.6
LZH pP P 09 07 23.5 +1.0
LZH sP pP 09 07 26.0 -2.1
LZH PP **PnPn** 09 07 36.3 +4.2
LZH pmax pmax
comp=Z,23nm,1.1s
SLVN Son La 18.05 107 P **P** 09 07 26.3 -0.7
GYA Guiyang 18.98 89 ⇓P **Pn** 09 07 38.8 +0.8
GYA pmax pmax
comp=Z,10.0nm,0.8s
MK31 Makanchi Array 19.02 353 P **Pn** 09 07 37.8 -0.5
MKAR Makanchi Array 19.02 353 P **Pn** 09 07 37.9 -0.4
comp=Z,2.1nm,0.3s,baz=174,slow=12,SNR=30
MKAR Makanchi Array 19.02 353 P **P** 09 07 37.1 -0.3
MAKZ Makanchi 19.07 353 P **P** 09 07 37.3 -0.6
MAKZ lAmb lAmb 09 07 40.0
comp=Z,31nm,0.7s
KK31 Karatay Array 19.37 325 P **P** 09 07 40.6 -0.7
KKAR Karatay Array 19.37 325 P **P** 09 07 40.5 -0.8
KKAR Karatay Array 19.37 325 P **P** 09 07 40.3 -0.9
KKAR lAmb lAmb 09 08 18.2
comp=Z,12nm,0.9s
CHAI Chaiyaphum 19.46 124 P Pn 09 07 50.6 +6.9
comp=Z,33nm,1.0s
KHON Khomkaen 19.80 122 P **Pn** 09 07 53.0 +5.3
comp=Z,37nm,0.7s
SRAK Srakaew 20.77 128 P Pn 09 08 03.7 +4.7
comp=Z,2µmcomp=Z,282nm,0.9s
XAN Xi'an 21.07 67 P **P** 09 08 03.3 +3.5
XAN pP sP 09 08 07.0 -0.8
XAN pmax pmax
comp=Z,15nm,0.8s
XAN Xi'an 21.07 67 P **P** 09 07 59.3 -0.6
ENH Enshi 21.18 78 P **P** 09 08 00.4 -0.8
ENH lAmb lAmb 09 08 13.9
comp=Z,37nm,1.1s
UBPT Khong Chiam 22.46 120 P **P** 09 08 17.1 +2.3
UBPT Khong Chiam 22.46 120 P **P** 09 08 15.1 +0.2
UBPT lAmb lAmb 09 08 17.2
comp=Z,26nm,1.0s
KURBB Kurchatov Arra 23.29 349 P **P** 09 08 23.8 +0.6
comp=Z,15nm,0.7s,baz=172,slow=10,SNR=16
QIZ Qiongzhong 24.07 106 P **P** 09 08 31.5 +0.4
QIZ pmax pmax
comp=Z,22nm,1.2s
WSAR Wadi Sarin 24.56 265 P **P** 09 08 36.5 +1.0
comp=Z,4.7nm,0.9s,baz=41,slow=16,SNR=2.1
GEYT Alibeck 24.91 301 P **P** 09 08 40.3 +1.8
comp=Z,6.0nm,0.8s,baz=90,slow=8.8,SNR=2.6
HHC Hu-ho-hao-te 25.07 52 *e*P **P** 09 08 41.0 +0.9
HHC pmax pmax
comp=Z,18nm,0.8s
SONM Songino Array 25.76 34 P **P** 09 08 47.8 +1.5
comp=Z,25nm,0.8s,baz=216,slow=10,SNR=27
SONM Songino Array 25.76 34 P **P** 09 08 46.9 +0.6
SONM lAmb lAmb 09 08 50.6
comp=Z,20nm,0.9s
ZAA0 Zalesovo Array 26.03 359 P **P** 09 08 49.1 +0.5
ZAA0 lAmb lAmb 09 08 50.0
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 26.03 359 P **P** 09 08 49.4 +0.9
comp=Z,20nm,0.8s,baz=183,slow=9.6,SNR=23
ZALV Zalesovo Beam 26.03 359 P **P** 09 08 48.7 +0.2
ULN Ulaanbaatar 26.11 34 P **P** 09 08 49.5 +0.1
KULM Kulim 26.76 144 P **P** 09 08 55.3 -0.1
KULM lAmb lAmb 09 09 04.6
comp=Z,15nm,0.9s
TLY Talaya 27.43 25 P **P** 09 09 03.4 +2.1
comp=Z,1.9nm,0.7s,baz=208,slow=20,SNR=1.8
TLY Talaya 27.43 25 P **P** 09 09 01.3 0.0
BVAR Borovoye Array 27.46 340 P **P** 09 09 00.7 -0.7
comp=Z,0.7nm,0.4s,baz=189,slow=17,SNR=3.0
BRVK Borovoye 27.52 340 P **P** 09 09 01.7 -0.3
ABKAR Akbulak array 28.92 324 P **P** 09 09 14.1 -0.4
ABKAR lAmb lAmb 09 09 16.2
comp=Z,11nm,0.6s
NJ2 Nanjing 29.21 74 *e*P **P** 09 09 16.5 -0.8
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
AKTO Aktyubinsk 30.63 325 P **P** 09 09 30.0 +0.4
comp=Z,3.9nm,0.6s,baz=104,slow=7.4,SNR=5.7
HIA Hailar 33.87 42 P **P** 09 09 58.6 +0.6
HIA lAmb lAmb 09 09 59.8
comp=Z,8.7nm,0.8s
ARU Arti 34.33 334 P **P** 09 10 02.7 +0.7
comp=Z,3.7nm,0.7s,baz=151,slow=8.2,SNR=8.4
ARU Arti 34.33 334 P **P** 09 10 01.4 -0.6
ARU lAmb lAmb 09 10 03.4
comp=Z,9.5nm,0.7s
KSM Kuching 35.48 133 P **P** 09 10 10.6 -1.7
KSM lAmb lAmb 09 10 22.2
comp=Z,6.2nm,0.8s
GNI Garni 35.55 301 P **P** 09 10 12.2 -0.6
GNI lAmb lAmb 09 10 19.3
comp=Z,8.7nm,0.9s
CN2 Changchun 35.76 53 *e*P **P** 09 10 14.5 +0.1
CN2 pmax pmax
comp=Z,10.0nm,0.8s
RAYN Ar Rayn 36.09 272 P **P** 09 10 16.3 -1.3
RAYN lAmb lAmb 09 10 18.9
comp=Z,11nm,1.4s

KSAR Wonju Array Be 36.76 64 P **P** 09 10 22.7 -0.4
KSRS Korea Array 36.79 64 P **P** 09 10 22.9 -0.4
comp=Z,3.0nm,0.6s,baz=270,slow=8.2,SNR=14
KBZ Khabaz 37.47 306 P **P** 09 10 29.6 +0.7
comp=Z,4.4nm,0.8s,baz=117,slow=6.7,SNR=7.4
JOW Kunigami 37.96 81 P **P** 09 10 32.9 -0.5
comp=Z,11nm,0.7s,baz=310,slow=30,SNR=2.0
MARD Mardin 38.44 296 P **P** 09 10 36.6 -0.8
MARD lAmb lAmb 09 10 39.9
comp=Z,18nm,0.5s
MDJ Mudanjiang 38.84 53 P **P** 09 10 39.0 -1.5
USRK Ussuriysk Ar. 40.47 54 P **P** 09 10 54.2 +0.1
comp=Z,2.2nm,0.5s,baz=262,slow=9.0,SNR=7.8
USRK Ussuriysk Ar. 40.47 54 P **P** 09 10 54.4 +0.3
KLR Kul'dur 41.25 46 P **P** 09 11 01.1 +0.6
comp=Z,13nm,1.0s,baz=268,slow=9.0,SNR=18
NRIK Noril'sk 41.49 1 P **P** 09 11 03.3 +1.1
comp=Z,12nm,0.8s,baz=171,slow=7.3,SNR=7.9
MMAI Mount Meron Ar 43.07 290 P **P** 09 11 17.5 +1.9
comp=Z,1.1nm,0.7s,baz=57,slow=16,SNR=2.5
BRTR Keskin Array B 44.04 299 P **P** 09 11 24.1 +0.6
comp=Z,2.1nm,0.6s,baz=106,slow=8.1,SNR=6.4
BRTR Keskin Array B 44.04 299 P **P** 09 11 23.2 -0.3
OBN Obninsk 44.30 322 P **P** 09 11 24.9 -0.2
comp=Z,5.1nm,0.4s,baz=121,slow=14,SNR=3.8
YAK Yakutsk 44.84 28 P **P** 09 11 29.5 +0.2
comp=Z,10.0nm,0.5s,baz=176,slow=2.5,SNR=4.6
YAK Yakutsk 44.84 28 P **P** 09 11 30.1 +0.8
MAT Matsushiro 45.03 65 P **P** 09 11 31.2 -0.1
MJAR Matsushiro Arr 45.03 65 P **P** 09 11 31.7 +0.3
comp=Z,2.4nm,0.8s,baz=278,slow=10,SNR=6.4
JMM Marumori 46.98 63 P **P** 09 11 46.1 -0.5
ELL Elmali 47.15 295 P **P** 09 11 48.0 -0.1
AKASG Malin Array Be 47.73 314 P **P** 09 11 52.0 -0.3
comp=Z,1.0nm,0.5s,baz=80,slow=7.0,SNR=7.3
AKASG Malin Array Be 47.73 314 lAmb lAmb 09 11 53.6
comp=Z,1.1nm,0.8s
TIRR Tirgusor 47.91 306 P **P** 09 11 54.4 +0.7
VRI Vrincioaia 49.11 308 ⇓P **P** 09 12 04.5 +1.5
PLOR Plostina 49.16 308 ⇑P **P** 09 12 05.0 +1.5
MLR Muntele Rosu 49.66 307 P **P** 09 12 08.5 +1.2
comp=Z,14nm,0.8s,baz=117,slow=3.4,SNR=15
MLR Muntele Rosu 49.66 307 ⇑P **P** 09 12 09.1 +1.7
MLR Muntele Rosu 49.66 307 P **P** 09 12 06.5 -0.9
MLR lAmb lAmb 09 12 09.9
comp=Z,16nm,0.8s
TIXI Tiksi 49.84 17 P **P** 09 12 08.3 +0.1
comp=Z,12nm,0.8s,baz=250,slow=3.0,SNR=16
TIXI Tiksi 49.84 17 P **P** 09 12 08.1 0.0
TIXI lAmb lAmb 09 12 09.3
comp=Z,14nm,0.8s
JCJ Chichijima 49.99 77 P **P** 09 12 10.6 +0.7
comp=Z,17nm,0.4s,baz=258,slow=20,SNR=1.6
IIGN Ignalina 50.12 320 *e*P **P** 09 12 11.2 +0.7
BURAR Bucovina Array 50.16 310 ⇑P **P** 09 12 11.8 +0.7
BURAR Bucovina Array 50.16 310 P **P** 09 12 11.4 +0.3
BUR08 Bucovina Ar. S 50.18 310 P **P** 09 12 11.1 -0.1
BUR08 lAmb lAmb 09 12 22.0
comp=Z,4.7nm,0.8s
ISAL Salakas 50.21 321 *e*P **P** 09 12 11.6 +0.4
VSU Vasula 50.36 324 *e*P **P** 09 12 11.5 -0.8
FIA1 FINESS Array S 51.30 328 P **P** 09 12 18.9 -0.4
FINES FINESS Array B 51.30 328 P **P** 09 12 19.4 +0.1
comp=Z,14nm,0.5s,baz=105,slow=8.1,SNR=58
FINES FINESS Array B 51.30 328 P **P** 09 12 19.3 0.0
PABE Paberze 51.42 320 *e*P **P** 09 12 20.7 +0.4
PABE Paberze 51.42 320 P **P** 09 12 20.0 -0.2
VTS Vitosha 51.74 304 ⇓P **P** 09 12 24.4 +1.3
DRGR 51.88 309 ⇓P **P** 09 12 25.0 +1.0
MTSE Matsula 51.91 324 *e*P **P** 09 12 24.5 +0.6
SOEI Soe 53.07 129 P **P** 09 12 32.6 -0.6
KEV Kevo 53.28 338 P **P** 09 12 34.4 +0.4
ARA0 ARCESS Array S 53.71 338 *e*P **P** 09 12 37.8 +0.8
ARCES ARCESS Array B 53.71 338 P **P** 09 12 37.7 +0.6
comp=Z,29nm,0.7s,baz=85,slow=7.2,SNR=58
ARCES ARCESS Array B 53.71 338 P **P** 09 12 37.5 +0.4
MA2 Magadan 53.96 35 P **P** 09 12 39.4 +0.3
comp=Z,23nm,1.0s,baz=131,slow=8.2,SNR=3.9
DIVS Divibare 53.97 306 P **P** 09 12 38.7 -0.8
DIVS lAmb lAmb 09 12 43.0
comp=Z,7.6nm,1.0s
KTK1 Kautokeino 54.33 337 *e*P **P** 09 12 41.8 +0.2
KMBO Kilima Mbogo 54.45 246 P **P** 09 12 44.0 +0.5
comp=Z,5.2nm,0.8s,baz=60,slow=11,SNR=4.8
HAMF Hammerfest 54.64 339 *e*P **P** 09 12 44.7 +0.9
PDG Podgorica 54.69 304 ⇓P **P** 09 12 44.4 -0.2
SEY Seymchan 55.10 31 P **P** 09 12 48.2 +0.9
comp=Z,4.8nm,1.0s,baz=259,slow=8.3,SNR=8.4
UPP Uppsala 55.19 325 *e*P **P** 09 12 48.2 +0.3
JETT Jettan, Norway 55.44 337 *e*P **P** 09 12 50.3 +0.7
TRO Tromsø 55.96 337 *e*P **P** 09 12 53.8 +0.4
CONA Conrad Observa 56.45 311 *e*P **P** 09 12 57.3 0.0
comp=Z,5.8nm,1.0s
ARSA Arzberg 56.75 310 *i* P **P** 09 12 59.4 0.0
comp=Z,1.9nm,0.5s
STEI Steigen 57.01 335 *e*P **P** 09 13 01.1 +0.3
N2TV T'rrnvik 57.01 334 *e*P **P** 09 13 01.0 +0.2
BJO1 Bjornoya 57.07 343 *e*P **P** 09 13 00.7 -0.4
MOR8 Moi Rana 57.13 333 *e*P **P** 09 13 00.9 -0.9
SOKA Soboth 57.15 309 *e*P **P** 09 13 02.6 +0.2
comp=Z,6.6nm,1.1s
HFS Hagfors 57.18 326 P **P** 09 13 02.1 -0.1
comp=Z,17nm,0.7s,baz=98,slow=7.6,SNR=27
BRG Berggiesshubel 57.42 315 *e*P **P** 09 13 04.2 +0.2
BRG Amp 09 13 05.5
comp=Z,5.1nm,1.0s
OBKA Obir 57.51 309 *i* P **P** 09 13 04.5 -0.3
comp=Z,5.8nm,1.0s
MOA Molln 57.53 311 *i* P **P** 09 13 04.3 -0.6
comp=Z,6.2nm,1.3s
NBB15 Halsa Church 57.53 333 *e*P **P** 09 13 04.6 +0.1
LOF Lofoten 57.67 335 *e*P **P** 09 13 05.1 -0.4
KONS Konsvik 57.69 333 *e*P **P** 09 13 05.8 +0.2
STOK Stokkvaagen 57.72 333 *e*P **P** 09 13 05.6 -0.3
PETK Petropavlovsk- 57.76 43 P **P** 09 13 06.1 -0.3
comp=Z,7.5nm,1.0s,baz=191,slow=4.5,SNR=3.5
GEC2 GERESS Array S 57.78 312 P **P** 09 13 06.5 -0.3
GEC2 lAmb lAmb 09 13 15.4
comp=Z,8.7nm,1.6s
GERES GERESS Array B 57.78 312 P **P** 09 13 06.9 +0.2
comp=Z,0.8nm,0.4s,baz=93,slow=7.0,SNR=6.0
GERES GERESS Array B 57.78 312 P **P** 09 13 06.3 -0.4
CLL Collm 57.97 315 *e*P **P** 09 13 08.0 +0.1
NSS Namsos 58.07 331 *e*P **P** 09 13 07.8 -0.6
NC405 NORSAR Array S 58.15 327 P **P** 09 13 08.5 -0.5
NC602 NORSAR Array S 58.24 326 *e*P **P** 09 13 09.4 -0.2
NC303 NORSAR Array S 58.32 327 P **P** 09 13 10.0 -0.2
NB2 NORSAR Subarra 58.40 327 P **P** 09 13 10.4 -0.4
baz=88,slow=6.9
NOA NORSAR Array B 58.40 327 P **P** 09 13 10.2 -0.6
comp=Z,5.0nm,0.6s,baz=88,slow=7.0,SNR=20
NAO01 NORSAR Array S 58.56 326 *e*P **P** 09 13 11.4 -0.5
SPA0 Spitsbergen Ar 58.62 347 P **P** 09 13 10.7 -1.4
SPA0 Spitsbergen Ar 58.62 347 *e*P **P** 09 13 12.2 +0.2
OSL Oslo 58.67 325 *e*P **P** 09 13 12.6 0.0
STAL STALIGIAL 58.80 309 P **P** 09 13 13.0 -0.8
STAL lAmb lAmb 09 13 14.6
comp=Z,8.4nm,0.8s
ABTA Abfaltersbach 58.86 310 *i* P **P** 09 13 13.4 -0.9
comp=Z,1.4nm,0.6s
KONO Kongsberg 59.25 325 *e*P **P** 09 13 15.9 -0.7
DOMB Dombas 59.40 328 *e*P **P** 09 13 17.0 -0.7
WATA Walderalm 59.40 311 *i* P **P** 09 13 17.1 -1.0
comp=Z,5.1nm,0.9s
MOTA Moosalm 59.72 311 *i* P **P** 09 13 18.9 -1.5
comp=Z,7.0nm,0.8s
RETA Reutte 59.92 311 *i* P **P** 09 13 20.7 -0.9
comp=Z,3.2nm,0.7s
FETA Feichten 60.02 310 *e*P **P** 09 13 21.5 -1.0
comp=Z,6.1nm,1.1s
MOL Molde 60.08 329 *e*P **P** 09 13 21.9 -0.4
LATE Laterza 60.09 305 P **P** 09 13 21.6 -1.2
LATE lAmb lAmb 09 13 22.9
comp=Z,4.6nm,1.0s
OSSC Osservatorio P 60.31 306 P **P** 09 13 23.4 -0.9
OSSC lAmb lAmb 09 13 24.4
comp=Z,5.7nm,0.8s
SALO Salr 60.41 309 P **P** 09 13 22.8 -2.2
DAVA Damuels 60.55 311 *i* P **P** 09 13 25.2 -0.8
comp=Z,8.3nm,0.8s
DAVOX Davos/Dischmat 60.64 310 P **P** 09 13 26.1 -0.5
comp=Z,2.3nm,0.6s,baz=118,slow=9.8,SNR=5.9
BILL Bilibino 61.05 25 P **P** 09 13 30.1 +1.2
BILL lAmb lAmb 09 13 31.1
comp=Z,11nm,0.8s

SENIN Lac Senin/Sane 62.47 310 P **P** 09 13 39.2 +0.1
SENIN lAmb lAmb 09 13 39.9
comp=Z,12nm,0.9s
KEST Kesra 63.62 298 P **P** 09 13 47.5 +0.8
comp=Z,16nm,0.8s,baz=303,slow=2.3,SNR=15
KEST Kesra 63.62 298 P **P** 09 13 46.9 +0.2
NOR Nord 64.33 351 *i* P **P** 09 13 50.5 -0.1
NOR lAmb lAmb 09 13 51.4
comp=Z,4.6nm,0.6s
SSB Saint Sauveur 64.60 309 P **P** 09 13 52.7 -0.2
SSB lAmb lAmb 09 13 53.7
comp=Z,6.5nm,0.8s
DAG Danmarks Havn 66.21 346 *i* P **P** 09 14 03.3 +0.6
DAG lAmb lAmb 09 14 04.3
comp=Z,7.2nm,0.7s
WB0 Warramunga Arr 67.02 129 P **P** 09 14 09.1 +0.3
WRA Warramunga Arr 67.11 130 P **P** 09 14 09.9 +0.6
comp=Z,6.8nm,0.8s,baz=322,slow=6.5,SNR=16
WRA Warramunga Arr 67.11 130 P **P** 09 14 09.0 -0.3
WRAB Tennant Creek 67.11 130 P **P** 09 14 08.6 -0.8
WB2 Warramunga Arr 67.11 130 P **P** 09 14 08.3 -1.1
WR0 Warramunga Arr 67.26 130 P **P** 09 14 09.3 -1.0
WR0 lAmb lAmb 09 14 16.2
comp=Z,11nm,0.9s
DBG Daneborg 67.48 344 *i* P **P** 09 14 11.6 +0.7
DBG lAmb lAmb 09 14 12.6
comp=Z,3.1nm,0.9s
NWAO Narrogin (SRO) 67.63 151 P **P** 09 14 12.1 -0.2
AS31 Alice Springs 69.40 133 P **P** 09 14 22.7 -1.0
AS31 lAmb lAmb 09 14 29.9
comp=Z,3.1nm,0.8s
ASAR Alice Springs 69.40 133 P **P** 09 14 24.5 +0.8
comp=Z,5.8nm,0.8s,baz=318,slow=6.5,SNR=11
ASAR Alice Springs 69.40 133 P **P** 09 14 23.9 +0.2
CART Cartagena 70.92 303 P **P** 09 14 31.8 -1.0
FORT Forrest 71.15 142 P **P** 09 14 33.3 -0.9
NEEM North Greenlan 71.71 351 *i* P **P** 09 14 37.8 +0.4
NEEM lAmb lAmb 09 14 38.7
comp=Z,25nm,0.8s
RDOG Red Dog Mine 72.05 22 P **P** 09 14 39.3 +0.2
EUNU Eureka 72.18 359 P **P** 09 14 40.7 +0.9
EUNU lAmb lAmb 09 14 41.8
comp=Z,11nm,0.8s
ESDC Sonseca Array 72.32 306 P **P** 09 14 41.5 +0.2
comp=Z,4.3nm,0.8s,baz=63,slow=6.8,SNR=23
ESDC Sonseca Array 72.32 306 P **P** 09 14 39.3 -2.1
PAB San Pablo 72.65 306 P **P** 09 14 42.0 -1.4
PAB lAmb lAmb 09 14 44.5
comp=Z,8.2nm,0.9s
SUMG Summit 72.83 345 *i* P **P** 09 14 44.9 +0.7
SUMG lAmb lAmb 09 14 46.0
comp=Z,8.8nm,0.8s
SUMG Summit 72.83 345 P **P** 09 14 43.6 -0.6
PVRL Vila Real 74.35 309 *e*P **P** 09 14 53.1 -0.2
MTE Manteigas 74.58 308 *e*P **P** 09 14 55.5 +0.8
TULEG Thule 74.59 354 P **P** 09 14 53.6 -0.3
TULEG lAmb lAmb 09 14 54.6
comp=Z,8.0nm,0.8s
PCBR Castelo Branco 74.76 307 *e*P **P** 09 14 56.4 +0.8
PBAR Barrancos 75.11 305 *e*P **P** 09 14 58.1 +0.4
ICESG Greenland Ices 75.41 342 *i* P **P** 09 15 00.1 +0.8
ICESG IAML 09 15 00.6
comp=Z,14nm,0.6s
PMTG Montargil 75.60 307 *e*P **P** 09 15 00.7 +0.2
EVO Evora 75.67 306 *e*P **P** 09 15 01.6 +0.7
TOLK Toolik Lake Re 75.70 18 P **P** 09 15 00.5 -0.1
TOLK lAmb lAmb 09 15 02.6
comp=Z,9.9nm,0.8s
PBEJ Beja 75.77 306 *e*P **P** 09 15 01.7 +0.2
PVAQ Vaqueiros 75.92 305 *e*P **P** 09 15 02.9 +0.6
PBDV Barranco-do-Ve 76.14 305 *e*P **P** 09 15 04.6 +0.9
IMAR Indian Mountai 76.18 21 P **P** 09 15 03.6 +0.3
COLD Coldfoot 76.47 19 P **P** 09 15 03.9 -1.0
COLD lAmb lAmb 09 15 07.1
comp=Z,7.6nm,1.1s
RES Resolute Bay 77.67 0 P **P** 09 15 11.9 +0.4
comp=Z,1.8nm,0.7s,baz=39,slow=9.8,SNR=6.9
RES Resolute Bay 77.67 0 P **P** 09 15 11.4 -0.1
MLY Manley 77.76 21 P **P** 09 15 12.9 +0.6
MLY lAmb lAmb 09 15 14.3
comp=Z,5.6nm,0.8s
BMAR Burnt Mountain 77.90 18 P **P** 09 15 12.7 -0.3
LBTB Lobatse 77.98 233 P **P** 09 15 13.8 -0.3
LBTB lAmb lAmb 09 15 19.6
comp=Z,13nm,0.9s
TORD Torodi Ar. Bea 78.47 279 P **P** 09 15 16.5 -0.5
comp=Z,2.7nm,0.8s,baz=64,slow=4.9,SNR=7.8
TORD Torodi Ar. Bea 78.47 279 P **P** 09 15 16.0 -1.1
NEA2 Nenana 78.58 21 P **P** 09 15 17.6 +0.8
NEA2 lAmb lAmb 09 15 18.5
comp=Z,11nm,0.9s
MDM Murphy Dome 78.60 20 P **P** 09 15 16.9 0.0
MDM lAmb lAmb 09 15 18.8
comp=Z,28nm,1.6s
PRP Porcupine Dome 79.02 19 P **P** 09 15 19.6 +0.2
PRP lAmb lAmb 09 15 21.7
comp=Z,6.6nm,1.0s
IL31 79.14 20 P **P** 09 15 19.8 0.0
ILAR Eielson Array 79.14 20 P **P** 09 15 20.1 +0.3
comp=Z,2.2nm,0.6s,baz=308,slow=4.5,SNR=20
ILAR Eielson Array 79.14 20 P **P** 09 15 19.3 -0.5
RND Reindeer 79.47 22 P **P** 09 15 21.6 -0.1
RND lAmb lAmb 09 15 23.5
comp=Z,33nm,2.0s
SKT Skwentna 79.51 24 P **P** 09 15 22.0 +0.1
INK Inuvik 79.86 14 P **P** 09 15 23.6 0.0
INK lAmb lAmb 09 15 25.5
comp=Z,7.8nm,1.0s
STKA Stephens Creek 79.97 134 P **P** 09 15 24.4 -0.3
comp=Z,3.9nm,0.9s,baz=110,slow=3.7,SNR=3.3
STKA Stephens Creek 79.97 134 lAmb lAmb 09 15 26.1
comp=Z,2.8nm,1.1s
BOSA Boshof 80.46 231 P **P** 09 15 27.9 +0.3
comp=Z,5.1nm,0.8s,baz=26,slow=3.4,SNR=6.9
SCRK Sand Creek 80.59 20 P **P** 09 15 28.2 +0.3
SCRK lAmb lAmb 09 15 29.4
comp=Z,6.6nm,0.8s
PMR Palmer 80.61 23 P **P** 09 15 27.4 -0.4
PMR lAmb lAmb 09 15 29.0
comp=Z,5.3nm,0.8s
C36M Paulatuk 80.69 10 P **P** 09 15 28.1 0.0
C36M lAmb lAmb 09 15 29.2
comp=Z,15nm,1.1s
EPYK Eagle Plains 80.72 16 P **P** 09 15 28.4 0.0
EPYK lAmb lAmb 09 15 29.6
comp=Z,6.1nm,0.8s
SML Sawmill 80.74 23 P **P** 09 15 29.1 +0.4
SML lAmb lAmb 09 15 30.4
comp=Z,16nm,0.8s
DOT Dot Lake 80.81 20 P **P** 09 15 29.2 +0.3
EGAK Eagle 80.81 18 P **P** 09 15 29.3 +0.4
PAX Paxson 80.87 21 P **P** 09 15 30.0 +0.6
KNK Knik Glacier 80.97 23 P **P** 09 15 30.2 +0.4
K27K Chicken 81.12 19 P **P** 09 15 29.3 -1.2
K27K lAmb lAmb 09 15 32.3
comp=Z,4.3nm,0.8s
O22K Cooper Landing 81.16 24 P **P** 09 15 30.6 -0.1
DAWY Dawson 81.85 18 P **P** 09 15 34.7 +0.2
DAWY lAmb lAmb 09 15 41.7
comp=Z,12nm,1.6s
L27K Beaver Creek, 81.92 20 P **P** 09 15 35.4 +0.5
BCAR Beaver Creek A 81.93 20 P **P** 09 15 35.5 +0.6
N25K Chitina, Valde 82.14 22 P **P** 09 15 36.0 -0.1
N25K lAmb lAmb 09 15 38.6
comp=Z,8.3nm,1.0s
MCARA McCarthy VSAT 82.81 21 P **P** 09 15 40.2 +0.7
TGL Tana Glacier 83.35 22 P **P** 09 15 42.3 -0.1
TGL lAmb lAmb 09 15 44.6
comp=Z,7.5nm,0.8s
HYT Haines Junctio 84.95 20 P **P** 09 15 50.7 +0.1
HYT lAmb lAmb 09 15 52.8
comp=Z,6.2nm,0.8s
WHY Whitehorse 85.84 19 P **P** 09 15 54.7 -0.3
WHY lAmb lAmb 09 15 56.4
comp=Z,3.2nm,0.8s
DBIC Dimbokro 87.14 276 P **P** 09 16 02.3 +0.3
comp=Z,4.5nm,0.8s,baz=34,slow=7.6,SNR=3.2
YKA Yellowknife Ar 88.51 9 P **P** 09 16 07.6 -0.1
comp=Z,3.2nm,0.8s,baz=339,slow=4.7,SNR=22
TXAR Lajitas Array 122.44 9 PKP **PKPdf** 09 22 10.7 -0.7
comp=Z,0.6nm,0.9s,baz=134,slow=2.6,SNR=3.7
CPUP Villa Florida 146.86 264 PKPbc **PKPdf** 09 22 56.2 -0.1
comp=Z,2.2nm,0.8s,baz=76,slow=4.2,SNR=4.6
CPUP Villa Florida 146.86 264 PKPdf **PKPdf** 09 22 56.0 -0.3

CPUP **PKPbc 09 22 58.4 +0.1**

*LDG **25** 09:04:15.6±0.2,44°.23N×11°.95E,h10km,Ml2.7/7,Error ellipse: s-maj=5.5km s-min=3.8km az=55.0*
*ROM **25** 09:04:16.4±0.1,44°.229N±0°.009×11°.91E±0°.01, h17km±1km,ML2.3/22,Error ellipse: s-maj=1.0km s-min=0.5km az=220.0*
ISC 25 09:04:16.1±0.8,44°20N±0°.02×11°87E±0°.02,h17km±5km, n57,σ1§44/78,1C-3D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
FAEN	**Faenza**	**0.09**	**4**	P		**Pg**	**09 04 19.6**	**0.0**
FAEN				S		**Sg**	**09 04 23.4**	**+1.5**
BRIS	**BRISIGHELLA**	**0.26**	**260**	⇑P		**Pg**	**09 04 19.8**	**-2.1**
BRIS				S		**Sg**	**09 04 23.2**	**-2.8**
BRIS	comp=E,5175μm,0.3s			AML		AML		
BRIS	comp=N,3945μm,0.5s			AML		AML		
SFI	**Santa Sofia**	**0.29**	**183**	⇓P		**Pg**	**09 04 23.0**	**+0.5**
SFI				S		**Sb**	**09 04 29.2**	**+1.7**
SFI	comp=E,1710μm,0.7s			AML		AML		
SFI	comp=N,1195μm,0.8s			AML		AML		
SFI	comp=E,1705μm,0.7s			AML		AML		
SFI	comp=N,1265μm,1.1s			AML		AML		
SFI	comp=E,1760μm,1.2s			AML		AML		
SFI	comp=N,1200μm,0.8s			AML		AML		
SFI	comp=E,1765μm,1.2s			AML		AML		
SFI	comp=N,1260μm,1.1s			AML		AML		
MTRZ	**Monterenzio**	**0.34**	**302**	P		**Pb**	**09 04 24.3**	**+0.5**
MTRZ	comp=E,1056μm,1.1s			AML		AML		
MTRZ	comp=N,1210μm,0.4s			AML		AML		
MTRZ	comp=E,1057μm,1.1s			AML		AML		
MTRZ	comp=E,1054μm,1.1s			AML		AML		
MTRZ	comp=N,1215μm,0.4s			AML		AML		
MTRZ	comp=N,1188μm,0.4s			AML		AML		
MTRZ	comp=E,1030μm,1.0s			AML		AML		
CMPO	**Campotto Po**	**0.39**	**353**	P		**Pb**	**09 04 24.2**	**-0.3**
SEI	**Scarperia**	**0.40**	**249**	P		**Pg**	**09 04 24.8**	**+0.5**
SEI				S		**Sb**	**09 04 31.9**	**+1.5**
SEI	comp=E,1620μm,0.6s			AML		AML		
SEI	comp=N,2420μm,0.3s			AML		AML		
SEI	comp=E,1615μm,0.6s			AML		AML		
ASQU	**Asqua**	**0.40**	**188**	⇓P		**Pg**	**09 04 24.9**	**+0.5**
ASQU				S		**Sb**	**09 04 32.3**	**+1.6**
ASQU	comp=E,610μm,1.3s			AML		AML		
ASQU	comp=N,495μm,0.3s			AML		AML		
ASQU	comp=E,610μm,1.3s			AML		AML		
BLLA	**Bellaria**	**0.44**	**97**	P		**Pb**	**09 04 25.4**	**0.0**
RUFI	**Rufina**	**0.44**	**216**	⇓P		**Pg**	**09 04 25.6**	**+0.6**
RUFI				S		**Sb**	**09 04 33.7**	**+2.0**
RSM	**Repubblica di**	**0.50**	**122**	P		**Pb**	**09 04 26.2**	**-0.2**
CPGN	**Carpegna, Ital**	**0.51**	**140**	P		**Pb**	**09 04 26.9**	**+0.1**
CPGN	comp=E,488μm,0.5s			AML		AML		
CPGN	comp=N,595μm,0.6s			AML		AML		
FNVD	**Fontana Vidola**	**0.54**	**267**	P		**Pg**	**09 04 27.3**	**+0.4**
FNVD				S		**Sb**	**09 04 37.0**	**+2.3**
FNVD	comp=E,670μm,0.4s			AML		AML		
FNVD	comp=N,958μm,0.3s			AML		AML		
FNVD	comp=E,669μm,0.4s			AML		AML		
FNVD	comp=N,956μm,0.3s			AML		AML		
PARC	**Parchiule**	**0.61**	**154**	P		**Pg**	**09 04 28.4**	**+0.2**
PARC				S		**Sb**	**09 04 38.8**	**+2.1**
PARC	comp=E,253μm,0.6s			AML		AML		
PARC	comp=N,254μm,0.7s			AML		AML		
PARC	comp=N,254μm,0.7s			AML		AML		
PARC	comp=E,254μm,0.6s			AML		AML		
MTCR	**Monte La Croce**	**0.65**	**255**	P		**Pg**	**09 04 29.1**	**+0.1**
SSP9	**Sansepolcro**	**0.65**	**163**	P		**Pg**	**09 04 29.0**	**+0.1**
ZCCA	**Zocca**	**0.66**	**284**	P		**Pn**	**09 04 30.9**	**+0.2**
ZCCA	comp=E,126μm,0.5s			AML		AML		
ZCCA	comp=N,131μm,1.5s			AML		AML		
ZCCA	comp=E,126μm,0.5s			AML		AML		
ZCCA	comp=N,132μm,1.5s			AML		AML		
PE3	**Peglio**	**0.68**	**138**	P		**Pb**	**09 04 30.0**	**+0.5**
BADI	**Badiali**	**0.74**	**158**	P		**Pg**	**09 04 30.5**	**-0.1**
BADI	comp=N,262μm,0.3s			AML		AML		
BADI	comp=E,332μm,0.4s			AML		AML		
CRMI	**Carmignano**	**0.77**	**238**	P		**Pg**	**09 04 31.6**	**+0.6**
CRMI	comp=E,72μm,0.7s			AML		AML		
CRMI	comp=E,72μm,0.7s			AML		AML		
CRMI	comp=N,86μm,0.5s			AML		AML		
NARO	**Abbazia di Nar**	**0.78**	**138**	P		**Pg**	**09 04 31.1**	**-0.2**
NARO	comp=N,150μm,0.5s			AML		AML		
NARO	comp=E,133μm,0.7s			AML		AML		
NARO	comp=N,150μm,0.5s			AML		AML		
OSSC	**Osservatorio P**	**0.81**	**214**	P		**Pg**	**09 04 32.6**	**+0.7**
OSSC	comp=E,268μm,0.8s			AML		AML		
OSSC	comp=N,210μm,0.7s			AML		AML		
OSSC	comp=E,268μm,0.8s			AML		AML		
POPM	**Popiglio**	**0.81**	**260**	P		**Pb**	**09 04 33.2**	**+1.3**
POPM	comp=N,222μm,1.2s			AML		AML		
POPM	comp=E,226μm,0.6s			AML		AML		
POPM	comp=E,227μm,0.6s			AML		AML		
CSNT	**Castellina Chi**	**0.84**	**210**	P		**Pb**	**09 04 33.5**	**+1.3**
CSNT	comp=N,236μm,0.9s			AML		AML		
CSNT	comp=E,182μm,0.6s			AML		AML		
MPAG	**Monte Paganucc**	**0.86**	**131**	P		**Pb**	**09 04 32.8**	**+0.2**
MPAG	comp=E,174μm,0.9s			AML		AML		
MPAG	comp=N,204μm,0.8s			AML		AML		
CAFI	**Castiglion Fio**	**0.87**	**175**	P		**Pg**	**09 04 33.1**	**0.0**
CAFI	comp=E,215μm,0.6s			AML		AML		
CAFI	comp=E,216μm,0.6s			AML		AML		
CAFI	comp=N,177μm,0.4s			AML		AML		
ATVO	**AVT- Monte Val**	**0.90**	**154**	P		**Pg**	**09 04 33.4**	**-0.3**
ATVO	comp=E,290μm,0.8s			AML		AML		
ATVO	comp=N,284μm,0.5s			AML		AML		
ATVO	comp=E,290μm,0.8s			AML		AML		
ATVO	comp=N,283μm,0.5s			AML		AML		
ARVD	**Arcevia**	**1.04**	**132**	P		**Pn**	**09 04 36.2**	**+0.2**
ARVD	comp=E,113μm,0.3s			AML		AML		
ARVD	comp=E,113μm,0.3s			AML		AML		
ARVD	comp=N,85μm,0.3s			AML		AML		
SARO	**Sassorosso**	**1.06**	**270**	P		**Pg**	**09 04 37.5**	**+0.9**
SARO	comp=E,53μm,0.5s			AML		AML		
SARO	comp=N,44μm,0.7s			AML		AML		
ATTE	**AVT- Monte Tez**	**1.06**	**160**	P		**Pb**	**09 04 36.3**	**+0.3**
ATTE	comp=N,124μm,0.5s			AML		AML		
ATTE	comp=E,150μm,1.3s			AML		AML		
ATTE	comp=E,151μm,1.3s			AML		AML		
PII	**Pisa**	**1.08**	**244**	P		**Pb**	**09 04 36.8**	**+0.5**
PII	comp=E,194μm,0.3s			AML		AML		
PII	comp=N,228μm,0.5s			AML		AML		
TEOL	**Teolo**	**1.17**	**353**	P		**Pb**	**09 04 36.3**	**-1.7**
EQUI	**Equi**	**1.23**	**269**	P		**Pg**	**09 04 40.3**	**+0.3**
EQUI	comp=N,76μm,0.7s			AML		AML		
EQUI	comp=E,40μm,1.0s			AML		AML		
EQUI	comp=N,76μm,0.7s			AML		AML		
EQUI	comp=E,40μm,1.0s			AML		AML		
CSP1	**Cessapalombo**	**1.47**	**138**	P		**Pb**	**09 04 43.2**	**+0.1**
BRJN	**Brijuni**	**1.52**	**62**	*e*Pn		**Pn**	**09 04 41.9**	**-0.6**
BRJN				Sn		**Sn**	**09 04 59.8**	**-2.1**
MAGA	**Magasa**	**1.81**	**331**	AML		AML		
MAGA	comp=E,396μm,0.4s			AML		AML		
MAGA	comp=N,292μm,0.4s			AML		AML		
SMA1	**SAN MARTINO**	**1.90**	**145**	AML		AML		
SMA1	comp=E,107μm,0.8s			AML		AML		
SMA1	comp=N,90μm,0.4s			AML		AML		
SKDS	**Skadanscina**	**2.04**	**48**	*i* Pn		**Pn**	**09 04 47.3**	**-2.3**
SKDS				*i* Sn		**Sn**	**09 05 11.7**	**-3.0**
DUGI	**Dugi Otok**	**2.31**	**94**	*e*Pn		**Pn**	**09 04 53.1**	**-0.2**
DUGI				Sn		**Sn**	**09 05 19.4**	**-1.9**
ABTA	**Abfaltersbach**	**2.59**	**10**	Pn		**Pn**	**09 04 56.5**	**-0.8**
PGF	**Pioggiola**	**2.66**	**233**	*e*Pn		**Pn**	**09 04 57.7**	**-0.6**
PGF	comp=N,7.8nm,0.3s			*e*Sn		**Sn**	**09 05 28.1**	**-2.1**
PGF	**Pioggiola**	**2.66**	**233**	AML		AML		
PGF	comp=E,24μm,1.0s			AML		AML		
MYKA	**Terra Mystica**	**2.74**	**27**	*e*Pn		**Pn**	**09 04 58.3**	**-1.0**
MYKA	comp=E,1.5nm,0.2s			*e*Sn		**Sn**	**09 05 31.4**	**-0.6**
ZIRJ	**Zirje**	**2.78**	**100**	Sn		**Sn**	**09 05 31.1**	**-1.9**
MORI	**Morici**	**2.79**	**95**	*e*Pn		**Pn**	**09 05 00.3**	**+0.4**
MORI				Sn		**Sn**	**09 05 32.0**	**-1.1**
FETA	**Feichten**	**2.94**	**345**	*e*Pn		**Pn**	**09 05 03.0**	**+0.9**
OBKA	**Obir**	**2.99**	**38**	*e*Pn		**Pn**	**09 05 01.4**	**-1.4**
SQTA	**Sankt Quirin**	**3.06**	**352**	*i* Pn		**Pn**	**09 05 05.5**	**+1.7**
SQTA	comp=E,15nm,0.4s			*i* Sn		**Sn**	**09 05 41.6**	**+1.5**
WATA	**Walderalm**	**3.15**	**356**	*i* Pn		**Pn**	**09 05 06.0**	**+1.0**
WATA	comp=E,3.5nm,0.2s			*i* Sn		**Sn**	**09 05 43.3**	**+1.0**
MOTA	**Moosalm**	**3.19**	**351**	*i* Pn		**Pn**	**09 05 07.0**	**+1.3**
MOTA	comp=E,3.0nm,0.3s			*i* Sn		**Sn**	**09 05 44.7**	**+1.2**
SBF	**Sospel**	**3.21**	**266**	*e*Pn		**Pn**	**09 05 04.6**	**-1.3**
SBF	comp=E,4.0nm,0.3s			*e*Sn		**Sn**	**09 05 41.1**	**-2.7**
KIJV	**Kijevo**	**3.27**	**92**	*e*Pn		**Pn**	**09 05 08.2**	**+1.6**
KIJV				Sn		**Sn**	**09 05 43.8**	**-1.4**
RETA	**Reutte**	**3.38**	**347**	*i* Pn		**Pn**	**09 05 09.6**	**+1.4**
DAVA	**Damuels**	**3.39**	**336**	*e*Pn		**Pn**	**09 05 10.2**	**+1.8**
DAVA	comp=E,16nm,0.6s			*i* Sn		**Sn**	**09 05 50.0**	**+1.7**
MBDF	**Montbardon**	**3.69**	**280**	*e*Pn		**Pn**	**09 05 11.0**	**-1.5**
MBDF	comp=E,3.3nm,0.5s			*e*Sn		**Sn**	**09 05 52.0**	**-3.6**
RICI	**Ricice**	**3.87**	**99**	*e*Pn		**Pn**	**09 05 15.8**	**+1.0**
RICI				Sn		**Sn**	**09 05 59.0**	**-1.0**
LMR	**La Mourre**	**3.98**	**259**	*e*Pn		**Pn**	**09 05 15.3**	**-1.0**
LMR	comp=E,1.9nm,0.3s			*e*Sn		**Sn**	**09 05 58.6**	**-3.9**
ORIF	**Oris-en-Rattie**	**4.34**	**282**	*e*Pn		**Pn**	**09 05 21.1**	**-0.3**
ORIF	comp=E,3.0nm,0.4s			*e*Sn		**Sn**	**09 06 09.5**	**-2.1**

IDC 25 09:13:24.7±2.4,27°89N×86°01E,h0km,mb3.7/3, mb1 3.7/4,mb1mx3.3/53,mbtmp3.6/4,ML3.2/1,Error ellipse: s-maj=75.9km s-min=33.0km az=65.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.10**	**352**	P		Pn	09 17 49.5	-0.2
	0.1nm,0.3s,baz=172,slow=12,SNR=4.2							
SONM	**Songino Array**	**25.47**	**33**	P		P	09 18 54.4	-0.1
	0.7nm,0.6s,baz=242,slow=9.2,SNR=3.1							
ARCES	**ARCESS Array B**	**53.93**	**338**	P		P	09 22 49.3	-0.3
	1.9nm,0.9s,baz=102,slow=8.4,SNR=1.3							
WRA	**Warramunga Arr**	**66.68**	**130**	P		P	09 24 17.7	+0.1
	0.4nm,0.8s,baz=322,slow=6.7,SNR=2.1							

*IDC **25** 09:15:18.5±1.4,27°.84N×85°.37E,h0km,mb3.9/6, mb1 3.9/7,mb1mx3.5/54,mbtmp3.8/7,ML3.8/1,Error ellipse: s-maj=51.6km s-min=21.8km az=61.0*
ISC 25 09:15:21.3±1.6,27°9N±0°.2×85°4E±0°.4,h18km,n7,σ0§40/7, mb3.8/6,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.04**	**354**	P		**Pn**	**09 19 42.7**	**-0.5**
	0.3nm,0.3s,baz=174,slow=11,SNR=7.8							
SONM	**Songino Array**	**25.79**	**34**	P		**P**	**09 20 51.5**	**+0.2**
	1.3nm,0.4s,baz=228,slow=9.9,SNR=6.3							
ZALV	**Zalesovo Beam**	**26.05**	**359**	P		**P**	**09 20 53.5**	**+0.1**
	0.7nm,0.3s,baz=191,slow=11,SNR=4.9							
FINES	**FINESS Array B**	**51.30**	**328**	P		**P**	**09 24 24.0**	**0.0**
	0.8nm,0.4s,baz=110,slow=7.6,SNR=11							
ARCES	**ARCESS Array B**	**53.72**	**338**	P		**P**	**09 24 42.4**	**+0.5**
	0.6nm,0.3s,baz=102,slow=7.8,SNR=23							
WRA	**Warramunga Arr**	**67.11**	**130**	P		**P**	**09 26 14.1**	**0.0**
	0.3nm,0.6s,baz=325,slow=6.1,SNR=4.6							
ASAR	**Alice Springs**	**69.41**	**133**	P		**P**	**09 26 28.3**	**-0.2**
	0.4nm,0.6s,baz=316,slow=6.3,SNR=2.1							

*MOS **25** 09:17:00.7±0.9,28°.39N×87°.31E,h11km,mb5.8/101, MS5.6/11,Error ellipse: s-maj=5.6km s-min=3.1km az=117.6*
*BJI **25** 09:17:01.0±0.0,28°.40N×87°.25E,h10km,mB6.2/40, mb5.3/74,Ms5.9/75,Ms7 5.8/67*
*IDC **25** 09:17:01.4±0.3,28°.42N×87°.41E,h0km,mb5.2/52, mb1 5.2/55,mb1mx5.1/58,mbtmp5.1/55,ML4.4/3,MS5.7/5, Ms1 5.7/5,ms1mx4.9/53,Error ellipse: s-maj=9.0km s-min=7.8km az=32.0*
*NEIC **25** 09:17:02.3±1.4,28°.39N±0°.06×87°.32E±0°.06,h10km±1km, mb5.7/328,Ms_20 5.8/27,Error ellipse: s-maj=10.7km s-min=7.3km az=138.0*
*BGR **25** 09:17:02.1±0.0,28°.12N×87°.19E,h33km,mb5.7,Ms5.7*
*NDI **25** 09:17:03.4±4.4,28°.40N×87°.19E,h8km±25km,ML5.4, mb5.7(NEIC)*
*DMN **25** 09:17:05.4±0.4,28°.21N×87°.22E,h2km,Ml6.4/5,Error ellipse: s-maj=7.8km s-min=2.6km az=31.0*
ISC 25 09:17:02.3±0.4,28°35N±0°.03×87°29E±0°.02,h9km±2km, h9km:pP-P,n1233,σ1§41/1277,mb5.6/384,MS5.8/42, 95C-547D,Fault plane solution: NP1:ϕs202.40497°, δ42.05092°,λ-85.85626°. NP2:ϕs16.83244°,δ48.08404°, λ-93.72918°. Principal axes: T Plg3.0201°, Azm109.4721°; N Plg2.7741°, Azm19.3256°; P Plg85.8974°, Azm246.8280°; Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
TAPN	**Taplejung**	**1.06**	**159**	*e*Pg		**Pg**	**09 17 22.4**	**-0.3**
TAPN				*e*Sg		**Sg**	**09 17 36.0**	**-0.6**
	194μm,0.7s							
JIRN	**Jiri**	**1.19**	**235**	*e*Pg		**Pn**	**09 17 25.9**	**+0.5**
ODAN	**Odare**	**1.48**	**176**	*e*Pg		**Pg**	**09 17 30.8**	**0.0**
GTK	**Tadong**	**1.55**	**131**	*e*P		**Pn**	**09 17 30.3**	**+0.1**
PKI	**Pulchoki**	**1.83**	**245**	*e*Pg		**Pg**	**09 17 38.2**	**+0.7**
PKI				*e*Sg		**Sb**	**09 17 59.4**	**+0.1**
	196μm,0.8s							
KKN	**Kakani**	**1.86**	**253**	*e*Pg		**Pg**	**09 17 38.1**	**+0.1**
KKN				*e*Sg		**Sb**	**09 18 00.8**	**+0.8**
	109μm,0.6s							
DMN	**Daman**	**2.06**	**250**	*e*Pg		**Pg**	**09 17 42.3**	**+0.4**
DMN				*e*Sg		**Sg**	**09 18 07.7**	**-1.0**
	228μm,1.1s							
GKN	**Gorkha**	**2.37**	**262**	*e*Pg		**Pg**	**09 17 47.7**	**+0.1**
GKN				*e*Sg		**Sg**	**09 18 17.7**	**-0.6**
	101μm,0.5s							
DANN	**Dangsing**	**3.11**	**271**	*e*Pn		**Pn**	**09 17 54.6**	**+2.9**
KOLN	**Koldanda**	**3.31**	**261**	*e*Pg		**Pg**	**09 18 05.2**	**-0.5**
DHUB	**DHUBRI**	**3.35**	**133**	*e*P		**Pb**	**09 17 58.3**	**-3.5**
DHUB					IAML		09 18 49.5	
DHUB	comp=E,17μm,1.2s				IAML		09 19 02.5	
	comp=N,12μm,1.2s							
LSA	**Lhasa**	**3.64**	**67**	P		**Pn**	**09 18 02.8**	**+3.6**
LSA	**Lhasa**	**3.64**	**67**			**Pn**	**09 18 02.8**	**+3.6**
PYUN	**Piuthan**	**3.80**	**267**	*e*Pg		**Pg**	**09 18 15.1**	**0.0**
GUWA	**GUWAHATI**	**4.47**	**118**	*e*P		**Pn**	**09 18 12.8**	**+2.6**
GUWA				*e*S		**Sn**	**09 19 03.6**	**+1.4**
GUWA	comp=N,9μm,1.1s				IAML		09 19 27.5	
GUWA	comp=E,5μm,1.0s				IAML		09 19 29.9	
SHL	**Shillong**	**4.95**	**123**	P		**Pn**	**09 18 18.1**	**+1.1**
SHL	**Shillong**	**4.95**	**123**	*e*P		**Pn**	**09 18 18.4**	**+1.5**
SHL	comp=E,7μm,0.8s				IAML		09 19 39.8	
SHL	**Shillong**	**4.95**	**123**	Pn		**Pn**	**09 18 18.1**	**+1.1**
SHL	**Shillong**	**4.95**	**123**	P		**Pn**	**09 18 18.6**	**+1.6**
	SNR=172							
TEZP	**TEZPUR**	**5.19**	**108**	*e*P		**Pn**	**09 18 21.4**	**+1.4**
TEZP				*e*P		Pb	09 18 21.6	-12
AGT	**Agartala**	**5.70**	**140**	*e*P		**Pn**	**09 18 30.1**	**+3.0**
ITAN	**ITANAGAR**	**5.83**	**100**	*e*P		**Pn**	**09 18 30.7**	**+1.9**
ITAN	comp=E,20μm,1.6s				IAML		09 20 13.2	
ITAN	comp=N,13μm,1.5s				IAML		09 20 13.8	
KOHI	**KOHIMA**	**6.62**	**112**	*e*P		**Pn**	**09 18 40.8**	**+0.8**
KOHI				*e*S		**Sn**	**09 19 55.5**	**-0.1**
KOHI	comp=N,3μm,0.9s				IAML		09 20 03.7	
KOHI	comp=E,5μm,0.8s				IAML		09 20 03.9	
MOKO	**MOKOCHONG**	**6.74**	**106**	*e*P		**Pn**	**09 18 42.4**	**+0.9**
MOKO				*e*S		**Sn**	**09 19 58.0**	**-0.4**
MOKO	comp=N,3μm,0.6s				IAML		09 20 05.2	
MOKO	comp=E,4μm,0.9s				IAML		09 20 06.6	
IMP	**Imphal**	**6.91**	**119**	*e*P		**Pn**	**09 18 45.4**	**+1.5**
LKP	**Lekhapani**	**7.64**	**96**	*e*P		**Pn**	**09 18 56.8**	**+3.0**
DDI	**Dehra Dun**	**8.29**	**286**	*e*P		**Pn**	**09 19 05.2**	**+2.4**
DDI					IAML		09 20 41.6	
DDI	comp=N,12μm,0.8s				IAML		09 20 46.1	
DDI	comp=E,5μm,0.8s				IAML		09 20 46.1	
SMLA	**Simla**	**9.22**	**290**	*e*P		**Pn**	**09 19 16.7**	**+1.2**
SMLA					IAML		09 21 10.3	
SMLA	comp=E,2μm,0.7s				IAML		09 21 11.6	
SMLA	comp=N,2μm,1.1s				IAML		09 21 11.6	
BHPL	**Bhopal**	**10.24**	**242**	*e*P		**Pn**	**09 19 27.7**	**-1.7**
BHPL				*e*S		**Sn**	**09 21 16.2**	**-8.2**
BHPL	comp=N,2μm,0.5s				IAML		09 21 23.7	
BHPL	comp=E,2μm,0.9s				IAML		09 21 28.1	
DHRM	**DHARAMSHALA**	**10.26**	**295**	*e*P		**Pn**	**09 19 30.5**	**+0.6**
DHRM				*e*S		Sn	09 21 11.2	-14
DHRM	comp=E,2μm,0.9s				IAML		09 21 25.3	
DHRM	comp=N,2μm,0.8s				IAML		09 21 25.8	
CHCP	**Chirah Chowk**	**13.14**	**297**	P		**Pn**	**09 20 07.6**	**-1.5**
SARP	**Sargodha**	**13.14**	**289**	P		**Pn**	**09 20 07.2**	**-1.9**
NIL	**Nilore**	**13.14**	**297**	P		**Pn**	**09 20 07.6**	**-1.6**
NIL	**Nilore**	**13.14**	**297**	Pn		**Pn**	**09 20 07.6**	**-1.6**
NIL	**Nilore**	**13.14**	**297**	P		**Pn**	**09 20 09.0**	**-0.2**
HYB	**Hyderabad**	**13.53**	**218**	*i* P		**Pn**	**09 20 11.0**	**-3.4**
MHMT	**Maesarieng**	**14.07**	**134**	P		**Pn**	**09 20 20.0**	**-1.8**
	comp=N,371nm,1.0s							
KMI	**Kunming**	**14.18**	**100**	⇑P		**Pn**	**09 20 23.5**	**0.0**
KMI				pP		P	09 20 27.0	-4.1
KMI				sP			09 20 28.8	
KMI				PP		**PnPn**	**09 20 36.0**	**+4.6**
KMI				S		**Sn**	**09 22 58.3**	**-2.8**
KMI				SS		**S**	**09 23 18.8**	**-3.3**
KMI	comp=N,32nm,0.8s			pmax		pmax		
KMI	comp=N,22μm,10.9s			LR		LR		
KMI	comp=N,22μm,11.7s			LR		LR		
KMI	comp=N,21μm,11.3s			LR		LR		
KMI	**Kunming**	**14.18**	**100**	P		**Pn**	**09 20 23.7**	**+0.2**
KMI	**Kunming**	**14.18**	**100**			**Pn**	**09 20 23.7**	**+0.2**
CEP	**Cherat**	**14.26**	**296**	P		**Pn**	**09 20 21.5**	**-3.0**
CM33	**Chiang Mai Arr**	**14.28**	**129**	P		**Pn**	**09 20 26.0**	**+1.2**
CHTO	**Chiang Mai**	**14.28**	**129**	P		**Pn**	**09 20 23.5**	**-1.3**
CHTO	**Chiang Mai**	**14.28**	**129**	Pn		**Pn**	**09 20 23.5**	**-1.3**
CHTO	**Chiang Mai**	**14.28**	**129**	P		**Pn**	**09 20 23.8**	**-1.0**
CHTO	**Chiang Mai**	**14.28**	**129**	⇑P		**Pn**	**09 20 26.6**	**+1.8**
CMMT	**Chiang Mai**	**14.29**	**129**	P		**Pn**	**09 20 25.1**	**+0.3**
	comp=N,62nm,1.0s							
CM32	**Chiang Mai Arr**	**14.33**	**130**	P		**Pn**	**09 20 25.0**	**-0.4**
CM34	**Chiang Mai Arr**	**14.40**	**128**	P		**Pn**	**09 20 25.0**	**-1.4**
CM35	**Chiang Mai Arr**	**14.52**	**129**	P		**Pn**	**09 20 26.0**	**-2.0**
CM15	**Chiang Mai Arr**	**14.52**	**130**	P		**Pn**	**09 20 26.0**	**-2.0**
	comp=N,1μmcomp=N,110nm,0.9s							
CM31	**Chiang Mai Arr**	**14.53**	**130**	P		**Pn**	**09 20 28.1**	**-0.1**
	comp=N,35μmcomp=N,3μm,1.0s							
CM31	**Chiang Mai Arr**	**14.53**	**130**	Pn		**Pn**	**09 20 27.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**14.53**	**130**	Pn		**Pn**	**09 20 26.4**	**-1.8**
	comp=N,1.2nm,0.3s,baz=309,slow=14,SNR=54							
CMAR	baz=316,slow=2.5,SNR=4.5			ScP		**ScP**	**09 29 12.9**	**-3.9**
CMAR	**Chiang Mai Arr**	**14.53**	**130**	P		**Pn**	**09 20 26.8**	**-1.4**
CMAR	**Chiang Mai Arr**	**14.53**	**130**			**Pn**	**09 20 26.8**	**-1.4**
CM13	**Chiang Mai Arr**	**14.53**	**130**	P		**Pn**	**09 20 26.0**	**-2.2**
	comp=N,1μmcomp=N,147nm,1.1s							
CM02	**Chiang Mai Arr**	**14.55**	**130**	P		**Pn**	**09 20 27.4**	**-1.1**
	comp=N,1μmcomp=N,159nm,1.0s							
CD2	**Chengdu**	**14.55**	**76**	P		**Pn**	**09 20 26.8**	**-1.6**
CD2				S		**Sn**	**09 23 09.3**	**-0.6**
CD2	comp=N,420nm,1.4s			pmax		pmax		
CD2	comp=N,56μm,8.6s			LR		LR		
CD2	comp=N,47μm,12.2s			LR		LR		
CD2	comp=N,99μm,10.8s			LR		LR		
CM01	**Chiang Mai Arr**	**14.57**	**130**	P		**Pn**	**09 20 27.0**	**-1.6**
	comp=N,1μmcomp=N,157nm,1.0s							
CM05	**Chiang Mai Arr**	**14.57**	**130**	P		**Pn**	**09 20 27.0**	**-1.7**
	comp=N,1μmcomp=N,129nm,1.1s							
CM09	**Chiang Mai Arr**	**14.57**	**130**	P		**Pn**	**09 20 27.8**	**-0.9**
	comp=N,948nmcomp=N,138nm,1.1s							

CM36 Chiang Mai Arr 14.59 130 P **Pn** **09 20 28.0 -1.0**
CM04 Chiang Mai Arr 14.59 130 P **Pn** **09 20 27.7 -1.3**
comp=N,918nmcomp=N,80nm,0.8s
GTA Gaotai 15.15 40 ⇓P **Pn** **09 20 34.0 -2.5**
GTA pP P 09 20 38.8 -2.9
GTA sP pP 09 20 43.0 -2.7
GTA pmax pmax
comp=N,80nm,1.5s
GTA pmax pmax
comp=N,6μm,5.6s
GTA LR LR
comp=N,32μm,14.9s
GTA LR LR
comp=N,34μm,15.3s
GTA LR LR
comp=N,36μm,12.0s
WMQ Urumqi 15.45 1 *e*P **Pn** **09 20 40.0 -0.3**
WMQ pP P 09 20 46.3 +1.4
WMQ sP pP 09 20 49.0 +0.2
WMQ PP **sP** **09 20 56.0 +5.3**
WMQ S **S** **09 23 39.8 -7.9**
WMQ sS sS 09 23 44.0 -10
WMQ SS **SnSn** **09 23 48.0 +3.4**
WMQ pmax pmax
comp=N,240nm,1.5s
WMQ pmax pmax
comp=N,9μm,5.3s
WMQ LR LR
comp=N,36μm,12.9s
WMQ LR LR
comp=N,10μm,12.9s
WMQ LR LR
comp=N,36μm,20.7s
WMQ Urumqi 15.45 1 P **Pn** **09 20 39.6 -0.8**
WMQ pmax pmax
comp=Z,257nm,1.1s
WMQ Urumqi 15.45 1 **Pn** **09 20 39.6 -0.8**
NANT Nan 15.53 125 P **Pn** **09 20 40.3 -1.3**
comp=Z,29μmcomp=Z,4μm,1.0s
SUKH Sukhothai 15.68 131 P **Pn** **09 20 42.0 -1.5**
comp=Z,2μmcomp=Z,135nm,1.1s
PRZ Przheval'sk 15.84 335 P **Pn** **09 20 45.5 -0.1**
PRZ pmax pmax
comp=Z,272nm,1.1s
PRZ Przheval'sk 15.84 335 **Pn** **09 20 45.5 -0.1**
LZH Lanzhou 15.98 57 ⇓P **Pn** **09 20 45.3 -2.2**
LZH pP P 09 20 49.3 -1.7
LZH PP **PnPn** **09 20 56.3 +0.2**
LZH sS S 09 23 53.3 -5.6
LZH SS **SnSn** **09 24 02.0 +4.2**
LZH pmax pmax
comp=Z,630nm,1.3s
LZH pmax pmax
comp=Z,8μm,5.2s
LZH LR LR
comp=Z,50μm,11.4s
LZH LR LR
comp=Z,64μm,11.4s
KDJ Kajisay 16.02 332 P **Pn** **09 20 47.2 -0.8**
KDJ pmax pmax
comp=Z,213nm,1.1s
KDJ Kajisay 16.02 332 Pn **Pn** **09 20 47.2 -0.8**
SHLS Shalkode 16.07 339 *e*P **Pn** **09 20 45.7 -2.8**
comp=Z,593nm,2.0s,baz=340
SHLS Shalkode 16.07 339 *e*P **Pn** **09 20 45.7 -2.8**
SHLS pmax pmax
comp=Z,593nm,2.0s
UTTA Uttaradit 16.12 128 P **Pn** **09 20 48.8 -0.4**
comp=Z,2μmcomp=Z,180nm,1.1s
UMPA Umpang Tak 16.13 136 P **P** **09 20 51.5 -1.1**
comp=Z,3μmcomp=Z,123nm,0.7s
UZB Uzynbulak 16.20 338 *e*P **Pn** **09 20 49.2 -1.1**
comp=Z,357nm,2.4s,baz=338
UZB Uzynbulak 16.20 338 *e*P **Pn** **09 20 49.2 -1.1**
UZB pmax pmax
comp=Z,357nm,2.4s
SATY Saty 16.34 336 *e*P **Pn** **09 20 51.1 -0.9**
baz=336
SATY *e*S **Sn** **09 23 53.8 +0.3**
baz=336
SATY Saty 16.34 336 *e*P **Pn** **09 20 51.0 -0.9**
SATY *e*S **Sn** **09 23 53.7 +0.3**
PHIT Phitsanulok 16.41 130 P **Pn** **09 20 53.7 +0.7**
comp=Z,5μmcomp=Z,606nm,1.1s
ULHL Ulahol 16.52 330 P **Pn** **09 20 55.6 +1.3**
SNR=40
SLVN Son La 16.61 111 Pn **Pn** **09 20 54.9 -0.6**
KBL Kabul 16.74 296 P **Pn** **09 20 54.6 -2.6**
KBL pmax pmax
comp=Z,732nm,0.9s
KBL Kabul 16.74 296 Pn **Pn** **09 20 54.6 -2.6**
KBL IAmb IAmb 09 21 06.7
comp=Z,732nm,0.8s
KBL Kabul 16.74 296 P **Pn** **09 20 55.1 -2.1**
SNR=237
BOOM Boomskoye usch 16.85 330 P **Pn** **09 20 58.6 +0.1**
BOOM pmax pmax
comp=Z,340nm,1.0s
BOOM Boomskoye usch 16.85 330 **Pn** **09 20 58.5 +0.1**
TNSS Tian-Shan 16.87 333 *e*P **Pn** **09 20 58.3 -0.7**
baz=333
TNSS Tian-Shan 16.87 333 *e*P **Pn** **09 20 58.2 -0.7**
MDOK Medeo 16.94 333 *e*P **Pn** **09 20 59.0 -0.6**
baz=333
MDOK Medeo 16.94 333 *e*P **Pn** **09 20 59.0 -0.6**
UTHA Uthaitani 16.99 136 P **Pn** **09 20 59.5 -0.7**
comp=Z,2μmcomp=Z,195nm,0.8s
KNDC Almaty 17.02 333 P **P** **09 21 03.0 +0.7**
AAA Alma-Ata 17.03 333 *e*P **Pn** **09 21 00.4 -0.3**
baz=333
AAA Alma-Ata 17.03 333 *e*P **Pn** **09 21 00.3 -0.3**
UCH Uchtor 17.31 326 P **Pn** **09 21 03.5 -1.0**
SNR=20
GYA Guiyang 17.31 92 ⇑P **Pn** **09 21 02.0 -2.3**
GYA S **Sn** **09 24 14.3 -2.8**
GYA pmax pmax
comp=Z,2μm,3.5s
TKM2 Tokmak 2 17.34 330 P **Pn** **09 21 04.9 +0.2**
SNR=72
PBA Port Blair 17.38 162 P P 09 21 06.4 0.0
PBA IAmb IAmb 09 21 13.8
comp=Z,421nm,1.0s
PBA Port Blair 17.38 162 P P 09 21 09.1 +2.8
SNR=9.6
PBA Port Blair 17.38 162 ⇑P P 09 21 08.7 +2.3
KBK Karagaybulak 17.43 328 P **P** **09 21 08.6 +1.6**
SNR=49
AAK Ala-Archa 17.63 327 P **P** **09 21 09.0 -0.2**
comp=Z,0.3nm,0.3s,baz=142,slow=12,SNR=57
AAK Ala-Archa 17.63 327 P **P** **09 21 10.9 +1.7**
SNR=63
AAK Ala-Archa 17.63 327*ce*P **P** **09 21 10.5 +1.3**
AAK pmax pmax
comp=Z,926nm,1.7s
AAK Ala-Archa 17.63 327 **Pn** **09 21 08.7 +0.4**
AAK IAmb IAmb 09 21 23.0
comp=Z,509nm,1.4s
AAK Ala-Archa 17.63 327 P **P** **09 21 11.5 +2.3**
AAK Ala-Archa 17.63 327 ⇑P **P** **09 21 09.3 +0.1**
AML Almayashu 17.64 325 P **Pn** **09 21 07.4 -1.2**
SNR=42
FRU1 Bishkek 17.70 328 P **Pn** **09 21 09.2 +0.2**
FRU1 pmax pmax
comp=Z,262nm,1.3s
FRU1 Bishkek 17.70 328 **Pn** **09 21 09.2 +0.2**
CHMS Chumysh 17.79 329 P **P** **09 21 11.9 +1.1**
SNR=12
NONG Nongkai 17.79 122 P **P** **09 21 11.4 +0.4**
comp=Z,14μmcomp=Z,489nm,1.6s
EKS2 Erkin-Say 17.99 326 P **P** **09 21 16.1 +2.9**
SNR=63
TDK Taldyqorghan 18.06 339 *e*P **Pn** **09 21 12.8 -0.7**
comp=Z,1μm,2.0s,baz=339
TDK Taldyqorghan 18.06 339 *e*P **Pn** **09 21 12.7 -0.7**
TDK pmax pmax
comp=Z,1μm,2.0s
USP Ospenovka 18.11 329 P **P** **09 21 15.4 +1.0**
SNR=27
SGDS Sogindy 18.20 329 *e*P **Pn** **09 21 14.7 -0.5**
baz=329
SGDS *e*S **Sn** **09 24 39.4 +1.1**
baz=329
SGDS Sogindy 18.20 329 *e*P **Pn** **09 21 14.6 -0.5**
SGDS *e*S **Sn** **09 24 39.3 +1.1**
CHAI Chaiyaphum 18.38 129 P **P** **09 21 19.1 +1.5**
comp=Z,3μmcomp=Z,237nm,1.2s

KHON Khomkaen 18.67 127 P **Pn** **09 21 22.5 +1.5**
comp=Z,3μmcomp=Z,147nm,0.8s
MK31 Makanchi Array 18.83 349*d* iP **P** **09 21 22.1 -0.1**
MK31 Makanchi Array 18.83 349 P **P** **09 21 22.1 -0.1**
MKAR Makanchi Array 18.83 349 P **P** **09 21 22.0 -0.3**
comp=Z,2.6nm,0.3s,baz=158,slow=10,SNR=141
MKAR P3KPbc 09 55 57.7
comp=Z,0.1nm,0.3s,baz=27,slow=3.5,SNR=7.0
MKAR Makanchi Array 18.83 349 P **P** **09 21 22.0 -0.3**
MKAR Makanchi Array 18.83 349 P **P** **09 21 21.6 -0.7**
MAKZ Makanchi 18.89 349 P **P** **09 21 23.0 0.0**
MAKZ pmax pmax
comp=Z,213nm,1.3s
MAKZ Makanchi 18.89 349 P **P** **09 21 23.0 0.0**
MAKZ Makanchi 18.89 349 ⇓P **P** **09 21 22.9 0.0**
ZSN Zaisan 19.16 355 *e*P **P** **09 21 25.8 -0.2**
comp=Z,973nm,3.0s,baz=355
ZSN *e*S **Sn** **09 25 02.3 +0.7**
baz=355
ZSN Zaisan 19.16 355 *e*P **P** **09 21 25.7 -0.2**
ZSN *e*S **Sn** **09 25 02.2 +0.7**
ZSN pmax pmax
comp=Z,973nm,3.0s
PHET Kaeng Krachan 19.19 141 P **Pn** **09 21 28.9 +1.6**
comp=Z,1μmcomp=Z,139nm,0.9s
XAN Xi'an 19.34 68 P **P** **09 21 26.0 -2.0**
XAN pP Pn 09 21 29.3 +0.2
XAN S **S** **09 25 10.5 +3.4**
XAN SS **SnSn** **09 25 24.5 +4.2**
XAN pmax pmax
comp=Z,170nm,1.7s
XAN pmax pmax
comp=Z,7μm,6.9s
XAN LR LR
comp=Z,35μm,11.0s
XAN LR LR
comp=Z,21μm,8.4s
XAN LR LR
comp=Z,33μm,16.3s
XAN Xi'an 19.34 68 P **P** **09 21 26.1 -2.0**
XAN pmax pmax
comp=Z,263nm,1.4s
XAN Xi'an 19.34 68 P **P** **09 21 26.1 -1.9**
DZA Taraz 19.41 323 *e*P **P** **09 21 29.2 +0.5**
baz=322
DZA Taraz 19.41 323 *e*P **P** **09 21 29.2 +0.5**
ENH Enshi 19.45 79 P **P** **09 21 27.6 -1.7**
ENH IAmb IAmb 09 21 36.1
comp=Z,849nm,1.4s
TAS Tashkent 19.59 316 P **P** **09 21 30.0 -0.6**
TAS pmax pmax
comp=Z,405nm,0.9s
TAS Tashkent 19.59 316 **P** **09 21 30.0 -0.6**
TAS IAmb IAmb 09 21 41.2
comp=Z,405nm,0.9s
IUG Iuzhnay 19.65 319 *e*P **P** **09 21 30.3 -1.1**
baz=319
IUG Iuzhnay 19.65 319 *e*P **P** **09 21 30.3 -1.1**
BTLS Baital 19.71 331 *e*P **P** **09 21 30.4 -1.5**
baz=331
BTLS Baital 19.71 331 *e*P **P** **09 21 30.4 -1.5**
SRAK Srakaew 19.79 133 P **Pn** **09 21 39.0 +4.5**
comp=Z,23μmcomp=Z,2μm,1.4s
PATY Pattaya 19.89 138 P **Pn** **09 21 36.6 +0.9**
comp=Z,13μmcomp=Z,170nm,0.7s
KK31 Karatay Array 20.00 322 P **P** **09 21 35.1 0.0**
KK31 pmax pmax
comp=Z,184nm,1.2s
KK31 Karatay Array 20.00 322 P **P** **09 21 35.0 0.0**
KKAR Karatay Array 20.00 322 P **P** **09 21 35.7 +0.6**
KKAR pmax pmax
comp=Z,184nm,1.2s
KKAR Karatay Array 20.00 322 P **P** **09 21 35.7 +0.6**
KKAR Karatay Array 20.00 322 P **P** **09 21 35.5 +0.4**
KKAR Karatay Array 20.00 322 ⇓P **P** **09 21 35.7 +0.6**
CHM Chimkent 20.01 319 *e*P **P** **09 21 35.2 0.0**
baz=319
CHM Chimkent 20.01 319 *e*P **P** **09 21 35.1 0.0**
MALK Mahakanadarawa 20.84 199 ⇓P Pn 09 21 48.0 +1.2
UBPT Khong Chiam 21.27 124 P **P** **09 21 49.0 0.0**
comp=Z,218nm,1.4s
UBPT Khong Chiam 21.27 124 P **P** **09 21 49.3 +0.3**
UBPT Khong Chiam 21.27 124 ⇓P **P** **09 21 49.5 +0.4**
DGZ Jazzator, Alta 21.32 0*d* iP **P** **09 21 50.0 +0.5**
DGZ pmax pmax
comp=Z,571nm,1.4s
PALK Pallekele 21.87 198 P **P** **09 21 57.9 +2.5**
comp=Z,41nm,1.0s,baz=130,slow=11,SNR=11
PALK S **S** **09 25 56.5 -0.9**
comp=Z,40nm,0.8s,baz=9.1,slow=14,SNR=3.5
PALK Pallekele 21.87 198 P **P** **09 21 56.2 +0.7**
PALK Pallekele 21.87 198 P **P** **09 21 58.4 +2.9**
PALK Pallekele 21.87 198 ⇑P **P** **09 21 58.3 +2.9**
SURT Suratani 22.13 148 P **P** **09 22 00.5 +2.3**
comp=Z,87nmcomp=Z,10nm,1.2s
HRA Herat 22.19 292 P **P** **09 21 59.4 +0.4**
HRA IAmb IAmb 09 22 23.8
comp=Z,434nm,1.6s
BTO Baotou 22.30 51 P **P** **09 21 58.3 -1.8**
BTO S **S** **09 25 59.3 -6.2**
BTO pmax pmax
comp=Z,310nm,1.4s
BTO LR LR
comp=Z,67μm,18.1s
BTO LR LR
comp=Z,26μm,15.7s
QIZ Qiongzhong 22.61 109 P **P** **09 22 03.8 +0.4**
QIZ pP **sP** **09 22 08.8 -0.4**
QIZ S **S** **09 26 12.0 +0.7**
QIZ pmax pmax
comp=Z,6μm,8.2s
QIZ LR LR
comp=Z,13μm,18.3s
QIZ LR LR
comp=Z,11μm,20.1s
QIZ LR LR
comp=Z,10μm,14.3s
QIZ Qiongzhong 22.61 109 P **P** **09 22 03.2 -0.2**
QIZ IAmb IAmb 09 22 22.1
comp=Z,391nm,1.3s
SEM Semipalatinsk 22.67 348 *e*P **P** **09 22 01.1 -2.9**
comp=Z,198nm,2.2s,baz=348
SEM *e*S **S** **09 26 10.4 -2.0**
baz=348
SEM Semipalatinsk 22.67 348 *e*P **P** **09 22 01.1 -2.9**
SEM *e*S **S** **09 26 10.3 -2.0**
SEM pmax pmax
comp=Z,198nm,2.2s
PKDT Phuket 22.87 151 P **P** **09 22 06.8 +0.8**
comp=Z,400nm,1.5s
TIY Taiyuan 23.00 60 *e*P **P** **09 22 06.8 -0.7**
TIY pmax pmax
comp=Z,160nm,1.2s
TIY pmax pmax
comp=Z,3μm,4.1s
TIY LR LR
comp=Z,32μm,13.5s
TIY LR LR
comp=Z,19μm,17.4s
TIY LR LR
comp=Z,22μm,11.4s
HALK Hakmana 23.01 197 ⇓P **P** **09 22 11.7 +4.1**
KURBB Kurchatov Arra 23.22 346 P **P** **09 22 08.9 -0.5**
comp=Z,35nm,0.9s,baz=158,slow=9.3,SNR=167
KURBB S **S** **09 26 22.6 +1.3**
comp=Z,7.5nm,1.0s,baz=156,slow=18,SNR=4.2
KURBB P3KPbc 09 55 39.0
comp=Z,6.6nm,1.1s,baz=333,slow=4.6,SNR=14
KURBB Kurchatov Arra 23.22 346 P **P** **09 22 07.8 -1.6**
KURK Kurchatov 23.29 346 P **P** **09 22 08.9 -1.2**
KURK S **S** **09 26 22.6 +0.1**
KURK Kurchatov 23.29 346 P **P** **09 22 08.9 -1.2**
HHC Hu-ho-hao-te 23.47 52 *e*P **P** **09 22 12.0 -0.2**
HHC pP sP 09 22 18.5 +0.3
HHC S **S** **09 26 24.3 -1.6**
HHC pmax pmax
comp=Z,210nm,1.5s
HHC pmax pmax
comp=Z,5μm,5.3s
HHC LR LR
comp=Z,29μm,12.8s
HHC LR LR
comp=Z,33μm,12.0s
HHC LR LR
comp=Z,35μm,11.2s

TRTT Trang 23.53 148 P **P** **09 22 13.1 +0.3**
WHN Wuhan 23.65 78 ⇓P **P** **09 22 13.5 -0.4**
WHN S **S** **09 26 31.0 +2.2**
WHN pmax pmax
comp=Z,2μm,3.2s
WHN LR LR
comp=Z,33μm,9.5s
WHN LR LR
comp=Z,10μm,8.3s
WHN LR LR
comp=Z,42μm,19.4s
GZH Guangzhou 24.03 97 P **P** **09 22 18.8 +1.2**
GZH S **S** **09 26 33.8 -1.1**
GZH LR LR
comp=Z,12μm,9.6s
GZH LR LR
comp=Z,8μm,10.4s
MNCI Minicoy 24.05 217 P **P** **09 22 18.1 +0.2**
MNCI IAmb IAmb 09 22 42.0
comp=Z,277nm,1.2s
BRZS Berezniki 24.31 337 *e*P **P** **09 22 18.2 -1.9**
comp=Z,508nm,2.8s,baz=336
BRZS Berezniki 24.31 337 *e*P **P** **09 22 18.1 -1.9**
BRZS pmax pmax
comp=Z,508nm,2.8s
SONM Songino Array 24.47 32 P **P** **09 22 22.2 +0.6**
comp=Z,56nm,0.9s,baz=218,slow=8.9,SNR=98
SONM PcP **PcP** **09 26 01.1 +0.9**
comp=Z,6.3nm,0.6s,baz=223,slow=3.4,SNR=5.7
SONM ScP **ScP** **09 29 36.7 -2.4**
comp=Z,2.2nm,0.7s,baz=225,slow=1.8,SNR=2.3
SONM LR LR 09 32 54.5
comp=Z,34μm,18.5s,baz=279,slow=39
SONM Songino Array 24.47 32 P **P** **09 22 21.5 -0.1**
SONM pmax pmax
comp=Z,82nm,1.1s
SONM Songino Array 24.47 32 P **P** **09 22 21.5 -0.1**
LHMI Lhok Sumawe 24.76 156 P **P** **09 22 27.2 +3.0**
LHMI Lhok Sumawe 24.76 156 ⇓P **P** **09 22 27.4 +3.1**
LHMI Lhok Sumawe 24.76 156 P **P** **09 22 27.9 +3.6**
comp=Z,22μmcomp=Z,1μm,1.1s
ULN Ulaanbaatar 24.80 33*d* iP **P** **09 22 24.9 +0.2**
ULN pmax pmax
comp=Z,253nm,1.3s
ULN Ulaanbaatar 24.80 33 P **P** **09 22 25.0 +0.3**
ULN IAmb IAmb 09 22 26.9
comp=Z,244nm,1.2s
ULN Ulaanbaatar 24.80 33 P **P** **09 22 25.3 +0.6**
ULN Ulaanbaatar 24.80 33 ⇓P **P** **09 22 25.0 +0.3**
ZAK Zakamensk 25.14 25 *e*P **P** **09 22 28.0 +0.4**
ZAK *e* 09 33 27.0
ZAK pmax pmax
comp=Z,142nm,1.4s
MOY Mondy 25.46 20 *e*P **P** **09 22 31.6 +1.1**
MOY pmax pmax
comp=Z,566nm,1.8s
MLSI Meulaboh, Aceh 25.47 158 P **P** **09 22 33.3 +2.5**
comp=Z,127nm,1.1s
ZAA0 Zalesovo Array 25.64 357 P **P** **09 22 32.1 +0.1**
ZALV Zalesovo Beam 25.64 357 P **P** **09 22 32.3 +0.3**
comp=Z,55nm,0.9s,baz=182,slow=8.9,SNR=80
ZALV P3KPbc 09 55 30.1
comp=Z,3.6nm,1.0s,baz=338,slow=6.2,SNR=6.9
DLV T Lat 25.67 125 P **P** **09 22 32.7 -0.1**
DLV IAmb IAmb 09 22 39.8
comp=Z,176nm,1.1s
GEYT Alibeck 26.14 299 P **P** **09 22 39.1 +2.4**
comp=Z,50nm,0.8s,baz=122,slow=5.6,SNR=51
GEYT Alibeck 26.14 299 P **P** **09 22 38.2 +1.4**
GEYT IAmb IAmb 09 22 52.9
comp=Z,192nm,1.4s
GYA0B ALIBECK ARRAY 26.14 299 P **P** **09 22 39.2 +2.5**
GYA0B IAmb IAmb 09 22 51.4
comp=Z,216nm,1.1s
WBK Wadi Bani Khal 26.16 264 P **P** **09 22 40.1 +3.0**
SNR=18
KULM Kulim 26.21 149 P **P** **09 22 37.7 +0.2**
KULM Kulim 26.21 149 ⇓P **P** **09 22 38.9 +1.4**
WSAR Wadi Sarin 26.27 265 P **P** **09 22 39.6 +1.6**
comp=Z,9.3nm,0.8s,baz=115,slow=7.8,SNR=9.2
WSAR LR LR 09 32 51.8
comp=Z,15μm,21.0s,baz=86,slow=36
WSAR Wadi Sarin 26.27 265 P **P** **09 22 42.7 +4.6**
SNR=12
TLY Talaya 26.34 23 P **P** **09 22 38.3 -0.1**
comp=Z,4.9nm,0.6s,baz=222,slow=8.6,SNR=42
TLY Talaya 26.34 23 *e*P **P** **09 22 39.0 +0.6**
TLY pmax pmax
comp=Z,211nm,2.1s
TLY MLR MLR
comp=Z,18μm,18.0s
TLY Talaya 26.34 23 P **P** **09 22 38.1 -0.3**
TLY Talaya 26.34 23 P **P** **09 22 40.1 +1.7**
TLY Talaya 26.34 23 ⇓P **P** **09 22 39.6 +1.2**
TIA Tai'an 26.34 65 P **P** **09 22 38.5 -0.1**
TIA pmax pmax
comp=Z,64nm,1.9s
TIA LR LR
comp=Z,16μm,19.0s
TIA LR LR
comp=Z,9μm,20.8s
TIA LR LR
comp=Z,12μm,21.6s
BJT Baijiatuao 26.46 56 P **P** **09 22 40.3 +0.7**
BJT pmax pmax
comp=Z,93nm,1.2s
BJT Baijiatuao 26.46 56 P **P** **09 22 40.3 +0.7**
BIDO Bidbid 26.63 266 P **P** **09 22 46.2 +5.0**
SNR=9.9
TPTI 26.67 158 P **P** **09 22 40.3 -1.3**
comp=Z,62nm,1.4s
SMDO Samad 26.83 265 P **P** **09 22 45.2 +2.0**
SNR=15
TSI Tuntungan 26.94 154 P **P** **09 22 49.6 +5.5**
comp=Z,241nm,0.9s
JMDO Jabal Madar 27.00 264 P **P** **09 22 50.3 +5.7**
SNR=11
IRK Irkutsk 27.02 23 *e*P **P** **09 22 45.0 +0.5**
IRK pmax pmax
comp=Z,394nm,3.2s
IPM Ipoh 27.09 149 P **P** **09 22 46.0 +0.5**
IPM IAmb IAmb 09 22 49.1
comp=Z,143nm,1.5s
HOQ Hoqain 27.33 267 P **P** **09 22 49.4 +1.8**
SNR=12
NJ2 Nanjing 27.48 74 ⇓P **P** **09 22 49.0 +0.2**
NJ2 pP **sP** **09 22 54.5 -0.5**
NJ2 S **S** **09 27 30.5 +0.8**
NJ2 pmax pmax
comp=Z,76nm,1.0s
NJ2 LR LR
comp=Z,7μm,12.3s
NJ2 LR LR
comp=Z,21μm,11.8s
NJ2 LR LR
comp=Z,21μm,11.8s
MHTO MHTO 27.59 261 P **P** **09 22 52.3 +2.4**
SNR=16
BVAR Borovoye Array 27.64 338 P **P** **09 22 50.0 -0.1**
comp=Z,2.2nm,0.6s,baz=126,slow=15,SNR=14
BVAR PcP **PcP** **09 26 08.1 +0.9**
comp=Z,3.8nm,0.8s,baz=138,slow=9.1,SNR=4.3
BVAR P3KPbc 09 55 19.3
comp=Z,4.5nm,0.9s,baz=40,slow=5.6,SNR=12
BANOM Banah 27.65 272 ⇑P **P** **09 22 54.9 +4.4**
BSY Bisya 27.67 265 P **P** **09 22 57.0 +6.3**
SNR=11
BRVK Borovoye 27.70 338 P **P** **09 22 50.9 +0.3**
BRVK pmax pmax
comp=Z,62nm,1.2s
BRVK Borovoye 27.70 338 P **P** **09 22 50.9 +0.3**
BRVK Borovoye 27.70 338 P **P** **09 22 52.2 +1.5**
BRVK Borovoye 27.70 338 ⇓P **P** **09 22 51.3 +0.6**
PSI Prapat 27.72 154 P **P** **09 22 52.7 +1.5**
comp=Z,5.7nm,0.6s,baz=359,slow=6.4,SNR=15
PSI PcP **PcP** **09 26 09.4 +1.2**
comp=Z,24nm,0.7s,baz=356,slow=0.8,SNR=8.6
PSI Prapat 27.72 154 P **P** **09 22 51.8 +0.5**
PSI 09 26 09.4
PSI pmax pmax
comp=Z,123nm,1.4s
SHME Shamm 27.76 273 P **P** **09 22 54.2 +2.8**
MDH Madha 27.78 271 P **P** **09 22 56.3 +4.7**
RPSI Rantau Prapat 27.82 154 P **P** **09 22 51.8 -0.2**
RPSI IAmb IAmb 09 23 01.7
comp=Z,123nm,1.4s

RPSI Rantau Prapat 27.82 154 PcP 09 26 09.4 +1.1
SOHO SOHO 27.86 268 P P 09 22 55.5 +3.2
MASF Masafi 27.89 271 P P 09 22 56.1 +3.5
UOSS Minazif 27.95 270 P P 09 22 54.2 +1.1
UOSS Minazif 27.95 270 P P 09 22 58.1 +5.0
HATD Hatta, Dubai 28.04 270 P P 09 23 00.2 +6.3
KNMB Chin-men Tao 28.08 91 P P 09 22 53.5 -0.8
KNMB IAmb IAmb 09 23 00.9
comp=Z,106nm,1.0s
ARQ Araqi 28.09 267 P P 09 22 57.8 +3.4
SNR=6.4
QZH Quanzhou 28.14 90 eP P 09 22 57.8 +3.0
QZH S S 09 27 42.0 +1.7
QZH LR LR
comp=Z,6μm,10.9s
QZH LR LR
comp=Z,6μm,10.0s
QZH LR LR
comp=Z,10μm,9.5s
DQM DQM 28.35 259 P P 09 23 02.4 +5.6
SNR=7.3
NAZ Nazwa, Dubai 28.42 271 P P 09 23 05.0 +7.7
FAQ Al Faqa, Dubai 28.54 270 P P 09 23 02.4 +4.0
ALNE Al Ain 28.57 269 P P 09 23 05.8 +7.1
SNR=5.2
GSI Gunungsitoli 28.64 158 P P 09 23 01.2 +1.9
GSI Gunungsitoli 28.64 158 P P 09 23 04.8 +5.6
comp=Z,448nm,1.3s
ASUD Al Ashush, Dub 28.80 270 P P 09 23 08.4 +7.8
SSE Sheshan 29.50 76 P P 09 23 07.3 +0.4
SSE pmax pmax
comp=Z,21nm,1.0s
SSE LR LR
comp=Z,2μm,11.0s
SSE LR LR
comp=Z,9μm,13.5s
SSE LR LR
comp=Z,8μm,18.0s
SSE Sheshan 29.50 76 P P 09 23 07.3 +0.4
SSE IAmb IAmb 09 23 21.3
comp=Z,61nm,0.7s
AB31 Akbulak array 29.56 322 iP P 09 23 08.1 +0.9
ABKAR Akbulak array 29.56 322 P P 09 23 08.7 +1.5
ABKAR IAmb IAmb 09 23 14.1
comp=Z,63nm,0.8s
ABKAR Akbulak array 29.56 322 P P 09 23 08.6 +1.4
ABKAR Akbulak array 29.56 322 ⇑P P 09 23 08.0 +0.8
MNSI Mandailing Nat 29.82 155 P P 09 23 11.2 +1.5
comp=Z,134nm,1.3s
PBSI Pulau Batu 30.14 158 P P 09 23 15.6 +3.0
comp=Z,207nm,1.6s
DL2 Dalian 30.31 61 ⇓P P 09 23 14.3 +0.3
DL2 S S 09 28 16.8 +2.7
DL2 pmax pmax
comp=Z,140nm,1.2s
DL2 pmax pmax
comp=Z,4μm,5.9s
DL2 LR LR
comp=Z,26μm,17.6s
DL2 LR LR
comp=Z,10μm,16.8s
DL2 LR LR
comp=Z,18μm,16.0s
TPUB Ta-pu 30.37 92 P P 09 23 14.1 -0.6
SSLB Suanglung 30.52 91 P P 09 23 15.8 -0.3
MYKOM Kota Tinggi 30.79 146 P P 09 23 18.1 -0.2
BKNI Bangkinang 30.82 152 P P 09 23 19.3 +0.7
BKNI Bangkinang 30.82 152 P P 09 23 20.9 +2.3
comp=Z,217nm,1.1s
TWG Pinlang 30.90 92 P P 09 23 19.1 -0.3
YULB Yu-li 30.93 91 P P 09 23 20.0 +0.4
YULB IAmb IAmb 09 23 27.8
comp=Z,111nm,1.2s
NACB Ninganchiao 30.98 90 P P 09 23 20.8 +0.8
NACB IAmb IAmb 09 23 29.1
comp=Z,81nm,0.8s
AKTO Aktyubinsk 31.26 323 P P 09 23 23.1 +0.9
comp=Z,30nm,0.9s,baz=121,slow=9.2,SNR=43
AKTO Aktyubinsk 31.26 323 P P 09 23 22.6 +0.4
DMTO DMTO 31.50 257 P P 09 23 26.2 +1.6
SNR=5.2
DMTO P P 09 23 26.2 +1.6
SNR=5.2
SISI Saibi 31.61 157 P P 09 23 28.0 +2.5
comp=Z,106nm,1.5s
DOK Doka 31.83 260 P P 09 23 28.7 +1.1
SNR=12
SDSI Sungai Dareh 32.12 153 P P 09 23 34.5 +4.5
comp=Z,31nm,1.1s
SLWR Sila 32.15 271 P P 09 23 32.8 +2.6
RBK Rabkut 32.23 258 P P 09 23 33.5 +2.4
SNR=8.8
SZP Santa 32.28 102 P P 09 23 31.2 -0.3
SNY Shenyang 32.35 56 ⇓P P 09 23 32.0 +0.1
SNY pmax pmax
comp=Z,99nm,1.3s
SNY pmax pmax
comp=Z,5μm,7.3s
SNY LR LR
comp=Z,19μm,20.2s
SNY LR LR
comp=Z,6μm,23.7s
SNY LR LR
comp=Z,21μm,22.2s
HIA Hailar 32.42 41diP P 09 23 33.1 +0.6
HIA pmax pmax
comp=Z,339nm,1.4s
WHFO Wadi Hawf 32.42 259 P P 09 23 33.7 +0.8
SNR=16
ABTO Aybut 33.07 258 P P 09 23 40.1 +1.5
SNR=9.7
JMBI JAMBI 33.69 150 P P 09 23 45.9 +2.1
comp=Z,144nm,1.2s
INCN Inchon 34.06 64 P P 09 23 45.9 -1.0
INCN pmax pmax
comp=Z,295nm,1.7s
INCN Inchon 34.06 64 P P 09 23 45.9 -1.0
SVE Sverdlovsk 34.14 334ciP P 09 23 48.8 +1.5
SVE pmax pmax
comp=Z,158nm,1.3s
CN2 Changchun 34.15 53 eP P 09 23 47.3 -0.3
CN2 pmax pmax
comp=Z,10.0nm,1.2s
TGY Tagaytay City 34.28 107 P P 09 23 50.2 +1.1
comp=Z,235nm,0.3s,baz=122,slow=6.1,SNR=5.5
QRN Al-Qurain 34.48 280 eP 09 23 52.0
UMR Umm Al-Rimmam 34.53 282 eP 09 23 52.2
TJN Taejon 34.59 66diP P 09 23 50.0 -1.5
KSM Kuching 34.61 137 P P 09 23 52.4 +0.5
KSM IAmb IAmb 09 23 59.4
comp=Z,68nm,1.1s
AKT Akhty 34.68 303 eP P 09 23 54.3 +1.9
AKT e 09 25 14.0
AKT eS S 09 29 21.9 -0.5
AKT pmax pmax
comp=Z,326nm,1.2s
ARU Arti 34.70 332 P P 09 23 53.2 +1.0
comp=Z,13nm,0.5s,baz=132,slow=6.1,SNR=49
ARU Arti 34.70 332diP P 09 23 53.1 +1.0
ARU pmax pmax
comp=Z,80nm,0.8s
ARU Arti 34.70 332 P P 09 23 52.6 +0.4
ARU IAmb IAmb 09 24 01.7
comp=Z,76nm,0.8s
ARU Arti 34.70 332 ⇓P P 09 23 53.1 +1.0
RDF Al-Radifah 34.77 281 eP 09 23 54.3
BOD Bodaibo 34.88 25 eP P 09 23 53.9 +0.2
BOD pmax pmax
comp=Z,226nm,1.6s
SOCY Socotra 34.98 249 P P 09 23 53.8 -1.3
SOCY Socotra 34.98 249 P P 09 23 54.7 -0.5
SNR=19
SOCY Socotra 34.98 249 ⇑P P 09 23 54.2 -1.0
KS19 Wonju Array Si 35.04 64 P P 09 23 54.8 -0.6
KS19 IAmb IAmb 09 24 01.4
comp=Z,172nm,1.9s
KSAR Wonju Array Be 35.05 64 P P 09 23 54.6 -0.8
KSAR Wonju Array Be 35.05 64 P P 09 23 54.6 -0.8
SBUM Sibu 35.05 133 P P 09 23 57.1 +1.5
SBUM Sibu 35.05 133 ⇓P P 09 23 57.4 +1.8
KSRS Korea Array 35.08 64 P P 09 23 54.7 -1.0
comp=Z,10nm,0.6s,baz=260,slow=8.4,SNR=41
KSRS PcP PcP 09 26 27.4 0.0
comp=Z,5.9nm,1.0s,baz=263,slow=1.5,SNR=5.6
KSRS ScP ScP 09 30 11.0 -2.2
comp=Z,1.5nm,0.7s,baz=255,slow=4.8,SNR=4.1
MAK Makhachkala 35.12 305 eP P 09 23 52.0 -3.9
MAK eS S 09 29 22.0 -6.7
MAK pmax pmax
comp=Z,248nm,1.4s
MAK MLR MLR
comp=Z,7μm,14.0s
RST Umm Al-Ruwaisa 35.16 282 eP 09 23 58.0
KKM Kota Kinabalu 35.25 124 P P 09 23 59.1 +1.6
KKM IAmb IAmb 09 24 05.2
comp=Z,211nm,1.3s
KKM Kota Kinabalu 35.25 124 ⇓P P 09 23 58.9 +1.4
PMBI Palembang 35.35 149 P P 09 23 59.4 +1.3
LHSI Lahat 35.60 151 P P 09 24 05.4 +5.1
comp=Z,63nm,1.8s
JOW Kunigami 36.24 83 P P 09 24 04.9 -0.9
comp=Z,13nm,0.8s,baz=139,slow=27,SNR=1.7
JOW Kunigami 36.24 83 IAmb IAmb 09 24 11.4
comp=Z,30nm,1.0s
JTU Tsushima 36.26 69 P P 09 24 05.7 -0.1
JTU IAmb IAmb 09 24 07.3
comp=Z,180nm,1.5s
GROC Groznyy 36.39 305 eP P 09 24 08.8 +1.9
GROC e 09 25 31.0
GROC eS S 09 29 51.0 +2.7
GROC eSS SnSn 09 32 18.1 +2.3
GROC pmax pmax
comp=Z,409nm,1.0s
STKI Sintang 36.43 136 P P 09 24 22.0 +15
TPI Tanjungpandan 36.60 144 P P 09 24 21.5 +13
GNI Garni 36.76 300 P P 09 24 13.0 +2.7
comp=Z,53nm,1.0s,baz=172,slow=3.4,SNR=29
GNI Garni 36.76 300 iP P 09 24 13.2 +2.9
GNI pmax pmax
comp=Z,188nm,1.2s
GNI Garni 36.76 300 P P 09 24 10.7 +0.4
GNI IAmb IAmb 09 24 19.5
comp=Z,216nm,1.3s
GNI Garni 36.76 300 P P 09 24 14.7 +4.3
GNI Garni 36.76 300 ⇓P P 09 24 13.3 +2.9
MDJ Mudanjiang 37.23 53 P P 09 24 13.8 -0.2
MDJ pmax pmax
comp=Z,49nm,1.2s
MDJ Mudanjiang 37.23 53 P P 09 24 12.0 -2.0
JSU Suzuyama 37.37 74 P P 09 24 12.9 -2.5
MYLDM Lahad Datu 37.52 122 P P 09 24 17.9 +1.1
MYLDM IAmb IAmb 09 24 24.7
comp=Z,327nm,1.5s
MYLDM Lahad Datu 37.52 122 ⇓P P 09 24 18.8 +2.1
KASI Kota Agung 37.54 151 P P 09 24 15.2 -1.7
JNU Nakatsue 37.57 72 P P 09 24 16.9 -0.2
comp=Z,11nm,1.0s,baz=275,slow=7.3,SNR=5.1
ZEI Tsey 37.70 304 eP P 09 24 16.7 -1.6
ZEI pmax pmax
comp=Z,193nm,1.3s
RAYN Ar Rayn 37.75 272 P P 09 24 18.7 0.0
RAYN pmax pmax
comp=Z,20nm,1.0s
RAYN Ar Rayn 37.75 272 P P 09 24 18.7 0.0
BELG Belogornoye 37.90 320 P P 09 24 20.1 +0.5
comp=Z,51nm,0.7s,baz=307,slow=2.5,SNR=38
GEVA Gevas 37.96 297 P P 09 24 20.1 -0.4
NCK Nalchik 38.02 305⇓eP P 09 24 22.3 +1.5
NCK pmax pmax
comp=Z,139nm,0.8s
MSHR Mys Shultsa 38.02 56deP P 09 24 20.6 -0.1
MSHR pmax pmax
comp=Z,125nm,1.4s
KBZ Khabaz 38.56 306 P P 09 24 26.4 +1.2
comp=Z,28nm,0.8s,baz=100,slow=7.9,SNR=48
KBZ Khabaz 38.56 306deP P 09 24 26.1 +0.9
KBZ pmax pmax
comp=Z,59nm,0.9s
NEY Neytrino 38.62 305diP P 09 24 28.8 +2.8
NEY pmax pmax
comp=Z,53nm,1.2s
ZEA Zeya 38.62 38 eP P 09 24 26.2 +0.6
ZEA pmax pmax
comp=N,40nm,0.9s
ZEA pmax pmax
comp=E,40nm,0.9s
ZEA pmax pmax
comp=Z,60nm,1.0s
ZEA MLR MLR
comp=E,6μm,12.0s
ZEA MLR MLR
comp=N,6μm,13.0s
ZEA MLR MLR
comp=Z,9μm,13.0s
GOF Gofitskoye 38.67 308⇑eP P 09 24 27.3 +1.1
GOF eS S 09 30 26.1 +3.2
GOF pmax pmax
comp=Z,160nm,0.9s
GOF smax smax
comp=N,187nm,1.6s
GOF smax smax
comp=E,118nm,1.8s
KVAR Kislovodsk Arr 38.74 306 P P 09 24 29.1 +2.2
comp=E,20nm,0.8s,baz=90,slow=20,SNR=3.3
KIV Kislovodsk 38.74 306 eP P 09 24 28.2 +1.3
KIV eS S 09 30 27.2 +3.0
KIV pmax pmax
comp=Z,2μm,4.3s
KIV pmax pmax
comp=Z,318nm,1.1s
KIV Kislovodsk 38.74 306 P P 09 24 27.9 +1.0
KIV Kislovodsk 38.74 306 P P 09 24 28.8 +1.9
KIV Kislovodsk 38.74 306 ⇓P P 09 24 28.4 +1.4
USA0B Ussuriysk Arra 38.85 54 P P 09 24 27.5 -0.2
USA0B pmax pmax
comp=Z,138nm,1.6s
USA0B Ussuriysk Arra 38.85 54 P P 09 24 27.4 -0.2
USRK Ussuriysk Ar. 38.85 54 P P 09 24 27.6 -0.1
comp=Z,16nm,0.6s,baz=263,slow=7.5,SNR=46
USRK Ussuriysk Ar. 38.85 54 P P 09 24 27.1 -0.6
MTKI Muara Teweh, K 39.35 133 P P 09 24 36.8 +4.6
KLR Kul'dur 39.73 46 P P 09 24 35.0 0.0
comp=Z,155nm,1.1s,baz=263,slow=8.5,SNR=174
KLR Kul'dur 39.73 46diP P 09 24 34.8 -0.2
KLR pmax pmax
comp=Z,275nm,1.3s
MARD Mardin 39.76 295 P P 09 24 34.2 -1.3
KIRV Kirov 39.93 330 P P 09 24 37.5 +1.1
comp=Z,83nm,0.8s,baz=124,slow=3.9,SNR=48
KIRV Kirov 39.93 330diP P 09 24 37.4 +0.9
KOPT Kop Dagi 40.01 299 P P 09 24 39.4 +1.6
JMN Monobe 40.02 70 P P 09 24 37.5 -0.2
JMN Monobe 40.02 70 ⇓P P 09 24 38.1 +0.5
VRH Novokhopyorsk 40.94 317 eP P 09 24 45.1 +0.1
VRH pmax pmax
comp=Z,330nm,1.4s
NRIK Noril'sk 41.02 0 P P 09 24 46.2 +0.8
comp=Z,65nm,0.9s,baz=179,slow=6.9,SNR=98
NRIK Noril'sk 41.02 0deP P 09 24 46.3 +0.8
NRIK pmax pmax
comp=Z,138nm,1.1s
NRIK Noril'sk 41.02 0 P P 09 24 46.2 +0.8
NRIK IAmb IAmb 09 24 50.4
comp=Z,138nm,1.1s
JWT Wachi 41.14 68 P P 09 24 46.2 -0.6
JWT IAmb IAmb 09 24 48.8
comp=Z,188nm,1.3s
JWT Wachi 41.14 68 ⇓P P 09 24 47.0 +0.1
BBKI Banjar Baru 41.26 136 P P 09 24 50.6 +2.6
comp=Z,3μmcomp=Z,72nm,1.5s
SMRI Semarang 41.69 144 P P 09 24 50.7 -0.7
SMRI Semarang 41.69 144 P P 09 24 53.4 +1.9
comp=Z,436nm,1.4s
DAV Davao City (W) 41.90 113 P P 09 24 52.1 -1.2
TOLI2 Tolitoli 41.93 124 P P 09 24 53.5 0.0
KBKI Kotabaru 41.97 134 P P 09 24 56.5 +2.7
comp=Z,133nm,1.5s
TEY Ternei 42.23 53⇓eP P 09 24 54.9 -0.7
TEY pmax pmax
comp=E,20nm,1.8s
TEY pmax pmax
comp=Z,40nm,1.8s
VORD Divnogorie 42.36 316 eP P 09 24 57.0 +0.4
VORD pmax pmax
comp=Z,200nm,1.2s
XMIS Christmas Isla 42.49 153 P P 09 24 57.6 -0.4
XMIS IAmb IAmb 09 25 03.5
comp=Z,244nm,1.3s
VSR Storozhevoye 42.50 316 eP P 09 24 57.2 -0.5
VSR pmax pmax
comp=Z,190nm,1.3s
VORR Voronezh 42.58 317 eP P 09 24 58.0 -0.4
VORR pmax pmax
comp=Z,350nm,1.4s
ANN Anapa 42.58 306 eP P 09 24 56.4 -2.1
ANN e*PP pP 09 24 59.7 -3.2
ANN e 09 26 34.6
ANN e 09 26 50.0
ANN eS S 09 31 19.5 -1.7
ANN eSS SS 09 34 31.5 +0.6
ANN pmax pmax
comp=Z,77nm,0.9s
ANN MLR MLR
comp=E,3μm,15.0s
ANN MLR MLR
comp=Z,6μm,16.0s
ANN MLR MLR
comp=N,8μm,15.0s
JGF Kuroka 42.71 67 P P 09 24 58.1 -1.7
JGF Kuroka 42.71 67 ⇓P P 09 24 58.4 -1.4
LPSR Galich'ya Gora 42.98 318 eP P 09 25 02.1 +0.5
LPSR pmax pmax
comp=Z,160nm,0.9s
GRNR Gornyy 43.02 45⇓iP P 09 25 02.0 0.0
GRNR eS S 09 31 30.8 +3.2
GRNR pmax pmax
comp=E,70nm,1.0s
GRNR pmax pmax
comp=Z,130nm,0.7s
GRNR smax smax
comp=N,4.0nm,0.9s
GRNR MLR MLR
comp=E,4μm,10.0s
GRNR MLR MLR
comp=N,2μm,18.0s
GRNR MLR MLR
comp=Z,6μm,12.0s
TOKA Tokat 43.09 300 P P 09 25 02.9 +0.1
MRSI Marisa 43.20 124 P P 09 25 05.2 +1.4
comp=Z,3μmcomp=Z,95nm,1.2s
JSD Sado 43.27 63 P P 09 25 02.6 -1.6
JSD IAmb IAmb 09 25 04.7
comp=Z,137nm,1.4s
JSD Sado 43.27 63 ⇑P P 09 25 02.9 -1.3
MJB9 Matsu-Tunnel 43.32 66 P P 09 25 04.1 -0.5
MJB9 IAmb IAmb 09 25 27.8
comp=Z,119nm,0.6s
MAJO Matsushiro 43.32 66deP P 09 25 04.2 -0.5
MAJO pmax pmax
comp=Z,101nm,1.3s
MAJO Matsushiro 43.32 66 P P 09 25 03.7 -0.9
MAT Matsushiro 43.32 66 P P 09 25 03.8 -0.9
MAT S S 09 31 33.1 +0.7
MJAR Matsushiro Arr 43.32 66 P P 09 25 04.3 -0.3
comp=Z,38nm,1.1s,baz=279,slow=9.6,SNR=65
MJAR ScP ScP 09 30 42.3 -2.7
comp=Z,5.0nm,1.1s,baz=292,slow=4.1,SNR=6.0
MJAR Matsushiro Arr 43.32 66 P P 09 25 04.0 -0.6
YAK Yakutsk 43.66 27 P P 09 25 06.4 -0.5
comp=Z,9.9nm,0.5s,baz=241,slow=4.6,SNR=18
YAK Yakutsk 43.66 27 P P 09 25 06.4 -0.5
YAK IAmb IAmb 09 25 08.1
comp=Z,103nm,1.2s
APSI Ampana 43.94 126 P P 09 25 11.3 +1.5
comp=Z,46nm,0.9s
TTSI Tana Toraja 44.18 130 P P 09 25 13.5 +1.8
comp=Z,3μmcomp=Z,185nm,1.4s
ABJI Asem Bagus 44.37 140 P P 09 25 14.9 +1.8
comp=Z,194nm,1.6s
MMAI Mount Meron Ar 44.50 289 P P 09 25 16.5 +2.3
comp=Z,16nm,0.9s
MMAI PcP PP 09 26 59.7 +1.7
comp=Z,14nm,0.7s,baz=50,slow=4.4,SNR=6.0
MMAI ScP ScP 09 30 48.5 -1.4
comp=Z,2.7nm,0.9s,baz=62,slow=3.9,SNR=2.4
MOS Moscow 44.58 322 eP P 09 25 11.4 -3.0
MOS e 09 27 01.1
MOS eS S 09 31 45.1 -5.0
MOS pmax pmax
comp=Z,900nm,2.4s
MOS pmax pmax
comp=Z,238nm,1.7s
GHAJ Ghor Haditha 44.63 287 P P 09 25 17.8 +2.6
GHAJ IAmb IAmb 09 25 34.5
comp=Z,156nm,1.2s
KMSI Cibinong 44.65 122 P P 09 25 19.6 +4.1
comp=Z,396nm,1.0s
ATD Arta Tunnel 44.72 257 P P 09 25 18.7 +2.6
comp=Z,14nm,0.8s,baz=24,slow=5.9,SNR=6.2
SPSI Sidrap Palu 44.82 131 P P 09 25 18.5 +1.7
comp=Z,122nm,1.5s
LUWI Luwuk 44.84 125 P P 09 25 16.1 -0.9
LUWI IAmb IAmb 09 25 37.8
comp=Z,130nm,1.1s
LUWI Luwuk 44.84 125 P P 09 25 18.3 +1.3
comp=Z,5μmcomp=Z,178nm,1.3s
JAGI Jajag, Banyuwa 44.87 141 P P 09 25 14.3 -2.9
JYT Yasato 44.95 66 P P 09 25 16.3 -1.3
JYT IAmb IAmb 09 25 16.8
comp=Z,124nm,1.3s
OBN Obninsk 44.99 321 P P 09 25 18.1 +0.4
comp=Z,17nm,0.8s,baz=21,slow=3.2,SNR=36
OBN Obninsk 44.99 321diP P 09 25 17.9 +0.2
OBN e*PP pP 09 25 21.7 -0.4
OBN e 09 27.3
OBN e 09 26 59.3
OBN iPPP PPP 09 27 44.2
OBN pmax pmax
comp=Z,231nm,1.3s
OBN Obninsk 44.99 321 P P 09 25 18.1 +0.4
SRBI Singaraja 45.16 139 P P 09 25 24.1 +4.6
comp=Z,380nm,1.7s
BR131 Keskin Array S 45.28 299 P P 09 25 20.2 -0.2
BR131 pmax pmax
comp=Z,100nm,1.5s
BR131 Keskin Array S 45.28 299 P P 09 25 20.2 -0.2
BR131 IAmb IAmb 09 25 31.2
comp=Z,100nm,1.4s
BR131 Keskin Array S 45.28 299 P P 09 25 21.6 +1.1
SNR=19
BRTR Keskin Array B 45.28 299 P P 09 25 21.9 +1.4
comp=Z,6.7nm,0.7s,baz=108,slow=6.7,SNR=20
BRTR PcP PcP 09 27 00.7 +0.4
comp=Z,9.8nm,0.9s,baz=102,slow=5.2,SNR=4.2
BRTR Keskin Array B 45.28 299ceP P 09 25 21.2 +0.7
BRTR pmax pmax
comp=Z,7.0nm,0.7s
BRTR Keskin Array B 45.28 299 P P 09 25 20.8 +0.3
JMM Marumori 45.28 64 P P 09 25 19.1 -1.1
JMM Marumori 45.28 64 ⇑P P 09 25 19.5 -0.8
BNSI Bone 45.37 131 P P 09 25 22.0 +0.8
comp=Z,52nm,1.4s
KLMR Klimovskoe 45.42 329 eP P 09 25 18.6 -2.4
KLMR e 09 26 59.4
KLMR pmax pmax
comp=Z,200nm,1.4s
KLMR Klimovskoe 45.42 329 eP P 09 25 18.7 -2.3
KLMR AMP 09 25 22.9
comp=Z,200nm,1.4s
KLMR ePcP PcP 09 26 59.4 -0.7
EIL Elat 45.46 285 ⇓P P 09 25 23.8 +1.9
KAPI Kappang 45.59 132 P P 09 25 23.0 +0.1
comp=Z,90nm,1.2s,baz=266,slow=11,SNR=5.7
KAPI Kappang 45.59 132 P P 09 25 22.6 -0.3
KAPI pmax pmax
comp=Z,95nm,1.2s
KAPI Kappang 45.59 132 P P 09 25 22.6 -0.3
KAPI IAmb IAmb 09 25 28.6
comp=Z,95nm,1.2s
JEW Eniwo 45.61 57 P P 09 25 22.2 -0.5
ANTO Ankara 45.93 299 P P 09 25 25.3 -0.2
ANTO pmax pmax
comp=Z,44nm,1.1s
ANTO Ankara 45.93 299 P P 09 25 25.3 -0.2
CSS Mathiatis 45.94 292 P P 09 25 26.2 +0.6
CSS Mathiatis 45.94 292 ⇓P P 09 25 27.1 +1.5
BR231 Keskin MP Arra 45.94 299 P P 09 25 26.7 +1.0
ASAJ Asahikawa 46.45 55 P P 09 25 28.9 -0.5
comp=Z,26nm,0.7s,baz=254,slow=8.8,SNR=13
JKA Kamikawa-asahi 46.45 55 IAmb IAmb 09 25 39.6
comp=Z,159nm,1.4s
YSS Yuzh-Sakhalins 46.66 51diP P 09 25 30.6 -0.4
YSS pmax pmax
comp=Z,292nm,1.3s
YSS Yuzh-Sakhalins 46.66 51 P P 09 25 29.4 -1.5

YSS Yuzh-Sakhalins 46.66 51 ⇓P P 09 25 30.9 -0.1
TWSI Taliwang, Sumb 46.66 138 P P 09 25 33.8 +2.5
comp=Z,25nm,1.3s
ERM Erimo 46.88 58 *d* iP P 09 25 32.7 -0.1
ERM pmax pmax
comp=Z,44nm,1.0s
ERM Erimo 46.88 58 P P 09 25 32.0 -0.8
ERM lAmb lAmb 09 25 51.7
comp=Z,140nm,1.4s
JEM Erimo 46.88 58 P P 09 25 28.9 -3.9
JEM lAmb lAmb 09 25 51.7
comp=Z,141nm,1.4s
TYV Tymovskoe 46.94 46 *e*P P 09 25 33.5 +0.4
TYV *e*S S 09 32 27.2 +3.0
TYV pmax pmax
comp=Z,111nm,1.3s
TYV smax smax
comp=N,3µm,10.4s
TYV MLR MLR
comp=Z,14µm,13.0s
TNTI Ternate 47.10 119 P P 09 25 33.7 -1.1
TNTI Ternate 47.10 119 P P 09 25 39.5 +4.6
comp=Z,94nm,1.2s
MDUB Mudurnu 47.12 300 P P 09 25 34.2 -0.6
PLAI Plampang 47.26 137 P P 09 25 39.0 +2.9
comp=Z,74nm,1.4s
ISP Isparta 47.86 297 P P 09 25 40.1 -0.5
ISP pmax pmax
comp=Z,49nm,1.2s
ISP Isparta 47.86 297 P P 09 25 40.1 -0.5
ISP lAmb lAmb 09 25 46.7
comp=Z,49nm,1.2s
SANI Sanana 47.88 123 P P 09 25 40.6 -0.3
comp=Z,36nm,1.2s
AKASG Malin Array Be 48.62 314 P P 09 25 46.0 -0.1
comp=Z,20nm,0.8s,baz=76,slow=7.2,SNR=106
AKASG ScP ScP 09 31 05.7 -1.0
comp=Z,3.8nm,0.9s,baz=78,slow=4.1,SNR=4.4
AKASG S S 09 32 45.5 -2.6
comp=Z,2.2nm,0.8s,baz=91,slow=13,SNR=6.8
AKASG Malin Array Be 48.62 314 P P 09 25 46.1 -0.1
AKBB Malin Array Si 48.62 314 *d* iP P 09 25 45.4 -0.8
AKBB Malin Array Si 48.62 314 lAmb lAmb 09 25 59.9
comp=Z,52nm,0.8s
YUK Yuzh-Kuril'sk 48.80 55 *de*P P 09 25 46.8 -0.9
WBSI Waikabubak, Su 48.88 136 P P 09 25 47.7 -0.9
comp=Z,303nm,1.2s
TIXI Tiksi 48.94 16 P P 09 25 47.8 -0.5
comp=Z,35nm,0.6s,baz=222,slow=4.4,SNR=74
TIXI S S 09 32 47.5 -4.5
comp=Z,2.8nm,0.7s,baz=344,slow=20,SNR=10
TIXI Tiksi 48.94 16 P P 09 25 47.9 -0.5
TIXI pmax pmax
comp=Z,47nm,0.7s
TIXI Tiksi 48.94 16 P P 09 25 47.9 -0.5
TIXI lAmb lAmb 09 25 52.0
comp=Z,47nm,0.7s
TIXI Tiksi 48.94 16 ⇓P P 09 25 47.8 -0.5
TIRR Tirgusor 49.01 306 P P 09 25 49.3 0.0
TIRR Tirgusor 49.01 306 P P 09 25 49.3 0.0
TIRR lAmb lAmb 09 25 54.7
comp=Z,112nm,1.0s
TIRR Tirgusor 49.01 306 ⇓P P 09 25 49.6 +0.4
MANT Manisa 49.32 298 P P 09 25 51.9 -0.2
MANT lAmb lAmb 09 25 58.1
comp=Z,197nm,1.5s
MNK Minsk 49.81 319 *e*P P 09 25 55.0 -0.2
MNK *e* 09 27 50.0
MNK *e*S S 09 33 03.0 -1.7
MNK MLR MLR
comp=Z,8µm,12.0s
MNK Minsk 49.81 319 *i* P P 09 25 54.1 -1.1
comp=E,21nm,1.2s
MNK *i* P P 09 25 54.1 -1.1
comp=N,18nm,1.1s
MNK *i* P P 09 25 54.1 -1.1
comp=Z,154nm,1.0s
MNK *i* PP PP 09 27 49.0 -0.7
MNK *i* PPP PPP 09 28 42.6
MNK *i* S S 09 33 03.0 -1.7
MNK *i* SS SS 09 36 39.0 +2.1
MNK *i* SSS SSS 09 38 00.9
MNK *i* LQ LQ 09 43 25.2
MNK *i* LR LR 09 47 13.0
MNK *i* LRM MLR 09 50 32.4
comp=E,482nm,15.7s
MNK *i* LRM MLR 09 50 32.7
comp=N,3µm,15.7s
MNK *i* LRM MLR 09 50 36.8
comp=Z,4µm,14.7s
MMRI Maumere 49.92 132 P P 09 25 54.7 -1.8
MMRI Maumere 49.92 132 P P 09 25 58.8 +2.3
comp=Z,199nm,1.2s
LVZ Lovozero 50.23 337 ⇓*i*P P 09 25 57.7 -0.7
LVZ pmax pmax
comp=Z,73nm,1.7s
LVZ Lovozero 50.23 337 P P 09 25 57.6 -0.7
LVZ lAmb lAmb 09 26 11.3
comp=Z,52nm,0.9s
LVZ Lovozero 50.23 337 ⇑P P 09 25 58.7 +0.4
NACGM Naroch 50.49 319 *i* P P 09 26 01.1 +0.8
NACGM *i* P P 09 26 01.1 +0.8
NACGM *i* P P 09 26 01.1 +0.8
NACGM *i* PcP PcP 09 27 19.9 +1.5
NACGM *i* PP PP 09 27 56.6 +0.7
NACGM *i* PPP PPP 09 28 51.7
NACGM *i* S S 09 33 14.3 +0.2
NACGM *i* ScS ScS 09 34 33.1 -78
NACGM *i* SS SS 09 36 20.2 -28
NACGM *i* SSS SSS 09 38 44.8
NACGM *i* LQ LQ 09 43 40.8
NACGM *i* LR LR 09 47 44.1
APA Apatity 50.54 336 ⇓*i*P P 09 25 59.8 -0.7
APA pmax pmax
comp=Z,13nm,1.2s
IDID Didziasalis 50.56 320 *e*P P 09 26 02.0 +1.2
KARP Karpathos 50.85 294 ⇑P P 09 26 03.9 +0.4
IIGN Ignalina 50.85 320 *e*P P 09 26 04.6 +1.5
ISAL Salakas 50.93 320 *e*P P 09 26 04.8 +1.1
VSU Vasula 50.98 324 *e*P P 09 26 04.3 +0.3
VSU Vasula 50.98 324 ⇓P P 09 26 04.3 +0.3
ALN Alexandroupoli 50.98 301 P P 09 26 04.4 +0.1
ALN pmax pmax
comp=Z,161nm,1.3s
ALN Alexandroupoli 50.98 301 P P 09 26 04.4 +0.1
ALN lAmb lAmb 09 26 10.7
comp=Z,161nm,1.3s
ALN Alexandroupoli 50.98 301 ⇓P P 09 26 05.3 +0.9
SWI Sorong 51.16 117 P P 09 26 08.8 +2.9
comp=Z,89nm,1.4s
BURAR Bucovina Array 51.16 310 P P 09 26 06.0 +0.3
BUR08 Bucovina Ar. S 51.17 310 P P 09 26 06.3 +0.5
RDO Rodhopi 51.34 302 ⇓P P 09 26 07.9 +0.9
FIA1 FINESS Array S 51.81 328 lAmb lAmb 09 26 12.0
comp=Z,138nm,1.5s
FINES FINESS Array B 51.81 328 P P 09 26 10.8 +0.6
comp=Z,22nm,0.7s,baz=107,slow=10,SNR=33
FINES FINESS Array B 51.81 328 P P 09 26 10.2 0.0
LVV L'vov 51.92 313 ⇑*i*P P 09 26 11.7 +0.5
LVV *e*S S 09 33 31.4 -2.7
LVV pmax pmax
comp=Z,200nm,1.4s
LVV MLR MLR
comp=N,2µm,17.0s
LVV MLR MLR
comp=E,2µm,17.0s
LVV MLR MLR
comp=Z,4µm,18.0s
BATI Baumata 52.02 132 P P 09 26 14.1 +1.8
comp=Z,56nm,1.3s
SANT Santorini 52.07 296 P P 09 26 11.5 -1.1
SANT lAmb lAmb 09 26 16.1
comp=Z,86nm,0.7s
SANT Santorini 52.07 296 ⇓P P 09 26 12.2 -0.3
SOEI Soe 52.08 131 P P 09 26 11.8 -1.1
SOEI Soe 52.08 131 ⇓P P 09 26 11.7 -1.3
SOEI Soe 52.08 131 P P 09 26 10.7 -2.2
comp=Z,261nm,0.8s
PABE Paberze 52.15 320 *e*P P 09 26 13.3 +0.5
BNDI Bandanaira 52.44 122 P P 09 26 16.6 +1.1
comp=Z,227nm,1.2s
SUW Suwalki 52.52 318 *e*P P 09 26 15.6 0.0
SUW Suwalki 52.52 318 *e*P P 09 26 15.8 +0.3
SUW Suwalki 52.52 318 ⇓P P 09 26 15.5 0.0

MTSE Matsula 52.53 324 *e*P P 09 26 14.3 -1.3
MA2 Magadan 52.63 35 P P 09 26 15.7 -0.7
comp=Z,28nm,0.6s,baz=280,slow=7.1,SNR=14
MA2 Magadan 52.63 35 P P 09 26 15.2 -1.2
MA2 pmax pmax
comp=Z,84nm,1.1s
MA2 Magadan 52.63 35 P P 09 26 15.2 -1.2
MA2 lAmb lAmb 09 26 17.3
comp=Z,84nm,1.1s
IDI Anoyia 52.72 294 P P 09 26 17.0 -0.5
IDI Anoyia 52.72 294 ⇓P P 09 26 17.8 +0.3
VTS Vitosha 52.89 304 lAmb lAmb 09 26 24.6
comp=Z,112nm,1.3s
VTS Vitosha 52.89 304 ⇓P P 09 26 19.9 +1.2
UZH Uzhgorod 53.09 311 ⇓*i*P P 09 26 19.3 -0.6
UZH *i* 09 26 21.9
UZH *i* 09 26 26.2
FAKI Fak Fak 53.20 118 P P 09 26 20.1 -1.1
FAKI Fak Fak 53.20 118 ⇓P P 09 26 20.8 -0.4
FAKI Fak Fak 53.20 118 P P 09 26 21.2 0.0
comp=Z,158nm,1.5s
SLIT Slitere, Latvi 53.23 323 *e*P P 09 26 21.3 +0.6
PBUR Paburge 53.33 320 *e*P P 09 26 22.2 +0.7
KEV Kevo 53.49 338 P P 09 26 22.1 -0.4
KEV pmax pmax
comp=Z,59nm,1.1s
KEV Kevo 53.49 338 P P 09 26 22.1 -0.4
KEV lAmb lAmb 09 26 40.1
comp=Z,59nm,1.1s
KEV Kevo 53.49 338 ⇑P P 09 26 23.1 +0.6
VAY Valandovo 53.54 302 *i* P P 09 26 23.8 +0.5
CRVS Cervenica-Dubn 53.62 312 *e*P P 09 26 24.9 +1.0
CRVS pmax pmax
comp=Z,85nm,1.4s
CRVS Cervenica-Dubn 53.62 312 *e*P P 09 26 24.9 +1.0
LIT Litokhoron 53.77 301 lAmb lAmb 09 26 31.2
comp=Z,104nm,1.1s
LIT Litokhoron 53.77 301 ⇓P P 09 26 25.1 0.0
SEY Seymchan 53.85 31 P P 09 26 24.7 -0.6
comp=Z,26nm,0.9s,baz=267,slow=8.8,SNR=25
SEY Seymchan 53.85 31 ⇓*i*P P 09 26 24.8 -0.5
ARA0 ARCESS Array S 53.93 337 *e*P P 09 26 26.4 +0.7
ARCES ARCESS Array B 53.93 337 P P 09 26 26.3 +0.5
comp=Z,32nm,1.1s,baz=103,slow=7.4,SNR=67
ARCES ARCESS Array B 53.93 337 P P 09 26 26.4 +0.6
ARCES pmax pmax
comp=Z,34nm,0.8s
ARCES ARCESS Array B 53.93 337 P P 09 26 26.4 +0.6
BEL Belsk 53.95 315 *e*P P 09 26 27.0 +0.8
AGG Agios Georgios 54.07 299 lAmb lAmb 09 26 32.6
comp=Z,108nm,0.9s
AGG Agios Georgios 54.07 299 ⇓P P 09 26 26.9 -0.4
SKO Skopje 54.29 303 *i* P P 09 26 29.2 +0.3
KECS Kecovo 54.29 311 *e*P P 09 26 29.3 +0.6
KECS pmax pmax
comp=Z,12nm,1.0s
KECS Kecovo 54.29 311 *e*P P 09 26 29.3 +0.6
NIE Niedzica 54.36 312 *e*P P 09 26 31.9 +2.6
FNA Florina 54.51 302 P P 09 26 29.8 -0.7
FNA pmax pmax
comp=Z,50nm,1.0s
FNA Florina 54.51 302 P P 09 26 29.8 -0.7
FNA lAmb lAmb 09 26 42.5
comp=Z,50nm,1.0s
FNA Florina 54.51 302 ⇑P P 09 26 30.4 -0.2
KTK1 Kautokeino 54.58 337 *e*P P 09 26 29.3 -1.2
AAL Aland 54.61 326 *e*P P 09 26 30.6 -0.2
OJC Ojcow 54.63 313 *e*P P 09 26 33.0 +1.7
OJC Ojcow 54.63 313 P P 09 26 31.4 +0.2
OJC pmax pmax
comp=Z,43nm,0.8s
OJC Ojcow 54.63 313 P P 09 26 31.4 +0.2
OJC lAmb lAmb 09 26 44.8
comp=Z,43nm,0.8s
OJC Ojcow 54.63 313 ⇓P P 09 26 31.4 +0.2
ITM Ithomi 54.71 297 lAmb lAmb 09 26 48.5
comp=Z,47nm,0.8s
ITM Ithomi 54.71 297 ⇑P P 09 26 31.4 -0.5
PSZ Piszkesteto 54.73 310 lAmb lAmb 09 26 37.4
comp=Z,74nm,1.3s
PSZ Piszkesteto 54.73 310 ⇓P P 09 26 32.6 +0.6
HAMF Hammerfest 54.83 339 *e*P P 09 26 33.2 +1.0
OHR Ohrid 54.89 302 *i* P P 09 26 34.0 +0.7
LANS Liptovska Anna 54.92 312 *e*P P 09 26 34.7 +1.4
LANS pmax pmax
comp=Z,12nm,1.2s
LANS Liptovska Anna 54.92 312 *e*P P 09 26 34.7 +1.4
FRGS Fruska Gora 55.06 307 ⇓*i*P P 09 26 34.9 +0.5
DIVS Divibare 55.06 306 ⇓*i*P P 09 26 35.0 +0.5
DIVS Divibare 55.06 306 ⇓P P 09 26 35.0 +0.5
LODK Lodwar 55.21 253 P P 09 26 35.2 -0.7
LODK Lodwar 55.21 253 P P 09 26 37.0 +1.1
SNR=10
TEKS Tekeris 55.34 306 ⇓*i*P P 09 26 36.5 +0.1
VYHS Vyhne 55.39 311 *e*P P 09 26 37.5 +0.8
VYHS pmax pmax
comp=Z,55nm,1.4s
VYHS Vyhne 55.39 311 *e*P P 09 26 37.5 +0.8
SKR Severo-Kuril's 55.46 46 *e*P P 09 26 49.1 +12
SKR pmax pmax
comp=Z,42nm,1.2s
SKR MLR MLR
comp=Z,5µm,16.0s
SKR MLR MLR
comp=Z,5µm,17.0s
BBLS Lazići 55.51 306 ⇓*i*P P 09 26 38.6 +0.9
TIR Tirane 55.55 303 P P 09 26 37.2 -0.8
TIR pmax pmax
comp=Z,101nm,1.0s
TIR Tirane 55.55 303 P P 09 26 37.2 -0.8
TIR lAmb lAmb 09 26 51.6
comp=Z,101nm,1.0s
JETT Jettan, Norway 55.68 337 *e*P P 09 26 40.3 +1.8
OKC Ostrava-Krasne 55.72 313 *e*P P 09 26 40.1 +1.1
OKC *e* 09 26 43.3
OKC Ostrava-Krasne 55.72 313 *e*P P 09 26 40.1 +1.1
OKC *e*pP pP 09 26 43.3 -0.3
MORH Mrgy, Hungar 55.75 309 ⇓*i*P P 09 26 39.8 +0.5
UPP Uppsala 55.78 325 *e*P P 09 26 39.2 0.0
SRO Srobarova 55.80 310 *e*P P 09 26 40.8 +1.2
SRO Srobarova 55.80 310 *e*P P 09 26 40.8 +1.2
HAPS Han Pijesak,BI 55.81 306 *e*P P 09 26 39.7 -0.2
PDG Podgorica 55.83 304 ⇓*i*P P 09 26 39.7 -0.2
PDG Podgorica 55.83 304 P P 09 26 38.5 -1.4
PDG lAmb lAmb 09 26 56.9
comp=Z,80nm,1.0s
KEK Kerkira 55.88 301 ⇑P P 09 26 39.8 -0.6
DRME Dracevica, Mon 55.92 304 ⇓*i*P P 09 26 40.5 -0.1
UPM Unac-Piva 55.97 305 *e*P P 09 26 41.9 +0.7
GKP Gorka Klasztor 56.06 317 *e*P P 09 26 41.8 +0.5
GKP Gorka Klasztor 56.06 317 *e*P P 09 26 41.9 +0.5
MORC Moravsky Berou 56.12 313 *e*P P 09 26 42.6 +0.6
MORC Moravsky Berou 56.12 313 P P 09 26 42.3 +0.3
MORC pmax pmax
comp=Z,44nm,0.8s
MORC Moravsky Berou 56.12 313 P P 09 26 42.3 +0.3
MORC lAmb lAmb 09 26 46.8
comp=Z,44nm,0.8s
MORC Moravsky Berou 56.12 313 ⇓P P 09 26 42.6 +0.6
MORC Moravsky Berou 56.12 313 ⇓P P 09 26 42.6 +0.6
JAVC Velka Javorina 56.12 312 *e*P P 09 26 43.4 +1.4
KMBO Kilima Mbogo 56.16 247 P P 09 26 44.0 +1.0
comp=Z,30nm,1.0s,baz=50,slow=11,SNR=17
KMBO Kilima Mbogo 56.16 247 P P 09 26 44.0 +1.0
TRO Tromso 56.20 337 *e*P P 09 26 42.5 +0.4
KIBK Kibwezi 56.23 246 P P 09 26 43.8 +0.5
HOPEN Hopen 56.26 346 *e*P P 09 26 45.1 +2.7
BRY Bratogost 56.28 305 ⇓*i*P P 09 26 43.5 +0.2
PETK Petropavlovsk- 56.29 43 P P 09 26 42.5 -0.6
comp=Z,12nm,0.4s,baz=41,slow=24,SNR=1.8
SMOL Smolenice 56.32 311 *e*P P 09 26 44.1 +0.8
SMOL pmax pmax
comp=Z,13nm,1.1s
SMOL Smolenice 56.32 311 *e*P P 09 26 44.1 +0.8
HCY Herceg Novi 56.38 304 ⇓*i*P P 09 26 43.5 -0.4
MODS Modra-Piesok 56.43 311 *e*P P 09 26 43.9 -0.3
MODS pmax pmax
comp=Z,41nm,1.2s
MODS Modra-Piesok 56.43 311 *e*P P 09 26 43.9 -0.3
TREB Trebinje 56.45 304 *e*P P 09 26 44.3 -0.1
ZST Bratislava 56.57 311 *e*P P 09 26 45.7 +0.6
ZST pmax pmax
comp=Z,65nm,1.0s

ZST Bratislava 56.57 311 *e*P P 09 26 45.6 +0.5
KRLC Kraliky 56.58 313 *e*P P 09 26 46.0 +0.7
KRLC Kraliky 56.58 313 *e*P P 09 26 46.0 +0.7
BLEU Blekinge 56.75 321 *i* P P 09 26 46.0 -0.3
VRAC Vranov 56.78 312 *e*P P 09 26 47.5 +0.9
KSP Ksiaz 56.82 314 *e*P P 09 26 47.7 +0.8
KSP Ksiaz 56.82 314 ⇓P P 09 26 47.5 +0.6
SCTE Santa Cesarea 56.82 301 P P 09 26 46.1 -0.9
SCTE lAmb lAmb 09 26 53.6
comp=Z,75nm,0.7s
DPC Dobruska-Polom 56.85 314 *e*P P 09 26 48.0 +0.9
DPC Dobruska-Polom 56.85 314 *e*P P 09 26 48.0 +0.9
OSTC Ostas 56.90 314 *e*P P 09 26 48.2 +0.7
OSTC *e*pP pP 09 26 51.8 -0.2
KRUC Moravsky 56.94 312 *e*P P 09 26 48.4 +0.7
KRUC *e*PP PP 09 28 55.5 +1.5
BLY Banja Luka 56.97 307 ⇓*i*P P 09 26 48.0 0.0
BLY Banja Luka 56.97 307 ⇓P P 09 26 48.6 +0.6
GIRL Giralia 56.97 150 P P 09 26 47.7 -0.5
GIRL Giralia 56.97 150 ⇑P P 09 26 50.2 +2.0
CHVC Chvalec 56.99 314 *e*P P 09 26 49.1 +0.9
BEHE Becsehely 57.00 309 ⇓*i*P P 09 26 50.8 +2.6
UPC Upice 57.03 314 *e*P P 09 26 49.5 +1.1
UPC *e* 09 26 52.9
UPC Upice 57.03 314 *e*P P 09 26 49.5 +1.1
UPC *e*pP pP 09 26 52.9 0.0
MGRS Mrkonjic Grad 57.09 307 ⇑*i*P P 09 26 50.0 +1.1
MRAK Mrakovica 57.12 307 ⇓*i*P P 09 26 49.5 +0.3
BSD Bornholm Skovb 57.32 319 *e*P P 09 26 50.4 +0.1
BSD Bornholm Skovb 57.32 319 *i* P P 09 26 49.6 -0.6
BSD lAmb lAmb 09 26 50.8
comp=Z,20nm,0.8s
BSD Bornholm Skovb 57.32 319 *i* P P 09 26 49.6 -0.6
BSD pmax pmax
comp=Z,20nm,0.8s
BSD Bornholm Skovb 57.32 319 ⇓P P 09 26 49.7 -0.6
CONA Conrad Observa 57.42 311 *i* P P 09 26 51.9 +0.6
comp=Z,133nm,1.6s,SNR=72
TREC Trest 57.50 312 *e*P P 09 26 52.5 +0.7
TREC Trest 57.50 312 *e*P P 09 26 52.5 +0.7
MOR8 Moi Rana 57.50 333 *e*P P 09 26 51.1 -0.4
ARSA Arzberg 57.74 310 *i* P P 09 26 54.0 +0.5
comp=Z,49nm,1.6s,SNR=18
DEL Delary 57.82 321 *i* P P 09 26 54.1 +0.3
LNIZ Loecknitz 57.85 318 *e*P P 09 26 54.6 +0.5
comp=Z,259nm,1.7s,baz=81,slow=6.8
GROS Grobnik 57.88 309 *i* P P 09 26 55.0 +0.5
PVCC Panska Ves 57.94 314 *e*P P 09 26 56.1 +1.3
PVCC Panska Ves 57.94 314 *e*P P 09 26 56.1 +1.3
LOF Lofoten 57.97 335 *e*P P 09 26 54.5 -0.2
CRES Cresnjev 58.00 308 ⇓*i*P P 09 26 55.9 +0.6
PRU Pruhonice 58.03 313 *e*P P 09 26 56.2 +0.8
PRU *e* 09 26 59.6
PRU Pruhonice 58.03 313 *e*P P 09 26 56.2 +0.8
PRU *e*pP pP 09 26 59.6 -0.3
KONS Konsvik 58.05 333 *e*P P 09 26 56.2 +0.9
LUNU Lund 58.12 320 *i* P P 09 26 56.2 +0.3
SOKA Soboth 58.16 309 *i* P P 09 26 57.2 +0.7
comp=Z,114nm,1.7s,SNR=30
RUE Ruedersdorf 58.21 316 *e*P P 09 26 57.0 +0.3
comp=Z,120nm,1.0s,baz=81,slow=6.8
RGN Rugen 58.28 319 P P 09 26 56.9 -0.2
RGN lAMs_20 lAMs_20 09 44 42.0
comp=Z,6µm,20.0s
RGN Rugen 58.28 319 *e*P P 09 26 57.9 +0.8
comp=Z,144nm,0.8s,baz=81,slow=6.8
TIP Timpagrande 58.29 301 P P 09 26 57.8 +0.2
TIP lAmb lAmb 09 27 03.7
comp=Z,134nm,1.2s
TIP Timpagrande 58.29 301 ⇓P P 09 26 57.7 +0.2
BRG Berggiesshubel 58.30 314 ⇓*i*P P 09 26 58.0 +0.7
BRG Amp 09 26 59.3
comp=Z,75nm,1.1s
BRG *i* x x 09 27 01.3
BRG Amp 09 27 02.7
comp=Z,71nm,1.2s
BRG Berggiesshubel 58.30 314 *e*P P 09 26 57.9 +0.6
comp=Z,75nm,1.1s,baz=81,slow=6.8
BJUU Bjuv 58.32 321 *i* P P 09 26 57.5 +0.1
MRVN Minervino Murg 58.33 303 ⇓P P 09 26 57.5 -0.2
CKRC Cesky Krumlov 58.33 312 *e*P P 09 26 58.2 +0.6
MBWA Marble Bar 58.35 144 P P 09 26 59.0 +1.1
MBWA Marble Bar 58.35 144 ⇓P P 09 26 58.7 +0.8
BORU Boraas 58.35 322 *i* P P 09 26 57.5 0.0
PBCC Pribram 58.42 313 *e*P P 09 26 59.2 +1.1
PBCC *e*pP pP 09 27 02.2 -0.5
FABU Falkenberg 58.42 322 *e*P P 09 26 57.9 -0.1
HSPB Hornsund (broa 58.49 345 *e*P P 09 26 59.1 +0.9
MOA Molln 58.50 311 *i* P P 09 26 59.1 +0.3
comp=Z,77nm,1.0s,SNR=44
NSS Namsos 58.50 331 *e*P P 09 26 58.7 +0.3
OBKA Obir 58.52 309 *i* P P 09 26 59.7 +0.6
comp=Z,54nm,1.0s,SNR=22
SGRT San Giovanni R 58.52 304 P P 09 26 58.9 -0.2
SGRT lAmb lAmb 09 27 05.0
comp=Z,90nm,1.0s
SPA0 Spitsbergen Ar 58.56 347 P P 09 26 58.7 0.0
SPA0 lAmb lAmb 09 27 04.2
comp=Z,131nm,1.2s
SPA0 Spitsbergen Ar 58.56 347 *e*P P 09 26 59.7 +1.0
LJU Ljubljana 58.61 309 ⇓*i*P P 09 27 00.4 +0.9
comp=Z,349nm,1.6s
FBE Freiberg 58.66 315 *e*P P 09 27 00.7 +0.9
comp=Z,102nm,1.1s,baz=81,slow=6.8
COP Copenhagen 58.69 320 *i* P P 09 27 00.3 +0.4
COP Copenhagen 58.69 320 *i* P P 09 27 00.3 +0.4
NC405 NORSAR Array S 58.70 327 P P 09 26 59.3 -0.6
GEC2 GERESS Array S 58.72 312 P P 09 27 00.4 0.0
GEC2 lAmb lAmb 09 27 02.3
comp=Z,75nm,1.1s
GEC2 GERESS Array S 58.72 312 *e*P P 09 27 01.0 +0.5
comp=Z,96nm,1.2s,baz=81,slow=6.8
GERES GERESS Array B 58.72 312 P P 09 27 00.9 +0.5
comp=Z,28nm,0.9s,baz=79,slow=6.9,SNR=158
GERES PKP2bc 09 56 45.7
comp=Z,3.4nm,1.1s,baz=200,slow=2.0,SNR=12
GERES GERESS Array B 58.72 312 P P 09 27 00.6 +0.1
CEY Cerknica 58.73 308 ⇓*i*P P 09 26 59.5 -0.9
PSA00 Pilbara Seismi 58.75 144 P P 09 27 00.8 +0.1
PSA00 Pilbara Seismi 58.75 144 P P 09 27 00.3 -0.4
PSA00 lAmb lAmb 09 27 25.4
comp=Z,61nm,0.7s
KHC Kasperske Hory 58.76 312 *d* iP P 09 27 01.1 +0.5
KHC pmax pmax
comp=Z,164nm,1.5s
KHC Kasperske Hory 58.76 312 *e*P P 09 27 01.1 +0.5
KHC *e*pP pP 09 27 04.8 -0.4
KHC Kasperske Hory 58.76 312 P P 09 27 00.4 -0.2
KHC lAmb lAmb 09 27 05.3
comp=Z,39nm,0.9s
KHC Kasperske Hory 58.76 312 ⇑P P 09 27 01.2 +0.5
NC602 NORSAR Array S 58.80 326 P P 09 27 00.1 -0.5
CLL Collm 58.83 315 ⇓*i*P P 09 27 00.8 -0.2
comp=Z,50nm,1.2s
CLL lmV 09 54 00.0
comp=Z,6µm,20.8s
CLL Collm 58.83 315 ⇓*i*P P 09 27 00.8 -0.2
CLL pmax pmax
comp=Z,50nm,1.2s
CLL MLR MLR
comp=Z,6µm,20.8s
CLL Collm 58.83 315 P P 09 27 01.0 +0.1
CLL Collm 58.83 315 *e*P P 09 27 01.1 +0.1
comp=Z,50nm,1.2s,baz=81,slow=6.8
NC303 NORSAR Array S 58.86 327 P P 09 27 00.5 -0.6
NB201 NORSAR Array S 58.90 327 P P 09 27 00.9 -0.5
NB2 NORSAR Subarra 58.94 327 P P 09 27 00.8 -0.9
baz=90,slow=6.9
NOA NORSAR Array B 58.94 327 P P 09 27 01.1 -0.6
comp=Z,22nm,1.1s,baz=87,slow=6.7,SNR=27
NOA LR LR 09 55 13.9
comp=Z,3µm,18.9s,baz=75,slow=39
JAVS Javornik 58.95 309 ⇓*i*P P 09 27 02.2 +0.2
comp=Z,313nm,1.7s
MTN Manton Dam 58.96 128 lAmb lAmb 09 27 07.6
comp=Z,60nm,1.4s
STRU Stroemstad 59.09 324 *i* P P 09 27 02.8 +0.2
NAO01 NORSAR Array S 59.11 326 P P 09 27 01.8 -1.0
NAO01 lAmb lAmb 09 27 15.2
comp=Z,78nm,0.9s
NAO01 NORSAR Array S 59.11 326 *e*P P 09 27 03.2 +0.4
MYKA Terra Mystica 59.12 310 *i* P P 09 27 03.2 +0.1
comp=Z,19nm,0.8s,SNR=10

NBO00 NORSAR Array S 59.16 327 P **P** 09 27 02.1 -1.0
NBO00 IAmb IAmb 09 27 11.3
comp=Z,72nm,1.1s
CEL Celeste 59.16 300 P **P** 09 27 04.0 +0.5
CEL Celeste 59.16 300 ⇓P **P** 09 27 04.2 +0.6
TRI Trieste 59.19 309 P **P** 09 27 03.2 -0.4
TRI pmax pmax
comp=Z,107nm,1.1s
TRI Trieste 59.19 309 P **P** 09 27 03.2 -0.4
TRI IAmb IAmb 09 27 04.9
comp=Z,107nm,1.1s
TRI Trieste 59.19 309 ⇓P **P** 09 27 03.5 -0.1
WET Wettzell 59.22 313 *e*P **P** 09 27 04.4 +0.7
comp=Z,70nm,1.1s,baz=81,slow=6.8
FITZ Fitzroy Crossi 59.23 137 ⇓P **P** 09 27 04.8 +0.7
KBA Koelnbreinsper 59.24 310 *i*P **P** 09 27 04.0 -0.1
comp=Z,37nm,1.1s,SNR=9.9
OSL Oslo 59.25 325 *e*P **P** 09 27 04.0 +0.2
TANN Tannenbergstha 59.29 314 *e*P **P** 09 27 04.9 +0.6
comp=Z,54nm,1.1s,baz=81,slow=6.8
GENI Genyem 59.33 112 P **P** 09 27 06.6 +1.7
comp=Z,184nm,1.3s
NKC Novy Kostel 59.33 314 *e*P **P** 09 27 04.9 +0.4
NKC Novy Kostel 59.33 314 *e*P **P** 09 27 04.9 +0.4
PTCC Patocco-Chiusa 59.35 309 ⇓P **P** 09 27 04.3 -0.5
WERN Wernitzgruen 59.37 314 *e*P **P** 09 27 05.5 +0.7
comp=Z,50nm,1.2s,baz=81,slow=6.8
GUNZ Gunzen 59.38 314 *e*P **P** 09 27 05.5 +0.6
comp=Z,81nm,1.2s,baz=81,slow=6.8
KNRA Kununurra 59.38 132 IAmb IAmb 09 27 09.7
comp=Z,86nm,1.0s
WERD Werda 59.39 314 *e*P **P** 09 27 05.4 +0.5
comp=Z,61nm,1.1s,baz=81,slow=6.8
PLN Plauen 59.48 314 *e*P **P** 09 27 06.0 +0.5
comp=Z,49nm,1.1s,baz=81,slow=6.8
RJOB Jochberg 59.50 311 *e*P **P** 09 27 06.0 +0.2
comp=Z,199nm,1.3s,baz=81,slow=6.8
PAOL Paolisi 59.54 303 P **P** 09 27 05.6 -0.6
PAOL IAmb IAmb 09 27 13.5
comp=Z,89nm,1.5s
ROTZ Rotzenmuhle 59.55 313 *e*P **P** 09 27 07.1 +1.1
comp=Z,161nm,1.5s,baz=81,slow=6.8
KBS Kingsbay 59.56 347 P **P** 09 27 05.5 -0.1
KBS pmax pmax
comp=Z,28nm,0.9s
KBS Kingsbay 59.56 347 P **P** 09 27 05.5 -0.1
KBS Kingsbay 59.56 347 *e*P **P** 09 27 08.5 +2.9
MANZ Manzenberg 59.58 314 *e*P **P** 09 27 07.1 +0.8
comp=Z,138nm,1.6s,baz=81,slow=6.8
NEUB Neuenburg 59.61 315 *e*P **P** 09 27 06.8 +0.4
comp=Z,92nm,1.1s,baz=81,slow=6.8
FLTG Flechtingen 59.78 316 *e*P **P** 09 27 07.5 -0.1
comp=Z,81nm,1.2s,baz=81,slow=6.8
FLTG Flechtingen 59.78 316 P **P** 09 27 07.4 -0.1
KDU Kakadu 59.79 127 ⇓P **P** 09 27 07.6 -0.4
MOX Moxa 59.79 314 *e*P **P** 09 27 08.2 +0.5
comp=Z,63nm,1.2s,baz=81,slow=6.8
MOX *e*L L 09 46 58.7
comp=Z,5μm,19.6s
STAL STALIGIAL 59.81 309 IAmb IAmb 09 27 08.8
comp=Z,79nm,1.0s
KONO Kongsberg 59.84 325 *de*P **P** 09 27 07.9 +0.1
KONO pmax pmax
comp=Z,62nm,1.3s
KONO Kongsberg 59.84 325 P **P** 09 27 07.7 -0.1
KONO IAmb IAmb 09 27 21.2
comp=Z,86nm,1.2s
KONO Kongsberg 59.84 325 *e*P **P** 09 27 09.2 +1.4
KONO Kongsberg 59.84 325 ⇑P **P** 09 27 08.2 +0.4
ABTA Abfaltersbach 59.86 310 *i*P **P** 09 27 07.7 -0.6
comp=Z,40nm,1.3s,SNR=19
DOMB Dombas 59.91 328 *e*P **P** 09 27 07.9 -0.4
BILL Bilibino 59.93 25 *ce*P **P** 09 27 08.5 +0.2
BILL *e**PP **pP** 09 27 11.1 -1.8
BILL *e* 09 27 55.1
BILL *e* 09 29 21.1
BILL Bilibino 59.93 25 P **P** 09 27 08.6 +0.3
BSEG Bad Segeberg 60.10 318 *e*P **P** 09 27 10.6 +0.9
comp=Z,129nm,1.1s,baz=81,slow=6.8
AQU L'Aquila 60.10 305 P **P** 09 27 09.9 -0.1
AQU pmax pmax
comp=Z,216nm,1.2s
AQU L'Aquila 60.10 305 ⇓*i*P **P** 09 27 10.5 +0.5
AQU L'Aquila 60.10 305 P **P** 09 27 09.9 -0.1
AQU L'Aquila 60.10 305 ⇑P **P** 09 27 09.8 -0.3
ASSE Asse, Remlinge 60.15 316 *e*P **P** 09 27 10.5 +0.5
comp=Z,53nm,1.3s,baz=81,slow=6.8
GRA1 Grafenberg Arr 60.20 313 P **P** 09 27 10.9 +0.4
GRF Grafenberg Arr 60.20 313 P **P** 09 27 10.9 +0.4
GRF pmax pmax
comp=Z,164nm,1.4s
GRF Grafenberg Arr 60.20 313 *e*P **P** 09 27 11.7 +1.2
comp=Z,156nm,1.4s,baz=81,slow=6.8
GRF *e*L L 09 53 29.9
comp=Z,5μm,21.0s
GRFO Grafenberg 60.20 313 P **P** 09 27 11.1 +0.7
GRFO pmax pmax
comp=Z,160nm,1.4s
GRFO Grafenberg 60.20 313 P **P** 09 27 11.1 +0.7
NRCA Norcia 60.21 305 P **P** 09 27 10.7 0.0
NRCA IAmb IAmb 09 27 19.9
comp=Z,72nm,0.8s
GOET G??ttrup 60.32 322 *e*P **P** 09 27 11.6 +0.5
WTTA Wattenberg 60.35 311 *i*P **P** 09 27 11.5 -0.3
comp=Z,67nm,1.0s,SNR=24
CLZ Clausthal 60.38 316 *e*P **P** 09 27 12.3 +0.6
comp=Z,121nm,1.0s,baz=81,slow=6.8
WATA Walderalm 60.38 311 *i*P **P** 09 27 11.3 -0.7
comp=Z,52nm,1.2s,SNR=18
SKAR Skarslia 60.39 326 *e*P **P** 09 27 12.2 +0.5
MUD Monsted U'grnd 60.42 321 *i*P **P** 09 27 12.9 +1.0
MUD Monsted U'grnd 60.42 321 *i*P **P** 09 27 12.8 +1.0
FUR Furstenfeldbru 60.43 312 *e*P **P** 09 27 12.8 +0.7
comp=Z,176nm,1.2s,baz=81,slow=6.8
NRDL Niedersach Rie 60.44 317 *e*P **P** 09 27 13.1 +1.1
comp=Z,171nm,1.1s,baz=81,slow=6.8
SKMB Sankelmark Bun 60.50 319 *e*P **P** 09 27 14.0 +1.5
comp=Z,208nm,1.4s,baz=81,slow=6.8
CTI Castel Tesino 60.58 309 P **P** 09 27 12.7 -0.6
CTI pmax pmax
comp=Z,51nm,1.0s
CTI Castel Tesino 60.58 309 P **P** 09 27 12.7 -0.6
CTI IAmb IAmb 09 27 19.4
comp=Z,51nm,1.0s
RAFF Raffo Rosso 60.59 299 P **P** 09 27 14.3 +0.9
SQTA Sankt Quirin 60.65 311 *i*P **P** 09 27 13.2 -0.5
comp=Z,53nm,0.8s,SNR=24
OPO Ambohidratompo 60.66 224 LR LR 09 50 36.5
comp=Z,7μm,18.4s,baz=172,slow=33
GTTG Gottingen 60.68 316 *e*P **P** 09 27 14.3 +0.6
comp=Z,100nm,1.2s,baz=81,slow=6.8
MOTA Moosalm 60.70 311 *i*P **P** 09 27 13.5 -0.6
comp=Z,64nm,0.9s,SNR=29
TEOL Teolo 60.70 308 P **P** 09 27 13.5 -0.5
UBBA Unterbreizbach 60.78 315 *e*P **P** 09 27 14.5 +0.2
comp=Z,99nm,1.8s,baz=81,slow=6.8
AKN Aaknes 60.86 328 *e*P **P** 09 27 16.7 +1.9
RETA Reutte 60.90 311 *i*P **P** 09 27 15.1 -0.2
comp=Z,42nm,0.9s,SNR=22
MGAB Montegabbione 60.91 306 ⇓P **P** 09 27 14.8 -0.7
ABPO Ambohimpanom 60.97 224 P **P** 09 27 16.4 +0.2
ABPO Ambohimpanom 60.97 224 ⇑P **P** 09 27 17.6 +1.3
FETA Feichten 61.01 310 *i*P **P** 09 27 15.8 -0.4
comp=Z,54nm,1.0s,SNR=39
LATE Laterza 61.20 305 P **P** 09 27 16.4 -1.1
LATE IAmb IAmb 09 27 23.5
comp=Z,75nm,1.0s
SNART Snartemo 61.22 324 *e*P **P** 09 27 18.3 +1.1
SNART Snartemo 61.22 324 *e*P **P** 09 27 17.9 +0.6
CORL Corleone 61.23 300 P **P** 09 27 17.1 -0.6
CORL IAmb IAmb 09 27 27.7
comp=Z,61nm,0.9s
MBAR Mbarara 61.26 252 *ce*P **P** 09 27 19.3 +0.9
MBAR Mbarara 61.26 252 P **P** 09 27 18.2 -0.2
MBAR Mbarara 61.26 252 P **P** 09 27 18.7 +0.4
MBAR Mbarara 61.26 252 ⇓P **P** 09 27 18.8 +0.4
UBR Ueberruh 61.29 311 *e*P **P** 09 27 17.8 -0.2
comp=Z,54nm,1.1s,baz=81,slow=6.8
ODD1 Odda 61.31 325 *e*P **P** 09 27 18.8 +0.9
CLTB Caltabellotta 61.38 300 P **P** 09 27 18.2 -0.7
CLTB IAmb IAmb 09 27 25.9
comp=Z,40nm,1.0s
OSSC Osservatorio P 61.39 306 P **P** 09 27 18.5 -0.2
OSSC IAmb IAmb 09 27 26.6
comp=Z,56nm,0.8s
ZCCA Zocca 61.40 307 P **P** 09 27 20.2 +1.4
MILB Miltenberg 61.40 314 *e*P **P** 09 27 19.1 +0.4
comp=Z,40nm,1.2s,baz=81,slow=6.8
SALO Salr 61.44 309 P **P** 09 27 19.1 0.0
SALO Salr 61.44 309 ⇓P **P** 09 27 19.5 +0.4
BLS5 Blasjo 61.46 325 *e*P **P** 09 27 20.2 +1.3
DAVA Damuels 61.52 311 *i*P **P** 09 27 19.5 -0.2
comp=Z,82nm,1.0s,SNR=53
STU Stuttgart 61.67 313 P **P** 09 27 20.6 +0.1
STU pmax pmax
comp=Z,76nm,1.0s
STU Stuttgart 61.67 313 P **P** 09 27 20.6 +0.1
STU IAmb IAmb 09 27 22.3
comp=Z,76nm,1.0s
STU Stuttgart 61.67 313 *e*P **P** 09 27 21.0 +0.5
comp=Z,114nm,1.2s,baz=81,slow=6.8
KASTN Kahler Asten 61.69 315 *e*P **P** 09 27 21.1 +0.5
comp=Z,45nm,1.4s,baz=81,slow=6.8
CASP Castiglione de 61.83 306 P **P** 09 27 20.8 -0.9
VLC Villacollemand 61.85 307 P **P** 09 27 22.0 +0.2
VLC Villacollemand 61.85 307 ⇓P **P** 09 27 21.9 0.0
TNS Taunus Mts 61.86 314 *e*P **P** 09 27 22.2 +0.4
comp=Z,63nm,1.1s,baz=81,slow=6.8
IBBN Ibbenburen 61.89 317 *e*P **P** 09 27 22.5 +0.6
comp=Z,102nm,1.1s,baz=81,slow=6.8
IBBN Ibbenburen 61.89 317 ⇓P **P** 09 27 22.4 +0.6
TUE Stuetta 62.05 310 P **P** 09 27 22.2 -1.1
TUE IAmb IAmb 09 27 38.5
comp=Z,98nm,1.1s
TUE Stuetta 62.05 310 ⇓P **P** 09 27 22.7 -0.6
BFO Black Forest 62.33 312 P **P** 09 27 24.3 -0.6
BFO pmax pmax
comp=Z,23nm,1.1s
BFO Black Forest 62.33 312 P **P** 09 27 24.3 -0.6
BFO Black Forest 62.33 312 *e*P **P** 09 27 24.9 0.0
comp=Z,68nm,1.8s,baz=81,slow=6.8
BFO Black Forest 62.33 312 P **P** 09 27 24.7 -0.2
BUG Bochum--Univer 62.35 316 *e*P **P** 09 27 25.5 +0.5
comp=Z,75nm,1.0s,baz=81,slow=6.8
BOB Bobbio (Coli) 62.37 308 ⇓P **P** 09 27 26.2 +0.9
AHRW Bad Neuenahr-A 62.66 315 *e*P **P** 09 27 27.7 +0.7
comp=Z,59nm,1.1s,baz=81,slow=6.8
ECH Echery 63.11 312 P **P** 09 27 29.2 -1.0
ECH pmax pmax
comp=Z,30nm,1.1s
ECH Echery 63.11 312 P **P** 09 27 29.2 -1.0
ECH Echery 63.11 312 ⇓P **P** 09 27 30.0 -0.2
PGF Pioggiola 63.23 306 P **P** 09 27 31.0 -0.2
BTNL Ternell 63.24 315 *dP* **P** 09 27 31.4 +0.4
comp=Z,27nm,1.1s
BTNL *dx* x 09 27 34.6
MEM Membach 63.31 315 *dP* **P** 09 27 31.6 +0.3
comp=Z,23nm,1.0s
MONC Moncucco Torin 63.34 309 ⇓P **P** 09 27 31.9 +0.2
BHOU Houvegnez 63.37 315 *dP* **P** 09 27 33.0 +1.2
MORW Morawa 63.38 152 P **P** 09 27 32.3 +0.3
MORW IAmb IAmb 09 27 36.6
comp=Z,66nm,0.8s
MORW Morawa 63.38 152 ⇑P **P** 09 27 32.3 +0.3
WLF Walferdange 63.43 314 *dP* **P** 09 27 33.4 +1.2
comp=Z,39nm,1.2s
WLF Walferdange 63.43 314 P **P** 09 27 32.9 +0.7
WLF pmax pmax
comp=Z,103nm,1.2s
WLF Walferdange 63.43 314 P **P** 09 27 32.9 +0.7
WLF IAmb IAmb 09 27 34.6
comp=Z,103nm,1.2s
WLF Walferdange 63.43 314 *e*P **P** 09 27 33.3 +1.0
comp=Z,240nm,1.7s,baz=81,slow=6.8
WLF Walferdange 63.43 314 ⇓P **P** 09 27 33.2 +1.0
VOI Vohitsoka 63.43 222 P **P** 09 27 33.1 +0.4
VOI IAmb IAmb 09 27 38.9
comp=Z,35nm,0.8s
VOI Vohitsoka 63.43 222 ⇑P **P** 09 27 33.7 +1.0
SENIN Lac Senin/Sane 63.46 310 P **P** 09 27 32.7 0.0
SENIN IAmb IAmb 09 27 39.1
comp=Z,76nm,0.9s
BEBN Eben Emael 63.47 315 *dP* **P** 09 27 33.1 +0.7
VSL Villasalto 63.76 302 P **P** 09 27 34.1 -0.6
VSL IAmb IAmb 09 27 42.4
comp=Z,51nm,1.1s
VSL Villasalto 63.76 302 ⇓P **P** 09 27 34.4 -0.2
BCLA Clavier 63.79 315 *dP* **P** 09 27 35.3 +0.8
comp=Z,18nm,1.2s
RCHB Rochefort 63.90 315 *dP* **P** 09 27 35.9 +0.6
comp=Z,20nm,1.2s
BGES Gesves 63.93 315 *dP* **P** 09 27 36.0 +0.4
BMRD Maredsous 64.15 315 *dP* **P** 09 27 37.4 +0.4
NOR Nord 64.16 351 *i*P **P** 09 27 36.4 -0.1
NOR IAmb IAmb 09 27 37.4
comp=Z,19nm,1.0s
NOR Nord 64.16 351 *i*P **P** 09 27 36.4 -0.1
NOR pmax pmax
comp=Z,19nm,1.0s
BNI Bardonecchia 64.21 309 P **P** 09 27 37.1 -0.5
BNI pmax pmax
comp=Z,56nm,1.1s
BNI Bardonecchia 64.21 309 P **P** 09 27 37.1 -0.5
BNI IAmb IAmb 09 27 47.4
comp=Z,56nm,1.1s
BNI Bardonecchia 64.21 309 ⇓P **P** 09 27 37.3 -0.3
DOU Dourbes 64.31 315 *dP* **P** 09 27 38.0 0.0
comp=Z,11nm,1.1s
DOU *d*PcP **PcP** 09 28 13.6 +1.0
SNF Seneffe 64.40 315 *dP* **P** 09 27 38.6 +0.1
comp=Z,33nm,1.0s
KEST Kesra 64.88 299 P **P** 09 27 43.0 +0.9
comp=Z,71nm,1.0s,baz=20,slow=1.0,SNR=38
KEST Kesra 64.88 299 P **P** 09 27 42.1 0.0
KEST Kesra 64.88 299 P **P** 09 27 43.5 +1.4
SNR=24
MANU Manus Island 65.00 107 P **P** 09 27 42.5 -0.5
SSB Saint Sauveur 65.60 310 P **P** 09 27 46.3 -0.3
SSB *PP **P** 09 27 46.6 0.0
SSB Saint Sauveur 65.60 310 P **P** 09 27 46.3 -0.3
SSB IAmb IAmb 09 27 50.6
comp=Z,32nm,0.9s
SSB Saint Sauveur 65.60 310 **P** 09 27 46.6 0.0
SSB Saint Sauveur 65.60 310 ⇓P **P** 09 27 46.5 0.0
WRA Warramunga Arr 66.12 131 P **P** 09 27 50.8 +0.7
comp=Z,59nm,0.9s,baz=326,slow=6.6,SNR=245
WRA PKP2bc 09 56 25.8
comp=Z,2.5nm,1.0s,baz=145,slow=2.6,SNR=6.9
WRA Warramunga Arr 66.12 131 P **P** 09 27 49.9 -0.2
WRAB Tennant Creek 66.12 131 *d*/P **P** 09 27 50.8 +0.7
WRAB pmax pmax
comp=Z,403nm,2.5s
WRAB Tennant Creek 66.12 131 P **P** 09 27 50.2 +0.1
WRAB Tennant Creek 66.12 131 ⇓P **P** 09 27 50.8 +0.7
WB2 Warramunga Arr 66.13 131 P **P** 09 27 50.6 +0.5
WRKA Warakurna 66.14 139 ⇓P **P** 09 27 51.0 +0.8
DAG Danmarks Havn 66.18 346 ⇓*i*P **P** 09 27 49.7 0.0
DAG IAmb IAmb 09 27 51.0
comp=Z,29nm,1.0s
DAG Danmarks Havn 66.18 346 ⇓*i*P **P** 09 27 49.7 0.0
DAG pmax pmax
comp=Z,29nm,1.0s
WR0 Warramunga Arr 66.27 131 P **P** 09 27 51.0 -0.1
NWAO Narrogin (SRO) 67.25 153 P **P** 09 27 56.7 -0.3
NWAO pmax pmax
comp=Z,105nm,1.1s
NWAO Narrogin (SRO) 67.25 153 P **P** 09 27 56.7 -0.3
NWAO Narrogin (SRO) 67.25 153 P **P** 09 27 56.6 -0.3
NWAO IAmb IAmb 09 28 01.5
comp=Z,105nm,1.1s
NWAO Narrogin (SRO) 67.25 153 P **P** 09 27 56.9 -0.2
ESK Eskdalemuir 67.47 322 P **P** 09 27 58.0 -0.2
ESK pmax pmax
comp=Z,82nm,1.1s
ESK Eskdalemuir 67.47 322 P **P** 09 27 58.0 -0.2
ESK IAmb IAmb 09 27 59.7
comp=Z,82nm,1.1s
ESK Eskdalemuir 67.47 322 ⇑P **P** 09 27 58.6 +0.4
DBG Daneborg 67.52 344 *i*P **P** 09 27 58.9 +0.7
DBG IAML 09 28 00.3
comp=Z,30nm,1.0s
MCH1 Michaelchurch 68.37 318 ⇓P **P** 09 28 03.0 -1.0
COEN Coen 68.49 120 P **P** 09 28 04.9 -0.3
COEN Coen 68.49 120 ⇑P **P** 09 28 05.4 +0.2
ASAR Alice Springs 68.50 134 P **P** 09 28 05.9 +0.7
comp=Z,62nm,0.7s,baz=317,slow=6.4,SNR=300
ASAR PKP2bc 09 56 18.5
comp=Z,6.2nm,1.3s,baz=106,slow=2.3,SNR=9.5
ASAR Alice Springs 68.50 134 P **P** 09 28 05.5 +0.4
PMG Port Moresby 68.91 114 *d*/P **P** 09 28 08.5 +0.7
PMG pmax pmax
comp=Z,276nm,2.5s
PMG Port Moresby 68.91 114 P **P** 09 28 08.2 +0.3
PMG Port Moresby 68.91 114 ⇓P **P** 09 28 08.6 +0.7
GAMB Gambell 69.61 28 P 09 28 12.3
baz=293
SCO Scoresbysund 69.68 340 *i*P **P** 09 28 13.0 +1.2
SCO IAmb IAmb 09 28 14.5
comp=Z,18nm,1.1s
SCO Scoresbysund 69.68 340 P **P** 09 28 13.1 +1.3
SCO pmax pmax
comp=Z,90nm,1.4s
SCO Scoresbysund 69.68 340 P **P** 09 28 13.1 +1.3
SCO IAmb IAmb 09 28 14.6
comp=Z,90nm,1.4s
SCO Scoresbysund 69.68 340 ⇓P **P** 09 28 13.0 +1.2
DSB Dublin 69.90 320 P **P** 09 28 13.3 -0.1
DSB IAmb IAmb 09 28 15.2
comp=Z,68nm,1.4s
DSB IAMs_20 IAMs_20 09 57 18.1
comp=Z,4μm,19.0s
PATS Pohnpei 70.10 93 P **P** 09 28 14.2 -1.1
RABL Rabaul 70.19 106 P **P** 09 28 15.3 -0.5
TNA Tin City 70.37 25 P 09 28 16.6
baz=295
FORT Forrest 70.49 143 P **P** 09 28 17.2 0.0
RDOG Red Dog Mine 71.01 22 P **P** 09 28 19.9 -0.1
RDOG Red Dog Mine 71.01 22 P 09 28 20.5
baz=299
A21K Barrow 71.20 18 P **P** 09 28 21.0 -0.1
A21K IAmb IAmb 09 28 22.7
comp=Z,91nm,1.2s
A21K Barrow 71.20 18 P 09 28 21.4
baz=303,SNR=8.2
NEEM North Greenlan 71.53 351 ⇓*i*P **P** 09 28 23.3 -0.1
NEEM IAmb IAmb 09 28 31.1
comp=Z,141nm,0.9s
LSZ Lusaka 71.75 241 P **P** 09 28 25.9 +0.5
LSZ pmax pmax
comp=Z,59nm,1.0s
LSZ Lusaka 71.75 241 P **P** 09 28 25.9 +0.5
LSZ IAmb IAmb 09 28 32.9
comp=Z,59nm,1.0s
EUNU Eureka 71.77 359 ⇓P **P** 09 28 25.4 +0.9
ANM Nome 71.78 26 P **P** 09 28 24.8 +0.1
ANM pmax pmax
comp=Z,51nm,1.4s
ANM MLR MLR
comp=Z,5μm,21.0s
ANM Nome 71.78 26 P **P** 09 28 24.8 +0.1
ANM IAMs_20 IAMs_20 10 02 53.2
comp=Z,5μm,21.0s
ANM Nome 71.78 26 P 09 28 25.3
baz=298
CART Cartagena 72.07 303 P **P** 09 28 26.6 -0.3
CART Cartagena 72.07 303 ⇓P **P** 09 28 27.3 +0.3
BORG Borgarnes 72.18 335 P **P** 09 28 27.2 +0.1
BORG pmax pmax
comp=Z,153nm,1.6s
BORG Borgarnes 72.18 335 P **P** 09 28 27.2 +0.1
BORG IAmb IAmb 09 28 31.2
comp=Z,153nm,1.6s
SUMG Summit 72.82 345 ⇓*i*P **P** 09 28 31.9 +0.6
SUMG IAmb IAmb 09 28 33.5
comp=Z,55nm,1.1s
SUMG Summit 72.82 345 P **P** 09 28 31.8 +0.5
SUMG pmax pmax
comp=Z,302nm,1.4s
SUMG Summit 72.82 345 P **P** 09 28 31.8 +0.5
SUMG Summit 72.82 345 ⇓P **P** 09 28 31.8 +0.5
ES08 SONSECA Array 73.38 306 IAMs_20 IAMs_20 09 58 07.3
comp=Z,5μm,20.0s
ES18 SONSECA Array 73.39 306 IAMs_20 IAMs_20 09 49 30.6
comp=Z,5μm,18.0s
ES02 SONSECA Array 73.39 306 IAMs_20 IAMs_20 09 58 08.7
comp=Z,5μm,20.0s
ES03 SONSECA Array 73.39 306 IAMs_20 IAMs_20 09 58 07.7
comp=Z,4μm,20.0s
ES07 SONSECA Array 73.40 306 IAMs_20 IAMs_20 09 49 30.9
comp=Z,5μm,18.0s
ES01 SONSECA Array 73.40 306 IAMs_20 IAMs_20 09 58 09.0
comp=Z,5μm,20.0s
ES04 SONSECA Array 73.40 306 IAMs_20 IAMs_20 09 58 08.0
comp=Z,4μm,20.0s
ES06 SONSECA Array 73.40 306 IAMs_20 IAMs_20 09 49 32.0
comp=Z,5μm,18.0s
ESBB Sonseca Array 73.41 306 P **P** 09 28 35.0 0.0
ESDC Sonseca Array 73.41 306 P **P** 09 28 35.2 +0.3
comp=Z,33nm,1.1s,baz=54,slow=5.8,SNR=96
ESDC Sonseca Array 73.41 306 P **P** 09 28 34.7 -0.3
PAB San Pablo 73.73 306 P **P** 09 28 36.6 -0.3
PAB pmax pmax
comp=Z,52nm,1.1s
PAB San Pablo 73.73 306 P **P** 09 28 36.6 -0.3
PAB IAmb IAmb 09 28 43.5
comp=Z,52nm,1.1s
PAB San Pablo 73.73 306 ⇓P **P** 09 28 37.1 +0.2
TULEG Thule 74.31 354 *i*P **P** 09 28 38.0 -1.5
TULEG ⇓*i*P **pP** 09 28 39.0 -5.2
TULEG Thule 74.31 354 P **P** 09 28 38.6 -0.9
TULEG IAmb IAmb 09 28 46.1
comp=Z,57nm,0.9s
TULEG Thule 74.31 354 ⇓P **P** 09 28 38.6 -0.9
PBRG Braganca 74.49 309 *e*P **P** 09 28 41.8 +0.6
comp=Z,33nm,1.7s
CTAO Charters Tower 74.58 123 P **P** 09 28 42.2 +0.3
CTAO pmax pmax
comp=Z,92nm,1.1s
CTAO Charters Tower 74.58 123 P **P** 09 28 42.2 +0.3
CTAO IAmb IAmb 09 28 47.1
comp=Z,92nm,1.1s
MATP Matopo 74.66 236 LR LR 09 59 17.3
comp=Z,4μm,19.5s,baz=58,slow=34
TOLK Toolik Lake Re 74.75 19 P **P** 09 28 42.4 +0.2
TOLK IAmb IAmb 09 28 44.2
comp=Z,148nm,1.4s
TOLK Toolik Lake Re 74.75 19 P 09 28 42.6
baz=310,SNR=44
MVO Moncorvo 74.95 309 *e*P **P** 09 28 44.7 +0.8
comp=Z,55nm,2.1s
IMAR Indian Mountai 75.15 22 P **P** 09 28 43.9 -0.6
PVRL Vila Real 75.38 309 *e*P **P** 09 28 46.9 +0.6
POLO Lamas de Olo 75.39 309 *e*P **P** 09 28 46.9 +0.4
comp=Z,28nm,1.4s
PCAB Cabril 75.41 310 *e*P **P** 09 28 47.3 +0.8
comp=Z,77nm,1.6s
PGAV Gavieira, Arco 75.46 310 *e*P **P** 09 28 47.9 +1.0
comp=Z,115nm,1.7s
ICESG Greenland Ices 75.48 343 ⇓*i*P **P** 09 28 47.5 +0.7
ICESG IAmb IAmb 09 28 48.8
comp=Z,95nm,1.0s
COLD Coldfoot 75.48 20 P **P** 09 28 46.5 +0.1
COLD IAmb IAmb 09 28 47.7
comp=Z,69nm,1.2s
COLD Coldfoot 75.48 20 P 09 28 46.8
baz=310,SNR=55
MTE Manteigas 75.63 308 *e*P **P** 09 28 48.9 +1.1
comp=Z,88nm,1.8s
MTE Manteigas 75.63 308 P **P** 09 28 47.2 -0.7
MTE IAmb IAmb 09 28 52.7
comp=Z,51nm,0.9s
MTE Manteigas 75.63 308 ⇓P **P** 09 28 48.5 +0.7
PVIS Viseu 75.73 309 *e*P **P** 09 28 49.9 +1.5
comp=Z,83nm,1.4s
PCBR Castelo Branco 75.81 308 *e*P **P** 09 28 49.4 +0.6
comp=Z,51nm,1.8s
PMRV Marv??o 75.93 307 *e*P **P** 09 28 50.1 +0.6
comp=Z,46nm,1.8s
UPNV Upernavik 76.11 349 ⇓*i*P **P** 09 28 49.7 -0.2
UPNV IAmb IAmb 09 28 56.9
comp=Z,22nm,0.6s
TTA Tatalina 76.18 25 P **P** 09 28 50.8 +0.2
TTA pmax pmax
comp=Z,30nm,1.3s
TTA Tatalina 76.18 25 P **P** 09 28 50.8 +0.2
TTA Tatalina 76.18 25 ⇓P **P** 09 28 51.2 +0.6
TTA Tatalina 76.18 25 P 09 28 51.4
baz=306
PBAR Barrancos 76.21 306 *e*P **P** 09 28 51.6 +0.5
comp=Z,94nm,1.1s
COI Coimbra 76.31 308 P **P** 09 28 51.7 +0.1
COI Coimbra 76.31 308 *e*P **P** 09 28 52.6 +1.0
comp=Z,78nm,1.3s
COI Coimbra 76.31 308 P **P** 09 28 51.7 +0.1

PESTR Estremoz 76.31 307 *e*P P 09 28 51.7 0.0
comp=Z,36nm,1.6s
PESTR Estremoz 76.31 307 P P 09 28 51.3 -0.4
PCAS Casmilo, Conde 76.43 308 *e*P P 09 28 53.7 +1.3
BBOO Buckleboo 76.44 139 P P 09 28 52.8 +0.5
BBOO IAmb IAmb 09 28 56.8
comp=Z,92nm,1.1s
PMTG Montargil 76.67 307 *e*P P 09 28 54.2 +0.5
comp=Z,50nm,1.1s
MLY Manley 76.73 22 IAmb IAmb 09 28 54.9
comp=Z,58nm,1.2s
MLY Manley 76.73 22 P 09 28 54.2
baz=310,SNR=47
EVO Evora 76.75 307 *e*P P 09 28 55.1 +0.9
comp=Z,48nm,2.0s
PBEJ Beja 76.86 306 *e*P P 09 28 56.1 +1.3
comp=Z,11nm,1.4s
PSBE So Bento 76.87 308 *e*P P 09 28 56.1 +1.2
comp=Z,116nm,1.8s
CHUM Lake Minchumin 76.93 23 P 09 28 55.9
baz=309,SNR=23
PVAQ Vaqueiros 77.03 306 *e*P P 09 28 56.5 +0.7
comp=Z,84nm,1.7s
PVAQ Vaqueiros 77.03 306 P P 09 28 55.8 +0.1
PVAQ IAmb IAmb 09 29 00.4
comp=Z,46nm,0.9s
I23K Minto, Yukon-K 77.10 21 P P 09 28 56.1 +0.5
I23K IAmb IAmb 09 28 57.8
comp=Z,84nm,1.3s
I23K Minto, Yukon-K 77.10 21 P 09 28 56.5
baz=311,SNR=38
PCVE Castro Verde 77.16 306 *e*P P 09 28 57.7 +1.2
comp=Z,47nm,1.7s
RES Resolute Bay 77.21 1 P P 09 28 56.0 -0.1
RES pmax pmax
comp=Z,72nm,1.5s
RES Resolute Bay 77.21 1 P P 09 28 56.0 -0.1
RES IAmb IAmb 09 28 57.1
comp=Z,72nm,1.5s
RES Resolute Bay 77.21 1 ⇓P P 09 28 56.0 -0.1
BPAW Bear Paw Mtn. 77.24 23 IAmb IAmb 09 29 01.0
comp=Z,54nm,1.2s
BPAW Bear Paw Mtn. 77.24 23 P 09 28 56.8
baz=310,SNR=35
PBDV Barranco-do-Ve 77.25 305 *e*P P 09 28 57.9 +0.8
comp=Z,94nm,1.8s
QLP Quilpie 77.28 130 ⇓P P 09 28 58.5 +1.3
ANGG Ammassalik, Gr 77.28 340 *i*P P 09 28 57.2 +0.6
ANGG IAmb IAmb 09 28 57.3
comp=Z,26nm,0.9s
ANGG Ammassalik, Gr 77.28 340 P P 09 28 55.8 -0.7
ANGG Ammassalik, Gr 77.28 340 ⇓P P 09 28 56.9 +0.3
FYU Fort Yukon 77.38 19 P P 09 28 58.1 +0.9
SVW2 Sparrevohn 77.43 26 P P 09 28 57.6 0.0
SVW2 IAmb IAmb 09 28 59.5
comp=Z,54nm,1.3s
PMAFR Mafra 77.46 307 *e*P P 09 28 59.6 +1.4
NEA2 Nenana 77.56 22 P 09 28 58.0
baz=311,SNR=117
PPLA Purkeypile 77.59 24 P P 09 28 58.5 -0.2
PPLA Purkeypile 77.59 24 P 09 28 59.0
baz=309,SNR=38
KTH Kantishna Hill 77.62 23 P P 09 28 58.5 -0.2
KTH IAmb IAmb 09 29 00.6
comp=Z,113nm,1.4s
BWN Browne 77.70 22 P P 09 28 59.1 +0.1
POKR Poker Plat Res 77.72 21 IAmb IAmb 09 29 01.1
comp=Z,148nm,1.4s
POKR Poker Plat Res 77.72 21 P 09 28 59.8
baz=313,SNR=12
TCOL CIGO, UAF Yank 77.76 21 P 09 28 59.6
baz=312,SNR=26
COLA College 77.76 21 P P 09 28 59.5 +0.2
COLA pmax pmax
comp=Z,159nm,1.3s
COLA College 77.76 21 P P 09 28 59.5 +0.2
COLA College 77.76 21 ⇓P P 09 28 59.2 -0.1
COLA College 77.76 21 P 09 28 59.7
baz=312
TRF Thorofare Moun 77.90 23 P P 09 28 59.8 -0.6
TRF Thorofare Moun 77.90 23 P 09 29 00.6
baz=310,SNR=10.0
PFVI Vila Bisbo 77.94 306 *e*P P 09 29 01.9 +1.0
comp=Z,89nm,1.7s
PRP Porcupine Dome 78.03 20 P 09 29 01.6
baz=314
IL31 78.13 21 IAmb IAmb 09 29 02.1
comp=Z,92nm,1.4s
ILAR Eielson Array 78.13 21 P P 09 29 00.5 -1.0
comp=Z,23nm,0.9s,baz=299,slow=3.9,SNR=116
ILAR PP PP 09 31 56.6 -0.7
comp=Z,6.2nm,0.9s,baz=308,slow=7.9,SNR=6.3
ILAR PKP2bc 09 55 56.0
comp=Z,0.6nm,1.0s,baz=176,slow=2.7,SNR=3.7
ILAR Eielson Array 78.13 21 P P 09 29 00.1 -1.3
MCK McKinley 78.17 22 IAmb IAmb 09 29 03.2
comp=Z,85nm,1.4s
MCK McKinley 78.17 22 P 09 29 00.8
baz=312,SNR=23
HDA Harding Lake 78.36 21 P 09 29 01.6
baz=313,SNR=19
HDA P 09 29 01.6
baz=313,SNR=19
SKT Skwentna 78.41 24 P 09 29 03.1
baz=310,SNR=61
RND Reindeer 78.42 22 IAmb IAmb 09 29 04.1
comp=Z,108nm,1.4s
HTT Hallett 78.55 138 ⇓P P 09 29 06.3 +2.1
CUT Chulitna 78.59 24 IAmb IAmb 09 29 04.6
comp=Z,154nm,1.4s
CUT Chulitna 78.59 24 P 09 29 03.8
baz=311,SNR=8.7
SPCR Spurr Chakacha 78.66 25 P 09 29 05.3
baz=309,SNR=6.6
WAT2 Susitna Watana 78.81 23 P 09 29 04.3
baz=312
INK Inuvik 79.02 14 P P 09 29 06.3 +0.2
comp=Z,44nm,1.1s,baz=335,slow=6.5,SNR=78
INK Inuvik 79.02 14 IAmb IAmb 09 29 08.0
comp=Z,113nm,1.2s
INK Inuvik 79.02 14 ⇓P P 09 29 06.2 0.0
INK Inuvik 79.02 14 P 09 29 06.4
baz=324
SUA Susitna One 79.03 25 IAmb IAmb 09 29 07.4
comp=Z,63nm,1.1s
SUA Susitna One 79.03 25 P 09 29 06.7
baz=310,SNR=20
STKA Stephens Creek 79.09 135 P P 09 29 07.3 +0.2
comp=Z,32nm,0.9s,baz=311,slow=5.8,SNR=16
DY2G Dye2 79.11 343 ⇓*i*P P 09 29 07.3 +0.2
DY2G IAmb IAmb 09 29 09.8
comp=Z,43nm,1.6s
WAT6 Susitna Watana 79.35 23 P 09 29 08.2
baz=313,SNR=34
GHO Glory Hole Cre 79.48 24 IAmb IAmb 09 29 10.1
comp=Z,114nm,1.4s
PMR Palmer 79.53 24 IAmb IAmb 09 29 10.7
comp=Z,109nm,1.3s
PMR Palmer 79.53 24 P 09 29 09.2
baz=312,SNR=36
SCRK Sand Creek 79.59 20 IAmb IAmb 09 29 13.8
comp=Z,56nm,0.8s
SCRK Sand Creek 79.59 20 P 09 29 09.7
baz=316,SNR=69
LBTB Lobatse 79.59 234 P P 09 29 09.7 -0.4
LBTB pmax pmax
comp=Z,49nm,0.8s
LBTB Lobatse 79.59 234 P P 09 29 09.7 -0.4
LBTB IAmb IAmb 09 29 22.0
comp=Z,49nm,0.8s
LBTB Lobatse 79.59 234 ⇓P P 09 29 10.8 +0.7
RC01 Rabbit Creek A 79.65 24 P P 09 29 09.4 -0.4
RC01 IAmb IAmb 09 29 11.4
comp=Z,146nm,1.3s
RC01 Rabbit Creek A 79.65 24 P 09 29 10.0
baz=311,SNR=16
SML Sawmill 79.67 23 P 09 29 10.4
baz=312,SNR=53
SFJD Kangerlussuaq 79.79 344 ⇓*i*P P 09 29 10.1 -0.3
SFJD IAmb IAmb 09 29 11.6
comp=Z,22nm,1.1s
SFJD Kangerlussuaq 79.79 344 ⇓*i*P P 09 29 10.1 -0.3
SFJD pmax pmax
comp=Z,22nm,1.1s
SFJD Kangerlussuaq 79.79 344 P P 09 29 10.3 -0.1
SFJD IAmb IAmb 09 29 11.7
comp=Z,190nm,1.4s
SFJD Kangerlussuaq 79.79 344 ⇓P P 09 29 10.1 -0.3
EPYK Eagle Plains 79.82 17 IAmb IAmb 09 29 11.2
comp=Z,72nm,1.1s
EPYK Eagle Plains 79.82 17 P 09 29 10.5
baz=322
PAX Paxson 79.84 22 P 09 29 10.8
baz=315,SNR=25
EGAK Eagle 79.85 19 P 09 29 10.9
baz=318
KNK Knik Glacier 79.89 24 P 09 29 11.7
baz=312
C36M Paulatuk 79.94 11 IAmb IAmb 09 29 12.3
comp=Z,146nm,1.3s
C36M Paulatuk 79.94 11 P 09 29 10.8
baz=332
SCM Sheep Creek Mo 80.00 23 P P 09 29 11.4 -0.4
SCM pmax pmax
comp=Z,194nm,1.4s
SCM Sheep Creek Mo 80.00 23 P P 09 29 11.4 -0.4
SCM IAmb IAmb 09 29 13.7
comp=Z,194nm,1.4s
TOA0 Torodi Ar. Sit 80.05 280 P P 09 29 13.0 +0.2
TOA0 IAmb IAmb 09 29 17.3
comp=Z,58nm,0.8s
TOA0 Torodi Ar. Sit 80.05 280 P P 09 29 13.6 +0.8
SNR=19
TORD Torodi Ar. Bea 80.05 280 P P 09 29 13.2 +0.5
comp=Z,58nm,1.0s,baz=51,slow=4.1,SNR=140
TORD PP PP 09 32 15.3 +0.5
comp=Z,8.6nm,1.0s,baz=53,slow=8.2,SNR=4.0
TORD S S 09 39 11.5 -6.1
comp=Z,2.1nm,1.2s,baz=52,slow=7.6,SNR=6.6
TORD PKKPbc PKKPbc 09 47 57.4 +1.3
comp=Z,1.8nm,1.0s,baz=295,slow=2.7,SNR=4.3
TORD PKPPKP P'P'df 09 56 08.0 +4.2
comp=Z,0.9nm,0.9s,baz=272,slow=0.9,SNR=3.5
TORD Torodi Ar. Bea 80.05 280 P P 09 29 13.0 +0.2
TORD IAmb IAmb 09 29 17.3
comp=Z,49nm,0.8s
O22K Cooper Landing 80.05 25 P P 09 29 12.3 +0.3
O22K IAmb IAmb 09 29 31.5
comp=Z,72nm,0.9s
O22K Cooper Landing 80.06 25 P 09 29 12.4
baz=311
K27K Chicken 80.13 20 P P 09 29 13.1 +0.7
K27K IAmb IAmb 09 29 14.8
comp=Z,129nm,1.2s
K27K Chicken 80.13 20 P 09 29 13.2
baz=317
BRSE Bradley Lake S 80.16 26 P 09 29 12.3
baz=311
M24K Tolsona, Glenn 80.21 23 P P 09 29 13.1 +0.2
M24K Tolsona, Glenn 80.21 23 P 09 29 13.6
baz=314,SNR=20
HARP HAARP 80.34 22 P 09 29 14.6
baz=315
SEW Seward 80.41 25 P P 09 29 13.5 -0.4
SEW IAmb IAmb 09 29 15.4
comp=Z,171nm,1.4s
SEW Seward 80.41 25 P 09 29 14.3
baz=312,SNR=7.6
MENT Mentasta 80.42 21 P P 09 29 13.3 -0.7
KDAK Kodiak Island 80.69 28 *de*P P 09 29 15.4 0.0
KDAK pmax pmax
comp=Z,206nm,1.5s
KDAK Kodiak Island 80.69 28 P P 09 29 15.2 -0.2
KDAK IAmb IAmb 09 29 17.1
comp=Z,129nm,1.4s
KDAK Kodiak Island 80.69 28 ⇑P P 09 29 16.1 +0.7
KDAK Kodiak Island 80.69 28 P 09 29 15.5
baz=310
KLU Klutina 80.72 23 IAmb IAmb 09 29 17.9
comp=Z,111nm,1.2s
KLU Klutina 80.72 23 P 09 29 16.2
baz=314,SNR=50
GLI Glacier Island 80.74 24 P P 09 29 15.5 -0.2
GLI Glacier Island 80.74 24 P 09 29 15.8
baz=314,SNR=12
OHAK Old Harbor 80.75 29 P P 09 29 16.4 +0.6
OHAK IAmb IAmb 09 29 17.6
comp=Z,99nm,1.2s
OHAK Old Harbor 80.75 29 P 09 29 15.4
baz=309,SNR=8.5
DAWY Dawson 80.89 19 P P 09 29 16.2 -0.3
DAWY IAmb IAmb 09 29 18.1
comp=Z,76nm,1.2s
L27K Beaver Creek, 80.92 20 IAmb IAmb 09 29 19.2
comp=Z,88nm,1.2s
L27K Beaver Creek, 80.92 20 P 09 29 17.5
baz=318
BCAR Beaver Creek A 80.93 20 P P 09 29 17.4 +0.6
FID Port Fidalgo 81.05 24 P P 09 29 17.6 +0.2
FID IAmb IAmb 09 29 18.6
comp=Z,131nm,1.4s
N25K Chitina, Valde 81.09 22 P 09 29 18.6
baz=315,SNR=89
EIDS Eidsvold 81.32 125 IAmb IAmb 09 29 26.0
comp=Z,98nm,1.2s
GLB Gilahina Butte 81.47 22 P P 09 29 19.7 +0.1
GLB IAmb IAmb 09 29 21.9
comp=Z,86nm,1.3s
BMRM Bremner River 81.55 23 IAmb IAmb 09 29 22.1
comp=Z,117nm,1.2s
BMRM Bremner River 81.55 23 P 09 29 20.7
baz=316,SNR=34
VRDI Verde Repeater 81.75 22 P P 09 29 21.6 +0.3
VRDI IAmb IAmb 09 29 23.6
comp=Z,131nm,1.3s
MCARA McCarthy VSAT 81.78 22 P P 09 29 22.1 +0.9
MCARA McCarthy VSAT 81.78 22 P 09 29 22.3
baz=317
BOSA Boshof 82.05 232 P P 09 29 23.8 +0.6
comp=Z,26nm,0.8s,baz=39,slow=3.1,SNR=19
BOSA Boshof 82.05 232 P P 09 29 22.8 -0.4
BOSA pmax pmax
comp=Z,40nm,1.0s
BOSA Boshof 82.05 232 P P 09 29 22.8 -0.4
BOSA IAmb IAmb 09 29 27.4
comp=Z,40nm,1.0s
BOSA Boshof 82.05 232 ⇑P P 09 29 23.6 +0.4
HMT Hamilton 82.12 23 P P 09 29 22.6 -0.5
HMT IAmb IAmb 09 29 24.6
comp=Z,79nm,1.2s
CRQM Cirque 82.20 22 P P 09 29 24.2 +0.5
CRQM IAmb IAmb 09 29 28.6
comp=Z,83nm,0.8s
CRQE Cirque 82.22 22 P 09 29 24.4
baz=317
TSUM Tsumeb 82.27 243 P P 09 29 24.2 -0.4
NUUK Nuuk 82.34 343 *i*P P 09 29 23.9 -0.2
NUUK Nuuk 82.34 343 ⇓P P 09 29 23.7 -0.3
KAIM Kayak Island 82.36 24 P P 09 29 24.9 +0.7
KAIM Kayak Island 82.36 24 P 09 29 25.5
baz=316
BARN Barnard Glacie 82.46 22 P P 09 29 25.9 +0.8
SUCK Suckling Hills 82.48 23 P P 09 29 25.3 +0.4
SUCK IAmb IAmb 09 29 27.8
comp=Z,122nm,1.4s
CTG Chitna Glacier 82.64 22 P 09 29 27.0
baz=318
GRNC Granite Creek 82.68 22 P P 09 29 26.3 +0.1
GRNC IAmb IAmb 09 29 31.3
comp=Z,73nm,1.0s
LOGN Logan Glacier 82.85 22 IAmb IAmb 09 29 29.6
comp=Z,83nm,1.3s
NRS Narsarsuaq 82.92 339 ⇑P P 09 29 19.6 -7.6
TABL Table Mountain 83.09 22 P P 09 29 28.5 +0.1
TABL IAmb IAmb 09 29 29.8
comp=Z,62nm,1.4s
PCA Pinnacle 83.65 22 P P 09 29 31.2 +0.2
PCA IAmb IAmb 09 29 33.6
comp=Z,86nm,1.2s
PINM Pinnacle 83.65 22 P 09 29 32.1
baz=319
HYT Haines Junctio 83.96 20 IAmb IAmb 09 29 35.0
comp=Z,100nm,1.2s
BCPM Bancas Point 83.96 22 P P 09 29 33.5 +0.9
BCPM IAmb IAmb 09 29 35.2
comp=Z,82nm,1.3s
KOWA Kowa 84.37 283 P P 09 29 36.4 +0.9
KOWA IAmb IAmb 09 29 41.2
comp=Z,55nm,0.9s
ARMA Armidale 84.74 129 P P 09 29 36.8 -0.2
ARMA IAmb IAmb 09 29 42.8
comp=Z,53nm,1.1s
ARMA Armidale 84.74 129 ⇑P P 09 29 38.0 +1.0
WHY Whitehorse 84.87 19 P P 09 29 37.0 -0.3
WHY IAmb IAmb 09 29 39.1
comp=Z,85nm,1.3s
WHY Whitehorse 84.87 19 P 09 29 37.2
baz=324
TOO Toolangi 85.28 137 P P 09 29 39.2 -0.3
TOO pmax pmax
comp=Z,134nm,1.4s
TOO Toolangi 85.28 137 P P 09 29 39.2 -0.3
TOO Toolangi 85.28 137 ⇓P P 09 29 41.2 +1.7
TOO ⇑P pP 09 29 44.2 0.0
SKAG Skagway 85.70 20 P P 09 29 41.9 +0.6
SKAG IAmb IAmb 09 29 44.0
comp=Z,103nm,1.4s
SKAG Skagway 85.70 20 ⇓P P 09 29 42.6 +1.3
SKAG Skagway 85.71 20 P 09 29 42.4
baz=323
CAN Canberra 86.00 134 ⇑P P 09 29 44.1 +1.0
FRB Frobisher Bay 86.25 349 ⇓P P 09 29 43.3 -0.6
BESE Bessie Mountai 86.56 21 P P 09 29 45.5 -0.1
JIS Juneau Island 86.95 21 P P 09 29 48.1 +0.7
SUR Sutherland 87.37 231 P P 09 29 51.0 +0.9
SUR IAmb IAmb 09 29 55.3
comp=Z,50nm,1.1s
SIT Sitka 87.64 22 P P 09 29 50.4 -0.4
SIT pmax pmax
comp=Z,92nm,1.4s
SIT Sitka 87.64 22 P P 09 29 50.4 -0.4
SIT IAmb IAmb 09 29 53.5
comp=Z,92nm,1.4s
SIT Sitka 87.64 22 P 09 29 52.0
baz=323
YKA Yellowknife Ar 87.79 10 P P 09 29 50.8 -0.6
comp=Z,12nm,1.0s,baz=340,slow=4.5,SNR=114
YKA PKKPbc PKKPbc 09 47 36.1 -3.2
comp=Z,1.1nm,0.6s,baz=150,slow=2.2,SNR=5.1
YKA Yellowknife Ar 87.79 10 *ce*P P 09 29 50.7 -0.7
YKA pmax pmax
comp=Z,12nm,1.0s
DLBC Dease Lake 88.11 19 P P 09 29 53.3 +0.1
DBIC Dimbokro 88.75 277 P P 09 29 57.8 +0.9
comp=Z,35nm,1.1s,baz=42,slow=5.8,SNR=10.0
DBIC Dimbokro 88.75 277 P P 09 29 56.8 -0.1
DBIC pmax pmax
comp=Z,50nm,1.1s
DBIC Dimbokro 88.75 277 P P 09 29 56.8 -0.1
DBIC IAmb IAmb 09 30 01.6
comp=Z,50nm,1.1s
WRAK Wrangell Islan 89.11 21 P P 09 29 58.4 +0.7
WRAK IAmb IAmb 09 30 00.4
comp=Z,88nm,1.4s
WRAK Wrangell Islan 89.11 21 P 09 29 58.9
baz=326
CRAG Craig 89.65 22 P P 09 29 59.2 -1.1
CRAG IAmb IAmb 09 30 02.1
comp=Z,70nm,1.5s
CRAG Craig 89.65 22 P 09 30 01.6
baz=325
TAU Tasmania Unive 89.83 140 P P 09 29 59.2 -2.0
TAU pmax pmax
comp=Z,228nm,1.5s
TAU Tasmania Unive 89.83 140 P P 09 29 59.1 -2.0
FCC Fort Churchill 93.21 1 P P 09 30 16.4 -0.4
FCC pmax pmax
comp=Z,65nm,1.3s
FCC Fort Churchill 93.21 1 P P 09 30 16.4 -0.4
FCC IAmb IAmb 09 30 21.6
comp=Z,65nm,1.3s
CASY Casey 95.99 171 ⇓P P 09 30 34.0 +4.9
CASY ⇓P pP 09 30 34.0 +0.3
FFC Flin Flon 96.88 5 P P 09 30 33.1 -0.6
FFC pmax pmax
comp=Z,36nm,1.3s
FFC Flin Flon 96.88 5 P P 09 30 33.1 -0.6
FFC IAmb IAmb 09 30 38.3
comp=Z,36nm,1.3s
MAW Mawson 97.40 189 P Pdif 09 30 37.3 +1.9
comp=Z,6.1nm,0.8s,baz=356,slow=7.0,SNR=5.0
CHGQ Chibougamau 100.40 348 P 09 30 49.7
baz=16
MATQ Matagami 101.09 350 P 09 30 52.5
baz=13
ULM Lac du Bonnet 101.70 2 P Pdif 09 30 56.2 +0.9
comp=Z,1.5nm,0.8s,baz=8.2,slow=10,SNR=2.9
ULM PKKPbc PKKPbc 09 47 01.1 -1.3
comp=Z,1.1nm,0.7s,baz=33,slow=4.2,SNR=3.5
PDAR Pinedale Array 107.56 13 PKiKP PKiKP 09 35 29.5 -0.5
comp=Z,1.0nm,0.5s,baz=95,slow=1.8,SNR=13
PDAR PKKPbc PKKPbc 09 46 44.8 -0.2
comp=Z,0.9nm,0.8s,baz=137,slow=4.5,SNR=4.4
NVAR Mina Array Bea 109.39 21 PKiKP PKiKP 09 35 34.4 +0.9
comp=Z,1.0nm,0.6s,baz=341,slow=2.7,SNR=12
NVAR PKKPbc PKKPbc 09 46 39.6 +0.6
comp=Z,0.7nm,0.7s,baz=155,slow=5.0,SNR=7.3
NVAR Mina Array Bea 109.39 21 PKiKP 09 35 34.1 +0.6
R11A Troy Canyon, C 110.28 19 P 09 35 35.5
baz=339
O20A White River Ci 110.35 13 P 09 35 35.4
baz=346
CWC Cottonwood Cre 111.28 22 P 09 35 37.0
baz=336
MURC Murrieta 114.16 22 P 09 35 43.1
baz=336
BELC Belle Mtn. Jos 114.19 21 P 09 35 43.9
baz=338
VNDA Vanda 114.21 167 PKP PKPdf 09 35 40.4 -0.6
comp=Z,1.0nm,0.8s,baz=303,slow=5.7,SNR=3.8
VNDA PKKPbc PKKPbc 09 46 20.5 -3.2
comp=Z,1.4nm,0.9s,baz=48,slow=4.8,SNR=2.4
IRM Iron Mountain 114.31 20 P 09 35 44.0
baz=338
BC3 Big Chuckawall 114.68 21 P 09 35 44.7
baz=338
W18A Petrified Fore 114.86 15 P 09 35 45.1
baz=344
MONP2 Monument Peak 115.07 22 P 09 35 45.8
baz=337
GLA Glamis 115.43 20 P 09 35 46.2
baz=338
U40A Yellville 115.64 0 P 09 35 44.8
baz=360
WVT Waverly 115.70 356 P 09 35 44.5
baz=4.7
ANMO Albuquerque 115.72 13 PKIKP PKiKP 09 35 44.8 -0.9
ANMO Albuquerque 115.72 13 PKiKP 09 35 44.8 -0.9
ANMO Albuquerque 115.72 13 P 09 35 45.2
baz=347
HBAR Harrisburg 116.41 358 IAMs_20 IAMs_20 10 14 03.9
comp=Z,2μm,18.0s
BNM Barren Site 116.46 13 PKPdf PKiKP 09 35 45.6 -1.5
SNAA Sanae 116.66 201 PKPdf PKPdf 09 35 45.9 -0.1
SNAA Sanae 116.66 201 PKPbc PKPbc 09 46 13.9 -1.2
comp=Z,3.8nm,1.1s,baz=235,slow=8.7,SNR=3.5
SNAA Sanae 116.66 201 PKiKP PKPdf 09 35 45.1 -0.9
SNAA Sanae 116.66 201 PKPdf PKPdf 09 35 45.1 -0.9
WMOK Wichita Mounta 116.99 6 P 09 35 46.6
baz=354
214A Organ Pipe Nat 117.05 19 P 09 35 48.6
baz=340
TUC Tucson 117.28 17 P 09 35 49.4
baz=342
MSTX Muleshoe 117.29 9 P 09 35 48.5
baz=350
MIAR Mount Ida 117.44 1 P 09 35 48.4
baz=359
121A Cookes Peak, D 117.78 14 P 09 35 50.1
baz=345
VNA2 Neumayer--Watz 118.02 202 PKPdf PKiKP 09 35 50.7 +2.2
QSPA South Pole Qui 118.15 180 PKPdf PKPdf 09 35 48.4 -0.6
GDL2 Guadalupe Moun 118.77 11 PKPdf 09 35 51.0 -0.5
VNA3 Neumayer Olymp 118.78 201 PKPdf PKiKP 09 35 50.9 +0.8
ABTX Abilene, Hawle 119.01 7 P 09 35 51.0
baz=353
MNTX Cornudas Mount 119.08 12 P 09 35 52.1
baz=347
JCT Junction City 121.11 7 P 09 35 55.8
baz=353
NBPV Pedro Velho 121.61 280 *e*P PKiKP 09 35 59.0 +1.7
TXAR Lajitas Array 121.69 11 PKP PKPdf 09 35 57.0 -0.1
comp=Z,4.8nm,0.5s,baz=46,slow=0.7,SNR=85
TXAR PKKPab PKKPbc 09 45 56.3 +0.2
comp=Z,1.5nm,0.8s,baz=172,slow=7.0,SNR=9.9
RCBR Riachuelo 121.85 281 *e*P PKiKP 09 36 00.1 +2.3
NBRF Rio Formoso - 122.54 278 *e*P PKiKP 09 36 01.1 +2.1
833A Chaparral WMA, 123.29 7 P 09 36 00.1
baz=353

NBLI	**Livramento-PB**	**123.50**	**280**	*eP*	**PKiKP**	**09 36 03.2**	**+2.1**
HPIG		**123.64**	**14**		**PKPdf**	**09 36 00.1**	**-1.0**
BELA	**Belgrano 2**	**124.07**	**193**	PKPdf	**PKPdf**	**09 35 59.0**	**-1.0**
NBMO	**Morrinhos-CE**	**124.10**	**287**	*eP*	**PKiKP**	**09 36 04.1**	**+1.8**
NBPB	**Pedra_Branca-C**	**124.87**	**284**	*eP*	**PKiKP**	**09 36 05.5**	**+1.8**
NBMA	**Muriti-CE**	**125.08**	**282**	*eP*	**PKiKP**	**09 36 05.7**	**+1.5**
NBTA	**Tacaratu-PE**	**125.31**	**279**	*eP*	**PKiKP**	**09 36 06.6**	**+2.0**
NBLA	**Lagarto - SE**	**125.93**	**277**	*eP*	**PKiKP**	**09 36 07.4**	**+1.6**
NBPN	**Ponto Novo - B**	**127.97**	**279**	*eP*	**PKiKP**	**09 36 11.0**	**+1.0**
ZAIG	**Zacatecas**	**128.30**	**12**	PKPdf	**PKPdf**	**09 36 08.5**	**-1.7**
NBIT	**Itapeh - BA**	**129.08**	**273**	*eP*	**PKiKP**	**09 36 13.5**	**+1.4**
CMC01	**Camacan, BA**	**129.33**	**273**	*eP*	**PKiKP**	**09 36 13.7**	**+1.1**
TOSP	**Speyside**	**129.78**	**317**	IAMs_20	IAMs_20	10 17 12.7	
	comp=Z,2µm,19.0s						
TMAB	**Tom-Au,PA,Br**	**130.26**	**293**	*eP*	**PKiKP**	**09 36 15.3**	**+0.8**
RIB01	**Linhares ES**	**131.62**	**269**	*eP*	**PKiKP**	**09 36 18.3**	**+1.2**
BSFB	**Barra de Sao F**	**131.84**	**269**	*eP*	**PKiKP**	**09 36 18.7**	**+1.2**
SJMB	**Sao Joao De Ma**	**132.09**	**270**	*eP*	**PKiKP**	**09 36 18.9**	**+0.9**
SDBA	**SAO DESIDERIO**	**132.78**	**280**	*eP*	**PKiKP**	**09 36 20.8**	**+1.2**
SMTB	**Santa Maria do**	**133.38**	**286**	*eP*	**PKiKP**	**09 36 21.4**	**+0.6**
JANB	**Januaria**	**133.41**	**276**	*eP*	**PKiKP**	**09 36 21.2**	**+0.3**
PRPB	**Parauapebas**	**133.82**	**290**	*eP*	**PKiKP**	**09 36 22.4**	**+0.7**
DIAM	**Diamantina, MG**	**134.13**	**272**	*eP*	**PKiKP**	**09 36 22.6**	**+0.3**
MALB	**Monte Alegre**	**134.84**	**299**	*eP*	**PKiKP**	**09 36 23.9**	**+0.1**
PEXB	**Peixe**	**135.58**	**282**	*eP*	**PKiKP**	**09 36 25.6**	**+0.3**
MAN01	**Angra dos Reis**	**135.93**	**266**	*eP*	**PKiKP**	**09 36 26.4**	**+0.6**
BSCB	**Bom Sucesso**	**136.06**	**268**	*eP*	**PKiKP**	**09 36 26.4**	**+0.3**
ESAR	**Angra dos Reis**	**136.40**	**266**	*eP*	**PKiKP**	**09 36 27.0**	**+0.4**
BOAV	**Boa Vista**	**136.52**	**309**	*eP*	**PKiKP**	**09 36 27.5**	**+0.2**
BDFB	**Brasilia**	**136.90**	**277**	PKP	**PKPdf**	**09 36 25.9**	**-0.3**
	comp=Z,3.9nm,0.9s,baz=81,slow=5.4,SNR=4.6						
BDFB	**Brasilia**	**136.90**	**277**		**PKPdf**	**09 36 25.6**	**-0.6**
TGUH	**Tegucigalpa,Un**	**137.52**	**352**	PKPdf	**PKPdf**	**09 36 26.8**	**-0.7**
PARB	**Paraibuna**	**137.53**	**266**	*eP*	**PKiKP**	**09 36 28.9**	**-0.1**
ITTB	**Itaituba**	**137.55**	**297**	*eP*	**PKiKP**	**09 36 29.3**	**0.0**
SNDB	**Serra Nova Dou**	**138.09**	**284**	*eP*	**PKiKP**	**09 36 30.0**	**-0.4**
PTGA	**Pitinga**	**138.35**	**306**		**PKPdf**	**09 36 28.2**	**-0.6**
VAO	**Valinhos**	**138.61**	**267**	*eP*	**PKiKP**	**09 36 31.0**	**-0.3**
NPGB	**Novo Progresso**	**138.85**	**294**	*eP*	**PKiKP**	**09 36 31.2**	**-0.8**
RCLB	**Rio Claro- Sao**	**138.94**	**268**	*eP*	**PKiKP**	**09 36 31.6**	**-0.3**
SPB	**Sao Paulo**	**139.19**	**266**	*eP*	**PKiKP**	**09 36 31.6**	**-0.7**
PET01	**Itanhaem-SP**	**139.25**	**265**	*eP*	**PKiKP**	**09 36 31.8**	**-0.6**
ACON	**Acoyapa**	**139.26**	**349**	IAMs_20	IAMs_20	10 30 47.7	
	comp=Z,2µm,22.0s						
PMSA	**Palmer Station**	**139.31**	**198**	*eP*	**PKiKP**	**09 36 31.4**	**+0.2**
BB19B	**Bebedouro**	**139.39**	**270**	*eP*	**PKiKP**	**09 36 32.3**	**-0.6**
ARAG	**Araguaiana, MT**	**140.24**	**280**	*eP*	**PKiKP**	**09 36 34.1**	**-0.5**
ZARC	**Zaragoza, Cauc**	**140.42**	**332**	*eP*	PKPdf	09 36 23.6	-9.0
UREC	**San Jos de Ur**	**140.46**	**333**	*eP*	PKPdf	09 36 24.8	-8.0
MACA	**Manacapuru-AM**	**140.53**	**304**	*eP*	**PKiKP**	**09 36 34.8**	**-0.7**
ITRB	**Iturama**	**140.53**	**273**	*eP*	**PKiKP**	**09 36 34.4**	**-0.9**
FRTB	**Fartura**	**141.00**	**267**	*eP*	**PKiKP**	**09 36 35.6**	**-0.5**
TIJ01	**Guaruva-PR**	**141.04**	**264**	*eP*	**PKPdf**	**09 36 34.8**	**+1.2**
CLDB	**Colider**	**141.33**	**289**	*eP*	**PKiKP**	**09 36 36.0**	**-1.0**
SPBC	**San Pablo de B**	**141.72**	**329**	*eP*	**PKPdf**	**09 36 30.8**	**-4.3**
TER01	**Tubaro-SC**	**141.84**	**259**	*eP*	**PKiKP**	**09 36 37.1**	**-0.6**
PCMB	**Pacaembu**	**141.97**	**271**	*eP*	**PKiKP**	**09 36 37.1**	**-1.1**
NORC	**Norcasia**	**142.15**	**330**	*eP*	**PKiKP**	**09 36 32.1**	**-3.8**
CBOC	**Ciudad Bolivar**	**142.37**	**332**	*eP*	**PKPdf**	**09 36 31.2**	**-5.2**
CHIC	**Chingaza**	**142.46**	**328**	*eP*	**PKPdf**	**09 36 32.3**	**-4.5**
ROSC	**El Rosal**	**142.55**	**329**	PKhKP	PKPpre	09 36 33.0	
	comp=Z,13nm,0.6s,baz=52,slow=2.7,SNR=9.0						
ROSC	**El Rosal**	**142.55**	**329**	PKHKP	PKPpre	09 36 33.2	
ROSC	**El Rosal**	**142.55**	**329**	PKPdf	**PKPdf**	**09 36 33.2**	**-3.8**
ROSC	**El Rosal**	**142.55**	**329**	*eP*	**PKPdf**	**09 36 32.9**	**-4.0**
GUY2C	**Guyana, Caldas**	**142.67**	**331**	*eP*	**PKPdf**	**09 36 32.6**	**-4.7**
ANIL	**Santa Ana**	**143.34**	**330**	*eP*	PKPbc	09 36 35.2	-0.1
CNLB	**Canela**	**143.46**	**258**	*eP*	**PKiKP**	**09 36 39.4**	**-1.7**
TRCB	**Terra Rica**	**143.55**	**269**	*eP*	**PKiKP**	**09 36 39.8**	**-1.6**
PTGB	**Pitanga**	**143.57**	**266**	*eP*	**PKPdf**	**09 36 39.4**	**+1.3**
PP1B	**Ponte de Pedra**	**143.70**	**279**	*eP*	**PKiKP**	**09 36 40.8**	**-0.9**
ORTC	**Ortega, Tolima**	**143.79**	**330**	*eP*	PKPab	09 36 35.5	-0.1
ITAB	**Concordia**	**144.20**	**262**	*eP*	**PKiKP**	**09 36 40.8**	**-1.7**
YOTC	**Yotoco, Valle**	**144.20**	**331**	*eP*	**PKPab**	**09 36 36.2**	**-1.0**
MALC	**Bahia Malaga**	**144.58**	**333**	*eP*	**PKPdf**	**09 36 39.9**	**-0.2**
MALC	**Bahia Malaga**	**144.58**	**333**	*eP*	PKPbc	09 36 38.9	+0.3
MACC	**Macarena, Meta**	**144.68**	**326**	*eP*	**PKPab**	**09 36 38.1**	**-0.8**
BETC	**Betania**	**144.97**	**329**	*eP*	**PKPbc**	**09 36 38.7**	**-1.3**
MARP	**Paez Belalcaza**	**145.05**	**330**	*eP*	**PKPbc**	**09 36 40.2**	**-0.3**
EFI	**East Falkland**	**145.20**	**218**		**PKPbc**	**09 36 38.4**	**-1.1**
EFI					**PKiKP**	**09 36 43.4**	**-0.4**
GARC	**Garzon, Huila**	**145.43**	**329**	*eP*	**PKPbc**	**09 36 41.5**	**-0.2**
AQDB	**Aquidauana**	**145.50**	**275**	*eP*	**PKiKP**	**09 36 44.0**	**-1.4**
CPSB	**Cacapava Do Su**	**145.83**	**257**	*eP*	**PKPab**	**09 36 43.5**	**+0.9**
SOTA	**Rioblanco**	**145.97**	**330**	*eP*	**PKPbc**	**09 36 43.6**	**-0.1**
VILB	**Vilhena**	**146.08**	**290**	*eP*	**PKPab**	**09 36 44.4**	**+0.4**
PLTB	**Pedras Altas**	**146.10**	**254**	*eP*	**PKPab**	**09 36 43.7**	**+0.1**
SAML	**Samuel**	**146.17**	**299**	PKHKP	PKPpre	09 36 44.5	
SAML	**Samuel**	**146.17**	**299**		**PKPdf**	**09 36 42.5**	**-0.2**
SAML				PKPbc	**PKPab**	**09 36 44.5**	**+0.1**
SAML	**Samuel**	**146.17**	**299**	*eP*	**PKPab**	**09 36 44.2**	**-0.2**
PTLB	**Pontes e Lacer**	**146.43**	**285**	*eP*	**PKPab**	**09 36 45.2**	**0.0**
CRUC	**La Cruz**	**146.63**	**330**	*eP*	**PKPab**	**09 36 46.7**	**+0.1**
PTLC	**Puerto Leguiza**	**146.85**	**326**	*eP*	**PKPbc**	**09 36 46.2**	**+0.5**
USHA	**Ushuaia**	**146.97**	**207**	PKPbc	**PKPbc**	**09 36 48.4**	**+0.2**
	comp=Z,25nm,0.5s,baz=99,slow=1.3,SNR=3.2						
SIV	**San Ignacio**	**148.32**	**286**	PKPbc	**PKPbc**	**09 36 50.0**	**+0.3**
	comp=Z,87nm,1.1s,baz=83,slow=2.8,SNR=39						
OTAV	**Otavalo**	**148.46**	**332**	PKHKP	PKPpre	09 36 48.0	
OTAV	**Otavalo**	**148.46**	**332**		**PKPdf**	**09 36 48.0**	**+0.8**
OTAV	**Otavalo**	**148.46**	**332**	*eP*	**PKPdf**	**09 36 48.4**	**+1.2**
OTAV	**Otavalo**	**148.46**	**332**	*eP*	**PKPdf**	**09 36 47.5**	**+0.3**
ITQB	**Itaqui**	**148.49**	**259**	*eP*	**PKPdf**	**09 36 47.5**	**+1.4**
CPUP	**Villa Florida**	**148.57**	**265**	PKPbc	**PKPbc**	**09 36 49.8**	**-0.2**
	comp=Z,14nm,0.9s,baz=86,slow=2.5,SNR=27						
CPUP	**Villa Florida**	**148.57**	**265**		**PKPdf**	**09 36 45.6**	**-0.7**
CPUP	**Villa Florida**	**148.57**	**265**	*eP*	**PKPdf**	**09 36 47.7**	**+1.4**
ETMB	**Extrema**	**149.03**	**301**	*eP*	**PKPdf**	**09 36 49.4**	**+1.9**
MG02	**Cerro Sombrero**	**150.03**	**209**		**PKiKP**	**09 36 53.7**	**0.0**
GO10	**Punta Arenas**	**150.51**	**207**	PKPdf	**PKPdf**	**09 36 49.7**	**+1.0**
GO10					**sPKPdf**	**09 36 55.3**	**0.0**
MG04	**Isla Riesco**	**150.94**	**207**	PKPdf	**PKPdf**	**09 36 49.1**	**-0.1**
CZSB	**Cruzeiro do Su**	**152.12**	**314**	*eP*	**PKPdf**	**09 36 53.8**	**+1.5**
GO09	**Cerro Castillo**	**152.45**	**208**		**PKiKP**	**09 36 59.5**	**+0.8**
GO09				PKPab	**PKPab**	**09 37 09.0**	**+0.3**
TRQA	**Tornquist**	**152.63**	**241**	*eP*	**PKPdf**	**09 36 54.0**	**+1.6**
LPAZ	**La Paz**	**154.34**	**293**	PKPbc	**PKPbc**	**09 37 04.4**	**-0.1**
	comp=Z,8.3nm,1.0s,baz=40,slow=6.2,SNR=14						
LPAZ	**La Paz**	**154.34**	**293**	PKIKP	**PKPdf**	**09 36 54.2**	**-2.0**
LPAZ						09 37 04.9	
LPAZ	**La Paz**	**154.34**	**293**	PKPdf	**PKPdf**	**09 36 54.2**	**-2.0**
LPAZ				PKPbc	**PKiKP**	**09 37 04.9**	**+0.4**
LPAZ	**La Paz**	**154.34**	**293**	*eP*	**PKPdf**	**09 36 56.7**	**-1.4**
LPAZ	**La Paz**	**154.34**	**293**	*eP*	**PKPdf**	**09 36 56.7**	**+0.5**
MNMC	**Minye Minye**	**156.97**	**288**		**PKPdf**	**09 36 58.7**	**-0.5**
MNMC				PKPab	**PKPab**	**09 37 28.9**	**-0.4**
PB11	**IPOC Station P**	**157.31**	**287**	PKPab	**PKPab**	**09 37 29.8**	**-0.8**
PSGCX	**Pisagua**	**157.62**	**288**		**PKPab**	**09 37 31.4**	**-0.5**
PB01	**IPOC Station P**	**157.70**	**284**	PKPdf	**PKPdf**	**09 36 59.2**	**-0.6**
PB01					**PKPab**	**09 37 32.9**	**+0.6**
LVC	**Limon Verde**	**157.78**	**280**	PKP	**PKPdf**	**09 37 00.6**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=131,slow=5.2,SNR=4.8						
LVC				PKPab	**PKPab**	**09 37 33.2**	**+0.4**
	comp=Z,13nm,0.9s,baz=79,slow=7.6,SNR=7.8						
LVC	**Limon Verde**	**157.78**	**280**	PKPab	**PKPab**	**09 37 33.8**	**+0.9**
LVC	**Limon Verde**	**157.78**	**280**	*eP*	**PKPdf**	**09 37 01.3**	**+1.0**
PB09	**IPOC Station P**	**157.78**	**282**	PKPdf	**PKPdf**	**09 36 58.2**	**-1.8**
PB09					**PKPab**	**09 37 33.8**	**+1.1**
PLCA	**Paso Flores**	**158.03**	**230**	PKP	**PKPdf**	**09 37 00.1**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=346,slow=3.1,SNR=5.0						
PATCX	**Punta Patache**	**158.18**	**285**		**PKPab**	**09 37 34.3**	**0.0**
AC02	**Maricunga**	**159.05**	**269**	PKPdf	**PKPdf**	**09 37 01.2**	**-0.6**
GO02	**Mina Guanaco**	**159.12**	**273**		**PKPab**	**09 37 38.3**	**-0.3**
BI02	**San Fabin de**	**160.14**	**240**	PKPdf	**PKPdf**	**09 37 02.4**	**+0.1**
BO02	**Sierra Bellavi**	**160.26**	**246**		**PKPab**	**09 37 43.0**	**0.0**
LCO	**Las Campanas**	**160.68**	**263**	PKIKP	**PKPdf**	**09 37 01.5**	**-1.9**
LCO						09 37 44.8	
LCO	**Las Campanas**	**160.68**	**263**		**PKPdf**	**09 37 01.4**	**-1.9**
LCO					**PKPab**	**09 37 44.8**	**-0.4**
AC04	**Llanos de Chal**	**160.94**	**265**	PKPab	**PKPab**	**09 37 46.1**	**0.0**

*IDC **25** 09:22:36.7±0.7,27°.82N×85°.76E, h0km, mb4.3/26, mb1 4.4/28, mb1mx4.2/52, mbtmp4.3/28, ML4.4/2 Error ellipse: s-maj=18.6km s-min=14.4km az=26.0*
*NEIC **25** 09:22:36.9±1.6,27°.72N±0°.06×85°.75E±0°.04, h10km±1km, mb4.7/39, Error ellipse: s-maj=11.0km s-min=6.0km az=6.0*
ISC 25 09:22:38.5±0.4,**27°.73N**±0°.07×**85°.76E**±0°.06,**h19**km,**n78,**

σ1**9**00/79,**mb4.5**/40,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.12**	**66**		Pn	**Pn**	**09 23 53.3**	**-1.3**
SHL	**Shillong**	**5.89**	**110**		Pn	**Pn**	**09 24 04.2**	**-0.7**
NIL	**Nilore**	**12.27**	**302**		Pn	**Pn**	**09 25 30.6**	**-1.7**
CMAR	**Chiang Mai Arr**	**15.23**	**125**		Pn	**P**	**09 26 15.8**	**-1.7**
	0.4nm,0.3s,baz=301,slow=10,SNR=1.7							
KBL	**Kabul**	**15.83**	**299**		Pn	**Pn**	**09 26 18.8**	**-1.8**
KDJ	**Kajisay**	**15.98**	**336**		Pn	**Pn**	**09 26 22.3**	**-0.1**
BOOM	**Boomskoye usch**	**16.75**	**334**			**P**	**09 26 33.7**	**-0.7**
MK31	**Makanchi Array**	**19.22**	**353**		P	**P**	**09 27 00.3**	**-1.1**
MKAR	**Makanchi Array**	**19.22**	**353**		P	**Pn**	**09 27 01.9**	**-0.5**
	2.1nm,0.3s,baz=178,slow=11,SNR=8.6							
MKAR	**Makanchi Array**	**19.22**	**353**		P	**P**	**09 27 01.0**	**-0.5**
MAKZ	**Makanchi**	**19.27**	**352**		P	**P**	**09 27 00.7**	**-1.3**
KK31	**Karatay Array**	**19.69**	**325**		P	**P**	**09 27 05.8**	**-0.8**
KK31					IAmb	IAmb	09 27 09.5	
	comp=Z,34nm,1.1s							
KKAR	**Karatay Array**	**19.69**	**325**		P	**P**	**09 27 05.9**	**-0.7**
KKAR	**Karatay Array**	**19.69**	**325**		P	**P**	**09 27 05.6**	**-1.0**
KKAR					IAmb	IAmb	09 27 09.5	
	comp=Z,34nm,1.1s							
XAN	**Xi'an**	**20.82**	**67**		P	**P**	**09 27 17.8**	**-1.3**
XAN					IAmb	IAmb	09 27 29.7	
	comp=Z,32nm,1.2s							
ENH	**Enshi**	**20.90**	**77**		P	**P**	**09 27 19.2**	**-0.6**
ENH					IAmb	IAmb	09 27 28.6	
	comp=Z,63nm,1.2s							
PALK	**Pallekele**	**20.91**	**194**		P	**P**	**09 27 20.0**	**0.0**
KURBB	**Kurchatov Arra**	**23.51**	**348**		P	**P**	**09 27 47.8**	**+0.6**
	comp=Z,7.5nm,0.7s,baz=170,slow=9.9,SNR=5.6							
SONM	**Songino Array**	**25.71**	**33**		P	**P**	**09 28 09.3**	**+1.7**
	comp=Z,18nm,0.8s,baz=218,slow=10,SNR=16							
SONM	**Songino Array**	**25.71**	**33**		P	**P**	**09 28 07.7**	**0.0**
SONM					IAmb	IAmb	09 28 11.9	
	comp=Z,13nm,0.8s							
ULN	**Ulaanbaatar**	**26.06**	**34**		P	**P**	**09 28 10.4**	**-0.4**
ZAA0	**Zalesovo Array**	**26.20**	**359**		P	**P**	**09 28 10.6**	**-1.2**
ZAA0					IAmb	IAmb	09 28 15.4	
	comp=Z,8.9nm,0.7s							
ZALV	**Zalesovo Beam**	**26.20**	**359**		P	**P**	**09 28 13.0**	**+1.2**
	comp=Z,9.2nm,0.6s,baz=179,slow=9.1,SNR=7.6							
ZALV	**Zalesovo Beam**	**26.20**	**359**		P	**P**	**09 28 10.2**	**-1.6**
DLV	**T Lat**	**26.45**	**122**		P	**P**	**09 28 13.2**	**-1.5**
DLV					IAmb	IAmb	09 28 21.7	
	comp=Z,25nm,1.0s							
IPM	**Ipoh**	**27.32**	**145**		P	**P**	**09 28 22.1**	**-0.2**
IPM					IAmb	IAmb	09 28 25.1	
	comp=Z,31nm,1.5s							
BVAR	**Borovoye Array**	**27.73**	**340**		P	**P**	**09 28 26.6**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=156,slow=11,SNR=1.1							
AKTO	**Aktyubinsk**	**30.96**	**325**		P	**P**	**09 28 54.6**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=90,slow=19,SNR=1.2							
SOCY	**Socotra**	**33.50**	**249**		P	**P**	**09 29 15.2**	**-1.9**
SOCY					IAmb	IAmb	09 29 17.9	
	comp=Z,5.8nm,0.8s							
ARU	**Arti**	**34.63**	**333**		P	**P**	**09 29 26.9**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=109,slow=15,SNR=3.8							
ARU	**Arti**	**34.63**	**333**		P	**P**	**09 29 26.7**	**+0.5**
GNI	**Garni**	**35.91**	**301**		P	**P**	**09 29 37.0**	**-0.8**
KKM	**Kota Kinabalu**	**36.06**	**121**		P	**P**	**09 29 38.6**	**-0.6**
KKM					IAmb	IAmb	09 29 52.5	
	comp=Z,11nm,0.9s							
KS19	**Wonju Array Si**	**36.52**	**64**		P	**P**	**09 29 42.4**	**-0.4**
KS19					IAmb	IAmb	09 29 50.8	
	comp=Z,13nm,1.2s							
KSAR	**Wonju Array Be**	**36.53**	**64**		P	**P**	**09 29 42.9**	**0.0**
KSRS	**Korea Array**	**36.56**	**64**		P	**P**	**09 29 43.3**	**+0.1**
	comp=Z,25nm,0.5s,baz=265,slow=8.6,SNR=9.4							
JNU	**Nakatsue**	**39.04**	**71**		P	**P**	**09 30 05.3**	**+1.1**
	comp=Z,7.1nm,0.9s,baz=240,slow=4.7,SNR=2.5							
USA0B	**Ussuriysk Arra**	**40.30**	**53**		P	**P**	**09 30 15.1**	**+0.6**
USRK	**Ussuriysk Ar.**	**40.30**	**53**		P	**P**	**09 30 14.3**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=256,slow=8.3,SNR=6.0							
KLR	**Kul'dur**	**41.12**	**46**		P	**P**	**09 30 22.1**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=290,slow=11,SNR=3.3							
NRIK	**Noril'sk**	**41.65**	**1**		P	**P**	**09 30 26.1**	**+0.8**
	comp=Z,9.9nm,0.7s,baz=145,slow=6.0,SNR=4.5							
NRIK	**Noril'sk**	**41.65**	**1**		P	**P**	**09 30 24.6**	**-0.7**
NRIK					IAmb	IAmb	09 30 27.2	
	comp=Z,14nm,0.9s							
BRTR	**Keskin Array B**	**44.41**	**300**		P	**P**	**09 30 49.9**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=64,slow=6.6,SNR=2.4							
BRTR	**Keskin Array B**	**44.41**	**300**		P	**P**	**09 30 47.7**	**-0.5**
JSD	**Sado**	**44.75**	**63**		P	**P**	**09 30 50.5**	**-0.3**
JSD					IAmb	IAmb	09 31 09.2	
	comp=Z,18nm,1.4s							
YAK	**Yakutsk**	**44.83**	**28**		P	**P**	**09 30 50.7**	**-0.2**
TIXI	**Tiksi**	**49.90**	**16**		P	**P**	**09 31 30.4**	**0.0**
	comp=Z,9.6nm,0.5s,baz=238,slow=4.7,SNR=14							
TIXI	**Tiksi**	**49.90**	**16**		P	**P**	**09 31 30.3**	**0.0**
TIXI					IAmb	IAmb	09 31 31.7	
	comp=Z,10nm,0.7s							
FIA1	**FINESS Array S**	**51.61**	**328**		P	**P**	**09 31 43.5**	**+0.1**
FIA1					IAmb	IAmb	09 31 48.7	
	comp=Z,20nm,1.3s							
FINES	**FINESS Array B**	**51.62**	**328**		P	**P**	**09 31 43.6**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=115,slow=7.2,SNR=5.1							
FINES	**FINESS Array B**	**51.62**	**328**		P	**P**	**09 31 43.9**	**+0.5**
MA2	**Magadan**	**53.31**	**35**		P	**P**	**09 32 01.2**	**+0.8**
ARCES	**ARCESS Array B**	**53.98**	**338**		P	**P**	**09 32 01.3**	**+0.4**
	comp=Z,3.4nm,0.7s,baz=107,slow=7.7,SNR=8.0							
PETK	**Petropavlovsk-**	**57.65**	**43**		P	**P**	**09 32 27.3**	**-0.2**
	comp=Z,6.5nm,0.9s,baz=284,slow=8.8,SNR=3.2							
GERES	**GERESS Array B**	**58.14**	**312**		P	**P**	**09 32 31.0**	**0.0**
	comp=Z,0.3nm,0.4s,baz=81,slow=8.2,SNR=1.3							
NC303	**NORSAR Array S**	**58.63**	**327**		P	**P**	**09 32 34.3**	**+0.2**
NOA	**NORSAR Array B**	**58.71**	**327**		P	**P**	**09 32 34.3**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=316,slow=13,SNR=2.2							
SPA0	**Spitsbergen Ar**	**58.85**	**347**		P	**P**	**09 32 36.5**	**+1.1**
NRCA	**Norcia**	**59.47**	**305**		P	**P**	**09 32 40.0**	**-0.4**
KNRA	**Kununurra**	**59.99**	**131**		P	**P**	**09 32 43.9**	**-0.2**
KNRA					IAmb	IAmb	09 32 45.6	
	comp=Z,13nm,1.2s							
KEST	**Kesra**	**63.99**	**298**		P	**P**	**09 33 12.1**	**+1.2**
	comp=Z,12nm,0.9s,baz=251,slow=3.4,SNR=4.0							
WRA	**Warramunga Arr**	**66.75**	**130**		P	**P**	**09 33 30.4**	**+1.6**
	comp=Z,1.9nm,0.6s,baz=316,slow=7.9,SNR=6.8							
ASAR	**Alice Springs**	**69.05**	**133**		P	**P**	**09 33 45.1**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=313,slow=6.4,SNR=2.3							
ESDC	**Sonseca Array**	**72.69**	**306**		P	**P**	**09 34 06.0**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=53,slow=6.7,SNR=2.1							
LBTB	**Lobatse**	**78.14**	**234**		P	**P**	**09 34 36.0**	**-0.8**
LBTB					IAmb	IAmb	09 34 38.5	
	comp=Z,6.0nm,0.8s							
NEA2	**Nenana**	**78.62**	**21**		P	**P**	**09 34 39.9**	**+1.2**
NEA2					IAmb	IAmb	09 34 52.4	
	comp=Z,5.3nm,1.0s							
MDM	**Murphy Dome**	**78.63**	**21**		P	**P**	**09 34 39.6**	**+0.8**
MDM					IAmb	IAmb	09 34 51.3	
	comp=Z,9.2nm,1.3s							
TORD	**Torodi Ar. Bea**	**78.82**	**279**		P	**P**	**09 34 40.6**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=48,slow=4.5,SNR=2.7							
ILAR	**Eielson Array**	**79.18**	**20**		P	**P**	**09 34 41.5**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=307,slow=5.2,SNR=4.5							
ILAR					PP	**PP**	**09 37 40.1**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=303,slow=5.9,SNR=4.6							
RND	**Reindeer**	**79.49**	**22**		P	**P**	**09 34 43.8**	**+0.1**
SKT	**Skwentna**	**79.52**	**24**		P	**P**	**09 34 44.6**	**+0.9**
BOSA	**Boshof**	**80.61**	**231**		P	**P**	**09 34 53.8**	**+3.6**
	comp=Z,1.7nm,0.8s,baz=29,slow=3.8,SNR=1.9							
PMR	**Palmer**	**80.63**	**23**		P	**P**	**09 34 50.5**	**+0.8**
SML	**Sawmill**	**80.76**	**23**		P	**P**	**09 34 51.6**	**+1.1**
SML					IAmb	IAmb	09 35 02.0	
	comp=Z,12nm,1.0s							
C36M	**Paulatuk**	**80.79**	**10**		P	**P**	**09 34 50.5**	**+0.1**
C36M					IAmb	IAmb	09 34 51.8	
	comp=Z,10nm,1.3s							
YKA	**Yellowknife Ar**	**88.61**	**9**		P	**P**	**09 35 31.9**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=340,slow=4.0,SNR=1.5							
TXAR	**Lajitas Array**	**122.54**	**10**		PKP	**PKPdf**	**09 41 33.0**	**-0.4**
	comp=Z,0.5nm,1.0s,baz=285,slow=2.4,SNR=4.1							
TXAR	**Lajitas Array**	**122.54**	**10**			**PKiKP**	**09 41 33.8**	**+0.2**

*IDC **25** 09:27:59.3±0.9,28°.01N×85°.19E, h0km, mb4.0/17, mb1 4.1/19, mb1mx3.9/51, mbtmp4.0/19, ML4.6/2, Error ellipse: s-maj=23.9km s-min=15.3km az=49.0*
*NEIC **25** 09:28:00.1±1.7,28°.01N±0°.09×85°.31E±0°.07, h10km±1km, mb4.4/32, Error ellipse: s-maj=16.0km s-min=9.5km az=195.0*
*DMN **25** 09:28:02.0±0.5,28°.08N×85°.29E, h10km, Ml4.8/3, Error ellipse: s-maj=9.4km s-min=3.0km az=44.0*

ISC 25 09:28:01.5±1.0,**28°.04N**±0°.04×**85°.27E**±0°.04,**h18**km±5km,
n71,σ0**8**4/78,**mb4.1**/29,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.25**	**177**	*eP*		**Pg**	**09 28 08.1**	**+0.7**
KKN				*eSg*		**Sg**	**09 28 11.7**	**+0.3**
DMN	**Daman**	**0.45**	**198**	*eP*		**Pn**	**09 28 11.7**	**-1.7**
DMN				*eSg*		**Sb**	**09 28 18.7**	**+1.0**
PKI	**Pulchoki**	**0.48**	**165**	*eP*		**Pn**	**09

DANN	**Dangsing**	**1.61**	**285**	*e*Pg		**Pg**	**09 31 00.5**	**+0.5**
DANN				*e*Sg		**Sg**	**09 31 22.5**	**+1.6**
	11μm,0.4s							
KOLN	**Koldanda**	**1.71**	**265**	*e*Pg		**Pg**	**09 31 02.6**	**+0.6**
KOLN				*e*Sg		**Sg**	**09 31 25.7**	**+1.5**
	6μm,0.3s							
ODAN	**Odare**	**1.98**	**122**	*e*Pg		**Pb**	**09 31 05.6**	**+0.2**
ODAN				*e*Sg		**Sg**	**09 31 31.4**	**-1.4**
	11μm,0.4s							
TAPN	**Taplejung**	**2.03**	**106**	*e*Pg		**Pb**	**09 31 06.5**	**+0.2**
TAPN				*e*Sg		**Sb**	**09 31 31.8**	**+0.1**
	11μm,0.4s							
PYUN	**Piuthan**	**2.24**	**275**	*e*Pg		**Pg**	**09 31 13.0**	**+0.8**
PYUN				*e*Sg		**Sg**	**09 31 42.5**	**+1.2**
	17μm,0.5s							
GTK	**Tadong**	**2.80**	**102**	*e*P		**Pb**	**09 31 17.5**	**-1.9**
GTK				*e*S		**Sn**	**09 31 50.6**	**+2.5**
GTK				IAML			09 31 57.1	
	comp=N,6μm,0.3s							
GTK				IAML			09 31 58.1	
	comp=E,4μm,0.2s							
DHUB	**DHUBRI**	**4.43**	**115**	*e*P		**Pn**	**09 31 37.6**	**+1.3**
DHUB				*e*S		**Sn**	**09 32 27.0**	**-0.9**
DHUB				IAML			09 32 28.3	
	comp=E,1μm,0.4s							
LSA	**Lhasa**	**5.24**	**69**	Pg		Pb	09 31 56.0	-5.1
LSA				Sn		**Sn**	**09 32 47.5**	**-1.2**
LSA	**Lhasa**	**5.24**	**69**	P		**Pn**	**09 31 47.4**	**-0.6**
LSA	**Lhasa**	**5.24**	**69**	Pn		**Pn**	**09 31 47.4**	**-0.6**
GUWA	**GUWAHATI**	**5.77**	**106**⇓	*e*P		**Pn**	**09 31 56.4**	**+1.6**
GUWA				*e*S		**Sn**	**09 32 59.4**	**-1.6**
GUWA				IAML			09 33 03.4	
	comp=E,800nm,0.4s							
GUWA				IAML			09 33 03.4	
	comp=N,848nm,0.5s							
SHL	**Shillong**	**6.16**	**111**	P		**Pn**	**09 32 00.7**	**+0.4**
SHL	**Shillong**	**6.16**	**111**	*e*P		**Pn**	**09 32 01.0**	**+0.7**
SHL				*e*S		**Sn**	**09 33 06.3**	**-4.6**
SHL				IAML			09 33 13.4	
	comp=E,498nm,0.2s							
SHL	**Shillong**	**6.16**	**111**	Pn		**Pn**	**09 32 00.7**	**+0.4**
AGT	**Agartala**	**6.55**	**127**	*e*P		**Pn**	**09 32 08.4**	**+2.9**
AGT				IAML			09 33 28.0	
	comp=N,656nm,0.6s							
AGT				IAML			09 33 29.6	
	comp=E,521nm,0.3s							
TEZP	**TEZPUR**	**6.61**	**100**⇑	*e*P		**Pn**	**09 32 07.2**	**+0.9**
TEZP				*e*S		**Sn**	**09 33 19.8**	**-1.9**
DDI	**Dehra Dun**	**6.95**	**292**	*e*P		**Pn**	**09 32 13.9**	**+2.9**
DDI				*e*S		**Sn**	**09 33 29.6**	**-0.6**
DDI				IAML			09 33 33.8	
	comp=N,3μm,0.4s							
DDI				IAML			09 33 34.3	
	comp=E,1μm,0.4s							
BELO	**BELONIA**	**7.10**	**130**	*e*P		**Pn**	**09 32 15.8**	**+2.7**
BELO				*e*S		**Sn**	**09 33 32.1**	**-1.7**
ITAN	**ITANAGAR**	**7.32**	**94**	*e*P		**Pn**	**09 32 19.4**	**+3.2**
ITAN				*e*S		**Sn**	**09 33 37.7**	**-1.7**
NDI	**New Delhi**	**7.36**	**278**	*e*P		**Pn**	**09 32 19.0**	**+2.4**
NDI				*e*S		**Sn**	**09 33 38.0**	**-2.2**
ZIRO	**ZIRO**	**7.39**	**91**	*e*P		**Pn**	**09 32 19.2**	**+2.0**
ZIRO				*e*S		**Sn**	**09 33 37.7**	**-3.6**
ZIRO				IAML			09 33 47.1	
	comp=N,3μm,0.4s							
ZIRO				IAML			09 33 48.0	
	comp=E,4μm,0.4s							
SMLA	**Simla**	**7.94**	**296**⇑	*e*P		**Pn**	**09 32 26.6**	**+2.0**
SMLA				*e*S		**Sn**	**09 33 52.3**	**-2.2**
SMLA				IAML			09 33 57.1	
	comp=N,610nm,0.4s							
SMLA				IAML			09 34 02.0	
	comp=E,694nm,0.5s							
KOHI	**KOHIMA**	**7.98**	**104**	*e*P		**Pn**	**09 32 27.1**	**+1.8**
KOHI				*e*S		**Sn**	**09 33 52.7**	**-3.1**
KOHI				IAML			09 33 58.3	
	comp=E,710nm,0.5s							
KOHI				IAML			09 33 59.7	
	comp=N,673nm,0.8s							
BHPL	**Bhopal**	**8.68**	**239**	*e*P		**Pn**	**09 32 31.5**	**-3.3**
BHPL				*e*S		**Sn**	**09 34 05.2**	**-7.5**
BHPL				*e*S			09 34 05.9	
BHPL				IAML			09 34 11.8	
	comp=E,714nm,0.3s							
BHPL				IAML			09 34 13.2	
	comp=N,793nm,0.3s							
DHRM	**DHARAMSHALA**	**9.07**	**301**	*e*P		**Pn**	**09 32 39.2**	**-1.1**
DHRM				*e*S		**Sn**	**09 34 19.0**	**-3.6**
DHRM				IAML			09 34 24.7	
	comp=N,783nm,0.6s							
DHRM				IAML			09 34 24.9	
	comp=E,775nm,0.5s							
LKP	**Lekhapani**	**9.18**	**91**⇑	*e*P		**Pn**	**09 32 42.3**	**+0.7**
LKP				*e*S		**Sn**	**09 34 19.6**	**-5.4**
AJM	**Ajmer**	**9.79**	**264**	*e*P		**Pn**	**09 32 50.0**	**-0.1**
AJM				*i* S		**Sn**	**09 34 32.0**	**-8.2**
NIL	**Nilore**	**11.98**	**301**	P		**Pn**	**09 33 18.6**	**-1.5**
NIL	**Nilore**	**11.98**	**301**	Pn		**Pn**	**09 33 18.6**	**-1.5**
NIL	**Nilore**	**11.98**	**301**	⇓P		**Pn**	**09 33 19.2**	**-0.8**
HYB	**Hyderabad**	**12.29**	**213**	*i* P		**Pn**	**09 33 22.0**	**-2.2**
KSH	**Kashi**	**14.01**	**328**	P		**Pn**	**09 33 45.0**	**-2.7**
KSH				pmax	pmax			
	comp=E,46nm,0.8s							
MHMT	**Maesarieng**	**14.98**	**128**	P		**Pn**	**09 34 02.6**	**+1.6**
	comp=E,0.3nmcomp=E,87nm,0.6s							
BHUJ	**Bhuj**	**15.05**	**256**	*e*P		**Pn**	**09 33 59.1**	**-2.9**
BHUJ				*e*S		**Sn**	**09 36 39.5**	**-9.3**
CHTO	**Chiang Mai**	**15.30**	**124**	P		**Pn**	**09 34 05.9**	**+0.7**
CHTO				pmax	pmax			
	comp=Z,65nm,1.5s							
CHTO	**Chiang Mai**	**15.30**	**124**			**Pn**	**09 34 05.9**	**+0.7**
CHTO				IAmb		IAmb	09 34 21.9	
	comp=Z,65nm,1.4s							
CM33	**Chiang Mai Arr**	**15.30**	**124**	P		**P**	**09 34 12.0**	**+1.9**
CMMT	**Chiang Mai**	**15.30**	**124**	P		**P**	**09 34 10.3**	**+0.2**
	comp=Z,16nm,1.0s							
CM32	**Chiang Mai Arr**	**15.33**	**124**	P		**P**	**09 34 12.0**	**+1.6**
CM34	**Chiang Mai Arr**	**15.43**	**123**	P		**P**	**09 34 12.0**	**+0.5**
CM15	**Chiang Mai Arr**	**15.51**	**125**	P		**P**	**09 34 18.9**	**+6.5**
CM13	**Chiang Mai Arr**	**15.52**	**125**	P		**Pn**	**09 34 09.0**	**+0.9**
	comp=Z,0.1nmcomp=Z,225nmcomp=Z,28nm,0.7s							
CM31	**Chiang Mai Arr**	**15.52**	**125**	P		**P**	**09 34 14.0**	**+1.4**
	comp=Z,3.2nmcomp=Z,759nm,0.6s							
CM31	**Chiang Mai Arr**	**15.52**	**125**	Pn		**Pn**	**09 34 07.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**15.52**	**125**	Pn		**Pn**	**09 34 06.0**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=313,slow=13,SNR=9.0							
CMAR	**Chiang Mai Arr**	**15.52**	**125**	*i* P		**Pn**	**09 34 07.1**	**-1.1**
CMAR				pmax	pmax			
	comp=Z,3.0nm,0.4s							
CM35	**Chiang Mai Arr**	**15.54**	**123**	P		**P**	**09 34 13.0**	**+0.3**
CM02	**Chiang Mai Arr**	**15.54**	**125**	P		**P**	**09 34 13.0**	**+0.2**
	comp=Z,0.1nmcomp=Z,202nmcomp=Z,24nm,1.1s							
KBL	**Kabul**	**15.55**	**299**	P		**Pn**	**09 34 06.4**	**-2.2**
KBL				pmax	pmax			
	comp=Z,97nm,1.0s							
KBL	**Kabul**	**15.55**	**299**	Pn		**Pn**	**09 34 06.4**	**-2.2**
KBL				IAmb		IAmb	09 34 15.2	
	comp=Z,97nm,0.9s							
CM01	**Chiang Mai Arr**	**15.56**	**125**	P		**P**	**09 34 13.4**	**+0.5**
	comp=Z,0.1nmcomp=Z,304nmcomp=Z,34nm,0.8s							
CM05	**Chiang Mai Arr**	**15.56**	**125**	P		**P**	**09 34 13.0**	**0.0**
	comp=Z,0.1nmcomp=Z,186nmcomp=Z,21nm,0.8s							
CM09	**Chiang Mai Arr**	**15.56**	**125**	P		**P**	**09 34 13.6**	**+0.5**
	comp=Z,0.1nmcomp=Z,282nmcomp=Z,30nm,0.6s							
CM04	**Chiang Mai Arr**	**15.59**	**125**	P		**P**	**09 34 13.0**	**-0.3**
	comp=Z,0.1nmcomp=Z,340nmcomp=Z,35nm,0.7s							
CM36	**Chiang Mai Arr**	**15.59**	**124**	P		**P**	**09 34 13.0**	**-0.4**
PRZ	**Przheval'sk**	**15.62**	**340**	P		**Pn**	**09 34 08.8**	**-0.8**
PRZ				pmax	pmax			
	comp=Z,36nm,0.6s							
PRZ	**Przheval'sk**	**15.62**	**340**			**Pn**	**09 34 08.8**	**-0.8**
PRZ				IAmb		IAmb	09 34 19.6	
	comp=Z,36nm,0.6s							
KMI	**Kunming**	**15.66**	**96**	⇓P		**P**	**09 34 14.3**	**-0.1**
KMI				sP		pP	09 34 18.0	+0.1
KMI				pmax	pmax			
	comp=Z,13nm,0.8s							
KMI	**Kunming**	**15.66**	**96**	P		**Pn**	**09 34 10.5**	**+0.3**
KMI				pmax	pmax			
	comp=Z,23nm,0.5s							
KMI	**Kunming**	**15.66**	**96**			**Pn**	**09 34 10.5**	**+0.3**
KDJ	**Kajisay**	**15.71**	**337**	P		**Pn**	**09 34 09.4**	**-1.2**
KDJ				pmax	pmax			
	comp=Z,58nm,0.8s							
KDJ	**Kajisay**	**15.71**	**337**	Pn		**Pn**	**09 34 09.4**	**-1.2**
KDJ				IAmb		IAmb	09 34 19.5	
	comp=Z,58nm,0.8s							
WMQ	**Urumqi**	**15.95**	**6**	*e*P		**Pn**	**09 34 12.3**	**-1.3**
WMQ				pP		P	09 34 19.0	+1.8
WMQ				sP		**sP**	09 34 22.0	-1.1
WMQ				PP		**PnPn**	**09 34 26.5**	**+4.2**
WMQ				pmax	pmax			
	comp=Z,43nm,1.3s							
WMQ	**Urumqi**	**15.95**	**6**	P		**Pn**	**09 34 13.2**	**-0.4**
WMQ				pmax	pmax			
	comp=Z,60nm,0.7s							
WMQ	**Urumqi**	**15.95**	**6**			**Pn**	**09 34 13.2**	**-0.4**
WMQ				IAmb		IAmb	09 34 20.2	
	comp=Z,60nm,0.7s							
SHLS	**Shalkode**	**15.96**	**344**	*i* P		**Pn**	**09 34 11.1**	**-2.7**
	comp=Z,33nm,0.7s,baz=345							
UZB	**Uzynbulak**	**16.06**	**343**	*e*P		**Pn**	**09 34 14.3**	**-0.9**
	baz=343							
UZB	**Uzynbulak**	**16.06**	**343**	*e*P		**Pn**	**09 34 14.3**	**-0.9**
SATY	**Saty**	**16.15**	**341**	*e*P		**Pn**	**09 34 14.8**	**-1.5**
	baz=341							
SATY	**Saty**	**16.15**	**341**	*e*P		**Pn**	**09 34 14.8**	**-1.5**
ULHL	**Ulahol**	**16.15**	**335**	P		**Pn**	**09 34 15.6**	**-0.8**
	SNR=13							
CD2	**Chengdu**	**16.16**	**75**	P		**Pn**	**09 34 15.0**	**-1.5**
CD2				pmax	pmax			
	comp=Z,420nm,1.4s							
BOOM	**Boomskoye usch**	**16.48**	**334**	P		**Pn**	**09 34 19.3**	**-1.2**
BOOM				pmax	pmax			
	comp=Z,22nm,0.7s							
BOOM	**Boomskoye usch**	**16.48**	**334**	Pn		**Pn**	**09 34 19.3**	**-1.2**
GTA	**Gaotai**	**16.48**	**42**	⇑P		**P**	**09 34 23.3**	**0.0**
GTA				pP		sP	09 34 28.0	-0.3
GTA				sP		pP	09 34 31.0	+4.3
GTA				pmax	pmax			
	comp=Z,50nm,1.0s							
TNSS	**Tian-Shan**	**16.59**	**337**	*e*P		**Pn**	**09 34 20.9**	**-1.3**
	baz=338							
TNSS	**Tian-Shan**	**16.59**	**337**	*e*P		**Pn**	**09 34 20.8**	**-1.3**
NANT	**Nan**	**16.63**	**120**	P		**P**	**09 34 27.0**	**+2.2**
	comp=Z,279nm,0.7s							
SUKH	**Sukhothai**	**16.65**	**126**	P		**P**	**09 34 26.0**	**+0.9**
	comp=Z,0.1nmcomp=Z,40nm,0.6s							
MDOK	**Medeo**	**16.67**	**338**	*e*P		**Pn**	**09 34 21.9**	**-1.0**
	baz=338							
MDOK	**Medeo**	**16.67**	**338**	*e*P		**Pn**	**09 34 21.9**	**-1.0**
AAA	**Alma-Ata**	**16.75**	**338**	*e*P		**Pn**	**09 34 23.5**	**-0.4**
	comp=Z,25nm,0.5s,baz=338							
AAA	**Alma-Ata**	**16.75**	**338**	*e*P		**Pn**	**09 34 23.5**	**-0.4**
AAA				pmax	pmax			
	comp=Z,25nm,0.5s							
UCH	**Uchtor**	**16.84**	**331**	P		**Pn**	**09 34 24.9**	**-0.6**
	SNR=20							
TKM2	**Tokmak 2**	**16.98**	**334**	P		**Pn**	**09 34 26.2**	**-0.7**
	SNR=7.1							
UMPA	**Umpang Tak**	**16.99**	**131**	P		**P**	**09 34 32.9**	**+4.0**
	comp=Z,37nm,0.6s							
KBK	**Karagaybulak**	**17.01**	**332**	P		**P**	**09 34 31.8**	**+2.6**
	SNR=23							
AML	**Almayashu**	**17.13**	**329**	P		**Pn**	**09 34 27.2**	**-1.8**
	SNR=11							
UTTA	**Uttaradit**	**17.16**	**123**	P		**P**	**09 34 31.1**	**+0.5**
	comp=Z,40nm,0.8s							
AAK	**Ala-Archa**	**17.18**	**331**	P		**Pn**	**09 34 30.2**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=196,slow=8.6,SNR=11							
AAK	**Ala-Archa**	**17.18**	**331**	P		**P**	**09 34 32.0**	**+0.9**
	SNR=5.8							
AAK	**Ala-Archa**	**17.18**	**331**⇓	*e*P		**P**	**09 34 31.2**	**+0.2**
AAK	**Ala-Archa**	**17.18**	**331**	P		**Pn**	**09 34 28.0**	**-1.4**
FRU1	**Bishkek**	**17.27**	**332**	P		**Pn**	**09 34 29.8**	**-0.6**
FRU1				pmax	pmax			
	comp=Z,29nm,0.6s							
FRU1	**Bishkek**	**17.27**	**332**	P		**Pn**	**09 34 29.8**	**-0.6**
PHIT	**Phitsanulok**	**17.41**	**125**	P		P	09 34 41.8	+8.3
EKS2	**Erkin-Say**	**17.51**	**330**	P		**P**	**09 34 36.0**	**+1.4**
	SNR=11							
LZH	**Lanzhou**	**17.52**	**58**	*e*P		**Pn**	**09 34 30.8**	**-2.8**
LZH				pP		P	09 34 33.5	-1.3
LZH				sP		pP	09 34 35.8	-2.5
LZH				PP		**PnPn**	**09 34 44.5**	**+0.6**
LZH				pmax	pmax			
	comp=Z,48nm,1.1s							
USP	**Ospenovka**	**17.70**	**333**	P		**P**	**09 34 36.5**	**-0.2**
	SNR=9.2							
SGDS	**Sogindy**	**17.80**	**333**	*e*P		**Pn**	**09 34 36.4**	**-0.7**
	baz=333							
SGDS	**Sogindy**	**17.80**	**333**	*e*P		**Pn**	**09 34 36.3**	**-0.7**
UTHA	**Uthaitani**	**17.84**	**131**	P		**P**	**09 34 39.5**	**+1.2**
	comp=Z,22nm,0.7s							
SLVN	**Son La**	**17.95**	**107**	P		**Pn**	**09 34 39.0**	**+0.1**
TDK	**Taldyqorghan**	**17.95**	**343**	*e*P		**Pn**	**09 34 38.1**	**-0.8**
	baz=343							
TDK	**Taldyqorghan**	**17.95**	**343**	*e*P		**Pn**	**09 34 38.0**	**-0.8**
DZA	**Taraz**	**18.84**	**326**	*e*P		**P**	**09 34 48.2**	**-0.9**
	baz=326							
DZA	**Taraz**	**18.84**	**326**	*e*P		**P**	**09 34 48.2**	**-0.9**
TAS	**Tashkent**	**18.84**	**319**	P		**P**	**09 34 47.7**	**-1.5**
TAS				pmax	pmax			
	comp=Z,104nm,0.7s							
TAS	**Tashkent**	**18.84**	**319**	P		**P**	**09 34 47.7**	**-1.5**
TAS				IAmb		IAmb	09 34 53.4	
	comp=Z,104nm,0.7s							
GYA	**Guiyang**	**18.86**	**90**	⇑P		**Pn**	**09 34 51.5**	**+1.3**
GYA				S		**Sn**	**09 38 19.8**	**-1.7**
GYA				pmax	pmax			
	comp=Z,14nm,1.0s							
NONG	**Nongkai**	**18.95**	**117**	P		**Pn**	**09 34 56.0**	**+4.9**
	comp=Z,30nm,0.6s							
IUG	**Iuzhnay**	**18.98**	**322**	*e*P		**P**	**09 34 49.2**	**-1.6**
	baz=322							
IUG	**Iuzhnay**	**18.98**	**322**	*e*P		**P**	**09 34 49.2**	**-1.6**
MK31	**Makanchi Array**	**18.99**	**353**	*d* P		**Pn**	**09 34 51.8**	**+0.3**
MK31	**Makanchi Array**	**18.99**	**353**	P		**P**	**09 34 50.8**	**0.0**
MK31				IAmb		IAmb	09 34 55.8	
	comp=Z,36nm,0.6s							
MKAR	**Makanchi Array**	**18.99**	**353**	P		**Pn**	**09 34 51.9**	**+0.4**
	comp=Z,10nm,0.3s,baz=171,slow=12,SNR=142							
MKAR	**Makanchi Array**	**18.99**	**353**			**P**	**09 34 50.9**	**+0.1**
MAKZ	**Makanchi**	**19.04**	**353**	P		**Pn**	**09 34 52.2**	**+0.1**
MAKZ				pmax	pmax			
	comp=Z,50nm,0.7s							
MAKZ	**Makanchi**	**19.04**	**353**	P		**Pn**	**09 34 52.2**	**+0.1**
MAKZ				IAmb		IAmb	09 34 54.4	
	comp=Z,50nm,0.7s							
CHM	**Chimkent**	**19.33**	**322**	*e*P		**P**	**09 34 53.7**	**-0.8**
	baz=322							
CHM	**Chimkent**	**19.33**	**322**	*e*P		**P**	**09 34 53.7**	**-0.8**
BTLS	**Baital**	**19.37**	**335**	*e*P		**P**	**09 34 54.4**	**-0.5**
	baz=335							
BTLS	**Baital**	**19.37**	**335**	*e*P		**P**	**09 34 54.3**	**-0.5**
CHAI	**Chaiyaphum**	**19.38**	**125**	P		**Pn**	**09 35 02.0**	**+5.6**
	comp=Z,562nmcomp=Z,42nm,0.8s							
KK31	**Karatay Array**	**19.40**	**325**	P		**P**	**09 34 54.5**	**-0.8**
KK31				pmax	pmax			
	comp=Z,16nm,0.8s							
KK31	**Karatay Array**	**19.40**	**325**	P		**P**	**09 34 54.5**	**-0.8**
KKAR	**Karatay Array**	**19.40**	**325**	P		**P**	**09 34 54.3**	**-1.0**
KKAR				pmax	pmax			
	comp=Z,16nm,0.8s							
KKAR	**Karatay Array**	**19.40**	**325**	P		**P**	**09 34 54.3**	**-1.0**
KKAR	**Karatay Array**	**19.40**	**325**	P		**P**	**09 34 54.3**	**-1.0**
ZSN	**Zaisan**	**19.48**	**359**	*e*P		**P**	**09 34 55.5**	**-0.7**
	baz=359							
ZSN	**Zaisan**	**19.48**	**359**	*e*P		**P**	**09 34 55.5**	**-0.7**
MALK	**Mahakanadarawa**	**20.00**	**195**	⇓P		Pn	09 35 05.4	+1.7
PATY	**Pattaya**	**20.70**	**133**	P		Pn	09 35 17.8	+5.9
	comp=Z,61nm,0.8s							
HRA	**Herat**	**20.91**	**294**	P		**P**	**09 35 11.7**	**-0.3**
XAN	**Xi'an**	**20.94**	**67**	P		**P**	**09 35 12.5**	**+0.3**
XAN				pP		pP	09 35 15.5	-0.2
XAN				pmax	pmax			
	comp=Z,25nm,0.8s							
XAN	**Xi'an**	**20.94**	**67**	P		**P**	**09 35 12.5**	**+0.3**
XAN				pmax	pmax			
	comp=Z,19nm,0.6s							
XAN	**Xi'an**	**20.94**	**67**	P		**P**	**09 35 12.5**	**+0.3**
PALK	**Pallekele**	**21.06**	**193**	P		**P**	**09 35 20.1**	**+6.6**
	comp=Z,31nm,0.6s,baz=113,slow=12,SNR=24							
PALK				S		**S**	**09 39 03.4**	**-4.6**
	comp=Z,8.4nm,0.5s,baz=36,slow=20,SNR=2.8							
PALK	**Pallekele**	**21.06**	**193**	P		**P**	**09 35 20.2**	**+6.7**
PALK				pmax	pmax			
	comp=Z,32nm,0.6s							
PALK	**Pallekele**	**21.06**	**193**			**P**	**09 35 20.2**	**+6.7**
PALK				IAmb		IAmb	09 35 21.6	
	comp=Z,32nm,0.6s							
PALK	**Pallekele**	**21.06**	**193**	⇓P		**P**	**09 35 20.4**	**+6.9**
ENH	**Enshi**	**21.06**	**78**	P		**P**	**09 35 13.4**	**-0.1**
ENH				IAmb		IAmb	09 35 14.9	
	comp=Z,57nm,0.6s							
DGZ	**Jazzator, Alta**	**21.78**	**3**⇑	*i* P		**P**	**09 35 22.4**	**+1.2**
DGZ				pmax	pmax			
	comp=Z,78nm,0.7s							
UBPT	**Khong Chiam**	**22.38**	**120**	P		P	09 35 34.8	+7.2
UBPT	**Khong Chiam**	**22.38**	**120**	P		**P**	**09 35 28.4**	**+0.7**
SEM	**Semipalatinsk**	**22.80**	**351**	*e*P		**P**	**09 35 31.8**	**-0.3**
	comp=Z,17nm,0.6s,baz=351							
SEM	**Semipalatinsk**	**22.80**	**351**	*e*P		**P**	**09 35 31.8**	**-0.3**
SEM				pmax	pmax			
	comp=Z,17nm,0.6s							
KURBB	**Kurchatov Arra**	**23.27**	**349**	P		**P**	**09 35 37.9**	**+1.2**
	comp=Z,40nm,0.7s,baz=170,slow=9.8,SNR=149							
KURBB				ScP		**ScP**	**09 42 59.9**	**-2.3**
	comp=Z,1.0nm,0.8s,baz=184,slow=2.4,SNR=5.7							
KURK	**Kurchatov**	**23.34**	**349**	P		**P**	**09 35 37.9**	**+0.4**
KURK	**Kurchatov**	**23.34**	**349**	P		**P**	**09 35 37.9**	**+0.4**
QIZ	**Qiongzhong**	**23.97**	**106**	P		**P**	**09 35 45.0**	**+1.2**
BRZS	**Berezniki**	**24.10**	**339**	*e*P		**P**	**09 35 44.0**	**-0.8**
	baz=339							
BRZS	**Berezniki**	**24.10**	**339**	*e*P		**P**	**09 35 44.0**	**-0.8**
WSAR	**Wadi Sarin**	**24.68**	**265**	P		**P**	**09 35 50.9**	**+0.5**
	comp=Z,5.2nm,0.7s,baz=124,slow=5.5,SNR=4.9							
HHC	**Hu-ho-hao-te**	**24.95**	**52**	*e*P		**P**	**09 35 53.8**	**+1.1**
HHC				pmax	pmax			
	comp=Z,28nm,1.2s							
GEYT	**Alibeck**	**24.99**	**300**	P		**P**	**09 35 55.0**	**+2.0**
	comp=Z,9.7nm,0.8s,baz=146,slow=8.6,SNR=8.5							
GYA0B	**ALIBECK ARRAY**	**24.99**	**300**	P		**P**	**09 35 52.5**	**-0.5**
GYA0B				IAmb		IAmb	09 36 21.4	
	comp=Z,16nm,0.7s							
SONM	**Songino Array**	**25.66**	**34**	P		**P**	**09 36 00.9**	**+1.8**
	comp=Z,36nm,0.5s,baz=223,slow=10.0,SNR=157							
SONM	**Songino Array**	**25.66**	**34**	P		**P**	**09 35 59.3**	**+0.2**
SONM				IAmb		IAmb	09 36 03.7	
	comp=Z,42nm,1.2s							
ZAA0	**Zalesovo Array**	**25.99**	**359**	P		**P**	**09 36 02.7**	**+0.8**
ZALV	**Zalesovo Beam**	**25.99**	**359**	P		**P**	**09 36 02.8**	**+0.9**
	comp=Z,48nm,0.6s,baz=184,slow=9.5,SNR=110							
ZALV	**Zalesovo Beam**	**25.99**	**359**	*i* P		**P**	**09 36 02.7**	**+0.8**
ZALV				pmax	pmax			
	comp=Z,48nm,0.6s							
ULN	**Ulaanbaatar**	**26.01**	**34**	*ce*P		**P**	**09 36 03.6**	**+1.3**
ULN				pmax	pmax			
	comp=Z,112nm,1.5s							
ULN	**Ulaanbaatar**	**26.01**	**34**	P		**P**	**09 36 03.0**	**+0.7**
ZAK	**Zakamensk**	**26.17**	**26**	*e*P		**P**	**09 36 04.3**	**+0.6**
ZAK				pmax	pmax			
	comp=Z,24nm,1.3s							
MOY	**Mondy**	**26.40**	**22**	*e*P		**P**	**09 36 07.7**	**+1.9**
MOY				pmax	pmax			
	comp=Z,67nm,2.7s							
KULM	**Kulim**	**26.72**	**145**	P		**P**	**09 36 09.0**	**+0.2**
KULM				IAmb		IAmb	09 36 19.5	
	comp=Z,53nm,1.1s							
TLY	**Talaya**	**27.35**	**25**	P		**P**	**09 36 15.5**	**+1.3**
	comp=Z,3.9nm,0.6s,baz=222,slow=8.5,SNR=8.5							
TLY	**Talaya**	**27.35**	**25**⇑	*i* P		**P**	**09 36 16.3**	**+2.1**
TLY				pmax	pmax			
	comp=Z,25nm,2.4s							
TLY	**Talaya**	**27.35**	**25**	P		**P**	**09 36 13.4**	**-0.8**
BVAR	**Borovoye Array**	**27.46**	**340**	P		**P**	**09 36 16.1**	**+0.9**
	comp=Z,3.8nm,0.6s,baz=198,slow=8.9,SNR=15							
BVAR				PcP		**PcP**	**09 39 33.9**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=221,slow=11,SNR=3.6							
BVAR				ScP		**ScP**	**09 43 12.3**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=226,slow=7.7,SNR=4.1							
BRVK	**Borovoye**	**27.52**	**340**⇓	*i* P		**P**	**09 36 16.9**	**+1.2**
BRVK	**Borovoye**	**27.52**	**340**	P		**P**	**09 36 16.4**	**+0.7**
BRVK	**Borovoye**	**27.52**	**340**	⇓P		**P**	**09 36 16.9**	**+1.2**
IPM	**Ipoh**	**27.61**	**145**	P		**P**	**09 36

MARD **Mardin** 38.52 296 P **P** 09 37 52.9 +1.0
MARD IAmb IAmb 09 37 54.4
comp=Z,28nm,0.6s
KOPT **Kop Dagi** 38.85 300 P **P** 09 37 55.2 +0.3
JNU **Nakatsue** 39.18 71 P **P** 09 37 57.8 +0.4
comp=Z,8.6nm,0.7s,baz=4.3,slow=6.9,SNR=4.4
JNU **Nakatsue** 39.18 71 IAmb IAmb 09 38 00.3
comp=Z,28nm,1.3s
KIRV **Kirov** 39.52 331 P **P** 09 38 00.7 +0.9
comp=Z,24nm,0.6s,baz=24,slow=1.7,SNR=6.6
KIRV **Kirov** 39.52 331⇑ *eP* **P** 09 38 00.8 +1.1
ZEA **Zeya** 39.90 38 *eP* **P** 09 38 04.1 +1.1
ZEA pmax pmax
comp=Z,10.0nm,0.7s
USA0B **Ussuriysk Arra** 40.35 54 P **P** 09 38 07.4 +0.5
USA0B pmax pmax
comp=Z,9.0nm,1.1s
USA0B **Ussuriysk Arra** 40.35 54 P **P** 09 38 07.4 +0.5
USRK **Ussuriysk Ar.** 40.35 54 P **P** 09 38 07.1 +0.2
comp=Z,1.8nm,0.6s,baz=268,slow=7.0,SNR=8.1
USRK **Ussuriysk Ar.** 40.35 54 P **P** 09 38 07.6 +0.7
USRK **Ussuriysk Ar.** 40.35 54 P **P** 09 38 07.5 +0.7
JHS **Saijyo** 40.89 68 P **P** 09 38 11.8 +0.2
KLR **Kul'dur** 41.13 46 P **P** 09 38 13.5 +0.2
comp=Z,9.8nm,0.5s,baz=266,slow=9.6,SNR=67
GAZ **Gaziantep** 41.37 296 P **P** 09 38 16.3 +0.8
GAZ IAmb IAmb 09 38 18.1
comp=Z,24nm,1.0s
NRIK **Noril'sk** 41.45 1 P **P** 09 38 17.0 +1.4
comp=Z,42nm,0.7s,baz=169,slow=5.4,SNR=56
NRIK **Noril'sk** 41.45 1 *ceP* **P** 09 38 16.9 +1.3
NRIK pmax pmax
comp=Z,44nm,0.7s
NRIK **Noril'sk** 41.45 1 P **P** 09 38 16.8 +1.1
JMN **Monobe** 41.62 70 P **P** 09 38 18.6 +1.0
JWT **Wachi** 42.74 67 P **P** 09 38 27.2 +0.5
JWT IAmb IAmb 09 38 50.8
comp=Z,29nm,1.5s
ATD **Arta Tunnel** 43.11 256 P **P** 09 38 29.1 -0.8
ATD IAmb IAmb 09 38 37.0
comp=Z,18nm,0.9s
MMAI **Mount Meron Ar** 43.16 290 P **P** 09 38 32.4 +2.2
comp=Z,1.0nm,0.4s,baz=60,slow=12,SNR=5.0
BZK **Bozkurt** 43.86 303 ⇓P **P** 09 38 37.1 +1.6
MOS **Moscow** 43.96 323 *eP* **P** 09 38 33.4 -2.7
EIL **Elat** 44.06 285 P **P** 09 38 38.6 +1.2
comp=Z,4.5nm,0.6s,baz=84,slow=6.5,SNR=3.5
BR131 **Keskin Array S** 44.12 299 P **P** 09 38 37.4 -0.5
BR131 pmax pmax
comp=Z,10.0nm,1.1s
BR131 **Keskin Array S** 44.12 299 P **P** 09 38 37.4 -0.5
BRTR **Keskin Array B** 44.12 299 P **P** 09 38 38.9 +1.0
comp=Z,2.1nm,0.4s,baz=99,slow=7.6,SNR=10
BRTR **Keskin Array B** 44.12 299 P **P** 09 38 37.3 -0.5
MRSI **Marisa** 44.29 122 P **P** 09 38 39.3 0.0
comp=Z,3µmcomp=Z,39nm,0.7s
MRSI pP **sP** 09 38 44.4 -0.6
comp=Z,3µmcomp=Z,39nm,0.7s
OBN **Obninsk** 44.34 322 P **P** 09 38 39.0 -0.2
comp=Z,9.4nm,0.4s,baz=136,slow=19,SNR=7.2
OBN **Obninsk** 44.34 322 ⇓ *iP* **P** 09 38 39.7 +0.5
OBN *e**PP **pP** 09 38 43.1 +0.1
OBN *e**SP **sP** 09 38 45.2 +0.7
OBN *e* 09 40 23.8
OBN *e*PPP PPP 09 40 59.8
OBN pmax pmax
comp=Z,43nm,0.7s
OBN **Obninsk** 44.34 322 P **P** 09 38 38.8 -0.4
GRNR **Gornyy** 44.41 45⇑ *iP* **P** 09 38 40.1 +0.2
GRNR pmax pmax
comp=Z,20nm,0.6s
GRNR MLR MLR
comp=E,2µm,18.0s
GRNR MLR MLR
comp=N,620nm,13.0s
GRNR MLR MLR
comp=Z,3µm,19.0s
YAK **Yakutsk** 44.74 28 P **P** 09 38 43.1 +0.8
comp=Z,18nm,0.5s,baz=250,slow=1.6,SNR=8.6
YAK **Yakutsk** 44.74 28 *eP* **P** 09 38 42.8 +0.4
YAK pmax pmax
comp=Z,21nm,0.6s
YAK **Yakutsk** 44.74 28 P **P** 09 38 42.7 +0.4
ANTO **Ankara** 44.77 300 P **P** 09 38 42.4 -0.6
ANTO pmax pmax
comp=Z,10.0nm,0.7s
ANTO **Ankara** 44.77 300 P **P** 09 38 42.4 -0.6
ANTO IAmb IAmb 09 38 45.9
comp=Z,10nm,0.7s
JSD **Sado** 44.85 63 P **P** 09 38 42.1 -1.5
JSD IAmb IAmb 09 38 44.0
comp=Z,11nm,0.6s
MAT **Matsushiro** 44.91 65 P **P** 09 38 43.8 -0.3
MJAR **Matsushiro Arr** 44.91 65 P **P** 09 38 44.4 +0.3
comp=Z,3.8nm,0.8s,baz=280,slow=9.2,SNR=12
KLMR **Klimovskoe** 44.99 330 *eP* **P** 09 38 42.3 -2.0
KLMR *e* 09 40 24.7
KLMR pmax pmax
comp=Z,21nm,0.6s
KLMR **Klimovskoe** 44.99 330 *eP* **P** 09 38 42.4 -1.9
KLMR AMP 09 38 45.3
comp=Z,21nm,0.6s
KLMR *e*PcP **PcP** 09 40 24.7 -0.6
LUWI **Luwuk** 45.91 123 P P 09 39 06.2 +14
ISP **Isparta** 46.65 297 P **P** 09 38 57.0 -0.9
ISP pmax pmax
comp=Z,11nm,1.1s
ISP **Isparta** 46.65 297 P **P** 09 38 57.0 -0.9
ISP IAmb IAmb 09 39 13.9
comp=Z,11nm,1.1s
JMM **Marumori** 46.86 63 P **P** 09 38 58.8 -0.7
ELL **Elmali** 47.23 295 P **P** 09 39 03.1 +0.5
ELL pmax pmax
comp=Z,162nm,0.8s
ELL **Elmali** 47.23 295 P **P** 09 39 03.1 +0.5
TWSI **Taliwang, Sumb** 47.43 136 P P 09 39 17.2 +13
TLCR 47.70 307 ⇓P **P** 09 39 06.5 +0.6
AKASG **Malin Array Be** 47.79 314 P **P** 09 39 06.2 -0.3
comp=Z,4.8nm,0.7s,baz=80,slow=7.0,SNR=28
AKASG **Malin Array Be** 47.79 314 *iP* **P** 09 39 06.1 -0.3
AKASG pmax pmax
comp=Z,8.0nm,0.6s
AKASG **Malin Array Be** 47.79 314 P **P** 09 39 06.1 -0.3
AKBB **Malin Array Si** 47.79 314 *ceP* **P** 09 39 06.2 -0.3
AKBB pmax pmax
comp=Z,13nm,0.8s
AKBB **Malin Array Si** 47.79 314 P **P** 09 39 05.8 -0.6
AKBB IAmb IAmb 09 39 07.8
comp=Z,13nm,0.8s
ASAJ **Asahikawa** 47.96 54 P **P** 09 39 07.7 -0.3
comp=Z,4.8nm,0.6s
TPGR **Topolog** 47.98 306 ⇓P **P** 09 39 08.0 -0.1
YSS **Yuzh-Sakhalins** 48.12 51⇓ *eP* **P** 09 39 10.9 +1.8
YSS pmax pmax
comp=Z,33nm,1.9s
SORM **Soroca** 48.14 311 ⇑P **P** 09 39 09.1 -0.1
CFR **Carcaliu** 48.18 307 ⇑P **P** 09 39 10.0 +0.4
VRI **Vrincioaia** 49.18 308 ⇑P **P** 09 39 18.8 +1.5
PLOR **Plostina** 49.23 308 ⇑P **P** 09 39 19.5 +1.7
TESR **Tescani** 49.24 309 ⇑P **P** 09 39 18.1 +0.3
BIZ **Bicaz** 49.62 309 ⇓P **P** 09 39 21.6 +1.0
MLR **Muntele Rosu** 49.73 307 ⇓P **P** 09 39 23.6 +1.9
MLR **Muntele Rosu** 49.73 307 P **P** 09 39 21.2 -0.5
MLR pmax pmax
comp=Z,30nm,0.8s
MLR **Muntele Rosu** 49.73 307 P **P** 09 39 21.2 -0.5
TIXI **Tiksi** 49.77 17 P **P** 09 39 21.7 +0.3
comp=Z,22nm,0.6s,baz=228,slow=4.8,SNR=68
TIXI **Tiksi** 49.77 17 P **P** 09 39 21.7 +0.3
TIXI **Tiksi** 49.77 17 ⇑P **P** 09 39 21.6 +0.3
NACGM **Naroch** 49.79 320 *iP* **P** 09 39 22.5 +0.7
NACGM *iP* **P** 09 39 22.5 +0.7
NACGM *iP* **P** 09 39 22.5 +0.7
NACGM *i* PcP **PcP** 09 40 42.4 0.0
NACGM *i* PP **PP** 09 41 17.4 +1.2
NACGM *i* PPP PPP 09 42 11.3
NACGM *i* S **S** 09 46 32.1 +1.1
NACGM *i* ScS **ScS** 09 49 08.9 -4.3
NACGM *i* SS SS 09 50 20.1 +17
NACGM *i* SSS SSS 09 51 48.0
NACGM *i* LQ LQ 09 56 49.0
NACGM *i* LR LR 10 02 01.5
IDID **Didziasalis** 49.87 320 *eP* **P** 09 39 22.2 -0.1
LVZ **Lovozero** 50.01 337⇑ *eP* **P** 09 39 23.6 +0.3
LVZ pmax pmax
comp=Z,38nm,0.8s
DOPR **Dopca** 50.11 308 ⇑P **P** 09 39 25.7 +1.2
IIGN **Ignalina** 50.17 320 *eP* **P** 09 39 24.3 -0.3
BURAR **Bucovina Array** 50.23 310 ⇑P **P** 09 39 26.2 +0.8
BURAR **Bucovina Array** 50.23 310 P **P** 09 39 25.1 -0.3
BURAR IAmb IAmb 09 39 27.1
comp=Z,7.6nm,0.7s
BUR08 **Bucovina Ar. S** 50.24 310 P **P** 09 39 25.6 +0.1
ISAL **Salakas** 50.25 321 *eP* **P** 09 39 25.2 0.0
APA **Apatity** 50.29 337 ⇓ *iP* **P** 09 39 25.0 -0.4
APA pmax pmax
comp=Z,23nm,0.6s
APA MLR MLR
comp=Z,4µm,15.0s
VSU **Vasula** 50.40 324 *eP* **P** 09 39 26.8 +0.5
ARR **Arges** 50.65 307 ⇑P **P** 09 39 29.4 +0.7
SANT **Santorini** 50.84 296 P **P** 09 39 27.6 -2.4
SANT IAmb IAmb 09 39 36.3
comp=Z,31nm,1.0s
FIA1 **FINESS Array S** 51.33 328 P **P** 09 39 33.5 +0.2
FINES **FINESS Array B** 51.33 328 P **P** 09 39 33.7 +0.4
comp=Z,40nm,0.6s,baz=108,slow=8.2,SNR=196
FINES **FINESS Array B** 51.33 328 P **P** 09 39 33.0 -0.3
PABE **Paberze** 51.46 320 *eP* **P** 09 39 34.4 0.0
PABE **Paberze** 51.46 320 P **P** 09 39 34.3 0.0
SUW **Suwalki** 51.78 318 P **P** 09 39 36.4 -0.4
SUW pmax pmax
comp=Z,43nm,1.0s
SUW **Suwalki** 51.78 318 P **P** 09 39 36.4 -0.4
VTS **Vitosha** 51.82 304 ⇓P **P** 09 39 38.7 +1.2
VTS **Vitosha** 51.82 304 P **P** 09 39 37.3 -0.2
VTS pmax pmax
comp=Z,12nm,0.9s
VTS **Vitosha** 51.82 304 P **P** 09 39 37.3 -0.2
VTS IAmb IAmb 09 39 39.5
comp=Z,12nm,0.9s
VTS **Vitosha** 51.82 304 ⇓P **P** 09 39 38.7 +1.2
MTSE **Matsula** 51.95 324 *eP* **P** 09 39 36.3 -1.6
DRGR 51.95 309 ⇑P **P** 09 39 39.3 +1.0
GZR **Gura Zlata** 51.96 307 ⇑P **P** 09 39 39.2 +0.8
CRVS **Cervenica-Dubn** 52.73 312 *eP* **P** 09 39 45.5 +1.5
CRVS **Cervenica-Dubn** 52.73 312 *eP* **P** 09 39 45.5 +1.5
MDVR **Moldovita** 52.75 307 ⇑P **P** 09 39 45.0 +0.7
AGG **Agios Georgios** 52.91 299 P **P** 09 39 44.7 -0.8
AGG pmax pmax
comp=Z,12nm,0.8s
AGG **Agios Georgios** 52.91 299 P **P** 09 39 44.7 -0.8
AGG IAmb IAmb 09 39 45.5
comp=Z,12nm,0.8s
AGG **Agios Georgios** 52.91 299 ⇓P **P** 09 39 45.0 -0.6
SOEI **Soe** 53.01 129 ⇓P **P** 09 39 51.0 +4.5
SOEI **Soe** 53.01 129 P **P** 09 39 44.3 -2.2
comp=Z,44nm,0.8s
KEV **Kevo** 53.29 338 P **P** 09 39 48.5 +0.7
KEV pmax pmax
comp=Z,47nm,0.6s
KEV **Kevo** 53.29 338 P **P** 09 39 48.5 +0.7
KEV **Kevo** 53.29 338 ⇑P **P** 09 39 48.5 +0.7
KEV **Kevo** 53.29 338 ⇑P **P** 09 39 48.5 +0.7
ITM **Ithomi** 53.51 297 P **P** 09 39 48.9 -1.0
ITM IAmb IAmb 09 40 07.6
comp=Z,11nm,0.9s
LODK **Lodwar** 53.60 252 P **P** 09 39 50.0 -0.9
ARA0 **ARCESS Array S** 53.72 338 *eP* **P** 09 39 51.8 +0.9
ARCES **ARCESS Array B** 53.72 338 P **P** 09 39 51.8 +0.9
comp=Z,42nm,0.6s,baz=104,slow=7.6,SNR=219
ARCES **ARCESS Array B** 53.72 338 P **P** 09 39 50.8 -0.2
OJC **Ojcow** 53.78 313 *eP* **P** 09 39 51.8 +0.1
OJC **Ojcow** 53.78 313 P **P** 09 39 51.2 -0.5
OJC pmax pmax
comp=Z,10.0nm,0.9s
OJC **Ojcow** 53.78 313 P **P** 09 39 51.2 -0.5
OJC IAmb IAmb 09 39 53.2
comp=Z,10nm,0.9s
MA2 **Magadan** 53.86 35⇓ *eP* **P** 09 39 52.4 +0.3
MA2 pmax pmax
comp=Z,78nm,1.9s
DIVS **Divibare** 54.04 306 ⇓P **P** 09 39 54.3 +0.5
KTK1 **Kautokeino** 54.34 337 *eP* **P** 09 39 56.1 +0.7
VYHS **Vyhne** 54.48 311 *eP* **P** 09 39 56.8 -0.1
VYHS pmax pmax
comp=Z,11nm,1.4s
VYHS **Vyhne** 54.48 311 *eP* **P** 09 39 56.8 -0.1
KMBO **Kilima Mbogo** 54.57 246 P **P** 09 39 58.3 +0.1
comp=Z,2.8nm,0.5s,baz=10,slow=9.4,SNR=3.1
KMBO **Kilima Mbogo** 54.57 246 *iP* **P** 09 39 59.5 +1.3
KMBO pmax pmax
comp=Z,3.0nm,0.5s
HAMF **Hammerfest** 54.65 339 *eP* **P** 09 39 59.0 +1.4
PDG **Podgorica** 54.76 304 ⇑P **P** 09 39 58.6 -0.4
PDG **Podgorica** 54.76 304 P **P** 09 39 58.4 -0.5
PDG IAmb IAmb 09 40 00.0
comp=Z,12nm,0.8s
MORH **Mrgy, Hungar** 54.79 309 ⇓P **P** 09 39 59.7 +0.6
SEY **Seymchan** 55.01 31 ⇓ *iP* **P** 09 40 01.5 +1.1
UPP **Uppsala** 55.22 325 *eP* **P** 09 40 02.3 +0.3
MORC **Moravsky Berou** 55.26 313 *eP* **P** 09 40 02.7 +0.2
MORC **Moravsky Berou** 55.26 313 P **P** 09 40 02.0 -0.5
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC **Moravsky Berou** 55.26 313 P **P** 09 40 02.0 -0.5
JETT **Jettan, Norway** 55.45 337 *eP* **P** 09 40 04.3 +0.8
MODS **Modra-Piesok** 55.53 311 *eP* **P** 09 40 03.2 -1.2
MODS pmax pmax
comp=Z,9.0nm,1.2s
MODS **Modra-Piesok** 55.53 311 *eP* **P** 09 40 03.2 -1.2
KRLC **Kraliky** 55.73 313 *eP* **P** 09 40 06.2 +0.3
KRLC **Kraliky** 55.73 313 *eP* **P** 09 40 06.2 +0.3
VRAC **Vranov** 55.90 312 *eP* **P** 09 40 07.6 +0.5
TRO **Tromso** 55.97 337 *eP* **P** 09 40 07.5 +0.3
DPC **Dobruska-Polom** 56.00 314 *eP* **P** 09 40 08.6 +0.8
DPC **Dobruska-Polom** 56.00 314 *eP* **P** 09 40 08.6 +0.8
KRUC **Moravsky** 56.05 312 *eP* **P** 09 40 08.5 +0.3
BLEU **Blekinge** 56.08 321 *iP* **P** 09 40 07.2 -1.0
CHVC **Chvalec** 56.16 314 *eP* **P** 09 40 09.6 +0.7
CONA **Conrad Observa** 56.51 311 *iP* **P** 09 40 12.0 +0.4
comp=Z,10nm,0.8s,SNR=6.5
BSD **Bornholm Skovb** 56.62 320 *iP* **P** 09 40 11.8 -0.2
BSD **Bornholm Skovb** 56.62 320 *iP* **P** 09 40 11.8 -0.2
N2IH **Innhavet** 56.77 335 *eP* **P** 09 40 13.2 +0.3
ARSA **Arzberg** 56.81 310 *iP* **P** 09 40 14.0 +0.3
comp=Z,6.0nm,0.9s
STEI **Steigen** 57.02 335 *eP* **P** 09 40 15.5 +0.8
N2TV **Tvrnvik** 57.02 334 *eP* **P** 09 40 15.2 +0.5
MOR8 **Moi Rana** 57.15 333 *eP* **P** 09 40 15.2 -0.5
DEL **Delary** 57.16 321 *iP* **P** 09 40 16.3 +0.4
DEL **Delary** 57.16 321 *iP* **P** 09 40 16.0 +0.1
PRU **Pruhonice** 57.17 313 *eP* **P** 09 40 16.7 +0.6
PRU **Pruhonice** 57.17 313 *eP* **P** 09 40 16.7 +0.6
SOKA **Soboth** 57.22 309 *eP* **P** 09 40 17.1 +0.5
comp=Z,9.2nm,0.5s,SNR=7.2
NBB05 **Inndyr** 57.39 334 *eP* **P** 09 40 17.8 +0.5
GIRL **Giralia** 57.42 148 P **P** 09 40 19.0 +1.0
LUNU **Lund** 57.43 320 *iP* **P** 09 40 18.1 +0.3
LUNU **Lund** 57.43 320 *iP* **P** 09 40 17.0 -0.8
BRG **Berggiesshubel** 57.47 315 *iP* **P** 09 40 18.6 +0.4
BRG Amp 09 40 19.8
comp=Z,12nm,1.0s
BRG *ex* x 09 40 25.7
BRG Amp 09 40 27.4
comp=Z,12nm,1.1s
BRG **Berggiesshubel** 57.47 315 *eP* **P** 09 40 18.1 -0.1
comp=Z,6.3nm,0.8s,baz=82,slow=6.8
NBB30 **Finnes** 57.50 334 *eP* **P** 09 40 18.7 +0.6
RGN **Rugen** 57.56 319 *eP* **P** 09 40 19.4 +0.6
comp=Z,33nm,0.8s,baz=82,slow=6.8
OBKA **Obir** 57.57 309 *iP* **P** 09 40 19.5 +0.4
comp=Z,12nm,0.9s
MOA **Molln** 57.59 311 *iP* **P** 09 40 19.0 -0.2
comp=Z,4.6nm,0.6s
BJUU **Bjuv** 57.65 321 *iP* **P** 09 40 19.6 +0.2
PEA0B **Petropavlovsk-** 57.65 43 P **P** 09 40 19.6 +0.2
PEA0B pmax pmax
comp=Z,51nm,1.2s
PEA0B **Petropavlovsk-** 57.65 43 P **P** 09 40 19.6 +0.2
PETK **Petropavlovsk-** 57.65 43 P **P** 09 40 19.3 -0.1
comp=Z,3.7nm,0.8s,baz=283,slow=10,SNR=7.2
LOF **Lofoten** 57.68 335 *eP* **P** 09 40 19.1 -0.2
KONS **Konsvik** 57.71 333 *eP* **P** 09 40 19.8 +0.2
BORU **Boraas** 57.72 323 *iP* **P** 09 40 20.0 +0.2
STOK **Stokkvaagen** 57.74 333 *eP* **P** 09 40 20.2 +0.4
FABU **Falkenberg** 57.77 322 *iP* **P** 09 40 20.3 +0.1
FBE **Freiberg** 57.84 315 *eP* **P** 09 40 21.1 +0.3
comp=Z,10nm,0.8s,baz=82,slow=6.8
GEC2 **GERESS Array S** 57.84 312 P **P** 09 40 21.2 +0.2
GEC2 **GERESS Array S** 57.84 312 *eP* **P** 09 40 21.2 +0.2
comp=Z,3.1nm,0.8s,baz=82,slow=6.8
GERES **GERESS Array B** 57.84 312 P **P** 09 40 21.1 +0.2
comp=Z,2.7nm,0.5s,baz=82,slow=7.1,SNR=21
GERES **GERESS Array B** 57.84 312 P **P** 09 40 21.0 0.0
KHC **Kasperske Hory** 57.89 312 P **P** 09 40 21.4 +0.2
KHC pmax pmax
comp=Z,5.0nm,0.7s
KHC **Kasperske Hory** 57.89 312 *eP* **P** 09 40 21.4 +0.2
KHC **Kasperske Hory** 57.89 312 P **P** 09 40 21.4 +0.2
KHC **Kasperske Hory** 57.89 312 ⇑P **P** 09 40 21.5 +0.3
CLL **Collm** 58.02 315 *iP* **P** 09 40 22.4 +0.4
CLL **Collm** 58.02 315 *iP* **P** 09 40 22.4 +0.4
CLL **Collm** 58.02 315 *eP* **P** 09 40 21.5 -0.5
comp=Z,3.5nm,0.8s,baz=82,slow=6.8
NSS **Namsos** 58.09 331 *eP* **P** 09 40 22.1 -0.2
MYKA **Terra Mystica** 58.17 310 *eP* **P** 09 40 22.6 -0.7
comp=Z,8.0nm,1.0s
NC405 **NORSAR Array S** 58.18 327 P **P** 09 40 22.6 -0.5
ONAU **Onsala** 58.19 322 *iP* **P** 09 40 23.1 0.0
TRI **Trieste** 58.23 308 P **P** 09 40 22.7 -0.8
TRI pmax pmax
comp=Z,21nm,0.8s
TRI **Trieste** 58.23 308 P **P** 09 40 22.7 -0.8
KBA **Koelnbreinsper** 58.31 310 *iP* **P** 09 40 24.0 -0.4
comp=Z,5.6nm,0.8s
TJOU **Tjoern** 58.32 323 *iP* **P** 09 40 23.5 -0.4
WET **Wettzell** 58.34 313 *eP* **P** 09 40 24.3 -0.1
comp=Z,3.8nm,0.7s,baz=82,slow=6.8
NC303 **NORSAR Array S** 58.35 327 P **P** 09 40 23.7 -0.4
PTCC **Patocco-Chiusa** 58.40 309 ⇑P **P** 09 40 24.7 -0.2
NB2 **NORSAR Subarra** 58.42 327 P **P** 09 40 24.2 -0.6
baz=91,slow=6.9
NOA **NORSAR Array B** 58.42 327 P **P** 09 40 24.3 -0.5
comp=Z,6.4nm,0.5s,baz=88,slow=6.9,SNR=43
TANN **Tannenbergstha** 58.46 314 *eP* **P** 09 40 24.2 -1.0
comp=Z,3.7nm,0.8s,baz=82,slow=6.8
STRU **Stroemstad** 58.51 324 *iP* **P** 09 40 25.1 -0.2
WERN **Wernitzgruen** 58.53 314 *eP* **P** 09 40 25.6 0.0
comp=Z,3.0nm,0.8s,baz=82,slow=6.8
GUNZ **Gunzen** 58.55 314 *eP* **P** 09 40 25.7 -0.1
comp=Z,6.1nm,0.8s,baz=82,slow=6.8
WERD **Werda** 58.55 314 *eP* **P** 09 40 25.7 -0.1
comp=Z,7.0nm,0.8s,baz=82,slow=6.8
RJOB **Jochberg** 58.59 311 *eP* **P** 09 40 27.3 +1.1
comp=Z,18nm,0.7s,baz=82,slow=6.8
NAO01 **NORSAR Array S** 58.59 326 P **P** 09 40 24.8 -1.1
NAO01 **NORSAR Array S** 58.59 326 *eP* **P** 09 40 25.5 -0.3
SPA0 **Spitsbergen Ar** 58.60 347 P **P** 09 40 25.7 0.0
SPA0 **Spitsbergen Ar** 58.60 347 *eP* **P** 09 40 27.0 +1.3
NBO00 **NORSAR Array S** 58.64 327 P **P** 09 40 25.6 -0.6
NC204 **NORSAR Array S** 58.64 327 *eP* **P** 09 40 26.1 -0.2
ROTZ **Rotzenmuhle** 58.70 313 *eP* **P** 09 40 27.2 +0.3
comp=Z,7.3nm,0.8s,baz=82,slow=6.8
OSL **Oslo** 58.70 325 *eP* **P** 09 40 26.9 +0.3
MANZ **Manzenberg** 58.73 314 *eP* **P** 09 40 27.5 +0.4
comp=Z,9.1nm,1.1s,baz=82,slow=6.8
NEUB **Neuenburg** 58.80 315 *eP* **P** 09 40 27.1 -0.3
comp=Z,15nm,0.7s,baz=82,slow=6.8
STAL **STALIGIAL** 58.87 309 P **P** 09 40 27.1 -1.0
ABTA **Abfaltersbach** 58.92 310 *iP* **P** 09 40 27.5 -1.0
comp=Z,4.3nm,0.7s
MOX **Moxa** 58.97 314 *eP* **P** 09 40 28.5 -0.2
comp=Z,5.9nm,0.8s,baz=82,slow=6.8
FLTG **Flechtingen** 59.00 316 *eP* **P** 09 40 28.2 -0.6
comp=Z,10nm,0.8s,baz=82,slow=6.8
NRCA **Norcia** 59.17 305 P **P** 09 40 30.1 -0.3
NRCA IAmb IAmb 09 40 32.5
comp=Z,16nm,0.8s
KONO **Kongsberg** 59.28 325 *eP* **P** 09 40 30.8 +0.1
BSEG **Bad Segeberg** 59.37 318 *eP* **P** 09 40 31.6 +0.3
comp=Z,23nm,0.8s,baz=82,slow=6.8
DOMB **Dombas** 59.42 328 *eP* **P** 09 40 31.7 0.0
WTTA **Wettenberg** 59.44 311 *iP* **P** 09 40 31.6 -0.6
comp=Z,8.8nm,0.4s
WATA **Walderalm** 59.46 311 *iP* **P** 09 40 31.5 -0.9
comp=Z,10nm,1.1s
MURB **Monte Urbino** 59.52 306 P **P** 09 40 33.5 +0.8
CLZ **Clausthal** 59.59 316 *eP* **P** 09 40 32.9 -0.1
comp=Z,24nm,0.7s,baz=82,slow=6.8
CTI **Castel Tesino** 59.63 309 P **P** 09 40 32.9 -0.6
CTI pmax pmax
comp=Z,12nm,0.8s
CTI **Castel Tesino** 59.63 309 P **P** 09 40 32.9 -0.6
CTI IAmb IAmb 09 40 33.9
comp=Z,12nm,0.8s
NRDL **Niedersach Rie** 59.67 317 *eP* **P** 09 40 33.8 +0.4
comp=Z,21nm,0.8s,baz=82,slow=6.8
SQTA **Sankt Quirin** 59.73 311 *iP* **P** 09 40 33.4 -0.7
comp=Z,9.3nm,0.4s,SNR=7.2
TEOL **Teolo** 59.73 308 P **P** 09 40 33.9 -0.2
MOTA **Moosalm** 59.78 311 *iP* **P** 09 40 33.7 -0.9
comp=Z,15nm,0.8s,SNR=7.8
GTTG **Gottingen** 59.88 316 *eP* **P** 09 40 34.9 -0.1
comp=Z,8.7nm,0.7s,baz=82,slow=6.8
UBBA **Unterbreizbach** 59.96 315 *eP* **P** 09 40 35.4 0.0
comp=Z,2.5nm,0.6s,baz=82,slow=6.8
RETA **Reutte** 59.98 311 *iP* **P** 09 40 35.4 -0.4
comp=Z,5.9nm,0.5s
FITZ **Fitzroy Crossi** 60.03 135 ⇑P **P** 09 40 36.8 +0.5
FETA **Feichten** 60.09 310 *iP* **P** 09 40 36.1 -0.6
comp=Z,12nm,1.0s,SNR=5.1
MOL **Molde** 60.10 329 *eP* **P** 09 40 36.0 -0.3
LATE **Laterza** 60.16 305 P **P** 09 40 36.5 -0.6
LATE IAmb IAmb 09 40 37.2
comp=Z,7.6nm,0.8s
OSSC **Osservatorio P** 60.38 306 P **P** 09 40 37.9 -0.7
OSSC IAmb IAmb 09 40 39.5
comp=Z,8.2nm,0.7s
AKN **Aaknes** 60.38 328 *eP* **P** 09 40 38.4 +0.2
UBR **Ueberruh** 60.39 311 *eP* **P** 09 40 37.6 -1.0
comp=Z,7.1nm,0.7s,baz=82,slow=6.8
ZCCA **Zocca** 60.41 307 P **P** 09 40 39.2 +0.4
ZCCA IAmb IAmb 09 40 48.8
comp=Z,24nm,1.3s
SALO **Salr** 60.48 309 P **P** 09 40 39.5 +0.3
SALO **Salr** 60.48 309 ⇑P **P** 09 40 39.6 +0.3
DAVA **Damuels** 60.61 311 *iP* **P** 09 40 39.9 -0.4
comp=Z,26nm,1.0s,SNR=9.4
ODD1 **Odda** 60.76 325 *eP* **P** 09 40 41.2 +0.3
KASTN **Kahler Asten** 60.89 315 *eP* **P** 09 40 42.6 +0.7
comp=Z,4.7nm,0.8s,baz=82,slow=6.8
BILL **Bilibino** 60.97 25 ⇓ *iP* **P** 09 40 43.4 +1.3
BILL *e**PP **pP** 09 40 45.9 -0.2
BILL *e* 09 40 51.6
BILL *e* 09 42 58.9
BILL pmax pmax
comp=Z,24nm,1.4s
BILL **Bilibino** 60.97 25 P **P** 09 40 42.9 +0.8
TNS **Taunus Mts** 61.03 314 *eP* **P** 09 40 42.7 -0.3
comp=Z,13nm,0.8s,baz=82,slow=6.8
IBBN **Ibbenburen** 61.12 317 *eP* **P** 09 40 43.2 -0.1
comp=Z,14nm,0.8s,baz=82,slow=6.8
TUE **Stuetta** 61.12 310 P **P** 09 40 43.2 -0.6
TUE **Stuetta** 61.12 310 ⇑P **P** 09 40 43.1 -0.6
BOB **Bobbio (Coli)** 61.39 308 ⇑P **P** 09 40 46.1 +0.6
MSSA **Maissana** 61.44 308 P **P** 09 40 45.2 -0.6
MSSA IAmb IAmb 09 40 46.3
comp=Z,16nm,0.9s
BFO **Black Forest** 61.45 312 *eP* **P** 09 40 45.4 -0.3
comp=Z,3.3nm,0.7s,baz=82,slow=6.8
BUG **Bochum--Univer** 61.56 316 *eP* **P** 09 40 46.2 -0.1
comp=Z,15nm,0.8s,baz=82,slow=6.8
AHRW **Bad Neuenahr-A** 61.84 315 *eP* **P** 09 40 48.3 0.0
comp=Z,12nm,0.9s,baz=82,slow=6.8
ECH **Echery** 62.23 312 P **P** 09 40 50.9 -0.1
ECH pmax pmax
comp=Z,6.0nm,0.8s
ECH **Echery** 62.23 312 P **P** 09 40 50.9 -0.1
ECH IAmb IAmb 09 40 51.6
comp=Z,6.4nm,0.8s
ECH **Echery** 62.23 312 ⇓P **P** 09 40 51.0 -0.1
BTNL **Ternell** 62.42 315 *dP* **P** 09 40 52.3 0.0
comp=Z,8.7nm,1.0s
MEM **Membach** 62.50 315 *dP* **P** 09 40 53.1 +0.4
comp=Z,11nm,0.8s
SENIN **Lac Senin/Sane** 62.53 310 P **P** 09 40 53.1 -0.2
BHOU **Houvegnez** 62.55 315 *dP* **P** 09 40 53.8 +0.7
WLF **Walferdange** 62.59 314 *dP* **P** 09 40 54.0 +0.6
comp=Z,13nm,0.9s
WLF **Walferdange** 62.59 314 P **P** 09 40 52.7 -0.7
WLF pmax pmax

comp=Z,16nm,0.7s
WLF Walferdange 62.59 314 P **P** 09 40 52.7 -0.7
WLF Walferdange 62.59 314 *e*P **P** 09 40 53.6 +0.3
comp=Z,13nm,0.8s,baz=82,slow=6.8
BSTI Sart Tilman 62.78 315 *d*P **P** 09 40 55.1 +0.5
BCLA Clavier 62.98 315 *d*P **P** 09 40 55.9 0.0
comp=Z,7.0nm,0.8s
BGES Gesves 63.12 315 *d*P **P** 09 40 56.8 0.0
BNI Bardonecchia 63.25 309 P **P** 09 40 57.5 -0.5
BNI pmax pmax
comp=Z,15nm,0.8s
BNI Bardonecchia 63.25 309 P **P** 09 40 57.5 -0.5
BNI Bardonecchia 63.25 309 ⇑P **P** 09 40 57.7 -0.3
BMRD Maredsous 63.33 315 *d*P **P** 09 40 58.5 +0.2
comp=Z,7.4nm,0.7s
DOU Dourbes 63.49 315 *d*P **P** 09 40 59.8 +0.5
SNF Seneffe 63.59 315 *d*P **P** 09 40 59.7 -0.3
KEST Kesra 63.71 298 P **P** 09 41 01.9 +0.8
comp=Z,36nm,0.8s,baz=285,slow=0.9,SNR=39
KEST Kesra 63.71 298 P **P** 09 41 01.7 +0.6
NOR Nord 64.31 351 *i* P **P** 09 41 04.5 +0.2
NOR IAmb IAmb 09 41 05.2
comp=Z,6.9nm,0.7s
NOR Nord 64.31 351 *i* P **P** 09 41 04.4 +0.2
NOR pmax pmax
comp=Z,7.0nm,0.7s
SSB Saint Sauveur 64.66 310 P **P** 09 41 06.8 -0.4
SSB pmax pmax
comp=Z,16nm,0.8s
SSB Saint Sauveur 64.66 310 P **P** 09 41 06.8 -0.4
SSB Saint Sauveur 64.66 310 ⇑P **P** 09 41 07.0 -0.1
DAG Danmarks Havn 66.19 346 *i* P **P** 09 41 17.0 +0.5
DAG Danmarks Havn 66.19 346 *i* P **P** 09 41 17.0 +0.5
WRKA Warakurna 66.86 138 ⇓P **P** 09 41 22.0 +0.4
WB0 Warramunga Arr 66.96 130 P **P** 09 41 22.1 -0.1
WRA Warramunga Arr 67.04 130 P **P** 09 41 23.0 +0.3
comp=Z,3.9nm,0.6s,baz=322,slow=6.4,SNR=22
WRA Warramunga Arr 67.04 130 P **P** 09 41 23.0 +0.3
WRAB Tennant Creek 67.04 130⇑ *e*P **P** 09 41 23.0 +0.3
WRAB pmax pmax
comp=Z,47nm,1.6s
WRAB Tennant Creek 67.04 130 ⇓P **P** 09 41 23.2 +0.5
WB2 Warramunga Arr 67.05 130 P **P** 09 41 22.8 0.0
WR0 Warramunga Arr 67.19 130 P **P** 09 41 23.0 -0.7
WR0 IAmb IAmb 09 41 29.7
comp=Z,10.0nm,0.7s
DBG Daneborg 67.47 344 *i* P **P** 09 41 25.0 +0.4
DBG IAmb IAmb 09 41 26.5
comp=Z,5.5nm,0.9s
NWAO Narrogin (SRO) 67.61 151 P **P** 09 41 25.4 -0.6
NWAO pmax pmax
comp=Z,29nm,1.1s
NWAO Narrogin (SRO) 67.61 151 P **P** 09 41 25.0 -1.1
NWAO Narrogin (SRO) 67.61 151 P **P** 09 41 25.4 -0.6
NWAO IAmb IAmb 09 41 30.0
comp=Z,28nm,1.1s
AS31 Alice Springs 69.34 133 P **P** 09 41 36.9 -0.3
AS31 IAmb IAmb 09 41 43.3
comp=Z,5.8nm,0.5s
ASAR Alice Springs 69.34 133 P **P** 09 41 37.4 +0.2
comp=Z,3.6nm,0.6s,baz=315,slow=6.2,SNR=38
ASAR Alice Springs 69.34 133 P **P** 09 41 36.9 -0.3
TAM Tamanrasset 71.26 286 P **P** 09 41 48.7 -0.5
TAM pmax pmax
comp=Z,6.0nm,0.7s
TAM Tamanrasset 71.26 286 P **P** 09 41 48.7 -0.5
TAM IAmb IAmb 09 41 50.2
comp=Z,5.7nm,0.7s
NEEM North Greenlan 71.69 351 *i* P **P** 09 41 51.7 +0.6
NEEM IAmb IAmb 09 41 52.5
comp=Z,37nm,0.7s
RDOG Red Dog Mine 71.96 22 P **P** 09 41 53.2 +0.7
RDOG IAmb IAmb 09 41 54.8
comp=Z,9.5nm,0.6s
RDOG Red Dog Mine 71.96 22 P 09 41 53.2
baz=300
A21K Barrow 72.06 17 P 09 41 53.5
baz=305
EUNU Eureka 72.14 359 P **P** 09 41 53.9 +0.4
EUNU IAmb IAmb 09 41 55.0
comp=Z,13nm,0.8s
EUNU Eureka 72.14 359 ⇓P **P** 09 41 54.6 +1.2
ESDC Sonseca Array 72.39 306 P **P** 09 41 55.7 +0.1
comp=Z,5.8nm,0.7s,baz=53,slow=6.0,SNR=43
ESDC Sonseca Array 72.39 306 P **P** 09 41 55.5 -0.2
PAB San Pablo 72.72 306 P **P** 09 41 57.1 -0.5
PAB pmax pmax
comp=Z,8.0nm,0.8s
PAB San Pablo 72.72 306 P **P** 09 41 57.1 -0.5
PAB IAmb IAmb 09 41 58.7
comp=Z,7.9nm,0.8s
PAB San Pablo 72.72 306 ⇓P **P** 09 41 58.0 +0.4
SUMG Summit 72.81 345 *i* P **P** 09 41 59.0 +1.1
SUMG IAmb IAmb 09 41 59.9
comp=Z,14nm,0.9s
SUMG Summit 72.81 345 P **P** 09 41 57.9 -0.1
SUMG pmax pmax
comp=Z,22nm,0.9s
SUMG Summit 72.81 345 P **P** 09 41 57.9 -0.1
SUMG Summit 72.81 345 ⇑P **P** 09 41 58.8 +0.8
ANM Nome 72.82 25 P **P** 09 41 57.8 +0.1
ANM pmax pmax
comp=Z,5.0nm,0.8s
ANM Nome 72.82 25 P **P** 09 41 57.8 +0.1
ANM Nome 72.82 25 P 09 41 58.9
baz=299
MVO Moncorvo 73.98 308 *e*P **P** 09 42 05.5 +0.5
comp=Z,36nm,1.5s
TULEG Thule 74.56 354 *i* P **P** 09 42 06.4 -1.2
TULEG Thule 74.56 354 P **P** 09 42 07.3 -0.3
TULEG IAmb IAmb 09 42 08.0
comp=Z,13nm,0.7s
MTE Manteigas 74.65 308 *e*P **P** 09 42 09.7 +0.8
PVIS Viseu 74.77 308 *e*P **P** 09 42 10.4 +0.8
PCBR Castelo Branco 74.83 307 *e*P **P** 09 42 10.4 +0.6
PBAR Barrancos 75.18 305 *e*P **P** 09 42 12.6 +0.6
comp=Z,27nm,1.4s
ICESG Greenland Ices 75.40 342 *i* P **P** 09 42 14.1 +1.1
ICESG IAmb IAmb 09 42 14.9
comp=Z,20nm,0.7s
TOLK Toolik Lake Re 75.63 18 P **P** 09 42 14.4 +0.4
TOLK IAmb IAmb 09 42 15.9
comp=Z,13nm,0.6s
TOLK Toolik Lake Re 75.63 18 P 09 42 14.8
baz=312
PMTG Montargil 75.67 307 *e*P **P** 09 42 15.1 +0.4
CTAO Charters Tower 75.67 122 P **P** 09 42 14.1 -0.9
CTAO pmax pmax
comp=Z,8.0nm,1.1s
CTAO Charters Tower 75.67 122 P **P** 09 42 14.1 -0.9
CTAO IAmb IAmb 09 42 22.6
comp=Z,8.2nm,1.1s
EVO Evora 75.74 306 *e*P **P** 09 42 15.7 +0.6
PSBE So Bento 75.89 307 *e*P **P** 09 42 16.5 +0.5
PVAQ Vaqueiros 75.99 305 *e*P **P** 09 42 17.0 +0.4
PVAQ Vaqueiros 75.99 305 P **P** 09 42 16.9 +0.3
IMAR Indian Mountai 76.10 21 P **P** 09 42 17.2 +0.5
PCVE Castro Verde 76.13 305 *e*P **P** 09 42 20.6 +3.2
PBDV Barranco-do-Ve 76.21 305 *e*P **P** 09 42 18.8 +0.9
comp=Z,49nm,1.6s
UPNV Upernavik 76.22 349 *i* P **P** 09 42 17.3 +0.1
COLD Coldfoot 76.39 19 P **P** 09 42 18.3 0.0
COLD IAmb IAmb 09 42 27.5
comp=Z,6.3nm,0.8s
COLD Coldfoot 76.39 19 P 09 42 19.7
baz=311
PMAFR Mafra 76.46 307 *e*P **P** 09 42 21.6 +2.3
PFVI Vila Bisbo 76.91 305 *e*P **P** 09 42 21.7 -0.1
TTA Tatalina 77.20 24 ⇓P **P** 09 42 24.6 +1.5
RES Resolute Bay 77.63 0 P **P** 09 42 25.6 +0.5
RES pmax pmax
comp=Z,5.0nm,1.1s
RES Resolute Bay 77.63 0 P **P** 09 42 25.6 +0.5
MLY Manley 77.68 21 P **P** 09 42 26.0 +0.3
MLY IAmb IAmb 09 42 27.2
comp=Z,6.1nm,0.7s
MLY Manley 77.68 21 P 09 42 26.8
baz=311
BMAR Burnt Mountain 77.83 18 P **P** 09 42 27.2 +0.7
CHUM Lake Minchumin 77.91 23 P 09 42 27.6
baz=310
I23K Minto, Yukon-K 78.03 21 P **P** 09 42 27.3 -0.3
I23K Minto, Yukon-K 78.04 21 P 09 42 27.6
baz=312
LBTB Lobatse 78.10 233 P **P** 09 42 28.6 0.0
LBTB pmax pmax
comp=Z,8.0nm,0.8s
LBTB Lobatse 78.10 233 P **P** 09 42 28.6 0.0
LBTB IAmb IAmb 09 42 34.0
comp=Z,8.1nm,0.8s
LBTB Lobatse 78.10 233 ⇑P **P** 09 42 29.0 +0.4
BPAW Bear Paw Mtn. 78.21 22 P **P** 09 42 29.3 +0.7
BPAW Bear Paw Mtn. 78.21 22 P 09 42 28.9
baz=311
NEA2 Nenana 78.50 21 P **P** 09 42 30.2 0.0
NEA2 IAmb IAmb 09 42 37.0
comp=Z,8.5nm,0.7s
NEA2 Nenana 78.50 21 P 09 42 30.9
baz=313
MDM Murphy Dome 78.52 21 P **P** 09 42 30.6 +0.3
MDM IAmb IAmb 09 42 31.6
comp=Z,6.1nm,0.8s
TOA0 Torodi Ar. Sit 78.58 279 P **P** 09 42 30.4 -1.1
TORD Torodi Ar. Bea 78.58 279 P **P** 09 42 30.8 -0.6
comp=Z,4.7nm,0.7s,baz=60,slow=4.3,SNR=24
TORD Torodi Ar. Bea 78.58 279 P **P** 09 42 30.4 -1.1
PPLA Purkeypile 78.59 23 P **P** 09 42 30.6 -0.2
PPLA Purkeypile 78.59 23 P 09 42 31.0
baz=310
POKR Poker Plat Res 78.65 20 P 09 42 32.0
baz=314
TCOL CIGO, UAF Yank 78.69 20 P 09 42 31.5
baz=314
COLA College 78.69 20*ce*P **P** 09 42 32.2 +1.0
COLA pmax pmax
comp=Z,18nm,2.5s
COLA College 78.69 20 P **P** 09 42 31.4 +0.3
COLA IAmb IAmb 09 42 39.9
comp=Z,18nm,1.3s
PRP Porcupine Dome 78.94 19 P 09 42 33.7
baz=316
DY2G Dye2 79.03 342 *i* P **P** 09 42 34.0 +0.6
DY2G IAmb IAmb 09 42 34.5
comp=Z,9.5nm,0.6s
IL31 79.06 20 P **P** 09 42 32.8 -0.4
ILAR Eielson Array 79.06 20 P **P** 09 42 33.4 +0.2
comp=Z,2.6nm,0.5s,baz=309,slow=4.8,SNR=44
ILAR PP **PP** 09 45 30.0 -1.7
comp=Z,0.6nm,0.6s,baz=312,slow=7.5,SNR=5.9
ILAR Eielson Array 79.06 20 P **P** 09 42 32.6 -0.6
ILAR *PP **pP** 09 42 32.9 -4.5
ILAR Eielson Array 79.06 20 P **P** 09 42 32.6 -0.6
ILAR **pP** 09 42 32.9 -4.5
MCK McKinley 79.13 22 P **P** 09 42 33.2 -0.5
MCK pmax pmax
comp=Z,4.0nm,0.6s
MCK McKinley 79.13 22 P **P** 09 42 33.2 -0.5
MCK McKinley 79.13 22 P 09 42 33.6
baz=313
HDA Harding Lake 79.30 21 P 09 42 33.9
baz=314
HDA P 09 42 33.9
baz=314
RND Reindeer 79.38 22 P **P** 09 42 35.0 -0.1
RND pmax pmax
comp=Z,7.0nm,0.8s
RND Reindeer 79.38 22 P **P** 09 42 35.0 -0.1
RND IAmb IAmb 09 42 43.1
comp=Z,7.2nm,0.8s
SKT Skwentna 79.42 24 P **P** 09 42 35.5 +0.2
SKT IAmb IAmb 09 42 43.8
comp=Z,18nm,0.8s
SKT Skwentna 79.42 24 P 09 42 36.0
baz=311
SFJD Kangerlussuaq 79.76 344 *i* P **P** 09 42 36.9 -0.1
SFJD IAmb IAmb 09 42 37.9
comp=Z,7.9nm,0.8s
SFJD Kangerlussuaq 79.76 344 *i* P **P** 09 42 36.9 -0.1
SFJD pmax pmax
comp=Z,8.0nm,0.8s
WAT2 Susitna Watana 79.78 22 P 09 42 37.2
baz=313
INK Inuvik 79.79 14 P **P** 09 42 37.3 +0.2
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 79.79 14 P **P** 09 42 37.3 +0.2
INK Inuvik 79.79 14 ⇑P **P** 09 42 37.7 +0.6
INK Inuvik 79.79 14 P 09 42 37.6
baz=326
STKA Stephens Creek 79.91 134 P **P** 09 42 38.2 0.0
comp=Z,3.0nm,0.7s,baz=326,slow=3.9,SNR=11
STKA Stephens Creek 79.91 134 IAmb IAmb 09 42 43.6
comp=Z,1.7nm,0.9s
SUA Susitna One 80.04 24 P **P** 09 42 38.7 -0.1
SUA IAmb IAmb 09 42 56.4
comp=Z,10nm,0.9s
SUA Susitna One 80.05 24 P 09 42 39.3
baz=312
WAT6 Susitna Watana 80.32 22 P 09 42 40.2
baz=314
SCRK Sand Creek 80.51 20 P **P** 09 42 41.5 +0.2
SCRK IAmb IAmb 09 42 42.3
comp=Z,7.5nm,0.8s
SCRK Sand Creek 80.51 20 P 09 42 41.7
baz=317
PMR Palmer 80.53 23 P **P** 09 42 41.5 +0.3
PMR pmax pmax
comp=Z,8.0nm,0.8s
PMR Palmer 80.53 23 P **P** 09 42 41.5 +0.3
PMR IAmb IAmb 09 42 42.3
comp=Z,8.1nm,0.8s
PMR Palmer 80.53 23 P 09 42 41.8
baz=313
BOSA Boshof 80.57 231 P **P** 09 42 41.9 -0.2
comp=Z,2.7nm,0.6s,baz=49,slow=5.3,SNR=7.6
C36M Paulatuk 80.63 10 P **P** 09 42 42.0 +0.3
C36M IAmb IAmb 09 42 42.0
comp=Z,19nm,1.3s
C36M Paulatuk 80.63 10 P 09 42 41.4
baz=334
EPYK Eagle Plains 80.65 16 P **P** 09 42 41.5 -0.3
EPYK IAmb IAmb 09 42 42.6
comp=Z,7.1nm,0.8s
EPYK Eagle Plains 80.65 16 P 09 42 42.0
baz=323
RC01 Rabbit Creek A 80.66 24 P 09 42 42.1
baz=313
SML Sawmill 80.66 23 P 09 42 42.4
baz=314
DOT Dot Lake 80.73 20 P **P** 09 42 42.2 -0.1
DOT IAmb IAmb 09 42 50.5
comp=Z,12nm,1.3s
EGAK Eagle 80.73 18 P **P** 09 42 43.1 +0.8
PAX Paxson 80.79 21 P 09 42 42.8
baz=316
KNK Knik Glacier 80.89 23 P 09 42 44.3
baz=314
SCM Sheep Creek Mo 80.98 23 P **P** 09 42 44.9 +1.1
SCM pmax pmax
comp=Z,29nm,1.3s
SCM Sheep Creek Mo 80.98 23 P **P** 09 42 44.9 +1.1
SCM IAmb IAmb 09 42 52.7
comp=Z,29nm,1.3s
K27K Chicken 81.04 19 P **P** 09 42 45.1 +1.2
K27K IAmb IAmb 09 43 08.6
comp=Z,10nm,1.2s
K27K Chicken 81.04 19 P 09 42 44.7
baz=319
BRLK Bradley Lake 81.13 25 P **P** 09 42 45.0 +0.4
BRLK IAmb IAmb 09 43 08.8
comp=Z,19nm,1.0s
CNPM China Poot 81.15 26 P **P** 09 42 44.9 +0.3
M24K Tolsona, Glenn 81.17 22 P **P** 09 42 46.3 +1.5
M24K IAmb IAmb 09 42 46.6
comp=Z,8.9nm,0.8s
M24K Tolsona, Glenn 81.18 22 P 09 42 45.9
baz=315
HARP HAARP 81.30 21 P 09 42 46.4
baz=316
PWL Port Wells 81.31 24 P **P** 09 42 46.5 +1.0
PWL IAmb IAmb 09 42 59.1
comp=Z,19nm,1.3s
KLU Klutina 81.70 22 P 09 42 48.2
baz=316
GLI Glacier Island 81.73 23 P **P** 09 42 47.6 -0.1
GLI IAmb IAmb 09 42 55.7
comp=Z,10nm,1.1s
GLI Glacier Island 81.74 23 P 09 42 48.2
baz=315
DAWY Dawson 81.77 18 P **P** 09 42 48.4 +0.5
L27K Beaver Creek, 81.84 20 P 09 42 49.4
baz=319
OHAK Old Harbor 81.85 28 P 09 42 49.2
baz=310
BCAR Beaver Creek A 81.85 20 P **P** 09 42 49.4 +1.1
N25K Chitina, Valde 82.06 22 P **P** 09 42 50.2 +0.7
N25K IAmb IAmb 09 42 58.9
comp=Z,10nm,0.8s
N25K Chitina, Valde 82.06 22 P 09 42 50.9
baz=317
EYAK Cordova Ski Ar 82.44 23 P **P** 09 42 52.8 +1.5
EYAK IAmb IAmb 09 42 53.7
comp=Z,11nm,1.2s
EYAK Cordova Ski Ar 82.44 23 P 09 42 52.5
baz=316
BMRM Bremner River 82.52 22 P **P** 09 42 53.2 +1.3
BMRM IAmb IAmb 09 43 08.9
comp=Z,11nm,1.0s
BMRM Bremner River 82.52 22 P 09 42 52.8
baz=317
MCARA McCarthy VSAT 82.73 21 P **P** 09 42 53.9 +1.0
MCARA IAmb IAmb 09 43 02.4
comp=Z,14nm,0.8s
MCARA McCarthy VSAT 82.73 21 P 09 42 54.3
baz=318
RAGM Ragged Mountai 82.92 23 P **P** 09 42 55.1 +1.1
RAGM IAmb IAmb 09 43 05.9
comp=Z,18nm,1.2s
KOWA Kowa 82.94 283 P **P** 09 42 54.5 -0.4
KOWA IAmb IAmb 09 42 55.5
comp=Z,7.7nm,0.8s
CRQM Cirque 83.16 22 P **P** 09 42 56.8 +1.4
CRQM IAmb IAmb 09 43 04.5
comp=Z,9.4nm,0.7s
CRQE Cirque 83.18 22 P 09 42 56.3
baz=318
KAIM Kayak Island 83.35 23 P 09 42 57.5
baz=317
BARN Barnard Glacie 83.41 21 P **P** 09 42 58.4 +1.7
BARN IAmb IAmb 09 43 07.1
comp=Z,16nm,1.3s
CTG Chitna Glacier 83.59 21 P 09 42 58.9
baz=320
HYT Haines Junctio 84.87 20 P **P** 09 43 05.5 +1.5
HYT IAmb IAmb 09 43 12.0
comp=Z,5.7nm,0.8s
WHY Whitehorse 85.77 19 P **P** 09 43 09.3 +0.8
WHY IAmb IAmb 09 43 09.4
comp=Z,3.7nm,0.6s
WHY Whitehorse 85.77 19 P 09 43 09.1
baz=325
SUR Sutherland 85.91 230 P **P** 09 43 10.0 +0.3
comp=Z,7.0nm,1.1s,baz=126,slow=17,SNR=2.1
SUR Sutherland 85.91 230 IAmb IAmb 09 43 36.6
comp=Z,24nm,1.4s
DBIC Dimbokro 87.25 276 P **P** 09 43 16.3 -0.2
comp=Z,4.3nm,0.7s,baz=42,slow=6.1,SNR=6.4
DBIC Dimbokro 87.25 276 P **P** 09 43 16.7 +0.3
DBIC pmax pmax
comp=Z,14nm,1.3s
DBIC Dimbokro 87.25 276 P **P** 09 43 16.7 +0.3
DBIC IAmb IAmb 09 43 45.2
comp=Z,14nm,1.2s
YKA Yellowknife Ar 88.45 9 P **P** 09 43 21.2 -0.1
comp=Z,2.1nm,0.6s,baz=336,slow=4.7,SNR=25
PDAR Pinedale Array 108.29 12 PKiKP **PKiKP** 09 48 57.5 -0.6
comp=Z,0.3nm,0.5s,baz=184,slow=0.1,SNR=3.1
NVAR Mina Array Bea 110.31 20 PKiKP **PKiKP** 09 49 02.7 +0.8
comp=Z,0.5nm,0.6s,baz=28,slow=2.5,SNR=4.8
TXAR Lajitas Array 122.38 10 PKP **PKPdf** 09 49 25.0 -0.1
comp=Z,0.6nm,0.5s,baz=167,slow=0.4,SNR=9.3
TXAR Lajitas Array 122.38 10 PKPdf **PKPdf** 09 49 25.1 0.0
CHIC Chingaza 141.94 325 *e*P **PKPdf** 09 49 58.0 -4.6
GUY2C Guyana, Caldas 142.22 328 *e*P **PKPdf** 09 49 59.1 -4.1
ANIL Santa Ana 142.88 327 *e*P **PKPdf** 09 50 00.9 -3.2
ORTC Ortega, Tolima 143.31 327 *e*P PKPab 09 50 00.0 -0.4
YOTC Yotoco, Valle 143.77 328 *e*P PKPab 09 50 01.0 -1.3
MARP Paez Belalcaza 144.58 327 *e*P **PKPab** 09 50 05.1 -0.5
GARC Garzon, Huila 144.92 326 *e*P PKPbc 09 50 07.0 +0.2
PCON Cinco Dias 145.24 327 *e*P **PKPab** 09 50 08.5 +0.2
SOTA Rioblanco 145.51 327 *e*P **PKPbc** 09 50 08.9 -0.1
CRUC La Cruz 146.17 327 *e*P **PKPab** 09 50 11.2 -0.3
PTLC Puerto Leguiza 146.27 323 *e*P **PKPbc** 09 50 10.6 -0.1
CPUP Villa Florida 146.98 264 PKPbc **PKPdf** 09 50 10.5 0.0
comp=Z,3.6nm,0.8s,baz=43,slow=1.9,SNR=5.0
OTAV Otavalo 148.04 329 *e*P **PKPbc** 09 50 16.7 +0.4
LPAZ La Paz 153.04 290 PKPbc **PKPbc** 09 50 26.4 -1.9
comp=Z,2.4nm,0.8s,baz=33,slow=7.9,SNR=7.7

*IDC **25** 09:33:19.7±1.6,27°.83N×85°.59E,h0km,mb4.2/7,*
mb1 4.3/9,mb1mx3.8/46,mbtmp4.2/9,ML4.2/1,Error
ellipse: s-maj=58.4km s-min=20.8km az=61.0
*DMN **25** 09:33:21.4±0.1,27°.89N×85°.73E,h10km,Ml4.7/6,Error*
ellipse: s-maj=2.3km s-min=0.9km az=10.0
ISC 25 09:33:21.4±1.6,**27°.93N**±0'.07×**85°.71E**±0'.05,**h7**km±13km,
n19,σ0⁰**54**/29,**mb4.3**/7,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.41**	**249**	*e*Pg	**Pg**	**09 33 29.6**	**+0.2**
KKN				*e*Sg	**Sg**	**09 33 34.7**	**0.0**
PKI	**Pulchoki**	**0.45**	**216**	*e*Pg	**Pg**	**09 33 30.1**	**-0.1**
PKI				*e*Sg	**Sg**	**09 33 36.0**	**-0.1**
PKIN	**Phulchoki**	**0.45**	**218**	*e*Pg	**Pg**	**09 33 30.0**	**-0.2**
PKIN				*e*Sg	**Sg**	**09 33 36.0**	**-0.1**
DMN	**Daman**	**0.62**	**239**	*e*Pg	**Pg**	**09 33 33.6**	**+0.1**
DMN				*e*Sg	**Sg**	**09 33 41.3**	**-0.4**
GKN	**Gorkha**	**0.95**	**274**	*e*Pg	**Pg**	**09 33 39.8**	**+0.1**
GKN				*e*Sg	**Sb**	**09 33 52.7**	**-0.5**
	4μm,0.3s						
DANN	**Dangsing**	**1.77**	**284**	*e*Pg	**Pg**	**09 33 55.4**	**0.0**
DANN				*e*Sg	**Sg**	**09 34 18.0**	**-0.4**
	653nm,0.2s						
ODAN	**Odare**	**1.84**	**125**	*e*Pg	**Pb**	**09 33 55.5**	**0.0**
ODAN				*e*Sg	**Sb**	**09 34 19.1**	**+0.3**
	1μm,0.3s						
TAPN	**Taplejung**	**1.87**	**108**	*e*Pg	**Pb**	**09 33 55.8**	**-0.2**
TAPN				*e*Sg	**Sb**	**09 34 19.6**	**-0.1**
	726nm,0.4s						
KOLN	**Koldanda**	**1.88**	**266**	*e*Pg	**Pg**	**09 33 56.8**	**-0.6**
KOLN				*e*Sg	**Sg**	**09 34 21.1**	**-0.6**
	962nm,0.2s						
PYUN	**Piuthan**	**2.41**	**275**	*e*Pg	**Pb**	**09 34 06.2**	**+1.0**
PYUN				*e*Sg	**Sg**	**09 34 38.1**	**-0.8**
	1μm,0.4s						
CMAR	**Chiang Mai Arr**	**15.38**	**125**	Pn	**Pn**	**09 37 00.6**	**+1.6**
	baz=298,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**19.02**	**353**	P	**P**	**09 37 43.7**	**-0.2**
	0.8nm,0.3s,baz=172,slow=11,SNR=3.3						
KURBB	**Kurchatov Arra**	**23.31**	**348**	P	**P**	**09 38 29.8**	**0.0**
	3.9nm,0.7s,baz=170,slow=9.6,SNR=4.7						
SONM	**Songino Array**	**25.57**	**33**	P	**P**	**09 38 51.6**	**+0.5**
	2.5nm,0.7s,baz=225,slow=9.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**26.00**	**359**	P	**P**	**09 38 55.2**	**+0.5**
	3.2nm,0.3s,baz=187,slow=10,SNR=4.4						
FINES	**FINESS Array B**	**51.42**	**328**	P	**P**	**09 42 26.5**	**-0.3**
	3.0nm,0.6s,baz=108,slow=8.9,SNR=2.8						
ARCES	**ARCESS Array B**	**53.78**	**338**	P	**P**	**09 42 44.2**	**0.0**
	2.6nm,0.7s,baz=96,slow=8.4,SNR=1.7						
WRA	**Warramunga Arr**	**66.91**	**130**	P	**P**	**09 44 13.9**	**-0.8**
	1.8nm,0.6s,baz=320,slow=6.6,SNR=2.7						
ASAR	**Alice Springs**	**69.22**	**133**	P	**P**	**09 44 28.4**	**-0.8**
	0.5nm,0.5s,baz=316,slow=6.5,SNR=1.3						

*IDC **25** 09:36:27.8±1.5,27°.50N×85°.68E,h0km,mb3.8/9,*
mb1 3.9/11,mb1mx3.6/49,mbtmp3.7/11,ML3.7/1,Error
ellipse: s-maj=58.1km s-min=19.8km az=62.0
ISC 25 09:36:28.9±1.6,**27°.5N**±0'.2×**85°.7E**±0'.3,**h10**km,**n11**,
σ1⁰**31**/11,**mb3.7**/9,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.12**	**124**	Pn	**Pn**	**09 40 01.6**	**-1.1**
	baz=301,slow=12,SNR=1.8						
MKAR	**Makanchi Array**	**19.49**	**353**	P	**P**	**09 40 56.8**	**+0.7**
	0.2nm,0.3s,baz=170,slow=10,SNR=2.5						
KURBB	**Kurchatov Arra**	**23.78**	**349**	P	**P**	**09 41 42.0**	**+0.5**
	0.7nm,0.7s,baz=168,slow=10,SNR=2.2						
SONM	**Songino Array**	**25.98**	**33**	P	**P**	**09 42 01.6**	**-0.3**
	1.4nm,0.8s,baz=217,slow=9.1,SNR=3.0						
ZALV	**Zalesovo Beam**	**26.48**	**359**	P	**P**	**09 42 07.7**	**+1.5**
	0.4nm,0.3s,baz=137,slow=50,SNR=2.2						
FINES	**FINESS Array B**	**51.82**	**328**	P	**P**	**09 45 35.4**	**-1.4**

0.6nm,0.4s,baz=106,slow=13,SNR=2.5
ARCES ARCESS Array B 54.22 338 P P 09 45 55.6 +1.1
3.6nm,0.9s,baz=115,slow=10.0,SNR=2.1
WRA Warramunga Arr 66.61 130 P P 09 47 21.3 +1.4
0.5nm,0.4s,baz=322,slow=6.5,SNR=7.7
ASAR Alice Springs 68.90 133 P P 09 47 35.3 +1.1
0.4nm,0.6s,baz=309,slow=6.0,SNR=2.5
ILAR Eielson Array 79.46 20 P P 09 48 35.2 -0.1
0.4nm,0.6s,baz=313,slow=4.6,SNR=6.0
YKA Yellowknife Ar 88.90 9 P P 09 49 21.6 -1.7
0.2nm,0.7s,baz=345,slow=4.5,SNR=1.9

*IDC **25** 09:38:48.8±6.0,28.°11N×84.°54E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.4/50, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=103.1km s-min=56.3km az=173.0*
ISC 25 09:38:51.2±5.6,**28.°2N**±0.°7×**84.°5E**±0.°4,**h10**km,**n6**,σ0.°**49**/6,
mb4.0/5,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.61**	**355**	P		**P**	**09 43 08.2**	**-0.5**
	0.2nm,0.3s,baz=169,slow=12,SNR=3.3							
KURBB	**Kurchatov Arra**	**22.82**	**350**	P		**P**	**09 43 54.6**	**+0.5**
	0.3nm,0.5s,baz=182,slow=8.8,SNR=4.6							
ZALV	**Zalesovo Beam**	**25.69**	**0**	P		**P**	**09 44 21.7**	**+0.4**
	1.2nm,0.4s,baz=181,slow=8.9,SNR=4.7							
SONM	**Songino Array**	**25.91**	**35**	P		**P**	**09 44 23.5**	**-0.1**
	0.4nm,0.4s,baz=216,slow=10,SNR=2.5							
FINES	**FINESS Array B**	**50.61**	**328**	P		**P**	**09 47 49.9**	**-0.2**
	1.1nm,0.6s,baz=104,slow=8.0,SNR=4.0							
ARCES	**ARCESS Array B**	**53.11**	**338**	P		**P**	**09 48 08.6**	**0.0**
	1.8nm,0.8s,baz=97,slow=8.0,SNR=1.2							

*IDC **25** 09:42:59.8±0.7,28.°14N×84.°98E, h0km, mb4.0/17, mb1 4.1/19, mb1mx3.9/44, mbtmp4.0/19, ML4.3/2, Error ellipse: s-maj=22.3km s-min=14.2km az=59.0*
*NEIC **25** 09:43:00.8±1.2,28.°07N±0.°09×84.°88E±0.°08, h10km±1km, mb4.4/37, Error ellipse: s-maj=16.9km s-min=9.5km az=207.0*
*DMN **25** 09:43:00.8±0.3,28.°14N×85.°16E, h25km, Ml5.0/5, Error ellipse: s-maj=8.9km s-min=2.8km az=15.0*
*NDI **25** 09:43:03.1±3.6,27.°97N×85.°00E, h10km, ML4.0, mb4.4(NEIC)*
ISC 25 09:43:02.9±1.1,**28.°06N**±0.°06×**85.°07E**±0.°03,**h26**km±9km,
n86,σ1°**64**/98,**mb4.2**/34,**3C**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KKN	**Kakani**	**0.33**	**145**	*e*Sg		**Sb**	**09 43 14.5**	**-1.3**
	33μm,0.4s							
DMN	**Daman**	**0.45**	**175**	*e*Sg		**Sb**	**09 43 20.1**	**+1.1**
	7μm,0.3s							
DANN	**Dangsing**	**1.19**	**284**	*e*Pg		**Pb**	**09 43 25.6**	**+0.6**
DANN				*e*Sg		**Sn**	**09 43 41.8**	**+2.1**
	2μm,0.2s							
KOLN	**Koldanda**	**1.33**	**258**	*e*Pg		**Pb**	**09 43 27.5**	**+0.2**
KOLN				*e*Sg		**Sb**	**09 43 47.5**	**+3.5**
	10μm,0.4s							
RAMN	**Ramite**	**1.75**	**129**	*e*Pg		**Pn**	**09 43 33.6**	**+1.7**
PYUN	**Piuthan**	**1.83**	**272**	*e*Pg		**Pb**	**09 43 36.2**	**+0.3**
PYUN				*e*Sg		**Sb**	**09 44 01.2**	**+2.6**
	5μm,0.3s							
ODAN	**Odare**	**2.39**	**120**	*e*Pg		**Pb**	**09 43 45.6**	**+0.3**
ODAN				*e*Sg		**Sb**	**09 44 15.1**	**+0.7**
	1μm,0.5s							
TAPN	**Taplejung**	**2.45**	**106**	*e*Pg		**Pb**	**09 43 45.5**	**-0.9**
TAPN				*e*Sg		**Sb**	**09 44 16.4**	**+0.1**
	436nm,0.2s							
GTK	**Tadong**	**3.22**	**102**	*e*P		**Pn**	**09 43 55.2**	**+3.2**
GTK				*e*S		**Sn**	**09 44 32.0**	**+2.4**
GTK				IAML			09 44 37.1	
	comp=N,427nm,0.3s							
LSA	**Lhasa**	**5.58**	**72**	Pn		**Pn**	**09 44 24.3**	**-0.4**
GUWA	**GUWAHATI**	**6.19**	**106**	*e*P		**Pn**	**09 44 34.5**	**+1.8**
GUWA				*e*S		**Sn**	**09 45 42.9**	**+0.3**
SHL	**Shillong**	**6.58**	**111**↑	*e*P		**Pn**	**09 44 39.0**	**+0.8**
SHL				*e*S		**Sn**	**09 45 49.8**	**-2.7**
SHL	**Shillong**	**6.58**	**111**	Pn		**Pn**	**09 44 39.0**	**+0.8**
NDI	**New Delhi**	**6.94**	**277**	*e*P		**Pn**	**09 44 43.0**	**0.0**
NDI				*e*S		**Sn**	**09 46 02.0**	**+0.8**
TEZP	**TEZPUR**	**7.03**	**100**↑	*e*P		**Pn**	**09 44 45.9**	**+1.7**
SMLA	**Simla**	**7.53**	**296**↑	*e*P		**Pn**	**09 44 52.8**	**+1.7**
SMLA				*e*S		**Sn**	**09 46 11.8**	**-3.7**
BHPL	**Bhopal**	**8.40**	**237**	*e*P		**Pn**	**09 45 00.9**	**-2.2**
BHPL				*e*S		**Sn**	**09 46 30.3**	**-6.8**
BHPL				IAML			09 46 35.7	
	comp=N,110nm,0.2s							
BHPL				IAML			09 46 41.0	
	comp=E,112nm,0.4s							
KOHI	**KOHIMA**	**8.40**	**104**	*e*P		**Pn**	**09 45 03.8**	**+0.6**
KOHI				*e*S		**Sn**	**09 46 36.4**	**-1.0**
KOHI				IAML			09 46 40.7	
	comp=E,87nm,0.5s							
KOHI				IAML			09 46 48.5	
	comp=N,58nm,0.6s							
DHRM	**DHARAMSHALA**	**8.66**	**301**	*e*P		**Pn**	**09 45 06.3**	**-0.5**
DHRM				*e*S		**Sn**	**09 46 38.6**	**-5.2**
NIL	**Nilore**	**11.58**	**302**	Pn		**Pn**	**09 45 43.1**	**-3.4**
KBL	**Kabul**	**15.14**	**299**	Pn		**Pn**	**09 46 31.8**	**-3.5**
PRZ	**Przheval'sk**	**15.38**	**341**	Pn		**Pn**	**09 46 37.5**	**-0.8**
CHTO	**Chiang Mai**	**15.70**	**123**	Pn		**Pn**	**09 46 42.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**15.92**	**124**	Pn		**P**	**09 46 48.9**	**+0.1**
	comp=N,0.2nm,0.3s,baz=309,slow=12,SNR=12							
CMAR	**Chiang Mai Arr**	**15.92**	**124**			**Pn**	**09 46 46.4**	**+1.1**
BOOM	**Boomskoye usch**	**16.20**	**335**	Pn		**Pn**	**09 46 47.1**	**-1.8**
AAK	**Ala-Archa**	**16.89**	**332**	Pn		**P**	**09 47 00.0**	**+0.5**
	comp=N,0.3nm,0.3s,baz=133,slow=10,SNR=2.6							
AAK	**Ala-Archa**	**16.89**	**332**			**Pn**	**09 46 56.9**	**-0.7**
MK31	**Makanchi Array**	**18.83**	**354**			**P**	**09 47 20.5**	**-0.3**
MKAR	**Makanchi Array**	**18.83**	**354**	P		**P**	**09 47 20.6**	**-0.2**
	comp=N,2.1nm,0.3s,baz=174,slow=12,SNR=58							
MKAR	**Makanchi Array**	**18.83**	**354**	P		**P**	**09 47 20.4**	**-0.3**
MAKZ	**Makanchi**	**18.87**	**353**	P		**Pn**	**09 47 21.8**	**-0.1**
MAKZ				IAmb		IAmb	09 47 23.6	
	comp=Z,8.1nm,0.6s							
KK31	**Karatay Array**	**19.07**	**326**	P		**P**	**09 47 21.8**	**-1.6**
KKAR	**Karatay Array**	**19.07**	**326**	P		**P**	**09 47 21.5**	**-1.9**
PALK	**Pallekele**	**21.08**	**192**	P		**P**	**09 47 47.2**	**+1.7**
	comp=Z,6.8nm,1.0s,baz=340,slow=2.4,SNR=1.9							
XAN	**Xi'an**	**21.27**	**68**	P		**P**	**09 47 46.5**	**-0.9**
XAN				IAmb		IAmb	09 48 00.7	
	comp=Z,7.5nm,1.1s							
KURBB	**Kurchatov Arra**	**23.07**	**349**	P		**P**	**09 48 06.0**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=165,slow=10,SNR=10							
SONM	**Songino Array**	**25.79**	**34**	P		**P**	**09 48 33.4**	**+1.5**
	comp=Z,2.5nm,0.5s,baz=226,slow=10.0,SNR=14							
SONM	**Songino Array**	**25.79**	**34**	P		**P**	**09 48 32.3**	**+0.4**
ZAA0	**Zalesovo Array**	**25.86**	**360**	P		**P**	**09 48 32.5**	**+0.2**
ZAA0				IAmb		IAmb	09 48 33.6	
	comp=Z,4.4nm,0.7s							
ZALV	**Zalesovo Beam**	**25.86**	**360**	P		**P**	**09 48 33.0**	**+0.6**
	comp=Z,4.6nm,0.6s,baz=184,slow=9.8,SNR=17							
ZALV	**Zalesovo Beam**	**25.86**	**360**	P		**P**	**09 48 32.8**	**+0.5**
ULN	**Ulaanbaatar**	**26.14**	**35**	P		**P**	**09 48 36.1**	**+1.1**
ULN				IAmb		IAmb	09 48 39.0	
	comp=Z,7.4nm,0.9s							
BVAR	**Borovoye Array**	**27.21**	**340**	P		**P**	**09 48 43.8**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=153,slow=17,SNR=4.1							
ABKAR	**Akbulak array**	**28.63**	**325**	P		**P**	**09 48 57.0**	**-0.1**
SSLB	**Suanglung**	**32.48**	**89**	P		**P**	**09 49 32.8**	**+1.3**
ARU	**Arti**	**34.06**	**334**	P		**P**	**09 49 44.9**	**0.0**
ARU				IAmb		IAmb	09 49 46.1	
	comp=Z,5.1nm,0.6s							
INCN	**Inchon**	**35.95**	**64**	P		**P**	**09 50 01.2**	**-0.3**
KSRS	**Korea Array**	**36.97**	**64**	P		**P**	**09 50 09.4**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=263,slow=8.4,SNR=7.3							
JNU	**Nakatsue**	**39.52**	**71**	P		**P**	**09 50 33.5**	**+1.8**
JNU				IAmb		IAmb	09 50 47.3	
	comp=Z,20nm,1.2s							
USRK	**Ussuriysk Ar.**	**40.60**	**54**	P		**P**	**09 50 40.8**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=265,slow=6.9,SNR=4.6							
NRIK	**Noril'sk**	**41.34**	**1**	P		**P**	**09 50 46.8**	**+0.6**
NRIK				IAmb		IAmb	09 51 02.4	
	comp=Z,2.3nm,0.6s							
CSS	**Mathiatis**	**44.24**	**292**	P		**P**	**09 51 08.2**	**-2.0**
CSS				IAmb		IAmb	09 51 08.3	
	comp=Z,9.9nm,1.2s							
AKASG	**Malin Array Be**	**47.41**	**314**	P		**P**	**09 51 34.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=81,slow=7.1,SNR=7.2							
MLR	**Muntele Rosu**	**49.33**	**307**	P		**P**	**09 51 49.3**	**-0.8**
MLR				IAmb		IAmb	09 51 52.6	
	comp=Z,4.7nm,0.7s							

ALN	**Alexandroupoli**	**49.46**	**301**	P		**P**	**09 51 48.9**	**-2.0**
BURAR	**Bucovina Array**	**49.84**	**310**	P		**P**	**09 51 52.7**	**-1.3**
BURAR				IAmb		IAmb	09 51 55.1	
	comp=Z,1.6nm,0.8s							
FINES	**FINESS Array B**	**51.01**	**328**	P		**P**	**09 52 02.7**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=108,slow=10,SNR=11							
ARCES	**ARCESS Array B**	**53.45**	**338**	P		**P**	**09 52 21.1**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=102,slow=7.9,SNR=22							
NC303	**NORSAR Array S**	**58.02**	**327**	P		**P**	**09 52 53.6**	**+0.2**
NOA	**NORSAR Array B**	**58.10**	**327**	P		**P**	**09 52 53.2**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=101,slow=7.2,SNR=3.0							
SPA0	**Spitsbergen Ar**	**58.39**	**347**	P		**P**	**09 52 56.6**	**+0.9**
WB0	**Warramunga Arr**	**67.35**	**129**	P		**P**	**09 53 57.0**	**+0.9**
WRA	**Warramunga Arr**	**67.43**	**129**	P		**P**	**09 53 57.7**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=322,slow=6.6,SNR=12							
WB2	**Warramunga Arr**	**67.44**	**129**	P		**P**	**09 53 57.5**	**+0.8**
WR0	**Warramunga Arr**	**67.58**	**129**	P		**P**	**09 53 59.0**	**+1.5**
WR0				IAmb		IAmb	09 54 13.4	
	comp=Z,3.9nm,1.4s							
ASAR	**Alice Springs**	**69.72**	**133**	P		**P**	**09 54 14.1**	**+3.2**
	comp=Z,0.9nm,0.8s,baz=327,slow=6.7,SNR=7.3							
EUNU	**Eureka**	**72.01**	**358**	P		**P**	**09 54 24.7**	**+0.7**
EUNU				IAmb		IAmb	09 54 26.0	
	comp=Z,3.0nm,0.8s							
A21K	**Barrow**	**72.07**	**17**	P		**P**	**09 54 24.9**	**+0.6**
IMAR	**Indian Mountai**	**76.13**	**21**	P		**P**	**09 54 49.3**	**+1.0**
COLD	**Coldfoot**	**76.41**	**19**	P		**P**	**09 54 50.8**	**+1.0**
COLD				IAmb		IAmb	09 55 04.5	
	comp=Z,3.9nm,1.4s							
BMAR	**Burnt Mountain**	**77.83**	**18**	P		**P**	**09 54 59.6**	**+1.7**
I23K	**Minto, Yukon-K**	**78.06**	**21**	P		**P**	**09 54 60.0**	**+0.9**
TORD	**Torodi Ar. Bea**	**78.16**	**279**	P		**P**	**09 55 00.5**	**0.0**
	comp=Z,0.3nm,0.5s,baz=65,slow=4.5,SNR=2.6							
TORD	**Torodi Ar. Bea**	**78.16**	**279**	P		**P**	**09 54 59.4**	**-1.2**
ILAR	**Eielson Array**	**79.08**	**20**	P		**P**	**09 55 05.0**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=299,slow=4.7,SNR=9.5							
ILAR	**Eielson Array**	**79.08**	**20**	P		**P**	**09 55 05.2**	**+0.4**
SKT	**Skwentna**	**79.47**	**24**	P		**P**	**09 55 07.7**	**+0.8**
SKT				IAmb		IAmb	09 55 08.5	
	comp=Z,6.4nm,1.0s							
STKA	**Stephens Creek**	**80.28**	**134**	P		**P**	**09 55 12.4**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=343,slow=17,SNR=1.5							
STKA	**Stephens Creek**	**80.28**	**134**	IAmb		IAmb	09 55 15.0	
	comp=Z,1.2nm,1.2s							
SCRK	**Sand Creek**	**80.53**	**20**	P		**P**	**09 55 13.4**	**+0.7**
SCRK				IAmb		IAmb	09 55 14.3	
	comp=Z,2.3nm,0.8s							
SML	**Sawmill**	**80.70**	**23**	P		**P**	**09 55 14.8**	**+1.2**
SML				IAmb		IAmb	09 55 15.5	
	comp=Z,5.3nm,0.8s							
SCM	**Sheep Creek Mo**	**81.03**	**22**	P		**P**	**09 55 16.8**	**+1.4**
SCM				IAmb		IAmb	09 55 17.8	
	comp=Z,4.3nm,0.9s							
DAWY	**Dawson**	**81.78**	**18**	P		**P**	**09 55 19.9**	**+0.6**
DAWY				IAmb		IAmb	09 55 27.3	
	comp=Z,4.1nm,1.4s							
BCAR	**Beaver Creek A**	**81.87**	**20**	P		**P**	**09 55 21.5**	**+1.7**
YKA	**Yellowknife Ar**	**88.39**	**9**	P		**P**	**09 55 52.9**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=339,slow=4.6,SNR=12							

*IDC **25** 09:47:23.6±0.6,38.°42S×47.°91E, h0km, mb4.1/11, mb1 4.2/12, mb1mx3.9/41, mbtmp4.2/12, ML4.2/1, MS5.1/1, Ms1 5.1/1, ms1mx3.9/40, Error ellipse: s-maj=22.7km s-min=15.4km az=31.0*
*NEIC **25** 09:47:25.0±1.3,38.°51S±0.°04×47.°9E±0.°1, h10km±1km, mb4.6/21, Error ellipse: s-maj=20.0km s-min=3.6km az=255.0*
ISC 25 09:47:24.9±0.4,**38.°45S**±0.°08×**47.°90E**±0.°10,**h10**km,**n51**,
σ0°**71**/45,**mb4.3**/16,**Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CRZF	**Crozet Islands**	**8.49**	**161**	Pn		**Pn**	**09 49 27.2**	**-0.7**
VOI	**Vohitsoka**	**16.52**	**356**	Pn		**Pn**	**09 51 16.3**	**-0.5**
ABPO	**Ambohimpanom**	**19.37**	**358**	P		**Pn**	**09 51 52.2**	**+0.1**
ABPO				IAmb		IAmb	09 51 55.8	
	comp=Z,26nm,1.3s							
OPO	**Ambohidratompo**	**19.82**	**358**	P		**Pn**	**09 51 56.9**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=356,slow=2.4,SNR=5.6							
BOSA	**Boshof**	**21.23**	**291**	P		**P**	**09 52 11.7**	**+0.6**
	comp=Z,5.4nm,0.8s,baz=130,slow=9.9,SNR=9.0							
BOSA	**Boshof**	**21.23**	**291**	P		**P**	**09 52 11.6**	**+0.6**
SUR	**Sutherland**	**22.85**	**277**	P		**P**	**09 52 29.2**	**+0.7**
	comp=Z,4.5nm,0.8s,baz=89,slow=1.4,SNR=2.6							
SUR	**Sutherland**	**22.85**	**277**	P		**P**	**09 52 28.9**	**+0.4**
SUR				IAmb		IAmb	09 52 36.7	
	comp=Z,46nm,1.6s							
LBTB	**Lobatse**	**23.15**	**299**	P		**P**	**09 52 32.0**	**+0.5**
	comp=Z,4.2nm,0.9s,baz=138,slow=9.9,SNR=11							
LBTB				LR		LR	10 00 28.0	
	comp=Z,5μm,21.2s,baz=73,slow=34							
LBTB	**Lobatse**	**23.15**	**299**	P		**P**	**09 52 32.0**	**+0.5**
LBTB				IAmb		IAmb	09 52 38.9	
	comp=Z,12nm,0.9s							
MATP	**Matopo**	**24.57**	**311**	P		**P**	**09 52 45.5**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=144,slow=9.8,SNR=7.2							
LSZ	**Lusaka**	**28.89**	**318**	P		**P**	**09 53 24.2**	**+0.1**
MAW	**Mawson**	**30.38**	**169**	P		**P**	**09 53 37.0**	**+0.3**
TSUM	**Tsumeb**	**32.54**	**298**	P		**P**	**09 53 56.9**	**+0.6**
KIBK	**Kibwezi**	**37.05**	**344**	P		**P**	**09 54 35.0**	**-0.2**
KIBK				IAmb		IAmb	09 54 53.2	
	comp=Z,7.5nm,1.4s							
H08S1	**Diego Garcia H**	**37.85**	**42**	T		T	10 35 00.2	
	baz=212,slow=76,SNR=6.1							
H08S2	**Diego Garcia H**	**37.86**	**42**	T		T	10 34 52.7	
	baz=212,slow=76,SNR=5.0							
H08S3	**Diego Garcia H**	**37.87**	**42**	T		T	10 35 02.5	
	baz=212,slow=76,SNR=5.6							
DGAR	**Diego Garcia**	**38.03**	**42**	P		**P**	**09 54 42.9**	**-0.6**
MBAR	**Mbarara**	**40.83**	**333**	P		**P**	**09 55 05.3**	**-1.7**
MBAR				IAmb		IAmb	09 55 14.9	
	comp=Z,18nm,1.6s							
SNAA	**Sanae**	**41.87**	**202**	P		**P**	**09 55 14.1**	**-0.7**
	comp=Z,5.2nm,0.8s,baz=63,slow=4.8,SNR=13							
SNAA	**Sanae**	**41.87**	**202**	P		**P**	**09 55 13.9**	**-0.9**
CASY	**Casey**	**44.58**	**149**	P		**P**	**09 55 36.6**	**0.0**
CASY				IAmb		IAmb	09 55 54.8	
	comp=Z,11nm,1.4s							
COCO	**West Island**	**50.64**	**72**	P		**P**	**09 56 24.2**	**-0.1**
QSPA	**South Pole Qui**	**51.75**	**180**	P		**P**	**09 56 34.5**	**+2.2**
	comp=Z,3.6nm,1.0s,baz=271,slow=6.5,SNR=5.4							
QSPA	**South Pole Qui**	**51.75**	**180**	P		**P**	**09 56 31.3**	**-1.0**
QSPA				IAmb		IAmb	09 56 38.0	
	comp=Z,8.3nm,1.2s							
H01W2	**Cape Leeuwin H**	**52.21**	**108**	T		T	10 52 50.8	
	comp=Z,245,slow=75,SNR=74							
H01W3	**Cape Leeuwin H**	**52.22**	**108**	T		T	10 52 51.5	
	baz=245,slow=75,SNR=67							
H01W1	**Cape Leeuwin H**	**52.23**	**108**	T		T	10 52 52.1	
	baz=245,slow=75,SNR=82							
TOA0	**Torodi Ar. Sit**	**67.08**	**310**	P		**P**	**09 58 19.4**	**+0.8**
TOA0				IAmb		IAmb	09 58 21.6	
	comp=Z,8.9nm,1.4s							
TORD	**Torodi Ar. Bea**	**67.08**	**310**	P		**P**	**09 58 18.9**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=147,slow=6.6,SNR=5.9							
TORD	**Torodi Ar. Bea**	**67.08**	**310**	P		**P**	**09 58 18.3**	**-0.3**
TORD				IAmb		IAmb	09 58 30.3	
	comp=Z,2.0nm,0.9s							
FITZ	**Fitzroy Crossi**	**69.53**	**97**	P		**P**	**09 58 34.5**	**+0.4**
ASAR	**Alice Springs**	**72.70**	**107**	P		**P**	**09 58 53.6**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=231,slow=5.8,SNR=19							
ASAR	**Alice Springs**	**72.70**	**107**	P		**P**	**09 58 53.2**	**-0.1**
STKA	**Stephens Creek**	**73.60**	**118**	P		**P**	**09 58 59.0**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=229,slow=9.3,SNR=4.5							
CMAR	**Chiang Mai Arr**	**74.11**	**50**	P		**P**	**09 59 01.9**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=228,slow=6.3,SNR=6.4							
CMAR	**Chiang Mai Arr**	**74.11**	**50**	P		**P**	**09 59 01.1**	**-0.4**
WRA	**Warramunga Arr**	**75.18**	**104**	P		**P**	**09 59 08.7**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=227,slow=4.9,SNR=15							
ARMA	**Armidale**	**81.31**	**122**	P		**P**	**09 59 41.8**	**0.0**
KKAR	**Karatay Array**	**83.73**	**16**	P		**P**	**09 59 54.8**	**+1.1**
CTAO	**Charters Tower**	**84.02**	**111**	P		**P**	**09 59 56.3**	**+0.4**
CTAO				IAmb		IAmb	09 59 57.4	
	comp=Z,6.1nm,0.9s							
LL04	**Puerto Octay**	**84.05**	**221**	P		**P**	**09 59 55.3**	**-0.4**
INK	**Inuvik**	**150.08**	**1**	PKPbc		**PKPbc**	**10 07 13.8**	**-0.8**
	comp=Z,2.3nm,1.0s,baz=50,slow=3.8,SNR=7.6							
INK	**Inuvik**	**150.08**	**1**	PKPdf		**PKPdf**	**10 07 10.6**	**+1.0**
ULM	**Lac du Bonnet**	**151.82**	**307**	PKPbc		**PKPbc**	**10 07 18.5**	**-0.8**
	comp=Z,4.9nm,0.6s,baz=69,slow=2.4,SNR=16							
ULM	**Lac du Bonnet**	**151.82**	**307**	PKPbc		**PKPbc**	**10 07 18.7**	**-0.6**
ILAR	**Eielson Array**	**152.24**	**14**	PKPbc		**PKPbc**	**10 07 19.4**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=300,slow=2.6,SNR=8.0							
YKA	**Yellowknife Ar**	**153.66**	**342**	PKPbc		**PKPbc**	**10 07 22.4**	**-0.6**

	comp=Z,0.6nm,0.8s,baz=41,slow=1.8,SNR=6.1							
TXAR	**Lajitas Array**	**154.79**	**257**	PKPbc		**PKiKP**	**10 07 27.1**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=148,slow=4.1,SNR=10.0							
TXAR	**Lajitas Array**	**154.79**	**257**	PKPdf		**PKPdf**	**10 07 17.5**	**-0.5**

*IDC **25** 09:53:31.6±1.5,27.°49N×85.°59E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.5/49, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=60.4km s-min=21.1km az=62.0*
*DMN **25** 09:53:31.8±0.3,27.°64N×85.°81E, h25km, Ml4.7/2, Error ellipse: s-maj=7.0km s-min=3.2km az=152.0*
*NEIC **25** 09:53:32.6±1.2,27.°53N±0.°09×85.°73E±0.°07, h10km±1km, mb4.0/11, Error ellipse: s-maj=16.8km s-min=8.3km az=155.0*
ISC 25 09:53:32.4±1.7,**27.°57N**±0.°08×**85.°76E**±0.°04,**h8**km±10km,
n29,σ0°**80**/36,**mb4.1**/9,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PKI	**Pulchoki**	**0.31**	**270**	*e*Pg		**Pb**	**09 53 40.2**	**-0.3**
PKI				*e*Sg		**Sb**	**09 53 45.3**	**-0.6**
GUN	**Gumba**	**0.35**	**17**	*e*Pg		**Pg**	**09 53 39.0**	**-0.5**
GUN				*e*Sg		**Sg**	**09 53 44.3**	**+0.1**
KKN	**Kakani**	**0.48**	**297**	*e*Pg		**Pg**	**09 53 42.1**	**+0.3**
KKN				*e*Sg		**Sg**	**09 53 49.5**	**+1.4**
DMN	**Daman**	**0.58**	**274**	*e*Pg		**Pb**	**09 53 45.1**	**+0.1**
DMN				*e*Sg		**Sb**	**09 53 53.6**	**0.0**
GKN	**Gorkha**	**1.09**	**294**	*e*Pg		**Pb**	**09 53 53.4**	**-0.1**
GKN				*e*Sg		**Sb**	**09 54 08.2**	**+0.2**
KOLN	**Koldanda**	**1.93**	**276**	*e*Pg		**Pb**	**09 54 08.6**	**+0.7**
KOLN				*e*Sg		**Sg**	**09 54 34.5**	**+0.1**
	880nm,0.2s							
DANN	**Dangsing**	**1.93**	**294**	*e*Pg		**Pb**	**09 54 08.0**	**-0.1**
DANN				*e*Sg		**Sb**	**09 54 33.0**	**+0.5**
	521nm,0.2s							
NIL	**Nilore**	**12.36**	**302**	Pn		**Pn**	**09 56 26.8**	**-1.9**
MK31	**Makanchi Array**	**19.38**	**353**	P		**Pn**	**09 57 59.3**	**-0.4**
MK31				IAmb		IAmb	09 58 05.4	
	comp=Z,3.8nm,1.5s							
MKAR	**Makanchi Array**	**19.38**	**353**	P		**Pn**	**09 57 59.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=179,slow=12,SNR=6.9							
MKAR	**Makanchi Array**	**19.38**	**353**	P		**P**	**09 57 58.2**	**-0.4**
MAKZ	**Makanchi**	**19.43**	**352**	P		**P**	**09 57 59.5**	**+0.3**
KK31	**Karatay Array**	**19.82**	**325**	P		**P**	**09 58 03.9**	**+0.4**
KURBB	**Kurchatov Arra**	**23.67**	**348**	P		**P**	**09 58 46.0**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=166,slow=9.8,SNR=6.0							
KURK	**Kurchatov**	**23.75**	**349**	P		**P**	**09 58 46.0**	**+1.0**
SONM	**Songino Array**	**25.85**	**33**	P		**P**	**09 59 05.9**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=218,slow=10,SNR=3.6							
SONM	**Songino Array**	**25.85**	**33**	P		**P**	**09 59 04.7**	**+0.3**
SONM				IAmb		IAmb	09 59 12.4	
	comp=Z,1.2n

HG4B	**Hotspring**	**0.69**	**350**	P	**Pg**	**10 08 24.6**	**+0.3**
HG4B				S	**Sg**	**10 08 34.7**	**+1.6**
BNB	**Barry Inlet**	**1.06**	**334**	P	**Pb**	**10 08 30.4**	**-1.7**
BNB				S	**Sb**	**10 08 45.0**	**-1.5**
HG1B	**Mitchell Dam**	**1.49**	**333**	Pn	**Pn**	**10 08 36.9**	**-1.8**
HG1B				Sg	**Sb**	**10 08 59.3**	**+0.7**
MOBC	**Moresby Island**	**1.64**	**339**	Pn	**Pn**	**10 08 38.6**	**-2.2**
MOBC				Sn	**Sn**	**10 08 59.9**	**-2.5**
MOBC				Sg	**Sb**	**10 09 03.6**	**+0.6**
DIB	**Dawson Inlet,**	**1.83**	**331**	Pn	**Pn**	**10 08 41.0**	**-2.2**
DIB				Sg	**Sb**	**10 09 08.3**	**0.0**
BBB	**Bella Bella**	**1.87**	**71**	Pg	**Pn**	**10 08 40.4**	**-3.5**
	30nm,0.3s,baz=255,slow=8.2,SNR=288						
BBB				Lg	Lg	10 09 05.2	
	296nm,0.3s,baz=152,slow=21,SNR=14						
BBB	**Bella Bella**	**1.87**	**71**	Pn	**Pn**	**10 08 41.2**	**-2.7**
BBB				Sg	**Sn**	**10 09 05.0**	**-3.1**
BNAB	**Bonilla**	**1.89**	**7**	Pn	**Pn**	**10 08 41.8**	**-2.4**
BNAB				Sg	**Sb**	**10 09 09.2**	**-0.8**
HOLB	**Holberg**	**2.05**	**117**	Pn	**Pn**	**10 08 42.0**	**-4.5**
HWKB	**Hawksbury Isla**	**2.28**	**29**	Pn	**Pn**	**10 08 47.7**	**-1.9**
HWKB				Sg	**Sb**	**10 09 20.8**	**-0.5**
GRNB	**Grenville Isla**	**2.32**	**15**	Pn	**Pn**	**10 08 48.1**	**-2.0**
GRNB				Sg	**Sb**	**10 09 21.9**	**-0.6**
PHC	**Port Hardy**	**2.42**	**111**	Pn	**Pn**	**10 08 46.9**	**-4.6**
MASB	**Masset**	**2.48**	**346**	Pn	**Pn**	**10 08 53.1**	**+0.9**
NDB	**Naden**	**2.62**	**334**	Pn	**Pn**	**10 08 52.4**	**-1.9**
NDB				Sg	**Sg**	**10 09 35.6**	**+0.4**
MAYB	**Maynard**	**2.71**	**115**	Pn	**Pn**	**10 08 52.0**	**-3.5**
RUBB	**Prince Rupert**	**2.75**	**9**	Pn	**Pn**	**10 08 54.3**	**-1.6**
RUBB				Sg	**Sb**	**10 09 35.7**	**+0.9**
KITB	**Kitimat**	**2.85**	**29**	Pn	**Pn**	**10 08 55.7**	**-1.6**
KITB				Sg	**Sb**	**10 09 37.8**	**+0.2**
EDB	**Eliza Dome**	**3.02**	**124**	Pn	**Pn**	**10 08 58.7**	**-1.0**
WOSB	**Woss**	**3.16**	**116**	Pn	**Pn**	**10 08 58.5**	**-3.2**
NCRB	**Newcastle Ridg**	**3.35**	**109**	Pn	**Pn**	**10 09 00.8**	**-3.6**
NCRB				Pg	**Pb**	**10 09 09.9**	**-1.2**
NCRB				Sg	**Sb**	**10 09 52.1**	**-0.2**
GDR	**Gold River**	**3.65**	**118**	Pn	**Pn**	**10 09 05.8**	**-2.6**
GDR				Sg	**Sg**	**10 10 09.6**	**+1.2**
CBB	**Campbell River**	**3.91**	**112**	Pn	**Pn**	**10 09 09.2**	**-2.7**
CBB				Sn	**Sb**	**10 10 07.3**	**-0.9**
TOFB	**Tofino**	**4.09**	**125**	Pn	**Pn**	**10 09 12.9**	**-1.4**
BTB	**Buttle Lake**	**4.10**	**120**	Pn	**Pn**	**10 09 12.1**	**-2.7**
OZB	**Mount Ozzard**	**4.42**	**125**	Pn	**Pn**	**10 09 19.7**	**+0.7**
UBRB	**Upper Baezaeko**	**4.43**	**71**	Pn	**Pn**	**10 09 18.0**	**-1.3**
UBRB				Sg	**Sb**	**10 10 24.6**	**+1.2**
TXB	**Texada**	**4.60**	**112**	Pn	**Pn**	**10 09 18.9**	**-2.5**
B928	**Bamfield**	**4.68**	**124**	Pn	Pb	10 09 28.9	-4.9
MGB	**Mount Grey**	**4.82**	**121**	Pn	**Pn**	**10 09 21.9**	**-2.7**
GHNB	**Nanoose**	**4.90**	**116**	Pn	**Pb**	**10 09 35.8**	**-1.6**
GHNB				Sg	**Sg**	**10 10 44.0**	**-4.3**
FSB	**Fort Saint Jam**	**4.94**	**52**	Pn	**Pn**	**10 09 24.5**	**-1.6**
FSB				Sg	**Sb**	**10 10 43.4**	**+5.6**
SHB	**Sechelt**	**4.97**	**111**	Pn	**Pn**	**10 09 25.3**	**-1.3**
SHB				Sg	**Sb**	**10 10 41.3**	**+2.6**
NLLB	**Nanaimo Lost L**	**5.08**	**115**	Sg	**Sb**	**10 10 48.3**	**+6.4**
WPB	**Watts Point**	**5.33**	**109**	Pn	**Pn**	**10 09 30.1**	**-1.3**
WPB				Pg	**Pb**	**10 09 44.8**	**0.0**
BIB	**Bowen Island**	**5.38**	**111**	Pn	**Pn**	**10 09 31.4**	**-0.8**
BIB				Pg	**Pb**	**10 09 44.9**	**-0.8**
BIB				Sg	**Sb**	**10 10 52.7**	**+2.1**
SNB	**Saturna Island**	**5.78**	**116**	Sg	**Sg**	**10 11 17.3**	**+0.8**
LLLB	**Lillooet**	**5.83**	**96**	Pg	**Pb**	**10 09 58.0**	**+4.7**
MBW	**Mount Baker**	**6.49**	**112**	Pn	**Pn**	**10 09 47.0**	**-0.6**
MBW				Sg	**Sg**	**10 11 35.2**	**-4.3**
GNW	**Green Mountain**	**6.68**	**124**	Pg	**Pb**	**10 10 11.7**	**+3.9**
DLBC	**Dease Lake**	**6.86**	**4**	Pn	**Pn**	**10 09 53.6**	**+1.2**
	1.6nm,0.3s,baz=230,slow=8.1,SNR=34						
DLBC				Lg	Lg	10 11 46.5	
	1.0nm,0.3s,baz=275,slow=14,SNR=6.8						
DLBC	**Dease Lake**	**6.86**	**4**	Pn	**Pn**	**10 09 53.2**	**+0.8**
DLBC				Sg		10 11 43.3	-7.7
BMBC	**Bull Mountain**	**6.87**	**46**	Pn	**Pn**	**10 09 53.3**	**+0.7**
BMBC				Sg		10 11 43.5	-7.9
BLBC	**Blue River**	**7.30**	**82**	Pn	**Pn**	**10 09 58.8**	**+0.1**
BLBC				Sg	**Sg**	**10 12 01.9**	**-3.4**
BESE	**Bessie Mountai**	**7.32**	**344**	Pn	**Pn**	**10 09 59.0**	**+0.2**
NBC4	**NorthernBC 4**	**7.37**	**52**	Sg	Sg	10 11 59.2	-8.3
PNT	**Penticton**	**7.62**	**103**	Sg	Sb	10 12 16.7	+22
NBC5	**NorthernBC 5**	**7.63**	**36**	Pn	**Pn**	**10 10 04.1**	**+1.0**
NBC5				Pg	Pb	10 10 31.9	+7.9
NBC5				Sg	Sb	10 12 07.6	+12
MNB	**Mounoet Dainar**	**7.83**	**81**	Pn	**Pn**	**10 10 06.6**	**+0.7**
MNB				Sn	**Sb**	**10 11 57.7**	**-3.3**
LTY	**Liberty**	**8.02**	**119**	Pn	**Pn**	**10 10 06.7**	**-1.8**
SLEB	**Sale Mountain**	**8.06**	**88**	Sg	Sb	10 12 26.9	+19
PLBC	**Pleasant Camp**	**8.42**	**341**	Pn	**Pn**	**10 10 13.8**	**0.0**
PLBC				Sg	Sb	10 12 36.9	+19
NBC6	**NorthernBC 6**	**8.90**	**35**	Sg	Sn	10 12 45.2	+44
NBC1	**NorthernBC 1**	**9.01**	**24**	Sg	Sn	10 12 56.2	+52
WHY	**Whitehorse**	**9.31**	**348**	Pn	**Pn**	**10 10 27.3**	**+1.1**
NBC2	**NorthernBC 2**	**9.47**	**27**	Sg	Sn	10 13 09.8	+55
NEW	**Newport**	**9.55**	**105**	Lg	Lg	10 13 05.8	
	0.1nm,0.3s,baz=246,slow=9.0,SNR=4.5						
HYT	**Haines Junctio**	**9.91**	**341**	Pn	**Pn**	**10 10 35.0**	**+0.7**
PRDA	**Priddis**	**10.50**	**88**	Sg		10 13 35.7	
EDM	**Edmonton**	**10.90**	**75**	Sg		10 13 51.2	
WALA	**Waterton Lakes**	**11.21**	**97**	Sg		10 14 01.4	
YKA	**Yellowknife Ar**	**14.03**	**33**	Pn	**Pn**	**10 11 27.1**	**-3.3**
	0.0nm,0.3s,baz=227,slow=12,SNR=5.4						
YKA				Lg	Lg	10 15 27.4	
	0.1nm,0.3s,baz=217,slow=29,SNR=2.7						
ELK	**Elko**	**15.37**	**129**	Pn	**P**	**10 11 55.0**	**+1.2**
	0.1nm,0.3s,baz=338,slow=6.0,SNR=5.8						
ILAR	**Eielson Array**	**15.55**	**334**	Pn	**P**	**10 11 56.8**	**+1.4**
	0.0nm,0.3s,baz=144,slow=11,SNR=5.5						
NVAR	**Mina Array Bea**	**15.92**	**141**	Pn	**Pn**	**10 11 57.5**	**+1.4**
	0.1nm,0.3s,baz=18,slow=19,SNR=3.4						
INK	**Inuvik**	**16.79**	**357**	Pn	**P**	**10 12 11.0**	**+2.0**
	0.0nm,0.3s,baz=201,slow=15,SNR=2.1						
PDAR	**Pinedale Array**	**17.00**	**113**	Pn	**Pn**	**10 12 10.2**	**+0.3**
	0.1nm,0.3s,baz=268,slow=12,SNR=5.3						
TXAR	**Lajitas Array**	**30.15**	**127**	P	**P**	**10 14 21.8**	**-0.5**
	0.2nm,0.8s,baz=325,slow=9.0,SNR=2.6						
MKAR	**Makanchi Array**	**77.88**	**337**	P	**P**	**10 20 11.0**	**+1.2**
	0.1nm,0.4s,baz=0.0,slow=4.3,SNR=2.3						

IDC 25 10:09:36.8±3.4,27°63N×86°08E,h0km,mb3.5/3,
mb1 3.6/4,mb1mx3.2/71,mbtmp3.4/4,ML3.2/1,Error
ellipse: s-maj=114.4km s-min=30.5km az=77.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.36**	**352**	P	P	10 14 03.6	-0.4
	0.1nm,0.3s,baz=167,slow=11,SNR=5.2						
SONM	**Songino Array**	**25.65**	**33**	P	P	10 15 08.7	+0.4
	0.3nm,0.4s,baz=219,slow=9.9,SNR=3.5						
WRA	**Warramunga Arr**	**66.47**	**130**	P	P	10 20 28.4	0.0
	0.6nm,0.7s,baz=325,slow=6.8,SNR=2.6						
ASAR	**Alice Springs**	**68.77**	**133**	P	P	10 20 42.8	-0.1
	0.2nm,0.7s,baz=315,slow=6.6,SNR=1.5						

*IDC **25** 10:10:32.1±0.7,28°.06N×84°.69E,h0km,mb3.9/22,*
mb1 4.1/25,mb1mx3.9/74,mbtmp3.9/25,ML4.2/3,Error
ellipse: s-maj=24.0km s-min=12.7km az=48.0
*NEIC **25** 10:10:32.8±1.9,28°.28N±0°.04×84°.73E±0°.06,h10km±1km,*
mb4.2/36,Error ellipse: s-maj=9.7km s-min=5.1km
az=300.0
*DMN **25** 10:10:33.7±0.3,28°.15N×84°.72E,h10km,Ml4.6/3,Error*
ellipse: s-maj=8.8km s-min=3.1km az=23.0
*NDI **25** 10:10:35.5±2.9,27°.90N×84°.55E,h10km,ML4.0,*
mb4.2(NEIC)

ISC 25 10:10:33.1±1.1,28°20N±0°.05×84°71E±0°.03,h8km±7km,
n100,σ1°74/112,mb4.1/35,1C,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.20**	**198**	*e*Pg	**Pg**	**10 10 37.2**	**-0.1**
GKN				*e*Sg	**Sg**	**10 10 39.7**	**-0.5**
	89µm,0.4s						
KKN	**Kakani**	**0.65**	**129**	*e*Pg	**Pg**	**10 10 45.5**	**-0.2**
KKN				*e*Sg	**Sg**	**10 10 54.0**	**-0.2**
	11µm,0.6s						
DMN	**Daman**	**0.68**	**149**	*e*Pg	**Pg**	**10 10 46.2**	**-0.1**
DMN				*e*Sg	**Sg**	**10 10 55.2**	**-0.1**
	7µm,0.5s						
DANN	**Dangsing**	**0.85**	**281**	*e*Pg	**Pg**	**10 10 50.0**	**+0.5**
DANN				*e*Sg	**Sg**	**10 11 02.4**	**+1.8**
	2µm,0.2s						
KOLN	**Koldanda**	**1.07**	**247**	*e*Pg	**Pn**	**10 10 54.9**	**+0.3**
KOLN				*e*Sg	**Sg**	**10 11 07.8**	**+0.2**
	607nm,0.2s						
PYUN	**Piuthan**	**1.52**	**267**	*e*Pg	**Pb**	**10 11 02.4**	**+0.7**
PYUN				*e*Sg	**Sb**	**10 11 21.9**	**+0.7**
	1µm,0.2s						
GTK	**Tadong**	**3.56**	**103**	*e*P	**Pb**	**10 11 34.9**	**-1.5**
GTK				*e*S	**Sn**	**10 12 13.6**	**+2.5**
GTK				IAML		10 12 26.6	
	comp=N,330nm,0.7s						
GTK				IAML		10 12 28.2	
	comp=E,344nm,0.5s						
LSA	**Lhasa**	**5.84**	**74**	Pn	**Pn**	**10 11 58.4**	**-2.1**
GUWA	**GUWAHATI**	**6.53**	**106**	*e*P	**Pn**	**10 12 12.2**	**+2.7**
GUWA				*e*S	**Sn**	**10 13 23.1**	**-1.0**
NDI	**New Delhi**	**6.61**	**276**	*e*S	**Sn**	**10 13 23.0**	**-3.2**
SHL	**Shillong**	**6.92**	**111**	*e*P	**Pn**	**10 12 15.7**	**+0.6**
SHL				*e*S	**Sn**	**10 13 30.5**	**-3.5**
SHL	**Shillong**	**6.92**	**111**		**Pn**	**10 12 13.9**	**-1.2**
SMLA	**Simla**	**7.18**	**296**	*e*P	**Pn**	**10 12 20.0**	**+1.6**
SMLA				*e*S	**Sn**	**10 13 37.8**	**-2.4**
SMLA				IAML		10 13 45.3	
	comp=E,124nm,0.4s						
SMLA				IAML		10 13 47.6	
	comp=N,114nm,0.5s						
TEZP	**TEZPUR**	**7.36**	**100**	*e*P	**Pn**	**10 12 24.0**	**+3.1**
TEZP				*e*S	**Sn**	**10 13 42.7**	**-1.9**
BHPL	**Bhopal**	**8.21**	**235**	*e*P	**Pn**	**10 12 28.6**	**-4.0**
BHPL				*e*S	Sn	10 13 54.9	-11
BHPL				IAML		10 14 03.2	
	comp=E,81nm,0.3s						
BHPL				IAML		10 14 07.8	
	comp=N,65nm,0.3s						
DHRM	**DHARAMSHALA**	**8.32**	**301**	*e*P	**Pn**	**10 12 33.6**	**-0.7**
DHRM				*e*S	**Sn**	**10 14 04.6**	**-4.0**
DHRM				IAML		10 14 09.6	
	comp=N,308nm,0.7s						
DHRM				IAML		10 14 10.1	
	comp=E,344nm,0.8s						
KOHI	**KOHIMA**	**8.74**	**104**	*e*P	**Pn**	**10 12 42.3**	**+2.3**
MOKO	**MOKOCHONG**	**8.93**	**100**	*e*P	**Pn**	**10 12 45.2**	**+2.7**
MOKO				IAML		10 14 29.0	
	comp=N,47nm,0.6s						
MOKO				IAML		10 14 29.3	
	comp=E,51nm,0.4s						
NIL	**Nilore**	**11.24**	**302**		**Pn**	**10 13 12.9**	**-1.1**
KBL	**Kabul**	**14.79**	**299**	Pn	**Pn**	**10 14 00.3**	**-2.6**
KDJ	**Kajisay**	**15.19**	**338**	Pn	**Pn**	**10 14 05.9**	**-2.2**
DRK	**Karamyk**	**15.53**	**320**	Pn	**Pn**	**10 14 11.5**	**-1.2**
DRK				IAmb	IAmb	10 14 18.6	
	comp=Z,16nm,0.7s						
MHMT	**Maesarieng**	**15.71**	**127**	P	**P**	**10 14 20.0**	**+1.1**
	comp=Z,17nm,0.7s						
BOOM	**Boomskoye usch**	**15.94**	**336**		**Pn**	**10 14 16.2**	**-1.6**
CM33	**Chiang Mai Arr**	**16.04**	**123**	P	**P**	**10 14 24.0**	**+1.4**
CHTO	**Chiang Mai**	**16.04**	**123**		**Pn**	**10 14 18.1**	**-1.0**
CMMT	**Chiang Mai**	**16.04**	**123**	P	**P**	**10 14 24.0**	**+1.4**
	comp=Z,5.6nm,0.9s						
CM32	**Chiang Mai Arr**	**16.07**	**123**	P	**P**	**10 14 26.0**	**+3.1**
CM34	**Chiang Mai Arr**	**16.17**	**122**	P	**P**	**10 14 26.0**	**+1.9**
CM13	**Chiang Mai Arr**	**16.26**	**124**	P	**P**	**10 14 27.7**	**+2.7**
	comp=Z,6.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**16.26**	**124**	Pn	**Pn**	**10 14 22.6**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=310,slow=11,SNR=13						
CMAR				PcP	**PcP**	**10 19 15.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=248,slow=4.8,SNR=1.2						
CM02	**Chiang Mai Arr**	**16.28**	**124**	P	**P**	**10 14 28.6**	**+3.4**
	comp=Z,6.8nm,0.8s						
CM35	**Chiang Mai Arr**	**16.28**	**122**	P	**P**	**10 14 26.0**	**+0.7**
CM01	**Chiang Mai Arr**	**16.30**	**124**	P	**P**	**10 14 29.0**	**+3.6**
	comp=Z,6.0nm,0.9s						
CM05	**Chiang Mai Arr**	**16.30**	**124**	P	**P**	**10 14 28.8**	**+3.3**
	comp=Z,6.3nm,0.9s						
CM04	**Chiang Mai Arr**	**16.32**	**124**	P	**P**	**10 14 29.2**	**+3.5**
	comp=Z,5.7nm,0.8s						
CM36	**Chiang Mai Arr**	**16.34**	**123**	P	**P**	**10 14 26.0**	**+0.1**
AAK	**Ala-Archa**	**16.62**	**333**	Pn	**Pn**	**10 14 27.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=160,slow=12,SNR=5.3						
AAK	**Ala-Archa**	**16.62**	**333**		**Pn**	**10 14 25.7**	**-0.9**
MK31	**Makanchi Array**	**18.66**	**355**	P	**P**	**10 14 50.0**	**-1.4**
MKAR	**Makanchi Array**	**18.66**	**355**	P	**Pn**	**10 14 52.6**	**+0.8**
	comp=Z,1.1nm,0.3s,baz=177,slow=12,SNR=29						
MAKZ	**Makanchi**	**18.70**	**354**	P	**P**	**10 14 49.4**	**-2.5**
KK31	**Karatay Array**	**18.78**	**326**	P	**P**	**10 14 50.6**	**-2.2**
KKAR	**Karatay Array**	**18.78**	**326**	P	**P**	**10 14 50.5**	**-2.3**
KKAR	**Karatay Array**	**18.78**	**326**	P	**P**	**10 14 50.6**	**-2.2**
PALK	**Pallekele**	**21.15**	**191**	P	**P**	**10 15 24.4**	**+5.6**
	comp=Z,2.5nm,0.3s,baz=99,slow=12,SNR=6.8						
PALK	**Pallekele**	**21.15**	**191**	P	**P**	**10 15 18.4**	**-0.4**
PALK				IAmb	IAmb	10 15 20.7	
	comp=Z,11nm,1.1s						
XAN	**Xi'an**	**21.51**	**68**	P	**P**	**10 15 21.1**	**-1.5**
XAN				IAmb	IAmb	10 15 29.1	
	comp=Z,4.9nm,0.9s						
ENH	**Enshi**	**21.71**	**79**	P	**P**	**10 15 23.4**	**-1.4**
KURBB	**Kurchatov Arra**	**22.88**	**350**	P	**P**	**10 15 38.0**	**+1.0**
	comp=Z,4.0nm,0.8s,baz=174,slow=9.9,SNR=30						
KURK	**Kurchatov**	**22.96**	**350**	P	**P**	**10 15 38.0**	**+0.2**
SRIT	**Nakonsritamara**	**24.03**	**141**	P	**P**	**10 15 49.4**	**+0.7**
GEYT	**Alibeck**	**24.24**	**300**	P	**P**	**10 15 53.0**	**+2.4**
	comp=Z,1.0nm,0.4s,baz=127,slow=3.8,SNR=2.0						
GEYT	**Alibeck**	**24.24**	**300**	P	**P**	**10 15 49.2**	**-1.3**
GEYT				IAmb	IAmb	10 15 59.8	
	comp=Z,3.3nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**24.24**	**300**	P	**P**	**10 15 49.1**	**-1.5**
GYA0B				IAmb	IAmb	10 15 59.7	
	comp=Z,6.9nm,0.9s						
UOSS	**Minazif**	**25.67**	**269**	P	**P**	**10 16 02.8**	**-0.8**
UOSS				IAmb	IAmb	10 16 18.4	
	comp=Z,4.8nm,1.1s						
ZAA0	**Zalesovo Array**	**25.73**	**0**	P	**P**	**10 16 01.8**	**-2.0**
ZAA0				IAmb	IAmb	10 16 16.0	
	comp=Z,3.8nm,0.9s						
ZALV	**Zalesovo Beam**	**25.73**	**0**	P	**P**	**10 16 05.3**	**+1.5**
	comp=Z,2.9nm,0.5s,baz=185,slow=9.8,SNR=11						
ZALV	**Zalesovo Beam**	**25.73**	**0**	P	**P**	**10 16 03.2**	**-0.6**
SONM	**Songino Array**	**25.85**	**35**	P	**P**	**10 16 07.4**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=224,slow=8.0,SNR=2.3						
BVAR	**Borovoye Array**	**26.98**	**341**	P	**P**	**10 16 14.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=124,slow=5.9,SNR=2.2						
IPM	**Ipoh**	**28.23**	**144**	P	**P**	**10 16 26.2**	**-0.5**
IPM				IAmb	IAmb	10 16 36.4	
	comp=Z,7.4nm,0.9s						
ABKAR	**Akbulak array**	**28.33**	**325**	P	**P**	**10 16 26.0**	**-1.3**
BJT	**Baijiatuao**	**28.45**	**57**	P	**P**	**10 16 27.3**	**-1.1**
BJT				IAmb	IAmb	10 16 42.8	
	comp=Z,4.0nm,0.7s						
RPSI	**Rantau Prapat**	**28.76**	**149**	P	**P**	**10 16 31.2**	**-0.1**
RPSI				IAmb	IAmb	10 16 47.2	
	comp=Z,4.5nm,1.1s						
SOCY	**Socotra**	**32.81**	**247**	P	**P**	**10 17 06.0**	**-1.2**
SOCY				IAmb	IAmb	10 17 10.8	
	comp=Z,4.9nm,0.9s						
ARU	**Arti**	**33.80**	**334**	P	**P**	**10 17 16.2**	**+0.8**
	comp=Z,0.9nm,0.2s,baz=138,slow=15,SNR=4.3						
YOJ	**Yonaguni jima**	**34.44**	**87**	P	**P**	**10 17 20.3**	**-0.9**
GEVA	**Gevas**	**36.00**	**297**	P	**P**	**10 17 34.1**	**-0.8**
GEVA				IAmb	IAmb	10 17 42.4	
	comp=Z,6.7nm,1.2s						
KSM	**Kuching**	**36.12**	**133**	P	**P**	**10 17 35.7**	**-0.1**
KSRS	**Korea Array**	**37.20**	**64**	P	**P**	**10 17 46.6**	**+1.8**
	comp=Z,0.3nm,0.4s,baz=269,slow=7.8,SNR=2.8						
AKASG	**Malin Array Be**	**47.09**	**314**	P	**P**	**10 19 06.9**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=82,slow=6.9,SNR=5.6						
MLR	**Muntele Rosu**	**49.00**	**307**	P	**P**	**10 19 22.5**	**+2.1**
	comp=Z,5.4nm,0.8s,baz=100,slow=11,SNR=5.2						
BURAR	**Bucovina Array**	**49.51**	**310**	P	**P**	**10 19 24.8**	**+0.5**
FIA1	**FINESS Array S**	**50.73**	**328**	P	**P**	**10 19 33.5**	**+0.4**
FINES	**FINESS Array B**	**50.73**	**328**	P	**P**	**10 19 33.7**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=116,slow=7.5,SNR=12						
FINES	**FINESS Array B**	**50.73**	**328**	P	**P**	**10 19 33.5**	**+0.4**
ARCES	**ARCESS Array B**	**53.21**	**338**	P	**P**	**10 19 52.2**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=102,slow=7.7,SNR=3.9						
HFS	**Hagfors**	**56.59**	**325**	P	**P**	**10 20 16.1**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=90,slow=8.9,SNR=7.6						
GERES	**GERESS Array B**	**57.14**	**312**	P	**P**	**10 20 21.5**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=76,slow=9.2,SNR=2.3						
FITZ	**Fitzroy Crossi**	**60.72**	**134**	P	**P**	**10 20 45.7**	**+0.3**
BILL	**Bilibino**	**61.04**	**25**	P	**P**	**10 20 47.3**	**+0.4**
WB0	**Warramunga Arr**	**67.68**	**129**	P	**P**	**10 21 31.1**	**0.0**
WRA	**Warramunga Arr**	**67.76**	**129**	P	**P**	**10 21 30.9**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=322,slow=6.5,SNR=10						
ASAR	**Alice Springs**	**70.05**	**132**	P	**P**	**10 21 45.8**	**0.0**
	comp=Z,0.9nm,0.7s,baz=316,slow=6.3,SNR=10						
ASAR	**Alice Springs**	**70.05**	**132**	P	**P**	**10 21 46.0**	**+0.2**
ESDC	**Sonseca Array**	**71.66**	**306**	P	**P**	**10 21 56.9**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=131,slow=12,SNR=1.3						
EUNU	**Eureka**	**71.87**	**358**	P	**P**	**10 21 57.0**	**+0.9**
EUNU				IAmb	IAmb	10 22 00.8	
	comp=Z,2.4nm,1.1s						
CTA	**Charters Tower**	**76.42**	**122**	P	**P**	**10 22 23.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=266,slow=5.1,SNR=3.6						
TOA0	**Torodi Ar. Sit**	**77.83**	**278**	P	**P**	**10 22 31.8**	**+0.2**
TOA0				IAmb	IAmb	10 22 41.4	
	comp=Z,4.6nm,1.2s						
TORD	**Torodi Ar. Bea**	**77.83**	**278**	P	**P**	**10 22 31.2**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=67,slow=4.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**77.83**	**278**	P	**P**	**10 22 31.4**	**-0.2**
TORD				IAmb	IAmb	10 22 38.6	
	comp=Z,0.7nm,0.7s						
IL31		**79.07**	**20**	P	**P**	**10 22 37.6**	**0.0**
IL31				IAmb	IAmb	10 22 43.4	
	comp=Z,1.4nm,0.7s						
ILAR	**Eielson Array**	**79.07**	**20**	P	**P**	**10 22 38.0**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=304,slow=3.9,SNR=12						
ILAR	**Eielson Array**	**79.07**	**20**	P	**P**	**10 22 37.6**	**0.0**
INK	**Inuvik**	**79.71**	**14**	P	**P**	**10 22 42.5**	**+1.4**
	comp=Z,1.1nm,0.9s,baz=327,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**80.61**	**134**	P	**P**	**10 22 45.8**	**-0.6**
	comp=Z,5.1nm,1.1s,baz=335,slow=8.6,SNR=4.8						
STKA	**Stephens Creek**	**80.61**	**134**	IAmb	IAmb	10 22 46.2	
	comp=Z,1.4nm,1.1s						
TABL	**Table Mountain**	**84.07**	**21**	P	**P**	**10 23 03.5**	**-0.9**
YKA	**Yellowknife Ar**	**88.31**	**9**	P	**P**	**10 23 27.5**	**+2.6**
	comp=Z,0.5nm,0.8s,baz=351,slow=4.2,SNR=4.5						

*NEIC **25** 10:10:38.3±1.5,5°.57S±0°.08×147°.18E±0°.06,h214km±7km,*
mb4.4/18,Error ellipse: s-maj=12.5km s-min=5.7km
az=148.0
*DJA **25** 10:10:38.4±0.4,6°.S±5°.×14°.7E±°,h179km±6km,M4.5/8,*
mB4.4/2,mb4.4/8,MLv4.5/3,Mw(mB)3.6/2
*IDC **25** 10:10:39.6±2.0,5°.61S×147°.10E,h216km±22km,mb3.9/4,*
mb1 4.0/7,mb1mx3.3/52,mbtmp4.4/7,MS4.6/1,Ms1 4.6/1,
ms1mx3.8/44,Error ellipse: s-maj=41.6km s-min=15.0km
az=115.0

ISC 25 10:10:36.6±0.7,5°.57S±0°.07×147°.14E±0°.09,h195km,n35,
σ1°23/37,mb4.3/6,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.51**	**4**		**Pn**	**10 11 34.6**	**+2.5**
PMG	**Port Moresby**	**3.81**	**180**	P	**Pn**	**10 11 38.0**	**+2.1**
	11nm,0.3s,baz=299,slow=10,SNR=24						
PMG				S	**Sn**	**10 12 22.2**	**-0.3**
	34nm,0.3s,baz=38,slow=23,SNR=15						
PMG	**Port Moresby**	**3.81**	**180**		**Pn**	**10 11 37.4**	**+1.5**
RABL	**Rabaul**	**5.19**	**75

IGD				*i* S		**Sg**	**10 21 31.9**	**-0.5**
KAVV	**Kandilli-Istan**	**0.85**	**294**	PG		**Pg**	**10 21 21.4**	**-1.0**
ISK	**Istanbul-Kandi**	**0.85**	**294**	PG		**Pg**	**10 21 22.0**	**-0.4**
MDUB	**Mudurnu**	**0.89**	**106**	PG		**Pb**	**10 21 23.2**	**-0.5**
BORA	**Eskisehir**	**0.89**	**161**	*i* P		**Pb**	**10 21 23.3**	**-0.4**
BORA				*i* S		**Sb**	**10 21 35.4**	**-0.3**
BORA				IAML			10 21 40.0	
	comp=N,66nm,0.4s							
BORA				IAML			10 21 41.0	
	comp=E,64nm,0.2s							
BORA	**Eskisehir**	**0.89**	**161**	PG		**Pb**	**10 21 23.4**	**-0.3**
ULDT	**Uludag**	**0.93**	**232**	*i* P		**Pg**	**10 21 23.5**	**-0.5**
ULDT				*i* S		**Sg**	**10 21 36.7**	**+0.7**
KLYT	**Kilyos**	**0.95**	**304**	PG		**Pg**	**10 21 24.2**	**-0.2**
YIGI	**Dzce**	**1.06**	**77**	*i* P		**Pg**	**10 21 25.8**	**-0.7**
YIGI				*i* S		**Sb**	**10 21 40.6**	**-0.1**
YIGI				IAML			10 21 43.0	
	comp=N,60nm,0.3s							
ANDZ	**Kutahya, Merke**	**1.22**	**187**	*i* P		**Pn**	**10 21 30.0**	**+0.6**
ANDZ				*i* S		**Sg**	**10 21 45.0**	**-0.4**
YUVA	**Yuva-Kibriscik**	**1.27**	**105**	PN		**Pn**	**10 21 30.3**	**+0.3**
CTKS	**Kestanelik-??a**	**1.30**	**294**	PN		**Pn**	**10 21 30.6**	**+0.2**
SGAZ	**Eskisehir, Sey**	**1.33**	**154**	*i* P		**Pg**	**10 21 33.0**	**+1.4**
SGAZ				*i* S		**Sg**	**10 21 48.0**	**-0.8**
SGAZ				IAML			10 21 52.0	
	comp=N,44nm,0.3s							
TVSB	**Tavsanli**	**1.36**	**201**	PN		**Pn**	**10 21 31.7**	**+0.4**
KIBS	**BOLU**	**1.38**	**102**	*i* P		**Pg**	**10 21 32.6**	**0.0**
KIBS				IAML			10 21 55.0	
	comp=N,36nm,0.9s							
KCTX	**Karacabey (Bur**	**1.39**	**251**	PN		**Pn**	**10 21 31.6**	**-0.1**
BCAM	**Yenicaga**	**1.51**	**86**	*i* P		**Pb**	**10 21 33.9**	**-0.4**
BCAM				*i* S		**Sg**	**10 21 55.0**	**+0.4**
CTYL	**Yalikoy Yolu**	**1.55**	**300**	PN		**Pn**	**10 21 34.2**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.69**	**139**	PN		**Pn**	**10 21 36.4**	**+0.6**
MAR9	**Marsite Statio**	**1.81**	**267**	PN		**Pn**	**10 21 38.1**	**+0.7**
SHAP	**Saphane-Kutahy**	**1.82**	**202**	PN		**Pn**	**10 21 38.3**	**+0.6**
SMAA	**Simav-Kutahya**	**1.83**	**208**	PN		**Pn**	**10 21 38.4**	**+0.7**
SIMA	**Simav-Kutahya**	**1.84**	**208**	PN		**Pn**	**10 21 38.7**	**+0.7**
MRMT	**Marmara Adasi**	**1.90**	**267**	PN		**Pn**	**10 21 39.4**	**+0.8**

*IDC **25** 10:22:37.2±1.7,28°.06N×84°.51E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/43, mbtmp3.6/7, ML3.7/1, MS4.5/1, Ms1 4.5/1, ms1mx3.8/48, Error ellipse: s-maj=62.5km s-min=22.7km az=65.0*

ISC 25 10:22:38.8±1.7,28°.1N±0°.2×84°.5E±0°.4, h10km, n8, σ0s22/7, mb3.6/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.78**	**355**	P	**P**	**10 26 58.1**	**0.0**
	0.2nm,0.3s,baz=180,slow=12,SNR=6.5						
KURBB	**Kurchatov Arra**	**22.98**	**350**	P	**P**	**10 27 43.3**	**-0.2**
	0.9nm,0.7s,baz=174,slow=9.5,SNR=8.9						
ZALV	**Zalesovo Beam**	**25.86**	**0**	P	**P**	**10 28 10.1**	**-0.3**
	0.8nm,0.4s,baz=184,slow=9.5,SNR=4.0						
SONM	**Songino Array**	**26.06**	**35**	P	**P**	**10 28 12.7**	**+0.2**
	0.2nm,0.4s,baz=229,slow=15,SNR=1.0						
JCJ	**Chichijima**	**50.71**	**77**	LR	LR	10 54 43.1	
	comp=Z,512nm,19.8s,baz=225,slow=38						
FINES	**FINESS Array B**	**50.74**	**328**	P	**P**	**10 31 38.7**	**+0.1**
	2.0nm,1.0s,baz=122,slow=6.9,SNR=4.2						
WRA	**Warramunga Arr**	**67.82**	**129**	P	**P**	**10 33 37.4**	**0.0**
	0.4nm,0.7s,baz=319,slow=6.7,SNR=1.7						
ASAR	**Alice Springs**	**70.09**	**132**	P	**P**	**10 33 51.4**	**-0.1**
	0.2nm,0.8s,baz=315,slow=6.2,SNR=1.5						

*BJI **25** 10:23:13.4±0.0,27°.73N×85°.50E, h6km, mB4.8/4, mb4.3/18, Ms4.1/2, Ms7 4.1/2*
*IDC **25** 10:23:16.2±0.7,27°.71N×85°.75E, h0km, mb4.0/22, mb1 4.2/25, mb1mx4.0/45, mbtmp4.1/25, ML4.1/3, Error ellipse: s-maj=20.5km s-min=13.4km az=38.0*
*NEIC **25** 10:23:17.7±1.6,27°.80N±0°.08×85°.80E±0°.05, h10km±1km, mb4.4/39, Error ellipse: s-maj=14.3km s-min=6.7km az=174.0*
*DMN **25** 10:23:18.5±0.1,27°.86N×85°.81E, h2km, Ml5.1/4, Error ellipse: s-maj=4.0km s-min=1.1km az=10.0*
*NDI **25** 10:23:19.6±3.8,27°.52N×85°.67E, h10km, ML4.0, mb4.4(NEIC)*

ISC 25 10:23:17.4±0.9,27°.78N±0°.05×85°.76E±0°.02, h8km±6km, n110, σ1s22/123, mb4.4/47, 2C-1D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKI	**Pulchoki**	**0.37**	**236**	*e*Pg	**Pb**	**10 23 27.4**	**+1.0**
PKI				*e*Sg	**Sb**	**10 23 33.6**	**+1.1**
	12μm,0.2s						
JIRN	**Jiri**	**0.40**	**107**	*e*Pg	**Pb**	**10 23 26.6**	**-0.3**
JIRN				*e*Sg	**Sg**	**10 23 31.3**	**+0.7**
	91nm,0.2s						
KKN	**Kakani**	**0.42**	**272**	*e*Pg	**Pb**	**10 23 27.9**	**+0.7**
KKN				*e*Sg	**Sb**	**10 23 34.5**	**+0.6**
	8μm,0.2s						
DMN	**Daman**	**0.60**	**254**	*e*Pg	**Pn**	**10 23 31.6**	**-0.9**
DMN				*e*Sg	**Sb**	**10 23 40.8**	**+1.7**
	7μm,0.4s						
ODAN	**Odare**	**1.72**	**122**	*e*Pg	**Pg**	**10 23 51.2**	**+0.9**
ODAN				*e*Sg	**Sg**	**10 24 13.7**	**+1.1**
	8μm,0.5s						
TAPN	**Taplejung**	**1.78**	**103**	*e*Pg	**Pg**	**10 23 52.0**	**+0.4**
TAPN				*e*Sg	**Sb**	**10 24 14.0**	**+0.9**
	2μm,0.4s						
DANN	**Dangsing**	**1.86**	**288**	*e*Pg	**Pg**	**10 23 53.7**	**+0.7**
DANN				*e*Sg	**Sg**	**10 24 17.1**	**0.0**
	2μm,0.3s						
KOLN	**Koldanda**	**1.91**	**270**	*e*Pg	**Pg**	**10 23 54.9**	**+0.8**
KOLN				*e*Sg	**Sg**	**10 24 20.2**	**+1.3**
	3μm,0.3s						
GTK	**Tadong**	**2.56**	**100**	*e*P	**Pn**	**10 24 01.8**	**+2.5**
GTK				*e*S	**Sn**	**10 24 33.1**	**+2.3**
GTK				IAML		10 24 37.2	
	comp=N,1μm,0.4s						
GTK				IAML		10 24 37.8	
	comp=E,660nm,0.3s						
DHUB	**DHUBRI**	**4.17**	**114**	*e*P	**Pn**	**10 24 22.3**	**+1.1**
DHUB				*e*S	**Sn**	**10 25 10.2**	**0.0**
DHUB				IAML		10 25 22.4	
	comp=N,189nm,0.2s						
LSA	**Lhasa**	**5.11**	**67**	Pn	Pn	10 24 30.0	-4.6
GUWA	**GUWAHATI**	**5.52**	**105**	*e*P	**Pn**	**10 24 41.4**	**+1.5**
GUWA				*e*S	**Sn**	**10 25 42.8**	**-0.8**
SHL	**Shillong**	**5.91**	**111**	*e*P	**Pn**	**10 24 45.7**	**+0.4**
SHL				*e*S	**Sn**	**10 25 51.5**	**-1.8**
SHL	**Shillong**	**5.91**	**111**	Pn	Pn	**10 24 44.7**	**-0.6**
NDI	**New Delhi**	**7.59**	**279**	*e*P	**Pn**	**10 25 12.0**	**+3.7**
NDI				*e*S	**Sn**	**10 26 31.0**	**-3.5**
KOHI	**KOHIMA**	**7.74**	**103**	*e*S	**Sn**	**10 26 37.8**	**-0.7**
KOHI				IAML		10 26 39.9	
	comp=E,60nm,0.5s						
KOHI				IAML		10 26 42.5	
	comp=N,50nm,0.5s						
MOKO	**MOKOCHONG**	**7.94**	**99**	*e*P	**Pn**	**10 25 11.8**	**-1.5**
MOKO				*e*S	**Sn**	**10 26 39.5**	**-3.9**
MOKO				IAML		10 26 43.7	
	comp=N,91nm,0.5s						
MOKO				IAML		10 26 46.7	
	comp=E,96nm,0.8s						
SMLA	**Simla**	**8.20**	**296**	*e*P	**Pn**	**10 25 18.2**	**+1.6**
SMLA				*e*S	**Sn**	**10 26 46.5**	**-3.0**
SMLA				IAML		10 26 53.9	
	comp=E,152nm,0.3s						
SMLA				IAML		10 26 54.2	
	comp=N,76nm,0.6s						
BHPL	**Bhopal**	**8.78**	**241**	*e*P	**Pn**	**10 25 22.2**	**-2.5**
BHPL				*e*S	Sn	10 26 53.1	-11
BHPL				IAML		10 27 00.6	
	comp=N,113nm,0.2s						
BHPL				IAML		10 27 02.2	
	comp=E,105nm,0.2s						
DHRM	**DHARAMSHALA**	**9.33**	**301**	*e*P	**Pn**	**10 25 31.9**	**-0.5**
DHRM				*e*S	**Sn**	**10 27 13.8**	**-3.8**
DHRM				IAML		10 27 16.7	
	comp=N,94nm,0.5s						
DHRM				IAML		10 27 20.6	
	comp=E,115nm,0.6s						
NIL	**Nilore**	**12.24**	**302**		**Pn**	**10 26 11.5**	**-0.6**
HYB	**Hyderabad**	**12.27**	**214**	*i* P	**Pn**	**10 26 10.0**	**-2.5**
CHTO	**Chiang Mai**	**15.03**	**124**	Pn	**Pn**	**10 26 51.6**	**+1.4**
CHTO				IAmb	IAmb	10 27 01.1	
	comp=Z,6.7nm,1.2s						
CMAR	**Chiang Mai Arr**	**15.26**	**125**	Pn	**Pn**	**10 26 54.1**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=316,slow=14,SNR=2.3						
KBL	**Kabul**	**15.81**	**299**	Pn	**Pn**	**10 26 58.1**	**-2.4**
KBL				IAmb	IAmb	10 27 18.9	
	comp=Z,13nm,1.2s						
KDJ	**Kajisay**	**15.94**	**336**	Pn	**Pn**	**10 27 02.4**	**+0.3**
WMQ	**Urumqi**	**16.08**	**5**	*e*P	**Pn**	**10 27 02.8**	**-1.1**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,46nm,4.3s						
WMQ				LR	LR		
	comp=Z,410nm,14.9s						
WMQ				LR	LR		
	comp=Z,280nm,12.9s						
WMQ				LR	LR		
	comp=Z,1μm,27.7s						
GTA	**Gaotai**	**16.46**	**42**	⇓P	**P**	**10 27 12.3**	**+0.8**
GTA				pP	sP	10 27 15.5	0.0
GTA				sP	pP	10 27 18.5	+4.3
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BOOM	**Boomskoye usch**	**16.71**	**334**	Pn	**Pn**	**10 27 11.1**	**-0.9**
PBA	**Port Blair**	**17.33**	**156**	P	Pn	10 27 20.4	+0.7
PBA				IAmb	IAmb	10 27 40.9	
	comp=Z,57nm,0.9s						
AAK	**Ala-Archa**	**17.42**	**331**	P	**Pn**	**10 27 22.1**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=175,slow=20,SNR=2.8						
AAK	**Ala-Archa**	**17.42**	**331**		**Pn**	**10 27 21.0**	**0.0**
GYA	**Guiyang**	**18.66**	**89**	⇑P	**Pn**	**10 27 37.5**	**+1.3**
GYA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK31	**Makanchi Array**	**19.18**	**353**	P	**P**	**10 27 41.0**	**-0.3**
MKAR	**Makanchi Array**	**19.18**	**353**	P	**P**	**10 27 42.6**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=174,slow=11,SNR=31						
MKAR	**Makanchi Array**	**19.18**	**353**	P	**P**	**10 27 41.0**	**-0.3**
MAKZ	**Makanchi**	**19.23**	**352**	P	**P**	**10 27 41.6**	**-0.3**
MAKZ				IAmb	IAmb	10 27 44.1	
	comp=Z,5.6nm,0.5s						
KK31	**Karatay Array**	**19.65**	**325**	P	**P**	**10 27 47.1**	**+0.6**
KKAR	**Karatay Array**	**19.65**	**325**	P	**P**	**10 27 47.2**	**+0.7**
KKAR	**Karatay Array**	**19.65**	**325**	P	**P**	**10 27 46.3**	**-0.3**
XAN	**Xi'an**	**20.81**	**67**	P	**P**	**10 27 58.4**	**-0.8**
XAN				IAmb	IAmb	10 28 05.6	
	comp=Z,14nm,1.4s						
PALK	**Pallekele**	**20.95**	**194**	P	Pn	10 28 06.2	+2.8
	comp=Z,2.2nm,0.5s,baz=72,slow=6.4,SNR=1.5						
KURBB	**Kurchatov Arra**	**23.47**	**348**	P	**P**	**10 28 28.4**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=168,slow=10.0,SNR=26						
KURK	**Kurchatov**	**23.54**	**349**	P	**P**	**10 28 28.4**	**+0.4**
HHC	**Hu-ho-hao-te**	**24.88**	**52**	*e*P	**P**	**10 28 41.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
WHN	**Wuhan**	**25.09**	**77**	⇑P	P	10 28 51.0	+8.5
SONM	**Songino Array**	**25.68**	**33**	P	**P**	**10 28 49.2**	**+1.4**
	comp=Z,6.9nm,0.6s,baz=221,slow=9.4,SNR=26						
SONM	**Songino Array**	**25.68**	**33**	P	**P**	**10 28 48.8**	**+1.0**
SONM				IAmb	IAmb	10 28 52.0	
	comp=Z,5.6nm,0.7s						
ULN	**Ulaanbaatar**	**26.02**	**34**	P	**P**	**10 28 49.9**	**-1.1**
ULN					**pP**	**10 28 51.2**	**-2.7**
ULN				IAmb	IAmb	10 28 55.0	
	comp=Z,10.0nm,0.6s						
ZAA0	**Zalesovo Array**	**26.15**	**359**	P	**P**	**10 28 51.9**	**0.0**
ZAA0				IAmb	IAmb	10 29 00.0	
	comp=Z,9.9nm,1.4s						
ZALV	**Zalesovo Beam**	**26.15**	**359**	P	**P**	**10 28 52.3**	**+0.4**
	comp=Z,2.8nm,0.3s,baz=183,slow=9.5,SNR=16						
ZALV	**Zalesovo Beam**	**26.15**	**359**	P	**P**	**10 28 51.5**	**-0.4**
DLV	**T Lat**	**26.48**	**122**	P	**P**	**10 28 54.9**	**-0.5**
BVAR	**Borovoye Array**	**27.68**	**340**	P	**P**	**10 29 06.9**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=165,slow=12,SNR=3.5						
RPSI	**Rantau Prapat**	**27.94**	**151**	P	**P**	**10 29 07.1**	**-1.1**
RPSI				IAmb	IAmb	10 29 11.5	
	comp=Z,2.4nm,0.7s						
ABKAR	**Akbulak array**	**29.21**	**324**	P	**P**	**10 29 18.6**	**-0.7**
ABKAR				IAmb	IAmb	10 29 21.5	
	comp=Z,3.1nm,0.5s						
AKTO	**Aktyubinsk**	**30.92**	**325**	P	**P**	**10 29 35.5**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=144,slow=5.7,SNR=5.9						
KSRS	**Korea Array**	**36.55**	**64**	P	**P**	**10 30 23.2**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=262,slow=8.1,SNR=4.3						
KBZ	**Khabaz**	**37.80**	**306**	P	**P**	**10 30 36.0**	**+2.0**
	comp=Z,1.2nm,0.3s,baz=32,slow=17,SNR=4.7						
USRK	**Ussuriysk Ar.**	**40.27**	**53**	P	**P**	**10 30 55.3**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=267,slow=8.1,SNR=2.2						
USRK	**Ussuriysk Ar.**	**40.27**	**53**	P	**P**	**10 30 54.2**	**-0.6**
KLR	**Kul'dur**	**41.09**	**46**	P	**P**	**10 31 01.8**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=248,slow=7.6,SNR=3.8						
NRIK	**Noril'sk**	**41.60**	**1**	P	**P**	**10 31 06.8**	**+1.4**
	comp=Z,11nm,0.6s,baz=182,slow=4.9,SNR=14						
KLMR	**Klimovskoe**	**45.23**	**330**	*e*P	**P**	**10 31 32.9**	**-1.9**
KLMR				AMP		10 31 36.9	
	comp=Z,15nm,1.4s						
AKASG	**Malin Array Be**	**48.05**	**314**	P	**P**	**10 31 56.9**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=80,slow=7.0,SNR=7.6						
AKASG	**Malin Array Be**	**48.05**	**314**	IAmb	IAmb	10 31 58.7	
	comp=Z,0.8nm,1.1s						
TIXI	**Tiksi**	**49.86**	**16**	P	**P**	**10 32 10.6**	**0.0**
TIXI				IAmb	IAmb	10 32 11.6	
	comp=Z,4.9nm,0.5s						
MLR	**Muntele Rosu**	**49.99**	**307**	P	**P**	**10 32 11.6**	**-0.6**
MLR				IAmb	IAmb	10 32 15.2	
	comp=Z,6.9nm,0.7s						
ALN	**Alexandroupoli**	**50.13**	**301**	P	**P**	**10 32 12.5**	**-0.6**
ALN				IAmb	IAmb	10 32 24.0	
	comp=Z,10.0nm,1.3s						
BURAR	**Bucovina Array**	**50.49**	**310**	P	**P**	**10 32 15.9**	**0.0**
BURAR				IAmb	IAmb	10 32 17.6	
	comp=Z,2.1nm,0.9s						
FINES	**FINESS Array B**	**51.57**	**328**	P	**P**	**10 32 24.2**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=112,slow=7.6,SNR=14						
KEV	**Kevo**	**53.52**	**338**	P	**P**	**10 32 38.7**	**+0.7**
ARCES	**ARCESS Array B**	**53.94**	**338**	P	**P**	**10 32 41.9**	**+0.7**
	comp=Z,4.2nm,0.6s,baz=94,slow=8.0,SNR=27						
ARCES	**ARCESS Array B**	**53.94**	**338**	P	**P**	**10 32 42.1**	**+0.9**
CONA	**Conrad Observa**	**56.78**	**311**	*e*P	**P**	**10 33 02.5**	**+0.5**
	comp=Z,3.9nm,1.1s						
HFS	**Hagfors**	**57.46**	**326**	P	**P**	**10 33 07.0**	**+0.5**
	baz=123,slow=7.1						
MOA	**Molln**	**57.85**	**311**	*i* P	**P**	**10 33 09.7**	**+0.2**
	comp=Z,1.0nm,0.4s						
GERES	**GERESS Array B**	**58.10**	**312**	P	**P**	**10 33 11.6**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=93,slow=6.7,SNR=5.9						
GERES	**GERESS Array B**	**58.10**	**312**	P	**P**	**10 33 11.9**	**+0.6**
NC303	**NORSAR Array S**	**58.59**	**327**	P	**P**	**10 33 14.2**	**-0.2**
NB201	**NORSAR Array S**	**58.63**	**327**	P	**P**	**10 33 14.8**	**0.0**
NOA	**NORSAR Array B**	**58.67**	**327**	P	**P**	**10 33 14.6**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=87,slow=7.0,SNR=7.0						
SQTA	**Sankt Quirin**	**59.99**	**311**	*i* P	**P**	**10 33 23.7**	**-0.8**
	comp=Z,2.5nm,0.6s						
KNRA	**Kununurra**	**60.02**	**131**	P	**P**	**10 33 24.9**	**0.0**
MOTA	**Moosalm**	**60.04**	**311**	*e*P	**P**	**10 33 24.7**	**-0.2**
	comp=Z,5.2nm,0.8s						
FETA	**Feichten**	**60.35**	**310**	*i* P	**P**	**10 33 26.4**	**-0.6**
	comp=Z,1.4nm,0.6s						
DAVA	**Damuels**	**60.87**	**311**	*i* P	**P**	**10 33 30.9**	**+0.3**
	comp=Z,5.1nm,0.9s						
MSSA	**Maissana**	**61.70**	**308**	P	**P**	**10 33 35.8**	**-0.3**
KEST	**Kesra**	**63.97**	**298**	P	**P**	**10 33 52.5**	**+1.1**
	comp=Z,5.0nm,0.8s,baz=355,slow=5.2,SNR=5.6						
WB0	**Warramunga Arr**	**66.70**	**130**	P	**P**	**10 34 09.4**	**+0.3**
WB0				IAmb	IAmb	10 34 27.7	
	comp=Z,8.6nm,1.2s						
WRA	**Warramunga Arr**	**66.78**	**130**	P	**P**	**10 34 10.1**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=322,slow=6.4,SNR=27						
WB2	**Warramunga Arr**	**66.79**	**130**	P	**P**	**10 34 10.0**	**+0.3**
WR0	**Warramunga Arr**	**66.93**	**130**	P	**P**	**10 34 10.6**	**0.0**
WR0				IAmb	IAmb	10 34 34.9	
	comp=Z,5.8nm,1.2s						
ASAR	**Alice Springs**	**69.08**	**133**	P	**P**	**10 34 24.4**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=316,slow=5.7,SNR=12						
ASAR	**Alice Springs**	**69.08**	**133**	P	**P**	**10 34 24.1**	**0.0**
NEEM	**North Greenlan**	**71.88**	**351**	*i* P	**P**	**10 34 41.0**	**+0.3**
NEEM				IAmb	IAmb	10 34 43.0	
	comp=Z,3.7nm,0.6s						
EUNU	**Eureka**	**72.31**	**359**	P	**P**	**10 34 43.4**	**+0.4**
EUNU				IAmb	IAmb	10 34 45.0	
	comp=Z,2.6nm,0.9s						
ESDC	**Sonseca Array**	**72.66**	**306**	P	**P**	**10 34 45.2**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=64,slow=8.7,SNR=3.2						
SUMG	**Summit**	**73.02**	**345**	*i* P	**P**	**10 34 48.5**	**+0.8**
SUMG				IAmb	IAmb	10 34 49.6	
	comp=Z,4.0nm,0.8s						
ICESG	**Greenland Ices**	**75.62**	**342**	*i* P	**P**	**10 35 03.8**	**+1.0**
ICESG				IAmb	IAmb	10 35 04.6	
	comp=Z,7.6nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.81**	**279**	P	**P**	**10 35 20.9**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=59,slow=4.3,SNR=3.4						
ILAR	**Eielson Array**	**79.14**	**20**	P	**P**	**10 35 21.7**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=295,slow=4.5,SNR=6.0						
ILAR				PP	**PP**	**10 38 19.9**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=317,slow=8.5,SNR=4.5						
SKT	**Skwentna**	**79.48**	**24**	P	**P**	**10 35 24.9**	**+0.7**
SKT				IAmb	IAmb	10 35 25.4	
	comp=Z,4.4nm,1.0s						
PMR	**Palmer**	**80.59**	**23**	P	**P**	**10 35 30.6**	**+0.5**
PMR				IAmb	IAmb	10 35 39.9	
	comp=Z,8.2nm,1.4s						
SML	**Sawmill**	**80.72**	**23**	P	**P**	**10 35 31.7**	**+0.8**
SML				IAmb	IAmb	10 35 40.7	
	comp=Z,8.1nm,1.2s						
SCM	**Sheep Creek Mo**	**81.05**	**23**	P	**P**	**10 35 33.6**	**+0.9**
KDAK	**Kodiak Island**	**81.81**	**27**	P	**P**	**10 35 37.4**	**+0.7**
DAWY	**Dawson**	**81.86**	**18**	P	**P**	**10 35 37.5**	**+0.6**
DAWY				IAmb	IAmb	10 35 54.3	
	comp=Z,4.8nm,1.4s						
YKA	**Yellowknife Ar**	**88.57**	**9**	P	**P**	**10 36 10.4**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=336,slow=4.0,SNR=3.1						
TXAR	**Lajitas Array**	**122.50**	**10**	PKP	**PKPdf**	**10 42 13.2**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=324,slow=1.0,SNR=4.3						

*IDC **25** 10:28:07.3±1.9,28°.11N×85°.61E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/43, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=60.4km s-min=29.9km az=60.0*

ISC 25 10:28:10.2±1.8,28°.1N±0°.2×85°.6E±0°.4, h18km, n6, σ0s61/6, mb3.6/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.81**	**353**	P	**Pn**	**10 32 29.6**	**+0.2**
	0.1nm,0.3s,baz=169,slow=10,SNR=4.5						
SONM	**Songino Array**	**25.47**	**34**	P	**P**	**10 33 36.6**	**-0.6**
	0.7nm,0.8s,baz=213,slow=10,SNR=1.6						
ZALV	**Zalesovo Beam**	**25.80**	**359**	P	**P**	**10 33 40.6**	**+0.6**
	0.4nm,0.4s,baz=190,slow=7.3,SNR=2.2						
FINES	**FINESS Array B**	**51.20**	**328**	P	**P**	**10 37 11.6**	**-0.6**
	1.0nm,0.9s,baz=51,slow=7.5,SNR=1.1						
ARCES	**ARCESS Array B**	**53.56**	**338**	P	**P**	**10 37 29.8**	**+0.2**
	2.2nm,0.9s,baz=104,slow=8.0,SNR=5.2						
WRA	**Warramunga Arr**	**67.11**	**130**	P	**P**	**10 39 03.1**	**+0.2**
	0.4nm,0.9s,baz=325,slow=6.5,SNR=1.7						

*IDC **25** 10:34:29.8±2.0,27°.55N×84°.83E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.4/43, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=75.7km s-min=23.7km az=69.0*

ISC 25 10:34:31.4±1.9,27°.6N±0°.2×84°.8E±0°.4, h10km, n6, σ0s88/6, mb3.8/5, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.27**	**355**	P	**Pn**	**10 38 56.3**	**-0.9**
	0.1nm,0.3s,baz=168,slow=11,SNR=2.6						
SONM	**Songino Array**	**26.28**	**34**	P	**P**	**10 40 07.9**	**+0.8**
	0.7nm,0.4s,baz=241,slow=5.9,SNR=1.7						
ZALV	**Zalesovo Beam**	**26.33**	**360**	P	**P**	**10 40 06.9**	**-0.4**
	0.6nm,0.6s,baz=183,slow=13,SNR=2.0						
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**10 43 54.5**	**+0.6**
	4.8nm,1.1s,baz=100,slow=1.5,SNR=2.0						
WRA	**Warramunga Arr**	**67.29**	**129**	P	**P**	**10 45 26.0**	**-0.6**
	0.6nm,0.9s,baz=324,slow=6.5,SNR=2.0						
ASAR	**Alice Springs**	**69.56**	**132**	P	**P**	**10 45 41.0**	**+0.2**
	0.4nm,0.5s,baz=314,slow=6.6,SNR=8.0						

*IDC **25** 10:40:12.5±0.9,27°.75N×85°.95E, h0km, mb4.0/13, mb1 4.1/15, mb1mx3.8/50, mbtmp4.0/15, ML4.0/1, Error ellipse: s-maj=30.1km s-min=16.0km az=61.0*
*DMN **25** 10:40:13.3±0.2,27°.86N×85°.85E, h10km, Ml4.7/2, Error ellipse: s-maj=5.7km s-min=2.0km az=8.0*
*NEIC **25** 10:40:13.5±1.3,27°.77N±0°.07×85°.83E±0°.05, h10km±1km, mb4.1/29, Error ellipse: s-maj=13.4km s-min=2.9km az=210.0*

**ISC 25

KULM **Kulim** **26.40 145** P **P** **10 45 50.4 +0.1**
KULM IAmb IAmb 10 46 04.5
comp=Z,11nm,1.1s
KSRS Korea Array **36.48 64** P **P** **10 47 18.8 +0.1**
comp=Z,0.5nm,0.5s,baz=268,slow=8.2,SNR=4.7
NRIK Noril'sk **41.64 1** P **P** **10 48 02.2 +0.7**
comp=Z,4.7nm,0.4s,baz=180,slow=7.1,SNR=4.7
NRIK Noril'sk **41.64 1** P **P** **10 48 01.9 +0.4**
TOLI2 Tolitoli **42.65 122** P **P** **10 48 10.1 -0.3**
TIXI Tiksi **49.87 16** P **P** **10 49 06.4 0.0**
comp=Z,1.4nm,0.4s,baz=224,slow=3.8,SNR=5.4
TIXI Tiksi **49.87 16** P **P** **10 49 06.3 -0.1**
TIXI IAmb IAmb 10 49 07.2
comp=Z,4.6nm,1.1s
FINES FINESS Array B **51.65 328** P **P** **10 49 19.9 0.0**
comp=Z,0.6nm,0.4s,baz=97,slow=9.8,SNR=7.2
FINES FINESS Array B **51.65 328** P **P** **10 49 20.0 0.0**
VTS Vitosha **52.17 304** P **P** **10 49 23.5 -0.9**
VTS IAmb IAmb 10 49 39.1
comp=Z,2.0nm,1.1s
ARCES ARCESS Array B **54.00 338** P **P** **10 49 38.1 +0.8**
comp=Z,1.6nm,0.6s,baz=95,slow=7.5,SNR=6.6
KNRA Kununurra **59.94 131** P **P** **10 50 20.2 +0.2**
WB0 Warramunga Arr **66.61 130** P **P** **10 51 04.6 +0.3**
WRA Warramunga Arr **66.69 130** P **P** **10 51 05.0 +0.2**
comp=Z,2.1nm,0.6s,baz=323,slow=6.6,SNR=34
WRA Warramunga Arr **66.69 130** P **P** **10 51 04.8 0.0**
WB2 Warramunga Arr **66.70 130** P **P** **10 51 05.3 +0.4**
WR0 Warramunga Arr **66.84 130** P **P** **10 51 05.8 0.0**
ASAR Alice Springs **69.00 133** P **P** **10 51 19.6 +0.3**
comp=Z,1.1nm,0.6s,baz=317,slow=6.4,SNR=20
ASAR Alice Springs **69.00 133** P **P** **10 51 20.0 +0.7**
RABL Rabaul **71.24 105** P **P** **10 51 30.1 -3.3**
TOLK Toolik Lake Re **75.72 18** P **P** **10 51 59.7 +0.8**
TOLK IAmb IAmb 10 52 06.8
comp=Z,1.4nm,0.8s
IMAR Indian Mountai **76.17 21** P **P** **10 52 02.5 +1.1**
TORD Torodi Ar. Bea **78.90 279** P **P** **10 52 20.5 +2.9**
comp=Z,0.7nm,0.9s,baz=55,slow=3.6,SNR=2.9
ILAR Eielson Array **79.14 20** P **P** **10 52 18.2 +0.2**
comp=Z,0.3nm,0.6s,baz=328,slow=5.0,SNR=4.1
YKA Yellowknife Ar **88.59 9** P **P** **10 53 06.1 -0.2**
comp=Z,0.3nm,0.8s,baz=335,slow=4.7,SNR=3.6

IDC ***25*** *10:40:34.3±0.5,27.57N×85.97E, h0km, mb4.4/34, mb1 4.5/37, mb1mx4.4/51, mbtmp4.4/37, ML4.0/2, MS5.1/1, Ms1 5.1/1, ms1mx3.5/54, Error ellipse: s-maj=13.6km s-min=10.4km az=24.0*
BJI ***25*** *10:40:34.4±0.0, 27.73N×85.98E, h5km, mB4.9/6, mb4.6/38, ML4.3/1, Ms4.0/2, Ms7 4.0/2*
NEIC ***25*** *10:40:35.5±1.6, 27.60N±0.07×85.96E±0.05, h10km±1km, mb4.8/141, Error ellipse: s-maj=12.4km s-min=6.5km az=157.0*
NDI ***25*** *10:40:36.6±3.3, 27.44N×85.82E, h5km, mb4.0, ML4.3, mb4.8(NEIC)*

ISC 25 10:40:36.8±0.3, 27.59N±0.04×85.85E±0.03, h19km, n279,
σ1§46/297, mb4.7/116, 9C-7D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.46**	**96**	*eP*		**Pn**	**10 41 17.8**	**+1.7**
GTK				*eS*		**Sb**	**10 41 49.7**	**-0.7**
GTK				*eS*		**Sn**	**10 41 49.9**	**+4.3**
GTK				IAML			10 41 53.8	
	comp=N,2μm,0.4s							
GTK				IAML			10 41 54.8	
	comp=E,2μm,0.2s							
DHUB	**DHUBRI**	**4.02**	**112**	*eP*		**Pn**	**10 41 38.4**	**+1.0**
DHUB				*eS*		**Sn**	**10 42 23.0**	**-0.9**
LSA	**Lhasa**	**5.11**	**64**	Pn		**Pn**	**10 41 49.8**	**-3.0**
LSA				Sn		**Sn**	**10 42 51.0**	**-0.4**
LSA				smax		smax		
	comp=E,340nm,0.7s							
LSA				smax		smax		
	comp=E,500nm,1.0s							
LSA	**Lhasa**	**5.11**	**64**			**Pn**	**10 41 50.4**	**-2.3**
GUWA	**GUWAHATI**	**5.40**	**104**	*eP*		**Pn**	**10 41 57.2**	**+0.9**
GUWA				*eS*		**Sn**	**10 42 57.2**	**-0.7**
SHL	**Shillong**	**5.76**	**109**	*eP*		**Pn**	**10 42 01.4**	**-0.1**
SHL				*eS*		**Sn**	**10 43 03.8**	**-3.4**
SHL	**Shillong**	**5.76**	**109**	Pn		**Pn**	**10 42 00.3**	**-1.2**
NDI	**New Delhi**	**7.70**	**280**	*eP*		**Pn**	**10 42 32.0**	**+4.0**
NDI				*eS*		**Sn**	**10 43 49.0**	**-5.8**
MOKO	**MOKOCHONG**	**7.83**	**97**	*eP*		**Pn**	**10 42 29.4**	**-0.5**
MOKO				*eS*		**Sn**	**10 43 56.1**	**-2.1**
MOKO				IAML			10 44 02.3	
	comp=N,232nm,0.5s							
MOKO				IAML			10 44 05.1	
	comp=E,175nm,0.5s							
SMLA	**Simla**	**8.36**	**297**	*eP*		**Pn**	**10 42 38.3**	**+1.4**
SMLA				*eS*		**Sn**	**10 44 08.5**	**-2.4**
SMLA				IAML			10 44 25.8	
	comp=N,111nm,0.7s							
BHPL	**Bhopal**	**8.76**	**242**	*eP*		**Pn**	**10 42 42.9**	**+0.2**
BHPL				*eS*		**Sn**	**10 44 16.2**	**-4.8**
BHPL				IAML			10 44 22.4	
	comp=N,94nm,0.3s							
BHPL				IAML			10 44 24.1	
	comp=E,103nm,0.3s							
BHK	**Bhakra**	**9.06**	**297**	*ex*		**Pn**	**10 42 47.0**	**+0.3**
DHRM	**DHARAMSHALA**	**9.50**	**302**	*eP*		**Pn**	**10 42 52.7**	**-0.2**
DHRM				*eS*		**Sn**	**10 44 34.8**	**-4.4**
DHRM				IAML			10 44 40.9	
	comp=N,212nm,0.7s							
DHRM				IAML			10 44 46.2	
	comp=E,231nm,0.7s							
HYB	**Hyderabad**	**12.16**	**215**	*i* P		**Pn**	**10 43 29.0**	**-0.2**
NIL	**Nilore**	**12.41**	**302**			**Pn**	**10 43 31.8**	**-0.8**
POO	**Poona**	**14.25**	**233**	*ex*		Pn	10 43 50.0	-7.8
	comp=E,30nm,1.0s							
POO				*i* S		Sn	10 46 20.0	-15
CHTO	**Chiang Mai**	**14.86**	**123**			**Pn**	**10 44 03.7**	**-2.4**
CMMT	**Chiang Mai**	**14.87**	**123**	P		**P**	**10 44 11.3**	**-0.4**
	comp=E,8.7nm,1.2s							
CM32	**Chiang Mai Arr**	**14.89**	**124**	P		**P**	**10 44 13.0**	**+1.0**
CM15	**Chiang Mai Arr**	**15.07**	**124**	P		**Pn**	**10 44 07.5**	**-1.3**
	comp=E,14nm,0.9s							
CM13	**Chiang Mai Arr**	**15.08**	**124**	P		**Pn**	**10 44 07.0**	**-2.0**
	comp=E,103nmcomp=E,14nm,0.7s							
CM31	**Chiang Mai Arr**	**15.08**	**124**	P		**P**	**10 44 20.3**	**+6.2**
CM31	**Chiang Mai Arr**	**15.08**	**124**	Pn		**Pn**	**10 44 06.5**	**-2.5**
CMAR	**Chiang Mai Arr**	**15.08**	**124**	Pn		**Pn**	**10 44 06.5**	**-2.5**
	baz=304,slow=13,SNR=25							
CMAR	**Chiang Mai Arr**	**15.08**	**124**	Pn		**Pn**	**10 44 04.2**	**-4.8**
CM02	**Chiang Mai Arr**	**15.10**	**124**	P		**Pn**	**10 44 07.0**	**-2.2**
	comp=E,90nmcomp=E,11nm,0.8s							
CM01	**Chiang Mai Arr**	**15.12**	**124**	P		**Pn**	**10 44 08.1**	**-1.4**
	comp=E,108nmcomp=E,12nm,0.8s							
CM05	**Chiang Mai Arr**	**15.12**	**124**	P		**Pn**	**10 44 07.7**	**-1.8**
	comp=E,87nmcomp=E,12nm,0.8s							
CM09	**Chiang Mai Arr**	**15.13**	**124**	P		**Pn**	**10 44 08.8**	**-0.8**
	comp=E,138nmcomp=E,17nm,0.8s							
CM04	**Chiang Mai Arr**	**15.15**	**124**	P		**Pn**	**10 44 08.3**	**-1.5**
	comp=E,115nmcomp=E,13nm,0.7s							
KMI	**Kunming**	**15.34**	**95**	⇑P		**Pn**	**10 44 14.0**	**+1.5**
KMI				pP		P	10 44 17.0	-0.2
KMI				sP		pP	10 44 18.0	-5.0
KMI				pmax		pmax		
	comp=E,8.0nm,0.8s							
KMI				LR		LR		
	comp=E,420nm,16.7s							
KMI				LR		LR		
	comp=E,540nm,18.1s							
KMI				LR		LR		
	comp=E,950nm,27.4s							
KMI	**Kunming**	**15.34**	**95**	Pn		**Pn**	**10 44 10.5**	**-2.0**
KBL	**Kabul**	**15.97**	**300**	Pn		**Pn**	**10 44 20.6**	**-0.1**
PRZ	**Przheval'sk**	**16.05**	**340**	Pn		**Pn**	**10 44 21.1**	**-0.6**
KDJ	**Kajisay**	**16.14**	**336**	Pn		**Pn**	**10 44 21.6**	**-1.2**
SUKH	**Sukhothai**	**16.21**	**125**	P		**P**	**10 44 27.5**	**+0.9**
	comp=E,34nm,0.8s							
WMQ	**Urumqi**	**16.26**	**5**	*eP*		**Pn**	**10 44 25.0**	**+0.8**
WMQ				pP		pP	10 44 31.3	-1.7
WMQ				sP		sP	10 44 36.0	+0.5
WMQ				PP		**PnPn**	**10 44 38.3**	**+5.0**
WMQ				S		**Sn**	**10 47 22.5**	**-1.6**
WMQ				pmax		pmax		
	comp=E,21nm,0.9s							
UMPA	**Umpang Tak**	**16.54**	**131**	P		**P**	**10 44 34.0**	**+3.7**
	comp=E,15nm,0.8s							
GTA	**Gaotai**	**16.54**	**41**	P		**P**	**10 44 29.5**	**-0.9**
GTA				pP		pP	10 44 33.3	-3.1
GTA				sP		sP	10 44 36.0	-2.8
GTA				pmax		pmax		
	comp=E,7.0nm,1.0s							
DRK	**Karamyk**	**16.64**	**319**	Pn		**Pn**	**10 44 26.9**	**-2.4**
UTTA	**Uttaradit**	**16.72**	**123**	P		**P**	**10 44 32.9**	**+0.6**
	comp=E,26nm,0.8s							
BOOM	**Boomskoye usch**	**16.91**	**334**	Pn		**Pn**	**10 44 31.4**	**-1.2**
PHIT	**Phitsanulok**	**16.97**	**125**	P		**P**	**10 44 39.5**	**+4.4**
	comp=E,71nm,1.0s							
PBA	**Port Blair**	**17.12**	**156**	P		Pn	10 44 34.3	-0.9
PBA				IAmb		IAmb	10 44 39.1	
	comp=E,85nm,1.0s							
KHLT	**Khaolaem Dam**	**17.39**	**134**	P		**P**	**10 44 41.6**	**+1.9**
	comp=Z,8.2nm,0.8s							
UTHA	**Uthaitani**	**17.39**	**131**	P		**P**	**10 44 41.4**	**+1.6**
	comp=Z,26nm,0.8s							
LZH	**Lanzhou**	**17.46**	**57**	*eP*		**Pn**	**10 44 37.3**	**-2.1**
LZH				pP		P	10 44 40.5	-0.1
LZH				sP		pP	10 44 42.8	-3.7
LZH				PP		**PnPn**	**10 44 50.0**	**+0.3**
LZH				pmax		pmax		
	comp=E,18nm,1.3s							
AAK	**Ala-Archa**	**17.63**	**331**	P		**P**	**10 44 44.1**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=143,slow=12,SNR=8.9							
AAK	**Ala-Archa**	**17.63**	**331**			**Pn**	**10 44 40.0**	**-1.4**
FRU1	**Bishkek**	**17.71**	**332**	P		**Pn**	**10 44 41.6**	**-0.8**
FRU1				IAmb		IAmb	10 44 42.4	
	comp=Z,33nm,0.3s							
NONG	**Nongkai**	**18.53**	**117**	P		**Pn**	**10 44 53.8**	**+1.3**
	comp=Z,20nm,1.0s							
GYA	**Guiyang**	**18.58**	**89**	⇑P		**Pn**	**10 44 54.0**	**+0.8**
GYA				pmax		pmax		
	comp=E,11nm,0.7s							
CHAI	**Chaiyaphum**	**18.95**	**125**	P		**Pn**	**10 44 59.3**	**+1.7**
	comp=E,16nm,0.7s							
MK31	**Makanchi Array**	**19.37**	**353**	P		**P**	**10 45 01.8**	**+0.4**
MKAR	**Makanchi Array**	**19.37**	**353**	P		**Pn**	**10 45 02.2**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=167,slow=11,SNR=19							
MKAR	**Makanchi Array**	**19.37**	**353**	P		**P**	**10 45 01.1**	**-0.3**
MAKZ	**Makanchi**	**19.42**	**352**	P		**P**	**10 45 01.1**	**-0.8**
KK31	**Karatay Array**	**19.85**	**325**			**P**	**10 45 07.1**	**+0.5**
KKAR	**Karatay Array**	**19.85**	**325**			**P**	**10 45 05.6**	**-1.0**
KKAR	**Karatay Array**	**19.85**	**325**	P		**P**	**10 45 06.0**	**-0.6**
PALK	**Pallekele**	**20.79**	**195**	P		Pn	10 45 24.2	+4.7
	comp=Z,5.4nm,0.5s,baz=107,slow=11,SNR=5.1							
PALK				S		**S**	**10 49 05.4**	**-3.0**
	comp=Z,8.1nm,0.6s,baz=49,slow=20,SNR=5.9							
PALK	**Pallekele**	**20.79**	**195**	P		**P**	**10 45 17.3**	**+0.2**
XAN	**Xi'an**	**20.81**	**66**	P		**P**	**10 45 17.3**	**+0.2**
XAN				pP		pP	10 45 21.3	-1.8
XAN				pmax		pmax		
	comp=E,19nm,0.8s							
XAN	**Xi'an**	**20.81**	**66**	P		**P**	**10 45 15.7**	**-1.4**
ENH	**Enshi**	**20.85**	**77**	P		**P**	**10 45 16.5**	**-1.1**
KURBB	**Kurchatov Arra**	**23.67**	**348**	P		**P**	**10 45 48.2**	**+1.2**
	comp=Z,11nm,0.9s,baz=168,slow=9.1,SNR=28							
KURK	**Kurchatov**	**23.74**	**349**	P		**P**	**10 45 48.2**	**+0.5**
HHC	**Hu-ho-hao-te**	**24.93**	**51**	*eP*		**P**	**10 45 58.0**	**-0.9**
HHC				pmax		pmax		
	comp=E,25nm,1.0s							
HHC				pmax		pmax		
	comp=E,270nm,6.4s							
WSAR	**Wadi Sarin**	**24.95**	**266**	P		**P**	**10 46 01.8**	**+2.7**
	comp=Z,4.9nm,1.0s,baz=83,slow=13,SNR=2.1							
WHN	**Wuhan**	**25.05**	**76**	⇑P		**P**	**10 46 05.0**	**+5.0**
GEYT	**Alibeck**	**25.42**	**301**	P		**P**	**10 46 06.5**	**+3.3**
	comp=Z,3.9nm,0.7s,baz=148,slow=12,SNR=6.8							
GEYT	**Alibeck**	**25.42**	**301**	P		**P**	**10 46 03.9**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**25.42**	**301**	P		**P**	**10 46 02.7**	**-0.6**
SONM	**Songino Array**	**25.79**	**33**	P		**P**	**10 46 07.5**	**+0.9**
	comp=Z,12nm,0.8s,baz=220,slow=10.0,SNR=17							
SONM	**Songino Array**	**25.79**	**33**	P		**P**	**10 46 03.5**	**-3.1**
ULN	**Ulaanbaatar**	**26.13**	**34**	P		**P**	**10 46 08.3**	**-1.5**
ULN				IAmb		IAmb	10 46 13.8	
	comp=E,12nm,0.6s							
ZAA0	**Zalesovo Array**	**26.34**	**359**	P		**P**	**10 46 11.8**	**+0.4**
ZAA0				IAmb		IAmb	10 46 13.2	
	comp=Z,13nm,0.9s							
ZALV	**Zalesovo Beam**	**26.34**	**359**	P		**P**	**10 46 12.5**	**+1.1**
	comp=Z,9.6nm,0.7s,baz=184,slow=9.9,SNR=22							
ZALV	**Zalesovo Beam**	**26.34**	**359**	P		**P**	**10 46 11.3**	**-0.1**
BVAR	**Borovoye Array**	**27.89**	**340**	P		**P**	**10 46 25.9**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=145,slow=16,SNR=15							
BJT	**Baijiatuan**	**27.93**	**56**	P		**P**	**10 46 24.2**	**-1.7**
BJT				IAmb		IAmb	10 46 39.8	
	comp=E,6.1nm,0.5s							
BRVK	**Borovoye**	**27.95**	**340**	P		**P**	**10 46 25.1**	**-0.8**
GSI	**Gunungsitoli**	**28.45**	**155**	P		**P**	**10 46 29.6**	**-1.1**
GSI				IAmb		IAmb	10 46 39.1	
	comp=Z,16nm,0.7s							
NJ2	**Nanjing**	**28.91**	**73**	*eP*		**P**	**10 46 35.0**	**+0.4**
NJ2				pmax		pmax		
	comp=Z,12nm,0.6s							
KNMB	**Chin-men Tao**	**29.36**	**89**	P		**P**	**10 46 37.8**	**-0.9**
ABKAR	**Akbulak array**	**29.41**	**324**	P		**P**	**10 46 39.6**	**+0.6**
ABKAR				IAmb		IAmb	10 46 41.6	
	comp=Z,12nm,0.7s							
ABKAR	**Akbulak array**	**29.41**	**324**	P		**P**	**10 46 39.7**	**+0.8**
AKTO	**Aktyubinsk**	**31.12**	**325**	P		**P**	**10 46 55.3**	**+1.3**
	comp=Z,7.1nm,0.7s,baz=122,slow=9.2,SNR=25							
SOCY	**Socotra**	**33.52**	**249**	P		**P**	**10 47 15.1**	**-0.5**
SOCY				IAmb		IAmb	10 47 21.2	
	comp=Z,6.4nm,0.7s							
HIA	**Hailar**	**33.83**	**41**	P		**P**	**10 47 17.5**	**-0.3**
HIA				IAmb		IAmb	10 47 19.1	
	comp=Z,8.7nm,1.0s							
ARU	**Arti**	**34.79**	**333**	P		**P**	**10 47 26.6**	**+0.6**
ARU				IAmb		IAmb	10 47 28.1	
	comp=Z,8.7nm,0.6s							
INCN	**Inchon**	**35.53**	**63**	P		**P**	**10 47 31.5**	**-1.2**
INCN				IAmb		IAmb	10 48 07.1	
	comp=Z,11nm,0.7s							
CN2	**Changchun**	**35.61**	**52**	*eP*		**P**	**10 47 33.0**	**-0.3**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KS19	**Wonju Array Si**	**36.51**	**63**	P		**P**	**10 47 40.0**	**-1.1**
KS19				IAmb		IAmb	10 47 56.5	
	comp=Z,15nm,1.4s							
KSRS	**Korea Array**	**36.55**	**64**	P		**P**	**10 47 40.4**	**-1.0**
	comp=Z,3.3nm,0.6s,baz=259,slow=8.5,SNR=13							
KBZ	**Khabaz**	**37.98**	**307**	P		**P**	**10 47 54.6**	**+1.2**
	comp=Z,3.2nm,0.9s,baz=111,slow=9.5,SNR=6.3							
JNU	**Nakatsue**	**39.01**	**71**	P		**P**	**10 48 02.5**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=247,slow=7.7,SNR=2.1							
USRK	**Ussuriysk Ar.**	**40.32**	**53**	P		**P**	**10 48 12.8**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=260,slow=8.5,SNR=13							
USRK	**Ussuriysk Ar.**	**40.32**	**53**	P		**P**	**10 48 12.3**	**-0.6**
KLR	**Kul'dur**	**41.16**	**46**	P		**P**	**10 48 19.8**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=276,slow=8.8,SNR=11							
JMN	**Monobe**	**41.47**	**69**	P		**P**	**10 48 21.1**	**-1.6**
JMN				IAmb		IAmb	10 48 28.6	
	comp=Z,14nm,0.7s							
GAZ	**Gaziantep**	**41.79**	**296**	P		**P**	**10 48 26.5**	**+1.2**
GAZ				IAmb		IAmb	10 49 00.3	
	comp=Z,8.7nm,0.6s							
NRIK	**Noril'sk**	**41.79**	**1**	P		**P**	**10 48 26.1**	**+1.3**
	comp=Z,17nm,0.8s,baz=167,slow=6.1,SNR=13							
NRIK	**Noril'sk**	**41.79**	**1**	P		**P**	**10 48 25.5**	**+0.8**
NRIK				IAmb		IAmb	10 48 31.1	
	comp=Z,20nm,0.8s							
BR131	**Keskin Array S**	**44.55**	**300**	P		**P**	**10 48 47.8**	**+0.1**
BRTR	**Keskin Array B**	**44.55**	**300**	P		**P**	**10 48 49.2**	**+1.5**
	comp=Z,2.0nm,0.8s,baz=134,slow=7.1,SNR=4.9							
BRTR	**Keskin Array B**	**44.55**	**300**	P		**P**	**10 48 49.0**	**+1.4**
OBN	**Obninsk**	**44.79**	**322**	P		**P**	**10 48 49.9**	**+0.8**
MAT	**Matsushiro**	**44.79**	**65**	P		**P**	**10 48 49.0**	**-0.5**
MJAR	**Matsushiro Arr**	**44.79**	**65**	P		**P**	**10 48 48.8**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=274,slow=10,SNR=4.3							
MJAR	**Matsushiro Arr**	**44.79**	**65**	P		**P**	**10 48 48.3**	**-1.2**
CSS	**Mathiatis**	**45.06**	**293**	P		**P**	**10 48 51.5**	**-0.1**
CSS				IAmb		IAmb	10 49 24.9	
	comp=Z,14nm,1.1s							
KLMR	**Klimovskoe**	**45.43**	**330**	*eP*		**P**	**10 48 52.7**	**-1.5**
KLMR				AMP			10 49 03.3	
	comp=Z,21nm,1.3s							
ISP	**Isparta**	**47.07**	**297**	P		**P**	**10 49 08.5**	**+1.0**
ISP				IAmb		IAmb	10 49 25.2	
	comp=Z,8.2nm,0.9s							
ELL	**Elmali**	**47.65**	**296**	P		**P**	**10 49 12.3**	**+0.2**
ASAJ	**Asahikawa**	**47.92**	**54**	P		**P**	**10 49 13.3**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=262,slow=7.2,SNR=4.4							
YSS	**Yuzh-Sakhalins**	**48.11**	**50**	P		**P**	**10 49 15.5**	**+0.1**
AKASG	**Malin Array Be**	**48.24**	**315**	P		**P**	**10 49 16.3**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=80,slow=7.1,SNR=10							
AKASG	**Malin Array Be**	**48.24**	**315**	P		**P**	**10 49 16.1**	**-0.2**
AKBB	**Malin Array Si**	**48.24**	**315**	P		**P**	**10 49 16.6**	**+0.4**
AKBB				IAmb		IAmb	10 49 26.6	
	comp=Z,6.1nm,0.8s							
ERM	**Erimo**	**48.35**	**57**	P		**P**	**10 49 16.5**	**-0.8**
JEM	**Erimo**	**48.35**	**57**	P		P	10 49 12.3	-5.0
VRI	**Vrincioaia**	**49.62**	**308**	⇑P		**P**	**10 49 28.5**	**+1.5**
JCJ	**Chichijima**	**49.66**	**77**	LR		LR	11 12 49.0	
	comp=Z,2μm,19.2s,baz=62,slow=39							
PLOR	**Plostina**	**49.68**	**308**	⇑P		**P**	**10 49 29.9**	**+2.4**
TIXI	**Tiksi**	**50.02**	**16**	P		**P**	**10 49 29.5**	**0.0**
	comp=Z,3.4nm,0.4s,baz=242,slow=5.8,SNR=13							
TIXI	**Tiksi**	**50.02**	**16**	P		**P**	**10 49 29.5**	**0.0**
TIXI				IAmb		IAmb	10 49 30.4	
	comp=Z,8.6nm,1.0s							
MLR	**Muntele Rosu**	**50.17**	**308**	⇑P		**P**	**10 49 33.8**	**+2.5**
MLR	**Muntele Rosu**	**50.17**	**308**	P		**P**	**10 49 31.7**	**+0.4**
MLR				IAmb		IAmb	10 49 34.7	
	comp=Z,12nm,0.8s							
NACGM	**Naroch**	**50.24**	**320**	*i* P		**P**	**10 49 32.7**	**+1.2**
NACGM				*i* P		**P**	**10 49 32.7**	**+1.2**
NACGM				*i* P		**P**	**10 49 32.7**	**+1.2**
NACGM				*i* PP		**PP**	**10 51 28.2**	**+1.5**
NACGM				*i* PPP		PPP	10 52 23.4	
NACGM				*i* S		**S**	**10 56 44.6**	**+1.9**
NACGM				*i* SS		SS	11 00 29.5	+14
NACGM				*i* SSS		SSS	11 02 12.4	
NACGM				*i* LQ		LQ	11 07 12.6	
NACGM				*i* LR		LR	11 11 03.8	
IIGN	**Ignalina**	**50.62**	**320**	*eP*		**P**	**10 49 35.3**	**+0.9**
BURAR	**Bucovina Array**	**50.67**	**310**	⇓P		**P**	**10 49 36.6**	**+1.5**
BURAR	**Bucovina Array**	**50.67**	**310**	P		**P**	**10 49 35.5**	**+0.5**
BUR08	**Bucovina Ar. S**	**50.69**	**310**	P		**P**	**10 49 36.3**	**+1.1**
ISAL	**Salakas**	**50.70**	**321**	*eP*		**P**	**10 49 35.7**	**+0.7**
FINES	**FINESS Array B**	**51.78**	**328**	P		**P**	**10 49 43.9**	**+0.9**
	comp=Z,3.1nm,0.5s,baz=105,slow=8.0,SNR=21							
FINES	**FINESS Array B**	**51.78**	**328**	P		**P**	**10 49 43.7**	**+0.8**
IDI	**Anoyia**	**51.88**	**295**	⇑P		**P**	**10 49 45.2**	**+1.0**
PABE	**Paberze**	**51.91**	**320**	*eP*		**P**	**10 49 44.3**	**+0.3**
PABE	**Paberze**	**51.91**	**320**	P		**P**	**10 49 44.4**	**+0.1**
SUW	**Suwalki**	**52.24**	**318**	P		**P**	**10 49 45.6**	**-0.9**
VTS	**Vitosha**	**52.26**	**304**	⇑P		**P**	**10 49 48.9**	**+1.9**
VTS	**Vitosha**	**52.26**	**304**	P		**P**	**10 49 47.5**	**+0.5**
VTS				IAmb		IAmb	10 49 50.0	
	comp=Z,6.6nm,0.9s							
KWP	**Kalwaria Pacla**	**52.36**	**313**	P		**P**	**10 49 48.8**	**+1.3**
MTSE	**Matsula**	**52.40**	**324**	*eP*		**P**	**10 49 46.6**	**-1.0**
SOEI	**Soe**	**52.56**	**130**	P		**P**	**10 49 49.0**	**-0.5**
AGG	**Agios Georgios**	**53.33**	**300**	P		**P**	**10 49 54.6**	**-0.3**
AGG				IAmb		IAmb	10 50 00.4	
	comp=Z,8.4nm,0.9s							
ARCES	**ARCESS Array B**	**54.15**	**338**	P		**P**	**10 50 01.7**	**+1.3**
	comp=Z,12nm,0.8s,baz=93,slow=7.7,SNR=14							
OJC	**Ojcow**	**54.23**	**314**	P		**P**	**10 50 00.4**	**-0.9**
OJC				IAmb		IAmb	10 50 08.3	
	comp=Z,4.8nm,0.7s							
KMBO	**Kilima Mbogo**	**54.70**	**247**	P		**P**	**10 50 07.0**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=34,slow=15,SNR=1.7							
PDG	**Podgorica**	**55.20**	**304**	⇓P		**P**	**10 50 09.0**	**+0.6**
UPP	**Uppsala**	**55.67**	**325**	*eP*		**P**	**10 50 12.2**	**+0.8**
MORC	**Moravsky Berou**	**55.71**	**313**	P		**P**	**10 50 12.8**	**+0.8**
MODS	**Modra-Piesok**	**55.98**	**312**	*eP*		**P**	**10 50 14.8**	**+0.9**
ZST	**Bratislava**	**56.11**	**311**	*eP*		**P**	**10 50 16.0**	**+1.2**
KRLC	**Kraliky**	**56.18**	**314**	*eP*		**P**	**10 50 16.6**	**+1.2**
DPC	**Dobruska-Polom**	**56.45**	**314**	*eP*		**P**	**10 50 19.0**	**+1.7**
CHVC	**Chvalec**	**56.61**	**314**	*eP*		**P**	**10 50 19.7**	**+1.3**
CONA	**Conrad Observa**	**56.96**	**311**	*eP*		**P**	**10 50 22.0**	**+0.9**
	comp=Z,5.6nm,0.9s							
TIP	**Timpagrande**	**57.59**	**301**	⇑P		**P**	**10 50 26.0**	**+0.4**
PRU	**Pruhonice**	**57.62**	**314**	*eP*		**P**	**10

EUNU	**Eureka**	**72.49**	**359**	P	**P**	**10 52 02.6**	**+0.8**
EUNU				IAmb	IAmb	10 52 03.8	
	comp=Z,5.9nm,0.8s						
ESDC	**Sonseca Array**	**72.83**	**306**	P	**P**	**10 52 04.9**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=58,slow=6.5,SNR=11						
ESDC	**Sonseca Array**	**72.83**	**306**	P	**P**	**10 52 03.8**	**-0.7**
ANM	**Nome**	**73.01**	**25**	P	**P**	**10 52 03.6**	**-1.4**
ANM				IAmb	IAmb	10 52 07.3	
	comp=Z,6.0nm,0.9s						
ANM	**Nome**	**73.01**	**25**	P		10 52 05.4	
	baz=298						
PAB	**San Pablo**	**73.16**	**306**	P	**P**	**10 52 06.7**	**+0.3**
PAB				IAmb	IAmb	10 52 08.4	
	comp=Z,5.7nm,0.9s						
SUMG	**Summit**	**73.22**	**345**	*i* P	**P**	**10 52 06.6**	**-0.1**
SUMG				IAmb	IAmb	10 52 13.2	
	comp=Z,6.4nm,1.0s						
SUMG	**Summit**	**73.22**	**345**	P	**P**	**10 52 06.4**	**-0.3**
SUMG				IAmb	IAmb	10 52 13.1	
	comp=Z,15nm,1.1s						
TULEG	**Thule**	**74.93**	**354**	*i* P	**P**	**10 52 14.7**	**-1.4**
TULEG				IAmb	IAmb	10 52 16.8	
	comp=Z,6.8nm,0.7s						
TULEG	**Thule**	**74.93**	**354**	P	**P**	**10 52 15.8**	**-0.2**
TULEG				IAmb	IAmb	10 52 21.2	
	comp=Z,8.1nm,0.7s						
CTA	**Charters Tower**	**75.24**	**122**	P	**P**	**10 52 18.9**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=339,slow=5.3,SNR=5.8						
ICESG	**Greenland Ices**	**75.82**	**342**	*i* P	**P**	**10 52 22.0**	**+0.3**
ICESG				IAmb	IAmb	10 52 23.4	
	comp=Z,11nm,0.7s						
TOLK	**Toolik Lake Re**	**75.87**	**18**	P	**P**	**10 52 22.3**	**+0.7**
TOLK	**Toolik Lake Re**	**75.87**	**18**	P		10 52 21.7	
	baz=311						
COLD	**Coldfoot**	**76.62**	**19**	P	**P**	**10 52 26.7**	**+0.9**
COLD				IAmb	IAmb	10 52 27.9	
	comp=Z,5.3nm,0.9s						
COLD	**Coldfoot**	**76.62**	**19**	P		10 52 25.9	
	baz=311						
MLY	**Manley**	**77.89**	**21**	P	**P**	**10 52 32.8**	**-0.3**
MLY				IAmb	IAmb	10 52 39.4	
	comp=Z,6.9nm,0.8s						
MLY	**Manley**	**77.89**	**21**	P		10 52 34.0	
	baz=311,SNR=8.7						
CHUM	**Lake Minchumin**	**78.11**	**23**	P		10 52 35.1	
	baz=310						
I23K	**Minto, Yukon-K**	**78.25**	**21**	P	**P**	**10 52 35.3**	**+0.3**
I23K				IAmb	IAmb	10 52 37.9	
	comp=Z,4.7nm,0.7s						
I23K	**Minto, Yukon-K**	**78.25**	**21**	P		10 52 35.7	
	baz=312,SNR=7.4						
BPAW	**Bear Paw Mtn.**	**78.42**	**22**	P	**P**	**10 52 36.2**	**+0.2**
BPAW				IAmb	IAmb	10 52 37.7	
	comp=Z,10.0nm,1.1s						
BPAW	**Bear Paw Mtn.**	**78.42**	**22**	P		10 52 36.3	
	baz=311,SNR=8.0						
FYU	**Fort Yukon**	**78.50**	**19**	P	**P**	**10 52 37.4**	**+1.1**
FYU				IAmb	IAmb	10 52 39.1	
	comp=Z,7.2nm,0.9s						
NEA2	**Nenana**	**78.72**	**21**	P	**P**	**10 52 37.5**	**-0.1**
NEA2				IAmb	IAmb	10 52 39.3	
	comp=Z,11nm,0.8s						
NEA2	**Nenana**	**78.72**	**21**	P		10 52 38.4	
	baz=312,SNR=11						
MDM	**Murphy Dome**	**78.74**	**21**	P	**P**	**10 52 36.9**	**-0.8**
MDM				IAmb	IAmb	10 52 43.9	
	comp=Z,12nm,1.1s						
PPLA	**Purkeypile**	**78.79**	**23**	P	**P**	**10 52 38.5**	**+0.3**
PPLA				IAmb	IAmb	10 52 44.5	
	comp=Z,7.5nm,0.9s						
PPLA	**Purkeypile**	**78.79**	**23**	P		10 52 39.0	
	baz=310						
POKR	**Poker Flat Res**	**78.87**	**20**	P		10 52 39.2	
	baz=314						
TCOL	**CIGO, UAF Yank**	**78.91**	**21**	P	**P**	**10 52 39.1**	**+0.5**
TCOL				IAmb	IAmb	10 52 40.2	
	comp=Z,8.1nm,0.7s						
TCOL	**CIGO, UAF Yank**	**78.91**	**21**	P		10 52 39.2	
	baz=313						
COLA	**College**	**78.91**	**21**	P	**P**	**10 52 38.7**	**+0.1**
COLA				IAmb	IAmb	10 52 40.2	
	comp=Z,8.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.92**	**279**	P	**P**	**10 52 39.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=49,slow=4.7,SNR=6.8						
CCB	**Clear Creek Bu**	**79.08**	**21**	P	**P**	**10 52 39.8**	**+0.2**
CCB				IAmb	IAmb	10 52 40.4	
	comp=Z,4.0nm,0.6s						
TRF	**Thorofare Moun**	**79.08**	**22**	P		10 52 40.3	
	baz=311						
PRP	**Porcupine Dome**	**79.17**	**19**	P	**P**	**10 52 41.7**	**+1.4**
PRP				IAmb	IAmb	10 52 46.8	
	comp=Z,7.7nm,0.8s						
PRP	**Porcupine Dome**	**79.17**	**19**	P		10 52 41.2	
	baz=315						
IL31		**79.28**	**20**	P	**P**	**10 52 40.5**	**-0.1**
IL31				IAmb	IAmb	10 52 41.4	
	comp=Z,5.6nm,0.7s						
ILAR	**Eielson Array**	**79.28**	**20**	P	**P**	**10 52 40.5**	**-0.2**
	comp=Z,3.8nm,0.6s,baz=309,slow=4.6,SNR=40						
ILAR				PP	**PP**	**10 55 37.4**	**-2.5**
	comp=Z,0.6nm,0.7s,baz=307,slow=7.2,SNR=4.5						
MCK	**McKinley**	**79.34**	**22**	P	**P**	**10 52 41.5**	**+0.4**
MCK				IAmb	IAmb	10 52 42.6	
	comp=Z,5.7nm,0.6s						
MCK	**McKinley**	**79.35**	**22**	P		10 52 41.6	
	baz=312						
STKA	**Stephens Creek**	**79.46**	**134**	P	**P**	**10 52 42.1**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=331,slow=4.3,SNR=5.8						
HDA	**Harding Lake**	**79.52**	**21**	P		10 52 41.5	
	baz=314						
HDA				P		10 52 41.5	
	baz=314						
RND	**Reindeer**	**79.59**	**22**	P	**P**	**10 52 42.8**	**+0.3**
RND				IAmb	IAmb	10 52 43.4	
	comp=Z,7.3nm,0.6s						
SKT	**Skwentna**	**79.62**	**24**	P	**P**	**10 52 43.2**	**+0.6**
SKT	**Skwentna**	**79.62**	**24**	P		10 52 43.1	
	baz=310,SNR=12						
CUT	**Chulitna**	**79.79**	**23**	P		10 52 43.3	
	baz=312						
SPCR	**Spurr Chakacha**	**79.88**	**25**	P		10 52 43.2	
	baz=310						
WAT2	**Susitna Watana**	**79.98**	**22**	P		10 52 44.4	
	baz=313						
INK	**Inuvik**	**80.06**	**14**	P	**P**	**10 52 45.8**	**+1.0**
INK	**Inuvik**	**80.06**	**14**	P		10 52 45.1	
	baz=325						
SUA	**Susitna One**	**80.24**	**24**	P	**P**	**10 52 47.0**	**+0.9**
SUA				IAmb	IAmb	10 52 47.6	
	comp=Z,11nm,0.6s						
SUA	**Susitna One**	**80.24**	**24**	P		10 52 46.7	
	baz=311						
WAT6	**Susitna Watana**	**80.53**	**22**	P		10 52 47.7	
	baz=314						
BOSA	**Boshof**	**80.58**	**231**	P	**P**	**10 52 49.0**	**+0.7**
	comp=Z,3.2nm,1.0s,baz=45,slow=8.3,SNR=2.1						
BOSA	**Boshof**	**80.58**	**231**	P	**P**	**10 52 48.6**	**+0.2**
BOSA				IAmb	IAmb	10 52 58.8	
	comp=Z,33nm,2.0s						
GHO	**Glory Hole Cre**	**80.68**	**23**	P	**P**	**10 52 49.5**	**+1.1**
GHO				IAmb	IAmb	10 53 03.4	
	comp=Z,6.8nm,0.8s						
PMR	**Palmer**	**80.73**	**23**	P	**P**	**10 52 49.4**	**+0.8**
PMR				IAmb	IAmb	10 52 50.0	
	comp=Z,9.7nm,0.7s						
PMR	**Palmer**	**80.73**	**23**	P		10 52 48.6	
	baz=312,SNR=5.7						
SCRK	**Sand Creek**	**80.74**	**20**	P	**P**	**10 52 49.1**	**+0.4**
SCRK				IAmb	IAmb	10 52 50.2	
	comp=Z,9.5nm,0.6s						
SCRK	**Sand Creek**	**80.74**	**20**	P		10 52 48.3	
	baz=316,SNR=16						
RC01	**Rabbit Creek A**	**80.86**	**24**	P		10 52 50.0	
	baz=312						
SML	**Sawmill**	**80.86**	**23**	P		10 52 50.0	
	baz=313,SNR=8.2						
EPYK	**Eagle Plains**	**80.90**	**16**	P	**P**	**10 52 49.9**	**+0.5**
EPYK				IAmb	IAmb	10 52 50.6	
	comp=Z,6.3nm,0.8s						
EPYK	**Eagle Plains**	**80.90**	**16**	P		10 52 49.7	
	baz=322						
C36M	**Paulatuk**	**80.92**	**10**	P	**P**	**10 52 49.6**	**+0.3**
C36M				IAmb	IAmb	10 52 50.4	
	comp=Z,9.5nm,1.1s						
C36M	**Paulatuk**	**80.92**	**10**	P		10 52 49.2	
	baz=333						
DOT	**Dot Lake**	**80.95**	**20**	P	**P**	**10 52 49.5**	**-0.3**
DOT				IAmb	IAmb	10 52 50.9	
	comp=Z,5.2nm,0.6s						
EGAK	**Eagle**	**80.97**	**19**	P	**P**	**10 52 49.7**	**-0.1**
PAX	**Paxson**	**81.00**	**21**	P	**P**	**10 52 49.2**	**-1.0**
PAX	**Paxson**	**81.00**	**21**	P		10 52 50.2	
	baz=315						
KNK	**Knik Glacier**	**81.09**	**23**	P		10 52 51.1	
	baz=313						
SCM	**Sheep Creek Mo**	**81.19**	**23**	P	**P**	**10 52 51.5**	**+0.4**
K27K	**Chicken**	**81.27**	**19**	P	**P**	**10 52 50.5**	**-0.9**
K27K				IAmb	IAmb	10 52 53.2	
	comp=Z,4.8nm,0.8s						
K27K	**Chicken**	**81.27**	**19**	P		10 52 52.4	
	baz=318						
BRLK	**Bradley Lake**	**81.31**	**25**	P	**P**	**10 52 51.8**	**0.0**
CNPM	**China Poot**	**81.34**	**26**	P	**P**	**10 52 52.2**	**+0.3**
M24K	**Tolsona, Glenn**	**81.39**	**22**	P	**P**	**10 52 53.1**	**+1.0**
M24K	**Tolsona, Glenn**	**81.39**	**22**	P		10 52 53.0	
	baz=315						
HARP	**HAARP**	**81.51**	**21**	P		10 52 53.9	
	baz=316						
MENT	**Mentasta**	**81.58**	**21**	P	**P**	**10 52 53.6**	**+0.5**
MENT				IAmb	IAmb	10 54 21.1	
	comp=Z,18nm,2.0s						
SEW	**Seward**	**81.62**	**25**	P		10 52 53.8	
	baz=312						
KLU	**Klutina**	**81.91**	**22**	P	**P**	**10 52 55.5**	**+0.5**
KLU				IAmb	IAmb	10 52 57.7	
	comp=Z,5.2nm,0.7s						
KLU	**Klutina**	**81.91**	**22**	P		10 52 56.0	
	baz=315,SNR=5.2						
GLI	**Glacier Island**	**81.94**	**23**	P	**P**	**10 52 55.6**	**+0.6**
GLI				IAmb	IAmb	10 52 56.5	
	comp=Z,6.7nm,0.7s						
GLI	**Glacier Island**	**81.94**	**23**	P		10 52 55.5	
	baz=314						
DAWY	**Dawson**	**82.01**	**18**	P	**P**	**10 52 55.9**	**+0.5**
DAWY				IAmb	IAmb	10 53 01.2	
	comp=Z,5.5nm,0.9s						
OHAK	**Harbor**	**82.01**	**28**	P		10 52 56.1	
	baz=310						
SII	**Sitkinak Islan**	**82.05**	**29**	P		10 52 56.7	
	baz=309						
L27K	**Beaver Creek,**	**82.07**	**20**	P	**P**	**10 52 57.1**	**+1.5**
L27K				IAmb	IAmb	10 52 58.1	
	comp=Z,6.0nm,1.0s						
L27K	**Beaver Creek,**	**82.07**	**20**	P		10 52 56.8	
	baz=318,SNR=7.9						
BCAR	**Beaver Creek A**	**82.08**	**20**	P	**P**	**10 52 56.7**	**+0.9**
N25K	**Chitina, Valde**	**82.27**	**22**	P	**P**	**10 52 58.2**	**+1.4**
N25K	**Chitina, Valde**	**82.27**	**22**	P		10 52 57.9	
	baz=316,SNR=9.0						
EYAK	**Cordova Ski Ar**	**82.64**	**23**	P	**P**	**10 52 59.7**	**+1.1**
EYAK				IAmb	IAmb	10 53 00.9	
	comp=Z,6.6nm,0.9s						
EYAK	**Cordova Ski Ar**	**82.64**	**23**	P		10 52 59.5	
	baz=315						
GLB	**Gilahina Butte**	**82.65**	**22**	P	**P**	**10 52 59.1**	**+0.3**
BMRM	**Bremner River**	**82.73**	**22**	P	**P**	**10 53 00.2**	**+1.0**
BMRM				IAmb	IAmb	10 53 01.2	
	comp=Z,7.8nm,0.8s						
BMRM	**Bremner River**	**82.73**	**22**	P		10 52 60.0	
	baz=316,SNR=5.5						
VRDI	**Verde Repeater**	**82.92**	**22**	P	**P**	**10 53 01.8**	**+1.4**
VRDI				IAmb	IAmb	10 53 02.5	
	comp=Z,12nm,1.2s						
MCARA	**McCarthy VSAT**	**82.94**	**21**	P	**P**	**10 53 01.8**	**+1.6**
MCARA	**McCarthy VSAT**	**82.95**	**21**	P		10 53 01.5	
	baz=318						
RAGM	**Ragged Mountai**	**83.13**	**23**	P	**P**	**10 53 03.0**	**+1.8**
CRQM	**Cirque**	**83.37**	**22**	P	**P**	**10 53 04.0**	**+1.3**
CRQE	**Cirque**	**83.39**	**22**	P		10 53 04.0	
	baz=318						
TGL	**Tana Glacier**	**83.47**	**22**	P	**P**	**10 53 04.7**	**+1.6**
KAIM	**Kayak Island**	**83.55**	**23**	P		10 53 04.6	
	baz=317						
BARN	**Barnard Glacie**	**83.63**	**21**	P	**P**	**10 53 05.8**	**+1.8**
CTG	**Chitna Glacier**	**83.80**	**21**	P		10 53 06.0	
	baz=319						
CTGM	**Chitina Glacie**	**83.80**	**21**	P	**P**	**10 53 06.1**	**+1.2**
CTGM				IAmb	IAmb	10 55 31.8	
	comp=Z,6.7nm,0.7s						
GRNC	**Granite Creek**	**83.84**	**21**	P	**P**	**10 53 06.8**	**+1.6**
YAH	**Yahtse**	**84.13**	**22**	P	**P**	**10 53 08.6**	**+2.0**
PCA	**Pinnacle**	**84.81**	**21**	P	**P**	**10 53 10.7**	**+0.8**
PINM	**Pinnacle**	**84.81**	**21**	P		10 53 10.9	
	baz=320						
HYT	**Haines Junctio**	**85.10**	**20**	P	**P**	**10 53 12.8**	**+1.4**
WHY	**Whitehorse**	**86.00**	**19**	P	**P**	**10 53 16.6**	**+0.7**
WHY				IAmb	IAmb	10 53 17.3	
	comp=Z,6.3nm,0.8s						
WHY	**Whitehorse**	**86.00**	**19**	P		10 53 16.6	
	baz=324						
SKAG	**Skagway**	**86.85**	**20**	P	**P**	**10 53 21.9**	**+2.0**
SKAG	**Skagway**	**86.85**	**20**	P		10 53 21.1	
	baz=324						
DBIC	**Dimbokro**	**87.58**	**276**	P	**P**	**10 53 24.4**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=18,slow=3.2,SNR=1.6						
YKA	**Yellowknife Ar**	**88.74**	**9**	P	**P**	**10 53 29.1**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=339,slow=4.5,SNR=22						
TXAR	**Lajitas Array**	**122.67**	**10**	PKP	**PKPdf**	**10 59 31.6**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=341,slow=1.9,SNR=4.0						
CPUP	**Villa Florida**	**147.24**	**264**	PKPbc	**PKPbc**	**11 00 19.1**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=67,slow=3.7,SNR=4.1						

IDC 25 10:47:29.1±4.3, 27°.54N×84°.62E, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.2/62, mbtmp3.5/3, Error ellipse: s-maj=125.6km s-min=36.8km az=78.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.31**	**355**	P	P	10 51 55.1	-0.5
	baz=179,slow=9.1,SNR=1.6						
SONM	**Songino Array**	**26.44**	**34**	P	P	10 53 08.2	+0.5
	1.1nm,0.7s,baz=222,slow=11,SNR=4.8						
WRA	**Warramunga Arr**	**67.41**	**129**	P	P	10 58 26.5	-0.2
	0.4nm,0.5s,baz=325,slow=6.6,SNR=1.5						

IDC 25 10:49:31.7±2.4, 27°.74N×85°.72E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.3/64, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=75.9km s-min=33.1km az=65.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.21**	**353**	P	Pn	10 53 58.2	+0.1
	0.2nm,0.3s,baz=176,slow=11,SNR=4.4						
SONM	**Songino Array**	**25.73**	**33**	P	P	10 55 03.7	-0.2
	0.4nm,0.6s,baz=227,slow=9.7,SNR=1.9						
ARCES	**ARCESS Array B**	**53.96**	**338**	P	P	10 58 56.4	-0.5
	3.0nm,0.9s,baz=102,slow=8.6,SNR=1.7						
WRA	**Warramunga Arr**	**66.78**	**130**	P	P	11 00 25.4	+0.1
	0.2nm,0.4s,baz=322,slow=6.5,SNR=1.5						

*IDC **25** 10:50:44.9±3.0, 28°.14N×85°.04E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.3/63, mbtmp3.6/6, ML3.8/1, MS4.1/1, Ms1 4.1/1, ms1mx3.3/48, Error ellipse: s-maj=57.6km s-min=54.5km az=28.0*

*NEIC **25** 10:50:45.9±0.6, 28°.15N±0°.10×84°.6E±0°.1, h10km±1km, mb4.2/7, Error ellipse: s-maj=22.3km s-min=6.9km az=223.0*

*DMN **25** 10:50:46.6±0.4, 28°.07N×84°.94E, h10km, Ml4.7/4, Error ellipse: s-maj=10.7km s-min=2.8km az=23.0*

ISC 25 10:50:45.2±1.6, 28°.16N±0°.08×84°.92E±0°.04, h6km±12km, n28, σ1°50/34, mb3.9/9, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.29**	**238**	*e*Pg	**Pg**	**10 50 51.5**	**+0.5**
GKN				*e*Sg	**Sg**	**10 50 55.5**	**+0.5**
KKN	**Kakani**	**0.49**	**139**	*e*Pg	**Pg**	**10 50 54.8**	**+0.1**
KKN				*e*Sg	**Sg**	**10 51 00.4**	**-0.7**
DMN	**Daman**	**0.57**	**163**	*e*Pg	**Pg**	**10 50 56.6**	**+0.3**
DMN				*e*Sg	**Sg**	**10 51 02.3**	**-1.6**
DANN	**Dangsing**	**1.04**	**281**	*e*Pg	**Pn**	**10 51 07.7**	**+1.2**
DANN				*e*Sg	**Sn**	**10 51 21.6**	**+0.1**
	2μm,0.3s						
KOLN	**Koldanda**	**1.23**	**252**	*e*Pg	**Pg**	**10 51 09.7**	**+0.9**
KOLN				*e*Sg	**Sb**	**10 51 25.0**	**-0.1**
	5μm,0.3s						
PYUN	**Piuthan**	**1.71**	**268**	*e*Pg	**Pb**	**10 51 18.0**	**+0.9**
PYUN				*e*Sg	**Sg**	**10 51 40.9**	**+0.9**
	1μm,0.3s						
RAMN	**Ramite**	**1.92**	**129**	*e*Pg	**Pb**	**10 51 20.4**	**-0.3**
RAMN				*e*Sg	**Sb**	**10 51 44.5**	**-0.5**
	331nm,0.3s						
SHL	**Shillong**	**6.74**	**111**	Pn	**Pn**	**10 52 27.8**	**+3.0**
NIL	**Nilore**	**11.41**	**302**	Pn	**Pn**	**10 53 24.6**	**-4.2**
KBL	**Kabul**	**14.97**	**299**	Pn	**Pn**	**10 54 14.8**	**-2.7**
BOOM	**Boomskoye usch**	**16.05**	**335**	Pn	**Pn**	**10 54 31.1**	**-0.5**
BOOM				IAmb	IAmb	10 54 36.3	
	comp=Z,1.8nm,1.2s						
MK31	**Makanchi Array**	**18.71**	**354**	P	**P**	**10 55 04.4**	**0.0**
MKAR	**Makanchi Array**	**18.71**	**354**	P	**Pn**	**10 55 06.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=176,slow=12,SNR=11						
MKAR	**Makanchi Array**	**18.71**	**354**	P	**P**	**10 55 04.4**	**0.0**
KURBB	**Kurchatov Arra**	**22.95**	**350**	P	**P**	**10 55 52.6**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=175,slow=9.8,SNR=4.9						
ZALV	**Zalesovo Beam**	**25.76**	**360**	P	**P**	**10 56 17.4**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=127,slow=9.2,SNR=2.0						
ZALV	**Zalesovo Beam**	**25.76**	**360**	P	**P**	**10 56 16.9**	**+0.5**
SONM	**Songino Array**	**25.77**	**35**	P	**P**	**10 56 16.0**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=238,slow=8.0,SNR=2.1						
ILGA	**Ilgaz**	**43.48**	**301**	P	**P**	**10 58 47.2**	**-2.3**
ILGA				IAmb	IAmb	10 58 53.7	
	comp=Z,11nm,0.8s						
DAV	**Davao City (W)**	**43.77**	**111**	LR	LR	11 19 26.7	
	comp=Z,243nm,20.4s,baz=84,slow=39						
FINES	**FINESS Array B**	**50.86**	**328**	P	**P**	**10 59 46.5**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=116,slow=8.7,SNR=4.7						
FINES	**FINESS Array B**	**50.86**	**328**	P	**P**	**10 59 45.8**	**-0.6**
ARCES	**ARCESS Array B**	**53.31**	**338**	P	**P**	**11 00 05.0**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=98,slow=8.1,SNR=5.8						
PDG	**Podgorica**	**54.20**	**304**	P	**P**	**11 00 10.3**	**-1.2**
GEC2	**GERESS Array S**	**57.30**	**312**	P	**P**	**11 00 32.8**	**-1.0**
GEC2				IAmb	IAmb	11 00 38.3	
	comp=Z,1.8nm,1.1s						
WB0	**Warramunga Arr**	**67.51**	**129**	P	**P**	**11 01 44.0**	**+1.6**
WB0				IAmb	IAmb	11 01 58.2	
	comp=Z,8.4nm,1.5s						
PRP	**Porcupine Dome**	**78.90**	**19**	P	**P**	**11 02 50.4**	**+1.1**
PRP				IAmb	IAmb	11 02 52.1	
	comp=Z,3.2nm,1.2s						
TXAR	**Lajitas Array**	**122.24**	**9**	PKP	**PKiKP**	**11 09 43.6**	**+1.8**
	comp=Z,0.2nm,0.8s,baz=51,slow=1.7,SNR=3.0						

IDC 25 10:50:59.1±3.8, 5°.47S×152°.69E, h0km, mb2.9/2, mb1 3.2/2, mb1mx3.0/48, mbtmp2.9/2, Error ellipse: s-maj=156.5km s-min=54.5km az=122.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.74**	**234**	Sn	Sn	10 53 59.1	+2.2
	1.9nm,0.3s,baz=338,slow=19,SNR=5.5						
WRA	**Warramunga Arr**	**22.93**	**230**	P	P	10 56 05.5	+0.5
	0.2nm,0.6s,baz=55,slow=10,SNR=1.5						
ASAR	**Alice Springs**	**25.59**	**223**	P	P	10 56 29.5	-0.7
	0.3nm,0.9s,baz=56,slow=9.0,SNR=1.9						
TORD	**Torodi Ar. Bea**	**150.41**	**287**	PKPbc	PKPbc	11 10 53.6	-0.1
	0.3nm,0.8s,baz=72,slow=2.3,SNR=1.7						

*IDC **25** 10:52:00.2±1.0, 27°.58N×85°.63E, h0km, mb3.9/11, mb1 3.9/13, mb1mx3.6/64, mbtmp3.8/13, ML3.8/2, Error ellipse: s-maj=35.2km s-min=16.6km az=61.0*

*NEIC **25** 10:52:00.5±1.3, 27°.51N±0°.04×85°.63E±0°.07, h10km±1km, mb4.0/15, Error ellipse: s-maj=10.5km s-min=7.6km az=256.0*

ISC 25 10:52:01.0±0.7, 27°.6N±0°.1×85°.65E±0°.09, h10km, n36, σ0°.94/36, mb4.0/15, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.28**	**65**	Pn	**Pn**	**10 53 19.9**	**-0.4**
SHL	**Shillong**	**5.93**	**108**	Pn	**Pn**	**10 53 28.7**	**-0.4**
NIL	**Nilore**	**12.27**	**303**		**Pn**	**10 54 54.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**15.22**	**124**	Pn	**Pn**	**10 55 37.8**	**+1.7**
	0.1nm,0.3s,baz=295,slow=15,SNR=1.5						
CMAR	**Chiang Mai Arr**	**15.22**	**124**		**Pn**	**10 55 34.9**	**-1.2**
MK31	**Makanchi Array**	**19.37**	**353**	P	**P**	**10 56 27.1**	**+0.3**
MKAR	**Makanchi Array**	**19.37**	**353**	P	**Pn**	**10 56 27.8**	**-0.1**
	0.4nm,0.3s,baz=172,slow=13,SNR=9.9						
MKAR	**Makanchi Array**	**19.37**	**353**	P	**P**	**10 56 26.7**	**-0.1**
MAKZ	**Makanchi**	**19.42**	**352**	P	**P**	**10 56 27.4**	**0.0**
MAKZ				IAmb	IAmb	10 56 33.1	
	comp=Z,3.7nm,1.2s						
KK31	**Karatay Array**	**19.77**	**326**	P	**P**	**10 56 30.5**	**-0.7**
KKAR	**Karatay Array**	**19.77**	**326**	P	**P**	**10 56 30.3**	**-0.9**
ENH	**Enshi**	**21.03**	**77**	P	**P**	**10 56 44.8**	**-0.2**
SRIT	**Nakonsritamara**	**23.03**	**142**	P	**P**	**10 57 05.5**	**-0.9**
KURBB	**Kurchatov Arra**	**23.65**	**349**	P	**P**	**10 57 13.3**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=174,slow=9.7,SNR=5.7						
KURK	**Kurchatov**	**23.72**	**349**	P	**P**	**10 57 13.3**	**+0.3**
SONM	**Songino Array**	**25.90**	**33**	P	**P**	**10 57 35.0**	**+1.7**
	comp=Z,2.6nm,0.7s,baz=218,slow=9.8,SNR=11						
SONM	**Songino Array**	**25.90**	**33**	P	**P**	**10 57 34.6**	**+1.3**
SONM				IAmb	IAmb	10 57 38.0	
	comp=Z,2.4nm,0.9s						
ULN	**Ulaanbaatar**	**26.24**	**34**	P	**P**	**10 57 36.7**	**+0.3**
ULN				IAmb	IAmb	10 57 41.1	
	comp=Z,4.2nm,0.6s						
ZAA0	**Zalesovo Array**	**26.36**	**359**	P	**P**	**10 57 37.5**	**+0.4**
ZAA0				IAmb	IAmb	10 57 38.8	
	comp=Z,2.2nm,0.9s						
ZALV	**Zalesovo Beam**	**26.36**	**359**	P	**P**	**10 57 37.4**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=181,slow=7.4,SNR=5.0						
ZALV	**Zalesovo Beam**	**26.36**	**359**	P	**P**	**10 57 36.7**	**-0.4**
BVAR	**Borovoye Array**	**27.84**	**340**	P	**P**	**10 57 50.4**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=189,slow=9.7,SNR=6.2						
KSAR	**Wonju Array Be**	**36.69**	**64**	P	**P**	**10 59 06.6**	**-1.5**
NRIK	**Noril'sk**	**41.81**	**1**	P	**P**	**10 59 50.3**	**-0.2**
	comp=Z,3.5nm,0.6s,baz=197,slow=3.7,SNR=4.2						
NRIK	**Noril'sk**	**41.81**	**1**	P	**P**	**10 59 51.1**	**+0.6**
NRIK				IAmb	IAmb	10 59 52.

*NEIC **25** 10:53:43.5±1.5,27.81N±0.08×85.88E±0.04,h10km±1km, mb4.6/70,Error ellipse: s-maj=13.0km s-min=6.5km az=171.0*
*DMN **25** 10:53:44.5±0.2,27.90N×85.92E,h10km,Ml5.2/5,Error ellipse: s-maj=5.2km s-min=1.6km az=14.0*
*NDI **25** 10:53:45.6±2.4,27.66N×85.83E,h10km,ML4.2, mb4.6(NEIC)*
ISC 25 10:53:44.1±1.1,**27.79N**±0.04×**85.87E**±0.02,**h13**km±7km, **n182**,σ1°**46**/193,**mb4.5**/66,**5C-1D**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIRN	**Jiri**	**0.32**	**114**	*e*Pg	**Pb**	**10 53 51.6**	**-0.2**
JIRN				*e*Sg	**Sb**	**10 53 56.1**	**-0.9**
	122nm,0.3s						
PKI	**Pulchoki**	**0.46**	**242**	*e*Pg	**Pb**	**10 53 55.3**	**+1.0**
PKI				*e*Sg	**Sb**	**10 54 02.5**	**+1.4**
	13μm,0.4s						
PKIN	**Phulchoki**	**0.47**	**243**	*e*Pg	**Pn**	**10 53 56.2**	**-0.5**
KKN	**Kakani**	**0.52**	**270**	*e*Pg	**Pn**	**10 53 56.4**	**-1.0**
KKN				*e*Sg	**Sb**	**10 54 03.8**	**+1.1**
	8μm,0.2s						
DMN	**Daman**	**0.70**	**255**	*e*Sg	**Sn**	**10 54 10.0**	**-0.6**
	7μm,0.4s						
ODAN	**Odare**	**1.64**	**124**	*e*Pg	**Pg**	**10 54 15.6**	**-0.1**
ODAN				*e*Sg	**Sg**	**10 54 36.7**	**-0.4**
	9μm,0.5s						
TAPN	**Taplejung**	**1.70**	**105**	*e*Pg	**Pg**	**10 54 16.6**	**-0.1**
TAPN				*e*Sg	**Sg**	**10 54 37.8**	**-1.0**
	6μm,0.5s						
DANN	**Dangsing**	**1.94**	**287**	*e*Pg	**Pg**	**10 54 20.9**	**-0.5**
DANN				*e*Sg	**Sg**	**10 54 47.0**	**+0.3**
	2μm,0.2s						
KOLN	**Koldanda**	**2.01**	**270**	*e*Pg	**Pg**	**10 54 22.6**	**-0.1**
KOLN				*e*Sg	**Sg**	**10 54 50.1**	**+1.4**
	4μm,0.2s						
GTK	**Tadong**	**2.48**	**100**	*e*S	**Sn**	**10 54 55.2**	**+0.8**
GTK				IAML		10 55 01.5	
	comp=N,2μm,0.6s						
GTK				IAML		10 55 03.0	
	comp=E,1μm,0.6s						
PYUN	**Piuthan**	**2.56**	**278**	*e*Pg	**Pg**	**10 54 32.9**	**-0.4**
PYUN				*e*Sg	**Sg**	**10 55 06.1**	**-0.4**
	comp=E,2μm,0.3s						
DHUB	**DHUBRI**	**4.09**	**115**	*e*S	**Sn**	**10 55 33.2**	**-0.7**
DHUB				IAML		10 55 51.2	
	comp=N,592nm,0.6s						
LSA	**Lhasa**	**5.02**	**66**	Pn	**Pn**	**10 54 56.8**	**-2.7**
GUWA	**GUWAHATI**	**5.44**	**106**	*e*P	**Pn**	**10 55 05.8**	**+0.9**
GUWA				*e*S	**Sn**	**10 56 07.8**	**+0.6**
SHL	**Shillong**	**5.82**	**111**	*e*P	**Pn**	**10 55 10.9**	**+0.6**
SHL				*e*S	**Sn**	**10 56 13.7**	**-3.3**
SHL	**Shillong**	**5.82**	**111**	Pn	**Pn**	**10 55 09.1**	**-1.2**
SHL					**Sn**	**10 56 16.4**	**-0.7**
TEZP	**TEZPUR**	**6.29**	**99**	*e*P	**Pn**	**10 55 17.5**	**+1.0**
TEZP				*e*S	**Sn**	**10 56 25.5**	**-2.7**
ZIRO	**ZIRO**	**7.09**	**90**	*e*S	**Sn**	**10 56 47.1**	**-1.1**
KOHI	**KOHIMA**	**7.65**	**104**	*e*S	**Sn**	**10 56 57.9**	**-4.1**
KOHI				IAML		10 57 10.3	
	comp=E,114nm,0.5s						
MOKO	**MOKOCHONG**	**7.85**	**99**	*e*P	**Pn**	**10 55 38.5**	**+0.4**
MOKO				*e*S	**Sn**	**10 57 03.9**	**-3.0**
MOKO				IAML		10 57 10.6	
	comp=E,126nm,0.4s						
MOKO				IAML		10 57 10.9	
	comp=N,175nm,0.7s						
SMLA	**Simla**	**8.28**	**296**	*e*S	**Sn**	**10 57 13.8**	**-3.5**
SMLA				IAML		10 57 19.2	
	comp=E,405nm,0.6s						
SMLA				IAML		10 57 19.4	
	comp=N,254nm,0.4s						
BHPL	**Bhopal**	**8.87**	**241**	*e*S	**Sn**	**10 57 24.8**	**-7.0**
BHPL				IAML		10 57 30.4	
	comp=N,146nm,0.3s						
DHRM	**DHARAMSHALA**	**9.40**	**301**	*e*P	**Pn**	**10 55 59.9**	**+0.4**
DHRM				*e*S	**Sn**	**10 57 40.7**	**-4.6**
DHRM				IAML		10 57 44.3	
	comp=N,181nm,0.8s						
DHRM				IAML		10 57 48.3	
	comp=E,181nm,0.5s						
NIL	**Nilore**	**12.32**	**301**	Pn	**Pn**	**10 56 38.2**	**-1.1**
HYB	**Hyderabad**	**12.33**	**215**	*i* P	**Pn**	**10 56 36.0**	**-3.5**
KSH	**Kashi**	**14.29**	**327**	P	**Pn**	**10 57 04.5**	**-1.8**
KSH				pP	P	10 57 09.0	-4.5
KSH				pmax	pmax		
	comp=E,6.0nm,0.3s						
CM33	**Chiang Mai Arr**	**14.96**	**124**	P	P	10 57 31.0	+10
CMMT	**Chiang Mai**	**14.97**	**124**	P	P	10 57 30.6	+10
CM34	**Chiang Mai Arr**	**15.09**	**123**	P	**P**	**10 57 24.0**	**+1.7**
CM13	**Chiang Mai Arr**	**15.19**	**125**	P	**P**	**10 57 25.2**	**+1.8**
CM31	**Chiang Mai Arr**	**15.19**	**125**	Pn	**Pn**	**10 57 19.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**15.19**	**125**	Pn	**Pn**	**10 57 18.8**	**+0.5**
	comp=E,0.2nm,0.3s,baz=306,slow=12,SNR=1.7						
CM35	**Chiang Mai Arr**	**15.20**	**124**	P	**P**	**10 57 30.0**	**+6.4**
CM02	**Chiang Mai Arr**	**15.21**	**125**	P	**P**	**10 57 25.4**	**+1.9**
CM05	**Chiang Mai Arr**	**15.22**	**125**	P	**P**	**10 57 25.6**	**+1.8**
CM04	**Chiang Mai Arr**	**15.25**	**125**	P	**P**	**10 57 26.5**	**+2.4**
CM36	**Chiang Mai Arr**	**15.26**	**124**	P	**P**	**10 57 31.0**	**+6.8**
KBL	**Kabul**	**15.88**	**299**	Pn	**Pn**	**10 57 27.0**	**-0.6**
KDJ	**Kajisay**	**15.96**	**336**		**Pn**	**10 57 26.6**	**-2.0**
WMQ	**Urumqi**	**16.07**	**5**	*e*P	**Pn**	**10 57 29.0**	**-0.7**
WMQ				pmax	pmax		
	comp=E,14nm,0.9s						
WMQ				pmax	pmax		
	comp=E,46nm,4.3s						
WMQ				LR	LR		
	comp=E,410nm,14.9s						
WMQ				LR	LR		
	comp=E,280nm,12.9s						
WMQ				LR	LR		
	comp=E,1μm,27.7s						
SUKH	**Sukhothai**	**16.32**	**126**	P	P	10 57 44.5	+8.6
GTA	**Gaotai**	**16.39**	**41**	⇓P	**P**	**10 57 37.0**	**+0.2**
GTA				pP	sP	10 57 41.8	-1.1
GTA				sP	pP	10 57 44.3	+2.9
GTA				pmax	pmax		
	comp=E,15nm,0.9s						
DRK	**Karamyk**	**16.50**	**319**	Pn	**Pn**	**10 57 32.7**	**-2.9**
BOOM	**Boomskoye usch**	**16.74**	**334**	Pn	**Pn**	**10 57 37.2**	**-1.2**
LZH	**Lanzhou**	**17.34**	**57**	⇑P	**P**	**10 57 47.8**	**+0.4**
LZH				pP	pP	10 57 50.3	-1.6
LZH				sP	sP	10 57 53.0	-0.5
LZH				pmax	pmax		
	comp=E,21nm,1.0s						
AAK	**Ala-Archa**	**17.46**	**331**	P	**P**	**10 57 49.3**	**+0.6**
	comp=E,0.4nm,0.3s,baz=171,slow=7.5,SNR=4.4						
AAK	**Ala-Archa**	**17.46**	**331**	Pn	**Pn**	**10 57 46.4**	**-1.0**
GYA	**Guiyang**	**18.56**	**89**	⇑P	**Pn**	**10 58 02.3**	**+1.2**
GYA				pmax	pmax		
	comp=E,3.0nm,0.7s						
MK31	**Makanchi Array**	**19.18**	**353**	P	**P**	**10 58 07.5**	**+0.2**
MKAR	**Makanchi Array**	**19.18**	**353**	P	**Pn**	**10 58 08.3**	**+0.1**
	comp=E,1.7nm,0.3s,baz=177,slow=11,SNR=29						
MAKZ	**Makanchi**	**19.23**	**352**	P	**P**	**10 58 08.1**	**+0.2**
MAKZ				IAmb	IAmb	10 58 09.9	
	comp=E,7.9nm,0.5s						
KK31	**Karatay Array**	**19.70**	**325**	P	**P**	**10 58 11.0**	**-2.1**
KKAR	**Karatay Array**	**19.70**	**325**	P	**P**	**10 58 12.1**	**-1.0**
KKAR	**Karatay Array**	**19.70**	**325**	P	**P**	**10 58 12.2**	**-0.8**
XAN	**Xi'an**	**20.72**	**67**	P	**P**	**10 58 22.5**	**-1.8**
ENH	**Enshi**	**20.80**	**78**	P	**P**	**10 58 22.3**	**-2.9**
ENH				IAmb	IAmb	10 58 43.8	
	comp=E,12nm,0.5s						
PALK	**Pallekele**	**20.98**	**194**	P	Pn	10 58 34.0	+4.2
	comp=E,2.6nm,0.4s,baz=19,slow=13,SNR=4.7						
KURBB	**Kurchatov Arra**	**23.48**	**348**	P	**P**	**10 58 54.5**	**+1.3**
	comp=E,2.7nm,0.5s,baz=165,slow=9.3,SNR=23						
KURK	**Kurchatov**	**23.55**	**348**	P	**P**	**10 58 54.5**	**+0.5**
HHC	**Hu-ho-hao-te**	**24.80**	**52**	*e*P	**P**	**10 59 06.0**	**+0.1**
HHC				pmax	pmax		
	comp=E,13nm,0.8s						
WSAR	**Wadi Sarin**	**24.97**	**266**	P	**P**	**10 59 09.5**	**+2.0**
	comp=E,5.3nm,0.8s,baz=95,slow=9.3,SNR=2.3						
GEYT	**Alibeck**	**25.32**	**301**	P	**P**	**10 59 13.2**	**+2.6**
	comp=E,1.9nm,0.5s,baz=108,slow=12,SNR=2.5						
GYA0B	**ALIBECK ARRAY**	**25.32**	**301**	P	**P**	**10 59 09.5**	**-1.1**
GYA0B				IAmb	IAmb	10 59 27.5	
	comp=E,5.1nm,0.7s						
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**10 59 14.4**	**+1.1**
	comp=E,12nm,0.7s,baz=219,slow=9.8,SNR=34						
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**10 59 14.1**	**+0.9**
SONM				IAmb	IAmb	10 59 17.5	
	comp=E,8.9nm,0.7s						
ULN	**Ulaanbaatar**	**25.96**	**34**	P	**P**	**10 59 16.4**	**0.0**
ULN				IAmb	IAmb	10 59 20.1	
	comp=E,14nm,0.6s						
ZAA0	**Zalesovo Array**	**26.14**	**359**	P	**P**	**10 59 17.8**	**0.0**
ZAA0				IAmb	IAmb	10 59 21.6	
	comp=E,6.1nm,0.6s						
ZALV	**Zalesovo Beam**	**26.14**	**359**	P	**P**	**10 59 18.4**	**+0.7**
	comp=E,5.3nm,0.4s,baz=184,slow=8.8,SNR=20						
ZALV	**Zalesovo Beam**	**26.14**	**359**	P	**P**	**10 59 18.2**	**+0.4**
BVAR	**Borovoye Array**	**27.70**	**340**	P	**P**	**10 59 31.4**	**-0.5**
	comp=E,0.6nm,0.5s,baz=176,slow=8.5,SNR=3.6						
ABKAR	**Akbulak array**	**29.26**	**324**	P	**P**	**10 59 44.4**	**-1.4**
ABKAR				IAmb	IAmb	10 59 47.8	
	comp=E,7.4nm,0.5s						
AKTO	**Aktyubinsk**	**30.96**	**325**	P	**P**	**11 00 01.6**	**+0.8**
	comp=E,2.9nm,0.5s,baz=102,slow=9.3,SNR=6.5						
ARU	**Arti**	**34.62**	**333**	P	**P**	**11 00 33.4**	**+0.8**
	comp=E,1.7nm,0.2s,baz=130,slow=6.3,SNR=5.4						
INCN	**Inchon**	**35.43**	**64**	P	**P**	**11 00 39.6**	**-0.4**
INCN				IAmb	IAmb	11 01 08.5	
	comp=E,6.4nm,0.6s						
KSRS	**Korea Array**	**36.46**	**64**	P	**P**	**11 00 47.6**	**-1.1**
	comp=E,2.0nm,0.5s,baz=265,slow=8.5,SNR=14						
RAYN	**Ar Rayn**	**36.52**	**273**	P	**P**	**11 00 48.8**	**-0.7**
DGAR	**Diego Garcia**	**37.32**	**202**	P	**P**	**11 00 55.1**	**-1.1**
KBZ	**Khabaz**	**37.87**	**306**	P	**P**	**11 01 01.7**	**+1.1**
	comp=E,1.5nm,0.6s,baz=112,slow=8.4,SNR=4.5						
MYLDM	**Lahad Datu**	**38.31**	**120**	P	**P**	**11 01 04.3**	**-0.3**
MYLDM				IAmb	IAmb	11 01 08.5	
	comp=E,16nm,1.2s						
JNU	**Nakatsue**	**38.94**	**71**	P	**P**	**11 01 11.6**	**+1.7**
	comp=E,12nm,1.0s,baz=328,slow=9.5,SNR=3.6						
JNU	**Nakatsue**	**38.94**	**71**	P	**P**	**11 01 11.0**	**+1.2**
KIRV	**Kirov**	**39.79**	**331**	P	**P**	**11 01 18.1**	**+1.5**
	comp=E,9.7nm,0.5s,baz=121,slow=5.9,SNR=5.6						
USA0B	**Ussuriysk Arra**	**40.19**	**53**	P	**P**	**11 01 19.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**40.19**	**53**	P	**P**	**11 01 20.1**	**-0.1**
	comp=E,1.3nm,0.5s,baz=260,slow=8.4,SNR=8.6						
KLR	**Kul'dur**	**41.02**	**46**	P	**P**	**11 01 26.6**	**-0.2**
	comp=E,1.3nm,0.6s,baz=276,slow=6.6,SNR=6.2						
NRIK	**Noril'sk**	**41.59**	**1**	P	**P**	**11 01 32.5**	**+1.2**
	comp=E,19nm,0.5s,baz=181,slow=6.1,SNR=26						
NRIK	**Noril'sk**	**41.59**	**1**	P	**P**	**11 01 29.4**	**-1.9**
MMAI	**Mount Meron Ar**	**43.50**	**290**	P	**P**	**11 01 50.0**	**+2.6**
	comp=E,0.5nm,0.4s,baz=95,slow=4.6,SNR=2.1						
ELL	**Elmali**	**47.57**	**296**	P	**P**	**11 02 19.0**	**-0.7**
ASAJ	**Asahikawa**	**47.80**	**54**	P	**P**	**11 02 20.8**	**-0.4**
	comp=E,2.9nm,0.6s,baz=317,slow=5.2,SNR=6.3						
AKASG	**Malin Array Be**	**48.11**	**314**	P	**P**	**11 02 23.3**	**-0.1**
	comp=E,1.1nm,0.4s,baz=79,slow=6.9,SNR=7.8						
AKBB	**Malin Array Si**	**48.11**	**314**	P	**P**	**11 02 23.1**	**-0.3**
AKBB				IAmb	IAmb	11 02 24.0	
	comp=E,3.4nm,0.8s						
ERM	**Erimo**	**48.24**	**57**	P	**P**	**11 02 24.7**	**+0.2**
TIRR	**Tirgusor**	**48.31**	**306**	P	**P**	**11 02 25.0**	**-0.1**
VRI	**Vrincioaia**	**49.51**	**308**	⇑P	**P**	**11 02 36.5**	**+2.2**
PLOR	**Plostina**	**49.56**	**308**	⇑P	**P**	**11 02 36.4**	**+1.7**
TIXI	**Tiksi**	**49.82**	**16**	P	**P**	**11 02 35.8**	**-0.5**
TIXI				IAmb	IAmb	11 02 37.4	
	comp=E,6.8nm,0.5s						
MLR	**Muntele Rosu**	**50.06**	**307**	⇑P	**P**	**11 02 40.6**	**+1.9**
MLR	**Muntele Rosu**	**50.06**	**307**	P	**P**	**11 02 39.7**	**+1.1**
MLR				IAmb	IAmb	11 02 41.3	
	comp=E,8.1nm,0.7s						
IIGN	**Ignalina**	**50.47**	**320**	*e*P	**P**	**11 02 42.1**	**+0.6**
BURAR	**Bucovina Array**	**50.55**	**310**	P	**P**	**11 02 42.5**	**+0.1**
FIA1	**FINESS Array S**	**51.61**	**328**	P	**P**	**11 02 50.1**	**+0.2**
FIA1				IAmb	IAmb	11 03 04.8	
	comp=E,20nm,1.5s						
FINES	**FINESS Array B**	**51.61**	**328**	P	**P**	**11 02 50.5**	**+0.5**
	comp=E,4.6nm,0.5s,baz=106,slow=8.1,SNR=40						
FINES	**FINESS Array B**	**51.61**	**328**	P	**P**	**11 02 50.3**	**+0.3**
PABE	**Paberze**	**51.77**	**320**	*e*P	**P**	**11 02 51.8**	**+0.6**
PABE	**Paberze**	**51.77**	**320**	P	**P**	**11 02 51.4**	**+0.3**
MTSE	**Matsula**	**52.24**	**324**	*e*P	**P**	**11 02 52.8**	**-1.9**
ARA0	**ARCESS Array S**	**53.97**	**338**	*e*P	**P**	**11 03 08.2**	**+0.9**
ARCES	**ARCESS Array B**	**53.97**	**338**	P	**P**	**11 03 08.2**	**+1.0**
	comp=E,6.7nm,0.5s,baz=102,slow=7.7,SNR=46						
ARCES				PcP	**PcP**	**11 04 12.6**	**+0.3**
	comp=E,3.6nm,1.0s,baz=72,slow=4.0,SNR=1.6						
KTK1	**Kautokeino**	**54.59**	**337**	*e*P	**P**	**11 03 12.3**	**+0.6**
HAMF	**Hammerfest**	**54.89**	**339**	*e*P	**P**	**11 03 14.9**	**+1.0**
UPP	**Uppsala**	**55.52**	**325**	*e*P	**P**	**11 03 18.7**	**+0.2**
MORC	**Moravsky Berou**	**55.58**	**313**	P	**P**	**11 03 17.6**	**-1.7**
MORC				IAmb	IAmb	11 03 21.2	
	comp=E,3.0nm,1.0s						
JETT	**Jettan, Norway**	**55.70**	**337**	*e*P	**P**	**11 03 20.6**	**+0.8**
TRO	**Tromso**	**56.22**	**337**	*e*P	**P**	**11 03 23.8**	**+0.3**
HOPEN	**Hopen**	**56.49**	**346**	*e*P	**P**	**11 03 25.8**	**+0.5**
STEI	**Steigen**	**57.28**	**335**	*e*P	**P**	**11 03 31.5**	**+0.5**
MOR8	**Moi Rana**	**57.42**	**333**	*e*P	**P**	**11 03 31.5**	**-0.6**
PETK	**Petropavlovsk-**	**57.55**	**43**	P	**P**	**11 03 34.1**	**+0.9**
	comp=E,6.8nm,1.1s,baz=293,slow=9.4,SNR=1.6						
PETK	**Petropavlovsk-**	**57.55**	**43**	P	**P**	**11 03 30.9**	**-2.3**
LOF	**Lofoten**	**57.94**	**335**	*e*P	**P**	**11 03 35.5**	**-0.2**
KONS	**Konsvik**	**57.98**	**333**	*e*P	**P**	**11 03 36.2**	**+0.3**
STOK	**Stokkvaagen**	**58.01**	**333**	*e*P	**P**	**11 03 36.3**	**+0.2**
GERES	**GERESS Array B**	**58.17**	**312**	P	**P**	**11 03 38.1**	**+0.3**
	comp=E,0.5nm,0.3s,baz=79,slow=6.9,SNR=7.1						
GERES	**GERESS Array B**	**58.17**	**312**	P	**P**	**11 03 37.5**	**-0.3**
NSS	**Namsos**	**58.37**	**331**	*e*P	**P**	**11 03 38.6**	**-0.1**
NC602	**NORSAR Array S**	**58.56**	**326**	*e*P	**P**	**11 03 40.3**	**+0.2**
NB2	**NORSAR Subarra**	**58.72**	**327**	P	**P**	**11 03 40.7**	**-0.6**
	baz=88,slow=6.9						
NOA	**NORSAR Array B**	**58.72**	**327**	P	**P**	**11 03 41.2**	**-0.1**
	comp=E,1.3nm,0.4s,baz=80,slow=5.1,SNR=14						
NAO01	**NORSAR Array S**	**58.88**	**326**	P	**P**	**11 03 42.0**	**-0.4**
NAO01	**NORSAR Array S**	**58.88**	**326**	*e*P	**P**	**11 03 42.2**	**-0.2**
NC204	**NORSAR Array S**	**58.93**	**327**	P	**P**	**11 03 42.5**	**-0.3**
OSL	**Oslo**	**59.00**	**325**	*e*P	**P**	**11 03 43.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**59.71**	**135**	P	**P**	**11 03 48.5**	**-0.1**
	comp=E,16nm,1.4s,baz=39,slow=6.5,SNR=2.3						
DOMB	**Dombas**	**59.71**	**328**	*e*P	**P**	**11 03 48.2**	**+0.1**
MURB	**Monte Urbino**	**59.85**	**306**	P	**P**	**11 03 49.0**	**-0.4**
MURB				IAmb	IAmb	11 03 51.6	
	comp=E,8.5nm,0.8s						
KNRA	**Kununurra**	**59.96**	**131**	P	**P**	**11 03 50.1**	**-0.3**
KNRA				IAmb	IAmb	11 04 07.3	
	comp=E,11nm,1.2s						
SKAR	**Skarslia**	**60.16**	**326**	*e*P	**P**	**11 03 51.4**	**+0.2**
MOL	**Molde**	**60.39**	**329**	*e*P	**P**	**11 03 52.6**	**-0.1**
MSSA	**Maissana**	**61.77**	**308**	P	**P**	**11 04 02.2**	**-0.3**
MSSA				IAmb	IAmb	11 04 11.3	
	comp=E,8.8nm,1.0s						
MORW	**Morawa**	**63.49**	**151**	P	**P**	**11 04 13.9**	**0.0**
BNI	**Bardonecchia**	**63.58**	**309**	P	**P**	**11 04 14.7**	**0.0**
BNI				IAmb	IAmb	11 04 29.4	
	comp=E,4.1nm,1.0s						
KEST	**Kesra**	**64.04**	**298**	P	**P**	**11 04 18.9**	**+1.1**
	comp=E,6.2nm,0.8s,baz=31,slow=5.9,SNR=7.0						
KEST	**Kesra**	**64.04**	**298**	P	**P**	**11 04 18.6**	**+0.8**
WB0	**Warramunga Arr**	**66.63**	**130**	P	**P**	**11 04 34.9**	**+0.3**
WRA	**Warramunga Arr**	**66.72**	**130**	P	**P**	**11 04 35.5**	**+0.3**
	comp=E,5.1nm,0.6s,baz=323,slow=6.6,SNR=42						
WB2	**Warramunga Arr**	**66.72**	**130**	P	**P**	**11 04 35.7**	**+0.5**
WR0	**Warramunga Arr**	**66.86**	**130**	P	**P**	**11 04 36.3**	**+0.3**
AS31	**Alice Springs**	**69.02**	**133**	P	**P**	**11 04 50.1**	**+0.4**
ASAR	**Alice Springs**	**69.02**	**133**	P	**P**	**11 04 50.0**	**+0.3**
	comp=E,1.7nm,0.6s,baz=315,slow=6.2,SNR=19						
ASAR	**Alice Springs**	**69.02**	**133**	P	**P**	**11 04 50.2**	**+0.6**
EUNU	**Eureka**	**72.30**	**359**	P	**P**	**11 05 09.7**	**+0.8**
EUNU				IAmb	IAmb	11 05 12.9	
	comp=E,2.3nm,1.1s						
ESDC	**Sonseca Array**	**72.72**	**306**	P	**P**	**11 05 11.8**	**-0.3**
	comp=E,1.2nm,0.8s,baz=63,slow=6.5,SNR=7.6						
ESDC	**Sonseca Array**	**72.72**	**306**	P	**P**	**11 05 11.8**	**-0.3**
SUMG	**Summit**	**73.04**	**345**	P	**P**	**11 05 13.8**	**0.0**
SUMG				IAmb	IAmb	11 05 20.1	
	comp=E,2.9nm,0.8s						
TULEG	**Thule**	**74.74**	**354**	P	**P**	**11 05 23.0**	**-0.1**
TULEG				IAmb	IAmb	11 05 23.2	
	comp=E,4.6nm,1.0s						
TOLK	**Toolik Lake Re**	**75.67**	**18**	P	**P**	**11 05 29.5**	**+0.7**
TOLK				IAmb	IAmb	11 05 30.0	
	comp=E,2.9nm,0.7s						
BBOO	**Buckleboo**	**76.85**	**138**	P	**P**	**11 05 35.8**	**0.0**
MLY	**Manley**	**77.70**	**21**	P	**P**	**11 05 40.1**	**-0.2**
MLY				IAmb	IAmb	11 05 41.6	
	comp=E,1.9nm,0.8s						
I23K	**Minto, Yukon-K**	**78.07**	**21**	P	**P**	**11 05 43.2**	**+1.1**
BPAW	**Bear Paw Mtn.**	**78.23**	**22**	P	**P**	**11 05 44.4**	**+1.2**
BPAW				IAmb	IAmb	11 05 45.2	
	comp=E,3.0nm,0.9s						
NEA2	**Nenana**	**78.53**	**21**	P	**P**	**11 05 46.0**	**+1.1**
NEA2				IAmb	IAmb	11 05 46.3	
	comp=E,4.1nm,0.9s						
MDM	**Murphy Dome**	**78.55**	**21**	P	**P**	**11 05 44.5**	**-0.4**
MDM				IAmb	IAmb	11 05 46.5	
	comp=E,6.5nm,1.4s						
PPLA	**Purkeypile**	**78.61**	**23**	P	**P**	**11 05 46.4**	**+0.9**
PPLA				IAmb	IAmb	11 05 52.3	
	comp=E,9.4nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.90**	**279**	P	**P**	**11 05 47.5**	**-0.2**
	comp=E,0.5nm,0.7s,baz=51,slow=5.4,SNR=2.8						
ILAR	**Eielson Array**	**79.09**	**20**	P	**P**	**11 05 48.1**	**+0.2**
	comp=E,1.0nm,0.7s,baz=300,slow=4.2,SNR=10						
ILAR				PP	**PP**	**11 08 46.6**	**+0.1**
	comp=E,0.3nm,0.7s,baz=310,slow=7.2,SNR=4.5						
ILAR	**Eielson Array**	**79.09**	**20**	P	**P**	**11 05 47.5**	**-0.4**
SKT	**Skwentna**	**79.43**	**24**	P	**P**	**11 05 50.1**	**+0.3**
SKT				IAmb	IAmb	11 05 51.0	
	comp=E,7.7nm,1.0s						
INK	**Inuvik**	**79.86**	**14**	P	**P**	**11 05 52.1**	**+0.2**
	comp=E,0.7nm,0.7s,baz=326,slow=4.9,SNR=7.6						
PMR	**Palmer**	**80.55**	**23**	P	**P**	**11 05 56.1**	**+0.3**
PMR				IAmb	IAmb	11 06 18.0	
	comp=E,9.2nm,1.3s						
SCRK	**Sand Creek**	**80.55**	**20**	P	**P**	**11 05 56.6**	**+0.7**
SCRK				IAmb	IAmb	11 05 56.8	
	comp=E,3.2nm,0.8s						
BOSA	**Boshof**	**80.72**	**231**	P	**P**	**11 05 57.3**	**0.0**
	comp=E,0.9nm,0.6s,baz=352,slow=6.8,SNR=1.5						
BOSA	**Boshof**	**80.72**	**231**	IAmb	IAmb	11 06 17.3	
	comp=E,5.6nm,1.2s						
C36M	**Paulatuk**	**80.72**	**10**	P	**P**	**11 05 56.6**	**+0.1**
C36M				IAmb	IAmb	11 06 02.8	
	comp=E,6.2nm,1.4s						
EGAK	**Eagle**	**80.78**	**19**	P	**P**	**11 05 57.9**	**+0.9**
EGAK				IAmb	IAmb	11 06 20.9	
	comp=E,2.8nm,1.1s						
BRLK	**Bradley Lake**	**81.13**	**25**	P	**P**	**11 05 59.5**	**+0.5**
PWL	**Port Wells**	**81.33**	**24**	P	**P**	**11 06 00.7**	**+0.7**
PWL				IAmb	IAmb	11 06 02.2	
	comp=E,6.8nm,1.1s						
GLI	**Glacier Island**	**81.75**	**23**	P	**P**	**11 06 02.9**	**+0.7**
GLI				IAmb	IAmb	11 06 21.6	
	comp=E,1.4nm,1.4s						
DAWY	**Dawson**	**81.82**	**18**	P	**P**	**11 06 03.1**	**+0.5**
MCARA	**McCarthy VSAT**	**82.76**	**21**	P	**P**	**11 06 09.2**	**+1.7**
MCARA				IAmb	IAmb	11 06 09.7	
	comp=E,5.9nm,0.7s						
YKA	**Yellowknife Ar**	**88.55**	**9**	P	**P**	**11 06 36.0**	**-0.2**
	comp=E,0.3nm,0.5s,baz=344,slow=4.2,SNR=11						
TXAR	**Lajitas Array**	**122.47**	**10**	PKP	**PKPdf**	**11 12 39.5**	**-0.3**
	comp=E,0.2nm,0.5s,baz=48,slow=1.5,SNR=7.6						

*IDC **25** 11:00:57.0±13.0,**28.46N**×**85.92E**,**h0**km,**mb3.6**/1,* **mb1 3.5**/3,**mb1mx3.1**/57,**mbtmp3.4**/3,**ML3.5**/2,**Error ellipse: s-maj=410.6km s-min=43.2km az=58.0**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.54**	**127**	Pn	Pn	11 04 37.7	+0.1
	0.1nm,0.3s,baz=307,slow=10,SNR=1.4						
MKAR	**Makanchi Array**	**18.52**	**352**	P	P	11 05 14.8	-0.1
	0.1nm,0.3s,baz=170,slow=

BHPL	**Bhopal**	**8.68 239**	*eP*	**Pn**	**11 07 07.2**	**+0.3**
BHPL			*eS*	Sn	11 08 34.6	-10
BHPL			IAML		11 08 38.8	
	comp=N,71nm,0.4s					
BHPL			IAML		11 08 39.6	
	comp=E,101nm,0.3s					
DHRM	**DHARAMSHALA**	**9.09 301**	*eP*	**Pn**	**11 07 12.2**	**-0.6**
DHRM			*eS*	**Sn**	**11 08 47.8**	**-7.5**
DHRM			IAML		11 08 58.8	
	comp=N,56nm,0.5s					
NIL	**Nilore**	**12.01 301**		**Pn**	**11 07 50.9**	**-1.7**
CHTO	**Chiang Mai**	**15.27 124**		**Pn**	**11 08 38.8**	**+1.8**
CHTO			IAmb	IAmb	11 08 43.0	
	comp=Z,4.1nm,0.8s					
CMMT	**Chiang Mai**	**15.28 124**	P	**P**	**11 08 41.7**	**-0.3**
	comp=Z,0.0nmcomp=Z,2.8nm,0.9s					
CM32	**Chiang Mai Arr**	**15.30 124**	P	**P**	**11 08 43.0**	**+0.7**
CM15	**Chiang Mai Arr**	**15.49 125**	P	**P**	**11 08 46.8**	**+2.5**
	comp=Z,0.0nmcomp=Z,6.0nm,0.8s					
CM13	**Chiang Mai Arr**	**15.49 125**	P	**P**	**11 08 46.0**	**+1.6**
	comp=Z,0.0nmcomp=Z,4.8nm,0.9s					
CM31	**Chiang Mai Arr**	**15.50 125**	Pn	**Pn**	**11 08 40.2**	**+0.2**
CM31			IAmb	IAmb	11 08 46.8	
	comp=Z,4.9nm,0.8s					
CMAR	**Chiang Mai Arr**	**15.50 125**	Pn	**Pn**	**11 08 38.8**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=313,slow=10,SNR=1.9					
CMAR	**Chiang Mai Arr**	**15.50 125**		**Pn**	**11 08 40.2**	**+0.1**
CM02	**Chiang Mai Arr**	**15.51 125**	P	**P**	**11 08 45.0**	**+0.4**
	comp=Z,0.0nmcomp=Z,59nmcomp=Z,7.4nm,0.9s					
CM01	**Chiang Mai Arr**	**15.53 125**	P	**P**	**11 08 46.0**	**+1.2**
	comp=Z,0.0nmcomp=Z,5.5nm,0.8s					
CM05	**Chiang Mai Arr**	**15.53 125**	P	**P**	**11 08 46.0**	**+1.1**
	comp=Z,0.0nmcomp=Z,4.7nm,0.8s					
CM09	**Chiang Mai Arr**	**15.54 124**	P	**P**	**11 08 46.1**	**+1.2**
	comp=Z,0.0nmcomp=Z,53nmcomp=Z,6.6nm,0.8s					
CM04	**Chiang Mai Arr**	**15.56 125**	P	**P**	**11 08 47.1**	**+2.0**
	comp=Z,0.0nmcomp=Z,5.7nm,1.0s					
CM36	**Chiang Mai Arr**	**15.57 124**	P	**P**	**11 08 46.0**	**+0.7**
KBL	**Kabul**	**15.57 299**	Pn	**Pn**	**11 08 39.2**	**-1.9**
KBL			IAmb	IAmb	11 08 48.3	
	comp=Z,10nm,0.6s					
KMI	**Kunming**	**15.65 96**	Pn	**Pn**	**11 08 39.6**	**-2.5**
KMI			IAmb	IAmb	11 08 42.7	
	comp=Z,11nm,0.4s					
KDJ	**Kajisay**	**15.74 337**		**Pn**	**11 08 42.8**	**-0.3**
DRK	**Karamyk**	**16.22 319**	Pn	**Pn**	**11 08 49.0**	**-0.5**
DRK			IAmb	IAmb	11 08 53.7	
	comp=Z,18nm,0.4s					
BOOM	**Boomskoye usch**	**16.50 334**	Pn	**Pn**	**11 08 50.9**	**-2.1**
AAK	**Ala-Archa**	**17.21 331**	P	**P**	**11 09 04.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=140,slow=8.1,SNR=5.6					
AAK	**Ala-Archa**	**17.21 331**	P	**Pn**	**11 09 01.7**	**-0.3**
LOEI	**Loei**	**17.81 122**	P	**Pn**	**11 09 05.1**	**-4.2**
	comp=Z,0.1nmcomp=Z,1µmcomp=Z,13nm,0.9s					
MK31	**Makanchi Array**	**19.02 353**	P	**P**	**11 09 23.0**	**-0.2**
MKAR	**Makanchi Array**	**19.02 353**	P	**Pn**	**11 09 25.2**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=176,slow=11,SNR=36					
KK31	**Karatay Array**	**19.43 325**	P	**P**	**11 09 27.2**	**-0.5**
KKAR	**Karatay Array**	**19.43 325**	P	**P**	**11 09 27.2**	**-0.5**
KKAR	**Karatay Array**	**19.43 325**	P	**P**	**11 09 27.1**	**-0.7**
XAN	**Xi'an**	**20.94 67**	P	**P**	**11 09 44.1**	**-0.2**
XAN			IAmb	IAmb	11 09 54.9	
	comp=Z,3.3nm,0.7s					
ENH	**Enshi**	**21.05 78**	P	**P**	**11 09 44.9**	**-0.7**
ENH			IAmb	IAmb	11 09 54.1	
	comp=Z,8.7nm,0.5s					
KURBB	**Kurchatov Arra**	**23.30 349**	P	**P**	**11 10 10.4**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=169,slow=10,SNR=9.0					
KURK	**Kurchatov**	**23.37 349**	P	**P**	**11 10 10.4**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**25.01 301**	P	**P**	**11 10 25.3**	**-0.1**
GYA0B			IAmb	IAmb	11 10 41.4	
	comp=Z,5.8nm,1.1s					
LHMI	**Lhok Sumawe**	**25.03 152**	P	**P**	**11 10 24.9**	**-0.8**
SONM	**Songino Array**	**25.67 34**	P	**P**	**11 10 33.8**	**+2.4**
	comp=Z,2.1nm,0.5s,baz=218,slow=10,SNR=16					
ZAA0	**Zalesovo Array**	**26.02 359**	P	**P**	**11 10 35.3**	**+1.0**
ZAA0			IAmb	IAmb	11 10 46.7	
	comp=Z,2.4nm,0.6s					
ZALV	**Zalesovo Beam**	**26.02 359**	P	**P**	**11 10 35.9**	**+1.7**
	comp=Z,0.8nm,0.4s,baz=169,slow=8.1,SNR=4.2					
ZALV	**Zalesovo Beam**	**26.02 359**	P	**P**	**11 10 33.5**	**-0.7**
ULN	**Ulaanbaatar**	**26.02 34**	P	**P**	**11 10 34.2**	**-0.4**
ULN			IAmb	IAmb	11 10 39.6	
	comp=Z,3.4nm,0.7s					
UOSS	**Minazif**	**26.41 270**	P	**P**	**11 10 36.9**	**-1.2**
UOSS			IAmb	IAmb	11 10 42.5	
	comp=Z,9.6nm,1.2s					
BVAR	**Borovoye Array**	**27.49 340**	P	**P**	**11 10 49.1**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=143,slow=10,SNR=3.1					
IPM	**Ipoh**	**27.58 145**	P	**P**	**11 10 47.6**	**-1.1**
IPM			IAmb	IAmb	11 11 04.4	
	comp=Z,10nm,1.4s					
ABKAR	**Akbulak array**	**28.99 324**	P	**P**	**11 11 01.7**	**+0.7**
ABKAR			IAmb	IAmb	11 11 03.6	
	comp=Z,2.2nm,0.6s					
ARU	**Arti**	**34.38 333**	P	**P**	**11 11 49.4**	**+1.2**
	comp=Z,1.7nm,0.2s,baz=281,slow=9.0,SNR=1.2					
ARU	**Arti**	**34.38 333**	P	**P**	**11 11 49.5**	**+1.2**
GNI	**Garni**	**35.65 301**	P	**P**	**11 12 01.2**	**+1.5**
	comp=Z,7.7nm,0.4s,baz=21,slow=17,SNR=4.7					
GNI	**Garni**	**35.65 301**	P	**P**	**11 12 00.9**	**+1.2**
DGAR	**Diego Garcia**	**37.33 202**	P	**P**	**11 12 13.9**	**+0.1**
KLR	**Kul'dur**	**41.14 46**	P	**P**	**11 12 46.1**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=297,slow=9.0,SNR=4.5					
TIXI	**Tiksi**	**49.79 17**	P	**P**	**11 13 54.5**	**+0.8**
TIXI			IAmb	IAmb	11 13 55.3	
	comp=Z,1.5nm,0.5s					
FINES	**FINESS Array B**	**51.36 328**	P	**P**	**11 14 06.1**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=100,slow=7.9,SNR=8.4					
FINES	**FINESS Array B**	**51.36 328**	P	**P**	**11 14 06.4**	**+0.7**
ARCES	**ARCESS Array B**	**53.74 338**	P	**P**	**11 14 24.6**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=102,slow=7.8,SNR=13					
NOA	**NORSAR Array B**	**58.45 327**	P	**P**	**11 14 57.8**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=86,slow=7.2,SNR=3.2					
FITZ	**Fitzroy Crossi**	**60.00 135**	P	**P**	**11 15 08.6**	**+0.4**
KNRA	**Kununurra**	**60.26 131**	P	**P**	**11 15 10.5**	**+0.4**
KEST	**Kesra**	**63.73 298**	P	**P**	**11 15 33.9**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=323,slow=21,SNR=2.3					
WB0	**Warramunga Arr**	**66.93 130**	P	**P**	**11 15 54.7**	**+0.6**
WRA	**Warramunga Arr**	**67.02 130**	P	**P**	**11 15 55.3**	**+0.6**
	comp=Z,3.0nm,0.6s,baz=323,slow=6.6,SNR=29					
WRA	**Warramunga Arr**	**67.02 130**	P	**P**	**11 15 55.0**	**+0.3**
WB2	**Warramunga Arr**	**67.03 130**	P	**P**	**11 15 55.3**	**+0.6**
WB2			IAmb	IAmb	11 16 06.3	
	comp=Z,2.8nm,0.7s					
WR0	**Warramunga Arr**	**67.17 130**	P	**P**	**11 15 56.2**	**+0.6**
ESDC	**Sonseca Array**	**72.42 306**	P	**P**	**11 16 29.2**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=57,slow=6.1,SNR=7.8					
ESDC	**Sonseca Array**	**72.42 306**	P	**P**	**11 16 28.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**78.60 279**	P	**P**	**11 17 02.9**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=51,slow=4.5,SNR=4.9					
ILAR	**Eielson Array**	**79.08 20**	P	**P**	**11 17 06.1**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=313,slow=3.6,SNR=1.9					
YKA	**Yellowknife Ar**	**88.47 9**	P	**P**	**11 17 52.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=342,slow=5.3,SNR=4.0					

TAP ***25*** *11:05:44.9,23.96N×122.54E,h41km,ML3.3,D*
JMA ***25*** *11:05:44.1±0.1,23.88N×122.53E,h27km±3km,M2.5*

ISC 25 11:05:41.9±1.1,23.93N±0.02×122.56E±0.02,h11km±9km,
n99,σ0.91/194,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.63**	**34**	P			**Pn**	**11 05 57.1**	**+0.4**
JYNG				S			**Sn**	**11 06 06.2**	**-0.5**
YOJ	**Yonaguni jima**	**0.67**	**38**	P			**Pn**	**11 05 57.8**	**+0.5**
YOJ				*eS*			**Sn**	**11 06 07.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.67**	**38**	*i* P			**Pn**	**11 05 57.3**	**0.0**
	baz=40								
YOJ				S			**Sn**	**11 06 07.8**	**+0.1**
	baz=40								
HWA	**Hwalien**	**0.88**	**273**	*e*P			**Pb**	**11 05 59.6**	**+0.5**
	baz=261								
HWA				*e*S			**Sn**	**11 06 12.4**	**-0.4**
	baz=261								
EWUT	**Wuta**	**0.88**	**306**	P			**Pn**	**11 06 01.0**	**+0.8**
	baz=304								
EWUT				S			**Sn**	**11 06 12.5**	**-0.4**
	baz=304								
TWD	**Chiawan**	**0.90**	**280**	*e*P			**Pn**	**11 06 00.4**	**0.0**
	baz=277								
TWD				S			**Sb**	**11 06 11.8**	**+0.4**
	baz=277								
NACB	**Ninganchiao**	**0.92**	**286**	*e*P			**Pn**	**11 06 00.5**	**-0.2**
	baz=272								
NACB				S			**Sb**	**11 06 12.2**	**+0.2**
	baz=272								
TWC	**Suao**	**0.94**	**316**	P			**Pn**	**11 06 01.4**	**+0.4**
	baz=307								
TWC				S			**Sn**	**11 06 13.1**	**-1.2**
	baz=307								
ETLH	**Xiulin Townshi**	**1.02**	**286**	*e*P			**Pn**	**11 06 02.5**	**+0.3**
	baz=275								
ETLH				*e*S			**Sn**	**11 06 16.1**	**-0.6**
	baz=275								
ESL	**Shilin**	**1.04**	**264**	P			**Pb**	**11 06 02.1**	**+0.2**
	baz=261								
ESL				S			**Sb**	**11 06 14.8**	**-0.7**
	baz=261								
NDS	**Dongshan**	**1.04**	**312**	P			**Pn**	**11 06 03.1**	**+0.6**
	baz=311								
NDS				S			**Sn**	**11 06 17.1**	**+0.1**
	baz=311								
EGFH	**Guangfu**	**1.07**	**256**	*e*P			**Pn**	**11 06 02.9**	**+0.1**
	baz=244								
EGFH				*e*S			**Sb**	**11 06 16.2**	**-0.2**
	baz=244								
ILA	**Ilan**	**1.11**	**318**	*e*P			**Pg**	**11 06 05.2**	**+1.8**
	baz=309								
ILA				*e*S			**Sn**	**11 06 19.7**	**+0.9**
	baz=309								
HGSD	**Ruisui**	**1.13**	**248**	P			**Pn**	**11 06 03.7**	**+0.1**
	baz=245								
HGSD				*e*S			**Sb**	**11 06 17.7**	**-0.4**
	baz=245								
TWE	**Neicheng**	**1.14**	**314**	P			**Pg**	**11 06 04.7**	**+1.0**
	baz=314								
TWE				*e*S			**Sn**	**11 06 19.3**	**+0.1**
	baz=314								
NTC	**Toucheng**	**1.14**	**324**	P			**Pg**	**11 06 04.9**	**+1.2**
	baz=324								
NTC				S			**Sn**	**11 06 19.7**	**+0.5**
	baz=324								
IRIF	**Iriomote-Funau**	**1.14**	**69**	P			**Pg**	**11 06 05.1**	**+1.3**
IRIF				*e*S			**Sn**	**11 06 21.0**	**+1.6**
HATJ	**Hateruma jima**	**1.14**	**83**	P			**Pg**	**11 06 05.4**	**+1.5**
HATJ				*e*S			**Sn**	**11 06 20.8**	**+1.4**
ENTT	**Nioudou**	**1.15**	**308**	P			**Pg**	**11 06 04.9**	**+0.9**
	baz=295								
ENTT				S			**Sn**	**11 06 19.4**	**-0.2**
	baz=295								
NDT	**Datong Townshi**	**1.17**	**305**	*e*P			**Pg**	**11 06 04.8**	**+0.4**
	baz=304								
NDT				S			**Sn**	**11 06 19.7**	**-0.4**
	baz=304								
NNSB	**Datong**	**1.19**	**295**	P			**Pg**	**11 06 05.3**	**+0.6**
	baz=284								
NNSB				S			**Sg**	**11 06 20.1**	**-0.1**
	baz=284								
TWB1	**Santiao Chiao**	**1.20**	**334**	*e*P			**Pg**	**11 06 04.2**	**-0.6**
	baz=347								
TWB1				*e*S			**Sn**	**11 06 20.1**	**-0.6**
	baz=347								
NNS	**Nan Shan**	**1.20**	**295**	*e*P			**Pg**	**11 06 05.5**	**+0.5**
	baz=284								
NNS				*e*S			**Sb**	**11 06 20.1**	**-0.2**
	baz=284								
WHF	**Hehuan Shan**	**1.21**	**281**	P			**Pg**	**11 06 05.4**	**+0.3**
	baz=278								
WHF				*e*S			**Sb**	**11 06 20.3**	**-0.4**
	baz=278								
TIPB	**Shuangxi**	**1.24**	**327**	P			**Pg**	**11 06 06.1**	**+0.4**
	baz=327								
TIPB				*e*S			**Sg**	**11 06 21.2**	**-0.6**
	baz=327								
FUSS	**Fushou**	**1.25**	**285**	P			**Pg**	**11 06 06.1**	**+0.2**
	baz=282								
FUSS				S			**Sb**	**11 06 21.4**	**-0.2**
	baz=282								
OWD	**Renai**	**1.27**	**271**	*e*P			**Pg**	**11 06 06.5**	**+0.2**
	baz=269								
OWD				*e*S			**Sb**	**11 06 21.8**	**-0.4**
	baz=269								
CHGB	**Renai**	**1.28**	**276**	P			**Pg**	**11 06 06.5**	**+0.1**
	baz=273								
CHGB				*e*S			**Sb**	**11 06 21.5**	**-1.0**
	baz=273								
YULB	**Yu-li**	**1.28**	**246**	P			**Pn**	**11 06 06.1**	**+0.4**
	baz=234								
YULB				S			**Sb**	**11 06 21.8**	**-0.6**
	baz=234								
EYUL	**Yuli**	**1.28**	**243**	P			**Pn**	**11 06 06.2**	**+0.6**
	baz=240								
EYUL				*e*S			**Sb**	**11 06 21.8**	**-0.6**
	baz=240								
NWLT	**Wulai**	**1.28**	**311**	*e*P			**Pg**	**11 06 06.8**	**+0.2**
	baz=311								
NWLT				S			**Sn**	**11 06 22.1**	**-0.8**
	baz=311								
TWF1	**Yuli**	**1.29**	**244**	P			**Pn**	**11 06 06.4**	**+0.6**
	baz=241								
TWF1				S			**Sb**	**11 06 22.8**	**0.0**
	baz=241								
YHNB	**Yeheng**	**1.31**	**304**	P			**Pg**	**11 06 07.0**	**-0.1**
	baz=303								
YHNB				*e*S			**Sn**	**11 06 23.2**	**-0.5**
	baz=303								
VWDT	**VWDT**	**1.31**	**263**	P			**Pb**	**11 06 07.1**	**+0.6**
	baz=260								
VWDT				S			**Sb**	**11 06 22.9**	**-0.5**
	baz=260								
TDCB	**Techi**	**1.32**	**284**	*e*P			**Pg**	**11 06 07.2**	**-0.2**
	baz=273								
TDCB				*e*S			**Sb**	**11 06 23.2**	**-0.6**
	baz=273								
WFSB	**Wu-fen Shan**	**1.34**	**328**	*e*P			**Pg**	**11 06 07.6**	**-0.1**
	baz=328								
WFSB				*e*S			**Sg**	**11 06 24.3**	**-0.8**
	baz=328								
JKRS	**Kuro-shima**	**1.36**	**77**	P			**Pg**	**11 06 08.6**	**+0.6**
JKRS				*e*S			**Sg**	**11 06 26.2**	**+0.6**
FULB	**Fuli**	**1.37**	**238**	*e*P			**Pn**	**11 06 06.9**	**-0.1**
	baz=227								
FULB				*e*S			**Sn**	**11 06 23.8**	**-1.3**
	baz=227								
CHKT	**Chengkung**	**1.37**	**233**	*e*P			**Pn**	**11 06 07.4**	**+0.4**
	baz=222								
CHKT				*e*S			**Sn**	**11 06 22.3**	**-2.8**
	baz=222								
NHDH	**Xindian Distri**	**1.40**	**318**	*e*P			**Pg**	**11 06 08.2**	**-0.5**
	baz=331								
NHDH				*e*S			**Sg**	**11 06 25.4**	**-1.5**
	baz=331								
TNOU	**National Taiwa**	**1.41**	**330**	*e*P			**Pb**	**11 06 07.7**	**-0.6**
	baz=329								
TNOU				*e*S			**Sg**	**11 06 25.8**	**-1.5**
	baz=329								
TATO	**Taipei**	**1.43**	**317**	*e*P			**Pg**	**11 06 09.4**	**0.0**
	baz=331								
TATO				*e*S			**Sb**	**11 06 25.8**	**-0.9**
	baz=331								
WPL	**Puli Township**	**1.47**	**274**	*e*P			**Pb**	**11 06 09.3**	**+0.1**
	baz=271								
WPL				*e*S			**Sn**	**11 06 27.2**	**-0.3**
	baz=271								
SSLB	**Suanglung**	**1.48**	**265**	P			**Pb**	**11 06 09.3**	**-0.1**
	baz=262								
SSLB				*e*S			**Sn**	**11 06 26.7**	**-1.1**
	baz=262								
EDH	**Donghe**	**1.50**	**231**	*e*P			**Pn**	**11 06 09.5**	**+0.8**
	baz=221								
EDH				*e*S			**Sn**	**11 06 25.6**	**-2.6**
	baz=221								
DPDB	**Guoxing**	**1.50**	**274**	*e*P			**Pb**	**11 06 09.8**	**0.0**
	baz=272								
DPDB				*e*S			**Sn**	**11 06 28.2**	**-0.1**
	baz=272								
JIJ	**Ishigaki jima**	**1.51**	**73**	P			**Pg**	**11 06 10.0**	**-0.8**
JIJ				*e*S			**Sg**	**11 06 28.4**	**-2.0**
WCS	**Beigang Elemen**	**1.52**	**275**	*e*P			**Pb**	**11 06 10.4**	**+0.4**
	baz=273								
WCS				*e*S			**Sn**	**11 06 28.9**	**+0.3**
	baz=273								
WHP	**Taichung City**	**1.52**	**284**	*e*P			**Pb**	**11 06 10.2**	**+0.1**
	baz=281								
WHP				*e*S			**Sn**	**11 06 28.6**	**-0.2**
	baz=281								
SMLT	**Sun Moon Lake**	**1.52**	**269**	*e*P			**Pb**	**11 06 10.2**	**0.0**
	baz=266								
SMLT				*e*S			**Sn**	**11 06 28.8**	**-0.2**
	baz=266								
YUS	**Yu-Shan**	**1.54**	**254**	*e*P			**Pb**	**11 06 10.7**	**0.0**
	baz=251								
YUS				*e*S			**Sn**	**11 06 29.0**	**-0.9**
	baz=251								
TYC	**Yuchr**	**1.56**	**269**	*e*P			**Pb**	**11 06 10.7**	**0.0**
	baz=267								
TYC				*e*S			**Sn**	**11 06 29.4**	**-0.3**
	baz=267								
LIOB	**Emei**	**1.58**	**297**	*e*P			**Pg**	**11 06 12.1**	**-0.1**
	baz=295								
LIOB				*e*S			**Sb**	**11 06 31.3**	**+0.2**
	baz=295								
WHYT	**Xinyi Township**	**1.58**	**262**	*e*P			**Pb**	**11 06 11.0**	**-0.1**
	baz=250								
WHYT				*e*S			**Sn**	**11 06 30.2**	**-0.2**
	baz=250								
NSTT	**Nanjuang**	**1.59**	**296**	*e*P			**Pb**	**11 06 11.2**	**0.0**
	baz=295								
NSTT				*e*S			**Sn**	**11 06 30.0**	**-0.4**
	baz=295								
ELDTW	**Lidau**	**1.60**	**243**	P			**Pn**	**11 06 10.7**	**+0.5**
	baz=240								
ELDTW				S			**Sn**	**11 06 28.9**	**-1.9**
	baz=240								
LDUT	**Ludao**	**1.60**	**219**	*e*P			**Pn**	**11 06 10.3**	**+0.2**
	baz=216								
LDUT				*e*S			**Sn**	**11 06 28.9**	**-1.9**
	baz=216								
ALS	**Alishan**	**1.66**	**256**	P			**Pb**	**11 06 12.9**	**+0.2**
	baz=253								
ALS				S			**Sn**	**11 06 32.8**	**+0.1**
	baz=253								
LONT	**Longtian**	**1.66**	**233**	*e*P			**Pn**	**11 06 11.6**	**+0.6**
	baz=224								
LONT				*e*S			**Sn**	**11 06 31.5**	**-0.8**
	baz=224								
WJS	**Zhushan**	**1.68**	**267**	*e*P			**Pb**	**11 06 13.5**	**+0.7**
	baz=264								
WJS				*e*S			**Sb**	**11 06 34.8**	**+0.8**
	baz=264								
TWQ1	**Liyutan**	**1.69**	**285**	*e*P			**Pb**	**11 06 12.6**	**-0.4**
	baz=282								
TWQ1				*e*S			**Sb**	**11 06 34.6**	**+0.5**
	baz=282								
WNT	**Mingjian**	**1.72**	**269**	*e*P			**Pb**	**11 06 13.7**	**+0.2**
	baz=266								
WNT				*e*S			**Sb**	**11 06 35.5**	**+0.4**
	baz=266								
JISG	**Ishigakijimahi**	**1.73**	**67**	P			**Pb**	**11 06 12.9**	**-0.7**
JISG				*e*S			**Sb**	**11 06 33.6**	**-1.6**
TCU	**Taichung**	**1.74**	**278**	*e*S			**Sb**	**11 06 35.5**	**-0.1**
	baz=275								
TWGBT	**Beinan**	**1.75**	**231**	*e*P			**Pn**	**11 06 12.3**	**+0.1**
	baz=240								
TWGBT				*e*S			**Sn**	**11 06 33.6**	**-1.0**
	baz=240								
CHN5	**Tsauling**	**1.76**	**260**	*e*P			**Pb**	**11 06 14.7**	**+0.5**
	baz=249								
CHN5				*e*S			**Sb**	**11 06 36.2**	**-0.1**
	baz=249								
TWG	**Pinlang**	**1.76**	**231**	*e*P			**Pn**	**11 06 12.9**	**+0.6**
	baz=240								
TWG				*e*S			**Sn**	**11 06 33.4**	**-1.3**
	baz=240								
STYH	**Taoyuan**	**1.81**	**246**	*e*P			**Pn**	**11 06 14.3**	**+1.4**
	baz=237								
STYH				*e*S			**Sn**	**11 06 35.9**	**+0.1**
	baz=237								
STYT	**Tauyuan**	**1.82**	**246**	*e*P			**Pn**	**11 06 14.7**	**+1.4**
	baz=237								
STYT				*e*S			**Sn**	**11 06 36.3**	**0.0**
	baz=237								
WDLH	**Douliu**	**1.87**	**263**	*e*P			**Pb**	**11 06 15.9**	**-0.1**
	baz=260								
WDLH				*e*S			**Sb**	**11 06 39.1**	**-0.3**
	baz=260								
TPUB	**Ta-pu**	**1.88**	**251**	*e*P			**Pb**	**11 06 16.2**	**0.0**
	baz=239								
TPUB				*e*S			**Sb**	**11 06 39.5**	**-0.2**
	baz=239								
CHN4	**Tsaushan**	**1.90**	**253**	*e*P			**Pb**	**11 06 16.6**	**+0.1**
	baz=250								
CHN4				*e*S			**Sn**	**11 06 39.7**	**+1.7**
	baz=250								
ECL	**Taimali**	**1.99**	**228**	*e*P			**Pn**	**11 06 15.8**	**+0.4**
	baz=236								
ECL				*e*S			**Sn**	**11 06 38.8**	**-1.4**
	baz=236								
SLGT	**Liugui**	**1.99**	**242**	*e*P			**Pb**	**11 06 18.2**	**+0.1**
	baz=233								
SLGT				*e*S			**Sn**	**11 06 42.0**	**+1.6**
	baz=233								
WRL	**Guolierlin Hig**	**2.00**	**270**	*e*P			**Pb**	**11 06 18.0**	**-0.3**
	baz=279								
WRL				*e*S			**Sb**	**11 06 42.6**	**-0.5**
	baz=279								
SGST	**Jiashian**	**2.00**	**245**	*e*P			**Pb**	**11 06 18.3**	**0.0**
	baz=236								
SGST				*e*S			**Sn**	**11 06 42.8**	**+2.1**
	baz=236								
WTK	**Tuku**	**2.00**	**264**	*e*P			**Pb**	**11 06 19.1**	**+0.8**
	baz=261								
WTK				*e*S			**Sb**	**11 06 43.3**	**0.0**
	baz=261								
CHY	**Chiayi**	**2.01**	**258**	*e*P			**Pb**	**11 06 17.3**	**-1.1**
	baz=255								
CHY				*e*S			**Sb**	**11 06 42.9**	**-0.4**
	baz=255								
CHN1	**Nanshi**	**2.01**	**249**	*e*P			**Pb**	**11 06 18.4**	**0.0**
	baz=246								
CHN1				*e*S			**Sn**	**11 06 42.6**	**+1.8**
	baz=246								
WTCT	**Ta-ch'eng**	**2.09**	**269**	*e*P			**Pb**	**11 06 19.0**	**-0.8**
	baz=279								
WTCT				*e*S			**Sb**	**11 06 44.9**	**-0.8**
	baz

VWUC				*eS*		**Sn**	**11 07 05.4**	**-0.5**
	baz=288							
PTMZ	**Houxiangcun**	**3.33**	**290**	*eP*		**Pn**	**11 06 34.8**	**+1.0**
	baz=287							
PTMZ				*eS*		**Sn**	**11 07 12.0**	**-1.3**
	baz=287							
XPSS	**Dashiqiu**	**3.68**	**325**	*eP*		**Pn**	**11 06 40.4**	**+1.7**
	baz=324							
KNMB	**Chin-men Tao**	**3.85**	**279**	*eP*		**Pn**	**11 06 42.5**	**+1.5**
	baz=276							
KNMB				*eS*		**Sn**	**11 07 25.0**	**-1.2**
	baz=276							
AXDP	**Jialang**	**4.30**	**284**	*eP*		**Pn**	**11 06 48.6**	**+1.5**
	baz=272							
AXDP				*eS*		**Sn**	**11 07 36.2**	**-1.1**
	baz=272							

*IDC **25** 11:08:45.6±2.1, 16°.97S×179°.11W, h554km±18km, mb3.1/6, mb1 3.3/8, mb1mx3.0/41, mbtmp4.0/8, Error ellipse: s-maj=83.4km s-min=20.5km az=148.0*

ISC 25 11:08:45.1±1.5, 16°.9S±0°.5×179°.1W±0°.3, h550km, n11, σ0§46/11, mb3.8/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.84**	**252**	P	**P**	**11 10 00.1**	**+0.8**
	1.4nm,0.3s,baz=213,slow=21,SNR=8.0						
AFI	**Afiamalu**	**7.66**	**68**	P	P	11 10 33.0	-6.7
	2.3nm,0.3s,baz=34,slow=22,SNR=3.2						
DZM	**Mont Dzumac**	**14.56**	**247**	P	**P**	**11 11 49.8**	**-0.5**
	0.1nm,0.3s,baz=99,slow=23,SNR=1.1						
CTA	**Charters Tower**	**32.97**	**259**	P	**P**	**11 14 35.5**	**+0.4**
	2.0nm,0.8s,baz=101,slow=12,SNR=3.7						
STKA	**Stephens Creek**	**38.55**	**240**	P	**P**	**11 15 21.0**	**-0.1**
	3.8nm,0.5s,baz=76,slow=2.5,SNR=5.4						
WRA	**Warramunga Arr**	**44.17**	**259**	P	**P**	**11 16 05.5**	**-0.3**
	0.9nm,0.3s,baz=94,slow=8.3,SNR=15						
ASAR	**Alice Springs**	**44.44**	**253**	P	**P**	**11 16 07.8**	**0.0**
	16nm,0.6s,baz=88,slow=8.1,SNR=258						
ASAR				PcP	**PcP**	**11 17 39.0**	**-0.5**
	0.5nm,0.6s,baz=112,slow=4.3,SNR=3.9						
ILAR	**Eielson Array**	**85.05**	**13**	P	**P**	**11 20 22.5**	**0.0**
	0.2nm,0.7s,baz=219,slow=5.6,SNR=1.9						
TXAR	**Lajitas Array**	**86.02**	**58**	P	**P**	**11 20 28.2**	**+0.2**
	0.1nm,0.6s,baz=207,slow=3.7,SNR=1.6						
GERES	**GERESS Array B**	**146.46**	**345**	PKPbc	**PKPbc**	**11 27 24.9**	**-0.1**
	0.3nm,0.5s,baz=57,slow=3.6,SNR=3.9						
DAVOX	**Davos/Dischmat**	**149.28**	**348**	PKPbc	**PKiKP**	**11 27 32.7**	**-0.5**
	2.7nm,0.5s,baz=253,slow=4.0,SNR=6.7						

IDC 25 11:10:20.1±2.6, 27°.75N×85°.97E, h0km, mb3.3/4, mb1 3.4/5, mb1mx3.2/59, mbtmp3.3/5, ML3.4/1, Error ellipse: s-maj=93.8km s-min=25.5km az=71.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.23**	**352**	P	P	11 14 45.2	-0.5
	0.1nm,0.3s,baz=183,slow=10,SNR=4.1						
KURBB	**Kurchatov Arra**	**23.53**	**348**	P	P	11 15 32.0	+0.2
	0.3nm,0.5s,baz=160,slow=10,SNR=2.9						
SONM	**Songino Array**	**25.59**	**33**	P	P	11 15 51.3	+0.3
	0.3nm,0.5s,baz=224,slow=10,SNR=1.8						
WRA	**Warramunga Arr**	**66.62**	**130**	P	P	11 21 13.0	+0.4
	0.2nm,0.5s,baz=324,slow=6.8,SNR=4.7						
ASAR	**Alice Springs**	**68.93**	**133**	P	P	11 21 26.6	-0.6
	0.5nm,1.0s,baz=322,slow=5.9,SNR=2.7						

*IDC **25** 11:15:16.6±1.6, 27°.55N×86°.13E, h0km, mb3.5/7, mb1 3.7/9, mb1mx3.4/64, mbtmp3.6/9, ML4.0/2, MS4.0/1, Ms1 4.0/1, ms1mx3.2/34, Error ellipse: s-maj=59.6km s-min=19.9km az=64.0*

*NEIC **25** 11:15:18.0±1.6, 27°.60N±0°.05×86°.05E±0°.06, h10km±1km, mb4.0/17, Error ellipse: s-maj=9.7km s-min=6.2km az=131.0*

ISC 25 11:15:18.8±0.8, 27°.5N±0°.1×86°.1E±0°.1, h19km, n27, σ1§01/26, mb3.7/13, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIL	**Nilore**	**12.62**	**302**	Pn	**Pn**	**11 18 16.0**	**-1.4**
CMAR	**Chiang Mai Arr**	**14.88**	**125**	Pn	**Pn**	**11 18 47.8**	**-0.4**
	0.4nm,0.3s,baz=302,slow=13,SNR=1.6						
SLVN	**Son La**	**17.36**	**107**	P	**Pn**	**11 19 18.0**	**-2.2**
SLVN				IAmb	IAmb	11 19 46.4	
	comp=Z,7.8nm,1.5s						
MK31	**Makanchi Array**	**19.48**	**352**	P	**P**	**11 19 43.7**	**-0.8**
MKAR	**Makanchi Array**	**19.48**	**352**	P	**P**	**11 19 45.0**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=169,slow=12,SNR=6.5						
MAKZ	**Makanchi**	**19.53**	**352**	P	**P**	**11 19 45.4**	**+0.3**
MAKZ				IAmb	IAmb	11 20 12.2	
	comp=Z,2.3nm,1.1s						
KK31	**Karatay Array**	**20.03**	**325**	P	**P**	**11 19 51.2**	**+0.6**
KKAR	**Karatay Array**	**20.03**	**325**	P	**P**	**11 19 51.3**	**+0.7**
KURBB	**Kurchatov Arra**	**23.79**	**348**	P	**P**	**11 20 30.8**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=165,slow=9.8,SNR=4.9						
SONM	**Songino Array**	**25.75**	**33**	P	**P**	**11 20 49.4**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=217,slow=10,SNR=4.1						
ZAA0	**Zalesovo Array**	**26.43**	**358**	P	**P**	**11 20 52.8**	**-1.4**
ZAA0				IAmb	IAmb	11 21 20.9	
	comp=Z,1.9nm,1.0s						
ZALV	**Zalesovo Beam**	**26.43**	**358**	P	**P**	**11 20 54.2**	**0.0**
	comp=Z,0.7nm,0.3s,baz=188,slow=8.7,SNR=1.5						
TLY	**Talaya**	**27.54**	**24**	LR	LR	11 32 03.3	
	comp=Z,329nm,20.6s,baz=267,slow=37						
RPSI	**Rantau Prapat**	**27.57**	**151**	P	**P**	**11 21 04.3**	**-0.4**
RPSI				IAmb	IAmb	11 21 31.1	
	comp=Z,3.5nm,0.9s						
ABKAR	**Akbulak array**	**29.59**	**324**	P	**P**	**11 21 22.2**	**-0.3**
ABKAR				IAmb	IAmb	11 21 28.3	
	comp=Z,2.0nm,1.1s						
ARU	**Arti**	**34.95**	**333**	P	**P**	**11 22 09.9**	**+0.5**
ARU				IAmb	IAmb	11 22 12.8	
	comp=Z,8.4nm,1.4s						
JOW	**Kunigami**	**37.42**	**81**	P	**P**	**11 22 31.2**	**+0.3**
FINES	**FINESS Array B**	**51.95**	**328**	P	**P**	**11 24 27.4**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=123,slow=7.0,SNR=3.8						
CASP	**Castiglione de**	**61.45**	**306**	P	**P**	**11 25 34.4**	**+0.3**
WB0	**Warramunga Arr**	**66.31**	**130**	P	**P**	**11 26 07.5**	**+1.1**
WB0				IAmb	IAmb	11 26 32.2	
	comp=Z,7.3nm,1.4s						
WRA	**Warramunga Arr**	**66.40**	**130**	P	**P**	**11 26 08.2**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=322,slow=6.4,SNR=6.0						
WRA	**Warramunga Arr**	**66.40**	**130**	P	**P**	**11 26 08.3**	**+1.4**
WB2	**Warramunga Arr**	**66.40**	**130**	P	**P**	**11 26 08.0**	**+1.1**
WR0	**Warramunga Arr**	**66.55**	**130**	P	**P**	**11 26 08.9**	**+1.1**
WR0				IAmb	IAmb	11 26 19.1	
	comp=Z,11nm,1.4s						
ASAR	**Alice Springs**	**68.70**	**133**	P	**P**	**11 26 21.9**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=316,slow=6.7,SNR=4.6						
ILAR	**Eielson Array**	**79.30**	**20**	P	**P**	**11 27 22.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=312,slow=5.4,SNR=4.2						
SIT	**Sitka**	**88.81**	**21**	P	**P**	**11 28 10.4**	**-0.9**

*IDC **25** 11:17:01.4±0.8, 27°.68N×85°.81E, h0km, mb4.1/22, mb1 4.2/25, mb1mx3.9/65, mbtmp4.1/25, ML4.1/2, Error ellipse: s-maj=24.5km s-min=13.9km az=47.0*

ISC 25 11:17:04.5±0.9, 27°.7N±0°.1×85°.8E±0°.1, h19km, n25, σ0§58/25, mb4.2/22, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.18**	**125**	Pn	**Pn**	**11 20 38.2**	**+0.2**
	baz=304,slow=12,SNR=1.2						
AAK	**Ala-Archa**	**17.50**	**331**	P	**P**	**11 21 07.6**	**-1.0**
	0.3nm,0.3s,baz=185,slow=9.9,SNR=3.6						
MKAR	**Makanchi Array**	**19.24**	**353**	P	**Pn**	**11 21 28.1**	**-0.5**
	1.2nm,0.3s,baz=175,slow=12,SNR=19						
KURBB	**Kurchatov Arra**	**23.53**	**348**	P	**P**	**11 22 14.4**	**+1.1**
	3.2nm,0.6s,baz=166,slow=9.7,SNR=22						
SONM	**Songino Array**	**25.70**	**33**	P	**P**	**11 22 34.3**	**+0.8**
	6.3nm,0.8s,baz=219,slow=9.9,SNR=20						
ZALV	**Zalesovo Beam**	**26.21**	**359**	P	**P**	**11 22 38.5**	**+0.6**
	6.3nm,0.7s,baz=182,slow=10,SNR=15						
BVAR	**Borovoye Array**	**27.75**	**340**	P	**P**	**11 22 51.7**	**-0.2**
	0.3nm,0.3s,baz=248,slow=7.8,SNR=4.2						
AKTO	**Aktyubinsk**	**30.99**	**325**	P	**P**	**11 23 21.1**	**+0.5**
	2.0nm,0.5s,baz=122,slow=7.6,SNR=7.1						
ARU	**Arti**	**34.66**	**333**	P	**P**	**11 23 53.3**	**+0.8**
	1.8nm,0.2s,baz=153,slow=18,SNR=6.1						
KSRS	**Korea Array**	**36.52**	**64**	P	**P**	**11 24 08.4**	**-0.4**
	0.5nm,0.6s,baz=266,slow=11,SNR=2.8						
KLR	**Kul'dur**	**41.09**	**46**	P	**P**	**11 24 47.1**	**+0.2**
	0.5nm,0.6s,baz=240,slow=6.0,SNR=3.9						
NRIK	**Noril'sk**	**41.66**	**1**	P	**P**	**11 24 52.0**	**+0.7**
	8.1nm,0.5s,baz=172,slow=6.4,SNR=10.0						
AKASG	**Malin Array Be**	**48.12**	**315**	P	**P**	**11 25 42.9**	**-0.1**
	0.2nm,0.3s,baz=79,slow=7.0,SNR=3.2						
TIXI	**Tiksi**	**49.90**	**16**	P	**P**	**11 25 55.8**	**-0.5**
	2.6nm,0.5s,baz=244,slow=4.2,SNR=6.8						
FINES	**FINESS Array B**	**51.65**	**328**	P	**P**	**11 26 09.9**	**+0.2**
	1.4nm,0.5s,baz=110,slow=8.1,SNR=7.2						
ARCES	**ARCESS Array B**	**54.01**	**338**	P	**P**	**11 26 27.5**	**+0.5**
	4.9nm,0.7s,baz=107,slow=7.9,SNR=12						
HFS	**Hagfors**	**57.53**	**326**	P	**P**	**11 26 52.4**	**0.0**
	1.3nm,0.4s,baz=92,slow=8.2,SNR=12						
NOA	**NORSAR Array B**	**58.75**	**327**	P	**P**	**11 27 00.5**	**-0.5**
	0.8nm,0.5s,baz=88,slow=7.0,SNR=4.5						
KEST	**Kesra**	**64.04**	**298**	P	**P**	**11 27 37.4**	**+0.2**
	2.5nm,0.6s,baz=330,slow=4.8,SNR=3.9						
WRA	**Warramunga Arr**	**66.70**	**130**	P	**P**	**11 27 54.6**	**+0.1**
	1.7nm,0.3s,baz=322,slow=6.4,SNR=23						
EKA	**Eskdalemuir Ar**	**67.12**	**322**	P	**P**	**11 27 56.5**	**-0.1**
	1.4nm,0.6s,baz=78,slow=6.6,SNR=4.4						
ASAR	**Alice Springs**	**69.01**	**133**	P	**P**	**11 28 09.2**	**+0.2**
	0.7nm,0.5s,baz=316,slow=6.3,SNR=13						
ILAR	**Eielson Array**	**79.17**	**20**	P	**P**	**11 29 06.8**	**-0.9**
	0.8nm,0.7s,baz=305,slow=4.5,SNR=8.4						
INK	**Inuvik**	**79.94**	**14**	P	**P**	**11 29 11.4**	**-0.4**
	0.6nm,0.7s,baz=69,slow=1.4,SNR=3.7						
YKA	**Yellowknife Ar**	**88.62**	**9**	P	**P**	**11 29 55.5**	**-0.5**
	0.3nm,0.8s,baz=334,slow=4.8,SNR=4.8						

*IDC **25** 11:18:29.8±1.3, 27°.53N×85°.78E, h0km, mb3.8/9, mb1 3.8/10, mb1mx3.5/63, mbtmp3.7/10, ML3.7/1, MS4.1/1, Ms1 4.1/1, ms1mx3.1/41, Error ellipse: s-maj=46.7km s-min=22.0km az=59.0*

*NEIC **25** 11:18:30.1±1.0, 27°.49N±0°.09×86°.01E±0°.08, h10km±1km, mb4.4/15, Error ellipse: s-maj=18.8km s-min=6.5km az=145.0*

*DMN **25** 11:18:33.6±0.1, 27°.59N×85°.94E, h10km, Ml4.6/3, Error ellipse: s-maj=7.5km s-min=1.6km az=7.0*

ISC 25 11:18:32.5±0.5, 27°.63N±0°.08×85°.96E±0°.03, h19km, n37, σ0§96/40, mb4.1/18, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKI	**Pulchoki**	**0.49**	**263**	*e*Pg	**Pb**	**11 18 42.9**	**+0.1**
PKI				*e*Sg	**Sg**	**11 19 49.6**	**+0.1**
PKIN	**Phulchoki**	**0.51**	**264**	*e*Pg	**Pg**	**11 18 43.0**	**+0.2**
PKIN				*e*Sg	**Sg**	**11 18 49.6**	**-0.2**
RAMN	**Ramite**	**0.88**	**140**	*e*Pg	**Pn**	**11 18 50.1**	**0.0**
ODAN	**Odare**	**1.48**	**121**	*e*Sg	**Sg**	**11 19 21.4**	**+0.8**
	2µm,0.4s						
TAPN	**Taplejung**	**1.58**	**100**	*e*Pg	**Pg**	**11 19 03.8**	**+0.8**
TAPN	**Taplejung**	**1.58**	**100**	*e*Pg	**Pg**	**11 19 03.8**	**+0.8**
TAPN				*e*Sg	**Sg**	**11 19 23.6**	**0.0**
	842nm,0.4s						
TAPN				*e*Sg	**Sg**	**11 19 23.6**	**0.0**
	2µm,0.4s						
LSA	**Lhasa**	**5.00**	**64**	Pn	**Pn**	**11 19 46.0**	**-1.0**
SHL	**Shillong**	**5.69**	**110**	Pn	**Pn**	**11 19 53.5**	**-2.6**
MKAR	**Makanchi Array**	**19.35**	**352**	P	**P**	**11 22 57.3**	**+0.5**
	0.2nm,0.3s,baz=172,slow=11,SNR=2.7						
KURBB	**Kurchatov Arra**	**23.65**	**348**	P	**P**	**11 23 44.0**	**+1.5**
	0.7nm,0.5s,baz=163,slow=9.3,SNR=3.3						
SONM	**Songino Array**	**25.70**	**33**	P	**P**	**11 24 03.3**	**+1.7**
	2.2nm,0.7s,baz=223,slow=9.3,SNR=5.0						
SONM	**Songino Array**	**25.70**	**33**	P	**P**	**11 24 01.2**	**-0.3**
ULN	**Ulaanbaatar**	**26.04**	**33**	P	**P**	**11 24 04.7**	**0.0**
ULN				IAmb	IAmb	11 24 20.1	
	comp=Z,2.7nm,0.5s						
ZAA0	**Zalesovo Array**	**26.31**	**358**	P	**P**	**11 24 07.0**	**+0.2**
ZALV	**Zalesovo Beam**	**26.31**	**358**	P	**P**	**11 24 08.5**	**+1.8**
	comp=Z,1.7nm,0.5s,baz=181,slow=9.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.31**	**358**	P	**P**	**11 24 07.3**	**+0.5**
ABKAR	**Akbulak array**	**29.44**	**324**	P	**P**	**11 24 34.9**	**+0.1**
ABKAR				IAmb	IAmb	11 24 37.0	
	comp=Z,2.0nm,0.6s						
KS19	**Wonju Array Si**	**36.41**	**64**	P	**P**	**11 25 34.0**	**-1.8**
KS19				IAmb	IAmb	11 25 34.6	
	comp=Z,6.5nm,1.2s						
ILGA	**Ilgaz**	**44.55**	**302**	P	**P**	**11 26 43.2**	**-0.2**
TIXI	**Tiksi**	**49.95**	**16**	P	**P**	**11 27 24.4**	**-0.3**
FINES	**FINESS Array B**	**51.80**	**328**	P	**P**	**11 27 39.2**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=108,slow=8.9,SNR=2.4						
AGG	**Agios Georgios**	**53.40**	**300**	P	**P**	**11 27 51.3**	**+0.2**
AGG				IAmb	IAmb	11 28 07.7	
	comp=Z,5.9nm,1.2s						
MA2	**Magadan**	**53.89**	**35**	P	**P**	**11 27 53.5**	**-0.8**
PSZ	**Piszkesteto**	**54.31**	**311**	P	**P**	**11 27 58.2**	**+0.6**
PSZ				IAmb	IAmb	11 28 15.3	
	comp=Z,3.9nm,1.0s						
HFS	**Hagfors**	**57.68**	**326**	P	**P**	**11 28 21.7**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=99,slow=9.2,SNR=4.9						
NOA	**NORSAR Array B**	**58.90**	**327**	P	**P**	**11 28 29.8**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=76,slow=8.4,SNR=1.9						
NAO01	**NORSAR Array S**	**59.06**	**327**	P	**P**	**11 28 32.1**	**+0.9**
FITZ	**Fitzroy Crossi**	**59.53**	**135**	LR	LR	11 57 24.7	
	comp=Z,162nm,19.4s,baz=172,slow=39						
WRA	**Warramunga Arr**	**66.55**	**130**	P	**P**	**11 29 22.7**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=322,slow=6.6,SNR=2.6						
WB2	**Warramunga Arr**	**66.56**	**130**	P	**P**	**11 29 19.4**	**-2.2**
ASAR	**Alice Springs**	**68.85**	**133**	P	**P**	**11 29 36.6**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=316,slow=6.5,SNR=1.3						
PAB	**San Pablo**	**73.21**	**306**	P	**P**	**11 30 01.8**	**-0.7**
PAB				IAmb	IAmb	11 30 19.0	
	comp=Z,5.1nm,1.2s						
TULEG	**Thule**	**74.91**	**354**	P	**P**	**11 30 12.1**	**+0.5**
TULEG				IAmb	IAmb	11 30 15.8	
	comp=Z,9.5nm,1.1s						
ILAR	**Eielson Array**	**79.21**	**20**	P	**P**	**11 30 36.6**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=310,slow=4.5,SNR=4.1						
ILAR	**Eielson Array**	**79.21**	**20**	P	**P**	**11 30 35.7**	**-0.3**
SKT	**Skwentna**	**79.55**	**24**	P	**P**	**11 30 38.7**	**+0.8**
SKT				IAmb	IAmb	11 30 43.1	
	comp=Z,8.0nm,1.4s						
DAWY	**Dawson**	**81.94**	**18**	P	**P**	**11 30 51.7**	**+1.0**
DAWY				IAmb	IAmb	11 31 01.4	
	comp=Z,3.6nm,1.4s						

*ISK **25** 11:23:08.5, 38°.40N×23°.31E, h15km, ML3.3/16*

*IDC **25** 11:23:10.4±1.7, 38°.70N×23°.16E, h0km, mb3.4/5, mb1 3.5/5, mb1mx3.2/55, mbtmp3.4/5, Error ellipse: s-maj=37.9km s-min=27.4km az=132.0*

*THE **25** 11:23:11.5, 38°.62N×23°.39E, h4km±1km, ML3.5/14, Error ellipse: s-maj=1.4km s-min=0.3km az=203.0*

*ATH **25** 11:23:11.2, 38°.63N×23°.40E, h14km±1km, ML3.3/27, Error ellipse: s-maj=1.7km s-min=0.7km az=147.0*

*DDA **25** 11:23:11.4, 38°.76N×23°.48E, h7km±4km, ML3.3*

ISC 25 11:23:11.4±0.8, 38°.60N±0°.02×23°.38E±0°.01, h17km±5km, n116, σ1§39/153, mb3.3/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAL	**Atalanti**	**0.29**	**288**	P	**Pg**	**11 23 17.0**	**-0.7**
ATAL				S	**Sg**	**11 23 21.8**	**-0.2**
ATAL				AML	AML	11 23 22.6	
	comp=E,9284µm,0.4s						
ATAL				AML	AML	11 23 23.9	
	comp=N,11456µm,0.3s						
ATAL	**Atalanti**	**0.29**	**288**	P	**Pg**	**11 23 17.1**	**-0.7**
ATAL				S	**Sg**	**11 23 21.9**	**-0.2**
	comp=N,5µm,0.3s						
LKR	**Lokris**	**0.30**	**280**	P	**Pg**	**11 23 17.2**	**-0.7**
LKR				S	**Sg**	**11 23 21.7**	**-0.6**
LKR				AML	AML	11 23 22.8	
	comp=N,23012µm,0.2s						
LKR				AML	AML	11 23 23.1	
	comp=E,19659µm,0.2s						
LKR	**Lokris**	**0.30**	**280**	P	**Pg**	**11 23 17.2**	**-0.7**
LKR				S	**Sg**	**11 23 21.7**	**-0.6**
	comp=E,11µm,0.2s						
SMIA	**Simia**	**0.31**	**335**	P	**Pg**	**11 23 17.6**	**-0.4**
SMIA				S	**Sg**	**11 23 21.9**	**-0.7**
SMIA				AML	AML	11 23 23.3	
	comp=N,66138µm,0.4s						
SMIA				AML	AML	11 23 23.4	
	comp=E,61162µm,0.4s						
SMIA	**Simia**	**0.31**	**335**	P	**Pg**	**11 23 17.7**	**-0.4**
SMIA				S	**Sg**	**11 23 21.5**	**-1.0**
	comp=E,32µm,0.4s						
VIL2	**Platees**	**0.40**	**192**	P	**Pg**	**11 23 20.1**	**+0.5**
VIL2				S	**Sb**	**11 23 27.2**	**+1.5**
VIL2				AML	AML	11 23 29.1	
	comp=E,13694µm,0.5s						
VIL2				AML	AML	11 23 29.9	
	comp=N,18900µm,0.5s						
VILL	**Villia**	**0.44**	**187**	P	**Pg**	**11 23 20.2**	**-0.1**
VILL				S	**Sg**	**11 23 26.6**	**+0.2**
	comp=N,9µm,0.5s						
EREA	**Eretria**	**0.47**	**112**	P	**Pg**	**11 23 20.5**	**-0.4**
EREA				S	**Sg**	**11 23 27.2**	**-0.2**
EREA				AML	AML	11 23 29.7	
	comp=N,8336µm,0.7s						
EREA				AML	AML	11 23 33.2	
	comp=E,9585µm,0.3s						
EREA	**Eretria**	**0.47**	**112**	P	**Pg**	**11 23 20.6**	**-0.3**
EREA				S	**Sg**	**11 23 27.3**	**0.0**
	comp=E,5µm,0.5s						
KYMI	**Kymi, Euboea I**	**0.57**	**87**	P	**Pg**	**11 23 21.7**	**-0.9**
KYMI				S	**Sg**	**11 23 29.7**	**-0.6**
KYMI				AML	AML	11 23 30.3	
	comp=N,5064µm,0.3s						
KYMI				AML	AML	11 23 30.4	
	comp=E,4726µm,0.4s						
KYMI	**Kymi, Euboea I**	**0.57**	**87**	P	**Pg**	**11 23 21.8**	**-0.9**
KYMI				S	**Sg**	**11 23 30.2**	**-0.1**
	comp=E,2µm,0.3s						
AXAR	**Agios Charalam**	**0.58**	**287**	P	**Pg**	**11 23 22.2**	**-0.9**
AXAR				S	**Sb**	**11 23 31.9**	**+0.7**
AXAR				AML	AML	11 23 37.4	
	comp=N,13393µm,0.4s						
AXAR				AML	AML	11 23 37.8	
	comp=E,12015µm,0.5s						
AXAR	**Agios Charalam**	**0.58**	**287**	P	**Pg**	**11 23 22.4**	**-0.6**
AXAR				S	**Sg**	**11 23 30.9**	**0.0**
	comp=E,6µm,0.4s						
LTK	**Loutraki**	**0.66**	**209**	P	**Pg**	**11 23 24.0**	**-0.3**
LTK				S	**Sg**	**11 23 33.9**	**+0.7**
LTK				AML	AML	11 23 39.3	
	comp=N,9959µm,0.3s						
LTK				AML	AML	11 23 41.1	
	comp=E,7305µm,0.5s						
LTK	**Loutraki**	**0.66**	**209**	P	**Pg**	**11 23 24.1**	**-0.3**
ALNA	**Alonissos**	**0.67**	**35**	P	**Pg**	**11 23 23.6**	**-0.9**
PTL	**Penteli**	**0.67**	**145**	P	**Pg**	**11 23 24.4**	**-0.3**
PTL	**Penteli**	**0.67**	**145**	P	**Pg**	**11 23 24.3**	**-0.3**
PTL				S	**Sg**	**11 23 34.0**	**+0.4**
DION	**Dionisos Attik**	**0.68**	**140**	P	**Pg**	**11 23 24.5**	**-0.3**
DION				AML	AML	11 23 37.8	
	comp=N,16489µm,0.5s						
DION				AML	AML	11 23 37.8	
	comp=E,15346µm,0.3s						
DION	**Dionisos Attik**	**0.68**	**140**	P	**Pg**	**11 23 24.5**	**-0.3**
DION				S	**Sg**	**11 23 34.1**	**+0.2**
	comp=E,12µm,0.4s						
ATH	**Athens Observa**	**0.68**	**157**	P	**Pg**	**11 23 24.6**	**-0.2**
ATH				AML	AML	11 23 38.0	
	comp=E,16655µm,0.2s						
ATH				AML	AML	11 23 38.7	
	comp=N,17428µm,0.2s						
ATH	**Athens Observa**	**0.68**	**157**	P	**Pg**	**11 23 25.0**	**+0.2**
ATH				S	**Sb**	**11 23 35.0**	**+1.1**
	comp=N,9µm,0.2s						
LOUT	**Loutraki**	**0.69**	**207**	P	**Pg**	**11 23 24.6**	**-0.4**
LOUT				S	**Sg**	**11 23 34.9**	**+0.8**
LOUT	**Loutraki**	**0.69**	**207**	P	**Pg**	**11 23 24.7**	**-0.2**
DLFA	**Delphi**	**0.70**	**260**	P	**Pg**	**11 23 24.3**	**-0.9**
ATHU	**Athens Univers**	**0.71**	**153**	P	**Pg**	**11 23 24.7**	**-0.6**
ATHU	**Athens Univers**	**0.71**	**153**	P	**Pg**	**11 23 25.2**	**-0.1**
ATHU				S	**Sg**	**11 23 35.2**	**+0.4**
	comp=N,2µm,0.4s						
NEO	**Neokhori**	**0.71**	**350**	P	**Pg**	**11 23 24.8**	**-0.6**
NEO				S	**Sg**	**11 23 34.5**	**-0.5**
NEO				AML	AML	11 23 37.7	
	comp=E,12327µm,0.4s						
NEO				AML	AML	11 23 38.7	
	comp=N,18187µm,0.4s						
NEO	**Neokhori**	**0.71**	**350**	P	**Pg**	**11 23 25.0**	**-0.4**
NEO				S	**Sg**	**11 23 34.4**	**-0.5**
	comp=N,8µm,0.4s						
XOR	**Xorichti**	**0.78**	**349**	P	**Pg**	**11 23 25.9**	**-0.8**
XOR				AML	AML	11 23 39.3	
	comp=E,5160µm,0.4s						
XOR				AML	AML	11 23 39.8	
	comp=N,7480µm,0.5s						
XOR	**Xorichti**	**0.78**	**349**	P	**Pg**	**11 23 26.0**	**-0.6**
THAL	**Thalero**	**0.80**	**225**	P	**Pg**	**11 23 26.2**	**-0.7**
THAL				AML	AML	11 23 44.5	
	comp=N,9723µm,0.4s						
THAL				AML	AML	11 23 49.1	
	comp=E,11885µm,0.7s						
THAL	**Thalero**	**0.80**	**225**	P	**Pg**	**11 23 26.9**	**0.0**
VLY	**Voula,Athens**	**0.82**	**156**	P

comp=E,879µm,0.8s
RLS AML AML 11 24 11.1
comp=N,672µm,0.4s
AXS Araxos 1.62 256 P **Pn 11 23 41.0 +1.9**
AXS AML AML 11 24 09.0
comp=E,427µm,0.6s
AXS AML AML 11 24 10.0
comp=N,667µm,0.8s
LIT Litokhoron 1.65 336 P **Pn 11 23 40.4 +0.8**
LIT AML AML 11 24 08.7
comp=E,987µm,0.5s
LIT AML AML 11 24 09.5
comp=N,1409µm,0.7s
LIT Litokhoron 1.65 336 P **Pn 11 23 40.4 +0.8**
LIT Litokhoron 1.65 336 *i* P **Pn 11 23 40.2 +0.6**
LIT *i* S **Sn 11 23 58.3 -2.1**
LIT IAML 11 24 09.0
comp=N,426nm,0.7s
LIT IAML 11 24 10.0
comp=E,296nm,0.4s
AMT Artemida-Makis 1.69 231 P **Pn 11 23 42.3 +2.1**
TNSA Tinos 1.76 126 P **Pn 11 23 42.0 +0.9**
PLG Polygyros 1.77 2 P **Pn 11 23 41.4 +0.1**
PLG AML AML 11 24 04.7
comp=E,617µm,0.4s
PLG AML AML 11 24 06.3
comp=N,500µm,0.5s
PLG Polygyros 1.77 2 P **Pn 11 23 41.6 +0.3**
OUR Ouranopolis 1.79 15 P **Pn 11 23 42.0 +0.4**
OUR Ouranopolis 1.79 15 PN **Pn 11 23 41.9 +0.4**
OUR SN **Sg 11 24 07.7 -1.5**
ITM Ithomi 1.82 219 PN **Pn 11 23 37.5 -4.5**
ITM SN **Sn 11 23 58.9 -5.8**
VTN Vitineika 1.85 249 P **Pb 11 23 46.3 +1.5**
LIA Limnos Island 1.91 47 P **Pn 11 23 43.1 0.0**
LIA AML AML 11 24 16.4
comp=N,630µm,0.9s
LIA AML AML 11 24 16.4
comp=E,692µm,1.0s
LIA Limnos Island 1.91 47 P **Pn 11 23 43.1 0.0**
HORT Hortiatis 2.01 354 P **Pn 11 23 45.2 +0.6**
HORT Hortiatis 2.01 354 PN **Pn 11 23 45.3 +0.8**
SIGR SIGRI 2.03 72 PN **Pn 11 23 44.8 +0.1**
SIGR SN **Sn 11 24 11.3 +1.6**
CHOS Chios island 2.11 95 P **Pn 11 23 47.3 +1.3**
CHOS Chios island 2.11 95 PN **Pn 11 23 45.1 -0.9**
LKD2 Lefkada island 2.13 276 P **Pb 11 23 50.1 +0.5**
VLMS Volimes, Zakyn 2.26 252 P **Pb 11 23 51.1 -0.6**
APE Apeiranthos 2.29 131 *i* P **Pn 11 23 49.1 +0.7**
APE *i* S **Sn 11 24 14.4 -1.8**
APE Apeiranthos 2.29 131 PN **Pn 11 23 45.9 -2.5**
KOCA Canakkale, Ayv 2.33 66 *i* P **Pn 11 23 48.7 -0.2**
KTHA Kythira Island 2.35 186 PN Pn 11 23 44.7 -4.6
KTHA SN **Sn 11 24 11.3 -6.5**
BOZC Bozcaada 2.42 58 *i* P **Pn 11 23 49.2 -0.9**
BOZC *i* S **Sn 11 24 13.9 -5.5**
BOZC Bozcaada 2.42 58 PN **Pn 11 23 50.9 +0.7**
GRG Griva 2.47 343 PN **Pn 11 23 51.9 +1.0**
ZEYE Izmir, Urla-Ze 2.48 97 *i* P **Pn 11 23 53.0 +2.0**
ZEYE *i* S **Sb 11 24 24.7 -1.1**
ZEYE IAML 11 24 41.0
comp=E,32nm,0.6s
ZEYE IAML 11 24 41.0
comp=N,62nm,0.7s
GADA Gvkgeada 2.52 50 PN **Pn 11 23 52.5 +1.0**
URLA Izmir 2.54 94 *i* P **Pn 11 23 50.0 -1.8**
URLA *i* S **Sn 11 24 21.8 -0.5**
URLA Izmir 2.54 94 PN **Pn 11 23 51.2 -0.6**
KNT Kendrikon 2.58 352 PN **Pn 11 23 54.0 +1.6**
EZN Ezine 2.60 61 PN **Pn 11 23 53.5 +0.9**
FNA Florina 2.67 325 *i* P **Pn 11 23 54.2 +0.5**
FNA *i* S **Sn 11 24 21.1 -4.6**
FNA Florina 2.67 325 PN **Pn 11 23 54.4 +0.7**
BAYC CANAKKALE_Bayr 2.71 64 *i* P **Pn 11 23 53.4 -0.8**
SANT Santorini 2.77 143 PN **Pn 11 23 51.9 -3.2**
GELI Tayfur-Gelibol 2.99 52 PN **Pn 11 23 59.9 +1.9**
CAVK Edirne/Enez-Ca 3.00 45 *i* P **Pg 11 24 08.6 -0.3**
CAVK *i* S **Sb 11 24 41.8 +1.1**
ENEZ Enez 3.02 44 PN **Pn 11 23 59.8 +1.4**
RDO Rodhopi 3.04 33 PN **Pn 11 24 00.4 +1.8**
ALN Alexandroupoli 3.08 41 *i* P **Pn 11 23 56.6 -2.6**
ALN Alexandroupoli 3.08 41 PN **Pn 11 24 00.9 +1.7**
IMMV Iera Moni Meta 3.17 171 PN Pn 11 23 56.6 -3.9
ERIK Erikli-Kesan 3.18 49 PN **Pn 11 24 01.9 +1.3**
KDZ Kurdzhali 3.42 27 PN **Pn 11 24 05.2 +1.2**
BALY Balya 3.49 70 *i* P **Pg 11 24 18.4 +0.1**
IDI Anoyia 3.52 159 PN **Pn 11 24 02.0 -3.4**
MAR4 Marsite Statio 3.73 53 PN **Pn 11 24 09.7 +1.4**
ZKR Zakros 4.16 146 PN **Pn 11 24 11.6 -2.5**
ESDC Sonseca Array 21.21 282 P **P 11 27 56.1 -0.1**
comp=N,0.9nm,0.8s,baz=76,slow=11,SNR=7.9
HFS Hagfors 22.41 347 P **P 11 28 09.4 +0.6**
comp=N,1.5nm,0.6s,baz=150,slow=15,SNR=1.2
NOA NORSAR Array B 23.71 345 P **P 11 28 21.5 -0.7**
comp=N,0.5nm,0.8s,baz=158,slow=9.1,SNR=1.9
TORD Torodi Ar. Bea 31.82 223 P **P 11 29 36.5 +1.3**
comp=N,0.5nm,0.6s,baz=29,slow=9.3,SNR=4.2
MKAR Makanchi Array 43.16 59 P **P 11 31 13.5 +2.5**
comp=N,0.4nm,0.6s,baz=275,slow=6.1,SNR=3.5

*NEIC **25** 11:23:47.6±1.4,27.65N±0.09×85.43E±0.07,h10km±1km, mb4.5/32, Error ellipse: s-maj=14.9km s-min=10.0km az=176.0*
*IDC **25** 11:23:51.6±5.6,28.00N×85.25E,h0km,mb3.8/5, mb1 3.8/6,mb1mx3.4/61,mbtmp3.7/6,ML3.5/1,Error ellipse: s-maj=97.9km s-min=52.2km az=171.0*
*DMN **25** 11:23:52.7±0.2,28.10N×85.44E,h10km,Ml5.0/3,Error ellipse: s-maj=4.2km s-min=1.8km az=19.0*
ISC 25 11:23:49.7±0.5,27.86N±0.06×85.57E±0.04,h18km,n54, σ1§72/56,mb4.5/19,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.26**	**256**	*e*Sg	**Sn**	**11 24 03.2**	**-1.3**
PKI	**Pulchoki**	**0.32**	**206**	*e*Pg	Pn	11 24 03.0	+3.3
PKIN	**Phulchoki**	**0.32**	**208**	*e*Pg	**Pn**	**11 24 02.8**	**+3.1**
PKIN				*e*Sg	**Sn**	**11 24 09.7**	**+3.8**
DMN	**Daman**	**0.48**	**239**	*e*Pg	**Pn**	**11 24 03.9**	**+2.1**
GKN	**Gorkha**	**0.83**	**280**	*e*Pg	**Pn**	**11 24 06.7**	**0.0**
GKN				*e*Sg	**Sb**	**11 24 15.9**	**-0.8**
	2µm,0.3s						
RAMN	**Ramite**	**1.29**	**134**	*e*Sg	Sg	11 24 41.9	+10
DANN	**Dangsing**	**1.67**	**288**	*e*Pg	**Pb**	**11 24 21.1**	**+1.0**
DANN				*e*Sg	**Sn**	**11 24 40.6**	**+1.2**
DANN				*e*Sg	**Sb**	**11 24 40.9**	**0.0**
	1µm,0.2s						
KOLN	**Koldanda**	**1.74**	**268**	*e*Pg	**Pg**	**11 24 24.6**	**+1.3**
KOLN				*e*Sg	**Sg**	**11 24 45.7**	**-0.3**
	2µm,0.3s						
ODAN	**Odare**	**1.90**	**121**	*e*Pg	Pg	11 24 32.7	+6.4
ODAN				*e*Sg	Sg	11 25 00.5	+9.5
TAPN	**Taplejung**	**1.97**	**104**	*e*Pg	Pg	11 24 32.6	+5.0
TAPN				*e*Sg	Sg	11 25 00.9	+7.7
PYUN	**Piuthan**	**2.29**	**277**	*e*Pg	**Pg**	**11 24 32.5**	**-1.2**
PYUN				*e*Sg	**Sb**	**11 25 00.6**	**+1.9**
	2µm,0.3s						
LSA	**Lhasa**	**5.23**	**68**	Pn	**Pn**	**11 25 08.5**	**+1.0**
SHL	**Shillong**	**6.09**	**111**	Pn	**Pn**	**11 25 19.8**	**+0.7**
NIL	**Nilore**	**12.06**	**302**	Pn	**Pn**	**11 26 39.5**	**-1.2**
AAK	**Ala-Archa**	**17.27**	**331**	P	**P**	**11 27 52.7**	**+1.2**
MKAR	**Makanchi Array**	**19.08**	**353**	P	**Pn**	**11 28 14.2**	**+2.1**
	0.1nm,0.3s,baz=172,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**19.08**	**353**	P	**P**	**11 28 11.3**	**+0.2**
MAKZ	**Makanchi**	**19.13**	**352**	P	**Pn**	**11 28 13.0**	**+0.3**
KK31	**Karatay Array**	**19.49**	**325**	P	**P**	**11 28 16.1**	**+0.3**
PALK	**Pallekele**	**20.98**	**194**	P	**P**	**11 28 29.0**	**-3.2**
PALK				IAmb	IAmb	11 28 36.0	
	comp=Z,17nm,1.4s						
KURBB	**Kurchatov Arra**	**23.36**	**349**	P	**P**	**11 28 59.4**	**+2.5**
	comp=Z,0.3nm,0.5s,baz=163,slow=9.9,SNR=5.7						
KURK	**Kurchatov**	**23.43**	**349**	P	**P**	**11 28 59.4**	**+1.7**
SONM	**Songino Array**	**25.71**	**34**	P	**P**	**11 29 24.0**	**+5.1**
	comp=Z,0.4nm,0.5s,baz=222,slow=11,SNR=4.0						
ULN	**Ulaanbaatar**	**26.05**	**34**	P	**P**	**11 29 23.3**	**+1.2**
ZAA0	**Zalesovo Array**	**26.07**	**359**	P	**P**	**11 29 22.9**	**+0.9**
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**11 29 25.1**	**+3.1**
	comp=Z,1.8nm,0.5s,baz=180,slow=10.0,SNR=7.9						
IPM	**Ipoh**	**27.52**	**145**	P	**P**	**11 29 33.0**	**-2.4**
IPM				IAmb	IAmb	11 29 39.0	
	comp=Z,17nm,1.4s						
BRVK	**Borovoye**	**27.61**	**340**	P	**P**	**11 29 35.6**	**-0.2**
RPSI	**Rantau Prapat**	**28.09**	**151**	P	**P**	**11 29 38.1**	**-2.3**
RPSI				IAmb	IAmb	11 29 38.6	
	comp=Z,5.3nm,1.1s						
GSI	**Gunungsitoli**	**28.80**	**154**	P	**P**	**11 29 45.2**	**-1.6**
GSI				IAmb	IAmb	11 29 53.7	
	comp=Z,18nm,1.1s						
HIA	**Hailar**	**33.80**	**41**	P	**P**	**11 30 31.8**	**+1.2**
HIA				IAmb	IAmb	11 30 42.2	
	comp=Z,6.2nm,0.4s						
JSD	**Sado**	**44.85**	**63**	P	**P**	**11 32 04.0**	**+1.1**
JSD				IAmb	IAmb	11 32 05.8	
	comp=Z,16nm,1.5s						
BR231	**Keskin MP Arra**	**44.86**	**300**	P	**P**	**11 32 02.3**	**-0.8**
LVZ	**Lovozero**	**50.10**	**337**	P	**P**	**11 32 44.5**	**+1.1**
FINES	**FINESS Array B**	**51.42**	**328**	P	**P**	**11 32 55.9**	**+2.6**
	comp=Z,1.3nm,0.7s,baz=104,slow=8.0,SNR=7.7						
FINES	**FINESS Array B**	**51.42**	**328**	P	**P**	**11 32 53.7**	**+0.4**
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**11 33 14.1**	**+3.2**
	comp=Z,6.7nm,1.1s,baz=103,slow=8.1,SNR=9.9						
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**11 33 11.8**	**+0.9**
ARCES				IAmb	IAmb	11 33 18.8	
	comp=Z,17nm,1.4s						
MORC	**Moravsky Berou**	**55.34**	**313**	P	**P**	**11 33 21.2**	**-1.2**
MORC				IAmb	IAmb	11 33 37.0	
	comp=Z,1.6nm,0.9s						
TIP	**Timpagrande**	**57.23**	**300**	P	**P**	**11 33 36.5**	**+0.4**
TIP				IAmb	IAmb	11 33 44.8	
	comp=Z,14nm,1.4s						
PEA0B	**Petropavlovsk-**	**57.68**	**43**	P	**P**	**11 33 39.3**	**+0.4**
PET	**Petropavlovsk**	**58.26**	**43**	P	**P**	**11 33 42.3**	**-0.7**
NC405	**NORSAR Array S**	**58.27**	**327**	P	**P**	**11 33 43.0**	**0.0**
NC405				IAmb	IAmb	11 33 55.0	
	comp=Z,12nm,1.1s						
NC602	**NORSAR Array S**	**58.36**	**326**	P	**P**	**11 33 42.9**	**-0.7**
CTI	**Castel Tesino**	**59.71**	**309**	P	**P**	**11 33 53.6**	**+0.2**
CTI				IAmb	IAmb	11 34 05.3	
	comp=Z,1.7nm,0.8s						
LSZ	**Lusaka**	**70.19**	**240**	P	**P**	**11 34 59.5**	**-2.3**
LSZ				IAmb	IAmb	11 35 04.4	
	comp=Z,5.7nm,1.4s						
RES	**Resolute Bay**	**77.71**	**0**	P	**P**	**11 35 43.8**	**-1.1**
RES				IAmb	IAmb	11 35 48.2	
	comp=Z,2.1nm,1.5s						
MLY	**Manley**	**77.74**	**21**	P	**P**	**11 35 45.5**	**+0.2**
TOA0	**Torodi Ar. Sit**	**78.63**	**279**	P	**P**	**11 35 50.1**	**-0.9**
TOA0				IAmb	IAmb	11 35 51.7	
	comp=Z,2.7nm,1.4s						
GLI	**Glacier Island**	**81.80**	**23**	P	**P**	**11 36 06.9**	**-0.4**
GLI				IAmb	IAmb	11 36 23.1	
	comp=Z,14nm,1.4s						
ARMA	**Armidale**	**85.63**	**128**	P	**P**	**11 36 26.2**	**-1.3**
TOO	**Toolangi**	**85.97**	**136**	P	**P**	**11 36 27.5**	**-1.4**
TOO				IAmb	IAmb	11 36 39.4	
	comp=Z,14nm,1.2s						
CAN	**Canberra**	**86.77**	**133**	P	**P**	**11 36 32.1**	**-0.8**
CMLA	**Cha da Macela**	**88.23**	**312**	P	**P**	**11 36 39.2**	**-0.8**

*IDC **25** 11:29:36.7±1.1,28.62N×87.42E,h0km,mb3.7/6, mb1 3.8/8,mb1mx3.4/50,mbtmp3.6/8,ML3.1/1,Error ellipse: s-maj=36.8km s-min=20.8km az=66.0*
ISC 25 11:29:38.1±1.2,28.6N±0.2×87.5E±0.2,h10km,n8,σ1§40/8, mb3.6/6,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.59**	**131**	Pn	**Pn**	**11 33 03.9**	**-0.7**
	baz=305,slow=11,SNR=0.8						
MKAR	**Makanchi Array**	**18.59**	**349**	P	**P**	**11 33 53.2**	**-2.1**
	0.1nm,0.3s,baz=169,slow=11,SNR=3.1						
KURBB	**Kurchatov Arra**	**22.99**	**345**	P	**P**	**11 34 44.4**	**+1.6**
	1.1nm,0.6s,baz=166,slow=10,SNR=4.3						
SONM	**Songino Array**	**24.16**	**32**	P	**P**	**11 34 53.6**	**-0.9**
	0.7nm,0.6s,baz=217,slow=9.7,SNR=1.6						
KLR	**Kul'dur**	**39.43**	**46**	P	**P**	**11 37 09.1**	**+1.0**
	1.1nm,0.6s,baz=273,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	**66.18**	**131**	P	**P**	**11 40 26.6**	**+0.5**
	0.8nm,0.5s,baz=327,slow=6.6,SNR=16						
ASAR	**Alice Springs**	**68.57**	**134**	P	**P**	**11 40 41.9**	**+0.7**
	1.3nm,0.6s,baz=315,slow=6.3,SNR=21						
TORD	**Torodi Ar. Bea**	**80.16**	**280**	P	**P**	**11 41 48.9**	**-0.2**
	0.5nm,0.7s,baz=63,slow=3.9,SNR=3.2						

*NEIC **25** 11:41:47.7±1.6,28.06N±0.10×85.06E±0.04,h10km±1km, mb4.2/32,Error ellipse: s-maj=16.1km s-min=5.6km az=183.0*
*IDC **25** 11:41:48.3±1.1,28.19N×85.43E,h0km,mb3.9/13, mb1 4.0/16,mb1mx3.7/48,mbtmp3.9/16,ML3.9/2,Error ellipse: s-maj=33.3km s-min=15.1km az=58.0*
*DMN **25** 11:41:50.3±0.5,28.14N×85.28E,h10km,Ml4.6/3,Error ellipse: s-maj=8.6km s-min=3.0km az=45.0*
ISC 25 11:41:50.3±1.2,28.08N±0.06×85.23E±0.05,h23km±10km, n63,σ1§51/69,mb4.1/25,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.30**	**172**	*e*Pg	**Pb**	**11 41 57.2**	**0.0**
KKN				*e*Sg	**Sb**	**11 42 01.9**	**-0.1**
	22µm,0.2s						
DMN	**Daman**	**0.49**	**193**	*e*Pg	**Pb**	**11 42 01.2**	**+0.9**
DMN				*e*Sg	**Sb**	**11 42 08.0**	**+0.8**
	5µm,0.3s						
GKN	**Gorkha**	**0.53**	**261**	*e*Pg	**Pn**	**11 42 01.9**	**-0.7**
GKN				*e*Sg	**Sb**	**11 42 09.0**	**+0.6**
	4µm,0.3s						
DANN	**Dangsing**	**1.33**	**282**	*e*Pg	**Pb**	**11 42 16.2**	**+1.6**
DANN				*e*Sg	**Sb**	**11 42 33.6**	**+2.3**
	562nm,0.2s						
KOLN	**Koldanda**	**1.48**	**258**	*e*Pg	**Pb**	**11 42 18.9**	**+1.7**
KOLN				*e*Sg	**Sb**	**11 42 39.4**	**+3.8**
	2µm,0.2s						
PYUN	**Piuthan**	**1.98**	**271**	*e*Pg	**Pb**	**11 42 27.4**	**+1.6**
PYUN				*e*Sg	**Sb**	**11 42 53.7**	**+3.6**
	585nm,0.3s						
LSA	**Lhasa**	**5.43**	**71**	Pn	**Pn**	**11 43 10.6**	**+0.3**
SHL	**Shillong**	**6.45**	**111**	Pn	**Pn**	**11 43 24.9**	**+0.9**
NIL	**Nilore**	**11.69**	**301**	Pn	**Pn**	**11 44 32.2**	**-3.5**
KBL	**Kabul**	**15.25**	**299**	Pn	**Pn**	**11 45 21.6**	**-2.8**
KBL				IAmb	IAmb	11 45 31.4	
	comp=Z,6.4nm,0.7s						
KDJ	**Kajisay**	**15.47**	**337**		**Pn**	**11 45 25.0**	**-2.2**
CHTO	**Chiang Mai**	**15.59**	**123**	Pn	**Pn**	**11 45 29.2**	**+0.5**
CM31	**Chiang Mai Arr**	**15.81**	**124**	Pn	**Pn**	**11 45 31.9**	**+0.3**
CMAR	**Chiang Mai Arr**	**15.81**	**124**	Pn	**Pn**	**11 45 31.9**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=307,slow=11,SNR=1.7						
CMAR	**Chiang Mai Arr**	**15.81**	**124**		**Pn**	**11 45 32.8**	**+1.2**
BOOM	**Boomskoye usch**	**16.24**	**335**	Pn	**Pn**	**11 45 35.6**	**-1.4**
AAK	**Ala-Archa**	**16.93**	**332**	Pn	**P**	**11 45 47.3**	**-0.4**
	baz=191,slow=18,SNR=2.2						
AAK	**Ala-Archa**	**16.93**	**332**		**Pn**	**11 45 44.5**	**-1.4**
MK31	**Makanchi Array**	**18.82**	**354**		**P**	**11 46 08.0**	**-0.3**
MK31				IAmb	IAmb	11 46 11.3	
	comp=Z,3.7nm,0.6s						
MKAR	**Makanchi Array**	**18.82**	**354**	P	**Pn**	**11 46 09.4**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=174,slow=12,SNR=42						
MKAR	**Makanchi Array**	**18.82**	**354**		**P**	**11 46 07.9**	**-0.4**
MAKZ	**Makanchi**	**18.87**	**353**	P	**Pn**	**11 46 08.8**	**-0.7**
MAKZ				IAmb	IAmb	11 46 12.2	
	comp=Z,5.3nm,0.6s						
KK31	**Karatay Array**	**19.14**	**325**	P	**P**	**11 46 09.8**	**-2.0**
KKAR	**Karatay Array**	**19.14**	**325**		**P**	**11 46 11.0**	**-0.8**
KKAR	**Karatay Array**	**19.14**	**325**	P	**P**	**11 46 09.8**	**-2.0**
KKAR				IAmb	IAmb	11 46 15.7	
	comp=Z,1.7nm,0.9s						
PALK	**Pallekele**	**21.14**	**193**	P	**P**	**11 46 32.7**	**-1.0**
PALK				IAmb	IAmb	11 46 46.6	
	comp=Z,12nm,1.1s						
KURBB	**Kurchatov Arra**	**23.08**	**349**	P	**P**	**11 46 55.1**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=157,slow=11,SNR=11						
KURK	**Kurchatov**	**23.15**	**349**	P	**P**	**11 46 55.1**	**+0.2**
SONM	**Songino Array**	**25.68**	**34**	P	**P**	**11 47 17.9**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=226,slow=9.7,SNR=14						
SONM	**Songino Array**	**25.68**	**34**	P	**P**	**11 47 18.7**	**+0.1**
ZAA0	**Zalesovo Array**	**25.84**	**359**	P	**P**	**11 47 18.6**	**-1.2**
ZAA0				IAmb	IAmb	11 47 22.2	
	comp=Z,5.3nm,0.6s						
ZALV	**Zalesovo Beam**	**25.84**	**359**	P	**P**	**11 47 20.7**	**+0.9**
	comp=Z,6.6nm,0.5s,baz=183,slow=9.3,SNR=26						
ZALV	**Zalesovo Beam**	**25.84**	**359**	P	**P**	**11 47 19.2**	**-0.6**
ULN	**Ulaanbaatar**	**26.03**	**35**	P	**P**	**11 47 22.0**	**+0.2**
ULN				IAmb	IAmb	11 47 27.1	
	comp=Z,4.4nm,0.7s						
KULM	**Kulim**	**26.99**	**144**	P	**P**	**11 47 30.1**	**-0.4**
BVAR	**Borovoye Array**	**27.24**	**340**	P	**P**	**11 47 33.5**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=181,slow=8.6,SNR=2.7						
RPSI	**Rantau Prapat**	**28.43**	**150**	P	**P**	**11 47 43.5**	**+0.1**
RPSI				IAmb	IAmb	11 47 47.5	
	comp=Z,3.0nm,0.5s						
ABKAR	**Akbulak array**	**28.69**	**324**	P	**P**	**11 47 44.7**	**-0.7**
ABKAR				IAmb	IAmb	11 47 48.0	
	comp=Z,1.4nm,0.6s						
GSI	**Gunungsitoli**	**29.13**	**154**	P	**P**	**11 47 48.9**	**-0.7**
KSRS	**Korea Array**	**36.83**	**64**	P	**P**	**11 48 55.6**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=265,slow=7.9,SNR=8.9						
USRK	**Ussuriysk Ar.**	**40.47**	**54**	P	**P**	**11 49 27.1**	**0.0**
	comp=Z,1.0nm,0.5s,baz=250,slow=12,SNR=5.5						
SANT	**Santorini**	**50.54**	**295**	P	**P**	**11 50 44.8**	**-2.3**
FINES	**FINESS Array B**	**51.07**	**328**	P	**P**	**11 50 51.1**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=96,slow=7.3,SNR=10						
IDI	**Anoyia**	**51.17**	**294**	P	**P**	**11 50 49.5**	**-2.3**
ARCES	**ARCESS Array B**	**53.48**	**338**	P	**P**	**11 51 09.7**	**+1.3**
	comp=Z,2.8nm,0.7s,baz=69,slow=6.6,SNR=6.9						
OJC	**Ojcow**	**53.50**	**313**	P	**P**	**11 51 07.8**	**-1.0**
OJC				IAmb	IAmb	11 51 25.1	
	comp=Z,2.7nm,0.7s						
CASP	**Castiglione de**	**60.51**	**305**	P	**P**	**11 51 56.3**	**-2.3**
WB0	**Warramunga Arr**	**67.25**	**129**	P	**P**	**11 52 44.3**	**+1.1**
WRA	**Warramunga Arr**	**67.33**	**130**	P	**P**	**11 52 45.4**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=323,slow=6.4,SNR=11						
WB2	**Warramunga Arr**	**67.34**	**130**	P	**P**	**11 52 45.1**	**+1.4**
WR0	**Warramunga Arr**	**67.48**	**129**	P	**P**	**11 52 46.0**	**+1.4**
AS31	**Alice Springs**	**69.63**	**133**	P	**P**	**11 53 00.1**	**+2.0**
AS31				IAmb	IAmb	11 53 09.9	
	comp=Z,1.5nm,1.2s						
ASAR	**Alice Springs**	**69.63**	**133**	P	**P**	**11 52 59.5**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=316,slow=6.4,SNR=12						
EUNU	**Eureka**	**71.99**	**358**	P	**P**	**11 53 14.2**	**+2.6**
EUNU				IAmb	IAmb	11 53 16.6	
	comp=Z,2.7nm,1.3s						
TOLK	**Toolik Lake Re**	**75.57**	**18**	P	**P**	**11 53 34.9**	**+2.2**
TOLK				IAmb	IAmb	11 53 41.6	
	comp=Z,1.9nm,0.8s						
CTA	**Charters Tower**	**75.97**	**122**	P	**P**	**11 53 36.6**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=292,slow=11,SNR=1.0						
CTAO	**Charters Tower**	**75.97**	**122**	P	**P**	**11 53 37.5**	**+1.8**
CTAO				IAmb	IAmb	11 53 42.1	
	comp=Z,3.2nm,1.1s						
TTA	**Tatalina**	**77.18**	**24**	P	**P**	**11 53 42.9**	**+0.8**
TTA				IAmb	IAmb	11 54 01.6	
	comp=Z,1.8nm,1.1s						
IL31		**79.01**	**20**	P	**P**	**11 53 52.7**	**+0.7**
IL31				IAmb	IAmb	11 53 54.9	
	comp=Z,2.9nm,1.4s						
ILAR	**Eielson Array**	**79.01**	**20**	P	**P**	**11 53 52.8**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=307,slow=4.5,SNR=5.3						
ILAR	**Eielson Array**	**79.01**	**20**	P	**P**	**11 53 53.5**	**+1.4**
SKT	**Skwentna**	**79.39**	**24**	P	**P**	**11 53 55.8**	**+1.6**
SKT				IAmb	IAmb	11 54 00.1	
	comp=Z,6.3nm,1.3s						
YKA	**Yellowknife Ar**	**88.34**	**9**	P	**P**	**11 54 40.7**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=338,slow=4.7,SNR=2.5						

*IDC **25** 11:52:06.6±2.3,38.27S×75.16W,h0km,mb3.7/2, mb1 4.0/5,mb1mx3.8/21,mbtmp3.8/5,ML4.1/3,Error ellipse: s-maj=48.3km s-min=22.6km az=38.0*
*GUC **25** 11:52:10.9±0.4,38.37S×74.46W,h10km,ML4.2*
ISC 25 11:52:05.5±0.8,38.29S±0.05×75.30W±0.05,h10km,n24, σ2§71/39,1C-2D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCSP	**San Pedro de C**	**2.26**	**51**	*e*P	**Pn**	**11 52 41.7**	**-1.2**
CCSP				*e*S	**Sn**	**11 53 05.7**	**-5.1**
CCSP				IAML		11 53 12.8	
	comp=E,2µm,0.5s						
LL04	**Puerto Octay**	**3.44**	**140**	*e*P	**Pn**	**11 52 59.1**	**0.0**
LL04				*e*S	**Sn**	**11 53 34.8**	**-5.1**
LL04				IAML		11 53 39.1	
	comp=N,2µm,0.2s						
BI02	**San Fabin de**	**3.59**	**64**	*e*P	**Pn**	**11 53 01.6**	**+0.3**
BI02				*e*S	**Sn**	**11 53 42.9**	**-0.9**
BI02				IAML		11 53 46.2	
	comp=N,300nm,0.3s						
LL03	**Petrohue**	**3.61**	**143**	*e*P	**Pn**	**11 53 01.7**	**+0.1**
LL03				*e*S	**Sn**	**11 53 39.7**	**-4.6**
LL03				IAML		11 53 60.0	
	comp=N,765nm,0.6s						
PLCA	**Paso Flores**	**4.41**	**125**	Pn	**Pn**	**11 53 12.9**	**+0.4**
	comp=N,2.1nm,0.3s,baz=306,slow=12,SNR=20						
PLCA				Sn	**Sn**	**11 54 08.1**	**+4.1**
	comp=N,6.2nm,0.3s,baz=216,slow=16,SNR=6.0						
PLCA	**Paso Flores**	**4.41**	**125**	*e*P	**Pn**	**11 53 13.2**	**+0.6**
LL01	**San Ignacio de**	**4.64**	**153**	*i*P	**Pn**	**11 53 16.1**	**+0.5**
LL01				*e*S	**Sn**	**11 54 04.5**	**-5.0**
BO03	**Pichilemu**	**4.65**	**36**	*e*P	**Pn**	**11 53 15.0**	**-0.7**
BO03				*e*S	**Sn**	**11 54 06.4**	**-3.4**
LL07	**Hotel Espejo d**	**4.74**	**164**	*e*P	**Pn**	**11 53 16.8**	**-0.2**
GO07	**Milladeo Hill,**	**4.97**	**166**	*e*P	**Pn**	**11 53 20.9**	**+0.7**
BO02	**Sierra Bellavi**	**5.04**	**48**	*e*P	**Pn**	**11 53 20.9**	**-0.3**
BO02				*e*

VAF	**Ylistaro**	**1.69**	**249**	PG	**Pg**	**11**	**57**	**22.0 +0.3**
	baz=67							
VAF				MSG		11	57	41.0
	comp=Z,1.6nm,0.2s							
VAF				SN	**Sg**	**11**	**57**	**44.0 +0.4**
FIA0	**FINESS Array S**	**2.25**	**181**	SG	**Sg**	**11**	**58**	**00.8 -0.6**
FINES	**FINESS Array B**	**2.25**	**181**	Pn	**Pg**	**11**	**57**	**31.9 -0.5**
	comp=Z,0.2nm,0.3s,baz=357,slow=15,SNR=12							
FINES				Lg	Lg	11	58	00.2
	comp=Z,0.4nm,0.3s,baz=1.8,slow=29,SNR=10							
BURU	**Burvik**	**2.27**	**296**	PG	**Pg**	**11**	**57**	**32.7 -0.2**
BURU				SG	**Sg**	**11**	**58**	**01.7 -0.6**
UMAU	**Umeaa**	**2.43**	**277**	SG	**Sb**	**11**	**58**	**04.5 +0.2**
JOF	**Joensuu**	**2.46**	**106**	SB	**Sg**	**11**	**58**	**07.5 -0.8**
KALU	**Kalix**	**2.49**	**333**	SG	**Sg**	**11**	**58**	**09.6 +0.3**
KU6	**Riekki**	**2.85**	**33**	MSG		11	58	18.6
	comp=Z,3.5nm,0.2s							
LANU	**Lannavaara**	**4.70**	**341**	PG	**Pg**	**11**	**58**	**18.9 -0.5**
ARCES	**ARCESS Array B**	**5.88**	**358**	Pn	**Pn**	**11**	**58**	**20.3 +2.6**
	baz=171,slow=13,SNR=1.1							
ARCES				Sn	**Sn**	**11**	**59**	**24.5 -1.3**
	baz=180,slow=23,SNR=1.4							
NOA	**NORSAR Array B**	**7.43**	**256**	Pn	**Pn**	**11**	**58**	**36.1 -2.8**
	comp=Z,0.0nm,0.3s,baz=69,slow=20,SNR=2.3							

IDC 25 11:57:60.0±23.0, 27°92N×84°73E, h0km, mb4.1/2, mb1 3.9/3, mb1mx3.2/39, mbtmp3.7/3, Error ellipse: s-maj=547.9km s-min=117.6km az=120.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.94**	**355**	P	P	12 02 22.5	0.0
	baz=166,slow=11,SNR=3.9						
FINES	**FINESS Array B**	**50.98**	**328**	P	P	12 07 02.9	-0.2
	1.6nm,0.9s,baz=107,slow=18,SNR=2.6						
ARCES	**ARCESS Array B**	**53.47**	**338**	P	P	12 07 21.6	0.0
	2.9nm,0.9s,baz=103,slow=7.8,SNR=1.8						

*IDC **25** 12:00:36.3±2.1,27°72N×85°17E,h0km,mb3.4/5, mb1 3.5/7,mb1mx3.3/37,mbtmp3.4/7,ML3.3/1,Error ellipse: s-maj=62.9km s-min=25.7km az=60.0*

ISC 25 12:00:37.9±1.8, 27°7N±0°2×85°2E±0°3, h10km, n7, σ0§68/7, mb3.4/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.63**	**123**	Pn	**Pn**	**12 04 17.9**	**-0.4**
	baz=304,slow=9.7,SNR=1.0						
MKAR	**Makanchi Array**	**19.18**	**354**	P	**P**	**12 05 01.1**	**-0.6**
	0.1nm,0.3s,baz=180,slow=13,SNR=4.3						
KURBB	**Kurchatov Arra**	**23.43**	**349**	P	**P**	**12 05 46.5**	**-0.7**
	0.2nm,0.4s,baz=174,slow=10,SNR=1.9						
SONM	**Songino Array**	**26.00**	**34**	P	**P**	**12 06 11.7**	**+0.7**
	0.6nm,0.7s,baz=226,slow=11,SNR=4.1						
ZALV	**Zalesovo Beam**	**26.21**	**359**	P	**P**	**12 06 12.2**	**-0.4**
	0.5nm,0.5s,baz=168,slow=7.4,SNR=1.3						
FINES	**FINESS Array B**	**51.37**	**328**	P	**P**	**12 09 42.7**	**+0.3**
	0.4nm,0.6s,baz=103,slow=6.1,SNR=1.0						
WRA	**Warramunga Arr**	**67.11**	**129**	P	**P**	**12 11 32.2**	**+0.2**
	0.4nm,0.8s,baz=326,slow=6.5,SNR=2.5						

*BJI **25** 12:01:09.6±0.0,27°94N×85°27E,h8km,mB4.7/8, mb4.4/16,Ms4.0/3,Ms7 4.0/1*
*IDC **25** 12:01:09.6±0.7,27°84N×85°80E,h0km,mb4.0/20, mb1 4.1/23,mb1mx4.0/38,mbtmp4.0/23,ML4.2/3,Error ellipse: s-maj=21.0km s-min=13.5km az=48.0*
*NEIC **25** 12:01:10.7±1.4,27°86N±0°10×85°93E±0°04,h10km±1km, mb4.2/29,Error ellipse: s-maj=16.7km s-min=5.9km az=177.0*
*NDI **25** 12:01:12.8±3.4,27°79N×85°75E,h5km,ML4.1, mb4.2(NEIC)*
*DMN **25** 12:01:12.5±0.2,27°92N×85°86E,h10km,Ml4.9/6,Error ellipse: s-maj=5.1km s-min=2.7km az=17.0*

ISC 25 12:01:12.1±1.1, 27°88N±0°04×85°84E±0°02, h20km±5km, n84, σ1§67/98, mb4.2/29, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKI	**Pulchoki**	**0.49**	**231**	*e*Pg	**Pb**	**12 01 22.7**	**+0.3**
PKI				*e*Sg	**Sb**	**12 01 30.1**	**+0.8**
PKIN	**Phulchoki**	**0.50**	**232**	*e*Pg	**Pb**	**12 01 22.6**	**+0.2**
PKIN				*e*Sg	**Sb**	**12 01 30.7**	**+1.3**
KKN	**Kakani**	**0.51**	**259**	*e*Sg	**Sb**	**12 01 30.1**	**+0.5**
DMN	**Daman**	**0.71**	**247**	*e*Pg	**Pn**	**12 01 26.5**	**-0.8**
DMN				*e*Sg	**Sn**	**12 01 37.1**	**-0.7**
	4µm,0.4s						
GKN	**Gorkha**	**1.07**	**277**	*e*Pg	**Pg**	**12 01 33.5**	**+0.5**
GKN				*e*Sg	**Sn**	**12 01 47.6**	**+0.9**
	2µm,0.3s						
ODAN	**Odare**	**1.71**	**126**	*e*Sg	**Sg**	**12 02 07.4**	**-0.1**
	3µm,0.5s						
TAPN	**Taplejung**	**1.74**	**107**	*e*Sg	**Sg**	**12 02 08.4**	**0.0**
	746nm,0.4s						
DANN	**Dangsing**	**1.90**	**285**	*e*Pg	**Pg**	**12 01 47.9**	**-0.8**
DANN				*e*Sg	**Sg**	**12 02 12.3**	**-1.1**
	2µm,0.3s						
KOLN	**Koldanda**	**1.99**	**267**	*e*Sg	**Sg**	**12 02 16.6**	**+0.3**
	4µm,0.3s						
GTK	**Tadong**	**2.51**	**102**	*e*P	**Pb**	**12 01 57.3**	**+0.6**
GTK				*e*S	**Sb**	**12 02 28.9**	**+1.6**
GTK				IAML		12 02 31.0	
	comp=N,398nm,0.5s						
GTK				IAML		12 02 33.7	
	comp=E,369nm,0.4s						
PYUN	**Piuthan**	**2.53**	**276**	*e*Sg	**Sg**	**12 02 33.2**	**-0.5**
	comp=E,3µm,0.4s						
LSA	**Lhasa**	**5.00**	**68**	Pn	**Pb**	**12 02 36.3**	**-2.9**
LSA				Sn	**Sn**	**12 03 27.0**	**+3.1**
LSA	**Lhasa**	**5.00**	**68**	Pn	**Pn**	**12 02 23.5**	**-3.0**
SHL	**Shillong**	**5.87**	**112**	*e*P	**Pn**	**12 02 38.9**	**+0.6**
SHL	**Shillong**	**5.87**	**112**		**Pn**	**12 02 33.8**	**-4.5**
ZIRO	**ZIRO**	**7.11**	**91**	*e*P	**Pn**	**12 02 58.2**	**+2.9**
ZIRO				*e*S	**Sn**	**12 04 13.6**	**-1.9**
DDI	**Dehra Dun**	**7.23**	**291**	*e*P	**Pn**	**12 02 58.6**	**+1.8**
DDI				*e*S	**Sn**	**12 04 16.1**	**-2.3**
DDI				*e*S	**Sn**	**12 04 19.8**	**+1.3**
DDI				IAML		12 04 22.5	
	comp=N,250nm,0.3s						
DDI				IAML		12 04 22.8	
	comp=E,282nm,0.3s						
NDI	**New Delhi**	**7.65**	**278**	*e*P	**Pn**	**12 03 04.0**	**+1.5**
NDI				*e*S	**Sn**	**12 04 28.5**	**-0.1**
SMLA	**Simla**	**8.22**	**295**	*e*P	**Pn**	**12 03 11.3**	**+1.0**
SMLA				*e*S	**Sn**	**12 04 41.5**	**-1.2**
SMLA				IAML		12 04 48.4	
	comp=E,86nm,0.4s						
SMLA				IAML		12 04 50.0	
	comp=N,44nm,0.2s						
BHPL	**Bhopal**	**8.89**	**241**	*e*P	**Pn**	**12 03 19.5**	**-0.2**
BHPL				*e*S	**Sn**	**12 04 51.9**	**-7.4**
BHPL				IAML		12 04 58.1	
	comp=N,104nm,0.3s						
BHPL				IAML		12 04 58.7	
	comp=E,86nm,0.3s						
DHRM	**DHARAMSHALA**	**9.34**	**300**	*e*P	**Pn**	**12 03 25.3**	**-0.6**
DHRM				*e*S	**Sn**	**12 05 02.9**	**-7.6**
DHRM				IAML		12 05 05.7	
	comp=E,298nm,0.6s						
DHRM				IAML		12 05 06.6	
	comp=N,216nm,0.5s						
NIL	**Nilore**	**12.25**	**301**	Pn	**Pn**	**12 04 03.4**	**-2.3**
HYB	**Hyderabad**	**12.40**	**214**	*i* P	**Pn**	**12 04 06.0**	**-1.6**
CMAR	**Chiang Mai Arr**	**15.26**	**125**	Pn	**Pn**	**12 04 46.0**	**-0.5**
	comp=N,0.6nm,0.3s,baz=296,slow=13,SNR=5.5						
CMAR	**Chiang Mai Arr**	**15.26**	**125**	Pn	**Pn**	**12 04 45.9**	**-0.7**
PRZ	**Przheval'sk**	**15.77**	**339**	Pn	**Pn**	**12 04 51.7**	**-1.6**
PRZ				IAmb	IAmb	12 04 55.5	
	comp=Z,7.0nm,0.8s						
KBL	**Kabul**	**15.82**	**299**	Pn	**Pn**	**12 04 52.1**	**-1.9**
KBL				IAmb	IAmb	12 04 59.7	
	comp=Z,16nm,1.1s						
KDJ	**Kajisay**	**15.87**	**336**	Pn	**Pn**	**12 04 53.6**	**-0.9**
KDJ				IAmb	IAmb	12 05 02.7	
	comp=Z,10nm,0.9s						
WMQ	**Urumqi**	**15.97**	**5**	*e*P	**Pn**	**12 04 55.3**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,46nm,4.3s						
WMQ				LR	LR		
	comp=Z,410nm,14.9s						
WMQ				LR	LR		
	comp=Z,280nm,12.9s						
WMQ				LR	LR		
	comp=Z,1µm,27.7s						
GTA	**Gaotai**	**16.33**	**42**	*e*P	**P**	**12 05 03.8**	**+0.5**
GTA				pP	sP	12 05 11.5	-0.8
GTA				sP	pP	12 05 15.0	+5.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BOOM	**Boomskoye usch**	**16.65**	**334**	Pn	**Pn**	**12 05 03.3**	**-1.2**
AAK	**Ala-Archa**	**17.37**	**331**	P	**P**	**12 05 15.1**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=143,slow=4.6,SNR=6.6						
AAK	**Ala-Archa**	**17.37**	**331**	Pn	**Pn**	**12 05 12.9**	**-0.6**
MK31	**Makanchi Array**	**19.08**	**353**		**P**	**12 05 33.7**	**+0.2**
MKAR	**Makanchi Array**	**19.08**	**353**	P	**Pn**	**12 05 34.8**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=172,slow=12,SNR=45						
MKAR	**Makanchi Array**	**19.08**	**353**	P	**P**	**12 05 33.8**	**+0.4**
MAKZ	**Makanchi**	**19.13**	**352**	P	**Pn**	**12 05 34.4**	**-0.5**
MAKZ				IAmb	IAmb	12 05 36.7	
	comp=Z,5.6nm,0.8s						
KK31	**Karatay Array**	**19.61**	**325**	P	**P**	**12 05 39.1**	**-0.1**
KKAR	**Karatay Array**	**19.61**	**325**	P	**P**	**12 05 39.2**	**0.0**
KKAR	**Karatay Array**	**19.61**	**325**	P	**P**	**12 05 39.5**	**+0.3**
XAN	**Xi'an**	**20.70**	**67**	P	**P**	**12 05 51.2**	**0.0**
XAN				IAmb	IAmb	12 05 56.0	
	comp=Z,11nm,1.3s						
KURBB	**Kurchatov Arra**	**23.38**	**348**	P	**P**	**12 06 20.1**	**+0.7**
	comp=Z,2.8nm,0.6s,baz=164,slow=9.7,SNR=28						
HHC	**Hu-ho-hao-te**	**24.76**	**52**	*e*P	**P**	**12 06 37.0**	**+4.4**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
SONM	**Songino Array**	**25.55**	**33**	P	**P**	**12 06 41.5**	**+1.8**
	comp=Z,7.2nm,0.7s,baz=218,slow=9.9,SNR=32						
SONM	**Songino Array**	**25.55**	**33**	P	**P**	**12 06 40.2**	**+0.5**
ULN	**Ulaanbaatar**	**25.89**	**34**	P	**P**	**12 06 42.5**	**-0.4**
ULN				IAmb	IAmb	12 06 47.0	
	comp=Z,7.7nm,0.7s						
ZAA0	**Zalesovo Array**	**26.05**	**359**	P	**P**	**12 06 43.4**	**-0.6**
ZAA0				IAmb	IAmb	12 06 46.2	
	comp=Z,3.3nm,0.5s						
ZALV	**Zalesovo Beam**	**26.05**	**359**	P	**P**	**12 06 45.2**	**+1.2**
	comp=Z,2.9nm,0.4s,baz=184,slow=9.6,SNR=11						
ZALV	**Zalesovo Beam**	**26.05**	**359**	P	**P**	**12 06 44.6**	**+0.6**
BVAR	**Borovoye Array**	**27.61**	**340**	P	**P**	**12 06 58.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=243,slow=9.8,SNR=4.9						
KSRS	**Korea Array**	**36.43**	**64**	P	**P**	**12 08 15.2**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=254,slow=8.3,SNR=4.7						
KLR	**Kul'dur**	**40.97**	**46**	P	**P**	**12 08 54.1**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=336,slow=4.4,SNR=1.8						
NRIK	**Noril'sk**	**41.50**	**1**	P	**P**	**12 08 58.8**	**+1.2**
	comp=Z,4.4nm,0.4s,baz=153,slow=7.6,SNR=6.9						
NRIK	**Noril'sk**	**41.50**	**1**	P	**P**	**12 08 58.3**	**+0.7**
NRIK				IAmb	IAmb	12 09 00.0	
	comp=Z,6.2nm,0.7s						
ILGA	**Ilgaz**	**44.33**	**301**	P	**P**	**12 09 21.9**	**+0.8**
ELL	**Elmali**	**47.52**	**296**	P	**P**	**12 09 47.9**	**+1.7**
AKASG	**Malin Array Be**	**48.03**	**314**	P	**P**	**12 09 50.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=83,slow=6.6,SNR=5.3						
TIXI	**Tiksi**	**49.74**	**16**	P	**P**	**12 10 02.6**	**0.0**
TIXI				IAmb	IAmb	12 10 04.0	
	comp=Z,2.6nm,0.7s						
MLR	**Muntele Rosu**	**49.99**	**307**	P	**P**	**12 10 06.2**	**+1.1**
FINES	**FINESS Array B**	**51.52**	**328**	P	**P**	**12 10 17.1**	**+0.9**
	comp=Z,1.5nm,0.4s,baz=108,slow=7.8,SNR=22						
ARCES	**ARCESS Array B**	**53.87**	**338**	P	**P**	**12 10 34.9**	**+1.3**
	comp=Z,1.7nm,0.5s,baz=108,slow=7.6,SNR=27						
GERES	**GERESS Array B**	**58.09**	**312**	P	**P**	**12 11 04.7**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=78,slow=15,SNR=5.5						
NOA	**NORSAR Array B**	**58.63**	**327**	P	**P**	**12 11 08.5**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=82,slow=6.8,SNR=3.8						
MSSA	**Maissana**	**61.70**	**308**	P	**P**	**12 11 29.2**	**+0.2**
KEST	**Kesra**	**63.98**	**298**	P	**P**	**12 11 45.0**	**+0.6**
	comp=Z,6.6nm,0.8s,baz=345,slow=2.3,SNR=8.5						
KEST	**Kesra**	**63.98**	**298**	P	**P**	**12 11 45.2**	**+0.8**
WB0	**Warramunga Arr**	**66.71**	**130**	P	**P**	**12 12 02.1**	**+0.1**
WRA	**Warramunga Arr**	**66.79**	**130**	P	**P**	**12 12 03.9**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=323,slow=6.6,SNR=21						
WRA	**Warramunga Arr**	**66.79**	**130**	P	**P**	**12 12 03.0**	**+0.4**
WB2	**Warramunga Arr**	**66.80**	**130**	P	**P**	**12 12 02.5**	**-0.2**
WR0	**Warramunga Arr**	**66.94**	**130**	P	**P**	**12 12 04.2**	**+0.6**
WR0				IAmb	IAmb	12 12 04.6	
	comp=Z,3.8nm,1.1s						
ASAR	**Alice Springs**	**69.10**	**133**	P	**P**	**12 12 17.9**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=317,slow=6.3,SNR=10						
ASAR	**Alice Springs**	**69.10**	**133**	P	**P**	**12 12 16.7**	**-0.4**
EUNU	**Eureka**	**72.20**	**359**	P	**P**	**12 12 35.5**	**+0.2**
EUNU				IAmb	IAmb	12 12 37.3	
	comp=Z,2.7nm,1.0s						
ESDC	**Sonseca Array**	**72.65**	**306**	P	**P**	**12 12 38.8**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=50,slow=5.6,SNR=6.9						
TOLK	**Toolik Lake Re**	**75.59**	**18**	P	**P**	**12 12 56.2**	**+1.0**
TOLK				IAmb	IAmb	12 12 57.6	
	comp=Z,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.87**	**279**	P	**P**	**12 13 15.2**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=57,slow=3.8,SNR=2.8						
ILAR	**Eielson Array**	**79.01**	**20**	P	**P**	**12 13 14.6**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=286,slow=5.1,SNR=5.7						
SKT	**Skwentna**	**79.36**	**24**	P	**P**	**12 13 16.9**	**+0.5**
SKT				IAmb	IAmb	12 13 18.1	
	comp=Z,3.3nm,0.9s						
STKA	**Stephens Creek**	**79.67**	**134**	P	**P**	**12 13 19.6**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=302,slow=13,SNR=3.7						
STKA	**Stephens Creek**	**79.67**	**134**	P	**P**	**12 13 18.2**	**-0.2**
INK	**Inuvik**	**79.78**	**14**	P	**P**	**12 13 17.8**	**-0.7**
INK				IAmb	IAmb	12 13 21.0	
	comp=Z,0.9nm,0.9s						
YKA	**Yellowknife Ar**	**88.45**	**9**	P	**P**	**12 14 01.9**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=346,slow=4.3,SNR=2.2						
CPUP	**Villa Florida**	**147.26**	**264**	PKPbc	**PKPbc**	**12 20 54.5**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=127,slow=5.1,SNR=1.9						

*IDC **25** 12:12:12.7±0.7,27°51N×85°72E,h0km,mb4.1/21, mb1 4.2/24,mb1mx4.0/60,mbtmp4.1/24,ML4.0/3,MS4.0/3, Ms1 4.0/3,ms1mx3.2/49,Error ellipse: s-maj=21.2km s-min=13.1km az=47.0*
*DMN **25** 12:12:14.6±0.1,27°76N×85°91E,h25km,Ml4.9/3,Error ellipse: s-maj=4.9km s-min=1.8km az=9.0*
*NEIC **25** 12:12:14.8±1.6,27°66N±0°03×85°90E±0°04,h10km±1km, mb4.3/44,Error ellipse: s-maj=6.9km s-min=3.6km az=57.0*
*NDI **25** 12:12:16.7±3.3,27°51N×85°79E,h10km±19km,ML4.1, mb4.3(NEIC)*

ISC 25 12:12:15.4±1.0, 27°65N±0°04×85°86E±0°02, h16km±6km, n118, σ1§96/128, mb4.3/36, MS4.1/3, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**0.26**	**4**	*e*Pg	**Pg**	**12 12 20.4**	**-0.9**
PKI	**Pulchoki**	**0.41**	**259**	*e*Pg	**Pb**	**12 12 25.2**	**+0.8**
PKI				*e*Sg	**Sb**	**12 12 31.5**	**+1.0**
	13µm,0.6s						
PKIN	**Phulchoki**	**0.41**	**260**	*e*Pg	**Pb**	**12 12 25.2**	**+0.7**
PKIN				*e*Sg	**Sb**	**12 12 31.7**	**+1.0**
KKN	**Kakani**	**0.53**	**286**	*e*Pg	**Pb**	**12 12 26.9**	**+0.4**
KKN				*e*Sg	**Sb**	**12 12 34.5**	**+0.5**
	4µm,0.2s						
DMN	**Daman**	**0.67**	**267**	*e*Pg	**Pb**	**12 12 29.8**	**+1.0**
DMN				*e*Sg	**Sb**	**12 12 39.9**	**+1.9**
	6µm,0.6s						
RAMN	**Ramite**	**0.96**	**136**	*e*Pg	**Pg**	**12 12 32.9**	**-1.1**
ODAN	**Odare**	**1.57**	**120**	*e*Pg	**Pg**	**12 12 44.9**	**-0.8**
ODAN				*e*Sg	**Sg**	**12 13 06.1**	**-0.1**
	6µm,0.3s						
TAPN	**Taplejung**	**1.67**	**100**	*e*Pg	**Pb**	**12 12 45.7**	**-0.3**
TAPN				*e*Sg	**Sg**	**12 13 07.6**	**-1.8**
	6µm,0.6s						
DANN	**Dangsing**	**1.98**	**291**	*e*Pg	**Pb**	**12 12 51.9**	**+0.6**
DANN				*e*Sg	**Sg**	**12 13 18.1**	**-1.1**
	422nm,0.3s						
KOLN	**Koldanda**	**2.00**	**274**	*e*Pg	**Pb**	**12 12 52.3**	**+0.7**
KOLN				*e*Sg	**Sg**	**12 13 20.3**	**+0.3**
GTK	**Tadong**	**2.46**	**97**	*e*P	**Pb**	**12 12 58.8**	**-0.5**
GTK				*e*S	**Sb**	**12 13 30.3**	**+0.7**
GTK				IAML		12 13 31.9	
	comp=E,2µm,0.3s						
GTK				IAML		12 13 33.1	
	comp=N,2µm,0.3s						
PYUN	**Piuthan**	**2.58**	**281**	*e*Pg	**Pb**	**12 13 02.6**	**+1.2**
PYUN				*e*Sg	**Sg**	**12 13 36.9**	**-1.4**
LSA	**Lhasa**	**5.08**	**65**		**Pn**	**12 13 30.9**	**-0.5**
GUWA	**GUWAHATI**	**5.41**	**104**	*e*P	**Pn**	**12 13 37.2**	**+1.8**
GUWA				*e*S	**Sn**	**12 14 34.8**	**-2.5**
SHL	**Shillong**	**5.78**	**110**	*e*P	**Pn**	**12 13 44.3**	**+3.6**
SHL				*e*S	**Sn**	**12 14 43.7**	**-3.2**
SHL	**Shillong**	**5.78**	**110**	Pn	**Pn**	**12 13 40.7**	**0.0**
DDI	**Dehra Dun**	**7.33**	**293**	*e*P	**Pn**	**12 14 04.5**	**+2.5**
KOHI	**KOHIMA**	**7.63**	**103**	*e*P	**Pn**	**12 14 07.6**	**+1.5**
KOHI				*e*S	**Sn**	**12 15 28.1**	**-4.1**
SMLA	**Simla**	**8.34**	**297**	*e*P	**Pn**	**12 14 16.9**	**+1.3**
SMLA				*e*S	**Sn**	**12 15 44.9**	**-4.6**
SMLA				IAML		12 16 01.1	
	comp=E,108nm,0.5s						
SMLA				IAML		12 16 03.7	
	comp=N,62nm,0.5s						
BHPL	**Bhopal**	**8.79**	**242**	*e*P	**Pn**	**12 14 20.7**	**-1.3**
BHPL				*e*S	**Sn**	**12 15 53.9**	**-6.9**
DHRM	**DHARAMSHALA**	**9.47**	**301**	*e*P	**Pn**	**12 14 31.1**	**-0.3**
DHRM				*e*S	**Sn**	**12 16 13.5**	**-4.2**
DHRM				IAML		12 16 27.9	
	comp=E,104nm,0.7s						
DHRM				IAML		12 16 28.9	
	comp=N,90nm,0.9s						
NIL	**Nilore**	**12.39**	**302**	Pn	**Pn**	**12 15 09.0**	**-2.2**
CM33	**Chiang Mai Arr**	**14.89**	**123**	P	**P**	**12 15 52.0**	**+1.0**
CMMT	**Chiang Mai**	**14.89**	**123**	P	**P**	**12 15 55.2**	**+4.1**
	comp=N,340nmcomp=N,2.6nm,1.0s						
CM32	**Chiang Mai Arr**	**14.92**	**124**	P	P	12 15 59.0	+7.6
CM34	**Chiang Mai Arr**	**15.02**	**123**	P	**P**	**12 15 53.0**	**+0.5**
CM15	**Chiang Mai Arr**	**15.10**	**125**	P	**P**	**12 15 54.0**	**+0.6**
	comp=N,5.0nm,0.7s						
CM13	**Chiang Mai Arr**	**15.11**	**125**	P	**P**	**12 15 59.5**	**+6.0**
	comp=N,52nmcomp=N,5.7nm,0.7s						
CM31	**Chiang Mai Arr**	**15.11**	**124**	P	**P**	**12 15 59.0**	**+5.5**
CMAR	**Chiang Mai Arr**	**15.11**	**124**	Pn	**Pn**	**12 15 46.5**	**-1.9**
	comp=N,0.4nm,0.3s,baz=186,slow=26,SNR=4.5						
CMAR	**Chiang Mai Arr**	**15.11**	**124**		**Pn**	**12 15 44.7**	**-3.7**
CM02	**Chiang Mai Arr**	**15.13**	**125**	P	**P**	**12 15 59.0**	**+5.3**
	comp=N,74nmcomp=N,7.6nm,0.8s						
CM35	**Chiang Mai Arr**	**15.13**	**123**	P	**P**	**12 15 54.0**	**+0.3**
CM01	**Chiang Mai Arr**	**15.15**	**125**	P	**P**	**12 15 59.0**	**+5.1**
	comp=N,72nmcomp=N,7.4nm,0.8s						
CM05	**Chiang Mai Arr**	**15.15**	**125**	P	**P**	**12 15 57.0**	**+3.1**
	comp=N,40nmcomp=N,5.3nm,0.8s						
CM09	**Chiang Mai Arr**	**15.16**	**124**	P	**P**	**12 15 55.9**	**+1.9**
	comp=N,70nmcomp=N,6.8nm,0.8s						
CM04	**Chiang Mai Arr**	**15.18**	**125**	P	**P**	**12 15 56.1**	**+1.9**
	comp=N,59nmcomp=N,7.1nm,0.8s						
KBL	**Kabul**	**15.95**	**300**	Pn	**Pn**	**12 15 56.5**	**-2.9**
KBL				IAmb	IAmb	12 16 05.6	
	comp=Z,26nm,1.1s						
PRZ	**Przheval'sk**	**16.00**	**340**	Pn	**Pn**	**12 15 59.9**	**-0.1**
PRZ				IAmb	IAmb	12 16 19.2	
	comp=Z,11nm,0.4s						
KDJ	**Kajisay**	**16.09**	**336**		**Pn**	**12 16 00.0**	**-1.1**
SUKH	**Sukhothai**	**16.24**	**126**	P	**P**	**12 16 07.8**	**+1.8**
	comp=Z,12nm,0.8s						
DRK	**Karamyk**	**16.60**	**319**	Pn	**Pn**	**12 16 04.8**	**-3.0**
DRK				IAmb	IAmb	12 16 11.6	
	comp=Z,14nm,1.0s						
BOOM	**Boomskoye usch**	**16.87**	**334**	Pn	**Pn**	**12 16 10.0**	**-1.0**
UTHA	**Uthaitani**	**17.43**	**131**	P	**P**	**12 16 24.4**	**+5.3**
	comp=Z,208nmcomp=Z,24nm,0.9s						
AAK	**Ala-Archa**	**17.58**	**331**	P	**Pn**	**12 16 20.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=148,slow=12,SNR=7.3						
AAK	**Ala-Archa**	**17.58**	**331**	P	**Pn**	**12 16 20.1**	**+0.2**
SRDT	**SRDT**	**18.10**	**134**	P	**Pn**	**12 16 24.0**	**-2.3**
	comp=Z,32nm,1.6s						
CHAI	**Chaiyaphum**	**18.98**	**125**	P	Pn	12 16 44.4	+7.4
	comp=Z,9.6nm,0.7s						
MK31	**Makanchi Array**	**19.32**	**353**		**P**	**12 16 40.3**	**+0.5**
MKAR	**Makanchi Array**	**19.32**	**353**	P	**Pn**	**12 16 41.1**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=173,slow=12,SNR=22						
MKAR	**Makanchi Array**	**19.32**	**353**	P	**P**	**12 16 40.4**	**+0.5**
KK31	**Karatay Array**	**19.81**	**325**		**P**	**12 16 44.6**	**-0.6**
KKAR	**Karatay Array**	**19.81**	**325**		**P**	**12 16 44.9**	**-0.3**
KKAR	**Karatay Array**	**19.81**	**325**	P	**P**	**12 16 45.0**	**-0.2**
**X

comp=Z,138nm,19.6s,baz=274,slow=38
ESBB Sonseca Array 72.80 306 P **P** 12 23 42.2 -1.2
ESBB IAmb IAmb 12 23 43.1
comp=Z,7.6nm,1.4s
ESDC Sonseca Array 72.80 306 P **P** 12 23 43.0 -0.4
comp=Z,1.5nm,1.0s,baz=65,slow=7.2,SNR=6.0
CTA Charters Tower 75.27 122 LR LR 12 59 44.9
comp=Z,98nm,21.6s,baz=262,slow=38
BBOO Buckleboo 76.75 138 P **P** 12 24 05.9 -0.2
I23K Minto, Yukon-K 78.20 21 P **P** 12 24 15.5 +1.7
I23K IAmb IAmb 12 24 20.5
comp=Z,2.2nm,0.8s
PPLA Purkeypile 78.74 23 P **P** 12 24 18.3 +1.3
TORD Torodi Ar. Bea 78.92 279 P **P** 12 24 17.7 -0.9
comp=Z,0.8nm,0.7s,baz=50,slow=3.9,SNR=5.1
TORD Torodi Ar. Bea 78.92 279 P **P** 12 24 18.6 -0.1
CCB Clear Creek Bu 79.03 21 P **P** 12 24 19.1 +0.7
CCB IAmb IAmb 12 24 23.4
comp=Z,2.9nm,1.3s
ILAR Eielson Array 79.23 20 P **P** 12 24 19.9 +0.3
comp=Z,1.0nm,0.7s,baz=310,slow=4.0,SNR=13
ILAR Eielson Array 79.23 20 P **P** 12 24 19.5 0.0
STKA Stephens Creek 79.50 134 P **P** 12 24 21.3 -0.1
comp=Z,0.9nm,0.3s,baz=344,slow=17,SNR=3.0
STKA Stephens Creek 79.50 134 IAmb IAmb 12 24 24.0
comp=Z,2.7nm,1.5s
RND Reindeer 79.54 22 P **P** 12 24 21.9 +0.5
RND IAmb IAmb 12 24 21.9
comp=Z,5.2nm,1.2s
PMR Palmer 80.68 23 P **P** 12 24 28.2 +0.8
SCRK Sand Creek 80.68 20 P **P** 12 24 28.1 +0.5
SCRK IAmb IAmb 12 24 33.7
comp=Z,4.1nm,0.9s
DOT Dot Lake 80.90 20 P **P** 12 24 28.4 -0.2
DOT IAmb IAmb 12 24 29.8
comp=Z,1.9nm,0.8s
YKA Yellowknife Ar 88.69 9 P **P** 12 25 07.5 -0.3
comp=Z,0.5nm,0.7s,baz=337,slow=4.8,SNR=8.4

IDC ***25*** *12:17:08.9±1.2,27°63′N×85°94′E,h0km,mb3.8/15, mb1 3.9/18,mb1mx3.7/62,mbtmp3.8/18,ML3.6/2,MS4.3/1, Ms1 4.3/1,ms1mx3.1/56,Error ellipse: s-maj=33.1km s-min=18.1km az=40.0*

ISC 25 12:17:10.3±1.1,27.7N±0.2×86.0E±0.2,h10km,n19, σ0.983/18,mb3.8/15,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.03**	**125**	Pn		**Pn**	**12 20 42.5**	**-0.4**
	baz=326,slow=45,SNR=2.0							
AAK	**Ala-Archa**	**17.63**	**331**	P		**Pn**	**12 21 16.7**	**+0.5**
	0.1nm,0.3s,baz=154,slow=8.1,SNR=6.2							
MKAR	**Makanchi Array**	**19.33**	**352**	P		**P**	**12 21 36.1**	**+0.4**
	0.3nm,0.3s,baz=170,slow=12,SNR=26							
KURBB	**Kurchatov Arra**	**23.64**	**348**	P		**P**	**12 22 22.1**	**+0.5**
	3.3nm,0.7s,baz=167,slow=9.4,SNR=20							
SONM	**Songino Array**	**25.68**	**33**	P		**P**	**12 22 41.2**	**+0.7**
	1.6nm,0.8s,baz=223,slow=9.9,SNR=8.2							
ZALV	**Zalesovo Beam**	**26.29**	**358**	P		**P**	**12 22 47.0**	**+1.2**
	2.0nm,0.6s,baz=182,slow=11,SNR=9.6							
BVAR	**Borovoye Array**	**27.87**	**340**	P		**P**	**12 23 01.5**	**+1.5**
	0.6nm,0.6s,baz=136,slow=22,SNR=3.6							
AKTO	**Aktyubinsk**	**31.14**	**325**	P		**P**	**12 23 28.8**	**-0.3**
	1.1nm,0.6s,baz=134,slow=9.4,SNR=4.0							
ARU	**Arti**	**34.79**	**333**	P		**P**	**12 24 00.3**	**-0.6**
	0.8nm,0.5s,baz=296,slow=21,SNR=3.7							
KSRS	**Korea Array**	**36.43**	**64**	P		**P**	**12 24 13.7**	**-1.5**
	0.9nm,0.7s,baz=256,slow=8.0,SNR=5.0							
DAV	**Davao City (W)**	**42.71**	**111**	LR		LR	12 44 06.8	
	comp=Z,415nm,21.9s,baz=358,slow=38							
AKASG	**Malin Array Be**	**48.28**	**315**	P		**P**	**12 25 50.9**	**-0.6**
	0.3nm,0.4s,baz=82,slow=7.0,SNR=4.5							
FINES	**FINESS Array B**	**51.79**	**328**	P		**P**	**12 26 17.8**	**-0.2**
	1.2nm,0.7s,baz=98,slow=2.9,SNR=5.6							
ARCES	**ARCESS Array B**	**54.13**	**338**	P		**P**	**12 26 34.9**	**-0.4**
	3.4nm,0.8s,baz=116,slow=8.2,SNR=3.8							
GERES	**GERESS Array B**	**58.33**	**312**	P		**P**	**12 27 05.2**	**-0.4**
	0.4nm,0.6s,baz=48,slow=6.0,SNR=4.1							
NOA	**NORSAR Array B**	**58.89**	**327**	P		**P**	**12 27 09.6**	**+0.3**
	0.7nm,0.6s,baz=89,slow=6.8,SNR=3.6							
WRA	**Warramunga Arr**	**66.55**	**130**	P		**P**	**12 28 02.0**	**+1.2**
	0.4nm,0.6s,baz=322,slow=6.4,SNR=6.3							
ILAR	**Eielson Array**	**79.19**	**20**	P		**P**	**12 29 15.7**	**+0.5**
	0.6nm,0.9s,baz=311,slow=5.1,SNR=4.6							
INK	**Inuvik**	**79.98**	**14**	P		**P**	**12 29 19.9**	**+0.5**
	0.9nm,0.9s,baz=344,slow=8.7,SNR=3.7							

IDC ***25*** *12:17:52.8±0.6,27°85N×85°30E,h0km,mb4.1/28, mb1 4.2/30,mb1mx4.1/59,mbtmp4.1/30,ML4.3/2,MS3.6/1, Ms1 3.6/1,ms1mx3.0/49,Error ellipse: s-maj=16.8km s-min=12.0km az=48.0*

BJI ***25*** *12:17:53.5±0.0,28°03N×85°56E,h5km,mB4.8/21, mb4.4/42,Ms4.0/15,Ms7 4.0/15*

NEIC ***25*** *12:17:54.8±1.8,27°93N±0°09×85°45E±0°06,h10km±1km, mb4.5/61,Error ellipse: s-maj=15.1km s-min=8.7km az=188.0*

DMN ***25*** *12:17:55.3±0.1,28°00N×85°40E,h10km,Ml5.1/3,Error ellipse: s-maj=2.7km s-min=1.5km az=16.0*

NDI ***25*** *12:17:57.6±2.8,27°37N×85°26E,h10km,ML4.4, mb4.5(NEIC)*

ISC 25 12:17:55.3±0.9,27.94N±0.03×85.43E±0.02,h13km±6km, n159,σ1.920/176,mb4.4/49,1C-2D,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KKN	**Kakani**	**0.20**	**222**	*e*Pg		**Pg**	**12 18 00.2**	**+0.4**
KKN				*e*Sg		**Sb**	**12 18 04.1**	**-0.5**
KKN	**Kakani**	**0.20**	**222**	*e*Sg		**Sg**	**12 18 03.4**	**+0.4**
PKIN	**Phulchoki**	**0.36**	**184**	*e*Pg		**Pb**	**12 18 03.7**	**0.0**
PKIN				*e*Sg		**Sb**	**12 18 09.6**	**+0.3**
	79μm,0.4s							
PKI	**Pulchoki**	**0.37**	**183**	*e*Pg		**Pb**	**12 18 03.7**	**-0.1**
PKI				*e*Sg		**Sb**	**12 18 10.0**	**+0.5**
PKI	**Pulchoki**	**0.37**	**183**	*e*Pg		**Pb**	**12 18 03.8**	**-0.1**
PKI				*e*Sg		**Sb**	**12 18 10.1**	**+0.5**
GUN	**Gumba**	**0.40**	**94**	*e*Pg		**Pb**	**12 18 04.3**	**-0.1**
GUN				*e*Sg		**Sb**	**12 18 09.8**	**-0.8**
GUN	**Gumba**	**0.40**	**94**	*e*Pg		**Pg**	**12 18 03.8**	**+0.4**
GUN				*e*Sg		**Sb**	**12 18 09.9**	**-0.7**
DMN	**Daman**	**0.43**	**221**	*e*Pg		**Pb**	**12 18 04.7**	**-0.2**
DMN				*e*Sg		**Sb**	**12 18 11.6**	**+0.1**
DMN	**Daman**	**0.43**	**221**	*e*Pg		**Pb**	**12 18 04.7**	**-0.2**
DMN				*e*Sg		**Sb**	**12 18 11.7**	**+0.2**
GKN	**Gorkha**	**0.70**	**275**	*e*Pg		**Pg**	**12 18 08.4**	**-0.6**
GKN				*e*Sg		**Sg**	**12 18 17.9**	**-0.3**
GKN	**Gorkha**	**0.70**	**275**	*e*Sg		**Sg**	**12 18 17.4**	**-0.8**
	34μm,0.4s							
JIRN	**Jiri**	**0.73**	**112**	*e*Pg		**Pb**	**12 18 10.5**	**+0.4**
RAMN	**Ramite**	**1.43**	**133**	*e*Pg		**Pb**	**12 18 22.5**	**+0.5**
DANN	**Dangsing**	**1.53**	**286**	*e*Pg		**Pb**	**12 18 23.6**	**0.0**
DANN				*e*Sg		**Sn**	**12 18 41.9**	**-0.5**
	2μm,0.2s							
DANN	**Dangsing**	**1.53**	**286**	*e*Pg		**Pn**	**12 18 22.1**	**-0.4**
DANN				*e*Sg		**Sn**	**12 18 41.5**	**-0.9**
	2μm,0.3s							
KOLN	**Koldanda**	**1.63**	**265**	*e*Pg		**Pn**	**12 18 23.8**	**0.0**
KOLN				*e*Sg		**Sb**	**12 18 46.7**	**+0.9**
	3μm,0.3s							
KOLN	**Koldanda**	**1.63**	**265**	*e*Pg		**Pn**	**12 18 23.6**	**-0.2**
KOLN				*e*Sg		**Sb**	**12 18 45.5**	**-0.3**
	2μm,0.3s							
ODAN	**Odare**	**2.05**	**121**	*e*Sg		**Sg**	**12 19 02.2**	**+1.0**
ODAN	**Odare**	**2.05**	**121**	*e*Pg		**Pb**	**12 18 33.3**	**+0.8**
ODAN				*e*Sg		**Sg**	**12 19 02.2**	**+1.0**
TAPN	**Taplejung**	**2.11**	**106**	*e*Sg		**Sg**	**12 19 03.7**	**+0.6**
	3μm,0.3s							
TAPN	**Taplejung**	**2.11**	**106**	*e*Pg		**Pb**	**12 18 34.3**	**+0.8**
TAPN				*e*Sg		**Sg**	**12 19 03.2**	**+0.1**
	2μm,0.2s							
PYUN	**Piuthan**	**2.16**	**275**	*e*Pg		**Pb**	**12 18 34.7**	**+0.3**
PYUN				*e*Sg		**Sb**	**12 19 02.6**	**+1.4**
PYUN	**Piuthan**	**2.16**	**275**	*e*Pg		**Pb**	**12 18 33.9**	**-0.5**
PYUN				*e*Sg		**Sb**	**12 19 02.6**	**+1.4**
GTK	**Tadong**	**2.88**	**102**	*e*P		**Pb**	**12 18 44.3**	**-2.4**
GTK				*e*S		**Sb**	**12 19 19.9**	**-2.0**
GTK				IAML			12 19 29.0	
	comp=N,3μm,0.4s							
GTK				IAML			12 19 33.1	
	comp=E,3μm,0.3s							
GUWA	**GUWAHATI**	**5.85**	**106**	*e*P		**Pn**	**12 19 23.8**	**+2.1**
GUWA				*e*S		**Sn**	**12 20 29.8**	**+1.2**
GUWA				IAML			12 20 32.5	
	comp=N,309nm,0.4s							
GUWA				IAML			12 20 33.5	
	comp=E,281nm,0.4s							
SHL	**Shillong**	**6.24**	**111**	*e*P		**Pn**	**12 19 28.1**	**+0.9**
SHL				*e*S		**Sn**	**12 20 34.4**	**-4.0**
SHL				IAML			12 20 40.0	
	comp=N,513nm,0.5s							
SHL	**Shillong**	**6.24**	**111**	Pn		**Pn**	**12 19 28.4**	**+1.2**
DDI	**Dehra Dun**	**6.87**	**292**	*e*P		Pn	12 19 41.5	+5.7
DDI				*e*S		**Sn**	**12 20 53.8**	**-0.1**
DDI				IAML			12 21 06.1	
	comp=N,759nm,0.4s							
DHRM	**DHARAMSHALA**	**9.00**	**301**	*e*P		**Pn**	**12 20 07.7**	**+2.6**
NIL	**Nilore**	**11.91**	**302**			**Pn**	**12 20 46.2**	**+1.3**
HYB	**Hyderabad**	**12.24**	**213**	*i* P		**Pn**	**12 20 46.0**	**-3.4**
KSH	**Kashi**	**13.96**	**328**	P		**Pn**	**12 21 13.8**	**+0.9**
KSH				sP		P	12 21 19.5	-1.5
KSH				pmax		pmax		
	comp=N,6.0nm,0.5s							
KSH				pmax		pmax		
	comp=N,160nm,4.2s							
MHMT	**Maesareng**	**15.05**	**128**	P		**P**	**12 21 33.2**	**+0.2**
CM33	**Chiang Mai Arr**	**15.37**	**123**	P		**P**	**12 21 36.0**	**-0.6**
CHTO	**Chiang Mai**	**15.37**	**123**	Pn		**Pn**	**12 21 30.9**	**-1.0**
CHTO				IAmb		IAmb	12 21 37.9	
	comp=Z,17nm,0.8s							
CMMT	**Chiang Mai**	**15.37**	**123**	P		**P**	**12 21 35.0**	**-1.6**
	comp=Z,318nmcomp=Z,11nm,0.9s							
CM32	**Chiang Mai Arr**	**15.40**	**124**	P		**P**	**12 21 38.0**	**+1.1**
KBL	**Kabul**	**15.47**	**299**	P		**P**	**12 21 36.6**	**-1.3**
KBL				IAmb		IAmb	12 21 51.9	
	comp=Z,27nm,0.8s							
CM34	**Chiang Mai Arr**	**15.50**	**123**	P		**P**	**12 21 38.0**	**0.0**
CM15	**Chiang Mai Arr**	**15.58**	**124**	P		**Pn**	**12 21 35.0**	**+0.2**
	comp=Z,119nmcomp=Z,16nm,0.8s							
CM13	**Chiang Mai Arr**	**15.59**	**125**	P		**Pn**	**12 21 34.0**	**-0.8**
	comp=Z,120nmcomp=Z,16nm,0.9s							
CM31	**Chiang Mai Arr**	**15.59**	**124**	P		**P**	**12 21 40.0**	**+0.9**
	comp=Z,4μmcomp=Z,472nm,0.9s							
CM31	**Chiang Mai Arr**	**15.59**	**124**			**Pn**	**12 21 32.4**	**-2.4**
CM31				IAmb		IAmb	12 21 41.7	
	comp=Z,14nm,0.8s							
CMAR	**Chiang Mai Arr**	**15.59**	**124**	Pn		**Pn**	**12 21 33.5**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=302,slow=13,SNR=14							
CMAR	**Chiang Mai Arr**	**15.59**	**124**	Pn		**Pn**	**12 21 33.8**	**-1.0**
PRZ	**Przheval'sk**	**15.60**	**340**	Pn		**Pn**	**12 21 34.4**	**-0.6**
PRZ				IAmb		IAmb	12 21 48.1	
	comp=Z,13nm,0.5s							
CM35	**Chiang Mai Arr**	**15.61**	**123**	P		**P**	**12 21 39.0**	**-0.2**
CM02	**Chiang Mai Arr**	**15.61**	**124**	P		**Pn**	**12 21 35.0**	**-0.1**
	comp=Z,131nmcomp=Z,21nm,0.9s							
CM01	**Chiang Mai Arr**	**15.62**	**124**	P		**Pn**	**12 21 36.0**	**+0.7**
	comp=Z,134nmcomp=Z,19nm,0.8s							
CM05	**Chiang Mai Arr**	**15.63**	**125**	P		**Pn**	**12 21 35.0**	**-0.3**
	comp=Z,109nmcomp=Z,15nm,0.9s							
CM09	**Chiang Mai Arr**	**15.63**	**124**	P		**P**	**12 21 40.2**	**+0.7**
	comp=Z,113nmcomp=Z,15nm,0.9s							
CM04	**Chiang Mai Arr**	**15.65**	**124**	P		**Pn**	**12 21 36.4**	**+0.7**
	comp=Z,122nmcomp=Z,18nm,0.8s							
CM36	**Chiang Mai Arr**	**15.66**	**124**	P		**Pn**	**12 21 37.0**	**+1.2**
KDJ	**Kajisay**	**15.68**	**337**			**Pn**	**12 21 35.9**	**-0.1**
KMI	**Kunming**	**15.75**	**96**	⇓P		**Pn**	**12 21 37.0**	**-0.1**
KMI				sP		P	12 21 42.0	+1.0
KMI				pmax		pmax		
	comp=Z,7.0nm,0.8s							
KMI				LR		LR		
	comp=Z,270nm,13.2s							
KMI				LR		LR		
	comp=Z,370nm,17.3s							
KMI				LR		LR		
	comp=Z,610nm,16.8s							
KMI	**Kunming**	**15.75**	**96**			**Pn**	**12 21 36.4**	**-0.6**
KMI				IAmb		IAmb	12 21 43.0	
	comp=Z,19nm,0.7s							
WMQ	**Urumqi**	**15.96**	**6**	*e*P		**Pn**	**12 21 35.0**	**-4.5**
WMQ				pmax		pmax		
	comp=Z,14nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,46nm,4.3s							
WMQ				LR		LR		
	comp=Z,410nm,14.9s							
WMQ				LR		LR		
	comp=Z,280nm,12.9s							
WMQ				LR		LR		
	comp=Z,1μm,27.7s							
DRK	**Karamyk**	**16.14**	**319**	Pn		**Pn**	**12 21 42.3**	**+0.2**
DRK				IAmb		IAmb	12 21 51.2	
	comp=Z,21nm,0.6s							
BOOM	**Boomskoye usch**	**16.44**	**334**	Pn		**Pn**	**12 21 45.4**	**-0.4**
GTA	**Gaotai**	**16.54**	**43**	⇑P		**P**	**12 21 50.3**	**+0.7**
GTA				pP		pP	12 21 55.0	+0.5
GTA				sP		sP	12 21 58.0	+2.1
GTA				pmax		pmax		
	comp=Z,19nm,1.0s							
GTA				pmax		pmax		
	comp=Z,85nm,5.8s							
GTA				LR		LR		
	comp=Z,310nm,16.4s							
GTA				LR		LR		
	comp=Z,290nm,16.7s							
GTA				LR		LR		
	comp=Z,560nm,17.5s							
SUKH	**Sukhothai**	**16.72**	**125**	P		**P**	**12 21 52.0**	**+0.5**
	comp=Z,20nm,0.9s							
AAK	**Ala-Archa**	**17.14**	**332**			**Pn**	**12 21 54.0**	**-0.7**
UTTA	**Uttaradit**	**17.23**	**123**	P		**P**	**12 21 57.1**	**0.0**
	comp=Z,20nm,0.7s							
PHIT	**Phitsanulok**	**17.48**	**125**	P		**P**	**12 22 00.0**	**+0.1**
	comp=Z,86nm,0.8s							
LZH	**Lanzhou**	**17.59**	**58**	*e*P		**Pn**	**12 21 58.0**	**-2.3**
LZH				pP		P	12 22 00.5	-0.8
LZH				sP		pP	12 22 02.5	-3.0
LZH				pmax		pmax		
	comp=Z,19nm,1.0s							
UTHA	**Uthaitani**	**17.90**	**131**	P		**P**	**12 22 06.0**	**+1.3**
	comp=Z,18nm,0.9s							
SLVN	**Son La**	**18.03**	**107**	P		**Pn**	**12 22 04.9**	**-0.8**
GYA	**Guiyang**	**18.95**	**90**	⇓P		**Pn**	**12 22 18.5**	**+1.5**
GYA				pmax		pmax		
	comp=Z,16nm,0.8s							
MK31	**Makanchi Array**	**18.98**	**353**			**P**	**12 22 16.4**	**0.0**
MKAR	**Makanchi Array**	**18.98**	**353**	P		**Pn**	**12 22 16.9**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=174,slow=12,SNR=16							
MKAR	**Makanchi Array**	**18.98**	**353**			**P**	**12 22 16.4**	**0.0**
NONG	**Nongkai**	**19.02**	**117**	P		**Pn**	**12 22 20.8**	**+3.1**
	comp=Z,17nm,1.0s							
MAKZ	**Makanchi**	**19.03**	**353**	P		**Pn**	**12 22 17.3**	**-0.4**
KK31	**Karatay Array**	**19.35**	**325**	P		**P**	**12 22 19.9**	**-0.6**
KKAR	**Karatay Array**	**19.35**	**325**	P		**P**	**12 22 20.0**	**-0.5**
KKAR	**Karatay Array**	**19.35**	**325**	P		**P**	**12 22 18.7**	**-1.8**
CHAI	**Chaiyaphum**	**19.45**	**125**	P		**Pn**	**12 22 27.2**	**+4.3**
	comp=Z,312nmcomp=Z,23nm,1.0s							
KHON	**Khomkaen**	**19.79**	**122**	P		**Pn**	**12 22 32.0**	**+5.0**
	comp=Z,33nm,0.9s							
HRA	**Herat**	**20.83**	**294**	P		**P**	**12 22 37.6**	**+0.7**
XAN	**Xi'an**	**21.02**	**67**	P		**P**	**12 22 39.0**	**+0.3**
XAN				pP		pP	12 22 42.5	-0.6
XAN				pmax		pmax		
	comp=Z,9.0nm,0.5s							
XAN	**Xi'an**	**21.02**	**67**	P		**P**	**12 22 37.8**	**-0.9**
XAN				IAmb		IAmb	12 22 56.9	
	comp=Z,8.7nm,0.7s							
ENH	**Enshi**	**21.14**	**78**	P		**P**	**12 22 39.6**	**-0.5**
ENH				IAmb		IAmb	12 22 48.0	
	comp=Z,20nm,0.6s							
UBPT	**Khong Chiam**	**22.45**	**120**	P		**P**	**12 22 54.0**	**-0.1**
UBPT				IAmb		IAmb	12 23 10.4	
	comp=Z,10nm,0.7s							
KURBB	**Kurchatov Arra**	**23.25**	**349**	P		**P**	**12 23 02.4**	**+0.1**
	comp=Z,3.7nm,0.8s,baz=172,slow=10.0,SNR=8.3							
GEYT	**Alibeck**	**24.91**	**301**	P		**P**	**12 23 17.7**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=92,slow=12,SNR=1.6							
GEYT	**Alibeck**	**24.91**	**301**	P		**P**	**12 23 18.3**	**+0.3**
GYA0B	**ALIBECK ARRAY**	**24.91**	**301**	P		**P**	**12 23 18.6**	**+0.5**
GYA0B				IAmb		IAmb	12 23 33.2	
	comp=Z,7.1nm,0.8s							
HHC	**Hu-ho-hao-te**	**25.01**	**52**	*e*P		**P**	**12 23 19.0**	**0.0**
HHC				pmax		pmax		
	comp=Z,16nm,0.9s							
HHC				pmax		pmax		
	comp=Z,100nm,4.6s							
SONM	**Songino Array**	**25.71**	**34**	P		**P**	**12 23 27.2**	**+1.9**
	comp=Z,6.4nm,0.8s,baz=222,slow=9.9,SNR=10							
SONM	**Songino Array**	**25.71**	**34**	P		**P**	**12 23 26.5**	**+1.3**
SONM				IAmb		IAmb	12 23 40.8	
	comp=Z,8.2nm,0.9s							
ZAA0	**Zalesovo Array**	**25.99**	**359**	P		**P**	**12 23 28.0**	**+0.4**
ZAA0				IAmb		IAmb	12 23 35.8	
	comp=Z,12nm,0.7s							
ZALV	**Zalesovo Beam**	**25.99**	**359**	P		**P**	**12 23 28.2**	**+0.7**
	comp=Z,3.6nm,0.5s,baz=184,slow=9.7,SNR=11							
ZALV	**Zalesovo Beam**	**25.99**	**359**	P		**P**	**12 23 27.8**	**+0.2**
ULN	**Ulaanbaatar**	**26.05**	**34**	P		**P**	**12 23 27.9**	**-0.5**
ULN				IAmb		IAmb	12 23 33.2	
	comp=Z,9.8nm,0.8s							
BVAR	**Borovoye Array**	**27.43**	**340**	P		**P**	**12 23 40.7**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=129,slow=4.0,SNR=3.6							
ABKAR	**Akbulak array**	**28.91**	**324**	P		**P**	**12 23 53.9**	**0.0**
AKTO	**Aktyubinsk**	**30.62**	**325**	P		**P**	**12 24 08.5**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=134,slow=6.0,SNR=2.2							
SOCY	**Socotra**	**33.30**	**248**	P		**P**	**12 24 31.9**	**-1.0**
HIA	**Hailar**	**33.81**	**42**	P		**P**	**12 24 35.7**	**-1.3**
HIA				IAmb		IAmb	12 24 53.4	
	comp=Z,4.2nm,0.7s							
ARU	**Arti**	**34.31**	**334**	P		**P**	**12 24 42.6**	**+1.4**
	comp=Z,1.6nm,0.6s,baz=171,slow=3.7,SNR=6.5							
ARU	**Arti**	**34.31**	**334**	P		**P**	**12 24 42.6**	**+1.4**
ARU				IAmb		IAmb	12 24 47.1	
	comp=Z,4.4nm,0.7s							
CN2	**Changchun**	**35.70**	**53**	*e*P		**P**	**12 24 53.0**	**-0.4**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
SBUM	**Sibu**	**36.02**	**130**	P		**P**	**12 24 55.7**	**-0.6**
SBUM				IAmb		IAmb	12 24 58.9	
	comp=Z,4.7nm,1.0s							
KS19	**Wonju Array Si**	**36.70**	**64**	P		**P**	**12 25 01.1**	**-0.8**
KS19				IAmb		IAmb	12 25 02.6	
	comp=Z,5.9nm,0.8s							
KSRS	**Korea Array**	**36.74**	**64**	P		**P**	**12 25 01.9**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=268,slow=8.5,SNR=14							
KSRS				LR		LR	12 42 58.1	
	comp=Z,84nm,18.6s,baz=18,slow=41							
USRK	**Ussuriysk Ar.**	**40.42**	**54**	P		**P**	**12 25 32.9**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=269,slow=6.1,SNR=5.4							
KLR	**Kul'dur**	**41.19**	**46**	P		**P**	**12 25 40.5**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=259,slow=9.9,SNR=9.9							
NRIK	**Noril'sk**	**41.45**	**1**	P		**P**	**12 25 41.8**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=157,slow=18,SNR=2.2							
NRIK	**Noril'sk**	**41.45**	**1**	P		**P**	**12 25 41.9**	**+0.6**
NRIK				IAmb		IAmb	12 25 53.8	
	comp=Z,5.7nm,0.7s							
YAK	**Yakutsk**	**44.78**	**28**	P		**P**	**12 26 08.9**	**+0.5**
JSD	**Sado**	**44.92**	**63**	P		**P**	**12 26 09.4**	**-0.5**
JSD				IAmb		IAmb	12 26 12.1	
	comp=Z,4.8nm,0.8s							
MAJO	**Matsushiro**	**44.99**	**65**	P		**P**	**12 26 10.3**	**-0.1**
MAJO				IAmb		IAmb	12 26 20.4	
	comp=Z,8.4nm,1.1s							
MJAR	**Matsushiro Arr**	**44.99**	**65**	P		**P**	**12 26 10.7**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=280,slow=10,SNR=5.8							
JMM	**Marumori**	**46.93**	**63**	P		**P**	**12 26 25.8**	**+0.1**
ELL	**Elmali**	**47.16**	**295**	P		**P**	**12 26 27.9**	**+0.2**
AKASG	**Malin Array Be**	**47.73**	**314**	P		**P**	**12 26 29.7**	**-2.0**
	comp=Z,3.0nm,0.7s,baz=74,slow=7.0,SNR=6.0							
MLR	**Muntele Rosu**	**49.66**	**307**	P		**P**	**12 26 48.0**	**+1.2**
TIXI	**Tiksi**	**49.79**	**17**	P		**P**	**12 26 48.1**	**+0.9**
	comp=Z,1.3nm,0.4s,baz=275,slow=3.8,SNR=4.2							
TIXI	**Tiksi**	**49.79**	**17**	P		**P**	**12 26 47.0**	**-0.3**
TIXI				IAmb		IAmb	12 26 57.0	
	comp=Z,5.3nm,0.6s							
BUR08	**Bucovina Ar. S**	**50.18**	**310**	P		**P**	**12 26 51.0**	**+0.3**
FIA1	**FINESS Array S**	**51.28**	**328**	P		**P**	**12 26 58.7**	**+0.1**
FIA1				IAmb		IAmb	12 27 12.3	
	comp=Z,7.0nm,1.0s							
FINES	**FINESS Array B**	**51.28**	**328**	P		**P**	**12 26 58.0**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=103,slow=8.0,SNR=8.5							
FINES	**FINESS Array B**	**51.28**	**328**	P		**P**	**12 26 58.3**	**-0.4**
SOEI	**Soe**	**53.07**	**129**	P		**P**	**12 27 11.8**	**-0.8**
KEV	**Kevo**	**53.26**	**338**	P		**P**	**12 27 13.3**	**+0.1**
ARCES	**ARCESS Array B**	**53.68**	**338**	P		**P**	**12 27 14.6**	**-1.8**
	comp=Z,1.9nm,0.6s,baz=86,slow=7.4,SNR=9.2							
BRG	**Berggiesshubel**	**57.41**	**315**	*ex*		x	12 27 53.9	
BRG				Amp			12 27 55.3	
	comp=Z,2.7nm,0.9s							
NOA	**NORSAR Array B**	**58.38**	**327**	P		**P**	**12 27 50.6**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=101,slow=7.2,

NOA	**NORSAR Array B**	**58.48**	**327**	P		**P**	**12 30 12.0**	**-0.2**
	0.4nm,0.4s,baz=111,slow=5.3,SNR=3.4							
WRA	**Warramunga Arr**	**67.06**	**130**	P		**P**	**12 31 09.2**	**-0.7**
	1.4nm,0.7s,baz=322,slow=6.8,SNR=2.9							
ASAR	**Alice Springs**	**69.35**	**133**	P		**P**	**12 31 24.8**	**+0.5**
	0.9nm,0.6s,baz=315,slow=5.9,SNR=3.6							
TORD	**Torodi Ar. Bea**	**78.43**	**279**	P		**P**	**12 32 17.7**	**0.0**
	0.4nm,0.6s,baz=60,slow=4.2,SNR=1.6							

IDC 25 12:37:52.7±7.8, 28°.16N×84°.65E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.2/63, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=363.8km s-min=29.6km az=67.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.70**	**355**	P		P	12 42 12.4	-0.1
	0.1nm,0.3s,baz=159,slow=10,SNR=4.1							
KURBB	**Kurchatov Arra**	**22.91**	**350**	P		P	12 42 57.6	-0.5
	0.2nm,0.4s,baz=178,slow=9.5,SNR=5.8							
ZALV	**Zalesovo Beam**	**25.77**	**0**	P		P	12 43 25.6	+0.6
	0.8nm,0.5s,baz=186,slow=12,SNR=2.1							
WRA	**Warramunga Arr**	**67.77**	**129**	P		P	12 48 52.6	0.0
	0.4nm,0.9s,baz=324,slow=6.3,SNR=1.8							

*IDC **25** 12:39:51.7±1.4, 27°.52N×85°.89E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/59, mbtmp3.7/11, ML3.8/1, Error ellipse: s-maj=44.2km s-min=19.1km az=62.0*
*NEIC **25** 12:39:52.6±1.9, 27°.48N±0°.05×86°.10E±0°.04, h10km±1km, mb4.0/23, Error ellipse: s-maj=9.2km s-min=5.2km az=6.0*
*DMN **25** 12:39:55.0±0.2, 27°.79N×86°.04E, h10km, Ml4.6/4, Error ellipse: s-maj=6.6km s-min=2.1km az=16.0*
ISC 25 12:39:56.1±1.1, 27°.51N±0°.08×85°.99E±0°.03, h29km±8km, n49, σ1§93/56, mb3.9/18, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PKI	**Pulchoki**	**0.52**	**277**	*e*Pg		**Pb**	**12 40 06.6**	**-0.4**
PKI	**Pulchoki**	**0.52**	**277**	*e*Pg		**Pb**	**12 40 06.6**	**-0.4**
PKI				*e*Sg		**Sb**	**12 40 14.8**	**+0.3**
	2μm,0.4s							
PKIN	**Phulchoki**	**0.53**	**277**	*e*Pg		**Pb**	**12 40 06.6**	**-0.6**
KKN	**Kakani**	**0.69**	**294**	*e*Pg		**Pb**	**12 40 08.3**	**-1.5**
DMN	**Daman**	**0.79**	**277**	*e*Pg		**Pn**	**12 40 11.7**	**+0.1**
DMN				*e*Sg		**Sn**	**12 40 23.2**	**+0.6**
	2μm,0.5s							
GKN	**Gorkha**	**1.30**	**293**	*e*Pg		**Pn**	**12 40 18.9**	**+0.5**
GKN				*e*Sg		**Sn**	**12 40 35.4**	**+0.5**
	2μm,0.3s							
ODAN	**Odare**	**1.40**	**117**	*e*Pg		**Pb**	**12 40 23.3**	**+1.6**
ODAN				*e*Sg		**Sb**	**12 40 44.0**	**+4.7**
	953nm,0.3s							
TAPN	**Taplejung**	**1.53**	**96**	*e*Pg		**Pb**	**12 40 23.7**	**-0.3**
TAPN				*e*Sg		**Sb**	**12 40 44.9**	**+1.7**
	1μm,0.3s							
DANN	**Dangsing**	**2.15**	**293**	*e*Pg		**Pb**	**12 40 33.8**	**-0.6**
DANN				*e*Sg		**Sb**	**12 41 00.4**	**-0.4**
	934nm,0.4s							
LSA	**Lhasa**	**5.03**	**63**	Pn		**Pn**	**12 41 07.8**	**-2.3**
SHL	**Shillong**	**5.62**	**109**	Pn		**Pn**	**12 41 15.0**	**-2.9**
NIL	**Nilore**	**12.56**	**302**	Pn		**Pn**	**12 42 53.8**	**+0.9**
KBL	**Kabul**	**16.12**	**300**	Pn		**Pn**	**12 43 41.8**	**+1.0**
KBL				IAmb		IAmb	12 43 46.0	
	comp=Z,3.7nm,0.6s							
KDJ	**Kajisay**	**16.27**	**336**			**Pn**	**12 43 41.8**	**-0.8**
BOOM	**Boomskoye usch**	**17.04**	**334**	P		**Pn**	**12 43 51.1**	**-1.3**
MK31	**Makanchi Array**	**19.47**	**352**	P		**P**	**12 44 19.3**	**-1.2**
MKAR	**Makanchi Array**	**19.47**	**352**	P		**P**	**12 44 19.4**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=172,slow=12,SNR=8.0							
MKAR	**Makanchi Array**	**19.47**	**352**	P		**P**	**12 44 17.8**	**-2.7**
MAKZ	**Makanchi**	**19.52**	**352**	P		**P**	**12 44 19.9**	**-1.2**
MAKZ				IAmb		IAmb	12 44 23.2	
	comp=Z,4.1nm,1.1s							
KK31	**Karatay Array**	**19.99**	**325**	P		**P**	**12 44 25.6**	**-0.6**
KKAR	**Karatay Array**	**19.99**	**325**	P		**P**	**12 44 26.0**	**-0.2**
KKAR						**Sn**	**12 48 22.1**	**+10**
KKAR	**Karatay Array**	**19.99**	**325**	P		**P**	**12 44 26.7**	**+0.5**
KKAR				IAmb		IAmb	12 44 43.0	
	comp=Z,3.5nm,1.4s							
PALK	**Pallekele**	**20.74**	**195**	P		**P**	**12 44 34.1**	**-0.5**
PALK				IAmb		IAmb	12 44 46.2	
	comp=Z,7.6nm,1.1s							
KURBB	**Kurchatov Arra**	**23.77**	**348**	P		**P**	**12 45 05.2**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=167,slow=8.6,SNR=7.7							
SONM	**Songino Array**	**25.79**	**33**	P		**P**	**12 45 25.4**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=212,slow=9.9,SNR=7.7							
ZAA0	**Zalesovo Array**	**26.43**	**358**	P		**P**	**12 45 29.3**	**-0.8**
ZAA0				IAmb		IAmb	12 45 30.9	
	comp=Z,3.0nm,1.1s							
ZALV	**Zalesovo Beam**	**26.43**	**358**	P		**P**	**12 45 29.3**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=175,slow=11,SNR=9.9							
ZALV	**Zalesovo Beam**	**26.43**	**358**	P		**P**	**12 45 29.1**	**-1.0**
TLY	**Talaya**	**27.56**	**24**	P		**P**	**12 45 38.0**	**-2.4**
TLY				IAmb		IAmb	12 45 51.1	
	comp=Z,4.3nm,1.5s							
ABKAR	**Akbulak array**	**29.55**	**324**	P		**P**	**12 45 58.7**	**+0.6**
ABKAR				IAmb		IAmb	12 45 59.7	
	comp=Z,2.0nm,0.6s							
ABKAR	**Akbulak array**	**29.55**	**324**	P		**P**	**12 45 58.1**	**+0.1**
KSRS	**Korea Array**	**36.48**	**63**	P		**P**	**12 46 59.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=262,slow=7.6,SNR=3.0							
MYLDM	**Lahad Datu**	**38.07**	**120**	P		**P**	**12 47 10.2**	**-2.2**
MYLDM				IAmb		IAmb	12 47 29.5	
	comp=Z,11nm,1.2s							
SANT	**Santorini**	**51.40**	**296**	P		**P**	**12 48 58.2**	**-0.3**
FINES	**FINESS Array B**	**51.91**	**328**	P		**P**	**12 49 01.8**	**0.0**
	comp=Z,1.1nm,0.8s,baz=120,slow=7.7,SNR=3.6							
ARCES	**ARCESS Array B**	**54.27**	**338**	P		**P**	**12 49 19.4**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=104,slow=7.7,SNR=1.4							
NC204	**NORSAR Array S**	**59.22**	**327**	P		**P**	**12 49 54.1**	**-0.4**
AQU	**L'Aquila**	**59.64**	**305**	P		**P**	**12 49 57.6**	**-0.1**
AQU				IAmb		IAmb	12 50 13.1	
	comp=Z,5.7nm,0.8s							
KNRA	**Kununurra**	**59.69**	**131**	P		**P**	**12 49 57.8**	**-0.3**
CLF	**Chambon-Foret**	**66.07**	**313**	P		**P**	**12 50 41.0**	**+0.7**
CLF				IAmb		IAmb	12 50 42.6	
	comp=Z,0.3nm,0.8s							
WRA	**Warramunga Arr**	**66.45**	**130**	P		**P**	**12 50 44.5**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=322,slow=6.4,SNR=10							
WRA	**Warramunga Arr**	**66.45**	**130**	P		**P**	**12 50 41.1**	**-1.9**
WRAB	**Tennant Creek**	**66.45**	**130**	P		**P**	**12 50 41.6**	**-1.5**
WB2	**Warramunga Arr**	**66.46**	**130**	P		**P**	**12 50 42.0**	**-1.1**
WB2				IAmb		IAmb	12 50 53.5	
	comp=Z,9.1nm,1.4s							
ASAR	**Alice Springs**	**68.75**	**133**	P		**P**	**12 50 56.8**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=310,slow=5.8,SNR=4.1							
ASAR	**Alice Springs**	**68.75**	**133**	P		**P**	**12 50 56.9**	**-0.6**
ILAR	**Eielson Array**	**79.31**	**20**	P		**P**	**12 51 58.9**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=310,slow=4.9,SNR=5.5							
INK	**Inuvik**	**80.11**	**14**	P		**P**	**12 52 03.2**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=348,slow=3.6,SNR=3.0							
L27K	**Beaver Creek,**	**82.10**	**20**	P		**P**	**12 52 15.6**	**+2.0**
L27K				IAmb		IAmb	12 52 26.4	
	comp=Z,1.9nm,1.1s							

IDC 25 12:42:51.2±6.5, 27°.95N×84°.64E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/51, mbtmp3.4/5, ML3.8/2, MS4.0/3, Ms1 4.0/3, ms1mx3.4/34, Error ellipse: s-maj=139.3km s-min=39.3km az=50.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.18**	**123**	Pn		Pn	12 46 40.1	+0.1
	0.2nm,0.3s,baz=315,slow=15,SNR=2.7							
MKAR	**Makanchi Array**	**18.90**	**355**	P		P	12 47 13.3	0.0
	0.1nm,0.3s,baz=171,slow=12,SNR=7.5							
KURBB	**Kurchatov Arra**	**23.11**	**350**	P		P	12 47 59.1	+0.5
	0.2nm,0.4s,baz=166,slow=11,SNR=2.6							
ZALV	**Zalesovo Beam**	**25.97**	**0**	P		P	12 48 24.9	-0.5
	0.7nm,0.4s,baz=186,slow=8.9,SNR=4.6							
SONM	**Songino Array**	**26.09**	**35**	P		P	12 48 26.8	+0.1
	0.4nm,0.5s,baz=215,slow=12,SNR=1.4							
GERES	**GERESS Array B**	**57.25**	**312**	LR		LR	13 20 23.3	
	comp=Z,160nm,18.9s,baz=27,slow=39							
JMIC	**Jan Mayen**	**64.88**	**339**	LR		LR	13 20 41.5	
	comp=Z,114nm,21.2s,baz=266,slow=35							
WRA	**Warramunga Arr**	**67.66**	**129**	LR		LR	13 27 34.7	
	comp=Z,68nm,20.0s,baz=155,slow=40							

*BJI **25** 12:44:03.9±0.0, 28°.20N×84°.78E, h6km, mB5.0/42, mb4.7/66, ML5.2/1, Ms4.9/68, Ms7 4.7/61*

*IDC **25** 12:44:03.9±0.3, 28°.06N×84°.67E, h0km, mb4.9/43, mb1 4.9/46, mb1mx4.9/53, mbtmp4.9/46, ML4.7/3, MS4.2/12, Ms1 4.2/12, ms1mx3.8/48, Error ellipse: s-maj=10.2km s-min=8.6km az=41.0*
*MOS **25** 12:44:03.6±1.2, 28°.17N×84°.60E, h10km, mb5.3/86, MS4.7/13, Error ellipse: s-maj=5.2km s-min=2.9km az=116.2*
*DMN **25** 12:44:05.4±0.1, 28°.17N×84°.72E, h10km, Ml5.6/6, Error ellipse: s-maj=3.9km s-min=1.0km az=16.0*
*BGR **25** 12:44:05.9±0.0, 27°.94N×84°.60E, h10km, mb4.9*
*NEIC **25** 12:44:05.2±1.9, 28°.10N±0°.03×84°.56E±0°.06, h10km±1km, mb5.2/234, Error ellipse: s-maj=9.1km s-min=4.2km az=284.0*
*NDI **25** 12:44:07.4±3.5, 27°.91N×84°.62E, h10km, mb5.2, ML4.9, mb5.2(NEIC)*
ISC 25 12:44:05.9±0.4, 28°.08N±0°.03×84°.64E±0°.02, h15km±2km, h15km:pP-P, n843, σ1§70/918, mb5.1/290, MS4.6/41, 58C-36D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GKN	**Gorkha**	**0.08**	**183**	*e*Pg		**Pg**	**12 44 09.0**	**-0.2**
DMN	**Daman**	**0.62**	**139**	*e*Pg		**Pg**	**12 44 18.2**	**-0.1**
DMN				*e*Sg		**Sb**	**12 44 27.2**	**-0.2**
KKN	**Kakani**	**0.63**	**117**	*e*Pg		**Pg**	**12 44 17.6**	**-0.9**
KKN				*e*Sg		**Sg**	**12 44 25.9**	**-1.0**
DANN	**Dangsing**	**0.82**	**289**	*e*Pg		**Pg**	**12 44 21.7**	**-0.3**
DANN				*e*Sg		**Sb**	**12 44 33.3**	**+0.1**
	19μm,0.3s							
PKI	**Pulchoki**	**0.85**	**127**	*e*Pg		**Pg**	**12 44 21.6**	**-0.9**
PKI				*e*Sg		**Sg**	**12 44 33.2**	**-0.5**
	10μm,0.3s							
KOLN	**Koldanda**	**0.97**	**252**	*e*Pg		**Pn**	**12 44 26.0**	**+0.8**
KOLN				*e*Sg		**Sn**	**12 44 39.1**	**+0.2**
	20μm,0.3s							
PYUN	**Piuthan**	**1.46**	**271**	*e*Pg		**Pg**	**12 44 34.2**	**+0.1**
PYUN				*e*Sg		**Sg**	**12 44 53.4**	**+0.3**
	15μm,0.3s							
ODAN	**Odare**	**2.73**	**116**	*e*Pg		**Pb**	**12 44 56.2**	**+1.6**
ODAN				*e*Sg		**Sb**	**12 45 30.4**	**+2.5**
	13μm,0.4s							
TAPN	**Taplejung**	**2.82**	**104**	*e*Pg		**Pb**	**12 44 57.5**	**+1.4**
TAPN				*e*Sg		**Sb**	**12 45 32.9**	**+2.4**
	14μm,0.6s							
GTK	**Tadong**	**3.59**	**101**	*e*P		**Pn**	**12 45 04.5**	**+3.2**
GTK				*e*S		**Sn**	**12 45 43.9**	**+0.4**
GTK				IAML			12 45 59.8	
	comp=E,3μm,0.7s							
LSA	**Lhasa**	**5.93**	**73**	Pn		**Pn**	**12 45 35.3**	**+1.6**
LSA				Sn		**Sn**	**12 46 39.5**	**-2.1**
LSA				smax		smax		
	comp=E,2μm,0.7s							
LSA				smax		smax		
	comp=E,2μm,0.6s							
LSA	**Lhasa**	**5.93**	**73**	P		**Pn**	**12 45 34.9**	**+1.2**
LSA	**Lhasa**	**5.93**	**73**	Pn		**Pn**	**12 45 34.9**	**+1.2**
DDI	**Dehra Dun**	**6.17**	**293**	*e*P		**Pn**	**12 45 39.7**	**+3.0**
DDI				*e*S		**Sn**	**12 46 45.8**	**-1.2**
DDI				IAML			12 46 50.9	
	comp=E,2μm,0.4s							
DDI				IAML			12 46 51.6	
	comp=N,2μm,0.4s							
GUWA	**GUWAHATI**	**6.56**	**105**	*e*P		**Pn**	**12 45 43.9**	**+2.1**
GUWA				*e*S		**Sn**	**12 46 54.9**	**-1.5**
SHL	**Shillong**	**6.94**	**109**	P		**Pn**	**12 45 47.4**	**+0.1**
SHL	**Shillong**	**6.94**	**109**	*e*P		**Pn**	**12 45 47.3**	**+0.1**
SHL				*e*S		**Sn**	**12 47 02.7**	**-3.3**
SHL				*e*S		**Sn**	**12 47 02.7**	**-3.3**
SHL	**Shillong**	**6.94**	**109**	Pn		**Pn**	**12 45 47.4**	**+0.1**
SHL	**Shillong**	**6.94**	**109**	P		**Pn**	**12 45 47.3**	**+0.1**
	SNR=42							
SMLA	**Simla**	**7.18**	**297**	⇑*e*P		**Pn**	**12 45 53.2**	**+2.8**
AGT	**Agartala**	**7.27**	**124**	*e*P		**Pn**	**12 45 53.9**	**+2.3**
AGT				*e*S		**Sn**	**12 47 05.6**	**-8.3**
AGT				IAML			12 47 22.9	
	comp=N,714nm,0.4s							
AGT				IAML			12 47 26.2	
	comp=E,704nm,0.5s							
TEZP	**TEZPUR**	**7.40**	**99**	⇑*e*P		**Pn**	**12 45 53.2**	**-0.2**
BELO	**BELONIA**	**7.80**	**127**	*e*P		**Pn**	**12 46 00.9**	**+2.0**
BELO				IAML			12 47 28.8	
	comp=E,21μm,0.3s							
BHPL	**Bhopal**	**8.10**	**235**	*e*P		**Pn**	**12 46 01.7**	**-1.4**
BHPL				*e*S		**Sn**	**12 47 28.5**	**-5.9**
BHPL				IAML			12 47 37.0	
	comp=N,1μm,0.3s							
BHPL				IAML			12 47 37.7	
	comp=E,691nm,0.2s							
ZIRO	**ZIRO**	**8.17**	**92**	*e*P		**Pn**	**12 46 03.4**	**-0.8**
DHRM	**DHARAMSHALA**	**8.33**	**302**	⇑*e*P		**Pn**	**12 46 07.1**	**+0.7**
DHRM				*e*S		**Sn**	**12 47 38.8**	**-1.6**
DHRM				IAML			12 47 42.7	
	comp=N,923nm,0.5s							
DHRM				IAML			12 47 42.9	
	comp=E,1μm,0.5s							
KOHI	**KOHIMA**	**8.77**	**103**	*e*P		**Pn**	**12 46 11.8**	**-0.6**
KOHI				*e*S		**Sn**	**12 47 47.1**	**-4.0**
KOHI				IAML			12 47 57.9	
	comp=E,441nm,0.5s							
KOHI				IAML			12 47 58.3	
	comp=N,585nm,0.6s							
MOKO	**MOKOCHONG**	**8.96**	**99**	*e*P		**Pn**	**12 46 15.5**	**+0.4**
MOKO				*e*S		**Sn**	**12 47 50.7**	**-5.1**
SARP	**Sargodha**	**11.06**	**293**	P		**Pn**	**12 46 42.8**	**-0.8**
CHCP	**Chirah Chowk**	**11.24**	**302**	P		**Pn**	**12 46 45.9**	**-0.2**
NIL	**Nilore**	**11.25**	**302**	P		**Pn**	**12 46 45.3**	**-0.9**
NIL	**Nilore**	**11.25**	**302**			**Pn**	**12 46 45.3**	**-0.9**
NIL	**Nilore**	**11.25**	**302**	P		**Pn**	**12 46 46.1**	**-0.1**
HYB	**Hyderabad**	**12.00**	**209**	*i* P		**Pn**	**12 46 54.0**	**-2.6**
	comp=N,450nm,1.0s							
HYB	**Hyderabad**	**12.00**	**209**	⇑*e*P		**Pn**	**12 46 54.5**	**-2.1**
CEP	**Cherat**	**12.33**	**301**	P		**Pn**	**12 46 59.0**	**-2.1**
CEP				S		Sn	12 49 07.0	-11
KSH	**Kashi**	**13.48**	**330**	P		**Pn**	**12 47 13.5**	**-3.3**
KSH				sP		P	12 47 23.0	-3.1
KSH				pmax		pmax		
	comp=N,50nm,0.6s							
KSH				LR		LR		
	comp=N,2μm,8.6s							
KSH				LR		LR		
	comp=N,2μm,11.2s							
KSH				LR		LR		
	comp=N,4μm,9.3s							
KBL	**Kabul**	**14.80**	**300**	P		**Pn**	**12 47 31.9**	**-3.0**
KBL	**Kabul**	**14.80**	**300**	Pn		**Pn**	**12 47 31.9**	**-3.0**
KBL	**Kabul**	**14.80**	**300**	P		**Pn**	**12 47 32.7**	**-2.2**
	SNR=63							
PRZ	**Przheval'sk**	**15.24**	**342**	P		**Pn**	**12 47 38.6**	**-2.2**
PRZ				pmax		pmax		
	comp=Z,68nm,1.0s							
PRZ	**Przheval'sk**	**15.24**	**342**			**Pn**	**12 47 38.5**	**-2.2**
PRZ				IAmb		IAmb	12 47 50.2	
	comp=Z,68nm,1.0s							
KDJ	**Kajisay**	**15.28**	**338**	P		**Pn**	**12 47 38.8**	**-2.5**
KDJ				pmax		pmax		
	comp=Z,38nm,1.1s							
KDJ	**Kajisay**	**15.28**	**338**	Pn		**Pn**	**12 47 38.8**	**-2.5**
MDRS	**Chennai**	**15.49**	**196**	⇑*e*P		**Pn**	**12 47 43.7**	**-0.3**
DRK	**Karamyk**	**15.58**	**320**			**Pn**	**12 47 41.2**	**-4.1**
DRK				IAmb		IAmb	12 47 56.3	
	comp=Z,116nm,0.5s							
SHLS	**Shalkode**	**15.62**	**346**	*e*P		**Pn**	**12 47 42.0**	**-3.7**
	comp=Z,48nm,1.3s,baz=347							
SHLS	**Shalkode**	**15.62**	**346**	*e*P		**Pn**	**12 47 41.9**	**-3.7**
SHLS				pmax		pmax		
	comp=Z,48nm,1.3s							
MHMT	**Maesarieng**	**15.69**	**126**	P		**Pn**	**12 47 45.9**	**-0.7**
	comp=Z,2μmcomp=Z,192nm,0.7s							
ULHL	**Ulahol**	**15.70**	**336**	P		**Pn**	**12 47 45.4**	**-1.4**
	SNR=19							
UZB	**Uzynbulak**	**15.71**	**345**	⇑*i* P		**Pn**	**12 47 45.1**	**-1.7**
	comp=Z,70nm,1.2s,baz=345							
UZB	**Uzynbulak**	**15.71**	**345**	*c i* P		**Pn**	**12 47 45.1**	**-1.7**
UZB				pmax		pmax		
	comp=Z,69nm,1.2s							
SATY	**Saty**	**15.78**	**343**	*e*P		**Pn**	**12 47 45.6**	**-2.0**
	baz=343							
SATY	**Saty**	**15.78**	**343**	*e*P		**Pn**	**12 47 45.6**	**-2.0**
WMQ	**Urumqi**	**15.90**	**8**	*e*P		**P**	**12 47 56.5**	**+3.7**
WMQ				pmax		pmax		
	comp=Z,14nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,46nm,4.3s							
WMQ				smax		smax		
	comp=N,13nm,0.9s							
WMQ				smax		smax		
	comp=E,20nm,0.5s							
WMQ				LR		LR		
	comp=N,410nm,14.9s							
WMQ				LR		LR		
	comp=E,280nm,12.9s							
WMQ				LR		LR		
	comp=Z,1μm,27.7s							
WMQ	**Urumqi**	**15.90**	**8**	*e*P		**Pn**	**12 47 45.0**	**-4.2**
WMQ				pP		P	12 47 51.8	-1.0
WMQ				sP		pP	12 47 54.3	-3.4
WMQ				S		**Sn**	**12 50 43.0**	**-2.2**
WMQ				sS		S	12 50 46.3	-13
WMQ				SS		**SnSn**	**12 50 59.3**	**+1.0**
WMQ				pmax		pmax		
	comp=Z,74nm,1.7s							
WMQ				pmax		pmax		
	comp=Z,55nm,3.7s							
WMQ				LR		LR		
	comp=Z,4μm,15.1s							
WMQ				LR		LR		
	comp=Z,2μm,12.7s							
WMQ				LR		LR		
	comp=Z,6μm,20.3s							
WMQ	**Urumqi**	**15.90**	**8**	P		**Pn**	**12 47 47.8**	**-1.4**
WMQ				pmax		pmax		
	comp=Z,170nm,1.3s							
WMQ	**Urumqi**	**15.90**	**8**			**Pn**	**12 47 47.8**	**-1.4**
WMQ				IAmb		IAmb	12 47 55.7	
	comp=Z,170nm,1.3s							
BOOM	**Boomskoye usch**	**16.02**	**336**	P		**Pn**	**12 47 48.6**	**-2.3**
BOOM				pmax		pmax		
	comp=Z,111nm,1.5s							
BOOM	**Boomskoye usch**	**16.02**	**336**	Pn		**Pn**	**12 47 48.6**	**-2.3**
CM33	**Chiang Mai Arr**	**16.03**	**122**	P		**Pn**	**12 47 49.0**	**-1.9**
CHTO	**Chiang Mai**	**16.03**	**122**	P		**Pn**	**12 47 48.9**	**-2.0**
CHTO				pmax		pmax		
	comp=Z,157nm,1.0s							
CHTO	**Chiang Mai**	**16.03**	**122**	Pn		**Pn**	**12 47 48.9**	**-2.0**
CHTO				IAmb		IAmb	12 47 58.2	
	comp=Z,157nm,1.0s							
CHTO	**Chiang Mai**	**16.03**	**122**	P		**Pn**	**12 47 51.7**	**+0.8**
CMMT	**Chiang Mai**	**16.03**	**122**	P		**Pn**	**12 47 48.9**	**-2.1**
	comp=Z,856nmcomp=Z,89nm,1.1s							
CM32	**Chiang Mai Arr**	**16.05**	**123**	P		**Pn**	**12 47 50.0**	**-1.3**
CM34	**Chiang Mai Arr**	**16.16**	**122**	P		**Pn**	**12 47 51.0**	**-1.6**
TNSS	**Tian-Shan**	**16.17**	**339**	*e*P		**Pn**	**12 47 50.2**	**-2.9**
	baz=339							
TNSS	**Tian-Shan**	**16.17**	**339**	*e*P		**Pn**	**12 47 50.1**	**-2.9**
CM15	**Chiang Mai Arr**	**16.24**	**123**	P		**Pn**	**12 47 54.8**	**+1.2**
	comp=Z,786nmcomp=Z,94nm,0.8s							
CM13	**Chiang Mai Arr**	**16.24**	**123**	P		**Pn**	**12 47 53.0**	**-0.7**
	comp=Z,530nmcomp=Z,84nm,0.9s							
CM31	**Chiang Mai Arr**	**16.25**	**123**	P		**Pn**	**12 47 55.0**	**+1.3**
	comp=Z,19μmcomp=Z,2μm,0.8s							
CM31	**Chiang Mai Arr**	**16.25**	**123**			**Pn**	**12 47 52.6**	**-1.2**
CM31	**Chiang Mai Arr**	**16.25**	**123**	P		**P**	**12 47 56.0**	**-0.7**
	SNR=46							
CMAR	**Chiang Mai Arr**	**16.25**	**123**	Pn		**Pn**	**12 47 53.2**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=302,slow=12,SNR=47							
CMAR				ScP		**ScP**	**12 56 20.1**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=288,slow=4.0,SNR=8.8							
CMAR				LR		LR	12 56 29.0	
	comp=Z,391nm,18.1s,baz=342,slow=46							
CMAR	**Chiang Mai Arr**	**16.25**	**123**	*i* P		**Pn**	**12 47 53.2**	**-0.5**
CMAR				pmax		pmax		
	comp=Z,30nm,0.9s							
CMAR	**Chiang Mai Arr**	**16.25**	**123**			**Pn**	**12 47 53.1**	**-0.6**
MDOK	**Medeo**	**16.25**	**340**	*e*P		**Pn**	**12 47 51.1**	**-2.7**
	baz=340							
MDOK	**Medeo**	**16.25**	**340**	*e*P		**Pn**	**12 47 51.1**	**-2.7**
CM02	**Chiang Mai Arr**	**16.26**	**123**	P		**Pn**	**12 47 54.0**	**+0.1**
	comp=Z,931nmcomp=Z,136nm,0.8s							
CM35	**Chiang Mai Arr**	**16.27**	**122**	P		**Pn**	**12 47 53.0**	**-1.0**
CM01	**Chiang Mai Arr**	**16.28**	**123**	P		**Pn**	**12 47 55.4**	**+1.2**
	comp=Z,832nmcomp=Z,120nm,0.9s							
CM05	**Chiang Mai Arr**	**16.28**	**123**	P		**Pn**	**12 47 53.9**	**-0.4**
	comp=Z,663nmcomp=Z,86nm,0.9s							
CM09	**Chiang Mai Arr**	**16.29**	**123**	P		**Pn**	**12 47 55.4**	**+1.1**
	comp=Z,769nmcomp=Z,117nm,0.8s							
CM04	**Chiang Mai Arr**	**16.31**	**123**	P		**Pn**	**12 47 55.6**	**+1.1**
	comp=Z,588nmcomp=Z,88nm,0.9s							
CM36	**Chiang Mai Arr**	**16.32**	**123**	P		**Pn**	**

TDK **Taldyqorghan** 17.61 345 *e*P **Pn** 12 48 08.4 -2.2
TDK pmax pmax
comp=Z,123nm,0.9s
UMPA Umpang Tak 17.67 129 P **P** 12 48 13.7 +1.1
comp=Z,5µmcomp=Z,95nm,1.0s
UTTA Uttaradit 17.89 122 P **P** 12 48 16.0 +1.1
comp=Z,770nmcomp=Z,92nm,1.3s
PBA Port Blair 18.02 153 P Pn 12 48 15.3 -0.6
PBA IAmb IAmb 12 48 20.0
comp=Z,142nm,0.9s
PBA Port Blair 18.02 153 P P 12 48 18.9 +2.6
LZH Lanzhou 18.11 59 ⇓P **Pn** **12 48 15.3 -1.8**
LZH pP P 12 48 17.8 +0.4
LZH sP pP 12 48 20.3 -1.7
LZH PP **sP** **12 48 29.8 +5.7**
LZH S **Sn** **12 51 37.8 -1.1**
LZH sS S 12 51 44.3 -0.3
LZH SS **SnSn** **12 51 58.0 +5.4**
LZH pmax pmax
comp=Z,73nm,1.3s
LZH pmax pmax
comp=Z,550nm,4.5s
LZH LR LR
comp=Z,1µm,10.3s
LZH LR LR
comp=Z,2µm,12.5s
LZH LR LR
comp=Z,1µm,13.6s
PHIT Phitsanulok 18.13 123 P **P** **12 48 19.3 +1.8**
comp=Z,166nm,0.8s
TAS Tashkent 18.23 320 P **Pn** **12 48 15.5 -2.9**
TAS pmax pmax
comp=Z,104nm,0.5s
TAS Tashkent 18.23 320 P **Pn** **12 48 15.5 -2.9**
TAS IAmb IAmb 12 48 21.5
comp=Z,104nm,0.5s
DZA Taraz 18.29 327 *e*P **Pn** **12 48 17.4 -1.8**
baz=327
DZA Taraz 18.29 327 *e*P **Pn** **12 48 17.4 -1.8**
IUG luzhnay 18.40 324 *e*P **P** **12 48 17.9 -2.7**
baz=323
IUG luzhnay 18.40 324 *e*P **P** **12 48 17.8 -2.7**
KHLT Khaolaem Dam 18.50 133 P **P** **12 48 21.6 -0.1**
comp=Z,618nmcomp=Z,66nm,0.9s
UTHA Uthaitani 18.53 129 P **Pn** **12 48 23.1 +1.0**
comp=Z,1µmcomp=Z,102nm,0.8s
SLVN Son La 18.73 107 P **Pn** **12 48 25.0 +0.2**
CHM Chimkent 18.74 323 *e*P **P** **12 48 22.2 -2.1**
baz=323
CHM Chimkent 18.74 323 *e*P **P** **12 48 22.1 -2.1**
MK31 Makanchi Array 18.77 355 P **P** **12 48 23.0 -1.5**
MK31 pmax pmax
comp=Z,46nm,1.0s
MK31 Makanchi Array 18.77 355 P **P** **12 48 23.0 -1.5**
MKAR Makanchi Array 18.77 355 P **P** **12 48 23.9 -0.7**
comp=Z,20nm,0.3s,baz=174,slow=9.2,SNR=299
MKAR Makanchi Array 18.77 355 *i*P **P** **12 48 23.8 -0.7**
MKAR pmax pmax
comp=Z,44nm,0.4s
MKAR Makanchi Array 18.77 355 P **P** **12 48 23.2 -1.3**
MAKZ Makanchi 18.81 354 P **P** **12 48 24.6 -0.3**
MAKZ pmax pmax
comp=Z,58nm,1.2s
MAKZ Makanchi 18.81 354 P **P** **12 48 24.6 -0.3**
KK31 Karatay Array 18.85 326 P **P** **12 48 23.0 -2.3**
KK31 pmax pmax
comp=Z,24nm,0.7s
KK31 Karatay Array 18.85 326 P **P** **12 48 23.0 -2.3**
KKAR Karatay Array 18.85 326 P **P** **12 48 22.8 -2.5**
KKAR pmax pmax
comp=Z,24nm,0.7s
KKAR Karatay Array 18.85 326 P **P** **12 48 22.8 -2.5**
BTLS Baital 18.92 336 *e*P **P** **12 48 24.0 -2.1**
baz=336
BTLS Baital 18.92 336 *e*P **P** **12 48 24.0 -2.1**
SRDT SRDT 19.18 132 P **Pn** **12 48 32.6 +2.6**
comp=Z,32nm,0.9s
ZSN Zaisan 19.34 0 *e*P **P** **12 48 28.9 -1.8**
baz=0.5
ZSN Zaisan 19.34 0 *e*P **P** **12 48 28.9 -1.8**
GYA Guiyang 19.64 90 ⇑P **Pn** **12 48 36.0 +0.3**
GYA S **S** **12 52 10.0 -5.6**
NONG Nongkai 19.70 116 P **Pn** **12 48 36.3 -0.1**
comp=Z,6µmcomp=Z,84nm,1.0s
CHAI Chaiyaphum 20.11 123 P Pn 12 48 41.4 +0.3
comp=Z,2µmcomp=Z,244nm,0.9s
HRA Herat 20.14 294 P **P** **12 48 38.9 -0.9**
KHON Khomkaen 20.46 121 P Pn 12 48 45.0 -0.3
comp=Z,3µmcomp=Z,140nm,0.8s
PHET Kaeng Krachan 20.58 134 P Pn 12 48 46.0 -0.7
comp=Z,1µmcomp=Z,161nm,0.8s
PALK Pallekele 21.03 191 P **P** **12 48 50.0 +0.7**
comp=Z,31nm,0.8s,baz=108,slow=13,SNR=14
PALK LR LR 12 57 50.2
comp=Z,889nm,18.3s,baz=127,slow=39
PALK Pallekele 21.03 191 P **P** **12 48 50.7 +1.4**
PALK pmax pmax
comp=Z,53nm,1.0s
PALK Pallekele 21.03 191 P **P** **12 48 50.6 +1.4**
PALK Pallekele 21.03 191 P **P** **12 48 51.4 +2.1**
PATY Pattaya 21.37 132 P **P** **12 48 55.3 +2.4**
comp=Z,231nm,0.8s
XAN Xi'an 21.61 68 P **P** **12 48 54.5 -0.9**
XAN pP pP 12 48 58.5 -1.6
XAN S **S** **12 52 51.8 -2.6**
XAN pmax pmax
comp=Z,53nm,0.6s
XAN LR LR
comp=Z,860nm,7.7s
XAN LR LR
comp=Z,970nm,9.4s
XAN LR LR
comp=Z,1µm,10.6s
XAN Xi'an 21.61 68 P **P** **12 48 54.6 -0.9**
XAN pmax pmax
comp=Z,98nm,1.3s
XAN Xi'an 21.61 68 P **P** **12 48 54.5 -0.9**
XAN IAmb IAmb 12 48 59.2
comp=Z,98nm,1.3s
DGZ Jazzator, Alta 21.70 5*c* *i*P **P** **12 48 57.1 +0.7**
DGZ pmax pmax
comp=Z,88nm,1.4s
ENH Enshi 21.79 78 P **P** **12 48 56.3 -1.2**
ENH IAmb IAmb 12 49 01.8
comp=Z,71nm,0.7s
SEM Semipalatinsk 22.55 353 *e*P **P** **12 49 03.4 -2.2**
comp=Z,65nm,1.2s,baz=353
SEM Semipalatinsk 22.55 353 *e*P **P** **12 49 03.3 -2.2**
SEM pmax pmax
comp=Z,65nm,1.2s
KURBB Kurchatov Arra 22.99 350 P **P** **12 49 09.4 -0.5**
comp=Z,37nm,0.7s,baz=174,slow=9.8,SNR=174
KURBB ScP **ScP** **12 56 36.4 -0.4**
comp=Z,1.0nm,0.8s,baz=178,slow=2.7,SNR=4.8
KURK Kurchatov 23.06 350 P **P** **12 49 09.5 -1.2**
KURK Kurchatov 23.06 350 P **P** **12 49 09.4 -1.2**
KURK **ScP** **12 56 36.4 -0.6**
UBPT Khong Chiam 23.12 119 P **P** **12 49 12.7 +1.1**
comp=Z,21nm,0.8s
UBPT Khong Chiam 23.12 119 P **P** **12 49 11.2 -0.4**
BRZS Berezniki 23.70 341 *e*P **P** **12 49 15.2 -1.9**
baz=340
BRZS Berezniki 23.70 341 *e*P **P** **12 49 15.2 -1.9**
WBK Wadi Bani Khal 23.81 263 P **P** **12 49 21.4 +2.9**
SNR=8.0
WBK P **P** **12 49 21.4 +2.9**
SNR=8.0
WBK P **P** **12 49 21.4 +2.9**
SNR=8.0
PKDT Phuket 23.89 145 P **P** **12 49 20.3 +1.2**
comp=Z,3µmcomp=Z,79nm,1.1s
WSAR Wadi Sarin 23.92 264 P **P** **12 49 20.0 +0.6**
comp=Z,16nm,0.8s,baz=98,slow=8.3,SNR=8.0
WSAR LR LR 13 00 16.8
comp=Z,439nm,18.9s,baz=103,slow=41
WSAR Wadi Sarin 23.92 264 P **P** **12 49 22.9 +3.5**
SNR=6.6
KRAB Krabi 24.07 142 P **P** **12 49 27.8 +7.0**
comp=Z,54µmcomp=Z,964nm,0.6s
GEYT Alibeck 24.25 301 P **P** **12 49 23.2 +0.8**
comp=Z,32nm,0.9s,baz=139,slow=9.2,SNR=15
GEYT Alibeck 24.25 301 P **P** **12 49 21.9 -0.5**
GYA0B ALIBECK ARRAY 24.25 301 P **P** **12 49 21.6 -0.8**
GYA0B IAmb IAmb 12 49 30.1
comp=Z,43nm,0.9s
BIDO Bidbid 24.28 265 P **P** **12 49 25.3 +2.6**
SNR=6.7
BIDO P **P** **12 49 25.3 +2.6**
SNR=6.7
BTO Baotou 24.30 52 *e*P **P** **12 49 22.0 -1.0**
BTO S **S** **12 53 34.5 -7.0**
BTO LR LR
comp=Z,5µm,15.9s
BTO LR LR
comp=Z,5µm,11.8s
SMDO Samad 24.48 264 P **P** **12 49 27.2 +2.5**
SNR=7.8
JMDO Jabal Madar 24.65 263 P **P** **12 49 28.6 +2.5**
SNR=7.6
TRTT Trang 24.65 142 P **P** **12 49 26.0 -0.2**
QIZ Qiongzhong 24.76 106 P **P** **12 49 25.0 -2.1**
QIZ sP **pP** **12 49 30.8 -1.2**
QIZ S **S** **12 53 48.3 -0.6**
QIZ sS **sS** **12 53 57.8 +0.7**
QIZ pmax pmax
comp=Z,18nm,1.6s
QIZ LR LR
comp=Z,330nm,9.6s
QIZ LR LR
comp=Z,270nm,15.2s
QIZ Qiongzhong 24.76 106 P **P** **12 49 27.8 +0.7**
QIZ IAmb IAmb 12 49 43.6
comp=Z,26nm,0.9s
HOQ Hoqain 24.98 266 P **P** **12 49 31.6 +2.4**
TIY Taiyuan 25.16 60 *e*P **P** **12 49 31.8 +1.1**
TIY S **S** **12 53 55.3 0.0**
TIY pmax pmax
comp=Z,27nm,0.6s
TIY LR LR
comp=Z,440nm,8.5s
TIY LR LR
comp=Z,560nm,9.3s
TIY LR LR
comp=Z,730nm,15.6s
MHTO MHTO 25.24 260 P **P** **12 49 33.7 +2.2**
SNR=7.4
BANOM Banah 25.32 272 P **P** **12 49 35.3 +3.0**
BSY Bisya 25.32 264 P **P** **12 49 35.0 +2.8**
BSY P **P** **12 49 35.0 +2.8**
MDH Madha 25.45 270 P **P** **12 49 36.3 +2.9**
HHC Hu-ho-hao-te 25.48 53 *e*P **P** **12 49 32.8 -0.8**
HHC pP pP 12 49 38.0 -0.6
HHC S **S** **12 53 58.3 -2.1**
HHC sS sS 12 54 10.5 +1.4
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,230nm,4.8s
HHC LR LR
comp=Z,830nm,10.0s
HHC LR LR
comp=Z,2µm,13.7s
HHC LR LR
comp=Z,3µm,13.2s
SOHO SOHO 25.52 268 P **P** **12 49 37.6 +3.6**
SOHO P **P** **12 49 37.6 +3.6**
LHMI Lhok Sumawe 25.56 151 P **P** **12 49 34.6 +0.2**
LHMI Lhok Sumawe 25.56 151 P **P** **12 49 32.7 -1.7**
comp=Z,2µmcomp=Z,244nm,0.8s
MASF Masafi 25.56 271 P **P** **12 49 40.5 +6.1**
MASF P **P** **12 49 40.5 +6.1**
UOSS Minazif 25.61 270 P **P** **12 49 35.0 +0.1**
UOSS Minazif 25.61 270 P **P** **12 49 37.0 +2.2**
UOSS P **P** **12 49 37.0 +2.2**
HATD Hatta, Dubai 25.70 269 P **P** **12 49 41.8 +6.1**
ARQ Araqi 25.75 266 P **P** **12 49 41.4 +5.3**
ZAA0 Zalesovo Array 25.84 0 P **P** **12 49 36.4 -0.2**
ZAA0 IAmb IAmb 12 49 39.0
comp=Z,66nm,1.1s
ZALV Zalesovo Beam 25.84 0 P **P** **12 49 37.2 +0.6**
comp=Z,44nm,0.4s,baz=179,slow=9.3,SNR=250
ZALV Zalesovo Beam 25.84 0 P **P** **12 49 37.0 +0.3**
SONM Songino Array 25.98 35 P **P** **12 49 39.7 +1.6**
comp=Z,14nm,0.5s,baz=226,slow=9.5,SNR=86
SONM ScP **ScP** **12 56 46.0 +0.6**
comp=Z,1.9nm,1.0s,baz=204,slow=3.3,SNR=4.5
SONM Songino Array 25.98 35 P **P** **12 49 39.4 +1.2**
SONM **ScP** **12 56 45.5 +0.1**
WHN Wuhan 25.99 77 ⇑P **P** **12 49 43.8 +5.6**
WHN S **S** **12 54 11.0 +2.6**
WHN pmax pmax
comp=Z,48nm,0.7s
WHN LR LR
comp=N,1µm,11.5s
WHN LR LR
comp=E,1µm,10.8s
WHN LR LR
comp=Z,1µm,11.1s
DQM DQM 26.01 258 P **P** **12 49 43.5 +5.0**
DQM P **P** **12 49 43.5 +5.0**
NAZ Nazwa, Dubai 26.08 270 P **P** **12 49 44.7 +5.5**
ALNE Al Ain 26.23 268 P **P** **12 49 46.5 +6.0**
ALNE P **P** **12 49 46.5 +6.0**
ULN Ulaanbaatar 26.33 35*c* *i*P **P** **12 49 42.5 +1.1**
ULN pmax pmax
comp=Z,59nm,1.0s
ULN Ulaanbaatar 26.33 35 P **P** **12 49 41.7 +0.3**
ULN IAmb IAmb 12 49 45.6
comp=Z,39nm,0.7s
ZAK Zakamensk 26.40 27 *e*P **P** **12 49 42.4 +0.6**
ZAK pmax pmax
comp=Z,22nm,1.2s
MOY Mondy 26.57 23 *e*P **P** **12 49 45.1 +1.7**
MOY pmax pmax
comp=Z,70nm,2.2s
BVAR Borovoye Array 27.07 341 P **P** **12 49 47.9 +0.2**
comp=Z,3.5nm,0.4s,baz=165,slow=12,SNR=38
UMZA Um Al Zommool 27.12 265 P **P** **12 49 50.3 +1.7**
BRVK Borovoye 27.13 341*c* *i*P **P** **12 49 48.5 +0.3**
BRVK pmax pmax
comp=Z,18nm,1.7s
BRVK Borovoye 27.13 341 P **P** **12 49 48.1 -0.1**
KULM Kulim 27.30 143 P **P** **12 49 51.3 +1.2**
TLY Talaya 27.55 26 P **P** **12 49 53.0 +0.9**
comp=Z,2.1nm,0.4s,baz=211,slow=9.3,SNR=7.0
TLY Talaya 27.55 26 *e*P **P** **12 49 54.2 +2.1**
TLY *e*S **S** **12 54 23.3 -9.4**
TLY pmax pmax
comp=Z,20nm,1.5s
TLY MLR MLR
comp=Z,4µm,9.0s
TLY Talaya 27.55 26 P **P** **12 49 50.7 -1.4**
IPM Ipoh 28.18 143 P **P** **12 49 56.6 -1.4**
IPM IAmb IAmb 12 50 02.3
comp=Z,25nm,0.8s
IRK Irkutsk 28.24 26 *e*P **P** **12 49 59.2 +1.0**
IRK pmax pmax
comp=Z,39nm,2.9s
AB31 Akbulak array 28.39 325 *i*P **P** **12 50 00.2 +0.6**
ABKAR Akbulak array 28.39 325 P **P** **12 49 59.0 -0.6**
SHAO Shalim 28.45 256 P **P** **12 50 04.2 +3.8**
BJT Baijiatuau 28.56 57 P **P** **12 49 59.7 -1.5**
BJT pmax pmax
comp=Z,16nm,1.2s
BJT Baijiatuau 28.56 57 P **P** **12 49 59.7 -1.5**
BJI Beijing 28.57 57 P **P** **12 50 02.5 +1.2**
BJI S **S** **12 54 50.8 +1.9**
BJI pmax pmax
comp=Z,11nm,1.2s
BJI LR LR
comp=Z,880nm,12.8s
BJI LR LR
comp=Z,1µm,9.4s
BJI LR LR
comp=Z,560nm,15.2s
TIA Tai'an 28.57 65 P **P** **12 50 02.0 +0.6**
TIA S **S** **12 54 50.5 +1.4**
TIA pmax pmax
comp=Z,10.0nm,1.4s
TIA LR LR
comp=Z,410nm,13.7s
TIA LR LR
comp=Z,540nm,20.6s
TIA LR LR
comp=Z,1µm,23.0s
PSI Prapat 28.60 149 P **P** **12 50 02.4 +0.6**
comp=Z,1.7nm,0.3s,baz=359,slow=13,SNR=3.8
RPSI Rantau Prapat 28.69 149 P **P** **12 50 01.4 -1.2**
RPSI Rantau Prapat 28.69 149 P **P** **12 50 02.4 -0.1**
DMTO DMTO 29.16 256 P **P** **12 50 09.3 +2.5**
GSI Gunungsitoli 29.36 153 P **P** **12 50 08.7 +0.2**
GSI Gunungsitoli 29.36 153 P **P** **12 50 08.5 0.0**
comp=Z,95nm,0.8s
DOK Doka 29.49 258 P **P** **12 50 11.1 +1.4**
SNR=6.9
NJ2 Nanjing 29.80 74 *e*P **P** **12 50 10.5 -1.8**
NJ2 S **S** **12 55 06.5 -1.9**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
NJ2 pmax pmax
comp=Z,140nm,3.6s
NJ2 LR LR
comp=Z,390nm,8.6s
NJ2 LR LR
comp=Z,750nm,13.3s
NJ2 LR LR
comp=Z,790nm,11.6s
RBK Rabkut 29.89 256 P **P** **12 50 15.3 +2.0**
WHFO Wadi Hawf 30.09 257 P **P** **12 50 16.4 +1.4**
SNR=7.2
AKTO Aktyubinsk 30.10 325 P **P** **12 50 14.9 +0.1**
MNSI Mandailing Nat 30.67 150 P **P** **12 50 18.9 -1.2**
comp=Z,52nm,0.8s
ABTO Aybut 30.74 256 P **P** **12 50 21.9 +1.1**
BKNI Bangkinang 31.76 148 P **P** **12 50 29.4 -0.3**
BKNI Bangkinang 31.76 148 P **P** **12 50 28.5 -1.2**
comp=Z,3µmcomp=Z,242nm,1.0s
MYKOM Kota Tinggi 31.95 142 P **P** **12 50 30.3 -1.1**
MYKOM IAmb IAmb 12 50 36.5
comp=Z,42nm,0.8s
DL2 Dalian 32.48 61 P **P** **12 50 38.0 +2.2**
DL2 S **S** **12 55 54.5 +4.3**
DL2 pmax pmax
comp=Z,29nm,0.9s
DL2 LR LR
comp=Z,830nm,13.5s
DL2 LR LR
comp=Z,510nm,17.8s
DL2 LR LR
comp=Z,560nm,16.4s
SOCY Socotra 32.71 247 P **P** **12 50 35.1 -3.0**
SOCY IAmb IAmb 12 50 39.0
comp=Z,38nm,1.3s
SOCY Socotra 32.71 247 P **P** **12 50 37.5 -0.7**
AKT Akhty 32.88 304 *e*P **P** **12 50 40.3 +0.8**
AKT *e* 12 51 50.7
AKT pmax pmax
comp=Z,50nm,1.3s
MAK Makhachkala 33.38 306 *e*P P 12 50 38.0 -5.6
MAK *e*PPP PPP 12 52 01.2
MAK *e*S S 12 55 55.2 -8.8
MAK pmax pmax
comp=Z,197nm,1.2s
SVE Sverdlovsk 33.40 336 *e*P **P** **12 50 44.4 +0.8**
SVE pmax pmax
comp=Z,59nm,1.4s
ARU Arti 33.88 334*c* *i*P **P** **12 50 48.2 +0.4**
ARU 12 51 57.1
ARU PPP PPP 12 52 11.6
ARU S **S** **12 56 16.1 +4.6**
ARU SS **SnSn** **12 58 21.9 +4.8**
ARU pmax pmax
comp=Z,47nm,1.6s
ARU MLR MLR
comp=Z,580nm,15.0s
ARU Arti 33.88 334 P **P** **12 50 47.0 -0.9**
ARU IAmb IAmb 12 50 49.4
comp=Z,65nm,1.5s
HIA Hailar 34.17 42 P **P** **12 50 51.1 +0.6**
HIA pmax pmax
comp=Z,30nm,1.4s
HIA Hailar 34.17 42 P **P** **12 50 51.1 +0.6**
HIA IAmb IAmb 12 50 52.7
comp=Z,30nm,1.4s
SNY Shenyang 34.43 56 ⇓P **P** **12 50 52.0 -0.8**
SNY S **S** **12 56 13.3 -7.1**
SNY pmax pmax
comp=Z,9.0nm,0.5s
SNY pmax pmax
comp=Z,99nm,3.5s
SNY LR LR
comp=Z,330nm,12.5s
SNY LR LR
comp=Z,590nm,13.9s
SNY LR LR
comp=Z,890nm,11.9s
GROC Groznyy 34.65 306 *e*P **P** **12 50 54.0 -0.7**
GROC pmax pmax
comp=Z,22nm,0.4s
JMBI JAMBI 34.73 145 P **P** **12 50 56.0 +0.4**
comp=Z,148nm,0.9s
RAYN Ar Rayn 35.42 272 P **P** **12 51 01.3 -0.4**
RAYN pmax pmax
comp=Z,12nm,1.0s
RAYN Ar Rayn 35.42 272 P **P** **12 51 01.3 -0.4**
ZEI Tsey 35.93 305 *e*P **P** **12 51 07.2 +1.2**
ZEI pmax pmax
comp=Z,31nm,1.3s
KSI Kapahiang 35.98 148 P **P** **12 51 06.2 -0.2**
comp=Z,8µmcomp=Z,62nm,1.1s
BOD Bodaibo 36.13 26 *e*P **P** **12 51 08.4 +1.2**
BOD pmax pmax
comp=Z,37nm,1.4s
CN2 Changchun 36.17 53 *e*P **P** **12 51 07.8 0.0**
CN2 S **S** **12 56 46.5 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,100nm,6.4s
CN2 LR LR
comp=Z,300nm,13.0s
CN2 LR LR
comp=Z,600nm,13.0s
CN2 LR LR
comp=Z,900nm,11.0s
INCN Inchon 36.28 64 P **P** **12 51 07.5 -1.3**
INCN pmax pmax
comp=Z,35nm,1.2s
INCN Inchon 36.28 64 P **P** **12 51 07.5 -1.3**
INCN IAmb IAmb 12 51 09.8
comp=Z,35nm,1.2s
NCK Nalchik 36.28 306⇑ *e*P **P** **12 51 10.2 +1.4**
NCK pmax pmax
comp=Z,18nm,0.4s
PMBI Palembang 36.41 145 P **P** **12 51 09.5 -0.5**
PMBI Palembang 36.41 145 P **P** **12 51 10.3 +0.3**
comp=Z,11µmcomp=Z,564nm,0.8s
PPBI Pangkal Pinang 36.48 142 P **P** **12 51 10.2 -0.5**
SBUM Sibu 36.64 129 P **P** **12 51 12.6 +0.5**
SBUM IAmb IAmb 12 51 17.7
comp=Z,37nm,1.1s
BELG Belogornoye 36.64 322⇓ *e*P **P** **12 51 11.3 -0.3**
BELG pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 36.83 306 P **P** **12 51 14.7 +1.4**
comp=Z,5.4nm,0.8s,baz=171,slow=6.9,SNR=6.1
KBZ Khabaz 36.83 306 *de*P **P** **12 51 14.5 +1.2**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
TJN Taejon 36.83 66 *de*P **P** **12 51 13.3 -0.2**
KIV Kislovodsk 37.02 307 *e*P **P** **12 51 16.7 +1.6**
KIV pmax pmax
comp=Z,38nm,1.1s
KIV MLR MLR
comp=Z,486nm,16.0s
KIV Kislovodsk 37.02 307 P **P** **12 51 14.2 -0.9**
KS19 Wonju Array Si 37.26 64 P **P** **12 51 17.4 +0.2**
KSAR Wonju Array Be 37.27 64 P **P** **12 51 16.1 -1.1**
KSAR Wonju Array Be 37.27 64 P **P** **12 51 16.1 -1.1**
KSRS Korea Array 37.30 64 P **P** **12 51 16.7 -0.8**
comp=Z,2.8nm,0.4s,baz=264,slow=8.9,SNR=28
MARD Mardin 37.76 296 P **P** **12 51 19.9 -1.7**
MARD IAmb IAmb 12 51 29.4
comp=Z,39nm,0.8s
KOPT Kop Dagi 38.11 300 P **P** **12 51 23.7 -0.9**
JTU Tsushima 38.53 69 P **P** **12 51 27.8 -0.2**
JOW Kunigami 38.59 81 P **P** **12 51 28.2 -0.3**
comp=Z,21nm,0.6s,baz=293,slow=5.3,SNR=8.5
JOW Kunigami 38.59 81 P **P** **12 51 28.6 +0.1**
JOW IAmb IAmb 12 51 34.0
comp=Z,22nm,0.6s
KIRV Kirov 39.02 331*c* *i*P **P** **12 51 32.3 +0.7**
SOC Sochi 39.08 306 *e*P **P** **12 51 30.0 -2.4**
SOC *e* 12 52 59.1
SOC *e*PPP PPP 12 53 23.4
SOC *e*S **S** **12 57 29.9 -1.3**

SOC eSSS SSS 13 00 45.5
SOC pmax pmax
comp=Z,8.0nm,0.4s
MDJ Mudanjiang 39.25 53 P **P** **12 51 33.5 -0.3**
JNU Nakatsue 39.87 71 P **P** **12 51 40.1 +1.0**
ZEA Zeya 40.27 38 *e*P **P** **12 51 43.6 +1.4**
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=E,1μm,11.0s
ZEA MLR MLR
comp=N,600nm,13.0s
ZEA MLR MLR
comp=Z,1μm,12.0s
DBJI Dramaga 40.51 145 P **P** **12 51 42.7 -1.9**
comp=Z,41nm,0.6s
GAZ Gaziantep 40.61 295 P **P** **12 51 44.9 -0.4**
GAZ IAmb IAmb 12 51 51.6
comp=Z,40nm,0.8s
ANN Anapa 40.87 307 *e*P **P** **12 51 45.4 -1.8**
ANN *e**PP **pP** **12 51 47.6 -4.7**
ANN *e*S **S** **12 57 56.1 -1.9**
ANN *e*SS **SS** **13 00 56.7 -2.7**
ANN pmax pmax
comp=Z,32nm,0.9s
USA0B Ussuriysk Arra 40.89 54 P **P** **12 51 46.6 -0.8**
USA0B pmax pmax
comp=Z,16nm,1.3s
USA0B Ussuriysk Arra 40.89 54 P **P** **12 51 46.6 -0.8**
USRK Ussuriysk Ar. 40.89 54 P **P** **12 51 47.8 +0.3**
comp=Z,4.8nm,0.5s,baz=260,slow=8.7,SNR=29
USRK Ussuriysk Ar. 40.89 54 P **P** **12 51 47.4 -0.1**
MTKI Muara Teweh, K 40.93 130 P **P** **12 51 49.1 +1.0**
VORD Divnogorie 40.94 317 *e*P **P** **12 51 46.7 -1.0**
VORD pmax pmax
comp=Z,20nm,0.8s
VSR Storozhevoye 41.09 317 *e*P **P** **12 51 48.0 -0.9**
VSR pmax pmax
comp=Z,40nm,1.5s
NRIK Noril'sk 41.33 2 P **P** **12 51 51.6 +0.9**
comp=Z,10nm,0.5s,baz=170,slow=6.2,SNR=30
NRIK Noril'sk 41.33 2 P **P** **12 51 51.5 +0.9**
NRIK pmax pmax
comp=Z,37nm,1.2s
NRIK Noril'sk 41.33 2 P **P** **12 51 51.5 +0.8**
NRIK IAmb IAmb 12 51 55.0
comp=Z,37nm,1.2s
KLR Kul'dur 41.60 46 P **P** **12 51 53.9 +0.8**
comp=Z,2.1nm,0.5s,baz=263,slow=9.6,SNR=9.9
LPSR Galich'ya Gora 41.64 319 *e*P **P** **12 51 53.4 0.0**
LPSR pmax pmax
comp=Z,40nm,0.8s
JMN Monobe 42.30 70 P **P** **12 51 58.3 -1.0**
JMN IAmb IAmb 12 52 08.3
comp=Z,34nm,0.8s
MMAI Mount Meron Ar 42.38 289 LR LR 13 11 39.6
comp=Z,128nm,19.8s,baz=110,slow=39
ATD Arta Tunnel 42.39 256 P **P** **12 51 59.0 -1.1**
ATD IAmb IAmb 12 52 05.6
comp=Z,28nm,0.8s
BBKI Banjar Baru 42.76 132 P **P** **12 52 05.4 +2.4**
comp=Z,82nm,1.3s
SMRI Semarang 42.90 141 P **P** **12 52 03.3 -0.9**
comp=Z,309nm,1.2s
BZK Bozkurt 43.12 302 ⇑P **P** **12 52 05.0 -0.7**
ILGA Ilgaz 43.32 301 P **P** **12 52 07.0 -0.6**
ILGA IAmb IAmb 12 52 14.5
comp=Z,43nm,1.2s
BR131 Keskin Array S 43.37 299 P **P** **12 52 07.4 -0.5**
BR131 pmax pmax
comp=Z,19nm,1.0s
BR131 Keskin Array S 43.37 299 P **P** **12 52 07.4 -0.5**
BR131 Keskin Array S 43.37 299 P **P** **12 52 07.1 -0.8**
SNR=12
BRTR Keskin Array B 43.37 299 P **P** **12 52 09.2 +1.3**
comp=Z,9.0nm,1.0s,baz=106,slow=7.9,SNR=26
BRTR Keskin Array B 43.37 299 *i* P **P** **12 52 09.1 +1.2**
BRTR pmax pmax
comp=Z,9.0nm,1.0s
BRTR Keskin Array B 43.37 299 P **P** **12 52 08.5 +0.5**
MOS Moscow 43.38 323 *e*P **P** **12 52 06.1 -1.4**
MOS *e* 12 54 25.6
MOS *e*S **S** **12 58 31.8 -2.9**
MOS pmax pmax
comp=Z,55nm,1.2s
MOS pmax pmax
comp=Z,200nm,1.8s
MOS MLR MLR
comp=Z,1μm,17.0s
JWT Wachi 43.40 67 P **P** **12 52 08.1 +0.1**
JWT IAmb IAmb 12 52 10.0
comp=Z,45nm,1.3s
UGM Wanagama 43.66 141 P **P** **12 52 10.6 +0.3**
comp=Z,273nm,1.8s
OBN Obninsk 43.74 322 *c i*P **P** **12 52 10.8 +0.3**
OBN *e**PP **pP** **12 52 14.0 -1.6**
OBN *e* 12 53 57.8
OBN pmax pmax
comp=Z,126nm,1.7s
OBN Obninsk 43.74 322 P **P** **12 52 11.1 +0.6**
TOLI2 Tolitoli 43.74 121 P **P** **12 52 09.0 -2.0**
TOLI2 IAmb IAmb 12 52 16.1
comp=Z,32nm,1.1s
CSS Mathiatis 43.88 292 P **P** **12 52 11.4 -0.6**
CSS IAmb IAmb 12 52 17.5
comp=Z,26nm,0.8s
ANTO Ankara 44.02 299 P **P** **12 52 10.9 -2.2**
ANTO pmax pmax
comp=Z,19nm,0.8s
ANTO Ankara 44.02 299 P **P** **12 52 10.9 -2.2**
ANTO IAmb IAmb 12 52 24.1
comp=Z,19nm,0.8s
KLMR Klimovskoe 44.48 330 *e*P **P** **12 52 14.4 -1.8**
KLMR *e* 12 53 57.8
KLMR pmax pmax
comp=Z,40nm,0.9s
KLMR Klimovskoe 44.48 330 *e*P **P** **12 52 14.5 -1.8**
KLMR AMP 12 52 21.4
comp=Z,40nm,0.9s
KLMR *e*PP **PcP** **12 53 57.8 -1.7**
JGF Kuroka 44.96 67 P **P** **12 52 19.5 -1.1**
YAK Yakutsk 44.98 28 P **P** **12 52 20.4 +0.1**
comp=Z,15nm,0.5s,baz=242,slow=2.0,SNR=9.4
YAK LR LR 13 11 58.3
comp=Z,427nm,19.7s,baz=90,slow=37
YAK Yakutsk 44.98 28 *e*P **P** **12 52 20.7 +0.4**
YAK pmax pmax
comp=Z,25nm,0.8s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK Yakutsk 44.98 28 P **P** **12 52 18.4 -1.9**
MRSI Marisa 45.03 121 P **P** **12 52 20.6 -0.7**
comp=E,775nmcomp=E,32nm,1.2s
JSD Sado 45.48 63 P **P** **12 52 24.0 -0.6**
MAJO Matsushiro 45.56 65 ⇓*e*P **P** **12 52 24.5 -0.8**
MAJO pmax pmax
comp=Z,20nm,1.5s
MAJO Matsushiro 45.56 65 P **P** **12 52 24.2 -1.1**
MAT Matsushiro 45.56 65 P **P** **12 52 24.6 -0.7**
MJAR Matsushiro Arr 45.56 65 P **P** **12 52 25.4 +0.1**
comp=Z,8.1nm,1.1s,baz=282,slow=9.2,SNR=18
MJAR Matsushiro Arr 45.56 65 P **P** **12 52 25.1 -0.2**
MJAR pmax pmax
comp=Z,5.0nm,1.3s
MJAR Matsushiro Arr 45.56 65 P **P** **12 52 25.1 -0.2**
ABJI Asem Bagus 45.71 137 P **P** **12 52 26.0 -0.6**
comp=Z,100nm,1.1s
APSI Ampana 45.72 123 P **P** **12 52 27.9 +1.1**
comp=Z,681nmcomp=Z,13nm,0.4s
GTOI Gorontalo 45.74 120 P **P** **12 52 26.0 -0.9**
comp=Z,17nm,0.9s
TTSI Tana Toraja 45.85 127 P **P** **12 52 29.5 +1.7**
comp=Z,2μmcomp=Z,65nm,0.9s
SPSI Sidrap Palu 46.46 128 P **P** **12 52 35.8 +3.2**
comp=Z,1μmcomp=Z,35nm,0.8s
ELL Elmali 46.47 295 P **P** **12 52 33.9 +1.3**
ELL pmax pmax
comp=Z,694nm,1.2s
ELL Elmali 46.47 295 P **P** **12 52 33.9 +1.3**
SRBI Singaraja 46.54 136 P **P** **12 52 33.6 +0.5**
comp=Z,116nm,1.1s
JURR Jurilovca 46.94 306 ⇑P **P** **12 52 35.8 -0.2**
TLCR 47.00 307 ⇓P **P** **12 52 37.4 +1.0**
TLCR 47.00 307 ⇓P **P** **12 52 37.4 +1.0**
KIS Kishinev 47.07 309 *e*P **P** **12 52 36.0 -1.0**
KIS *e*L L 13 16 16.0
KIS LRM MLR 13 17 14.0
comp=Z,200nm,11.0s
KIS Kishinev 47.07 309 *e*P **P** **12 52 36.0 -1.0**
KIS MLR MLR
comp=Z,200nm,11.0s
AKASG Malin Array Be 47.13 314 P **P** **12 52 37.3 -0.2**
comp=Z,4.0nm,0.4s,baz=81,slow=6.5,SNR=12
AKASG PP **PP** **12 54 30.9 +2.8**
comp=Z,2.1nm,0.6s,baz=80,slow=7.6,SNR=4.1
AKASG LR LR 13 16 22.6
comp=Z,232nm,18.9s,baz=95,slow=41
AKASG Malin Array Be 47.13 314 P **P** **12 52 37.0 -0.4**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKASG Malin Array Be 47.13 314 P **P** **12 52 37.0 -0.4**
AKBB Malin Array Si 47.13 314 *c* ⇑P **P** **12 52 37.1 -0.3**
AKBB pmax pmax
comp=Z,34nm,0.8s
AKBB Malin Array Si 47.13 314 P **P** **12 52 37.0 -0.5**
AKBB **S** **12 59 29.8 +0.6**
JYT Yasato 47.18 65 P **P** **12 52 36.0 -2.0**
TIRR Tirgusor 47.27 306 P **P** **12 52 37.4 -1.2**
TIRR pmax pmax
comp=Z,52nm,1.3s
TIRR Tirgusor 47.27 306 P **P** **12 52 37.4 -1.2**
TPGR Topolog 47.27 306 ⇑P **P** **12 52 39.3 +0.7**
MANT Manisa 47.38 298 P **P** **12 52 37.6 -2.2**
CFR Carcaliu 47.48 307 ⇑P **P** **12 52 40.7 +0.5**
CFR Carcaliu 47.48 307 ⇑P **P** **12 52 40.7 +0.5**
JMM Marumori 47.49 63 P **P** **12 52 40.3 -0.1**
JMM IAmb IAmb 12 52 41.3
comp=Z,27nm,0.9s
HARR Harsova 47.62 306 ⇑P **P** **12 52 42.9 +1.6**
HARR Harsova 47.62 306 ⇑P **P** **12 52 42.9 +1.6**
VRI Vrincioaia 48.48 308 ⇓P **P** **12 52 49.8 +1.8**
VRI Vrincioaia 48.48 308 ⇓P **P** **12 52 49.8 +1.8**
MNK Minsk 48.48 319 *e*P **P** **12 52 48.0 +0.2**
MNK Minsk 48.48 319 *i* P **P** **12 52 47.1 -0.7**
comp=E,5.0nm,1.1s
MNK *i* P **P** **12 52 47.1 -0.7**
comp=N,20nm,1.0s
MNK *i* P **P** **12 52 47.1 -0.7**
comp=Z,33nm,0.9s
MNK *i* PP **PP** **12 54 40.0 -0.4**
MNK *i* PPP PPP 12 55 27.6
MNK *i* S **S** **12 59 47.7 -0.5**
MNK *i* SS **SS** **13 03 16.9 -0.9**
MNK *i* SSS SSS 13 04 27.8
MNK *i* LQ LQ 13 09 44.5
MNK *i* LR LR 13 13 25.9
MNK *i* LRM MLR 13 16 26.2
comp=E,70nm,18.4s
MNK *i* LRM MLR 13 16 26.9
comp=N,182nm,18.4s
MNK *i* LRM MLR 13 16 28.1
comp=Z,495nm,17.8s
PLOR Plostina 48.53 308 ⇑P **P** **12 52 50.3 +1.9**
PLOR Plostina 48.53 308 ⇑P **P** **12 52 50.3 +1.9**
TESR Tescani 48.54 309 ⇑P **P** **12 52 49.4 +0.9**
YSS Yuzh-Sakhalins 48.63 51 *de*P **P** **12 52 49.9 +0.8**
YSS pmax pmax
comp=Z,26nm,1.7s
YSS Yuzh-Sakhalins 48.63 51 P **P** **12 52 49.1 0.0**
YSS IAmb IAmb 12 52 50.5
comp=Z,34nm,1.4s
BIZ Bicaz 48.92 309 ⇑P **P** **12 52 52.4 +1.0**
MLR Muntele Rosu 49.02 307 ⇑P **P** **12 52 54.1 +1.8**
MLR Muntele Rosu 49.02 307 ⇑P **P** **12 52 54.1 +1.8**
MLR Muntele Rosu 49.02 307 P **P** **12 52 54.0 +1.8**
ALN Alexandroupoli 49.12 301 P **P** **12 52 52.6 -0.4**
ALN pmax pmax
comp=Z,18nm,1.0s
ALN Alexandroupoli 49.12 301 P **P** **12 52 52.6 -0.4**
ALN IAmb IAmb 12 52 58.3
comp=Z,18nm,1.0s
OZUR 49.13 308 ⇑P **P** **12 52 54.4 +1.3**
NACGM Naroch 49.17 320 *i* P **P** **12 52 53.9 +0.8**
NACGM *i* P **P** **12 52 53.9 +0.8**
NACGM *i* P **P** **12 52 53.9 +0.8**
NACGM *i* PcP **PcP** **12 54 18.0 +1.8**
NACGM *i* PP **PP** **12 54 54.1 +7.4**
NACGM *i* PPP PPP 12 55 44.8
NACGM *i* S **S** **12 59 58.6 +0.6**
NACGM *i* SS SS 13 03 12.4 -17
NACGM *i* SSS SSS 13 05 23.9
NACGM *i* LQ LQ 13 09 57.0
NACGM *i* LR LR 13 14 03.3
IDID Didziasalis 49.26 320 *e*P **P** **12 52 54.8 +1.0**
DOPR Dopca 49.41 308 ⇑P **P** **12 52 56.3 +1.1**
BURAR Bucovina Array 49.54 310 ⇑P **P** **12 52 57.2 +1.0**
BURAR Bucovina Array 49.54 310 ⇑P **P** **12 52 57.2 +1.0**
BURAR Bucovina Array 49.54 310 P **P** **12 52 56.8 +0.6**
BURAR IAmb IAmb 12 53 02.6
comp=Z,16nm,0.8s
BUR08 Bucovina Ar. S 49.55 310 P **P** **12 52 56.5 +0.1**
BUR08 IAmb IAmb 12 53 01.6
comp=Z,20nm,1.1s
IIGN Ignalina 49.56 320 *e*P **P** **12 52 57.1 +1.0**
ISAL Salakas 49.65 321 *e*P **P** **12 52 57.7 +1.0**
VOIR 49.65 307 ⇑P **P** **12 52 57.6 +0.5**
VOIR 49.65 307 ⇑P **P** **12 52 57.6 +0.5**
VSU Vasula 49.83 324 *e*P **P** **12 52 58.6 +0.6**
APA Apatity 49.86 337 ⇑*i*P **P** **12 53 00.4 +2.3**
APA pmax pmax
comp=Z,8.0nm,0.9s
APA MLR MLR
comp=Z,900nm,14.0s
TIXI Tiksi 49.86 17 *c i*P **P** **12 52 58.5 +0.4**
TIXI Tiksi 49.86 17 P **P** **12 52 58.3 +0.2**
ARR Arges 49.95 307 ⇑P **P** **12 53 00.2 +0.9**
SANT Santorini 50.07 295 P **P** **12 52 59.6 -0.8**
ARCR ARCALIA 50.12 309 ⇑P **P** **12 53 02.4 +1.9**
LVV L'vov 50.39 313 *e*P **P** **12 53 02.7 +0.2**
IDI Anoyia 50.70 294 ⇑P **P** **12 53 04.8 -0.3**
BMR Baia Mare 50.70 310 ⇑P **P** **12 53 07.1 +2.2**
BMR Baia Mare 50.70 310 ⇑P **P** **12 53 07.1 +2.2**
FIA1 FINESS Array S 50.80 328 P **P** **12 53 05.1 -0.2**
FIA1 IAmb IAmb 12 53 13.1
comp=Z,26nm,0.7s
FINES FINESS Array B 50.80 328 P **P** **12 53 05.6 +0.3**
comp=Z,14nm,0.4s,baz=113,slow=8.1,SNR=229
FINES LR LR 13 16 44.7
comp=Z,490nm,19.5s,baz=80,slow=39
PABE Paberze 50.85 320 *e*P **P** **12 53 06.6 +0.7**
PABE Paberze 50.85 320 P **P** **12 53 05.5 -0.4**
VTS Vitosha 51.09 304 ⇑P **P** **12 53 09.4 +1.3**
VTS Vitosha 51.09 304 ⇑P **P** **12 53 09.4 +1.3**
VTS Vitosha 51.09 304 P **P** **12 53 07.7 -0.4**
VTS IAmb IAmb 12 53 13.9
comp=Z,38nm,1.0s
DEV Deva 51.15 308 ⇑P **P** **12 53 09.7 +1.4**
DEV Deva 51.15 308 ⇑P **P** **12 53 09.7 +1.4**
SUW Suwalki 51.16 318 *e*P **P** **12 53 08.5 +0.3**
SUW Suwalki 51.16 318 *e*P **P** **12 53 08.3 +0.1**
SUW Suwalki 51.16 318 P **P** **12 53 07.7 -0.5**
SUW pmax pmax
comp=Z,72nm,0.9s
SUW Suwalki 51.16 318 P **P** **12 53 07.7 -0.5**
KWP Kalwaria Pacla 51.24 313 P **P** **12 53 07.9 -1.0**
KWP pmax pmax
comp=Z,101nm,0.9s
KWP Kalwaria Pacla 51.24 313 P **P** **12 53 07.9 -1.0**
DRGR 51.25 309 ⇓P **P** **12 53 09.8 +0.7**
DRGR 51.25 309 ⇓P **P** **12 53 09.8 +0.7**
GZR Gura Zlata 51.26 307 ⇑P **P** **12 53 09.6 +0.4**
GZR Gura Zlata 51.26 307 ⇑P **P** **12 53 09.6 +0.4**
MTSE Matsula 51.38 324 *e*P **P** **12 53 10.6 +0.9**
UZH Uzhgorod 51.51 311 *e*P **P** **12 53 10.4 -0.5**
UZH *i* 12 53 12.0
UZH *i* 12 53 15.2
LIT Litokhoron 51.90 300 P **P** **12 53 13.1 -0.9**
LIT pmax pmax
comp=Z,24nm,1.2s
LIT Litokhoron 51.90 300 P **P** **12 53 13.1 -0.9**
LIT IAmb IAmb 12 53 18.4
comp=Z,24nm,1.2s
SIRR Siria 52.00 308 ⇑P **P** **12 53 15.7 +1.1**
MDVR Moldovita 52.04 306 ⇓P **P** **12 53 16.0 +1.0**
CRVS Cervenica-Dubn 52.05 312 *e*P **P** **12 53 16.8 +1.8**
CRVS pmax pmax
comp=Z,47nm,1.5s
CRVS Cervenica-Dubn 52.05 312 *e*P **P** **12 53 16.8 +1.8**
BZS Buzias 52.06 308 ⇓P **P** **12 53 16.3 +1.2**
BZS Buzias 52.06 308 ⇓P **P** **12 53 16.3 +1.2**
AGG Agios Georgios 52.16 299 P **P** **12 53 15.0 -1.0**
AGG pmax pmax
comp=Z,26nm,0.9s
AGG Agios Georgios 52.16 299 P **P** **12 53 14.9 -1.0**
AGG IAmb IAmb 12 53 19.8
comp=Z,26nm,0.9s
FNA Florina 52.66 301 P **P** **12 53 18.7 -1.0**
FNA pmax pmax
comp=Z,29nm,1.4s
FNA Florina 52.66 301 P **P** **12 53 18.7 -1.0**
FNA IAmb IAmb 12 53 25.2
comp=Z,29nm,1.4s
KECS Kecovo 52.71 311 *e*P **P** **12 53 22.9 +3.0**
KECS Kecovo 52.71 311 *e* **P** **12 53 22.9 +3.0**
NIE Niedzica 52.81 312 *e*P **P** **12 53 22.4 +1.8**
LODK Lodwar 52.90 252 P **P** **12 53 21.3 -0.5**
LODK Lodwar 52.90 252 P **P** **12 53 23.1 +1.2**
SNR=7.5
OJC Ojcow 53.12 313 *e*P **P** **12 53 23.4 +0.5**
OJC Ojcow 53.12 313 P **P** **12 53 21.7 -1.2**
OJC pmax pmax
comp=Z,13nm,0.7s
OJC Ojcow 53.12 313 P **P** **12 53 21.7 -1.2**
OJC IAmb IAmb 12 53 30.8
comp=Z,13nm,0.7s
PSZ Piszkesteto 53.13 310 ⇑P **P** **12 53 24.0 +1.0**
PSZ Piszkesteto 53.13 310 P **P** **12 53 22.7 -0.3**
PSZ pmax pmax
comp=Z,13nm,0.8s
PSZ Piszkesteto 53.13 310 P **P** **12 53 22.7 -0.3**
ARA0 ARCESS Array S 53.29 338 *e*P **P** **12 53 24.6 +0.8**
ARCES ARCESS Array B 53.29 338 P **P** **12 53 24.3 +0.5**
comp=Z,15nm,0.7s,baz=99,slow=7.5,SNR=57
ARCES ARCESS Array B 53.29 338 P **P** **12 53 23.8 0.0**
DIVS Divibare 53.32 306 P **P** **12 53 24.7 +0.1**
FRGS Fruska Gora 53.36 307 ⇑P **P** **12 53 25.3 +0.6**
LANS Liptovska Anna 53.36 312 *e*P **P** **12 53 26.5 +1.8**
LANS pmax pmax
comp=Z,6.0nm,0.6s
LANS Liptovska Anna 53.36 312 *e*P **P** **12 53 26.5 +1.8**
BATI Baumata 53.61 130 P **P** **12 53 26.7 -0.1**
comp=Z,30nm,0.7s,baz=261,slow=7.0,SNR=3.8
SOEI Soe 53.70 129 P **P** **12 53 27.8 +0.1**
SOEI Soe 53.70 129 P **P** **12 53 28.0 +0.3**
comp=Z,90nm,0.8s
VYHS Vyhne 53.81 311 *e*P **P** **12 53 28.5 +0.5**
VYHS *e* 12 53 32.1
VYHS *e* 12 55 28.4
VYHS pmax pmax
comp=Z,26nm,1.3s
VYHS Vyhne 53.81 311 *e*P **P** **12 53 28.5 +0.5**
VYHS *e* 12 53 32.1
VYHS *e*PP **PP** **12 55 28.4 -0.5**
KTK1 Kautokeino 53.90 337 *e*P **P** **12 53 28.6 +0.3**
KMBO Kilima Mbogo 53.92 246 P **P** **12 53 30.1 +0.6**
comp=Z,14mm,0.8s,baz=46,slow=11,SNR=19
KMBO Kilima Mbogo 53.92 246 *i* P **P** **12 53 30.8 +1.3**
KMBO pmax pmax
comp=Z,14nm,0.8s
KIBK Kibwezi 54.01 244 P **P** **12 53 30.3 +0.3**
KIBK IAmb IAmb 12 53 35.6
comp=Z,31nm,1.5s
KIBK Kibwezi 54.01 244 P **P** **12 53 30.6 +0.6**
PDG Podgorica 54.04 304 ⇑P **P** **12 53 29.6 -0.1**
PDG Podgorica 54.04 304 P **P** **12 53 29.1 -0.6**
PDG IAmb IAmb 12 53 34.5
comp=Z,33nm,0.8s
MORH Mrgy, Hungar 54.09 308 ⇑P **P** **12 53 30.1 +0.1**
MA2 Magadan 54.19 35 P **P** **12 53 30.8 +0.2**
comp=Z,10.0nm,0.4s,baz=287,slow=6.2,SNR=17
MA2 Magadan 54.19 35 ⇓*e*P **P** **12 53 31.5 +0.9**
MA2 pmax pmax
comp=Z,39nm,1.2s
OKC Ostrava-Krasne 54.20 313 *e*P **P** **12 53 35.4 +4.7**
OKC MLR MLR
comp=Z,400nm,14.8s
OKC Ostrava-Krasne 54.20 313 *e*pP **P** **12 53 35.4 +4.7**
OKC AMS AMS 13 19 10.0
comp=Z,400nm,14.8s
HAMF Hammerfest 54.23 339 *e*P **P** **12 53 31.9 +1.3**
JAVC Velka Javorina 54.56 312 *e*P **P** **12 53 34.5 +1.0**
MORC Moravsky Berou 54.59 313 *e*P **P** **12 53 34.0 +0.3**
MORC Moravsky Berou 54.59 313 P **P** **12 53 32.2 -1.5**
MORC pmax pmax
comp=Z,19nm,1.1s
MORC Moravsky Berou 54.59 313 P **P** **12 53 32.2 -1.5**
MORC IAmb IAmb 12 53 39.0
comp=Z,19nm,1.1s
UPP Uppsala 54.66 325 *e*P **P** **12 53 34.7 +0.8**
MODS Modra-Piesok 54.85 311 *e*P **P** **12 53 35.8 +0.2**
MODS pmax pmax
comp=Z,20nm,1.4s
MODS Modra-Piesok 54.85 311 *e*P **P** **12 53 35.8 +0.2**
ZST Bratislava 54.98 311 *e*P **P** **12 53 38.0 +1.5**
ZST pmax pmax
comp=Z,24nm,0.8s
ZST Bratislava 54.98 311 *e*P **P** **12 53 38.0 +1.5**
JETT Jettan, Norway 55.02 337 *e*P **P** **12 53 37.4 +0.9**
KRLC Kraliky 55.06 313 *e*P **P** **12 53 37.8 +0.7**
KRLC MLR MLR
comp=Z,500nm,12.9s
KRLC Kraliky 55.06 313 *e*P **P** **12 53 37.8 +0.7**
KRLC AMS AMS 13 19 40.0
comp=Z,500nm,12.9s
VRAC Vranov 55.23 312 ⇓P **P** **12 53 39.5 +1.2**
VRAC Vranov 55.23 312 *e*P **P** **12 53 39.0 +0.7**
VRAC Vranov 55.23 312 ⇓P **P** **12 53 39.6 +1.2**
SEY Seymchan 55.28 31 P **P** **12 53 39.2 +0.8**
comp=Z,12nm,0.6s,baz=256,slow=6.5,SNR=30
SEY Seymchan 55.28 31 ⇓*i*P **P** **12 53 39.9 +1.5**
DPC Dobruska-Polom 55.34 314 *e*P **P** **12 53 40.0 +0.9**
DPC *e* 12 53 43.1
DPC MLR MLR
comp=Z,500nm,13.2s
DPC Dobruska-Polom 55.34 314 *e*P **P** **12 53 40.0 +0.9**
DPC *e*pP **pP** **12 53 43.1 -1.3**
DPC AMS AMS 13 19 50.0
comp=Z,500nm,13.2s
KRUC Moravsky 55.38 312 *e*P **P** **12 53 39.7 +0.3**
OSTC Ostas 55.40 314 *e*P **P** **12 53 40.5 +1.0**
OSTC AMS AMS 13 20 00.0
comp=Z,600nm,9.5s
BLEU Blekinge 55.48 321 *i* P **P** **12 53 39.7 -0.2**
CHVC Chvalec 55.50 314 *e*P **P** **12 53 41.2 +1.0**
UPC Upice 55.53 314 *e*P **P** **12 53 41.9 +1.5**
UPC MLR MLR
comp=Z,600nm,12.7s
UPC Upice 55.53 314 *e*P **P** **12 53 41.9 +1.5**
UPC AMS AMS 13 20 00.0
comp=Z,600nm,12.7s
TRO Tromso 55.54 337 *e*P **P** **12 53 40.8 +0.7**
CONA Conrad Observa 55.83 311 *e*P **P** **12 53 43.2 +0.5**
comp=Z,39nm,1.0s,SNR=22
HOPEN Hopen 55.94 346 *e*P **P** **12 53 43.2 +0.2**
TREC Trest 55.96 312 AMS AMS 13 20 10.0
comp=Z,500nm,9.7s
BSD Bornholm Skovb 56.00 319 *e*P **P** **12 53 47.0 +3.3**
BSD Bornholm Skovb 56.00 319 *e*P **P** **12 53 46.9 +3.3**
ARSA Arzberg 56.13 310 *e*P **P** **12 53 45.1 +0.3**
comp=Z,9.8nm,0.7s,SNR=5.5
RER Riviere de l'E 56.36 213 P **P** **12 53 48.8 +2.1**
PVCC Panska Ves 56.45 314 AMS AMS 13 20 30.0
comp=Z,600nm,14.3s
FAUS Fauske 56.47 334 *e*P **P** **12 53 47.0 +0.1**
PERS Pernice 56.47 309 ⇑*e*P **P** **12 53 47.9 +0.6**
LNIZ Loecknitz 56.48 318 *e*P **P** **12 53 47.7 +0.7**
comp=Z,10.0nm,0.7s,baz=83,slow=6.9
PRU Pruhonice 56.51 313 *e*P **P** **12 53 48.3 +0.9**
PRU *e* 12 53 52.1
PRU MLR MLR
comp=Z,500nm,15.9s
PRU Pruhonice 56.51 313 *e*P **P** **12 53 48.3 +0.9**
PRU *e*pP **pP** **12 53 52.1 -0.6**
PRU AMS AMS 13 20 30.0
comp=Z,500nm,15.9s
BOJS Bojanci 56.52 308 ⇑*i*P **P** **12 53 48.2 +0.6**
SOKA Soboth 56.53 309 *e*P **P** **12 53 48.3 +0.6**
comp=Z,27nm,1.1s,SNR=12
DEL Delary 56.56 321 *i* P **P** **12 53 48.3 +0.6**
DEL Delary 56.56 321 *i* P **P** **12 53 47.0 -0.7**

STEI Steigen 56.56 335 eP P 12 53 48.1 +0.7
PRA Prague 56.57 313 AMS AMS 13 20 40.0
comp=Z,700nm,13.1s
HFS Hagfors 56.65 326 LR LR 13 19 31.4
comp=Z,822nm,18.1s,baz=112,slow=38
MOR8 Moi Rana 56.67 333 eP P 12 53 48.0 -0.4
SGRT San Giovanni R 56.72 303 P P 12 53 48.7 -0.5
SGRT IAmb IAmb 12 53 56.7
comp=Z,35nm,1.0s
CKRC Cesky Krumlov 56.77 312 eP P 12 53 49.6 +0.2
CKRC AMS AMS 13 20 40.0
comp=Z,400nm,17.0s
RUE Ruedersdorf 56.80 316 eP P 12 53 49.9 +0.5
comp=Z,19nm,0.7s,baz=83,slow=6.9
BRG Berggiesshubel 56.82 314 eP P 12 53 50.1 +0.5
BRG Amp 12 53 51.1
comp=Z,7.6nm,0.7s
BRG ex x 12 53 53.3
BRG Amp 12 53 55.1
comp=Z,24nm,1.2s
BRG Berggiesshubel 56.82 314 eP P 12 53 50.5 +0.9
comp=Z,20nm,1.1s,baz=83,slow=6.9
LUNU Lund 56.83 320 iP P 12 53 50.4 +0.8
OBKA Obir 56.88 309 iP P 12 53 50.7 +0.5
comp=Z,24nm,1.1s
PBCC Pribram 56.89 313 eP P 12 53 50.7 +0.5
PBCC ex x 12 53 54.7
MOA Molln 56.91 311 iP P 12 53 50.5 +0.2
comp=Z,20nm,1.0s,SNR=14
RGN Rugen 56.95 319 eP P 12 53 51.5 +1.1
comp=Z,65nm,1.0s,baz=83,slow=6.9
NBB30 Finnes 57.03 334 eP P 12 53 51.5 +0.7
BORU Boraas 57.14 323 eP P 12 53 51.9 +0.1
GEC2 GERESS Array S 57.17 312 P P 12 53 52.2 -0.1
GEC2 GERESS Array S 57.17 312 eP P 12 53 53.0 +0.7
comp=Z,6.6nm,0.9s,baz=83,slow=6.9
GERES GERESS Array B 57.17 312 P P 12 53 53.0 +0.7
comp=Z,3.3nm,0.4s,baz=93,slow=7.0,SNR=22
GERES GERESS Array B 57.17 312 P P 12 53 53.0 +0.7
GERES GERESS Array B 57.17 312 P P 12 53 51.5 -0.7
FABU Falkenberg 57.18 322 iP P 12 53 52.5 +0.4
FBE Freiberg 57.18 314 eP P 12 53 53.4 +1.2
comp=Z,18nm,1.1s,baz=83,slow=6.9
KHC Kasperske Hory 57.22 312 eP P 12 53 53.0 +0.5
KHC e 12 53 56.9
KHC MLR MLR
comp=Z,500nm,11.6s
KHC Kasperske Hory 57.22 312 eP P 12 53 53.0 +0.5
KHC epP pP 12 53 56.9 -0.9
KHC AMS AMS 13 21 00.0
comp=Z,500nm,11.6s
KHC Kasperske Hory 57.22 312 P P 12 53 52.2 -0.4
LOF Lofoten 57.22 335 eP P 12 53 51.7 -0.5
KONS Konsvik 57.23 333 eP P 12 53 52.7 +0.5
CEL Celeste 57.26 299 P P 12 53 52.6 -0.3
CEL IAmb IAmb 12 53 58.0
comp=Z,27nm,1.0s
SKR Severo-Kuril's 57.33 46 eP P 12 53 58.1 +5.0
SKR eS S 13 01 54.7 +5.8
SKR pmax pmax
comp=Z,25nm,1.7s
SKR MLR MLR
comp=Z,600nm,15.0s
SKR MLR MLR
comp=Z,400nm,14.0s
CLL Collm 57.37 315 ⇓ iP P 12 53 56.9 +3.4
comp=Z,31nm,1.8s
CLL iP sP 12 54 00.4 -0.3
CLL ePP PP 12 56 02.0 +1.4
CLL Collm 57.37 315 P P 12 53 53.2 -0.3
CLL pmax pmax
comp=Z,17nm,1.4s
CLL Collm 57.37 315 P P 12 53 53.2 -0.3
CLL Collm 57.37 315 eP P 12 53 53.8 +0.3
comp=Z,4.9nm,0.9s,baz=83,slow=6.9
MYKA Terra Mystica 57.48 309 eP P 12 53 54.4 0.0
comp=Z,6.6nm,0.7s
TRI Trieste 57.53 308 P P 12 53 54.0 -0.7
TRI pmax pmax
comp=Z,45nm,1.3s
TRI Trieste 57.53 308 P P 12 53 54.0 -0.7
TRI IAmb IAmb 12 53 59.2
comp=Z,45nm,1.3s
NSS Namsos 57.59 331 eP P 12 53 55.4 +0.6
KBA Koelnbreinsper 57.62 310 eP P 12 53 55.2 -0.4
comp=Z,6.1nm,0.6s
NC405 NORSAR Array S 57.63 327 P P 12 53 54.5 -0.7
WET Wettzell 57.67 312 eP P 12 53 56.5 +0.8
comp=Z,7.7nm,0.9s,baz=83,slow=6.9
NC602 NORSAR Array S 57.72 326 P P 12 53 54.8 -1.0
PAOL Paolisi 57.72 303 P P 12 53 55.5 -0.8
PAOL IAmb IAmb 12 54 12.9
comp=Z,28nm,1.4s
NC300 NORSAR Array S 57.78 327 P P 12 53 55.8 -0.4
NC300 IAmb IAmb 12 54 03.6
comp=Z,26nm,0.9s
TANN Tannenbergstha 57.80 314 eP P 12 53 57.3 +0.7
comp=Z,8.2nm,1.1s,baz=83,slow=6.9
NC303 NORSAR Array S 57.80 327 P P 12 53 55.7 -0.7
NKC Novy Kostel 57.83 314 AMS AMS 13 21 20.0
comp=Z,800nm,13.8s
NB201 NORSAR Array S 57.84 327 P P 12 53 56.2 -0.5
WERN Wernitzgruen 57.87 314 eP P 12 53 57.9 +0.8
comp=Z,4.4nm,0.9s,baz=83,slow=6.9
NB2 NORSAR Subarra 57.88 327 P P 12 53 56.3 -0.7
baz=90,slow=6.9
NOA NORSAR Array B 57.88 327 P P 12 53 56.7 -0.3
comp=Z,5.4nm,0.7s,baz=90,slow=7.0,SNR=21
GUNZ Gunzen 57.87 314 eP P 12 53 58.0 +0.8
comp=Z,6.7nm,0.9s,baz=83,slow=6.9
WERD Werda 57.90 314 eP P 12 53 57.9 +0.7
comp=Z,5.8nm,0.8s,baz=83,slow=6.9
RJOB Jochberg 57.91 311 eP P 12 53 57.7 +0.3
comp=Z,34nm,0.8s,baz=83,slow=6.9
STRU Stroemstad 57.94 324 iP P 12 53 57.5 +0.2
ZOU Zoufplan 57.95 309 P P 12 53 56.9 -1.0
ROTZ Rotzenmuhle 58.04 313 eP P 12 53 59.5 +1.2
comp=Z,14nm,1.0s,baz=83,slow=6.9
NAO01 NORSAR Array S 58.04 326 P P 12 53 57.9 -0.2
NAO01 NORSAR Array S 58.04 326 eP P 12 53 58.0 -0.2
MANZ Manzenberg 58.07 313 eP P 12 53 59.8 +1.2
comp=Z,6.6nm,1.0s,baz=83,slow=6.9
PETK Petropavlovsk- 58.07 43 P P 12 53 58.3 -0.1
comp=Z,5.3nm,0.5s,baz=295,slow=2.6,SNR=17
NC204 NORSAR Array S 58.09 327 P P 12 53 58.3 -0.2
OSL Oslo 58.14 325 eP P 12 53 59.3 +0.5
NEUB Neuenburg 58.15 315 eP P 12 53 59.5 +0.6
comp=Z,14nm,0.9s,baz=83,slow=6.9
HSPB Hornsund (broa 58.17 346 eP P 12 53 59.8 +1.1
STAL STALIGIAL 58.17 309 P P 12 53 59.0 -0.2
STAL IAmb IAmb 12 54 04.0
comp=Z,26nm,0.9s
ABTA Abfaltersbach 58.24 310 eP P 12 53 59.2 -0.6
comp=Z,13nm,1.2s
MOX Moxa 58.31 314 eP P 12 54 00.9 +0.8
comp=Z,3.9nm,0.8s,baz=83,slow=6.9
AQU L'Aquila 58.34 304 P P 12 53 58.9 -1.6
AQU pmax pmax
comp=Z,31nm,1.0s
AQU L'Aquila 58.34 304 P P 12 53 58.9 -1.6
AQU IAmb IAmb 12 54 15.0
comp=Z,31nm,1.0s
FLTG Flechtingen 58.36 316 eP P 12 54 00.7 +0.3
comp=Z,9.5nm,0.8s,baz=83,slow=6.9
NRCA Norcia 58.46 305 P P 12 54 02.0 +0.6
NRCA IAmb IAmb 12 54 07.8
comp=Z,15nm,0.7s
PET Petropavlovsk 58.66 43 P P 12 54 02.1 -0.3
PET pmax pmax
comp=Z,63nm,1.2s
PET Petropavlovsk 58.66 43 P P 12 54 02.1 -0.3
KONO Kongsberg 58.72 325 P P 12 54 02.8 0.0
KONO pmax pmax
comp=Z,78nm,1.5s
KONO Kongsberg 58.72 325 P P 12 54 02.8 0.0
KONO Kongsberg 58.72 325 eP P 12 54 03.3 +0.5
ASSE Asse, Remlinge 58.73 316 eP P 12 54 02.5 -0.4
comp=Z,7.0nm,0.7s,baz=83,slow=6.9
BSEG Bad Segeberg 58.75 318 eP P 12 54 04.2 +1.1
comp=Z,20nm,0.7s,baz=83,slow=6.9
WTTA Wattenberg 58.75 310 eP P 12 54 02.9 -0.6
comp=Z,22nm,1.0s,SNR=5.4
WATA Walderalm 58.78 310 iP P 12 54 02.7 -1.0
comp=Z,12nm,0.7s
FUR Furstenfeldbru 58.86 311 eP P 12 54 04.8 +0.8
comp=Z,18nm,0.5s,baz=83,slow=6.9
DOMB Dombas 58.89 328 eP P 12 54 04.4 +0.4
CLZ Clausthal 58.95 316 eP P 12 54 05.5 +0.9
comp=Z,23nm,0.9s,baz=83,slow=6.9
MBAR Mbarara 58.96 251 ceP P 12 54 05.9 +0.6
MBAR pmax pmax
comp=Z,11nm,0.8s
MBAR Mbarara 58.96 251 P P 12 54 05.7 +0.3
NRDL Niedersach Rie 59.03 317 eP P 12 54 06.3 +1.3
comp=Z,25nm,0.8s,baz=83,slow=6.9
TEOL Teolo 59.04 308 P P 12 54 04.9 -0.4
SQTA Sankt Quirin 59.05 310 eP P 12 54 04.7 -0.7
comp=Z,17nm,0.7s,SNR=5.5
MOTA Moosalm 59.10 311 eP P 12 54 05.4 -0.5
comp=Z,28nm,1.1s,SNR=11
GTTG Gottingen 59.23 316 eP P 12 54 07.4 +0.8
comp=Z,11nm,0.9s,baz=83,slow=6.9
RETA Reutte 59.30 311 iP P 12 54 06.5 -0.7
comp=Z,13nm,0.7s
UBBA Unterbreizbach 59.31 315 eP P 12 54 07.8 +0.9
comp=Z,13nm,1.4s,baz=83,slow=6.9
SKAR Skarslia 59.31 326 eP P 12 54 07.6 +0.6
KBS Kingsbay 59.32 348 P P 12 54 06.1 -0.6
KBS pmax pmax
comp=Z,40nm,1.5s
KBS Kingsbay 59.32 348 P P 12 54 06.1 -0.6
KBS IAmb IAmb 12 54 11.5
comp=Z,40nm,1.4s
KBS Kingsbay 59.32 348 eP P 12 54 07.7 +1.0
HOMB Homborsund 59.38 323 eP P 12 54 08.1 +0.7
FETA Feichten 59.40 310 eP P 12 54 07.3 -0.7
comp=Z,24nm,1.2s,SNR=5.7
LATE Laterza 59.45 305 P P 12 54 07.1 -1.1
LATE IAmb IAmb 12 54 12.7
comp=Z,22nm,1.2s
MOL Molde 59.58 328 eP P 12 54 08.3 -0.3
OSSC Osservatorio P 59.67 306 P P 12 54 09.0 -0.7
OSSC IAmb IAmb 12 54 17.3
comp=Z,11nm,0.9s
UBR Ueberruh 59.71 311 eP P 12 54 09.9 -0.1
comp=Z,8.4nm,0.8s,baz=83,slow=6.9
SALO Salr 59.78 309 P P 12 54 10.2 -0.2
AKN Aaknes 59.85 328 eP P 12 54 11.2 +0.6
MILB Miltenberg 59.90 314 eP P 12 54 12.9 +1.7
comp=Z,5.6nm,0.8s,baz=83,slow=6.9
DAVA Damuels 59.93 311 eP P 12 54 11.2 -0.4
comp=Z,28nm,0.8s,SNR=14
STU Stuttgart 60.13 312 P P 12 54 12.4 -0.4
STU pmax pmax
comp=Z,17nm,0.9s
STU Stuttgart 60.13 312 P P 12 54 12.3 -0.4
STU IAmb IAmb 12 54 17.6
comp=Z,17nm,0.9s
STU Stuttgart 60.13 312 eP P 12 54 13.3 +0.5
comp=Z,11nm,0.8s,baz=83,slow=6.9
ODD1 Odda 60.20 325 eP P 12 54 13.7 +0.5
KASTN Kahler Asten 60.24 315 eP P 12 54 14.2 +0.7
comp=Z,14nm,1.3s,baz=83,slow=6.9
TNS Taunus Mts 60.38 314 eP P 12 54 15.2 +0.7
comp=Z,8.6nm,0.8s,baz=83,slow=6.9
TUE Stuetta 60.43 310 P P 12 54 14.4 -0.7
TUE IAmb IAmb 12 54 20.4
comp=Z,22nm,1.3s
IBBN Ibbenburen 60.48 317 eP P 12 54 15.8 +0.7
comp=Z,11nm,0.8s,baz=83,slow=6.9
FITZ Fitzroy Crossi 60.68 134 P P 12 54 16.9 +0.1
comp=Z,16nm,0.8s,baz=324,slow=4.2,SNR=27
FITZ Fitzroy Crossi 60.68 134 P P 12 54 17.0 +0.2
FITZ IAmb IAmb 12 54 21.5
comp=Z,20nm,0.8s
MSSA Maissana 60.74 307 P P 12 54 16.6 -0.5
MSSA IAmb IAmb 12 54 30.2
comp=Z,18nm,1.0s
BFO Black Forest 60.77 312 eP P 12 54 17.1 -0.1
comp=Z,3.2nm,1.0s,baz=83,slow=6.9
BUG Bochum--Univer 60.92 316 eP P 12 54 18.7 +0.7
comp=Z,12nm,0.9s,baz=83,slow=6.9
KNRA Kununurra 60.97 130 P P 12 54 19.7 +0.9
KNRA IAmb IAmb 12 54 23.3
comp=Z,23nm,0.8s
BILL Bilibino 61.17 25 dP P 12 54 20.9 +1.4
BILL e* PP pP 12 54 24.1 -0.7
BILL e 12 55 03.4
BILL e 12 56 34.2
BILL eP PPP PPP 12 57 58.2
BILL pmax pmax
comp=Z,36nm,1.3s
BILL Bilibino 61.17 25 P P 12 54 20.1 +0.6
AHRW Bad Neuenahr-A 61.19 315 eP P 12 54 20.8 +0.9
comp=Z,9.0nm,0.8s,baz=83,slow=6.9
SENIN Lac Senin/Sane 61.84 310 P P 12 54 24.0 -0.7
MEM Membach 61.85 315 dP P 12 54 24.8 +0.4
MEM dpP pP 12 54 27.9 -1.8
MEM dx x 12 54 31.7
WLF Walferdange 61.93 314 dP P 12 54 25.7 +0.7
WLF dx x 12 54 28.8
WLF Walferdange 61.93 314 P P 12 54 23.0 -2.0
WLF pmax pmax
comp=Z,17nm,1.0s
WLF Walferdange 61.93 314 P P 12 54 23.0 -2.0
WLF IAmb IAmb 12 54 30.4
comp=Z,17nm,1.0s
WLF Walferdange 61.93 314 eP P 12 54 26.1 +1.1
comp=Z,10nm,0.9s,baz=83,slow=6.9
BSTI Sart Tilman 62.13 315 dP P 12 54 25.6 -0.6
BCLA Clavier 62.32 315 dP P 12 54 21.1 -6.4
BCLA dPcP PcP 12 55 03.3 -3.9
BNI Bardonecchia 62.55 309 P P 12 54 28.6 -0.8
BNI pmax pmax
comp=Z,16nm,1.1s
BNI Bardonecchia 62.55 309 P P 12 54 28.6 -0.8
BNI IAmb IAmb 12 54 42.3
comp=Z,16nm,1.1s
BMRD Maredsous 62.68 315 dP P 12 54 29.1 -0.9
BMRD dpP pP 12 54 32.9 -2.4
DOU Dourbes 62.83 315 dP P 12 54 29.5 -1.5
KEST Kesra 62.95 298 P P 12 54 32.7 +0.6
comp=Z,31nm,1.0s,baz=351,slow=0.7,SNR=19
KEST Kesra 62.95 298 P P 12 54 30.4 -1.7
KEST Kesra 62.95 298 P P 12 54 33.4 +1.3
SNR=7.0
NOR Nord 64.05 351 iP P 12 54 38.7 +0.1
NOR IAmb IAmb 12 54 39.5
comp=Z,8.8nm,0.5s
NOR Nord 64.05 351 iP P 12 54 38.6 +0.1
NOR pmax pmax
comp=Z,9.0nm,0.5s
MORW Morawa 64.28 150 P P 12 54 40.8 +0.1
DAG Danmarks Havn 65.87 346 iP P 12 54 50.3 -0.2
DAG IAmb IAmb 12 54 51.3
comp=Z,3.6nm,0.5s
DAG Danmarks Havn 65.87 346 iP P 12 54 50.2 -0.2
DAG pmax pmax
comp=Z,4.0nm,0.5s
WB0 Warramunga Arr 67.65 129 P P 12 55 01.0 -1.6
WB0 IAmb IAmb 12 55 07.3
comp=Z,19nm,0.8s
WRA Warramunga Arr 67.73 129 P P 12 55 03.8 +0.6
comp=Z,12nm,0.7s,baz=322,slow=6.4,SNR=37
WRA Warramunga Arr 67.73 129 P P 12 55 03.7 +0.6
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 67.73 129 P P 12 55 03.7 +0.6
WRAB Tennant Creek 67.73 129 deP P 12 55 04.0 +0.9
WRAB pmax pmax
comp=Z,28nm,0.8s
WRAB Tennant Creek 67.73 129 P P 12 55 03.7 +0.6
WB2 Warramunga Arr 67.74 129 P P 12 55 03.6 +0.4
WB2 IAmb IAmb 12 55 08.9
comp=Z,23nm,0.8s
NWAO Narrogin (SRO) 68.11 151 P P 12 55 04.1 -1.1
comp=Z,34nm,0.9s,baz=318,slow=6.4,SNR=19
NWAO Narrogin (SRO) 68.11 151 P P 12 55 04.8 -0.4
NWAO pmax pmax
comp=Z,35nm,0.9s
NWAO Narrogin (SRO) 68.11 151 P P 12 55 04.8 -0.4
LSZ Lusaka 69.59 239 P P 12 55 15.4 +0.4
LSZ pmax pmax
comp=Z,21nm,1.1s
LSZ Lusaka 69.59 239 P P 12 55 15.4 +0.4
LSZ IAmb IAmb 12 55 22.8
comp=Z,21nm,1.1s
AS31 Alice Springs 70.01 132 P P 12 55 17.7 +0.4
ASAR Alice Springs 70.01 132 P P 12 55 17.9 +0.6
comp=Z,8.5nm,0.6s,baz=316,slow=6.3,SNR=44
ASAR Alice Springs 70.01 132 P P 12 55 18.3 +1.0
ASAR Alice Springs 70.01 132 P P 12 55 18.3 +1.0
CART Cartagena 70.26 303 P P 12 55 18.0 -0.7
CART IAmb IAmb 12 55 23.4
comp=Z,27nm,0.8s
COEN Coen 70.39 118 P P 12 55 20.3 +0.6
PMG Port Moresby 70.95 112 P P 12 55 23.4 +0.3
comp=Z,18nm,0.7s,baz=13,slow=5.7,SNR=4.5
NEEM North Greenlan 71.42 351 iP P 12 55 26.1 +0.6
NEEM IAmb IAmb 12 55 26.5
comp=Z,36nm,0.5s
ESBB Sonseca Array 71.68 306 P P 12 55 25.8 -1.6
ESDC Sonseca Array 71.68 306 P P 12 55 27.2 -0.1
comp=Z,7.0nm,1.1s,baz=57,slow=5.9,SNR=20
ESDC Sonseca Array 71.68 306 P P 12 55 27.9 +0.5
EUNU Eureka 71.98 358 P P 12 55 28.5 +0.1
EUNU IAmb IAmb 12 55 30.4
comp=Z,12nm,0.7s
A21K Barrow 72.16 17 P P 12 55 28.5 -1.0
A21K Barrow 72.16 17 P 12 55 30.6
baz=306
SUMG Summit 72.47 345 iP P 12 55 32.4 +0.4
SUMG IAmb IAmb 12 55 36.2
comp=Z,15nm,1.0s
SUMG Summit 72.47 345 P P 12 55 31.3 -0.6
SUMG pmax pmax
comp=Z,41nm,1.2s
SUMG Summit 72.47 345 P P 12 55 31.3 -0.6
SUMG IAmb IAmb 12 55 36.8
comp=Z,41nm,1.2s
ANM Nome 73.03 25 P P 12 55 33.2 -1.7
ANM pmax pmax
comp=Z,23nm,1.3s
ANM Nome 73.03 25 P P 12 55 33.2 -1.7
ANM IAmb IAmb 12 55 37.7
comp=Z,23nm,1.3s
ANM Nome 73.03 25 P 12 55 36.7
baz=300
MVO Moncorvo 73.29 308 eP P 12 55 37.8 +0.9
comp=Z,27nm,1.9s
PCAB Cabril 73.77 309 eP P 12 55 39.5 -0.2
MTE Manteigas 73.94 307 eP P 12 55 41.8 +1.0
PVIS Viseu 74.06 308 eP P 12 55 42.5 +1.0
PCBR Castelo Branco 74.12 307 eP P 12 55 42.8 +1.1
comp=Z,28nm,1.8s
TULEG Thule 74.34 354 iP P 12 55 42.1 -0.2
PBAR Barrancos 74.47 305 eP P 12 55 44.6 +0.8
comp=Z,25nm,1.9s
EVO Evora 75.03 306 eP P 12 55 46.5 -0.5
comp=Z,32nm,1.2s
ICESG Greenland Ices 75.03 342 iP P 12 55 47.8 +0.9
ICESG IAmb IAmb 12 55 48.2
comp=Z,11nm,0.6s
PBEJ Beja 75.12 305 eP P 12 55 48.6 +1.0
PSBE So Bento 75.18 307 eP P 12 55 46.1 -1.9
PVAQ Vaqueiros 75.27 305 eP P 12 55 49.3 +0.8
PCVE Castro Verde 75.41 305 eP P 12 55 50.0 +0.7
PBDV Barranco-do-Ve 75.49 305 eP P 12 55 51.2 +1.4
comp=Z,41nm,1.4s
TOLK Toolik Lake Re 75.73 18 P P 12 55 49.5 -1.2
TOLK Toolik Lake Re 75.74 18 P 12 55 51.9
baz=312
IMAR Indian Mountai 76.25 21 P P 12 55 54.1 +0.6
CTA Charters Tower 76.41 122 P P 12 55 56.0 +0.9
comp=Z,9.8nm,0.7s,baz=316,slow=6.4,SNR=14
CTAO Charters Tower 76.41 122 P P 12 55 54.5 -0.6
CTAO pmax pmax
comp=Z,14nm,0.9s
CTAO Charters Tower 76.41 122 P P 12 55 54.5 -0.6
CTAO IAmb IAmb 12 56 09.3
comp=Z,14nm,0.8s
COLD Coldfoot 76.51 19 P P 12 55 55.9 +0.9
COLD IAmb IAmb 12 55 57.5
comp=Z,32nm,1.2s
COLD Coldfoot 76.51 19 P 12 55 56.4
baz=312
TTA Tatalina 77.39 24 P P 12 56 00.9 +0.7
TTA Tatalina 77.39 24 P P 12 56 00.9 +0.7
TTA Tatalina 77.39 24 P 12 56 02.0
baz=308,SNR=8.9
RES Resolute Bay 77.49 360 P P 12 56 00.4 +0.1
RES pmax pmax
comp=Z,13nm,1.5s
RES Resolute Bay 77.49 360 P P 12 56 00.4 +0.1
LBTB Lobatse 77.56 233 P P 12 56 02.1 +0.5
LBTB pmax pmax
comp=Z,52nm,1.4s
LBTB Lobatse 77.56 233 P P 12 56 02.1 +0.5
LBTB IAmb IAmb 12 56 03.0
comp=Z,52nm,1.4s
BBOO Buckleboo 77.79 138 P P 12 56 02.5 -0.1
TOA0 Torodi Ar. Sit 77.79 278 P P 12 56 03.1 0.0
TOA0 Torodi Ar. Sit 77.79 278 P P 12 56 03.1 0.0
TORD Torodi Ar. Bea 77.79 278 P P 12 56 03.1 0.0
comp=Z,7.3nm,0.7s,baz=59,slow=4.5,SNR=58
TORD Torodi Ar. Bea 77.79 278 P P 12 56 03.0 -0.1
MLY Manley 77.83 21 P P 12 56 03.9 +1.5
MLY Manley 77.83 21 P 12 56 03.9
baz=312,SNR=31
BMAR Burnt Mountain 77.93 17 P P 12 56 05.3 +2.3
CHUM Lake Minchumin 78.08 22 P 12 56 05.7
baz=311,SNR=6.1
I23K Minto, Yukon-K 78.18 20 P P 12 56 05.6 +1.3
I23K IAmb IAmb 12 56 09.9
comp=Z,52nm,1.4s
I23K Minto, Yukon-K 78.18 20 P 12 56 05.8
baz=313,SNR=20
BPAW Bear Paw Mtn. 78.37 22 P P 12 56 06.0 +0.5
BPAW IAmb IAmb 12 56 10.5
comp=Z,29nm,1.2s
BPAW Bear Paw Mtn. 78.37 22 P 12 56 06.6
baz=312,SNR=18
FYU Fort Yukon 78.38 18 P P 12 56 07.1 +1.7
FYU IAmb IAmb 12 56 08.6
comp=Z,41nm,1.2s
NEA2 Nenana 78.65 21 P P 12 56 07.8 +0.8
NEA2 IAmb IAmb 12 56 12.0
comp=Z,31nm,0.9s
NEA2 Nenana 78.65 21 P 12 56 07.9
baz=314,SNR=38
MDM Murphy Dome 78.65 20 P P 12 56 08.0 +0.9
KTH Kantishna Hill 78.76 22 P P 12 56 08.4 +0.7
KTH IAmb IAmb 12 56 12.9
comp=Z,26nm,1.2s
PPLA Purkeypile 78.77 23 P P 12 56 08.5 +0.6
PPLA Purkeypile 78.77 23 P 12 56 09.3
baz=311,SNR=12
POKR Poker Plat Res 78.79 20 P 12 56 09.3
baz=315
BWN Browne 78.81 21 P P 12 56 08.1 +0.2
TCOL CIGO, UAF Yank 78.83 20 P P 12 56 08.7 +0.7
TCOL CIGO, UAF Yank 78.83 20 P 12 56 09.2
baz=314,SNR=10.0
COLA College 78.83 20 P P 12 56 08.1 +0.2
COLA pmax pmax
comp=Z,59nm,1.4s
COLA College 78.83 20 P P 12 56 08.1 +0.2
COLA College 78.83 20 P 12 56 09.2
baz=314
FALS False Pass 78.98 33 P P 12 56 07.8 -1.1
FALS IAmb IAmb 12 56 20.0
comp=Z,52nm,1.3s
CCB Clear Creek Bu 79.00 20 P P 12 56 09.1 +0.2
CCB IAmb IAmb 12 56 09.7
comp=Z,9.0nm,0.6s
TRF Thorofare Moun 79.04 22 P P 12 56 09.6 +0.2
TRF IAmb IAmb 12 56 13.8
comp=Z,22nm,1.4s
WRH Wood River Hil 79.04 21 P P 12 56 08.7 -0.4
TRF Thorofare Moun 79.04 22 P 12 56 10.0
baz=313
PRP Porcupine Dome 79.06 19 P P 12 56 10.2 +0.8
PRP IAmb IAmb 12 56 15.1
comp=Z,26nm,0.9s
PRP Porcupine Dome 79.06 19 P 12 56 11.2
baz=316
IL31 79.19 20 P P 12 56 10.2 +0.2
IL31 IAmb IAmb 12 56 11.1
comp=Z,11nm,0.7s
ILAR Eielson Array 79.19 20 P P 12 56 09.9 0.0
comp=Z,7.9nm,0.6s,baz=308,slow=4.7,SNR=109
ILAR PP PP 12 59 08.1 -0.8
comp=Z,2.5nm,1.0s,baz=307,slow=8.4,SNR=4.7
ILAR LR LR 13 34 53.7
comp=Z,202nm,19.7s,baz=305,slow=38

ILAR	**Eielson Array**	**79.19**	**20**	P	**P**	**12 56 10.0**	**0.0**	
MCK	**McKinley**	**79.29**	**21**	P	**P**	**12 56 11.2**	**+0.7**	
MCK				pmax	pmax			
	comp=Z,34nm,1.4s							
MCK	**McKinley**	**79.29**	**21**	P	**P**	**12 56 11.2**	**+0.7**	
MCK				IAmb	IAmb	12 56 15.5		
	comp=Z,34nm,1.4s							
MCK	**McKinley**	**79.29**	**21**	P		12 56 11.4		
	baz=314,SNR=9.4							
SFJD	**Kangerlussuaq**	**79.40**	**344**	P	**P**	**12 56 11.1**	**+0.1**	
SFJD				pmax	pmax			
	comp=Z,12nm,1.1s							
SFJD	**Kangerlussuaq**	**79.40**	**344**	P	**P**	**12 56 11.1**	**+0.1**	
HDA	**Harding Lake**	**79.44**	**20**	P		12 56 10.7		
	baz=315,SNR=15							
HDA				P		12 56 10.7		
	baz=315,SNR=15							
RND	**Reindeer**	**79.54**	**22**	P	**P**	**12 56 12.7**	**+0.7**	
RND				pmax	pmax			
	comp=Z,36nm,1.4s							
RND	**Reindeer**	**79.54**	**22**	P	**P**	**12 56 12.7**	**+0.7**	
RND				IAmb	IAmb	12 56 14.1		
	comp=Z,36nm,1.4s							
SKT	**Skwentna**	**79.60**	**24**	P	**P**	**12 56 13.2**	**+0.9**	
SKT	**Skwentna**	**79.60**	**24**	P		12 56 13.2		
	baz=312,SNR=33							
CUT	**Chulitna**	**79.75**	**23**	P	**P**	**12 56 13.9**	**+0.8**	
CUT				IAmb	IAmb	12 56 21.8		
	comp=Z,57nm,1.4s							
CUT	**Chulitna**	**79.76**	**23**	P		12 56 13.5		
	baz=313,SNR=7.9							
INK	**Inuvik**	**79.84**	**13**	P	**P**	**12 56 14.0**	**+0.6**	
INK				pmax	pmax			
	comp=Z,18nm,1.1s							
INK	**Inuvik**	**79.84**	**13**	P	**P**	**12 56 14.0**	**+0.6**	
INK				IAmb	IAmb	12 56 18.4		
	comp=Z,18nm,1.1s							
INK	**Inuvik**	**79.84**	**13**	P		12 56 14.1		
	baz=326,SNR=20							
WAT2	**Susitna Watana**	**79.94**	**22**	P		12 56 14.1		
	baz=314							
BOSA	**Boshof**	**80.06**	**230**	P	**P**	**12 56 15.4**	**+0.1**	
	comp=Z,3.4nm,0.4s,baz=34,slow=3.1,SNR=12							
BOSA	**Boshof**	**80.06**	**230**	P	**P**	**12 56 15.4**	**+0.1**	
BOSA				pmax	pmax			
	comp=Z,12nm,0.9s							
BOSA	**Boshof**	**80.06**	**230**	P	**P**	**12 56 15.4**	**+0.1**	
SUA	**Susitna One**	**80.23**	**24**	P	**P**	**12 56 16.8**	**+1.0**	
SUA				IAmb	IAmb	12 56 17.6		
	comp=Z,23nm,0.6s							
SUA	**Susitna One**	**80.23**	**24**	P		12 56 16.7		
	baz=312,SNR=12							
WAT6	**Susitna Watana**	**80.48**	**22**	P		12 56 17.8		
	baz=315,SNR=9.8							
STKA	**Stephens Creek**	**80.57**	**134**	P	**P**	**12 56 18.1**	**+0.3**	
	comp=Z,8.6nm,0.3s,baz=336,slow=4.7,SNR=35							
STKA				LR	LR	13 36 46.7		
	comp=Z,112nm,18.6s,baz=18,slow=39							
STKA	**Stephens Creek**	**80.57**	**134**	P	**P**	**12 56 18.1**	**+0.3**	
STKA				pmax	pmax			
	comp=Z,4.0nm,1.1s							
STKA	**Stephens Creek**	**80.57**	**134**	P	**P**	**12 56 18.1**	**+0.3**	
C36M	**Paulatuk**	**80.63**	**10**	P	**P**	**12 56 17.6**	**0.0**	
C36M				IAmb	IAmb	12 56 22.4		
	comp=Z,39nm,1.4s							
C36M	**Paulatuk**	**80.63**	**10**	P		12 56 17.6		
	baz=334,SNR=27							
SCRK	**Sand Creek**	**80.64**	**20**	P	**P**	**12 56 18.9**	**+0.9**	
SCRK				IAmb	IAmb	12 56 22.9		
	comp=Z,25nm,1.0s							
SCRK	**Sand Creek**	**80.64**	**20**	P		12 56 18.9		
	baz=318,SNR=31							
GHO	**Glory Hole Cre**	**80.65**	**23**	P	**P**	**12 56 18.9**	**+0.8**	
GHO				IAmb	IAmb	12 56 25.0		
	comp=Z,36nm,1.2s							
PMR	**Palmer**	**80.70**	**23**	P	**P**	**12 56 19.0**	**+0.8**	
PMR				pmax	pmax			
	comp=Z,49nm,1.4s							
PMR	**Palmer**	**80.70**	**23**	P	**P**	**12 56 19.0**	**+0.8**	
PMR				IAmb	IAmb	12 56 23.1		
	comp=Z,49nm,1.4s							
PMR	**Palmer**	**80.71**	**23**	P		12 56 19.0		
	baz=314,SNR=11							
EPYK	**Eagle Plains**	**80.72**	**16**	P	**P**	**12 56 18.8**	**+0.5**	
EPYK				IAmb	IAmb	12 56 19.8		
	comp=Z,28nm,1.2s							
EPYK	**Eagle Plains**	**80.72**	**16**	P		12 56 18.7		
	baz=324,SNR=13							
SML	**Sawmill**	**80.83**	**23**	P		12 56 20.1		
	baz=314,SNR=20							
RC01	**Rabbit Creek A**	**80.84**	**24**	P	**P**	**12 56 20.2**	**+1.2**	
RC01				IAmb	IAmb	12 56 23.8		
	comp=Z,50nm,1.4s							
RC01	**Rabbit Creek A**	**80.84**	**24**	P		12 56 19.6		
	baz=313							
EGAK	**Eagle**	**80.84**	**18**	P	**P**	**12 56 19.7**	**+0.8**	
EGAK				IAmb	IAmb	12 56 23.3		
	comp=Z,11nm,0.8s							
EGAK	**Eagle**	**80.84**	**18**	P		12 56 19.8		
	baz=320,SNR=14							
DOT	**Dot Lake**	**80.86**	**20**	P	**P**	**12 56 19.8**	**+0.8**	
DOT				IAmb	IAmb	12 56 20.5		
	comp=Z,11nm,0.6s							
PAX	**Paxson**	**80.93**	**21**	P	**P**	**12 56 20.5**	**+1.0**	
PAX				pmax	pmax			
	comp=Z,7.0nm,0.9s							
PAX	**Paxson**	**80.93**	**21**	P	**P**	**12 56 20.5**	**+1.0**	
PAX	**Paxson**	**80.93**	**21**	P		12 56 20.1		
	baz=317,SNR=7.9							
KNK	**Knik Glacier**	**81.06**	**23**	P	**P**	**12 56 21.3**	**+1.2**	
KNK				IAmb	IAmb	12 56 21.9		
	comp=Z,22nm,0.6s							
KNK	**Knik Glacier**	**81.06**	**23**	P		12 56 21.4		
	baz=314							
SCM	**Sheep Creek Mo**	**81.15**	**22**	P	**P**	**12 56 21.8**	**+1.1**	
SCM				pmax	pmax			
	comp=Z,38nm,0.6s							
SCM	**Sheep Creek Mo**	**81.15**	**22**	P	**P**	**12 56 21.8**	**+1.1**	
K27K	**Chicken**	**81.16**	**19**	P	**P**	**12 56 22.1**	**+1.6**	
K27K				IAmb	IAmb	12 56 30.5		
	comp=Z,19nm,1.0s							
K27K	**Chicken**	**81.16**	**19**	P		12 56 22.2		
	baz=319,SNR=16							
BRLK	**Bradley Lake**	**81.33**	**25**	P	**P**	**12 56 22.2**	**+0.6**	
BRLK				IAmb	IAmb	12 56 22.9		
	comp=Z,39nm,1.2s							
M24K	**Tolsona, Glenn**	**81.33**	**22**	P	**P**	**12 56 23.4**	**+1.7**	
M24K	**Tolsona, Glenn**	**81.33**	**22**	P		12 56 23.4		
	baz=316,SNR=9.8							
CNPM	**China Poot**	**81.36**	**25**	P	**P**	**12 56 22.2**	**+0.5**	
CNPM				IAmb	IAmb	12 56 23.1		
	comp=Z,39nm,1.2s							
BRSE	**Bradley Lake S**	**81.40**	**25**	P		12 56 22.3		
	baz=313							
HARP	**HAARP**	**81.45**	**21**	P		12 56 24.2		
	baz=317							
PWL	**Port Wells**	**81.49**	**23**	P	**P**	**12 56 23.5**	**+1.1**	
MENT	**Mentasta**	**81.50**	**20**	P	**P**	**12 56 23.8**	**+1.3**	
SEW	**Seward**	**81.62**	**24**	P	**P**	**12 56 23.9**	**+0.8**	
SEW				IAmb	IAmb	12 56 34.1		
	comp=Z,47nm,1.3s							
SEW	**Seward**	**81.62**	**24**	P		12 56 23.6		
	baz=314							
HNR	**Honiara**	**81.67**	**105**	LR	LR	13 30 05.7		
	comp=Z,41nm,21.3s,baz=179,slow=34							
KLU	**Klutina**	**81.86**	**22**	P	**P**	**12 56 25.6**	**+1.1**	
KLU				IAmb	IAmb	12 56 30.0		
	comp=Z,25nm,1.3s							
KLU	**Klutina**	**81.86**	**22**	P		12 56 25.9		
	baz=316,SNR=10							
DAWY	**Dawson**	**81.88**	**18**	P	**P**	**12 56 25.2**	**+0.7**	
DAWY				IAmb	IAmb	12 56 29.4		
	comp=Z,26nm,1.4s							
GLI	**Glacier Island**	**81.91**	**23**	P	**P**	**12 56 25.4**	**+0.8**	
GLI				IAmb	IAmb	12 56 30.5		
	comp=Z,36nm,1.5s							
GLI	**Glacier Island**	**81.91**	**23**	P		12 56 25.5		
	baz=316							
L27K	**Beaver Creek,**	**81.97**	**19**	P	**P**	**12 56 26.6**	**+1.6**	
L27K				IAmb	IAmb	12 56 27.1		
	comp=Z,9.1nm,0.7s							
L27K	**Beaver Creek,**	**81.97**	**19**	P		12 56 26.7		
	baz=320,SNR=22							
BCAR	**Beaver Creek A**	**81.98**	**19**	P	**P**	**12 56 26.7**	**+1.7**	
KDAK	**Kodiak Island**	**82.00**	**27**	P	**P**	**12 56 26.2**	**+1.1**	
KDAK				pmax	pmax			
	comp=Z,78nm,1.5s							
KDAK	**Kodiak Island**	**82.00**	**27**	P	**P**	**12 56 26.2**	**+1.1**	
KDAK	**Kodiak Island**	**82.00**	**27**	P		12 56 26.3		
	baz=312							
OHAK	**Old Harbor**	**82.08**	**28**	P	**P**	**12 56 26.6**	**+1.1**	
OHAK				IAmb	IAmb	12 56 31.7		
	comp=Z,24nm,0.8s							
KOWA	**Kowa**	**82.15**	**282**	P	**P**	**12 56 27.6**	**+0.9**	
KOWA				IAmb	IAmb	12 56 41.0		
	comp=Z,19nm,0.9s							
N25K	**Chitina, Valde**	**82.21**	**21**	P	**P**	**12 56 27.5**	**+1.2**	
FID	**Port Fidalgo**	**82.21**	**23**	P	**P**	**12 56 27.4**	**+1.2**	
FID				IAmb	IAmb	12 56 31.6		
	comp=Z,18nm,1.0s							
N25K	**Chitina, Valde**	**82.21**	**21**	P		12 56 28.1		
	baz=318,SNR=20							
NRS	**Narsarsuaq**	**82.31**	**338**	P	**P**			
NRS				pmax	pmax			
	comp=Z,38nm,1.1s							
NRS	**Narsarsuaq**	**82.31**	**338**	P	**P**	**12 56 25.8**	**-0.9**	
NRS				IAmb	IAmb	12 56 27.5		
	comp=Z,38nm,1.1s							
GLB	**Gilahina Butte**	**82.59**	**21**	P	**P**	**12 56 29.6**	**+1.4**	
GLB				IAmb	IAmb	12 56 33.7		
	comp=Z,14nm,1.2s							
EYAK	**Cordova Ski Ar**	**82.61**	**23**	P	**P**	**12 56 29.8**	**+1.6**	
EYAK				IAmb	IAmb	12 56 30.3		
	comp=Z,9.5nm,0.6s							
EYAK	**Cordova Ski Ar**	**82.61**	**23**	P		12 56 29.6		
	baz=317							
BMRM	**Bremner River**	**82.68**	**22**	P	**P**	**12 56 30.0**	**+1.3**	
BMRM				IAmb	IAmb	12 56 39.4		
	comp=Z,14nm,0.9s							
BMRM	**Bremner River**	**82.68**	**22**	P		12 56 30.1		
	baz=318,SNR=7.5							
VRDI	**Verde Repeater**	**82.86**	**21**	P	**P**	**12 56 31.2**	**+1.4**	
VRDI				IAmb	IAmb	12 56 35.3		
	comp=Z,20nm,1.0s							
MCARA	**McCarthy VSAT**	**82.88**	**21**	P	**P**	**12 56 31.4**	**+1.7**	
MCARA	**McCarthy VSAT**	**82.88**	**21**	P		12 56 31.7		
	baz=319							
RAGM	**Ragged Mountai**	**83.09**	**22**	P	**P**	**12 56 32.6**	**+1.7**	
EIDS	**Eidsvold**	**83.11**	**123**	P	**P**	**12 56 32.1**	**+0.7**	
CRQM	**Cirque**	**83.32**	**21**	P	**P**	**12 56 33.7**	**+1.5**	
CRQE	**Cirque**	**83.34**	**21**	P		12 56 33.7		
	baz=319							
KAIM	**Kayak Island**	**83.52**	**23**	P		12 56 34.8		
	baz=318							
BARN	**Barnard Glacie**	**83.56**	**21**	P	**P**	**12 56 35.2**	**+1.8**	
CTG	**Chitna Glacier**	**83.73**	**21**	P		12 56 36.1		
	baz=320							
CTGM	**Chitina Glacie**	**83.73**	**21**	P	**P**	**12 56 36.3**	**+2.0**	
CTGM				IAmb	IAmb	12 56 40.2		
	comp=Z,29nm,1.4s							
GRNC	**Granite Creek**	**83.78**	**21**	P	**P**	**12 56 36.1**	**+1.5**	
YAH	**Yahtse**	**84.06**	**21**	P	**P**	**12 56 37.9**	**+1.8**	
PCA	**Pinnacle**	**84.74**	**21**	P	**P**	**12 56 41.3**	**+1.9**	
PCA				IAmb	IAmb	12 56 42.1		
	comp=Z,30nm,1.4s							
PINM	**Pinnacle**	**84.75**	**21**	P		12 56 41.0		
	baz=321							
HYT	**Haines Junctio**	**85.00**	**19**	P	**P**	**12 56 42.2**	**+1.5**	
HYT				IAmb	IAmb	12 56 43.0		
	comp=Z,13nm,0.7s							
WHY	**Whitehorse**	**85.88**	**18**	P	**P**	**12 56 46.0**	**+1.0**	
WHY	**Whitehorse**	**85.88**	**18**	P		12 56 45.9		
	baz=326							
DBIC	**Dimbokro**	**86.46**	**276**	P	**P**	**12 56 49.2**	**+0.6**	
	comp=Z,7.8nm,0.7s,baz=35,slow=5.3,SNR=9.1							
SKAG	**Skagway**	**86.75**	**19**	P	**P**			
SKAG				IAmb	IAmb	12 57 00.5		
	comp=Z,8.3nm,0.7s							
SKAG	**Skagway**	**86.75**	**19**	P		12 56 51.1		
	baz=325							
CAN	**Canberra**	**87.53**	**132**	P	**P**	**12 56 53.8**	**+0.5**	
CAN				pmax	pmax			
	comp=Z,47nm,1.4s							
CAN	**Canberra**	**87.53**	**132**	P	**P**	**12 56 53.8**	**+0.5**	
YKA	**Yellowknife Ar**	**88.43**	**9**	P	**P**	**12 56 57.2**	**+0.1**	
	comp=Z,1.7nm,0.6s,baz=338,slow=4.9,SNR=25							
YKA				LR	LR	13 38 58.0		
	comp=Z,212nm,21.4s,baz=0.0,slow=37							
MAW	**Mawson**	**96.78**	**188**	P	**P**	**12 57 35.1**	**-0.2**	
	comp=Z,3.4nm,0.9s,baz=9.5,slow=5.7,SNR=4.0							
NVAR	**Mina Array Bea**	**110.44**	**19**	PP	**PP**	**13 03 15.2**	**+3.0**	
	comp=Z,0.2nm,0.3s,baz=336,slow=7.0,SNR=3.6							
OK031	**S. Brethren Rd**	**116.29**	**1**		**PKiKP**	**13 02 47.2**	**-1.9**	
TXAR	**Lajitas Array**	**122.36**	**9**	PKP	**PKiKP**	**13 03 01.7**	**+0.4**	
	comp=Z,0.6nm,0.5s,baz=263,slow=0.4,SNR=9.8							
TXAR	**Lajitas Array**	**122.36**	**9**		**PKiKP**	**13 03 01.2**	**0.0**	
MAN01	**Angra dos Reis**	**133.59**	**264**	*e*P	**PKPdf**	**13 03 23.0**	**+0.6**	
SDV	**Santo Domingo**	**136.16**	**323**	PKP	**PKPdf**	**13 03 27.8**	**0.0**	
	comp=Z,3.4nm,0.2s,baz=74,slow=21,SNR=1.9							
VAO	**Valinhos**	**136.27**	**265**	*e*P	**PKiKP**	**13 03 29.1**	**-0.1**	
CLDB	**Cloliet**	**139.19**	**267**	*e*P	**PKiKP**	**13 03 35.5**	**+0.2**	
AQDB	**Aquidauana**	**143.19**	**273**	*e*P	**PKiKP**	**13 03 42.3**	**-1.0**	
CPSB	**Cacapava Do Su**	**143.50**	**256**	*e*P	**PKiKP**	**13 03 42.7**	**-1.0**	
PLTB	**Pedras Altas**	**143.78**	**254**	*e*P	**PKiKP**	**13 03 42.6**	**-1.6**	
VILB	**Vilhena**	**143.95**	**287**	*e*P	**PKiKP**	**13 03 43.9**	**-1.2**	
SAML	**Samuel**	**144.22**	**296**	PKIKP	PKPbc	13 03 40.3	+0.1	
SAML	**Samuel**	**144.22**	**296**		PKPbc	13 03 40.3	+0.1	
SAML	**Samuel**	**144.22**	**296**	*e*P	**PKPdf**	**13 03 43.9**	**+1.8**	
SIV	**San Ignacio**	**146.14**	**284**	PKPbc	**PKPab**	**13 03 47.1**	**+0.2**	
	comp=Z,9.2nm,0.6s,baz=104,slow=4.5,SNR=11							
CPUP	**Villa Florida**	**146.22**	**264**	PKPbc	**PKPab**	**13 03 47.6**	**+0.7**	
	comp=Z,2.7nm,0.7s,baz=80,slow=4.1,SNR=5.3							
CPUP	**Villa Florida**	**146.22**	**264**	*e*P	**PKPbc**	**13 03 46.4**	**+0.2**	
ETMB	**Extrema**	**147.13**	**298**	*e*P	**PKPbc**	**13 03 49.1**	**-0.1**	
OTAV	**Otavalo**	**147.51**	**327**	*e*P	**PKPbc**	**13 03 49.8**	**-1.0**	
CZSB	**Crixeiro do Su**	**150.54**	**309**	*e*P	**PKPdf**	**13 03 55.2**	**+2.6**	
LPAZ	**La Paz**	**152.26**	**289**	PKPbc	**PKiKP**	**13 04 03.3**	**+0.4**	
	comp=Z,2.3nm,0.7s,baz=160,slow=4.7,SNR=4.9							
LPAZ	**La Paz**	**152.26**	**289**	*e*P	**PKPdf**	**13 03 57.9**	**+2.1**	

IDC ***25*** *12:46:36.8±2.0,24.°05S×179.°82W,h510km±21km, mb3.8/18,mb1 3.9/20,mb1mx3.7/41,mbtmp4.6/20,Error ellipse: s-maj=18.4km s-min=14.6km az=134.0*

NEIC ***25*** *12:46:36.6±1.6,24.°0S±0.°1×179.°8W±0.°1,h506km±8km, mb4.6/29,Error ellipse: s-maj=18.9km s-min=15.8km az=114.0*

NOU ***25*** *12:46:36.4,24.°00S×179.°21W,h570km,mb4.4,South of Fiji Islands*

ISC 25 12:46:36.4±0.4,**23.°95S**±0.°05×**179.°68W**±0.°07,**h512**km, **n81**,σ**1.°56**/91,**mb4.5**/31,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GLKZ	**Green Lake**	**5.52**	**164**	P	**P**		**12 48 09.4**	**+0.8**
GLKZ				S		**S**	**12 49 28.1**	**+4.1**
MSVF	**Nonsavu**	**6.54**	**341**	P	**P**		**12 48 18.7**	**+0.1**
	3.2nm,0.3s,baz=244,slow=21,SNR=16							
MSVF	**Nonsavu**	**6.54**	**341**	P	**P**		**12 48 18.4**	**-0.2**
NIUE	**Niue**	**10.29**	**64**	P	**P**		**12 48 57.4**	**+0.4**
NIUE	**Niue**	**10.29**	**64**	P	**P**		**12 48 54.7**	**-2.3**
AFI	**Afiamalu**	**12.47**	**38**	P	**P**		**12 49 17.1**	**-2.9**
	7.0nm,0.3s,baz=202,slow=7.3,SNR=15							
AFI				S		**S**	**12 51 32.5**	**-2.4**
	5.4nm,0.3s,baz=106,slow=22,SNR=5.6							
AFI	**Afiamalu**	**12.47**	**38**	P	**P**		**12 49 17.6**	**-2.5**
OUZ	**Omahuta**	**12.66**	**206**	P	**P**		**12 49 22.3**	**+0.6**
OUZ	**Omahuta**	**12.66**	**206**	P	**P**		**12 49 23.1**	**+1.4**
DZM	**Mont Dzumac**	**12.92**	**276**	P	**P**		**12 49 25.7**	**+1.0**
	0.5nm,0.3s,baz=70,slow=23,SNR=9.0							
WCZ	**Waipu Caves**	**13.02**	**202**	P	**P**		**12 49 26.0**	**+0.6**
WMGZ	**Waiomatatini S**	**13.92**	**186**	P	**P**		**12 49 35.9**	**+1.0**
HAZ	**Te Kaha**	**13.93**	**188**	P	**P**		**12 49 33.6**	**-1.4**
HAZ				S	**S**		**12 52 00.2**	**-2.1**
PKGZ	**Pakihiroa**	**14.03**	**187**	S	**S**		**12 52 02.3**	**-2.0**
PUZ	**Puketiti**	**14.19**	**187**	P	**P**		**12 49 37.1**	**-0.7**
PUZ				S	**S**		**12 52 04.5**	**-2.8**
TWGZ	**Tauwhareparae**	**14.32**	**187**	P	**P**		**12 49 37.8**	**-1.4**
TWGZ				S	**S**		**12 52 10.2**	**+0.2**
KMRZ	**Kaimai**	**14.35**	**194**	P	**P**		**12 49 41.7**	**+2.2**
KARZ	**Kaharoa**	**14.45**	**193**	P	**P**		**12 49 40.2**	**-0.3**
URZ	**Urewera**	**14.53**	**190**	P	**P**		**12 49 37.2**	**-4.0**
	3.6nm,0.3s,baz=121,slow=24,SNR=28							
URZ				S		**S**	**12 52 14.1**	**+0.4**
	3.4nm,0.3s,baz=154,slow=12,SNR=8.4							
URZ	**Urewera**	**14.53**	**190**	P	**P**		**12 49 40.3**	**-0.9**
URZ	**Urewera**	**14.53**	**190**	P	**P**		**12 49 37.3**	**-4.0**
URZ				S	**S**		**12 52 09.2**	**-4.5**
MWZ	**Matawai**	**14.54**	**189**	P	**P**		**12 49 39.6**	**-1.9**
MWZ				S	**S**		**12 52 09.4**	**-4.6**
TKGZ	**Te Karaka**	**14.60**	**188**	P	**P**		**12 49 40.9**	**-1.0**
TKGZ				S	**S**		**12 52 13.3**	**-1.8**
CNGZ	**Carnagh Statio**	**14.60**	**187**	P	**P**		**12 49 43.6**	**+1.5**
RAGZ	**Rawiri**	**14.71**	**189**	P	**P**		**12 49 43.3**	**0.0**
MUGZ	**Murupara**	**14.79**	**191**	P	**P**		**12 49 41.9**	**-2.2**
MUGZ				S	**S**		**12 52 15.5**	**-3.4**
RPZ	**Rata Peaks**	**21.14**	**199**	P	**P**		**12 50 43.7**	**-0.8**
	8.8nm,0.5s,baz=291,slow=2.2,SNR=8.2							
KNTN	**Kanton**	**22.41**	**21**	P	**P**		**12 50 56.1**	**-0.3**
ARMA	**Armidale**	**26.28**	**250**	P	**P**		**12 51 31.4**	**+0.7**
ARMA				IAmb	IAmb		12 51 32.5	
	comp=Z,8.7nm,0.8s							
EIDS	**Eidsvold**	**26.59**	**261**	P	**P**		**12 51 33.4**	**0.0**
EIDS				IAmb	IAmb		12 51 34.0	
	comp=Z,9.3nm,0.6s							
CAN	**Canberra**	**29.37**	**240**	P	**P**		**12 51 58.0**	**+0.4**
CAN				IAmb	IAmb		12 52 20.9	
	comp=Z,22nm,1.3s							
CTA	**Charters Tower**	**31.77**	**270**	P	**P**		**12 52 18.6**	**+0.2**
	comp=Z,33nm,0.4s,baz=93,slow=11,SNR=103							
CTAO	**Charters Tower**	**31.77**	**270**	P	**P**		**12 52 18.6**	**+0.2**
TOO	**Toolangi**	**32.67**	**237**	P	**P**		**12 52 25.8**	**0.0**
TOO				IAmb	IAmb		12 52 26.6	
	comp=Z,10nm,0.7s							
TOO	**Toolangi**	**32.67**	**237**	P	**P**		**12 52 26.1**	**+0.2**
TAU	**Tasmania Unive**	**33.12**	**227**	P	**P**		**12 52 29.4**	**-0.1**
TAU				IAmb	IAmb		12 52 37.3	
	comp=Z,34nm,1.1s							
PMG	**Port Moresby**	**34.79**	**289**	P	**P**		**12 52 43.7**	**-0.3**
	comp=Z,23nm,0.7s,baz=85,slow=6.1,SNR=15							
PMG	**Port Moresby**	**34.79**	**289**	P	**P**		**12 52 43.9**	**-0.1**
PMG				IAmb	IAmb		12 52 44.5	
	comp=Z,25nm,0.8s							
PMG	**Port Moresby**	**34.79**	**289**	P	**P**		**12 52 43.9**	**-0.1**
	comp=Z,35nm,0.9s							
STKA	**Stephens Creek**	**34.98**	**248**	P	**P**		**12 52 44.0**	**-1.3**
	comp=Z,3.6nm,0.4s,baz=92,slow=10,SNR=12							
STKA	**Stephens Creek**	**34.98**	**248**	P	**P**		**12 52 45.3**	**0.0**
COEN	**Coen**	**36.41**	**279**	P	**P**		**12 52 57.6**	**+0.1**
BBOO	**Buckleboo**	**39.70**	**247**	P	**P**		**12 53 23.0**	**-1.1**
BBOO				IAmb	IAmb		12 53 51.8	
	comp=Z,20nm,1.2s							
ASAR	**Alice Springs**	**42.32**	**261**	P	**P**		**12 53 44.5**	**-0.6**
	comp=Z,5.3nm,0.3s,baz=98,slow=7.1,SNR=153							
WRA	**Warramunga Arr**	**42.70**	**266**	P	**P**		**12 53 47.0**	**-1.1**
	comp=Z,20nm,0.5s,baz=98,slow=8.2,SNR=383							
FORT	**Forrest**	**46.57**	**250**	P	**P**		**12 54 16.6**	**-1.2**
FAKI	**Fak Fak**	**50.88**	**287**	P	**P**		**12 54 49.2**	**-0.9**
FAKI				IAmb	IAmb		12 54 57.7	
	comp=Z,23nm,1.1s							
FITZ	**Fitzroy Crossi**	**51.12**	**266**	P	**P**		**12 54 51.6**	**-0.1**
	comp=Z,9.0nm,0.4s,baz=106,slow=4.0,SNR=23							
FITZ	**Fitzroy Crossi**	**51.12**	**266**	P	**P**		**12 54 52.1**	**+0.3**
FITZ				IAmb	IAmb		12 54 52.8	
	comp=Z,13nm,0.8s							
SIJI	**Sorong**	**52.73**	**288**	P	**P**		**12 55 03.0**	**-0.5**
	comp=Z,28nm,0.6s,baz=109,slow=8.1,SNR=9.8							
SOEI	**Soe**	**55.14**	**275**	P	**P**		**12 55 21.4**	**+0.7**
SOEI				IAmb	IAmb		12 55 22.1	
	comp=Z,36nm,0.6s							
PSA00	**Pilbara Seismi**	**55.44**	**260**	P	**P**		**12 55 21.5**	**-1.0**
PSA00				IAmb	IAmb		12 55 49.9	
	comp=Z,24nm,1.4s							
BATI	**Baumata**	**55.52**	**274**	P	**P**		**12 55 23.6**	**+0.4**
	comp=Z,22nm,0.5s,baz=146,slow=4.2,SNR=4.8							
MORW	**Morawa**	**57.13**	**250**	P	**P**		**12 55 33.7**	**-0.4**
GIRL	**Giralia**	**60.19**	**257**	P	**P**		**12 55 55.0**	**+0.2**
CASY	**Casey**	**60.20**	**206**	P	**P**		**12 55 53.8**	**-0.3**
JAGI	**Jajag, Banyuwa**	**64.87**	**272**	P	**P**		**12 56 24.3**	**-0.9**
QSPA	**South Pole Qui**	**66.13**	**180**	P	**P**		**12 56 33.7**	**+1.3**
UGM	**Wanagama**	**68.40**	**271**	P	**P**		**12 56 46.7**	**-0.4**
KKM	**Kota Kinabalu**	**69.20**	**287**	P	**P**		**12 56 52.3**	**+0.3**
KKM				IAmb	IAmb		12 56 58.4	
	comp=Z,28nm,1.2s							
JOW	**Kunigami**	**71.24**	**312**	P	**P**		**12 57 04.9**	**+1.1**
JOW				IAmb	IAmb		12 57 18.9	
	comp=Z,36nm,1.3s							
LEM	**Lembang**	**71.47**	**271**	P	**P**		**12 57 05.5**	**-0.2**
	comp=Z,11nm,0.3s,baz=20,slow=22,SNR=3.8			

AP01				IAML			12 59 17.5	
	comp=N,9µm,0.4s							
AP01	**Chacalluta**	**1.13 316**			**Pn**		**12 58 56.4**	**+0.3**
HMBC	**Humberstone**	**1.14 198**	⇓	*i* P	**Pn**		**12 58 56.2**	**-0.2**
HMBC				*i* S	**Sn**		**12 59 13.1**	**+0.1**
HMBC				IAML			12 59 20.3	
	comp=N,4µm,0.5s							
TA02	**Huaiquique**	**1.23 209**		*e*P	**Pn**		**12 58 56.7**	**-0.5**
TA02				*i* S	**Sn**		**12 59 14.9**	**+0.4**
TA02	**Huaiquique**	**1.23 209**			**Pn**		**12 58 57.5**	**+0.3**
TA02				Sn	**Sn**		**12 59 15.5**	**+1.1**
TA01	**Diego Aracena**	**1.51 205**	⇓	*e*P	**Pn**		**12 59 00.3**	**-0.3**
TA01				*i* S	**Sn**		**12 59 20.7**	**+0.2**
TA01				IAML			12 59 25.8	
	comp=E,3µm,0.3s							
TA01	**Diego Aracena**	**1.51 205**			**Pn**		**12 59 00.7**	**+0.1**
PATCX	**Punta Patache**	**1.73 200**		*e*P	**Pn**		**12 59 03.4**	**-0.2**
PATCX				*i* S	**Sn**		**12 59 25.6**	**-0.1**
PATCX				IAML			12 59 34.7	
	comp=N,2µm,0.5s							
PATCX	**Punta Patache**	**1.73 200**			**Pn**		**12 59 04.0**	**+0.5**
PATCX	**Punta Patache**	**1.73 200**		*e*P	**Pn**		**12 59 03.5**	**0.0**
PATCX				*e*P			12 59 03.7	
PATCX				*e*S	**Sn**		**12 59 26.0**	**+0.3**
PB01	**IPOC Station P**	**1.84 179**	⇓	*i* P	**Pn**		**12 59 05.2**	**+0.3**
PB01				*i* S	**Sn**		**12 59 29.0**	**+0.7**
PB01				IAML			12 59 32.5	
	comp=N,3µm,0.2s							
PB01	**IPOC Station P**	**1.84 179**			**Pn**		**12 59 05.3**	**+0.3**
PB01	**IPOC Station P**	**1.84 179**		*e*P	**Pn**		**12 59 05.3**	**+0.4**
PB01				*e*S	**Sn**		**12 59 29.3**	**+1.1**
PB01				IAML			12 59 32.5	
	comp=Z,2µm,0.2s							
PB07	**IPOC Station P**	**2.55 188**	⇑	*i* P	**Pn**		**12 59 14.4**	**+0.2**
PB07				*i* S	**Sn**		**12 59 45.5**	**+0.7**
PB07				IAML			12 59 53.0	
	comp=E,3µm,0.2s							
PB07	**IPOC Station P**	**2.55 188**			**Pn**		**12 59 15.4**	**+1.2**
PB07	**IPOC Station P**	**2.55 188**		*e*P	**Pn**		**12 59 15.3**	**+1.1**
PB07				*e*S	**Sn**		**12 59 49.2**	**+4.4**
PB07				IAML			12 59 54.0	
	comp=Z,2µm,0.4s							
PB09	**IPOC Station P**	**2.61 175**		*e*P	**Pn**		**12 59 15.5**	**+0.6**
PB09				IAML			12 59 58.4	
	comp=N,746nm,0.3s							
PB09	**IPOC Station P**	**2.61 175**			**Pn**		**12 59 16.4**	**+1.5**
PB09	**IPOC Station P**	**2.61 175**		*e*P	**Pn**		**12 59 15.6**	**+0.6**
PB09				*e*S	**Sn**		**12 59 47.5**	**+1.4**
PB09				IAML			12 59 57.1	
	comp=Z,669nm,0.4s							
PB03	**IPOC Station P**	**2.85 185**		IAML			13 00 01.8	
	comp=N,934nm,0.2s							
PB03	**IPOC Station P**	**2.85 185**		*e*P	**Pn**		**12 59 19.0**	**+0.7**
PB03				*e*S	**Sn**		**12 59 57.5**	**+5.5**
PB03				IAML			13 00 01.5	
	comp=Z,846nm,0.2s							
LPAZ	**La Paz**	**3.17 25**		P	**Pn**		**12 59 23.9**	**+1.0**
	comp=Z,4.2nm,0.3s,baz=184,slow=7.3,SNR=141							
LPAZ				S	**Sn**		**12 59 58.2**	**-2.1**
	comp=Z,2.6nm,0.3s,baz=206,slow=17,SNR=4.4							
LPAZ	**La Paz**	**3.17 25**			**Pn**		**12 59 24.8**	**+1.8**
PB04	**IPOC Station P**	**3.19 191**		*e*P	**Pn**		**12 59 23.4**	**+0.7**
PB04				IAML			13 00 21.0	
	comp=N,850nm,0.6s							
PB04	**IPOC Station P**	**3.19 191**			**Pn**		**12 59 24.1**	**+1.4**
LVC	**Limon Verde**	**3.45 171**		P	**Pn**		**12 59 27.2**	**+0.9**
	comp=N,13nm,0.3s,baz=3.9,slow=9.5,SNR=82							
LVC				S	**Sn**		**13 00 06.5**	**-0.1**
	comp=N,52nm,0.3s,baz=259,slow=22,SNR=17							
LVC	**Limon Verde**	**3.45 171**		*e*P	**Pn**		**12 59 27.4**	**+1.0**
LVC				*i* S	**Sn**		**13 00 06.4**	**-0.1**
LVC	**Limon Verde**	**3.45 171**		*e*P	**Pn**		**12 59 27.3**	**+0.9**
LVC				*e*S	**Sn**		**13 00 07.3**	**+0.7**
LVC				IAML			13 00 20.9	
	comp=Z,157nm,0.2s							
PB06	**IPOC Station P**	**3.50 181**		*e*P	**Pn**		**12 59 27.4**	**+0.5**
PB06				*i* S	**Sn**		**13 00 04.6**	**-2.9**
PB06	**IPOC Station P**	**3.50 181**			**Pn**		**12 59 27.3**	**+0.4**
PB06	**IPOC Station P**	**3.50 181**		*e*P	**Pn**		**12 59 27.9**	**+1.0**
PB06				*e*S	**Sn**		**13 00 05.1**	**-2.4**
PB06				IAML			13 00 16.4	
	comp=Z,298nm,0.3s							
PB05	**IPOC Station P**	**3.70 190**		*e*P	**Pn**		**12 59 29.4**	**-0.2**
PB05	**IPOC Station P**	**3.70 190**		*e*P	**Pn**		**12 59 29.7**	**+0.1**
PB05				*e*S	Sn		13 00 24.3	+12
PB05				IAML			13 00 27.7	
	comp=Z,308nm,0.3s							
PB15	**IPOC Station P**	**4.00 180**		*e*P	**Pn**		**12 59 34.0**	**+0.3**
PB15				*i* S	**Sn**		**13 00 16.7**	**-2.9**
PB15	**IPOC Station P**	**4.00 180**			**Pn**		**12 59 34.5**	**+0.8**
PB15	**IPOC Station P**	**4.00 180**		*e*P	**Pn**		**12 59 35.3**	**+1.6**
PB15				*e*S	Sn		13 00 34.2	+15
PB15				IAML			13 00 39.8	
	comp=Z,943nm,0.2s							
PB10	**IPOC Station P**	**4.41 193**		*e*P	**Pn**		**12 59 38.2**	**-0.8**
PB10	**IPOC Station P**	**4.41 193**			**Pn**		**12 59 38.3**	**-0.8**
PB10	**IPOC Station P**	**4.41 193**		*e*P	**Pn**		**12 59 38.4**	**-0.7**
PB10				IAML			13 00 49.3	
	comp=Z,146nm,0.4s							
GO02	**Mina Guanaco**	**5.95 181**			**Pn**		**12 59 59.2**	**-1.0**
SLA	**San Lorenzo**	**6.64 147**		*e*P	**Pn**		**13 00 09.9**	**+0.4**
AC01	**Pan de Azucar**	**7.00 188**			**Pn**		**13 00 11.5**	**-2.7**
AC02	**Maricunga**	**7.62 177**			**Pn**		**13 00 21.6**	**-1.5**
SIV	**San Ignacio**	**8.65 70**		P	**Pn**		**13 00 32.5**	**-4.3**
	comp=Z,1.7nm,0.3s,baz=269,slow=10,SNR=11							
NNA	**Nana**	**10.06 314**		Pn	**Pn**		**13 00 55.1**	**-0.9**
AGUA	**GUANDACOL**	**10.29 175**		*e*P	**Pn**		**13 00 58.7**	**-0.4**
ACDV	**Cuesta del Vie**	**10.94 178**		*e*P	**Pn**		**13 01 08.5**	**+0.5**
ACCO	**Cerro Coronel**	**11.36 178**		*e*P	**Pn**		**13 01 09.5**	**-4.2**
CO03	**El Pedregal**	**11.65 185**		Pn	**Pn**		**13 01 15.4**	**-2.0**
CPUP	**Villa Florida**	**13.29 125**		P	**Pn**		**13 01 36.3**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=294,slow=12,SNR=4.5							
MRA	**San Martin**	**13.61 166**		*e*P	**Pn**		**13 01 42.5**	**-0.8**
PEXB	**Peixe**	**21.59 74**		*e*P	**P**		**13 03 23.0**	**+6.7**
TORD	**Torodi Ar. Bea**	**77.13 71**		P	**P**		**13 10 16.7**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=241,slow=4.8,SNR=1.3							
TORD	**Torodi Ar. Bea**	**77.13 71**		P	**P**		**13 10 16.1**	**-1.5**
YKA	**Yellowknife Ar**	**88.83 341**		P	**P**		**13 11 17.1**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=136,slow=5.1,SNR=8.3							

*IDC **25** 13:00:07.2±2.6,27.72N×84.58E,h0km,mb3.5/5, mb1 3.6/6,mb1mx3.3/56,mbtmp3.5/6,ML3.7/1,MS3.6/1, Ms1 3.6/1,ms1mx2.8/39,Error ellipse: s-maj=95.2km s-min=22.7km az=71.0*

ISC 25 13:00:08.7±2.7,27.7N±0.3×84.5E±0.6,h10km,n7,σ0s32/6, mb3.6/5,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.13**	**355**	P		**P**	**13 04 32.0**	**+0.1**
	0.2nm,0.3s,baz=172,slow=11,SNR=17							
KURBB	**Kurchatov Arra**	**23.33**	**350**	P		P	**13 05 16.7**	**-0.2**
	0.3nm,0.7s,baz=179,slow=9.6,SNR=4.2							
ZALV	**Zalesovo Beam**	**26.21**	**0**	P		**P**	**13 05 43.5**	**0.0**
	0.9nm,0.6s,baz=182,slow=11,SNR=4.5							
SONM	**Songino Array**	**26.35**	**34**	P		**P**	**13 05 45.0**	**0.0**
	0.3nm,0.6s,baz=225,slow=11,SNR=3.2							
EIL	**Elat**	**43.26**	**285**	LR		LR	13 27 37.2	
	comp=Z,82nm,19.9s,baz=120,slow=38							
WRA	**Warramunga Arr**	**67.59**	**129**	P		**P**	**13 11 05.4**	**-0.4**
	0.4nm,0.6s,baz=323,slow=6.8,SNR=5.5							
ASAR	**Alice Springs**	**69.85**	**132**	P		**P**	**13 11 20.2**	**+0.4**
	0.6nm,1.0s,baz=329,slow=6.9,SNR=2.6							

*IDC **25** 13:01:02.4±0.8,28.40N×87.23E,h0km,mb3.8/14, mb1 4.0/17,mb1mx3.7/57,mbtmp3.8/17,ML3.7/2,Error ellipse: s-maj=24.8km s-min=15.4km az=55.0*

ISC 25 13:01:03.7±0.8,28.4N±0.1×87.2E±0.1,h10km,n18, σ0s81/18,mb3.8/14,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.59**	**130**	Pn		**Pn**	**13 04 30.2**	**-0.1**
	baz=305,slow=13,SNR=1.0							
AAK	**Ala-Archa**	**17.57**	**327**	Pn		**P**	**13 05 09.9**	**0.0**
	0.3nm,0.3s,baz=93,slow=2.6,SNR=2.6							
MKAR	**Makanchi Array**	**18.78**	**349**	P		**Pn**	**13 05 24.4**	**+1.0**
	0.2nm,0.3s,baz=168,slow=12,SNR=8.6							
KURBB	**Kurchatov Arra**	**23.16**	**346**	P		**P**	**13 06 10.4**	**+0.2**
	2.2nm,0.7s,baz=166,slow=10.0,SNR=15							
SONM	**Songino Array**	**24.45**	**32**	P		**P**	**13 06 23.0**	**+0.2**
	0.9nm,0.5s,baz=214,slow=9.7,SNR=6.6							
ZALV	**Zalesovo Beam**	**25.59**	**357**	P		**P**	**13 06 33.7**	**+0.8**
	1.9nm,0.8s,baz=172,slow=12,SNR=6.8							
KLR	**Kul'dur**	**39.73**	**46**	P		**P**	**13 08 35.7**	**-0.5**
	2.3nm,0.8s,baz=263,slow=10,SNR=7.3							
TIXI	**Tiksi**	**48.91**	**16**	P		**P**	**13 09 49.2**	**-0.1**
	0.7nm,0.5s,baz=90,slow=2.0,SNR=2.5							
FINES	**FINESS Array B**	**51.76**	**328**	P		**P**	**13 10 11.7**	**+0.6**
	0.5nm,0.4s,baz=101,slow=8.1,SNR=4.3							
ARCES	**ARCESS Array B**	**53.88**	**337**	P		**P**	**13 10 28.0**	**+1.3**
	4.2nm,1.0s,baz=104,slow=7.3,SNR=8.0							
GERES	**GERESS Array B**	**58.67**	**312**	P		**P**	**13 11 01.0**	**-0.3**
	0.3nm,0.5s,baz=86,slow=6.8,SNR=4.5							
NOA	**NORSAR Array B**	**58.88**	**327**	P		**P**	**13 11 02.6**	**+0.1**
	0.3nm,0.6s,baz=86,slow=7.0,SNR=2.1							
WRA	**Warramunga Arr**	**66.18**	**131**	P		**P**	**13 11 52.6**	**+0.8**
	1.0nm,0.6s,baz=327,slow=6.7,SNR=23							
ASAR	**Alice Springs**	**68.56**	**134**	P		**P**	**13 12 07.7**	**+0.9**
	2.0nm,0.7s,baz=317,slow=6.5,SNR=25							
ESDC	**Sonseca Array**	**73.35**	**306**	P		**P**	**13 12 34.6**	**-1.3**
	0.4nm,0.6s,baz=58,slow=6.1,SNR=3.0							
ILAR	**Eielson Array**	**78.10**	**21**	P		**P**	**13 13 00.9**	**-1.6**
	0.3nm,0.6s,baz=266,slow=6.2,SNR=2.9							
TORD	**Torodi Ar. Bea**	**80.01**	**280**	P		**P**	**13 13 14.0**	**+0.2**
	1.0nm,0.5s,baz=57,slow=4.5,SNR=12							
TXAR	**Lajitas Array**	**121.66**	**11**	PKP		**PKPdf**	**13 19 58.5**	**+0.2**
	0.2nm,0.5s,baz=29,slow=1.2,SNR=4.6							

IDC 25 13:08:08.3±5.8,28.10N×84.73E,h0km,mb3.1/3, mb1 3.2/4,mb1mx3.1/52,mbtmp3.2/4,ML3.4/1,Error ellipse: s-maj=99.6km s-min=51.1km az=168.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.76**	**355**	P		Pn	13 12 29.2	+0.1
	0.1nm,0.3s,baz=177,slow=11,SNR=6.5							
KURBB	**Kurchatov Arra**	**22.98**	**350**	P		P	13 13 13.9	-0.4
	0.2nm,0.7s,baz=173,slow=9.9,SNR=4.2							
SONM	**Songino Array**	**25.92**	**35**	P		P	13 13 42.2	0.0
	0.3nm,0.4s,baz=221,slow=12,SNR=2.3							
AKASG	**Malin Array Be**	**47.17**	**314**	P		P	13 16 42.4	-0.1
	0.1nm,0.3s,baz=81,slow=8.2,SNR=4.4							

TAP 25 13:16:39.2,24.42N×121.36E,h13km,ML1.3,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.02**	**57**	P		Pg	13 16 42.3	+0.7
	baz=56							
NNSB				S		Sg	13 16 43.2	-0.1
	baz=56							
NNSH	**Datong**	**0.02**	**57**	P		Pg	13 16 42.2	+0.6
	baz=56							
NNSH				S		Sg	13 16 43.2	-0.1
	baz=56							
NNS	**Nan Shan**	**0.03**	**23**	*i* P		Pg	13 16 42.4	+0.8
	baz=39							
NNS				*i* S		Sg	13 16 43.5	+0.1
	baz=39							
FUSS	**Fushou**	**0.20**	**213**	P		Pb	13 16 44.8	-0.1
	baz=212							
NDT	**Datong Townshi**	**0.23**	**36**	*e*P		Pb	13 16 45.0	-0.3
	baz=36							
NDT				*e*S		Sb	13 16 48.8	-0.6
	baz=36							
ETLH	**Xiulin Townshi**	**0.23**	**152**	P		Pb	13 16 45.9	+0.5
	baz=152							
ETLH				S		Sb	13 16 49.0	-0.6
	baz=152							
TWT	**Tachien**	**0.23**	**226**	P		Pb	13 16 45.5	0.0
	baz=227							
TDCB	**Techi**	**0.25**	**229**	P		Pb	13 16 45.5	-0.2
	baz=228							
TDCB				S		Sg	13 16 48.9	+0.9
	baz=228							
YHNB	**Yeheng**	**0.25**	**3**	P		Pb	13 16 46.2	+0.5
	baz=2.0							
YHNB				S		Sb	13 16 49.6	-0.5
	baz=2.0							
NSK	**Sanguang**	**0.26**	**359**	P		Pb	13 16 46.0	+0.2
NSK				S		Sb	13 16 49.5	-0.8
WHF	**Hehuan Shan**	**0.28**	**198**	*e*P		Pb	13 16 46.0	-0.5
	baz=196							
WHF				S		Sg	13 16 50.3	+0.9
	baz=196							
ENTT	**Nioudou**	**0.29**	**40**	*i* P		Pb	13 16 46.3	0.0
	baz=41							
ENTT				S		Sb	13 16 50.7	-0.4
	baz=41							
NACB	**Ninganchiao**	**0.32**	**139**	*e*P		Pg	13 16 46.1	+0.4
	baz=138							
NACB				*e*S		Sb	13 16 52.0	0.0
	baz=138							
EWUT	**Wuta**	**0.38**	**86**	*e*S		Sg	13 16 52.6	+0.7
	baz=85							
NWLT	**Wulai**	**0.38**	**20**	*e*P		Pg	13 16 47.1	+0.2
	baz=19							
NWLT				*e*S		Sb	13 16 53.2	-0.6
	baz=19							
NDS	**Dongshan**	**0.39**	**56**	P		Pb	13 16 47.7	-0.2
	baz=56							
NDS				*e*S		Sb	13 16 53.8	-0.1
	baz=56							
LIOB	**Emei**	**0.39**	**306**	*e*P		Pb	13 16 47.5	-0.5
	baz=306							
LIOB				*e*S		Sb	13 16 54.0	+0.1
	baz=306							
NSTT	**Nanjuang**	**0.39**	**303**	*e*P		Pg	13 16 47.5	+0.5
	baz=303							
NSTT				*e*S		Sb	13 16 53.9	-0.1
	baz=303							
CHGB	**Renai**	**0.39**	**206**	P		Pb	13 16 47.9	-0.3
	baz=205							
CHGB				*e*S		Sb	13 16 53.6	-0.6
	baz=205							
TWD	**Chiawan**	**0.40**	**147**	P		Pb	13 16 48.1	0.0
	baz=146							
TWD				S		Sb	13 16 54.0	-0.1
	baz=146							
NJD	**Zhudong**	**0.40**	**322**	*e*P		Pb	13 16 48.2	-0.1
	baz=321							
NJD				*e*S		Sb	13 16 54.1	-0.2
	baz=321							
WHP	**Taichung City**	**0.40**	**250**	*e*P		Pb	13 16 48.0	-0.3
	baz=250							
WHP				*e*S		Sb	13 16 53.8	-0.6
	baz=250							
TWE	**Neicheng**	**0.41**	**42**	P		Pb	13 16 48.8	+0.5
	baz=44							
TWE				*e*S		Sb	13 16 54.4	-0.2
	baz=44							
TWC	**Suao**	**0.48**	**66**	*e*P		Pb	13 16 49.6	0.0
	baz=67							
TWC				*e*S		Sb	13 16 57.5	+0.9
	baz=67							
HWA	**Hwalien**	**0.49**	**153**	*e*P		Pb	13 16 49.7	0.0
	baz=152							
HWA				*e*S		Sb	13 16 57.3	+0.5
	baz=152							
OWD	**Renai**	**0.49**	**200**	*e*P		Pb	13 16 49.6	-0.2
	baz=200							
OWD				*e*S		Sb	13 16 56.7	-0.2
	baz=200							
ILA	**Ilan**	**0.49**	**45**	*e*P		Pb	13 16 49.4	-0.4
	baz=46							
ILA				*e*S		Sb	13 16 57.1	+0.1
	baz=46							

TAP 25 13:16:42.4,24.43N×121.40E,h11km,ML1.2,A,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.02**	**281**	P		Pg	13 16 44.7	+0.2
	baz=279							
NNSB				S		Sg	13 16 46.3	+0.3
	baz=279							
NNSH	**Datong**	**0.02**	**281**	P		Pg	13 16 45.2	+0.7
	baz=279							
NNSH				*i* S		Sg	13 16 46.3	+0.4
	baz=279							
NNS	**Nan Shan**	**0.03**	**299**	*e*P		Pg	13 16 44.9	+0.3
	baz=302							
NNS				*i* S		Sg	13 16 46.5	+0.4
	baz=302							
NDT	**Datong Townshi**	**0.20**	**30**	P		Pb	13 16 47.5	-0.7
	baz=29							
NDT				S		Sg	13 16 50.8	+1.1
	baz=29							
FUSS	**Fushou**	**0.23**	**219**	*e*P		Pb	13 16 48.2	-0.5
	baz=219							
FUSS				*e*S		Sg	13 16 51.7	+1.1
	baz=219							
FUSS	**Fushou**	**0.23**	**219**	S		Pb	13 16 48.2	-0.6
	baz=212							
ETLH	**Xiulin Townshi**	**0.23**	**161**	P		Pg	13 16 47.9	+0.6
	baz=161							
ETLH				S		Sg	13 16 52.5	+2.0
	baz=161							
YHNB	**Yeheng**	**0.24**	**354**	*e*P		Pb	13 16 48.4	-0.6
	baz=354							
YHNB				S		Sg	13 16 52.7	+1.7
	baz=354							
NSK	**Sanguang**	**0.25**	**351**	*e*P		Pb	13 16 48.6	-0.5
	baz=352							
NSK				*i* S		Sb	13 16 52.9	-0.7
	baz=352							
ENTT	**Nioudou**	**0.26**	**35**	P		Pb	13 16 48.9	-0.3
	baz=36							
ENTT				*i* S		Sb	13 16 53.5	-0.3
	baz=36							
TWT	**Tachien**	**0.27**	**230**	*e*P		Pb	13 16 49.1	-0.2
	baz=231							
TWT				S		Sb	13 16 54.0	0.0
	baz=231							
TWT	**Tachien**	**0.27**	**230**	S		Pb	13 16 49.4	0.0
	baz=227							
NACB	**Ninganchiao**	**0.31**	**145**	*e*P		Pb	13 16 49.7	-0.2
	baz=144							
NACB				*e*S		Sb	13 16 54.9	0.0
	baz=144							
WHF	**Hehuan Shan**	**0.31**	**204**	P		Pb	13 16 49.5	-0.7
	baz=202							
WHF				S		Sg	13 16 53.6	+0.6
	baz=202							
NDS	**Dongshan**	**0.35**	**54**	*e*P		Pb	13 16 50.1	-0.6
	baz=54							
NDS				*e*S		Sg	13 16 55.2	+1.0
	baz=54							

IDC 25 13:19:25.4±3.0,27.55N×84.32E,h0km,mb3.3/4, mb1 3.3/5,mb1mx3.1/65,mbtmp3.3/5,ML3.2/1,Error ellipse: s-maj=95.7km s-min=30.1km az=70.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.28**	**356**	P		P	13 23 49.9	-1.8
	0.1nm,0.3s,baz=178,slow=12,SNR=5.7							
KURBB	**Kurchatov Arra**	**23.46**	**351**	P		P	13 24 36.9	+0.5
	0.1nm,0.2s,baz=169,slow=19,SNR=1.5							
ZALV	**Zalesovo Beam**	**26.38**	**1**	P		P	13 25 04.1	+0.9
	0.5nm,0.5s,baz=168,slow=7.4,SNR=2.8							
SONM	**Songino Array**	**26.58**	**34**	P		P	13 25 05.4	+0.1
	0.6nm,0.8s,baz=221,slow=10,SNR=4.0							
ASAR	**Alice Springs**	**69.87**	**132**	P		P	13 30 38.3	-0.1
	0.2nm,0.7s,baz=316,slow=6.5,SNR=2.3							

IDC 25 13:19:58.5±3.7,27.77N×84.68E,h0km,mb3.4/3, mb1 3.6/5,mb1mx3.2/65,mbtmp3.4/5,ML3.8/2,MS3.7/1, Ms1 3.7/1,ms1mx2.8/33,Error ellipse: s-maj=168.8km s-min=25.2km az=65.0,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.05**	**122**	P		P	13 23 47.9	-1.4
	0.3nm,0.3s,baz=319,slow=9.5,SNR=2.6							
MKAR	**Makanchi Array**	**19.08**	**355**	P		P	13 24 21.9	-0.7
	0.1nm,0.3s,baz=170,slow=10,SNR=4.3							
KURBB	**Kurchatov Arra**	**23.29**	**350**	P		P	13 25 08.7	+0.9
	0.4nm,0.5s,baz=170,slow=10,SNR=3.1							
LEM	**Lembang**	**40.92**	**144**	LR		LR	13 47 21.7	
	comp=Z,95nm,18.1s,baz=28,slow=40							
WRA	**Warramunga Arr**	**67.52**	**129**	P		P	13 30 56.4	-0.3
	0.3nm,0.6s,baz=322,slow=6.3,SNR=5.7							
ASAR	**Alice Springs**	**69.78**	**132**	P		P	13 31 10.8	-0.1
	0.3nm,0.6s,baz=322,slow=6.6,SNR=5.1							

WEL 25 13:21:06.2±0.5,42°S±3°×17°3E±°,h5km±5km,M2.5/9, ML2.5/9,MLv2.5/9,Error ellipse: s-maj=0.0km s-min=0.0km az=71.6,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.29**	**330**	P		Pg	13 21 12.7	+0.8
THZ				S		Sg	13 21 16.5	+0.6
KHZ	**Kahutara**	**0.51**	**141**	P		Pg	13 21 16.6	+0.5
KHZ				S		Sg	13 21 24.0	+1.2
BSWZ	**Blackbirch Sta**	**0.65**	**63**	P		Pg	13 21 19.0	+0.3
TUWZ	**Tuamarina**	**0.86**	**47**	P		Pg	13 21 22.6	-0.1
GVZ	**Greta Valley S**	**0.95**	**183**	P		Pb	13 21 25.1	-0.2
GVZ				S		Sb	13 21 38.6	+0.4
LTZ	**Lake Taylor**	**0.98**	**219**	P		Pg	13 21 24.3	-0.8
DSZ	**Denniston Nort**	**1.01**	**285**	P		Pb	13 21 26.0	-0.1
TCW	**Tory Channel**	**1.19**	**48**	P		Pg	13 21 28.5	-0.6
QRZ	**Quartz Range**	**1.27**	**340**	P		Pb	13 21 30.5	0.0
INZ	**Inchbonnie**	**1.42**	**240**	P		Pn	13 21 32.3	-0.3
MQZ	**McQueen's Vall**	**1.72**	**191**	P		Pn	13 21 34.8	-2.0
HOWZ	**Holdsworth Sta**	**2.13**	**59**	P		Pg	13 21 54.1	+7.1
TMWZ	**Te Maipa**	**2.28**	**67**	P		Pg	13 21 55.3	+5.4
MRZ	**Mangatainoka R**	**2.30**	**55**	P		Pg	13 21 54.3	+3.9
TIWZ	**Tintock**	**2.43**	**60**	P		Pg	13 21 52.0	-0.8
OHWZ	**Ohakea**	**2.46**	**43**	P		Pg	13 21 59.4	+6.0
CPWZ	**Castlepoint**	**2.58**	**66**	P		Pb	13 21 53.0	+0.1
POWZ	**Post Office Ro**	**2.58**	**52**	P		Pb	13 21 52.5	-0.5
PRWZ	**Pori Road**	**2.61

KOLN	Koldanda	2.08 274	*e*Pg	Pg	13 22 23.8	-0.7
KOLN			*e*Sg	Sg	13 22 52.0	+0.5
	970nm,0.3s					
PYUN	Piuthan	2.66 281	*e*Pg	Pg	13 22 35.3	-0.1
PYUN			*e*Sg	Sg	13 23 08.4	-1.5
	1µm,0.3s					
CMAR	Chiang Mai Arr	15.04 125	Pn	Pn	13 25 15.7	-1.5
	0.4nm,0.3s,baz=313,slow=14,SNR=4.2					
MKAR	Makanchi Array	19.33 352	P	Pn	13 26 09.6	-1.3
	0.3nm,0.3s,baz=174,slow=12,SNR=10					
KURBB	Kurchatov Arra	23.63 348	P	P	13 26 55.5	-0.1
	0.5nm,0.2s,baz=330,slow=33,SNR=4.2					
SONM	Songino Array	25.70 33	P	P	13 27 15.4	+0.6
	1.2nm,0.6s,baz=221,slow=10,SNR=11					
ZALV	Zalesovo Beam	26.29 358	P	P	13 27 20.4	+0.5
	0.8nm,0.4s,baz=192,slow=9.8,SNR=6.6					
FINES	FINESS Array B	51.78 328	P	P	13 30 52.3	+0.3
	1.9nm,0.9s,baz=96,slow=7.1,SNR=2.4					
ARCES	ARCESS Array B	54.13 338	P	P	13 31 09.4	+0.2
	2.7nm,0.9s,baz=122,slow=8.6,SNR=1.5					
WRA	Warramunga Arr	66.57 130	P	P	13 32 34.7	-0.3
	0.2nm,0.4s,baz=322,slow=6.4,SNR=6.1					
ASAR	Alice Springs	68.87 133	P	P	13 32 51.0	+1.6
	0.4nm,0.8s,baz=312,slow=6.2,SNR=2.9					

NEIC ***25*** *13:28:15.5±1.1, 18°.2S±0°.1×177°.9W±0°.2, h632km±11km, mb4.2/24, Error ellipse: s-maj=31.7km s-min=12.0km az=60.0*

IDC ***25*** *13:28:15.5±1.3, 18°.30S×177°.95W, h626km±15km, mb3.4/13, mb1 3.5/15, mb1mx3.3/41, mbtmp4.4/15, Error ellipse: s-maj=16.2km s-min=13.6km az=131.0*

ISC 25 13:28:13.2±0.7, 18°.2S±0°.1×177°.9W±0°.1, h600km, n44, σ0§96/45, mb4.2/22, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.87 277		P	P	13 29 43.8	+5.9
	7.8nm,0.3s,baz=122,slow=3.7,SNR=65						
DZM	Mont Dzumac	15.17 253		P	P	13 31 22.6	-0.5
	0.5nm,0.3s,baz=201,slow=20,SNR=5.7						
DZM	Mont Dzumac	15.17 253		P	P	13 31 20.3	-2.8
DZM				IAmb	IAmb	13 31 39.7	
	comp=Z,13nm,1.1s						
URZ	Urewera	20.42 191		P	P	13 32 09.5	-1.1
	comp=Z,8.1nm,0.6s,baz=302,slow=23,SNR=15						
URZ	Urewera	20.42 191		P	P	13 32 09.2	-1.3
URZ				IAmb	IAmb	13 32 15.6	
	comp=Z,12nm,0.8s						
CTA	Charters Tower	33.85 261		P	P	13 34 08.4	+0.7
	comp=Z,6.4nm,0.6s,baz=98,slow=10,SNR=22						
PMG	Port Moresby	34.97 280		P	P	13 34 19.2	+2.1
STKA	Stephens Creek	38.88 242		P	P	13 34 48.9	+0.1
	comp=Z,2.7nm,0.9s,baz=11,slow=16,SNR=2.9						
WB0	Warramunga Arr	45.00 260		P	P	13 35 37.6	+0.7
WB0				IAmb	IAmb	13 35 38.0	
	comp=Z,7.9nm,0.7s						
WB2	Warramunga Arr	45.02 260		P	P	13 35 37.6	+0.6
WRAB	Tennant Creek	45.02 260		P	P	13 35 37.0	0.0
WRAB				IAmb	IAmb	13 35 38.2	
	comp=Z,8.2nm,0.6s						
WRA	Warramunga Arr	45.03 260		P	P	13 35 37.7	+0.6
	comp=Z,7.8nm,0.6s,baz=96,slow=7.1,SNR=147						
WRA	Warramunga Arr	45.03 260		P	P	13 35 37.2	+0.1
AS31	Alice Springs	45.15 255		P	P	13 35 38.8	+0.8
ASAR	Alice Springs	45.15 255		P	P	13 35 39.0	+1.0
	comp=Z,10nm,0.7s,baz=91,slow=7.9,SNR=194						
ASAR				ScP	ScP	13 40 00.8	-0.8
	comp=Z,0.2nm,0.6s,baz=101,slow=4.6,SNR=4.3						
ASAR				S	S	13 41 33.9	-1.3
	comp=Z,2.7nm,0.7s,baz=90,slow=16,SNR=25						
ASAR	Alice Springs	45.15 255		P	P	13 35 38.6	+0.6
MTN	Manton Dam	49.25 269		P	P	13 36 08.9	+0.2
MTN				IAmb	IAmb	13 36 09.5	
	comp=Z,9.0nm,0.7s						
KNRA	Kununurra	50.92 264		P	P	13 36 20.9	+0.1
KNRA				IAmb	IAmb	13 36 22.1	
	comp=Z,7.6nm,0.8s						
FAKI	Fak Fak	51.09 281		P	P	13 36 22.2	0.0
SIJI	Sorong	52.76 283		P	P	13 36 34.5	+0.3
	comp=Z,21nm,0.5s,baz=175,slow=22,SNR=9.7						
FITZ	Fitzroy Crossi	53.43 261		P	P	13 36 38.9	+0.1
	comp=Z,1.5nm,0.6s,baz=130,slow=6.6,SNR=7.1						
FITZ	Fitzroy Crossi	53.43 261		P	P	13 36 39.6	+0.8
SOEI	Soe	56.53 270		P	P	13 37 01.4	+0.9
SOEI				IAmb	IAmb	13 37 11.8	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	58.27 256		P	P	13 37 11.9	-0.2
SBA	Scott Base	60.12 184		P	P	13 37 24.2	+0.8
SBA				IAmb	IAmb	13 37 44.1	
	comp=Z,12nm,1.1s						
VNDA	Vanda	60.16 185		P	P	13 37 24.8	+1.1
	comp=Z,1.2nm,0.6s,baz=11,slow=5.5,SNR=7.9						
VNDA	Vanda	60.16 185		P	P	13 37 23.7	0.0
CASY	Casey	66.04 205		P	P	13 38 01.0	-0.4
JGF	Kuroka	68.28 322		P	P	13 38 14.9	-0.7
JGF				IAmb	IAmb	13 38 27.8	
	comp=Z,7.7nm,1.1s						
MJAR	Matsushiro Arr	68.44 323		P	P	13 38 16.3	-0.3
	comp=Z,3.2nm,0.6s,baz=160,slow=6.0,SNR=13						
MJAR	Matsushiro Arr	68.44 323		P	P	13 38 15.1	-1.4
MAJO	Matsushiro	68.44 323		P	P	13 38 15.9	-0.7
MAJO				IAmb	IAmb	13 38 16.7	
	comp=Z,3.1nm,0.6s						
MAT	Matsushiro	68.44 323		P	P	13 38 16.0	-0.6
JMN	Monobe	69.14 318		P	P	13 38 20.2	-0.6
UGM	Wanagama	70.10 268		P	P	13 38 27.2	+0.3
QSPA	South Pole Qui	71.82 180		P	P	13 38 36.9	+0.7
QSPA				IAmb	IAmb	13 38 37.9	
	comp=Z,6.1nm,0.7s						
SSLB	Suanglung	72.80 303		P	P	13 38 41.5	-0.9
SSLB				IAmb	IAmb	13 38 51.8	
	comp=Z,7.3nm,0.8s						
TPUB	Ta-pu	72.82 302		P	P	13 38 41.3	-1.3
PETK	Petropavlovsk-	74.11 345		P	P	13 38 49.9	+0.8
	comp=Z,5.9nm,1.0s,baz=251,slow=9.2,SNR=5.9						
KSRS	Korea Array	75.25 318		P	P	13 38 56.5	+0.7
	comp=Z,0.6nm,0.7s,baz=67,slow=39,SNR=2.8						
MAW	Mawson	83.71 200		P	P	13 39 39.4	-0.3
TXAR	Lajitas Array	85.78 57		P	P	13 39 51.8	+1.2
	comp=Z,0.8nm,0.7s,baz=221,slow=6.5,SNR=13						
ILAR	Eielson Array	86.10 13		P	P	13 39 49.6	-1.5
	comp=Z,0.2nm,0.4s,baz=214,slow=5.0,SNR=6.9						
CLL	Collm	145.88 348		*e*PKPbc	PKPbc	13 46 45.0	-1.4

IDC ***25*** *13:29:29.9±1.0, 27°.62N×85°.59E, h0km, mb4.0/13, mb1 4.0/15, mb1mx3.7/61, mbtmp3.9/15, ML4.0/2, Error ellipse: s-maj=35.7km s-min=16.1km az=58.0*

NEIC ***25*** *13:29:31.6±1.9, 27°.81N±0°.06×85°.79E±0°.04, h10km±1km, mb4.3/19, Error ellipse: s-maj=10.2km s-min=6.4km az=13.0*

ISC 25 13:29:31.4±0.6, 27°.70N±0°.10×85°.64E±0°.08, h10km, n45, σ0§85/43, mb4.2/20, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	Lhasa	5.23 66		Pn	Pn	13 30 50.1	-0.1
SHL	Shillong	5.97 109		Pn	Pn	13 31 00.8	+0.8
NIL	Nilore	12.20 302		Pn	Pn	13 32 25.2	-0.1
CMAR	Chiang Mai Arr	15.29 124		Pn	Pn	13 33 07.5	0.0
	0.2nm,0.3s,baz=297,slow=13,SNR=5.4						
CMAR	Chiang Mai Arr	15.29 124			Pn	13 33 05.3	-2.2
KDJ	Kajisay	15.97 337		P	Pn	13 33 15.7	-0.7
GTA	Gaotai	16.59 42		⇑P	P	13 33 26.5	-0.3
GTA				pP	sP	13 33 31.0	-0.3
GTA				sP	pP	13 33 33.8	+3.9
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BOOM	Boomskoye usch	16.74 334		P	Pn	13 33 24.1	-2.1
GAR	Garm	17.04 315		Pn	Pn	13 33 29.6	-0.3
GAR				IAmb	IAmb	13 33 48.2	
	comp=Z,11nm,0.3s						
MK31	Makanchi Array	19.25 353			P	13 33 55.7	-0.2
MKAR	Makanchi Array	19.25 353		P	Pn	13 33 56.9	0.0
	comp=Z,0.4nm,0.3s,baz=175,slow=11,SNR=21						
MKAR	Makanchi Array	19.25 353		P	P	13 33 54.9	-0.9
MAKZ	Makanchi	19.30 352		P	P	13 33 54.6	-1.8
KURBB	Kurchatov Arra	23.53 349		P	P	13 34 42.9	+1.3
	comp=Z,1.9nm,0.7s,baz=168,slow=10.0,SNR=12						
KURK	Kurchatov	23.60 349		P	P	13 34 42.9	+0.6
SONM	Songino Array	25.80 33		P	P	13 35 03.5	+0.8
	comp=Z,3.3nm,0.7s,baz=218,slow=9.7,SNR=17						
SONM	Songino Array	25.80 33		P	P	13 35 02.5	-0.2
SONM				IAmb	IAmb	13 35 06.0	
	comp=Z,2.6nm,0.8s						
ZAA0	Zalesovo Array	26.23 359		P	P	13 35 05.0	-1.4
ZAA0				IAmb	IAmb	13 35 08.7	
	comp=Z,5.8nm,1.3s						
ZALV	Zalesovo Beam	26.23 359		P	P	13 35 07.9	+1.5
	comp=Z,1.3nm,0.4s,baz=186,slow=9.3,SNR=9.3						
ZALV	Zalesovo Beam	26.23 359		P	P	13 35 05.8	-0.6
UOSS	Minazif	26.50 271		P	P	13 35 09.7	+0.5
UOSS				IAmb	IAmb	13 35 10.1	
	comp=Z,10nm,0.9s						
ABKAR	Akbulak array	29.22 324		P	P	13 35 33.0	-0.2
SOCY	Socotra	33.39 249		P	P	13 36 10.0	-0.4
SOCY				IAmb	IAmb	13 36 14.7	
	comp=Z,9.2nm,1.2s						
ARU	Arti	34.61 334		P	P	13 36 21.4	+1.0
	comp=Z,1.0nm,0.5s,baz=326,slow=24,SNR=5.6						
ARU	Arti	34.61 334		IAmb	IAmb	13 36 22.6	
	comp=Z,3.4nm,0.7s						
NRIK	Noril'sk	41.69 1		P	P	13 37 21.1	+1.3
	comp=Z,5.4nm,0.5s,baz=174,slow=6.8,SNR=9.0						
NRIK	Noril'sk	41.69 1		P	P	13 37 19.7	-0.2
AKASG	Malin Array Be	48.03 315		P	P	13 38 11.2	+0.5
	comp=Z,0.5nm,0.4s,baz=80,slow=6.7,SNR=4.5						
TIXI	Tiksi	49.97 16		P	P	13 38 24.6	-0.6
	comp=Z,1.1nm,0.3s,baz=198,slow=6.0,SNR=5.5						
TIXI	Tiksi	49.97 16		IAmb	IAmb	13 38 25.7	
	comp=Z,1.6nm,0.6s						
FINES	FINESS Array B	51.59 328		P	P	13 38 37.9	+0.3
	comp=Z,1.6nm,0.6s,baz=117,slow=9.4,SNR=4.7						
ARCES	ARCESS Array B	53.98 338		P	P	13 38 55.0	-0.1
	comp=Z,3.3nm,0.7s,baz=91,slow=7.5,SNR=9.3						
NOA	NORSAR Array B	58.69 327		P	P	13 39 27.9	-1.0
	comp=Z,0.8nm,0.7s,baz=89,slow=7.0,SNR=3.6						
WRA	Warramunga Arr	66.81 130		P	P	13 40 23.8	+0.2
	comp=Z,0.7nm,0.4s,baz=322,slow=6.5,SNR=13						
WRAB	Tennant Creek	66.81 130		P	P	13 40 23.8	+0.2
WRAB				IAmb	IAmb	13 40 28.1	
	comp=Z,3.7nm,1.1s						
WB2	Warramunga Arr	66.81 130		P	P	13 40 23.6	0.0
WR0	Warramunga Arr	66.95 130		P	P	13 40 24.3	-0.2
NWAO	Narrogin (SRO)	67.35 151		P	P	13 40 27.1	+0.4
ASAR	Alice Springs	69.10 133		P	P	13 40 38.2	+0.2
	comp=Z,0.3nm,0.5s,baz=311,slow=6.3,SNR=6.6						
EUNU	Eureka	72.39 359		P	P	13 40 57.8	+0.6
EUNU				IAmb	IAmb	13 41 06.0	
	comp=Z,3.5nm,1.5s						
TOLK	Toolik Lake Re	75.83 18		P	P	13 41 17.4	-0.1
TOLK				IAmb	IAmb	13 41 22.6	
	comp=Z,5.5nm,1.5s						
BMAR	Burnt Mountain	78.03 18		P	P	13 41 30.9	+1.0
ILAR	Eielson Array	79.25 20		P	P	13 41 36.6	0.0
	comp=Z,0.3nm,0.7s,baz=311,slow=4.7,SNR=3.7						
ILAR	Eielson Array	79.25 20		P	P	13 41 36.2	-0.3
SKT	Skwentna	79.60 24		P	P	13 41 38.2	-0.3
SKT				IAmb	IAmb	13 41 47.5	
	comp=Z,5.9nm,1.2s						

IDC ***25*** *13:30:26.3±0.5, 27°.97N×85°.13E, h0km, mb4.3/34, mb1 4.4/37, mb1mx4.3/62, mbtmp4.3/37, ML4.6/3, MS3.6/6, Ms1 3.6/6, ms1mx3.1/48, Error ellipse: s-maj=14.4km s-min=10.2km az=48.0*

BJI ***25*** *13:30:27.6±0.0, 28°.20N×85°.20E, h5km, mb4.7/20, mb4.5/38, ML4.5/1, Ms4.0/23, Ms7 3.9/21*

NEIC ***25*** *13:30:28.0±2.5, 28°.08N±0°.09×85°.04E±0°.06, h10km±1km, mb4.6/42, Error ellipse: s-maj=16.0km s-min=8.8km az=194.0*

DMN ***25*** *13:30:29.5±0.1, 28°.11N×85°.20E, h2km, Ml5.0/5, Error ellipse: s-maj=2.6km s-min=1.3km az=21.0*

NDI ***25*** *13:30:30.7±3.7, 27°.85N×85°.07E, h10km, ML4.5, mb4.6(NEIC)*

ISC 25 13:30:28.7±0.3, 28°.10N±0°.04×85°.18E±0°.03, h12km, n191, σ1§44/203, mb4.5/60, MS3.8/6, 14C-2D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	Kakani	0.32 165		*e*Pg	Pg	13 30 35.8	+0.5
KKN				*e*Sg	Sg	13 30 40.3	+0.5
GKN	Gorkha	0.49 258		*e*Sg	Sg	13 30 45.8	+0.8
DMN	Daman	0.50 188		*e*Pg	Pg	13 30 39.5	+1.0
DMN	Daman	0.50 188		*e*Pg	Pg	13 30 39.5	+1.0
DMN				*e*Sg	Sg	13 30 46.3	+1.2
	24µm,0.4s						
PKIN	Phulchoki	0.56 160		*e*Pg	Pg	13 30 40.3	+0.7
PKI	Pulchoki	0.57 159		*e*Pg	Pg	13 30 40.3	+0.5
PKI	Pulchoki	0.57 159		*e*Pg	Pg	13 30 40.5	+0.7
PKI				*e*Sg	Sg	13 30 47.8	+0.4
GUN	Gumba	0.65 107		*e*Pg	Pg	13 30 41.7	+0.4
GUN				*e*Sg	Sg	13 30 49.8	-0.1
DANN	Dangsing	1.28 281		*e*Pg	Pn	13 30 53.8	+1.2
DANN				*e*Sg	Sn	13 31 11.2	+1.3
	3µm,0.2s						
KOLN	Koldanda	1.44 257		*e*Pg	Pb	13 30 57.0	+1.5
KOLN				*e*Sg	Sb	13 31 15.5	+1.6
	1µm,0.2s						
PYUN	Piuthan	1.94 270		*e*Pg	Pb	13 31 05.0	+1.0
PYUN				*e*Sg	Sb	13 31 30.6	+2.3
	15µm,0.4s						
ODAN	Odare	2.32 122		*e*Sn	Sn	13 31 35.1	-0.4
	1µm,0.4s						
TAPN	Taplejung	2.36 108		*e*Sn	Sn	13 31 36.2	-0.5
	2µm,0.4s						
GTK	Tadong	3.13 104		*e*P	Pn	13 31 21.5	+3.5
GTK				*e*S	Sn	13 31 58.3	+2.9
LSA	Lhasa	5.47 72		Pg	Pb	13 32 05.5	+1.1
LSA				Sn	Sn	13 32 50.8	-2.7
LSA				smax	smax		
	comp=N,470nm,1.1s						
LSA				smax	smax		
	comp=E,510nm,1.1s						
LSA	Lhasa	5.47 72		Pn	Pn	13 31 51.4	+0.9
GUWA	GUWAHATI	6.10 107		*e*P	Pn	13 31 58.7	0.0
GUWA				*e*S	Sn	13 33 08.0	-0.5
GUWA				IAML		13 33 12.3	
	comp=E,317nm,0.6s						
GUWA				IAML		13 33 12.3	
	comp=N,327nm,0.3s						
SHL	Shillong	6.50 111		*e*P	Pn	13 32 05.2	+0.9
SHL				*e*S	Sn	13 33 13.2	-5.2
SHL	Shillong	6.50 111		Pn	Pn	13 32 05.1	+0.8
DDI	Dehra Dun	6.61 291		*e*P	Pn	13 32 09.6	+3.9
DDI				*e*S	Sn	13 33 21.3	+0.3
DDI				IAML		13 33 25.4	
	comp=E,974nm,0.3s						
DDI				IAML		13 33 26.1	
	comp=N,1µm,0.4s						
AGT	Agartala	6.89 126		*e*P	Pn	13 32 12.0	+2.5
TEZP	TEZPUR	6.93 101		⇑*e*P	Pn	13 32 11.1	+1.0
TEZP				*e*S	Sn	13 33 27.5	-1.4
TEZP				IAML		13 33 33.3	
	comp=E,179nm,0.2s						
SMLA	Simla	7.60 295		⇑*e*P	Pn	13 32 21.0	+1.7
SMLA				*e*S	Sn	13 33 42.1	-3.2
SMLA				IAML		13 33 49.7	
	comp=E,459nm,0.5s						
ZIRO	ZIRO	7.70 92		⇑*e*P	Pn	13 32 22.9	+2.1
ZIRO				IAML		13 33 28.7	
	comp=N,285nm,0.4s						
ZIRO				*e*S	Sn	13 33 48.3	+0.3
KOHI	KOHIMA	8.31 105		⇑*e*P	Pn	13 32 29.7	+0.5
KOHI				*e*S	Sn	13 34 02.3	-0.8
KOHI				IAML		13 34 08.3	
	comp=E,322nm,0.5s						
MOKO	MOKOCHONG	8.50 100		*e*P	Pn	13 32 32.6	+0.9
MOKO				*e*S	Sn	13 34 04.6	-3.1
MOKO				IAML		13 34 08.8	
	comp=E,329nm,0.5s						
MOKO				IAML		13 34 09.6	
	comp=N,230nm,0.4s						
BHPL	Bhopal	8.51 237		*e*P	Pn	13 32 29.2	-2.6
BHPL				*e*S	Sn	13 33 59.0	-8.8
BHPL				IAML		13 34 04.7	
	comp=E,207nm,0.4s						
BHPL				IAML		13 34 07.5	
	comp=N,154nm,0.2s						
DHRM	DHARAMSHALA	8.73 300		⇑*e*P	Pn	13 32 35.4	+0.5
DHRM				*e*S	Sn	13 34 08.5	-4.9
DHRM				IAML		13 34 12.3	
	comp=E,436nm,0.5s						
DHRM				IAML		13 34 13.1	
	comp=N,461nm,0.5s						
NIL	Nilore	11.64 301		Pn	Pn	13 33 13.6	-1.0
HYB	Hyderabad	12.26 211		*i* P	Pn	13 33 20.5	-2.8
KSH	Kashi	13.71 329		P	Pn	13 33 40.0	-3.0
KSH				pP	P	13 33 44.0	-7.7
KSH				S	Sn	13 36 06.8	-8.4
KSH				pmax	pmax		
	comp=N,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=N,98nm,4.3s						
KSH				LR	LR		
	comp=N,310nm,8.5s						
KSH				LR	LR		
	comp=N,550nm,9.4s						
KSH				LR	LR		
	comp=N,540nm,10.1s						
KBL	Kabul	15.21 299			Pn	13 34 01.7	-1.8
MHMT	Maesarieng	15.32 127		P	P	13 34 08.4	-1.2
	comp=N,1µmcomp=N,45nm,0.8s						
KDJ	Kajisay	15.44 337		P	Pn	13 34 06.9	+0.5
CHTO	Chiang Mai	15.64 123			Pn	13 34 09.9	+0.9
CHTO				IAmb	IAmb	13 34 14.3	
	comp=Z,40nm,0.8s						
CM33	Chiang Mai Arr	15.64 123		P	P	13 34 12.0	-1.1
CMMT	Chiang Mai	15.64 123		P	Pn	13 34 12.0	+2.9
	comp=Z,335nmcomp=Z,30nm,1.0s						
CM32	Chiang Mai Arr	15.67 124		P	Pn	13 34 09.0	-0.4
CM34	Chiang Mai Arr	15.77 123		P	Pn	13 34 10.0	-0.7
WMQ	Urumqi	15.81 7		*e*P	P	13 34 15.0	0.0
WMQ				sP	pP	13 34 20.8	+1.3
WMQ				pmax	pmax		
	comp=Z,60nm,1.1s						
WMQ				LR	LR		
	comp=Z,440nm,13.3s						
WMQ				LR	LR		
	comp=Z,260nm,8.5s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
CM15	Chiang Mai Arr	15.85 124		P	P	13 34 15.7	+0.1
	comp=Z,31nm,0.8s						
CM13	Chiang Mai Arr	15.86 124		P	Pn	13 34 13.5	+1.6
	comp=Z,142nmcomp=Z,24nm,0.8s						
CM31	Chiang Mai Arr	15.86 124		P	P	13 34 16.1	+0.4
	comp=Z,6µmcomp=Z,815nm,0.8s						
CMAR	Chiang Mai Arr	15.86 124		Pn	Pn	13 34 10.2	-1.8
	comp=Z,1.1nm,0.3s,baz=304,slow=12,SNR=12						
CMAR	Chiang Mai Arr	15.86 124		P	P	13 34 15.5	-0.2
CM35	Chiang Mai Arr	15.88 123		P	P	13 34 15.0	-0.8
CM02	Chiang Mai Arr	15.88 124		P	P	13 34 15.7	-0.2
	comp=Z,321nmcomp=Z,48nm,0.8s						
CM01	Chiang Mai Arr	15.90 124		P	P	13 34 16.3	+0.3
	comp=Z,260nmcomp=Z,35nm,0.8s						
CM05	Chiang Mai Arr	15.90 124		P	Pn	13 34 14.0	+1.6
	comp=Z,206nmcomp=Z,28nm,0.8s						
CM09	Chiang Mai Arr	15.91 124		P	P	13 34 16.0	-0.1
	comp=Z,313nmcomp=Z,38nm,0.7s						
CM04	Chiang Mai Arr	15.93 124		P	P	13 34 15.4	-0.9
	comp=Z,348nmcomp=Z,49nm,0.8s						
CM36	Chiang Mai Arr	15.94 124		P	P	13 34 16.0	-0.4
KMI	Kunming	15.98 97		⇑P	Pn	13 34 12.8	-0.8
KMI				pP	P	13 34 18.0	+0.8
KMI				sP	pP	13 34 21.0	-0.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,5.4s						
KMI				LR	LR		
	comp=Z,110nm,8.7s						
KMI				LR	LR		
	comp=Z,190nm,8.7s						
KMI				LR	LR		
	comp=Z,200nm,17.0s						
BOOM	Boomskoye usch	16.20 335			Pn	13 34 12.4	-3.9
CD2	Chengdu	16.41 76		P	P	13 34 22.0	+0.3
CD2				LR	LR		
	comp=Z,470nm,10.1s						
CD2				LR	LR		
	comp=Z,810nm,12.2s						
CD2				LR	LR		
	comp=Z,870nm,10.8s						
GAR	Garm	16.46 315		Pn	Pn	13 34 14.4	-5.1
GAR				IAmb	IAmb	13 34 23.6	
	comp=Z,43nm,1.2s						
GTA	Gaotai	16.57 43		P	P	13 34 23.8	+0.3
GTA				pP	pP	13 34 28.5	+0.9
GTA				sP	sP	13 34 31.5	+2.0
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,74nm,4.7s						
GTA				LR	LR		
	comp=Z,180nm,13.5s						
GTA				LR	LR		
	comp=Z,200nm,13.1s						
GTA				LR	LR		
	comp=Z,270nm,13.1s						
AAK	Ala-Archa	16.90 332		Pn	Pn	13 34 25.8	+0.6
	comp=Z,0.7nm,0.3s,baz=179,slow=8.5,SNR=12						
AAK	Ala-Archa	16.90 332		P	Pn	13 34 26.4	+1.3
SUKH	Sukhothai	16.99 125		P	P	13 34 28.3	+0.2
	comp=Z,312nmcomp=Z,38nm,0.8s						
UTTA	Uttaradit	17.50 123		P	Pn	13 34 34.0	+1.4
	comp=Z,354nmcomp=Z,44nm,0.9s						
PHIT	Phitsanulok	17.75 125		P	P	13 34 37.9	+1.3
	comp=Z,102nm,0.8s						
KHLT	Khaolaem Dam	18.17 134		P	P	13 34 44.2	+3.0
	comp=Z,9.0nm,0.7s						
UTHA	Uthaitani	18.18 130		P	Pn	13 34 41.0	0.0
	comp=Z,582nmcomp=Z,67nm,0.8s						
MK31	Makanchi Array	18.80 354			P	13 34 46.8	-1.1
MKAR	Makanchi Array	18.80 354		P	P	13 34 49.0	+1.0
	comp=Z,4.8nm,0.3s,baz=176,slow=12,SNR=70						
MKAR				LR	LR	13 43 11.0	
	comp=Z,317nm,19.8s,baz=206,slow=40						
MKAR	Makanchi Array	18.80 354		P	P	13 34 47.9	0.0
MAKZ	Makanchi	18.84 353		P	P	13 34 49.4	+1.0
MAKZ				IAmb	IAmb	13 34 51.3	
	comp=Z,23nm,0.7s						
KKAR	Karatay Array	19.09 325		P	P	13 34 49.7	-1.5
GYA	Guiyang	19.16 90		⇓P	Pn	13 34 54.3	+1.2
GYA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHAI	Chaiyaphum	19.72 124		P	Pn	13 35 00.7	+1.0
	comp=Z,853nmcomp=Z,97nm,0.7s						
KHON	Khomk

ZALV **Zalesovo Beam** 25.82 360 P **P** 13 36 00.5 +0.8
comp=Z,15nm,0.4s,baz=182,slow=9.1,SNR=60
ZALV **Zalesovo Beam** 25.82 360 P **P** 13 36 00.2 +0.6
KULM **Kulim** 27.03 144 P **P** 13 36 10.8 -0.1
KULM IAmb IAmb 13 36 15.7
comp=Z,23nm,0.8s
BVAR **Borovoye Array** 27.20 340 P **P** 13 36 12.0 -0.1
comp=Z,1.5nm,0.4s,baz=169,slow=14,SNR=16
TPTI **27.23 153** P **P** 13 36 14.9 +2.3
comp=Z,14nm,1.0s
ABKAR **Akbulak array** 28.65 324 P **P** 13 36 26.0 +0.9
ABKAR IAmb IAmb 13 36 26.7
comp=Z,6.5nm,0.6s
ABKAR **Akbulak array** 28.65 324 P **P** 13 36 25.6 +0.5
GSI **Gunungsitoli** 29.17 154 P **P** 13 36 31.1 +1.1
comp=Z,34nm,0.7s
NJ2 **Nanjing** 29.33 74 *eP* **P** 13 36 32.8 +1.5
NJ2 pmax pmax
comp=Z,18nm,0.6s
AKTO **Aktyubinsk** 30.36 325 P **P** 13 36 40.8 +0.5
comp=Z,3.2nm,0.5s,baz=117,slow=8.9,SNR=11
MNSI **Mandailing Nat** 30.45 151 P **P** 13 36 41.4 +0.1
BKNI **Bangkinang** 31.52 148 P **P** 13 36 51.2 +0.4
comp=Z,3µmcomp=Z,75nm,0.8s
ARU **Arti** 34.07 334 P **P** 13 37 13.4 +0.7
comp=Z,4.4nm,0.5s,baz=121,slow=6.5,SNR=19
ARU **Arti** 34.07 334 P **P** 13 37 12.8 +0.1
CN2 **Changchun** 35.78 53 *eP* **P** 13 37 28.8 +1.2
CN2 pmax pmax
comp=Z,10.0nm,0.7s
KSRS **Korea Array** 36.86 64 P **P** 13 37 36.3 -0.6
comp=Z,1.7nm,0.5s,baz=263,slow=7.9,SNR=12
KIRV **Kirov** 39.23 331 P **P** 13 37 57.8 +1.2
comp=Z,8.1nm,0.5s,baz=292,slow=0.3,SNR=4.1
KIRV LR LR 13 55 34.0
comp=Z,143nm,19.6s,baz=291,slow=38
USRK **Ussuriysk Ar.** 40.49 54 P **P** 13 38 07.0 -0.4
comp=Z,1.3nm,0.5s,baz=255,slow=8.1,SNR=5.7
KLR **Kul'dur** 41.23 46 P **P** 13 38 13.6 +0.2
comp=Z,0.8nm,0.5s,baz=270,slow=11,SNR=5.7
NRIK **Noril'sk** 41.29 1 P **P** 13 38 13.8 +0.2
comp=Z,4.5nm,0.6s,baz=152,slow=6.3,SNR=4.6
OBN **Obninsk** 44.02 322 LR LR 13 58 35.1
comp=Z,42nm,18.1s,baz=196,slow=38
MAT **Matsushiro** 45.11 65 P **P** 13 38 45.3 +0.3
MJAR **Matsushiro Arr** 45.12 65 P **P** 13 38 45.7 +0.7
comp=Z,2.2nm,0.9s,baz=270,slow=10,SNR=2.2
MJAR LR LR 14 00 08.4
comp=Z,38nm,20.9s,baz=250,slow=39
ELL **Elmali** 46.89 295 P **P** 13 38 58.9 -0.2
AKASG **Malin Array Be** 47.46 314 P **P** 13 39 02.8 -0.4
comp=Z,1.7nm,0.5s,baz=78,slow=7.2,SNR=11
AKASG **Malin Array Be** 47.46 314 P **P** 13 39 01.2 -2.0
AKBB **Malin Array Si** 47.46 314 P **P** 13 39 03.6 +0.4
AKBB IAmb IAmb 13 39 08.2
comp=Z,6.6nm,0.9s
TPGR **Topolog** 47.64 306 ⇑P **P** 13 39 08.1 +3.4
VRI **Vrincioaia** 48.84 308 ⇑P **P** 13 39 15.1 +1.1
PLOR **Plostina** 48.89 308 ⇓P **P** 13 39 15.8 +1.4
MLR **Muntele Rosu** 49.39 307 ⇑P **P** 13 39 19.6 +1.3
OZUR **49.50 308** ⇑P **P** 13 39 15.9 -3.1
TIXI **Tiksi** 49.70 17 P **P** 13 39 20.7 +0.6
comp=Z,2.1nm,0.4s,baz=230,slow=3.3,SNR=9.4
TIXI **Tiksi** 49.70 17 P **P** 13 39 19.1 -0.9
TIXI IAmb IAmb 13 39 27.5
comp=Z,8.0nm,1.1s
BURAR **Bucovina Array** 49.89 310 ⇑P P 13 39 26.9 +4.8
BURAR **Bucovina Array** 49.89 310 P **P** 13 39 21.9 -0.2
BURAR IAmb IAmb 13 39 31.8
comp=Z,3.1nm,0.7s
BUR08 **Bucovina Ar. S** 49.90 310 P **P** 13 39 21.8 -0.4
BUR08 IAmb IAmb 13 39 32.1
comp=Z,3.4nm,0.8s
FINES **FINESS Array B** 51.03 328 P **P** 13 39 30.5 +0.2
comp=Z,2.8nm,0.5s,baz=98,slow=8.1,SNR=13
VTS **Vitosha** 51.48 304 ⇑P **P** 13 39 37.4 +3.2
SOEI **Soe** 53.34 129 P **P** 13 39 47.0 -1.3
ARA0 **ARCESS Array S** 53.45 338 *eP* **P** 13 39 48.8 +0.6
ARCES **ARCESS Array B** 53.45 338 P **P** 13 39 48.7 +0.5
comp=Z,6.9nm,0.6s,baz=86,slow=7.1,SNR=40
KTK1 **Kautokeino** 54.07 337 *eP* **P** 13 39 53.2 +0.5
HAMF **Hammerfest** 54.38 339 *eP* **P** 13 39 56.0 +1.0
PDG **Podgorica** 54.42 304 ⇑P **P** 13 39 56.1 +0.4
MORH **Mrgy, Hungar** 54.45 308 ⇑P P 13 40 02.2 +6.3
JETT **Jettan, Norway** 55.18 337 *eP* **P** 13 40 01.5 +0.7
TRO **Tromso** 55.70 337 *eP* **P** 13 40 04.6 +0.1
FAUS **Fauske** 56.66 334 *eP* **P** 13 40 11.4 0.0
STEI **Steigen** 56.74 335 *eP* **P** 13 40 12.3 +0.3
MOR8 **Moi Rana** 56.87 333 *eP* **P** 13 40 11.9 -1.0
LOF **Lofoten** 57.40 335 *eP* **P** 13 40 16.3 -0.4
KONS **Konsvik** 57.43 333 *eP* **P** 13 40 17.3 +0.5
GERES **GERESS Array B** 57.51 312 P **P** 13 40 16.5 -1.4
comp=Z,0.2nm,0.2s,baz=131,slow=5.7,SNR=1.2
NC602 **NORSAR Array S** 57.97 326 *eP* **P** 13 40 21.1 +0.4
NB2 **NORSAR Subarra** 58.12 327 P **P** 13 40 21.0 -0.9
baz=91,slow=6.9
NOA **NORSAR Array B** 58.12 327 P **P** 13 40 20.3 -1.6
comp=Z,0.3nm,0.4s,baz=95,slow=5.4,SNR=3.2
HSPB **Hornsund (broa** 58.27 346 *eP* **P** 13 40 23.5 +0.9
OSL **Oslo** 58.40 325 *eP* **P** 13 40 24.2 +0.5
SKAR **Skarslia** 59.56 326 *eP* **P** 13 40 32.2 +0.3
FITZ **Fitzroy Crossi** 60.35 135 P **P** 13 40 37.0 -0.8
comp=Z,5.0nm,0.9s,baz=340,slow=4.5,SNR=7.0
FITZ **Fitzroy Crossi** 60.35 135 P **P** 13 40 37.5 -0.3
KEST **Kesra** 63.36 298 P **P** 13 40 58.3 +0.2
comp=Z,4.6nm,0.7s,baz=22,slow=4.8,SNR=4.8
KEST **Kesra** 63.36 298 P **P** 13 40 57.5 -0.6
NOR **Nord** 64.10 351 *i* P **P** 13 41 01.7 -0.4
DAG **Danmarks Havn** 65.96 346 *i* P **P** 13 41 14.4 +0.1
WB0 **Warramunga Arr** 67.30 129 P **P** 13 41 23.4 -0.2
WRA **Warramunga Arr** 67.38 130 P **P** 13 41 24.5 +0.4
comp=Z,7.0nm,0.8s,baz=323,slow=5,SNR=23
WRA **Warramunga Arr** 67.38 130 P **P** 13 41 24.0 -0.1
WB2 **Warramunga Arr** 67.39 130 P **P** 13 41 24.5 +0.4
WB2 IAmb IAmb 13 41 25.1
comp=Z,6.8nm,0.7s
WR0 **Warramunga Arr** 67.53 129 P **P** 13 41 23.5 -1.6
NWAO **Narrogin (SRO)** 67.90 151 P **P** 13 41 25.8 -1.3
comp=Z,8.8nm,0.7s,baz=324,slow=6.0,SNR=7.2
ASAR **Alice Springs** 69.68 133 P **P** 13 41 38.2 -0.2
comp=Z,3.9nm,0.7s,baz=318,slow=6.2,SNR=26
LSZ **Lusaka** 70.02 239 P **P** 13 41 38.9 -1.9
NEEM **North Greenlan** 71.48 351 *i* P **P** 13 41 49.5 +0.4
NEEM IAmb IAmb 13 41 50.8
comp=Z,7.3nm,0.5s
EUNU **Eureka** 71.97 358 P **P** 13 41 52.2 +0.5
EUNU IAmb IAmb 13 41 58.3
comp=Z,5.4nm,0.8s
ESDC **Sonseca Array** 72.05 306 P **P** 13 41 52.8 0.0
comp=Z,1.2nm,1.0s,baz=57,slow=5.3,SNR=5.5
ESDC **Sonseca Array** 72.05 306 P **P** 13 41 50.9 -2.0
SUMG **Summit** 72.58 345 *eP* **P** 13 41 59.3 +3.5
SUMG IAmb IAmb 13 42 02.9
comp=Z,9.4nm,1.0s
ICESG **Greenland Ices** 75.15 342 *i* P **P** 13 42 12.4 +1.5
ICESG IAmb IAmb 13 42 17.7
comp=Z,11nm,1.0s
TOLK **Toolik Lake Re** 75.56 18 P **P** 13 42 13.9 +1.0
TOLK IAmb IAmb 13 42 21.7
comp=Z,4.4nm,0.8s
CTA **Charters Tower** 76.02 122 P **P** 13 42 15.0 -1.1
comp=Z,1.3nm,0.5s,baz=308,slow=7.2,SNR=5.3
BMAR **Burnt Mountain** 77.76 18 P **P** 13 42 27.2 +1.9
TORD **Torodi Ar. Bea** 78.26 279 P **P** 13 42 27.6 -1.4
comp=Z,1.8nm,0.6s,baz=52,slow=4.4,SNR=11
TORD **Torodi Ar. Bea** 78.26 279 P **P** 13 42 27.5 -1.4
ILAR **Eielson Array** 79.01 20 P **P** 13 42 32.9 +0.6
comp=Z,0.9nm,0.8s,baz=301,slow=4.9,SNR=7.3
ILAR LR LR 14 21 36.0
comp=Z,45nm,19.4s,baz=32,slow=39
ILAR **Eielson Array** 79.01 20 P **P** 13 42 33.5 +1.3
SKT **Skwentna** 79.39 24 P **P** 13 42 34.9 +0.6
SKT IAmb IAmb 13 42 47.8
comp=Z,5.9nm,0.8s
INK **Inuvik** 79.70 14 P **P** 13 42 36.5 +0.6
comp=Z,0.8nm,0.7s,baz=331,slow=10.0,SNR=4.1
INK **Inuvik** 79.70 14 IAmb IAmb 13 42 42.6
comp=Z,6.8nm,1.4s
STKA **Stephens Creek** 80.24 134 P **P** 13 42 38.6 -0.7
comp=Z,1.5nm,0.4s,baz=320,slow=5.4,SNR=6.0
BOSA **Boshof** 80.45 230 P **P** 13 42 39.1 -1.5
comp=Z,1.9nm,0.6s,baz=66,slow=4.3,SNR=7.1
BOSA **Boshof** 80.45 230 P **P** 13 42 39.4 -1.3
BOSA IAmb IAmb 13 42 57.4
comp=Z,4.2nm,1.0s

SCRK **Sand Creek** 80.46 20 P **P** 13 42 41.7 +1.5
SCRK IAmb IAmb 13 42 49.7
comp=Z,3.9nm,0.9s
C36M **Paulatuk** 80.52 10 P **P** 13 42 40.0 -0.2
C36M IAmb IAmb 13 42 47.3
comp=Z,6.5nm,1.1s
EGAK **Eagle** 80.67 18 P **P** 13 42 42.3 +1.1
EGAK IAmb IAmb 13 42 54.2
comp=Z,5.4nm,1.2s
BCAR **Beaver Creek A** 81.80 20 P **P** 13 42 49.0 +1.7
KOWA **Kowa** 82.61 282 P **P** 13 42 51.0 -1.3
KOWA IAmb IAmb 13 43 00.1
comp=Z,4.3nm,0.7s
DBIC **Dimbokro** 86.93 276 P **P** 13 43 13.0 -1.1
comp=Z,3.5nm,0.8s,baz=14,slow=14,SNR=3.2
YKA **Yellowknife Ar** 88.33 9 P **P** 13 43 19.9 0.0
comp=Z,0.8nm,0.7s,baz=338,slow=4.5,SNR=12
YKA LR LR 14 25 20.0
comp=Z,33nm,22.0s,baz=0.0,slow=37
TXAR **Lajitas Array** 122.26 9 PKP **PKPdf** 13 49 23.8 -0.4
comp=Z,0.2nm,0.5s,baz=93,slow=1.8,SNR=3.8
LPAZ **La Paz** 152.70 290 PKPbc **PKPbc** 13 50 24.8 -2.0
comp=Z,1.2nm,0.9s,baz=63,slow=6.8,SNR=2.4

IDC 25 13:32:50.7±8.4, 27.85N×85.38E, h0km, mb3.8/2, mb1 3.8/3, mb1mx3.2/61, mbtmp3.7/3, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/38, Error ellipse: s-maj=152.8km s-min=68.7km az=179.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	19.07	353	P	P	13 37 14.6	-0.1
	0.2nm,0.3s,baz=167,slow=9.7,SNR=1.7						
SONM	**Songino Array**	25.80	34	P	P	13 38 23.7	+0.1
	0.5nm,0.5s,baz=220,slow=7.9,SNR=1.5						
USRK	**Ussuriysk Ar.**	40.50	54	LR	LR	13 59 17.3	
	comp=Z,68nm,20.5s,baz=192,slow=39						
ARCES	**ARCESS Array B**	53.75	339	P	P	13 42 14.4	-0.1
	1.1nm,0.6s,baz=97,slow=7.4,SNR=5.0						

*IDC **25** 13:36:13.0±0.7, 27.62N×86.04E, h0km, mb4.3/30, mb1 4.4/33, mb1mx4.2/62, mbtmp4.3/33, ML4.0/3, MS3.9/1, Ms1 3.9/1, ms1mx2.9/46, Error ellipse: s-maj=17.1km s-min=12.4km az=24.0*
*BJI **25** 13:36:14.3±0.0, 27.68N×85.98E, h8km, mB4.7/24, mb4.5/41, ML4.0/1, Ms4.1/20, Ms7 4.0/20*
*NEIC **25** 13:36:14.6±2.0, 27.73N±0.04×85.98E±0.04, h10km±1km, mb4.7/48, Error ellipse: s-maj=8.5km s-min=2.9km az=34.0*
*DMN **25** 13:36:15.5±0.1, 27.69N×86.02E, h10km, Ml5.1/4, Error ellipse: s-maj=4.9km s-min=1.6km az=15.0*
*NDI **25** 13:36:15.4±3.0, 27.19N×85.80E, h10km, ML4.5, mb4.7(NEIC)*

ISC 25 13:36:15.4±0.9, 27.66N±0.05×85.99E±0.02, h17km±6km, n153, σ1°21/169, mb4.6/67, MS3.9/3, 9C-3D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIRN	**Jiri**	0.17	91	*e*Pg	**Pg**	13 36 19.4	-0.8
GUN	**Gumba**	0.27	338	*e*Pg	**Pg**	13 36 21.4	-0.1
PKI	**Pulchoki**	0.53	260	*e*Pg	**Pb**	13 36 26.7	+0.3
PKI				*e*Sg	**Sb**	13 36 34.0	+0.1
	26µm,0.4s						
PKIN	**Phulchoki**	0.54	261	*e*Pg	**Pb**	13 36 26.7	+0.2
KKN	**Kakani**	0.65	282	*e*Pg	**Pb**	13 36 28.6	+0.2
KKN				*e*Sg	**Sb**	13 36 36.9	-0.3
	12µm,0.2s						
DMN	**Daman**	0.79	266	*e*Pg	**Pb**	13 36 31.2	+0.4
DMN				*e*Sg	**Sb**	13 36 42.0	+0.6
	19µm,0.6s						
RAMN	**Ramite**	0.89	143	*e*Pg	**Pg**	13 36 31.8	-1.0
GKN	**Gorkha**	1.25	286	*e*Pg	**Pg**	13 36 39.4	-0.1
GKN				*e*Sg	**Sn**	13 36 56.0	+1.2
	4µm,0.3s						
ODAN	**Odare**	1.48	122	*e*Pg	**Pg**	13 36 43.7	-0.2
ODAN				*e*Sg	**Sg**	13 37 03.1	-0.1
	4µm,0.3s						
TAPN	**Taplejung**	1.56	101	*e*Pg	**Pb**	13 36 44.0	0.0
TAPN				*e*Sg	**Sb**	13 37 04.2	+0.7
	1µm,0.3s						
DANN	**Dangsing**	2.09	290	*e*Sg	**Sg**	13 37 21.3	-1.4
	5µm,0.2s						
KOLN	**Koldanda**	2.12	273	*e*Pg	**Pg**	13 36 54.7	-1.5
KOLN				*e*Sg	**Sg**	13 37 23.3	-0.5
GTK	**Tadong**	2.34	98	*e*P	**Pb**	13 36 55.9	-1.4
GTK				*e*S	**Sb**	13 37 27.3	+1.3
GTK				IAML		13 37 29.1	
	comp=E,1µm,0.3s						
PYUN	**Piuthan**	2.69	280	*e*Pg	**Pg**	13 37 05.6	-1.5
LSA	**Lhasa**	4.96	65	Pn	**Pn**	13 37 33.0	+3.4
LSA				Sn	**Sn**	13 38 24.0	-2.9
LSA				smax	smax		
	comp=E,160nm,1.0s						
LSA				smax	smax		
	comp=E,180nm,1.1s						
LSA	**Lhasa**	4.96	65	Pn	**Pn**	13 37 29.2	-0.5
GUWA	**GUWAHATI**	5.29	105	*e*P	**Pn**	13 37 35.5	+1.8
GUWA				*e*S	**Sn**	13 38 34.7	+0.3
GUWA				IAML		13 38 40.8	
	comp=E,86nm,0.5s						
GUWA				IAML		13 38 43.2	
	comp=N,73nm,0.5s						
SHL	**Shillong**	5.67	110	*e*P	**Pn**	13 37 40.1	+0.9
SHL				*e*S	**Sn**	13 38 40.5	-3.4
SHL	**Shillong**	5.67	110	Pn	**Pn**	13 37 40.0	+0.9
TEZP	**TEZPUR**	6.15	98	*e*P	**Pn**	13 37 46.5	+1.0
TEZP				*e*S	**Sn**	13 38 56.2	+0.7
DDI	**Dehra Dun**	7.44	293	*e*P	**Pn**	13 38 05.3	+2.1
DDI				*e*S	**Sn**	13 39 26.4	-0.9
DDI				IAML		13 39 30.6	
	comp=N,1µm,0.3s						
DDI				IAML		13 39 32.0	
	comp=E,993nm,0.3s						
KOHI	**KOHIMA**	7.51	103	*e*P	**Pn**	13 38 04.6	+0.3
KOHI				*e*S	**Sn**	13 39 27.8	-1.4
MOKO	**MOKOCHONG**	7.72	98	*e*P	**Pn**	13 38 08.1	+0.9
MOKO				*e*S	**Sn**	13 39 32.0	-2.4
SMLA	**Simla**	8.44	296	*e*P	**Pn**	13 38 17.9	+1.0
SMLA				*e*S	**Sn**	13 39 48.0	-3.7
SMLA				IAML		13 39 51.8	
	comp=N,438nm,0.3s						
SMLA				IAML		13 39 54.0	
	comp=E,627nm,0.4s						
LKP	**Lekhapani**	8.76	90	*e*P	**Pn**	13 38 21.6	+0.3
DHRM	**DHARAMSHALA**	9.57	301	*e*P	**Pn**	13 38 32.2	-0.5
DHRM				*e*S	**Sn**	13 40 14.3	-5.6
DHRM				IAML		13 40 19.1	
	comp=E,679nm,0.5s						
DHRM				IAML		13 40 19.2	
	comp=N,488nm,0.4s						
NIL	**Nilore**	12.48	302		**Pn**	13 39 10.7	-1.7
KSH	**Kashi**	14.46	327	P	**Pn**	13 39 37.0	-2.4
KSH				pP	P	13 39 40.3	-5.8
KSH				pmax	pmax		
	comp=N,23nm,0.9s						
KSH				LR	LR		
	comp=N,150nm,7.4s						
KSH				LR	LR		
	comp=N,350nm,8.2s						
KSH				LR	LR		
	comp=N,100nm,4.7s						
CHTO	**Chiang Mai**	14.80	124	P	**P**	13 39 50.1	+0.3
CMAR	**Chiang Mai Arr**	15.02	125	Pn	**Pn**	13 39 44.7	-2.3
	comp=N,0.2nm,0.3s,baz=302,slow=14,SNR=2.6						
KMI	**Kunming**	15.22	96	*e*P	**Pn**	13 39 52.5	+2.7
KMI				pP	P	13 39 55.5	+0.7
KMI				pmax	pmax		
	comp=N,4.0nm,0.9s						
KMI				pmax	pmax		
	comp=N,140nm,4.6s						
KMI				LR	LR		
	comp=N,130nm,9.2s						
KMI				LR	LR		
	comp=N,160nm,10.1s						
KMI				LR	LR		
	comp=N,270nm,11.7s						
KBL	**Kabul**	16.05	299	P	**Pn**	13 39 57.9	-2.6
KDJ	**Kajisay**	16.13	336	P	**Pn**	13 40 01.1	-0.4
WMQ	**Urumqi**	16.18	4	*e*P	**Pn**	13 40 02.5	+0.4
WMQ				pP	P	13 40 06.5	+1.3
WMQ				sP	pP	13 40 08.0	-2.5
WMQ				pmax	pmax		
	comp=N,13nm,0.9s						
WMQ				pmax	pmax		
	comp=N,88nm,4.7s						
WMQ				LR	LR		
	comp=N,190nm,14.7s						
WMQ				LR	LR		
	comp=N,240nm,15.3s						
GTA	**Gaotai**	16.41	41	⇓P	**Pn**	13 40 03.3	-1.8
GTA				pP	P	13 40 08.5	+0.7
GTA				sP	pP	13 40 11.5	-1.5
GTA				pmax	pmax		
	comp=N,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=N,52nm,4.0s						
GTA				LR	LR		
	comp=N,210nm,13.1s						
GTA				LR	LR		
	comp=N,260nm,13.8s						
GTA				LR	LR		
	comp=N,410nm,13.1s						
BOOM	**Boomskoye usch**	16.91	334	Pn	**Pn**	13 40 10.1	-1.3
GAR	**Garm**	17.28	315	P	**Pn**	13 40 12.9	-3.1
LZH	**Lanzhou**	17.32	57	*e*P	**P**	13 40 17.5	-0.4
LZH				sP	sP	13 40 23.5	-2.2
LZH				PP	**PnPn**	13 40 29.5	+2.9
LZH				pmax	pmax		
	comp=N,22nm,1.2s						
LZH				pmax	pmax		
	comp=N,83nm,5.1s						
LZH				LR	LR		
	comp=N,370nm,11.4s						
LZH				LR	LR		
	comp=N,440nm,12.5s						
LZH				LR	LR		
	comp=N,400nm,11.9s						
AAK	**Ala-Archa**	17.63	331	Pn	**P**	13 40 20.8	-0.4
	comp=N,0.2nm,0.3s,baz=146,slow=14,SNR=8.3						
GYA	**Guiyang**	18.45	89	⇑P	**Pn**	13 40 32.3	+1.7
GYA				pmax	pmax		
	comp=N,3.0nm,1.0s						
MK31	**Makanchi Array**	19.32	352	P	**Pn**	13 40 40.7	-0.1
MKAR	**Makanchi Array**	19.32	352	P	**P**	13 40 40.1	+0.4
	comp=N,0.8nm,0.3s,baz=167,slow=11,SNR=31						
MAKZ	**Makanchi**	19.37	352	P	**Pn**	13 40 41.6	+0.2
KKAR	**Karatay Array**	19.87	325	P	**P**	13 40 45.2	-0.5
XAN	**Xi'an**	20.66	66	P	**P**	13 40 55.5	+1.0
XAN				pP	pP	13 40 58.8	-1.0
XAN				S	Sn	13 44 50.8	+1.1
XAN				pmax	pmax		
	comp=N,11nm,0.7s						
XAN				LR	LR		
	comp=N,230nm,10.3s						
XAN				LR	LR		
	comp=N,230nm,10.8s						
XAN				LR	LR		
	comp=N,260nm,11.8s						
KURBB	**Kurchatov Array**	23.62	348	P	**P**	13 41 26.7	+1.2
	comp=N,13nm,0.9s,baz=172,slow=9.1,SNR=47						
KURK	**Kurchatov**	23.70	348	P	**P**	13 41 26.7	+0.5
HHC	**Hu-ho-hao-te**	24.79	51	*e*P	**P**	13 41 36.5	-0.1
HHC				sP	sP	13 41 46.0	+1.3
HHC				S	**S**	13 45 58.0	-0.4
HHC				sS	sS	13 46 06.8	-0.9
HHC				pmax	pmax		
	comp=N,11nm,1.0s						
HHC				pmax	pmax		
	comp=N,90nm,6.4s						
HHC				LR	LR		
	comp=N,210nm,10.4s						
HHC				LR	LR		
	comp=N,360nm,14.1s						
HHC				LR	LR		
	comp=N,350nm,11.4s						
WHN	**Wuhan**	24.92	77	⇑P	P	13 41 49.3	+12
WSAR	**Wadi Sarin**	25.07	266	P	**P**	13 41 41.3	+2.1
	comp=N,7.7nm,0.9s,baz=92,slow=4.4,SNR=4.0						
GEYT	**Alibeck**	25.49	301	P	**P**	13 41 44.8	+1.9
	comp=N,4.4nm,0.8s,baz=145,slow=11,SNR=7.5						
GEYT	**Alibeck**	25.49	301	P	**P**	13 41 40.5	-2.3
SONM	**Songino Array**	25.66	33	P	**P**	13 41 45.9	+1.5
	comp=N,11nm,1.0s,baz=220,slow=10,SNR=22						
SONM	**Songino Array**	25.66	33	P	**P**	13 41 44.1	-0.3
ZAA0	**Zalesovo Array**	26.27	358	P	**P**	13 41 48.6	-1.1
ZAA0				IAmb	IAmb	13 41 51.8	
	comp=Z,12nm,0.8s						
ZALV	**Zalesovo Beam**	26.27	358	P	**P**	13 41 50.7	+1.0
	comp=Z,7.6nm,0.6s,baz=182,slow=10,SNR=31						
ZALV	**Zalesovo Beam**	26.27	358	P	**P**	13 41 48.7	-1.0
BVAR	**Borovoye Array**	27.86	340	P	**P**	13 42 05.1	+1.0
	comp=Z,1.3nm,0.5s,baz=158,slow=16,SNR=7.9						
NJ2	**Nanjing**	28.77	73	*e*P	**P**	13 42 13.0	+0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ABKAR	**Akbulak array**	29.43	324	P	**P**	13 42 17.4	-0.5
AKTO	**Aktyubinsk**	31.13	325	P	**P**	13 42 34.0	+1.0
	comp=Z,7.5nm,0.7s,baz=130,slow=8.7,SNR=21						
ARU	**Arti**	34.78	333	P	**P**	13 43 05.3	+0.5
	comp=Z,2.4nm,0.6s,baz=136,slow=3.6,SNR=12						
ARU	**Arti**	34.78	333	P	**P**	13 43 04.5	-0.3
ARU				IAmb	IAmb	13 43 06.8	
	comp=Z,8.1nm,0.7s						
CN2	**Changchun**	35.47	52	*e*P	**P**	13 43 11.5	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	**Korea Array**	36.41	64	P	**P**	13 43 18.2	-0.9
	comp=Z,1.0nm,0.5s,baz=258,slow=8.7,SNR=5.3						
BELG	**Belogornoye**	37.71	322	P	**P**	13 43 30.5	+0.6
	comp=Z,11nm,0.6s,baz=344,slow=0.8,SNR=4.8						
KBZ	**Khabaz**	38.03	306	P	**P**	13 43 33.8	+1.0
	comp=Z,1.8nm,0.9s,baz=124,slow=7.6,SNR=4.5						
KIRV	**Kirov**	39.96	331	P	**P**	13 43 49.6	+0.9
	comp=Z,6.0nm,0.4s,baz=147,slow=6.7,SNR=6.1						
USRK	**Ussuriysk Ar.**	40.18	53	P	**P**	13 43 51.0	+0.3
	comp=Z,4.1nm,1.1s,baz=255,slow=9.8,SNR=4.3						
KLR	**Kul'dur**	41.02	46	P	**P**	13 43 58.6	+0.9
	comp=Z,2.8nm,0.9s,baz=257,slow=10,SNR=6.9						
NRIK	**Noril'sk**	41.72	1	P	**P**	13 44 04.2	+1.1
	comp=Z,17nm,0.8s,baz=176,slow=5.1,SNR=5.6						
YAK	**Yakutsk**	44.79	28	P	**P**	13 44 28.8	+0.9
	comp=Z,7.8nm,0.7s,baz=91,slow=1.0,SNR=4.4						
ELL	**Elmali**	47.73	296	P	**P**	13 44 50.7	-0.9
AKASG	**Malin Array Be**	48.28	315	P	**P**	13 44 55.3	-0.2
	comp=Z,1.1nm,0.6s,baz=79,slow=7.0,SNR=9.6						
AKASG	**Malin Array Be**	48.28	315	IAmb	IAmb	13 44 56.0	
	comp=Z,1.6nm,1.1s						
AKBB	**Malin Array Si**	48.28	315	P	**P**	13 44 55.4	-0.1
AKBB				IAmb	IAmb	13 45 00.4	
	comp=Z,5.7nm,0.9s						
VRI	**Vrincioaia**	49.68	308	⇑P	**P**	13 45 07.9	+1.5
PLOR	**Plostina**	49.73	308	⇑P	**P**	13 45 08.1	+1.3
TIXI	**Tiksi**	49.91	16	P	**P**	13 45 07.2	-0.5
	comp=Z,2.2nm,0.4s,baz=220,slow=4.3,SNR=12						
TIXI	**Tiksi**	49.91	16	P	**P**	13 45 07.7	0.0
TIXI				IAmb	IAmb	13 45 09.0	
	comp=Z,6.4nm,0.9s						
MLR	**Muntele Rosu**	50.23	308	⇑P	**P**	13 45 12.6	+1.9
BURAR	**Bucovina Array**	50.72	310	⇑P	**P**	13 45 14.9	+0.5
FINES	**FINESS Array B**	51.78	328	P	**P**	13 45 22.4	+0.5
	comp=Z,2.4nm,0.6s,baz=86,slow=6.3,SNR=6.4						
PABE	**Paberze**	51.94	320	*e*P	**P**	13 45 23.7	+0.5
PABE	**Paberze**	51.94	320	P	**P**	13 45 23.9	+0.7
VTS	**Vitosha**	52.32	304	⇑P	**P**	13 45 27.8	+1.4
SOEI	**Soe**	52.51	130	P	**P**	13 45 26.2	-1.8
AGG	**Agios Georgios**	53.41	300	P	**P**	13 45 34.0

	comp=Z,4.6nm,0.9s							
MOA	**Molln**	**58.09**	**311**	*i* P		**P**	**13 46 07.9**	**+0.1**
	comp=Z,4.6nm,0.9s							
GERES	**GERESS Array B**	**58.34**	**312**	P		**P**	**13 46 09.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=86,slow=6.8,SNR=10							
KHC	**Kasperske Hory**	**58.38**	**313**	*e*P		**P**	**13 46 10.4**	**+0.5**
KHC	**Kasperske Hory**	**58.38**	**313**	P		**P**	**13 46 09.0**	**-0.9**
NC405	**NORSAR Array S**	**58.64**	**327**	P		**P**	**13 46 11.3**	**-0.1**
NOA	**NORSAR Array B**	**58.88**	**327**	P		**P**	**13 46 13.1**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=88,slow=6.9,SNR=6.8							
STAL	**STALIGIAL**	**59.36**	**309**	P		**P**	**13 46 15.6**	**-1.2**
STAL				IAmb		IAmb	13 46 17.3	
	comp=Z,8.9nm,0.9s							
WTTA	**Wattenberg**	**59.93**	**311**	*i* P		**P**	**13 46 20.5**	**-0.3**
	comp=Z,6.3nm,0.9s							
WATA	**Walderalm**	**59.96**	**311**	*i* P		**P**	**13 46 20.3**	**-0.7**
	comp=Z,3.0nm,0.6s							
SQTA	**Sankt Quirin**	**60.23**	**311**	*i* P		**P**	**13 46 22.2**	**-0.6**
	comp=Z,6.6nm,0.9s							
MOTA	**Moosalm**	**60.28**	**311**	*i* P		**P**	**13 46 23.2**	**0.0**
	comp=Z,11nm,1.1s							
RETA	**Reutte**	**60.48**	**311**	*i* P		**P**	**13 46 24.1**	**-0.4**
	comp=Z,7.0nm,1.4s							
FETA	**Feichten**	**60.58**	**311**	*i* P		**P**	**13 46 24.4**	**-0.9**
	comp=Z,5.7nm,1.0s							
DAVA	**Damuels**	**61.10**	**311**	*e*P		**P**	**13 46 28.5**	**-0.3**
	comp=Z,11nm,1.0s							
MEM	**Membach**	**62.99**	**315**	*d*P		**P**	**13 46 41.6**	**+0.5**
	comp=Z,4.9nm,0.8s							
SENIN	**Lac Senin/Sane**	**63.03**	**310**	P		**P**	**13 46 41.3**	**-0.5**
WLF	**Walferdange**	**63.08**	**314**	*d*P		**P**	**13 46 42.5**	**+0.6**
KEST	**Kesra**	**64.20**	**298**	P		**P**	**13 46 50.5**	**+0.9**
	comp=Z,9.3nm,0.9s,baz=291,slow=2.1,SNR=9.8							
WRA	**Warramunga Arr**	**66.55**	**130**	P		**P**	**13 47 05.2**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=323,slow=6.5,SNR=24							
ASAR	**Alice Springs**	**68.85**	**133**	P		**P**	**13 47 19.4**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=316,slow=6.3,SNR=8.0							
EUNU	**Eureka**	**72.43**	**359**	P		**P**	**13 47 38.8**	**-1.6**
EUNU				IAmb		IAmb	13 47 42.4	
	comp=Z,6.0nm,1.0s							
ESDC	**Sonseca Array**	**72.89**	**306**	P		**P**	**13 47 44.0**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=50,slow=5.6,SNR=13							
ESDC	**Sonseca Array**	**72.89**	**306**	P		**P**	**13 47 44.1**	**+0.3**
TOLK	**Toolik Lake Re**	**75.76**	**18**	P		**P**	**13 48 01.1**	**+1.2**
TOLK				IAmb		IAmb	13 48 02.0	
	comp=Z,6.1nm,0.8s							
MLY	**Manley**	**77.78**	**21**	P		**P**	**13 48 11.3**	**-0.1**
MLY				IAmb		IAmb	13 48 13.7	
	comp=Z,4.7nm,0.8s							
I23K	**Minto, Yukon-K**	**78.14**	**21**	P		**P**	**13 48 12.9**	**-0.4**
I23K				IAmb		IAmb	13 48 15.6	
	comp=Z,8.7nm,1.4s							
MDM	**Murphy Dome**	**78.63**	**21**	P		**P**	**13 48 16.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**79.03**	**279**	P		**P**	**13 48 19.6**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=66,slow=6.5,SNR=4.6							
ILAR	**Eielson Array**	**79.17**	**20**	P		**P**	**13 48 18.5**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=300,slow=4.4,SNR=17							
ILAR	**Eielson Array**	**79.17**	**20**	P		**P**	**13 48 18.4**	**-0.7**
RND	**Reindeer**	**79.48**	**22**	P		**P**	**13 48 21.2**	**+0.4**
RND				IAmb		IAmb	13 48 21.9	
	comp=Z,4.3nm,1.0s							
SKT	**Skwentna**	**79.50**	**24**	P		**P**	**13 48 21.6**	**+0.7**
INK	**Inuvik**	**79.96**	**14**	P		**P**	**13 48 23.1**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=337,slow=9.3,SNR=11							
SUA	**Susitna One**	**80.12**	**24**	P		**P**	**13 48 25.4**	**+1.0**
SUA				IAmb		IAmb	13 48 26.3	
	comp=Z,15nm,1.2s							
GHO	**Glory Hole Cre**	**80.57**	**23**	P		**P**	**13 48 27.3**	**+0.5**
GHO				IAmb		IAmb	13 48 31.1	
	comp=Z,5.4nm,0.9s							
PMR	**Palmer**	**80.62**	**23**	P		**P**	**13 48 27.4**	**+0.5**
PMR				IAmb		IAmb	13 48 28.7	
	comp=Z,7.9nm,1.0s							
SCRK	**Sand Creek**	**80.63**	**20**	P		**P**	**13 48 27.6**	**+0.5**
SCRK				IAmb		IAmb	13 48 28.8	
	comp=Z,6.4nm,0.9s							
C36M	**Paulatuk**	**80.83**	**10**	P		**P**	**13 48 28.7**	**+0.9**
C36M				IAmb		IAmb	13 48 29.0	
	comp=Z,11nm,1.2s							
DOT	**Dot Lake**	**80.84**	**20**	P		**P**	**13 48 28.1**	**-0.1**
SCM	**Sheep Creek Mo**	**81.08**	**23**	P		**P**	**13 48 30.3**	**+0.8**
SCM				IAmb		IAmb	13 48 31.0	
	comp=Z,8.3nm,0.7s							
K27K	**Chicken**	**81.16**	**19**	P		**P**	**13 48 29.9**	**+0.1**
K27K				IAmb		IAmb	13 48 32.3	
	comp=Z,8.2nm,1.1s							
M24K	**Tolsona, Glenn**	**81.27**	**22**	P		**P**	**13 48 31.7**	**+1.2**
M24K				IAmb		IAmb	13 48 36.5	
	comp=Z,13nm,1.2s							
PWL	**Port Wells**	**81.40**	**24**	P		**P**	**13 48 32.0**	**+0.9**
PWL				IAmb		IAmb	13 48 37.6	
	comp=Z,14nm,1.4s							
KDAK	**Kodiak Island**	**81.82**	**28**	P		**P**	**13 48 34.0**	**+0.6**
DAWY	**Dawson**	**81.90**	**18**	P		**P**	**13 48 34.5**	**+0.8**
DAWY				IAmb		IAmb	13 48 35.5	
	comp=Z,4.4nm,1.0s							
L27K	**Beaver Creek,**	**81.96**	**20**	P		**P**	**13 48 34.9**	**+0.8**
L27K				IAmb		IAmb	13 48 36.6	
	comp=Z,4.6nm,0.9s							
BCAR	**Beaver Creek A**	**81.97**	**20**	P		**P**	**13 48 33.9**	**-0.2**
N25K	**Chitina, Valde**	**82.16**	**22**	P		**P**	**13 48 35.6**	**+0.5**
N25K				IAmb		IAmb	13 48 37.8	
	comp=Z,12nm,1.1s							
GLB	**Gilahina Butte**	**82.54**	**22**	P		**P**	**13 48 37.8**	**+0.7**
GLB				IAmb		IAmb	13 48 40.0	
	comp=Z,8.5nm,1.4s							
MCARA	**McCarthy VSAT**	**82.83**	**21**	P		**P**	**13 48 40.0**	**+1.4**
CRQM	**Cirque**	**83.26**	**22**	P		**P**	**13 48 41.3**	**+0.2**
TGL	**Tana Glacier**	**83.36**	**22**	P		**P**	**13 48 42.2**	**+0.7**
HYT	**Haines Junctio**	**84.99**	**20**	P		**P**	**13 48 50.7**	**+0.9**
YKA	**Yellowknife Ar**	**88.65**	**9**	P		**P**	**13 49 07.7**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=342,slow=4.5,SNR=12							
TXAR	**Lajitas Array**	**122.58**	**10**	PKP		**PKPdf**	**13 55 10.2**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=152,slow=5.7,SNR=3.4							

IDC 25 13:38:44.6±2.0, 0°08'S×125°21'E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/46, mbtmp3.6/3, MS3.9/1, Ms1 3.9/1, ms1mx2.9/30, Error ellipse: s-maj=184.4km s-min=27.9km az=64.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.68**	**156**	P	P	13 43 36.5	-0.6
	1.7nm,0.4s,baz=334,slow=11,SNR=14						
ASAR	**Alice Springs**	**24.92**	**161**	P	P	13 44 10.1	+0.4
	0.8nm,0.4s,baz=344,slow=11,SNR=18						
SONM	**Songino Array**	**50.45**	**344**	LR	LR	14 11 38.1	
	comp=Z,115nm,18.1s,baz=9.5,slow=39						
MKAR	**Makanchi Array**	**59.85**	**327**	P	P	13 48 52.0	-0.1
	0.2nm,0.5s,baz=120,slow=8.5,SNR=2.2						

IDC 25 13:38:57.7±1.4, 27°34'N×85°62'E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.5/53, mbtmp3.7/9, ML2.7/1, MS3.5/1, Ms1 3.5/1, ms1mx2.7/43, Error ellipse: s-maj=54.9km s-min=20.7km az=61.0

ISC 25 13:38:59.2±1.5, 27°4'N±0°2'×85°6'E±0°3', h10km, n10, σ0°69'/9, mb3.7/8, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.59**	**353**	P	**P**	**13 43 26.6**	**-0.8**
	0.0nm,0.3s,baz=167,slow=10,SNR=1.3						
KURBB	**Kurchatov Arra**	**23.86**	**349**	P	**P**	**13 44 13.5**	**+0.9**
	0.5nm,0.6s,baz=171,slow=9.4,SNR=1.6						
SONM	**Songino Array**	**26.09**	**33**	P	**P**	**13 44 33.4**	**+0.2**
	0.7nm,0.4s,baz=218,slow=9.9,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.59**	**359**	P	**P**	**13 44 36.9**	**-0.4**
	0.5nm,0.3s,baz=180,slow=8.8,SNR=2.5						
EIL	**Elat**	**44.31**	**285**	LR	LR	14 07 22.0	
	comp=Z,66nm,20.9s,baz=114,slow=38						
FINES	**FINESS Array B**	**51.88**	**328**	P	**P**	**13 48 07.7**	**+0.2**
	0.9nm,0.8s,baz=106,slow=10,SNR=1.1						
ARCES	**ARCESS Array B**	**54.29**	**338**	P	**P**	**13 48 25.7**	**+0.4**
	2.7nm,0.9s,baz=102,slow=8.7,SNR=1.7						
NOA	**NORSAR Array B**	**58.97**	**327**	P	**P**	**13 48 58.2**	**-0.5**
	0.4nm,0.6s,baz=80,slow=5.6,SNR=1.4						
WRA	**Warramunga Arr**	**66.59**	**130**	P	**P**	**13 49 50.6**	**+0.6**
	0.5nm,0.3s,baz=322,slow=6.4,SNR=6.7						
ASAR	**Alice Springs**	**68.88**	**133**	P	**P**	**13 50 03.7**	**-0.7**
	0.3nm,0.6s,baz=323,slow=6.0,SNR=2.0						

IDC 25 13:48:14.3±1.6, 27°75'N×85°58'E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.4/61, mbtmp3.6/7, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/37, Error ellipse: s-maj=62.1km s-min=22.4km az=62.0

ISC 25 13:48:17.2±1.6, 27°8'N±0°2'×85°6'E±0°4', h18km, n8, σ0°56'/7, mb3.7/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.15**	**353**	P	**P**	**13 52 38.7**	**-0.8**
	0.1nm,0.3s,baz=177,slow=11,SNR=6.2						
KURBB	**Kurchatov Arra**	**23.43**	**349**	P	**P**	**13 53 25.9**	**+0.6**
	0.5nm,0.5s,baz=169,slow=10.0,SNR=5.0						
SONM	**Songino Array**	**25.75**	**33**	P	**P**	**13 53 47.1**	**+0.2**
	0.6nm,0.7s,baz=228,slow=9.0,SNR=2.8						
DAV	**Davao City (W)**	**43.08**	**111**	LR	LR	14 15 32.7	
	comp=Z,50nm,19.8s,baz=340,slow=38						
FINES	**FINESS Array B**	**51.49**	**328**	P	**P**	**13 57 21.4**	**0.0**
	2.0nm,1.0s,baz=132,slow=4.1,SNR=1.6						
ARCES	**ARCESS Array B**	**53.88**	**338**	P	**P**	**13 57 39.0**	**0.0**
	3.4nm,1.0s,baz=110,slow=7.8,SNR=1.6						
WRA	**Warramunga Arr**	**66.90**	**130**	P	**P**	**13 59 08.9**	**+0.3**
	0.9nm,1.1s,baz=321,slow=6.5,SNR=2.6						
ASAR	**Alice Springs**	**69.20**	**133**	P	**P**	**13 59 22.6**	**-0.4**
	0.3nm,0.8s,baz=321,slow=5.9,SNR=4.5						

IDC 25 13:53:05.5±0.6, 27°72'N×85°06'E, h0km, mb4.1/28, mb1 4.2/31, mb1mx4.1/63, mbtmp4.2/31, ML4.0/3, Error ellipse: s-maj=15.9km s-min=13.1km az=53.0

ISC 25 13:53:07.3±0.6, 27°75'N±0°09'×85°05'E±0°09', h10km, n42, σ1°22'/42, mb4.2/27, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM33	**Chiang Mai Arr**	**15.55**	**122**	P	**P**	**13 56 50.0**	**-1.0**
CMMT	**Chiang Mai**	**15.55**	**122**	P	**P**	**13 56 49.5**	**-1.6**
CM32	**Chiang Mai Arr**	**15.57**	**123**	P	**P**	**13 56 53.0**	**+1.7**
CM34	**Chiang Mai Arr**	**15.68**	**121**	P	**P**	**13 56 51.0**	**-1.5**
CM13	**Chiang Mai Arr**	**15.76**	**123**	P	**P**	**13 56 56.4**	**+3.0**
CMAR	**Chiang Mai Arr**	**15.76**	**123**	Pn	**Pn**	**13 56 49.6**	**+0.1**
	0.2nm,0.3s,baz=315,slow=11,SNR=18						
CM02	**Chiang Mai Arr**	**15.78**	**123**	P	**P**	**13 56 56.9**	**+3.3**
CM35	**Chiang Mai Arr**	**15.79**	**122**	P	**P**	**13 56 52.0**	**-1.7**
CM05	**Chiang Mai Arr**	**15.80**	**123**	P	**P**	**13 56 57.0**	**+3.1**
CM09	**Chiang Mai Arr**	**15.81**	**123**	P	**P**	**13 56 53.8**	**-0.2**
CM04	**Chiang Mai Arr**	**15.83**	**123**	P	**P**	**13 56 54.6**	**+0.5**
CM36	**Chiang Mai Arr**	**15.84**	**122**	P	**P**	**13 56 54.0**	**-0.3**
AAK	**Ala-Archa**	**17.15**	**333**	P	**Pn**	**13 57 07.5**	**+0.2**
	0.4nm,0.3s,baz=176,slow=10.0,SNR=10						
MKAR	**Makanchi Array**	**19.13**	**354**	P	**P**	**13 57 30.5**	**-0.1**
	0.6nm,0.3s,baz=171,slow=12,SNR=65						
PALK	**Pallekele**	**20.78**	**192**	P	**P**	**13 57 48.9**	**+0.2**
	5.0nm,0.8s,baz=285,slow=22,SNR=2.5						
KURBB	**Kurchatov Arra**	**23.37**	**349**	P	**P**	**13 58 15.3**	**-0.6**
	3.5nm,0.8s,baz=175,slow=9.6,SNR=21						
GEYT	**Alibeck**	**24.73**	**301**	P	**P**	**13 58 30.3**	**+1.4**
	5.0nm,1.1s,baz=113,slow=10,SNR=5.4						
SONM	**Songino Array**	**26.05**	**34**	P	**P**	**13 58 41.5**	**+0.6**
	10nm,0.7s,baz=220,slow=10,SNR=47						
ZALV	**Zalesovo Beam**	**26.17**	**360**	P	**P**	**13 58 41.6**	**-0.1**
	2.7nm,0.5s,baz=182,slow=9.5,SNR=18						
BVAR	**Borovoye Array**	**27.50**	**341**	P	**P**	**13 58 54.1**	**+0.3**
	0.2nm,0.3s,baz=150,slow=15,SNR=2.7						
ARU	**Arti**	**34.33**	**334**	P	**P**	**13 59 55.0**	**+1.1**
	0.4nm,0.3s,baz=145,slow=14,SNR=3.7						
KSRS	**Korea Array**	**37.12**	**64**	P	**P**	**14 00 18.4**	**+0.3**
	1.1nm,0.7s,baz=264,slow=8.4,SNR=6.6						
KLR	**Kul'dur**	**41.56**	**46**	P	**P**	**14 00 55.5**	**+0.5**
	1.7nm,0.7s,baz=278,slow=11,SNR=4.6						
NRIK	**Noril'sk**	**41.65**	**1**	P	**P**	**14 00 55.6**	**+0.2**
	5.9nm,0.5s,baz=171,slow=5.4,SNR=12						
YAK	**Yakutsk**	**45.10**	**28**	P	**P**	**14 01 23.7**	**+0.3**
	3.8nm,0.5s,baz=151,slow=0.8,SNR=4.7						
AKASG	**Malin Array Be**	**47.62**	**315**	P	**P**	**14 01 42.3**	**-1.1**
	1.2nm,0.7s,baz=79,slow=7.1,SNR=8.0						
MLR	**Muntele Rosu**	**49.51**	**307**	P	**P**	**14 01 59.4**	**+1.2**
	6.2nm,0.8s,baz=176,slow=6.1,SNR=7.2						
TIXI	**Tiksi**	**50.07**	**17**	P	**P**	**14 02 00.8**	**-1.0**
	5.5nm,0.6s,baz=228,slow=3.5,SNR=24						
FINES	**FINESS Array B**	**51.27**	**328**	P	**P**	**14 02 10.1**	**-0.9**
	1.5nm,0.6s,baz=105,slow=11,SNR=9.8						
ARCES	**ARCESS Array B**	**53.73**	**338**	P	**P**	**14 02 30.3**	**+1.1**
	1.8nm,0.7s,baz=74,slow=8.9,SNR=4.8						
SEY	**Seymchan**	**55.38**	**31**	P	**P**	**14 02 41.9**	**+0.7**
	3.0nm,0.8s,baz=209,slow=10,SNR=4.6						
NOA	**NORSAR Array B**	**58.35**	**327**	P	**P**	**14 03 02.5**	**0.0**
	0.5nm,0.6s,baz=89,slow=7.4,SNR=3.5						
KEST	**Kesra**	**63.43**	**298**	P	**P**	**14 03 38.4**	**+0.9**
	2.7nm,0.8s,baz=39,slow=10,SNR=3.0						
EKA	**Eskdalemuir Ar**	**66.68**	**322**	P	**P**	**14 03 57.6**	**-0.6**
	1.3nm,0.7s,baz=83,slow=6.0,SNR=2.8						
WRA	**Warramunga Arr**	**67.25**	**129**	P	**P**	**14 04 02.0**	**-0.2**
	3.3nm,0.4s,baz=322,slow=6.3,SNR=73						
ASAR	**Alice Springs**	**69.52**	**133**	P	**P**	**14 04 16.1**	**-0.3**
	3.2nm,0.6s,baz=315,slow=6.3,SNR=54						
ESDC	**Sonseca Array**	**72.16**	**306**	P	**P**	**14 04 32.4**	**-0.1**
	0.8nm,0.8s,baz=56,slow=5.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**78.20**	**279**	P	**P**	**14 05 06.9**	**-0.7**
	0.7nm,0.8s,baz=75,slow=3.9,SNR=3.2						
ILAR	**Eielson Array**	**79.38**	**20**	P	**P**	**14 05 11.5**	**-1.7**
	0.8nm,0.7s,baz=316,slow=5.8,SNR=5.5						
INK	**Inuvik**	**80.07**	**14**	P	**P**	**14 05 16.4**	**-0.5**
	1.9nm,0.9s,baz=330,slow=7.7,SNR=6.6						
BOSA	**Boshof**	**80.14**	**230**	P	**P**	**14 05 17.3**	**-0.6**
	2.6nm,0.9s,baz=67,slow=3.8,SNR=5.1						
YKA	**Yellowknife Ar**	**88.70**	**9**	P	**P**	**14 05 59.7**	**-0.9**
	1.1nm,0.7s,baz=340,slow=4.7,SNR=15						

IDC 25 13:55:42.1±1.4, 27°81'N×85°05'E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.3/62, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=45.0km s-min=24.0km az=59.0

ISC 25 13:55:44.0±1.4, 27°8'N±0°2'×85°1'E±0°3', h12km, n7, σ0°39'/7, mb3.6/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.04**	**354**	P	**Pn**	**14 00 06.7**	**-0.1**
	0.2nm,0.3s,baz=173,slow=12,SNR=4.4						
GEYT	**Alibeck**	**24.68**	**301**	P	**P**	**14 01 05.0**	**+0.1**
	1.2nm,0.5s,baz=99,slow=9.3,SNR=2.1						
SONM	**Songino Array**	**25.97**	**34**	P	**P**	**14 01 17.0**	**+0.4**
	0.5nm,0.6s,baz=224,slow=10,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.08**	**360**	P	**P**	**14 01 16.7**	**-0.6**
	0.7nm,0.6s,baz=197,slow=8.6,SNR=2.9						
ARCES	**ARCESS Array B**	**53.65**	**338**	P	**P**	**14 05 05.2**	**+0.2**
	3.0nm,0.9s,baz=102,slow=8.4,SNR=1.6						
WRA	**Warramunga Arr**	**67.30**	**129**	P	**P**	**14 06 39.0**	**0.0**
	0.6nm,0.6s,baz=324,slow=6.6,SNR=2.2						
ASAR	**Alice Springs**	**69.59**	**133**	P	**P**	**14 06 53.1**	**-0.1**
	0.2nm,0.5s,baz=315,slow=6.3,SNR=2.0						

IDC 25 13:59:27.6±1.9, 27°75'N×85°25'E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.3/57, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=57.0km s-min=29.0km az=57.0

ISC 25 13:59:29.0±1.8, 27°8'N±0°2'×85°2'E±0°4', h10km, n6, σ0°48/6, mb3.5/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.13**	**354**	P	**Pn**	**14 03 52.6**	**-0.5**
	0.1nm,0.3s,baz=172,slow=12,SNR=7.4						
KURBB	**Kurchatov Arra**	**23.38**	**349**	P	**P**	**14 04 37.5**	**-0.2**
	0.3nm,0.6s,baz=176,slow=10,SNR=2.9						
SONM	**Songino Array**	**25.94**	**34**	P	**P**	**14 05 02.1**	**+0.4**
	0.5nm,0.4s,baz=213,slow=8.8,SNR=4.6						
FINES	**FINESS Array B**	**51.33**	**328**	P	**P**	**14 08 33.6**	**+0.3**
	0.7nm,0.5s,baz=123,slow=9.4,SNR=6.4						
ARCES	**ARCESS Array B**	**53.77**	**338**	P	**P**	**14 08 51.6**	**+0.3**
	2.1nm,0.9s,baz=90,slow=7.3,SNR=4.1						
WRA	**Warramunga Arr**	**67.14**	**129**	P	**P**	**14 10 23.1**	**-0.2**
	0.3nm,0.8s,baz=326,slow=6.3,SNR=1.3						

IDC 25 14:00:02.0±1.7, 28°16'N×84°93'E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.4/59, mbtmp3.6/8, ML3.7/2, Error ellipse: s-maj=58.7km s-min=21.0km az=63.0

ISC 25 14:00:03.8±1.7, 28°2'N±0°2'×85°0'E±0°3', h12km, n8, σ0°55/8, mb3.6/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.05**	**124**	Pn	**Pn**	**14 03 48.8**	**-0.7**
	0.1nm,0.3s,baz=309,slow=11,SNR=9.0						
MKAR	**Makanchi Array**	**18.71**	**354**	P	**Pn**	**14 04 22.8**	**+0.2**
	0.2nm,0.3s,baz=177,slow=12,SNR=11						
KURBB	**Kurchatov Arra**	**22.96**	**349**	P	**P**	**14 05 07.6**	**-0.2**
	0.2nm,0.4s,baz=177,slow=8.4,SNR=2.9						
SONM	**Songino Array**	**25.74**	**35**	P	**P**	**14 05 34.5**	**+0.3**
	0.2nm,0.5s,baz=226,slow=8.2,SNR=3.9						
ZALV	**Zalesovo Beam**	**25.76**	**360**	P	**P**	**14 05 34.0**	**-0.1**
	1.6nm,0.4s,baz=173,slow=9.0,SNR=8.2						
FINES	**FINESS Array B**	**50.88**	**328**	P	**P**	**14 09 04.0**	**-0.3**
	2.2nm,1.0s,baz=120,slow=7.5,SNR=4.5						
WRA	**Warramunga Arr**	**67.56**	**129**	P	**P**	**14 11 00.4**	**0.0**
	0.5nm,0.9s,baz=324,slow=6.3,SNR=2.2						
ASAR	**Alice Springs**	**69.85**	**133**	P	**P**	**14 11 15.5**	**+0.9**
	0.5nm,1.0s,baz=316,slow=6.5,SNR=2.6						

IDC 25 14:08:50.2±1.6, 25°39N×141°12E, h102km±13km, mb3.7/16, mb1 3.9/17, mb1mx3.6/43, mbtmp4.1/17, Error ellipse: s-maj=19.3km s-min=13.3km az=97.0
NEIC 25 14:08:51.7±1.4, 25°33N±0°07'×141°1E±0°1, h116km±6km, mb4.4/32, Error ellipse: s-maj=20.8km s-min=7.5km az=112.0

ISC 25 14:08:49.7±0.5, 25°33N±0°07'×141°1E±0°1, h100km, n59, σ0°85/60, mb4.3/31, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.03**	**29**	P	**Pn**	**14 09 24.2**	**+1.6**
	47nm,0.3s,baz=302,slow=23,SNR=30						
JCJ				S	**Sn**	**14 09 46.5**	**-1.3**
	188nm,0.3s,baz=293,slow=23,SNR=8.4						
JCJ	**Chichijima**	**2.03**	**29**	Pn	**Pn**	**14 09 23.9**	**+1.3**
JMM	**Marumori**	**12.51**	**359**	Pn	**Pn**	**14 11 42.5**	**-1.4**
JSD	**Sado**	**12.90**	**350**	Pn	**Pn**	**14 11 49.4**	**+0.3**
KSRS	**Korea Array**	**16.48**	**320**	P	**P**	**14 12 35.9**	**+0.2**
	0.1nm,0.3s,baz=139,slow=12,SNR=1.2						
YULB	**Yu-li**	**18.12**	**268**	P	**P**	**14 12 53.1**	**-0.9**
YULB				IAmb	IAmb	14 13 06.6	
	comp=Z,26nm,1.1s						
ASAJ	**Asahikawa**	**18.79**	**3**	P	**P**	**14 13 01.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=77,slow=32,SNR=2.2						
JKA	**Kamikawa-asahi**	**18.79**	**3**	P	**Pn**	**14 13 04.6**	**+1.9**
SEY	**Seymchan**	**38.35**	**8**	P	**P**	**14 16 01.8**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=359,slow=22,SNR=1.4						
WB0	**Warramunga Arr**	**45.29**	**189**	P	**P**	**14 16 58.5**	**+0.9**
WB0				IAmb	IAmb	14 16 58.8	
	comp=Z,5.3nm,0.6s						
BILL	**Bilibino**	**45.40**	**13**	P	**P**	**14 16 58.3**	**+0.4**
BILL				IAmb	IAmb	14 16 59.8	
	comp=Z,3.7nm,0.7s						
CTAO	**Charters Tower**	**45.42**	**173**	P	**P**	**14 16 58.9**	**+0.3**
WR0	**Warramunga Arr**	**45.46**	**189**	P	**P**	**14 16 59.6**	**+0.7**
WR0				IAmb	IAmb	14 17 00.2	
	comp=Z,4.6nm,0.7s						
WRAB	**Tennant Creek**	**45.46**	**189**	P	**P**	**14 16 59.7**	**+0.8**
WB2	**Warramunga Arr**	**45.47**	**189**	P	**P**	**14 16 59.9**	**+1.0**
WRA	**Warramunga Arr**	**45.47**	**189**	P	**P**	**14 16 59.9**	**+0.9**
	comp=Z,8.3nm,0.4s,baz=8.7,slow=8.6,SNR=132						
WRA	**Warramunga Arr**	**45.47**	**189**	P	**P**	**14 16 59.9**	**+0.9**
ASAR	**Alice Springs**	**49.19**	**189**	P	**P**	**14 17 28.5**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=12,slow=15,SNR=7.7						
ASAR	**Alice Springs**	**49.19**	**189**	P	**P**	**14 17 28.0**	**+0.1**
ZALV	**Zalesovo Beam**	**50.19**	**320**	P	**P**	**14 17 35.0**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=101,slow=7.6,SNR=2.2						
MKAR	**Makanchi Array**	**50.85**	**311**	P	**P**	**14

KKN	**Kakani**	**0.54**	283	*e*Pg		**Pg**		**14 10 14.6**	**+0.5**
KKN				*e*Sg		**Sg**		**14 10 21.7**	**+0.5**
DMN	**Daman**	**0.68**	265	*e*Pg		**Pb**		**14 10 17.6**	**0.0**
DMN				*e*Sg		**Sb**		**14 10 27.6**	**+0.4**
	6µm,0.4s								
RAMN	**Ramite**	**0.96**	138	*e*Pg		**Pb**		**14 10 22.6**	**+0.1**
GKN	**Gorkha**	**1.14**	287	*e*Pg		**Pb**		**14 10 25.8**	**+0.3**
GKN				*e*Sg		**Sb**		**14 10 41.1**	**+0.7**
	3µm,0.4s								
ODAN	**Odare**	**1.57**	120	*e*Pg		**Pg**		**14 10 34.1**	**+0.4**
ODAN				*e*Sg		**Sg**		**14 10 53.6**	**-0.6**
	2µm,0.4s								
TAPN	**Taplejung**	**1.66**	100	*e*Pg		**Pb**		**14 10 34.9**	**+0.5**
TAPN				*e*Sg		**Sg**		**14 10 56.8**	**-0.3**
	2µm,0.3s								
DANN	**Dangsing**	**1.99**	291	*e*Pg		**Pb**		**14 10 40.7**	**+0.8**
DANN				*e*Sg		**Sg**		**14 11 06.9**	**-0.6**
	1µm,0.3s								
KOLN	**Koldanda**	**2.02**	273	*e*Pg		**Pb**		**14 10 41.4**	**+1.0**
KOLN				*e*Sg		**Sg**		**14 11 08.3**	**-0.1**
	5µm,0.5s								
GTK	**Tadong**	**2.45**	97	*e*P		**Pb**		**14 10 46.9**	**-0.8**
GTK				*e*S		**Sb**		**14 11 18.4**	**+0.3**
GTK				IAML				14 11 23.8	
	comp=E,2µm,0.3s								
GTK				IAML				14 11 24.1	
	comp=N,2µm,0.2s								
PYUN	**Piuthan**	**2.59**	280	*e*Sg		**Sg**		**14 11 26.6**	**-0.1**
	comp=N,2µm,0.4s								
LSA	**Lhasa**	**5.06**	65	Pn		**Pn**		**14 11 22.8**	**+2.9**
LSA				Pg		**Pb**		**14 11 28.8**	**-3.7**
LSA				Sn		**Sn**		**14 12 25.8**	**+7.2**
LSA				smax	smax				
	comp=N,200nm,1.0s								
LSA				smax	smax				
	comp=N,160nm,1.0s								
LSA	**Lhasa**	**5.06**	65	Pn		**Pn**		**14 11 18.8**	**-1.1**
GUWA	**GUWAHATI**	**5.40**	104	*e*P		**Pn**		**14 11 25.9**	**+1.8**
GUWA				*e*S		**Sn**		**14 12 26.8**	**+0.5**
SHL	**Shillong**	**5.77**	110	*e*P		**Pn**		**14 11 29.6**	**+0.2**
SHL				*e*S		**Sn**		**14 12 33.6**	**-2.2**
SHL	**Shillong**	**5.77**	110	Pn		**Pn**		**14 11 29.4**	**0.0**
TEZP	**TEZPUR**	**6.26**	98	*e*P		**Pn**		**14 11 37.2**	**+1.3**
TEZP				*e*S		**Sn**		**14 12 47.0**	**-0.5**
TEZP				IAML				14 12 50.8	
	comp=N,195nm,0.2s								
ZIRO	**ZIRO**	**7.08**	89⇑	*e*P		**Pn**		**14 11 48.4**	**+1.0**
ZIRO				*e*S		**Sn**		**14 13 05.2**	**-2.8**
ZIRO				IAML				14 13 11.2	
	comp=E,682nm,0.5s								
DDI	**Dehra Dun**	**7.34**	293	*e*P		**Pn**		**14 11 53.0**	**+2.2**
DDI				*e*S		**Sn**		**14 13 11.2**	**-3.0**
DDI				IAML				14 13 15.6	
	comp=E,336nm,0.2s								
DDI				IAML				14 13 16.3	
	comp=N,490nm,0.4s								
KOHI	**KOHIMA**	**7.62**	103	*e*P		**Pn**		**14 11 57.2**	**+2.5**
KOHI				*e*S		**Sn**		**14 13 17.5**	**-3.7**
MOKO	**MOKOCHONG**	**7.83**	98⇑	*e*P		**Pn**		**14 11 58.8**	**+1.2**
MOKO				*e*S		**Sn**		**14 13 23.3**	**-3.0**
MOKO				IAML				14 13 34.6	
	comp=N,126nm,0.5s								
SMLA	**Simla**	**8.34**	297	*e*P		**Pn**		**14 12 05.3**	**+0.9**
SMLA				*e*S		**Sn**		**14 13 34.6**	**-4.1**
SMLA				IAML				14 13 41.5	
	comp=E,100nm,0.5s								
BHPL	**Bhopal**	**8.81**	242	*e*P		**Pn**		**14 12 08.7**	**-2.3**
BHPL				*e*S		Sn		14 13 41.5	-8.9
BHPL				IAML				14 13 47.2	
	comp=N,95nm,0.4s								
DHRM	**DHARAMSHALA**	**9.47**	301	*e*P		**Pn**		**14 12 19.5**	**-0.8**
DHRM				*e*S		**Sn**		**14 14 01.7**	**-5.2**
DHRM				IAML				14 14 03.4	
	comp=E,133nm,0.5s								
HYB	**Hyderabad**	**12.23**	215	*i* P		Pn		14 12 52.5	-5.4
NIL	**Nīlore**	**12.39**	302			**Pn**		**14 12 58.2**	**-1.7**
KSH	**Kashi**	**14.40**	328	P		**Pn**		**14 13 23.5**	**-4.0**
KSH				pP		P		14 13 27.5	-7.0
KSH				S		Sn		14 15 57.0	-10
KSH				pmax	pmax				
	comp=E,6.0nm,0.3s								
KSH				pmax	pmax				
	comp=E,77nm,3.6s								
KSH				LR	LR				
	comp=E,120nm,5.1s								
KSH				LR	LR				
	comp=E,100nm,4.5s								
KSH				LR	LR				
	comp=E,99nm,5.2s								
MHMT	**Maesarieng**	**14.57**	128	P		P		14 13 42.6	+6.2
CHTO	**Chiang Mai**	**14.89**	124			**P**		**14 13 40.6**	**+0.7**
CMMT	**Chiang Mai**	**14.89**	123	P		**P**		**14 13 43.9**	**+4.0**
	comp=E,3.4nm,1.3s								
CM32	**Chiang Mai Arr**	**14.92**	124	P		P		14 13 53.0	+13
CM34	**Chiang Mai Arr**	**15.02**	123	P		**P**		**14 13 42.0**	**+0.7**
CM15	**Chiang Mai Arr**	**15.10**	125	P		**P**		**14 13 48.5**	**+6.3**
	comp=E,5.5nm,0.7s								
CM13	**Chiang Mai Arr**	**15.11**	125	P		**P**		**14 13 40.0**	**-2.3**
	comp=E,54nmcomp=E,7.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**15.11**	125	Pn		**Pn**		**14 13 35.1**	**-2.0**
	comp=E,0.1nm,0.3s,baz=307,slow=13,SNR=12								
CM02	**Chiang Mai Arr**	**15.13**	125	P		**P**		**14 13 49.2**	**+6.6**
	comp=E,5.2nm,0.8s								
CM01	**Chiang Mai Arr**	**15.15**	125	P		P		14 13 50.0	+7.2
CM05	**Chiang Mai Arr**	**15.15**	125	P		**Pn**		**14 13 40.0**	**+2.3**
	comp=E,39nmcomp=E,4.6nm,0.8s								
CM09	**Chiang Mai Arr**	**15.16**	124	P		**P**		**14 13 49.4**	**+6.5**
	comp=E,7.5nm,1.0s								
CM04	**Chiang Mai Arr**	**15.18**	125	P		**P**		**14 13 42.5**	**-0.6**
	comp=E,59nmcomp=E,6.1nm,1.0s								
KMI	**Kunming**	**15.33**	96	⇓P		**Pn**		**14 13 42.0**	**+1.8**
KMI				pP		P		14 13 45.0	0.0
KMI				sP		pP		14 13 46.8	-1.8
KMI				pmax	pmax				
	comp=E,4.0nm,0.6s								
KMI				pmax	pmax				
	comp=E,42nm,3.7s								
KMI				LR	LR				
	comp=E,120nm,11.9s								
KMI				LR	LR				
	comp=E,190nm,12.6s								
KMI				LR	LR				
	comp=E,140nm,13.3s								
KBL	**Kabul**	**15.95**	300			**Pn**		**14 13 46.7**	**-1.5**
KDJ	**Kajisay**	**16.08**	336	Pn		**Pn**		**14 13 48.1**	**-1.7**
WMQ	**Urumqi**	**16.19**	5	*e*P		**Pn**		**14 13 52.0**	**+0.9**
WMQ				pP		pP		14 13 56.8	-0.9
WMQ				S		**Sn**		**14 16 54.5**	**+3.8**
WMQ				pmax	pmax				
	comp=E,16nm,0.9s								
WMQ				pmax	pmax				
	comp=E,150nm,3.6s								
WMQ				LR	LR				
	comp=E,110nm,5.5s								
WMQ				LR	LR				
	comp=E,350nm,5.5s								
WMQ				LR	LR				
	comp=E,150nm,6.3s								
SUKH	**Sukhothai**	**16.24**	126	P		**P**		**14 14 00.4**	**+5.5**
	comp=E,12nm,0.8s								
GTA	**Gaotai**	**16.48**	41	⇓P		**P**		**14 13 57.5**	**-0.1**
GTA				pP		pP		14 14 01.0	-0.1
GTA				sP		sP		14 14 03.3	+0.8
GTA				pmax	pmax				
	comp=E,13nm,0.8s								
GTA				pmax	pmax				
	comp=E,85nm,5.5s								
GTA				LR	LR				
	comp=E,150nm,13.5s								
GTA				LR	LR				
	comp=E,210nm,13.4s								
GTA				LR	LR				
	comp=E,270nm,13.8s								
BOOM	**Boomskoye usch**	**16.86**	334			**Pn**		**14 13 58.1**	**-1.6**
LZH	**Lanzhou**	**17.40**	57	*e*P		**P**		**14 14 08.0**	**+0.1**
LZH				pP		pP		14 14 11.5	0.0
LZH				sP		sP		14 14 14.0	+0.9
LZH				pmax	pmax				
	comp=E,22nm,1.0s								
LZH				pmax	pmax				
	comp=E,79nm,4.9s								
LZH				LR	LR				
	comp=E,240nm,10.8s								
LZH				LR	LR				
	comp=E,350nm,10.3s								
LZH				LR	LR				
	comp=E,310nm,13.9s								
UTHA	**Uthaitani**	**17.43**	131	P		**P**		**14 14 14.2**	**+6.1**
AAK	**Ala-Archa**	**17.57**	331	P		**P**		**14 14 10.1**	**+0.5**
	comp=E,0.3nm,0.3s,baz=131,slow=14,SNR=6.1								
GYA	**Guiyang**	**18.56**	89	⇑P		**Pn**		**14 14 22.3**	**+1.5**
GYA				pmax	pmax				
	comp=E,6.0nm,0.8s								
MK31	**Makanchi Array**	**19.30**	353			**P**		**14 14 28.3**	**-0.2**
MKAR	**Makanchi Array**	**19.30**	353	P		**P**		**14 14 29.0**	**+0.5**
	comp=E,1.3nm,0.3s,baz=176,slow=11,SNR=52								
MKAR	**Makanchi Array**	**19.30**	353	P		**P**		**14 14 27.9**	**-0.6**
MAKZ	**Makanchi**	**19.35**	352	P		**P**		**14 14 29.4**	**+0.3**
KKAR	**Karatay Array**	**19.80**	325			**P**		**14 14 34.5**	**+0.4**
XAN	**Xi'an**	**20.76**	67	P		**P**		**14 14 45.3**	**+0.7**
XAN				pP		pP		14 14 49.0	+0.8
XAN				pmax	pmax				
	comp=E,15nm,1.0s								
ENH	**Enshi**	**20.82**	77	P		**P**		**14 14 44.1**	**-1.1**
ENH				IAmb	IAmb			14 14 49.5	
	comp=Z,13nm,0.7s								
MNCI	**Minicoy**	**22.77**	215	P		**P**		**14 15 02.5**	**-3.6**
KURBB	**Kurchatov Arra**	**23.60**	348	P		**P**		**14 15 15.3**	**+1.0**
	comp=E,6.1nm,0.7s,baz=168,slow=9.8,SNR=39								
KURK	**Kurchatov**	**23.67**	348	P		**P**		**14 15 15.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**24.87**	51	*e*P		**P**		**14 15 27.8**	**+1.4**
HHC				pmax	pmax				
	comp=E,16nm,1.0s								
HHC				pmax	pmax				
	comp=Z,92nm,5.9s								
GEYT	**Alibeck**	**25.39**	301	P		**P**		**14 15 32.2**	**+1.1**
	comp=Z,1.0nm,0.4s,baz=130,slow=14,SNR=3.8								
SONM	**Songino Array**	**25.72**	33	P		**P**		**14 15 35.4**	**+1.4**
	comp=Z,12nm,0.7s,baz=220,slow=9.6,SNR=49								
SONM	**Songino Array**	**25.72**	33	P		**P**		**14 15 35.2**	**+1.2**
SONM				IAmb	IAmb			14 15 38.4	
	comp=Z,8.8nm,0.8s								
ULN	**Ulaanbaatar**	**26.06**	34	P		**P**		**14 15 38.4**	**+1.3**
ULN				IAmb	IAmb			14 15 41.0	
	comp=Z,13nm,0.7s								
ZAA0	**Zalesovo Array**	**26.27**	359	P		**P**		**14 15 36.5**	**-2.2**
ZAA0				IAmb	IAmb			14 15 40.9	
	comp=Z,15nm,1.2s								
ZALV	**Zalesovo Beam**	**26.27**	359	P		**P**		**14 15 39.5**	**+0.7**
	comp=Z,6.1nm,0.5s,baz=181,slow=9.9,SNR=23								
ZALV	**Zalesovo Beam**	**26.27**	359	P		**P**		**14 15 38.7**	**0.0**
BVAR	**Borovoye Array**	**27.82**	340	P		**P**		**14 15 52.4**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=146,slow=19,SNR=9.9								
NJ2	**Nanjing**	**28.87**	73	*e*P		**P**		**14 16 04.5**	**+2.2**
NJ2				pmax	pmax				
	comp=Z,6.0nm,0.5s								
ABKAR	**Akbulak array**	**29.36**	324	P		**P**		**14 16 05.6**	**-0.9**
ABKAR				IAmb	IAmb			14 16 08.3	
	comp=Z,5.9nm,0.6s								
ARU	**Arti**	**34.73**	333	P		**P**		**14 16 52.8**	**-0.7**
ARU				IAmb	IAmb			14 16 55.0	
	comp=Z,8.9nm,0.6s								
KSM	**Kuching**	**35.01**	134	P		**P**		**14 16 55.1**	**-1.3**
KSRS	**Korea Array**	**36.51**	64	P		**P**		**14 17 06.7**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=269,slow=8.3,SNR=6.7								
STKI	**Sintang**	**36.84**	134	P		P		14 17 20.7	+8.7
JOW	**Kunigami**	**37.57**	81	P		**P**		**14 17 17.4**	**-0.8**
JOW				IAmb	IAmb			14 17 28.7	
	comp=Z,27nm,1.2s								
USRK	**Ussuriysk Ar.**	**40.26**	53	P		**P**		**14 17 39.7**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=263,slow=8.8,SNR=4.3								
KLR	**Kul'dur**	**41.10**	46	P		**P**		**14 17 47.6**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=274,slow=13,SNR=4.9								
NRIK	**Noril'sk**	**41.72**	1	P		**P**		**14 17 52.0**	**-0.2**
	comp=Z,15nm,0.6s,baz=168,slow=6.3,SNR=25								
NRIK	**Noril'sk**	**41.72**	1	P		**P**		**14 17 52.6**	**+0.4**
NRIK				IAmb	IAmb			14 17 54.0	
	comp=Z,16nm,0.7s								
UGM	**Wanagama**	**42.66**	142	P		**P**		**14 17 59.5**	**-1.0**
MJAR	**Matsushiro Arr**	**44.75**	65	P		**P**		**14 18 17.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=280,slow=10.0,SNR=4.0								
YAK	**Yakutsk**	**44.84**	28	P		**P**		**14 18 18.0**	**+0.5**
	comp=Z,5.8nm,0.5s,baz=183,slow=1.3,SNR=7.2								
YAK	**Yakutsk**	**44.84**	28	P		**P**		**14 18 16.8**	**-0.7**
AKASG	**Malin Array Be**	**48.20**	315	P		**P**		**14 18 43.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=76,slow=6.9,SNR=6.6								
TIXI	**Tiksi**	**49.94**	16	P		**P**		**14 18 56.7**	**-0.3**
TIXI				IAmb	IAmb			14 18 57.8	
	comp=Z,6.0nm,1.0s								
BURAR	**Bucovina Array**	**50.64**	310	P		**P**		**14 19 03.5**	**+0.6**
FIA1	**FINESS Array S**	**51.72**	328	P		**P**		**14 19 08.5**	**-2.1**
FIA1				IAmb	IAmb			14 19 11.5	
	comp=Z,7.1nm,1.0s								
FINES	**FINESS Array B**	**51.72**	328	P		**P**		**14 19 10.8**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=108,slow=7.8,SNR=14								
ARCES	**ARCESS Array B**	**54.08**	338	P		**P**		**14 19 28.1**	**+0.1**
	comp=Z,10nm,0.8s,baz=99,slow=7.5,SNR=11								
SEY	**Seymchan**	**55.08**	31	P		**P**		**14 19 36.0**	**+0.7**
	comp=Z,5.6nm,0.7s,baz=263,slow=6.1,SNR=19								
GERES	**GERESS Array B**	**58.25**	312	P		**P**		**14 19 57.7**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=97,slow=6.9,SNR=4.3								
NOA	**NORSAR Array B**	**58.82**	327	P		**P**		**14 20 01.4**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=88,slow=6.9,SNR=5.8								
KEST	**Kesra**	**64.11**	298	P		**P**		**14 20 39.0**	**+0.9**
	comp=Z,6.6nm,0.9s,baz=15,slow=5.1,SNR=6.6								
WB0	**Warramunga Arr**	**66.55**	130	P		**P**		**14 20 54.4**	**+0.5**
WRA	**Warramunga Arr**	**66.63**	130	P		**P**		**14 20 55.1**	**+0.7**
	comp=Z,3.9nm,0.4s,baz=323,slow=6.5,SNR=64								
WRA	**Warramunga Arr**	**66.63**	130	P		**P**		**14 20 54.7**	**+0.2**
WB2	**Warramunga Arr**	**66.64**	130	P		**P**		**14 20 55.1**	**+0.5**
WR0	**Warramunga Arr**	**66.78**	130	P		**P**		**14 20 56.0**	**+0.6**
WR0				IAmb	IAmb			14 20 56.4	
	comp=Z,9.2nm,1.2s								
AS31	**Alice Springs**	**68.93**	133	P		**P**		**14 21 09.4**	**+0.4**
ASAR	**Alice Springs**	**68.93**	133	P		**P**		**14 21 09.6**	**+0.6**
	comp=Z,2.2nm,0.6s,baz=315,slow=6.3,SNR=45								
ASAR	**Alice Springs**	**68.93**	133	P		**P**		**14 21 09.7**	**+0.7**
COEN	**Coen**	**69.24**	119	P		**P**		**14 21 10.3**	**-0.7**
COEN				IAmb	IAmb			14 21 26.1	
	comp=Z,6.6nm,1.4s								
EUNU	**Eureka**	**72.42**	359	P		**P**		**14 21 30.0**	**+0.6**
EUNU				IAmb	IAmb			14 21 31.1	
	comp=Z,3.1nm,0.8s								
ESDC	**Sonseca Array**	**72.80**	306	P		**P**		**14 21 32.6**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=60,slow=4.6,SNR=4.4								
CTAO	**Charters Tower**	**75.27**	122	P		**P**		**14 21 47.6**	**+0.6**
CTAO				IAmb	IAmb			14 21 53.0	
	comp=Z,6.5nm,1.3s								
TOLK	**Toolik Lake Re**	**75.79**	18	P		**P**		**14 21 49.8**	**+0.5**
TOLK				IAmb	IAmb			14 21 50.9	
	comp=Z,3.2nm,0.8s								
BBOO	**Buckleboo**	**76.75**	138	P		**P**		**14 21 55.2**	**+0.1**
NIKH	**Nikolski High**	**76.91**	37	P		**P**		**14 21 56.0**	**+0.2**
MLY	**Manley**	**77.82**	21	P		**P**		**14 22 01.0**	**+0.2**
MLY				IAmb	IAmb			14 22 02.6	
	comp=Z,3.9nm,1.0s								
BMAR	**Burnt Mountain**	**77.99**	18	P		**P**		**14 22 02.2**	**+0.5**
I23K	**Minto, Yukon-K**	**78.18**	21	P		**P**		**14 22 02.2**	**-0.5**
I23K				IAmb	IAmb			14 22 07.8	
	comp=Z,2.5nm,0.9s								
BPAW	**Bear Paw Mtn.**	**78.35**	22	P		**P**		**14 22 03.1**	**-0.6**
BPAW				IAmb	IAmb			14 22 05.7	
	comp=Z,4.1nm,0.8s								
NEA2	**Nenana**	**78.64**	21	P		**P**		**14 22 05.6**	**+0.3**
NEA2				IAmb	IAmb			14 22 07.2	
	comp=Z,5.5nm,0.8s								
MDM	**Murphy Dome**	**78.66**	21	P		**P**		**14 22 05.5**	**0.0**
MDM				IAmb	IAmb			14 22 07.6	
	comp=Z,7.8nm,1.4s								
PPLA	**Purkeypile**	**78.72**	23	P		**P**		**14 22 07.1**	**+1.1**
PPLA				IAmb	IAmb			14 22 24.3	
	comp=Z,8.1nm,1.3s								
TORD	**Torodi Ar. Bea**	**78.93**	279	P		**P**		**14 22 06.9**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=85,slow=3.1,SNR=3.8								
TORD	**Torodi Ar. Bea**	**78.93**	279	P		**P**		**14 22 07.8**	**+0.1**
TRF	**Thorofare Moun**	**79.01**	22	P		**P**		**14 22 08.1**	**+0.6**
TRF				IAmb	IAmb			14 22 11.9	
	comp=Z,9.8nm,1.5s								
IL31		**79.21**	20	P		**P**		**14 22 07.7**	**-0.6**
IL31				IAmb	IAmb			14 22 09.3	
	comp=Z,1.9nm,0.8s								
ILAR	**Eielson Array**	**79.21**	20	P		**P**		**14 22 08.1**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=310,slow=4.7,SNR=16								
STKA	**Stephens Creek**	**79.50**	134	P		**P**		**14 22 09.5**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=326,slow=12,SNR=3.9								
STKA	**Stephens Creek**	**79.50**	134	P		**P**		**14 22 10.6**	**+0.2**
RND	**Reindeer**	**79.52**	22	P		**P**		**14 22 10.2**	**0.0**
RND				IAmb	IAmb			14 22 19.6	
	comp=Z,5.4nm,1.2s								
SKT	**Skwentna**	**79.54**	24	P		**P**		**14 22 10.8**	**+0.5**
INK	**Inuvik**	**79.98**	14	P		**P**		**14 22 12.7**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=11,slow=7.0,SNR=6.9								
SCRK	**Sand Creek**	**80.66**	20	P		**P**		**14 22 16.7**	**+0.2**
SCRK				IAmb	IAmb			14 22 17.7	
	comp=Z,4.5nm,0.7s								
BCAR	**Beaver Creek A**	**82.00**	20	P		**P**		**14 22 24.2**	**+0.7**
MCARA	**McCarthy VSAT**	**82.87**	21	P		**P**		**14 22 29.2**	**+1.2**
CRQM	**Cirque**	**83.30**	22	P		**P**		**14 22 31.5**	**+1.1**
TGL	**Tana Glacier**	**83.40**	22	P		**P**		**14 22 32.4**	**+1.5**
HYT	**Haines Junctio**	**85.02**	20	P		**P**		**14 22 40.6**	**+1.5**
HYT				IAmb	IAmb			14 22 41.0	
	comp=Z,5.1nm,0.8s								
YKA	**Yellowknife Ar**	**88.67**	9	P		**P**		**14 22 56.0**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=337,slow=4.5,SNR=11								

IDC **25** *14:16:43.1*±12.0, **28°20′N**×**85°82′E**, **h0**km, **mb3.4**/2, **mb1 3.6**/3, **mb1mx3.1**/35, **mbtmp3.4**/3, **ML3.4**/1, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.6**/37, **Error ellipse: s-maj=592.4km s-min=32.6km az=68.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.77**	**352**	P	Pn	14 21 04.9	+0.7
	0.1nm,0.3s,baz=178,slow=12,SNR=7.1						
ZALV	**Zalesovo Beam**	**25.74**	**359**	P	P	14 22 14.3	-0.8
	0.3nm,0.4s,baz=181,slow=8.6,SNR=1.9						
BRTR	**Keskin Array B**	**44.23**	**299**	LR	LR	14 44 57.8	
	comp=Z,57nm,21.6s,baz=82,slow=38						
WRA	**Warramunga Arr**	**67.00**	**130**	P	P	14 27 38.2	+0.1
	0.4nm,0.9s,baz=321,slow=6.5,SNR=0.7						

IDC **25** *14:23:09.0*±2.4, *27°71N*×*84°45E*, *h0km*, *mb3.5/5, mb1 3.6/7, mb1mx3.4/36, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=80.9km s-min=21.0km az=70.0*
DMN **25** *14:23:12.9*±0.2, *28°04N*×*85°24E*, *h10km*, *MI4.7/4, Error ellipse: s-maj=4.0km s-min=1.7km az=16.0*
ISC 25 14:23:13.2±1.1, **28°01N**±0°05×**85°20E**±0°03, **h12**km±9km, **n20**, σ1°13/31, **mb3.6**/5, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.23**	**163**	*e*Pg	**Pg**	**14 23 18.5**	**+0.3**
KKN				*e*Sg	**Sg**	**14 23 21.4**	**-0.2**
DMN	**Daman**	**0.41**	**192**	*e*Pg	**Pb**	**14 23 22.1**	**-0.5**
DMN				*e*Sg	**Sb**	**14 23 29.1**	**+0.2**
	3µm,0.3s						
PKIN	**Phulchoki**	**0.46**	**158**	*e*Pg	**Pg**	**14 23 22.8**	**+0.4**
PKI	**Pulchoki**	**0.47**	**157**	*e*Pg	**Pg**	**14 23 23.0**	**+0.4**
PKI				*e*Sg	**Sg**	**14 23 29.6**	**+0.6**
	2µm,0.2s						
GKN	**Gorkha**	**0.50**	**269**	*e*Pg	**Pb**	**14 23 23.7**	**-0.4**
GKN				*e*Sg	**Sb**	**14 23 30.4**	**-1.0**
	3µm,0.2s						
GUN	**Gumba**	**0.61**	**99**	*e*Pg	**Pg**	**14 23 24.9**	**-0.2**
JIRN	**Jiri**	**0.94**	**112**	*e*Pg	**Pb**	**14 23 31.2**	**-0.5**
JIRN				*e*Sg	**Sb**	**14 23 42.2**	**-2.1**
DANN	**Dangsing**	**1.32**	**285**	*e*Pg	**Pg**	**14 23 38.7**	**+0.1**
DANN				*e*Sg	**Sg**	**14 23 55.5**	**-0.3**
	1µm,0.3s						
KOLN	**Koldanda**	**1.44**	**261**	*e*Pg	**Pg**	**14 23 40.6**	**-0.3**
KOLN				*e*Sg	**Sg**	**14 24 00.4**	**+0.8**
	2µm,0.2s						
RAMN	**Ramite**	**1.63**	**130**	*e*Pg	**Pb**	**14 23 43.3**	**-0.1**
PYUN	**Piuthan**	**1.96**	**273**	*e*Pg	**Pb**	**14 23 49.1**	**+0.1**
PYUN				*e*Sg	**Sg**	**14 24 15.8**	**-0.4**
	829nm,0.3s						
ODAN	**Odare**	**2.26**	**120**	*e*Pg	**Pb**	**14 23 54.3**	**+0.2**
ODAN				*e*Sg	**Sb**	**14 24 23.1**	**+1.0**
ODAN				*e*Sg	**Sg**	**14 24 23.2**	**-2.6**
	379nm,0.2s						
TAPN	**Taplejung**	**2.32**	**106**	*e*Pg	**Pb**	**14 23 55.3**	**+0.1**
TAPN				*e*Sg	**Sb**	**14 24 26.0**	**+2.1**
CMAR	**Chiang Mai Arr**	**15.79**	**124**	Pn	**P**	**14 26 58.1**	**-1.4**
	baz=312,slow=11,SNR=1.0						
MKAR	**Makanchi Array**	**18.89**	**354**	P	**Pn**	**14 27 34.6**	**+0.5**
	0.2nm,0.3s,baz=175,slow=12,SNR=19						
KURBB	**Kurchatov Arra**	**23.14**	**349**	P	**P**	**14 28 17.8**	**-1.5**
	0.3nm,0.9s,baz=172,slow=9.8,SNR=2.0						
SONM	**Songino Array**	**25.76**

JIRN	**Jiri**	**0.15**	**51**	*e*Pg	**Pg**	**14 36 37.7**	**+0.1**
JIRN				*e*Sg	**Sg**	**14 36 39.3**	**-1.1**
GUN	**Gumba**	**0.38**	**335**	*e*Pg	**Pb**	**14 36 42.1**	**-0.6**
PKI	**Pulchoki**	**0.58**	**271**	*e*Pg	**Pb**	**14 36 46.6**	**+0.5**
PKI				*e*Sg	**Sg**	**14 36 53.8**	**+0.9**
	6μm,0.4s						
PKIN	**Phulchoki**	**0.59**	**271**	*e*Pg	**Pb**	**14 36 46.8**	**+0.6**
KKN	**Kakani**	**0.73**	**288**	*e*Pg	**Pb**	**14 36 49.1**	**+0.5**
KKN	**Kakani**	**0.73**	**288**	*e*Pg	**Pb**	**14 36 49.1**	**+0.5**
KKN				*e*Sg	**Sb**	**14 36 59.4**	**+0.8**
RAMN	**Ramite**	**0.78**	**142**	*e*Pg	**Pb**	**14 36 49.1**	**-0.4**
DMN	**Daman**	**0.85**	**273**	*e*Pg	**Pb**	**14 36 51.5**	**+0.9**
GKN	**Gorkha**	**1.33**	**289**	*e*Pg	**Pg**	**14 36 59.9**	**+0.4**
GKN				*e*Sg	**Sn**	**14 37 17.3**	**+1.1**
	1μm,0.3s						
ODAN	**Odare**	**1.38**	**120**	*e*Pg	**Pg**	**14 37 00.9**	**+0.6**
ODAN				*e*Sg	**Sn**	**14 37 19.1**	**+1.7**
	468nm,0.2s						
TAPN	**Taplejung**	**1.48**	**98**	*e*Pg	**Pg**	**14 37 01.8**	**-0.5**
TAPN				*e*Sg	**Sg**	**14 37 22.2**	**+0.6**
	2μm,0.3s						
DANN	**Dangsing**	**2.18**	**292**	*e*Sg	**Sg**	**14 37 43.1**	**-0.8**
	2μm,0.5s						
KOLN	**Koldanda**	**2.19**	**276**	*e*Sg	**Sg**	**14 37 44.7**	**+0.4**
	3μm,0.5s						
PYUN	**Piuthan**	**2.77**	**282**	*e*Sg	**Sg**	**14 38 02.3**	**-0.6**
	2μm,0.5s						
AJM	**Ajmer**	**10.24**	**267**	*e*P	Pn	14 38 54.0	-6.7
AJM				*i* S	**Sn**	**14 40 48.0**	**-7.5**
CMAR	**Chiang Mai Arr**	**14.92**	**125**	Pn	**Pn**	**14 40 03.2**	**-1.4**
	0.1nm,0.3s,baz=303,slow=13,SNR=6.9						
AAK	**Ala-Archa**	**17.74**	**331**	P	**P**	**14 40 41.8**	**+0.2**
	0.3nm,0.3s,baz=152,slow=8.8,SNR=5.3						
MKAR	**Makanchi Array**	**19.42**	**352**	P	**P**	**14 41 00.9**	**+1.0**
	1.5nm,0.3s,baz=185,slow=11,SNR=33						
KURBB	**Kurchatov Arra**	**23.73**	**348**	P	**P**	**14 41 46.8**	**+1.1**
	5.1nm,0.8s,baz=170,slow=9.5,SNR=22						
SONM	**Songino Array**	**25.71**	**33**	P	**P**	**14 42 05.2**	**+1.2**
	2.3nm,0.4s,baz=219,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**26.37**	**358**	P	**P**	**14 42 10.6**	**+0.9**
	6.6nm,0.7s,baz=182,slow=9.6,SNR=14						
BVAR	**Borovoye Array**	**27.97**	**340**	P	**P**	**14 42 24.2**	**0.0**
	0.7nm,0.4s,baz=160,slow=14,SNR=7.2						
AKTO	**Aktyubinsk**	**31.25**	**325**	P	**P**	**14 42 54.0**	**+0.7**
	1.3nm,0.7s,baz=115,slow=8.6,SNR=5.0						
ARU	**Arti**	**34.89**	**333**	P	**P**	**14 43 25.1**	**+0.2**
	0.5nm,0.3s,baz=6.0,slow=15,SNR=3.7						
KSRS	**Korea Array**	**36.40**	**64**	P	**P**	**14 43 37.5**	**-0.6**
	1.4nm,0.5s,baz=260,slow=8.1,SNR=13						
KLR	**Kul'dur**	**41.05**	**46**	P	**P**	**14 44 17.3**	**+0.3**
	1.0nm,0.4s,baz=272,slow=7.6,SNR=4.0						
AKASG	**Malin Array Be**	**48.39**	**315**	P	**P**	**14 45 15.2**	**-0.3**
	0.4nm,0.4s,baz=79,slow=7.3,SNR=4.1						
FINES	**FINESS Array B**	**51.90**	**328**	P	**P**	**14 45 42.5**	**+0.6**
	1.1nm,0.7s,baz=99,slow=10.0,SNR=5.5						
ARCES	**ARCESS Array B**	**54.24**	**338**	P	**P**	**14 45 59.6**	**+0.4**
	2.5nm,0.9s,baz=148,slow=8.6,SNR=1.8						
GERES	**GERESS Array B**	**58.45**	**312**	P	**P**	**14 46 29.9**	**+0.3**
	0.3nm,0.5s,baz=116,slow=9.0,SNR=2.4						
NOA	**NORSAR Array B**	**59.00**	**327**	P	**P**	**14 46 33.1**	**0.0**
	0.6nm,0.9s,baz=63,slow=3.5,SNR=3.3						
WRA	**Warramunga Arr**	**66.44**	**130**	P	**P**	**14 47 23.9**	**+0.7**
	1.8nm,0.8s,baz=323,slow=6.4,SNR=26						
ASAR	**Alice Springs**	**68.74**	**133**	P	**P**	**14 47 38.4**	**+0.6**
	1.0nm,0.9s,baz=316,slow=6.3,SNR=12						
ILAR	**Eielson Array**	**79.24**	**20**	P	**P**	**14 48 38.5**	**-0.1**
	0.8nm,0.6s,baz=311,slow=4.1,SNR=8.9						
INK	**Inuvik**	**80.04**	**14**	P	**P**	**14 48 42.6**	**-0.2**
	0.4nm,0.5s,baz=301,slow=5.3,SNR=4.1						
YKA	**Yellowknife Ar**	**88.74**	**9**	P	**P**	**14 49 26.7**	**-0.3**
	0.3nm,0.7s,baz=340,slow=4.5,SNR=4.6						

*IDC **25** 14:36:57.6±1.2,0˚.69S×127˚.20E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.3/51,mbtmp3.5/5,ML3.3/1,Error ellipse: s-maj=48.5km s-min=21.5km az=60.0*
*DJA **25** 14:37:00.6±0.6,1˚.5S±2˚×12˚.7E±˚,h18km±6km,M3.9/9, mb4.7/2,mB4.5/1,MLv3.5/9,Mw(mB)3.7/1*
ISC 25 14:37:03.3±1.0,0.69S±0˚.05×127.42E±0˚.08,h41km,n12, σ1s13/15,mb3.6/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.46**	**358**	P		**Pn**	**14 37 26.0**	**-1.1**
TNTI				S		**Sn**	**14 37 45.2**	**+0.2**
SANI	**Sanana**	**1.96**	**227**	P		**Pn**	**14 37 33.1**	**-1.0**
SANI				S		**Sn**	**14 37 57.7**	**+0.2**
NLAI	**Namlea**	**2.55**	**187**	P		**Pn**	**14 37 42.1**	**0.0**
NLAI				S		**Sn**	**14 38 11.9**	**0.0**
KMSI	**Cibinong**	**3.66**	**290**	P		**Pn**	**14 37 57.1**	**-0.3**
SIJI	**Sorong**	**3.85**	**93**	Pn		**Pn**	**14 38 01.4**	**+1.4**
	2.0nm,0.3s,baz=196,slow=20,SNR=6.7							
GTOI	**Gorontalo**	**4.60**	**287**	P		**Pn**	**14 38 13.3**	**+2.9**
APSI	**Ampana**	**5.77**	**268**	P		**Pn**	**14 38 25.4**	**-1.1**
	0.1nm436nm22nm,0.5s							
SPSI	**Sidrap Palu**	**8.30**	**247**	P		**Pn**	**14 39 00.8**	**-0.4**
WRA	**Warramunga Arr**	**20.30**	**161**	P		**P**	**14 41 35.5**	**-0.2**
	0.6nm,0.6s,baz=340,slow=11,SNR=6.7							
ASAR	**Alice Springs**	**23.61**	**165**	P		**P**	**14 42 12.2**	**+0.8**
	0.6nm,0.6s,baz=345,slow=11,SNR=18							
MKAR	**Makanchi Array**	**61.58**	**326**	P		**P**	**14 47 16.1**	**-0.4**
	0.3nm,0.3s,baz=115,slow=7.8,SNR=9.4							
KURBB	**Kurchatov Arra**	**65.83**	**328**	P		**P**	**14 47 43.9**	**-0.5**
	0.3nm,0.5s,baz=126,slow=6.6,SNR=4.0							

*IDC **25** 14:38:19.4±2.0,27˚.82N×84˚.91E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.4/59,mbtmp3.7/6,Error ellipse: s-maj=75.3km s-min=25.1km az=68.0*
ISC 25 14:38:21.3±1.9,27.8N±0˚.2×84.9E±0˚.4,h12km,n6,σ0s49/6, mb3.6/5,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.03**	**354**	P		**Pn**	**14 42 44.0**	**+0.1**
	baz=168,slow=13,SNR=2.0							
SONM	**Songino Array**	**26.05**	**34**	P		**P**	**14 43 54.4**	**-0.1**
	0.3nm,0.3s,baz=227,slow=8.7,SNR=2.0							
ZALV	**Zalesovo Beam**	**26.08**	**360**	P		**P**	**14 43 54.9**	**+0.3**
	0.8nm,0.3s,baz=178,slow=11,SNR=3.7							
ARCES	**ARCESS Array B**	**53.59**	**338**	P		**P**	**14 47 41.7**	**-0.2**
	4.4nm,1.0s,baz=96,slow=8.3,SNR=1.5							
WRA	**Warramunga Arr**	**67.41**	**129**	P		**P**	**14 49 16.5**	**-0.5**
	0.4nm,0.8s,baz=322,slow=6.7,SNR=1.7							
ASAR	**Alice Springs**	**69.69**	**132**	P		**P**	**14 49 31.7**	**+0.6**
	0.2nm,0.5s,baz=306,slow=6.3,SNR=1.7							

*MOS **25** 14:46:24.9±1.0,56˚.03N×113˚.72E,h6km,mb3.9/4,Error ellipse: s-maj=9.1km s-min=6.0km az=73.2*
*IDC **25** 14:46:25.6±0.8,56˚.06N×113˚.69E,h0km,mb3.7/11, mb1 3.9/14,mb1mx3.5/64,mbtmp3.7/14,ML3.3/3,Error ellipse: s-maj=20.4km s-min=16.9km az=151.0*
*BYKL **25** 14:46:26.6±0.1,56˚.06N×113˚.69E,h5km±2km*
ISC 25 14:46:26.6±0.8,56.02N±0˚.02×113.53E±0˚.02,h8km±5km, n86,σ2s57/157,mb3.7/13,9C-11D,East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.10**	**11**	⇑*i*Pg		**Pg**	**14 46 28.7**	**-0.3**
SVKR				Pmax			14 46 30.1	
	11μm,0.2s							
SVKR				*e*Sg		**Sg**	**14 46 31.1**	**+0.4**
SVKR				Smax			14 46 33.9	
	125μm,0.8s							
SVKR	**Severomuysk**	**0.10**	**11**	⇑*i*PG		**Pg**	**14 46 28.5**	**-0.5**
SVKR				*e*S		**Sg**	**14 46 30.4**	**-0.3**
UKT	**Uakit**	**0.54**	**174**	⇑*i*Pg		**Pg**	**14 46 36.3**	**-0.7**
UKT				*e*			14 46 38.9	
UKT				max			14 46 41.2	
	400nm,0.4s							
UKT				*e*Sg		**Sg**	**14 46 43.7**	**-0.4**
UKT				Smax			14 46 55.8	
	2μm,0.2s							
UKT	**Uakit**	**0.54**	**174**	⇑*i*PG		**Pg**	**14 46 36.3**	**-0.7**
UKT				*e*			14 46 44.6	
UKT				pmax	pmax			
	comp=Z,360nm,0.2s							
UKT				smax	smax			
	comp=N,2μm,0.2s							
YOA	**Uoyan**	**1.02**	**277**	*e*Pg		**Pb**	**14 46 46.9**	**+0.5**
YOA				*e*			14 46 50.5	
YOA				max			14 46 50.7	
	comp=N,2μm,0.2s							
YOA				*e*Sg		**Sn**	**14 47 02.2**	**+0.7**
YOA				*e*			14 47 07.5	
YOA				max			14 47 10.6	
	comp=N,8μm,0.3s							
YOA	**Uoyan**	**1.02**	**277**	*e*PG		**Pb**	**14 46 46.8**	**+0.4**
YOA				*e*			14 47 02.5	
YOA				pmax	pmax			
	comp=Z,1μm,0.3s							
YOA				smax	smax			
	comp=N,8μm,0.3s							
NLYR	**Nelyaty**	**1.30**	**68**	⇓*i*Pg		**Pn**	**14 46 48.2**	**-2.8**
NLYR				*e*			14 46 51.3	
NLYR				max			14 46 52.6	
	comp=N,1μm,0.3s							
NLYR				*e*Sg		**Sg**	**14 47 04.0**	**-4.4**
NLYR				*e*			14 47 08.5	
NLYR				max			14 47 09.0	
	comp=N,4μm,0.8s							
NLYR	**Nelyaty**	**1.30**	**68**	⇓*i*PG		**Pn**	**14 46 48.2**	**-2.8**
NLYR				*e*			14 47 04.2	
NLYR				pmax	pmax			
	comp=Z,1μm,0.5s							
NLYR				smax	smax			
	comp=E,4μm,0.9s							
KMO	**Kumora**	**1.31**	**265**	*e*Pg		**Pg**	**14 46 52.2**	**+0.4**
KMO				*e*Pb		**Pb**	**14 46 53.5**	**+2.0**
KMO				max			14 46 54.0	
	comp=E,793nm,0.2s							
KMO				*e*			14 46 58.7	
KMO				*e*Sg		**Sn**	**14 47 10.5**	**+1.6**
KMO				*e*			14 47 14.5	
KMO				max			14 47 15.6	
	comp=E,5μm,0.8s							
KMO	**Kumora**	**1.31**	**265**	*e*PG		**Pg**	**14 46 52.2**	**+0.4**
KMO				*e*			14 47 11.0	
KMO				pmax	pmax			
	comp=Z,791nm,0.2s							
KMO				smax	smax			
	comp=N,5μm,0.8s							
YLYR	**Ulyunkhan**	**1.77**	**230**	⇓*i*Pn		**Pb**	**14 46 59.9**	**+0.7**
YLYR				*e*Pg		**Pg**	**14 47 00.3**	**-0.2**
YLYR				Pmax			14 47 00.9	
	comp=N,600nm,0.2s							
YLYR				*e*			14 47 01.5	
YLYR				*e*			14 47 09.4	
YLYR				*e*Sg		**Sg**	**14 47 24.8**	**+1.4**
YLYR				Smax			14 47 29.2	
	comp=N,2μm,0.4s							
YLYR	**Ulyunkhan**	**1.77**	**230**	⇓*i*PN		**Pb**	**14 46 59.9**	**+0.7**
YLYR				*e*			14 47 01.0	
YLYR				*e*S		**Sg**	**14 47 23.7**	**+0.3**
YLYR				*e*			14 47 24.8	
YLYR				pmax	pmax			
	comp=Z,352nm,0.2s							
YLYR				smax	smax			
	comp=N,2μm,0.3s							
BOD	**Bodaibo**	**1.82**	**8**	⇓*i*Pg		**Pn**	**14 46 58.2**	**+0.1**
BOD				*e*			14 46 59.3	
BOD				max			14 47 00.6	
	comp=N,821nm,0.7s							
BOD				*e*Sg		**Sn**	**14 47 21.4**	**+0.1**
BOD				Smax			14 47 23.5	
	comp=N,1μm,0.8s							
BOD	**Bodaibo**	**1.82**	**8**	⇓*i*PN		**Pn**	**14 46 58.2**	**+0.1**
BOD				*e*			14 47 21.7	
BOD				pmax	pmax			
	comp=Z,810nm,0.6s							
BOD				smax	smax			
	comp=E,1μm,0.8s							
NIZ	**Nizh Angarsk**	**2.26**	**265**	*e*Pn		**Pb**	**14 47 06.5**	**-1.0**
NIZ				*e*Pg		**Pg**	**14 47 09.1**	**-0.7**
NIZ				*e*			14 47 11.0	
NIZ				max			14 47 11.7	
	comp=E,207nm,0.3s							
NIZ				*e*Sn		**Sb**	**14 47 35.6**	**0.0**
NIZ				*e*Sg		**Sg**	**14 47 39.5**	**+0.5**
NIZ				Smax			14 47 41.9	
	comp=E,2μm,0.4s							
NIZ	**Nizh Angarsk**	**2.26**	**265**	*e*PN		**Pb**	**14 47 06.5**	**-1.0**
NIZ				*e*			14 47 09.8	
NIZ				*e*			14 47 40.1	
NIZ				pmax	pmax			
	comp=Z,250nm,1.0s							
NIZ				smax	smax			
	comp=N,2μm,0.4s							
CRS	**Chara**	**2.77**	**70**	*e*Pn		**Pn**	**14 47 10.8**	**-0.5**
CRS				*i* Pg		**Pb**	**14 47 15.3**	**-1.1**
CRS				Pmax			14 47 16.9	
	comp=N,830nm,0.8s							
CRS				*e*			14 47 27.1	
CRS				*e*Sg		**Sb**	**14 47 50.0**	**-0.5**
CRS				*e*SgSg		**SnSn**	**14 47 56.4**	**+0.8**
CRS				max			14 47 59.4	
	comp=N,2μm,1.6s							
CRS				*e*			14 48 05.0	
CRS	**Chara**	**2.77**	**70**	*e*PN		**Pn**	**14 47 10.7**	**-0.5**
CRS				*e*			14 47 15.3	
CRS				*e*			14 47 49.3	
CRS				pmax	pmax			
	comp=Z,822nm,0.9s							
CRS				smax	smax			
	comp=E,2μm,1.5s							
SYVR	**Suvo**	**3.13**	**222**	*e*Pn		**Pn**	**14 47 18.1**	**+2.0**
SYVR				*e*Pg		**Pb**	**14 47 24.2**	**+1.9**
SYVR				*e*PgPg		**Pg**	**14 47 27.4**	**+1.0**
SYVR				max			14 47 29.2	
	comp=E,117nm,0.7s							
SYVR				*e*Sn		**Sn**	**14 47 56.8**	**+3.2**
SYVR				*e*Sg		**Sg**	**14 48 05.8**	**-1.1**
SYVR				*e*			14 48 14.3	
SYVR				max			14 48 17.5	
	comp=E,1μm,1.2s							
SYVR	**Suvo**	**3.13**	**222**	*e*PN		**Pn**	**14 47 18.1**	**+2.0**
SYVR				*e*			14 47 24.2	
SYVR				*e*			14 48 06.4	
SYVR				pmax	pmax			
	comp=Z,122nm,0.5s							
SYVR				smax	smax			
	comp=E,1μm,1.2s							
KHNR	**Khani**	**3.69**	**73**	*e*Pn		**Pn**	**14 47 22.9**	**-0.9**
KHNR				*e*Pg		**Pb**	**14 47 30.7**	**-1.3**
KHNR				*e*Sn		**Sn**	**14 48 04.1**	**-3.4**
KHNR				*e*Sg		**Sb**	**14 48 17.2**	**+0.4**
MXMB	**Maximikha**	**3.92**	**227**	*e*Pn		**Pn**	**14 47 29.4**	**+2.4**
MXMB				*e*Pg		**Pg**	**14 47 38.9**	**-2.7**
MXMB				*e*Sn		**Sn**	**14 48 15.5**	**+2.4**
MXMB				*e*Sg		**Sg**	**14 48 30.8**	**-1.5**
MXMB				*e*			14 48 38.2	
CIT	**Chita**	**4.01**	**180**	*e*Pg		**Pb**	**14 47 38.2**	**+0.8**
CIT				Pmax			14 47 48.5	
	comp=E,122nm,0.2s							
CIT				*e*Sn		**Sn**	**14 48 15.3**	**-0.1**
CIT				*e*Sg		**Sg**	**14 48 31.9**	**-3.4**
CIT				Smax			14 48 35.9	
	comp=E,634nm,0.2s							
CIT	**Chita**	**4.01**	**180**	*e*PN		**Pb**	**14 47 38.6**	**+1.2**
CIT				*e*S		**Sn**	**14 48 17.0**	**+1.6**
CIT				*e*			14 48 32.0	
CIT				pmax	pmax			
	comp=Z,80nm,1.3s							
CIT				smax	smax			
	comp=E,472nm,1.2s							
TUP	**Tupik**	**4.01**	**111**	*e*Pn		**Pn**	**14 47 27.8**	**-0.5**
TUP				*e*Pg		**Pb**	**14 47 37.6**	**+0.1**
TUP				Pmax			14 47 39.6	
	comp=E,167nm,0.4s							
TUP				*e*Sn		**Sn**	**14 48 13.4**	**-2.1**
TUP				*e*Sg		**Sb**	**14 48 29.0**	**+2.9**
TUP				*e*			14 48 34.2	
TUP				max			14 48 38.0	
	comp=E,650nm,1.0s							
TUP				*e*			14 48 43.2	
TUP	**Tupik**	**4.01**	**111**	*e*PN		**Pn**	**14 47 27.9**	**-0.4**
TUP				*e*			14 47 37.7	
TUP				*e*S		**Sn**	**14 48 13.4**	**-2.1**
TUP				*e*			14 48 28.6	
TUP				pmax	pmax			
	comp=Z,167nm,0.4s							
TUP				smax	smax			
	comp=E,584nm,0.9s							
OGRR	**Ongureny**	**4.18**	**238**	⇓*i*Pn		**Pn**	**14 47 33.7**	**+3.2**
OGRR				*e*Pg		**Pb**	**14 47 43.2**	**+3.0**
OGRR				Pmax			14 47 45.9	
	comp=E,53nm,0.4s							
OGRR				*e*			14 48 08.1	
OGRR				*e*Sn		**Sn**	**14 48 20.6**	**+1.2**
OGRR				*e*Sg		**Sg**	**14 48 38.9**	**-1.7**
OGRR				Smax			14 48 49.8	
	comp=E,246nm,0.5s							
OGRR	**Ongureny**	**4.18**	**238**	⇓*i*PN		**Pn**	**14 47 33.7**	**+3.2**
OGRR				*e*			14 47 44.5	
OGRR				*e*			14 48 38.5	
OGRR				pmax	pmax			
	comp=Z,52nm,0.7s							
OGRR				smax	smax			
	comp=E,244nm,0.8s							
KELR	**Kotokel**	**4.56**	**226**	*e*Pn		**Pn**	**14 47 38.4**	**+2.6**
KELR				*e*Pg		**Pb**	**14 47 49.7**	**+2.9**
KELR				*e*Sn		**Sn**	**14 48 31.1**	**+2.2**
KELR				*e*			14 48 54.7	
YKLR	**Yuktali**	**4.56**	**79**	*e*Pn		**Pn**	**14 47 35.1**	**-0.7**
YKLR				*e*Pg		**Pb**	**14 47 46.1**	**-0.7**
YKLR				*e*			14 48 17.5	
YKLR				*e*Sn		**Sn**	**14 48 25.7**	**-3.2**
YKLR				*e*Sg		**Sb**	**14 48 44.5**	**+2.6**
ZRHB	**Zarechye**	**5.10**	**230**	*e*Pn		**Pn**	**14 47 45.8**	**+2.6**
ZRHB				*e*Pg		**Pg**	**14 48 01.4**	**-2.8**
ZRHB				Pmax			14 48 05.0	
	comp=E,73nm,0.8s							
ZRHB				*e*Sg		**Sg**	**14 49 09.0**	**-1.2**
ZRHB				*e*			14 49 11.0	
ZRHB				max			14 49 39.4	
	comp=E,627nm,1.0s							
TRG	**Tyrgan**	**5.32**	**235**	*e*Pn		**Pn**	**14 47 48.1**	**+1.9**
TRG				*e*Pg		**Pb**	**14 48 03.3**	**+3.6**
TRG				Pmax			14 48 11.3	
	comp=E,25nm,1.1s							
TRG				*e*Sn		**Sn**	**14 48 48.8**	**+1.2**
TRG				*e*Sg		**Sg**	**14 49 14.1**	**-3.0**
TRG				*e*			14 49 16.5	
TRG				max			14 49 18.4	
	comp=E,182nm,0.4s							
TRG	**Tyrgan**	**5.32**	**235**	*e*PN		**Pn**	**14 47 48.1**	**+1.9**
TRG				*e*			14 48 03.0	
TRG				*e*			14 49 11.8	
TRG				pmax	pmax			
	comp=Z,25nm,0.7s							
TRG				smax	smax			
	comp=E,182nm,0.4s							
FFNB	**Fofonovo**	**5.63**	**228**	*e*Pn		**Pn**	**14 47 52.8**	**+2.3**
FFNB				*e*Pg		**Pb**	**14 48 09.5**	**+4.5**
FFNB				*e*Sn		**Sn**	**14 48 56.9**	**+1.6**
FFNB				*e*Sg		**Sg**	**14 49 24.0**	**-3.3**
FFNB				*e*			14 49 30.6	
KAB	**Kabansk**	**5.68**	**228**	*e*Sg		**Sg**	**14 49 25.2**	**-3.5**
KAB				Smax			14 50 05.3	
	comp=E,656nm,1.4s							
STDB	**Stepnoy Dvoret**	**5.71**	**230**	*e*Sg		**Sg**	**14 49 26.7**	**-3.1**
HRMR	**Khuramsha**	**5.88**	**224**	*e*Pn		**Pn**	**14 47 56.0**	**+2.2**
HRMR				*e*Pg		Pb	14 48 14.0	+4.9
HRMR				Pmax			14 48 18.3	
	comp=E,52nm,0.5s							
HRMR				*e*Sn		**Sn**	**14 49 02.9**	**+1.6**
HRMR				*e*Sg		**Sg**	**14 49 32.1**	**-2.9**
HRMR				Smax			14 49 47.7	
	comp=E,666nm,0.7s							
BGT	**Bolshoye Golou**	**6.22**	**234**	*e*Pn		**Pn**	**14 48 01.7**	**+3.1**
BGT				*e*Pg		Pb	14 48 19.7	+4.6
BGT				Pmax			14 48 41.8	
	comp=E,35nm,1.4s							
BGT				*e*Sn		**Sn**	**14 49 10.4**	**+0.5**
BGT				*e*Sg		**Sg**	**14 49 41.5**	**-4.7**
BGT				Smax			14 49 51.0	
	comp=E,174nm,1.3s							
IENR	**Iengra**	**6.34**	**83**	*e*Pn		**Pn**	**14 47 59.5**	**-0.8**
IENR				*e*Pg		**Pb**	**14 48 18.7**	**+1.6**
IENR				*e*Sn		**Sn**	**14 49 08.7**	**-4.1**
IENR				*e*Sg		**Sb**	**14 49 39.9**	**+6.9**
IENR				*e*			14 49 54.4	
KPC	**Khapcheranga**	**6.37**	**187**	*e*Pn		**Pn**	**14 48 01.6**	**+0.9**
KPC				*e*			14 48 24.2	
KPC				max			14 48 45.3	
	comp=E,14nm,1.0s							
KPC				*e*Sn		**Sn**	**14 49 13.8**	**+0.3**
KPC				*e*			14 49 30.4	
KPC				*e*Sg		**Sg**	**14 49 45.5**	**-5.4**
KPC				*e*			14 49 59.9	
KPC				max			14 50 03.1	
	comp=E,264nm,1.5s							
KPC	**Khapcheranga**	**6.37**	**187**	*e*PN		**Pn**	**14 48 00.8**	**+0.1**
KPC				*e*			14 48 21.1	
KPC				*e*			14 49 44.5	
KPC				pmax	pmax			
	comp=Z,9.0nm,0.5s							
KPC				smax	smax			
	comp=E,263nm,1.5s							
LSTR	**Listvyanka**	**6.61**	**235**	*e*Pn		**Pn**	**14 48 05.4**	**+1.6**
LSTR				*e*Pg		Pb	14 48 27.2	+5.6
LSTR				Pmax			14 48 28.9	
	comp=E,13nm,1.7s							
LSTR				*e*Sn		**Sn**	**14 49 19.6**	**+0.3**
LSTR				*e*Sg		**Sg**	**14 49 54.0**	**-4.4**
LSTR				Smax			14 49 59.2	
	comp=E,131nm,2.0s							
IRK	**Irkutsk**	**6.63**	**239**	*e*Sg		**Sg**	**14 49 54.3**	**-4.8**
IRK				Smax			14 50 01.0	
	comp=E,315nm,0.5s							
IRK	**Irkutsk**	**6.63**	**239**	*e*PG		Pg	14 48 27.8	-5.5
IRK				*e*			14 49 54.5	
IRK				pmax	pmax			
	comp=Z,42nm,0.2s							
IRK				smax	smax			
	comp=E,315nm,0.5s							
IVK	**Ivanovka**	**6.84**	**236**	*e*Pn		**Pn**	**14 48 09.3**	**+2.2**
IVK				*e*Pg		Pb	14 48 30.7	+5.1
IVK				Pmax			14 48 44.8	
	comp=E,12nm,0.8s							
IVK				*e*Sn		**Sn**	**14 49 25.0**	**-0.1**
IVK				*e*Sg		**Sg**	**14 50 00.7**	**-5.4**
IVK				*e*			14 50 02.4	
IVK				max			14 50 13.3	
	comp=E,114nm,1.0s							
TLY	**Talaya**	**7.28**	**237**	Pg		**Pb**	**14 48 32.3**	**-0.8**
	comp=E,0.0nm,0.3s,baz=47,slow=6.0,SNR=2.8							
TLY				Lg		Lg	14 50 15.8	
	comp=E,0.

ZAK pmax pmax
comp=Z,6.0nm,0.6s
ZAK smax smax
comp=N,92nm,1.4s
MOY Mondy 8.60 245 *e*Pn **Pn 14 48 32.6 +1.4**
MOY *e* 14 48 43.3
MOY max 14 48 47.0
comp=N,27nm,1.6s
MOY *e*Sn **Sn 14 50 08.2 -0.1**
MOY *e* 14 50 30.2
MOY *e*Sg **Sg 14 50 53.6 -8.6**
MOY Smax 14 51 10.2
comp=N,155nm,2.1s
MOY Mondy 8.60 245 *e*PN **Pn 14 48 33.0 +1.8**
MOY *e* 14 49 04.1
MOY *e*S **Sn 14 50 12.3 +4.0**
MOY *e* 14 50 53.4
ORL Orlik 8.75 252 *e*Pn **Pn 14 48 35.4 +2.1**
ORL max 14 48 47.0
comp=N,21nm,1.8s
ORL *e* 14 49 17.1
ORL *e*Sn **Sn 14 50 12.0 -0.1**
ORL *e*Sg **Sg 14 50 59.7 -7.4**
ORL Smax 14 51 17.0
comp=N,130nm,1.7s
ORL Orlik 8.75 252 *e*PN **Pn 14 48 35.1 +1.8**
ORL *e* 14 49 04.8
ORL *e*S **Sn 14 50 12.0 -0.1**
ORL *e* 14 50 59.0
ORL pmax pmax
comp=Z,23nm,1.2s
ORL smax smax
comp=N,110nm,1.2s
ULN Ulaanbaatar 9.09 209⇓ *e*P **Pn 14 48 38.5 +0.4**
ULN pmax pmax
comp=Z,8.0nm,2.8s
SONM Songino Array 9.30 211 Pn **Pn 14 48 42.6 +1.7**
comp=Z,0.2nm,0.3s,baz=22,slow=13,SNR=4.0
SONM Sn **Sn 14 50 22.5 -3.2**
comp=Z,0.7nm,0.3s,baz=19,slow=19,SNR=3.7
SONM Lg Lg 14 51 19.6
comp=Z,3.3nm,0.3s,baz=16,slow=28,SNR=11
YAK Yakutsk 10.26 47 Lg Lg 14 51 40.9
comp=Z,0.1nm,0.3s,baz=321,slow=22,SNR=7.1
KLR Kul'dur 12.97 114 Pn **Pn 14 49 30.8 -0.1**
comp=Z,0.4nm,0.3s,baz=311,slow=14,SNR=7.7
KLR Lg Lg 14 53 10.7
comp=Z,0.5nm,0.3s,baz=252,slow=12,SNR=4.2
KLR Kul'dur 12.97 114⇑ *e*P **Pn 14 49 32.0 +1.1**
KLR pmax pmax
comp=Z,4.0nm,1.5s
ZALV Zalesovo Beam 16.55 275 Pn **Pn 14 50 20.0 +1.3**
comp=Z,0.3nm,0.3s,baz=67,slow=9.7,SNR=6.4
USRK Uesuriysk Ar. 15.68 127 Lg Lg 14 55 14.5
baz=325,slow=33,SNR=5.4
DGZ Jazzator, Alta 16.91 259⇑ *e*P **P 14 50 26.4 +0.9**
DGZ pmax pmax
comp=Z,4.0nm,2.1s
TIXI Tiksi 16.98 17 Pn **Pn 14 50 19.1 -4.9**
comp=Z,0.6nm,0.3s,baz=200,slow=8.3,SNR=15
NRIK Noril'sk 17.68 329 P **Pn 14 50 29.1 -3.6**
comp=Z,1.0nm,0.3s,baz=124,slow=7.0,SNR=6.0
NRIK Noril'sk 17.68 329⇓ *e*P **Pn 14 50 31.6 -1.1**
NRIK pmax pmax
comp=Z,2.0nm,0.6s
KURK Kurchatov 21.33 270 P **P 14 51 16.4 +2.8**
MK31 Makanchi Array 21.39 258⇑ *i*P **P 14 51 16.3 +1.9**
MKAR Makanchi Array 21.39 258 P **P 14 51 16.4 +2.0**
comp=Z,0.9nm,0.5s,baz=58,slow=10,SNR=13
MKAR Makanchi Array 21.39 258 *i* P **P 14 51 16.3 +1.9**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
KURBB Kurchatov Arra 21.43 270 P **P 14 51 16.4 +1.8**
comp=Z,2.1nm,0.5s,baz=56,slow=12,SNR=22
BVAR Borovoye Array 24.91 281 P **P 14 51 51.7 +2.0**
comp=Z,1.1nm,0.7s,baz=90,slow=7.4,SNR=5.6
BRVK Borovoye 24.95 281⇓ *e*P **P 14 51 51.9 +1.9**
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BILL Bilibino 26.54 42 *e*P **P 14 52 03.9 -0.4**
BILL pmax pmax
comp=Z,1.0nm,0.8s
ARCES ARCESS Array B 38.60 326 P **P 14 53 49.2 -0.2**
comp=Z,3.1nm,0.9s,baz=75,slow=7.9,SNR=4.9
FINES FINESS Array B 42.46 315 P **P 14 54 21.0 -0.4**
comp=Z,0.8nm,0.5s,baz=42,slow=8.8,SNR=6.7
FINES FINESS Array B 42.46 315 *i* P **P 14 54 22.2 +0.8**
FINES pmax pmax
comp=Z,1.0nm,0.6s
ILAR Eielson Array 44.96 37 P **P 14 54 41.2 -0.2**
comp=Z,0.7nm,0.9s,baz=300,slow=4.4,SNR=7.9
YKA Yellowknife Ar 56.02 25 P **P 14 56 04.1 -0.9**
comp=Z,0.7nm,0.6s,baz=332,slow=6.7,SNR=10
ESDC Sonseca Array 70.96 11 P **P 14 57 45.0 +0.8**
comp=Z,0.9nm,0.8s,baz=21,slow=6.1,SNR=7.4
NVAR Mina Array Bea 76.13 39 P **P 14 58 15.8 +0.9**
comp=Z,0.2nm,0.5s,baz=324,slow=5.8,SNR=2.7
WRA Warramunga Arr 77.69 160 P **P 14 58 23.7 +0.3**
comp=Z,0.4nm,0.6s,baz=351,slow=6.7,SNR=3.1
CMLA Cha da Macela 80.29 328 *i* P **P 14 58 38.4 +0.7**
ASAR Alice Springs 81.24 161 P **P 14 58 42.9 +0.2**
comp=Z,0.2nm,0.7s,baz=352,slow=5.0,SNR=1.8

DMN ***25*** *14:51:21.1±0.2,28.°14N×85.°14E, h10km, Ml4.7/3, Error ellipse: s-maj=4.8km s-min=1.6km az=24.0*
IDC ***25*** *14:51:22.1±1.4,27.°96N×85.°49E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.5/62, mbtmpb3.7/9, ML3.7/2, Error ellipse: s-maj=55.4km s-min=18.6km az=62.0*
ISC 25 14:51:22.7±1.3, 28.°00N±0.°07×85.°08E±0.°03, h8km±9km, n30, σ1§46/38, mb3.9/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.28**	**140**	*e*Pg		**Pg**		**14 51 28.6**	**+0.3**
KKN				*e*Sg		**Sg**		**14 51 33.1**	**+1.0**
GKN	**Gorkha**	**0.39**	**270**	*e*Pg		**Pg**		**14 51 30.1**	**-0.3**
GKN				*e*Sg		**Sg**		**14 51 35.1**	**-0.4**
DMN	**Daman**	**0.39**	**176**	*e*Pg		**Pb**		**14 51 31.4**	**-0.7**
PKIN	**Phulchoki**	**0.51**	**146**	*e*Pg		**Pg**		**14 51 33.0**	**+0.3**
PKIN				*e*Sg		**Sb**		**14 51 41.6**	**-0.2**
PKI	**Pulchoki**	**0.52**	**145**	*e*Pg		**Pg**		**14 51 33.2**	**+0.3**
PKI				*e*Sg		**Sb**		**14 51 41.6**	**-0.6**
JIRN	**Jiri**	**1.04**	**109**	*e*Pg		**Pb**		**14 51 41.5**	**-1.8**
DANN	**Dangsing**	**1.21**	**287**	*e*Pg		**Pn**		**14 51 44.9**	**-1.3**
DANN				*e*Sg		**Sb**		**14 52 01.5**	**-0.5**
KOLN	**Koldanda**	**1.33**	**260**	*e*Pg		**Pn**		**14 51 47.9**	**+0.2**
KOLN				*e*Sg		**Sg**		**14 52 06.3**	**+0.9**
	1μm,0.2s								
RAMN	**Ramite**	**1.71**	**127**	*e*Pg		**Pn**		**14 51 53.8**	**+0.7**
PYUN	**Piuthan**	**1.85**	**273**	*e*Pg		**Pn**		**14 51 56.1**	**+1.2**
PYUN				*e*Sg		**Sb**		**14 52 21.2**	**+1.0**
ODAN	**Odare**	**2.35**	**118**	*e*Sg		**Sb**		**14 52 34.8**	**0.0**
	1μm,0.5s								
TAPN	**Taplejung**	**2.42**	**105**	*e*Pg		**Pn**		**14 52 05.4**	**+2.5**
TAPN				*e*Sg		**Sb**		**14 52 37.1**	**+0.1**
	759nm,0.3s								
POO	**Poona**	**13.97**	**230**	*e*P		**Pn**		**14 54 42.5**	**+1.4**
CM33	**Chiang Mai Arr**	**15.66**	**123**	P		**P**		**14 55 07.0**	**-1.0**
CMMT	**Chiang Mai**	**15.67**	**123**	P		**P**		**14 55 06.5**	**-1.5**
	3.7nm,1.3s								
CM34	**Chiang Mai Arr**	**15.79**	**122**	P		**P**		**14 55 08.0**	**-1.5**
CM15	**Chiang Mai Arr**	**15.87**	**124**	P		**P**		**14 55 11.0**	**+0.6**
	3.4nm,0.9s								
CM13	**Chiang Mai Arr**	**15.88**	**124**	P		**P**		**14 55 13.0**	**+2.6**
	2.6nm,0.7s								
CMAR	**Chiang Mai Arr**	**15.88**	**124**	Pn		**Pn**		**14 55 02.0**	**-4.7**
	0.1nm,0.3s,baz=318,slow=15,SNR=1.8								
CM35	**Chiang Mai Arr**	**15.90**	**123**	P		**P**		**14 55 10.0**	**-0.7**
CM04	**Chiang Mai Arr**	**15.95**	**124**	P		**P**		**14 55 11.0**	**-0.2**
	4.3nm,0.8s								
CM36	**Chiang Mai Arr**	**15.96**	**123**	P		**P**		**14 55 11.0**	**-0.3**
MKAR	**Makanchi Array**	**18.89**	**354**	P		**P**		**14 55 43.1**	**-0.4**
	0.3nm,0.3s,baz=171,slow=12,SNR=11								
KURBB	**Kurchatov Arra**	**23.13**	**349**	P		**P**		**14 56 30.7**	**+1.5**
	0.5nm,0.6s,baz=175,slow=9.7,SNR=5.6								
SONM	**Songino Array**	**25.83**	**34**	P		**P**		**14 56 53.8**	**-0.7**
	1.0nm,0.6s,baz=228,slow=9.4,SNR=4.1								
ZALV	**Zalesovo Beam**	**25.92**	**360**	P		**P**		**14 56 56.8**	**+1.6**
	1.7nm,0.5s,baz=186,slow=9.9,SNR=9.0								
FINES	**FINESS Array B**	**51.06**	**328**	P		**P**		**15 00 27.4**	**+2.1**
	1.2nm,0.8s,baz=108,slow=6.2,SNR=4.0								
ARCES	**ARCESS Array B**	**53.51**	**338**	P		**P**		**15 00 45.5**	**+2.1**
	4.8nm,1.0s,baz=99,slow=7.5,SNR=4.3								
WRA	**Warramunga Arr**	**67.39**	**129**	P		**P**		**15 02 17.6**	**-1.3**
	0.3nm,0.4s,baz=322,slow=6.4,SNR=4.9								
ASAR	**Alice Springs**	**69.68**	**133**	P		**P**		**15 02 32.0**	**-1.1**
	0.3nm,0.7s,baz=314,slow=6.2,SNR=7.6								

IDC ***25*** *14:54:47.7±1.6,28.°05N×85.°35E, h0km, mb3.6/6, mb1 3.6/8, mb1mx3.3/55, mbtmpb3.5/8, ML3.3/2, Error ellipse: s-maj=58.3km s-min=19.0km az=65.0*
ISC 25 14:54:50.4±1.6, 28.°1N±0.°2×85.°4E±0.°3, h18km, n8, σ0§56/8, mb3.7/6, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.69**	**125**	Pn		**Pn**		**14 58 30.2**	**-0.5**
	0.1nm,0.3s,baz=314,slow=18,SNR=2.0								
MKAR	**Makanchi Array**	**18.86**	**353**	P		**P**		**14 59 09.8**	**+0.2**
	0.1nm,0.3s,baz=168,slow=12,SNR=7.3								
KURBB	**Kurchatov Arra**	**23.13**	**349**	P		**P**		**14 59 56.1**	**+0.7**
	0.2nm,0.4s,baz=163,slow=9.7,SNR=3.3								
SONM	**Songino Array**	**25.62**	**34**	P		**P**		**15 00 18.9**	**0.0**
	0.8nm,0.8s,baz=228,slow=9.4,SNR=4.6								
ZALV	**Zalesovo Beam**	**25.87**	**359**	P		**P**		**15 00 20.8**	**-0.1**
	1.4nm,0.4s,baz=183,slow=9.8,SNR=7.2								
FINES	**FINESS Array B**	**51.16**	**328**	P		**P**		**15 03 51.5**	**-0.6**
	0.8nm,0.7s,baz=107,slow=6.4,SNR=4.2								
WRA	**Warramunga Arr**	**67.21**	**130**	P		**P**		**15 05 44.0**	**+0.1**
	0.5nm,0.7s,baz=322,slow=6.4,SNR=8.4								
ASAR	**Alice Springs**	**69.52**	**133**	P		**P**		**15 05 59.0**	**+0.7**
	0.3nm,0.6s,baz=312,slow=6.3,SNR=7.7								

IDC ***25*** *14:59:53.2±1.6,27.°53N×85.°78E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.4/53, mbtmpb3.5/9, ML3.7/2, Error ellipse: s-maj=56.2km s-min=19.9km az=63.0*
ISC 25 14:59:56.2±1.6, 27.°6N±0.°2×85.°9E±0.°3, h19km, n9, σ1§20/9, mb3.5/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.03**	**124**	Pn		**Pn**		**15 03 26.0**	**-1.6**
	0.1nm,0.3s,baz=306,slow=14,SNR=4.9								
MKAR	**Makanchi Array**	**19.41**	**353**	P		**Pn**		**15 04 21.0**	**-1.4**
	0.2nm,0.3s,baz=172,slow=11,SNR=8.0								
KURBB	**Kurchatov Arra**	**23.71**	**348**	P		**P**		**15 05 06.9**	**+0.2**
	0.6nm,0.8s,baz=165,slow=9.2,SNR=6.0								
SONM	**Songino Array**	**25.79**	**33**	P		**P**		**15 05 27.4**	**+1.4**
	0.8nm,0.7s,baz=225,slow=8.9,SNR=5.7								
ZALV	**Zalesovo Beam**	**26.38**	**359**	P		**P**		**15 05 31.6**	**+0.5**
	0.5nm,0.3s,baz=194,slow=10,SNR=2.9								
FINES	**FINESS Array B**	**51.83**	**328**	P		**P**		**15 09 02.5**	**-0.3**
	0.8nm,0.6s,baz=106,slow=14,SNR=5.7								
WRA	**Warramunga Arr**	**66.54**	**130**	P		**P**		**15 10 45.8**	**+0.6**
	0.3nm,0.6s,baz=323,slow=6.5,SNR=7.1								
ASAR	**Alice Springs**	**68.84**	**133**	P		**P**		**15 11 00.8**	**+1.2**
	0.3nm,0.8s,baz=313,slow=6.3,SNR=2.3								
ILAR	**Eielson Array**	**79.30**	**20**	P		**P**		**15 12 00.0**	**-0.1**
	0.3nm,0.6s,baz=305,slow=4.4,SNR=8.1								

IDC ***25*** *15:04:55.7±7.5,37.°37N×71.°89E, h172km±44km, mb3.3/6, mb1 3.3/12, mb1mx3.0/54, mbtmpb3.7/12, Error ellipse: s-maj=70.6km s-min=29.6km az=171.0*
NNC ***25*** *15:05:00.6±2.4,37.°81N×71.°83E, h214km±33km, mb2.8, mpv3.9, Error ellipse: s-maj=28.4km s-min=13.1km az=28.0*
ISC 25 15:05:01.0±1.5, 37.°8N±0.°1×71.°79E±0.°10, h200km, n27, σ1§15/31, mb3.5/6, 5C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.59**	**18**	P		**Pn**		**15 06 09.3**	**-1.2**
	SNR=109								
UCH	**Uchtor**	**4.91**	**24**	P		**Pn**		**15 06 13.5**	**-1.1**
	SNR=96								
EKS2	**Erkin-Say**	**5.11**	**17**	P		**Pn**		**15 06 16.4**	**-0.5**
	SNR=26								
AAK	**Ala-Archa**	**5.28**	**22**	P		**Pn**		**15 06 18.4**	**-0.6**
	12nm,0.3s,baz=183,slow=5.7,SNR=113								
AAK				S		**Sn**		**15 07 21.1**	**+0.4**
	2.3nm,0.3s,baz=133,slow=22,SNR=13								
AAK	**Ala-Archa**	**5.28**	**22**	P		**Pn**		**15 06 18.5**	**-0.6**
	SNR=47								
AAK	**Ala-Archa**	**5.28**	**22**	⇓P		**Pn**		**15 06 18.4**	**-0.6**
	16nm,0.4s								
AAK				⇑S		**Sn**		**15 07 20.8**	**+0.2**
	28nm,1.0s								
KK31	**Karatay Array**	**5.41**	**350**	⇑P		**Pn**		**15 06 20.4**	**-0.1**
	4.8nm,0.3s,baz=157,slow=11,SNR=174								
KK31				⇓S		**Sn**		**15 07 23.4**	**0.0**
	12nm,0.3s,baz=182,slow=22,SNR=18								
KBK	**Karagaybulak**	**5.44**	**25**	P		**Pn**		**15 06 21.3**	**+0.2**
	SNR=7.4								
ULHL	**Ulahol**	**5.62**	**36**	P		**Pn**		**15 06 21.2**	**-2.3**
	SNR=12								
CHMS	**Chumysh**	**5.68**	**23**	P		**Pn**		**15 06 23.4**	**-0.7**
	SNR=9.8								
USP	**Ospenovka**	**5.86**	**20**	P		**Pn**		**15 06 25.1**	**-1.3**
	SNR=6.2								
TKM2	**Tokmak 2**	**5.90**	**28**	P		**Pn**		**15 06 26.6**	**-0.4**
	SNR=5.7								
TKM2	**Tokmak 2**	**5.90**	**28**	⇓P		**Pn**		**15 06 25.7**	**-1.4**
	2.3nm,0.5s								
MDOK	**Medeo**	**6.71**	**35**	⇓P		**Pn**		**15 06 36.4**	**-1.1**
	4.4nm,0.6s								
MKAR	**Makanchi Array**	**11.89**	**37**	P		**Pn**		**15 07 43.5**	**-0.9**
	0.1nm,0.3s,baz=217,slow=15,SNR=3.1								
KURBB	**Kurchatov Arra**	**13.71**	**18**	P		**P**		**15 08 08.8**	**-0.6**
	0.1nm,0.3s,baz=204,slow=11,SNR=8.3								
AB31	**Akbulak array**	**14.31**	**327**	⇑P		**P**		**15 08 14.8**	**-1.2**
	0.8nm,0.5s,baz=150,slow=9.8,SNR=29								
AB31				⇑S		**S**		**15 10 51.7**	**-1.9**
	3.4nm,0.8s,baz=153,slow=22,SNR=7.4								
BVAR	**Borovoye Array**	**15.28**	**357**	P		**P**		**15 08 29.2**	**+2.5**
	0.2nm,0.3s,baz=169,slow=9.8,SNR=3.8								
AKTO	**Aktyubinsk**	**16.02**	**327**	P		**Pn**		**15 08 37.4**	**+2.0**
	0.4nm,0.3s,baz=160,slow=6.5,SNR=5.1								
AKTO	**Aktyubinsk**	**16.02**	**327**	⇑P		**P**		**15 08 34.0**	**-1.0**
	2.8nm,1.0s								
ZALV	**Zalesovo Beam**	**18.49**	**25**	P		**P**		**15 09 02.2**	**+0.4**
	0.8nm,0.3s,baz=229,slow=11,SNR=14								
AKASG	**Malin Array Be**	**32.66**	**307**	P		**P**		**15 11 12.8**	**-1.1**
	0.3nm,0.3s,baz=94,slow=9.9,SNR=2.8								
NRIK	**Noril'sk**	**32.76**	**10**	P		**P**		**15 11 16.0**	**+1.4**
	1.0nm,0.3s,baz=190,slow=4.9,SNR=4.1								
ARCES	**ARCESS Array B**	**40.21**	**337**	P		**P**		**15 12 18.6**	**+1.1**
	5.5nm,1.1s,baz=100,slow=6.0,SNR=7.5								
NOA	**NORSAR Array B**	**43.75**	**322**	P		**P**		**15 12 46.0**	**-0.3**
	0.5nm,0.8s,baz=94,slow=7.6,SNR=1.8								
INK	**Inuvik**	**72.54**	**10**	P		**P**		**15 16 05.6**	**+0.1**
	0.6nm,0.5s,baz=349,slow=9.7,SNR=5.0								
YKA	**Yellowknife Ar**	**79.94**	**3**	P		**P**		**15 16 46.8**	**-0.5**
	0.4nm,0.7s,baz=352,slow=4.9,SNR=9.2								

IDC ***25*** *15:11:22.5±1.7,27.°64N×85.°62E, h0km, mb3.7/5, mb1 3.7/7, mb1mx3.4/58, mbtmpb3.5/7, ML3.4/2, Error ellipse: s-maj=59.6km s-min=22.8km az=58.0*
ISC 25 15:11:23.9±1.7, 27.°7N±0.°2×85.°7E±0.°3, h10km, n7, σ0§97/7, mb3.9/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.28**	**124**	Pn		**Pn**		**15 14 59.5**	**-0.4**
	0.1nm,0.3s,baz=308,slow=10,SNR=1.5								
MKAR	**Makanchi Array**	**19.26**	**353**	P		**Pn**		**15 15 48.7**	**-0.9**
	0.1nm,0.3s,baz=178,slow=9.6,SNR=6.1								
KURBB	**Kurchatov Arra**	**23.55**	**349**	P		**P**		**15 16 33.4**	**-0.9**
	0.3nm,0.6s,baz=163,slow=9.2,SNR=3.4								
SONM	**Songino Array**	**25.81**	**33**	P		**P**		**15 16 56.3**	**+0.9**
	0.6nm,0.6s,baz=217,slow=7.7,SNR=3.8								
FINES	**FINESS Array B**	**51.61**	**328**	P		**P**		**15 20 30.4**	**+0.2**
	1.6nm,0.9s,baz=110,slow=19,SNR=2.2								
ARCES	**ARCESS Array B**	**54.00**	**338**	P		**P**		**15 20 48.9**	**+1.1**
	3.1nm,0.8s,baz=116,slow=5.5,SNR=4.0								
WRA	**Warramunga Arr**	**66.79**	**130**	P		**P**		**15 22 16.0**	**0.0**
	1.1nm,0.9s,baz=322,slow=6.5,SNR=8.5								

IDC 25 15:15:50.7±2.9, 33.°96N×96.°89E, h0km, mb3.2/2, mb1 3.5/5, mb1mx3.2/50, mbtmpb3.4/5, ML3.5/3, Error ellipse: s-maj=73.2km s-min=37.1km az=76.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.54**	**173**	Pn		**Pn**		**15 19 31.2**	**-0.1**
	0.0nm,0.3s,baz=340,slow=12,SNR=8.0								
SONM	**Songino Array**	**15.60**	**24**	Pn		**Pn**		**15 19 30.7**	**-1.2**
	0.3nm,0.3s,baz=212,slow=17,SNR=4.9								
MKAR	**Makanchi Array**	**16.94**	**324**	Pn		**Pn**		**15 19 46.7**	**-2.4**
	0.2nm,0.3s,baz=137,slow=13,SNR=8.2								
KURBB	**Kurchatov Arra**	**21.39**	**327**	P		**P**		**15 20 40.5**	**+0.7**
	0.4nm,0.7s,baz=132,slow=11,SNR=6.4								
ZALV	**Zalesovo Beam**	**21.74**	**340**	P		**P**		**15 20 43.0**	**-0.4**
	2.0nm,0.7s,baz=159,slow=12,SNR=7.7								

IDC ***25*** *15:17:13.7±0.8,27.°74N×85.°36E, h0km, mb4.0/12, mb1 4.1/15, mb1mx3.8/48, mbtmpb3.9/15, ML3.8/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/38, Error ellipse: s-maj=29.9km s-min=15.8km az=58.0*
DMN ***25*** *15:17:16.0±0.1,27.°93N×85.°55E, h10km, Ml4.6/6, Error ellipse: s-maj=2.6km s-min=1.1km az=8.0*
NDI ***25*** *15:17:17.1±2.6,27.°52N×85.°36E, h10km, ML4.0*
ISC 25 15:17:16.5±0.9, 27.°88N±0.°04×85.°50E±0.°02, h18km±4km, n55, σ1§50/74, mb3.9/12, 2C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.21**	**247**	*e*Pg		**Pg**		**15 17 21.8**	**0.0**
KKN				*e*Sg		**Sg**		**15 17 25.2**	**-0.2**
PKIN	**Phulchoki**	**0.31**	**197**	*e*Pg		**Pb**		**15 17 23.8**	**+0.1**
PKIN				*e*Sg		**Sb**		**15 17 28.8**	**+0.3**
PKI	**Pulchoki**	**0.31**	**195**	*e*Pg		**Pb**		**15 17 23.3**	**-0.5**
PKI				*e*Sg		**Sb**		**15 17 28.9**	**+0.3**
GUN	**Gumba**	**0.34**	**84**	*e*Pg		**Pg**		**15 17 22.7**	**-1.2**
GUN				*e*Sg		**Sg**		**15 17 27.2**	**-1.7**
DMN	**Daman**	**0.44**	**233**	*e*Pg		**Pb**		**15 17 26.2**	**+0.3**
DMN				*e*Sg		**Sb**		**15 17 33.2**	**+1.0**
GKN	**Gorkha**	**0.77**	**280**	*e*Pg		**Pb**		**15 17 31.7**	**+0.1**
GKN				*e*Sg		**Sb**		**15 17 42.9**	**+1.1**
	468nm,0.3s								
RAMN	**Ramite**	**1.34**	**133**	*e*Pg		**Pn**		**15 17 41.1**	**+0.5**
DANN	**Dangsing**	**1.61**	**288**	*e*Pg		**Pg**		**15 17 46.3**	**-1.2**
DANN				*e*Sg		**Sg**		**15 18 08.1**	**-0.4**
	3μm,0.4s								
KOLN	**Koldanda**	**1.69**	**267**	*e*Pg		**Pg**		**15 17 48.0**	**-1.0**
KOLN				*e*Sn		**Sn**		**15 18 05.7**	**-0.9**
	381nm,0.3s								
KOLN				*e*Sg		**Sg**		**15 18 10.1**	**-0.8**
	657nm,0.3s								
KOLN				*e*Sg		**Sb**		**15 18 10.8**	**+2.7**
ODAN	**Odare**	**1.96**	**121**	*e*Pg		**Pb**		**15 17 53.0**	**+1.1**
ODAN				*e*Sg		**Sb**		**15 18 17.8**	**+1.7**
	1μm,0.2s								
TAPN	**Taplejung**	**2.03**	**104**	*e*Pg		**Pb**		**15 17 53.4**	**+0.3**
TAPN				*e*Sg		**Sb**		**15 18 18.9**	**+0.7**
	1μm,0.3s								
PYUN	**Piuthan**	**2.23**	**276**	*e*Pg		**Pg**		**15 17 58.0**	**-1.4**
PYUN				*e*Sn		**Sn**		**15 18 18.6**	**-1.4**
	415nm,0.3s								
PYUN				*e*Sg		**Sg**		**15 18 27.9**	**-0.5**
GTK	**Tadong**	**2.81**	**101**	IAML				15 18 29.3	
	comp=N,371nm,0.4s								
GUWA	**GUWAHATI**	**5.77**	**105**	*e*P		**Pn**		**15 18 43.7**	**+2.4**
GUWA				*e*S		**Sn**		**15 19 47.7**	**+0.6**
SHL	**Shillong**	**6.16**	**110**	*e*P		**Pn**		**15 18 47.5**	**+0.8**
SHL				*e*S		**Sn**		**15 19 52.9**	**-3.9**
TEZP	**TEZPUR**	**6.62**	**99**	*e*P		**Pn**		**15 18 54.1**	**+1.1**
DDI	**Dehra Dun**	**6.95**	**292**⇑	*e*P		**Pn**		**15 19 00.8**	**+3.2**
DDI				*e*S		**Sn**		**15 20 15.2**	**-1.1**
DDI				IAML				15 20 19.1	
	comp=E,290nm,0.2s								
DDI				IAML				15 20 21.6	
	comp=N,379nm,0.3s								
ZIRO	**ZIRO**	**7.41**	**91**	*e*S		**Sn**		**15 20 27.6**	**-0.2**
SMLA	**Simla**	**7.95**	**296**⇑	*e*P		**Pn**		**15 19 12.2**	**+1.0**
SMLA				*e*S		**Sn**		**15 20 38.6**	**-2.1**
SMLA				IAML				15 20 41.4	
	comp=E,163nm,0.5s								
SMLA				IAML				15 20 42.0	
	comp=N,110nm,0.5s								
KOHI	**KOHIMA**	**7.99**	**104**	*e*P		**Pn**		**15 19 13.5**	**+1.6**
KOHI				*e*S		**Sn**		**15 20 38.8**	**-3.1**
KOHI				IAML				15 20 45.5	
	comp=N,47nm,0.7s								
KOHI				IAML				15 20 46.0	
	comp=E,52nm,0.5s								
MOKO	**MOKOCHONG**	**8.18**	**99**	*e*P		**Pn**		**15 19 15.2**	**+0.7**
MOKO				*e*S		**Sn**		**15 20 44.1**	**-2.7**
MOKO				IAML				15 20 48.0	
	comp=E,86nm,0.6s								
MOKO				IAML				15 20 50.2	
	comp=N,76nm,0.3s								
BHPL	**Bhopal**	**8.63**	**239**	*e*P		**Pn**		**15 19 18.5**	**-2.0**
BHPL				*e*S		Sn		15 20 44.9	-13
BHPL				IAML				15 20 57.4	
	comp=E,36nm,0.5s								
BHPL				IAML				15 20 58.6	
	comp=N,36nm,0.3s								
DHRM	**DHARAMSHALA**	**9.08**	**301**	*e*P		**Pn**		**15 19 26.7**	**-0.3**
DHRM				*e*S		**Sn**		**15 21 04.4**	**-4.5**
DHRM				IAML				15 21 10.7	
	comp=N,122nm,0.6s								
DHRM				IAML				15 21 13.7	
	comp=E,82nm,0.4s				

ellipse: s-maj=108.3km s-min=29.3km az=79.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.51**	**354**	P	P	15 47 07.3	-0.1
	0.1nm,0.3s,baz=174,slow=12,SNR=8.5						
SONM	**Songino Array**	**26.17**	**33**	P	P	15 48 15.0	+0.1
	1.7nm,0.8s,baz=220,slow=11,SNR=9.3						
WRA	**Warramunga Arr**	**66.79**	**129**	P	P	15 53 32.6	+0.2
	0.3nm,0.7s,baz=323,slow=6.5,SNR=2.4						
ASAR	**Alice Springs**	**69.07**	**133**	P	P	15 53 46.4	-0.3
	0.2nm,0.6s,baz=310,slow=6.7,SNR=1.9						

*IDC **25** 15:43:42.6±1.4,27.97N×85.48E,h0km,mb3.9/7, mb1 3.9/9,mb1mx3.5/43,mbtmp3.8/9,ML3.8/2,Error ellipse: s-maj=72.7km s-min=19.0km az=58.0*

ISC 25 15:43:45.2±1.6,27.9N±0.3×85.4E±0.4,h18km,n9,σ0s96/9, mb3.7/7,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.62**	**124**	Pn	**Pn**	**15 47 24.8**	**+0.1**
	0.2nm,0.3s,baz=319,slow=9.9,SNR=6.8						
MKAR	**Makanchi Array**	**18.98**	**353**	P	**P**	**15 48 06.4**	**+0.8**
	0.2nm,0.3s,baz=177,slow=11,SNR=8.1						
KURBB	**Kurchatov Arra**	**23.24**	**349**	P	**P**	**15 48 49.6**	**-1.8**
	1.3nm,0.2s,baz=228,slow=13,SNR=4.2						
ZALV	**Zalesovo Beam**	**25.99**	**359**	P	**P**	**15 49 16.4**	**-0.4**
	1.2nm,0.6s,baz=188,slow=12,SNR=5.3						
FINES	**FINESS Array B**	**51.26**	**328**	P	**P**	**15 52 47.7**	**0.0**
	1.6nm,0.4s,baz=115,slow=7.0,SNR=22						
ARCES	**ARCESS Array B**	**53.67**	**338**	P	**P**	**15 53 06.6**	**+1.2**
	1.9nm,0.5s,baz=104,slow=8.2,SNR=26						
NOA	**NORSAR Array B**	**58.35**	**327**	P	**P**	**15 53 39.2**	**0.0**
	0.3nm,0.5s,baz=73,slow=7.5,SNR=1.8						
WRA	**Warramunga Arr**	**67.14**	**130**	P	**P**	**15 54 37.9**	**-0.3**
	0.4nm,0.7s,baz=323,slow=6.5,SNR=4.9						
ASAR	**Alice Springs**	**69.44**	**133**	P	**P**	**15 54 52.6**	**+0.1**
	0.3nm,0.7s,baz=316,slow=6.1,SNR=2.1						

*TAP **25** 15:43:59.6,24.04N×122.44E,h33km,ML3.0,D*
*JMA **25** 15:43:59.4±0.1,23.99N×122.41E,h23km±3km,M2.5*

ISC 25 15:43:57.3±1.0,23.99N±0.02×122.44E±0.02,h15km±8km, n100,σ0s76/183,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.65**	**45**	P	**Pn**	**15 44 12.1**	**+0.1**
JYNG				S	**Sn**	**15 44 20.8**	**-1.2**
YOJ	**Yonaguni jima**	**0.70**	**48**	P	**Pn**	**15 44 13.0**	**+0.3**
YOJ				S	**Sn**	**15 44 22.3**	**-1.0**
YOJ	**Yonaguni jima**	**0.70**	**48**	P	**Pn**	**15 44 12.9**	**+0.3**
	baz=51						
YOJ				S	**Sn**	**15 44 22.4**	**-0.8**
	baz=51						
EWUT	**Wuta**	**0.76**	**307**	*e*P	**Pn**	**15 44 14.4**	**+1.0**
	baz=304						
EWUT				*e*S	**Sn**	**15 44 23.8**	**-0.8**
	baz=304						
NACB	**Ninganchiao**	**0.80**	**284**	P	**Pn**	**15 44 14.1**	**+0.1**
	baz=266						
NACB				S	**Sn**	**15 44 24.8**	**-0.7**
	baz=266						
TWC	**Suao**	**0.82**	**319**	*i* P	**Pn**	**15 44 14.1**	**-0.3**
	baz=317						
TWC				*i* S	**Sg**	**15 44 23.7**	**-0.4**
	baz=317						
ETLH	**Xiulin Townshi**	**0.90**	**284**	P	**Pn**	**15 44 16.0**	**+0.5**
	baz=268						
ETLH				*e*S	**Sn**	**15 44 27.6**	**-0.7**
	baz=268						
NDS	**Dongshan**	**0.92**	**314**	P	**Pn**	**15 44 16.2**	**+0.5**
	baz=312						
NDS				S	**Sn**	**15 44 29.1**	**+0.3**
	baz=312						
ESL	**Shilin**	**0.94**	**260**	P	**Pn**	**15 44 16.9**	**+1.0**
	baz=248						
ESL				S	**Sb**	**15 44 28.2**	**+0.7**
	baz=248						
EGFH	**Guangfu**	**0.98**	**251**	*e*P	**Pn**	**15 44 17.1**	**+0.6**
	baz=247						
EGFH				*e*S	**Sn**	**15 44 30.6**	**+0.5**
	baz=247						
ILA	**Ilan**	**1.00**	**321**	*e*P	**Pn**	**15 44 17.6**	**+0.8**
	baz=311						
ILA				*e*S	**Sn**	**15 44 31.4**	**+0.8**
	baz=311						
TWE	**Neicheng**	**1.02**	**316**	P	**Pn**	**15 44 17.6**	**+0.6**
	baz=314						
TWE				S	**Sn**	**15 44 31.4**	**+0.4**
	baz=314						
NTC	**Toucheng**	**1.03**	**327**	*e*P	**Pn**	**15 44 18.0**	**+0.8**
	baz=325						
NTC				*e*S	**Sn**	**15 44 31.0**	**-0.3**
	baz=325						
ENTT	**Nioudou**	**1.03**	**309**	P	**Pn**	**15 44 17.4**	**+0.2**
	baz=294						
ENTT				*i* S	**Sn**	**15 44 31.7**	**+0.3**
	baz=294						
NDT	**Datong Townshi**	**1.04**	**306**	P	**Pn**	**15 44 18.7**	**+1.2**
	baz=291						
NDT				S	**Sn**	**15 44 32.0**	**+0.3**
	baz=291						
HGSD	**Ruisui**	**1.05**	**242**	P	**Pn**	**15 44 17.8**	**+0.3**
	baz=239						
HGSD				*e*S	**Sb**	**15 44 30.5**	**-0.4**
	baz=239						
NNSB	**Datong**	**1.06**	**295**	P	**Pn**	**15 44 18.1**	**+0.4**
	baz=280						
NNSB				S	**Sg**	**15 44 31.7**	**-0.1**
	baz=280						
NNS	**Nan Shan**	**1.07**	**295**	*i* P	**Pn**	**15 44 18.5**	**+0.6**
	baz=281						
NNS				*i* S	**Sn**	**15 44 32.6**	**-0.1**
	baz=281						
WHF	**Hehuan Shan**	**1.09**	**279**	*i* P	**Pn**	**15 44 18.3**	**0.0**
	baz=263						
WHF				*i* S	**Sn**	**15 44 32.9**	**-0.4**
	baz=263						
TWB1	**Santiao Chiao**	**1.10**	**338**	P	**Pg**	**15 44 19.2**	**+0.7**
	baz=353						
TWB1				*e*S	**Sb**	**15 44 31.2**	**-0.9**
	baz=353						
FUSS	**Fushou**	**1.12**	**284**	*e*P	**Pg**	**15 44 19.6**	**+0.5**
	baz=280						
FUSS				S	**Sg**	**15 44 33.5**	**-0.4**
	baz=280						
TIPB	**Shuangxi**	**1.13**	**330**	*i* P	**Pg**	**15 44 19.6**	**+0.4**
	baz=329						
TIPB				*i* S	**Sn**	**15 44 33.8**	**0.0**
	baz=329						
OWD	**Renai**	**1.16**	**269**	*e*P	**Pg**	**15 44 19.4**	**-0.3**
	baz=265						
OWD				*e*S	**Sb**	**15 44 33.8**	**-0.2**
	baz=265						
CHGB	**Renai**	**1.16**	**274**	P	**Pg**	**15 44 19.6**	**-0.2**
	baz=260						
CHGB				*e*S	**Sg**	**15 44 34.7**	**-0.3**
	baz=260						
NWLT	**Wulai**	**1.16**	**313**	*e*P	**Pg**	**15 44 20.2**	**+0.5**
	baz=310						
NWLT				*e*S	**Sn**	**15 44 34.9**	**+0.2**
	baz=310						
YHNB	**Yeheng**	**1.19**	**305**	P	**Pg**	**15 44 20.1**	**-0.1**
	baz=291						
YHNB				S	**Sb**	**15 44 34.2**	**-0.6**
	baz=291						
TDCB	**Techi**	**1.20**	**283**	P	**Pg**	**15 44 20.8**	**+0.3**
	baz=270						
TDCB				S	**Sb**	**15 44 35.4**	**+0.1**
	baz=270						
NSK	**Sanguang**	**1.20**	**305**	*i* P	**Pg**	**15 44 20.1**	**-0.5**
	baz=289						
NSK				*i* S	**Sb**	**15 44 34.9**	**-0.3**
	baz=289						
YULB	**Yu-li**	**1.20**	**241**	P	**Pb**	**15 44 19.9**	**+0.1**
	baz=252						
YULB				S	**Sn**	**15 44 35.8**	**+0.1**
	baz=252						
EYUL	**Yuli**	**1.21**	**238**	*e*P	**Pn**	**15 44 19.6**	**-0.1**
	baz=235						
EYUL				*e*S	**Sb**	**15 44 35.4**	**+0.1**
	baz=235						
VWDT	**VWDT**	**1.21**	**259**	P	**Pg**	**15 44 20.6**	**-0.1**
	baz=256						
VWDT				S	**Sn**	**15 44 35.9**	**+0.1**
	baz=256						
TWF1	**Yuli**	**1.23**	**239**	*i* P	**Pg**	**15 44 20.8**	**-0.2**
	baz=225						
TWF1				*i* S	**Sg**	**15 44 36.8**	**-0.1**
	baz=225						
IRIF	**Iriomote-Funau**	**1.23**	**73**	P	**Pg**	**15 44 21.8**	**+0.8**
IRIF				S	**Sg**	**15 44 37.8**	**+0.8**
WFSB	**Wu-fen Shan**	**1.23**	**331**	P	**Pg**	**15 44 21.0**	**-0.2**
	baz=330						
WFSB				*e*S	**Sg**	**15 44 37.7**	**+0.4**
	baz=330						
HATJ	**Hateruma jima**	**1.25**	**87**	*e*S	**Sg**	**15 44 41.0**	**+3.3**
TWA	**Mucha**	**1.26**	**322**	S	**Sg**	**15 44 38.2**	**+0.1**
	baz=338						
NHDH	**Xindian Distri**	**1.28**	**320**	*e*P	**Pg**	**15 44 23.1**	**+1.1**
	baz=317						
NHDH				*e*S	**Sg**	**15 44 38.2**	**-0.5**
	baz=317						
TNOU	**National Taiwa**	**1.31**	**332**	*e*P	**Pb**	**15 44 21.1**	**-0.4**
	baz=331						
TNOU				*e*S	**Sg**	**15 44 38.9**	**-0.7**
	baz=331						
TATO	**Taipei**	**1.31**	**319**	P	**Pg**	**15 44 22.7**	**+0.1**
	baz=316						
TATO				S	**Sg**	**15 44 39.1**	**-0.6**
	baz=316						
FULB	**Fuli**	**1.31**	**234**	P	**Pg**	**15 44 22.4**	**-0.3**
	baz=219						
FULB				S	**Sb**	**15 44 38.0**	**-0.3**
	baz=219						
CHKT	**Chengkung**	**1.32**	**228**	S	**Sb**	**15 44 37.0**	**-1.7**
	baz=225						
TAP	**Taipei**	**1.35**	**321**	P	**Pb**	**15 44 22.0**	**-0.3**
	baz=319						
TAP				*e*S	**Sg**	**15 44 40.9**	**-0.1**
	baz=319						
WPL	**Puli Township**	**1.36**	**271**	*e*P	**Pg**	**15 44 23.1**	**-0.4**
	baz=260						
WPL				*e*S	**Sn**	**15 44 39.6**	**+0.2**
	baz=260						
SSLB	**Suanglung**	**1.38**	**262**	P	**Pg**	**15 44 23.2**	**-0.6**
	baz=259						
DPDB	**Guoxing**	**1.39**	**272**	*e*P	**Pg**	**15 44 23.8**	**-0.2**
	baz=261						
DPDB				*e*S	**Sb**	**15 44 40.7**	**+0.2**
	baz=261						
WHP	**Taichung City**	**1.40**	**282**	*e*P	**Pg**	**15 44 23.6**	**-0.6**
	baz=269						
WHP				*e*S	**Sb**	**15 44 41.2**	**+0.4**
	baz=269						
YM01	**YM01**	**1.40**	**326**	*e*P	**Pg**	**15 44 24.8**	**+0.5**
	baz=339						
YM01				*e*S	**Sg**	**15 44 42.4**	**-0.1**
	baz=339						
SMLT	**Sun Moon Lake**	**1.41**	**266**	P	**Pb**	**15 44 23.8**	**+0.3**
	baz=263						
SMLT				S	**Sg**	**15 44 42.1**	**-0.9**
	baz=263						
YM08	**YM08**	**1.43**	**327**	*e*S	**Sn**	**15 44 40.1**	**-1.0**
	baz=325						
TYC	**Yuchr**	**1.45**	**267**	P	**Pg**	**15 44 25.0**	**-0.2**
	baz=264						
TYC				S	**Sb**	**15 44 43.0**	**+0.7**
	baz=264						
YUS	**Yu-Shan**	**1.45**	**250**	P	**Pb**	**15 44 24.7**	**+0.3**
	baz=247						
YUS				S	**Sn**	**15 44 42.4**	**0.0**
	baz=247						
EDH	**Donghe**	**1.45**	**226**	*e*P	**Pn**	**15 44 23.2**	**+0.2**
	baz=215						
EDH				S	**Sn**	**15 44 40.7**	**-1.1**
	baz=215						
JKRS	**Kuro-shima**	**1.45**	**80**	P	**Pg**	**15 44 25.9**	**+0.6**
JKRS				*e*S	**Sg**	**15 44 45.1**	**+0.9**
LIOB	**Emei**	**1.46**	**297**	P	**Pg**	**15 44 25.2**	**-0.2**
	baz=294						
LIOB				*e*S	**Sb**	**15 44 42.8**	**+0.3**
	baz=294						
ANP	**Anpu**	**1.46**	**325**	*e*P	**Pb**	**15 44 23.8**	**-0.4**
	baz=323						
ANP				*e*S	**Sn**	**15 44 41.4**	**-0.7**
	baz=323						
NSTT	**Nanjuang**	**1.46**	**296**	P	**Pg**	**15 44 25.5**	**+0.1**
	baz=293						
NSTT				S	**Sn**	**15 44 42.1**	**+0.1**
	baz=293						
TWY	**Chenhua**	**1.49**	**329**	*e*P	**Pn**	**15 44 22.9**	**-0.7**
	baz=328						
TWY				*e*S	**Sn**	**15 44 41.8**	**-1.0**
	baz=328						
ELDTW	**Lidau**	**1.53**	**239**	P	**Pn**	**15 44 24.5**	**+0.3**
	baz=235						
ELDTW				S	**Sn**	**15 44 42.3**	**-1.6**
	baz=235						
TWQ1	**Liyutan**	**1.56**	**284**	P	**Pg**	**15 44 26.9**	**-0.5**
	baz=280						
TWQ1				S	**Sg**	**15 44 47.0**	**-0.8**
	baz=280						
ALS	**Alishan**	**1.57**	**253**	P	**Pb**	**15 44 26.6**	**+0.3**
	baz=249						
ALS				*i* S	**Sb**	**15 44 46.1**	**+0.1**
	baz=249						
WJS	**Zhushan**	**1.58**	**264**	*e*P	**Pg**	**15 44 28.7**	**+1.1**
	baz=261						
WJS				*e*S	**Sg**	**15 44 49.0**	**+0.8**
	baz=261						
LDUT	**Ludao**	**1.58**	**215**	*e*P	**Pb**	**15 44 25.7**	**-0.6**
	baz=212						
LDUT				*e*S	**Sn**	**15 44 43.9**	**-1.1**
	baz=212						
NSY	**Sanyi**	**1.59**	**286**	*e*P	**Pg**	**15 44 28.2**	**+0.2**
	baz=282						
WWF	**Wufeng**	**1.59**	**272**	*e*S	**Sg**	**15 44 49.7**	**+0.9**
	baz=269						
JIJ	**Ishigaki jima**	**1.60**	**76**	P	**Pg**	**15 44 27.0**	**-1.1**
JIJ				S	**Sb**	**15 44 46.6**	**+0.1**
WNT	**Mingjian**	**1.61**	**266**	P	**Pg**	**15 44 28.0**	**-0.3**
	baz=263						
WNT				S	**Sg**	**15 44 48.3**	**-1.0**
	baz=263						
LONT	**Longtian**	**1.61**	**228**	*e*S	**Sn**	**15 44 46.1**	**+0.4**
	baz=238						
TCU	**Taichung**	**1.62**	**276**	*e*S	**Sg**	**15 44 48.6**	**-1.0**
	baz=272						
CHN5	**Tsauling**	**1.66**	**257**	P	**Pg**	**15 44 28.5**	**-0.7**
	baz=244						
CHN5				S	**Sg**	**15 44 49.7**	**-1.2**
	baz=244						
WDJ	**Dajia District**	**1.68**	**283**	*e*P	**Pb**	**15 44 27.8**	**-0.2**
	baz=279						
WDJ				*e*S	**Sb**	**15 44 49.5**	**+0.5**
	baz=279						
TWGBT	**Beinan**	**1.71**	**227**	*e*S	**Sn**	**15 44 47.7**	**-0.4**
	baz=236						
STYH	**Taoyuan**	**1.73**	**242**	*e*P	**Pb**	**15 44 28.5**	**-0.2**
	baz=230						
STYH				*e*S	**Sb**	**15 44 50.4**	**0.0**
	baz=230						
WGK	**Gukeng**	**1.75**	**260**	*e*P	**Pg**	**15 44 31.2**	**+0.3**
	baz=257						
WGK				*e*S	**Sg**	**15 44 52.5**	**-1.1**
	baz=257						
STYT	**Tauyuan**	**1.75**	**242**	*e*P	**Pb**	**15 44 29.4**	**+0.3**
	baz=230						
STYT				S	**Sn**	**15 44 49.9**	**+0.6**
	baz=230						
WDLH	**Douliu**	**1.77**	**261**	P	**Pg**	**15 44 30.5**	**-0.8**
	baz=257						
WDLH				*e*S	**Sg**	**15 44 54.1**	**-0.2**
	baz=257						
TPUB	**Ta-pu**	**1.80**	**248**	P	**Pg**	**15 44 31.2**	**-0.7**
	baz=245						
TPUB				S	**Sb**	**15 44 53.0**	**+0.8**
	baz=245						
JISG	**Ishigakijimahi**	**1.81**	**70**	P	**Pb**	**15 44 29.3**	**-0.8**
JISG				S	**Sb**	**15 44 51.7**	**-0.8**
CHN4	**Tsaushan**	**1.81**	**250**	P	**Pg**	**15 44 31.2**	**-0.9**
	baz=247						
CHN4				S	**Sg**	**15 44 54.6**	**-1.0**
	baz=247						
WTP	**Ta-pu**	**1.83**	**247**	P	**Pg**	**15 44 31.9**	**-0.6**
	baz=243						
WTP				S	**Sb**	**15 44 54.6**	**+1.3**
	baz=243						
WTK	**Tuku**	**1.90**	**261**	*e*P	**Pb**	**15 44 32.0**	**+0.3**
	baz=258						
WTK				*e*S	**Sb**	**15 44 56.0**	**+0.7**
	baz=258						
SLGT	**Liugui**	**1.92**	**239**	*e*P	**Pb**	**15 44 32.8**	**+0.7**
	baz=228						
SLGT				*e*S	**Sb**	**15 44 56.2**	**+0.3**
	baz=228						
CHN1	**Nanshi**	**1.93**	**246**	S	**Sb**	**15 44 57.2**	**+1.2**
	baz=243						
SGST	**Jiashian**	**1.93**	**243**	P	**Pb**	**15 44 32.0**	**-0.1**
	baz=231						
SGST				*e*S	**Sb**	**15 44 55.8**	**-0.2**
	baz=231						
SNST	**Tainan City**	**1.94**	**247**	*e*S	**Sb**	**15 44 57.8**	**+1.4**
	baz=244						
ECL	**Taimali**	**1.94**	**225**	*e*P	**Pn**	**15 44 30.5**	**+0.7**
	baz=222						
ECL				S	**Sn**	**15 44 52.7**	**-1.3**
	baz=222						
SSD	**Sandimen**	**2.07**	**234**	*e*P	**Pb**	**15 44 33.3**	**-1.3**
	baz=225						
SSD				*e*S	**Sn**	**15 44 58.0**	**+0.9**
	baz=225						
SCST	**Cishan**	**2.10**	**239**	*e*P	**Pb**	**15 44 35.0**	**0.0**
	baz=224						
SCST				*e*S	**Sb**	**15 45 01.5**	**+0.6**
	baz=224						
MASBT	**Mashibuluo**	**2.15**	**231**	*e*P	**Pb**	**15 44 34.5**	**-1.5**
	baz=224						
MASBT				*e*S	**Sn**	**15 44 59.4**	**+0.3**
	baz=224						
JTJ	**Tarama**	**2.16**	**72**	P	**Pb**	**15 44 35.6**	**-0.5**
JTJ				S	**Sb**	**15 45 01.9**	**-0.9**
EAST	**Anshuo**	**2.17**	**223**	P	**Pn**	**15 44 33.6**	**+0.8**
	baz=220						
EAST				*e*S	**Sn**	**15 44 58.8**	**-0.7**
	baz=220						
SSPT	**Xinbi**	**2.28**	**229**	*e*P	**Pb**	**15 44 36.6**	**-1.6**
	baz=222						
SSPT				*e*S	**Sn**	**15 45 03.6**	**+1.3**
	baz=222						
SCZT	**Fangliau**	**2.32**	**227**	P	**Pn**	**15 44 36.3**	**+1.3**
	baz=218						
SCZT				*e*S	**Sn**	**15 45 04.3**	**+1.0**
	baz=218						
SLIU	**Shizi**	**2.32**	**221**	*e*P	**Pb**	**15 44 37.2**	**-1.7**
	baz=226						
SLIU				*e*S	**Sn**	**15 45 04.3**	**+1.0**
	baz=226						
TWKBT	**Hengchun**	**2.53**	**217**	*e*P	**Pb**	**15 44 40.9**	**-1.6**
	baz=214						
TWKBT				*e*S	**Sn**	**15 45 09.4**	**+1.0**
	baz=214						
TWK1	**Hengchun**	**2.53**	**217**	*e*S	**Sn**	**15 45 09.2**	**+0.8**
	baz=214						
WDGT	**Dungji**	**2.65**	**255**	*e*S	**Sn**	**15 45 12.2**	**+0.8**
	baz=241						
PNG	**Penghu**	**2.68**	**262**	*e*S	**Sn**	**15 45 13.1**	**+1.1**
	baz=258						
VCHM	**Qimei**	**2.87**	**255**	*e*P	**Pn**	**15 44 44.9**	**+2.4**
	baz=252						
VCHM				*e*S	**Sn**	**15 45 16.8**	**0.0**
	baz=252						
VWUC	**VWUC**	**2.90**	**291**	*e*P	**Pn**	**15 44 43.7**	**+0.7**
	baz=287						
PTMZ	**Houxiangcun**	**3.20**	**290**	*e*P	**Pn**	**15 44 47.6**	**+0.5**
	baz=286						

*IDC **25** 15:50:54.0±1.5,28.25N×85.87E,h0km,mb3.7/6, mb1 3.8/7,mb1mx3.4/54,mbtmp3.7/7,ML3.9/1,Error ellipse: s-maj=57.9km s-min=19.2km az=67.0*

ISC 25 15:50:55.6±1.7,28.3N±0.2×85.9E±0.4,h10km,n7,σ0s61/7, mb3.9/6,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.72**	**352**	P	**Pn**	**15 55 15.4**	**+0.7**
	0.4nm,0.3s,baz=174,slow=10,SNR=17						
KURBB	**Kurchatov Arra**	**23.02**	**348**	P	**P**	**15 55 59.8**	**-0.9**
	1.0nm,0.7s,baz=164,slow=9.9,SNR=8.0						
SONM	**Songino Array**	**25.23**	**34**	P	**P**	**15 56 21.7**	**-0.1**
	1.4nm,0.5s,baz=218,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**25.68**	**359**	P	**P**	**15 56 25.4**	**-0.3**
	1.3nm,0.5s,baz=189,slow=9.2,SNR=8.6						
FINES	**FINESS Array B**	**51.22**	**328**	P	**P**	**15 59 59.2**	**+0.1**
	1.2nm,0.9s,baz=74,slow=10,SNR=1.8						
WRA	**Warramunga Arr**	**67.01**	**130**	P	**P**	**16 01 49.2**	**+0.2**
	0.6nm,0.5s,baz=324,slow=6.5,SNR=15						
ASAR	**Alice Springs**	**69.34**	**133**	P	**P**	**16 02 03.5**	**-0.1**
	0.4nm,0.8s,baz=315,slow=6.6,SNR=6.3						

TAP 25 15:53:53.7,25.08N×122.34E,h39km±1km,ML2.1,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.33**	**258**	*i* P	Pn	15 54 02.0	-0.1
	baz=255						
TWB1				*i* S	Sn	15 54 07.9	-0.7
	baz=255						
TIPB	**Shuangxi**	**0.48**	**257**	*i* P	Pn	15 54 04.9	+0.7
	baz=258						
TIPB				S	Sn	15 54 11.2	-0.4
	baz=258						
WFSB	**Wu-fen Shan**	**0.51**	**269**	*e*P	Pn	15 54 04.6	0.0
	baz=280						
WFSB				*e*S	Sn	15 54 12.7	+0.5
	baz=280						
TWC	**Suao**	**0.65**	**224**	*e*P	Pn	15 54 06.2	-0.3
	baz=218						
TWE	**Neicheng**	**0.71**	**240**	*e*P	Pn	15 54 07.5	+0.2
	baz=248						
NDS	**Dongshan**	**0.72**	**232**	*e*P	Pn	15 54 07.5	+0.1
	baz=225						
NWLT	**Wulai**	**0.82**	**249**	*e*P	Pn	15 54 10.0	+1.2
	baz=258						
ENTT	**Nioudou**	**0.83**	**238**	*e*P	Pn	15 54 10.0	+1.1
	baz=235						
YHNB	**Yeheng**	**0.97**	**245**	*e*P	Pn	15 54 12.1	+1.2
	baz=252						

TAP 25 15:54:03.7,24.01N×121.69E,h43km,ML2.1,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.09**	**250**	*e*P	Pn	15 54 10.8	+0.2
	baz=247						
TWD	**Chiawan**	**0.12**	**309**	P	Pn	15 54 10.9	+0.1
	baz=299						
TWD				*e*S	Sn	15 54 15.4	-0.3
	baz=299						
NACB	**Ninganchiao**	**0.19**	**332**	P	Pn	15 54 11.3	+0.1
	baz=321						
NACB				S	Sn	15 54 16.4	-0.2
	baz=321						
ETLH	**Xiulin Townshi**	**0.28**	**316**	P	Pn	15 54 12.1	-0.1
	baz=308						
ETLH				*e*S	Sn	15 54 18.0	0.0
	baz=308						
ESL	**Shilin**	**0.31**	**231**	P	Pn	15 54 12.0	-0.3
	baz=238						
ESL				*e*S	Sn	15 54 18.4	+0.1
	baz=238						
EGFH	**Guangfu**	**0.41**	**216**	*e*P	Pn	15 54 13.1	-0.4
	baz=225						
EGFH				*e*S	Sn	15 54 21.5	+1.1
	baz=225						
WHF	**Hehuan Shan**	**0.42**	**290**	P	Pn	15 54 13.6	-0.3
	baz=286						
WHF				*e*S	Sn	15 54 21.3	+0.1
	baz=286						
EWUT	**Wuta**	**0.44**	**10**	*e*P	Pn	15 54 14.5	+0.6
	baz=13						
EWUT				*e*S	Sn	15 54 22.3	+1.3
	baz=13						
FUSS	**Fushou**	**0.48**	**300**	P	Pn	15 54 14.9	+0.4
	baz=300						
FUSS				*e*S	Sn	15 54 22.4	+0.3
	baz=300						
OWD	**Renai**	**0.48**	**264**	P	Pn	15 54 14.5	+0.1
	baz=267						
OWD				S	Sn	15 54 21.9	-0.1
	baz=267						
CHGB	**Renai**	**0.48**	**277**	P	Pn	15 54 14.7	+0.1
	baz=273						
CHGB				*e*S	Sn	15 54 21.5	-0.6
	baz=273						
NNSB	**Datong**	**0.51**	**326**	*e*P	Pn	15 54 13.3	-1.5
	baz=326						

NNSB				*e*S	Sn	15 54 22.5	-0.2	
	baz=326							
NNS	**Nan Shan**	**0.52**	**326**	P	Pn	15 54 14.1	-0.9	
	baz=326							
NNS				*e*S	Sn	15 54 22.9	-0.1	
	baz=326							
TWT	**Tachien**	**0.53**	**298**	P	Pn	15 54 15.9	+0.7	
	baz=293							
TWT				*e*S	Sn	15 54 24.0	+0.7	
	baz=293							
TDCB	**Techi**	**0.55**	**297**	P	Pn	15 54 15.6	+0.3	
	baz=294							
TDCB				*e*S	Sn	15 54 23.7	+0.1	
	baz=294							
VWDT	**VWDT**	**0.56**	**244**	P	Pn	15 54 15.9	+0.5	
	baz=239							
VWDT				*e*S	Sn	15 54 24.0	+0.3	
	baz=239							
HGSD	**Ruisui**	**0.57**	**206**	P	Pn	15 54 15.7	+0.3	
	baz=219							
HGSD				*e*S	Sn	15 54 25.1	+1.2	
	baz=219							
NDT	**Datong Townshi**	**0.62**	**344**	*e*P	Pn	15 54 16.2	+0.1	
	baz=344							
NDT				*e*S	Sn	15 54 25.3	+0.3	
	baz=344							
TWC	**Suao**	**0.62**	**13**	*e*P	Pn	15 54 17.5	+1.4	
	baz=21							
TWC				*e*S	Sn	15 54 26.9	+1.9	
	baz=21							
NDS	**Dongshan**	**0.62**	**2**	*e*P	Pn	15 54 15.9	-0.3	
	baz=351							
NDS				*e*S	Sn	15 54 26.8	+1.6	
	baz=351							
ENTT	**Nioudou**	**0.64**	**350**	P	Pn	15 54 16.7	+0.3	
	baz=350							
ENTT				*e*S	Sn	15 54 25.8	+0.2	
	baz=350							
WPL	**Puli Township**	**0.67**	**271**	*i* P	Pn	15 54 17.1	+0.2	
	baz=268							
WPL				S	Sn	15 54 27.3	+1.0	
	baz=268							
DPDB	**Guoxing**	**0.70**	**272**	*e*P	Pn	15 54 17.7	+0.4	
	baz=270							
DPDB				*e*S	Sn	15 54 27.9	+0.8	
	baz=270							
SSLB	**Suanglung**	**0.71**	**252**	P	Pn	15 54 16.8	-0.6	
	baz=257							
SSLB				*e*S	Sn	15 54 26.9	-0.3	
	baz=257							
YULB	**Yu-li**	**0.71**	**211**	P	Pn	15 54 17.6	+0.3	
	baz=219							
YULB				*e*S	Sn	15 54 27.4	+0.1	
	baz=219							
TWE	**Neicheng**	**0.71**	**358**	*e*P	Pn	15 54 17.8	+0.4	
	baz=351							
TWE				*e*S	Sn	15 54 27.5	+0.3	
	baz=351							
TWE	**Neicheng**	**0.71**	**358**	*e*S	Pn	15 54 17.8	+0.4	
	baz=248							
YHNB	**Yeheng**	**0.72**	**336**	P	Pn	15 54 17.7	+0.1	
	baz=336							
YHNB				*e*S	Sn	15 54 27.0	-0.5	
	baz=336							
WHP	**Taichung City**	**0.73**	**292**	*e*P	Pn	15 54 19.4	+1.7	
	baz=291							
WHP				*e*S	Sn	15 54 28.7	+0.8	
	baz=291							
SMLT	**Sun Moon Lake**	**0.74**	**261**	P	Pn	15 54 18.9	+1.1	
	baz=254							
TWF1	**Yuli**	**0.75**	**209**	*e*P	Pn	15 54 17.1	-0.8	
	baz=219							
TYC	**Yuchr**	**0.77**	**263**	P	Pn	15 54 19.2	+1.1	
	baz=257							
NWLT	**Wulai**	**0.79**	**347**	P	Pn	15 54 18.7	+0.3	
	baz=347							
NWLT				*e*S	Sn	15 54 29.3	+0.2	
	baz=347							
YUS	**Yu-Shan**	**0.85**	**233**	P	Pn	15 54 20.2	+0.5	
	baz=227							
YUS				*e*S	Sn	15 54 31.3	0.0	
	baz=227							
FULB	**Fuli**	**0.88**	**205**	*e*P	Pn	15 54 19.6	-0.1	
	baz=214							
NSTT	**Nanjuang**	**0.89**	**315**	*e*P	Pn	15 54 21.4	+1.7	
	baz=320							
LIOB	**Emei**	**0.89**	**316**	P	Pn	15 54 21.1	+1.3	
	baz=321							
WJS	**Zhushan**	**0.90**	**258**	*e*P	Pn	15 54 21.9	+2.0	
	baz=258							
TWQ1	**Liyutan**	**0.91**	**292**	*e*P	Pn	15 54 21.2	+1.1	
	baz=292							
WNT	**Mingjian**	**0.93**	**262**	*e*P	Pn	15 54 21.7	+1.4	
	baz=253							
ALS	**Alishan**	**0.95**	**239**	*e*P	Pn	15 54 22.0	+1.1	
	baz=232							
ALS				*e*S	Sn	15 54 35.6	+2.2	
	baz=232							
TIPB	**Shuangxi**	**0.97**	**7**	*i* P	Pn	15 54 22.0	+1.1	
	baz=358							
TIPB				*e*S	Sn	15 54 35.4	+1.8	
	baz=358							
CHN5	**Tsauling**	**1.02**	**247**	*e*P	Pn	15 54 23.8	+2.2	
	baz=246							
WDLH	**Douliu**	**1.10**	**254**	*e*P	Pn	15 54 23.7	+1.1	
	baz=244							
STYH	**Taoyuan**	**1.18**	**226**	*e*P	Pn	15 54 23.2	-0.6	
	baz=226							
STYT	**Taoyuan**	**1.20**	**226**	*e*P	Pn	15 54 25.6	+1.5	
	baz=226							
CHN4	**Tsaushan**	**1.20**	**237**	*i* P	Pn	15 54 26.4	+2.3	
	baz=229							
CHN4				*e*S	Sn	15 54 41.5	+2.4	
	baz=229							
TPUB	**Ta-pu**	**1.20**	**234**	*e*P	Pn	15 54 24.9	+0.9	
	baz=227							
TPUB				*e*S	Sn	15 54 41.5	+2.3	
	baz=227							
WTK	**Tuku**	**1.24**	**255**	P	Pn	15 54 26.2	+1.7	
	baz=256							
WTK				*e*S	Sn	15 54 42.9	+2.9	
	baz=256							
WTP	**Ta-pu**	**1.25**	**233**	*e*P	Pn	15 54 24.9	+0.2	
	baz=233							
CHN1	**Nanshi**	**1.35**	**233**	*e*P	Pn	15 54 28.8	+2.8	
	baz=233							

IDC ***25*** *15:58:14.6±0.9, 6°.15S×122°.89E, h0km, mb4.0/8, mb1 4.0/12, mb1mx3.8/40, mbtmp4.0/12, ML3.7/4, MS3.5/5, Ms1 3.5/5, ms1mx3.0/36, Error ellipse: s-maj=30.4km s-min=15.9km az=47.0*

DJA ***25*** *15:58:18.8±1.4, 6°.5±2°×12°.3E±°, h18km±13km, M4.3/15, mb4.6/7, mB5.0/4, MLv4.1/15, Mw(mB)4.3/4*

ISC 25 15:58:19.5±0.7, 6°.13S±0°.07×122°.78E±0°.07, h35km, n30, σ1§63/29, mb4.1/7, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.55**	**192**	P	**Pn**	**15 58 58.6**	**+0.2**
BNSI	**Bone**	**3.17**	**303**	P	**Pn**	**15 59 06.0**	**-0.8**
BNSI				S	**Sn**	**15 59 42.9**	**-0.5**
KAPI	**Kappang**	**3.21**	**290**	Pn	**Pn**	**15 59 08.0**	**+0.5**
	16nm,0.3s,baz=116,slow=4.4,SNR=11						
KAPI				Sn	**Sn**	**15 59 46.5**	**+2.0**
	7.2nm,0.3s,baz=216,slow=22,SNR=5.6						
SPSI	**Sidrap Palu**	**3.69**	**305**	P	**Pn**	**15 59 13.2**	**-0.8**
SOEI	**Soe**	**3.89**	**158**	P	**Pn**	**15 59 19.4**	**+2.4**
BATI	**Baumata**	**4.15**	**168**	Pn	**Pn**	**15 59 21.6**	**+1.2**
	16nm,0.3s,baz=11,slow=3.7,SNR=30						
BATI				LR	LR	16 01 26.4	
	comp=Z,319nm,21.7s,baz=300,slow=47						
BATI	**Baumata**	**4.15**	**168**	P	**Pn**	**15 59 23.8**	**+3.4**
TTSI	**Tana Toraja**	**4.25**	**316**	P	**Pn**	**15 59 22.8**	**+1.0**
WBSI	**Waikabubak, Su**	**4.84**	**224**	P	**Pn**	**15 59 30.1**	**+0.1**
LUWI	**Luwuk**	**5.05**	**360**	P	**Pn**	**15 59 31.1**	**-1.7**
	0.5nm116nm,0.6s						
SANI	**Sanana**	**5.16**	**38**	P	**Pn**	**15 59 33.5**	**-0.8**
	0.1nm18nm,1.0s						
NLAI	**Namlea**	**5.17**	**57**	P	**Pn**	**15 59 37.3**	**+2.8**
	0.1nm4μm36nm,0.9s						
APSI	**Ampana**	**5.30**	**348**	P	**Pn**	**15 59 36.7**	**+0.5**
	0.2nm734nm78nm,0.9s						
PLAI	**Plampang**	**5.64**	**241**	P	**Pn**	**15 59 39.1**	**-1.8**
	0.1nm32nm,0.8s						
MRSI	**Marisa**	**6.61**	**353**	P	**Pn**	**15 59 52.7**	**-1.6**
	0.1nm25nm,0.9s						

GTOI	**Gorontalo**	**6.72**	**2**	P	**Pn**	**15 59 57.6**	**+1.9**	
	0.1nm16nm,0.6s							
SIJI	**Sorong**	**9.95**	**59**	Pn	**Pn**	**16 00 39.7**	**-0.4**	
	1.1nm,0.3s,baz=256,slow=17,SNR=4.7							
FITZ	**Fitzroy Crossi**	**12.22**	**167**	Pn	**Pn**	**16 01 09.8**	**-1.3**	
	0.1nm,0.3s,baz=9.5,slow=12,SNR=3.1							
FITZ				LR	LR	16 06 14.1		
	comp=Z,130nm,20.0s,baz=22,slow=39							
WRA	**Warramunga Arr**	**17.74**	**142**	P	**Pn**	**16 02 20.7**	**-3.2**	
	0.2nm,0.3s,baz=315,slow=13,SNR=14							
ASAR	**Alice Springs**	**20.46**	**150**	P	**P**	**16 02 54.8**	**+0.5**	
	1.8nm,0.7s,baz=331,slow=11,SNR=20							
PMG	**Port Moresby**	**24.37**	**99**	P	**P**	**16 03 32.3**	**-2.3**	
	5.7nm,0.9s,baz=258,slow=9.9,SNR=2.4							
PSI	**Prapat**	**25.42**	**290**	P	**P**	**16 03 44.8**	**+0.6**	
	4.3nm,0.4s,baz=179,slow=4.0,SNR=9.1							
STKA	**Stephens Creek**	**31.07**	**148**	P	**P**	**16 04 33.9**	**-0.6**	
	2.7nm,0.8s,baz=328,slow=16,SNR=3.2							
CMAR	**Chiang Mai Arr**	**33.91**	**317**	LR	LR	16 21 42.9		
	comp=Z,26nm,18.4s,baz=75,slow=41							
SONM	**Songino Array**	**55.64**	**347**	P	**P**	**16 07 52.9**	**+0.8**	
	0.5nm,0.6s,baz=163,slow=7.9,SNR=5.2							
MKAR	**Makanchi Array**	**63.73**	**330**	P	**P**	**16 08 49.4**	**+1.7**	
	0.9nm,0.6s,baz=128,slow=7.6,SNR=8.8							
ZALV	**Zalesovo Beam**	**67.80**	**337**	P	**P**	**16 09 13.8**	**+0.1**	
	0.8nm,0.6s,baz=128,slow=4.1,SNR=3.6							
KURBB	**Kurchatov Arra**	**68.16**	**331**	P	**P**	**16 09 16.9**	**+0.9**	
	0.5nm,0.6s,baz=140,slow=6.2,SNR=2.8							
AKTO	**Aktyubinsk**	**79.07**	**324**	LR	LR	16 47 32.5		
	comp=Z,62nm,21.0s,baz=257,slow=37							
FINES	**FINESS Array B**	**98.56**	**331**	LR	LR	17 00 29.6		
	comp=Z,106nm,19.1s,baz=70,slow=38							

NEIC ***25*** *16:05:17.8±2.1, 38°.78N±0°.02×122°.75W±0°.07, h13km±7km, Error ellipse: s-maj=7.6km s-min=1.6km az=75.0*

NCEDC ***25*** *16:05:17.9±2.8, 38°.79N±0°.02×122°.72W±0°.02, h2km±7km, ML3.3/55, ML3.0/57(NEIC), Error ellipse: s-maj=2.7km s-min=2.2km az=69.0*

IDC ***25*** *16:05:19.5±1.9, 38°.68N×122°.55W, h0km, mb1 3.4/6, mb1mx3.2/45, mbtmp3.0/6, ML3.1/6, Error ellipse: s-maj=24.7km s-min=12.8km az=47.0*

ISC 25 16:05:17.6±1.2, 38°.78N±0°.02×122°.72W±0°.03, h1km±10km, n64, σ1§19/60, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCRM	**Castle Rock Sp**	**0.00**	**165**		**Pg**	**16 05 18.3**	**+0.4**
GDXM	**Geysers**	**0.07**	**296**		**Pg**	**16 05 19.1**	**+0.2**
GSGM	**Seigler Mounta**	**0.09**	**3**		**Pg**	**16 05 20.1**	**+0.8**
GPMM	**Pine Mountain**	**0.19**	**291**		**Pg**	**16 05 22.1**	**+0.7**
MNRC	**McLaughlin Min**	**0.24**	**65**		**Pg**	**16 05 23.2**	**+1.0**
HOPS	**Hopland Field**	**0.35**	**308**		**Pg**	**16 05 25.2**	**+0.8**
HOPS	**Hopland Field**	**0.35**	**308**	IAML		16 05 34.3	
	comp=N,3μm,1.1s						
HOPS				IAML		16 05 35.0	
	comp=E,2μm,1.0s						
FTR	**Fort Ross**	**0.43**	**234**		**Pg**	**16 05 27.1**	**+1.2**
CVS	**Carmenet Viney**	**0.48**	**155**		**Pg**	**16 05 27.5**	**+0.8**
MCCM	**Marconi Confer**	**0.65**	**192**		**Pb**	**16 05 31.2**	**-0.5**
MCCM	**Marconi Confer**	**0.65**	**192**	IAML		16 05 44.0	
	comp=E,944nm,0.5s						
GNAM	**Navarro Ridge**	**0.83**	**301**		**Pb**	**16 05 34.8**	**-0.1**
HERB	**Hercules**	**0.84**	**155**		**Pg**	**16 05 34.6**	**+0.8**
SUTB	**Sutter Butte**	**0.85**	**58**		**Pg**	**16 05 34.0**	**0.0**
GASB	**Alder Springs**	**0.88**	**0**		**Pb**	**16 05 35.6**	**-0.2**
BRK	**Berkeley--Havi**	**0.97**	**158**		**Pg**	**16 05 36.7**	**+0.5**
VAK	**Adit at Lawren**	**0.97**	**158**		**Pg**	**16 05 36.8**	**+0.6**
BL67	**Building 67, L**	**0.97**	**158**		**Pg**	**16 05 36.8**	**+0.6**
BKS	**Berkeley--Byer**	**0.98**	**157**		**Pg**	**16 05 36.2**	**-0.1**
BDM	**Black Diamond**	**1.06**	**141**		**Pg**	**16 05 37.6**	**-0.3**
FARB	**Farallon Islan**	**1.10**	**192**		**Pg**	**16 05 38.4**	**-0.3**
KCPM	**Cahto Peak**	**1.13**	**324**		**Pb**	**16 05 40.0**	**-0.1**
KCPM				IAML		16 06 07.4	
	comp=E,461nm,0.9s						
KCPM				IAML		16 06 18.1	
	comp=N,356nm,1.1s						
ORV	**Oroville**	**1.22**	**50**		**Pg**	**16 05 39.0**	**-2.0**
AFDM	**Forest Hills D**	**1.37**	**82**		**Pn**	**16 05 41.7**	**-2.3**
WENL	**Wente Vineyard**	**1.38**	**146**		**Pn**	**16 05 42.7**	**-1.4**
JRSC	**Jasper Ridge**	**1.42**	**164**		**Pn**	**16 05 42.8**	**-1.8**
LTCM	**Tuscan Springs**	**1.50**	**18**		**Pn**	**16 05 43.9**	**-1.9**
KMRM	**Mail Ridge**	**1.63**	**332**		**Pn**	**16 05 45.9**	**-1.7**
KMRM				IAML		16 06 40.2	
	comp=E,147nm,2.0s						
COSM	**Mount Oso**	**1.65**	**140**		**Pn**	**16 05 46.4**	**-1.5**
MHC	**Mount Hamilton**	**1.67**	**149**		**Pn**	**16 05 46.5**	**-1.6**
WDC	**Whiskeytown Da**	**1.81**	**4**		**Pn**	**16 05 49.0**	**-1.0**
GHS	**Gilroy Hot Spr**	**1.96**	**149**		**Pn**	**16 05 50.9**	**-1.1**
CMB	**Columbia Colle**	**1.98**	**111**		**Pn**	**16 05 51.7**	**-0.6**
CMB	**Columbia Colle**	**1.98**	**111**	IAML		16 06 19.3	
	comp=E,95nm,0.6s						
CMB				IAML		16 06 19.8	
	comp=N,97nm,0.6s						
RUBR	**Rubicon Trail**	**2.02**	**81**		**Pn**	**16 05 53.2**	**+0.2**
HFEM	**San Felipe**	**2.07**	**149**		**Pn**	**16 05 52.4**	**-1.2**
BEKR	**Beckworth**	**2.13**	**59**		**Pn**	**16 05 54.8**	**+0.3**
BEKR				IAML		16 06 23.7	
	comp=N,65nm,0.8s						
BEKR				IAML		16 06 31.6	
	comp=E,78nm,0.8s						
KHMM	**Horse Mountain**	**2.24**	**340**		**Pn**	**16 05 55.6**	**-0.4**
KHMM				IAML		16 06 58.9	
	comp=N,67nm,3.4s						
SAO	**San Andreas Ge**	**2.25**	**153**		**Pn**	**16 05 54.4**	**-1.6**
PNTR	**Pine Nut**	**2.45**	**82**		**Pn**	**16 05 57.7**	**-1.3**
BJCM	**Johnson Can.**	**2.46**	**154**		**Pn**	**16 05 56.7**	**-2.2**
HAST	**Hastings Reser**	**2.56**	**158**		**Pn**	**16 05 58.0**	**-2.2**
WAKR	**Walker**	**2.58**	**95**		**Pn**	**16 05 59.8**	**-1.0**
WAKR				IAML		16 06 40.8	
	comp=N,66nm,0.8s						
BSMM	**Soledad Missio**	**2.60**	**156**		**Pn**	**16 05 59.1**	**-1.8**
YERR	**Yerington**	**2.72**	**85**		**Pn**	**16 06 01.3**	**-1.4**
YERR				IAML		16 07 04.6	
	comp=N,90nm,1.2s						
PAHR	**Pah Rah Range**	**2.75**	**69**		**Pn**	**16 06 01.5**	**-1.6**
PAHR				IAML		16 07 01.9	
	comp=N,44nm,1.7s						
YBH	**Yreka Blue Hor**	**2.95**	**0**	Pn	**Pb**	**16 06 10.6**	**-0.5**
	comp=N,0.5nm,0.3s,baz=178,slow=9.3,SNR=11						
YBH	**Yreka Blue Hor**	**2.95**			**Pn**	**16 06 04.6**	**-1.1**
PMPB	**Monarch Peak**	**2.98**	**149**		**Pn**	**16 06 05.2**	**-0.9**
PMPB				IAML		16 07 13.8	
	comp=E,72nm,2.1s						
MDPB	**Devils Postpil**	**3.08**	**111**		**Pn**	**16 06 08.2**	**+0.4**
MDPB				IAML		16 06 54.4	
	comp=E,71nm,0.8s						
RYN	**Ryan**	**3.28**	**91**		**Pn**	**16 06 10.4**	**0.0**
RYN				IAML		16 07 05.0	
	comp=E,47nm,1.9s						
RYN				IAML		16 07 06.9	
	comp=N,37nm,0.7s						
LHV	**Little Huntoon**	**3.35**	**98**		**Pn**	**16 06 12.1**	**+1.0**
NVAR	**Mina Array Bea**	**3.48**	**94**	Pn	**Pn**	**16 06 13.3**	**+0.2**
	comp=N,0.8nm,0.3s,baz=270,slow=15,SNR=17						
NVAR				Lg	Lg	16 07 04.7	
	comp=N,0.9nm,0.3s,baz=262,slow=34,SNR=1.7						
NV11	**Mina Array Sit**	**3.59**	**94**	Pn	**Pn**	**16 06 14.8**	**+0.1**
NV11				IAML		16 07 13.9	
	comp=N,38nm,1.6s						
NV11				IAML		16 07 27.5	
	comp=E,36nm,1.6s						
KVN	**Kaiserville**	**3.61**	**84**	Pn	**Pn**	**16 06 14.5**	**-0.5**
KVN				IAML		16 07 14.1	
	comp=N,24nm,1.7s						
KVN				IAML		16 07 18.3	
	comp=E,25nm,0.8s						
PAGB	**Antelope Grade**	**3.62**	**146**		**Pn**	**16 06 13.9**	**-1.1**
PAGB				IAML		16 07 16.9	
	comp=E,29nm,2.0s						
PAGB				IAML		16 07 56.1	
	comp=N,24nm,2.3s						
MOD	**Modoc Plateau**	**3.63**	**30**		**Pn**	**16 06 13.4**	**-1.7**
HUMO	**Hull Mountain**	**3.83**	**357**		**Pn**	**16 06 17.6**	**-0.2**
ISA	**Isabella, Lake**	**4.60**	**131**	Pn	**Pn**	**16 06 27.6**	**-0.8**
ISA				IAML		16 07 37.9	
	comp=E,21nm,0.9s						
ISA				IAML		16 07 55.1	
	comp=N,12nm,1.3s						
ELK	**Elko**	**6.09**	**69**	Pn	**Pn**	**16 06 49.7**	**+0.7**
	comp=N,0.1nm,0.3s,baz=269,slow=14,SNR=7.7						
PFO	**Pinyon Flats O**	**7.22**	**134**	Pn	**Pn**	**16 07 04.5**	**0.0**
	comp=N,0.2nm,0.3s,baz=319,slow=8.6,SNR=3.5						
PFO	**Pinyon Flats O**	**7.22**	**134**	Pn	**Pn**	**16 07 02.9**	**-1.5**

PDAR	**Pinedale Array**	**10.74**	**64**	Pn	Pn	16 07 57.7	+4.9	
	comp=N,0.1nm,0.3s,baz=246,slow=14,SNR=5.7							
TXAR	**Lajitas Array**	**18.35**	**115**	Pn	**P**	**16 09 36.4**	**+2.7**	
	comp=N,0.0nm,0.3s,baz=290,slow=12,SNR=4.6							

IDC ***25*** *16:09:51.3±2.5, 43°.32N×105°.29W, h0km, mb1 3.1/3, mb1mx3.0/41, mbtmp2.9/3, ML2.8/3, Error ellipse: s-maj=47.8km s-min=10.1km az=154.0*

NEIC ***25*** *16:09:54.8±2.4, 43°.50N±0°.04×105°.33W±0°.05, h0km±2km, ML3.1/18, Error ellipse: s-maj=7.8km s-min=5.2km az=320.0*

ISC 25 16:09:52.5±1.1, 43°.62N±0°.06×105°.33W±0°.07, h0km, n20, σ1§87/19, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.06**	**61**		**Pn**	**16 10 14.8**	**-0.1**
K22A	**Casper**	**1.30**	**223**		**Pg**	**16 10 16.6**	**-0.8**
K22A				IAML		16 10 40.4	
	comp=E,328nm,0.5s						
K22A				IAML		16 10 40.8	
	comp=N,265nm,0.4s						
PHWY	**Pilot Hill**	**2.32**	**182**		**Pn**	**16 10 33.5**	**+1.3**
RWWY	**Rawlins**	**2.37**	**216**		**Pn**	**16 10 34.3**	**+1.4**
RWWY				IAML		16 11 07.1	
	comp=N,214nm,0.9s						
RWWY				IAML		16 11 09.1	
	comp=N,177nm,1.1s						
RLMT	**Red Lodge**	**3.20**	**299**		**Pn**	**16 10 46.7**	**+2.5**
RLMT				IAML		16 11 43.2	
	comp=N,64nm,1.1s						
RLMT				IAML		16 11 46.7	
	comp=N,42nm,1.2s						
BW06	**Boulder Array**	**3.21**	**256**		**Pn**	**16 10 46.4**	**+2.0**
BW06				IAML		16 11 37.8	
	comp=N,47nm,0.8s						
BW06				IAML		16 11 38.0	
	comp=N,28nm,0.8s						
PD31	**Pinedale Array**	**3.21**	**256**		**Pn**	**16 10 46.0**	**+1.7**
PDAR	**Pinedale Array**	**3.21**	**256**	Pn	**Pn**	**16 10 45.5**	**+1.2**
	comp=N,1.5nm,0.3s,baz=78,slow=16,SNR=52						
PDAR				Lg	Lg	16 11 30.9	
	comp=N,10.0nm,0.3s,baz=81,slow=34,SNR=20						
PDAR	**Pinedale Array**	**3.21**	**256**		**Pn**	**16 10 46.3**	**+1.9**
OGNE	**Ogallala**	**3.62**	**136**		**Pn**	**16 10 51.7**	**+1.8**
YNE	**Yellowstone No**	**3.63**	**294**		**Pn**	**16 10 50.2**	**0.0**
YNE				IAML		16 11 42.7	
	comp=E,41nm,2.3s						
YNE				IAML		16 11 53.2	
	comp=N,52nm,0.8s						
GCMT	**Greycliff**	**3.78**	**307**		**Pn**	**16 10 55.3**	**+3.1**
ISCO	**Idaho Springs**	**3.82**	**183**		**Pn**	**16 10 55.3**	**+2.4**
REDW	**Red Top Meadow**	**4.03**	**268**		**Pb**	**16 11 02.9**	**-1.5**
EGMT	**Eagleton**	**5.38**	**326**		**Pn**	**16 11 14.3**	**+0.1**
HRY	**Holter Researc**	**5.54**	**306**		**Pn**	**16 11 19.3**	**+3.0**
PV03	**Paradox Valley**	**5.98**	**208**		**Pn**	**16 11 24.3**	**+1.8**
ULM	**Lac du Bonnet**	**9.26**	**41**	Pn	**Pn**	**16 12 07.3**	**+0.1**
	comp=N,0.2nm,0.3s,baz=225,slow=16,SNR=2.2						
ULM				Lg	Lg	16 14 43.2	
	comp=N,0.1nm,0.3s,baz=195,slow=7.7,SNR=3.5						
I56US	**NEWPORT INFRAS**	**9.44**	**304**	*i*		17 05 00.0	
	baz=116,slow=325,SNR=1.8						
YKA	**Yellowknife Ar**	**19.68**	**347**	P	**Pn**	**16 14 23.7**	**-0.4**
	comp=N,0.0nm,0.3s,baz=156,slow=12,SNR=2.8						

IDC ***25*** *16:24:01.1±1.9, 27°.71N×85°.53E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.4/55, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=66.2km s-min=20.8km az=67.0*

ISC 25 16:24:02.7±2.1, 27°.7N±0°.2×85°.5E±0°.5, h10km, n8, σ0§49/8, mb3.7/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.19**	**353**	P	**Pn**	**16 28 27.3**	**-0.1**
	0.2nm,0.3s,baz=169,slow=12,SNR=16						
KURBB	**Kurchatov Arra**	**23.47**	**349**	P	**P**	**16 29 12.3**	**+0.1**
	1.0nm,0.8s,baz=171,slow=10,SNR=6.8						
SONM	**Songino Array**	**25.82**	**33**	P	**P**	**16 29 34.2**	**0.0**
	1.2nm,0.6s,baz=212,slow=9.7,SNR=12						
ZALV	**Zalesovo Beam**	**26.19**	**359**	P	**P**	**16 29 37.0**	**-0.3**
	0.8nm,0.4s,baz=176,slow=9.2,SNR=5.6						
BVAR	**Borovoye Array**	**27.65**	**340**	P	**P**	**16 29 50.6**	**+0.1**
	0.3nm,0.3s,baz=166,slow=12,SNR=6.1						
NRIK	**Noril'sk**	**41.65**	**1**	P	**P**	**16 31 51.0**	**+0.2**
	1.3nm,0.5s,baz=153,slow=4.5,SNR=3.9						
WRA	**Warramunga Arr**	**66.91**	**130**	P	**P**	**16 34 56.2**	**+0.7**
	0.7nm,1.0s,baz=321,slow=6.5,SNR=2.1						
ASAR	**Alice Springs**	**69.21**	**133**	P	**P**	**16 35 09.2**	**-0.7**
	0.2nm,0.5s,baz=318,slow=5.4,SNR=4.3						

IDC 25 16:24:22.4±3.0, 27°.78N×85°.53E, h0km, mb3.7/3, mb1 3.7/5, mb1mx3.2/56, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=95.5km s-min=27.2km az=75.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.42**	**124**	Pn	Pn	16 27 59.8	-1.6
	0.0nm,0.3s,baz=310,slow=13,SNR=1.8						
MKAR	**Makanchi Array**	**19.15**	**353**	P	P	16 28 46.4	-0.8
	0.2nm,0.3s,baz=176,slow=11,SNR=7.4						
SONM	**Songino Array**	**25.79**	**33**	P	P	16 29 55.8	+0.7
	0.4nm,0.5s,baz=210,slow=10.0,SNR=3.7						
WRA	**Warramunga Arr**	**66.94**	**130**	P	P	16 35 17.1	+0.1
	0.6nm,0.7s,baz=323,slow=6.5,

PKI				*e*Sg		**Sb**	**16 27 37.1**	**-0.3**
	157µm,0.6s								
PKIN	**Phulchoki**		**0.39**	**216**	*e*Pg		**Pb**	**16 27 31.7**	**+0.3**
PKIN					*e*Sg		**Sb**	**16 27 37.6**	**+0.2**
DMN	**Daman**		**0.56**	**240**	*e*Pg		**Pb**	**16 27 34.7**	**+0.4**
DMN					*e*Sg		**Sb**	**16 27 43.1**	**+0.8**
	30µm,0.3s								
GKN	**Gorkha**		**0.91**	**277**	*e*Pg		**Pn**	**16 27 40.7**	**-0.3**
GKN					*e*Sg		**Sb**	**16 27 52.2**	**+0.1**
	27µm,0.5s								
DANN	**Dangsing**		**1.73**	**286**	*e*Pg		**Pg**	**16 27 55.7**	**-0.1**
DANN					*e*Sg		**Sg**	**16 28 17.1**	**-1.2**
	11µm,0.5s								
KOLN	**Koldanda**		**1.82**	**267**	*e*Pg		**Pg**	**16 27 56.8**	**-0.7**
KOLN					*e*Sg		**Sg**	**16 28 21.2**	**0.0**
	13µm,0.2s								
ODAN	**Odare**		**1.86**	**123**	*e*Pg		**Pg**	**16 27 57.4**	**-0.7**
ODAN					*e*Sg		**Sg**	**16 28 22.5**	**+0.3**
TAPN	**Taplejung**		**1.90**	**106**	*e*Pg		**Pg**	**16 27 58.3**	**-0.7**
TAPN					*e*Sg		**Sg**	**16 28 23.1**	**-0.7**
	4µm,0.3s								
PYUN	**Piuthan**		**2.37**	**276**	*e*Pg		**Pg**	**16 28 07.2**	**-0.6**
PYUN					*e*Sg		**Sg**	**16 28 36.8**	**-1.7**
	15µm,0.4s								
LSA	**Lhasa**		**5.15**	**68**	Pn		**Pn**	**16 28 43.5**	**+3.9**
LSA					Pg		**Pb**	**16 28 49.0**	**-3.6**
LSA					Sn		**Sn**	**16 29 41.0**	**+1.9**
LSA					smax	smax			
	comp=N,990nm,0.9s								
LSA					smax	smax			
	comp=E,670nm,1.0s								
SHL	**Shillong**		**6.03**	**111**	*e*P		**Pn**	**16 28 52.1**	**+0.6**
SHL					*e*S		**Sn**	**16 29 59.1**	**-1.5**
SHL	**Shillong**		**6.03**	**111**	Pn		**Pn**	**16 28 52.6**	**+1.2**
SHL	**Shillong**		**6.03**	**111**	P		**Pn**	**16 28 52.7**	**+1.2**
	SNR=17								
AGT	**Agartala**		**6.43**	**127**	*e*P		**Pn**	**16 29 00.3**	**+3.5**
AGT					*e*S		**Sn**	**16 30 10.3**	**+0.3**
AGT					IAML			16 30 22.4	
	comp=N,273nm,0.5s								
BELO	**BELONIA**		**6.98**	**130**	*e*P		**Pn**	**16 29 06.6**	**+2.2**
DDI	**Dehra Dun**		**7.07**	**292**	*e*P		**Pn**	**16 29 09.2**	**+3.5**
DDI					*e*S		**Sn**	**16 30 23.9**	**-2.1**
DDI					IAML			16 30 28.1	
	comp=E,1µm,0.4s								
DDI					IAML			16 30 30.8	
	comp=N,2µm,0.3s								
KOHI	**KOHIMA**		**7.86**	**104**	*e*P		**Pn**	**16 29 17.8**	**+1.2**
KOHI					*e*S		**Sn**	**16 30 41.4**	**-4.1**
MOKO	**MOKOCHONG**		**8.05**	**99**	*e*P		**Pn**	**16 29 19.7**	**+0.5**
MOKO					*e*S		**Sn**	**16 30 48.6**	**-1.6**
MOKO					IAML			16 30 55.4	
	comp=N,242nm,0.4s								
MOKO					IAML			16 31 01.9	
	comp=E,360nm,0.7s								
SMLA	**Simla**		**8.07**	**296**	*e*P		**Pn**	**16 29 19.9**	**+0.7**
SMLA					*e*S		**Sn**	**16 30 44.4**	**-5.9**
SMLA					IAML			16 30 50.1	
	comp=N,310nm,0.4s								
SMLA					IAML			16 30 50.4	
	comp=E,412nm,0.3s								
BHPL	**Bhopal**		**8.76**	**240**	*e*P		**Pn**	**16 29 26.2**	**-2.6**
BHPL					*e*S		**Sn**	**16 30 59.8**	**-7.5**
BHPL					IAML			16 31 03.2	
	comp=E,288nm,0.3s								
BHPL					IAML			16 31 05.9	
	comp=N,359nm,0.3s								
DHRM	**DHARAMSHALA**		**9.19**	**300**	*e*P		**Pn**	**16 29 34.6**	**-0.3**
DHRM					*e*S		**Sn**	**16 31 12.2**	**-6.2**
DHRM					IAML			16 31 23.8	
	comp=E,400nm,0.4s								
DHRM					IAML			16 31 26.3	
	comp=N,343nm,0.6s								
NIL	**Nilore**		**12.11**	**301**			**Pn**	**16 30 12.9**	**-1.7**
HYB	**Hyderabad**		**12.31**	**214**	*i* P		**Pn**	**16 30 15.0**	**-2.5**
HYB					*e*S		**Sn**	**16 32 34.0**	**-0.7**
KSH	**Kashi**		**14.10**	**328**	P		**Pn**	**16 30 38.8**	**-3.2**
KSH					pP		P	16 30 41.8	-7.9
KSH					S		Sn	16 33 08.3	-10
KSH					pmax	pmax			
	comp=N,12nm,0.5s								
KSH					pmax	pmax			
	comp=N,120nm,4.7s								
KSH					LR	LR			
	comp=N,410nm,8.9s								
KSH					LR	LR			
	comp=N,100nm,5.4s								
MHMT	**Maesarieng**		**14.86**	**128**	P		**Pn**	**16 30 53.0**	**+0.6**
CM33	**Chiang Mai Arr**		**15.18**	**124**	P		**Pn**	**16 30 56.0**	**-0.5**
CHTO	**Chiang Mai**		**15.18**	**124**	Pn		**Pn**	**16 30 54.8**	**-1.7**
CHTO					IAmb		IAmb	16 31 03.1	
	comp=Z,33nm,0.9s								
CHTO	**Chiang Mai**		**15.18**	**124**	P		**P**	**16 31 02.5**	**+0.9**
CMMT	**Chiang Mai**		**15.18**	**124**	P		**Pn**	**16 30 58.0**	**+1.4**
CM32	**Chiang Mai Arr**		**15.21**	**124**	P		**Pn**	**16 30 56.0**	**-0.9**
CM34	**Chiang Mai Arr**		**15.30**	**123**	P		**Pn**	**16 30 59.0**	**+0.8**
CM15	**Chiang Mai Arr**		**15.39**	**125**	P		**Pn**	**16 30 58.0**	**-1.4**
CM13	**Chiang Mai Arr**		**15.40**	**125**	P		**Pn**	**16 30 58.0**	**-1.5**
CM31	**Chiang Mai Arr**		**15.40**	**125**	P		**Pn**	**16 30 59.0**	**-0.5**
CM31	**Chiang Mai Arr**		**15.40**	**125**	P		**P**	**16 31 03.6**	**-0.5**
CM31					IAmb		IAmb	16 31 06.9	
	comp=Z,46nm,1.3s								
CMAR	**Chiang Mai Arr**		**15.40**	**125**	Pn		**Pn**	**16 30 57.8**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=305,slow=13,SNR=26								
CMAR					PcP		**PcP**	**16 36 03.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=316,slow=2.4,SNR=4.2								
CM35	**Chiang Mai Arr**		**15.41**	**124**	P		**Pn**	**16 30 58.0**	**-1.7**
CM02	**Chiang Mai Arr**		**15.42**	**125**	P		**Pn**	**16 30 58.0**	**-1.7**
CM01	**Chiang Mai Arr**		**15.44**	**125**	P		**Pn**	**16 30 58.0**	**-2.0**
CM05	**Chiang Mai Arr**		**15.44**	**125**	P		**Pn**	**16 30 58.9**	**-1.1**
CM09	**Chiang Mai Arr**		**15.44**	**125**	P		**Pn**	**16 30 59.5**	**-0.5**
CM04	**Chiang Mai Arr**		**15.46**	**125**	P		**Pn**	**16 30 59.3**	**-1.0**
KMI	**Kunming**		**15.54**	**96**	⇑P		**Pn**	**16 31 00.8**	**-0.7**
KMI					pP		P	16 31 04.3	-1.6
KMI					sP		pP	16 31 09.5	-0.8
KMI					pmax	pmax			
	comp=Z,16nm,0.9s								
KMI					pmax	pmax			
	comp=Z,110nm,4.8s								
KMI					LR	LR			
	comp=Z,250nm,13.4s								
KMI					LR	LR			
	comp=Z,390nm,15.2s								
KMI					LR	LR			
	comp=Z,410nm,15.9s								
KMI	**Kunming**		**15.54**	**96**			**Pn**	**16 30 59.8**	**-1.8**
KBL	**Kabul**		**15.67**	**299**	P		**P**	**16 31 06.0**	**-1.2**
KBL					IAmb		IAmb	16 31 18.2	
	comp=Z,38nm,0.8s								
KBL	**Kabul**		**15.67**	**299**	P		**P**	**16 31 07.8**	**+0.6**
	SNR=17								
PRZ	**Przheval'sk**		**15.71**	**340**	P		**P**	**16 31 07.4**	**-0.1**
WMQ	**Urumqi**		**15.98**	**5**	*e*P		**P**	**16 31 10.3**	**-0.1**
WMQ					pP		pP	16 31 12.0	-2.7
WMQ					PP		**sP**	**16 31 20.3**	**+3.4**
WMQ					S		**S**	**16 34 15.5**	**-2.3**
WMQ					PcP		**PcP**	**16 36 05.8**	**+1.8**
WMQ					pmax	pmax			
	comp=Z,210nm,3.7s								
WMQ					LR	LR			
	comp=Z,670nm,14.5s								
WMQ					LR	LR			
	comp=Z,640nm,16.9s								
WMQ					LR	LR			
	comp=Z,400nm,14.5s								
SHLS	**Shalkode**		**16.03**	**343**	*e*P		**Pn**	**16 31 04.8**	**-2.8**
	baz=344								
CD2	**Chengdu**		**16.06**	**75**	P		**Pn**	**16 31 07.0**	**-1.0**
CD2					S		**Sn**	**16 34 07.0**	**+1.0**
CD2					pmax	pmax			
	comp=Z,100nm,0.8s								
CD2					LR	LR			
	comp=Z,850nm,12.2s								
CD2					LR	LR			
	comp=Z,1µm,11.5s								
CD2					LR	LR			
	comp=Z,1µm,12.2s								
UZB	**Uzynbulak**		**16.14**	**342**	*e*P		**Pn**	**16 31 07.5**	**-1.5**
	baz=342								
SATY	**Saty**		**16.23**	**341**	*e*P		**Pn**	**16 31 08.5**	**-1.7**
	baz=341								
ULHL	**Ulahol**		**16.24**	**334**	P		**P**	**16 31 16.2**	**+2.7**
	SNR=7.6								
GTA	**Gaotai**		**16.43**	**42**	⇓P		**Pn**	**16 31 11.0**	**-1.9**
GTA					pP		P	16 31 16.0	+0.4
GTA					sP		pP	16 31 19.0	-1.1
GTA					pmax	pmax			
	comp=Z,58nm,4.7s								
GTA					LR	LR			
	comp=Z,390nm,14.2s								
GTA					LR	LR			
	comp=Z,420nm,13.8s								
GTA					LR	LR			
	comp=Z,560nm,13.8s								
SUKH	**Sukhothai**		**16.53**	**126**	P		**Pn**	**16 31 15.0**	**+1.0**
	comp=Z,0.2nmcomp=Z,46nm,0.8s								
BOOM	**Boomskoye usch**		**16.57**	**334**	Pn		**Pn**	**16 31 14.1**	**-0.5**
TNSS	**Tian-Shan**		**16.67**	**337**	*e*P		**Pn**	**16 31 14.5**	**-1.6**
	baz=337								
MDOK	**Medeo**		**16.75**	**338**	*e*P		**Pn**	**16 31 15.7**	**-1.2**
	baz=338								
AAA	**Alma-Ata**		**16.84**	**337**	*e*P		**Pn**	**16 31 16.1**	**-1.8**
	baz=337								
UMPA	**Umpang Tak**		**16.87**	**131**	P		**P**	**16 31 21.1**	**+0.7**
	comp=Z,0.1nmcomp=Z,21nm,0.8s								
GAR	**Garm**		**16.90**	**315**	Pn		**Pn**	**16 31 16.2**	**-2.6**
UCH	**Uchtor**		**16.94**	**330**	P		**Pn**	**16 31 18.3**	**-1.2**
	SNR=13								
UTTA	**Uttaradit**		**17.03**	**123**	P		**P**	**16 31 21.6**	**-0.5**
	comp=Z,0.1nmcomp=Z,31nm,1.2s								
KBK	**Karagaybulak**		**17.10**	**332**	P		**P**	**16 31 25.8**	**+2.8**
	SNR=11								
AML	**Almayashu**		**17.23**	**329**	P		**Pn**	**16 31 21.2**	**-1.9**
	SNR=10								
AAK	**Ala-Archa**		**17.28**	**331**	P		**P**	**16 31 25.2**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=174,slow=7.9,SNR=20								
AAK	**Ala-Archa**		**17.28**	**331**	P		**Pn**	**16 31 24.1**	**+0.6**
	SNR=9.9								
AAK	**Ala-Archa**		**17.28**	**331**	P		**Pn**	**16 31 24.1**	**+0.6**
AAK	**Ala-Archa**		**17.28**	**331**	P		**P**	**16 31 24.3**	**-0.7**
PHIT	**Phitsanulok**		**17.29**	**125**	P		**P**	**16 31 24.9**	**0.0**
	comp=Z,0.3nmcomp=Z,107nm,0.8s								
LZH	**Lanzhou**		**17.44**	**58**	*e*P		**Pn**	**16 31 25.5**	**-0.1**
LZH					pP		P	16 31 28.0	+1.2
LZH					sP		pP	16 31 30.8	-0.5
LZH					PP		**PnPn**	**16 31 37.8**	**+2.0**
LZH					pmax	pmax			
	comp=Z,33nm,1.1s								
LZH					pmax	pmax			
	comp=Z,170nm,4.9s								
LZH					LR	LR			
	comp=Z,630nm,11.6s								
LZH					LR	LR			
	comp=Z,640nm,10.5s								
LZH					LR	LR			
	comp=Z,660nm,12.4s								
EKS2	**Erkin-Say**		**17.61**	**330**	P		**P**	**16 31 29.9**	**+1.3**
	SNR=7.8								
UTHA	**Uthaitani**		**17.72**	**131**	P		**P**	**16 31 30.5**	**+0.6**
	comp=Z,0.1nmcomp=Z,312nmcomp=Z,37nm,0.9s								
KHLT	**Khaolaem Dam**		**17.73**	**135**	P		**P**	**16 31 31.0**	**+1.1**
	comp=Z,0.0nmcomp=Z,13nm,0.9s								
USP	**Ospenovka**		**17.79**	**332**	P		**P**	**16 31 30.2**	**-0.3**
	SNR=6.5								
SLVN	**Son La**		**17.82**	**107**			**Pn**	**16 31 29.5**	**-0.8**
SGDS	**Sogindy**		**17.89**	**333**	*e*P		**Pn**	**16 31 29.1**	**-1.9**
	baz=333								
TDK	**Taldyqorghan**		**18.03**	**343**	*e*P		**Pn**	**16 31 31.4**	**-1.2**
	baz=343								
GYA	**Guiyang**		**18.75**	**90**	⇑P		**P**	**16 31 41.3**	**+0.1**
GYA					S		**Sn**	**16 35 11.8**	**+0.5**
GYA					pmax	pmax			
	comp=Z,15nm,0.9s								
GYA					LR	LR			
	comp=Z,39nm,11.8s								
GYA					LR	LR			
	comp=Z,53nm,13.6s								
NONG	**Nongkai**		**18.82**	**118**	P		**Pn**	**16 31 43.8**	**+1.3**
	comp=Z,0.2nmcomp=Z,48nm,1.1s								
DZA	**Taraz**		**18.94**	**326**	*e*P		**P**	**16 31 41.8**	**-1.3**
	baz=326								
MK31	**Makanchi Array**		**19.05**	**353**	P		**Pn**	**16 31 45.3**	**+0.2**
MKAR	**Makanchi Array**		**19.05**	**353**	P		**Pn**	**16 31 45.3**	**+0.3**
	comp=Z,4.9nm,0.3s,baz=172,slow=11,SNR=153								
MKAR					PcP		**PcP**	**16 36 08.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=183,slow=2.3,SNR=1.8								
MKAR					PKKP		**PKKPdf**	**16 59 07.6**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=326,slow=0.4,SNR=3.6								
MKAR	**Makanchi Array**		**19.05**	**353**	P		**P**	**16 31 44.5**	**+0.3**
IUG	**Iuzhnay**		**19.08**	**322**	*e*P		**P**	**16 31 43.0**	**-1.8**
	baz=322								
MAKZ	**Makanchi**		**19.10**	**352**	P		**Pn**	**16 31 46.0**	**+0.4**
CHAI	**Chaiyaphum**		**19.26**	**125**	P		**Pn**	**16 31 49.9**	**+2.1**
	comp=Z,0.1nmcomp=Z,354nmcomp=Z,32nm,0.9s								
KK31	**Karatay Array**		**19.50**	**325**	P		**P**	**16 31 48.2**	**-1.0**
KKAR	**Karatay Array**		**19.50**	**325**	P		**P**	**16 31 48.2**	**-1.1**
KKAR	**Karatay Array**		**19.50**	**325**	P		**P**	**16 31 48.1**	**-1.1**
KHON	**Khomkaen**		**19.60**	**122**	P		**Pn**	**16 31 52.9**	**+1.1**
	comp=Z,0.3nmcomp=Z,2µmcomp=Z,63nm,0.8s								
PHET	**Kaeng Krachan**		**19.82**	**136**	P		Pn	16 32 03.3	+8.9
	comp=Z,0.1nmcomp=Z,374nmcomp=Z,22nm,0.8s								
PATY	**Pattaya**		**20.59**	**133**	P		Pn	16 32 03.0	-0.4
XAN	**Xi'an**		**20.85**	**67**	P		**P**	**16 32 04.3**	**+0.3**
XAN					pP		pP	16 32 08.3	-0.3
XAN					S		**S**	**16 35 56.3**	**0.0**
XAN					pmax	pmax			
	comp=Z,34nm,0.8s								
XAN					pmax	pmax			
	comp=Z,110nm,3.5s								
XAN					LR	LR			
	comp=Z,620nm,17.1s								
XAN					LR	LR			
	comp=Z,190nm,15.3s								
XAN					LR	LR			
	comp=Z,630nm,13.2s								
XAN	**Xi'an**		**20.85**	**67**	P		**P**	**16 32 03.0**	**-1.0**
XAN					IAmb		IAmb	16 32 08.9	
	comp=Z,21nm,0.7s								
ENH	**Enshi**		**20.96**	**78**	IAmb		IAmb	16 32 20.4	
	comp=Z,77nm,1.0s								
PALK	**Pallekele**		**21.04**	**194**	P		**P**	**16 32 12.3**	**+6.1**
	comp=Z,12nm,0.6s,baz=109,slow=14,SNR=15								
PALK					S		**S**	**16 35 52.5**	**-7.8**
	comp=Z,8.7nm,0.8s,baz=225,slow=6.6,SNR=3.8								
PALK	**Pallekele**		**21.04**	**194**	P		P	16 32 14.0	+7.8
UBPT	**Khong Chiam**		**22.25**	**120**	P		**P**	**16 32 21.5**	**+2.3**
UBPT	**Khong Chiam**		**22.25**	**120**	P		**P**	**16 32 19.9**	**+0.8**
UBPT					IAmb		IAmb	16 32 22.1	
	comp=Z,37nm,1.2s								
SEM	**Semipalatinsk**		**22.86**	**351**	*e*P		**P**	**16 32 24.0**	**-1.5**
	baz=351								
KURBB	**Kurchatov Arra**		**23.34**	**348**	P		**P**	**16 32 31.2**	**+1.0**
	comp=Z,20nm,0.7s,baz=170,slow=10,SNR=100								
KURK	**Kurchatov**		**23.41**	**349**	P		**P**	**16 32 31.2**	**+0.3**
QIZ	**Qiongzhong**		**23.84**	**106**	P		**P**	**16 32 35.5**	**0.0**
QIZ					S		**S**	**16 36 52.5**	**+1.3**
QIZ					LR	LR			
	comp=Z,170nm,15.2s								
QIZ					LR	LR			
	comp=Z,200nm,14.7s								
QIZ					LR	LR			
	comp=Z,190nm,14.7s								
QIZ	**Qiongzhong**		**23.84**	**106**	P		**P**	**16 32 34.2**	**-1.3**
QIZ					IAmb		IAmb	16 32 40.0	
	comp=Z,31nm,1.2s								
BRZS	**Berezniki**		**24.18**	**339**	*e*P		**P**	**16 32 36.8**	**-1.6**
	baz=339								
WBK	**Wadi Bani Khal**		**24.68**	**264**	P		**P**	**16 32 49.2**	**+6.0**
	SNR=5.8								
WBK					P		**P**	**16 32 49.2**	**+6.0**
	SNR=5.8								
WSAR	**Wadi Sarin**		**24.79**	**265**	P		**P**	**16 32 46.0**	**+1.8**
	comp=Z,4.2nm,0.6s,baz=75,slow=7.0,SNR=2.1								
WSAR					LR		LR	16 44 09.0	
	comp=Z,104nm,18.0s,baz=113,slow=41								
WSAR	**Wadi Sarin**		**24.79**	**265**	P		**P**	**16 32 50.9**	**+6.7**
	SNR=6.0								
HHC	**Hu-ho-hao-te**		**24.88**	**52**	*e*P		**P**	**16 32 44.5**	**-0.5**
HHC					sP		sP	16 32 53.5	+1.5
HHC					S		**S**	**16 37 04.0**	**-3.8**
HHC					pmax	pmax			
	comp=Z,24nm,1.0s								
HHC					pmax	pmax			
	comp=Z,76nm,5.4s								
HHC					LR	LR			
	comp=Z,310nm,10.8s								
HHC					LR	LR			
	comp=Z,380nm,12.2s								
HHC					LR	LR			
	comp=Z,430nm,12.1s								
LHMI	**Lhok Sumawe**		**24.97**	**152**	P		**P**	**16 32 47.2**	**+1.4**
	comp=Z,65nm,0.7s								
GEYT	**Alibeck**		**25.11**	**301**	P		**P**	**16 32 48.7**	**+1.7**
	comp=Z,1.4nm,0.3s,baz=148,slow=8.7,SNR=4.7								
BIDO	**Bidbid**		**25.16**	**266**	P		**P**	**16 32 54.2**	**+6.8**
SMDO	**Samad**		**25.36**	**265**	P		**P**	**16 32 51.2**	**+1.8**
	SNR=5.7								
SMDO					P		**P**	**16 32 51.2**	**+1.8**
	SNR=5.7								
JMDO	**Jabal Madar**		**25.51**	**264**	P		**P**	**16 32 57.3**	**+6.6**
SONM	**Songino Array**		**25.63**	**33**	P		**P**	**16 32 53.8**	**+2.1**
	comp=Z,30nm,0.7s,baz=220,slow=10.0,SNR=139								
SONM					PcP		**PcP**	**16 36 22.6**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=218,slow=3.2,SNR=6.1								
SONM	**Songino Array**		**25.63**	**33**	P		**P**	**16 32 53.4**	**+1.7**
SONM					IAmb		IAmb	16 32 56.5	
	comp=Z,24nm,0.8s								
HOQ	**Hoqain**		**25.86**	**267**	P		**P**	**16 32 59.7**	**+5.8**
ULN	**Ulaanbaatar**		**25.98**	**34**	P		**P**	**16 32 54.7**	**-0.1**
ULN					IAmb		IAmb	16 32 59.6	
	comp=Z,32nm,0.8s								
ULN	**Ulaanbaatar**		**25.98**	**34**	P		**P**	**16 32 56.4**	**+1.6**
ZAA0	**Zalesovo Array**		**26.04**	**359**	P		**P**	**16 32 56.5**	**+1.3**
ZAA0					IAmb		IAmb	16 32 57.2	
	comp=Z,23nm,0.9s								
ZALV	**Zalesovo Beam**		**26.04**	**359**	P		**P**	**16 32 56.1**	**+1.0**
	comp=Z,9.2nm,0.4s,baz=185,slow=10,SNR=69								
MHTO	**MHTO**		**26.09**	**261**	P		**P**	**16 33 00.9**	**+5.0**
MHTO					P		**P**	**16 33 00.9**	**+5.0**
BSY	**Bisya**		**26.20**	**265**	P		**P**	**16 33 00.4**	**+3.4**
SOHO	**SOHO**		**26.41**	**269**	P		**P**	16 33 06.6	+7.8
MASF	**Masafi**		**26.46**	**271**	P		**P**	**16 33 04.7**	**+5.4**
DLV	**T Lat**		**26.62**	**122**	P		**P**	**16 33 01.8**	**+0.8**
DLV					IAmb		IAmb	16 33 03.7	
	comp=Z,23nm,1.0s								
KULM	**Kulim**		**26.62**	**145**	P		**P**	**16 33 02.0**	**+1.2**
KULM					IAmb		IAmb	16 33 10.6	
	comp=Z,28nm,0.9s								
TPTI			**26.86**	**154**	P		**P**	**16 33 07.0**	**+4.2**
	comp=Z,5.3nm,0.8s								
BVAR	**Borovoye Array**		**27.54**	**340**	P		**P**	**16 33 09.2**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=166,slow=13,SNR=22								
BRVK	**Borovoye**		**27.60**	**340**	P		**P**	**16 33 09.7**	**+0.4**
PSI	**Prapat**		**27.99**	**151**	P		**P**	**16 33 14.1**	**+0.9**
	comp=Z,1.8nm,0.4s,baz=180,slow=17,SNR=2.2								
UMZA	**Um Al Zommool**		**28.00**	**266**	P		**P**	**16 33 15.6**	**+2.4**
RPSI	**Rantau Prapat**		**28.08**	**151**	P		**P**	**16 33 14.1**	**+0.2**
GSI	**Gunungsitoli**		**28.80**	**155**	P		**P**	**16 33 19.8**	**-0.5**
GSI					IAmb		IAmb	16 33 27.9	
	comp=Z,20nm,0.9s								
GSI	**Gunungsitoli**		**28.80**	**155**	P		**P**	**16 33 21.3**	**+1.0**
	comp=Z,27nm,0.8s								
NJ2	**Nanjing**		**28.99**	**74**	*e*P		**P**	**16 33 21.8**	**0.0**
NJ2					pmax	pmax			
	comp=Z,11nm,0.6s								
ABKAR	**Akbulak array**		**29.06**	**324**	P		**P**	**16 33 23.3**	**+1.0**
SHAO	**Shalim**		**29.27**	**257**	P		P	16 33 30.7	+6.1
DMTO	**DMTO**		**29.99**	**257**	P		P	16 33 37.2	+6.4
MNSI	**Mandailing Nat**		**30.07**	**151**	P		**P**	**16 33 31.9**	**+0.4**
RBK	**Rabkut**		**30.72**	**257**	P		**P**	**16 33 39.9**	**+2.5**
RBK					P		**P**	**16 33 39.9**	**+2.5**
AKTO	**Aktyubinsk**		**30.77**	**325**	P		**P**	**16 33 38.0**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=179,slow=6.6,SNR=11								
AKTO					PcP		**PcP**	**16 36 35.2**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=98,slow=8.5,SNR=4.6								
SOCY	**Socotra**		**33.47**	**249**	P		**P**	**16 34 00.1**	**-1.5**
SOCY					IAmb		IAmb	16 34 11.2	
	comp=Z,17nm,1.3s								
HIA	**Hailar**		**33.71**	**41**	P		**P**	**16 34 04.5**	**+1.2**
ARU	**Arti**		**34.44**	**333**	P		**P**	**16 34 10.4**	**+1.0**
	comp=Z,4.9nm,0.5s,baz=131,slow=5.6,SNR=25								
ARU					PcP		**PcP**	**16 36 45.5**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=45,slow=4.1,SNR=3.1								
ARU	**Arti**		**34.44**	**333**	P		**P**	**16 34 09.7**	**+0.2**
ARU					IAmb		IAmb	16 34 11.2	
	comp=Z,15nm,0.6s								
CN2	**Changchun**		**35.57**	**53**	*e*P		**P**	**16 34 20.0**	**+0.6**
CN2					*e*S		**S**	**16 39 53.0**	**-1.8**
CN2					pmax	pmax			
	comp=Z,10.0nm,1.0s								
CN2					pmax	pmax			
	comp=Z,40nm,5.0s								
CN2					LR	LR			
	comp=Z,100nm,11.0s								
CN2					LR	LR			
	comp=Z,200nm,11.0s								
CN2					LR	LR			
	comp=Z,400nm,14.0s								
KKM	**Kota Kinabalu**		**36.23**	**121**	P		**P**	**16 34 24.8**	**-0.6**
KKM					IAmb		IAmb	16 34 34.0	
	comp=Z,9.7nm,0.7s								
RAYN	**Ar Rayn**		**36.33**

comp=Z,27nm,1.2s
MNK *i* PP **PP** 16 38 03.6 -0.1
MNK *i* PPP PPP 16 38 54.5
MNK *i* S **S** 16 43 15.6 +0.3
MNK *i* SS **SS** 16 46 48.3 +2.0
MNK *i* SSS SSS 16 48 06.4
MNK *i* LQ LQ 16 53 21.9
MNK *i* LR LR 16 57 06.2
MNK *i* LRM MLR 17 00 10.4
comp=E,12nm,14.4s
MNK *i* LRM MLR 17 00 12.6
comp=N,61nm,13.8s
MNK *i* LRM MLR 17 00 15.5
comp=Z,148nm,14.1s
VRI Vrincioaia 49.30 308 ⇑P **P 16 36 12.0 +1.0**
PLOR Plostina 49.35 308 ⇓P **P 16 36 13.2 +1.8**
BIZ Bicaz 49.73 309 ⇓P **P 16 36 15.4 +1.0**
TIXI Tiksi 49.78 17 P **P 16 36 14.7 +0.5**
TIXI IAmb IAmb 16 36 15.8
comp=Z,16nm,0.8s
MLR Muntele Rosu 49.85 307 ⇑P **P 16 36 17.1 +1.7**
MLR Muntele Rosu 49.85 307 P **P 16 36 15.1 -0.3**
NACGM Naroch 49.89 320 *i* P **P 16 36 16.4 +1.0**
NACGM *i* P **P 16 36 16.4 +1.0**
NACGM *i* P **P 16 36 16.4 +1.0**
NACGM *i* PcP PcP 16 37 05.9 -30
NACGM *i* PP **PP 16 38 05.5 -4.5**
NACGM *i* PPP PPP 16 39 26.6
NACGM *i* S **S 16 43 28.3 +3.4**
NACGM *i* PS PKiKP 16 44 29.5 +7.8
NACGM *i* SS **SS 16 46 59.6 +2.2**
NACGM *i* SSS SSS 16 48 26.8
NACGM *i* LQ LQ 16 53 57.5
IDID Didziasalis 49.98 320 *eP* **P 16 36 16.6 +0.6**
DOPR Dopca 50.23 308 ⇓P **P 16 36 19.3 +1.2**
IIGN Ignalina 50.27 320 *eP* **P 16 36 19.0 +0.7**
BURAR Bucovina Array 50.34 310 ⇓P **P 16 36 20.1 +1.0**
BURAR Bucovina Array 50.34 310 P **P 16 36 17.8 -1.2**
ISAL Salakas 50.36 321 *eP* **P 16 36 19.8 +0.9**
VOIR 50.48 307 ⇑P **P 16 36 19.8 -0.3**
VSU Vasula 50.50 324 *eP* **P 16 36 20.6 +0.8**
MMRI Maumere 50.70 130 P **P 16 36 19.5 -2.5**
ARR Arges 50.77 307 ⇑P **P 16 36 22.9 +0.6**
FIA1 FINESS Array S 51.43 328 P **P 16 36 27.2 +0.4**
FINES FINESS Array B 51.43 328 P **P 16 36 27.2 +0.3**
comp=Z,18nm,0.6s,baz=107,slow=8.2,SNR=89
PABE Paberze 51.57 320 *eP* **P 16 36 28.7 +0.8**
PABE Paberze 51.57 320 P **P 16 36 28.0 +0.1**
SUW Suwalki 51.89 318 *eP* **P 16 36 30.6 +0.1**
VTS Vitosha 51.94 304 ⇑P **P 16 36 32.2 +1.0**
MTSE Matsula 52.05 324 *eP* **P 16 36 31.1 -0.4**
DRGR 52.06 309 ⇑P **P 16 36 32.7 +0.7**
GZR Gura Zlata 52.08 307 ⇓P **P 16 36 32.6 +0.5**
BATI Baumata 52.80 130 P **P 16 36 37.1 -0.6**
comp=Z,23nm,0.5s,baz=315,slow=1.8,SNR=13
SIRR Siria 52.81 308 ⇑P **P 16 36 38.6 +1.2**
CRVS Cervenica-Dubn 52.85 312 *eP* **P 16 36 38.9 +1.3**
BZS Buzias 52.88 308 ⇑P **P 16 36 38.5 +0.6**
SOEI Soe 52.89 130 P **P 16 36 37.4 -1.0**
AGG Agios Georgios 53.03 299 P **P 16 36 38.6 -0.6**
AGG IAmb IAmb 16 36 39.5
comp=Z,9.7nm,0.9s
KEV Kevo 53.37 338 P **P 16 36 41.9 +0.8**
ITM Ithomi 53.63 297 P **P 16 36 42.5 -1.1**
ITM IAmb IAmb 16 36 60.0
comp=Z,14nm,1.0s
ARA0 ARCESS Array S 53.80 338 *eP* **P 16 36 45.5 +1.2**
ARCES ARCESS Array B 53.80 338 P **P 16 36 45.2 +0.9**
comp=Z,22nm,0.7s,baz=92,slow=7.0,SNR=66
ARCES ARCESS Array B 53.80 338 P **P 16 36 44.6 +0.3**
MA2 Magadan 53.83 35 P **P 16 36 44.3 -0.4**
KTK1 Kautokeino 54.42 337 *eP* **P 16 36 49.7 +0.9**
KMBO Kilima Mbogo 54.66 246 P **P 16 36 52.7 +1.0**
comp=Z,2.3nm,0.7s,baz=50,slow=14,SNR=2.6
HAMF Hammerfest 54.73 339 *eP* **P 16 36 52.6 +1.5**
PDG Podgorica 54.89 304 ⇓P **P 16 36 52.4 -0.2**
MORH Mrgy, Hungar 54.90 309 ⇓P **P 16 36 53.2 +0.5**
JAVC Velka Javorina 55.35 312 *eP* **P 16 36 57.0 +1.0**
MORC Moravsky Berou 55.37 313 *eP* **P 16 36 56.3 +0.2**
JETT Jettan, Norway 55.53 337 *eP* **P 16 36 58.0 +1.1**
MODS Modra-Piesok 55.65 311 *eP* **P 16 36 58.2 +0.1**
KRLC Kraliky 55.84 313 *eP* **P 16 36 59.7 +0.2**
KRLC *ep*P **sP 16 37 05.6 -0.5**
VRAC Vranov 56.02 313 *eP* **P 16 37 01.3 +0.6**
TRO Tromso 56.05 337 *eP* **P 16 37 01.5 +0.9**
DPC Dobruska-Polom 56.12 314 *eP* **P 16 37 02.1 +0.7**
KRUC Moravsky 56.17 312 *eP* **P 16 37 02.1 +0.3**
BLEU Blekinge 56.19 321 *i* P **P 16 37 01.3 -0.5**
CHVC Chvalec 56.27 314 *eP* **P 16 37 02.8 +0.3**
CONA Conrad Observa 56.63 311 *eP* **P 16 37 05.6 +0.4**
comp=Z,7.0nm,0.8s,SNR=5.5
ARSA Arzberg 56.93 310 *eP* **P 16 37 07.5 +0.3**
comp=Z,4.6nm,1.0s
FAUS Fauske 57.03 334 *eP* **P 16 37 08.5 +0.9**
GROS Grobnik 57.04 309 ⇓*i*P **P 16 37 08.2 +0.1**
comp=Z,14nm,1.0s
STEI Steigen 57.11 335 *eP* **P 16 37 09.6 +1.4**
MOR8 Moi Rana 57.24 333 *eP* **P 16 37 08.7 -0.4**
DEL Delary 57.27 321 *i* P **P 16 37 10.0 +0.6**
PRU Pruhonice 57.29 313 *eP* **P 16 37 10.4 +0.7**
PRU *ep*P **pP 16 37 14.3 -0.5**
GIRL Giralia 57.32 148 P **P 16 37 11.1 +1.0**
SOKA Soboth 57.34 310 *eP* **P 16 37 10.7 +0.4**
comp=Z,12nm,1.0s,SNR=7.5
PDKS Podkum 57.44 309 ⇑*i*P **P 16 37 11.6 +0.7**
comp=Z,28nm,1.1s
LUNU Lund 57.54 320 *eP* **P 16 37 12.0 +0.6**
RUE Ruedersdorf 57.55 316 *eP* **P 16 37 10.9 -0.5**
comp=Z,16nm,0.7s,baz=82,slow=6.8
CKRC Cesky Krumlov 57.56 312 *eP* **P 16 37 12.1 +0.4**
BRG Berggiesshubel 57.59 315 *eP* **P 16 37 12.2 +0.3**
BRG Amp 16 37 13.3
comp=Z,10nm,0.9s
BRG *ex* x 16 37 16.8
BRG Amp 16 37 18.3
comp=Z,7.9nm,1.0s
BRG Berggiesshubel 57.59 315 *eP* **P 16 37 12.1 +0.3**
comp=Z,6.0nm,0.8s,baz=82,slow=6.8
PETK Petropavlovsk- 57.60 43 P **P 16 37 11.8 0.0**
comp=Z,5.3nm,0.9s,baz=262,slow=7.3,SNR=2.6
OBKA Obir 57.69 309 *eP* **P 16 37 13.3 +0.6**
comp=Z,8.7nm,0.8s
MOA Molln 57.71 311 *i* P **P 16 37 12.5 -0.2**
comp=Z,5.7nm,0.8s
BJUU Bjuv 57.76 321 *eP* **P 16 37 13.0 +0.1**
LOF Lofoten 57.77 335 *eP* **P 16 37 13.1 +0.3**
BORU Boraas 57.83 323 *i* P **P 16 37 13.7 +0.3**
CEY Cerknica 57.88 308 ⇑*i*P **P 16 37 14.5 +0.5**
FABU Falkenberg 57.88 322 *i* P **P 16 37 14.1 +0.3**
FBE Freiberg 57.95 315 *eP* **P 16 37 14.9 +0.6**
comp=Z,9.3nm,0.9s,baz=82,slow=6.8
GEC2 GERESS Array S 57.96 312 *eP* **P 16 37 16.0 +1.5**
comp=Z,2.8nm,0.8s,baz=82,slow=6.8
GERES GERESS Array B 57.96 312 P **P 16 37 14.8 +0.2**
comp=Z,1.2nm,0.4s,baz=96,slow=6.8,SNR=15
KHC Kasperske Hory 58.01 313 *eP* **P 16 37 14.3 -0.5**
KHC Kasperske Hory 58.01 313 P **P 16 37 14.3 -0.5**
CLL Collm 58.13 315 ⇓*i*P **P 16 37 15.8 +0.2**
comp=Z,6.0nm,1.0s
CLL *i* sP **sP 16 37 20.4 -1.8**
CLL Collm 58.13 315 *eP* **P 16 37 15.4 -0.2**
comp=Z,2.6nm,0.8s,baz=82,slow=6.8
NC405 NORSAR Array S 58.28 327 P **P 16 37 16.5 -0.1**
NC602 NORSAR Array S 58.37 326 P **P 16 37 16.0 -1.1**
NC602 NORSAR Array S 58.37 326 *eP* **P 16 37 17.7 +0.5**
NC300 NORSAR Array S 58.42 327 P **P 16 37 17.3 -0.2**
WET Wettzell 58.46 313 *eP* **P 16 37 17.3 -0.7**
comp=Z,3.6nm,0.8s,baz=82,slow=6.8
NB2 NORSAR Subarra 58.52 327 P **P 16 37 17.5 -0.8**
baz=88,slow=7.4
NOA NORSAR Array B 58.52 327 P **P 16 37 17.9 -0.4**
comp=Z,3.1nm,0.6s,baz=89,slow=7.0,SNR=14
TANN Tannenbergstha 58.57 314 *eP* **P 16 37 18.9 +0.1**
comp=Z,3.1nm,0.8s,baz=82,slow=6.8
TANN *ep*P **sP 16 37 24.3 -1.2**
STRU Stroemstad 58.61 324 *i* P **P 16 37 18.6 -0.1**
GUNZ Gunzen 58.66 314 *eP* **P 16 37 19.6 +0.3**
comp=Z,4.5nm,0.8s,baz=82,slow=6.8
WERD Werda 58.67 314 *eP* **P 16 37 19.5 +0.1**
comp=Z,4.7nm,0.8s,baz=82,slow=6.8
NAO01 NORSAR Array S 58.69 326 *eP* **P 16 37 19.2 -0.2**
RJOB Jochberg 58.70 311 *eP* **P 16 37 20.3 +0.5**
comp=Z,12nm,0.8s,baz=82,slow=6.8
ROTZ Rotzenmuhle 58.81 313 *eP* **P 16 37 21.1 +0.7**
comp=Z,6.3nm,0.8s,baz=82,slow=6.8
MANZ Manzenberg 58.85 314 *eP* **P 16 37 20.1 -0.6**
comp=Z,3.4nm,0.9s,baz=82,slow=6.8
NEUB Neuenburg 58.91 315 *eP* **P 16 37 21.0 0.0**
comp=Z,8.7nm,0.8s,baz=82,slow=6.8
STAL STALIGIAL 58.98 309 P **P 16 37 20.8 -0.9**
ABTA Abfaltersbach 59.04 310 *i* P **P 16 37 22.0 -0.2**
comp=Z,5.2nm,0.8s
MOX Moxa 59.08 314 *eP* **P 16 37 22.4 +0.1**
comp=Z,4.7nm,0.8s,baz=82,slow=6.8
FLTG Flechtingen 59.11 316 *eP* **P 16 37 22.0 -0.3**
comp=Z,6.8nm,0.8s,baz=82,slow=6.8
FLTG *ep*P **sP 16 37 27.9 -1.1**
NRCA Norcia 59.30 305 P **P 16 37 24.2 +0.2**
NRCA IAmb IAmb 16 37 26.1
comp=Z,8.8nm,0.8s
KONO Kongsberg 59.39 325 *eP* **P 16 37 24.7 +0.5**
BSEG Bad Segeberg 59.48 318 *eP* **P 16 37 25.5 +0.6**
comp=Z,13nm,0.8s,baz=82,slow=6.8
DOMB Dombas 59.52 328 *eP* **P 16 37 25.3 +0.2**
WTTA Wattenberg 59.55 311 *i* P **P 16 37 25.2 -0.6**
comp=Z,12nm,0.9s
WATA Walderalm 59.58 311 *i* P **P 16 37 25.1 -0.9**
comp=Z,8.6nm,0.9s
MURB Monte Urbino 59.64 306 P **P 16 37 27.4 +1.1**
FUR Furstenfeldbru 59.65 312 *eP* **P 16 37 25.5 -0.8**
comp=Z,6.3nm,0.7s,baz=82,slow=6.8
CLZ Clausthal 59.70 316 *eP* **P 16 37 26.8 +0.3**
comp=Z,15nm,0.8s,baz=82,slow=6.8
CLZ *ep*P **sP 16 37 32.7 -0.5**
CTI Castel Tesino 59.75 309 P **P 16 37 25.2 -1.9**
CTI IAmb IAmb 16 37 27.5
comp=Z,6.3nm,0.8s
NRDL Niedersach Rie 59.78 317 *eP* **P 16 37 27.7 +0.8**
comp=Z,14nm,0.8s,baz=82,slow=6.8
NRDL *ep*P **sP 16 37 33.4 -0.2**
MTN Manton Dam 59.84 126 P **P 16 37 27.9 0.0**
MTN IAmb IAmb 16 37 39.8
comp=Z,16nm,1.2s
SQTA Sankt Quirin 59.85 311 *i* P **P 16 37 27.0 -0.8**
comp=Z,5.1nm,0.5s
MOTA Moosalm 59.90 311 *eP* **P 16 37 27.3 -0.8**
comp=Z,12nm,0.8s,SNR=5.7
FITZ Fitzroy Crossi 59.91 135 P **P 16 37 28.9 +0.6**
comp=Z,4.8nm,0.8s,baz=321,slow=6.9,SNR=12
FITZ Fitzroy Crossi 59.91 135 P **P 16 37 28.8 +0.6**
FITZ IAmb IAmb 16 37 34.8
comp=Z,6.3nm,0.8s
SKAR Skarslia 59.96 326 *eP* **P 16 37 29.0 +0.7**
GTTG Gottingen 59.99 316 *eP* **P 16 37 27.8 -0.7**
comp=Z,5.8nm,0.8s,baz=82,slow=6.8
RETA Reutte 60.10 311 *eP* **P 16 37 29.0 -0.4**
comp=Z,4.2nm,0.6s,SNR=5.4
KNRA Kununurra 60.17 131 P **P 16 37 30.2 +0.1**
KNRA IAmb IAmb 16 37 38.5
comp=Z,7.7nm,0.8s
FETA Feichten 60.20 310 *eP* **P 16 37 29.5 -0.7**
comp=Z,7.8nm,0.9s,SNR=5.6
AKN Aakres 60.48 328 *eP* **P 16 37 32.2 +0.5**
UBR Ueberruh 60.50 311 *eP* **P 16 37 30.6 -1.6**
comp=Z,4.5nm,0.7s,baz=82,slow=6.8
SALO Salr 60.60 309 P **P 16 37 32.6 -0.2**
DAVA Damuels 60.73 311 *eP* **P 16 37 33.4 -0.4**
comp=Z,15nm,0.8s,SNR=7.0
HLG Helgoland 60.87 319 *eP* **P 16 37 32.3 -2.1**
comp=Z,74nm,0.8s,baz=82,slow=6.8
STU Stuttgart 60.91 313 *eP* **P 16 37 34.8 0.0**
comp=Z,8.2nm,0.7s,baz=82,slow=6.8
BILL Bilibino 60.95 25 P **P 16 37 36.4 +1.5**
BILL IAmb IAmb 16 37 37.4
comp=Z,12nm,0.9s
KASTN Kahler Asten 61.00 315 *eP* **P 16 37 35.6 +0.2**
comp=Z,3.2nm,0.9s,baz=82,slow=6.8
TNS Taunus Mts 61.15 314 *eP* **P 16 37 36.6 +0.1**
comp=Z,8.0nm,0.8s,baz=82,slow=6.8
IBBN Ibbenburen 61.23 317 *eP* **P 16 37 36.3 -0.6**
comp=Z,9.0nm,0.9s,baz=82,slow=6.8
IBBN *ep*P **sP 16 37 42.6 -1.0**
TUE Stuetta 61.24 310 P **P 16 37 36.9 -0.5**
TUE IAmb IAmb 16 37 48.7
comp=Z,10nm,0.9s
BER Bergen 61.45 326 *eP* **P 16 37 38.7 +0.4**
MSSA Maissana 61.56 308 P **P 16 37 38.8 -0.6**
BFO Black Forest 61.56 312 *eP* **P 16 37 38.4 -0.9**
comp=Z,2.3nm,0.7s,baz=82,slow=6.8
BUG Bochum--Univer 61.67 316 *eP* **P 16 37 40.1 +0.2**
comp=Z,8.2nm,0.8s,baz=82,slow=6.8
AHRW Bad Neuenahr-A 61.95 315 *eP* **P 16 37 42.2 +0.4**
comp=Z,9.5nm,0.9s,baz=82,slow=6.8
MEM Membach 62.61 315 *dP* **P 16 37 46.5 +0.2**
MEM *dx* x 16 37 51.1
SENIN Lac Senin/Sane 62.65 310 P **P 16 37 46.5 -0.3**
WLF Walferdange 62.71 314 *dP* **P 16 37 47.9 +0.9**
WLF *dx* x 16 37 52.5
WLF Walferdange 62.71 314 *eP* **P 16 37 47.5 +0.6**
comp=Z,10nm,0.8s,baz=82,slow=6.8
BCLA Clavier 63.09 315 *dP* **P 16 37 48.8 -0.6**
comp=Z,7.0nm,1.1s
BCLA *dx* x 16 37 54.8
BNI Bardonecchia 63.37 309 P **P 16 37 51.1 -0.4**
BNI IAmb IAmb 16 38 03.6
comp=Z,11nm,0.9s
BMRD Maredsous 63.45 315 *dP* **P 16 37 52.2 +0.4**
BMRD *dx* x 16 37 55.7
MORW Morawa 63.68 150 P **P 16 37 52.9 -0.5**
MORW IAmb IAmb 16 37 54.1
comp=Z,11nm,0.8s
SNF Seneffe 63.71 315 *dP* **P 16 37 53.1 -0.4**
comp=Z,9.5nm,0.9s
SNF *dx* x 16 37 57.7
KEST Kesra 63.83 298 P **P 16 37 55.5 +0.7**
comp=Z,26nm,0.8s,baz=318,slow=1.6,SNR=29
KEST Kesra 63.83 298 P **P 16 37 55.6 +0.9**
NOR Nord 64.37 351 *i* P **P 16 37 57.9 +0.5**
NOR IAmb IAmb 16 37 58.5
comp=Z,4.3nm,0.7s
SSB Saint Sauveur 64.78 310 IAmb IAmb 16 38 01.6
comp=Z,10nm,0.8s
DAG Danmarks Havn 66.26 346 *i* P **P 16 38 10.2 +0.5**
DAG IAmb IAmb 16 38 12.1
comp=Z,7.1nm,0.8s
WRA Warramunga Arr 66.93 130 P **P 16 38 15.6 +0.8**
comp=Z,8.5nm,0.7s,baz=322,slow=6.3,SNR=56
WRA Warramunga Arr 66.93 130 P **P 16 38 14.6 -0.2**
WRAB Tennant Creek 66.93 130 P **P 16 38 14.8 +0.1**
WB2 Warramunga Arr 66.93 130 P **P 16 38 15.5 +0.7**
WR0 Warramunga Arr 67.07 130 P **P 16 38 16.3 +0.6**
WR0 IAmb IAmb 16 38 22.3
comp=Z,8.0nm,0.7s
NWAO Narrogin (SRO) 67.52 152 P **P 16 38 17.6 -0.6**
DBG Daneborg 67.55 344 *i* P **P 16 38 17.9 0.0**
DBG IAmb IAmb 16 38 19.9
comp=Z,5.2nm,0.8s
AS31 Alice Springs 69.23 133 P **P 16 38 29.5 +0.3**
ASAR Alice Springs 69.23 133 P **P 16 38 29.9 +0.7**
comp=Z,7.3nm,0.7s,baz=315,slow=6.3,SNR=73
ASAR Alice Springs 69.23 133 P **P 16 38 29.0 -0.2**
PMG Port Moresby 70.06 113 P **P 16 38 35.4 +0.9**
comp=Z,9.4nm,0.7s,baz=314,slow=12,SNR=6.0
PMG Port Moresby 70.06 113 P **P 16 38 34.9 +0.4**
PMG IAmb IAmb 16 38 36.2
comp=Z,9.0nm,0.8s
LSZ Lusaka 70.27 240 P **P 16 38 35.0 -0.9**
LSZ IAmb IAmb 16 38 44.6
comp=Z,5.5nm,0.6s
FORT Forrest 71.00 142 P **P 16 38 39.1 -0.8**
RABL Rabaul 71.45 105 P **P 16 38 41.0 -2.0**
RABL IAmb IAmb 16 38 45.4
comp=Z,17nm,1.1s
NEEM North Greenlan 71.75 351 *i* P **P 16 38 45.0 +0.8**
NEEM IAmb IAmb 16 38 45.8
comp=Z,27nm,0.8s
A21K Barrow 72.07 17 P **P 16 38 44.8 -1.0**
A21K IAmb IAmb 16 38 55.6
comp=Z,14nm,0.9s
EUNU Eureka 72.19 359 P **P 16 38 47.4 +0.9**
EUNU IAmb IAmb 16 38 48.7
comp=Z,13nm,0.8s
ESDC Sonseca Array 72.51 306 P **P 16 38 49.3 +0.2**
comp=Z,3.3nm,0.8s,baz=56,slow=5.6,SNR=25
ESDC Sonseca Array 72.51 306 P **P 16 38 48.6 -0.5**
PAB San Pablo 72.84 306 P **P 16 38 50.6 -0.4**
PAB IAmb IAmb 16 38 57.2
comp=Z,7.7nm,0.8s
SUMG Summit 72.89 345 ⇑*i*P **P 16 38 52.0 +0.8**
SUMG IAmb IAmb 16 38 53.3
comp=Z,15nm,0.9s
SUMG Summit 72.89 345 P **P 16 38 52.5 +1.3**
MVO Moncorvo 74.10 308 *eP* **P 16 38 59.0 +0.5**
comp=Z,31nm,1.9s
TULEG Thule 74.61 354 *i* P **P 16 39 00.4 -0.4**
TULEG IAmb IAmb 16 39 01.2
comp=Z,8.2nm,0.6s
TULEG Thule 74.61 354 P **P 16 39 00.2 -0.5**
TULEG IAmb IAmb 16 39 01.6
comp=Z,10nm,0.8s
PVIS Viseu 74.88 308 *eP* **P 16 39 03.8 +0.8**
PBAR Barrancos 75.31 306 *eP* **P 16 39 06.1 +0.7**
ICESG Greenland Ices 75.48 342 *i* P **P 16 39 07.5 +1.2**
ICESG IAmb IAmb 16 39 08.3
comp=Z,22nm,0.8s
CTA Charters Tower 75.55 122 P **P 16 39 08.0 +1.0**
comp=Z,4.5nm,0.8s,baz=311,slow=5.8,SNR=9.6
CTAO Charters Tower 75.55 122 P **P 16 39 07.8 +0.8**
CTAO IAmb IAmb 16 39 08.9
comp=Z,20nm,1.4s
TOLK Toolik Lake Re 75.63 18 P **P 16 39 08.2 +1.3**
PVAQ Vaqueiros 76.11 305 *eP* **P 16 39 10.7 +0.7**
comp=Z,40nm,1.6s
UPNV Upernavik 76.28 349 *i* P **P 16 39 10.1 -0.3**
UPNV IAmb IAmb 16 39 11.2
comp=Z,8.2nm,0.6s
COLD Coldfoot 76.39 19 P **P 16 39 11.7 +0.6**
COLD IAmb IAmb 16 39 13.4
comp=Z,8.4nm,1.1s
BBOO Buckleboo 77.05 138 P **P 16 39 15.4 +0.1**
RES Resolute Bay 77.67 0 P **P 16 39 19.0 +0.9**
MLY Manley 77.67 21 P **P 16 39 17.8 -0.6**
MLY IAmb IAmb 16 39 20.7
comp=Z,14nm,1.3s
I23K Minto, Yukon-K 78.03 21 P **P 16 39 21.6 +1.3**
I23K IAmb IAmb 16 39 23.4
comp=Z,5.1nm,0.8s
LBTB Lobatse 78.16 233 P **P 16 39 21.7 0.0**
LBTB IAmb IAmb 16 39 22.7
comp=Z,8.2nm,0.9s
BPAW Bear Paw Mtn. 78.21 22 P **P 16 39 22.2 +0.8**
BPAW IAmb IAmb 16 39 31.0
comp=Z,8.5nm,1.0s
MDM Murphy Dome 78.52 21 P **P 16 39 24.1 +1.0**
MDM IAmb IAmb 16 39 25.2
comp=Z,21nm,1.4s
PPLA Purkeypile 78.58 23 P **P 16 39 25.1 +1.4**
PPLA IAmb IAmb 16 39 34.9
comp=Z,6.6nm,0.8s
TOA0 Torodi Ar. Sit 78.70 279 P **P 16 39 24.3 -0.6**
TORD Torodi Ar. Bea 78.70 279 P **P 16 39 24.4 -0.5**
comp=Z,3.3nm,0.8s,baz=52,slow=5.0,SNR=19
TORD Torodi Ar. Bea 78.70 279 P **P 16 39 24.3 -0.6**
IL31 79.06 20 P **P 16 39 25.9 -0.1**
ILAR Eielson Array 79.06 20 P **P 16 39 26.1 0.0**
comp=Z,2.6nm,0.6s,baz=307,slow=4.8,SNR=25
ILAR PP **PP 16 42 23.5 -1.0**
comp=Z,2.0nm,0.9s,baz=303,slow=6.7,SNR=7.7
ILAR Eielson Array 79.06 20 P **P 16 39 25.7 -0.3**
DY2G Dye2 79.11 342 *i* P **P 16 39 27.3 +0.7**
DY2G IAmb IAmb 16 39 27.9
comp=Z,8.0nm,0.6s
MCK McKinley 79.13 22 P **P 16 39 26.1 -0.4**
MCK IAmb IAmb 16 39 36.1
comp=Z,16nm,1.4s
SKT Skwentna 79.41 24 IAmb IAmb 16 39 29.7
comp=Z,20nm,1.0s
STKA Stephens Creek 79.80 134 P **P 16 39 30.8 +0.4**
comp=Z,4.1nm,0.5s,baz=323,slow=4.0,SNR=14
STKA Stephens Creek 79.80 134 P **P 16 39 30.4 0.0**
SUA Susitna One 80.03 24 P **P 16 39 31.8 +0.3**
SUA IAmb IAmb 16 39 33.3
comp=Z,7.9nm,0.8s
SCRK Sand Creek 80.51 20 IAmb IAmb 16 39 35.8
comp=Z,12nm,1.1s
BOSA Boshof 80.64 231 P **P 16 39 34.8 -0.4**
comp=Z,4.0nm,0.8s,baz=57,slow=6.7,SNR=6.1
BOSA Boshof 80.64 231 P **P 16 39 34.2 -1.0**
C36M Paulatuk 80.65 10 IAmb IAmb 16 39 35.7
comp=Z,14nm,1.2s
SCM Sheep Creek Mo 80.98 23 P **P 16 39 37.0 +0.4**
SCM IAmb IAmb 16 39 38.6
comp=Z,14nm,0.9s
PWL Port Wells 81.31 24 P **P 16 39 38.8 +0.5**
PWL IAmb IAmb 16 39 45.1
comp=Z,18nm,1.3s
KDAK Kodiak Island 81.75 27 P **P 16 39 41.3 +0.7**
KDAK IAmb IAmb 16 39 42.2
comp=Z,17nm,0.9s
L27K Beaver Creek, 81.84 20 P **P 16 39 41.7 +0.7**
L27K IAmb IAmb 16 39 43.8
comp=Z,7.0nm,1.1s
BCAR Beaver Creek A 81.85 20 P **P 16 39 41.7 +0.6**
N25K Chitina, Valde 82.05 22 IAmb IAmb 16 39 45.0
comp=Z,12nm,1.0s
BMRM Bremner River 82.52 22 P **P 16 39 44.4 -0.2**
BMRM IAmb IAmb 16 39 46.5
comp=Z,4.2nm,0.8s
MCARA McCarthy VSAT 82.73 21 P **P 16 39 47.1 +1.5**
RAGM Ragged Mountai 82.92 23 P **P 16 39 47.7 +1.0**
RAGM IAmb IAmb 16 39 55.4
comp=Z,7.5nm,1.0s
KOWA Kowa 83.07 283 P **P 16 39 47.4 -0.8**
KOWA IAmb IAmb 16 39 54.5
comp=Z,6.7nm,0.8s
CRQM Cirque 83.16 22 P **P 16 39 48.5 +0.4**
CRQM IAmb IAmb 16 39 50.6
comp=Z,6.7nm,0.9s
TGL Tana Glacier 83.26 22 P **P 16 39 49.1 +0.5**
TGL IAmb IAmb 16 39 51.0
comp=Z,11nm,1.0s
CTGM Chitina Glacie 83.58 21 P **P 16 39 50.8 +0.5**
CTGM IAmb IAmb 16 39 59.3
comp=Z,6.8nm,1.0s
HYT Haines Junctio 84.87 20 P **P 16 39 57.5 +0.7**
HYT IAmb IAmb 16 39 59.3
comp=Z,12nm,1.2s
WHY Whitehorse 85.77 19 IAmb IAmb 16 40 03.1
comp=Z,9.6nm,1.4s
SUR Sutherland 85.97 230 P **P 16 40 02.9 +0.1**
SUR IAmb IAmb 16 40 03.7
comp=Z,14nm,1.2s
DBIC Dimbokro 87.37 276 P **P 16 40 09.7 -0.1**
comp=Z,3.4nm,0.6s,baz=33,slow=3.0,SNR=5.8
DBIC Dimbokro 87.37 276 P **P 16 40 08.6 -1.2**
DBIC IAmb IAmb 16 40 21.4
comp=Z,8.6nm,0.9s
YKA Yellowknife Ar 88.47 9 P **P 16 40 14.3 +0.2**
comp=Z,2.9nm,0.7s,baz=339,slow=4.6,SNR=52
FCC Fort Churchill 93.67 360 P **P 16 40 37.5 -0.8**
FCC IAmb IAmb 16 40 39.6
comp=Z,10nm,1.5s
PDAR Pinedale Array 108.31 12 PKiKP **PKiKP 16 45 50.5 -0.4**
comp=Z,0.3nm,0.5s,baz=67,slow=3.6,SNR=4.0
TXAR Lajitas Array 122.40 10 PKP **PKPdf 16 46 18.0 0.0**
comp=Z,0.6nm,0.5s,baz=74,slow=0.1,SNR=9.9
SAML Samuel 145.10 297 **PKPdf 16 47 00.2 -0.2**
CPUP Villa Florida 147.09 264 PKPbc **PKPdf 16 47 03.5 +0.1**
comp=Z,3.3nm,0.8s,baz=163,slow=1.0,SNR=6.8
LPAZ La Paz 153.16 290 PKP **PKPdf 16 47 14.1 +0.1**
comp=Z,1.3nm,0.9s,baz=12,slow=8.4,SNR=4.1
LPAZ PKPbc **PKPbc 16 47 21.2 -0.1**
comp=Z,3.1nm,0.8s,baz=64,slow=3.6,SNR=12
LPAZ PKPab **PKPab 16 47 31.7 -1.3**
comp=Z,3.2nm,0.9s,baz=56,slow=5.0,SNR=6.3

INET ***25*** *16:32:28.3, 10°.23N×86°.27W, h28km, MW3.5*
UCR 25 16:32:26.9±1.4, 10°.30N×86°.32W, h16km±8km, MW4.0, 6C,
Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res ISC
				Op			h m s	
SAJU	**San Juanillo,**	**0.64**	**111**	*eP*		Pg	16 32 39.5	0.0
GRZA	**Playa Garza**	**0.77**	**120**	*eP*		Pb	16 32 41.6	-0.3
GUAI	**GUAI**	**0.79**	**92**	⇑*i*P		Pb	16 32 41.9	-0.5
GUAI				*i* S		Sb	16 32 51.9	-0.9
INDI	**Punta indio, G**	**0.91**	**118**	*eP*		Pb	16 32 43.7	-0.6
PLVR	**Palo Verde**	**0.95**	**87**	*eP*		Pb	16 32 43.4	-1.7
GBS3	**Finca Las Img**	**0.97**	**61**	⇑*eP*		Pb	16 32 44.7	-0.7
LAPC	**Finca la Perla**	**0.98**	**62**	⇑*i*P		Pb	16 32 43.8	-1.8
BUEV	**Buena Vista**	**1.02**	**61**	*i* P		Pb	16 32 45.5	-0.8
BUEV				*i* S		Sn	16 33 00.5	-0.2

GB1A	**Borinquen Arri**	**1.04**	**60**⇑	*i*P		Pb	16 32 45.8	-0.8
GB1A				*i* S		Sg	16 33 00.5	-0.2
GPS3	**Bodega del ICE**	**1.04**	**64**	*i* P		Pb	16 32 45.8	-0.7
GPS2	**Hotel Rincn d**	**1.05**	**65**	*e*P		Pb	16 32 46.0	-0.7
BUAI	**Buenos Aires**	**1.12**	**59**	*e*P		Pb	16 32 46.2	-1.7
COLC	**Colonia**	**1.15**	**72**⇑	*i*P		Pn	16 32 47.3	-1.0
CUI	**Cuipilapa**	**1.19**	**73**⇑	*i*P		Pn	16 32 47.1	-1.8
HORNC	**Hornillas**	**1.19**	**70**	*i* P		Pn	16 32 48.0	-1.0
ACAL	**Aguas Claras**	**1.30**	**75**	*e*P		Pn	16 32 50.0	-0.5
JTS	**Las Juntas de**	**1.34**	**90**	*e*P		Pn	16 32 50.1	-0.9
LAFE	**Finca La Fe, P**	**1.47**	**109**	*e*P		Pn	16 32 51.3	-1.4
ARE1	**Arenal 1**	**1.58**	**84**	*e*P		Pn	16 32 54.6	+0.4
CEDE	**Laguna Cedeo**	**1.60**	**83**	*e*P		Pn	16 32 54.0	-0.5
RIMA	**Rio Macho**	**2.47**	**102**	*e*P		Pn	16 33 07.9	+1.2

IDC ***25*** *16:36:09.0±1.8, 27°.5N×85°.74E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/58, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=61.0km s-min=24.9km az=66.0*

ISC 25 16:36:10.8±1.8, 27°.3N±0°.2×85°.8E±0°.4, h10km, n6, σ0.98/6, mb3.6/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.67**	**353**	P		**P**	**16 40 38.5**	**-1.4**
	0.2nm,0.3s,baz=178,slow=10,SNR=7.3							
KURBB	**Kurchatov Arra**	**23.96**	**349**	P		**P**	**16 41 24.8**	**-0.3**
	0.2nm,0.6s,baz=136,slow=4.6,SNR=2.4							
SONM	**Songino Array**	**26.09**	**33**	P		**P**	**16 41 45.4**	**+0.7**
	0.8nm,0.6s,baz=216,slow=10,SNR=6.0							
ZALV	**Zalesovo Beam**	**26.65**	**359**	P		**P**	**16 41 49.5**	**0.0**
	0.5nm,0.3s,baz=182,slow=9.6,SNR=2.9							
FINES	**FINESS Array B**	**52.00**	**328**	P		**P**	**16 45 20.6**	**+0.6**
	1.2nm,0.8s,baz=110,slow=8.3,SNR=3.4							
ASAR	**Alice Springs**	**68.74**	**133**	P		**P**	**16 47 14.8**	**-0.3**
	18nm,0.8s,baz=341,slow=7.3,SNR=8.3							

IDC 25 16:37:44.5±6.5, 28°.00N×85°.14E, h0km, mb3.1/2, mb1 3.3/4, mb1mx3.1/61, mbtmp3.2/4, ML3.4/2, Error ellipse: s-maj=133.8km s-min=40.6km az=51.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.84**	**124**	Pn		Pn	16 41 28.9	0.0
	0.1nm,0.3s,baz=320,slow=11,SNR=1.8							
MKAR	**Makanchi Array**	**18.90**	**354**	P		P	16 42 06.6	+0.1
	0.1nm,0.3s,baz=179,slow=12,SNR=4.5							
KURBB	**Kurchatov Arra**	**23.15**	**349**	P		P	16 42 52.2	-0.1
	0.1nm,0.5s,baz=181,slow=9.3,SNR=2.5							
SONM	**Songino Array**	**25.80**	**34**	P		P	16 43 17.4	0.0
	0.5nm,0.7s,baz=218,slow=9.1,SNR=3.8							

IDC 25 16:41:02.8±29.0, 27°.14N×84°.53E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.1/54, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=491.7km s-min=88.6km az=25.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.69**	**355**	P		P	16 45 33.6	0.0
	0.1nm,0.3s,baz=173,slow=12,SNR=8.7							
ZALV	**Zalesovo Beam**	**26.78**	**0**	P		P	16 46 44.2	0.0
	0.6nm,0.6s,baz=190,slow=7.3,SNR=2.1							
SONM	**Songino Array**	**26.81**	**34**	P		P	16 46 44.8	0.0
	0.1nm,0.3s,baz=219,slow=9.3,SNR=2.3							

BJI ***25*** *16:41:10.9±0.0, 2°.75N×128°.57E, h133km, mB5.5/61, mb5.5/88*

NEIC ***25*** *16:41:15.7±2.0, 3°.12N×0°.03×128°.16E±0°.08, h127km±4km, mb5.3/166, Error ellipse: s-maj=12.0km s-min=3.6km az=83.0*

DJA ***25*** *16:41:16.7±0.2, 3°N±2°×12°.8E±°, h140km±2km, M5.3/70, mB5.7/55, mb5.4/70, MLv5.9/16, Mw(mB)5.2/55, MwMwp7.3/1, Mwp7.0/1*

IDC ***25*** *16:41:16.6±0.9, 3°.12N×128°.17E, h133km±7km, mb4.8/44, mb1 4.8/48, mb1mx4.8/53, mbtmp5.2/48, MS4.0/18, Ms1 4.0/18, ms1mx3.8/44, Error ellipse: s-maj=10.3km s-min=5.7km az=75.0*

MOS ***25*** *16:41:17.6±0.9, 3°.16N×128°.12E, h159km, mb5.2/51, Error ellipse: s-maj=7.9km s-min=4.1km az=109.5*

GCMT ***25*** *16:41:18.7±0.3, 3°.18N±0°.02×127°.97E±0°.02, h141km±4km, MW5.5/100, Moment Tensor Solution. s11,c12; s100,c136; Duration: 1⁋4 Moment tensor: Scale 10^17 Nm; Mrr0.92±.11; Mθθ1.28±.09; Mϕϕ-2.20±.10; Mrθ1.17±.07; Mθϕ0.96±.10; Mϕr0.03±.08; Best double couple: M≥2.43900×10^17 NP1:ϕs24.00000°, δ61.00000°, λ155.00000°. NP2:ϕs127.00000°, δ68.00000°, λ32.00000°. Principal axes: T 2.4090, Plg38.0000°, Azm348.0000°; N 0.0590, Plg52.0000°, Azm158.0000°; P -2.4700, Plg5.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 16:41:17.1±0.3, 3.05N±0°.03×128°.08E±0°.04, h139km±2km, h139km: pP-P, n620, σ1.954/682, mb5.2/213, 113C-57D, Fault plane solution: NP1:ϕs21.02403°, δ57.60068°, λ152.74741°. NP2:ϕs126.45324°, δ67.25487°, λ35.52083°. Principal axes: T Plg40.7130°, Azm347.0533°; N Plg48.6433°, Azm154.8942°; P Plg6.0554°, Azm251.8157°; **North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**2.37**	**198**	Pn		**Pn**	**16 41 57.1**	**+1.1**
TNTI	**Ternate**	**2.37**	**198**	P		**Pn**	**16 41 57.2**	**+1.1**
SGSI	**Sangihe**	**2.62**	**284**	P		**Pn**	**16 41 58.7**	**-0.6**
SGSI				S		**Sn**	**16 42 30.0**	**-1.7**
DDMP	**Don Marcelino,**	**3.85**	**322**	*e*P		**Pn**	**16 42 13.0**	**-2.1**
MATI	**Mati**	**4.28**	**335**	*e*P		**Pn**	**16 42 18.5**	**-2.3**
DAV	**Davao City (W)**	**4.71**	**328**	P		**Pn**	**16 42 27.1**	**+0.6**
	397nm,0.3s,baz=216,slow=1.9,SNR=48							
DAV				S		**Sn**	**16 43 21.3**	**+0.8**
	72nm,0.3s,baz=49,slow=8.9,SNR=4.5							
DAV	**Davao City (W)**	**4.71**	**328**			**Pn**	**16 42 26.6**	**+0.1**
KMSI	**Cibinong**	**4.78**	**239**	P		**Pn**	**16 42 27.9**	**+0.5**
KMSI				S		**Sn**	**16 43 21.8**	**-0.3**
SKMP	**Bagumbayan, Su**	**4.93**	**315**	*e*P		**Pn**	**16 42 29.4**	**-0.1**
SWI	**Sorong**	**5.02**	**141**	P		**Pn**	**16 42 31.7**	**+1.1**
	5.1nm11μm793nm,1.4s							
SWI				S		**Sn**	**16 43 26.0**	**-1.9**
	5.1nm11μm793nm,1.4s							
SIJI	**Sorong**	**5.03**	**141**	P		**Pn**	**16 42 31.4**	**+0.6**
	59nm,0.3s,baz=322,slow=16,SNR=147							
SIJI				S		**Sn**	**16 43 26.8**	**-1.4**
	54nm,0.3s,baz=158,slow=21,SNR=13							
SANI	**Sanana**	**5.48**	**202**	P		**Pn**	**16 42 35.5**	**-1.3**
	8.4nm22μm882nm,0.9s							
GTOI	**Gorontalo**	**5.60**	**245**	P		**Pn**	**16 42 39.6**	**+1.2**
	16nm51μm4μm,0.5s							
BUKP	**Musuan**	**5.66**	**328**	*e*P		**Pn**	**16 42 39.1**	**-0.2**
NLAI	**Namlea**	**6.32**	**189**	P		**Pn**	**16 42 48.4**	**+0.3**
	2.9nm7μm414nm,0.6s							
CGP	**Cagayan de Oro**	**6.34**	**328**‖	*e*P		**Pn**	**16 42 46.9**	**-1.4**
BUTP	**Butuan**	**6.37**	**338**	*e*P		**Pn**	**16 42 48.7**	**0.0**
MRSI	**Marisa**	**6.65**	**248**	P		**Pn**	**16 42 54.2**	**+1.8**
	22nm61μm7μm,1.1s							
PAGZ	**Pagadian**	**6.68**	**316**	*e*P		Pn	16 42 38.8	-14
LUWI	**Luwuk**	**6.68**	**233**	Pn		**Pn**	**16 42 52.0**	**-0.9**
LUWI	**Luwuk**	**6.68**	**233**	P		**Pn**	**16 42 51.7**	**-1.2**
	21nm18μm1μm,0.7s							
GLSP	**General Luna,**	**6.97**	**344**	*e*P		**Pn**	**16 42 54.3**	**-2.4**
FAKI	**Fak Fak**	**7.25**	**145**	Pn		**Pn**	**16 43 01.7**	**+1.2**
FAKI	**Fak Fak**	**7.25**	**145**	P		**Pn**	**16 43 02.0**	**+1.5**
	2.4nm8μm582nm,1.1s							
APSI	**Ampana**	**7.54**	**239**	P		**Pn**	**16 43 04.3**	**-0.1**
	6.6nm11μm676nm,0.7s							
TOLI2	**Tolitoli**	**7.54**	**255**	Pn		**Pn**	**16 43 04.2**	**-0.3**
MSLP	**Maasin**	**7.73**	**336**	*e*P		**Pn**	**16 43 04.4**	**-2.6**
CNOP	**Candoni, Negro**	**8.63**	**322**	*e*P		**Pn**	**16 43 18.3**	**-0.8**
OCLP	**Ormoc**	**8.66**	**337**	*e*P		**Pn**	**16 43 18.9**	**-0.6**
BAKI	**Biak**	**9.06**	**118**	P		**Pn**	**16 43 27.1**	**+2.3**
	1μm,1.0s							
SRPI	**Serui, Papua**	**9.51**	**121**	P		**Pn**	**16 43 32.4**	**+1.6**
	5μm515nm,0.9s							
MYLDM	**Lahad Datu**	**9.79**	**283**	Pn		**Pn**	**16 43 36.0**	**+1.5**
RCP	**Roxas**	**9.97**	**328**⇑	*e*P		**Pn**	**16 43 37.7**	**+0.7**
TTSI	**Tana Toraja**	**10.24**	**234**	P		**Pn**	**16 43 38.7**	**-1.8**
	4μm386nm,1.1s							
CUYO	**Cuyo Island**	**10.45**	**318**	*e*P		**Pn**	**16 43 41.6**	**-1.7**
SPSI	**Sidrap Palu**	**10.84**	**230**	P		**Pn**	**16 43 48.3**	**-0.3**
	4μm202nm,0.6s							
BNSI	**Bone**	**10.87**	**227**	P		**Pn**	**16 43 49.0**	**0.0**
	3μm314nm,1.0s							
SAUI	**Saumlaki**	**11.42**	**164**	P		**Pn**	**16 43 54.4**	**-1.8**
	568nm,1.0s							
KAPI	**Kappang**	**11.55**	**226**	P		**Pn**	**16 43 59.3**	**+1.4**
	22nm,0.3s,baz=31,slow=4.8,SNR=33							
KAPI				S		**Sn**	**16 46 03.2**	**-2.2**
	25nm,0.3s,baz=85,slow=22,SNR=14							
SJMP	**San Jose**	**11.62**	**324**	*e*P		**Pn**	**16 43 58.0**	**-0.8**
BATP	**Bataraza**	**11.71**	**300**	*e*P		**Pn**	**16 44 02.1**	**+2.1**
ENPP	**El Nido**	**11.80**	**314**	*e*P		**Pn**	**16 43 59.5**	**-1.8**
BKB	**Balikpapan**	**11.97**	**249**			**Pn**	**16 44 05.1**	**+1.7**
BKB	**Balikpapan**	**11.97**	**249**	P		**Pn**	**16 44 03.8**	**+0.4**
	7μm721nm,1.4s							
KKM	**Kota Kinabalu**	**12.20**	**285**	Pn		**Pn**	**16 44 06.1**	**-0.4**
JCNP	**Jose Panganiba**	**12.37**	**335**	*e*P		**Pn**	**16 44 08.0**	**-0.6**
LQP	**Lukban**	**12.75**	**330**	*e*P		**Pn**	**16 44 14.2**	**+0.4**
MMRI	**Maumere**	**12.99**	**207**	P		**Pn**	**16 44 17.2**	**+0.6**
	3μm368nm,1.0s							
TGY	**Tagaytay City**	**13.05**	**328**	P		**Pn**	**16 44 19.1**	**+1.5**
	106nm,0.3s,baz=153,slow=3.7,SNR=29							
TGY				LR		LR	16 50 05.5	
	comp=Z,925nm,20.0s,baz=108,slow=41							
LUBP	**Lubang**	**13.14**	**324**	*e*P		**Pn**	**16 44 18.7**	**+0.2**
SOEI	**Soe**	**13.27**	**197**	Pn		**Pn**	**16 44 21.6**	**+1.1**
SOEI	**Soe**	**13.27**	**197**	P		**Pn**	**16 44 21.1**	**+0.7**
	3μm190nm,0.9s							
MACP	**Maragondon, Ca**	**13.30**	**327**	*e*P		**Pn**	**16 44 20.1**	**-0.6**
GENI	**Genyem**	**13.32**	**115**	P		**Pn**	**16 44 21.4**	**+0.5**
	9μm1μm,0.8s							
MTKI	**Muara Teweh, K**	**13.76**	**253**	P		**Pn**	**16 44 26.7**	**+0.1**
	3μm176nm,1.3s							
JAY	**Jayapura**	**13.78**	**114**	P		**Pn**	**16 44 27.3**	**+0.5**
	1μm143nm,0.9s							
BATI	**Baumata**	**13.88**	**198**	P		**P**	**16 44 30.4**	**-1.4**
	12nm,0.3s,baz=173,slow=0.5,SNR=18							
BATI				S		**S**	**16 47 08.6**	**-4.8**
	3.9nm,0.3s,baz=352,slow=20,SNR=2.3							
BATI	**Baumata**	**13.88**	**198**	P		**Pn**	**16 44 28.4**	**+0.3**
	1μm98nm,0.6s							
BBKI	**Banjar Baru**	**14.73**	**244**	P		**Pn**	**16 44 38.7**	**-0.1**
	3μm202nm,1.8s							
BASI	**Baing, Sumba**	**15.15**	**209**	P		**P**	**16 44 45.2**	**-0.7**
	2μm178nm,0.6s							
WBSI	**Waikabubak, Su**	**15.29**	**214**	P		**Pn**	**16 44 45.5**	**-0.3**
	2μm190nm,0.9s							
BOLP	**Bolinao**	**15.49**	**329**	*e*P		**Pn**	**16 44 48.3**	**0.0**
PLAI	**Plampang**	**15.64**	**221**	P		**P**	**16 44 51.4**	**+0.1**
	5μm634nm,1.1s							
SBUM	**Sibu**	**15.85**	**268**			**P**	**16 44 53.8**	**+0.1**
SBUM					IAmb	IAmb	16 44 59.9	
	comp=Z,299nm,1.1s							
MTN	**Manton Dam**	**16.08**	**169**	P		**Pn**	**16 44 54.2**	**-1.3**
	baz=16,SNR=100							
MTN	**Manton Dam**	**16.08**	**169**	Pn		**Pn**	**16 44 53.6**	**-1.8**
MTN					IAmb	IAmb	16 44 59.6	
	comp=Z,111nm,0.7s							
APYP	**Conner**	**16.18**	**336**	*e*P		**Pn**	**16 44 56.3**	**-0.3**
TWSI	**Taliwang, Sumb**	**16.18**	**224**	P		**P**	**16 44 58.3**	**+1.0**
	comp=Z,2μmcomp=Z,214nm,1.1s							
ABRA	**Dolores**	**16.21**	**334**	*e*P		**Pn**	**16 44 56.7**	**-0.4**
KDU	**Kakadu**	**16.23**	**164**	P		**Pn**	**16 44 56.6**	**-0.7**
	baz=16,SNR=127							
SZP	**Santa**	**16.24**	**333**	P		**Pn**	**16 44 57.1**	**-0.3**
STKI	**Sintang**	**16.86**	**260**	P		**Pn**	**16 45 06.3**	**+1.3**
	comp=Z,92nm,1.2s							
SRBI	**Singaraja**	**16.94**	**229**	P		**P**	**16 45 03.0**	**-2.7**
	comp=Z,5μmcomp=Z,286nm,1.1s							
KMMI	**Kalianget**	**17.29**	**235**	P		**P**	**16 45 09.2**	**-0.4**
	comp=Z,5μmcomp=Z,242nm,2.2s							
DNP	**Denpasar**	**17.33**	**228**	P		**Pn**	**16 45 11.1**	**+0.4**
	comp=Z,439nm,1.0s							
PBKI	**Pangkalan Bun**	**17.37**	**251**	P		**P**	**16 45 10.5**	**+0.1**
	comp=Z,6μmcomp=Z,611nm,1.2s							
ABJI	**Asem Bagus**	**17.52**	**232**	P		**P**	**16 45 10.2**	**-1.8**
	comp=Z,7μmcomp=Z,264nm,1.2s							
KSM	**Kuching**	**17.83**	**265**	P		**Pn**	**16 45 17.3**	**+0.6**
KSM					IAmb	IAmb	16 45 21.4	
	comp=Z,278nm,1.0s							
JAGI	**Jajag, Banyuwa**	**18.00**	**230**			**Pn**	**16 45 20.4**	**+1.8**
JAGI					IAmb	IAmb	16 45 22.3	
	comp=Z,295nm,1.1s							
JAGI	**Jajag, Banyuwa**	**18.00**	**230**	P		**Pn**	**16 45 19.0**	**+0.3**
	comp=Z,9μmcomp=Z,535nm,1.2s							
KNRA	**Kununurra**	**18.62**	**178**	P		**P**	**16 45 24.4**	**+0.3**
KNRA					IAmb	IAmb	16 45 26.9	
	comp=Z,122nm,0.9s							
MANU	**Manus Island**	**19.93**	**104**	P		**P**	**16 45 38.5**	**+0.1**
SMRI	**Semarang**	**20.26**	**240**	P		**P**	**16 45 42.5**	**+0.6**
SMRI					IAmb	IAmb	16 45 44.7	
	comp=Z,259nm,1.1s							
SMRI	**Semarang**	**20.26**	**240**	P		**P**	**16 45 39.7**	**-2.2**
	comp=Z,249nm,1.0s							
UGM	**Wanagama**	**20.62**	**238**	P		**P**	**16 45 46.0**	**+0.2**
UGM	**Wanagama**	**20.62**	**238**	P		**P**	**16 45 42.1**	**-3.7**
	comp=Z,423nm,1.0s							
TWG	**Pinlang**	**20.80**	**342**	P		**P**	**16 45 44.6**	**-3.0**
TWG					IAmb	IAmb	16 45 45.8	
	comp=Z,80nm,0.6s							
FITZ	**Fitzroy Crossi**	**21.15**	**186**	P		**P**	**16 45 50.7**	**-0.6**
	comp=Z,6.2nm,0.4s,baz=18,slow=8.8,SNR=42							
FITZ	**Fitzroy Crossi**	**21.15**	**186**	P		**P**	**16 45 50.6**	**-0.8**
	baz=21,SNR=66							
FITZ	**Fitzroy Crossi**	**21.15**	**186**	P		**P**	**16 45 50.4**	**-0.9**
TPI	**Tanjungpandan**	**21.22**	**254**	P		**P**	**16 45 52.0**	**-0.1**
	comp=Z,2μmcomp=Z,131nm,1.4s							
YULB	**Yu-li**	**21.26**	**343**	P		**P**	**16 45 49.1**	**-3.5**
YULB					IAmb	IAmb	16 45 56.8	
	comp=Z,45nm,0.6s							
TPUB	**Ta-pu**	**21.39**	**341**	P		**P**	**16 45 50.2**	**-3.6**
TPUB					IAmb	IAmb	16 45 55.6	
	comp=Z,160nm,0.7s							
SSLB	**Suanglung**	**21.74**	**342**	P		**P**	**16 45 54.9**	**-2.8**
SSLB					IAmb	IAmb	16 46 03.1	
	comp=Z,83nm,0.7s							
YOJ	**Yonaguni jima**	**21.84**	**348**	P		**P**	**16 45 57.1**	**-1.5**
YOJ					pmax	pmax		
	comp=Z,202nm,0.8s							
YOJ	**Yonaguni jima**	**21.84**	**348**	P		**P**	**16 45 57.1**	**-1.5**
NACB	**Ninganchiao**	**21.92**	**344**	P		**P**	**16 45 58.0**	**-1.5**
JCJI	**Jatiwangi**	**21.93**	**244**	P		**P**	**16 46 00.1**	**+0.4**
	comp=Z,347nm,1.3s							
YHNB	**Yeheng**	**22.45**	**344**	P		**P**	**16 46 03.7**	**-1.1**
PPBI	**Pangkal Pinang**	**22.54**	**257**	P		**P**	**16 46 05.6**	**-0.1**
	comp=Z,5μmcomp=Z,57nm,1.2s							
COEN	**Coen**	**22.57**	**139**	P		**P**	**16 46 05.2**	**-0.9**
LEM	**Lembang**	**22.66**	**244**	P		**P**	**16 46 07.3**	**+0.2**
	comp=Z,119nm,1.0s,baz=76,slow=10,SNR=17							
LEM	**Lembang**	**22.66**	**244**	P		**P**	**16 46 06.0**	**-1.1**
	comp=Z,2μmcomp=Z,64nm,1.1s							
PMG	**Port Moresby**	**22.68**	**123**	P		**P**	**16 46 05.2**	**-1.9**
	comp=Z,6.7nm,0.7s,baz=237,slow=4.7,SNR=3.0							
TATO	**Taipei**	**22.71**	**344**	P		**P**	**16 46 05.7**	**-1.5**
TATO					IAmb	IAmb	16 46 08.1	
	comp=Z,95nm,0.8s							
TATO	**Taipei**	**22.71**	**344**	P		**P**	**16 46 06.2**	**-1.0**
JMZ	**Minamidaito 2**	**22.84**	**7**	P		**P**	**16 46 07.7**	**-0.7**
CBJI	**Citeko**	**23.19**	**246**	P		**P**	**16 46 10.3**	**-1.5**
	comp=Z,6μmcomp=Z,222nm,1.1s							
KNMB	**Chin-men Tao**	**23.25**	**337**	P		**P**	**16 46 12.3**	**0.0**
DBJI	**Dramaga**	**23.33**	**246**	P		**P**	**16 46 10.6**	**-2.6**
	comp=Z,4μmcomp=Z,217nm,1.4s							
WB0	**Warramunga Arr**	**23.51**	**165**	P		**P**	**16 46 14.3**	**-0.4**
QZH	**Quanzhou**	**23.61**	**338**⇑	*i*P		**P**	**16 46 15.5**	**0.0**
QZH				S		**S**	**16 50 20.5**	**+0.7**
QZH				SS		**SnSn**	**16 51 17.0**	**+2.4**
QZH				pmax		pmax		
	comp=Z,260nm,1.4s							
QZH				pmax		pmax		
	comp=Z,1μm,4.9s							
JOW	**Kunigami**	**23.65**	**0**	P		**P**	**16 46 15.3**	**-0.6**
	comp=Z,232nm,1.0s,baz=194,slow=8.2,SNR=28							
JOW				LR		LR	16 54 21.7	
	comp=Z,282nm,19.9s,baz=159,slow=33							
JOW	**Kunigami**	**23.65**	**0**	P		**P**	**16 46 15.7**	**-0.2**
WRAB	**Tennant Creek**	**23.65**	**165***c*	*i*P		**P**	**16 46 16.0**	**0.0**
WRAB				pmax		pmax		
	comp=Z,111nm,0.8s							
WRAB	**Tennant Creek**	**23.65**	**165**	P		**P**	**16 46 15.8**	**-0.2**
WRAB					IAmb	IAmb	16 46 18.4	
	comp=Z,116nm,0.9s							
WRA	**Warramunga Arr**	**23.66**	**165**	P		**P**	**16 46 16.0**	**-0.1**
	comp=Z,80nm,0.5s,baz=345,slow=10,SNR=712							
WRA				PcP		**PcP**	**16 49 57.4**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=340,slow=2.1,SNR=2.0							
WRA				S		**S**	**16 50 24.0**	**+3.3**
	comp=Z,6.3nm,0.8s,baz=346,slow=18,SNR=5.1							
WRA				ScP		**ScP**	**16 53 21.2**	**-1.3**
	comp=Z,1.4nm,0.6s,baz=339,slow=2.7,SNR=2.3							
WRA	**Warramunga Arr**	**23.66**	**165**	P		**P**	**16 46 14.6**	**-1.5**
WB2	**Warramunga Arr**	**23.66**	**165**	P		**P**	**16 46 15.6**	**-0.5**
	baz=24							
WB2	**Warramunga Arr**	**23.66**	**165**	P		**P**	**16 46 15.9**	**-0.2**
WB2					IAmb	IAmb	16 46 18.4	
	comp=Z,107nm,0.8s							
WR0	**Warramunga Arr**	**23.73**	**165**	P		**P**	**16 46 16.6**	**-0.1**
WR0					IAmb	IAmb	16 46 22.4	
	comp=Z,71nm,0.7s							
QIZ	**Qiongzhong**	**23.88**	**313**	P		**P**	**16 46 18.5**	**+0.4**
QIZ				pP		**pP**	**16 46 42.5**	**-3.0**
QIZ				S		**S**	**16 50 23.8**	**-0.6**
QIZ				pmax		pmax		
	comp=Z,94nm,1.5s							
QIZ				pmax		pmax		
	comp=Z,710nm,4.4s							
QIZ				LR		LR		
	comp=Z,1μm,15.1s							
QIZ				LR		LR		
	comp=Z,760nm,19.5s							
QIZ				LR		LR		
	comp=Z,580nm,14.5s							
MYKOM	**Kota Tinggi**	**24.24**	**268**	P		**P**	**16 46 22.9**	**+1.5**
MYKOM					IAmb	IAmb	16 46 29.4	
	comp=Z,81nm,1.1s							
KASI	**Kota Agung**	**25.05**	**250**	P		**P**	**16 46 29.4**	**+0.7**
	comp=Z,2μmcomp=Z,222nm,1.0s							
RABL	**Rabaul**	**25.12**	**107**	P		**P**	**16 46 28.8**	**-0.7**
LWLI	**Liwa**	**25.30**	**252**	P		**P**	**16 46 30.9**	**-0.3**
	comp=Z,809μmcomp=Z,10μmcomp=Z,87nm,1.3s							
UBPT	**Khong Chiam**	**25.38**	**300**	P		**P**	**16 46 32.9**	**+1.2**
	comp=Z,650nmcomp=Z,40nm,0.8s							
UBPT	**Khong Chiam**	**25.38**	**300**	P		**P**	**16 46 32.9**	**+1.2**
UBPT					IAmb	IAmb	16 46 34.2	
	comp=Z,52nm,0.8s							
PSA00	**Pilbara Seismi**	**25.76**	**198**	P		**P**	**16 46 35.8**	**+0.7**
PSA00	**Pilbara Seismi**	**25.76**	**198**	P		**P**	**16 46 34.7**	**-0.4**
PSA00					IAmb	IAmb	16 46 40.7	
	comp=Z,15nm,0.8s							
QIS	**Mount Isa**	**26.04**	**155**	P		**P**	**16 46 37.6**	**0.0**
	baz=26,SNR=52							
MTSU	**Mount Surprise**	**26.44**	**143**	P		**P**	**16 46 41.5**	**+0.3**
	baz=26,SNR=25							
IPM	**Ipoh**	**27.03**	**274**	P		**P**	**16 46 46.6**	**-0.1**
ASAR	**Alice Springs**	**27.15**	**168**	P		**P**	**16 46 47.3**	**-0.3**
	comp=Z,7.2nm,0.7s,baz=350,slow=7.2,SNR=65							
ASAR				PcP		**PcP**	**16 50 05.0**	**+0.2**
	comp=Z,8.4nm,0.6s,baz=354,slow=2.4,SNR=8.1							
ASAR				S		**S**	**16 51 14.1**	**-2.0**
	comp=Z,2.7nm,0.7s,baz=352,slow=19,SNR=4.1							
ASAR				ScP		**ScP**	**16 53 31.8**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=343,slow=3.1,SNR=8.1							
ASAR				ScS		**ScS**	**16 57 23.6**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=2.5,slow=5.0,SNR=5.5							
ASAR				LR		LR	16 59 37.3	
	comp=Z,571nm,19.2s,baz=0.5,slow=40							
ASAR	**Alice Springs**	**27.15**	**168**	P		**P**	**16 46 47.7**	**+0.1**
KULM	**Kulim**	**27.45**	**276**	P		**P**	**16 46 51.3**	**+1.0**
JCJ	**Chichijima**	**27.46**	**28**	P		**P**	**16 46 48.6**	**-1.7**
	comp=Z,100nm,0.5s,baz=275,slow=15,SNR=7.6							
JCJ	**Chichijima**	**27.46**	**28**	P		**P**	**16 46 47.8**	**-2.5**
WRKA	**Warakurna**	**27.92**	**180**	P		**P**	**16 46 54.1**	**-0.3**
	baz=28,SNR=51							
KHON	**Khonkaen**	**28.13**	**300**	P		**P**	**16 46 58.0**	**+1.7**
	comp=Z,107nm,0.9s							
JSU	**Suz

CM15	**Chiang Mai Arr**	**32.39**	**300**	P	**P**	**16 47 36.2**	**+2.3**		
	comp=Z,110nmcomp=Z,15nm,0.9s								
CM13	**Chiang Mai Arr**	**32.39**	**300**	P	**P**	**16 47 36.3**	**+2.3**		
	comp=Z,92nmcomp=Z,13nm,0.9s								
CMMT	**Chiang Mai**	**32.52**	**301**	P	**P**	**16 47 35.7**	**+0.6**		
	comp=Z,9.9nm,0.9s								
CM33	**Chiang Mai Arr**	**32.52**	**301**	P	**P**	**16 47 36.0**	**+0.9**		
CHTO	**Chiang Mai**	**32.53**	**301**	P	**P**	**16 47 34.8**	**-0.3**		
CHTO				pmax	pmax				
	comp=Z,21nm,1.0s								
CHTO	**Chiang Mai**	**32.53**	**301**	P	**P**	**16 47 34.8**	**-0.3**		
CHTO	**Chiang Mai**	**32.53**	**301**	P	**P**	**16 47 36.3**	**+1.2**		
CM32	**Chiang Mai Arr**	**32.54**	**301**	P	**P**	**16 47 37.0**	**+1.7**		
JWT	**Wachi**	**32.79**	**11**	P	**P**	**16 47 36.2**	**-0.9**		
JWT				IAmb	IAmb	16 47 37.8			
	comp=Z,41nm,0.7s								
KMI	**Kunming**	**32.81**	**314**	⇓P	**P**	**16 47 40.5**	**+2.7**		
KMI				sP	sP	16 48 22.5	0.0		
KMI				PP	**PP**	**16 48 54.0**	**-0.8**		
KMI				S	**S**	**16 52 47.0**	**+1.9**		
KMI				sS	sS	16 53 36.0	+0.3		
KMI				PcS	**PcS**	**16 54 03.8**	**-1.8**		
KMI				SS	**SS**	**16 55 04.3**	**-8.4**		
KMI				pmax	pmax				
	comp=Z,55nm,1.0s								
KMI				pmax	pmax				
	comp=Z,340nm,4.5s								
KMI				LR	LR				
	comp=Z,230nm,17.5s								
KMI				LR	LR				
	comp=Z,530nm,17.7s								
KMI				LR	LR				
	comp=Z,510nm,21.7s								
MHMT	**Maesarieng**	**33.14**	**299**	P	**P**	**16 47 41.7**	**+1.3**		
TJN	**Taejon**	**33.17**	**359***c*	*i*P	**P**	**16 47 39.2**	**-1.3**		
QLP	**Quilpie**	**33.34**	**153**	P	**P**	**16 47 41.7**	**-0.4**		
	baz=33,SNR=5.7								
FORT	**Forrest**	**33.64**	**180**	P	**P**	**16 47 43.5**	**-1.1**		
FORT				IAmb	IAmb	16 47 50.0			
	comp=Z,50nm,0.8s								
FORT				PcP	**PcP**	**16 50 21.9**	**+0.3**		
MORW	**Morawa**	**33.96**	**199**	P	**P**	**16 47 47.2**	**-0.2**		
	baz=34,SNR=12								
MORW	**Morawa**	**33.96**	**199**	P	**P**	**16 47 47.5**	**+0.1**		
KSAR	**Wonju Array Be**	**34.23**	**360**	P	**P**	**16 47 49.1**	**-0.5**		
KSAR	**Wonju Array Be**	**34.23**	**360**	P	**P**	**16 47 49.0**	**-0.5**		
KSAR					**PcP**	**16 50 24.7**	**+1.5**		
KSRS	**Korea Array**	**34.24**	**360**	P	**P**	**16 47 49.0**	**-0.7**		
	comp=Z,16nm,0.6s,baz=176,slow=10,SNR=63								
KSRS				PcP	**PcP**	**16 50 23.8**	**+0.6**		
	comp=Z,4.2nm,0.8s,baz=195,slow=2.6,SNR=8.8								
KSRS				LR	LR	17 00 43.5			
	comp=Z,148nm,21.9s,baz=175,slow=34								
KSRS	**Korea Array**	**34.24**	**360**	P	**P**	**16 47 49.0**	**-0.7**		
KS19	**Wonju Array Si**	**34.29**	**360**	P	**P**	**16 47 49.1**	**-1.0**		
KS19				IAmb	IAmb	16 47 52.8			
	comp=Z,60nm,1.1s								
TIA	**Tai'an**	**34.52**	**344**	P	**P**	**16 47 51.5**	**-0.6**		
TIA				pmax	pmax				
	comp=Z,71nm,0.9s								
MAJO	**Matsushiro**	**34.62**	**14***c*	*i*P	**P**	**16 47 51.0**	**-2.0**		
MAJO				pmax	pmax				
	comp=Z,171nm,2.2s								
MAJO	**Matsushiro**	**34.62**	**14**	P	**P**	**16 47 50.7**	**-2.2**		
MAJO				IAmb	IAmb	16 47 52.7			
	comp=Z,40nm,0.7s								
MAJO				PcP	**PcP**	**16 50 25.5**	**+1.1**		
MAT	**Matsushiro**	**34.62**	**14**	P	**P**	**16 47 50.2**	**-2.8**		
MAT				S	**S**	**16 53 14.4**	**+2.2**		
MJAR	**Matsushiro Arr**	**34.62**	**14**	P	**P**	**16 47 50.6**	**-2.4**		
	comp=Z,32nm,0.8s,baz=184,slow=9.4,SNR=92								
MJAR				PcP	**PcP**	**16 50 25.0**	**+0.6**		
	comp=Z,6.7nm,0.7s,baz=176,slow=3.1,SNR=7.4								
MJAR				LR	LR	17 00 45.4			
	comp=Z,354nm,20.4s,baz=180,slow=34								
MJAR	**Matsushiro Arr**	**34.62**	**14**	P	**P**	**16 47 50.2**	**-2.8**		
MJAR				PcP	**PcP**	**16 50 25.3**	**+1.0**		
MJB9	**Matsu-Tunnel**	**34.62**	**14**	P	**P**	**16 47 50.2**	**-2.8**		
KMBL	**Kambalda**	**34.73**	**189**	P	**P**	**16 47 54.1**	**+0.1**		
	baz=35,SNR=27								
JYT	**Yasato**	**34.86**	**17**	IAmb	IAmb	16 47 55.7			
	comp=Z,22nm,0.4s								
BLDU	**Ballidu**	**35.19**	**197**	P	**P**	**16 47 57.8**	**-0.2**		
	baz=35,SNR=23								
RMQ	**Roma**	**35.52**	**147**	P	**P**	**16 48 01.1**	**+0.2**		
	baz=36,SNR=5.1								
XAN	**Xi'an**	**35.64**	**332**	P	**P**	**16 48 01.5**	**-0.3**		
XAN				pP	pP	16 48 28.5	-3.1		
XAN				sP	sP	16 48 45.0	-2.2		
XAN				PP	**PnPn**	**16 49 32.0**	**+5.7**		
XAN				S	**S**	**16 53 25.3**	**-2.7**		
XAN				pmax	pmax				
	comp=Z,220nm,1.3s								
XAN				LR	LR				
	comp=Z,290nm,11.9s								
XAN				LR	LR				
	comp=Z,320nm,17.4s								
XAN				LR	LR				
	comp=Z,360nm,15.2s								
XAN	**Xi'an**	**35.64**	**332**	P	**P**	**16 48 02.0**	**+0.2**		
XAN				pmax	pmax				
	comp=Z,182nm,1.0s								
XAN	**Xi'an**	**35.64**	**332**	P	**P**	**16 48 02.0**	**+0.2**		
KLBR	**Kellerberrin**	**35.82**	**195**	P	**P**	**16 48 03.6**	**+0.2**		
	baz=36,SNR=14								
CD2	**Chengdu**	**35.99**	**323**	P	**P**	**16 48 05.3**	**+0.4**		
CD2				PP	**PP**	**16 49 27.3**	**-2.3**		
CD2				S	**S**	**16 53 32.3**	**-1.2**		
CD2				pmax	pmax				
	comp=Z,200nm,0.9s								
CD2				LR	LR				
	comp=Z,610nm,17.2s								
CD2				LR	LR				
	comp=Z,420nm,11.5s								
CD2				LR	LR				
	comp=Z,700nm,14.4s								
EIDS	**Eidsvold**	**35.99**	**143**	P	**P**	**16 48 03.1**	**-1.8**		
PBA	**Port Blair**	**36.04**	**286**	P	P	16 48 04.3	-1.1		
JSD	**Sado**	**36.05**	**14**	IAmb	IAmb	16 48 04.6			
	comp=Z,28nm,0.6s								
DL2	**Dalian**	**36.17**	**351**	⇑P	**P**	**16 48 06.0**	**-0.2**		
DL2				sP	**sP**	**16 48 46.0**	**-5.8**		
DL2				S	**S**	**16 53 36.8**	**+0.9**		
DL2				pmax	pmax				
	comp=Z,160nm,0.8s								
DL2				pmax	pmax				
	comp=Z,360nm,4.5s								
BBOO	**Buckleboo**	**36.45**	**169**	P	**P**	**16 48 08.8**	**+0.2**		
	baz=37,SNR=51								
BBOO	**Buckleboo**	**36.45**	**169**	P	**P**	**16 48 08.9**	**+0.2**		
BBOO				IAmb	IAmb	16 48 10.8			
	comp=Z,29nm,0.8s								
BBOO				PcP	**PcP**	**16 50 30.4**	**+0.6**		
MUN	**Mundaring**	**36.61**	**197**	P	**P**	**16 48 10.2**	**+0.1**		
	baz=37,SNR=9.3								
STKA	**Stephens Creek**	**37.03**	**161**	P	**P**	**16 48 13.9**	**+0.3**		
	comp=Z,22nm,0.4s,baz=345,slow=7.5,SNR=117								
STKA				LR	LR	17 05 41.3			
	comp=Z,242nm,19.3s,baz=344,slow=40								
STKA	**Stephens Creek**	**37.03**	**161**	P	**P**	**16 48 13.8**	**+0.2**		
	baz=37,SNR=84								
STKA	**Stephens Creek**	**37.03**	**161***ce*	P	**P**	**16 48 13.8**	**+0.2**		
NWAO	**Narrogin (SRO)**	**37.22**	**195**	P	**P**	**16 48 15.8**	**+0.6**		
	baz=37,SNR=12								
NWAO	**Narrogin (SRO)**	**37.22**	**195**	P	**P**	**16 48 15.4**	**+0.2**		
NWAO				PcP	**PcP**	**16 50 33.7**	**+1.5**		
NWAO	**Narrogin (SRO)**	**37.22**	**195**	P	**P**	**16 48 15.0**	**-0.3**		
NWAO				IAmb	IAmb	16 48 18.3			
	comp=Z,42nm,0.6s								
NWAO				PcP	**PcP**	**16 50 33.6**	**+1.5**		
TIY	**Taiyuan**	**37.37**	**339**	*e*P	**P**	**16 48 16.0**	**-0.5**		
TIY				pP	**pP**	**16 48 43.5**	**-3.0**		
TIY				PP	**PnPn**	**16 49 47.0**	**0.0**		
TIY				pmax	pmax				
	comp=Z,71nm,0.7s								
TIY				pmax	pmax				
	comp=Z,400nm,3.8s								
HTT	**Hallett**	**37.70**	**165**	P	**P**	**16 48 20.2**	**+0.9**		
	baz=38,SNR=12								
CMSA	**Cobar Meteorol**	**38.26**	**155**	P	**P**	**16 48 25.6**	**+1.6**		
	baz=38,SNR=21								
BJT	**Baijiatuau**	**38.35**	**345**	P	**P**	**16 48 23.2**	**-1.4**		
BJT				pmax	pmax				
	comp=Z,110nm,0.7s								
BJT	**Baijiatuau**	**38.35**	**345**	P	**P**	**16 48 23.2**	**-1.4**		
BJI	**Beijing**	**38.37**	**345**	P	**P**	**16 48 24.3**	**-0.4**		
BJI				PcP	**PcP**	**16 50 36.8**	**+1.2**		
BJI				S	**S**	**16 54 11.5**	**+2.4**		
BJI				pmax	pmax				
	comp=Z,51nm,0.6s								
BJI				pmax	pmax				
	comp=Z,350nm,3.5s								
BJI				LR	LR				
	comp=Z,120nm,5.4s								
BJI				LR	LR				
	comp=Z,170nm,9.8s								
SNY	**Shenyang**	**38.82**	**355**	⇑P	**P**	**16 48 27.8**	**-0.7**		
SNY				sP	**sP**	**16 49 15.3**	**+1.0**		
SNY				pmax	pmax				
	comp=Z,51nm,0.9s								
SNY				pmax	pmax				
	comp=Z,280nm,9.3s								
SNY				LR	LR				
	comp=Z,180nm,16.1s								
SNY				LR	LR				
	comp=Z,290nm,18.0s								
SNY				LR	LR				
	comp=Z,320nm,16.5s								
JTM	**Tenmabayashi**	**39.36**	**16**	P	**P**	**16 48 32.4**	**-0.5**		
MSHR	**Mys Shultsa**	**39.46**	**4***c*	*i*P	**P**	**16 48 34.4**	**+0.7**		
MSHR				pmax	pmax				
	comp=Z,64nm,1.0s								
MOKO	**MOKOCHONG**	**39.64**	**309**	*e*P	**P**	**16 48 36.3**	**+0.6**		
MOKO				IAmb	IAmb	16 48 38.6			
	comp=Z,50nm,0.7s								
KOHI	**KOHIMA**	**39.66**	**308**	*e*P	**P**	**16 48 35.8**	**-0.1**		
KOHI				IAmb	IAmb	16 48 38.4			
	comp=Z,68nm,0.7s								
LZH	**Lanzhou**	**39.78**	**329**	⇑P	**P**	**16 48 38.3**	**+1.6**		
LZH				pP	pP	16 49 07.8	+0.9		
LZH				sP	sP	16 49 18.8	-3.7		
LZH				S	**S**	**16 54 31.0**	**+0.3**		
LZH				sS	sS	16 55 24.0	+1.7		
LZH				SS	**SS**	**16 57 29.3**	**-3.1**		
LZH				pmax	pmax				
	comp=Z,380nm,1.3s								
LZH				pmax	pmax				
	comp=Z,1μm,6.0s								
LZH				LR	LR				
	comp=Z,1μm,14.1s								
LZH				LR	LR				
	comp=Z,850nm,13.4s								
LZH				LR	LR				
	comp=Z,480nm,16.1s								
ARMA	**Armidale**	**40.17**	**148**	P	**P**	**16 48 40.2**	**+0.3**		
	baz=40,SNR=16								
ARMA	**Armidale**	**40.17**	**148**	P	**P**	**16 48 39.9**	**-0.1**		
HHC	**Hu-ho-hao-te**	**40.47**	**341**	*e*P	**P**	**16 48 42.5**	**+0.2**		
HHC				PP	**PP**	**16 50 20.5**	**+2.1**		
HHC				S	**S**	**16 54 44.0**	**+3.2**		
HHC				sS	sS	16 55 36.8	+4.2		
HHC				SS	**SS**	**16 57 44.5**	**-1.5**		
HHC				pmax	pmax				
	comp=Z,93nm,1.0s								
HHC				pmax	pmax				
	comp=Z,270nm,7.8s								
CN2	**Changchun**	**40.65**	**357**	*e*P	**P**	**16 48 42.5**	**-1.1**		
CN2				*e*S	**S**	**16 54 45.5**	**+2.4**		
CN2				pmax	pmax				
	comp=Z,20nm,0.7s								
CN2				pmax	pmax				
	comp=Z,100nm,7.0s								
CN2				LR	LR				
	comp=Z,200nm,14.0s								
CN2				LR	LR				
	comp=Z,200nm,14.0s								
CN2				LR	LR				
	comp=Z,200nm,14.1s								
BELO	**BELONIA**	**40.73**	**303**	*e*P	**P**	**16 48 45.7**	**+1.1**		
ZIRO	**ZIRO**	**40.76**	**310**	*e*P	**P**	**16 48 45.7**	**+0.7**		
H11S3	**WAKE ISLAND Hy**	**40.78**	**65**	T	T	17 32 37.5			
	baz=252,slow=75,SNR=24								
BTO	**Baotou**	**40.79**	**339**	*e*P	**P**	**16 48 45.3**	**+0.4**		
BTO				LR	LR				
	comp=Z,890nm,10.8s								
BTO				LR	LR				
	comp=Z,1μm,15.3s								
H11S1	**WAKE ISLAND Hy**	**40.80**	**65**	T	T	17 32 25.9			
	baz=252,slow=75,SNR=22								
H11S2	**WAKE ISLAND Hy**	**40.80**	**65**	T	T	17 32 39.1			
	baz=252,slow=75,SNR=33								
ERM	**Erimo**	**41.08**	**17**	P	**P**	**16 48 46.9**	**-0.2**		
ERM				pmax	pmax				
	comp=Z,80nm,1.2s								
ERM	**Erimo**	**41.08**	**17**	P	**P**	**16 48 46.9**	**-0.2**		
ERM				IAmb	IAmb	16 49 00.2			
	comp=Z,80nm,1.1s								
USA0B	**Ussuriysk Arra**	**41.13**	**4***c*	*i*P	**P**	**16 48 46.5**	**-1.0**		
USA0B	**Ussuriysk Arra**	**41.13**	**4**	IAmb	IAmb	16 48 48.7			
	comp=Z,80nm,0.9s								
USRK	**Ussuriysk Ar.**	**41.13**	**4**	P	**P**	**16 48 47.0**	**-0.5**		
	comp=Z,48nm,0.8s,baz=186,slow=7.3,SNR=110								
USRK				PcP	**PcP**	**16 50 44.2**	**-0.1**		
	comp=Z,2.0nm,0.7s,baz=206,slow=3.1,SNR=4.6								
USRK				LR	LR	17 02 55.2			
	comp=Z,93nm,21.0s,baz=179,slow=32								
USRK	**Ussuriysk Ar.**	**41.13**	**4**	P	**P**	**16 48 46.4**	**-1.0**		
USRK				PcP	**PcP**	**16 50 44.1**	**-0.2**		
H11N1	**WAKE ISLAND Hy**	**41.34**	**63**	T	T	17 33 13.7			
	baz=249,slow=75								
H11N2	**WAKE ISLAND Hy**	**41.35**	**63**	T	T	17 33 05.7			
	baz=249								
H11N3	**WAKE ISLAND Hy**	**41.36**	**63**	T	T	17 33 14.8			
	baz=249,slow=75								
SHL	**Shillong**	**41.36**	**306**	P	**P**	**16 48 50.4**	**+0.4**		
SHL				pmax	pmax				
	comp=Z,198nm,0.6s								
SHL	**Shillong**	**41.36**	**306**	*e*P	**P**	**16 48 50.4**	**+0.4**		
SHL				IAmb	IAmb	16 48 52.6			
	comp=Z,153nm,0.6s								
SHL	**Shillong**	**41.36**	**306**	P	**P**	**16 48 50.4**	**+0.4**		
SHL	**Shillong**	**41.36**	**306**	P	**P**	**16 48 50.4**	**+0.4**		
MDJ	**Mudanjiang**	**41.42**	**2**	P	**P**	**16 48 49.5**	**-0.4**		
MDJ				pmax	pmax				
	comp=Z,130nm,0.9s								
MDJ				pmax	pmax				
	comp=Z,560nm,4.1s								
MDJ	**Mudanjiang**	**41.42**	**2**	P	**P**	**16 48 47.8**	**-2.1**		
MDJ				IAmb	IAmb	16 48 51.3			
	comp=Z,93nm,0.9s								
ARPS	**Mount Arapiles**	**41.64**	**163**	P	**P**	**16 48 52.9**	**+1.2**		
	baz=42,SNR=27								
TEY	**Ternei**	**42.48**	**9**	⇑*i*P	**P**	**16 48 58.2**	**-0.3**		
TEY				pmax	pmax				
	comp=Z,50nm,1.1s								
TEY				pmax	pmax				
	comp=N,30nm,1.0s								
TEY				pmax	pmax				
	comp=Z,100nm,3.7s								
ASAJ	**Asahikawa**	**42.87**	**15**	P	**P**	**16 49 01.4**	**-0.2**		
	comp=Z,23nm,0.8s,baz=220,slow=12,SNR=27								
ASAJ	**Asahikawa**	**42.87**	**15**	P	**P**	**16 49 01.7**	**+0.1**		
ASAJ				pmax	pmax				
	comp=Z,21nm,0.7s								
JKA	**Kamikawa-asahi**	**42.87**	**15**	P	**P**	**16 49 01.7**	**0.0**		
CAN	**Canberra**	**42.91**	**155**	P	**P**	**16 49 04.1**	**+1.9**		
CAN				pmax	pmax				
	comp=Z,11nm,1.0s								
CAN	**Canberra**	**42.91**	**155**	P	**P**	**16 49 04.1**	**+1.9**		
TOO	**Toolangi**	**43.53**	**160**	P	**P**	**16 49 08.8**	**+1.8**		
	baz=44,SNR=7.0								
TOO	**Toolangi**	**43.53**	**160**	P	**P**	**16 49 08.6**	**+1.5**		
TOO				pmax	pmax				
	comp=Z,14nm,1.0s								
TOO	**Toolangi**	**43.53**	**160**	P	**P**	**16 49 08.6**	**+1.5**		
YUK	**Yuzh-Kuril'sk**	**43.75**	**19***de*	P	**P**	**16 49 08.8**	**+0.2**		
LSA	**Lhasa**	**43.90**	**311**	*i* P	**P**	**16 49 12.9**	**+2.2**		
	SNR=16								
LSA	**Lhasa**	**43.90**	**311**	P	**P**	**16 49 12.2**	**+1.5**		
LSA				pmax	pmax				
	comp=Z,47nm,0.8s								
LSA	**Lhasa**	**43.90**	**311**	P	**P**	**16 49 12.2**	**+1.5**		
LSA				IAmb	IAmb	16 49 15.3			
	comp=Z,47nm,0.8s								
GTA	**Gaotai**	**44.38**	**328**	⇑P	**P**	**16 49 14.5**	**+0.5**		
GTA				pP	pP	16 49 45.3	+0.6		
GTA				sP	sP	16 49 57.8	-2.3		
GTA				PcP	**PcP**	**16 50 57.5**	**+2.0**		
GTA				ScP	**ScP**	**16 54 36.3**	**+1.5**		
GTA				S	**S**	**16 55 38.0**	**-0.2**		
GTA				ScS	**ScS**	**16 58 56.8**	**-1.1**		
GTA				SS	**SS**	**16 58 59.5**	**-2.2**		
GTA				pmax	pmax				
	comp=Z,110nm,1.0s								
GTA				pmax	pmax				
	comp=Z,480nm,5.4s								
GTA				LR	LR				
	comp=Z,510nm,19.3s								
GTA				LR	LR				
	comp=Z,370nm,17.8s								
GTA				LR	LR				
	comp=Z,280nm,15.3s								
DZM	**Mont Dzumac**	**45.04**	**126**	P	**P**	**16 49 18.4**	**-1.1**		
KUR	**Kuril'sk**	**45.47**	**20***c*	*i*P	**P**	**16 49 22.1**	**-0.2**		
KUR				*i*		16 51 09.1			
KUR				S	**S**	**16 55 55.4**	**+2.1**		
YSS	**Yuzh-Sakhalins**	**45.55**	**14***ce*	P	**P**	**16 49 21.8**	**-1.1**		
YSS				pmax	pmax				
	comp=Z,34nm,1.0s								
YSS	**Yuzh-Sakhalins**	**45.55**	**14**	P	**P**	**16 49 21.6**	**-1.3**		
KLR	**Kul'dur**	**46.12**	**3**	P	**P**	**16 49 26.6**	**-0.8**		
	comp=Z,21nm,0.5s,baz=215,slow=4.3,SNR=78								
KLR	**Kul'dur**	**46.12**	**3***c*	*i*P	**P**	**16 49 26.4**	**-1.0**		
KLR				pmax	pmax				
	comp=Z,57nm,1.0s								
HIA	**Hailar**	**46.60**	**352**	P	**P**	**16 49 29.3**	**-1.8**		
HIA				pmax	pmax				
	comp=Z,66nm,1.2s								
HIA	**Hailar**	**46.60**	**352**	P	**P**	**16 49 29.3**	**-1.8**		
HIA				IAmb	IAmb	16 49 32.4			
	comp=Z,66nm,1.2s								
PALK	**Pallekele**	**47.35**	**277**	P	**P**	**16 49 37.3**	**-0.3**		
PALK				pmax	pmax				
	comp=Z,20nm,1.0s								
PALK	**Pallekele**	**47.35**	**277**	P	**P**	**16 49 37.3**	**-0.3**		
PALK	**Pallekele**	**47.35**	**277**	P	**P**	**16 49 38.9**	**+1.3**		
GRNR	**Gornyy**	**48.07**	**7**	⇑*i*P	**P**	**16 49 42.3**	**-0.2**		
GRNR				pmax	pmax				
	comp=N,20nm,1.0s								
GRNR				pmax	pmax				
	comp=Z,40nm,0.8s								
GRNR				MLR	MLR				
	comp=E,90nm,20.0s								
ULN	**Ulaanbaatar**	**48.19**	**341***c*	*i*P	**P**	**16 49 43.5**	**-0.1**		
ULN				pmax	pmax				
	comp=Z,176nm,1.3s								
ULN	**Ulaanbaatar**	**48.19**	**341**	P	**P**	**16 49 43.7**	**0.0**		
ULN				PcP	**PcP**	**16 51 10.3**	**+1.5**		
SONM	**Songino Array**	**48.38**	**341**	P	**P**	**16 49 44.8**	**-0.2**		
	comp=Z,34nm,0.8s,baz=152,slow=7.9,SNR=191								
SONM				PcP	**PcP**	**16 51 10.1**	**+0.7**		
	comp=Z,14nm,0.7s,baz=159,slow=3.9,SNR=9.6								
SONM				LR	LR	17 12 30.0			
	comp=Z,170nm,18.1s,baz=158,slow=39								
SONM	**Songino Array**	**48.38**	**341**	P	**P**	**16 49 45.0**	**-0.1**		
SONM				IAmb	IAmb	16 49 46.7			
	comp=Z,34nm,0.8s								
SONM				PcP	**PcP**	**16 51 10.2**	**+0.8**		
TYV	**Tymovskoe**	**49.21**	**12**	*e*P	**P**	**16 49 51.4**	**+0.3**		
TYV				*e*S	**S**	**16 56 49.4**	**+3.2**		
TYV				pmax	pmax				
	comp=Z,700nm,4.1s								
TYV				pmax	pmax				
	comp=Z,32nm,1.1s								
TYV				smax	smax				
	comp=E,500nm,9.6s								
CIT	**Chita**	**50.29**	**348**	*e*P	**P**	**16 49 59.2**	**-0.2**		
CIT				*e*		16 51 17.2			
CIT				pmax	pmax				
	comp=Z,192nm,2.0s								
ZEA	**Zeya**	**50.53**	**359**	*e*P	**P**	**16 49 59.8**	**-1.3**		
ZEA				pmax	pmax				
	comp=N,20nm,1.0s								
ZEA				pmax	pmax				
	comp=Z,30nm,1.0s								
ZEA				MLR	MLR				
	comp=N,100nm,15.0s								
ZEA				MLR	MLR				
	comp=Z,100nm,13.0s								
HYB	**Hyderabad**	**50.61**	**290**	*i* P	**P**	**16 50 03.0**	**+0.6**		
HYB	**Hyderabad**	**50.61**	**290**	*e*P	**P**	**16 50 02.4**	**0.0**		
HYB				IAmb	IAmb	16 50 03.8			
	comp=Z,112nm,0.9s								
ZAK	**Zakamensk**	**51.62**	**340**	*e*P	**P**	**16 50 08.4**	**-1.0**		
ZAK				pmax	pmax				
	comp=Z,21nm,0.9s								
TLY	**Talaya**	**52.60**	**341**	P	**P**	**16 50 16.3**	**-0.3**		
	comp=Z,3.5nm,0.4s,baz=168,slow=7.6,SNR=9.6								
TLY	**Talaya**	**52.60**	**341**	*i* P	**P**	**16 50 17.0**	**+0.4**		
TLY				pmax	pmax				
	comp=Z,35nm,1.3s								
IRK	**Irkutsk**	**52.88**	**342**	*e*P	**P**	**16 50 18.4**	**-0.2**		
IRK				pmax	pmax				
	comp=Z,100nm,1.8s								
BHPL	**Bhopal**	**52.91**	**297**	*e*P	**P**	**16 50 19.3**	**0.0**		
BHPL				IAmb	IAmb	16 50 20.4			
	comp=Z,99nm,1.0s								
MOY	**Mondy**	**53.48**	**339**	*e*P	**P**	**16 50 23.4**	**+0.2**		
MOY				pmax	pmax				
	comp=Z,154nm,1.8s								
WMQ	**Urumqi**	**54.05**	**325**	*e*P	**P**	**16 50 29.0**	**+1.6**		
WMQ				PcP	**PcP**	**16 51 31.0**	**+0.4**		
WMQ				PP	**PP**	**16 52 35.0**	**+4.6**		
WMQ				S	**S**	**16 57 53.5**	**+0.5**		
WMQ				sS	sS	16 58 47.8	-0.5		
WMQ				pmax	pmax				
	comp=Z,160nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,700nm,3.7s								
WMQ				LR	LR				
	comp=Z,950nm,17.9s								
WMQ				LR	LR				
	comp=Z,640nm,16.1s								
WMQ				LR	LR				
	comp=Z,590nm,18.7s								
DDI	**Dehra Dun**	**54.46**	**305**	*e*P	**P**	**16 50 31.7**	**+1.2**		
POO	**Poona**	**55.22**	**290**	*e*P	**P**	**16 50 36.5**	**+0.4**		
POO				IAmb	IAmb	16 50 37.4			
	comp=Z,37nm,0.6s								
SMLA	**Simla**	**55.45**	**306**	*e*P	**P**	**16 50 38.1**	**+0.5**		
PEA0B	**Petropavlovsk-**	**55.56**	**21***d*	*i*P	**P**	**16 50 38.7**	**+0.7**		
**PEA0B

YAK pmax pmax
comp=E,15nm,0.9s
YAK smax smax
comp=N,74nm,3.0s
YAK smax smax
comp=E,37nm,2.5s
YAK Yakutsk 58.86 1 P **P** **16 51 00.2 -0.7**
MK31 Makanchi Array 58.88 325 P **P** **16 51 01.6 +0.1**
MKAR Makanchi Array 58.88 325 P **P** **16 51 01.8 +0.2**
comp=E,64nm,0.7s,baz=122,slow=8.2,SNR=358
MKAR ScP **ScP** **16 55 37.0 -0.1**
comp=E,2.5nm,0.7s,baz=107,slow=5.4,SNR=4.9
MKAR Makanchi Array 58.88 325*ce*P **P** **16 51 01.7 +0.2**
MKAR pmax pmax
comp=Z,65nm,0.7s
MKAR Makanchi Array 58.88 325 P **P** **16 51 01.6 +0.1**
UZB Uzynbulak 59.01 320 *e*P **P** **16 51 02.1 -0.5**
comp=Z,44nm,1.0s,baz=320
UZB *e*S **S** **16 58 59.5 +1.0**
baz=320
UZB Uzynbulak 59.01 320 *e*P **P** **16 51 02.1 -0.5**
UZB *e*S **S** **16 58 59.5 +1.0**
UZB pmax pmax
comp=Z,44nm,1.0s
MA2 Magadan 59.05 13 P **P** **16 51 02.1 -0.2**
comp=Z,67nm,0.8s,baz=193,slow=6.2,SNR=29
MA2 Magadan 59.05 13 ‖ *i*P **P** **16 51 02.4 +0.1**
MA2 pmax pmax
comp=Z,69nm,0.8s
MA2 Magadan 59.05 13 P **P** **16 51 02.2 -0.1**
MAKZ Makanchi 59.07 325 P **P** **16 51 03.1 +0.3**
MAKZ pmax pmax
comp=Z,94nm,0.8s
MAKZ Makanchi 59.07 325 P **P** **16 51 03.1 +0.3**
SATY Saty 59.36 320 *e*P **P** **16 51 04.7 -0.4**
comp=Z,65nm,0.9s,baz=319
SATY Saty 59.36 320 *e*P **P** **16 51 04.6 -0.4**
SATY pmax pmax
comp=Z,65nm,0.9s
NIL Nilore 59.41 308 P **P** **16 51 05.2 -0.1**
NIL pmax pmax
comp=Z,45nm,1.1s
NIL Nilore 59.41 308 P **P** **16 51 05.2 -0.1**
NIL IAmb IAmb 16 51 08.4
comp=Z,45nm,1.1s
NIL Nilore 59.41 308 P **P** **16 51 06.3 +0.9**
KSH Kashi 59.48 315 P **P** **16 51 08.0 +2.2**
KSH pP pP 16 51 38.0 +0.1
KSH S **S** **16 59 09.0 +4.4**
KSH sS sS 17 00 05.0 +4.4
KSH pmax pmax
comp=Z,9.0nm,0.4s
KSH pmax pmax
comp=Z,190nm,3.5s
KSH LR LR
comp=Z,130nm,5.8s
KSH LR LR
comp=Z,98nm,4.1s
KDJ Kajisay 59.75 318 P **P** **16 51 08.5 +0.8**
KDJ pmax pmax
comp=Z,74nm,0.8s
KDJ Kajisay 59.75 318 P **P** **16 51 08.5 +0.8**
TDK Taldyqorghan 60.28 321 *e*P **P** **16 51 11.0 -0.2**
comp=Z,47nm,0.9s,baz=321
TDK Taldyqorghan 60.28 321 *e*P **P** **16 51 10.9 -0.2**
TDK pmax pmax
comp=Z,47nm,0.9s
MDOK Medeo 60.30 319 *e*P **P** **16 51 11.1 -0.4**
baz=319
MDOK *e*S **S** **16 59 16.2 +1.1**
baz=319
MDOK Medeo 60.30 319 *e*P **P** **16 51 11.0 -0.4**
MDOK *e*S **S** **16 59 16.1 +1.1**
TNSS Tian-Shan 60.31 319 *e*P **P** **16 51 11.3 -0.5**
baz=319
TNSS Tian-Shan 60.31 319 *e*P **P** **16 51 11.3 -0.5**
LBZ Lake Benmore 60.37 146 P **P** **16 51 11.9 +0.2**
LBZ IAmb IAmb 16 51 13.8
comp=Z,41nm,1.0s
AAA Alma-Ata 60.40 319 *e*P **P** **16 51 12.2 +0.1**
comp=Z,41nm,0.8s,baz=319
AAA Alma-Ata 60.40 319 *e*P **P** **16 51 12.1 +0.1**
AAA pmax pmax
comp=Z,41nm,0.8s
ULHL Ulahol 60.43 318 P **P** **16 51 13.0 +0.7**
SNR=28
RPZ Rata Peaks 60.43 145 LR LR 17 16 21.3
comp=Z,281nm,21.9s,baz=314,slow=35
BOOM Boomskoye usch 60.73 318 P **P** **16 51 15.2 +0.8**
BOOM pmax pmax
comp=Z,28nm,1.0s
BOOM Boomskoye usch 60.73 318 P **P** **16 51 15.2 +0.8**
BOOM IAmb IAmb 16 51 16.7
comp=Z,28nm,0.9s
RAO Raoul Island 60.84 126 LR LR 17 18 30.4
comp=Z,92nm,18.4s,baz=90,slow=37
KHZ Kahutara 61.11 143 P **P** **16 51 16.2 -0.4**
KHZ IAmb IAmb 16 51 22.6
comp=Z,31nm,1.1s
URZ Urewera 61.13 137 P **P** **16 51 15.6 -1.3**
comp=Z,3.0nm,0.3s,baz=279,slow=19
URZ Urewera 61.13 137 P **P** **16 51 16.4 -0.4**
URZ IAmb IAmb 16 51 26.5
comp=Z,21nm,1.1s
TKM2 Tokmak 2 61.15 318 P **P** **16 51 17.4 +0.1**
SNR=47
BKZ Black Stump Fm 61.18 138 P **P** **16 51 17.6 +0.3**
BKZ IAmb IAmb 16 51 26.2
comp=Z,19nm,0.8s
UCH Uchtor 61.59 317 P **P** **16 51 21.5 +1.0**
SNR=68
CHMS Chumysh 61.74 318 P **P** **16 51 21.1 0.0**
SNR=15
AAK Ala-Archa 61.77 318 P **P** **16 51 22.0 +0.7**
SNR=18
AAK Ala-Archa 61.77 318 *i* P **P** **16 51 22.2 +0.9**
SNR=8.0
AAK Ala-Archa 61.77 318*c i*P **P** **16 51 22.1 +0.8**
AAK pmax pmax
comp=Z,113nm,1.7s
AAK Ala-Archa 61.77 318 P **P** **16 51 21.7 +0.4**
AAK Ala-Archa 61.77 318 P **P** **16 51 22.3 +0.9**
ZAA0 Zalesovo Array 61.81 333 P **P** **16 51 19.9 -1.2**
ZAA0 IAmb IAmb 16 51 21.8
comp=Z,43nm,1.0s
ZALV Zalesovo Beam 61.81 333 P **P** **16 51 19.9 -1.2**
comp=Z,23nm,0.7s,baz=114,slow=6.2,SNR=87
ZALV LR LR 17 21 09.5
comp=Z,80nm,19.1s,baz=128,slow=39
ZALV Zalesovo Beam 61.81 333 P **P** **16 51 20.0 -1.2**
ZALV Zalesovo Beam 61.81 333 P **P** **16 51 19.6 -1.6**
SEM Semipalatinsk 61.99 328 *e*P **P** **16 51 21.0 -1.8**
baz=327
SEM Semipalatinsk 61.99 328 *e*P **P** **16 51 20.9 -1.8**
SGDS Sogindy 62.01 319 *e*P **P** **16 51 22.0 -0.8**
comp=Z,16nm,1.2s,baz=318
SGDS Sogindy 62.01 319 *e*P **P** **16 51 22.0 -0.8**
SGDS pmax pmax
comp=Z,16nm,1.2s
USP Ospenovka 62.02 318 P **P** **16 51 23.3 +0.4**
SNR=51
AML Almayashu 62.10 317 P **P** **16 51 24.8 +0.8**
SNR=93
EKS2 Erkin-Say 62.26 317 P **P** **16 51 25.4 +0.8**
SNR=50
SMY Shemya 62.38 30 P **P** **16 51 25.0 +0.1**
SMY pmax pmax
comp=Z,91nm,1.0s
SMY Shemya 62.38 30 P **P** **16 51 25.0 +0.1**
SEY Seymchan 62.40 12 P **P** **16 51 25.2 +0.3**
comp=Z,55nm,1.0s,baz=219,slow=6.0,SNR=52
SEY Seymchan 62.40 12 ‖ *i*P **P** **16 51 25.4 +0.5**
KBL Kabul 63.00 307 P **P** **16 51 30.2 +0.4**
SNR=8.5
KURBB Kurchatov Arra 63.04 327 P **P** **16 51 28.9 -0.5**
BTLS Baital 63.06 320 *e*P **P** **16 51 29.0 -0.7**
comp=Z,18nm,0.9s,baz=320
BTLS Baital 63.06 320 *e*P **P** **16 51 29.0 -0.7**
BTLS pmax pmax
comp=Z,19nm,0.9s
DZA Taraz 64.01 317 *e*P **P** **16 51 35.9 -0.1**
comp=Z,26nm,0.8s,baz=317
DZA Taraz 64.01 317 *e*P **P** **16 51 35.9 -0.1**
DZA pmax pmax
comp=Z,26nm,0.8s
AMKA Amchitka 64.33 33 P **P** **16 51 37.3 -0.6**

IUG luznay 64.64 316 *e*P **P** **16 51 39.6 -0.7**
baz=316
IUG luznay 64.64 316 *e*P **P** **16 51 39.5 -0.7**
KK31 Karatay Array 64.65 317 P **P** **16 51 40.5 +0.3**
KK31 pmax pmax
comp=Z,48nm,1.0s
KK31 Karatay Array 64.65 317 P **P** **16 51 40.5 +0.3**
KK31 IAmb IAmb 16 51 41.9
comp=Z,48nm,1.0s
KKAR Karatay Array 64.65 317 P **P** **16 51 40.5 +0.3**
KKAR pmax pmax
comp=Z,48nm,1.0s
KKAR Karatay Array 64.65 317 P **P** **16 51 40.5 +0.3**
KKAR IAmb IAmb 16 51 41.9
comp=Z,48nm,1.0s
CHM Chimkent 65.00 316 *e*P **P** **16 51 42.0 -0.5**
comp=Z,6.7nm,0.7s,baz=316
CHM Chimkent 65.00 316 *e*P **P** **16 51 41.9 -0.5**
CHM pmax pmax
comp=Z,7.0nm,0.7s
BRZS Berezniki 66.02 324 *e*P **P** **16 51 47.8 -1.0**
comp=Z,26nm,0.9s,baz=324
BRZS Berezniki 66.02 324 *e*P **P** **16 51 47.8 -1.0**
BRZS pmax pmax
comp=Z,26nm,0.9s
ADK Adak 66.77 34 P **P** **16 51 52.5 -1.0**
ADK pmax pmax
comp=Z,58nm,0.8s
ADK Adak 66.77 34 P **P** **16 51 52.5 -1.0**
ADK IAmb IAmb 16 51 58.9
comp=Z,58nm,0.8s
ATKA Atka Island 68.30 34 P **P** **16 52 02.9 -0.2**
TIXI Tiksi 68.51 0 P **P** **16 52 03.0 -1.1**
comp=Z,26nm,0.5s,baz=171,slow=4.3,SNR=95
TIXI Tiksi 68.51 0 P **P** **16 52 02.7 -1.3**
TIXI pmax pmax
comp=Z,43nm,0.7s
TIXI Tiksi 68.51 0 P **P** **16 52 02.7 -1.3**
TIXI IAmb IAmb 16 52 04.7
comp=Z,43nm,0.7s
BRVK Borovoye 68.70 327*c i*P **P** **16 52 05.1 -0.5**
BRVK pmax pmax
comp=Z,111nm,1.3s
BRVK Borovoye 68.70 327 P **P** **16 52 05.2 -0.4**
WBK Wadi Bani Khal 69.56 293 P **P** **16 52 11.6 0.0**
BILL Bilibino 69.87 14 *e*P **P** **16 52 11.4 -1.1**
BILL *e* 16 52 34.6
BILL *e**SP **pP** **16 52 52.2 +6.1**
BILL pmax pmax
comp=Z,10.0nm,1.0s
BILL Bilibino 69.87 14 P **P** **16 52 11.7 -0.9**
WSAR Wadi Sarin 69.93 294 P **P** **16 52 12.7 -1.1**
CASY Casey 70.31 187 P **P** **16 52 16.5 +1.3**
CASY IAmb IAmb 16 52 21.3
comp=Z,30nm,0.8s
JMDO Jabal Madar 70.34 293 P **P** **16 52 17.0 +0.7**
SNR=6.1
BIDO Bidbid 70.42 294 P **P** **16 52 17.0 +0.3**
SMDO Samad 70.45 293 P **P** **16 52 17.1 +0.1**
DQM DQM 70.68 290 P **P** **16 52 19.1 +0.7**
HOQ Hoqain 71.17 294 P **P** **16 52 21.6 +0.2**
BSY Bisya 71.20 293 P **P** **16 52 21.9 +0.4**
SNR=5.6
NRIK Noril'sk 71.41 346 P **P** **16 52 21.2 -0.7**
comp=Z,61nm,0.8s,baz=125,slow=6.5,SNR=136
NRIK LR LR 17 26 39.9
comp=Z,143nm,20.5s,baz=153,slow=38
NRIK Noril'sk 71.41 346*c i*P **P** **16 52 20.8 -1.0**
NRIK pmax pmax
comp=Z,74nm,0.8s
NRIK Noril'sk 71.41 346 P **P** **16 52 21.4 -0.5**
NRIK IAmb IAmb 16 52 22.9
comp=Z,69nm,0.8s
ARQ Araqi 71.87 293 P **P** **16 52 26.1 +0.6**
SNR=5.4
SOHO SOHO 71.92 294 *i* P **P** **16 52 26.0 +0.1**
SNR=6.6
SOHO SOHO 71.92 294 P **P** **16 52 25.9 +0.1**
UOSS Minazif 72.29 295 P **P** **16 52 28.7 +0.7**
BANOM Banah 72.29 296 P **P** **16 52 29.0 +1.0**
HATD Hatta, Dubai 72.35 295 P **P** **16 52 28.9 +0.5**
HATD Hatta, Dubai 72.35 295 P **P** **16 52 28.1 -0.3**
GEYT Alibeck 72.37 309 P **P** **16 52 28.8 +0.5**
comp=Z,18nm,0.8s,baz=162,slow=5.3,SNR=33
GEYT LR LR 17 28 23.5
comp=Z,72nm,19.9s,baz=50,slow=39
GEYT Alibeck 72.37 309 P **P** **16 52 28.9 +0.5**
MSFE Esma-Masafi 72.37 296 P **P** **16 52 29.8 +1.3**
MASF Masafi 72.37 296 P **P** **16 52 30.0 +1.5**
SHAO Shalim 72.38 288 P **P** **16 52 29.4 +0.8**
SHAO Shalim 72.38 288 P **P** **16 52 29.3 +0.7**
ALNE Al Ain 72.63 294 *i* P **P** **16 52 30.9 +0.8**
SNR=14
ALNE Al Ain 72.63 294 P **P** **16 52 31.0 +0.9**
SNR=5.7
NAZ Nazwa, Dubai 72.79 295 P **P** **16 52 31.3 +0.3**
FAQ Al Faqa, Dubai 72.83 295 P **P** **16 52 31.6 +0.4**
DMTO DMTO 73.01 287 P **P** **16 52 32.1 -0.2**
UMZA Um Al Zommool 73.08 293 P **P** **16 52 32.6 -0.1**
AB31 Akbulak array 73.53 321 P **P** **16 52 33.7 -1.1**
ABKAR Akbulak array 73.53 321 P **P** **16 52 33.9 -0.8**
AKUT Akutan 73.72 34 P **P** **16 52 34.3 -1.4**
SOCY Socotra 73.82 282 P **P** **16 52 35.8 -1.5**
SOCY IAmb IAmb 16 52 38.0
comp=Z,26nm,0.8s
SOCY Socotra 73.82 282 P **P** **16 52 36.6 -0.7**
SNR=10
DOK Doka 73.83 288 P **P** **16 52 37.0 -0.1**
SNR=10
WHFO Wadi Hawf 74.14 288 P **P** **16 52 39.0 -0.1**
SNR=11
GAMB Gambell 74.47 24 P **P** **16 52 39.0 -0.9**
GAMB IAmb IAmb 16 52 42.0
comp=Z,71nm,0.9s
GAMB Gambell 74.47 24 P 16 52 40.3
baz=244
RAR Rarotonga 74.53 113 P **P** **16 52 41.2 +0.1**
comp=Z,4.3nm,0.4s,baz=214,slow=7.3,SNR=1.8
SVE Sverdlovsk 75.24 328 ‖ *e*P **P** **16 52 44.2 -0.3**
SVE pmax pmax
comp=Z,68nm,1.2s
FALS False Pass 75.25 34 P 16 52 44.1
baz=254
ARU Arti 76.23 328*c i*P **P** **16 52 48.6 -1.6**
ARU pmax pmax
comp=Z,78nm,1.7s
ARU Arti 76.23 328 P **P** **16 52 49.5 -0.7**
ARU IAmb IAmb 16 52 50.6
comp=Z,37nm,0.8s
TNA Tin City 76.69 23 P 16 52 52.9
baz=247
SDPT Sand Point 77.00 34 P 16 52 54.3
baz=256
ANM Nome 77.33 24 IAmb IAmb 16 52 58.4
comp=Z,33nm,1.1s
ANM Nome 77.33 24 P 16 52 56.7
baz=250
RDOG Red Dog Mine 79.43 21 P 16 53 08.4
baz=252
SII Sitkinak Islan 80.71 33 P 16 53 15.4
baz=261
AKT Akhty 80.76 311 *e*P **P** **16 53 12.9 -2.6**
AKT *e**SP **pwP** **16 53 57.7 +5.1**
AKT *e* 16 56 19.0
AKT pmax pmax
comp=Z,34nm,1.0s
TTA Tatalina 80.90 27 IAmb IAmb 16 53 17.9
comp=Z,47nm,1.2s
TTA Tatalina 80.90 27 P 16 53 16.2
baz=259
OHAK Old Harbor 81.29 33 IAmb IAmb 16 53 19.8
comp=Z,57nm,0.9s
OHAK Old Harbor 81.29 33 P 16 53 18.2
baz=262,SNR=5.3
KIRV Kirov 81.50 329*d i*P **P** **16 53 18.3 -0.5**
KDAK Kodiak Island 81.75 32 P **P** **16 53 20.4 +0.3**
comp=Z,42nm,0.7s,baz=275,slow=5.8,SNR=20
KDAK Kodiak Island 81.75 32 P **P** **16 53 19.8 -0.3**
KDAK pmax pmax
comp=Z,30nm,0.7s
KDAK Kodiak Island 81.75 32 P **P** **16 53 19.8 -0.3**
KDAK IAmb IAmb 16 53 21.6
comp=Z,30nm,0.7s
KDAK Kodiak Island 81.75 32 P 16 53 20.7
baz=263

BELG Belogornoye 81.77 322*c i*P **P** **16 53 19.5 -0.9**
BELG pmax pmax
comp=Z,16nm,0.9s
RAYN Ar Rayn 81.99 293 *i* P **P** **16 53 22.4 +0.1**
SNR=13
RAYN Ar Rayn 81.99 293 P **P** **16 53 22.2 -0.1**
RAYN pmax pmax
comp=Z,18nm,1.0s
RAYN Ar Rayn 81.99 293 P **P** **16 53 22.2 -0.1**
GROC Groznyy 82.30 313 *e*P **P** **16 53 23.5 +0.1**
GROC pmax pmax
comp=Z,35nm,1.0s
ABPO Ambohimpanom 82.35 250 P **P** **16 53 24.6 +0.2**
ABPO pmax pmax
comp=Z,9.0nm,0.9s
ABPO Ambohimpanom 82.35 250 P **P** **16 53 24.6 +0.2**
SPCR Spurr Chakacha 82.38 29 P 16 53 23.4
baz=262
A21K Barrow 82.44 18 P 16 53 24.4
baz=257,SNR=8.1
VNDA Vanda 82.59 173 P **P** **16 53 24.9 +0.8**
comp=Z,7.9nm,1.0s,baz=348,slow=5.9,SNR=10
VNDA Vanda 82.59 173 P **P** **16 53 24.5 +0.3**
VNDA pmax pmax
comp=Z,8.0nm,0.9s
VNDA Vanda 82.59 173 P **P** **16 53 24.5 +0.3**
PPLA Purkeypile 82.62 27 IAmb IAmb 16 53 27.6
comp=Z,46nm,0.9s
PPLA Purkeypile 82.62 27 P 16 53 24.9
baz=262,SNR=15
CNPM China Poot 82.66 30 IAmb IAmb 16 53 26.2
comp=Z,54nm,0.8s
CHUM Lake Minchumin 82.70 26 P 16 53 25.9
baz=262,SNR=43
SKT Skwentna 82.80 28 IAmb IAmb 16 53 26.6
comp=Z,54nm,1.0s
SKT Skwentna 82.80 28 P 16 53 25.2
baz=263,SNR=25
BRLK Bradley Lake 82.86 30 IAmb IAmb 16 53 26.5
comp=Z,35nm,0.7s
BRSE Bradley Lake S 82.93 30 P 16 53 26.5
baz=264
GNI Garni 82.95 310 LR LR 17 34 30.4
comp=Z,57nm,21.9s,baz=60,slow=38
GNI Garni 82.95 310*c i*P **P** **16 53 27.3 +0.2**
GNI pmax pmax
comp=Z,21nm,1.7s
VOI Vohitsoka 83.06 248 P **P** **16 53 27.9 0.0**
VOI IAmb IAmb 16 53 29.5
comp=Z,17nm,0.7s
SUA Susitna One 83.11 29 P 16 53 27.0
baz=264,SNR=22
KTH Kantishna Hill 83.27 26 IAmb IAmb 16 53 30.3
comp=Z,66nm,1.0s
BPAW Bear Paw Mtn. 83.31 26 IAmb IAmb 16 53 30.2
comp=Z,52nm,1.0s
BPAW Bear Paw Mtn. 83.31 26 P 16 53 28.6
baz=263,SNR=29
CUT Chulitna 83.44 28 P 16 53 29.6
baz=264,SNR=6.3
O22K Cooper Landing 83.51 30 P 16 53 29.2
baz=265
MLY Manley 83.52 25 IAmb IAmb 16 53 31.4
comp=Z,59nm,0.9s
MLY Manley 83.52 25 P 16 53 29.9
baz=263,SNR=61
TRF Thorofare Moun 83.54 27 IAmb IAmb 16 53 30.9
comp=Z,76nm,1.0s
TRF Thorofare Moun 83.54 27 P 16 53 29.4
baz=264,SNR=30
CLDR Caldiran 83.56 309 *e*P **P** **16 53 29.9 -0.4**
RC01 Rabbit Creek A 83.56 29 IAmb IAmb 16 53 30.7
comp=Z,56nm,0.9s
RC01 Rabbit Creek A 83.56 29 P 16 53 28.9
baz=265,SNR=20
MAW Mawson 83.59 200 P **P** **16 53 30.2 +0.8**
comp=Z,7.9nm,0.8s,baz=109,slow=7.6,SNR=12
MAW Mawson 83.59 200 P **P** **16 53 30.3 +0.9**
MAW pmax pmax
comp=Z,2.0nm,0.8s
MAW Mawson 83.59 200 P **P** **16 53 30.3 +0.9**
SEW Seward 83.61 30 IAmb IAmb 16 53 31.3
comp=Z,52nm,1.1s
SEW Seward 83.61 30 P 16 53 29.7
baz=265
ZEI Tsey 83.67 313 *e*P **P** **16 53 28.5 -2.2**
ZEI pmax pmax
comp=Z,10.0nm,0.7s
PMR Palmer 83.90 28 P 16 53 31.0
baz=265,SNR=30
NCK Nalchik 83.91 313 *i* P **P** **16 53 32.8 +1.1**
NCK pmax pmax
comp=Z,36nm,1.5s
VANB Van 83.96 308 *e*P **P** **16 53 31.5 -0.7**
COLD Coldfoot 83.99 23 P 16 53 32.5
baz=264,SNR=110
GHO Glory Hole Cre 84.01 28 IAmb IAmb 16 53 33.3
comp=Z,47nm,1.0s
I23K Minto, Yukon-K 84.12 25 P 16 53 32.9
baz=264,SNR=77
MCK McKinley 84.17 26 IAmb IAmb 16 53 33.9
comp=Z,71nm,1.0s
MCK McKinley 84.17 26 P 16 53 32.3
baz=265,SNR=38
RND Reindeer 84.18 27 IAmb IAmb 16 53 33.7
comp=Z,71nm,1.0s
NEA2 Nenana 84.19 25 P 16 53 33.3
baz=265,SNR=28
KNK Knik Glacier 84.20 29 P 16 53 33.1
baz=266
WAT2 Susitna Watana 84.26 27 P 16 53 32.7
baz=265
AKDM Akdamar-Van 84.28 308 *e*P **P** **16 53 34.4 +0.5**
AGRB Hanur-Agry 84.28 309 *e*P **P** **16 53 34.7 +0.8**
SML Sawmill 84.29 28 P 16 53 33.2
baz=266,SNR=47
TOLK Toolik Lake Re 84.38 21 IAmb IAmb 16 53 36.3
comp=Z,69nm,0.9s
TOLK Toolik Lake Re 84.38 21 P 16 53 34.8
baz=264,SNR=61
KBZ Khabaz 84.42 313 P **P** **16 53 34.1 -0.1**
comp=Z,5.5nm,0.9s,baz=129,slow=5.5,SNR=14
KBZ Khabaz 84.42 313*c i*P **P** **16 53 34.4 +0.2**
KBZ pmax pmax
comp=Z,23nm,1.4s
NEY Neytrino 84.54 313*de*P **P** **16 53 36.6 +1.5**
NEY pmax pmax
comp=Z,6.0nm,1.2s
KIV Kislovodsk 84.58 314 *i* P **P** **16 53 37.1 +1.9**
SNR=5.8
KIV Kislovodsk 84.58 314 *e*P **P** **16 53 34.7 -0.5**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,211nm,20.0s
WRH Wood River Hil 84.60 26 IAmb IAmb 16 53 36.4
comp=Z,52nm,1.2s
WAT6 Susitna Watana 84.62 28 P 16 53 35.0
baz=266,SNR=57
COLA College 84.73 25 ‖ *e*P **P** **16 53 34.9 -0.4**
COLA pmax pmax
comp=Z,13nm,1.0s
CCB Clear Creek Bu 84.74 25 P **P** **16 53 34.1 -1.3**
CCB IAmb IAmb 16 53 36.8
comp=Z,36nm,1.1s
GLI Glacier Island 84.83 29 P 16 53 36.1
baz=267,SNR=20
HDA Harding Lake 85.09 26 P 16 53 36.5
baz=267,SNR=12
HDA P 16 53 36.5
baz=267,SNR=12
ILAR Eielson Array 85.14 25 P **P** **16 53 36.4 -1.0**
comp=Z,6.2nm,0.9s,baz=255,slow=4.7,SNR=38
ILAR Eielson Array 85.14 25 P **P** **16 53 35.8 -1.6**
KOPR Koprukoy-ERZUR 85.16 310 *e*P **P** **16 53 38.9 +0.6**
M24K Tolsona, Glenn 85.33 28 P 16 53 39.2
baz=268,SNR=18
VRH Novokhopyorsk 85.36 321 *e*P **P** **16 53 37.8 -0.9**
VRH pmax pmax
comp=Z,60nm,0.8s
KLU Klutina 85.42 29 IAmb IAmb 16 53 41.0
comp=Z,46nm,1.0s
KLU Klutina 85.42 29 P 16 53 39.5
baz=268,SNR=23
EYAK Cordova Ski Ar 85.48 30 P 16 53 39.9
baz=268
PAX Paxson 85.69 27 P 16 53 40.8

baz=268,SNR=18
PRP **Porcupine Dome** 85.75 25 P 16 53 39.2
baz=268
HARP **HAARP** 85.81 28 P 16 53 41.8
baz=268
CHOM **Cayeli-Rize** 85.99 311 *e*P **P** **16 53 41.7 -0.5**
BMRM **Bremner River** 86.05 29 IAmb IAmb 16 53 44.2
comp=Z,46nm,0.9s
BMRM **Bremner River** 86.05 29 P 16 53 42.5
baz=269,SNR=16
N25K **Chitina, Valde** 86.06 29 IAmb IAmb 16 53 44.5
comp=Z,31nm,1.1s
N25K **Chitina, Valde** 86.06 29 P 16 53 42.7
baz=269,SNR=17
BNGB **Bingl** 86.08 309 *e*P **P** **16 53 42.8 0.0**
KAIM **Kayak Island** 86.13 30 P 16 53 43.7
baz=269
YEDI **Yedisu-Bingol** 86.18 309 *e*P **P** **16 53 44.2 +0.9**
SCRK **Sand Creek** 86.37 26 P 16 53 44.0
baz=269
GLB **Gilahina Butte** 86.44 29 IAmb IAmb 16 53 46.2
comp=Z,27nm,0.9s
DYBB **Diyarbakir** 86.52 308 *e*P **P** **16 53 45.3 +0.4**
VRDI **Verde Repeater** 86.61 29 IAmb IAmb 16 53 47.0
comp=Z,20nm,0.9s
KLMR **Klimovskoe** 86.66 331 *e*P **P** **16 53 42.4 -2.5**
KLMR *e**SP **pwP** **16 54 25.5 +3.1**
KLMR pmax pmax
comp=Z,37nm,1.0s
KLMR **Klimovskoe** 86.66 331 *e*P **P** **16 53 42.5 -2.5**
KLMR AMP 16 53 44.9
comp=Z,37nm,1.0s
KLMR *es*P **pwP** **16 54 25.5 +3.1**
KLMR *e*PP **PP** **16 57 02.2 -6.6**
SOC **Sochi** 86.73 313 *e*P P 16 53 55.3 +10
SOC *e* 16 57 14.7
SOC *e*PPP PPP 16 59 09.5
SOC MLR MLR
comp=Z,80nm,17.0s
CRQE **Cirque** 86.79 29 P 16 53 46.0
baz=270
MCARA **McCarthy VSAT** 86.82 29 P 16 53 47.3
baz=270
VORD **Divnogorie** 86.89 321 *e*P **P** **16 53 44.4 -1.9**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR **Storozhevoye** 86.96 321 *e*P **P** **16 53 44.8 -1.8**
VSR pmax pmax
comp=Z,30nm,1.0s
LPSR **Galich'ya Gora** 87.08 322 *e*P **P** **16 53 46.3 -0.9**
LPSR pmax pmax
comp=Z,40nm,0.8s
K27K **Chicken** 87.21 26 P 16 53 48.2
baz=271
L27K **Beaver Creek,** 87.35 27 P 16 53 48.5
baz=271
BARN **Barnard Glacie** 87.48 29 IAmb IAmb 16 53 52.1
comp=Z,21nm,0.8s
URFA **Urfa** 87.58 307 *e*P **P** **16 53 49.2 -0.8**
EGAK **Eagle** 87.59 25 P 16 53 48.8
baz=272
CTG **Chitna Glacier** 87.64 29 P 16 53 50.1
baz=272
CTGM **Chitina Glacie** 87.64 29 IAmb IAmb 16 53 52.9
comp=Z,26nm,0.9s
TABL **Table Mountain** 87.76 30 IAmb IAmb 16 53 54.7
comp=Z,21nm,0.8s
MOS **Moscow** 87.76 326 *e*P **P** **16 53 46.7 -3.6**
MOS pmax pmax
comp=Z,40nm,1.2s
PINM **Pinnacle** 88.22 30 P 16 53 53.4
baz=273
OBN **Obninsk** 88.39 325 *de*P **P** **16 53 51.9 -1.4**
OBN *e**SP **sP** **16 54 37.4 -4.7**
OBN *e* 16 57 26.6
OBN *e*PPP PPP 16 59 16.7
OBN pmax pmax
comp=Z,68nm,1.7s
RSDY **Resadiye-TOKAT** 88.62 310 *e*P **P** **16 53 55.1 +0.3**
SVSK **Karacayir** 88.90 310 *e*P **P** **16 53 55.9 -0.1**
EPYK **Eagle Plains** 89.32 24 P 16 53 57.8
baz=276
SARI **SarD1z-Kayseri** 89.43 308 *e*P **P** **16 53 57.5 -1.4**
HYT **Haines Junctio** 89.52 29 P P **16 53 58.5 -0.2**
INK **Inuvik** 90.30 22 P P **16 54 00.9 -1.0**
comp=Z,8.8nm,0.9s,baz=259,slow=4.6,SNR=27
INK **Inuvik** 90.30 22 IAmb IAmb 16 54 02.7
comp=Z,17nm,1.1s
INK **Inuvik** 90.30 22 P 16 54 01.0
baz=279
WHY **Whitehorse** 90.82 29 P 16 54 04.7
baz=278
KMBO **Kilima Mbogo** 90.89 269 P **P** **16 54 06.7 +0.5**
comp=Z,2.1nm,0.7s,baz=44,slow=6.7,SNR=4.3
BRTR **Keskin Array B** 91.49 310 P **P** **16 54 07.0 -1.4**
comp=Z,1.9nm,0.8s,baz=115,slow=5.6,SNR=4.8
BRTR **Keskin Array B** 91.49 310 *i* P **P** **16 54 07.6 -0.8**
BRTR pmax pmax
comp=Z,2.0nm,0.8s
ARA0 **ARCESS Array S** 91.55 340 *e*P **P** **16 54 06.3 -1.5**
ARCES **ARCESS Array B** 91.55 340 P **P** **16 54 06.1 -1.7**
comp=Z,11nm,0.8s,baz=82,slow=5.9,SNR=22
ARCES **ARCESS Array B** 91.55 340 P **P** **16 54 06.4 -1.4**
ARCES pmax pmax
comp=Z,15nm,1.0s
ARCES **ARCESS Array B** 91.55 340 P **P** **16 54 06.4 -1.4**
ARCES IAmb IAmb 16 54 07.9
comp=Z,15nm,0.9s
HAMF **Hammerfest** 91.89 341 *e*P **P** **16 54 08.5 -0.8**
KTK1 **Kautokeino** 92.46 340 *e*P **P** **16 54 11.8 -0.2**
WRAK **Wrangell Islan** 92.77 33 P 16 54 13.8
baz=280
FINES **FINESS Array B** 93.06 332 P **P** **16 54 13.5 -1.4**
comp=Z,2.3nm,0.7s,baz=65,slow=4.5,SNR=16
AKASG **Malin Array Be** 93.27 321 P **P** **16 54 14.5 -1.6**
comp=Z,4.2nm,0.7s,baz=66,slow=4.5,SNR=14
AKASG **Malin Array Be** 93.27 321 *i* P **P** **16 54 15.1 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKBB **Malin Array Si** 93.27 321⇑ *e*P **P** **16 54 14.5 -1.6**
JETT **Jettan, Norway** 93.27 340 *e*P **P** **16 54 15.0 -0.8**
C36M **Paulatuk** 93.39 20 P 16 54 15.2
baz=288
DLBC **Dease Lake** 93.63 31 P **P** **16 54 18.2 +0.5**
comp=Z,6.6nm,0.9s,baz=289,slow=5.4,SNR=18
DLBC LR LR 17 31 18.9
comp=Z,68nm,21.3s,baz=324,slow=32
DLBC **Dease Lake** 93.63 31 P **P** **16 54 17.8 +0.1**
DLBC IAmb IAmb 16 54 19.7
comp=Z,13nm,1.1s
TRO **Tromso** 93.74 341 *e*P **P** **16 54 16.6 -1.2**
NACGM **Naroch** 94.01 325 *i* P **P** **16 54 17.4 -2.0**
NACGM *i* P **P** **16 54 17.4 -2.0**
NACGM *i* P **P** **16 54 17.4 -2.0**
NACGM *i* sP **pwP** **16 55 02.2 +4.9**
NACGM *i* pP sP 16 55 38.9 +31
NACGM *i* PP PP 16 58 19.6 +13
NACGM *i* PPP PPP 16 59 52.9
NACGM *i* S **SKSac** **17 04 38.1 -3.1**
NACGM *i* sS ScS 17 05 39.8 +21
NACGM *i* PS **PS** **17 06 41.1 -9.4**
NACGM *i* SS SS 17 11 28.6 -12
NACGM *i* SSS SSS 17 14 30.3
LOF **Lofoten** 96.11 340 *e*P **P** **16 54 27.8 -0.9**
BUR08 **Bucovina Ar. S** 96.41 318 P **P** **16 54 30.0 -0.7**
MOR8 **Moi Rana** 96.57 338 *e*P **P** **16 54 30.2 -0.7**
UZH **Uzhgorod** 98.09 320 *i* P **P** **16 54 37.9 -0.2**
NSS **Namsos** 98.19 337 *e*P **P** **16 54 36.0 -2.2**
RES **Resolute Bay** 98.23 11 P **P** **16 54 37.7 -0.5**
comp=Z,13nm,0.8s,baz=306,slow=5.2,SNR=60
RES **Resolute Bay** 98.23 11 P **P** **16 54 37.7 -0.5**
RES pmax pmax
comp=Z,15nm,0.8s
RES **Resolute Bay** 98.23 11 P **P** **16 54 37.7 -0.5**
YKA **Yellowknife Ar** 99.55 25 P **Pdif** **16 54 43.5 -0.8**
comp=Z,4.1nm,0.9s,baz=298,slow=4.4,SNR=44
YKA PKiKP **PKiKP** **16 59 12.4 -0.2**
comp=Z,0.7nm,0.7s,baz=295,slow=1.3,SNR=9.1
NB2 **NORSAR Subarra** 99.99 334 P **Pdif** **16 54 44.3 -2.0**
baz=65,slow=4.6
NOA **NORSAR Array B** 99.99 334 P **Pdif** **16 54 44.8 -1.6**
comp=Z,2.9nm,0.8s,baz=65,slow=4.6,SNR=9.8
NOA LR LR 17 45 42.0
comp=Z,63nm,18.7s,baz=80,slow=39
AKN **Aaknes** 101.26 336 *e*Pdif **Pdif** **16 54 51.3 -0.7**

BRG **Berggiesshubel** 102.58 324 *e*P **Pdif** **16 54 58.2 +0.2**
BRG Amp 16 54 60.0
comp=Z,8.7nm,1.7s
BRG PP **PKiKP** **16 59 16.2 -2.3**
BRG Amp 16 59 17.4
comp=Z,11nm,1.6s
BRG PKPPKP 17 27 51.0
BRG Amp 17 27 51.9
comp=Z,1.7nm,0.7s
BER **Bergen** 102.85 335 *e*Pdif **Pdif** **16 54 57.5 -1.5**
CLL **Collm** 102.98 324 *e*Pdif **Pdif** **16 54 59.0 -0.8**
CLL *e*PP **PP** **16 59 11.0 -4.4**
CLL **Collm** 102.98 324 *e*P **Pdif** **16 54 59.0 -0.8**
GERES **GERESS Array B** 103.45 322 Pdiff **Pdif** **16 55 01.6 -0.5**
comp=Z,0.7nm,0.8s,baz=90,slow=6.7,SNR=5.8
GERES PKiKP **PKiKP** **16 59 21.8 +1.6**
comp=Z,0.8nm,0.7s,baz=69,slow=5.4,SNR=7.3
SUMG **Summit** 104.02 356 *i* P **PKiKP** **16 59 20.8 -0.2**
WTTA **Wattenberg** 105.32 321 *e*P **PP** **16 59 37.3 +4.2**
comp=Z,12nm,1.3s
WATA **Walderalm** 105.33 321 *e*P **PP** **16 59 37.1 +3.9**
comp=Z,11nm,1.7s
SQTA **Sankt Quirin** 105.61 321 *e*P **PP** **16 59 38.2 +3.0**
comp=Z,12nm,1.4s
MOTA **Moosalm** 105.62 321 *e*P **PP** **16 59 38.6 +3.2**
comp=Z,11nm,1.0s
RETA **Reutte** 105.78 321 *i* P **PP** **16 59 40.2 +3.7**
comp=Z,7.6nm,1.3s
FETA **Feichten** 105.98 321 *e*P **PP** **16 59 41.2 +3.1**
comp=Z,7.6nm,1.2s
NVAR **Mina Array Bea** 106.35 49 Pdiff **Pdif** **16 55 16.4 +1.1**
comp=Z,0.5nm,0.7s,baz=260,slow=4.2,SNR=2.8
NVAR PKiKP **PKiKP** **16 59 26.2 +0.1**
comp=Z,0.4nm,0.6s,baz=291,slow=2.5,SNR=2.6
PDAR **Pinedale Array** 110.97 42 PKiKP **PKiKP** **16 59 35.8 +1.1**
comp=Z,0.3nm,0.7s,baz=122,slow=1.2,SNR=2.6
PDAR PKKPbc **PKKPbc** **17 10 32.6 -1.0**
comp=Z,0.5nm,0.8s,baz=114,slow=1.8,SNR=4.4
O20A **White River Ci** 112.99 44 PKiKP 16 59 39.2
baz=296
RSSD **Black Hills** 113.89 38 P 16 59 40.5
baz=300
ULM **Lac du Bonnet** 114.90 29 PKP **PKiKP** **16 59 41.1 -0.5**
comp=Z,1.9nm,0.6s,baz=301,slow=3.5,SNR=5.2
ULM PKKPbc **PKKPbc** **17 10 20.8 +0.4**
comp=Z,0.8nm,0.4s,baz=21,slow=6.2,SNR=3.2
S22A **4UR Ranch, Cre** 115.02 46 P 16 59 44.2
baz=296
SDCO **Great Sand Dun** 115.96 45 P 16 59 45.4
baz=297
ANMO **Albuquerque** 116.48 48 ⇓ *i* PKiKP **PKiKP** **16 59 47.0 +1.6**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO **Albuquerque** 116.48 48 P 16 59 46.5
baz=295
T25A **Trinidad** 117.01 45 P 16 59 47.6
baz=297
ECSD **EROS Data Cent** 118.57 35 P 16 59 48.8
baz=307
MNTX **Cornudas Mount** 118.63 51 **PKiKP** **16 59 50.8 +1.4**
MNTX **Cornudas Mount** 118.63 51 P 16 59 50.1
baz=294
ESDC **Sonseca Array** 118.85 319 PKP **PKiKP** **16 59 50.1 +0.5**
comp=Z,0.9nm,0.6s,baz=26,slow=2.0,SNR=9.5
BGNE **Belgrade** 119.00 38 P 16 59 49.5
baz=305
MVO **Moncorvo** 119.97 322 *e*PKPdf **PKiKP** **16 59 52.7 +0.9**
POLO **Lamas de Olo** 120.31 323 *e*PKPdf **PKiKP** **16 59 53.3 +0.8**
PVRL **La Real** 120.32 322 *e*PKPdf **PKiKP** **16 59 53.7 +1.2**
MTE **Manteigas** 120.73 322 *e*PKPdf **PKiKP** **16 59 54.4 +1.1**
PVIS **Viseu** 120.76 322 *e*PKPdf **PKiKP** **16 59 54.6 +1.2**
TX32 **Lajitas Array** 120.94 53 **PKiKP** **16 59 54.9 +0.8**
TXAR **Lajitas Array** 120.94 53 PKP **PKiKP** **16 59 54.3 +0.2**
comp=Z,1.4nm,0.7s,baz=269,slow=1.0,SNR=23
TXAR PKKPbc **PKKPbc** **17 09 58.0 -0.4**
comp=Z,0.5nm,0.8s,baz=121,slow=6.2,SNR=6.4
TXAR **Lajitas Array** 120.94 53 **PKiKP** **16 59 55.0 +0.9**
PCBR **Castelo Branco** 121.01 321 *e*PKPdf **PKiKP** **16 59 54.6 +0.8**
KSU1 **Kansas State U** 121.28 40 P 16 59 54.7
baz=305
PCAS **Casmilo, Conde** 121.53 322 *e*PKPdf **PKiKP** **16 59 56.0 +1.2**
PESTR **Estremoz** 121.64 320 *e*PKPdf **PKPdf** **16 59 55.0 +0.1**
PBAR **Barrancos** 121.68 319 *e*PKPdf **PKiKP** **16 59 56.2 +1.1**
PSBE **So Bento** 122.03 321 *e*PKPdf **PKiKP** **16 59 57.2 +1.4**
WMOK **Wichita Mounta** 122.17 45 P 16 59 56.6
baz=301
PBEJ **Beja** 122.30 319 *e*PKPdf **PKiKP** **16 59 57.9 +1.5**
PVAQ **Vaqueiros** 122.56 319 *e*PKPdf **PKiKP** **16 59 58.1 +1.2**
PCVE **Castro Verde** 122.64 319 *e*PKPdf **PKiKP** **16 59 58.0 +0.9**
PBDV **Barranco-do-Ve** 122.79 319 *e*PKPdf **PKiKP** **16 59 59.2 +1.8**
MORF **Marmelete** 123.22 319 *e*PKPdf **PKiKP** **16 59 59.8 +1.5**
PFVI **Vila Bisbo** 123.44 319 *e*PKPdf **PKiKP** **16 59 58.8 +0.1**
JCT **Junction City** 123.47 50 P 16 59 59.3
baz=298
LSQQ **Lebel-sur-Quev** 123.73 20 P 16 59 58.2
baz=330
CHGQ **Chibougamau** 123.81 17 P 16 59 58.2
baz=333
S39A **Bolivar** 124.20 39 **PKPdf** **16 59 59.9 +0.1**
TOA0 **Torodi Ar. Sit** 124.41 288 PKPdf **PKPdf** **17 00 00.5 -0.3**
TORD **Torodi Ar. Bea** 124.41 288 PKP **PKPdf** **17 00 00.7 -0.2**
comp=Z,9.9nm,0.7s,baz=51,slow=2.1,SNR=52
CCM **Cathedral Cave** 125.27 38 P 17 00 02.4
baz=309
U40A **Yellville** 125.30 40 P 17 00 01.9
baz=307
W39A **Magazine** 125.37 42 P 17 00 02.8
baz=305
MIAR **Mount Ida** 125.88 43 P 17 00 04.6
baz=305
D55A **Sainte-Anne-du** 126.00 20 P 17 00 02.6
baz=330
D56A **ZEC Mazanza, M** 126.22 19 P 17 00 03.5
baz=331
I51A **Listowel** 126.54 26 P 17 00 04.7
baz=323
LATQ **La Tuque** 126.54 18 P 17 00 04.3
baz=334
E56A **St. Veronique** 126.56 20 P 17 00 04.1
baz=331
D58A **Chemin du LacG** 126.77 18 P 17 00 04.3
baz=334
H57A **Richville** 128.25 21 P 17 00 08.1
baz=330
M53A **WI Miller and** 128.57 28 P 17 00 09.0
baz=322
WVT **Waverly** 128.59 37 P 17 00 08.9
baz=312
M54A **Oil Creek Stat** 128.97 27 P 17 00 09.8
baz=323
N54A **Moraine State** 129.26 27 P 17 00 10.3
baz=323
L56A **Greenwood** 129.37 25 P 17 00 10.2
baz=326
J59A **Piesco** 129.43 21 P 17 00 10.9
baz=330
L57A **Andrews Acres** 129.78 24 P 17 00 11.2
baz=327
SSPA **Standing Stone** 130.47 26 P 17 00 11.8
baz=325
N57A **Milroy** 130.51 26 P 17 00 12.2
baz=325
N58A **Sunbury** 130.80 25 P 17 00 13.0
baz=326
Q58A **Fox Den Farm,** 131.94 27 P 17 00 15.0
baz=324
DBIC **Dimbokro** 132.04 282 PKP **PKPdf** **17 00 15.8 +0.4**
comp=Z,8.2nm,0.9s,baz=54,slow=2.9,SNR=7.7
DBIC SKPbc **SKPbc** **17 03 29.1 0.0**
comp=Z,2.9nm,0.6s,baz=62,slow=5.3,SNR=5.7
DBIC **Dimbokro** 132.04 282 **PKiKP** **17 00 16.8 +0.3**
PLCA **Paso Flores** 138.89 158 PKhKP PKPpre 17 00 20.2
comp=Z,1.8nm,0.9s,baz=284,slow=5.4,SNR=3.3
PLCA PKP **PKPdf** **17 00 26.9 -0.6**
comp=Z,3.5nm,0.7s,baz=214,slow=5.3,SNR=13
PLCA SKP **SKPdf** **17 03 49.8 +0.1**
comp=Z,0.9nm,0.6s,baz=289,slow=2.4,SNR=6.7
PLCA **Paso Flores** 138.89 158 PKiKP **PKPdf** **17 00 27.0 -0.6**
MT01 **Popeta** 144.43 152 **PKPdf** **17 00 37.0 -0.5**
JTS **Las Juntas de** 144.54 68 PKiKP PKPbc 17 00 37.6 +0.3
JTS **Las Juntas de** 144.54 68 PKPbc 17 00 37.6 +0.4
MT09 **Talagante** 144.62 152 **PKPdf** **17 00 38.0 -0.1**
MT02 **Curacav** 144.98 151 **PKPdf** **17 00 39.2 +0.6**
CO02 **Combarbal** 146.71 149 **PKPbc** **17 00 44.0 +0.4**
LCO **Las Campanas** 148.60 147 PKP2 **PKiKP** **17 00 50.3 -0.1**
LCO **Las Campanas** 148.60 147 **PKiKP** **17 00 50.2 -0.1**

AC04 **Llanos de Chal** 149.03 146 **PKiKP** **17 00 51.0 +0.2**
CPUP **Villa Florida** 156.28 168 PKP **PKPdf** **17 00 56.6 +0.6**
comp=Z,1.8nm,0.8s,baz=153,slow=2.3,SNR=3.6
CPUP PKPab **PKPab** **17 01 26.4 +2.0**
comp=Z,5.6nm,0.9s,baz=201,slow=7.5,SNR=7.9
ROSC **El Rosal** 156.29 71 PKPab **PKPab** **17 01 27.4 +1.8**
comp=Z,18nm,0.6s,baz=69,slow=23,SNR=6.0
LPAZ **La Paz** 159.33 131 PKP **PKPdf** **17 01 01.9 +1.0**
comp=Z,1.8nm,0.8s,baz=102,slow=3.7,SNR=6.7
LPAZ PKPab **PKPab** **17 01 40.8 +2.0**
comp=Z,2.2nm,0.8s,baz=255,slow=5.7,SNR=3.8

BJI ***25*** *17:09:15.5±0.0,4˚.55S×143˚.87E,h131km,mB5.3/42, mb5.3/78*
MOS ***25*** *17:09:18.9±1.0,4˚.26S×143˚.26E,h125km,mb5.1/31, Error ellipse: s-maj=8.4km s-min=4.5km az=106.9*
NEIC ***25*** *17:09:19.8±1.9,4˚.32S±0˚.06×143˚.29E±0˚.02,h124km±4km, mb5.2/180, Error ellipse: s-maj=8.9km s-min=2.6km az=183.0*
IDC ***25*** *17:09:20.2±0.4,4˚.27S×143˚.33E,h123km±3km, mb4.8/40, mb1 4.8/45,mb1mx4.8/57,mbtmp5.2/45,MS3.8/15, Ms1 3.8/15,ms1mx3.6/36,Error ellipse: s-maj=8.8km s-min=6.6km az=94.0*
DJA ***25*** *17:09:20.1±0.3,4˚.S±3˚×14˚.3E±˚,h134km±3km,M4.9/48, mB5.4/33,mb5.2/48,MLv5.4/5,Mw(mB)4.8/33, MwMwp4.2/1,Mwp4.7/1*
ISC 25 17:09:19.9±0.2,4˚.36S±0˚.03×143˚.28E±0˚.04,h123km±2km, h124km;pP-P,n649,σ1934/714,mb5.2/198,104C-78D,
Fault plane solution: NP1:ϕs189.94688°,δ11.02039°, λ20.63341°. **NP2:ϕ**s79.66271°,δ86.13753°,λ100.32919°.
Principal axes: T Plg47.8764°, Azm0.5587°; N Plg10.3055°, Azm258.9593°; P Plg40.2734°, Azm160.0972°; **New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**3.15**	**305**	P	**Pn**	**17 10 08.4**	**0.0**
JAY				S	**Sn**	**17 10 44.8**	**-1.0**
GENI	**Genyem**	**3.56**	**299**	P	**Pn**	**17 10 14.3**	**+0.5**
GENI				S	**Sn**	**17 10 53.3**	**-2.1**
MANU	**Manus Island**	**4.69**	**61**		**Pn**	**17 10 30.1**	**+1.3**
PMG	**Port Moresby**	**6.33**	**143**	P	**Pn**	**17 10 50.8**	**0.0**
	11nm,0.3s,baz=323,slow=13,SNR=56						
PMG				S	**Sn**	**17 11 59.1**	**-2.7**
	21nm,0.3s,baz=155,slow=20,SNR=7.7						
PMG	**Port Moresby**	**6.33**	**143**	*c* *i* P	**Pn**	**17 10 50.6**	**-0.2**
PMG	**Port Moresby**	**6.33**	**143**	Pn	**Pn**	**17 10 50.7**	**-0.2**
PMG	**Port Moresby**	**6.33**	**143**	P	**Pn**	**17 10 52.0**	**+1.2**
SRPI	**Serui, Papua**	**7.45**	**289**	P	**Pn**	**17 11 05.9**	**-0.1**
	7.5nm4µm250nm,0.6s						
RABL	**Rabaul**	**8.87**	**89**	Pn	**Pn**	**17 11 26.1**	**+1.0**
RABL	**Rabaul**	**8.87**	**89**	P	**Pn**	**17 11 29.4**	**+4.2**
COEN	**Coen**	**9.54**	**181**	P	**Pn**	**17 11 36.2**	**+2.0**
	baz=9.6						
COEN	**Coen**	**9.54**	**181**	Pn	**Pn**	**17 11 36.3**	**+2.0**
FAKI	**Fak Fak**	**11.10**	**277**	Pn	**Pn**	**17 11 55.4**	**+0.2**
FAKI	**Fak Fak**	**11.10**	**277**	P	**Pn**	**17 11 55.0**	**-0.2**
SAUI	**Saumlaki**	**12.44**	**253**	Pn	**Pn**	**17 12 15.7**	**+2.9**
SIJI	**Sorong**	**12.49**	**286**	P	**Pn**	**17 12 13.9**	**+0.5**
	6.5nm,0.3s,baz=88,slow=11,SNR=21						
SIJI				S	**Sn**	**17 14 27.4**	**-3.8**
	1.3nm,0.3s,baz=121,slow=23,SNR=1.4						
SWI	**Sorong**	**12.49**	**286**	P	**Pn**	**17 12 13.0**	**-0.6**
	1µm115nm,0.9s						
KDU	**Kakadu**	**13.51**	**232**	P	**Pn**	**17 12 26.1**	**-0.6**
	baz=14,SNR=105						
MTSU	**Mount Surprise**	**13.73**	**176**	P	**Pn**	**17 12 31.4**	**+1.8**
	baz=14,SNR=26						
MTN	**Manton Dam**	**14.66**	**234**	P	**Pn**	**17 12 40.4**	**-1.0**
	baz=15,SNR=92						
MTN	**Manton Dam**	**14.66**	**234**	Pn	**Pn**	**17 12 40.5**	**-1.0**
CTA	**Charters Tower**	**15.90**	**170**	P	**P**	**17 12 58.1**	**0.0**
	1.6nm,0.3s,baz=354,slow=12,SNR=25						
CTAO	**Charters Tower**	**15.90**	**170**	P	**P**	**17 12 58.2**	**0.0**
CTAO				pmax	pmax		
	comp=Z,57nm,0.9s						
CTAO	**Charters Tower**	**15.90**	**170**		**P**	**17 12 58.1**	**0.0**
NLAI	**Namlea**	**16.18**	**273**	P	**P**	**17 13 01.0**	**-0.2**
	comp=Z,70nm,1.7s						
QIS	**Mount Isa**	**16.50**	**192**	P	**Pn**	**17 13 04.3**	**+0.1**
	baz=17,SNR=30						
TNTI	**Ternate**	**16.69**	**287**	P	**P**	**17 13 06.8**	**-0.1**
TNTI	**Ternate**	**16.69**	**287**	P	**P**	**17 13 06.8**	**-0.1**
	comp=Z,1µmcomp=Z,63nm,0.9s						
HNR	**Honiara**	**17.30**	**108**	P	**P**	**17 13 13.1**	**-0.4**
	comp=Z,12nm,0.3s,baz=343,slow=6.6,SNR=12						
HNR	**Honiara**	**17.30**	**108**	P	**P**	**17 13 13.1**	**-0.4**
HNR				pmax	pmax		
	comp=Z,344nm,1.1s						
HNR	**Honiara**	**17.30**	**108**		**P**	**17 13 13.1**	**-0.4**
SANI	**Sanana**	**17.41**	**277**	P	**P**	**17 13 14.7**	**-0.1**
	comp=Z,1µmcomp=Z,84nm,0.8s						
WB0	**Warramunga Arr**	**17.60**	**209**	P	**Pn**	**17 13 17.6**	**+0.1**
WR0	**Warramunga Arr**	**17.69**	**208**	P	**P**	**17 13 17.8**	**-0.1**
WRAB	**Tennant Creek**	**17.76**	**209**	*d* *i* P	**Pn**	**17 13 19.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,505nm,1.3s						
WRAB	**Tennant Creek**	**17.76**	**209**	P	**Pn**	**17 13 19.4**	**-0.1**
WB2	**Warramunga Arr**	**17.77**	**209**	P	**Pn**	**17 13 19.7**	**+0.1**
	baz=18						
WB2	**Warramunga Arr**	**17.77**	**209**	P	**Pn**	**17 13 19.8**	**+0.1**
WRA	**Warramunga Arr**	**17.77**	**209**	P	**Pn**	**17 13 20.0**	**+0.3**
	comp=Z,20nm,0.3s,baz=31,slow=10,SNR=178						
WRA				S	**S**	**17 16 31.9**	**-5.2**
	comp=Z,1.1nm,0.3s,baz=27,slow=24,SNR=5.3						
WRA	**Warramunga Arr**	**17.77**	**209**	P	**P**	**17 13 18.9**	**+0.2**
WRA				pmax	pmax		
	comp=Z,22nm,1.2s						
WRA	**Warramunga Arr**	**17.77**	**209**	P	**P**	**17 13 18.9**	**+0.2**
GUMO	**Guam**	**17.90**	**5**	P	**Pn**	**17 13 21.1**	**-0.1**
	comp=Z,6.8nm,0.3s,baz=189,slow=14,SNR=6.9						
GUMO	**Guam**	**17.90**	**5**	P	**Pn**	**17 13 21.6**	**+0.4**
GUMO				pmax	pmax		
	comp=Z,998nm,1.8s						
GUMO	**Guam**	**17.90**	**5**	Pn	**Pn**	**17 13 21.6**	**+0.4**
KNRA	**Kununurra**	**18.17**	**231**	P	**P**	**17 13 23.8**	**+0.7**
PATS	**Pohnpei**	**18.68**	**54**	P	**Pn**	**17 13 30.1**	**-0.4**
	baz=19,SNR=7.0						
PATS	**Pohnpei**	**18.68**	**54**	P	**P**	**17 13 29.0**	**+0.3**
SOEI	**Soe**	**19.61**	**253**	P	**Pn**	**17 13 40.6**	**-0.9**
SOEI	**Soe**	**19.61**	**253**	P	**P**	**17 13 38.8**	**-0.1**
	comp=Z,4µmcomp=Z,370nm,0.9s						
KMSI	**Cibinong**	**19.89**	**284**	P	**P**	**17 13 41.9**	**0.0**
	comp=Z,3µmcomp=Z,278nm,0.7s						
BATI	**Baumata**	**20.30**	**252**	P	Pn	17 13 48.8	-0.7
	comp=Z,490nm,0.9s,baz=133,slow=1.3,SNR=46						
BATI				S	**S**	**17 17 30.1**	**+2.7**
	comp=Z,17nm,0.6s,baz=215,slow=24,SNR=2.3						
BATI	**Baumata**	**20.30**	**252**	P	**P**	**17 13 46.8**	**+0.5**
	comp=Z,2µmcomp=Z,299nm,0.9s						
ANA2	**Anatahan**	**20.70**	**7**	P	**P**	**17 13 50.7**	**+0.1**
LUWI	**Luwuk**	**20.74**	**279**	P	**P**	**17 13 50.9**	**-0.2**
LUWI	**Luwuk**	**20.74**	**279**	P	**P**	**17 13 51.5**	**+0.5**
	comp=Z,3µmcomp=Z,276nm,1.0s						
GTOI	**Gorontalo**	**20.85**	**283**	P	**P**	**17 13 52.8**	**+0.7**
	comp=Z,2µmcomp=Z,88nm,0.6s						
AS31	**Alice Springs**	**21.22**	**204**	P	**P**	**17 13 56.5**	**+0.4**
AS31				IAmb	IAmb	17 14 04.1	
	comp=Z,104nm,0.8s						
ASAR	**Alice Springs**	**21.22**	**204**	P	**P**	**17 13 56.5**	**+0.4**
	comp=Z,46nm,0.8s,baz=34,slow=9.0,SNR=280						
ASAR				S	**S**	**17 17 49.9**	**+4.8**
	comp=Z,30nm,1.0s,baz=20,slow=26,SNR=6.9						
ASAR				LR	LR	17 23 44.7	
	comp=Z,295nm,18.3s,baz=26,slow=40						
ASAR				PKiKP	**PKiKP**	**17 25 43.0**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=19,slow=1.0,SNR=4.9						
ASAR	**Alice Springs**	**21.22**	**204**	P	**P**	**17 13 55.7**	**-0.4**
MMRI	**Maumere**	**21.33**	**257**	P	**P**	**17 13 56.7**	**-0.6**
MMRI				IAmb	IAmb	17 14 03.8	
	comp=Z,153nm,0.8s						
MMRI	**Maumere**	**21.33**	**257**	P	**P**	**17 13 55.5**	**-1.8**
	comp=Z,2µmcomp=Z,225nm,0.9s						
MRSI	**Marisa**	**21.85**	**282**	P	**P**	**17 14 01.6**	**-1.3**
	comp=Z,1µmcomp=Z,168nm,1.2s						
APSI	**Ampana**	**21.87**	**278**	P	**P**	**17 14 04.1**	**+1.0**
	comp=Z,2µmcomp=Z,258nm,1.2s						
FITZ	**Fitzroy Crossi**	**22.00**	**230**	P	**P**	**17 14 03.8**	**-0.6**
	comp=Z,72nm,0.8s,baz=49,slow=11,SNR=139						
FITZ				S	**S**	**17 17 59.1**	**-0.2**
	comp=Z,8.9nm,0.8s,baz=184,slow=23,SNR=5.7						
FITZ	**Fitzroy Crossi**	**22.00**	**230**	P	**P**	**17 14 03.8**	**-0.6**

baz=22,SNR=171
FITZ Fitzroy Crossi 22.00 230 P P 17 14 03.5 -0.9
QLP Quilpie 22.12 178 P P 17 14 06.4 +0.9
baz=22,SNR=64
EIDS Eidsvold 22.20 161 P P 17 14 07.6 +1.3
EIDS IAmb IAmb 17 14 10.0
comp=Z,174nm,0.8s
RMQ Roma 22.62 167 P P 17 14 12.5 +1.9
baz=23,SNR=376
BNSI Bone 23.10 269 P P 17 14 15.5 +0.2
comp=Z,2µmcomp=Z,133nm,1.1s
TOLI2 Tolitoli 23.12 283 P P 17 14 15.2 -0.3
TOLI2 IAmb IAmb 17 14 17.1
comp=Z,115nm,0.9s
BASI Baing, Sumba 23.25 254 P P 17 14 16.7 +0.1
comp=Z,4µmcomp=Z,419nm,1.1s
TTSI Tana Toraja 23.44 272 P P 17 14 18.0 -0.4
comp=Z,2µmcomp=Z,94nm,1.0s
SPSI Sidrap Palu 23.45 270 P P 17 14 18.5 0.0
comp=Z,976nmcomp=Z,43nm,0.9s
KAPI Kappang 23.45 267 P P 17 14 19.7 +1.2
comp=Z,24nm,0.6s,baz=86,slow=6.1,SNR=13
KAPI Kappang 23.45 267 P P 17 14 19.0 +0.5
KAPI pmax pmax
comp=Z,59nm,1.1s
KAPI Kappang 23.45 267 P P 17 14 19.0 +0.5
WBSI Waikabubak, Su 24.27 256 P P 17 14 24.4 -1.6
comp=Z,170nm,0.8s
WRKA Warakurna 25.10 214 P P 17 14 34.2 +0.8
baz=25,SNR=161
PLAI Plampang 25.71 259 P P 17 14 36.2 -2.8
comp=Z,148nm,0.9s
MYLDM Lahad Datu 26.50 291 P P 17 14 47.3 +1.3
TWSI Taliwang, Sumb 26.57 259 P P 17 14 43.4 -3.3
comp=Z,31nm,0.8s
ARMA Armidale 27.10 164 P P 17 14 53.5 +2.1
baz=27,SNR=14
ARMA Armidale 27.10 164 P P 17 14 52.8 +1.5
ARMA IAmb IAmb 17 14 59.0
comp=Z,52nm,0.9s
CMSA Cobar Meteorol 27.13 175 P P 17 14 53.4 +1.9
baz=27,SNR=30
STKA Stephens Creek 27.42 183 P P 17 14 55.5 +1.4
comp=Z,55nm,0.8s,baz=350,slow=8.6,SNR=58
STKA LR LR 17 27 38.3
comp=Z,473nm,19.0s,baz=1.2,slow=40
STKA Stephens Creek 27.42 183 P P 17 14 55.2 +1.1
baz=28,SNR=22
STKA Stephens Creek 27.42 183 P P 17 14 54.5 +0.4
STKA pmax pmax
comp=Z,13nm,0.9s
STKA Stephens Creek 27.42 183 P P 17 14 54.5 +0.4
SRBI Singaraja 28.14 261 P P 17 14 56.2 -4.5
BBKI Banjar Baru 28.38 271 P P 17 15 02.3 -0.6
comp=Z,23nm,1.1s
PSA00 Pilbara Seismi 28.45 231 P P 17 15 03.9 +0.5
PSA00 IAmb IAmb 17 15 05.3
comp=Z,50nm,1.0s
PSA00 Pilbara Seismi 28.45 231 P P 17 15 04.9 +1.4
PSA00 IAmb IAmb 17 15 06.8
comp=Z,114nm,1.0s
DZM Mont Dzumac 28.53 130 *e*P **P 17 15 03.8 -0.4**
comp=Z,101nm,1.2s
DZM *e*LR LR 17 22 31.5
comp=Z,587nm,33.5s
DZM Mont Dzumac 28.53 130 P **P 17 15 04.5 +0.3**
comp=Z,21nm,0.6s,baz=272,slow=9.2,SNR=27
DZM Mont Dzumac 28.53 130 P **P 17 15 04.7 +0.4**
DZM IAmb IAmb 17 15 05.4
comp=Z,30nm,0.7s
MTKI Muara Teweh, K 28.55 276 P P 17 15 03.5 -0.9
KKM Kota Kinabalu 28.93 291 P P 17 15 06.9 -1.0
BBOO Buckleboo 29.10 193 P P 17 15 10.0 +0.9
baz=29,SNR=55
BBOO Buckleboo 29.10 193 P P 17 15 10.0 +0.9
HTT Hallett 29.21 187 P P 17 15 11.3 +1.3
baz=29,SNR=26
JAGI Jajag, Banyuwa 29.22 260 P P 17 15 08.0 -2.4
JAGI IAmb IAmb 17 15 09.5
comp=Z,50nm,0.9s
FORT Forrest 29.94 207 P P 17 15 17.8 +1.3
baz=30,SNR=20
FORT Forrest 29.94 207 P P 17 15 17.6 +1.1
YNG Young 30.17 172 P P 17 15 20.7 +2.2
baz=30,SNR=28
CAN Canberra 31.26 171 P P 17 15 30.0 +1.9
CAN pmax pmax
comp=Z,111nm,1.1s
CAN Canberra 31.26 171 P P 17 15 30.0 +1.9
CNB Canberra Magne 31.32 170 P P 17 15 30.4 +1.8
baz=32,SNR=20
ARPS Mount Arapiles 32.28 182 P P 17 15 38.9 +1.9
baz=32,SNR=17
H11S3 WAKE ISLAND Hy 32.37 45 T T 17 49 13.9
baz=228,slow=75
H11S2 WAKE ISLAND Hy 32.38 45 T T 17 49 18.5
baz=228
H11S1 WAKE ISLAND Hy 32.39 45 T T 17 49 09.8
baz=228,slow=75
TOO Toolangi 33.12 177 P P 17 15 47.1 +2.7
baz=33,SNR=4.4
TOO Toolangi 33.12 177 P P 17 15 46.2 +1.9
TOO pmax pmax
comp=Z,222nm,1.9s
TOO Toolangi 33.12 177 P P 17 15 46.2 +1.9
H11N1 WAKE ISLAND Hy 33.34 43 T T 17 50 29.1
baz=224
H11N2 WAKE ISLAND Hy 33.35 43 T T 17 50 24.1
baz=224
H11N3 WAKE ISLAND Hy 33.35 43 T T 17 50 28.4
baz=224
KSM Kuching 33.45 279 P P 17 15 48.2 +0.8
KSM IAmb IAmb 17 15 49.7
comp=Z,50nm,1.3s
GIRL Giralia 33.46 234 P P 17 15 50.0 +2.6
baz=34,SNR=5.7
GIRL Giralia 33.46 234 P P 17 15 49.6 +2.2
KMBL Kambalda 33.56 214 P P 17 15 49.5 +1.2
baz=34,SNR=43
JOW Kunigami 34.23 336 LR LR 17 28 34.4
comp=Z,96nm,19.3s,baz=154,slow=34
JOW Kunigami 34.23 336 P P 17 15 54.5 +0.4
JOW IAmb IAmb 17 15 56.3
comp=Z,85nm,1.3s
YULB Yu-li 34.94 323 P P 17 16 01.3 +1.1
YULB IAmb IAmb 17 16 11.8
comp=Z,31nm,1.1s
TPUB Ta-pu 35.27 322 P P 17 16 02.2 -0.8
TPUB IAmb IAmb 17 16 03.5
comp=Z,45nm,1.0s
NACB Ningaanchiao 35.36 324 P P 17 16 03.8 +0.1
SSLB Suanglung 35.44 323 P P 17 16 05.7 +1.2
LEM Lembang 35.57 264 P P 17 16 05.1 -0.8
comp=Z,48nm,0.9s,baz=76,slow=10,SNR=11
LEM Lembang 35.57 264 P P 17 16 04.3 -1.6
comp=Z,31nm,0.9s
TPI Tanjungpandan 35.59 271 P P 17 16 06.2 +0.3
comp=Z,38nm,1.0s
MORW Morawa 35.65 223 P P 17 16 07.4 +1.2
baz=36,SNR=39
MORW Morawa 35.65 223 P P 17 16 06.8 +0.6
YHNB Yeheng 35.86 325 P P 17 16 08.9 +0.8
KLBR Kellerberrin 36.17 219 P P 17 16 11.6 +0.9
baz=36,SNR=17
BLDU Ballidu 36.19 221 P P 17 16 11.9 +1.1
baz=36,SNR=45
PPBI Pangkal Pinang 37.14 272 P P 17 16 18.7 -0.4
MUN Mundaring 37.41 220 P P 17 16 22.4 +1.3
baz=38,SNR=9.8
NWAO Narrogin (SRO) 37.41 217 P P 17 16 22.1 +1.0
comp=Z,27nm,0.8s,baz=55,slow=8.3,SNR=16
NWAO Narrogin (SRO) 37.41 217 P P 17 16 22.6 +1.4
baz=38,SNR=17
NWAO Narrogin (SRO) 37.41 217 P P 17 16 23.2 +2.1
NWAO pmax pmax
comp=Z,53nm,1.0s
NWAO Narrogin (SRO) 37.41 217 P P 17 16 22.4 +1.3
NWAO IAmb IAmb 17 16 25.6
comp=Z,48nm,1.0s
NWAO Narrogin (SRO) 37.41 217 P P 17 16 23.2 +2.1
NWAO IAmb IAmb 17 16 25.6
comp=Z,52nm,0.9s
JSU Suzuyama 37.70 342 P P 17 16 23.5 0.0
JSU IAmb IAmb 17 16 24.7
comp=Z,37nm,0.8s
TAU Tasmania Unive 38.56 175 P P 17 16 31.3 +0.7
TAU pmax pmax
comp=Z,208nm,1.9s
TAU Tasmania Unive 38.56 175 P P 17 16 31.3 +0.7
KASI Kota Agung 38.65 267 P P 17 16 29.2 -2.6
comp=Z,147nm,0.9s
JMN Monobe 38.91 347 P P 17 16 33.8 +0.1
JNU Nakatsue 39.08 343 P P 17 16 35.5 +0.3
JSG Sagara 39.12 353 P P 17 16 35.6 +0.3
LHSI Lahat 39.65 269 P P 17 16 40.2 +0.1
JWT Wachi 40.12 350 P P 17 16 43.1 -0.5
JGF Kuroka 40.13 353 P P 17 16 42.8 -1.0
JGF IAmb IAmb 17 16 46.5
comp=Z,44nm,0.8s
JHS Saijyo 40.30 347 P P 17 16 45.0 -0.1
JYT Yasato 40.48 356 P P 17 16 45.8 -0.7
JTU Tsushima 40.83 342 P P 17 16 49.3 -0.2
JTU IAmb IAmb 17 16 50.7
comp=Z,55nm,0.9s
MJAR Matsushiro Arr 40.96 354 P P 17 16 49.0 -1.6
comp=Z,30nm,0.8s,baz=176,slow=8.3,SNR=72
MJAR ScP ScP 17 22 26.6 -0.4
comp=Z,2.8nm,1.0s,baz=181,slow=4.9,SNR=6.3
MJAR LR LR 17 32 01.7
comp=Z,103nm,21.4s,baz=170,slow=33
MJAR Matsushiro Arr 40.96 354 P **P 17 16 48.9 -1.6**
MJAR **ScP 17 22 25.1 -2.0**
MAJO Matsushiro 40.96 354*c i*P **P 17 16 49.3 -1.3**
MAJO pmax pmax
comp=Z,70nm,0.9s
MAJO Matsushiro 40.96 354 P **P 17 16 48.9 -1.6**
MAJO IAmb IAmb 17 16 52.0
comp=Z,56nm,0.9s
MAT Matsushiro 40.96 354 P **P 17 16 49.1 -1.5**
SSE Sheshan 41.08 331 P **P 17 16 53.0 +1.4**
SSE pmax pmax
comp=Z,77nm,0.8s
OUZ Omahuta 41.58 141 P P 17 16 58.6 +2.9
OUZ IAmb IAmb 17 16 59.8
comp=Z,54nm,1.1s
JMM Marumori 42.07 357 P P 17 16 58.8 -0.7
JMM IAmb IAmb 17 17 00.2
comp=Z,91nm,1.0s
UBPT Khong Chiam 42.22 298 P P 17 17 00.7 -0.4
JSD Sado 42.43 354 P P 17 17 01.7 -0.8
BKNI Bangkinang 42.45 275 P P 17 17 03.0 -0.1
NJ2 Nanjing 43.02 329 *e*P **P 17 17 08.8 +1.5**
NJ2 pmax pmax
comp=Z,40nm,0.9s
IPM Ipoh 43.11 281 P P 17 17 07.8 -0.6
TJN Taejon 43.17 341*c i*P **P 17 17 08.6 +0.1**
KULM Kulim 43.64 282 P P 17 17 12.1 -0.6
KSRS Korea Array 43.98 342 P P 17 17 15.8 +0.8
comp=Z,63nm,0.8s,baz=162,slow=9.3,SNR=203
KSRS PcP PP 17 18 59.4 -0.6
comp=Z,7.9nm,1.1s,baz=161,slow=4.0,SNR=4.7
KSRS LR LR 17 32 22.1
comp=Z,75nm,19.6s,baz=182,slow=32
KSAR Wonju Array Be 43.98 342 P P 17 17 15.6 +0.6
KSAR Wonju Array Be 43.98 342 P P 17 17 15.6 +0.6
KS19 Wonju Array Si 44.05 342 P P 17 17 15.4 -0.1
KS19 IAmb IAmb 17 17 16.9
comp=Z,78nm,0.9s
WHN Wuhan 44.37 323 ⇑P **P 17 17 20.0 +1.8**
WHN S **S 17 23 44.8 +1.3**
WHN pmax pmax
comp=Z,84nm,1.1s
WHN LR LR
comp=Z,210nm,6.7s
WHN LR LR
comp=Z,490nm,11.1s
WHN LR LR
comp=Z,420nm,10.7s
INCN Inchon 44.42 341 P P 17 17 18.6 +0.2
INCN pmax pmax
comp=Z,150nm,0.9s
INCN Inchon 44.42 341 P P 17 17 18.6 +0.2
HIZ Hauiti 44.50 144 P P 17 17 21.4 +2.2
HIZ IAmb IAmb 17 17 54.0
comp=Z,114nm,1.2s
QRZ Quartz Range 44.82 148 P P 17 17 24.1 +2.4
QRZ IAmb IAmb 17 18 06.2
comp=Z,132nm,1.4s
TGRZ Tauranga 44.83 142 P P 17 17 32.0 +10
RPSI Rantau Prapat 44.87 278 P P 17 17 21.3 -1.1
RPSI IAmb IAmb 17 17 23.3
comp=Z,55nm,1.0s
RPSI PcP **PcP 17 19 01.4 -0.8**
PSI Prapat 44.89 278 P **P 17 17 22.2 -0.6**
comp=Z,41nm,1.0s,baz=179,slow=1.7,SNR=33
JTM Tenmabayashi 44.97 358 P P 17 17 22.3 -0.5
KHON Khomkaen 44.98 298 P P 17 17 24.1 +0.9
comp=Z,43nm,0.9s
NONG Nongkai 45.41 301 P P 17 17 26.0 -0.6
comp=Z,68nm,1.1s
PATY Pattaya 45.49 293 P P 17 17 29.0 +1.7
CHAI Chaiyaphum 45.54 297 P P 17 17 27.5 -0.2
comp=Z,520nmcomp=Z,68nm,0.8s
NNZ Nelson 45.55 148 P P 17 17 29.8 +2.4
NNZ IAmb IAmb 17 18 07.4
comp=Z,74nm,1.2s
MRHZ Matea Rd 45.63 143 P P 17 17 30.9 +2.7
URZ Urewera 45.69 142 P P 17 17 30.1 +1.6
comp=Z,9.5nm,0.9s,baz=300,slow=23,SNR=12
URZ Urewera 45.69 142 P P 17 17 30.1 +1.6
URZ IAmb IAmb 17 18 24.0
comp=Z,43nm,1.3s
URZ Urewera 45.69 142 P P 17 17 30.8 +2.3
THZ Tophouse 45.69 149 P P 17 17 29.4 +0.9
BHHZ Black Hill Sta 45.85 144 P P 17 17 31.5 +1.6
BKZ Black Stump Fm 45.90 144 P P 17 17 30.9 +0.7
BKZ IAmb IAmb 17 17 38.3
comp=Z,40nm,1.1s
BKZ Black Stump Fm 45.90 144 P P 17 17 31.9 +1.7
MTHZ Maungataniwha 45.90 143 P P 17 17 32.1 +1.8
TUWZ Tuamarina 46.00 148 P P 17 17 31.4 +0.5
GSI Gunungsitoli 46.01 276 P P 17 17 29.1 -2.4
KWHZ Kaweka Forest 46.02 144 P P 17 17 28.8 -2.4
RAHZ Arahi 46.09 143 P P 17 17 34.0 +2.3
LTZ Lake Taylor 46.12 150 P P 17 17 33.0 +1.1
LTZ IAmb IAmb 17 18 07.6
comp=Z,58nm,1.2s
KRHZ Kereru 46.13 144 P P 17 17 33.7 +1.6
ERM Erimo 46.15 360 P P 17 17 33.9 +1.9
ERM pmax pmax
comp=Z,60nm,1.1s
ERM Erimo 46.15 360 P P 17 17 33.9 +1.9
ERM IAmb IAmb 17 19 19.1
comp=Z,60nm,1.1s
BSWZ Blackbirch Sta 46.16 148 P P 17 17 33.1 +0.9
TSZ Takapari Road 46.17 145 P P 17 17 33.9 +1.6
TWGZ Tauwhareparae 46.17 142 P P 17 17 34.8 +2.4
MCHZ McNeill Hill 46.20 144 P P 17 17 35.0 +2.5
WKZ Wanaka 46.20 155 P P 17 17 33.2 +0.8
PNHZ Pukenui 46.21 145 P P 17 17 34.4 +1.7
RPZ Rata Peaks 46.24 152 P P 17 17 34.0 +1.3
comp=Z,26nm,0.8s,baz=344,slow=1.4,SNR=5.7
RPZ Rata Peaks 46.24 152 P P 17 17 33.7 +0.9
RPZ IAmb IAmb 17 17 38.2
comp=Z,33nm,0.9s
TKGZ Te Karaka 46.25 142 P P 17 17 34.6 +1.7
MLZ Mavora Lakes 46.26 156 P P 17 17 33.6 +0.7
SLVN Son La 46.26 305 P P 17 17 33.3 -0.1
LBZ Lake Benmore 46.36 153 P P 17 17 33.5 -0.2
LBZ IAmb IAmb 17 18 31.2
comp=Z,120nm,1.6s
RIGZ Rimuhau 46.37 142 P P 17 17 35.8 +1.9
DVHZ Dannevirke 46.45 145 P P 17 17 36.5 +2.0
PKDT Phuket 46.45 285 P P 17 17 34.9 -0.1
comp=Z,2µmcomp=Z,17nm,0.7s
KHZ Kahutara 46.49 149 P P 17 17 35.1 +0.4
KHZ IAmb IAmb 17 18 31.8
comp=Z,76nm,1.3s
PHET Kaeng Krachan 46.62 292 P P 17 17 37.0 +0.8
comp=Z,520nmcomp=Z,64nm,0.8s
BFZ Birch Farm 46.75 145 P P 17 17 37.5 +0.7
BFZ IAmb IAmb 17 18 27.2
comp=Z,46nm,1.0s
GYA Guiyang 46.84 313 ⇑P **P 17 17 39.5 +1.7**
GYA pP pP 17 18 09.8 +3.5
GYA sP sP 17 18 21.5 +1.3
GYA S **S 17 24 22.5 +3.2**
GYA sS sS 17 25 11.5 +3.0
GYA pmax pmax
comp=Z,9.0nm,0.9s
MQZ McQueen's Vall 46.99 151 P P 17 17 39.9 +1.3
MQZ IAmb IAmb 17 18 12.3
comp=Z,149nm,1.5s
JEW Eniwo 47.01 358 P P 17 17 38.2 -0.4
TIA Tai'an 47.20 331 P P 17 17 40.3 0.0
TIA pmax pmax
comp=Z,37nm,1.3s
ENH Enshi 47.23 319 P P 17 17 40.8 +0.1
ENH IAmb IAmb 17 17 42.5
comp=Z,42nm,1.0s
LHMI Lhok Sumawe 47.24 281 P P 17 17 40.9 -0.2
LHMI IAmb IAmb 17 17 42.2
comp=Z,74nm,1.0s
PHIT Phitsanulok 47.43 298 P P 17 17 43.7 +1.3
comp=Z,105nm,0.8s
DL2 Dalian 47.47 337 P P 17 17 43.3 +0.9
DL2 pmax pmax
comp=Z,41nm,0.8s
UTTA Uttaradit 47.52 299 P P 17 17 43.9 +0.8
comp=Z,312nmcomp=Z,41nm,0.9s
SRDT SRDT 47.56 294 P P 17 17 43.7 +0.2
comp=Z,14µmcomp=Z,20nm,1.0s
UTHA Uthaitani 47.69 295 P P 17 17 45.0 +0.6
comp=Z,562nmcomp=Z,76nm,0.8s
MSHR Mys Shultsa 47.99 348‖ *i*P **P 17 17 47.2 +0.9**
MSHR pmax pmax
comp=Z,32nm,0.8s
KHLT Khaolaem Dam 48.20 294 P P 17 17 48.0 -0.4
comp=Z,27nm,0.9s
YUK Yuzh-Kuril'sk 48.23 2*de*P **P 17 17 47.9 -0.2**
SUKH Sukhothai 48.23 298 P P 17 17 49.7 +1.2
comp=Z,26nm,0.8s
ASAJ Asahikawa 48.26 359 P P 17 17 48.3 0.0
ASAJ pmax pmax
comp=Z,152nm,1.7s
JKA Kamikawa-asahi 48.26 359 P P 17 17 48.3 0.0
UMPA Umpang Tak 48.44 296 P P 17 17 50.9 +0.6
comp=Z,624nmcomp=Z,68nm,0.9s
KMI Kunming 49.07 309 ⇑P **P 17 17 57.0 +1.8**
KMI pP pP 17 18 26.8 +2.9
KMI sP sP 17 18 38.5 +0.8
KMI pmax pmax
comp=Z,43nm,1.0s
KMI pmax pmax
comp=Z,210nm,4.1s
KMI LR LR
comp=Z,110nm,12.6s
KMI LR LR
comp=Z,100nm,11.4s
KMI LR LR
comp=Z,120nm,19.1s
KMI Kunming 49.07 309 P **P 17 17 56.8 +1.6**
KMI IAmb IAmb 17 17 58.3
comp=Z,48nm,1.1s
KMI **pP 17 18 24.1 +0.1**
CM36 Chiang Mai Arr 49.10 299 P **P 17 17 56.2 +0.9**
CM35 Chiang Mai Arr 49.11 299 P **P 17 17 56.0 +0.6**
CM04 Chiang Mai Arr 49.16 299 P **P 17 17 56.8 +1.1**
comp=Z,289nmcomp=Z,42nm,0.9s
CM09 Chiang Mai Arr 49.16 299 P P 17 17 57.0 +1.2
comp=Z,311nmcomp=Z,44nm,0.8s
CM01 Chiang Mai Arr 49.18 299 P **P 17 17 57.1 +1.2**
comp=Z,298nmcomp=Z,44nm,0.8s
CM34 Chiang Mai Arr 49.19 299 P P 17 17 56.0 +0.1
CM05 Chiang Mai Arr 49.19 299 P P 17 17 57.0 +1.1
comp=Z,229nmcomp=Z,33nm,0.8s
CM02 Chiang Mai Arr 49.20 299 P P 17 17 57.0 +1.0
comp=Z,285nmcomp=Z,42nm,0.8s
CM31 Chiang Mai Arr 49.21 299 P P 17 17 57.2 +1.1
comp=Z,8µmcomp=Z,1µm,0.8s
CM31 Chiang Mai Arr 49.21 299 P P 17 17 56.9 +0.8
CM31 IAmb IAmb 17 17 58.4
comp=Z,38nm,0.8s
CM31 **pP 17 18 25.4 +0.6**
CMAR Chiang Mai Arr 49.21 299 P **P 17 17 57.3 +1.2**
comp=Z,28nm,0.8s,baz=121,slow=6.2,SNR=212
CMAR Chiang Mai Arr 49.21 299 P **P 17 17 56.5 +0.4**
CMAR **pP 17 18 25.8 +1.0**
CMAR PcP **PcP 17 19 18.6 +1.1**
CM15 Chiang Mai Arr 49.23 299 P **P 17 17 57.3 +1.1**
comp=Z,450nmcomp=Z,52nm,0.8s
CM13 Chiang Mai Arr 49.23 299 P P 17 17 57.3 +1.1
comp=Z,282nmcomp=Z,43nm,0.8s
SNY Shenyang 49.34 341 ⇑P **P 17 17 57.0 +0.3**
SNY pP **pP 17 18 26.5 +1.1**
SNY pmax pmax
comp=Z,50nm,0.9s
SNY pmax pmax
comp=Z,380nm,10.0s
SNY LR LR
comp=Z,100nm,16.6s
SNY LR LR
comp=Z,110nm,9.2s
SNY LR LR
comp=Z,140nm,17.1s
CMMT Chiang Mai 49.35 299 P P 17 17 56.0 -1.1
comp=Z,17nm,1.0s
CM33 Chiang Mai Arr 49.35 299 P P 17 17 57.0 -0.2
CHTO Chiang Mai 49.35 299 P P 17 17 56.9 -0.3
CHTO pmax pmax
comp=Z,25nm,0.9s
CHTO Chiang Mai 49.35 299 P P 17 17 56.9 -0.3
CHTO IAmb IAmb 17 17 59.1
comp=Z,25nm,0.8s
CM32 Chiang Mai Arr 49.37 299 P P 17 17 58.0 +0.7
USA0B Ussuriysk Arra 49.39 349 P P 17 17 56.9 -0.1
USA0B pmax pmax
comp=Z,84nm,1.1s
USA0B Ussuriysk Arra 49.39 349 P P 17 17 56.9 -0.1
USRK Ussuriysk Ar. 49.39 349 P P 17 17 57.2 +0.3
comp=Z,44nm,0.9s,baz=170,slow=8.0,SNR=67
USRK LR LR 17 37 40.2
comp=Z,55nm,19.9s,baz=175,slow=34
USRK Ussuriysk Ar. 49.39 349 P **P 17 17 56.8 -0.2**
USRK *PP **pP 17 18 28.9 +3.1**
USRK Ussuriysk Ar. 49.39 349 P **P 17 17 56.8 -0.2**
USRK pP **pP 17 18 28.9 +3.1**
KUR Kuril'sk 49.54 4‖ *e*P **P 17 17 58.8 +0.7**
MHMT Maesarieng 49.99 298 P **P 17 18 02.0 0.0**
XAN Xi'an 50.09 322 P **P 17 18 03.0 +0.4**
XAN PP **PP 17 19 59.5 +0.5**
XAN pmax pmax
comp=Z,44nm,1.1s
XAN Xi'an 50.09 322 P **P 17 18 02.8 +0.2**
XAN IAmb IAmb 17 18 04.1
comp=Z,52nm,1.2s
XAN pP **pP 17 18 34.3 +2.9**
MDJ Mudanjiang 50.27 347 P **P 17 18 03.2 -0.5**
MDJ IAmb IAmb 17 18 05.0
comp=Z,47nm,1.0s
CN2 Changchun 50.56 343 *e*P **P 17 18 05.5 -0.3**
CN2 *e*S **S 17 25 12.5 +1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.4s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,12.0s
CN2 LR LR
comp=Z,100nm,11.0s
BJT Baijiatuau 50.70 333 P **P 17 18 07.3 +0.3**
BJT pmax pmax
comp=Z,76nm,0.8s
BJT Baijiatuau 50.70 333 P **P 17 18 07.3 +0.3**
BJI Beijing 50.72 333 P **P 17 18 07.5 +0.4**
BJI sP **sP 17 18 50.3 +0.6**
BJI pmax pmax
comp=Z,90nm,0.8s
BJI pmax pmax
comp=Z,230nm,3.5s
BJI LR LR
comp=Z,120nm,13.3s
BJI LR LR
comp=Z,89nm,9.8s
YSS Yuzh-Sakhalins 51.09 360*c i*P **P 17 18 09.4 -0.3**
YSS pmax pmax
comp=Z,77nm,1.4s
YSS Yuzh-Sakhalins 51.09 360 P **P 17 18 09.1 -0.6**
CD2 Chengdu 51.50 316 P **P 17 18 14.3 +1.1**
CD2 pmax pmax
comp=Z,100nm,0.7s
PBA Port Blair 52.72 288 P P 17 18 22.1 -0.2
PBA IAmb IAmb 17 19 18.1

comp=Z,69nm,1.1s
HHC Hu-ho-hao-te 53.53 330 *e*P **P 17 18 29.0 +0.9**
HHC pmax pmax
comp=Z,43nm,0.9s
HHC pmax pmax
comp=Z,130nm,5.8s
KLR Kul'dur 54.30 351*c i*P **P 17 18 33.3 0.0**
KLR pmax pmax
comp=Z,62nm,1.2s
LZH Lanzhou 54.58 321 ⇑P **P 17 18 37.5 +1.7**
LZH pP pP 17 19 11.5 +6.4
LZH sP sP 17 19 23.8 +5.1
LZH S **S 17 26 06.5 +0.4**
LZH sS sS 17 26 57.5 +3.0
LZH SS **SS 17 29 50.5 -0.2**
LZH pmax pmax
comp=Z,69nm,1.3s
LZH pmax pmax
comp=Z,260nm,5.2s
TYV Tymovskoe 55.00 360 *e*P **P 17 18 38.6 +0.2**
TYV *e*S **S 17 26 16.4 +5.5**
TYV pmax pmax
comp=Z,200nm,3.6s
TYV pmax pmax
comp=Z,16nm,0.8s
TYV smax smax
comp=E,500nm,8.7s
GRNR Gornyy 55.22 355⇑ *i*P **P 17 18 40.2 +0.2**
GRNR pmax pmax
comp=N,9.0nm,1.1s
GRNR pmax pmax
comp=Z,20nm,1.1s
HIA Hailar 57.19 342 P **P 17 18 54.0 0.0**
HIA pmax pmax
comp=Z,35nm,1.1s
HIA Hailar 57.19 342 P **P 17 18 54.0 0.0**
HIA IAmb IAmb 17 18 55.7
comp=Z,35nm,1.1s
SHL Shillong 58.02 304 P **P 17 19 00.6 +0.1**
SHL pmax pmax
comp=Z,65nm,0.7s
SHL Shillong 58.02 304 P **P 17 19 00.6 +0.1**
PEA0B Petropavlovsk- 58.53 10 P **P 17 19 03.1 -0.2**
PEA0B pmax pmax
comp=Z,69nm,1.0s
PEA0B Petropavlovsk- 58.53 10 P **P 17 19 03.1 -0.2**
PETK Petropavlovsk- 58.53 10 P **P 17 19 03.6 +0.3**
comp=Z,38nm,0.8s,baz=177,slow=7.4,SNR=28
PETK pP **pP 17 19 33.4 +0.5**
comp=Z,15nm,0.9s,baz=164,slow=6.9,SNR=3.4
PETK LR LR 17 44 02.1
comp=Z,48nm,19.7s,baz=176,slow=36
PETK Petropavlovsk- 58.53 10 P **P 17 19 03.0 -0.3**
PETK *PP **pP 17 19 33.4 +0.5**
PETK Petropavlovsk- 58.53 10 P **P 17 19 03.0 -0.3**
PET Petropavlovsk 58.62 11⇑ *i*P **P 17 19 03.4 -0.5**
PET pmax pmax
comp=Z,33nm,1.0s
PET Petropavlovsk 58.62 11 P **P 17 19 03.7 -0.1**
GTA Gaotai 59.14 322 ⇑P **P 17 19 08.8 +0.9**
GTA pP pP 17 19 40.3 +2.7
GTA sP PcP 17 19 54.0 -1.2
GTA sS sS 17 27 59.5 +4.5
GTA pmax pmax
comp=Z,32nm,0.9s
GTA pmax pmax
comp=Z,150nm,6.8s
ZEA Zeya 59.43 349⇑ *e*P **P 17 19 09.8 +0.4**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,40nm,1.1s
ZEA pmax pmax
comp=Z,70nm,1.0s
LSA Lhasa 60.30 308 P **P 17 19 18.0 +1.5**
LSA pmax pmax
comp=Z,98nm,0.9s
LSA Lhasa 60.30 308 P **P 17 19 17.6 +1.1**
LSA pmax pmax
comp=Z,22nm,0.9s
LSA Lhasa 60.30 308 P **P 17 19 17.6 +1.1**
LSA IAmb IAmb 17 19 19.2
comp=Z,22nm,0.9s
ULN Ulaanbaatar 60.93 333*c i*P **P 17 19 20.8 +0.8**
ULN pmax pmax
comp=Z,36nm,0.7s
ULN Ulaanbaatar 60.93 333 P **P 17 19 21.0 +1.0**
ULN IAmb IAmb 17 19 21.8
comp=Z,34nm,0.8s
SONM Songino Array 61.21 333 P **P 17 19 22.7 +0.8**
comp=Z,12nm,0.7s,baz=160,slow=6.7,SNR=96
CIT Chita 61.59 340 *e*P **P 17 19 24.8 +0.6**
CIT *e* 17 19 54.0
CIT *e* 17 20 07.2
AMKA Amchitka 63.47 24 P **P 17 19 35.4 -1.2**
PALK Pallekele 63.50 280 P **P 17 19 38.9 +1.2**
comp=Z,12nm,0.8s,baz=184,slow=4.4,SNR=9.5
PALK Pallekele 63.50 280 P **P 17 19 37.7 0.0**
PALK pmax pmax
comp=Z,30nm,1.1s
PALK Pallekele 63.50 280 P **P 17 19 37.7 0.0**
PALK IAmb IAmb 17 20 21.7
comp=Z,30nm,1.1s
MA2 Magadan 64.01 4 P **P 17 19 38.9 -1.1**
comp=Z,20nm,0.8s,baz=159,slow=6.2,SNR=9.7
MA2 Magadan 64.01 4⇓ *i*P **P 17 19 40.3 +0.3**
MA2 pmax pmax
comp=Z,44nm,2.5s
MA2 Magadan 64.01 4 P **P 17 19 39.4 -0.6**
MA2 IAmb IAmb 17 19 41.0
comp=Z,39nm,1.0s
ZAK Zakamensk 64.46 333 *e*P **P 17 19 43.7 +0.4**
ZAK *e* 17 20 16.9
ZAK pmax pmax
comp=Z,85nm,1.0s
ZAK pmax pmax
comp=Z,21nm,1.3s
TLY Talaya 65.22 334 P **P 17 19 49.2 +1.0**
comp=Z,30nm,0.8s,baz=156,slow=4.5,SNR=27
TLY Talaya 65.22 334*c i*P **P 17 19 49.1 +1.0**
TLY pmax pmax
comp=Z,47nm,0.9s
TLY Talaya 65.22 334 P **P 17 19 48.0 -0.1**
TLY IAmb IAmb 17 19 50.3
comp=Z,42nm,0.9s
IRK Irkutsk 65.36 335 *e*P **P 17 19 48.6 -0.4**
IRK pmax pmax
comp=Z,46nm,3.1s
CASY Casey 65.90 194 P **P 17 19 52.8 +0.6**
CASY IAmb IAmb 17 19 54.0
comp=Z,26nm,1.1s
BOD Bodaibo 66.31 343 *e*P **P 17 19 54.5 -0.4**
BOD pmax pmax
comp=Z,36nm,1.4s
MOY Mondy 66.40 333 *e*P **P 17 19 56.7 +0.9**
MOY pmax pmax
comp=Z,154nm,1.8s
PPT Papeete 66.92 107 LR LR 17 45 12.0
comp=Z,57nm,21.3s,baz=232,slow=32
PPT2 Papeete2 66.92 107 *e*LR LR 17 40 23.6
comp=Z,155nm,25.8s
YAK Yakutsk 67.02 353 P **P 17 19 59.2 -0.1**
comp=Z,29nm,0.8s,baz=126,slow=0.6,SNR=19
YAK LR LR 17 45 37.1
comp=Z,73nm,21.2s,baz=167,slow=32
YAK Yakutsk 67.02 353 *e*P **P 17 19 59.3 0.0**
YAK *e**PP **pP 17 20 30.2 +0.6**
YAK *e*S **S 17 28 42.9 0.0**
YAK *e**SS **pS 17 29 20.6 +3.5**
YAK *e*SS **SS 17 33 09.1 +5.0**
YAK pmax pmax
comp=N,43nm,1.1s
YAK pmax pmax
comp=Z,93nm,1.1s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK smax smax
comp=E,79nm,3.7s
YAK smax smax
comp=N,92nm,4.0s
HYB Hyderabad 67.42 291 *i*P **P 17 20 02.0 -0.8**
TBI Tubuai 67.42 113 *e*LR LR 17 40 28.4
comp=N,210nm,40.0s
SEY Seymchan 67.46 4 P **P 17 20 01.7 -0.4**
comp=N,13nm,1.0s,baz=168,slow=5.2,SNR=18
SEY pP **pP 17 20 33.8 +1.3**
comp=N,3.9nm,0.3s,baz=271,slow=2.4,SNR=3.6
WMQ Urumqi 69.15 320 *e*P **P 17 20 14.0 +0.8**
WMQ pP pP 17 20 45.8 +2.2
WMQ sP sP 17 20 58.8 +1.8
WMQ pmax pmax
comp=N,66nm,1.5s
WMQ pmax pmax
comp=N,350nm,3.7s
WMQ LR LR
comp=N,2μm,12.7s
WMQ LR LR
comp=N,4μm,14.9s
WMQ LR LR
comp=N,2μm,25.5s
WMQ Urumqi 69.15 320 P **P 17 20 13.4 +0.3**
WMQ pmax pmax
comp=Z,58nm,1.0s
WMQ Urumqi 69.15 320 P **P 17 20 13.4 +0.3**
WMQ IAmb IAmb 17 20 15.2
comp=Z,58nm,1.0s
DGAR Diego Garcia 70.46 264⇓ *e*P **P 17 20 23.8 +2.2**
DGAR pmax pmax
comp=Z,158nm,1.3s
DGZ Jazzator, Alta 72.17 326*c i*P **P 17 20 31.9 +0.4**
DGZ pmax pmax
comp=Z,53nm,0.9s
ZSN Zaisan 72.60 323 *e*P **P 17 20 33.1 -0.8**
comp=Z,13nm,1.2s,baz=323
ZSN Zaisan 72.60 323 *e*P **P 17 20 33.1 -0.8**
ZSN pmax pmax
comp=Z,13nm,1.2s
VNDA Vanda 73.78 176 P **P 17 20 41.4 +1.1**
comp=Z,7.4nm,0.7s,baz=328,slow=6.5,SNR=35
VNDA pP **pP 17 21 10.9 -0.5**
comp=Z,8.0nm,1.1s,baz=356,slow=5.1,SNR=3.6
VNDA LR LR 17 53 50.7
comp=Z,28nm,18.8s,baz=338,slow=36
VNDA Vanda 73.78 176 P **P 17 20 41.1 +0.8**
VNDA pmax pmax
comp=Z,11nm,0.9s
VNDA Vanda 73.78 176 P **P 17 20 41.1 +0.8**
MK31 Makanchi Array 73.89 321*c i*P **P 17 20 41.8 +0.3**
MK31 Makanchi Array 73.89 321 P **P 17 20 41.6 +0.2**
MK31 IAmb IAmb 17 20 43.2
comp=Z,37nm,1.1s
MK31 pP **pP 17 21 12.9 +0.6**
MKAR Makanchi Array 73.89 321 P **P 17 20 42.0 +0.5**
comp=Z,28nm,0.8s,baz=110,slow=7.0,SNR=220
MKAR pP **pP 17 21 13.2 +0.9**
comp=Z,17nm,0.9s,baz=120,slow=7.4,SNR=5.3
MKAR Makanchi Array 73.89 321 P **P 17 20 41.6 +0.1**
MKAR pP **pP 17 21 12.9 +0.6**
BILL Bilibino 74.02 9*d i*P **P 17 20 41.1 -0.6**
BILL pmax pmax
comp=Z,19nm,1.7s
BILL Bilibino 74.02 9 P **P 17 20 41.2 -0.6**
MAKZ Makanchi 74.09 321 P **P 17 20 42.9 +0.2**
MAKZ pmax pmax
comp=Z,48nm,1.0s
MAKZ Makanchi 74.09 321 P **P 17 20 42.9 +0.2**
MAKZ IAmb IAmb 17 20 44.3
comp=Z,48nm,0.9s
SHLS Shalkode 74.30 317 *e*P **P 17 20 41.6 -2.5**
comp=Z,22nm,0.9s,baz=317
SHLS Shalkode 74.30 317 *e*P **P 17 20 41.5 -2.5**
SHLS pmax pmax
comp=Z,22nm,0.9s
UZB Uzynbulak 74.60 317 *e*P **P 17 20 45.1 -0.8**
comp=Z,19nm,0.7s,baz=317
UZB Uzynbulak 74.60 317 *e*P **P 17 20 45.0 -0.8**
UZB pmax pmax
comp=Z,19nm,0.7s
SATY Saty 74.99 317 *e*P **P 17 20 47.1 -1.0**
comp=Z,24nm,1.3s,baz=317
SATY Saty 74.99 317 *e*P **P 17 20 47.0 -1.0**
SATY pmax pmax
comp=Z,24nm,1.3s
SDPT Sand Point 75.25 29 P 17 20 49.2
baz=239
KDJ Kajisay 75.52 315 P **P 17 20 51.3 +0.1**
KDJ pmax pmax
comp=Z,38nm,1.0s
KDJ Kajisay 75.52 315 P **P 17 20 51.3 +0.1**
KDJ IAmb IAmb 17 20 53.2
comp=Z,38nm,1.0s
KSH Kashi 75.53 313 P **P 17 20 53.3 +2.1**
KSH pP pP 17 21 23.8 +1.6
KSH S **S 17 30 26.8 +4.6**
KSH pmax pmax
comp=Z,130nm,2.5s
ZAA0 Zalesovo Array 75.67 329 P **P 17 20 50.5 -1.0**
ZAA0 IAmb IAmb 17 20 52.0
comp=Z,34nm,0.8s
ZALV Zalesovo Beam 75.67 329 P **P 17 20 51.0 -0.5**
comp=Z,36nm,0.8s,baz=109,slow=5.4,SNR=117
ZALV pP **pP 17 21 23.9 +1.4**
comp=Z,7.5nm,0.8s,baz=104,slow=7.7,SNR=2.8
ZALV Zalesovo Beam 75.67 329 P **P 17 20 50.7 -0.8**
TDK Taldyqorghan 75.69 318 *e*P **P 17 20 51.2 -0.7**
comp=Z,30nm,0.8s,baz=318
TDK Taldyqorghan 75.69 318 *e*P **P 17 20 51.2 -0.7**
TDK pmax pmax
comp=Z,30nm,0.8s
MDOK Medeo 75.96 316 *e*P **P 17 20 52.9 -0.8**
baz=316
MDOK Medeo 75.96 316 *e*P **P 17 20 52.8 -0.8**
NIL Nilore 75.96 306 P **P 17 20 54.0 +0.3**
NIL pmax pmax
comp=Z,73nm,0.8s
NIL Nilore 75.96 306 P **P 17 20 54.0 +0.3**
TNSS Tian-Shan 75.98 316 *e*P **P 17 20 54.0 -0.1**
baz=316
TNSS Tian-Shan 75.98 316 *e*P **P 17 20 54.0 -0.1**
AAA Alma-Ata 76.06 316 *e*P **P 17 20 54.4 +0.2**
comp=Z,12nm,0.6s,baz=316
AAA Alma-Ata 76.06 316 *e*P **P 17 20 54.3 +0.2**
AAA pmax pmax
comp=Z,12nm,0.6s
ULHL Ulahol 76.21 315 P **P 17 20 55.9 +0.8**
SNR=17
TIXI Tiksi 76.45 355 P **P 17 20 54.9 -0.6**
comp=Z,11nm,0.7s,baz=168,slow=2.2,SNR=39
TIXI Tiksi 76.45 355 P **P 17 20 54.6 -0.9**
TIXI pmax pmax
comp=Z,12nm,0.7s
TIXI Tiksi 76.45 355 P **P 17 20 54.6 -0.9**
SEM Semipalatinsk 76.62 324 *e*P **P 17 20 55.5 -1.8**
comp=Z,6.4nm,1.1s,baz=324
SEM Semipalatinsk 76.62 324 *e*P **P 17 20 55.4 -1.8**
SEM pmax pmax
comp=Z,6.0nm,1.1s
TKM2 Tokmak 2 76.88 316 P **P 17 20 59.2 +0.3**
SNR=17
KBK Karagaybulak 77.25 315 P **P 17 21 01.7 +0.8**
SNR=8.4
UCH Uchtor 77.42 315 P **P 17 21 03.4 +1.2**
SNR=28
CHMS Chumysh 77.49 316 P **P 17 21 02.5 +0.3**
SNR=20
AAK Ala-Archa 77.56 315 P **P 17 21 03.4 +0.7**
comp=Z,14nm,1.1s,baz=103,slow=5.3,SNR=29
AAK Ala-Archa 77.56 315 P **P 17 21 03.3 +0.7**
SNR=14
AAK Ala-Archa 77.56 315*c i*P **P 17 21 03.1 +0.4**
AAK pmax pmax
comp=Z,69nm,1.3s
KURK Kurchatov 77.70 324 P **P 17 21 03.0 +0.1**
KURK Kurchatov 77.70 324 P **P 17 21 03.0 +0.1**
KURBB Kurchatov Arra 77.71 324 P **P 17 21 03.0 0.0**
comp=Z,21nm,1.0s,baz=110,slow=5.6,SNR=101
KURBB pP **pP 17 21 34.5 +0.4**
comp=Z,8.3nm,1.0s,baz=110,slow=4.6,SNR=4.2
KURBB Kurchatov Arra 77.71 324 P **P 17 21 02.4 -0.7**
SGDS Sogindy 77.72 316 *e*P **P 17 21 01.8 -1.7**
comp=Z,6.1nm,0.9s,baz=316
SGDS Sogindy 77.72 316 *e*P **P 17 21 01.7 -1.7**
SGDS pmax pmax
comp=Z,6.0nm,0.9s
USP Ospenovka 77.75 316 P **P 17 21 04.1 +0.5**
SNR=49
AML Almayashu 77.97 315 P **P 17 21 06.0 +0.7**
SNR=43
EKS2 Erkin-Say 78.07 315 P **P 17 21 06.2 +0.8**
SNR=25
ANM Nome 78.41 20 P 17 21 06.9
baz=233
BTLS Baital 78.61 317 *e*P **P 17 21 07.0 -1.2**
comp=Z,9.9nm,0.7s,baz=317
BTLS Baital 78.61 317 *e*P **P 17 21 06.9 -1.2**
BTLS pmax pmax
comp=Z,10.0nm,0.7s
DRK Karamyk 78.61 312 P **P 17 21 09.2 +0.5**
OHAK Old Harbor 79.67 30 P 17 21 12.5
baz=245
DZA Taraz 79.87 315 *e*P **P 17 21 14.4 -0.7**
comp=Z,19nm,1.2s,baz=315
DZA Taraz 79.87 315 *e*P **P 17 21 14.4 -0.7**
DZA pmax pmax
comp=Z,19nm,1.2s
KDAK Kodiak Island 80.25 29 LR LR 17 50 11.8
comp=Z,72nm,21.9s,baz=240,slow=31
KK31 Karatay Array 80.50 315 *i*P **P 17 21 18.4 -0.1**
KK31 Karatay Array 80.50 315 P **P 17 21 18.4 -0.1**
KK31 IAmb IAmb 17 21 20.0
comp=Z,68nm,1.7s
KK31 pP **pP 17 21 49.7 -0.1**
KKAR Karatay Array 80.50 315 P **P 17 21 18.4 -0.1**
KKAR Karatay Array 80.50 315 P **P 17 21 18.4 -0.1**
KKAR pP **pP 17 21 49.4 -0.4**
KKAR Karatay Array 80.50 315 IAmb IAmb 17 21 20.0
comp=Z,68nm,1.7s
IUG luzhnay 80.60 314 *e*P **P 17 21 18.6 -0.6**
comp=Z,122nm,0.7s,baz=314
IUG luzhnay 80.60 314 *e*P **P 17 21 18.5 -0.6**
IUG pmax pmax
comp=Z,122nm,0.7s
CHM Chimkent 80.95 314 *e*P **P 17 21 20.6 -0.3**
baz=314
CHM Chimkent 80.95 314 *e*P **P 17 21 20.6 -0.3**
BRZS Berezniki 81.01 322 *e*P **P 17 21 19.9 -1.2**
comp=Z,15nm,1.3s,baz=322
BRZS Berezniki 81.01 322 *e*P **P 17 21 19.8 -1.2**
BRZS pmax pmax
comp=Z,15nm,1.3s
TTA Tatalina 81.02 24 P 17 21 21.0
baz=242,SNR=9.8
TTA Tatalina 81.02 24 P **P 17 21 20.5 -0.4**
TTA pmax pmax
comp=Z,11nm,1.0s
TTA Tatalina 81.02 24 P **P 17 21 20.5 -0.4**
RDOG Red Dog Mine 81.29 18 P 17 21 22.5
baz=234
HOM Homer 81.47 28 P 17 21 23.0
baz=246
MAW Mawson 82.33 202 P **P 17 21 28.8 +1.2**
comp=Z,15nm,0.9s,baz=74,slow=6.4,SNR=16
MAW pP **pP 17 21 58.4 -0.7**
comp=Z,17nm,1.0s,baz=97,slow=5.6,SNR=5.2
MAW LR LR 17 55 12.7
comp=Z,54nm,20.9s,baz=64,slow=33
MAW Mawson 82.33 202 P **P 17 21 29.1 +1.5**
baz=82,SNR=11
MAW Mawson 82.33 202 P **P 17 21 29.0 +1.4**
MAW pmax pmax
comp=Z,4.0nm,0.9s
MAW Mawson 82.33 202 P **P 17 21 29.0 +1.4**
SKT Skwentna 82.47 26 P 17 21 26.8
baz=246
SKT Skwentna 82.47 26 P **P 17 21 26.6 -1.8**
PPLA Purkeypile 82.57 25 P 17 21 28.1
baz=245
NRIK Noril'sk 82.60 343 P **P 17 21 28.8 -0.1**
comp=Z,21nm,0.9s,baz=125,slow=4.9,SNR=51
NRIK pP **pP 17 21 58.3 -2.0**
comp=Z,16nm,0.9s,baz=115,slow=5.9,SNR=4.9
NRIK Noril'sk 82.60 343*c i*P **P 17 21 28.6 -0.3**
NRIK pmax pmax
comp=Z,71nm,1.5s
NRIK Noril'sk 82.60 343 P **P 17 21 28.3 -0.6**
NRIK IAmb IAmb 17 21 30.1
comp=Z,103nm,1.6s
NRIK pP **pP 17 22 00.6 +0.3**
NRIK sP **sP 17 22 13.4 0.0**
SUA Susitna One 82.60 26 P 17 21 27.8
baz=247
RC01 Rabbit Creek A 82.91 27 P 17 21 30.0
baz=248,SNR=5.5
RC01 Rabbit Creek A 82.91 27 IAmb IAmb 17 21 30.9
comp=Z,39nm,1.1s
CHUM Lake Minchumin 82.94 24 P 17 21 30.8
baz=245,SNR=24
CUT Chulitna 83.18 25 P 17 21 30.9
baz=247
BVAR Borovoye Array 83.28 324 P **P 17 21 32.6 -0.2**
comp=Z,36nm,0.8s,baz=124,slow=8.0,SNR=182
IMAR Indian Mountai 83.30 22 P **P 17 21 31.6 -1.0**
BRVK Borovoye 83.35 324*c i*P **P 17 21 33.1 0.0**
BRVK pmax pmax
comp=Z,71nm,1.0s
BRVK Borovoye 83.35 324 P **P 17 21 33.4 +0.3**
BRVK IAmb IAmb 17 21 34.6
comp=Z,74nm,1.1s
BRVK pP **pP 17 22 04.7 +0.1**
KTH Kantishna Hill 83.36 24 IAmb IAmb 17 22 16.7
comp=Z,26nm,1.0s
PMR Palmer 83.37 26 P 17 21 32.0
baz=248,SNR=6.9
PWL Port Wells 83.46 27 P **P 17 21 32.5 -1.0**
PWL IAmb IAmb 17 21 33.9
comp=Z,31nm,0.9s
BPAW Bear Paw Mtn. 83.56 24 P 17 21 33.5
baz=246,SNR=7.6
TRF Thorofare Moun 83.58 24 P **P 17 21 32.6 -1.7**
TRF Thorofare Moun 83.58 24 P 17 21 33.1
baz=247,SNR=5.7
KNK Knik Glacier 83.60 27 IAmb IAmb 17 21 34.9
comp=Z,31nm,1.0s
KNK Knik Glacier 83.60 27 P 17 21 33.8
baz=249
SML Sawmill 83.80 26 P 17 21 34.9
baz=249,SNR=8.7
GLI Glacier Island 84.03 27 IAmb IAmb 17 21 36.8
comp=Z,22nm,0.8s
GLI Glacier Island 84.03 27 P 17 21 36.1
baz=250,SNR=6.2
MLY Manley 84.03 23 P **P 17 21 35.7 -0.7**
MLY Manley 84.03 23 P 17 21 36.0
baz=246,SNR=21
WAT2 Susitna Watana 84.11 25 P 17 21 36.1
baz=248
RND Reindeer 84.16 25 P **P 17 21 35.8 -1.3**
RND pmax pmax
comp=Z,31nm,0.9s
RND Reindeer 84.16 25 P **P 17 21 35.8 -1.3**
RND IAmb IAmb 17 21 37.0
comp=Z,31nm,0.9s
BWN Browne 84.20 24 IAmb IAmb 17 22 21.5
comp=Z,73nm,1.2s
MCK McKinley 84.25 24 IAmb IAmb 17 22 21.2
comp=Z,31nm,1.0s
MCK McKinley 84.25 24 P 17 21 36.5
baz=248,SNR=17
SCM Sheep Creek Mo 84.26 27 IAmb IAmb 17 21 38.3
comp=Z,28nm,0.9s
WAT6 Susitna Watana 84.34 26 P 17 21 37.3
baz=249,SNR=10.0
NEA2 Nenana 84.52 24 P 17 21 38.0
baz=248,SNR=8.9
I23K Minto, Yukon-K 84.62 23 P 17 21 38.6
baz=248,SNR=6.2
KLU Klutina 84.77 27 P **P 17 21 40.0 -0.3**
KLU IAmb IAmb 17 21 41.1
comp=Z,25nm,1.0s
KLU Klutina 84.77 27 P 17 21 40.0
baz=251,SNR=14
M24K Tolsona, Glenn 84.86 26 P 17 21 40.7
baz=251
WRH Wood River Hil 84.87 24 IAmb IAmb 17 21 40.3
comp=Z,26nm,1.1s
TCOL CIGO, UAF Yank 85.11 24 P 17 21 40.9
baz=249
COLA College 85.11 24*ce*P **P 17 21 40.2 -1.5**
COLA College 85.11 24 P 17 21 40.9
baz=249
COLD Coldfoot 85.11 21 P 17 21 42.0
baz=247,SNR=14
COLD Coldfoot 85.12 21 P **P 17 21 41.9 +0.2**
HMT Hamilton 85.18 28 IAmb IAmb 17 21 43.1
comp=Z,32nm,0.9s
BMRM Bremner River 85.21 28 P **P 17 21 42.2 -0.3**
BMRM IAmb IAmb 17 21 43.2
comp=Z,24nm,1.0s

BMRM Bremner River 85.21 28 P 17 21 42.2
baz=252,SNR=7.0
HDA Harding Lake 85.31 24 P 17 21 41.1
baz=250,SNR=6.1
HDA P 17 21 41.1
baz=250,SNR=6.1
HARP HAARP 85.41 26 P 17 21 43.3
baz=252
N25K Chitina, Valde 85.41 27 P 17 21 43.2
baz=252,SNR=5.9
PAX Paxson 85.45 26 P 17 21 43.1
baz=251,SNR=5.9
IL31 85.46 24 P **P** **17 21 41.6 -1.8**
ILAR Eielson Array 85.46 24 P **P** **17 21 41.5 -2.1**
comp=Z,11nm,0.8s,baz=257,slow=5.0,SNR=85
QSPA South Pole Qui 85.60 180 P **P** **17 21 44.6 +0.2**
QSPA pP **pP** **17 22 15.3 -1.0**
QSPA lAmb lAmb 17 22 19.3
comp=Z,68nm,1.2s
CRQE Cirque 85.86 28 P 17 21 45.6
baz=254
TOLK Toolik Lake Re 85.89 20 P 17 21 45.9
baz=247,SNR=9.6
TGL Tana Glacier 85.98 28 P **P** **17 21 46.0 -0.3**
TGL lAmb lAmb 17 21 47.2
comp=Z,27nm,1.0s
MCARA McCarthy VSAT 86.07 28 P 17 21 46.3
baz=254
DOT Dot Lake 86.27 25 P **P** **17 21 46.8 -0.7**
DOT lAmb lAmb 17 21 48.2
comp=Z,28nm,1.1s
SCRK Sand Creek 86.40 25 P 17 21 47.8
baz=253,SNR=6.3
GRNC Granite Creek 86.48 28 P **P** **17 21 48.6 -0.3**
BARN Barnard Glacie 86.61 28 lAmb lAmb 17 21 50.7
comp=Z,24nm,0.7s
TABL Table Mountain 86.70 29 P **P** **17 21 49.8 -0.2**
TABL lAmb lAmb 17 21 50.8
comp=Z,29nm,0.8s
FYU Fort Yukon 86.71 22 lAmb lAmb 17 21 52.0
comp=Z,34nm,1.3s
CTG Chitna Glacier 86.74 28 P 17 21 50.3
baz=255
CTGM Chitina Glacie 86.74 28 lAmb lAmb 17 21 51.3
comp=Z,35nm,0.9s
LOGN Logan Glacier 86.86 28 lAmb lAmb 17 21 51.7
comp=Z,20nm,0.9s
PCA Pinnacle 87.04 29 P **P** **17 21 50.9 -0.6**
PCA lAmb lAmb 17 21 52.4
comp=Z,22nm,0.9s
PINM Pinnacle 87.04 29 P 17 21 51.2
baz=256,SNR=7.7
L27K Beaver Creek, 87.07 26 P 17 21 51.5
baz=255,SNR=14
BCAR Beaver Creek A 87.09 26 P **P** **17 21 50.7 -0.9**
K27K Chicken 87.22 25 P 17 21 52.7
baz=254
K27K Chicken 87.22 25 lAmb lAmb 17 21 53.9
comp=Z,26nm,1.0s
BMAR Burnt Mountain 87.22 22 P **P** **17 21 52.3 +0.1**
EGAK Eagle 87.80 25 P 17 21 54.8
baz=255,SNR=14
DAWY Dawson 88.37 25 P **P** **17 21 57.5 -0.2**
DAWY lAmb lAmb 17 21 59.0
comp=Z,29nm,1.2s
DAWY pP **pP** **17 22 30.0 +0.5**
HYT Haines Junctio 88.53 29 lAmb lAmb 17 21 59.9
comp=Z,21nm,1.1s
GEYT Alibeck 88.83 308 P **P** **17 21 59.9 -0.5**
comp=Z,3.3nm,0.7s,baz=196,slow=2.6,SNR=9.7
GEYT Alibeck 88.83 308 P **P** **17 22 00.1 -0.4**
AB31 Akbulak array 88.92 319 *i* P **P** **17 21 58.9 -1.6**
ABKAR Akbulak array 88.92 319 P **P** **17 21 58.8 -1.7**
ABKAR Akbulak array 88.92 319 P **P** **17 21 59.2 -1.3**
ABKAR lAmb lAmb 17 21 59.8
comp=Z,7.3nm,0.8s
WHY Whitehorse 89.77 29 P 17 22 04.2
baz=261
EPYK Eagle Plains 89.96 23 lAmb lAmb 17 22 49.0
baz=254nm,1.7s
EPYK Eagle Plains 89.96 23 P 17 22 04.6
baz=259,SNR=13
SOCY Socotra 90.21 282 P **P** **17 22 06.1 -1.3**
AKTO Aktyubinsk 90.30 320 P **P** **17 22 05.9 -1.0**
comp=Z,4.0nm,0.9s,baz=85,slow=8.1,SNR=9.6
WRAK Wrangell Islan 90.48 34 P 17 22 07.9
baz=263
ARU Arti 90.67 326 P **P** **17 22 07.1 -1.4**
comp=Z,1.1nm,0.6s,baz=109,slow=4.4,SNR=8.4
ARU Arti 90.67 326 *c iP* **P** **17 22 06.7 -1.8**
ARU *PP **pP** **17 22 41.8 +1.4**
ARU 17 25 43.0
ARU S **SKSac** **17 32 25.3 -3.3**
ARU SS **SS** **17 38 54.8 -3.7**
ARU pmax pmax
comp=Z,10.0nm,1.0s
SYO Syowa Base 90.84 200 ||*e* pP pP 17 22 39.6 -1.3
INK Inuvik 91.50 22 P **P** **17 22 10.8 -1.2**
comp=Z,3.7nm,1.1s,baz=252,slow=10,SNR=7.4
INK Inuvik 91.50 22 P 17 22 11.1
baz=262,SNR=6.0
DLBC Dease Lake 91.95 32 P **P** **17 22 14.8 +0.3**
comp=Z,2.6nm,0.9s,baz=272,slow=4.7,SNR=7.3
BBB Bella Bella 92.56 38 LR LR 17 57 51.0
comp=Z,61nm,19.9s,baz=244,slow=32
OPO Ambohidratompo 94.38 251 P **P** **17 22 26.7 0.0**
comp=Z,23nm,0.9s,baz=97,slow=4.0,SNR=18
C36M Paulatuk 94.99 21 P 17 22 26.8
baz=271
L02E Cave Junction 95.21 48 P 17 22 30.7
baz=269
HUMO Hull Mountain 95.70 48 P **P** **17 22 33.0 +1.0**
HUMO lAmb lAmb 17 22 33.5
comp=Z,10nm,0.9s
M02C Callahan 95.76 49 P 17 22 33.2
baz=269
O02D Mt. Diablo Mer 95.79 50 P 17 22 33.3
baz=269
N02D Trinity Center 95.87 49 P 17 22 33.6
baz=269
YBH Yreka Blue Hor 95.87 49 P **P** **17 22 32.9 0.0**
comp=Z,4.6nm,0.8s,baz=282,slow=3.4,SNR=11
YBH LR LR 17 57 41.5
comp=Z,57nm,21.7s,baz=260,slow=30
H04D Lebanon 95.87 46 P 17 22 33.6
baz=270
L04D Klamath Falls 96.18 48 P 17 22 34.5
baz=270
J04D Umpqua Nationa 96.32 47 P 17 22 35.4
baz=270
M04C Macdoel 96.52 49 P 17 22 36.1
baz=270
O03E Paynes Creek 96.55 50 P 17 22 35.4
baz=270
I05D Terrebonne, OR 96.87 46 P 17 22 37.7
baz=271
BELG Belogornoye 96.88 322 *c e* P **P** **17 22 35.6 -1.5**
BELG pmax pmax
comp=Z,5.0nm,0.9s
J05D Fort Rock, OR 96.96 47 P 17 22 38.5
baz=271
K05A Summer Lake 97.22 48 P **P** **17 22 39.0 -0.2**
BELA Belgrano 2 97.87 180 **P** **17 22 40.8 -0.3**
BELA lAmb lAmb 17 23 18.6
comp=Z,10nm,1.3s
PKM Mcpherson Peak 98.14 56 P 17 22 43.8
baz=270
VES Vestal, Richgr 98.72 55 P 17 22 45.5
baz=271
WVOR Wild Horse Val 98.89 48 P **P** **17 22 45.5 -1.1**
WVOR pmax pmax
comp=Z,13nm,1.1s
WVOR Wild Horse Val 98.89 48 P **P** **17 22 45.5 -1.1**
WVOR lAmb lAmb 17 22 47.7
comp=Z,12nm,1.1s
ISA Isabella, Lake 99.22 55 Pdiff 17 22 47.9
baz=271
NVAR Mina Array Bea 99.29 52 P **Pdif** **17 22 47.9 -0.6**
comp=Z,2.0nm,0.7s,baz=264,slow=5.4,SNR=7.0
NVAR LR LR 18 00 04.2
comp=Z,66nm,20.7s,baz=256,slow=31
NVAR Mina Array Bea 99.29 52 P **Pdif** **17 22 48.2 -0.3**
YKA Yellowknife Ar 99.44 27 P **Pdif** **17 22 47.5 -0.8**
comp=Z,1.0nm,0.8s,baz=274,slow=4.7,SNR=17
YKA pP **pP** **17 23 20.1 -0.2**
comp=Z,0.7nm,0.8s,baz=276,slow=4.3,SNR=3.2
YKA PKiKP **PKiKP** **17 27 16.8 -0.3**
comp=Z,0.3nm,0.6s,baz=292,slow=1.0,SNR=9.2
CWC Cottonwood Cre 99.52 54 Pdiff 17 22 49.6
baz=272
EDW2 Edwards Air Fo 99.64 56 Pdiff 17 22 50.0
baz=271
KLMR Klimovskoe 100.48 331 *e* P **Pdif** **17 22 49.7 -3.2**
KLMR pmax pmax
comp=Z,11nm,1.3s
KLMR Klimovskoe 100.48 331 *e* P **Pdif** **17 22 49.8 -3.2**
KLMR AMP 17 22 53.2
comp=Z,11nm,1.3s
HLID Hailey 101.91 47 Pdiff 17 23 01.0
baz=275
IRM Iron Mountain 102.01 56 Pdiff 17 23 00.7
baz=273
ARCES ARCESS Array B 103.53 341 Pdiff **Pdif** **17 23 04.3 -2.2**
comp=Z,3.0nm,0.8s,baz=70,slow=8.2,SNR=6.5
PDAR Pinedale Array 105.53 47 Pdiff **Pdif** **17 23 15.9 -0.3**
comp=Z,1.0nm,0.8s,baz=270,slow=3.0,SNR=7.9
PDAR PKiKP **PKiKP** **17 27 28.9 -0.3**
comp=Z,1.0nm,0.7s,baz=187,slow=1.8,SNR=9.8
FINES FINESS Array B 106.57 334 Pdiff **Pdif** **17 23 18.8 -1.3**
comp=Z,2.2nm,0.7s,baz=67,slow=6.8,SNR=7.2
FINES PKiKP **PKiKP** **17 27 30.0 -0.1**
comp=Z,2.5nm,0.9s,baz=98,slow=3.4,SNR=4.7
ANMO Albuquerque 109.07 55 PKiKP **PKiKP** **17 27 37.0 +1.1**
comp=Z,0.9nm,0.5s,baz=340,slow=5.0,SNR=3.7
ANMO Albuquerque 109.07 55 PKiKP **PKiKP** **17 27 35.6 -0.3**
ANMO Albuquerque 109.07 55 PKiKP 17 27 36.4
baz=278
RSSD Black Hills 109.23 45 PKiKP 17 27 35.1
baz=283
SDCO Great Sand Dun 109.40 52 PKiKP 17 27 36.8
baz=280
MNTX Cornudas Mount 110.41 58 PKiKP 17 27 38.6
baz=278,SNR=6.4
MLR Mutele Rosu 112.07 318 PKiKP **PKiKP** **17 27 40.9 -0.2**
comp=Z,2.2nm,0.6s,baz=136,slow=12,SNR=6.0
BOSA Boshof 112.08 237 PKiKP **PKiKP** **17 27 42.6 +1.0**
comp=Z,1.9nm,0.6s,baz=158,slow=2.8,SNR=6.8
TXAR Lajitas Array 112.20 60 PKiKP **PKiKP** **17 27 42.2 +0.4**
comp=Z,2.8nm,0.9s,baz=318,slow=1.7,SNR=14
MSTX Muleshoe 112.23 55 PKiKP 17 27 41.6
baz=280
ULM Lac du Bonnet 112.71 37 PKiKP **PKiKP** **17 27 40.6 -1.4**
comp=Z,3.7nm,0.5s,baz=283,slow=3.8,SNR=10.0
NOA NORSAR Array B 113.02 337 PKiKP **PKiKP** **17 27 42.0 -0.4**
comp=Z,0.4nm,0.6s,baz=44,slow=1.9,SNR=3.6
ECSD EROS Data Cent 114.49 44 P 17 27 44.8
baz=289
WMOK Wichita Mounta 115.32 54 PKiKP **PKiKP** **17 27 46.5 -1.0**
WMOK Wichita Mounta 115.32 54 **PKiKP** **17 27 46.5 -1.0**
WMOK **pPKiKP** **17 28 18.7 -2.1**
WMOK Wichita Mounta 115.32 54 P 17 27 47.0
baz=283,SNR=5.4
JCT Junction City 115.33 58 PKiKP **PKiKP** **17 27 46.8 -0.9**
JCT Junction City 115.33 58 **PKiKP** **17 27 46.8 -0.9**
JCT **pPKiKP** **17 28 19.2 -1.8**
JCT Junction City 115.33 58 P 17 27 47.7
baz=280,SNR=5.5
KAN08 Anthony NE Sta 115.36 51 **PKiKP** **17 27 46.3 -1.2**
MORC Moravsky Berou 115.78 324 *e* PKiKP **PKPdf** **17 27 48.4 +0.4**
F36A Milaca 115.82 41 **PKPdf** **17 27 47.2 -0.9**
KSU1 Kansas State U 115.89 48 P 17 27 48.6
baz=287
833A Chaparral WMA, 116.05 61 P 17 27 49.5
baz=280
KRLC Kraliky 116.09 325 *e* PKiKP **PKiKP** **17 27 48.7 +0.1**
KRLC Kraliky 116.09 325 *e* PKP **PKiKP** **17 27 48.7 +0.1**
JAVC Velka Javorina 116.11 323 *e* PKiKP **PKiKP** **17 27 50.1 +1.4**
OSTC Ostas 116.19 325 *e* PKP **PKiKP** **17 27 49.0 +0.2**
DPC Dobruska-Polom 116.23 325 *e* PKiKP **PKiKP** **17 27 49.4 +0.5**
DPC Dobruska-Polom 116.23 325 *e* PKP **PKiKP** **17 27 49.4 +0.5**
VRAC Vranov 116.55 324 *e* PKiKP **PKiKP** **17 27 49.7 +0.2**
T35A Sooner Cattle 116.57 51 **PKPdf** **17 27 48.7 -1.2**
T35A pPKPdf 17 28 22.4 -0.8
I37A Lemond, Waseca 116.58 42 PKPdf **PKPdf** **17 27 49.0 -0.7**
FNA Florina 116.69 314 PKiKP **PKPdf** **17 27 48.8 -1.3**
FNA Florina 116.69 314 PKPdf **PKPdf** **17 27 48.8 -1.3**
KRUC Moravsky 116.77 324 *e* PKiKP **PKiKP** **17 27 50.2 +0.3**
PRU Pruhonice 117.41 325 *e* PKiKP **PKPdf** **17 27 50.7 -0.4**
PRU Pruhonice 117.41 325 *e* PKP **PKPdf** **17 27 50.7 -0.4**
CONA Conrad Observa 117.60 323 *i* P **PKPdf** **17 27 51.5 -0.1**
comp=Z,2.4nm,0.7s
CLL Collm 117.60 327 ||*i* PKiKP **PKiKP** **17 27 51.4 0.0**
comp=Z,16nm,1.7s
CLL *e* PP **PP** **17 29 04.0 -1.1**
CLL Collm 117.60 327 ||*i* PKiKP **PKiKP** **17 27 51.4 0.0**
CLL pmax pmax
comp=Z,16nm,1.7s
PBCC Pribram 117.87 325 *e* PKP **PKiKP** **17 27 52.2 +0.2**
CKRC Cesky Krumlov 118.10 324 *e* PKP **PKiKP** **17 27 52.8 +0.3**
G40A Rib Lake 118.20 40 **PKPdf** **17 27 51.8 -1.0**
G40A **pPKPdf** **17 28 24.9 -1.1**
U38A Gravette 118.34 51 **PKPdf** **17 27 52.6 -0.7**
U38A **pPKPdf** **17 28 25.1 -1.5**
KHC Kasperske Hory 118.38 325 ||*i* PKiKP **PKiKP** **17 27 53.5 +0.4**
KHC Kasperske Hory 118.38 325 *e* PKP **PKiKP** **17 27 53.4 +0.4**
GERES GERESS Array B 118.44 325 PKP **PKPdf** **17 27 53.2 0.0**
comp=Z,2.6nm,0.8s,baz=48,slow=2.0,SNR=19
GERES pPKP **pPKPdf** **17 28 26.2 -0.3**
comp=Z,0.8nm,0.7s,baz=75,slow=1.5,SNR=3.1
GERES GERESS Array B 118.44 325 **PKPdf** **17 27 53.0 -0.2**
MOA Molln 118.59 323 *i* P **PKPdf** **17 27 53.0 -0.5**
comp=Z,3.6nm,0.9s
SOKA Soboth 118.67 322 *i* P **PKPdf** **17 27 53.1 -0.6**
comp=Z,3.1nm,0.8s
S39A Bolivar 118.78 49 **PKPdf** **17 27 52.9 -1.2**
S39A **pPKPdf** **17 28 25.8 -1.6**
OBKA Obir 119.04 322 *i* P **PKPdf** **17 27 53.8 -0.6**
comp=Z,3.0nm,0.8s
JFWS Jewell Farm 119.12 43 P 17 27 53.4
baz=294,SNR=5.0
W39A Magazine 119.17 52 P 17 27 54.4
baz=287,SNR=7.5
NATX Nacogdoches 119.37 56 P 17 27 55.4
baz=284
R40A Maddies Statio 119.37 48 **PKPdf** **17 27 54.0 -1.2**
R40A **pPKPdf** **17 28 27.2 -1.3**
MIAR Mount Ida 119.52 53 P 17 27 55.9
baz=286,SNR=7.7
U40A Yellville 119.55 50 P 17 27 55.1
baz=288,SNR=8.3
N41A Harden Midland 119.55 45 PKPdf **PKPdf** **17 27 54.1 -1.4**
N41A **pPKPdf** **17 28 27.0 -1.7**
ABTA Abfaltersbach 120.17 323 *i* P **PKPdf** **17 27 55.7 -0.9**
comp=Z,6.2nm,0.7s
CCM Cathedral Cave 120.21 48 PKPdf **PKPdf** **17 27 55.8 -1.0**
CCM **pPKPdf** **17 28 28.6 -1.5**
CCM Cathedral Cave 120.21 48 P 17 27 56.0
baz=290
STAL STALIGIAL 120.28 322 **PKPdf** **17 27 56.4 -0.4**
W41B Gary Mavity, V 120.38 52 P 17 27 56.6
baz=288,SNR=7.3
WATA Walderalm 120.43 324 *i* P **PKPdf** **17 27 56.5 -0.6**
comp=Z,8.9nm,1.2s
WTTA Wattenberg 120.43 324 *i* P **PKPdf** **17 27 57.0 -0.2**
comp=Z,8.5nm,0.7s
MOTA Moosalm 120.70 324 *i* P **PKPdf** **17 27 57.0 -0.7**
comp=Z,7.8nm,0.7s
SQTA Sankt Quirin 120.70 324 *i* P **PKPdf** **17 27 57.3 -0.4**
comp=Z,7.0nm,0.9s
HDIL Hopedale 120.71 45 P 17 27 57.2
baz=293
RETA Reutte 120.83 324 *e* P **PKPdf** **17 27 57.5 -0.3**
comp=Z,7.6nm,1.7s
FVM French Village 120.84 48 PKiKP **PKPdf** **17 27 57.2 -0.9**
FVM 17 28 30.3
FVM French Village 120.84 48 **PKPdf** **17 27 57.1 -0.9**
FVM **pPKPdf** **17 28 30.3 -1.0**
LCAR Lake Charles 120.94 50 PKPdf **PKPdf** **17 27 57.4 -0.9**
LCAR **pPKPdf** **17 28 30.0 -1.6**
FETA Feichten 121.09 324 *i* P **PKPdf** **17 27 58.1 -0.4**
comp=Z,5.2nm,0.8s
E46A Sault Ste Mari 121.34 37 PKPdf **PKPdf** **17 27 58.0 -0.8**
E46A **pPKPdf** **17 28 30.7 -1.3**
DAVA Damuels 121.44 325 *i* P **PKPdf** **17 27 59.1 -0.1**
comp=Z,8.9nm,0.7s
CMIG Matias Romero 121.68 73 PKP **PKPdf** **17 27 59.9 -0.3**
comp=Z,11nm,0.7s,baz=28,slow=3.6,SNR=18
BCLA Clavier 122.13 330 *d* PKP **PKPdf** **17 28 00.1 0.0**
WLF Walferdange 122.15 329 *d* PKP **PKiKP** **17 28 00.7 +0.3**
TUE Stuetta 122.19 324 PKPdf **PKPdf** **17 27 59.9 -0.7**
TUE **pPKPdf** **17 28 32.8 -1.1**
OLIL Olney 122.27 46 **PKPdf** **17 28 00.1 -0.6**
OLIL pPKPdf **pPKPdf** **17 28 33.0 -1.0**
SFIN Lafayette 122.31 44 P 17 28 00.2
baz=295
BMRD Maredsous 122.47 330 *d* PKP **PKPdf** **17 28 00.8 +0.1**
P46A Rosedale 122.55 45 **PKPdf** **17 28 00.7 -0.6**
P46A **pPKPdf** **17 28 33.3 -1.2**
J47A Sunmer 122.56 40 **PKPdf** **17 28 00.7 -0.5**
LATE Laterza 122.57 319 **PKPdf** **17 27 60.0 -1.3**
SNF Seneffe 122.58 330 *d* PKP **PKPdf** **17 28 00.9 0.0**
MATQ Matagami 123.10 30 P 17 28 00.7
baz=309
L48A N Adams 123.42 41 **PKPdf** **17 28 02.4 -0.5**
L48A **pPKPdf** **17 28 35.3 -0.9**
WVT Waverly 123.45 49 P 17 28 02.1
baz=292
WCI Wyandotte Cave 123.77 46 PKIKP **PKPdf** **17 28 02.8 -0.9**
WCI Wyandotte Cave 123.77 46 **PKPdf** **17 28 02.8 -0.9**
WCI Wyandotte Cave 123.77 46 P 17 28 03.1
baz=294
LSQQ Lebel-sur-Quev 123.88 31 P 17 28 02.6
baz=309
N49A Columbus Grove 124.06 42 **PKPdf** **17 28 03.3 -0.8**
N49A **pPKPdf** **17 28 36.5 -0.9**
P49A Miami Univ. Ec 124.33 44 P 17 28 04.2
baz=296,SNR=8.9
CLTN Cedars of Leba 124.58 49 **PKPdf** **17 28 03.8 -1.5**
CLTN **pPKPdf** **17 28 37.5 -1.1**
CHGQ Chibougamau 124.61 29 P 17 28 03.9
baz=312,SNR=9.1
I51A Listowel 124.66 38 P 17 28 04.8
baz=302,SNR=5.4
LRAL Lakeview Retre 125.19 52 **PKPdf** **17 28 05.5 -1.0**
LRAL **pPKPdf** **17 28 39.1 -0.7**
LRAL Lakeview Retre 125.19 52 P 17 28 06.1
baz=290,SNR=5.3
ACSO Alum Creek Sta 125.19 43 P 17 28 05.9
baz=298,SNR=7.2
ALGO Algonquin Park 125.20 34 P 17 28 05.5
baz=306,SNR=7.8
SADO Sadowa 125.26 36 PKP **PKPdf** **17 28 05.8 -0.6**
comp=Z,13nm,0.8s,baz=313,slow=4.0,SNR=12
SADO pPKP **pPKPdf** **17 28 38.6 -0.9**
comp=Z,11nm,0.9s,baz=350,slow=2.1,SNR=5.1
SADO Sadowa 125.26 36 PKPdf **PKPdf** **17 28 05.6 -0.7**
SADO **pPKPdf** **17 28 38.2 -1.4**
T50A Nancy 125.31 47 **PKPdf** **17 28 06.0 -0.7**
T50A **pPKPdf** **17 28 37.9 -2.0**
PLCA Paso Flores 125.48 149 PKP **PKiKP** **17 28 08.2 +0.7**
comp=Z,11nm,1.0s,baz=244,slow=1.9,SNR=23
PLCA pPKP **pPKPdf** **17 28 40.4 +0.1**
comp=Z,6.3nm,0.8s,baz=227,slow=1.0,SNR=7.2
PLCA Paso Flores 125.48 149 PKPdf **PKiKP** **17 28 07.8 +0.3**
P51A Williamsport 125.49 43 **PKPdf** **17 28 05.8 -1.1**
P51A **pPKPdf** **17 28 38.7 -1.5**
G54A Lake Saint Pet 125.51 35 P 17 28 05.9
baz=306,SNR=7.5
SSB Saint Sauveur 125.64 325 PKiKP **PKPdf** **17 28 07.2 +0.1**
SSB Saint Sauveur 125.64 325 **PKPdf** **17 28 07.2 +0.1**
VSL Villasalto 125.65 317 PKPdf **PKPdf** **17 28 07.0 -0.3**
H53A Bobcaygeon 125.70 36 P 17 28 06.6
baz=305,SNR=8.5
D55A Sainte-Anne-du 125.95 32 P 17 28 06.6
baz=310,SNR=5.3
E55A Montcerf-Lytto 126.00 33 P 17 28 07.3
baz=309
P52A Corning 126.05 43 P 17 28 07.3
baz=299,SNR=7.7
APG El Apazote 126.11 75 PKP **PKPdf** **17 28 09.1 0.0**
comp=Z,5.1nm,0.4s,baz=325,slow=2.9,SNR=11
L53A Girard 126.12 39 P 17 28 07.6
baz=302
M53A WI Miller and 126.12 40 P 17 28 07.3
baz=301
V51A Loudon 126.17 48 **PKPdf** **17 28 07.7 -0.7**
V51A **pPKPdf** **17 28 40.7 -1.0**
ERPA Erie 126.20 39 P 17 28 07.6
baz=302
PLVO Plevna 126.30 35 **PKPdf** **17 28 07.6 -0.7**
PLVO pPKPdf **pPKPdf** **17 28 40.2 -1.4**
D56A ZEC Mazanza, M 126.31 32 P 17 28 07.7
baz=310,SNR=8.1
O53A New Philadelph 126.37 42 P 17 28 08.4
baz=300,SNR=6.0
E56A St. Veronique 126.49 32 P 17 28 07.9
baz=310
P53A Whipple 126.63 43 **PKPdf** **17 28 08.6 -0.5**
P53A **pPKPdf** **17 28 41.5 -0.9**
TKL Tuckaleechee C 126.66 48 PKP **PKPdf** **17 28 09.3 0.0**
comp=Z,18nm,0.8s,baz=165,slow=3.0,SNR=16
TKL pPKP **pPKPdf** **17 28 41.7 -0.8**
comp=Z,16nm,0.9s,baz=175,slow=2.9,SNR=6.5
M54A Oil Creek Stat 126.73 40 P 17 28 08.9
baz=302,SNR=7.9
N54A Moraine State 126.81 40 **PKPdf** **17 28 08.6 -0.9**
N54A **pPKPdf** **17 28 41.7 -1.0**
N54A Moraine State 126.81 40 P 17 28 09.1
baz=302
Q53A Leroy 126.84 43 P 17 28 09.3
baz=299
LATQ La Tuque 127.10 30 P 17 28 09.1
baz=313
Y52A Lilburn 127.17 50 **PKPdf** **17 28 09.9 -0.4**
Y52A **pPKPdf** **17 28 43.1 -0.5**
D58A Chemin du LacG 127.24 30 P 17 28 09.1
baz=312
KEST Kesra 127.35 313 PKP **PKiKP** **17 28 11.4 +0.1**
comp=Z,4.5nm,0.8s,baz=237,slow=4.7,SNR=5.0
KEST Kesra 127.35 313 **PKPdf** **17 28 10.9 +0.2**
G57A Newington 127.43 34 P 17 28 10.0
baz=309
TEIG Tepich 127.46 68 PKP **PKPdf** **17 28 11.3 +0.1**
comp=Z,22nm,0.8s,baz=306,slow=4.7,SNR=9.6
S54A Dingess, Beckl 127.49 44 P 17 28 10.4
baz=298
E58A La Victoria 127.52 31 P 17 28 10.3
baz=312
R54A Victor 127.53 44 P 17 28 10.2
baz=299
MCWV Mont Chateau 127.58 42 P 17 28 11.0
baz=301
H57A Richville 127.60 34 P 17 28 10.4
baz=308
M56A Emporium 127.68 39 P 17 28 10.6
baz=304,SNR=7.7
L56A Greenwood 127.70 38 PKPdf **PKPdf** **17 28 10.6 -0.6**
L56A **pPKPdf** **17 28 43.4 -1.0**
L56A Greenwood 127.70 38 P 17 28 10.6
baz=305,SNR=8.6
I57A Carthage 127.77 35 P 17 28 11.1
baz=306,SNR=5.9
GOGA Godfrey 127.80 50 P 17 28 11.6
baz=293,SNR=5.9
J57A Williamstown 127.90 36 P 17 28 11.4
baz=307
N56A West Decatur 127.92 40 P 17 28 11.7
baz=303,SNR=5.1
LONY Lake Ozonia 127.95 34 P 17 28 10.9
baz=309
BI02 San Fabin de 127.99 145 PKPdf **PKiKP** **17 28 12.4 -0.1**
K57A Scipio Center 127.99 37 P 17 28 11.2
baz=306,SNR=5.9
R55A Marlinton 128.08 43 P 17 28 12.1
baz=300,SNR=7.5
O56A Blue Knob Stat 128.10 40 P 17 28 12.1
baz=302,SNR=5.5
L57A Andrews Acres 128.22 38 P 17 28 11.6
baz=305,SNR=7.1
H58A Gabriels 128.31 34 P 17 28 12.3
baz=310,SNR=6.4
I58A Old Forge 128.31 35 P 17 28 12.0
baz=308
P56A Dayton Farm, R 128.32 41 P 17 28 12.5
baz=302,SNR=5.7
Q56A Snyder Ridge, 128.33 42 P 17 28 12.5
baz=301
SSPA Standing Stone 128.33 40 **PKPdf** **17 28 11.9 -0.4**
SSPA **pPKPdf** **17 28 45.2 -0.4**
SSPA Standing Stone 128.33 40 P 17 28 12.1
baz=303
D60A Saint Jean D'O 128.34 29 P 17 28 12.4
baz=314
BLA Blacksburg 128.39 45 P 17 28 12.4
baz=299,SNR=7.5
M57A Sunshine Farm, 128.42 39 P 17 28 12.4
baz=305,SNR=7.5
V55A Taylorsville 128.45 47 **PKPdf** **17 28 12.3 -0.4**

V55A						**pPKPdf**	**17 28 46.0**	**0.0**
F60A	**Warwick**	**128.48**	**31**	P			17 28 11.7	
	baz=313							
N57A	**Milroy**	**128.48**	**39**	P			17 28 12.5	
	baz=304,SNR=5.1							
K58A	**Earlville**	**128.49**	**36**	P			17 28 12.4	
	baz=307							
R56A	**Bull Pasture M**	**128.51**	**43**	P			17 28 12.9	
	baz=300							
BINY	**Binghamton**	**128.62**	**37**	P			17 28 12.8	
	baz=306,SNR=5.5							
KMSC	**Kings Mountain**	**128.68**	**48**	P			17 28 13.5	
	baz=296,SNR=5.1							
J59A	**Piesco**	**128.72**	**35**	PKPdf		**PKPdf**	**17 28 12.6**	**-0.4**
J59A						**pPKPdf**	**17 28 45.5**	**-0.8**
J59A	**Piesco**	**128.72**	**35**	P			17 28 13.2	
	baz=309,SNR=6.5							
O57A	**Amberson**	**128.73**	**40**	P			17 28 13.2	
	baz=303							
L58A	**Harry Jones Me**	**128.79**	**37**	P			17 28 13.3	
	baz=306							
Q57A	**Strasburg**	**128.85**	**42**	P			17 28 13.5	
	baz=302							
I59A	**Olmsteadville**	**128.87**	**34**	P			17 28 13.7	
	baz=310,SNR=5.4							
P57A	**Homestead Farm**	**128.88**	**41**	P			17 28 13.1	
	baz=302							
E61A	**Lac Etchemin**	**128.89**	**30**	P			17 28 13.9	
	baz=315,SNR=5.6							
F61A	**St Evariste**	**128.96**	**30**	P			17 28 14.3	
	baz=314							
N58A	**Sunbury**	**128.96**	**39**	P			17 28 13.6	
	baz=305,SNR=5.1							
R57A	**Stanardsville**	**129.16**	**43**	P			17 28 14.3	
	baz=301							
I60A	**Shoreham**	**129.16**	**34**	P			17 28 14.3	
	baz=310,SNR=9.6							
L59A	**Walton**	**129.19**	**36**	P			17 28 14.2	
	baz=307							
O58A	**Lewisberry**	**129.23**	**40**	P			17 28 13.4	
	baz=304							
T57A	**Hurt**	**129.31**	**44**			**PKPdf**	**17 28 14.2**	**-0.1**
T57A						**pPKPdf**	**17 28 46.8**	**-0.8**
M59A	**Waymart**	**129.34**	**37**	P			17 28 14.4	
	baz=306,SNR=6.2							
Q58A	**Fox Den Farm,**	**129.38**	**41**	P			17 28 14.0	
	baz=302							
H61A	**Lyndonville**	**129.45**	**32**	P			17 28 14.9	
	baz=312							
N59A	**State Game Lan**	**129.50**	**38**	P			17 28 14.7	
	baz=306							
O59A	**Robesonia**	**129.59**	**39**	P			17 28 14.9	
	baz=305							
K60A	**Five Rivers En**	**129.60**	**35**	P			17 28 15.4	
	baz=309							
LBNH	**Lisbon**	**129.65**	**33**	P			17 28 15.4	
	baz=312							
I61A	**Oroboro, Fairl**	**129.70**	**33**	P			17 28 15.7	
	baz=311							
R58B	**Mineral**	**129.77**	**43**	P			17 28 14.9	
	baz=302							
P59A	**Jarrettsville**	**129.83**	**40**	P			17 28 15.9	
	baz=304							
E63A	**Oxbow**	**129.90**	**28**	P			17 28 15.1	
	baz=317							
J61A	**Chester**	**129.90**	**34**	P			17 28 16.5	
	baz=311							
PQI	**Presque Isle**	**129.90**	**28**	PKPdf		**PKPdf**	**17 28 15.1**	**0.0**
K61A	**Williamstown**	**129.93**	**35**	P			17 28 16.0	
	baz=309							
N60A	**Cedar Hill Far**	**129.94**	**38**	P			17 28 14.7	
	baz=306							
O60A	**Telford**	**130.08**	**39**	P			17 28 16.3	
	baz=306							
E64A	**Bridgewater**	**130.18**	**28**	P			17 28 15.9	
	baz=318							
P60A	**Greenville**	**130.22**	**39**	P			17 28 16.1	
	baz=305							
G63A	**Kingsbury**	**130.25**	**30**	P			17 28 15.8	
	baz=315							
PKME	**Peaks-Kenny Pk**	**130.31**	**30**	P			17 28 16.1	
	baz=315							
F64A	**Sherman**	**130.34**	**29**	P			17 28 16.4	
	baz=317							
H63A	**New Sharon**	**130.36**	**31**	P			17 28 16.2	
	baz=314							
M61A	**Granite Spring**	**130.48**	**37**	P			17 28 16.2	
	baz=308							
HRV	**Adam Dziewonsk**	**131.00**	**34**	P			17 28 18.2	
	baz=311							
G65A	**Princeton**	**131.20**	**29**	P			17 28 18.3	
	baz=317							
ORTG	**Ortega, Santa**	**131.34**	**80**			**PKPdf**	**17 28 19.3**	**+0.4**
JTS	**Las Juntas de**	**131.84**	**80**	PKP		**PKPdf**	**17 28 19.7**	**0.0**
	comp=Z,13nm,0.8s,baz=5.1,slow=7.0,SNR=8.5							
ESDC	**Sonseca Array**	**134.04**	**324**	PKP		**PKPdf**	**17 28 23.2**	**0.0**
	comp=Z,0.7nm,0.8s,baz=18,slow=3.8,SNR=3.2							
GO02	**Mina Guanaco**	**136.64**	**134**			**PKPdf**	**17 28 29.5**	**+0.7**
PB10	**IPOC Station P**	**136.92**	**132**	PKPdf		**PKPdf**	**17 28 29.9**	**+0.9**
OTAV	**Otavalo**	**138.12**	**94**	PKIKP		**PKPdf**	**17 28 32.5**	**+0.5**
OTAV	**Otavalo**	**138.12**	**94**			**PKPdf**	**17 28 32.5**	**+0.5**
PB11	**IPOC Station P**	**139.72**	**128**			PKPpre	17 28 25.4	
PB11						**PKPdf**	**17 28 31.8**	**-2.7**
CRUC	**La Cruz**	**139.74**	**93**	*eP*		**PKPdf**	**17 28 35.9**	**+1.0**
PB16	**IPOC Station P**	**140.60**	**126**			PKPpre	17 28 29.5	
MOTC	**Monteria, Cord**	**141.08**	**81**	*eP*		**PKPdf**	**17 28 34.0**	**-2.9**
TOA0	**Torodi Ar. Sit**	**141.09**	**285**	PKPdf		**PKPdf**	**17 28 31.0**	**-5.8**
TORD	**Torodi Ar. Bea**	**141.09**	**285**	PKHKP		PKPpre	17 28 29.6	
	comp=Z,3.4nm,1.0s,baz=78,slow=2.5,SNR=12							
TORD				PKP		**PKiKP**	**17 28 39.1**	**-0.5**
	comp=Z,10.0nm,0.8s,baz=61,slow=2.1,SNR=26							
TORD	**Torodi Ar. Bea**	**141.09**	**285**			PKPpre	17 28 29.5	
TORD				PKPdf		**PKPdf**	**17 28 36.6**	**-0.2**
GUY2C	**Guyana, Caldas**	**141.49**	**87**	*eP*		**PKPdf**	**17 28 35.9**	**-2.3**
TOLC	**Tolima**	**141.52**	**88**	*eP*		**PKPdf**	**17 28 36.9**	**-1.2**
ZARC	**Zaragoza, Cauc**	**141.95**	**83**	*eP*		**PKPdf**	**17 28 31.1**	**-7.3**
NORC	**Norcasia**	**141.98**	**87**	*eP*		**PKPdf**	**17 28 33.0**	**-5.5**
NORC				*eP*		**PKiKP**	**17 28 35.9**	**-5.6**
PTBC	**PUERTO BERRIO**	**142.38**	**85**	*eP*		**PKPdf**	**17 28 33.3**	**-5.9**
ROSC	**El Rosal**	**142.53**	**88**	PKhKP		PKPpre	17 28 35.2	
	comp=Z,38nm,0.7s,baz=130,slow=10.0,SNR=8.5							
SPBC	**San Pablo de B**	**142.78**	**86**	*eP*		**PKPdf**	**17 28 35.9**	**-4.1**
LPAZ	**La Paz**	**142.78**	**124**	PKP		**PKPdf**	**17 28 38.1**	**-2.4**
	comp=Z,15nm,0.8s,baz=238,slow=1.3,SNR=33							
MACC	**Macarena, Meta**	**142.88**	**92**	*eP*		**PKPdf**	**17 28 34.0**	**-6.1**
BRRC	**Barranca, Sant**	**143.10**	**84**	*eP*		PKPab	17 28 35.9	-0.2
CHIC	**Chingaza**	**143.11**	**88**	*eP*		PKPab	17 28 36.9	+0.2
VILC	**Villavicencio,**	**143.13**	**89**	*eP*		PKPab	17 28 35.9	-0.5
CPUP	**Villa Florida**	**143.55**	**148**	PKP		**PKPdf**	**17 28 40.2**	**-0.7**
	comp=Z,12nm,1.0s,baz=255,slow=1.9,SNR=17							
CPUP				pPKP		**pPKPdf**	**17 29 14.2**	**0.0**
	comp=Z,7.2nm,0.8s,baz=321,slow=2.3,SNR=4.6							
CPUP	**Villa Florida**	**143.55**	**148**	PKPdf		PKPbc	17 28 39.5	+1.0
BARC	**Barichara**	**143.65**	**85**	*eP*		PKPab	17 28 38.8	+0.2
RUSC	**La Rusia**	**143.76**	**86**	*eP*		PKPab	17 28 38.8	-0.6
PAMC	**Pamplona, Colo**	**144.10**	**84**	*eP*		**PKPab**	**17 28 40.7**	**+0.1**
URIC	**Uribia, Colomb**	**144.35**	**76**	*eP*		**PKPab**	**17 28 39.7**	**-1.2**
TAMC	**Tame, Arauca**	**145.03**	**85**	*eP*		**PKPbc**	**17 28 41.8**	**-1.7**
ITAB	**Concordia**	**145.24**	**155**	*eP*		pPKPab	17 29 14.4	-1.9
SDV	**Santo Domingo**	**146.03**	**81**			**PKPdf**	**17 28 45.8**	**+0.1**
KOWA	**Kowa**	**146.25**	**290**			**PKPdf**	**17 28 46.4**	**+0.6**
MLPR	**Magueyes Islan**	**147.40**	**63**	PKPdf		**PKPdf**	**17 28 47.2**	**-0.5**
MLPR						**pPKPdf**	**17 29 20.6**	**-0.4**
PTGB	**Pitanga**	**147.48**	**153**	*eP*		PKPab	17 29 03.0	+10
OBIP	**Obispado Ponce**	**147.76**	**63**	PKPdf		**PKPdf**	**17 28 48.1**	**-0.2**
OBIP				pPKPdf		**pPKPdf**	**17 29 22.3**	**+0.7**
ICMP	**Isla Caja de M**	**147.89**	**63**			**PKPdf**	**17 28 47.9**	**-0.6**
ICMP				pPKPdf		**pPKPdf**	**17 29 22.2**	**+0.4**
SJG	**San Juan**	**148.14**	**62**			**PKPdf**	**17 28 48.1**	**-0.7**
SJG				pPKPdf		**pPKPbc**	**17 29 23.9**	**-1.4**
SJG	**San Juan**	**148.14**	**62**	*eP*		**PKPbc**	**17 28 51.2**	**-1.0**
TIJ01	**Guaruva-PR**	**148.18**	**159**	*eP*		pPKPbc	17 29 26.2	+0.8
DBIC	**Dimbokro**	**148.20**	**276**	PKPbc		**PKPbc**	**17 28 53.0**	**+0.4**
	comp=Z,60nm,0.9s,baz=81,slow=3.3,SNR=49							
DBIC	**Dimbokro**	**148.20**	**276**	PKPdf		**PKPdf**	**17 28 48.9**	**-0.3**
DBIC				PKPbc		**PKPbc**	**17 28 52.7**	**+0.1**
MTP	**Monte Pirata**	**148.67**	**62**			**PKPdf**	**17 28 49.1**	**-0.6**
MTP				PKPbc		**PKPbc**	**17 28 53.2**	**-0.4**
MTP						**pPKPbc**	**17 29 25.7**	**-1.0**
TRCB	**Terra Rica**	**148.86**	**151**	*eP*		**PKPdf**	**17 28 50.2**	**+0.1**
STVI	**Saint Thomas**	**149.10**	**61**			**PKPdf**	**17 28 49.7**	**-0.7**
STVI				PKPbc		**PKPbc**	**17 28 54.0**	**-0.6**
STVI				PKPab		**PKPab**	**17 28 58.4**	**-0.9**
STVI				pPKPdf		**pPKPdf**	**17 29 22.3**	**-1.5**
STVI						**pPKPbc**	**17 29 26.5**	**-1.2**
MACI	**Morro de la Ar**	**149.43**	**323**			**PKPbc**	**17 28 55.6**	**+0.1**
CDVI	**St. Croix**	**149.49**	**62**	PKPdf		**PKPdf**	**17 28 49.7**	**-1.3**
CDVI				PKPbc		**PKPbc**	**17 28 55.3**	**-0.4**
CDVI				pPKPdf		**pPKPdf**	**17 29 23.3**	**-1.1**
CDVI						**pPKPbc**	**17 29 27.7**	**-1.1**
SPB	**Sao Paulo**	**150.32**	**160**	*eP*		pPKPbc	17 29 32.0	+1.3
SAML	**Samuel**	**150.50**	**117**	PKIKP		**PKPdf**	**17 28 52.9**	**+0.1**
SAML	**Samuel**	**150.50**	**117**			**PKPdf**	**17 28 52.9**	**+0.1**
SAML				PKPbc		**PKPbc**	**17 28 58.4**	**+0.1**
VAO	**Valinhos**	**151.03**	**160**	*eP*		pPKPbc	17 29 34.0	+1.5
BB19B	**Bebedouro**	**152.21**	**156**	*eP*		**PKPab**	**17 29 16.7**	**+4.7**
ITRB	**Iturama**	**152.59**	**151**	*eP*		**PKPdf**	**17 28 57.3**	**+1.5**
BDFB	**Brasilia**	**157.20**	**151**	PKP		**PKPdf**	**17 29 02.9**	**+0.5**
	comp=Z,11nm,0.9s,baz=307,slow=0.4,SNR=14							
BDFB	**Brasilia**	**157.20**	**151**	PKPdf		**PKPdf**	**17 29 02.5**	**+0.1**
PEXB	**Peixe**	**160.00**	**145**	*eP*		**PKPdf**	**17 29 03.9**	**-1.8**
NBLA	**Lagarto - SE**	**164.72**	**176**	*eP*		pPKPab	17 30 34.9	-3.3
TMAB	**Tom-Au,PA,Br**	**166.82**	**120**	*eP*		**PKPdf**	**17 29 16.9**	**+4.9**

MAN ***25*** *17:22:39.6,6.10N×125.82E,h152km,MS2.9*
IDC ***25*** *17:22:42.2±2.2,5.89N×125.39E,h114km±50km,mb3.6/4, mb1 3.8/5,mb1mx3.1/45,mbtmp4.0/5,Error ellipse: s-maj=96.7km s-min=41.7km az=61.0*
NEIC ***25*** *17:22:42.7±1.5,6.23N±0.10×125.9E±0.2,h138km±13km, mb4.3/9,Error ellipse: s-maj=25.2km s-min=12.2km az=71.0*

ISC 25 17:22:43.3±0.8,6.19N±0.06×125.86E±0.08,h138km±7km, n26,σ1°16/32,mb4.2/8,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.17**	**241**	*eP*		**Pn**	**17 23 01.0**	**-1.1**
DDMP				*eS*		**Sn**	**17 23 16.1**	**-0.2**
MATI	**Mati**	**0.85**	**28**	*eP*		**Pn**	**17 23 04.2**	**-1.5**
MATI				*eS*		**Sn**	**17 23 23.3**	**+0.6**
DAV	**Davao City (W)**	**0.92**	**342**	P		**Pn**	**17 23 06.2**	**0.0**
	21nm,0.3s,baz=237,slow=4.3,SNR=16							
DAV				S		**Sn**	**17 23 23.5**	**-0.2**
	112nm,0.3s,baz=130,slow=22,SNR=19							
SKMP	**Bagumbayan, Su**	**1.35**	**284**	*eP*		**Pn**	**17 23 08.6**	**-1.8**
SKMP				*eS*		**Sn**	**17 23 30.5**	**-0.6**
BUKP	**Musuan**	**1.86**	**335**	*eP*		**Pn**	**17 23 14.7**	**-1.5**
BUKP				*eS*		**Sn**	**17 23 41.9**	**+0.6**
CGP	**Cagayan de Oro**	**2.53**	**333**	*eP*		**Pn**	**17 23 21.3**	**-3.0**
CGP				*eS*		**Sn**	**17 23 54.7**	**-1.1**
BUTP	**Butuan**	**2.77**	**355**	*eP*		**Pn**	**17 23 26.6**	**-0.7**
BUTP				*eS*		**Sn**	**17 24 02.2**	**+0.9**
TNTI	**Ternate**	**5.59**	**164**	Pn		**Pn**	**17 24 04.7**	**+0.3**
TNTI						**Sn**	**17 25 06.4**	**-1.3**
TOLI2	**Tolitoli**	**7.15**	**225**	Pn		**Pn**	**17 24 25.4**	**+0.1**
MYLDM	**Lahad Datu**	**7.39**	**263**	Pn		**Pn**	**17 24 31.6**	**+3.0**
LUWI	**Luwuk**	**7.82**	**203**	Pn		Pn	17 24 39.0	+4.6
SIJI	**Sorong**	**8.85**	**142**	P		**Pn**	**17 24 48.4**	**+0.2**
	1.1nm,0.3s,baz=145,slow=22,SNR=5.1							
FAKI	**Fak Fak**	**11.07**	**145**	Pn		**Pn**	**17 25 19.0**	**+1.2**
KNRA	**Kununurra**	**21.91**	**172**	P		**Pn**	**17 27 24.9**	**-0.7**
KNRA				IAmb	IAmb		17 27 54.1	
	comp=Z,29nm,1.6s							
FITZ	**Fitzroy Crossi**	**24.13**	**181**	P		**P**	**17 27 46.4**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=358,slow=11,SNR=9.0							
FITZ	**Fitzroy Crossi**	**24.13**	**181**	IAmb	IAmb		17 27 53.6	
	comp=Z,21nm,1.6s							
WB0	**Warramunga Arr**	**27.12**	**162**	P		**P**	**17 28 12.7**	**-0.9**
WB0				IAmb	IAmb		17 29 02.7	
	comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**27.27**	**162**	P		**P**	**17 28 14.1**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=335,slow=10,SNR=14							
WB2	**Warramunga Arr**	**27.28**	**162**	P		**P**	**17 28 14.0**	**-0.9**
WB2				IAmb	IAmb		17 28 38.1	
	comp=Z,9.1nm,1.2s							
WR0	**Warramunga Arr**	**27.35**	**162**	P		**P**	**17 28 14.9**	**-0.6**
WR0				IAmb	IAmb		17 28 19.4	
	comp=Z,8.7nm,1.2s							
AS31	**Alice Springs**	**30.69**	**165**	P		**P**	**17 28 44.6**	**-0.6**
ASAR	**Alice Springs**	**30.70**	**165**	P		**P**	**17 28 44.8**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=338,slow=7.1,SNR=41							
NWAO	**Narrogin (SRO)**	**39.76**	**191**	P		**P**	**17 30 02.1**	**-0.4**
BBOO	**Buckleboo**	**39.98**	**167**	P		**P**	**17 30 04.5**	**+0.1**
STKA	**Stephens Creek**	**40.72**	**159**	P		**P**	**17 30 10.4**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=326,slow=11,SNR=3.4							
STKA	**Stephens Creek**	**40.72**	**159**	P		**P**	**17 30 10.8**	**+0.3**

IDC ***25*** *17:25:54.4±1.6,26.40N×129.31E,h0km,mb3.5/6, mb1 3.6/6,mb1mx3.4/44,mbtmp3.5/6,Error ellipse: s-maj=58.6km s-min=20.7km az=57.0*
JMA ***25*** *17:25:58.8±0.3,25.90N×128.51E,h46km±5km,M3.1*

ISC 25 17:25:58.9±1.5,25.93N±0.06×128.54E±0.04,h24km±12km, n18,σ1°10/29,mb3.5/6,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**0.71**	**288**	P		**Pb**	**17 26 12.5**	**-0.2**
JJT3				S		**Sb**	**17 26 22.6**	**+0.5**
JNTH	**Nagotoyohara**	**0.75**	**322**	P		**Pb**	**17 26 12.7**	**-0.6**
JNTH				S		**Sb**	**17 26 23.8**	**+0.7**
JOW	**Kunigami**	**0.93**	**345**	Pn		**Pn**	**17 26 16.2**	**-0.3**
	218nm,0.3s,baz=140,slow=22,SNR=101							
JOW				Sn		**Sn**	**17 26 28.2**	**-0.8**
	154nm,0.3s,baz=134,slow=24,SNR=6.5							
JOW	**Kunigami**	**0.93**	**345**	P		**Pn**	**17 26 16.2**	**-0.3**
JOW				S		**Sn**	**17 26 28.7**	**-0.4**
JYRO	**Yoronjima**	**1.09**	**356**	P		**Pn**	**17 26 18.5**	**-0.2**
JYRO				S		**Sn**	**17 26 32.4**	**-0.7**
JIH	**Iheya**	**1.21**	**335**	P		**Pn**	**17 26 20.5**	**+0.1**
JIH				S		**Sn**	**17 26 35.6**	**-0.5**
JAGN	**Aguni-jima**	**1.33**	**300**	P		**Pn**	**17 26 21.7**	**-0.3**
JAGN				*eS*		**Sn**	**17 26 39.0**	**0.0**
JOKE	**Okinoerabujima**	**1.43**	**1**	P		**Pn**	**17 26 23.5**	**+0.1**
JKE	**Kume jima 2**	**1.62**	**285**	P		**Pn**	**17 26 25.0**	**-1.0**
JKE				*eS*		**Sn**	**17 26 44.0**	**-2.1**
JTK	**Tokunoshima**	**1.89**	**11**	P		**Pn**	**17 26 30.0**	**+0.3**
JTK				S		**Sn**	**17 26 52.4**	**-0.3**
JMZ	**Minamidaito 2**	**2.42**	**92**	P		**Pn**	**17 26 36.8**	**-0.2**
JMZ				S		**Sn**	**17 27 03.9**	**-1.9**
JKDJ	**Kitadaitoujima**	**2.49**	**89**	P		**Pn**	**17 26 37.8**	**-0.1**
JKDJ				S		**Sn**	**17 27 05.7**	**-1.8**
SONM	**Songino Array**	**27.95**	**327**	P		**P**	**17 31 48.5**	**+0.9**
	0.3nm,0.4s,baz=138,slow=9.5,SNR=5.2							
MKAR	**Makanchi Array**	**41.94**	**312**	P		**P**	**17 33 47.5**	**-0.2**
	0.3nm,0.4s,baz=99,slow=9.4,SNR=7.9							
KURBB	**Kurchatov Arra**	**45.26**	**317**	P		**P**	**17 34 14.5**	**+0.2**
	0.2nm,0.3s,baz=105,slow=8.9,SNR=3.6							
WRA	**Warramunga Arr**	**45.94**	**172**	P		**P**	**17 34 22.1**	**+2.1**
	0.4nm,0.6s,baz=353,slow=8.6,SNR=1.6							
ASAR	**Alice Springs**	**49.58**	**174**	P		**P**	**17 34 50.6**	**+2.4**
	0.3nm,0.8s,baz=2.1,slow=7.4,SNR=2.3							
FINES	**FINESS Array B**	**73.26**	**331**	P		**P**	**17 37 26.0**	**-1.9**
	1.5nm,0.9s,baz=73,slow=4.8,SNR=1.8							

IDC ***25*** *17:26:54.6±2.1,27.63N×85.80E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.4/52,mbtmp3.6/7,ML3.6/1,MS3.7/1, Ms1 3.7/1,ms1mx2.8/40,Error ellipse: s-maj=81.6km s-min=19.6km az=70.0*

ISC 25 17:26:56.1±2.4,27.6N±0.3×85.8E±0.6,h10km,n8,σ0°20/7, mb3.6/6,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.32**	**353**	P		**P**	**17 31 21.2**	**-0.2**
	0.2nm,0.3s,baz=170,slow=10,SNR=6.6							
KURBB	**Kurchatov Arra**	**23.61**	**348**	P		**P**	**17 32 07.1**	**0.0**
	0.5nm,0.6s,baz=165,slow=9.5,SNR=4.6							
SONM	**Songino Array**	**25.78**	**33**	P		**P**	**17 32 27.2**	**-0.1**
	1.4nm,0.8s,baz=217,slow=9.4,SNR=8.3							
ZALV	**Zalesovo Beam**	**26.29**	**359**	P		**P**	**17 32 31.9**	**+0.3**
	0.5nm,0.5s,baz=178,slow=10,SNR=3.6							
JNU	**Nakatsue**	**39.05**	**71**	LR		LR	17 51 01.8	
	comp=Z,108nm,21.6s,baz=218,slow=37							
NRIK	**Noril'sk**	**41.74**	**1**	P		**P**	**17 34 45.1**	**0.0**
	1.3nm,0.5s,baz=176,slow=9.7,SNR=3.6							
WRA	**Warramunga Arr**	**66.67**	**130**	P		**P**	**17 37 47.5**	**+0.1**
	0.5nm,0.5s,baz=323,slow=6.5,SNR=12							
ASAR	**Alice Springs**	**68.97**	**133**	P		**P**	**17 38 01.8**	**-0.1**
	0.2nm,0.6s,baz=315,slow=6.2,SNR=7.9							

IDC ***25*** *17:34:09.4±2.9,27.62N×85.64E,h0km,mb3.3/4, mb1 3.5/6,mb1mx3.2/72,mbtmp3.3/6,ML3.2/2,Error ellipse: s-maj=90.1km s-min=26.1km az=64.0*

ISC 25 17:34:10.9±2.8,27.6N±0.3×85.6E±0.5,h10km,n6,σ1°04/6, mb3.2/4,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.26**	**124**	Pn		**Pn**	**17 37 46.6**	**+0.1**
	0.0nm,0.3s,baz=310,slow=10,SNR=1.4							
MKAR	**Makanchi Array**	**19.34**	**353**	P		**P**	**17 38 36.6**	**+0.3**
	0.1nm,0.3s,baz=171,slow=11,SNR=9.1							
KURBB	**Kurchatov Arra**	**23.61**	**349**	P		**P**	**17 39 22.5**	**+0.6**
	0.3nm,0.6s,baz=162,slow=9.5,SNR=4.4							
SONM	**Songino Array**	**25.89**	**33**	P		**P**	**17 39 43.4**	**+0.4**
	0.2nm,0.5s,baz=227,slow=7.7,SNR=2.6							
ZALV	**Zalesovo Beam**	**26.33**	**359**	P		**P**	**17 39 45.1**	**-1.6**
	0.4nm,0.6s,baz=170,slow=8.8,SNR=1.8							
WRA	**Warramunga Arr**	**66.76**	**130**	P		**P**	**17 45 02.8**	**0.0**
	0.6nm,0.4s,baz=323,slow=6.5,SNR=2.4							

IDC ***25*** *17:35:30.1±2.1,7.45S×128.35E,h140km±26km,mb3.1/2, mb1 3.7/7,mb1mx3.2/58,mbtmp4.0/7,Error ellipse: s-maj=31.7km s-min=20.9km az=91.0*
NEIC ***25*** *17:35:32.1±2.0,7.52S±0.10×128.09E±0.08,h142km±11km, mb4.1/4,Error ellipse: s-maj=14.3km s-min=11.1km az=168.0*

ISC 25 17:35:31.3±0.7,7.69S±0.06×128.15E±0.06,h142km,n28, σ2°30/31,mb3.5/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.13**	**95**	Pn		**Pn**	**17 36 23.6**	**+3.6**
SOEI	**Soe**	**4.35**	**242**	Pn		**Pn**	**17 36 38.1**	**+2.0**
BATI	**Baumata**	**5.09**	**240**	P		**Pn**	**17 36 49.7**	**+3.9**
	4.3nm,0.3s,baz=81,slow=3.1,SNR=11							
BATI				S		**Sn**	**17 37 44.4**	**+0.5**
	6.1nm,0.3s,baz=188,slow=3.7,SNR=4.6							
MTN	**Manton Dam**	**5.90**	**150**	Pn		**Pn**	**17 36 60.0**	**+3.4**
MMRI	**Maumere**	**5.93**	**261**	Pn		**Pn**	**17 36 55.9**	**-1.1**
FAKI	**Fak Fak**	**6.25**	**41**	Pn		**Pn**	**17 37 01.4**	**0.0**
SIJI	**Sorong**	**7.46**	**25**	P		Pn	17 37 12.2	-5.3
	0.4nm,0.3s,baz=231,slow=23,SNR=6.4							
SIJI				S		Sn	17 38 27.2	-14
	0.9nm,0.3s,baz=154,slow=23,SNR=2.2							
KNRA	**Kununurra**	**7.96**	**176**	Pn		**Pn**	**17 37 26.8**	**+2.7**
FITZ	**Fitzroy Crossi**	**10.63**	**193**	P		**Pn**	**17 38 00.4**	**+0.6**
	1.0nm,0.3s,baz=26,slow=12,SNR=43							
FITZ				S		**Sn**	**17 39 53.7**	**-3.5**
	1.0nm,0.3s,baz=345,slow=18,SNR=2.5							
FITZ	**Fitzroy Crossi**	**10.63**	**193**	Pn		**Pn**	**17 37 59.9**	**+0.1**
WB0	**Warramunga Arr**	**13.44**	**154**			**Pn**	**17 38 37.2**	**+0.7**
WRAB	**Tennant Creek**	**13.57**	**154**			**Pn**	**17 38 37.1**	**-1.0**
WRA	**Warramunga Arr**	**13.57**	**154**	P		**Pn**	**17 38 38.1**	**0.0**
	1.7nm,0.3s,baz=329,slow=14,SNR=73							
WRA				S		**Sn**	**17 41 04.3**	**-4.1**
	2.2nm,0.3s,baz=330,slow=22,SNR=9.7							
WRA	**Warramunga Arr**	**13.57**	**154**			**Pn**	**17 38 37.0**	**-1.2**
WB2	**Warramunga Arr**	**13.58**	**154**			**Pn**	**17 38 38.7**	**+0.4**
WR0	**Warramunga Arr**	**13.68**	**154**			**Pn**	**17 38 40.0**	**+0.5**
JAGI	**Jajag, Banyuwa**	**13.88**	**266**	Pn		**Pn**	**17 38 42.6**	**+0.5**
PSA00	**Pilbara Seismi**	**15.96**	**209**			**P**	**17 39 11.3**	**

KKN eSg Sb 17 43 15.7 -0.1
34µm,0.2s
PKI Pulchoki 0.79 210 ePg **Pn** **17 43 08.6 -0.7**
PKI eSg **Sb** **17 43 19.2 +0.5**
30µm,0.3s
PKIN Phulchoki 0.79 211 ePg **Pn** **17 43 08.7 -0.5**
PKIN eSg **Sb** **17 43 19.2 +0.5**
DMN Daman 0.93 226 ePg **Pb** **17 43 10.3 +0.2**
DMN eSg **Sn** **17 43 24.4 -0.3**
31µm,0.6s
GKN Gorkha 1.11 257 ePg **Pn** **17 43 13.4 -0.1**
GKN eSg **Sn** **17 43 29.2 +0.2**
36µm,0.4s
RAMN Ramite 1.46 153 ePg **Pg** **17 43 19.7 0.0**
DANN Dangsing 1.86 273 ePg **Pb** **17 43 25.9 0.0**
DANN eSg **Sg** **17 43 51.4 -0.1**
10µm,0.3s
TAPN Taplejung 1.87 118 ePg **Pb** **17 43 26.4 +0.2**
TAPN eSg **Sg** **17 43 50.7 -1.2**
17µm,0.3s
ODAN Odare 1.94 135 ePg **Pg** **17 43 28.5 -0.5**
ODAN eSg **Sg** **17 43 54.0 -0.2**
10µm,0.3s
KOLN Koldanda 2.06 257 ePg **Pb** **17 43 28.9 -0.4**
KOLN eSg **Sg** **17 43 58.4 +0.5**
13µm,0.4s
LSA Lhasa 4.85 72 P **Pn** **17 44 08.1 +2.9**
LSA Lhasa 4.85 72 Pn **Pn** **17 44 08.1 +2.9**
LSA Lhasa 4.85 72 ⇑P **Pn** **17 44 08.2 +3.0**
SHL Shillong 6.01 115 P **Pn** **17 44 21.5 +0.7**
SHL Shillong 6.01 115 eP **Pn** **17 44 21.9 +1.0**
SHL eS **Sn** **17 45 26.4 -3.5**
SHL Shillong 6.01 115 Pn **Pn** **17 44 21.5 +0.7**
SHL Shillong 6.01 115 P **Pn** **17 44 22.0 +1.2**
SNR=122
AGT Agartala 6.51 131 eP **Pn** **17 44 31.1 +3.5**
BELO BELONIA 7.09 133 eP **Pn** **17 44 38.2 +2.7**
ZIRO ZIRO 7.11 94⇑ eP **Pn** **17 44 36.8 +0.8**
DDI Dehra Dun 7.12 289 eP **Pn** **17 44 38.1 +2.1**
DDI eS **Sn** **17 45 56.0 -1.1**
DDI IAML 17 46 01.4
comp=N,6µm,0.5s
DDI IAML 17 46 02.5
comp=E,2µm,0.3s
KOHI KOHIMA 7.78 107 eP **Pn** **17 44 45.9 +0.7**
KOHI eS **Sn** **17 46 13.3 -0.1**
KOHI IAML 17 46 18.8
comp=E,2µm,1.1s
MOKO MOKOCHONG 7.94 102 eP **Pn** **17 44 47.7 +0.3**
MOKO eS **Sn** **17 46 12.9 -4.4**
MOKO IAML 17 46 17.4
comp=N,2µm,0.9s
MOKO IAML 17 46 19.7
comp=E,1µm,0.6s
LKP Lekhapani 8.89 94 eP **Pn** **17 45 00.8 +0.6**
LKP eS **Sn** **17 46 36.2 -4.3**
LKP IAML 17 46 57.5
comp=N,2µm,1.1s
BHPL Bhopal 9.10 239 eP **Pn** **17 45 02.3 -0.9**
BHPL eS **Sn** **17 46 41.5 -4.2**
BHPL IAML 17 46 43.5
comp=N,1µm,0.5s
BHPL IAML 17 46 43.8
comp=E,867nm,0.5s
DHRM DHARAMSHALA 9.18 298 eP **Pn** **17 45 04.3 -0.1**
DHRM eS **Sn** **17 46 43.2 -4.6**
DHRM IAML 17 46 48.8
comp=N,902nm,0.7s
DHRM IAML 17 46 51.2
comp=E,1µm,0.6s
CHCP Chirah Chowk 12.07 300 P **Pn** **17 45 42.6 -1.3**
NIL Nilore 12.08 300 P **Pn** **17 45 41.9 -2.1**
NIL Nilore 12.08 300 **Pn** **17 45 41.9 -2.1**
NIL Nilore 12.08 300 P **Pn** **17 45 43.5 -0.6**
HYB Hyderabad 12.72 213 *i* P **Pn** **17 45 50.0 -2.7**
HYB eS Sn 17 48 25.0 +11
HYB Hyderabad 12.72 213 eP **Pn** **17 45 51.1 -1.6**
KSH Kashi 13.90 326 P **Pn** **17 46 06.3 -2.6**
KSH pmax pmax
comp=E,53nm,0.8s
KSH LR LR
comp=E,4µm,10.0s
KSH LR LR
comp=E,8µm,11.2s
KSH LR LR
comp=E,2µm,6.9s
MHMT Maesarieng 14.95 130 P **Pn** **17 46 20.2 -3.0**
comp=E,3µmcomp=E,303nm,0.8s
CM33 Chiang Mai Arr 15.23 125 P **Pn** **17 46 27.0 0.0**
CHTO Chiang Mai 15.23 125 P **Pn** **17 46 25.3 -1.6**
CHTO pmax pmax
comp=Z,335nm,1.2s
CHTO Chiang Mai 15.23 125 Pn **Pn** **17 46 25.3 -1.6**
CHTO IAmb IAmb 17 46 38.8
comp=Z,335nm,1.1s
CHTO Chiang Mai 15.23 125 P **P** **17 46 31.7 -0.3**
CMMT Chiang Mai 15.23 125 P **Pn** **17 46 25.0 -2.0**
comp=Z,2µmcomp=Z,150nm,1.5s
CM32 Chiang Mai Arr 15.26 126 P **Pn** **17 46 26.0 -1.4**
CM34 Chiang Mai Arr 15.35 125 P **Pn** **17 46 28.0 -0.6**
KMI Kunming 15.40 98 ⇑P **Pn** **17 46 28.0 -1.5**
KMI pP P 17 46 31.0 -3.1
KMI sP pP 17 46 33.5 -4.6
KMI PP **sP** **17 46 42.0 +2.0**
KMI S **Sn** **17 49 23.0 +2.7**
KMI SS **S** **17 49 39.3 +2.7**
KMI pmax pmax
comp=Z,66nm,1.1s
KMI pmax pmax
comp=Z,710nm,3.8s
KMI LR LR
comp=Z,3µm,9.1s
KMI LR LR
comp=Z,4µm,13.2s
KMI LR LR
comp=Z,4µm,17.4s
KMI Kunming 15.40 98 P **Pn** **17 46 27.9 -1.5**
KMI pmax pmax
comp=Z,135nm,1.1s
KMI Kunming 15.40 98 **Pn** **17 46 27.9 -1.6**
KMI IAmb IAmb 17 46 34.8
comp=Z,135nm,1.1s
PRZ Przheval'sk 15.43 339 P **Pn** **17 46 30.4 +0.7**
PRZ pmax pmax
comp=Z,116nm,1.3s
PRZ Przheval'sk 15.43 339 **Pn** **17 46 30.4 +0.7**
CM15 Chiang Mai Arr 15.45 126 P **Pn** **17 46 29.2 -0.6**
comp=Z,1µmcomp=Z,120nm,1.4s
CM13 Chiang Mai Arr 15.46 126 P **Pn** **17 46 28.2 -1.8**
comp=Z,83nmcomp=Z,1µmcomp=Z,105nm,0.9s
CM31 Chiang Mai Arr 15.46 126 P **Pn** **17 46 29.2 -0.8**
comp=Z,45µmcomp=Z,4µm,1.5s
CM31 Chiang Mai Arr 15.46 126 **Pn** **17 46 27.2 -2.8**
CM31 Chiang Mai Arr 15.46 126 P **P** **17 46 34.7 +0.2**
SNR=240
CMAR Chiang Mai Arr 15.46 126 Pn **Pn** **17 46 27.8 -2.3**
comp=Z,0.3nm,0.3s,baz=305,slow=13,SNR=41
CMAR LR LR 17 54 23.3
comp=Z,2µm,18.9s,baz=1.0,slow=45
CMAR ScP **ScP** **17 55 05.7 -2.0**
comp=Z,0.1nm,0.3s,baz=306,slow=4.1,SNR=4.1
CMAR Chiang Mai Arr 15.46 126 P **Pn** **17 46 27.4 -2.6**
CMAR Chiang Mai Arr 15.46 126 **Pn** **17 46 27.4 -2.6**
CMAR **ScP** **17 55 05.6 -2.2**
CM35 Chiang Mai Arr 15.47 125 P **Pn** **17 46 29.0 -1.1**
CM02 Chiang Mai Arr 15.48 126 P **Pn** **17 46 29.4 -0.8**
comp=Z,1µmcomp=Z,147nm,1.1s
CM01 Chiang Mai Arr 15.50 126 P **Pn** **17 46 29.6 -0.8**
comp=Z,2µmcomp=Z,154nm,1.1s
CM05 Chiang Mai Arr 15.50 126 P **Pn** **17 46 29.6 -0.9**
comp=Z,1µmcomp=Z,103nm,1.2s
CM09 Chiang Mai Arr 15.50 126 P **Pn** **17 46 30.0 -0.6**
comp=Z,2µmcomp=Z,198nm,1.2s
CM04 Chiang Mai Arr 15.52 126 P **Pn** **17 46 30.2 -0.6**
comp=Z,140nmcomp=Z,2µmcomp=Z,216nm,1.2s
CM36 Chiang Mai Arr 15.53 126 P **Pn** **17 46 29.0 -1.9**
KDJ Kajisay 15.54 335 P **Pn** **17 46 27.5 -3.6**
KDJ pmax pmax
comp=Z,43nm,0.8s
KDJ Kajisay 15.54 335 **Pn** **17 46 27.5 -3.6**
WMQ Urumqi 15.60 5 eP **P** **17 46 36.0 0.0**
WMQ pP pP 17 46 37.0 -3.2
WMQ sP sP 17 46 41.0 -1.2
WMQ S **Sn** **17 49 18.5 -6.2**
WMQ sS S 17 49 35.8 -4.4
WMQ SS **SnSn** **17 49 42.5 +4.8**
WMQ pmax pmax
comp=Z,270nm,6.5s
WMQ LR LR
comp=Z,1µm,13.9s
WMQ Urumqi 15.60 5 P **Pn** **17 46 29.5 -2.2**
WMQ pmax pmax
comp=Z,65nm,1.0s
WMQ Urumqi 15.60 5 **Pn** **17 46 29.5 -2.2**
KBL Kabul 15.66 298 P **Pn** **17 46 28.7 -4.0**
KBL pmax pmax
comp=Z,358nm,1.2s
KBL Kabul 15.66 298 **Pn** **17 46 28.7 -4.0**
KBL IAmb IAmb 17 46 44.3
comp=Z,358nm,1.2s
SHLS Shalkode 15.74 342 eP **Pn** **17 46 30.8 -2.8**
baz=343
SHLS Shalkode 15.74 342 eP **Pn** **17 46 30.8 -2.8**
CD2 Chengdu 15.79 76 P **Pn** **17 46 32.5 -1.8**
CD2 sP pP 17 46 41.8 -0.6
CD2 S **Sn** **17 49 35.8 +6.3**
CD2 pmax pmax
comp=Z,180nm,1.4s
CD2 LR LR
comp=Z,20µm,10.8s
UZB Uzynbulak 15.85 341 eP **Pn** **17 46 33.9 -1.2**
baz=341
UZB eS **Sn** **17 49 30.4 -0.6**
baz=341
UZB Uzynbulak 15.85 341 eP **Pn** **17 46 33.9 -1.2**
UZB eS **Sn** **17 49 30.3 -0.6**
SATY Saty 15.95 340 eP **Pn** **17 46 34.9 -1.5**
baz=340
SATY eS **Sn** **17 49 32.6 -0.7**
baz=340
SATY Saty 15.95 340 eP **Pn** **17 46 34.9 -1.5**
SATY eS **Sn** **17 49 32.6 -0.7**
MDRS Chennai 16.00 200 eP **Pn** **17 46 37.4 +0.5**
ULHL Ulahol 16.00 333 P **Pn** **17 46 35.8 -1.2**
SNR=11
GTA Gaotai 16.04 43 P **Pn** **17 46 34.3 -3.3**
GTA pP P 17 46 41.3 +0.3
GTA sP pP 17 46 46.0 +0.7
GTA S **Sn** **17 49 34.8 -0.8**
GTA SS **S** **17 49 53.3 +3.9**
GTA pmax pmax
comp=Z,260nm,6.2s
GTA LR LR
comp=Z,3µm,10.2s
GTA LR LR
comp=Z,4µm,9.5s
GTA LR LR
comp=Z,4µm,9.8s
DRK Karamyk 16.15 317 Pn **Pn** **17 46 33.9 -5.3**
BOOM Boomskoye usch 16.32 333 P **Pn** **17 46 40.1 -1.1**
BOOM Boomskoye usch 16.32 333 Pn **Pn** **17 46 40.1 -1.1**
DGPR DIGLIPUR 16.39 155 eP **Pn** **17 46 40.9 -1.1**
TNSS Tian-Shan 16.41 336 eP **Pn** **17 46 41.2 -1.4**
baz=336
TNSS Tian-Shan 16.41 336 eP **Pn** **17 46 41.2 -1.4**
MDOK Medeo 16.49 337 eP **Pn** **17 46 41.7 -1.6**
baz=336
MDOK eS **Sn** **17 49 45.5 -0.9**
baz=336
MDOK LR LR 17 52 30.7
comp=Z,1µm,11.9s,baz=336
MDOK Medeo 16.49 337 eP **Pn** **17 46 41.6 -1.6**
MDOK eS **Sn** **17 49 45.5 -0.9**
MDOK MLR MLR
comp=Z,1µm,12.0s
AAA Alma-Ata 16.58 337 eP **Pn** **17 46 43.8 -0.5**
baz=336
AAA LR LR 17 52 34.5
comp=Z,1µm,12.9s,baz=336
AAA Alma-Ata 16.58 337 eP **Pn** **17 46 43.8 -0.5**
AAA pmax pmax
comp=Z,1.0nm,13.0s
UCH Uchtor 16.72 329 P **Pn** **17 46 44.7 -1.8**
SNR=28
GAR Garm 16.78 314 Pn **Pn** **17 46 42.5 -4.5**
GAR IAmb IAmb 17 47 12.9
comp=Z,207nm,1.3s
TKM2 Tokmak 2 16.82 333 P **Pn** **17 46 47.1 -0.5**
SNR=15
KBK Karagaybulak 16.87 331 P **P** **17 46 52.7 +2.5**
SNR=13
UMPA Umpang Tak 16.97 132 P **P** **17 46 50.7 -0.6**
comp=Z,2µmcomp=Z,219nm,1.0s
AML Almayashu 17.02 328 P **Pn** **17 46 48.8 -1.4**
SNR=11
AAK Ala-Archa 17.05 330 P **Pn** **17 46 49.8 -0.6**
comp=Z,1.4nm,0.3s,baz=176,slow=13,SNR=15
AAK Ala-Archa 17.05 330 P **Pn** **17 46 49.5 -0.9**
SNR=14
AAK Ala-Archa 17.05 330⇑⇑ eP **Pn** **17 46 49.6 -0.9**
AAK pmax pmax
comp=Z,124nm,1.7s
AAK Ala-Archa 17.05 330 **Pn** **17 46 49.0 -1.4**
AAK Ala-Archa 17.05 330 P **P** **17 46 54.2 +2.0**
UTTA Uttaradit 17.08 125 P **Pn** **17 46 51.4 +0.6**
comp=Z,2µmcomp=Z,191nm,1.2s
LZH Lanzhou 17.09 58 ⇓P **Pn** **17 46 49.3 -1.7**
LZH pP P 17 46 53.8 +1.1
LZH sP sP 17 46 58.0 -0.7
LZH PP **PnPn** **17 47 02.0 +1.3**
LZH S **Sn** **17 49 54.3 -6.8**
LZH sS S 17 50 04.5 -6.4
LZH SS **SnSn** **17 50 15.5 +1.1**
LZH pmax pmax
comp=Z,170nm,1.2s
LZH pmax pmax
comp=Z,1µm,4.1s
LZH LR LR
comp=Z,5µm,13.0s
LZH LR LR
comp=Z,6µm,11.9s
LZH LR LR
comp=Z,5µm,14.6s
BTK Batken 17.11 317 P **Pn** **17 46 48.5 -2.5**
BTK pmax pmax
comp=Z,94nm,0.6s
BTK Batken 17.11 317 Pn **Pn** **17 46 48.5 -2.5**
FRU1 Bishkek 17.13 331 P **Pn** **17 46 50.5 -0.8**
FRU1 pmax pmax
comp=Z,284nm,1.8s
FRU1 Bishkek 17.13 331 P **Pn** **17 46 50.5 -0.8**
CHGR Chuyangaron 17.35 311 P **Pn** **17 46 51.1 -2.9**
CHGR IAmb IAmb 17 47 23.0
comp=Z,208nm,0.9s
PHIT Phitsanulok 17.35 126 P **P** **17 46 56.8 +1.3**
comp=Z,7µmcomp=Z,815nm,1.1s
EKS2 Erkin-Say 17.39 329 P **Pn** **17 46 54.8 +0.2**
SNR=16
USP Ospenovka 17.56 332 P **Pn** **17 46 56.5 -0.2**
SNR=8.7
SGDS Sogindy 17.66 332 eP **Pn** **17 46 56.8 -1.1**
baz=332
SGDS Sogindy 17.66 332 eP **Pn** **17 46 56.8 -1.1**
PBA Port Blair 17.73 157 P **Pn** **17 46 56.9 -1.9**
PBA Port Blair 17.73 157 P **P** **17 47 06.0 +6.4**
SNR=12
TDK Taldyqorghan 17.74 342 eP **Pn** **17 46 57.8 -1.0**
comp=Z,77nm,0.9s,baz=342
TDK LR LR 17 53 42.0
comp=Z,889nm,12.9s,baz=342
TDK Taldyqorghan 17.74 342 eP **Pn** **17 46 57.7 -1.0**
TDK pmax pmax
comp=Z,77nm,0.9s
TDK MLR MLR
comp=Z,889nm,13.0s
SLVN Son La 17.76 109 P **Pn** **17 46 56.7 -2.6**
UTHA Uthaitani 17.83 132 P **Pn** **17 46 59.0 -1.0**
comp=Z,2µmcomp=Z,274nm,0.9s
KHLT Khaolaem Dam 17.86 136 P **Pn** **17 47 00.1 -0.3**
comp=Z,811nmcomp=Z,59nm,1.5s
SRDT SRDT 18.53 136 P **P** **17 47 08.0 -0.5**
comp=Z,57nm,1.5s
GYA Guiyang 18.57 91 ⇑P **P** **17 47 07.5 -1.5**
GYA S **Sn** **17 50 32.8 -4.1**
GYA SS **SnSn** **17 50 50.8 +0.2**
GYA LR LR
comp=Z,510nm,11.9s
GYA LR LR
comp=Z,400nm,10.3s
GYA LR LR
comp=Z,1µm,13.6s
MK31 Makanchi Array 18.71 352*d* iP **P** **17 47 10.3 -0.1**
MK31 Makanchi Array 18.71 352 **P** **17 47 09.4 -0.9**
MKAR Makanchi Array 18.71 352 P **Pn** **17 47 10.9 +0.2**
comp=Z,9.2nm,0.3s,baz=169,slow=8.9,SNR=206
MKAR LR LR 17 55 41.6
comp=Z,1µm,18.9s,baz=159,slow=41
MKAR P3KPbc 18 21 46.2
baz=339,slow=3.7,SNR=4.2
MKAR Makanchi Array 18.71 352*ce* P **Pn** **17 47 10.8 0.0**
MKAR pmax pmax
comp=Z,24nm,0.5s
MKAR Makanchi Array 18.71 352 P **P** **17 47 09.4 -0.9**
DZA Taraz 18.75 325 eP **P** **17 47 09.9 -0.8**
baz=325
DZA Taraz 18.75 325 eP **P** **17 47 09.9 -0.8**
MAKZ Makanchi 18.77 352 P **P** **17 47 10.3 -0.6**
MAKZ pmax pmax
comp=Z,51nm,0.7s
MAKZ Makanchi 18.77 352 P **P** **17 47 10.3 -0.6**
TAS Tashkent 18.80 318 P **P** **17 47 08.2 -3.2**
TAS pmax pmax
comp=Z,251nm,1.5s
TAS Tashkent 18.80 318 P **P** **17 47 08.2 -3.2**
TAS IAmb IAmb 17 48 06.1
comp=Z,251nm,1.5s
NONG Nongkai 18.83 119 P **Pn** **17 47 13.0 +0.7**
comp=Z,14µmcomp=Z,392nm,1.4s
IUG Iuzhnay 18.91 321 eP **P** **17 47 10.6 -2.2**
baz=321
IUG Iuzhnay 18.91 321 eP **P** **17 47 10.5 -2.2**
ZSN Zaisan 19.18 358 eP **P** **17 47 14.0 -1.4**
baz=358
ZSN Zaisan 19.18 358 eP **P** **17 47 14.0 -1.4**
BTLS Baital 19.21 334 eP **P** **17 47 15.5 -0.3**
baz=334
BTLS eS **Sn** **17 50 52.4 +0.3**
baz=334
BTLS Baital 19.21 334 eP **P** **17 47 15.5 -0.3**
BTLS eS **Sn** **17 50 52.3 +0.3**
CHM Chimkent 19.27 321 eP **P** **17 47 16.5 +0.1**
baz=321
CHM Chimkent 19.27 321 eP **P** **17 47 16.5 +0.1**
KK31 Karatay Array 19.32 324 P **P** **17 47 15.6 -1.4**
KK31 pmax pmax
comp=Z,100nm,1.6s
KK31 Karatay Array 19.32 324 P **P** **17 47 15.6 -1.4**
KKAR Karatay Array 19.32 324 P **P** **17 47 15.6 -1.4**
KKAR pmax pmax
comp=Z,100nm,1.6s
KKAR Karatay Array 19.32 324 **P** **17 47 15.6 -1.4**
KKAR Karatay Array 19.32 324 P **P** **17 47 15.9 -1.1**
CHAI Chaiyaphum 19.32 126 P **Pn** **17 47 19.0 +0.7**
comp=Z,4µmcomp=Z,348nm,1.2s
KHON Khomkaen 19.64 124 P **Pn** **17 47 22.7 +0.6**
comp=Z,2µmcomp=Z,234nm,1.2s
PHET Kaeng Krachan 19.95 137 P **Pn** **17 47 26.0 +0.2**
comp=Z,1µmcomp=Z,133nm,1.0s
XAN Xi'an 20.54 68 P **P** **17 47 29.8 -0.7**
XAN pP pP 17 47 34.8 +0.2
XAN S **S** **17 51 17.0 -3.3**
XAN pmax pmax
comp=Z,110nm,1.3s
XAN pmax pmax
comp=Z,2µm,4.7s
XAN LR LR
comp=Z,3µm,9.4s
XAN LR LR
comp=Z,1µm,12.9s
XAN LR LR
comp=Z,6µm,21.7s
XAN Xi'an 20.54 68 P **P** **17 47 29.8 -0.7**
XAN pmax pmax
comp=Z,82nm,1.0s
XAN Xi'an 20.54 68 P **P** **17 47 29.8 -0.7**
PATY Pattaya 20.70 134 P Pn 17 47 34.3 -0.3
comp=Z,8µmcomp=Z,334nm,1.0s
ENH Enshi 20.70 79 P **P** **17 47 32.1 -0.1**
ENH IAmb IAmb 17 47 44.1
comp=Z,158nm,0.9s
HRA Herat 21.06 293 P **P** **17 47 35.9 -0.3**
PALK Pallekele 21.44 194 P **P** **17 47 41.7 +1.5**
comp=Z,29nm,1.0s,baz=111,slow=12,SNR=13
PALK S **S** **17 51 35.2 -3.0**
comp=Z,18nm,0.6s,baz=88,slow=3.5,SNR=6.1
PALK LR LR 17 55 49.2
comp=Z,892nm,19.9s,baz=124,slow=36
PALK Pallekele 21.44 194 P **P** **17 47 41.5 +1.3**
PALK pmax pmax
comp=Z,49nm,0.9s
PALK Pallekele 21.44 194 P **P** **17 47 41.5 +1.3**
PALK Pallekele 21.44 194 P **P** **17 47 46.0 +5.8**
PALK P **P** **17 47 46.0 +5.8**
DGZ Jazzator, Alta 21.45 3*de* P **P** **17 47 41.0 +0.8**
DGZ pmax pmax
comp=Z,174nm,1.1s
UBPT Khong Chiam 22.28 121 P **P** **17 47 49.3 +0.1**
comp=Z,2µmcomp=Z,118nm,1.6s
UBPT Khong Chiam 22.28 121 P **P** **17 47 48.4 -0.8**
SEM Semipalatinsk 22.53 351 eP **P** **17 47 50.2 -1.8**
comp=Z,20nm,0.6s,baz=350
SEM LR LR 17 57 01.4
comp=Z,363nm,12.3s,baz=350
SEM Semipalatinsk 22.53 351 eP **P** **17 47 50.1 -1.8**
SEM pmax pmax
comp=Z,20nm,0.6s
SEM MLR MLR
comp=Z,363nm,12.0s
SURT Suratani 22.74 145 P **P** **17 47 56.6 +2.5**
comp=Z,135nmcomp=Z,17nm,1.2s
KURBB Kurchatov Arra 23.02 348 P **P** **17 47 57.1 +0.3**
comp=Z,22nm,0.9s,baz=165,slow=9.6,SNR=105
KURBB ScP **ScP** **17 55 23.4 -0.8**
comp=Z,1.1nm,1.0s,baz=183,slow=3.4,SNR=2.5
KURBB P3KPbc 18 21 28.9
comp=Z,0.9nm,0.9s,baz=337,slow=5.0,SNR=7.2
KURBB Kurchatov Arra 23.02 348 P **P** **17 47 56.5 -0.3**
KURK Kurchatov 23.09 348 P **P** **17 47 57.1 -0.4**
KURK Kurchatov 23.09 348 P **P** **17 47 57.1 -0.4**
KURK **ScP** **17 55 23.4 -1.0**
BTO Baotou 23.34 52 P **P** **17 47 59.0 -1.3**
BTO pmax pmax
comp=Z,140nm,2.5s
BTO LR LR
comp=Z,11µm,13.9s
BTO LR LR
comp=Z,13µm,12.6s
PKDT Phuket 23.43 147 P **P** **17 48 02.0 +0.7**
comp=Z,5µmcomp=Z,295nm,1.4s
SRIT Nakonsritamara 23.46 144 P **P** **17 48 01.5 0.0**
SRIT IAmb IAmb 17 48 53.2
comp=Z,139nm,1.0s
KRAB Krabi 23.57 145 P **P** **17 48 05.0 +2.4**
QIZ Qiongzhong 23.77 107 P **P** **17 48 04.5 -0.1**
QIZ pP **pP** **17 48 08.5 -0.4**
QIZ S **S** **17 52 20.3 +0.1**
QIZ sS **sS** **17 52 28.0 +0.3**
QIZ pmax pmax
comp=Z,66nm,1.8s
QIZ pmax pmax
comp=Z,790nm,3.5s
QIZ LR LR
comp=Z,1µm,14.2s
QIZ LR LR
comp=Z,1µm,13.7s
QIZ LR LR
comp=Z,2µm,14.7s
QIZ Qiongzhong 23.77 107 P **P** **17 48 05.3 +0.7**
BRZS Berezniki 23.91 339 eP **P** **17 48 05.0 -0.7**
comp=Z,26nm,0.9s,baz=338
BRZS Berezniki 23.91 339 eP **P** **17 48 05.0 -0.7**
BRZS pmax pmax
comp=Z,26nm,0.9s
TIY Taiyuan 24.13 60 eP **P** **17 48 08.5 +0.5**
TIY S **S** **17 52 26.5 +0.7**
TIY SS **SnSn** **17 53 13.5 +6.5**
TIY pmax pmax
comp=Z,200nm,1.4s
TIY pmax pmax
comp=Z,1µm,3.5s
TIY LR LR
comp=Z,3µm,15.1s
TIY LR LR
comp=Z,3µm,12.6s
TIY LR LR

comp=Z,4μm,13.5s
HHC Hu-ho-hao-te 24.51 52 *e*P **P 17 48 12.0 +0.5**
HHC S **S 17 52 33.0 +1.0**
HHC pmax pmax
comp=Z,48nm,1.9s
HHC pmax pmax
comp=Z,1μm,6.8s
HHC LR LR
comp=Z,5μm,11.0s
HHC LR LR
comp=Z,5μm,12.0s
HHC LR LR
comp=Z,7μm,11.8s
WHN Wuhan 24.90 78 ⇑P **P 17 48 15.3 +0.4**
WHN S **S 17 52 39.0 +0.9**
WHN pmax pmax
comp=Z,160nm,1.1s
WHN LR LR
comp=Z,6μm,8.9s
WHN LR LR
comp=Z,7μm,12.1s
WHN LR LR
comp=Z,11μm,12.9s
WBK Wadi Bani Khal 24.90 263 P **P 17 48 16.9 +1.9**
SNR=16
WBK P **P 17 48 16.9 +1.9**
SNR=16
WSAR Wadi Sarin 25.01 265 P **P 17 48 17.6 +1.7**
comp=Z,10nm,0.7s,baz=120,slow=8.3,SNR=14
WSAR Wadi Sarin 25.01 265 P **P 17 48 20.3 +4.3**
SNR=12
GEYT Alibeck 25.09 300 P **P 17 48 19.1 +2.5**
comp=Z,3.2nm,0.4s,baz=104,slow=11,SNR=16
GEYT LR LR 18 00 26.4
comp=Z,2μm,18.6s,baz=70,slow=42
GEYT Alibeck 25.09 300 P **P 17 48 17.9 +1.3**
GYA0B ALIBECK ARRAY 25.09 300 P **P 17 48 17.7 +1.1**
GYA0B IAmb IAmb 17 48 44.3
comp=Z,48nm,1.0s
LHMI Lhok Sumawe 25.21 153 P **P 17 48 17.4 -0.3**
LHMI Lhok Sumawe 25.21 153 P **P 17 48 19.4 +1.7**
comp=Z,6μmcomp=Z,424nm,1.2s
SONM Songino Array 25.23 34 P **P 17 48 19.3 +1.5**
comp=Z,55nm,0.7s,baz=219,slow=9.8,SNR=316
SONM PcP **PcP 17 51 52.2 +1.0**
comp=Z,3.3nm,0.5s,baz=211,slow=3.6,SNR=12
SONM ScP **ScP 17 55 28.8 -1.7**
comp=Z,2.1nm,1.0s,baz=205,slow=3.7,SNR=4.1
SONM LR LR 17 59 20.6
comp=Z,2μm,21.2s,baz=226,slow=39
SONM P3KPbc 18 21 25.0
comp=Z,0.8nm,0.7s,baz=22,slow=1.6,SNR=4.4
SONM Songino Array 25.23 34 P **P 17 48 18.2 +0.4**
SONM pmax pmax
comp=Z,96nm,0.9s
SONM Songino Array 25.23 34 P **P 17 48 18.2 +0.4**
SONM IAmb IAmb 17 48 26.9
comp=Z,96nm,0.9s
GZH Guangzhou 25.27 95 P **P 17 48 20.0 +1.7**
GZH S **S 17 52 45.0 +0.8**
GZH LR LR
comp=Z,3μm,11.9s
GZH LR LR
comp=Z,3μm,11.5s
BIDO Bidbid 25.37 266 P **P 17 48 20.6 +1.4**
SNR=11
BIDO P **P 17 48 20.6 +1.4**
SNR=11
SMDO Samad 25.57 265 P **P 17 48 22.8 +1.6**
SNR=14
SMDO P **P 17 48 22.8 +1.6**
SNR=14
ULN Ulaanbaatar 25.57 34 *d i*P **P 17 48 22.0 +1.0**
ULN pmax pmax
comp=Z,276nm,1.7s
ULN Ulaanbaatar 25.57 34 P **P 17 48 21.2 +0.2**
ULN Ulaanbaatar 25.57 34 P **P 17 48 22.1 +1.1**
ZAA0 Zalesovo Array 25.68 359 P **P 17 48 21.3 -0.4**
ZAA0 IAmb IAmb 17 48 28.8
comp=Z,133nm,1.4s
ZALV Zalesovo Beam 25.68 359 P **P 17 48 23.4 +1.7**
comp=Z,35nm,0.5s,baz=193,slow=8.7,SNR=127
ZALV LR LR 18 00 12.1
comp=Z,766nm,18.1s,baz=185,slow=40
ZALV P3KPbc 18 21 16.1
comp=Z,0.4nm,0.2s,baz=317,slow=5.9,SNR=3.7
ZALV Zalesovo Beam 25.68 359 *i*P **P 17 48 22.6 +0.9**
ZALV pmax pmax
comp=Z,35nm,0.5s
ZALV Zalesovo Beam 25.68 359 P **P 17 48 21.8 +0.1**
JMDO Jabal Madar 25.74 263 P **P 17 48 24.4 +1.8**
SNR=11
ZAK Zakamensk 25.75 26 *e*P **P 17 48 23.3 +0.7**
ZAK pmax pmax
comp=Z,60nm,1.4s
MOY Mondy 25.99 22 *e*P **P 17 48 26.3 +1.5**
MOY pmax pmax
comp=Z,157nm,1.8s
HOQ Hoqain 26.07 266 P **P 17 48 26.3 +0.8**
SNR=7.4
MHTO MHTO 26.33 260 P **P 17 48 32.0 +4.0**
SNR=11
MHTO P **P 17 48 32.0 +4.0**
SNR=11
BSY Bisya 26.41 265 P **P 17 48 33.0 +4.2**
SNR=11
BSY P **P 17 48 33.0 +4.2**
SNR=11
SOHO SOHO 26.60 268 P **P 17 48 34.2 +3.8**
SOHO P **P 17 48 34.2 +3.8**
DLV T Lat 26.66 123 P **P 17 48 31.8 +0.6**
UOSS Minazif 26.69 270 P **P 17 48 30.2 -1.0**
UOSS Minazif 26.69 270 P **P 17 48 32.1 +0.8**
HATD Hatta, Dubai 26.78 270 P **P 17 48 35.5 +3.4**
HATD P **P 17 48 35.5 +3.4**
KULM Kulim 26.81 146 P **P 17 48 33.2 +0.9**
ARQ Araqi 26.83 266 P **P 17 48 36.1 +3.6**
SNR=6.2
ARQ P **P 17 48 36.1 +3.6**
SNR=6.2
TLY Talaya 26.93 25 P **P 17 48 35.3 +2.2**
comp=Z,2.4nm,0.4s,baz=212,slow=13,SNR=3.7
TLY Talaya 26.93 25 *e*P **P 17 48 35.5 +2.4**
TLY *e*S **S 17 53 14.9 +4.9**
TLY pmax pmax
comp=Z,71nm,1.5s
TLY MLR MLR
comp=Z,2μm,16.0s
TLY Talaya 26.93 25 P **P 17 48 34.5 +1.4**
TLY Talaya 26.93 25 P **P 17 48 35.7 +2.6**
TPTI 27.10 155 P **P 17 48 31.4 -3.5**
comp=Z,29nm,1.3s
DQM DQM 27.10 258 P **P 17 48 39.2 +4.2**
SNR=5.5
DQM P **P 17 48 39.2 +4.2**
SNR=5.5
BVAR Borovoye Array 27.27 339 P **P 17 48 37.3 +1.2**
comp=Z,2.7nm,0.6s,baz=111,slow=14,SNR=16
BVAR P3KPbc 18 21 09.5
comp=Z,0.4nm,0.6s,baz=335,slow=6.4,SNR=4.1
FAQ Al Faqa, Dubai 27.28 270 P **P 17 48 39.9 +3.4**
ALNE Al Ain 27.31 268 P **P 17 48 39.0 +2.2**
ALNE P **P 17 48 39.0 +2.2**
BRVK Borovoye 27.33 339⇑ *e*P **P 17 48 37.9 +1.3**
BRVK pmax pmax
comp=Z,18nm,1.3s
BRVK Borovoye 27.33 339 P **P 17 48 36.0 -0.7**
BRVK Borovoye 27.33 339 P **P 17 48 38.7 +2.1**
TSI Tuntungan 27.43 152 P **P 17 48 38.0 +0.1**
comp=Z,110nm,1.1s
TIA Tai'an 27.52 65 P **P 17 48 39.0 +0.5**
TIA S **S 17 53 18.5 -1.1**
TIA pmax pmax
comp=Z,23nm,2.1s
TIA pmax pmax
comp=Z,420nm,4.3s
TIA LR LR
comp=Z,2μm,13.3s
TIA LR LR
comp=Z,3μm,15.5s
TIA LR LR
comp=Z,5μm,20.1s
BJT Baijiatuau 27.56 57 P **P 17 48 38.7 -0.2**
BJT pmax pmax
comp=Z,55nm,1.2s
BJT Baijiatuau 27.56 57 P **P 17 48 38.6 -0.2**
BJT IAmb IAmb 17 48 46.6
comp=Z,55nm,1.2s
BJI Beijing 27.57 57 P **P 17 48 40.0 +1.1**
BJI S **S 17 53 19.5 -0.7**
BJI pmax pmax
comp=Z,25nm,1.5s
BJI pmax pmax
comp=Z,170nm,3.5s
BJI LR LR
comp=Z,2μm,9.3s
BJI LR LR
comp=Z,2μm,9.0s
BJI LR LR
comp=Z,2μm,22.7s
IRK Irkutsk 27.61 25 *e*P **P 17 48 40.0 +0.8**
IRK pmax pmax
comp=Z,82nm,1.7s
IPM Ipoh 27.70 146 P **P 17 48 40.0 -0.3**
IPM IAmb IAmb 17 48 47.5
comp=Z,77nm,1.0s
PSI Prapat 28.22 151 P **P 17 48 45.6 +0.6**
comp=Z,5.3nm,0.5s,baz=0.0,slow=4.0,SNR=5.6
PSI PcP **PcP 17 51 59.0 +0.3**
comp=Z,8.7nm,0.9s,baz=179,slow=1.2,SNR=3.6
PSI LR LR 18 02 18.0
comp=Z,586nm,19.6s,baz=280,slow=41
PSI Prapat 28.22 151 P **P 17 48 45.0 0.0**
PSI pmax pmax
comp=Z,33nm,1.0s
RPSI Rantau Prapat 28.31 152 P **P 17 48 45.0 -0.7**
NJ2 Nanjing 28.71 74 ⇓P **P 17 48 49.8 +0.6**
NJ2 pP **pP 17 48 54.0 +0.1**
NJ2 S **S 17 53 40.5 +2.1**
NJ2 pmax pmax
comp=Z,28nm,0.5s
NJ2 pmax pmax
comp=Z,480nm,3.8s
NJ2 LR LR
comp=Z,2μm,11.8s
NJ2 LR LR
comp=Z,5μm,13.7s
NJ2 LR LR
comp=Z,6μm,12.9s
AB31 Akbulak array 28.88 324 *i*P **P 17 48 50.6 +0.1**
ABKAR Akbulak array 28.88 324 P **P 17 48 50.5 0.0**
ABKAR IAmb IAmb 17 48 56.8
comp=Z,84nm,1.6s
ABKAR Akbulak array 28.88 324 P **P 17 48 50.8 +0.3**
GSI Gunungsitoli 29.05 155 P **P 17 48 53.8 +1.5**
GSI Gunungsitoli 29.05 155 P **P 17 48 54.2 +1.9**
comp=Z,4μmcomp=Z,272nm,1.5s
KNMB Chin-men Tao 29.34 90 P **P 17 48 55.1 +0.3**
KNMB IAmb IAmb 17 49 04.1
comp=Z,66nm,1.0s
QZH Quanzhou 29.40 89 *e*P **P 17 48 55.0 -0.4**
QZH S **S 17 53 49.3 -0.1**
QZH LR LR
comp=Z,630nm,11.4s
QZH LR LR
comp=Z,4μm,16.1s
QZH LR LR
comp=Z,5μm,16.5s
MNSI Mandailing Nat 30.30 152 P **P 17 49 03.3 -0.1**
comp=Z,1μmcomp=Z,127nm,1.1s
AKTO Aktyubinsk 30.58 324 P **P 17 49 06.3 +0.8**
comp=Z,4.0nm,0.6s,baz=125,slow=7.6,SNR=8.2
SSE Sheshan 30.74 76 P **P 17 49 08.8 +1.6**
SSE S **S 17 54 09.5 -0.8**
SSE pmax pmax
comp=Z,29nm,0.6s
SSE pmax pmax
comp=Z,100nm,3.4s
SSE LR LR
comp=Z,1μm,16.6s
SSE LR LR
comp=Z,560nm,13.8s
SSE Sheshan 30.74 76 P **P 17 49 08.1 +0.9**
SSE IAmb IAmb 17 49 58.3
comp=Z,46nm,0.7s
BKNI Bangkinang 31.35 150 P **P 17 49 13.1 +0.5**
BKNI Bangkinang 31.35 150 P **P 17 49 13.6 +1.0**
comp=Z,3μmcomp=Z,242nm,0.9s
MYKOM Kota Tinggi 31.43 144 P **P 17 49 14.8 +1.4**
MYKOM IAmb IAmb 17 49 21.4
comp=Z,86nm,1.1s
DL2 Dalian 31.45 61 P **P 17 49 14.8 +1.4**
DL2 S **S 17 54 25.0 +3.7**
DL2 pmax pmax
comp=Z,78nm,1.1s
DL2 pmax pmax
comp=Z,350nm,6.3s
DL2 LR LR
comp=Z,2μm,14.7s
DL2 LR LR
comp=Z,3μm,12.8s
DL2 LR LR
comp=Z,3μm,15.6s
CIT Chita 31.46 33 *e*P P 17 49 24.8 +11
CIT *e* 18 50 22.2
CIT pmax pmax
comp=Z,89nm,1.7s
TPUB Ta-pu 31.62 91 P **P 17 49 16.7 +1.6**
TPUB IAmb IAmb 17 49 44.1
comp=Z,122nm,1.5s
SSLB Suanglung 31.78 90 P **P 17 49 16.9 +0.5**
SSLB IAmb IAmb 17 49 59.4
comp=Z,63nm,1.4s
TATO Taipei 31.95 88 P **P 17 49 17.7 -0.2**
TWG Pinlang 32.15 92 P **P 17 49 20.3 +0.6**
YULB Yu-li 32.19 90 P **P 17 49 19.7 -0.3**
NACB Ninganchiao 32.24 89 P **P 17 49 20.1 -0.4**
HIA Hailar 33.32 42 P **P 17 49 30.1 +0.4**
HIA pmax pmax
comp=Z,78nm,1.3s
HIA Hailar 33.32 42 P **P 17 49 30.1 +0.4**
HIA IAmb IAmb 17 49 37.3
comp=Z,78nm,1.3s
UMR Umm Al-Rimmam 33.32 282 *e*P 17 49 29.9
YOJ Yonaguni jima 33.42 88 P **P 17 49 29.6 -1.1**
YOJ pmax pmax
comp=Z,192nm,1.4s
YOJ Yonaguni jima 33.42 88 P **P 17 49 29.6 -1.1**
SNY Shenyang 33.44 56 ⇓P **P 17 49 30.8 0.0**
SNY S **S 17 54 53.0 +0.9**
SNY pmax pmax
comp=Z,36nm,1.3s
SNY pmax pmax
comp=Z,440nm,3.5s
SNY LR LR
comp=Z,2μm,14.2s
SNY LR LR
comp=Z,1μm,10.1s
SNY LR LR
comp=Z,2μm,19.9s
SZP Santa 33.49 101 P **P 17 49 30.2 -1.2**
RDF Al-Radifah 33.55 280 *e*P 17 49 32.1
AKT Akhty 33.68 303 *e*P **P 17 49 34.3 +1.3**
AKT *e* 17 50 47.0
AKT pmax pmax
comp=Z,14nm,1.0s
SVE Sverdlovsk 33.68 335⇑ *e*P **P 17 49 34.3 +1.6**
SVE *e*S **S 17 54 58.7 +3.1**
SVE pmax pmax
comp=Z,92nm,1.3s
SVE MLR MLR
comp=Z,1μm,13.0s
SOCY Socotra 33.77 248 P **P 17 49 31.7 -2.3**
SOCY IAmb IAmb 17 49 43.7
comp=Z,30nm,0.8s
SOCY Socotra 33.77 248 P **P 17 49 37.1 +3.0**
SNR=7.2
RST Umm Al-Ruwaisa 33.95 282 *e*P 17 49 35.7
MAK Makhachkala 34.15 306 *e*P **P 17 49 33.2 -3.7**
MAK *e*S **S 17 54 57.3 -5.7**
MAK *e*SS **SnSn 17 57 09.4 -1.3**
MAK pmax pmax
comp=Z,83nm,1.2s
MAK MLR MLR
comp=Z,2μm,16.0s
ARU Arti 34.20 333 P **P 17 49 38.2 +1.1**
comp=Z,6.3nm,0.6s,baz=123,slow=6.8,SNR=13
ARU Arti 34.20 333*c i*P **P 17 49 38.1 +0.9**
ARU 17 50 48.2
ARU PPP PPP 17 51 05.1
ARU 17 52 14.6
ARU S **S 17 55 06.2 +2.6**
ARU SS **SnSn 17 57 11.0 -0.7**
ARU pmax pmax
comp=Z,22nm,0.7s
ARU MLR MLR
comp=Z,801nm,14.0s
ARU Arti 34.20 333 P **P 17 49 36.8 -0.4**
ARU IAmb IAmb 17 49 43.0
comp=Z,146nm,1.7s
JMBI JAMBI 34.27 147 P **P 17 49 39.9 +1.7**
comp=Z,283nm,1.0s
LUBP Lubang 35.06 107 *e*P **P 17 49 48.9 +3.9**
CN2 Changchun 35.20 53 *e*P **P 17 49 46.0 -0.1**
CN2 *e*S **S 17 55 17.0 -2.4**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,800nm,13.0s
CN2 LR LR
comp=Z,2μm,13.0s
CN2 LR LR
comp=Z,3μm,13.0s
INCN Inchon 35.23 64 P **P 17 49 45.7 -0.7**
INCN pmax pmax
comp=Z,189nm,1.5s
INCN Inchon 35.23 64 P **P 17 49 45.7 -0.7**
INCN Inchon 35.23 64 P **P 17 49 47.6 +1.2**
INCN P **P 17 49 47.6 +1.2**
GROC Groznyy 35.42 306 *e*P **P 17 49 49.0 +1.1**
GROC *e* 17 51 07.9
GROC *e* 17 52 22.1
GROC *e*S **S 17 55 24.8 +2.1**
GROC pmax pmax
comp=Z,59nm,1.0s
KSM Kuching 35.43 134 P **P 17 49 47.6 -0.7**
KSM IAmb IAmb 17 49 56.6
comp=Z,53nm,1.1s
TGY Tagaytay City 35.46 106 P **P 17 49 49.7 +1.1**
comp=Z,136nm,0.4s,baz=185,slow=4.4,SNR=1.7
BOD Bodaibo 35.50 26 *e*P **P 17 49 49.2 +0.8**
BOD pmax pmax
comp=Z,111nm,1.3s
KSI Kapahiang 35.58 150 P **P 17 49 49.0 -0.6**
comp=Z,75nm,0.8s
ENPP El Nido 35.69 112 *e*P **P 17 49 50.7 +0.2**
GNI Garni 35.72 300 P **P 17 49 52.7 +1.9**
comp=Z,24nm,1.2s,baz=320,slow=1.9,SNR=6.6
GNI Garni 35.72 300*de*P **P 17 49 52.5 +1.7**
GNI pmax pmax
comp=Z,42nm,1.3s
GNI Garni 35.72 300 P **P 17 49 48.8 -2.0**
GNI IAmb IAmb 17 50 02.7
comp=Z,71nm,1.4s
GNI Garni 35.72 300 P **P 17 49 52.5 +1.7**
BATP Bataraza 35.76 117 *e*P **P 17 49 52.0 +0.9**
TJN Taejon 35.78 66*de*P **P 17 49 50.0 -1.1**
SBUM Sibu 35.93 131 P **P 17 49 52.4 -0.2**
SBUM IAmb IAmb 17 50 01.1
comp=Z,87nm,1.1s
PMBI Palembang 35.95 147 P **P 17 49 50.5 -2.1**
PMBI Palembang 35.95 147 P **P 17 49 52.9 +0.3**
comp=Z,390nm,1.1s
LQP Lukban 35.97 106⇑ *e*P **P 17 49 52.8 -0.3**
PPBI Pangkal Pinang 35.98 144 P **P 17 49 53.5 +0.6**
comp=Z,115nm,1.3s
LHSI Lahat 36.15 149 P **P 17 49 51.8 -2.6**
comp=Z,57nm,1.3s
KS19 Wonju Array Si 36.21 64 P **P 17 49 54.0 -0.8**
KSAR Wonju Array Be 36.22 64 P **P 17 49 53.5 -1.4**
KSAR Wonju Array Be 36.22 64 P **P 17 49 53.5 -1.4**
KSRS Korea Array 36.25 64 P **P 17 49 54.3 -0.8**
comp=Z,6.3nm,0.7s,baz=266,slow=8.3,SNR=57
KSRS PcP **PcP 17 52 20.5 +0.3**
comp=Z,2.0nm,1.1s,baz=272,slow=3.3,SNR=2.1
KSRS LR LR 18 05 43.8
comp=Z,1μm,21.4s,baz=260,slow=38
CLDR Caldiran 36.26 298 *e*P **P 17 49 56.1 +0.6**
KKM Kota Kinabalu 36.26 122 P **P 17 49 55.8 +0.3**
SJMP San Jose 36.43 108 *e*P **P 17 49 57.1 +0.2**
RAYN Ar Rayn 36.49 272 P **P 17 49 55.2 -2.2**
RAYN pmax pmax
comp=Z,30nm,1.4s
RAYN Ar Rayn 36.49 272 P **P 17 49 55.2 -2.2**
ZEI Tsey 36.71 305 *e*P **P 17 50 00.1 +0.9**
ZEI pmax pmax
comp=Z,30nm,1.4s
JCNP Jose Panganiba 36.87 104 *e*P **P 17 49 59.9 -0.7**
GEVA Gevas 36.88 297 P **P 17 49 59.0 -1.7**
AKDM Akdamar-Van 36.94 297 *e*P **P 17 50 03.8 +2.6**
AGRB Hanur-Agry 37.01 299 *e*P **P 17 50 04.1 +2.3**
NCK Nalchik 37.05 306⇑ *e*P **P 17 50 04.2 +2.3**
NCK pmax pmax
comp=Z,20nm,0.6s
BELG Belogornoye 37.18 321 P **P 17 50 05.2 +2.5**
comp=Z,27nm,1.1s,baz=307,slow=5.5,SNR=11
BELG Belogornoye 37.18 321*de*P **P 17 50 05.9 +3.1**
BELG pmax pmax
comp=Z,12nm,1.4s
CUYO Cuyo Island 37.19 111 *e*P P 17 50 09.6 +6.2
STKI Sintang 37.25 134 P **P 17 50 05.5 +1.7**
comp=Z,37nm,1.2s
TPI Tanjungpandan 37.28 142 P **P 17 50 04.8 +0.8**
comp=Z,610nmcomp=Z,53nm,1.4s
LWLI Liwa 37.44 149 P **P 17 50 03.7 -1.9**
comp=Z,2μmcomp=Z,104nm,0.8s
JTU Tsushima 37.47 69 P **P 17 50 06.0 +0.5**
JTU IAmb IAmb 17 50 12.6
comp=Z,122nm,1.4s
JOW Kunigami 37.49 82 P **P 17 50 05.7 -0.1**
JOW IAmb IAmb 17 50 26.7
comp=Z,92nm,1.7s
KBZ Khabaz 37.59 306 P **P 17 50 07.7 +1.3**
comp=Z,5.5nm,0.9s,baz=88,slow=7.9,SNR=11
KBZ LR LR 18 09 25.1
comp=Z,897nm,18.4s,baz=86,slow=42
KBZ Khabaz 37.59 306⇓ *e*P **P 17 50 07.2 +0.8**
KBZ pmax pmax
comp=Z,11nm,1.1s
GURO Guroymak-BITLI 37.69 297 *e*P **P 17 50 08.4 +0.8**
GOF Gofitskoye 37.73 308⇑ *e*P P 17 50 12.7 +5.1
DGAR Diego Garcia 37.75 202 P **P 17 50 08.4 +0.4**
DGAR pmax pmax
comp=Z,106nm,1.3s
DGAR Diego Garcia 37.75 202 P **P 17 50 08.4 +0.4**
DGAR IAmb IAmb 17 50 46.5
comp=Z,106nm,1.2s
KIV Kislovodsk 37.78 306 *e*P **P 17 50 09.4 +1.2**
KIV *e* 17 52 26.1
KIV *e*S **S 17 56 01.1 +2.1**
KIV pmax pmax
comp=Z,45nm,1.1s
KIV pmax pmax
comp=Z,54nm,3.9s
KIV MLR MLR
comp=Z,2μm,16.0s
KIV Kislovodsk 37.78 306 P **P 17 50 07.2 -1.0**
KOPR Koprukoy-ERZUR 37.91 300 *e*P P 17 50 14.7 +5.2
KASI Kota Agung 38.09 149 P **P 17 50 07.0 -3.9**
comp=Z,51nm,1.2s
MDJ Mudanjiang 38.29 53 P **P 17 50 15.8 +3.5**
MDJ PP **PP 17 51 44.0 +4.2**
MDJ S **S 17 56 11.5 +5.1**
MDJ pmax pmax
comp=Z,15nm,1.0s
MDJ pmax pmax
comp=Z,230nm,4.1s
MDJ LR LR
comp=Z,2μm,15.7s
MDJ LR LR
comp=Z,1μm,19.9s
MDJ LR LR
comp=Z,3μm,18.5s
MDJ Mudanjiang 38.29 53 P **P 17 50 11.6 -0.7**
MYLDM Lahad Datu 38.55 120 P **P 17 50 14.8 0.0**
MYLDM IAmb IAmb 17 50 23.7
comp=Z,178nm,1.2s
JSU Suzuyama 38.60 74 P **P 17 50 14.1 -1.1**
JSU IAmb IAmb 17 50 22.0
comp=Z,109nm,1.4s
MARD Mardin 38.66 295 P **P 17 50 14.6 -1.1**
BNGB Bingl 38.77 298 *e*P **P 17 50 18.5 +1.9**
JNU Nakatsue 38.79 71 P **P 17 50 17.1 +0.3**
comp=Z,17nm,0.9s,baz=310,slow=1.4,SNR=10

JNU Nakatsue 38.79 71 P **P** **17 50 16.6 -0.2**
JNU lAmb lAmb 17 50 24.1
comp=Z,109nm,1.3s
CHOM Cayeli-Rize 38.83 301 *e*P **P** **17 50 18.9 +1.9**
KOPT Kop Dagi 38.96 300 P **P** **17 50 16.5 -1.8**
CNOP Candoni, Negro 39.09 111 *e*P **P** **17 50 16.6 -2.8**
KIRV Kirov 39.39 331 P **P** **17 50 22.4 +1.1**
comp=Z,21nm,0.6s,baz=121,slow=4.1,SNR=6.7
ZEA Zeya 39.46 38 *e*P **P** **17 50 23.5 +1.5**
ZEA *e* 17 51 58.0
ZEA *e*S **S** **17 56 21.2 -2.7**
ZEA pmax pmax
comp=N,100nm,4.4s
ZEA pmax pmax
comp=Z,100nm,4.2s
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,10.0nm,1.1s
ZEA pmax pmax
comp=Z,200nm,11.0s
ZEA smax smax
comp=N,100nm,11.8s
ZEA MLR MLR
comp=E,2µm,13.0s
ZEA MLR MLR
comp=N,800nm,20.0s
ZEA MLR MLR
comp=Z,2µm,15.0s
PBKI Pangkalan Bun 39.54 137 P **P** **17 50 21.5 -1.6**
comp=Z,119nm,1.0s
SOC Sochi 39.85 305 *e*P **P** **17 50 23.7 -1.7**
SOC *e* 17 51 58.4
SOC *e*PPP PPP 17 52 19.1
SOC *e*S **S** **17 56 30.4 +0.4**
SOC *e*SS **SS** **17 59 18.4 -7.7**
SOC pmax pmax
comp=Z,21nm,1.1s
SOC MLR MLR
comp=Z,583nm,14.0s
USA0B Ussuriysk Arra 39.92 54 P **P** **17 50 25.5 -0.5**
USA0B pmax pmax
comp=Z,96nm,2.0s
USA0B Ussuriysk Arra 39.92 54 P **P** **17 50 25.5 -0.5**
USA0B lAmb lAmb 17 50 32.7
comp=Z,96nm,1.9s
USRK Ussuriysk Ar. 39.92 54 P **P** **17 50 25.9 0.0**
comp=Z,7.6nm,0.7s,baz=251,slow=5.8,SNR=12
USRK LR LR 18 08 44.2
comp=Z,2µm,19.2s,baz=252,slow=39
USRK Ussuriysk Ar. 39.92 54 P **P** **17 50 25.1 -0.8**
DBJI Dramaga 40.05 147 P **P** **17 50 25.0 -2.3**
comp=Z,60nm,1.0s
VRH Novokhopyorsk 40.15 317 *e*P **P** **17 50 30.7 +2.9**
VRH pmax pmax
comp=Z,120nm,1.6s
VRH MLR MLR
comp=Z,3µm,18.0s
URFA Urfa 40.22 296 *e*P **P** **17 50 28.6 -0.1**
MTKI Muara Teweh, K 40.23 131 P **P** **17 50 29.4 +0.6**
comp=Z,32nm,1.2s
JMZ Minamidaito 2 40.30 83 P **P** **17 50 30.3 +1.0**
JHS Saijyo 40.49 68 P **P** **17 50 30.4 -0.5**
MALT Malatya 40.52 297 *e*P **P** **17 50 32.8 +1.6**
KLR Kul'dur 40.70 46 P **P** **17 50 32.4 0.0**
comp=Z,9.9nm,0.9s,baz=263,slow=9.1,SNR=19
KLR Kul'dur 40.70 46 *d i*P **P** **17 50 32.3 0.0**
KLR pmax pmax
comp=Z,63nm,1.5s
NRIK Noril'sk 41.13 1 P **P** **17 50 36.6 +1.0**
comp=Z,34nm,1.1s,baz=173,slow=6.1,SNR=35
NRIK LR LR 18 09 50.0
comp=Z,822nm,18.5s,baz=190,slow=39
NRIK Noril'sk 41.13 1 *d i*P **P** **17 50 36.3 +0.7**
NRIK pmax pmax
comp=Z,100nm,1.6s
NRIK Noril'sk 41.13 1 P **P** **17 50 35.9 +0.3**
NRIK lAmb lAmb 17 50 42.7
comp=Z,54nm,1.1s
JMN Monobe 41.23 70 P **P** **17 50 35.6 -1.5**
JMN lAmb lAmb 17 50 51.9
comp=Z,65nm,1.0s
DARE Darende-Malaty 41.26 297 *e*P P 17 50 42.7 +5.4
RSDY Resadiye-TOKAT 41.40 300 *e*P P 17 50 43.7 +5.4
GAZ Gaziantep 41.51 295 *e*P **P** **17 50 40.5 +1.2**
GAZ Gaziantep 41.51 295 P **P** **17 50 38.8 -0.5**
VORD Divnogorie 41.55 316 *e*P **P** **17 50 42.9 +3.6**
VORD pmax pmax
comp=Z,70nm,1.2s
ANN Anapa 41.63 307 *e*P **P** **17 50 38.2 -1.8**
ANN *e**PP **pP** **17 50 42.1 -2.8**
ANN *e* 17 52 16.1
ANN *e* 17 52 34.2
ANN *e*S **S** **17 56 54.9 -1.5**
ANN pmax pmax
comp=Z,35nm,1.0s
ANN MLR MLR
comp=N,1µm,15.0s
ANN MLR MLR
comp=Z,2µm,14.0s
ANN MLR MLR
comp=E,2µm,14.0s
SVSK Karacayir 41.64 299 *e*P P 17 50 45.7 +5.5
VSR Storozhevoye 41.70 317 *e*P **P** **17 50 42.4 +1.9**
VSR pmax pmax
comp=Z,80nm,1.3s
VSR MLR MLR
comp=Z,2µm,15.0s
KMRS Kahramanmaras 41.74 296 *e*P **P** **17 50 40.5 -0.7**
TOKT Tokat 41.99 300 *e*P **P** **17 50 44.4 +1.2**
GLSP General Luna, 42.01 108 *e*P **P** **17 50 48.0 +4.4**
BUTP Butuan 42.02 109 *e*P **P** **17 50 44.9 +1.3**
TOKA Tokat 42.04 300 P **P** **17 50 42.2 -1.4**
TOKA lAmb lAmb 17 52 11.8
comp=Z,28nm,0.5s
BBKI Banjar Baru 42.09 134 P **P** **17 50 45.8 +1.6**
comp=Z,1µmcomp=Z,141nm,1.4s
BUKP Musuan 42.15 111 *e*P **P** **17 50 46.2 +1.5**
LPSR Galich'ya Gora 42.22 318 *e*P **P** **17 50 48.4 +3.7**
LPSR pmax pmax
comp=Z,80nm,1.2s
LPSR MLR MLR
comp=Z,2µm,17.0s
JWT Wachi 42.34 68 P **P** **17 50 45.7 -0.3**
JWT lAmb lAmb 17 50 54.6
comp=Z,153nm,1.6s
SMRI Semarang 42.37 142 P **P** **17 50 47.2 +0.8**
comp=Z,251nm,1.4s
BNN Bunyan 42.54 298 *e*P **P** **17 50 47.7 -0.1**
KOZT Kozan 42.60 296 *e*P **P** **17 50 49.0 +0.9**
CEYT Ceyhan 42.68 295 *e*P **P** **17 50 50.4 +1.6**
TOLI2 Tolitoli 42.92 123 P **P** **17 50 51.1 +0.2**
TOLI2 lAmb lAmb 17 50 58.8
comp=Z,129nm,1.1s
XMIS Christmas Isla 43.01 151 P **P** **17 50 50.8 -0.8**
XMIS lAmb lAmb 17 50 58.0
comp=Z,158nm,1.3s
DAV Davao City (W) 43.02 112 P **P** **17 50 53.1 +1.3**
comp=Z,74nm,0.3s,baz=20,slow=4.4,SNR=7.5
KARA Karaisali 43.22 295 *e*P **P** **17 50 54.0 +0.8**
GHAJ Ghor Haditha 43.46 287 P **P** **17 50 55.0 -0.1**
GHAJ lAmb lAmb 17 51 02.8
comp=Z,157nm,1.4s
ATD Arta Tunnel 43.47 256 P **P** **17 50 53.4 -2.1**
MERS Mersin 43.67 295 *e*P **P** **17 50 57.1 +0.2**
DDMP Don Marcelino, 43.68 113 *e*P **P** **17 50 57.5 +0.4**
MOS Moscow 43.89 323 *e*P **P** **17 50 59.4 +1.2**
MOS *e* 17 52 46.9
MOS *e*S **S** **17 57 37.2 +7.9**
MOS pmax pmax
comp=Z,122nm,1.7s
MOS pmax pmax
comp=Z,300nm,2.1s
MOS MLR MLR
comp=Z,2µm,17.0s
JGF Kuroka 43.90 67 P **P** **17 50 58.5 -0.3**
BZK Bozkurt 43.94 302 ⇓P **P** **17 50 59.1 +0.3**
BZK Bozkurt 43.94 302 *e*P **P** **17 50 59.6 +0.8**
GRNR Gornyy 43.97 45 ⇓ *i*P **P** **17 50 59.0 0.0**
GRNR pmax pmax
comp=E,8.0nm,0.6s
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR MLR MLR
comp=E,840nm,11.0s
GRNR MLR MLR
comp=N,660nm,12.0s
GRNR MLR MLR
comp=Z,870nm,11.0s
KIZK Mersin 44.01 294 *e*P **P** **17 50 59.9 +0.4**
EREN Erenkoy 44.07 293 *e*P **P** **17 51 00.9 +0.9**
ILGA Ilgaz 44.15 301 P **P** **17 50 59.8 -1.0**
ILGA lAmb lAmb 17 51 11.0
comp=Z,82nm,1.5s
MRSI Marisa 44.21 122 P **P** **17 51 01.6 +0.3**
comp=Z,1µmcomp=Z,132nm,1.2s
BR131 Keskin Array S 44.23 299 P **P** **17 50 59.9 -1.5**
BR131 pmax pmax
comp=Z,23nm,1.2s
BR131 Keskin Array S 44.23 299 P **P** **17 50 59.9 -1.5**
BR131 Keskin Array S 44.23 299 P **P** **17 51 02.4 +1.0**
SNR=6.7
BRTR Keskin Array B 44.23 299 P **P** **17 51 02.1 +0.7**
comp=Z,3.9nm,0.9s,baz=99,slow=7.6,SNR=9.8
BRTR PcP **PcP** **17 52 46.0 0.0**
comp=Z,3.2nm,0.9s,baz=99,slow=4.5,SNR=2.0
BRTR LR LR 18 12 58.7
comp=Z,518nm,18.4s,baz=108,slow=41
BRTR Keskin Array B 44.23 299 P **P** **17 51 00.2 -1.2**
OBN Obninsk 44.27 321 ⇓ *e*P **P** **17 51 00.7 -0.6**
OBN *e**PP **pP** **17 51 05.4 -0.6**
OBN *e* 17 52 46.5
OBN pmax pmax
comp=Z,103nm,1.3s
OBN Obninsk 44.27 321 P **P** **17 51 00.8 -0.5**
OBN lAmb lAmb 17 51 06.8
comp=Z,114nm,1.3s
SERE Sereflikochisa 44.31 298 *e*P **P** **17 51 02.9 +0.8**
YAK Yakutsk 44.32 28 P **P** **17 51 02.2 +0.6**
comp=Z,12nm,0.6s,baz=243,slow=3.0,SNR=12
YAK Yakutsk 44.32 28 *d e*P **P** **17 51 01.9 +0.3**
YAK pmax pmax
comp=Z,74nm,1.7s
YAK Yakutsk 44.32 28 P **P** **17 51 01.7 +0.1**
KMMI Kalianget 44.37 138 P **P** **17 51 03.1 +0.6**
comp=Z,114nm,1.4s
JSD Sado 44.44 63 P **P** **17 51 00.6 -2.4**
MAJO Matsushiro 44.50 65 *d i*P **P** **17 51 02.9 -0.6**
MAJO pmax pmax
comp=Z,52nm,2.1s
MAJO Matsushiro 44.50 65 P **P** **17 51 02.0 -1.4**
MAT Matsushiro 44.50 65 P **P** **17 51 02.8 -0.7**
MAT S **S** **17 57 34.6 -4.3**
MJAR Matsushiro Arr 44.51 65 P **P** **17 51 03.4 -0.2**
comp=Z,9.8nm,0.9s,baz=280,slow=10,SNR=29
MJAR PcP **PcP** **17 52 46.7 -0.1**
comp=Z,6.8nm,1.1s,baz=275,slow=2.7,SNR=4.8
MJAR LR LR 18 10 39.5
comp=Z,630nm,20.8s,baz=265,slow=38
MJAR Matsushiro Arr 44.51 65 P **P** **17 51 02.5 -1.0**
AKKU Akkuyu-Mersin 44.51 294 *e*P **P** **17 51 03.9 +0.4**
LFK Lefkose 44.61 293 *e*P **P** **17 51 08.5 +4.1**
BERE Bereket-Mersin 44.76 294 *e*P **P** **17 51 06.3 +0.6**
CSS Mathiatis 44.81 292 P **P** **17 51 04.6 -1.4**
CHBY Cihanbeyli 44.86 297 *e*P **P** **17 51 05.5 -0.9**
KLMR Klimovskoe 44.86 330 *e*P **P** **17 51 04.9 -1.1**
KLMR *e* 17 52 50.7
KLMR *e*SS SS 18 01 03.5 -0.8
KLMR pmax pmax
comp=Z,68nm,1.4s
KLMR Klimovskoe 44.86 330 *e*P **P** **17 51 04.9 -1.1**
KLMR AMP 17 51 12.2
comp=Z,68nm,1.4s
KLMR *e*PP **PP** **17 52 50.8 +0.2**
KLMR *e*SS **SS** **18 01 03.6 -0.7**
KLMR *e*SS **SS** **18 01 03.6 -0.7**
KLMR LQ LQ 18 06 40.0
KLMR LQ LQ 18 06 40.0
KLMR LR LR 18 09 09.6
ANTO Ankara 44.88 299 P **P** **17 51 06.3 -0.2**
ANTO pmax pmax
comp=Z,25nm,1.1s
ANTO Ankara 44.88 299 P **P** **17 51 06.3 -0.2**
BR231 Keskin MP Arra 44.89 299 P **P** **17 51 07.9 +1.3**
LOD Lodumlu 44.90 299 *e*P **P** **17 51 07.1 +0.4**
APSI Ampana 44.92 124 P **P** **17 51 06.4 -0.6**
comp=Z,660nmcomp=Z,56nm,1.3s
TTSI Tana Toraja 45.10 128 P **P** **17 51 09.3 +0.9**
comp=Z,2µmcomp=Z,241nm,1.3s
ABJI Asem Bagus 45.12 138 P **P** **17 51 07.4 -1.1**
comp=Z,122nm,1.2s
LEF Lefka 45.15 293 ⇓P **P** **17 51 10.4 +1.8**
LEF Lefka 45.15 293 *e*P **P** **17 51 09.5 +0.8**
LADK Ladik-KONYA 45.29 297 *e*P **P** **17 51 12.4 +2.5**
KONT Konya--Tatoy 45.31 297 *e*P **P** **17 51 13.5 +3.5**
JAGI Jajag, Banyuwa 45.61 139 P **P** **17 51 11.8 -0.7**
JAGI lAmb lAmb 17 51 18.0
comp=Z,48nm,1.1s
KMSI Cibinong 45.68 120 P **P** **17 51 12.0 -1.0**
comp=Z,2µmcomp=Z,194nm,0.9s
SPSI Sidrap Palu 45.73 129 P **P** **17 51 12.2 -1.2**
comp=Z,1µmcomp=Z,105nm,1.2s
LUWI Luwuk 45.84 123 P **P** **17 51 15.4 +1.2**
LUWI Luwuk 45.84 123 P **P** **17 51 15.8 +1.6**
comp=Z,1µmcomp=Z,116nm,1.1s
SRBI Singaraja 45.93 138 P **P** **17 51 14.3 -0.6**
comp=Z,2µmcomp=Z,236nm,1.3s
MDUB Mudurnu 46.07 300 *e*P **P** **17 51 19.5 +3.5**
MDUB Mudurnu 46.07 300 P **P** **17 51 13.8 -2.2**
MDUB lAmb lAmb 17 52 02.4
comp=Z,81nm,1.0s
JYT Yasato 46.13 66 P **P** **17 51 14.4 -1.9**
BNSI Bone 46.27 129 P **P** **17 51 14.1 -3.6**
comp=Z,64nm,1.3s
JMM Marumori 46.45 63 P **P** **17 51 16.9 -2.0**
JTM Tenmabayashi 46.47 59 P **P** **17 51 15.3 -3.7**
JTM lAmb lAmb 17 51 25.9
comp=Z,89nm,1.3s
KAPI Kappang 46.48 130 P **P** **17 51 17.6 -1.7**
KAPI pmax pmax
comp=Z,67nm,1.1s
KAPI Kappang 46.48 130 P **P** **17 51 17.6 -1.7**
KAPI lAmb lAmb 17 51 27.3
comp=Z,67nm,1.1s
SRCK Saricakaya, Es 46.53 300 *e*P **P** **17 51 22.8 +3.3**
GULT Gulveren 46.60 300 *e*P P 17 51 24.9 +4.8
SHUT Suhut-Afyon 46.69 298 *e*P **P** **17 51 21.4 +0.5**
ISP Isparta 46.77 297 P P **17 51 20.9 -0.7**
ISP Isparta 46.77 297 P P **17 51 20.9 -0.7**
ISP lAmb lAmb 17 51 45.6
comp=Z,21nm,1.1s
KORT Korkueli 46.99 296 *e*P **P** **17 51 27.4 +4.1**
HRT Hereke 47.22 301 *e*P **P** **17 51 22.1 -2.8**
ELL Elmali 47.37 295 *e*P **P** **17 51 26.7 +0.4**
ELL Elmali 47.37 295 P **P** **17 51 25.3 -1.0**
ELL pmax pmax
comp=Z,226nm,0.9s
ELL Elmali 47.37 295 P **P** **17 51 25.3 -1.0**
TVSB Tavsanli 47.47 299 *e*P **P** **17 51 26.1 -0.8**
ISK Istanbul-Kandi 47.67 301 *e*P **P** **17 51 30.6 +2.3**
KLYT Kilyos 47.67 301 *e*P **P** **17 51 32.5 +4.2**
YSS Yuzh-Sakhalins 47.69 51 P **P** **17 51 28.1 -0.3**
YSS pmax pmax
comp=Z,119nm,1.4s
YSS Yuzh-Sakhalins 47.69 51 P **P** **17 51 28.1 -0.3**
TLCR 47.75 307 ⇑P **P** **17 51 29.1 +0.1**
AKASG Malin Array Be 47.78 314 P **P** **17 51 28.7 -0.3**
comp=Z,4.2nm,0.4s,baz=81,slow=6.5,SNR=29
AKASG LR LR 18 15 05.5
comp=Z,1µm,18.7s,baz=90,slow=40
AKASG Malin Array Be 47.78 314 P **P** **17 51 28.2 -0.8**
AKASG pmax pmax
comp=Z,20nm,1.5s
AKASG Malin Array Be 47.78 314 P **P** **17 51 28.2 -0.8**
AKBB Malin Array Si 47.78 314 *de*P **P** **17 51 28.8 -0.3**
AKBB pmax pmax
comp=Z,22nm,0.9s
AKBB Malin Array Si 47.78 314 P **P** **17 51 28.0 -1.1**
AKBB lAmb lAmb 17 51 33.8
comp=Z,20nm,0.8s
ERM Erimo 47.99 58 P **P** **17 51 29.7 -1.1**
ERM pmax pmax
comp=Z,108nm,1.3s
ERM Erimo 47.99 58 P **P** **17 51 29.7 -1.1**
JEM Erimo 47.99 58 P **P** **17 51 27.4 -3.4**
TIRR Tirgusor 48.04 306 P **P** **17 51 30.2 -0.9**
TIRR pmax pmax
comp=Z,65nm,1.4s
TIRR Tirgusor 48.04 306 P **P** **17 51 30.2 -0.9**
TIRR lAmb lAmb 17 51 36.8
comp=Z,65nm,1.4s
SORM Soroca 48.16 311 ⇑P **P** **17 51 32.2 +0.2**
KULA Kula-Manisa 48.17 298 *e*P **P** **17 51 30.7 -1.7**
TNTI Ternate 48.17 117 P **P** **17 51 31.4 -1.1**
TNTI lAmb lAmb 17 51 39.0
comp=Z,60nm,1.1s
TNTI Ternate 48.17 117 P **P** **17 51 31.2 -1.3**
comp=Z,671nmcomp=Z,54nm,1.2s
CFR Carcaliu 48.23 307 ⇓P **P** **17 51 32.9 +0.3**
MANT Manisa 48.25 298 P **P** **17 51 30.6 -2.5**
MANT lAmb lAmb 17 51 60.0
comp=Z,85nm,1.4s
FURI Furi 48.33 256 P **P** **17 51 32.6 -1.6**
FURI lAmb lAmb 17 51 45.1
comp=Z,43nm,1.1s
SANI Sanana 48.90 121 P **P** **17 51 36.7 -1.4**
comp=Z,706nmcomp=Z,42nm,1.4s
MNK Minsk 49.05 319 *e*P **P** **17 51 42.0 +3.2**
MNK *e* 17 53 37.0
MNK Minsk 49.05 319 *i*P **P** **17 51 37.3 -1.5**
comp=E,3.0nm,0.9s
MNK *i*P **P** **17 51 37.3 -1.5**
comp=N,9.0nm,0.7s
MNK *i*P **P** **17 51 37.3 -1.5**
comp=Z,12nm,1.0s
MNK *i*PcP **PcP** **17 53 00.9 -1.6**
MNK *i*PP **PP** **17 53 30.9 -1.3**
MNK *i*PPP PPP 17 54 21.6
MNK *i*S **S** **17 58 42.7 -0.7**
MNK *i*ScS **ScS** **18 01 31.2 +0.2**
MNK *i*SS **SS** **18 02 16.1 +2.0**
MNK *i*SSS SSS 18 03 29.9
MNK *i*LQ LQ 18 08 48.3
MNK *i*LR LR 18 12 32.3
MNK *i*LRM MLR 18 15 20.5
comp=E,220nm,18.2s
MNK *i*LRM MLR 18 15 24.3
comp=Z,2µm,17.6s
MNK *i*LRM MLR 18 15 35.5
comp=N,274nm,12.8s
VRI Vrincioaia 49.22 308 ⇓P **P** **17 51 41.6 +1.3**
TESR Tescani 49.27 308 ⇑P **P** **17 51 41.1 +0.5**
PLOR Plostina 49.27 308 ⇑P **P** **17 51 41.8 +1.0**
TIXI Tiksi 49.38 17 P **P** **17 51 40.0 -1.0**
TIXI pmax pmax
comp=Z,71nm,1.4s
TIXI Tiksi 49.38 17 P **P** **17 51 40.0 -1.0**
TIXI lAmb lAmb 17 51 47.8
comp=Z,71nm,1.4s
JCJ Chichijima 49.50 77 P **P** **17 51 41.5 -1.2**
PRAR RASCA 49.57 310 ⇑P **P** **17 51 45.2 +2.3**
BIZ Bicaz 49.65 309 ⇑P **P** **17 51 44.7 +1.2**
WBSI Waikabubak, Su 49.70 134 P **P** **17 51 45.8 +1.5**
comp=Z,1µmcomp=Z,112nm,0.9s
KARP Karpathos 49.74 294 P **P** **17 51 43.7 -0.7**
KARP lAmb lAmb 17 53 23.8
comp=Z,60nm,1.0s
NACGM Naroch 49.74 320 *i*P **P** **17 51 44.6 +0.5**
NACGM *i*P **P** **17 51 44.6 +0.5**
NACGM *i*P **P** **17 51 44.6 +0.5**
NACGM *i*PcP PcP 17 52 53.3 -12
NACGM *i*PP **PP** **17 53 32.3 -6.1**
NACGM *i*PPP PPP 17 54 08.2
NACGM *i*S **S** **17 58 49.4 -3.6**
NACGM *i*PS PKiKP 17 59 29.1 -22
NACGM *i*SS **SS** **18 02 19.7 -5.4**
NACGM *i*SSS SSS 18 04 04.5
NACGM *i*LQ LQ 18 09 28.9
NACGM *i*LR LR 18 11 55.0
MLR Muntele Rosu 49.77 307 P **P** **17 51 43.3 -1.4**
MLR pmax pmax
comp=Z,123nm,1.4s
MLR Muntele Rosu 49.77 307 P **P** **17 51 43.3 -1.4**
IDID Didziasalis 49.82 320 *e*P **P** **17 51 45.7 +1.0**
EZN Ezine 49.84 300 *e*P **P** **17 51 49.1 +4.0**
YUK Yuzh-Kuril'sk 49.88 55 *e*P **P** **17 51 44.7 -0.6**
YUK *e* 17 53 03.7
YUK *e* 17 53 38.1
YUK *e*PPP PPP 17 54 31.2
YUK *e*S **S** **17 58 55.4 +0.1**
YUK *e*SS **SS** **18 02 29.2 +1.4**
YUK *e*SSS SSS 18 03 51.1
YUK pmax pmax
comp=Z,40nm,1.0s
YUK pmax pmax
comp=E,45nm,0.6s
YUK pmax pmax
comp=N,19nm,0.9s
YUK pmax pmax
comp=Z,278nm,1.7s
YUK MLR MLR
comp=N,326nm,12.0s
YUK MLR MLR
comp=E,412nm,12.0s
YUK MLR MLR
comp=Z,489nm,12.0s
ALN Alexandroupoli 49.96 301 P **P** **17 51 46.0 +0.1**
ALN pmax pmax
comp=Z,21nm,1.0s
ALN Alexandroupoli 49.96 301 P **P** **17 51 46.0 +0.1**
IIGN Ignalina 50.12 320 *e*P **P** **17 51 48.1 +1.2**
APA Apatity 50.12 337 ⇓ *i*P **P** **17 51 50.2 +3.5**
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,1µm,17.0s
DOPR Dopca 50.15 308 ⇓P **P** **17 51 48.5 +1.1**
ISAL Salakas 50.20 320 *e*P **P** **17 51 49.1 +1.6**
BURAR Bucovina Array 50.25 310 ⇓P **P** **17 51 49.0 +0.8**
BURAR Bucovina Array 50.25 310 P **P** **17 51 47.3 -0.9**
BUR08 Bucovina Ar. S 50.27 310 P **P** **17 51 46.5 -1.8**
VSU Vasula 50.31 324 *e*P **P** **17 51 48.9 +0.6**
VOIR 50.41 307 ⇑P **P** **17 51 50.2 +0.8**
NLAI Namlea 50.52 121 P **P** **17 51 51.1 +0.7**
comp=Z,41nm,1.3s
ARR Arges 50.70 307 ⇓P **P** **17 51 52.4 +0.8**
MMRI Maumere 50.80 131 P **P** **17 51 51.3 -1.2**
MMRI Maumere 50.80 131 P **P** **17 51 50.4 -2.1**
comp=Z,1µmcomp=Z,118nm,1.0s
ARCR ARCALIA 50.85 309 ⇓P **P** **17 51 54.7 +2.1**
BASI Baing, Sumba 50.89 134 P P 17 52 06.0 +13
LVV L'vov 51.06 313 *e*P **P** **17 51 58.1 +4.0**
LVV MLR MLR
comp=N,400nm,16.0s
LVV MLR MLR
comp=E,600nm,16.0s
LVV MLR MLR
comp=Z,800nm,16.0s
FIA1 FINESS Array S 51.22 328 P P **17 51 55.1 0.0**
FIA1 lAmb lAmb 17 52 00.4
comp=Z,116nm,1.7s
FINES FINESS Array B 51.22 328 P **P** **17 51 55.5 +0.4**
comp=Z,11nm,0.7s,baz=108,slow=8.1,SNR=49
FINES LR LR 18 16 03.9
comp=Z,2µm,20.0s,baz=110,slow=39
FINES FINESS Array B 51.22 328 P **P** **17 51 55.2 +0.1**
PABE Paberze 51.41 320 *e*P **P** **17 51 57.3 +0.7**
PABE Paberze 51.41 320 P **P** **17 51 55.7 -0.9**
IDI Anoyia 51.61 294 P **P** **17 51 56.9 -1.7**
IDI lAmb lAmb 17 52 02.5
comp=Z,125nm,1.8s
SUW Suwalki 51.75 318 *e*P **P** **17 52 02.7 +3.5**
SUW Suwalki 51.75 318 *e*P **P** **17 51 58.9 -0.3**
SUW Suwalki 51.75 318 P **P** **17 51 56.8 -2.4**
SUW pmax pmax
comp=Z,88nm,1.0s
SUW Suwalki 51.75 318 P **P** **17 51 56.8 -2.4**
SUW lAmb lAmb 17 52 04.0
comp=Z,88nm,1.0s
MTSE Matsula 51.86 324 *e*P **P** **17 52 00.1 +0.1**
VTS Vitosha 51.89 304 ⇑P **P** **17 52 02.2 +1.5**
VTS Vitosha 51.89 304 P **P** **17 51 59.6 -1.1**
VTS pmax pmax
comp=Z,58nm,1.4s
VTS Vitosha 51.89 304 P **P** **17 51 59.6 -1.1**
VTS lAmb lAmb 17 52 06.9
comp=Z,58nm,1.4s
KWP Kalwaria Pacla 51.91 313 *e*P P 17 52 05.5 +4.9
KWP Kalwaria Pacla 51.91 313 P **P** **17 51 58.9 -1.7**
KWP pmax pmax
comp=Z,109nm,1.2s

KWP Kalwaria Pacla 51.91 313 P P 17 51 58.9 -1.7
DRGR 51.98 309 ⇑P P 17 52 02.1 +0.9
GZR Gura Zlata 52.01 307 ⇓P P 17 52 01.8 +0.4
TRPA Tarpa 52.05 311 ⇓P P 17 52 02.2 +0.7
UZH Uzhgorod 52.20 311 ⇓i P P 17 52 06.2 +3.5
UZH i 17 52 10.8
SWI Sorong 52.24 116 P P 17 52 00.1 -3.3
comp=Z,727nmcomp=Z,61nm,1.3s
HERR Herculane 52.30 307 ⇓P P 17 52 04.9 +1.5
VAY Valandovo 52.52 302 i P P 17 52 07.6 +2.4
PBUR Paburge 52.60 321 eP P 17 52 06.0 +0.5
SIRR Siria 52.73 308 ⇑P P 17 52 07.4 +0.7
CRVS Cervenica-Dubn 52.74 312 eP P 17 52 10.9 +4.2
CRVS pmax pmax
comp=Z,71nm,2.1s
CRVS Cervenica-Dubn 52.74 312 eP P 17 52 10.9 +4.2
STIP Stip 52.77 303 i P P 17 52 05.1 -1.9
MDVR Moldovita 52.80 306 ⇑P P 17 52 07.9 +0.6
BATI Baumata 52.90 131 P P 17 52 06.4 -1.8
comp=Z,52nm,1.4s
SOEI Soe 52.98 130 P P 17 52 07.7 -1.2
SOEI Soe 52.98 130 P P 17 52 07.3 -1.6
comp=Z,2μmcomp=Z,154nm,0.8s
AGG Agios Georgios 53.02 299 P P 17 52 06.6 -2.3
AGG pmax pmax
comp=Z,29nm,1.1s
AGG Agios Georgios 53.02 299 P P 17 52 06.6 -2.3
AGG IAmb IAmb 17 52 13.1
comp=Z,29nm,1.1s
KEV Kevo 53.11 338 P P 17 52 08.7 -0.3
KEV pmax pmax
comp=Z,31nm,0.8s
KEV Kevo 53.11 338 P P 17 52 08.7 -0.3
KEV IAmb IAmb 17 52 15.4
comp=Z,31nm,0.8s
SKO Skopje 53.29 303 i P P 17 52 12.7 +1.9
MA2 Magadan 53.43 35⇑eP P 17 52 12.0 +0.4
MA2 pmax pmax
comp=Z,46nm,1.7s
MA2 Magadan 53.43 35 P P 17 52 10.4 -1.2
MA2 IAmb IAmb 17 52 19.4
comp=Z,87nm,1.6s
NIE Niedzica 53.49 312 eP P 17 52 17.3 +5.1
FNA Florina 53.49 302 P P 17 52 10.5 -1.9
FNA pmax pmax
comp=Z,17nm,0.8s
FNA Florina 53.49 302 P P 17 52 10.5 -1.9
ARA0 ARCESS Array S 53.53 338 eP P 17 52 14.8 +2.6
ARCES ARCESS Array B 53.53 338 P P 17 52 13.2 +1.0
comp=Z,21nm,0.6s,baz=106,slow=7.4,SNR=25
ARCES LR LR 18 16 02.0
comp=Z,502nm,18.3s,baz=80,slow=37
ARCES ARCESS Array B 53.53 338 P P 17 52 13.1 +0.9
ARCES pmax pmax
comp=Z,33nm,0.9s
ARCES ARCESS Array B 53.53 338 P P 17 52 13.1 +0.9
ARCES IAmb IAmb 17 52 18.7
comp=Z,33nm,0.8s
ITM Ithomi 53.63 297 P P 17 52 11.9 -1.6
ITM IAmb IAmb 17 53 15.7
comp=Z,32nm,1.1s
OJC Ojcow 53.78 313 eP P 17 52 18.7 +4.3
OJC Ojcow 53.78 313 P P 17 52 12.7 -1.6
OJC pmax pmax
comp=Z,12nm,0.6s
OJC Ojcow 53.78 313 P P 17 52 12.7 -1.6
PSZ Piszkesteto 53.83 310 ⇑P P 17 52 15.0 +0.1
PSZ Piszkesteto 53.83 310 P P 17 52 13.5 -1.4
PSZ pmax pmax
comp=Z,32nm,1.3s
PSZ Piszkesteto 53.83 310 P P 17 52 13.5 -1.4
PSZ IAmb IAmb 17 52 20.7
comp=Z,32nm,1.3s
OHR Ohrid 53.88 302 i P P 17 52 16.6 +1.4
LODK Lodwar 53.98 252 P P 17 52 15.2 -1.2
LANS Liptovska Anna 54.04 312 eP P 17 52 21.5 +5.2
LANS Liptovska Anna 54.04 312 eP P 17 52 21.5 +5.2
DIVS Divibare 54.10 306 P P 17 52 16.4 -0.5
KTK1 Kautokeino 54.16 337 eP P 17 52 17.7 +0.9
FAKI Fak Fak 54.27 117 P P 17 52 17.5 -0.9
FAKI Fak Fak 54.27 117 P P 17 52 23.6 +5.2
HAMF Hammerfest 54.46 339 eP P 17 52 20.1 +1.2
VYHS Vyhne 54.50 311 eP P 17 52 23.7 +4.1
VYHS pmax pmax
comp=Z,19nm,1.3s
VYHS Vyhne 54.50 311 eP P 17 52 23.7 +4.1
TIR Tirane 54.54 302 ⇑P P 17 52 20.9 +0.8
TIR Tirane 54.54 302 P P 17 52 17.4 -2.6
TIR pmax pmax
comp=Z,123nm,1.6s
TIR Tirane 54.54 302 P P 17 52 17.4 -2.6
SEY Seymchan 54.58 31⇑eP P 17 52 20.9 +1.0
MORH Mrgy, Hungar 54.82 308 ⇑P P 17 52 22.2 +0.3
PDG Podgorica 54.84 304 ⇑P P 17 52 21.3 -0.9
PDG Podgorica 54.84 304 P P 17 52 20.6 -1.5
OKC Ostrava-Krasne 54.86 313 AMS AMS 18 18 10.0
comp=Z,900nm,14.9s
SRO Srobarova 54.90 310 eP P 17 52 27.6 +5.1
SRO pmax pmax
comp=Z,37nm,1.1s
SRO Srobarova 54.90 310 eP P 17 52 27.5 +5.0
KMBO Kilima Mbogo 54.97 246 P P 17 52 24.8 +1.0
comp=Z,24nm,1.1s,baz=45,slow=9.8,SNR=8.8
KMBO LR LR 18 17 10.8
comp=Z,347nm,18.1s,baz=91,slow=38
KIBK Kibwezi 55.06 245 P P 17 52 22.5 -1.7
KIBK IAmb IAmb 17 52 33.7
comp=Z,55nm,2.0s
UPP Uppsala 55.13 325 eP P 17 52 24.8 +0.8
JAVC Velka Javorina 55.24 312 eP P 17 52 26.8 +1.7
MORC Moravsky Berou 55.26 313 eP P 17 52 25.5 +0.4
MORC Moravsky Berou 55.26 313 P P 17 52 23.2 -1.9
MORC pmax pmax
comp=Z,24nm,1.1s
MORC Moravsky Berou 55.26 313 P P 17 52 23.2 -1.9
MORC IAmb IAmb 17 52 30.9
comp=Z,24nm,1.1s
JETT Jettan, Norway 55.27 337 eP P 17 52 26.1 +1.2
GKP Gorka Klasztor 55.27 317 eP P 17 52 25.6 +0.5
MODS Modra-Piesok 55.55 311 eP P 17 52 30.8 +3.6
MODS pmax pmax
comp=Z,17nm,1.4s
MODS Modra-Piesok 55.55 311 eP P 17 52 30.8 +3.6
ZST Bratislava 55.68 311 eP P 17 52 32.4 +4.3
ZST Bratislava 55.68 311 eP P 17 52 32.4 +4.3
KRLC Kraliky 55.73 313 eP P 17 52 28.8 +0.3
KRLC e 17 52 33.3
KRLC MLR MLR
comp=Z,1μm,14.6s
KRLC Kraliky 55.73 313 eP P 17 52 28.8 +0.3
KRLC epP pP 17 52 33.3 0.0
KRLC AMS AMS 18 18 40.0
comp=Z,1μm,14.6s
TRO Tromso 55.79 337 eP P 17 52 29.3 +0.7
VRAC Vranov 55.91 312 ⇑P P 17 52 30.5 +0.7
VRAC Vranov 55.91 312 eP P 17 52 30.4 +0.6
KSP Ksiaz 55.98 314 eP P 17 52 34.6 +4.3
DPC Dobruska-Polom 56.00 314 eP P 17 52 30.8 +0.3
DPC e 17 52 35.0
DPC MLR MLR
comp=Z,1μm,16.2s
DPC Dobruska-Polom 56.00 314 eP P 17 52 30.8 +0.3
DPC epP pP 17 52 35.0 -0.3
DPC AMS AMS 18 18 50.0
comp=Z,1μm,16.2s
BLEU Blekinge 56.03 321 i P P 17 52 30.3 -0.1
OSTC Ostas 56.05 314 eP P 17 52 31.1 +0.3
OSTC ex x 17 52 35.6
OSTC AMS AMS 18 18 40.0
comp=Z,1μm,15.2s
KRUC Moravsky 56.06 312 eP P 17 52 31.0 +0.1
UPC Upice 56.19 314 eP P 17 52 32.3 +0.6
UPC MLR MLR
comp=Z,2μm,15.9s
UPC Upice 56.19 314 eP P 17 52 32.3 +0.6
UPC AMS AMS 18 18 50.0
comp=Z,2μm,15.9s
SKR Severo-Kuril's 56.43 46 eP P 17 52 27.3 -6.1
SKR eS S 18 00 19.3 -4.9
SKR pmax pmax
comp=Z,100nm,4.2s
SKR pmax pmax
comp=Z,25nm,1.1s
SKR pmax pmax
comp=Z,100nm,4.4s
SKR MLR MLR
comp=Z,1μm,14.0s
SKR MLR MLR
comp=Z,1μm,14.0s
CONA Conrad Observa 56.53 311 eP P 17 52 34.5 +0.1
comp=Z,30nm,1.2s,SNR=9.2
BSD Bornholm Skovb 56.57 319 eP P 17 52 34.0 -0.4
BSD Bornholm Skovb 56.57 319 eP P 17 52 33.9 -0.4
TREC Trest 56.63 312 AMS AMS 18 19 10.0
comp=Z,1μm,16.3s
FAUS Fauske 56.78 334 eP P 17 52 38.1 +2.5
STEI Steigen 56.86 335 eP P 17 52 37.5 +1.3
GROS Grobnik 56.96 309 i P P 17 52 37.4 0.0
MOR8 Moi Rana 57.01 333 eP P 17 52 37.9 +0.6
LNIZ Loecknitz 57.07 317 eP P 17 52 38.5 +0.5
comp=Z,29nm,0.7s,baz=82,slow=6.9
PVCC Panska Ves 57.10 314 AMS AMS 18 19 30.0
comp=Z,1μm,16.0s
DEL Delary 57.10 321 i P P 17 52 38.4 +0.3
PRU Pruhonice 57.17 313 eP P 17 52 39.1 +0.4
PRU e 17 52 43.3
PRU MLR MLR
comp=Z,1μm,15.2s
PRU Pruhonice 57.17 313 eP P 17 52 39.1 +0.4
PRU epP pP 17 52 43.3 -0.3
PRU AMS AMS 18 19 30.0
comp=Z,1μm,15.2s
PERS Pernice 57.20 309 i P P 17 52 39.2 +0.2
PERS e 17 52 43.0
PETK Petropavlovsk- 57.21 43 P P 17 52 38.8 -0.1
comp=Z,3.5nm,1.0s,baz=178,slow=3.7,SNR=4.1
PETK LR LR 18 19 04.4
comp=Z,477nm,18.1s,baz=277,slow=38
PRA Prague 57.23 313 AMS AMS 18 19 20.0
comp=Z,2μm,15.1s
SOKA Soboth 57.25 309 eP P 17 52 39.8 +0.3
comp=Z,34nm,1.5s,SNR=21
TIP Timpagrande 57.26 300 ⇓P P 17 52 39.5 -0.1
TIP Timpagrande 57.26 300 P P 17 52 37.7 -1.9
TIP IAmb IAmb 17 53 14.0
comp=Z,30nm,1.2s
LUNU Lund 57.38 320 i P P 17 52 40.4 +0.4
RUE Ruedersdorf 57.41 316 eP P 17 52 40.9 +0.5
comp=Z,59nm,1.1s,baz=82,slow=6.9
CKRC Cesky Krumlov 57.46 312 eP P 17 52 47.3 +6.5
CKRC eS S 18 00 32.9 -5.1
CKRC AMS AMS 18 19 40.0
comp=Z,800nm,16.0s
BRG Berggiesshubel 57.46 314 i P P 17 52 41.2 +0.4
BRG Amp 17 52 42.0
comp=Z,6.5nm,0.6s
BRG ex x 17 52 45.5
BRG Amp 17 52 46.5
comp=Z,34nm,1.1s
BRG ex x 17 52 49.9
BRG Amp 17 52 51.2
comp=Z,24nm,1.1s
BRG Berggiesshubel 57.46 314 eP P 17 52 41.7 +0.9
comp=Z,17nm,0.9s,baz=82,slow=6.9
LOF Lofoten 57.52 335 eP P 17 52 40.9 0.0
RGN Rugen 57.52 319 P P 17 52 39.0 -2.0
RGN IAmb IAmb 17 52 51.9
comp=Z,58nm,1.0s
RGN Rugen 57.52 319 eP P 17 52 42.3 +1.2
comp=Z,44nm,0.9s,baz=82,slow=6.9
SGRT San Giovanni R 57.52 303 P P 17 52 40.6 -0.9
SGRT IAmb IAmb 17 52 46.2
comp=Z,36nm,1.2s
GIRL Giralia 57.53 149 P P 17 52 39.7 -1.8
PBCC Pribram 57.56 313 eP P 17 52 45.9 +4.4
KONS Konsvik 57.56 333 eP P 17 52 45.0 +3.8
BJUU Bjuv 57.59 321 i P P 17 52 41.9 +0.3
OBKA Obir 57.60 309 eP P 17 52 41.9 -0.1
comp=Z,17nm,1.1s,SNR=7.6
MOA Molln 57.61 311 eP P 17 52 41.7 -0.2
comp=Z,24nm,1.3s,SNR=10
BORU Boraas 57.65 322 i P P 17 52 41.7 -0.3
LJU Ljubljana 57.68 309 i P P 17 52 42.9 +0.5
LJU i 17 52 46.6
FABU Falkenberg 57.71 322 eP P 17 52 42.6 +0.3
FBE Freiberg 57.83 315 eP P 17 52 44.5 +1.1
comp=Z,25nm,1.0s,baz=82,slow=6.9
GEC2 GERESS Array S 57.85 312 P P 17 52 42.5 -1.2
GEC2 GERESS Array S 57.85 312 eP P 17 52 44.5 +0.8
comp=Z,12nm,1.1s,baz=82,slow=6.9
GERES GERESS Array B 57.85 312 P P 17 52 43.9 +0.2
comp=Z,8.5nm,1.0s,baz=81,slow=7.2,SNR=24
GERES LR LR 18 20 35.8
comp=Z,933nm,18.4s,baz=68,slow=39
GERES GERESS Array B 57.85 312 P P 17 52 43.3 -0.4
KHC Kasperske Hory 57.90 312⇓eP P 17 52 44.5 +0.6
KHC pmax pmax
comp=Z,48nm,1.2s
KHC Kasperske Hory 57.90 312 eP P 17 52 43.9 0.0
KHC epP pP 17 52 48.4 -0.4
KHC AMS AMS 18 20 00.0
comp=Z,900nm,14.9s
KHC Kasperske Hory 57.90 312 P P 17 52 42.5 -1.4
NSS Namsos 57.96 331 eP P 17 52 47.1 +3.1
CLL Collm 58.01 315 eP P 17 52 44.0 -0.6
CLL i Pmax 17 52 48.4
comp=Z,22nm,1.3s
CLL ePP PP 17 54 51.0 -1.8
CLL ePPP PPP 17 56 10.0
CLL eS S 18 00 45.0 0.0
CLL e 18 05 54.0
CLL Lm MLR 18 20 00.0
comp=N,600nm,19.9s
CLL Lm MLR 18 20 00.0
comp=E,1μm,19.4s
CLL Lm MLR 18 20 00.0
comp=Z,2μm,19.0s
CLL Lmax 18 20 00.0
CLL Collm 58.01 315 eP P 17 52 44.0 -0.6
CLL eS S 18 00 45.0 0.0
CLL pmax pmax
comp=Z,22nm,1.3s
CLL MLR MLR
comp=Z,2μm,19.0s
CLL Collm 58.01 315 P P 17 52 43.0 -1.6
CLL Collm 58.01 315 eP P 17 52 44.9 +0.3
comp=Z,8.7nm,0.9s,baz=82,slow=6.9
NC405 NORSAR Array S 58.08 327 P P 17 52 43.6 -1.4
CEL Celeste 58.11 299 P P 17 52 43.7 -1.9
CEL IAmb IAmb 17 52 55.8
comp=Z,56nm,1.0s
NC602 NORSAR Array S 58.17 326 P P 17 52 43.4 -2.2
NC602 NORSAR Array S 58.17 326 eP P 17 52 46.0 +0.4
NC303 NORSAR Array S 58.24 327 P P 17 52 44.4 -1.7
TRI Trieste 58.26 308 P P 17 52 44.9 -1.6
TRI pmax pmax
comp=Z,23nm,0.9s
TRI Trieste 58.26 308 P P 17 52 44.9 -1.6
TRI IAmb IAmb 17 52 51.5
comp=Z,23nm,0.9s
HSPB Hornsund (broa 58.27 345 eP P 17 52 47.4 +1.4
NB201 NORSAR Array S 58.29 327 P P 17 52 45.8 -0.6
NB2 NORSAR Subarra 58.33 327 P P 17 52 46.5 -0.2
baz=88,slow=6.9
NOA NORSAR Array B 58.33 327 P P 17 52 46.8 0.0
comp=Z,25nm,1.1s,baz=88,slow=6.9,SNR=12
NOA LR LR 18 19 20.6
comp=Z,858nm,20.1s,baz=90,slow=38
KBA Koelnbreinsper 58.34 310 eP P 17 52 46.6 -0.6
comp=Z,6.3nm,0.8s
WET Wettzell 58.35 312 eP P 17 52 47.9 +0.8
comp=Z,12nm,0.9s,baz=82,slow=6.9
WET epP pP 17 52 51.9 0.0
STRU Stroemstad 58.42 324 i P P 17 52 47.6 +0.2
TANN Tannenbergstha 58.45 314 eP P 17 52 48.6 +0.8
comp=Z,12nm,1.0s,baz=82,slow=6.9
NKC Novy Kostel 58.48 314 eP P 17 52 52.5 +4.5
NKC MLR MLR
comp=Z,2μm,15.4s
NKC Novy Kostel 58.48 314 eP P 17 52 52.5 +4.5
NKC AMS AMS 18 20 20.0
comp=Z,2μm,15.4s
NAO01 NORSAR Array S 58.49 326 P P 17 52 46.1 -1.7
NAO01 NORSAR Array S 58.49 326 eP P 17 52 47.4 -0.4
WERN Wernitzgruen 58.52 314 eP P 17 52 48.3 0.0
comp=Z,9.3nm,1.0s,baz=82,slow=6.9
WERN epP pP 17 52 53.0 -0.1
PAOL Paolisi 58.53 303 P P 17 52 46.4 -2.1
NC204 NORSAR Array S 58.54 327 P P 17 52 46.2 -2.0
NBO00 NORSAR Array S 58.54 327 P P 17 52 46.9 -1.3
GUNZ Gunzen 58.54 314 eP P 17 52 49.3 +0.9
comp=Z,15nm,1.0s,baz=82,slow=6.9
GUNZ epP pP 17 52 53.1 -0.1
WERD Werda 58.55 314 eP P 17 52 49.2 +0.7
comp=Z,13nm,1.0s,baz=82,slow=6.9
RJOB Jochberg 58.61 311 eP P 17 52 49.3 +0.3
comp=Z,16nm,0.9s,baz=82,slow=6.9
ZOU Zoufplan 58.67 309 P P 17 52 48.0 -1.5
ZOU IAmb IAmb 17 52 54.3
comp=Z,26nm,1.5s
ROTZ Rotzenmuhle 58.70 313 eP P 17 52 50.8 +1.3
comp=Z,18nm,1.0s,baz=82,slow=6.9
ROTZ epP pP 17 52 54.7 +0.3
MANZ Manzenberg 58.73 314 eP P 17 52 51.1 +1.3
comp=Z,21nm,1.1s,baz=82,slow=6.9
MANZ epP pP 17 52 54.9 +0.3
NEUB Neuenburg 58.78 315 eP P 17 52 50.6 +0.6
comp=Z,19nm,0.9s,baz=82,slow=6.9
INTR Introdacqua 58.83 304 P P 17 52 48.3 -2.3
STAL STALIGIAL 58.90 309 P P 17 52 49.0 -1.9
STAL IAmb IAmb 17 52 55.4
comp=Z,24nm,1.0s
ABTA Abfaltersbach 58.95 310 eP P 17 52 51.6 +0.2
comp=Z,9.5nm,1.2s
MOX Moxa 58.96 314 eP P 17 52 52.0 +0.8
comp=Z,14nm,1.0s,baz=82,slow=6.9
FLTG Flechtingen 58.98 316 eP P 17 52 51.6 +0.3
comp=Z,21nm,1.0s,baz=82,slow=6.9
FLTG epP pP 17 52 55.9 -0.3
AQU L'Aquila 59.12 305 P P 17 52 50.1 -2.5
AQU pmax pmax
comp=Z,29nm,1.0s
AQU L'Aquila 59.12 305 P P 17 52 50.1 -2.5
AQU IAmb IAmb 17 53 09.7
comp=Z,29nm,1.0s
KONO Kongsberg 59.20 325 P P 17 52 51.6 -1.1
KONO pmax pmax
comp=Z,80nm,1.4s
KONO Kongsberg 59.20 325 P P 17 52 51.6 -1.1
KONO Kongsberg 59.20 325 eP P 17 52 53.7 +1.0
NRCA Norcia 59.24 305 P P 17 52 52.6 -0.8
NRCA IAmb IAmb 17 53 17.6
comp=Z,28nm,1.2s
DOMB Dombas 59.31 328 eP P 17 52 53.0 -0.6
BSEG Bad Segeberg 59.34 318 eP P 17 52 54.9 +1.2
comp=Z,30nm,1.0s,baz=82,slow=6.9
GRA1 Grafenberg Arr 59.34 313 P P 17 52 52.1 -1.9
GRA1 IAmb IAmb 17 53 00.1
comp=Z,54nm,1.4s
GRF Grafenberg Arr 59.34 313 P P 17 52 52.1 -1.9
GRF pmax pmax
comp=Z,55nm,1.4s
GRF Grafenberg Arr 59.34 313 eP P 17 52 54.3 +0.4
comp=Z,26nm,1.2s,baz=82,slow=6.9
GRFO Grafenberg 59.34 313 P P 17 52 52.5 -1.5
GRFO pmax pmax
comp=Z,59nm,1.5s
GRFO Grafenberg 59.34 313 P P 17 52 52.5 -1.5
GRFO IAmb IAmb 17 53 00.1
comp=Z,59nm,1.5s
ASSE Asse, Remlinge 59.35 316 eP P 17 52 54.5 +0.7
comp=Z,6.4nm,0.9s,baz=82,slow=6.9
KBS Kingsbay 59.38 348 eP P 17 52 54.6 +0.9
PSA00 Pilbara Seismi 59.42 143 P P 17 52 54.5 -0.2
PSA00 IAmb IAmb 17 52 56.5
comp=Z,54nm,1.2s
WTTA Wattenberg 59.46 310 eP P 17 52 55.0 0.0
comp=Z,27nm,1.2s,SNR=5.9
WATA Walderalm 59.49 311 eP P 17 52 54.8 -0.4
comp=Z,19nm,0.7s
RAFF Raffo Rosso 59.53 299 P P 17 52 52.4 -3.1
FUR Furstenfeldbru 59.55 312 eP P 17 52 55.2 -0.2
baz=82,slow=6.9
CLZ Clausthal 59.57 316 eP P 17 52 56.4 +0.9
comp=Z,33nm,1.0s,baz=82,slow=6.9
CLZ epP pP 17 53 00.8 +0.4
MURB Monte Urbino 59.58 306 P P 17 52 53.2 -2.5
NRDL Niedersach Rie 59.64 317 eP P 17 52 57.2 +1.4
comp=Z,44nm,1.0s,baz=82,slow=6.9
NRDL epP pP 17 53 01.0 +0.3
CTI Castel Tesino 59.66 309 P P 17 52 54.6 -1.7
CTI pmax pmax
comp=Z,12nm,1.0s
CTI Castel Tesino 59.66 309 P P 17 52 54.6 -1.7
OPO Ambohidratompo 59.72 223 P P 17 52 57.3 +0.2
comp=Z,7.2nm,1.0s,baz=353,slow=8.1,SNR=3.7
SQTA Sankt Quirin 59.75 310 eP P 17 52 56.1 -0.9
comp=Z,14nm,0.7s
SKAR Skarslia 59.77 326 eP P 17 52 57.6 +0.9
TEOL Teolo 59.77 308 P P 17 52 54.5 -2.5
TEOL IAmb IAmb 17 53 12.4
comp=Z,28nm,0.8s
MOTA Moosalm 59.80 311 eP P 17 52 56.3 -1.0
comp=Z,21nm,1.1s,SNR=5.8
GTTG Gottingen 59.86 316 eP P 17 52 57.4 0.0
comp=Z,18nm,1.0s,baz=82,slow=6.9
MTN Manton Dam 59.90 127 P P 17 52 57.3 -0.9
MTN IAmb IAmb 17 53 04.7
comp=Z,76nm,1.9s
UBBA Unterbreizbach 59.95 315 eP P 17 52 57.6 -0.3
comp=Z,10nm,1.2s,baz=82,slow=6.9
RETA Reutte 60.00 311 eP P 17 52 57.9 -0.8
comp=Z,17nm,1.3s,SNR=6.4
MBAR Mbarara 60.03 251 P P 17 52 58.2 -1.2
MBAR pmax pmax
comp=Z,21nm,1.0s
MBAR Mbarara 60.03 251 P P 17 52 58.2 -1.2
MBAR IAmb IAmb 17 53 05.6
comp=Z,21nm,1.0s
FITZ Fitzroy Crossi 60.04 135 P P 17 52 58.5 -0.5
FITZ IAmb IAmb 17 53 06.5
comp=Z,58nm,1.1s
ABPO Ambohimpanom 60.04 223 P P 17 52 58.6 -0.7
ABPO pmax pmax
comp=Z,26nm,1.4s
ABPO Ambohimpanom 60.04 223 P P 17 52 58.5 -0.7
ABPO IAmb IAmb 17 53 19.9
comp=Z,26nm,1.4s
FETA Feichten 60.11 310 eP P 17 52 58.6 -0.8
comp=Z,17nm,0.9s,SNR=9.1
CORL Corleone 60.18 300 P P 17 52 59.3 -0.6
CORL IAmb IAmb 17 53 20.0
comp=Z,48nm,1.3s
LATE Laterza 60.23 305 P P 17 52 58.0 -2.2
LATE IAmb IAmb 17 53 05.0
comp=Z,20nm,1.2s
KNRA Kununurra 60.26 131 P P 17 53 00.3 -0.3
KNRA IAmb IAmb 17 53 07.8
comp=Z,62nm,1.1s
AKN Aaknes 60.27 328 eP P 17 53 01.3 +1.1
CLTB Caltabellotta 60.33 299 P P 17 52 58.7 -2.4
CLTB IAmb IAmb 17 53 06.1
comp=Z,21nm,0.9s
UBR Ueberruh 60.41 311 eP P 17 53 01.3 -0.1
comp=Z,7.9nm,0.8s,baz=82,slow=6.9
OSSC Osservatorio P 60.44 306 P P 17 52 59.4 -2.2
OSSC IAmb IAmb 17 53 06.0
comp=Z,21nm,1.2s
ZCCA Zocca 60.45 307 P P 17 53 01.7 0.0
ZCCA IAmb IAmb 17 53 50.2
comp=Z,33nm,1.1s
GENI Genyem 60.46 111 P P 17 52 59.9 -2.2
SALO Salr 60.51 309 P P 17 53 00.9 -1.2
BILL Bilibino 60.55 25ceP P 17 53 02.8 +0.9
BILL e*PP pP 17 53 06.2 -0.6
BILL e 17 53 11.5
BILL e 17 53 50.3
BILL e 17 55 13.8
BILL pmax pmax
comp=Z,23nm,1.7s
BILL Bilibino 60.55 25 P P 17 53 01.9 0.0
BILL IAmb IAmb 17 53 15.3
comp=Z,18nm,0.9s
MILB Miltenberg 60.56 314 eP P 17 53 02.8 +0.5
comp=Z,7.5nm,0.8s,baz=82,slow=6.9
DAVA Damuels 60.63 311 eP P 17 53 02.5 -0.5
comp=Z,24nm,1.1s,SNR=6.9
HYA Hoyanger 60.75 327 eP P 17 53 05.3 +1.9
STU Stuttgart 60.81 312 P P 17 53 03.9 -0.1
STU pmax pmax
comp=Z,37nm,1.2s
STU Stuttgart 60.81 312 P P 17 53 03.9 -0.1
STU IAmb IAmb 17 53 09.5

comp=Z,37nm,1.2s
STU Stuttgart 60.81 312 *e*P **P** **17 53 04.6 +0.6**
comp=Z,13nm,0.8s,baz=82,slow=6.9
BLS5 Blasjo 60.81 325 *e*P **P**
KASTN Kahler Asten 60.88 315 *e*P **P** **17 53 05.2 +0.8**
comp=Z,8.5nm,0.9s,baz=82,slow=6.9
VLC Villacollemand 60.91 307 P **P** **17 53 03.7 -1.1**
VLC IAmb IAmb 17 53 11.3
comp=Z,30nm,1.1s
TNS Taunus Mts 61.02 314 *e*P **P** **17 53 06.2 +0.7**
comp=Z,16nm,1.0s,baz=82,slow=6.9
IBBN Ibbenburen 61.09 317 *e*P **P** **17 53 06.7 +0.9**
comp=Z,33nm,1.1s,baz=82,slow=6.9
TUE Stuetta 61.15 310 P **P** **17 53 05.4 -1.2**
BER Bergen 61.26 326 *e*P **P** **17 53 08.1 +1.3**
BFO Black Forest 61.45 312 P **P** **17 53 06.4 -2.1**
BFO pmax pmax
comp=Z,7.0nm,0.9s
BFO Black Forest 61.45 312 P **P** **17 53 06.3 -2.1**
BFO Black Forest 61.45 312 *e*P **P** **17 53 10.3 +1.9**
comp=Z,4.9nm,0.8s,baz=82,slow=6.9
MSSA Maissana 61.48 307 P **P** **17 53 07.8 -1.0**
MSSA IAmb IAmb 17 53 18.1
comp=Z,53nm,1.4s
BUG Bochum--Univer 61.54 316 *e*P **P** **17 53 09.7 +0.8**
comp=Z,28nm,1.1s,baz=82,slow=6.9
AHRW Bad Neuenahr-A 61.83 315 *e*P **P** **17 53 11.8 +0.9**
comp=Z,17nm,1.0s,baz=82,slow=6.9
ECH Echery 62.24 312 P **P** **17 53 12.4 -1.4**
ECH pmax pmax
comp=Z,18nm,1.2s
ECH Echery 62.24 312 P **P** **17 53 12.3 -1.4**
ECH IAmb IAmb 17 53 23.4
comp=Z,18nm,1.2s
BTNL Ternell 62.41 315 *d*P **P** **17 53 14.4 -0.4**
BTNL *dx* x 17 53 19.1
MEM Membach 62.48 315 *d*P **P** **17 53 15.9 +0.7**
MEM *dx* x 17 53 19.5
VOI Vohitsoka 62.53 221 P **P** **17 53 15.4 -0.6**
VOI IAmb IAmb 17 54 37.3
comp=Z,24nm,1.1s
BHOU Houvegnez 62.54 315 *d*P **P** **17 53 17.2 +1.5**
BHOU *dx* x 17 53 19.9
SENIN Lac Senin/Sane 62.55 310 IAmb IAmb 17 53 25.4
comp=Z,32nm,0.9s
WLF Walferdange 62.59 314 *d*P **P** **17 53 16.2 +0.2**
WLF *dx* x 17 53 20.9
WLF Walferdange 62.59 314 pP 17 53 19.2 -1.7
WLF Walferdange 62.59 314 *e*P **P** **17 53 17.2 +1.2**
comp=Z,24nm,1.0s,baz=82,slow=6.9
VSL Villasalto 62.75 302 P **P** **17 53 15.5 -1.8**
BSTI Sart Tilman 62.76 315 *dx* x 17 53 21.7
BCLA Clavier 62.96 315 *d*P **P** **17 53 18.1 -0.4**
comp=Z,9.1nm,1.3s
BCLA *dx* x 17 53 23.0
BGES Gesves 63.11 315 *dx* **P** **17 53 23.4 +3.9**
BNI Bardonecchia 63.28 309 P **P** **17 53 19.7 -1.2**
BNI pmax pmax
comp=Z,17nm,0.9s
BNI Bardonecchia 63.28 309 P **P** **17 53 19.7 -1.2**
BNI IAmb IAmb 17 53 36.1
comp=Z,17nm,0.9s
BMRD Maredsous 63.32 315 *dx* **P** **17 53 24.7 +3.9**
DOU Dourbes 63.48 315 *dx* **P** **17 53 26.1 +4.2**
SNF Seneffe 63.58 315 *d*P **P** **17 53 23.2 +0.7**
SNF *dx* x 17 53 26.6
KEST Kesra 63.82 298 P **P** **17 53 25.1 +0.6**
comp=Z,35nm,1.1s,baz=92,slow=1.4,SNR=19
KEST LR LR 18 27 48.1
comp=Z,198nm,18.5s,baz=324,slow=42
KEST Kesra 63.82 298 P **P** **17 53 24.5 0.0**
KEST Kesra 63.82 298 P **P** **17 53 25.8 +1.3**
SNR=15
MORW Morawa 63.90 151 P **P** **17 53 24.5 -0.3**
NOR Nord 64.04 351 *i* P **P** **17 53 26.0 +0.9**
NOR IAmb IAmb 17 53 31.2
comp=Z,7.2nm,1.6s
NOR Nord 64.04 351 *i* P **P** **17 53 26.0 +0.9**
NOR pmax pmax
comp=Z,7.0nm,1.6s
SSB Saint Sauveur 64.69 309 P **P** **17 53 29.2 -0.8**
SSB pmax pmax
comp=Z,21nm,1.2s
SSB Saint Sauveur 64.69 309 P **P** **17 53 29.2 -0.8**
SSB IAmb IAmb 17 53 35.0
comp=Z,21nm,1.2s
DAG Danmarks Havn 65.96 346 *i* P **P** **17 53 38.0 +0.4**
DAG IAmb IAmb 17 53 44.1
comp=Z,12nm,1.1s
DAG Danmarks Havn 65.96 346 *i* P **P** **17 53 38.0 +0.4**
DAG pmax pmax
comp=Z,12nm,1.1s
MANU Manus Island 66.18 106 P **P** **17 53 40.9 +0.9**
WB0 Warramunga Arr 66.93 130 P **P** **17 53 44.5 -0.2**
WRA Warramunga Arr 67.02 130 P **P** **17 53 46.1 +0.9**
comp=Z,22nm,0.4s,baz=324,slow=6.5,SNR=900
WRA PKP2ab 18 22 19.1
comp=Z,3.6nm,1.0s,baz=109,slow=2.6,SNR=5.6
WRA LR LR 18 27 34.6
comp=Z,106nm,18.9s,baz=315,slow=40
WRA Warramunga Arr 67.02 130 P **P** **17 53 44.9 -0.3**
WRA pmax pmax
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 67.02 130 P **P** **17 53 44.9 -0.3**
WRAB Tennant Creek 67.02 130 *d* iP **P** **17 53 46.2 +1.0**
WRAB pmax pmax
comp=Z,94nm,1.3s
WRAB Tennant Creek 67.02 130 P **P** **17 53 45.7 +0.5**
WB2 Warramunga Arr 67.03 130 P **P** **17 53 45.3 +0.1**
DBG Daneborg 67.25 344 *e*P **P** **17 53 48.0 +2.1**
DBG IAmb IAmb 17 53 57.1
comp=Z,11nm,1.1s
NWAO Narrogin (SRO) 67.75 152 P **P** **17 53 49.1 -0.5**
comp=Z,53nm,1.0s,baz=330,slow=7.4,SNR=12
NWAO Narrogin (SRO) 67.75 152 P **P** **17 53 48.8 -0.8**
NWAO pmax pmax
comp=Z,107nm,1.1s
NWAO Narrogin (SRO) 67.75 152 P **P** **17 53 48.8 -0.8**
NWAO Narrogin (SRO) 67.75 152 P **P** **17 53 48.8 -0.8**
NWAO IAmb IAmb 17 53 55.8
comp=Z,83nm,1.1s
SCO Scoresbysund 69.34 340 P **P** **17 53 58.9 -0.1**
SCO pmax pmax
comp=Z,25nm,1.3s
SCO Scoresbysund 69.34 340 P **P** **17 53 58.9 -0.1**
SCO IAmb IAmb 17 54 05.7
comp=Z,25nm,1.3s
AS31 Alice Springs 69.34 133 P **P** **17 53 59.0 -0.7**
ASAR Alice Springs 69.34 133 P **P** **17 54 00.6 +0.8**
comp=Z,12nm,0.5s,baz=318,slow=6.2,SNR=374
ASAR PKPPKP **P'P'df** **18 22 08.9 +3.5**
comp=Z,0.7nm,0.9s,baz=112,slow=4.3,SNR=4.9
ASAR Alice Springs 69.34 133 P **P** **17 53 59.9 +0.1**
COEN Coen 69.53 119 P **P** **17 54 00.5 -0.6**
PMG Port Moresby 70.03 113 *d* iP **P** **17 54 04.8 +0.7**
PMG pmax pmax
comp=Z,72nm,1.7s
PMG Port Moresby 70.03 113 P **P** **17 54 03.5 -0.6**
LSZ Lusaka 70.61 240 P **P** **17 54 08.1 +0.3**
comp=Z,5.6nm,0.4s,baz=55,slow=6.6,SNR=16
LSZ Lusaka 70.61 240 P **P** **17 54 07.0 -0.8**
LSZ pmax pmax
comp=Z,34nm,1.4s
LSZ Lusaka 70.61 240 P **P** **17 54 07.0 -0.8**
LSZ IAmb IAmb 17 54 13.2
comp=Z,34nm,1.4s
FORT Forrest 71.18 142 P **P** **17 54 10.1 -0.7**
PATS Pohnpei 71.35 92 P **P** **17 54 10.7 -1.6**
NEEM North Greenlan 71.42 351 *i* P **P** **17 54 12.6 +0.5**
NEEM IAmb IAmb 17 54 17.8
comp=Z,48nm,0.8s
TAM Tamanrasset 71.46 286 IAmb IAmb 17 54 21.7
comp=Z,117nm,2.0s
EUNU Eureka 71.83 359 IAmb IAmb 17 54 20.4
comp=Z,28nm,1.0s
ANM Nome 72.41 25 P **P** **17 54 18.2 +0.4**
ANM pmax pmax
comp=Z,36nm,1.6s
ANM Nome 72.41 25 P **P** **17 54 18.2 +0.4**
ANM IAmb IAmb 17 54 25.7
comp=Z,36nm,1.6s
ANM Nome 72.41 25 P 17 54 19.7
baz=299
ESBB Sonseca Array 72.45 306 P **P** **17 54 16.0 -2.6**
ESBB IAmb IAmb 17 54 24.1
comp=Z,24nm,1.4s
ESDC Sonseca Array 72.45 306 P **P** **17 54 18.5 -0.1**
comp=Z,10nm,1.1s,baz=58,slow=5.7,SNR=25
SUMG Summit 72.59 345 IAmb IAmb 17 54 25.5
comp=Z,76nm,1.3s
PAB San Pablo 72.77 306 pP 17 54 25.0 -0.5
MATP Matopo 73.57 235 P **P** **17 54 25.7 +0.2**
comp=Z,33nm,1.1s,baz=34,slow=5.2,SNR=16
PBRG Braganca 73.57 309 *e*P **P** **17 54 29.4 +4.2**
MVO Moncorvo 74.02 308 *e*P **P** **17 54 28.6 +0.7**
comp=Z,40nm,1.6s
MVO Moncorvo 74.02 308 *e*LR LR 18 29 31.4
comp=Z,324nm,20.0s
PVRL Vila Real 74.45 309 *e*P P 17 54 35.8 +5.4
comp=Z,49nm,1.5s
PGAV Gavieira, Arco 74.55 309 *i* LQ LQ 17 54 41.3
PGAV Gavieira, Arco 74.55 309 *e*LR LR 18 29 45.7
comp=Z,204nm,20.0s
MTE Manteigas 74.69 308 *e*P **P** **17 54 36.4 +4.6**
MTE Manteigas 74.69 308 *e*LR LR 18 29 55.0
comp=Z,334nm,18.0s
PVIS Viseu 74.81 308 *e*P P 17 54 37.5 +5.1
PCBR Castelo Branco 74.87 307 *e*P P 17 54 37.7 +4.9
comp=Z,27nm,1.7s
TOLK Toolik Lake Re 75.23 18 P **P** **17 54 33.4 -1.0**
TOLK IAmb IAmb 17 54 41.9
comp=Z,124nm,1.9s
TOLK Toolik Lake Re 75.23 18 P 17 54 35.2
baz=311
PBAR Barrancos 75.25 306 *e*P **P** **17 54 35.4 +0.5**
comp=Z,43nm,1.3s
PCAS Casmilo, Conde 75.50 308 *e*P **P** **17 54 35.9 -0.5**
CTAO Charters Tower 75.59 122 P **P** **17 54 37.1 0.0**
CTAO pmax pmax
comp=Z,96nm,1.2s
CTAO Charters Tower 75.59 122 P **P** **17 54 37.1 0.0**
PMTG Montargil 75.72 307 *e*P **P** **17 54 42.1 +4.5**
comp=Z,39nm,1.4s
EVO Evora 75.79 306 *e*P **P** **17 54 40.2 +2.1**
comp=Z,51nm,1.4s
PSBE So Bento 75.93 307 *e*P P 17 54 43.8 +4.9
COLD Coldfoot 75.99 19 IAmb IAmb 17 55 02.0
comp=Z,23nm,1.1s
COLD Coldfoot 75.99 19 P 17 54 39.7
baz=311
PVAQ Vaqueiros 76.05 305 *e*P **P** **17 54 40.2 +0.6**
comp=Z,46nm,1.8s
PVAQ Vaqueiros 76.05 305 *e*LR LR 18 30 35.5
comp=Z,220nm,18.0s
PVAQ Vaqueiros 76.05 305 pP 17 54 44.5 -0.1
PCVE Castro Verde 76.19 305 *e*P P 17 54 47.1 +6.7
PBDV Barranco-do-Ve 76.28 305 *e*P P 17 54 46.3 +5.4
TTA Tatalina 76.79 24 P 17 54 45.4
baz=307,SNR=8.5
BBOO Buckleboo 77.20 138 IAmb IAmb 17 54 47.6
comp=Z,63nm,1.0s
MLY Manley 77.27 21 P **P** **17 54 46.2 +0.2**
MLY IAmb IAmb 17 54 53.8
comp=Z,57nm,1.5s
MLY Manley 77.27 21 P 17 54 47.2
baz=311,SNR=22
RES Resolute Bay 77.31 0 P **P** **17 54 45.8 -0.2**
comp=Z,2.1nm,0.8s,baz=345,slow=5.9,SNR=7.0
CHUM Lake Minchumin 77.50 23 P 17 54 49.6
baz=310,SNR=9.4
I23K Minto, Yukon-K 77.63 21 P **P** **17 54 48.4 +0.4**
I23K IAmb IAmb 17 54 55.8
comp=Z,48nm,1.5s
I23K Minto, Yukon-K 77.63 21 P 17 54 49.2
baz=312,SNR=16
BPAW Bear Paw Mtn. 77.80 22 P 17 54 49.5
baz=311,SNR=12
FYU Fort Yukon 77.87 19 IAmb IAmb 17 55 13.4
comp=Z,66nm,1.3s
NEA2 Nenana 78.10 21 P 17 54 51.4
baz=313,SNR=33
MDM Murphy Dome 78.11 21 P **P** **17 54 50.1 -0.6**
MDM IAmb IAmb 17 55 13.8
comp=Z,52nm,1.2s
PPLA Purkeypile 78.18 23 P 17 54 52.2
baz=310
KTH Kantishna Hill 78.19 23 P **P** **17 54 50.5 -0.7**
KTH IAmb IAmb 17 55 00.8
comp=Z,26nm,1.2s
POKR Poker Plat Res 78.25 20 IAmb IAmb 17 54 53.7
comp=Z,32nm,1.2s
POKR Poker Plat Res 78.25 20 P 17 54 51.9
baz=314
BWN Browne 78.25 22 P **P** **17 54 51.4 0.0**
TCOL CIGO, UAF Yank 78.28 21 IAmb IAmb 17 55 02.9
comp=Z,52nm,1.4s
TCOL CIGO, UAF Yank 78.29 21 P 17 54 52.9
baz=314
COLA College 78.29 21 *d* iP **P** **17 54 51.8 +0.2**
COLA pmax pmax
comp=Z,32nm,1.2s
COLA College 78.29 21 P **P** **17 54 51.3 -0.3**
COLA IAmb IAmb 17 55 02.9
comp=Z,56nm,1.4s
COLA College 78.29 21 P 17 54 53.1
baz=314
LBTB Lobatse 78.53 234 P **P** **17 54 53.9 +0.2**
comp=Z,13nm,0.9s,baz=56,slow=5.9,SNR=22
LBTB Lobatse 78.53 234 IAmb IAmb 17 54 59.7
comp=Z,30nm,0.9s
PRP Porcupine Dome 78.54 19 P 17 54 54.7
baz=315
IL31 78.66 20 IAmb IAmb 17 55 03.4
comp=Z,48nm,1.6s
ILAR Eielson Array 78.66 20 P **P** **17 54 53.4 -0.3**
comp=Z,5.6nm,0.8s,baz=299,slow=4.1,SNR=31
MCK McKinley 78.73 22 P **P** **17 54 53.9 -0.2**
MCK pmax pmax
comp=Z,28nm,1.4s
MCK McKinley 78.73 22 P **P** **17 54 53.9 -0.2**
MCK IAmb IAmb 17 55 17.5
comp=Z,28nm,1.4s
MCK McKinley 78.73 22 P 17 54 54.9
baz=313
TOA0 Torodi Ar. Sit 78.83 279 P **P** **17 54 55.5 0.0**
TOA0 IAmb IAmb 17 55 02.4
comp=Z,23nm,1.1s
TOA0 Torodi Ar. Sit 78.83 279 P **P** **17 54 57.8 +2.3**
SNR=9.8
TOA0 P **P** **17 54 57.8 +2.3**
SNR=9.8
TORD Torodi Ar. Bea 78.83 279 P **P** **17 54 55.4 0.0**
comp=Z,11nm,0.6s,baz=58,slow=4.4,SNR=120
TORD LR LR 18 33 21.9
comp=Z,391nm,20.2s,baz=55,slow=38
TORD Torodi Ar. Bea 78.83 279 P **P** **17 54 55.5 0.0**
HDA Harding Lake 78.89 21 P 17 54 54.5
baz=314
HDA P 17 54 54.5
baz=314
RND Reindeer 78.97 22 P **P** **17 54 54.8 -0.7**
RND pmax pmax
comp=Z,31nm,1.2s
RND Reindeer 78.97 22 P **P** **17 54 54.8 -0.7**
RND IAmb IAmb 17 55 16.3
comp=Z,31nm,1.2s
SKT Skwentna 79.01 24 P 17 54 56.2
baz=311,SNR=15
WAT2 Susitna Watana 79.37 22 P 17 54 57.0
baz=313
INK Inuvik 79.41 14 IAmb IAmb 17 55 03.8
comp=Z,32nm,1.2s
INK Inuvik 79.41 14 P 17 54 58.3
baz=325,SNR=21
SFJD Kangerlussuaq 79.53 344 P **P** **17 54 59.9 +1.5**
comp=Z,13nm,1.0s,baz=46,slow=9.5,SNR=4.8
SFJD Kangerlussuaq 79.53 344 P **P** **17 54 58.7 +0.3**
SFJD pmax pmax
comp=Z,30nm,1.2s
SFJD Kangerlussuaq 79.53 344 P **P** **17 54 58.7 +0.3**
SFJD IAmb IAmb 17 55 03.7
comp=Z,30nm,1.1s
SUA Susitna One 79.63 24 P 17 55 00.1
baz=312
WAT6 Susitna Watana 79.91 22 P 17 55 01.2
baz=314,SNR=14
STKA Stephens Creek 79.92 134 P **P** **17 55 01.3 +0.4**
comp=Z,8.4nm,0.5s,baz=326,slow=4.1,SNR=21
SCRK Sand Creek 80.11 20 P **P** **17 55 01.4 -0.3**
SCRK IAmb IAmb 17 55 11.5
comp=Z,25nm,0.9s
SCRK Sand Creek 80.11 20 P 17 55 02.2
baz=317,SNR=34
PMR Palmer 80.12 23 IAmb IAmb 17 55 07.5
comp=Z,28nm,1.2s
PMR Palmer 80.12 23 P 17 55 02.9
baz=313
RC01 Rabbit Creek A 80.25 24 P 17 55 02.7
baz=312
SML Sawmill 80.25 23 P 17 55 03.0
baz=314,SNR=15
EPYK Eagle Plains 80.26 16 P 17 55 02.6
baz=323,SNR=14
C36M Paulatuk 80.26 10 IAmb IAmb 17 55 12.1
comp=Z,43nm,1.1s
C36M Paulatuk 80.26 10 P 17 55 02.4
baz=334,SNR=18
DOT Dot Lake 80.33 20 P **P** **17 55 01.8 -1.1**
EGAK Eagle 80.34 19 P **P** **17 55 02.5 -0.3**
EGAK Eagle 80.34 19 P 17 55 03.3
baz=319,SNR=8.8
PAX Paxson 80.38 21 P 17 55 04.1
baz=316,SNR=18
KNK Knik Glacier 80.48 23 P 17 55 04.7
baz=314
SCM Sheep Creek Mo 80.57 23 P **P** **17 55 04.8 +0.5**
SCM pmax pmax
comp=Z,28nm,0.7s
SCM Sheep Creek Mo 80.57 23 P **P** **17 55 04.8 +0.5**
SCM IAmb IAmb 17 55 16.2
comp=Z,28nm,0.7s
K27K Chicken 80.64 19 P 17 55 05.4
baz=318
M24K Tolsona, Glenn 80.77 22 IAmb IAmb 17 55 17.2
comp=Z,38nm,1.0s
M24K Tolsona, Glenn 80.77 22 P 17 55 06.7
baz=315
HARP HAARP 80.89 22 P 17 55 07.6
baz=316
BOSA Boshof 81.01 231 P **P** **17 55 06.8 -0.2**
comp=Z,6.3nm,0.6s,baz=22,slow=4.1,SNR=30
BOSA LR LR 18 30 24.8
comp=Z,302nm,18.1s,baz=54,slow=35
BOSA Boshof 81.01 231 P **P** **17 55 06.1 -1.0**
BOSA pmax pmax
comp=Z,29nm,1.0s
BOSA Boshof 81.01 231 P **P** **17 55 06.1 -1.0**
BOSA IAmb IAmb 17 55 12.7
comp=Z,30nm,1.0s
SEW Seward 81.02 25 P 17 55 11.9
baz=313
KLU Klutina 81.29 22 P 17 55 09.8
baz=316,SNR=11
GLI Glacier Island 81.33 23 P 17 55 09.8
baz=315
KDAK Kodiak Island 81.35 28 P **P** **17 55 09.6 +1.3**
comp=Z,9.0nm,0.5s,baz=295,slow=2.7,SNR=13
KDAK Kodiak Island 81.35 28 P **P** **17 55 09.6 +1.3**
KDAK pmax pmax
comp=Z,76nm,1.4s
KDAK Kodiak Island 81.35 28 IAmb IAmb 17 55 22.0
comp=Z,76nm,1.4s
KDAK Kodiak Island 81.35 28 P 17 55 09.6
baz=311
L27K Beaver Creek, 81.44 20 P **P** **17 55 09.5 +0.7**
L27K IAmb IAmb 17 55 16.2
comp=Z,31nm,1.2s
L27K Beaver Creek, 81.44 20 P 17 55 09.8
baz=319,SNR=29
N25K Chitina, Valde 81.65 22 IAmb IAmb 17 55 17.4
comp=Z,46nm,1.1s
N25K Chitina, Valde 81.65 22 P 17 55 11.7
baz=317,SNR=26
EYAK Cordova Ski Ar 82.03 23 IAmb IAmb 17 55 19.2
comp=Z,51nm,1.5s
EYAK Cordova Ski Ar 82.03 23 P 17 55 13.2
baz=316
BMRM Bremner River 82.11 22 P 17 55 14.0
baz=317
MCARA McCarthy VSAT 82.33 21 P 17 55 15.1
baz=318
CRQE Cirque 82.77 22 P 17 55 17.1
baz=318
SUCK Suckling Hills 83.05 23 IAmb IAmb 17 55 25.0
comp=Z,30nm,1.2s
KOWA Kowa 83.17 283 P **P** **17 55 18.6 0.0**
CTG Chitna Glacier 83.18 21 P 17 55 19.8
baz=319
PINM Pinnacle 84.19 21 P 17 55 25.1
baz=320
HYT Haines Junctio 84.47 20 IAmb IAmb 17 55 37.7
comp=Z,20nm,0.9s
WHY Whitehorse 85.37 19 P 17 55 29.7
baz=325
FRB Frobisher Bay 86.10 349 P **P** **17 55 32.8 +0.3**
comp=Z,9.9nm,0.9s,baz=15,slow=4.2,SNR=9.4
SUR Sutherland 86.34 230 P **P** **17 55 34.2 -0.2**
SUR IAmb IAmb 17 55 40.6
comp=Z,54nm,1.1s
CAN Canberra 86.85 133 IAmb IAmb 17 55 43.8
comp=Z,45nm,1.3s
BESE Bessie Mountai 87.08 20 P **P** **17 55 37.0 -0.6**
BESE IAmb IAmb 17 55 40.2
comp=Z,31nm,1.2s
DBIC Dimbokro 87.52 276 P **P** **17 55 40.9 +0.5**
comp=Z,15nm,0.5s,baz=44,slow=5.5,SNR=37
DBIC LR LR 18 37 56.6
comp=Z,432nm,18.7s,baz=50,slow=38
YKA Yellowknife Ar 88.08 9 P **P** **17 55 42.1 -0.1**
comp=Z,3.7nm,0.7s,baz=342,slow=4.6,SNR=35
YKA PKKPbc **PKKPbc** **18 13 29.7 +1.8**
comp=Z,0.3nm,0.7s,baz=157,slow=2.4,SNR=5.5
DLBC Dease Lake 88.59 18 P **P** **17 55 45.4 +0.6**
comp=Z,4.4nm,1.0s,baz=342,slow=6.1,SNR=7.2
DLBC Dease Lake 88.59 18 P **P** **17 55 44.3 -0.5**
DLBC IAmb IAmb 17 55 51.5
comp=Z,14nm,1.2s
FCC Fort Churchill 93.31 360 IAmb IAmb 17 56 12.2
comp=Z,17nm,1.2s
FFC Flin Flon 97.08 5 P **P** **17 56 22.5 -1.4**
FFC pmax pmax
comp=Z,8.0nm,1.1s
FFC Flin Flon 97.08 5 P **P** **17 56 22.5 -1.4**
FFC IAmb IAmb 17 56 34.2
comp=Z,8.1nm,1.1s
MAW Mawson 97.11 189 P Pdif 17 56 24.1 +0.6
comp=Z,3.8nm,0.9s,baz=58,slow=12,SNR=4.2
MAW LR LR 18 34 50.7
comp=Z,134nm,20.2s,baz=52,slow=32
MAW Mawson 97.11 189 P Pdif 17 56 24.1 +0.6
MAW pmax pmax
comp=Z,2.0nm,1.1s
MAW Mawson 97.11 189 IAmb IAmb 17 56 25.3
comp=Z,1.8nm,1.1s
SYO Syowa Base 102.69 195 *i e* PKiKP **PKiKP** **18 01 10.8 +1.8**
PDAR Pinedale Array 107.91 12 PKiKP **PKiKP** **18 01 19.4 -0.5**
comp=Z,0.3nm,0.5s,baz=76,slow=1.4,SNR=4.6
NVAR Mina Array Bea 109.91 20 PKiKP **PKiKP** **18 01 22.3 -1.5**
comp=Z,0.2nm,0.3s,baz=224,slow=2.5,SNR=2.1
NVAR PKKPbc **PKKPbc** **18 12 26.0 -0.8**
comp=Z,0.3nm,0.6s,baz=129,slow=4.7,SNR=2.9
NVAR PKKP **PKKPab** **18 12 41.1 +0.3**
comp=Z,1.4nm,1.0s,baz=169,slow=5.1,SNR=4.5
Q52A Bidwell 112.22 350 PKiKP **PKiKP** **18 01 30.5 +2.6**
TUC Tucson 117.72 16 PKiKP **PKiKP** **18 01 39.2 +0.4**
TUC Tucson 117.72 16 PKPdf **PKiKP** **18 01 39.2 +0.4**
MNTX Cornudas Mount 119.42 11 PKPdf **PKPdf** **18 01 42.0 0.0**
MNTX Cornudas Mount 119.42 11 P 18 01 42.7
baz=349
RCBR Riachuelo 120.63 281 *e*P **PKiKP** **18 01 48.6 +3.8**
NBRF Rio Formoso - 121.31 277 *e*P **PKiKP** **18 01 49.8 +3.8**
JCT Junction City 121.34 6 P 18 01 46.3
baz=354
NBPA Parau_RN 121.64 281 *e*P **PKiKP** **18 01 50.5 +3.8**
NBCL Cascavel-CE 121.90 284 *e*P **PKiKP** **18 01 50.7 +3.5**
TX31 Lajitas Ar. Si 122.01 10 PKPdf **PKiKP** **18 01 47.3 +0.1**
TXAR Lajitas Array 122.01 10 PKP **PKiKP** **18 01 47.5 +0.2**
comp=Z,1.1nm,0.5s,baz=90,slow=0.4,SNR=19
TXAR PKKPbc **PKKPbc** **18 11 45.4 +1.2**
comp=Z,0.7nm,1.0s,baz=188,slow=7.6,SNR=3.9
TXAR Lajitas Array 122.01 10 PKiKP **PKPdf** **18 01 46.5 -0.6**
TXAR Lajitas Array 122.01 10 PKPdf **PKPdf** **18 01 46.5 -0.6**
NBAN Anadia - AL 122.77 277 *e*P **PKiKP** **18 01 52.2 +3.3**
NBMO Morrinhos-CE 122.92 286 *e*P **PKiKP** **18 01 53.2 +3.9**
NBMA Muriti-CE 123.86 281 *e*P **PKiKP** **18 01 54.1 +3.0**
NBPN Ponto Novo - B 126.74 278 *e*P **PKiKP** **18 02 00.7 +3.8**
GDU01 Guandu, BA 127.45 274 *e*P **PKiKP** **18 02 01.5 +3.4**
CMC01 Camacan, BA 128.08 272 *e*P **PKiKP** **18 02 01.8 +2.4**
PPT2 Papeete2 128.23 91 *e*LR LR 18 42 08.2

	comp=Z,150nm,21.2s							
GUA01	**Guaratinga, BA**	**128.82**	**271**	*e*P		**PKiKP**	**18 02 04.4**	**+3.6**
NAN01	**Guarapari, ES**	**129.58**	**270**	*e*P		**PKiKP**	**18 02 05.3**	**+2.9**
TBI	**Tubuai**	**130.31**	**98**	*e*LR		LR	18 43 06.0	
	comp=Z,124nm,25.0s							
RiB01	**Linhares ES**	**130.36**	**268**	*e*P		**PKiKP**	**18 02 07.3**	**+3.4**
BSFB	**Barra de Sao F**	**130.58**	**269**	*e*P		**PKiKP**	**18 02 07.8**	**+3.5**
SJMB	**Sao Joao De Ma**	**130.83**	**269**	*e*P		**PKiKP**	**18 02 08.1**	**+3.3**
ALF01	**Guarapari-ES**	**131.10**	**267**	*e*P		**PKiKP**	**18 02 09.0**	**+3.7**
PCRV	**Puerto La Cruz**	**132.31**	**319**	PKP		**PKPdf**	**18 02 06.1**	**-0.9**
	comp=Z,20nm,0.9s,baz=37,slow=5.1,SNR=3.0							
TAOE	**Nuku Hiva Isla**	**132.65**	**75**	*e*LR		LR	18 44 26.1	
	comp=Z,227nm,25.7s							
PRPB	**Parauapebas**	**132.67**	**289**	*e*P		**PKiKP**	**18 02 10.8**	**+2.0**
DUB01	**Friburgo-RJ**	**133.03**	**265**	*e*P		**PKiKP**	**18 02 12.2**	**+2.9**
MALB	**Monte Alegre**	**133.77**	**297**	*e*P		**PKiKP**	**18 02 13.6**	**+2.6**
PEXB	**Peixe**	**134.37**	**281**	*e*P		**PKiKP**	**18 02 14.8**	**+2.6**
MAN01	**Angra dos Reis**	**134.67**	**265**	*e*P		**PKiKP**	**18 02 15.0**	**+2.4**
BSCB	**Bom Sucesso**	**134.80**	**268**	*e*P		**PKiKP**	**18 02 15.6**	**+2.7**
BOAV	**Boa Vista**	**135.60**	**308**	*e*P		**PKiKP**	**18 02 17.3**	**+2.6**
SDV	**Santo Domingo**	**136.64**	**325**	PKP		**PKPdf**	**18 02 15.9**	**+0.6**
	comp=Z,5.8nm,0.7s,baz=63,slow=6.8,SNR=3.7							
VAO	**Valinhos**	**137.35**	**266**	*e*P		**PKiKP**	**18 02 19.9**	**+1.8**
NPGB	**Novo Progresso**	**137.73**	**292**	*e*P		**PKiKP**	**18 02 21.1**	**+2.0**
PET01	**Itanhaem-SP**	**137.99**	**264**	*e*P		**PKiKP**	**18 02 21.1**	**+1.8**
PMSA	**Palmar Station**	**138.82**	**199**	*e*P		**PKiKP**	**18 02 21.9**	**+2.3**
TER01	**Tubaro-SC**	**140.59**	**259**	*e*P		**PKiKP**	**18 02 25.7**	**+1.2**
PCMB	**Pacaembu**	**140.72**	**270**	*e*P		**PKiKP**	**18 02 26.2**	**+1.4**
PP1B	**Ponte de Pedra**	**142.47**	**278**	*e*P		**PKiKP**	**18 02 29.4**	**+0.8**
AQDB	**Aquidauana**	**144.25**	**274**	*e*P		**PKPdf**	**18 02 28.6**	**0.0**
PLTB	**Pedras Altas**	**144.87**	**254**	*e*P		**PKiKP**	**18 02 32.0**	**-1.1**
VILB	**Vilhena**	**144.92**	**289**	*e*P		**PKiKP**	**18 02 32.3**	**-1.4**
SAML	**Samuel**	**145.10**	**297**	*e*P		**PKiKP**	**18 02 33.1**	**-1.0**
PTLB	**Pontes e Lacer**	**145.24**	**284**	*e*P		**PKiKP**	**18 02 33.0**	**-1.2**
ITQB	**Itaqui**	**147.24**	**258**	*e*P		**PKPab**	**18 02 36.6**	**-0.8**
CPUP	**Villa Florida**	**147.31**	**265**	PKPbc		**PKPbc**	**18 02 35.5**	**-0.6**
	comp=Z,26nm,1.1s,baz=40,slow=5.3,SNR=8.5							
CPUP	**Villa Florida**	**147.31**	**265**			**PKPbc**	**18 02 35.0**	**-1.0**
CPUP	**Villa Florida**	**147.31**	**265**	*e*P		**PKPbc**	**18 02 36.0**	**0.0**
OTAV	**Otavalo**	**147.92**	**329**	*e*P		**PKPbc**	**18 02 38.3**	**-0.3**
ETMB	**Extrema**	**147.99**	**299**	*e*P		**PKPbc**	**18 02 37.8**	**-0.4**
GO10	**Punta Arenas**	**149.85**	**208**	PKPab		**PKPab**	**18 02 52.8**	**+5.5**
LPAZ	**La Paz**	**153.21**	**291**	PKP		**PKPdf**	**18 02 43.7**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=45,slow=2.3,SNR=3.5							
LPAZ				PKPab		**PKPab**	**18 03 02.5**	**-0.5**
	comp=Z,8.3nm,0.9s,baz=277,slow=0.4,SNR=14							
LPAZ	**La Paz**	**153.21**	**291**	PKPdf		**PKPdf**	**18 02 44.1**	**+0.2**
PB08	**IPOC Station P**	**155.85**	**284**	PKPdf		**PKPdf**	**18 02 46.1**	**-1.1**
PB08				PKPab		**PKPab**	**18 03 10.8**	**-3.2**
PB11	**IPOC Station P**	**156.12**	**285**	PKPdf		**PKPdf**	**18 02 46.4**	**-0.9**
PB11				PKPab		**PKPab**	**18 03 11.9**	**-3.0**

*IDC **25** 17:46:11.1±1.4,28°.05N×85°.79E, h0km, mb4.3/6, mb1 4.3/7, mb1mx3.8/51, mbtmp4.2/7, ML3.8/1, Error ellipse: s-maj=39.8km s-min=30.0km az=65.0*
*DMN **25** 17:46:13.9±0.2,28°.26N×85°.88E, h10km, Ml5.0/4, Error ellipse: s-maj=4.3km s-min=2.0km az=23.0*
*NEIC **25** 17:46:17.6±2.7,28°.2N±0°.2×86°.1E±0°.1, h35km±17km, mb4.5/5, Error ellipse: s-maj=24.9km s-min=11.4km az=206.0*

ISC 25 17:46:13.4±1.5,**28°.23N**±0°.06×**85°.87E**±0°.04,**h9**km±10km**, n22**,σ0**°84**/28,**mb4.5**/8,**2C-1D**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.32**	**179**	⇑*i*	P	g	**Pb**	**17 46 21.2**	**-0.4**
GUN					*e*	S	**Sb**	**17 46 26.6**	**-0.4**
KKN	**Kakani**	**0.68**	**230**	⇓*i*	P	g	**Pb**	**17 46 27.6**	**-0.1**
KKN					*e*	S	**Sg**	**17 46 36.4**	**+0.8**
PKI	**Pulchoki**	**0.78**	**212**	⇑*i*	P	g	**Pb**	**17 46 29.8**	**+0.5**
PKI					*e*	S	**Sg**	**17 46 39.5**	**+1.0**
GKN	**Gorkha**	**1.11**	**258**	*e*	P	g	**Pb**	**17 46 35.4**	**+0.4**
GKN					*e*	S	**Sb**	**17 46 50.5**	**+0.9**
	3μm,0.3s								
RAMN	**Ramite**	**1.43**	**153**	*e*	S	g	**Sn**	**17 46 59.7**	**+0.8**
TAPN	**Taplejung**	**1.85**	**118**	*e*	P	g	**Pg**	**17 46 49.3**	**+0.4**
DANN	**Dangsing**	**1.86**	**274**	*e*	P	g	**Pb**	**17 46 48.5**	**+0.6**
DANN					*e*	S	**Sg**	**17 47 13.5**	**+0.1**
	2μm,0.4s								
ODAN	**Odare**	**1.92**	**135**	*e*	S	g	**Sg**	**17 47 14.3**	**-0.9**
KOLN	**Koldanda**	**2.06**	**258**	*e*	P	g	**Pg**	**17 46 52.5**	**-0.4**
KOLN					*e*	S	**Sg**	**17 47 20.0**	**+0.4**
	4μm,0.5s								
PYUN	**Piuthan**	**2.55**	**268**	*e*	P	g	**Pg**	**17 47 01.2**	**-1.0**
PYUN					*e*	S	**Sg**	**17 47 34.2**	**-1.1**
	3μm,0.4s								
MKAR	**Makanchi Array**	**18.74**	**352**	P		P	**P**	**17 50 31.8**	**-0.8**
	0.3nm,0.3s,baz=171,slow=10,SNR=1.3								
SONM	**Songino Array**	**25.25**	**34**	P		P	**P**	**17 51 40.3**	**+0.4**
	6.6nm,0.7s,baz=220,slow=10,SNR=4.9								
ULN	**Ulaanbaatar**	**25.59**	**34**	P		P	**P**	**17 51 43.1**	**+0.1**
ZAA0	**Zalesovo Array**	**25.70**	**359**	P		P	**P**	**17 51 44.5**	**+0.7**
ZAA0				IAmb		IAmb		17 52 04.2	
	comp=Z,16nm,1.6s								
ZALV	**Zalesovo Beam**	**25.70**	**359**	P		P	**P**	**17 51 44.6**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=186,slow=9.9,SNR=2.3								
KULM	**Kulim**	**26.79**	**146**	P		P	**P**	**17 51 54.4**	**+0.5**
KULM				IAmb		IAmb		17 52 02.8	
	comp=Z,41nm,1.8s								
FINES	**FINESS Array B**	**51.24**	**328**	P		P	**P**	**17 55 17.7**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=98,slow=8.6,SNR=1.6								
ARCES	**ARCESS Array B**	**53.56**	**338**	P		P	**P**	**17 55 35.7**	**+1.4**
	comp=Z,4.1nm,0.8s,baz=109,slow=6.8,SNR=2.9								
WRA	**Warramunga Arr**	**67.00**	**130**	P		P	**P**	**17 57 05.9**	**-1.1**
	comp=Z,2.4nm,0.6s,baz=326,slow=6.6,SNR=2.6								
WB2	**Warramunga Arr**	**67.00**	**130**	P		P	**P**	**17 57 07.0**	**0.0**
TORD	**Torodi Ar. Bea**	**78.84**	**279**	P		P	**P**	**17 58 15.4**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=52,slow=5.0,SNR=1.6								
TORD	**Torodi Ar. Bea**	**78.84**	**279**	IAmb		IAmb		17 58 20.3	
	comp=Z,3.8nm,1.6s								

*IDC **25** 17:55:51.3±2.7,27°.98N×85°.21E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.3/42, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=94.1km s-min=23.1km az=72.0*

ISC 25 17:55:53.0±2.7,**28°.0N**±0°.3×**85°.3E**±0°.5,**h10**km**, n6**,σ0**°54**/6, **mb3.7**/4,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.74**	**124**	Pn			**Pn**	**17 59 34.5**	**-0.4**
	baz=307,slow=11,SNR=1.7								
MKAR	**Makanchi Array**	**18.90**	**354**	P			**Pn**	**18 00 14.2**	**-0.1**
	0.1nm,0.3s,baz=173,slow=12,SNR=7.9								
SONM	**Songino Array**	**25.73**	**34**	P			**P**	**18 01 24.1**	**+0.5**
	0.2nm,0.4s,baz=227,slow=9.2,SNR=2.3								
ZALV	**Zalesovo Beam**	**25.92**	**359**	P			**P**	**18 01 24.6**	**-0.5**
	0.7nm,0.3s,baz=173,slow=8.7,SNR=4.6								
WRA	**Warramunga Arr**	**67.25**	**130**	P			**P**	**18 06 48.0**	**0.0**
	0.4nm,0.5s,baz=321,slow=6.6,SNR=6.6								
ASAR	**Alice Springs**	**69.55**	**133**	P			**P**	**18 07 02.7**	**+0.4**
	0.3nm,0.6s,baz=311,slow=6.5,SNR=6.3								

IDC 25 18:00:51.2±2.4,**3°.57S**×**129°.33E, h0**km**, mb3.1**/2, **mb1 3.3**/3,**mb1mx3.1**/39,**mbtmp3.2**/3,**ML2.8**/1,**Error ellipse: s-maj=156.2km s-min=29.1km az=69.0,Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.00**	**164**	Pn			Pn	18 04 50.3	-0.2
	0.0nm,0.3s,baz=344,slow=12,SNR=4.8								
WRA							Sn	18 07 40.4	-20
	0.1nm,0.3s,baz=347,slow=28,SNR=1.0								
ASAR	**Alice Springs**	**20.47**	**168**	P			P	18 05 30.7	+0.1
	0.2nm,0.4s,baz=344,slow=9.7,SNR=9.7								
MKAR	**Makanchi Array**	**65.01**	**326**	P			P	18 11 33.2	0.0
	0.3nm,0.4s,baz=119,slow=8.3,SNR=5.0								

*IDC **25** 18:01:25.2±1.4,27°.69N×85°.85E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.5/41, mbtmp3.6/9, ML3.9/2, Error ellipse: s-maj=52.5km s-min=18.6km az=62.0*

ISC 25 18:01:28.3±1.6,**27°.7N**±0°.2×**85°.9E**±0°.3,**h19**km**, n9**,σ0**°54**/9, **mb3.7**/7,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.17**	**125**	Pn			**Pn**	**18 05 01.9**	**+0.3**
	0.2nm,0.3s,baz=304,slow=12,SNR=1.5								
MKAR	**Makanchi Array**	**19.22**	**353**	P			**Pn**	**18 05 51.3**	**-0.9**
	0.3nm,0.3s,baz=178,slow=11,SNR=11								
KURBB	**Kurchatov Arra**	**23.52**	**348**	P			**P**	**18 06 37.6**	**+0.6**
	0.4nm,0.6s,baz=169,slow=10,SNR=6.3								
SONM	**Songino Array**	**25.66**	**33**	P			**P**	**18 06 57.2**	**+0.2**
	1.1nm,0.6s,baz=218,slow=9.5,SNR=7.7								
ZALV	**Zalesovo Beam**	**26.19**	**359**	P			**P**	**18 07 01.6**	**+0.1**
	0.8nm,0.6s,baz=199,slow=9.5,SNR=4.8								
FINES	**FINESS Array B**	**51.65**	**328**	P			**P**	**18 10 33.6**	**+0.1**
	0.8nm,0.7s,baz=107,slow=4.7,SNR=4.4								
ARCES	**ARCESS Array B**	**54.00**	**338**	P			**P**	**18 10 51.3**	**+0.5**
	2.7nm,0.9s,baz=110,slow=7.9,SNR=6.6								
WRA	**Warramunga Arr**	**66.69**	**130**	P			**P**	**18 12 18.0**	**-0.3**
	0.5nm,0.6s,baz=323,slow=6.5,SNR=6.2								
ASAR	**Alice Springs**	**69.00**	**133**	P			**P**	**18 12 32.4**	**-0.4**
	0.2nm,0.6s,baz=315,slow=6.2,SNR=5.6								

*NEIC **25** 18:05:48.0±0.5, 16°.3S±0°.2×176°.5W±0°.1, h381km±10km, mb4.2/7, Error ellipse: s-maj=26.6km s-min=14.0km az=154.0*
*IDC **25** 18:05:50.8±3.0, 16°.42S×176°.59W, h404km±30km, mb3.1/5, mb1 3.3/6, mb1mx3.0/33, mbtmp3.8/6, Error ellipse: s-maj=31.2km s-min=24.6km az=134.0*

ISC 25 18:05:48.5±0.8,**16°.3S**±0°.1×**176°.5W**±0°.1,**h379**km**, n18,** σ1**°26**/18,**mb3.9**/10,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.11**	**63**	Pn			**Pn**	**18 07 10.8**	**0.0**
MSVF	**Nonsavu**	**5.44**	**254**	P			**Pn**	**18 07 16.2**	**+1.9**
	2.7nm,0.3s,baz=96,slow=20,SNR=4.7								
MSVF	**Nonsavu**	**5.44**	**254**				**Pn**	**18 07 16.4**	**+2.0**
NIUE	**Niue**	**6.81**	**115**	Pn			**Pn**	**18 07 29.7**	**+0.3**
URZ	**Urewera**	**22.59**	**193**	P			**P**	**18 10 17.1**	**-0.8**
	8.9nm,1.0s,baz=122,slow=24,SNR=8.2								
BKZ	**Black Stump Fm**	**23.60**	**194**	P			**P**	**18 10 26.5**	**-0.5**
BKZ				IAmb		IAmb		18 10 51.4	
	comp=Z,47nm,1.6s								
WR0	**Warramunga Arr**	**46.58**	**258**	P			**P**	**18 13 39.2**	**-1.2**
WR0				IAmb		IAmb		18 13 58.8	
	comp=Z,8.6nm,1.3s								
WB0	**Warramunga Arr**	**46.73**	**258**	P			**P**	**18 13 40.5**	**-1.1**
WB0				IAmb		IAmb		18 13 52.9	
	comp=Z,14nm,1.6s								
WB2	**Warramunga Arr**	**46.76**	**258**	P			**P**	**18 13 40.6**	**-1.2**
WB2				IAmb		IAmb		18 14 04.8	
	comp=Z,17nm,1.6s								
WRA	**Warramunga Arr**	**46.77**	**258**	P			**P**	**18 13 40.7**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=96,slow=7.9,SNR=14								
AS31	**Alice Springs**	**47.03**	**253**	P			**P**	**18 13 43.0**	**-0.8**
ASAR	**Alice Springs**	**47.03**	**253**	P			**P**	**18 13 43.0**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=88,slow=7.6,SNR=71								
ASAR	**Alice Springs**	**47.03**	**253**	P			**P**	**18 13 42.4**	**-1.5**
FORT	**Forrest**	**52.38**	**244**	P			**P**	**18 14 22.2**	**-1.4**
FORT				IAmb		IAmb		18 14 37.4	
	comp=Z,41nm,1.2s								
TXAR	**Lajitas Array**	**83.57**	**57**	P			**P**	**18 17 37.2**	**+1.6**
	comp=Z,0.2nm,0.8s,baz=231,slow=5.7,SNR=2.7								
ILAR	**Eielson Array**	**83.92**	**12**	P			**P**	**18 17 35.5**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=219,slow=5.2,SNR=6.1								
GERES	**GERESS Array B**	**146.50**	**348**	PKPbc			**PKPbc**	**18 24 45.6**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=14,slow=2.0,SNR=1.7								
GERES	**GERESS Array B**	**146.50**	**348**				**PKPbc**	**18 24 45.3**	**-0.7**

IDC 25 18:08:15.2±8.2,**27°.48N**×**85°.92E, h0**km**, mb3.5**/4, **mb1 3.5**/5,**mb1mx3.2**/38,**mbtmp3.4**/5,**ML3.3**/1,**MS3.4**/1, **Ms1 3.4**/1,**ms1mx2.7**/37,**Error ellipse: s-maj=138.6km s-min=68.2km az=5.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.49**	**352**	P			P	18 12 42.8	-0.9
	0.1nm,0.3s,baz=174,slow=10,SNR=4.9								
KURBB	**Kurchatov Arra**	**23.79**	**348**	P			P	18 13 29.5	+0.1
	0.2nm,0.5s,baz=169,slow=11,SNR=2.8								
SONM	**Songino Array**	**25.84**	**33**	P			P	18 13 48.1	-0.3
	0.4nm,0.6s,baz=218,slow=9.1,SNR=2.2								
ZALV	**Zalesovo Beam**	**26.45**	**359**	P			P	18 13 55.1	+1.3
	0.6nm,0.5s,baz=188,slow=7.3,SNR=2.7								
YAK	**Yakutsk**	**44.98**	**27**	LR			LR	18 36 18.6	
	comp=Z,49nm,21.5s,baz=217,slow=37								
ARCES	**ARCESS Array B**	**54.27**	**338**	P			P	18 17 42.2	-0.5
	1.6nm,0.8s,baz=91,slow=7.1,SNR=1.0								

*IDC **25** 18:13:33.0±1.2,27°.93N×85°.46E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.4/36, mbtmp3.5/10, ML3.4/2, MS2.5/1, Ms1 2.5/1, ms1mx2.4/38, Error ellipse: s-maj=40.5km s-min=19.6km az=58.0*

ISC 25 18:13:35.9±1.2,**28°.0N**±0°.2×**85°.5E**±0°.2,**h18**km**, n11,** σ0**°88**/10,**mb3.6**/8,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.58**	**125**	Pn			**Pn**	**18 17 15.2**	**+0.4**
	0.0nm,0.3s,baz=305,slow=11,SNR=2.3								
MKAR	**Makanchi Array**	**18.96**	**353**	P			**P**	**18 17 56.4**	**+0.2**
	0.2nm,0.3s,baz=174,slow=12,SNR=19								
KURBB	**Kurchatov Arra**	**23.24**	**349**	P			**P**	**18 18 41.7**	**-0.3**
	0.4nm,0.6s,baz=170,slow=10,SNR=5.6								
GEYT	**Alibeck**	**24.93**	**300**	P			**P**	**18 18 59.7**	**+1.5**
	0.8nm,0.5s,baz=130,slow=14,SNR=1.8								
SONM	**Songino Array**	**25.67**	**34**	P			**P**	**18 19 06.0**	**+1.1**
	0.7nm,0.4s,baz=219,slow=11,SNR=4.7								
ZALV	**Zalesovo Beam**	**25.97**	**359**	P			**P**	**18 19 07.1**	**-0.2**
	1.4nm,0.5s,baz=182,slow=11,SNR=8.7								
ASF	**Jabal al Asfar**	**41.96**	**288**	LR			LR	18 41 50.0	
	comp=Z,5.7nm,18.9s,baz=222,slow=40								
FINES	**FINESS Array B**	**51.28**	**328**	P			**P**	**18 22 37.7**	**-0.8**
	1.4nm,0.8s,baz=98,slow=10.0,SNR=5.6								
WRA	**Warramunga Arr**	**67.10**	**130**	P			**P**	**18 24 28.5**	**-0.2**
	0.4nm,0.8s,baz=308,slow=9.5,SNR=1.6								
ASAR	**Alice Springs**	**69.40**	**133**	P			**P**	**18 24 42.8**	**-0.3**
	0.2nm,0.6s,baz=310,slow=6.6,SNR=4.7								
YKA	**Yellowknife Ar**	**88.44**	**9**	P			**P**	**18 26 25.8**	**-0.9**
	0.1nm,0.6s,baz=354,slow=5.0,SNR=2.9								

*IDC **25** 18:19:23.1±1.5,21°.38S×70°.19W, h46km±8km, mb3.4/2, mb1 3.6/4, mb1mx3.4/18, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=43.8km s-min=8.0km az=55.0*
*GUC **25** 18:19:24.6±0.8,21°.45S×70°.07W, h40km±2km, ML3.8*

ISC 25 18:19:22.5±0.8,**21°.45S**±0°.02×**70°.17W**±0°.05,**h29**km±5km**, n34,**σ1**°25**/45,**15D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	**0.38**	**137**	⇓*i*	P		**Pn**	**18 19 33.1**	**+0.8**
PB07				*i*	S		**Sn**	**18 19 39.2**	**+0.4**
PB07				IAML				18 19 39.8	
	comp=N,16μm,0.2s								
PATCX	**Punta Patache**	**0.62**	**1**	⇓*i*	P		**Pn**	**18 19 36.5**	**+1.0**
PATCX				*i*	S		**Sn**	**18 19 45.8**	**+1.3**
PATCX				IAML				18 19 49.0	
	comp=E,8μm,0.4s								
PB03	**IPOC Station P**	**0.71**	**147**	⇓*i*	P		**Pb**	**18 19 37.1**	**+0.5**
PB03				*i*	S		**Sb**	**18 19 46.3**	**+0.1**
PB03				IAML				18 19 46.7	
	comp=E,3μm,0.1s								
PB01	**IPOC Station P**	**0.75**	**58**	⇓*i*	P		**Pb**	**18 19 37.2**	**0.0**
PB01				*i*	S		**Sb**	**18 19 46.6**	**-0.5**
PB01				IAML				18 19 47.5	
	comp=E,12μm,0.3s								
TA01	**Diego Aracena**	**0.88**	**359**	⇓*i*	P		**Pb**	**18 19 39.8**	**+0.5**
TA01				*i*	S		**Sb**	**18 19 51.3**	**+0.6**
TA01				IAML				18 19 54.5	
	comp=E,3μm,0.2s								
PB04	**IPOC Station P**	**0.88**	**179**	⇓*i*	P		**Pn**	**18 19 40.3**	**+1.1**
PB04				*i*	S		**Sn**	**18 19 52.2**	**+1.2**
PB04				IAML				18 19 54.5	
	comp=N,24μm,0.9s								
PB09	**IPOC Station P**	**0.93**	**112**	⇓*i*	P		**Pb**	**18 19 40.2**	**0.0**
PB09				*i*	S		**Sb**	**18 19 52.0**	**-0.3**
TA02	**Huaiquique**	**1.17**	**2**	*e*	P		**Pn**	**18 19 44.0**	**+1.0**
TA02				*i*	S		**Sn**	**18 19 58.8**	**+0.8**
HMBC	**Humberstone**	**1.19**	**13**	⇓*i*	P		**Pn**	**18 19 44.1**	**+0.8**
HMBC				*i*	S		**Sn**	**18 19 59.1**	**+0.5**
HMBC				IAML				18 20 08.1	
	comp=N,2μm,0.5s								
PB06	**IPOC Station P**	**1.37**	**156**	⇓*i*	P		**Pn**	**18 19 46.5**	**+0.6**
PB06				*i*	S		**Sn**	**18 20 03.8**	**+0.7**
PB06				IAML				18 20 06.6	
	comp=E,5μm,0.5s								
PB05	**IPOC Station P**	**1.40**	**181**	⇓*i*	P		**Pn**	**18 19 47.4**	**+1.2**
PB05				*i*	S		**Sb**	**18 20 05.7**	**0.0**
PB05				IAML				18 20 09.4	
	comp=N,2μm,0.8s								
PB08	**IPOC Station P**	**1.61**	**36**	⇓*i*	P		**Pn**	**18 19 50.6**	**+1.3**
PB08				*i*	S		**Sn**	**18 20 10.7**	**+1.4**
PB08				IAML				18 20 14.2	
	comp=N,2μm,0.2s								
LVC	**Limon Verde**	**1.64**	**135**	P			**Pn**	**18 19 51.4**	**+1.6**
	comp=N,65nm,0.3s,baz=330,slow=7.9,SNR=244								
LVC				LR			LR	18 20 10.5	
	comp=N,96nm,20.6s,baz=98,slow=28								
LVC				S			**Sn**	**18 20 11.7**	**+1.5**
	comp=N,216nm,0.3s,baz=73,slow=19,SNR=19								
LVC	**Limon Verde**	**1.64**	**135**	*e*	P		**Pn**	**18 19 51.4**	**+1.6**
LVC				*e*	S		**Sn**	**18 20 11.4**	**+1.3**
PB11	**IPOC Station P**	**1.75**	**16**	⇓*i*	P		**Pn**	**18 19 52.2**	**+1.2**
PB11				*i*	S		**Sn**	**18 20 14.5**	**+2.1**
PB11				IAML				18 20 18.0	
	comp=N,2μm,0.5s								
PSGC	**Pisagua**	**1.84**	**1**	⇓*i*	P		**Pn**	**18 19 53.6**	**+1.3**
PSGC				*i*	S		**Sn**	**18 20 15.6**	**+1.0**
PSGC				IAML				18 20 22.3	
	comp=E,755nm,0.4s								
PB15	**IPOC Station P**	**1.87**	**160**	*e*	P		**Pn**	**18 19 53.7**	**+1.0**
PB15				*i*	S		**Sn**	**18 20 17.9**	**+2.4**
PB10	**IPOC Station P**	**2.09**	**190**	⇓*i*	P		**Pn**	**18 19 56.2**	**+0.6**
PB10				IAML				18 20 37.7	
	comp=N,821nm,0.9s								
MNMC	**Minye Minye**	**2.37**	**13**	⇓*i*	P		**Pn**	**18 20 01.5**	**+1.8**
MNMC				IAML				18 20 48.9	
	comp=N,1μm,0.6s								
LPAZ	**La Paz**	**5.48**	**21**	P			**Pn**	**18 20 43.5**	**+0.7**
	comp=N,0.3nm,0.3s,baz=217,slow=4.2,SNR=2.9								
SIV	**San Ignacio**	**10.18**	**59**	P			**Pn**	**18 21 46.2**	**-0.7**
	baz=251,slow=12,SNR=0.3								
H03N1	**Juan Fernandez**	**14.24**	**211**	T			T	18 37 06.2	
	baz=36,slow=72,SNR=43								
H03N2	**Juan Fernandez**	**14.24**	**211**	T			T	18 37 08.1	
	baz=36,slow=72,SNR=46								
H03N3	**Juan Fernandez**	**14.26**	**211**	T			T	18 37 05.7	
	baz=36,slow=72,SNR=45								
ATAH	**Atahualpa**	**16.30**	**330**	P			**P**	**18 23 13.6**	**+1.0**
	comp=N,0.2nm,0.3s,baz=109,slow=12,SNR=2.7								
TORD	**Torodi Ar. Bea**	**78.44**	**71**	P			**P**	**18 31 19.2**	**-1.9**
	comp=N,0.7nm,0.6s,baz=250,slow=5.8,SNR=3.7								
TORD				pP			**PcP**	**18 31 32.3**	**+2.0**
	comp=N,0.3nm,0.5s,baz=254,slow=5.3,SNR=2.4								
YKA	**Yellowknife Ar**	**90.75**	**341**	P			**P**	**18 32 19.1**	**-3.1**
	comp=N,0.1nm,0.7s,baz=139,slow=4.9,SNR=1.8								
YKA				pP			**sP**	**18 32 34.5**	**-0.6**
	comp=N,0.2nm,0.7s,baz=151,slow=4.9,SNR=3.5								
H11S2	**WAKE ISLAND Hyd**	**26.71**	**278**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=N,37nm,1.1s						
PD31	**Pinedale Array**	**3.34**	**249**		**Pn**	**18 43 26.9**	**+0.9**
PDAR	**Pinedale Array**	**3.34**	**249**	Pn	**Pn**	**18 43 26.8**	**+0.9**
	comp=N,3.2nm,0.3s,baz=83,slow=16,SNR=31						
PDAR				Pg	**Pb**	**18 43 31.0**	**-1.5**
	comp=N,3.3nm,0.3s,baz=72,slow=19,SNR=34						
PDAR				Lg	Lg	18 44 12.1	
	comp=N,2.1nm,0.3s,baz=75,slow=35,SNR=4.2						
PDAR	**Pinedale Array**	**3.34**	**249**		**Pn**	**18 43 25.9**	**-0.1**
YNE	**Yellowstone No**	**3.50**	**288**	Pn	**Pn**	**18 43 28.4**	**+0.3**
YNE				IAML		18 44 29.7	
	comp=N,46nm,0.8s						
YNE				IAML		18 45 11.1	
	comp=E,50nm,1.1s						
YMP	**Mirror Lake Pl**	**3.54**	**283**	Pn	**Pn**	**18 43 28.9**	**+0.1**
YMP				IAML		18 44 34.3	
	comp=N,68nm,0.9s						
YMP				IAML		18 44 41.2	
	comp=E,67nm,0.9s						
GCMT	**Greycliff**	**3.56**	**301**		**Pn**	**18 43 29.2**	**+0.3**
H17A	**Grant Village**	**3.80**	**277**		**Pn**	**18 43 33.4**	**+1.0**
H17A				IAML		18 44 38.7	
	comp=N,34nm,1.3s						
LOHW	**Long Hollow**	**3.85**	**266**		**Pn**	**18 43 33.8**	**+0.8**
FLWY	**Flagg Ranch**	**3.88**	**273**		**Pn**	**18 43 34.3**	**+0.9**
OGNE	**Ogallala**	**3.92**	**141**	Pn	**Pn**	**18 43 34.5**	**+0.8**
MOOW	**Moose Ponds**	**3.94**	**268**		**Pn**	**18 43 35.0**	**+0.9**
SNOW	**Snow King Moun**	**3.99**	**264**		**Pb**	**18 43 44.9**	**+1.4**
SNOW				IAML		18 44 49.2	
	comp=N,51nm,1.4s						
SNOW				IAML		18 45 25.6	
	comp=N,52nm,1.5s						
REDW	**Red Top Meadow**	**4.07**	**262**		**Pn**	**18 43 37.7**	**+1.7**
ISCO	**Idaho Springs**	**4.24**	**183**		**Pn**	**18 43 39.4**	**+1.1**
ISCO				IAML		18 44 48.8	
	comp=N,26nm,1.8s						
AHID	**Auburn Hatcher**	**4.41**	**255**		**Pb**	**18 43 52.0**	**+1.4**
AHID				IAML		18 45 05.2	
	comp=E,36nm,1.1s						
O20A	**White River Ci**	**4.46**	**210**		**Pn**	**18 43 42.8**	**+1.4**
DGMT	**Dagmar**	**4.51**	**9**	Pn	**Pn**	**18 43 38.9**	**-2.8**
DGMT					**Pb**	**18 43 54.0**	**+1.7**
BOZ	**Bozeman (W)**	**4.76**	**291**		**Pn**	**18 43 44.6**	**-0.8**
BOZ				IAML		18 45 08.5	
	comp=E,21nm,1.3s						
BOZ				IAML		18 45 13.1	
	comp=E,15nm,1.2s						
SMCO	**Snowmass**	**5.01**	**195**		**Pn**	**18 43 51.2**	**+2.2**
SMCO				IAML		18 45 26.6	
	comp=E,20nm,1.3s						
HRY	**Holter Researc**	**5.32**	**303**	Pn	**Pn**	**18 43 53.6**	**+0.6**
LRM	**Limekiln Ridge**	**5.38**	**292**	Pn	**Pn**	**18 43 54.3**	**+0.4**
ECSD	**EROS Data Cent**	**6.29**	**90**	Pn	**Pn**	**18 44 08.2**	**+1.9**
PV14	**Lion Creek, Pa**	**6.31**	**208**	Pg	**Pg**	**18 44 30.7**	**-2.4**
PV16	**Waysonger Mesa**	**6.33**	**207**		**Pg**	**18 44 31.9**	**-1.6**
ULM	**Lac du Bonnet**	**8.94**	**43**	Pn	**Pn**	**18 44 41.6**	**-0.9**
	comp=E,0.1nm,0.3s,baz=224,slow=14,SNR=1.2						
ULM				Lg	Lg	18 47 11.7	
	comp=E,0.1nm,0.3s,baz=272,slow=13,SNR=3.0						
NEW	**Newport**	**9.22**	**301**	Lg	Lg	18 47 20.7	
	comp=E,0.2nm,0.3s,baz=197,slow=16,SNR=1.8						
I56US	**NEWPORT INFRAS**	**9.23**	**301**	*i*		19 37 30.0	
	baz=114,slow=334,SNR=2.9						
TXAR	**Lajitas Array**	**14.73**	**174**	Pn	Pn	18 45 52.6	-9.3
	comp=E,0.0nm,0.3s,baz=358,slow=15,SNR=1.9						

IDC 25 18:50:04.0±6.0**, 27°.92N**×**85°.96E, h0**km**, mb3.2**/4, **mb1 3.4**/5**, mb1mx3.1**/50**, mbtmp3.2**/5**, ML3.3**/1**, Error ellipse: s-maj=313.1km s-min=23.2km az=67.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.06**	**352**	P	P	18 54 27.7	0.0
	0.1nm,0.3s,baz=179,slow=12,SNR=5.8						
KURBB	**Kurchatov Arra**	**23.36**	**348**	P	P	18 55 13.6	-0.3
	0.1nm,0.6s,baz=171,slow=9.6,SNR=1.3						
ZALV	**Zalesovo Beam**	**26.01**	**358**	P	P	18 55 38.9	+0.4
	0.2nm,0.3s,baz=198,slow=9.1,SNR=1.8						
WRA	**Warramunga Arr**	**66.73**	**130**	P	P	19 00 57.8	+0.6
	0.3nm,0.8s,baz=322,slow=6.5,SNR=1.7						
ASAR	**Alice Springs**	**69.05**	**133**	P	P	19 01 11.4	-0.4
	0.2nm,0.6s,baz=322,slow=5.9,SNR=6.9						

*NEIC **25** 18:50:21.5*±*1.0, 52°.39N*±*0°.08*×*173°.77E*±*0°.09, h40km*±*10km, mb3.6/5, Error ellipse: s-maj=12.4km s-min=8.1km az=166.0*

*IDC **25** 18:50:25.0*±*8.2, 52°.69N*×*173°.54E, h64km*±*50km, mb2.8/3, mb1 3.1/4, mb1mx2.8/58, mbtmp3.2/4, ML2.1/1, Error ellipse: s-maj=177.4km s-min=25.6km az=171.0*

ISC 25 18:50:20.8±1.1**, 52°.4N**±0°.1×**173°.70E**±0°.07**, h33km, n18, **σ1§21/14, mb3.4/6, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**0.42**	**35**		**Pn**	**18 50 30.4**	**-0.2**
SMY				Sn	**Sn**	**18 50 38.0**	**+0.8**
AMKA	**Amchitka**	**3.62**	**104**	Pn	**Pn**	**18 51 14.3**	**-0.1**
PETK	**Petropavlovsk-**	**9.73**	**281**	P	**Pn**	**18 52 40.8**	**+2.5**
	0.1nm,0.3s,baz=88,slow=19,SNR=6.0						
PETK				S	**Sn**	**18 54 24.1**	**-2.2**
	0.1nm,0.3s,baz=84,slow=14,SNR=2.4						
PETK	**Petropavlovsk-**	**9.73**	**281**		**Pn**	**18 52 39.3**	**+1.0**
ILAR	**Eielson Array**	**23.53**	**43**	P	**P**	**18 55 27.0**	**-0.6**
	0.2nm,0.6s,baz=247,slow=7.8,SNR=4.3						
DOT	**Dot Lake**	**24.55**	**46**	P	**P**	**18 55 35.7**	**-1.4**
DOT				IAmb	IAmb	18 55 38.8	
	comp=Z,2.6nm,1.0s						
SCRK	**Sand Creek**	**24.63**	**45**	P	**P**	**18 55 37.2**	**-0.8**
SCRK				IAmb	IAmb	18 55 40.7	
	comp=Z,1.1nm,1.0s						
BARN	**Barnard Glacie**	**25.51**	**53**	P	**P**	**18 55 46.3**	**+0.3**
BARN				IAmb	IAmb	18 56 02.8	
	comp=Z,2.2nm,1.0s						
PCA	**Pinnacle**	**26.24**	**55**	P	**P**	**18 55 52.5**	**0.0**
INK	**Inuvik**	**29.38**	**37**	P	**P**	**18 56 20.3**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**33.02**	**192**	T	T	19 31 43.1	
	baz=8.0,slow=76,SNR=10						
H11N3	**WAKE ISLAND Hy**	**33.03**	**192**	T	T	19 31 51.9	
	baz=8.0,slow=76,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**33.04**	**192**	T	T	19 31 48.0	
	baz=8.0,slow=76,SNR=8.5						
H11S1	**WAKE ISLAND Hy**	**34.25**	**192**	T	T	19 33 20.1	
	baz=7.7,slow=76,SNR=8.1						
H11S3	**WAKE ISLAND Hy**	**34.27**	**192**	T	T	19 33 17.5	
	baz=7.7,slow=76,SNR=7.3						
H11S2	**WAKE ISLAND Hy**	**34.27**	**192**	T	T	19 33 23.2	
	baz=7.7,slow=76,SNR=6.1						
YKA	**Yellowknife Ar**	**37.89**	**46**	P	**P**	**18 57 33.8**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=289,slow=7.7,SNR=2.0						
MKAR	**Makanchi Array**	**55.58**	**304**	P	**P**	**18 59 53.3**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=57,slow=7.6,SNR=5.5						

IDC 25 18:50:34.5±10.0**, 27°.90N**×**85°.06E, h0km, mb3.7**/4, **mb1 3.7**/5**, mb1mx3.3**/51**, mbtmp3.6**/5**, ML3.4/1, Error ellipse: s-maj=223.9km s-min=84.6km az=126.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.98**	**354**	P	Pn	18 54 58.6	+0.4
	0.1nm,0.3s,baz=177,slow=12,SNR=6.0						
KURBB	**Kurchatov Arra**	**23.23**	**349**	P	P	18 55 42.6	-0.5
	0.5nm,0.7s,baz=172,slow=9.7,SNR=7.2						
ZALV	**Zalesovo Beam**	**26.02**	**360**	P	P	18 56 08.6	-0.5
	0.5nm,0.3s,baz=185,slow=9.8,SNR=3.5						
FINES	**FINESS Array B**	**51.14**	**328**	P	P	18 59 38.5	-0.4
	1.3nm,0.9s,baz=108,slow=6.2,SNR=5.6						
ARCES	**ARCESS Array B**	**53.59**	**338**	P	P	18 59 57.8	+0.7
	2.5nm,0.8s,baz=96,slow=8.3,SNR=1.8						

*IDC **25** 18:56:03.9*±*0.7, 14°.13N*×*53°.75E, h0km, mb3.9/22, mb1 4.1/22, mb1mx3.8/62, mbtmp4.0/22, MS3.5/12, Ms1 3.5/12, ms1mx3.2/37, Error ellipse: s-maj=17.4km s-min=16.0km az=15.0*

*NEIC **25** 18:56:05.1*±*2.3, 14°.03N*±*0°.05*×*53°.8E*±*0°.1, h10km*±*1km, mb4.4/29, Error ellipse: s-maj=20.5km s-min=8.3km az=261.0*

ISC 25 18:56:05.4±0.6**, 14°.1N**±0°.1×**53°.75E**±0°.09**, h10**km, n56, σ1§05/50, mb4.2/33, MS3.5/10, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**1.91**	**173**		Pn	18 56 32.9	-5.1
SOCY				Sn	Sn	18 56 52.8	-9.5
WSAR	**Wadi Sarin**	**10.21**	**26**	LR	LR	19 02 07.9	
	comp=Z,314nm,21.8s,baz=230,slow=36						
ATD	**Arta Tunnel**	**10.93**	**258**	LR	LR	19 01 40.8	
	comp=Z,267nm,20.6s,baz=70,slow=31						
LODK	**Lodwar**	**21.02**	**241**	P	**P**	**19 00 50.0**	**+0.5**
HRA	**Herat**	**21.62**	**19**	P	**P**	**19 00 56.1**	**+0.1**
KMBO	**Kilima Mbogo**	**22.27**	**229**	P	**P**	**19 01 01.4**	**-1.7**
	1.7nm,0.9s,baz=47,slow=16,SNR=2.0						
KMBO				LR	LR	19 09 57.1	
	comp=Z,159nm,20.9s,baz=90,slow=37						
KIBK	**Kibwezi**	**22.56**	**225**	P	**P**	**19 01 04.9**	**-1.2**
KIBK				IAmb	IAmb	19 01 14.1	
	comp=Z,13nm,1.3s						
EIL	**Elat**	**23.28**	**315**	P	**P**	**19 01 15.0**	**+1.6**
	comp=Z,3.6nm,0.6s,baz=147,slow=15,SNR=2.3						
EIL				LR	LR	19 09 27.0	
	comp=Z,45nm,21.1s,baz=104,slow=34						
GHAJ	**Ghor Haditha**	**23.91**	**319**	P	**P**	**19 01 18.8**	**-0.7**
GEYT	**Alibeck**	**24.06**	**8**	P	**P**	**19 01 19.0**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=193,slow=5.8,SNR=4.7						
GEYT				LR	LR	19 12 18.9	
	comp=Z,138nm,18.0s,baz=210,slow=41						
GEYT	**Alibeck**	**24.06**	**8**	P	**P**	**19 01 20.3**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**24.06**	**8**	P	**P**	**19 01 19.3**	**-1.6**
GYA0B				IAmb	IAmb	19 01 55.5	
	comp=Z,21nm,1.6s						
HYB	**Hyderabad**	**24.09**	**79**	*i* P	**P**	**19 01 22.5**	**+1.0**
KBL	**Kabul**	**24.61**	**32**	P	**P**	**19 01 24.2**	**-2.0**
KBL				IAmb	IAmb	19 01 35.7	
	comp=Z,13nm,1.2s						
MMAI	**Mount Meron Ar**	**25.18**	**322**	P	**P**	**19 01 31.4**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=147,slow=12,SNR=3.4						
MMAI				LR	LR	19 12 29.5	
	comp=Z,79nm,18.4s,baz=55,slow=39						
MARD	**Mardin**	**25.86**	**336**	P	**P**	**19 01 38.8**	**+1.4**
MARD				IAmb	IAmb	19 02 09.4	
	comp=Z,6.6nm,0.8s						
GEVA	**Gevas**	**25.92**	**340**	P	**P**	**19 01 37.1**	**-0.9**
GNI	**Garni**	**27.14**	**345**	P	**P**	**19 01 47.5**	**-1.5**
	comp=Z,1.5nm,0.4s,baz=96,slow=10,SNR=2.3						
GNI				LR	LR	19 14 35.2	
	comp=Z,145nm,18.1s,baz=141,slow=41						
GNI	**Garni**	**27.14**	**345**	P	**P**	**19 01 50.1**	**+1.1**
GNI				IAmb	IAmb	19 02 12.1	
	comp=Z,16nm,1.2s						
KOPT	**Kop Dagi**	**28.33**	**338**	P	**P**	**19 02 00.1**	**+0.4**
KOPT				IAmb	IAmb	19 02 19.6	
	comp=Z,15nm,1.4s						
BTK	**Batken**	**29.89**	**27**	P	**P**	**19 02 15.2**	**+1.8**
KBZ	**Khabaz**	**30.97**	**345**	P	**P**	**19 02 22.9**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=212,slow=13,SNR=3.0						
KBZ				LR	LR	19 17 23.9	
	comp=Z,79nm,19.3s,baz=157,slow=41						
ELL	**Elmali**	**31.02**	**321**	P	**P**	**19 02 25.6**	**+2.1**
KIV	**Kislovodsk**	**31.23**	**344**	P	**P**	**19 02 27.0**	**+1.8**
KIV				IAmb	IAmb	19 02 32.4	
	comp=Z,5.1nm,1.1s						
ABKAR	**Akbulak array**	**35.43**	**7**	P	**P**	**19 03 01.7**	**+0.1**
ABKAR				IAmb	IAmb	19 03 04.0	
	comp=Z,4.0nm,1.0s						
ABKAR	**Akbulak array**	**35.43**	**7**	P	**P**	**19 03 01.2**	**-0.5**
MKAR	**Makanchi Array**	**40.41**	**30**	LR	LR	19 22 01.3	
	comp=Z,69nm,19.1s,baz=207,slow=39						
BVAR	**Borovoye Array**	**41.03**	**15**	P	**P**	**19 03 48.9**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=209,slow=8.3,SNR=13						
BRVK	**Borovoye**	**41.03**	**15**		**P**	**19 03 47.9**	**-0.9**
AKASG	**Malin Array Be**	**41.58**	**337**	P	**P**	**19 03 51.6**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=140,slow=7.3,SNR=2.9						
AKASG				LR	LR	19 24 57.7	
	comp=Z,31nm,19.6s,baz=225,slow=42						
AKBB	**Malin Array Si**	**41.58**	**337**	P	**P**	**19 03 53.4**	**+0.1**
MATP	**Matopo**	**42.34**	**216**	P	**P**	**19 04 00.2**	**+0.1**
	comp=Z,7.0nm,1.1s,baz=32,slow=12,SNR=6.4						
CMAR	**Chiang Mai Arr**	**43.52**	**78**	P	**P**	**19 04 10.1**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=273,slow=9.0,SNR=3.4						
KEST	**Kesra**	**45.20**	**307**	P	**P**	**19 04 23.5**	**+0.6**
	comp=Z,4.1nm,0.8s,baz=73,slow=8.4,SNR=4.6						
KEST	**Kesra**	**45.20**	**307**	P	**P**	**19 04 24.7**	**+1.8**
LATE	**Laterza**	**45.90**	**317**	P	**P**	**19 04 28.1**	**-0.1**
LATE				IAmb	IAmb	19 04 41.6	
	comp=Z,6.3nm,1.1s						
MORC	**Moravsky Berou**	**46.23**	**328**	P	**P**	**19 04 31.1**	**+0.3**
MORC				IAmb	IAmb	19 04 37.9	
	comp=Z,6.9nm,1.3s						
TAM	**Tamanrasset**	**46.39**	**288**	P	**P**	**19 04 32.4**	**-0.2**
PABE	**Paberze**	**47.31**	**337**	P	**P**	**19 04 39.3**	**+0.3**
TOA0	**Torodi Ar. Sit**	**50.52**	**276**	P	**P**	**19 05 05.0**	**+0.7**
TOA0				IAmb	IAmb	19 05 08.6	
	comp=Z,4.8nm,1.0s						
TORD	**Torodi Ar. Bea**	**50.52**	**276**	P	**P**	**19 05 04.3**	**0.0**
	comp=Z,3.2nm,0.8s,baz=86,slow=6.6,SNR=18						
BOSA	**Bosof**	**50.62**	**213**	LR	LR	19 26 12.3	
	comp=Z,52nm,19.1s,baz=4.5,slow=36						
FINES	**FINESS Array B**	**51.31**	**343**	P	**P**	**19 05 08.4**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=132,slow=8.5,SNR=8.8						
FINES	**FINESS Array B**	**51.31**	**343**	P	**P**	**19 05 09.8**	**+0.2**
SONM	**Songino Array**	**54.87**	**41**	P	**P**	**19 05 36.3**	**0.0**
	comp=Z,1.9nm,1.0s,baz=245,slow=7.6,SNR=2.5						
NOA	**NORSAR Array B**	**55.99**	**337**	P	**P**	**19 05 44.4**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=145,slow=8.9,SNR=3.0						
ESBB	**Sonseca Array**	**56.37**	**308**	P	**P**	**19 05 46.6**	**-0.4**
ESBB				IAmb	IAmb	19 05 50.1	
	comp=Z,6.3nm,1.1s						
ESDC	**Sonseca Array**	**56.37**	**308**	P	**P**	**19 05 46.6**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=89,slow=6.7,SNR=17						
ESDC	**Sonseca Array**	**56.37**	**308**	P	**P**	**19 05 45.7**	**-1.4**
ESDC				IAmb	IAmb	19 05 59.5	
	comp=Z,3.6nm,1.0s						
ARCES	**ARCESS Array B**	**58.19**	**349**	P	**P**	**19 05 59.9**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=143,slow=6.6,SNR=5.9						
NRIK	**Noril'sk**	**59.18**	**13**	LR	LR	19 36 28.8	
	comp=Z,68nm,18.1s,baz=218,slow=41						
KSRS	**Korea Array**	**69.08**	**55**	P	**P**	**19 07 11.0**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=274,slow=6.5,SNR=2.8						
KLR	**Kul'dur**	**71.64**	**42**	P	**P**	**19 07 26.2**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=291,slow=18,SNR=2.2						
MJAR	**Matsushiro Arr**	**77.36**	**55**	P	**P**	**19 08 01.1**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=294,slow=6.1,SNR=1.3						
WRA	**Warramunga Arr**	**86.14**	**112**	P	**P**	**19 08 48.4**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=294,slow=4.1,SNR=13						
ASAR	**Alice Springs**	**86.81**	**115**	P	**P**	**19 08 51.0**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=286,slow=4.5,SNR=20						

*IDC **25** 18:58:32.0*±*0.7, 27°.61N*×*85°.32E, h0km, mb4.0/21, mb1 4.0/24, mb1mx3.9/63, mbtmp3.9/24, ML3.4/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/32, Error ellipse: s-maj=18.6km s-min=14.4km az=36.0*

*DMN **25** 18:58:33.5*±*0.1, 27°.70N*×*85°.43E, h6km, Ml4.6/4, Error ellipse: s-maj=3.3km s-min=1.7km az=12.0*

*NEIC **25** 18:58:34.5*±*1.7, 27°.6N*±*0°.1×85°.35E*±*0°.08, h14km*±*3km, mb4.2/39, Error ellipse: s-maj=14.9km s-min=9.4km az=195.0*

*NDI **25** 18:58:35.7*±*3.9, 27°.55N*×*85°.35E, h10km, ML4.1, mb4.2(NEIC)*

*BJI **25** 18:58:36.0*±*0.0, 27°.98N*×*85°.76E, h10km, mB4.5/16, mb4.4/31, ML3.8/1, Ms3.8/16, Ms7 3.8/14*

ISC 25 18:58:33.6±0.7**, 27°.66N**±0°.03×**85°.41E**±0°.02**, h11**km±4km, **n118, σ2§01/131, mb4.1/30, MS3.5/3, 2C-1D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKIN	**Phulchoki**	**0.08**	**189**	*e*Pg	**Pg**	**18 58 36.7**	**+0.3**
PKI	**Pulchoki**	**0.09**	**181**	*e*Pg	**Pg**	**18 58 36.6**	**+0.1**
PKI				*e*Sg	**Sg**	**18 58 40.0**	**+1.5**
KKN	**Kakani**	**0.18**	**319**	*e*Pg	**Pg**	**18 58 37.5**	**-0.1**
KKN				*e*Sg	**Sg**	**18 58 40.2**	**-0.2**
	40μm,0.2s						
DMN	**Daman**	**0.28**	**260**	*e*Pg	**Pg**	**18 58 39.6**	**+0.3**
DMN				*e*Sg	**Sb**	**18 58 45.0**	**-0.5**
GUN	**Gumba**	**0.49**	**59**	*e*Pg	**Pg**	**18 58 42.0**	**-1.2**
GUN				*e*Sg	**Sg**	**18 58 49.2**	**-0.5**
JIRN	**Jiri**	**0.69**	**90**	*e*Pg	**Pg**	**18 58 47.1**	**0.0**
GKN	**Gorkha**	**0.77**	**297**	*e*Pg	**Pg**	**18 58 48.2**	**-0.3**
RAMN	**Ramite**	**1.27**	**123**	*e*Pg	**Pb**	**18 58 57.8**	**+0.1**
KOLN	**Koldanda**	**1.61**	**274**	*e*Pg	**Pg**	**18 59 04.2**	**-0.3**
KOLN				*e*Sg	**Sg**	**18 59 25.0**	**-0.4**
	881nm,0.3s						
DANN	**Dangsing**	**1.61**	**296**	*e*Pg	**Pg**	**18 59 04.6**	**0.0**
DANN				*e*Sg	**Sg**	**18 59 25.5**	**-0.1**
	841nm,0.3s						
ODAN	**Odare**	**1.93**	**114**	*e*Pg	**Pg**	**18 59 10.1**	**-0.6**
ODAN				*e*Sg	**Sg**	**18 59 35.1**	**-0.7**
	1μm,0.4s						
TAPN	**Taplejung**	**2.06**	**98**	*e*Pg	**Pb**	**18 59 11.7**	**+0.4**
TAPN				*e*Sg	**Sb**	**18 59 38.6**	**+1.5**
PYUN	**Piuthan**	**2.19**	**282**	*e*Pg	**Pb**	**18 59 13.9**	**+0.5**
PYUN				*e*Sg	**Sg**	**18 59 42.5**	**-1.5**
	1μm,0.5s						
BOK	**Bokaro**	**3.87**	**174**	*e*P	**Pn**	**18 59 35.2**	**+2.1**
BOK				*e*S	**Sn**	**19 00 18.6**	**+0.1**
LSA	**Lhasa**	**5.44**	**67**	Pg	**Pb**	**19 00 04.5**	**-4.4**
LSA				Sn	**Sn**	**19 01 01.3**	**+3.4**
LSA				Sg	**Sb**	**19 01 06.5**	**-7.9**
LSA				smax	smax		
	comp=N,100nm,0.7s						
LSA				smax	smax		
	comp=E,150nm,0.7s						
LSA	**Lhasa**	**5.44**	**67**	Pn	**Pn**	**18 59 58.2**	**+3.2**
SHL	**Shillong**	**6.16**	**108**	‖*e*P	**Pn**	**19 00 05.9**	**+1.2**
SHL				*e*S	**Sn**	**19 01 12.9**	**-2.3**
SHL	**Shillong**	**6.16**	**108**	Pn	**Pn**	**19 00 05.7**	**+1.0**
DDI	**Dehra Dun**	**6.97**	**294**	*e*P	**Pn**	**19 00 18.8**	**+3.1**
DDI				*e*S	**Sn**	**19 01 33.7**	**-1.4**
DDI				IAML		19 01 37.2	
	comp=E,118nm,0.4s						
DDI				IAML		19 01 38.1	
	comp=N,187nm,0.5s						
ZIRO	**ZIRO**	**7.49**	**89**	*e*P	**Pn**	**19 00 24.2**	**+1.2**
ZIRO				*e*S	**Sn**	**19 01 46.9**	**-1.2**
ZIRO				IAML		19 01 51.4	
	comp=N,390nm,0.5s						
ZIRO				IAML		19 01 52.2	
	comp=E,501nm,0.5s						
SMLA	**Simla**	**7.98**	**298**	*e*P	**Pn**	**19 00 30.9**	**+1.4**
SMLA				*e*S	**Sn**	**19 01 59.9**	**+0.1**
SMLA				IAML		19 02 04.7	
	comp=E,79nm,0.4s						
KOHI	**KOHIMA**	**8.01**	**102**	*e*P	**Pn**	**19 00 31.1**	**+0.9**
KOHI				*e*S	**Sn**	**19 02 00.4**	**-0.6**
KOHI				IAML		19 02 06.3	
	comp=E,92nm,0.8s						
KOHI				IAML		19 02 08.2	
	comp=N,83nm,0.6s						
MOKO	**MOKOCHONG**	**8.23**	**97**	*e*P	**Pn**	**19 00 33.9**	**+0.7**
MOKO				*e*S	**Sn**	**19 02 02.1**	**-4.2**
MOKO				IAML		19 02 08.4	
	comp=E,126nm,0.4s						
MOKO				IAML		19 02 09.2	
	comp=N,154nm,0.5s						
BHPL	**Bhopal**	**8.45**	**240**	*e*P	**Pn**	**19 00 34.3**	**-1.8**
BHPL				*e*S	**Sn**	**19 02 03.7**	**-7.9**
BHPL				IAML		19 02 08.5	
	comp=N,88nm,0.4s						
BHPL				IAML		19 02 10.8	
	comp=E,67nm,0.4s						
BHK	**Bhakra**	**8.68**	**298**	*ex*	x	19 00 39.2	
DHRM	**DHARAMSHALA**	**9.13**	**302**	*e*P	**Pn**	**19 00 46.1**	**+0.6**
DHRM				*e*S	**Sn**	**19 02 22.1**	**-6.4**
DHRM				IAML		19 02 30.3	
	comp=E,54nm,0.4s						
DHRM				IAML		19 02 33.0	
	comp=N,74nm,0.6s						
LKP	**Lekhapani**	**9.27**	**90**	*e*P	**Pn**	**19 00 47.7**	**+0.4**
LKP				*e*S	**Sn**	**19 02 27.1**	**-4.6**
LKP				IAML		19 02 41.0	
	comp=N,76nm,0.5s						
AJM	**Ajmer**	**9.67**	**265**	*e*P	**Pn**	**19 00 51.0**	**-1.8**
AJM				*i* S	**Sn**	**19 02 33.0**	**-8.5**
HYB	**Hyderabad**	**12.00**	**213**	*e*S	**Sn**	**19 03 38.0**	**-0.6**
NIL	**Nilore**	**12.05**	**303**		**Pn**	**19 01 24.8**	**-0.6**
CHTO	**Chiang Mai**	**15.23**	**122**	P	**P**	**19 02 11.9**	**-1.7**
CM33	**Chiang Mai Arr**	**15.23**	**122**	P	P	19 02 21.0	+7.3
CMMT	**Chiang Mai**	**15.23**	**122**	P	P	19 02 22.0	+8.3
CM34	**Chiang Mai Arr**	**15.36**	**122**	P	**P**	**19 02 16.0**	**+0.9**
CM15	**Chiang Mai Arr**	**15.44**	**124**	P	**P**	**19 02 19.0**	**+3.0**
CM13	**Chiang Mai Arr**	**15.44**	**124**	P	**P**	**19 02 21.9**	**+5.9**
CM31	**Chiang Mai Arr**	**15.45**	**123**	Pn	**P**	**19 02 14.8**	**-1.3**
CMAR	**Chiang Mai Arr**	**15.45**	**123**	Pn	**Pn**	**19 02 10.9**	**-0.6**
	comp=N,0.0nm,0.3s,baz=302,slow=9.9,SNR=3.1						
CMAR	**Chiang Mai Arr**	**15.45**	**123**		**P**	**19 02 15.5**	**-0.6**
CM02	**Chiang Mai Arr**

PALK	**Pallekele**	**20.76**	**193**	P		Pn		19 03 19.2	+2.1
	comp=Z,4.6nm,0.5s,baz=40,slow=18,SNR=8.3								
PALK				S		S		19 06 55.3	-11
	comp=Z,4.2nm,0.9s,baz=231,slow=10,SNR=2.1								
PALK	**Pallekele**	**20.76**	**193**	P		Pn		19 03 20.7	+3.7
PALK				IAmb		IAmb		19 03 26.0	
	comp=Z,25nm,1.6s								
XAN	**Xi'an**	**21.14**	**67**	P		**P**		**19 03 18.8**	**+0.1**
XAN				pP		sP		19 03 24.0	+0.2
XAN				pmax		pmax			
	comp=Z,12nm,0.6s								
XAN				LR		LR			
	comp=Z,120nm,13.0s								
XAN				LR		LR			
	comp=Z,170nm,14.1s								
XAN				LR		LR			
	comp=Z,220nm,11.9s								
XAN	**Xi'an**	**21.14**	**67**	P		**P**		**19 03 18.1**	**-0.6**
XAN				IAmb		IAmb		19 03 22.9	
	comp=Z,10nm,1.0s								
ENH	**Enshi**	**21.22**	**77**	P		**P**		**19 03 20.1**	**+0.5**
ENH				IAmb		IAmb		19 03 31.1	
	comp=Z,13nm,0.6s								
KURBB	**Kurchatov Arra**	**23.53**	**349**	P		**P**		**19 03 44.5**	**+0.9**
	comp=Z,1.8nm,0.2s,baz=171,slow=9.7,SNR=14								
KURK	**Kurchatov**	**23.60**	**349**	P		**P**		**19 03 44.5**	**+0.2**
WSAR	**Wadi Sarin**	**24.56**	**266**	P		**P**		**19 03 52.7**	**-0.9**
	comp=Z,4.1nm,0.7s,baz=76,slow=4.6,SNR=4.1								
GEYT	**Allbeck**	**25.05**	**301**	P		**P**		**19 03 56.5**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=137,slow=11,SNR=2.2								
HHC	**Hu-ho-hao-te**	**25.20**	**52**	*eP*		**P**		**19 04 00.8**	**+1.4**
HHC				pmax		pmax			
	comp=Z,13nm,1.0s								
HHC				pmax		pmax			
	comp=Z,95nm,5.7s								
SONM	**Songino Array**	**25.95**	**33**	P		**P**		**19 04 08.0**	**+1.9**
	comp=Z,9.6nm,0.8s,baz=218,slow=10.0,SNR=47								
SONM				LR		LR		19 15 39.3	
	comp=Z,125nm,18.5s,baz=258,slow=40								
SONM	**Songino Array**	**25.95**	**33**	P		**P**		**19 04 07.6**	**+1.5**
SONM				IAmb		IAmb		19 04 11.8	
	comp=Z,9.1nm,1.0s								
ZAA0	**Zalesovo Array**	**26.27**	**359**	P		**P**		**19 04 09.3**	**+0.6**
ZAA0				IAmb		IAmb		19 04 10.8	
	comp=Z,3.8nm,0.8s								
ZALV	**Zalesovo Beam**	**26.27**	**359**	P		**P**		**19 04 09.4**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=186,slow=8.4,SNR=12								
ULN	**Ulaanbaatar**	**26.29**	**34**	P		**P**		**19 04 10.1**	**+0.8**
ULN						**pP**		**19 04 10.4**	**-2.7**
BVAR	**Borovoye Array**	**27.69**	**340**	P		**P**		**19 04 22.6**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=153,slow=14,SNR=1.2								
ABKAR	**Akbulak array**	**29.13**	**325**	P		**P**		**19 04 34.9**	**+0.5**
KS19	**Wonju Array Si**	**36.83**	**64**	P		**P**		**19 05 44.4**	**+2.5**
KS19				IAmb		IAmb		19 05 57.6	
	comp=Z,8.7nm,1.0s								
KSAR	**Wonju Array Be**	**36.84**	**64**	P		**P**		**19 05 43.8**	**+1.8**
KSRS	**Korea Array**	**36.88**	**64**	P		**P**		**19 05 40.8**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=260,slow=7.9,SNR=8.2								
KSRS				LR		LR		19 22 04.1	
	comp=Z,46nm,21.0s,baz=250,slow=38								
USRK	**Ussuriysk Ar.**	**40.59**	**53**	P		**P**		**19 06 14.0**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=264,slow=9.4,SNR=2.6								
KLR	**Kul'dur**	**41.40**	**46**	P		**P**		**19 06 20.4**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=270,slow=6.6,SNR=3.7								
NRIK	**Noril'sk**	**41.73**	**1**	P		**P**		**19 06 22.2**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=158,slow=6.7,SNR=6.7								
NRIK	**Noril'sk**	**41.73**	**1**	P		**P**		**19 06 23.2**	**+0.9**
NRIK				IAmb		IAmb		19 06 24.8	
	comp=Z,4.6nm,0.8s								
BKB	**Balikpapan**	**41.74**	**128**	P		**P**		**19 06 23.3**	**+0.2**
ELL	**Elmali**	**47.27**	**296**	P		**P**		**19 07 07.7**	**+0.5**
TIXI	**Tiksi**	**50.06**	**17**	P		**P**		**19 07 28.0**	**0.0**
TIXI				IAmb		IAmb		19 07 33.7	
	comp=Z,4.5nm,1.1s								
BURAR	**Bucovina Array**	**50.33**	**310**	P		**P**		**19 07 31.1**	**+0.6**
FIA1	**FINESS Array S**	**51.51**	**328**	P		**P**		**19 07 40.3**	**+1.2**
FINES	**FINESS Array B**	**51.51**	**328**	P		**P**		**19 07 39.3**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=133,slow=7.8,SNR=4.5								
FINES	**FINESS Array B**	**51.51**	**328**	P		**P**		**19 07 39.6**	**+0.6**
ARCES	**ARCESS Array B**	**53.94**	**338**	P		**P**		**19 07 57.3**	**+0.4**
	comp=Z,3.5nm,0.8s,baz=104,slow=7.4,SNR=6.6								
ARCES	**ARCESS Array B**	**53.94**	**338**	P		**P**		**19 07 58.0**	**+1.1**
SEY	**Seymchan**	**55.30**	**31**	P		**P**		**19 08 08.3**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=270,slow=23,SNR=1.6								
NOA	**NORSAR Array B**	**58.60**	**327**	P		**P**		**19 08 30.8**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=89,slow=7.0,SNR=2.1								
KEST	**Kesra**	**63.75**	**298**	P		**P**		**19 09 05.9**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=153,slow=6.8,SNR=2.1								
KEST	**Kesra**	**63.75**	**298**	P		**P**		**19 09 06.1**	**+0.3**
WB0	**Warramunga Arr**	**66.86**	**129**	P		**P**		**19 09 26.7**	**+0.8**
WRA	**Warramunga Arr**	**66.94**	**130**	P		**P**		**19 09 27.5**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=323,slow=6.6,SNR=12								
WB2	**Warramunga Arr**	**66.95**	**130**	P		**P**		**19 09 27.0**	**+0.5**
WR0	**Warramunga Arr**	**67.09**	**129**	P		**P**		**19 09 27.9**	**+0.5**
AS31	**Alice Springs**	**69.23**	**133**	P		**P**		**19 09 41.3**	**+0.5**
AS31				IAmb		IAmb		19 09 49.4	
	comp=Z,0.7nm,0.8s								
ASAR	**Alice Springs**	**69.23**	**133**	P		**P**		**19 09 41.6**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=314,slow=6.4,SNR=17								
ASAR	**Alice Springs**	**69.23**	**133**	P		**P**		**19 09 41.8**	**+1.0**
EUNU	**Eureka**	**72.42**	**359**	P		**P**		**19 10 01.0**	**+1.6**
EUNU				IAmb		IAmb		19 10 41.2	
	comp=Z,12nm,1.6s								
ESDC	**Sonseca Array**	**72.48**	**306**	P		**P**		**19 10 00.8**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=64,slow=5.6,SNR=2.5								
TOLK	**Toolik Lake Re**	**75.93**	**18**	P		**P**		**19 10 19.7**	**-0.4**
TOLK				IAmb		IAmb		19 10 49.4	
	comp=Z,7.0nm,1.4s								
TORD	**Torodi Ar. Bea**	**78.53**	**279**	P		**P**		**19 10 34.6**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=49,slow=4.7,SNR=5.5								
TORD	**Torodi Ar. Bea**	**78.53**	**279**	IAmb		IAmb		19 10 39.4	
	comp=Z,0.9nm,0.7s								
ILAR	**Eielson Array**	**79.36**	**20**	P		**P**		**19 10 39.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=313,slow=5.0,SNR=6.8								
YKA	**Yellowknife Ar**	**88.74**	**9**	P		**P**		**19 11 27.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=339,slow=4.6,SNR=9.0								

*JMA **25** 18:58:33.5±0.1,23.°95N×122.°40E,h33km±3km,M2.7*
*TAP **25** 18:58:34.1,24.°02N×122.°42E,h37km±1km,ML3.0,D*
ISC 25 18:58:33.2±1.3,23.°96N±0.°04×122.°43E±0.°02,h21km±5km, n54,σ0.°70/64,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.68**	**44**	P		**Pb**	**18 58 46.9**	**+0.5**
JYNG				S		**Sb**	**18 58 56.1**	**+0.7**
YOJ	**Yonaguni jima**	**0.73**	**47**	P		**Pb**	**18 58 47.7**	**+0.5**
YOJ				S		**Sb**	**18 58 57.4**	**+0.7**
YOJ	**Yonaguni jima**	**0.73**	**47**	*i* P		**Pb**	**18 58 47.7**	**+0.5**
	baz=60							
YOJ				*i* S		**Sn**	**18 58 57.9**	**-0.9**
	baz=60							
EWUT	**Wuta**	**0.77**	**309**	*i* P		**Pb**	**18 58 48.0**	**+0.1**
	baz=315							
EWUT				*i* S		**Sb**	**18 58 58.0**	**+0.1**
	baz=315							
TWD	**Chiawan**	**0.77**	**279**	*i* P		**Pb**	**18 58 47.9**	**-0.1**
	baz=274							
NACB	**Ninganchiao**	**0.79**	**286**	P		**Pb**	**18 58 48.1**	**-0.2**
	baz=269							
TWC	**Suao**	**0.84**	**321**	*i* P		Pb	18 58 48.6	-0.5
	baz=319							
ETLH	**Xiulin Townshi**	**0.90**	**286**	P		**Pb**	**18 58 49.9**	**-0.3**
	baz=272							
ESL	**Shilin**	**0.93**	**261**	*i* P		Pb	18 58 49.8	-0.8
	baz=249							
NDS	**Dongshan**	**0.94**	**316**	*i* P		**Pb**	**18 58 50.6**	**-0.1**
	baz=314							
EGFH	**Guangfu**	**0.96**	**253**	P		**Pb**	**18 58 50.9**	**-0.3**
	baz=249							
TWE	**Neicheng**	**1.03**	**317**	*i* P		**Pb**	**18 58 52.0**	**-0.4**
	baz=316							
HGSD	**Ruisui**	**1.03**	**243**	P		Pb	18 58 51.9	-0.5
	baz=240							
ENTT	**Nioudou**	**1.04**	**311**	*i* P		Pb	18 58 52.0	-0.5
	baz=296							
NTC	**Toucheng**	**1.04**	**328**	*i* P		**Pb**	**18 58 52.4**	**-0.2**
	baz=327							
NTC				*i* S		**Sb**	**18 59 04.9**	**-0.9**
	baz=327							
NDT	**Datong Townshi**	**1.05**	**307**	P		**Pb**	**18 58 52.7**	**-0.1**
	baz=294							
NNSB	**Datong**	**1.06**	**296**	*eP*		Pb	18 58 51.0	-2.0
	baz=293							
NNS	**Nan Shan**	**1.08**	**296**	*i* P		Pb	18 58 51.4	-1.9
	baz=294							
WHF	**Hehuan Shan**	**1.08**	**280**	*i* P		Pb	18 58 52.6	-0.9
	baz=266							
FUSS	**Fushou**	**1.12**	**285**	*eP*		**Pn**	**18 58 53.7**	**-0.3**
	baz=282							
TIPB	**Shuangxi**	**1.15**	**331**	*i* P		Pn	18 58 53.5	-0.7
	baz=330							
TIPB				*i* S		**Sb**	**18 59 07.8**	**-1.1**
	baz=330							
OWD	**Renai**	**1.15**	**270**	P		Pn	18 58 53.8	-0.4
	baz=266							
CHGB	**Renai**	**1.15**	**275**	*eP*		Pn	18 58 53.7	-0.7
	baz=263							
NWLT	**Wulai**	**1.17**	**314**	P		**Pn**	**18 58 54.3**	**-0.2**
	baz=311							
NWLT				S		**Sb**	**18 59 08.8**	**-0.8**
	baz=311							
TWT	**Tachien**	**1.18**	**284**	P		**Pb**	**18 58 55.4**	**+0.3**
	baz=281							
YULB	**Yu-li**	**1.18**	**242**	P		Pn	18 58 54.3	-0.3
	baz=252							
YULB				S		**Sb**	**18 59 08.8**	**-1.1**
	baz=252							
EYUL	**Yuli**	**1.19**	**239**	*i* P		**Pn**	**18 58 54.5**	**-0.2**
	baz=236							
EYUL				*i* S		**Sb**	**18 59 09.6**	**-0.4**
	baz=236							
YHNB	**Yeheng**	**1.19**	**306**	P		Pn	18 58 54.5	-0.3
	baz=293							
TDCB	**Techi**	**1.20**	**284**	P		**Pn**	**18 58 54.8**	**-0.1**
	baz=272							
VWDT	**VWDT**	**1.20**	**260**	P		**Pn**	**18 58 55.0**	**+0.2**
	baz=252							
TWF1	**Yuli**	**1.20**	**240**	*i* P		**Pn**	**18 58 54.8**	**-0.1**
	baz=227							
TWF1				*i* S		**Sb**	**18 59 09.8**	**-0.6**
	baz=227							
IRIF	**Iriomote-Funau**	**1.24**	**72**	P		**Pn**	**18 58 55.5**	**+0.1**
IRIF				*eS*		**Sn**	**18 59 11.7**	**+0.2**
HATJ	**Hateruma jima**	**1.26**	**85**	*eS*		**Sn**	**18 59 11.8**	**-0.2**
TWA	**Mucha**	**1.27**	**323**	*i* P		Pn	18 58 55.6	-0.2
	baz=337							
TWA				*i* S		**Sn**	**18 59 12.5**	**+0.1**
	baz=337							
FULB	**Fuli**	**1.29**	**234**	*i* P		Pn	18 58 55.5	-0.6
	baz=231							
NHDH	**Xindian Distri**	**1.29**	**321**	P		**Pn**	**18 58 56.6**	**+0.5**
	baz=318							
NHDH				S		**Sn**	**18 59 12.7**	**-0.1**
	baz=318							
WPL	**Puli Township**	**1.35**	**272**	*eP*		**Pn**	**18 58 57.1**	**+0.3**
	baz=269							
SSLB	**Suanglung**	**1.36**	**263**	P		**Pn**	**18 58 57.2**	**+0.1**
	baz=260							
DPDB	**Guoxing**	**1.38**	**273**	P		**Pn**	**18 58 57.7**	**+0.4**
	baz=270							
WHP	**Taichung City**	**1.39**	**283**	P		**Pb**	**18 58 59.1**	**+0.5**
	baz=272							
SMLT	**Sun Moon Lake**	**1.40**	**267**	*i* P		**Pn**	**18 58 58.1**	**+0.4**
	baz=256							
TYC	**Yuchr**	**1.44**	**268**	*i* P		**Pn**	**18 58 58.5**	**+0.3**
	baz=265							
TYC				*eS*		**Sn**	**18 59 15.7**	**-0.7**
	baz=265							
LIOB	**Emei**	**1.46**	**298**	P		**Pb**	**18 58 59.4**	**-0.3**
	baz=295							
LIOB				S		**Sn**	**18 59 17.4**	**+0.4**
	baz=295							
NSTT	**Nanjuang**	**1.47**	**297**	*i* P		**Pb**	**18 58 59.4**	**-0.4**
	baz=294							
NSTT				*i* S		**Sn**	**18 59 17.2**	**+0.1**
	baz=294							
JKRS	**Kuro-shima**	**1.47**	**79**	P		**Pb**	**18 58 59.4**	**-0.4**
JKRS				*eS*		**Sb**	**18 59 17.6**	**-0.4**
WHYT	**Xinyi Township**	**1.47**	**260**	P		**Pb**	**18 58 60.0**	**+0.1**
	baz=258							
WJS	**Zhushan**	**1.56**	**265**	*i* P		**Pb**	**18 59 01.9**	**+0.4**
	baz=262							
WJS				*i* S		**Sb**	**18 59 23.4**	**+2.6**
	baz=262							
WNT	**Mingjian**	**1.60**	**267**	*i* P		**Pb**	**18 59 02.0**	**-0.1**
	baz=265							
WNT1	**Nantou City**	**1.60**	**268**	P		**Pb**	**18 59 02.5**	**+0.4**
	baz=265							
WNT1				S		**Sb**	**18 59 23.6**	**+1.7**
	baz=265							
JIJ	**Ishigaki jima**	**1.61**	**75**	P		**Pn**	**18 59 00.5**	**0.0**
JIJ				S		**Sn**	**18 59 19.8**	**-0.9**
TCU	**Taichung**	**1.61**	**277**	*i* P		**Pb**	**18 59 02.1**	**-0.3**
	baz=274							
TCU				*i* S		**Sb**	**18 59 23.3**	**+1.0**
	baz=274							
JISG	**Ishigakijimahi**	**1.82**	**70**	P		**Pn**	**18 59 03.0**	**-0.4**
JISG				*eS*		**Sn**	**18 59 23.6**	**-2.3**
JTJ	**Tarama**	**2.18**	**71**	P		**Pn**	**18 59 08.9**	**+0.6**
JTJ				*eS*		**Sn**	**18 59 34.8**	**+0.1**
JIRB	**Irabujima**	**2.64**	**70**	P		**Pn**	**18 59 15.7**	**+1.0**
JIRB				*eS*		**Sn**	**18 59 46.9**	**+0.8**

IDC 25 19:08:02.6±4.0,27.°87N×85.°08E,h0km,mb3.4/2, mb1 3.6/3,mb1mx3.2/47,mbtmp3.4/3,ML3.5/1,Error ellipse: s-maj=122.1km s-min=35.7km az=75.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.02**	**354**	P		P	19 12 25.9	-0.1
	0.1nm,0.3s,baz=171,slow=11,SNR=11							
SONM	**Songino Array**	**25.94**	**34**	P		P	19 13 36.8	+0.1
	0.2nm,0.3s,baz=226,slow=8.5,SNR=2.2							
WRA	**Warramunga Arr**	**67.30**	**129**	P		P	19 18 59.5	-0.1
	0.5nm,1.0s,baz=322,slow=6.5,SNR=1.3							

*IDC **25** 19:09:53.6±1.4,5.°19N×82.°28W,h0km,mb3.7/8, mb1 4.1/10,mb1mx3.8/33,mbtmp3.8/10,ML4.2/2,Error ellipse: s-maj=123.7km s-min=24.7km az=57.0*
*NEIC **25** 19:09:53.5±1.6,4.°94N±0.°09×82.°9W±0.°1,h10km±2km, mb4.2/9,Error ellipse: s-maj=18.7km s-min=12.2km az=235.0*
*UCR **25** 19:10:36.7±3.0,8.°04N×83.°60W,h6km±30km,mb4.4(NEIC)*
ISC 25 19:09:54.1±0.8,4.°90N±0.°09×82.°8W±0.°1,h10km,n65, σ1.°50/64,mb4.1/12,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RIOS	**Rincon, Osa**	**3.84**	**349**	Pn		**Pn**	**19 10 50.5**	**-2.8**
EDSV	**San Vito**	**3.90**	**357**	*eP*		**Pn**	**19 10 52.8**	**-1.4**
EDPN	**Palmar Norte**	**4.09**	**351**	*eP*		**Pn**	**19 10 54.8**	**-1.9**
LPLA	**Las Palmas La**	**4.11**	**357**	*eP*		**Pn**	**19 10 55.2**	**-1.9**
EDBA	**Buenos Aires**	**4.26**	**354**	*eP*		**Pn**	**19 10 58.1**	**-1.0**
DRK0	**Durika**	**4.36**	**354**	*eP*		**Pn**	**19 10 58.7**	**-1.9**
EDLM	**Las Mercedes**	**4.42**	**350**	*eP*		**Pn**	**19 11 00.1**	**-1.2**
EDDO	**Dominical**	**4.45**	**346**	*eP*		**Pn**	**19 10 59.8**	**-1.9**
PEZE	**Perez Zeledon,**	**4.54**	**349**	*eP*		**Pn**	**19 11 01.5**	**-1.5**
PEZE	**Perez Zeledon,**	**4.54**	**349**			**Pn**	**19 11 01.3**	**-1.7**
CDM	**Cerro de Muert**	**4.72**	**348**	*eP*		**Pn**	**19 11 04.3**	**-1.5**
RIMA	**Rio Macho**	**4.95**	**348**	*eP*		**Pn**	**19 11 07.2**	**-1.6**
LCR2	**La Lucha 2**	**4.96**	**346**	*eP*		**Pn**	**19 11 07.3**	**-1.6**
OCM	**Ochomogo**	**5.09**	**347**	*eP*		**Pn**	**19 11 09.3**	**-1.4**
BCIP	**Isla Barro Col**	**5.16**	**35**			**Pn**	**19 11 09.6**	**-1.8**
BCIP	**Isla Barro Col**	**5.16**	**35**	*eP*		**Pn**	**19 11 08.7**	**-2.7**
CVTR	**Volcan Turrial**	**5.17**	**349**	*eP*		**Pn**	**19 11 10.9**	**-1.2**
BATAN	**Batan**	**5.19**	**354**	Pn		**Pn**	**19 11 10.6**	**-1.4**
HDC	**Heredia**	**5.23**	**346**	*eP*		**Pn**	**19 11 11.5**	**-1.1**
HDC	**Heredia**	**5.23**	**346**			**Pn**	**19 11 10.8**	**-1.8**
CAO2	**Cobano, Puntar**	**5.28**	**334**	Pn		**Pn**	**19 11 10.7**	**-2.4**
PTAC	**Punta Ardita,**	**5.44**	**66**	*eP*		**Pn**	**19 11 13.6**	**-1.7**
JTS	**Las Juntas de**	**5.76**	**338**	Pn		**Pn**	**19 11 18.5**	**-1.2**
	16nm,0.3s,baz=228,slow=5.2,SNR=30							
JTS						**Sn**	**19 12 24.5**	**-1.6**
	32nm,0.3s,baz=44,slow=21,SNR=14							
JTS	**Las Juntas de**	**5.76**	**338**	*eP*		**Pn**	**19 11 18.6**	**-1.2**
JTS	**Las Juntas de**	**5.76**	**338**			**Pn**	**19 11 18.0**	**-1.8**
ARE1	**Arenal 1**	**5.84**	**341**	*eP*		**Pn**	**19 11 20.8**	**-0.1**
PLVR	**Palo Verde**	**5.97**	**335**	*eP*		**Pn**	**19 11 20.3**	**-2.5**
COVE	**Coope Vega, Sa**	**5.99**	**345**	Pn		**Pn**	**19 11 22.0**	**-0.9**
ORTG	**Ortega, Santa**	**6.03**	**334**			**Pn**	**19 11 21.8**	**-1.8**
OTAV	**Otavalo**	**6.35**	**137**	Pn		**Pn**	**19 11 25.9**	**-2.3**
OTAV	**Otavalo**	**6.35**	**137**	*eP*		Pn	19 11 22.6	-5.6
YOTC	**Yotoco, Valle**	**6.50**	**98**	*eP*		**Pn**	**19 11 25.9**	**-4.1**
CCUFI	**Cufio, Nario**	**6.55**	**124**	*eP*		**Pn**	**19 11 29.9**	**-1.1**
GCUF	**Volcan Galeras**	**6.55**	**124**	*eP*		**Pn**	**19 11 29.8**	**-1.3**
SOTA	**Rioblanco**	**6.76**	**114**	*eP*		**Pn**	**19 11 32.8**	**-1.1**
PCON	**Cinco Dias**	**6.88**	**112**	*eP*		**Pn**	**19 11 35.8**	**+0.2**
MARP	**Paez Belalcaza**	**7.13**	**106**	*eP*		**Pn**	**19 11 38.4**	**-0.4**
ESPN	**Las Esperanzas**	**7.40**	**349**	Pn		**Pn**	**19 11 40.5**	**-1.7**
ACON	**Acoyapa**	**7.40**	**342**	Pn		**Pn**	**19 11 41.4**	**-1.0**
TOLC	**Tolima**	**7.46**	**92**	*eP*		**Pn**	**19 11 42.1**	**-1.3**
ORTC	**Ortega, Tolima**	**7.59**	**97**	*eP*		**Pn**	**19 11 44.5**	**-0.4**
UREC	**San Jos de Ur**	**7.75**	**68**	*eP*		**Pn**	**19 11 46.6**	**-0.5**
BOAB	**BOACO BROADBAN**	**8.02**	**339**	Pn		**Pn**	**19 11 49.6**	**-1.2**
ROSC	**El Rosal**	**8.45**	**90**	Pn		**Pn**	**19 11 56.6**	**-0.3**
SJCC	**San Jacinto, C**	**9.04**	**56**	*eP*		**Pn**	**19 12 05.2**	**+0.4**
APG	**El Apazote**	**12.56**	**324**	Pn		**Pn**	**19 12 53.8**	**+0.6**
	0.5nm,0.3s,baz=90,slow=20,SNR=2.1							
SDV	**Santo Domingo**	**12.71**	**71**	Pn		**Pn**	**19 12 56.6**	**+1.4**
AOPR	**Arecibo Observ**	**20.60**	**48**	P		Pn	19 14 33.7	-2.2
GCPR	**Guaynabo City**	**21.08**	**49**	P		**P**	**19 14 38.7**	**-0.1**
GCPR				IAmb		IAmb	19 14 45.8	
	comp=Z,18nm,0.9s							
LPAZ	**La Paz**	**25.57**	**146**	P		**P**	**19 15 24.2**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=352,slow=5.2,SNR=2.7							
LPAZ	**La Paz**	**25.57**	**146**	P		**P**	**19 15 24.6**	**+0.4**
LPAZ				IAmb		IAmb	19 15 30.1	
	comp=Z,6.1nm,1.4s							
PB16	**IPOC Station P**	**26.55**	**151**	P		**P**	**19 15 32.8**	**-0.2**
PB16				IAmb		IAmb	19 15 36.5	
	comp=Z,3.1nm,0.9s							
MNMC	**Minye Minye**	**27.19**	**152**	P		**P**	**19 15 38.4**	**-0.1**
MNMC				IAmb		IAmb	19 15 46.1	
	comp=Z,4.8nm,0.9s							
PB11	**IPOC Station P**	**27.71**	**153**	P		**P**	**19 15 43.1**	**+0.1**
TXAR	**Lajitas Array**	**31.32**	**323**	P		**P**	**19 16 16.6**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=144,slow=11,SNR=3.7							
X18A	**Snowflake**	**38.75**	**323**	P		**P**	**19 17 19.1**	**0.0**
X18A				IAmb		IAmb	19 17 22.7	
	comp=Z,8.2nm,1.6s							
X16A	**Lo Mia Camp, P**	**39.59**	**322**	P		**P**	**19 17 26.6**	**+0.6**
PDAR	**Pinedale Array**	**44.55**	**332**	P		**P**	**19 18 07.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=118,slow=7.6,SNR=2.4							
NVAR	**Mina Array Bea**	**46.40**	**321**	P		**P**	**19 18 23.5**	**+2.2**
	comp=Z,0.8nm,0.2s,baz=119,slow=7.3,SNR=4.1							
NVAR	**Mina Array Bea**	**46.40**	**321**	P		**P**	**19 18 21.2**	**0.0**
YKA	**Yellowknife Ar**	**62.07**	**344**	P		**P**	**19 20 14.5**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=137,slow=6.6,SNR=7.6							
DLBC	**Dease Lake**	**64.65**	**335**	P		**P**	**19 20 33.5**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=139,slow=20,SNR=2.8							
INK	**Inuvik**	**71.74**	**342**	P		**P**	**19 21 17.2**	**+1.0**
	comp=Z,1.9nm,1.0s,baz=48,slow=0.5,SNR=4.1							
ILAR	**Eielson Array**	**74.73**	**336**	P		**P**	**19 21 35.2**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=119,slow=4.2,SNR=5.9							
ESDC	**Sonseca Array**	**78.29**	**51**	P		**P**	**19 21 55.2**	**+0.4**

*IDC **25** 19:10:07.0±0.7,4.°88N×82.°67W,h0km,mb4.1/13, mb1 4.4/16,mb1mx4.2/34,mbtmp4.1/16,ML4.4/3,MS3.6/1, Ms1 3.5/1,ms1mx2.7/27,Error ellipse: s-maj=42.2km s-min=13.2km az=58.0*
*NEIC **25** 19:10:08.7±2.5,4.°92N±0.°06×82.°80W±0.°06,h10km±1km, mb4.4/44,Error ellipse: s-maj=10.8km s-min=9.4km az=130.0*
ISC 25 19:10:08.8±0.5,4.°97N±0.°06×82.°62W±0.°07,h12km,n97, σ1.°21/92,mb4.4/31,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RIOS	**Rincon, Osa**	**3.81**	**347**	Pn		**Pn**	**19 11 05.3**	**-2.1**
EDLM	**Las Mercedes**	**4.38**	**347**	*eS*		**Pn**	**19 11 14.7**	**-0.6**
EDDO	**Dominical**	**4.43**	**344**	*eS*		**Pn**	**19 11 14.1**	**-1.7**
PEZE	**Perez Zeledon,**	**4.

comp=Z,7.8nm,1.2s
U15A **North Rim** 41.49 323 P P 19 17 57.2 +1.0
U15A IAmb IAmb 19 17 59.6
comp=Z,7.9nm,1.2s
KNB **Kanab** 42.20 323 P P 19 18 02.0 +0.1
CCUT **Cedar City** 42.88 323 P P 19 18 08.3 +0.8
RSSD **Black Hills** 43.30 337 P P 19 18 11.7 +0.8
RSSD IAmb IAmb 19 18 13.3
comp=Z,13nm,1.6s
SHPR **Sheep Range** 43.31 321 P P 19 18 12.2 +1.3
SHPR IAmb IAmb 19 18 14.3
comp=Z,6.9nm,1.1s
SPR3 **Spring Creek 3** 44.41 324 P P 19 18 20.2 +0.3
PD31 **Pinedale Array** 44.58 332 P P 19 18 21.1 0.0
PDAR **Pinedale Array** 44.58 332 P P 19 18 20.8 -0.3
comp=Z,0.8nm,0.8s,baz=133,slow=8.7,SNR=6.3
PDAR **Pinedale Array** 44.58 332 P P 19 18 21.1 0.0
NV11 **Mina Array Sit** 46.37 321 P P 19 18 35.8 +0.5
NVAR **Mina Array Bea** 46.46 321 P P 19 18 37.1 +1.1
comp=Z,1.5nm,0.5s,baz=129,slow=8.7,SNR=8.6
NVAR **Mina Array Bea** 46.46 321 P P 19 18 37.0 +1.0
PLCA **Paso Flores** 46.81 167 P P 19 18 37.5 -1.0
comp=Z,1.2nm,0.8s,baz=342,slow=9.6,SNR=3.4
PLCA **Paso Flores** 46.81 167 P P 19 18 37.7 -0.9
WVOR **Wild Horse Val** 49.12 325 P P 19 18 56.6 +0.1
ORV **Oroville** 49.14 320 P P 19 18 57.0 +0.4
ORV IAmb IAmb 19 19 00.8
comp=Z,8.3nm,1.4s
F07A **Phinny Hill Vi** 52.05 328 P P 19 19 17.5 -0.9
YKA **Yellowknife Ar** 62.05 344 P P 19 20 28.4 -0.6
comp=Z,3.1nm,1.0s,baz=139,slow=6.6,SNR=17
DLBC **Dease Lake** 64.67 335 P P 19 20 47.5 +1.1
comp=Z,4.2nm,0.9s,baz=97,slow=4.1,SNR=7.9
DLBC **Dease Lake** 64.67 335 P P 19 20 47.1 +0.6
RES **Resolute Bay** 70.02 357 P P 19 21 21.3 +1.3
RES IAmb IAmb 19 21 22.4
comp=Z,3.2nm,1.0s
INK **Inuvik** 71.73 342 P P 19 21 30.9 +0.4
comp=Z,5.2nm,1.0s,baz=128,slow=6.2,SNR=11
INK **Inuvik** 71.73 342 P P 19 21 31.1 +0.6
IL31 **74.74 336** P P 19 21 48.6 +0.3
IL31 IAmb IAmb 19 21 51.0
comp=Z,5.9nm,1.2s
ILAR **Eielson Array** 74.74 336 P P 19 21 48.8 +0.3
comp=Z,2.1nm,0.8s,baz=117,slow=3.6,SNR=14
ILAR **Eielson Array** 74.74 336 P P 19 21 48.4 0.0
ESDC **Sonseca Array** 78.11 51 P P 19 22 09.8 +1.7
comp=Z,1.5nm,0.9s,baz=265,slow=5.1,SNR=6.1
ESDC **Sonseca Array** 78.11 51 P P 19 22 09.3 +1.2
ESDC IAmb IAmb 19 22 11.8
comp=Z,3.9nm,1.1s
TORD **Torodi Ar. Bea** 83.36 77 P P 19 22 36.5 -0.1
comp=Z,0.4nm,0.5s,baz=298,slow=5.5,SNR=3.0
H11N3 **WAKE ISLAND Hy** 107.42 292 T T 21 24 31.9
baz=78,slow=75,SNR=19
H11N2 **WAKE ISLAND Hy** 107.43 292 T T 21 24 32.6
baz=78,slow=75,SNR=15
H11N1 **WAKE ISLAND Hy** 107.44 292 T T 21 24 33.3
baz=78,slow=75,SNR=19
MKAR **Makanchi Array** 126.75 13 PKP PKiKP 19 29 13.6 +0.4
comp=Z,0.4nm,0.9s,baz=46,slow=4.2,SNR=2.6
SONM **Songino Array** 126.82 352 PKP PKiKP 19 29 13.9 +0.5
comp=Z,0.1nm,0.5s,baz=55,slow=2.5,SNR=3.9
ASAR **Alice Springs** 140.22 239 PKP PKPdf 19 29 35.9 -2.6
comp=Z,0.5nm,1.0s,baz=122,slow=2.8,SNR=2.4
ASAR **Alice Springs** 140.22 239 PKPdf 19 29 36.0 -2.6
WRA **Warramunga Arr** 141.09 244 PKP PKPdf 19 29 38.1 -2.1
comp=Z,0.7nm,0.9s,baz=106,slow=2.3,SNR=1.8
WRA **Warramunga Arr** 141.09 244 PKPdf 19 29 38.6 -1.6
CMAR **Chiang Mai Arr** 156.67 356 PKP PKPdf 19 30 06.3 +1.3
comp=Z,0.3nm,0.7s,baz=307,slow=3.3,SNR=4.2
CMAR PKPab PKPab 19 30 34.8 +0.9
comp=Z,0.4nm,0.7s,baz=339,slow=4.8,SNR=3.5
CMAR **Chiang Mai Arr** 156.67 356 PKPdf 19 30 05.0 -0.1

IDC 25 19:11:47.4±5.1, **27.76N**×**84.27E**, **h0**km, **mb3.4**/1, **mb1 3.5**/3, **mb1mx3.1**/35, **mbtmp3.2**/3, **ML3.3**/2, **Error ellipse: s-maj=187.3km s-min=35.7km az=64.0, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.36**	**121**	Pn	Pn	19 15 39.3	+0.8
	0.0nm,0.3s,baz=308,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**19.06**	**356**	P	P	19 16 11.4	+0.2
	0.1nm,0.3s,baz=173,slow=12,SNR=6.8						
WRA	**Warramunga Arr**	**67.79**	**129**	P	P	19 22 47.2	-0.2
	0.4nm,0.8s,baz=312,slow=7.7,SNR=1.5						

IDC 25 19:20:00.2±4.1, **28.10N**×**85.27E**, **h0**km, **mb3.3**/2, **mb1 3.5**/3, **mb1mx3.2**/29, **mbtmp3.3**/3, **ML3.4**/1, **Error ellipse: s-maj=122.7km s-min=36.0km az=76.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.81**	**354**	P	P	19 24 21.3	0.0
	0.1nm,0.3s,baz=174,slow=11,SNR=9.3						
SONM	**Songino Array**	**25.65**	**34**	P	P	19 25 31.7	0.0
	0.2nm,0.5s,baz=230,slow=7.8,SNR=1.8						
WRA	**Warramunga Arr**	**67.32**	**130**	P	P	19 30 57.2	0.0
	0.5nm,0.9s,baz=320,slow=6.5,SNR=1.6						

*IDC **25** 19:20:03.4±2.3, 43°.51N×105°.18W, h0km, mb1 3.2/3, mb1mx3.1/32, mbtmp3.0/3, ML2.2/2, Error ellipse: s-maj=48.7km s-min=9.6km az=151.0*
*NEIC **25** 19:20:05.9±1.9, 43°.67N±0°.05×105°.14W±0°.08, h0km±2km, ML3.3/47, Error ellipse: s-maj=10.6km s-min=8.1km az=109.0*

ISC 25 19:20:05.0±1.1, **43°.70N**±0°.06×**105°.11W**±0°.06, **h0**km, **n41**, σ1§**04**/41, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.89**	**61**	Pn	Pn	19 20 24.6	-0.3
K22A	**Casper**	**1.47**	**225**		Pn	19 20 30.9	-2.0
PHWY	**Pilot Hill**	**2.41**	**186**	Pn	Pn	19 20 46.2	+0.4
RWWY	**Rawlins**	**2.53**	**218**	Pn	Pn	19 20 47.1	-0.5
RWWY				IAML		19 21 23.6	
	206nm,0.8s						
RWWY				IAML		19 21 29.2	
	222nm,0.8s						
LAO	**LASA Array**	**3.09**	**346**		Pn	19 20 55.4	+0.3
RLMT	**Red Lodge**	**3.30**	**297**		Pn	19 20 59.5	+1.3
RLMT				IAML		19 21 56.1	
	58nm,0.5s						
RLMT				IAML		19 22 04.8	
	62nm,0.9s						
PD31	**Pinedale Array**	**3.38**	**256**		Pn	19 20 59.3	+0.1
PDAR	**Pinedale Array**	**3.38**	**256**	Pn	Pn	19 21 00.4	+1.1
	2.0nm,0.3s,baz=77,slow=15,SNR=33						
PDAR				Pg	Pb	19 21 05.5	-0.4
	5.4nm,0.3s,baz=74,slow=17,SNR=22						
PDAR				Lg	Lg	19 21 46.0	
	12nm,0.3s,baz=78,slow=34,SNR=13						
PDAR	**Pinedale Array**	**3.38**	**256**		Pn	19 21 00.1	+0.9
BW06	**Boulder Array**	**3.38**	**256**		Pn	19 20 59.3	0.0
BW06				IAML		19 21 50.3	
	70nm,0.7s						
BW06				IAML		19 21 58.7	
	46nm,0.7s						
OGNE	**Ogallala**	**3.57**	**139**		Pn	19 21 03.3	+1.5
YNE	**Yellowstone No**	**3.75**	**292**		Pn	19 21 05.0	+0.7
YNE				IAML		19 22 06.8	
	comp=E,62nm,0.7s						
YMP	**Mirror Lake Pl**	**3.77**	**288**		Pn	19 21 05.9	+1.2
ISCO	**Idaho Springs**	**3.91**	**186**		Pn	19 21 07.8	+1.2
ISCO				IAML		19 23 15.6	
	comp=E,34nm,3.9s						
LOHW	**Long Hollow**	**3.99**	**271**		Pn	19 21 08.4	+0.9
LOHW				IAML		19 22 13.0	
	comp=E,28nm,0.8s						
LOHW				IAML		19 22 16.8	
	comp=E,27nm,0.8s						
H17A	**Grant Village**	**4.00**	**282**		Pn	19 21 08.8	+1.1
H17A				IAML		19 22 15.5	
	comp=N,36nm,0.9s						
H17A				IAML		19 22 15.7	
	comp=E,39nm,0.7s						
FLWY	**Flagg Ranch**	**4.06**	**277**		Pn	19 21 10.1	+1.6
FLWY				IAML		19 22 25.2	
	comp=E,38nm,2.3s						
MOOW	**Moose Ponds**	**4.08**	**273**		Pn	19 21 10.2	+1.3
SNOW	**Snow King Moun**	**4.11**	**269**		Pn	19 21 10.6	+1.4
SNOW				IAML		19 22 36.2	
	comp=E,45nm,2.0s						
YPP	**Pitchstone Pla**	**4.15**	**280**		Pn	19 21 09.9	+0.1
YPP				IAML		19 23 39.5	
	comp=N,34nm,5.0s						
REDW	**Red Top Meadow**	**4.19**	**267**		Pn	19 21 09.1	-1.2
REDW				IAML		19 22 24.7	
	comp=N,54nm,0.9s						
O20A	**White River Ci**	**4.26**	**214**		Pn	19 21 11.8	+0.5
O20A				IAML		19 22 37.2	
	comp=E,52nm,0.9s						
YHB	**Horse Butte**	**4.50**	**286**	Pn	Pn	19 21 14.6	+0.1
SMCO	**Snowmass**	**4.73**	**198**		Pn	19 21 19.2	+1.3
SMCO				IAML		19 22 39.3	
	comp=E,30nm,1.0s						
SMCO				IAML		19 23 54.8	
	comp=E,22nm,4.3s						
BOZ	**Bozeman (W)**	**5.03**	**294**		Pn	19 21 22.1	+0.4
BOZ				IAML		19 23 50.4	
	comp=E,15nm,4.8s						
BOZ				IAML		19 24 06.7	
	comp=E,16nm,4.8s						
KSCO	**Kaye Shedlock'**	**5.04**	**157**		Pn	19 21 21.5	-0.4
HWUT	**Hardware Ranch**	**5.20**	**249**		Pn	19 21 24.4	+0.3
HWUT				IAML		19 23 03.2	
	comp=E,24nm,0.8s						
HWUT				IAML		19 23 10.3	
	comp=E,21nm,0.9s						
TCUT	**Toone Canyon**	**5.33**	**243**		Pn	19 21 26.3	+0.3
EGMT	**Eagleton**	**5.41**	**325**		Pn	19 21 28.5	+1.5
HRY	**Holter Researc**	**5.62**	**305**		Pn	19 21 30.7	+0.8
LRM	**Limekiln Ridge**	**5.64**	**295**		Pn	19 21 31.7	+1.4
PV07	**Paradox Valley**	**5.89**	**208**	Pn	Pn	19 21 33.8	0.0
SDCO	**Great Sand Dun**	**5.95**	**183**	Pn	Pn	19 21 36.3	+1.7
P17A	**Butcher Ranch,**	**5.97**	**227**		Pn	19 21 34.4	-0.3
PV16	**Nyswonger Mesa**	**6.10**	**209**		Pn	19 21 37.5	+0.9
ECSD	**EROS Data Cent**	**6.16**	**87**	Pn	Pn	19 21 37.5	+0.3
T25A	**Trinidad**	**6.57**	**175**	Pn	Pn	19 21 44.2	+1.2
DUG	**Dugway, Tooele**	**6.72**	**241**	Pn	Pn	19 21 44.8	-0.3
ULM	**Lac du Bonnet**	**9.10**	**41**	Pn	Pn	19 22 15.4	-2.0
	comp=E,0.1nm,0.3s,baz=220,slow=17,SNR=1.5						
ULM				Lg	Lg	19 24 49.1	
	comp=E,0.1nm,0.3s,baz=97,slow=5.7,SNR=3.0						
I56US	**NEWPORT INFRAS**	**9.53**	**303**	*i*		20 15 35.0	
	baz=115,slow=327,SNR=9.7						
YKA	**Yellowknife Ar**	**19.63**	**347**	P	Pn	19 24 36.4	+0.2
	comp=E,0.0nm,0.3s,baz=158,slow=10.0,SNR=1.6						

IDC 25 19:34:30.6±4.0, **27.62N**×**85.69E**, **h0**km, **mb3.4**/2, **mb1 3.5**/3, **mb1mx3.2**/34, **mbtmp3.3**/3, **ML3.1**/1, **MS3.2**/1, **Ms1 3.4**/1, **ms1mx2.5**/36, **Error ellipse: s-maj=119.0km s-min=36.0km az=76.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.22**	**124**	LR	LR	19 44 34.8	
	comp=Z,88nm,18.6s,baz=282,slow=40						
MKAR	**Makanchi Array**	**19.33**	**353**	P	P	19 38 57.4	0.0
	0.1nm,0.3s,baz=172,slow=10,SNR=4.3						
SONM	**Songino Array**	**25.84**	**33**	P	P	19 40 03.8	0.0
	0.3nm,0.6s,baz=232,slow=8.4,SNR=4.6						
WRA	**Warramunga Arr**	**66.72**	**130**	P	P	19 45 23.8	0.0
	0.5nm,0.9s,baz=320,slow=6.6,SNR=2.5						

*IDC **25** 19:44:22.2±1.3, 27°.82N×85°.40E, h0km, mb3.8/9, mb1 3.8/11, mb1mx3.5/53, mbtmp3.8/11, ML3.5/2, Error ellipse: s-maj=42.0km s-min=20.5km az=59.0*

ISC 25 19:44:24.9±1.5, **27.9N**±0°.2×**85.3E**±0°.3, **h18**km, **n11**, σ0§**64**/11, **mb3.7**/9, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**17.18**	**332**	P	P	19 48 24.8	-0.9
	0.1nm,0.3s,baz=145,slow=12,SNR=1.6						
MKAR	**Makanchi Array**	**19.06**	**354**	P	Pn	19 48 46.7	-0.3
	0.4nm,0.3s,baz=171,slow=11,SNR=26						
KURBB	**Kurchatov Arra**	**23.32**	**349**	P	P	19 49 32.4	+0.6
	1.3nm,0.7s,baz=170,slow=10,SNR=17						
SONM	**Songino Array**	**25.82**	**34**	P	P	19 49 55.3	+0.2
	1.0nm,0.5s,baz=222,slow=10.0,SNR=12						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	P	19 49 57.9	+0.7
	1.0nm,0.4s,baz=186,slow=9.0,SNR=8.5						
TIXI	**Tiksi**	**49.90**	**17**	P	P	19 53 16.2	-0.7
	1.3nm,0.4s,baz=164,slow=0.3,SNR=6.4						
FINES	**FINESS Array B**	**51.31**	**328**	P	P	19 53 28.3	+0.6
	1.5nm,0.5s,baz=101,slow=8.3,SNR=18						
ARCES	**ARCESS Array B**	**53.73**	**338**	P	P	19 53 46.3	+0.8
	1.7nm,0.5s,baz=103,slow=8.0,SNR=16						
NOA	**NORSAR Array B**	**58.41**	**327**	P	P	19 54 18.8	-0.3
	0.4nm,0.7s,baz=91,slow=6.1,SNR=1.1						
WRA	**Warramunga Arr**	**67.11**	**130**	P	P	19 55 17.7	0.0
	0.7nm,0.5s,baz=326,slow=6.4,SNR=1.6						
ASAR	**Alice Springs**	**69.41**	**133**	P	P	19 55 31.9	-0.1
	0.2nm,0.5s,baz=322,slow=7.0,SNR=1.9						

*IDC **25** 19:45:58.9±1.1, 28°.09N×84°.59E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.5/51, mbtmp3.7/11, ML3.7/1, Error ellipse: s-maj=35.9km s-min=21.8km az=66.0*

ISC 25 19:46:00.4±1.1, **28.1N**±0°.2×**84.6E**±0°.2, **h10**km, **n11**, σ0§**36**/11, **mb3.7**/10, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.74**	**355**	P	P	19 50 19.6	+0.2
	0.2nm,0.3s,baz=177,slow=12,SNR=7.4						
KURBB	**Kurchatov Arra**	**22.95**	**350**	P	P	19 51 04.5	-0.2
	0.6nm,0.5s,baz=173,slow=10,SNR=8.6						
ZALV	**Zalesovo Beam**	**25.82**	**0**	P	P	19 51 31.8	+0.2
	1.0nm,0.5s,baz=186,slow=10,SNR=5.1						
SONM	**Songino Array**	**25.98**	**35**	P	P	19 51 33.7	+0.3
	0.5nm,0.6s,baz=231,slow=9.3,SNR=4.2						
TIXI	**Tiksi**	**49.84**	**17**	P	P	19 54 52.6	-0.7
	0.7nm,0.3s,baz=246,slow=2.4,SNR=3.3						
FINES	**FINESS Array B**	**50.75**	**328**	P	P	19 55 00.7	+0.5
	0.8nm,0.5s,baz=109,slow=5.7,SNR=7.3						
ARCES	**ARCESS Array B**	**53.24**	**338**	P	P	19 55 19.1	+0.3
	2.2nm,0.8s,baz=101,slow=9.3,SNR=1.3						
WRA	**Warramunga Arr**	**67.79**	**129**	P	P	19 56 58.9	+0.1
	0.4nm,0.6s,baz=324,slow=6.3,SNR=2.5						
ASAR	**Alice Springs**	**70.07**	**132**	P	P	19 57 13.1	+0.1
	0.3nm,0.5s,baz=316,slow=6.1,SNR=1.7						
TORD	**Torodi Ar. Bea**	**77.74**	**278**	P	P	19 57 57.9	-0.3
	0.3nm,0.6s,baz=52,slow=5.9,SNR=2.2						
ILAR	**Eielson Array**	**79.18**	**20**	P	P	19 58 05.2	0.0
	0.3nm,0.6s,baz=310,slow=4.6,SNR=4.3						

*IDC **25** 19:51:49.5±4.9, 37°.42N×72°.23E, h98km±34km, mb3.3/3, mb1 3.2/7, mb1mx2.9/46, mbtmp3.4/7, Error ellipse: s-maj=66.9km s-min=30.9km az=145.0*
*NNC **25** 19:51:55.6±2.8, 38°.21N×71°.89E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=23.0km s-min=16.5km az=163.0*

ISC 25 19:51:54.1±1.5, **37.9N**±0°.1×**71.82E**±0°.09, **h113**km, **n19**, σ1§**97**/25, **mb3.5**/3, **2C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.51**	**18**	P	Pn	19 53 00.9	+0.2
	SNR=60						
UCH	**Uchtor**	**4.83**	**25**	P	Pn	19 53 04.9	-0.2
	SNR=20						
EKS2	**Erkin-Say**	**5.03**	**17**	P	Pn	19 53 08.2	+0.7
	SNR=21						
AAK	**Ala-Archa**	**5.20**	**22**	P	Pn	19 53 09.9	+0.1
	2.7nm,0.3s,baz=181,slow=6.5,SNR=40						
AAK				S	Sn	19 54 06.9	-1.8
	2.0nm,0.3s,baz=329,slow=21,SNR=23						
AAK	**Ala-Archa**	**5.20**	**22**	P	Pn	19 53 10.1	+0.3
	SNR=14						
AAK	**Ala-Archa**	**5.20**	**22**	⇑P	Pn	19 53 09.8	+0.1
	3.2nm,0.4s						
AAK				⇓S	Sn	19 54 07.6	-1.1
	32nm,0.8s						
KK31	**Karatay Array**	**5.34**	**350**	P	Pn	19 53 12.7	+1.2
	9.8nm,0.5s,baz=163,slow=12,SNR=103						
KK31				S	Sn	19 54 11.8	0.0
	7.0nm,0.3s,baz=169,slow=18,SNR=14						
ULHL	**Ulahol**	**5.55**	**36**	P	Pn	19 53 12.8	-1.7
	SNR=11						
CHMS	**Chumysh**	**5.61**	**23**	P	Pn	19 53 15.2	+0.1
	SNR=5.2						
TKM2	**Tokmak 2**	**5.83**	**29**	⇓P	Pn	19 53 19.3	+1.0
	1.9nm,0.7s						
TKM2				⇓S	Sn	19 54 23.7	-0.2
	5.4nm,0.8s						
GEYT	**Alibeck**	**10.83**	**275**	P	Pn	19 54 25.7	-0.2
	0.3nm,0.3s,baz=85,slow=14,SNR=2.1						
GEYT				S	Sn	19 56 21.3	-3.7
	0.4nm,0.3s,baz=84,slow=18,SNR=2.2						
MKAR	**Makanchi Array**	**11.82**	**38**	P	Pn	19 54 35.5	-3.5
	0.0nm,0.3s,baz=229,slow=15,SNR=1.3						
KURBB	**Kurchatov Arra**	**13.64**	**18**	P	Pn	19 55 02.8	+0.1
	0.0nm,0.3s,baz=208,slow=10,SNR=5.9						
AB31	**Akbulak array**	**14.26**	**327**	⇑P	Pn	19 55 11.8	+1.1
	0.5nm,0.5s,baz=145,slow=12,SNR=20						
AB31				S	Sn	19 57 44.2	-3.7
	0.6nm,0.4s,baz=158,slow=21,SNR=11						
AKTO	**Aktyubinsk**	**15.97**	**326**	P	P	19 55 36.1	+2.6
	0.3nm,0.3s,baz=123,slow=11,SNR=3.1						
AKTO	**Aktyubinsk**	**15.97**	**326**	⇓P	P	19 55 38.4	+4.9
	3.1nm,0.9s						
FINES	**FINESS Array B**	**36.74**	**325**	P	P	19 58 51.4	+1.3
	2.4nm,1.1s,baz=120,slow=13,SNR=3.8						
NOA	**NORSAR Array B**	**43.70**	**322**	P	P	19 59 48.6	+1.0
	0.8nm,0.9s,baz=85,slow=7.2,SNR=2.0						
TORD	**Torodi Ar. Bea**	**66.40**	**269**	P	P	20 02 30.4	-0.9
	0.2nm,0.5s,baz=57,slow=6.3,SNR=1.5						

JMA 25 19:54:49.3, 35°.16N×139°.13E, h5km±1km, **M0.8, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOD2	**Odawara 2**	**0.11**	**342**	P	Pg	19 54 51.8	+0.2
JOD2				S	Sg	19 54 54.1	+1.0
AJI	**Ajiro2**	**0.12**	**195**	P	Pg	19 54 52.0	+0.3
KTJ3	**Kamata3**	**0.23**	**192**	P	Pg	19 54 53.8	0.0
KTJ3				S	Sg	19 54 57.3	+0.5

IDC 25 19:54:57.0±2.1, **33.26N**×**138.98E**, **h0**km, **mb3.3**/2, **mb1 3.5**/3, **mb1mx3.1**/52, **mbtmp3.2**/3, **ML2.0**/1, **Error ellipse: s-maj=137.3km s-min=24.9km az=85.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**3.33**	**349**	Pn	Pn	19 55 49.5	-0.9
	0.2nm,0.3s,baz=167,slow=15,SNR=20						
MJAR				Sn	Sn	19 56 33.1	+2.3
	0.1nm,0.3s,baz=186,slow=25,SNR=3.3						
WRA	**Warramunga Arr**	**53.09**	**185**	P	P	20 04 15.6	-0.6
	0.4nm,0.7s,baz=2.4,slow=7.6,SNR=5.0						
ASAR	**Alice Springs**	**56.82**	**186**	P	P	20 04 43.7	+0.5
	0.3nm,0.8s,baz=1.5,slow=6.8,SNR=5.0						

*GUC **25** 19:56:05.6±0.6, 23°.96S×67°.32W, h242km±8km, ML4.2*
*IDC **25** 19:56:06.7±2.8, 23°.84S×67°.63W, h254km±30km, mb2.8/2, mb1 3.1/4, mb1mx2.9/22, mbtmp3.5/4, Error ellipse: s-maj=48.1km s-min=22.5km az=90.0*

ISC 25 19:56:05.3±1.4, **24.00S**±0°.06×**67.4W**±0°.2, **h239**km±14km, **n17**, σ1§**03**/31, **8C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.98**	**314**	⇑*i*P	Pn	19 56 47.0	-0.1
LVC				*i* S	S	19 57 19.3	-0.5
PB15	**IPOC Station P**	**2.08**	**292**	⇑*i*P	Pn	19 56 48.6	+0.7
PB15				*i* S	S	19 57 21.3	+0.1
GO02	**Mina Guanaco**	**2.33**	**240**	*i* P	Pn	19 56 50.2	-0.2
GO02				*i* S	S	19 57 25.0	-0.7
GO02				IAML		19 57 27.4	
	comp=N,756nm,0.2s						
PB06	**IPOC Station P**	**2.40**	**302**	⇑*i*P	Pn	19 56 51.8	+0.9
PB06				*i* S	S	19 57 26.9	+0.2
PB06				IAML		19 57 29.0	
	comp=E,565nm,0.4s						
PB09	**IPOC Station P**	**2.79**	**321**	*i* P	Pn	19 56 56.0	+1.0
PB09				*i* S	S	19 57 34.8	+0.6
PB09				IAML		19 57 39.1	
	comp=E,127nm,0.4s						
PB05	**IPOC Station P**	**2.84**	**293**	⇑*i*P	Pn	19 56 56.8	+1.2
PB05				*i* S	S	19 57 35.0	0.0
PB05				IAML		19 57 38.4	
	comp=N,236nm,0.4s						
PB03	**IPOC Station P**	**2.93**	**311**	⇑*i*P	Pn	19 56 57.3	+0.7
PB03				*i* S	S	19 57 36.4	-0.5
PB10	**IPOC Station P**	**2.96**	**279**	⇑*i*P	Pn	19 56 58.2	+1.6
PB10				*i* S	S	19 57 37.3	+0.3
PB04	**IPOC Station P**	**3.05**	**302**	⇑*i*P	Pn	19 56 58.9	+1.1
PB04				*i* S	S	19 57 39.0	-0.2
PB07	**IPOC Station P**	**3.24**	**314**	⇑*i*P	Pn	19 57 00.8	+0.8
PB07				*i* S	S	19 57 42.7	-0.4
PB01	**IPOC Station P**	**3.53**	**326**	*e*P	Pn	19 57 03.6	+0.3
PB01				*i* S	S	19 57 48.3	-0.8
AC01	**Pan de Azucar**	**3.62**	**233**	⇓*i*P	Pn	19 57 03.5	-0.7
AC01				*i* S	S	19 57 48.8	-2.0
PB08	**IPOC Station P**	**4.18**	**336**	*e*P	Pn	19 57 12.4	+1.1
PB08				*i* S	S	19 58 03.3	0.0
LPAZ	**La Paz**	**7.71**	**355**	P	Pn	19 57 55.1	-0.4
LPAZ	comp=N,0.7nm,0.3s,baz=174,slow=7.0,SNR=14						
				S	S	19 59 21.6	-2.3
	comp=N,0.2nm,0.3s,baz=223,slow=19,SNR=2.2						
PLCA	**Paso Flores**	**16.90**	**188**	P	P	19 59 48.2	+1.6
	comp=N,0.1nm,0.3s,baz=351,slow=9.3,SNR=1.8						
TXAR	**Lajitas Array**	**63.48**	**325**	P	P	20 06 08.3	-2.0
	comp=N,0.2nm,0.9s,baz=137,slow=8.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**76.89**	**69**	P	P	20 07 32.3	+0.6
	comp=N,0.3nm,0.4s,baz=254,slow=5.2,SNR=2.5						

*BJI **25** 20:01:34.2±0.0, 23°.98N×122°.54E, h8km, mB5.3/64, mb5.2/83, ML5.3/12, Ms5.3/88, Ms7 5.3/84*
*MOS **25** 20:01:36.1±1.0, 24°.10N×122°.59E, h31km, mb5.6/61, MS5.0/15, Error ellipse: s-maj=5.8km s-min=3.5km az=118.1*
*NIED **25** 20:01:36.6, 23°.90N×122°.48E, h21km, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^17 Nm; Mrr0.19; Mθθ-0.49; Mφφ0.30; Mrθ0.89; Mθφ0.14; Mrφ0.43; Fault plane solution: M0 1.09000×10^17 NP1:φs65.00000°, δ84.00000°, λ69.00000°. NP2:φs320.00000°, δ22.00000°, λ164.00000°.*
*NEIC **25** 20:01:36.2±1.6, 23°.94N±0°.04×122°.54E±0°.05, h23km±3km, mb5.5/293, Mwr5.1/19, ML5.6(TAP) Error ellipse: s-maj=8.1km s-min=4.0km az=137.0*
*IDC **25** 20:01:36.7±1.5, 24°.15N×122°.64E, h24km±9km, mb5.0/50, mb1 5.1/54, mb1mx5.0/59, mbt

δ19.49205°,λ153.77777°. **NP2:**ϕ₀74.13921°,δ81.52163°, λ72.38353°. **Principal axes:** T Plg50.4288°, Azm324.5099°; N Plg17.4178°, Azm76.8196°; P Plg34.2169°, Azm179.1378°; **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.66**	**38**	P **Pn**	**20 01 49.8**	**-0.6**
JYNG				S **Sb**	**20 01 58.3**	**+0.3**
YOJ	**Yonaguni jima**	**0.70**	**41**	P **Pn**	**20 01 50.6**	**-0.4**
YOJ				*e*S **Sb**	**20 01 59.7**	**+0.4**
YOJ	**Yonaguni jima**	**0.70**	**41**	⇓*i*P **Pn**	**20 01 50.6**	**-0.4**
	baz=39					
YOJ				*i* S **Sb**	**20 01 59.8**	**+0.4**
	baz=39					
YOJ	**Yonaguni jima**	**0.70**	**41**	**Pn**	**20 01 50.6**	**-0.4**
YOJ				Sn **Sb**	**20 01 59.5**	**+0.2**
HWA	**Hwalien**	**0.82**	**273**	⇑*i*P **Pb**	**20 01 52.2**	**+0.1**
	baz=273					
HWA				*e*S **Sn**	**20 02 04.2**	**+0.2**
	baz=273					
EWUT	**Wuta**	**0.83**	**308**	⇓*i*P **Pn**	**20 01 52.6**	**-0.2**
	baz=307					
EWUT				S **Sn**	**20 02 04.6**	**+0.2**
	baz=307					
TWD	**Chiawan**	**0.84**	**280**	⇑*i*P **Pb**	**20 01 52.3**	**-0.1**
	baz=280					
TWD				*i* S **Sn**	**20 02 04.1**	**-0.4**
	baz=280					
ENA	**Nanau**	**0.85**	**306**	⇓*e*P **Pn**	**20 01 53.1**	**0.0**
	baz=305					
ENA				*e*S **Sn**	**20 02 05.8**	**+1.0**
	baz=305					
NACB	**Ninganchiao**	**0.86**	**286**	⇑*i*P **Pb**	**20 01 52.7**	**-0.1**
	baz=286					
NACB				S **Sn**	**20 02 05.1**	**0.0**
	baz=286					
NACB	**Ninganchiao**	**0.86**	**286**	**Pb**	**20 01 52.6**	**-0.2**
TWC	**Suao**	**0.90**	**319**	⇓*i*P **Pn**	**20 01 53.6**	**-0.1**
	baz=318					
TWC				S **Sn**	**20 02 06.0**	**0.0**
	baz=318					
ETLH	**Xiulin Townshi**	**0.97**	**286**	⇑*i*P **Pb**	**20 01 54.5**	**-0.2**
	baz=286					
ETLH				*e*S **Sn**	**20 02 08.4**	**+0.5**
	baz=286					
ESL	**Shilin**	**0.98**	**263**	⇑*i*P **Pb**	**20 01 53.9**	**-0.9**
	baz=263					
ESL				*e*S **Sb**	**20 02 06.3**	**-1.2**
	baz=263					
NDS	**Dongshan**	**1.00**	**314**	⇓*i*P **Pn**	**20 01 55.6**	**+0.5**
	baz=313					
NDS				*e*S **Sn**	**20 02 09.4**	**+0.9**
	baz=313					
EGFH	**Guangfu**	**1.02**	**255**	⇑*i*P **Pb**	**20 01 54.6**	**-0.8**
	baz=256					
EGFH				*e*S **Sb**	**20 02 08.1**	**-0.3**
	baz=256					
ILA	**Ilan**	**1.08**	**321**	⇑P **Pb**	**20 01 57.3**	**+0.9**
	baz=320					
ILA				*e*S **Sn**	**20 02 12.5**	**+2.1**
	baz=320					
HGSD	**Ruisui**	**1.08**	**246**	P **Pn**	**20 01 55.4**	**-0.8**
	baz=247					
HGSD				*e*S **Sb**	**20 02 08.4**	**-1.8**
	baz=247					
TWE	**Neicheng**	**1.09**	**316**	⇑*i*P **Pb**	**20 01 57.2**	**+0.5**
	baz=315					
TWE				*e*S **Sn**	**20 02 13.5**	**+2.7**
	baz=315					
NTC	**Toucheng**	**1.10**	**326**	⇑*i*P **Pb**	**20 01 57.3**	**+0.4**
	baz=325					
NTC				*e*S **Sn**	**20 02 13.4**	**+2.3**
	baz=325					
ENTT	**Nioudou**	**1.11**	**310**	⇑*i*P **Pb**	**20 01 57.4**	**+0.4**
	baz=309					
ENTT				*e*S **Sn**	**20 02 13.1**	**+2.0**
	baz=309					
NDT	**Datong Townshi**	**1.12**	**307**	⇑P **Pb**	**20 01 57.6**	**+0.4**
	baz=306					
NDT				*e*S **Sn**	**20 02 11.9**	**+0.4**
	baz=306					
NNSB	**Datong**	**1.13**	**296**	⇑*i*P **Pb**	**20 01 57.5**	**0.0**
	baz=295					
NNSB				*e*S **Sn**	**20 02 12.8**	**+0.8**
	baz=295					
NNS	**Nan Shan**	**1.15**	**296**	⇑*i*P **Pb**	**20 01 57.7**	**-0.1**
	baz=296					
NNS				*e*S **Sn**	**20 02 12.8**	**+0.5**
	baz=296					
WHF	**Hehuan Shan**	**1.15**	**281**	⇑*i*P **Pn**	**20 01 57.3**	**-0.3**
	baz=281					
WHF				*e*S **Sb**	**20 02 12.6**	**0.0**
	baz=281					
TWB1	**Santiao Chiao**	**1.17**	**337**	⇑P **Pb**	**20 01 58.0**	**0.0**
	baz=336					
TWB1				S **Sn**	**20 02 13.7**	**+1.1**
	baz=336					
FUSS	**Fushou**	**1.19**	**285**	⇑*i*P **Pb**	**20 01 58.2**	**-0.3**
	baz=285					
FUSS				*e*S **Sn**	**20 02 13.7**	**+0.1**
	baz=285					
IRIF	**Iriomote-Funau**	**1.19**	**70**	P **Pb**	**20 01 58.6**	**+0.2**
IRIF				S **Sn**	**20 02 14.4**	**+1.2**
HATJ	**Hateruma jima**	**1.20**	**84**	P **Pb**	**20 01 58.9**	**+0.4**
HATJ				*e*S **Sn**	**20 02 14.8**	**+1.4**
TIPB	**Shuangxi**	**1.20**	**329**	⇑*i*P **Pb**	**20 01 58.7**	**+0.1**
	baz=328					
TIPB				*e*S **Sb**	**20 02 15.2**	**+1.4**
	baz=328					
OWD	**Renai**	**1.21**	**271**	⇑P **Pn**	**20 01 57.9**	**-0.3**
	baz=271					
OWD				*e*S **Sn**	**20 02 14.2**	**+0.3**
	baz=271					
CHGB	**Renai**	**1.22**	**276**	⇑*i*P **Pn**	**20 01 58.5**	**+0.1**
	baz=276					
YULB	**Yu-li**	**1.23**	**244**	P **Pn**	**20 01 58.0**	**-0.3**
	baz=245					
YULB				*e*S **Sn**	**20 02 13.6**	**-0.6**
	baz=245					
YULB	**Yu-li**	**1.23**	**244**	Pn **Pn**	**20 01 58.2**	**-0.1**
YULB				Sn **Sn**	**20 02 13.4**	**-0.8**
EYUL	**Yuli**	**1.23**	**242**	⇓*i*P **Pn**	**20 01 58.0**	**-0.2**
	baz=243					
EYUL				*e*S **Sb**	**20 02 14.4**	**-0.2**
	baz=243					
NWLT	**Wulai**	**1.24**	**313**	⇑P **Pb**	**20 01 59.5**	**+0.2**
	baz=312					
NWLT				*e*S **Sb**	**20 02 16.0**	**+1.2**
	baz=312					
TWF1	**Yuli**	**1.25**	**243**	⇓*i*P **Pn**	**20 01 58.2**	**-0.4**
	baz=243					
TWF1				*e*S **Sn**	**20 02 14.1**	**-0.5**
	baz=243					
TWT	**Tachien**	**1.25**	**285**	⇑P **Pb**	**20 01 59.5**	**-0.1**
	baz=284					
TWT				*e*S **Sb**	**20 02 15.9**	**+0.6**
	baz=284					
VWDT	**VWDT**	**1.26**	**262**	⇑*i*P **Pn**	**20 01 58.9**	**+0.2**
	baz=262					
VWDT				S **Sn**	**20 02 14.8**	**-0.1**
	baz=262					
YHNB	**Yeheng**	**1.26**	**306**	⇑*e*P **Pb**	**20 01 59.6**	**0.0**
	baz=305					
YHNB	**Yeheng**	**1.26**	**306**	Pn **Pb**	**20 01 59.6**	**0.0**
TDCB	**Techi**	**1.27**	**285**	⇑*i*P **Pb**	**20 01 59.5**	**-0.3**
	baz=284					
TDCB				*e*S **Sn**	**20 02 15.2**	**-0.1**
	baz=284					
NSK	**Sanguang**	**1.28**	**306**	⇑P **Pb**	**20 01 59.8**	**-0.1**
	baz=305					
NSK				*e*S **Sb**	**20 02 16.0**	**+0.1**
	baz=305					
NWF	**Wu-fen Shan**	**1.31**	**330**	⇑*e*P **Pb**	**20 02 00.3**	**-0.1**
	baz=329					
WFSB	**Wu-fen Shan**	**1.31**	**330**	⇑P **Pb**	**20 02 00.3**	**-0.1**
	baz=329					
WFSB				*e*S **Sb**	**20 02 18.7**	**+1.9**
	baz=329					
FULB	**Fuli**	**1.33**	**237**	⇓*i*P **Pn**	**20 01 58.7**	**-0.9**
	baz=237					
FULB				S **Sn**	**20 02 15.4**	**-1.2**
	baz=237					
CHKT	**Chengkung**	**1.33**	**232**	⇓*i*P **Pn**	**20 01 58.6**	**-1.1**
	baz=232					
CHKT				*e*S **Sn**	**20 02 14.5**	**-2.2**
	baz=232					
TWA	**Mucha**	**1.34**	**321**	⇑P **Pb**	**20 02 01.0**	**+0.1**
	baz=321					
TWA				*e*S **Sb**	**20 02 19.9**	**+2.3**
	baz=321					
NHDH	**Xindian Distri**	**1.36**	**319**	⇑P **Pb**	**20 02 01.5**	**+0.3**
	baz=318					
NHDH				*e*S **Sb**	**20 02 20.0**	**+1.8**
	baz=318					
TNOU	**National Taiwa**	**1.38**	**331**	⇑P **Pb**	**20 02 00.9**	**-0.7**
	baz=330					
TNOU				*e*S **Sb**	**20 02 19.9**	**+1.0**
	baz=330					
TATO	**Taipei**	**1.39**	**319**	⇑*e*P **Pb**	**20 02 01.9**	**+0.1**
	baz=318					
TATO				*e*S **Sb**	**20 02 19.7**	**+0.6**
	baz=318					
TATO	**Taipei**	**1.39**	**319**	**Pb**	**20 02 01.7**	**-0.1**
TATO	**Taipei**	**1.39**	**319**	P **Pb**	**20 02 02.0**	**+0.2**
JKRS	**Kuro-shima**	**1.41**	**77**	P **Pb**	**20 02 01.9**	**-0.2**
JKRS				*e*S **Sb**	**20 02 21.3**	**+1.6**
WPL	**Puli Township**	**1.41**	**273**	⇑P **Pb**	**20 02 01.4**	**-0.8**
	baz=273					
WPL				*e*S **Sn**	**20 02 19.2**	**+0.5**
	baz=273					
TAP1	**Taipei**	**1.42**	**321**	*e*P **Pb**	**20 02 02.1**	**-0.1**
	baz=320					
SSLB	**Suanglung**	**1.42**	**264**	⇑P **Pn**	**20 02 01.1**	**+0.1**
	baz=264					
SSLB				*e*S **Sn**	**20 02 18.4**	**-0.6**
	baz=264					
SSLB	**Suanglung**	**1.42**	**264**	Pn **Pn**	**20 02 01.1**	**+0.1**
TAP	**Taipei**	**1.43**	**321**	*e*P **Pn**	**20 02 01.4**	**+0.5**
	baz=320					
TAP				*e*S **Sb**	**20 02 22.1**	**+2.0**
	baz=320					
BACT	**New Taipei Cit**	**1.43**	**318**	*e*P **Pb**	**20 02 02.8**	**+0.2**
	baz=317					
BACT				*e*S **Sb**	**20 02 23.2**	**+2.8**
	baz=317					
DPDB	**Guoxing**	**1.44**	**274**	⇑P **Pb**	**20 02 02.1**	**-0.7**
	baz=274					
DPDB				*e*S **Sb**	**20 02 20.6**	**-0.1**
	baz=274					
EDH	**Donghe**	**1.46**	**229**	⇓*i*P **Pn**	**20 02 00.4**	**-1.0**
	baz=230					
EDH				S **Sn**	**20 02 17.4**	**-2.4**
	baz=230					
WCS	**Beigang Elemen**	**1.46**	**275**	⇑*e*P **Pb**	**20 02 02.4**	**-0.5**
	baz=275					
WCS				*e*S **Sb**	**20 02 22.1**	**+1.0**
	baz=275					
WHP	**Taichung City**	**1.46**	**284**	⇑P **Pb**	**20 02 02.6**	**-0.5**
	baz=281					
WHP				*e*S **Sb**	**20 02 21.6**	**+0.3**
	baz=281					
SMLT	**Sun Moon Lake**	**1.47**	**268**	⇑P **Pn**	**20 02 02.2**	**+0.6**
	baz=268					
SMLT				*e*S **Sb**	**20 02 21.3**	**-0.1**
	baz=268					
YM01	**YM01**	**1.48**	**325**	⇑*e*P **Pb**	**20 02 02.4**	**-0.9**
	baz=324					
YM01				*e*S **Sb**	**20 02 23.9**	**+2.2**
	baz=324					
NWRT	**Kuosheng**	**1.48**	**329**	*e*P **Pb**	**20 02 03.1**	**-0.1**
	baz=328					
NWRT				*e*S **Sb**	**20 02 21.9**	**+0.3**
	baz=328					
YM08	**YM08**	**1.50**	**327**	⇑*e*P **Pn**	**20 02 02.4**	**+0.4**
	baz=326					
YM08				*e*S **Sb**	**20 02 23.4**	**+1.1**
	baz=326					
TYC	**Yuchr**	**1.50**	**269**	⇑P **Pn**	**20 02 02.7**	**+0.6**
	baz=269					
TYC				*e*S **Sb**	**20 02 22.3**	**-0.1**
	baz=269					
NJD	**Zhudong**	**1.52**	**302**	⇑*e*P **Pb**	**20 02 04.3**	**+0.4**
	baz=301					
NJD				*e*S **Sb**	**20 02 24.3**	**+1.6**
	baz=301					
TWS1	**Kuangyinshan**	**1.52**	**320**	*e*P **Pb**	**20 02 03.5**	**-0.5**
	baz=319					
TWS1				*e*S **Sb**	**20 02 24.1**	**+1.1**
	baz=319					
NTY	**Taoyuan**	**1.53**	**314**	*e*P **Pb**	**20 02 03.9**	**-0.2**
	baz=313					
NTY				*e*S **Sb**	**20 02 23.9**	**+0.9**
	baz=313					
WHYT	**Xinyi Township**	**1.53**	**261**	⇑*e*P **Pb**	**20 02 03.2**	**-0.9**
	baz=261					
WHYT				*e*S **Sb**	**20 02 22.4**	**-0.7**
	baz=261					
LIOB	**Emei**	**1.53**	**298**	⇑*e*P **Pb**	**20 02 04.4**	**+0.2**
	baz=297					
LIOB				*e*S **Sb**	**20 02 24.5**	**+1.4**
	baz=297					
ANP	**Anpu**	**1.53**	**325**	⇑P **Pn**	**20 02 03.0**	**+0.4**
	baz=324					
ANP				*e*S **Sb**	**20 02 25.5**	**+2.2**
	baz=324					
NSTT	**Nanjuang**	**1.54**	**297**	⇑*e*P **Pb**	**20 02 04.4**	**+0.1**
	baz=297					
NSTT				*e*S **Sb**	**20 02 23.9**	**+0.6**
	baz=297					
ELDTW	**Lidau**	**1.55**	**242**	⇓P **Pn**	**20 02 02.3**	**-0.5**
	baz=242					
ELDTW				*e*S **Sn**	**20 02 21.1**	**-1.1**
	baz=242					
NTST	**Danshui**	**1.56**	**322**	*e*P **Pb**	**20 02 04.6**	**0.0**
	baz=321					
NTST				*e*S **Sb**	**20 02 25.4**	**+1.5**
	baz=321					
JIJ	**Ishigaki jima**	**1.56**	**74**	P **Pn**	**20 02 03.5**	**+0.7**
JIJ				S **Sb**	**20 02 23.2**	**-0.8**
TWY	**Chenhua**	**1.57**	**329**	⇑*e*P **Pb**	**20 02 03.8**	**-1.1**
	baz=328					
TWY				*e*S **Sb**	**20 02 26.6**	**+2.4**
	baz=328					
LDUT	**Ludao**	**1.57**	**217**	⇓*i*P **Pn**	**20 02 01.8**	**-1.1**
	baz=218					
LDUT				S **Sn**	**20 02 19.7**	**-2.9**
	baz=218					
NCU	**National Centr**	**1.58**	**311**	⇑*e*P **Pb**	**20 02 04.6**	**-0.4**
	baz=310					
NCU				*e*S **Sb**	**20 02 25.8**	**+1.2**
	baz=310					
NCUH	**Zhongli**	**1.58**	**311**	⇑*e*P **Pb**	**20 02 04.5**	**-0.5**
	baz=310					
NCUH				*e*S **Sb**	**20 02 25.3**	**+0.7**
	baz=310					
HSN1	**Hsinchu**	**1.59**	**302**	⇑*e*P **Pb**	**20 02 05.3**	**+0.1**
	baz=301					
HSN1				*e*S **Sb**	**20 02 25.5**	**+0.6**
	baz=301					
ALS	**Alishan**	**1.61**	**255**	⇑*e*P **Pb**	**20 02 04.6**	**-1.1**
	baz=255					
ALS				*e*S **Sn**	**20 02 24.5**	**+0.5**
	baz=255					
LONT	**Longtian**	**1.62**	**231**	⇓P **Pn**	**20 02 03.2**	**-0.5**
	baz=232					
LONT				*e*S **Sn**	**20 02 23.3**	**-0.5**
	baz=232					
SBCB	**Hsinchu**	**1.62**	**302**	⇑*e*P **Pb**	**20 02 05.6**	**-0.2**
	baz=301					
SBCB				*e*S **Sb**	**20 02 26.8**	**+0.9**
	baz=301					
WJS	**Zhushan**	**1.63**	**266**	⇑*e*P **Pb**	**20 02 05.4**	**-0.4**
	baz=266					
WJS				*e*S **Sb**	**20 02 27.9**	**+2.0**
	baz=266					
TWQ1	**Liyutan**	**1.63**	**285**	⇑*e*P **Pb**	**20 02 06.0**	**+0.1**
	baz=285					
TWQ1				*e*S **Sb**	**20 02 25.6**	**-0.5**
	baz=285					
HSN	**Hsinchu**	**1.64**	**302**	⇑*e*P **Pb**	**20 02 05.5**	**-0.6**
	baz=303					
HSN				*e*S **Sb**	**20 02 26.9**	**+0.6**
	baz=303					
WWF	**Wufeng**	**1.65**	**274**	⇑*e*P **Pb**	**20 02 06.5**	**+0.2**
	baz=274					
WWF				*e*S **Sb**	**20 02 27.8**	**+1.2**
	baz=274					
NSY	**Sanyi**	**1.66**	**287**	⇑*e*P **Pb**	**20 02 06.5**	**+0.1**
	baz=287					
NSY				*e*S **Sb**	**20 02 28.1**	**+1.2**
	baz=287					
NJN	**Zhunan**	**1.66**	**297**	*e*P **Pb**	**20 02 06.2**	**-0.2**
	baz=296					
NJN				*e*S **Sb**	**20 02 27.6**	**+0.6**
	baz=296					
WNT	**Mingjian**	**1.66**	**268**	⇑*e*P **Pb**	**20 02 06.2**	**-0.2**
	baz=268					
WNT				*e*S **Sb**	**20 02 27.4**	**+0.4**
	baz=268					
WNT1	**Nantou City**	**1.67**	**269**	*e*P **Pb**	**20 02 06.8**	**+0.3**
	baz=269					
WNT1				*e*S **Sb**	**20 02 28.0**	**+0.9**
	baz=269					
NMLH	**Miaoli**	**1.67**	**291**	⇑*e*P **Pb**	**20 02 06.6**	**0.0**
	baz=291					
NMLH				*e*S **Sb**	**20 02 27.5**	**+0.3**
	baz=291					
TCU	**Taichung**	**1.68**	**278**	⇑*e*P **Pb**	**20 02 06.6**	**-0.2**
	baz=277					
TCU				*e*S **Sb**	**20 02 27.4**	**-0.1**
	baz=277					
NHW	**Xinwu Township**	**1.70**	**309**	⇑*e*P **Pb**	**20 02 06.1**	**-1.0**
	baz=308					
NHW				*e*S **Sb**	**20 02 28.3**	**+0.3**
	baz=308					
CHN5	**Tsauling**	**1.70**	**259**	⇑*e*P **Pb**	**20 02 06.3**	**-0.8**
	baz=259					
CHN5				*e*S **Sb**	**20 02 28.1**	**-0.1**
	baz=259					
TTN	**Taitung**	**1.71**	**227**	*e*P **Pn**	**20 02 04.6**	**-0.3**
	baz=227					
TTN				*e*S **Sn**	**20 02 25.5**	**-0.5**
	baz=227					
TWGBT	**Beinan**	**1.71**	**230**	⇓P **Pn**	**20 02 04.4**	**-0.5**
	baz=230					
TWGBT				*e*S **Sn**	**20 02 24.3**	**-1.9**
	baz=230					
TWG	**Pinlang**	**1.72**	**230**	⇓P **Pn**	**20 02 04.4**	**-0.6**
	baz=230					
TWG				*e*S **Sn**	**20 02 24.3**	**-1.9**
	baz=230					
TWG	**Pinlang**	**1.72**	**230**	**Pn**	**20 02 04.4**	**-0.6**
PCYT	**Pengchaiyu**	**1.73**	**347**	⇑*i*P **Pn**	**20 02 06.1**	**+0.9**
	baz=346					
PCYT				*e*S **Sb**	**20 02 28.5**	**-0.5**
	baz=346					
WDJ	**Dajia District**	**1.75**	**284**	⇑*e*P **Pb**	**20 02 07.3**	**-0.6**
	baz=284					
WDJ				*e*S **Sb**	**20 02 29.8**	**+0.4**
	baz=284					
STYH	**Taoyuan**	**1.76**	**245**	⇓P **Pn**	**20 02 06.3**	**+0.9**
	baz=245					
STYH				*e*S **Sn**	**20 02 27.2**	**+0.1**
	baz=245					
STYT	**Tauyuan**	**1.77**	**245**	⇓*e*P **Pn**	**20 02 06.5**	**+0.7**
	baz=245					
STYT				*e*S **Sn**	**20 02 28.2**	**+0.5**
	baz=245					
JISG	**Ishigakijimahi**	**1.78**	**68**	P **Pn**	**20 02 06.3**	**+0.5**
JISG				*e*S **Sb**	**20 02 28.7**	**-1.5**
WCHH	**Zhanghua**	**1.78**	**275**	⇑*e*P **Pb**	**20 02 08.0**	**-0.5**
	baz=275					
WCHH				*e*S **Sb**	**20 02 30.7**	**+0.3**
	baz=275					
WGK	**Gukeng**	**1.79**	**262**	⇑*e*P **Pb**	**20 02 07.8**	**-0.8**
	baz=262					
WGK				*e*S **Sb**	**20 02 31.5**	**+0.8**
	baz=262					
WDLH	**Douliu**	**1.81**	**263**	*e*P **Pb**	**20 02 08.2**	**-0.8**
	baz=263					
WDLH				*e*S **Sb**	**20 02 31.6**	**+0.3**
	baz=263					
TPUB	**Ta-pu**	**1.83**	**250**	⇑*e*P **Pb**	**20 02 08.1**	**-1.2**
	baz=250					
TPUB				*e*S **Sn**	**20 02 29.9**	**+0.9**
	baz=250					
TPUB	**Ta-pu**	**1.83**	**250**	**Pb**	**20 02 08.0**	**-1.3**
CHN4	**Tsaushan**	**1.84**	**252**	⇑*e*P **Pb**	**20 02 08.5**	**-1.1**
	baz=252					
CHN4				*e*S **Sb**	**20 02 32.1**	**0.0**
	baz=252					
WTP	**Ta-pu**	**1.86**	**249**	⇑*e*P **Pb**	**20 02 08.6**	**-1.3**
	baz=249					
WTP				*e*S **Sb**	**20 02 31.4**	**-1.3**
	baz=249					
CHN2	**Minshiung**	**1.90**	**258**	*e*P **Pb**	**20 02 10.0**	**-0.5**
	baz=258					
CHN2				*e*S **Sb**	**20 02 34.5**	**+0.7**
	baz=258					
SLGT	**Liugui**	**1.94**	**242**	*e*P **Pn**	**20 02 09.3**	**+1.2**
	baz=242					
SLGT				*e*S **Sb**	**20 02 33.6**	**-1.4**
	baz=242					
WRL	**Guolierlin Hig**	**1.94**	**269**	*e*P **Pb**	**20 02 10.2**	**-1.0**
	baz=269					
WRL				*e*S **Sb**	**20 02 34.6**	**-0.4**
	baz=269					
ECL	**Taimali**	**1.95**	**227**	⇓*e*P **Pn**	**20 02 07.3**	**-0.9**
	baz=227					
ECL				*e*S **Sn**	**20 02 29.5**	**-2.3**
	baz=227					
WTK	**Tuku**	**1.95**	**263**	*e*P **Pb**	**20 02 10.3**	**-1.1**
	baz=263					
WTK				*e*S **Sb**	**20 02 35.0**	**-0.3**
	baz=263					
CHY	**Chiayi**	**1.95**	**258**	*e*P **Pb**	**20 02 09.7**	**-1.6**
	baz=257					
CHY				*e*S **Sb**	**20 02 34.3**	**-1.0**
	baz=257					
SGST	**Jiashian**	**1.95**	**245**	*e*P **Pn**	**20 02 09.0**	**+0.8**
	baz=245					
SGST				*e*S **Sn**	**20 02 32.3**	**+0.2**
	baz=245					
CHN1	**Nanshi**	**1.96**	**248**	*e*P **Pb**	**20 02 10.2**	**-1.2**
	baz=248					
CHN1				*e*S **Sb**	**20 02 35.1**	**-0.3**
	baz=248					
SNST	**Tainan City**	**1.97**	**249**	*e*P **Pb**	**20 02 10.6**	**-1.1**
	baz=249					
WTCT	**Ta-ch'eng**	**2.03**	**268**	⇑*e*P **Pb**	**20 02 11.5**	**-1.2**
	baz=268					
WTCT				*e*S **Sb**	**20 02 37.4**	**-0.2**
	baz=268					
LAY	**Lan-yu**	**2.08**	**205**	⇓P **Pn**	**20 02 08.4**	**-1.6**
	baz=206					
LAY				*e*S **Sn**	**20 02 31.1**	**-4.1**
	baz=206					
SSD	**Sandimen**	**2.08**	**236**	*e*P **Pn**	**20 02 10.3**	**+0.2**
	baz=236					
SSD				*e*S **Sb**	**20 02 37.3**	**-1.8**
	baz=236					
WMLT	**Mailiao**	**2.09**	**267**	*e*P **Pb**	**20 02 12.5**	**-1.2**
	baz=267					
WMLT				*e*S **Sb**	**20 02 38.8**	**-0.5**
	baz=267					
TSMG	**Majia**	**2.10**	**235**	⇓*e*P **Pn**	**20 02 10.4**	**+0.2**
	baz=235					
TSMG				*e*S **Sn**	**20 02 37.2**	**+1.6**
	baz=235					
WSF	**Szhu**	**2.11**	**262**	*e*P **Pn**	**20 02 11.8**	**+1.5**
	baz=262					
WSF				*e*S **Sb**	**20 02 39.0**	**-0.7**
	baz=262					
ICHU	**Yijhu**	**2.12**	**255**	⇑*e*P **Pb**	**20 02 12.3**	**-1.9**
	baz=255					
ICHU				*e*S **Sb**	**20 02 38.0**	**-2.0**
	baz=255					
SCST	**Cishan**	**2.12**	**241**	⇓*e*P **Pb**	**20 02 12.7**	**-1.5**
	baz=241					
SCST				*e*S **Sb**	**20 02 39.1**	**-1.0**
	baz=241					
JTJ	**Tarama**	**2.13**	**70**	P **Pn**	**20 02 11.6**	**+1.0**
CHN3	**Shinhua**	**2.14**	**247**	*e*P **Pb**	**20 02 13.9**	**-0.6**
	baz=247					
CHN3				*e*S **Sb**	**20 02 41.2**	**+0.5**
	baz=247					
TAW	**Tawu**	**2.15**	**224**	*e*P **Pn**	**20 02 10.7**	**-0.3**
	baz=224					
TAW				*e*S **Sn**	**20 02 35.5**	**-1.5**
	baz=224					
MASBT	**Mashibuluo**	**2.16**	**233**	⇓*e*P **Pn**	**20 02 11.5**	**+0.3**
	baz=233					
MASBT				*e*S **Sb**	**20 02 41.0**	**-0.4**
	baz=233					
EAST	**Anshuo**	**2.17**	**225**	⇓*e*P **Pn**	**20 02 10.7**	**-0.5**
	baz=225					
EAST				*e*S **Sn**	**20 02 35.1**	**-2.2**
	baz=225					
CHN8	**Yiju**	**2.18**	**255**	*e*P **Pn**	**20 02 13.1**	**+1.8**
	baz=255					
CHN8				*e*S **Sb**	**20 02 40.4**	**-1.4**
	baz=255					
SGLT	**Jiouru**	**2.20**	**237**	*e*P **Pb**	**20 02 14.9**	**-0.8**

SGLT eS Sb 20 02 43.5 +1.0
baz=237
TWM1 Shoushan 2.21 240⇓eP Pb 20 02 15.0 -0.7
baz=240
TWM1 eS Sb 20 02 43.6 +1.0
baz=240
TSPT Pingtung City 2.23 236 eP Pb 20 02 14.8 -1.2
baz=236
TSPT eS Sb 20 02 42.7 -0.5
baz=236
SCLT Jiali 2.25 251 eP Pb 20 02 14.8 -1.6
baz=251
SCLT eS Sb 20 02 42.3 -1.5
baz=251
TAI1 Yung-k'ang 2.27 247 eP Pb 20 02 15.5 -1.2
baz=247
SSPT Xinbi 2.29 231 eP Pn 20 02 14.1 +1.2
baz=231
SSPT eS Sb 20 02 44.2 -0.8
baz=231
SNJT Kaohsiung City 2.31 240 eP Pb 20 02 16.5 -1.0
baz=240
SLIU Shizi 2.32 223⇓eP Pn 20 02 12.9 -0.3
baz=223
SLIU eS Sn 20 02 40.3 -0.8
baz=223
SCZT Fangliau 2.33 228 eP Pn 20 02 14.0 +0.6
baz=228
SCZT eS Sb 20 02 44.4 -1.7
baz=228
KAU Kaohsiung 2.43 236 eP Pb 20 02 18.4 -1.1
baz=236
TSEB Hengchuen, Pin 2.50 216 eP Pn 20 02 17.2 +1.4
baz=217
TSEB eS Sn 20 02 47.4 +1.8
baz=217
WLCH Liuqiu 2.51 232 eP Pb 20 02 19.0 -1.9
baz=232
HEN Hengchun 2.51 221 eP Pn 20 02 16.7 +0.8
baz=221
HEN eS Sn 20 02 46.2 +0.3
baz=221
TWKBT Hengchun 2.52 218 eP Pn 20 02 16.2 +0.2
baz=219
TWKBT eS Sn 20 02 45.8 -0.3
baz=219
TWK1 Hengchun 2.52 219 eP Pn 20 02 16.7 +0.6
baz=219
TWK1 eS Sn 20 02 46.9 +0.8
baz=219
TWP Hsiaoliuchiu 2.52 232 eP Pb 20 02 19.2 -1.9
baz=232
SNW Nanwan 2.54 220 eP Pn 20 02 17.6 +1.2
baz=220
JIRB Irabujima 2.59 69 P Pn 20 02 18.0 +1.0
JIRB eS Sn 20 02 49.9 +2.0
WDGT Dungji 2.69 256⇑eP Pn 20 02 19.6 +1.2
baz=256
WDGT eS Sn 20 02 50.1 -0.1
baz=256
JMJ Miyako jima 2 2.69 70 P Pn 20 02 20.3 +1.9
baz=71
JMJ eS Sn 20 02 53.0 +2.7
baz=71
PNG Penghu 2.72 263 eP Pn 20 02 20.1 +1.3
baz=262
PNG eS Sn 20 02 52.2 +1.1
baz=262
VCHM Qimei 2.91 256 eP Pn 20 02 22.6 +1.2
baz=256
VCHM eS Sn 20 02 55.4 -0.3
baz=256
VWUC VWUC 2.97 291⇑eP Pn 20 02 22.8 +0.5
baz=291
VWUC eS Sn 20 02 56.1 -1.1
baz=291
MATB Ma-tsu 3.20 314⇑eP Pn 20 02 25.5 +0.1
baz=313
MATB eS Sn 20 03 02.1 -0.7
baz=313
MSUT Lienchiang 3.23 314⇑eP Pn 20 02 25.9 +0.1
baz=313
MSUT eS Sn 20 03 02.8 -0.7
baz=313
PTMZ Houxiangcun 3.27 290⇑eP Pn 20 02 26.8 +0.5
baz=290
PTMZ eS Sn 20 03 02.9 -1.7
baz=290
BBP Basco 3.51 188 eP Pn 20 02 28.3 -1.4
LYJJ Jianjiangzhen 3.60 317⇑eP Pn 20 02 31.0 +0.1
baz=316
LYJJ eS Sn 20 03 11.9 -0.7
baz=316
XPSS Dashiqiu 3.64 325⇑eP Pn 20 02 31.3 -0.1
baz=325
XPSS eS Sn 20 03 13.2 -0.6
baz=325
QZH Quanzhou 3.70 287⇑iPn Pn 20 02 32.5 +0.2
QZH Sn Sn 20 03 13.0 -2.2
QZH smax smax
comp=N,3μm,0.8s
QZH smax smax
comp=E,2μm,0.7s
QZH LR LR
comp=N,16μm,10.4s
QZH LR LR
comp=E,20μm,14.9s
QZH LR LR
comp=Z,22μm,13.7s
KNM Kinmen 3.75 278⇑eP Pn 20 02 35.1 +2.2
baz=277
KNM eS Sn 20 03 17.8 +1.5
baz=277
KNMB Chin-men Tao 3.79 279⇑eP Pn 20 02 33.9 +0.3
baz=278
KNMB eS Sn 20 03 15.4 -2.0
baz=278
KNMB Chin-men Tao 3.79 279 Pn Pn 20 02 33.8 +0.3
MHZQ Yeshan 3.82 305⇑eP Pn 20 02 33.8 0.0
baz=304
MHZQ eS Sn 20 03 16.7 -1.4
baz=304
AXDP Jialang 4.24 284⇑eP Pn 20 02 40.2 +0.6
baz=283
AXDP eS Sn 20 03 26.3 -2.2
baz=283
ZPLA Ao Xicun 4.35 271⇑eP Pn 20 02 41.8 +0.6
baz=270
ZPLA eS Sn 20 03 29.8 -1.3
baz=270
JKE Kume jima 2 4.56 58 P Pn 20 02 44.6 +0.6
SGCP Mt. Cagua 5.68 184 eP Pn 20 02 57.9 -1.6
JOW Kunigami 5.97 60 Pn Pn 20 03 02.3 -1.2
23nm,0.3s,baz=171,slow=11,SNR=71
JOW Sn Sn 20 04 06.5 -4.6
baz=263,slow=17,SNR=1.2
JOW Kunigami 5.97 60⇓eP Pn 20 03 02.8 -0.7
baz=61
JOW eS Sn 20 04 10.2 -0.8
baz=61
JOW Kunigami 5.97 60 Pn 20 03 02.7 -0.7
JYRO Yoronjima 6.20 59 P Pn 20 03 05.5 -1.1
CVP Callao Caves 6.23 186⇑eP Pn 20 03 04.8 -2.2
VDOS Pratas Island 6.24 240 eP Pn 20 03 09.2 +2.1
baz=239
ABRA Dolores 6.47 195 eP Pn 20 03 11.0 +0.6
JTK Tokunoshima 6.96 55 P Pn 20 03 15.6 -1.5
SSE Sheshan 7.23 351 Pn Pn 20 03 21.0 +0.3
SSE Sn Sn 20 04 42.0 -0.1
SSE smax smax
comp=N,370nm,1.4s
SSE smax smax
comp=E,470nm,1.2s
JAMN Amaminishikomi 7.38 53 P Pn 20 03 20.8 -2.0
JAM Amami Oshima 7.79 54 P Pn 20 03 26.8 -1.6
HKPS Hong Kong Po S 7.87 260 eP Pn 20 03 31.0 +1.4
baz=258
BOLP Bolinao 7.90 198 eP Pn 20 03 30.7 +0.8
JMZ Minamidaito 2 8.14 75 Pn Pn 20 03 31.8 -1.5
MCO Taipa Grande 8.43 259 P Pn 20 03 40.0 +2.7
GZH Guangzhou 8.45 266 P Pn 20 03 34.3 -3.2
GZH S Sn 20 05 05.8 -6.3
GZH smax smax
comp=N,1μm,1.2s
GZH smax smax
comp=E,980nm,1.2s

NJ2 Nanjing 8.71 339 ⇑P Pn 20 03 40.3 -0.7
NJ2 sP 20 03 46.5
NJ2 S Sn 20 05 17.3 -1.1
NJ2 pmax pmax
comp=Z,260nm,0.7s
NJ2 smax smax
comp=N,740nm,1.3s
NJ2 smax smax
comp=E,760nm,1.2s
NJ2 LR LR
comp=N,20μm,11.1s
NJ2 LR LR
comp=E,14μm,7.7s
NJ2 LR LR
comp=Z,26μm,11.1s
POLP Polilio Island 9.17 183 eP Pn 20 03 49.8 +2.3
JCNP Jose Panganiba 9.60 179 eP Pn 20 03 53.7 +0.5
MACP Maragondon, Ca 9.77 190 eP Pn 20 03 58.2 +2.6
WHN Wuhan 9.79 314 ⇓P Pn 20 03 55.5 -0.4
WHN S Sn 20 05 44.3 -0.9
WHN LR LR
comp=N,21μm,11.6s
WHN LR LR
comp=E,12μm,8.0s
WHN LR LR
comp=Z,30μm,13.5s
LQP Lukban 9.81 185⇑eP Pn 20 03 57.7 +1.3
TGY Tagaytay City 9.89 189 Pn Pn 20 04 01.7 +4.3
74nm,0.3s,baz=17,slow=19,SNR=7.1
TGY LR LR 20 07 55.3
comp=Z,4μm,20.9s,baz=13,slow=37
JSU Suzuyama 10.32 41 Pn Pn 20 04 03.0 -0.2
LUBP Lubang 10.37 192 eP Pn 20 04 07.4 +3.6
SJMP San Jose 11.49 187 eP Pn 20 04 20.1 +0.9
JNU Nakatsue 11.74 37 Pn Pn 20 04 24.8 +2.1
0.9nm,0.3s,baz=206,slow=8.1,SNR=7.9
JNU LR LR 20 09 15.0
comp=Z,4μm,19.4s,baz=216,slow=40
JNU Nakatsue 11.74 37 Pn Pn 20 04 23.5 +0.8
JTU Tsushima 12.15 28 Pn Pn 20 04 28.3 +0.2
QIZ Qiongzhong 12.75 250 P Pn 20 04 38.3 +1.8
QIZ S Sn 20 07 02.8 +5.0
QIZ LR LR
comp=N,3μm,18.1s
QIZ LR LR
comp=E,2μm,19.6s
QIZ LR LR
comp=Z,2μm,18.4s
OCLP Ormoc 12.97 171 eP Pn 20 04 42.4 +3.0
ENPP El Nido 12.99 194 eP Pn 20 04 38.4 -1.3
CUYO Cuyo Island 13.09 186 eP P 20 04 53.9 +2.8
TIA Tai'an 13.09 340 P Pn 20 04 40.3 -0.7
TIA S Sn 20 07 13.5 +7.6
TIA pmax pmax
comp=Z,19nm,0.7s
TIA pmax pmax
comp=Z,640nm,5.2s
TIA LR LR
comp=N,9μm,12.4s
TIA LR LR
comp=E,5μm,10.8s
TIA LR LR
comp=Z,15μm,12.4s
ENH Enshi 13.19 301 Pn Pn 20 04 43.8 +1.3
MSLP Maasin 13.91 170 eP Pn 20 04 56.0 +3.7
JMN Monobe 13.94 43 Pn Pn 20 04 48.3 -4.4
INCN Inchon 13.96 14 P P 20 04 57.3 -3.5
CNOP Candoni, Negro 14.03 179 eP Pn 20 04 53.7 -0.2
KSAR Wonju Array Be 14.23 18 P Pn 20 04 57.5 +0.9
KSAR Wonju Array Be 14.23 18 Pn 20 04 57.5 +0.9
KSRS Korea Array 14.26 18 Pn Pn 20 04 59.6 +2.7
1.7nm,0.3s,baz=199,slow=12,SNR=101
KSRS LR LR 20 11 28.0
comp=Z,5μm,18.0s,baz=198,slow=42
KS19 Wonju Array Si 14.29 18 Pn 20 04 59.4 +2.0
JHS Saijyo 14.38 38 Pn Pn 20 04 58.0 -0.6
GLSP General Luna, 14.49 166 eP P 20 05 05.8 -0.9
GYA Guiyang 14.56 283 ⇑P Pn 20 05 02.5 +1.3
GYA S Sn 20 07 39.0 -3.0
GYA pmax pmax
comp=Z,5.0nm,0.8s
GYA pmax pmax
comp=Z,78nm,7.6s
GYA LR LR
comp=Z,2μm,13.5s
DL2 Dalian 14.95 357 P Pn 20 05 08.5 +2.2
DL2 S Sn 20 07 58.5 +7.4
DL2 pmax pmax
comp=Z,120nm,1.2s
DL2 pmax pmax
comp=Z,1μm,3.9s
DL2 LR LR
comp=N,8μm,14.5s
DL2 LR LR
comp=E,2μm,12.4s
DL2 LR LR
comp=Z,10μm,13.4s
BUTP Butuan 15.18 168 eP Pn 20 05 11.2 +1.7
CGP Cagayan de Oro 15.54 172⇓eP P 20 05 20.2 +1.8
XAN Xi'an 15.56 313 P Pn 20 05 15.0 +0.5
XAN pP P 20 05 21.0 +2.4
XAN S Sn 20 08 10.0 +3.8
XAN pmax pmax
comp=Z,220nm,1.3s
XAN pmax pmax
comp=Z,970nm,4.3s
XAN LR LR
comp=N,4μm,12.4s
XAN LR LR
comp=E,7μm,11.4s
XAN LR LR
comp=Z,12μm,16.5s
XAN Xi'an 15.56 313 P Pn 20 05 14.9 +0.5
XAN pmax pmax
comp=Z,327nm,1.3s
XAN Xi'an 15.56 313 Pn Pn 20 05 14.9 +0.4
XAN IAmb IAmb 20 05 21.6
comp=Z,327nm,1.3s
BATP Bataraza 15.71 197 eP Pn 20 05 17.0 +0.5
JWT Wachi 15.91 42 Pn 20 05 17.5 -1.5
PAGZ Pagadian 16.02 177 eP P 20 05 21.9 -1.8
TIY Taiyuan 16.21 330 eP P 20 05 25.3 -0.6
TIY pP pP 20 05 28.8 -2.4
TIY S S 20 08 31.0 -3.7
TIY pmax pmax
comp=Z,39nm,0.8s
TIY LR LR
comp=Z,12μm,13.1s
TIY LR LR
comp=Z,6μm,14.3s
TIY LR LR
comp=Z,12μm,13.3s
BJT Baijiatuau 16.90 343 P Pn 20 05 31.8 +0.3
BJT pmax pmax
comp=Z,54nm,0.9s
BJT Baijiatuau 16.90 343 P Pn 20 05 31.8 +0.3
BJI Beijing 16.92 343 P P 20 05 33.8 +0.2
BJI S Sn 20 08 40.3 +1.2
BJI pmax pmax
comp=Z,31nm,1.2s
BJI pmax pmax
comp=Z,1μm,6.3s
BJI LR LR
comp=Z,3μm,19.6s
BJI LR LR
comp=Z,2μm,19.8s
BJI LR LR
comp=Z,2μm,19.7s
DAV Davao City (W) 17.03 170 P P 20 05 34.7 -0.2
comp=Z,38nm,0.3s,baz=297,slow=4.5,SNR=1.5
DAV LR LR 20 11 57.4
comp=Z,3μm,20.9s,baz=342,slow=36
DAV Davao City (W) 17.03 170 P P 20 05 34.5 -0.5
DAV IAmb IAmb 20 05 58.4
comp=Z,269nm,1.1s
MATI Mati 17.27 167 eP P 20 05 38.4 +0.7
JGF Kuroka 17.34 45 Pn 20 05 35.9 -1.2
SKMP Bagumbayan, Su 17.43 173 eP P 20 05 39.9 +0.5
JHJ Hachijo jima 2 17.71 55 P P 20 05 43.1 +0.8
comp=Z,9.6nm,0.3s,baz=218,slow=9.4,SNR=5.4
JHJ LR LR 20 12 57.1
comp=Z,925nm,18.1s,baz=255,slow=39
JHJ2 Mitsune 17.73 55 P Pn 20 05 40.5 -1.4
JHJ2 IAmb IAmb 20 05 54.3
comp=Z,524nm,1.1s

SNY Shenyang 17.87 3 ⇑P P 20 05 43.8 -0.2
SNY pmax pmax
comp=Z,16nm,0.6s
SNY pmax pmax
comp=Z,770nm,6.9s
SNY LR LR
comp=Z,5μm,15.3s
SNY LR LR
comp=Z,3μm,16.0s
SNY LR LR
comp=Z,7μm,15.3s
CD2 Chengdu 18.02 297 P P 20 05 46.0 +0.1
CD2 PP PnPn 20 06 00.8 +4.1
CD2 S Sn 20 09 05.3 -0.7
CD2 pmax pmax
comp=Z,340nm,1.1s
CD2 pmax pmax
comp=Z,2μm,9.4s
CD2 LR LR
comp=Z,7μm,9.4s
CD2 LR LR
comp=Z,9μm,14.4s
CD2 LR LR
comp=Z,13μm,15.1s
KMI Kunming 18.02 278 ⇑P P 20 05 47.0 +0.9
KMI sP pwP 20 05 55.5 -0.3
KMI PP PnPn 20 06 05.3 +8.4
KMI S Sn 20 09 08.0 +1.7
KMI sS S 20 09 16.0 +4.0
KMI SS SnSn 20 09 28.0 +8.0
KMI pmax pmax
comp=Z,590nm,5.1s
KMI LR LR
comp=Z,3μm,10.3s
KMI LR LR
comp=Z,7μm,12.2s
KMI LR LR
comp=Z,7μm,13.6s
KMI Kunming 18.02 278 P P 20 05 46.0 -0.1
KMI pmax pmax
comp=Z,67nm,1.1s
KMI Kunming 18.02 278 P P 20 05 46.0 -0.1
JCJ Chichijima 18.04 76 LR LR 20 11 53.2
comp=Z,2μm,21.1s,baz=272,slow=34
UBPT Khong Chiam 18.19 245 P P 20 05 52.9 +5.1
comp=Z,66μmcomp=Z,624nmcomp=Z,26nm,1.1s
UBPT Khong Chiam 18.19 245 Pn P 20 05 49.9 +2.1
MAJO Matsushiro 18.46 44 *d* iP P 20 05 48.8 -1.9
MAJO pmax pmax
comp=Z,13nm,1.1s
MAJO Matsushiro 18.46 44 P P 20 05 48.9 -1.8
MAT Matsushiro 18.46 44 S Sn 20 09 14.8 -1.8
MAT Matsushiro 18.46 44 P P 20 05 47.6 -3.1
MJAR Matsushiro Arr 18.46 44 P P 20 05 47.3 -3.4
comp=Z,0.1nm,0.3s,baz=245,slow=11,SNR=20
MJAR ScP ScP 20 13 54.6 -0.1
comp=Z,0.0nm,0.3s,baz=248,slow=3.1,SNR=4.6
MJAR Matsushiro Arr 18.46 44 P Pn 20 05 51.2 +0.3
MJAR Matsushiro Arr 18.46 44 P Pn 20 05 51.2 +0.3
KKM Kota Kinabalu 18.79 200 P Pn 20 05 55.0 +0.1
NONG Nongkai 18.98 256 P Pn 20 06 01.4 +4.1
comp=Z,111nm,1.0s
MYLDM Lahad Datu 19.04 192 P Pn 20 05 59.5 +1.5
MYLDM IAmb IAmb 20 06 25.4
comp=Z,292nm,1.4s
HHC Hu-ho-hao-te 19.20 334 eP Pn 20 06 01.0 +1.1
HHC PP pwP 20 06 18.3 +9.4
HHC S Sn 20 09 33.3 -1.2
HHC sS S 20 09 39.5 +4.5
HHC SS 20 10 00.0
HHC pmax pmax
comp=Z,120nm,1.2s
HHC pmax pmax
comp=Z,1μm,7.8s
HHC LR LR
comp=Z,9μm,12.6s
HHC LR LR
comp=Z,5μm,13.1s
HHC LR LR
comp=Z,12μm,14.5s
JSD Sado 19.46 40 P P 20 05 58.5 -3.0
JYT Yasato 19.57 47 P P 20 06 01.6 -1.2
BTO Baotou 19.65 331 P Pn 20 06 06.0 +0.7
BTO S S 20 09 35.5 -8.8
BTO pmax pmax
comp=Z,190nm,1.2s
BTO LR LR
comp=Z,41μm,13.7s
BTO LR LR
comp=Z,20μm,14.1s
MSHR Mys Shultsa 19.93 19 *c* eP P 20 06 06.4 -0.3
MSHR pmax pmax
comp=Z,105nm,1.0s
KHON Khomkaen 19.95 251 P Pn 20 06 11.7 +2.9
comp=Z,1μmcomp=Z,88nm,1.0s
CN2 Changchun 19.97 6 eP P 20 06 06.5 -0.5
CN2 eS Sn 20 09 52.5 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,8μm,13.0s
CN2 LR LR
comp=Z,2μm,13.0s
CN2 LR LR
comp=Z,9μm,15.0s
LZH Lanzhou 20.15 311 ⇑P Pn 20 06 11.5 +0.2
LZH pP pP 20 06 15.3 +0.5
LZH sP pwP 20 06 20.0 +0.9
LZH PP PnPn 20 06 31.0 +5.0
LZH eS Sn 20 09 58.8 +1.3
LZH sS pS 20 10 06.8 -1.5
LZH SS SnSn 20 10 18.3 +6.2
LZH pmax pmax
comp=Z,350nm,1.1s
LZH pmax pmax
comp=Z,790nm,4.6s
LZH LR LR
comp=Z,6μm,13.2s
LZH LR LR
comp=Z,6μm,13.0s
LZH LR LR
comp=Z,6μm,14.7s
CHAI Chaiyaphum 20.86 251 P Pn 20 06 19.8 +0.3
comp=Z,770nmcomp=Z,86nm,1.0s
JMM Marumori 20.91 44 P P 20 06 13.2 -4.1
MDJ Mudanjiang 21.43 14 P P 20 06 22.5 -0.4
MDJ pmax pmax
comp=Z,27nm,0.6s
MDJ pmax pmax
comp=Z,320nm,3.6s
MDJ LR LR
comp=Z,6μm,12.8s
MDJ LR LR
comp=Z,4μm,13.5s
MDJ LR LR
comp=Z,9μm,15.7s
MDJ Mudanjiang 21.43 14 P P 20 06 21.0 -1.8
USA0B Ussuriysk Arra 21.66 19 *c* iP P 20 06 23.2 -2.1
USA0B Ussuriysk Arra 21.66 19 P P 20 06 23.3 -2.1
USRK Ussuriysk Ar. 21.66 19 P P 20 06 23.2 -2.1
comp=Z,34nm,0.8s,baz=204,slow=10,SNR=78
USRK LR LR 20 15 31.3
comp=Z,3μm,18.6s,baz=200,slow=39
USRK Ussuriysk Ar. 21.66 19 P P 20 06 23.0 -2.3
USRK Ussuriysk Ar. 21.66 19 P P 20 06 22.9 -2.3
PHIT Phitsanulok 21.72 256 P P 20 06 29.0 +2.8
comp=Z,3μmcomp=Z,394nm,1.0s
CM34 Chiang Mai Arr 22.31 261 P P 20 06 34.0 +1.4
SUKH Sukhothai 22.32 258 P P 20 06 35.8 +3.1
comp=Z,54nm,1.2s
CM35 Chiang Mai Arr 22.36 261 P P 20 06 35.0 +1.9
CM36 Chiang Mai Arr 22.46 261 P P 20 06 36.0 +1.8
CM33 Chiang Mai Arr 22.50 261 P P 20 06 36.0 +1.3
CMMT Chiang Mai 22.50 261 P P 20 06 35.6 +0.9
comp=Z,373nmcomp=Z,24nm,1.2s
CHTO Chiang Mai 22.51 261 P P 20 06 36.0 +1.3
CHTO pmax pmax
comp=Z,60nm,1.2s
CHTO Chiang Mai 22.51 261 P P 20 06 36.0 +1.3
CHTO Chiang Mai 22.51 261 P P 20 06 36.8 +2.1
CM09 Chiang Mai Arr 22.58 260 P P 20 06 38.0 +2.6
comp=Z,302nmcomp=Z,37nm,1.1s
CM04 Chiang Mai Arr 22.60 260 P P 20 06 38.0 +2.3

comp=Z,272nmcomp=Z,35nm,1.0s
CM01 Chiang Mai Arr 22.61 260 P **P** **20 06 38.4 +2.5**
comp=Z,301nmcomp=Z,40nm,1.1s
CM31 Chiang Mai Arr 22.62 261 P **P** **20 06 38.0 +2.1**
comp=Z,7µmcomp=Z,879nm,0.9s
CM31 Chiang Mai Arr 22.62 261 P **P** **20 06 36.4 +0.5**
CM31 Chiang Mai Arr 22.62 261 P **P** **20 06 38.2 +2.3**
SNR=22
CMAR Chiang Mai Arr 22.62 261 P **P** **20 06 37.5 +1.6**
comp=Z,24nm,0.9s,baz=63,slow=7.9,SNR=83
CMAR PcP **PcP** **20 10 29.4 +0.9**
comp=Z,6.8nm,1.1s,baz=77,slow=1.3,SNR=5.9
CMAR ScP **ScP** **20 14 04.8 -0.1**
comp=Z,2.2nm,1.0s,baz=149,slow=3.3,SNR=7.7
CMAR LR LR 20 15 48.0
comp=Z,743nm,19.6s,baz=111,slow=37
CMAR Chiang Mai Arr 22.62 261 *i* P **P** **20 06 37.7 +1.8**
CMAR pmax pmax
comp=Z,24nm,0.9s
CMAR Chiang Mai Arr 22.62 261 P **P** **20 06 36.1 +0.2**
CM02 Chiang Mai Arr 22.62 261 P **P** **20 06 38.0 +2.1**
comp=Z,282nmcomp=Z,41nm,0.9s
CM05 Chiang Mai Arr 22.63 260 P **P** **20 06 38.5 +2.4**
comp=Z,199nmcomp=Z,26nm,1.0s
CM15 Chiang Mai Arr 22.64 261 P **P** **20 06 38.3 +2.2**
comp=Z,236nmcomp=Z,37nm,0.9s
CM32 Chiang Mai Arr 22.64 261 P **P** **20 06 38.0 +1.9**
CM13 Chiang Mai Arr 22.66 261 P **P** **20 06 38.0 +1.7**
comp=Z,219nmcomp=Z,28nm,1.0s
TOLI2 Tolitoli 22.75 184 P **P** **20 06 37.0 -0.2**
JTM Tenmabayashi 22.91 38 P **P** **20 06 33.6 -5.1**
GTOI Gorontalo 23.16 179 P **P** **20 06 40.8 -0.7**
comp=Z,1µmcomp=Z,72nm,1.2s
UTHA Uthaitani 23.22 253 P **P** **20 06 44.6 +2.5**
comp=Z,333nmcomp=Z,28nm,0.8s
PATY Pattaya 23.23 246 P **P** **20 06 47.3 +5.1**
comp=Z,20nm,0.9s
KMSI Cibinong 23.27 176 P **P** **20 06 44.9 +2.4**
comp=Z,2µmcomp=Z,86nm,1.0s
MRSI Marisa 23.32 181 P **P** **20 06 38.0 -5.1**
UMPA Umpang Tak 23.48 255 P **P** **20 06 48.2 +3.5**
comp=Z,728nmcomp=Z,82nm,1.0s
TNTI Ternate 23.50 168 P **P** **20 06 45.2 +0.4**
TNTI lAmb lAmb 20 07 00.6
comp=Z,204nm,1.0s
TNTI Ternate 23.50 168 P **P** **20 06 45.1 +0.2**
comp=Z,4µmcomp=Z,252nm,1.2s
GUMO Guam 23.51 112 P **P** **20 06 45.2 +0.3**
comp=Z,49nm,0.6s,baz=266,slow=11,SNR=3.8
GUMO LR LR 20 15 43.7
comp=Z,2µm,18.9s,baz=284,slow=36
GUMO Guam 23.51 112 P **P** **20 06 44.8 -0.2**
GUMO pmax pmax
comp=Z,486nm,1.3s
GUMO Guam 23.51 112 P **P** **20 06 44.8 -0.2**
SBUM Sibu 23.56 206 P **P** **20 06 45.2 -0.2**
MHMT Maesarieng 23.62 261 P **P** **20 06 48.3 +2.3**
comp=Z,905nmcomp=Z,62nm,1.5s
SRDT SRDT 24.02 251 P **P** **20 06 52.0 +2.1**
comp=Z,18nm,1.1s
LKP Lekhapani 24.25 284 *e*P **P** **20 06 51.9 0.0**
LKP lAmb lAmb 20 06 55.0
comp=Z,177nm,0.8s
PHET Kaeng Krachan 24.27 247 P **P** **20 06 55.6 +3.4**
comp=Z,520nmcomp=Z,52nm,1.1s
KHLT Khaolaem Dam 24.29 252 P **P** **20 06 54.7 +2.4**
comp=Z,418nmcomp=Z,24nm,1.0s
JEW Eniwo 24.52 35 P **P** **20 06 51.9 -2.3**
JEW lAmb lAmb 20 07 03.8
comp=Z,80nm,0.8s
GTA Gaotai 24.62 314 ⇑P **P** **20 06 55.3 0.0**
GTA pP sP 20 07 02.3 -1.2
GTA sP pwP 20 07 05.5 +0.2
GTA PcP **PcP** **20 10 33.8 +1.1**
GTA S **S** **20 11 14.5 -0.9**
GTA sS sS 20 11 25.8 +0.8
GTA ScP **ScP** **20 14 10.8 +0.7**
GTA ScS **ScS** **20 17 56.5 -1.6**
GTA pmax pmax
comp=Z,81nm,1.1s
GTA pmax pmax
comp=Z,610nm,5.8s
GTA LR LR
comp=Z,2µm,15.3s
GTA LR LR
comp=Z,4µm,15.6s
GTA LR LR
comp=Z,5µm,15.6s
APSI Ampana 24.71 182 P **P** **20 06 56.0 -0.1**
comp=Z,1µmcomp=Z,153nm,1.3s
LUWI Luwuk 24.83 179 P **P** **20 06 59.6 +2.4**
LUWI lAmb lAmb 20 07 44.4
comp=Z,180nm,1.1s
LUWI Luwuk 24.83 179 P **P** **20 07 00.0 +2.8**
comp=Z,3µmcomp=Z,142nm,1.2s
ERM Erimo 24.90 39⇑ *e*P **P** **20 06 55.1 -2.5**
ERM pmax pmax
comp=Z,49nm,1.3s
ERM Erimo 24.90 39 P **P** **20 06 53.8 -3.8**
DIBR DIBRUGARH 25.09 284 *e*P **P** **20 07 00.4 +0.9**
DIBR lAmb lAmb 20 07 02.4
comp=Z,480nm,1.2s
KSM Kuching 25.26 210 P **P** **20 07 00.4 -0.7**
HIA Hailar 25.38 356 P **P** **20 06 59.6 -2.3**
HIA pmax pmax
comp=Z,42nm,0.9s
HIA Hailar 25.38 356 P **P** **20 06 59.6 -2.3**
MOKO MOKOCHONG 25.43 281⇑ *e*P **P** **20 07 03.5 +0.7**
BKB Balikpapan 25.63 193 P **P** **20 07 04.0 -0.4**
BKB lAmb lAmb 20 07 34.5
comp=Z,198nm,1.0s
MTKI Muara Teweh, K 25.81 198 P **P** **20 07 05.9 -0.2**
comp=Z,70nm,0.9s
KOHI KOHIMA 25.81 280 *e*P **P** **20 07 05.5 -0.7**
ASAJ Asahikawa 26.00 34 P **P** **20 07 04.5 -3.1**
comp=Z,12nm,0.6s,baz=219,slow=14,SNR=21
ASAJ LR LR 20 17 23.1
comp=Z,2µm,21.7s,baz=240,slow=37
ASAJ Asahikawa 26.00 34 P **P** **20 07 04.8 -2.8**
ASAJ pmax pmax
comp=Z,153nm,1.8s
JKA Kamikawa-asahi 26.00 34 P **P** **20 07 04.8 -2.9**
JKA lAmb lAmb 20 07 13.9
comp=Z,153nm,1.8s
STKI Sintang 26.03 206 P **P** **20 07 09.4 +1.4**
comp=Z,12µmcomp=Z,15nm,1.3s
SANI Sanana 26.05 172 P **P** **20 07 07.2 -1.0**
comp=Z,2µmcomp=Z,163nm,1.2s
SWI Sorong 26.08 160 P **P** **20 07 08.5 0.0**
comp=Z,1µmcomp=Z,132nm,1.2s
SIJI Sorong 26.08 160 P **P** **20 07 08.8 +0.2**
comp=Z,34nm,1.0s,baz=348,slow=11,SNR=11
KLR Kul'dur 26.28 14 P **P** **20 07 07.6 -2.4**
comp=Z,19nm,0.8s,baz=232,slow=9.3,SNR=54
KLR PcP **PcP** **20 10 36.2 +0.2**
comp=Z,8.6nm,0.7s,baz=178,slow=3.9,SNR=7.4
KLR ScP **ScP** **20 14 12.8 -1.7**
comp=Z,3.1nm,0.8s,baz=263,slow=3.3,SNR=4.8
KLR LR LR 20 18 36.3
comp=Z,4µm,18.9s,baz=195,slow=39
KLR Kul'dur 26.28 14 *ce*P **P** **20 07 07.7 -2.4**
KLR pmax pmax
comp=Z,28nm,0.9s
ULN Ulaanbaatar 26.86 337 ⇑P **P** **20 07 14.6 -0.9**
ULN pmax pmax
comp=Z,118nm,1.7s
ULN Ulaanbaatar 26.86 337 P **P** **20 07 14.3 -1.2**
ULN Ulaanbaatar 26.86 337 P **P** **20 07 14.9 -0.6**
SONM Songino Array 27.08 336 P **P** **20 07 16.6 -0.8**
comp=Z,106nm,1.0s,baz=154,slow=8.9,SNR=214
SONM PcP **PcP** **20 10 38.6 +0.5**
comp=Z,3.8nm,0.6s,baz=163,slow=4.2,SNR=6.6
SONM ScP **ScP** **20 14 15.7 -1.4**
comp=Z,7.2nm,1.0s,baz=166,slow=3.8,SNR=13
SONM LR LR 20 19 13.0
comp=Z,6µm,19.1s,baz=162,slow=39
SONM Songino Array 27.08 336 P **P** **20 07 16.3 -1.1**
SONM pmax pmax
comp=Z,86nm,1.0s
SONM Songino Array 27.08 336 P **P** **20 07 16.3 -1.1**
SONM lAmb lAmb 20 07 18.7
comp=Z,86nm,1.0s
SURT Suratani 27.11 241 P **P** **20 07 21.8 +3.9**
comp=Z,3.2nm,1.1s
NLAI Namlea 27.38 170 P **P** **20 07 22.0 +1.8**
comp=Z,329nm,1.2s

YUK Yuzh-Kuril'sk 27.71 38 *e*P **P** **20 07 22.1 -0.9**
YUK *e* 20 08 08.0
YUK *e*PPP PPP 20 08 16.6
YUK *e*S **S** **20 12 03.4 -0.6**
YUK *e*SS **SnSn** **20 13 15.2 -1.6**
YUK *e*SSS SSS 20 13 32.4
YUK pmax pmax
comp=Z,51nm,0.7s
YUK pmax pmax
comp=E,39nm,0.6s
YUK pmax pmax
comp=Z,147nm,1.0s
YUK MLR MLR
comp=Z,680nm,16.0s
YUK MLR MLR
comp=N,549nm,14.0s
YUK MLR MLR
comp=E,560nm,16.0s
SHL Shillong 27.82 280 P **P** **20 07 23.2 -1.2**
SHL pmax pmax
comp=Z,164nm,1.3s
SHL Shillong 27.82 280 P **P** **20 07 23.2 -1.2**
SHL lAmb lAmb 20 07 44.7
comp=Z,164nm,1.3s
SHL Shillong 27.82 280 P **P** **20 07 28.5 +4.0**
SNR=12
KULM Kulim 28.04 232 P **P** **20 07 27.6 +1.5**
PKDT Phuket 28.11 239 P **P** **20 07 29.9 +3.0**
YSS Yuzh-Sakhalins 28.12 30⇑ *e*P **P** **20 07 26.9 +0.3**
YSS pmax pmax
comp=Z,61nm,1.2s
YSS Yuzh-Sakhalins 28.12 30 P **P** **20 07 27.0 +0.3**
YSS lAmb lAmb 20 07 49.2
comp=Z,64nm,0.9s
BBKI Banjar Baru 28.23 196 P **P** **20 07 28.2 +0.3**
comp=Z,52nm,1.3s
FAKI Fak Fak 28.33 159 P **P** **20 07 29.1 +0.4**
FAKI lAmb lAmb 20 07 47.0
comp=Z,155nm,1.2s
FAKI Fak Fak 28.33 159 P **P** **20 07 27.8 -0.9**
comp=Z,1µmcomp=Z,115nm,1.2s
IPM Ipoh 28.33 230 P **P** **20 07 28.7 -0.1**
BELO BELONIA 28.44 275 *e*P **P** **20 07 29.3 -0.4**
MYKOM Kota Tinggi 28.47 222 P **P** **20 07 30.7 +0.7**
LSA Lhasa 28.51 288 P **P** **20 07 32.5 +1.7**
LSA pP **sP** **20 07 39.3 +0.3**
LSA S **S** **20 12 22.0 +4.2**
LSA pmax pmax
comp=Z,150nm,1.0s
LSA LR LR
comp=Z,2µm,19.2s
LSA LR LR
comp=Z,8µm,15.0s
LSA LR LR
comp=Z,11µm,17.1s
LSA Lhasa 28.51 288 *i* P **P** **20 07 32.6 +1.7**
SNR=14
LSA Lhasa 28.51 288 P **P** **20 07 31.3 +0.4**
LSA pmax pmax
comp=Z,34nm,0.8s
LSA Lhasa 28.51 288 P **P** **20 07 31.2 +0.4**
AGT Agartala 28.54 276 *e*P **P** **20 07 30.6 0.0**
AGT lAmb lAmb 20 07 49.2
comp=Z,101nm,1.2s
CIT Chita 28.87 349 *e*P P 20 07 45.4 +12
CIT *e* 20 08 02.6
CIT *e* 20 08 31.0
CIT pmax pmax
comp=Z,70nm,1.4s
KAPI Kappang 28.90 186 LR LR 20 18 58.2
comp=Z,761nm,21.5s,baz=16,slow=36
KAPI Kappang 28.90 186 P **P** **20 07 33.1 -0.6**
ZEA Zeya 29.98 6 *e*P **P** **20 07 41.3 -1.7**
ZEA pmax pmax
comp=N,10.0nm,0.7s
ZEA pmax pmax
comp=Z,30nm,0.8s
ZEA MLR MLR
comp=E,800nm,13.0s
ZEA MLR MLR
comp=N,2µm,15.0s
ZEA MLR MLR
comp=Z,1µm,15.0s
ZAK Zakamensk 30.34 335 *e*P **P** **20 07 44.3 -2.1**
ZAK pmax pmax
comp=Z,17nm,1.2s
TSI Tuntungan 30.77 232 P **P** **20 07 50.1 -0.3**
comp=Z,1µmcomp=Z,78nm,1.0s
LHMI Lhok Sumawe 30.84 237 P **P** **20 07 51.8 +0.8**
LHMI lAmb lAmb 20 08 33.8
comp=Z,93nm,1.1s
LHMI Lhok Sumawe 30.84 237 P **P** **20 07 53.4 +2.4**
comp=Z,70nm,0.9s
PSI Prapat 30.99 231 P **P** **20 07 54.2 +1.6**
comp=Z,26nm,1.1s,baz=360,slow=3.7,SNR=20
PSI LR LR 20 21 23.0
comp=Z,1µm,18.5s,slow=38
PSI Prapat 30.99 231 P **P** **20 07 53.2 +0.7**
PSI pmax pmax
comp=Z,81nm,1.3s
RPSI Rantau Prapat 31.07 231 P **P** **20 07 53.2 +0.2**
RPSI lAmb lAmb 20 08 08.9
comp=Z,81nm,1.3s
TLY Talaya 31.26 337 P **P** **20 07 53.4 -1.1**
comp=Z,24nm,0.6s,baz=196,slow=6.1,SNR=24
TLY PcP **PcP** **20 10 49.4 +1.0**
comp=Z,1.9nm,0.3s,baz=227,slow=4.2,SNR=3.0
TLY LR LR 20 21 27.0
comp=Z,2µm,22.0s,baz=136,slow=38
TLY Talaya 31.26 337 *e*P **P** **20 07 53.9 -0.6**
TLY *i* S **S** **20 13 00.0 +0.3**
TLY pmax pmax
comp=Z,71nm,0.6s
TLY MLR MLR
comp=Z,14µm,14.0s
TLY Talaya 31.26 337 P **P** **20 07 52.8 -1.7**
TLY lAmb lAmb 20 07 55.7
comp=Z,32nm,0.7s
TLY Talaya 31.26 337 P **P** **20 07 53.9 -0.6**
BKNI Bangkinang 31.37 225 P **P** **20 07 54.4 -1.3**
BKNI lAmb lAmb 20 08 44.4
comp=Z,114nm,1.3s
IRK Irkutsk 31.51 338 *e*P **P** **20 07 54.2 -2.4**
IRK pmax pmax
comp=Z,53nm,1.5s
KMMI Kalianget 31.90 196 P **P** **20 07 59.2 -1.1**
comp=Z,48nm,1.4s
MNSI Mandailing Nat 31.98 227 P **P** **20 08 01.6 +0.6**
comp=Z,64nm,0.8s
MOY Mondy 32.24 335 *e*P **P** **20 08 01.9 -1.3**
MOY pmax pmax
comp=Z,64nm,1.5s
MMRI Maumere 32.37 180 P **P** **20 08 04.2 -0.3**
MMRI Maumere 32.37 180 P **P** **20 08 03.2 -1.2**
comp=Z,1µmcomp=Z,91nm,1.0s
GSI Gunungsitoli 33.00 231 P **P** **20 08 10.6 +0.5**
GSI lAmb lAmb 20 08 58.7
comp=Z,51nm,1.3s
DNP Denpasar 33.19 193 P **P** **20 08 10.7 -0.9**
WBSI Waikabubak, Su 33.51 186 P **P** **20 08 12.5 -1.9**
comp=Z,30nm,1.1s
SOEI Soe 33.53 177 P **P** **20 08 15.3 +0.6**
SOEI lAmb lAmb 20 08 37.4
comp=Z,50nm,0.8s
SOEI Soe 33.53 177 P **P** **20 08 15.5 +0.8**
comp=Z,69nm,1.0s
KSI Kapahiang 33.58 218 P **P** **20 08 16.1 +0.9**
LEM Lembang 33.85 207 P **P** **20 08 19.2 +1.6**
comp=Z,26nm,0.8s,baz=89,slow=12,SNR=8.4
LEM Lembang 33.85 207 P **P** **20 08 19.1 +1.5**
comp=Z,28nm,0.8s
LWLI Liwa 33.93 214 P **P** **20 08 19.2 +1.0**
comp=Z,4µmcomp=Z,66nm,0.8s
BATI Baumata 33.95 178 P **P** **20 08 18.2 -0.1**
comp=Z,14nm,0.6s,baz=308,slow=1.9,SNR=5.2
BATI LR LR 20 23 36.2
comp=Z,640nm,20.1s,baz=338,slow=39
BATI Baumata 33.95 178 P **P** **20 08 16.3 -2.0**
comp=Z,30nm,1.1s
DBJI Dramaga 33.98 209 P **P** **20 08 19.9 +1.4**
comp=Z,70nm,1.5s
BOD Bodaibo 34.40 352 *e*P **P** **20 08 18.8 -3.0**
BOD pmax pmax
comp=Z,14nm,1.2s
WMQ Urumqi 34.70 313 *e*P **P** **20 08 25.5 +0.9**
WMQ pP sP 20 08 32.5 -0.4
WMQ sP pwP 20 08 35.8 +1.1
WMQ PP **PP** **20 09 41.5 -1.9**
WMQ S **S** **20 13 52.0 -1.3**
WMQ pmax pmax
comp=Z,110nm,0.9s
WMQ pmax pmax
comp=Z,470nm,3.8s
WMQ LR LR
comp=Z,3µm,13.1s
WMQ LR LR
comp=Z,2µm,9.5s
WMQ LR LR
comp=Z,770nm,29.0s
WMQ Urumqi 34.70 313 P **P** **20 08 25.2 +0.6**
WMQ pmax pmax
comp=Z,144nm,1.4s
WMQ Urumqi 34.70 313 P **P** **20 08 25.2 +0.6**
WMQ lAmb lAmb 20 08 26.4
comp=Z,144nm,1.4s
MANU Manus Island 35.37 133 P **P** **20 08 31.3 +0.6**
SKR Severo-Kuril's 37.25 36 *e*P P 20 08 40.5 -5.7
SKR *e*S **S** **20 14 37.9 +5.9**
SKR *e*SSS SSS 20 17 31.6
SKR pmax pmax
comp=Z,25nm,1.5s
SKR pmax pmax
comp=Z,200nm,4.8s
SKR pmax pmax
comp=Z,100nm,3.8s
SKR MLR MLR
comp=Z,400nm,15.0s
SKR MLR MLR
comp=Z,400nm,14.0s
MTN Manton Dam 37.51 166 P **P** **20 08 48.2 -0.6**
DGZ Jazzator, Alta 37.53 322 *c i*P **P** **20 08 48.5 -0.3**
DGZ pmax pmax
comp=Z,36nm,0.9s
ZSN Zaisan 37.99 318⇑ *i*P **P** **20 08 52.4 -0.3**
comp=Z,14nm,1.0s,baz=318
ZSN Zaisan 37.99 318 *c i*P **P** **20 08 52.3 -0.3**
ZSN pmax pmax
comp=Z,14nm,1.0s
YAK Yakutsk 38.39 5 P **P** **20 08 52.8 -2.9**
comp=Z,53nm,0.7s,baz=191,slow=1.3,SNR=86
YAK PcP **PcP** **20 11 08.0 -0.8**
comp=Z,9.6nm,0.8s,baz=243,slow=2.2,SNR=2.8
YAK Yakutsk 38.39 5 *c i*P **P** **20 08 53.1 -2.6**
YAK *e**PP **pP** **20 08 59.5 -2.2**
YAK *e* 20 10 22.4
YAK *e* 20 11 08.2
YAK *e*S **S** **20 14 45.0 -4.1**
YAK *e**SS **sS** **20 14 59.4 +0.6**
YAK *e*SS **SnSn** **20 17 26.7 -8.8**
YAK *e* 20 18 59.0
YAK pmax pmax
comp=Z,125nm,0.9s
YAK pmax pmax
comp=N,41nm,0.9s
YAK pmax pmax
comp=E,14nm,1.0s
YAK pmax pmax
comp=Z,66nm,3.7s
YAK pmax pmax
comp=N,70nm,2.9s
YAK pmax pmax
comp=E,78nm,3.5s
YAK smax smax
comp=N,29nm,2.3s
YAK smax smax
comp=E,47nm,3.0s
YAK MLR MLR
comp=Z,2µm,16.0s
YAK MLR MLR
comp=N,1µm,16.0s
YAK Yakutsk 38.39 5 P **P** **20 08 52.8 -2.9**
YAK lAmb lAmb 20 08 55.5
comp=Z,101nm,0.7s
YAK **PcP** **20 11 08.3 -0.5**
MK31 Makanchi Array 39.36 316 *c i*P **P** **20 09 04.1 0.0**
MK31 Makanchi Array 39.36 316 P **P** **20 09 03.6 -0.5**
MK31 lAmb lAmb 20 09 05.4
comp=Z,153nm,1.3s
MKAR Makanchi Array 39.36 316 P **P** **20 09 04.2 +0.1**
comp=Z,58nm,0.6s,baz=100,slow=10,SNR=446
MKAR PcP **PcP** **20 11 12.6 +0.3**
comp=Z,6.4nm,0.6s,baz=92,slow=5.1,SNR=3.2
MKAR ScP **ScP** **20 14 58.9 -0.6**
comp=Z,7.0nm,1.1s,baz=101,slow=5.1,SNR=6.9
MKAR LR LR 20 25 38.9
comp=Z,767nm,20.0s,baz=98,slow=37
MKAR Makanchi Array 39.36 316 *i* P **P** **20 09 04.1 0.0**
MKAR pmax pmax
comp=Z,58nm,0.6s
MKAR Makanchi Array 39.36 316 P **P** **20 09 03.5 -0.6**
PETK Petropavlovsk- 39.41 33 P **P** **20 09 01.8 -2.7**
comp=Z,2.7nm,0.7s,baz=208,slow=2.9,SNR=2.2
PETK LR LR 20 25 35.0
comp=Z,1µm,19.6s,baz=225,slow=37
MAKZ Makanchi 39.56 316 P **P** **20 09 05.6 -0.2**
MAKZ pmax pmax
comp=Z,225nm,1.3s
MAKZ Makanchi 39.56 316 P **P** **20 09 05.6 -0.2**
KNRA Kununurra 39.84 171 P **P** **20 09 08.4 +0.1**
KNRA lAmb lAmb 20 09 21.5
comp=Z,196nm,1.1s
PET Petropavlovsk 39.84 34⇓ *e*P **P** **20 09 08.8 +0.8**
PET *e*S **S** **20 15 11.1 0.0**
PET MLR MLR
comp=Z,1µm,19.0s
SHLS Shalkode 40.15 309⇑ *i*P **P** **20 09 09.3 -1.6**
comp=Z,93nm,0.8s,baz=309
SHLS *e*S **S** **20 15 13.5 -2.9**
baz=309
SHLS Shalkode 40.15 309 *c i*P **P** **20 09 09.3 -1.6**
SHLS *e*S **S** **20 15 13.4 -2.9**
SHLS pmax pmax
comp=Z,93nm,0.8s
RABL Rabaul 40.21 130 P **P** **20 09 12.9 +1.4**
RABL lAmb lAmb 20 09 29.4
comp=Z,152nm,1.1s
UZB Uzynbulak 40.46 309⇑ *i*P **P** **20 09 14.4 +0.9**
comp=Z,110nm,1.3s,baz=309
UZB *e*S **S** **20 15 22.6 +1.6**
baz=309
UZB Uzynbulak 40.46 309 *c i*P **P** **20 09 14.4 +0.9**
UZB *e*S **S** **20 15 22.6 +1.6**
UZB pmax pmax
comp=Z,110nm,1.3s
PRZ Przheval'sk 40.75 308 P **P** **20 09 17.4 +1.4**
PRZ pmax pmax
comp=Z,165nm,1.0s
PRZ Przheval'sk 40.75 308 P **P** **20 09 17.4 +1.4**
MA2 Magadan 40.76 22⇑ *e*P **P** **20 09 14.6 -1.0**
MA2 pmax pmax
comp=Z,58nm,4.1s
SATY Saty 40.88 309⇑ *i*P **P** **20 09 18.0 +1.1**
comp=Z,75nm,1.0s,baz=309
SATY Saty 40.88 309 *c i*P **P** **20 09 18.0 +1.1**
SATY pmax pmax
comp=Z,75nm,1.0s
PMG Port Moresby 40.97 141 P **P** **20 09 18.7 +1.0**
comp=Z,48nm,0.9s,baz=340,slow=6.4,SNR=16
PMG Port Moresby 40.97 141 *d i*P **P** **20 09 18.8 +1.0**
PMG pmax pmax
comp=Z,62nm,0.9s
PMG Port Moresby 40.97 141 P **P** **20 09 18.9 +1.2**
PMG lAmb lAmb 20 09 32.7
comp=Z,127nm,1.1s
ZAA0 Zalesovo Array 41.11 327 P **P** **20 09 17.2 -1.3**
ZAA0 lAmb lAmb 20 09 18.2
comp=Z,82nm,0.8s
ZALV Zalesovo Beam 41.11 327 P **P** **20 09 17.0 -1.5**
comp=Z,89nm,0.8s,baz=112,slow=7.8,SNR=258
ZALV PcP **PcP** **20 11 17.1 -0.7**
comp=Z,13nm,0.6s,baz=109,slow=3.8,SNR=8.1
ZALV ScP **ScP** **20 15 03.9 -2.3**
comp=Z,2.5nm,0.8s,baz=90,slow=4.4,SNR=5.1
ZALV LR LR 20 28 29.7
comp=Z,533nm,19.7s,baz=126,slow=39
ZALV Zalesovo Beam 41.11 327 P **P** **20 09 17.0 -1.5**
H11N1 WAKE ISLAND Hy 41.30 87 T T 20 53 49.5
baz=281,slow=74
H11N2 WAKE ISLAND Hy 41.30 87 T T 20 53 51.2
baz=281
H11N3 WAKE ISLAND Hy 41.31 87 T T 20 53 27.4
baz=281,slow=74

TDK Taldyqorghan 41.36 312 *i* P **P 20 09 22.1 +1.3**
comp=Z,172nm,0.7s,baz=312
TDK *eS* **S 20 15 36.2 +2.0**
baz=312
TDK Taldyqorghan 41.36 312 *i* P **P 20 09 22.0 +1.3**
TDK *eS* **S 20 15 36.1 +2.0**
TDK pmax pmax
comp=Z,172nm,0.7s
H11S3 WAKE ISLAND Hy 41.42 89 T T 20 54 06.9
baz=283
H11S1 WAKE ISLAND Hy 41.43 89 T T 20 53 47.4
baz=283
H11S2 WAKE ISLAND Hy 41.44 89 T T 20 53 44.7
baz=283
HYB Hyderabad 41.50 270 *i* P **P 20 09 19.0 -3.2**
KDJ Kajisay 41.56 307 P **P 20 09 23.8 +1.1**
KDJ pmax pmax
comp=Z,165nm,1.0s
KDJ Kajisay 41.56 307 P **P 20 09 23.8 +1.1**
MDOK Medeo 41.87 309 *i* P **P 20 09 26.4 +1.3**
baz=308
MDOK *eS* **S 20 15 44.0 +2.0**
baz=308
MDOK Medeo 41.87 309 *i* P **P 20 09 26.4 +1.3**
MDOK *eS* **S 20 15 44.0 +2.0**
FITZ Fitzroy Crossi 41.89 176 LR LR 20 29 05.9
comp=Z,144nm,19.1s,baz=358,slow=39
FITZ Fitzroy Crossi 41.89 176 P **P 20 09 24.9 -0.3**
TNSS Tian-Shan 41.92 308⇑ *i*P **P 20 09 27.4 +1.6**
baz=308
TNSS Tian-Shan 41.92 308⇑ *i*P **P 20 09 27.3 +1.6**
AAA Alma-Ata 41.98 309⇑ *i*P **P 20 09 27.3 +1.4**
comp=Z,64nm,1.0s,baz=308
AAA Alma-Ata 41.98 309*c* *i*P **P 20 09 27.2 +1.4**
AAA pmax pmax
comp=Z,64nm,1.0s
SEM Semipalatinsk 41.98 320⇑ *i*P **P 20 09 25.2 -0.8**
comp=Z,68nm,1.0s,baz=320
SEM Semipalatinsk 41.98 320*c* *i*P **P 20 09 25.1 -0.9**
SEM pmax pmax
comp=Z,68nm,1.0s
KSH Kashi 42.04 303 P **P 20 09 30.5 +4.0**
KSH pP pwP 20 09 38.0 +0.8
KSH PP PcP 20 11 13.0 -8.3
KSH S **S 20 15 49.8 +5.2**
KSH pmax pmax
comp=Z,81nm,1.0s
KSH LR LR
comp=Z,650nm,11.3s
KSH LR LR
comp=Z,690nm,10.6s
KSH LR LR
comp=Z,780nm,13.0s
ULHL Ulahol 42.27 307 P **P 20 09 30.2 +1.7**
SNR=13
BOOM Boomskoye usch 42.54 307 P **P 20 09 31.1 +0.5**
BOOM pmax pmax
comp=Z,55nm,0.9s
BOOM Boomskoye usch 42.54 307 P **P 20 09 31.1 +0.5**
BOOM IAmb IAmb 20 09 32.8
comp=Z,55nm,0.8s
COEN Coen 42.74 150 P **P 20 09 33.2 +1.0**
COEN IAmb IAmb 20 09 47.5
comp=Z,59nm,1.1s
TKM2 Tokmak 2 42.87 308 P **P 20 09 34.8 +1.5**
SNR=226
KURK Kurchatov 43.06 320 P **P 20 09 34.0 -0.4**
KURK Kurchatov 43.06 320 P **P 20 09 34.0 -0.4**
KURBB Kurchatov Arra 43.08 320 P **P 20 09 34.0 -0.5**
comp=Z,53nm,0.9s,baz=110,slow=7.8,SNR=205
KURBB PcP **PcP 20 11 23.5 -0.8**
comp=Z,12nm,1.0s,baz=119,slow=2.5,SNR=5.2
KURBB ScP **ScP 20 15 12.6 -1.6**
comp=Z,1.7nm,0.8s,baz=124,slow=3.3,SNR=5.3
KBK Karagaybulak 43.29 307 P **P 20 09 38.3 +1.6**
SNR=112
PALK Pallekele 43.33 255 P **P 20 09 38.7 +1.6**
comp=Z,10nm,1.0s,baz=105,slow=16,SNR=4.6
PALK LR LR 20 28 13.2
comp=Z,501nm,20.5s,baz=165,slow=37
PALK Pallekele 43.33 255 P **P 20 09 38.3 +1.2**
PALK pmax pmax
comp=Z,21nm,1.2s
PALK Pallekele 43.33 255 P **P 20 09 38.3 +1.2**
PALK Pallekele 43.33 255 P **P 20 09 38.5 +1.3**
CHMS Chumysh 43.49 308 P **P 20 09 39.3 +1.2**
SNR=142
UCH Uchtor 43.53 307 P **P 20 09 40.9 +2.0**
SNR=399
FRU1 Bishkek 43.55 308 P **P 20 09 39.6 +1.0**
FRU1 pmax pmax
comp=Z,161nm,1.0s
FRU1 Bishkek 43.55 308 P **P 20 09 39.6 +1.0**
AAK Ala-Archa 43.61 307 P **P 20 09 40.6 +1.3**
comp=Z,71nm,0.9s,baz=116,slow=5.8,SNR=223
AAK ScP **ScP 20 15 16.8 +0.1**
comp=Z,3.0nm,0.9s,baz=82,slow=3.6,SNR=3.6
AAK LR LR 20 30 50.3
comp=Z,2µm,18.9s,baz=90,slow=40
AAK Ala-Archa 43.61 307 P **P 20 09 40.7 +1.3**
SNR=100
AAK Ala-Archa 43.61 307 *i* P **P 20 09 40.6 +1.3**
SNR=123
AAK Ala-Archa 43.61 307*c* *i*P **P 20 09 40.4 +1.1**
AAK pmax pmax
comp=Z,340nm,1.3s
AAK Ala-Archa 43.61 307 P **P 20 09 40.1 +0.9**
AAK IAmb IAmb 20 09 41.7
comp=Z,75nm,0.9s
AAK Ala-Archa 43.61 307 P **P 20 09 40.8 +1.5**
SGDS Sogindy 43.66 309⇑ *i*P **P 20 09 40.1 +0.6**
comp=Z,30nm,1.0s,baz=308
SGDS *eS* **S 20 16 09.4 +1.2**
baz=308
SGDS Sogindy 43.66 309*c* *i*P **P 20 09 40.1 +0.6**
SGDS *eS* **S 20 16 09.3 +1.2**
SGDS pmax pmax
comp=Z,30nm,1.0s
USP Ospenovka 43.72 308 P **P 20 09 40.9 +0.9**
SNR=73
SEY Seymchan 43.81 19⇑ *eP* **P 20 09 38.8 -1.5**
NIL Nilore 43.88 294 P **P 20 09 41.9 +0.5**
NIL pmax pmax
comp=Z,60nm,0.8s
NIL Nilore 43.88 294 P **P 20 09 41.9 +0.5**
NIL IAmb IAmb 20 09 43.9
comp=Z,60nm,0.8s
NIL Nilore 43.88 294 P **P 20 09 42.5 +1.1**
AML Almayashu 44.12 306 P **P 20 09 45.3 +1.7**
SNR=285
EKS2 Erkin-Say 44.14 307 P **P 20 09 44.8 +1.3**
SNR=133
BTLS Baital 44.38 311⇑ *i*P **P 20 09 45.7 +0.5**
comp=Z,47nm,1.0s,baz=310
BTLS Baital 44.38 311*c* *i*P **P 20 09 45.6 +0.5**
BTLS pmax pmax
comp=Z,47nm,1.0s
MBWA Marble Bar 44.90 184 P **P 20 09 48.2 -1.3**
WB0 Warramunga Arr 44.96 164 P **P 20 09 50.3 +0.4**
WB0 IAmb IAmb 20 10 03.8
comp=Z,138nm,1.3s
WRAB Tennant Creek 45.10 164*d* *i*P **P 20 09 51.6 +0.5**
WRAB pmax pmax
comp=Z,77nm,1.0s
WRAB Tennant Creek 45.10 164 P **P 20 09 51.3 +0.1**
WRA Warramunga Arr 45.11 164 P **P 20 09 51.6 +0.5**
comp=Z,44nm,0.8s,baz=346,slow=8.5,SNR=134
WRA Warramunga Arr 45.11 164 P **P 20 09 50.3 -0.9**
WB2 Warramunga Arr 45.11 164 P **P 20 09 51.5 +0.2**
WB2 IAmb IAmb 20 10 05.2
comp=Z,127nm,1.2s
WR0 Warramunga Arr 45.18 164 P **P 20 09 52.1 +0.4**
WR0 IAmb IAmb 20 09 53.5
comp=Z,57nm,0.8s
DRK Karamyk 45.25 303 P **P 20 09 53.8 +1.2**
PSA00 Pilbara Seismi 45.31 183 P **P 20 09 52.6 -0.1**
PSA00 IAmb IAmb 20 09 53.5
comp=Z,147nm,1.8s
DZA Taraz 45.96 307⇑ *i*P **P 20 09 58.6 +0.8**
comp=Z,44nm,0.8s,baz=307
DZA Taraz 45.96 307*c* *i*P **P 20 09 58.6 +0.8**
DZA pmax pmax
comp=Z,44nm,0.8s
BTK Batken 46.05 303 P **P 20 09 59.3 +0.6**
BTK pmax pmax
comp=Z,196nm,1.4s

BTK Batken 46.05 303 P **P 20 09 59.3 +0.6**
GAR Garm 46.37 302 P **P 20 10 01.8 +0.6**
BRZS Berezniki 46.44 317⇑ *i*P **P 20 10 01.4 -0.1**
comp=Z,21nm,0.7s,baz=317
BRZS Berezniki 46.44 317*c* *i*P **P 20 10 01.3 -0.1**
BRZS pmax pmax
comp=Z,21nm,0.7s
KK31 Karatay Array 46.58 307 P **P 20 10 02.9 +0.2**
KK31 pmax pmax
comp=Z,60nm,0.8s
KK31 Karatay Array 46.58 307 P **P 20 10 02.9 +0.2**
KK31 IAmb IAmb 20 10 04.8
comp=Z,60nm,0.8s
KKAR Karatay Array 46.58 307 P **P 20 10 03.2 +0.5**
KKAR pmax pmax
comp=Z,60nm,0.8s
KKAR Karatay Array 46.58 307 P **P 20 10 03.2 +0.5**
KKAR IAmb IAmb 20 10 04.8
comp=Z,60nm,0.8s
KKAR Karatay Array 46.58 307 P **P 20 10 02.6 0.0**
IUG luzhnay 46.83 306⇑ *i*P **P 20 10 05.9 +1.1**
baz=306
IUG luzhnay 46.83 306*c* *i*P **P 20 10 05.8 +1.1**
CHM Chimkent 47.16 306⇑ *i*P **P 20 10 08.3 +1.1**
comp=Z,13nm,0.7s,baz=306
CHM Chimkent 47.16 306*c* *i*P **P 20 10 08.3 +1.1**
CHM pmax pmax
comp=Z,13nm,0.7s
TAS Tashkent 47.30 305 P **P 20 10 09.6 +1.3**
TAS pmax pmax
comp=Z,207nm,0.9s
TAS Tashkent 47.30 305 P **P 20 10 09.6 +1.3**
KBL Kabul 47.36 296 P **P 20 10 09.7 +0.6**
KBL pmax pmax
comp=Z,85nm,0.8s
KBL Kabul 47.36 296 P **P 20 10 09.7 +0.6**
KBL Kabul 47.36 296 P **P 20 10 10.5 +1.4**
SNR=87
TIXI Tiksi 47.88 3 P **P 20 10 09.6 -2.7**
comp=Z,25nm,0.6s,baz=160,slow=5.9,SNR=127
TIXI ScP **ScP 20 15 30.9 -2.7**
comp=Z,0.9nm,0.7s,baz=180,slow=2.8,SNR=3.5
TIXI Tiksi 47.88 3*c* *i*P **P 20 10 09.4 -2.9**
TIXI Tiksi 47.88 3 P **P 20 10 09.3 -2.9**
TIXI IAmb IAmb 20 10 10.8
comp=Z,28nm,0.7s
TIXI PcP **PcP 20 11 40.4 -0.2**
AS31 Alice Springs 48.59 166 P **P 20 10 19.3 +0.9**
ASAR Alice Springs 48.59 166 P **P 20 10 19.5 +1.1**
comp=Z,32nm,1.0s,baz=347,slow=6.3,SNR=140
ASAR LR LR 20 32 30.9
comp=Z,295nm,19.0s,baz=339,slow=38
ASAR Alice Springs 48.59 166 P **P 20 10 19.2 +0.8**
ASAR Alice Springs 48.59 166 P **P 20 10 19.2 +0.8**
BVAR Borovoye Array 48.63 321 P **P 20 10 16.9 -1.5**
comp=Z,25nm,0.6s,baz=189,slow=9.6,SNR=123
BVAR PcP **PcP 20 11 43.0 -0.6**
comp=Z,18nm,0.9s,baz=166,slow=5.0,SNR=5.9
BVAR ScP **ScP 20 15 35.5 -1.7**
comp=Z,10nm,1.1s,baz=55,slow=6.7,SNR=10
BRVK Borovoye 48.70 321*c* *i*P **P 20 10 18.5 -0.4**
BRVK pmax pmax
comp=Z,54nm,1.0s
BRVK Borovoye 48.70 321 P **P 20 10 18.1 -0.8**
BRVK IAmb IAmb 20 10 21.1
comp=Z,41nm,0.8s
BRVK Borovoye 48.70 321 P **P 20 10 18.7 -0.3**
HNR Honiara 49.38 128 P **P 20 10 25.2 +0.6**
HNR pmax pmax
comp=Z,184nm,1.4s
HNR Honiara 49.38 128 P **P 20 10 25.2 +0.6**
CTA Charters Tower 49.50 150 LR LR 20 29 17.6
comp=Z,727nm,20.0s,baz=338,slow=34
CTAO Charters Tower 49.50 150 P **P 20 10 26.8 +1.4**
CTAO pmax pmax
comp=Z,125nm,1.3s
CTAO Charters Tower 49.50 150 P **P 20 10 26.8 +1.4**
NRIK Noril'sk 49.96 345 P **P 20 10 25.6 -2.7**
comp=Z,9.4nm,0.5s,baz=119,slow=9.8,SNR=13
NRIK PcP **PcP 20 11 47.9 -0.3**
comp=Z,14nm,0.8s,baz=102,slow=4.8,SNR=4.2
NRIK LR LR 20 33 36.3
comp=Z,2µm,21.1s,baz=140,slow=39
NRIK Noril'sk 49.96 345*c* *i*P **P 20 10 25.8 -2.5**
NRIK pmax pmax
comp=Z,16nm,0.9s
NRIK Noril'sk 49.96 345 P **P 20 10 26.0 -2.2**
NRIK IAmb IAmb 20 10 45.8
comp=Z,34nm,0.9s
NRIK PcP **PcP 20 11 47.2 -0.9**
AMKA Amchitka 51.07 42 P **P 20 10 35.8 -1.1**
BILL Bilibino 51.52 19*ce* *e*P **P 20 10 39.0 -1.0**
BILL *e* 20 11 53.3
BILL *e*PPP PPP 20 13 31.6
BILL pmax pmax
comp=Z,13nm,1.0s
BILL MLR MLR
comp=Z,1µm,16.0s
BILL Bilibino 51.52 19 P **P 20 10 38.8 -1.3**
HRA Herat 52.97 296 P **P 20 10 51.5 -0.2**
MORW Morawa 53.06 187 P **P 20 10 52.0 0.0**
ADK Adak 53.62 42 P **P 20 10 55.0 -0.9**
ADK pmax pmax
comp=Z,109nm,1.4s
ADK Adak 53.62 42 P **P 20 10 55.0 -0.9**
ADK IAmb IAmb 20 12 33.3
comp=Z,109nm,1.4s
ABKAR Akbulak array 54.48 314 P **P 20 11 02.0 -0.1**
ABKAR Akbulak array 54.48 314 P **P 20 11 02.2 0.0**
ABKAR IAmb IAmb 20 11 04.2
comp=Z,64nm,0.8s
FORT Forrest 54.66 174 P **P 20 11 04.2 +0.6**
SVE Sverdlovsk 54.96 324*de* P **P 20 11 05.1 -0.4**
SVE pmax pmax
comp=Z,65nm,0.9s
SVE MLR MLR
comp=Z,2µm,17.0s
AKTO Aktyubinsk 55.79 316 P **P 20 11 11.1 -0.6**
comp=Z,9.8nm,0.6s,baz=96,slow=13,SNR=31
GEYT Alibeck 55.96 301 P **P 20 11 14.1 +1.0**
comp=Z,100nm,0.9s,baz=86,slow=6.3,SNR=154
GEYT LR LR 20 40 16.1
comp=Z,879nm,18.1s,baz=215,slow=41
GEYT Alibeck 55.96 301 P **P 20 11 13.9 +0.8**
GYA0B ALIBECK ARRAY 55.96 301 P **P 20 11 14.6 +1.5**
ARU Arti 56.03 323 P **P 20 11 12.1 -1.2**
comp=Z,21nm,0.7s,baz=106,slow=3.2,SNR=84
ARU Arti 56.03 323*c* *i*P **P 20 11 12.1 -1.2**
ARU *SP **sP** 20 11 22.4 +0.7
ARU 20 12 08.7
ARU S **S 20 18 59.1 -1.2**
ARU SS **SS 20 22 43.0 -3.2**
ARU pmax pmax
comp=Z,51nm,0.7s
ARU MLR MLR
comp=Z,786nm,15.0s
ARU Arti 56.03 323 P **P 20 11 12.2 -1.0**
ARU IAmb IAmb 20 11 14.2
comp=Z,53nm,0.7s
EIDS Eidsvold 56.29 149 P **P 20 11 16.7 +1.3**
EIDS IAmb IAmb 20 11 31.2
comp=Z,37nm,1.2s
NWAO Narrogin (SRO) 56.77 185 P **P 20 11 20.5 +1.8**
NWAO pmax pmax
comp=Z,78nm,1.5s
NWAO Narrogin (SRO) 56.77 185 P **P 20 11 20.5 +1.8**
NWAO IAmb IAmb 20 11 32.2
comp=Z,78nm,1.4s
BBOO Buckleboo 57.89 167 P **P 20 11 27.7 +1.1**
WBK Wadi Bani Khal 57.92 283 P **P 20 11 28.9 +1.6**
SNR=7.3
WSAR Wadi Sarin 58.07 283 P **P 20 11 28.8 +0.6**
comp=Z,32nm,1.1s,baz=104,slow=6.3,SNR=11
WSAR LR LR 20 39 03.3
comp=Z,448nm,19.8s,baz=98,slow=39
WSAR Wadi Sarin 58.07 283 P **P 20 11 29.8 +1.5**
SNR=6.5
STKA Stephens Creek 58.42 161 P **P 20 11 31.7 +1.2**
comp=Z,22nm,0.8s,baz=337,slow=7.2,SNR=49
STKA LR LR 20 37 46.8
comp=Z,455nm,20.2s,baz=352,slow=37
STKA Stephens Creek 58.42 161*d* *i*P **P 20 11 31.5 +1.1**
STKA Stephens Creek 58.42 161 P **P 20 11 31.6 +1.2**
BIDO Bidbid 58.44 284 P **P 20 11 32.7 +1.8**
SNR=6.8

SMDO Samad 58.63 283 P **P 20 11 33.5 +1.2**
SNR=5.4
JMDO Jabal Madar 58.76 282 P **P 20 11 33.4 +0.4**
HOQ Hoqain 59.15 284 P **P 20 11 37.0 +1.2**
SNR=13
MHTO MHTO 59.25 281 P **P 20 11 36.3 -0.2**
BSY Bisya 59.47 283 P **P 20 11 39.1 +1.1**
SNR=6.3
BANOM Banah 59.48 287 P **P 20 11 39.9 +1.9**
BANOM Banah 59.48 287 P **P 20 11 40.0 +2.0**
SHME Shamm 59.58 287 P **P 20 11 40.7 +1.9**
MDH Madha 59.62 286 P **P 20 11 39.7 +0.7**
SOHO SOHO 59.70 285 *i* P **P 20 11 40.5 +0.9**
SNR=13
SOHO SOHO 59.70 285 P **P 20 11 40.6 +1.0**
MASF Masafi 59.73 286 P **P 20 11 41.6 +1.8**
MSFE Esma-Masafi 59.73 286 P **P 20 11 41.7 +1.9**
UOSS Minazif 59.79 286 P **P 20 11 40.9 +0.6**
UOSS Minazif 59.79 286 P **P 20 11 40.6 +0.4**
UOSS IAmb IAmb 20 11 58.3
comp=Z,31nm,1.1s
UOSS Minazif 59.79 286 P **P 20 11 40.1 -0.1**
HATD Hatta, Dubai 59.89 286 P **P 20 11 42.3 +1.4**
HATD Hatta, Dubai 59.89 286 P **P 20 11 42.6 +1.8**
ARQ Araqi 59.92 284 P **P 20 11 42.1 +1.0**
DQM DQM 59.93 280 P **P 20 11 41.8 +0.6**
NAZ Nazwa, Dubai 60.26 286 P **P 20 11 44.5 +1.1**
FAQ Al Faqa, Dubai 60.38 286 *i* P **P 20 11 45.0 +0.8**
SNR=8.7
FAQ Al Faqa, Dubai 60.38 286 P **P 20 11 45.1 +0.8**
ALNE Al Ain 60.41 285 *i* P **P 20 11 45.6 +1.2**
SNR=10
ALNE Al Ain 60.41 285 P **P 20 11 45.7 +1.2**
ASUD Al Ashush, Dub 60.64 286 P **P 20 11 47.2 +1.2**
ASUD Al Ashush, Dub 60.64 286 P **P 20 11 47.5 +1.5**
ARMA Armidale 60.84 151 P **P 20 11 48.4 +1.2**
ARMA IAmb IAmb 20 12 05.5
comp=Z,60nm,1.1s
ANM Nome 60.98 28 P **P 20 11 47.9 +0.3**
ANM pmax pmax
comp=Z,29nm,1.2s
ANM Nome 60.98 28 P **P 20 11 47.9 +0.3**
ANM IAmb IAmb 20 11 59.1
comp=Z,29nm,1.2s
ANM Nome 60.98 28 P 20 11 48.0
baz=265,SNR=7.7
KIRV Kirov 61.11 325 P **P 20 11 47.1 -1.5**
comp=Z,50nm,0.6s,baz=76,slow=2.0,SNR=15
KIRV Kirov 61.11 325*c* *i*P **P 20 11 47.4 -1.2**
UMZA Um Al Zommool 61.29 284 P **P 20 11 51.0 +0.6**
SHAO Shalim 62.23 278 P **P 20 11 57.1 +0.3**
RDOG Red Dog Mine 62.28 24 P **P 20 11 55.8 -0.6**
RDOG Red Dog Mine 62.28 24 P 20 11 55.8
baz=265
BELG Belogornoye 62.28 318*c* *i*P **P 20 11 55.8 -0.8**
BELG pmax pmax
comp=Z,7.0nm,1.1s
DZM Mont Dzumac 62.59 134 *e*P P 20 12 06.2 +7.1
comp=Z,87nm,1.4s
DZM *eS* **S 20 20 33.0 +7.0**
comp=Z,1µm,26.8s
DZM Mont Dzumac 62.59 134 *e*LR LR 20 30 42.5
comp=Z,2µm,24.2s
DMTO DMTO 62.93 278 P **P 20 12 02.3 +0.7**
DOK Doka 63.40 280 P **P 20 12 04.4 -0.2**
AKT Akhty 63.46 306 *eP* **P 20 12 05.4 +0.6**
AKT *e* 20 12 41.6
AKT pmax pmax
comp=Z,93nm,0.8s
RBK Rabkut 63.67 278 P **P 20 12 07.0 +0.5**
WHFO Wadi Hawf 63.94 279 P **P 20 12 08.0 -0.3**
SLWR Sila 63.99 286 P **P 20 12 09.3 +0.8**
CAN Canberra 64.06 156 P **P 20 12 09.4 +0.9**
CAN pmax pmax
comp=Z,52nm,1.4s
CAN Canberra 64.06 156 P **P 20 12 09.4 +0.9**
CAN IAmb IAmb 20 12 24.2
comp=Z,52nm,1.4s
TRNA Turayna 64.23 287 P **P 20 12 09.7 -0.3**
ABTO Aybut 64.54 279 P **P 20 12 12.4 +0.2**
GROC Groznyy 64.59 308 *eP* **P 20 12 11.0 -1.1**
GROC *eS* **S 20 20 46.6 -3.9**
GROC pmax pmax
comp=Z,128nm,1.4s
A21K Barrow 64.62 21 P **P 20 12 11.4 -0.3**
A21K IAmb IAmb 20 12 33.8
comp=Z,30nm,1.1s
A21K Barrow 64.62 21 P 20 12 11.5
baz=270
TOO Toolangi 64.89 160 P **P 20 12 15.2 +1.3**
TOO pmax pmax
comp=Z,135nm,1.8s
TOO Toolangi 64.89 160 P **P 20 12 15.2 +1.3**
TTA Tatalina 65.12 30 P **P 20 12 15.0 -0.3**
TTA pmax pmax
comp=Z,26nm,1.3s
TTA Tatalina 65.12 30 P **P 20 12 15.0 -0.3**
TTA Tatalina 65.12 30 P 20 12 15.8
baz=274,SNR=13
SOCY Socotra 65.65 273 P **P 20 12 18.4 -1.1**
SOCY IAmb IAmb 20 12 19.7
comp=Z,49nm,1.3s
SOCY Socotra 65.65 273 P **P 20 12 18.7 -0.8**
SNR=7.2
GNI Garni 65.93 305 P **P 20 12 22.6 +1.5**
GNI Garni 65.93 305*c* *i*P **P 20 12 22.1 +1.0**
GNI pmax pmax
comp=Z,106nm,1.3s
GNI Garni 65.93 305 P **P 20 12 21.9 +0.8**
UMR Umm Al-Rimmam 65.97 293 *eP* 20 12 20.8
KLMR Klimovskoe 66.02 328 *eP* **P 20 12 18.8 -2.2**
KLMR *e* 20 14 45.6
KLMR pmax pmax
comp=Z,38nm,1.3s
KLMR MLR MLR
comp=Z,2µm,16.0s
KLMR Klimovskoe 66.02 328 *eP* **P 20 12 18.9 -2.1**
KLMR AMP 20 12 23.4
comp=Z,38nm,1.3s
KLMR *ePP **PP** 20 14 45.6 -0.5
KLMR LQ LQ 20 36 47.2
KLMR LQ LQ 20 36 47.2
KLMR LR LR 20 41 11.9
KLMR AMP 20 43 36.0
comp=Z,2µm,16.0s
ZEI Tsey 66.03 308 *eP* **P 20 12 17.8 -3.9**
ZEI pmax pmax
comp=Z,68nm,1.0s
VRH Novokhopyorsk 66.06 317 *eP* **P 20 12 20.5 -0.9**
VRH pmax pmax
comp=Z,90nm,1.0s
NCK Nalchik 66.12 309⇑ *i*P **P 20 12 22.2 +0.2**
NCK pmax pmax
comp=Z,40nm,1.1s
GOF Gofitskoye 66.22 310⇑ *i*P **P 20 12 22.9 +0.3**
GOF pmax pmax
comp=Z,133nm,1.1s
RDF Al-Radifah 66.27 292 *eP* 20 12 22.7
KBZ Khabaz 66.57 309 P **P 20 12 25.2 +0.3**
comp=Z,61nm,0.9s,baz=98,slow=5.4,SNR=118
KBZ LR LR 20 45 09.8
comp=Z,825nm,18.8s,baz=69,slow=39
KBZ Khabaz 66.57 309*d* *i*P **P 20 12 24.5 -0.3**
KBZ pmax pmax
comp=Z,83nm,1.0s
RST Umm Al-Ruwaisa 66.59 293 *eP* 20 12 24.1
AKH Akhalkalaki 66.61 306⇓ *i*P **P 20 12 27.0 +1.6**
KIV Kislovodsk 66.68 309⇑ *eP* **P 20 12 26.4 +0.7**
KIV Kislovodsk 66.68 309 *i* P **P 20 12 26.4 +0.7**
SNR=68
KIV Kislovodsk 66.68 309 *eP* **P 20 12 26.2 +0.5**
KIV *e* 20 14 53.2
KIV *eS* **S 20 21 17.5 +1.3**
KIV pmax pmax
comp=Z,20nm,1.1s
KIV pmax pmax
comp=Z,90nm,2.8s
KIV MLR MLR
comp=Z,2µm,17.0s
KIV Kislovodsk 66.68 309 P **P 20 12 26.1 +0.4**
KIV Kislovodsk 66.68 309 P **P 20 12 26.7 +1.0**
CHUM Lake Minchumin 66.69 29 P 20 12 26.2
baz=277,SNR=12
CLDR Caldiran 66.77 304 *eP* **P 20 12 26.8 +0.3**

NEY	**Neytrino**	**66.79**	**309**	*d*	iP		**P**		**20 12 28.4**	**+1.9**
NEY						pmax	pmax			
	comp=Z,12nm,0.9s									
PPLA	**Purkeypile**	**66.87**	**30**		P		**P**		**20 12 26.5**	**-0.1**
PPLA	**Purkeypile**	**66.87**	**30**		P				20 12 27.0	
	baz=277,SNR=9.7									
RSO	**Redoubt South**	**66.93**	**32**		P		**P**		**20 12 27.1**	**0.0**
SPCR	**Spurr Chakacha**	**67.09**	**32**		P				20 12 28.2	
	baz=278,SNR=9.7									
OHAK	**Old Harbor**	**67.13**	**36**		P		**P**		**20 12 27.3**	**-0.8**
OHAK	**Old Harbor**	**67.13**	**36**		P				20 12 27.6	
	baz=279									
COLD	**Coldfoot**	**67.15**	**25**		P		**P**		**20 12 27.8**	**-0.3**
COLD	**Coldfoot**	**67.15**	**25**		P				20 12 28.4	
	baz=277									
TOLK	**Toolik Lake Re**	**67.20**	**23**		P		**P**		**20 12 28.4**	**-0.1**
TOLK					IAmb		IAmb		20 12 57.8	
	comp=Z,25nm,1.0s									
TOLK	**Toolik Lake Re**	**67.20**	**23**		P				20 12 28.3	
	baz=277,SNR=14									
MLY	**Manley**	**67.22**	**27**		P		**P**		**20 12 28.7**	**+0.1**
MLY					IAmb		IAmb		20 12 40.1	
	comp=Z,29nm,1.0s									
MLY	**Manley**	**67.22**	**27**		P				20 12 29.2	
	baz=278,SNR=18									
BPAW	**Bear Paw Mtn.**	**67.24**	**28**		P		**P**		**20 12 28.8**	**0.0**
BPAW					IAmb		IAmb		20 12 29.8	
	comp=Z,14nm,0.6s									
BPAW	**Bear Paw Mtn.**	**67.24**	**28**		P				20 12 29.1	
	baz=278,SNR=18									
LVZ	**Lovozero**	**67.27**	**336**		P		**P**		**20 12 28.4**	**-0.5**
LVZ					pmax		pmax			
	comp=Z,71nm,1.3s									
LVZ	**Lovozero**	**67.27**	**336**		P		**P**		**20 12 28.4**	**-0.5**
LVZ					IAmb		IAmb		20 12 43.1	
	comp=Z,71nm,1.3s									
SKT	**Skwentna**	**67.30**	**31**		P				20 12 28.6	
	baz=278,SNR=6.7									
KTH	**Kantishna Hill**	**67.35**	**29**		P		**P**		**20 12 29.5**	**-0.1**
CHVG	**Ch'k'valeri**	**67.36**	**308**	⇑	P		**P**		**20 12 30.7**	**+0.8**
AGRB	**Hanur-Agry**	**67.37**	**305**	*e*	P		**P**		**20 12 31.7**	**+1.4**
KDAK	**Kodiak Island**	**67.41**	**35**		P		**P**		**20 12 29.0**	**-0.9**
KDAK					pmax		pmax			
	comp=Z,46nm,1.2s									
KDAK	**Kodiak Island**	**67.41**	**35**		P		**P**		**20 12 29.0**	**-0.9**
KDAK					IAmb		IAmb		20 12 31.6	
	comp=Z,46nm,1.1s									
KDAK	**Kodiak Island**	**67.41**	**35**		P				20 12 29.5	
	baz=279									
CUKT	**Cukurca**	**67.43**	**302**		*e*P		**P**		**20 12 30.2**	**-0.4**
LPSR	**Galich'ya Gora**	**67.53**	**319**		*e*P		**P**		**20 12 29.4**	**-1.4**
LPSR					pmax		pmax			
	comp=Z,50nm,0.8s									
GEVA	**Gevas**	**67.61**	**303**		P		**P**		**20 12 32.1**	**+0.3**
VORD	**Divnogorie**	**67.61**	**317**		*e*P		**P**		**20 12 30.2**	**-1.1**
VORD					pmax		pmax			
	comp=Z,40nm,1.1s									
SENK	**Senkaya-Erzuru**	**67.63**	**306**		*e*P		**P**		**20 12 33.3**	**+1.4**
VSR	**Storozhevoye**	**67.64**	**318**		*e*P		**P**		**20 12 29.7**	**-1.8**
VSR					pmax		pmax			
	comp=Z,60nm,1.0s									
TRF	**Thorofare Moun**	**67.64**	**29**		P		**P**		**20 12 31.6**	**0.0**
TRF					IAmb		IAmb		20 12 37.3	
	comp=Z,51nm,1.7s									
TRF	**Thorofare Moun**	**67.64**	**29**		P				20 12 31.8	
	baz=279									
AKDM	**Akdamar-Van**	**67.66**	**303**		*e*P		**P**		**20 12 33.2**	**+1.1**
MOS	**Moscow**	**67.73**	**323**		*e*P		**P**		**20 12 29.9**	**-2.1**
MOS					*e*				20 12 43.5	
MOS					*e*				20 13 03.1	
MOS					pmax		pmax			
	comp=Z,46nm,0.8s									
MOS					MLR		MLR			
	comp=Z,800nm,16.0s									
SUA	**Susitna One**	**67.75**	**31**		P				20 12 32.4	
	baz=279,SNR=16									
I23K	**Minto, Yukon-K**	**67.78**	**27**		P		**P**		**20 12 31.9**	**-0.2**
I23K	**Minto, Yukon-K**	**67.78**	**27**		P				20 12 32.2	
	baz=279,SNR=13									
MLAZ	**Malazgirt-MUS**	**67.80**	**304**		*e*P		**P**		**20 12 34.6**	**+1.6**
CUT	**Chulitna**	**67.82**	**30**		P				20 12 32.3	
	baz=279									
NEA2	**Nenana**	**67.99**	**28**		P		**P**		**20 12 33.2**	**-0.3**
NEA2					IAmb		IAmb		20 12 44.5	
	comp=Z,62nm,1.2s									
NEA2	**Nenana**	**67.99**	**28**		P				20 12 33.6	
	baz=279,SNR=30									
BRSE	**Bradley Lake S**	**68.03**	**33**		P				20 12 34.5	
	baz=280									
KOPR	**Koprukoy-ERZUR**	**68.13**	**305**		*e*P		**P**		**20 12 36.5**	**+1.4**
MCK	**McKinley**	**68.19**	**29**		P		**P**		**20 12 34.3**	**-0.5**
MCK					pmax		pmax			
	comp=Z,31nm,1.0s									
MCK	**McKinley**	**68.19**	**29**		P		**P**		**20 12 34.3**	**-0.5**
MCK					IAmb		IAmb		20 12 45.3	
	comp=Z,31nm,1.0s									
MCK	**McKinley**	**68.19**	**29**		P				20 12 34.5	
	baz=280,SNR=14									
MDM	**Murphy Dome**	**68.28**	**27**		P		**P**		**20 12 34.8**	**-0.6**
RND	**Reindeer**	**68.29**	**29**		P		**P**		**20 12 34.4**	**-1.0**
RND					pmax		pmax			
	comp=Z,43nm,0.7s									
RND	**Reindeer**	**68.29**	**29**		P		**P**		**20 12 34.4**	**-1.0**
RND					IAmb		IAmb		20 12 35.9	
	comp=Z,43nm,0.7s									
GURO	**Guroymak-BITLI**	**68.33**	**304**		*e*P		**P**		**20 12 37.6**	**+1.3**
O22K	**Cooper Landing**	**68.41**	**32**		P				20 12 35.4	
	baz=280									
WRH	**Wood River Hil**	**68.43**	**28**		P		**P**		**20 12 35.9**	**-0.4**
WRH					IAmb		IAmb		20 12 47.9	
	comp=Z,36nm,1.4s									
OBN	**Obninsk**	**68.44**	**322**	*c*	*i*P		**P**		**20 12 35.2**	**-1.2**
OBN					*e**PP		**pP**		**20 12 42.6**	**0.0**
OBN					*e*				20 12 49.9	
OBN					*e*				20 13 01.2	
OBN					pmax		pmax			
	comp=Z,76nm,1.6s									
OBN					MLR		MLR			
	comp=Z,859nm,18.0s									
OBN	**Obninsk**	**68.44**	**322**		P		**P**		**20 12 35.5**	**-0.9**
COLA	**College**	**68.46**	**27**	⇓	*i*P		**P**		**20 12 36.1**	**-0.3**
COLA					pmax		pmax			
	comp=Z,6.0nm,0.7s									
PMR	**Palmer**	**68.49**	**31**		P				20 12 35.8	
	baz=280									
WAT2	**Susitna Watana**	**68.49**	**29**		P				20 12 36.0	
	baz=280									
CCB	**Clear Creek Bu**	**68.52**	**28**		P		**P**		**20 12 35.8**	**-0.9**
GHO	**Glory Hole Cre**	**68.55**	**31**		P		**P**		**20 12 36.6**	**-0.5**
POKR	**Poker Flat Res**	**68.59**	**27**		P				20 12 37.8	
	baz=281									
SEW	**Seward**	**68.61**	**33**		P				20 12 36.6	
	baz=281									
CHOM	**Cayeli-Rize**	**68.68**	**307**		*e*P		**P**		**20 12 39.0**	**+0.7**
SML	**Sawmill**	**68.82**	**31**		P				20 12 38.0	
	baz=281,SNR=7.6									
KNK	**Knik Glacier**	**68.84**	**31**		P				20 12 38.5	
	baz=281									
SOC	**Sochi**	**68.86**	**309**		*e*P		**P**		**20 12 36.8**	**-2.5**
SOC					*e*				20 15 09.2	
SOC					*e*PPP		PPP		20 16 47.5	
SOC					*e*S		**S**		**20 21 41.0**	**-1.1**
SOC					*e*SSS		SSS		20 29 11.9	
SOC					pmax		pmax			
	comp=Z,55nm,0.8s									
SOC					MLR		MLR			
	comp=Z,1μm,20.0s									
IL31		**68.88**	**27**		P		**P**		**20 12 37.8**	**-1.2**
ILAR	**Eielson Array**	**68.88**	**27**		P		**P**		**20 12 37.5**	**-1.5**
	comp=Z,2.2nm,0.5s,baz=259,slow=5.5,SNR=35									
ILAR					PKP2bc				20 40 56.7	
	comp=Z,0.5nm,1.0s,baz=151,slow=2.1,SNR=2.6									
ILAR					LR		LR		20 45 46.0	
	comp=Z,259nm,18.1s,baz=306,slow=39									
ILAR	**Eielson Array**	**68.88**	**27**		P		**P**		**20 12 37.4**	**-1.7**
ILAR	**Eielson Array**	**68.88**	**27**		P		**P**		**20 12 37.4**	**-1.7**
HDA	**Harding Lake**	**68.93**	**28**		P				20 12 38.1	
	baz=281,SNR=10.0									
HDA					P				20 12 38.1	
	baz=281,SNR=10.0									
WAT6	**Susitna Watana**	**68.94**	**30**		P				20 12 39.2	
	baz=281,SNR=15									
PWL	**Port Wells**	**69.00**	**32**		P		**P**		**20 12 39.0**	**-0.9**
PWL					IAmb		IAmb		20 12 39.9	
	comp=Z,38nm,0.8s									

KOPT	**Kop Dagi**	**69.14**	**306**		P		**P**		**20 12 42.3**	**+0.8**
FYU	**Fort Yukon**	**69.19**	**25**		P		**P**		**20 12 41.2**	**+0.3**
YEDI	**Yedisu-Bingol**	**69.24**	**305**		*e*P		**P**		**20 12 42.6**	**+0.6**
BNGB	**Bingl**	**69.25**	**304**		*e*P		**P**		**20 12 43.1**	**+1.1**
BMAR	**Burnt Mountain**	**69.26**	**24**		P		**P**		**20 12 40.9**	**-0.6**
SCM	**Sheep Creek Mo**	**69.28**	**30**		P		**P**		**20 12 41.2**	**-0.5**
SCM					pmax		pmax			
	comp=Z,42nm,0.8s									
SCM	**Sheep Creek Mo**	**69.28**	**30**		P		**P**		**20 12 41.2**	**-0.5**
SCM					IAmb		IAmb		20 12 42.2	
	comp=Z,42nm,0.8s									
PRP	**Porcupine Dome**	**69.29**	**26**		P		**P**		**20 12 41.4**	**-0.4**
PRP	**Porcupine Dome**	**69.30**	**26**		P				20 12 41.2	
	baz=282									
KTUT	**Trabzon**	**69.44**	**307**	⇓⇓	P		**P**		**20 12 43.7**	**+0.8**
RAYN	**Ar Rayn**	**69.57**	**287**	*i*	P		**P**		**20 12 44.3**	**+0.2**
	SNR=5.0									
RAYN	**Ar Rayn**	**69.57**	**287**		P		**P**		**20 12 44.4**	**+0.3**
RAYN					pmax		pmax			
	comp=Z,39nm,1.0s									
RAYN	**Ar Rayn**	**69.57**	**287**		P		**P**		**20 12 44.4**	**+0.3**
RAYN					IAmb		IAmb		20 12 46.7	
	comp=Z,39nm,0.9s									
GLI	**Glacier Island**	**69.59**	**31**		P		**P**		**20 12 43.0**	**-0.5**
GLI					IAmb		IAmb		20 12 43.8	
	comp=Z,28nm,0.8s									
GLI	**Glacier Island**	**69.59**	**31**		P				20 12 43.2	
	baz=282,SNR=8.3									
MARD	**Mardin**	**69.60**	**303**		P		**P**		**20 12 44.6**	**+0.4**
KEV	**Kevo**	**69.65**	**338**		P		**P**		**20 12 42.9**	**-0.8**
KEV					pmax		pmax			
	comp=Z,29nm,0.7s									
KEV	**Kevo**	**69.65**	**338**		P		**P**		**20 12 42.9**	**-0.8**
KEV					IAmb		IAmb		20 12 43.8	
	comp=Z,29nm,0.7s									
M24K	**Tolsona, Glenn**	**69.75**	**30**		P				20 12 45.2	
	baz=283,SNR=7.0									
PAX	**Paxson**	**69.88**	**29**		P		**P**		**20 12 44.7**	**-0.7**
PAX					pmax		pmax			
	comp=Z,16nm,1.0s									
PAX	**Paxson**	**69.88**	**29**		P		**P**		**20 12 44.7**	**-0.7**
PAX	**Paxson**	**69.88**	**29**		P				20 12 45.2	
	baz=283,SNR=8.9									
DYBB	**Diyarbakir**	**69.93**	**303**		*e*P		**P**		**20 12 47.3**	**+1.2**
SPA0	**Spitsbergen Ar**	**69.98**	**348**		P		**P**		**20 12 44.6**	**-1.1**
SPA0					IAmb		IAmb		20 12 46.2	
	comp=Z,84nm,1.3s									
KLU	**Klutina**	**70.01**	**31**		P				20 12 46.0	
	baz=283,SNR=10									
HARP	**HAARP**	**70.15**	**30**		P				20 12 47.5	
	baz=284									
ANN	**Anapa**	**70.17**	**311**		*e*P		**P**		**20 12 45.4**	**-1.9**
ANN					*e**PP		**pP**		**20 12 52.1**	**-1.4**
ANN					*e*				20 15 22.2	
ANN					*e*PPP		PPP		20 17 00.4	
ANN					*e*S		**S**		**20 21 55.1**	**-2.3**
ANN					*e*SS		**SS**		**20 26 25.0**	**-2.1**
ANN					pmax		pmax			
	comp=Z,220nm,1.1s									
ANN					MLR		MLR			
	comp=N,357nm,18.0s									
ANN					MLR		MLR			
	comp=Z,723nm,17.0s									
ARA0	**ARCESS Array S**	**70.22**	**338**		*e*P		**P**		**20 12 46.9**	**-0.3**
ARCES	**ARCESS Array B**	**70.22**	**338**		P		**P**		**20 12 46.5**	**-0.7**
	comp=Z,17nm,0.8s,baz=65,slow=7.8,SNR=30									
ARCES					LR		LR		20 48 47.8	
	comp=Z,739nm,18.1s,baz=60,slow=40									
ARCES	**ARCESS Array B**	**70.22**	**338**		P		**P**		**20 12 46.5**	**-0.7**
SCRK	**Sand Creek**	**70.29**	**28**		P		**P**		**20 12 46.6**	**-1.3**
SCRK	**Sand Creek**	**70.29**	**28**		P				20 12 47.4	
	baz=284,SNR=9.5									
EYAK	**Cordova Ski Ar**	**70.31**	**32**		P				20 12 48.1	
	baz=284									
DOT	**Dot Lake**	**70.33**	**28**		P		**P**		**20 12 47.2**	**-0.9**
DOT					IAmb		IAmb		20 12 57.6	
	comp=Z,32nm,1.2s									
HSPB	**Hornsund (broa**	**70.58**	**347**		*e*P		**P**		**20 12 48.0**	**-1.3**
N25K	**Chitina, Valde**	**70.60**	**30**		P				20 12 49.9	
	baz=284									
ILIC	**ilic-Erzincan**	**70.72**	**305**		*e*P		**P**		**20 12 51.8**	**+0.8**
BMRM	**Bremner River**	**70.75**	**31**		P				20 12 50.4	
	baz=284									
GLB	**Gilahina Butte**	**71.00**	**30**		P		**P**		**20 12 52.2**	**0.0**
GLB					IAmb		IAmb		20 13 03.8	
	comp=Z,38nm,1.3s									
URFA	**Urfa**	**71.07**	**303**		*e*P		**P**		**20 12 53.1**	**0.0**
K27K	**Chicken**	**71.09**	**28**		P		**P**		**20 12 52.3**	**-0.3**
K27K					IAmb		IAmb		20 13 03.3	
	comp=Z,37nm,1.3s									
K27K	**Chicken**	**71.09**	**28**		P				20 12 53.4	
	baz=286									
KAIM	**Kayak Island**	**71.11**	**32**		P		**P**		**20 12 53.0**	**+0.2**
KAIM					IAmb		IAmb		20 13 13.1	
	comp=Z,42nm,1.0s									
KAIM	**Kayak Island**	**71.11**	**32**		P				20 12 53.2	
	baz=285									
MALT	**Malatya**	**71.13**	**304**		*e*P		**P**		**20 12 54.9**	**+1.4**
KTK1	**Kautokeino**	**71.14**	**338**		*e*P		**P**		**20 12 52.6**	**-0.2**
VRDI	**Verde Repeater**	**71.23**	**31**		P		**P**		**20 12 53.2**	**-0.6**
EGAK	**Eagle**	**71.27**	**27**		P		**P**		**20 12 53.2**	**-0.4**
EGAK	**Eagle**	**71.27**	**27**		P				20 12 53.4	
	baz=286,SNR=16									
RSDY	**Resadiye-TOKAT**	**71.38**	**307**		*e*P		**P**		**20 12 55.3**	**+0.4**
MCARA	**McCarthy VSAT**	**71.39**	**30**		P				20 12 54.8	
	baz=286									
L27K	**Beaver Creek,**	**71.46**	**29**		P				20 12 55.3	
	baz=286,SNR=19									
BCAR	**Beaver Creek A**	**71.48**	**29**		P		**P**		**20 12 54.9**	**-0.1**
SVSK	**Karacayir**	**71.76**	**306**		*e*P		**P**		**20 12 58.2**	**+1.1**
DARE	**Darende-Malaty**	**71.77**	**305**		*e*P		**P**		**20 12 58.7**	**+1.3**
JETT	**Jettan, Norway**	**71.92**	**339**		*e*P		**P**		**20 12 57.4**	**-0.2**
TOKT	**Tokat**	**71.98**	**307**		*e*P		**P**		**20 12 59.0**	**+0.5**
TOKA	**Tokat**	**72.03**	**307**		P		**P**		**20 12 58.5**	**-0.3**
TOKA					IAmb		IAmb		20 13 00.6	
	comp=Z,95nm,1.2s									
KVT	**Kavak**	**72.13**	**308**		*e*P		**P**		**20 13 00.3**	**+0.9**
DAWY	**Dawson**	**72.21**	**27**		P		**P**		**20 12 58.8**	**-0.7**
FIA1	**FINESS Array S**	**72.27**	**330**		P		**P**		**20 12 58.9**	**-0.8**
FIA1					IAmb		IAmb		20 13 01.1	
	comp=Z,68nm,1.1s									
FINES	**FINESS Array B**	**72.27**	**330**		P		**P**		**20 12 58.4**	**-1.3**
	comp=Z,50nm,1.0s,baz=61,slow=4.9,SNR=71									
FINES					LR		LR		20 48 03.3	
	comp=Z,3μm,18.5s,baz=74,slow=39									
FINES	**FINESS Array B**	**72.27**	**330**	*i*	P		**P**		**20 12 58.7**	**-1.0**
FINES					pmax		pmax			
	comp=Z,50nm,1.0s									
FINES	**FINESS Array B**	**72.27**	**330**		P		**P**		**20 12 58.8**	**-0.9**
CTG	**Chitna Glacier**	**72.29**	**31**		P				20 13 00.2	
	baz=287									
GAZ	**Gaziantep**	**72.38**	**303**		*e*P		**P**		**20 13 01.7**	**+0.7**
GAZ	**Gaziantep**	**72.38**	**303**		P		**P**		**20 13 01.1**	**+0.1**
TRO	**Tromso**	**72.38**	**339**		*e*P		**P**		**20 12 59.1**	**-1.1**
KMRS	**Kahramanmaras**	**72.52**	**304**		*e*P		**P**		**20 13 02.6**	**+0.8**
EPYK	**Eagle Plains**	**72.53**	**25**		P		**P**		**20 13 00.2**	**-1.1**
EPYK					IAmb		IAmb		20 13 01.5	
	comp=Z,18nm,0.6s									
EPYK	**Eagle Plains**	**72.53**	**25**		P				20 13 00.7	
	baz=290,SNR=6.2									
DIKM	**Dikmen**	**72.54**	**308**	⇓	P		**P**		**20 13 02.5**	**+0.7**
DIKM	**Dikmen**	**72.54**	**308**		*e*P		**P**		**20 13 01.9**	**+0.2**
SARI	**SarD1z-Kayseri**	**72.62**	**305**		*e*P		**P**		**20 13 02.2**	**-0.3**
NOR	**Nord**	**72.71**	**354**	*i*	P		**P**		**20 13 00.5**	**-1.6**
NOR					IAmb		IAmb		20 13 02.5	
	comp=Z,6.6nm,0.7s									
NOR	**Nord**	**72.71**	**354**	*i*	P		**P**		**20 13 00.5**	**-1.6**
NOR					pmax		pmax			
	comp=Z,7.0nm,0.7s									
VSU	**Vasula**	**72.85**	**327**		*e*P		**P**		**20 13 03.1**	**-0.2**
BNN	**Bunyan**	**72.92**	**305**		*e*P		**P**		**20 13 03.7**	**-0.5**
INK	**Inuvik**	**73.00**	**22**		P		**P**		**20 13 02.8**	**-1.2**
	comp=Z,15nm,0.7s,baz=298,slow=5.0,SNR=58									
INK	**Inuvik**	**73.00**	**22**		P		**P**		**20 13 03.0**	**-1.0**
INK					pmax		pmax			
	comp=Z,22nm,1.0s									
INK	**Inuvik**	**73.00**	**22**		P		**P**		**20 13 03.0**	**-1.0**
INK	**Inuvik**	**73.00**	**22**		P				20 13 03.1	
	baz=292,SNR=24									
KOZT	**Kozan**	**73.34**	**304**		*e*P		**P**		**20 13 07.2**	**+0.6**
BZK	**Bozkurt**	**73.34**	**309**	⇑	P		**P**		**20 13 06.9**	**+0.4**
BZK	**Bozkurt**	**73.34**	**309**		*e*P		**P**		**20 13 06.8**	**+0.3**
TAHT	**Tahtakopru-Hat**	**73.40**	**303**		*e*P		**P**		**20 13 07.7**	**+0.7**
CORM	**Corum**	**73.42**	**307**		*e*P		**P**		**20 13 06.8**	**-0.4**

MNK	**Minsk**	**73.46**	**323**		*e*P		**P**		**20 13 07.0**	**+0.1**
MNK					*e*				20 13 20.0	
MNK	**Minsk**	**73.46**	**323**		*i*P		**P**		**20 13 06.3**	**-0.6**
	comp=E,6.0nm,0.9s									
MNK					*i*P		**P**		**20 13 06.3**	**-0.6**
	comp=N,18nm,1.1s									
MNK					*i*P		**P**		**20 13 06.3**	**-0.6**
	comp=Z,59nm,1.0s									
MNK					*i* PcP		**PcP**		**20 13 22.2**	**-0.8**
MNK					*i* PP		**PP**		**20 15 49.9**	**-0.5**
MNK					*i* PPP		PPP		20 17 34.6	
MNK					*i* S		**S**		**20 22 35.4**	**+0.4**
MNK					*i* ScS		**ScS**		**20 23 14.3**	**-0.1**
MNK					*i* SS		**SS**		**20 27 18.9**	**+2.0**
MNK					*i* SSS		SSS		20 30 40.9	
MNK					*i* LQ		LQ		20 40 29.1	
MNK					*i* LR		LR		20 46 04.6	
MNK					*i* LRM		MLR		20 47 50.6	
	comp=N,284nm,11.5s									
MNK					*i* LRM		MLR		20 47 53.3	
	comp=E,65nm,12.4s									
MNK					*i* LRM		MLR		20 47 57.8	
	comp=Z,517nm,14.7s									
CEYT	**Ceyhan**	**73.54**	**304**		*e*P		**P**		**20 13 08.9**	**+1.1**
ILGA	**Ilgaz**	**73.82**	**308**		P		**P**		**20 13 09.3**	**-0.4**
ILGA					IAmb		IAmb		20 13 11.5	
	comp=Z,64nm,1.2s									
IDID	**Didziasalis**	**73.83**	**324**		*e*P		**P**		**20 13 08.3**	**-0.8**
AKASG	**Malin Array Be**	**73.86**	**319**		P		**P**		**20 13 08.2**	**-1.2**
	comp=Z,23nm,0.8s,baz=58,slow=5.8,SNR=62									
AKASG					LR		LR		20 48 47.2	
	comp=Z,482nm,18.1s,baz=75,slow=38									
AKBB	**Malin Array Si**	**73.86**	**319**	*c*	*i*P				**20 13 08.1**	**-1.2**
AKBB					pmax		pmax			
	comp=Z,26nm,0.9s									
AKBB	**Malin Array Si**	**73.86**	**319**		P		**P**		**20 13 08.6**	**-0.7**
NACGM	**Naroch**	**73.94**	**323**		*i*P		**P**		**20 13 10.1**	**+0.3**
NACGM					*i*P		**P**		**20 13 10.1**	**+0.3**
NACGM					*i*P		**P**		**20 13 10.1**	**+0.3**
NACGM					*i* PP		PP		20 15 25.6	-29
NACGM					*i* PPP		PPP		20 17 50.1	
NACGM					*i* S		**SKiKP**		**20 22 38.1**	**+1.1**
NACGM					*i* sS		**ScS**		**20 23 24.8**	**+6.6**
NACGM					*i* PS		PnS		20 24 12.2	+57
NACGM					*i* SS		SS		20 26 31.8	-52
NACGM					*i* SSS		SSS		20 31 11.7	
KARA	**Karaisali**	**74.00**	**304**		*e*P		**P**		**20 13 11.1**	**+0.7**
N2IH	**Innhavet**	**74.03**	**338**		*e*P		**P**		**20 13 09.5**	**-0.5**
ISAL	**Salakas**	**74.08**	**324**		*e*P		**P**		**20 13 10.4**	**-0.1**
IIGN	**Ignalina**	**74.10**	**324**		*e*P		**P**		**20 13 10.4**	**-0.3**
MTSE	**Matsula**	**74.22**	**328**		*e*P		**P**		**20 13 07.6**	**-3.6**
STEI	**Steigen**	**74.28**	**338**		*e*P		**P**		**20 13 11.0**	**-0.5**
BR131	**Keskin Array S**	**74.29**	**307**	*c*	*i*P		**P**		**20 13 12.1**	**-0.2**
BR131	**Keskin Array S**	**74.29**	**307**		P		**P**		**20 13 12.0**	**-0.2**
BR131	**Keskin Array S**	**74.29**	**307**		P		**P**		**20 13 12.5**	**+0.2**
	SNR=60									
BRTR	**Keskin Array B**	**74.29**	**307**		P		**P**		**20 13 12.3**	**0.0**
	comp=Z,67nm,1.0s,baz=104,slow=5.2,SNR=122									
BRTR					LR		LR		20 51 06.2	
	comp=Z,390nm,18.4s,baz=80,slow=40									
BRTR	**Keskin Array B**	**74.29**	**307**		P		**P**		**20 13 11.9**	**-0.4**
KAMT	**Kaman**	**74.34**	**306**		*e*P		**P**		**20 13 12.4**	**-0.2**
N2TV	**T?rnvik**	**74.48**	**338**		*e*P		**P**		**20 13 12.4**	**-0.2**
FAUS	**Fauske**	**74.50**	**337**		*e*P		**P**		**20 13 12.1**	**-0.7**
MERS	**Mersin**	**74.52**	**304**		*e*P		**P**		**20 13 13.7**	**+0.1**
SERE	**Sereflikochisa**	**74.59**	**306**		*e*P		**P**		**20 13 14.1**	**+0.1**
LOF	**Lofoten**	**74.77**	**338**		*e*P		**P**		**20 13 13.7**	**-0.6**
AFSR	**Afar-Bala (An**	**74.79**	**307**		*e*P		**P**		**20

DAG IAmb IAmb 20 13 25.7
comp=Z,7.6nm,1.0s
DAG Danmarks Havn 76.80 351 *i* P **P 20 13 24.5 -1.3**
DAG pmax pmax
comp=Z,8.0nm,1.0s
HRT Hereke 76.80 309 *e*P **P 20 13 26.0 -0.5**
PRAR RASCA 76.83 316 ⇓P **P 20 13 26.0 -0.5**
TESR Tescani 76.86 315 ⇓P **P 20 13 26.7 -0.1**
ODBI Odobesti 76.86 314 ⇑P **P 20 13 28.0 +1.3**
ADVT Abdulvahap 76.88 308 *e*P **P 20 13 26.6 -0.3**
SHUT Suhut-Afyon 76.94 306 *e*P **P 20 13 27.6 +0.1**
NSS Namsos 77.00 335 *e*P **P 20 13 26.9 -0.2**
VRI Vrincioaia 77.04 314 ⇑P **P 20 13 28.1 +0.3**
GRER 77.05 314 ⇑P **P 20 13 29.4 +1.6**
BIZ Bicaz 77.06 316 ⇑P **P 20 13 27.7 -0.1**
KLYT Kilyos 77.09 309 *e*P **P 20 13 27.7 -0.4**
PLOR Plostina 77.10 314 ⇑P **P 20 13 28.6 +0.5**
ISK Istanbul-Kandi 77.15 309 *e*P **P 20 13 28.0 -0.4**
BISRR Bisoca 77.17 314 ⇑P **P 20 13 29.4 +0.8**
ISP Isparta 77.21 306 P **P 20 13 28.1 -0.9**
ISP pmax pmax
comp=Z,84nm,0.9s
ISP Isparta 77.21 306 P **P 20 13 28.1 -0.9**
LVV L'vov 77.29 319 *e*P **P 20 13 27.9 -1.1**
LVV MLR MLR
comp=N,300nm,19.0s
LVV MLR MLR
comp=E,300nm,19.0s
LVV MLR MLR
comp=Z,500nm,19.0s
BUR08 Bucovina Ar. S 77.38 317 P **P 20 13 29.1 -0.6**
BURAR Bucovina Array 77.38 317 ⇑P **P 20 13 29.7 0.0**
BURAR Bucovina Array 77.38 317 P **P 20 13 29.2 -0.5**
TVSB Tavsanli 77.42 308 *e*P **P 20 13 29.1 -1.1**
ISR Istrita 77.43 314 ⇑P **P 20 13 30.9 +0.8**
LEHL Lehliu 77.48 313 ⇓P **P 20 13 31.0 +0.8**
NEHR Nehoiu 77.48 314 ⇑P **P 20 13 30.7 +0.5**
OZUR 77.57 315 ⇑P **P 20 13 31.2 +0.5**
KORT Korkueli 77.63 305 *e*P **P 20 13 30.8 -0.6**
MLR Muntele Rosu 77.69 314 ⇑P **P 20 13 32.3 +0.7**
MLR Muntele Rosu 77.69 314 P **P 20 13 30.9 -0.6**
MLR pmax pmax
comp=Z,26nm,0.9s
MLR Muntele Rosu 77.69 314 P **P 20 13 30.9 -0.6**
MLR IAmb IAmb 20 13 32.7
comp=Z,26nm,0.9s
SULR 77.78 313 ⇑P **P 20 13 32.5 +0.7**
DOPR Dopca 77.87 315 ⇑P **P 20 13 32.7 +0.2**
KCTX Karacabey (Bur 77.93 309 *e*P **P 20 13 32.4 -0.5**
ELL Elmali 78.05 305 *e*P **P 20 13 33.5 -0.2**
ELL Elmali 78.05 305 P **P 20 13 33.2 -0.5**
ELL pmax pmax
comp=Z,209nm,0.8s
ELL Elmali 78.05 305 P **P 20 13 33.2 -0.5**
ARCR ARCALIA 78.12 316 ⇓P **P 20 13 34.2 +0.5**
KWP Kalwaria Pacla 78.15 319 *e*P **P 20 13 33.9 0.0**
KWP Kalwaria Pacla 78.15 319 P **P 20 13 33.7 -0.2**
KWP pmax pmax
comp=Z,95nm,1.1s
KWP Kalwaria Pacla 78.15 319 P **P 20 13 33.7 -0.2**
EDC Edincik 78.25 309 *e*P **P 20 13 34.5 -0.1**
VOIR 78.29 315 ⇓P **P 20 13 34.5 -0.3**
WRAK Wrangell Islan 78.32 33 P 20 13 35.1
baz=296,SNR=6.0
CRAG Craig 78.33 34 P 20 13 35.5
baz=295,SNR=6.1
MANT Manisa 78.42 307 P **P 20 13 35.2 -0.7**
AKAS Kas 78.46 304 *e*P **P 20 13 33.8 -2.2**
BALB Balikesir 78.50 308 *e*P **P 20 13 35.8 -0.2**
DLBC Dease Lake 78.55 31 P **P 20 13 36.3 +0.3**
DLBC IAmb IAmb 20 13 37.8
comp=Z,39nm,0.9s
ARR Arges 78.59 315 ⇑P **P 20 13 36.6 +0.1**
RKY Sarkoy-Tekirda 78.61 309 *e*P **P 20 13 36.4 -0.3**
HUMR Humele 78.68 314 ⇓P **P 20 13 36.7 -0.2**
FETY Fethiye 78.71 305 P **P 20 13 35.0 -2.2**
FETY Fethiye 78.71 305 *e*P **P 20 13 35.4 -1.8**
RES Resolute Bay 78.71 9 P **P 20 13 35.1 -1.4**
RES pmax pmax
comp=Z,14nm,1.1s
RES Resolute Bay 78.71 9 P **P 20 13 35.1 -1.4**
NC405 NORSAR Array S 78.76 332 P **P 20 13 36.1 -0.9**
NEEM North Greenlan 78.77 359 *i* P **P 20 13 36.7 -0.5**
NEEM IAmb IAmb 20 13 39.5
comp=Z,20nm,0.9s
UZH Uzhgorod 78.80 318 *e*P **P 20 13 37.5 +0.1**
UZH *e* 20 13 44.4
TRPA Tarpa 78.84 318 ⇑P **P 20 13 37.7 +0.1**
DALY Dalyan (Mula) 78.96 305 *e*P **P 20 13 37.7 -0.9**
NB2 NORSAR Subarra 79.00 332 P **P 20 13 37.0 -1.4**
baz=60,slow=5.3
NOA NORSAR Array B 79.00 332 P **P 20 13 36.8 -1.6**
comp=Z,21nm,0.8s,baz=57,slow=5.6,SNR=54
NOA LR LR 20 52 34.3
comp=Z,1μm,18.7s,baz=75,slow=39
NC602 NORSAR Array S 79.02 332 *e*P **P 20 13 37.7 -0.7**
LPK Lapseki 79.03 309 *e*P **P 20 13 37.7 -1.2**
DBG Daneborg 79.05 350 *i* P **P 20 13 37.8 -0.5**
DBG IAmb IAmb 20 13 39.8
comp=Z,9.9nm,0.9s
AYDB Zeytinkoy-Aydi 79.11 307 *e*P **P 20 13 39.7 +0.1**
YER Yerkesik 79.12 306 P **P 20 13 38.7 -0.8**
YER Yerkesik 79.12 306 *e*P **P 20 13 39.4 -0.1**
BLEU Blekinge 79.14 327 *i* P **P 20 13 38.0 -1.2**
NBO00 NORSAR Array S 79.19 333 *e*P **P 20 13 40.8 +1.4**
DRGR 79.27 316 ⇑P **P 20 13 40.3 +0.1**
ALN Alexandroupoli 79.33 310 P **P 20 13 40.1 -0.4**
PLVB Pleven 79.36 313 ⇑P **P 20 13 40.5 -0.1**
DOMB Dombas 79.38 334 *e*P **P 20 13 40.0 -0.4**
QRZ Quartz Range 79.43 144 P **P 20 13 41.6 +0.7**
DEV Deva 79.51 316 ⇑P **P 20 13 41.9 +0.6**
TULEG Thule 79.52 3 *i* P **P 20 13 39.1 -1.7**
TULEG IAmb IAmb 20 13 42.9
comp=Z,4.5nm,0.7s
TULEG Thule 79.52 3 P **P 20 13 39.8 -1.1**
EZN Ezine 79.54 309 *e*P **P 20 13 41.3 -0.4**
RDO Rodhopi 79.59 310 P **P 20 13 41.2 -0.7**
OJC Ojcow 79.64 320 *e*P **P 20 13 41.8 -0.2**
OJC Ojcow 79.64 320 P **P 20 13 41.3 -0.7**
OJC pmax pmax
comp=Z,50nm,1.0s
OJC Ojcow 79.64 320 P **P 20 13 41.3 -0.7**
OJC IAmb IAmb 20 13 43.2
comp=Z,50nm,1.0s
DIB Dawson Inlet, 79.66 36 P **P 20 13 42.0 +0.1**
DIB IAmb IAmb 20 13 42.8
comp=Z,45nm,0.7s
NIE Niedzica 79.68 320 *e*P **P 20 13 42.1 -0.2**
BOZC Bozcaada 79.73 309 *e*P **P 20 13 42.1 -0.6**
OSL Oslo 79.77 332 *e*P **P 20 13 42.3 -0.2**
GZR Gura Zlata 79.78 315 ⇓P **P 20 13 43.1 +0.1**
SRE Strehaia 79.80 314 ⇑P **P 20 13 42.9 +0.1**
PRK Paraskevi 79.80 308 P **P 20 13 43.6 +0.5**
KECS Kecovo 79.95 319 *e*P **P 20 13 44.1 +0.3**
KECS pmax pmax
comp=Z,16nm,1.3s
KECS Kecovo 79.95 319 *e*P **P 20 13 44.1 +0.3**
BORU Boraas 79.98 329 *i* P **P 20 13 43.0 -0.7**
DEL Delary 80.02 328 *i* P **P 20 13 43.2 -0.7**
STRU Stroemstad 80.02 331 *i* P **P 20 13 42.6 -1.2**
PUNG Punghina 80.13 314 ⇑P **P 20 13 45.2 +0.4**
BSD Bornholm Skovb 80.13 326 *e*P **P 20 13 44.2 -0.4**
BSD Bornholm Skovb 80.13 326 *i* P **P 20 13 44.0 -0.6**
BSD IAmb IAmb 20 13 46.0
comp=Z,22nm,0.9s
BSD Bornholm Skovb 80.13 326 *i* P **P 20 13 44.0 -0.6**
BSD pmax pmax
comp=Z,22nm,0.9s
SIRR Siria 80.14 316 ⇑P **P 20 13 44.8 0.0**
HERR Herculane 80.22 315 ⇑P **P 20 13 45.4 +0.1**
LANS Liptovska Anna 80.28 320 *e*P **P 20 13 46.8 +1.2**
LANS pmax pmax
comp=Z,19nm,1.7s
LANS Liptovska Anna 80.28 320 *e*P **P 20 13 46.8 +1.2**
FABU Falkenberg 80.32 329 *e*P **P 20 13 45.4 -0.1**
KAVA Kavala 80.36 311 P **P 20 13 45.5 -0.6**
KONO Kongsberg 80.41 332 *e*P **P 20 13 45.6 -0.4**
SKAR Skarsila 80.41 333 *e*P **P 20 13 46.0 -0.1**
BZS Buzias 80.44 316 ⇑P **P 20 13 46.0 -0.4**
ONAU Onsala 80.50 329 *i* P **P 20 13 44.8 -1.7**
ONAU *i* P **P 20 13 45.5 -0.9**
BKZ Black Stump Fm 80.53 140 P **P 20 13 47.2 +0.3**

BKZ IAmb IAmb 20 14 04.0
comp=Z,52nm,1.2s
PSZ Piszkesteto 80.55 318 ⇓P **P 20 13 47.3 +0.2**
PSZ Piszkesteto 80.55 318 P **P 20 13 46.8 -0.3**
PSZ pmax pmax
comp=Z,32nm,1.1s
PSZ Piszkesteto 80.55 318 P **P 20 13 46.8 -0.3**
PSZ IAmb IAmb 20 13 48.4
comp=Z,32nm,1.1s
KARP Karpathos 80.56 305 P **P 20 13 45.8 -1.6**
BSZH Beloenyszg 80.58 318 ⇓P **P 20 13 48.0 +0.8**
VTS Vitosha 80.60 312 ⇑P **P 20 13 48.1 +0.5**
VTS Vitosha 80.60 312 P **P 20 13 47.1 -0.4**
VTS pmax pmax
comp=Z,34nm,0.8s
VTS Vitosha 80.60 312 P **P 20 13 47.1 -0.4**
VTS IAmb IAmb 20 13 49.1
comp=Z,34nm,0.8s
BJUU Bjuv 80.62 328 *i* P **P 20 13 46.8 -0.3**
LUNU Lund 80.63 327 *e*P **P 20 13 47.3 +0.1**
NVR Nevrokopi 80.68 311 P **P 20 13 47.1 -0.7**
MDVR Moldovita 80.72 315 ⇑P **P 20 13 48.0 -0.1**
OKC Ostrava-Krasne 80.76 321 AMS AMS 20 55 00.0
comp=Z,600nm,13.5s
FURI Furi 80.83 276 P **P 20 13 49.6 +0.1**
FURI IAmb IAmb 20 14 35.5
comp=Z,23nm,0.4s
VYHS Vyhne 80.94 319 *e*P **P 20 13 49.1 0.0**
VYHS pmax pmax
comp=Z,59nm,1.1s
VYHS Vyhne 80.94 319 *e*P **P 20 13 49.1 0.0**
OUR Ouranopolis 81.00 310 P **P 20 13 48.8 -0.7**
COP Copenhagen 81.10 327 *e*P **P 20 13 49.1 -0.6**
COP Copenhagen 81.10 327 *e*P **P 20 13 49.1 -0.6**
MORC Moravsky Berou 81.14 321 *e*P **P 20 13 49.7 -0.5**
MORC Moravsky Berou 81.14 321 P **P 20 13 50.0 -0.2**
MORC pmax pmax
comp=Z,20nm,1.1s
MORC Moravsky Berou 81.14 321 P **P 20 13 50.0 -0.2**
BOVS Bovan 81.20 314 ⇑P **P 20 13 50.2 -0.4**
LNIZ Loecknitz 81.26 325 *e*P **P 20 13 50.9 +0.2**
comp=Z,76nm,1.3s,baz=59,slow=5.0
PLG Polygyros 81.36 310 P **P 20 13 50.5 -1.0**
KSP Ksiaz 81.37 322 *e*P **P 20 13 51.2 -0.1**
PAIG Paliouri 81.37 310 P **P 20 13 50.7 -0.8**
BFZ Birch Farm 81.40 142 P **P 20 13 51.8 +0.3**
BFZ IAmb IAmb 20 15 32.2
comp=Z,118nm,1.5s
KNT Kendrikon 81.42 311 P **P 20 13 50.8 -1.0**
KRLC Kraliky 81.44 321 *e*P **P 20 13 52.0 +0.2**
KRLC Kraliky 81.44 321 *e*P **P 20 13 52.0 +0.2**
JAVC Velka Javorina 81.47 320 *e*P **P 20 13 52.8 +0.8**
HORT Hortiatis 81.51 311 P **P 20 13 50.9 -1.4**
SRO2 Moca 81.53 319 *e*P **P 20 13 51.1 -1.1**
SRO2 pmax pmax
comp=Z,12nm,1.0s
SRO2 Moca 81.53 319 *e*P **P 20 13 51.1 -1.1**
OSTC Ostas 81.55 322 *e*P **P 20 13 52.7 +0.4**
OSTC AMS AMS 20 54 50.0
comp=Z,900nm,14.7s
SRO Srobarova 81.56 319 *e*P **P 20 13 52.0 -0.3**
SRO pmax pmax
comp=Z,15nm,1.0s
SRO Srobarova 81.56 319 *e*P **P 20 13 52.0 -0.3**
VAY Valandovo 81.58 311 *i* P **P 20 13 52.1 -0.5**
DPC Dobruska-Polom 81.58 322 *e*P **P 20 13 52.8 +0.3**
DPC MLR MLR
comp=Z,1μm,15.4s
DPC Dobruska-Polom 81.58 322 *e*P **P 20 13 52.8 +0.3**
DPC AMS AMS 20 53 40.0
comp=Z,1μm,15.4s
KYMI Kymi, Euboea I 81.60 308 P **P 20 13 52.0 -0.8**
CHVC Chvalec 81.62 322 *e*P **P 20 13 52.9 +0.2**
CHVC AMS AMS 20 55 00.0
comp=Z,900nm,15.8s
UPC Upice 81.68 322 AMS AMS 20 55 00.0
comp=Z,900nm,14.4s
STIP Stip 81.69 312 ⇑*i*P **P 20 13 51.6 -1.6**
SMOL Smolenice 81.77 320 *e*P **P 20 13 54.1 +0.6**
SMOL pmax pmax
comp=Z,12nm,1.2s
SMOL Smolenice 81.77 320 *e*P **P 20 13 54.1 +0.6**
FRGS Fruska Gora 81.79 316 ⇑P **P 20 13 53.7 +0.1**
FRGS Fruska Gora 81.79 316 ⇑*i*P **P 20 13 53.4 -0.3**
BER Bergen 81.80 333 *e*P **P 20 13 52.8 -0.5**
NPS Neapolis 81.83 305 P **P 20 13 53.4 -0.7**
GRG Griva 81.84 311 P **P 20 13 53.0 -1.0**
VRAC Vranov 81.90 321 ⇑P **P 20 13 54.4 +0.2**
VRAC Vranov 81.90 321 *e*P **P 20 13 54.1 -0.1**
MODS Modra-Piesok 81.93 319 *e*P **P 20 13 54.0 -0.3**
MODS pmax pmax
comp=Z,19nm,1.2s
MODS Modra-Piesok 81.93 319 *e*P **P 20 13 54.0 -0.3**
LAST Lasithi 81.97 305 P **P 20 13 54.6 -0.3**
RUE Ruedersdorf 81.98 324 *e*P **P 20 13 54.4 0.0**
comp=Z,36nm,0.9s,baz=59,slow=5.0
MORH Mrgy, Hungar 82.06 317 ⇑P **P 20 13 55.0 0.0**
MORH Mrgy, Hungar 82.06 317 ⇑*i*P **P 20 13 54.5 -0.5**
SKO Skopje 82.08 312 *i* P **P 20 13 55.0 -0.2**
DIVS Divibare 82.13 315 ⇑*i*P **P 20 13 54.9 -0.7**
DIVS Divibare 82.13 315 P **P 20 13 55.1 -0.4**
KRUC Moravsky 82.13 320 *e*P **P 20 13 55.0 -0.4**
LIT Litokhoron 82.14 310 P **P 20 13 54.4 -1.1**
LIT Litokhoron 82.14 310 P **P 20 13 54.5 -1.1**
LIT pmax pmax
comp=Z,18nm,0.8s
LIT Litokhoron 82.14 310 P **P 20 13 54.5 -1.1**
SNART Snartemo 82.15 331 *i* P **P 20 13 54.8 -0.4**
MUD Monsted U'grnd 82.28 329 *i* P **P 20 13 55.9 -0.1**
MUD IAmb IAmb 20 13 57.8
comp=Z,22nm,0.7s
MUD Monsted U'grnd 82.28 329 *i* P **P 20 13 55.8 -0.1**
MUD pmax pmax
comp=Z,22nm,0.7s
IDI Anoyia 82.36 305 P **P 20 13 55.8 -1.1**
comp=Z,32nm,1.1s,baz=0.8,slow=16,SNR=7.5
IDI Anoyia 82.36 305 ⇑P **P 20 13 56.6 -0.3**
IDI Anoyia 82.36 305 P **P 20 13 56.4 -0.6**
IDI IAmb IAmb 20 14 17.5
comp=Z,71nm,1.3s
PVCC Panska Ves 82.49 322 AMS AMS 20 55 30.0
comp=Z,1μm,16.5s
SCO Scoresbysund 82.55 349 *i* P **P 20 13 56.7 -0.4**
SCO IAmb IAmb 20 13 58.4
comp=Z,8.2nm,0.8s
SCO Scoresbysund 82.55 349 P **P 20 13 56.9 -0.2**
SCO pmax pmax
comp=Z,32nm,1.3s
SCO Scoresbysund 82.55 349 P **P 20 13 56.9 -0.2**
SCO IAmb IAmb 20 13 57.9
comp=Z,32nm,1.3s
KZN Kozani 82.55 311 P **P 20 13 56.4 -1.4**
TREC Trest 82.55 321 AMS AMS 20 54 20.0
comp=Z,1μm,16.7s
AXAR Agios Charalam 82.57 309 P **P 20 13 56.1 -1.8**
BBLS Lazići 82.61 315 ⇑*i*P **P 20 13 57.8 -0.3**
FNA Florina 82.62 311 P **P 20 13 56.7 -1.4**
FNA pmax pmax
comp=Z,12nm,0.8s
FNA Florina 82.62 311 P **P 20 13 56.7 -1.4**
BRG Berggiesshubel 82.67 323 *e*P **P 20 13 57.5 -0.6**
BRG Amp 20 14 01.0
comp=Z,21nm,1.3s
BRG Berggiesshubel 82.67 323 *e*P **P 20 13 57.5 -0.6**
comp=Z,21nm,1.3s,baz=59,slow=5.0
AGG Agios Georgios 82.70 309 P **P 20 13 56.4 -2.2**
AGG Agios Georgios 82.70 309 P **P 20 13 56.4 -2.2**
AGG pmax pmax
comp=Z,32nm,0.8s
AGG Agios Georgios 82.70 309 P **P 20 13 56.4 -2.2**
AGG IAmb IAmb 20 13 57.7
comp=Z,32nm,0.8s
IVA Berane 82.72 314 ⇓*i*P **P 20 13 58.6 -0.1**
YKA Yellowknife Ar 82.73 23 P **P 20 13 57.4 -0.8**
comp=Z,19nm,0.7s,baz=314,slow=4.6,SNR=406
YKA PKKPbc **PKKPbc 20 32 28.0 +4.5**
comp=Z,0.2nm,0.7s,baz=122,slow=2.6,SNR=3.6
YKA LR LR 20 54 39.2
comp=Z,215nm,18.2s,baz=0.0,slow=39
YKA Yellowknife Ar 82.73 23 *i* P **P 20 13 57.4 -0.8**
YKA pmax pmax
comp=Z,20nm,0.7s
PRU Pruhonice 82.76 322 *e*P **P 20 13 59.0 +0.4**
PRU MLR MLR
comp=Z,800nm,14.6s
PRU Pruhonice 82.76 322 *e*P **P 20 13 59.0 +0.4**
PRU AMS AMS 20 55 30.0
comp=Z,800nm,14.6s
PRA Prague 82.78 322 AMS AMS 20 55 50.0
comp=Z,1μm,16.6s
PVY Plav 82.80 313 ⇑*i*P **P 20 13 58.2 -1.0**
HAPS Han Pijesak,Bl 82.81 315 *e*P **P 20 13 57.9 -1.2**
VAM Vamos 82.83 305 P **P 20 13 59.1 -0.2**
SUMG Summit 82.87 354 *i* P **P 20 13 59.1 -0.1**
SUMG IAmb IAmb 20 14 01.8
comp=Z,22nm,0.8s
SUMG Summit 82.87 354 P **P 20 13 59.4 +0.1**
SUMG pmax pmax
comp=Z,51nm,1.2s
SUMG Summit 82.87 354 P **P 20 13 59.4 +0.1**
SUMG IAmb IAmb 20 13 59.7
comp=Z,50nm,1.2s
PHP Peshkopia 82.87 312 P **P 20 13 58.0 -1.4**
OHR Ohrid 82.88 312 *i* P **P 20 13 58.5 -1.0**
FBE Freiberg 82.97 323 *e*P **P 20 13 59.5 -0.1**
comp=Z,39nm,1.2s,baz=59,slow=5.0
CONA Conrad Observa 82.97 320 *i* P **P 20 14 00.2 +0.3**
comp=Z,34nm,1.2s,SNR=15
CLL Collm 82.97 323 *i* P **P 20 13 59.2 -0.5**
comp=Z,26nm,1.2s
CLL *e*sP **pwP 20 14 10.0 -0.8**
CLL *e*PP **PP 20 17 09.0 -0.9**
CLL *e*sS **sS 20 24 31.0 +3.2**
CLL *e*PS **PnS 20 25 10.0 +0.7**
CLL *e*(SS) 20 30 18.0
CLL *e* 20 34 00.0
CLL *e*SSSS 20 35 48.0
CLL Lmax 20 55 00.0
CLL Collm 82.97 323 *i* P **P 20 13 59.2 -0.5**
CLL *e* 20 14 10.0
CLL pmax pmax
comp=Z,26nm,1.2s
CLL Collm 82.97 323 P **P 20 13 59.3 -0.5**
CLL IAmb IAmb 20 14 00.4
comp=Z,26nm,1.2s
CLL Collm 82.97 323 *e*P **P 20 13 59.3 -0.4**
comp=Z,26nm,1.2s,baz=59,slow=5.0
KOME Kolasin 82.98 314 *e*P **P 20 13 59.9 -0.1**
BSEG Bad Segeberg 83.05 327 *e*P **P 20 13 59.8 -0.2**
comp=Z,44nm,1.1s,baz=59,slow=5.0
SKMB Sankelmark Bun 83.07 327 *e*P **P 20 14 00.8 +0.7**
comp=Z,162nm,1.2s,baz=59,slow=5.0
ANX Ano Chora 83.17 309 P **P 20 13 59.2 -1.9**
PBCC Pribram 83.22 322 *e*P **P 20 14 01.0 0.0**
UPM Unac-Piva 83.23 314 ⇑*i*P **P 20 14 01.2 -0.2**
UPM Unac-Piva 83.23 314 *e*P **P 20 14 00.4 -1.0**
KLV Kalavryta, Ach 83.24 309 P **P 20 13 59.1 -2.3**
PDG Podgorica 83.34 313 *e*P **P 20 14 01.0 -0.7**
PDG Podgorica 83.34 313 P **P 20 14 01.1 -0.7**
PDG IAmb IAmb 20 14 04.5
comp=Z,23nm,0.9s
TTG Podgorica 83.34 313 *e*P **P 20 14 01.2 -0.5**
NKY Niksic 83.34 314 ⇓*i*P **P 20 14 01.4 -0.5**
NKME Niksic 83.39 314 ⇓*i*P **P 20 14 01.6 -0.5**
FLTG Flechtingen 83.40 325 *e*P **P 20 14 01.3 -0.5**
comp=Z,21nm,1.1s,baz=59,slow=5.0
TIR Tirane 83.41 312 P **P 20 14 01.3 -0.8**
TIR pmax pmax
comp=Z,29nm,0.8s
TIR Tirane 83.41 312 P **P 20 14 01.3 -0.8**
TIR IAmb IAmb 20 14 05.1
comp=Z,29nm,0.8s
CKRC Cesky Krumlov 83.46 321 *e*P **P 20 14 02.6 +0.3**
CKRC AMS AMS 20 54 50.0
comp=Z,900nm,15.5s
ARSA Arzberg 83.50 319 *i* P **P 20 14 02.4 -0.2**
comp=Z,17nm,1.1s,SNR=11
DRME Dracevica, Mon 83.50 313 ⇑*i*P **P 20 14 02.1 -0.5**
DRME Dracevica, Mon 83.50 313 *e*P **P 20 14 02.2 -0.4**
CEME Cevo 83.51 314 *e*P **P 20 14 02.1 -0.6**
UPNV Upernavik 83.53 360 *i* P **P 20 14 01.3 -0.8**
UPNV IAmb IAmb 20 14 03.6
comp=Z,16nm,0.7s
ULC Ulcinj 83.56 313 *e*P **P 20 14 02.1 -0.8**
BRY Bratogost 83.60 314 ⇑*i*P **P 20 14 02.6 -0.7**
BRY Bratogost 83.60 314 *e*P **P 20 14 03.2 -0.1**
BLY Banja Luka 83.64 316 ⇑*i*P **P 20 14 03.1 -0.2**
BUM Brajici-Budva 83.64 313 ⇑*i*P **P 20 14 02.8 -0.6**
NEUB Neuenburg 83.69 324 *e*P **P 20 14 03.0 -0.4**
comp=Z,42nm,0.9s,baz=59,slow=5.0
MRAK Mrakovica 83.70 317 *e*P **P 20 14 03.8 +0.2**
TANN Tannenbergstha 83.72 323 *e*P **P 20 14 03.3 -0.4**
comp=Z,22nm,1.2s,baz=59,slow=5.0
KHC Kasperske Hory 83.73 321 *c i*P **P 20 14 03.3 -0.4**
KHC pmax pmax
comp=Z,69nm,1.1s
KHC Kasperske Hory 83.73 321 *e*P **P 20 14 03.7 0.0**
KHC AMS AMS 20 55 00.0
comp=Z,1μm,16.2s
KHC Kasperske Hory 83.73 321 P **P 20 14 03.4 -0.4**
KHC IAmb IAmb 20 14 04.9
comp=Z,25nm,1.0s
ITM Ithomi 83.76 308 P **P 20 14 02.8 -1.3**
WERD Werda 83.79 323 *e*P **P 20 14 03.2 -0.7**
comp=Z,32nm,1.3s,baz=59,slow=5.0
GEC2 GERESS Array S 83.80 321 P **P 20 14 03.6 -0.5**
GEC2 IAmb IAmb 20 14 05.6
comp=Z,39nm,1.0s
GEC2 GERESS Array S 83.80 321 *e*P **P 20 14 03.8 -0.3**
comp=Z,45nm,1.0s,baz=59,slow=5.0
GERES GERESS Array B 83.80 321 P **P 20 14 03.5 -0.6**
comp=Z,28nm,0.9s,baz=57,slow=4.9,SNR=132
GERES PKKPbc **PKKPbc 20 32 28.3 +7.5**
comp=Z,0.6nm,0.8s,baz=172,slow=2.0,SNR=3.9
GERES LR LR 20 55 01.5
comp=Z,828nm,18.3s,baz=60,slow=38
ASSE Asse, Remlinge 83.81 325 *e*P **P 20 14 03.4 -0.4**
comp=Z,18nm,1.4s,baz=59,slow=5.0
TREB Trebinje 83.81 314 *e*P **P 20 14 03.8 -0.4**
GUNZ Gunzen 83.81 323 *e*P **P 20 14 04.1 0.0**
comp=Z,33nm,1.1s,baz=59,slow=5.0
NKC Novy Kostel 83.81 323 *e*P **P 20 14 04.6 +0.5**
NKC Novy Kostel 83.81 323 *e*P **P 20 14 04.6 +0.5**
WERN Wernitzgruen 83.83 323 *e*P **P 20 14 04.2 0.0**
comp=Z,32nm,1.2s,baz=59,slow=5.0
HCY Herceg Novi 83.84 314 ⇑*i*P **P 20 14 03.2 -1.1**
HCY Herceg Novi 83.84 314 ⇑*i*P **P 20 14 03.3 -1.1**
PLN Plauen 83.85 323 *e*P **P 20 14 03.8 -0.4**
comp=Z,22nm,1.2s,baz=59,slow=5.0
MGRS Mrkonjic Grad 83.86 316 ⇑*i*P **P 20 14 05.0 +0.6**
GROS Grobnik 83.88 318 *i* P **P 20 14 03.8 -0.8**
comp=Z,51nm,1.4s
NRDL Niedersach Rie 83.91 325 *e*P **P 20 14 04.4 +0.1**
comp=Z,39nm,1.5s,baz=59,slow=5.0
MOA Molln 83.95 320 *i* P **P 20 14 04.9 0.0**
comp=Z,28nm,1.1s,SNR=14
LKD2 Lefkada island 83.98 310 P **P 20 14 02.9 -2.3**
SOKA Soboth 84.06 319 *i* P **P 20 14 05.2 -0.3**
comp=Z,28nm,1.0s,SNR=27
MOX Moxa 84.06 323 *e*P **P 20 14 05.2 -0.2**
comp=Z,19nm,1.0s,baz=59,slow=5.0
MOX *e*L L 20 56 29.4
comp=Z,1μm,19.2s
CLZ Clausthal 84.11 325 *e*P **P 20 14 05.9 +0.3**
comp=Z,41nm,1.2s,baz=59,slow=5.0
WET Wettzell 84.12 322 *e*P **P 20 14 05.7 0.0**
comp=Z,22nm,1.2s,baz=59,slow=5.0
MANZ Manzenberg 84.13 323 *e*P **P 20 14 05.7 0.0**
comp=Z,22nm,1.1s,baz=59,slow=5.0
ROTZ Rotzenmuhle 84.19 322 *e*P **P 20 14 06.2 +0.2**
comp=Z,35nm,1.0s,baz=59,slow=5.0
CRES Cresnjev 84.21 318 ⇑*i*P **P 20 14 05.8 -0.4**
PSDA Pessada-Kefalo 84.32 309 P **P 20 14 05.1 -1.8**
PDKS Podkum 84.38 318 *i* P **P 20 14 06.6 -0.5**
comp=Z,96nm,1.1s
DMLN Damoulianata-K 84.42 309 P **P 20 14 06.2 -1.2**
OBKA Obir 84.44 319 *i* P **P 20 14 07.0 -0.4**
comp=Z,33nm,1.1s,SNR=16
KEF3 Kipouria, Keph 84.45 309 P **P 20 14 05.8 -1.7**
GTTG Gottingen 84.49 325 *e*P **P 20 14 07.6 +0.2**
comp=Z,31nm,1.1s,baz=59,slow=5.0
LJU Ljubljana 84.68 318 *i* P **P 20 14 08.2 -0.3**
comp=Z,82nm,1.1s
LJU *e* 20 14 22.4
GRA1 Grafenberg Arr 84.77 323 P **P 20 14 08.8 -0.1**
GRA1 IAmb IAmb 20 14 10.4
comp=Z,37nm,1.0s
GRF Grafenberg Arr 84.77 323 P **P 20 14 08.8 -0.1**
GRF Grafenberg Arr 84.77 323 *e*P **P 20 14 08.9 -0.1**

comp=Z,44nm,1.1s,baz=59,slow=5.0
GRF eL L 20 56 27.9

comp=Z,995nm,19.3s
GRFO Grafenberg 84.77 323 P **P** **20 14 08.5 -0.4**
GRFO pmax pmax

comp=Z,36nm,1.0s
GRFO Grafenberg 84.77 323 P **P** **20 14 08.5 -0.4**
GRFO IAmb IAmb 20 14 10.3

comp=Z,36nm,1.0s
UBBA Unterbreizbach 84.85 324 *eP* **P** **20 14 08.8 -0.3**
comp=Z,42nm,1.7s,baz=59,slow=5.0
ABPO Ambohimpanom 84.87 247 P **P** **20 14 10.2 +0.1**
ABPO pmax pmax

comp=Z,95nm,1.9s
ABPO Ambohimpanom 84.87 247 P **P** **20 14 10.2 +0.1**
ABPO IAmb IAmb 20 14 24.9

comp=Z,95nm,1.9s
RJOB Jochberg 84.87 320 *eP* **P** **20 14 09.5 -0.1**
comp=Z,157nm,0.9s,baz=59,slow=5.0
KBA Koelnbreinsper 84.88 320 *i* P **P** **20 14 09.0 -0.7**
comp=Z,33nm,1.0s,SNR=21
CEY Cerknica 84.89 318⇑ *i* P **P** **20 14 09.0 -0.6**
MYKA Terra Mystica 84.92 319 *i* P **P** **20 14 08.9 -1.0**
comp=Z,14nm,1.0s,SNR=8.0
SCTE Santa Cesarea 84.93 312 P **P** **20 14 09.1 -0.8**
IBBN Ibbenburen 85.22 326 *eP* **P** **20 14 10.8 -0.3**
comp=Z,67nm,1.2s,baz=59,slow=5.0
TRI Trieste 85.31 318 P **P** **20 14 10.4 -1.3**
TRI pmax pmax

comp=Z,25nm,1.0s
TRI Trieste 85.31 318 P **P** **20 14 10.4 -1.3**
TRI IAmb IAmb 20 14 11.9

comp=Z,25nm,1.0s
ZOU Zoufplan 85.36 319 P **P** **20 14 10.7 -1.5**
ZOU IAmb IAmb 20 14 12.0

comp=Z,22nm,1.0s
KASTN Kahler Asten 85.49 325 *eP* **P** **20 14 12.2 -0.4**
comp=Z,43nm,1.6s,baz=59,slow=5.0
FUR Furstenfeldbru 85.53 321 *eP* **P** **20 14 13.0 +0.2**
comp=Z,103nm,1.0s,baz=59,slow=5.0
ABTA Abfaltersbach 85.54 320 *i* P **P** **20 14 11.5 -1.4**
comp=Z,38nm,1.0s,SNR=25
STAL STALIGIAL 85.67 319 P **P** **20 14 12.1 -1.4**
STAL IAmb IAmb 20 14 13.9

comp=Z,48nm,1.1s
MILB Miltenberg 85.76 323 *eP* **P** **20 14 13.2 -0.6**
comp=Z,32nm,1.1s,baz=59,slow=5.0
WATA Walderalm 85.79 320 *i* P **P** **20 14 13.3 -0.9**
comp=Z,20nm,1.0s,SNR=16
WTTA Wattenberg 85.79 320 *i* P **P** **20 14 13.5 -0.8**
comp=Z,49nm,1.0s,SNR=31
KIBK Kibwezi 85.87 266 P **P** **20 14 14.7 -0.4**
KIBK IAmb IAmb 20 14 30.7

comp=Z,52nm,1.4s
BUG Bochum--Univer 85.96 325 *eP* **P** **20 14 14.7 -0.1**
comp=Z,77nm,1.2s,baz=59,slow=5.0
TNS Taunus Mts 86.01 324 *eP* **P** **20 14 15.2 +0.1**
comp=Z,33nm,1.4s,baz=59,slow=5.0
LODK Lodwar 86.01 272 P **P** **20 14 15.8 0.0**
LODK Lodwar 86.01 272 P **P** **20 14 17.4 +1.6**
SNR=9.1
MOTA Moosalm 86.06 321 *i* P **P** **20 14 14.5 -1.0**
comp=Z,24nm,1.0s,SNR=16
SQTA Sankt Quirin 86.06 320 *i* P **P** **20 14 14.7 -0.9**
comp=Z,39nm,1.1s,SNR=22
KMBO Kilima Mbogo 86.11 267 P **P** **20 14 17.6 +1.1**
comp=Z,12nm,1.0s,baz=43,slow=5.6,SNR=18
KMBO LR LR 20 54 48.7

comp=Z,157nm,18.7s,baz=91,slow=37
RETA Reutte 86.18 321 *i* P **P** **20 14 15.2 -0.9**
comp=Z,11nm,1.0s,SNR=5.8
ICESG Greenland Ices 86.34 354 *i* P **P** **20 14 15.9 -0.9**
ICESG IAmb IAmb 20 14 17.1

comp=Z,22nm,0.9s
STU Stuttgart 86.39 322 P **P** **20 14 16.0 -1.0**
STU pmax pmax

comp=Z,22nm,1.0s
STU Stuttgart 86.39 322 P **P** **20 14 16.0 -1.0**
STU IAmb IAmb 20 14 17.9

comp=Z,22nm,1.0s
STU Stuttgart 86.39 322 *eP* **P** **20 14 16.6 -0.4**
comp=Z,29nm,1.2s,baz=59,slow=5.0
CTI Castel Tesino 86.41 319 P **P** **20 14 16.0 -1.3**
CTI pmax pmax

comp=Z,16nm,1.1s
CTI Castel Tesino 86.41 319 P **P** **20 14 16.0 -1.3**
FETA Feichten 86.44 320 *i* P **P** **20 14 16.8 -0.7**
comp=Z,26nm,1.1s,SNR=16
UBR Ueberruh 86.46 321 *eP* **P** **20 14 17.0 -0.4**
comp=Z,39nm,1.3s,baz=59,slow=5.0
TIP Timpagrande 86.51 311 P **P** **20 14 17.2 -0.6**
TIP IAmb IAmb 20 14 32.8

comp=Z,27nm,1.0s
AHRW Bad Neuenahr-A 86.56 325 *eP* **P** **20 14 17.6 -0.2**
comp=Z,26nm,1.1s,baz=59,slow=5.0
TEOL Teolo 86.75 319 P **P** **20 14 17.7 -1.1**
DAVA Damuels 86.80 321 *i* P **P** **20 14 18.6 -0.7**
comp=Z,15nm,1.0s,SNR=5.2
BTNL Ternell 87.03 325 *dP* **P** **20 14 19.3 -0.8**
comp=Z,16nm,1.2s
MEM Membach 87.09 325 *dP* **P** **20 14 19.8 -0.6**
comp=Z,14nm,1.2s
BFO Black Forest 87.11 322 P **P** **20 14 19.8 -0.8**
BFO pmax pmax

comp=Z,28nm,1.4s
BFO Black Forest 87.11 322 P **P** **20 14 19.8 -0.8**
BFO IAmb IAmb 20 14 21.3

comp=Z,28nm,1.4s
BFO Black Forest 87.11 322 *eP* **P** **20 14 19.8 -0.8**
comp=Z,35nm,1.5s,baz=59,slow=5.0
NRCA Norcia 87.14 316 P **P** **20 14 21.0 +0.1**
BEBN Eben Emael 87.15 325 *dP* **P** **20 14 20.1 -0.5**
AQU L'Aquila 87.20 315 P **P** **20 14 21.2 +0.1**
AQU pmax pmax

comp=Z,77nm,1.0s
AQU L'Aquila 87.20 315⇑ *i* P **P** **20 14 21.1 -0.1**
AQU L'Aquila 87.20 315 P **P** **20 14 21.2 +0.1**
BHOU Houvegnez 87.23 325 *dP* **P** **20 14 20.6 -0.5**
MURB Monte Urbino 87.30 317 P **P** **20 14 21.6 0.0**
SALO Salr 87.30 319 P **P** **20 14 20.7 -0.8**
NLWA Neilton Lookou 87.32 39 P **P** **20 14 21.5 -0.1**
NLWA IAmb IAmb 20 14 23.9

comp=Z,52nm,1.2s
BSTI Sart Tilman 87.33 325 *dP* **P** **20 14 20.7 -0.8**
A05A Maple Falls 87.42 37 P **P** **20 14 22.0 0.0**
A05A IAmb IAmb 20 14 24.0

comp=Z,57nm,1.2s
CEL Celeste 87.54 311 P **P** **20 14 23.0 +0.1**
TUE Stuetta 87.54 321 P **P** **20 14 22.4 -0.5**
TUE IAmb IAmb 20 14 23.7

comp=Z,32nm,1.2s
WLF Walferdange 87.55 324 *dP* **P** **20 14 22.2 -0.4**
comp=Z,44nm,1.1s
WLF Walferdange 87.55 324 P **P** **20 14 22.5 -0.1**
WLF pmax pmax

comp=Z,73nm,1.0s
WLF Walferdange 87.55 324 P **P** **20 14 22.5 -0.1**
WLF Walferdange 87.55 324 *eP* **P** **20 14 22.8 +0.2**
comp=Z,95nm,1.1s,baz=59,slow=5.0
BCLA Clavier 87.56 325 *dP* **P** **20 14 22.0 -0.7**
comp=Z,12nm,1.1s
BCLA *dp* **pP** **20 14 29.4 +0.4**
BCLA *ds* **pwP** **20 14 33.5 -0.3**
D03D Eldon 87.68 38 P 20 14 24.6
baz=304,SNR=34
ZCCA Zocca 87.70 318 P **P** **20 14 23.8 +0.3**
ZCCA IAmb IAmb 20 14 25.9

comp=Z,38nm,1.1s
RCHB Rochefort 87.75 325 *dP* **P** **20 14 23.0 -0.5**
comp=Z,23nm,1.1s
ECH Echery 87.83 323 P **P** **20 14 23.0 -1.0**
ECH pmax pmax

comp=Z,26nm,1.2s
ECH Echery 87.83 323 P **P** **20 14 23.0 -1.0**
ECH IAmb IAmb 20 14 24.5

comp=Z,26nm,1.2s
UCC Uccle 87.83 326 *dP* **P** **20 14 23.3 -0.6**
UCC Uccle 87.83 326 P **P** **20 14 23.2 -0.7**
UCC pmax pmax

comp=Z,49nm,1.3s
UCC Uccle 87.83 326 P **P** **20 14 23.2 -0.7**
UCC IAmb IAmb 20 14 24.4

comp=Z,49nm,1.3s
B05A Bryant 87.83 37 P 20 14 24.5
baz=304,SNR=13
PRMA PARMA 87.88 319 P **P** **20 14 24.6 +0.3**

BMRD Maredsous 87.91 325 *dP* **P** **20 14 23.9 -0.4**
comp=Z,20nm,1.1s
E03A Lebam 87.96 39 P **P** **20 14 25.2 +0.7**
OSSC Osservatorio P 87.96 317 P **P** **20 14 23.7 -1.0**
OSSC IAmb IAmb 20 14 25.0

comp=Z,25nm,1.1s
B06A Marblemount 88.02 37 P **P** **20 14 24.9 0.0**
SNF Seneffe 88.04 326 *dP* **P** **20 14 24.8 -0.1**
DOU Dourbes 88.12 325 *dP* **P** **20 14 24.8 -0.5**
VLC Villacollemand 88.16 318 P **P** **20 14 24.9 -0.7**
VLC IAmb IAmb 20 14 33.0

comp=Z,27nm,1.2s
D05A Enumclaw 88.50 38 P **P** **20 14 27.5 +0.3**
E04D Cinebar 88.52 39 P 20 14 28.4
baz=304,SNR=10.0
ESK Eskdalemuir 88.53 332 *i* P **P** **20 14 26.9 -0.2**
ESK Eskdalemuir 88.53 332 P **P** **20 14 25.9 -1.2**
MSSA Maissana 88.60 319 P **P** **20 14 26.3 -1.6**
MSSA IAmb IAmb 20 14 27.6

comp=Z,17nm,1.0s
SENIN Lac Senin/Sane 88.78 321 P **P** **20 14 27.2 -1.7**
LON Longmire 88.84 38 P **P** **20 14 28.5 -0.4**
LON pmax pmax

comp=Z,34nm,1.1s
LON Longmire 88.84 38 P **P** **20 14 28.4 -0.4**
LON IAmb IAmb 20 14 31.1

comp=Z,34nm,1.1s
G03D McMinnville, O 88.86 40 P 20 14 30.0
baz=304
COR Corvallis 89.19 41 P **P** **20 14 29.9 -0.5**
COR pmax pmax

comp=Z,48nm,1.1s
COR Corvallis 89.19 41 P **P** **20 14 29.9 -0.5**
LTY Liberty 89.19 37 P **P** **20 14 30.2 -0.3**
LTY IAmb IAmb 20 14 32.0

comp=Z,42nm,1.1s
SFJD Kangerlussuaq 89.20 357 *i* P **P** **20 14 29.1 -0.9**
SFJD IAmb IAmb 20 14 29.9

comp=Z,7.8nm,0.8s
SFJD Kangerlussuaq 89.20 357 *i* P **P** **20 14 29.1 -0.9**
SFJD pmax pmax

comp=Z,8.0nm,0.8s
SFJD Kangerlussuaq 89.20 357 P **P** **20 14 28.8 -1.2**
SFJD IAmb IAmb 20 14 29.9

comp=Z,25nm,1.1s
B08A Colville Reser 89.28 36 P **P** **20 14 30.7 -0.3**
DY2G Dye2 89.47 356 *i* P **P** **20 14 30.5 -1.2**
DY2G IAmb IAmb 20 14 31.9

comp=Z,20nm,0.8s
KEBM Edson Butte 89.49 43 P **P** **20 14 31.4 -0.6**
F05D White Salmon 89.54 39 P 20 14 33.3
baz=305
H04D Lebanon 89.56 41 P 20 14 33.9
baz=304
I03D Drain, OR 89.65 41 P 20 14 33.6
baz=304
ISOG Isortoq, Green 89.68 352 *i* P **P** **20 14 31.0 -1.3**
ISOG IAmb IAmb 20 14 32.4

comp=Z,23nm,1.0s
H04A Detroit Lake 89.79 40 P **P** **20 14 33.1 -0.2**
H04A IAmb IAmb 20 14 45.6

comp=Z,49nm,1.3s
BNI Bardonecchia 89.88 320 P **P** **20 14 33.5 -0.4**
BNI pmax pmax

comp=Z,24nm,0.9s
BNI Bardonecchia 89.88 320 P **P** **20 14 33.5 -0.4**
BNI IAmb IAmb 20 14 36.1

comp=Z,24nm,0.9s
G05D Wamic, OR 89.99 39 P 20 14 35.4
baz=305
E07A Sunnyside 90.06 38 P **P** **20 14 34.8 +0.2**
I04A Tendick Farm, 90.16 41 P 20 14 35.7
baz=304,SNR=7.0
C09A Chrisman Ranch 90.19 36 P **P** **20 14 35.2 +0.1**
D08A Wollman Farm, 90.28 37 P **P** **20 14 35.8 +0.3**
HAWA Hanford 90.33 38 P **P** **20 14 36.0 +0.1**
HAWA IAmb IAmb 20 14 38.5

comp=Z,45nm,1.1s
F07A Phinny Hill Vi 90.40 38 P **P** **20 14 36.6 +0.5**
F07A IAmb IAmb 20 14 52.6

comp=Z,38nm,1.0s
HUMO Hull Mountain 90.49 42 P **P** **20 14 37.6 +1.0**
I05D Terrebonne, OR 90.49 40 P 20 14 37.8
baz=305
NEW Newport 90.52 35 P **P** **20 14 36.8 +0.1**
NEW pmax pmax

comp=Z,55nm,1.0s
NEW Newport 90.52 35 P **P** **20 14 36.8 +0.1**
NEW Newport 90.52 35 P 20 14 37.5
baz=308,SNR=66
E08A Dider Farm, El 90.54 37 P **P** **20 14 37.2 +0.4**
E08A IAmb IAmb 20 14 38.8

comp=Z,55nm,1.3s
J04D Umpqua Nationa 90.65 41 P 20 14 38.4
baz=304,SNR=7.1
SSB Saint Sauveur 90.99 321 P **P** **20 14 38.2 -0.7**
SSB pmax pmax

comp=Z,26nm,1.0s
SSB Saint Sauveur 90.99 321 P **P** **20 14 38.1 -0.7**
SSB IAmb IAmb 20 14 39.6

comp=Z,26nm,1.0s
E09A Wood Farm, Sta 91.03 37 P **P** **20 14 39.1 +0.1**
PINE Pine Mountain 91.04 40 P **P** **20 14 39.8 +0.4**
PINE IAmb IAmb 20 14 52.5

comp=Z,31nm,0.9s
L04D Klamath Falls 91.11 42 P 20 14 40.3
baz=304,SNR=13
YBH Yreka Blue Hor 91.12 43 P **P** **20 14 40.2 +0.5**
YBH pmax pmax

comp=Z,17nm,1.2s
YBH Yreka Blue Hor 91.12 43 P **P** **20 14 40.2 +0.5**
YBH IAmb IAmb 20 14 56.1

comp=Z,17nm,1.2s
J05D Fort Rock, OR 91.15 41 P 20 14 40.8
baz=305,SNR=9.5
M02C Callahan 91.22 43 P 20 14 41.3
baz=304
VSL Villasalto 91.29 315 P **P** **20 14 40.0 -0.4**
G08A Pilot Rock 91.31 38 P **P** **20 14 40.7 +0.2**
G08A IAmb IAmb 20 14 58.5

comp=Z,17nm,1.2s
M04C Macdoel 91.64 42 P 20 14 43.1
baz=304,SNR=10
WALA Waterton Lakes 91.67 33 P **P** **20 14 42.2 +0.1**
K05A Summer Lake 91.68 41 P **P** **20 14 41.6 -0.8**
I07A Izee 91.71 40 P **P** **20 14 42.7 +0.2**
I07A IAmb IAmb 20 14 55.3

comp=Z,18nm,1.1s
MBAR Mbarara 91.85 270 *ce* P **P** **20 14 45.0 +1.4**
MBAR pmax pmax

comp=Z,7.0nm,1.0s
MBAR Mbarara 91.85 270 P **P** **20 14 43.0 -0.6**
MBAR IAmb IAmb 20 14 55.7

comp=Z,16nm,1.3s
F10A Beach Ranch, E 91.87 37 P **P** **20 14 42.7 -0.3**
F10A IAmb IAmb 20 15 00.2

comp=Z,15nm,1.0s
O02D Mt. Diablo Mer 91.94 44 P 20 14 44.3
baz=304
FCC Fort Churchill 92.21 18 P **P** **20 14 43.1 -1.1**
FCC pmax pmax

comp=Z,78nm,1.3s
FCC Fort Churchill 92.21 18 P **P** **20 14 43.1 -1.1**
JTMT Jette 92.33 34 P **P** **20 14 44.5 -0.7**
O03E Paynes Creek 92.50 44 P 20 14 46.4
baz=304
MOD Modoc Plateau 92.51 42 P **P** **20 14 45.9 -0.3**
MOD IAmb IAmb 20 15 02.4

comp=Z,22nm,1.1s
J08A Circle Bar Ran 92.74 40 P **P** **20 14 46.9 -0.3**
J08A IAmb IAmb 20 15 03.7

comp=Z,30nm,1.0s
FFC Flin Flon 92.87 24 P **P** **20 14 46.6 -0.8**
FFC pmax pmax

comp=Z,60nm,0.9s
FFC Flin Flon 92.87 24 P **P** **20 14 46.5 -0.8**
MSO Missoula 93.10 35 P **P** **20 14 47.8 -0.9**
MSO IAmb IAmb 20 14 50.5

comp=Z,16nm,0.9s
MSO Missoula 93.10 35 P 20 14 48.9
baz=310,SNR=17
KEST Kesra 93.34 311 P **P** **20 14 50.1 +0.1**
comp=Z,13nm,0.9s,baz=318,slow=2.0,SNR=13
KEST LR LR 21 04 05.6

comp=Z,384nm,18.6s,baz=314,slow=40

KEST Kesra 93.34 311 P **P** **20 14 49.5 -0.6**
KEST IAmb IAmb 20 15 05.8

comp=Z,42nm,1.4s
BEKR Beckworth 93.65 43 P **P** **20 14 51.3 -0.2**
BEKR IAmb IAmb 20 15 12.1

comp=Z,9.9nm,0.9s
MFID Camas Ranch 94.23 38 P **P** **20 14 54.4 +0.4**
MFID IAmb IAmb 20 15 10.4

comp=Z,12nm,0.9s
HRY Holter Researc 94.27 34 P **P** **20 14 53.7 -0.5**
EGMT Eagleton 94.42 32 P 20 14 54.7
baz=314
LRM Limekiln Ridge 94.54 35 P **P** **20 14 55.1 -0.4**
PNTR Pine Nut 94.58 44 P **P** **20 14 56.0 +0.1**
PNTR IAmb IAmb 20 18 38.9

comp=Z,12nm,0.8s
CMB Columbia Colle 94.69 45 P **P** **20 14 55.7 -0.5**
CMB pmax pmax

comp=Z,11nm,1.1s
CMB Columbia Colle 94.69 45 P **P** **20 14 55.7 -0.5**
DLMT Dillon 94.76 35 P **P** **20 14 56.4 -0.1**
DLMT IAmb IAmb 20 15 12.4

comp=Z,15nm,0.8s
YERR Yerington 94.87 44 P **P** **20 14 56.8 -0.4**
HLID Hailey 94.94 38 P **P** **20 14 57.1 -0.3**
HLID IAmb IAmb 20 14 59.7

comp=Z,27nm,1.7s
HLID Hailey 94.94 38 P 20 14 58.3
baz=310,SNR=11
MCMT McKenzie Canyo 94.98 36 P **P** **20 14 57.6 0.0**
WAKR Walker 95.03 44 P **P** **20 14 58.1 +0.2**
BOZ Bozeman (W) 95.12 35 P **P** **20 14 58.0 -0.1**
BOZ pmax pmax

comp=Z,16nm,1.6s
BOZ Bozeman (W) 95.12 35 P **P** **20 14 58.0 -0.1**
BOZ Bozeman (W) 95.12 35 P 20 14 58.3
baz=312
PPT Papeete 95.13 107 LR LR 20 48 18.7
comp=Z,328nm,21.7s,baz=316,slow=30
PPT2 Papeete2 95.14 107 *eS* **S** **20 26 15.3 +2.6**
comp=Z,365nm,25.5s
PPT2 Papeete2 95.14 107 *e* LR LR 20 45 38.3
comp=Z,727nm,23.2s,baz=288
NVAR Mina Array Bea 95.79 44 P **P** **20 15 01.7 +0.3**
comp=Z,3.1nm,0.7s,baz=294,slow=3.7,SNR=9.5
NVAR Mina Array Bea 95.79 44 P **P** **20 15 00.9 -0.5**
ELK Elko 96.25 40 P **P** **20 15 03.6 +0.1**
ELK pmax pmax

comp=Z,37nm,1.3s
ELK Elko 96.25 40 P **P** **20 15 03.6 +0.1**
ELK IAmb IAmb 20 17 27.3

comp=Z,37nm,1.3s
H17A Grant Village 96.48 35 P 20 15 06.9
baz=313,SNR=5.7
RLMT Red Lodge 96.66 34 P **P** **20 15 05.1 -0.1**
RLMT IAmb IAmb 20 15 17.9

comp=Z,14nm,1.4s
RLMT Red Lodge 96.66 34 P 20 15 05.9
baz=314
TBI Tubuai 97.48 112 *eS* **S** **20 26 36.3 +3.7**
comp=Z,196nm,24.8s
TBI Tubuai 97.48 112 *e* LR LR 20 46 46.7
comp=Z,344nm,24.8s,baz=298
PDAR Pinedale Array 98.13 36 P **P** **20 15 11.3 -0.6**
comp=Z,0.7nm,0.6s,baz=100,slow=1.8,SNR=6.4
PDAR Pinedale Array 98.13 36 P **P** **20 15 10.6 -1.3**
ULM Lac du Bonnet 98.70 24 P **P** **20 15 12.5 -1.5**
comp=Z,5.2nm,0.9s,baz=324,slow=5.3,SNR=11
ULM Lac du Bonnet 98.70 24 P **P** **20 15 12.8 -1.1**
ULM pmax pmax

comp=Z,7.0nm,1.0s
ULM Lac du Bonnet 98.70 24 **P** **Pdif** **20 15 12.8 -1.1**
ESDC Sonseca Array 99.39 321 P **Pdif** **20 15 16.4 -1.0**
comp=Z,1.2nm,1.0s,baz=38,slow=4.7,SNR=5.1
ESDC PP **PP** **20 19 16.9 -3.1**
comp=Z,2.8nm,1.2s,baz=45,slow=6.2,SNR=5.0
ESDC PKKP **PKKPdf** **20 31 46.0 +1.9**
comp=Z,0.3nm,0.9s,baz=321,slow=1.8,SNR=1.7
ESDC LR LR 21 05 27.8
comp=Z,443nm,19.8s,baz=20,slow=39
MVO Moncorvo 100.09 324 *e* LR LR 20 55 44.5
comp=Z,773nm,18.0s
PGAV Gavieira, Arco 100.19 325 *e* LR LR 20 56 55.6
comp=Z,802nm,18.0s
TAOE Nuku Hiva Isla 100.22 95 *e* LR LR 20 48 01.8
comp=Z,292nm,23.4s
MTE Manteigas 100.90 323 *e* LR LR 20 57 56.6
comp=Z,818nm,18.0s
PVAQ Vaqueiros 103.09 321 *e* LR LR 20 59 35.0
comp=Z,563nm,16.0s
MDT Midelt 104.32 316 PKiKP **PKiKP** **20 19 57.7 +1.6**
comp=Z,4.2nm,1.0s,baz=346,slow=4.0,SNR=3.6
RKT Rikitea 109.89 107 *e* LR LR 20 52 31.7
comp=Z,566nm,24.0s
TXAR Lajitas Array 110.90 42 Pdiff **Pdif** **20 16 11.6 +2.7**
comp=Z,0.2nm,0.8s,baz=325,slow=4.6,SNR=2.5
TXAR PKiKP **PKiKP** **20 20 08.4 -0.1**
comp=Z,1.2nm,0.8s,baz=216,slow=0.6,SNR=11
TXAR PKKPab **PKKPab** **20 31 18.6 +0.3**
comp=Z,0.4nm,0.9s,baz=125,slow=4.5,SNR=4.1
TORD Torodi Ar. Bea 111.43 296 PKKP **PKiKP** **20 20 09.2 -0.4**
comp=Z,1.1nm,0.7s,baz=29,slow=2.4,SNR=4.7
TORD PP **PP** **20 20 50.6 +0.6**
comp=Z,7.6nm,1.1s,baz=53,slow=5.9,SNR=8.0
TORD PKKPab **PKKPab** **20 31 14.4 -0.6**
comp=Z,1.8nm,1.1s,baz=258,slow=4.8,SNR=4.5
KOWA Kowa 115.28 301 PKP **PKiKP** **20 20 16.4 -0.5**
comp=Z,1.1nm,0.4s,baz=54,slow=3.0,SNR=2.2
KOWA PP **PP** **20 21 18.1 +0.9**
comp=Z,4.0nm,0.8s,baz=28,slow=5.1,SNR=4.5
DBIC Dimbokro 120.33 294 PKP **PKPdf** **20 20 26.5 -0.2**
comp=Z,1.3nm,0.5s,baz=25,slow=2.8,SNR=1.8
DBIC PP **PP** **20 21 52.7 +0.2**
comp=Z,7.8nm,1.0s,baz=31,slow=7.1,SNR=3.4
DBIC Dimbokro 120.33 294 PKiKP **PKPdf** **20 20 26.2 -0.5**
DBIC Dimbokro 120.33 294 **PKPdf** **20 20 26.2 -0.5**
BELA Belgrano 2 124.92 186 **PKPdf** **20 20 33.1 -0.7**
MOTC Monteria, Cord 142.96 31 *eP* **PKPdf** **20 21 04.2 -5.0**
ZARC Zaragoza, Cauc 144.46 31 *eP* **PKPab** **20 21 09.1 -1.0**
SDV Santo Domingo 144.95 23 **PKPab** **20 21 11.4 -0.7**
HELC Santa Helena 145.27 33 *eP* **PKPbc** **20 21 12.1 -1.3**
BRRC Barranca, Sant 145.32 29 *eP* **PKPbc** **20 21 12.1 -1.0**
PTBC PUERTO BERRIO 145.49 31 *eP* **PKPbc** **20 21 11.9 -1.8**
PAMC Pamplona, Colo 145.56 27 *eP* **PKPdf** **20 21 15.7 -0.6**
BARC Barichara 146.02 29 *eP* **PKPdf** **20 21 15.1 +0.3**
NORC Norcasia 146.14 32 *eP* **PKPdf** **20 21 14.2 -0.7**
GUY2C Guyana, Caldas 146.19 33 *eP* **PKPdf** **20 21 14.8 -0.6**
SPBC San Pablo de B 146.44 31 *eP* **PKPdf** **20 21 15.7 +0.3**
RUSC La Rusia 146.68 29 *eP* **PKPdf** **20 21 16.3 +0.1**
YOTC Yotoco, Valle 146.73 36 *eP* **PKPdf** **20 21 16.6 +0.6**
TOLC Tolima 146.75 34 *eP* **PKPdf** **20 21 16.8 +0.5**
ANIL Santa Ana 146.79 34 *eP* **PKPdf** **20 21 17.0 +0.7**
ROSC El Rosal 147.03 32 PKPbc **PKPdf** **20 21 17.3 +0.5**
comp=Z,34nm,0.7s,baz=355,slow=4.5,SNR=11
ROSC El Rosal 147.03 32 PKP2 **PKPdf** **20 21 16.7 -0.1**
ROSC El Rosal 147.03 32 **PKPdf** **20 21 16.7 -0.1**
ROSC El Rosal 147.03 32 *eP* **PKPdf** **20 21 17.5 +0.7**
ORTC Ortega, Tolima 147.37 34 *eP* **PKPdf** **20 21 17.9 +1.0**
CHIC Chingaza 147.50 31 *eP* **PKPbc** **20 21 19.1 -1.0**
VILC Villavicencio, 147.97 32 *eP* **PKPbc** **20 21 20.9 -0.1**
PCON Cinco Dias 148.07 38 *eP* **PKPbc** **20 21 22.0 +0.1**
SOTA Rioblanco 148.11 38 *eP* **PKPbc** **20 21 21.2 -0.7**
BETC Betania 148.30 36 *eP* **PKPbc** **20 21 21.9 +0.1**
CRUC La Cruz 148.38 39 *eP* **PKPbc** **20 21 22.5 +0.1**
OTAV Otavalo 148.52 43 PKiKP **PKPdf** **20 21 19.9 +0.6**
OTAV Otavalo 148.52 43 **PKPdf** **20 21 19.9 +0.6**
GARC Garzon, Huila 148.69 36 *eP* **PKPbc** **20 21 22.9 -0.1**
MACC Macarena, Meta 149.59 34 *eP* **PKPbc** **20 21 23.6 -1.4**
PTLC Puerto Leguiza 150.74 37 *eP* **PKPbc** **20 21 28.0 +0.2**
RCBR Riachuelo 152.51 307 PKPbc **PKPbc** **20 21 31.3 -0.6**
comp=Z,22nm,0.8s,baz=28,slow=4.5,SNR=12
RCBR PKPab **PKPab** **20 21 42.4 +0.2**
comp=Z,47nm,0.9s,baz=27,slow=3.1,SNR=11
RCBR Riachuelo 152.51 307 PKiKP **PKPbc** **20 21 31.9 0.0**
RCBR Riachuelo 152.51 307 **PKPbc** **20 21 31.9 0.0**
PTGA Pitinga 156.81 6 PKP **PKPdf** **20 21 30.5 -0.4**
comp=Z,1.6nm,0.2s,baz=308,slow=2.4,SNR=4.2
PTGA PKPab **PKPab** **20 21 59.1 -1.2**
comp=Z,12nm,0.8s,baz=359,slow=4.7,SNR=7.6
PLCA Paso Flores 159.99 150 PKPab **PKPab** **20 22 13.9 +0.4**
comp=Z,1.8nm,0.8s,baz=262,slow=6.9,SNR=3.0
SAML Samuel 164.14 21 PKP2 **PKPab** **20 22 30.1 -2.0**
SAML 21 21 38.5
SAML Samuel 164.14 21 **PKPdf** **20 21 38.5 -0.4**
SAML PKPab **PKPab** **20 22 30.1 -2.0**

LPAZ	**La Paz**	**167.45**	**55**	PKP	**PKPdf**	**20 21 43.8**	**+1.5**
	comp=Z,5.5nm,0.9s,baz=7.3,slow=3.1,SNR=14						
LPAZ				PKPab	**PKPab**	**20 22 46.8**	**-0.8**
	comp=Z,4.9nm,1.1s,baz=34,slow=3.6,SNR=1.5						
LPAZ	**La Paz**	**167.45**	**55**	PKIKP	**PKPdf**	**20 21 42.4**	**+0.1**
LPAZ	**La Paz**	**167.45**	**55**		**PKPdf**	**20 21 42.4**	**+0.1**
PB16	**IPOC Station P**	**167.49**	**66**		**PKPdf**	**20 21 42.5**	**+0.3**
MNMC	**Minye Minye**	**167.77**	**69**		**PKPdf**	**20 21 42.6**	**+0.6**
BDFB	**Brasilia**	**167.85**	**311**	PKP	**PKPdf**	**20 21 41.6**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=82,slow=2.2,SNR=2.1						
BDFB				PKPab	**PKPab**	**20 22 47.8**	**-1.0**
	comp=Z,9.3nm,0.8s,baz=48,slow=6.7,SNR=7.9						
BDFB	**Brasilia**	**167.85**	**311**	PKP2	**PKPab**	**20 22 47.6**	**-1.1**
BDFB	**Brasilia**	**167.85**	**311**	PKPab	**PKPab**	**20 22 47.6**	**-1.1**
PB11	**IPOC Station P**	**167.97**	**72**		**PKPdf**	**20 21 42.2**	**+0.2**
SIV	**San Ignacio**	**171.41**	**24**	PKP	**PKPdf**	**20 21 44.0**	**+0.1**
	comp=Z,5.9nm,1.0s,baz=72,slow=2.2,SNR=11						
SIV				PKPab	**PKPab**	**20 23 02.9**	**-1.3**
	comp=Z,9.9nm,0.9s,baz=334,slow=1.8,SNR=7.9						

JMA 25 20:04:18.0, 33°32N × 133°11E, h23 km, M-0.3, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKU	**Kubokawa**	**0.04**	**255**	P	Pb	20 04 21.9	-0.1
JKU				*e*S	Sb	20 04 24.6	-0.2

*NEIC **25** 20:04:19.8±1.2, 43°.68N±0°.06 × 105°.14W±0°.07, h0 km±2 km, ML2.9/37, Error ellipse: s-maj=11.0km s-min=7.4km az=335.0*

*IDC **25** 20:04:21.2±1.7, 43°.85N × 105°.69W, h0 km, mb1 3.3/3, mb1mx3.2/44, mbtmp3.1/3, ML2.9/2, Error ellipse: s-maj=48.4km s-min=8.7km az=149.0*

ISC 25 20:04:19.9±0.9, 43°.72N±0°.06 × 105°.22W±0°.06, h0 km, n32, σ1 ℜ12/33, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.94**	**64**	Pg	**Pg**	**20 04 36.8**	**-1.2**
K22A	**Casper**	**1.43**	**222**	Pn	**Pn**	**20 04 43.5**	**-3.8**
PHWY	**Pilot Hill**	**2.42**	**184**		**Pn**	**20 05 00.5**	**-0.5**
RWWY	**Rawlins**	**2.50**	**217**		**Pn**	**20 05 00.5**	**-1.6**
RWWY				IAML		20 05 40.2	
	80nm,0.4s						
RWWY				IAML		20 05 42.5	
	88nm,0.3s						
RLMT	**Red Lodge**	**3.23**	**297**		**Pn**	**20 05 11.7**	**-0.3**
RLMT				IAML		20 06 05.0	
	39nm,0.3s						
RLMT				IAML		20 06 10.6	
	28nm,0.3s						
BW06	**Boulder Array**	**3.31**	**255**		**Pn**	**20 05 13.7**	**+0.5**
BW06				IAML		20 06 07.2	
	33nm,0.3s						
BW06				IAML		20 06 07.7	
	32nm,0.3s						
PD31	**Pinedale Array**	**3.31**	**255**		**Pn**	**20 05 13.8**	**+0.6**
PDAR	**Pinedale Array**	**3.31**	**255**	Pn	**Pn**	**20 05 14.1**	**+0.9**
	12nm,0.3s,baz=73,slow=17,SNR=50						
PDAR				Pg	**Pb**	**20 05 18.8**	**-0.9**
	12nm,0.3s,baz=72,slow=20,SNR=58						
PDAR				Lg	Lg	20 05 55.9	
	9.0nm,0.3s,baz=71,slow=30,SNR=4.4						
PDAR	**Pinedale Array**	**3.31**	**255**	Pn	**Pn**	**20 05 13.6**	**+0.4**
OGNE	**Ogallala**	**3.64**	**139**		**Pn**	**20 05 16.9**	**-0.6**
YNE	**Yellowstone No**	**3.67**	**292**		**Pn**	**20 05 18.7**	**+0.6**
YMP	**Mirror Lake Pl**	**3.69**	**288**		**Pn**	**20 05 18.6**	**+0.1**
GCMT	**Greycliff**	**3.79**	**305**		**Pn**	**20 05 20.2**	**+0.5**
LOHW	**Long Hollow**	**3.91**	**270**		**Pn**	**20 05 22.7**	**+1.3**
H17A	**Grant Village**	**3.92**	**282**		**Pn**	**20 05 22.5**	**+0.9**
H17A				IAML		20 06 21.9	
	comp=E,13nm,0.3s						
H17A				IAML		20 06 24.4	
	comp=N,13nm,0.3s						
FLWY	**Flagg Ranch**	**3.98**	**277**		**Pn**	**20 05 22.7**	**+0.3**
FLWY				IAML		20 06 33.6	
	comp=N,18nm,2.3s						
FLWY				IAML		20 07 28.4	
	comp=N,12nm,3.8s						
REDW	**Red Top Meadow**	**4.11**	**267**		**Pn**	**20 05 25.0**	**+0.8**
REDW				IAML		20 06 27.7	
	comp=N,15nm,0.5s						
REDW				IAML		20 06 33.5	
	comp=N,16nm,0.6s						
YHH	**Holmes Hill**	**4.19**	**287**		**Pn**	**20 05 25.1**	**-0.1**
O20A	**White River Ci**	**4.23**	**213**		**Pn**	**20 05 26.8**	**+1.0**
O20A				IAML		20 06 37.5	
	comp=N,14nm,0.3s						
YHL	**Hebgen Lake**	**4.43**	**287**		**Pn**	**20 05 30.1**	**+1.5**
YHL				IAML		20 06 46.6	
	comp=E,10nm,1.2s						
YHL				IAML		20 07 02.0	
	comp=N,11nm,2.2s						
BOZ	**Bozeman (W)**	**4.95**	**295**		**Pn**	**20 05 36.4**	**+0.8**
KSCO	**Kaye Sheldock'**	**5.09**	**157**	Pn	**Pn**	**20 05 37.8**	**+0.3**
HWUT	**Hardware Ranch**	**5.13**	**248**	Pn	**Pn**	**20 05 38.6**	**+0.5**
HWUT				IAML		20 07 06.6	
	comp=N,9.4nm,0.6s						
HWUT				IAML		20 07 14.4	
	comp=N,10.0nm,0.9s						
TCUT	**Toone Canyon**	**5.27**	**243**	Pn	**Pn**	**20 05 41.2**	**+1.1**
HRY	**Holter Researc**	**5.55**	**305**	Pn	**Pn**	**20 05 43.9**	**+0.1**
LRM	**Limekiln Ridge**	**5.56**	**295**		**Pn**	**20 05 44.7**	**+0.6**
SPUT	**South Promonto**	**5.86**	**248**	Pn	**Pn**	**20 05 49.8**	**+1.6**
PV16	**Nyswonger Mesa**	**6.08**	**209**		**Pn**	**20 05 52.7**	**+1.4**
DUG	**Dugway, Tooele**	**6.67**	**241**	Pn	**Pn**	**20 06 00.2**	**+1.0**
F33A	**5 Mile Ranch,**	**6.70**	**68**	Pn	**Pn**	**20 06 00.0**	**+0.6**
ULM	**Lac du Bonnet**	**9.13**	**41**	Pn	**Pn**	**20 06 33.6**	**+0.8**
	comp=N,1.2nm,0.3s,baz=225,slow=12,SNR=13						
ULM				Lg	Lg	20 09 02.8	
	comp=N,0.3nm,0.3s,baz=150,slow=16,SNR=1.7						
YKA	**Yellowknife Ar**	**19.60**	**347**	P	**P**	**20 08 49.3**	**0.0**
	comp=N,0.1nm,0.3s,baz=166,slow=12,SNR=3.0						

IDC 25 20:04:29.2±3.2, 27°.97N × 85°.39E, h0 km, mb3.9/2, mb1 4.0/3, mb1mx3.4/58, mbtmp3.8/3, ML3.8/1, MS3.9/1, Ms1 3.9/1, ms1mx2.9/46, Error ellipse: s-maj=179.6km s-min=32.9km az=62.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.95**	**353**	P	Pn	20 08 52.4	0.0
	0.3nm,0.3s,baz=173,slow=12,SNR=22						
AKTO	**Aktyubinsk**	**30.57**	**325**	LR	LR	20 24 11.3	
	comp=Z,210nm,19.8s,baz=254,slow=39						
ARCES	**ARCESS Array B**	**53.64**	**338**	P	P	20 13 51.7	-0.5
	4.2nm,0.8s,baz=96,slow=8.3,SNR=1.0						
WRA	**Warramunga Arr**	**67.16**	**130**	P	P	20 15 25.3	0.0
	0.2nm,0.6s,baz=323,slow=6.8,SNR=1.1						

IDC 25 20:06:24.0±4.4, 43°.07N × 29°.45W, h0 km, mb3.7/3, mb1 3.6/4, mb1mx3.3/51, mbtmp3.6/4, ML4.2/1, Error ellipse: s-maj=105.0km s-min=43.5km az=68.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**19.41**	**91**	P	P	20 10 51.8	+0.2
	0.1nm,0.3s,baz=287,slow=13,SNR=7.0						
TORD	**Torodi Ar. Bea**	**40.12**	**129**	P	P	20 14 01.4	-0.1
	0.7nm,0.9s,baz=325,slow=8.8,SNR=3.4						
KURBB	**Kurchatov Arra**	**67.64**	**41**	P	P	20 17 23.0	+0.5
	0.9nm,0.8s,baz=316,slow=6.5,SNR=4.4						
MKAR	**Makanchi Array**	**72.07**	**42**	P	P	20 17 49.2	-0.7
	0.5nm,0.8s,baz=303,slow=6.0,SNR=3.0						

*IDC **25** 20:07:00.6±0.6, 27°.97N × 84°.55E, h0 km, mb4.0/20, mb1 4.1/21, mb1mx3.9/55, mbtmp4.0/21, ML4.4/1, MS4.3/2, Ms1 4.3/2, ms1mx3.1/53, Error ellipse: s-maj=19.0km s-min=15.3km az=51.0*

*NEIC **25** 20:07:02.0±1.4, 27°.98N±0°.09 × 84°.53E±0°.07, h10 km±1 km, mb4.4/36, Error ellipse: s-maj=16.1km s-min=10.8km az=190.0*

*DMN **25** 20:07:01.9±0.2, 28°.15N × 84°.74E, h2 km, Ml5.3/3, Error ellipse: s-maj=5.6km s-min=2.1km az=14.0*

*NDI **25** 20:07:04.9±3.6, 28°.03N × 84°.56E, h10 km, ML4.3, mb4.4(NEIC)*

ISC 25 20:07:02.9±0.8, 28°.05N±0°.05 × 84°.65E±0°.03, h16 km±5 km, n93, σ1 ℜ68/103, mb4.3/35, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GKN	**Gorkha**	**0.04**	**189**	*e*Pg	**Pg**	**20 07 05.4**	**-0.6**
GKN				*e*Sg	**Sg**	**20 07 08.3**	**+0.2**
DMN	**Daman**	**0.60**	**137**	*e*Pg	**Pg**	**20 07 14.6**	**-0.2**
DMN				*e*Sg	**Sg**	**20 07 22.8**	**0.0**
KKN	**Kakani**	**0.62**	**114**	*e*Pg	**Pg**	**20 07 14.1**	**-1.0**
PKIN	**Phulchoki**	**0.81**	**125**	*e*Pg	**Pg**	**20 07 17.8**	**-1.0**
PKIN				*e*Sg	**Sg**	**20 07 26.7**	**-2.9**
PKI	**Pulchoki**	**0.83**	**125**	*e*Pg	**Pg**	**20 07 18.0**	**-1.0**
DANN	**Dangsing**	**0.84**	**291**	*e*Pg	**Pg**	**20 07 18.6**	**-0.6**
DANN				*e*Sg	**Sb**	**20 07 31.0**	**+0.6**
	3μm,0.2s						
KOLN	**Koldanda**	**0.96**	**254**	*e*Pg	**Pn**	**20 07 22.1**	**+0.1**
KOLN				*e*Sg	**Sn**	**20 07 37.1**	**+1.6**
	4μm,0.2s						
GUN	**Gumba**	**1.10**	**97**	*e*Pg	**Pb**	**20 07 21.6**	**-2.1**
JIRN	**Jiri**	**1.42**	**105**	*e*Pg	**Pn**	**20 07 28.3**	**-0.1**
PYUN	**Piuthan**	**1.46**	**272**	*e*Pg	**Pg**	**20 07 31.1**	**0.0**
PYUN				*e*Sg	**Sg**	**20 07 50.9**	**+0.7**
	13μm,0.3s						
RAMN	**Ramite**	**2.05**	**122**	*e*Pg	**Pb**	**20 07 39.2**	**-0.7**
RAMN				*e*Sg	**Sb**	**20 08 06.0**	**+0.7**
BOK	**Bokaro**	**4.38**	**165**	IAmb	IAmb	20 08 12.9	
	comp=Z,46nm,0.4s						
BOK	**Bokaro**	**4.38**	**165**	*e*P	**Pn**	**20 08 10.7**	**+2.0**
BOK				*e*S	**Sn**	**20 09 02.4**	**+2.9**
BOK				IAML		20 09 03.6	
	comp=E,2μm,0.1s						
BOK	**Bokaro**	**4.38**	**165**	*e*P	**Pn**	**20 08 10.8**	**+2.0**
LSA	**Lhasa**	**5.94**	**72**	Pn	**Pn**	**20 08 31.5**	**+0.9**
DDI	**Dehra Dun**	**6.19**	**293**	*e*P	**Pn**	**20 08 36.7**	**+3.0**
DDI				*e*S	**Sn**	**20 09 40.6**	**-3.6**
DDI				IAML		20 09 46.5	
	comp=E,189nm,0.4s						
DDI				IAML		20 09 49.9	
	comp=N,366nm,0.3s						
SHL	**Shillong**	**6.92**	**109**	*e*P	**Pn**	**20 08 44.2**	**+0.3**
SHL	**Shillong**	**6.92**	**109**	Pn	**Pn**	**20 08 43.7**	**-0.2**
SMLA	**Simla**	**7.20**	**297**	*e*P	**Pn**	**20 08 48.8**	**+1.4**
SMLA				*e*S	**Sn**	**20 10 08.2**	**-0.7**
SMLA				IAML		20 10 11.7	
	comp=E,1μm,0.3s						
SMLA				IAML		20 10 12.2	
	comp=N,1μm,0.2s						
AGT	**Agartala**	**7.25**	**123**	*e*P	**Pn**	**20 08 51.9**	**+3.8**
BELO	**BELONIA**	**7.78**	**126**	*e*P	**Pn**	**20 08 59.8**	**+4.3**
BHK	**Bhakra**	**7.90**	**297**	*ex*	**Pn**	**20 08 57.0**	**-0.2**
BHPL	**Bhopal**	**8.08**	**235**	*e*P	**Pn**	**20 08 58.2**	**-1.5**
BHPL				*e*S	**Sn**	**20 10 24.7**	**-6.1**
BHPL				IAML		20 10 30.4	
	comp=N,140nm,0.3s						
BHPL				IAML		20 10 31.1	
	comp=E,142nm,0.3s						
DHRM	**DHARAMSHALA**	**8.35**	**302**	*e*P	**Pn**	**20 09 03.7**	**+0.2**
DHRM				*e*S	**Sn**	**20 10 31.4**	**-6.2**
DHRM				IAML		20 10 40.4	
	comp=E,109nm,0.5s						
DHRM				IAML		20 10 43.0	
	comp=N,74nm,0.8s						
KOHI	**KOHIMA**	**8.76**	**103**	*e*S	**Sn**	**20 10 43.7**	**-3.9**
AJM	**Ajmer**	**9.04**	**262**	*e*P	**Pn**	**20 09 14.0**	**+1.2**
AJM				*i* S	**Sn**	**20 10 48.0**	**-6.2**
MK31	**Makanchi Array**	**18.80**	**355**	P	**Pn**	**20 11 22.3**	**+0.2**
MKAR	**Makanchi Array**	**18.80**	**355**	P	**P**	**20 11 21.8**	**+0.2**
	comp=N,1.1nm,0.3s,baz=178,slow=11,SNR=8.5						
MKAR	**Makanchi Array**	**18.80**	**355**	P	**Pn**	**20 11 22.1**	**-0.1**
PALK	**Pallekele**	**21.00**	**191**	P	**P**	**20 11 45.0**	**-0.8**
ENH	**Enshi**	**21.80**	**78**	P	**P**	**20 11 56.6**	**+2.3**
KURBB	**Kurchatov Arra**	**23.02**	**350**	P	**P**	**20 12 07.1**	**+0.1**
	comp=N,1.7nm,0.6s,baz=170,slow=10,SNR=1.3						
UBPT	**Khong Chiam**	**23.11**	**119**	P	**P**	**20 12 11.0**	**+2.8**
UBPT				IAmb	IAmb	20 12 23.6	
	comp=Z,8.4nm,1.2s						
GEYT	**Alibeck**	**24.26**	**301**	LR	LR	20 24 41.5	
	comp=Z,423nm,21.2s,baz=50,slow=44						
ZAA0	**Zalesovo Array**	**25.88**	**0**	P	**P**	**20 12 34.7**	**+1.0**
ZAA0				IAmb	IAmb	20 12 35.0	
	comp=Z,3.8nm,0.6s						
ZALV	**Zalesovo Beam**	**25.88**	**0**	P	**P**	**20 12 34.5**	**+0.8**
	comp=Z,2.8nm,0.5s,baz=181,slow=9.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**25.88**	**0**	P	**P**	**20 12 34.1**	**+0.4**
SONM	**Songino Array**	**26.00**	**35**	P	**P**	**20 12 36.6**	**+1.5**
	comp=Z,1.6nm,0.5s,baz=223,slow=9.5,SNR=9.4						
SONM	**Songino Array**	**26.00**	**35**	P	**P**	**20 12 35.8**	**+0.7**
ULN	**Ulaanbaatar**	**26.36**	**35**	P	**P**	**20 12 39.2**	**+0.8**
ULN				IAmb	IAmb	20 12 47.0	
	comp=Z,4.4nm,0.7s						
KULM	**Kulim**	**27.27**	**143**	P	**P**	**20 12 47.8**	**+1.2**
KULM				IAmb	IAmb	20 12 48.5	
	comp=Z,8.1nm,1.2s						
SOCY	**Socotra**	**32.70**	**247**	P	**P**	**20 13 34.1**	**-0.8**
KSRS	**Korea Array**	**37.31**	**64**	P	**P**	**20 14 14.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=267,slow=9.5,SNR=4.0						
ELL	**Elmali**	**46.49**	**295**	P	**P**	**20 15 30.3**	**+0.8**
AKASG	**Malin Array Be**	**47.16**	**314**	P	**P**	**20 15 34.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=80,slow=6.9,SNR=2.9						
AKASG	**Malin Array Be**	**47.16**	**314**	P	**P**	**20 15 34.2**	**-0.2**
MLR	**Muntele Rosu**	**49.05**	**307**	P	**P**	**20 15 50.6**	**+1.4**
MLR				IAmb	IAmb	20 15 52.3	
	comp=Z,6.1nm,0.8s						
BURAR	**Bucovina Array**	**49.56**	**310**	P	**P**	**20 15 52.4**	**-0.8**
BURAR				IAmb	IAmb	20 16 04.2	
	comp=Z,2.4nm,0.9s						
BUR08	**Bucovina Ar. S**	**49.58**	**310**	P	**P**	**20 15 53.1**	**-0.2**
BUR08				IAmb	IAmb	20 16 00.3	
	comp=Z,5.4nm,1.1s						
TIXI	**Tiksi**	**49.89**	**17**	P	**P**	**20 15 55.9**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=259,slow=5.2,SNR=9.0						
TIXI	**Tiksi**	**49.89**	**17**	P	**P**	**20 15 55.5**	**+0.4**
TIXI				IAmb	IAmb	20 16 01.6	
	comp=Z,2.9nm,0.5s						
FIA1	**FINESS Array S**	**50.82**	**328**	P	**P**	**20 16 02.8**	**+0.5**
FIA1				IAmb	IAmb	20 16 17.9	
	comp=Z,10nm,1.2s						
FINES	**FINESS Array B**	**50.83**	**328**	P	**P**	**20 16 02.4**	**0.0**
	comp=Z,1.8nm,0.5s,baz=110,slow=8.3,SNR=5.1						
FINES	**FINESS Array B**	**50.83**	**328**	P	**P**	**20 16 01.7**	**-0.6**
PABE	**Paberze**	**50.88**	**320**	P	**P**	**20 16 03.5**	**+0.6**
AGG	**Agios Georgios**	**52.18**	**299**	P	**P**	**20 16 12.5**	**-0.4**
AGG				IAmb	IAmb	20 16 22.9	
	comp=Z,12nm,1.4s						
ARCES	**ARCESS Array B**	**53.32**	**338**	P	**P**	**20 16 21.4**	**+0.5**
	comp=Z,4.2nm,0.9s,baz=100,slow=10,SNR=5.5						
GERES	**GERESS Array B**	**57.19**	**312**	P	**P**	**20 16 49.3**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=80,slow=8.1,SNR=4.5						
GERES	**GERESS Array B**	**57.19**	**312**	P	**P**	**20 16 48.6**	**-0.7**
NOA	**NORSAR Array B**	**57.91**	**327**	P	**P**	**20 16 53.9**	**0.0**
	comp=Z,0.8nm,0.8s,baz=90,slow=7.1,SNR=1.7						
WB0	**Warramunga Arr**	**67.63**	**129**	P	**P**	**20 17 59.2**	**0.0**
WRA	**Warramunga Arr**	**67.71**	**129**	P	**P**	**20 18 00.3**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=322,slow=6.6,SNR=15						
WRA	**Warramunga Arr**	**67.71**	**129**	P	**P**	**20 17 59.8**	**+0.1**
NWAO	**Narrogin (SRO)**	**68.08**	**151**	P	**P**	**20 18 00.4**	**-1.4**
LSZ	**Lusaka**	**69.58**	**239**	P	**P**	**20 18 11.0**	**-0.6**
LSZ				IAmb	IAmb	20 18 12.2	
	comp=Z,2.6nm,0.6s						
AS31	**Alice Springs**	**69.99**	**132**	P	**P**	**20 18 13.5**	**-0.5**
ASAR	**Alice Springs**	**69.99**	**132**	P	**P**	**20 18 14.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=316,slow=6.2,SNR=10						
ASAR	**Alice Springs**	**69.99**	**132**	P	**P**	**20 18 13.8**	**-0.1**
BORG	**Borgarnes**	**71.45**	**334**	LR	LR	20 52 35.4	
	comp=Z,387nm,19.3s,baz=315,slow=38						
ESDC	**Sonseca Array**	**71.70**	**306**	P	**P**	**20 18 24.5**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=79,slow=6.2,SNR=2.4						
LBTB	**Lobatse**	**77.54**	**233**	P	**P**	**20 18 58.2**	**-0.1**
LBTB				IAmb	IAmb	20 18 58.9	
	comp=Z,3.1nm,0.8s						
TOA0	**Torodi Ar. Sit**	**77.80**	**278**	P	**P**	**20 18 59.0**	**-0.9**
TOA0				IAmb	IAmb	20 19 00.9	
	comp=Z,3.3nm,1.2s						
TORD	**Torodi Ar. Bea**	**77.80**	**278**	P	**P**	**20 18 59.7**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=56,slow=4.5,SNR=16						
TORD	**Torodi Ar. Bea**	**77.80**	**278**	P	**P**	**20 18 58.6**	**-1.3**
TORD				IAmb	IAmb	20 19 00.3	
	comp=Z,1.4nm,0.6s						
MLY	**Manley**	**77.85**	**21**	P	**P**	**20 19 00.3**	**+0.8**
BMAR	**Burnt Mountain**	**77.96**	**17**	P	**P**	**20 19 01.5**	**+1.6**
BPAW	**Bear Paw Mtn.**	**78.40**	**22**	P	**P**	**20 19 02.5**	**+0.1**
BPAW				IAmb	IAmb	20 19 10.8	
	comp=Z,6.2nm,1.4s						
MDM	**Murphy Dome**	**78.68**	**20**	P	**P**	**20 19 05.1**	**+1.1**
MDM				IAmb	IAmb	20 19 13.6	
	comp=Z,3.4nm,1.2s						
PPLA	**Purkeypile**	**78.79**	**23**	P	**P**	**20 19 06.2**	**+1.4**
ILAR	**Eielson Array**	**79.22**	**20**	P	**P**	**20 19 08.7**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=304,slow=5.1,SNR=5.9						
ILAR	**Eielson Array**	**79.22**	**20**	P	**P**	**20 19 08.3**	**+1.4**
RND	**Reindeer**	**79.57**	**22**	P	**P**	**20 19 09.3**	**+0.4**
RND				IAmb	IAmb	20 19 19.2	
	comp=Z,4.6nm,1.2s						
INK	**Inuvik**	**79.87**	**13**	P	**P**	**20 19 11.6**	**+1.3**
BOSA	**Boshof**	**80.05**	**230**	P	**P**	**20 19 11.3**	**-0.7**
	comp=Z,2.0nm,1.0s,baz=39,slow=6.5,SNR=1.9						
BOSA	**Boshof**	**80.05**	**230**	P	**P**	**20 19 10.8**	**-1.2**
BOSA				IAmb	IAmb	20 19 14.8	
	comp=Z,7.2nm,1.4s						
STKA	**Stephens Creek**	**80.55**	**134**	P	**P**	**20 19 14.5**	**0.0**
	comp=Z,0.8nm,0.3s,baz=342,slow=5.5,SNR=5.4						
STKA	**Stephens Creek**	**80.55**	**134**	P	**P**	**20 19 14.3**	**-0.1**
KOWA	**Kowa**	**82.16**	**282**	P	**P**	**20 19 23.9**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=60,slow=3.1,SNR=12						
KOWA	**Kowa**	**82.16**	**282**	P	**P**	**20 19 23.1**	**-0.4**
DBIC	**Dimbokro**	**86.47**	**276**	P	**P**	**20 19 45.7**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=63,slow=2.3,SNR=3.7						
DBIC	**Dimbokro**	**86.47**	**276**	P	**P**	**20 19 45.3**	**-0.1**
YKA	**Yellowknife Ar**	**88.46**	**9**	P	**P**	**20 19 55.1**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=328,slow=3.7,SNR=2.6						
SIV	**San Ignacio**	**146.15**	**283**	PKPbc	**PKPbc**	**20 26 42.9**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=104,slow=4.2,SNR=3.6						

*IDC **25** 20:11:32.2±1.5, 27°.75N × 85°.37E, h0 km, mb3.7/7, mb1 3.8/8, mb1mx3.4/49, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=51.2km s-min=21.9km az=62.0*

ISC 25 20:11:35.1±1.6, 27°.8N±0°.2 × 85°.4E±0°.4, h18 km, n8, σ0 ℜ41/8, mb3.7/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.12**	**354**	P	**Pn**	**20 15 57.2**	**-0.6**
	0.2nm,0.3s,baz=176,slow=11,SNR=6.1						
KURBB	**Kurchatov Arra**	**23.38**	**349**	P	**P**	**20 16 42.8**	**+0.2**
	0.8nm,0.7s,baz=173,slow=9.9,SNR=3.4						
SONM	**Songino Array**	**25.85**	**34**	P	**P**	**20 17 05.7**	**+0.1**
	0.8nm,0.5s,baz=221,slow=9.9,SNR=9.2						
ZALV	**Zalesovo Beam**	**26.13**	**359**	P	**P**	**20 17 08.3**	**+0.4**
	0.9nm,0.4s,baz=187,slow=10.0,SNR=4.3						
FINES	**FINESS Array B**	**51.38**	**328**	P	**P**	**20 20 38.3**	**-0.1**
	1.1nm,0.8s,baz=114,slow=6.5,SNR=6.4						
ARCES	**ARCESS Array B**	**53.80**	**338**	P	**P**	**20 20 56.5**	**+0.3**
	2.8nm,0.9s,baz=103,slow=7.5,SNR=16						
WRA	**Warramunga Arr**	**67.05**	**130**	P	**P**	**20 22 27.1**	**-0.3**
	0.6nm,1.0s,baz=322,slow=6.6,SNR=2.5						
ASAR	**Alice Springs**	**69.34**	**133**	P	**P**	**20 22 42.0**	**+0.1**
	0.2nm,0.5s,baz=310,slow=6.1,SNR=1.6						

*IDC **25** 20:23:01.7±1.2, 9°.62S × 117°.25E, h0 km, mb3.8/7, mb1 3.9/11, mb1mx3.6/44, mbtmp3.8/11, ML3.8/4, Error ellipse: s-maj=41.9km s-min=16.8km az=58.0*

ISC 25 20:23:07.3±1.0, 9°.65S±0°.08 × 117°.7E±0°.1, h35 km, n11, σ3 ℜ44/16, mb3.9/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**5.04**	**24**	Pn	**Pn**	**20 24 23.0**	**+2.6**
	7.0nm,0.3s,baz=169,slow=6.4,SNR=12						
KAPI				Sn	**Sn**	**20 25 15.7**	**-1.8**
	28nm,0.3s,baz=195,slow=20,SNR=18						
BATI	**Baumata**	**5.91**	**96**	Pn	**Pn**	**20 24 36.0**	**+3.6**
	5.4nm,0.3s,baz=294,slow=1.6,SNR=7.3						
BATI				Sn	**Sn**	**20 25 40.5**	**+1.6**
	5.7nm,0.3s,baz=212,slow=20,SNR=6.6						
FITZ	**Fitzroy Crossi**	**11.40**	**138**	Pn	**Pn**	**20 25 50.0**	**+2.3**
	0.3nm,0.3s,baz=339,slow=11,SNR=9.3						
FITZ				Sn	**Sn**	**20 27 49.9**	**-4.0**
	0.2nm,0.3s,baz=180,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**19.05**	**124**	P	**Pn**	**20 27 28.1**	**+0.4**
	0.2nm,0.3s,baz=297,slow=12,SNR=5.8						
WRA		

NEIC ***25*** *20:32:48.2±1.4, 27.64N±0.07×85.92E±0.05, h10km±1km, mb4.4/67, Error ellipse: s-maj=12.9km s-min=6.5km az=160.0*

NDI ***25*** *20:32:49.9±3.3, 27.58N×85.90E, h10km, ML4.2, mb4.4(NEIC)*

ISC 25 20:32:48.2±0.9,**27.61N**±0.03×**85.90E**±0.02,**h12**km±6km, **n166**,σ1§46/183,**mb4.3**/62,**2C**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIRN	**Jiri**	**0.26**	**78**	*e*Pg		**Pg**	**20 32 52.9**	**-0.9**
JIRN				eSg		**Sg**	**20 32 56.8**	**-0.8**
GUN	**Gumba**	**0.30**	**356**	*e*Pg		**Pg**	**20 32 54.2**	**-0.4**
GUN				eSg		**Sg**	**20 32 57.8**	**-1.1**
PKI	**Pulchoki**	**0.44**	**265**	*e*Pg		**Pb**	**20 32 59.0**	**+0.9**
PKI				eSg		**Sb**	**20 33 06.0**	**+1.2**
PKIN	**Phulchoki**	**0.45**	**266**	*e*Pg		**Pb**	**20 32 59.1**	**+0.9**
KKN	**Kakani**	**0.58**	**288**	*e*Pg		**Pb**	**20 33 00.8**	**+0.3**
KKN				eSg		**Sb**	**20 33 08.9**	**+0.1**
DMN	**Daman**	**0.71**	**270**	*e*Pg		**Pb**	**20 33 03.7**	**+1.1**
DMN				eSg		**Sb**	**20 33 13.8**	**+1.4**
RAMN	**Ramite**	**0.90**	**136**	*e*Pg		**Pg**	**20 33 05.8**	**+0.1**
GKN	**Gorkha**	**1.19**	**290**	*e*Pg		**Pn**	**20 33 12.0**	**+1.2**
GKN				eSg		**Sb**	**20 33 26.8**	**+0.6**
	2μm,0.2s							
ODAN	**Odare**	**1.52**	**119**	*e*Pg		**Pg**	**20 33 17.4**	**0.0**
ODAN				eSg		**Sb**	**20 33 36.6**	**+0.8**
	4μm,0.3s							
TAPN	**Taplejung**	**1.63**	**99**	*e*Pg		**Pb**	**20 33 18.4**	**+0.1**
DANN	**Dangsing**	**2.03**	**292**	*e*Pg		**Pg**	**20 33 26.8**	**-0.5**
DANN				eSg		**Sg**	**20 33 53.2**	**-0.5**
	2μm,0.3s							
KOLN	**Koldanda**	**2.05**	**275**	*e*Sg		**Sg**	**20 33 55.1**	**+1.0**
	6μm,0.4s							
PYUN	**Piuthan**	**2.62**	**281**	*e*Pn		**Pn**	**20 33 33.1**	**+2.5**
PYUN	**Piuthan**	**2.62**	**281**	*e*Pg		**Pg**	**20 33 38.1**	**-0.5**
PYUN				eSg		**Sg**	**20 34 12.4**	**-0.2**
LSA	**Lhasa**	**5.06**	**64**	Pn		**Pn**	**20 34 07.0**	**+2.7**
LSA				Sn		**Sn**	**20 35 04.0**	**+1.0**
LSA				smax		smax		
	comp=N,120nm,0.9s							
LSA				smax		smax		
	comp=E,120nm,0.9s							
LSA	**Lhasa**	**5.06**	**64**	Pn		**Pn**	**20 34 05.9**	**+1.5**
SHL	**Shillong**	**5.73**	**109**	*e*P		**Pn**	**20 34 13.3**	**+0.1**
SHL				*e*S		**Sn**	**20 35 15.6**	**-3.4**
SHL	**Shillong**	**5.73**	**109**			**Pn**	**20 34 13.7**	**+0.4**
AGT	**Agartala**	**6.08**	**126**	*e*P		**Pn**	**20 34 21.4**	**+3.4**
BELO	**BELONIA**	**6.63**	**130**	*e*P		**Pn**	**20 34 28.7**	**+3.3**
BELO				*e*S		**Sn**	**20 35 38.7**	**-2.2**
ZIRO	**ZIRO**	**7.05**	**89**	*e*P		**Pn**	**20 34 32.6**	**+1.1**
ZIRO				*e*S		**Sn**	**20 35 48.2**	**-3.5**
DDI	**Dehra Dun**	**7.39**	**293**	*e*P		**Pn**	**20 34 30.0**	**+2.1**
DDI				*e*S		**Sn**	**20 35 58.7**	**-1.0**
DDI				IAML			20 36 02.2	
	comp=E,351nm,0.3s							
DDI				IAML			20 36 02.6	
	comp=N,771nm,0.2s							
MOKO	**MOKOCHONG**	**7.79**	**97**	*e*P		**Pn**	**20 34 41.8**	**+0.2**
MOKO				*e*S		**Sn**	**20 36 05.8**	**-4.0**
MOKO				IAML			20 36 16.3	
	comp=E,76nm,0.4s							
SMLA	**Simla**	**8.39**	**297**	*e*P		**Pn**	**20 34 49.6**	**0.0**
SMLA				*e*S		**Sn**	**20 36 21.1**	**-3.2**
SMLA				IAML			20 36 24.5	
	comp=N,100nm,0.2s							
SMLA				IAML			20 36 26.5	
	comp=E,130nm,0.5s							
BHPL	**Bhopal**	**8.81**	**242**	*i* P		**Pn**	**20 34 54.5**	**-1.0**
BHPL				*e*P		**Pn**	**20 34 54.5**	**-1.0**
BHPL				*e*S		**Sn**	**20 36 28.1**	**-6.6**
BHPL				IAML			20 36 32.5	
	comp=N,154nm,0.4s							
BHPL				IAML			20 36 32.7	
	comp=E,133nm,0.2s							
LKP	**Lekhapani**	**8.84**	**89**	*e*P		**Pn**	**20 34 55.7**	**-0.1**
LKP				*e*S		**Sn**	**20 36 30.5**	**-4.8**
LKP				IAML			20 36 36.4	
	comp=N,83nm,0.3s							
DHRM	**DHARAMSHALA**	**9.53**	**301**	*e*P		**Pn**	**20 35 04.6**	**-0.8**
DHRM				*e*S		**Sn**	**20 36 46.8**	**-5.8**
DHRM				IAML			20 36 52.3	
	comp=N,89nm,0.4s							
DHRM				IAML			20 36 52.5	
	comp=E,104nm,0.3s							
HYB	**Hyderabad**	**12.20**	**215**	*i* P		**Pn**	**20 35 40.0**	**-1.9**
HYB				*e*S		**Sn**	**20 38 01.0**	**+3.0**
NIL	**Nilore**	**12.44**	**302**	Pn		**Pn**	**20 35 43.8**	**-1.4**
KSH	**Kashi**	**14.46**	**328**	P		**Pn**	**20 36 10.0**	**-2.9**
KSH				pmax		pmax		
	comp=E,5.0nm,0.3s							
KSH				pmax		pmax		
	comp=E,350nm,9.3s							
CM33	**Chiang Mai Arr**	**14.83**	**123**	P		**P**	**20 36 25.0**	**+1.3**
CHTO	**Chiang Mai**	**14.83**	**123**	Pn		**Pn**	**20 36 17.5**	**-0.4**
CMMT	**Chiang Mai**	**14.84**	**123**	P		P	20 36 28.7	+4.9
CM32	**Chiang Mai Arr**	**14.86**	**124**	P		P	20 36 33.0	+8.9
CM34	**Chiang Mai Arr**	**14.96**	**123**	P		**P**	**20 36 26.0**	**+0.8**
CM15	**Chiang Mai Arr**	**15.05**	**125**	P		P	**20 36 28.2**	**+2.2**
CM13	**Chiang Mai Arr**	**15.05**	**125**	P		**P**	**20 36 28.1**	**+1.9**
CM31	**Chiang Mai Arr**	**15.06**	**124**	Pn		**Pn**	**20 36 18.8**	**-2.0**
CMAR	**Chiang Mai Arr**	**15.06**	**124**	Pn		**Pn**	**20 36 18.9**	**-2.0**
	baz=305,slow=14,SNR=14							
CMAR	**Chiang Mai Arr**	**15.06**	**124**			**Pn**	**20 36 22.4**	**+1.5**
CM02	**Chiang Mai Arr**	**15.07**	**125**	P		**P**	**20 36 32.0**	**+5.6**
CM35	**Chiang Mai Arr**	**15.07**	**123**	P		**P**	**20 36 27.2**	**+0.8**
CM01	**Chiang Mai Arr**	**15.09**	**125**	P		**P**	**20 36 29.0**	**+2.4**
CM05	**Chiang Mai Arr**	**15.09**	**125**	P		**P**	**20 36 29.0**	**+2.4**
CM09	**Chiang Mai Arr**	**15.10**	**124**	P		**P**	**20 36 28.0**	**+1.3**
CM04	**Chiang Mai Arr**	**15.12**	**125**	P		**P**	**20 36 28.9**	**+2.0**
CM36	**Chiang Mai Arr**	**15.13**	**124**	P		**P**	**20 36 28.0**	**+1.0**
KMI	**Kunming**	**15.29**	**95**	⇑P		**Pn**	**20 36 26.5**	**+2.3**
KMI				pP		P	20 36 29.3	+0.2
KMI				pmax		pmax		
	comp=E,4.0nm,1.0s							
KMI				pmax		pmax		
	comp=E,68nm,5.1s							
KMI				LR		LR		
	comp=E,130nm,9.2s							
KMI				LR		LR		
	comp=E,260nm,12.3s							
KMI				LR		LR		
	comp=E,200nm,11.7s							
KBL	**Kabul**	**16.00**	**300**	Pn		**Pn**	**20 36 31.8**	**-1.6**
KBL				IAmb		IAmb	20 36 39.0	
	comp=Z,15nm,0.9s							
PRZ	**Przheval'sk**	**16.05**	**340**			**Pn**	**20 36 34.3**	**+0.4**
KDJ	**Kajisay**	**16.14**	**336**			**Pn**	**20 36 34.3**	**-0.9**
SUKH	**Sukhothai**	**16.18**	**126**	P		**P**	**20 36 40.0**	**+1.3**
WMQ	**Urumqi**	**16.24**	**5**	*e*P		**P**	**20 36 39.8**	**+0.5**
WMQ				S		**Sn**	**20 39 38.0**	**+1.6**
WMQ				pmax		pmax		
	comp=Z,17nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,240nm,10.3s							
WMQ				LR		LR		
	comp=Z,350nm,6.7s							
WMQ				LR		LR		
	comp=Z,190nm,7.3s							
WMQ				LR		LR		
	comp=Z,270nm,29.1s							
DRK	**Karamyk**	**16.66**	**319**			**Pn**	**20 36 39.0**	**-2.8**
DRK				IAmb		IAmb	20 36 57.0	
	comp=Z,8.5nm,0.6s							
BOOM	**Boomskoye usch**	**16.92**	**334**	Pn		**Pn**	**20 36 44.0**	**-0.9**
LZH	**Lanzhou**	**17.41**	**56**	*e*P		**Pn**	**20 36 50.5**	**-0.7**
LZH				pP		P	20 36 54.3	+1.9
LZH				sP		sP	20 36 58.0	-0.3
LZH				pmax		pmax		
	comp=Z,10.0nm,1.1s							
BTK	**Batken**	**17.61**	**319**			**Pn**	**20 36 50.8**	**-2.8**
BTK				IAmb		IAmb	20 36 57.1	
	comp=Z,14nm,0.7s							
AAK	**Ala-Archa**	**17.64**	**331**	P		**P**	**20 36 55.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=165,slow=11,SNR=5.5							
AAK	**Ala-Archa**	**17.64**	**331**			**Pn**	**20 36 53.0**	**-0.9**
GYA	**Guiyang**	**18.53**	**89**	⇑P		**Pn**	**20 37 06.3**	**+1.3**
GYA				pmax		pmax		
	comp=Z,3.0nm,0.5s							
MK31	**Makanchi Array**	**19.36**	**352**	P		**P**	**20 37 13.8**	**+0.2**
MKAR	**Makanchi Array**	**19.36**	**352**	P		**P**	**20 37 14.0**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=175,slow=11,SNR=23							
MKAR	**Makanchi Array**	**19.36**	**352**	P		**P**	**20 37 13.9**	**+0.2**
MAKZ	**Makanchi**	**19.41**	**352**	P		**P**	**20 37 14.9**	**+0.6**
KK31	**Karatay Array**	**19.86**	**325**	P		**P**	**20 37 19.4**	**+0.2**
KKAR	**Karatay Array**	**19.86**	**325**	P		**P**	**20 37 19.3**	**+0.1**
KKAR	**Karatay Array**	**19.86**	**325**	P		**P**	**20 37 19.1**	**-0.1**
HRA	**Herat**	**21.35**	**294**	P		**P**	**20 37 35.0**	**-0.6**
UBPT	**Khong Chiam**	**21.92**	**120**	P		**P**	**20 37 41.9**	**+0.3**
UBPT				IAmb		IAmb	20 37 49.8	
	comp=Z,17nm,1.4s							
KURBB	**Kurchatov Arra**	**23.66**	**348**	P		**P**	**20 37 59.4**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=166,slow=9.5,SNR=11							
BSI	**Banda Aceh**	**23.74**	**156**	P		P	20 38 11.3	+11
HHC	**Hu-ho-hao-te**	**24.89**	**51**	*e*P		**P**	**20 38 12.8**	**+1.8**
HHC				pmax		pmax		
	comp=Z,6.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,190nm,7.1s							
GEYT	**Alibeck**	**25.45**	**301**	P		**P**	**20 38 17.2**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=142,slow=11,SNR=3.9							
GEYT	**Alibeck**	**25.45**	**301**	P		**P**	**20 38 16.8**	**+0.8**
SONM	**Songino Array**	**25.75**	**33**	P		**P**	**20 38 19.1**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=222,slow=9.5,SNR=10							
ULN	**Ulaanbaatar**	**26.09**	**34**	P		**P**	**20 38 22.0**	**+0.1**
ULN				IAmb		IAmb	20 38 31.2	
	comp=Z,5.1nm,1.0s							
KULM	**Kulim**	**26.26**	**145**	P		**P**	**20 38 24.2**	**+0.7**
KULM				IAmb		IAmb	20 38 30.0	
	comp=Z,8.8nm,0.9s							
ZAA0	**Zalesovo Array**	**26.33**	**359**	P		**P**	**20 38 23.8**	**+0.1**
ZAA0				IAmb		IAmb	20 38 32.1	
	comp=Z,3.9nm,0.7s							
ZALV	**Zalesovo Beam**	**26.33**	**359**	P		**P**	**20 38 24.4**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=190,slow=8.9,SNR=9.9							
ZALV	**Zalesovo Beam**	**26.33**	**359**	P		**P**	**20 38 23.8**	**0.0**
BVAR	**Borovoye Array**	**27.89**	**340**	P		**P**	**20 38 38.2**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=146,slow=16,SNR=6.9							
ABKAR	**Akbulak array**	**29.42**	**324**	P		**P**	**20 38 52.0**	**+0.5**
SOCY	**Socotra**	**33.57**	**249**	P		**P**	**20 39 27.9**	**-0.6**
SOCY				IAmb		IAmb	20 39 28.9	
	comp=Z,4.0nm,0.7s							
ARU	**Arti**	**34.79**	**333**	P		**P**	**20 39 39.1**	**+0.6**
KSRS	**Korea Array**	**36.51**	**64**	P		**P**	**20 39 52.8**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=256,slow=8.1,SNR=5.1							
KBZ	**Khabaz**	**38.00**	**307**	P		**P**	**20 40 04.8**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=122,slow=9.7,SNR=4.1							
JNU	**Nakatsue**	**38.97**	**71**	LR		LR	20 57 04.8	
	comp=Z,567nm,20.7s,baz=274,slow=37							
USRK	**Ussuriysk Ar.**	**40.28**	**53**	P		**P**	**20 40 24.7**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=237,slow=9.0,SNR=4.7							
KLR	**Kul'dur**	**41.12**	**46**	LR		LR	20 58 42.8	
	comp=Z,180nm,19.5s,baz=221,slow=38							
NRIK	**Noril'sk**	**41.77**	**1**	P		**P**	**20 40 38.1**	**+1.0**
	comp=Z,7.0nm,0.6s,baz=202,slow=6.2,SNR=4.2							
NRIK	**Noril'sk**	**41.77**	**1**	P		**P**	**20 40 38.1**	**+1.0**
NRIK				IAmb		IAmb	20 40 43.2	
	comp=Z,7.2nm,0.7s							
JWT	**Wachi**	**42.56**	**67**	P		**P**	**20 40 44.5**	**+0.6**
JWT				IAmb		IAmb	20 40 49.3	
	comp=Z,13nm,1.4s							
YAK	**Yakutsk**	**44.88**	**28**	P		**P**	**20 41 02.5**	**+0.3**
YAK				IAmb		IAmb	20 41 09.0	
	comp=Z,5.7nm,0.7s							
CSS	**Mathiatis**	**45.09**	**293**	P		**P**	**20 41 05.0**	**+0.7**
CSS				IAmb		IAmb	20 41 08.3	
	comp=Z,3.6nm,1.0s							
ELL	**Elmali**	**47.68**	**296**	P		**P**	**20 41 25.3**	**+0.5**
AKASG	**Malin Array Be**	**48.26**	**315**	P		**P**	**20 41 28.4**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=84,slow=6.6,SNR=6.2							
AKASG	**Malin Array Be**	**48.26**	**315**	P		**P**	**20 41 28.4**	**-0.5**
TIXI	**Tiksi**	**49.99**	**16**	P		**P**	**20 41 41.7**	**-0.1**
TIXI				IAmb		IAmb	20 41 46.7	
	comp=Z,2.1nm,0.8s							
MLR	**Muntele Rosu**	**50.20**	**308**	P		**P**	**20 41 43.7**	**-0.3**
MLR				IAmb		IAmb	20 41 46.5	
	comp=Z,5.6nm,0.8s							
IDID	**Didziasalis**	**50.34**	**320**	*e*P		**P**	**20 41 44.8**	**+0.1**
IIGN	**Ignalina**	**50.63**	**320**	*e*P		**P**	**20 41 47.2**	**+0.2**
BURAR	**Bucovina Array**	**50.70**	**310**	P		**P**	**20 41 47.8**	**+0.1**
BURAR				IAmb		IAmb	20 41 49.0	
	comp=Z,1.2nm,0.8s							
BUR08	**Bucovina Ar. S**	**50.71**	**310**	P		**P**	**20 41 48.3**	**+0.5**
BUR08				IAmb		IAmb	20 41 49.5	
	comp=Z,5.1nm,1.4s							
ISAL	**Salakas**	**50.72**	**321**	*e*P		**P**	**20 41 48.0**	**+0.4**
FIA1	**FINESS Array S**	**51.79**	**328**	P		**P**	**20 41 55.5**	**0.0**
FINES	**FINESS Array B**	**51.79**	**328**	P		**P**	**20 41 55.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=103,slow=7.9,SNR=19							
PABE	**Paberze**	**51.93**	**320**	*e*P		**P**	**20 41 56.8**	**+0.1**
PABE	**Paberze**	**51.93**	**320**	P		**P**	**20 41 56.8**	**+0.1**
AGG	**Agios Georgios**	**53.37**	**300**	P		**P**	**20 42 06.8**	**-0.8**
AGG				IAmb		IAmb	20 42 08.0	
	comp=Z,7.0nm,1.0s							
KEV	**Kevo**	**53.72**	**338**	P		**P**	**20 42 10.5**	**+0.8**
ARCES	**ARCESS Array B**	**54.15**	**338**	P		**P**	**20 42 13.2**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=102,slow=8.2,SNR=9.1							
SOKA	**Soboth**	**57.69**	**310**	*i* P		**P**	**20 42 39.2**	**+0.6**
	comp=Z,3.2nm,1.0s							
OBKA	**Obir**	**58.04**	**310**	*i* P		**P**	**20 42 41.4**	**+0.2**
	comp=Z,3.0nm,0.9s							
GERES	**GERESS Array B**	**58.31**	**312**	P		**P**	**20 42 42.4**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=94,slow=8.0,SNR=4.5							
GERES	**GERESS Array B**	**58.31**	**312**	P		**P**	**20 42 42.9**	**-0.1**
KHC	**Kasperske Hory**	**58.36**	**313**	P		**P**	**20 42 43.3**	**0.0**
KHC				IAmb		IAmb	20 43 00.5	
	comp=Z,3.0nm,1.3s							
NC405	**NORSAR Array S**	**58.64**	**327**	P		**P**	**20 42 44.8**	**-0.2**
NOA	**NORSAR Array B**	**58.89**	**327**	P		**P**	**20 42 46.2**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=80,slow=5.0,SNR=6.3							
FITZ	**Fitzroy Crossi**	**59.55**	**135**	P		**P**	**20 42 52.2**	**+0.4**
	comp=Z,2.6nm,1.1s,baz=299,slow=10,SNR=1.6							
FITZ	**Fitzroy Crossi**	**59.55**	**135**	P		**P**	**20 42 52.3**	**+0.5**
NRCA	**Norcia**	**59.64**	**305**	P		**P**	**20 42 52.7**	**+0.4**
NRCA				IAmb		IAmb	20 43 00.8	
	comp=Z,5.1nm,1.2s							
WTTA	**Wattenberg**	**59.91**	**311**	*e*P		**P**	**20 42 53.4**	**-0.8**
	comp=Z,1.7nm,0.6s							
SQTA	**Sankt Quirin**	**60.20**	**311**	*i* P		**P**	**20 42 55.4**	**-0.7**
	comp=Z,2.0nm,0.5s							
MOTA	**Moosalm**	**60.25**	**311**	*e*P		**P**	**20 42 55.9**	**-0.6**
	comp=Z,4.4nm,1.2s							
RETA	**Reutte**	**60.46**	**311**	*i* P		**P**	**20 42 57.5**	**-0.3**
	comp=Z,4.3nm,1.5s							
DAVA	**Damuels**	**61.08**	**311**	*i* P		**P**	**20 43 02.1**	**-0.2**
	comp=Z,3.1nm,0.7s							
TUE	**Stuetta**	**61.59**	**310**	P		**P**	**20 43 05.3**	**-0.4**
TUE				IAmb		IAmb	20 43 18.0	
	comp=Z,2.8nm,0.8s							
MSSA	**Maissana**	**61.91**	**308**	P		**P**	**20 43 07.2**	**-0.6**
MSSA				IAmb		IAmb	20 43 22.5	
	comp=Z,4.5nm,1.0s							
SENIN	**Lac Senin/Sane**	**63.00**	**310**	P		**P**	**20 43 15.6**	**+0.4**
SENIN				IAmb		IAmb	20 43 21.8	
	comp=Z,5.0nm,1.0s							
KEST	**Kesra**	**64.16**	**298**	P		**P**	**20 43 23.7**	**+0.9**
	comp=Z,7.8nm,0.9s,baz=17,slow=2.0,SNR=8.8							
KEST	**Kesra**	**64.16**	**298**	P		**P**	**20 43 23.8**	**+0.9**
WB0	**Warramunga Arr**	**66.49**	**130**	P		**P**	**20 43 38.0**	**0.0**
WB0				IAmb		IAmb	20 43 46.2	
	comp=Z,6.4nm,1.4s							
WRA	**Warramunga Arr**	**66.57**	**130**	P		**P**	**20 43 38.8**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=323,slow=6.5,SNR=24							
WRA	**Warramunga Arr**	**66.57**	**130**	P		**P**	**20 43 38.6**	**+0.1**
WB2	**Warramunga Arr**	**66.58**	**130**	P		**P**	**20 43 39.0**	**+0.4**
NWAO	**Narrogin (SRO)**	**67.16**	**152**	P		**P**	**20 43 41.5**	**-0.5**
ASAR	**Alice Springs**	**68.87**	**133**	P		**P**	**20 43 53.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=316,slow=6.4,SNR=16							
ASAR	**Alice Springs**	**68.87**	**133**	P		**P**	**20 43 53.7**	**+0.7**
LSZ	**Lusaka**	**70.32**	**240**	P		**P**	**20 44 02.4**	**+0.3**
EUNU	**Eureka**	**72.48**	**359**	P		**P**	**20 44 15.2**	**+1.0**
EUNU				IAmb		IAmb	20 44 20.3	
	comp=Z,2.1nm,0.9s							
ESDC	**Sonseca Array**	**72.86**	**306**	P		**P**	**20 44 17.1**	**0.0**
	comp=Z,1.3nm,1.0s,baz=64,slow=7.5,SNR=7.3							
ESDC	**Sonseca Array**	**72.86**	**306**	P		**P**	**20 44 16.9**	**-0.2**
ANM	**Nome**	**72.98**	**25**	P		**P**	**20 44 16.8**	**-0.5**
ANM				IAmb		IAmb	20 44 23.7	
	comp=Z,7.7nm,1.5s							
PAB	**San Pablo**	**73.18**	**306**	P		**P**	**20 44 18.8**	**-0.3**
TOLK	**Toolik Lake Re**	**75.84**	**18**	P		**P**	**20 44 34.6**	**+0.6**
TOLK				IAmb		IAmb	20 44 35.5	
	comp=Z,3.3nm,0.7s							
IMAR	**Indian Mountai**	**76.29**	**21**	P		**P**	**20 44 37.0**	**+0.4**
BBOO	**Buckleboo**	**76.69**	**138**	P		**P**	**20 44 38.9**	**-0.3**
TTA	**Tatalina**	**77.36**	**24**	P		**P**	**20 44 43.4**	**+0.6**
TTA				IAmb		IAmb	20 44 44.7	
	comp=Z,3.7nm,1.2s							
MLY	**Manley**	**77.86**	**21**	P		**P**	**20 44 46.3**	**+0.9**
MLY				IAmb		IAmb	20 44 52.0	
	comp=Z,3.9nm,1.0s							
BMAR	**Burnt Mountain**	**78.04**	**18**	P		**P**	**20 44 47.8**	**+1.4**
LBTB	**Lobatse**	**78.17**	**234**	P		**P**	**20 44 47.5**	**-0.2**
LBTB				IAmb		IAmb	20 45 05.9	
	comp=Z,3.0nm,0.9s							
I23K	**Minto, Yukon-K**	**78.22**	**21**	P		**P**	**20 44 47.7**	**+0.3**
I23K				IAmb		IAmb	20 44 53.6	
	comp=Z,3.1nm,0.9s							
NEA2	**Nenana**	**78.69**	**21**	P		**P**	**20 44 50.6**	**+0.6**
NEA2				IAmb		IAmb	20 44 56.2	
	comp=Z,4.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.96**	**279**	P		**P**	**20 44 51.7**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=57,slow=3.9,SNR=8.2							
TORD	**Torodi Ar. Bea**	**78.96**	**279**	P		**P**	**20 44 51.6**	**-0.7**
ILAR	**Eielson Array**	**79.25**	**20**	P		**P**	**20 44 52.6**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=310,slow=4.8,SNR=18							
INK	**Inuvik**	**80.03**	**14**	P		**P**	**20 44 57.5**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=44,slow=4.8,SNR=4.1							
BOSA	**Boshof**	**80.63**	**231**	P		**P**	**20 45 01.3**	**+0.2**
BOSA				IAmb		IAmb	20 45 19.2	
	comp=Z,9.5nm,1.3s							
SCRK	**Sand Creek**	**80.71**	**20**	P		**P**	**20 45 01.5**	**+0.4**
SCRK				IAmb		IAmb	20 45 02.2	
	comp=Z,3.2nm,0.6s							
SML	**Sawmill**	**80.83**	**23**	P		**P**	**20 45 02.3**	**+0.6**
KDAK	**Kodiak Island**	**81.91**	**27**	P		**P**	**20 45 08.2**	**+0.8**
L27K	**Beaver Creek,**	**82.04**	**20**	P		**P**	**20 45 09.1**	**+1.0**
L27K				IAmb		IAmb	20 45 10.0	
	comp=Z,4.4nm,1.2s							
BCAR	**Beaver Creek A**	**82.05**	**20**	P		**P**	**20 45 09.2**	**+1.1**
HYT	**Haines Junctio**	**85.07**	**20**	P		**P**	**20 45 24.9**	**+1.1**
HYT				IAmb		IAmb	20 45 30.1	
	comp=Z,3.6nm,0.8s							
YKA	**Yellowknife Ar**	**88.72**	**9**	P		**P**	**20 45 40.5**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=340,slow=4.5,SNR=9.7							
CPUP	**Villa Florida**	**147.28**	**264**	PKPbc		**PKPdf**	**20 52 31.0**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=75,slow=2.3,SNR=3.0							

IDC ***25*** *20:37:44.2±0.5, 8.29N×83.29W, h0km, mb4.6/23, mb1 4.8/26, mb1mx4.7/35, mbtmp4.7/26, ML5.0/3, MS3.8/9, Ms1 3.9/9, ms1mx3.5/36, Error ellipse: s-maj=21.6km s-min=10.5km az=59.0*

UPA ***25*** *20:37:46.5±1.5, 8.14N×83.41W, h14km±3km, MW5.3*

NEIC ***25*** *20:37:46.8, 8.22N×83.38W, h19km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr1.18; Mθθ-1.06; Mϕϕ-0.12; Mrθ-0.23; Mϕθ0.49; Mϕr-0.21; Fault plane solution: M₀1.27000×10¹⁶ NP1:ϕ₁279.71000°, δ49.69000°, λ71.97000°. NP2:ϕ₂126.41000°, δ43.52000°, λ110.04000°. Principal axes: T 1.2598, Plg76.0000°, Azm125.0000°; N 0.0169, Plg14.0000°, Azm292.0000°; P -1.2766, Plg3.0000°, Azm22.0000°;*

UCR ***25*** *20:37:46.7, 8.16N×83.42W, h13km, MD3.7, ML4.0, mb4.7(NEIC)*

NEIC ***25*** *20:37:47.7±1.7, 8.21N±0.04×83.44W±0.06, h14km±3km, mb4.9/208, Mwr4.7/23, ML5.1(UCR), Error ellipse: s-maj=9.3km s-min=5.3km az=69.0*

INET ***25*** *20:37:48.9, 8.30N×83.34W, h8km, ML5.2*

SNET ***25*** *20:37:54.6±1.4, 8.49N×83.91W, h15km±999km, ML4.9*

BGR ***25*** *20:37:59.4±0.0, 10.17N×82.60W, h33km, mb4.8*

ISC 25 20:37:46.7±0.6,**8.21N**±0.03×**83.41W**±0.03,**h16**km±3km, **h16**km:**pP-P**,**n526**,σ0§99/581,**mb4.9**/160,**MS3.9**/6,**8C-19D**, **Costa Rica**

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

JTS Sn **Sn** **20 38 57.9 -0.8**
539nm,0.3s,baz=351,slow=22,SNR=4.3
JTS **Las Juntas de 2.57 324** *eP* **Pn** **20 38 27.8 0.0**
JTS *eS* **Sn** **20 38 59.3 +0.5**
JTS **Las Juntas de 2.57 324** **Pn** **20 38 27.3 -0.5**
JTS **Las Juntas de 2.57 324** Pn **Pn** **20 38 27.3 -0.5**
JTS **Las Juntas de 2.57 324** *eP* **Pn** **20 38 28.4 +0.6**
ARE1 **Arenal 1 2.58 330** *eP* **Pn** **20 38 29.3 +1.3**
CEDE **Laguna Cedeo 2.60 331** *eP* **Pn** **20 38 29.7 +1.5**
INDI **Punta indio, G 2.64 309** *eP* **Pn** **20 38 27.6 -1.2**
CACAO **El Cacao, Vera 2.67 109** *eP* **Pn** **20 38 28.0 -1.2**
CACAO *eS* **Sn** **20 38 59.9 -1.3**
COVE **Coope Vega, Sa 2.68 339** *eP* **Pn** **20 38 30.2 +0.9**
COVE **Coope Vega, Sa 2.68 339** **Pn** **20 38 30.5 +1.2**
GRZA **Playa Garza 2.77 308** *eP* **Pn** **20 38 29.6 -1.0**
PLVR **Palo Verde 2.86 318** *eP* **Pn** **20 38 31.4 -0.6**
ACAL **Aguas Claras 2.89 327** *eP* **Pn** **20 38 33.6 +1.3**
GUAI **GUAI 2.91 315** *i/P* **Pn** **20 38 32.6 +0.1**
ORTG **Ortega, Santa 2.94 317** **Pn** **20 38 33.0 0.0**
CUI **Cuipilapa 2.98 325** *i P* **Pn** **20 38 33.2 -0.4**
COLC **Colonia 3.01 324** *i P* **Pn** **20 38 35.8 +1.9**
HORNC **Hornillas 3.04 325** *i P* **Pn** **20 38 35.1 +0.8**
GUAB **Guayabo de Bag 3.06 324** *i/P* **Pn** **20 38 36.2 +1.6**
PNME **Penonome 3.07 85** *eP* **Pn** **20 38 35.7 +1.1**
PNME *eS* **Sn** **20 39 13.5 +2.4**
LIM1 **Limonal 3.07 324** *i P* **Pn** **20 38 36.2 +1.5**
AZU **Azuero 3.14 97** *eP* **Pn** **20 38 35.9 +0.3**
AZU *eS* **Sn** **20 39 10.2 -2.6**
AZU **Azuero 3.14 97** *eP* **Pn** **20 38 35.3 -0.2**
AZU **Azuero 3.14 97** *eP* **Pn** **20 38 35.8 +0.3**
GPS2 **Hotel Rincn d 3.17 323** *i/P* **Pn** **20 38 37.8 +1.7**
GPS3 **Bodega del ICE 3.18 323** *i P* **Pn** **20 38 37.9 +1.7**
VRLE **La Escondida, 3.21 323** *eP* **Pn** **20 38 37.9 +1.3**
LAPC **Finca la Perla 3.23 322** *i/P* **Pn** **20 38 37.4 +0.5**
BUEV **Buena Vista 3.24 323** *i P* **Pn** **20 38 38.6 +1.6**
GB1A **Borinquen Arri 3.25 323** *i P* **Pn** **20 38 39.1 +1.7**
GBS3 **Finca Las Img 3.25 322** *i/P* **Pn** **20 38 38.7 +1.4**
BUAI **Buenos Aires 3.26 325** *i/P* **Pn** **20 38 37.6 +0.3**
BCIP **Isla Barro Col 3.66 75** *eP* **Pn** **20 38 43.9 +1.0**
BCIP *eS* **Sb** **20 39 35.1 -0.3**
BCIP **Isla Barro Col 3.66 75** *eP* **Pn** **20 38 43.6 +0.8**
BCIP **Isla Barro Col 3.66 75** Pn **Pn** **20 38 43.8 +1.0**
BCIP **Isla Barro Col 3.66 75** *eP* **Pn** **20 38 44.3 +1.5**
ESPN **Las Esperanzas 4.06 348** *eP* **Pn** **20 38 49.5 +1.2**
ESPN **Las Esperanzas 4.06 348** **Pn** **20 38 49.3 +1.0**
ACON **Acoyapa 4.12 335** *eP* **Pn** **20 38 50.9 +1.8**
ACON **Acoyapa 4.12 335** **Pn** **20 38 49.7 +0.6**
BOAB **BOACO BROADBAN 4.76 332** **Pn** **20 38 57.9 0.0**
MATN **Matagalpa 5.30 332** **Pn** **20 39 06.5 +1.0**
PRVC **Isla de Provid 5.52 21** *eP* **Pn** **20 39 08.3 0.0**
CRIN **San Cristobal 5.72 322** **Pn** **20 39 11.9 +0.7**
SOLC **Bahia Solano 6.27 108** *eP* **Pn** **20 39 17.1 -1.7**
CNCH **Conchagua 6.65 320** *eP* **Pn** **20 39 26.1 +2.1**
CNCH **Conchagua 6.65 320** *eP* **Pn** **20 39 26.1 +2.1**
TGUH **Tegucigalpa,Un 6.94 327** *eP* **Pn** **20 39 29.1 +1.2**
TGUH **Tegucigalpa,Un 6.94 327** *eP* **Pn** **20 39 29.1 +1.2**
TGUH **Tegucigalpa,Un 6.94 327** Pn **Pn** **20 39 29.4 +1.5**
TGUH **Tegucigalpa,Un 6.94 327** *eP* Pn 20 39 33.3 +5.4
LFRS **El Faro 7.73 315** *eP* **Pn** **20 39 40.6 +1.8**
LFRS **El Faro 7.73 315** *eP* **Pn** **20 39 40.6 +1.8**
LFRS *eS* **Sn** **20 41 02.3 -3.9**
SNET **Serv Nac Est T 7.89 314** **Pn** **20 39 42.1 +1.1**
HELC **Santa Helena 8.08 104** *eP* Pn 20 39 48.8 +4.9
SJCC **San Jacinto, C 8.30 78** *eP* **Pn** **20 39 50.1 +3.4**
MTO3 **Montecristo 8.48 317** *eP* **Pn** **20 39 49.5 +0.3**
MTO3 **Montecristo 8.48 317** *eP* **Pn** **20 39 49.5 +0.3**
MTO3 **Montecristo 8.48 317** **Pn** **20 39 50.5 +1.3**
GUY2C **Guyana, Caldas 8.53 110** *eP* **Pn** **20 39 51.0 +0.9**
ESQI **Esquipulas 8.58 318** IAML 20 40 09.7
comp=Z,57nm,0.3s
ESQI **Esquipulas 8.58 318** **Pn** **20 39 52.4 +1.9**
TOLC **Tolima 8.81 114** *eP* **Pn** **20 39 58.0 +4.1**
SOTA **Rioblanco 9.07 131** *eP* **Pn** **20 40 00.7 +3.1**
PCON **Cinco Dias 9.11 130** *eP* **Pn** **20 40 00.9 +2.8**
OTAV **Otavalo 9.34 148** **Pn** **20 40 03.0 +1.8**
OTAV **Otavalo 9.34 148** *eP* **Pn** **20 40 01.3 +0.1**
ROSC **El Rosal 9.63 110** Pn **Pn** **20 40 06.6 +1.4**
APG **El Apazote 9.66 315** Pn **Pn** **20 40 06.7 +1.3**
comp=Z,7.4nm,0.3s,baz=139,slow=10,SNR=37
RTAL **Retalhuleu 10.26 308** IAML 20 40 24.8
comp=Z,70nm,0.2s
RTAL **Retalhuleu 10.26 308** **Pn** **20 40 14.4 +1.0**
HUEH **Huehuetenango 10.61 312** **Pn** **20 40 19.9 +1.5**
PETF **Flores 10.70 325** **Pn** **20 40 21.4 +1.9**
MTDJ **Mount Denham 11.48 29** Pn **Pn** **20 40 31.5 +1.2**
CCIG **Comitan 11.70 314** **Pn** **20 40 34.6 +1.2**
CBCY **The Bluff, Cay 12.00 17** Pn **Pn** **20 40 37.8 +0.6**
SDV **Santo Domingo 12.66 86** Pn **Pn** **20 40 47.1 +0.6**
TEIG **Tepich 12.84 339** LR LR 20 45 42.2
comp=Z,378nm,20.5s,baz=196,slow=37
TEIG **Tepich 12.84 339** Pn **Pn** **20 40 49.1 +0.4**
GTBY **Guantanamo Bay 14.15 34** **Pn** **20 41 08.8 +2.1**
CMIG **Matias Romero 14.25 309** Pn **Pn** **20 41 09.1 +1.1**
comp=Z,6.1nm,0.3s,baz=119,slow=11,SNR=34
CMIG Sn **Sn** **20 43 45.1 -0.8**
comp=Z,1.1nm,0.3s,baz=43,slow=19,SNR=1.9
SOR **Soroa 14.51 1** Pn **Pn** **20 41 13.5 +1.9**
JAKH **Jacmel 14.55 46** Pn **Pn** **20 41 13.0 +0.9**
LGNH **Logne 14.67 45** Pn **Pn** **20 41 15.3 +1.6**
SDDR **Presa de Saban 15.91 46** Pn **Pn** **20 41 30.5 +0.3**
SDDR IAmb IAmb 20 41 45.0
comp=Z,122nm,1.3s
SDDR **Presa de Saban 15.91 46** *eP* **Pn** **20 41 30.6 +0.3**
TLIG **Tlapa 17.44 304** P **Pn** **20 41 50.0 +0.3**
GRTK **Grand Turk 17.75 41** P **P** **20 41 55.0 +0.9**
GRTK IAmb IAmb 20 42 12.8
comp=Z,173nm,1.6s
MLPR **Magueyes Islan 18.65 57** P **P** **20 42 03.2 -0.8**
MLPR IAmb IAmb 20 42 15.8
comp=Z,67nm,1.2s
OBIP **Obispado Ponce 19.05 57** P **P** **20 42 07.5 -1.0**
OBIP IAmb IAmb 20 42 22.2
comp=Z,109nm,1.6s
AOPR **Arecibo Observ 19.07 56** P **P** **20 42 08.4 -0.3**
AOPR IAmb IAmb 20 42 27.9
comp=Z,46nm,0.9s
CZSB **Cruzeiro do Su 19.09 146** *eP* **P** **20 42 10.1 +1.1**
SJG **San Juan 19.46 58** LR LR 20 49 17.3
comp=Z,284nm,20.4s,baz=259,slow=36
SJG **San Juan 19.46 58** P **Pn** **20 42 13.9 -0.3**
PDPR **Patillas Dam, 19.53 58** P **P** **20 42 13.4 -0.3**
GCPR **Guaynabo City 19.61 57** P **P** **20 42 14.3 -0.3**
GCPR IAmb IAmb 20 42 32.9
comp=Z,55nm,1.1s
CBYP **Canovanas 19.78 58** P **P** **20 42 15.7 -0.9**
MTP **Monte Pirata 19.96 59** P **P** **20 42 18.6 +0.1**
MTP IAmb IAmb 20 42 29.3
comp=Z,102nm,1.5s
CUPR **Culebra, Puert 20.28 59** P **P** **20 42 22.2 +0.3**
CUPR IAmb IAmb 20 42 35.6
comp=Z,57nm,1.1s
CDVI **St. Croix 20.48 61** P **P** **20 42 23.7 -0.4**
STVI **Saint Thomas 20.58 59** P **P** **20 42 23.8 -1.4**
STVI IAmb IAmb 20 42 38.6
comp=Z,67nm,1.2s
MOIG **Morelia 20.65 305** P **P** **20 42 26.6 +0.4**
MOIG IAmb IAmb 20 42 50.3
comp=Z,33nm,0.5s
NNA **Nana 21.10 162** P **P** **20 42 31.6 +0.8**
comp=Z,31nm,0.8s,baz=332,slow=10.0,SNR=14
NNA **Nana 21.10 162** P **P** **20 42 30.5 -0.4**
NNA IAmb IAmb 20 42 33.0
comp=Z,51nm,0.9s
ABVI **Anegada Island 21.28 59** P **P** **20 42 32.9 +0.2**
352A **Blakely 23.20 357** P **P** **20 42 53.2 +0.2**
352A IAmb IAmb 20 42 56.7
comp=Z,60nm,1.2s
ZAIG **Zacatecas 23.41 310** P **P** **20 42 56.3 +0.6**
250A **Grady 23.80 354** P **P** **20 42 59.1 +0.2**
344A **Westbrook Farm 24.11 345** P **P** **20 43 02.1 +0.2**
154A **Montrose 24.29 1** P **P** **20 43 03.7 +0.2**
152A **Waverly Hall 24.37 357** P **P** **20 43 04.2 0.0**
152A IAmb IAmb 20 43 16.3
comp=Z,49nm,1.8s
ETMB **Extrema 24.78 136** *eP* **P** **20 43 07.8 -0.3**
VBMS **Vicksburg 24.79 346** P **P** **20 43 08.1 +0.1**
VBMS IAmb IAmb 20 43 18.2
comp=Z,36nm,0.8s
146A **Union 24.87 349** P **P** **20 43 09.0 +0.2**
146A IAmb IAmb 20 43 10.9
comp=Z,42nm,0.9s
LRAL **Lakeview Retre 24.93 353** P **P** 20 43 10.3
baz=172,SNR=12
LRAL **Lakeview Retre 24.93 353** P **P** **20 43 09.7 +0.4**
NHSC **New Hope 24.96 6** P 20 43 11.2
baz=188
PTGA **Pitinga 25.00 110** P **P** **20 43 10.2 0.0**
comp=Z,20nm,1.1s,baz=299,slow=9.7,SNR=8.8
PTGA **Pitinga 25.00 110** P **P** **20 43 10.0 -0.2**
PTGA IAmb IAmb 20 43 12.9
comp=Z,21nm,1.1s
Z51A **Franklin 25.04 357** P **P** **20 43 10.0 -0.3**
833A **Chaparral WMA, 25.05 325** P 20 43 10.6
baz=140
GOGA **Godfrey 25.08 360** P **P** **20 43 11.1 +0.5**
GOGA IAmb IAmb 20 43 13.9
comp=Z,29nm,0.9s
GOGA **Godfrey 25.08 360** P 20 43 11.7
baz=180,SNR=10
Z47A **Carrollton 25.24 351** P **P** **20 43 12.6 +0.4**
MACA **Manacapuru-AM 25.33 116** *eP* **P** **20 43 13.2 +0.1**
143A **Socs Landing, 25.48 344** P **P** **20 43 15.5 +1.2**
143A IAmb IAmb 20 43 26.6
comp=Z,26nm,0.9s
Y52A **Lilburn 25.54 359** P **P** **20 43 15.4 +0.6**
Y52A IAmb IAmb 20 43 18.5
comp=Z,26nm,1.0s
Y49A **Blount Mountai 25.68 354** P **P** **20 43 16.4 +0.3**
Y49A IAmb IAmb 20 43 19.9
comp=Z,19nm,0.8s
HODGE **Hodges 25.92 2** P **P** **20 43 18.2 -0.1**
HODGE IAmb IAmb 20 43 28.9
comp=Z,16nm,0.8s
Y59A **Loris 26.00 9** P **P** **20 43 18.4 -0.6**
JSC **Jenkinsville 26.02 4** P **P** **20 43 18.7 -0.5**
435B **Jarrell 26.07 331** P **P** **20 43 19.4 -0.4**
435B IAmb IAmb 20 43 46.5
comp=Z,20nm,0.9s
Y45A **Yeager Farm, C 26.15 348** P **P** **20 43 19.5 -0.9**
X48A **Hartselle 26.33 353** P **P** **20 43 21.5 -0.5**
SAML **Samuel 26.39 130** P **P** **20 43 21.6 -1.1**
SAML **Samuel 26.39 130** *eP* **P** **20 43 22.0 -0.8**
Z41A **Richland Creek 26.40 342** P 20 43 23.6
baz=159
BIRD **Birdtown, Kers 26.45 5** P **P** **20 43 23.1 +0.1**
BIRD IAmb IAmb 20 43 40.0
comp=Z,22nm,1.1s
PAULI **Pauline 26.53 3** P **P** **20 43 24.6 +0.9**
PAULI IAmb IAmb 20 43 44.4
comp=Z,22nm,1.1s
BG3 **Lake Jocassee 26.66 1** P **P** **20 43 25.6 +0.6**
KMSC **Kings Mountain 26.88 4** P **P** **20 43 27.0 0.0**
KMSC **Kings Mountain 26.88 4** P 20 43 28.5
baz=184
W50A **Signal Mountai 26.92 357** P **P** **20 43 26.8 -0.6**
JCT **Junction City 26.95 327** P **P** **20 43 26.6 -1.1**
SWET **Sewanee 26.98 355** P **P** **20 43 27.9 -0.1**
W57A **Gilead 27.00 6** P **P** **20 43 28.5 +0.4**
W57A IAmb IAmb 20 43 43.2
comp=Z,26nm,1.2s
CPCT **Cooper Cave 27.13 358** P **P** **20 43 29.9 +0.7**
TKL **Tuckaleechee C 27.32 359** P **P** **20 43 31.2 +0.2**
comp=Z,3.8nm,0.8s,baz=152,slow=11,SNR=3.7
TKL **Tuckaleechee C 27.32 359** P **P** **20 43 31.1 +0.1**
V58A **Windy Hill, Pi 27.74 8** P **P** **20 43 34.9 +0.2**
V58A IAmb IAmb 20 43 35.8
comp=Z,15nm,0.8s
MIAR **Mount Ida 27.83 342** P 20 43 36.2
baz=158
W41B **Gary Mavity, V 28.04 344** P 20 43 37.3
baz=161,SNR=6.3
HPIG **28.14 314** P **P** **20 43 39.0 +0.4**
WHAR **Wooly Hollow 28.16 344** P **P** **20 43 38.0 -0.4**
WHAR IAmb IAmb 20 43 51.9
comp=Z,17nm,0.9s
TXAR **Lajitas Array 28.35 320** P **P** **20 43 40.9 +0.6**
comp=Z,1.9nm,0.9s,baz=145,slow=8.1,SNR=17
TXAR PcP **PcP** **20 46 54.1 +1.0**
comp=Z,2.1nm,0.7s,baz=155,slow=5.9,SNR=13
TXAR **Lajitas Array 28.35 320** P **P** **20 43 40.4 0.0**
TXAR PcP **PcP** **20 46 54.1 +1.0**
TX32 **Lajitas Array 28.35 320** P **P** **20 43 40.6 +0.3**
TX32 PcP **PcP** **20 46 54.4 +1.3**
W39A **Magazine 28.50 342** P 20 43 41.6
baz=158
LPAZ **La Paz 28.66 148** P **P** **20 43 43.8 +0.1**
comp=Z,6.0nm,0.8s,baz=340,slow=8.8,SNR=22
LPAZ LR LR 20 56 18.8
comp=Z,163nm,18.6s,baz=313,slow=39
LPAZ **La Paz 28.66 148** P **P** **20 43 44.1 +0.3**
LPAZ **La Paz 28.66 148** *eP* **P** **20 43 44.2 +0.4**
FCAR **Ozark Folk Cen 28.68 345** P **P** **20 43 42.7 -0.4**
H06E1 **SOCORRO T-PHAS 28.70 294** T T 21 13 41.8
SNR=428
BLA **Blacksburg 29.00 5** P 20 43 47.9
baz=186
U40A **Yellville 29.31 344** P 20 43 48.7
baz=161,SNR=5.5
HHAR **Hobbs 29.55 343** P **P** **20 43 50.9 +0.1**
PB16 **IPOC Station P 29.73 153** P **P** **20 43 54.2 +1.0**
PB16 IAmb IAmb 20 43 55.8
comp=Z,18nm,0.8s
MGMO **Mountain Grove 29.92 346** P **P** **20 43 53.7 -0.4**
MGMO IAmb IAmb 20 43 54.5
comp=Z,18nm,0.8s
R54A **Victor 29.92 4** P 20 43 55.1
baz=185
ITTB **Itaituba 30.30 113** *eP* **P** **20 43 57.6 -0.1**
MNMC **Minye Minye 30.39 153** P **P** **20 43 59.1 +0.4**
MNMC **PcP** **20 46 58.7 +0.1**
CCM **Cathedral Cave 30.55 348** P **P** **20 43 58.6 -0.9**
CCM PcP **PcP** **20 46 58.8 +0.4**
CCM **Cathedral Cave 30.55 348** P 20 43 58.9
baz=165
Q53A **Leroy 30.56 3** P 20 44 00.5
baz=184
PSGCX **Pisagua 30.57 155** P **P** **20 44 00.7 +0.5**
Q52A **Bidwell 30.64 2** P **P** **20 44 00.6 +0.2**
Q52A IAmb IAmb 20 44 18.9
comp=Z,24nm,1.2s
Q51A **Peebles 30.68 0** P **P** **20 44 01.4 +0.6**
S39A **Bolivar 30.69 344** P **P** **20 44 00.1 -0.8**
S39A IAmb IAmb 20 44 01.4
comp=Z,11nm,0.8s
MDP **Montagnes des 30.71 94** LR LR 20 56 51.0
comp=Z,454nm,18.8s,baz=282,slow=38
MALB **Monte Alegre 30.74 108** *eP* **P** **20 44 01.6 +0.1**
PB11 **IPOC Station P 30.92 154** P **P** **20 44 03.9 +0.6**
PB11 IAmb IAmb 20 44 05.1
comp=Z,22nm,0.9s
Q56A **Snyder Ridge, 30.93 6** P 20 44 04.2
baz=188
MNTX **Cornudas Mount 31.05 322** P **P** **20 44 04.7 +0.5**
MNTX **Cornudas Mount 31.05 322** P 20 44 05.8
baz=134
P51A **Williamsport 31.14 1** P **P** **20 44 04.9 +0.1**
VILB **Vilhena 31.21 132** *eP* **P** **20 44 05.6 0.0**
P52A **Corning 31.31 2** P 20 44 07.1
baz=182
TA01 **Diego Aracena 31.41 156** P **P** **20 44 08.4 +1.0**
TA01 IAmb IAmb 20 44 09.7
comp=Z,16nm,0.9s
PB08 **IPOC Station P 31.47 154** P **P** **20 44 09.0 +0.6**
PB08 IAmb IAmb 20 44 10.8
comp=Z,12nm,1.0s
MCWV **Mont Chateau 31.48 5** P 20 44 09.4
baz=187
P57A **Homestead Farm 31.52 8** P 20 44 09.8
baz=190
P57A **Homestead Farm 31.52 8** P **P** **20 44 09.2 +1.1**
P57A IAmb IAmb 20 44 20.6
comp=Z,16nm,1.0s
PATCX **Punta Patache 31.66 156** P **P** **20 44 10.3 +0.7**
P43A **Skaggs, Pawnee 31.77 351** P **P** **20 44 10.4 0.0**
NPGB **Novo Progresso 31.81 118** *eP* **P** **20 44 10.3 -0.8**
P59A **Jarrettsville 31.89 10** P 20 44 12.8
baz=193
ACSO **Alum Creek Sta 31.89 1** P 20 44 11.9
baz=181,SNR=6.6
ACSO **Alum Creek Sta 31.89 1** P **P** **20 44 11.5 0.0**
O53A **New Philadelph 31.97 3** P 20 44 12.5
baz=184
O53A **New Philadelph 31.97 3** P **P** **20 44 12.1 0.0**
PB01 **IPOC Station P 32.13 155** P **P** **20 44 14.3 +0.5**
PB01 IAmb IAmb 20 44 16.0
comp=Z,16nm,1.1s
O56A **Blue Knob Stat 32.22 7** P 20 44 15.7
baz=189
PAGS **Pennsylvania G 32.44 10** P **P** **20 44 17.2 +0.9**
PAGS IAmb IAmb 20 44 18.3
comp=Z,18nm,1.0s
PB07 **IPOC Station P 32.58 156** P **P** **20 44 18.8 +1.0**
PB07 IAmb IAmb 20 44 20.6
comp=Z,18nm,0.9s
O59A **Robesonia 32.61 10** P 20 44 19.2
baz=193
SSPA **Standing Stone 32.67 8** P **P** **20 44 18.8 +0.6**
SSPA IAmb IAmb 20 44 30.0
comp=Z,13nm,1.1s
O60A **Telford 32.76 11** P 20 44 20.1
baz=195
N57A **Milroy 32.83 8** P 20 44 20.8
baz=191
KSU1 **Kansas State U 32.97 341** P 20 44 21.2
baz=156
N41A **Harden Midland 33.04 350** P **P** **20 44 20.5 -0.9**
LUPA **Lehigh Univers 33.04 11** P **P** **20 44 22.7 +1.2**
LUPA IAmb IAmb 20 44 24.2
comp=Z,29nm,1.4s
121A **Cookes Peak, D 33.12 320** P **P** **20 44 24.0 +1.5**
121A IAmb IAmb 20 44 26.3
comp=Z,16nm,0.9s
121A **Cookes Peak, D 33.12 320** P 20 44 25.6
baz=132,SNR=6.9
N59A **State Game Lan 33.27 11** P 20 44 25.0
baz=194
N59A **State Game Lan 33.28 11** P **P** **20 44 24.4 +0.9**
N59A IAmb IAmb 20 45 00.3
comp=Z,28nm,1.6s
319A **Douglas 33.35 317** P **P** **20 44 26.5 +2.0**
M57A **Sunshine Farm, 33.46 9** P 20 44 26.5
baz=191
M56A **Emporium 33.46 7** P 20 44 26.0
baz=189
BNM **Barren Site 33.52 324** P **P** **20 44 26.9 +0.8**
PB06 **IPOC Station P 33.58 156** P **P** **20 44 27.0 +0.5**
PB06 IAmb IAmb 20 44 28.7
comp=Z,12nm,0.7s
PTLB **Pontes e Lacer 33.63 134** *eP* **P** **20 44 26.5 -0.4**
LVC **Limon Verde 33.76 155** P **P** **20 44 29.4 +1.0**
LVC IAmb IAmb 20 44 31.9
comp=Z,22nm,1.1s
LVC **Limon Verde 33.76 155** *eP* **P** **20 44 28.9 +0.5**
M60A **Port Jervis 33.89 12** P 20 44 29.9
baz=196
KSPA **Keystone Colle 33.90 10** P **P** **20 44 30.6 +1.7**
KSPA IAmb IAmb 20 44 31.0
comp=Z,17nm,0.9s
M59A **Waymart 33.94 11** P 20 44 30.7
baz=194,SNR=5.2
ANMO **Albuquerque 33.99 325** P **P** **20 44 31.3 +1.2**
ANMO PcP **PcP** **20 47 08.9 +0.8**
ANMO **Albuquerque 33.99 325** P 20 44 31.4
baz=136
PB15 **IPOC Station P 34.07 157** P **P** **20 44 32.2 +1.3**
PB15 IAmb IAmb 20 44 33.4
comp=Z,29nm,1.5s
L57A **Andrews Acres 34.15 9** P 20 44 31.9
baz=192
L56A **Greenwood 34.19 8** P **P** **20 44 31.3 -0.2**
L58A **Harry Jones Me 34.36 10** P 20 44 34.1
baz=193
L40A **Anamosa 34.42 350** P **P** **20 44 32.6 -0.9**
BINY **Binghamton 34.48 10** P 20 44 35.0
baz=193
BINY **Binghamton 34.48 10** P **P** **20 44 34.4 +0.3**
BINY IAmb IAmb 20 44 57.5
comp=Z,27nm,1.3s
T25A **Trinidad 34.53 330** P **P** **20 44 34.4 -0.4**
T25A **Trinidad 34.53 330** P 20 44 38.4
baz=141
L60A **Shokan 34.61 12** P 20 44 36.5
baz=196
N33A **J Bar K, Exete 34.72 341** P **P** **20 44 35.9 -0.3**
K56A **Middlesex 34.77 8** P 20 44 37.3
baz=191
K57A **Scipio Center 34.92 9** P 20 44 38.2
baz=192
TUC **Tucson 34.93 317** P 20 44 40.6
baz=127
TUC **Tucson 34.93 317** P **P** **20 44 39.7 +1.6**
TUC IAmb IAmb 20 44 41.6
comp=Z,16nm,1.1s
L61A **Hillsdale 1, H 34.95 13** P 20 44 39.3
baz=197
PB14 **IPOC Station P 35.01 159** P **P** **20 44 40.0 +0.9**
PB14 IAmb IAmb 20 44 41.3
comp=Z,23nm,1.3s
JFWS **Jewell Farm 35.09 351** P 20 44 38.2
baz=168
K58A **Earlville 35.09 10** P 20 44 40.1
baz=193
K59A **Cooperstown 35.24 11** P 20 44 41.7
baz=195
J56A **Wolcott 35.40 8** P 20 44 41.7
baz=191
J56A **Wolcott 35.40 8** P **P** **20 44 42.0 +0.1**
J56A IAmb IAmb 20 44 43.1
comp=Z,16nm,0.9s
I51A **Listowel 35.52 3** P 20 44 42.9
baz=184
SDCO **Great Sand Dun 35.55 329** P **P** **20 44 44.1 +0.5**
SDCO **Great Sand Dun 35.55 329** P 20 44 44.4
baz=140,SNR=10
X18A **Snowflake 35.79 321** P **P** **20 44 47.6 +2.0**
X18A IAmb IAmb 20 44 49.2
comp=Z,22nm,0.9s
GO02 **Mina Guanaco 35.80 158** P **P** **20 44 46.5 +0.6**
GO02 IAmb IAmb 20 44 48.3
comp=Z,45nm,1.6s
J60A **Lant Hill Farm 35.98 12** P 20 44 48.5
baz=197
W18A **Petrified Fore 36.04 322** P 20 44 50.7
baz=132,SNR=5.9
214A **Organ Pipe Nat 36.12 315** P **P** **20 44 50.5 +2.2**
214A IAmb IAmb 20 44 51.8
comp=Z,11nm,0.8s
214A **Organ Pipe Nat 36.12 315** P 20 44 51.0
baz=124,SNR=9.0
I57A **Carthage 36.23 9** P 20 44 49.2
baz=193
S22A **4UR Ranch, Cme 36.24 328** P 20 44 50.8
baz=138,SNR=6.5
J61A **Chester 36.27 13** P 20 44 50.6
baz=198
I59A **Olmsteadville 36.42 12** P 20 44 51.4
baz=196,SNR=6.7
I60A **Shoreham 36.58 12** P 20 44 53.3
baz=197,SNR=6.0
SADO **Sadowa 36.61 5** P **P** **20 44 51.5 -0.8**
comp=Z,3.6nm,0.9s,baz=236,slow=15,SNR=3.3
X16A **Lo Mia Camp, P 36.66 319** P **P** **20 44 54.7 +1.6**
X16A IAmb IAmb 20 44 56.6
comp=Z,20nm,0.8s
TMAB **Tom-Au,PA,Br 36.76 105** *eP* **P** **20 44 54.7 +0.8**
MVCO **Mesa Verde 36.76 326** P 20 44 56.4
baz=136,SNR=6.0
MVCO **Mesa Verde 36.76 326** P **P** **20 44 55.3 +1.3**
MVCO IAmb IAmb 20 44 57.1
comp=Z,13nm,0.8s
H57A **Richville 36.78 10** P 20 44 54.2
baz=193
I61A **Oroboro, Fairl 36.91 14** P 20 44 56.2
baz=199
LONY **Lake Ozonia 37.08 10** P 20 44 56.8
baz=194
ISCO **Idaho Springs 37.20 331** P 20 44 59.4
baz=142
ISCO **Idaho Springs 37.20 331** P **P** **20 44 59.4 +1.6**
ISCO PcP **PcP** **20 47 18.6 +1.0**
ECSD **EROS Data Cent 37.22 344** P 20 44 55.5
baz=158
ECSD **EROS Data Cent 37.22 344** P **P** **20 44 56.5 -1.0**
ECSD PcP **PcP** **20 47 17.5 +0.3**
113A **Mohawk Valley, 37.24 315** P **P** **20 44 58.3 +0.5**
H59A **Cadyville 37.27 11** P 20 44 58.1
baz=196
WUAZ **Wupatki 37.32 321** P **P** **20 44 60.0 +1.4**
WUAZ IAmb IAmb 20 45 02.2
comp=Z,26nm,1.0s
WUAZ **Wupatki 37.32 321** P 20 45 01.3
baz=130,SNR=9.7
G54A **Lake Saint Pet 37.34 6** P 20 44 58.6

baz=189
G57A Newington 37.48 10 P 20 44 60.0
baz=194,SNR=5.1
AC02 Maricunga 37.49 159 P P 20 45 01.5 +1.0
AC02 IAmb IAmb 20 45 03.5
comp=Z,21nm,1.2s
SPX San Pedro Mart 37.54 312 P P 20 45 02.3 +1.5
H61A Lyndonville 37.54 14 P 20 45 01.3
baz=199
PV18 Skein Mesa, Pa 37.73 326 P P 20 45 02.7 +0.6
PV18 IAmb IAmb 20 45 05.5
comp=Z,16nm,0.8s
SPMN Marine on St. 37.76 349 P 20 45 00.6
baz=165,SNR=5.5
ALGO Algonquin Park 37.89 6 P 20 45 02.6
baz=189
G60A Masonville 37.98 13 P 20 45 04.1
baz=198
G61A St-Isidore-de- 38.34 14 P 20 45 08.4
baz=199
PDMCI Parker Dam,Lak 38.37 317 P 20 45 10.1
baz=126,SNR=11
G62A West of Eustis 38.52 15 P 20 45 10.1
baz=201
TRQ Mont Tremblant 38.63 10 P P 20 45 09.4 0.0
G63A Kingsbury 38.66 16 P 20 45 11.2
baz=202
O20A White River Ci 38.76 329 P 20 45 11.9
baz=138
E56A St. Veronique 38.87 9 P 20 45 11.5
baz=193
PKME Peaks-Kenny Pk 38.89 16 P P 20 45 12.3 +0.8
PKME IAmb IAmb 20 45 20.5
comp=Z,51nm,1.6s
F60A Warwick 38.90 13 P 20 45 12.1
baz=198
BC3 Big Chuckawall 38.91 315 P 20 45 14.7
baz=123
E58A La Victoria 39.01 11 P 20 45 12.7
baz=196
D55A Sainte-Anne-du 39.27 9 P 20 45 14.5
baz=192,SNR=6.9
ARAG Araguaiana, MT 39.30 127 eP P 20 45 14.2 -1.1
E60A Ste Agathe de 39.39 13 P 20 45 16.3
baz=199,SNR=5.2
D56A ZEC Mazanza, M 39.40 9 P 20 45 15.4
baz=194
AQDB Aquidauana 39.44 137 eP P 20 45 15.9 -0.6
MTPU Mount Pierson 39.45 323 P P 20 45 18.6 +1.8
PFO Pinyon Flats O 39.59 314 P P 20 45 19.7 +1.9
PFO IAmb IAmb 20 45 21.5
comp=Z,17nm,0.8s
PFO Pinyon Flats O 39.59 314 P 20 45 20.3
baz=122,SNR=8.5
GMRC Granite Mounta 39.68 317 P 20 45 20.8
baz=124,SNR=7.1
F64A Sherman 39.70 17 P P 20 45 19.6 +1.3
F64A Sherman 39.70 17 P 20 45 19.4
baz=204
D58A Chemin du LacG 39.78 11 P 20 45 19.4
baz=196,SNR=5.5
LATQ La Tuque 40.08 11 P P 20 45 21.8 +0.4
LATQ La Tuque 40.08 11 P 20 45 22.0
baz=196,SNR=6.1
MURC Murrieta 40.11 314 P 20 45 24.6
baz=121
HEC Hector,Ludlow 40.16 316 P 20 45 25.4
baz=124
PEXB Peixe 40.32 120 eP P 20 45 23.4 -0.5
SHPR Sheep Range 40.34 319 P P 20 45 25.1 +1.1
D61A St Aubert, Com 40.46 14 P 20 45 26.2
baz=200
CO03 El Pedregal 40.70 163 P P 20 45 27.3 +0.5
CO03 IAmb IAmb 20 45 58.4
comp=Z,25nm,1.5s
CO02 Combarbal 40.95 164 P P 20 45 29.8 +0.9
CO02 IAmb IAmb 20 45 30.7
comp=Z,25nm,0.8s
LSQQ Lebel-sur-Quev 41.07 6 P 20 45 28.7
baz=190
DUG Dugway, Tooele 41.26 325 P P 20 45 32.6 +1.1
DUG PcP PcP 20 47 31.3 +1.1
DUG Dugway, Tooele 41.26 325 P 20 45 33.6
baz=133
TPNV Topopah Spring 41.31 319 P P 20 45 33.6 +1.7
TPNV IAmb IAmb 20 45 36.0
comp=Z,37nm,1.1s
TPNV Topopah Spring 41.31 319 P 20 45 35.0
baz=126,SNR=25
AGMN Agassiz Nation 41.32 347 P 20 45 30.1
baz=161,SNR=6.9
EDW2 Edwards Air Fo 41.34 315 P 20 45 34.4
baz=122,SNR=6.2
SPR3 Spring Creek 3 41.35 323 P P 20 45 33.9 +1.3
SPR3 IAmb IAmb 20 45 35.2
comp=Z,13nm,0.8s
SPR3 PcP PcP 20 47 31.9 +1.1
BW06 Boulder Array 41.38 331 P 20 45 34.0
baz=139
PD31 Pinedale Array 41.38 331 P P 20 45 33.0 +0.5
PD31 PcP PcP 20 47 30.7 0.0
PDAR Pinedale Array 41.38 331 P P 20 45 31.9 -0.7
comp=Z,0.5nm,0.5s,baz=132,slow=10,SNR=7.7
PDAR PcP PcP 20 47 30.9 +0.3
comp=Z,3.2nm,0.9s,baz=140,slow=4.8,SNR=11
FURC Furnace Creek, 41.43 318 P 20 45 35.3
baz=124,SNR=15
HWUT Hardware Ranch 41.55 328 P P 20 45 34.1 +0.2
HWUT PcP PcP 20 47 32.0 +0.8
BATG Bathurst New B 41.65 18 P P 20 45 35.1 +0.7
MATQ Matagami 41.70 6 P 20 45 33.7
baz=189,SNR=5.7
R11A Troy Canyon, C 41.72 321 P 20 45 37.6
baz=128,SNR=20
R11A Troy Canyon, C 41.72 321 P P 20 45 37.5 +2.2
SPUT South Promonto 41.82 327 P P 20 45 36.7 +0.7
BGU Big Grassy Mou 41.87 326 P P 20 45 37.3 +0.7
ZON Zonda 41.97 161 P P 20 45 37.9 +0.7
ZON IAmb IAmb 20 45 39.3
comp=Z,23nm,1.4s
ARVC Arvin 42.05 315 P 20 45 40.6
baz=121
GRAC Grapevine Rang 42.07 318 P 20 45 40.6
baz=124,SNR=14
ISA Isabella, Lake 42.09 316 P P 20 45 39.4 +1.2
ISA Isabella, Lake 42.09 316 P 20 45 40.6
baz=122,SNR=7.6
AHID Auburn Hatcher 42.15 329 P P 20 45 38.7 -0.1
CWC Cottonwood Cre 42.23 317 P 20 45 41.9
baz=123
CHGQ Chibougamau 42.25 9 P 20 45 38.6
baz=193
HVU Hansel Valley 42.32 327 P P 20 45 40.8 +0.6
BDFB Brasilia 42.32 124 P P 20 45 39.6 -0.8
comp=Z,7.5nm,0.8s,baz=280,slow=10,SNR=8.6
BDFB Brasilia 42.32 124 P P 20 45 39.6 -0.8
REDW Red Top Meadow 42.46 330 P P 20 45 41.6 +0.3
REDW IAmb IAmb 20 45 44.1
comp=Z,20nm,1.2s
VA03 San Esteban 42.55 164 P P 20 45 43.0 +1.0
VA03 IAmb IAmb 20 46 04.8
comp=Z,30nm,1.4s
VES Vestal, Richgr 42.60 316 P 20 45 44.9
baz=122,SNR=9.7
PKM Mcpherson Peak 42.63 314 P 20 45 44.6
baz=120
CPUP Villa Florida 42.67 144 P P 20 45 41.5 -1.5
comp=Z,1.9nm,0.7s,baz=346,slow=9.6,SNR=6.1
CPUP PcP PcP 20 47 34.9 0.0
comp=Z,4.2nm,0.9s,baz=334,slow=4.2,SNR=5.1
CPUP Villa Florida 42.67 144 P P 20 45 42.7 -0.2
CPUP PcP PcP 20 47 35.4 +0.5
MT02 Curacav 42.86 165 P P 20 45 44.5 +0.1
MT02 IAmb IAmb 20 46 13.2
comp=Z,61nm,1.6s
SMMC Simmler 42.97 314 P 20 45 48.2
baz=120
ELK Elko 43.01 324 P P 20 45 46.9 +1.0
ELK PcP PcP 20 47 37.3 +1.2
RLMT Red Lodge 43.04 333 P 20 45 45.8
baz=141
ULM Lac du Bonnet 43.18 348 P P 20 45 44.6 -2.1
comp=Z,28nm,0.9s,baz=162,slow=7.7,SNR=46
ULM PcP PcP 20 47 36.1 0.0
comp=Z,5.1nm,0.7s,baz=162,slow=4.2,SNR=5.5
ULM Lac du Bonnet 43.18 348 P P 20 45 44.7 -2.0
ULM IAmb IAmb 20 45 46.4
comp=Z,37nm,1.0s
PCMB Pacaembu 43.28 134 eP P 20 45 47.8 -0.2
PAGB Antelope Grade 43.36 315 P P 20 45 50.0 +1.4
PAGB IAmb IAmb 20 45 53.1
comp=Z,34nm,0.9s
NV11 Mina Array Sit 43.40 319 P P 20 45 50.7 +1.8
NV11 IAmb IAmb 20 45 52.5
comp=Z,37nm,1.0s
SDBA SAO DESIDERIO 43.41 118 eP P 20 45 48.4 -0.8
NVAR Mina Array Bea 43.49 319 P P 20 45 52.1 +2.3
comp=Z,14nm,0.7s,baz=133,slow=7.0,SNR=56
NVAR PcP PcP 20 47 39.0 +1.3
comp=Z,3.1nm,0.7s,baz=135,slow=3.9,SNR=5.5
NVAR Mina Array Bea 43.49 319 P P 20 45 51.3 +1.6
MDPB Devils Postpil 43.55 318 P P 20 45 51.9 +1.5
MDPB IAmb IAmb 20 45 53.7
comp=Z,17nm,0.9s
YERR Yerington 44.41 319 P P 20 45 58.5 +1.4
YERR IAmb IAmb 20 46 00.3
comp=Z,28nm,1.1s
HLID Hailey 44.42 328 P 20 45 58.0
baz=133,SNR=8.6
HLID Hailey 44.42 328 P P 20 45 57.4 +0.3
BOZ Bozeman (W) 44.49 332 P P 20 45 57.8 +0.2
BOZ Bozeman (W) 44.49 332 P 20 45 58.0
baz=138,SNR=13
PNTR Pine Nut 44.70 319 P P 20 46 00.4 +0.9
PNTR IAmb IAmb 20 46 06.4
comp=Z,19nm,1.0s
JANB Januaria 45.13 121 eP P 20 46 02.4 -0.6
BEKR Beckworth 45.62 320 P P 20 46 08.0 +1.2
BEKR IAmb IAmb 20 46 09.6
comp=Z,21nm,1.1s
BI02 San Fabin de 46.07 166 P P 20 46 10.5 +0.4
BI02 IAmb IAmb 20 46 16.2
comp=Z,19nm,1.4s
ITAB Concordia 46.47 140 eP P 20 46 13.0 -0.3
MSO Missoula 46.48 331 P P 20 46 13.3 0.0
MSO Missoula 46.48 331 P 20 46 14.4
baz=136,SNR=6.0
O03E Paynes Creek 46.78 319 P 20 46 17.3
baz=122,SNR=5.7
O02D Mt. Diablo Mer 47.36 319 P 20 46 21.1
baz=121
I07A Izee 47.56 325 P P 20 46 21.9 +0.1
M04C Macdoel 47.61 321 P 20 46 23.5
baz=124,SNR=12
CPSB Cacapava Do Su 47.98 144 eP P 20 46 24.4 -0.7
M02C Callahan 48.04 320 P 20 46 25.1
baz=122
L04D Klamath Falls 48.14 321 P 20 46 27.4
baz=124,SNR=13
KHMM Horse Mountain 48.33 319 P P 20 46 29.3 +1.4
NBTA Tacaratu-PE 48.34 110 eP P 20 46 27.5 -0.7
J04D Umpqua Nationa 48.59 322 P 20 46 31.3
baz=124,SNR=8.0
GDU01 Guandu, BA 48.66 116 eP P 20 46 29.8 -0.9
FFC Flin Flon 48.71 346 P P 20 46 30.0 -0.4
FFC IAmb IAmb 20 46 30.8
comp=Z,14nm,0.8s
I05D Terrebonne, OR 48.77 324 P 20 46 33.1
baz=126
NEW Newport 49.02 331 P 20 46 33.2
baz=133
I04A Tendick Farm, 49.09 323 P 20 46 34.1
baz=124,SNR=7.9
K02D Willamette Mer 49.25 321 P 20 46 35.7
baz=122
NBIT Itapeh - BA 49.29 118 eP P 20 46 35.3 -0.1
G05D Wamic, OR 49.29 325 P 20 46 37.3
baz=127,SNR=8.1
SJMB Sao Joao De Ma 49.49 123 eP P 20 46 36.8 -0.1
I03D Drain, OR 49.60 322 P 20 46 38.0
baz=124
J01E Myrtle Point 49.66 321 P 20 46 39.2
baz=122
H04D Lebanon 49.69 324 P 20 46 38.5
baz=125
F05D White Salmon 49.76 326 P 20 46 40.7
baz=127
BSFB Barra de Sao F 49.84 123 eP P 20 46 39.0 -0.5
LL04 Puerto Octay 49.91 169 P P 20 46 39.6 -0.1
LL04 IAmb IAmb 20 46 42.4
comp=Z,8.7nm,0.8s
PLCA Paso Flores 50.12 167 P P 20 46 41.4 0.0
comp=Z,12nm,0.7s,baz=343,slow=8.6,SNR=45
PLCA Paso Flores 50.12 167 P P 20 46 41.6 +0.2
PLCA IAmb IAmb 20 46 42.4
comp=Z,18nm,0.9s
PLCA Paso Flores 50.12 167 eP P 20 46 41.5 +0.2
I02D Swisshome 50.12 322 P 20 46 43.0
baz=123
NBAN Anadia - AL 50.19 110 eP P 20 46 41.2 -1.1
G03D McMinnville, O 50.39 324 P 20 46 44.6
baz=125
RIB01 Linhares ES 50.44 123 eP P 20 46 43.8 -0.3
LON Longmire 50.47 326 P P 20 46 44.8 +0.8
ALF01 Guarapari-ES 50.81 125 eP P 20 46 46.6 -0.2
FCC Fort Churchill 51.10 353 P P 20 46 47.5 -0.9
FCC IAmb IAmb 20 46 48.4
comp=Z,13nm,0.9s
LL01 San Ignacio de 51.34 170 P P 20 46 50.0 -0.4
LL01 IAmb IAmb 20 46 50.9
comp=Z,10nm,0.8s
D03D Eldon 51.64 327 P 20 46 53.5
baz=126,SNR=5.2
LL02 Futaleuf 52.23 169 P P 20 46 57.0 0.0
YKA Yellowknife Ar 58.75 344 P P 20 47 42.9 -0.8
comp=Z,6.2nm,0.8s,baz=139,slow=7.1,SNR=92
YKA PcP PcP 20 48 33.8 +0.5
comp=Z,2.2nm,0.8s,baz=144,slow=4.5,SNR=7.2
SFJD Kangerlussuaq 62.78 14 P P 20 48 09.0 -2.1
comp=Z,9.7nm,0.9s,baz=172,slow=4.7,SNR=5.0
MACI Morro de la Ar 65.84 63 P P 20 48 33.2 +1.1
C36M Paulatuk 66.48 345 P 20 48 34.3
baz=135
RES Resolute Bay 66.76 357 P P 20 48 35.9 -1.0
comp=Z,4.6nm,0.8s,baz=180,slow=10.0,SNR=19
RES Resolute Bay 66.76 357 P P 20 48 36.2 -0.8
RES IAmb IAmb 20 48 37.0
comp=Z,7.0nm,0.9s
ICESG Greenland Ices 67.11 16 i P P 20 48 38.0 -1.7
ICESG IAmb IAmb 20 48 39.4
comp=Z,19nm,0.9s
CTGM Chitina Glacie 67.65 333 P P 20 48 44.2 +1.2
CTGM IAmb IAmb 20 48 45.8
comp=Z,8.4nm,0.9s
CTG Chitina Glacier 67.65 333 P 20 48 44.7
baz=115
DAWY Dawson 68.23 337 P P 20 48 47.0 +0.5
DAWY IAmb IAmb 20 48 49.0
comp=Z,14nm,1.6s
CRQE Cirque 68.35 333 P 20 48 48.7
baz=113
EPYK Eagle Plains 68.39 340 P P 20 48 48.3 +0.8
EPYK IAmb IAmb 20 48 48.9
comp=Z,10.0nm,0.9s
EPYK Eagle Plains 68.39 340 P 20 48 48.2
baz=121,SNR=6.2
INK Inuvik 68.43 342 P P 20 48 47.9 +0.3
comp=Z,14nm,1.0s,baz=103,slow=6.7,SNR=32
INK Inuvik 68.43 342 P P 20 48 47.7 +0.1
INK Inuvik 68.43 342 P 20 48 48.2
baz=125,SNR=16
MCARA McCarthy VSAT 68.57 334 P 20 48 51.0
baz=114
KAIM Kayak Island 68.64 332 P 20 48 51.3
baz=112
BCAR Beaver Creek A 68.74 335 P P 20 48 50.8 +1.1
L27K Beaver Creek, 68.75 335 P P 20 48 50.7 +0.9
L27K Beaver Creek, 68.75 335 P 20 48 51.4
baz=115,SNR=20
GLB Gilahina Butte 68.94 333 P P 20 48 52.6 +1.6
BMRM Bremner River 69.11 333 P 20 48 53.4
baz=112,SNR=7.4
EGAK Eagle 69.24 337 P P 20 48 53.3 +0.6
EGAK IAmb IAmb 20 48 55.2
comp=Z,13nm,1.1s
EGAK Eagle 69.24 337 P 20 48 53.8
baz=116,SNR=8.2
K27K Chicken 69.27 336 P 20 48 54.5
baz=115
N25K Chitina, Valde 69.35 333 P 20 48 55.4
baz=112,SNR=9.9
EYAK Cordova Ski Ar 69.49 332 P P 20 48 55.4 +1.1
baz=111
EYAK Cordova Ski Ar 69.49 332 P 20 48 55.8
baz=111
MENT Mentasta 69.49 335 P P 20 48 54.8 +0.4
MENT IAmb IAmb 20 48 56.6
comp=Z,9.9nm,0.8s
SUMG Summit 69.74 13 i P P 20 48 55.2 -1.0
SUMG IAmb IAmb 20 48 56.3
comp=Z,15nm,0.9s
SUMG Summit 69.74 13 P P 20 48 55.0 -1.2
KLU Klutina 69.90 333 P 20 48 58.3
baz=111,SNR=9.9
DOT Dot Lake 69.91 336 P P 20 48 57.7 +0.8
SCRK Sand Creek 70.01 336 P P 20 48 58.6 +0.9
SCRK IAmb IAmb 20 49 00.1
comp=Z,12nm,0.9s
SCRK Sand Creek 70.01 336 P 20 48 59.1
baz=113,SNR=9.7
GLI Glacier Island 70.22 332 P 20 48 59.5
baz=110
M24K Tolsona, Glenn 70.23 334 P 20 49 00.5
baz=111
PAX Paxson 70.24 335 P 20 48 59.8
baz=112,SNR=7.5
PWL Port Wells 70.79 332 P P 20 49 03.0 +0.7
KNK Knik Glacier 71.02 333 P 20 49 04.6
baz=108
WAT6 Susitna Watana 71.08 334 P 20 49 05.3
baz=109,SNR=26
SEW Seward 71.09 331 P 20 49 05.0
baz=107
SML Sawmill 71.09 333 P 20 49 04.9
baz=109,SNR=10.0
PRP Porcupine Dome 71.22 337 P 20 49 05.8
baz=112
NEEM North Greenlan 71.26 7 i P P 20 49 04.2 -1.1
NEEM IAmb IAmb 20 49 05.4
comp=Z,9.0nm,0.8s
GHO Glory Hole Cre 71.34 333 P P 20 49 06.7 +0.9
HDA Harding Lake 71.38 336 P 20 49 06.7
baz=111,SNR=32
HDA P 20 49 06.7
baz=111,SNR=32
PMR Palmer 71.38 333 P 20 49 06.3
baz=108
IL31 71.48 336 P P 20 49 06.9 +0.5
ILAR Eielson Array 71.48 336 P P 20 49 07.0 +0.6
comp=Z,16nm,0.9s,baz=112,slow=4.4,SNR=74
RC01 Rabbit Creek A 71.51 332 P P 20 49 07.5 +0.8
RC01 Rabbit Creek A 71.51 332 P 20 49 07.7
baz=107,SNR=6.3
WAT2 Susitna Watana 71.57 334 P 20 49 08.1
baz=109
BRSE Bradley Lake S 71.61 330 P 20 49 08.4
baz=106
BMAR Burnt Mountain 71.63 339 P P 20 49 08.5 +1.1
POKR Poker Plat Res 71.82 336 P 20 49 09.6
baz=110
RND Reindeer 71.83 334 P P 20 49 09.7 +1.1
COLA College 71.90 336 P P 20 49 09.5 +0.6
MCK McKinley 71.97 335 P 20 49 10.3
baz=109,SNR=20
KDAK Kodiak Island 72.04 328 P 20 49 11.1
baz=103
SUA Susitna One 72.09 332 P P 20 49 11.1 +0.8
SUA Susitna One 72.09 332 P 20 49 11.4
baz=106,SNR=13
CUT Chulitna 72.14 333 P 20 49 11.3
baz=107,SNR=7.3
OHAK Old Harbor 72.28 328 P 20 49 12.2
baz=103
NEA2 Nenana 72.30 336 P 20 49 12.0
baz=109,SNR=19
BWN Browne 72.33 335 P P 20 49 12.2 +0.7
TRF Thorofare Moun 72.46 334 P 20 49 13.1
baz=107,SNR=9.9
SKT Skwentna 72.59 333 P 20 49 13.8
baz=106,SNR=14
I23K Minto, Yukon-K 72.60 336 P P 20 49 13.9 +0.8
I23K Minto, Yukon-K 72.60 336 P 20 49 14.2
baz=109,SNR=18
SPCR Spurr Chakacha 72.69 332 P 20 49 14.5
baz=105,SNR=5.8
RSO Redoubt South 72.77 331 P P 20 49 15.3 +0.8
BPAW Bear Paw Mtn. 72.95 335 P 20 49 15.9
baz=107,SNR=25
MORF Marmelete 72.96 54 eP P 20 49 16.1 +0.2
MORF IAmb IAmb 20 49 17.2
comp=Z,77nm,1.6s
MORF Marmelete 72.96 54 eP P 20 49 17.1 +1.2
comp=Z,64nm,1.4s
PSBE So Bento 72.96 51 eP P 20 49 16.2 +0.3
comp=Z,99nm,1.9s
MLY Manley 73.12 336 P 20 49 17.0
baz=107,SNR=38
PPLA Purkeypile 73.13 334 P 20 49 17.1
baz=105,SNR=12
PMTG Montargil 73.38 52 eP P 20 49 17.9 -0.4
CHUM Lake Minchumin 73.45 334 P 20 49 18.5
baz=106
PCVE Castro Verde 73.46 53 eP P 20 49 19.5 +0.7
comp=Z,41nm,1.7s
EVO Evora 73.52 52 eP P 20 49 19.5 +0.4
comp=Z,40nm,1.8s
COLD Coldfoot 73.59 338 P P 20 49 20.7 +1.8
COLD Coldfoot 73.59 338 P 20 49 20.7
baz=108,SNR=19
TOLK Toolik Lake Re 73.83 340 P 20 49 21.3
baz=110,SNR=11
POLO Lamas de Olo 73.83 49 eP P 20 49 21.2 +0.2
MTE Manteigas 73.97 50 eP P 20 49 21.5 -0.3
comp=Z,42nm,1.7s
PBAR Barrancos 74.27 53 eP P 20 49 23.9 +0.4
MVO Moncorvo 74.40 50 eP P 20 49 24.6 +0.3
IMAR Indian Mountai 74.59 336 P P 20 49 25.3 +0.5
TTA Tatalina 74.84 333 P P 20 49 26.6 +0.2
TTA Tatalina 74.84 333 P 20 49 26.6
baz=102,SNR=16
DAG Danmarks Havn 76.39 12 i P P 20 49 33.3 -1.7
DAG IAmb IAmb 20 49 34.4
comp=Z,3.9nm,0.9s
PAB San Pablo 76.40 51 P P 20 49 36.5 +0.6
PAB IAmb IAmb 20 49 59.5
comp=Z,18nm,1.4s
ESDC Sonseca Array 76.70 51 P P 20 49 37.7 +0.1
comp=Z,5.5nm,0.9s,baz=279,slow=5.3,SNR=31
ESBB Sonseca Array 76.70 51 P P 20 49 37.6 +0.1
ESBB IAmb IAmb 20 49 39.0
comp=Z,7.9nm,1.1s
A21K Barrow 76.91 342 P 20 49 38.9
baz=103,SNR=6.7
KOWA Kowa 77.78 77 P P 20 49 44.8 +0.8
DBIC Dimbokro 77.79 85 P P 20 49 44.1 +0.1
comp=Z,9.1nm,0.9s,baz=235,slow=4.9,SNR=6.2
DBIC Dimbokro 77.79 85 P P 20 49 44.3 +0.3
DBIC IAmb IAmb 20 49 45.4
comp=Z,15nm,1.1s
RDOG Red Dog Mine 78.51 338 P P 20 49 47.8 +0.8
RDOG Red Dog Mine 78.51 338 P 20 49 47.9
baz=97
ANM Nome 79.18 334 P P 20 49 51.9 +1.2
ANM IAmb IAmb 20 49 53.1
comp=Z,18nm,1.0s
ANM Nome 79.18 334 P 20 49 52.4
baz=94,SNR=12
TNA Tin City 80.31 335 P 20 49 58.2
baz=92
GAMB Gambell 81.94 333 P 20 50 07.1
baz=88
DOU Dourbes 82.49 40 dP P 20 50 08.2 -0.5
MEM Membach 83.36 40 dP P 20 50 13.1 0.0
BTNL Ternell 83.44 40 dP P 20 50 12.9 -0.7
TOA0 Torodi Ar. Sit 83.44 78 P P 20 50 14.3 0.0
TORD Torodi Ar. Bea 83.44 78 P P 20 50 13.8 -0.5
comp=Z,5.6nm,0.9s,baz=264,slow=4.3,SNR=26
TORD PKKPbc PKKPbc 21 08 33.2 +0.1
comp=Z,0.2nm,0.7s,baz=74,slow=3.9,SNR=4.8
TORD LR LR 21 27 14.8
comp=Z,147nm,20.3s,baz=15,slow=36
TORD Torodi Ar. Bea 83.44 78 P P 20 50 14.1 -0.3
WLF Walferdange 83.53 41 bP P 20 50 14.1 0.0
comp=Z,6.5nm,1.0s
WLF Walferdange 83.53 41 eP P 20 50 13.6 -0.5
comp=Z,6.4nm,0.9s,baz=279,slow=5.1
AHRW Bad Neuenahr-A 84.04 40 eP P 20 50 16.4 -0.3
comp=Z,7.6nm,0.9s,baz=279,slow=5.1
BUG Bochum--Univer 84.08 39 eP P 20 50 16.0 -0.8

comp=Z,4.7nm,0.8s,baz=279,slow=5.1
IBBN Ibbenburen 84.29 38 *e*P **P 20 50 17.1 -0.8**
comp=Z,5.3nm,0.8s,baz=279,slow=5.1
ECH Echery 84.33 42 P **P 20 50 17.8 -0.4**
ECH IAmb IAmb 20 50 18.8
comp=Z,14nm,1.4s
KASTN Kahler Asten 84.82 39 *e*P **P 20 50 18.9 -1.8**
comp=Z,3.0nm,1.0s,baz=279,slow=5.1
TNS Taunus Mts 84.95 40 *e*P **P 20 50 20.8 -0.6**
comp=Z,6.6nm,1.1s,baz=279,slow=5.1
BFO Black Forest 85.09 42 P **P 20 50 21.6 -0.5**
BFO IAmb IAmb 20 50 21.7
comp=Z,6.2nm,1.1s
BFO Black Forest 85.09 42 *e*P **P 20 50 21.0 -1.2**
comp=Z,4.6nm,1.0s,baz=279,slow=5.1
NOA NORSAR Array B 85.12 29 P **P 20 50 21.7 -0.3**
comp=Z,6.2nm,0.9s,baz=277,slow=4.8,SNR=12
NOA LR LR 21 26 17.2
comp=Z,30nm,20.0s,baz=295,slow=34
MILB Miltenberg 85.54 40 *e*P **P 20 50 23.7 -0.6**
comp=Z,14nm,0.8s,baz=279,slow=5.1
STU Stuttgart 85.61 42 P **P 20 50 24.0 -0.7**
STU Stuttgart 85.61 42 *e*P **P 20 50 24.0 -0.7**
comp=Z,12nm,1.0s,baz=279,slow=5.1
BSEG Bad Segeberg 85.62 36 *e*P **P 20 50 24.0 -0.5**
comp=Z,3.6nm,0.8s,baz=279,slow=5.1
TAM Tamanrasset 85.90 68 P **P 20 50 27.1 +0.3**
TAM IAmb IAmb 20 50 28.9
comp=Z,7.3nm,1.0s
CLZ Clausthal 85.95 38 *e*P **P 20 50 24.8 -1.5**
comp=Z,7.8nm,1.0s,baz=279,slow=5.1
TUE Stuetta 86.01 44 P **P 20 50 26.9 -0.1**
TUE IAmb IAmb 20 50 27.6
comp=Z,9.1nm,0.7s
ASSE Asse, Remlinge 86.09 38 *e*P **P 20 50 26.8 -0.1**
comp=Z,7.2nm,0.9s,baz=279,slow=5.1
DAVA Damuels 86.26 43 *e*P **P 20 50 28.2 0.0**
comp=Z,12nm,1.0s,SNR=4.4
UBR Ueberruh 86.36 43 *e*P **P 20 50 28.0 -0.5**
comp=Z,3.0nm,0.8s,baz=279,slow=5.1
FLTG Flechtingen 86.40 38 *e*P **P 20 50 27.6 -0.8**
comp=Z,6.7nm,0.9s,baz=279,slow=5.1
GRFO Grafenberg 86.80 40 P **P 20 50 30.2 -0.3**
GRFO IAmb IAmb 20 50 31.4
comp=Z,9.3nm,0.9s
GRF Grafenberg Arr 86.80 40 *e*P **P 20 50 30.2 -0.3**
comp=Z,7.0nm,0.8s,baz=279,slow=5.1
RETA Reute 86.83 43 *e*P **P 20 50 30.5 -0.3**
comp=Z,6.5nm,1.2s,SNR=4.5
FETA Feichten 86.88 43 *e*P **P 20 50 30.9 -0.2**
comp=Z,6.9nm,0.9s,SNR=8.2
MOX Moxa 86.90 39 *e*P **P 20 50 30.5 -0.5**
comp=Z,3.7nm,0.9s,baz=279,slow=5.1
NEUB Neuenburg 86.91 39 *e*P **P 20 50 30.6 -0.4**
comp=Z,13nm,0.8s,baz=279,slow=5.1
VSL Villasalto 86.99 51 P **P 20 50 32.1 +0.4**
MOTA Moosalm 87.08 43 *e*P **P 20 50 31.6 -0.6**
comp=Z,4.3nm,1.0s,SNR=4.8
SQTA Sankt Quirin 87.17 43 *i* P **P 20 50 32.1 -0.4**
comp=Z,7.9nm,1.2s
MANZ Manzenberg 87.32 40 *e*P **P 20 50 32.7 -0.4**
comp=Z,3.7nm,0.8s,baz=279,slow=5.1
WERD Werda 87.36 40 *e*P **P 20 50 32.8 -0.5**
comp=Z,4.4nm,0.8s,baz=279,slow=5.1
GUNZ Gunzen 87.39 40 *e*P **P 20 50 33.2 -0.3**
comp=Z,4.3nm,1.0s,baz=279,slow=5.1
WATA Walderalm 87.40 43 *i* P **P 20 50 33.1 -0.5**
comp=Z,5.5nm,1.4s
ROTZ Rotzenmuhle 87.42 40 *e*P **P 20 50 33.3 -0.2**
comp=Z,2.3nm,0.8s,baz=279,slow=5.1
WERN Wernitzgruen 87.44 40 *e*P **P 20 50 33.6 -0.1**
comp=Z,6.3nm,1.0s,baz=279,slow=5.1
WTTA Wattenberg 87.45 43 *i* P **P 20 50 33.5 -0.5**
comp=Z,4.8nm,1.1s
TANN Tannenbergstha 87.47 40 *e*P **P 20 50 33.5 -0.3**
comp=Z,7.1nm,0.9s,baz=279,slow=5.1
NKC Novy Kostel 87.49 40 *e*P **P 20 50 34.0 +0.1**
CLL Collm 87.65 39⇑ *i*P **P 20 50 34.3 -0.3**
comp=Z,12nm,0.9s
CLL *i* pP **sP 20 50 40.6 -0.4**
CLL Collm 87.65 39 P **P 20 50 34.2 -0.4**
CLL Collm 87.65 39 *e*P **P 20 50 34.1 -0.5**
comp=Z,8.1nm,0.8s,baz=279,slow=5.1
FBE Freiberg 87.94 39 *e*P **P 20 50 35.9 0.0**
comp=Z,8.5nm,1.0s,baz=279,slow=5.1
WET Wettzell 87.95 41 *e*P **P 20 50 36.0 -0.1**
comp=Z,9.0nm,1.0s,baz=279,slow=5.1
ABTA Abfaltersbach 88.13 43 *i* P **P 20 50 36.8 -0.3**
comp=Z,7.9nm,0.9s,SNR=7.5
RJOB Jochberg 88.14 42 *e*P **P 20 50 36.9 -0.2**
comp=Z,17nm,0.9s,baz=279,slow=5.1
BRG Berggiesshubel 88.31 39 *e*P **P 20 50 37.7 -0.1**
BRG Amp 20 50 38.9
comp=Z,8.5nm,1.0s
BRG Berggiesshubel 88.31 39 *e*P **P 20 50 37.5 -0.3**
comp=Z,4.3nm,0.8s,baz=279,slow=5.1
KHC Kasperske Hory 88.41 41 *e*P **P 20 50 38.1 -0.2**
KHC *e*pP **sP 20 50 44.7 0.0**
KHC Kasperske Hory 88.41 41 P **P 20 50 37.6 -0.7**
KHC IAmb IAmb 20 50 39.4
comp=Z,9.6nm,1.2s
GEC2 GERESS Array S 88.54 41 P **P 20 50 38.6 -0.5**
GEC2 IAmb IAmb 20 50 39.7
comp=Z,9.2nm,1.2s
GEC2 GERESS Array S 88.54 41 *e*P **P 20 50 38.5 -0.5**
comp=Z,4.9nm,1.0s,baz=279,slow=5.1
GERES GERESS Array B 88.54 41 P **P 20 50 38.6 -0.5**
comp=Z,2.5nm,0.8s,baz=273,slow=2.3,SNR=20
GERES GERESS Array B 88.54 41 P **P 20 50 38.2 -0.8**
PBCC Pribram 88.57 40 *e*P **P 20 50 39.1 +0.1**
KBA Koelnbreinsper 88.63 43 *e*P **P 20 50 40.1 +0.5**
comp=Z,7.5nm,1.1s
MURB Monte Urbino 88.74 47 P **P 20 50 38.7 -1.3**
MURB IAmb IAmb 20 50 52.9
comp=Z,12nm,1.3s
PRU Pruhonice 88.86 40 *e*P **P 20 50 40.3 0.0**
ARCES ARCESS Array B 88.86 19 P **P 20 50 38.7 -1.3**
comp=Z,5.3nm,0.9s,baz=316,slow=3.3,SNR=7.1
MYKA Terra Mystica 88.91 43 *e*P **P 20 50 40.5 -0.3**
comp=Z,6.9nm,0.9s
CKRC Cesky Krumlov 88.94 41 *e*P **P 20 50 40.6 -0.2**
MOA Molln 89.10 42 *i* P **P 20 50 41.1 -0.5**
comp=Z,4.7nm,1.0s
OBKA Obir 89.55 43 *i* P **P 20 50 44.2 +0.4**
comp=Z,5.1nm,1.2s
OSTC Ostas 89.79 39 *e*P **P 20 50 44.7 -0.1**
OSTC *ex* x 20 50 51.0
SOKA Soboth 89.84 43 *e*P **P 20 50 44.4 -0.7**
comp=Z,3.1nm,0.7s,SNR=5.8
BILL Bilibino 89.88 339 P **P 20 50 44.9 +0.2**
DPC Dobruska-Polom 89.91 39 *e*P **P 20 50 45.5 +0.2**
DPC *e*pP **pwP 20 50 52.2 0.0**
BELA Belgrano 2 90.04 171 P **P 20 50 44.8 -0.4**
BELA IAmb IAmb 20 50 45.9
comp=Z,14nm,1.2s
CONA Conrad Observa 90.13 42 *e*P **P 20 50 46.4 0.0**
comp=Z,6.4nm,0.9s,SNR=7.5
KRUC Moravsky 90.23 40 *e*P **P 20 50 46.3 -0.5**
VRAC Vranov 90.31 40 *e*P **P 20 50 46.9 -0.3**
MORC Moravsky Berou 90.80 40 *e*P **P 20 50 49.3 -0.2**
JAVC Velka Javorina 91.10 40 *e*P **P 20 50 51.7 +0.8**
FINES FINESS Array B 91.97 27 P **P 20 50 53.9 -0.7**
comp=Z,3.5nm,1.0s,baz=300,slow=8.1,SNR=5.0
FINES LR LR 21 27 08.6
comp=Z,40nm,21.6s,baz=262,slow=32
VNA3 Neumayer Olymp 92.55 162 P **P 20 50 57.0 0.0**
VNA1 Neumayer--Stat 92.82 161 P **P 20 50 58.8 +0.6**
VNA2 Neumayer--Watz 93.17 161 P **P 20 50 59.3 -0.5**
DIVS Divibare 93.84 45 P **P 20 51 03.8 +0.1**
DIVS IAmb IAmb 20 51 05.0
comp=Z,5.3nm,1.1s
SNAA Sanae 94.78 162 P **P 20 51 06.6 -0.7**
TIXI Tiksi 97.50 350 P **P 20 51 18.9 -0.7**
TIXI IAmb IAmb 20 51 20.2
comp=Z,4.9nm,0.9s
AKASG Malin Array Be 97.63 36 LR LR 21 33 32.1
comp=Z,57nm,19.9s,baz=35,slow=34
KLMR Klimovskoe 98.03 25 *e*P **P 20 51 18.5 -3.8**
KLMR AMP 20 51 36.2
comp=Z,25nm,1.5s
QSPA South Pole Qui 98.20 180 P **P 20 51 22.8 -0.2**
ZALV Zalesovo Beam 117.29 8 PKP **PKPdf 20 56 30.7 -0.7**
comp=Z,1.1nm,0.7s,baz=315,slow=2.0,SNR=5.2
MJAR Matsushiro Arr 120.79 321 PKP **PKPdf 20 56 38.2 -0.6**
comp=Z,2.2nm,0.7s,baz=100,slow=1.3,SNR=12
GEYT Alibeck 121.74 35 PKP **PKPdf 20 56 39.8 -0.8**
comp=Z,6.2nm,0.7s,baz=233,slow=8.4,SNR=4.8
SONM Songino Array 123.53 352 PKP **PKPdf 20 56 43.4 -0.5**
comp=Z,6.0nm,0.8s,baz=346,slow=1.1,SNR=36
MKAR Makanchi Array 123.78 12 PKP **PKPdf 20 56 43.1 -1.2**
comp=Z,0.9nm,0.7s,baz=359,slow=2.4,SNR=12
MKAR Makanchi Array 123.78 12 **PKPdf 20 56 42.7 -1.5**
KSRS Korea Array 125.94 329 PKP **PKPdf 20 56 48.7 +0.1**
comp=Z,13nm,0.8s,baz=62,slow=1.4,SNR=52
WMQ Urumqi 127.59 8 *e*P **PKiKP 20 56 52.5 +0.3**
HHC Hu-ho-hao-te 129.27 345 *e*P **PKPdf 20 56 55.5 +0.5**
CTA Charters Tower 130.59 251 PKP **PKPdf 20 56 58.5 +0.6**
comp=Z,2.5nm,0.7s,baz=51,slow=6.5,SNR=2.3
STKA Stephens Creek 132.06 234 PKP **PKPdf 20 57 00.2 -0.1**
comp=Z,2.6nm,0.9s,baz=93,slow=5.4,SNR=4.3
GTA Gaotai 132.53 357 PKPbc **PKPdf 20 57 01.3 0.0**
NJ2 Nanjing 134.67 333 *e*P **PKPdf 20 57 04.5 -0.8**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
WHN Wuhan 137.87 337⇑PKP **PKPdf 20 57 11.0 -0.3**
ASAR Alice Springs 141.12 242 PKhKP PKPpre 20 57 09.9
comp=Z,5.4nm,0.8s,baz=112,slow=3.5,SNR=43
WRA Warramunga Arr 141.66 248 PKhKP PKPpre 20 57 11.3
comp=Z,13nm,0.8s,baz=99,slow=2.9,SNR=49
GYA Guiyang 144.18 344⇓P PKPbc 20 57 21.3 +0.4
GYA pmax pmax
comp=Z,5.0nm,1.1s
FITZ Fitzroy Crossi 150.09 248 PKPbc **PKPbc 20 57 37.5 -0.2**
comp=Z,25nm,0.8s,baz=143,slow=2.4,SNR=34
FITZ Fitzroy Crossi 150.09 248 **PKPbc 20 57 37.8 +0.1**
CM34 Chiang Mai Arr 152.99 355 P **PKPdf 20 57 39.0 +1.8**
CM33 Chiang Mai Arr 153.04 355 P **PKPdf 20 57 38.0 +0.7**
CM33 P **pPKPdf 20 57 43.0 +0.9**
CMMT Chiang Mai 153.05 355 P **PKPbc 20 57 43.0 -1.6**
comp=Z,4.7nm,1.1s
CM35 Chiang Mai Arr 153.16 355 P **PKPdf 20 57 37.0 -0.5**
CM32 Chiang Mai Arr 153.22 355 P **PKPbc 20 57 44.0 -1.0**
CM36 Chiang Mai Arr 153.33 355 P **PKPdf 20 57 39.0 +1.3**
CM31 Chiang Mai Arr 153.40 355 P **PKPbc 20 57 45.0 -0.4**
comp=Z,3μmcomp=Z,366nm,0.9s
CMAR Chiang Mai Arr 153.40 355 PKP **PKPdf 20 57 37.6 -0.2**
comp=Z,1.5nm,0.8s,baz=309,slow=1.9,SNR=19
CMAR PKPbc **sPKPdf 20 57 45.0 +0.6**
comp=Z,11nm,0.9s,baz=335,slow=3.0,SNR=53
CMAR Chiang Mai Arr 153.40 355 **PKPdf 20 57 37.9 +0.1**
CMAR PKPbc **sPKPdf 20 57 44.7 +0.4**
CM09 Chiang Mai Arr 153.41 355 P **PKPbc 20 57 45.0 -0.4**
comp=Z,115nmcomp=Z,16nm,1.0s
CM01 Chiang Mai Arr 153.44 355 P **PKPbc 20 57 45.0 -0.5**
comp=Z,113nmcomp=Z,16nm,1.0s
CM13 Chiang Mai Arr 153.44 355 P **PKPdf 20 57 39.2 +1.4**
CM04 Chiang Mai Arr 153.46 355 P **PKPbc 20 57 45.0 -0.5**
comp=Z,135nmcomp=Z,20nm,0.9s
CM05 Chiang Mai Arr 153.46 355 P **PKPdf 20 57 39.0 +1.1**
comp=Z,108nmcomp=Z,14nm,1.0s
MHMT Maesarieng 153.75 357 P **PKPbc 20 57 45.4 -0.7**
comp=Z,33nm,0.8s
UMPA Umpang Tak 155.64 355 P **PKPab 20 58 09.0 +2.2**

*IDC **25** 20:43:00.3±3.6, 5.°65S×146.°67E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.5/30, mbtmp3.7/5, ML2.9/2, Error ellipse: s-maj=60.5km s-min=37.0km az=60.0*
ISC 25 20:43:04.0±2.8, 5.°8S±0.°2×146.°5E±0.°3, h10km, n6, σ0s85/8, mb3.6/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.61**	**170**	Pn	**Pn**	**Pn**	**20 43 59.9**	**-0.1**
	7.5nm,0.3s,baz=348,slow=9.3,SNR=22							
PMG				Pg	**Pb**	**Pb**	**20 44 09.1**	**+1.1**
	14nm,0.3s,baz=355,slow=10.0,SNR=12							
PMG				Sn	**Sn**	**Sn**	**20 44 41.5**	**-1.3**
	4.3nm,0.3s,baz=295,slow=15,SNR=3.4							
PMG				Lg	Lg		20 44 54.6	
	8.8nm,0.3s,baz=52,slow=20,SNR=3.4							
WRA	**Warramunga Arr**	**18.35**	**219**	P	**Pn**	**Pn**	**20 47 18.4**	**-0.4**
	0.2nm,0.3s,baz=41,slow=11,SNR=8.6							
ASAR	**Alice Springs**	**21.49**	**213**	P	**P**	**P**	**20 47 53.3**	**+0.3**
	0.6nm,0.5s,baz=46,slow=8.6,SNR=15							
FITZ	**Fitzroy Crossi**	**23.74**	**237**	P	**P**	**P**	**20 48 17.0**	**+0.4**
	1.3nm,0.7s,baz=66,slow=11,SNR=3.6							
STKA	**Stephens Creek**	**26.32**	**189**	P	**P**	**P**	**20 48 39.7**	**-0.3**
	1.1nm,0.6s,baz=17,slow=11,SNR=3.9							
TORD	**Torodi Ar. Bea**	**80.14**	**280**	PKP	**PKPab**	**PKPab**	**21 02 39.8**	**-0.5**
	0.1nm,0.4s,baz=68,slow=2.5,SNR=1.2							

IDC 25 21:01:47.8±2.0, 28.°14N×87.°35E, h0km, mb3.7/3, mb1 3.5/5, mb1mx3.2/70, mbtmp3.4/5, ML3.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/56, Error ellipse: s-maj=42.9km s-min=38.4km az=81.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.35**	**130**	Pn	Pn	Pn	**21 08 16.2**	**-0.5**
	0.1nm,0.3s,baz=320,slow=11,SNR=1.7							
MKAR	**Makanchi Array**	**19.16**	**355**	P	**P**	**P**	**21 08 52.7**	**-1.0**
	0.4nm,0.3s,baz=176,slow=11,SNR=20							
KURBB	**Kurchatov Arra**	**23.36**	**350**	P	**P**	**P**	**21 09 37.9**	**-0.8**
	2.3nm,0.2s,baz=171,slow=9.7,SNR=4.2							
ZALV	**Zalesovo Beam**	**26.24**	**0**	P	**P**	**P**	**21 10 04.2**	**-1.0**
	1.1nm,0.6s,baz=186,slow=10,SNR=5.7							
SONM	**Songino Array**	**26.34**	**34**	P		**P**	**21 10 06.5**	**+0.1**
	0.7nm,0.7s,baz=238,slow=8.5,SNR=4.3							
TLY	**Talaya**	**27.94**	**26**	LR	LR		21 22 32.7	
	comp=Z,62nm,20.4s,baz=262,slow=39							
FINES	**FINESS Array B**	**51.09**	**328**	P	**P**	**P**	**21 13 32.5**	**-0.1**
	1.2nm,0.9s,baz=113,slow=2.9,SNR=4.1							
ARCES	**ARCESS Array B**	**53.63**	**338**	P	**P**	**P**	**21 13 51.5**	**+0.1**
	6.4nm,1.0s,baz=102,slow=7.5,SNR=2.3							
WRA	**Warramunga Arr**	**67.54**	**129**	P	**P**	**P**	**21 15 26.8**	**-0.2**
	0.8nm,0.8s,baz=322,slow=6.5,SNR=4.1							
ASAR	**Alice Springs**	**69.80**	**132**	P	**P**	**P**	**21 15 41.0**	**-0.1**
	0.9nm,0.6s,baz=317,slow=6.1,SNR=8.9							
ILAR	**Eielson Array**	**79.59**	**20**	P	**P**	**P**	**21 16 38.8**	**+1.6**
	0.2nm,0.6s,baz=313,slow=4.5,SNR=2.8							

*BJI **25** 21:07:14.9±0.0, 27.°60N×85.°59E, h15km, mB4.5/23, mb4.4/45, ML4.2/1, Ms3.9/18, Ms7 3.6/18*
*IDC **25** 21:07:16.5±0.4, 27.°70N×85.°78E, h0km, mb4.4/51, mb1 4.4/54, mb1mx4.4/72, mbtmp4.4/54, ML4.1/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/48, Error ellipse: s-maj=11.7km s-min=9.0km az=24.0*
*MOS **25** 21:07:17.3±0.9, 27.°80N×85.°72E, h16km, mb4.9/23, Error ellipse: s-maj=6.8km s-min=3.6km az=116.7*
*DMN **25** 21:07:18.4±0.1, 27.°78N×85.°79E, h10km, Ml5.1/4, Error ellipse: s-maj=3.2km s-min=1.4km az=5.0*
*NEIC **25** 21:07:20±1.4, 27.°77N±0.°06×85.°81E±0.°04, h24km±4km, mb4.6/117, Error ellipse: s-maj=9.6km s-min=4.3km az=192.0*
*NDI **25** 21:07:20.2±2.5, 27.°75N×85.°79E, h10km, ML4.5, mb4.6(NEIC)*
ISC 25 21:07:17.7±0.6, 27.°75N±0.°03×85.°76E±0.°02, h8km±3km, n420, σ1s29/450, mb4.7/144, 25C-17D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.20**	**34**	*e*Pg	**Pg**	**Pg**	**21 07 22.9**	**+1.0**
GUN				*e*Sg	**Sg**	**Sg**	**21 07 25.7**	**+0.9**
PKI	**Pulchoki**	**0.35**	**241**	*e*Pg	**Pb**	**Pb**	**21 07 26.5**	**0.0**
PKI				*e*Sg		**Sb**	**21 07 32.4**	**+0.1**
PKIN	**Phulchoki**	**0.36**	**242**	*e*Pg	**Pb**	**Pb**	**21 07 26.9**	**+0.3**
PKIN				*e*Sg		**Sb**	**21 07 32.5**	**0.0**
JIRN	**Jiri**	**0.39**	**102**	*e*Pg	**Pb**	**Pb**	**21 07 26.3**	**-0.9**
JIRN				*e*Sg		**Sg**	**21 07 31.4**	**+0.6**
KKN	**Kakani**	**0.42**	**276**	*e*Pg	**Pb**	**Pb**	**21 07 27.5**	**-0.1**
KKN				*e*Sg		**Sb**	**21 07 34.1**	**-0.2**
DMN	**Daman**	**0.59**	**257**	*e*Pg	**Pb**	**Pb**	**21 07 30.8**	**+0.3**
DMN				*e*Sg		**Sb**	**21 07 39.7**	**+0.5**
GKN	**Gorkha**	**1.02**	**285**	*e*Pg	**Pb**	**Pb**	**21 07 38.2**	**+0.4**
GKN				*e*Sg		**Sg**	**21 07 51.2**	**+0.5**
RAMN	**Ramite**	**1.09**	**136**	*e*Pg	**Pb**	**Pb**	**21 07 38.9**	**-0.1**
ODAN	**Odare**	**1.70**	**121**	*e*Pg	**Pg**	**Pg**	**21 07 50.6**	**+0.2**
ODAN				*e*Sg		**Sg**	**21 08 12.9**	**+0.4**
	7μm,0.6s							
TAPN	**Taplejung**	**1.78**	**102**	*e*Pg	**Pg**	**Pg**	**21 07 51.3**	**-0.6**
TAPN				*e*Sg		**Sg**	**21 08 14.0**	**-1.0**
	2μm,0.3s							
DANN	**Dangsing**	**1.86**	**289**	*e*Pg	**Pb**	**Pb**	**21 07 52.3**	**+0.1**
DANN				*e*Sg		**Sg**	**21 08 18.0**	**+0.3**
	2μm,0.3s							
KOLN	**Koldanda**	**1.91**	**271**	*e*Pg	**Pb**	**Pb**	**21 07 53.5**	**+0.5**
KOLN				*e*Sg		**Sg**	**21 08 19.4**	**+0.2**
	4μm,0.3s							
PYUN	**Piuthan**	**2.47**	**279**	*e*Pn	**Pn**	**Pn**	**21 08 00.5**	**+2.0**
PYUN	**Piuthan**	**2.47**	**279**	*e*Pg	**Pg**	**Pg**	**21 08 04.1**	**-1.1**
BOK	**Bokaro**	**3.94**	**178**	*e*P	**Pn**	**Pn**	**21 08 20.7**	**+2.2**
BOK				*e*S		**Sn**	**21 09 04.7**	**-0.2**
LSA	**Lhasa**	**5.12**	**66**	Pn	**Pn**	**Pn**	**21 08 38.0**	**+2.8**
LSA				Sn		**Sn**	**21 09 35.0**	**+0.2**
LSA				smax	smax			
	comp=N,270nm,1.0s							
LSA				smax	smax			
	comp=E,180nm,0.9s							
LSA	**Lhasa**	**5.12**	**66**	P	**Pn**	**Pn**	**21 08 34.4**	**-0.8**
LSA	**Lhasa**	**5.12**	**66**	Pn	**Pn**	**Pn**	**21 08 34.4**	**-0.8**
SHL	**Shillong**	**5.90**	**110**	P	**Pn**	**Pn**	**21 08 45.5**	**-0.1**
SHL	**Shillong**	**5.90**	**110**	*e*P	**Pn**	**Pn**	**21 08 46.6**	**+1.0**
SHL				*e*S		**Sn**	**21 09 51.6**	**-1.9**
SHL	**Shillong**	**5.90**	**110**	Pn	**Pn**	**Pn**	**21 08 45.5**	**-0.1**
ZIRO	**ZIRO**	**7.18**	**90**	*e*P	**Pn**	**Pn**	**21 09 06.2**	**+2.9**
DDI	**Dehra Dun**	**7.21**	**293**	*e*P	**Pn**	**Pn**	**21 09 06.2**	**+2.6**
DDI				*e*S		**Sn**	**21 10 24.2**	**-1.5**
DDI				IAML			21 10 29.3	
	comp=N,1μm,0.4s							
DDI				IAML			21 10 30.8	
	comp=E,672nm,0.4s							
SMLA	**Simla**	**8.21**	**296**	*e*P	**Pn**	**Pn**	**21 09 18.2**	**+1.0**
SMLA				*e*S		**Sn**	**21 10 46.5**	**-3.8**
SMLA				IAML			21 10 49.6	
	comp=E,315nm,0.7s							
SMLA				IAML			21 10 53.2	
	comp=N,248nm,0.5s							
BHK	**Bhakra**	**8.91**	**296**	*ex*	x		21 09 25.4	
LKP	**Lekhapani**	**8.97**	**90**	*e*P	**Pn**	**Pn**	**21 09 27.8**	**+0.2**
LKP				*e*S		**Sn**	**21 11 01.6**	**-7.3**
LKP				IAML			21 11 11.2	
	comp=N,88nm,0.6s							
DHRM	**DHARAMSHALA**	**9.35**	**301**	*e*P	**Pn**	**Pn**	**21 09 32.9**	**-0.1**
DHRM				*e*S		**Sn**	**21 11 13.3**	**-5.1**
DHRM				IAML			21 11 17.3	
	comp=N,212nm,0.6s							
HYB	**Hyderabad**	**12.24**	**214**	*i* P		**Pn**	**21 10 10.0**	**-2.5**
HYB				*e*S		**Sn**	**21 12 31.5**	**+2.3**
NIL	**Nilore**	**12.26**	**302**	P		**Pn**	**21 10 10.9**	**-1.8**
NIL	**Nilore**	**12.26**	**302**	Pn		**Pn**	**21 10 10.9**	**-1.8**
KSH	**Kashi**	**14.28**	**328**	P		**Pn**	**21 10 36.8**	**-3.5**
KSH				sP		P	21 10 42.3	-5.4
KSH				S		**Sn**	**21 13 12.3**	**-6.7**
KSH				pmax	pmax			
	comp=N,8.0nm,0.6s							
KSH				pmax	pmax			
	comp=N,98nm,5.1s							
KSH				LR	LR			
	comp=N,190nm,6.4s							
KSH				LR	LR			
	comp=N,180nm,9.4s							
KSH				LR	LR			
	comp=N,170nm,7.1s							
MHMT	**Maesarieng**	**14.70**	**128**	P	P		21 11 01.6	+9.2
CHTO	**Chiang Mai**	**15.02**	**123**	P	**Pn**		**21 10 51.4**	**+1.0**
CHTO	**Chiang Mai**	**15.02**	**123**		**Pn**		**21 10 51.4**	**+1.0**
CM33	**Chiang Mai Arr**	**15.02**	**123**	P	**P**		**21 10 55.0**	**-0.9**
CMMT	**Chiang Mai**	**15.02**	**123**	P	**P**		**21 10 55.4**	**-0.6**
CM32	**Chiang Mai Arr**	**15.05**	**124**	P	**P**		**21 10 55.0**	**-1.2**
CM34	**Chiang Mai Arr**	**15.15**	**123**	P	**P**		**21 10 57.0**	**-0.3**
CM15	**Chiang Mai Arr**	**15.23**	**125**	P	**P**		**21 10 59.1**	**+0.8**
CM13	**Chiang Mai Arr**	**15.24**	**125**	P	**Pn**		**21 10 55.0**	**+1.7**
CM31	**Chiang Mai Arr**	**15.24**	**125**	P	**P**		**21 10 58.0**	**-0.4**
CM31	**Chiang Mai Arr**	**15.24**	**125**	Pn	**Pn**		**21 10 53.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**15.24**	**125**	Pn	**Pn**		**21 10 54.2**	**+0.9**
	comp=N,0.2nm,0.3s,baz=303,slow=13,SNR=19							
CMAR				LR	LR		21 18 18.9	
	comp=N,45nm,19.3s,baz=10,slow=44							
CMAR	**Chiang Mai Arr**	**15.24**	**125**	*i* P	**Pn**		**21 10 54.7**	**+1.3**
CMAR				pmax	pmax			
	comp=Z,2.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**15.24**	**125**		**Pn**		**21 10 53.8**	**+0.4**
CM35	**Chiang Mai Arr**	**15.26**	**123**	P	**P**		**21 10 58.0**	**-0.6**
CM02	**Chiang Mai Arr**	**15.26**	**125**	P	**Pn**		**21 10 56.0**	**+2.4**
CM01	**Chiang Mai Arr**	**15.28**	**125**	P	**P**		**21 11 01.0**	**+2.2**
CM05	**Chiang Mai Arr**	**15.28**	**125**	P	**Pn**		**21 10 55.0**	**+1.1**
CM09	**Chiang Mai Arr**	**15.29**	**124**	P	**P**		**21 11 05.3**	**+6.5**
CM04	**Chiang Mai Arr**	**15.30**	**125**	P	**P**		**21 10 59.9**	**+0.8**
CM36	**Chiang Mai Arr**	**15.31**	**124**	P	**P**		**21 11 00.2**	**+1.0**
KMI	**Kunming**	**15.44**	**96**⇓	P	**Pn**		**21 10 58.3**	**+2.2**
KMI				sP	sP		21 11 05.5	+0.8
KMI				pmax	pmax			
	comp=Z,3.0nm,1.1s							
KMI				pmax	pmax			
	comp=Z,89nm,5.4s							
KMI				LR	LR			
	comp=Z,120nm,11.0s							
KMI				LR	LR			
	comp=Z,200nm,11.0s							
KMI				LR	LR			
	comp=Z,140nm,18.1s							
KBL	**Kabul**	**15.82**	**299**	P	**Pn**	**Pn**	**21 10 58.0**	**-3.1**
KBL				pmax	pmax			
	comp=Z,15nm,0.9s							
KBL	**Kabul**	**15.82**	**299**		**Pn**	**Pn**	**21 10 58.0**	**-3.1**
PRZ	**Przheval'sk**	**15.88**	**340**	P	**Pn**	**Pn**	**21 10 59.6**	**-2.1**
PRZ				pmax	pmax			
	comp=Z,9.0nm,1.1s							
PRZ	**Przheval'sk**	**15.88**	**340**	Pn	**Pn**	**Pn**	**21 10 59.6**	**-2.1**
KDJ	**Kajisay**	**15.97**	**336**	P	**Pn**	**Pn**	**21 11 01.9**	**-1.0**
KDJ				pmax	pmax			
	comp=Z,11nm,0.7s							
KDJ	**Kajisay**	**15.97**	**336**	Pn	**Pn**	**Pn**	**21 11 01.9**	**-1.0**
WMQ	**Urumqi**	**16.12**	**5**	*e*P	**Pn**	**Pn**	**21 11 05.8**	**+1.1**
WMQ				pP	pP		21 11 09.8	-0.9
WMQ				sP	sP		21 11 14.0	+2.0
WMQ				pmax	pmax			
	comp=Z,14nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,120nm,7.7s							
WMQ				LR	LR			
	comp=Z,520nm,22.3s							
WMQ				LR	L

GTA sP sP 21 11 15.8 -0.4
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,63nm,5.5s
GTA LR LR
comp=Z,140nm,13.8s
GTA LR LR
comp=Z,170nm,13.8s
GTA LR LR
comp=Z,200nm,13.4s
BOOM Boomskoye usch 16.74 334 P **Pn 21 11 10.4 -2.4**
BOOM pmax pmax
comp=Z,7.0nm,0.7s
BOOM Boomskoye usch 16.74 334 Pn 21 11 10.3 -2.4
MDOK Medeo 16.92 338 *eP* **Pn 21 11 13.4 -1.7**
baz=338
MDOK Medeo 16.92 338 *eP* **Pn 21 11 13.4 -1.7**
GAR Garm 17.07 315 Pn 21 11 14.4 -2.5
GAR IAmb IAmb 21 11 19.7
comp=Z,66nm,1.5s
BTK Batken 17.42 319 P **Pn 21 11 17.1 -4.1**
BTK pmax pmax
comp=Z,25nm,0.7s
BTK Batken 17.42 319 Pn 21 11 17.1 -4.1
BTK IAmb IAmb 21 11 25.2
comp=Z,25nm,0.7s
LZH Lanzhou 17.45 57 *eP* **P 21 11 23.5 +0.6**
LZH pP sP 21 11 29.3 +2.4
LZH sP pP 21 11 32.5 +6.9
LZH pmax pmax
comp=Z,17nm,1.1s
AAK Ala-Archa 17.45 331 P **Pn 21 11 21.7 0.0**
comp=Z,0.4nm,0.3s,baz=153,slow=9.5,SNR=12
AAK LR LR 21 19 09.1
comp=Z,90nm,20.3s,baz=97,slow=4
AAK Ala-Archa 17.45 331*c i*P **P 21 11 23.8 +0.9**
AAK pmax pmax
comp=Z,42nm,1.7s
AAK Ala-Archa 17.45 331 Pn 21 11 21.4 -0.3
FRU1 Bishkek 17.54 332 P **Pn 21 11 21.9 -0.7**
FRU1 pmax pmax
comp=Z,8.0nm,0.8s
FRU1 Bishkek 17.54 332 Pn **Pn 21 11 21.9 -0.7**
UTHA Uthaitani 17.56 131 P **P 21 11 30.9 +6.8**
SGDS Sogindy 18.07 333 *eP* **Pn 21 11 27.9 -1.4**
baz=333
SGDS Sogindy 18.07 333 *eP* **Pn 21 11 27.8 -1.4**
TDK Taldyqorghan 18.20 343 *eP* **Pn 21 11 29.3 -1.5**
baz=343
TDK Taldyqorghan 18.20 343 *eP* **Pn 21 11 29.2 -1.5**
GYA Guiyang 18.66 89 ⇑P **Pn 21 11 37.8 +1.2**
GYA pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 19.21 353*ce*P **Pn 21 11 42.9 -0.1**
MK31 Makanchi Array 19.21 353 P **P 21 11 42.3 +0.2**
MKAR Makanchi Array 19.21 353 P **Pn 21 11 43.0 0.0**
comp=Z,1.3nm,0.3s,baz=174,slow=11,SNR=45
MKAR Makanchi Array 19.21 353 P **Pn 21 11 43.0 0.0**
MKAR Makanchi Array 19.21 353 P **P 21 11 42.3 +0.2**
IUG Iuzhnay 19.26 322 *eP* **P 21 11 41.1 -1.7**
baz=322
IUG Iuzhnay 19.26 322 *eP* **P 21 11 41.0 -1.7**
MAKZ Makanchi 19.26 352 P **P 21 11 42.1 -0.5**
MAKZ pmax pmax
comp=Z,6.0nm,0.6s
MAKZ Makanchi 19.26 352 P **P 21 11 42.1 -0.5**
CHM Chimkent 19.61 322 *eP* **P 21 11 45.2 -1.3**
baz=322
CHM Chimkent 19.61 322 *eP* **P 21 11 45.2 -1.3**
KK31 Karatay Array 19.68 325 P **P 21 11 46.7 -0.5**
KK31 pmax pmax
comp=Z,6.0nm,1.0s
KK31 Karatay Array 19.68 325 P 21 11 46.7 -0.5
KKAR Karatay Array 19.68 325 P **P 21 11 46.6 -0.7**
KKAR pmax pmax
comp=Z,6.0nm,1.0s
KKAR Karatay Array 19.68 325 P P 21 11 46.5 -0.7
KKAR Karatay Array 19.68 325 P P 21 11 46.5 -0.7
XAN Xi'an 20.82 67 P **P 21 12 00.3 +0.5**
XAN pP pP 21 12 02.3 -0.2
XAN pmax pmax
comp=Z,11nm,1.0s
XAN Xi'an 20.82 67 P **P 21 11 59.2 -0.6**
XAN pmax pmax
comp=Z,10.0nm,1.0s
XAN Xi'an 20.82 67 P P 21 11 59.2 -0.6
ENH Enshi 20.90 77 P **P 21 12 00.0 -0.7**
ENH IAmb IAmb 21 12 03.8
comp=Z,31nm,1.4s
PALK Pallekele 20.92 194 P **P 21 12 02.3 +1.4**
comp=Z,3.7nm,0.9s,baz=183,slow=23,SNR=2.0
HRA Herat 21.18 294 P **P 21 12 02.4 -1.4**
DGZ Jazzator, Alta 21.96 3⇑*eP* **P 21 12 12.5 +0.5**
DGZ pmax pmax
comp=Z,9.0nm,0.7s
UBPT Khong Chiam 22.10 120 P **P 21 12 13.4 -0.2**
UBPT IAmb IAmb 21 12 30.7
comp=Z,19nm,1.4s
KURBB Kurchatov Arra 23.50 348 P **P 21 12 29.1 +1.2**
comp=Z,3.7nm,0.5s,baz=169,slow=10,SNR=26
KURK Kurchatov 23.57 349 P **P 21 12 29.1 +0.4**
KURK Kurchatov 23.57 349 P **P 21 12 29.1 +0.4**
QIZ Qiongzhong 23.72 106 P **P 21 12 27.3 -3.1**
QIZ pmax pmax
comp=Z,28nm,1.7s
WSAR Wadi Sarin 24.87 266 P **P 21 12 42.5 +1.5**
comp=Z,5.0nm,0.6s,baz=120,slow=6.6,SNR=5.8
HHC Hu-ho-hao-te 24.90 52 *eP* **P 21 12 40.0 -1.3**
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,68nm,6.1s
GEYT Alibeck 25.26 301 P **P 21 12 46.5 +2.0**
comp=Z,4.1nm,0.6s,baz=116,slow=13,SNR=9.8
GEYT Alibeck 25.26 301 P **P 21 12 45.5 +1.0**
GYA0B ALIBECK ARRAY 25.26 301 P **P 21 12 44.0 -0.5**
GYA0B IAmb IAmb 21 12 48.1
comp=Z,6.6nm,0.7s
SONM Songino Array 25.71 33 P **P 21 12 49.8 +1.3**
comp=Z,7.7nm,0.6s,baz=221,slow=9.2,SNR=41
SONM Songino Array 25.71 33 P **P 21 12 48.6 +0.1**
SONM pmax pmax
comp=Z,9.0nm,0.7s
SONM Songino Array 25.71 33 P **P 21 12 48.6 +0.1**
SONM IAmb IAmb 21 12 56.9
comp=Z,9.3nm,0.7s
ULN Ulaanbaatar 26.05 34*c i*P **P 21 12 52.4 +0.7**
ULN pmax pmax
comp=Z,18nm,1.0s
ULN Ulaanbaatar 26.05 34 P **P 21 12 52.1 +0.4**
ULN IAmb IAmb 21 12 59.8
comp=Z,16nm,0.7s
ZAA0 Zalesovo Array 26.19 359 P **P 21 12 52.4 -0.3**
ZAA0 IAmb IAmb 21 12 55.0
comp=Z,11nm,1.2s
ZALV Zalesovo Beam 26.19 359 P **P 21 12 53.4 +0.7**
comp=Z,3.3nm,0.4s,baz=184,slow=9.2,SNR=21
ZALV Zalesovo Beam 26.19 359 *i* P **P 21 12 54.2 +1.6**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 26.19 359 P **P 21 12 52.5 -0.1**
ZAK Zakamensk 26.25 26 *eP* **P 21 12 54.4 +1.0**
ZAK pmax pmax
comp=Z,4.0nm,1.5s
KULM Kulim 26.45 145 P **P 21 12 55.3 0.0**
KULM IAmb IAmb 21 13 02.8
comp=Z,7.9nm,0.7s
UOSS Minazif 26.60 271 P **P 21 12 57.2 +0.5**
UOSS IAmb IAmb 21 13 13.2
comp=Z,33nm,1.4s
TLY Talaya 27.43 25 P **P 21 13 05.9 +2.0**
comp=Z,1.0nm,0.5s,baz=236,slow=19,SNR=2.0
BVAR Borovoye Array 27.71 340 P **P 21 13 07.0 +0.6**
comp=Z,1.3nm,0.4s,baz=154,slow=14,SNR=11
BVAR Borovoye Array 27.71 340 P **P 21 13 07.0 +0.6**
NJ2 Nanjing 28.95 73 *eP* **P 21 13 17.3 -0.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
ABKAR Akbulak array 29.24 324 P **P 21 13 20.3 +0.3**
ABKAR IAmb IAmb 21 13 22.0
comp=Z,7.4nm,0.6s
ABKAR Akbulak array 29.24 324 P **P 21 13 19.8 -0.2**
AKTO Aktyubinsk 30.94 325 P **P 21 13 36.0 +0.9**
comp=Z,2.9nm,0.4s,baz=127,slow=9.5,SNR=13

AKTO LR LR 21 27 34.4
comp=Z,91nm,18.6s,baz=131,slow=39
SOCY Socotra 33.50 249 P **P 21 13 57.0 -1.0**
SOCY IAmb IAmb 21 13 58.0
comp=Z,4.9nm,1.0s
AKT Akhty 33.88 304 *eP* **P 21 14 02.7 +1.6**
AKT *e* 21 15 16.2
AKT pmax pmax
comp=Z,10.0nm,0.7s
SVE Sverdlovsk 34.11 335 *eP* **P 21 14 04.1 +1.4**
SVE pmax pmax
comp=Z,11nm,0.6s
ARU Arti 34.61 333 P **P 21 14 07.9 +0.9**
comp=Z,4.6nm,0.5s,baz=121,slow=4.5,SNR=27
ARU Arti 34.61 333*c i*P **P 21 14 07.7 +0.6**
ARU 21 15 21.3
ARU S **S 21 19 39.9 +3.4**
ARU SS **SnSn 21 21 52.4 +4.3**
ARU pmax pmax
comp=Z,11nm,0.6s
ARU Arti 34.61 333 P **P 21 14 07.2 +0.1**
GROC Groznyy 35.64 306 *eP* **P 21 14 16.5 +0.3**
GROC *e* 21 15 33.8
GROC pmax pmax
comp=Z,15nm,0.6s
GNI Garni 35.90 301 P **P 21 14 19.1 +0.5**
comp=Z,3.8nm,0.8s,baz=231,slow=7.5,SNR=3.5
GNI Garni 35.90 301⇑*eP* **P 21 14 20.6 +2.0**
GNI pmax pmax
comp=Z,7.0nm,1.0s
GNI Garni 35.90 301 P **P 21 14 18.6 -0.1**
GNI IAmb IAmb 21 14 27.2
comp=Z,4.8nm,0.8s
BOD Bodaibo 36.00 26 *eP* **P 21 14 20.0 +1.0**
BOD pmax pmax
comp=Z,7.0nm,1.6s
RAYN Ar Rayn 36.42 273 P **P 21 14 22.8 -0.3**
RAYN pmax pmax
comp=Z,11nm,1.5s
RAYN Ar Rayn 36.42 273 P **P 21 14 22.8 -0.3**
RAYN IAmb IAmb 21 14 23.9
comp=Z,11nm,1.4s
KSRS Korea Array 36.56 64 P **P 21 14 23.0 -1.1**
comp=Z,1.0nm,0.6s,baz=262,slow=8.5,SNR=6.2
ZEI Tsey 36.93 305 *eP* **P 21 14 28.3 +0.9**
ZEI pmax pmax
comp=Z,6.0nm,0.6s
NCK Nalchik 37.27 306⇓*eP* **P 21 14 31.3 +1.2**
NCK pmax pmax
comp=Z,10.0nm,0.5s
BELG Belogornoye 37.52 322 P **P 21 14 32.2 +0.2**
comp=Z,16nm,0.8s,baz=26,slow=6.9,SNR=4.5
BELG Belogornoye 37.52 322⇑*eP* **P 21 14 32.1 +0.1**
BELG pmax pmax
comp=Z,2.0nm,0.7s
KBZ Khabaz 37.82 306 P **P 21 14 34.9 +0.3**
comp=Z,2.0nm,0.8s,baz=107,slow=7.3,SNR=8.1
KBZ Khabaz 37.82 306⇓*eP* **P 21 14 35.6 +1.0**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
NEY Neytrino 37.86 306⇑*eP* **P 21 14 38.1 +2.8**
NEY pmax pmax
comp=Z,1.0nm,0.6s
KIV Kislovodsk 38.01 307 *eP* **P 21 14 37.4 +1.0**
KIV pmax pmax
comp=Z,9.0nm,0.9s
MARD Mardin 38.79 296 P **P 21 14 43.4 +0.2**
MARD IAmb IAmb 21 14 45.4
comp=Z,16nm,0.6s
JNU Nakatsue 39.04 71 P **P 21 14 45.6 +0.4**
comp=Z,5.4nm,0.8s,baz=345,slow=3.8,SNR=4.2
JNU Nakatsue 39.04 71 P **P 21 14 45.3 +0.1**
JNU IAmb IAmb 21 14 46.6
comp=Z,18nm,1.1s
KIRV Kirov 39.79 331 P **P 21 14 51.6 +0.7**
comp=Z,16nm,0.5s,baz=108,slow=1.9,SNR=11
KIRV Kirov 39.79 331*d i*P **P 21 14 51.9 +1.0**
USRK Ussuriysk Ar. 40.30 53 P **P 21 14 54.3 -1.1**
comp=Z,0.8nm,0.6s,baz=264,slow=14,SNR=2.9
VRH Novokhopyorsk 40.46 318 *eP* **P 21 14 56.3 -0.4**
VRH pmax pmax
comp=Z,30nm,0.7s
KLR Kul'dur 41.12 46 P **P 21 15 01.6 -0.5**
comp=Z,1.3nm,0.7s
KLR Kul'dur 41.12 46⇑*eP* **P 21 15 03.0 +0.9**
KLR pmax pmax
comp=Z,4.0nm,1.4s
JMN Monobe 41.49 69 P **P 21 15 06.0 +0.5**
JMN IAmb IAmb 21 15 08.0
comp=Z,9.7nm,0.8s
NRIK Noril'sk 41.64 1 P **P 21 15 07.3 +1.2**
comp=Z,18nm,0.6s,baz=171,slow=6.0,SNR=20
NRIK Noril'sk 41.64 1*c i*P **P 21 15 07.1 +1.0**
NRIK pmax pmax
comp=Z,16nm,0.6s
NRIK Noril'sk 41.64 1 P **P 21 15 06.8 +0.7**
GAZ Gaziantep 41.64 296 P **P 21 15 07.4 +0.7**
GAZ IAmb IAmb 21 15 09.0
comp=Z,11nm,1.0s
VORD Divnogorie 41.86 317 *eP* **P 21 15 07.8 -0.4**
VORD pmax pmax
comp=Z,10.0nm,0.8s
ANN Anapa 41.86 307 *eP* **P 21 15 06.4 -1.9**
ANN *e**PP **pP 21 15 09.7 -1.5**
ANN *e* 21 16 42.2
ANN *e* 21 17 02.1
ANN *e*S **S 21 21 25.5 -0.8**
ANN pmax pmax
comp=Z,32nm,0.9s
VSR Storozhevoye 42.00 317 *eP* **P 21 15 08.4 -0.9**
VSR pmax pmax
comp=Z,7.0nm,0.5s
LPSR Galich'ya Gora 42.54 319 *eP* **P 21 15 13.4 -0.3**
LPSR pmax pmax
comp=Z,30nm,0.7s
JWT Wachi 42.62 67 P **P 21 15 14.8 +0.1**
MMAI Mount Meron Ar 43.42 290 P **P 21 15 22.6 +1.4**
comp=Z,3.2nm,0.8s,baz=74,slow=16,SNR=5.3
BZK Bozkurt 44.13 303 ⇑P **P 21 15 27.6 +0.9**
ILGA Ilgaz 44.33 301 P **P 21 15 28.6 0.0**
ILGA IAmb IAmb 21 15 30.9
comp=Z,18nm,1.4s
BRTR Keskin Array B 44.40 300 P **P 21 15 29.4 +0.3**
comp=Z,1.5nm,0.7s,baz=115,slow=8.0,SNR=5.5
BRTR Keskin Array B 44.40 300 P **P 21 15 29.0 -0.1**
OBN Obninsk 44.61 322 P **P 21 15 30.7 +0.4**
comp=Z,2.2nm,0.3s,baz=21,slow=8.6,SNR=4.6
OBN Obninsk 44.61 322⇓*eP* **P 21 15 30.9 +0.5**
OBN *e**PP **pP 21 15 33.7 +0.4**
OBN *e* 21 17 15.9
OBN *e*PPP PPP 21 17 52.3
OBN pmax pmax
comp=Z,27nm,0.9s
OBN Obninsk 44.61 322 P **P 21 15 30.0 -0.4**
MJAR Matsushiro Arr 44.80 65 P **P 21 15 32.1 -0.1**
comp=Z,1.8nm,0.9s,baz=273,slow=9.1,SNR=6.5
YAK Yakutsk 44.82 28 P **P 21 15 30.8 -1.1**
comp=Z,3.3nm,0.5s,baz=157,slow=1.8,SNR=5.3
YAK Yakutsk 44.82 28⇓*i*P **P 21 15 32.3 +0.4**
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK Yakutsk 44.82 28 P **P 21 15 31.3 -0.6**
YAK IAmb IAmb 21 15 33.0
comp=Z,6.9nm,0.7s
CSS Mathiatis 44.92 293 P **P 21 15 33.1 0.0**
CSS IAmb IAmb 21 15 35.5
comp=Z,6.2nm,0.9s
KLMR Klimovskoe 45.26 330 *eP* **P 21 15 34.7 -0.7**
KLMR pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 45.26 330 *eP* **P 21 15 34.8 -0.7**
KLMR AMP 21 15 36.5
comp=Z,11nm,0.8s
LEF Lefka 45.27 293 ⇓P **P 21 15 37.5 +1.7**
ELL Elmali 47.51 296 P **P 21 15 53.9 +0.3**
ELL pmax pmax
comp=Z,130nm,0.7s
ELL Elmali 47.51 296 P **P 21 15 53.9 +0.3**
TLCR 47.98 307 ⇑P **P 21 15 57.8 +0.8**
AKASG Malin Array Be 48.07 315 P **P 21 15 57.2 -0.4**
comp=Z,2.3nm,0.4s,baz=81,slow=7.0,SNR=35
AKASG Malin Array Be 48.07 315 P **P 21 15 56.9 -0.7**
AKASG pmax pmax
comp=Z,2.0nm,1.1s
AKASG Malin Array Be 48.07 315 P **P 21 15 56.9 -0.7**

AKBB Malin Array Si 48.07 315*ce*P **P 21 15 57.2 -0.4**
AKBB pmax pmax
comp=Z,11nm,0.8s
AKBB Malin Array Si 48.07 315 P **P 21 15 57.0 -0.6**
AKBB IAmb IAmb 21 15 58.0
comp=Z,11nm,0.8s
TPGR Topolog 48.26 307 ⇑P **P 21 15 59.5 +0.2**
ERM Erimo 48.34 57 P **P 21 16 00.2 +0.3**
ERM pmax pmax
comp=Z,42nm,1.3s
ERM Erimo 48.34 57 P **P 21 16 00.2 +0.3**
SORM Soroca 48.42 311 ⇑P **P 21 16 00.1 -0.2**
TLBR Topalu 48.52 306 ⇑P **P 21 16 02.2 +0.9**
TESR Tescani 49.52 309 ⇓P **P 21 16 09.4 +0.5**
TIXI Tiksi 49.89 16 P **P 21 16 11.1 -0.2**
TIXI pmax pmax
comp=Z,6.0nm,0.6s
TIXI Tiksi 49.89 16 P **P 21 16 11.1 -0.2**
TIXI IAmb IAmb 21 16 16.5
comp=Z,6.0nm,0.6s
BIZ Bicaz 49.90 309 ⇑P **P 21 16 11.7 0.0**
MLR Muntele Rosu 50.01 307 P **P 21 16 13.9 +1.2**
comp=Z,19nm,0.7s,baz=71,slow=1.2,SNR=51
MLR Muntele Rosu 50.01 307 ⇑P **P 21 16 14.4 +1.7**
MLR Muntele Rosu 50.01 307 P **P 21 16 13.6 +0.8**
MLR pmax pmax
comp=Z,21nm,0.8s
MLR Muntele Rosu 50.01 307 P **P 21 16 13.6 +0.8**
NACGM Naroch 50.07 320 *i* P **P 21 16 12.6 -0.2**
NACGM *i* P **P 21 16 12.6 -0.2**
NACGM *i* P **P 21 16 12.6 -0.2**
NACGM *i* PcP PcP 21 16 59.6 -33
NACGM *i* PP PP 21 17 59.2 -8.5
NACGM *i* PPP PPP 21 19 21.8
NACGM *i* S **S 21 23 25.1 +1.0**
NACGM *i* PS **PKiKP 21 24 25.1 +7.0**
NACGM *i* SS **SS 21 26 56.6 -0.3**
NACGM *i* SSS SSS 21 28 57.1
NACGM *i* LQ LQ 21 33 07.6
NACGM *i* LR LR 21 36 58.6
OZUR 50.12 308 ⇓P **P 21 16 14.4 +1.0**
IDID Didziasalis 50.15 320 *eP* **P 21 16 13.6 +0.1**
IIGN Ignalina 50.45 320 *eP* **P 21 16 16.8 +1.0**
BURAR Bucovina Array 50.51 310 ⇑P **P 21 16 17.0 +0.5**
BURAR Bucovina Array 50.51 310 P **P 21 16 16.7 +0.2**
BURAR IAmb IAmb 21 16 18.0
comp=Z,6.1nm,0.8s
BUR08 Bucovina Ar. S 50.52 310 P **P 21 16 16.6 0.0**
BUR08 IAmb IAmb 21 16 17.8
comp=Z,5.5nm,0.8s
ISAL Salakas 50.53 321 *eP* **P 21 16 16.6 +0.3**
VOIR 50.64 307 ⇓P **P 21 16 17.8 +0.3**
VSU Vasula 50.67 324 *eP* **P 21 16 17.9 +0.6**
ARR Arges 50.94 307 ⇓P **P 21 16 20.4 +0.7**
ARCR ARCALIA 51.10 310 ⇓P **P 21 16 22.3 +1.5**
SANT Santorini 51.11 296 P **P 21 16 20.3 -0.8**
FIA1 FINESS Array S 51.60 328 P **P 21 16 24.2 -0.1**
FIA1 IAmb IAmb 21 16 33.5
comp=Z,21nm,1.5s
FINES FINESS Array B 51.60 328 P **P 21 16 24.4 +0.1**
comp=Z,2.9nm,0.5s,baz=108,slow=8.1,SNR=29
IDI Anoyia 51.73 294 P **P 21 16 25.5 -0.3**
comp=Z,9.0nm,0.6s,baz=40,slow=12,SNR=7.1
IDI Anoyia 51.73 294 P **P 21 16 25.5 -0.3**
PABE Paberze 51.74 320 *eP* **P 21 16 26.1 +0.6**
PABE Paberze 51.74 320 P **P 21 16 25.3 -0.2**
SUW Suwalki 52.06 318 *eP* **P 21 16 27.7 -0.2**
SUW Suwalki 52.06 318 P **P 21 16 27.5 -0.4**
SUW pmax pmax
comp=Z,19nm,0.8s
SUW Suwalki 52.06 318 P **P 21 16 27.5 -0.4**
VTS Vitosha 52.10 304 ⇑P **P 21 16 29.4 +0.9**
VTS Vitosha 52.10 304 P **P 21 16 29.3 +0.7**
VTS pmax pmax
comp=Z,9.0nm,0.9s
VTS Vitosha 52.10 304 P **P 21 16 29.3 +0.7**
VTS IAmb IAmb 21 16 30.3
comp=Z,8.7nm,0.9s
KWP Kalwaria Pacla 52.19 313 P **P 21 16 29.3 +0.4**
KWP pmax pmax
comp=Z,24nm,0.6s
KWP Kalwaria Pacla 52.19 313 P **P 21 16 29.3 +0.4**
MTSE Matsula 52.22 324 *eP* **P 21 16 26.8 -2.2**
GZR Gura Zlata 52.24 307 ⇓P **P 21 16 29.8 +0.3**
TRPA Tarpa 52.31 311 ⇑P **P 21 16 30.7 +0.9**
BATI Baumata 52.64 130 P **P 21 16 31.6 -1.1**
comp=Z,10nm,0.6s
SOEI Soe 52.72 130 P **P 21 16 32.9 -0.5**
BZS Buzias 53.04 308 ⇑P **P 21 16 35.9 +0.6**
AGGG Agios Georgios 53.18 300 P **P 21 16 35.5 -1.0**
AGG pmax pmax
comp=Z,12nm,0.8s
AGG Agios Georgios 53.18 300 P **P 21 16 35.5 -1.0**
AGG IAmb IAmb 21 16 36.2
comp=Z,12nm,0.8s
KEV Kevo 53.55 338 P **P 21 16 39.3 +0.7**
KEV pmax pmax
comp=Z,35nm,1.3s
KEV Kevo 53.55 338 P **P 21 16 39.3 +0.7**
LODK Lodwar 53.74 253 P **P 21 16 40.5 -0.4**
ITM Ithomi 53.78 297 P **P 21 16 39.5 -1.4**
MA2 Magadan 53.90 35 P **P 21 16 41.7 +0.3**
comp=Z,4.5nm,0.7s,baz=297,slow=23,SNR=2.3
ARCES ARCESS Array B 53.97 338 P **P 21 16 42.6 +0.9**
comp=Z,10.0nm,0.6s,baz=105,slow=8.3,SNR=32
ARCES ARCESS Array B 53.97 338 P **P 21 16 42.4 +0.6**
ARCES pmax pmax
comp=Z,11nm,0.8s
ARCES ARCESS Array B 53.97 338 P **P 21 16 42.4 +0.6**
PSZ Piszkesteto 54.09 311 P **P 21 16 43.5 +0.4**
PSZ pmax pmax
comp=Z,5.0nm,0.7s
PSZ Piszkesteto 54.09 311 P **P 21 16 43.5 +0.4**
PSZ IAmb IAmb 21 16 44.4
comp=Z,4.6nm,0.7s
DIVS Divibare 54.32 306 P **P 21 16 44.8 0.0**
KMBO Kilima Mbogo 54.68 247 P **P 21 16 48.5 +0.5**
comp=Z,0.9nm,0.6s,baz=41,slow=9.0,SNR=3.6
KMBO Kilima Mbogo 54.68 247 *i* P **P 21 16 49.4 +1.4**
KMBO pmax pmax
comp=Z,1.0nm,0.6s
PDG Podgorica 55.04 304 ⇓P **P 21 16 49.8 -0.2**
PDG Podgorica 55.04 304 P **P 21 16 49.4 -0.5**
PDG IAmb IAmb 21 16 50.4
comp=Z,10nm,0.9s
SEY Seymchan 55.06 31 P **P 21 16 50.2 +0.4**
comp=Z,8.0nm,0.8s,baz=241,slow=5.9,SNR=20
SEY Seymchan 55.06 31⇓*i*P **P 21 16 50.7 +0.9**
MORH Mrgy, Hungar 55.07 309 ⇑P **P 21 16 50.3 +0.2**
SRO2 Moca 55.11 311 *eP* **P 21 16 50.4 +0.1**
SRO2 Moca 55.11 311 *eP* **P 21 16 50.4 +0.1**
SRO Srobarova 55.16 311 *eP* **P 21 16 52.1 +1.4**
SRO Srobarova 55.16 311 *eP* **P 21 16 52.1 +1.4**
UPP Uppsala 55.50 325 *eP* **P 21 16 52.5 -0.5**
JAVC Velka Javorina 55.51 312 *eP* **P 21 16 54.4 +1.1**
MORC Moravsky Berou 55.54 313 *eP* **P 21 16 53.7 +0.2**
MORC Moravsky Berou 55.54 313 P **P 21 16 53.4 -0.1**
MORC pmax pmax
comp=Z,5.0nm,0.7s
MORC Moravsky Berou 55.54 313 P **P 21 16 53.4 -0.1**
MORC IAmb IAmb 21 16 54.7
comp=Z,5.0nm,0.7s
KRLC Kraliky 56.01 314 *eP* **P 21 16 57.2 +0.3**
KRLC Kraliky 56.01 314 *eP* **P 21 16 57.2 +0.3**
VRAC Vranov 56.19 313 P **P 21 16 58.6 +0.5**
comp=Z,6.1nm,0.6s,baz=90,slow=7.4,SNR=12
VRAC Vranov 56.19 313 ⇓P **P 21 16 58.8 +0.7**
VRAC Vranov 56.19 313 *eP* **P 21 16 58.4 +0.3**
KRUC Moravsky 56.34 312 *eP* **P 21 16 59.4 +0.2**
OSTC Ostas 56.34 314 *eP* **P 21 16 59.7 +0.5**
BLEU Blekinge 56.36 321 *i* P **P 21 16 59.0 -0.2**
UPC Upice 56.47 314 *eP* **P 21 17 00.7 +0.6**
UPC Upice 56.47 314 *eP* **P 21 17 00.7 +0.6**
CONA Conrad Observa 56.80 311 *i* P **P 21 17 02.8 +0.2**
comp=Z,6.5nm,0.8s
ARSA Arzberg 57.10 310 *i* P **P 21 17 04.8 +0.1**
comp=Z,4.4nm,0.7s
DEL Delary 57.44 321 *i* P **P 21 17 06.7 -0.1**
PRU Pruhonice 57.46 314 *eP* **P 21 17 07.4 +0.3**
PRU Pruhonice 57.46 314 *eP* **P 21 17 07.4 +0.3**
HFS Hagfors 57.48 326 P **P 21 17 07.1 0.0**
comp=Z,7.3nm,0.6s,baz=103,slow=6.5,SNR=19
SOKA Soboth 57.50 310 *eP* **P 21 17 08.0 +0.4**

comp=Z,6.7nm,0.6s,SNR=8.7
PETK Petropavlovsk- 57.65 43 P **P** **21 17 10.2 +1.8**
comp=Z,4.4nm,0.9s,baz=273,slow=10.0,SNR=3.3
LUNU Lund 57.71 320 *i* P **P** **21 17 09.1 +0.4**
CKRC Cesky Krumlov 57.73 312 *eP* **P** **21 17 09.5 +0.4**
BRG Berggiesshubel 57.75 315 *i* P **P** **21 17 09.8 +0.6**
BRG Amp 21 17 10.4
comp=Z,6.4nm,0.6s
PBCC Pribram 57.84 313 *eP* **P** **21 17 10.0 +0.2**
OBKA Obir 57.85 309 *i* P **P** **21 17 10.4 +0.3**
comp=Z,6.6nm,0.8s
MOA Molln 57.87 311 *i* P **P** **21 17 10.0 -0.1**
comp=Z,4.7nm,0.6s
BJUU Bjuv 57.93 321 *i* P **P** **21 17 10.3 0.0**
BORU Boraas 58.00 323 *i* P **P** **21 17 10.6 -0.1**
GEC2 GERESS Array S 58.12 312 P **P** **21 17 11.8 -0.1**
GEC2 IAmb IAmb 21 17 12.8
comp=Z,2.4nm,0.7s
GERES GERESS Array B 58.12 312 P **P** **21 17 11.9 0.0**
comp=Z,1.9nm,0.5s,baz=90,slow=7.3,SNR=17
GERES GERESS Array B 58.12 312 P **P** **21 17 12.1 +0.2**
GERES GERESS Array B 58.12 312 P **P** **21 17 12.1 +0.2**
KHC Kasperske Hory 58.17 313⇓ *i* P **P** **21 17 12.6 +0.4**
KHC pmax pmax
comp=Z,11nm,0.8s
KHC Kasperske Hory 58.17 313 *eP* **P** **21 17 12.6 +0.4**
KHC Kasperske Hory 58.17 313 P **P** **21 17 12.3 +0.1**
KHC IAmb IAmb 21 17 13.3
comp=Z,4.9nm,0.8s
CLL Collm 58.30 315 *eP* **P** **21 17 13.0 0.0**
CLL Collm 58.30 315 *eP* **P** **21 17 13.0 0.0**
NC303 NORSAR Array S 58.62 327 P **P** **21 17 14.5 -0.5**
NC303 IAmb IAmb 21 17 30.4
comp=Z,9.7nm,1.1s
NOA NORSAR Array B 58.70 327 P **P** **21 17 15.1 -0.6**
comp=Z,2.6nm,0.6s,baz=89,slow=6.9,SNR=11
NOA LR LR 21 44 05.4
comp=Z,29nm,19.3s,baz=95,slow=38
NKC Novy Kostel 58.77 314 *eP* **P** **21 17 16.6 +0.3**
NKC Novy Kostel 58.77 314 *eP* **P** **21 17 16.6 +0.3**
SPA0 Spitsbergen Ar 58.84 347 P **P** **21 17 17.2 +0.9**
ZOU Zoufplan 58.92 310 P **P** **21 17 17.1 -0.5**
STAL STALIGIAL 59.15 309 P **P** **21 17 18.5 -0.5**
NRCA Norcia 59.45 305 P **P** **21 17 20.8 -0.4**
NRCA IAmb IAmb 21 17 22.1
comp=Z,7.5nm,0.8s
WTTA Wattenberg 59.72 311 *i* P **P** **21 17 22.3 -0.8**
comp=Z,4.9nm,0.6s
FITZ Fitzroy Crossi 59.74 135 P **P** **21 17 23.3 0.0**
comp=Z,3.0nm,0.9s,baz=3.1,slow=19,SNR=3.1
FITZ Fitzroy Crossi 59.74 135 P **P** **21 17 23.1 -0.2**
WATA Walderalm 59.75 311 *i* P **P** **21 17 22.4 -0.9**
comp=Z,4.7nm,0.6s
MURB Monte Urbino 59.80 306 P **P** **21 17 24.1 +0.5**
CTI Castel Tesino 59.91 309 P **P** **21 17 24.1 -0.3**
CTI pmax pmax
comp=Z,7.0nm,0.6s
CTI Castel Tesino 59.91 309 P **P** **21 17 24.1 -0.3**
CTI IAmb IAmb 21 17 24.6
comp=Z,6.9nm,0.6s
KNRA Kununurra 60.00 131 P **P** **21 17 24.9 -0.3**
SQTA Sankt Quirin 60.01 311 *i* P **P** **21 17 24.2 -0.9**
comp=Z,7.4nm,0.5s,SNR=7.2
MOTA Moosalm 60.06 311 *eP* **P** **21 17 24.1 -1.4**
comp=Z,7.0nm,0.6s,SNR=6.9
RETA Reutte 60.27 311 *i* P **P** **21 17 26.2 -0.6**
comp=Z,5.2nm,0.6s
FETA Feichten 60.37 311 *eP* **P** **21 17 26.4 -1.1**
comp=Z,4.2nm,0.6s
SALO Salr 60.76 309 P **P** **21 17 30.2 +0.1**
DAVA Damuels 60.89 311 *i* P **P** **21 17 30.6 -0.5**
comp=Z,8.5nm,0.8s,SNR=5.4
DAVOX Davos/Dischmat 60.98 310 P **P** **21 17 30.9 -0.9**
comp=Z,4.6nm,0.6s,baz=125,slow=6.1,SNR=16
BILL Bilibino 61.05 25 *eP* **P** **21 17 31.1 -0.6**
BILL *e**PP **sP** **21 17 36.2 +0.2**
BILL *e* 21 18 14.2
BILL *e* 21 19 47.5
BILL *e*PPP PPP 21 21 12.8
BILL pmax pmax
comp=Z,7.0nm,1.8s
STU Stuttgart 61.08 313 P **P** **21 17 32.2 0.0**
STU pmax pmax
comp=Z,10.0nm,0.9s
STU Stuttgart 61.08 313 P **P** **21 17 32.2 0.0**
TUE Stuetta 61.40 310 P **P** **21 17 34.3 -0.4**
TUE IAmb IAmb 21 17 35.8
comp=Z,7.0nm,0.7s
MSSA Maissana 61.72 308 P **P** **21 17 36.1 -0.6**
BFO Black Forest 61.73 312 P **P** **21 17 36.5 -0.1**
BFO pmax pmax
comp=Z,2.0nm,0.7s
BFO Black Forest 61.73 312 P **P** **21 17 36.5 -0.1**
ECH Echery 62.52 312 P **P** **21 17 41.8 -0.1**
ECH Echery 62.52 312 P **P** **21 17 41.8 -0.1**
ECH IAmb IAmb 21 17 42.7
comp=Z,2.1nm,0.7s
SENIN Lac Senin/Sane 62.81 310 P **P** **21 17 44.0 -0.1**
WLF Walferdange 62.87 314 P **P** **21 17 43.9 -0.3**
WLF pmax pmax
comp=Z,16nm,1.0s
WLF Walferdange 62.87 314 P **P** **21 17 43.9 -0.3**
BNI Bardonecchia 63.53 309 P **P** **21 17 48.3 -0.6**
BNI pmax pmax
comp=Z,9.0nm,1.5s
BNI Bardonecchia 63.53 309 P **P** **21 17 48.3 -0.6**
BNI IAmb IAmb 21 17 49.5
comp=Z,8.8nm,1.5s
KEST Kesra 63.98 298 P **P** **21 17 52.5 +0.6**
comp=Z,16nm,0.8s,baz=324,slow=1.4,SNR=20
KEST Kesra 63.98 298 P **P** **21 17 52.3 +0.4**
DAG Danmarks Havn 66.43 346 *i* P **P** **21 18 07.0 0.0**
DAG IAmb IAmb 21 18 08.5
comp=Z,4.4nm,0.9s
DAG Danmarks Havn 66.43 346 *i* P **P** **21 18 07.0 0.0**
DAG pmax pmax
comp=Z,4.0nm,0.9s
WB0 Warramunga Arr 66.68 130 P **P** **21 18 09.5 +0.1**
WRA Warramunga Arr 66.76 130 P **P** **21 18 10.1 +0.2**
comp=Z,5.1nm,0.6s,baz=323,slow=6.6,SNR=46
WRA Warramunga Arr 66.76 130 P **P** **21 18 09.8 -0.1**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 66.76 130 P **P** **21 18 09.8 -0.1**
WRAB Tennant Creek 66.76 130 *ce*P **P** **21 18 10.1 +0.2**
WRAB pmax pmax
comp=Z,19nm,1.9s
WR0 Warramunga Arr 66.91 130 P **P** **21 18 11.0 +0.1**
WR0 IAmb IAmb 21 18 14.2
comp=Z,4.8nm,1.0s
EKA Eskdalemuir Ar 67.07 322 P **P** **21 18 11.1 -0.3**
comp=Z,3.9nm,0.7s,baz=88,slow=6.7,SNR=9.4
AS31 Alice Springs 69.06 133 P **P** **21 18 24.3 -0.1**
ASAR Alice Springs 69.06 133 P **P** **21 18 24.4 +0.1**
comp=Z,2.5nm,0.6s,baz=314,slow=6.1,SNR=38
ASAR Alice Springs 69.06 133 P **P** **21 18 24.3 -0.1**
LSZ Lusaka 70.28 240 P **P** **21 18 31.8 -0.3**
LSZ pmax pmax
comp=Z,5.0nm,0.7s
LSZ Lusaka 70.28 240 P **P** **21 18 31.8 -0.3**
LSZ IAmb IAmb 21 18 32.5
comp=Z,4.9nm,0.7s
NEEM North Greenlan 71.91 351 *i* P **P** **21 18 41.4 0.0**
NEEM IAmb IAmb 21 18 43.1
comp=Z,8.7nm,0.7s
ESDC Sonseca Array 72.67 306 P **P** **21 18 46.2 -0.1**
comp=Z,1.4nm,0.7s,baz=58,slow=5.5,SNR=15
ESDC Sonseca Array 72.67 306 P **P** **21 18 45.8 -0.5**
PAB San Pablo 73.00 306 P **P** **21 18 47.9 -0.3**
PAB pmax pmax
comp=Z,7.0nm,1.2s
PAB San Pablo 73.00 306 P **P** **21 18 47.9 -0.3**
PAB IAmb IAmb 21 18 58.9
comp=Z,6.5nm,1.2s
SUMG Summit 73.06 345 *i* P **P** **21 18 49.0 +0.6**
SUMG IAmb IAmb 21 18 50.1
comp=Z,6.1nm,0.8s
SUMG Summit 73.06 345 P **P** **21 18 48.9 +0.6**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 73.06 345 P **P** **21 18 48.9 +0.6**
SUMG IAmb IAmb 21 18 50.0
comp=Z,9.1nm,0.9s
ICESG Greenland Ices 75.65 342 *i* P **P** **21 19 04.5 +1.0**
ICESG IAmb IAmb 21 19 05.0
comp=Z,14nm,0.8s
TOLK Toolik Lake Re 75.75 18 P **P** **21 19 03.7 0.0**
TOLK IAmb IAmb 21 19 05.2
comp=Z,4.3nm,1.0s
MDT Midelt 75.82 300 P **P** **21 19 04.9 +0.1**
comp=Z,1.1nm,0.6s,baz=72,slow=3.6,SNR=4.5
COLD Coldfoot 76.50 19 P **P** **21 19 08.0 +0.1**
BBOO Buckleboo 76.88 138 P **P** **21 19 10.0 -0.5**
MLY Manley 77.78 21 P **P** **21 19 15.5 +0.2**
MLY IAmb IAmb 21 19 17.0
comp=Z,3.1nm,0.9s
BMAR Burnt Mountain 77.95 18 P **P** **21 19 16.9 +0.8**
LBTB Lobatse 78.15 234 P **P** **21 19 17.7 -0.2**
LBTB pmax pmax
comp=Z,9.0nm,0.9s
LBTB Lobatse 78.15 234 P **P** **21 19 17.6 -0.2**
LBTB IAmb IAmb 21 19 18.5
comp=Z,8.7nm,0.9s
BPAW Bear Paw Mtn. 78.31 22 P **P** **21 19 18.1 -0.1**
BPAW IAmb IAmb 21 19 20.5
comp=Z,5.1nm,1.0s
PPLA Purkeypile 78.68 23 P **P** **21 19 21.1 +0.7**
PPLA IAmb IAmb 21 19 37.4
comp=Z,18nm,1.4s
TOA0 Torodi Ar. Sit 78.81 279 P **P** **21 19 20.7 -1.0**
TORD Torodi Ar. Bea 78.81 279 P **P** **21 19 20.8 -0.9**
comp=Z,1.4nm,0.7s,baz=47,slow=4.4,SNR=10
TORD Torodi Ar. Bea 78.81 279 P **P** **21 19 20.8 -0.9**
IL31 79.17 20 P **P** **21 19 22.5 -0.2**
ILAR Eielson Array 79.17 20 P **P** **21 19 22.4 -0.4**
comp=Z,1.2nm,0.7s,baz=311,slow=4.4,SNR=9.7
ILAR PP **PP** **21 22 19.8 -1.8**
comp=Z,0.8nm,1.0s,baz=297,slow=6.0,SNR=5.2
ILAR Eielson Array 79.17 20 P **P** **21 19 22.8 0.0**
ILAR Eielson Array 79.17 20 P **P** **21 19 22.8 0.0**
SKT Skwentna 79.51 24 P **P** **21 19 25.3 +0.5**
SKT IAmb IAmb 21 19 25.9
comp=Z,6.9nm,0.7s
STKA Stephens Creek 79.63 134 P **P** **21 19 25.4 -0.3**
comp=Z,1.7nm,0.7s,baz=318,slow=4.5,SNR=3.1
STKA Stephens Creek 79.63 134 P **P** **21 19 25.6 -0.1**
STKA pmax pmax
comp=Z,3.0nm,1.4s
STKA Stephens Creek 79.63 134 P **P** **21 19 25.6 -0.1**
SUA Susitna One 80.14 24 P **P** **21 19 28.6 +0.3**
SUA IAmb IAmb 21 19 34.2
comp=Z,8.4nm,1.2s
GHO Glory Hole Cre 80.57 23 P **P** **21 19 30.8 +0.2**
GHO IAmb IAmb 21 19 34.6
comp=Z,4.2nm,0.9s
BOSA Boshof 80.61 231 P **P** **21 19 30.8 -0.5**
comp=Z,4.9nm,1.0s,baz=61,slow=4.4,SNR=6.1
BOSA Boshof 80.61 231 P **P** **21 19 30.8 -0.5**
BOSA pmax pmax
comp=Z,18nm,1.5s
BOSA Boshof 80.61 231 P **P** **21 19 30.8 -0.5**
BOSA IAmb IAmb 21 19 30.9
comp=Z,18nm,1.5s
SCRK Sand Creek 80.62 20 P **P** **21 19 31.2 +0.4**
SCRK IAmb IAmb 21 19 32.1
comp=Z,3.7nm,0.8s
SML Sawmill 80.75 23 P **P** **21 19 31.9 +0.4**
DOT Dot Lake 80.84 20 P **P** **21 19 32.4 +0.5**
DOT IAmb IAmb 21 19 33.1
comp=Z,5.5nm,1.3s
KDAK Kodiak Island 81.85 27 P **P** **21 19 37.8 +0.5**
KDAK pmax pmax
comp=Z,19nm,0.9s
KDAK Kodiak Island 81.85 27 P **P** **21 19 37.8 +0.5**
BCAR Beaver Creek A 81.96 20 P **P** **21 19 38.9 +1.0**
KOWA Kowa 83.19 283 P **P** **21 19 44.8 -0.3**
KOWA IAmb IAmb 21 19 45.3
comp=Z,15nm,1.4s
TGL Tana Glacier 83.36 22 P **P** **21 19 46.3 +1.0**
TGL IAmb IAmb 21 19 47.6
comp=Z,10nm,1.0s
HYT Haines Junctio 84.98 20 P **P** **21 19 54.9 +1.3**
HYT IAmb IAmb 21 19 55.9
comp=Z,4.4nm,0.8s
DBIC Dimbokro 87.48 276 P **P** **21 20 06.1 -0.4**
comp=Z,1.4nm,0.5s,baz=20,slow=4.8,SNR=3.6
DBIC Dimbokro 87.48 276 P **P** **21 20 06.1 -0.4**
DBIC pmax pmax
comp=Z,17nm,1.5s
DBIC Dimbokro 87.48 276 P **P** **21 20 06.1 -0.4**
YKA Yellowknife Ar 88.60 9 P **P** **21 20 10.6 -0.4**
comp=Z,0.9nm,0.7s,baz=340,slow=4.5,SNR=15
TXAR Lajitas Array 122.53 10 PKP **PKPdf** **21 26 13.8 -0.7**
comp=Z,0.3nm,0.6s,baz=25,slow=0.7,SNR=4.0
TXAR Lajitas Array 122.53 10 PKIKP **PKPdf** **21 26 14.0 -0.5**
TXAR Lajitas Array 122.53 10 **PKPdf** **21 26 14.0 -0.5**

*IDC **25** 21:16:58.2± 1.7, 34.7°N× 132.5°E, h0km, mb1 3.4/4, mb1mx3.0/67, mbtmp3.3/4, ML2.8/4, Error ellipse: s-maj=20.5km s-min=13.1km az=142.0*
*JMA **25** 21:16:58.5, 34.85°N× 132.56°E, h17km, M4.0 Broadband fault plane solution: P waves. NP1:ϕb216.00000°, δ53.00000°, λ156.00000°. NP2:ϕb321.00000°, δ71.00000°, λ39.00000°. Principal axes: T Plg41.0000°, Azm185.0000°; N Plg47.0000°, Azm343.0000°; P Plg11.0000°, Azm85.0000°;*
JMA Felt II J1.
*NIED **25** 21:16:58.6, 34.85N× 132.56E, h17km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.66; Mθθ2.69; Mϕϕ-4.35; Mrθ-2.05; Mθϕ0.56; Mrϕ0.04; Fault plane solution: Mo4.35000×10¹⁴ NP1: ϕs317.00000°, δ66.00000°, λ30.00000°. NP2: ϕs214.00000°, δ63.00000°, λ153.00000°.*
ISC 25 21:17:00.3±0.8, 34°84N±0.03× 132°53E±0.03, h10km, n12, σ1§91/21, 3C-4D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
JHT	**Toyohira**	**0.20**	**206**	⇓P		**Pg**	**21 17 03.6**	**-0.9**
JHT				S		**Sg**	**21 17 07.0**	**-0.4**
JGT2	**ShimaneMisato**	**0.22**	**356**	⇑P		**Pg**	**21 17 03.6**	**-1.4**
JGT2				S		**Sg**	**21 17 07.2**	**-0.9**
JHS	**Saijyo**	**0.51**	**72**	⇓P		**Pg**	**21 17 07.9**	**-2.4**
JHS				S		**Sg**	**21 17 14.6**	**-2.4**
JJG	**Jouge**	**0.55**	**111**	⇓P		**Pg**	**21 17 08.8**	**-2.3**
JJG				S		**Sg**	**21 17 16.1**	**-2.3**
JHIK	**Hikimi**	**0.58**	**238**	⇓P		**Pg**	**21 17 10.0**	**-1.6**
JHIK				S		**Sg**	**21 17 18.4**	**-0.9**
JHM	**Kurahashi**	**0.70**	**180**	⇑P		**Pg**	**21 17 11.7**	**-2.2**
JISK	**Izumosakaura**	**0.71**	**22**	⇑P		**Pg**	**21 17 11.6**	**-2.5**
JISK				S		**Sg**	**21 17 21.2**	**-2.1**
JNU	**Nakatsue**	**2.19**	**219**	Pn		**Pn**	**21 17 35.5**	**-1.4**
	16nm,0.3s,baz=37,slow=13,SNR=117							
JNU				Lg		Lg	21 18 06.3	
	72nm,0.3s,baz=209,slow=17,SNR=22							
KSRS	**Korea Array**	**4.55**	**306**	Pn		**Pn**	**21 18 07.0**	**-2.2**
	0.5nm,0.3s,baz=121,slow=14,SNR=5.3							
KSRS				Sn		**Sn**	**21 19 02.8**	**+0.8**
	1.6nm,0.3s,baz=122,slow=26,SNR=5.9							
KSRS				Lg		Lg	21 19 26.2	
	0.9nm,0.3s,baz=126,slow=35,SNR=5.5							
MAT	**Matsushiro**	**4.92**	**68**	P		**Pn**	**21 18 13.9**	**-0.5**
MAT				*e*S		**Sn**	**21 19 13.8**	**+2.3**
MJAR	**Matsushiro Arr**	**4.93**	**68**	Pn		**Pn**	**21 18 14.6**	**+0.2**
	0.4nm,0.3s,baz=249,slow=14,SNR=32							
MJAR				Pg		**Pb**	**21 18 29.2**	**+2.5**
	0.4nm,0.3s,baz=248,slow=15,SNR=9.5							
MJAR				Lg		Lg	21 19 35.4	
	0.2nm,0.3s,baz=236,slow=25,SNR=5.8							
USRK	**Ussuriysk Ar.**	**9.36**	**358**	Pn		**Pn**	**21 19 16.6**	**+1.4**
	baz=178,slow=15,SNR=2.5							

IDC 25 21:20:14.7±2.1, 27.7°N× 86.0°E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.3/66, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=122.0km s-min=29.0km az=60.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.22**	**352**	P		Pn	21 24 41.0	-0.2
	0.1nm,0.3s,baz=172,slow=11,SNR=7.2							
KURBB	**Kurchatov Arra**	**23.53**	**348**	P		P	21 25 26.4	0.0
	0.3nm,0.3s,baz=154,slow=8.8,SNR=1.4							
FINES	**FINESS Array B**	**51.73**	**328**	P		P	21 29 23.0	-0.5
	3.1nm,1.1s,baz=85,slow=8.2,SNR=3.5							
ARCES	**ARCESS Array B**	**54.06**	**338**	P		P	21 29 40.5	-0.1
	1.7nm,0.9s,baz=103,slow=7.5,SNR=5.2							
WRA Warramunga Arr 66.55 130 P P 21 31 06.9 0.0
0.8nm,1.1s,baz=325,slow=6.1,SNR=1.8

*IDC **25** 21:21:26.0± 1.5, 10.66°S× 120.24°E, h0km, mb3.8/3, mb1 3.8/6, mb1mx3.5/41, mbtmp3.8/6, ML3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/43, Error ellipse: s-maj=45.2km s-min=21.7km az=40.0*
ISC 25 21:21:27.7±1.1, 10°52S±0.09× 120°77E±0.09, h10km, n9, σ2§34/11, mb3.9/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BATI	**Baumata**	**2.86**	**84**	Pn		**Pg**	**21 22 21.6**	**-1.0**
	13nm,0.3s,baz=278,slow=7.1,SNR=15							
BATI				Sn		**Sg**	**21 23 00.8**	**+1.1**
	6.6nm,0.3s,baz=20,slow=22,SNR=12							
KAPI	**Kappang**	**5.57**	**349**	LR		LR	21 25 43.8	
	comp=Z,124nm,20.0s,baz=251,slow=46							
FITZ	**Fitzroy Crossi**	**8.88**	**149**	Pn		**Pn**	**21 23 38.4**	**+2.2**
	0.5nm,0.3s,baz=321,slow=13,SNR=11							
FITZ				Sn		**Sn**	**21 25 14.9**	**-1.5**
	1.1nm,0.3s,baz=2.3,slow=24,SNR=12							
WRA	**Warramunga Arr**	**16.08**	**127**	Pn		**Pn**	**21 25 15.2**	**+1.1**
	0.2nm,0.3s,baz=307,slow=14,SNR=7.8							
WRA				Sn		**Sn**	**21 28 13.2**	**+0.5**
	0.1nm,0.3s,baz=302,slow=24,SNR=2.4							
ASAR	**Alice Springs**	**18.10**	**138**	P		**P**	**21 25 42.5**	**+2.7**
	0.2nm,0.3s,baz=313,slow=12,SNR=14							
ASAR				S		**Sn**	**21 28 56.7**	**-4.9**
	0.1nm,0.3s,baz=309,slow=23,SNR=4.9							
PMG	**Port Moresby**	**26.01**	**90**	LR		LR	21 39 25.5	
	comp=Z,41nm,18.6s,baz=335,slow=41							
SONM	**Songino Array**	**59.49**	**349**	P		**P**	**21 31 31.0**	**-0.1**
	0.3nm,0.4s,baz=178,slow=7.0,SNR=4.2							
MKAR	**Makanchi Array**	**66.61**	**332**	P		**P**	**21 32 17.9**	**-0.5**
	0.5nm,0.6s,baz=138,slow=7.5,SNR=7.1							
ZALV	**Zalesovo Beam**	**71.08**	**338**	P		**P**	**21 32 44.8**	**-1.2**
	1.2nm,0.6s,baz=134,slow=4.3,SNR=5.4							

*VAO **25** 21:24:00.9± 1.6, 24.38S× 69.75W, h10km, mb4.3*
*NEIC **25** 21:24:41.4± 1.7, 24.00S± 0.08× 66.7W± 0.1, h188km± 9km, mb4.1/9, Md3.7(SJA), Error ellipse: s-maj=16.0km s-min=10.6km az=104.0*
*SJA **25** 21:24:41.5± 0.6, 24.10S× 66.87W, h210km± 3km, ML4.0, MW3.6*
*IDC **25** 21:24:42.2± 1.6, 23.95S× 66.70W, h190km± 15km, mb3.3/3, mb1 3.6/8, mb1mx3.4/24, mbtmp3.9/8, Error ellipse: s-maj=23.7km s-min=19.4km az=166.0*
*GUC **25** 21:24:43.5± 0.6, 24.01S× 67.30W, h225km± 12km, ML4.4*
ISC 25 21:24:41.8±0.6, 24°06S±0.04× 66°89W±0.04, h203km, n94, σ1§59/126, mb3.9/5, 9C, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.43**	**118**	*e*P		**Pn**	**21 25 16.3**	**+1.0**
SLA				*e*S		**S**	**21 25 41.4**	**+0.3**
FSA	**Cafayete**	**2.20**	**158**	*e*P		**Pn**	**21 25 23.3**	**+0.4**
FSA				*e*S		**S**	**21 25 53.8**	**-0.7**
YJA	**Yavi**	**2.27**	**34**	*e*P		**Pn**	**21 25 24.7**	**+0.8**
LVC	**Limon Verde**	**2.35**	**308**	P		**Pn**	**21 25 26.0**	**+1.3**
	31nm,0.3s,baz=154,slow=5.5,SNR=208							
LVC				S		**S**	**21 25 58.3**	**+0.9**
	53nm,0.3s,baz=246,slow=20,SNR=26							
LVC	**Limon Verde**	**2.35**	**308**	*e*P		**Pn**	**21 25 25.9**	**+1.3**
LVC				*i* S		**S**	**21 25 58.3**	**+0.9**
LVC	**Limon Verde**	**2.35**	**308**	*e*P		**Pn**	**21 25 26.0**	**+1.3**
LVC				*e*S		**S**	**21 25 58.7**	**+1.2**
PB15	**IPOC Station P**	**2.51**	**289**⇑	*i*P		**Pn**	**21 25 27.7**	**+1.4**
PB15				*i* S		**S**	**21 26 00.9**	**+0.6**
PB15	**IPOC Station P**	**2.51**	**289**			**Pn**	**21 25 27.6**	**+1.3**
PB15	**IPOC Station P**	**2.51**	**289**	*e*P		**Pn**	**21 25 27.6**	**+1.3**
PB15				*e*S		**S**	**21 26 01.2**	**+0.9**
PB15				IAML			21 26 05.2	
	comp=Z,1μm,0.4s							
GO02	**Mina Guanaco**	**2.69**	**245**⇑	*i*P		**Pn**	**21 25 29.8**	**+1.4**
GO02				*i* S		**S**	**21 26 05.2**	**+1.2**
GO02				IAML			21 26 06.4	
	comp=E,985nm,0.2s							
GO02	**Mina Guanaco**	**2.69**	**245**			**Pn**	**21 25 29.8**	**+1.4**
PB06	**IPOC Station P**	**2.81**	**298**⇑	*i*P		**Pn**	**21 25 30.8**	**+1.2**
PB06				*i* S		**S**	**21 26 06.1**	**-0.2**
PB06				IAML			21 26 07.8	
	comp=N,752nm,0.6s							
PB06	**IPOC Station P**	**2.81**	**298**			**Pn**	**21 25 30.8**	**+1.2**
PB06	**IPOC Station P**	**2.81**	**298**	*e*P		**Pn**	**21 25 30.6**	**+1.1**
PB06				*e*S		**S**	**21 26 06.9**	**+0.6**
PB06				IAML			21 26 08.7	
	comp=Z,414nm,0.3s							
PB09	**IPOC Station P**	**3.13**	**316**			**Pn**	**21 25 34.5**	**+1.2**
PB09	**IPOC Station P**	**3.13**	**316**	*e*P		**Pn**	**21 25 34.7**	**+1.4**
PB09				*e*S		**S**	**21 26 13.4**	**+0.4**
PB09				IAML			21 26 17.4	
	comp=Z,203nm,0.6s							
PB14	**IPOC Station P**	**3.25**	**259**⇑	*i*P		**Pn**	**21 25 35.8**	**+0.8**
PB14				*i* S		**S**	**21 26 15.4**	**-0.5**
PB14	**IPOC Station P**	**3.25**	**259**	Pn		**Pn**	**21 25 35.6**	**+0.7**
PB14	**IPOC Station P**	**3.25**	**259**	*e*P		**Pn**	**21 25 35.8**	**+0.8**
PB14				*e*S		**S**	**21 26 15.9**	**+0.1**
PB14				IAML			21 26 18.8	
	comp=Z,198nm,0.3s							
PB05	**IPOC Station P**	**3.27**	**291**⇑	*i*P		**Pn**	**21 25 35.6**	**+0.6**
PB05				*i* S		**S**	**21 26 14.7**	**-1.1**
PB05	**IPOC Station P**	**3.27**	**291**	*e*P		**Pn**	**21 25 35.9**	**+1.0**
PB05				*e*S		**S**	**21 26 14.8**	**-1.1**
PB05				IAML			21 26 18.7	
	comp=Z,152nm,0.5s							
PB10	**IPOC Station P**	**3.40**	**278**⇑	*i*P		**Pn**	**21 25 37.5**	**+1.1**
PB10				*i* S		**S**	**21 26 17.2**	**-1.3**
PB10				IAML			21 26 21.5	
	comp=E,226nm,0.3s							
PB10	**IPOC Station P**	**3.40**	**278**	Pn		**Pn**	**21 25 37.5**	**+1.1**
PB10	**IPOC Station P**	**3.40**	**278**	*e*P		**Pn**	**21 25 37.5**	**+1.1**
PB10				*e*S		**S**	**21 26 18.5**	**0.0**
PB10				IAML			21 26 21.1	
	comp=Z,182nm,0.3s							
AC02	**Maricunga**	**3.42**	**216**	Pn		**Pn**	**21 25 38.6**	**+1.5**
PB04	**IPOC Station P**	**3.46**	**299**⇑	*i*P		**Pn**	**21 25 37.8**	**+0.6**
PB04				*i* S		**S**	**21 26 18.9**	**-1.1**
PB04				IAML			21 26 21.4	
	comp=N,512nm,0.3s							
PB04	**IPOC Station P**	**3.46**	**299**			**Pn**	**21 25 37.8**	**+0.6**
PB04	**IPOC Station P**	**3.46**	**299**	*e*P		**Pn**	**21 25 38.1**	**+0.9**
PB04				*e*S		**S**	**21 26 19.6**	**-0.4**
PB04				IAML			21 26 20.9	
	comp=Z,360nm,0.6s							
PB07	**IPOC Station P**	**3.61**	**309**⇑	*i*P		**Pn**	**21 25 39.6**	**+0.5**
PB07				*i* S		**S**	**21 26 21.3**	**-2.1**
PB07				IAML			21 26 24.4	
	comp=E,540nm,0.3s							
PB07	**IPOC Station P**	**3.61**	**309**			**Pn**	**21 25 39.2**	**+0.1**
PB01	**IPOC Station P**	**3.84**	**321**	*e*P		**Pn**	**21 25 42.2**	**+0.2**
PB01				*i* S		**S**	**21 26 26.3**	**-2.3**
PB01				IAML			21 26 29.9	
	comp=E,206nm,0.4s							
PB01	**IPOC Station P**	**3.84**	**321**			**Pn**	**21 25 42.1**	**+0.2**
AC01	**Pan de Azucar**	**3.95**	**237**⇑	*i*P		**Pn**	**21 25 43.1**	**0.0**
AC01				*i* S		**S**	**21 26 29.3**	**-1.4**
AC01	**Pan de Azucar**	**3.95**	**237**			**Pn**	**21 25 43.1**	**0.0**
PATCX	**Punta Patache**	**4.42**	**316**			**Pn**	**21 25 49.0**	**0.0**
PB08	**IPOC Station P**	**4.43**	**331**	*i*P		**Pn**	**21 25 50.2**	**+0.7**
PB08				*i* S		**S**	**21 26 40.5**	**-1.7**
PB08				IAML			21 26 46.0	
	comp=E,108nm,0.4s							
PB08	**IPOC Station P**	**4.43**	**331**	Pn		**Pn**	**21 25 50.7**	**+1.1**
TA01	**Diego Aracena**	**4.62**	**318**			**Pn**	**21 25 51.2**	**-0.3**
GO03	**Copiap**	**4.63**	**220**	Pn		**Pn**	**21 25 51.6**	**0.0**
GO03	**Copiap**	**4.63**	**220**	*e*P		**Pn**	**21 25 52.0**	**+0.3**
GO03				*e*S		**S**	**21 26 45.1**	**-1.1**
TA02	**Huaiquique**	**4.82**	**321**			**Pn**	**21 25 54.0**	**-0.1**
PB11	**IPOC Station P**	**4.99**	**329**	Pn		**Pn**	**21 25 55.6**	**-0.7**
PSGCX

comp=Z,12nm,0.3s
ACCO Cerro Coronel 6.78 196 eP Pn 21 26 20.4 +0.8
ACCO eS S 21 27 37.9 +1.0
ACCO IAML 21 27 38.6
comp=Z,13nm,0.3s
GO04 Tololo Observa 7.01 209 eP Pn 21 26 22.3 -0.1
GO04 eS S 21 27 34.7 -7.5
CO03 El Pedregal 7.55 206 Pn Pn 21 26 27.8 -1.4
CO03 El Pedregal 7.55 206 eP Pn 21 26 28.5 -0.8
CO03 IAML 21 27 53.1
comp=Z,9.9nm,1.0s
LPAZ La Paz 7.82 351 P Pn 21 26 33.1 -0.3
comp=Z,1.2nm,0.3s,baz=135,slow=5.7,SNR=23
LPAZ S S 21 28 01.0 -1.1
comp=Z,0.2nm,0.3s,baz=309,slow=8.5,SNR=4.8
LPAZ La Paz 7.82 351 Pn 21 26 33.6 +0.2
LPAZ La Paz 7.82 351 eP Pn 21 26 34.0 +0.6
LPAZ eS S 21 28 06.1 +4.0
RTCV Cerro Valdivia 7.91 190 eP Pn 21 26 33.8 -0.1
RTCV eS S 21 27 59.1 -4.0
RTCV IAML 21 28 12.5
comp=Z,23nm,4.3s
CO02 Combarbal 7.99 206 Pn Pn 21 26 33.7 -1.3
RTLS Leoncito 8.00 195 eP Pn 21 26 37.3 +2.1
RTLS eS S 21 28 04.5 -1.1
RTLS IAML 21 28 50.0
comp=Z,8.5nm,2.2s
VA03 San Esteban 9.25 200 Pn Pn 21 26 49.6 -1.7
SIV San Ignacio 9.71 35 P Pn 21 26 55.4 -2.0
comp=Z,0.3nm,0.3s,baz=241,slow=10,SNR=7.7
BO02 Sierra Bellavi 11.22 197 Pn Pn 21 27 16.8 +0.2
BI02 San Fabin de 13.12 196 Pn Pn 21 27 41.0 +0.3
TRCB Terra Rica 13.15 87 eP P 21 27 44.0 -0.1
PTGB Pitanga 13.53 96 eP P 21 27 49.3 +0.9
SAML Samuel 15.44 14 P Pn 21 28 07.7 -1.7
ITRB Iturama 15.94 77 eP Pn 21 28 17.0 +1.5
ARAG Araguaiana, MT 16.43 62 eP Pn 21 28 22.2 +0.9
TER01 Tubaro-SC 16.54 109 eP P 21 28 21.9 +0.4
CLDB Colider 16.84 41 eP P 21 28 22.6 -2.3
PLCA Paso Flores 16.91 190 P Pn 21 28 28.4 +1.6
comp=Z,0.1nm,0.3s,baz=9.4,slow=10,SNR=5.2
PLCA Paso Flores 16.91 190 Pn 21 28 26.4 -0.4
PLCA IAmb IAmb 21 28 39.0
comp=Z,6.4nm,1.3s
BB19B Bebedouro 17.22 84 eP Pn 21 28 32.0 +1.3
LL04 Puerto Octay 17.43 194 Pn 21 28 32.2 -0.6
LL04 IAmb IAmb 21 28 56.4
comp=Z,12nm,1.1s
SPB Sao Paulo 17.81 92 eP Pn 21 28 38.5 +0.9
LL01 San Ignacio de 18.84 193 P P 21 28 47.6 +1.3
LL01 IAmb IAmb 21 28 51.7
comp=Z,9.7nm,1.2s
PARB Paraibuna 19.49 92 eP Pn 21 28 57.3 -0.2
BDFB Brasilia 19.62 68 P P 21 28 54.8 -0.3
comp=Z,1.2nm,0.3s,baz=233,slow=12,SNR=20
BDFB Brasilia 19.62 68 P P 21 28 54.1 -1.0
NPGB Novo Progresso 20.22 35 eP P 21 28 55.4 -6.0
PEXB Peixe 21.27 59 eP P 21 29 12.3 -0.2
ITTB Itaituba 22.34 31 eP P 21 29 17.3 -5.8
JANB Januaria 23.06 71 eP P 21 29 29.1 -0.5
SDBA SAO DESIDERIO 23.84 35 eP P 21 29 36.0 -0.8
SMTB Santa Maria do 23.85 54 eP P 21 29 36.0 -0.7
TMAB Tom-Au,PA,Br 28.20 43 eP P 21 30 11.8 -3.9
TXAR Lajitas Array 63.78 324 P P 21 34 54.4 +1.9
comp=Z,0.2nm,0.5s,baz=162,slow=9.3,SNR=2.9
QSPA South Pole Qui 66.14 180 P P 21 35 09.8 +2.6
QSPA IAmb IAmb 21 35 10.6
comp=Z,6.2nm,1.4s
KOWA Kowa 72.37 65 P P 21 35 46.0 0.0
TOA0 Torodi Ar. Sit 76.50 69 P P 21 36 09.7 -0.2
TOA0 IAmb IAmb 21 36 12.4
comp=Z,3.9nm,1.3s
TORD Torodi Ar. Bea 76.50 69 P P 21 36 09.9 0.0
comp=Z,1.2nm,0.5s,baz=258,slow=5.4,SNR=22
TORD Torodi Ar. Bea 76.50 69 P P 21 36 09.8 0.0
YKA Yellowknife Ar 94.22 340 P P 21 37 38.9 +1.7
comp=Z,0.2nm,0.6s,baz=132,slow=4.9,SNR=6.4
MKAR Makanchi Array 146.51 40 PKPbc PKPab 21 44 00.9 +0.4
comp=Z,0.3nm,0.5s,baz=301,slow=3.5,SNR=4.8

IDC 25 21:31:20.4±5.8, 27°.85N×85°.44E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.3/35, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=101.4km s-min=54.5km az=171.0
ISC 25 21:31:24.2±4.9, 28°.0N±0°.6×85°.4E±0°.4, h18km, n6, σ0s22/6, mb3.5/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.94	353	P	Pn	21 35 44.6	-0.2
	0.2nm,0.3s,baz=174,slow=12,SNR=13						
KURBB	Kurchatov Arra	23.21	349	P	P	21 36 30.2	+0.2
	0.6nm,0.6s,baz=174,slow=11,SNR=5.1						
SONM	Songino Array	25.66	34	P	P	21 36 53.0	-0.1
	0.5nm,0.5s,baz=221,slow=8.6,SNR=3.5						
ZALV	Zalesovo Beam	25.94	359	P	P	21 36 55.5	+0.2
	0.7nm,0.6s,baz=190,slow=7.3,SNR=3.8						
FINES	FINESS Array B	51.25	328	P	P	21 40 26.4	-0.1
	1.9nm,0.9s,baz=101,slow=7.2,SNR=6.1						
ARCES	ARCESS Array B	53.64	338	P	P	21 40 44.1	0.0
	1.8nm,0.9s,baz=102,slow=7.5,SNR=5.8						

IDC 25 21:46:16.9±1.9, 27°.79N×85°.43E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.3/48, mbtmp3.5/6, ML3.2/1, Error ellipse: s-maj=61.5km s-min=29.4km az=61.0
ISC 25 21:46:19.9±1.7, 27°.8N±0°.2×85°.5E±0°.4, h18km, n6, σ0s66/6, mb3.5/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.11	353	P	P	21 50 41.4	-0.2
	0.1nm,0.3s,baz=176,slow=11,SNR=4.4						
KURBB	Kurchatov Arra	23.38	349	P	P	21 51 28.4	+1.0
	0.2nm,0.3s,baz=153,slow=10,SNR=2.2						
SONM	Songino Array	25.84	34	P	P	21 51 49.8	-0.2
	0.2nm,0.3s,baz=232,slow=9.0,SNR=2.2						
FINES	FINESS Array B	51.40	328	P	P	21 55 23.0	-0.3
	1.5nm,0.9s,baz=96,slow=8.5,SNR=3.4						
ARCES	ARCESS Array B	53.80	338	P	P	21 55 40.8	-0.3
	2.1nm,0.8s,baz=100,slow=8.4,SNR=1.5						
ASAR	Alice Springs	69.31	133	P	P	21 57 26.5	+0.1
	0.4nm,1.0s,baz=318,slow=6.0,SNR=1.8						

IDC 25 21:50:06.5±1.4, 27°.73N×85°.47E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.5/55, mbtmp3.8/8, ML4.0/1, MS4.8/1, Ms1 4.8/1, ms1mx2.6/47, Error ellipse: s-maj=46.2km s-min=19.9km az=61.0
ISC 25 21:50:08.1±1.6, 27°.8N±0°.2×85°.5E±0°.3, h10km, n9, σ0s98/8, mb3.9/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.16	353	P	Pn	21 54 32.2	-0.3
	0.5nm,0.3s,baz=178,slow=11,SNR=26						
KURBB	Kurchatov Arra	23.43	349	P	P	21 55 17.5	+0.2
	0.5nm,0.4s,baz=168,slow=10.0,SNR=6.0						
SONM	Songino Array	25.80	33	P	P	21 55 41.1	+1.7
	0.4nm,0.5s,baz=229,slow=9.8,SNR=3.1						
KSRS	Korea Array	36.74	64	P	P	21 57 14.4	-1.2
	0.4nm,0.4s,baz=263,slow=7.0,SNR=2.3						
TIXI	Tiksi	49.93	17	LR	LR	22 22 00.3	
	comp=Z,924nm,20.2s,baz=346,slow=38						
FINES	FINESS Array B	51.47	328	P	P	21 59 12.9	-0.5
	3.2nm,1.1s,baz=116,slow=8.7,SNR=4.0						
ARCES	ARCESS Array B	53.87	338	P	P	21 59 31.2	+0.1
	2.0nm,0.7s,baz=101,slow=8.3,SNR=1.8						
WRA	Warramunga Arr	66.94	130	P	P	22 01 01.4	+0.3
	0.7nm,0.5s,baz=320,slow=6.4,SNR=7.4						
ASAR	Alice Springs	69.23	133	P	P	22 01 15.7	+0.2
	0.5nm,0.5s,baz=313,slow=6.8,SNR=9.2						

IDC 25 21:57:27.1±3.4, 27°.69N×85°.12E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.2/65, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=208.2km s-min=27.6km az=93.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.20	354	P	P	22 01 52.9	+0.4
	0.2nm,0.3s,baz=178,slow=10,SNR=8.5						
PALK	Pallekele	20.73	192	P	P	22 02 09.5	0.0
	4.1nm,0.9s,baz=303,slow=12,SNR=3.5						
KURBB	Kurchatov Arra	23.45	349	P	P	22 02 37.9	0.0
	0.4nm,0.3s,baz=168,slow=9.7,SNR=6.5						
ZALV	Zalesovo Beam	26.23	360	P	P	22 03 03.4	-0.3
	0.4nm,0.3s,baz=181,slow=7.2,SNR=2.5						
ARCES	ARCESS Array B	53.81	338	P	P	22 06 51.2	0.0
	2.4nm,0.8s,baz=102,slow=8.4,SNR=1.7						

DJA 25 22:00:53.1±0.5, 2°.S±10°×13°.8E±°, h10km, M4.3/6, mb4.6/1, MLv4.2/6
IDC 25 22:01:01.1±4.6, 2°.10S×138°.34E, h93km±40km, mb3.4/5, mb1 3.7/6, mb1mx3.2/50, mbtmp3.8/6, MS3.2/3, Ms1 3.2/3, ms1mx2.7/23, Error ellipse: s-maj=49.7km s-min=15.1km az=91.0
ISC 25 22:00:55.4±0.9, 2°.15S±0°.09×137°.92E±0°.06, h30km, n13, σ2s78/14, mb3.8/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.70	279	P	Pn	22 01 22.5	-0.5
SRPI				S	Sn	22 01 45.2	+1.4
BAKI	Biak	2.04	298	P	Pn	22 01 25.8	-2.0
GENI	Genyem	2.29	101	P	Pn	22 01 31.6	+0.4
JAY	Jayapura	2.81	97	P	Pn	22 01 38.6	+0.2
FAKI	Fak Fak	5.71	262	P	Pn	22 02 19.4	+1.1
GUMO	Guam	17.09	24	LR	LR	22 12 32.3	
	comp=Z,36nm,18.1s,baz=104,slow=41						
WRA	Warramunga Arr	18.02	191	P	P	22 05 05.3	+1.2
	0.3nm,0.3s,baz=16,slow=11,SNR=9.8						
WRA				S	Sn	22 08 16.8	-7.3
	0.1nm,0.3s,baz=6.7,slow=22,SNR=3.1						
FITZ	Fitzroy Crossi	19.90	216	P	Pn	22 05 29.8	+3.3
	0.8nm,0.4s,baz=35,slow=14,SNR=1.5						
FITZ				S	S	22 08 55.2	-12
	1.3nm,0.8s,baz=197,slow=16,SNR=1.7						
FITZ				LR	LR	22 14 54.2	
	comp=Z,69nm,19.3s,baz=272,slow=41						
ASAR	Alice Springs	21.74	190	P	P	22 05 46.2	+1.7
	1.3nm,0.4s,baz=18,slow=11,SNR=17						
ASAR				S	S	22 09 43.5	-0.1
	1.3nm,1.0s,baz=12,slow=23,SNR=5.4						
STKA	Stephens Creek	29.77	174	LR	LR	22 19 23.0	
	comp=Z,104nm,19.6s,baz=31,slow=37						
CMAR	Chiang Mai Arr	43.47	300	P	P	22 08 57.9	+1.5
	1.1nm,0.3s,baz=121,slow=8.7,SNR=1.6						
MKAR	Makanchi Array	68.87	323	P	P	22 11 56.9	-0.5
	0.8nm,0.6s,baz=100,slow=8.6,SNR=9.2						
ILAR	Eielson Array	85.66	25	P	P	22 13 28.7	-2.3
	0.3nm,0.7s,baz=262,slow=6.2,SNR=2.4						

IDC 25 22:03:05.7±1.3, 27°.52N×86°.12E, h0km, mb3.6/5, mb1 3.6/6, mb1mx3.3/67, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=58.3km s-min=21.3km az=59.0
ISC 25 22:03:08.4±1.4, 27°.5N±0°.3×86°.0E±0°.3, h19km, n6, σ1s37/6, mb3.6/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.52	352	P	P	22 07 34.5	0.0
	0.2nm,0.3s,baz=175,slow=10.0,SNR=8.7						
KURBB	Kurchatov Arra	23.82	348	P	P	22 08 20.7	+0.6
	0.7nm,0.7s,baz=166,slow=9.4,SNR=5.8						
GEYT	Alibeck	25.60	301	P	P	22 08 36.6	0.0
	0.7nm,0.4s,baz=87,slow=13,SNR=1.8						
ZALV	Zalesovo Beam	26.47	358	P	P	22 08 43.5	-0.7
	0.5nm,0.5s,baz=188,slow=9.7,SNR=3.6						
WRA	Warramunga Arr	66.41	130	P	P	22 13 58.1	+1.6
	1.0nm,1.1s,baz=323,slow=6.4,SNR=5.6						
ASAR	Alice Springs	68.70	133	P	P	22 14 09.5	-1.5
	0.3nm,0.6s,baz=341,slow=8.9,SNR=4.2						

IDC 25 22:03:13.0±0.8, 53°.05N×162°.77W, h0km, mb4.2/32, mb1 4.4/35, mb1mx4.2/82, mbtmp4.2/35, ML3.8/3, MS3.3/11, Ms1 3.3/11, ms1mx3.0/39, Error ellipse: s-maj=20.6km s-min=10.9km az=178.0
NEIC 25 22:03:13.1±1.6, 52°.90N±0°.06×162°.79W±0°.08, h10km±1km, mb4.4/58, ML3.8/38(AEIC), Error ellipse: s-maj=10.6km s-min=7.6km az=161.0
MOS 25 22:03:14.3±0.8, 53°.20N×163°.12W, h10km, mb4.7/25, Error ellipse: s-maj=37.3km s-min=9.5km az=103.2
AEIC 25 22:03:16.8±1.7, 52°.85N±0°.07×162°.71W±0°.10, h7km±4km, Error ellipse: s-maj=11.0km s-min=8.0km az=161.0
ISC 25 22:03:13.0±0.5, 53°.02N±0°.06×162°.76W±0°.04, h10km, n238, σ1s18/242, mb4.5/83, MS3.5/15, 8C-11D, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRPK	Brown Peak	1.73	341		Pn	22 03 44.2	+0.2
BRPK					Sn	22 04 05.7	-0.4
SSLS	Shishaldin Sou	1.84	337		Pn	22 03 46.1	+0.5
SSLS					Sn	22 04 10.0	+0.9
FALS	False Pass	1.88	348		Pn	22 03 46.2	+0.2
FALS	False Pass	1.88	348		Sn	22 04 10.6	+0.9
WESP	Westdahl Peak	1.88	322		Pn	22 03 46.1	0.0
WESP					Sn	22 04 09.8	-0.1
WECS	Westdahl Cape	1.93	322		Pn	22 03 47.2	+0.4
SSBA	Shishaldin	1.93	336		Pn	22 03 47.2	+0.3
SSLN	Shishaldin Nor	1.94	338		Pn	22 03 47.8	+0.9
SSLN					Sb	22 04 12.8	-0.7
AKSA	Akutan Strait	2.08	304		Pn	22 03 48.6	-0.2
AKSA	Akutan Strait	2.08	304		Pn	22 03 48.6	-0.2
DT1	Dutton Round H	2.11	7		Pn	22 03 49.2	+0.1
AKUT	Akutan	2.12	303	Pn	Pn	22 03 49.2	0.0
AKUT	Akutan	2.12	303		Sn	22 04 14.1	-1.4
AKBBA	Akutan Broad B	2.18	301		Pn	22 03 50.2	+0.1
HSB	Akutan Spr's B	2.21	303		Pn	22 03 50.5	-0.2
AKMO	Akutan Morgan	2.22	300		Pn	22 03 51.1	+0.4
AKMO					Sn	22 04 17.3	-0.8
AKLV	Akutan Long Va	2.22	302		Pn	22 03 50.8	0.0
HAG	Hague Volcano	2.35	12		Pn	22 03 53.6	+1.0
PS4A	Pavlof South-4	2.39	12		Pn	22 03 54.2	+1.2
MNAT	Makushin Natee	2.50	292		Pn	22 03 54.3	-0.3
MNAT					Sn	22 04 23.2	-1.9
MSW	Makushin Switc	2.57	292		Pn	22 03 55.3	-0.2
MGOD	Makushin Gods	2.58	289		Pn	22 03 55.2	-0.5
MAPS	Pakushin South	2.62	289		Pn	22 03 56.2	-0.1
MAPS					Sn	22 04 26.9	-1.2
SDPT	Sand Point	2.69	29	Pn	Pn	22 03 58.3	+1.2
OKFG	Magazine Ridge	3.12	279		Pn	22 04 02.7	-0.5
OKSO	Okmok South	3.27	278		Pn	22 04 03.7	-1.4
NIKH	Nikolski High	3.69	272	Pn	Pn	22 04 09.3	-1.6
SII	Sitkinak Islan	6.09	51	Pn	Pn	22 04 43.5	-0.4
KABU	Katmai Buttres	6.75	36		Pn	22 04 54.0	+1.1
KABR	Katmai Barrier	6.76	38		Pn	22 04 54.0	+1.0
OHAK	Old Harbor	6.87	48	Pn	Pn	22 04 53.9	-0.6
ATKA	Atka Island	7.02	268	Pn	Pn	22 04 54.9	-1.6
KDAK	Kodiak Island	7.50	46	Pn	Pn	22 05 02.2	-1.0
	2.6nm,0.3s,baz=257,slow=5.9,SNR=18						
KDAK					Sn	22 06 21.7	-6.4
	1.0nm,0.3s,baz=185,slow=13,SNR=2.4						
KDAK				LR	LR	22 07 48.8	
	comp=Z,133nm,19.4s,baz=264,slow=37						
KDAK	Kodiak Island	7.50	46	i P	Pn	22 05 02.3	-0.9
GSTD	Great Sitkin T	8.22	269		Pn	22 05 13.0	-0.2
ADK	Adak	8.59	268	Pn	Pn	22 05 17.3	-0.8
BRLK	Bradley Lake	9.42	39	Pn	Pn	22 05 28.3	-1.2
SEW	Seward	10.19	41	Pn	Pn	22 05 40.3	+0.2
TTA	Tatalina	10.55	17	Pn	Pn	22 05 45.2	+0.2
SUA	Susitna One	10.65	33		Pn	22 05 47.1	+0.6
SKT	Skwentna	10.80	29	Pn	Pn	22 05 50.5	+2.0
PWL	Port Wells	11.10	39		Pn	22 05 52.3	-0.2
AMKA	Amchitka	11.13	269	Pn	Pn	22 05 51.9	-1.1
PPLA	Purkeypile	11.36	25		Pn	22 05 58.2	+2.1
FID	Port Fidalgo	11.77	42	Pn	Pn	22 06 00.4	-1.2
EYAK	Cordova Ski Ar	11.96	44		Pn	22 06 03.6	-0.6
SCM	Sheep Creek Mo	12.09	37		Pn	22 06 05.8	-0.3
CHUM	Lake Minchumin	12.16	22	P		22 06 07.6	
	baz=211,SNR=9.0						
KTH	Kantishna Hill	12.23	26	Pn	Pn	22 06 07.7	-0.2
KAIM	Kayak Island	12.24	48		Pn	22 06 08.0	-0.1
TRF	Thorofare Moun	12.31	27	Pn	Pn	22 06 09.2	0.0
RAGM	Ragged Mountai	12.34	46	Pn	Pn	22 06 08.2	-1.3
KLU	Klutina	12.41	40		Pn	22 06 09.8	-0.7
KLU	Klutina	12.41	40	P		22 06 09.7	
	baz=234,SNR=8.7						
BMRM	Bremner River	12.66	44		Pn	22 06 13.0	-0.8
BPAW	Bear Paw Mtn.	12.66	24	Pn	Pn	22 06 14.5	+0.7
M24K	Tolsona, Glenn	12.69	38		Pn	22 06 13.6	-0.7
N25K	Chitina, Valde	13.00	41		Pn	22 06 18.0	-0.6
CRQM	Cirque	13.18	46		Pn	22 06 21.1	0.0
GLB	Gilahina Butte	13.23	43		Pn	22 06 20.8	-0.9
PAX	Paxson	13.49	36		Pn	22 06 25.1	-0.1
PAX	Paxson	13.49	36	P		22 06 24.8	
	baz=230,SNR=12						
MLY	Manley	13.50	22	Pn	Pn	22 06 26.1	+0.8
MLY	Manley	13.50	22	P		22 06 25.4	
	baz=213,SNR=7.2						
YAH	Yahtse	13.64	49		Pn	22 06 27.2	-0.1
WRH	Wood River Hil	13.72	28		Pn	22 06 25.9	-2.4
GRNC	Granite Creek	13.79	48		Pn	22 06 28.1	-1.2
I23K	Minto, Yukon-K	13.93	24		Pn	22 06 31.0	0.0
TABL	Table Mountain	13.95	49		Pn	22 06 31.7	+0.2
BARN	Barnard Glacie	13.97	46		Pn	22 06 32.6	+0.8
CTGM	Chitina Glacie	14.07	47		Pn	22 06 33.9	+0.7
MENT	Mentasta	14.10	38		Pn	22 06 33.6	+0.1
LOGN	Logan Glacier	14.16	48		Pn	22 06 35.2	+0.8
PCA	Pinnacle	14.23	51		Pn	22 06 35.5	+0.2
ILAR	Eielson Array	14.29	28	Pn	Pn	22 06 33.5	-2.6
	0.1nm,0.3s,baz=221,slow=13,SNR=7.3						
ILAR				Sn	Sn	22 09 07.5	-6.9
	0.2nm,0.3s,baz=198,slow=6.2,SNR=1.3						
ILAR				LR	LR	22 12 53.9	
	comp=Z,66nm,18.2s,baz=256,slow=41						
ILAR	Eielson Array	14.29	28		Pn	22 06 35.8	-0.3
DOT	Dot Lake	14.41	35		Pn	22 06 36.8	-0.9
BCPM	Bancas Point	14.48	52		Pn	22 06 38.0	-0.6
SCRK	Sand Creek	14.65	34	Pn	Pn	22 06 39.8	-1.2
SCRK	Sand Creek	14.65	34	P		22 06 39.2	
	baz=230,SNR=7.7						
L27K	Beaver Creek,	14.88	39		Pn	22 06 43.8	-0.4
L27K	Beaver Creek,	14.88	39	P		22 06 44.5	
	baz=237,SNR=21						
BCAR	Beaver Creek A	14.90	39		Pn	22 06 43.7	-0.7
PRP	Porcupine Dome	15.23	28		Pn	22 06 49.4	+0.5
K27K	Chicken	15.34	36		Pn	22 06 49.6	-0.6
K27K				IAmb	IAmb	22 07 00.2	
	comp=Z,15nm,1.2s						
COLD	Coldfoot	15.51	18	Pn	Pn	22 06 52.4	0.0
COLD	Coldfoot	15.51	18	P		22 06 52.3	
	baz=210,SNR=8.0						
HYT	Haines Junctio	15.76	50		Pn	22 06 57.0	+1.2
HYT				IAmb	IAmb	22 07 08.3	
	comp=Z,18nm,0.9s						
EGAK	Eagle	16.11	35		Pn	22 06 59.6	-0.6
EGAK				IAmb	IAmb	22 07 11.2	
	comp=Z,14nm,0.7s						
EGAK	Eagle	16.11	35	P		22 06 59.2	
	baz=233,SNR=13						
DAWY	Dawson	16.34	38		Pn	22 07 02.8	-0.4
DAWY				IAmb	IAmb	22 07 11.1	
	comp=Z,44nm,1.2s						
JIS	Juneau Island	16.78	60	P	P	22 07 10.0	-0.9
TOLK	Toolik Lake Re	16.86	17	P	P	22 07 12.9	+1.1
TOLK				IAmb	IAmb	22 07 18.1	
	comp=Z,21nm,0.8s						
TOLK	Toolik Lake Re	16.86	17	P		22 07 09.2	
	baz=208,SNR=18						
BMAR	Burnt Mountain	16.92	24		Pn	22 07 11.2	+0.7
WHY	Whitehorse	16.95	52	P	P	22 07 13.3	+0.4
WHY				IAmb	IAmb	22 07 19.4	
	comp=Z,29nm,1.4s						
WHY	Whitehorse	16.95	52	P		22 07 11.3	
	baz=256,SNR=10						
EPYK	Eagle Plains	18.54	34		Pn	22 07 31.3	+0.8
EPYK	Eagle Plains	18.54	34	P		22 07 30.7	
	baz=236,SNR=41						
A21K	Barrow	18.57	6	P	P	22 07 29.9	-0.6
DLBC	Dease Lake	19.08	60	P	Pn	22 07 36.9	-0.2
	comp=Z,0.2nm,0.3s,baz=240,slow=16,SNR=4.3						
DLBC	Dease Lake	19.08	60	P	P	22 07 36.2	-0.1
INK	Inuvik	20.64	31	P	P	22 07 53.9	+0.7
	comp=Z,3.6nm,0.5s,baz=232,slow=12,SNR=18						
INK				S	S	22 11 32.4	-11
	comp=Z,0.5nm,0.8s,baz=247,slow=25,SNR=1.0						
INK	Inuvik	20.64	31	P	P	22 07 53.5	+0.4
INK	Inuvik	20.64	31	P		22 07 52.8	
	baz=237,SNR=5.8						
BILL	Bilibino	21.06	327	i P	P	22 07 58.6	+0.9
BILL				e		22 08 16.2	
BILL				ePPP	PPP	22 08 24.3	
BILL				pmax	pmax		
	comp=Z,21nm,2.5s						
BILL				MLR	MLR		
	comp=Z,279nm,19.0s						
BILL	Bilibino	21.06	327	P	P	22 07 57.1	-0.6
PEA0B	Petropavlovsk-	23.56	286	P	P	22 08 23.6	-0.6
PETK	Petropavlovsk-	23.56	286	P	P	22 08 23.8	-0.4
	comp=Z,10nm,0.8s,baz=83,slow=12,SNR=16						
PETK	Petropavlovsk-	23.56	286	P	P	22 08 23.6	-0.6
C36M	Paulatuk	24.16	33	P	P	22 08 30.3	+0.5
C36M				IAmb	IAmb	22 08 31.4	
	comp=Z,14nm,1.5s						
SEY	Seymchan	25.24	311	P	P	22 08 37.1	-2.5
	comp=Z,1.3nm,0.9s,baz=36,slow=16,SNR=2.2						
YKA	Yellowknife Ar	26.75	50	P	P	22 08 54.5	+1.2
	comp=Z,3.2nm,0.7s,baz=270,slow=9.4,SNR=64						
YKA				LR	LR	22 21 23.2	
	comp=Z,58nm,18.6s,baz=0.0,slow=41						
NEW	Newport	28.94	81	P	P	22 09 14.4	+1.4
	comp=Z,1.2nm,0.6s,baz=293,slow=8.4,SNR=3.1						
JTMT	Jette	30.87	80	P	P	22 09 30.3	+0.1
MSO	Missoula	31.52	81	P	P	22 09 35.9	0.0
MCMT	McKenzie Canyo	33.20	84	P	P	22 09 51.3	+0.4
BOZ	Bozeman (W)	33.52	82	P	P	22 09 53.6	0.0
BOZ				IAmb	IAmb	22 09 56.0	
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	33.70	98	P	P	22 09 55.2	-0.1
	comp=Z,1.2nm,0.7s,baz=304,slow=8.6,SNR=6.1						
NVAR	Mina Array Bea	33.70	98	P	P	22 09 55.1	-0.2
RES	Resolute Bay	34.02	26	P	P	22 09 58.0	+0.6
YHH	Holmes Hill	34.42	82	P	P	22 10 02.0	+0.4
YHH				IAmb	IAmb	22 10 03.6	
	comp=Z,2.7nm,0.7s						
FFC	Flin Flon	34.89	62	P	P	22 10 05.4	+0.2
FFC				IAmb	IAmb	22 10 06.8	
	comp=Z,6.3nm,1.2s						
RLMT	Red

NRIK LR LR 22 32 53.0
comp=Z,38nm,21.0s,baz=102,slow=37
NRIK Noril'sk 47.71 333↑ eP P 22 11 51.4 +1.3
NRIK pmax pmax
comp=Z,4.0nm,0.9s
NRIK Noril'sk 47.71 333 P P 22 11 50.8 +0.7
NRIK IAmb IAmb 22 11 52.1
comp=Z,3.5nm,0.8s
DAG Danmarks Havn 48.48 10 *i* P P 22 11 57.0 +0.9
DAG IAmb IAmb 22 11 57.5
comp=Z,4.6nm,0.6s
DAG Danmarks Havn 48.48 10 *i* P P 22 11 56.9 +0.9
DAG pmax pmax
comp=Z,5.0nm,0.6s
TX31 Lajitas Ar. Si 48.75 95 P P 22 11 58.1 -0.7
TXAR Lajitas Array 48.75 95 P P 22 11 59.3 +0.6
comp=Z,4.9nm,0.9s,baz=301,slow=7.0,SNR=17
TXAR Lajitas Array 48.75 95 P P 22 11 58.0 -0.7
SUMG Summit 48.90 19 *i* P P 22 12 01.0 +1.3
SUMG IAmb IAmb 22 12 03.5
comp=Z,7.8nm,0.8s
SUMG Summit 48.90 19 *i* P P 22 12 01.0 +1.3
SUMG pmax pmax
comp=Z,8.0nm,0.8s
SUMG Summit 48.90 19 P P 22 12 00.3 +0.6
KSRS Korea Array 49.28 281 P P 22 12 03.0 +0.3
comp=Z,2.1nm,0.9s,baz=52,slow=6.8,SNR=7.1
KSAR Wonju Array Be 49.31 281 P P 22 12 02.1 -0.7
ICESG Greenland Ices 51.29 23 *i* P P 22 12 18.3 +0.4
ICESG IAmb IAmb 22 12 19.7
comp=Z,8.7nm,0.8s
TLY Talaya 53.13 309 P P 22 12 31.9 +0.6
comp=Z,3.2nm,0.6s,baz=16,slow=7.5,SNR=7.4
TLY Talaya 53.13 309↑ eP P 22 12 32.5 +1.1
TLY pmax pmax
comp=Z,6.0nm,0.8s
TLY Talaya 53.13 309 P P 22 12 31.5 +0.1
TLY IAmb IAmb 22 12 33.2
comp=Z,5.0nm,0.7s
ULN Ulaanbaatar 54.00 304 *de*P P 22 12 38.1 +0.2
ULN pmax pmax
comp=Z,5.0nm,0.8s
SONM Songino Array 54.35 304 P P 22 12 41.1 +0.6
comp=Z,2.8nm,0.9s,baz=52,slow=7.7,SNR=14
SONM Songino Array 54.35 304 P P 22 12 40.7 +0.2
SONM IAmb IAmb 22 12 42.1
comp=Z,3.4nm,1.0s
HHC Hu-ho-hao-te 56.37 295 *e*P P 22 12 54.0 -1.1
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,87nm,5.5s
ARCES ARCESS Array B 57.60 357 P P 22 13 03.7 +0.4
comp=Z,3.7nm,0.9s,baz=21,slow=7.7,SNR=2.4
ARCES LR LR 22 38 58.6
comp=Z,20nm,18.1s,baz=310,slow=37
ZAA0 Zalesovo Array 59.56 321 P P 22 13 17.4 +0.3
ZAA0 IAmb IAmb 22 13 28.7
comp=Z,3.0nm,1.1s
ZALV Zalesovo Beam 59.56 321 P P 22 13 17.9 +0.7
comp=Z,1.1nm,0.5s,baz=40,slow=5.8,SNR=7.2
ZALV LR LR 22 39 25.2
comp=Z,30nm,18.5s,baz=284,slow=36
ZALV Zalesovo Beam 59.56 321 P P 22 13 17.4 +0.3
DGZ Jazzator, Alta 61.76 316↓ eP P 22 13 33.0 +0.6
DGZ pmax pmax
comp=Z,3.0nm,1.3s
GTA Gaotai 63.68 301 P P 22 13 45.5 +0.2
GTA pP pwP 22 13 55.8 +0.4
GTA sP sP 22 14 00.5 +14
GTA pmax pmax
comp=Z,3.0nm,1.3s
KURK Kurchatov 64.46 322 P P 22 13 51.2 +1.1
KURBB Kurchatov Arra 64.56 322 P P 22 13 51.2 +0.4
comp=Z,3.7nm,1.1s,baz=35,slow=6.4,SNR=13
SVE Sverdlovsk 64.89 335 *e*P P 22 13 53.7 +0.9
SVE pmax pmax
comp=Z,14nm,1.0s
KLMR Klimovskoe 65.08 348 *e*P P 22 13 52.5 -1.5
KLMR pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 65.08 348 *e*P P 22 13 52.5 -1.5
KLMR AMP 22 13 54.8
comp=Z,9.0nm,1.0s
BVAR Borovoye Array 65.40 328 P P 22 13 57.0 +0.8
comp=Z,3.3nm,1.0s,baz=78,slow=8.2,SNR=8.9
BRVK Borovoye 65.41 328 *de*P P 22 13 56.8 +0.6
BRVK pmax pmax
comp=Z,5.0nm,1.3s
BRVK Borovoye 65.41 328 P P 22 13 56.6 +0.4
FIA1 FINESS Array S 65.66 355 P P 22 13 58.0 +0.3
FINES FINESS Array B 65.66 355 P P 22 13 58.1 +0.4
comp=Z,6.1nm,0.9s,baz=23,slow=10,SNR=9.1
FINES LR LR 22 42 42.3
comp=Z,24nm,20.6s,baz=304,slow=36
KIRV Kirov 65.73 342 *de*P P 22 13 58.4 +0.2
ARU Arti 65.76 336 P P 22 13 59.1 +0.6
comp=Z,1.7nm,0.7s,baz=359,slow=2.5,SNR=8.7
ARU Arti 65.76 336 *d* *i*P P 22 13 58.9 +0.4
ARU 22 14 28.3
ARU S S 22 22 46.4 +2.1
ARU SS SS 22 26 55.7 -1.9
ARU pmax pmax
comp=Z,11nm,1.1s
ARU Arti 65.76 336 P P 22 13 58.8 +0.4
MK31 Makanchi Array 66.17 317↑ eP P 22 14 01.3 0.0
MK31 Makanchi Array 66.17 317 P P 22 14 01.6 +0.2
MKAR Makanchi Array 66.17 317 P P 22 14 01.4 +0.1
comp=Z,1.2nm,0.7s,baz=46,slow=6.2,SNR=13
MKAR LR LR 22 43 50.9
comp=Z,32nm,21.3s,baz=338,slow=37
MKAR Makanchi Array 66.17 317 P P 22 14 01.2 -0.2
NOA NORSAR Array B 66.18 3 P P 22 14 02.0 +0.9
comp=Z,2.0nm,0.8s,baz=357,slow=6.5,SNR=4.6
NOA LR LR 22 44 46.3
comp=Z,14nm,18.1s,baz=310,slow=38
WMQ Urumqi 66.20 312 *e*P P 22 14 03.8 +2.2
MAKZ Makanchi 66.29 317 P P 22 14 01.9 -0.1
MAKZ IAmb IAmb 22 14 07.1
comp=Z,3.9nm,1.3s
AFI Afiamalu 67.11 190 P P 22 14 04.9 -2.6
OBN Obninsk 71.05 348↓ eP P 22 14 31.2 -0.3
OBN *e* 22 14 51.3
OBN *e* 22 17 06.7
OBN *e*PPP PPP 22 18 50.6
OBN pmax pmax
comp=Z,30nm,2.5s
OBN MLR MLR
comp=Z,30nm,15.0s
PPT2 Papeete2 71.24 167 *e*LR LR 22 36 12.9
comp=Z,69nm,22.0s
AKTO Aktyubinsk 71.33 334 P P 22 14 33.8 +0.4
comp=Z,6.9nm,0.8s,baz=18,slow=4.1,SNR=19
PABE Paberze 71.69 356 P P 22 14 35.9 +0.5
ABKAR Akbulak array 71.87 332 P P 22 14 37.0 +0.4
ABKAR IAmb IAmb 22 14 38.6
comp=Z,5.5nm,0.9s
NACGM Naroch 72.15 354 *i* P P 22 14 33.0 -5.1
NACGM *i* P P 22 14 33.0 -5.1
NACGM *i* P P 22 14 33.0 -5.1
NACGM *i* PcP **PcP** 22 14 56.9 +0.4
NACGM *i* PP PP 22 17 02.3 -15
NACGM *i* PPP PPP 22 18 43.3
NACGM *i* S **S** 22 23 55.4 -4.6
NACGM *i* PS **PnS** 22 24 29.0 0.0
NACGM *i* SS SS 22 28 12.4 -24
NACGM *i* SSS SSS 22 31 05.3
NACGM *i* LQ LQ 22 42 15.4
NACGM *i* LR LR 22 47 32.8
BOOM Boomskoye usch 72.29 318 P P 22 14 39.9 +0.5
BOOM IAmb IAmb 22 14 41.0
comp=Z,2.4nm,0.8s
AAK Ala-Archa 72.74 319 P P 22 14 43.0 +0.9
comp=Z,3.2nm,0.8s,baz=129,slow=2.5,SNR=13
AAK Ala-Archa 72.74 319↓ *i*P P 22 14 43.1 +0.9
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 72.74 319 P P 22 14 42.8 +0.6
AAK IAmb IAmb 22 14 44.2
comp=Z,4.0nm,0.9s
KK31 Karatay Array 73.86 322 P P 22 14 48.8 +0.2
KK31 IAmb IAmb 22 14 50.0
comp=Z,3.3nm,0.9s
KSH Kashi 74.78 317 P P 22 14 58.0 +3.9
KSH pmax pmax
comp=Z,3.0nm,1.1s
KSH pmax pmax
comp=Z,81nm,4.2s
CLL Collm 75.98 3 *e*P P 22 15 01.0 +0.4
comp=Z,4.0nm,1.1s
CLL Collm 75.98 3 *e*P P 22 15 01.0 +0.4
CLL pmax pmax
comp=Z,4.0nm,1.1s
AKASG Malin Array Be 76.16 352 P P 22 15 01.5 -0.1
comp=Z,4.2nm,0.7s,baz=11,slow=5.8,SNR=19
AKBB Malin Array Si 76.16 352↓ *i*P P 22 15 01.3 -0.3
AKBB pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 76.16 352 P P 22 15 01.3 -0.3
DRK Karamyk 76.49 320 P P 22 15 04.2 +0.1
DRK IAmb IAmb 22 15 18.6
comp=Z,6.2nm,1.1s
TBI Tubuai 76.92 167 *e*LR LR 22 38 24.9
comp=Z,63nm,33.5s
GAR Garm 77.48 320 P P 22 15 09.5 0.0
KWP Kalwaria Pacla 77.61 356 P P 22 15 10.5 +0.6
KHC Kasperske Hory 78.17 2↑ *i*P P 22 15 14.5 +1.4
KHC pmax pmax
comp=Z,13nm,1.6s
LANS Liptovska Anna 78.18 359 *e*P P 22 15 15.1 +2.0
LANS pmax pmax
comp=Z,3.0nm,0.9s
LANS Liptovska Anna 78.18 359 *e*P P 22 15 15.1 +2.0
GERES GERESS Array B 78.46 2 P P 22 15 15.6 +0.9
comp=Z,0.6nm,0.7s,baz=20,slow=4.3,SNR=4.8
CONA Conrad Observa 79.42 1 *e*P P 22 15 21.8 +1.9
comp=Z,5.5nm,1.2s
BUR08 Bucovina Ar. S 79.48 355 P P 22 15 20.9 +0.5
BUR08 IAmb IAmb 22 15 32.6
comp=Z,5.3nm,1.1s
RKT Rikitea 79.58 154 *e*LR LR 22 40 04.1
comp=Z,1μm,39.5s
GOF Gofitskoye 79.82 342↑ *e*P P 22 15 23.6 +1.5
GOF pmax pmax
comp=Z,25nm,0.9s
MOTA Moosalm 79.87 4 *e*P P 22 15 23.9 +1.3
comp=Z,6.1nm,1.3s
WATA Walderalm 79.90 4 *e*P P 22 15 24.2 +1.5
comp=Z,5.1nm,1.1s
WTTA Wattenberg 79.97 4 *e*P P 22 15 24.8 +1.6
comp=Z,7.4nm,1.5s
SQTA Sankt Quirin 80.00 4 *e*P P 22 15 24.8 +1.6
comp=Z,5.1nm,0.8s
ARSA Arzberg 80.09 1 *e*P P 22 15 25.5 +2.0
comp=Z,5.9nm,1.4s
FETA Feichten 80.18 5 *e*P P 22 15 25.9 +1.7
comp=Z,3.2nm,1.1s
KBA Koelnbreinsper 80.22 3 *e*P P 22 15 26.5 +2.0
comp=Z,11nm,1.3s
CMAR Chiang Mai Arr 80.33 288 P P 22 15 25.3 +0.1
comp=Z,1.2nm,0.3s,baz=25,slow=4.4,SNR=8.6
SOKA Soboth 80.66 2 *e*P P 22 15 28.4 +1.7
comp=Z,6.9nm,1.1s
OBKA Obir 80.82 2 *i*P P 22 15 29.1 +1.5
comp=Z,7.3nm,0.8s
NIL Nilore 80.92 316 P P 22 15 28.1 -0.1
NIL IAmb IAmb 22 15 30.1
comp=Z,6.3nm,0.8s
KIV Kislovodsk 80.95 342 *e*P P 22 15 29.3 +1.0
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,67nm,19.0s
KIV Kislovodsk 80.95 342 P P 22 15 28.9 +0.6
KIV IAmb IAmb 22 15 30.6
comp=Z,7.7nm,1.1s
KBZ Khabaz 81.13 341 P P 22 15 30.5 +1.4
comp=Z,3.4nm,0.9s,baz=337,slow=2.6,SNR=7.7
KBZ LR LR 22 55 29.9
comp=Z,21nm,18.9s,baz=1.5,slow=39
KBZ Khabaz 81.13 341↓ *e*P P 22 15 30.3 +1.2
KBZ pmax pmax
comp=Z,6.0nm,1.1s
NCK Nalchik 81.22 341↑ *e*P P 22 15 31.9 +2.2
NCK pmax pmax
comp=Z,12nm,0.6s
TEOL Teolo 81.88 4 P P 22 15 34.0 +0.9
BNI Bardonecchia 81.88 8 P P 22 15 34.7 +1.4
BNI IAmb IAmb 22 15 36.0
comp=Z,4.4nm,1.0s
GEYT Alibeck 82.72 329 P P 22 15 38.5 +0.8
comp=Z,2.8nm,0.9s,baz=266,slow=5.9,SNR=4.5
DIVS Divibare 83.23 358 P P 22 15 40.6 +0.3
DIVS IAmb IAmb 22 15 42.2
comp=Z,3.6nm,1.1s
GNI Garni 84.20 339 P P 22 15 47.8 +2.4
comp=Z,2.5nm,0.8s,baz=360,slow=11,SNR=3.8
GNI Garni 84.20 339 *d* *i*P P 22 15 47.3 +1.9
GNI pmax pmax
comp=Z,4.0nm,1.0s
ESDC Sonseca Array 85.86 16 P P 22 15 53.8 +0.2
comp=Z,1.6nm,0.9s,baz=342,slow=4.8,SNR=12
ESDC LR LR 22 58 37.1
comp=Z,23nm,18.5s,baz=235,slow=39
FNA Florina 86.50 357 P P 22 15 56.4 -0.3
FNA IAmb IAmb 22 15 57.9
comp=Z,3.7nm,0.8s
BR131 Keskin Array S 86.54 347 P P 22 15 57.2 +0.1
BRTR Keskin Array B 86.54 347 P P 22 15 58.2 +1.1
comp=Z,1.9nm,0.8s,baz=58,slow=7.5,SNR=5.1
BRTR Keskin Array B 86.54 347 P P 22 15 57.0 -0.1
KEST Kesra 91.34 6 P P 22 16 20.6 +0.8
comp=Z,2.4nm,0.9s,baz=349,slow=5.3,SNR=3.6

*IDC **25** 22:10:03.3±0.8,2°.05N×128°.83E, h0km, mb3.7/11, mb1 3.8/12, mb1mx3.7/44, mbtmp3.7/12, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/27, Error ellipse: s-maj=44.5km s-min=14.7km az=75.0*
*DJA **25** 22:10:06.7±0.6,2°.N±7°×12°.9E±°, h10km, M4.1/7, mb4.5/2, mB5.3/1, MLv4.0/7, Mw(mB)4.7/1*
ISC 25 22:10:08.7±0.7,2°.06N±0°.08×129°.17E±0°.07, h40km, n18, σ1§46/21, mb3.8/10, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.21**	**235**	P		P	**Pn**	**22 10 42.0**	**-0.9**
SWI	**Sorong**	**3.57**	**144**	P		P	**Pn**	**22 11 00.3**	**-1.3**
SWI				S		S	**Sn**	**22 11 42.6**	**0.0**
SIJI	**Sorong**	**3.58**	**144**	P	n	P	**Pn**	**22 11 02.1**	**+0.4**
	4.0nm,0.3s,baz=152,slow=21,SNR=10								
SIJI				Sn			**Sn**	**22 11 44.4**	**+1.5**
	7.0nm,0.3s,baz=90,slow=22,SNR=14								
SIJI				LR		LR		22 12 32.9	
	comp=Z,113nm,21.0s,baz=314,slow=40								
SGSI	**Sangihe**	**3.98**	**294**	P		P	**Pn**	**22 11 05.5**	**-1.7**
SGSI				S		S	**Sn**	**22 11 56.6**	**+3.9**
KMSI	**Cibinong**	**5.39**	**254**	P		P	**Pn**	**22 11 25.4**	**-1.3**
	0.5nm3μm138nm,0.8s								
GTOI	**Gorontalo**	**6.32**	**257**	P		P	**Pn**	**22 11 38.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**20.33**	**190**	P		P	**Pn**	**22 14 39.6**	**-2.0**
	1.1nm,0.6s,baz=4.8,slow=12,SNR=1.7								
WRA	**Warramunga Arr**	**22.44**	**167**	P		P		**22 15 05.1**	**+0.7**
	0.9nm,0.5s,baz=345,slow=11,SNR=8.7								
ASAR	**Alice Springs**	**25.98**	**170**	P		P		**22 15 39.0**	**+1.2**
	0.3nm,0.4s,baz=354,slow=8.7,SNR=3.8								
KSRS	**Korea Array**	**35.24**	**358**	P		P		**22 16 59.1**	**-0.3**
	0.6nm,0.6s,baz=187,slow=9.4,SNR=2.6								
MJAR	**Matsushiro Arr**	**35.32**	**13**	P		P		**22 17 00.2**	**+0.2**
	0.5nm,0.4s,baz=177,slow=10,SNR=2.6								
STKA	**Stephens Creek**	**35.75**	**162**	P		P		**22 17 05.1**	**+1.2**
	1.3nm,0.6s,baz=326,slow=10,SNR=2.0								
USRK	**Ussuriysk Ar.**	**42.04**		3	P	P		**22 17 58.1**	**+1.8**
	1.4nm,0.8s,baz=212,slow=13,SNR=2.9								
SONM	**Songino Array**	**49.67**	**340**	P		P		**22 18 56.6**	**0.0**
	0.4nm,0.5s,baz=157,slow=10,SNR=3.6								
MKAR	**Makanchi Array**	**60.31**	**325**	P		P		**22 20 12.7**	**-0.8**
	1.0nm,0.7s,baz=119,slow=8.4,SNR=11								
ZALV	**Zalesovo Beam**	**63.18**	**332**	P		P		**22 20 31.1**	**-1.4**
	0.5nm,0.4s,baz=108,slow=4.7,SNR=2.0								
GEYT	**Alibeck**	**73.83**	**309**	P		P		**22 21 39.3**	**-0.2**
	1.0nm,0.4s,baz=80,slow=16,SNR=2.4								
TORD	**Torodi Ar. Bea**	**125.75**	**288**	PKP		**PKPdf**		**22 29 06.8**	**-0.3**
	0.3nm,0.7s,baz=72,slow=1.6,SNR=2.3								

*IDC **25** 22:11:08.4±1.1,16°.45N×98°.29W, h0km, mb4.1/10, mb1 4.3/14, mb1mx4.0/45, mbtmp4.0/14, ML3.6/4, MS3.6/16, Ms1 3.6/16, ms1mx3.5/36, Error ellipse: s-maj=35.9km s-min=16.5km az=52.0*

*NEIC **25** 22:11:10.3±1.7, 16°.51N±0°.05×98°.38W±0°.07, h10km±1km, Error ellipse: s-maj=11.2km s-min=9.0km az=249.0*
*MEX **25** 22:11:12.3±1.3, 16°.44N×98°.38W, h15km±6km, MD4.3*
ISC 25 22:11:10.3±0.9, 16°.50N±0°.03×98°.37W±0°.03, h13km±6km, n172, σ1§38/190, mb4.4/40, MS3.5/12, 4D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.25**	**114**	*e*P			**Pb**	**22 11 16.8**	**+0.1**
	baz=282,slow=12								
PNIG				*e*S			**Sb**	**22 11 21.0**	**0.0**
PNIG	**Pinotepa**	**0.25**	**114**				**Pb**	**22 11 16.8**	**+0.1**
PNIG							**Sb**	**22 11 21.0**	**0.0**
CRIG	**Cruz Grande**	**0.77**	**288**	*e*P			**Pg**	**22 11 24.7**	**-0.6**
CRIG				*e*P			**Pb**	**22 11 25.2**	**-0.4**
YOIG	**Yosondua**	**0.87**	**65**	*i* P			**Pg**	**22 11 26.6**	**-0.5**
YOIG				*i* S			**Sg**	**22 11 38.0**	**-0.5**
TXIG	**Tlaxiaco**	**0.95**	**37**	*e*P			**Pg**	**22 11 28.2**	**-0.5**
TXIG				*i* S			**Sg**	**22 11 40.5**	**-0.6**
TLIG	**Tlapa**	**1.08**	**350**				**Pb**	**22 11 29.9**	**-0.9**
TLIG							**Sb**	**22 11 43.7**	**-1.2**
HLIG	**Huajuapan de L**	**1.43**	**22**	*e*P			**Pn**	**22 11 35.7**	**-0.5**
HLIG				*i* S			**Sn**	**22 11 53.1**	**-1.9**
ACP2	**Acapulco**	**1.50**	**285**	*e*P			**Pn**	**22 11 34.6**	**-2.3**
ACP2				*e*S			**Sn**	**22 11 55.7**	**-0.7**
VHO	**Vista Hermosa**	**1.67**	**70**	*e*P			**Pn**	**22 11 38.8**	**-0.6**
VHO				*i* S			**Sn**	**22 11 57.9**	**-2.9**
MEIG	**Mezcala**	**1.86**	**320**	*e*P			**Pn**	**22 11 41.6**	**-0.2**
MEIG				*e*S			**Sn**	**22 12 00.5**	**-4.8**
MEIG	**Mezcala**	**1.86**	**320**				**Pn**	**22 11 41.6**	**-0.2**
TOIG	**Toxpalan**	**2.02**	**38**	*i* P			**Pn**	**22 11 43.0**	**-1.2**
TOIG				*i* S			**Sn**	**22 12 07.1**	**-2.2**
TPIG	**Tehuac#an**	**2.14**	**26**	*e*P			**Pn**	**22 11 46.2**	**+0.4**
TPIG				*i* S			**Sn**	**22 12 06.8**	**-5.6**
TPIG	**Tehuac#an**	**2.14**	**26**				**Pn**	**22 11 46.2**	**+0.4**
PLIG	**Platanillo**	**2.18**	**330**	*e*P			**Pn**	**22 11 46.0**	**-0.2**
PLIG				*e*S			**Sn**	**22 12 08.1**	**-5.0**
PLIG	**Platanillo**	**2.18**	**330**				**Pn**	**22 11 48.0**	**+1.8**
HUIG	**Huatulco**	**2.29**	**108**	*i* P			**Pn**	**22 11 46.6**	**-1.1**
HUIG				*i* S			**Sn**	**22 12 13.0**	**-2.8**
YAIG	**Yautepec**	**2.45**	**344**	*e*P			**Pn**	**22 11 51.7**	**+1.6**
YAIG	**Yautepec**	**2.45**	**344**				**Pn**	**22 11 51.7**	**+1.6**
PPM	**Popocatepetl**	**2.57**	**355**	*e*P			**Pn**	**22 11 52.9**	**+0.9**
PPM				*e*S			**Sg**	**22 12 31.0**	**-2.0**
AMVM	**AMECAMECA**	**2.65**	**351**	*e*P			**Pb**	**22 11 56.5**	**-1.4**
AMVM				*i* S			**Sb**	**22 12 33.0**	**+2.6**
MAVM	**Malinalco, Edo**	**2.67**	**336**	*e*P			**Pb**	**22 11 56.6**	**-1.6**
MAVM				*e*S			**Sb**	**22 12 31.6**	**+0.7**
UNM	**Universidad Na**	**2.92**	**345**				**Pn**	**22 11 57.2**	**+0.5**
CVM	**Colonia del Va**	**2.97**	**345**	*e*P			**Pb**	**22 12 05.2**	**+2.1**
CVM				*e*S			**Sb**	**22 12 40.9**	**+1.6**
PBVM	**Pinon**	**3.01**	**347**	*e*P			**Pb**	**22 12 01.3**	**-2.4**
PBVM				*i* S			**Sn**	**22 12 34.2**	**+0.6**
TOVM	**TOLUCA**	**3.04**	**336**	*e*P			**Pn**	**22 11 59.0**	**+0.6**
TOVM				*e*S			**Sn**	**22 12 36.7**	**+1.9**
TOVM				*i* S			**Sb**	**22 12 42.8**	**+1.2**
PTVM	**Pico Tres Padr**	**3.16**	**347**	*e*P			**Pn**	**22 12 01.4**	**+1.4**
PTVM				*i* S			**Sn**	**22 12 36.8**	**-0.9**
ZIIG	**Zihuatanejo**	**3.16**	**291**	*e*P			**Pn**	**22 11 59.3**	**-0.4**
ZIIG				*e*S			**Sn**	**22 12 37.1**	**-0.2**
ZIIG	**Zihuatanejo**	**3.16**	**291**				**Pn**	**22 11 59.3**	**-0.4**
ZIIG							**Sb**	**22 12 47.1**	**+2.3**
VTVM	**Tizayuca**	**3.28**	**353**	*e*P			**Pn**	**22 12 05.3**	**+3.6**
VTVM				*i* S			**Sn**	**22 12 40.7**	**0.0**
ZUVM	**ZUMPANGO**	**3.38**	**349**	*e*P			**Pn**	**22 12 02.6**	**-0.4**
ZUVM				*i* S			**Sn**	**22 12 42.9**	**-0.2**
CMIG	**Matias Romero**	**3.39**	**79**	Pn			**Pn**	**22 12 02.5**	**-0.3**
	8.7nm,0.3s,baz=259,slow=11,SNR=90								
CMIG						Sn	**Sn**	**22 12 39.2**	**-3.8**
	42nm,0.3s,baz=202,slow=22,SNR=7.4								
CMIG						Lg	Lg	22 12 56.6	
	138nm,0.3s,baz=3.0,slow=22,SNR=18								
ATVM	**ATLACOMULCO**	**3.54**	**337**	*e*P			**Pn**	**22 12 08.0**	**+2.7**
ATVM				*e*S			**Sn**	**22 12 51.6**	**+4.5**
MOIG	**Morelia**	**4.15**	**320**				**Pn**	**22 12 14.6**	**+1.1**
PCIG		**5.01**	**98**	*e*P			**Pn**	**22 12 27.3**	**+2.1**
TGIG		**5.04**	**86**	*e*P			**Pn**	**22 12 26.2**	**+0.6**
TGIG				*e*S			**Sn**	**22 13 23.4**	**-0.3**
MMIG	**Aquila**	**5.08**	**291**	*e*P			**Pn**	**22 12 26.4**	**+0.3**
MMIG				*e*S			**Sn**	**22 13 23.1**	**-1.4**
MMIG	**Aquila**	**5.08**	**291**				**Pn**	**22 12 26.4**	**+0.3**
CCIG	**Comitan**	**5.98**	**91**				**Pn**	**22 12 40.4**	**+1.7**
HUEH	**Huehuetenango**	**6.71**	**99**	Pn			**Pn**	**22 12 50.5**	**+1.7**
ZAIG	**Zacatecas**	**7.39**	**328**	Pn			**Pn**	**22 12 59.5**	**+1.3**
APG	**El Apazote**	**7.75**	**100**	Pn			**Pn**	**22 13 05.9**	**+2.8**
	1.3nm,0.3s,baz=270,slow=16,SNR=1.6								
APG						Sn	**Sn**	**22 14 29.2**	**-1.7**
	1.4nm,0.3s,baz=15,slow=15,SNR=1.7								
APG						Lg	Lg	22 15 11.4	
	2.7nm,0.3s,baz=56,slow=22,SNR=1.7								
PETF	**Flores**	**8.16**	**86**				**Pn**	**22 13 08.8**	**+0.4**
MTO3	**Montecristo**	**8.93**	**102**	Pn			**Pn**	**22 13 21.8**	**+2.6**
TEIG	**Tepich**	**10.27**	**67**	Pn			**Pn**	**22 13 37.4**	**0.0**
	2.4nm,0.3s,baz=88,slow=20,SNR=2.6								
TEIG						Sn	Sn	22 15 21.2	-11
	0.8nm,0.3s,baz=286,slow=23,SNR=1.2								
TEIG						LR	LR	22 18 23.3	
	comp=Z,584nm,19.1s,baz=284,slow=42								
CRIN	**San Cristobal**	**11.59**	**108**	Pn			**Pn**	**22 13 57.0**	**+1.5**
LPIG	**La Paz**	**13.51**	**306**	LR			LR	22 19 10.7	
	comp=Z,378nm,18.4s,baz=144,slow=36								
TX32	**Lajitas Array**	**13.68**	**340**				**Pn**	**22 14 24.9**	**+0.8**
TXAR	**Lajitas Array**	**13.68**	**340**	Pn			**Pn**	**22 14 26.8**	**+2.7**
	0.0nm,0.3s,baz=155,slow=16,SNR=7.0								
TXAR						Lg	Lg	22 18 23.4	
	0.0nm,0.3s,baz=45,slow=55,SNR=2.0								
TXAR						LR	LR	22 20 29.3	
	comp=Z,528nm,19.0s,baz=0.0,slow=41								
TXAR	**Lajitas Array**	**13.68**	**340**				**Pn**	**22 14 25.5**	**+1.4**
ORTG	**Ortega, Santa**	**13.95**	**114**				**Pn**	**22 14 30.3**	**+2.4**
JCT	**Junction City**	**13.98**	**355**				**Pn**	**22 14 28.5**	**+0.3**
435B	**Jarrell**	**14.24**	**3**				**Pn**	**22 14 32.3**	**+0.6**
JTS	**Las Juntas de**	**14.43**	**114**	Pn			**P**	**22 14 38.9**	**-2.3**
	0.7nm,0.3s,baz=0.0,slow=20,SNR=2.1								
JTS						LR	LR	22 18 15.7	
	comp=Z,16nm,18.2s,baz=30,slow=30								
JTS	**Las Juntas de**	**14.43**	**114**	Pn			**Pn**	**22 14 36.9**	**+2.6**
NATX	**Nacogdoches**	**15.57**	**12**				**Pn**	**22 14 48.9**	**-0.6**
NATX						IAmb	IAmb	22 15 03.5	
	comp=Z,30nm,0.9s								
ABTX	**Abilene, Hawle**	**16.10**	**356**				**Pn**	**22 14 57.9**	**+1.5**
ABTX						IAmb	IAmb	22 15 03.7	
	comp=Z,59nm,1.4s								
MNTX	**Cornudas Mount**	**16.43**	**338**				**Pn**	**22 15 01.1**	**+0.5**
Z35A	**Perchaven, San**	**16.79**	**3**				**Pn**	**22 15 06.2**	**+1.0**
Z35A						IAmb	IAmb	22 15 17.3	
	comp=Z,25nm,0.9s								
HSIG		**17.01**	**319**				**P**	**22 15 09.1**	**-0.7**
VBMS	**Vicksburg**	**17.20**	**23**	P			**P**	**22 15 11.5**	**-0.3**
VBMS						IAmb	IAmb	22 15 15.9	
	comp=Z,28nm,0.7s								
319A	**Douglas**	**17.84**	**328**				**Pn**	**22 15 18.8**	**+0.4**
MSTX	**Muleshoe**	**17.85**	**348**	P			**Pn**	**22 15 18.0**	**-0.4**
121A	**Cookes Peak, D**	**18.10**	**334**	Pn			**Pn**	**22 15 21.5**	**-0.2**
X37A	**Clayton**	**18.22**	**8**	P			**Pn**	**22 15 22.7**	**-0.2**
X37A						IAmb	IAmb	22 15 35.1	
	comp=Z,30nm,1.1s								
MIAR	**Mount Ida**	**18.48**	**13**	P			**P**	**22 15 26.3**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**18.85**	**2**	P			**P**	**22 15 30.4**	**+0.3**
BNM	**Barren Site**	**19.09**	**339**	P			**P**	**22 15 32.9**	**0.0**
BCOK	**Bluff Creek, N**	**19.10**	**2**	P			**P**	**22 15 33.0**	**+0.3**
TUC	**Tucson**	**19.36**	**327**	P			**P**	**22 15 36.3**	**+0.6**
QUOK	**Quay**	**19.65**	**4**	P			**P**	**22 15 39.0**	**+0.2**
QUOK						IAmb	IAmb	22 15 50.4	
	comp=Z,18nm,1.0s								
ANMO	**Albuquerque**	**19.75**	**340**	P			**P**	**22 15 40.8**	**+0.7**
	comp=

X48A	**Hartselle**	**20.57**	**28**	P	**P**	**22 15 47.7**	**-1.1**
X48A				IAmb	IAmb	22 15 58.8	
	comp=Z,14nm,1.0s						
PLAL	**Pickwick Lake**	**20.59**	**25**	P	**P**	**22 15 48.5**	**-0.4**
PLAL				IAmb	IAmb	22 15 59.2	
	comp=Z,28nm,1.3s						
T25A	**Trinidad**	**21.25**	**347**	P	**P**	**22 15 57.0**	**+0.6**
T25A				IAmb	IAmb	22 16 03.1	
	comp=Z,12nm,0.8s						
SPX	**San Pedro Mart**	**21.27**	**316**	P	**P**	**22 15 58.5**	**+1.7**
SPX				IAmb	IAmb	22 16 01.0	
	comp=Z,31nm,1.4s						
Y52A	**Lilburn**	**21.56**	**34**	P	**P**	**22 15 59.0**	**-0.5**
S39A	**Bolivar**	**21.58**	**11**	P	**P**	**22 16 00.2**	**+0.5**
WVT	**Waverly**	**21.69**	**24**	P	**P**	**22 16 00.8**	**0.0**
WVT				IAmb	IAmb	22 16 09.1	
	comp=Z,14nm,0.8s						
R32A	**Long Quarter,**	**21.85**	**359**	P	**P**	**22 16 02.7**	**+0.1**
R32A				IAmb	IAmb	22 16 15.2	
	comp=Z,21nm,1.1s						
W50A	**Signal Mountai**	**21.98**	**30**	P	**P**	**22 16 03.8**	**-0.3**
SDCO	**Great Sand Dun**	**22.08**	**345**	P	**P**	**22 16 05.0**	**-0.4**
WUAZ	**Wupatki**	**22.22**	**331**	P	**P**	**22 16 07.4**	**+0.7**
WUAZ				IAmb	IAmb	22 16 18.8	
	comp=Z,16nm,0.9s						
CCM	**Cathedral Cave**	**22.38**	**15**	P	**P**	**22 16 08.8**	**+0.6**
CCM				IAmb	IAmb	22 16 21.9	
	comp=Z,16nm,0.9s						
MVCO	**Mesa Verde**	**22.50**	**338**	P	**P**	**22 16 09.7**	**-0.1**
MVCO				IAmb	IAmb	22 16 13.0	
	comp=Z,18nm,1.0s						
HODGE	**Hodges**	**22.83**	**36**	P	**P**	**22 16 12.5**	**-0.6**
HODGE				IAmb	IAmb	22 16 22.1	
	comp=Z,19nm,1.1s						
TKL	**Tuckaleechee C**	**23.10**	**32**	LR	LR	22 26 06.4	
	comp=Z,22nm,20.2s,baz=252,slow=39						
W13A	**Hualapai Mount**	**23.15**	**326**	P	**P**	**22 16 17.7**	**+1.1**
PV01	**Paradox Valley**	**23.35**	**339**	P	**P**	**22 16 19.0**	**+0.3**
PV01				IAmb	IAmb	22 16 22.5	
	comp=Z,16nm,1.4s						
U15A	**North Rim**	**23.39**	**331**	P	**P**	**22 16 19.2**	**+0.1**
U15A				IAmb	IAmb	22 16 23.1	
	comp=Z,15nm,1.1s						
JSC	**Jenkinsville**	**23.44**	**38**	P	**P**	**22 16 20.5**	**+1.1**
JSC				IAmb	IAmb	22 16 26.3	
	comp=Z,16nm,1.1s						
PFO	**Pinyon Flats O**	**23.58**	**320**	LR	LR	22 25 36.0	
	comp=Z,205nm,21.0s,baz=186,slow=37						
SMCO	**Snowmass**	**23.82**	**343**	P	**P**	**22 16 24.1**	**+0.7**
SMCO				IAmb	IAmb	22 16 28.1	
	comp=Z,12nm,1.1s						
ISCO	**Idaho Springs**	**24.06**	**346**	P	**P**	**22 16 26.0**	**+0.4**
ISCO				IAmb	IAmb	22 16 28.6	
	comp=Z,8.7nm,0.8s						
KNB	**Kanab**	**24.11**	**331**	P	**P**	**22 16 27.0**	**+1.0**
KNB				IAmb	IAmb	22 16 38.4	
	comp=Z,11nm,0.9s						
N38A	**Joes South For**	**24.62**	**9**	P	**P**	**22 16 29.2**	**-1.1**
CCUT	**Cedar City**	**24.80**	**331**	P	**P**	**22 16 33.5**	**+1.2**
MSU	**Marysvale**	**25.06**	**334**	P	**P**	**22 16 36.5**	**+1.9**
TMUT	**Trail Mountain**	**25.34**	**336**	P	**P**	**22 16 37.8**	**+0.6**
PHWY	**Pilot Hill**	**25.47**	**348**	P	**P**	**22 16 38.1**	**-0.2**
PSUT	**Pine Spring**	**25.82**	**331**	P	**P**	**22 16 42.0**	**+0.5**
P49A	**Miami Univ. Ec**	**25.86**	**25**	P	**P**	**22 16 40.8**	**-0.8**
RDMU	**Red Mountain**	**25.88**	**340**	P	**P**	**22 16 42.6**	**+0.5**
RDMU				IAmb	IAmb	22 16 47.5	
	comp=Z,11nm,1.1s						
SDDR	**Presa de Saban**	**25.90**	**80**	P	**P**	**22 16 42.6**	**+0.3**
Q51A	**Peebles**	**26.01**	**27**	P	**P**	**22 16 42.8**	**-0.2**
R53A	**Hurricane**	**26.10**	**30**	P	**P**	**22 16 44.5**	**+0.7**
NLU	**North Lily Min**	**26.24**	**336**	P	**P**	**22 16 45.3**	**-0.1**
NLU				IAmb	IAmb	22 16 56.9	
	comp=Z,6.1nm,0.9s						
SPR3	**Spring Creek 3**	**26.42**	**331**	P	**P**	**22 16 47.1**	**0.0**
SPR3				IAmb	IAmb	22 16 58.2	
	comp=Z,10nm,1.4s						
Q52A	**Bidwell**	**26.45**	**29**	P	**P**	**22 16 46.8**	**-0.1**
DUG	**Dugway, Tooele**	**26.74**	**335**	P	**P**	**22 16 49.9**	**+0.1**
TCUT	**Toone Canyon**	**27.00**	**338**	P	**P**	**22 16 52.7**	**+0.5**
TCUT				IAmb	IAmb	22 17 04.5	
	comp=Z,9.2nm,1.0s						
ECSD	**EROS Data Cent**	**27.19**	**3**	P	**P**	**22 16 54.7**	**+1.1**
PD31	**Pinedale Array**	**27.88**	**342**	P	**P**	**22 16 60.0**	**-0.1**
PDAR	**Pinedale Array**	**27.88**	**342**	P	**P**	**22 17 00.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=128,slow=8.3,SNR=9.6						
PDAR				LR	LR	22 29 07.2	
	comp=Z,125nm,20.0s,baz=164,slow=39						
PDAR	**Pinedale Array**	**27.88**	**342**	P	**P**	**22 16 60.0**	**-0.1**
NV11	**Mina Array Sit**	**27.91**	**325**	P	**P**	**22 17 00.9**	**+0.6**
NV11				IAmb	IAmb	22 17 03.2	
	comp=Z,7.9nm,1.1s						
NVAR	**Mina Array Bea**	**27.99**	**325**	P	**P**	**22 17 03.2**	**+2.1**
	comp=Z,4.9nm,1.0s,baz=150,slow=11,SNR=15						
NVAR				LR	LR	22 27 50.8	
	comp=Z,132nm,20.8s,baz=198,slow=36						
SDV	**Santo Domingo**	**28.07**	**102**	LR	LR	22 29 12.6	
	comp=Z,125nm,18.4s,baz=274,slow=39						
SDV	**Santo Domingo**	**28.07**	**102**	P	**P**	**22 17 02.9**	**+0.9**
SDV				IAmb	IAmb	22 17 18.2	
	comp=Z,12nm,1.2s						
ELK	**Elko**	**28.24**	**332**	P	**P**	**22 17 04.8**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=116,slow=6.5,SNR=3.8						
REDW	**Red Top Meadow**	**28.81**	**341**	P	**P**	**22 17 08.6**	**+0.2**
REDW				IAmb	IAmb	22 17 19.5	
	comp=Z,9.2nm,1.2s						
LOHW	**Long Hollow**	**28.96**	**341**	P	**P**	**22 17 09.8**	**+0.1**
LOHW				IAmb	IAmb	22 17 20.8	
	comp=Z,8.0nm,1.1s						
MOOW	**Moose Ponds**	**29.13**	**341**	P	**P**	**22 17 11.0**	**-0.1**
RLMT	**Red Lodge**	**29.98**	**344**	P	**P**	**22 17 19.2**	**+0.6**
RLMT				IAmb	IAmb	22 17 30.3	
	comp=Z,9.0nm,1.2s						
MCMT	**McKenzie Canyo**	**30.77**	**340**	P	**P**	**22 17 27.1**	**+1.4**
DLMT	**Dillon**	**31.16**	**340**	P	**P**	**22 17 30.0**	**+1.0**
J08A	**Circle Bar Ran**	**31.77**	**332**	P	**P**	**22 17 35.4**	**+1.0**
PLID	**Pearl Lake**	**32.13**	**336**	P	**P**	**22 17 38.2**	**+0.6**
PLID				IAmb	IAmb	22 17 40.1	
	comp=Z,5.7nm,1.1s						
I07A	**Izee**	**32.81**	**331**	P	**P**	**22 17 43.1**	**-0.3**
I07A				IAmb	IAmb	22 17 44.9	
	comp=Z,2.8nm,0.8s						
EGMT	**Eagleton**	**32.81**	**346**	P	**P**	**22 17 43.5**	**+0.1**
ULM	**Lac du Bonnet**	**33.73**	**3**	LR	LR	22 32 35.1	
	comp=Z,104nm,18.3s,baz=104,slow=38						
H04A	**Detroit Lake**	**34.53**	**329**	P	**P**	**22 17 58.7**	**+0.3**
C09A	**Chrisman Ranch**	**35.26**	**337**	P	**P**	**22 18 05.5**	**+0.9**
C09A				IAmb	IAmb	22 18 06.5	
	comp=Z,8.9nm,1.2s						
LON	**Longmire**	**35.89**	**332**	P	**P**	**22 18 10.6**	**+0.5**
LON				IAmb	IAmb	22 18 13.3	
	comp=Z,4.3nm,0.9s						
B08A	**Colville Reser**	**36.12**	**336**	P	**P**	**22 18 12.5**	**+0.4**
B08A				IAmb	IAmb	22 18 13.5	
	comp=Z,6.0nm,1.1s						
FFC	**Flin Flon**	**38.26**	**357**	P	**P**	**22 18 29.2**	**-0.7**
FFC				IAmb	IAmb	22 18 39.7	
	comp=Z,4.4nm,0.8s						
LPAZ	**La Paz**	**44.16**	**136**	LR	LR	22 35 26.2	
	comp=Z,60nm,20.1s,baz=276,slow=33						
PB16	**IPOC Station P**	**44.78**	**139**	P	**P**	**22 19 24.9**	**+0.3**
YKA	**Yellowknife Ar**	**47.34**	**350**	P	**P**	**22 19 42.9**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=156,slow=7.5,SNR=16						
DLBC	**Dease Lake**	**47.97**	**338**	P	**P**	**22 19 50.7**	**+2.1**
	comp=Z,1.8nm,0.8s,baz=165,slow=8.5,SNR=4.5						
H03N2	**Juan Fernandez**	**53.01**	**160**	T	T	23 17 16.5	
	baz=338,slow=77,SNR=354						
H03N1	**Juan Fernandez**	**53.02**	**160**	T	T	23 17 17.7	
	baz=338,slow=77,SNR=739						
H03N3	**Juan Fernandez**	**53.03**	**160**	T	T	23 17 16.7	
	baz=338,slow=77,SNR=562						
BCAR	**Beaver Creek A**	**55.35**	**338**	P	**P**	**22 20 44.6**	**+0.9**
K27K	**Chicken**	**56.03**	**338**	P	**P**	**22 20 49.9**	**+1.4**
EGAK	**Eagle**	**56.18**	**339**	P	**P**	**22 20 50.8**	**+1.3**
EGAK				IAmb	IAmb	22 21 08.6	
	comp=Z,3.5nm,0.8s						
INK	**Inuvik**	**56.39**	**345**	P	**P**	**22 20 50.5**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=125,slow=6.5,SNR=9.6						
INK	**Inuvik**	**56.39**	**345**	P	**P**	**22 20 50.4**	**-0.5**
INK				IAmb	IAmb	22 20 51.6	
	comp=Z,4.4nm,0.9s						
ILAR	**Eielson Array**	**58.18**	**338**	P	**P**	**22 21 03.9**	**+0.2**
	comp=Z,3.2nm,1.2s,baz=147,slow=4.6,SNR=12						
ILAR	**Eielson Array**	**58.18**	**338**	P	**P**	**22 21 02.9**	**-0.8**
RES	**Resolute Bay**	**58.23**	**1**	P	**P**	**22 21 05.0**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=70,slow=1.5,SNR=1.6						
RES	**Resolute Bay**	**58.23**	**1**	P	**P**	**22 21 05.1**	**+1.3**
CPUP	**Villa Florida**	**58.34**	**136**	LR	LR	22 44 49.1	
	comp=Z,58nm,18.9s,baz=83,slow=35						
TRF	**Thorofare Moun**	**58.80**	**336**	P	**P**	**22 21 08.8**	**+0.6**
BMAR	**Burnt Mountain**	**58.90**	**341**	P	**P**	**22 21 08.6**	**-0.1**
BDFB	**Brasilia**	**59.06**	**120**	P	**P**	**22 21 10.0**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=85,slow=23,SNR=3.8						
BDFB	**Brasilia**	**59.06**	**120**	P	**P**	**22 21 09.7**	**-1.0**
I23K	**Minto, Yukon-K**	**59.27**	**338**	P	**P**	**22 21 11.8**	**+0.5**
MLY	**Manley**	**59.73**	**337**	P	**P**	**22 21 14.8**	**+0.3**
PLCA	**Paso Flores**	**62.52**	**156**	P	**P**	**22 21 33.8**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=322,slow=12,SNR=5.1						
NOA	**NORSAR Array B**	**84.84**	**27**	LR	LR	23 04 28.4	
	comp=Z,12nm,18.1s,baz=285,slow=38						
PETK	**Petropavlovsk-**	**85.07**	**324**	LR	LR	23 01 14.5	
	comp=Z,16nm,18.4s,baz=79,slow=35						
DOU	**Dourbes**	**85.57**	**39**	*d*P	**P**	**22 23 47.2**	**-1.1**
ARCES	**ARCESS Array B**	**85.64**	**17**	LR	LR	23 05 44.3	
	comp=Z,19nm,18.5s,baz=245,slow=38						
BTNL	**Ternell**	**86.31**	**38**	*d*P	**P**	**22 23 52.4**	**+0.4**
BTNL				*d*PcP	**PcP**	**22 23 55.0**	**+0.4**
TIXI	**Tiksi**	**86.48**	**347**	P	**P**	**22 23 51.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**95.71**	**75**	LR	LR	23 04 01.0	
	comp=Z,37nm,20.8s,baz=260,slow=33						

*IDC **25** 22:59:55.8±7.8, 33.38S×179.82E, h271km±84km, mb3.3/2, mb1 3.6/4, mb1mx3.2/31, mbtmp4.1/4, Error ellipse: s-maj=96.6km s-min=46.5km az=1.0*
*WEL **25** 22:59:59.6±0.8, 34.5S×14.18°E±2.2, h335km±13km, M3.9/18, mB4.3/7, ML5.0/8, MLv4.4/18, Mw(mB)3.4/7, Error ellipse: s-maj=0.0km s-min=0.0km az=122.3*

ISC 25 23:00:00.2±1.7, 33.7S±0.1×179.3E±0.2, h300km, n33, σ1.9 76/59, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.97**	**192**	P	Pn	23 01 10.3	+4.3
MXZ				S	**S**	**23 01 58.5**	**-0.2**
WMGZ	**Waiomatatini S**	**4.20**	**190**	P	**Pn**	**23 01 09.7**	**+1.2**
WMGZ				S	**S**	**23 02 05.4**	**+2.1**
HAZ	**Te Kaha**	**4.26**	**197**	P	**Pn**	**23 01 08.4**	**-0.8**
HAZ				S	**S**	**23 02 07.6**	**+3.1**
PKGZ	**Pakihiroa**	**4.33**	**193**	P	**Pn**	**23 01 08.0**	**-2.0**
PKGZ				S	**S**	**23 02 02.2**	**-3.8**
PUZ	**Puketiti**	**4.47**	**191**	P	**Pn**	**23 01 12.2**	**+0.5**
PUZ				S	**S**	**23 02 10.1**	**+1.1**
TWGZ	**Tauwhareparae**	**4.62**	**193**	P	**Pn**	**23 01 12.6**	**-0.8**
TWGZ				S	**S**	**23 02 14.4**	**+2.3**
MWZ	**Matawai**	**4.88**	**197**	P	**Pn**	**23 01 15.0**	**-1.2**
MWZ				S	**S**	**23 02 18.8**	**+1.5**
CNGZ	**Carnagh Statio**	**4.88**	**191**	P	**Pn**	**23 01 14.6**	**-1.7**
CNGZ				S	**S**	**23 02 21.2**	**+3.8**
URZ	**Urewera**	**4.92**	**201**	P	**Pn**	**23 01 16.2**	**-0.5**
	1.8nm,0.3s,baz=300,slow=24,SNR=30						
URZ				S	**S**	**23 02 21.7**	**+3.6**
	5.1nm,0.3s,baz=301,slow=23,SNR=4.4						
BKZ	**Black Stump Fm**	**5.94**	**202**	P	**Pn**	**23 01 27.5**	**-1.3**
BKZ				S	**S**	**23 02 42.0**	**+1.9**
KWHZ	**Kaweka Forest**	**6.20**	**201**	P	**Pn**	**23 01 29.9**	**-2.0**
KWHZ				S	**S**	**23 02 50.3**	**+4.5**
BHHZ	**Black Hill Sta**	**6.37**	**203**	P	**Pn**	**23 01 32.0**	**-1.9**
BHHZ				S	**S**	**23 02 51.3**	**+1.7**
KRHZ	**Kereru**	**6.42**	**201**	P	**Pn**	**23 01 32.4**	**-2.0**
KRHZ				S	**S**	**23 02 50.8**	**+0.4**
KAHZ	**Kahuranaki**	**6.42**	**197**	P	**Pn**	**23 01 32.9**	**-1.5**
KAHZ				S	**S**	**23 02 51.8**	**+1.3**
PNHZ	**Pukenui**	**6.72**	**201**	P	**Pn**	**23 01 36.0**	**-2.1**
PNHZ				S	**S**	**23 02 56.4**	**-0.7**
DREZ	**Durham Road**	**6.89**	**216**	P	Pn	23 01 45.2	+5.1
TSZ	**Takapari Road**	**6.92**	**202**	P	**Pn**	**23 01 40.6**	**+0.1**
TSZ				S	**S**	**23 03 02.3**	**+0.7**
DVHZ	**Dannevirke**	**7.08**	**200**	P	**Pn**	**23 01 43.4**	**+0.9**
DVHZ				S	**S**	**23 03 05.3**	**+0.1**
BFZ	**Birch Farm**	**7.42**	**199**	P	**Pn**	**23 01 46.9**	**+0.4**
BFZ				S	**S**	**23 03 12.1**	**-0.4**
MRZ	**Mangatainoka R**	**7.59**	**202**	P	**Pn**	**23 01 48.0**	**-0.7**
MRZ				S	**S**	**23 03 15.6**	**-0.9**
HOWZ	**Holdsworth Sta**	**7.83**	**202**	S	**S**	**23 03 20.8**	**-1.0**
OGWZ	**Otaki Gorge**	**7.86**	**204**	P	**Pn**	**23 01 51.4**	**-0.6**
OGWZ				S	**S**	**23 03 21.4**	**-1.2**
TMWZ	**Te Maipa**	**7.91**	**199**	P	**Pn**	**23 01 52.6**	**0.0**
TMWZ				S	**S**	**23 03 21.7**	**-2.0**
TCW	**Tory Channel**	**8.53**	**207**	P	**Pn**	**23 02 00.0**	**-0.1**
TCW				S	**S**	**23 03 36.8**	**-0.8**
TUWZ	**Tuamarina**	**8.85**	**207**	P	**Pn**	**23 02 03.3**	**-0.7**
TUWZ				S	**S**	**23 03 42.5**	**-2.2**
NNZ	**Nelson**	**8.89**	**210**	P	**Pn**	**23 02 05.8**	**+1.2**
NNZ				S	**S**	**23 03 46.7**	**+0.9**
QRZ	**Quartz Range**	**8.96**	**215**	P	**Pn**	**23 02 06.1**	**+0.6**
QRZ				S	**S**	**23 03 48.6**	**+1.1**
THZ	**Tophouse**	**9.54**	**210**	P	**Pn**	**23 02 12.6**	**-0.1**
THZ				S	**S**	**23 04 02.0**	**+1.4**
KHZ	**Kahutara**	**9.85**	**206**	P	**Pn**	**23 02 16.4**	**+0.1**
KHZ				S	**S**	**23 04 05.9**	**-1.5**
RPZ	**Rata Peaks**	**11.93**	**210**	P	**Pn**	**23 02 41.8**	**+0.1**
	0.8nm,0.3s,baz=281,slow=18,SNR=2.4						
RPZ				S	**S**	**23 04 50.3**	**-4.0**
	0.6nm,0.3s,baz=68,slow=10,SNR=1.6						
ASAR	**Alice Springs**	**40.82**	**272**	P	**P**	**23 07 14.8**	**+1.4**
	0.8nm,0.4s,baz=111,slow=7.8,SNR=13						
WRA	**Warramunga Arr**	**42.11**	**277**	P	**P**	**23 07 24.6**	**+0.8**
	0.3nm,0.3s,baz=118,slow=8.2,SNR=7.3						
FINES	**FINESS Array B**	**147.34**	**336**	PKPbc	**PKPbc**	**23 19 05.7**	**-2.1**
	2.3nm,1.0s,baz=44,slow=5.2,SNR=4.5						

*BJI **25** 23:12:44.0±0.0, 26.92N×85.69E, h10km, mb4.2/5*
*IDC **25** 23:12:50.2±1.0, 27.52N×86.01E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.6/49, mbtmp3.8/12, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/27, Error ellipse: s-maj=31.1km s-min=17.7km az=53.0*
*NEIC **25** 23:12:52.1±0.6, 27.60N±0.05×86.09E±0.04, h9km±5km, mb4.0/18, Error ellipse: s-maj=7.3km s-min=4.9km az=182.0*

ISC 25 23:12:51.4±0.7, 27.46N±0.08×85.97E±0.07, h10km, n42, σ0.8 0/43, mb3.9/15, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.07**	**63**	Pn	**Pn**	**23 14 11.0**	**+3.1**
LSA				Sn	**Sn**	**23 15 06.0**	**-0.7**
LSA	**Lhasa**	**5.07**	**63**	Pn	**Pn**	**23 14 07.1**	**-0.8**
SHL	**Shillong**	**5.62**	**108**		**Pn**	**23 14 15.0**	**-0.2**
NIL	**Nilore**	**12.57**	**302**		**Pn**	**23 15 49.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**14.92**	**124**	Pn	**Pn**	**23 16 21.9**	**-0.7**
	baz=304,slow=13,SNR=4.4						
KDJ	**Kajisay**	**16.30**	**336**		**Pn**	**23 16 39.8**	**-0.8**
KDJ				IAmb	IAmb	23 16 51.3	
	comp=Z,4.3nm,1.2s						
WMQ	**Urumqi**	**16.38**	**4**	*e*P	**P**	**23 16 43.8**	**-0.5**
WMQ				pP	pP	23 16 45.5	-2.2
WMQ				S	**Sn**	**23 19 44.3**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
BOOM	**Boomskoye usch**	**17.08**	**334**		**Pn**	**23 16 50.4**	**0.0**
GAR	**Garm**	**17.41**	**315**	Pn	**Pn**	**23 16 55.0**	**+0.5**
GAR				IAmb	IAmb	23 17 07.5	
	comp=Z,4.9nm,0.7s						
BTK	**Batken**	**17.76**	**319**		**Pn**	**23 16 57.9**	**-1.0**
BTK				IAmb	IAmb	23 17 07.5	
	comp=Z,4.6nm,1.0s						
AAK	**Ala-Archa**	**17.79**	**331**	LR	LR	23 24 43.1	
	comp=Z,98nm,20.8s,baz=292,slow=40						
MK31	**Makanchi Array**	**19.51**	**352**	P	**P**	**23 17 18.1**	**-0.7**
MKAR	**Makanchi Array**	**19.51**	**352**	P	**P**	**23 17 18.3**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=174,slow=10,SNR=14						
MKAR	**Makanchi Array**	**19.51**	**352**	P	**P**	**23 17 18.5**	**-0.3**
KKAR	**Karatay Array**	**20.02**	**325**	P	**Pn**	**23 17 25.3**	**-0.8**
KURBB	**Kurchatov Arra**	**23.81**	**348**	P	**P**	**23 18 04.8**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=170,slow=9.2,SNR=15						
KURK	**Kurchatov**	**23.89**	**348**	P	**P**	**23 18 04.8**	**-0.2**
SONM	**Songino Array**	**25.84**	**33**	P	**P**	**23 18 23.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=216,slow=9.3,SNR=6.4						
SONM	**Songino Array**	**25.84**	**33**	P	**P**	**23 18 22.4**	**-0.6**
SONM				IAmb	IAmb	23 18 25.9	
	comp=Z,1.1nm,0.9s						
ZALV	**Zalesovo Beam**	**26.47**	**358**	P	**P**	**23 18 28.4**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=187,slow=8.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**26.47**	**358**	P	**P**	**23 18 28.2**	**-0.3**
ABKAR	**Akbulak array**	**29.58**	**324**	P	**P**	**23 18 56.6**	**+0.2**
ABKAR	**Akbulak array**	**29.58**	**324**	P	**P**	**23 18 56.5**	**+0.2**
ABKAR				IAmb	IAmb	23 18 58.0	
	comp=Z,1.9nm,0.6s						
KSRS	**Korea Array**	**36.51**	**63**	P	**P**	**23 19 56.1**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=251,slow=9.4,SNR=1.9						
USA0B	**Ussuriysk Arra**	**40.31**	**53**	P	**P**	**23 20 29.2**	**+0.3**
USA0B				IAmb	IAmb	23 20 29.2	
	comp=Z,4.4nm,0.8s						
JWT	**Wachi**	**42.55**	**67**	P	**P**	**23 20 47.0**	**-0.4**
JWT				IAmb	IAmb	23 20 52.1	
	comp=Z,6.5nm,1.2s						
TIXI	**Tiksi**	**50.11**	**16**	P	**P**	**23 21 45.5**	**-0.8**
TIXI				IAmb	IAmb	23 21 57.5	
	comp=Z,1.9nm,1.1s						
FINES	**FINESS Array B**	**51.94**	**328**	P	**P**	**23 22 00.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=104,slow=6.9,SNR=7.0						
PABE	**Paberze**	**52.08**	**320**	P	**P**	**23 22 01.6**	**+0.3**
GERES	**GERESS Array B**	**58.46**	**312**	P	**P**	**23 22 47.6**	**0.0**
	comp=Z,0.2nm,0.6s,baz=70,slow=8.5,SNR=1.8						
KEST	**Kesra**	**64.28**	**299**	P	**P**	**23 23 27.6**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=28,slow=13,SNR=4.7						
KEST	**Kesra**	**64.28**	**299**	P	**P**	**23 23 28.4**	**+1.1**
KEST				IAmb	IAmb	23 23 28.5	
	comp=Z,5.1nm,1.1s						
WB0	**Warramunga Arr**	**66.35**	**130**	P	**P**	**23 23 41.2**	**+0.6**
WRA	**Warramunga Arr**	**66.43**	**130**	P	**P**	**23 23 42.2**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=323,slow=6.5,SNR=8.2						
WRA	**Warramunga Arr**	**66.43**	**130**	P	**P**	**23 23 41.8**	**+0.7**
WB2	**Warramunga Arr**	**66.44**	**130**	P	**P**	**23 23 42.1**	**+0.9**
ASAR	**Alice Springs**	**68.73**	**133**	P	**P**	**23 23 56.1**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=316,slow=6.5,SNR=5.5						
ASAR	**Alice Springs**	**68.73**	**133**	P	**P**	**23 23 56.6**	**+0.9**
BBOO	**Buckleboo**	**76.54**	**138**	P	**P**	**23 24 42.6**	**+0.7**
BMAR	**Burnt Mountain**	**78.15**	**18**	P	**P**	**23 24 51.0**	**+0.5**
ILAR	**Eielson Array**	**79.36**	**20**	P	**P**	**23 24 56.8**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=293,slow=4.2,SNR=4.9						
SKT	**Skwentna**	**79.69**	**24**	P	**P**	**23 24 59.1**	**0.0**
SKT				IAmb	IAmb	23 24 59.2	
	comp=Z,12nm,1.5s						

*IDC **25** 23:13:03.1±2.0, 36.30N×96.89W, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/34, mbtmp3.2/4, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/30, Error ellipse: s-maj=31.5km s-min=12.2km az=107.0*
*TUL **25** 23:13:04.3±1.3, 36.40N±0.02×97.33W±0.05, h8km±7km, ML3.4, mb_Lg3.1/89(NEIC), Error ellipse: s-maj=5.8km s-min=1.7km az=70.0*
*NEIC **25** 23:13:04.3±0.9, 36.40N±0.02×97.35W±0.05, h4km±7km, Error ellipse: s-maj=6.3km s-min=1.7km az=70.0*
*ANF **25** 23:13:04.2±0.4, 36.40N×97.35W, h5km, ML3.7/17, Error ellipse: s-maj=3.7km s-min=3.3km az=145.0*

ISC 25 23:13:04.2±1.1, 36.40N±0.02×97.34W±0.02, h7km±8km, n114, σ0.6 78/103, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.53**	**281**		**Pg**	**23 13 14.6**	**+0.1**
CROK				Sg	**Sg**	**23 13 21.9**	**+0.4**
QUOK	**Quay**	**0.56**	**114**		**Pg**	**23 13 15.2**	**+0.2**
QUOK				Sg	**Sg**	**23 13 22.8**	**+0.6**
OK031	**S. Brethren Rd**	**0.60**	**138**		**Pg**	**23 13 15.9**	**+0.1**
OK031				Sg	**Sg**	**23 13 24.1**	**+0.5**
OK029	**Liberty Lake**	**0.61**	**189**		**Pg**	**23 13 16.1**	**0.0**
OK029				Sg	**Sg**	**23 13 24.4**	**+0.4**
GC02	**Grant County #**	**0.61**	**317**		**Pg**	**23 13 16.1**	**0.0**
GC02				Sg	**Sg**	**23 13 24.4**	**+0.4**
KAN13	**South Haven SW**	**0.62**	**349**	Pg	**Pg**	**23 13 16.2**	**+0.1**
KAN13				Sg	**Sg**	**23 13 24.8**	**+0.6**
OK030	**Cody Creek RV**	**0.65**	**137**		**Pg**	**23 13 16.9**	**+0.1**
KAN17	**Caldwell West**	**0.73**	**332**	Pg	**Pg**	**23 13 18.2**	**0.0**
KAN17				Sg	**Sg**	**23 13 28.4**	**+0.4**
KAN14	**Manchester OK**	**0.75**	**318**	Pg	**Pg**	**23 13 18.5**	**-0.1**
KAN14				Sg	**Sg**	**23 13 28.5**	**+0.2**
KAN09	**Caldwell North**	**0.77**	**343**	Pg	**Pg**	**23 13 18.9**	**-0.1**
KAN09				Sg	**Sg**	**23 13 29.2**	**+0.3**
BCOK	**Bluff Creek, N**	**0.78**	**197**		**Pg**	**23 13

KSU1	Kansas State U	2.75	12			Pn	23 13 49.9	+1.1
Z35A	Perchaven, San	3.07	179			Pn	23 13 54.0	+0.8
Z35A	Perchaven, San baz=359	3.07	179	P		Pn	23 13 54.2	+1.0
Z35A	Perchaven, San baz=359	3.07	179	P			23 13 54.2	
CBKS	Cedar Bluff	3.07	322			Pn	23 13 54.6	+1.3
W39A	Magazine	3.13	112			Pn	23 13 54.8	+0.8
W39A	Magazine baz=294	3.13	112	P		Pn	23 13 55.2	+1.2
W39A	Magazine baz=294	3.13	112	P			23 13 55.2	
S39A	Bolivar	3.46	67			Pn	23 13 58.7	+0.2
S39A	comp=Z,64nm,0.8s				IAmb_Lg		23 15 01.2	
S39A	Bolivar baz=249,SNR=16	3.46	67	P		Pn	23 13 59.3	+0.7
S39A	Bolivar baz=249,SNR=16	3.46	67	P			23 13 59.3	
MIAR	Mount Ida	3.58	120			Pn	23 14 00.8	+0.6
MIAR	Mount Ida baz=302,SNR=16	3.58	120	P		Pn	23 14 01.3	+1.0
MIAR	Mount Ida baz=302,SNR=16	3.58	120	P			23 14 01.3	
U40A	Yellville	3.62	89			Pn	23 14 01.4	+0.6
U40A	Yellville baz=272	3.62	89	S		Sn	23 14 44.5	+0.8
U40A	Yellville baz=272	3.62	89	S			23 14 44.5	
U40A	baz=272			S			23 14 44.5	
Z38A	Mt. Pleasant	3.68	148			Pn	23 14 02.2	+0.5
Z38A	comp=Z,59nm,0.8s				IAmb_Lg		23 15 11.3	
MGMO	Mountain Grove	4.14	78			Pn	23 14 09.1	+1.2
MGMO	comp=Z,36nm,0.8s				IAmb_Lg		23 15 13.9	
X40A	Basin Creek Fa	4.14	116			Pn	23 14 08.6	+0.7
X40A	Basin Creek Fa baz=299	4.14	116	P		Pn	23 14 08.9	+0.9
X40A	Basin Creek Fa baz=299	4.14	116	P			23 14 08.9	
X40A	baz=299			P			23 14 08.9	
WHAR	Wooly Hollow	4.25	104			Pn	23 14 10.4	+1.0
WHAR	comp=Z,32nm,0.8s				IAmb_Lg		23 15 24.4	
FCAR	Ozark Folk Cen	4.25	95			Pn	23 14 09.9	+0.5
FCAR	comp=Z,60nm,0.9s				IAmb_Lg		23 15 18.4	
N33A	J Bar K, Exete comp=Z,40nm,0.8s	4.33	359		IAmb_Lg		23 15 31.4	
P38A	Dawn	4.40	42			Pn	23 14 11.8	+0.3
P38A	comp=Z,30nm,0.8s				IAmb_Lg		23 15 23.6	
WHTX	Lake Whitney,	4.40	181	Pn		Pn	23 14 12.4	+0.8
WHTX	comp=Z,25nm,1.0s				IAmb_Lg		23 15 26.6	
R40A	Maddies Statio	4.46	63			Pn	23 14 12.6	+0.4
R40A	comp=Z,55nm,0.9s				IAmb_Lg		23 15 23.7	
R40A	Maddies Statio baz=246,SNR=13	4.46	63	P		Pn	23 14 12.6	+0.4
R40A	Maddies Statio baz=246,SNR=13	4.46	63	P			23 14 12.6	
237A	Washetta, Mont	4.57	163	Pn		Pn	23 14 12.8	-1.0
237A	Washetta, Mont baz=344	4.57	163	S		Sn	23 15 07.4	+0.2
237A	Washetta, Mont baz=344	4.57	163	S			23 15 07.4	
N35A	Tabor	4.64	16			Pn	23 14 14.9	+0.1
Z41A	Richland Creek baz=312	4.87	129	S		Sn	23 15 14.2	-0.4
Z41A	Richland Creek baz=312	4.87	129	S			23 15 14.2	
Z41A	baz=312			S			23 15 14.2	
KSCO	Kaye Shedlock'	4.94	303			Pn	23 14 19.2	+0.2
LCAR	Lake Charles	5.01	92	Pn		Pn	23 14 20.1	+0.3
LCAR	comp=Z,40nm,0.9s				IAmb_Lg		23 15 40.6	
BGNE	Belgrade	5.04	353			Pn	23 14 20.1	-0.2
BGNE	comp=Z,44nm,0.8s				IAmb_Lg		23 15 53.5	
BGNE	Belgrade baz=172,SNR=8.5	5.04	353	P		Pn	23 14 20.1	-0.2
BGNE	Belgrade baz=172,SNR=8.5	5.04	353	P			23 14 20.1	
MSTX	Muleshoe	5.07	243			Pn	23 14 20.3	-0.5
CCM	Cathedral Cave	5.13	69	Pn		Pn	23 14 22.5	+1.0
CCM	comp=Z,37nm,0.8s				IAmb_Lg		23 15 51.2	
NATX	Nacogdoches	5.14	154		IAmb_Lg		23 16 02.0	
P40A	comp=Z,20nm,0.8s Paris	5.21	52		IAmb_Lg		23 15 52.0	
N38A	comp=Z,29nm,0.8s Joes South For	5.43	35			Pn	23 14 24.5	-1.2
N38A	comp=Z,45nm,0.7s				IAmb_Lg		23 16 04.3	
435B	Jarrell comp=Z,31nm,0.8s	5.61	182		IAmb_Lg		23 16 16.6	
T25A	Trinidad	5.73	279			Pn	23 14 30.5	+0.5
T25A	comp=Z,18nm,0.8s				IAmb_Lg		23 16 21.3	
FVM	French Village comp=Z,31nm,0.8s	5.74	72		IAmb_Lg		23 16 07.6	
OGNE	Ogallala	5.84	322			Pn	23 14 32.0	+0.7
OGNE	comp=Z,41nm,0.8s				IAmb_Lg		23 16 14.8	
JCT	Junction City	6.26	200	Pn		Pn	23 14 37.9	+0.8
JCT	comp=Z,33nm,0.7s				IAmb_Lg		23 16 33.7	
S44A	Carbondale comp=Z,30nm,0.7s	6.59	76		IAmb_Lg		23 16 39.4	
N41A	Harden Midland	6.65	48	Pn		Pn	23 14 42.8	+0.4
SDCO	Great Sand Dun	6.66	284	Pn		Pn	23 14 44.3	+1.4
OXF	Oxford comp=Z,28nm,1.1s	6.74	104		IAmb_Lg		23 16 54.4	
ECSD	EROS Data Cent	7.34	4	Pn		Pn	23 14 52.5	+0.6
ISCO	Idaho Springs	7.35	300	Pn		Pn	23 14 51.6	-0.7
L40A	Anamosa comp=Z,25nm,0.9s	7.38	38		IAmb_Lg		23 17 05.6	
HDIL	Hopedale	7.55	54	Pn		Pn	23 14 54.5	-0.2
PLAL	Pickwick Lake comp=Z,12nm,1.1s	7.67	98		IAmb_Lg		23 17 20.5	
USIN	University of comp=Z,22nm,1.0s	7.87	76		IAmb_Lg		23 17 14.4	
O44A	Mansfield comp=Z,22nm,0.7s	7.92	59		IAmb_Lg		23 17 14.3	
SUSD	Miller comp=Z,18nm,0.8s	8.12	352		IAmb_Lg		23 17 37.0	
L42A	Oliver, Polo	8.16	44	Pn		Pn	23 15 02.8	-0.4
L42A	comp=Z,26nm,1.0s				IAmb_Lg		23 17 22.3	
I37A	Lemond, Waseca comp=Z,17nm,0.8s	8.18	20		IAmb_Lg		23 17 30.0	
JFWS	Jewell Farm	8.49	38	Pn		Pn	23 15 08.0	+0.3
V48A	Smith Brothers comp=Z,12nm,0.8s	8.54	91		IAmb_Lg		23 17 35.1	
X48A	Hartselle comp=Z,12nm,1.1s	8.62	100		IAmb_Lg		23 17 37.5	
TXAR	Lajitas Array	8.83	219	Pn		Pn	23 15 11.7	-0.7
TXAR	comp=Z,0.2nm,0.3s,baz=43,slow=12,SNR=8.3				Sn	Sn	23 16 52.6	+0.3
TXAR	comp=Z,0.2nm,0.3s,baz=36,slow=24,SNR=1.2				Lg	Lg	23 17 39.4	
TXAR	Lajitas Array comp=Z,0.5nm,0.3s,baz=42,slow=28,SNR=1.6	8.83	219			Pn	23 15 13.2	+0.7
CLTN	Cedars of Leba comp=Z,9.5nm,0.7s	8.90	89		IAmb_Lg		23 17 48.1	
SFIN	Lafayette comp=Z,20nm,0.8s	8.96	61		IAmb_Lg		23 17 44.8	
WCI	Wyandotte Cave comp=Z,16nm,0.9s	8.98	75		IAmb_Lg		23 17 53.6	
I40A	Norwalk comp=Z,12nm,0.8s	9.07	32		IAmb_Lg		23 17 56.2	
RSSD	Black Hills comp=Z,9.9nm,1.0s	9.25	328		IAmb_Lg		23 18 03.9	
PV12	Saucer Basin, comp=Z,18nm,1.1s	9.33	285		IAmb_Lg		23 18 14.5	
SWET	Sewanee comp=Z,10.0nm,1.1s	9.34	94		IAmb_Lg		23 18 13.0	
SPMN	Marine on St. comp=Z,10nm,0.9s	9.46	20		IAmb_Lg		23 18 31.7	
F33A	5 Mile Ranch, comp=Z,16nm,1.3s	9.46	4		IAmb_Lg		23 18 07.7	
FPAL	Fort Paine comp=Z,9.6nm,1.0s	9.74	98		IAmb_Lg		23 18 34.0	
W50A	Signal Mountai comp=Z,12nm,1.1s	9.84	93		IAmb_Lg		23 18 26.6	
P48A	Milroy comp=Z,15nm,0.8s	9.89	68		IAmb_Lg		23 18 23.4	
PDAR	Pinedale Array comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=2.5	11.37	308		Pn	Pn	23 15 55.0	+7.8
PDAR	comp=Z,0.2nm,0.3s,baz=114,slow=26,SNR=4.1				Lg	Lg	23 19 03.0	
ULM	Lac du Bonnet comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=1.6	13.88	4		Pn	Pn	23 16 17.2	-4.1
ULM	comp=Z,0.2nm,0.3s,baz=284,slow=22,SNR=1.7				Sn	Sn	23 18 42.5	-13
ULM	comp=Z,0.1nm,0.3s,baz=101,slow=22,SNR=1.6				Lg	Lg	23 20 15.9	
ROSC	El Rosal comp=Z,54nm,18.3s,baz=35,slow=44	37.87	141		LR	LR	23 40 21.7	
ILAR	Eielson Array comp=Z,0.5nm,0.6s,baz=109,slow=7.4,SNR=8.0	40.70	330		P	P	23 20 46.0	+1.0

IDC 25 23:15:22.5±3.5, 28.40N×84.72E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.2/51, mbtmpg3.7/5, ML3.5/1, Error ellipse: s-maj=79.0km s-min=41.7km az=143.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.2nm,0.3s,baz=174,slow=12,SNR=6.1	18.46	355	P	P	23 19 41.3	+1.5
SONM	Songino Array 0.3nm,0.3s,baz=235,slow=10,SNR=1.4	25.68	35	P	P	23 20 54.2	-0.1
FINES	FINESS Array B 2.4nm,1.1s,baz=88,slow=9.0,SNR=4.4	50.56	328	P	P	23 24 21.8	-0.8
ARCES	ARCESS Array B 2.2nm,0.9s,baz=101,slow=8.0,SNR=1.3	53.02	338	P	P	23 24 40.2	-0.6
TORD	Torodi Ar. Bea 0.2nm,0.6s,baz=59,slow=4.7,SNR=2.1	77.81	278	P	P	23 27 22.8	+0.6

*BGR **25** 23:16:06.7±0.0, 26.70N×86.16E, h14km, mb5.4, Ms4.5*
*MOS **25** 23:16:13.2±1.0, 27.86N×84.86E, h10km, mb5.5/54, MS4.6/24, Error ellipse: s-maj=5.1km s-min=3.0km az=117.9*
*BJI **25** 23:16:14.0±0.0, 27.70N×84.95E, h10km, mB5.1/50, mb5.1/74, Ms5.1/86, Ms7 5.0/77*
*NEIC **25** 23:16:15, 27.77N×84.85E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=2.62; Mθθ=1.35; Mϕϕ 3.97; Mrθ=2.09; Mrϕ=-1.57; Mθϕ=-0.25; Fault plane solution: M0=4.37000×10^16 NP1:ϕs 197.04000°, δ 50.39000°, λ -37.31000°. NP2:ϕs 312.96000°, δ 62.16000°, λ -133.86000°. Principal axes: T 4.4949, Plg7.0000°, Azm73.0000°; N -0.2614, Plg38.0000°, Azm337.0000°; P -4.2336, Plg51.0000°, Azm171.0000°;*
*DMN **25** 23:16:15.2±0.1, 27.93N×85.01E, h10km, Ml6.0/4 Error ellipse: s-maj=2.2km s-min=0.8km az=17.0*
*NEIC **25** 23:16:15.4±1.4, 27.80N±0.07×84.87E±0.06, h14km±3km, mb5.5/263, Mwr5.0/9, Mww5.1, Error ellipse: s-maj=10.6km s-min=7.7km az=189.0*
*NDI **25** 23:16:16.7±3.1, 27.79N×84.94E, h10km, ML5.2, mb5.5(NEIC)*
*GCMT **25** 23:16:17.4±0.2, 27.61N±0.02×84.96E±0.01, h15km, MW5.2/92, Moment Tensor Solution. s25,c30; s92,c154; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.08±.15; Mθθ=2.46±.13; Mϕϕ 4.54±.10; Mrθ=5.53±.50; Mrϕ=-1.20±.10; Mθϕ=-0.91±.38; Best double couple: M0=6.66400×10^16 NP1:ϕs 201.00000°, δ 40.00000°, λ -20.00000°. NP2: ϕs 306.00000°, δ 77.00000°, λ -129.00000°. Principal axes: T 5.5210, Plg23.0000°, Azm65.0000°; N 2.2870, Plg38.0000°, Azm316.0000°; P -7.8080, Plg44.0000°, Azm178.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **25** 23:16:18.6±1.6, 27.80N×84.94E, h33km±12km, mb5.0/43, mb1 5.1/45, mb1mx5.0/50, mbtmpg5.2/45, ML4.7/2, MS4.6/7, Ms1 4.6/7, ms1mx4.3/12 Error ellipse: s-maj=9.6km s-min=7.3km az=43.0*
*NEIC **25** 23:16:21, 27.30N×85.10E, h26km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=5.25; Mθθ 0.19; Mϕϕ 5.06; Mrθ=3.62; Mrϕ=-1.79; Mθϕ 0.59; Fault plane solution: M0=6.58000×10^16 NP1:ϕs 186.00000°, δ 48.00000°, λ -51.00000°. NP2:ϕs 316.00000°, δ 55.00000°, λ -124.00000°. Principal axes: T 5.6829, Plg4.0000°, Azm70.0000°; N 1.5232, Plg28.0000°, Azm338.0000°; P -7.2061, Plg62.0000°, Azm167.0000°;*

ISC 25 23:16:15.2±0.3, 27.77N±0.03×84.95E±0.02, h14km±1km, h14km; pP-P, n1123, s1942/1245, mb5.5/355, MS4.8/51, 98C-273D, Fault plane solution: NP1:ϕs 345.74722°, δ 61.60086°, λ -127.57343°. NP2:ϕs 224.02344°, δ 45.79794°, λ -41.56281°. Principal axes: T Plg9.0143°, Azm101.6325°; N Plg32.4385°, Azm5.8457°; P Plg56.0265°, Azm205.2493°; Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMN	Daman	0.21	140	ePg	Pb	23 16 22.1	+1.0
DMN				eSg	Sb	23 16 26.5	+1.5
KKN	Kakani	0.29	87	ePg	Pg	23 16 21.7	+0.3
KKN				eSg	Sg	23 16 25.1	-0.5
GKN	Gorkha	0.36	310	ePg	Pg	23 16 22.6	0.0
GKN				eSg	Sg	23 16 26.8	-0.7
PKIN	Phulchoki	0.44	116	ePg	Pb	23 16 25.1	+0.1
PKIN				eSg	Sb	23 16 31.5	-0.1
PKI	Pulchoki	0.46	116	ePg	Pb	23 16 25.2	0.0
PKI				eSg	Sb	23 16 31.8	-0.2
GUN	Gumba	0.83	80	ePg	Pg	23 16 29.8	-1.7
GUN	50µm,0.3s			eSg	Sg	23 16 40.5	-2.0
JIRN	Jiri	1.10	96	ePg	Pb	23 16 36.3	-0.1
KOLN	Koldanda	1.20	270	ePg	Pg	23 16 39.0	+0.7
KOLN	14µm,0.2s			eSg	Sn	23 16 54.9	+1.0
DANN	Dangsing	1.20	299	ePg	Pn	23 16 37.5	-0.4
DANN	37µm,0.3s			eSg	Sb	23 16 53.2	-0.2
RAMN	Ramite	1.68	119	ePg	Pb	23 16 46.7	+0.6
PYUN	Piuthan	1.76	281	ePg	Pb	23 16 47.8	+0.3
PYUN				eSg	Sg	23 17 12.2	+0.2
ODAN	Odare	2.35	112	ePg	Pg	23 16 59.2	-1.2
ODAN	47µm,0.5s			eSg	Sg	23 17 29.8	-1.1
TAPN	Taplejung	2.49	99	ePg	Pb	23 17 01.2	+1.3
TAPN	33µm,0.5s			eSg	Sg	23 17 33.4	-1.8
BOK	Bokaro	4.05	168	eP	Pn	23 17 19.8	+2.9
LSA	Lhasa	5.77	69	Pn	Pn	23 17 43.3	+2.3
LSA				Sn	Sn	23 18 45.0	-2.2
LSA				Sg	Sg	23 19 16.5	-4.1
LSA	comp=N,8µm,6.4s			LR	LR		
LSA	comp=E,16µm,5.0s			LR	LR		
LSA	comp=Z,33µm,5.3s			LR	LR		
LSA	Lhasa SNR=108	5.77	69	*i* P	Pn	23 17 43.2	+2.3
LSA	Lhasa	5.77	69	P	Pn	23 17 42.8	+1.9
LSA	Lhasa	5.77	69	Pn	Pn	23 17 42.8	+1.9
DDI	Dehra Dun	6.55	294	eP	Pn	23 17 53.8	+2.6
DDI				eS	Sn	23 19 04.3	-1.4
DDI				IAML		23 19 07.9	
DDI	comp=N,3µm,0.5s			IAML		23 19 11.4	
DDI	comp=E,3µm,0.3s						
SHL	Shillong	6.58	108	P	Pn	23 17 52.3	+0.5
SHL	Shillong	6.58	108	eP	Pn	23 17 52.8	+1.0
SHL				eS	Sn	23 19 02.4	-4.4
SHL				IAML		23 19 10.4	
SHL	comp=N,2µm,0.6s						
SHL	Shillong SNR=110	6.58	108	Pn	Pn	23 17 52.3	+0.5
SHL	Shillong	6.58	108	P	Pn	23 17 52.9	+1.1
AGT	Agartala	6.87	123	eP	Pn	23 17 59.4	+3.8
AGT				eS	Sn	23 19 12.9	-0.8
AGT				IAML		23 19 19.2	
AGT	comp=N,2µm,0.8s			IAML		23 19 24.2	
	comp=E,2µm,0.7s						

BELO	BELONIA	7.40	126	eP		Pn	23 18 05.1	+2.3
SMLA	Simla	7.56	298	eP		Pn	23 18 06.0	+0.9
SMLA				eS		Sn	23 19 27.6	-3.0
SMLA	comp=E,2µm,0.5s			IAML			23 19 32.4	
ITAN	ITANAGAR	7.82	93	eP		Pn	23 18 10.2	+1.6
ZIRO	ZIRO	7.90	90	eP		Pn	23 18 11.0	+1.1
BHPL	Bhopal	8.16	238	eP		Pn	23 18 12.3	-1.0
BHPL				eS		Sn	23 19 39.4	-6.0
BHPL	comp=E,2µm,0.5s			IAML			23 19 44.1	
BHPL	comp=N,2µm,0.3s			IAML			23 19 45.8	
KOHI	KOHIMA	8.44	102	eP		Pn	23 18 18.4	+1.1
KOHI				eS		Sn	23 19 49.6	-2.8
KOHI	comp=E,4µm,0.7s			IAML			23 19 56.4	
KOHI	comp=N,3µm,0.5s			IAML			23 20 02.2	
DHRM	DHARAMSHALA	8.72	303	eP		Pn	23 18 21.2	0.0
DHRM				eS		Sn	23 19 53.7	-5.8
DHRM	comp=N,2µm,0.7s			IAML			23 20 04.1	
DHRM	comp=E,2µm,0.7s			IAML			23 20 05.4	
DIBR	DIBRUGARH	8.84	90	eP		Pn	23 18 23.4	+0.8
LKP	Lekhapani	9.68	90	eP		Pn	23 18 34.7	+0.6
LKP				eS		Sn	23 20 14.6	-8.1
LKP	comp=N,3µm,0.8s			IAML			23 20 29.0	
NIL	Nilore	11.64	303	P		Pn	23 18 59.7	-1.3
NIL	Nilore	11.64	303	Pn		Pn	23 18 59.7	-1.3
HYB	Hyderabad comp=N,550nm,1.0s	11.88	211	*i* P		Pn	23 19 03.0	-1.3
HYB				ePS			23 21 19.0	
KBL	Kabul	15.19	300	P		Pn	23 19 46.0	-3.6
KBL	comp=Z,425nm,1.1s			pmax	pmax			
KBL	Kabul comp=Z,425nm,1.1s	15.19	300	Pn		Pn	23 19 46.0	-3.6
KBL				IAmb	IAmb		23 20 02.0	
MHMT	Maesarieng comp=Z,2µmcomp=Z,215nm,0.8s	15.29	126	P		Pn	23 19 50.0	-0.8
PRZ	Przheval'sk	15.61	342	P		Pn	23 19 52.9	-2.2
PRZ	comp=Z,140nm,0.7s			pmax	pmax			
PRZ	Przheval'sk comp=Z,140nm,0.7s	15.61	342			Pn	23 19 52.9	-2.2
PRZ				IAmb	IAmb		23 20 05.3	
CHTO	Chiang Mai	15.63	122	P		Pn	23 19 53.5	-1.8
CHTO	comp=Z,201nm,1.3s			pmax	pmax			
CHTO	Chiang Mai comp=Z,1µmcomp=Z,71nm,1.1s	15.63	122	Pn		Pn	23 19 53.5	-1.8
CHTO	Chiang Mai	15.63	122	P		Pn	23 19 56.7	+1.4
CM33	Chiang Mai Arr	15.63	122	P		Pn	23 19 54.0	-1.3
CMMT	Chiang Mai comp=Z,1µmcomp=Z,71nm,1.1s	15.64	122	P		Pn	23 19 53.8	-1.5
CM32	Chiang Mai Arr	15.66	122	P		Pn	23 19 55.0	-0.6
KDJ	Kajisay	15.66	338	P		Pn	23 19 54.0	-1.7
KDJ	comp=Z,58nm,0.8s			pmax	pmax			
KDJ	Kajisay	15.66	338			Pn	23 19 54.0	-1.7
CM34	Chiang Mai Arr	15.77	121	P		Pn	23 19 57.0	0.0
CM15	Chiang Mai Arr comp=Z,1µmcomp=Z,129nm,0.9s	15.84	123	P		Pn	23 19 59.0	+1.0
CM13	Chiang Mai Arr comp=Z,770nmcomp=Z,99nm,0.8s	15.85	123	P		Pn	23 19 57.0	-1.0
CM31	Chiang Mai Arr comp=Z,22µmcomp=Z,3µm,0.9s	15.85	123	P		P	23 20 00.0	-1.8
CM31	Chiang Mai Arr	15.85	123			Pn	23 19 58.2	+0.1
CM31	Chiang Mai Arr SNR=74	15.85	123	P		Pn	23 19 59.5	+1.4
CMAR	Chiang Mai Arr comp=Z,0.8nm,0.3s,baz=298,slow=12,SNR=41	15.85	123	Pn		Pn	23 19 56.9	-1.2
CMAR	Chiang Mai Arr	15.85	123	P		Pn	23 19 58.4	+0.3
CMAR	Chiang Mai Arr	15.85	123	Pn		Pn	23 19 58.4	+0.3
CM02	Chiang Mai Arr comp=Z,919nmcomp=Z,124nm,1.0s	15.87	123	P		Pn	23 19 58.8	+0.5
CM35	Chiang Mai Arr	15.88	122	P		Pn	23 19 58.0	-0.4
CM01	Chiang Mai Arr comp=Z,1µmcomp=Z,138nm,0.9s	15.89	123	P		Pn	23 19 59.0	+0.5
CM05	Chiang Mai Arr comp=Z,626nmcomp=Z,94nm,0.8s	15.89	123	P		Pn	23 19 58.0	-0.5
CM09	Chiang Mai Arr comp=Z,1µmcomp=Z,127nm,0.9s	15.90	123	P		Pn	23 19 59.4	+0.7
CM04	Chiang Mai Arr comp=Z,935nmcomp=Z,131nm,0.9s	15.91	123	P		Pn	23 19 59.4	+0.5
CM36	Chiang Mai Arr	15.93	122	P		Pn	23 19 59.0	-0.1
SHLS	Shalkode baz=346	15.98	345	eP		Pn	23 19 56.1	-3.6
SHLS	Shalkode	15.98	345	eP		Pn	23 19 56.1	-3.6
UZB	Uzynbulak comp=Z,104nm,1.4s,baz=344	16.07	344	eP		Pn	23 19 58.6	-2.3
UZB	Uzynbulak comp=Z,104nm,1.4s	16.07	344	eP		Pn	23 19 58.6	-2.3
UZB				pmax	pmax			
ULHL	Ulahol SNR=25	16.09	336	P		Pn	23 19 58.8	-2.5
SATY	Saty baz=342	16.15	343	eP		Pn	23 19 59.5	-2.4
SATY	Saty	16.15	343	eP		Pn	23 19 59.4	-2.4
KMI	Kunming	16.15	95	⇑P		Pn	23 20 01.3	-0.8
KMI				pP		P	23 20 06.5	+1.1
KMI				sP		pP	23 20 09.5	0.0
KMI				PP		**sP**	23 20 15.3	+3.9
KMI				S		Sn	23 22 55.5	-5.8
KMI				sS		S	23 23 06.0	-8.5
KMI				SS		SnSn	23 23 18.0	+3.8
KMI	comp=Z,53nm,0.8s			pmax	pmax			
KMI	comp=Z,210nm,3.8s			pmax	pmax			
KMI	comp=Z,2µm,11.7s			LR	LR			
KMI	comp=Z,3µm,14.3s			LR	LR			
KMI	comp=Z,3µm,13.5s			LR	LR			
KMI	Kunming comp=Z,125nm,0.9s	16.15	95	P		Pn	23 20 01.0	-1.1
KMI				pmax	pmax			
KMI	Kunming	16.15	95			Pn	23 20 01.0	-1.1
WMQ	Urumqi	16.16	7	eP		Pn	23 20 02.5	+0.5
WMQ				pP		P	23 20 05.8	+0.6
WMQ				sP		pP	23 20 09.3	0.0
WMQ				PP		**sP**	23 20 15.5	+4.2
WMQ				S		Sn	23 23 02.3	+1.1
WMQ				sS		S	23 23 10.3	-4.0
WMQ				SS		SnSn	23 23 23.0	+8.6
WMQ	comp=Z,480nm,1.1s			pmax	pmax			
WMQ	comp=Z,650nm,3.6s			pmax	pmax			
WMQ	comp=Z,4µm,15.9s			LR	LR			
WMQ	comp=Z,3µm,16.7s			LR	LR			
WMQ	comp=Z,5µm,21.5s			LR	LR			
WMQ	Urumqi	16.16	7	P		Pn	23 20 00.5	-1.5
WMQ	comp=Z,441nm,1.1s			pmax	pmax			
WMQ	Urumqi	16.16	7			Pn	23 20 00.5	-1.5
WMQ	comp=Z,441nm,1.1s			IAmb	IAmb		23 20 10.6	
BOOM	Boomskoye usch comp=Z,87nm,1.2s	16.41	336	P		Pn	23 20 02.9	-2.4
BOOM				pmax	pmax			
BOOM	Boomskoye usch	16.41	336			Pn	23 20 02.9	-2.4
GAR	Garm comp=Z,652nm,1.2s	16.55	316	Pn		Pn	23 20 04.3	-2.7
GAR				IAmb	IAmb		23 20 14.7	
CD2	Chengdu	16.70	75	P		Pn	23 20 09.3	+0.4
CD2				S		Sn	23 23 14.0	-0.2
CD2	comp=Z,5µm,8.6s			LR	LR			
CD2	comp=Z,7µm,10.1s			LR	LR			
CD2	comp=Z,10µm,10.1s			LR	LR			
UCH	Uchtor SNR=71	16.74	332	P		Pn	23 20 07.1	-2.7
TKM2	Tokmak 2 SNR=18	16.91	336	P		Pn	23 20 10.0	-1.7
KBK	Karagaybulak	16.93	334	P		P	23 20 13.6	-0.2

SNR=25
BTK Batken 16.93 320 P **Pn** **23 20 08.0 -3.8**
BTK pmax pmax
comp=Z,159nm,0.9s
BTK Batken 16.93 320 Pn **Pn** **23 20 08.0 -3.8**
GTA Gaotai 16.95 43 P **Pn** **23 20 08.8 -3.2**
GTA pP P 23 20 14.5 +0.5
GTA sP pP 23 20 17.5 -0.6
GTA S **Sn** **23 23 17.5 -2.8**
GTA SS **SnSn** **23 23 35.0 +1.4**
GTA pmax pmax
comp=Z,26nm,1.3s
GTA pmax pmax
comp=Z,75nm,4.7s
GTA LR LR
comp=N,1µm,10.5s
GTA LR LR
comp=E,4µm,10.5s
GTA LR LR
comp=Z,4µm,10.9s
SUKH Sukhothai 16.97 124 P **Pn** **23 20 12.0 -0.3**
comp=Z,1µmcomp=Z,165nm,0.8s
AML Almayashu 17.01 330 P **Pn** **23 20 11.7 -1.4**
SNR=6.9
AAK Ala-Archa 17.09 333 P **Pn** **23 20 13.0 -0.9**
comp=Z,1.6nm,0.3s,baz=159,slow=13,SNR=31
AAK Ala-Archa 17.09 333 P **Pn** **23 20 13.0 -0.9**
SNR=38
AAK Ala-Archa 17.09 333 *i* P **Pn** **23 20 13.0 -0.9**
SNR=73
AAK Ala-Archa 17.09 333⇓ *e*P **Pn** **23 20 12.8 -1.1**
AAK pmax pmax
comp=Z,206nm,1.3s
AAK Ala-Archa 17.09 333 **Pn** **23 20 11.3 -2.6**
AAK Ala-Archa 17.09 333 P **Pn** **23 20 12.7 -1.2**
FRU1 Bishkek 17.18 333 P **Pn** **23 20 13.4 -1.5**
FRU1 pmax pmax
comp=Z,201nm,1.4s
FRU1 Bishkek 17.18 333 Pn **Pn** **23 20 13.4 -1.5**
UMPA Umpang Tak 17.27 129 P **P** **23 20 18.1 +0.5**
comp=Z,1µmcomp=Z,126nm,0.7s
CHMS Chumysh 17.30 334 P **Pn** **23 20 15.2 -1.1**
SNR=34
EKS2 Erkin-Say 17.41 331 P **Pn** **23 20 16.6 -1.2**
SNR=21
UTTA Uttaradit 17.50 121 P **Pn** **23 20 19.0 +0.1**
comp=Z,1µmcomp=Z,113nm,0.8s
USP Ospenovka 17.62 334 P **P** **23 20 20.9 -0.4**
SNR=21
PBA Port Blair 17.62 154 P P 23 20 22.1 +0.6
PBA IAmb IAmb 23 20 33.6
comp=Z,265nm,0.8s
PBA Port Blair 17.62 154 P P 23 20 23.6 +2.2
SNR=12
SGDS Sogindy 17.73 335 *e*P **Pn** **23 20 19.9 -1.8**
baz=334
SGDS Sogindy 17.73 335 *e*P **Pn** **23 20 19.9 -1.8**
PHIT Phitsanulok 17.74 123 P **P** **23 20 22.9 +0.2**
comp=Z,3µmcomp=Z,431nm,0.9s
TDK Taldyqorghan 17.97 345 *e*P **Pn** **23 20 22.5 -2.2**
comp=Z,179nm,0.8s,baz=345
TDK Taldyqorghan 17.97 345 *e*P **Pn** **23 20 22.4 -2.2**
TDK pmax pmax
comp=Z,179nm,0.8s
LZH Lanzhou 18.03 58 ⇑P **Pn** **23 20 23.0 -2.6**
LZH S **Sn** **23 23 43.0 -3.7**
LZH sS S 23 23 49.5 -3.2
LZH SS **SnSn** **23 24 08.0 +7.7**
LZH pmax pmax
comp=Z,120nm,1.0s
LZH pmax pmax
comp=Z,430nm,4.6s
LZH LR LR
comp=Z,3µm,10.5s
LZH LR LR
comp=Z,2µm,10.3s
LZH LR LR
comp=Z,3µm,12.4s
KHLT Khaolaem Dam 18.10 133 P **Pn** **23 20 26.3 0.0**
comp=Z,56nm,0.8s
UTHA Uthaitani 18.12 129 P **P** **23 20 27.2 +0.2**
comp=Z,1µmcomp=Z,150nm,0.9s
TAS Tashkent 18.64 321 P **P** **23 20 29.7 -2.8**
TAS pmax pmax
comp=Z,730nm,1.5s
TAS Tashkent 18.64 321 **P** **23 20 29.7 -2.8**
TAS IAmb IAmb 23 20 38.8
comp=Z,730nm,1.5s
SRDT SRDT 18.77 132 P **Pn** **23 20 36.4 +1.9**
comp=Z,35nm,0.9s
IUG luznay 18.80 324 *e*P **P** **23 20 32.4 -2.1**
baz=323
IUG luznay 18.80 324 *e*P **P** **23 20 32.3 -2.1**
MK31 Makanchi Array 19.10 354*de*P **P** **23 20 37.7 +0.1**
MK31 Makanchi Array 19.10 354 **P** **23 20 37.1 -0.4**
MKAR Makanchi Array 19.10 354 P **P** **23 20 37.4 -0.2**
comp=Z,4.1nm,0.3s,baz=188,slow=10,SNR=78
MKAR S **Sn** **23 24 11.2 -0.9**
comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=1.8
MKAR LR LR 23 29 04.1
comp=Z,2µm,18.7s,baz=192,slow=40
MKAR P3KPbc 23 55 07.2
comp=Z,0.1nm,0.3s,baz=37,slow=4.6,SNR=13
MKAR Makanchi Array 19.10 354 P **P** **23 20 36.7 -0.9**
MAKZ Makanchi 19.14 354 P **P** **23 20 37.5 -0.5**
MAKZ pmax pmax
comp=Z,81nm,0.9s
MAKZ Makanchi 19.14 354 P **P** **23 20 37.5 -0.5**
CHM Chimkent 19.15 323 *e*P **P** **23 20 36.9 -1.2**
baz=323
CHM Chimkent 19.15 323 *e*P **P** **23 20 36.9 -1.2**
KK31 Karatay Array 19.25 326 P **P** **23 20 37.4 -1.8**
KK31 pmax pmax
comp=Z,53nm,0.8s
KK31 Karatay Array 19.25 326 **P** **23 20 37.4 -1.8**
KKAR Karatay Array 19.25 326 P **P** **23 20 37.3 -1.9**
KKAR pmax pmax
comp=Z,53nm,0.8s
KKAR Karatay Array 19.25 326 P **P** **23 20 37.1 -2.2**
KKAR Karatay Array 19.25 326 P **P** **23 20 37.3 -1.9**
KKAR IAmb IAmb 23 20 45.3
comp=Z,53nm,0.8s
BTLS Baital 19.31 336 *e*P **P** **23 20 38.1 -1.8**
baz=336
BTLS Baital 19.31 336 *e*P **P** **23 20 38.0 -1.8**
NONG Nongkai 19.33 116 P **Pn** **23 20 42.0 +0.7**
comp=Z,143nm,0.9s
GYA Guiyang 19.37 89⇓P **P** **23 20 40.8 0.0**
GYA S Sn 23 24 06.0 -13
GYA pmax pmax
comp=Z,12nm,0.9s
GYA LR LR
comp=Z,210nm,10.5s
GYA LR LR
comp=Z,240nm,11.1s
CHAI Chaiyaphum 19.71 123 P **Pn** **23 20 47.0 +1.1**
comp=Z,2µmcomp=Z,227nm,1.3s
KHON Khomkaen 20.07 121 P Pn 23 20 50.6 +0.5
comp=Z,2µmcomp=Z,284nm,0.8s
PHET Kaeng Krachan 20.17 134 P Pn 23 20 51.7 +0.4
comp=Z,2µmcomp=Z,251nm,0.7s
HRA Herat 20.51 294 P **P** **23 20 52.7 -0.6**
HRA IAmb IAmb 23 21 02.1
comp=Z,438nm,1.5s
PALK Pallekele 20.79 192 P Pn 23 20 58.2 -0.3
comp=Z,40nm,0.7s,baz=110,slow=12,SNR=39
PALK S **S** **23 24 38.1 -10**
comp=Z,33nm,0.8s,baz=115,slow=11,SNR=3.0
PALK Pallekele 20.79 192 P **P** **23 20 56.6 +0.5**
PALK pmax pmax
comp=Z,68nm,0.7s
PALK Pallekele 20.79 192 P **P** **23 20 56.6 +0.5**
PALK Pallekele 20.79 192 P Pn 23 20 58.3 -0.3
PALK P Pn 23 20 58.3 -0.3
SRAK Srakaew 21.00 127 P **P** **23 21 04.7 +6.3**
comp=Z,13µmcomp=Z,1µm,1.3s
XAN Xi'an 21.47 67 P **P** **23 21 03.0 -0.4**
XAN pP pP 23 21 07.0 -0.6
XAN S **S** **23 24 58.5 -2.9**
XAN pmax pmax
comp=Z,160nm,1.0s
XAN LR LR
comp=Z,790nm,9.2s
XAN LR LR
comp=Z,2µm,10.6s
XAN LR LR
comp=Z,2µm,10.6s
XAN Xi'an 21.47 67 P **P** **23 21 02.6 -0.8**
XAN pmax pmax
comp=Z,98nm,0.7s
XAN Xi'an 21.47 67 P **P** **23 21 02.6 -0.8**
XAN IAmb IAmb 23 21 04.0
comp=Z,98nm,0.7s
ENH Enshi 21.59 78 P **P** **23 21 04.9 +0.1**
ENH IAmb IAmb 23 21 10.7
comp=Z,232nm,0.9s
DGZ Jazzator, Alta 21.98 4*ce*P **P** **23 21 09.4 +0.6**
DGZ pmax pmax
comp=Z,85nm,0.7s
MNCI Minicoy 22.41 212 P **P** **23 21 13.4 -0.1**
MNCI IAmb IAmb 23 21 24.6
comp=Z,199nm,0.9s
UBPT Khong Chiam 22.74 119 P **P** **23 21 17.0 -0.1**
comp=Z,805nmcomp=Z,60nm,1.0s
UBPT Khong Chiam 22.74 119 P **P** **23 21 16.8 -0.2**
UBPT IAmb IAmb 23 21 23.6
comp=Z,176nm,1.2s
SURT Suratani 22.83 142 P **P** **23 21 20.0 +2.0**
comp=Z,98nmcomp=Z,13nm,1.1s
SEM Semipalatinsk 22.89 352 *e*P **P** **23 21 16.9 -1.8**
comp=Z,98nm,1.2s,baz=352
SEM Semipalatinsk 22.89 352 *e*P **P** **23 21 16.8 -1.8**
SEM pmax pmax
comp=Z,98nm,1.2s
KURBB Kurchatov Arra 23.34 350 P **P** **23 21 22.9 0.0**
comp=Z,130nm,1.1s,baz=176,slow=8.9,SNR=86
KURBB S **S** **23 25 33.0 -2.1**
comp=Z,4.0nm,1.0s,baz=195,slow=9.6,SNR=1.2
KURBB P3KPbc 23 54 50.1
comp=Z,2.2nm,1.0s,baz=342,slow=5.2,SNR=12
KURK Kurchatov 23.41 350 P **P** **23 21 22.9 -0.8**
PKDT Phuket 23.48 145 P **P** **23 21 25.7 +1.0**
comp=Z,52nm,0.7s
KRAB Krabi 23.66 143 P **P** **23 21 28.7 +2.4**
WBK Wadi Bani Khal 24.04 263 P **P** **23 21 34.0 +3.9**
SNR=20
BRZS Berezniki 24.08 340 *e*P **P** **23 21 28.7 -1.5**
comp=Z,147nm,1.4s,baz=340
BRZS Berezniki 24.08 340 *e*P **P** **23 21 28.6 -1.6**
BRZS pmax pmax
comp=Z,147nm,1.4s
WSAR Wadi Sarin 24.16 265 P **P** **23 21 33.2 +2.0**
comp=Z,35nm,0.7s,baz=114,slow=8.3,SNR=47
WSAR Wadi Sarin 24.16 265 P **P** **23 21 33.5 +2.3**
SNR=18
BTO Baotou 24.27 52 *e*P **P** **23 21 31.0 -1.2**
BTO LR LR
comp=Z,8µm,11.4s
QIZ Qiongzhong 24.41 106 P **P** **23 21 33.0 -0.5**
QIZ pP **pP** **23 21 35.8 -2.1**
QIZ sP **sP** **23 21 38.5 -1.3**
QIZ S **S** **23 25 52.3 -0.7**
QIZ sS **pS** **23 25 58.5 +0.1**
QIZ pmax pmax
comp=Z,510nm,7.3s
QIZ LR LR
comp=Z,690nm,17.7s
QIZ LR LR
comp=Z,590nm,11.3s
QIZ LR LR
comp=Z,680nm,12.9s
QIZ Qiongzhong 24.41 106 P **P** **23 21 33.8 +0.4**
QIZ IAmb IAmb 23 21 40.8
comp=Z,97nm,1.0s
BIDO Bidbid 24.53 266 P **P** **23 21 37.1 +2.6**
SNR=18
GEYT Alibeck 24.64 301 P **P** **23 21 36.0 +0.6**
comp=Z,48nm,0.8s,baz=148,slow=11,SNR=80
GEYT Alibeck 24.64 301 P **P** **23 21 35.8 +0.3**
GYA0B ALIBECK ARRAY 24.64 301 P **P** **23 21 35.5 +0.1**
GYA0B IAmb IAmb 23 21 44.3
comp=Z,137nm,1.0s
SMDO Samad 24.72 265 P **P** **23 21 39.0 +2.6**
SNR=36
JMDO Jabal Madar 24.88 264 P **P** **23 21 40.3 +2.6**
SNR=18
TIY Taiyuan 25.07 60 *e*P **P** **23 21 40.3 +0.9**
TIY S **S** **23 26 01.5 -2.0**
TIY pmax pmax
comp=Z,53nm,0.9s
TIY LR LR
comp=Z,2µm,8.9s
TIY LR LR
comp=Z,1µm,10.4s
TIY LR LR
comp=Z,2µm,12.3s
LHMI Lhok Sumawe 25.16 151 P **P** **23 21 42.1 +1.9**
LHMI Lhok Sumawe 25.16 151 P **P** **23 21 40.5 +0.3**
comp=Z,4µmcomp=Z,314nm,1.0s
HOQ Hoqain 25.23 267 P **P** **23 21 45.0 +4.1**
SNR=10.0
HHC Hu-ho-hao-te 25.45 52 *e*P **P** **23 21 44.0 +1.2**
HHC sP sP 23 21 54.0 +4.9
HHC S **S** **23 26 09.5 0.0**
HHC sS sS 23 26 16.8 -0.1
HHC pmax pmax
comp=Z,74nm,0.9s
HHC pmax pmax
comp=Z,280nm,6.5s
HHC LR LR
comp=Z,3µm,10.2s
HHC LR LR
comp=Z,3µm,12.5s
HHC LR LR
comp=Z,4µm,11.9s
MHTO MHTO 25.45 261 P **P** **23 21 45.3 +2.4**
SNR=25
BSY Bisya 25.56 265 P **P** **23 21 47.0 +3.0**
SNR=20
BANOM Banah 25.61 273 P **P** **23 21 46.2 +1.9**
BANOM Banah 25.61 273 P **P** **23 21 46.6 +2.3**
SHME Shamm 25.72 273 P **P** **23 21 47.6 +2.3**
SHME Shamm 25.72 273 P **P** **23 21 45.3 0.0**
MDH Madha 25.73 271 P **P** **23 21 45.4 0.0**
MDH Madha 25.73 271 P **P** **23 21 46.4 +1.1**
SOHO SOHO 25.78 268 P **P** **23 21 46.6 +0.8**
SOHO SOHO 25.78 268 P **P** **23 21 46.8 +0.9**
WHN Wuhan 25.79 77⇓P **P** **23 21 47.3 +1.4**
WHN S **S** **23 26 22.0 +7.1**
WHN pmax pmax
comp=Z,64nm,0.9s
WHN LR LR
comp=Z,4µm,10.3s
WHN LR LR
comp=Z,3µm,11.0s
WHN LR LR
comp=Z,4µm,12.7s
MASF Masafi 25.84 271 P **P** **23 21 47.9 +1.5**
MSFE Esma-Masafi 25.84 271 *i* P **P** **23 21 47.6 +1.1**
SNR=6.6
UOSS Minazif 25.89 270 P **P** **23 21 46.7 -0.1**
UOSS Minazif 25.89 270 P **P** **23 21 48.8 +2.0**
HATD Hatta, Dubai 25.98 270 P **P** **23 21 49.3 +1.7**
HATD Hatta, Dubai 25.98 270 P **P** **23 21 50.0 +2.4**
ARQ Araqi 26.00 267 P **P** **23 21 51.0 +3.1**
SNR=12
SONM Songino Array 26.08 34 P **P** **23 21 50.0 +1.6**
comp=Z,52nm,0.8s,baz=220,slow=11,SNR=53
SONM PcP **PcP** **23 25 16.5 +0.5**
comp=Z,2.6nm,0.5s,baz=233,slow=3.8,SNR=4.6
SONM ScP **ScP** **23 28 53.2 -2.2**
comp=Z,2.1nm,1.0s,baz=194,slow=4.3,SNR=3.6
SONM LR LR 23 33 24.7
comp=Z,2µm,18.8s,baz=230,slow=39
SONM P3KPbc 23 54 40.2
comp=Z,1.9nm,0.7s,baz=59,slow=3.3,SNR=13
SONM Songino Array 26.08 34 P **P** **23 21 49.6 +1.1**
SONM IAmb IAmb 23 21 57.5
comp=Z,76nm,0.8s
ZAA0 Zalesovo Array 26.15 360 P **P** **23 21 48.8 -0.1**
ZAA0 IAmb IAmb 23 21 53.6
comp=Z,96nm,0.9s
ZALV Zalesovo Beam 26.15 360 P **P** **23 21 49.6 +0.8**
comp=Z,56nm,0.7s,baz=182,slow=10,SNR=99
ZALV ScS ScS 23 32 39.5 -5.2
comp=Z,1.3nm,0.7s,baz=145,slow=5.3,SNR=3.5
ZALV P3KPbc 23 54 38.5
comp=Z,3.1nm,0.9s,baz=351,slow=4.9,SNR=9.8
ZALV Zalesovo Beam 26.15 360 P **P** **23 21 49.2 +0.3**
NAZ Nazwa, Dubai 26.36 271 P **P** **23 21 53.2 +2.1**
NAZ Nazwa, Dubai 26.36 271 P **P** **23 21 53.3 +2.3**
ULN Ulaanbaatar 26.43 35*c* *i*P **P** **23 21 52.6 +0.9**
ULN pmax pmax
comp=Z,67nm,0.7s
ULN Ulaanbaatar 26.43 35 P **P** **23 21 52.1 +0.4**
ULN IAmb IAmb 23 21 59.2
comp=Z,91nm,0.6s
ULN Ulaanbaatar 26.43 35 P **P** **23 21 52.9 +1.2**
FAQ Al Faqa, Dubai 26.47 270 P **P** **23 21 53.8 +1.7**
FAQ Al Faqa, Dubai 26.47 270 P **P** **23 21 54.3 +2.2**
ALNE Al Ain 26.49 269 *i* P **P** **23 21 54.6 +2.2**
SNR=19
ALNE Al Ain 26.49 269 P **P** **23 21 55.5 +3.2**
SNR=9.2
ZAK Zakamensk 26.55 27 *e*P **P** **23 21 53.2 +0.6**
ZAK pmax pmax
comp=Z,28nm,1.0s
ASUD Al Ashush, Dub 26.73 270 P **P** **23 21 54.7 +0.3**
ASUD Al Ashush, Dub 26.73 270 P **P** **23 21 55.7 +1.3**
MOY Mondy 26.75 22 *e*P **P** **23 21 56.2 +1.8**
MOY pmax pmax
comp=Z,70nm,1.4s
KULM Kulim 26.89 143 P **P** **23 21 57.0 +1.1**
TPTI 27.03 152 P **P** **23 21 54.6 -2.5**
comp=Z,31nm,1.5s
TSI Tuntungan 27.41 149 P **P** **23 22 01.5 +0.9**
comp=Z,89nm,0.8s
BVAR Borovoye Array 27.44 341 P **P** **23 22 00.0 -0.5**
comp=Z,17nm,0.9s,baz=169,slow=12,SNR=51
BVAR P3KPbc 23 54 31.6
comp=Z,1.7nm,0.8s,baz=68,slow=4.0,SNR=9.0
BRVK Borovoye 27.50 341*d* *i*P **P** **23 22 01.1 0.0**
BRVK pmax pmax
comp=Z,41nm,1.3s
BRVK Borovoye 27.50 341 P **P** **23 22 00.8 -0.3**
BRVK IAmb IAmb 23 22 15.9
comp=Z,109nm,1.7s
BRVK Borovoye 27.50 341 P **P** **23 22 01.5 +0.4**
TLY Talaya 27.71 25 P **P** **23 22 05.4 +2.4**
comp=Z,4.6nm,0.7s,baz=228,slow=9.2,SNR=13
TLY Talaya 27.71 25 *e*P **P** **23 22 08.0 +5.0**
TLY *i* S **S** **23 26 45.9 +1.1**
TLY pmax pmax
comp=Z,64nm,1.6s
TLY MLR MLR
comp=Z,3µm,11.0s
TLY Talaya 27.71 25 P **P** **23 22 03.7 +0.7**
IPM Ipoh 27.77 144 P **P** **23 22 03.2 -0.6**
PSI Prapat 28.20 149 P **P** **23 22 07.8 +0.1**
comp=Z,28nm,0.9s,baz=0.2,slow=3.6,SNR=13
PSI PcP **PcP** **23 25 22.3 +0.8**
comp=Z,17nm,0.8s,baz=278,slow=2.3,SNR=4.2
PSI Prapat 28.20 149 P **P** **23 22 08.0 +0.3**
PSI pmax pmax
comp=Z,35nm,1.0s
MZWR Madinat Zayed 28.23 269 P **P** **23 22 09.1 +1.3**
RPSI Rantau Prapat 28.29 149 P **P** **23 22 08.0 -0.5**
IRK Irkutsk 28.39 25 *e*P **P** **23 22 10.9 +1.8**
IRK pmax pmax
comp=Z,44nm,2.4s
TIA Tai'an 28.45 65 P **P** **23 22 10.5 +0.7**
TIA S **S** **23 26 55.5 -1.3**
TIA pmax pmax
comp=Z,24nm,1.3s
TIA pmax pmax
comp=Z,130nm,3.7s
TIA LR LR
comp=Z,540nm,13.0s
TIA LR LR
comp=Z,1µm,15.9s
TIA LR LR
comp=Z,2µm,21.1s
BJT Baijiatuao 28.50 57 P **P** **23 22 09.6 -0.5**
BJT pmax pmax
comp=Z,14nm,0.8s
BJT Baijiatuao 28.50 57 P **P** **23 22 09.6 -0.5**
BJI Beijing 28.51 56 P **P** **23 22 11.3 +1.1**
BJI S **S** **23 26 59.5 +2.0**
BJI pmax pmax
comp=Z,5.0nm,0.7s
BJI LR LR
comp=Z,1µm,10.6s
BJI LR LR
comp=Z,1µm,9.4s
BJI LR LR
comp=Z,770nm,19.9s
SHAO Shalim 28.64 256 P **P** **23 22 14.1 +2.5**
SHAO Shalim 28.64 256 P **P** **23 22 14.2 +2.5**
ABKAR Akbulak array 28.80 325 P **P** **23 22 12.9 +0.2**
ABKAR Akbulak array 28.80 325 P **P** **23 22 12.6 -0.1**
GSI Gunungsitoli 28.97 153 P **P** **23 22 16.0 +1.5**
GSI Gunungsitoli 28.97 153 P **P** **23 22 15.8 +1.3**
comp=Z,201nm,0.7s
DMTO DMTO 29.35 256 P **P** **23 22 20.2 +2.3**
NJ2 Nanjing 29.62 73 *e*P **P** **23 22 21.3 +1.1**
NJ2 pP **pP** **23 22 24.3 -0.4**
NJ2 sP **sP** **23 22 26.5 0.0**
NJ2 S **S** **23 27 13.5 -1.7**
NJ2 sS **sS** **23 27 21.8 -0.9**
NJ2 pmax pmax
comp=Z,21nm,1.0s
NJ2 pmax pmax
comp=Z,95nm,4.0s
NJ2 LR LR
comp=Z,1µm,13.3s
NJ2 LR LR
comp=Z,2µm,11.6s
NJ2 LR LR
comp=Z,2µm,12.6s
DOK Doka 29.69 259 P **P** **23 22 23.0 +2.1**
SNR=11
RBK Rabkut 30.09 257 P **P** **23 22 27.0 +2.6**
SNR=9.9
SLWR Sila 30.09 271 P **P** **23 22 25.2 +0.8**
QZH Quanzhou 30.22 88 *e*P **P** **23 22 27.5 +1.9**
QZH S **S** **23 27 23.0 -1.8**
QZH LR LR
comp=Z,600nm,10.4s
QZH LR LR
comp=Z,850nm,10.9s
QZH LR LR
comp=Z,1µm,12.3s
MNSI Mandailing Nat 30.27 150 P **P** **23 22 26.6 +0.6**
comp=Z,77nm,0.9s
WHFO Wadi Hawf 30.29 258 P **P** **23 22 28.0 +1.7**
SNR=20
ABTO Aybut 30.93 257 P **P** **23 22 34.0 +2.0**
SNR=15
BKNI Bangkinang 31.35 148 P **P** **23 22 36.4 +0.8**
BKNI Bangkinang 31.35 148 P **P** **23 22 36.0 +0.4**
comp=Z,3µmcomp=Z,386nm,1.0s
MYKOM Kota Tinggi 31.54 142 P **P** **23 22 38.1 +0.9**
MYKOM IAmb IAmb 23 22 40.2
comp=Z,89nm,1.0s
SSE Sheshan 31.64 75 P **P** **23 22 40.5 +2.4**
SSE S **S** **23 27 48.5 +1.6**
SSE pmax pmax
comp=Z,27nm,0.8s
SSE LR LR
comp=Z,740nm,16.4s
SSE LR LR
comp=Z,210nm,12.6s
DL2 Dalian 32.39 60 P **P** **23 22 46.5 +2.0**
DL2 S **S** **23 28 02.5 +4.1**
DL2 pmax pmax
comp=Z,59nm,0.8s
DL2 LR LR
comp=Z,1µm,11.6s
DL2 LR LR
comp=Z,1µm,12.3s
DL2 LR LR
comp=Z,2µm,15.5s
QRN Al-Qurain 32.55 281 *e*P 23 22 45.5
UMR Umm Al-Rimmam 32.63 282 *e*P 23 22 46.6
SOCY Socotra 32.84 248 P **P** **23 22 48.2 -0.6**
SOCY IAmb IAmb 23 22 54.5
comp=Z,37nm,0.9s
SOCY Socotra 32.84 248 P **P** **23 22 48.9 +0.1**
SNR=12
RDF Al-Radifah 32.85 281 *e*P 23 22 48.7
YULB Yu-li 33.00 89 P **P** **23 22 51.5 +1.4**
YULB IAmb IAmb 23 23 05.0
comp=Z,34nm,0.8s
NACB Ninganchiao 33.06 88 P **P** **23 22 52.1 +1.5**
NACB IAmb IAmb 23 23 17.1
comp=Z,38nm,0.9s
RST Umm Al-Ruwaisa 33.26 282 *e*P 23 22 52.4

AKT Akhty 33.27 304 *e*P P 23 22 53.8 +1.4
AKT *e* 23 24 05.2
AKT pmax pmax
comp=Z,53nm,0.8s
MAK Makhachkala 33.78 307 *e*P P 23 22 51.3 -5.3
MAK *e*S S 23 28 13.6 -6.3
MAK pmax pmax
comp=Z,27nm,0.5s
MAK MLR MLR
comp=Z,543nm,15.0s
SVE Sverdlovsk 33.78 336*ce*P P 23 22 57.1 +0.6
SVE pmax pmax
comp=Z,121nm,1.1s
SVE MLR MLR
comp=Z,609nm,12.0s
HIA Hailar 34.22 42 P P 23 23 01.7 +1.3
HIA pmax pmax
comp=Z,73nm,1.6s
HIA Hailar 34.22 42 P P 23 23 01.7 +1.3
HIA IAmb IAmb 23 23 05.6
comp=Z,73nm,1.6s
ARU Arti 34.27 334*c i*P P 23 23 00.7 0.0
ARU 23 24 10.4
ARU PPP PPP 23 24 26.7
ARU 23 25 36.4
ARU S S 23 28 30.5 +3.3
ARU SS SnSn 23 30 39.1 +2.9
ARU pmax pmax
comp=Z,93nm,1.1s
ARU MLR MLR
comp=Z,779nm,16.0s
ARU Arti 34.27 334 P P 23 23 00.6 -0.1
ARU IAmb IAmb 23 23 05.4
comp=Z,109nm,1.2s
JMBI JAMBI 34.32 145 P P 23 23 03.6 +2.0
comp=Z,233nm,0.9s
SNY Shenyang 34.38 56 ⇑P P 23 23 05.0 +3.2
SNY S S 23 28 32.0 +2.8
SNY pmax pmax
comp=Z,25nm,1.2s
SNY pmax pmax
comp=Z,110nm,3.5s
SNY LR LR
comp=Z,700nm,12.1s
SNY LR LR
comp=Z,870nm,12.6s
SNY LR LR
comp=Z,1μm,14.2s
GROC Groznyy 35.05 306 *e*P P 23 23 08.1 +0.5
GROC *e* 23 24 27.9
GROC pmax pmax
comp=Z,71nm,0.8s
GNI Garni 35.27 301 P P 23 23 08.7 -1.1
GNI Garni 35.27 301*d i*P P 23 23 11.9 +2.1
GNI pmax pmax
comp=Z,142nm,1.5s
GNI Garni 35.27 301 P P 23 23 10.9 +1.1
GNI IAmb IAmb 23 23 18.3
comp=Z,197nm,1.6s
KSI Kapahiang 35.57 149 P P 23 23 12.0 -0.4
KSM Kuching 35.68 133 P P 23 23 14.9 +1.6
KSM IAmb IAmb 23 23 16.5
comp=Z,53nm,0.9s
RAYN Ar Rayn 35.71 272 *i* P P 23 23 14.1 +0.5
SNR=14
RAYN Ar Rayn 35.71 272 P P 23 23 13.6 0.0
RAYN pmax pmax
comp=Z,89nm,1.3s
RAYN Ar Rayn 35.71 272 P P 23 23 13.6 0.0
RAYN IAmb IAmb 23 23 19.7
comp=Z,89nm,1.2s
PMBI Palembang 36.00 145 P P 23 23 17.6 +1.6
PMBI Palembang 36.00 145 P P 23 23 17.2 +1.2
comp=Z,931nm,1.0s
PPBI Pangkal Pinang 36.08 142 P P 23 23 17.6 +0.9
comp=Z,4μmcomp=Z,87nm,1.4s
CN2 Changchun 36.14 53 *e*P P 23 23 17.3 +0.3
CN2 *e*S S 23 28 57.0 +0.8
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,900nm,12.0s
CN2 LR LR
comp=Z,1μm,12.0s
CN2 LR LR
comp=Z,1μm,12.2s
LHSI Lahat 36.16 147 P P 23 23 15.6 -1.8
comp=Z,56nm,1.0s
INCN Inchon 36.17 64 P P 23 23 18.6 +1.2
INCN pmax pmax
comp=Z,48nm,1.0s
INCN Inchon 36.17 64 P P 23 23 18.6 +1.2
INCN IAmb IAmb 23 23 21.8
comp=Z,48nm,1.0s
SBUM Sibu 36.24 129 P P 23 23 19.8 +1.7
SBUM IAmb IAmb 23 23 21.5
comp=Z,92nm,1.0s
BOD Bodaibo 36.28 26 *e*P P 23 23 18.8 +0.8
BOD pmax pmax
comp=Z,83nm,1.4s
ZEI Tsey 36.33 305 *e*P P 23 23 18.4 -0.5
ZEI pmax pmax
comp=Z,96nm,1.3s
GEVA Gevas 36.38 298 P P 23 23 19.3 -0.1
NCK Nalchik 36.68 306⇓*i*P P 23 23 22.7 +1.0
NCK pmax pmax
comp=Z,46nm,0.7s
KKM Kota Kinabalu 36.70 120 P P 23 23 24.2 +2.0
KKM IAmb IAmb 23 23 25.8
comp=Z,186nm,1.3s
TJN Taejon 36.71 66*de*P P 23 23 21.6 -0.3
DGAR Diego Garcia 37.01 201⇑*i*P P 23 23 27.6 +3.0
DGAR pmax pmax
comp=Z,117nm,1.7s
BELG Belogornoye 37.05 322*de*P P 23 23 24.4 -0.2
BELG pmax pmax
comp=Z,20nm,1.3s
KS19 Wonju Array Si 37.15 64 P P 23 23 25.8 +0.2
KSAR Wonju Array Be 37.16 64 P P 23 23 25.6 -0.1
KSAR Wonju Array Be 37.16 64 P P 23 23 25.6 -0.1
KSRS Korea Array 37.19 64 P P 23 23 25.7 -0.3
comp=Z,9.9nm,0.6s,baz=269,slow=8.4,SNR=40
KSRS PcP PcP 23 25 46.0 +0.2
comp=Z,3.8nm,0.8s,baz=270,slow=1.1,SNR=6.5
KSRS ScP ScP 23 29 30.2 -2.4
comp=Z,7.1nm,1.0s,baz=256,slow=3.6,SNR=11
H08S3 Diego Garcia H 37.20 201 P P 23 23 28.5 +2.6
baz=5.5,slow=14,SNR=7.5
H08S2 Diego Garcia H 37.22 201 P P 23 23 28.8 +2.8
baz=5.5,slow=14,SNR=6.0
H08S1 Diego Carcia H 37.22 201 P P 23 23 28.9 +2.8
baz=5.5,slow=14,SNR=6.0
KBZ Khabaz 37.23 307 P P 23 23 26.9 +0.7
comp=Z,11nm,0.8s,baz=117,slow=5.9,SNR=42
KBZ PcP PcP 23 25 46.3 +0.4
comp=Z,17nm,0.8s,baz=116,slow=4.8,SNR=4.2
KBZ Khabaz 37.23 307*d i*P P 23 23 26.8 +0.6
KBZ pmax pmax
comp=Z,19nm,0.9s
NEY Neytrino 37.26 306⇓*e*P P 23 23 29.7 +2.9
NEY pmax pmax
comp=Z,11nm,0.9s
GOF Gofitskoye 37.40 309⇑*e*P P 23 23 28.9 +1.2
GOF pmax pmax
comp=Z,33nm,1.0s
TPI Tanjungpandan 37.41 141 P P 23 23 28.7 +0.7
comp=Z,719nmcomp=Z,67nm,1.1s
KVAR Kislovodsk Arr 37.41 307 P P 23 23 28.9 +0.9
comp=Z,2.6nm,0.5s,baz=90,slow=20,SNR=4.7
KIV Kislovodsk 37.42 307 *i* P P 23 23 29.0 +1.0
SNR=16
KIV Kislovodsk 37.42 307 *e*P P 23 23 28.6 +0.6
KIV *e*S S 23 29 17.6 +1.6
KIV pmax pmax
comp=Z,64nm,4.1s
KIV pmax pmax
comp=Z,102nm,1.0s
KIV MLR MLR
comp=Z,628nm,16.0s
KIV Kislovodsk 37.42 307 P P 23 23 28.0 0.0
KIV Kislovodsk 37.42 307 P P 23 23 29.0 +1.0
LWLI Liwa 37.46 148 P P 23 23 27.3 -1.3
comp=Z,4μmcomp=Z,79nm,0.8s
STKI Sintang 37.50 133 P P 23 23 31.0 +2.1
comp=Z,26μmcomp=Z,24nm,0.4s
KASI Kota Agung 38.11 147 P P 23 23 30.5 -3.4
comp=Z,71nm,0.8s
MARD Mardin 38.14 296 P P 23 23 35.6 +1.4
MARD IAmb IAmb 23 23 41.8
comp=Z,84nm,0.9s
BNGB Bingl 38.29 299 *e*P P 23 23 37.5 +2.1
BLSI Bandar Lampung 38.34 146 P P 23 23 34.5 -1.4
comp=Z,57nm,0.8s
JOW Kunigami 38.36 81 P P 23 23 36.6 +0.5
CHOM Cayeli-Rize 38.40 302 *e*P P 23 23 38.3 +2.1
MAZI Mazidag 38.41 296 *e*P P 23 23 38.2 +1.7
KOPT Kop Dagi 38.50 300 P P 23 23 37.7 +0.4
DYBB Diyarbakir 38.66 297 *e*P P 23 23 39.8 +1.2
MYLDM Lahad Datu 39.01 119 P P 23 23 43.3 +1.7
KTUT Trabzon 39.13 302 *e*P P 23 23 44.1 +1.7
MDJ Mudanjiang 39.22 53 P P 23 23 46.3 +3.3
MDJ PP PnPn 23 25 14.5 -1.1
MDJ S S 23 29 40.0 -3.0
MDJ SS SS 23 32 30.8 -5.2
MDJ pmax pmax
comp=Z,24nm,0.8s
MDJ pmax pmax
comp=Z,75nm,3.7s
MDJ LR LR
comp=Z,2μm,18.5s
MDJ LR LR
comp=Z,510nm,12.8s
MDJ LR LR
comp=Z,2μm,17.1s
MDJ Mudanjiang 39.22 53 P P 23 23 45.3 +2.3
KIRV Kirov 39.42 331*d i*P P 23 23 44.8 +0.4
SOC Sochi 39.48 306 *e*P P 23 23 43.9 -1.3
SOC *e* 23 25 12.8
SOC *e*S S 23 29 46.0 -0.9
SOC *e*SSS SSS 23 32 58.0
SOC pmax pmax
comp=Z,19nm,0.6s
SOC MLR MLR
comp=Z,309nm,14.0s
URFA Urfa 39.70 296 *e*P P 23 23 48.1 +0.8
JNU Nakatsue 39.71 71 P P 23 23 48.0 +0.7
comp=Z,10nm,1.0s,baz=298,slow=4.1,SNR=4.1
JNU Nakatsue 39.71 71 P P 23 23 48.4 +1.1
PBKI Pangkalan Bun 39.75 135 P P 23 23 49.6 +1.9
comp=Z,219nm,1.0s
ILIC ilic-Erzincan 39.95 299 *e*P P 23 23 51.7 +2.4
VRH Novokhopyorsk 39.96 318 *e*P P 23 23 48.5 -0.6
VRH pmax pmax
comp=Z,60nm,0.6s
VRH MLR MLR
comp=Z,640nm,14.0s
MALT Malatya 40.02 297 *e*P P 23 23 52.0 +2.1
MSHR Mys Shultsa 40.06 56⇑*e*P P 23 23 49.9 -0.1
MSHR pmax pmax
comp=Z,52nm,1.3s
DBJI Dramaga 40.11 145 P P 23 23 48.1 -2.6
comp=Z,111nm,0.9s
ZEA Zeya 40.34 38 *e*P P 23 23 54.3 +2.1
ZEA *e*S S 23 29 58.7 -0.8
ZEA pmax pmax
comp=E,100nm,4.0s
ZEA pmax pmax
comp=Z,200nm,4.6s
ZEA pmax pmax
comp=Z,10.0nm,1.6s
ZEA smax smax
comp=E,100nm,14.5s
ZEA MLR MLR
comp=E,2μm,12.0s
ZEA MLR MLR
comp=N,800nm,11.0s
ZEA MLR MLR
comp=Z,2μm,12.0s
MTKI Muara Teweh, K 40.53 130 P P 23 23 55.7 +1.5
comp=Z,92nm,0.9s
DARE Darende-Malaty 40.77 298 *e*P P 23 23 58.0 +1.9
LEM Lembang 40.78 144 P P 23 23 55.6 -0.9
comp=Z,13nm,0.3s,baz=81,slow=7.1,SNR=3.9
LEM Lembang 40.78 144 P P 23 23 55.2 -1.3
comp=Z,14nm,0.7s
USA0B Ussuriysk Arra 40.85 54 P P 23 23 55.3 -1.3
USA0B pmax pmax
comp=Z,19nm,0.8s
USA0B Ussuriysk Arra 40.85 54 P P 23 23 55.3 -1.3
USRK Ussuriysk Ar. 40.85 54 P P 23 23 56.8 +0.2
comp=Z,9.6nm,0.6s,baz=259,slow=7.5,SNR=16
USRK Ussuriysk Ar. 40.85 54 P P 23 23 55.2 -1.4
RSDY Resadiye-TOKAT 40.94 301 *e*P P 23 23 59.1 +1.6
GAZ Gaziantep 40.99 296 *e*P P 23 23 59.5 +1.6
GAZ Gaziantep 40.99 296 P P 23 23 58.3 +0.4
GAZ IAmb IAmb 23 24 00.5
comp=Z,73nm,0.8s
SVSK Karacayir 41.18 300 *e*P P 23 24 01.3 +2.0
KMRS Kahramanmaras 41.23 296 *e*P P 23 24 01.5 +1.7
ANN Anapa 41.27 307 *e*P P 23 23 57.8 -2.2
ANN *e**PP pP 23 24 00.6 -4.0
ANN *e* 23 25 55.6
ANN *e*S S 23 30 11.7 -1.9
ANN *e*SS SS 23 33 16.8 -0.1
ANN MLR MLR
comp=Z,602nm,17.0s
ANN MLR MLR
comp=N,501nm,17.0s
JHS Saijyo 41.42 68 P P 23 24 01.3 -0.1
VSR Storozhevoye 41.49 317 *e*P P 23 24 00.9 -0.9
VSR pmax pmax
comp=Z,70nm,1.1s
VSR MLR MLR
comp=Z,900nm,15.0s
TOKT Tokat 41.54 300 *e*P P 23 24 03.9 +1.5
TOKA Tokat 41.59 300 P P 23 24 03.2 +0.4
VORR Voronezh 41.60 318 *e*P P 23 24 02.0 -0.6
VORR pmax pmax
comp=Z,300nm,1.4s
SARI SarD1z-Kayseri 41.60 298 *e*P P 23 24 03.9 +0.8
KLR Kul'dur 41.61 46 P P 23 24 03.4 +0.6
comp=Z,12nm,0.7s,baz=267,slow=8.7,SNR=15
KLR Kul'dur 41.61 46*d i*P P 23 24 03.5 +0.7
KLR pmax pmax
comp=Z,17nm,0.9s
NRIK Noril'sk 41.62 1 P P 23 24 03.5 +0.9
comp=Z,67nm,0.9s,baz=169,slow=6.4,SNR=71
NRIK LR LR 23 43 15.5
comp=Z,1μm,18.5s,baz=180,slow=39
NRIK Noril'sk 41.62 1*d i*P P 23 24 03.3 +0.7
NRIK pmax pmax
comp=Z,166nm,1.3s
NRIK Noril'sk 41.62 1 P P 23 24 03.1 +0.5
NRIK IAmb IAmb 23 24 07.8
comp=Z,169nm,1.2s
TAHT Tahtakopru-Hat 41.83 295 *e*P P 23 24 06.4 +1.6
KVT Kavak 41.95 302 *e*P P 23 24 07.1 +1.4
LPSR Galich'ya Gora 42.05 319 *e*P P 23 24 06.1 -0.1
LPSR pmax pmax
comp=Z,140nm,1.0s
LPSR MLR MLR
comp=Z,350nm,12.0s
BNN Bunyan 42.05 298 *e*P P 23 24 07.0 +0.3
KOZT Kozan 42.08 296 *e*P P 23 24 08.4 +1.6
BKB Balikpapan 42.13 128 P P 23 24 08.1 +0.7
BKB Balikpapan 42.13 128 P P 23 24 08.1 +0.7
comp=Z,3μmcomp=Z,294nm,0.9s
JMN Monobe 42.15 69 P P 23 24 08.7 +1.3
BBKI Banjar Baru 42.35 132 P P 23 24 11.0 +1.8
comp=Z,2μmcomp=Z,208nm,1.0s
SMRI Semarang 42.49 141 P P 23 24 11.8 +1.4
SMRI Semarang 42.49 141 P P 23 24 11.7 +1.4
comp=Z,445nm,0.8s
DIKM Dikmen 42.57 302 *e*P P 23 24 11.7 +1.0
ATD Arta Tunnel 42.58 256 P P 23 24 12.6 +1.4
comp=Z,48nm,0.7s,baz=41,slow=6.0,SNR=36
ATD Arta Tunnel 42.58 256 P P 23 24 11.8 +0.7
ATD IAmb IAmb 23 24 13.8
comp=Z,58nm,0.8s
ATD Arta Tunnel 42.58 256 P P 23 24 13.2 +2.1
SNR=7.2
KARA Karaisali 42.70 296 *e*P P 23 24 13.3 +1.4
GHAJ Ghor Haditha 42.83 287 P P 23 24 13.8 +0.9
XMIS Christmas Isla 42.99 149 P P 23 24 14.5 +0.2
XMIS IAmb IAmb 23 24 16.2
comp=Z,69nm,0.8s
CORM Corum 43.00 300 *e*P P 23 24 14.6 +0.2
MERS Mersin 43.15 295 *e*P P 23 24 16.9 +1.4
UGM Wanagama 43.25 141 P P 23 24 17.6 +1.1
JWT Wachi 43.27 67 P P 23 24 17.6 +1.1
JWT IAmb IAmb 23 24 21.9
comp=Z,121nm,1.7s
TOLI2 Tolitoli 43.35 122 P P 23 24 18.8 +1.5
TOLI2 IAmb IAmb 23 24 20.2
comp=Z,143nm,1.2s
KIZK Mersin 43.47 295 *e*P P 23 24 19.1 +1.0
BZK Bozkurt 43.52 303 *e*P P 23 24 19.5 +1.2
EREN Erenkoy 43.52 293 *e*P P 23 24 20.1 +1.7
DAV Davao City (W) 43.60 110 P P 23 24 22.1 +2.7
comp=Z,98nm,0.4s,baz=290,slow=2.1,SNR=3.7
SILI Silifke-Mersin 43.66 295 *e*P P 23 24 20.7 +1.1
KAMT Kaman 43.71 299 *e*P P 23 24 20.9 +0.8
ILGA Ilgaz 43.71 301 P P 23 24 20.6 +0.3
ILGA IAmb IAmb 23 24 27.5
comp=Z,120nm,1.2s
BR131 Keskin Array S 43.76 300 P P 23 24 20.6 +0.1
BR131 pmax pmax
comp=Z,98nm,1.5s
BR131 Keskin Array S 43.76 300 P P 23 24 20.6 +0.1
BR131 IAmb IAmb 23 24 30.7
comp=Z,98nm,1.5s
BR131 Keskin Array S 43.76 300 P P 23 24 21.2 +0.7
SNR=24
BRTR Keskin Array B 43.76 299 P P 23 24 21.1 +0.7
comp=Z,14nm,0.8s,baz=117,slow=7.1,SNR=40
BRTR PcP PcP 23 26 07.6 +0.4
comp=Z,12nm,1.0s,baz=130,slow=5.0,SNR=4.0
BRTR Keskin Array B 43.76 299 P P 23 24 20.8 +0.2
MOS Moscow 43.78 323 *e*P P 23 24 16.8 -3.5
MOS *e* 23 26 05.9
MOS *e*S S 23 30 46.0 -4.3
MOS pmax pmax
comp=Z,300nm,1.6s
MOS pmax pmax
comp=Z,146nm,1.2s
MOS MLR MLR
comp=Z,900nm,16.0s
SERE Sereflikochisa 43.83 298 *e*P P 23 24 22.2 +1.1
AKKU Akkuyu-Mersin 43.97 294 *e*P P 23 24 22.8 +0.7
TEVE Tevekalti-Mers 44.04 295 *e*P P 23 24 23.9 +1.2
LFK Lefkose 44.06 293 *e*P P 23 24 24.1 +1.2
OBN Obninsk 44.15 322*d i*P P 23 24 23.1 -0.1
OBN *e**PP pP 23 24 26.4 -1.4
OBN *e**SP sP 23 24 28.5 -1.1
OBN *e* 23 26 08.3
OBN *e*S S 23 30 53.1 -2.5
OBN *e*SS SS 23 34 12.9 -0.3
OBN MLR MLR
comp=Z,806nm,19.0s
OBN Obninsk 44.15 322 P P 23 24 22.9 -0.3
AFSR Afar-Bala (An 44.20 299 *e*P P 23 24 24.1 +0.1
TEY Ternei 44.22 53 *e*P P 23 24 17.2 -6.7
BERE Bereket-Mersin 44.22 295 *e*P P 23 24 25.5 +1.2
CSS Mathiatis 44.25 293 P P 23 24 25.0 +0.6
CSS IAmb IAmb 23 24 26.8
comp=Z,46nm,0.7s
ANTO Ankara 44.41 300 P P 23 24 26.3 +0.6
ANTO pmax pmax
comp=Z,43nm,0.9s
ANTO Ankara 44.41 300 P P 23 24 26.3 +0.6
ANTO IAmb IAmb 23 24 28.7
comp=Z,43nm,0.9s
BR231 Keskin MP Arra 44.42 300 P P 23 24 26.6 +0.7
LOD Lodumlu 44.43 300 *e*P P 23 24 25.8 0.0
KMMI Kalianget 44.56 137 P P 23 24 28.0 +1.1
comp=Z,159nm,0.8s
LEF Lefka 44.60 293 *e*P P 23 24 28.6 +1.5
MRSI Marisa 44.64 121 P P 23 24 28.6 +1.0
comp=Z,3μmcomp=Z,344nm,0.7s
LADK Ladik-KONYA 44.80 297 *e*P P 23 24 28.6 -0.2
KONT Konya--Tatoy 44.81 297 *e*P P 23 24 29.9 +1.1
JGF Kuroka 44.83 66 P P 23 24 30.7 +1.6
KLMR Klimovskoe 44.88 330 *e*P P 23 24 26.9 -2.1
KLMR *e* 23 26 09.9
KLMR pmax pmax
comp=Z,132nm,1.2s
KLMR Klimovskoe 44.88 330 *e*P P 23 24 26.9 -2.1
KLMR AMP 23 24 33.5
comp=Z,132nm,1.2s
KLMR *e*PcP PcP 23 26 09.9 -0.5
KLMR LQ LQ 23 39 31.2
KLMR LQ LQ 23 39 31.2
KLMR LR LR 23 41 03.3
GRNR Gornyy 44.88 45⇓*i*P P 23 24 29.8 +0.6
GRNR MLR MLR
comp=E,250nm,17.0s
GRNR MLR MLR
comp=N,310nm,11.0s
GRNR MLR MLR
comp=Z,440nm,11.0s
GAZI Gazipasa 44.96 295 *e*P P 23 24 30.6 +0.5
YAK Yakutsk 45.12 28 LR LR 23 44 56.7
comp=Z,362nm,18.4s,baz=268,slow=38
YAK Yakutsk 45.12 28 *e*P P 23 24 31.6 +0.7
YAK *e*S S 23 31 10.6 +1.0
YAK *e**SS sS 23 31 30.4 +13
YAK pmax pmax
comp=Z,60nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,14nm,1.1s
YAK smax smax
comp=E,103nm,3.6s
YAK smax smax
comp=N,52nm,2.5s
YAK MLR MLR
comp=Z,354nm,14.0s
YAK Yakutsk 45.12 28 P P 23 24 31.3 +0.4
YAK IAmb IAmb 23 24 39.1
comp=Z,70nm,0.7s
ABJI Asem Bagus 45.31 137 P P 23 24 33.7 +0.8
comp=Z,236nm,0.9s
APSI Ampana 45.33 123 P P 23 24 32.7 -0.4
comp=Z,677nmcomp=Z,84nm,0.9s
JSD Sado 45.38 63 P P 23 24 32.7 -0.5
SVRH Sivrihisar-ESK 45.40 299 *e*P P 23 24 33.9 +0.3
MAJO Matsushiro 45.44 65⇑*e*P P 23 24 34.1 +0.3
MAJO pmax pmax
comp=Z,33nm,1.1s
MAJO Matsushiro 45.44 65 P P 23 24 34.0 +0.1
MAT Matsushiro 45.44 65 P P 23 24 34.2 +0.4
MAT S S 23 31 14.8 -0.1
MJAR Matsushiro Arr 45.44 65 P P 23 24 34.2 +0.3
comp=Z,23nm,1.1s,baz=282,slow=8.9,SNR=32
MJAR PcP PcP 23 26 12.3 -0.6
comp=Z,6.5nm,1.0s,baz=270,slow=3.4,SNR=2.1
MJAR ScP ScP 23 30 02.5 -2.9
comp=Z,3.6nm,1.0s,baz=277,slow=3.5,SNR=5.9
MJAR Matsushiro Arr 45.44 65 P P 23 24 33.9 +0.1
MJAR pmax pmax
comp=Z,5.0nm,1.0s
MJAR Matsushiro Arr 45.44 65 P P 23 24 33.9 +0.1
TTSI Tana Toraja 45.45 127 P P 23 24 35.9 +1.8
comp=Z,3μmcomp=Z,385nm,0.9s
MDUB Mudumu 45.62 301 P P 23 24 35.0 -0.3
CIFT Cifteler, Eski 45.76 299 *e*P P 23 24 36.9 +0.5
JAGI Jajag, Banyuwa 45.79 138 P P 23 24 35.9 -0.9
JAGI IAmb IAmb 23 24 39.4
comp=Z,51nm,0.7s
JAGI Jajag, Banyuwa 45.79 138 P P 23 24 35.3 -1.4
comp=Z,74nm,0.7s
SPSI Sidrap Palu 46.06 128 P P 23 24 40.3 +1.4
comp=Z,2μcomp=Z,152nm,0.8s
SRCK Saricakaya, Es 46.07 300 *e*P P 23 24 39.2 +0.4
SRBI Singaraja 46.13 136 P P 23 24 39.6 +0.2
comp=Z,3μmcomp=Z,258nm,1.4s
KMSI Cibinong 46.14 119 P P 23 24 39.8 +0.2
comp=Z,326nm,0.8s
GULT Gulveren 46.14 301 *e*P P 23 24 39.9 +0.5
SHUT Suhut-Afyon 46.20 298 *e*P P 23 24 40.6 +0.7
BCK Bucak 46.24 296 *e*P P 23 24 39.0 -1.3
LUWI Luwuk 46.26 122 P P 23 24 41.4 +1.0
LUWI Luwuk 46.26 122 P P 23 24 40.6 +0.1
comp=Z,2μcomp=Z,170nm,0.9s
ISP Isparta 46.27 297 P P 23 24 39.9 -0.6
ISP pmax pmax
comp=Z,51nm,0.9s
ISP Isparta 46.27 297 P P 23 24 39.9 -0.6
ISP IAmb IAmb 23 24 41.7
comp=Z,51nm,0.9s
DNP Denpasar 46.59 137 P P 23 24 42.2 -0.8
BNSI Bone 46.61 128 P P 23 24 42.7 -0.5

comp=Z,73nm,0.8s
ADVT Abdulvahap 46.74 301 eP P 23 24 44.2 +0.2
HRT Hereke 46.78 301 eP P 23 24 44.6 +0.3
SILT Sile 46.79 302 eP P 23 24 44.6 +0.3
KAPI Kappang 46.80 129 P P 23 24 45.5 +0.8
comp=Z,119nm,1.1s,baz=291,slow=10,SNR=16
KAPI Kappang 46.80 129 P P 23 24 45.1 +0.4
KAPI pmax pmax
comp=Z,109nm,1.0s
KAPI Kappang 46.80 129 P P 23 24 45.1 +0.4
ELL Elmali 46.85 296 eP P 23 24 46.0 +0.9
ELL Elmali 46.85 296 P P 23 24 45.4 +0.4
ELL Elmali 46.85 296 P P 23 24 45.4 +0.4
TVSB Tavsanli 46.99 299 eP P 23 24 45.8 -0.4
JYT Yasato 47.06 65 P P 23 24 47.7 +1.1
JYT IAmb IAmb 23 24 51.1
comp=Z,98nm,1.2s
AKAS Kas 47.14 295 eP P 23 24 45.8 -1.6
AKAS Kas 47.14 295 P P 23 24 46.0 -1.4
AKAS IAmb IAmb 23 24 50.3
comp=Z,38nm,0.7s
KSL Kastellorizon 47.17 295 P P 23 24 46.5 -0.9
ISK Istanbul-Kandi 47.23 301 eP P 23 24 48.2 +0.4
KLYT Kilyos 47.24 302 eP P 23 24 48.4 +0.6
JMM Marumori 47.38 63 P P 23 24 49.8 +0.8
JMM IAmb IAmb 23 24 53.6
comp=Z,76nm,1.0s
KIS Kishinev 47.47 310 eP P 23 24 49.0 -0.6
KIS eL L 23 44 42.0
KIS LRM MLR 23 48 49.0
comp=Z,200nm,14.0s
FETY Fethiye 47.52 295 eP P 23 24 49.9 -0.3
AKASG Malin Array Be 47.54 315 P P 23 24 49.5 -0.5
comp=Z,28nm,0.6s,baz=78,slow=6.9,SNR=93
AKASG PcP PcP 23 26 20.3 +0.4
comp=Z,7.1nm,0.7s,baz=79,slow=3.1,SNR=4.4
AKASG PP PP 23 26 41.4 -0.1
comp=Z,10nm,0.9s,baz=81,slow=8.0,SNR=2.4
AKASG S S 23 31 40.3 -4.3
comp=Z,2.2nm,0.7s,baz=112,slow=19,SNR=4.4
AKASG Malin Array Be 47.54 315 P P 23 24 49.5 -0.5
AKBB Malin Array Si 47.54 315d iP P 23 24 49.4 -0.7
AKBB pmax pmax
comp=Z,57nm,0.9s
AKBB Malin Array Si 47.54 315 P P 23 24 49.4 -0.7
AKBB IAmb IAmb 23 24 55.9
comp=Z,52nm,1.0s
TIRR Tirgusor 47.67 306 P P 23 24 51.2 0.0
TIRR pmax pmax
comp=Z,85nm,1.1s
TIRR Tirgusor 47.67 306 P P 23 24 51.1 0.0
TIRR IAmb IAmb 23 24 56.1
comp=Z,85nm,1.1s
TWSI Taliwang, Sumb 47.67 135 P P 23 24 47.8 -3.7
comp=Z,27nm,0.7s
KULA Kula-Manisa 47.68 298 eP P 23 24 51.5 0.0
MANT Manisa 47.76 298 P P 23 24 51.5 -0.8
CTYL Yalikoy Yolu 47.80 302 eP P 23 24 52.5 +0.3
KCTX Karacabey (Bur 47.80 300 eP P 23 24 52.5 +0.2
SLVT Silivri 47.86 302 eP P 23 24 53.2 +0.5
TURN Turunc 48.17 296 eP P 23 24 55.7 +0.5
BALB Balikesir 48.20 300 eP P 23 24 55.6 +0.2
PLAI Plampang 48.30 134 P P 23 24 53.8 -2.6
comp=Z,46nm,0.9s
AYDB Zeytinkoy-Aydi 48.34 297 eP P 23 24 55.9 -0.7
MRMT Marmara Adasi 48.36 301 eP P 23 24 56.4 -0.3
KRBG Karabiga-Canak 48.60 301 eP P 23 24 58.6 +0.2
TNTI Ternate 48.68 116 P P 23 24 59.2 -0.1
TNTI IAmb IAmb 23 25 01.3
comp=Z,62nm,1.4s
PUL Pulkovo 48.75 327⇓ eP P 23 24 59.8 +0.5
PUL pmax pmax
comp=Z,74nm,0.8s
MNK Minsk 48.89 319 eP P 23 25 04.0 +3.6
MNK Minsk 48.89 319 iP P 23 25 00.3 -0.1
comp=E,9.0nm,1.2s
MNK iP P 23 25 00.3 -0.1
comp=N,16nm,1.2s
MNK iP P 23 25 00.3 -0.1
comp=Z,68nm,1.0s
MNK iPcP PcP 23 26 24.6 -0.1
MNK iPP PP 23 26 53.7 +0.1
MNK iPPP PPP 23 27 43.7
MNK iS S 23 32 04.4 +0.8
MNK iScS ScS 23 34 52.8 +0.5
MNK iScS ScS 23 34 52.8 +0.5
MNK iSS SS 23 35 36.9 +2.8
MNK iSSS SSS 23 36 50.5
MNK iLQ LQ 23 42 07.0
MNK iLR LR 23 45 50.2
MNK iLRM MLR 23 48 54.2
comp=E,79nm,17.9s
MNK iLRM MLR 23 48 56.4
comp=N,404nm,16.0s
MNK iLRM MLR 23 48 59.6
comp=Z,627nm,14.7s
DKL Dikili 49.00 299 eP P 23 25 01.6 +0.1
ERIK Erikli-Kesan 49.18 301 eP P 23 25 03.5 +0.6
KARP Karpathos 49.20 294 P P 23 25 02.9 -0.3
GELI Tayfur-Gelibol 49.23 301 eP P 23 25 03.8 +0.6
SANI Sanana 49.35 120 P P 23 25 00.7 -3.8
comp=Z,764nmcomp=Z,64nm,0.9s
EZN Ezine 49.38 300 eP P 23 25 04.7 +0.3
MLR Muntele Rosu 49.42 307 P P 23 25 05.9 +1.0
MLR pmax pmax
comp=Z,183nm,1.0s
MLR Muntele Rosu 49.42 307 P P 23 25 05.9 +1.0
ALN Alexandroupoli 49.52 301 P P 23 25 05.9 +0.5
ALN Alexandroupoli 49.52 301 P P 23 25 05.6 +0.1
ALN pmax pmax
comp=Z,32nm,0.9s
ALN Alexandroupoli 49.52 301 P P 23 25 05.5 +0.1
ALN IAmb IAmb 23 25 07.0
comp=Z,32nm,0.9s
NACGM Naroch 49.58 320 iP P 23 25 05.8 0.0
NACGM iP P 23 25 05.8 0.0
NACGM iP P 23 25 05.8 0.0
NACGM iPcP PcP 23 26 11.6 -16
NACGM iPP PP 23 26 52.2 -7.7
NACGM iPPP PPP 23 27 56.8
NACGM iS S 23 32 13.1 -0.2
NACGM iPS PKiKP 23 33 47.2 +33
NACGM iSS SS 23 35 45.0 -0.2
NACGM iSSS SSS 23 37 14.5
NACGM iLQ LQ 23 43 01.8
NACGM iLR LR 23 45 37.8
LBMI Labuha 49.64 117 P P 23 25 07.9 +1.2
comp=Z,180µcomp=Z,2µcomp=Z,155nm,0.9s
IDID Didziasalis 49.67 320 eP P 23 25 06.6 +0.2
RDO Rodhopi 49.88 302 P P 23 25 08.3 +0.1
BURAR Bucovina Array 49.95 310 P P 23 25 08.9 +0.2
BURAR IAmb IAmb 23 25 10.4
comp=Z,33nm,0.8s
WBSI Waikabubak, Su 49.95 133 P P 23 25 06.6 -2.5
comp=Z,2µcomp=Z,130nm,0.7s
BUR08 Bucovina Ar. S 49.96 310 P P 23 25 08.7 -0.2
LVZ Lovozero 49.96 338⇑ eP P 23 25 07.7 -0.8
LVZ pmax pmax
comp=Z,91nm,0.9s
LVZ Lovozero 49.96 338 P P 23 25 08.2 -0.3
LVZ IAmb IAmb 23 25 13.2
comp=Z,82nm,0.9s
IIGN Ignalina 49.97 320 eP P 23 25 08.9 +0.3
ISAL Salakas 50.06 321 eP P 23 25 09.9 +0.5
TIXI Tiksi 50.07 17 LR LR 23 47 30.7
comp=Z,461nm,21.8s,baz=224,slow=37
TIXI Tiksi 50.07 17deP P 23 25 09.4 +0.2
TIXI Tiksi 50.07 17 P P 23 25 09.4 +0.2
VSU Vasula 50.23 324 eP P 23 25 10.6 0.0
APA Apatity 50.24 337⇑ iP P 23 25 09.7 -0.9
APA pmax pmax
comp=Z,23nm,0.8s
LIA Limnos Island 50.25 300 P P 23 25 11.2 +0.1
THR8 Santorini-Mono 50.43 296 P P 23 25 12.2 -0.2
SANT Santorini 50.45 296 P P 23 25 12.0 -0.7
THR3 Thira Island, 50.49 296 P P 23 25 12.8 -0.1
THR5 Thira Island, 50.53 296 P P 23 25 13.3 +0.1
LAST Lasithi 50.61 294 P P 23 25 14.6 +0.6
LVV L'vov 50.79 313 eP P 23 25 14.5 -0.5
LVV e 23 27 14.3
LVV eS S 23 32 27.7 -2.7
LVV pmax pmax
comp=Z,110nm,1.5s

YUK Yuzh-Kuril'sk 50.82 54 eP P 23 25 15.7 +0.4
YUK e 23 26 31.8
YUK e 23 27 12.0
YUK ePPP PPP 23 28 09.4
YUK eS S 23 32 32.1 +1.3
YUK eSS SS 23 36 08.9 +3.7
YUK eSSS SSS 23 37 39.3
YUK pmax pmax
comp=N,107nm,0.6s
YUK pmax pmax
comp=Z,115nm,0.6s
YUK pmax pmax
comp=E,150nm,0.8s
YUK pmax pmax
comp=Z,439nm,1.4s
YUK MLR MLR
comp=Z,316nm,12.0s
YUK MLR MLR
comp=E,535nm,13.0s
NLAI Namlea 50.96 120 P P 23 25 17.3 +0.6
comp=E,2µcomp=E,129nm,0.8s
IDI Anoyia 51.07 294 P P 23 25 17.0 -0.4
IDI Anoyia 51.07 294 P P 23 25 17.0 -0.4
IDI IAmb IAmb 23 25 18.7
comp=Z,74nm,0.8s
MMRI Maumere 51.10 130 P P 23 25 16.9 -0.8
MMRI Maumere 51.10 130 P P 23 25 16.1 -1.6
comp=Z,184nm,0.8s
OUR Ouranopolis 51.13 301 P P 23 25 17.3 -0.4
FIA1 FINESS Array S 51.20 328 P P 23 25 17.7 -0.2
FIA1 IAmb IAmb 23 25 22.8
comp=Z,64nm,0.9s
FINES FINESS Array B 51.20 328 P P 23 25 17.8 -0.1
comp=Z,45nm,0.8s,baz=108,slow=7.8,SNR=180
FINES S S 23 32 34.3 -1.3
comp=Z,3.6nm,0.9s,baz=83,slow=12,SNR=3.4
FINES LR LR 23 48 29.0
comp=Z,1µm,19.2s,baz=102,slow=38
FINES FINESS Array B 51.20 328 P P 23 25 17.3 -0.5
PABE Paberze 51.26 320 eP P 23 25 18.8 +0.4
PABE Paberze 51.26 320 P P 23 25 18.6 +0.2
PAIG Paliouri 51.40 300 P P 23 25 20.0 +0.3
DION Dionisos Attik 51.43 298 P P 23 25 20.1 +0.1
VTS Vitosha 51.49 304 P P 23 25 20.9 +0.3
VTS pmax pmax
comp=Z,55nm,0.9s
VTS Vitosha 51.49 304 P P 23 25 20.9 +0.3
VTS IAmb IAmb 23 25 22.6
comp=Z,56nm,0.9s
PLG Polygyros 51.53 301 P P 23 25 20.9 +0.1
VLY Voula,Athens 51.56 298 P P 23 25 20.2 -0.8
SUW Suwalki 51.57 318 eP P 23 25 20.6 -0.1
SUW Suwalki 51.57 318 eP P 23 25 20.2 -0.5
SUW Suwalki 51.57 318 P P 23 25 20.0 -0.7
SUW pmax pmax
comp=Z,137nm,1.1s
SUW Suwalki 51.57 318 P P 23 25 20.0 -0.7
VAM Vamos 51.61 295 P P 23 25 22.1 +0.7
KWP Kalwaria Pacla 51.65 313 eP P 23 25 22.3 +0.8
KWP Kalwaria Pacla 51.65 313 P P 23 25 21.4 0.0
KWP pmax pmax
comp=Z,185nm,1.1s
KWP Kalwaria Pacla 51.65 313 P P 23 25 21.4 0.0
IMMV Iera Moni Meta 51.77 295 P P 23 25 23.1 +0.5
MTSE Matsula 51.78 324 eP P 23 25 22.6 +0.3
XOR Xorichti 51.84 300 P P 23 25 22.5 -0.6
KNT Kendrikon 51.87 302 P P 23 25 22.9 -0.3
UZH Uzhgorod 51.91 312 eP P 23 25 23.4 0.0
UZH e 23 25 26.8
VAY Valandovo 52.10 302 iP P 23 25 24.8 -0.1
LTK Loutraki 52.19 298 P P 23 25 23.3 -2.4
GRG Griva 52.26 302 P P 23 25 25.4 -0.8
LIT Litokhoron 52.29 301 P P 23 25 25.3 -1.1
LIT Litokhoron 52.29 301 P P 23 25 26.1 -0.3
LIT pmax pmax
comp=Z,32nm,0.9s
LIT Litokhoron 52.29 301 P P 23 25 26.1 -0.3
STIP Stip 52.35 303⇓ iP P 23 25 25.1 -1.7
VLI Veliai 52.41 296 P P 23 25 25.9 -1.4
KTHR Kythira 52.43 296 P P 23 25 23.4 -4.1
SLIT Slitere, Latvi 52.43 323 eP P 23 25 26.9 -0.2
PBUR Paburge 52.46 321 eP P 23 25 27.5 +0.1
AGG Agios Georgios 52.55 299 P P 23 25 26.8 -1.5
AGG Agios Georgios 52.55 299 P P 23 25 27.2 -1.2
AGG pmax pmax
comp=Z,69nm,0.9s
AGG Agios Georgios 52.55 299 P P 23 25 27.2 -1.2
AGG IAmb IAmb 23 25 28.4
comp=Z,69nm,0.9s
THL Klokotos Trika 52.72 300 P P 23 25 28.1 -1.4
VLX Vlachokerasia 52.75 297 P P 23 25 28.1 -1.8
SWI Sorong 52.77 115 P P 23 25 28.8 -1.4
comp=Z,44nm,1.4s
KZN Kozani 52.81 301 P P 23 25 28.2 -2.1
KLV Kalavryta, Ach 52.82 298 P P 23 25 28.4 -2.0
SKO Skopje 52.87 303⇓ iP P 23 25 30.5 -0.2
BEL Belsk 52.90 316 eP P 23 25 30.8 +0.1
ANX Ano Chora 52.92 299 P P 23 25 29.8 -1.4
EVR Evrytania 52.97 296 P P 23 25 30.4 -1.1
FNA Florina 53.05 302 P P 23 25 31.3 -0.8
FNA Florina 53.05 302 P P 23 25 31.1 -1.0
FNA pmax pmax
comp=Z,19nm,0.8s
FNA Florina 53.05 302 P P 23 25 31.1 -1.0
LODK Lodwar 53.07 252 P P 23 25 32.7 +0.2
LODK Lodwar 53.07 252 P P 23 25 34.0 +1.5
SNR=16
ITM Ithomi 53.13 297 P P 23 25 31.4 -1.2
ITM IAmb IAmb 23 25 46.0
comp=Z,43nm,0.8s
KPRO Kipourio 53.17 301 P P 23 25 31.5 -1.5
DRO Drosia 53.18 298 P P 23 25 32.1 -0.9
BATI Baumata 53.20 130 P P 23 25 32.5 -0.9
comp=Z,100nm,0.6s,baz=293,slow=15,SNR=4.8
BATI Baumata 53.20 130 P P 23 25 31.2 -2.2
comp=Z,1µcomp=Z,101nm,0.8s
NIE Niedzica 53.22 313 eP P 23 25 34.2 +1.1
KEV Kevo 53.26 338 P P 23 25 32.8 -0.2
KEV pmax pmax
comp=Z,86nm,1.2s
KEV Kevo 53.26 338 P P 23 25 32.8 -0.2
KEV IAmb IAmb 23 25 37.6
comp=Z,86nm,1.2s
SOEI Soe 53.30 129 P P 23 25 33.6 -0.6
SOEI Soe 53.30 129 P P 23 25 31.7 -2.5
comp=Z,3µcomp=Z,423nm,0.9s
PENT Pentalofos 53.31 301 P P 23 25 33.1 -0.9
NEST Nestorio 53.35 301 P P 23 25 33.6 -0.7
OHR Ohrid 53.45 302 iP P 23 25 35.7 +0.7
KBN Korca 53.52 302 P P 23 25 34.4 -1.1
OJC Ojcow 53.53 314 eP P 23 25 35.5 +0.1
OJC Ojcow 53.53 314 P P 23 25 35.2 -0.2
OJC pmax pmax
comp=Z,16nm,0.7s
OJC Ojcow 53.53 314 P P 23 25 35.2 -0.2
PSZ Piszkesteto 53.53 311 P P 23 25 35.8 +0.3
PSZ pmax pmax
comp=Z,33nm,1.1s
PSZ Piszkesteto 53.53 311 P P 23 25 35.8 +0.3
ARA0 ARCESS Array S 53.67 338 eP P 23 25 36.5 +0.4
ARCES ARCESS Array B 53.67 338 P P 23 25 36.4 +0.2
comp=Z,27nm,0.6s,baz=92,slow=7.4,SNR=104
ARCES ARCESS Array B 53.67 338 P P 23 25 36.4 +0.2
ARCES IAmb IAmb 23 25 40.9
comp=Z,59nm,1.1s
DIVS Divibare 53.72 306⇓ iP P 23 25 36.9 -0.1
DIVS Divibare 53.72 306 P P 23 25 36.8 -0.1
FRGS Fruska Gora 53.76 307⇓ iP P 23 25 37.1 -0.1
LANS Liptovska Anna 53.77 312 eP P 23 25 38.1 +0.9
LANS pmax pmax
comp=Z,9.0nm,1.1s
LANS Liptovska Anna 53.77 312 eP P 23 25 38.1 +0.9
NYDR Nydri-Lefkada 53.85 299 P P 23 25 36.1 -1.8
LKD2 Lefkada island 53.87 299 P P 23 25 36.5 -1.6
IGT Igoumenitsa 54.01 300 P P 23 25 37.5 -1.6
KMBO Kilima Mbogo 54.04 246 P P 23 25 40.6 +0.7
comp=Z,39nm,1.0s,baz=45,slow=10,SNR=73
KMBO Kilima Mbogo 54.04 246 iP P 23 25 40.7 +0.8
KMBO pmax pmax
comp=Z,39nm,1.0s
TIR Tirane 54.12 303 P P 23 25 38.5 -1.3
TIR pmax pmax
comp=Z,72nm,0.9s

TIR Tirane 54.12 303 P P 23 25 38.5 -1.3
TIR IAmb IAmb 23 25 43.5
comp=Z,72nm,0.9s
KIBK Kibwezi 54.12 244 P P 23 25 39.9 -0.3
KIBK IAmb IAmb 23 25 46.8
comp=Z,61nm,1.5s
BBLS Lazići 54.17 306⇓ iP P 23 25 40.5 +0.3
DMLN Damoulianata-K 54.18 299 P P 23 25 39.0 -1.3
VYHS Vyhne 54.21 311 eP P 23 25 40.0 -0.4
VYHS pmax pmax
comp=Z,27nm,1.1s
VYHS Vyhne 54.21 311 eP P 23 25 40.0 -0.4
MA2 Magadan 54.29 35⇓ eP P 23 25 41.5 +0.8
MA2 pmax pmax
comp=Z,44nm,1.3s
MA2 Magadan 54.29 35 P P 23 25 41.0 +0.3
MA2 IAmb IAmb 23 25 48.6
comp=Z,31nm,0.9s
KTK1 Kautokeino 54.29 337 eP P 23 25 40.7 +0.1
PDG Podgorica 54.44 304⇓ iP P 23 25 41.4 -0.7
PDG Podgorica 54.44 304 P P 23 25 41.4 -0.7
PDG IAmb IAmb 23 25 46.1
comp=Z,52nm,0.8s
HAPS Han Pijesak,Bl 54.47 306⇓ iP P 23 25 41.8 -0.7
MORH Mrgy, Hungar 54.49 309⇓ iP P 23 25 42.3 -0.1
DRME Dracevica, Mon 54.52 304⇓ iP P 23 25 42.1 -0.6
SRO2 Moca 54.55 311 eP P 23 25 42.5 -0.3
SRO2 pmax pmax
comp=Z,53nm,1.0s
SRO2 Moca 54.55 311 eP P 23 25 42.5 -0.3
SRO Srobarova 54.60 311 eP P 23 25 44.3 +1.1
SRO pmax pmax
comp=Z,64nm,1.1s
SRO Srobarova 54.60 311 eP P 23 25 44.3 +1.1
UPM Unac-Piva 54.60 305⇓ iP P 23 25 43.4 -0.1
OKC Ostrava-Krasne 54.60 313 eP P 23 25 43.8 +0.6
OKC e 23 25 47.1
OKC MLR MLR
comp=Z,400nm,16.4s
OKC Ostrava-Krasne 54.60 313 eP P 23 25 43.8 +0.6
OKC epP pP 23 25 47.1 -0.7
OKC AMS AMS 23 51 40.0
comp=Z,400nm,16.4s
HAMF Hammerfest 54.62 339 eP P 23 25 43.8 +0.8
FAKI Fak Fak 54.78 116 P P 23 25 45.1 +0.2
FAKI IAmb IAmb 23 25 46.4
comp=Z,51nm,0.9s
FAKI Fak Fak 54.78 116 P P 23 25 42.6 -2.4
comp=Z,66nm,1.0s
BRY Bratogost 54.90 305⇓ iP P 23 25 45.3 -0.4
JAVC Velka Javorina 54.96 312 eP P 23 25 46.6 +0.7
HCY Herceg Novi 54.99 304⇓ iP P 23 25 45.4 -0.8
MORC Moravsky Berou 55.00 313 eP P 23 25 46.2 +0.1
MORC Moravsky Berou 55.00 313 P P 23 25 46.2 +0.1
MORC pmax pmax
comp=Z,30nm,1.2s
MORC Moravsky Berou 55.00 313 P P 23 25 46.2 +0.1
TREB Trebinje 55.06 304⇓ iP P 23 25 45.9 -0.8
UPP Uppsala 55.07 325 eP P 23 25 46.0 -0.3
GKP Gorka Klasztor 55.08 317 eP P 23 25 46.2 -0.3
GKP Gorka Klasztor 55.08 317 eP P 23 25 46.5 -0.1
SMOL Smolenice 55.15 312 eP P 23 25 47.3 +0.1
SMOL pmax pmax
comp=Z,5.0nm,0.9s
SMOL Smolenice 55.15 312 eP P 23 25 47.3 +0.1
MODS Modra-Piesok 55.26 311 eP P 23 25 47.1 -0.9
MODS pmax pmax
comp=Z,25nm,1.3s
MODS Modra-Piesok 55.26 311 eP P 23 25 47.1 -0.9
SCTE Santa Cesarea 55.35 301 P P 23 25 47.2 -1.5
SCTE IAmb IAmb 23 25 48.2
comp=Z,52nm,0.9s
ZST Bratislava 55.38 311 eP P 23 25 48.7 -0.2
ZST pmax pmax
comp=Z,29nm,0.9s
ZST Bratislava 55.38 311 eP P 23 25 48.7 -0.2
JETT Jettan, Norway 55.40 337 eP P 23 25 49.2 +0.5
SEY Seymchan 55.41 31⇑ eP P 23 25 50.1 +1.3
KRLC Kraliky 55.47 313 eP P 23 25 49.8 +0.3
KRLC MLR MLR
comp=Z,600nm,15.4s
KRLC Kraliky 55.47 313 eP P 23 25 49.8 +0.3
KRLC AMS AMS 23 52 00.0
comp=Z,600nm,15.4s
VRAC Vranov 55.64 313 eP P 23 25 51.1 +0.4
BLY Banja Luka 55.66 307⇓ iP P 23 25 51.0 +0.1
KSP Ksiaz 55.74 314 eP P 23 25 51.5 +0.1
DPC Dobruska-Polom 55.75 314 eP P 23 25 52.0 +0.5
DPC MLR MLR
comp=Z,600nm,16.0s
DPC Dobruska-Polom 55.75 314 eP P 23 25 52.0 +0.5
DPC AMS AMS 23 52 10.0
comp=Z,600nm,16.0s
BEHE Becsehely 55.76 309⇓ iP P 23 25 54.8 +3.2
KRUC Moravsky 55.79 312 eP P 23 25 51.9 +0.1
OSTC Ostas 55.81 314 eP P 23 25 52.3 +0.4
OSTC AMS AMS 23 52 10.0
comp=Z,500nm,15.4s
BLEU Blekinge 55.89 321 iP P 23 25 52.0 -0.3
CHVC Chvalec 55.91 314 eP P 23 25 53.0 +0.4
CHVC AMS AMS 23 52 10.0
comp=Z,600nm,16.0s
TRO Tromso 55.92 337 eP P 23 25 52.3 0.0
UPC Upice 55.94 314 eP P 23 25 53.2 +0.4
UPC MLR MLR
comp=Z,600nm,15.5s
UPC Upice 55.94 314 eP P 23 25 53.2 +0.4
UPC AMS AMS 23 52 20.0
comp=Z,600nm,15.5s
CONA Conrad Observa 56.24 311 iP P 23 25 55.2 +0.1
comp=Z,43nm,1.0s,SNR=26
RER Riviere de l'E 56.25 213 P P 23 25 55.8 +0.4
TREC Trest 56.37 313 AMS AMS 23 52 40.0
comp=Z,600nm,12.2s
BSD Bornholm Skovb 56.41 320 eP P 23 25 55.6 -0.5
BSD Bornholm Skovb 56.41 320 iP P 23 25 55.1 -1.0
BSD Bornholm Skovb 56.41 320 iP P 23 25 55.0 -1.0
ARSA Arzberg 56.53 310 iP P 23 25 57.2 0.0
comp=Z,28nm,1.7s,SNR=9.3
GROS Grobnik 56.63 309 iP P 23 25 58.0 +0.1
CRES Cresnjev 56.74 308⇓ iP P 23 25 58.8 +0.2
TIP Timpagrande 56.80 300 P P 23 25 59.1 -0.2
PVCC Panska Ves 56.86 314 eP P 23 25 59.8 +0.4
PVCC Panska Ves 56.86 314 eP P 23 25 59.8 +0.4
FAUS Fauske 56.87 334 eP P 23 25 59.0 -0.1
LNIZ Loecknitz 56.88 318 eP P 23 25 59.3 -0.1
comp=Z,59nm,1.1s,baz=83,slow=6.8
PRU Pruhonice 56.92 313 eP P 23 26 00.3 +0.5
PRU e 23 26 03.7
PRU MLR MLR
comp=Z,600nm,14.3s
PRU Pruhonice 56.92 313 eP P 23 26 00.3 +0.5
PRU ex x 23 26 03.7
PRU AMS AMS 23 52 50.0
comp=Z,600nm,14.3s
SOKA Soboth 56.93 309 iP P 23 26 00.4 +0.3
comp=Z,41nm,1.1s,SNR=20
STEI Steigen 56.95 335 eP P 23 25 59.5 -0.2
DEL Delary 56.97 321 iP P 23 26 00.3 +0.3
PRA Prague 56.98 314 eP P 23 26 00.9 +0.7
PRA e 23 26 04.8
PRA Prague 56.98 314 eP P 23 26 00.9 +0.7
PRA epP pP 23 26 04.8 -0.1
MOR8 Moi Rana 57.06 333 eP P 23 25 59.2 -1.4
SGRT San Giovanni R 57.12 304 P P 23 26 00.7 -0.8
SGRT IAmb IAmb 23 26 07.8
comp=Z,36nm,0.8s
CKRC Cesky Krumlov 57.18 312 eP P 23 26 01.5 -0.2
CKRC AMS AMS 23 53 10.0
comp=Z,500nm,14.6s
RUE Ruedersdorf 57.20 316 eP P 23 26 01.6 -0.1
comp=Z,64nm,1.0s,baz=83,slow=6.8
BRG Berggiesshubel 57.23 315 iP P 23 26 02.1 +0.2
BRG Amp 23 26 03.1
comp=Z,26nm,1.2s
BRG ex x 23 26 06.0
BRG Amp 23 26 07.6
comp=Z,35nm,1.3s
BRG Berggiesshubel 57.23 315 eP P 23 26 02.1 +0.2
comp=Z,35nm,1.3s,baz=83,slow=6.8
LUNU Lund 57.23 320 iP P 23 26 02.5 +0.5
OBKA Obir 57.28 309 iP P 23 26 02.8 +0.3
comp=Z,33nm,1.1s,SNR=14

PBCC **Pribram** 57.30 313 *e*P **P** 23 26 02.8 +0.3
MOA **Molln** 57.31 311 *i* P **P** 23 26 02.4 -0.3
comp=Z,36nm,1.2s,SNR=16
SKR **Severo-Kuril's** 57.34 46 *e*P P 23 25 57.9 -4.9
SKR *e*S **S** 23 33 57.0 -1.8
SKR pmax pmax
comp=Z,100nm,3.0s
SKR pmax pmax
comp=Z,22nm,0.8s
SKR pmax pmax
comp=Z,100nm,3.5s
SKR MLR MLR
comp=Z,1µm,13.0s
SKR MLR MLR
comp=Z,800nm,14.0s
RGN **Rugen** 57.35 319 P **P** 23 26 03.2 +0.5
RGN IAmb IAmb 23 26 08.8
comp=Z,70nm,0.8s
RGN **Rugen** 57.35 319 *e*P **P** 23 26 03.2 +0.5
comp=Z,85nm,0.9s,baz=83,slow=6.8
LJU **Ljubljana** 57.36 309 *i* P **P** 23 26 03.5 +0.5
BJUU **Bjuv** 57.46 321 *i* P **P** 23 26 03.8 +0.3
CEY **Cerknica** 57.47 308 ||*i*P **P** 23 26 03.5 -0.3
BORU **Boraas** 57.55 323 *i* P **P** 23 26 04.2 +0.1
GEC2 **GERESS Array S** 57.58 312 P **P** 23 26 04.0 -0.6
GEC2 **GERESS Array S** 57.58 312 *e*P **P** 23 26 04.6 0.0
comp=Z,24nm,1.2s,baz=83,slow=6.8
GERES **GERESS Array B** 57.58 312 P **P** 23 26 04.5 -0.1
comp=Z,4.2nm,0.6s,baz=86,slow=6.9,SNR=51
GERES **GERESS Array B** 57.58 312 P **P** 23 26 04.2 -0.4
FABU **Falkenberg** 57.59 322 *i* P **P** 23 26 04.6 +0.2
FBE **Freiberg** 57.59 315 *e*P **P** 23 26 05.0 +0.5
comp=Z,60nm,1.3s,baz=83,slow=6.8
LOF **Lofoten** 57.61 335 *e*P **P** 23 26 03.4 -1.0
KHC **Kasperske Hory** 57.63 313 *d*P **P** 23 26 04.8 -0.1
KHC pmax pmax
comp=Z,30nm,0.8s
KHC **Kasperske Hory** 57.63 313 *e*P **P** 23 26 04.8 -0.1
KHC AMS AMS 23 53 30.0
comp=Z,500nm,13.3s
KHC **Kasperske Hory** 57.63 313 P **P** 23 26 04.3 -0.6
CEL **Celeste** 57.64 300 P **P** 23 26 04.2 -1.0
CEL IAmb IAmb 23 26 12.0
comp=Z,61nm,1.0s
CLL **Collm** 57.78 315 ||*i*P **P** 23 26 05.3 -0.5
comp=Z,17nm,1.4s
CLL *i* pP **pP** 23 26 08.2 -2.3
comp=Z,22nm,1.4s
CLL *e*PP **PP** 23 28 12.0 -1.7
CLL *e*PPP PPP 23 29 29.0
CLL *e*S **S** 23 34 05.0 +0.5
CLL *e* 23 39 10.0
CLL *e*SSS SSS 23 40 18.0
CLL LmH 23 50 00.0
comp=N,400nm,20.4s
CLL LmH 23 50 00.0
comp=E,300nm,18.9s
CLL LmH 23 50 00.0
comp=Z,300nm,20.3s
CLL **Collm** 57.78 315 ||*i*P **P** 23 26 05.3 -0.5
CLL *i* 23 26 08.2
CLL *e*S **S** 23 34 05.0 +0.5
CLL pmax pmax
comp=Z,17nm,1.4s
CLL **Collm** 57.78 315 P **P** 23 26 04.9 -1.0
CLL **Collm** 57.78 315 *e*P **P** 23 26 05.5 -0.3
comp=Z,22nm,1.4s,baz=83,slow=6.8
CADS **Cadrg** 57.88 309 *e*P **P** 23 26 06.3 -0.4
TRI **Trieste** 57.93 308 P **P** 23 26 06.1 -0.9
TRI pmax pmax
comp=Z,48nm,1.2s
TRI **Trieste** 57.93 308 P **P** 23 26 06.1 -0.9
TRI IAmb IAmb 23 26 12.7
comp=Z,48nm,1.2s
NSS **Namsos** 57.99 331 *e*P **P** 23 26 06.5 -0.6
KBA **Koelnbreinsper** 58.03 310 *i* P **P** 23 26 07.3 -0.6
comp=Z,14nm,0.9s,SNR=9.8
NC405 **NORSAR Array S** 58.04 327 P **P** 23 26 06.9 -0.7
WET **Wettzell** 58.08 313 *e*P **P** 23 26 08.2 +0.2
comp=Z,20nm,1.0s,baz=83,slow=6.8
PETK **Petropavlovsk-** 58.11 43 P **P** 23 26 08.4 +0.2
comp=Z,4.0nm,0.9s,baz=289,slow=4.4,SNR=2.7
PAOL **Paolisi** 58.12 303 P **P** 23 26 07.8 -0.7
NC602 **NORSAR Array S** 58.13 326 P **P** 23 26 07.4 -0.8
NC602 IAmb IAmb 23 26 11.5
comp=Z,80nm,1.2s
NC602 **NORSAR Array S** 58.13 326 *e*P **P** 23 26 07.5 -0.6
NC303 **NORSAR Array S** 58.21 327 P **P** 23 26 07.9 -0.8
NC303 IAmb IAmb 23 26 13.3
comp=Z,36nm,0.9s
TANN **Tannenbergstha** 58.21 314 *e*P **P** 23 26 08.9 -0.1
comp=Z,36nm,1.6s,baz=83,slow=6.8
NKC **Novy Kostel** 58.24 314 *e*P **P** 23 26 09.2 +0.1
NKC MLR MLR
comp=Z,900nm,15.9s
NKC **Novy Kostel** 58.24 314 *e*P **P** 23 26 09.2 +0.1
NKC AMS AMS 23 53 40.0
comp=Z,900nm,15.9s
WERN **Wernitzgruen** 58.28 314 *e*P **P** 23 26 09.7 +0.2
comp=Z,56nm,1.9s,baz=83,slow=6.8
NB2 **NORSAR Subarra** 58.28 327 P **P** 23 26 08.3 -1.0
baz=91,slow=6.9
NOA **NORSAR Array B** 58.28 327 P **P** 23 26 08.4 -1.0
comp=Z,22nm,0.8s,baz=89,slow=6.9,SNR=45
GUNZ **Gunzen** 58.30 314 *e*P **P** 23 26 09.8 +0.2
comp=Z,36nm,1.3s,baz=83,slow=6.8
WERD **Werda** 58.30 314 *e*P **P** 23 26 09.7 +0.1
comp=Z,51nm,1.6s,baz=83,slow=6.8
RJOB **Jochberg** 58.31 311 *e*P **P** 23 26 12.1 +2.3
comp=Z,64nm,0.9s,baz=83,slow=6.8
STRU **Stroemstad** 58.34 324 *i* P **P** 23 26 09.2 -0.4
ZOU **Zoufplan** 58.35 310 P **P** 23 26 09.1 -1.1
PLN **Plauen** 58.39 314 *e*P **P** 23 26 10.4 +0.2
comp=Z,46nm,1.7s,baz=83,slow=6.8
ROTZ **Rotzenmuhle** 58.44 313 *e*P **P** 23 26 11.2 +0.6
comp=Z,33nm,1.2s,baz=83,slow=6.8
NAO01 **NORSAR Array S** 58.45 326 *e*P **P** 23 26 09.6 -0.8
MANZ **Manzenberg** 58.48 314 *e*P **P** 23 26 11.5 +0.7
comp=Z,41nm,1.4s,baz=83,slow=6.8
OSL **Oslo** 58.55 325 *e*P **P** 23 26 11.0 -0.1
NEUB **Neuenburg** 58.55 315 *e*P **P** 23 26 11.2 -0.1
comp=Z,48nm,1.2s,baz=83,slow=6.8
STAL **STALIGIAL** 58.58 309 P **P** 23 26 10.7 -0.9
STAL IAmb IAmb 23 26 17.6
comp=Z,47nm,1.1s
ABTA **Abfaltersbach** 58.64 310 *i* P **P** 23 26 10.9 -1.2
comp=Z,17nm,1.3s,SNR=9.4
PET **Petropavlovsk** 58.69 43 *e*P **P** 23 26 13.6 +1.4
PET *e*S **S** 23 34 13.8 -2.6
PET MLR MLR
comp=Z,2µm,13.0s
PET MLR MLR
comp=Z,1µm,14.0s
MOX **Moxa** 58.72 314 *e*P **P** 23 26 12.6 +0.2
comp=Z,42nm,1.5s,baz=83,slow=6.8
MOX *e*L L 23 53 18.0
comp=Z,334nm,19.3s
AQU **L'Aquila** 58.73 305 P **P** 23 26 12.0 -0.8
AQU pmax pmax
comp=Z,92nm,1.5s
AQU **L'Aquila** 58.73 305 ||*i*P **P** 23 26 12.3 -0.5
AQU **L'Aquila** 58.73 305 P **P** 23 26 12.0 -0.8
AQU IAmb IAmb 23 26 19.2
comp=Z,92nm,1.5s
FLTG **Flechtingen** 58.77 316 *e*P **P** 23 26 12.3 -0.4
comp=Z,52nm,1.0s,baz=83,slow=6.8
NRCA **Norcia** 58.85 305 P **P** 23 26 13.2 -0.4
NRCA IAmb IAmb 23 26 19.8
comp=Z,36nm,1.0s
RAFF **Raffo Rosso** 59.05 299 P **P** 23 26 15.1 +0.1
RAFF IAmb IAmb 23 26 16.8
comp=Z,53nm,0.9s
GRA1 **Grafenberg Arr** 59.09 313 P **P** 23 26 14.9 -0.1
GRA1 IAmb IAmb 23 26 21.1
comp=Z,70nm,1.4s
GRF **Grafenberg Arr** 59.09 313 P **P** 23 26 14.9 -0.1
GRF pmax pmax
comp=Z,70nm,1.4s
GRF **Grafenberg Arr** 59.09 313 *e*P **P** 23 26 16.0 +0.9
comp=Z,84nm,1.5s,baz=83,slow=6.8
GRF *e*L L 23 53 25.2
comp=Z,271nm,18.9s
GRFO **Grafenberg** 59.09 313 P **P** 23 26 15.2 +0.1
GRFO pmax pmax
comp=Z,69nm,1.4s
GRFO **Grafenberg** 59.09 313 P **P** 23 26 15.2 +0.1
GRFO IAmb IAmb 23 26 21.1
comp=Z,69nm,1.4s
MBAR **Mbarara** 59.12 251 P **P** 23 26 15.7 -0.2
MBAR pmax pmax
comp=Z,84nm,1.5s
MBAR **Mbarara** 59.12 251 P **P** 23 26 15.7 -0.2
MBAR IAmb IAmb 23 26 17.5
comp=Z,84nm,1.5s
KONO **Kongsberg** 59.13 325 P **P** 23 26 14.7 -0.4
KONO pmax pmax
comp=Z,28nm,1.0s
KONO **Kongsberg** 59.13 325 P **P** 23 26 14.7 -0.4
KONO IAmb IAmb 23 26 21.0
comp=Z,28nm,0.9s
KONO **Kongsberg** 59.13 325 *e*P **P** 23 26 14.6 -0.4
ASSE **Asse, Remlinge** 59.13 316 *e*P **P** 23 26 15.2 0.0
comp=Z,58nm,1.8s,baz=83,slow=6.8
ABPO **Ambohimpanom** 59.14 222 P **P** 23 26 16.0 +0.1
ABPO pmax pmax
comp=Z,75nm,1.2s
ABPO **Ambohimpanom** 59.14 222 P **P** 23 26 16.0 +0.1
ABPO IAmb IAmb 23 26 17.9
comp=Z,75nm,1.2s
WTTA **Wattenberg** 59.16 311 *i* P **P** 23 26 14.7 -1.1
comp=Z,24nm,1.0s,SNR=15
BSEG **Bad Segeberg** 59.16 318 *e*P **P** 23 26 15.8 +0.4
comp=Z,89nm,0.9s,baz=83,slow=6.8
WATA **Walderalm** 59.19 311 *i* P **P** 23 26 14.8 -1.2
comp=Z,18nm,1.0s,SNR=13
MURB **Monte Urbino** 59.20 306 P **P** 23 26 16.2 +0.2
FUR **Furstenfeldbru** 59.26 312 *e*P **P** 23 26 16.5 +0.2
comp=Z,55nm,1.4s,baz=83,slow=6.8
DOMB **Dombas** 59.29 328 *e*P **P** 23 26 15.5 -0.8
CLZ **Clausthal** 59.35 316 *e*P **P** 23 26 17.0 +0.2
comp=Z,87nm,1.0s,baz=83,slow=6.8
CLZ *e*pP **pP** 23 26 20.7 -0.8
NRDL **Niedersach Rie** 59.44 317 *e*P **P** 23 26 17.9 +0.6
comp=Z,111nm,1.0s,baz=83,slow=6.8
NRDL *e*pP **pP** 23 26 21.8 -0.2
TEOL **Teolo** 59.44 308 P **P** 23 26 16.7 -0.8
TEOL IAmb IAmb 23 26 18.3
comp=Z,31nm,0.8s
SQTA **Sankt Quirin** 59.45 311 *i* P **P** 23 26 16.7 -1.0
comp=Z,17nm,0.7s,SNR=16
GOET **G??ttrup** 59.50 322 *i* P **P** 23 26 17.7 0.0
MOTA **Moosalm** 59.50 311 *i* P **P** 23 26 17.0 -1.2
comp=Z,27nm,0.9s,SNR=19
PSA00 **Pilbara Seismi** 59.53 142 P **P** 23 26 18.9 +0.5
PSA00 IAmb IAmb 23 26 20.0
comp=Z,55nm,1.0s
SKMB **Sankelmark Bun** 59.59 319 *e*P **P** 23 26 19.5 +1.1
comp=Z,140nm,1.3s,baz=83,slow=6.8
GTTG **Gottingen** 59.64 316 *e*P **P** 23 26 19.0 +0.2
comp=Z,62nm,1.4s,baz=83,slow=6.8
KBS **Kingsbay** 59.68 348 P **P** 23 26 18.8 +0.2
KBS pmax pmax
comp=Z,40nm,0.9s
KBS **Kingsbay** 59.68 348 **P** 23 26 18.8 +0.2
KBS IAmb IAmb 23 26 23.5
comp=Z,40nm,0.9s
RETA **Reutte** 59.71 311 *i* P **P** 23 26 18.5 -1.0
comp=Z,16nm,0.9s,SNR=14
UBBA **Unterbreizbach** 59.72 315 *e*P **P** 23 26 19.5 +0.3
comp=Z,37nm,1.5s,baz=83,slow=6.8
SKAR **Skarslia** 59.72 326 *e*P **P** 23 26 19.7 +0.4
FETA **Feichten** 59.81 310 *i* P **P** 23 26 19.3 -1.0
comp=Z,18nm,1.0s,SNR=9.9
MOL **Molde** 59.98 329 *e*P **P** 23 26 20.0 -0.9
ZCCA **Zocca** 60.10 307 P **P** 23 26 22.7 +0.5
ZCCA IAmb IAmb 23 26 29.7
comp=Z,108nm,1.6s
UBR **Ueberruh** 60.12 311 *e*P **P** 23 26 21.5 -0.7
comp=Z,14nm,0.8s,baz=83,slow=6.8
MTN **Manton Dam** 60.27 126 P **P** 23 26 23.8 +0.2
MTN IAmb IAmb 23 26 24.9
comp=Z,81nm,1.3s
FITZ **Fitzroy Crossi** 60.27 134 P **P** 23 26 24.7 +1.2
comp=Z,73nm,0.8s,baz=295,slow=4.3,SNR=68
FITZ **Fitzroy Crossi** 60.27 134 P **P** 23 26 24.6 +1.1
MILB **Miltenberg** 60.31 314 *e*P **P** 23 26 22.3 -1.1
comp=Z,20nm,1.1s,baz=83,slow=6.8
DAVA **Damuels** 60.33 311 *i* P **P** 23 26 23.1 -0.7
comp=Z,32nm,0.8s,SNR=21
PRMA **PARMA** 60.49 308 P **P** 23 26 25.2 +0.4
PRMA IAmb IAmb 23 26 31.7
comp=Z,33nm,1.1s
STU **Stuttgart** 60.54 313 P **P** 23 26 24.6 -0.4
STU pmax pmax
comp=Z,25nm,1.0s
STU **Stuttgart** 60.54 313 P **P** 23 26 24.6 -0.4
STU **Stuttgart** 60.54 313 *e*P **P** 23 26 24.9 -0.1
comp=Z,26nm,1.1s,baz=83,slow=6.8
KNRA **Kunmurra** 60.56 130 P **P** 23 26 20.6 +0.4
ODD1 **Odda** 60.61 326 *e*P **P** 23 26 25.6 +0.2
KASTN **Kahler Asten** 60.65 315 *e*P **P** 23 26 25.8 0.0
comp=Z,18nm,1.1s,baz=83,slow=6.8
HYA **Hoyanger** 60.72 327 *e*P **P** 23 26 26.4 +0.5
TNS **Taunus Mts** 60.78 314 *e*P **P** 23 26 26.7 0.0
comp=Z,43nm,1.1s,baz=83,slow=6.8
TUE **Stuetta** 60.84 310 P **P** 23 26 26.6 -0.7
IBBN **Ibbenburen** 60.89 317 *e*P **P** 23 26 27.5 +0.2
comp=Z,71nm,1.1s,baz=83,slow=6.8
GENI **Genyem** 61.05 110 P **P** 23 26 29.5 +0.6
comp=Z,83nm,1.2s
MSSA **Maissana** 61.14 308 P **P** 23 26 28.8 -0.5
MSSA IAmb IAmb 23 26 35.3
comp=Z,84nm,1.6s
BFO **Black Forest** 61.18 312 P **P** 23 26 28.7 -0.8
BFO pmax pmax
comp=Z,6.0nm,0.8s
BFO **Black Forest** 61.18 312 P **P** 23 26 28.7 -0.8
BFO **Black Forest** 61.18 312 *e*P **P** 23 26 27.7 -1.8
comp=Z,8.1nm,1.1s,baz=83,slow=6.8
BUG **Bochum–Univer** 61.32 316 *e*P **P** 23 26 30.3 +0.1
comp=Z,58nm,1.0s,baz=83,slow=6.8
BILL **Bilibino** 61.33 25 *d*P **P** 23 26 31.8 +1.7
BILL *e**SP **sP** 23 26 35.7 -0.9
BILL *e**PP **pP** 23 26 36.8 +2.0
BILL *e* 23 27 14.2
BILL *e* 23 28 46.0
BILL *e*PPP PPP 23 30 10.6
BILL *e*S **S** 23 34 51.1 +1.2
BILL *e*SS **SS** 23 38 52.7 +3.0
BILL MLR MLR
comp=Z,549nm,16.0s
BILL **Bilibino** 61.33 25 P **P** 23 26 31.3 +1.3
BILL IAmb IAmb 23 26 36.0
comp=Z,34nm,1.0s
JAY **Jayapura** 61.45 110 P **P** 23 26 32.1 +0.4
comp=Z,274nmcomp=Z,12nm,1.0s
AHRW **Bad Neuenahr-A** 61.60 315 *e*P **P** 23 26 32.4 +0.3
comp=Z,57nm,1.1s,baz=83,slow=6.8
VOI **Vohitsoka** 61.63 221 P **P** 23 26 33.4 +0.5
VOI IAmb IAmb 23 26 34.4
comp=Z,56nm,1.1s
ECH **Echery** 61.97 312 P **P** 23 26 34.3 -0.5
ECH pmax pmax
comp=Z,12nm,1.0s
ECH **Echery** 61.97 312 P **P** 23 26 34.3 -0.5
BTNL **Ternell** 62.18 315 *d*P **P** 23 26 36.1 0.0
comp=Z,20nm,1.1s
SENIN **Lac Senin/Sane** 62.25 310 P **P** 23 26 36.6 -0.3
MEM **Membach** 62.25 315 *b*P **P** 23 26 36.7 +0.1
comp=Z,20nm,1.0s
BHOU **Houvegnez** 62.30 315 *d*P **P** 23 26 37.5 +0.5
comp=Z,21nm,1.1s
WLF **Walferdange** 62.34 314 κP **P** 23 26 37.7 +0.5
comp=Z,24nm,1.0s
WLF **Walferdange** 62.34 314 P **P** 23 26 37.6 +0.4
WLF pmax pmax
comp=Z,52nm,1.1s
WLF **Walferdange** 62.34 314 P **P** 23 26 37.6 +0.4
WLF IAmb IAmb 23 26 42.4
comp=Z,52nm,1.1s
WLF **Walferdange** 62.34 314 *e*P **P** 23 26 37.7 +0.5
comp=Z,58nm,1.1s,baz=83,slow=6.8
BSTI **Sart Tilman** 62.53 315 *d*P **P** 23 26 38.9 +0.4
BCLA **Clavier** 62.73 315 κP **P** 23 26 39.8 0.0
comp=Z,18nm,1.1s
RCHB **Rochefort** 62.83 315 *d*P **P** 23 26 40.6 +0.2
comp=Z,18nm,1.0s
BGES **Gesves** 62.87 315 *d*P **P** 23 26 40.5 -0.2
comp=Z,16nm,1.1s
BGES *d*PcP **PcP** 23 27 19.5 +0.5
BNI **Bardonecchia** 62.96 309 P **P** 23 26 41.0 -0.6
BNI pmax pmax
comp=Z,25nm,1.0s
BNI **Bardonecchia** 62.96 309 P **P** 23 26 41.0 -0.6
BNI IAmb IAmb 23 26 50.8
comp=Z,25nm,1.0s
BMRD **Maredsous** 63.09 315 *d*P **P** 23 26 42.2 0.0
comp=Z,10nm,1.1s
BMRD *d*pP **pP** 23 26 45.6 -1.3
DOU **Dourbes** 63.24 315 *d*P **P** 23 26 43.3 +0.2
comp=Z,7.1nm,1.1s
KEST **Kesra** 63.34 298 P **P** 23 26 44.9 +0.7
comp=Z,84nm,0.9s,baz=4.4,slow=1.8,SNR=89
KEST LR LR 23 58 44.0
comp=Z,178nm,18.7s,baz=330,slow=40
KEST **Kesra** 63.34 298 P **P** 23 26 44.7 +0.5
SNF **Seneffe** 63.35 315 *d*P **P** 23 26 43.6 -0.3
comp=Z,18nm,1.0s
SNF *d*pP **pP** 23 26 47.2 -1.4
MORW **Morawa** 63.88 150 P **P** 23 26 48.0 +0.5
SSB **Saint Sauveur** 64.37 309 P **P** 23 26 50.3 -0.5
SSB pmax pmax
comp=Z,25nm,1.0s
SSB **Saint Sauveur** 64.37 309 P **P** 23 26 50.2 -0.5
SSB IAmb IAmb 23 26 54.5
comp=Z,25nm,1.0s
NOR **Nord** 64.39 351 *i* P **P** 23 26 50.3 0.0
NOR IAmb IAmb 23 26 54.9
comp=Z,18nm,1.3s
NOR **Nord** 64.39 351 *i* P **P** 23 26 50.2 0.0
NOR pmax pmax
comp=Z,18nm,1.3s
CMAH **Djebel Manchou** 64.58 300 P **P** 23 26 52.8 +0.5
CASM **Ain Smara** 65.40 299 P **P** 23 26 57.6 -0.1
CTEI **Djebel Teioual** 65.53 299 P **P** 23 26 57.8 -0.8
DFRA **Djebel Bou Aff** 65.79 300 P **P** 23 27 00.7 +0.4
DAG **Danmarks Havn** 66.23 346 *i* P **P** 23 27 01.9 -0.4
DAG IAmb IAmb 23 27 07.2
comp=Z,27nm,0.9s
DAG **Danmarks Havn** 66.23 346 *i* P **P** 23 27 01.8 -0.4
DAG pmax pmax
comp=Z,27nm,0.9s
SET **Setif** 66.26 300 P **P** 23 27 04.0 +0.7
ESK **Eskdalemuir** 66.63 322 P **P** 23 27 04.7 -0.4
ESK pmax pmax
comp=Z,29nm,1.0s
ESK **Eskdalemuir** 66.63 322 P **P** 23 27 04.7 -0.4
ESK IAmb IAmb 23 27 09.3
comp=Z,29nm,0.9s
MANU **Manus Island** 66.82 106 P **P** 23 27 08.1 +1.1
MANU IAmb IAmb 23 27 10.6
comp=Z,38nm,1.4s
WRA **Warramunga Arr** 67.33 129 P **P** 23 27 11.5 +1.4
comp=Z,114nm,0.6s,baz=322,slow=6.5,SNR=527
WRA PKP2bc 23 55 36.6
comp=Z,3.2nm,0.9s,baz=134,slow=1.7,SNR=8.3
WRA **Warramunga Arr** 67.33 129 P **P** 23 27 10.4 +0.3
WRA pmax pmax
comp=Z,4.0nm,0.7s
WRA **Warramunga Arr** 67.33 129 P **P** 23 27 10.4 +0.3
WRAB **Tennant Creek** 67.33 129 *d*P **P** 23 27 11.5 +1.4
WRAB pmax pmax
comp=Z,140nm,0.7s
WR0 **Warramunga Arr** 67.48 129 P **P** 23 27 12.1 +1.0
DBG **Daneborg** 67.48 343 *i* P **P** 23 27 09.3 -1.0
DBG IAmb IAmb 23 27 15.1
comp=Z,9.2nm,1.0s
NWAO **Narrogin (SRO)** 67.71 151 P **P** 23 27 12.0 -0.2
comp=Z,160nm,0.7s,baz=331,slow=6.3,SNR=118
NWAO **Narrogin (SRO)** 67.71 151 P **P** 23 27 11.9 -0.2
DSB **Dublin** 69.01 320 P **P** 23 27 19.6 -0.6
DSB IAmb IAmb 23 27 33.8
comp=Z,44nm,1.4s
EBNR **Beni Rached** 69.19 301 P **P** 23 27 21.5 -0.2
ECHA **Ech Chlef** 69.37 301 P **P** 23 27 22.2 -0.5
AS31 **Alice Springs** 69.61 132 P **P** 23 27 25.0 +0.7
AS31 IAmb IAmb 23 27 26.4
comp=Z,32nm,0.8s
ASAR **Alice Springs** 69.61 132 P **P** 23 27 25.6 +1.3
comp=Z,107nm,0.8s,baz=318,slow=6.4,SNR=569
ASAR S **S** 23 36 33.6 +1.2
comp=Z,2.6nm,1.0s,baz=306,slow=13,SNR=8.9
ASAR PKP2bc 23 55 30.0
comp=Z,3.2nm,0.8s,baz=136,slow=4.1,SNR=17
ASAR **Alice Springs** 69.61 132 P **P** 23 27 24.7 +0.4
EANR **'Ain N'Sour** 69.64 301 P **P** 23 27 23.9 -0.6
LSZ **Lusaka** 69.67 239 P **P** 23 27 24.8 -0.1
LSZ pmax pmax
comp=Z,26nm,0.7s
LSZ **Lusaka** 69.67 239 P **P** 23 27 24.8 -0.1
LSZ IAmb IAmb 23 27 25.8
comp=Z,26nm,0.7s
ETRT **Tiaret** 69.68 300 P **P** 23 27 25.8 +1.0
COEN **Coen** 70.01 119 P **P** 23 27 27.8 +1.0
PMG **Port Moresby** 70.59 112 P **P** 23 27 31.5 +1.1
comp=Z,28nm,0.5s,baz=13,slow=3.7,SNR=9.8
PMG **Port Moresby** 70.59 112 *d*P **P** 23 27 31.9 +1.5
PMG pmax pmax
comp=Z,62nm,1.1s
PMG **Port Moresby** 70.59 112 P **P** 23 27 31.5 +1.1
PMG IAmb IAmb 23 27 32.8
comp=Z,65nm,1.1s
CART **Cartagena** 70.66 303 P **P** 23 27 30.3 -0.2
TAM **Tamanrasset** 70.82 286 P **P** 23 27 32.2 +0.2
TAM pmax pmax
comp=Z,70nm,1.2s
TAM **Tamanrasset** 70.82 286 P **P** 23 27 32.2 +0.2
TAM IAmb IAmb 23 27 38.6
comp=Z,70nm,1.2s
GAMB **Gambell** 71.07 27 P **P** 23 27 34.8 +2.2
GAMB IAmb IAmb 23 27 38.2
comp=Z,59nm,1.7s
FORT **Forrest** 71.29 142 P **P** 23 27 35.0 +0.7
NEEM **North Greenlan** 71.77 351 *i* P **P** 23 27 37.3 +0.3
NEEM IAmb IAmb 23 27 41.8
comp=Z,59nm,0.9s
RABL **Rabaul** 72.03 105 P **P** 23 27 39.7 +0.5
RABL IAmb IAmb 23 27 44.9
comp=Z,33nm,0.6s
ESBB **Sonseca Array** 72.08 306 P **P** 23 27 39.1 -0.1
ESBB IAmb IAmb 23 27 40.4
comp=Z,31nm,1.0s
ESDC **Sonseca Array** 72.08 306 P **P** 23 27 39.2 0.0
comp=Z,19nm,0.9s,baz=54,slow=6.2,SNR=107
ESDC **Sonseca Array** 72.08 306 P **P** 23 27 38.9 -0.3
PATS **Pohnpei** 72.14 92 P **P** 23 27 41.4 +1.6
EUNU **Eureka** 72.29 358 P **P** 23 27 40.1 +0.3
EUNU IAmb IAmb 23 27 45.2
comp=Z,51nm,0.9s
A21K **Barrow** 72.37 17 P **P** 23 27 40.3 0.0
A21K **Barrow** 72.37 17 P 23 27 41.3
baz=305
PAB **San Pablo** 72.40 306 P **P** 23 27 41.1 -0.1
PAB pmax pmax
comp=Z,36nm,1.0s
PAB **San Pablo** 72.40 306 P **P** 23 27 41.1 -0.1
PAB IAmb IAmb 23 27 42.4
comp=Z,36nm,0.9s
SUMG **Summit** 72.84 345 *i* P **P** 23 27 43.3 -0.3
SUMG IAmb IAmb 23 27 49.4
comp=Z,57nm,0.9s
SUMG **Summit** 72.84 345 P **P** 23 27 43.7 +0.1
SUMG pmax pmax
comp=Z,104nm,1.1s
SUMG **Summit** 72.84 345 P **P** 23 27 43.6 +0.1
ANM **Nome** 73.19 25 P **P** 23 27 46.8 +1.5
ANM **Nome** 73.19 25 P **P** 23 27 46.8 +1.5
ANM IAmb IAmb 23 27 51.4
comp=Z,71nm,1.7s
ANM **Nome** 73.19 25 P 23 27 46.9
baz=300
PBRG **Braganca** 73.24 309 *e*P **P** 23 27 46.0 -0.1
comp=Z,38nm,2.1s
MVO **Moncorvo** 73.69 308 *e*P **P** 23 27 49.1 +0.3
PVRL **Vila Real** 74.12 308 *e*P **P** 23 27 51.2 -0.1
POLO **Lamas de Olo** 74.14 309 *e*P **P** 23 27 51.7 +0.2
comp=Z,20nm,1.2s
PGAV **Gavieira, Arco** 74.23 309 *e*P **P** 23 27 50.8 -1.2
comp=Z,78nm,1.6s
MTE **Manteigas** 74.35 308 *e*P **P** 23 27 53.3 +0.6
comp=Z,75nm,1.2s
MTE **Manteigas** 74.35 308 P **P** 23 27 52.6 0.0
MTE IAmb IAmb 23 27 54.3
comp=Z,59nm,0.9s
PVIS **Viseu** 74.47 308 *e*P **P** 23 27 54.0 +0.7
comp=Z,62nm,1.1s

PCBR **Castelo Branco** 74.52 307 *e*P P 23 27 54.0 +0.4
comp=Z,47nm,1.3s
PMRV **Marv??o** 74.62 307 *e*P P 23 27 54.6 +0.4
comp=Z,44nm,1.2s
TULEG **Thule** 74.67 354 *i* P P 23 27 53.9 +0.2
TULEG **Thule** 74.67 354 P P 23 27 52.1 -1.6
TULEG IAmb IAmb 23 27 57.8
comp=Z,37nm,1.0s
PBAR **Barrancos** 74.87 305 *e*P P 23 27 56.1 +0.5
comp=Z,89nm,1.0s
PESTR **Estremoz** 74.99 306 P P 23 27 56.1 -0.2
COI **Coimbra** 75.03 308 P P 23 27 55.7 -0.8
COI pmax pmax
comp=Z,166nm,1.7s
COI **Coimbra** 75.03 308 *e*P P 23 27 52.8 -3.7
comp=Z,115nm,1.6s
COI **Coimbra** 75.03 308 P P 23 27 55.7 -0.8
PCAS **Casmilo, Conde** 75.16 308 *e*P P 23 27 56.8 -0.5
PMTG **Montargil** 75.36 307 *e*P P 23 27 58.5 +0.1
comp=Z,44nm,1.5s
ICESG **Greenland Ices** 75.40 342 *i* P P 23 27 59.2 +0.7
ICESG IAmb IAmb 23 28 03.7
comp=Z,45nm,0.9s
EVO **Evora** 75.42 306 *e*P P 23 27 59.3 +0.5
comp=Z,68nm,1.1s
PBEJ **Beja** 75.52 305 *e*P P 23 28 00.1 +0.7
comp=Z,16nm,0.9s
PSBE **So Bento** 75.58 307 *e*P P 23 28 00.7 +0.9
comp=Z,120nm,1.4s
PVAQ **Vaqueiros** 75.67 305 *e*P P 23 28 00.6 +0.4
comp=Z,96nm,1.0s
PVAQ **Vaqueiros** 75.67 305 P P 23 27 59.7 -0.6
PCVE **Castro Verde** 75.81 305 *e*P P 23 28 01.6 +0.6
comp=Z,44nm,1.2s
PBDV **Barranco-do-Ve** 75.89 305 *e*P P 23 28 02.6 +1.0
comp=Z,151nm,1.2s
TOLK **Toolik Lake Re** 75.94 18 P P 23 28 02.0 +0.7
TOLK **Toolik Lake Re** 75.94 18 P 23 28 02.5
baz=312
CTA **Charters Tower** 76.02 122 P P 23 28 03.9 +1.5
comp=Z,43nm,0.7s,baz=317,slow=8.4,SNR=53
CTAO **Charters Tower** 76.02 122 P P 23 28 02.9 +0.5
CTAO pmax pmax
comp=Z,56nm,0.8s
CTAO **Charters Tower** 76.02 122 P P 23 28 02.9 +0.5
CTAO IAmb IAmb 23 28 04.8
comp=Z,56nm,0.8s
PMAFR **Mafra** 76.16 307 *e*P P 23 28 03.8 +0.8
UPNV **Upernavik** 76.28 349 *i* P P 23 28 04.5 +1.5
PTEO **Sao Teotonio** 76.34 305 *e*P P 23 28 05.2 +1.1
MORF **Marmelete** 76.39 305 *e*P P 23 28 05.1 +0.7
MORF IAmb IAmb 23 28 06.5
comp=Z,34nm,1.1s
MORF **Marmelete** 76.39 305 *e*P P 23 28 05.1 +0.7
MORF **Marmelete** 76.39 305 *e*P P 23 28 05.7 +1.3
comp=Z,49nm,1.5s
IMAR **Indian Mountai** 76.44 21 P P 23 28 04.5 +0.5
PFVI **Vila Bisbo** 76.59 305 *e*P P 23 28 06.6 +1.1
comp=Z,162nm,1.6s
PFVI **Vila Bisbo** 76.59 305 P P 23 28 05.7 +0.2
COLD **Coldfoot** 76.71 19 P 23 28 06.9
baz=312
BBOO **Buckleboo** 77.38 138 P P 23 28 10.3 +0.5
TTA **Tatalina** 77.56 24 P P 23 28 11.7 +1.2
TTA pmax pmax
comp=Z,76nm,1.6s
TTA **Tatalina** 77.56 24 P P 23 28 11.7 +1.2
TTA IAmb IAmb 23 28 17.1
comp=Z,76nm,1.6s
TTA **Tatalina** 77.56 24 P 23 28 12.2
baz=308
LBTB **Lobatse** 77.59 233 P P 23 28 11.4 +0.1
LBTB pmax pmax
comp=Z,49nm,0.8s
LBTB **Lobatse** 77.59 233 P P 23 28 11.4 +0.1
LBTB IAmb IAmb 23 28 13.8
comp=Z,49nm,0.8s
RES **Resolute Bay** 77.80 360 P P 23 28 11.5 -0.1
RES pmax pmax
comp=Z,7.0nm,0.9s
RES **Resolute Bay** 77.80 360 P P 23 28 11.4 -0.1
PAF **Port-aux-Franc** 77.90 190 P P 23 28 13.5 +1.3
PAF **Port-aux-Franc** 77.90 190 P P 23 28 13.5 +1.3
MLY **Manley** 78.01 21 P P 23 28 13.8 +0.8
MLY IAmb IAmb 23 28 18.8
comp=Z,114nm,1.4s
MLY **Manley** 78.01 21 P 23 28 14.2
baz=312,SNR=51
TOA0 **Torodi Ar. Sit** 78.10 279 P P 23 28 13.9 -0.5
TOA0 IAmb IAmb 23 28 18.6
comp=Z,27nm,0.7s
TORD **Torodi Ar. Bea** 78.10 279 P P 23 28 14.0 -0.3
comp=Z,28nm,0.6s,baz=51,slow=4.7,SNR=155
TORD PP PP 23 31 11.5 +0.8
comp=Z,3.7nm,0.8s,baz=57,slow=6.4,SNR=3.2
BMAR **Burnt Mountain** 78.14 17 P P 23 28 15.2 +1.6
CHUM **Lake Minchumin** 78.25 22 P 23 28 16.1
baz=310,SNR=18
I23K **Minto, Yukon-K** 78.37 21 P P 23 28 15.5 +0.6
I23K **Minto, Yukon-K** 78.37 21 P 23 28 16.2
baz=313,SNR=51
BPAW **Bear Paw Mtn.** 78.55 22 P 23 28 16.8
baz=312,SNR=38
NEA2 **Nenana** 78.84 21 P P 23 28 18.0 +0.5
NEA2 **Nenana** 78.84 21 P 23 28 18.6
baz=313,SNR=104
MDM **Murphy Dome** 78.85 20 P P 23 28 18.0 +0.4
KTH **Kantishna Hill** 78.94 22 P P 23 28 18.8 +0.6
KTH IAmb IAmb 23 28 24.4
comp=Z,81nm,1.2s
PPLA **Purkeypile** 78.94 23 P P 23 28 18.9 +0.6
PPLA **Purkeypile** 78.94 23 P 23 28 19.6
baz=311,SNR=14
POKR **Poker Plat Res** 78.98 20 P 23 28 19.5
baz=314,SNR=33
BWN **Browne** 79.00 21 P P 23 28 20.1 +1.7
TCOL **CIGO, UAF Yank** 79.02 20 P 23 28 19.7
baz=314
COLA **College** 79.02 20 *d* iP P 23 28 19.1 +0.6
COLA pmax pmax
comp=Z,91nm,1.2s
COLA **College** 79.02 20 P P 23 28 19.0 +0.6
COLA **College** 79.02 20 P 23 28 19.7
baz=314
DY2G **Dye2** 79.03 342 *i* P P 23 28 18.9 0.0
DY2G IAmb IAmb 23 28 19.7
comp=Z,15nm,0.7s
TRF **Thorofare Moun** 79.22 22 P 23 28 20.4
baz=312
PRP **Porcupine Dome** 79.26 19 P P 23 28 21.3 +1.3
PRP **Porcupine Dome** 79.26 19 P 23 28 21.2
baz=316
IL31 79.39 20 P P 23 28 20.3 -0.1
IL31 IAmb IAmb 23 28 25.1
comp=Z,31nm,0.8s
ILAR **Eielson Array** 79.39 20 P P 23 28 20.1 -0.4
comp=Z,25nm,0.9s,baz=301,slow=4.4,SNR=125
ILAR PP PP 23 31 20.4 +0.5
comp=Z,2.5nm,0.9s,baz=302,slow=6.0,SNR=3.1
ILAR **Eielson Array** 79.39 20 P P 23 28 20.5 0.0
ILAR **Eielson Array** 79.39 20 P P 23 28 20.5 0.0
MCK **McKinley** 79.47 21 P 23 28 21.8
baz=313
HDA **Harding Lake** 79.63 20 P 23 28 21.2
baz=315,SNR=18
HDA P 23 28 21.2
baz=315,SNR=18
SFJD **Kangerlussuaq** 79.77 344 P P 23 28 22.3 -0.3
SFJD pmax pmax
comp=Z,43nm,1.1s
SFJD **Kangerlussuaq** 79.77 344 P P 23 28 22.2 -0.3
SFJD IAmb IAmb 23 28 26.9
comp=Z,43nm,1.1s
SKT **Skwentna** 79.77 24 P P 23 28 22.9 +0.2
SKT **Skwentna** 79.78 24 P 23 28 23.5
baz=312,SNR=64
CUT **Chulitna** 79.93 23 P 23 28 24.0
baz=312
SPCR **Spurr Chakacha** 80.05 24 P 23 28 25.5
baz=311
INK **Inuvik** 80.07 14 P P 23 28 24.5 +0.4
INK pmax pmax
comp=Z,89nm,1.2s
INK **Inuvik** 80.07 14 P P 23 28 24.5 +0.4
INK IAmb IAmb 23 28 29.6
comp=Z,89nm,1.1s
INK **Inuvik** 80.07 14 P 23 28 25.0
baz=326
BOSA **Boshof** 80.08 230 P P 23 28 24.9 0.0
comp=Z,14nm,0.7s,baz=56,slow=4.9,SNR=35
BOSA **Boshof** 80.08 230 P P 23 28 24.6 -0.3
BOSA pmax pmax
comp=Z,122nm,1.8s
BOSA **Boshof** 80.08 230 P P 23 28 24.6 -0.3
BOSA IAmb IAmb 23 28 26.1
comp=Z,122nm,1.8s
WAT2 **Susitna Watana** 80.12 22 P 23 28 24.4
baz=314
STKA **Stephens Creek** 80.16 134 P P 23 28 26.0 +0.8
comp=Z,45nm,0.8s,baz=322,slow=5.7,SNR=51
STKA **Stephens Creek** 80.16 134 *d* iP P 23 28 25.9 +0.8
STKA **Stephens Creek** 80.16 134 P P 23 28 25.7 +0.5
TSUM **Tsumeb** 80.17 242 P P 23 28 24.9 -0.7
SUA **Susitna One** 80.40 24 P P 23 28 27.1 +0.9
SUA IAmb IAmb 23 28 33.1
comp=Z,41nm,0.8s
SUA **Susitna One** 80.40 24 P 23 28 26.9
baz=312,SNR=20
WAT6 **Susitna Watana** 80.66 22 P 23 28 28.2
baz=314,SNR=23
GHO **Glory Hole Cre** 80.83 23 P P 23 28 28.8 +0.4
GHO IAmb IAmb 23 28 36.9
comp=Z,68nm,1.2s
SCRK **Sand Creek** 80.84 20 P 23 28 29.2
baz=318,SNR=106
C36M **Paulatuk** 80.88 10 P P 23 28 28.1 -0.3
PMR **Palmer** 80.88 23 P 23 28 29.3
baz=314,SNR=13
C36M **Paulatuk** 80.88 10 P 23 28 28.3
baz=334
EPYK **Eagle Plains** 80.94 16 P P 23 28 29.1 +0.1
EPYK **Eagle Plains** 80.94 16 P 23 28 29.4
baz=324
SML **Sawmill** 81.01 23 P 23 28 30.2
baz=314,SNR=26
RC01 **Rabbit Creek A** 81.01 24 P 23 28 30.1
baz=313,SNR=8.0
EGAK **Eagle** 81.05 18 P P 23 28 29.9 +0.4
EGAK IAmb IAmb 23 28 34.9
comp=Z,64nm,0.9s
EGAK **Eagle** 81.05 18 P 23 28 30.3
baz=320
PAX **Paxson** 81.12 21 P P 23 28 30.5 +0.5
PAX pmax pmax
comp=Z,46nm,1.2s
PAX **Paxson** 81.12 21 P P 23 28 30.4 +0.5
PAX IAmb IAmb 23 28 37.1
comp=Z,46nm,1.2s
PAX **Paxson** 81.12 21 P 23 28 30.7
baz=316,SNR=32
KNK **Knik Glacier** 81.24 23 P 23 28 31.5
baz=314
HNR **Honiara** 81.32 105 P P 23 28 31.3 -0.4
HNR pmax pmax
comp=Z,47nm,0.7s
HNR **Honiara** 81.32 105 P P 23 28 31.3 -0.4
HNR IAmb IAmb 23 28 45.1
comp=Z,48nm,0.7s
K27K **Chicken** 81.36 19 P 23 28 32.6
baz=319
O22K **Cooper Landing** 81.43 24 P P 23 28 31.9 +0.3
O22K **Cooper Landing** 81.43 24 P 23 28 32.8
baz=313
M24K **Tolsona, Glenn** 81.52 22 P 23 28 33.6
baz=316,SNR=15
BRSE **Bradley Lake S** 81.56 25 P 23 28 32.0
baz=312
HARP **HAARP** 81.64 21 P 23 28 34.3
baz=317
SEW **Seward** 81.79 24 P 23 28 34.1
baz=313
KLU **Klutina** 82.04 22 P 23 28 36.0
baz=316,SNR=20
GLI **Glacier Island** 82.08 23 P 23 28 35.9
baz=315,SNR=8.4
DAWY **Dawson** 82.09 18 P P 23 28 35.1 +0.1
DAWY IAmb IAmb 23 28 40.4
comp=Z,110nm,1.4s
KDAK **Kodiak Island** 82.15 27 *d* iP P 23 28 36.3 +0.9
KDAK pmax pmax
comp=Z,77nm,0.8s
KDAK **Kodiak Island** 82.15 27 P P 23 28 36.4 +0.9
KDAK **Kodiak Island** 82.15 27 P 23 28 36.4
baz=311
L27K **Beaver Creek,** 82.17 20 P 23 28 37.0
baz=319,SNR=55
BCAR **Beaver Creek A** 82.18 20 P P 23 28 36.3 +0.8
OHAK **Old Harbor** 82.23 28 P 23 28 36.8
baz=311
NUUK **Nuuk** 82.27 342 *i* P P 23 28 36.4 +0.5
N25K **Chitina, Valde** 82.40 22 P 23 28 38.3
baz=317,SNR=58
KOWA **Kowa** 82.48 282 P P 23 28 37.5 -0.4
KOWA IAmb IAmb 23 28 42.9
comp=Z,40nm,0.6s
EIDS **Eidsvold** 82.71 123 P P 23 28 39.5 +0.7
EIDS IAmb IAmb 23 28 41.1
comp=Z,32nm,1.1s
EYAK **Cordova Ski Ar** 82.78 23 P 23 28 39.9
baz=316
BMRM **Bremner River** 82.86 22 P P 23 28 40.2 +1.1
BMRM IAmb IAmb 23 28 45.0
comp=Z,74nm,1.1s
BMRM **Bremner River** 82.86 22 P 23 28 40.4
baz=317,SNR=24
MCARA **McCarthy VSAT** 83.07 21 P 23 28 41.7
baz=319
CRQM **Cirque** 83.50 22 P P 23 28 43.8 +1.1
CRQE **Cirque** 83.52 22 P 23 28 43.8
baz=319
KAIM **Kayak Island** 83.69 23 P 23 28 45.2
baz=318
BARN **Barnard Glacie** 83.75 21 P P 23 28 44.5 +0.6
CTG **Chitna Glacier** 83.92 21 P 23 28 46.4
baz=320
GRNC **Granite Creek** 83.97 21 P P 23 28 45.6 +0.5
YAH **Yahtse** 84.25 21 P P 23 28 47.4 +0.9
PMAR **Madeira** 84.50 304 *e*P P 23 28 49.6 +1.3
comp=Z,150nm,1.4s
PINM **Pinnacle** 84.93 21 P 23 28 50.8
baz=321
HYT **Haines Junctio** 85.19 19 P P 23 28 52.0 +0.9
SUR **Sutherland** 85.41 230 P P 23 28 53.5 +0.9
ARMA **Armidale** 86.02 127 P P 23 28 57.5 +1.8
ARMA IAmb IAmb 23 28 58.6
comp=Z,39nm,0.9s
WHY **Whitehorse** 86.08 18 P P 23 28 55.7 +0.1
WHY IAmb IAmb 23 29 00.8
comp=Z,34nm,0.8s
WHY **Whitehorse** 86.08 18 P 23 28 56.1
baz=325
TOO **Toolangi** 86.28 136 P P 23 28 57.9 +1.2
TOO pmax pmax
comp=Z,73nm,1.0s
TOO **Toolangi** 86.28 136 P P 23 28 57.9 +1.2
DBIC **Dimbokro** 86.76 276 P P 23 28 59.8 +0.2
comp=Z,27nm,0.6s,baz=40,slow=5.6,SNR=48
DBIC **Dimbokro** 86.76 276 P P 23 28 59.6 0.0
DBIC pmax pmax
comp=Z,41nm,1.0s
DBIC **Dimbokro** 86.76 276 P P 23 28 59.6 0.0
DBIC IAmb IAmb 23 29 05.8
comp=Z,41nm,1.0s
CAN **Canberra** 87.12 133 P P 23 29 01.7 +0.9
CAN pmax pmax
comp=Z,198nm,1.8s
CAN **Canberra** 87.12 133 P P 23 29 01.6 +0.9
BESE **Bessie Mountai** 87.81 20 P P 23 29 04.9 +0.9
BESE IAmb IAmb 23 29 10.1
comp=Z,49nm,1.0s
YKA **Yellowknife Ar** 88.69 9 P P 23 29 07.8 -0.1
comp=Z,21nm,0.8s,baz=341,slow=4.6,SNR=139
YKA ScS S 23 39 50.8 -3.3
comp=Z,0.6nm,0.9s,baz=345,slow=8.7,SNR=4.4
YKA PKKPbc PKKPbc 23 46 47.0 -2.4
comp=Z,1.0nm,0.6s,baz=155,slow=2.5,SNR=16
SIT **Sitka** 88.92 21 P 23 29 10.8
baz=325
DLBC **Dease Lake** 89.29 18 P P 23 29 12.1 +1.2
DLBC IAmb IAmb 23 29 17.0
comp=Z,27nm,1.0s
FCC **Fort Churchill** 93.79 359 P P 23 29 31.4 -0.2
FCC pmax pmax
comp=Z,16nm,1.3s
FCC **Fort Churchill** 93.79 359 P P 23 29 31.4 -0.2
MAW **Mawson** 96.52 188 P P 23 29 44.1 +0.5
comp=Z,20nm,0.9s,baz=346,slow=6.6,SNR=19
MAW **Mawson** 96.52 188 P P 23 29 44.3 +0.7
MAW pmax pmax
comp=Z,5.0nm,0.9s
MAW **Mawson** 96.52 188 P P 23 29 44.3 +0.7
FFC **Flin Flon** 97.62 4 P P 23 29 48.8 -0.4
FFC pmax pmax
comp=Z,11nm,1.1s
FFC **Flin Flon** 97.62 4 P P 23 29 48.8 -0.4
FFC IAmb IAmb 23 29 55.5
comp=Z,11nm,1.1s
ULM **Lac du Bonnet** 102.32 1 PKKPbc PKKPbc 23 46 10.0 -2.9
comp=Z,2.6nm,0.8s,baz=126,slow=2.4,SNR=6.9
PDAR **Pinedale Array** 108.55 11 PKiKP **PKiKP** 23 34 43.5 -0.6
comp=Z,0.4nm,0.7s,baz=101,slow=4.7,SNR=4.2
PDAR PKKPbc **PKKPbc** 23 45 52.1 -2.0
comp=Z,0.8nm,0.6s,baz=139,slow=4.2,SNR=9.9
PDAR PKKP **PKKPdf** 23 46 05.7 -1.6
comp=Z,1.6nm,0.9s,baz=160,slow=4.7,SNR=7.4
NVAR **Mina Array Bea** 110.64 19 PKiKP **PKiKP** 23 34 48.5 +0.4
comp=Z,1.3nm,0.7s,baz=312,slow=2.2,SNR=7.2
NVAR PKKPbc **PKKPbc** 23 45 46.2 -1.1
comp=Z,0.6nm,0.7s,baz=180,slow=4.5,SNR=3.6
NVAR PKKPab **PKKPab** 23 45 57.5 -2.9
comp=Z,1.5nm,0.8s,baz=160,slow=5.6,SNR=6.4
VNDA **Vanda** 114.13 167 PKP PKPdf 23 34 52.4 -0.7
comp=Z,0.8nm,0.7s,baz=297,slow=3.0,SNR=5.1
SNAA **Sanae** 115.40 200 PKPdf **PKiKP** 23 34 55.5 -0.2
VNA3 **Neumayer Olymp** 117.50 201 PKPdf **PKPdf** 23 34 59.5 -0.3
QSPA **South Pole Qui** 117.58 180 PKP **PKPdf** 23 34 59.5 -0.6
comp=Z,7.8nm,0.7s,baz=285,slow=1.0,SNR=37
QSPA PP **PP** 23 36 12.5 -0.3
comp=Z,9.9nm,1.1s,baz=309,slow=8.0,SNR=3.9
QSPA PKKPbc **PKKPab** 23 45 23.0 -0.6
comp=Z,5.0nm,0.8s,baz=132,slow=1.5,SNR=8.8
MIAR **Mount Ida** 118.00 359 PKiKP **PKPdf** 23 35 01.5 -0.4
MIAR **Mount Ida** 118.00 359 PKPdf **PKPdf** 23 35 01.5 -0.4
MIAR **Mount Ida** 118.00 359 P 23 35 01.9
baz=1.6
MNTX **Cornudas Mount** 120.04 10 PKPdf **PKiKP** 23 35 06.2 +0.1
MNTX **Cornudas Mount** 120.05 10 P 23 35 06.4
baz=350
JCT **Junction City** 121.89 5 PKiKP **PKPdf** 23 35 09.2 -0.4
JCT **Junction City** 121.89 5 PKPdf **PKPdf** 23 35 09.2 -0.4
JCT **Junction City** 121.90 5 P 23 35 09.4
baz=355
TXAR **Lajitas Array** 122.62 9 PP PP 23 36 47.0 +0.4
comp=Z,6.5nm,1.2s,baz=36,slow=3.2,SNR=4.3
TXAR PKKPbc **PKKPbc** 23 45 05.0 +0.2
comp=Z,1.7nm,0.9s,baz=168,slow=6.8,SNR=10
TXAR SKKPbc SKKPbc 23 48 46.9 -4.3
comp=Z,0.1nm,0.5s,baz=165,slow=3.7,SNR=3.5
BELA **Belgrano 2** 123.06 193 PKPdf **PKPdf** 23 35 09.8 -0.5
TMAB **Tom-Au,PA,Br** 128.56 291 *e*P **PKiKP** 23 35 24.2 +0.9
NAN01 **Guarapari, ES** 128.77 269 *e*P **PKiKP** 23 35 24.4 +0.9
RIB01 **Linhares ES** 129.53 267 *e*P **PKPdf** 23 35 24.3 0.0
BSFB **Barra de Sao F** 129.76 268 *e*P **PKPdf** 23 35 25.1 +0.3
SJMB **Sao Joao De Ma** 130.02 268 *e*P **PKiKP** 23 35 26.7 +0.7
ALF01 **Guarapari-ES** 130.26 266 *e*P **PKiKP** 23 35 27.5 +1.1
MCPB **Macapa, AP** 130.62 296 *e*P **PKiKP** 23 35 27.7 +0.2
SDBA **SAO DESIDERIO** 130.82 278 *e*P **PKiKP** 23 35 28.9 +1.0
JANB **Januaria** 131.41 274 *e*P **PKiKP** 23 35 29.5 +0.5
CAM01 **Campos-RJ** 131.48 265 *e*P **PKiKP** 23 35 29.3 +0.5
SMTB **Santa Maria do** 131.53 283 *e*P **PKiKP** 23 35 29.8 +0.5
PRPB **Parauapebas** 132.06 288 *e*P **PKiKP** 23 35 31.1 +0.7
DIAM **Diamantina, MG** 132.07 270 *e*P **PKiKP** 23 35 30.2 -0.2
DUB01 **Friburgo-RJ** 132.19 265 *e*P **PKiKP** 23 35 31.7 +1.3
VAS01 **Vassouras-RJ** 133.19 265 *e*P **PKiKP** 23 35 32.2 -0.2
MALB **Monte Alegre** 133.27 296 *e*P **PKiKP** 23 35 33.3 +0.5
PEXB **Peixe** 133.66 280 *e*P **PKPdf** 23 35 32.9 +0.6
MAN01 **Angra dos Reis** 133.82 264 *e*P **PKiKP** 23 35 34.4 +0.7
BSCB **Bom Sucesso** 133.97 267 *e*P **PKiKP** 23 35 33.4 -0.6
ESAR **Angra dos Reis** 134.29 264 *e*P **PKiKP** 23 35 34.9 +0.4
BDFB **Brasilia** 134.91 275 PKP **PKiKP** 23 35 35.8 -0.4
comp=Z,2.9nm,0.9s,baz=122,slow=9.5,SNR=3.0
PARB **Paraibuna** 135.42 264 *e*P **PKiKP** 23 35 36.8 -0.1
ITTB **Itaituba** 135.94 295 *e*P **PKPdf** 23 35 36.3 -0.3
SNDB **Serra Nova Dou** 136.20 282 *e*P **PKiKP** 23 35 38.9 +0.2
VAO **Valinhos** 136.51 265 *e*P **PKiKP** 23 35 38.9 -0.3
SDV **Santo Domingo** 136.56 324 PKP **PKPdf** 23 35 37.6 -0.4
comp=Z,10nm,0.8s,baz=47,slow=5.9,SNR=7.3
SDV SKPbc **SKPbc** 23 39 07.6 -2.6
comp=Z,5.0nm,0.6s,baz=17,slow=1.5,SNR=4.4
SDV **Santo Domingo** 136.56 324 **PKPdf** 23 35 37.3 -0.7
RCLB **Rio Claro- Sao** 136.84 266 *e*P **PKPdf** 23 35 38.6 +0.6
SPB **Sao Paulo** 137.09 264 *e*P **PKiKP** 23 35 40.4 +0.1
PET01 **Itanhaem-SP** 137.14 263 *e*P **PKiKP** 23 35 40.4 +0.1
NPGB **Novo Progresso** 137.16 291 *e*P **PKiKP** 23 35 40.4 -0.3
BB19B **Benedouro** 137.31 268 *e*P **PKiKP** 23 35 40.4 -0.5
ARAG **Araguaiana, MT** 138.28 278 *e*P **PKiKP** 23 35 42.4 -0.5
ITRB **Iturama** 138.49 271 *e*P **PKPdf** 23 35 41.2 +0.1
FRTB **Fartura** 138.90 266 *e*P **PKiKP** 23 35 43.5 -0.5
TIJ01 **Guaruva-PR** 138.92 263 *e*P **PKPdf** 23 35 42.5 +0.6
MACA **Manacapuru-AM** 139.09 301 *e*P **PKiKP** 23 35 44.0 -0.7
CLDB **Colider** 139.54 287 *e*P **PKiKP** 23 35 44.7 -0.8
TER01 **Tubaro-SC** 139.70 258 *e*P **PKiKP** 23 35 44.9 -0.6
PCMB **Pacaembu** 139.90 269 *e*P **PKiKP** 23 35 45.5 -0.6
CNLB **Canela** 141.31 257 *e*P **PKPdf** 23 35 46.9 +0.8
PTGB **Pitanga** 141.47 264 *e*P **PKPdf** 23 35 46.9 +0.4
TRCB **Terra Rica** 141.47 268 *e*P **PKPdf** 23 35 47.3 +0.8
ROSC **El Rosal** 141.90 325 PKhKP PKPpre 23 35 43.7
comp=Z,15nm,0.6s,baz=111,slow=6.3,SNR=5.9
ROSC PKP **PKPdf** 23 35 48.8 +0.8
comp=Z,22nm,0.6s,baz=44,slow=2.8,SNR=8.4
ROSC **El Rosal** 141.90 325 PKPdf **PKPdf** 23 35 48.2 +0.2
AQDB **Aquidauana** 143.48 273 *e*P **PKiKP** 23 35 51.9 -1.5
VILB **Vilhena** 144.31 287 *e*P PKPbc 23 35 50.8 +0.8
SAML **Samuel** 144.60 296 PKiKP PKPbc 23 35 51.1 +0.2
SAML **Samuel** 144.60 296 PKPbc 23 35 51.1 +0.2
ITQB **Itaqui** 146.35 257 *e*P **PKPab** 23 35 56.5 -0.4
CPUP **Villa Florida** 146.46 264 PKPbc **PKPdf** 23 35 54.8 -0.2
comp=Z,18nm,0.9s,baz=76,slow=3.6,SNR=26
CPUP **Villa Florida** 146.46 264 PKPdf **PKPdf** 23 35 54.1 -0.9
CPUP **Villa Florida** 146.46 264 *e*P **PKPbc** 23 35 56.8 +0.3
SIV **San Ignacio** 146.47 283 PKPbc **PKPdf** 23 35 55.9 +0.5
comp=Z,24nm,0.7s,baz=107,slow=3.7,SNR=60
ETMB **Extrema** 147.51 298 *e*P **PKPbc** 23 36 00.1 +0.3
OTAV **Otavalo** 147.91 327 PKiKP **PKPdf** 23 35 58.2 -0.3
OTAV **Otavalo** 147.91 327 **PKPdf** 23 35 58.1 -0.3
OTAV **Otavalo** 147.91 327 *e*P **PKPbc** 23 36 00.4 -1.1
CZSB **Cruzeiro do Su** 150.94 309 *e*P **PKPdf** 23 36 05.1 +2.4
GO09 **Cerro Castillo** 150.94 210 **PKPdf** 23 36 02.3 +0.8
GO09 PKPbc **PKiKP** 23 36 08.0 +0.1
LPAZ **La Paz** 152.62 289 PKP **PKPdf** 23 36 05.4 -0.5
comp=Z,3.9nm,0.8s,baz=58,slow=4.5,SNR=19
LPAZ PKPbc **sPKPdf** 23 36 12.2 -0.4
comp=Z,11nm,0.9s,baz=32,slow=6.6,SNR=15
LPAZ PP **PP** 23 39 55.2 -0.8
comp=Z,4.5nm,1.0s,baz=69,slow=4.6,SNR=3.5
LPAZ **La Paz** 152.62 289 PKPdf **PKPdf** 23 36 05.7 -0.2
LPAZ PKPbc **PKiKP** 23 36 13.0 -0.1
LPAZ **La Paz** 152.62 289 *e*P **PKPdf** 23 36 06.4 +0.5
ATAH **Atahualpa** 154.11 319 PKPbc **PKiKP** 23 36 16.8 +0.7
comp=Z,6.3nm,0.8s,baz=129,slow=2.1,SNR=3.8
PB16 **IPOC Station P** 154.73 286 **PKPdf** 23 36 08.9 +0.1
PB11 **IPOC Station P** 155.46 283 PKPdf **PKPdf** 23 36 09.2 0.0
PSGCX **Pisagua** 155.80 284 **PKPab** 23 36 35.6 -0.6
LVC **Limon Verde** 155.81 276 *e*P **PKPdf** 23 36 12.5 +2.6
PLCA **Paso Flores** 156.07 231 PKP **PKPdf** 23 36 09.8 +0.5
comp=Z,2.7nm,0.9s,baz=180,slow=8.1,SNR=5.2
PLCA PKPab **PKPab** 23 36 36.2 -0.6
comp=Z,2.4nm,0.8s,baz=117,slow=4.5,SNR=4.5
NNA **Nana** 156.82 309 PKPab **PKPab** 23 36 41.4 +0.8
comp=Z,27nm,0.8s,baz=348,slow=2.3,SNR=8.7
AC02 **Maricunga** 156.96 266 PKPdf **PKPdf** 23 36 11.8 +0.3
GO02 **Mina Guanaco** 157.07 271 **PKPdf** 23 36 11.8 +0.3
GO02 PKPab **PKPab** 23 36 41.7 -0.2
BI02 **San Fabin de** 158.06 240 PKPab **PKPab** 23 36 45.6 +0.1
LCO **Las Campanas** 158.55 261 PKiKP **PKPdf** 23 36 12.6 -0.5
LCO **Las Campanas** 158.55 261 **PKPdf** 23 36 12.6 -0.5

IDC ***25*** *23:23:01.1±2.1, 10.50S×120.45E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.6/30, mbtmp3.6/6, ML3.4/3 Error ellipse: s-maj=145.8km s-min=23.3km az=56.0*
ISC 25 23:23:02.5±1.4, **10.6S**±0.3×**120.6E**±0.5, **h10**km, **n6,** σ2ˢ**94**/**7**, **mb3.8**/3, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**8.93**	**147**	Pn	**Pn**	**23 25 13.5**	**+1.9**
	0.3nm,0.3s,baz=323,slow=10,SNR=7.8						
FITZ				Sn	**Sn**	**23 26 48.0**	**-4.3**
	1.2nm,0.3s,baz=17,slow=20,SNR=6.9						
WRA	**Warramunga Arr**	**16.21**	**127**	Pn	**Pn**	**23 26 50.8**	**+0.4**
	0.1nm,0.3s,baz=298,slow=13,SNR=2.6						
ASAR	**Alice Springs**	**18.18**	**137**	P	**P**	**23 27 18.6**	**+3.1**
	0.1nm,0.3s,baz=313,slow=12,SNR=8.8						
SONM	**Songino Array**	**59.53**	**349**	P	**P**	**23 33 05.8**	**-0.3**
	0.4nm,0.5s,baz=173,slow=8.5,SNR=2.4						
MKAR	**Makanchi Array**	**66.58**	**332**	P	**P**	**23 33 52.4**	**-0.5**
	0.5nm,0.7s,baz=125,slow=7.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**71.08**	**339**	P	**P**	**23 34 19.4**	**-1.4**
	1.1nm,0.6s,baz=133,slow=6.3,SNR=3.1						

*ATH **25** 23:23:39.7, 34˚.94N×26˚.88E, h13km±4km, ML2.8/2, Error ellipse: s-maj=8.4km s-min=1.5km az=336.0*
*THE **25** 23:23:40.8, 35˚.05N×26˚.80E, h2km±4km, ML2.6/3, Error ellipse: s-maj=8.1km s-min=0.6km az=152.0*
ISC 25 23:23:41.7±3.5, 35°.1N±0°.2×26°.76E±0°.09, h16km±29km, n11, σ0°92/17, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.45**	**267**	P	**Pb**	**23 23 50.6**	**-0.7**
ZKR				S	**Sb**	**23 23 58.6**	**+0.9**
ZKR				AML	AML	23 23 58.8	
	comp=E,1318μm,0.3s						
ZKR				AML	AML	23 23 58.9	
	comp=N,746μm,0.3s						
ZKR	**Zakros**	**0.45**	**267**	P	**Pb**	**23 23 50.4**	**-0.8**
ZKR				S	**Sb**	**23 23 58.3**	**+0.6**
	comp=N,518nm,0.3s						
KARP	**Karpathos**	**0.52**	**38**	P	**Pb**	**23 23 52.2**	**-0.3**
KARP				S	**Sb**	**23 24 01.1**	**+1.3**
KARP				AML	AML	23 24 02.5	
	comp=N,5039μm,0.4s						
KARP				AML	AML	23 24 02.8	
	comp=E,3370μm,0.4s						
KARP	**Karpathos**	**0.52**	**38**	P	**Pb**	**23 23 52.0**	**-0.5**
KARP				S	**Sn**	**23 24 01.4**	**-1.7**
	comp=E,2μm,0.4s						
NPS	**Neapolis**	**0.95**	**278**	P	**Pn**	**23 24 00.1**	**-0.3**
NPS	**Neapolis**	**0.95**	**278**	P	**Pn**	**23 24 00.5**	**+0.1**
NPS				S	**Sb**	**23 24 13.8**	**+1.6**
	comp=E,312nm,0.6s						
LAST	**Lasithi**	**1.05**	**272**	P	**Pb**	**23 24 01.0**	**-0.6**
LAST	**Lasithi**	**1.05**	**272**	P	**Pn**	**23 24 01.8**	**-0.1**
LAST				S	**Sn**	**23 24 16.8**	**+0.5**
IDI	**Anoyia**	**1.54**	**276**	P	**Pb**	**23 24 09.5**	**-0.4**
KORT	**Korkueli**	**3.45**	**56**	*e*P	**Pb**	**23 24 42.9**	**+0.4**
LPK	**Lapseki**	**5.22**	**360**	*e*P	**Pn**	**23 24 58.9**	**-0.2**

IDC 25 23:25:08.9±23.0, 28°.61N×85°.11E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/38, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=601.1km s-min=58.6km az=109.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.28**	**354**	P	Pn	23 29 23.9	-0.1
	0.1nm,0.3s,baz=175,slow=11,SNR=1.5						
FINES	**FINESS Array B**	**50.56**	**328**	P	P	23 34 08.7	-0.2
	1.6nm,0.8s,baz=111,slow=7.6,SNR=5.0						
TORD	**Torodi Ar. Bea**	**78.12**	**279**	P	P	23 37 10.4	+0.1
	0.1nm,0.5s,baz=56,slow=6.6,SNR=0.8						

*IDC **25** 23:28:27.3±1.6, 10˚.70S×120˚.14E, h0km, mb4.0/3, mb1 4.0/7, mb1mx3.7/32, mbtmp3.9/7, ML3.8/4, MS3.3/1, Ms1 3.5/1, ms1mx2.6/36, Error ellipse: s-maj=57.9km s-min=21.3km az=47.0*
ISC 25 23:28:32.1±1.2, 10°.94S±0°.09×120°.3E±0°.1, h35km, n8, σ3°80/11, mb4.0/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.38**	**78**	Pn	**Pn**	**23 29 23.4**	**+1.0**
	18nm,0.3s,baz=300,slow=2.6,SNR=13						
BATI				Sn	**Sn**	**23 30 02.9**	**+1.5**
	14nm,0.3s,baz=29,slow=22,SNR=9.6						
FITZ	**Fitzroy Crossi**	**8.79**	**145**	Pn	**Pn**	**23 30 40.2**	**+3.5**
	0.7nm,0.3s,baz=317,slow=13,SNR=7.4						
FITZ				Sn	**Sn**	**23 32 13.6**	**-1.1**
	0.9nm,0.3s,baz=190,slow=17,SNR=3.8						
WRA	**Warramunga Arr**	**16.21**	**125**	Pn	**Pn**	**23 32 18.5**	**+1.2**
	0.3nm,0.3s,baz=297,slow=13,SNR=1.3						
WRA				Sn	**Sn**	**23 35 08.8**	**-7.2**
	0.1nm,0.3s,baz=290,slow=25,SNR=2.4						
ASAR	**Alice Springs**	**18.11**	**136**	P	**P**	**23 32 44.5**	**+3.3**
	0.3nm,0.3s,baz=315,slow=12,SNR=8.2						
ASAR				S	**Sn**	**23 35 56.8**	**-5.3**
	0.1nm,0.3s,baz=310,slow=24,SNR=5.7						
CMAR	**Chiang Mai Arr**	**36.02**	**324**	LR	LR	23 50 40.4	
	comp=Z,42nm,18.3s,baz=70,slow=37						
SONM	**Songino Array**	**59.81**	**349**	P	**P**	**23 38 32.4**	**-1.5**
	0.8nm,0.6s,baz=165,slow=8.3,SNR=7.9						
MKAR	**Makanchi Array**	**66.76**	**333**	P	**P**	**23 39 19.2**	**-0.7**
	0.6nm,0.6s,baz=140,slow=7.8,SNR=7.5						
ZALV	**Zalesovo Beam**	**71.30**	**339**	P	**P**	**23 39 46.4**	**-1.5**
	1.5nm,0.6s,baz=134,slow=4.2,SNR=6.3						

*IDC **25** 23:40:47.3±1.0, 27˚.57N×84˚.94E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.6/48, mbtmp3.8/12, ML3.7/1, Error ellipse: s-maj=36.3km s-min=18.2km az=61.0*
ISC 25 23:40:49.2±1.0, 27°.6N±0°.1×84°.9E±0°.1, h10km, n13, σ1°07/13, mb3.7/10, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.84**	**68**	Pn	**Pn**	**23 42 16.0**	**-0.3**
LSA				smax	smax		
	comp=N,68nm,1.4s						
LSA				smax	smax		
	comp=E,81nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.76**	**122**	Pn	**Pn**	**23 44 32.2**	**+0.8**
	baz=318,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**19.27**	**354**	P	**P**	**23 45 14.3**	**+0.4**
	comp=E,0.2nm,0.3s,baz=175,slow=11,SNR=4.0						
SONM	**Songino Array**	**26.23**	**34**	P	**P**	**23 46 24.5**	**+0.1**
	comp=E,1.5nm,0.9s,baz=233,slow=10,SNR=8.9						
ZALV	**Zalesovo Beam**	**26.32**	**360**	P	**P**	**23 46 23.3**	**-1.7**
	comp=E,1.1nm,0.6s,baz=171,slow=10,SNR=5.6						
BVAR	**Borovoye Array**	**27.61**	**341**	P	**P**	**23 46 34.6**	**-2.0**
	comp=E,0.4nm,0.5s,baz=172,slow=11,SNR=3.2						
NRIK	**Noril'sk**	**41.80**	**1**	P	**P**	**23 48 39.1**	**+0.6**
	comp=E,1.4nm,0.5s,baz=206,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**51.34**	**328**	P	**P**	**23 49 53.3**	**-0.2**
	comp=E,0.7nm,0.7s,baz=99,slow=8.6,SNR=1.1						
ARCES	**ARCESS Array B**	**53.84**	**338**	P	**P**	**23 50 12.3**	**+0.4**
	comp=E,4.1nm,0.9s,baz=92,slow=8.4,SNR=4.7						
WRA	**Warramunga Arr**	**67.22**	**129**	P	**P**	**23 51 43.1**	**-0.9**
	comp=E,0.8nm,0.7s,baz=321,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	**69.49**	**132**	P	**P**	**23 51 57.5**	**-0.7**
	comp=E,0.6nm,0.5s,baz=308,slow=6.0,SNR=12						
TORD	**Torodi Ar. Bea**	**78.12**	**279**	P	**P**	**23 52 49.2**	**+0.2**
	comp=E,0.1nm,0.5s,baz=60,slow=4.1,SNR=1.8						
YKA	**Yellowknife Ar**	**88.86**	**9**	P	**P**	**23 53 44.7**	**+1.4**
	comp=E,0.3nm,0.7s,baz=335,slow=4.1,SNR=5.6						

*BJI **25** 23:41:49.1±0.0, 27˚.38N×85˚.79E, h13km, mB4.7/14, mb4.5/30, Ms3.9/9, Ms7 3.7/9*
*IDC **25** 23:41:51.4±0.5, 27˚.56N×86˚.06E, h0km, mb4.2/31, mb1 4.3/34, mb1mx4.3/46, mbtmp4.2/34, ML4.2/2, Error ellipse: s-maj=14.5km s-min=11.1km az=29.0*
*NEIC **25** 23:41:53.8±1.4, 27˚.67N±0˚.06×86˚.07E±0˚.05, h16km±2km, mb4.5/91, Error ellipse: s-maj=9.5km s-min=5.5km az=160.0*
*DMN **25** 23:41:54.1±0.2, 27˚.70N×86˚.08E, h10km, Ml4.5/5, Error ellipse: s-maj=6.7km s-min=2.3km az=19.0*
*NDI **25** 23:41:55.5±3.9, 27˚.51N×85˚.94E, h10km, ML4.4, mb4.5(NEIC)*
ISC 25 23:41:53.4±0.8, 27°.58N±0°.03×86°.01E±0°.02, h15km±4km, n221, σ1°36/240, mb4.5/81, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIRN	**Jiri**	**0.18**	**64**	*e*Pg	**Pb**	**23 41 57.9**	**-0.8**
GUN	**Gumba**	**0.35**	**340**	*e*Pg	**Pg**	**23 42 00.5**	**-0.3**
GUN				*e*Sg	**Sg**	**23 42 05.3**	**-0.5**
	72μm,0.3s						
PKI	**Pulchoki**	**0.53**	**269**	*e*Pg	**Pn**	**23 42 05.8**	**-1.1**
PKI				*e*Sg	**Sb**	**23 42 13.6**	**+1.2**
	9μm,0.3s						
PKIN	**Phulchoki**	**0.55**	**270**	*e*Pg	**Pn**	**23 42 06.1**	**-0.9**
KKN	**Kakani**	**0.68**	**288**	*e*Pg	**Pb**	**23 42 07.7**	**+0.5**
KKN				*e*Sg	**Sb**	**23 42 18.2**	**+1.7**
	9μm,0.2s						
DMN	**Daman**	**0.80**	**272**	*e*Pg	**Pn**	**23 42 10.3**	**-0.2**
DMN				*e*Sg	**Sn**	**23 42 22.4**	**+0.1**
RAMN	**Ramite**	**0.82**	**140**	*e*Pg	**Pb**	**23 42 09.5**	**-0.1**
GKN	**Gorkha**	**1.29**	**289**	*e*Pg	**Pg**	**23 42 18.6**	**+0.3**
GKN				*e*Sg	**Sg**	**23 42 36.4**	**+1.3**
ODAN	**Odare**	**1.42**	**120**	*e*Pg	**Pg**	**23 42 21.8**	**+0.9**
ODAN				*e*Sg	**Sg**	**23 42 39.0**	**-0.5**
	909nm,0.4s						
TAPN	**Taplejung**	**1.53**	**98**	*e*Pg	**Pg**	**23 42 21.8**	**-1.1**
TAPN				*e*Sg	**Sg**	**23 42 41.9**	**-0.9**
	521nm,0.3s						
DANN	**Dangsing**	**2.13**	**292**	*e*Pg	**Pb**	**23 42 33.0**	**+1.0**
DANN				*e*Sn	**Sn**	**23 42 53.6**	**-1.6**
	653nm,0.3s						
KOLN	**Koldanda**	**2.15**	**276**	*e*Pg	**Pg**	**23 42 34.1**	**-0.6**
KOLN				*e*Sn	**Sn**	**23 42 55.2**	**-0.2**
	1μm,0.4s						
PYUN	**Piuthan**	**2.72**	**282**	*e*Sn	**Sn**	**23 43 08.9**	**-0.8**
	874nm,0.4s						
BOK	**Bokaro**	**3.77**	**182**	*e*P	**Pn**	**23 42 52.0**	**+0.8**
BOK				*e*S	**Sn**	**23 43 35.6**	**+0.3**
LSA	**Lhasa**	**4.99**	**64**		**Pn**	**23 43 05.4**	**-2.8**
SHL	**Shillong**	**5.63**	**110**	*e*P	**Pn**	**23 43 17.2**	**+0.4**
SHL				*e*S	**Sn**	**23 44 21.9**	**+0.6**
SHL	**Shillong**	**5.63**	**110**	Pn	**Pn**	**23 43 16.6**	**-0.2**
ZIRO	**ZIRO**	**6.96**	**89**	*e*P	**Pn**	**23 43 36.8**	**+1.7**
KOHI	**KOHIMA**	**7.48**	**103**	*e*P	**Pn**	**23 43 43.5**	**+1.3**
KOHI				*e*S	**Sn**	**23 45 08.7**	**+1.8**
DDI	**Dehra Dun**	**7.49**	**293**	*e*P	**Pn**	**23 43 44.8**	**+2.6**
DDI				*e*S	**Sn**	**23 45 05.9**	**-1.0**
DDI				IAML		23 45 11.7	
	comp=N,948nm,0.3s						
DDI				IAML		23 45 12.2	
	comp=E,938nm,0.3s						
SMLA	**Simla**	**8.49**	**297**	*e*P	**Pn**	**23 43 57.3**	**+1.5**
SMLA				*e*S	**Sn**	**23 45 27.7**	**-3.6**
SMLA				IAML		23 45 31.3	
	comp=N,105nm,0.2s						
SMLA				IAML		23 45 31.8	
	comp=E,180nm,0.4s						
LKP	**Lekhapani**	**8.74**	**89**	*e*P	**Pn**	**23 43 59.5**	**+0.2**
LKP				*e*S	**Sn**	**23 45 36.0**	**-1.7**
BHPL	**Bhopal**	**8.88**	**243**	*e*P	**Pn**	**23 44 00.3**	**-1.1**
BHPL				*e*S	**Sn**	**23 45 34.1**	**-7.1**
BHPL				IAML		23 45 38.4	
	comp=E,163nm,0.4s						
BHPL				IAML		23 45 39.1	
	comp=N,168nm,0.3s						
BHK	**Bhakra**	**9.19**	**297**	*ex*	Pn	23 43 58.0	-7.5
DHRM	**DHARAMSHALA**	**9.62**	**301**	*e*P	**Pn**	**23 44 11.3**	**-0.3**
DHRM				*e*S	**Sn**	**23 45 53.8**	**-5.8**
DHRM				IAML		23 45 57.0	
	comp=N,145nm,0.6s						
DHRM				IAML		23 46 03.6	
	comp=E,190nm,0.3s						
AJM	**Ajmer**	**10.20**	**266**	*e*P	**Pn**	**23 44 19.0**	**-0.4**
AJM				*i* S	**Sn**	**23 46 07.0**	**-6.5**
HYB	**Hyderabad**	**12.24**	**216**	*i* P	**Pn**	**23 44 46.0**	**-1.3**
HYB				*e*S	**Sn**	**23 47 08.0**	**+4.4**
NIL	**Nilore**	**12.54**	**302**		**Pn**	**23 44 50.1**	**-1.3**
POO	**Poona**	**14.36**	**234**	*i* S	Sn	23 47 44.0	-11
KSH	**Kashi**	**14.54**	**328**	P	**Pn**	**23 45 16.3**	**-2.5**
KSH				pP	P	23 45 19.5	-5.8
KSH				pmax	pmax		
	comp=E,12nm,0.4s						
KSH				pmax	pmax		
	comp=E,170nm,6.3s						
CHTO	**Chiang Mai**	**14.74**	**124**		**Pn**	**23 45 20.5**	**-1.0**
CM33	**Chiang Mai Arr**	**14.74**	**124**	P	**P**	**23 45 29.0**	**+1.5**
CMMT	**Chiang Mai**	**14.74**	**124**	P	**P**	**23 45 28.3**	**+0.7**
	comp=E,4.4nm,1.1s						
CM32	**Chiang Mai Arr**	**14.77**	**124**	P	**P**	**23 45 29.0**	**+1.1**
CM34	**Chiang Mai Arr**	**14.87**	**123**	P	**P**	**23 45 30.0**	**+1.0**
CM13	**Chiang Mai Arr**	**14.96**	**125**	P	**P**	**23 45 32.0**	**+2.0**
	comp=E,6.5nm,0.8s						
CM31	**Chiang Mai Arr**	**14.96**	**125**	Pn	**Pn**	**23 45 23.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**14.96**	**125**	Pn	**Pn**	**23 45 22.6**	**-1.9**
	baz=304,slow=13,SNR=15						
CMAR	**Chiang Mai Arr**	**14.96**	**125**	Pn	**Pn**	**23 45 25.2**	**+0.6**
CM35	**Chiang Mai Arr**	**14.98**	**123**	P	**P**	**23 45 31.0**	**+0.8**
CM02	**Chiang Mai Arr**	**14.98**	**125**	P	**Pn**	**23 45 24.6**	**-0.2**
CM01	**Chiang Mai Arr**	**15.00**	**125**	P	**P**	**23 45 32.0**	**+1.6**
	comp=E,68nmcomp=E,9.3nm,0.9s						
CM05	**Chiang Mai Arr**	**15.00**	**125**	P	P	23 45 36.0	+5.6
	comp=E,3.6nm,0.8s						
CM09	**Chiang Mai Arr**	**15.01**	**125**	P	**P**	**23 45 33.0**	**+2.4**
	comp=E,67nmcomp=E,8.6nm,0.8s						
CM04	**Chiang Mai Arr**	**15.03**	**125**	P	**P**	**23 45 28.6**	**-2.1**
	comp=E,53nmcomp=E,7.1nm,0.9s						
CM36	**Chiang Mai Arr**	**15.04**	**124**	P	**P**	**23 45 32.0**	**+1.2**
SUKH	**Sukhothai**	**16.09**	**126**	P	**P**	**23 45 43.0**	**+0.5**
	comp=E,21nm,0.8s						
KBL	**Kabul**	**16.10**	**300**		**Pn**	**23 45 37.1**	**-2.4**
KBL				IAmb	IAmb	23 45 48.7	
	comp=Z,23nm,0.8s						
PRZ	**Przheval'sk**	**16.11**	**339**	Pn	**Pn**	**23 45 38.2**	**-1.3**
KDJ	**Kajisay**	**16.21**	**336**		**Pn**	**23 45 39.8**	**-1.0**
WMQ	**Urumqi**	**16.26**	**4**	*e*P	**Pn**	**23 45 38.3**	**-3.1**
WMQ				pP	pP	23 45 46.5	-2.7
WMQ				sP	sP	23 45 49.5	-1.9
WMQ				pmax	pmax		
	comp=Z,36nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,7.1s						
WMQ				LR	LR		
	comp=Z,310nm,15.7s						
WMQ				LR	LR		
	comp=Z,43nm,14.3s						
WMQ				LR	LR		
	comp=Z,170nm,18.5s						
GTA	**Gaotai**	**16.46**	**41**	P	**P**	**23 45 47.0**	**+0.3**
GTA				pP	sP	23 45 52.8	-0.9
GTA				sP	pP	23 45 55.3	+3.8
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
UTTA	**Uttaradit**	**16.60**	**123**	P	**P**	**23 45 49.3**	**+1.1**
	comp=Z,11nm,0.9s						
BOOM	**Boomskoye usch**	**16.99**	**334**		**Pn**	**23 45 49.7**	**-1.0**
UTHA	**Uthaitani**	**17.28**	**131**	P	**P**	**23 45 57.8**	**+2.0**
	comp=Z,229nmcomp=Z,32nm,0.8s						
GAR	**Garm**	**17.34**	**315**		**Pn**	**23 45 52.4**	**-2.7**
GAR				IAmb	IAmb	23 46 04.0	
	comp=Z,22nm,0.8s						
LZH	**Lanzhou**	**17.35**	**56**	*e*P	**P**	**23 46 00.5**	**+4.0**
LZH				pP	sP	23 46 02.5	-1.0
LZH				sP	pP	23 46 05.5	+4.2
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
BTK	**Batken**	**17.69**	**319**		**Pn**	**23 45 57.2**	**-2.2**
BTK				IAmb	IAmb	23 46 03.3	
	comp=Z,16nm,0.6s						
AAK	**Ala-Archa**	**17.70**	**331**	P	**Pn**	**23 45 59.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=138,slow=11,SNR=2.9						
AAK	**Ala-Archa**	**17.70**	**331**		**Pn**	**23 45 58.6**	**-1.0**
FRU1	**Bishkek**	**17.79**	**332**	Pn	**Pn**	**23 45 59.5**	**-1.1**
NONG	**Nongkai**	**18.40**	**117**	P	**P**	**23 46 09.6**	**+1.5**
	comp=Z,17nm,0.9s						
GYA	**Guiyang**	**18.44**	**89**	⇑P	**Pn**	**23 46 10.3**	**+1.6**
GYA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHAI	**Chaiyaphum**	**18.83**	**125**	P	**Pn**	**23 46 16.5**	**+3.2**
MK31	**Makanchi Array**	**19.40**	**352**		**P**	**23 46 18.6**	**-0.3**
MKAR	**Makanchi Array**	**19.40**	**352**	P	**P**	**23 46 19.6**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=175,slow=10,SNR=31						
MKAR	**Makanchi Array**	**19.40**	**352**	P	**P**	**23 46 19.0**	**0.0**
MAKZ	**Makanchi**	**19.45**	**352**	P	**P**	**23 46 19.4**	**-0.1**
KK31	**Karatay Array**	**19.94**	**325**		**P**	**23 46 24.3**	**-0.5**
KKAR	**Karatay Array**	**19.94**	**325**	P	**P**	**23 46 24.4**	**-0.4**
KKAR	**Karatay Array**	**19.94**	**325**	P	**P**	**23 46 24.7**	**-0.2**
SRAK	**Srakaew**	**20.14**	**129**	P	Pn	23 46 39.2	+10
XAN	**Xi'an**	**20.68**	**66**	P	Pn	23 46 35.5	+0.1
XAN				pP	sP	23 46 39.3	-0.7
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ENH	**Enshi**	**20.72**	**77**	P	**P**	**23 46 32.4**	**-1.0**
ENH				IAmb	IAmb	23 46 41.8	
	comp=Z,11nm,0.9s						
PALK	**Pallekele**	**20.82**	**195**	S	**S**	**23 50 20.2**	**-6.3**
	comp=Z,5.5nm,0.9s,baz=311,slow=20,SNR=2.5						
HRA	**Herat**	**21.45**	**294**	P	**P**	**23 46 40.9**	**-0.6**
KURBB	**Kurchatov Arra**	**23.70**	**348**	P	**P**	**23 47 05.7**	**+1.1**
	comp=Z,8.9nm,0.8s,baz=169,slow=9.1,SNR=35						
HHC	**Hu-ho-hao-te**	**24.83**	**51**	*e*P	**P**	**23 47 15.8**	**+0.5**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,7.2s						
WSAR	**Wadi Sarin**	**25.08**	**266**	P	**P**	**23 47 19.7**	**+2.1**
	comp=Z,3.0nm,0.6s,baz=79,slow=5.2,SNR=5.3						
GEYT	**Alibeck**	**25.54**	**301**	P	**P**	**23 47 23.9**	**+2.3**
	comp=Z,3.1nm,0.6s,baz=126,slow=11,SNR=8.5						
GEYT	**Alibeck**	**25.54**	**301**	P	**P**	**23 47 22.1**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**25.54**	**301**	P	**P**	**23 47 22.5**	**+0.8**
GYA0B				IAmb	IAmb	23 47 36.7	
	comp=Z,5.7nm,0.8s						
SONM	**Songino Array**	**25.72**	**33**	P	**P**	**23 47 24.5**	**+1.2**
	comp=Z,4.0nm,0.6s,baz=219,slow=9.8,SNR=13						
SONM	**Songino Array**	**25.72**	**33**	P	**P**	**23 47 23.7**	**+0.4**
ULN	**Ulaanbaatar**	**26.06**	**33**	P	**P**	**23 47 26.3**	**-0.1**
ULN				IAmb	IAmb	23 47 38.8	
	comp=Z,5.7nm,0.8s						
KULM	**Kulim**	**26.18**	**145**	P	**P**	**23 47 28.4**	**+0.8**
KULM				IAmb	IAmb	23 47 32.1	
	comp=Z,9.0nm,0.8s						
ZAA0	**Zalesovo Array**	**26.36**	**358**	P	**P**	**23 47 28.9**	**+0.1**
ZAA0				IAmb	IAmb	23 47 30.6	
	comp=Z,7.5nm,0.8s						
ZALV	**Zalesovo Beam**	**26.36**	**358**	P	**P**	**23 47 29.7**	**+0.9**
	comp=Z,7.7nm,0.7s,baz=183,slow=9.5,SNR=28						
ZALV	**Zalesovo Beam**	**26.36**	**358**	P	**P**	**23 47 29.2**	**+0.4**
BVAR	**Borovoye Array**	**27.94**	**340**	P	**P**	**23 47 43.4**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=165,slow=12,SNR=22						
BRVK	**Borovoye**	**28.00**	**340**	P	**P**	**23 47 43.3**	**-0.4**
NJ2	**Nanjing**	**28.78**	**73**	*e*P	**P**	**23 47 51.3**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ABKAR	**Akbulak array**	**29.50**	**324**	P	**P**	**23 47 57.9**	**+0.9**
ABKAR	**Akbulak array**	**29.50**	**324**	P	**P**	**23 47 57.6**	**+0.6**
SOCY	**Socotra**	**33.65**	**249**	P	**P**	**23 48 33.0**	**-0.9**
SOCY				IAmb	IAmb	23 48 34.6	
	comp=Z,6.2nm,0.8s						
ARU	**Arti**	**34.86**	**333**	P	**P**	**23 48 44.1**	**+0.2**
ARU				IAmb	IAmb	23 48 45.7	
	comp=Z,6.4nm,0.6s						
KSRS	**Korea Array**	**36.43**	**64**	P	**P**	**23 48 56.9**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=256,slow=8.4,SNR=8.8						
RAYN	**Ar Rayn**	**36.66**	**273**	P	**P**	**23 48 59.9**	**+0.1**
KBZ	**Khabaz**	**38.09**	**307**	P	**P**	**23 49 12.9**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=131,slow=9.0,SNR=5.6						
KIV	**Kislovodsk**	**38.29**	**307**	P	**P**	**23 49 13.4**	**0.0**
MARD	**Mardin**	**39.07**	**296**	P	**P**	**23 49 20.1**	**0.0**
MARD				IAmb	IAmb	23 49 22.8	
	comp=Z,9.4nm,0.5s						
USRK	**Ussuriysk Ar.**	**40.21**	**53**	P	**P**	**23 49 29.6**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=276,slow=4.6,SNR=4.3						
KLR	**Kul'dur**	**41.07**	**46**	P	**P**	**23 49 37.3**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=267,slow=7.9,SNR=4.5						
JMN	**Monobe**	**41.34**	**69**	P	**P**	**23 49 39.1**	**+0.2**
JMN				IAmb	IAmb	23 49 41.6	
	comp=Z,9.6nm,0.8s						
NRIK	**Noril'sk**	**41.80**	**1**	P	**P**	**23 49 43.0**	**+0.9**
	comp=Z,7.2nm,0.8s,baz=162,slow=6.3,SNR=17						
NRIK	**Noril'sk**	**41.80**	**1**	P	**P**	**23 49 43.3**	**+1.2**
NRIK				IAmb	IAmb	23 49 44.2	
	comp=Z,9.0nm,0.8s						
GAZ	**Gaziantep**	**41.92**	**296**	P	**P**	**23 49 43.6**	**0.0**
GAZ				IAmb	IAmb	23 49 45.8	
	comp=Z,5.7nm,0.7s						
JWT	**Wachi**	**42.48**	**67**	P	**P**	**23 49 47.8**	**-0.3**
JWT				IAmb	IAmb	23 50 06.3	
	comp=Z,7.9nm,1.3s						
MJAR	**Matsushiro Arr**	**44.67**	**65**	P	**P**	**23 50 06.1**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=280,slow=10,SNR=6.6						
BRTR	**Keskin Array B**	**44.67**	**300**	P	**P**	**23 50 06.2**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=125,slow=7.7,SNR=3.9						
BRTR	**Keskin Array B**	**44.67**	**300**	P	**P**	**23 50 06.6**	**+0.7**
CSS	**Mathiatis**	**45.19**	**293**	P	**P**	**23 50 09.6**	**-0.3**
CSS				IAmb	IAmb	23 50 16.5	
	comp=Z,6.4nm,0.7s						
KLMR	**Klimovskoe**	**45.51**	**330**	*

BRG	**Berggiesshubel**	**58.03**	**315**	*i* P	**P**	**23 51 46.4**	**+0.7**
BRG				Amp		23 51 47.3	
	comp=Z,6.1nm,1.0s						
OBKA	**Obir**	**58.13**	**310**	*e*P	**P**	**23 51 47.2**	**+0.7**
	comp=Z,4.2nm,0.8s,SNR=5.7						
MOA	**Molln**	**58.15**	**311**	*i* P	**P**	**23 51 47.2**	**+0.5**
	comp=Z,3.2nm,0.7s,SNR=5.3						
GEC2	**GERESS Array S**	**58.40**	**312**	P	**P**	**23 51 48.8**	**+0.3**
GEC2				IAmb	IAmb	23 51 50.0	
	comp=Z,5.4nm,1.4s						
GERES	**GERESS Array B**	**58.40**	**312**	P	**P**	**23 51 48.9**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=91,slow=6.9,SNR=11						
GERES	**GERESS Array B**	**58.40**	**312**	P	**P**	**23 51 48.8**	**+0.3**
KHC	**Kasperske Hory**	**58.45**	**313**	*e*P	**P**	**23 51 49.3**	**+0.6**
KHC				*e*pP	**pP**	**23 51 53.3**	**-0.9**
KHC	**Kasperske Hory**	**58.45**	**313**	P	**P**	**23 51 48.9**	**+0.2**
KHC				IAmb	IAmb	23 51 50.2	
	comp=Z,2.5nm,0.8s						
CLL	**Collm**	**58.58**	**315**	*e*P	**P**	**23 51 50.0**	**+0.5**
NC602	**NORSAR Array S**	**58.81**	**326**	P	**P**	**23 51 50.9**	**0.0**
NOA	**NORSAR Array B**	**58.96**	**327**	P	**P**	**23 51 51.9**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=88,slow=7.1,SNR=9.4						
ZOU	**Zoufplan**	**59.20**	**310**	P	**P**	**23 51 53.8**	**-0.4**
STAL	**STALIGIAL**	**59.42**	**309**	P	**P**	**23 51 54.9**	**-0.7**
NRCA	**Norcia**	**59.73**	**306**	P	**P**	**23 51 57.7**	**-0.1**
WTTA	**Wattenberg**	**59.99**	**311**	*i* P	**P**	**23 51 59.1**	**-0.5**
	comp=Z,4.3nm,0.9s						
WATA	**Walderalm**	**60.02**	**311**	*i* P	**P**	**23 51 59.1**	**-0.6**
	comp=Z,4.6nm,1.1s						
CTI	**Castel Tesino**	**60.19**	**309**	P	**P**	**23 52 00.8**	**-0.1**
CTI				IAmb	IAmb	23 52 01.5	
	comp=Z,2.5nm,0.7s						
SQTA	**Sankt Quirin**	**60.29**	**311**	*i* P	**P**	**23 52 01.1**	**-0.5**
	comp=Z,4.5nm,0.6s						
TEOL	**Teolo**	**60.29**	**309**	P	**P**	**23 52 01.5**	**0.0**
MOTA	**Moosalm**	**60.34**	**311**	*e*P	**P**	**23 52 01.2**	**-0.8**
	comp=Z,4.8nm,0.8s,SNR=4.9						
RETA	**Reutte**	**60.54**	**311**	*e*P	**P**	**23 52 02.6**	**-0.7**
	comp=Z,8.3nm,2.1s						
FETA	**Feichten**	**60.65**	**311**	*e*P	**P**	**23 52 03.6**	**-0.5**
	comp=Z,3.3nm,0.9s,SNR=4.6						
DAVA	**Damuels**	**61.17**	**311**	*e*P	**P**	**23 52 07.5**	**-0.1**
	comp=Z,8.8nm,1.0s,SNR=4.7						
TUE	**Stuetta**	**61.68**	**310**	P	**P**	**23 52 10.9**	**-0.2**
TUE				IAmb	IAmb	23 52 17.8	
	comp=Z,5.2nm,0.8s						
MSSA	**Maissana**	**62.00**	**308**	P	**P**	**23 52 12.8**	**-0.4**
SENIN	**Lac Senin/Sane**	**63.09**	**310**	P	**P**	**23 52 20.8**	**+0.2**
BNI	**Bardonecchia**	**63.81**	**309**	P	**P**	**23 52 25.1**	**-0.2**
BNI				IAmb	IAmb	23 52 31.5	
	comp=Z,8.0nm,1.3s						
KEST	**Kesra**	**64.26**	**298**	P	**P**	**23 52 29.6**	**+1.3**
	comp=Z,10nm,0.8s,baz=3.4,slow=0.9,SNR=20						
KEST	**Kesra**	**64.26**	**298**	P	**P**	**23 52 28.6**	**+0.3**
WB0	**Warramunga Arr**	**66.40**	**130**	P	**P**	**23 52 42.4**	**+0.2**
WRA	**Warramunga Arr**	**66.48**	**130**	P	**P**	**23 52 43.6**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=323,slow=6.5,SNR=13						
WRA	**Warramunga Arr**	**66.48**	**130**	P	**P**	**23 52 42.8**	**+0.1**
WB2	**Warramunga Arr**	**66.49**	**130**	P	**P**	**23 52 43.0**	**+0.2**
ASAR	**Alice Springs**	**68.79**	**133**	P	**P**	**23 52 57.9**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=319,slow=6.5,SNR=17						
ASAR	**Alice Springs**	**68.79**	**133**	P	**P**	**23 52 57.1**	**-0.1**
EUNU	**Eureka**	**72.51**	**359**	P	**P**	**23 53 19.6**	**+0.4**
EUNU				IAmb	IAmb	23 53 20.9	
	comp=Z,3.8nm,0.9s						
ESBB	**Sonseca Array**	**72.95**	**306**	P	**P**	**23 53 22.7**	**+0.2**
ESBB				IAmb	IAmb	23 53 30.2	
	comp=Z,4.6nm,1.1s						
ESDC	**Sonseca Array**	**72.95**	**306**	P	**P**	**23 53 22.6**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=54,slow=5.0,SNR=18						
PAB	**San Pablo**	**73.28**	**306**	P	**P**	**23 53 24.5**	**+0.1**
PAB				IAmb	IAmb	23 53 25.6	
	comp=Z,7.7nm,1.0s						
TULEG	**Thule**	**74.96**	**354**	P	**P**	**23 53 31.9**	**-1.6**
TULEG				IAmb	IAmb	23 53 40.6	
	comp=Z,3.9nm,0.8s						
CTAO	**Charters Tower**	**75.12**	**122**	P	**P**	**23 53 35.5**	**+0.3**
TOLK	**Toolik Lake Re**	**75.83**	**18**	P	**P**	**23 53 39.4**	**+0.6**
TOLK				IAmb	IAmb	23 53 40.6	
	comp=Z,4.4nm,0.8s						
BBOO	**Buckleboo**	**76.61**	**138**	P	**P**	**23 53 43.6**	**0.0**
MLY	**Manley**	**77.85**	**21**	P	**P**	**23 53 51.1**	**+0.9**
MLY				IAmb	IAmb	23 53 51.8	
	comp=Z,2.9nm,0.8s						
I23K	**Minto, Yukon-K**	**78.21**	**21**	P	**P**	**23 53 53.0**	**+0.9**
I23K				IAmb	IAmb	23 54 04.5	
	comp=Z,9.0nm,1.4s						
BPAW	**Bear Paw Mtn.**	**78.38**	**22**	P	**P**	**23 53 53.4**	**+0.4**
BPAW				IAmb	IAmb	23 53 54.4	
	comp=Z,5.6nm,1.0s						
PPLA	**Purkeypile**	**78.74**	**23**	P	**P**	**23 53 56.1**	**+0.8**
TOA0	**Torodi Ar. Sit**	**79.06**	**279**	P	**P**	**23 53 57.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**79.06**	**279**	P	**P**	**23 53 57.0**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=64,slow=3.6,SNR=6.5						
TORD	**Torodi Ar. Bea**	**79.06**	**279**	P	**P**	**23 53 57.2**	**-0.4**
PRP	**Porcupine Dome**	**79.13**	**19**	P	**P**	**23 53 58.8**	**+1.5**
PRP				IAmb	IAmb	23 53 59.6	
	comp=Z,4.0nm,0.8s						
ILAR	**Eielson Array**	**79.24**	**20**	P	**P**	**23 53 58.0**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=309,slow=4.9,SNR=16						
ILAR	**Eielson Array**	**79.24**	**20**	P	**P**	**23 53 57.8**	**0.0**
STKA	**Stephens Creek**	**79.35**	**134**	P	**P**	**23 53 58.8**	**0.0**
	comp=Z,1.8nm,0.5s,baz=326,slow=9.2,SNR=4.9						
STKA	**Stephens Creek**	**79.35**	**134**	P	**P**	**23 53 59.0**	**+0.2**
RND	**Reindeer**	**79.55**	**22**	P	**P**	**23 53 59.1**	**-0.5**
RND				IAmb	IAmb	23 54 11.1	
	comp=Z,3.0nm,1.1s						
SKT	**Skwentna**	**79.57**	**24**	P	**P**	**23 53 60.0**	**+0.3**
INK	**Inuvik**	**80.03**	**14**	P	**P**	**23 54 02.0**	**+0.1**
INK				IAmb	IAmb	23 54 18.3	
	comp=Z,4.0nm,1.2s						
SUA	**Susitna One**	**80.19**	**24**	P	**P**	**23 54 03.6**	**+0.4**
SUA				IAmb	IAmb	23 54 13.4	
	comp=Z,7.9nm,1.2s						
BOSA	**Boshof**	**80.69**	**231**	P	**P**	**23 54 06.5**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=26,slow=6.6,SNR=1.9						
BOSA	**Boshof**	**80.69**	**231**	P	**P**	**23 54 06.5**	**+0.3**
BOSA				IAmb	IAmb	23 54 08.5	
	comp=Z,10nm,1.4s						
SCRK	**Sand Creek**	**80.70**	**20**	P	**P**	**23 54 06.4**	**+0.5**
SCRK				IAmb	IAmb	23 54 07.3	
	comp=Z,5.2nm,0.8s						
SML	**Sawmill**	**80.82**	**23**	P	**P**	**23 54 06.9**	**+0.4**
BCAR	**Beaver Creek A**	**82.04**	**20**	P	**P**	**23 54 13.7**	**+0.8**
N25K	**Chitina, Valde**	**82.22**	**22**	P	**P**	**23 54 15.1**	**+1.2**
N25K				IAmb	IAmb	23 54 16.4	
	comp=Z,6.8nm,1.1s						
KOWA	**Kowa**	**83.44**	**283**	P	**P**	**23 54 20.7**	**-0.2**
KOWA				IAmb	IAmb	23 54 27.1	
	comp=Z,4.4nm,1.4s						
HYT	**Haines Junctio**	**85.06**	**20**	P	**P**	**23 54 29.6**	**+1.1**
DBIC	**Dimbokro**	**87.72**	**276**	P	**P**	**23 54 42.5**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=356,slow=3.0,SNR=3.6						
DBIC	**Dimbokro**	**87.72**	**276**	P	**P**	**23 54 41.6**	**-0.6**
YKA	**Yellowknife Ar**	**88.73**	**9**	P	**P**	**23 54 46.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=338,slow=4.7,SNR=9.3						
CPUP	**Villa Florida**	**147.37**	**264**	PKPbc	**PKPbc**	**00 01 37.0**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=91,slow=4.9,SNR=3.6						

IDC 25 23:47:06.5±5.8, 27.30N×84.53E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/41, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=111.9km s-min=83.7km az=45.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.54**	**355**	P	P	23 51 35.6	0.0
	0.2nm,0.3s,baz=173,slow=11,SNR=8.4						
ZALV	**Zalesovo Beam**	**26.62**	**0**	P	P	23 52 46.5	0.0
	0.9nm,0.5s,baz=177,slow=9.0,SNR=4.4						
SONM	**Songino Array**	**26.68**	**34**	P	P	23 52 47.3	0.0
	0.3nm,0.6s,baz=224,slow=10,SNR=2.0						
YKA	**Yellowknife Ar**	**89.21**	**9**	P	P	00 00 03.9	0.0
	0.1nm,0.6s,baz=338,slow=4.1,SNR=2.1						

*IDC **25** 23:55:45.7±0.8, 27.58N×85.66E, h0km, mb3.8/16, mb1 3.9/18, mb1mx3.7/47, mbtmp3.8/18, ML3.6/2, Error ellipse: s-maj=27.6km s-min=16.1km az=56.0*
*NEIC **25** 23:55:46.1±1.6, 27.61N±0.05×85.84E±0.05, h7km±4km, mb4.1/32, Error ellipse: s-maj=8.0km s-min=6.0km az=158.0*
ISC 25 23:55:46.1±0.6, **27.52N**±0.10×**85.75E**±0.08, **h10**km, **n56, σ1§09/56, mb4.1/25, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.22**	**64**	Pn	**Pn**	**23 57 04.6**	**-0.1**
SHL	**Shillong**	**5.83**	**108**	Pn	**Pn**	**23 57 10.0**	**-2.8**
NIL	**Nilore**	**12.38**	**303**		**Pn**	**23 58 39.8**	**-2.7**
CMAR	**Chiang Mai Arr**	**15.12**	**124**	Pn	**Pn**	**23 59 19.1**	**-0.7**
	0.1nm,0.3s,baz=305,slow=14,SNR=4.4						
KBL	**Kabul**	**15.93**	**300**	Pn	**Pn**	**23 59 29.5**	**-1.1**
KBL				IAmb	IAmb	23 59 42.1	
	comp=Z,6.0nm,0.9s						
KDJ	**Kajisay**	**16.17**	**337**		**Pn**	**23 59 33.2**	**-0.5**
BOOM	**Boomskoye usch**	**16.94**	**334**		**Pn**	**23 59 43.2**	**-0.3**
GAR	**Garm**	**17.23**	**316**	Pn	**Pn**	**23 59 44.9**	**-2.1**
GAR				IAmb	IAmb	23 59 55.0	
	comp=Z,5.2nm,0.6s						
BTK	**Batken**	**17.59**	**319**	Pn	**Pn**	**23 59 48.6**	**-2.8**
AAK	**Ala-Archa**	**17.65**	**332**	P	**P**	**23 59 52.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=195,slow=19,SNR=2.7						
AAK	**Ala-Archa**	**17.65**	**332**	P	**Pn**	**23 59 52.0**	**-0.3**
MK31	**Makanchi Array**	**19.43**	**353**	P	**P**	**00 00 12.4**	**-0.3**
MKAR	**Makanchi Array**	**19.43**	**353**	P	**P**	**00 00 12.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=174,slow=11,SNR=16						
MAKZ	**Makanchi**	**19.48**	**352**	P	**Pn**	**00 00 13.5**	**-0.9**
MAKZ				IAmb	IAmb	00 00 19.2	
	comp=Z,7.5nm,1.4s						
KK31	**Karatay Array**	**19.86**	**325**	P	**P**	**00 00 17.2**	**-0.1**
KURBB	**Kurchatov Arra**	**23.72**	**349**	P	**P**	**00 00 58.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=167,slow=9.7,SNR=10						
KURK	**Kurchatov**	**23.80**	**349**	P	**P**	**00 00 58.8**	**-0.1**
SONM	**Songino Array**	**25.90**	**33**	P	**P**	**00 01 19.2**	**+0.8**
	comp=Z,3.7nm,0.7s,baz=220,slow=9.7,SNR=20						
SONM	**Songino Array**	**25.90**	**33**	P	**P**	**00 01 18.1**	**-0.3**
SONM				IAmb	IAmb	00 01 22.2	
	comp=Z,2.5nm,0.7s						
ULN	**Ulaanbaatar**	**26.24**	**34**	P	**P**	**00 01 21.0**	**-0.5**
ULN				IAmb	IAmb	00 01 25.2	
	comp=Z,3.8nm,0.7s						
ZAA0	**Zalesovo Array**	**26.41**	**359**	P	**P**	**00 01 20.4**	**-2.3**
ZAA0				IAmb	IAmb	00 01 24.3	
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**26.41**	**359**	P	**P**	**00 01 23.8**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=182,slow=12,SNR=5.9						
ZALV	**Zalesovo Beam**	**26.41**	**359**	P	**P**	**00 01 20.4**	**-2.3**
BVAR	**Borovoye Array**	**27.92**	**340**	P	**P**	**00 01 36.8**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=132,slow=4.1,SNR=2.3						
ABKAR	**Akbulak array**	**29.42**	**325**	P	**P**	**00 01 50.2**	**+0.5**
ARU	**Arti**	**34.81**	**334**	P	**P**	**00 02 37.2**	**+0.4**
ARU				IAmb	IAmb	00 02 38.5	
	comp=Z,3.8nm,1.0s						
NRIK	**Noril'sk**	**41.87**	**1**	P	**P**	**00 03 37.2**	**+1.1**
	comp=Z,2.9nm,0.4s,baz=173,slow=7.8,SNR=12						
NRIK	**Noril'sk**	**41.87**	**1**	P	**P**	**00 03 36.6**	**+0.5**
NRIK				IAmb	IAmb	00 03 37.6	
	comp=Z,4.4nm,0.6s						
ELL	**Elmali**	**47.60**	**296**	P	**P**	**00 04 23.1**	**+0.7**
AKASG	**Malin Array Be**	**48.23**	**315**	P	**P**	**00 04 26.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=81,slow=6.8,SNR=4.3						
AKASG	**Malin Array Be**	**48.23**	**315**	P	**P**	**00 04 26.7**	**-0.2**
AKASG				IAmb	IAmb	00 04 43.6	
	comp=Z,0.6nm,0.8s						
ERM	**Erimo**	**48.48**	**57**	P	**P**	**00 04 28.9**	**0.0**
TIXI	**Tiksi**	**50.12**	**16**	P	**P**	**00 04 40.9**	**-0.1**
TIXI				IAmb	IAmb	00 04 41.5	
	comp=Z,2.0nm,0.8s						
MLR	**Muntele Rosu**	**50.14**	**308**	P	**P**	**00 04 42.8**	**+0.9**
MLR				IAmb	IAmb	00 05 09.2	
	comp=Z,6.4nm,1.3s						
FINES	**FINESS Array B**	**51.79**	**328**	P	**P**	**00 04 54.1**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=120,slow=11,SNR=5.2						
PABE	**Paberze**	**51.91**	**320**	P	**P**	**00 04 55.0**	**+0.2**
ARCES	**ARCESS Array B**	**54.18**	**338**	P	**P**	**00 05 12.2**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=83,slow=9.9,SNR=7.3						
GERES	**GERESS Array B**	**58.27**	**312**	P	**P**	**00 05 41.8**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=102,slow=9.1,SNR=1.8						
NOA	**NORSAR Array B**	**58.89**	**327**	P	**P**	**00 05 44.7**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=89,slow=6.8,SNR=1.7						
BNI	**Bardonecchia**	**63.67**	**309**	P	**P**	**00 06 16.9**	**-0.9**
BNI				IAmb	IAmb	00 06 31.4	
	comp=Z,5.2nm,1.3s						
KEST	**Kesra**	**64.08**	**298**	P	**P**	**00 06 21.2**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=126,slow=14,SNR=2.6						
KEST	**Kesra**	**64.08**	**298**	P	**P**	**00 06 20.5**	**-0.1**
KEST				IAmb	IAmb	00 06 28.1	
	comp=Z,4.1nm,0.9s						
WB0	**Warramunga Arr**	**66.54**	**130**	P	**P**	**00 06 37.4**	**+0.8**
WRA	**Warramunga Arr**	**66.62**	**130**	P	**P**	**00 06 39.1**	**+2.1**
	comp=Z,1.9nm,0.7s,baz=323,slow=6.5,SNR=11						
WB2	**Warramunga Arr**	**66.63**	**130**	P	**P**	**00 06 37.1**	**0.0**
NWAO	**Narrogin (SRO)**	**67.15**	**152**	P	**P**	**00 06 41.0**	**+0.9**
ASAR	**Alice Springs**	**68.91**	**133**	P	**P**	**00 06 53.5**	**+2.0**
	comp=Z,0.7nm,0.6s,baz=316,slow=6.2,SNR=13						
MLY	**Manley**	**78.00**	**21**	P	**P**	**00 07 45.2**	**+0.7**
MLY				IAmb	IAmb	00 07 58.1	
	comp=Z,3.0nm,1.4s						
FYU	**Fort Yukon**	**78.61**	**18**	P	**P**	**00 07 48.6**	**+0.9**
TORD	**Torodi Ar. Bea**	**78.84**	**279**	P	**P**	**00 07 50.6**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=74,slow=5.9,SNR=3.1						
PPLA	**Purkeypile**	**78.90**	**23**	P	**P**	**00 07 50.5**	**+1.0**
ILAR	**Eielson Array**	**79.39**	**20**	P	**P**	**00 07 52.1**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=274,slow=3.4,SNR=4.0						
SKT	**Skwentna**	**79.72**	**24**	P	**P**	**00 07 54.4**	**+0.4**
SKT				IAmb	IAmb	00 08 00.1	
	comp=Z,6.1nm,1.2s						
SCRK	**Sand Creek**	**80.84**	**20**	P	**P**	**00 07 60.0**	**-0.1**
SCRK				IAmb	IAmb	00 08 09.9	
	comp=Z,2.9nm,1.3s						
KDAK	**Kodiak Island**	**82.05**	**27**	P	**P**	**00 08 06.9**	**+0.5**
YKA	**Yellowknife Ar**	**88.83**	**9**	P	**P**	**00 08 40.3**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=336,slow=4.9,SNR=4.3						

*IDC **25** 23:58:19.7±6.3, 27.77N×85.35E, h0km, mb3.7/6, mb1 3.7/7, mb1mx3.3/51, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=110.3km s-min=56.3km az=175.0*
ISC 25 23:58:22.7±6.0, **27.8N**±0.7×**85.3E**±0.4, **h18**km, **n7, σ0§74/7, mb3.8/6, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.10**	**354**	P	**P**	**00 02 44.9**	**+0.5**
	0.1nm,0.3s,baz=171,slow=11,SNR=4.9						
KURBB	**Kurtov Arra**	**23.39**	**349**	P	**P**	**00 03 30.0**	**0.0**
	0.4nm,0.7s,baz=173,slow=9.5,SNR=4.5						
SONM	**Songino Array**	**25.85**	**34**	P	**P**	**00 03 53.7**	**+0.5**
	0.5nm,0.4s,baz=217,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.11**	**359**	P	**P**	**00 03 55.9**	**+0.5**
	0.5nm,0.3s,baz=198,slow=8.8,SNR=3.1						
NRIK	**Noril'sk**	**41.58**	**1**	P	**P**	**00 06 07.8**	**-1.1**
	1.1nm,0.4s,baz=180,slow=2.0,SNR=2.5						
FINES	**FINESS Array B**	**51.35**	**328**	P	**P**	**00 07 26.1**	**+0.3**
	1.5nm,0.9s,baz=100,slow=7.8,SNR=1.7						
ARCES	**ARCESS Array B**	**53.77**	**338**	P	**P**	**00 07 43.9**	**+0.2**
	1.7nm,0.7s,baz=103,slow=7.5,SNR=1.5						

*IDC **26** 00:15:28.3±1.4, 27.61N×85.30E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/41, mbtmp3.5/7, ML3.5/1, MS3.5/3, Ms1 3.5/3, ms1mx2.7/56, Error ellipse: s-maj=39.7km s-min=27.1km az=74.0*
ISC 26 00:15:29.9±1.3, **27.6N**±0.2×**85.3E**±0.3, **h10**km, **n10, σ1§15/7, mb3.4/6, MS3.5/3, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.27**	**354**	P	**P**	**00 19 54.0**	**-0.6**
	0.1nm,0.3s,baz=175,slow=11,SNR=9.3						
KURBB	**Kurchatov Arra**	**23.53**	**349**	P	**P**	**00 20 39.6**	**-0.5**
	0.5nm,0.4s,baz=169,slow=8.9,SNR=3.2						
SONM	**Songino Array**	**26.02**	**34**	P	**P**	**00 21 04.3**	**+1.0**
	0.6nm,0.7s,baz=226,slow=11,SNR=5.3						
ZALV	**Zalesovo Beam**	**26.29**	**359**	P	**P**	**00 21 06.5**	**+1.1**
	0.3nm,0.3s,baz=170,slow=10,SNR=2.1						
MMAI	**Mount Meron Ar**	**43.08**	**290**	LR	LR	00 46 56.8	
	comp=Z,34nm,18.3s,baz=90,slow=44						
BATI	**Baumata**	**52.88**	**130**	LR	LR	00 49 54.9	
	comp=Z,63nm,19.0s,baz=201,slow=39						
ARCES	**ARCESS Array B**	**53.92**	**338**	P	**P**	**00 24 52.2**	**-1.0**
	1.9nm,1.0s,baz=109,slow=11,SNR=0.9						
OPO	**Ambohidratompo**	**58.93**	**223**	LR	LR	00 46 39.5	
	comp=Z,36nm,21.8s,baz=279,slow=32						
ASAR	**Alice Springs**	**69.29**	**133**	P	**P**	**00 26 37.1**	**-0.6**
	0.3nm,0.5s,baz=308,slow=5.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**78.43**	**279**	P	**P**	**00 27 32.4**	**+1.0**
	0.2nm,0.7s,baz=60,slow=4.3,SNR=4.1						

*IDC **26** 00:20:09.1±3.1, 53.94N×163.90W, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.3/53, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=58.9km s-min=42.9km az=34.0*
*AEIC **26** 00:20:15±0.9, 53.96N±0.06×163.47W±0.09, h42km±10km, ML3.2, Error ellipse: s-maj=9.1km s-min=7.3km az=159.0*
*NEIC **26** 00:20:15.1±1.0, 54.0N±0.1×163.47W±0.10, h26km±11km, Error ellipse: s-maj=17.8km s-min=5.9km az=159.0*
ISC 26 00:20:14.9±1.1, **54.0N**±0.1×**163.42W**±0.06, **h30**km, **n38, σ1§14/34, mb3.5/3, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**0.70**	**344**		**Pb**	**00 20 28.4**	**-0.2**
SSLS	**Shishaldin Sou**	**0.81**	**335**		**Pn**	**00 20 30.8**	**+0.4**
FALS	**False Pass**	**0.88**	**360**		**Pn**	**00 20 31.5**	**+0.2**
WESP	**Westdahl Peak**	**0.93**	**305**		**Pn**	**00 20 32.0**	**+0.1**
WECS	**Westdahl Cape**	**0.97**	**305**		**Pn**	**00 20 32.6**	**+0.1**
DT1	**Dutton Round H**	**1.31**	**30**		**Pn**	**00 20 37.3**	**+0.1**
AKSA	**Akutan Strait**	**1.35**	**278**		**Pn**	**00 20 37.4**	**-0.3**
AKUT	**Akutan**	**1.40**	**278**		**Pn**	**00 20 37.6**	**-0.7**
AKUT				Sn	**Sn**	**00 20 55.5**	**-0.2**
AHB	**Akutan Harbor**	**1.42**	**277**		**Pn**	**00 20 38.9**	**+0.2**
AKLV	**Akutan Long Va**	**1.51**	**278**		**Pn**	**00 20 39.9**	**0.0**
ZRO	**Akutan Zero**	**1.52**	**275**		**Pn**	**00 20 39.8**	**-0.2**
AKMO	**Akutan Morgan**	**1.54**	**275**		**Pn**	**00 20 40.1**	**-0.1**
AKRB	**Akutan Reef Bi**	**1.57**	**277**		**Pn**	**00 20 41.3**	**+0.6**
HAG	**Hague Volcano**	**1.61**	**33**		**Pn**	**00 20 42.6**	**+1.3**
PS4A	**Pavlof South-4**	**1.65**	**33**		**Pn**	**00 20 42.9**	**+1.2**
MTBL	**Makushin Table**	**1.93**	**271**		**Pn**	**00 20 46.2**	**+0.5**
MNAT	**Makushin Natee**	**1.93**	**269**		**Pn**	**00 20 45.5**	**-0.2**
MSW	**Makushin Switc**	**1.99**	**270**		**Pn**	**00 20 46.5**	**0.0**
MGOD	**Makushin Gods**	**2.05**	**266**		**Pn**	**00 20 47.1**	**-0.3**
MAPS	**Pakushin South**	**2.09**	**267**		**Pn**	**00 20 47.8**	**-0.1**
SDPT	**Sand Point**	**2.19**	**50**		**Pn**	**00 20 50.1**	**+0.9**
VNHG	**Veniaminof 1**	**3.32**	**46**		**Pn**	**00 21 06.2**	**+1.4**
OHAK	**Old Harbor**	**6.60**	**56**	Pn	**Pn**	**00 21 50.4**	**+0.7**
KDAK	**Kodiak Island**	**7.19**	**54**	Pn	**Pn**	**00 21 59.2**	**+1.4**
	0.3nm,0.3s,baz=123,slow=13,SNR=2.0						
KDAK				Sn	**Sn**	**00 23 14.7**	**-3.6**
	0.4nm,0.3s,baz=94,slow=19,SNR=1.7						
KDAK	**Kodiak Island**	**7.19**	**54**	Pn	**Pn**	**00 21 59.6**	**+1.8**
TTA	**Tatalina**	**9.78**	**20**	Pn	**Pn**	**00 22 35.0**	**+1.7**
SUA	**Susitna One**	**10.10**	**37**	Pn	**Pn**	**00 22 37.6**	**-0.2**
PPLA	**Purkeypile**	**10.69**	**29**	Pn	**Pn**	**00 22 48.8**	**+2.9**
INK	**Inuvik**	**20.04**	**33**	P	**P**	**00 24 44.6**	**-0.5**
	0.3nm,0.4s,baz=228,slow=8.5,SNR=2.4						
YKA	**Yellowknife Ar**	**26.46**	**52**	P	**P**	**00 25 49.8**	**+0.9**
	0.1nm,0.5s,baz=270,slow=9.2,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**42.22**	**225**	T	T	01 13 07.5	
	baz=26						
H11S2	**WAKE ISLAND Hy**	**42.23**	**225**	T	T	01 13 07.7	
	baz=26						
H11S3	**WAKE ISLAND Hy**	**42.23**	**225**	T	T	01 13 07.1	
	baz=26						
TXAR	**Lajitas Array**	**49.22**	**95**	P	**P**	**00 29 01.1**	**+0.7**
	0.3nm,0.5s,baz=310,slow=5.6,SNR=6.2						

PKGZ S S 00 30 43.6 +3.8
TGRZ Tauranga 18.60 195 P P 00 27 39.9 +1.2
TWGZ Tauwhareparae 18.67 191 P P 00 27 40.5 +1.1
TWGZ S S 00 30 53.1 +8.4
KARZ Kaharoa 18.88 195 P P 00 27 42.3 +1.0
URZ Urewera 18.91 193 P P 00 27 39.0 -2.6
comp=Z,14nm,0.3s,baz=301,slow=24,SNR=72
URZ S S 00 30 40.5 -8.0
comp=Z,0.8nm,0.3s,baz=304,slow=23,SNR=2.3
URZ ScP ScP 00 34 33.2 +0.6
comp=Z,0.4nm,0.3s,baz=305,slow=23,SNR=2.7
URZ Urewera 18.91 193 P P 00 27 39.1 -2.5
URZ IAmb IAmb 00 27 41.9
comp=Z,43nm,0.6s
URZ Urewera 18.91 193 P P 00 27 39.0 -2.6
URZ S S 00 30 42.6 -5.9
CNGZ Carnagh Statio 18.93 190 P P 00 27 41.5 -0.2
CNGZ S S 00 30 53.7 +4.9
TKGZ Te Karaka 18.95 191 P P 00 27 43.0 +1.1
TARZ Mount Tarawera 19.02 194 P P 00 27 43.2 +0.5
BKZ Black Stump Fm 19.91 193 P P 00 27 48.7 -2.1
BKZ IAmb IAmb 00 27 51.4
comp=Z,88nm,1.8s
THZ Tophouse 23.27 198 P P 00 28 20.0 -1.1
THZ IAmb IAmb 00 28 37.6
comp=Z,182nm,1.8s
HNR Honiara 23.87 292 P P 00 28 25.9 -0.8
comp=Z,52nm,0.3s,baz=203,slow=2.4,SNR=7.5
HNR S S 00 32 01.3 -6.8
comp=Z,73nm,0.4s,baz=220,slow=14,SNR=1.9
HNR Honiara 23.87 292 P P 00 28 25.3 -1.4
HNR pmax pmax
comp=Z,121nm,0.5s
HNR Honiara 23.87 292 P P 00 28 25.3 -1.4
OXZ Oxford 24.96 198 P P 00 28 34.2 -1.9
OXZ IAmb IAmb 00 28 58.5
comp=Z,53nm,1.2s
RPZ Rata Peaks 25.61 199 P P 00 28 40.7 -1.1
comp=Z,6.3nm,0.3s,baz=19,slow=22,SNR=2.0
TBI Tubuai 26.54 103 *eP* P 00 28 50.4 +0.1
comp=Z,92nm,0.9s
PAE Paea 26.77 90 *eP* P 00 28 52.6 +0.3
comp=Z,10nm,0.8s
PPT2 Papeete2 26.79 90 *eP* P 00 28 53.1 +0.5
comp=Z,86nm,1.2s
PPT Papeete 26.79 90 P P 00 28 53.4 +0.9
comp=Z,51nm,0.5s,baz=50,slow=4.8,SNR=16
PPT S S 00 32 52.0 -1.9
comp=Z,20nm,0.5s,baz=222,slow=11,SNR=4.9
PPTF Pamatai, Papee 26.80 90 P P 00 28 53.4 +0.7
TIAR Tiarei 27.01 90 *eP* P 00 28 54.5 0.0
comp=Z,8.4nm,0.9s
WHZ Wether Hill Ro 28.55 201 P P 00 29 07.5 -0.1
WHZ IAmb IAmb 00 29 09.3
comp=Z,35nm,0.8s
VAH Vaihoa 29.08 86 *eP* P 00 29 12.5 -0.1
comp=Z,73nm,1.1s
EIDS Eidsvold 29.24 253 P P 00 29 13.7 -0.3
EIDS IAmb IAmb 00 29 14.9
comp=Z,37nm,0.7s
ARMA Armidale 29.57 243 P P 00 29 17.9 +1.1
baz=30,SNR=92
ARMA Armidale 29.57 243 P P 00 29 17.6 +0.7
ARMA IAmb IAmb 00 29 18.6
comp=Z,56nm,0.6s
MGCD Mangrove Creek 30.75 238 P P 00 29 28.1 +1.2
baz=31,SNR=5.7
RMQ Roma 31.42 251 P P 00 29 33.8 +1.0
baz=32,SNR=33
KWAJ Kwajalein Atol 31.87 332 P P 00 29 36.7 0.0
KWAJ pmax pmax
comp=Z,440nm,0.7s
KWAJ Kwajalein Atol 31.87 332 P P 00 29 36.7 0.0
KWAJ Kwajalein Atol 31.87 332 P P 00 29 36.9 +0.2
comp=Z,734nm,0.9s
CNB Canberra Magne 32.79 235 P P 00 29 45.6 +1.1
baz=33,SNR=15
CAN Canberra 33.08 235 P P 00 29 47.1 +0.2
CAN pmax pmax
comp=Z,29nm,0.9s
CAN Canberra 33.08 235 P P 00 29 47.1 +0.2
RABL Rabaul 33.16 294 P P 00 29 47.4 -0.5
RABL Rabaul 33.16 294 P P 00 29 47.5 -0.3
CTA Charters Tower 33.78 263 ScP ScP 00 35 18.8 +1.8
comp=Z,9.0nm,0.9s,baz=111,slow=0.6,SNR=5.7
CTAO Charters Tower 33.78 263 P P 00 29 53.5 +0.5
CTAO pmax pmax
comp=Z,84nm,1.0s
CTAO Charters Tower 33.78 263 P P 00 29 53.5 +0.5
CTAO IAmb IAmb 00 29 54.3
comp=Z,84nm,0.9s
CMSA Cobar Meteorol 34.78 243 P P 00 30 01.6 +0.3
baz=35,SNR=51
PMG Port Moresby 35.41 282 P P 00 30 06.2 -0.4
comp=Z,63nm,0.8s,baz=82,slow=5.6,SNR=22
PMG Port Moresby 35.41 282 *d iP* P 00 30 07.1 +0.4
PMG pmax pmax
comp=Z,73nm,1.0s
PMG Port Moresby 35.41 282 P P 00 30 07.1 +0.4
PMG IAmb IAmb 00 30 08.5
comp=Z,58nm,0.8s
PATS Pohnpei 35.43 316 P P 00 30 07.0 +0.1
QLP Quilpie 35.47 252 P P 00 30 07.3 +0.2
baz=36,SNR=44
MTSU Mount Surprise 35.84 266 P P 00 30 10.7 +0.4
baz=36,SNR=52
TOO Toolangi 36.48 233 P P 00 30 15.8 +0.4
baz=37,SNR=23
TOO Toolangi 36.48 233 P P 00 30 15.4 0.0
TOO pmax pmax
comp=Z,36nm,0.7s
TOO Toolangi 36.48 233 P P 00 30 15.4 0.0
TOO IAmb IAmb 00 30 16.4
comp=Z,36nm,0.7s
COEN Coen 37.76 273 P P 00 30 26.6 +0.4
TAOE Nuku Hiva Isla 37.95 79 P P 00 30 28.2 +0.3
STKA Stephens Creek 38.28 243 P P 00 30 30.8 +0.5
comp=Z,24nm,0.4s,baz=91,slow=10,SNR=82
STKA ScP ScP 00 35 34.2 +0.6
comp=Z,5.3nm,0.9s,baz=52,slow=5.9,SNR=4.3
STKA Stephens Creek 38.28 243 P P 00 30 30.7 +0.5
baz=38,SNR=5.1
STKA Stephens Creek 38.28 243 P P 00 30 30.5 +0.2
MANU Manus Island 38.37 293 P P 00 30 32.0 +0.8
ARPS Mount Arapiles 39.05 236 P P 00 30 36.4 0.0
baz=39,SNR=6.2
RKT Rikitea 39.86 103 *eP* P 00 30 43.0 -0.2
comp=Z,126nm,0.9s
QIS Mount Isa 39.93 261 P P 00 30 43.3 -0.5
baz=40,SNR=13
HTT Hallett 40.74 242 P P 00 30 50.2 +0.1
baz=41,SNR=24
H11N3 WAKE ISLAND Hy 42.05 338 P P 00 31 00.3 0.0
baz=176,slow=11,SNR=8.3
H11N1 WAKE ISLAND Hy 42.06 338 P P 00 31 01.2 +0.8
baz=176,slow=11,SNR=3.6
H11N2 WAKE ISLAND Hy 42.07 338 P P 00 31 01.4 +0.9
baz=176,slow=11,SNR=3.7
BBOO Buckleboo 43.05 243 P P 00 31 08.3 -0.1
baz=43,SNR=72
BBOO Buckleboo 43.05 243 P P 00 31 08.2 -0.1
BBOO IAmb IAmb 00 31 09.1
comp=Z,76nm,0.8s
JAY Jayapura 44.03 288 P P 00 31 15.7 -0.7
comp=Z,523nmcomp=Z,57nm,0.7s
GENI Genyem 44.48 287 P P 00 31 19.6 -0.2
comp=Z,2µmcomp=Z,111nm,0.8s
KHLU Kahalu`u 44.65 30 P P 00 31 21.7 +0.6
WR0 Warramunga Arr 44.72 261 P P 00 31 21.0 -0.7
WR0 IAmb IAmb 00 31 22.5
comp=Z,46nm,0.9s
MLOA Mauna Loa Obse 44.75 30 P P 00 31 22.8 +0.6
AS31 Alice Springs 44.89 256 P P 00 31 22.5 -0.4
AS31 IAmb IAmb 00 31 23.5
comp=Z,39nm,0.6s
WB0 Warramunga Arr 44.89 262 P P 00 31 22.5 -0.4
WB0 IAmb IAmb 00 31 23.4
comp=Z,84nm,0.8s
ASAR Alice Springs 44.89 256 P P 00 31 22.9 -0.1
comp=Z,163nm,0.6s,baz=95,slow=7.7,SNR=2553
ASAR PcP PcP 00 32 54.2 -0.3
comp=Z,12nm,0.5s,baz=96,slow=4.1,SNR=9.9
ASAR ScP ScP 00 36 01.3 +1.0
comp=Z,5.4nm,0.7s,baz=97,slow=4.2,SNR=8.6
ASAR S S 00 37 23.1 -1.8
comp=Z,17nm,0.8s,baz=93,slow=16,SNR=39
ASAR ScS ScS 00 40 27.7 +1.1
comp=Z,1.1nm,0.9s,baz=98,slow=6.8,SNR=4.1
ASAR Alice Springs 44.89 256 P P 00 31 22.4 -0.5
ASAR Alice Springs 44.89 256 P P 00 31 22.4 -0.5
WB2 Warramunga Arr 44.90 261 P P 00 31 22.2 -0.8
WRAB Tennant Creek 44.90 261 *c iP* P 00 31 22.2 -0.9
WRAB pmax pmax
comp=Z,42nm,0.6s
WRAB Tennant Creek 44.90 261 P P 00 31 22.1 -0.9
WRA Warramunga Arr 44.91 261 P P 00 31 22.4 -0.7
comp=Z,44nm,0.3s,baz=96,slow=7.6,SNR=593
WRA PcP PcP 00 32 55.0 +0.5
comp=Z,8.3nm,0.8s,baz=99,slow=4.0,SNR=5.3
WRA ScP ScP 00 36 01.1 +0.7
comp=Z,6.5nm,1.1s,baz=90,slow=4.7,SNR=5.1
WRA S S 00 37 22.9 -2.4
comp=Z,16nm,1.1s,baz=92,slow=13,SNR=12
WRA Warramunga Arr 44.91 261 P P 00 31 22.0 -1.1
KDU Kakadu 48.15 271 P P 00 31 47.6 -0.2
baz=48,SNR=26
MTN Manton Dam 49.38 270 P P 00 31 55.2 -1.6
baz=50,SNR=35
MTN Manton Dam 49.38 270 P P 00 31 55.8 -1.1
MTN IAmb IAmb 00 31 57.3
comp=Z,61nm,0.6s
GUMO Guam 49.53 309 P P 00 31 57.6 -0.4
comp=Z,138nm,0.6s,baz=139,slow=11,SNR=9.3
GUMO Guam 49.53 309 P P 00 31 57.9 0.0
GUMO pmax pmax
comp=Z,168nm,0.7s
GUMO Guam 49.53 309 P P 00 31 57.9 0.0
GUMO Guam 49.53 309 P P 00 31 59.2 +1.3
FORT Forrest 49.77 246 P P 00 31 58.8 -0.7
baz=50,SNR=29
FORT Forrest 49.77 246 P P 00 31 59.0 -0.6
WRKA Warakurna 49.86 254 P P 00 32 00.3 -0.1
baz=50,SNR=430
KNRA Kununurra 50.92 266 P P 00 32 08.0 -0.2
KNRA IAmb IAmb 00 32 08.8
comp=Z,79nm,0.7s
FAKI Fak Fak 51.56 282 P P 00 32 12.7 -0.2
SIJI Sorong 53.27 284 P P 00 32 25.6 +0.3
SWI Sorong 53.28 284 P P 00 32 25.1 -0.2
comp=Z,63nm,0.7s
FITZ Fitzroy Crossi 53.33 262 P P 00 32 25.7 +0.1
baz=53,SNR=26
FITZ Fitzroy Crossi 53.33 262 P P 00 32 25.7 +0.1
FITZ IAmb IAmb 00 32 26.8
comp=Z,151nm,2.0s
KMBL Kambalda 55.04 245 P P 00 32 36.7 -0.8
baz=55,SNR=11
SOEI Soe 56.70 271 P P 00 32 50.5 +1.0
SOEI IAmb IAmb 00 32 51.8
comp=Z,95nm,0.8s
SOEI Soe 56.70 271 P P 00 32 49.1 -0.3
comp=Z,130nm,0.8s
BATI Baumata 57.13 270 P P 00 32 52.1 -0.2
comp=Z,34nm,0.8s
SANI Sanana 57.67 280 P P 00 32 50.3 -5.6
comp=Z,25nm,1.0s
PSA00 Pilbara Seismi 58.03 256 P P 00 32 56.8 -1.6
PSA00 IAmb IAmb 00 32 57.9
comp=Z,49nm,0.7s
PSA00 Pilbara Seismi 58.03 256 P P 00 32 57.8 -0.5
PSA00 IAmb IAmb 00 32 58.7
comp=Z,86nm,0.7s
MEEK Meekatharra 58.35 250 P P 00 32 59.7 -0.8
baz=58,SNR=23
KLBR Kellerberrin 58.54 245 P P 00 33 01.2 -0.4
baz=59,SNR=41
SBA Scott Base 58.57 184 P P 00 33 03.6 +2.6
SBA pmax pmax
comp=Z,69nm,1.2s
SBA Scott Base 58.57 184 P P 00 33 03.6 +2.6
SBA IAmb IAmb 00 33 04.9
comp=Z,69nm,1.1s
VNDA Vanda 58.61 185 P P 00 33 02.0 +0.7
comp=Z,14nm,0.8s,baz=357,slow=7.5,SNR=70
VNDA PcP PcP 00 33 45.3 +0.1
comp=Z,7.3nm,0.8s,baz=316,slow=6.6,SNR=4.4
VNDA Vanda 58.61 185 P P 00 33 02.8 +1.5
VNDA pmax pmax
comp=Z,65nm,1.6s
VNDA Vanda 58.61 185 P P 00 33 02.8 +1.5
NWAO Narrogin (SRO) 58.87 243 P P 00 33 03.8 -0.1
baz=59,SNR=4.0
NWAO Narrogin (SRO) 58.87 243 P P 00 33 03.4 -0.4
NWAO pmax pmax
comp=Z,36nm,0.8s
NWAO Narrogin (SRO) 58.87 243 P P 00 33 03.4 -0.4
NWAO IAmb IAmb 00 33 45.7
comp=Z,36nm,0.8s
BLDU Balliduu 59.53 246 P P 00 33 07.8 -0.5
baz=60,SNR=39
MUN Mundaring 59.82 244 P P 00 33 10.3 +0.1
baz=60,SNR=14
BASI Baing, Sumba 60.04 269 P P 00 33 10.4 -1.5
comp=Z,76nm,1.3s
MORW Morawa 60.29 247 P P 00 33 12.8 -0.6
baz=60,SNR=9.5
MORW Morawa 60.29 247 P P 00 33 12.8 -0.6
WBSI Waikabubak, Su 61.32 270 P P 00 33 17.6 -2.9
comp=Z,32nm,1.1s
BSSI Bau Bau, Buton 61.37 274 P P 00 33 16.6 -4.2
comp=Z,40nm,1.8s
BNSI Bone 62.31 276 P P 00 33 24.9 -2.0
comp=Z,39nm,0.7s
KAPI Kappang 62.44 275 P P 00 33 27.3 -0.4
KAPI pmax pmax
comp=Z,39nm,1.4s
KAPI Kappang 62.44 275 P P 00 33 27.3 -0.4
SPSI Sidrap Palu 62.78 276 P P 00 33 26.1 -3.8
comp=Z,16nm,1.4s
GIRL Giralia 62.94 254 P P 00 33 31.9 +1.0
baz=63,SNR=14
GIRL Giralia 62.94 254 P P 00 33 31.7 +0.8
PLAI Plampang 63.09 270 P P 00 33 29.8 -2.1
comp=Z,2µmcomp=Z,94nm,0.9s
TOLI2 Tolitoli 63.68 282 P P 00 33 35.8 +0.1
TWSI Taliwang, Sumb 63.95 270 P P 00 33 36.5 -1.0
comp=Z,59nm,0.9s
CASY Casey 64.67 205 P P 00 33 41.5 +0.4
CASY IAmb IAmb 00 33 42.4
comp=Z,73nm,1.1s
JAGI Jajag, Banyuwa 66.61 269 P P 00 33 52.9 -1.3
JAGI IAmb IAmb 00 33 53.8
comp=Z,53nm,0.7s
JAGI Jajag, Banyuwa 66.61 269 P P 00 33 51.9 -2.3
comp=Z,79nm,0.9s
BBKI Banjar Baru 67.57 275 P P 00 34 00.0 -0.2
comp=Z,2µmcomp=Z,17nm,1.5s
JGF Kuroka 69.60 322 P P 00 34 11.2 -0.9
MJAR Matsushiro Arr 69.79 323 P P 00 34 13.0 -0.1
comp=Z,5.5nm,0.7s,baz=158,slow=6.1,SNR=26
MJAR pP pP 00 35 54.3 -0.6
comp=Z,3.2nm,0.9s,baz=151,slow=6.5,SNR=4.0
MJAR Matsushiro Arr 69.79 323 P P 00 34 13.0 -0.1
MAJO Matsushiro 69.79 323 P P 00 34 12.8 -0.3
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MAJO Matsushiro 69.79 323 P P 00 34 12.8 -0.3
MAT Matsushiro 69.79 323 P P 00 34 12.9 -0.2
MAT S S 00 42 40.6 -2.7
KKM Kota Kinabalu 69.79 284 P P 00 34 14.2 +0.5
KKM IAmb IAmb 00 34 15.0
comp=Z,24nm,0.5s
UGM Wanagama 70.19 269 P P 00 34 16.0 -0.1
QSPA South Pole Qui 70.25 180 P P 00 34 16.9 +1.3
JWT Wachi 70.53 321 P P 00 34 18.1 +0.6
JSD Sado 70.83 325 P P 00 34 20.0 +0.7
AMKA Amchitka 70.93 358 P P 00 34 19.3 -0.2
ADK Adak 71.39 1 P P 00 34 22.3 +0.1
ADK pmax pmax
comp=Z,93nm,0.6s
ADK Adak 71.39 1 P P 00 34 22.3 +0.1
GSTR Great Sitkin T 71.61 1 P P 00 34 23.7 +0.1
JHS Saijyo 71.72 319 P P 00 34 24.8 +0.1
ATKA Atka Island 71.77 2 P P 00 34 24.4 0.0
SBUM Sibu 72.10 279 P P 00 34 27.3 0.0
SMY Shemya 72.58 355 P P 00 34 28.7 -0.4
SMY pmax pmax
comp=Z,147nm,1.1s
SMY Shemya 72.58 355 P P 00 34 28.7 -0.4
NIKH Nikolski High 72.89 6 P 00 34 32.2
baz=189
ASAJ Asahikawa 73.23 331 P P 00 34 33.8 +0.7
comp=Z,21nm,1.0s,baz=264,slow=15,SNR=4.2
YULB Yu-li 73.30 303 P P 00 34 33.0 -1.0
YULB IAmb IAmb 00 36 18.8
comp=Z,43nm,1.4s
KSM Kuching 73.53 278 P P 00 34 35.9 +0.4
KSM IAmb IAmb 00 34 37.2
comp=Z,46nm,1.3s
YHNB Yeheng 73.90 304 P P 00 34 37.6 +0.2
YHNB IAmb IAmb 00 35 18.8
comp=Z,162nm,1.7s
XMIS Christmas Isla 73.99 264 P P 00 34 38.0 -0.2
XMIS Christmas Isla 73.99 264 P P 00 34 38.3 +0.1
comp=Z,63nm,1.1s
AKUT Akutan 74.36 7 P P 00 34 39.0 -0.2
PET Petropavlovsk 75.36 346 *ll eP* P 00 34 45.5 +0.6
PET pmax pmax
comp=Z,41nm,1.5s
PEA0B Petropavlovsk- 75.66 345 *ll eP* P 00 34 48.1 +1.4
PEA0B Petropavlovsk- 75.66 345 P P 00 34 47.0 +0.3
PEA0B IAmb IAmb 00 35 02.1
comp=Z,131nm,1.8s
PETK Petropavlovsk- 75.66 345 P P 00 34 47.0 +0.3
comp=Z,14nm,0.9s,baz=122,slow=6.7,SNR=29
PETK Petropavlovsk- 75.66 345 P P 00 34 47.0 +0.3
PETK Petropavlovsk- 75.66 345 P P 00 34 46.8 +0.1
SDPT Sand Point 76.30 10 P 00 34 50.1
baz=197
SDPT Sand Point 76.30 10 P P 00 34 50.0 0.0
SDPT IAmb IAmb 00 34 50.8
comp=Z,63nm,0.6s
KSRS Korea Array 76.52 318 P P 00 34 51.9 +0.2
comp=Z,0.5nm,0.4s,baz=132,slow=6.1,SNR=2.0
KSRS PP PP 00 37 52.6 +0.2
comp=Z,0.9nm,0.5s,baz=129,slow=9.6,SNR=1.5
PKM Mcpherson Peak 77.36 46 P 00 34 58.8
baz=235,SNR=5.1
PASC Pasadena Art C 78.06 47 P P 00 35 00.7 +0.4
PASC IAmb IAmb 00 35 02.6
comp=Z,50nm,1.4s
KMRM Mail Ridge 78.09 39 P P 00 35 01.5 +1.1
109C Camp Elliot, M 78.11 49 P 00 35 02.3
baz=237
ARVC Arvin 78.16 46 P 00 35 02.3
baz=235
MWC Mount Wilson 78.18 47 P P 00 35 02.2 +1.1
MWC pmax pmax
comp=Z,87nm,1.4s
MWC Mount Wilson 78.18 47 P P 00 35 02.2 +1.1
MWC IAmb IAmb 00 35 03.5
comp=Z,87nm,1.4s
VES Vestal, Richgr 78.39 45 P 00 35 03.3
baz=235,SNR=8.7
MURC Murrieta 78.43 48 P 00 35 03.9
baz=237,SNR=6.3
KHMM Horse Mountain 78.48 39 P P 00 35 03.5 +0.9
USRK Ussuriysk Ar. 78.52 326 P P 00 35 02.5 +0.1
comp=Z,1.2nm,0.7s,baz=124,slow=5.4,SNR=2.7
EDW2 Edwards Air Fo 78.59 46 P 00 35 04.9
baz=236,SNR=8.7
MONP2 Monument Peak 78.59 49 P 00 35 05.3
baz=237
O02D Mt. Diablo Mer 78.61 40 P 00 35 05.5
baz=232
SII Sitkinak Islan 78.63 13 P 00 35 04.0
baz=203
SII Sitkinak Islan 78.63 13 P P 00 35 03.5 +0.8
IKP In-Ko-Pah, Jac 78.69 49 P 00 35 05.6
baz=238
ISA Isabella, Lake 78.70 46 P P 00 35 05.2 +1.4
ISA pmax pmax
comp=Z,30nm,1.2s
ISA Isabella, Lake 78.70 46 P P 00 35 05.2 +1.4
ISA Isabella, Lake 78.70 46 P 00 35 05.5
baz=236,SNR=13
CMB Columbia Colle 78.81 43 P P 00 35 05.7 +1.4
CMB pmax pmax
comp=Z,31nm,1.2s
CMB Columbia Colle 78.81 43 P P 00 35 05.7 +1.4
PFO Pinyon Flats O 78.96 48 P P 00 35 05.9 +0.6
comp=Z,6.6nm,0.8s,baz=274,slow=4.3,SNR=4.0
PFO Pinyon Flats O 78.96 48 *ll eP* P 00 35 06.5 +1.3
PFO pmax pmax
comp=Z,29nm,1.1s
PFO Pinyon Flats O 78.96 48 P P 00 35 06.0 +0.8
AFDM Forest Hills D 78.98 42 P P 00 35 05.8 +0.7
WDC Whiskeytown Da 79.01 40 P P 00 35 06.1 +0.9
WDC pmax pmax
comp=Z,29nm,1.2s
WDC Whiskeytown Da 79.01 40 P P 00 35 06.0 +0.9
ORV Oroville 79.02 41 P P 00 35 06.4 +1.1
ORV pmax pmax
comp=Z,25nm,1.1s
ORV Oroville 79.02 41 P P 00 35 06.4 +1.1
N02D Trinity Center 79.15 39 P 00 35 08.4
baz=232,SNR=8.0
O03E Paynes Creek 79.28 40 P 00 35 08.1
baz=232,SNR=14
M02C Callahan 79.32 39 P 00 35 09.3
baz=232,SNR=14
L02E Cave Junction 79.36 38 P 00 35 09.2
baz=231
CWC Cottonwood Cre 79.40 45 P 00 35 09.3
baz=236
MDPB Devils Postpil 79.42 44 P P 00 35 08.6 +0.8
OHAK Old Harbor 79.43 13 P 00 35 08.0
baz=203
OHAK Old Harbor 79.43 13 P P 00 35 07.7 +0.7
OHAK IAmb IAmb 00 35 08.6
comp=Z,57nm,0.5s
MLAC Mammoth, Mammo 79.58 44 P 00 35 10.6
baz=235
NJ2 Nanjing 79.61 309 *eP* P 00 35 10.0 +1.5
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
YBH Yreka Blue Hor 79.62 39 P P 00 35 09.9 +1.4
YBH pmax pmax
comp=Z,23nm,0.7s
YBH Yreka Blue Hor 79.62 39 P P 00 35 09.9 +1.4
K02D Willamette Mer 79.67 37 P 00 35 10.7
baz=231
BC3 Big Chuckawall 79.69 49 P 00 35 11.1
baz=238,SNR=5.7
J01E Myrtle Point 79.81 37 P 00 35 11.2
baz=230
HUMO Hull Mountain 80.02 38 P P 00 35 11.6 +1.0
MDJ Mudanjiang 80.08 325 P P 00 35 12.5 +1.8
MDJ pmax pmax
comp=Z,8.0nm,0.7s
MDJ pmax pmax
comp=Z,130nm,4.8s
KDAK Kodiak Island 80.10 13 P P 00 35 11.6 +1.1
comp=Z,26nm,0.6s,baz=226,slow=3.6,SNR=22
KDAK Kodiak Island 80.10 13 P P 00 35 11.4 +0.9
KDAK pmax pmax
comp=Z,30nm,0.8s
KDAK Kodiak Island 80.10 13 P P 00 35 11.3 +0.9
KDAK IAmb IAmb 00 35 13.1
comp=Z,30nm,0.8s
GMRC Granite Mounta 80.14 48 P 00 35 13.2
baz=238,SNR=6.3
L04D Klamath Falls 80.16 38 P 00 35 13.1
baz=232,SNR=16
M04C Macdoel 80.16 39 P 00 35 13.1
baz=232,SNR=12
IRM Iron Mountain 80.17 48 P 00 35 13.5
baz=238,SNR=18
GRAC Grapevine Rang 80.19 45 P 00 35 13.6
baz=236,SNR=9.5
BELA Belgrano 2 80.21 173 P P 00 35 10.9 -0.1
BELA IAmb IAmb 00 35 12.2
comp=Z,70nm,0.9s
FURC Furnace Creek, 80.23 46 P 00 35 13.5
baz=236
NVAR Mina Array Bea 80.38 43 P P 00 35 13.7 +0.9
comp=Z,15nm,1.0s,baz=226,slow=8.5,SNR=45
NVAR Mina Array Bea 80.38 43 P P 00 35 14.0 +1.2
113A Mohawk Valley, 80.43 50 P P 00 35 14.3 +1.5
113A IAmb IAmb 00 35 16.0
comp=Z,68nm,1.5s
NV11 Mina Array Sit 80.48 43 P P 00 35 14.5 +1.3
I03D Drain, OR 80.48 37 P 00 35 14.4
baz=231
HSIG 80.68 55 P P 00 35 14.9 +0.7
HSIG IAmb IAmb 00 35 17.0
comp=Z,60nm,1.6s

214A **Organ Pipe Nat** 80.72 51 P 00 35 16.8
baz=240
J04D **Umpqua Nationa** 80.90 38 P 00 35 17.4
baz=232,SNR=8.9
TPNV **Topopah Spring** 80.91 45 P 00 35 17.3
baz=237,SNR=14
PDMCI **Parker Dam,Lak** 80.95 49 P 00 35 17.6
baz=238,SNR=8.4
I04A **Tendick Farm,** 81.07 37 P 00 35 17.3
baz=232,SNR=8.9
H04D **Lebanon** 81.34 36 P 00 35 19.3
baz=231,SNR=7.2
J05D **Fort Rock, OR** 81.43 38 P 00 35 19.9
baz=232,SNR=51
G03D **McMinnville, O** 81.48 36 P 00 35 19.9
baz=231,SNR=5.2
W13A **Hualapai Mount** 81.55 48 P P 00 35 20.1 +1.2
PMSA **Palmer Station** 81.83 157 P P 00 35 20.6 +1.1
PINE **Pine Mountain** 81.91 38 P P 00 35 22.5 +1.9
PINE IAmb IAmb 00 35 23.6
comp=Z,77nm,0.9s
I05D **Terrebonne, OR** 82.01 37 P 00 35 22.6
baz=232,SNR=12
HOM **Homer** 82.02 13 P 00 35 22.2
baz=205
R11A **Troy Canyon, C** 82.11 45 P P 00 35 22.4 +0.7
R11A **Troy Canyon, C** 82.11 45 P 00 35 22.9
baz=237,SNR=18
E03A **Lebam** 82.17 34 P P 00 35 22.8 +1.3
E03A IAmb IAmb 00 35 24.2
comp=Z,77nm,0.8s
F04D **Rainier, OR** 82.17 35 P 00 35 23.8
baz=231
MAW **Mawson** 82.28 200 P P 00 35 22.2 +0.4
comp=Z,13nm,0.5s,baz=137,slow=5.3,SNR=38
MAW **Mawson** 82.28 200 P P 00 35 22.2 +0.4
baz=82,SNR=29
MAW **Mawson** 82.28 200 P P 00 35 22.1 +0.4
MAW pmax pmax
comp=Z,7.0nm,1.2s
MAW **Mawson** 82.28 200 P P 00 35 22.1 +0.3
BRSE **Bradley Lake S** 82.28 13 P 00 35 22.8
baz=206
TUC **Tucson** 82.39 52 P 00 35 25.4
baz=241
TUC **Tucson** 82.39 52 P P 00 35 25.2 +2.1
TUC pmax pmax
comp=Z,80nm,1.3s
TUC **Tucson** 82.39 52 P P 00 35 25.1 +2.1
TUC IAmb IAmb 00 35 26.6
comp=Z,80nm,1.3s
DIB **Dawson Inlet,** 82.57 26 P P 00 35 24.4 +1.0
DIB IAmb IAmb 00 35 26.4
comp=Z,74nm,1.6s
H02S1 **DAWSON INLET T** 82.57 26 P P 00 35 24.2 +0.9
SNR=14
G05D **Wamic, OR** 82.58 36 P 00 35 25.1
baz=232
E04D **Cinebar** 82.71 35 P 00 35 25.9
baz=231,SNR=11
F05D **White Salmon** 82.89 36 P 00 35 26.5
baz=232,SNR=7.2
SEW **Seward** 82.90 14 P 00 35 25.1
baz=207
I07A **Izee** 82.92 38 P P 00 35 27.1 +1.6
I07A IAmb IAmb 00 35 28.2
comp=Z,46nm,0.8s
X16A **Lo Mia Camp, P** 82.94 50 P P 00 35 27.4 +1.4
X16A IAmb IAmb 00 35 29.8
comp=Z,55nm,1.1s
LCMT **Little Creek M** 82.98 47 P P 00 35 27.5 +1.5
D03D **Eldon** 83.05 34 P 00 35 27.7
baz=231,SNR=16
319A **Douglas** 83.07 53 P P 00 35 28.0 +1.5
319A IAmb IAmb 00 35 30.1
comp=Z,110nm,1.2s
J08A **Circle Bar Ran** 83.10 39 P P 00 35 27.4 +1.0
J08A IAmb IAmb 00 35 29.1
comp=Z,29nm,0.8s
O22K **Cooper Landing** 83.17 14 P 00 35 26.8
baz=206,SNR=7.9
CCUT **Cedar City** 83.18 46 P P 00 35 28.6 +1.4
CCUT IAmb IAmb 00 35 30.1
comp=Z,32nm,1.1s
IPM **Ipoh** 83.26 277 P P 00 35 27.9 +0.1
IPM IAmb IAmb 00 35 29.3
comp=Z,28nm,0.7s
SPCR **Spurr Chakacha** 83.31 12 P 00 35 26.6
baz=204,SNR=11
GAMB **Gambell** 83.44 3 P 00 35 29.0
baz=186
GAMB **Gambell** 83.45 3 P P 00 35 28.6 +1.1
GAMB IAmb IAmb 00 35 29.9
comp=Z,44nm,0.6s
WUAZ **Wupatki** 83.53 49 P 00 35 30.9
baz=240,SNR=16
WUAZ **Wupatki** 83.53 49 P P 00 35 30.3 +1.4
WUAZ IAmb IAmb 00 35 31.9
comp=Z,30nm,1.0s
PGC **Sidney** 83.57 33 P P 00 35 29.9 +1.4
PGC IAmb IAmb 00 35 30.8
comp=Z,47nm,0.8s
ELK **Elko** 83.63 43 P P 00 35 30.4 +1.1
ELK pmax pmax
comp=Z,25nm,1.0s
ELK **Elko** 83.63 43 P P 00 35 30.4 +1.1
BBB **Bella Bella** 83.70 28 P P 00 35 30.4 +1.3
comp=Z,24nm,0.6s,baz=287,slow=2.8,SNR=21
RC01 **Rabbit Creek A** 83.72 13 P 00 35 29.5
baz=206,SNR=10
SUA **Susitna One** 83.84 13 P 00 35 30.1
baz=205,SNR=39
KULM **Kulim** 83.89 278 P P 00 35 31.2 +0.3
GO10 **Punta Arenas** 83.93 145 P P 00 35 32.4 +2.0
KAIM **Kayak Island** 83.97 16 P 00 35 31.7
baz=211
GO09 **Cerro Castillo** 83.99 142 P P 00 35 32.0 +1.3
A04D **Lummi Island** 83.99 33 P 00 35 32.4
baz=231,SNR=35
CRAG **Craig** 84.00 24 P 00 35 32.1
baz=222
B05A **Bryant** 84.02 34 P 00 35 32.3
baz=231,SNR=22
GLI **Glacier Island** 84.13 15 P 00 35 31.5
baz=209,SNR=25
SKT **Skwentna** 84.15 12 P 00 35 30.6
baz=205,SNR=8.2
SKT **Skwentna** 84.16 12 P P 00 35 30.8 -0.4
SKT IAmb IAmb 00 35 31.4
comp=Z,13nm,0.5s
LTY **Liberty** 84.16 35 P P 00 35 32.4 +0.8
EYAK **Cordova Ski Ar** 84.17 15 P 00 35 31.9
baz=210
TTA **Tatalina** 84.23 10 P 00 35 33.0
baz=200,SNR=22
TTA **Tatalina** 84.23 10 P P 00 35 32.4 +0.8
TTA pmax pmax
comp=Z,26nm,0.8s
TTA **Tatalina** 84.23 10 P P 00 35 32.4 +0.8
TTA IAmb IAmb 00 35 33.5
comp=Z,26nm,0.8s
KNK **Knik Glacier** 84.29 14 P 00 35 32.5
baz=208
PMR **Palmer** 84.30 13 P 00 35 32.4
baz=207,SNR=28
SIT **Sitka** 84.41 22 P 00 35 33.7
baz=220
W18A **Petrified Fore** 84.50 50 P 00 35 35.3
baz=241
GHO **Glory Hole Cre** 84.51 13 P P 00 35 33.7 +0.8
E08A **Dider Farm, El** 84.59 36 P P 00 35 34.8 +1.2
E08A IAmb IAmb 00 35 36.1
comp=Z,23nm,0.8s
RPSI **Rantau Prapat** 84.61 275 P P 00 35 34.0 -0.4
PSI **Prapat** 84.65 275 P P 00 35 34.1 -0.7
comp=Z,8.2nm,0.8s,baz=14,slow=0.1,SNR=9.5
PSI pP pP 00 37 20.8 -0.4
comp=Z,9.6nm,0.9s,baz=180,slow=3.3,SNR=2.7
ANM **Nome** 84.65 5 P 00 35 34.7
baz=192
SML **Sawmill** 84.67 14 P 00 35 34.3
baz=208,SNR=8.4
ZAIG **Zacatecas** 84.70 64 P P 00 35 36.6 +1.5
121A **Cookes Peak, D** 84.73 53 P 00 35 37.2
baz=243,SNR=18
121A **Cookes Peak, D** 84.73 53 P P 00 35 36.5 +1.6
121A IAmb IAmb 00 35 38.2
comp=Z,39nm,1.1s
CUT **Chulitna** 84.79 12 P 00 35 34.8
baz=206,SNR=22
BMRM **Bremner River** 84.81 16 P 00 35 35.1
baz=211,SNR=23
PPLA **Purkeypile** 84.86 11 P 00 35 34.2
baz=204,SNR=5.6
DUG **Dugway, Tooele** 84.91 44 P 00 35 36.4
baz=239
KLU **Klutina** 84.94 15 P 00 35 35.8
baz=210,SNR=7.2
D08A **Wollman Farm,** 85.00 36 P P 00 35 36.6 +1.0
D08A IAmb IAmb 00 35 38.1
comp=Z,25nm,0.9s
WRAK **Wrangell Islan** 85.00 23 P 00 35 36.8
baz=222,SNR=7.8
WRAK **Wrangell Islan** 85.00 23 P P 00 35 36.3 +1.0
WRAK IAmb IAmb 00 35 37.7
comp=Z,34nm,0.8s
CRQM **Cirque** 85.01 16 P P 00 35 36.1 +0.5
CRQM IAmb IAmb 00 35 37.2
comp=Z,69nm,1.2s
CRQE **Cirque** 85.02 16 P 00 35 36.4
baz=212
MG02 **Cerro Sombrero** 85.08 145 P P 00 35 37.3 +1.3
PINM **Pinnacle** 85.26 18 P 00 35 37.6
baz=215,SNR=5.7
TABL **Table Mountain** 85.29 17 P P 00 35 38.0 +1.0
TABL IAmb IAmb 00 35 38.7
comp=Z,48nm,0.7s
VRDI **Verde Repeater** 85.33 16 P P 00 35 37.9 +0.7
VRDI IAmb IAmb 00 35 38.6
comp=Z,23nm,0.6s
N25K **Chitina, Valde** 85.36 15 P 00 35 38.1
baz=211,SNR=36
GSI **Gunungsitoli** 85.41 273 P P 00 35 39.2 +0.8
GSI IAmb IAmb 00 35 40.5
comp=Z,24nm,0.7s
M24K **Tolsona, Glenn** 85.42 14 P 00 35 38.5
baz=210,SNR=9.3
TNA **Tin City** 85.43 4 P 00 35 38.5
baz=189
WAT6 **Susitna Watana** 85.48 13 P 00 35 38.3
baz=208,SNR=30
TMUT **Trail Mountain** 85.52 46 P P 00 35 40.2 +1.5
TMUT IAmb IAmb 00 35 41.6
comp=Z,33nm,1.1s
MCARA **McCarthy VSAT** 85.57 16 P 00 35 39.2
baz=212
WAT2 **Susitna Watana** 85.64 13 P 00 35 38.9
baz=207
HLID **Hailey** 85.67 41 P 00 35 40.8
baz=238
HLID **Hailey** 85.67 41 P P 00 35 40.5 +1.3
CTG **Chitna Glacier** 85.67 17 P 00 35 39.5
baz=214
TRF **Thorofare Moun** 85.73 12 P 00 35 39.0
baz=206,SNR=37
BESE **Bessie Mountai** 85.74 21 P P 00 35 39.8 +0.8
BESE IAmb IAmb 00 35 41.3
comp=Z,21nm,0.7s
CHUM **Lake Minchumin** 85.75 11 P 00 35 38.7
baz=204,SNR=21
SEY **Seymchan** 85.76 347 P P 00 35 39.3 +0.4
comp=Z,14nm,0.9s,baz=155,slow=5.5,SNR=23
SEY pP pP 00 37 25.8 -0.9
comp=Z,4.1nm,0.8s,baz=16,slow=23,SNR=2.3
SEY **Seymchan** 85.76 347 *i*eP P 00 35 39.1 +0.2
ENH **Enshi** 85.83 304 P P 00 35 40.5 +0.4
ENH IAmb IAmb 00 37 35.5
comp=Z,59nm,1.6s
HARP **HAARP** 85.91 15 P 00 35 40.5
baz=211
P17A **Butcher Ranch,** 85.92 46 P P 00 35 41.6 +1.1
TLIG **Tlapa** 86.15 70 P P 00 35 43.2 +1.2
TLIG IAmb IAmb 00 35 44.7
comp=Z,37nm,1.4s
MNTX **Cornudas Mount** 86.18 55 P P 00 35 43.0 +1.3
MNTX IAmb IAmb 00 35 44.7
comp=Z,44nm,1.1s
MNTX **Cornudas Mount** 86.18 55 P 00 35 43.6
baz=244,SNR=24
BPAW **Bear Paw Mtn.** 86.19 11 P 00 35 40.4
baz=205,SNR=11
H03S2 **Juan Fernandez** 86.20 124 P P 00 35 41.2 -0.3
H03S1 **Juan Fernandez** 86.22 124 P P 00 35 42.2 +0.6
baz=215,slow=74,SNR=2.9
H03S3 **Juan Fernandez** 86.22 124 P P 00 35 42.1 +0.5
baz=325,slow=74,SNR=4.3
MCK **McKinley** 86.26 12 P 00 35 41.5
baz=207,SNR=36
SKAG **Skagway** 86.26 20 P 00 35 43.2
baz=220
BNM **Barren Site** 86.32 52 P P 00 35 43.7 +1.1
PAX **Paxson** 86.33 14 P 00 35 41.8
baz=210,SNR=9.6
MVCO **Mesa Verde** 86.38 48 P 00 35 43.6
baz=242
TX31 **Lajitas Ar. Si** 86.50 57 P P 00 35 44.7 +1.3
TXAR **Lajitas Array** 86.50 57 P P 00 35 45.2 +1.8
comp=Z,15nm,0.9s,baz=217,slow=7.5,SNR=142
TXAR pP pwP 00 37 32.3 -1.4
comp=Z,1.1nm,0.8s,baz=225,slow=3.7,SNR=2.1
TXAR PKKPbc PKKPbc 00 53 36.8 -0.3
comp=Z,0.3nm,0.6s,baz=89,slow=0.9,SNR=5.1
TXAR **Lajitas Array** 86.50 57 P P 00 35 44.8 +1.4
HYT **Haines Junctio** 86.66 18 P P 00 35 44.3 +0.9
NEW **Newport** 86.69 36 P 00 35 44.4
baz=235,SNR=12
ANMO **Albuquerque** 86.81 51 P 00 35 46.2
baz=243
ANMO **Albuquerque** 86.81 51 *c i*P P 00 35 46.1 +1.3
ANMO pmax pmax
comp=Z,23nm,0.9s
ANMO **Albuquerque** 86.81 51 P P 00 35 46.1 +1.3
ANMO IAmb IAmb 00 35 47.2
comp=Z,19nm,0.9s
NEA2 **Nenana** 87.00 12 P 00 35 44.4
baz=207,SNR=23
MLY **Manley** 87.08 11 P 00 35 45.0
baz=205,SNR=41
WRH **Wood River Hil** 87.09 12 P P 00 35 44.9 -0.3
WRH IAmb IAmb 00 35 46.2
comp=Z,58nm,0.9s
HDA **Harding Lake** 87.27 13 P 00 35 46.5
baz=209,SNR=82
HDA P 00 35 46.5
baz=209,SNR=82
L27K **Beaver Creek,** 87.29 16 P 00 35 47.3
baz=214,SNR=21
MCMT **McKenzie Canyo** 87.29 40 P P 00 35 48.2 +1.3
CCB **Clear Creek Bu** 87.30 12 P P 00 35 46.0 -0.1
BCAR **Beaver Creek A** 87.31 16 P P 00 35 46.8 +0.4
WHY **Whitehorse** 87.33 20 P 00 35 47.8
baz=220,SNR=13
WHY **Whitehorse** 87.33 20 P P 00 35 47.4 +0.8
DLBC **Dease Lake** 87.34 23 P P 00 35 47.8 +1.2
DLBC IAmb IAmb 00 35 49.0
comp=Z,20nm,0.8s
I23K **Minto, Yukon-K** 87.44 12 P 00 35 46.9
baz=207,SNR=38
I23K **Minto, Yukon-K** 87.44 12 P P 00 35 46.7 -0.1
I23K IAmb IAmb 00 35 47.8
comp=Z,23nm,0.5s
SYO **Syowa Base** 87.44 193 ⇑ *i*P P 00 35 46.8 -0.1
SYO **Syowa Base** 87.44 193 ‖ *e*PcP PcP 00 35 48.6 +0.2
SYO **Syowa Base** 87.44 193 ⇑ *e*pP pP 00 37 36.0 +1.6
IMAR **Indian Mountai** 87.44 10 P P 00 35 47.3 +0.5
TCOL **CIGO, UAF Yank** 87.49 12 P 00 35 47.2
baz=208,SNR=26
COLA **College** 87.49 12 *i* P P 00 35 47.0 0.0
COLA pmax pmax
comp=Z,57nm,0.6s
COLA **College** 87.49 12 P P 00 35 47.0 0.0
SCRK **Sand Creek** 87.54 14 P 00 35 48.3
baz=212,SNR=17
IL31 **87.60** 13 P P 00 35 47.4 -0.1
IL31 IAmb IAmb 00 35 48.4
comp=Z,20nm,0.7s
ILAR **Eielson Array** 87.60 13 P P 00 35 47.4 -0.2
comp=Z,12nm,0.4s,baz=225,slow=5.4,SNR=337
ILAR pP pP 00 37 35.5 +0.3
comp=Z,12nm,1.0s,baz=225,slow=5.3,SNR=13
ILAR PP PP 00 39 25.0 +3.2
comp=Z,3.9nm,0.9s,baz=216,slow=7.5,SNR=5.2
ILAR PKKP PKKPdf 00 53 30.6 +0.6
comp=Z,0.5nm,0.5s,baz=359,slow=3.4,SNR=4.6
ILAR **Eielson Array** 87.60 13 P P 00 35 47.0 -0.6
LL01 **San Ignacio de** 87.62 134 P P 00 35 49.3 +1.0
LL02 **Futaleuf** 87.66 135 P P 00 35 49.9 +1.4
MSO **Missoula** 87.70 38 P 00 35 49.4
baz=238,SNR=13
MSO **Missoula** 87.70 38 P P 00 35 48.8 +0.2
MSO IAmb IAmb 00 35 50.2
comp=Z,29nm,1.4s
DLMT **Dillon** 87.72 40 P P 00 35 49.9 +1.0
DLMT IAmb IAmb 00 35 51.5
comp=Z,42nm,0.9s
POKR **Poker Plat Res** 87.79 12 P 00 35 48.6
baz=208,SNR=13
S22A **4UR Ranch, Cre** 87.80 49 P 00 35 51.1
baz=243,SNR=36
XAN **Xi'an** 87.89 307 P P 00 35 50.5 +0.8
XAN pmax pmax
comp=Z,9.0nm,0.8s
XAN pmax pmax
comp=Z,170nm,6.0s
XAN **Xi'an** 87.89 307 P P 00 35 50.3 +0.5
XAN pmax pmax
comp=Z,24nm,1.4s
XAN **Xi'an** 87.89 307 P P 00 35 50.2 +0.5
XAN IAmb IAmb 00 37 49.2
comp=Z,24nm,1.4s
O20A **White River Ci** 87.93 46 P 00 35 51.3
baz=242,SNR=5.6
JTMT **Jette** 87.99 37 P P 00 35 50.4 +0.4
K27K **Chicken** 88.04 15 P 00 35 51.3
baz=213,SNR=27
LRM **Limekiln Ridge** 88.05 39 P P 00 35 51.7 +1.2
QLMT **Earthquake Lak** 88.16 41 P P 00 35 52.8 +1.9
FLWY **Flagg Ranch** 88.24 42 P P 00 35 52.9 +1.6
FLWY IAmb IAmb 00 35 54.3
comp=Z,53nm,0.9s
LL04 **Puerto Octay** 88.24 133 P P 00 35 52.3 +1.0
LL04 IAmb IAmb 00 35 53.4
comp=Z,69nm,1.6s
YHB **Horse Butte** 88.26 41 P P 00 35 53.1 +1.6
BW06 **Boulder Array** 88.31 43 P 00 35 52.6
baz=241,SNR=31
PD31 **Pinedale Array** 88.31 43 P P 00 35 52.2 +0.5
PD31 IAmb IAmb 00 35 53.6
comp=Z,19nm,0.9s
PDAR **Pinedale Array** 88.31 43 P P 00 35 52.4 +0.6
comp=Z,10nm,0.8s,baz=212,slow=2.9,SNR=100
PDAR PKKP PKKPdf 00 53 28.6 +0.4
comp=Z,0.8nm,0.6s,baz=83,slow=3.9,SNR=8.6
PDAR **Pinedale Array** 88.31 43 P P 00 35 52.1 +0.3
BILL **Bilibino** 88.38 354 *i* P P 00 35 50.7 -0.4
BILL *i* *PP pP 00 37 39.3 +0.5
BILL *i* 00 39 27.5
BILL pmax pmax
comp=Z,13nm,1.3s
BILL **Bilibino** 88.38 354 P P 00 35 51.8 +0.6
BOZ **Bozeman (W)** 88.42 40 P 00 35 53.7
baz=239,SNR=79
H17A **Grant Village** 88.47 41 P 00 35 55.4
baz=240,SNR=37
PRP **Porcupine Dome** 88.53 13 P 00 35 52.2
baz=210
LKWY **Lake** 88.66 41 P P 00 35 55.8 +2.4
LKWY pmax pmax
comp=Z,48nm,1.1s
LKWY **Lake** 88.66 41 P P 00 35 55.8 +2.4
LKWY IAmb IAmb 00 35 57.8
comp=Z,48nm,1.1s
SNAA **Sanae** 88.69 178 P P 00 35 52.6 -0.3
SNAA **Sanae** 88.69 178 *ce*P P 00 35 52.5 -0.4
SNAA pmax pmax
comp=Z,29nm,1.2s
SNAA **Sanae** 88.69 178 P P 00 35 52.5 -0.4
SNAA IAmb IAmb 00 35 53.6
comp=Z,33nm,1.2s
DAWY **Dawson** 88.74 16 P P 00 35 53.9 +0.9
DAWY IAmb IAmb 00 35 54.9
comp=Z,35nm,0.7s
SDCO **Great Sand Dun** 88.74 49 P 00 35 55.4
baz=244,SNR=8.1
SDCO **Great Sand Dun** 88.74 49 P P 00 35 55.0 +1.0
VNA3 **Neumayer Olymp** 88.81 176 P P 00 35 53.3 0.0
HRY **Holter Researc** 88.87 39 P P 00 35 55.2 +1.1
EGAK **Eagle** 88.89 15 P 00 35 54.4
baz=214,SNR=41
EGAK **Eagle** 88.89 15 P P 00 35 53.9 +0.3
EGAK IAmb IAmb 00 35 55.3
comp=Z,37nm,0.8s
HHC **Hu-ho-hao-te** 89.03 314 *e*P P 00 35 55.0 0.0
HHC pmax pmax
comp=Z,15nm,1.0s
HHC pmax pmax
comp=Z,130nm,7.1s
MSTX **Muleshoe** 89.13 53 P P 00 35 56.5 +0.9
MSTX IAmb IAmb 00 35 57.7
comp=Z,39nm,0.8s
MSTX **Muleshoe** 89.13 53 P 00 35 56.7
baz=245,SNR=21
SUKH **Sukhothai** 89.13 289 P P 00 35 58.7 +2.9
COLD **Coldfoot** 89.16 10 P 00 35 56.3
baz=206,SNR=9.7
KMI **Kunming** 89.23 297 ⇑P P 00 35 56.5 +0.1
KMI pP pP 00 37 40.0 -4.2
KMI pmax pmax
comp=Z,7.0nm,0.6s
KMI pmax pmax
comp=Z,71nm,5.7s
VNA2 **Neumayer--Watz** 89.26 177 P P 00 35 55.8 +0.3
baz=190,slow=3.5
T25A **Trinidad** 89.26 50 P 00 35 57.0
baz=244,SNR=7.9
T25A **Trinidad** 89.26 50 P P 00 35 57.0 +0.7
NVL **N'lazarevskaya** 89.41 183 *e*P P 00 35 55.8 -0.3
NVL pmax pmax
comp=Z,79nm,0.7s
VNA1 **Neumayer--Stat** 89.48 177 P P 00 35 56.7 +0.3
Q24A **Divide** 89.53 48 P 00 35 58.8
baz=244
833A **Chaparral WMA,** 89.53 60 P 00 35 58.8
baz=247
ISCO **Idaho Springs** 89.57 47 P 00 35 59.1
baz=244,SNR=7.7
ISCO **Idaho Springs** 89.57 47 P P 00 35 58.5 +0.7
ISCO pmax pmax
comp=Z,10.0nm,1.3s
ISCO **Idaho Springs** 89.57 47 P P 00 35 58.5 +0.7
PLCA **Paso Flores** 89.59 133 P P 00 35 58.9 +1.1
comp=Z,21nm,0.9s,baz=233,slow=4.6,SNR=47
PLCA **Paso Flores** 89.59 133 P P 00 35 58.7 +1.0
PLCA pmax pmax
comp=Z,50nm,1.3s
PLCA **Paso Flores** 89.59 133 P P 00 35 58.7 +1.0
PLCA IAmb IAmb 00 36 00.2
comp=Z,50nm,1.3s
RLMT **Red Lodge** 89.64 41 P 00 35 59.8
baz=241,SNR=46
N23A **Red Feather La** 89.83 46 P 00 36 00.5
baz=243,SNR=24
CM36 **Chiang Mai Arr** 89.97 290 P P 00 36 01.0 +1.3
CM35 **Chiang Mai Arr** 89.98 290 P P 00 36 01.0 +1.3
JCT **Junction City** 90.03 58 P 00 36 00.9
baz=247
JCT **Junction City** 90.03 58 P P 00 36 00.7 +0.9
JCT **Junction City** 90.03 58 P P 00 36 00.7 +0.9
JCT IAmb IAmb 00 36 01.5
comp=Z,16nm,0.8s
CM04 **Chiang Mai Arr** 90.04 289 P P 00 36 02.2 +2.2
CM09 **Chiang Mai Arr** 90.04 289 P P 00 36 02.9 +2.8
CM34 **Chiang Mai Arr** 90.04 290 P P 00 36 02.0 +2.0
CM01 **Chiang Mai Arr** 90.06 289 P P 00 36 02.9 +2.8
CM05 **Chiang Mai Arr** 90.07 289 P P 00 36 02.6 +2.4
CM02 **Chiang Mai Arr** 90.08 289 P P 00 36 03.0 +2.8
CMAR **Chiang Mai Arr** 90.09 289 P P 00 36 01.3 +1.0
comp=Z,4.9nm,0.8s,baz=115,slow=3.0,SNR=27
CMAR pP pP 00 37 48.4 +0.2
comp=Z,0.7nm,0.3s,baz=112,slow=3.4,SNR=1.8
CMAR PKKPbc PKKPbc 00 53 29.0 +1.1
comp=Z,5.1nm,0.6s,baz=285,slow=4.6,SNR=19
CMAR **Chiang Mai Arr** 90.09 289 *i* P P 00 36 02.2 +1.9
CMAR pmax pmax
comp=Z,5.0nm,0.8s
CM15 **Chiang Mai Arr** 90.10 289 P P 00 36 04.0 +3.7
CM13 **Chiang Mai Arr** 90.11 289 P P 00 36 02.0 +1.7

CMMT Chiang Mai 90.21 290 P **P** **00 36 01.4 +0.5**
CM33 Chiang Mai Arr 90.21 290 P **P** **00 36 02.0 +1.2**
CHTO Chiang Mai 90.21 290 P **P** **00 36 01.6 +0.7**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 90.21 290 P **P** **00 36 01.6 +0.7**
K22A Casper 90.23 44 P 00 36 01.9
baz=243,SNR=9.9
BMAR Burnt Mountain 90.38 12 P **P** **00 36 01.0 +0.5**
TOLK Toolik Lake Re 90.54 10 P 00 36 02.2
baz=206,SNR=9.8
CD2 Chengdu 90.60 303 *e*P **P** **00 36 02.5 +0.1**
EGMT Eagleton 90.75 39 P 00 36 04.1
baz=241,SNR=9.9
EGMT Eagleton 90.75 39 P **P** **00 36 03.4 +0.7**
EGMT IAmb IAmb 00 36 04.9
comp=Z,19nm,0.9s
BI02 San Fabin de 90.84 130 P **P** **00 36 03.4 -0.2**
BI02 IAmb IAmb 00 36 05.5
comp=Z,34nm,0.9s
ABTX Abilene, Hawle 90.99 56 P 00 36 05.3
baz=247
EPYK Eagle Plains 91.27 15 P 00 36 05.5
baz=218,SNR=27
KSCO Kaye Shedlock' 91.33 49 P 00 36 07.9
baz=245,SNR=6.7
435B Jarrell 91.92 58 P 00 36 09.9
baz=248
MT01 Popeta 92.06 127 P **P** **00 36 09.8 +0.6**
A21K Barrow 92.06 7 P 00 36 09.1
baz=200
LAO LASA Array 92.25 41 P 00 36 11.7
baz=243,SNR=18
WMOK Wichita Mounta 92.47 54 P 00 36 11.3
baz=248
RSSD Black Hills 92.51 44 P 00 36 12.2
baz=245
RSSD Black Hills 92.51 44 P **P** **00 36 11.5 +0.4**
RSSD pmax pmax
comp=Z,38nm,1.0s
RSSD Black Hills 92.51 44 P **P** **00 36 11.5 +0.4**
PEL Peldehue 92.79 127 P **P** **00 36 13.3 +0.7**
PEL pmax pmax
comp=Z,31nm,0.9s
PEL Peldehue 92.79 127 P **P** **00 36 13.2 +0.7**
PEL IAmb IAmb 00 36 14.5
comp=Z,31nm,0.9s
VA03 San Esteban 93.06 126 P **P** **00 36 14.6 +0.7**
VA03 IAmb IAmb 00 36 15.3
comp=Z,26nm,1.1s
CBKS Cedar Bluff 93.31 50 P **P** **00 36 15.6 +0.9**
CBKS pmax pmax
comp=Z,33nm,0.9s
CBKS Cedar Bluff 93.31 50 P **P** **00 36 15.6 +0.9**
CBKS Cedar Bluff 93.31 50 P 00 36 15.8
baz=247
CO02 Combarbal 93.39 125 P **P** **00 36 15.8 +0.3**
INK Inuvik 93.55 15 P 00 36 15.4
baz=221
INK Inuvik 93.55 15 pP pP 00 38 03.2 -0.2
comp=Z,5.0nm,1.1s,baz=198,slow=4.6,SNR=3.5
INK Inuvik 93.55 15 P **P** **00 36 15.2 +0.2**
INK pmax pmax
comp=Z,16nm,0.8s
INK Inuvik 93.55 15 P **P** **00 36 15.2 +0.2**
INK IAmb IAmb 00 36 16.0
comp=Z,16nm,0.8s
CO03 El Pedregal 93.79 125 P **P** **00 36 17.8 +0.6**
CO03 IAmb IAmb 00 36 22.0
comp=Z,43nm,1.8s
DGMT Dagmar 94.26 40 P **P** **00 36 19.6 +0.8**
DGMT Dagmar 94.26 40 P 00 36 20.6
baz=245,SNR=9.3
SONM Songino Array 95.38 319 P **P** **00 36 24.1 +0.1**
comp=Z,0.2nm,0.4s,baz=104,slow=6.1,SNR=1.5
SONM PP **PP** **00 40 16.7 -6.1**
comp=Z,1.3nm,0.9s,baz=121,slow=6.7,SNR=4.7
SONM PKKP **PKKPbc** **00 53 14.4 -1.2**
comp=Z,2.3nm,1.0s,baz=275,slow=5.9,SNR=6.1
SONM PKKPab PKKPdf 00 53 50.3 +35
comp=Z,2.0nm,0.9s,baz=275,slow=4.5,SNR=5.3
BGNE Belgrade 95.42 48 P 00 36 25.8
baz=248,SNR=5.6
BGNE Belgrade 95.42 48 P **P** **00 36 25.5 +1.3**
KSU1 Kansas State U 95.68 51 P 00 36 27.1
baz=249
YKA Yellowknife Ar 95.80 25 P **P** **00 36 25.3 -0.1**
comp=Z,7.6nm,0.9s,baz=238,slow=4.4,SNR=71
YKA pP **pP** **00 38 14.1 +0.3**
comp=Z,1.0nm,0.8s,baz=239,slow=4.3,SNR=5.8
YKA PP **PP** **00 40 25.9 +0.4**
comp=Z,0.6nm,0.9s,baz=245,slow=7.3,SNR=4.2
YKA PKiKP **PKiKP** **00 41 01.0 -0.4**
comp=Z,0.2nm,0.6s,baz=255,slow=1.2,SNR=4.0
YKA PKKP **PKKPbc** **00 53 11.8 -3.0**
comp=Z,0.4nm,0.5s,baz=40,slow=2.6,SNR=12
YKA PKPPKP **P'P'df** **01 01 26.1 +2.2**
comp=Z,0.3nm,1.0s,baz=68,slow=2.8,SNR=3.6
C36M Paulatuk 96.73 17 P 00 36 29.4
baz=230
C36M Paulatuk 96.73 17 P **P** **00 36 29.4 0.0**
C36M IAmb IAmb 00 36 30.9
comp=Z,14nm,1.2s
ECSD EROS Data Cent 97.31 46 P 00 36 33.1
baz=250,SNR=7.5
ECSD EROS Data Cent 97.31 46 P Pdif 00 36 32.9 +0.2
TIXI Tiksi 98.14 345‖ *e*P Pdif 00 36 35.4 -0.2
LPAZ La Paz 102.12 112 P **Pdif** **00 36 55.9 +0.4**
comp=Z,3.2nm,0.9s,baz=216,slow=2.8,SNR=13
LPAZ PKiKP **PKiKP** **00 41 15.2 +0.3**
comp=Z,0.9nm,0.8s,baz=243,slow=3.6,SNR=2.8
LPAZ La Paz 102.12 112 *e*P **Pdif** **00 36 59.7 +4.2**
CPUP Villa Florida 106.23 126 PKiKP **PKiKP** **00 41 21.3 -0.2**
comp=Z,0.4nm,0.3s,baz=139,slow=2.6,SNR=2.8
NRIK Noril'sk 110.01 338 PKiKP **PKiKP** **00 41 25.8 -1.5**
comp=Z,1.1nm,0.5s,baz=84,slow=3.2,SNR=4.1
NRIK PP **PP** **00 42 07.6 -2.4**
comp=Z,1.1nm,0.6s,baz=95,slow=7.6,SNR=2.3
ZALV Zalesovo Beam 110.09 321 PKiKP **PKiKP** **00 41 26.5 -1.3**
comp=Z,2.2nm,0.5s,baz=84,slow=0.7,SNR=12
ZALV PKKPbc **PKKPbc** **00 52 31.1 -1.4**
comp=Z,1.6nm,0.5s,baz=238,slow=2.5,SNR=6.1
ZALV PKKPab **PKKPab** **00 52 42.9 -0.1**
comp=Z,2.4nm,0.7s,baz=248,slow=2.7,SNR=5.6
M57A Sunshine Farm, 110.65 52 P 00 41 29.0
baz=261
MK31 Makanchi Array 110.88 314*c i*PKiKP **PKiKP** **00 41 28.5 -1.1**
MKAR Makanchi Array 110.88 314 PKiKP **PKiKP** **00 41 28.6 -1.0**
comp=Z,2.3nm,0.6s,baz=111,slow=0.4,SNR=28
MKAR PKKPbc **PKKPbc** **00 52 28.6 -1.2**
comp=Z,2.4nm,0.5s,baz=275,slow=3.1,SNR=7.4
MKAR PKPPKP **P'P'df** **01 00 52.6 -4.0**
comp=Z,0.3nm,0.7s,baz=326,slow=0.5,SNR=3.7
N58A Sunbury 110.88 53 P 00 41 29.2
baz=262
L58A Harry Jones Me 111.69 52 P 00 41 31.0
baz=262
LSQQ Lebel-sur-Quev 111.70 44 P 00 41 30.0
baz=264
I57A Carthage 112.06 50 P 00 41 31.0
baz=263
D55A Sainte-Anne-du 112.51 46 P 00 41 32.0
baz=265
J59A Piesco 112.85 50 P 00 41 33.0
baz=264
D56A ZEC Mazanza, M 113.00 46 P 00 41 32.9
baz=265
CHGQ Chibougamau 113.46 43 P 00 41 32.9
baz=267
KURK Kurchatov 113.63 318 *i* PKiKP **PKiKP** **00 41 33.7 -0.9**
K61A Williamstown 113.67 51 P 00 41 35.3
baz=264
KURBB Kurchatov Arra 113.69 317 PKiKP **PKiKP** **00 41 33.7 -1.1**
comp=Z,3.0nm,0.6s,baz=98,slow=1.7,SNR=35
KURBB PP **PP** **00 42 35.8 -0.7**
comp=Z,1.0nm,0.8s,baz=89,slow=6.4,SNR=3.5
KURBB SKP **SKPdf** **00 44 22.5 -1.3**
comp=Z,1.3nm,0.8s,baz=91,slow=2.6,SNR=5.0
L61B Northampton 114.08 52 P 00 41 35.4
baz=265
J61A Chester 114.25 51 P 00 41 36.3
baz=265
D58A Chemin du LacG 114.29 46 P 00 41 35.2
baz=267
F60A Warwick 114.86 48 P 00 41 36.9
baz=267
BOOM Boomskoye usch 114.97 308 PKiKP PKPdf 00 41 37.2 -0.5
BOOM Boomskoye usch 114.97 308 PKPdf 00 41 37.2 -0.6
E60A Ste Agathe de 115.23 47 P 00 41 37.4
baz=267
I63A Otisfield 115.73 50 P 00 41 39.2
baz=267
PTGA Pitinga 115.78 101 **PKPdf** **00 41 39.6 -0.4**
G62A West of Eustis 115.82 49 P 00 41 38.9
baz=267
GCPR Guayabo City 115.83 79 **PKPdf** **00 41 39.3 -0.6**
E61A Lac Etchemin 115.90 47 P 00 41 39.3
baz=268
AAK Ala-Archa 116.04 309 PKP **PKPdf** **00 41 39.0 -0.8**
baz=133,slow=3.7
AAK PKKPbc **PKKPbc** **00 52 12.1 -0.5**
comp=Z,3.6nm,0.7s,baz=204,slow=4.6,SNR=14
AAK Ala-Archa 116.04 309‖ *i*PKiKP **PKPdf** **00 41 38.7 -1.1**
AAK pmax pmax
comp=Z,16nm,2.5s
MTP Monte Pirata 116.27 79 **PKPdf** **00 41 39.9 -0.7**
PKME Peaks-Kenny Pk 116.70 49 P 00 41 40.4
baz=268
H64A Troy 116.73 49 P 00 41 40.5
baz=268
F63A Nahmakanta, Br 116.84 48 P 00 41 40.9
baz=269
G64A Maxfield 117.08 49 P 00 41 41.4
baz=269
E63A Oxbow 117.33 47 P 00 41 41.1
baz=270
F64A Sherman 117.37 48 P 00 41 41.6
baz=269
D63A Stockholm 117.55 47 P 00 41 41.6
baz=270
PQI Presque Isle 117.61 47 **PKPdf** **00 41 41.8 -0.7**
G65A Princeton 117.92 49 P 00 41 42.7
baz=269
BVAR Borovoye Array 118.69 320 PKP **PKPdf** **00 41 42.9 -1.4**
comp=Z,5.4nm,0.4s,baz=182,slow=4.4,SNR=38
BVAR SKP **SKPdf** **00 44 33.0 -0.4**
comp=Z,1.7nm,0.8s,baz=106,slow=11,SNR=4.8
BVAR PKKPab **PKKPab** **00 52 05.6 +0.6**
comp=Z,3.1nm,0.6s,baz=240,slow=4.6,SNR=5.6
BRVK Borovoye 118.75 320*c i*PKiKP **PKPdf** **00 41 43.8 -0.7**
BRVK Borovoye 118.75 320 PKPdf **PKPdf** **00 41 43.7 -0.7**
KK31 Karatay Array 118.98 309 PKiKP **PKPdf** **00 41 44.7 -0.6**
KK31 Karatay Array 118.98 309 **PKPdf** **00 41 44.7 -0.6**
KKAR Karatay Array 118.98 309 PKiKP **PKPdf** **00 41 44.7 -0.6**
KKAR Karatay Array 118.98 309 **PKPdf** **00 41 44.7 -0.6**
BDFB Brasilia 119.33 122 PKP **PKPdf** **00 41 46.0 -0.9**
comp=Z,7.5nm,0.5s,baz=263,slow=1.3,SNR=12
BDFB Brasilia 119.33 122 PKiKP **PKPdf** **00 41 46.5 -0.4**
BDFB Brasilia 119.33 122 **PKPdf** **00 41 46.5 -0.4**
KBL Kabul 119.75 299 PKiKP **PKPdf** **00 41 47.2 0.0**
KBL Kabul 119.75 299 PKPdf **PKPdf** **00 41 47.2 0.0**
LMN Caledonia Moun 119.85 48 **PKPdf** **00 41 46.3 -0.5**
OPO Ambohidratompo 121.69 232 PKP **PKiKP** **00 41 51.8 +0.2**
comp=Z,6.1nm,0.8s,baz=125,slow=4.3
ALF01 Guarapari-ES 121.84 131 *e*P **PKPdf** **00 41 51.4 0.0**
SFJD Kangerlussuaq 122.23 22 PKiKP **PKPdf** **00 41 50.4 -0.3**
SFJD Kangerlussuaq 122.23 22 **PKPdf** **00 41 50.4 -0.3**
SUMG Summit 122.44 13 PKiKP **PKPdf** **00 41 51.6 +0.1**
SUMG Summit 122.44 13 PKPdf **PKPdf** **00 41 51.6 +0.1**
RIB01 Linhares ES 122.92 130 *e*P **PKPdf** **00 41 53.1 -0.4**
SVE Sverdlovsk 123.54 326 *e*PKiKP **PKPdf** **00 41 53.0 -0.5**
NAN01 Guarapari, ES 124.06 129 *e*P **PKPdf** **00 41 55.8 0.0**
ARU Arti 124.76 326 PKP **PKPdf** **00 41 55.9 +0.1**
comp=Z,4.8nm,0.4s,baz=94,slow=2.0,SNR=26
ARU PP **PP** **00 43 53.5 +2.2**
comp=Z,0.4nm,0.4s,baz=42,slow=2.2,SNR=4.1
ARU PKKPbc **PKKPab** **00 51 38.1 -0.4**
comp=Z,1.9nm,0.5s,baz=242,slow=2.3,SNR=15
ARU Arti 124.76 326 *i* PKiKP **PKPdf** **00 41 55.5 -0.4**
ARU 00 43 47.0
ARU 00 48 19.8
GUA01 Guaratinga, BA 125.10 128 *e*P **PKPdf** **00 41 57.2 -0.6**
SUR Sutherland 125.14 199 PKPdf **PKPdf** **00 41 57.7 -0.1**
HRA Herat 125.35 299 PKPdf **PKPdf** **00 41 57.6 -0.4**
ABKAR Akbulak array 125.73 317 PKPdf **PKPdf** **00 41 57.8 -0.2**
CMC01 Camacan, BA 126.09 127 *e*P **PKPdf** **00 41 59.1 -0.6**
NBIT Itapeh - BA 126.42 127 *e*P **PKPdf** **00 42 00.3 0.0**
AKTO Aktyubinsk 126.69 319 PKP **PKPdf** **00 41 60.0 +0.2**
comp=Z,4.2nm,0.6s,baz=97,slow=4.4,SNR=9.4
AKTO Aktyubinsk 126.69 319 PKiKP **PKPdf** **00 42 00.0 +0.2**
BOSA Boshof 126.97 205 PKP **PKiKP** **00 42 01.9 +0.2**
comp=Z,8.7nm,0.8s,baz=168,slow=1.3,SNR=19
BOSA Boshof 126.97 205 PKiKP **PKiKP** **00 42 02.0 +0.2**
BOSA Boshof 126.97 205 PKPdf **PKPdf** **00 42 01.4 +0.2**
WSAR Wadi Sarin 127.69 284 PKP **PKPdf** **00 42 01.5 -1.0**
comp=Z,2.8nm,0.7s,baz=279,slow=10,SNR=5.0
ARCES ARCESS Array B 128.28 350 PKP **PKPdf** **00 42 02.0 -0.3**
comp=Z,3.4nm,0.4s,baz=40,slow=1.2,SNR=47
ARCES PKKP **PKKPdf** **00 52 10.1 -3.7**
comp=Z,3.7nm,0.9s,baz=166,slow=1.9,SNR=4.6
ARCES ARCESS Array B 128.28 350 PKiKP **PKPdf** **00 42 02.2 -0.1**
ARCES ARCESS Array B 128.28 350 **PKPdf** **00 42 02.1 -0.1**
KIRV Kirov 128.47 331 PKP **PKiKP** **00 42 03.2 -0.3**
comp=Z,12nm,0.5s,baz=35,slow=1.9,SNR=5.0
KIRV SKPbc SKPbc 00 44 37.9
comp=Z,5.2nm,0.5s,baz=350,slow=5.5,SNR=3.6
GEYT Alibeck 128.59 303 PKP **PKPdf** **00 42 03.6 -0.3**
comp=Z,3.3nm,0.7s,baz=225,slow=1.7,SNR=9.1
GEYT SKPbc SKiKP 00 44 40.4 -14
comp=Z,3.8nm,0.9s,baz=224,slow=6.2,SNR=8.9
GEYT Alibeck 128.59 303 **PKPdf** **00 42 03.8 -0.1**
SOCY Socotra 129.83 270 PKPdf **PKPdf** **00 42 07.0 +0.1**
KLMR Klimovskoe 131.34 337 *e*PKiKP **PKPdf** **00 42 06.6 -1.6**
KLMR 00 44 39.4
KLMR pmax pmax
comp=Z,16nm,1.5s
KLMR Klimovskoe 131.34 337 *e*PKPdf **PKPdf** **00 42 06.6 -1.6**
KLMR AMP 00 42 13.9
comp=Z,16nm,1.5s
KLMR PP **PP** **00 44 39.5 +5.9**
NBMA Muriti-CE 131.45 120 *e*P **PKPdf** **00 42 09.9 -0.1**
NBPB Pedra_Branca-C 131.77 117 *e*P **PKPdf** **00 42 08.3 -2.2**
BELG Belogornoye 132.18 324 PKP **PKPdf** **00 42 09.8 -0.2**
comp=Z,14nm,0.6s,baz=13,slow=0.8,SNR=10
BELG SKPbc **SKPab** **00 44 52.0 -0.5**
comp=Z,36nm,0.8s,baz=212,slow=0.9,SNR=14
BELG Belogornoye 132.18 324*d i*PKiKP **PKiKP** **00 42 10.8 -0.4**
FINES FINESS Array B 135.17 344 PKhKP PKPpre 00 42 01.8
comp=Z,2.3nm,0.9s,baz=13,slow=1.9,SNR=6.0
FINES PKP **PKiKP** **00 42 16.2 -0.8**
comp=Z,2.4nm,0.4s,baz=20,slow=1.6,SNR=13
FINES SKPbc **SKPbc** **00 45 01.1 +0.8**
comp=Z,3.7nm,0.8s,baz=134,slow=5.5,SNR=5.0
FINES FINESS Array B 135.17 344 PKPdf **PKPdf** **00 42 16.1 +0.7**
AKT Akhty 135.90 310 *e*PKiKP **PKiKP** **00 42 19.9 +0.6**
AKT *e* 00 44 17.8
AKT *e* 00 45 04.7
AKT *e* 00 45 05.6
AKT pmax pmax
comp=Z,5.0nm,0.7s
OBN Obninsk 136.25 332 PKP **PKPdf** **00 42 17.9 +0.3**
comp=Z,2.0nm,0.5s,baz=54,slow=18,SNR=3.9
OBN SKP **SKPdf** **00 45 04.7 -1.5**
comp=Z,2.0nm,0.6s,baz=81,slow=3.1,SNR=5.1
OBN Obninsk 136.25 332 *i* PKiKP **PKPdf** **00 42 17.2 -0.4**
OBN *i* 00 45 04.5
OBN pmax pmax
comp=Z,8.0nm,0.9s
NOA NORSAR Array B 138.32 353 PKhKP PKPpre 00 42 11.9
comp=Z,0.7nm,0.6s,baz=16,slow=4.1,SNR=8.7
NOA PKP **PKPdf** **00 42 22.1 +0.8**
comp=Z,1.3nm,0.5s,baz=14,slow=3.9,SNR=7.8
TSUM Tsumeb 138.41 202 **PKPdf** **00 42 23.4 +0.4**
GNI Garni 138.45 309 PKP **PKPdf** **00 42 22.4 0.0**
comp=Z,3.1nm,0.8s,baz=349,slow=15,SNR=4.1
GNI SKPbc **SKPbc** **00 45 11.6 +0.6**
comp=Z,4.4nm,0.9s,baz=57,slow=1.9,SNR=6.5
GNI Garni 138.45 309‖ *i*PKiKP **PKiKP** **00 42 24.5 -0.1**
KBZ Khabaz 138.57 314 PKP **PKPdf** **00 42 22.0 -0.3**
comp=Z,2.1nm,0.9s,baz=71,slow=4.5,SNR=5.4
KBZ SKPbc **SKPbc** **00 45 10.8 -0.1**
comp=Z,3.4nm,1.0s,baz=166,slow=4.4,SNR=6.0
KBZ Khabaz 138.57 314‖ *i*PKiKP **PKiKP** **00 42 24.5 0.0**
KVAR Kislovodsk Arr 138.62 315 PKP **PKPdf** **00 42 20.7 -1.8**
comp=Z,2.1nm,0.9s,baz=85,slow=22,SNR=2.7
KVAR SKPbc **SKPbc** **00 45 11.7 +0.5**
comp=Z,4.1nm,1.0s,baz=88,slow=22,SNR=3.5
KIV Kislovodsk 138.63 315 *e*PKiKP **PKPdf** **00 42 22.1 -0.4**
KIV pmax pmax
comp=Z,12nm,1.0s
HFS Hagfors 138.90 351 PKhKP PKPpre 00 42 12.8
comp=Z,4.3nm,0.4s,baz=72,slow=4.8,SNR=25
KMBO Kilima Mbogo 139.85 243 PKhKP PKPpre 00 42 18.0
comp=Z,2.5nm,0.8s,baz=167,slow=8.4,SNR=6.4
KMBO PKP **PKPdf** **00 42 25.4 -0.4**
comp=Z,2.5nm,0.8s,baz=58,slow=5.6,SNR=5.1
KMBO SKPbc **SKPbc** **00 45 16.2 +0.5**
comp=Z,3.5nm,1.1s,baz=37,slow=7.2,SNR=3.2
STRU Stroemstad 140.29 353 *i* P **PKPdf** **00 42 19.6 -5.3**
NACGM Naroch 140.32 338 *i* PKP **PKPdf** **00 42 21.1 -4.0**
NACGM *i* PKP **PKPdf** **00 42 21.1 -4.0**
NACGM *i* PKP **PKPdf** **00 42 21.1 -4.0**
NACGM *i* pPKP PKiKP 00 42 50.5 +23
NACGM *i* sPKP 00 43 16.5
NACGM *i* PP pPKPdf 00 44 03.1 -17
NACGM *i* PPP PPP 00 46 50.6
NACGM *i* SKS SKSdf 00 49 22.5 +34
NACGM *i* SKKS SKKSac 00 52 03.5 +30
NACGM *i* PS 00 54 21.2
NACGM *i* SSS SSS 01 05 15.2
HOMB Homborsund 141.32 355 *i* P **PKPdf** **00 42 25.3 -1.4**
BORU Boraas 141.44 351 *i* P **PKPdf** **00 42 21.4 -5.6**
ONAU Onsala 141.79 352 *i* P **PKPdf** **00 42 22.8 -4.8**
KAC Achnashellach 141.95 7 *e*P **PKPdf** **00 42 24.5 -3.5**
FABU Falkenberg 142.05 351 *i* P **PKPdf** **00 42 24.5 -3.6**
BLEU Blekinge 142.17 348 *i* P **PKPdf** **00 42 23.8 -4.5**
DEL Delary 142.38 349 *i* P **PKPdf** **00 42 24.9 -3.8**
AKASG Malin Array Be 142.51 332 PKhKP PKPpre 00 42 25.2
comp=Z,7.5nm,0.3s,baz=43,slow=4.0,SNR=60
AKASG SKPbc **SKiKP** **00 45 21.8 -0.3**
comp=Z,5.9nm,0.8s,baz=40,slow=3.2,SNR=12
AKBB Malin Array Si 142.51 332*de*PKHKP PKPpre 00 42 25.3
BJUU Bjuv 142.90 350 *i* P **PKPdf** **00 42 26.9 -2.7**
INVG Invergeldie, C 143.14 6 *e*P PKPab 00 42 27.7 +0.1
FURI Furi 143.14 258 **PKPdf** **00 42 31.3 -0.5**
LUNU Lund 143.25 349 *i* P PKPbc 00 42 28.2 -0.1
EAB Aberfoyle 143.35 6 *e*P PKPbc 00 42 28.6 -0.1
BSD Bornholm Skovb 143.47 348 *i* P PKPbc 00 42 29.2 +0.1
BSD Bornholm Skovb 143.47 348 *i* PKiKP PKPbc 00 42 29.1 +0.1
SHEL Horse Pasture 143.60 167 PKiKP **PKPdf** **00 42 31.9 -0.3**
SHEL Horse Pasture 143.60 167 PKPdf **PKPdf** **00 42 31.9 -0.3**
SIM Simferopol' 143.60 321 *e*PKiKP PKPab 00 42 29.2 -0.5
SIM pmax pmax
comp=Z,70nm,0.5s
URFA Urfa 143.67 307 *e*P PKPab 00 42 30.0 -0.3
MALT Malatya 143.68 308 *e*P **PKPdf** **00 42 31.2 -0.5**
RSDY Resadiye-TOKAT 143.69 312 *e*P **PKPdf** **00 42 31.2 -0.4**
PGBU Glenifferbraes 143.70 6 *e*P PKPab 00 42 29.6 0.0
ESY Stoneypath 143.77 5 *e*P PKPab 00 42 29.8 -0.2
LODK Lodwar 143.81 248 PKPbc 00 42 32.0 +0.5
EBL Broad Law 143.88 5 *e*P PKPab 00 42 30.4 0.0
SVSK Karacayir 144.11 312 *e*P **PKPdf** **00 42 32.9 +0.7**
DARE Darende-Malaty 144.28 309 *e*P **PKPdf** **00 42 33.6 +0.8**
KVT Kavak 144.28 314 *e*P **PKPdf** **00 42 33.0 +0.4**
EKA Eskdalemuir Ar 144.30 5 PKP PKPbc 00 42 31.1 -0.6
comp=Z,28nm,0.9s,baz=334,slow=3.2,SNR=31
TOKA Tokat 144.31 312 **PKPdf** **00 42 32.9 +0.2**
NEWG New Galloway 144.41 6 *e*P PKPbc 00 42 31.8 -0.3
GAL1 Galloway 144.61 7 *e*P **PKPab** **00 42 33.8 +0.7**
GKP Gorka Klasztor 144.65 344 *e*PKP **PKPab** **00 42 33.2 -0.1**
SKMB Sankelmark Bun 144.72 353 *e*PKPbc **PKPab** **00 42 33.8 +0.2**
baz=15,slow=2.5
SORM Soroca 144.73 329⇑P **PKPdf** **00 42 33.0 -0.1**
SORM Soroca 144.73 329⇑PKiKP **PKPdf** **00 42 33.0 -0.1**
EDMD Edmundbyers 144.89 4 *e*P PKPbc 00 42 33.4 -0.2
GAZ Gaziantep 144.97 307 *e*P **PKPab** **00 42 34.9 -0.3**
GAZ Gaziantep 144.97 307 PKPdf PKPbc 00 42 34.8 +0.3
KESW Keswick, Cumbr 145.04 5 *e*P **PKPbc** **00 42 34.1 0.0**
KMRS Kahramanmaras 145.09 308 *e*P **PKPbc** **00 42 35.2 +0.4**
SARI SarD1z-Kayseri 145.12 309 *e*P **PKPdf** **00 42 34.6 +0.3**
IOMK Kirk Michael 145.22 7 *e*P **PKPbc** **00 42 34.5 0.0**
H07S1 FLORES T-PHASE 145.27 49 PKPbc **PKPbc** **00 42 35.3 0.0**
SNR=5.8
H07S1 FLORES T-PHASE 145.27 49 *e*PKP **PKPbc** **00 42 35.1 -0.2**
BNN Bunyan 145.36 310 *e*P **PKPdf** **00 42 35.0 +0.3**
GDLE Glaisdale, N Y 145.37 3 *e*P **PKPbc** **00 42 35.1 +0.1**
BSEG Bad Segeberg 145.37 352 *e*PKPbc **PKPbc** **00 42 34.8 -0.2**
baz=15,slow=2.5
LVV L'vov 145.38 335 *e*PKiKP **PKPbc** **00 42 34.7 -0.5**
LVV *e* 00 44 29.0
MBAR Mbarara 145.47 237 PKPbc **PKPab** **00 42 37.5 -0.4**
comp=Z,40nm,0.7s,baz=165,slow=0.9,SNR=42
MBAR Mbarara 145.47 237*c i*PKP2 **PKPab** **00 42 37.4 -0.5**
MBAR Mbarara 145.47 237 **PKPbc** **00 42 37.1 +0.3**
CORM Corum 145.65 313 *e*P **PKPbc** **00 42 36.4 +0.1**
HPK Haverah Park 145.78 4 *e*P **PKPbc** **00 42 36.2 0.0**
ILGA Ilgaz 145.86 315 **PKPbc** **00 42 37.1 0.0**
KWP Kalwaria Pacla 146.05 336 *e*PKP **PKPbc** **00 42 37.4 +0.2**
KWP Kalwaria Pacla 146.05 336 PKP2 **PKPbc** **00 42 37.3 +0.2**
KWP Kalwaria Pacla 146.05 336 **PKPbc** **00 42 37.3 +0.2**
CEYT Ceyhan 146.13 308 *e*P **PKPbc** **00 42 38.3 +0.6**
RUE Ruedersdorf 146.18 347 *e*PKPbc **PKPbc** **00 42 37.5 +0.1**
baz=15,slow=2.5
WLF1 Llynfaes 146.19 7 *e*P **PKPbc** **00 42 37.4 0.0**
PRAR RÁSCA 146.29 330⇑P **PKPbc** **00 42 38.6 +0.7**
YLL Llanberis 146.37 7 *e*P **PKiKP** **00 42 40.5 +0.3**
TLCR 146.47 325⇓P **PKPbc** **00 42 39.0 +0.6**
TLCR 146.47 325⇓PKP2 **PKPbc** **00 42 39.0 +0.6**
VARL Varlezi 146.51 327⇑P **PKPbc** **00 42 39.0 +0.5**
BR131 Keskin Array S 146.53 313*c i*PKP2 **PKPbc** **00 42 38.7 -0.3**
BRTR Keskin Array B 146.53 313 PKPbc **PKPbc** **00 42 38.7 -0.3**
comp=Z,12nm,0.6s,baz=143,slow=4.0,SNR=57
BRTR pPKPbc **pPKPdf** **00 44 31.9 -0.4**
comp=Z,1.4nm,0.6s,baz=75,slow=1.6,SNR=2.4
BRTR SKPab SKPab 00 45 54.1
comp=Z,4.2nm,0.8s,baz=97,slow=3.6,SNR=6.5
BRTR Keskin Array B 146.53 313 **PKPbc** **00 42 38.8 -0.2**
KARA Karaisali 146.55 308 *e*P **PKPdf** **00 42 36.8 +0.2**
BUR08 Bucovina Ar. S 146.55 331 **PKPbc** **00 42 39.3 +0.6**
BURAR Bucovina Array 146.57 331⇑P **PKPbc** **00 42 39.7 +0.9**
BURAR Bucovina Array 146.57 331⇑PKP2 **PKPbc** **00 42 39.7 +0.9**
BURAR Bucovina Array 146.57 331 PKPdf **PKPbc** **00 42 39.4 +1.0**
STNC Stoke 146.60 5 *e*P **PKPbc** **00 42 39.0 +0.4**
GHRR 146.63 327⇑P **PKiKP** **00 42 40.2 -0.8**
BIZ Bicaz 146.65 330⇑P **PKiKP** **00 42 40.0 -1.1**
TESR Tescani 146.69 329⇑P **PKPbc** **00 42 39.3 +0.3**
JURR Jurilovca 146.71 324⇓P **PKPbc** **00 42 39.6 +0.5**
FOEL Foel Wylfa 146.72 6 *e*P **PKPbc** **00 42 38.1 -0.8**
FLTG Flechtingen 146.79 350 *e*PKPbc **PKPbc** **00 42 39.0 0.0**
baz=15,slow=2.5
FLTG *ep*PKPbc pPKPab 00 44 34.1 +1.5
NRDL Niedersach Rie 146.81 351 *e*PKPbc **PKPbc** **00 42 39.4 +0.3**
baz=15,slow=2.5
CFR Carcaliu 146.84 326⇑P **PKPbc** **00 42 39.7 +0.3**
CFR Carcaliu 146.84 326⇑PKP2 **PKPbc** **00 42 39.7 +0.3**
TPGR Topolog 146.90 325⇑P **PKPbc** **00 42 40.1 +0.5**
ODBI Odobesti 147.01 327⇑P **PKiKP** **00 42 41.1 -0.7**
UZH Uzhgorod 147.01 335 *e*PKiKP **PKPdf** **00 42 35.8 -1.1**
UZH *i* 00 42 42.6
UZH *e* 00 44 33.5
ANTO Ankara 147.04 314 PKiKP **PKPdf** **00 42 38.4 +1.0**
ANTO Ankara 147.04 314 PKPdf **PKPdf** **00 42 38.4 +1.0**
AFSR Afar-Bala (An 147.05 313 *e*P **PKPbc** **00 42 39.8 -0.5**
BR231 Keskin MP Arra 147.07 314 **PKPbc** **00 42 40.7 +0.3**
ASSE Asse, Remlinge 147.08 350 *e*PKPbc **PKPbc** **00 42 40.2 +0.5**
baz=15,slow=2.5
MERS Mersin 147.09 308 *e*P **PKPbc** **00 42 40.5 0.0**
KSP Ksiaz 147.10 344 *e*PKP **PKPbc** **00 42 40.7 +0.8**
VRI Vrincioaia 147.11 328⇑P **PKPbc** **00 42 40.5 +0.3**
VRI Vrincioaia 147.11 328⇑PKP2 **PKPbc** **00 42 40.5 +0.3**
NIE Niedzica 147.11 338 *e*PKP **PKiKP** **00 42 41.1 -0.9**
PLOR Plostina 147.16 328⇓P **PKPbc** **00 42 40.6 +0.3**
PLOR Plostina 147.16 328⇓PKP2 **PKPbc** **00 42 40.6 +0.3**
TIRR Tirgusor 147.16 324 PKP2 **PKPbc** **00 42 40.5 +0.2**
TIRR Tirgusor 147.16 324 **PKPbc** **00 42 40.5 +0.2**
HARR Harsova 147.27 325⇑P **PKPbc** **00 42 41.3 +0.7**
HARR Harsova 147.27 325⇑PKP2 **PKPbc** **00 42 41.3 +0.7**
BMR Baia Mare 147.28 333⇓P **PKPbc** **00 42 41.3 +0.8**
BMR Baia Mare 147.28 333⇓PKP2 **PKPbc** **00 42 41.3 +0.8**
TLBR Topalu 147.31 325⇑P **PKPbc** **00 42 41.3 +0.6**
GRER 147.32 327⇓P **PKiKP** **00 42 42.2 -0.3**
TRPA Tarpa 147.32 334⇑P **PKPbc** **00 42 41.1 +0.5**
BISRR Bisoca 147.34 327⇑P **PKiKP** **00 42 42.1 -0.5**
MFTR Murfatlar 147.34 324⇓P **PKPbc** **00 42 41.5 +0.7**
ARCR ARCALIA 147.35 332⇑P **PKiKP** **00 42 41.7 -0.8**
CALA Caldeira 147.38 48 *e*PKP **PKPdf** **00 42 38.1 +0.1**
OSTC Ostas 147.38 343 *e*PKPDF **PKPdf** **00 42 38.0 +0.5**
OSTC ⇑*e*PKP **PKPbc** **00 42 41.5 +0.8**
CHVC Chvalec 147.39 344⇑ *e*PKP **PKPbc** **00 42 40.8 0.0**
CLZ Clausthal 147.40 351 *e*PKPbc **PKPbc** **00 42 41.3 +0.5**
baz=15,slow=2.5
CLZ *ep*PKPbc **pPKPab** **00 44 35.5 +0.4**

CLL	Collm	147.44	347	⇓*i*	SKPbc	SKiKP	00 45 34.9	+2.6
	comp=Z,9.0nm,1.0s							
CLL	Collm	147.44	347	⇑*e*	PKIKP	PKPdf	00 42 38.0	+0.5
CLL				*i*			00 42 45.5	
CLL				*e*			00 44 36.0	
CLL					pmax	pmax		
	comp=Z,39nm,0.7s							
CLL					pmax	pmax		
	comp=Z,19nm,0.9s							
CLL	Collm	147.44	347		PKPdf	PKPdf	00 42 38.5	+1.0
CLL					PKPbc	PKPbc	00 42 41.4	+0.5
CLL	Collm	147.44	347	*e*	PKPbc	PKPbc	00 42 40.9	+0.1
	baz=15,slow=2.5							
CLL				*ep*	PKPbc	pPKPab	00 44 35.2	-0.2
CLL	Collm	147.44	347	*e*	PKPdf	PKPdf	00 42 38.0	+0.5
CLL	Collm	147.44	347	⇑*i*	PKPbc	PKPbc	00 42 41.3	+0.5
	comp=Z,39nm,0.7s							
CLL	Collm	147.44	347	*i*	PKPab	PKPab	00 42 45.5	+1.1
	comp=Z,19nm,0.9s							
CLL	Collm	147.44	347	*ep*	PKPab	pPKPab	00 44 36.0	+0.6
UPC	Upice	147.48	344	*e*	PKP2	PKPbc	00 42 41.6	+0.6
UPC	Upice	147.48	344	⇑*e*	PKP	PKPbc	00 42 41.6	+0.6
KIZK	Mersin	147.52	307	*e*	P	PKPbc	00 42 41.5	0.0
DPC	Dobruska-Polom	147.53	343	*e*	PKIKP	PKPdf	00 42 37.7	-0.1
DPC				*e*			00 42 42.1	
DPC				*e*			00 44 36.4	
DPC	Dobruska-Polom	147.53	343	*e*	PKPDF	PKPdf	00 42 37.7	-0.1
DPC				⇑*e*	PKP	PKiKP	00 42 42.1	-0.7
DPC				*ep*	PKP	pPKPab	00 44 36.4	+0.6
PICO	Pico	147.61	48	*e*	PKP	PKPdf	00 42 38.3	0.0
MCH1	Michaelchurch	147.62	6	*e*	P	PKPbc	00 42 41.0	-0.3
LANS	Liptovska Anna	147.62	339	*e*	PKP2	PKiKP	00 42 42.9	-0.1
LANS	Liptovska Anna	147.62	339	*e*	PKP	PKiKP	00 42 42.9	-0.1
LANS				*e*			00 44 39.1	
NEHR	Nehoiu	147.63	328	⇓	P	PKPbc	00 42 42.1	+0.5
ROSA	Rosais	147.64	48	*e*	PKP	PKPdf	00 42 39.0	+0.7
ROSA	Rosais	147.64	48			PKPbc	00 42 42.4	+0.6
BRG	Berggiesshubel	147.65	346	*e*	PKPbc	PKPbc	00 42 41.8	+0.4
	baz=15,slow=2.5							
BRG	Berggiesshubel	147.65	346	⇓*e*	PKPf		00 42 38.0	
BRG	Berggiesshubel	147.65	346		Amp		00 42 39.6	
	comp=Z,7.5nm,1.2s							
BRG	Berggiesshubel	147.65	346	⇑*i*	PKP	PKPbc	00 42 41.9	+0.5
BRG	Berggiesshubel	147.65	346		Amp		00 42 42.7	
	comp=Z,21nm,0.8s							
BRG	Berggiesshubel	147.65	346	*ex*		x	00 42 48.4	
BRG	Berggiesshubel	147.65	346		Amp		00 42 48.7	
	comp=Z,7.2nm,0.8s							
BRG	Berggiesshubel	147.65	346	*ex*		x	00 43 00.2	
BRG	Berggiesshubel	147.65	346		Amp		00 43 01.5	
	comp=Z,3.3nm,0.8s							
BRG	Berggiesshubel	147.65	346		pPKP	pPKPdf	00 44 37.0	+3.9
BRG	Berggiesshubel	147.65	346		Amp		00 44 40.9	
	comp=Z,13nm,1.2s							
KRLC	Kraliky	147.65	342	*e*	PKIKP	PKPdf	00 42 38.4	+0.4
KRLC	Kraliky	147.65	342	*e*	PKPDF	PKPdf	00 42 38.4	+0.4
KRLC				⇑*e*	PKP	PKPbc	00 42 42.1	+0.6
MMAI	Mount Meron Ar	147.66	301		PKPbc	PKPbc	00 42 42.8	+0.7
	comp=Z,19nm,0.5s,baz=74,slow=6.5,SNR=115							
MMAI					pPKPbc	pPKPdf	00 44 34.5	+0.2
	comp=Z,2.2nm,0.5s,baz=76,slow=6.1,SNR=3.3							
DOPR	Dopca	147.69	329	⇑	P	PKiKP	00 42 42.7	-0.6
MORC	Moravsky Berou	147.70	341	*e*	PKP	PKPbc	00 42 42.1	+0.5
MORC	Moravsky Berou	147.70	341		PKP2	PKPbc	00 42 41.9	+0.3
MORC	Moravsky Berou	147.70	341			PKPbc	00 42 41.9	+0.3
ISR	Istrita	147.72	327	⇑	P	PKPbc	00 42 42.5	+0.7
ISR	Istrita	147.72	327	⇑	PKP2	PKPbc	00 42 42.5	+0.7
FBE	Freiberg	147.73	347	*e*	PKPbc	PKPbc	00 42 42.3	+0.7
	baz=15,slow=2.5							
GTTG	Gottingen	147.75	351	*e*	PKPbc	PKPbc	00 42 42.0	+0.4
	baz=15,slow=2.5							
GTTG				*ep*	PKPbc	pPKPbc	00 44 35.4	+0.2
MLR	Muntele Rosu	147.76	328		PKPbc	PKPbc	00 42 41.9	-0.1
	comp=Z,12nm,0.4s,baz=337,slow=5.6,SNR=68							
MLR					pPKPbc	pPKPdf	00 44 35.0	+1.0
	comp=Z,5.7nm,1.0s,baz=66,slow=2.4,SNR=3.0							
MLR	Muntele Rosu	147.76	328	⇑	P	PKPbc	00 42 42.1	0.0
MLR	Muntele Rosu	147.76	328		PKPdf	PKPdf	00 42 38.4	0.0
NEUB	Neuenburg	147.78	349	*e*	PKPbc	PKPbc	00 42 41.9	+0.2
	baz=15,slow=2.5							
MONM	Monmouth	147.79	6	*e*	P	PKPbc	00 42 41.4	-0.3
MDUB	Mudurnu	147.81	316	*e*	P	PKPbc	00 42 41.5	-0.8
MDUB	Mudurnu	147.81	316			PKPbc	00 42 40.9	-1.4
PVCC	Panska Ves	147.82	345	*e*	PKP2	PKPbc	00 42 42.4	+0.5
PVCC	Panska Ves	147.82	345	*e*	PKP	PKPbc	00 42 42.4	+0.5
GHAJ	Ghor Hadītha	147.94	298			PKPbc	00 42 43.3	+0.5
ASCN	Ascension	147.96	148			PKiKP	00 42 44.1	-0.7
H10N3	ASCENSION HYDR	147.96	147		PKPbc	PKPbc	00 42 42.8	-0.1
	baz=207,slow=2.9,SNR=3.7							
H10N1	ASCENSION HYDR	147.97	148		PKPbc	PKPbc	00 42 42.7	-0.3
	baz=207,slow=2.9,SNR=9.1							
CJR	Cluj-Napoca	147.97	332	⇑	P	PKPbc	00 42 43.1	+0.7
CJR	Cluj-Napoca	147.97	332	⇑	PKP2	PKPbc	00 42 43.1	+0.7
H10N2	ASCENSION HYDR	147.98	147		PKPbc	PKiKP	00 42 44.2	-0.2
	baz=207,slow=2.9,SNR=5.5							
SVRH	Sivrihisar-ESK	148.10	314	*e*	P	PKPbc	00 42 42.7	-0.4
LADK	Ladik-KONYA	148.11	312	*e*	P	PKPbc	00 42 41.7	-1.4
BUG	Bochum--Univer	148.19	354	*e*	PKPbc	PKPbc	00 42 42.9	+0.2
	baz=15,slow=2.5							
SWN1	Swindon	148.20	5	*e*	P	PKPbc	00 42 42.8	+0.1
KONT	Konya--Tatoy	148.22	311	*e*	P	PKPbc	00 42 42.8	-0.5
SAUV	Serdivan-Sakar	148.22	317	*e*	P	PKPbc	00 42 43.1	-0.1
VOIR		148.24	329	⇑	P	PKPbc	00 42 43.2	0.0
VOIR		148.24	329	⇑	PKP2	PKPbc	00 42 43.2	0.0
BERE	Bereket-Mersin	148.26	308	*e*	P	PKPbc	00 42 43.7	+0.1
KASTN	Kahler Asten	148.30	353	*e*	PKPbc	PKPbc	00 42 43.3	+0.2
	baz=15,slow=2.5							
DRGR		148.30	333	⇓	P	PKPbc	00 42 43.8	+0.5
DRGR		148.30	333	⇓	PKP2	PKPbc	00 42 43.8	+0.5
PRU	Pruhonice	148.33	345	*e*	PKP2	PKPbc	00 42 43.7	+0.5
PRU	Pruhonice	148.33	345	⇑	ePKP	PKPbc	00 42 43.7	+0.5
PRU					ePKPAB	PKPab	00 42 48.7	+0.6
MOX	Moxa	148.34	349	*e*	PKPbc	PKPbc	00 42 43.5	+0.3
	baz=15,slow=2.5							
PAGU	Agualva, Azore	148.35	47	*e*	PKP	PKPdf	00 42 39.0	-0.4
PLN	Plauen	148.39	348	*e*	PKPbc	PKPbc	00 42 43.6	+0.2
	baz=15,slow=2.5							
VRAC	Vranov	148.40	342		PKPbc	PKPbc	00 42 42.6	-0.8
	comp=Z,5.7nm,0.5s,baz=19,slow=1.6,SNR=17							
VRAC					pPKPbc	pPKPbc	00 44 37.0	-0.6
	comp=Z,2.6nm,0.8s,baz=8,9,slow=2.3,SNR=3.0							
VRAC	Vranov	148.40	342	⇑	P	PKiKP	00 42 44.1	-0.5
VRAC	Vranov	148.40	342	*e*	PKP	PKPbc	00 42 43.9	+0.5
VRAC				*e*			00 44 39.1	
TANN	Tannenbergstha	148.40	347	*e*	PKPbc	PKPbc	00 42 43.7	+0.3
	baz=15,slow=2.5							
WERD	Werda	148.40	348	*e*	PKPbc	PKPbc	00 42 43.5	+0.2
	baz=15,slow=2.5							
SRCK	Saricakaya, Es	148.40	316	*e*	P	PKPbc	00 42 43.6	-0.1
VYHS	Vyhne	148.40	339	*e*	PKP2	PKPbc	00 42 44.0	+0.6
VYHS	Vyhne	148.40	339	*e*	PKP	PKPbc	00 42 44.0	+0.6
VYHS				*e*			00 44 38.8	
LFK	Lefkose	148.42	306	*e*	P	PKPbc	00 42 44.0	+0.1
WOL	Wolverton	148.45	4	*e*	P	PKPbc	00 42 43.4	0.0
UBBA	Unterbreizbach	148.45	351	*e*	PKPbc	PKPbc	00 42 43.8	+0.5
	baz=15,slow=2.5							
JAVC	Velka Javorina	148.47	340	*e*	PKP	PKiKP	00 42 45.3	+0.5
JAVC				*e*			00 44 39.1	
GUNZ	Gunzen	148.47	348	*e*	PKPbc	PKPbc	00 42 44.0	+0.4
	baz=15,slow=2.5							
KOLL	Kolacno	148.47	339	*e*	PKP	PKiKP	00 42 44.4	-0.3
ARR	Arges	148.49	329	⇓	P	PKiKP	00 42 45.1	+0.1
PSZ	Piszkesteto	148.51	337	⇑	P	PKPbc	00 42 44.3	+0.5
PSZ	Piszkesteto	148.51	337			PKPbc	00 42 43.9	+0.1
WERN	Wernitzgruen	148.54	347	*e*	PKPbc	PKiKP	00 42 44.5	-0.4
	baz=15,slow=2.5							
NKC	Novy Kostel	148.57	347	*e*	PKHKP	PKPpre	00 42 40.3	
NKC	Novy Kostel	148.57	347	*e*	PKPDF	PKPdf	00 42 40.3	+0.8
NKC				⇑*e*	PKP	PKPbc	00 42 44.2	+0.4
HRT	Hereke	148.60	318	*e*	P	PKPbc	00 42 44.1	-0.1
KRUC	Moravsky	148.68	342	*e*	PKP	PKPbc	00 42 44.5	+0.5
KRUC				*e*			00 44 39.3	
CSS	Mathiatis	148.69	305			PKPbc	00 42 44.3	-0.2
PBCC	Pribram	148.74	345	⇑	*e*PKP	PKPbc	00 42 44.7	+0.5
ADVT	Abdulvahap	148.77	317	*e*	P	PKPbc	00 42 44.5	0.0
EIL	Elat	148.79	295		PKPbc	PKPbc	00 42 45.3	+0.4
	comp=Z,13nm,0.7s,baz=15,slow=2.8,SNR=20							
LOT	Lotru	148.85	330	⇓	P	PKPbc	00 42 44.7	-0.1
SMOL	Smolenice	148.85	340	*e*	PKP2	PKiKP	00 42 45.6	+0.1
SMOL	Smolenice	148.85	340	*e*	PKP	PKiKP	00 42 45.6	+0.1
MANZ	Manzenberg	148.88	348	*e*	PKPbc	PKPbc	00 42 45.0	+0.4
	baz=15,slow=2.5							
DEV	Deva	148.92	331	⇑	P	PKPbc	00 42 45.0	+0.3

DEV	Deva	148.92	331	⇑	PKP2	PKPbc	00 42 45.0	+0.3
HUMR	Humele	148.93	328	⇓	P	PKPbc	00 42 44.6	-0.2
LEF	Lefka	148.97	306	⇑	P	PKPbc	00 42 45.4	+0.2
LEF	Lefka	148.97	306	*e*	P	PKPbc	00 42 45.1	-0.1
GAZI	Gazipasa	148.97	308	*e*	P	PKPbc	00 42 44.3	-0.9
MODS	Modra-Piesok	149.02	340	*e*	PKHKP	PKPpre	00 42 45.1	
MODS	Modra-Piesok	149.02	340	*e*	PKP	PKPbc	00 42 45.0	+0.1
MODS				*e*			00 44 39.8	
UCC	Uccle	149.03	357	*d*	PKiKP	PKPbc	00 42 45.2	+0.4
UCC				*d*	PKPab	PKPab	00 42 49.9	-1.0
UCC	Uccle	149.03	357		PKP2	PKiKP	00 42 45.6	-0.2
UCC	Uccle	149.03	357			PKiKP	00 42 45.5	-0.2
ROTZ	Rotzenmuhle	149.07	347	*e*	PKPbc	PKPbc	00 42 45.4	+0.4
	baz=15,slow=2.5							
ROTZ				*ep*	PKPbc	pPKPbc	00 44 40.0	+1.1
AHRW	Bad Neuenahr-A	149.10	354	*e*	PKPbc	PKPbc	00 42 45.4	+0.4
	baz=15,slow=2.5							
MEM	Membach	149.12	355	*d*	PKPdf	PKPdf	00 42 41.5	+1.2
MEM				*d*	PKiKP	PKPbc	00 42 45.5	+0.4
BTNL	Ternell	149.13	355	*d*	PKiKP	PKPbc	00 42 45.5	+0.4
BTNL				*d*	PKPab	PKPab	00 42 49.7	-1.7
SIRR	Siria	149.16	333	⇑	P	PKiKP	00 42 45.9	-0.4
BSTI	Sart Tilman	149.18	356	*d*	PKiKP	PKPbc	00 42 45.6	+0.4
SHUT	Suhut-Afyon	149.20	313	*e*	P	PKPbc	00 42 46.0	+0.2
TNS	Taunus Mts	149.25	352	*e*	PKPbc	PKPbc	00 42 45.7	+0.2
	baz=15,slow=2.5							
SNF	Seneffe	149.32	357	*d*	PKPdf	PKPdf	00 42 40.7	+0.1
SNF				*d*	PKiKP	PKiKP	00 42 46.1	-0.3
SNF				*d*	PKPab	PKPab	00 42 52.4	+0.2
GRA1	Grafenberg Arr	149.33	349			PKiKP	00 42 46.3	-0.2
GRA1					PKPab	PKPab	00 42 53.2	+1.0
GRF	Grafenberg Arr	149.33	349		PKP2	PKPab	00 42 53.2	+1.0
GRF	Grafenberg Arr	149.33	349	*e*	PKPbc	PKiKP	00 42 46.1	-0.4
	baz=15,slow=2.5							
GRFO	Grafenberg	149.33	349		PKHKP	PKPpre	00 42 46.0	
GRFO	Grafenberg	149.33	349			PKPbc	00 42 46.0	+0.4
GRFO					PKPab	PKPab	00 42 53.8	+1.6
GZR	Gura Zlata	149.35	331	⇑	P	PKPbc	00 42 45.9	0.0
GZR	Gura Zlata	149.35	331	⇑	PKIKP	PKPbc	00 42 45.9	0.0
BCLA	Clavier	149.36	356	*d*	PKPdf	PKPdf	00 42 40.7	+0.1
BCLA				*d*	PKPbc	PKPbc	00 42 45.1	-0.5
BCLA				*d*	PKiKP	PKiKP	00 42 45.8	-0.8
BCLA				*d*	PKPab	PKPab	00 42 53.1	+0.8
KHC	Kasperske Hory	149.36	345	*e*	PKHKP	PKPpre	00 42 41.0	
KHC	Kasperske Hory	149.36	345	*e*	PKPDF	PKPdf	00 42 41.0	+0.2
KHC				⇑*e*	PKP	PKiKP	00 42 46.3	-0.3
KHC				*ep*	PKP	pPKPab	00 44 22.2	-0.8
KHC	Kasperske Hory	149.36	345		PKPdf	PKPdf	00 42 40.9	+0.2
KHC					PKPbc	PKiKP	00 42 46.4	-0.3
BHOU	Houvegnez	149.38	355	*d*	PKPdf	PKPdf	00 42 41.0	+0.3
BHOU				*d*	PKiKP	PKiKP	00 42 46.4	-0.1
BHOU				*d*	PKPab	PKPab	00 42 53.5	+1.1
BGES	Gesves	149.41	356	*d*	PKiKP	PKPbc	00 42 45.7	-0.1
BGES				*d*	PKPab	PKPab	00 42 53.1	+0.6
CKRC	Cesky Krumlov	149.47	344	*e*	PKPDF	PKPdf	00 42 41.2	+0.3
CKRC				⇑*e*	PKP	PKPbc	00 42 46.4	+0.4
CKRC				*ep*	PKP	pPKPbc	00 44 41.3	+1.2
TVSB	Tavsanli	149.48	316	*e*	P	PKPbc	00 42 45.8	-0.7
BMRD	Maredsous	149.51	357	*d*	PKPdf	PKPdf	00 42 40.8	-0.1
BMRD				*d*	PKiKP	PKiKP	00 42 46.8	-0.4
BMRD				*d*	PKPab	PKPab	00 42 52.9	0.0
WET	Wettzell	149.51	346	*e*	PKPbc	PKiKP	00 42 46.6	-0.3
	baz=15,slow=2.5							
MILB	Miltenberg	149.52	351	*e*	PKPbc	PKPbc	00 42 46.4	+0.3
	baz=15,slow=2.5							
MILB				*ep*	PKPbc	pPKPbc	00 44 41.3	+1.2
ISP	Isparta	149.57	312		PKHKP	PKPpre	00 42 45.9	
ISP	Isparta	149.57	312			PKPbc	00 42 45.9	-0.9
GEC2	GERESS Array S	149.60	345		PKPdf	PKPdf	00 42 41.6	+0.4
GEC2					PKPbc	PKPbc	00 42 46.7	+0.3
GERES	GERESS Array B	149.60	345		PKP	PKPdf	00 42 41.3	+0.1
	comp=Z,2.5nm,1.0s,baz=48,slow=2.0,SNR=12							
GERES					PKPbc	PKPbc	00 42 46.5	+0.1
	comp=Z,21nm,0.8s,baz=46,slow=2.8,SNR=91							
GERES					pPKPbc	pPKPbc	00 44 39.2	-1.4
	comp=Z,2.7nm,0.8s,baz=62,slow=3.2,SNR=5.1							
GERES	GERESS Array B	149.60	345			PKPdf	00 42 40.9	-0.3
GERES					PKPbc	PKPbc	00 42 46.7	+0.3
RCHB	Rochefort	149.63	356	*d*	PKPdf	PKPdf	00 42 41.2	+0.2
RCHB				*d*	PKiKP	PKPbc	00 42 46.6	+0.3
BZS	Buzias	149.69	333	⇑	P	PKiKP	00 42 47.1	-0.3
BZS	Buzias	149.69	333	⇑	PKHKP	PKPpre	00 42 47.1	
SRE	Strehaia	149.70	330	⇑	P	PKiKP	00 42 47.4	-0.1
SRE	Strehaia	149.70	330	⇑	PKHKP	PKPpre	00 42 47.4	
DOU	Dourbes	149.72	357	*d*	PKiKP	PKiKP	00 42 46.9	-0.3
KCTX	Karacabey (Bur	149.74	318	*e*	P	PKPbc	00 42 46.8	-0.1
PSET	Sete Cidades	149.81	48	*e*	PKP	PKPdf	00 42 42.2	+0.4
CONA	Conrad Observa	149.85	342	*e*	P	PKPdf	00 42 41.5	-0.1
	comp=Z,3.3nm,1.2s							
CONA				*i*	P	PKiKP	00 42 47.6	-0.1
	comp=Z,24nm,0.6s,SNR=17							
CONA				*e*		pPKPbc	00 44 42.8	+1.7
	comp=Z,12nm,1.1s							
HERR	Herculane	149.90	331	⇑	P	PKPbc	00 42 47.3	+0.1
MRMT	Marmara Adasi	150.02	319	*e*	P	PKPbc	00 42 47.3	-0.3
WLF	Walferdange	150.05	355	*d*	PKiKP	PKiKP	00 42 48.2	+0.3
WLF	Walferdange	150.05	355		PKHKP	PKPpre	00 42 48.5	
WLF	Walferdange	150.05	355			PKiKP	00 42 48.5	+0.6
WLF	Walferdange	150.05	355	*e*	PKPbc	PKiKP	00 42 48.1	+0.1
	baz=15,slow=2.5							
KORT	Korkueli	150.07	311	*e*	P	PKPbc	00 42 48.1	+0.1
BANR	Banloc	150.09	333	⇑	P	PKiKP	00 42 48.5	+0.4
MDVR	Moldovita	150.30	331	⇑	P	PKPbc	00 42 48.2	+0.1
KRBG	Karabiga-Canak	150.32	319	*e*	P	PKPbc	00 42 48.1	-0.1
MOA	Molln	150.37	343	*e*	P	PKPdf	00 42 43.5	+1.1
	comp=Z,3.8nm,1.0s							
MOA				*i*	P	PKPbc	00 42 48.0	-0.2
	comp=Z,8.2nm,0.5s,SNR=6.0							
MOA				*e*		pPKPbc	00 44 43.8	+1.4
	comp=Z,8.0nm,1.2s							
BALB	Balikesir	150.40	317	*e*	P	PKPbc	00 42 48.2	-0.2
MORH	Mrgy, Hungar	150.41	337	⇑	P	PKPbc	00 42 48.5	+0.2
MORH	Mrgy, Hungar	150.41	337	⇑	P	PKPbc	00 42 48.1	-0.2
JLP	Les Platons	150.43	6	*e*	P	PKPbc	00 42 48.3	+0.1
JVM	Valle D.L. Mar	150.45	6	*e*	P	PKiKP	00 42 48.5	-0.2
JQE	Queens East	150.48	6	*e*	P	PKPbc	00 42 48.3	0.0
JSA	Saint Aubin	150.48	6	*e*	P	PKPbc	00 42 47.3	-1.0
ELL	Elmali	150.50	311	*e*	P	PKPbc	00 42 48.9	0.0
ELL	Elmali	150.50	311		PKIKP	PKPbc	00 42 49.0	0.0
ELL	Elmali	150.50	311			PKPbc	00 42 49.0	0.0
ARSA	Arzberg	150.56	341	*e*	P	PKPbc	00 42 48.4	-0.2
	comp=Z,3.9nm,0.8s							
ARSA				*e*		pPKPbc	00 44 45.5	+1.7
	comp=Z,8.0nm,1.3s							
STU	Stuttgart	150.57	351		PKIKP	PKiKP	00 42 49.0	0.0
STU	Stuttgart	150.57	351			PKiKP	00 42 49.0	0.0
STU	Stuttgart	150.57	351	*e*	PKPbc	PKPbc	00 42 48.8	+0.2
	baz=15,slow=2.5							
MANT	Manisa	150.58	315			PKPbc	00 42 48.6	-0.6
PSMN	Pico do Norte,	150.66	49	*e*	PKP	PKPdf	00 42 43.0	-0.1
FUR	Furstenfeldbru	150.78	348	*e*	PKPbc	PKPbc	00 42 49.1	0.0
	baz=15,slow=2.5							
GELI	Tayfur-Gelibol	150.82	320	*e*	P	PKPbc	00 42 49.1	-0.3
FRGS	Fruska Gora	150.82	334	⇓	P	PKPbc	00 42 49.2	-0.1
FRGS	Fruska Gora	150.82	334	⇑	P	PKPbc	00 42 49.3	-0.1
RJOB	Jochberg	150.85	345	*e*	PKPbc	PKPbc	00 42 49.1	-0.2
	baz=15,slow=2.5							
AKAS	Kas	150.96	310			PKPbc	00 42 48.5	-1.5
BFO	Black Forest	151.12	352		PKIKP	PKiKP	00 42 50.3	0.0
BFO	Black Forest	151.12	352			PKiKP	00 42 50.3	0.0
BFO	Black Forest	151.12	352	*e*	PKPbc	PKPbc	00 42 49.9	0.0
	baz=15,slow=2.5							
BFO				*ep*	PKPbc	pPKPbc	00 44 46.2	+2.1
VTS	Vitosha	151.18	327	⇑	P	PKPbc	00 42 50.4	0.0
VTS	Vitosha	151.18	327	⇑	PKIKP	PKPbc	00 42 50.4	0.0
VTS	Vitosha	151.18	327			PKPbc	00 42 50.2	-0.2
BOVS	Bovan	151.18	330	⇑	P	PKPbc	00 42 49.7	-0.5
SOKA	Soboth	151.22	342	*e*	P	PKPdf	00 42 43.5	-0.3
	comp=Z,3.2nm,0.7s							
SOKA				*i*	P	PKPbc	00 42 50.0	-0.3
	comp=Z,22nm,1.3s,SNR=5.9							
SOKA				*e*		pPKPbc	00 44 46.4	+1.8
	comp=Z,6.3nm,0.8s							
PERS	Pernice	151.23	341	*e*	PKPbc	PKPbc	00 42 49.9	-0.4
KBA	Koelnbreinsper	151.33	344	*i*	P	PKPbc	00 42 49.8	-0.8
	comp=Z,19nm,0.9s,SNR=8.5							
KBA				*e*		pPKPbc	00 44 46.4	+1.3
	comp=Z,6.0nm,1.0s							
ECH	Echery	151.38	353		PKIKP	PKPbc	00 42 50.1	-0.4
ECH	Echery	151.38	353			PKPbc	00 42 50.1	-0.4
TEKS	Tekeris	151.44	334	⇑	*i*P	PKiKP	00 42 51.0	0.0
UBR	Ueberruh	151.47	349	*e*	PKPbc	PKPbc	00 42 50.6	-0.2

	baz=15,slow=2.5							
WATA	Walderalm	151.51	347	*e*	P	PKPdf	00 42 43.4	-0.9
	comp=Z,3.4nm,0.9s							
WATA				*i*	P	PKPbc	00 42 50.9	0.0
	comp=Z,12nm,0.5s,SNR=8.2							
WATA				*e*	P	pPKPbc	00 44 43.2	-2.0
	comp=Z,8.9nm,1.1s							
OBKA	Obir	151.52	342	*e*	P	PKPbc	00 42 50.2	-0.7
	comp=Z,6.8nm,0.8s							
OBKA				*e*	P	pPKPbc	00 44 48.5	+3.2
	comp=Z,6.5nm,1.2s							
RETA	Reutte	151.53	348	*i*	P	PKPdf	00 42 44.4	+0.2
	comp=Z,3.2nm,1.0s							
RETA				*i*	P	PKPbc	00 42 50.6	-0.3
	comp=Z,11nm,1.0s,SNR=6.9							
RETA				*e*	P	pPKPbc	00 44 47.3	+2.1
	comp=Z,6.8nm,1.3s							
WTTA	Wattenberg	151.56	346	*i*	P	PKPdf	00 42 44.3	-0.1
	comp=Z,3.9nm,0.9s,SNR=4.6							
WTTA				*i*	P	PKiKP	00 42 51.4	0.0
	comp=Z,31nm,0.7s,SNR=13							
WTTA				*e*	P	pPKPbc	00 44 46.5	+1.1
	comp=Z,12nm,1.2s							
MOTA	Moosalm	151.60	347	*e*	P	PKPdf	00 42 44.1	-0.3
	comp=Z,5.6nm,1.0s							
MOTA				*i*	P	PKPbc	00 42 51.2	0.0
	comp=Z,14nm,0.7s,SNR=8.2							
MOTA				*e*	P	pPKPbc	00 44 47.3	+1.8
	comp=Z,14nm,1.1s							
DIVS	Divibare	151.60	332	⇑	*i*P	PKPbc	00 42 50.9	-0.3
DIVS	Divibare	151.60	332		PKPdf	PKPdf	00 42 44.0	-0.5
DIVS					PKPbc	PKPbc	00 42

CMAR	**Chiang Mai Arr**	**15.87**	**123**	Pn		**Pn**	**00 36 25.1**	**-0.2**
	0.4nm,0.3s,baz=313,slow=12,SNR=7.7							
MKAR	**Makanchi Array**	**19.06**	**354**	P		**P**	**00 37 04.5**	**+0.4**
	0.3nm,0.3s,baz=172,slow=12,SNR=14							
KURBB	**Kurchatov Arra**	**23.30**	**350**	P		**P**	**00 37 49.8**	**+0.3**
	0.4nm,0.5s,baz=172,slow=10.0,SNR=8.8							
SONM	**Songino Array**	**26.04**	**34**	P		**P**	**00 38 15.1**	**0.0**
	3.1nm,0.8s,baz=228,slow=10,SNR=14							
ZALV	**Zalesovo Beam**	**26.11**	**360**	P		**P**	**00 38 15.8**	**+0.3**
	0.3nm,0.4s,baz=185,slow=10,SNR=1.9							
FINES	**FINESS Array B**	**51.17**	**328**	P		**P**	**00 41 44.5**	**-0.1**
	1.9nm,0.7s,baz=98,slow=7.9,SNR=5.2							
WRA	**Warramunga Arr**	**67.35**	**129**	P		**P**	**00 43 37.4**	**+0.2**
	2.5nm,0.7s,baz=323,slow=6.5,SNR=20							
ASAR	**Alice Springs**	**69.63**	**132**	P		**P**	**00 43 51.3**	**-0.1**
	1.9nm,0.6s,baz=315,slow=6.3,SNR=27							
CTA	**Charters Tower**	**76.03**	**122**	P		**P**	**00 44 29.9**	**+0.4**
	1.0nm,0.4s,baz=270,slow=2.0,SNR=1.3							
ILAR	**Eielson Array**	**79.35**	**20**	P		**P**	**00 44 46.9**	**-0.4**
	0.4nm,0.9s,baz=298,slow=4.0,SNR=2.4							
YKA	**Yellowknife Ar**	**88.65**	**9**	P		**P**	**00 45 34.5**	**-0.2**
	0.4nm,0.8s,baz=337,slow=4.8,SNR=6.6							

PRU 26 00:32:46.8±0.0, 51.50N×16.12E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**171**	*e*Pg	Pg	00 32 59.9	+0.3
KSP				*e*Sg	Sg	00 33 08.8	+0.7
CHVC	**Chvalec**	**0.91**	**183**	*e*PG	Pg	00 33 04.6	+0.3
CHVC				*e*SG	Sg	00 33 16.4	+0.3
	comp=Z,4.0nm,0.4s						
OSTC	**Ostas**	**0.95**	**176**	*e*PG	Pb	00 33 05.5	-0.6
OSTC				*e*SG	Sg	00 33 18.0	+0.8
	comp=Z,4.6nm,0.3s						
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	Pg	00 33 08.8	-0.2
DPC				*e*SG	Sg	00 33 23.7	-0.3
	comp=Z,2.7nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**226**	*e*PG	Pb	00 33 13.4	-0.1
PVCC				*e*SG	Sb	00 33 31.9	+0.3
	comp=Z,17nm,0.2s						
KRLC	**Kraliky**	**1.49**	**163**	*e*PG	Pn	00 33 15.0	+0.2
KRLC				*e*SG	Sg	00 33 34.6	+0.1
	comp=Z,4.0nm,0.3s						
BRG	**Berggiesshubel**	**1.51**	**246**	Pg	Pg	00 33 15.7	0.0
BRG				Sg	Sn	00 33 35.9	+0.5
BRG				Amp		00 33 37.5	
	comp=Z,6.0nm,0.4s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*PN	Pn	00 33 20.8	-0.4
MORC				*e*SG	Sb	00 33 47.3	-0.7
CLL	**Collm**	**1.96**	**266**	*e*Pg	Pg	00 33 24.0	-0.4
CLL				*e*Sg	Sb	00 33 49.0	+0.6
	comp=Z,3.0nm,0.4s						
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PG	Pb	00 33 39.0	0.0
KHC				*e*SG	Sg	00 34 18.2	-1.0
	comp=Z,1.1nm,0.3s						
CKRC	**Cesky Krumlov**	**2.92**	**204**	*e*PG	Pb	00 33 39.9	+0.1
CKRC				*e*SG	Sg	00 34 18.9	-1.8

IDC 26 00:37:12.0±2.1, 10.75S×120.03E, h0km, mb3.3/1, mb1 3.5/5, mb1mx3.3/62, mbtmp3.4/5, ML3.3/4, Error ellipse: s-maj=61.2km s-min=28.0km az=47.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.61**	**82**	Pn	Pn	00 38 08.8	-0.4
	4.0nm,0.3s,baz=339,slow=1.0,SNR=4.3						
BATI				Sn	Sn	00 38 47.9	-4.8
	2.1nm,0.3s,baz=17,slow=21,SNR=5.7						
FITZ	**Fitzroy Crossi**	**9.10**	**144**	Pn	Pn	00 39 25.6	+0.9
	0.2nm,0.3s,baz=326,slow=7.3,SNR=7.8						
FITZ				Sn	Sn	00 40 58.2	-10
	0.2nm,0.3s,baz=55,slow=23,SNR=1.3						
WRA	**Warramunga Arr**	**16.54**	**125**	Pn	Pn	00 41 04.0	-1.5
	0.1nm,0.3s,baz=300,slow=9.8,SNR=1.9						
ASAR	**Alice Springs**	**18.43**	**136**	P	P	00 41 29.6	+0.4
	0.1nm,0.3s,baz=314,slow=13,SNR=2.7						
MKAR	**Makanchi Array**	**66.47**	**333**	P	P	00 48 03.3	0.0
	0.2nm,0.6s,baz=155,slow=7.2,SNR=2.0						

IDC 26 00:39:17.2±13.0, 28.67N×85.85E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.2/77, mbtmp3.8/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/41, Error ellipse: s-maj=248.1km s-min=66.7km az=179.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**24.89**	**34**	P	P	00 44 41.9	0.0
	1.0nm,0.7s,baz=222,slow=9.6,SNR=6.8						
ZALV	**Zalesovo Beam**	**25.27**	**359**	P	P	00 44 44.9	0.0
	1.0nm,0.6s,baz=180,slow=8.6,SNR=2.5						
OBN	**Obninsk**	**43.95**	**321**	LR	LR	01 07 57.4	
	comp=Z,8.9nm,18.4s,baz=192,slow=39						
ARCES	**ARCESS Array B**	**53.15**	**338**	P	P	00 48 36.4	-0.1
	2.8nm,0.9s,baz=97,slow=7.7,SNR=1.5						

IDC 26 00:41:34.1±7.2, 27.24N×85.88E, h0km, mb4.0/3, mb1 3.9/4, mb1mx3.3/76, mbtmp3.8/4, ML3.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/40, Error ellipse: s-maj=140.8km s-min=58.3km az=169.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**17.95**	**332**	LR	LR	00 52 36.2	
	comp=Z,48nm,20.0s,baz=246,slow=37						
MKAR	**Makanchi Array**	**19.73**	**353**	P	P	00 46 04.9	-0.3
	0.1nm,0.3s,baz=177,slow=11,SNR=2.9						
SONM	**Songino Array**	**26.08**	**32**	P	P	00 47 09.3	-0.2
	0.5nm,0.5s,baz=219,slow=10.0,SNR=2.0						
ARCES	**ARCESS Array B**	**54.48**	**338**	P	P	00 51 04.0	+0.8
	3.3nm,0.8s,baz=102,slow=8.4,SNR=7.3						
HFS	**Hagfors**	**57.96**	**326**	P	P	00 51 27.1	-1.0
	2.9nm,1.0s,baz=98,slow=8.9,SNR=2.0						

*BJI **26** 00:41:41.1±0.0, 12.77N×143.94E, h104km, mB4.9/36, mb5.0/59*
*DJA **26** 00:41:42.5±0.5, 13°N±3°×14°E±°, h87km±8km, M5.1/19, mB5.6/6, mb4.9/19, MLv5.2/1, Mw(mB)5.2/6*
*IDC **26** 00:41:45.5±0.8, 12.93N×143.77E, h117km±7km, mb4.2/35, mb1 4.3/36, mb1mx4.1/65, mbtmp4.6/36, MS3.5/20, Ms1 3.5/20, ms1mx3.4/36, Error ellipse: s-maj=11.1km s-min=8.6km az=80.0*
*NEIC **26** 00:41:45.1±1.0, 12.87N±0.07×143.66E±0.09, h107km±5km, mb4.7/117, Error ellipse: s-maj=12.9km s-min=10.4km az=102.0*

ISC 26 00:41:44.5±0.7, 12.81N±0.05×143.69E±0.06, h105km±6km, n234, σ1§12/233, mb4.7/113, 4C, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.39**	**56**	P	**Pn**	**00 42 09.3**	**-0.4**
	992nm,0.3s,baz=220,slow=4.3,SNR=372						
GUMO				S	**Sn**	**00 42 28.5**	**-0.3**
	baz=209,slow=19						
GUMO	**Guam**	**1.39**	**56**	Pn	**Pn**	**00 42 09.6**	**-0.1**
GUMO				Sn	**Sn**	**00 42 27.9**	**-0.8**
GUMO	**Guam**	**1.39**	**56**	P	**Pn**	**00 42 09.8**	**+0.1**
ANA2	**Anatahan**	**4.02**	**29**		**Pn**	**00 42 45.8**	**+1.7**
ANA2	**Anatahan**	**4.02**	**29**	P	**Pn**	**00 42 47.2**	**+3.1**
SARN	**Sarigan**	**4.36**	**27**	P	**Pn**	**00 42 51.3**	**+2.6**
MANU	**Manus Island**	**15.21**	**166**		**Pn**	**00 45 14.1**	**+0.4**
JAY	**Jayapura**	**15.51**	**191**	P	**P**	**00 45 19.8**	**+0.1**
	11nm,1.0s						
PATS	**Pohnpei**	**15.58**	**111**	Pn	**Pn**	**00 45 18.5**	**0.0**
GENI	**Genyem**	**15.70**	**193**	P	**Pn**	**00 45 18.2**	**-1.7**
	31nm,0.8s						
RKPI	**Ransiki, Papua**	**17.08**	**214**	P	**Pn**	**00 45 31.5**	**-5.4**
	4μm160nm,0.6s						
SIJI	**Sorong**	**18.35**	**223**	P	**Pn**	**00 45 53.3**	**+1.0**
	baz=13,slow=19,SNR=4.9						
DAV	**Davao City (W)**	**18.72**	**254**	LR	LR	00 51 42.0	
	comp=Z,93nm,21.6s,baz=268,slow=32						
RABL	**Rabaul**	**18.88**	**153**	P	**Pn**	**00 45 58.7**	**+0.2**
RABL				IAmb	IAmb	00 46 02.0	
	comp=Z,82nm,1.2s						
FAKI	**Fak Fak**	**19.32**	**217**		**Pn**	**00 46 04.7**	**+1.0**
FAKI				IAmb	IAmb	00 46 20.4	
	comp=Z,41nm,0.9s						
FAKI	**Fak Fak**	**19.32**	**217**	P	**Pn**	**00 46 04.1**	**+0.4**
	comp=Z,860nmcomp=Z,51nm,1.0s						
JOW	**Kunigami**	**20.09**	**316**	P	**P**	**00 46 10.9**	**+1.1**
	comp=Z,99nm,0.5s,baz=139,slow=8.2,SNR=21						
JOW	**Kunigami**	**20.09**	**316**	P	**P**	**00 46 10.4**	**+0.6**
TNTI	**Ternate**	**20.12**	**235**	P	**P**	**00 46 10.2**	**-0.1**
TGY	**Tagaytay City**	**22.16**	**276**	P	**P**	**00 46 33.0**	**+0.9**
	comp=Z,158nm,0.4s,baz=160,slow=4.8,SNR=13						
JSU	**Suzuyama**	**22.24**	**329**	P	**P**	**00 46 32.6**	**-0.1**
JSU				IAmb	IAmb	00 46 35.1	
	comp=Z,58nm,0.9s						
PMG	**Port Moresby**	**22.34**	**171**	LR	LR	00 55 39.1	
	comp=Z,69nm,19.4s,baz=352,slow=37						
PMG	**Port Moresby**	**22.34**	**171**	P	**P**	**00 46 36.1**	**+2.2**
JMN	**Monobe**	**22.66**	**338**	P	**P**	**00 46 36.7**	**-0.4**
JMN				IAmb	IAmb	00 46 39.2	
	comp=Z,67nm,1.5s						
H11S3	**WAKE ISLAND Hy**	**22.85**	**73**	T	T	01 09 56.2	
	baz=258,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**22.86**	**73**	T	T	01 10 02.4	
	baz=258,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**22.86**	**73**	T	T	01 09 54.6	
	baz=258,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**23.29**	**70**	T	T	01 10 33.2	
	baz=255,slow=75,SNR=15						
H11N2	**WAKE ISLAND Hy**	**23.30**	**70**	T	T	01 10 38.5	
	baz=255,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**23.31**	**70**	T	T	01 10 31.3	
	baz=255,slow=75,SNR=46						
JNU	**Nakatsue**	**23.36**	**332**	P	**P**	**00 46 43.0**	**-0.7**
	comp=Z,29nm,0.8s,baz=128,slow=5.2,SNR=14						
JNU	**Nakatsue**	**23.36**	**332**	P	**P**	**00 46 43.9**	**+0.1**
JNU				IAmb	IAmb	00 46 45.4	
	comp=Z,56nm,1.0s						
JGF	**Kuroka**	**23.40**	**347**	P	**P**	**00 46 43.9**	**-0.2**
JYT	**Yasato**	**23.52**	**353**	P	**P**	**00 46 44.0**	**-1.2**
JYT				IAmb	IAmb	00 46 45.3	
	comp=Z,61nm,1.3s						
JWT	**Wachi**	**23.59**	**343**	P	**P**	**00 46 44.9**	**-0.9**
YULB	**Yu-li**	**23.70**	**299**	P	**P**	**00 46 46.6**	**-0.4**
YULB				IAmb	IAmb	00 46 49.2	
	comp=Z,38nm,0.8s						
NACB	**Ninganchiao**	**23.77**	**302**	P	**P**	**00 46 46.6**	**-0.9**
NACB				IAmb	IAmb	00 46 48.5	
	comp=Z,32nm,1.1s						
JHS	**Saijyo**	**24.07**	**338**	P	**P**	**00 46 48.9**	**-1.3**
JHS				IAmb	IAmb	00 46 55.1	
	comp=Z,19nm,0.8s						
MJAR	**Matsushiro Arr**	**24.14**	**349**	P	**P**	**00 46 49.1**	**-1.6**
	comp=Z,8.1nm,0.8s,baz=167,slow=11,SNR=21						
MJAR				PcP	**PcP**	**00 50 28.1**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=160,slow=4.5,SNR=4.0						
MJAR				LR	LR	00 54 39.4	
	comp=Z,140nm,21.9s,baz=200,slow=32						
MJAR	**Matsushiro Arr**	**24.14**	**349**	P	**P**	**00 46 49.2**	**-1.4**
MAJO	**Matsushiro**	**24.14**	**349**	P	**P**	**00 46 49.2**	**-1.5**
MAT	**Matsushiro**	**24.14**	**349**	P	**P**	**00 46 48.9**	**-1.8**
MAT				*e*S	**S**	**00 51 03.8**	**+2.7**
SSLB	**Suanglung**	**24.15**	**300**	P	**P**	**00 46 51.1**	**+0.1**
MRSI	**Marisa**	**24.80**	**242**	P	**P**	**00 46 57.3**	**+0.4**
	comp=Z,1μmcomp=Z,68nm,0.9s						
LUWI	**Luwuk**	**24.90**	**238**	P	**P**	**00 46 57.7**	**-0.2**
LUWI	**Luwuk**	**24.90**	**238**	P	**P**	**00 46 55.2**	**-2.7**
	comp=Z,3μmcomp=Z,146nm,1.0s						
JMM	**Marumori**	**25.08**	**355**	P	**P**	**00 46 59.4**	**+0.2**
JMM				IAmb	IAmb	00 47 05.7	
	comp=Z,35nm,0.9s						
JTU	**Tsushima**	**25.21**	**331**	P	**P**	**00 47 00.2**	**-0.2**
JTU				IAmb	IAmb	00 47 03.1	
	comp=Z,22nm,0.9s						
TOLI2	**Tolitoli**	**25.50**	**245**	P	**P**	**00 47 04.0**	**+0.7**
JSD	**Sado**	**25.58**	**350**	P	**P**	**00 47 03.8**	**0.0**
JSD				IAmb	IAmb	00 47 07.2	
	comp=Z,19nm,0.9s						
APSI	**Ampana**	**25.77**	**240**	P	**P**	**00 47 01.3**	**-4.4**
	comp=Z,33nm,1.2s						
COEN	**Coen**	**26.60**	**181**	P	**P**	**00 47 14.1**	**+0.9**
HNR	**Honiara**	**27.37**	**143**	LR	LR	00 58 34.8	
	comp=Z,50nm,18.5s,baz=329,slow=37						
KSRS	**Korea Array**	**28.30**	**333**	P	**P**	**00 47 26.5**	**-1.6**
	comp=Z,2.9nm,0.7s,baz=142,slow=9.6,SNR=14						
KSRS				LR	LR	00 58 47.0	
	comp=Z,61nm,18.2s,baz=145,slow=36						
KSAR	**Wonju Array Be**	**28.31**	**333**	P	**P**	**00 47 27.5**	**-0.7**
NJ2	**Nanjing**	**29.76**	**314**	*e*P	**P**	**00 47 42.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
ASAJ	**Asahikawa**	**31.21**	**358**	P	**P**	**00 47 52.6**	**-1.1**
	comp=Z,11nm,1.0s,baz=278,slow=25,SNR=1.7						
WHN	**Wuhan**	**32.32**	**308**	⇑P	**P**	**00 48 05.0**	**+1.3**
WHN				pP	**pP**	**00 48 25.8**	**-0.4**
WHN				pmax	pmax		
	comp=Z,62nm,1.0s						
CTAO	**Charters Tower**	**32.79**	**176**	P	**P**	**00 48 09.1**	**+1.2**
CTAO				IAmb	IAmb	00 48 16.2	
	comp=Z,15nm,1.4s						
USRK	**Ussuriysk Ar.**	**32.85**	**344**	P	**P**	**00 48 07.0**	**-1.2**
	comp=Z,1.2nm,0.6s,baz=180,slow=7.2,SNR=2.7						
QIZ	**Qiongzhong**	**33.09**	**285**	P	**P**	**00 48 08.5**	**-2.1**
QIZ				S	**S**	**00 53 24.0**	**+1.9**
QIZ				LR	LR		
	comp=Z,180nm,16.2s						
QIZ				LR	LR		
	comp=Z,180nm,21.1s						
WB0	**Warramunga Arr**	**33.64**	**196**	P	**P**	**00 48 15.8**	**+0.5**
WR0	**Warramunga Arr**	**33.79**	**196**	P	**P**	**00 48 17.1**	**+0.6**
WRA	**Warramunga Arr**	**33.83**	**196**	P	**P**	**00 48 17.6**	**+0.7**
	comp=Z,3.8nm,0.7s,baz=19,slow=9.5,SNR=17						
WRA				PcP	**PcP**	**00 50 52.8**	**-0.9**
	comp=Z,3.0nm,0.8s,baz=14,slow=3.4,SNR=6.1						
WRA	**Warramunga Arr**	**33.83**	**196**	P	**P**	**00 48 16.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**35.50**	**210**	P	**P**	**00 48 31.5**	**+0.2**
	comp=Z,6.0nm,1.0s,baz=29,slow=12,SNR=3.2						
FITZ				PcP	**PcP**	**00 50 58.6**	**0.0**
	comp=Z,1.3nm,0.5s,baz=50,slow=1.1,SNR=7.3						
FITZ	**Fitzroy Crossi**	**35.50**	**210**	P	**P**	**00 48 31.3**	**0.0**
FITZ				IAmb	IAmb	00 48 37.9	
	comp=Z,8.6nm,1.1s						
FITZ					**PcP**	**00 50 59.1**	**+0.5**
ENH	**Enshi**	**36.05**	**304**	P	**P**	**00 48 36.1**	**0.0**
BJT	**Baijiatuan**	**36.34**	**323**	P	**P**	**00 48 38.0**	**-0.3**
BJI	**Beijing**	**36.35**	**323**	P	**P**	**00 48 38.5**	**+0.1**
BJI				pmax	pmax		
	comp=Z,32nm,0.9s						
GYA	**Guiyang**	**37.27**	**297**	⇑P	**P**	**00 48 48.3**	**+1.8**
GYA				pP	pwP	00 49 13.0	-0.8
GYA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIY	**Taiyuan**	**37.29**	**317**	*e*P	**P**	**00 48 47.5**	**+1.0**
TIY				pmax	pmax		
	comp=Z,51nm,1.0s						
AS31	**Alice Springs**	**37.50**	**195**	P	**P**	**00 48 49.0**	**+0.8**
ASAR	**Alice Springs**	**37.50**	**195**	P	**P**	**00 48 49.0**	**+0.8**
	comp=Z,4.1nm,0.7s,baz=18,slow=12,SNR=44						
ASAR				PcP	**PcP**	**00 51 04.3**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=12,slow=3.2,SNR=9.6						
ASAR				LR	LR	01 04 22.6	
	comp=Z,56nm,19.2s,baz=24,slow=36						
ASAR	**Alice Springs**	**37.50**	**195**	P	**P**	**00 48 48.7**	**+0.4**
ASAR					**PcP**	**00 51 05.4**	**+0.8**
KLR	**Kul'dur**	**37.63**	**347**	P	**P**	**00 48 48.4**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=207,slow=4.2,SNR=6.5						
XAN	**Xi'an**	**37.98**	**310**	P	**P**	**00 48 52.8**	**+0.4**
XAN				pmax	pmax		
	comp=Z,29nm,0.9s						
XAN				pmax	pmax		
	comp=Z,96nm,4.5s						
XAN	**Xi'an**	**37.98**	**310**	P	**P**	**00 48 51.4**	**-0.9**
EIDS	**Eidsvold**	**38.63**	**169**	P	**P**	**00 48 58.2**	**+0.5**
EIDS				IAmb	IAmb	00 48 59.2	
	comp=Z,9.2nm,1.1s						
NONG	**Nongkai**	**39.37**	**283**	P	**P**	**00 49 06.1**	**+2.0**
	comp=Z,24nm,1.4s						
HHC	**Hu-ho-hao-te**	**39.62**	**321**	*e*P	**P**	**00 49 06.5**	**+0.5**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,50nm,5.6s						
KMI	**Kunming**	**40.46**	**294**	⇑P	**P**	**00 49 15.0**	**+1.7**
KMI				pP	pP	00 49 37.5	+1.0
KMI				sP	sP	00 49 50.3	+2.2
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
KMI				pmax	pmax		
	comp=Z,160nm,5.8s						
KMI	**Kunming**	**40.46**	**294**	P	**P**	**00 49 13.7**	**+0.4**
KMI				IAmb	IAmb	00 49 15.8	
	comp=Z,28nm,1.2s						
CHAI	**Chaiyaphum**	**40.47**	**280**	P	**P**	**00 49 14.2**	**+1.0**
	comp=Z,395nmcomp=Z,49nm,0.9s						
MYKOM	**Kota Tinggi**	**40.93**	**258**	P	**P**	**00 49 17.7**	**+0.6**
DZM	**Mont Dzumac**	**41.23**	**147**	P	**P**	**00 49 19.3**	**-0.2**
	comp=Z,14nm,0.8s,baz=246,slow=6.7,SNR=11						
DZM	**Mont Dzumac**	**41.23**	**147**	P	**P**	**00 49 21.3**	**+1.9**
DZM				IAmb	IAmb	00 49 22.6	
	comp=Z,16nm,0.8s						
HIA	**Hailar**	**41.37**	**336**	P	**P**	**00 49 20.0**	**-0.1**
HIA				IAmb	IAmb	00 49 20.4	
	comp=Z,8.1nm,0.4s						
PSA00	**Pilbara Seismi**	**41.42**	**215**	P	**P**	**00 49 21.6**	**+0.7**
PSA00				IAmb	IAmb	00 49 22.4	
	comp=Z,27nm,1.1s						
PETK	**Petropavlovsk-**	**41.72**	**13**	LR	LR	01 04 30.7	
	comp=Z,97nm,20.3s,baz=189,slow=33						
PHIT	**Phitsanulok**	**41.96**	**281**	P	**P**	**00 49 27.0**	**+1.6**
	comp=Z,122nm,0.9s						
LZH	**Lanzhou**	**42.62**	**310**	⇑P	**P**	**00 49 32.0**	**+1.3**
LZH				pP	pP	00 49 55.3	+1.3
LZH				sP	sP	00 50 09.0	+3.5
LZH				pmax	pmax		
	comp=Z,55nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,5.6s						
SUKH	**Sukhothai**	**42.71**	**282**	P	**P**	**00 49 32.9**	**+1.5**
	comp=Z,36nm,1.0s						
PHET	**Kaeng Krachan**	**42.91**	**275**	P	**P**	**00 49 35.5**	**+2.3**
	comp=Z,437nmcomp=Z,29nm,1.0s						
UTHA	**Uthaitani**	**42.92**	**279**	P	**P**	**00 49 35.0**	**+1.8**
	comp=Z,395nmcomp=Z,46nm,0.8s						
IPM	**Ipoh**	**42.93**	**263**	P	**P**	**00 49 33.5**	**+0.2**
KULM	**Kulim**	**43.10**	**264**	P	**P**	**00 49 35.5**	**+0.8**
CM34	**Chiang Mai Arr**	**43.18**	**284**	P	**P**	**00 49 36.0**	**+0.7**
SRDT	**SRDT**	**43.30**	**277**	P	**P**	**00 49 37.7**	**+1.5**
	comp=Z,14nm,1.0s						
CM04	**Chiang Mai Arr**	**43.33**	**283**	P	**P**	**00 49 38.1**	**+1.6**
	comp=Z,253nmcomp=Z,34nm,1.0s						
CM01	**Chiang Mai Arr**	**43.35**	**283**	P	**P**	**00 49 38.5**	**+1.9**
	comp=Z,211nmcomp=Z,28nm,1.0s						
CM05	**Chiang Mai Arr**	**43.37**	**283**	P	**P**	**00 49 38.3**	**+1.5**
	comp=Z,177nmcomp=Z,22nm,1.0s						
CM31	**Chiang Mai Arr**	**43.37**	**283**	P	**P**	**00 49 37.3**	**+0.5**
CM31				IAmb	IAmb	00 49 39.6	
	comp=Z,23nm,0.9s						
CMAR	**Chiang Mai Arr**	**43.37**	**283**	P	**P**	**00 49 37.7**	**+0.9**
	comp=Z,14nm,0.8s,baz=84,slow=6.2,SNR=57						
CMAR				LR	LR	01 04 43.7	
	comp=Z,64nm,21.3s,baz=360,slow=32						
CMMT	**Chiang Mai**	**43.37**	**284**	P	**P**	**00 49 38.2**	**+1.4**
	comp=Z,2.8nm,1.2s						
CHTO	**Chiang Mai**	**43.37**	**284**	P	**P**	**00 49 36.9**	**0.0**
BKNI	**Bangkinang**	**44.05**	**257**	P	**P**	**00 49 41.9**	**-0.4**
SURT	**Suratani**	**44.21**	**270**	P	**P**	**00 49 48.0**	**+4.4**
	comp=Z,1.4nm,1.1s						
STKA	**Stephens Creek**	**44.48**	**183**	P	**P**	**00 49 45.4**	**0.0**
	comp=Z,4.9nm,0.7s,baz=334,slow=10.0,SNR=6.0						
STKA	**Stephens Creek**	**44.48**	**183**	P	**P**	**00 49 45.5**	**+0.1**
PKDT	**Phuket**	**44.84**	**268**	P	**P**	**00 49 49.4**	**+0.8**
RPSI	**Rantau Prapat**	**45.40**	**261**	P	**P**	**00 49 53.0**	**-0.1**
FORT	**Forrest**	**45.87**	**199**	P	**P**	**00 49 57.1**	**+0.7**
BBOO	**Buckleboo**	**45.95**	**189**	P	**P**	**00 49 57.4**	**+0.5**
ULN	**Ulaanbaatar**	**46.37**	**326**	P	**P**	**00 50 00.3**	**-0.1**
ULN				IAmb	IAmb	00 50 01.9	
	comp=Z,9.1nm,0.9s						
LHMI	**Lhok Sumawe**	**46.71**	**265**	P	**P**	**00 50 04.8**	**+1.4**
SONM	**Songino Array**	**46.71**	**326**	P	**P**	**00 50 03.3**	**+0.3**
	comp=Z,3.5nm,0.6s,baz=145,slow=8.5,SNR=25						
SONM				LR	LR	01 11 06.5	
	comp=Z,71nm,19.6s,baz=146,slow=38						
SONM	**Songino Array**	**46.71**	**326**	P	**P**	**00 50 03.1**	**+0.1**
GTA	**Gaotai**	**46.84**	**313**	P	**P**	**00 50 04.5**	**+0.4**
GTA				pP	pP	00 50 27.0	-0.7
GTA				sP	sP	00 50 38.5	-0.7
GTA				pmax	pmax		
	comp=Z,27nm,1.2s						
GTA				pmax	pmax		
	comp=Z,81nm,5.0s						
GTA				LR	LR		
	comp=Z,110nm,19.3s						
GTA				LR	LR		
	comp=Z,70nm,20.4s						
GTA				LR	LR		
	comp=Z,110nm,19.3s						
GSI	**Gunungsitoli**	**47.08**	**260**	P	**P**	**00 50 05.7**	**-0.5**
MORW	**Morawa**	**49.47**	**212**	P	**P**	**00 50 24.6**	**+0.3**
YAK	**Yakutsk**	**50.17**	**351**	P	**P**	**00 50 28.3**	**-0.8**
SHL	**Shillong**	**50.26**	**293**	P	**P**	**00 50 29.9**	**-0.7**
TLY	**Talaya**	**50.40**	**329**	P	**P**	**00 50 31.1**	**0.0**
TLY				IAmb	IAmb	00 50 32.5	
	comp=Z,5.0nm,0.8s						
LSA	**Lhasa**	**51.33**	**298**	P	**P**	**00 50 39.2**

TOLK	**Toolik Lake Re**	**69.75**	**21**	P	**P**	**00 52 43.2**	**+0.2**	
IL31		**69.76**	**25**	P	**P**	**00 52 42.6**	**-0.3**	
ILAR	**Eielson Array**	**69.76**	**25**	P	**P**	**00 52 42.1**	**-0.9**	
	comp=Z,1.4nm,0.6s,baz=249,slow=5.4,SNR=17							
ILAR				LR	LR	01 20 18.4		
	comp=Z,27nm,21.7s,baz=294,slow=33							
ILAR	**Eielson Array**	**69.76**	**25**	P	**P**	**00 52 42.6**	**-0.4**	
BVAR	**Borovoye Array**	**69.82**	**322**	P	**P**	**00 52 42.2**	**-1.4**	
	comp=Z,6.4nm,0.5s,baz=144,slow=10.0,SNR=27							
BRVK	**Borovoye**	**69.89**	**322**	P	**P**	**00 52 43.9**	**-0.1**	
BRVK				IAmb	IAmb	00 52 44.8		
	comp=Z,8.1nm,0.6s							
KBL	**Kabul**	**70.27**	**302**	P	**P**	**00 52 45.9**	**-1.1**	
KBL				IAmb	IAmb	00 52 49.5		
	comp=Z,16nm,1.3s							
DOT	**Dot Lake**	**70.74**	**27**	P	**P**	**00 52 49.5**	**+0.4**	
BMAR	**Burnt Mountain**	**71.26**	**23**	P	**P**	**00 52 52.5**	**+0.4**	
PPT	**Papeete**	**72.46**	**113**	LR	LR	01 20 59.1		
	comp=Z,26nm,20.1s,baz=358,slow=32							
INK	**Inuvik**	**75.52**	**22**	P	**P**	**00 53 14.4**	**-2.6**	
	comp=Z,2.3nm,0.8s,baz=266,slow=2.1,SNR=10							
HRA	**Herat**	**75.88**	**303**	P	**P**	**00 53 19.7**	**-0.4**	
HRA				IAmb	IAmb	00 53 21.2		
	comp=Z,12nm,1.1s							
ABKAR	**Akbulak array**	**76.34**	**318**	P	**P**	**00 53 21.4**	**-0.7**	
ABKAR	**Akbulak array**	**76.34**	**318**	P	**P**	**00 53 21.2**	**-0.9**	
ARU	**Arti**	**76.75**	**325**	P	**P**	**00 53 23.3**	**-1.0**	
	comp=Z,1.9nm,0.6s,baz=135,slow=0.5,SNR=11							
ARU	**Arti**	**76.75**	**325**	P	**P**	**00 53 24.1**	**-0.2**	
DLBC	**Dease Lake**	**77.25**	**33**	P	**P**	**00 53 27.8**	**+0.6**	
AKTO	**Aktyubinsk**	**77.50**	**319**	P	**P**	**00 53 28.9**	**+0.3**	
	comp=Z,1.9nm,0.6s,baz=294,slow=0.9,SNR=5.3							
GEYT	**Alibeck**	**78.79**	**307**	P	**P**	**00 53 36.1**	**+0.1**	
	comp=Z,5.3nm,0.8s,baz=174,slow=1.5,SNR=14							
GEYT	**Alibeck**	**78.79**	**307**	P	**P**	**00 53 36.0**	**-0.1**	
GYA0B	**ALIBECK ARRAY**	**78.79**	**307**	P	**P**	**00 53 35.9**	**-0.1**	
GYA0B				IAmb	IAmb	00 53 37.4		
	comp=Z,10nm,1.1s							
KIRV	**Kirov**	**81.39**	**328**	P	**P**	**00 53 48.6**	**-0.8**	
	comp=Z,3.2nm,0.6s,baz=83,slow=3.3,SNR=3.6							
NLWA	**Neilton Lookou**	**82.33**	**43**	P	**P**	**00 53 55.6**	**+0.8**	
NLWA				IAmb	IAmb	00 54 09.3		
	comp=Z,11nm,1.1s							
UOSS	**Minazif**	**82.45**	**294**	P	**P**	**00 53 55.1**	**-0.7**	
BELG	**Belogornoye**	**83.63**	**322**	P	**P**	**00 54 00.2**	**-1.0**	
	comp=Z,15nm,0.8s,baz=221,slow=1.6,SNR=8.2							
YKA	**Yellowknife Ar**	**84.07**	**27**	P	**P**	**00 54 02.5**	**-0.8**	
	comp=Z,1.5nm,0.6s,baz=286,slow=4.7,SNR=17							
YKA				LR	LR	01 29 46.7		
	comp=Z,37nm,20.4s,baz=0.0,slow=34							
YBH	**Yreka Blue Hor**	**84.25**	**49**	P	**P**	**00 54 04.6**	**-0.2**	
	comp=Z,5.0nm,0.8s,baz=286,slow=4.3,SNR=14							
YBH	**Yreka Blue Hor**	**84.25**	**49**	P	**P**	**00 54 05.2**	**+0.4**	
YBH				IAmb	IAmb	00 54 06.6		
	comp=Z,6.7nm,0.8s							
PINE	**Pine Mountain**	**85.08**	**46**	P	**P**	**00 54 09.7**	**+0.7**	
PINE				IAmb	IAmb	00 54 11.3		
	comp=Z,18nm,1.1s							
B08A	**Colville Reser**	**85.12**	**42**	P	**P**	**00 54 08.9**	**-0.1**	
B08A				IAmb	IAmb	00 54 10.0		
	comp=Z,5.2nm,0.7s							
RES	**Resolute Bay**	**85.56**	**13**	P	**P**	**00 54 11.5**	**+1.0**	
C09A	**Chrisman Ranch**	**85.94**	**42**	P	**P**	**00 54 13.2**	**+0.2**	
C09A				IAmb	IAmb	00 54 14.2		
	comp=Z,5.3nm,0.7s							
BEKR	**Beckworth**	**86.40**	**50**	P	**P**	**00 54 15.6**	**0.0**	
BEKR				IAmb	IAmb	00 54 16.9		
	comp=Z,7.5nm,0.9s							
CMB	**Columbia Colle**	**86.81**	**52**	P	**P**	**00 54 17.2**	**-0.3**	
CMB				IAmb	IAmb	00 54 18.9		
	comp=Z,5.0nm,0.9s							
J08A	**Circle Bar Ran**	**86.92**	**46**	P	**P**	**00 54 18.1**	**+0.1**	
J08A				IAmb	IAmb	00 54 19.5		
	comp=Z,10nm,1.2s							
SOCY	**Socotra**	**87.06**	**282**	P	**P**	**00 54 17.8**	**-1.4**	
SOCY				IAmb	IAmb	00 54 18.9		
	comp=Z,12nm,1.1s							
BMO	**Blue Mountains**	**87.35**	**45**	P	**P**	**00 54 20.0**	**-0.1**	
BMO				IAmb	IAmb	00 54 21.3		
	comp=Z,9.8nm,0.9s							
ARCES	**ARCESS Array B**	**87.46**	**342**	P	**P**	**00 54 18.9**	**-1.0**	
	comp=Z,2.4nm,0.6s,baz=64,slow=7.0,SNR=8.4							
ARCES				LR	LR	01 38 47.2		
	comp=Z,28nm,18.1s,baz=90,slow=39							
ARCES	**ARCESS Array B**	**87.46**	**342**	P	**P**	**00 54 19.8**	**-0.2**	
PLID	**Pearl Lake**	**88.18**	**44**	P	**P**	**00 54 24.1**	**-0.1**	
PLID				IAmb	IAmb	00 54 24.7		
	comp=Z,4.4nm,0.8s							
LHV	**Little Huntoon**	**88.19**	**51**	P	**P**	**00 54 24.9**	**+0.9**	
LHV				IAmb	IAmb	00 54 26.3		
	comp=Z,10nm,1.0s							
NVAR	**Mina Array Bea**	**88.30**	**51**	P	**P**	**00 54 25.4**	**+0.5**	
	comp=Z,8.7nm,0.7s,baz=261,slow=6.0,SNR=47							
NVAR				LR	LR	01 28 53.9		
	comp=Z,21nm,20.6s,baz=264,slow=32							
NVAR	**Mina Array Bea**	**88.30**	**51**	P	**P**	**00 54 25.5**	**+0.6**	
NV11	**Mina Array Sit**	**88.41**	**51**	P	**P**	**00 54 25.8**	**+0.5**	
NV11				IAmb	IAmb	00 54 27.1		
	comp=Z,9.5nm,0.9s							
MFID	**Camas Ranch**	**88.77**	**46**	P	**P**	**00 54 27.2**	**+0.4**	
MFID				IAmb	IAmb	00 54 28.4		
	comp=Z,13nm,1.0s							
TPH	**Tonopah**	**89.22**	**51**	P	**P**	**00 54 29.6**	**+0.4**	
HLID	**Hailey**	**89.71**	**45**	P	**P**	**00 54 31.8**	**+0.5**	
HLID				IAmb	IAmb	00 54 32.9		
	comp=Z,5.1nm,0.9s							
ELK	**Elko**	**89.95**	**48**	P	**P**	**00 54 33.4**	**+0.8**	
ELK				IAmb	IAmb	00 54 34.3		
	comp=Z,6.2nm,0.9s							
TPNV	**Topopah Spring**	**90.27**	**52**	P	**P**	**00 54 34.8**	**+0.7**	
VNDA	**Vanda**	**90.77**	**176**	P	**P**	**00 54 36.4**	**+1.2**	
	comp=Z,3.2nm,1.0s,baz=322,slow=3.0,SNR=6.2							
VNDA	**Vanda**	**90.77**	**176**	P	**P**	**00 54 36.3**	**+1.2**	
VNDA				IAmb	IAmb	00 54 37.4		
	comp=Z,6.2nm,1.1s							
SHPR	**Sheep Range**	**91.23**	**52**	P	**P**	**00 54 38.8**	**+0.3**	
SHPR				IAmb	IAmb	00 54 40.6		
	comp=Z,5.5nm,0.9s							
QLMT	**Earthquake Lak**	**91.34**	**43**	P	**P**	**00 54 39.6**	**+0.7**	
FINES	**FINESS Array B**	**91.37**	**335**	P	**P**	**00 54 36.7**	**-1.7**	
	comp=Z,1.9nm,0.5s,baz=63,slow=4.3,SNR=19							
FINES	**FINESS Array B**	**91.37**	**335**	P	**P**	**00 54 36.5**	**-1.8**	
HVU	**Hansel Valley**	**91.41**	**47**	P	**P**	**00 54 39.7**	**+0.4**	
HVU				IAmb	IAmb	00 54 41.0		
	comp=Z,9.1nm,1.3s							
H17A	**Grant Village**	**92.06**	**44**	P	**P**	**00 54 43.8**	**+1.5**	
H17A				IAmb	IAmb	00 54 46.2		
	comp=Z,9.3nm,1.1s							
FLWY	**Flagg Ranch**	**92.09**	**44**	P	**P**	**00 54 43.0**	**+0.6**	
FLWY				IAmb	IAmb	00 54 44.5		
	comp=Z,6.7nm,0.8s							
RAYN	**Ar Rayn**	**92.29**	**295**	P	**P**	**00 54 42.9**	**-0.6**	
RAYN				IAmb	IAmb	00 54 42.9		
	comp=Z,3.2nm,1.0s							
W13A	**Hualapai Mount**	**92.64**	**53**	P	**P**	**00 54 45.4**	**+0.3**	
W13A				IAmb	IAmb	00 54 47.0		
	comp=Z,4.0nm,0.9s							
KNB	**Kanab**	**92.87**	**51**	P	**P**	**00 54 46.8**	**+0.7**	
KNB				IAmb	IAmb	00 54 48.3		
	comp=Z,5.4nm,1.0s							
PDAR	**Pinedale Array**	**93.33**	**45**	P	**P**	**00 54 47.6**	**-0.6**	
	comp=Z,0.4nm,0.6s,baz=179,slow=1.8,SNR=4.8							
Y14A	**Wickenburg**	**93.68**	**54**	P	**P**	**00 54 50.3**	**+0.5**	
LAO	**LASA Array**	**94.06**	**40**	P	**P**	**00 54 51.5**	**+0.3**	
NOA	**NORSAR Array B**	**97.36**	**339**	P	**P**	**00 55 04.5**	**-1.4**	
	comp=Z,1.1nm,0.9s,baz=47,slow=4.9,SNR=2.3							
NOA				LR	LR	01 42 00.0		
	comp=Z,23nm,19.4s,baz=95,slow=37							
MAW	**Mawson**	**98.27**	**202**	LR	LR	01 37 59.7		
	comp=Z,33nm,18.7s,baz=242,slow=34							
TXAR	**Lajitas Array**	**102.74**	**56**	P	**Pdif**	**00 55 30.3**	**-0.4**	
	comp=Z,0.4nm,0.8s,baz=265,slow=4.5,SNR=4.3							
TXAR				PKKPbc	**PKKPbc**	**01 11 27.2**	**-2.3**	
	comp=Z,0.3nm,0.8s,baz=101,slow=2.8,SNR=4.7							
BOSA	**Boshof**	**120.88**	**244**	PKP	**PKiKP**	**01 00 25.5**	**+0.1**	
	comp=Z,1.8nm,0.7s,baz=230,slow=1.4,SNR=5.0							
TORD	**Torodi Ar. Bea**	**134.34**	**303**	PKP	**PKPdf**	**01 00 50.5**	**-0.6**	
	comp=Z,2.6nm,0.7s,baz=42,slow=2.4,SNR=15							
TORD				SKPbc	**SKPbc**	**01 04 08.9**	**-2.6**	
	comp=Z,2.1nm,1.0s,baz=57,slow=2.4,SNR=6.8							
TORD	**Torodi Ar. Bea**	**134.34**	**303**	PKPdf	**PKPdf**	**01 00 51.6**	**+0.4**	
PLCA	**Paso Flores**	**139.12**	**139**	PKP	**PKPdf**	**01 00 59.6**	**+0.3**	
	comp=Z,2.3nm,1.0s,baz=214,slow=9.0,SNR=4.0							
PLCA	**Paso Flores**	**139.12**	**139**		**PKiKP**	**01 01 00.6**	**-1.1**	
LPAZ	**La Paz**	**149.03**	**100**	PKPbc	**PKPdf**	**01 01 19.2**	**+1.3**	
	comp=Z,4.1nm,0.7s,baz=7.0,slow=2.4,SNR=12							
LPAZ	**La Paz**	**149.03**	**100**	PKPdf	**PKPdf**	**01 01 18.7**	**+0.8**	
SIV	**San Ignacio**	**155.82**	**100**	PKP	**PKPdf**	**01 01 25.7**	**-1.5**	
	comp=Z,2.8nm,0.9s,baz=230,slow=2.3,SNR=7.2							
CPUP	**Villa Florida**	**156.11**	**127**	PKPab	**PKPab**	**01 01 55.6**	**+0.3**	
	comp=Z,0.4nm,0.3s,baz=255,slow=5.7,SNR=6.2							
BDFB	**Brasilia**	**168.31**	**105**	PKP	**PKPdf**	**01 01 39.2**	**-0.6**	
	comp=Z,4.4nm,0.8s,baz=202,slow=5.0,SNR=5.6							

PGC 26 00:46:47.3±3.2, 51.64N×130.79W, h10km, MLSn3.2/19, Mw3.8/19, Mw3.9/18, 192km west of Bella Bella, Bc
Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.70**	**339**	P	Pg	00 47 00.3	-0.5
HG4B				S	Sg	00 47 10.3	+0.2
BNB	**Barry Inlet**	**1.11**	**328**	P	Pb	00 47 06.1	-2.6
BNB				S	Sg	00 47 21.3	-1.7
MOBC	**Moresby Island**	**1.67**	**335**	Pn	Pn	00 47 14.5	-2.1
MOBC				Sg	Sb	00 47 39.2	-0.1
BBB	**Bella Bella**	**1.75**	**71**	Pn	Pn	00 47 16.7	-0.9
BBB				Sg	Sn	00 47 40.2	+0.3
BNAB	**Bonilla**	**1.86**	**3**	Pn	Pn	00 47 18.0	-1.1
BNAB				Sg	Sb	00 47 45.1	+0.5
DIB	**Dawson Inlet,**	**1.88**	**327**	Pn	Pn	00 47 16.8	-2.6
DIB				Sg	Sb	00 47 44.6	-0.5
HOLB	**Holberg**	**1.95**	**120**	Pn	Pn	00 47 18.1	-2.3
HWKB	**Hawksbury Isla**	**2.20**	**26**	Pn	Pn	00 47 23.4	-0.6
HWKB				Sg	Sb	00 47 54.6	0.0
GRNB	**Grenville Isla**	**2.27**	**13**	Pn	Pn	00 47 24.3	-0.5
GRNB				Sg	Sb	00 47 57.0	+0.6
PHC	**Port Hardy**	**2.31**	**113**	Pn	Pn	00 47 23.1	-2.2
MAYB	**Maynard**	**2.60**	**117**	Pn	Pn	00 47 28.2	-1.3
NDB	**Naden**	**2.66**	**331**	Pn	Pn	00 47 28.4	-1.9
NDB				Sg	Sb	00 48 10.1	+2.3
RUBB	**Prince Rupert**	**2.71**	**7**	Pn	Pn	00 47 31.1	+0.2
RUBB				Sg	Sb	00 48 09.8	+0.7
KITB	**Kitimat**	**2.77**	**27**	Pn	Pn	00 47 30.9	-0.8
KITB				Sg	Sb	00 48 12.3	+1.5
EDB	**Eliza Dome**	**2.92**	**126**	Pn	Pn	00 47 34.9	+1.0
WOSB	**Woss**	**3.05**	**117**	Pn	Pn	00 47 34.2	-1.5
NCRB	**Newcastle Ridg**	**3.24**	**111**	Pn	Pn	00 47 37.5	-0.8
NCRB				Sn	Sb	00 48 27.8	+3.4
GDR	**Gold River**	**3.55**	**120**	Sn	Sg	00 48 41.3	+0.1
CBB	**Campbell River**	**3.80**	**113**	Pn	Pn	00 47 47.2	+1.4
CBB				Sn	Sb	00 48 40.8	+0.4
BTB	**Buttle Lake**	**4.00**	**121**	Pn	Pn	00 47 49.8	+1.0
BTB				Sn	Sb	00 48 50.7	+4.3
UBRB	**Upper Baezaeko**	**4.31**	**70**	Pn	Pn	00 47 54.2	+1.3
UBRB				Sg	Sb	00 48 59.4	+4.3
TXB	**Texada**	**4.49**	**113**	Pn	Pn	00 47 55.5	+0.2
MGB	**Mount Grey**	**4.72**	**122**	Pn	Pn	00 48 05.6	-4.5
FSB	**Fort Saint Jam**	**4.82**	**51**	Pn	Pn	00 48 00.4	+0.4
FSB				Sg	Sb	00 49 14.8	+4.9
SHB	**Sechelt**	**4.85**	**112**	Sn	Sb	00 49 16.4	+5.5
NLLB	**Nanaimo Lost L**	**4.97**	**116**	Sn	Sg	00 49 20.9	-5.9
BMBC	**Bull Mountain**	**6.76**	**46**	Pn	Pn	00 48 27.7	+1.1
BMBC				Sg	Sg	00 50 27.9	+3.8
DLBC	**Dease Lake**	**6.83**	**3**	Pn	Pn	00 48 29.6	+2.1
DLBC				Sg	Sb	00 50 16.4	+8.8
NBC5	**NorthernBC 5**	**7.54**	**35**	Pn	Pn	00 48 39.6	+2.2
NBC5				Pg	Pg	00 49 08.4	-3.2
NBC5				Sg	Sg	00 50 42.8	-6.4

*IDC **26** 00:47:21.5±1.8, 32.°63S×68.°99W, h0km, mb3.5/2,*
mb1 3.8/4, mb1mx3.6/31, mbtmp3.6/4, ML4.0/2, Error ellipse: s-maj=63.0km s-min=44.1km az=15.0
ISC 26 00:47:26.7±1.8, 32.6S±0.3×68.9W±0.2, h35km, n7, σ0.47/7,
Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**11.85**	**61**	Pn	**Pn**	**00 50 13.1**	**-0.2**
	0.2nm,0.3s,baz=246,slow=10,SNR=3.2						
LPAZ	**La Paz**	**16.24**	**3**	Pn	**Pn**	**00 51 13.2**	**+0.4**
	0.3nm,0.3s,baz=222,slow=6.9,SNR=7.6						
TXAR	**Lajitas Array**	**69.86**	**328**	P	**P**	**00 58 33.5**	**-0.5**
	0.2nm,0.6s,baz=146,slow=8.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**81.25**	**68**	P	**P**	**00 59 39.6**	**0.0**
	0.6nm,0.7s,baz=240,slow=3.4,SNR=9.3						
KURBB	**Kurchatov Arra**	**150.04**	**43**	PKPbc	**PKiKP**	**01 07 14.3**	**+0.3**
	0.6nm,0.6s,baz=299,slow=3.4,SNR=8.6						
ZALV	**Zalesovo Beam**	**151.62**	**33**	PKPbc	**PKiKP**	**01 07 17.5**	**+0.3**
	1.9nm,0.5s,baz=309,slow=2.3,SNR=10						
MKAR	**Makanchi Array**	**153.86**	**49**	PKPbc	**PKiKP**	**01 07 22.5**	**+0.4**
	0.3nm,0.6s,baz=274,slow=4.2,SNR=2.7						

*JMA **26** 00:47:34.2±0.1, 24.°01N×122.°40E, h19km±3km, M1.9*
*TAP **26** 00:47:35.4, 24.°10N×122.°34E, h20km, ML2.5, D*
ISC 26 00:47:34.1±1.3, 24.02N±0.03×122.40E±0.02, h21km±4km,
n60, σ0.46/110, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.66**	**49**	P	**Pb**	**00 47 46.8**	**-0.2**
JYNG				*e*S	**Sb**	**00 47 55.7**	**-0.1**
EWUT	**Wuta**	**0.70**	**307**	*e*P	**Pb**	**00 47 47.6**	**-0.1**
	baz=313						
EWUT				*e*S	**Sb**	**00 47 56.9**	**-0.1**
	baz=313						
YOJ	**Yonaguni jima**	**0.71**	**52**	P	**Pb**	**00 47 47.7**	**-0.1**
YOJ				S	**Sb**	**00 47 57.2**	**0.0**
YOJ	**Yonaguni jima**	**0.71**	**52**	P	**Pb**	**00 47 47.6**	**-0.2**
	baz=58						
HWA	**Hwalien**	**0.72**	**267**	P	**Pn**	**00 47 49.1**	**0.0**
	baz=246						
HWA				S	**Sn**	**00 47 59.4**	**-0.2**
	baz=246						
TWD	**Chiawan**	**0.73**	**275**	*e*P	**Pn**	**00 47 49.0**	**-0.3**
	baz=253						
TWD				*i* S	**Sb**	**00 47 58.9**	**+1.1**
	baz=253						
NACB	**Ninganchiao**	**0.75**	**282**	P	**Pb**	**00 47 48.4**	**0.0**
	baz=260						
NACB				S	**Sn**	**00 47 59.4**	**-0.8**
	baz=260						
TWC	**Suao**	**0.77**	**320**	*i* P	**Pb**	**00 47 48.3**	**-0.5**
	baz=319						
TWC				*i* S	**Sb**	**00 47 57.3**	**-1.5**
	baz=319						
ETLH	**Xiulin Townshi**	**0.85**	**283**	*e*P	**Pb**	**00 47 50.2**	**0.0**
	baz=264						
ETLH				*e*S	**Sb**	**00 48 01.8**	**+0.5**
	baz=264						
NDS	**Dongshan**	**0.87**	**315**	*e*P	**Pb**	**00 47 50.6**	**+0.2**
	baz=319						
NDS				*e*S	**Sb**	**00 48 00.6**	**-1.1**
	baz=319						
ESL	**Shilin**	**0.90**	**257**	*e*P	**Pn**	**00 47 51.9**	**+0.3**
	baz=241						
ESL				S	**Sn**	**00 48 04.3**	**+0.2**
	baz=241						
EGS		**0.92**	**333**	P	**Pb**	**00 47 51.2**	**-0.1**
	baz=333						
EGS				S	**Sb**	**00 48 03.5**	**+0.2**
	baz=333						
ILA	**Ilan**	**0.95**	**322**	S	**Sb**	**00 48 04.1**	**+0.1**
	baz=321						
TWE	**Neicheng**	**0.96**	**317**	*i* P	**Pn**	**00 47 52.5**	**+0.1**
	baz=321						
TWE				S	**Sb**	**00 48 04.2**	**-0.2**
	baz=321						
ENTT	**Nioudou**	**0.98**	**309**	P	**Pn**	**00 47 52.4**	**+0.1**
	baz=308						
ENTT				S	**Sb**	**00 48 04.8**	**0.0**
	baz=308						
NTC	**Toucheng**	**0.98**	**328**	*e*P	**Pn**	**00 47 52.9**	**+0.3**
	baz=328						
NTC				*e*S	**Sb**	**00 48 04.9**	**+0.1**
	baz=328						
NDT	**Datong Townshi**	**0.99**	**306**	P	**Pn**	**00 47 53.3**	**+0.5**
	baz=312						
NDT				S	**Sb**	**00 48 05.3**	**+0.1**
	baz=312						
NNSB	**Datong**	**1.01**	**294**	P	**Pb**	**00 47 53.1**	**+0.1**
	baz=291						
NNSB				S	**Sb**	**00 48 06.3**	**+0.5**
	baz=291						
NNSH	**Datong**	**1.01**	**294**	*e*P	**Pn**	**00 47 53.6**	**+0.4**
	baz=291						
NNS	**Nan Shan**	**1.02**	**294**	*i* P	**Pb**	**00 47 53.5**	**+0.3**
	baz=292						
NNS				S	**Sn**	**00 48 06.9**	**-0.2**
	baz=292						
HGSD	**Ruisui**	**1.03**	**240**	P	**Pb**	**00 47 53.2**	**0.0**
	baz=236						
HGSD				S	**Sb**	**00 48 05.6**	**-0.8**
	baz=236						
WHF	**Hehuan Shan**	**1.04**	**277**	*i* P	**Pb**	**00 47 53.5**	**-0.2**
	baz=261						
WHF				S	**Sb**	**00 48 07.1**	**+0.1**
	baz=261						
TWB1	**Santiao Chiao**	**1.05**	**339**	P	**Pb**	**00 47 53.7**	**+0.1**
	baz=340						
TWB1				*e*S	**Sb**	**00 48 06.9**	**0.0**
	baz=340						
FUSS	**Fushou**	**1.08**	**282**	*e*P	**Pb**	**00 47 54.1**	**0.0**
	baz=280						
FUSS				*e*S	**Sn**	**00 48 08.7**	**+0.1**
	baz=280						
TIPB	**Shuangxi**	**1.08**	**331**	*i* P	**Pb**	**00 47 54.1**	**0.0**
	baz=322						
TIPB				S	**Sb**	**00 48 07.1**	**-0.6**
	baz=322						
NWLT	**Wulai**	**1.11**	**313**	*e*P	**Pb**	**00 47 54.9**	**+0.3**
	baz=312						
NWLT				*e*S	**Sb**	**00 48 08.3**	**-0.3**
	baz=312						
CHGB	**Renai**	**1.12**	**272**	P	**Pn**	**00 47 54.5**	**-0.2**
	baz=256						
CHGB				S	**Sb**	**00 48 08.9**	**-0.1**
	baz=256						
OWD	**Renai**	**1.12**	**267**	P	**Pn**	**00 47 54.5**	**-0.2**
	baz=264						
OWD				S	**Sb**	**00 48 08.7**	**-0.2**
	baz=264						
YHNB	**Yeheng**	**1.13**	**305**	P	**Pb**	**00 47 55.3**	**+0.3**
	baz=303						
YHNB				*e*S	**Sn**	**00 48 09.9**	**+0.2**
	baz=303						
TWT	**Tachien**	**1.14**	**282**	S	**Sn**	**00 48 11.2**	**+1.1**
	baz=266						
NSK	**Sanguang**	**1.15**	**305**	P	**Pn**	**00 47 54.5**	**-0.5**
	baz=303						
NSK				S	**Sb**	**00 48 09.9**	**+0.2**
	baz=303						
TDCB	**Techi**	**1.15**	**282**	*e*P	**Pb**	**00 47 56.1**	**+0.7**
	baz=266						
TDCB				S	**Sb**	**00 48 09.9**	**0.0**
	baz=266						
VWDT	**VWDT**	**1.18**	**257**	P	**Pn**	**00 47 55.7**	**+0.4**
	baz=242						
VWDT				*e*S	**Sn**	**00 48 11.0**	**+0.2**
	baz=242						
YULB	**Yu-li**	**1.18**	**238**	P	**Pn**	**00 47 54.9**	**-0.6**
	baz=223						
YULB				S	**Sb**	**00 48 10.6**	**-0.2**
	baz=223						
WFSB	**Wu-fen Shan**	**1.19**	**332**	*e*P	**Pn**	**00 47 55.7**	**+0.2**
	baz=331						
WFSB				*e*S	**Sb**	**00 48 10.4**	**-0.4**
	baz=331						
EYUL	**Yuli**	**1.19**	**236**	*e*S	**Sn**	**00 48 11.8**	**+0.6**
	baz=233						
TWF1	**Yuli**	**1.21**	**237**	P	**Pn**	**00 47 55.7**	**0.0**
	baz=221						
TWF1				S	**Sn**	**00 48 12.2**	**+0.7**
	baz=221						
TWA	**Mucha**	**1.21**	**322**	*e*P	**Pb**	**00 47 56.5**	**+0.3**
	baz=330						
TWA				S	**Sn**	**00 48 11.8**	**+0.2**
	baz=330						
IRIF	**Iriomote-Funau**	**1.26**	**75**	P	**Pb**	**00 47 57.3**	**+0.2**
IRIF				*e*S	**Sb**	**00 48 13.3**	**+0.4**
TAP	**Taipei**	**1.30**	**322**	*e*P	**Pn**	**00 47 57.5**	**+0.5**
	baz=320						
TAP				*e*S	**Sb**	**00 48 14.4**	**+0.4**
	baz=320						
SSLB	**Suanglung**	**1.34**	**260**	*e*P	**Pb**	**00 47 58.6**	**+0.1**
	baz=258						
SSLB				*e*S	**Sb**	**00 48 15.4**	**+0.2**
	baz=258						
WHP	**Taichung City**	**1.35**	**281**	*e*S	**Sn**	**00 48 14.6**	**-0.5**
	baz=267						
YM01	**YM01**	**1.35**	**326**	*e*P	**Pn**	**00 47 57.8**	**0.0**
	baz=325						
YM01				*e*S	**Sb**	**00 48 15.4**	**-0.1**
	baz=325						
SMLT	**Sun Moon Lake**	**1.37**	**265**	P	**Pn**	**00 47 58.8**	**+0.6**
	baz=262						
SMLT				S	**Sn**	**00 48 15.4**	**-0.4**
	baz=262						
YM08	**YM08**	**1.37**	**328**	*e*P	**Pn**	**00 47 58.6**	**+0.5**
	baz=327						
YM08				*e*S	**Sn**	**00 48 15.4**	**-0.2**
	baz=327						
NJD	**Zhudong**	**1.39**	**301**	*e*P	**Pb**	**00 47 59.4**	**+0.1**
	baz=299						
TWS1	**Kuangyinshan**	**

DJR				*e*S	**Sg**	**00 50 55.8**	**+0.8**
	43nm,0.3s						
DJR	**Jarkent**	**2.07**	**315**	Pg	**Pb**	**00 50 26.6**	**+0.8**
	1.4nm,0.2s						
DJR				Lg	Lg	00 50 55.8	
	43nm,0.3s						
UZB	**Uzynbulak**	**2.08**	**278**	*e*P	**Pb**	**00 50 26.8**	**+0.8**
UZB	2.0nm,0.2s			*e*S	**Sg**	**00 50 56.5**	**+1.2**
	19nm,0.2s						
UZB	**Uzynbulak**	**2.08**	**278**	Pg	**Pb**	**00 50 26.8**	**+0.8**
UZB	2.0nm,0.2s			Lg	Lg	00 50 56.5	
	19nm,0.2s						
SATY	**Saty**	**2.52**	**275**	*e*P	**Pb**	**00 50 35.6**	**+2.1**
	3.5nm,0.2s						
SATY				*e*S	**Sg**	**00 51 11.4**	**+1.8**
	23nm,0.2s						
SATY	**Saty**	**2.52**	**275**	Pg	**Pb**	**00 50 35.6**	**+2.1**
	3.5nm,0.2s						
SATY				Lg	Lg	00 51 11.4	
	23nm,0.2s						
MK31	**Makanchi Array**	**3.91**	**5**	⇑Pn	**Pn**	**00 50 50.0**	**+2.0**
	0.1nm,0.2s,baz=189,slow=12,SNR=3.0						
MK31				⇓Pg	**Pg**	**00 51 00.5**	**-2.9**
	0.4nm,0.3s,baz=182,slow=16,SNR=8.8						
MAKZ	**Makanchi**	**3.92**	**1**	⇑Pn	**Pn**	**00 50 49.7**	**+1.7**
	0.9nm,0.6s						

JMA ***26*** *00:56:17.3±0.2,24°.53N×122°.97E,h86km±2km,M1.8*
TAP ***26*** *00:56:18.1,24°.47N×122°.90E,h79km±1km,ML3.1,B*
ISC 26 00:56:17.7±1.4,24°.47N±0°.04×122°.95E±0°.03,h83km±9km,
n67,σ0s.74/120,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.02**	**193**	P	**Pn**	**00 56 29.5**	**0.0**
JYNG				S	**Sn**	**00 56 38.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.06**	**99**	P	**Pn**	**00 56 29.6**	**+0.1**
YOJ				S	**Sn**	**00 56 38.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.06**	**99**	P	**Pn**	**00 56 29.7**	**+0.2**
	baz=87						
YOJ				S	**Sn**	**00 56 38.1**	**-0.1**
	baz=87						
IRIF	**Iriomote-Funau**	**0.72**	**101**	P	**Pn**	**00 56 32.9**	**-0.9**
IRIF				S	**Sn**	**00 56 45.9**	**0.0**
HATJ	**Hateruma jima**	**0.88**	**118**	P	**Pn**	**00 56 36.0**	**+0.4**
HATJ				*e*S	**Sn**	**00 56 50.0**	**+1.1**
JKRS	**Kuro-shima**	**0.99**	**103**	P	**Pn**	**00 56 37.4**	**+0.6**
JKRS				S	**Sn**	**00 56 51.7**	**+0.5**
EGS		**1.00**	**292**	*e*P	**Pn**	**00 56 37.7**	**+0.8**
	baz=293						
EGS				S	**Sn**	**00 56 50.7**	**-0.6**
	baz=293						
TWC	**Suao**	**1.01**	**278**	P	**Pn**	**00 56 36.6**	**-0.4**
	baz=278						
TWC				S	**Sn**	**00 56 50.5**	**-1.1**
	baz=278						
NTC	**Toucheng**	**1.09**	**291**	*e*P	**Pn**	**00 56 39.5**	**+1.5**
	baz=291						
JIJ	**Ishigaki jima**	**1.09**	**95**	P	**Pn**	**00 56 38.0**	**0.0**
JIJ				S	**Sn**	**00 56 52.5**	**-0.8**
ILA	**Ilan**	**1.13**	**285**	*e*P	**Pn**	**00 56 39.2**	**+0.7**
	baz=285						
ILA				S	**Sn**	**00 56 54.0**	**-0.2**
	baz=285						
NDS	**Dongshan**	**1.14**	**279**	*e*P	**Pn**	**00 56 38.8**	**+0.3**
	baz=278						
NDS				S	**Sn**	**00 56 53.1**	**-1.1**
	baz=278						
TIPB	**Shuangxi**	**1.14**	**296**	P	**Pn**	**00 56 38.6**	**0.0**
	baz=297						
TIPB				*e*S	**Sn**	**00 56 52.9**	**-1.4**
	baz=297						
TWE	**Neicheng**	**1.19**	**282**	*i* P	**Pn**	**00 56 39.2**	**0.0**
	baz=282						
TWE				S	**Sn**	**00 56 55.1**	**-0.4**
	baz=282						
WFSB	**Wu-fen Shan**	**1.22**	**300**	*e*P	**Pn**	**00 56 40.1**	**+0.5**
	baz=300						
JISG	**Ishigakijimahi**	**1.25**	**84**	P	**Pn**	**00 56 39.7**	**-0.2**
JISG				S	**Sn**	**00 56 55.8**	**-0.8**
TNOU	**National Taiwa**	**1.27**	**303**	P	**Pn**	**00 56 40.3**	**+0.2**
	baz=303						
TNOU				S	**Sn**	**00 56 57.7**	**+0.6**
	baz=303						
ENTT	**Nioudou**	**1.27**	**278**	*e*P	**Pn**	**00 56 41.6**	**+1.4**
	baz=278						
ENTT				S	**Sn**	**00 56 57.2**	**0.0**
	baz=278						
NACB	**Ninganchiao**	**1.27**	**257**	P	**Pn**	**00 56 40.1**	**-0.1**
	baz=256						
NACB				S	**Sn**	**00 56 57.2**	**0.0**
	baz=256						
TWD	**Chiawan**	**1.29**	**253**	P	**Pn**	**00 56 39.9**	**-0.6**
	baz=252						
TWD				*i* S	**Sn**	**00 56 57.4**	**-0.3**
	baz=252						
NDT	**Datong Townshi**	**1.31**	**276**	P	**Pn**	**00 56 41.8**	**+1.0**
	baz=276						
NDT				S	**Sn**	**00 56 58.8**	**+0.5**
	baz=276						
HWA	**Hwalien**	**1.32**	**248**	*e*P	**Pn**	**00 56 40.5**	**-0.3**
	baz=247						
TWA	**Mucha**	**1.34**	**293**	*e*P	**Pn**	**00 56 41.2**	**+0.1**
	baz=293						
TWA				S	**Sn**	**00 56 59.4**	**+0.6**
	baz=293						
NWLT	**Wulai**	**1.35**	**283**	*e*P	**Pn**	**00 56 41.4**	**+0.1**
	baz=283						
NWLT				*e*S	**Sn**	**00 56 59.2**	**+0.1**
	baz=283						
ETLH	**Xiulin Townshi**	**1.36**	**259**	*e*P	**Pn**	**00 56 41.8**	**+0.3**
	baz=258						
ETLH				S	**Sn**	**00 56 59.4**	**0.0**
	baz=258						
NWRT	**Kuosheng**	**1.38**	**302**	*e*P	**Pn**	**00 56 41.6**	**0.0**
	baz=303						
NWRT				*e*S	**Sn**	**00 56 59.4**	**-0.2**
	baz=303						
PCYT	**Pengchaiyu**	**1.40**	**326**	P	**Pn**	**00 56 42.5**	**+0.6**
	baz=327						
PCYT				*e*S	**Sn**	**00 56 59.6**	**-0.5**
	baz=327						
TATO	**Taipei**	**1.42**	**291**	P	**Pn**	**00 56 41.8**	**-0.3**
	baz=291						
NNSB	**Datong**	**1.43**	**269**	P	**Pn**	**00 56 42.5**	**+0.2**
	baz=268						
NNSB				S	**Sn**	**00 57 00.3**	**-0.7**
	baz=268						
NNS	**Nan Shan**	**1.44**	**269**	P	**Pn**	**00 56 42.5**	**0.0**
	baz=268						
NNS				*e*S	**Sn**	**00 56 59.8**	**-1.3**
	baz=268						
YHNB	**Yeheng**	**1.45**	**278**	P	**Pn**	**00 56 43.4**	**+0.8**
	baz=278						
YHNB				*e*S	**Sn**	**00 57 00.3**	**-1.0**
	baz=278						
TWY	**Chenhua**	**1.47**	**303**	P	**Pn**	**00 56 42.3**	**-0.4**
	baz=304						
TWY				*e*S	**Sn**	**00 57 00.9**	**-0.6**
	baz=304						
TWS1	**Kuangyinshan**	**1.53**	**295**	P	**Pn**	**00 56 43.6**	**+0.1**
	baz=295						
TWS1				*e*S	**Sn**	**00 57 03.1**	**+0.1**
	baz=295						
WHF	**Hehuan Shan**	**1.57**	**258**	*i* P	**Pn**	**00 56 44.6**	**+0.2**
	baz=257						
WHF				*i* S	**Sn**	**00 57 04.0**	**-0.7**
	baz=257						
FUSS	**Fushou**	**1.57**	**262**	*e*P	**Pn**	**00 56 44.4**	**+0.1**
	baz=261						
FUSS				*e*S	**Sn**	**00 57 03.7**	**-0.7**
	baz=261						
TWT	**Tachien**	**1.63**	**263**	*e*P	**Pn**	**00 56 46.2**	**+1.2**
	baz=262						
TWT				S	**Sn**	**00 57 05.5**	**-0.2**
	baz=262						
TDCB	**Techi**	**1.65**	**263**	P	**Pn**	**00 56 46.4**	**+1.2**
	baz=262						
TDCB				S	**Sn**	**00 57 06.3**	**+0.3**
	baz=262						
CHGB	**Renai**	**1.67**	**256**	P	**Pn**	**00 56 46.4**	**+0.8**
	baz=255						
CHGB				*e*S	**Sn**	**00 57 05.7**	**-1.0**
	baz=255						
NCU	**National Centr**	**1.68**	**288**	*e*S	**Sn**	**00 57 06.3**	**-0.2**
	baz=287						
NCUH	**Zhongli**	**1.68**	**288**	*e*P	**Pn**	**00 56 46.2**	**+0.7**
	baz=287						
NCUH				*e*S	**Sn**	**00 57 06.6**	**0.0**
	baz=287						
OWD	**Renai**	**1.70**	**253**	P	**Pn**	**00 56 46.6**	**+0.8**
	baz=252						
OWD				S	**Sn**	**00 57 06.6**	**-0.7**
	baz=252						
HGSD	**Ruisui**	**1.70**	**235**	*e*P	**Pn**	**00 56 46.8**	**+1.1**
	baz=234						
HGSD				*e*S	**Sn**	**00 57 06.1**	**-0.9**
	baz=234						
LIOB	**Emei**	**1.77**	**276**	P	**Pn**	**00 56 47.5**	**+0.8**
	baz=276						
LIOB				*e*S	**Sn**	**00 57 08.1**	**-0.6**
	baz=276						
NSTT	**Nanjuang**	**1.78**	**276**	*e*P	**Pn**	**00 56 47.5**	**+0.7**
	baz=275						
NSTT				*e*S	**Sn**	**00 57 08.9**	**0.0**
	baz=275						
VWDT	**VWDT**	**1.80**	**247**	P	**Pn**	**00 56 48.1**	**+1.1**
	baz=246						
VWDT				*e*S	**Sn**	**00 57 09.2**	**-0.2**
	baz=246						
HSN	**Hsinchu**	**1.83**	**281**	P	**Pn**	**00 56 47.7**	**+0.3**
	baz=281						
HSN				*e*S	**Sn**	**00 57 08.7**	**-1.4**
	baz=281						
WHP	**Taichung City**	**1.84**	**264**	*e*P	**Pn**	**00 56 49.0**	**+1.4**
	baz=264						
WHP				*e*S	**Sn**	**00 57 10.5**	**+0.1**
	baz=264						
YULB	**Yu-li**	**1.85**	**235**	P	**Pn**	**00 56 47.7**	**-0.1**
	baz=234						
YULB				S	**Sn**	**00 57 10.2**	**-0.4**
	baz=234						
EYUL	**Yuli**	**1.86**	**233**	*e*P	**Pn**	**00 56 48.3**	**+0.4**
	baz=232						
EYUL				*e*S	**Sn**	**00 57 10.7**	**-0.2**
	baz=232						
TWF1	**Yuli**	**1.88**	**234**	P	**Pn**	**00 56 48.3**	**+0.3**
	baz=232						
TWF1				*e*S	**Sn**	**00 57 10.5**	**-0.7**
	baz=232						
SMLT	**Sun Moon Lake**	**1.96**	**253**	P	**Pn**	**00 56 50.5**	**+1.2**
	baz=252						
NMLH	**Miaoli**	**1.97**	**272**	*e*S	**Sn**	**00 57 12.2**	**-1.1**
	baz=272						
FULB	**Fuli**	**1.98**	**230**	*e*P	**Pn**	**00 56 49.6**	**+0.3**
	baz=229						
FULB				*e*S	**Sn**	**00 57 13.1**	**-0.5**
	baz=229						
TWQ1	**Liyutan**	**1.99**	**267**	*e*S	**Sn**	**00 57 13.7**	**-0.1**
	baz=266						
CHKT	**Chengkung**	**1.99**	**227**	*e*S	**Sn**	**00 57 13.9**	**+0.1**
	baz=225						
TYC	**Yuchr**	**1.99**	**254**	*e*P	**Pn**	**00 56 51.0**	**+1.4**
	baz=253						
TYC				S	**Sn**	**00 57 13.7**	**-0.2**
	baz=253						
WHYT	**Xinyi Township**	**2.06**	**249**	*e*P	**Pn**	**00 56 51.4**	**+0.8**
	baz=247						
WHYT				*e*S	**Sn**	**00 57 15.7**	**0.0**
	baz=247						
YUS	**Yu-Shan**	**2.07**	**242**	*e*P	**Pn**	**00 56 51.8**	**+0.7**
	baz=241						
YUS				*e*S	**Sn**	**00 57 15.7**	**-0.8**
	baz=241						
TCU	**Taichung**	**2.10**	**262**	*e*P	**Pn**	**00 56 50.1**	**-0.9**
	baz=261						
EDH	**Donghe**	**2.12**	**226**	*e*S	**Sn**	**00 57 15.4**	**-1.5**
	baz=224						
ELDTW	**Lidau**	**2.18**	**235**	P	**Pn**	**00 56 52.5**	**+0.3**
	baz=233						
ELDTW				S	**Sn**	**00 57 17.6**	**-0.9**
	baz=233						
LDUT	**Ludao**	**2.25**	**218**	*e*P	**Pn**	**00 56 53.8**	**+0.8**
	baz=216						
LDUT				*e*S	**Sn**	**00 57 18.3**	**-1.6**
	baz=216						
CHN5	**Tsauling**	**2.25**	**248**	*e*P	**Pn**	**00 56 53.3**	**+0.2**
	baz=247						
LONT	**Longtian**	**2.28**	**227**	*e*S	**Sn**	**00 57 20.9**	**+0.1**
	baz=226						
WGK	**Gukeng**	**2.32**	**251**	*e*P	**Pn**	**00 56 55.3**	**+1.4**
	baz=249						
WGK				*e*S	**Sn**	**00 57 20.2**	**-1.4**
	baz=249						
STYH	**Taoyuan**	**2.37**	**237**	*e*P	**Pn**	**00 56 55.7**	**+1.1**
	baz=236						
STYH				*e*S	**Sn**	**00 57 21.9**	**-1.0**
	baz=236						
STYT	**Tauyuan**	**2.39**	**238**	*e*P	**Pn**	**00 56 56.6**	**+1.6**
	baz=236						

IDC 26 00:59:26.5±2.8,31°.52S×177°.92W,h0km,mb3.9/2,
mb1 4.1/3,mb1mx3.7/22,mbtmp3.8/3,ML3.3/1,Error
ellipse: s-maj=67.7km s-min=35.8km az=117.0,
Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.87**	**210**	Pn	Pn	01 01 21.1	-1.0
	0.4nm,0.3s,baz=126,slow=23,SNR=1.5						
URZ				Sn	Sn	01 02 54.7	+2.8
	2.0nm,0.3s,baz=310,slow=23,SNR=6.4						
ASAR	**Alice Springs**	**43.13**	**268**	P	P	01 07 28.4	-0.6
	0.7nm,0.6s,baz=106,slow=7.1,SNR=15						
WRA	**Warramunga Arr**	**44.22**	**273**	P	P	01 07 38.0	+0.3
	2.1nm,0.6s,baz=113,slow=7.5,SNR=11						
FINES	**FINESS Array B**	**146.22**	**339**	PKPbc	PKPdf	01 19 07.4	+0.4
	1.8nm,0.4s,baz=55,slow=4.1,SNR=32						

IDC ***26*** *01:05:25.0±1.3,30°.48N×49°.66E,h0km,mb3.6/15,*
mb1 3.8/22,mb1mx3.7/44,mbtmp3.7/22,ML3.3/7,MS3.3/5,
Ms1 3.3/5,ms1mx2.8/37,Error ellipse: s-maj=25.3km
s-min=15.6km az=171.0
THR ***26*** *01:05:27.9±0.4,30°.49N×49°.95E,h14km±7km,ML4.2*
TEH ***26*** *01:05:27.5,30°.46N×49°.86E,h13km,ML4.2*
NEIC ***26*** *01:05:29.9±2.4,30°.48N±0°.07×49°.82E±0°.07,h38km±12km,*
Error ellipse: s-maj=11.2km s-min=8.4km az=203.0
DSN ***26*** *01:05:30.3±1.4,30°.18N×49°.92E,h10km,ML4.4/9,Error*
ellipse: s-maj=14.4km s-min=9.9km az=168.0
OMAN ***26*** *01:05:33.8,30°.08N×50°.11E,h10km,mb5.6/18,ms2.6/1*
ISC 26 01:05:26.2±0.5,30°.39N±0°.05×49°.79E±0°.04,h10km,n155,
σ1s.77/164,mb3.7/26,MS3.7/3,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABEH	**Behbahan**	**0.45**	**63**	*e*Pg	**Pg**	**01 05 35.2**	**+0.3**
ABEH				*e*Sg	**Sg**	**01 05 40.8**	**-0.1**
ABEH				*e*		01 06 05.5	
	comp=Z,61μm,0.4s						
AHWZ	**Ahwaz**	**1.36**	**314**		**Pg**	**01 05 52.9**	**+0.6**
AHWZ	**Ahwaz**	**1.36**	**314**	*e*Pg	**Pg**	**01 05 52.9**	**+0.6**
AHWZ				*e*		01 06 17.5	
	comp=Z,52μm,0.2s						
KLNJ	**Kolanjah**	**1.67**	**68**	Pg	**Pn**	**01 05 57.1**	**+1.3**
KLNJ	**Kolanjah**	**1.67**	**68**	*e*Pg	**Pn**	**01 05 57.2**	**+1.4**
KLNJ				*e*		01 06 24.8	
	comp=Z,40μm,0.4s						
KAZ1	**Kazerun**	**1.77**	**115**	*e*Pg	**Pb**	**01 06 00.2**	**+1.3**
KAZ1				*e*		01 06 52.3	
	comp=Z,43μm,0.8s						
UMR	**Umm Al-Rimmam**	**1.99**	**246**	*e*P		01 06 03.4	
AHBU	**AHRAM**	**2.01**	**139**	*e*Pn	**Pb**	**01 06 03.2**	**+0.4**
SHK1	**Shahrekord**	**2.14**	**26**	*e*Pn	**Pn**	**01 06 04.2**	**+2.0**
SHK1				*e*		01 06 40.3	
	comp=Z,20μm,1.0s						
QRN	**Al-Qurain**	**2.32**	**225**	*e*P		01 06 07.8	
RDF	**Al-Radifah**	**2.44**	**234**	*e*P		01 06 10.0	
RDF				*e*S		01 06 40.9	
IPIR	**Pirpir**	**2.47**	**22**	*e*		01 06 47.1	
	comp=Z,11μm,0.6s						
IPIR				*e*Pn	**Pn**	**01 06 08.7**	**+1.9**
SHI	**Shiraz**	**2.48**	**107**	*e*		01 06 56.3	
	comp=Z,14μm,0.8s						
SHI				*e*Pn	**Pn**	**01 06 09.7**	**+3.0**
RST	**Umm Al-Ruwaisa**	**2.59**	**251**	*e*P		01 06 11.6	
IRAM	**Ramesheh**	**2.63**	**57**	*e*Pn	**Pn**	**01 06 11.6**	**+2.7**
IRAM				*e*		01 06 20.2	
	comp=Z,6μm,0.5s						
IGAR	**Gharneh**	**2.78**	**43**	*e*Pn	**Pn**	**01 06 13.1**	**+2.2**
IGAR				*e*		01 07 00.7	
	comp=Z,4μm,0.7s						
DHL1	**Dehloran**	**3.13**	**317**	*e*Pn	**Pn**	**01 06 18.6**	**+3.0**
IKLH	**Kolahrood**	**3.29**	**27**	*e*Pn	**Pn**	**01 06 20.4**	**+2.4**
IKLH				*e*		01 07 24.4	
	comp=Z,3μm,0.7s						
IZEF	**Zefreh**	**3.30**	**40**	*e*Pn	**Pn**	**01 06 20.1**	**+1.9**
KHMZ	**Khomeyn**	**3.34**	**2**	*e*Pn	**Pn**	**01 06 20.4**	**+1.7**
KHMZ	**Khomeyn**	**3.34**	**2**	*e*Pn	**Pn**	**01 06 20.4**	**+1.7**
QIR1	**Qir**	**3.42**	**123**	*e*Pn	**Pn**	**01 06 21.2**	**+1.6**
NASN	**Na'in**	**3.52**	**46**	*e*Pn	**Pn**	**01 06 22.2**	**+0.9**
NASN	**Na'in**	**3.52**	**46**	Pn	**Pn**	**01 06 22.1**	**+0.9**
NASN	**Na'in**	**3.52**	**46**	*e*Pn	**Pn**	**01 06 22.2**	**+0.9**
IKFM	**Kafar-mosalman**	**3.53**	**333**	*e*Pn	**Pn**	**01 06 22.5**	**+1.4**
IKFM				*e*		01 07 31.4	
	comp=Z,8μm,0.9s						
QAM	**Ghamsar**	**3.63**	**22**	*e*Pn	**Pn**	**01 06 25.4**	**+2.7**
IDOB	**Doab**	**3.65**	**338**	*e*Pn	**Pn**	**01 06 24.6**	**+1.6**
HSAM	**Samen**	**3.94**	**345**	*e*Pn	**Pn**	**01 06 29.1**	**+2.1**
HSAM				*e*		01 07 47.6	
	comp=Z,2μm,0.9s						
KRSH	**Karshahi**	**4.08**	**29**	*e*Pn	**Pn**	**01 06 31.1**	**+2.3**
ASAO	**Ashtian**	**4.15**	**3**	*e*Pn	**Pn**	**01 06 31.9**	**+2.1**
ASAO	**Ashtian**	**4.15**	**3**	*e*Pn	**Pn**	**01 06 31.9**	**+2.1**
ANAR	**Anarak**	**4.36**	**49**	*e*Pn	**Pn**	**01 06 34.3**	**+1.7**
IBZA	**Bozab**	**4.38**	**339**	*e*Pn	**Pn**	**01 06 33.9**	**+0.9**
HAGD	**Aghdareh**	**4.45**	**353**	*e*Pn	**Pn**	**01 06 35.6**	**+1.6**
HAGD				*e*		01 07 59.0	
	comp=Z,2μm,0.6s						
ISFB	**Sefidab**	**4.46**	**27**	*e*Pn	**Pn**	**01 06 35.5**	**+1.6**
KER	**Kermanshah**	**4.57**	**331**	*e*Pn	**Pn**	**01 06 37.0**	**+1.5**
IALM	**Almabolaq**	**4.66**	**343**	*e*Pn	**Pn**	**01 06 37.9**	**+1.0**
IGHG	**Ghaleghazi**	**4.78**	**326**	*e*Pn	**Pn**	**01 06 40.5**	**+2.0**
IRAZ	**Razeghan**	**5.00**	**1**	*e*Pn	**Pn**	**01 06 43.5**	**+2.0**
ILIN	**Lien**	**5.10**	**333**	*e*Pn	**Pn**	**01 06 44.0**	**+1.0**
IDHR	**Dehrash**	**5.17**	**327**	*e*Pn	**Pn**	**01 06 44.3**	**+0.5**
IDHR				*e*		01 08 23.4	
	comp=Z,2μm,0.5s						
QABG	**Abgarm-Qazvin**	**5.30**	**358**	Pn	**Pn**	**01 06 45.3**	**-0.4**
QABG	**Abgarm-Qazvin**	**5.30**	**358**	*e*Pn	**Pn**	**01 06 45.4**	**-0.3**
IMHD	**Mahdasht**	**5.33**	**8**	*e*Pn	**Pn**	**01 06 47.6**	**+1.7**
ILAS	**Lasjerd**	**5.64**	**27**	*e*Pn	**Pn**	**01 06 52.7**	**+2.4**
KHGB	**Koh Gabri**	**5.77**	**89**	*e*Pn	**Pn**	**01 06 54.2**	**+2.0**
TRNA	**Turayna**	**5.78**	**167**	P	**Pn**	**01 06 55.7**	**+3.7**
KRBR	**Kerman**	**6.04**	**92**	*e*Pn	**Pn**	**01 06 57.8**	**+1.9**
KRBR				IAML		01 08 15.7	
	comp=N,47nm,0.4s						
KRBR				IAML		01 08 18.7	
	comp=E,55nm,0.4s						
KRBR	**Kerman**	**6.04**	**92**	*e*Pn	**Pn**	**01 06 57.8**	**+1.9**
TVBK	**TV Kerman**	**6.04**	**92**	Pn	**Pn**	**01 06 58.3**	**+2.3**
TVBK	**TV Kerman**	**6.04**	**92**	Pn	**Pn**	**01 06 58.3**	**+2.3**
NGRK	**Negar Kerman**	**6.06**	**95**	*e*Pn	**Pn**	**01 06 59.0**	**+2.8**
QALM	**Alamut, Qazvin**	**6.06**	**7**	*e*Pn	**Pn**	**01 06 56.7**	**+0.6**
IANJ	**Anjilo**	**6.13**	**33**	*e*Pn	**Pn**	**01 06 58.3**	**+1.2**
IPRN	**Peran**	**6.21**	**19**	*e*Pn	**Pn**	**01 06 59.3**	**+1.3**
GENO	**Geno**	**6.34**	**117**	*e*Pn	**Pn**	**01 07 01.5**	**+1.6**
TPRV	**Parvadeh(Tabas**	**6.43**	**64**	*e*Pn	**Pn**	**01 07 02.7**	**+1.6**
SLWR	**Sila**	**6.52**	**165**	P	**Pn**	**01 07 05.9**	**+3.7**
CHMN	**Cheshme madani**	**6.73**	**93**	*e*Pn	**Pn**	**01 07 07.9**	**+2.5**
TNSJ	**Nastanj**	**6.78**	**57**	*e*Pn	**Pn**	**01 07 07.3**	**+1.4**
TKDS	**Koohdasht(Taba**	**7.00**	**61**	*e*Pn	**Pn**	**01 07 10.4**	**+1.5**
SHME	**Shamm**	**7.08**	**126**	P	**Pn**	**01 07 09.6**	**-0.3**
SHME	**Shamm**	**7.08**	**126**	*e*Pn	**Pn**	**01 07 12.7**	**+2.9**
SHME	**Shamm**	**7.08**	**126**	P	**Pn**	**01 07 11.5**	**+1.7**
BANOM	**Banah**	**7.27**	**126**	P	**Pn**	**01 07 14.3**	**+1.9**
BANOM				S	**Sn**	**01 08 33.6**	**-1.5**
BANOM	**Banah**	**7.27**	**126**	*e*Pn	**Pn**	**01 07 14.9**	**+2.4**
BANOM	**Banah**	**7.27**	**126**	P	**Pn**	**01 07 14.0**	**+1.5**
	SNR=28						
BANOM				S	**Sn**	**01 08 34.0**	**-1.1**
NAZ	**Nazwa, Dubai**	**7.49**	**135**	P	**Pn**	**01 07 16.5**	**+1.0**
NAZ	**Nazwa, Dubai**	**7.49**	**135**	*e*Pn	**Pn**	**01 07 16.1**	**+0.6**
NAZ	**Nazwa, Dubai**	**7.49**	**135**	P	**Pn**	**01 07 17.5**	**+2.0**
NAZ				S	**Sn**	**01 08 41.3**	**+0.9**
MASF	**Masafi**	**7.53**	**130**	P	**Pn**	**01 07 18.6**	**+2.4**
MSFE	**Esma-Masafi**	**7.54**	**130**	P	**Pn**	**01 07 18.4**	**+2.1**
MSFE	**Esma-Masafi**	**7.54**	**130**	*e*Pn	**Pn**	**01 07 17.9**	**+1.6**
MZWR	**Madinat Zayed**	**7.54**	**150**	P	**Pn**	**01 07 19.9**	**+3.7**
ASUD	**Al Ashush, Dub**	**7.56**	**138**	P	**Pn**	**01 07 19.0**	**+2.5**
	SNR=23						
ASUD				S	**Sn**	**01 08 42.8**	**+0.6**
FAQ	**Al Faqa, Dubai**	**7.62**	**136**	P	**Pn**	**01 07 18.9**	**+1.5**
FAQ	**Al Faqa, Dubai**	**7.62**	**136**	*e*Pn	**Pn**	**01 07 18.1**	**+0.7**
FAQ	**Al Faqa, Dubai**	**7.62**	**136**	P	**Pn**	**01 07 19.4**	**+2.0**
MDH	**Madha**	**7.67**	**130**	P	**Pn**	**01 07 19.3**	**+1.2**
MDH	**Madha**	**7.67**	**130**	*e*Pn	**Pn**	**01 07 20.7**	**+2.6**
MDH	**Madha**	**7.67**	**130**	P	**Pn**	**01 07 20.1**	**+2.0**
RAYN	**Ar Rayn**	**7.84**	**210**	P	**Pn**	**01 07 22.4**	**+2.0**
RAYN	**Ar Rayn**	**7.84**	**210**	Pn	**Pn**	**01 07 21.9**	**+1.5**
UOSS	**Minazif**	**7.86**	**132**	P	**Pn**	**01 07 22.0**	**+1.4**
UOSS	**Minazif**	**7.86**	**132**	Pn	**Pn**	**01 07 23.6**	**+3.0**
UOSS	**Minazif**	**7.86**	**132**	*e*Pn	**Pn**	**01 07 23.0**	**+2.4**
UOSS	**Minazif**	**7.86**	**132**	P	**Pn**	**01 07 22.5**	**+1.9**
HATD	**Hatta, Dubai**	**7.90**	**133**	P	**Pn**	**01 07 23.5**	**+2.4**
HATD	**Hatta, Dubai**	**7.90**	**133**	*e*Pn	**Pn**	**01 07 23.5**	**+2.4**
HATD	**Hatta, Dubai**	**7.90**	**133**	P	**Pn**	**01 07 23.7**	**+2.6**
HATD				S	**Sn**	**01 08 49.7**	**-0.9**
ALNE	**Al Ain**	**8.24**	**139**	P	**Pn**	**01 07 27.8**	**+1.9**
ALNE	**Al Ain**	**8.24**	**139**	*e*Pn	**Pn**	**01 07 27.2**	**+1.3**
ALNE	**Al Ain**	**8.24**	**139**	P	**Pn**	**01 07 27.9**	**+2.0**
	SNR=5.8						
ALNE				S	**Sn**	**01 08 57.1**	**-2.1**
SOHO	**SOHO**	**8.65**	**135**	P	**Pn**	**01 07 32.2**	**

KK31 IAmb IAmb 01 10 14.3
comp=Z,5.1nm,0.9s
KKAR Karatay Array 20.82 47 P **P** **01 10 07.2 -0.7**
KKAR IAmb IAmb 01 10 14.3
comp=Z,5.1nm,0.9s
AKTO Aktyubinsk 20.95 15 P **P** **01 10 08.4 -0.7**
comp=Z,1.8nm,0.8s,baz=225,slow=6.1,SNR=2.5
IDI Anoyia 21.46 290 P **P** **01 10 13.8 -1.1**
comp=Z,7.6nm,0.8s,baz=259,slow=17,SNR=1.6
BELG Belogornoye 22.04 356 P **P** **01 10 19.9 -0.9**
comp=Z,11nm,0.9s,baz=167,slow=5.0,SNR=3.7
AAK Ala-Archa 23.22 51 P **P** **01 10 33.6 +0.1**
comp=Z,0.4nm,0.3s,baz=237,slow=21,SNR=2.3
KSH Kashi 23.24 60 P **P** **01 10 36.0 +2.2**
KSH pmax pmax
comp=Z,8.0nm,0.7s
KSH pmax pmax
comp=Z,110nm,5.9s
MLR Muntele Rosu 23.98 316 P **P** **01 10 39.0 -1.9**
comp=Z,1.1nm,0.9s,baz=280,slow=18,SNR=1.5
KDJ Kajisay 24.89 54 P **P** **01 10 47.6 -1.7**
KDJ IAmb IAmb 01 11 19.6
comp=Z,1.6nm,0.8s
AKASG Malin Array Be 25.45 329 P **P** **01 10 53.2 -0.9**
comp=Z,0.3nm,0.3s,baz=134,slow=8.1,SNR=2.3
BURAR Bucovina Array 25.53 319 P **P** **01 10 54.5 -0.5**
BURAR IAmb IAmb 01 11 05.2
comp=Z,1.6nm,0.8s
BUR08 Bucovina Ar. S 25.56 319 P **P** **01 10 54.8 -0.5**
ARU Arti 26.75 11 P **P** **01 11 05.7 -0.1**
comp=Z,0.2nm,0.3s,baz=73,slow=23,SNR=1.6
BVAR Borovoye Array 27.16 28 P **P** **01 11 10.0 +0.5**
comp=Z,0.4nm,0.5s,baz=159,slow=13,SNR=3.2
KURBB Kurchatov Arra 29.46 39 P **P** **01 11 30.5 +0.4**
comp=Z,0.9nm,0.7s,baz=240,slow=9.4,SNR=9.0
MK31 Makanchi Array 29.95 48 P **P** **01 11 34.2 -0.3**
MK31 IAmb IAmb 01 11 46.3
comp=Z,1.4nm,0.9s
MKAR Makanchi Array 29.95 48 P **P** **01 11 35.4 +0.9**
comp=Z,0.5nm,0.5s,baz=234,slow=9.8,SNR=6.7
OBKA Obir 31.63 311 *eP* **P** **01 11 49.5 +0.1**
comp=Z,0.3nm,0.3s
MOA Molln 32.25 313 *eP* **P** **01 11 55.5 +0.7**
comp=Z,0.5nm,0.5s
ABTA Abfaltersbach 33.04 310 *eP* **P** **01 12 01.9 +0.1**
comp=Z,0.4nm,0.3s
WTTA Wattenberg 33.76 311 *eP* **P** **01 12 07.4 -0.8**
comp=Z,0.2nm,0.2s
WATA Walderalm 33.82 311 *eP* **P** **01 12 08.4 -0.3**
comp=Z,1.0nm,0.5s
SQTA Sankt Quirin 34.03 311 *eP* **P** **01 12 10.4 0.0**
comp=Z,1.6nm,0.5s
MOTA Moosalm 34.13 311 *eP* **P** **01 12 10.7 -0.7**
comp=Z,0.1nm,0.1s
FETA Feichten 34.30 310 *eP* **P** **01 12 12.3 -0.5**
comp=Z,0.5nm,0.4s
ZALV Zalesovo Beam 34.48 37 P **P** **01 12 14.6 +0.5**
comp=Z,2.0nm,0.9s,baz=232,slow=7.3,SNR=5.5
FINES FINESS Array B 34.75 340 P **P** **01 12 15.4 -1.0**
comp=Z,0.8nm,0.6s,baz=145,slow=8.7,SNR=5.3
SONM Songino Array 46.17 51 P **P** **01 13 51.8 +0.6**
comp=Z,0.4nm,0.6s,baz=251,slow=9.0,SNR=1.7
ULN Ulaanbaatar 46.62 51 P **P** **01 13 54.1 -0.6**
TORD Torodi Ar. Bea 47.48 260 P **P** **01 14 01.2 -0.4**
comp=Z,0.5nm,0.6s,baz=56,slow=8.7,SNR=7.6
DBIC Dimbokro 56.31 257 LR LR 01 41 18.1
comp=Z,26nm,18.8s,baz=78,slow=38
BOSA Boshof 63.18 204 LR LR 01 41 47.4
comp=Z,46nm,19.4s,baz=57,slow=34
SIJI Sorong 83.08 95 LR LR 01 59 28.5
comp=Z,30nm,19.1s,baz=104,slow=39
YKA Yellowknife Ar 86.59 353 P **P** **01 18 09.6 +0.2**
comp=Z,0.3nm,0.8s,baz=16,slow=3.0,SNR=5.1

*IDC **26** 01:23:06.0±4.6,28.°14N×85.°44E,h0km,mb3.8/5, mb1 3.8/6,mb1mx3.5/29,mbtmp3.7/6,ML3.6/1,Error ellipse: s-maj=93.0km s-min=41.8km az=154.0*
ISC 26 01:23:08.3±3.6,28.°3N±0.°4×85.°4E±0.°3,h10km,n6,σ0s52/6, mb4.0/5,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.67**	**353**	P		P	**Pn**	**01 27 26.4**	**-0.4**
	0.2nm,0.3s,baz=171,slow=11,SNR=7.2								
SONM	**Songino Array**	**25.46**	**34**	P		**P**		**01 28 36.4**	**-0.2**
	0.5nm,0.6s,baz=215,slow=9.7,SNR=4.4								
ZALV	**Zalesovo Beam**	**25.68**	**359**	P		**P**		**01 28 38.9**	**+0.7**
	0.3nm,0.3s,baz=160,slow=8.9,SNR=1.8								
FINES	**FINESS Array B**	**51.01**	**328**	P		**P**		**01 32 10.4**	**+0.3**
	2.0nm,1.0s,baz=99,slow=8.6,SNR=4.5								
ARCES	**ARCESS Array B**	**53.38**	**338**	P		**P**		**01 32 27.6**	**-0.1**
	2.4nm,0.8s,baz=107,slow=8.1,SNR=1.6								
KEST	**Kesra**	**63.46**	**298**	P		P		**01 33 38.5**	**-0.2**
	1.5nm,0.7s,baz=94,slow=14,SNR=2.7								

ISC 26 01:50:37.0±31.0,26.°57N×86.°72E,h0km,mb3.4/3, mb1 3.5/3,mb1mx3.2/36,mbtmp3.5/3,MS3.3/1,Ms1 3.3/1, ms1mx2.4/33,Error ellipse: s-maj=514.5km s-min=86.3km az=22.0,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**20.49**	**351**	P		P		01 55 16.4	-0.1
	0.3nm,0.4s,baz=176,slow=10.0,SNR=6.8								
SONM	**Songino Array**	**26.24**	**31**	P		P		01 56 13.9	0.0
	0.5nm,0.6s,baz=222,slow=11,SNR=2.8								
ZALV	**Zalesovo Beam**	**27.38**	**358**	P		P		01 56 24.0	+0.1
	0.4nm,0.3s,baz=178,slow=8.7,SNR=1.5								
USRK	**Ussuriysk Ar.**	**40.32**	**52**	LR		LR		02 15 41.1	
	comp=Z,36nm,18.9s,baz=340,slow=37								

*IDC **26** 02:02:07.0±5.9,27.°55N×85.°29E,h0km,mb3.8/5, mb1 3.8/6,mb1mx3.3/45,mbtmp3.8/6,ML3.7/1,Error ellipse: s-maj=103.0km s-min=53.2km az=171.0*
*NEIC **26** 02:02:07.8±1.9,27.°6N±0.°2×85.°44E±0.°07,h10km±1km, mb4.2/5,Error ellipse: s-maj=25.3km s-min=6.6km az=192.0*
ISC 26 02:02:07.8±1.3,27.°5N±0.°2×85.°3E±0.°2,h10km,n13, σ0s99/13,mb3.9/7,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**12.05**	**303**	Pn		**Pn**		**02 04 59.5**	**-0.1**
MK31	**Makanchi Array**	**19.38**	**354**	P		**P**		**02 06 33.8**	**+0.1**
MKAR	**Makanchi Array**	**19.38**	**354**	P		**P**		**02 06 33.9**	**+0.2**
	0.2nm,0.3s,baz=173,slow=11,SNR=12								
KURBB	**Kurchatov Arra**	**23.64**	**349**	P		**P**		**02 07 19.5**	**+0.6**
	0.6nm,0.6s,baz=173,slow=10,SNR=7.7								
KURK	**Kurchatov**	**23.71**	**349**	P		**P**		**02 07 19.5**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**25.04**	**301**	P		**P**		**02 07 31.2**	**-1.0**
GYA0B				IAmb		IAmb		02 07 33.5	
	comp=Z,3.9nm,1.1s								
SONM	**Songino Array**	**26.10**	**33**	P		**P**		**02 07 42.4**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=223,slow=9.7,SNR=4.3								
SONM	**Songino Array**	**26.10**	**33**	P		**P**		**02 07 39.4**	**-2.4**
ZALV	**Zalesovo Beam**	**26.39**	**359**	P		**P**		**02 07 45.3**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=187,slow=10.0,SNR=4.2								
RPSI	**Rantau Prapat**	**27.91**	**150**	P		**P**		**02 07 58.3**	**+0.2**
ABKAR	**Akbulak array**	**29.19**	**325**	P		**P**		**02 08 09.4**	**+0.2**
ABKAR				IAmb		IAmb		02 08 11.7	
	comp=Z,12nm,2.0s								
FINES	**FINESS Array B**	**51.58**	**328**	P		**P**		**02 11 14.1**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=114,slow=6.9,SNR=6.9								
ARCES	**ARCESS Array B**	**54.02**	**338**	P		**P**		**02 11 32.8**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=100,slow=7.5,SNR=6.3								

*IDC **26** 02:06:35.0±1.1,28.°00N×85.°19E,h0km,mb3.8/9, mb1 3.9/10,mb1mx3.5/47,mbtmp3.8/10,ML4.0/1,Error ellipse: s-maj=37.8km s-min=20.5km az=64.0*
ISC 26 02:06:37.0±1.1,28.°0N±0.°2×85.°2E±0.°2,h12km,n10, σ0s58/10,mb3.7/9,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.90**	**354**	P		P	**P**	**02 10 57.6**	**+0.2**
	0.4nm,0.3s,baz=174,slow=12,SNR=32								
KURBB	**Kurchatov Arra**	**23.16**	**349**	P		**P**		**02 11 43.2**	**+0.1**
	0.6nm,0.5s,baz=168,slow=10,SNR=7.1								
SONM	**Songino Array**	**25.78**	**34**	P		**P**		**02 12 07.9**	**+0.1**
	1.5nm,0.8s,baz=224,slow=6.2,SNR=6.0								
ZALV	**Zalesovo Beam**	**25.93**	**360**	P		**P**		**02 12 07.5**	**-1.4**
	2.2nm,0.4s,baz=180,slow=9.2,SNR=11								
FINES	**FINESS Array B**	**51.12**	**328**	P		**P**		**02 15 39.6**	**+0.3**
	1.6nm,0.9s,baz=79,slow=9.9,SNR=5.0								
ARCES	**ARCESS Array B**	**53.55**	**338**	P		**P**		**02 15 57.5**	**+0.2**
	4.2nm,1.0s,baz=64,slow=5.5,SNR=4.9								
WRA	**Warramunga Arr**	**67.31**	**130**	P		**P**		**02 17 32.2**	**+0.2**
	0.7nm,0.8s,baz=322,slow=6.9,SNR=2.6								
ASAR	**Alice Springs**	**69.60**	**133**	P		**P**		**02 17 46.2**	**-0.1**
	0.4nm,0.6s,baz=309,slow=6.8,SNR=5.8								
TORD	**Torodi Ar. Bea**	**78.28**	**279**	P		P		**02 18 37.1**	**-0.2**
	0.1nm,0.4s,baz=61,slow=4.2,SNR=1.6								
YKA	**Yellowknife Ar**	**88.44**	**9**	P		**P**		**02 19 29.0**	**+0.2**
	0.1nm,0.6s,baz=338,slow=4.9,SNR=4.9								

*NEIC **26** 02:17:59.7±1.7,21.°23S±0.°08×179.°2W±0.°1,h598km±5km, mb4.6/178,Error ellipse: s-maj=14.1km s-min=11.9km az=74.0*
*NOU **26** 02:18:00.1,21.°23S×178.°99W,h616km,mb4.9,Fiji Islands Region*
*BJI **26** 02:18:00.3±0.0,21.°17S×178.°75W,h624km,mB4.9/10, mb4.6/12*
*IDC **26** 02:18:00.9±0.4,21.°15S×179.°15W,h609km±4km,mb4.2/30, mb1 4.2/33,mb1mx4.2/40,mbtmp5.1/33,Error ellipse: s-maj=8.4km s-min=8.2km az=98.0*
*BGR **26** 02:18:01.3±0.0,21.°81S×178.°62W,h626km±13km*
ISC 26 02:18:00.3±0.3,21.°24S±0.°04×179.°09W±0.°05, h611km,3km,h611km;pP-P,n536,σ1s38/574,mb4.5/114, 96C-47D,Fault plane solution: NP1:ϕ±231.46933°, δ56.26110°,λ124.15554°. NP2:ϕ±0.77396°,δ46.51664°, λ49.94930°. Principal axes: T Plg61.5610°, Azm197.9440°; N Plg27.8321°, Azm30.8216°; P Plg5.3856°, Azm297.9687°; Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.41**	**322**	P		P	**P**	**02 19 30.3**	**+0.7**
	176nm,0.3s,baz=270,slow=23,SNR=4.10								
MSVF				S			**S**	**02 20 43.1**	**+0.8**
	baz=149,slow=20,SNR=1.0								
MSVF	**Nonsavu**	**4.41**	**322**	P		P	**P**	**02 19 30.7**	**+1.0**
MSVF	**Nonsavu**	**4.41**	**322**	P		P	**P**	**02 19 31.1**	**+1.5**
RIZ	**Raoul Island**	**8.04**	**173**	P		P	**P**	**02 19 58.9**	**-1.4**
RIZ				S			**S**	**02 21 38.3**	**-0.5**
RAO	**Raoul Island**	**8.05**	**173**	P		P	**P**	**02 19 59.8**	**-0.6**
	175nm,0.3s,baz=184,slow=2.6,SNR=6.9								
RAO				S			**S**	**02 21 35.6**	**-3.3**
	116nm,0.3s,baz=107,slow=23,SNR=9.3								
RAO	**Raoul Island**	**8.05**	**173**	P		**P**	**P**	**02 19 59.0**	**-1.4**
GLKZ	**Green Lake**	**8.06**	**173**	P		P	**P**	**02 20 00.2**	**-0.2**
GLKZ				S			**S**	**02 21 36.1**	**-2.9**
NIUE	**Niue**	**8.87**	**78**	P		P	**P**	**02 20 08.8**	**+0.4**
	baz=8.8,SNR=5.7								
NIUE				S			**S**	**02 21 55.6**	**+2.3**
	baz=8.8								
NIUE	**Niue**	**8.87**	**78**	P		**P**	**P**	**02 20 08.5**	**+0.1**
AFI	**Afiamalu**	**10.08**	**45**	P		P	**P**	**02 20 18.2**	**-2.2**
	40nm,0.3s,baz=140,slow=1.0,SNR=34								
AFI				S			**S**	**02 22 09.6**	**-5.6**
	23nm,0.3s,baz=118,slow=13,SNR=9.6								
AFI	**Afiamalu**	**10.08**	**45**	P		P	**P**	**02 20 17.7**	**-2.7**
AFI	**Afiamalu**	**10.08**	**45**	P		P	**P**	**02 20 18.3**	**-2.1**
MARNC	**Mare, Loyalty**	**12.00**	**267**	P		P	**P**	**02 20 39.0**	**-0.1**
DVP	**Devils Point**	**12.49**	**284**	P		P	**P**	**02 20 45.2**	**+1.2**
	463µm,0.7s								
FUNA	**Funafuti**	**12.74**	**352**	P		P	**P**	**02 20 44.1**	**-2.5**
LIFNC	**LIFOU**	**12.78**	**270**	P		P	**P**	**02 20 45.9**	**-0.9**
YATNC	**Mamie plateau,**	**13.06**	**264**	P		P	**P**	**02 20 50.1**	**+0.4**
OUENC	**Ouen Island, N**	**13.12**	**262**	P		P	**P**	**02 20 51.7**	**+1.5**
DZM	**Mont Dzumac**	**13.48**	**264**	P		P	**P**	**02 20 53.5**	**-0.4**
	5.1nm,0.3s,baz=81,slow=18,SNR=53								
DZM	**Mont Dzumac**	**13.48**	**264**	P		P	**P**	**02 20 52.2**	**-1.7**
DZM	**Mont Dzumac**	**13.48**	**264**	P		P	**P**	**02 20 53.7**	**-0.2**
NOUC	**Port Laguerre**	**13.61**	**264**	P		P	**P**	**02 20 54.8**	**-0.3**
NFK	**Norfolk Island**	**14.08**	**234**	P		P	**P**	**02 21 01.2**	**+1.6**
	baz=14,SNR=3.2								
NFK	**Norfolk Island**	**14.08**	**234**	P		P	**P**	**02 21 00.7**	**+1.1**
KOUNC	**Koumac, New Ca**	**15.55**	**270**	P		P	**P**	**02 21 13.5**	**+0.3**
WCZ	**Waipu Caves**	**15.73**	**200**	P		P	**P**	**02 21 17.4**	**+2.8**
KUZ	**Kuaotunu**	**16.10**	**195**	P		P	**P**	**02 21 19.6**	**+1.7**
WIAZ	**Waiheke Island**	**16.30**	**197**	P		P	**P**	**02 21 21.8**	**+2.0**
HAZ	**Te Kaha**	**16.68**	**189**	P		P	**P**	**02 21 22.5**	**-0.7**
PKGZ	**Pakihiroa**	**16.77**	**188**	P		P	**P**	**02 21 21.6**	**-2.5**
PUZ	**Puketiti**	**16.93**	**187**	P		P	**P**	**02 21 25.0**	**-0.6**
PUZ				S			**S**	**02 24 08.3**	**-4.2**
TWGZ	**Tauwhareparae**	**17.07**	**188**	P		P	**P**	**02 21 26.7**	**-0.2**
TWGZ				S			**S**	**02 24 11.0**	**-3.8**
OMRZ	**Omania**	**17.26**	**192**	P		P	**P**	**02 21 29.7**	**+1.1**
URZ	**Urewera**	**17.28**	**190**	P		P	**P**	**02 21 26.2**	**-2.5**
	19nm,0.3s,baz=301,slow=24,SNR=62								
URZ				S			**S**	**02 24 11.0**	**-7.1**
	2.1nm,0.3s,baz=118,slow=22,SNR=3.0								
URZ				ScP			**ScP**	**02 28 13.7**	**-0.1**
	0.3nm,0.3s,baz=305,slow=24,SNR=2.4								
URZ	**Urewera**	**17.28**	**190**	P		P	**P**	**02 21 27.1**	**-1.6**
CNGZ	**Carnagh Statio**	**17.35**	**187**	P		P	**P**	**02 21 29.0**	**-0.3**
CNGZ				S			**S**	**02 24 17.3**	**-1.8**
TKGZ	**Te Karaka**	**17.35**	**188**	P		P	**P**	**02 21 29.7**	**+0.4**
TARZ	**Mount Tarawera**	**17.36**	**192**	P		P	**P**	**02 21 30.9**	**+1.3**
MUGZ	**Murupara**	**17.55**	**191**	P		P	**P**	**02 21 30.4**	**-0.8**
MUGZ				S			**S**	**02 24 16.1**	**-6.4**
RIGZ	**Rimuhau**	**17.62**	**188**	P		P	**P**	**02 21 31.1**	**-0.8**
RIGZ				S			**S**	**02 24 20.2**	**-3.5**
SNGZ	**Shannon Statio**	**17.75**	**189**	P		P	**P**	**02 21 32.1**	**-1.0**
SNGZ				S			**S**	**02 24.7**	**-1.1**
PRGZ	**Paritu Road**	**17.82**	**188**	P		P	**P**	**02 21 33.6**	**0.0**
MTHZ	**Maungataniwha**	**17.90**	**190**	P		P	**P**	**02 21 34.1**	**-0.3**
RAHZ	**Arahi**	**17.93**	**190**	P		P	**P**	**02 21 34.4**	**-0.3**
RAHZ				S			**S**	**02 24 26.1**	**-2.5**
KNZ	**Kokohu**	**17.94**	**188**	P		P	**P**	**02 21 33.8**	**-0.9**
KNZ				S			**S**	**02 24 24.7**	**-4.1**
MRHZ	**Matea Rd**	**17.96**	**191**	P		P	**P**	**02 21 34.3**	**-0.7**
MRHZ				S			**S**	**02 24 25.6**	**-3.6**
HIZ	**Hauiti**	**17.99**	**196**	P		P	**P**	**02 21 37.5**	**+2.3**
RAR	**Rarotonga**	**18.01**	**93**	P		P	**P**	**02 21 36.2**	**+0.5**
	0.8nm,0.3s,baz=249,slow=9.6,SNR=4.3								
MHGZ	**Mahia Peninsul**	**18.04**	**188**	P		P	**P**	**02 21 36.5**	**+0.8**
RATZ	**Rangitukua**	**18.12**	**193**	P		P	**P**	**02 21 36.8**	**+0.4**
NMHZ	**Naumai**	**18.15**	**190**	P		P	**P**	**02 21 36.6**	**-0.2**
NMHZ				S			**S**	**02 24 31.8**	**-0.5**
BKZ	**Black Stump Fm**	**18.27**	**191**	P		P	**P**	**02 21 36.0**	**-1.8**
BKZ				S			**S**	**02 24 33.8**	**-0.3**
ARHZ	**Aropaoanui**	**18.28**	**190**	P		P	**P**	**02 21 37.9**	**0.0**
NTVZ	**North Tongarir**	**18.36**	**193**	P		P	**P**	**02 21 38.9**	**+0.2**
TMVZ	**Te Maari**	**18.37**	**193**	P		P	**P**	**02 21 38.4**	**-0.4**
ETVZ	**East Tongariro**	**18.39**	**193**	P		P	**P**	**02 21 38.7**	**-0.3**
NNVZ	**North Ngauruho**	**18.41**	**193**	P		P	**P**	**02 21 40.0**	**+0.8**
OTVZ	**Oturere**	**18.43**	**193**	P		P	**P**	**02 21 38.9**	**-0.5**
SNVZ	**South Ngauruho**	**18.45**	**193**	P		P	**P**	**02 21 39.2**	**-0.4**
MCHZ	**McNeill Hill**	**18.50**	**190**	P		P	**P**	**02 21 39.2**	**-0.7**
KWHZ	**Kaweka Forest**	**18.53**	**191**	P		P	**P**	**02 21 38.6**	**-1.6**
KWHZ				S			**S**	**02 24 32.5**	**-5.9**
VRZ	**Vera Road**	**18.59**	**195**	P		P	**P**	**02 21 43.0**	**+2.4**
MOVZ	**Moawhango**	**18.64**	**193**	P		P	**P**	**02 21 40.4**	**-0.8**
BHHZ	**Black Hill Sta**	**18.66**	**192**	P		P	**P**	**02 21 35.8**	**-5.6**
KRHZ	**Kereru**	**18.75**	**191**	P		P	**P**	**02 21 40.9**	**-1.3**
KRHZ				S			**S**	**02 24 38.3**	**-3.6**
KAHZ	**Kahuranaki**	**18.82**	**190**	P		P	**P**	**02 21 42.3**	**-0.4**
NEZ	**North Egmont**	**18.90**	**197**	P		P	**P**	**02 21 47.7**	**+4.1**
PNHZ	**Pukenui**	**19.05**	**191**	P		P	**P**	**02 21 43.8**	**-1.0**
PXZ	**Pawanui**	**19.05**	**190**	P		P	**P**	**02 21 44.4**	**-0.4**
PRHZ	**Porangahau**	**19.32**	**190**	P		P	**P**	**02 21 47.5**	**+0.2**
DVHZ	**Dannevirke**	**19.43**	**191**	P		P	**P**	**02 21 47.4**	**-0.9**
BFZ	**Birch Farm**	**19.79**	**191**	P		P	**P**	**02 21 50.7**	**-0.7**
KHZ	**Kahutara**	**22.01**	**195**	P		P	**P**	**02 22 09.2**	**-2.1**
HNR	**Honiara**	**23.34**	**297**	P		P	**P**	**02 22 22.4**	**-1.1**
	128nm,0.6s,baz=213,slow=5.6,SNR=10								
HNR	**Honiara**	**23.34**	**297**	P		P	**P**	**02 22 21.9**	**-1.6**
RPZ	**Rata Peaks**	**23.87**	**198**	P		P	**P**	**02 22 28.6**	**+0.8**
	18nm,0.5s,baz=33,slow=3.2,SNR=8.7								
RPZ	**Rata Peaks**	**23.87**	**198**	IAmb		IAmb		02 22 34.0	
	comp=Z,40nm,1.1s								
WHZ	**Wether Hill Ro**	**26.79**	**200**	P		P	**P**	**02 22 53.8**	**+0.4**
ARMA	**Armidale**	**27.83**	**245**	P		P	**P**	**02 23 04.7**	**+1.8**
	baz=28,SNR=22								
ARMA	**Armidale**	**27.83**	**245**	P		P	**P**	**02 23 04.3**	**+1.4**
RMQ	**Roma**	**29.82**	**254**	P		P	**P**	**02 23 22.3**	**+2.2**
	baz=30,SNR=5.5								
CNB	**Canberra Magne**	**30.97**	**236**	P		P	**P**	**02 23 31.4**	**+1.5**
	baz=31,SNR=28								
CAN	**Canberra**	**31.25**	**236**	P		P	**P**	**02 23 32.3**	**+0.1**
CTA	**Charters Tower**	**32.41**	**266**	P		P	**P**	**02 23 42.8**	**+0.6**
	comp=Z,29nm,0.5s,baz=91,slow=10,SNR=55								
CTA				PcP			**PcP**	**02 26 09.4**	**-1.2**
	comp=Z,5.1nm,0.5s,baz=83,slow=6.7,SNR=2.7								
CTA				ScP			**ScP**	**02 28 58.5**	**+1.1**
	comp=Z,4.6nm,0.8s,baz=72,slow=22,SNR=2.6								
CTAO	**Charters Tower**	**32.41**	**266**	P		P	**P**	**02 23 41.9**	**-0.3**
RABL	**Rabaul**	**32.65**	**297**	P		P	**P**	**02 23 44.6**	**+0.3**
CMSA	**Cobar Meteorol**	**33.05**	**245**	P		P	**P**	**02 23 48.3**	**+1.0**
	baz=33,SNR=53								
QLP	**Quilpie**	**33.87**	**254**	P		P	**P**	**02 23 55.2**	**+0.9**
	baz=34,SNR=8.5								
PMG	**Port Moresby**	**34.52**	**285**	P		P	**P**	**02 24 00.4**	**+0.6**
	comp=Z,96nm,0.8s,baz=83,slow=5.9,SNR=30								
PMG	**Port Moresby**	**34.52**	**285**	P		P	**P**	**02 24 00.4**	**+0.6**
PMG	**Port Moresby**	**34.52**	**285**	P		P	**P**	**02 24 00.5**	**+0.6**
MTSU	**Mount Surprise**	**34.54**	**269**	P		P	**P**	**02 24 00.8**	**+0.7**
	baz=34,SNR=66								
TOO	**Toolangi**	**34.64**	**234**	P		P	**P**	**02 24 01.7**	**+1.1**
	baz=35,SNR=30								
TOO	**Toolangi**	**34.64**	**234**	P		P	**P**	**02 24 00.6**	**0.0**
PATS	**Pohnpei**	**35.64**	**319**	P		P	**P**	**02 24 10.5**	**+1.4**
	baz=36,SNR=4.6								
STKA	**Stephens Creek**	**36.55**	**245**	P		P	**P**	**02 24 17.6**	**+1.2**
	comp=Z,22nm,0.5s,baz=92,slow=10,SNR=59								
STKA				ScP			**ScP**	**02 29 12.3**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=56,slow=21,SNR=1.9								
STKA	**Stephens Creek**	**36.55**	**245**	P		P	**P**	**02 24 17.6**	**+1.2**
	baz=37,SNR=32								
STKA	**Stephens Creek**	**36.55**	**245**	P		P	**P**	**02 24 14.8**	**-1.6**
COEN	**Coen**	**36.62**	**275**	P		P	**P**	**02 24 16.7**	**-0.5**
ARPS	**Mount Arapiles**	**37.23**	**237**	P		P	**P**	**02 24 22.5**	**+0.7**
	baz=37,SNR=8.6								
QIS	**Mount Isa**	**38.51**	**263**	P		P	**P**	**02 24 32.5**	**0.0**
	baz=38,SNR=5.1								
HTT	**Hallett**	**38.98**	**243**	P		P	**P**	**02 24 36.9**	**+0.8**
	baz=39,SNR=22								
BBOO	**Buckleboo**	**41.31**	**244**	P		P	**P**	**02 24 55.0**	**+0.5**
	baz=41,SNR=76								
BBOO	**Buckleboo**	**41.31**	**244**	P		P	**P**	**02 24 54.2**	**-0.3**
WR0	**Warramunga Arr**	**43.30**	**263**	P		P	**P**	**02 25 09.2**	**-1.1**
AS31	**Alice Springs**	**43.36**	**258**	P		P	**P**	**02 25 10.1**	**-0.6**
ASAR	**Alice Springs**	**43.36**	**258**	P		P	**P**	**02 25 11.2**	**+0.5**
	comp=Z,22nm,0.8s,baz=98,slow=7.6,SNR=264								
ASAR				PcP			**PcP**	**02 26 45.6**	**+0.4**
	comp=Z,12nm,0.6s,baz=106,slow=3.7,SNR=20								
ASAR				ScP			**ScP**	**02 29 39.9**	**+0.6**
	comp=Z,4.4nm,0.8s,baz=102,slow=4.6,SNR=8.1								
ASAR				S			**S**	**02 30 53.2**	**-2.6**
	comp=Z,14nm,0.8s,baz=95,slow=16,SNR=42								
ASAR				PKiKP			**PKiKP**	**02 33 44.5**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=82,slow=1.0,SNR=5.3								
ASAR				ScS			**ScS**	**02 34 04.8**	**+1.9**
	comp=Z,3.6nm,0.9s,baz=94,slow=7.4,SNR=9.9								
ASAR	**Alice Springs**	**43.36**	**258**	P		P	**P**	**02 25 10.5**	**-0.2**
WB0	**Warramunga Arr**	**43.47**	**263**	IAmb		IAmb		02 25 12.2	
	comp=Z,17nm,0.7s								
WB2	**Warramunga Arr**	**43.48**	**263**	P		P	**P**	**02 25 11.0**	**-0.6**
WB2				IAmb		IAmb		02 25 12.4	
	comp=Z,14nm,0.8s								
WRA	**Warramunga Arr**	**43.49**	**263**	P		P	**P**	**02 25 11.6**	**-0.2**
	comp=Z,4.5nm,0.3s,baz=97,slow=7.6,SNR=94								
WRA				PcP			**PcP**	**02 26 46.2**	**+0.5**
	comp=Z,8.9nm,0.9s,baz=98,slow=4.3,SNR=6.4								
WRA				ScP			**ScP**	**02 29 40.4**	**+0.5**
	comp=Z,3.1nm,1.0s,baz=99,slow=4.4,SNR=5.2								
WRA				S			**S**	**02 30 54.7**	**-3.0**
	comp=Z,6.1nm,0.9s,baz=96,slow=14,SNR=9.8								
WRA				PKiKP			**PKiKP**	**02 33 44.6**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=113,slow=0

baz=80,SNR=16
MAW Mawson 80.53 200 P **P** 02 29 10.2 +0.4
WDC Whiskeytown Da 80.89 40 P **P** 02 29 13.2 +1.1
WDC IAmb IAmb 02 29 15.4
comp=Z,14nm,1.1s
PMSA Palmer Station 81.02 157 P **P** 02 29 13.6 +1.3
comp=Z,35nm,0.6s,baz=234,slow=2.7,SNR=11
MDPB Devils Postpil 81.30 44 IAmb IAmb 02 29 17.5
comp=Z,13nm,1.0s
YBH Yreka Blue Hor 81.50 39 P **P** 02 29 16.9 +1.5
YBH IAmb IAmb 02 29 18.7
comp=Z,12nm,0.8s
WAKR Walker 81.57 43 IAmb IAmb 02 29 18.6
comp=Z,11nm,0.7s
HUMO Hull Mountain 81.90 38 P **P** 02 29 19.1 +1.9
HUMO IAmb IAmb 02 29 20.8
comp=Z,17nm,1.1s
YERR Yerington 81.98 43 IAmb IAmb 02 29 20.6
comp=Z,15nm,0.9s
LHV Little Huntoon 82.03 44 IAmb IAmb 02 29 21.1
comp=Z,12nm,0.9s
IPM Ipoh 82.22 278 P **P** 02 29 19.6 +0.1
NVAR Mina Array Bea 82.26 44 P **P** 02 29 20.9 +1.4
comp=Z,9.0nm,0.8s,baz=225,slow=8.1,SNR=38
NVAR pP **pwP** 02 31 29.1 -1.3
comp=Z,1.7nm,0.8s,baz=229,slow=8.2,SNR=3.4
NVAR PKKPbc **PKKPbc** 02 47 44.4 +1.2
comp=Z,0.8nm,0.6s,baz=100,slow=2.7,SNR=4.5
PAHR Pah Rah Range 82.31 42 IAmb IAmb 02 29 22.3
comp=Z,13nm,0.9s
NV11 Mina Array Sit 82.36 44 IAmb IAmb 02 29 22.5
comp=Z,14nm,1.1s
HSIG 82.51 55 P **P** 02 29 21.5 +0.9
HSIG IAmb IAmb 02 29 23.4
comp=Z,11nm,0.8s
KLR Kul'dur 82.64 330 P **P** 02 29 21.7 +0.9
comp=Z,2.3nm,0.6s,baz=309,slow=7.1,SNR=5.6
KLR pP **pP** 02 31 30.3 +1.5
comp=Z,0.7nm,0.4s,baz=236,slow=20,SNR=1.8
KULM Kulim 82.86 278 P **P** 02 29 22.9 +0.2
KULM IAmb IAmb 02 29 24.6
comp=Z,12nm,0.8s
MOD Modoc Plateau 83.03 40 IAmb IAmb 02 29 26.0
comp=Z,10nm,0.8s
K05A Summer Lake 83.17 39 IAmb IAmb 02 29 27.1
comp=Z,23nm,0.9s
RPSI Rantau Prapat 83.50 275 P **P** 02 29 25.6 -0.3
RPSI IAmb IAmb 02 29 27.1
comp=Z,14nm,0.9s
PSI Prapat 83.54 276 P **P** 02 29 25.8 -0.5
comp=Z,5.1nm,0.4s,baz=174,slow=1.4,SNR=12
H04A Detroit Lake 83.63 37 IAmb IAmb 02 29 28.2
comp=Z,8.9nm,0.9s
PINE Pine Mountain 83.79 38 IAmb IAmb 02 29 30.1
comp=Z,20nm,0.8s
PRN Pahroc Range 83.84 46 IAmb IAmb 02 29 30.4
comp=Z,17nm,1.3s
E03A Lebam 84.04 35 IAmb IAmb 02 29 30.8
comp=Z,25nm,1.0s
TUC Tucson 84.23 52 P **P** 02 29 30.6 +1.4
TUC IAmb IAmb 02 29 32.8
comp=Z,9.2nm,0.8s
GSI Gunungsitoli 84.25 274 P **P** 02 29 30.0 +0.4
I07A Izee 84.80 39 IAmb IAmb 02 29 34.8
comp=Z,13nm,1.2s
J08A Circle Bar Ran 84.98 40 IAmb IAmb 02 29 35.5
comp=Z,19nm,1.4s
CCUT Cedar City 85.05 47 P **P** 02 29 34.4 +1.1
D05A Enumclaw 85.28 35 IAmb IAmb 02 29 38.8
comp=Z,20nm,1.0s
PKCU Pink Cliffs 85.71 47 IAmb IAmb 02 29 40.2
comp=Z,15nm,0.9s
SYO Syowa Base 85.78 193 *e*P **P** 02 29 35.6 -0.3
SYO Syowa Base 85.78 193 *e*P **P** 02 29 36.7 +0.8
G08A Pilot Rock 85.82 38 IAmb IAmb 02 29 39.4
comp=Z,29nm,1.5s
X18A Snowflake 85.92 51 P **P** 02 29 39.2 +1.8
E07A Sunnyside 86.06 36 IAmb IAmb 02 29 40.5
comp=Z,16nm,1.0s
MTPU Mount Pierson 86.11 47 IAmb IAmb 02 29 43.3
comp=Z,6.4nm,0.8s
HAWA Hanford 86.14 37 IAmb IAmb 02 29 40.8
comp=Z,13nm,0.8s
GHO Glory Hole Cre 86.18 14 IAmb IAmb 02 29 39.3
comp=Z,12nm,0.7s
ZAIG Zacatecas 86.44 64 P **P** 02 29 41.9 +1.6
MFID Camas Ranch 86.61 41 IAmb IAmb 02 29 43.1
comp=Z,8.3nm,0.9s
D08A Wolman Farm, 86.88 36 IAmb IAmb 02 29 44.2
comp=Z,19nm,1.1s
E09A Wood Farm, Sta 86.99 37 IAmb IAmb 02 29 44.4
comp=Z,15nm,1.1s
N25K Chitina, Valde 87.06 16 IAmb IAmb 02 29 43.7
comp=Z,6.2nm,0.7s
Q16A Castle Valley 87.23 46 IAmb IAmb 02 29 47.0
comp=Z,7.5nm,1.0s
SNAA Sanae 87.30 179 P **P** 02 29 43.1 0.0
SNAA Sanae 87.30 179 P **P** 02 29 43.0 -0.1
BARN Barnard Glacie 87.38 17 IAmb IAmb 02 29 45.7
comp=Z,7.3nm,0.7s
TRF Thorofare Moun 87.38 13 IAmb IAmb 02 29 45.0
comp=Z,12nm,0.7s
CTGM Chitina Glacie 87.39 17 IAmb IAmb 02 29 45.6
comp=Z,7.8nm,0.8s
TMUT Trail Mountain 87.40 46 IAmb IAmb 02 29 47.6
comp=Z,9.9nm,0.8s
B08A Colville Reser 87.42 35 IAmb IAmb 02 29 45.9
comp=Z,14nm,0.8s
PLID Pearl Lake 87.42 39 IAmb IAmb 02 29 46.7
comp=Z,19nm,1.4s
VNA3 Neumayer Olymp 87.47 177 P **P** 02 29 44.1 +0.2
LL02 Futaleuf 87.52 136 P **P** 02 29 45.8 +1.2
HLID Hailey 87.55 41 IAmb IAmb 02 29 47.8
comp=Z,9.4nm,0.9s
HVU Hansel Valley 87.64 43 IAmb IAmb 02 29 48.6
comp=Z,9.1nm,1.0s
RND Reindeer 87.64 13 IAmb IAmb 02 29 46.3
comp=Z,11nm,0.7s
C09A Chrisman Ranch 87.67 36 IAmb IAmb 02 29 47.4
comp=Z,13nm,0.8s
SRU San Rafael Swe 87.77 46 IAmb IAmb 02 29 48.5
comp=Z,9.4nm,0.8s
VNA2 Neumayer--Watz 87.90 177 P **P** 02 29 46.5 +0.7
baz=187,slow=3.8
MNTX Cornudas Mount 88.01 55 IAmb IAmb 02 29 50.0
comp=Z,11nm,0.8s
VNA1 Neumayer--Stat 88.14 177 P **P** 02 29 47.5 +0.6
LL04 Puerto Octay 88.17 133 IAmb IAmb 02 29 50.3
comp=Z,15nm,1.0s
TX32 Lajitas Array 88.31 58 IAmb IAmb 02 29 51.9
comp=Z,13nm,0.9s
TXAR Lajitas Array 88.31 58 P **P** 02 29 50.5 +1.9
comp=Z,9.6nm,0.8s,baz=219,slow=5.9,SNR=111
TXAR PKKPbc **PKKPbc** 02 47 29.6 +1.3
comp=Z,1.1nm,0.6s,baz=113,slow=2.3,SNR=9.9
HWUT Hardware Ranch 88.33 44 IAmb IAmb 02 29 50.6
comp=Z,6.0nm,0.7s
PV03 Paradox Valley 88.50 48 P **P** 02 29 49.9 +0.5
BCYI Bear Canyon 88.56 41 P **P** 02 29 50.9 +1.4
ANMO Albuquerque 88.66 52 P **P** 02 29 50.6 +0.4
ANMO IAmb IAmb 02 29 52.8
comp=Z,8.3nm,1.1s
WRH Wood River Hil 88.74 13 IAmb IAmb 02 29 50.6
comp=Z,5.2nm,0.7s
CCB Clear Creek Bu 88.95 13 IAmb IAmb 02 29 51.3
comp=Z,5.5nm,0.6s
RDMU Red Mountain 89.12 46 IAmb IAmb 02 29 54.6
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 89.14 315 *e*P **P** 02 29 52.0 -0.2
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,73nm,5.7s
MDM Murphy Dome 89.14 13 IAmb IAmb 02 29 52.3
comp=Z,4.5nm,0.9s
IL31 89.26 13 IAmb IAmb 02 29 52.4
comp=Z,10.0nm,1.4s
ILAR Eielson Array 89.26 13 P **P** 02 29 52.2 +0.2
comp=Z,1.8nm,0.6s,baz=214,slow=5.1,SNR=30
ILAR pP **pP** 02 32 02.8 -0.5
comp=Z,2.7nm,1.0s,baz=226,slow=5.5,SNR=6.9
ILAR PKiKP **PKiKP** 02 34 45.0 -0.7
comp=Z,0.3nm,0.5s,baz=190,slow=4.3,SNR=4.1
ILAR Eielson Array 89.26 13 P **P** 02 29 51.5 -0.5
CMAR Chiang Mai Arr 89.40 290 P **P** 02 29 53.3 -0.5
comp=Z,1.7nm,0.4s,baz=128,slow=3.3,SNR=18
CMAR PKKPbc **PKKPbc** 02 47 26.5 +1.4
comp=Z,0.8nm,0.3s,baz=268,slow=4.9,SNR=4.1
CMAR Chiang Mai Arr 89.40 290 P **P** 02 29 55.9 +2.1
PLCA Paso Flores 89.50 134 P **P** 02 29 55.7 +1.7
comp=Z,10nm,0.7s,baz=240,slow=5.0,SNR=43
PLCA Paso Flores 89.50 134 P **P** 02 29 54.7 +0.7
CHTO Chiang Mai 89.54 290 P **P** 02 29 55.3 +0.9
CHTO IAmb IAmb 02 29 56.8
comp=Z,5.1nm,0.6s
DLMT Dillon 89.60 40 IAmb IAmb 02 29 56.9
comp=Z,3.9nm,0.8s
SNOW Snow King Moun 89.78 43 IAmb IAmb 02 29 58.0
comp=Z,12nm,1.0s
O20A White River Ci 89.80 46 IAmb IAmb 02 29 57.7
comp=Z,8.5nm,0.8s
LOHW Long Hollow 89.94 43 IAmb IAmb 02 29 58.4
comp=Z,4.2nm,0.7s
FLWY Flagg Ranch 90.12 42 IAmb IAmb 02 29 59.8
comp=Z,11nm,1.2s
YHB Horse Butte 90.14 41 IAmb IAmb 02 29 59.6
comp=Z,5.5nm,0.8s
BW06 Boulder Array 90.20 44 IAmb IAmb 02 29 59.2
comp=Z,5.3nm,0.8s
PD31 Pinedale Array 90.20 44 IAmb IAmb 02 29 59.2
comp=Z,5.0nm,0.8s
PDAR Pinedale Array 90.20 44 P **P** 02 29 58.0 +0.8
comp=Z,4.3nm,0.7s,baz=200,slow=3.1,SNR=41
PDAR PKKPbc **PKKPbc** 02 47 23.1 -1.3
comp=Z,0.6nm,0.7s,baz=64,slow=4.1,SNR=5.5
PDAR Pinedale Array 90.20 44 P **P** 02 29 58.0 +0.8
YHL Hebgen Lake 90.20 41 IAmb IAmb 02 30 00.5
comp=Z,4.5nm,0.8s
SMCO Snowmass 90.22 48 IAmb IAmb 02 29 59.5
comp=Z,3.8nm,0.8s
BOZ Bozeman (W) 90.31 40 IAmb IAmb 02 30 00.2
comp=Z,5.6nm,1.0s
H17A Grant Village 90.35 42 IAmb IAmb 02 30 01.6
comp=Z,4.2nm,0.9s
CMIG Matias Romero 90.87 72 P **P** 02 30 01.5 +1.0
comp=Z,3.1nm,0.6s,baz=266,slow=5.7,SNR=7.2
BI02 San Fabin de 90.89 130 P **P** 02 30 00.8 +0.3
MSTX Muleshoe 90.97 54 IAmb IAmb 02 30 02.8
comp=Z,7.6nm,0.8s
YNE Yellowstone No 91.00 42 IAmb IAmb 02 30 03.7
comp=Z,3.6nm,0.8s
T25A Trinidad 91.12 50 IAmb IAmb 02 30 03.6
comp=Z,4.5nm,0.8s
JCT Junction City 91.84 58 IAmb IAmb 02 30 06.5
comp=Z,5.1nm,0.7s
MT01 Popeta 92.18 128 P **P** 02 30 07.3 +0.9
RSSD Black Hills 94.39 44 P **P** 02 30 17.4 +1.0
RSSD IAmb IAmb 02 30 18.7
comp=Z,5.1nm,1.1s
SONM Songino Array 95.64 319 PP **PP** 02 34 22.8 -1.5
comp=Z,0.9nm,0.7s,baz=124,slow=7.4,SNR=4.8
SONM PKKPbc **PKKPbc** 02 47 10.4 -0.1
comp=Z,1.1nm,0.8s,baz=316,slow=3.4,SNR=6.2
YKA Yellowknife Ar 97.61 25 P Pdif 02 30 30.0 0.0
comp=Z,0.6nm,0.7s,baz=242,slow=4.3,SNR=13
YKA pP pP 02 32 42.0 +0.2
comp=Z,0.6nm,0.8s,baz=242,slow=4.3,SNR=2.6
YKA PKiKP **PKiKP** 02 34 59.5 -0.7
comp=Z,0.5nm,1.0s,baz=225,slow=1.7,SNR=5.5
YKA PKKPbc **PKKPbc** 02 47 03.0 -2.4
comp=Z,0.3nm,0.4s,baz=45,slow=2.7,SNR=13
YKA PKKPab PKKPdf 02 47 33.1 +26
comp=Z,0.9nm,1.0s,baz=60,slow=4.6,SNR=7.0
LPAZ La Paz 102.72 113 P **Pdif** 02 30 56.1 +1.5
comp=Z,1.6nm,0.9s,baz=235,slow=4.9,SNR=6.3
RES Resolute Bay 108.79 16 PKiKP **PKiKP** 02 35 20.1 -0.2
comp=Z,1.1nm,0.6s,baz=295,slow=3.0,SNR=6.8
ZALV Zalesovo Beam 110.42 321 PKiKP **PKiKP** 02 35 22.9 -1.1
comp=Z,2.7nm,0.6s,baz=130,slow=0.8,SNR=14
MKAR Makanchi Array 110.96 313 PKiKP **PKiKP** 02 35 24.7 -0.6
comp=Z,1.3nm,0.4s,baz=64,slow=0.1,SNR=18
MKAR PKKPbc **PKKPbc** 02 46 24.2 -1.1
comp=Z,2.8nm,0.8s,baz=273,slow=3.4,SNR=13
KURBB Kurchatov Arra 113.89 317 PKiKP **PKiKP** 02 35 30.1 -0.5
comp=Z,2.3nm,0.7s,baz=104,slow=1.8,SNR=15
KURBB PP PP 02 36 30.0 -0.6
comp=Z,1.4nm,1.0s,baz=99,slow=6.9,SNR=4.5
KURBB PKKPbc **PKKPbc** 02 46 15.6 -0.1
comp=Z,1.7nm,0.7s,baz=271,slow=3.8,SNR=12
NEEM North Greenlan 118.50 11 *i* P **PKPdf** 02 35 39.3 0.0
NEEM IAmb IAmb 02 35 40.1
comp=Z,10nm,0.6s
BVAR Borovoye Array 118.98 320 PKP **PKPdf** 02 35 39.3 -1.1
comp=Z,5.6nm,0.4s,baz=182,slow=4.5,SNR=48
BVAR PKKPbc **PKKPbc** 02 45 58.2 -0.1
comp=Z,0.6nm,0.5s,baz=224,slow=6.0,SNR=4.3
BRVK Borovoye 119.04 320 PKPdf **PKPdf** 02 35 40.3 -0.3
BDFB Brasilia 119.61 123 PKP **PKPdf** 02 35 42.8 -0.2
comp=Z,2.2nm,0.5s,baz=245,slow=0.7,SNR=4.8
OPO Ambohidratompo 119.84 232 PKP **PKiKP** 02 35 43.9 +0.4
comp=Z,5.7nm,0.7s,baz=126,slow=6.5,SNR=7.8
KBS Kingsbay 122.03 357 *e*PKPdf **PKiKP** 02 35 46.0 +0.1
BSFB Barra de Sao F 122.93 131 *e*P **PKPdf** 02 35 48.1 -1.0
SUR Sutherland 123.39 200 PKPdf **PKiKP** 02 35 50.2 0.0
DAG Danmarks Havn 123.56 5 *i* P **PKPdf** 02 35 47.7 -0.9
DAG IAmb IAmb 02 35 48.4
comp=Z,6.4nm,0.6s
HSPB Hornsund (broa 123.72 356 *e*PKPdf **PKPdf** 02 35 48.8 -0.1
NAN01 Guarapari, ES 124.10 131 *e*P **PKiKP** 02 35 51.6 -0.1
SUMG Summit 124.10 13 *i* P **PKiKP** 02 35 50.7 +0.1
SUMG IAmb IAmb 02 35 52.5
comp=Z,11nm,1.0s
SUMG Summit 124.10 13 PKPdf **PKiKP** 02 35 50.7 +0.1
HRA Herat 124.93 298 PKPdf **PKiKP** 02 35 54.9 +1.8
BOSA Boshof 125.15 206 PKP **PKPdf** 02 35 52.8 -0.5
comp=Z,7.1nm,0.9s,baz=175,slow=3.1,SNR=12
BOSA Boshof 125.15 206 PKPdf **PKiKP** 02 35 53.6 -0.1
ARU Arti 125.22 325 PKP **PKiKP** 02 35 52.8 +0.1
comp=Z,5.1nm,0.4s,baz=84,slow=1.3,SNR=30
DBG Daneborg 125.69 7 *i* P **PKPdf** 02 35 52.6 -0.1
DBG IAmb IAmb 02 35 53.3
comp=Z,7.8nm,0.7s
DY2G Dye2 125.76 21 *i* P **PKPdf** 02 35 53.3 0.0
DY2G IAmb IAmb 02 35 54.7
comp=Z,19nm,0.7s
ABKAR Akbulak array 125.91 316 PKPdf **PKPdf** 02 35 53.3 -0.5
ICESG Greenland Ices 126.20 17 *i* P **PKPdf** 02 35 53.9 -0.3
ICESG IAmb IAmb 02 35 54.6
comp=Z,10nm,0.7s
NBIT Itapeh - BA 126.52 129 *e*P **PKPdf** 02 35 54.8 -1.3
AKTO Aktyubinsk 126.93 318 PKP **PKiKP** 02 35 56.3 0.0
comp=Z,4.1nm,0.6s,baz=93,slow=3.1,SNR=16
GDU01 Guandu, BA 127.21 128 *e*P **PKPdf** 02 35 53.7 -3.7
GEYT Alibeck 128.31 302 PKP **PKPdf** 02 35 59.1 +0.2
comp=Z,8.1nm,0.7s,baz=162,slow=0.5,SNR=12
SOCY Socotra 128.57 269 PKPdf **PKPdf** 02 35 59.9 -0.1
HAMF Hammerfest 128.78 350 *e*PKPdf **PKPdf** 02 35 58.6 -0.1
KIRV Kiruna 129.09 330 PKP **PKPdf** 02 35 59.5 0.0
comp=Z,17nm,0.6s,baz=66,slow=1.6,SNR=7.8
ARCES ARCESS Array B 129.45 349 PKP **PKPdf** 02 35 59.6 -0.4
comp=Z,8.3nm,0.5s,baz=43,slow=1.2,SNR=55
ARCES SKPbc SKPbc 02 38 27.4 +1.6
comp=Z,23nm,0.8s,baz=39,slow=4.6,SNR=21
KTK1 Kautokeino 130.30 350 *e*PKPdf **PKPdf** 02 36 01.6 0.0
TRO Tromso 130.38 352 *e*PKPdf **PKiKP** 02 36 02.3 -0.4
NBMA Muriti-CE 131.79 122 *e*P **PKPdf** 02 36 06.6 +0.4
KLMR Klimovskoe 132.13 336 *e*PKPdf **PKPdf** 02 36 04.7 -0.6
KLMR AMP 02 36 07.8
comp=Z,19nm,1.3s
KLMR *e*PP PP 02 38 35.5 -1.2
NBPB Pedra_Branca-C 132.19 119 *e*P **PKPdf** 02 36 04.3 -2.6
LOF Lofoten 132.45 354 *e*PKPdf **PKPdf** 02 36 06.2 +0.6
STEI Steigen 132.45 353 *e*PKPdf **PKiKP** 02 36 06.5 -0.4
BELG Belogornoye 132.57 323 PKP **PKiKP** 02 36 07.1 -0.5
comp=Z,33nm,0.8s,baz=328,slow=1.2,SNR=12
BELG SKPbc **SKPbc** 02 38 37.2 -0.1
comp=Z,18nm,1.0s,baz=101,slow=3.2,SNR=4.7
FAUS Fauske 132.97 352 *e*PKPdf **PKPdf** 02 36 06.3 -0.4
KONS Konsvik 134.07 353 *e*PKPdf **PKPdf** 02 36 08.8 +0.1
MOR8 Moi Rana 134.23 352 *e*PKPdf **PKPdf** 02 36 08.5 -0.6
LSZ Lusaka 134.91 219 PKPdf **PKiKP** 02 36 13.4 -0.3
FINES FINESS Array B 136.18 343 PKhKP PKPpre 02 36 01.2
comp=Z,1.0nm,0.5s,baz=30,slow=4.0,SNR=6.4
FINES PKP **PKPdf** 02 36 12.6 -0.2
comp=Z,4.7nm,0.7s,baz=48,slow=2.1,SNR=7.2
FINES SKPbc **SKPbc** 02 38 48.4 0.0
comp=Z,11nm,0.8s,baz=47,slow=2.7,SNR=19
TSUM Tsumeb 136.62 203 PKPdf **PKPdf** 02 36 15.5 +0.3
OBN Obninsk 136.90 331 SKPbc **SKPbc** 02 38 50.1 -0.6
comp=Z,2.7nm,0.6s,baz=44,slow=13,SNR=5.2
TBLU Trondheim 137.53 354 *e*Pdif **Pdif** 02 33 23.2 -4.4
KMBO Kilima Mbogo 138.09 243 PKhKP PKPpre 02 36 08.9
comp=Z,1.0nm,0.6s,baz=236,slow=7.7,SNR=3.8
KMBO PKP **PKiKP** 02 36 19.5 -0.9
comp=Z,4.7nm,0.9s,baz=60,slow=8.9,SNR=7.4
KMBO SKPbc **SKPbc** 02 38 57.0 +1.1
comp=Z,2.7nm,1.0s,baz=55,slow=7.8,SNR=4.5
GNI Garni 138.34 307 PKP **PKPdf** 02 36 17.8 +0.1
comp=Z,6.2nm,0.9s,baz=21,slow=11,SNR=3.2
GNI SKPbc **SKPbc** 02 38 56.0 +0.4
comp=Z,3.5nm,0.6s,baz=160,slow=13,SNR=4.8
KBZ Khabaz 138.65 313 PKP **PKPdf** 02 36 18.6 +0.7
comp=Z,1.9nm,0.9s,baz=234,slow=2.1,SNR=4.9
KVAR Kislovodsk Arr 138.72 313 PKP **PKPdf** 02 36 19.0 +0.7
comp=Z,0.9nm,0.4s,baz=82,slow=22,SNR=1.1
ATD Arta Tunnel 138.73 263 PKP **PKPdf** 02 36 19.9 +0.8
comp=Z,2.6nm,0.3s,baz=45,slow=24,SNR=2.6
RAYN Ar Rayn 138.82 282 PKPdf **PKPdf** 02 36 18.9 -0.1
DOMB Dombas 138.84 354 *e*PKPdf **PKPdf** 02 36 11.2 -6.6
NOA NORSAR Array B 139.58 352 PKhKP PKPpre 02 36 09.7
comp=Z,0.5nm,0.6s,baz=68,slow=1.2,SNR=12
NOA PKP **PKPdf** 02 36 20.3 +1.1
comp=Z,1.9nm,0.6s,baz=14,slow=3.9,SNR=7.6
NOA SKPbc **SKPbc** 02 38 57.9 -0.2
comp=Z,2.5nm,0.8s,baz=17,slow=4.4,SNR=5.8
NC602 NORSAR Array S 139.83 352 *e*PKPdf **PKPdf** 02 36 19.1 -0.5
HFS Hagfors 140.09 350 PKhKP PKPpre 02 36 13.6
comp=Z,6.1nm,0.6s,baz=86,slow=4.6,SNR=28
HFS PKP **PKPdf** 02 36 21.4 +1.3
comp=Z,5.2nm,0.6s,baz=46,slow=4.3,SNR=7.5
HFS SKPbc **SKPbc** 02 39 00.2 +0.8
comp=Z,4.4nm,0.8s,baz=35,slow=5.4,SNR=4.4
SKAR Skarslia 140.25 354 *e*PKPdf **PKPdf** 02 36 16.2 -4.2
KONO Kongsberg 141.13 353 *e*PKPdf **PKPdf** 02 36 17.8 -4.1
NACGM Naroch 141.15 336 *i* PKP **PKPdf** 02 36 22.4 +0.3
NACGM *i* PKP **PKPdf** 02 36 22.4 +0.3
NACGM *i* PKP **PKPdf** 02 36 22.4 +0.3
NACGM *i* pPKP pPKPdf 02 38 16.7 -26
NACGM *i* sPKP 02 39 39.8
NACGM *i* SKS **SKSdf** 02 42 30.1 -4.8
NACGM *i* PPP PPP 02 45 22.0
NACGM *i* SSS SSS 03 08 15.4
STRU Stroemstad 141.52 351 *i* P **PKPdf** 02 36 18.5 -4.1
BLS5 Blasjo 141.65 355 *e*PKPdf **PKPdf** 02 36 19.4 -3.4
MARD Mardin 142.02 304 PKPdf **PKPdf** 02 36 22.0 -2.4
LODK Lodwar 142.12 247 PKPdf **PKPdf** 02 36 23.1 -1.9
SHEL Horse Pasture 142.46 169 PKPdf **PKPdf** 02 36 25.0 -0.7
HOMB Homborsund 142.60 353 *i* P **PKPdf** 02 36 23.4 -1.1
HOMB Homborsund 142.60 353 *e*PKPdf **PKPdf** 02 36 22.8 -1.7
BORU Boraas 142.62 350 *i* P **PKPdf** 02 36 21.8 -2.8
SNART Snartemo 142.66 355 *i* P **PKPdf** 02 36 22.8 -1.8
ONAU Onsala 142.99 350 *i* P **PKPdf** 02 36 23.4 -1.9
AKASG Malin Array Be 143.15 330 PKP PKPab 02 36 23.8 -0.1
comp=Z,11nm,0.4s,baz=43,slow=4.4,SNR=88
AKASG SKPbc **SKPbc** 02 39 07.1 -0.2
comp=Z,6.0nm,0.9s,baz=47,slow=2.5,SNR=13
SUW Suwalki 143.15 338 *e*PKP PKPbc 02 36 24.0 -0.1
SUW Suwalki 143.15 338 *e*P PKPbc 02 36 24.4 +0.3
FABU Falkenberg 143.23 349 *i* P PKPbc 02 36 24.2 -0.1
BLEU Blekinge 143.27 346 *i* P PKPbc 02 36 24.0 -0.2
DEL Delary 143.52 348 *i* P PKPab 02 36 25.0 0.1
DEL Delary 143.52 348 *i* P PKPbc 02 36 25.2 0.0
MBAR Mbarara 143.66 237 PKP PKPab 02 36 27.2 0.0
comp=Z,50nm,0.8s,baz=110,slow=3.5,SNR=43
MBAR Mbarara 143.66 237 PKPdf **PKPdf** 02 36 28.8 +0.7
BJUU Bjuv 144.06 348 *i* P PKPbc 02 36 26.9 0.0
LUNU Lund 144.39 348 *i* P PKPbc 02 36 28.0 +0.1
LUNU Lund 144.39 348 *i* P PKPbc 02 36 28.1 +0.2
BSD Bornholm Skovb 144.57 346 *e*P PKPbc 02 36 28.4 0.0
BSD Bornholm Skovb 144.57 346 *i* P **PKPab** 02 36 28.9 -0.3
GAZ Gaziantep 144.80 305 PKPdf PKPbc 02 36 30.0 +0.1
GAZ SKPbc **SKiKP** 02 39 13.0 +0.7
GKP Gorka Klasztor 145.65 343 *e*PKP **PKPbc** 02 36 32.3 +0.7
GKP Gorka Klasztor 145.65 343 *e*P **PKPbc** 02 36 31.6 -0.1
BEL Belsk 145.77 338 *e*PKP **PKPbc** 02 36 33.1 -0.9
EKA Eskdalemuir Ar 145.82 4 PKPbc **PKPbc** 02 36 32.1 0.0
comp=Z,14nm,0.6s,baz=358,slow=3.0,SNR=42
LNIZ Loecknitz 146.22 346 *e*PKPbc **PKPbc** 02 36 33.9 +0.6
baz=19,slow=2.4
BRTR Keskin Array B 146.56 311 PKP **PKPdf** 02 36 32.0 -0.1
comp=Z,9.7nm,0.7s,baz=123,slow=1.2,SNR=55
BRTR PKPbc **PKPbc** 02 36 34.6 -0.3
comp=Z,10nm,0.7s,baz=121,slow=2.8,SNR=65
BRTR pPKPbc **pPKPdf** 02 38 53.3 +1.2
comp=Z,0.1nm,0.5s,baz=55,slow=5.7,SNR=1.7
BSEG Bad Segeberg 146.57 350 *e*PKPbc **PKPbc** 02 36 35.1 +0.9
baz=19,slow=2.4
KWP Kalwaria Pacla 146.80 334 *e*PKP **PKPbc** 02 36 35.7 +0.7
PRAR RASCA 146.86 328 ⇑P **PKPbc** 02 36 36.1 +0.9
BIR Birlad 146.87 325 ⇓P **PKiKP** 02 36 36.7 -0.4
TLCR 146.89 323 ⇑P **PKPbc** 02 36 35.8 +0.5
ANTO Ankara 147.09 312 **PKPbc** 02 36 36.0 -0.2
JURR Jurilovca 147.10 322 ⇓P **PKiKP** 02 36 36.8 -0.8
GHRR 147.12 325 ⇓P **PKiKP** 02 36 37.7 +0.1
BURAR Bucovina Array 147.18 329 PKPbc **PKiKP** 02 36 37.2 -0.6
BIZ Bicaz 147.21 327 ⇑P **PKiKP** 02 36 37.3 -0.5
TESR Tescani 147.22 326 ⇑P **PKPbc** 02 36 36.7 +0.5
RUE Ruedersdorf 147.26 345 *e*PKPbc **PKiKP** 02 36 36.9 -0.8
baz=19,slow=2.4
CFR Carcaliu 147.28 323 ⇑P **PKPbc** 02 36 37.0 +0.6
MMAI Mount Meron Ar 147.28 298 PKPbc **PKiKP** 02 36 37.9 -0.6
comp=Z,24nm,0.6s,baz=70,slow=5.4,SNR=46
MMAI pPKPbc **pPKPdf** 02 38 53.6 +0.1
comp=Z,1.8nm,0.6s,baz=56,slow=3.6,SNR=2.0
TPGR Topolog 147.31 323 ⇑P **PKiKP** 02 36 37.3 -0.8
ODBI Odobesti 147.50 325 ⇓P **PKPbc** 02 36 38.6 +0.3
VRI Vrincioaia 147.61 325 ⇑P **PKPbc** 02 36 37.4 +0.2
PLOR Plostina 147.66 325 ⇑P **PKPbc** 02 36 37.7 +0.3
HARR Harsova 147.69 323 ⇑P **PKiKP** 02 36 38.3 -0.5
TLBR Topalu 147.71 322 ⇓P **PKPdf** 02 36 34.9 +1.2
BISRR Bisoca 147.82 325 ⇑P **PKiKP** 02 36 39.3 +0.1
CVDA Cernavoda 147.84 322 ⇑P **PKiKP** 02 36 38.9 -0.3
NIE Niedzica 147.93 336 *e*PKP **PKiKP** 02 36 39.2 -0.1
FLTG Flechtingen 147.95 348 *e*PKPbc **PKPbc** 02 36 38.3 +0.5
baz=19,slow=2.4
FLTG *e*pPKPbc **pPKPab** 02 39 00.6 +4.0
OZUR 147.95 327 ⇑P **PKiKP** 02 36 39.1 -0.3
NRDL Niedersach Rie 148.00 349 *e*PKPbc **PKiKP** 02 36 38.6 -0.5
baz=19,slow=2.4
TRPA Tarpa 148.03 332 ⇑P **PKiKP** 02 36 38.9 -0.5
KSP Ksiaz 148.08 341 *e*PKP **PKiKP** 02 36 39.1 -0.3
NEHR Nehoiu 148.12 325 ⇓P **PKiKP** 02 36 39.3 -0.4
ISR Istrita 148.19 324 ⇑P **PKiKP** 02 36 40.0 +0.1
EIL Elat 148.22 292 PKP **PKPdf** 02 36 36.0 +0.9
comp=Z,12nm,0.7s,baz=148,slow=11,SNR=5.5
EIL PKPbc **PKPbc** 02 36 39.4 +0.2
comp=Z,12nm,0.7s,baz=18,slow=2.6,SNR=16
DOPR Dopca 148.24 327 ⇑P **PKiKP** 02 36 40.1 +0.1
ASSE Asse, Remlinge 148.24 349 *e*PKPbc **PKiKP** 02 36 39.1 -0.5
baz=19,slow=2.4
MLR Muntele Rosu 148.27 326 PKP **PKPdf** 02 36 34.7 0.0
comp=Z,8.7nm,0.9s,baz=145,slow=19,SNR=5.6
MLR PKPbc **PKPbc** 02 36 38.9 -0.1
comp=Z,10nm,0.7s,baz=40,slow=1.7,SNR=25
MLR Muntele Rosu 148.27 326 ⇑P **PKPbc** 02 36 39.6 +0.5
OSTC Ostas 148.35 341 ⇑*e*PKP **PKiKP** 02 36 40.1 0.0
CHVC Chvalec 148.37 341 ⇑*e*PKP **PKiKP** 02 36 39.7 -0.4
CHVC *e*pPKP **pPKPab** 02 39 01.9 +3.5
CSS Mathiatis 148.45 303 **PKPbc** 02 36 39.8 +0.1
UPC Upice 148.46 341 ⇑*e*PKP **PKiKP** 02 36 40.4 +0.1
LANS Liptovska Anna 148.46 336 *e*PKP **PKiKP** 02 36 40.9 +0.5
LANS *e* 02 39 04.7
DPC Dobruska-Polom 148.50 341 ⇑*e*PKP **PKiKP** 02 36 40.1 -0.3
DPC *e*pPKP **pPKPab** 02 39 02.5 +3.6
CLL Collm 148.53 345 ⇑*i*PKPbc **PKiKP** 02 36 40.1 -0.2
comp=Z,39nm,1.1s
CLL *e*(pPKPab) 02 39 03.0
comp=Z,11nm,0.8s
CLL Collm 148.53 345 *e*PKPbc **PKiKP** 02 36 40.1 -0.2
baz=19,slow=2.4
IBBN Ibbenburen 148.53 352 *e*PKPbc **PKiKP** 02 36 40.1 -0.2
baz=19,slow=2.4
CLZ Clausthal 148.57 349 *e*PKPbc **PKiKP** 02 36 40.5 0.0
baz=19,slow=2.4
CLZ *e*pPKPb

	comp=Z,11nm,1.1s							
BRG	**Berggiesshubel**	**148.70**	**344**	*e*PKPbc	**PKiKP**	**02 36 40.7**	**-0.1**
	baz=19,slow=2.4							
LEF	**Lefka**	**148.75**	**303**	⇑P	**PKiKP**	**02 36 40.9**	**-0.4**
VOIR		**148.77**	**326**	⇑P	**PKPbc**	**02 36 40.1**	**-0.2**
FBE	**Freiberg**	**148.80**	**345**	*e*PKPbc	**PKiKP**	**02 36 41.2**	**+0.2**
	baz=19,slow=2.4							
PVCC	**Panska Ves**	**148.85**	**343**	⇑*e*PKP	**PKiKP**	**02 36 41.2**	**+0.2**
LTVH	**Ltavrtes, Hu**	**148.88**	**332**	⇑P	**PKiKP**	**02 36 41.6**	**+0.4**
NEUB	**Neuenburg**	**148.90**	**347**	*e*PKPbc	**PKiKP**	**02 36 41.1**	**0.0**
	baz=19,slow=2.4							
GTTG	**Gottingen**	**148.93**	**349**	*e*PKPbc	**PKiKP**	**02 36 41.3**	**+0.1**
	baz=19,slow=2.4							
GTTG				*ep*PKPbc	**pPKPab**	**02 39 01.1**	**+0.5**
DRGR		**148.96**	**330**	⇑P	**PKiKP**	**02 36 41.3**	**-0.2**
ARR	**Arges**	**149.03**	**327**	⇓P	**PKiKP**	**02 36 42.8**	**+1.1**
VYHS	**Vyhne**	**149.24**	**336**	*e*PKP	**PKiKP**	**02 36 41.9**	**0.0**
VYHS				*e*		02 39 06.6		
KOLL	**Kolacno**	**149.33**	**337**	*e*PKP	**PKiKP**	**02 36 42.5**	**+0.4**
VRAC	**Vranov**	**149.33**	**340**	PKP	**PKPdf**	**02 36 36.6**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=196,slow=18,SNR=2.0							
VRAC				PKPbc	**PKPbc**	**02 36 41.2**	**-0.1**
	comp=Z,10nm,0.9s,baz=33,slow=1.6,SNR=19							
VRAC	**Vranov**	**149.33**	**340**	⇑P	**PKiKP**	**02 36 42.3**	**+0.2**
VRAC	**Vranov**	**149.33**	**340**	*e*PKP	**PKiKP**	**02 36 42.1**	**0.0**
VRAC				*e*		02 39 05.0		
PRU	**Pruhonice**	**149.34**	**343**	⇑*e*PKP	**PKiKP**	**02 36 42.0**	**-0.1**
JAVC	**Velka Javorina**	**149.35**	**338**	*e*PKP	**PKiKP**	**02 36 43.4**	**+1.2**
LOT	**Lotru**	**149.42**	**327**	⇑P	**PKPbc**	**02 36 41.8**	**0.0**
BUG	**Bochum--Univer**	**149.45**	**352**	*e*PKPbc	**PKiKP**	**02 36 42.2**	**0.0**
	baz=19,slow=2.4							
MOX	**Moxa**	**149.46**	**347**	*e*PKPbc	**PKiKP**	**02 36 42.3**	**0.0**
	baz=19,slow=2.4							
TANN	**Tannenbergstha**	**149.49**	**345**	*e*PKPbc	**PKiKP**	**02 36 42.6**	**+0.2**
	baz=19,slow=2.4							
PLN	**Plauen**	**149.49**	**346**	*e*PKPbc	**PKiKP**	**02 36 42.6**	**+0.2**
	baz=19,slow=2.4							
WERD	**Werda**	**149.49**	**346**	*e*PKPbc	**PKiKP**	**02 36 42.6**	**+0.2**
	baz=19,slow=2.4							
KASTN	**Kahler Asten**	**149.52**	**351**	*e*PKPbc	**PKiKP**	**02 36 42.6**	**+0.1**
	baz=19,slow=2.4							
GUNZ	**Gunzen**	**149.56**	**345**	*e*PKPbc	**PKiKP**	**02 36 42.8**	**+0.2**
	baz=19,slow=2.4							
GUNZ				*ep*PKPbc	**pPKPab**	**02 39 07.8**	**+4.7**
KRUC	**Moravsky**	**149.61**	**340**	*e*PKP	**PKiKP**	**02 36 42.6**	**-0.1**
KRUC				*e*		02 39 05.6		
UBBA	**Unterbreizbach**	**149.62**	**349**	*e*PKPbc	**PKiKP**	**02 36 42.4**	**0.0**
	baz=19,slow=2.4							
WERN	**Wernitzgruen**	**149.63**	**345**	*e*PKPbc	**PKiKP**	**02 36 42.9**	**+0.2**
	baz=19,slow=2.4							
BSZH	**Besenyszg**	**149.64**	**333**	⇑P	**PKiKP**	**02 36 43.1**	**+0.4**
NKC	**Novy Kostel**	**149.66**	**345**	⇑*e*PKP	**PKiKP**	**02 36 42.7**	**-0.1**
SMOL	**Smolenice**	**149.73**	**338**	*e*PKP	**PKiKP**	**02 36 43.4**	**+0.5**
SMOL				*e*		02 39 08.0		
SIRR	**Siria**	**149.83**	**331**	⇑P	**PKiKP**	**02 36 43.4**	**+0.1**
MODS	**Modra-Piesok**	**149.90**	**338**	*e*PKP	**PKPbc**	**02 36 43.0**	**+0.3**
MODS				*e*		02 39 07.6		
GZR	**Gura Zlata**	**149.95**	**328**	⇑P	**PKiKP**	**02 36 43.3**	**-0.2**
MANZ	**Manzenberg**	**149.97**	**345**	*e*PKPbc	**PKiKP**	**02 36 43.8**	**+0.4**
	baz=19,slow=2.4							
SRO	**Srobarova**	**150.00**	**336**	*e*PKP	**PKiKP**	**02 36 44.1**	**+0.6**
SRO2	**Moca**	**150.01**	**336**	*e*PKP	**PKPbc**	**02 36 42.9**	**0.0**
ZST	**Bratislava**	**150.12**	**338**	*e*PKP	**PKiKP**	**02 36 44.5**	**+0.8**
ROTZ	**Rotzenmuhle**	**150.15**	**345**	*e*PKPbc	**PKiKP**	**02 36 44.1**	**+0.4**
	baz=19,slow=2.4							
SRE	**Strehaia**	**150.25**	**327**	⇑P	**PKiKP**	**02 36 44.8**	**+0.7**
BEBN	**Eben Emael**	**150.26**	**354**	*d*PKiKP	**PKiKP**	**02 36 44.1**	**+0.2**
BZS	**Buzias**	**150.34**	**330**	⇑P	**PKiKP**	**02 36 44.4**	**+0.1**
AHRW	**Bad Neuenahr-A**	**150.35**	**352**	*e*PKPbc	**PKiKP**	**02 36 45.5**	**+1.4**
	baz=19,slow=2.4							
PLVB	**Pleven**	**150.36**	**324**	⇓P	**PKiKP**	**02 36 44.9**	**+0.5**
UCC	**Uccle**	**150.37**	**356**	*d*PKiKP	**PKiKP**	**02 36 44.3**	**+0.2**
KHC	**Kasperske Hory**	**150.39**	**343**	*e*PKPDF	**PKPdf**	**02 36 38.4**	**+0.5**
KHC				⇑*e*PKP	**PKiKP**	**02 36 44.6**	**+0.3**
KHC				*ep*PKP	**pPKPdf**	**02 39 00.1**	**+1.6**
MEM	**Membach**	**150.41**	**353**	*d*PKiKP	**PKiKP**	**02 36 44.3**	**+0.1**
BTNL	**Ternell**	**150.42**	**353**	*d*PKiKP	**PKiKP**	**02 36 44.5**	**+0.2**
GRF	**Grafenberg Arr**	**150.45**	**346**	*e*PKPbc	**PKiKP**	**02 36 44.9**	**+0.5**
	baz=19,slow=2.4							
GRF				*ep*PKPbc	**pPKPab**	**02 39 08.5**	**+2.0**
GRFO	**Grafenberg**	**150.45**	**346**		**PKiKP**	**02 36 45.0**	**+0.7**
CKRC	**Cesky Krumlov**	**150.46**	**342**	*e*PKPDF	**PKPdf**	**02 36 38.7**	**+0.7**
CKRC				⇑*e*PKP	**PKiKP**	**02 36 44.9**	**+0.4**
CKRC				*ep*PKP	**pPKPab**	**02 39 06.9**	**+0.3**
TNS	**Taunus Mts**	**150.47**	**350**	*e*PKPbc	**PKiKP**	**02 36 44.8**	**+0.4**
	baz=19,slow=2.4							
BSTI	**Sart Tilman**	**150.48**	**354**	*d*PKiKP	**PKiKP**	**02 36 44.5**	**+0.2**
HERR	**Herculane**	**150.49**	**328**	⇑P	**PKiKP**	**02 36 44.7**	**+0.1**
WET	**Wettzell**	**150.56**	**344**	*e*PKPbc	**PKiKP**	**02 36 44.8**	**+0.2**
	baz=19,slow=2.4							
GEC2	**GERESS Array S**	**150.61**	**343**	*e*PKPbc	**PKiKP**	**02 36 45.1**	**+0.2**
	baz=19,slow=2.4							
GEC2				*ep*PKPbc	**pPKPab**	**02 39 07.5**	**+0.1**
GERES	**GERESS Array B**	**150.61**	**343**	PKP	**PKPdf**	**02 36 38.7**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=108,slow=1.7,SNR=8.5							
GERES				PKPbc	**PKiKP**	**02 36 45.0**	**+0.1**
	comp=Z,13nm,0.7s,baz=39,slow=2.4,SNR=77							
GERES				pPKPbc	**pPKPbc**	**02 39 02.7**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=24,slow=2.7,SNR=3.8							
BHOU	**Houvegnez**	**150.66**	**353**	*d*PKiKP	**PKiKP**	**02 36 45.3**	**+0.5**
SNF	**Seneffe**	**150.66**	**356**	*d*PKiKP	**PKiKP**	**02 36 45.0**	**+0.2**
BCLA	**Clavier**	**150.67**	**354**	*d*PKP	**PKPbc**	**02 36 44.5**	**+0.1**
MILB	**Miltenberg**	**150.70**	**349**	*e*PKPbc	**PKiKP**	**02 36 45.3**	**+0.4**
	baz=19,slow=2.4							
MILB				*ep*PKPbc	**pPKPab**	**02 39 08.2**	**+0.7**
BGES	**Gesves**	**150.72**	**355**	*d*PKP	**PKiKP**	**02 36 44.8**	**-0.1**
BANR	**Banloc**	**150.74**	**330**	⇑P	**PKiKP**	**02 36 46.1**	**+1.0**
CONA	**Conrad Observa**	**150.77**	**339**	*i* P	**PKiKP**	**02 36 45.5**	**+0.2**
	comp=Z,22nm,0.6s,SNR=17							
CONA				*e*P	**pPKPab**	**02 39 08.5**	**+0.5**
	comp=Z,18nm,1.1s							
BMRD	**Maredsous**	**150.83**	**355**	*d*PKiKP	**PKiKP**	**02 36 45.3**	**+0.2**
MDVR	**Moldovita**	**150.91**	**329**	⇑P	**PKiKP**	**02 36 45.4**	**-0.1**
RCHB	**Rochefort**	**150.94**	**354**	*d*PKiKP	**PKiKP**	**02 36 45.4**	**+0.1**
DOU	**Dourbes**	**151.05**	**355**	*d*PKiKP	**PKiKP**	**02 36 45.9**	**+0.3**
MORH	**Mrgy, Hungar**	**151.18**	**334**	⇓P	**PKPdf**	**02 36 39.4**	**+0.3**
MORH	**Mrgy, Hungar**	**151.18**	**334**	⇑*i*P	**PKPbc**	**02 36 45.8**	**+0.1**
WLF	**Walferdange**	**151.33**	**353**	*d*PKiKP	**PKiKP**	**02 36 46.8**	**+0.6**
WLF	**Walferdange**	**151.33**	**353**	*e*PKPbc	**PKiKP**	**02 36 47.2**	**+1.0**
	baz=19,slow=2.4							
MOA	**Molln**	**151.35**	**341**	*i* P	**PKiKP**	**02 36 46.4**	**+0.1**
	comp=Z,7.4nm,0.6s,SNR=6.6							
MOA				*e*P	**pPKPab**	**02 39 09.6**	**-0.6**
	comp=Z,9.7nm,1.6s							
ARSA	**Arzberg**	**151.47**	**339**	*e*P	**PKPdf**	**02 36 39.0**	**-0.5**
	comp=Z,2.0nm,0.8s							
ARSA				*e*P	**PKPbc**	**02 36 46.1**	**-0.3**
	comp=Z,4.4nm,0.9s							
ARSA				*e*P	**pPKPab**	**02 39 08.9**	**-1.9**
	comp=Z,4.7nm,1.2s							
FRGS	**Fruska Gora**	**151.52**	**331**	⇑P	**PKiKP**	**02 36 47.1**	**+0.4**
FRGS	**Fruska Gora**	**151.52**	**331**	⇑*i*P	**PKiKP**	**02 36 47.0**	**+0.2**
VTS	**Vitosha**	**151.63**	**324**	⇑P	**PKiKP**	**02 36 47.4**	**+0.2**
VTS	**Vitosha**	**151.63**	**324**	PKPdf	**PKPdf**	**02 36 39.7**	**-0.4**
VTS					**PKiKP**	**02 36 47.5**	**+0.2**
STU	**Stuttgart**	**151.74**	**348**	*e*PKPbc	**PKiKP**	**02 36 47.6**	**+0.6**
	baz=19,slow=2.4							
FUR	**Furstenfeldbru**	**151.87**	**345**	*e*PKPbc	**PKiKP**	**02 36 47.7**	**+0.3**
	baz=19,slow=2.4							
RJOB	**Jochberg**	**151.87**	**343**	*e*PKPbc	**PKiKP**	**02 36 47.5**	**+0.1**
	baz=19,slow=2.4							
SOKA	**Soboth**	**152.14**	**339**	*e*P	**PKPdf**	**02 36 41.6**	**+0.9**
	comp=Z,2.1nm,0.8s							
SOKA				*e*P	**PKPbc**	**02 36 47.1**	**-0.8**
	comp=Z,11nm,1.0s							
SOKA				*e*P	**pPKPbc**	**02 39 09.7**	**+2.6**
	comp=Z,19nm,1.6s							
PERS	**Pernice**	**152.15**	**339**	*e*PKPbc	**PKPbc**	**02 36 47.7**	**-0.2**
DIVS	**Divibare**	**152.24**	**330**	⇑*i*P	**PKiKP**	**02 36 48.4**	**0.0**
KBA	**Koelnbreinsper**	**152.31**	**342**	*i* P	**PKPbc**	**02 36 47.9**	**-0.5**
	comp=Z,11nm,0.9s,SNR=5.4							
KBA				*e*P	**pPKPab**	**02 39 11.1**	**-3.3**
	comp=Z,6.9nm,1.0s							
BFO	**Black Forest**	**152.32**	**349**		**PKiKP**	**02 36 48.7**	**+0.3**
BFO	**Black Forest**	**152.32**	**349**	*e*PKPbc	**PKiKP**	**02 36 48.6**	**+0.3**
	baz=19,slow=2.4							
OBKA	**Obir**	**152.45**	**339**	*e*P	**PKPdf**	**02 36 40.4**	**-0.7**
	comp=Z,4.8nm,1.2s							
OBKA				*e*P	**PKPbc**	**02 36 48.2**	**-0.4**
	comp=Z,4.9nm,0.8s							
OBKA				*e*P	**pPKPbc**	**02 39 09.7**	**+1.8**
	comp=Z,7.8nm,1.5s							
WATA	**Walderalm**	**152.56**	**344**	*e*P	**PKPdf**	**02 36 41.0**	**-0.3**
	comp=Z,3.3nm,1.0s							
WATA				*e*P	**PKPbc**	**02 36 48.9**	**-0.1**
	comp=Z,4.4nm,0.5s							
WATA				*e*P	**pPKPbc**	**02 39 09.4**	**+1.2**
	comp=Z,5.2nm,0.8s							
UBR	**Ueberruh**	**152.59**	**346**	*e*PKPbc	**PKiKP**	**02 36 49.2**	**+0.3**
	baz=19,slow=2.4							
WTTA	**Wattenberg**	**152.62**	**344**	*e*P	**PKPdf**	**02 36 41.4**	**-0.1**
	comp=Z,5.5nm,1.0s							
WTTA				*i* P	**PKPbc**	**02 36 49.1**	**+0.1**
	comp=Z,13nm,0.6s,SNR=6.9							
WTTA				*e*P	**pPKPbc**	**02 39 09.7**	**+1.3**
	comp=Z,10nm,0.8s							
RETA	**Reutte**	**152.62**	**345**	*e*P	**PKPdf**	**02 36 41.6**	**+0.3**
	comp=Z,2.5nm,1.1s							
RETA				*e*P	**PKiKP**	**02 36 49.1**	**+0.1**
	comp=Z,4.8nm,0.7s							
RETA				*e*P	**pPKPdf**	**02 38 59.3**	**-2.8**
	comp=Z,5.1nm,1.3s							
MYKA	**Terra Mystica**	**152.63**	**341**	*i* P	**PKPbc**	**02 36 48.3**	**-0.6**
	comp=Z,7.6nm,0.5s,SNR=7.0							
MYKA				*e*P	**pPKPab**	**02 39 12.4**	**-3.2**
	comp=Z,5.2nm,1.0s							
MOTA	**Moosalm**	**152.68**	**345**	*e*P	**PKPdf**	**02 36 41.3**	**-0.2**
	comp=Z,6.1nm,1.1s							
MOTA				*e*P	**PKPbc**	**02 36 49.0**	**-0.1**
	comp=Z,18nm,1.1s							
MOTA				*e*P	**pPKPbc**	**02 39 06.3**	**-2.2**
	comp=Z,7.8nm,0.9s							
BBLS	**Lazići**	**152.69**	**330**	⇑*i*P	**PKiKP**	**02 36 49.6**	**+0.3**
CRES	**Cresnjev**	**152.73**	**337**	*i* PKPbc	**PKiKP**	**02 36 49.3**	**+0.1**
CRES				*ep*PKPbc	**pPKPbc**	**02 39 09.8**	**+1.3**
CRES	**Cresnjev**	**152.73**	**337**	⇑*i*P	**PKPbc**	**02 36 49.1**	**0.0**
HAPS	**Han Pijesak,Bl**	**152.73**	**331**	*e*P	**PKPbc**	**02 36 49.1**	**-0.2**
SQTA	**Sankt Quirin**	**152.76**	**345**	*e*P	**PKPdf**	**02 36 41.6**	**0.0**
	comp=Z,4.0nm,0.8s							
SQTA				*i* P	**PKiKP**	**02 36 49.7**	**+0.3**
	comp=Z,11nm,0.7s,SNR=5.5							
SQTA				*e*P	**pPKPbc**	**02 39 07.2**	**-1.5**
	comp=Z,6.9nm,0.8s							
ABTA	**Abfaltersbach**	**152.85**	**342**	*e*P	**PKPdf**	**02 36 41.4**	**-0.3**
	comp=Z,7.8nm,1.0s							
ABTA				*i* P	**PKPbc**	**02 36 49.3**	**-0.2**
	comp=Z,14nm,0.7s,SNR=5.9							
ABTA				*e*P	**pPKPab**	**02 39 12.9**	**-3.7**
	comp=Z,11nm,0.9s							
LJU	**Ljubljana**	**152.86**	**339**	*i* PKPbc	**PKiKP**	**02 36 49.8**	**+0.3**
BLY	**Banja Luka**	**152.97**	**334**	⇑*i*P	**PKPbc**	**02 36 49.3**	**-0.4**
DAVA	**Damuels**	**153.01**	**346**	*e*P	**PKPdf**	**02 36 42.0**	**0.0**
	comp=Z,4.7nm,0.9s							
DAVA				*e*P	**PKiKP**	**02 36 50.0**	**0.0**
	comp=Z,13nm,1.1s							
DAVA				*e*P	**pPKPbc**	**02 39 12.1**	**+2.8**
	comp=Z,6.8nm,1.3s							
FETA	**Feichten**	**153.07**	**345**	*e*P	**PKPdf**	**02 36 42.3**	**+0.3**
	comp=Z,9.3nm,1.0s							
FETA				*e*P	**PKiKP**	**02 36 50.4**	**+0.3**
	comp=Z,10nm,1.3s							
FETA				*e*P	**pPKPbc**	**02 39 11.1**	**+1.7**
	comp=Z,4.3nm,0.9s							
CEY	**Cerknica**	**153.16**	**339**	⇑*i*P	**PKiKP**	**02 36 50.2**	**0.0**
DAVOX	**Davos/Dischmat**	**153.49**	**346**	PKP	**PKPdf**	**02 36 42.7**	**0.0**
	comp=Z,3.1nm,0.8s,baz=89,slow=5.1,SNR=8.4							
DAVOX				PKPbc	**PKiKP**	**02 36 51.3**	**+0.3**
	comp=Z,14nm,0.7s,baz=228,slow=4.3,SNR=41							
DAVOX				pPKPbc	**pPKPbc**	**02 39 11.8**	**+1.2**
	comp=Z,7.0nm,0.7s,baz=344,slow=6.7,SNR=7.8							
BRY	**Bratogost**	**153.84**	**330**	⇑*i*P	**PKPbc**	**02 36 51.3**	**-0.5**
PDG	**Podgorica**	**153.85**	**328**	⇓P	**PKiKP**	**02 36 51.8**	**+0.2**
PDG	**Podgorica**	**153.85**	**328**	⇑*i*P	**PKPbc**	**02 36 51.2**	**-0.4**
IDI	**Anoyia**	**154.74**	**309**	PKPbc	**PKPbc**	**02 36 54.6**	**+0.7**
	comp=Z,12nm,1.0s,baz=286,slow=7.1,SNR=2.3							
TIP	**Timpagrande**	**157.53**	**326**	⇑P	**PKPdf**	**02 36 43.1**	**-5.0**
PBRG	**Braganca**	**158.50**	**16**	*e*PKPdf	**PKPdf**	**02 36 49.6**	**+0.4**
MVO	**Moncorvo**	**159.02**	**17**	*e*PKPdf	**PKPdf**	**02 36 50.9**	**+1.1**
PVIS	**Viseu**	**159.19**	**19**	*e*PKPdf	**PKPdf**	**02 36 53.2**	**+3.2**
ESDC	**Sonseca Array**	**161.15**	**12**	PKP	**PKPdf**	**02 36 52.1**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=339,slow=1.2,SNR=6.2							
ESDC				PKPab	**PKPab**	**02 37 39.4**	**-0.5**
	comp=Z,1.6nm,1.1s,baz=330,slow=3.1,SNR=4.8							
PBAR	**Barrancos**	**161.78**	**20**	*e*PKPdf	**PKPdf**	**02 36 53.9**	**+1.1**
PCVE	**Castro Verde**	**161.91**	**23**	*e*PKPdf	**PKPdf**	**02 36 54.3**	**+1.4**
PFVI	**Vila Bisbo**	**162.04**	**26**	*e*PKPdf	**PKPdf**	**02 36 55.0**	**+1.9**
DBIC	**Dimbokro**	**164.48**	**158**	PKP	**PKPdf**	**02 36 55.5**	**-0.4**
	comp=Z,9.1nm,0.7s,baz=144,slow=1.9,SNR=15							
DBIC				PKPab	**PKPab**	**02 37 56.1**	**+1.2**
	comp=Z,6.5nm,0.6s,baz=171,slow=5.8,SNR=11							
DBIC	**Dimbokro**	**164.48**	**158**	PKPdf	**PKPdf**	**02 36 55.6**	**-0.4**
DBIC				PKPab	**PKPab**	**02 37 56.5**	**+1.5**
MDT	**Midelt**	**167.47**	**22**	PKP	**PKPdf**	**02 36 58.4**	**+0.4**
	comp=Z,5.0nm,0.9s,baz=14,slow=0.7,SNR=6.6							
KOWA	**Kowa**	**171.82**	**144**	PKPdf	**PKPdf**	**02 37 00.5**	**-0.3**
KOWA				PKPab	**PKPab**	**02 38 28.6**	**+1.1**
TOA0	**Torodi Ar. Sit**	**171.92**	**185**	PKPdf	**PKPdf**	**02 36 59.4**	**-1.4**
TOA0				PKPab	**PKPab**	**02 38 27.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**171.92**	**185**	PKP	**PKPdf**	**02 37 00.2**	**-0.6**
	comp=Z,6.4nm,0.8s,baz=327,slow=1.0,SNR=43							
TORD				PKPab	**PKPab**	**02 38 28.2**	**+0.4**
	comp=Z,7.1nm,0.8s,baz=180,slow=3.7,SNR=22							
TORD				PP	**PP**	**02 42 18.8**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=168,slow=4.2,SNR=9.0							
TORD	**Torodi Ar. Bea**	**171.92**	**185**		**PKPdf**	**02 37 00.2**	**-0.6**
TORD				PKPab	**PKPab**	**02 38 27.3**	**-0.5**

*IDC **26** 02:21:17.8± 1.5, 27.°66N× 85.°86E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.5/50, mbtmp3.7/8, ML3.6/1, MS3.3/1, Ms1 3.2/1, ms1mx2.4/52 Error ellipse: s-maj=53.3km s-min=23.3km az=58.0*

ISC 26 02:21:21.0± 1.6, 27.°7N ±0.°2× 85.°9E ±0.°3, h19km, n9, σ0.°65/8, mb3.7/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.25**	**352**	P	**Pn**	**02 25 44.5**	**-0.8**
	0.2nm,0.3s,baz=166,slow=11,SNR=8.9						
KURBB	**Kurchatov Arra**	**23.55**	**348**	P	**P**	**02 26 29.7**	**-0.4**
	0.3nm,0.3s,baz=169,slow=9.6,SNR=3.1						
SONM	**Songino Array**	**25.65**	**33**	P	**P**	**02 26 50.2**	**+0.6**
	0.5nm,0.4s,baz=213,slow=10,SNR=2.4						
ZALV	**Zalesovo Beam**	**26.21**	**359**	P	**P**	**02 26 54.6**	**+0.1**
	0.5nm,0.3s,baz=161,slow=9.2,SNR=3.9						
AKTO	**Aktyubinsk**	**31.04**	**325**	P	**P**	**02 27 38.3**	**+0.8**
	0.5nm,0.4s,baz=135,slow=11,SNR=2.7						
KBZ	**Khabaz**	**37.94**	**306**	LR	LR	02 49 20.9	
	comp=Z,39nm,19.3s,baz=130,slow=44						
FINES	**FINESS Array B**	**51.69**	**328**	P	**P**	**02 30 26.1**	**-0.5**
	1.0nm,0.7s,baz=118,slow=8.0,SNR=6.2						
ARCES	**ARCESS Array B**	**54.05**	**338**	P	**P**	**02 30 43.8**	**0.0**
	3.2nm,0.9s,baz=119,slow=9.4,SNR=2.0						
WRA	**Warramunga Arr**	**66.64**	**130**	P	**P**	**02 32 10.4**	**-0.2**
	0.4nm,0.3s,baz=324,slow=6.2,SNR=8.1						

*IDC **26** 02:28:54.0± 1.6, 13.°31S× 166.°86E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/38, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=53.9km s-min=28.1km az=126.0*

ISC 26 02:28:59.3± 1.4, 13.°4S ±0.°2× 166.°9E ±0.°3, h35km, n6, σ0.°53/6, mb3.8/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.64**	**183**	Pn	**Pn**	**02 31 02.3**	**+0.2**
	1.0nm,0.3s,baz=21,slow=17,SNR=12						
DZM				Sn	Sn	02 32 26.7	-12
	baz=328,slow=23,SNR=1.8						
STKA	**Stephens Creek**	**29.58**	**227**	P	**P**	**02 35 00.6**	**-0.5**
	2.9nm,0.4s,baz=58,slow=8.8,SNR=13						
WRA	**Warramunga Arr**	**31.79**	**254**	P	**P**	**02 35 21.3**	**+0.5**
	0.7nm,0.8s,baz=84,slow=8.4,SNR=2.1						
ASAR	**Alice Springs**	**32.80**	**247**	P	**P**	**02 35 29.7**	**+0.1**
	0.7nm,0.6s,baz=74,slow=9.4,SNR=12						
ILAR	**Eielson Array**	**85.38**	**18**	P	**P**	**02 41 32.9**	**+0.2**
	0.4nm,0.7s,baz=232,slow=4.4,SNR=4.5						
ARCES	**ARCESS Array B**	**118.86**	**345**	PKP	**PKPdf**	**02 47 43.1**	**-0.5**
	2.5nm,0.7s,baz=44,slow=2.7,SNR=5.2						

ISC 26 02:32:35.5± 1.3, 45.°04N ±0.°04× 14.°97E ±0.°06, h8km ±12km, n9, σ0.°65/16, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIY	**Rijeka**	**0.45**	**310**	*e*Pg	**Pg**	**02 32 44.4**	**+0.2**
RIY				Sg	**Sb**	**02 32 51.5**	**-1.0**
GBRS	**Gornja Briga**	**0.50**	**347**	*i* Pg	**Pg**	**02 32 45.4**	**+0.1**
GBRS				*e*Sg	**Sb**	**02 32 53.1**	**-1.0**
GBRS				IAML		02 32 55.3	
	comp=Z,1.9nm,0.1s						
BOJS	**Bojanci**	**0.51**	**23**	*i* Pg	**Pg**	**02 32 44.9**	**-0.5**
BOJS				*i* Sg	**Sg**	**02 32 52.2**	**+0.3**
BOJS				IAML		02 32 54.3	
	comp=Z,2.0nm,0.1s						
KNDS	**Knezji Dol**	**0.64**	**320**	*i* Pg	**Pg**	**02 32 47.9**	**0.0**
KNDS				*e*Sg	**Sb**	**02 32 57.7**	**-0.5**
KNDS				IAML		02 32 59.3	
	comp=Z,1.2nm,0.1s						
VISS	**Visnje**	**0.77**	**353**	*e*Pg	**Pg**	**02 32 50.5**	**+0.2**
VISS				*e*Sg	**Sb**	**02 33 01.7**	**-0.1**
VISS				IAML		02 33 02.9	
	comp=Z,0.7nm,0.1s						
SKDS	**Skadanscina**	**0.84**	**307**	*i* Sg	**Sb**	**02 33 04.3**	**+0.4**
SKDS				IAML		02 33 05.6	
	comp=Z,0.6nm,0.1s						
CRES	**Cresnjev**	**0.86**	**23**	*e*Pg	**Pb**	**02 32 52.9**	**+0.2**
DUGI	**Dugi Otok**	**1.05**	**177**	*e*Pg	**Pg**	**02 32 55.5**	**-0.2**
DUGI				Sg	**Sn**	**02 33 10.9**	**-0.4**
MORI	**Morici**	**1.29**	**156**	*e*Pg	**Pb**	**02 32 59.9**	**-0.1**
MORI				Sg	**Sn**	**02 33 18.5**	**+1.4**

*IDC **26** 02:33:24.7± 2.2, 36.°70N× 70.°81E, h0km, mb3.6/8, mb1 3.8/13, mb1mx3.5/65, mbtmp3.8/13, ML3.5/5, MS3.3/2, Ms1 3.4/2, ms1mx2.6/55, Error ellipse: s-maj=43.0km s-min=20.4km az=150.0*
*NNC **26** 02:33:31.9± 5.0, 37.°01N× 70.°18E, h27km ±114km, mb4.6, mpv4.4, Error ellipse: s-maj=92.2km s-min=19.4km az=2.0*

ISC 26 02:33:27.4± 0.6, 36.°87N ±0.°05× 70.°56E ±0.°06, h10km, n31, σ2.°44/39, mb3.5/8, 4C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.23**	**160**	P	**Pg**	**02 34 26.6**	**-2.8**
CEP				S	**Sg**	**02 35 16.0**	**+4.7**
CHCP	**Chirah Chowk**	**3.89**	**145**	P	**Pb**	**02 34 35.2**	**-1.

comp=Z,1.6nm,0.9s,baz=99,slow=8.6,SNR=1.4
ARCES ARCESS Array B 54.19 338 P **P** **02 42 52.0 -0.1**
comp=Z,3.1nm,0.9s,baz=100,slow=8.3,SNR=1.8
WRA Warramunga Arr 66.45 130 P **P** **02 44 16.7 +0.1**
comp=Z,1.3nm,1.0s,baz=322,slow=6.4,SNR=18
ASAR Alice Springs 68.76 133 P **P** **02 44 31.3 +0.1**
comp=Z,0.5nm,0.6s,baz=316,slow=6.2,SNR=7.4
ILAR Eielson Array 79.15 20 P **P** **02 45 30.9 -0.6**
comp=Z,0.3nm,0.6s,baz=327,slow=6.1,SNR=4.5

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*IDC **26** 02:37:41.7±1.5,27.9̄3N×85.6̄2E,h0km,mb3.7/7, mb1 3.8/8,mb1mx3.4/54,mbtmp3.7/8,ML3.7/1,Error ellipse: s-maj=54.7km s-min=22.5km az=63.0*
ISC 26 02:37:44.6±1.5,28.0̄N±0.2×85.7̄E±0.3,h18km,n8,σ0.975/8, mb3.7/7,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.97**	**353**	P			**Pn**	**02 42 05.2**	**-0.4**
	0.2nm,0.3s,baz=178,slow=12,SNR=5.3								
KURBB	**Kurchatov Arra**	**23.26**	**348**	P			**P**	**02 42 52.1**	**+1.1**
	0.4nm,0.5s,baz=168,slow=10.0,SNR=1.9								
SONM	**Songino Array**	**25.56**	**34**	P			**P**	**02 43 13.1**	**+0.5**
	1.3nm,0.6s,baz=223,slow=9.2,SNR=6.6								
ZALV	**Zalesovo Beam**	**25.96**	**359**	P			**P**	**02 43 14.9**	**-1.0**
	0.4nm,0.3s,baz=195,slow=10,SNR=1.8								
ARCES	**ARCESS Array B**	**53.73**	**338**	P			**P**	**02 47 04.9**	**-0.4**
	2.6nm,0.9s,baz=102,slow=8.4,SNR=1.3								
HFS	**Hagfors**	**57.24**	**326**	P			**P**	**02 47 30.9**	**+0.3**
	3.1nm,1.0s,baz=92,slow=10,SNR=2.1								
WRA	**Warramunga Arr**	**66.98**	**130**	P			**P**	**02 48 36.7**	**+0.1**
	0.5nm,0.9s,baz=322,slow=6.6,SNR=1.6								
ASAR	**Alice Springs**	**69.28**	**133**	P			**P**	**02 48 50.8**	**-0.2**
	0.2nm,0.8s,baz=311,slow=6.0,SNR=1.9								

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*BJI **26** 02:48:35.5±0.0,27.8̄9N×84.3̄0E,h17km,mB4.5/22, mb4.3/34,Ms4.0/12,Ms7 3.8/16*
*IDC **26** 02:48:36.6±0.5,28.1̄0N×84.5̄5E,h0km,mb4.2/32, mb1 4.3/34,mb1mx4.1/59,mbtmp4.2/34,ML4.1/2,MS3.1/10, Ms1 3.1/10,ms1mx2.9/60,Error ellipse: s-maj=15.0km s-min=11.2km az=51.0*
*DMN **26** 02:48:37.2±0.4,28.2̄8N×84.7̄3E,h10km,Ml5.0/4,Error ellipse: s-maj=9.7km s-min=3.3km az=6.0*
*NEIC **26** 02:48:39.1±1.8,28.2̄3N±0.0̄9×84.5̄9E±0.0̄8,h10km±1km, mb4.5/70,Error ellipse: s-maj=15.9km s-min=11.0km az=203.0*
*NDI **26** 02:48:40.8±3.4,28.1̄0N×84.5̄2E,h10km,ML4.2, mb4.5(NEIC)*
ISC 26 02:48:38.6±0.9,28.14N±0.04×84.60E±0.03,h13km±6km, n200,σ1.976/191,mb4.4/78,MS3.2/9,7C-6D,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.14**	**165**	*e*Pg			**Pg**	**02 48 42.6**	**+0.2**
GKN				*e*Sg			**Sg**	**02 48 44.9**	**-0.1**
DMN	**Daman**	**0.70**	**139**	*e*Pg			**Pg**	**02 48 52.1**	**-0.2**
KKN	**Kakani**	**0.70**	**120**	*e*Pg			**Pg**	**02 48 51.6**	**-0.7**
KKN				*e*Sg			**Sg**	**02 49 00.4**	**-1.2**
	13μm,0.6s								
DANN	**Dangsing**	**0.77**	**286**	*e*Sg			**Sb**	**02 49 03.4**	**-1.0**
	6μm,0.3s								
PKIN	**Phulchoki**	**0.91**	**128**	*e*Pg			**Pg**	**02 48 55.3**	**-0.9**
PKI	**Pulchoki**	**0.92**	**128**	*e*Pg			**Pg**	**02 48 55.4**	**-1.0**
KOLN	**Koldanda**	**0.95**	**247**	*e*Pg			**Pn**	**02 48 58.2**	**+0.3**
KOLN				*e*Sg			**Sn**	**02 49 13.5**	**+2.0**
	3μm,0.2s								
GUN	**Gumba**	**1.16**	**101**	*e*Pg			**Pg**	**02 48 58.0**	**-3.0**
PYUN	**Piuthan**	**1.42**	**269**	*e*Pg			**Pg**	**02 49 06.7**	**+0.8**
PYUN				*e*Sg			**Sn**	**02 49 25.8**	**+2.9**
	14μm,0.4s								
JIRN	**Jiri**	**1.49**	**108**	*e*Pg			**Pn**	**02 49 04.7**	**-0.7**
RAMN	**Ramite**	**2.14**	**123**	*e*Pg			**Pn**	**02 49 16.3**	**+2.1**
ODAN	**Odare**	**2.79**	**117**	*e*Pg			**Pb**	**02 49 27.7**	**-0.8**
ODAN				*e*Sg			**Sb**	**02 50 03.4**	**+0.7**
	891nm,0.5s								
TAPN	**Taplejung**	**2.87**	**105**	*e*Pg			**Pb**	**02 49 28.8**	**-1.1**
TAPN				*e*Sg			**Sb**	**02 50 04.3**	**-0.7**
	645nm,0.5s								
BOK	**Bokaro**	**4.48**	**165**	*e*P			**Pn**	**02 49 48.2**	**+2.0**
BOK				*e*S			**Sn**	**02 50 37.7**	**-0.6**
BOK				IAML				02 51 05.9	
	comp=E,313nm,0.3s								
LSA	**Lhasa**	**5.95**	**73**	P			Pn	02 50 14.0	+7.1
LSA				S			**Sg**	**02 51 50.8**	**+1.0**
LSA				LR			LR		
	comp=N,400nm,3.6s								
LSA				LR			LR		
	comp=E,650nm,3.6s								
LSA				LR			LR		
	comp=Z,770nm,4.3s								
LSA	**Lhasa**	**5.95**	**73**	Pn			**Pn**	**02 50 08.0**	**+1.1**
SHL	**Shillong**	**7.00**	**110**	*e*P			**Pn**	**02 50 21.2**	**+0.2**
SHL				*e*S			**Sn**	**02 51 37.9**	**-2.6**
SHL	**Shillong**	**7.00**	**110**	Pn			**Pn**	**02 50 20.5**	**-0.5**
SMLA	**Simla**	**7.12**	**297**	*e*P			**Pn**	**02 50 24.7**	**+2.3**
SMLA				*e*S			**Sn**	**02 51 41.4**	**-1.7**
SMLA				IAML				02 51 46.7	
	comp=E,381nm,0.3s								
SMLA				IAML				02 51 48.5	
	comp=N,376nm,0.3s								
BHPL	**Bhopal**	**8.10**	**235**	*e*P			**Pn**	**02 50 34.5**	**-1.5**
BHPL				*e*S			**Sn**	**02 52 00.1**	**-7.4**
BHPL				IAML				02 52 10.9	
	comp=N,106nm,0.3s								
BHPL				IAML				02 52 13.2	
	comp=E,106nm,0.3s								
ZIRO	**ZIRO**	**8.22**	**92**	*e*P			**Pn**	**02 50 41.7**	**+3.9**
DHRM	**DHARAMSHALA**	**8.26**	**302**	*e*P			**Pn**	**02 50 39.1**	**+0.7**
DHRM				*e*S			**Sn**	**02 52 09.3**	**-2.4**
DHRM				IAML				02 52 13.0	
	comp=E,332nm,0.4s								
DHRM				IAML				02 52 15.8	
	comp=N,206nm,0.6s								
KOHI	**KOHIMA**	**8.82**	**104**	*e*P			**Pn**	**02 50 45.9**	**-0.2**
IMP	**Imphal**	**9.00**	**109**	*e*P			**Pn**	**02 50 52.5**	**+4.1**
AJM	**Ajmer**	**9.01**	**262**	*e*P			**Pn**	**02 50 49.0**	**+0.6**
AJM				*i* S			**Sn**	**02 52 24.0**	**-5.8**
CHCP	**Chirah Chowk**	**11.18**	**302**	P			**Pn**	**02 51 18.2**	**+0.1**
NIL	**Nilore**	**11.18**	**302**				**Pn**	**02 51 18.2**	**0.0**
HYB	**Hyderabad**	**12.04**	**209**	*i* P			**Pn**	**02 51 28.0**	**-2.0**
HYB				*e*S			Sn	02 53 58.0	+14
HYB	**Hyderabad**	**12.04**	**209**	*e*P			**Pn**	**02 51 26.5**	**-3.5**
POO	**Poona**	**13.74**	**228**	*e*S			Sn	02 54 12.0	-14
PRZ	**Przheval'sk**	**15.17**	**342**	Pn			**Pn**	**02 52 11.7**	**-1.1**
KDJ	**Kajisay**	**15.21**	**339**	Pn			**Pn**	**02 52 10.5**	**-2.7**
MHMT	**Maesarieng**	**15.76**	**126**	P			**P**	**02 52 29.0**	**+4.7**
	comp=N,4μmcomp=N,28nm,0.6s								
WMQ	**Urumqi**	**15.85**	**8**	*e*P			**P**	**02 52 23.3**	**-1.9**
WMQ					pmax		pmax		
	comp=N,16nm,0.7s								
WMQ					pmax		pmax		
	comp=N,100nm,3.8s								
WMQ	**Urumqi**	**15.85**	**8**	Pn			**Pn**	**02 52 19.4**	**-2.1**
WMQ				IAmb			IAmb	02 52 48.0	
	comp=Z,15nm,0.4s								
BOOM	**Boomskoye usch**	**15.95**	**336**	Pn			**Pn**	**02 52 19.9**	**-3.0**
CHTO	**Chiang Mai**	**16.09**	**122**	Pn			**Pn**	**02 52 24.6**	**-0.1**
CMMT	**Chiang Mai**	**16.10**	**122**	P			**P**	**02 52 29.1**	**+1.0**
	comp=Z,11nm,1.1s								
CM15	**Chiang Mai Arr**	**16.30**	**123**	P			**P**	**02 52 34.5**	**+4.1**
	comp=Z,12nm,0.9s								
CM13	**Chiang Mai Arr**	**16.31**	**123**	P			**P**	**02 52 33.7**	**+3.3**
	comp=Z,9.4nm,0.8s								
CM31	**Chiang Mai Arr**	**16.31**	**123**	P			**P**	**02 52 36.1**	**+5.7**
CM31	**Chiang Mai Arr**	**16.31**	**123**	Pn			**Pn**	**02 52 28.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**16.31**	**123**	Pn			**Pn**	**02 52 28.1**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=301,slow=14,SNR=11								
CMAR					LR		LR	02 59 27.6	
	comp=Z,23nm,21.3s,baz=150,slow=40								
CMAR	**Chiang Mai Arr**	**16.31**	**123**	Pn			**Pn**	**02 52 27.4**	**-0.1**
CM02	**Chiang Mai Arr**	**16.33**	**123**	P			**P**	**02 52 34.1**	**+3.5**
	comp=Z,117nmcomp=Z,17nm,0.8s								
CM01	**Chiang Mai Arr**	**16.35**	**123**	P			**P**	**02 52 34.0**	**+3.2**
	comp=Z,13nm,0.9s								
CM05	**Chiang Mai Arr**	**16.35**	**123**	P			**P**	**02 52 34.1**	**+3.3**
	comp=Z,8.8nm,0.8s								
CM09	**Chiang Mai Arr**	**16.36**	**123**	P			**P**	**02 52 34.8**	**+3.8**
	comp=Z,16nm,0.9s								
CM04	**Chiang Mai Arr**	**16.38**	**123**	P			**P**	**02 52 34.9**	**+3.8**
	comp=Z,130nmcomp=Z,12nm,0.9s								
KMI	**Kunming**	**16.50**	**96**	⇑P			**P**	**02 52 33.3**	**+0.6**
KMI					pmax		pmax		
	comp=Z,7.0nm,0.8s								
KMI					pmax		pmax		
	comp=Z,84nm,6.2s								
KMI					LR		LR		
	comp=Z,95nm,12.2s								
KMI					LR		LR		
	comp=Z,69nm,10.8s								
KMI					LR		LR		
	comp=Z,110nm,11.5s								
KMI	**Kunming**	**16.50**	**96**	Pn			**Pn**	**02 52 31.1**	**+1.0**
FRU1	**Bishkek**	**16.72**	**334**	Pn			**Pn**	**02 52 31.0**	**-1.5**
FRU1				IAmb			IAmb	02 53 00.0	
	comp=Z,17nm,0.5s								
GTA	**Gaotai**	**16.90**	**44**	P			**P**	**02 52 38.5**	**+1.6**
GTA				pP			sP	02 52 46.0	+2.6
GTA				sP			pP	02 52 49.8	+8.5
GTA					pmax		pmax		
	comp=Z,6.0nm,1.0s								
GTA					pmax		pmax		
	comp=Z,55nm,4.3s								
GTA					LR		LR		
	comp=Z,96nm,10.5s								
GTA					LR		LR		
	comp=Z,220nm,11.3s								
GTA					LR		LR		
	comp=Z,180nm,10.5s								
SUKH	**Sukhothai**	**17.44**	**124**	P			**P**	**02 52 47.8**	**+5.0**
	comp=Z,10nm,0.9s								
LZH	**Lanzhou**	**18.11**	**59**	*e*P			**Pn**	**02 52 50.0**	**0.0**
LZH					pmax		pmax		
	comp=Z,21nm,1.2s								
LZH					pmax		pmax		
	comp=Z,78nm,5.1s								
LZH					LR		LR		
	comp=Z,230nm,13.0s								
LZH					LR		LR		
	comp=Z,180nm,11.4s								
LZH					LR		LR		
	comp=Z,130nm,12.5s								
UTHA	**Uthaitani**	**18.60**	**129**	P			**Pn**	**02 53 00.2**	**+4.2**
	comp=Z,12nm,1.4s								
MK31	**Makanchi Array**	**18.71**	**355**	P			**P**	**02 52 56.5**	**-0.3**
MKAR	**Makanchi Array**	**18.71**	**355**	P			**Pn**	**02 52 57.4**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=172,slow=12,SNR=27								
MKAR					LR		LR	03 00 49.9	
	comp=Z,17nm,21.9s,baz=173,slow=39								
MKAR	**Makanchi Array**	**18.71**	**355**	P			**P**	**02 52 55.4**	**-1.3**
KKAR	**Karatay Array**	**18.77**	**326**	P			**P**	**02 52 56.0**	**-1.4**
GYA	**Guiyang**	**19.68**	**90**	⇑P			**Pn**	**02 53 09.3**	**+0.2**
GYA					pmax		pmax		
	comp=Z,2.0nm,1.1s								
NONG	**Nongkai**	**19.77**	**117**	P			**Pn**	**02 53 15.6**	**+5.6**
HRA	**Herat**	**20.08**	**294**	P			**P**	**02 53 09.5**	**-2.6**
PALK	**Pallekele**	**21.08**	**191**	P			**P**	**02 53 22.5**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=234,slow=13,SNR=2.2								
PALK					LR		LR	03 01 20.1	
	comp=Z,101nm,19.3s,baz=132,slow=36								
XAN	**Xi'an**	**21.62**	**68**	P			**P**	**02 53 28.0**	**-0.6**
XAN					sP		sP	02 53 35.5	+1.0
XAN					pmax		pmax		
	comp=Z,8.0nm,0.8s								
XAN					pmax		pmax		
	comp=Z,88nm,5.7s								
XAN	**Xi'an**	**21.62**	**68**	P			**P**	**02 53 28.1**	**-0.4**
ENH	**Enshi**	**21.82**	**78**	P			**P**	**02 53 30.5**	**-0.2**
ENH				IAmb			IAmb	02 53 39.8	
	comp=Z,24nm,1.2s								
KURBB	**Kurchatov Arra**	**22.92**	**350**	P			**P**	**02 53 42.1**	**-0.1**
	comp=Z,6.4nm,0.8s,baz=177,slow=9.4,SNR=43								
KURK	**Kurchatov**	**23.00**	**350**	P			**P**	**02 53 42.0**	**-0.9**
GEYT	**Alibeck**	**24.18**	**301**	P			**P**	**02 53 55.5**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=101,slow=11,SNR=4.7								
HHC	**Hu-ho-hao-te**	**25.48**	**53**	*e*P			**P**	**02 54 08.0**	**+1.4**
HHC					pmax		pmax		
	comp=Z,14nm,1.0s								
HHC					pmax		pmax		
	comp=Z,96nm,5.4s								
HHC					LR		LR		
	comp=Z,85nm,9.0s								
HHC					LR		LR		
	comp=Z,180nm,10.5s								
HHC					LR		LR		
	comp=Z,150nm,11.0s								
ZAA0	**Zalesovo Array**	**25.78**	**0**	P			**P**	**02 54 08.9**	**-0.1**
ZAA0				IAmb			IAmb	02 54 15.9	
	comp=Z,6.3nm,0.8s								
ZALV	**Zalesovo Beam**	**25.78**	**0**	P			**P**	**02 54 09.7**	**+0.7**
	comp=Z,6.2nm,0.6s,baz=183,slow=9.3,SNR=24								
ZALV					LR		LR	03 04 27.8	
	comp=Z,10nm,19.8s,baz=222,slow=37								
SONM	**Songino Array**	**25.95**	**35**	P			**P**	**02 54 12.2**	**+1.4**
	comp=Z,3.0nm,0.8s,baz=224,slow=11,SNR=15								
SONM					LR		LR	03 05 33.4	
	comp=Z,73nm,20.3s,baz=148,slow=39								
SONM	**Songino Array**	**25.95**	**35**	P			**P**	**02 54 11.7**	**+0.9**
ULN	**Ulaanbaatar**	**26.31**	**35**	P			**P**	**02 54 14.2**	**+0.1**
BVAR	**Borovoye Array**	**27.00**	**341**	P			**P**	**02 54 19.6**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=172,slow=12,SNR=4.6								
ABKAR	**Akbulak array**	**28.32**	**325**	P			**P**	**02 54 32.5**	**+0.6**
NJ2	**Nanjing**	**29.82**	**74**	*e*P			**P**	**02 54 45.8**	**+0.4**
NJ2					pmax		pmax		
	comp=Z,8.0nm,0.5s								
AKTO	**Aktyubinsk**	**30.03**	**325**	LR			LR	03 07 49.6	
	comp=Z,41nm,20.2s,baz=136,slow=38								
SOCY	**Socotra**	**32.69**	**247**	P			**P**	**02 55 10.0**	**-1.0**
SOCY				IAmb			IAmb	02 55 11.8	
	comp=Z,3.9nm,0.8s								
ARU	**Arti**	**33.80**	**334**	P			**P**	**02 55 20.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=151,slow=10,SNR=6.2								
ARU	**Arti**	**33.80**	**334**	IAmb			IAmb	02 55 30.8	
	comp=Z,10.0nm,1.4s								
KBZ	**Khabaz**	**36.76**	**306**	P			**P**	**02 55 45.8**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=106,slow=1.4,SNR=3.9								
KSRS	**Korea Array**	**37.31**	**64**	P			**P**	**02 55 50.5**	**0.0**
	comp=Z,0.8nm,0.7s,baz=266,slow=7.2,SNR=2.2								
MARD	**Mardin**	**37.70**	**295**	P			**P**	**02 55 53.7**	**-0.3**
KIRV	**Kirov**	**38.95**	**331**	P			**P**	**02 56 05.1**	**+1.1**
	comp=Z,8.2nm,0.6s,baz=100,slow=7.5,SNR=2.3								
NRIK	**Noril'sk**	**41.27**	**2**	P			**P**	**02 56 22.9**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=168,slow=8.3,SNR=4.9								
NRIK	**Noril'sk**	**41.27**	**2**	P			**P**	**02 56 23.5**	**+0.4**
NRIK				IAmb			IAmb	02 56 26.0	
	comp=Z,8.2nm,1.2s								
EIL	**Elat**	**43.22**	**284**	P			**P**	**02 56 39.9**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=329,slow=23,SNR=1.8								
EIL					LR		LR	03 17 39.8	
	comp=Z,24nm,18.5s,baz=106,slow=40								
BR131	**Keskin Array S**	**43.31**	**299**	P			**P**	**02 56 42.5**	**+2.1**
BRTR	**Keskin Array B**	**43.31**	**299**	P			**P**	**02 56 40.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=108,slow=7.9,SNR=7.3								
BRTR	**Keskin Array B**	**43.31**	**299**	P			**P**	**02 56 41.1**	**+0.7**
LEF	**Lefka**	**44.16**	**293**	⇑P			**P**	**02 56 49.5**	**+2.4**
KLMR	**Klimovskoe**	**44.41**	**330**	*e*P			**P**	**02 56 46.7**	**-2.0**
KLMR					AMP			02 56 51.7	
	comp=Z,10.0nm,1.2s								
ELL	**Elmali**	**46.41**	**295**	P			**P**	**02 57 05.8**	**+0.7**
AKASG	**Malin Array Be**	**47.06**	**314**	P			**P**	**02 57 09.4**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=77,slow=7.0,SNR=9.8								
AKASG	**Malin Array Be**	**47.06**	**314**	P			**P**	**02 57 09.2**	**-0.6**
AKBB	**Malin Array Si**	**47.06**	**314**	P			**P**	**02 57 09.0**	**-0.8**
AKBB				IAmb			IAmb	02 57 14.6	
	comp=Z,5.4nm,0.9s								
SORM	**Soroca**	**47.38**	**311**	⇓P			**P**	**02 57 13.0**	**+0.6**
VRI	**Vrincioaia**	**48.41**	**308**	⇓P			**P**	**02 57 22.7**	**+2.3**
PLOR	**Plostina**	**48.46**	**308**	⇑P			**P**	**02 57 23.2**	**+2.3**
TESR	**Tescani**	**48.47**	**309**	⇓P			**P**	**02 57 22.4**	**+1.5**
MLR	**Muntele Rosu**	**48.95**	**307**	⇓P			**P**	**02 57 27.4**	**+2.6**
MLR	**Muntele Rosu**	**48.95**	**307**	P			**P**	**02 57 25.6**	**+0.8**
IDID	**Didziasalis**	**49.19**	**320**	*e*P			**P**	**02 57 26.8**	**+0.5**
BURAR	**Bucovina Array**	**49.47**	**310**	P			**P**	**02 57 29.8**	**+1.1**
BUR08	**Bucovina Ar. S**	**49.48**	**310**	P			**P**	**02 57 27.8**	**-1.0**
BUR08				IAmb			IAmb	02 57 34.6	
	comp=Z,2.7nm,0.8s								
IIGN	**Ignalina**	**49.49**	**320**	*e*P			**P**	**02 57 29.7**	**+1.2**
ISAL	**Salakas**	**49.58**	**321**	*e*P			**P**	**02 57 30.0**	**+0.8**
TIXI	**Tiksi**	**49.81**	**17**	P			**P**	**02 57 31.3**	**+0.6**
	comp=Z,4.0nm,0.6s,baz=215,slow=2.7,SNR=8.8								
TIXI	**Tiksi**	**49.81**	**17**	P			**P**	**02 57 30.3**	**-0.4**
TIXI				IAmb			IAmb	02 57 35.8	
	comp=Z,9.1nm,1.2s								
FINES	**FINESS Array B**	**50.72**	**328**	P			**P**	**02 57 37.8**	**0.0**
	comp=Z,5.6nm,0.7s,baz=104,slow=7.6,SNR=21								
PABE	**Paberze**	**50.78**	**320**	*e*P			**P**	**02 57 39.1**	**+0.8**
PABE	**Paberze**	**50.78**	**320**	P			**P**	**02 57 37.8**	**-0.4**
VTS	**Vitosha**	**51.03**	**304**	⇑P			**P**	**02 57 42.4**	**+1.8**
VTS	**Vitosha**	**51.03**	**304**	P			**P**	**02 57 40.3**	**-0.3**
VTS				IAmb			IAmb	02 57 43.2	
	comp=Z,3.8nm,0.8s								
KWP	**Kalwaria Pacla**	**51.17**	**313**	P			**P**	**02 57 41.8**	**+0.5**
TRPA	**Tarpa**	**51.28**	**311**	⇓P			**P**	**02 57 43.9**	**+1.7**
MTSE	**Matsula**	**51.30**	**324**	*e*P			**P**	**02 57 41.4**	**-0.8**
ARCES	**ARCESS Array B**	**53.22**	**338**	P			**P**	**02 57 57.1**	**+0.8**
	comp=Z,6.2nm,0.9s,baz=86,slow=7.8,SNR=7.4								
ARCES	**ARCESS Array B**	**53.22**	**338**	IAmb			IAmb	02 58 08.3	
	comp=Z,6.8nm,0.9s								
TIR	**Tirane**	**53.66**	**302**	P			**P**	**02 57 59.3**	**-0.7**
PDG	**Podgorica**	**53.97**	**304**	⇑P			**P**	**02 58 01.7**	**-0.5**
PDG	**Podgorica**	**53.97**	**304**	IAmb			IAmb	02 58 03.8	
	comp=Z,5.3nm,0.8s								
MORH	**Mrgy, Hungar**	**54.02**	**308**	⇑P			**P**	**02 58 03.0**	**+0.5**
MA2	**Magadan**	**54.17**	**35**	LR			LR	03 23 03.8	
	comp=Z,39nm,18.4s,baz=340,slow=38								
MORC	**Moravsky Berou**	**54.52**	**313**	*e*P			**P**	**02 58 07.3**	**+1.1**
KRLC	**Kraliky**	**54.99**	**313**	*e*P			**P**	**02 58 10.4**	**+0.8**
VRAC	**Vranov**	**55.16**	**312**	⇓P			**P**	**02 58 12.6**	**+1.8**
VRAC	**Vranov**	**55.16**	**312**	*e*P			**P**	**02 58 12.2**	**+1.4**
DPC	**Dobruska-Polom**	**55.27**	**314**	*e*P			**P**	**02 58 12.1**	**+0.5**
KRUC	**Moravsky**	**55.31**	**312**	*e*P			**P**	**02 58 13.0**	**+1.2**
CHVC	**Chvalec**	**55.43**	**314**	*e*P			**P**	**02 58 13.3**	**+0.6**
CONA	**Conrad Observa**	**55.76**	**311**	*i* P			**P**	**02 58 16.0**	**+0.8**
	comp=Z,4.9nm,1.1s,SNR=4.7								
ARSA	**Arzberg**	**56.06**	**310**	*e*P			**P**	**02 58 17.8**	**+0.5**
	comp=Z,2.5nm,0.8s								
SOKA	**Soboth**	**56.46**	**309**	*e*P			**P**	**02 58 21.1**	**+0.9**
	comp=Z,2.7nm,0.7s								
BRG	**Berggiesshubel**	**56.74**	**314**	*e*P			**P**	**02 58 26.8**	**+4.7**
BRG					Amp			02 58 29.9	
	comp=Z,1.6nm,0.8s								
BRG				*ex*			x	02 58 32.7	
BRG					Amp			02 58 33.8	
	comp=Z,2.3nm,0.8s								
OBKA	**Obir**	**56.81**	**309**	*e*P			**P**	**02 58 23.2**	**+0.5**
	comp=Z,2.9nm,0.9s								
MOA	**Molln**	**56.84**	**311**	*i* P			**P**	**02 58 23.2**	**+0.4**
	comp=Z,1.9nm,0.6s,SNR=4.0								
GERES	**GERESS Array B**	**57.10**	**312**	P			**P**	**02 58 24.3**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=86,slow=8.4,SNR=9.5								
GERES	**GERESS Array B**	**57.10**	**312**	P			**P**	**02 58 24.1**	**-0.6**
KHC	**Kasperske Hory**	**57.15**	**312**	*e*P			**P**	**02 58 26.2**	**+1.2**
CLL	**Collm**	**57.30**	**315**	*e*P			**P**	**02 58 26.0**	**0.0**
KBA	**Koelnbreinsper**	**57.55**	**310**	*e*P			**P**	**02 58 27.9**	**-0.2**
	comp=Z,2.7nm,1.2s								
NOA	**NORSAR Array B**	**57.81**	**327**	P			**P**	**02 58 29.2**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=88,slow=7.2,SNR=3.8								
NOA					LR		LR	03 24 49.0	
	comp=Z,46nm,19.9s,baz=85,slow=38								
PETK	**Petropavlovsk-**	**58.06**	**43**	P			**P**	**02 58 30.9**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=251,slow=4.4,SNR=3.9								
PETK					LR		LR	03 25 43.9	
	comp=Z,26nm,18.7s,baz=189,slow=38								
STAL	**STALIGIAL**	**58.10**	**309**	IAmb			IAmb	02 58 41.7	
	comp=Z,8.3nm,1.1s								
ABTA	**Abfaltersbach**	**58.17**	**310**	*e*P			**P**	**02 58 32.7**	**+0.4**
	comp=Z,2.3nm,1.1s								
NRCA	**Norcia**	**58.39**	**305**	IAmb			IAmb	02 58 38.7	
	comp=Z,3.6nm,0.8s								
WTTA	**Wattenberg**	**58.68**	**310**	*e*P			**P**	**02 58 35.8**	**-0.2**
	comp=Z,4.0nm,1.3s								
WATA	**Walderalm**	**58.71**	**310**	*e*P			**P**	**02 58 35.9**	**-0.2**
	comp=Z,1.8nm,0.7s								
SQTA	**Sankt Quirin**

mb1 3.3/9, mb1mx2.9/58, mbtmp3.8/9, Error ellipse: s-maj=90.2km s-min=26.0km az=150.0
NNC ***26*** *02:50:23.4±10.0, 37.05N×70.09E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=80.2km s-min=67.8km az=174.0*
ISC 26 02:50:20.6±0.8, 36.52N±0.07×70.57E±0.08, h200km, n20, σ2.830/25, mb3.5/6, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.90**	**157**	P	**Pn**	**02 51 11.5**	**+2.2**
CEP				S	**Sn**	**02 51 48.0**	**+0.7**
KSH	**Kashi**	**5.21**	**53**	Pn	**Pn**	**02 51 36.3**	**-1.5**
KSH				Sn	**Sn**	**02 52 33.5**	**-5.2**
KSH				smax	smax		
	comp=N,78nm,0.3s						
KSH				smax	smax		
	comp=E,43nm,0.3s						
AML	**Almayashu**	**6.11**	**22**	P	**Pn**	**02 51 51.7**	**+2.1**
	SNR=102						
UCH	**Uchtor**	**6.47**	**27**	P	**Pn**	**02 51 56.7**	**+2.4**
	SNR=30						
KK31	**Karatay Array**	**6.58**	**360**	⇑P	**Pn**	**02 51 56.1**	**+0.8**
	comp=E,1.7nm,0.2s,baz=177,slow=12,SNR=99						
KK31				⇓S	**Sn**	**02 53 05.8**	**-4.6**
	comp=E,3.0nm,0.3s,baz=189,slow=26,SNR=5.2						
EKS2	**Erkin-Say**	**6.62**	**21**	P	**Pn**	**02 51 58.5**	**+2.6**
	SNR=15						
AAK	**Ala-Archa**	**6.82**	**25**	P	**Pn**	**02 52 01.0**	**+2.3**
	SNR=7.4						
AAK	**Ala-Archa**	**6.82**	**25**	⇑P	**Pn**	**02 52 00.5**	**+1.9**
	comp=E,4.9nm,0.7s						
AAK				⇑S	**Sn**	**02 53 17.8**	**+1.4**
	comp=E,9.7nm,0.5s						
TKM2	**Tokmak 2**	**7.47**	**30**	P	**Pn**	**02 52 09.9**	**+2.8**
	SNR=8.6						
TKM2	**Tokmak 2**	**7.47**	**30**	⇑P	**Pn**	**02 52 09.1**	**+2.0**
	comp=E,5.3nm,0.5s						
TKM2				⇓S	**Sn**	**02 53 32.3**	**+0.4**
	comp=E,2.9nm,0.5s						
GEYT	**Alibeck**	**10.03**	**282**	P	**Pn**	**02 52 37.1**	**-3.2**
	comp=E,0.3nm,0.3s,baz=89,slow=19,SNR=4.8						
BVAR	**Borovoye Array**	**16.51**	**360**	P	**Pn**	**02 54 01.3**	**+0.5**
	comp=E,0.4nm,0.3s,baz=193,slow=12,SNR=6.3						
AKTO	**Aktyubinsk**	**16.59**	**331**	P	**Pn**	**02 54 02.0**	**+0.2**
	comp=E,0.6nm,0.3s,baz=139,slow=11,SNR=14						
ZALV	**Zalesovo Beam**	**20.04**	**25**	P	**Pn**	**02 54 40.8**	**-1.9**
	comp=E,2.7nm,0.4s,baz=214,slow=10,SNR=6.3						
ARU	**Arti**	**21.50**	**342**	P	**P**	**02 54 54.9**	**+1.3**
	comp=E,0.9nm,0.5s,baz=186,slow=9.4,SNR=5.0						
BRTR	**Keskin Array B**	**29.10**	**288**	P	**P**	**02 56 03.4**	**+0.7**
	comp=E,0.2nm,0.6s,baz=91,slow=8.7,SNR=2.0						
AKASG	**Malin Array Be**	**32.66**	**309**	P	**P**	**02 56 33.6**	**-0.1**
	comp=E,0.2nm,0.3s,baz=84,slow=7.5,SNR=3.4						
FINES	**FINESS Array B**	**37.28**	**326**	P	**P**	**02 57 14.2**	**+1.2**
	comp=E,2.3nm,0.9s,baz=115,slow=11,SNR=12						
ARCES	**ARCESS Array B**	**41.00**	**338**	P	**P**	**02 57 45.1**	**+1.5**
	comp=E,1.8nm,0.6s,baz=108,slow=7.8,SNR=14						
NOA	**NORSAR Array B**	**44.16**	**352**	P	**P**	**02 58 09.5**	**+0.3**
	comp=E,1.5nm,0.9s,baz=101,slow=8.1,SNR=2.8						

IDC ***26*** *02:54:53.0±1.1, 28.29N×84.83E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.4/58, mbtmp3.6/9, ML3.3/1, Error ellipse: s-maj=37.7km s-min=23.1km az=61.0*
ISC 26 02:54:54.7±1.1, 28.3N±0.2×84.8E±0.2, h10km, n9, σ0.980/9, mb3.6/8, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.55**	**354**	P	**Pn**	**02 59 11.6**	**-0.2**
	0.1nm,0.3s,baz=171,slow=11,SNR=5.0						
KURBB	**Kurchatov Arra**	**22.79**	**350**	P	**P**	**02 59 57.4**	**+0.1**
	0.5nm,0.5s,baz=163,slow=15,SNR=5.1						
SONM	**Songino Array**	**25.69**	**35**	P	**P**	**03 00 25.2**	**+0.2**
	1.0nm,0.6s,baz=227,slow=10.0,SNR=3.2						
FINES	**FINESS Array B**	**50.69**	**328**	P	**P**	**03 03 53.2**	**-0.9**
	0.5nm,0.4s,baz=101,slow=7.2,SNR=4.3						
ARCES	**ARCESS Array B**	**53.14**	**338**	P	**P**	**03 04 11.8**	**-0.4**
	5.9nm,1.2s,baz=102,slow=8.4,SNR=1.7						
WRA	**Warramunga Arr**	**67.75**	**129**	P	**P**	**03 05 51.5**	**-1.3**
	0.6nm,0.8s,baz=322,slow=6.5,SNR=2.6						
ASAR	**Alice Springs**	**70.04**	**133**	P	**P**	**03 06 07.7**	**+0.6**
	0.3nm,0.8s,baz=312,slow=6.4,SNR=1.8						
TORD	**Torodi Ar. Bea**	**77.92**	**278**	P	**P**	**03 06 54.0**	**+0.6**
	0.2nm,0.6s,baz=54,slow=3.9,SNR=4.2						
ILAR	**Eielson Array**	**78.92**	**20**	P	**P**	**03 06 58.8**	**+0.7**
	0.2nm,0.6s,baz=312,slow=5.3,SNR=4.3						

IDC ***26*** *03:06:19.4±2.7, 27.90N×84.72E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.4/53, mbtmp3.7/8, ML3.7/1, Error ellipse: s-maj=64.7km s-min=43.0km az=120.0*
ISC 26 03:06:21.2±2.3, 27.9N±0.3×84.7E±0.4, h10km, n9, σ0.964/8, mb3.6/7, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.93**	**355**	P	**P**	**03 10 42.3**	**+0.2**
	0.3nm,0.3s,baz=175,slow=12,SNR=14						
KURBB	**Kurchatov Arra**	**25.13**	**350**	P	**P**	**03 11 27.3**	**-0.2**
	0.2nm,0.3s,baz=177,slow=10,SNR=4.8						
ZALV	**Zalesovo Beam**	**26.00**	**0**	P	**P**	**03 11 54.2**	**+0.2**
	0.4nm,0.4s,baz=168,slow=9.6,SNR=1.7						
FINES	**FINESS Array B**	**50.96**	**328**	P	**P**	**03 15 22.6**	**0.0**
	2.9nm,1.0s,baz=111,slow=4.3,SNR=7.1						
ARCES	**ARCESS Array B**	**53.45**	**338**	P	**P**	**03 15 41.0**	**0.0**
	2.4nm,0.9s,baz=106,slow=7.7,SNR=5.1						
SCO	**Scoresbysund**	**69.29**	**340**	*e*	P	03 17 36.0	+7.8
SCO				*e*		03 18 03.2	
TORD	**Torodi Ar. Bea**	**77.87**	**279**	P	**P**	**03 18 19.8**	**+0.2**
	0.4nm,0.8s,baz=77,slow=4.5,SNR=1.7						
ILAR	**Eielson Array**	**79.32**	**20**	P	**P**	**03 18 27.6**	**+0.8**
	0.6nm,1.0s,baz=300,slow=3.6,SNR=2.6						
YKA	**Yellowknife Ar**	**88.57**	**9**	P	**P**	**03 19 12.8**	**-1.1**
	0.1nm,0.7s,baz=347,slow=5.1,SNR=3.2						

IDC ***26*** *03:10:14.8±1.8, 27.78N×84.57E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.4/58, mbtmp3.7/7, ML4.1/2, MS3.7/1, Ms1 3.7/1, ms1mx2.4/45, Error ellipse: s-maj=39.0km s-min=35.0km az=117.0*
ISC 26 03:10:16.3±1.4, 27.8N±0.2×84.6E±0.2, h10km, n8, σ1.902/7, mb3.6/5, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.13**	**122**	Pn	**Pn**	**03 14 03.3**	**0.0**
	0.7nm,0.3s,baz=319,slow=11,SNR=2.0						
MKAR	**Makanchi Array**	**19.05**	**355**	P	**Pn**	**03 14 39.7**	**+0.3**
	0.1nm,0.3s,baz=173,slow=12,SNR=7.3						
KURBB	**Kurchatov Arra**	**23.26**	**350**	P	**P**	**03 15 23.7**	**-0.1**
	0.2nm,0.3s,baz=174,slow=10,SNR=4.9						
ZALV	**Zalesovo Beam**	**25.13**	**0**	P	**P**	**03 15 50.1**	**-0.3**
	0.7nm,0.3s,baz=180,slow=5.8,SNR=4.2						
SONM	**Songino Array**	**26.24**	**34**	P	**P**	**03 15 52.9**	**+1.2**
	2.0nm,0.8s,baz=216,slow=12,SNR=6.1						
KLR	**Kul'dur**	**41.83**	**46**	LR	LR	03 34 57.7	
	comp=Z,98nm,20.7s,baz=199,slow=35						
TORD	**Torodi Ar. Bea**	**77.78**	**278**	P	**P**	**03 22 14.9**	**+0.6**
	0.4nm,0.7s,baz=44,slow=4.8,SNR=5.5						
YKA	**Yellowknife Ar**	**88.72**	**9**	P	**P**	**03 23 08.3**	**-1.5**
	0.2nm,0.7s,baz=335,slow=4.9,SNR=4.3						

IDC ***26*** *03:12:48.1±2.2, 6.34S×130.53E, h132km±23km, mb3.6/6, mb1 3.8/11, mb1mx3.3/52, mbtmp4.1/11, Error ellipse: s-maj=29.8km s-min=18.8km az=97.0*
ISC 26 03:12:43.3±0.7, 6.46S±0.05×130.7E±0.1, h90km, n11, σ3.938/16, mb3.9/6, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.58**	**5**	P	**Pn**	**03 14 07.8**	**+3.9**
	12nm,0.3s,baz=56,slow=6.6,SNR=36						
SIJI				S	**Sn**	**03 15 02.6**	**-4.1**
	28nm,0.3s,baz=185,slow=23,SNR=25						
BATI	**Baumata**	**7.93**	**242**	P	**Pn**	**03 14 39.6**	**+3.7**
	8.8nm,0.3s,baz=152,slow=4.5,SNR=6.5						
BATI				S	**Sn**	**03 16 03.2**	**-0.8**
	13nm,0.3s,baz=49,slow=4.8,SNR=5.1						
FITZ	**Fitzroy Crossi**	**12.59**	**203**	P	**Pn**	**03 15 42.1**	**+2.9**
	0.8nm,0.3s,baz=31,slow=10,SNR=40						
FITZ				S	**Sn**	**03 17 49.9**	**-7.7**
	0.6nm,0.3s,baz=182,slow=23,SNR=2.4						
WRA	**Warramunga Arr**	**13.85**	**166**	P	**P**	**03 16 00.6**	**-0.5**
	0.9nm,0.3s,baz=326,slow=15,SNR=22						
WRA				S	**Sn**	**03 18 25.8**	**-2.4**
	0.7nm,0.3s,baz=251,slow=8.9,SNR=5.6						
ASAR	**Alice Springs**	**17.38**	**170**	P	**Pn**	**03 16 44.7**	**+4.5**
	0.3nm,0.3s,baz=342,slow=10,SNR=18						
ASAR				S	**Sn**	**03 19 53.0**	**-0.4**
	0.5nm,0.3s,baz=334,slow=9.2,SNR=5.6						
CMAR	**Chiang Mai Arr**	**39.96**	**309**	P	**P**	**03 20 07.1**	**-2.2**
	0.4nm,0.3s,baz=131,slow=6.5,SNR=5.0						
USRK	**Ussuriysk Ar.**	**50.44**	**1**	P	**P**	**03 21 31.3**	**-0.5**
	0.6nm,0.4s,baz=182,slow=7.0,SNR=1.6						
PETK	**Petropavlovsk-**	**63.59**	**18**	P	**P**	**03 23 04.8**	**+0.4**
	1.4nm,0.7s,baz=209,slow=2.6,SNR=1.8						
MKAR	**Makanchi Array**	**68.18**	**326**	P	**P**	**03 23 33.4**	**-0.7**
	1.3nm,0.4s,baz=116,slow=8.1,SNR=17						
SEY	**Seymchan**	**71.15**	**10**	P	**P**	**03 23 51.8**	**-0.1**
	0.6nm,0.4s,baz=262,slow=9.2,SNR=4.9						
ILAR	**Eielson Array**	**92.55**	**25**	P	**P**	**03 25 42.6**	**-1.7**
	0.3nm,0.7s,baz=250,slow=6.5,SNR=2.0						

IDC ***26*** *03:21:36.3±0.5, 27.51N×85.62E, h0km, mb4.1/32, mb1 4.2/34, mb1mx4.1/61, mbtmp4.1/34, ML4.3/2, MS3.1/6, Ms1 3.2/6, ms1mx2.8/41, Error ellipse: s-maj=14.5km s-min=11.7km az=28.0*
NEIC ***26*** *03:21:36.2±2.4, 27.47N±0.06×85.56E±0.08, h10km±1km, mb4.3/35, Error ellipse: s-maj=12.6km s-min=10.5km az=251.0*
BJI ***26*** *03:21:37.0±0.0, 27.50N×85.66E, h13km, mB4.5/13, mb4.4/24, Ms3.9/15, Ms7 3.9/13*
DMN ***26*** *03:21:37.1±0.1, 27.65N×85.62E, h2km, Ml4.7/5, Error ellipse: s-maj=5.1km s-min=1.6km az=10.0*
NDI ***26*** *03:21:39.8±3.2, 27.48N×85.47E, h10km, ML4.3, mb4.3(NEIC)*
ISC 26 03:21:37.8±0.8, 27.53N±0.04×85.55E±0.02, h15km±4km, n135, σ1.972/150, mb4.2/53, MS3.2/6, 1C-1D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKI	**Pulchoki**	**0.13**	**290**	*e*Pg	**Pg**	**03 21 41.4**	**-0.4**
PKI				*e*Sg	**Sg**	**03 21 44.6**	**+0.2**
PKI				*e*Sg	**Sg**	**03 21 44.6**	**+0.2**
PKIN	**Phulchoki**	**0.14**	**291**	*e*Pg	**Pg**	**03 21 41.8**	**-0.1**
PKIN				*e*Sg	**Sg**	**03 21 44.7**	**+0.1**
DMN	**Daman**	**0.40**	**282**	*e*Pg	**Pb**	**03 21 46.4**	**-0.4**
DMN				*e*Sg	**Sb**	**03 21 52.5**	**-0.3**
	82μm,0.3s						
JIRN	**Jiri**	**0.58**	**77**	*e*Pg	**Pg**	**03 21 46.8**	**-2.6**
GKN	**Gorkha**	**0.94**	**301**	*e*Pg	**Pb**	**03 21 55.8**	**-0.1**
GKN				*e*Sg	**Sb**	**03 22 06.4**	**-1.8**
	3μm,0.3s						
RAMN	**Ramite**	**1.10**	**121**	*e*Pg	**Pb**	**03 21 57.9**	**-0.7**
KOLN	**Koldanda**	**1.75**	**278**	*e*Pg	**Pg**	**03 22 10.9**	**-0.5**
KOLN				*e*Sg	**Sg**	**03 22 34.0**	**-0.1**
	1μm,0.2s						
ODAN	**Odare**	**1.77**	**112**	*e*Pg	**Pg**	**03 22 11.0**	**-0.8**
ODAN				*e*Sg	**Sb**	**03 22 33.0**	**+0.8**
	550nm,0.3s						
DANN	**Dangsing**	**1.78**	**298**	*e*Pg	**Pb**	**03 22 10.6**	**+0.2**
DANN				*e*Sg	**Sg**	**03 22 34.1**	**-1.2**
	661nm,0.2s						
TAPN	**Taplejung**	**1.93**	**95**	*e*Pg	**Pb**	**03 22 12.9**	**+0.1**
TAPN				*e*Sg	**Sb**	**03 22 36.3**	**-0.5**
	824nm,0.3s						
PYUN	**Piuthan**	**2.34**	**285**	*e*Pn	**Pn**	**03 22 17.7**	**+1.8**
PYUN	**Piuthan**	**2.34**	**285**	*e*Pg	**Pb**	**03 22 20.8**	**+1.0**
PYUN	**Piuthan**	**2.34**	**285**	*e*Pg	**Pb**	**03 22 20.8**	**+1.0**
PYUN				*e*Sg	**Sg**	**03 22 51.6**	**-1.4**
BOK	**Bokaro**	**3.73**	**175**	*e*P	**Pn**	**03 22 37.3**	**+2.5**
BOK				*e*S	**Sn**	**03 23 20.1**	**+1.6**
LSA	**Lhasa**	**5.38**	**65**	Pn	**Pn**	**03 23 00.5**	**+2.6**
LSA				LR	LR		
	comp=N,460nm,5.3s						
LSA				LR	LR		
	comp=E,610nm,5.3s						
LSA				LR	LR		
	comp=Z,840nm,6.4s						
LSA	**Lhasa**	**5.38**	**65**	Pn	**Pn**	**03 22 57.4**	**-0.5**
SHL	**Shillong**	**6.00**	**108**	*e*P	**Pn**	**03 23 07.8**	**+1.6**
SHL				*e*S	**Sn**	**03 24 13.9**	**-0.9**
SHL	**Shillong**	**6.00**	**108**	Pn	**Pn**	**03 23 03.0**	**-3.2**
DDI	**Dehra Dun**	**7.13**	**295**	*e*P	**Pn**	**03 23 25.0**	**+3.3**
KOHI	**KOHIMA**	**7.87**	**101**	*e*S	**Sn**	**03 24 58.5**	**-2.2**
IMP	**Imphal**	**8.01**	**108**	*e*P	**Pn**	**03 23 36.0**	**+2.3**
IMP				*e*S	**Sn**	**03 25 03.5**	**-0.6**
IMP				*e*S	**Sn**	**03 25 04.2**	**+0.1**
MOKO	**MOKOCHONG**	**8.09**	**96**	*e*P	**Pn**	**03 23 35.6**	**+0.7**
MOKO				*e*S	**Sn**	**03 25 05.5**	**-0.8**
MOKO				IAML		03 25 13.9	
	comp=N,75nm,0.4s						
MOKO				IAML		03 25 14.7	
	comp=E,84nm,0.4s						
SMLA	**Simla**	**8.15**	**298**	*e*P	**Pn**	**03 23 36.9**	**+1.4**
SMLA				*e*S	**Sn**	**03 25 03.2**	**-4.2**
SMLA				IAML		03 25 08.9	
	comp=N,555nm,0.5s						
SMLA				IAML		03 25 09.0	
	comp=E,584nm,0.5s						
BHPL	**Bhopal**	**8.49**	**242**	*e*P	**Pn**	**03 23 38.7**	**-1.7**
BHPL				*e*S	**Sn**	**03 25 10.8**	**-5.2**
BHPL				IAML		03 25 21.6	
	comp=N,153nm,0.6s						
DHRM	**DHARAMSHALA**	**9.30**	**303**	*e*P	**Pn**	**03 23 52.0**	**+0.4**
DHRM				*e*S	**Sn**	**03 25 31.6**	**-4.5**
AJM	**Ajmer**	**9.78**	**266**	*i* P	**Pn**	**03 23 57.0**	**-1.0**
AJM				*i* S	**Sn**	**03 25 42.0**	**-5.7**
HYB	**Hyderabad**	**11.96**	**214**	*i* P	**Pn**	**03 24 26.0**	**-1.8**
HYB				*e*		03 26 39.0	
CHCP	**Chirah Chowk**	**12.22**	**303**	P	**Pn**	**03 24 31.0**	**-0.3**
NIL	**Nilore**	**12.22**	**303**	Pn	**Pn**	**03 24 29.6**	**-1.8**
CEP	**Cherat**	**13.31**	**301**	P	**Pn**	**03 24 44.4**	**-1.9**
POO	**Poona**	**14.00**	**233**	*i* S	Sn	03 27 18.0	-13
CM33	**Chiang Mai Arr**	**15.05**	**122**	P	**P**	**03 25 16.0**	**+0.7**
CHTO	**Chiang Mai**	**15.05**	**122**	Pn	**Pn**	**03 25 07.3**	**-2.7**
CHTO				IAmb	IAmb	03 25 16.7	
	comp=Z,10.0nm,1.1s						
CMMT	**Chiang Mai**	**15.06**	**122**	P	**P**	**03 25 15.5**	**+0.2**
	comp=Z,3.0nm,1.1s						
CM32	**Chiang Mai Arr**	**15.08**	**123**	P	**P**	**03 25 17.0**	**+1.4**
CM34	**Chiang Mai Arr**	**15.19**	**122**	P	**P**	**03 25 17.0**	**+0.2**
CM13	**Chiang Mai Arr**	**15.27**	**124**	P	**P**	**03 25 19.4**	**+1.6**
	comp=Z,5.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.27**	**123**	Pn	**Pn**	**03 25 11.4**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=297,slow=14,SNR=6.4						
CMAR				LR	LR	03 31 19.1	
	comp=Z,38nm,18.1s,baz=11,slow=38						
CM02	**Chiang Mai Arr**	**15.29**	**123**	P	**P**	**03 25 17.0**	**-0.9**
	comp=Z,76nmcomp=Z,9.1nm,0.9s						
CM35	**Chiang Mai Arr**	**15.29**	**122**	P	**P**	**03 25 19.0**	**+1.0**
CM01	**Chiang Mai Arr**	**15.31**	**123**	P	**P**	**03 25 21.0**	**+2.9**
	comp=Z,8.0nm,1.1s						
CM05	**Chiang Mai Arr**	**15.31**	**124**	P	**P**	**03 25 17.6**	**-0.6**
	comp=Z,6.4nm,0.8s						
CM04	**Chiang Mai Arr**	**15.33**	**123**	P	**P**	**03 25 20.8**	**+2.3**
	comp=Z,5.8nm,0.8s						
CM36	**Chiang Mai Arr**	**15.35**	**123**	P	**P**	**03 25 24.0**	**+5.4**
KMI	**Kunming**	**15.60**	**95**	Pn	**Pn**	**03 25 16.2**	**-1.2**
KMI				IAmb	IAmb	03 25 23.9	
	comp=Z,14nm,1.0s						
KBL	**Kabul**	**15.77**	**300**	Pn	**Pn**	**03 25 17.4**	**-2.2**
PRZ	**Przheval'sk**	**16.02**	**341**	Pn	**Pn**	**03 25 22.2**	**-0.6**
PRZ				IAmb	IAmb	03 25 30.1	
	comp=Z,12nm,1.0s						
KDJ	**Kajisay**	**16.09**	**337**		**Pn**	**03 25 22.3**	**-1.4**
WMQ	**Urumqi**	**16.35**	**6**	*e*P	**P**	**03 25 29.5**	**-0.2**
WMQ	**Urumqi**	**16.35**	**6**	Pn	**Pn**	**03 25 27.2**	**+0.3**
WMQ				IAmb	IAmb	03 26 05.3	
	comp=Z,16nm,0.4s						
SUKH	**Sukhothai**	**16.39**	**125**	P	**P**	**03 25 33.3**	**+3.2**
	comp=Z,14nm,0.9s						
GTA	**Gaotai**	**16.77**	**41**	P	**P**	**03 25 36.0**	**+1.6**
GTA				pP	sP	03 25 42.8	+1.7
GTA				sP	pP	03 25 47.5	+8.5
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,56nm,4.5s						
GTA				LR	LR		
	comp=Z,190nm,9.1s						
GTA				LR	LR		
	comp=Z,150nm,9.5s						
GTA				LR	LR		
	comp=Z,290nm,11.6s						
BOOM	**Boomskoye usch**	**16.86**	**335**		**Pn**	**03 25 32.0**	**-1.4**
GAR	**Garm**	**17.10**	**316**		**Pn**	**03 25 34.9**	**-1.5**
GAR				IAmb	IAmb	03 25 43.5	
	comp=Z,60nm,1.3s						
BTK	**Batken**	**17.47**	**319**	Pn	**Pn**	**03 25 39.8**	**-1.1**
AAK	**Ala-Archa**	**17.56**	**332**	Pn	**Pn**	**03 25 40.5**	**-1.6**
GYA	**Guiyang**	**18.85**	**88**	⇓P	**Pn**	**03 25 59.0**	**+1.0**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	**Makanchi Array**	**19.41**	**353**	P	**P**	**03 26 02.4**	**-0.9**
MKAR	**Makanchi Array**	**19.41**	**353**	P	**Pn**	**03 26 05.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=170,slow=13,SNR=21						
MKAR	**Makanchi Array**	**19.41**	**353**	P	**P**		
MAKZ	**Makanchi**	**19.45**	**353**	P	**P**	**03 26 02.0**	**-1.8**
KK31	**Karatay Array**	**19.75**	**326**		**P**	**03 26 04.7**	**-2.4**
KK31				IAmb	IAmb	03 26 14.2	
	comp=Z,8.0nm,0.7s						
KKAR	**Karatay Array**	**19.75**	**326**	P	**P**	**03 26 06.4**	**-0.7**
PALK	**Pallekele**	**20.66**	**194**	P	Pn	03 26 19.6	+0.1
	comp=Z,1.8nm,0.5s,baz=99,slow=14,SNR=1.6						
PALK				LR	LR	03 34 15.5	
	comp=Z,54nm,19.4s,baz=114,slow=37						
XAN	**Xi'an**	**21.08**	**66**	P	**P**	**03 26 21.3**	**-0.3**
XAN				pP	pP	03 26 25.5	-0.8
XAN				S	**S**	**03 30 14.3**	**-1.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,82nm,4.3s						
XAN				LR	LR		
	comp=Z,120nm,10.6s						
XAN				LR	LR		
	comp=Z,170nm,10.8s						
XAN				LR	LR		
	comp=Z,250nm,11.1s						
XAN	**Xi'an**	**21.08**	**66**	P	**P**	**03 26 18.9**	**-2.7**
XAN				IAmb	IAmb	03 26 31.7	
	comp=Z,26nm,1.4s						
HRA	**Herat**	**21.10**	**295**	P	**P**	**03 26 19.1**	**-2.9**
HRA				IAmb	IAmb	03 26 30.0	
	comp=Z,5.9nm,0.8s						
ENH	**Enshi**	**21.13**	**77**	P	**P**	**03 26 20.1**	**-2.0**
ENH				IAmb	IAmb	03 26 37.5	
	comp=Z,15nm,0.8s						
KURBB	**Kurchatov Arra**	**23.68**	**349**	P	**P**	**03 26 50.4**	**+1.7**
	comp=Z,2.2nm,0.5s,baz=171,slow=9.5,SNR=20						
WSAR	**Wadi Sarin**	**24.67**	**266**	P	**P**	**03 27 00.3**	**+2.1**
	comp=Z,6.0nm,1.0s,baz=98,slow=11,SNR=2.9						
GEYT	**Alibeck**	**25.22**	**301**	P	**P**	**03 27 05.4**	**+2.4**
	comp=Z,3.0nm,0.5s,baz=119,slow=10,SNR=7.6						
GEYT				LR	LR	03 38 18.3	
	comp=Z,28nm,21.6s,baz=30,slow=40						
GYA0B	**ALIBECK ARRAY**	**25.22**	**301**	P	**P**	**03 27 03.2**	**+0.1**
GYA0B				IAmb	IAmb	03 27 10.8	
	comp=Z,6.0nm,0.7s						
SONM	**Songino Array**	**25.99**	**33**	P	**P**	**03 27 11.9**	**+1.9**
	comp=Z,12nm,0.7s,baz=221,slow=10,SNR=28						
SONM	**Songino Array**	**25.99**	**33**	P	**P**	**03 27 10.3**	**+0.3**
ULN	**Ulaanbaatar**	**26.33**	**34**	P	**P**	**03 27 13.4**	**+0.2**
KULM	**Kulim**	**26.38**	**144**	P	**P**	**03 27 12.5**	**-1.1**
ZAA0	**Zalesovo Array**	**26.40**	**359**	P	**P**	**03 27 13.2**	**-0.4**
ZAA0				IAmb	IAmb	03 27 15.9	
	comp=Z,5.2nm,0.9s						
ZALV	**Zalesovo Beam**	**26.40**	**359**	P	**P**	**03 27 15.2**	**+1.6**
	comp=Z,1.8nm,0.5s,baz=179,slow=9.6,SNR=15						
ZALV	**Zalesovo Beam**	**26.40**	**359**	P	**P**	**03 27 13.2**	**-0.4**
BVAR	**Borovoye Array**	**27.86**	**340**	P	**P**	**03 27 28.7**	**+2.0**
	comp=Z,1.9nm,0.4s,baz=141,slow=8.4,SNR=22						
BRVK	**Borovoye**	**27.92**	**340**	P	**P**	**03 27 26.7**	**-0.5**
BRVK				IAmb	IAmb	03 27 32.4	
	comp=Z,18nm,1.9s						
ABKAR	**Akbulak array**	**29.31**	**325**	P	**P**	**03 27 38.6**	**-1.0**
AKTO	**Aktyubinsk**	**31.02**	**325**	P	**P**	**03 27 56.9**	**+2.2**
	comp=Z,0.8nm,0.5s,baz=244,slow=18,SNR=1.5						
ARU	**Arti**	**34.73**	**334**	P	**P**		
	comp=Z,2.1nm,0.7s,baz=120,slow=20,SNR=2.0						
ARU	**Arti**	**34.73**	**334**	P	**P**	**03 28 26.9**	**-0.1**
ARU				IAmb	IAmb	03 28 32.4	
	comp=Z,4.2nm,0.8s						
GNI	**Garni**	**35.86**	**301**	P	**P**	**03 28 35.6**	**-1.6**
GNI				IAmb	IAmb	03 29 15.5	
	comp=Z,5.7nm,0.9s						
KSRS	**Korea Array**	**36.82**	**63**	P	**P**	**03 28 44.9**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=271,slow=8.6,SNR=5.0						
KSRS				LR	LR	03 44 54.2	
	comp=Z,41nm,18.2s,ba

ICESG	**Greenland Ices**	**75.80**	**342**	*i* P		P	03 33 30.2	+7.0
ICESG				IAmb		IAmb	03 33 33.2	
	comp=Z,5.3nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.67**	**279**	P		**P**	**03 33 40.0**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=61,slow=4.4,SNR=16							
TORD				LR		LR	04 13 26.3	
	comp=Z,25nm,19.5s,baz=200,slow=40							
TORD	**Torodi Ar. Bea**	**78.67**	**279**	P		**P**	**03 33 39.2**	**-0.6**
TORD				IAmb		IAmb	03 33 43.4	
	comp=Z,2.0nm,0.7s							
ILAR	**Eielson Array**	**79.44**	**20**	P		**P**	**03 33 43.7**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=308,slow=4.0,SNR=6.5							
STKA	**Stephens Creek**	**79.61**	**134**	P		**P**	**03 33 44.6**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=319,slow=2.7,SNR=3.0							
DBIC	**Dimbokro**	**87.32**	**276**	P		**P**	**03 34 25.3**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=40,slow=5.0,SNR=4.9							
YKA	**Yellowknife Ar**	**88.85**	**9**	P		**P**	**03 34 31.6**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=341,slow=4.4,SNR=8.0							
CPUP	**Villa Florida**	**146.96**	**263**	PKPbc		**PKPab**	**03 41 21.8**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=179,slow=1.4,SNR=4.8							

IDC 26 03:25:11.4±7.4, 5.75S×150.31E, h112km±50km, mb3.3/3, mb1 3.6/4, mb1mx3.1/43, mbtmp3.9/4, Error ellipse: s-maj=96.3km s-min=53.3km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.79**	**221**	P	Pn	03 26 22.2	+0.6
	18nm,0.3s,baz=21,slow=9.3,SNR=20						
PMG				S	Sn	03 27 15.9	-0.1
	20nm,0.3s,baz=169,slow=20,SNR=9.2						
WRA	**Warramunga Arr**	**20.98**	**226**	P	P	03 29 45.8	-0.2
	0.9nm,0.6s,baz=53,slow=11,SNR=10						
ASAR	**Alice Springs**	**23.81**	**220**	P	P	03 30 15.2	+0.9
	0.8nm,0.3s,baz=54,slow=9.0,SNR=27						
FITZ	**Fitzroy Crossi**	**27.03**	**241**	P	P	03 30 43.6	+0.2
	1.3nm,0.6s,baz=65,slow=6.8,SNR=7.2						
TORD	**Torodi Ar. Bea**	**148.21**	**286**	PKPbc	PKPbc	03 44 43.9	-1.6
	0.3nm,0.6s,baz=85,slow=2.0,SNR=5.2						

ASRS 26 03:28:28.2±0.2, 52.7°N±2.7°×98.3E±0.9, h5km, MLh3.7/9, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	**Kungurtug, Tuv**	**1.71**	**197**	Pg	Pg	03 29 01.3	+0.3
KNGR				Sg	Sg	03 29 24.2	+1.0
KZLR	**Kyzyl**	**2.45**	**259**	Pg	Pg	03 29 15.1	0.0
KZLR				Sg	Sg	03 29 46.8	0.0
ARDR	**Aradan**	**3.01**	**278**	Pg	Pb	03 29 23.2	+0.8
ARDR				Sg	Sg	03 30 03.3	-1.7
TLY	**Talaya**	**3.34**	**98**	Pg	Pb	03 29 30.0	+2.1
TLY				Sg	Sb	03 30 12.2	+3.3
ORY	**Orie**	**3.37**	**327**	Pg	Pb	03 29 30.4	+2.1
ORY				Sg	Sg	03 30 16.6	+0.3
ZAK	**Zakamensk**	**3.63**	**119**	Pg	Pb	03 29 33.6	+0.8
ZAK				Sg	Sg	03 30 22.9	-1.8
IRK	**Irkutsk**	**3.66**	**88**	Sg	Sb	03 30 21.2	+3.2
CERR	**Cheremushki**	**4.26**	**281**	Pg	Pg	03 29 49.4	-0.4
CERR				Sg	Sg	03 30 42.7	-2.2
DJOS	**Djoyskaya Sosn**	**4.26**	**280**	Pg	Pb	03 29 46.3	+2.7
DJOS				Sg	Sg	03 30 42.8	-2.3
DJO	**Djoy, Khakassi**	**4.37**	**280**	Pg	Pg	03 29 49.4	-2.5
DJO				Sg	Sg	03 30 46.7	-1.8
TBTR	**Tabat**	**4.69**	**281**	Pg	Pb	03 29 52.1	+1.3
TBTR				Sg	Sb	03 30 51.5	+4.0
GZLN	**Zheleznogorsk**	**4.93**	**329**	Sg	Sg	03 31 06.1	-0.4
TRG	**Tyrgan**	**4.94**	**81**	Pg	Pb	03 29 57.7	+2.6
TRG				Sg	Sg	03 31 02.3	-4.3
TEL	**Teeli**	**5.20**	**260**	Pg	Pg	03 30 04.7	-3.1
TEL				Sg	Sg	03 31 11.7	-3.5
LUZB	**Luzhba, Kemero**	**5.87**	**288**	Pg	Pg	03 30 19.5	-1.0
LUZB				Sg	Sb	03 31 28.6	+7.1
TASR	**Tashtagol**	**6.40**	**279**	Sg	Sg	03 31 47.4	-6.0
CUR	**Chagan-Uzun**	**6.62**	**255**	Sg	Sg	03 31 53.5	-7.3
BRCR	**Berchikul'**	**6.81**	**304**	Pg	Pg	03 32 02.7	-4.1
BRCR				Sg	Sg	03 32 08.9	-3.3
ARTR	**Artybash**	**6.83**	**271**	Sg	Sg	03 32 03.9	-3.3
AKAR	**Aktash**	**6.98**	**258**	Sg	Sg	03 32 07.6	-4.5
CHBI	**Chibit, Altay**	**7.05**	**258**	Sg	Sg	03 32 08.9	-5.6
ULN	**Ulaanbaatar**	**7.12**	**124**	Sg	Sg	03 32 14.3	-2.6
DGZ	**Jazzator, Alta**	**7.33**	**254**	Sg	Sg	03 32 20.1	-3.2
ELT	**Eltsovka**	**7.40**	**283**	Sg	Sg	03 32 21.6	-4.1

*TAP **26** 03:32:12.2, 24.°63N×122.°50E, h14km±1km, ML2.6, D*
*JMA **26** 03:32:13.0, 24.°50N×122.°53E, h29km±2km, M1.9*
ISC 26 03:32:11.7±1.2, 24.59N±0.°03×122.55E±0.°02, h24km±13km, n56, σ1°87/96, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.39**	**111**	P	**Pn**	**03 32 21.3**	**-0.5**
JYNG				S	**Sn**	**03 32 27.3**	**-1.1**
YOJ	**Yonaguni jima**	**0.44**	**107**	P	**Pn**	**03 32 22.2**	**-0.3**
YOJ				*e*S	**Sn**	**03 32 29.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.44**	**107**	P	**Pn**	**03 32 22.3**	**-0.3**
	baz=109						
YOJ				S	**Sn**	**03 32 29.5**	**-0.3**
	baz=109						
EGS		**0.62**	**294**	*i* P	**Pb**	**03 32 23.6**	**-0.2**
	baz=292						
EGS				S	**Sb**	**03 32 31.7**	**-0.4**
	baz=292						
TWC	**Suao**	**0.64**	**272**	*i* P	**Pb**	**03 32 23.8**	**-0.4**
	baz=268						
TWC				*i* S	**Sn**	**03 32 33.3**	**-1.4**
	baz=268						
TWB1	**Santiao Chiao**	**0.66**	**309**	P	**Pb**	**03 32 24.2**	**-0.3**
	baz=309						
TWB1				S	**Sb**	**03 32 33.0**	**-0.3**
	baz=309						
NTC	**Toucheng**	**0.71**	**292**	*e*P	**Pn**	**03 32 25.5**	**-0.7**
	baz=290						
NTC				*e*S	**Sn**	**03 32 36.1**	**-0.3**
	baz=290						
EWUT	**Wuta**	**0.72**	**258**	*e*P	**Pn**	**03 32 26.3**	**0.0**
	baz=254						
EWUT				S	**Sn**	**03 32 35.9**	**-0.8**
	baz=254						
ILA	**Ilan**	**0.75**	**284**	*e*P	**Pn**	**03 32 26.7**	**-0.1**
	baz=281						
TIPB	**Shuangxi**	**0.76**	**300**	*i* P	**Pn**	**03 32 26.7**	**-0.3**
	baz=299						
TIPB				*e*S	**Sn**	**03 32 37.6**	**-0.1**
	baz=299						
NDS	**Dongshan**	**0.76**	**273**	P	**Pn**	**03 32 26.8**	**-0.2**
	baz=270						
NDS				S	**Sn**	**03 32 36.6**	**-1.1**
	baz=270						
TWE	**Neicheng**	**0.81**	**279**	*i* P	**Pn**	**03 32 27.2**	**-0.4**
	baz=276						
TWE				*i* S	**Sn**	**03 32 38.0**	**-1.0**
	baz=276						
WFSB	**Wu-fen Shan**	**0.85**	**304**	P	**Pn**	**03 32 28.3**	**+0.1**
	baz=303						
WFSB				S	**Sn**	**03 32 39.8**	**0.0**
	baz=303						
ENTT	**Nioudou**	**0.90**	**273**	*i* P	**Pn**	**03 32 29.4**	**+0.6**
	baz=270						
ENTT				*i* S	**Sn**	**03 32 40.2**	**-1.0**
	baz=270						
TNOU	**National Taiwa**	**0.90**	**308**	*e*S	**Sn**	**03 32 40.6**	**-0.5**
	baz=307						
NDT	**Datong Townshi**	**0.94**	**271**	*i* P	**Pn**	**03 32 30.4**	**+0.9**
	baz=268						
NDT				S	**Sn**	**03 32 42.3**	**0.0**
	baz=268						
TWA	**Mucha**	**0.96**	**294**	P	**Pn**	**03 32 29.8**	**0.0**
	baz=292						
TWA				S	**Sn**	**03 32 41.9**	**-0.7**
	baz=292						
NACB	**Ninganchiao**	**0.97**	**245**	P	**Pn**	**03 32 30.2**	**+0.5**
	baz=241						
NACB				S	**Sn**	**03 32 43.6**	**+0.8**
	baz=241						
NWLT	**Wulai**	**0.97**	**281**	*e*P	**Pn**	**03 32 30.2**	**+0.4**
	baz=279						
NWLT				*e*S	**Sn**	**03 32 42.3**	**-0.7**
	baz=279						
TWD	**Chiawan**	**1.01**	**240**	*e*P	**Pn**	**03 32 31.5**	**+1.2**
	baz=236						
TWD				S	**Sn**	**03 32 45.0**	**+1.2**
	baz=236						
TATO	**Taipei**	**1.04**	**292**	*e*S	**Sn**	**03 32 45.0**	**+0.5**
	baz=290						
ETLH	**Xiulin Townshi**	**1.05**	**249**	*e*P	**Pn**	**03 32 32.0**	**+1.0**
	baz=245						
ETLH				S	**Sn**	**03 32 46.0**	**+1.0**
	baz=245						
YM01	**YM01**	**1.05**	**302**	*e*P	**Pn**	**03 32 31.6**	**+0.6**
	baz=301						
YM01				S	**Sn**	**03 32 45.2**	**+0.3**
	baz=301						
YM08	**YM08**	**1.06**	**304**	*e*S	**Sn**	**03 32 45.9**	**+0.8**
	baz=303						
HWA	**Hwalien**	**1.06**	**235**	*e*S	**Sn**	**03 32 46.3**	**+1.3**
	baz=231						
YHNB	**Yeheng**	**1.07**	**274**	P	**Pn**	**03 32 32.0**	**+0.7**
	baz=272						
YHNB				S	**Sn**	**03 32 46.2**	**+0.6**
	baz=272						
NNSB	**Datong**	**1.08**	**262**	P	**Pn**	**03 32 32.2**	**+0.8**
	baz=259						
NNSB				S	**Sn**	**03 32 46.7**	**+1.0**
	baz=259						
NNS	**Nan Shan**	**1.08**	**262**	P	**Pn**	**03 32 31.7**	**+0.2**
	baz=259						
NNS				S	**Sn**	**03 32 45.8**	**-0.1**
	baz=259						
NSK	**Sanguang**	**1.09**	**275**	P	**Pb**	**03 32 32.7**	**+0.8**
	baz=272						
NSK				S	**Sn**	**03 32 46.2**	**+0.3**
	baz=272						
TWY	**Chenhua**	**1.10**	**308**	*e*P	**Pb**	**03 32 32.0**	**0.0**
	baz=308						
TWY				*e*S	**Sn**	**03 32 46.7**	**+0.6**
	baz=308						
IRIF	**Iriomote-Funau**	**1.10**	**103**	P	**Pb**	**03 32 32.7**	**+0.6**
ANP	**Anpu**	**1.11**	**303**	*e*S	**Sn**	**03 32 46.7**	**+0.2**
	baz=302						
PCYT	**Pengchaiyu**	**1.12**	**337**	*e*S	**Sn**	**03 32 47.0**	**+0.4**
	baz=338						
FUSS	**Fushou**	**1.24**	**254**	P	**Pb**	**03 32 35.2**	**+0.6**
	baz=251						
FUSS				S	**Sn**	**03 32 50.9**	**+1.0**
	baz=251						
WHF	**Hehuan Shan**	**1.25**	**250**	P	**Pb**	**03 32 35.4**	**+0.5**
	baz=246						
WHF				*e*S	**Sn**	**03 32 51.8**	**+1.3**
	baz=246						
ESL	**Shilin**	**1.28**	**233**	*e*P	**Pb**	**03 32 35.1**	**0.0**
	baz=230						
ESL				*e*S	**Sb**	**03 32 53.3**	**+2.2**
	baz=230						
TWT	**Tachien**	**1.30**	**255**	*e*S	**Sb**	**03 32 53.6**	**+1.8**
	baz=252						
TDCB	**Techi**	**1.31**	**255**	*e*P	**Pb**	**03 32 35.7**	**-0.1**
	baz=253						
TDCB				*e*S	**Sb**	**03 32 53.0**	**+0.8**
	baz=253						
CHGB	**Renai**	**1.36**	**247**	*e*P	**Pb**	**03 32 36.6**	**-0.1**
	baz=245						
JKRS	**Kuro-shima**	**1.38**	**105**	P	**Pb**	**03 32 37.0**	**+0.3**
JKRS				*e*S	**Sb**	**03 32 55.0**	**+1.2**
OWD	**Renai**	**1.41**	**243**	*e*P	**Pb**	**03 32 37.9**	**+0.6**
	baz=241						
OWD				*e*S	**Sb**	**03 32 55.6**	**+0.7**
	baz=241						
JIJ	**Ishigaki jima**	**1.47**	**99**	P	**Pb**	**03 32 38.2**	**-0.1**
VWDT	**VWDT**	**1.53**	**237**	*e*P	**Pb**	**03 32 40.0**	**+0.6**
	baz=235						
VWDT				*e*S	**Sb**	**03 32 59.8**	**+1.4**
	baz=235						
DPDB	**Guoxing**	**1.58**	**250**	*e*P	**Pb**	**03 32 39.8**	**-0.5**
	baz=247						
DPDB				*e*S	**Sb**	**03 33 00.3**	**+0.4**
	baz=247						
JISG	**Ishigakijimahi**	**1.60**	**90**	P	**Pb**	**03 32 40.7**	**+0.1**
YULB	**Yu-li**	**1.66**	**224**	*e*P	**Pb**	**03 32 40.5**	**-1.0**
	baz=221						
TWF1	**Yuli**	**1.69**	**223**	P	**Pb**	**03 32 41.5**	**-0.5**
	baz=220						
TWF1				*e*S	**Sb**	**03 33 03.2**	**+0.5**
	baz=220						
TYC	**Yuchr**	**1.69**	**246**	*e*P	**Pb**	**03 32 41.3**	**-0.8**
	baz=244						
TYC				*e*S	**Sb**	**03 33 02.9**	**0.0**
	baz=244						
WHYT	**Xinyi Township**	**1.79**	**240**	*e*P	**Pb**	**03 32 42.4**	**-1.4**
	baz=238						
YUS	**Yu-Shan**	**1.83**	**233**	P	**Pb**	**03 32 44.7**	**0.0**
	baz=231						
YUS				S	**Sb**	**03 33 07.6**	**+0.3**
	baz=231						
WCHH	**Zhanghua**	**1.89**	**255**	*e*P	**Pb**	**03 32 44.4**	**-1.1**
	baz=252						
WCHH				*e*S	**Sb**	**03 33 07.2**	**-1.5**
	baz=252						
ALS	**Alishan**	**1.93**	**236**	P	**Pb**	**03 32 44.9**	**-1.4**
	baz=234						
ALS				*e*S	**Sb**	**03 33 08.0**	**-2.0**
	baz=234						
EDH	**Donghe**	**1.98**	**216**	*e*P	**Pb**	**03 32 45.4**	**-1.6**
	baz=213						
EDH				*e*S	**Sb**	**03 33 10.9**	**-0.2**
	baz=213						
CHN5	**Tsauling**	**1.98**	**240**	*e*S	**Sb**	**03 33 09.3**	**-2.0**
	baz=238						
ELDTW	**Lidau**	**1.98**	**225**	*e*P	**Pb**	**03 32 45.5**	**-1.6**
	baz=223						
ELDTW				*e*S	**Sb**	**03 33 09.6**	**-1.8**
	baz=223						
WGK	**Gukeng**	**2.03**	**244**	*e*P	**Pb**	**03 32 46.3**	**-1.5**
	baz=242						

*NEIC **26** 03:38:33.4±1.9, 40.°32N±0.°04×141.°57E±0.°09, h99km±7km, mb4.0/5, Error ellipse: s-maj=10.1km s-min=5.3km az=82.0*
*IDC **26** 03:38:34.3±1.9, 40.°29N×141.°50E, h120km±18km, mb3.5/13, mb1 3.6/17, mb1mx3.5/43, mbtmp3.8/17, Error ellipse: s-maj=17.1km s-min=13.4km az=126.0*
*JMA **26** 03:38:34.1±0.1, 40.°34N×141.°60E, h113km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs=314.00000°, δ23.00000°, λ-137.00000°. NP2: φs=184.00000°, δ75.00000°, λ-73.00000°. Principal axes: T Plg28.0000°, Azm260.0000°; N Plg16.0000°, Azm359.0000°; P Plg57.0000°, Azm116.0000°;*
JMA Felt II J1.
ISC 26 03:38:34.0±0.7, 40.31N±0.°03×141.61E±0.°06, h114km±5km, n58, σ1°22/65, mb3.7/16, 10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.10**	**312**	ǁP	**Pn**	**03 38 49.6**	**-0.1**
JANG				S	**Sn**	**03 39 00.9**	**-0.6**
JKEN	**Kujiedanarisaw**	**0.13**	**143**	ǁP	**Pn**	**03 38 50.0**	**+0.3**
JKEN				S	**Sn**	**03 39 01.6**	**+0.1**
JTM	**Tenmabayashi**	**0.63**	**319**	ǁP	**Pn**	**03 38 51.9**	**-0.3**
JTM				S	**Sn**	**03 39 05.3**	**-0.6**
JTM	**Tenmabayashi**	**0.63**	**319**	Pn	**Pn**	**03 38 51.4**	**-0.8**
JAH	**Hinai**	**0.76**	**261**	ǁP	**Pn**	**03 38 53.3**	**+0.1**
JAH				*e*S	**Sn**	**03 39 07.8**	**+0.1**
JOM	**Ohasama**	**0.87**	**196**	ǁP	**Pn**	**03 38 54.4**	**+0.1**
JOM				S	**Sn**	**03 39 09.5**	**-0.1**
JOT	**Ohata**	**1.15**	**339**	P	**Pn**	**03 38 56.6**	**-0.5**
JOT				S	**Sn**	**03 39 13.6**	**-1.0**
JRG	**Rokugo**	**1.18**	**220**	ǁP	**Pn**	**03 38 58.0**	**+0.6**
JRG				S	**Sn**	**03 39 15.9**	**+0.7**
JIW	**Iwasaki**	**1.25**	**284**	ǁP	**Pn**	**03 38 58.3**	**+0.1**
JIW				*e*S	**Sn**	**03 39 16.8**	**+0.2**
JMK	**Ichinoseki**	**1.39**	**193**	ǁP	**Pn**	**03 38 59.8**	**0.0**
JMK				S	**Sn**	**03 39 18.6**	**-0.7**
JKB	**Kayabe**	**1.64**	**345**	ǁP	**Pn**	**03 39 02.1**	**-0.5**
JKB				S	**Sn**	**03 39 23.1**	**-1.4**
JYK	**Kaneyama**	**1.69**	**215**	ǁP	**Pn**	**03 39 03.6**	**+0.2**
JYK				S	**Sn**	**03 39 25.5**	**-0.2**
JOMM	**Oshimamatsumae**	**1.72**	**316**	P	**Pn**	**03 39 02.7**	**-0.9**
ERM	**Erimo**	**2.07**	**34**	Pn	**Pn**	**03 39 06.8**	**-1.2**
JMM	**Marumori**	**2.52**	**195**	Pn	**Pn**	**03 39 13.4**	**-0.4**
JEW	**Eniwo**	**2.53**	**357**	Pn	**Pn**	**03 39 13.0**	**-0.9**
JSD	**Sado**	**3.45**	**230**	Pn	**Pn**	**03 39 25.7**	**-0.4**
ASAJ	**Asahikawa**	**3.88**	**11**	P	**Pn**	**03 39 31.4**	**-0.3**
	11nm,0.3s,baz=200,slow=12,SNR=57						
ASAJ				S	**Sn**	**03 40 14.6**	**-1.8**
	6.1nm,0.3s,baz=104,slow=29,SNR=6.4						
JKA	**Kamikawa-asahi**	**3.88**	**11**	Pn	**Pn**	**03 39 31.3**	**-0.4**
JYT	**Yasato**	**4.22**	**196**	Pn	**Pn**	**03 39 35.5**	**-1.0**
MAJO	**Matsushiro**	**4.61**	**216**	Pn	**Pn**	**03 39 41.4**	**-0.3**
MAT	**Matsushiro**	**4.61**	**216**	P	**Pn**	**03 39 42.0**	**+0.3**
MAT				*e*S	**Sn**	**03 40 32.4**	**-1.8**
MJAR	**Matsushiro Arr**	**4.61**	**216**	P	**Pn**	**03 39 41.9**	**+0.3**
	0.5nm,0.3s,baz=31,slow=12,SNR=47						
MJAR	**Matsushiro Arr**	**4.61**	**216**		**Pn**	**03 39 40.3**	**-1.4**
JGF	**Kuroka**	**5.78**	**217**		**Pn**	**03 39 57.2**	**-0.2**
JWT	**Wachi**	**7.02**	**226**	Pn	**Pn**	**03 40 14.6**	**+0.4**
JHJ	**Hachijo jima 2**	**7.32**	**192**	S	**Sn**	**03 41 32.7**	**-7.2**
	17nm,0.3s,baz=100,slow=23,SNR=6.7						
USRK	**Ussuriysk Ar.**	**8.12**	**302**	P	**Pn**	**03 40 29.6**	**+0.6**
	baz=105,slow=14,SNR=9.8						
KSRS	**Korea Array**	**11.04**	**259**	P	**Pn**	**03 41 08.5**	**0.0**
	0.1nm,0.3s,baz=59,slow=14,SNR=4.9						
JSU	**Suzuyama**	**12.60**	**229**	Pn	**Pn**	**03 41 28.3**	**-0.8**
BJT	**Baijiatuan**	**19.43**	**277**	P	**P**	**03 42 52.0**	**+0.7**
SEY	**Seymchan**	**23.56**	**12**	P	**P**	**03 43 33.0**	**-0.8**
	0.7nm,0.4s,baz=272,slow=0.7,SNR=4.1						
SONM	**Songino Array**	**26.22**	**298**	P	**P**	**03 43 58.2**	**0.0**
	1.0nm,0.6s,baz=76,slow=8.1,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**29.82**	**126**	T	T	04 15 28.9	
	baz=318,slow=75,SNR=33						
H11N1	**WAKE ISLAND Hy**	**29.83**	**126**	T	T	04 15 32.2	
	baz=318,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**29.84**	**126**	T	T	04 15 34.4	
	baz=318,slow=75,SNR=40						
H11S1	**WAKE ISLAND Hy**	**30.63**	**128**	T	T	04 17 15.3	
	baz=318,slow=74						
H11S3	**WAKE ISLAND Hy**	**30.63**	**128**	T	T	04 16 35.0	
	baz=318						
H11S2	**WAKE ISLAND Hy**	**30.64**	**128**	T	T	04 17 21.1	
	baz=318,slow=74						
ZAA0	**Zalesovo Array**	**39.89**	**310**	P	**P**	**03 45 57.4**	**+1.2**
ZALV	**Zalesovo Beam**	**39.89**	**310**	P	**P**	**03 45 55.0**	**-1.3**
	2.7nm,0.6s,baz=95,slow=8.0,SNR=9.9						
ZALV	**Zalesovo Beam**	**39.89**	**310**	P	**P**	**03 45 55.5**	**-0.8**
CHTO	**Chiang Mai**	**42.34**	**252**	P	**P**	**03 46 18.4**	**+1.6**
CHTO				IAmb	IAmb	03 46 21.7	
	comp=Z,2.4nm,0.9s						
MK31	**Makanchi Array**	**42.58**	**299**	P	**P**	**03 46 18.7**	**+0.2**
MK31				IAmb	IAmb	03 46 19.0	
	comp=Z,1.8nm,0.7s						
MKAR	**Makanchi Array**	**42.58**	**299**	P	**P**	**03 46 17.4**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=78,slow=12,SNR=7.6						
IMAR	**Indian Mountai**	**43.78**	**32**	P	**P**	**03 46 28.6**	**+0.8**
KURK	**Kurchatov**	**44.09**	**306**	P	**P**	**03 46 30.2**	**-0.3**
KURBB	**Kurchatov Arra**	**44.17**	**305**	P	**P**	**03 46 30.2**	**-0.9**
	comp=Z,4.5nm,0.4s,baz=80,slow=8.9,SNR=26						
ILAR	**Eielson Array**	**46.67**	**34**	P	**P**	**03 46 50.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=270,slow=6.5,SNR=13						
BMAR	**Burnt Mountain**	**47.41**	**30**	P	**P**	**03 46 58.0**	**+1.6**
BRVK	**Borovoye**	**48.58**	**310**	P	**P**	**03 47 06.8**	**+1.3**
BRVK				IAmb	IAmb	03 47 10.4	
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**51.42**	**28**	P	**P**	**03 47 26.9**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=296,slow=8.1,SNR=8.0						
WRA	**Warramunga Arr**	**60.32**	**188**	P	**P**	**03 48 29.6**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=4.5,slow=7.2,SNR=8.8						
YKA	**Yellowknife Ar**	**60.91**	**31**	P	**P**	**03 48 34.7**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=300,slow=6.1,SNR=8.2						
ASAR	**Alice Springs**	**64.05**	**188**	P	**P**	**03 48 54.8**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=10,slow=7.6,SNR=4.8						
NVAR	**Mina Array Bea**	**72.92**	**54**	P	**P**	**03 49 52.2**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=306,slow=7.7,SNR=3.0						
PDAR	**Pinedale Array**	**75.28**	**46**	P	**P**	**03 50 05.5**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=237,slow=1.4,SNR=9.3						
TXAR	**Lajitas Array**	**88.00**	**53**	P	**P**	**03 51 11.3**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=329,slow=3.1,SNR=4.2						

*IDC **26** 04:28:54.5±2.1, 24.°04S×179.°82W, h492km±20km, mb3.1/3, mb1 3.4/5, mb1mx3.0/26, mbtmp4.0/5, Error ellipse: s-maj=33.5km s-min=22.2km az=144.0*
ISC 26 04:28:55.8±1.1, 24.°0S±0.°1×179.°9W±0.°2, h518km, n7, σ1°85/9, mb3.8/3, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.53**	**342**	P	**P**	**04 30 36.3**	**-1.9**
	4.6nm,0.3s,baz=248,slow=22,SNR=23						
URZ	**Urewera**	**14.46**	**190**	P	**P**	**04 31 57.5**	**-2.3**
	0.5nm,0.3s,baz=303,slow=23,SNR=1.5						
URZ				S	**S**	**04 34 32.4**	**+0.8**
	0.2nm,0.3s,baz=297,slow=23,SNR=1.9						
ASAR	**Alice Springs**	**42.15**	**261**	P	**P**	**04 36 03.9**	**+1.1**
	0.7nm,0.6s,baz=91,slow=8.5,SNR=9.0						
ASAR				ScP	**ScP**	**04 40 49.1**	**+2.6**
	0.4nm,0.7s,baz=99,slow=4.9,SNR=4.5						
WRA	**Warramunga Arr**	**42.53**	**266**	P	**P**	**04 36 06.2**	**+0.4**
	1.5nm,0.5s,baz=106,slow=8.6,SNR=46						
TXAR	**Lajitas Array**	**90.37**	**58**	P	**P**	**04 41 03.1**	**+1.3**
	0.8nm,0.7s,baz=214,slow=6.4,SNR=10.0						
AKASG	**Malin Array Be**	**145.12**	**327**	PKPbc	**PKPdf**	**04 47 33.4**	**-0.4**
	0.5nm,0.5s,baz=54,slow=4.3,SNR=2.0						
BRTR	**Keskin Array B**	**147.74**	**307**	PKPbc	**PKiKP**	**04 47 44.8**	**+1.0**
	0.3nm,0.5s,baz=90,slow=2.9,SNR=2.4						

*IDC **26** 04:40:15.1±1.0, 28.°09N×84.°67E, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.6/47, mbtmp3.8/12, ML4.3/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/43, Error ellipse: s-maj=33.4km s-min=19.9km az=60.0*
*NEIC **26** 04:40:16.3±3.0, 28.°2N±0.°1×84.°7E±0.°1, h10km±1km, mb4.0/8,

SONM	**Songino Array**	**25.80**	**35**	P		**P**	**04 45 49.7**	**+2.4**
	comp=Z,1.4nm,1.0s,baz=216,slow=9.7,SNR=7.4							
SONM	**Songino Array**	**25.80**	**35**	P		**P**	**04 45 49.2**	**+1.9**
ULN	**Ulaanbaatar**	**26.15**	**35**	P		**P**	**04 45 52.7**	**+2.1**
BRVK	**Borovoye**	**27.13**	**341**	P		**P**	**04 45 60.0**	**+0.9**
BRVK				IAmb		IAmb	04 46 02.0	
	comp=Z,7.0nm,1.6s							
ABKAR	**Akbulak array**	**28.45**	**325**	P		**P**	**04 46 10.8**	**-0.2**
FINES	**FINESS Array B**	**50.85**	**328**	P		**P**	**04 49 17.4**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=94,slow=5.7,SNR=11							
ARCES	**ARCESS Array B**	**53.30**	**338**	P		**P**	**04 49 35.9**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=96,slow=7.3,SNR=9.3							
WRA	**Warramunga Arr**	**67.61**	**129**	P		**P**	**04 51 16.6**	**+3.3**
	comp=Z,0.6nm,0.8s,baz=318,slow=6.2,SNR=2.8							
ASAR	**Alice Springs**	**69.91**	**133**	P		**P**	**04 51 28.0**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=323,slow=6.0,SNR=2.7							
TORD	**Torodi Ar. Bea**	**77.99**	**279**	P		**P**	**04 52 14.7**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=62,slow=4.9,SNR=5.0							
TORD	**Torodi Ar. Bea**	**77.99**	**279**	IAmb		IAmb	04 54 34.2	
	comp=Z,3.3nm,1.6s							
ILAR	**Eielson Array**	**79.05**	**20**	P		**P**	**04 52 20.0**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=290,slow=3.5,SNR=3.7							
YKA	**Yellowknife Ar**	**88.32**	**9**	P		**P**	**04 53 06.9**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=343,slow=4.2,SNR=5.2							

*IDC **26** 04:50:28.2±1.0,27.°93N×85.°36E,h0km,mb3.9/13, mb1 4.0/14,mb1mx3.7/48,mbtmp3.9/14,ML4.1/1,Error ellipse: s-maj=25.7km s-min=18.3km az=53.0*
*NEIC **26** 04:50:29.6±2.2,28.°0N±0.°1×85.°36E±0.°09,h10km±1km, mb4.1/7,Error ellipse: s-maj=23.9km s-min=7.9km az=210.0*
*DMN **26** 04:50:30.7±0.1,28.°03N×85.°48E,h10km,Ml4.9/3,Error ellipse: s-maj=2.9km s-min=1.5km az=21.0*
*NDI **26** 04:50:30.5±1.9,27.°95N×85.°35E,h5km±10km,ML3.9, mb4.1(NEIC)*

ISC 26 04:50:30.7±0.5,28.°02N±0.°04×85.°40E±0.°03,h18km,n50, σ1§61/67,mb4.0/17,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
KKN	**Kakani**	**0.25**	**205**	*e*Pg		**Pg**	**04 50 36.5**	**-0.1**
KKN				*e*Sg		**Sg**	**04 50 40.7**	**+0.2**
PKI	**Pulchoki**	**0.44**	**179**	*e*Pg		**Pg**	**04 50 39.9**	**0.0**
PKI				*e*Sg		**Sg**	**04 50 46.2**	**+0.1**
	10μm,0.4s							
DMN	**Daman**	**0.48**	**213**	*e*Pg		**Pg**	**04 50 41.1**	**+0.6**
DMN				*e*Sg		**Sb**	**04 50 49.1**	**+1.4**
	8μm,0.4s							
GKN	**Gorkha**	**0.67**	**269**	*e*Pg		**Pn**	**04 50 45.0**	**-0.5**
GKN				*e*Sg		**Sn**	**04 50 55.1**	**-0.6**
	5μm,0.2s							
JIRN	**Jiri**	**0.79**	**117**	*e*Pg		**Pb**	**04 50 45.1**	**-1.0**
DANN	**Dangsing**	**1.48**	**283**	*e*Pg		**Pg**	**04 50 59.7**	**+0.3**
DANN				*e*Sg		**Sg**	**04 51 20.2**	**+1.4**
	1μm,0.3s							
RAMN	**Ramite**	**1.51**	**135**	*e*Pg		**Pn**	**04 50 57.6**	**+0.6**
KOLN	**Koldanda**	**1.61**	**262**	*e*Pg		**Pg**	**04 51 01.9**	**+0.1**
KOLN				*e*Sg		**Sg**	**04 51 24.8**	**+2.0**
	2μm,0.3s							
ODAN	**Odare**	**2.11**	**123**	*e*Pg		**Pb**	**04 51 08.6**	**0.0**
ODAN				*e*Sg		**Sb**	**04 51 36.0**	**+1.4**
PYUN	**Piuthan**	**2.13**	**273**	*e*Pg		**Pg**	**04 51 12.1**	**+0.5**
PYUN				*e*Sg		**Sg**	**04 51 39.7**	**+0.4**
	2μm,0.4s							
TAPN	**Taplejung**	**2.15**	**107**	*e*Pg		**Pb**	**04 51 08.9**	**-0.5**
TAPN				*e*Sg		**Sb**	**04 51 37.6**	**+1.7**
GTK	**Tadong**	**2.92**	**103**	*e*P		**Pn**	**04 51 19.4**	**+2.9**
GTK				*e*S		**Sn**	**04 51 54.0**	**+2.8**
GTK				IAML			04 51 54.8	
	comp=E,348nm,0.2s							
BOK	**Bokaro**	**4.23**	**174**	*e*P		**Pn**	**04 51 35.5**	**+1.3**
BOK				*e*S		**Sn**	**04 52 23.5**	**+0.4**
BOK				IAML			04 52 27.2	
	comp=E,106nm,0.1s							
LSA	**Lhasa**	**5.32**	**70**			**Pn**	**04 51 48.2**	**-1.4**
SHL	**Shillong**	**6.29**	**111**	*e*P		**Pn**	**04 52 03.8**	**+1.1**
SHL				*e*S		**Sn**	**04 52 12.9**	**-1.3**
SHL				IAML			04 53 16.4	
	comp=E,60nm,0.3s							
SHL	**Shillong**	**6.29**	**111**			**Pn**	**04 52 02.6**	**-0.1**
ZIRO	**ZIRO**	**7.50**	**92**	*e*P		**Pn**	**04 52 21.1**	**+1.6**
ZIRO				*e*S		**Sn**	**04 53 42.0**	**-2.2**
ZIRO				IAML			04 53 45.6	
	comp=N,596nm,0.6s							
ZIRO				IAML			04 53 47.5	
	comp=E,444nm,0.4s							
SMLA	**Simla**	**7.81**	**295**	*e*P		**Pn**	**04 52 25.4**	**+2.0**
SMLA				IAML			04 53 55.1	
	comp=E,60nm,0.2s							
KOHI	**KOHIMA**	**8.11**	**104**	*e*P		**Pn**	**04 52 29.3**	**+1.6**
KOHI				*e*S		**Sn**	**04 53 56.6**	**-2.4**
KOHI				IAML			04 54 05.0	
	comp=N,66nm,0.3s							
KOHI				IAML			04 54 06.0	
	comp=E,81nm,0.7s							
MOKO	**MOKOCHONG**	**8.29**	**100**	*e*P		**Pn**	**04 52 33.1**	**+2.8**
MOKO				*e*S		**Sn**	**04 53 59.9**	**-3.7**
MOKO				IAML			04 54 10.8	
	comp=E,74nm,0.5s							
MOKO				IAML			04 54 11.1	
	comp=N,72nm,0.5s							
BHPL	**Bhopal**	**8.62**	**238**	*e*P		**Pn**	**04 52 32.8**	**-1.9**
BHPL				*e*S		**Sn**	**04 54 06.2**	**-5.3**
BHPL				IAML			04 54 11.2	
	comp=E,50nm,0.2s							
BHPL				IAML			04 54 13.7	
	comp=N,51nm,0.2s							
DHRM	**DHARAMSHALA**	**8.94**	**300**	*e*P		**Pn**	**04 52 40.8**	**+1.7**
DHRM				*e*S		**Sn**	**04 54 15.4**	**-4.0**
NIL	**Nilore**	**11.85**	**301**			**Pn**	**04 53 17.3**	**-1.6**
KBL	**Kabul**	**15.41**	**299**	Pn		**Pn**	**04 54 07.0**	**-0.4**
KDJ	**Kajisay**	**15.59**	**337**	Pn		**Pn**	**04 54 09.4**	**-0.4**
BOOM	**Boomskoye usch**	**16.36**	**334**	Pn		**Pn**	**04 54 16.9**	**-2.7**
BTK	**Batken**	**17.01**	**319**	Pn		**Pn**	**04 54 25.7**	**-2.1**
MK31	**Makanchi Array**	**18.90**	**353**	P		**P**	**04 54 50.8**	**+0.5**
MKAR	**Makanchi Array**	**18.90**	**353**	P		**Pn**	**04 54 52.0**	**+1.1**
	comp=N,0.6nm,0.3s,baz=171,slow=12,SNR=27							
MKAR	**Makanchi Array**	**18.90**	**353**	P		**P**	**04 54 50.0**	**-0.3**
MAKZ	**Makanchi**	**18.95**	**353**	P		**P**	**04 54 49.7**	**-1.1**
MAKZ				IAmb		IAmb	04 54 53.8	
	comp=Z,3.3nm,0.7s							
ENH	**Enshi**	**21.15**	**78**	P		**P**	**04 55 13.6**	**-1.3**
ENH				IAmb		IAmb	04 55 29.8	
	comp=Z,12nm,1.3s							
KURBB	**Kurchatov Arra**	**23.17**	**349**	P		**P**	**04 55 37.5**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=173,slow=9.6,SNR=15							
SONM	**Songino Array**	**25.66**	**34**	P		**P**	**04 56 01.5**	**+2.0**
	comp=Z,2.8nm,0.4s,baz=218,slow=10,SNR=19							
ZAA0	**Zalesovo Array**	**25.91**	**359**	P		**P**	**04 56 03.1**	**+1.5**
ZAA0				IAmb		IAmb	04 56 03.5	
	comp=Z,4.0nm,0.7s							
ZALV	**Zalesovo Beam**	**25.91**	**359**	P		**P**	**04 56 02.9**	**+1.3**
	comp=Z,4.3nm,0.5s,baz=180,slow=9.3,SNR=21							
ZALV	**Zalesovo Beam**	**25.91**	**359**	P		**P**	**04 56 02.6**	**+1.0**
ULN	**Ulaanbaatar**	**26.00**	**35**	P		**P**	**04 56 02.8**	**+0.1**
ULN				IAmb		IAmb	04 56 07.1	
	comp=Z,4.2nm,0.7s							
KSRS	**Korea Array**	**36.73**	**64**	P		**P**	**04 57 37.0**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=272,slow=8.8,SNR=5.2							
USRK	**Ussuriysk Ar.**	**40.39**	**54**	P		**P**	**04 58 07.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=275,slow=8.4,SNR=3.4							
KLR	**Kul'dur**	**41.16**	**46**	P		**P**	**04 58 14.4**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=270,slow=9.7,SNR=9.0							
FINES	**FINESS Array B**	**51.20**	**328**	P		**P**	**04 59 33.2**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=119,slow=6.7,SNR=13							
ARCES	**ARCESS Array B**	**53.60**	**338**	P		**P**	**04 59 51.5**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=102,slow=7.8,SNR=11							
WB0	**Warramunga Arr**	**67.09**	**130**	P		**P**	**05 01 23.4**	**+0.1**
WRA	**Warramunga Arr**	**67.18**	**130**	P		**P**	**05 01 24.5**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=323,slow=6.5,SNR=8.5							
AS31	**Alice Springs**	**69.48**	**133**	P		**P**	**05 01 38.6**	**+0.3**
AS31				IAmb		IAmb	05 01 40.5	
	comp=Z,1.9nm,1.2s							
ASAR	**Alice Springs**	**69.48**	**133**	P		**P**	**05 01 39.3**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=318,slow=5.8,SNR=4.7							
TORD	**Torodi Ar. Bea**	**78.46**	**279**	P		**P**	**05 02 31.0**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=63,slow=4.1,SNR=4.5							
ILAR	**Eielson Array**	**79.03**	**20**	P		**P**	**05 02 33.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=307,slow=4.5,SNR=5.5							
YKA	**Yellowknife Ar**	**88.39**	**9**	P		**P**	**05 03 21.9**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=338,slow=4.9,SNR=8.4							

*BJI **26** 04:58:35.3±0.0,27.°63N×84.°41E,h12km,mB4.5/14, mb4.3/29,Ms3.8/5,Ms7 3.5/6*
*IDC **26** 04:58:38.4±0.5,28.°00N×84.°85E,h0km,mb4.2/28, mb1 4.3/30,mb1mx4.2/51,mbtmp4.2/30,ML4.3/2,MS3.1/5, Ms1 3.1/5,ms1mx2.6/47,Error ellipse: s-maj=16.8km s-min=11.9km az=51.0*
*DMN **26** 04:58:38.2±0.3,28.°26N×85.°02E,h2km,Ml5.3/2,Error ellipse: s-maj=6.6km s-min=2.6km az=7.0*
*NEIC **26** 04:58:40.0±2.1,28.°0N±0.°1×84.°71E±0.°08,h10km±1km, mb4.5/42,Error ellipse: s-maj=18.1km s-min=11.5km az=202.0*
*NDI **26** 04:58:41.1±3.0,27.°94N×84.°82E,h10km±15km,ML4.1, mb4.0(NEIC)*

ISC 26 04:58:40.4±1.1,28.°05N±0.°04×84.°87E±0.°02,h13km±7km, n175,σ1§92/201,mb4.4/52,MS3.1/6,6C-6D,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
GKN	**Gorkha**	**0.21**	**256**	*e*Pg		**Pb**	**04 58 45.7**	**-0.6**
GKN				*e*Sg		**Sb**	**04 58 50.6**	**+0.5**
	78μm,0.4s							
KKN	**Kakani**	**0.45**	**126**	*e*Sg		**Sg**	**04 58 54.8**	**-0.6**
DMN	**Daman**	**0.49**	**155**	*e*Sg		**Sb**	**04 58 59.1**	**+0.8**
PKIN	**Phulchoki**	**0.67**	**135**	*e*Pg		**Pg**	**04 58 53.8**	**+0.4**
PKI	**Pulchoki**	**0.68**	**135**	*e*Pg		**Pg**	**04 58 53.5**	**-0.2**
PKI				*e*Sg		**Sb**	**04 59 03.7**	**-0.1**
GUN	**Gumba**	**0.91**	**99**	*e*Pg		**Pg**	**04 58 54.9**	**-3.1**
DANN	**Dangsing**	**1.02**	**287**	*e*Pg		**Pn**	**04 59 01.0**	**+0.2**
KOLN	**Koldanda**	**1.16**	**256**	*e*Pg		**Pg**	**04 59 04.0**	**+1.3**
KOLN				*e*Sg		**Sn**	**04 59 21.4**	**+3.0**
	5μm,0.3s							
PYUN	**Piuthan**	**1.66**	**272**	*e*Pg		**Pg**	**04 59 12.0**	**-0.3**
PYUN				*e*Sg		**Sg**	**04 59 34.0**	**+0.1**
	7μm,0.5s							
RAMN	**Ramite**	**1.89**	**125**	*e*Pg		**Pb**	**04 59 14.6**	**-0.4**
ODAN	**Odare**	**2.54**	**117**	*e*Pg		**Pb**	**04 59 24.4**	**-1.6**
ODAN	**Odare**	**2.54**	**117**	*e*Pg		**Pb**	**04 59 25.1**	**-0.9**
ODAN				*e*Sg		**Sb**	**04 59 56.7**	**-0.5**
TAPN	**Taplejung**	**2.62**	**105**	*e*Pg		**Pb**	**04 59 25.6**	**-1.8**
TAPN	**Taplejung**	**2.62**	**105**	*e*Pg		**Pb**	**04 59 25.6**	**-1.8**
TAPN				*e*Sg		**Sb**	**04 59 57.9**	**-1.6**
GTK	**Tadong**	**3.39**	**102**	*e*P		**Pn**	**04 59 36.4**	**+3.1**
GTK				*e*S		**Sn**	**05 00 15.1**	**+1.7**
GTK				IAML			05 00 21.0	
	comp=E,207nm,0.2s							
GTK	**Tadong**	**3.39**	**102**	*e*P		**Pn**	**04 59 35.6**	**+2.4**
GTK				*e*S		**Sn**	**05 00 15.1**	**+1.7**
GTK				IAML			05 00 19.4	
	comp=N,6μm,0.2s							
BOK	**Bokaro**	**4.34**	**168**	*e*P		**Pn**	**04 59 48.2**	**+2.0**
BOK				*e*S		**Sn**	**05 00 35.7**	**-1.0**
BOK	**Bokaro**	**4.34**	**168**	*e*P		**Pn**	**04 59 48.1**	**+2.0**
BOK				*e*S		**Sn**	**05 00 37.0**	**+0.3**
BOK				IAML			05 01 00.5	
	comp=E,393nm,1.0s							
LSA	**Lhasa**	**5.75**	**72**	Pn		**Pn**	**05 00 07.7**	**+1.8**
DDI	**Dehra Dun**	**6.37**	**292**	*e*P		**Pn**	**05 00 17.7**	**+3.6**
DDI				*e*S		**Sn**	**05 01 26.1**	**-0.6**
DDI				IAML			05 01 31.9	
	comp=N,346nm,0.3s							
DDI				IAML			05 01 33.3	
	comp=E,267nm,0.3s							
DDI	**Dehra Dun**	**6.37**	**292**	*e*P		**Pn**	**05 00 16.9**	**+2.8**
DDI				*e*S		**Sn**	**05 01 26.3**	**-0.5**
DDI				IAML			05 01 31.9	
	comp=N,362nm,0.3s							
DDI				IAML			05 01 33.4	
	comp=E,263nm,0.3s							
SHL	**Shillong**	**6.74**	**110**	*e*P		**Pn**	**05 00 19.8**	**+0.5**
SHL				*e*S		**Sn**	**05 01 32.1**	**-4.0**
SHL	**Shillong**	**6.74**	**110**	*e*P		**Pn**	**05 00 19.5**	**+0.2**
SHL				*e*S		**Sn**	**05 01 30.2**	**-5.8**
SHL	**Shillong**	**6.74**	**110**	Pn		**Pn**	**05 00 19.8**	**+0.5**
SMLA	**Simla**	**7.37**	**296**	*e*P		**Pn**	**05 00 29.6**	**+1.8**
SMLA				*e*S		**Sn**	**05 01 50.1**	**-1.2**
SMLA				IAML			05 01 53.0	
	comp=N,70nm,0.4s							
SMLA				IAML			05 01 53.0	
	comp=E,125nm,0.5s							
SMLA	**Simla**	**7.37**	**296**	*e*P		**Pn**	**05 00 29.8**	**+2.0**
SMLA				*e*S		**Sn**	**05 01 47.6**	**-3.8**
BHPL	**Bhopal**	**8.25**	**236**	*e*P		**Pn**	**05 00 38.6**	**-1.3**
BHPL				*e*S		**Sn**	**05 02 06.8**	**-6.2**
BHPL				IAML			05 02 10.7	
	comp=E,139nm,0.3s							
BHPL				IAML			05 02 15.2	
	comp=N,162nm,0.3s							
BHPL	**Bhopal**	**8.25**	**236**	*e*P		**Pn**	**05 00 38.6**	**-1.3**
BHPL				*e*S		**Sn**	**05 02 07.1**	**-5.9**
BHPL				IAML			05 02 09.9	
	comp=N,147nm,0.5s							
BHPL				IAML			05 02 10.7	
	comp=E,141nm,0.2s							
DHRM	**DHARAMSHALA**	**8.51**	**301**	*e*P		**Pn**	**05 00 44.4**	**+0.7**
DHRM				*e*S		**Sn**	**05 02 15.3**	**-4.5**
DHRM				IAML			05 02 19.4	
	comp=N,664nm,0.4s							
DHRM	**DHARAMSHALA**	**8.51**	**301**	*e*P		**Pn**	**05 00 43.9**	**+0.2**
DHRM				*e*S		**Sn**	**05 02 16.0**	**-3.8**
DHRM				IAML			05 02 19.3	
	comp=N,646nm,0.3s							
DHRM				IAML			05 02 21.1	
	comp=E,576nm,0.3s							
KOHI	**KOHIMA**	**8.57**	**104**	*e*P		**Pn**	**05 00 45.3**	**+0.9**
KOHI				*e*S		**Sn**	**05 02 18.4**	**-2.7**
KOHI				IAML			05 02 31.1	
	comp=E,85nm,0.9s							
KOHI				IAML			05 02 32.9	
	comp=N,71nm,1.0s							
KOHI	**KOHIMA**	**8.57**	**104**	*e*P		**Pn**	**05 00 45.1**	**+0.7**
KOHI				*e*S		**Sn**	**05 02 18.1**	**-3.0**
KOHI				IAML			05 02 31.1	
	comp=E,84nm,1.0s							
KOHI				IAML			05 02 32.8	
	comp=N,69nm,0.7s							
MOKO	**MOKOCHONG**	**8.76**	**99**	*e*P		**Pn**	**05 00 48.2**	**+1.1**
MOKO				*e*S		**Sn**	**05 02 24.4**	**-1.4**
MOKO				IAML			05 02 26.2	
	comp=E,96nm,0.6s							
MOKO				IAML			05 02 33.5	
	comp=N,86nm,0.5s							
MOKO	**MOKOCHONG**	**8.76**	**99**	*e*P		**Pn**	**05 00 46.7**	**-0.4**
MOKO				*e*S		**Sn**	**05 02 22.7**	**-3.1**
MOKO				IAML			05 02 25.6	
	comp=E,94nm,0.6s							
MOKO				IAML			05 02 33.6	
	comp=N,90nm,0.5s							
AJM	**Ajmer**	**9.23**	**263**	*i* S		**Sn**	**05 02 30.0**	**-7.2**
CHCP	**Chirah Chowk**	**11.43**	**302**	P		**Pn**	**05 01 23.3**	**-0.1**
NIL	**Nilore**	**11.43**	**302**	Pn		**Pn**	**05 01 22.0**	**-1.5**
HYB	**Hyderabad**	**12.08**	**210**	*i* P		Pn	05 01 25.0	-7.4
HYB				*e*S		**Sn**	**05 03 54.0**	**+6.9**
CEP	**Cherat**	**12.52**	**301**	P		**Pn**	**05 01 36.9**	**-1.5**
KSH	**Kashi**	**13.61**	**329**	P		**Pn**	**05 01 50.5**	**-2.8**
KSH				pP		P	05 01 56.3	-5.9
KSH				pmax		pmax		
	comp=N,6.0nm,0.6s							
KSH				pmax		pmax		
	comp=N,90nm,3.4s							
KBL	**Kabul**	**14.99**	**299**	Pn		**Pn**	**05 02 09.5**	**-2.7**
KDJ	**Kajisay**	**15.38**	**338**	Pn		**Pn**	**05 02 15.1**	**-2.2**
MHMT	**Maesarieng**	**15.51**	**127**	P		**P**	**05 02 22.9**	**-0.4**
	comp=N,734nmcomp=N,24nm,0.6s							
CHTO	**Chiang Mai**	**15.84**	**122**	Pn		**Pn**	**05 02 24.4**	**+1.0**
CM33	**Chiang Mai**	**15.84**	**122**	P		**P**	**05 02 27.0**	**-0.1**
CMMT	**Chiang Mai**	**15.85**	**122**	P		**P**	**05 02 26.4**	**-0.8**
	comp=N,7.5nm,1.1s							
WMQ	**Urumqi**	**15.90**	**7**	*e*P		**P**	**05 02 27.0**	**-0.6**
CM15	**Chiang Mai Arr**	**16.05**	**124**	P		**P**	**05 02 31.7**	**+2.3**
CM13	**Chiang Mai Arr**	**16.06**	**124**	P		**P**	**05 02 30.0**	**+0.5**
	comp=N,104nmcomp=N,7.8nm,0.9s							
CM31	**Chiang Mai Arr**	**16.06**	**123**	Pn		**Pn**	**05 02 27.1**	**+1.0**
CMAR	**Chiang Mai Arr**	**16.06**	**123**	Pn		**Pn**	**05 02 24.6**	**-1.5**
	comp=N,0.4nm,0.3s,baz=301,slow=13,SNR=25							
CMAR	**Chiang Mai Arr**	**16.06**	**123**	Pn		**Pn**	**05 02 27.7**	**+1.5**
CM02	**Chiang Mai Arr**	**16.08**	**124**	P		**P**	**05 02 30.5**	**+0.8**
	comp=N,91nmcomp=N,12nm,0.9s							
CM35	**Chiang Mai Arr**	**16.08**	**122**	P		**P**	**05 02 30.0**	**+0.3**
CM01	**Chiang Mai Arr**	**16.10**	**124**	P		**P**	**05 02 30.0**	**+0.1**
	comp=N,69nmcomp=N,8.2nm,0.8s							
CM05	**Chiang Mai Arr**	**16.10**	**124**	P		**P**	**05 02 30.0**	**+0.1**
	comp=N,51nmcomp=N,7.0nm,0.8s							
CM09	**Chiang Mai Arr**	**16.11**	**123**	P		**P**	**05 02 31.1**	**+1.1**
	comp=N,10nm,0.7s							
CM04	**Chiang Mai Arr**	**16.13**	**124**	P		**P**	**05 02 31.1**	**+0.8**
	comp=N,119nmcomp=N,8.0nm,0.8s							
BOOM	**Boomskoye usch**	**16.13**	**336**	Pn		**Pn**	**05 02 27.4**	**+0.4**
GAR	**Garm**	**16.30**	**316**	Pn		**Pn**	**05 02 27.5**	**-1.7**
GAR				IAmb		IAmb	05 02 41.8	
	comp=Z,68nm,2.0s							
GTA	**Gaotai**	**16.79**	**44**	P		**P**	**05 02 42.5**	**+4.9**
GTA				pP		sP	05 02 45.8	+2.6
GTA				sP		pP	05 02 48.5	+6.8
GTA				pmax		pmax		
	comp=Z,6.0nm,0.9s							
GTA				pmax		pmax		
	comp=Z,56nm,4.4s							
GTA				LR		LR		
	comp=Z,85nm,12.0s							
GTA				LR		LR		
	comp=Z,280nm,14.5s							
GTA				LR		LR		
	comp=Z,110nm,10.5s							
AAK	**Ala-Archa**	**16.81**	**333**	Pn		**Pn**	**05 02 34.4**	**-1.3**
SUKH	**Sukhothai**	**17.19**	**125**	P		**P**	**05 02 49.0**	**+7.0**
UTHA	**Uthaitani**	**18.36**	**130**	P		**P**	**05 02 56.5**	**+1.6**
	comp=Z,17nm,0.8s							
MK31	**Makanchi Array**	**18.82**	**355**	P		**P**	**05 03 00.2**	**+0.4**
MKAR	**Makanchi Array**	**18.82**	**355**	P		**Pn**	**05 03 00.9**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=177,slow=11,SNR=34							
MKAR	**Makanchi Array**	**18.82**	**355**	P		**P**	**05 02 59.7**	**-0.1**
MAKZ	**Makanchi**	**18.86**	**354**	P		**P**	**05 03 00.7**	**+0.4**
KK31	**Karatay Array**	**18.98**	**326**			**P**	**05 03 00.9**	**-0.7**
KKAR	**Karatay Array**	**18.98**	**326**			**P**	**05 02 59.8**	**-1.8**
GYA	**Guiyang**	**19.44**	**90**	*e*P		**Pn**	**05 03 12.8**	**+4.7**
GYA				pmax		pmax		
	comp=Z,2.0nm,0.5s							
HRA	**Herat**	**20.33**	**294**	P		**P**	**05 03 13.3**	**-3.4**
PHET	**Kaeng Krachan**	**20.42**	**135**	P		Pn	05 03 19.7	+0.1
	comp=Z,23nm,0.8s							
PALK	**Pallekele**	**21.04**	**192**	P		**P**	**05 03 23.9**	**-0.4**
	comp=Z,2.6nm,0.5s,baz=228,slow=10,SNR=1.9							
SRAK	**Srakaew**	**21.23**	**128**	P		**P**	**05 03 33.0**	**+6.8**
XAN	**Xi'an**	**21.43**	**68**	P		**P**	**05 03 33.0**	**+4.6**
XAN				pP		sP	05 03 37.3	+3.3
XAN				pmax		pmax		
	comp=Z,8.0nm,0.7s							
ENH	**Enshi**	**21.60**	**78**	P		**P**	**05 03 30.5**	**+0.3**
ENH				IAmb		IAmb	05 03 43.5	
	comp=Z,15nm,1.1s							
KURBB	**Kurchatov Arra**	**23.05**	**350**	P		**P**	**05 03 46.0**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=174,slow=10,SNR=15							
KURK	**Kurchatov**	**23.12**	**350**	P		**P**	**05 03 46.0**	**-0.2**
GEYT	**Alibeck**	**24.43**	**301**	P		**P**	**05 03 58.9**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=123,slow=7.6,SNR=3.0							
HHC	**Hu-ho-hao-te**	**25.34**	**53**	*e*P		**P**	**05 04 09.3**	**+2.1**
HHC				pmax		pmax		
	comp=Z,14nm,0.8s							
HHC				pmax		pmax		
	comp=Z,120nm,5.1s							
ZAA0	**Zalesovo Array**	**25.87**	**360**	P		**P**	**05 04 13.1**	**+1.4**
ZAA0				IAmb		IAmb	05 04 17.4	
	comp=Z,4.6nm,0.7s							
ZALV	**Zalesovo Beam**	**25.87**	**360**	P		**P**	**05 04 12.7**	**+1.0**
	comp=Z,5.8nm,0.5s,baz=183,slow=10.0,SNR=5.8							
SONM	**Songino Array**	**25.89**	**34**	P		**P**	**05 04 12.9**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=223,slow=9.8,SNR=3.9							
SONM	**Songino Array**	**25.89**	**34**	P		**P**	**05 04 12.2**	**+0.1**
ULN	**Ulaanbaatar**	**26.24**	**35**	P		**P**	**05 04 17.1**	**+1.7**
ULN				IAmb		IAmb	05 04 23.4	
	comp=Z,8.4nm,1.1s							
BVAR	**Borovoye Array**	**27.16**	**341**	P		**P**	**05 04 23.5**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=162,slow=12,SNR=9.9							
ABKAR	**Akbulak array**	**28.53**	**325**	P		**P**	**05 04 36.1**	**+0.5**
AKTO	**Aktyubinsk**

STEI	Steigen	56.67	335	*e*P		P	05 08 24.1	+1.0
SOKA	Soboth	56.70	309	*e*P		P	05 08 23.0	-0.8
	comp=Z,2.4nm,0.6s							
MOR8	Moi Rana	56.78	333	*e*P		P	05 08 23.6	-0.4
BRG	Berggiesshubel	56.98	314	*e*P		P	05 08 26.3	+0.7
BRG				Amp			05 08 28.2	
	comp=Z,1.8nm,1.0s							
BRG				*ex*		x	05 08 30.7	
BRG				Amp			05 08 32.2	
	comp=Z,1.5nm,0.8s							
LOF	Lofoten	57.33	335	*e*P		P	05 08 27.6	-0.2
GERES	GERESS Array B	57.34	312	P		P	05 08 28.2	-0.1
	comp=Z,0.4nm,0.5s,baz=94,slow=8.0,SNR=6.6							
NC602	NORSAR Array S	57.85	326	*e*P		P	05 08 31.4	-0.2
NB2	NORSAR Subarra	58.01	327	P		P	05 08 32.3	-0.5
	baz=90,slow=6.9							
NOA	NORSAR Array B	58.01	327	P		P	05 08 32.4	-0.4
	comp=Z,1.7nm,0.7s,baz=89,slow=7.0,SNR=6.3							
NAO01	NORSAR Array S	58.17	326	*e*P		P	05 08 33.9	0.0
NC204	NORSAR Array S	58.23	327	*e*P		P	05 08 34.4	+0.1
KONO	Kongsberg	58.86	325	*e*P		P	05 08 38.7	+0.1
DOMB	Dombas	59.02	328	*e*P		P	05 08 39.4	-0.3
SQTA	Sankt Quirin	59.22	310	*e*P		P	05 08 40.9	-0.6
	comp=Z,1.5nm,0.5s							
MOTA	Moosalm	59.27	311	*e*P		P	05 08 40.9	-1.0
	comp=Z,4.6nm,1.4s							
FETA	Feichten	59.57	310	*e*P		P	05 08 42.0	-2.0
	comp=Z,2.6nm,1.0s							
DAVA	Damuels	60.10	311	*e*P		P	05 08 45.0	-2.7
	comp=Z,3.8nm,1.2s							
KEST	Kesra	63.14	298	P		P	05 09 08.9	+0.6
	comp=Z,3.3nm,0.8s,baz=190,slow=6.5,SNR=4.3							
WRA	Warramunga Arr	67.56	129	P		P	05 09 37.5	+0.6
	comp=Z,1.9nm,0.7s,baz=323,slow=6.5,SNR=13							
NWAO	Narrogin (SRO)	67.99	151	P		P	05 09 38.8	-0.5
	comp=Z,6.0nm,0.6s,baz=336,slow=5.7,SNR=3.6							
ASAR	Alice Springs	69.85	132	P		P	05 09 51.4	+0.3
	comp=Z,1.1nm,0.6s,baz=316,slow=6.5,SNR=9.0							
TAM	Tamanrasset	70.67	286	P		P	05 09 55.1	-1.3
TAM				IAmb		IAmb	05 09 58.1	
	comp=Z,2.9nm,0.6s							
ESDC	Sonseca Array	71.86	306	P		P	05 10 03.4	+0.1
	comp=Z,0.7nm,0.8s,baz=47,slow=5.1,SNR=4.7							
A21K	Barrow	72.12	17	P		P	05 10 03.9	-0.3
TOLK	Toolik Lake Re	75.70	18	P		P	05 10 26.4	+1.1
COLD	Coldfoot	76.47	19	P		P	05 10 31.0	+1.4
COLD				IAmb		IAmb	05 10 36.1	
	comp=Z,6.3nm,0.9s							
MLY	Manley	77.78	21	P		P	05 10 37.8	+0.7
MLY				IAmb		IAmb	05 10 43.5	
	comp=Z,4.1nm,1.0s							
TORD	Torodi Ar. Bea	77.99	279	P		P	05 10 39.0	0.0
	comp=Z,2.4nm,0.6s,baz=60,slow=4.3,SNR=23							
TORD	Torodi Ar. Bea	77.99	279	P		P	05 10 39.1	+0.1
BPAW	Bear Paw Mtn.	78.32	22	P		P	05 10 41.1	+1.0
NEA2	Nenana	78.60	21	P		P	05 10 41.6	0.0
NEA2				IAmb		IAmb	05 10 48.1	
	comp=Z,7.6nm,0.9s							
MDM	Murphy Dome	78.61	20	P		P	05 10 43.6	+1.9
MDM				IAmb		IAmb	05 10 47.8	
	comp=Z,6.4nm,1.0s							
IL31		79.15	20	P		P	05 10 44.3	-0.2
IL31				IAmb		IAmb	05 12 53.4	
	comp=Z,13nm,1.8s							
ILAR	Eielson Array	79.15	20	P		P	05 10 44.8	+0.2
	comp=Z,1.7nm,0.8s,baz=286,slow=3.9,SNR=10							
ILAR	Eielson Array	79.15	20	P		P	05 10 44.1	-0.5
SKT	Skwentna	79.55	24	P		P	05 10 47.8	+1.0
INK	Inuvik	79.82	14	P		P	05 10 49.5	+1.3
INK				IAmb		IAmb	05 10 54.0	
	comp=Z,5.6nm,1.1s							
STKA	Stephens Creek	80.41	134	P		P	05 10 51.7	-0.2
	comp=Z,1.5nm,0.4s,baz=340,slow=5.7,SNR=5.2							
SCRK	Sand Creek	80.60	20	P		P	05 10 53.9	+1.3
SCRK				IAmb		IAmb	05 10 59.0	
	comp=Z,6.0nm,1.0s							
L27K	Beaver Creek,	81.93	20	P		P	05 11 01.7	+2.1
L27K				IAmb		IAmb	05 11 06.3	
	comp=Z,4.8nm,0.9s							
MCARA	McCarthy VSAT	82.83	21	P		P	05 11 06.1	+1.7
DBIC	Dimbokro	86.66	276	P		P	05 11 24.8	+0.3
	comp=Z,2.1nm,0.4s,baz=28,slow=4.6,SNR=8.5							
DBIC	Dimbokro	86.66	276	P		P	05 11 22.7	-1.7
YKA	Yellowknife Ar	88.42	9	P		P	05 11 32.1	0.0
	comp=Z,0.8nm,0.7s,baz=340,slow=4.6,SNR=19							
CPUP	Villa Florida	146.42	264	PKPbc		PKPdf	05 18 19.6	-0.7
	comp=Z,2.2nm,1.0s,baz=168,slow=5.7,SNR=5.0							

*IDC **26** 05:04:17.0±1.5, 10.°63S×120.°13E, h0km, mb3.7/3, mb1 3.8/7, mb1mx3.5/46, mbtmp3.7/7, ML3.6/4, Error ellipse: s-maj=61.3km s-min=21.6km az=46.0*

ISC 26 05:04:22.0±1.4, 10.°89S±0.°09×120.°4E±0.°1, h35km, n7, σ4$03/11, mb3.9/3, Suma region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	3.32	79	Pn	Pn	05 05 12.9	+1.4
	7.7nm,0.3s,baz=263,slow=8.1,SNR=5.5						
BATI				Sn	Sn	05 05 52.2	+2.5
	4.0nm,0.3s,baz=359,slow=22,SNR=7.0						
FITZ	Fitzroy Crossi	8.80	145	Pn	Pn	05 06 30.3	+3.4
	0.5nm,0.3s,baz=319,slow=2.3,SNR=22						
FITZ				Sn	Sn	05 08 03.9	-1.0
	0.5nm,0.3s,baz=322,slow=12,SNR=3.1						
WRA	Warramunga Arr	16.20	125	Pn	Pn	05 08 08.5	+1.4
	0.2nm,0.3s,baz=297,slow=13,SNR=8.9						
WRA				Sn	Sn	05 11 00.6	-5.1
	0.1nm,0.3s,baz=67,slow=13,SNR=2.4						
ASAR	Alice Springs	18.11	136	P	Pn	05 08 35.5	+4.5
	0.2nm,0.3s,baz=313,slow=12,SNR=9.8						
ASAR				S	Sn	05 11 45.0	-7.2
	0.1nm,0.3s,baz=308,slow=22,SNR=2.1						
MKAR	Makanchi Array	66.74	333	P	P	05 15 08.5	-1.2
	0.6nm,0.6s,baz=153,slow=8.2,SNR=5.7						
KURBB	Kurchatov Arra	71.25	333	P	P	05 15 35.4	-2.2
	0.2nm,0.4s,baz=140,slow=5.3,SNR=1.5						
ZALV	Zalesovo Beam	71.27	339	P	P	05 15 36.0	-1.6
	0.4nm,0.3s,baz=134,slow=4.3,SNR=3.6						

NNC 26 05:06:10.8±1.4, 52.°71N×87.°80E, h0km, mb3.7, mpv3.3, 4C-7D, Error ellipse: s-maj=12.6km s-min=4.5km az=79.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	2.17	306	⇓Pn	Pn	05 06 47.5	-0.7
	1.1nm,0.3s						
ZAA0				⇑Sn	Sn	05 07 17.1	+1.3
	4.2nm,0.5s						
KURBB	Kurchatov Arra	6.13	254	⇑Pn	Pn	05 07 42.8	+0.2
	3.8nm,0.5s						
KURBB				⇑Sn	Sn	05 08 53.7	+0.3
	7.8nm,0.7s						
KURBB				⇑Lg	Lg	05 09 24.8	
	20nm,0.7s						
MK31	Makanchi Array	6.92	213	⇓Pn	Pn	05 07 54.4	+1.0
	1.1nm,0.4s,baz=29,slow=12,SNR=51						
MK31				⇓Sn	Sn	05 09 14.4	+1.7
	1.0nm,0.5s,baz=31,slow=23,SNR=2.9						
MK31				⇓Lg	Lg	05 09 51.3	
	1.1nm,0.5s,baz=30,slow=30,SNR=4.3						
MAKZ	Makanchi	7.01	215	⇓Pn	Pn	05 07 55.3	+0.7
	2.1nm,0.5s						
MAKZ				⇓Sn	Sn	05 09 16.0	+1.0
	2.0nm,0.6s						
MAKZ				⇓Lg	Lg	05 09 50.2	
	2.1nm,0.8s						

*NNC **26** 05:13:49.3±4.0, 36.°69N×70.°99E, h91km±84km, mb3.5, mpv4.0, Error ellipse: s-maj=29.2km s-min=28.3km az=7.0*

*IDC **26** 05:14:06.6±17.0, 37.°39N×71.°52E, h242km±111km, mb3.2/4, mb1 3.2/9, mb1mx2.8/51, mbtmp3.8/9, MS3.2/1, Ms1 3.2/1, ms1mx2.1/33, Error ellipse: s-maj=170.7km s-min=35.3km az=180.0*

ISC 26 05:13:48.3±1.7, 36.°6N±0.°1×71.°1E±0.°1, h100km, n22, σ1$56/26, mb3.8/4, 7C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.84	19	P	Pn	05 15 13.5	+0.7
	SNR=67						
UCH	Uchtor	6.17	24	P	Pn	05 15 17.7	+0.4
	SNR=12						
EKS2	Erkin-Say	6.36	18	P	Pn	05 15 20.6	+1.0
	SNR=24						
KK31	Karatay Array	6.48	356	⇑P	Pn	05 15 22.2	+1.1
	6.5nm,0.5s,baz=180,slow=13,SNR=174						
KK31				⇓S	Sn	05 16 34.6	+1.1
	4.3nm,0.3s,baz=184,slow=16,SNR=11						
AAK	Ala-Archa	6.54	22	P	Pn	05 15 22.8	+0.8
	SNR=13						
AAK	Ala-Archa	6.54	22	⇑P	Pn	05 15 22.0	0.0
	6.4nm,0.6s						
AAK				⇓S	Sn	05 16 36.6	+1.4
	5.2nm,0.5s						
CHMS	Chumysh	6.95	23	P	Pn	05 15 28.1	+0.6
	SNR=6.0						
USP	Ospenovka	7.12	20	P	Pn	05 15 30.1	+0.4
	SNR=8.4						
TKM2	Tokmak 2	7.17	27	P	Pn	05 15 31.0	+0.4
	SNR=11						
TKM2	Tokmak 2	7.17	27	⇑P	Pn	05 15 30.8	+0.2
	6.0nm,0.6s						
TKM2				⇓S	Sn	05 16 51.6	+1.1
	5.3nm,0.9s						
MKAR	Makanchi Array	13.13	36	P	P	05 16 55.4	-1.8
	0.1nm,0.3s,baz=206,slow=11,SNR=4.2						
KURBB	Kurchatov Arra	14.97	19	P	P	05 17 16.6	-0.9
	0.1nm,0.3s,baz=207,slow=11,SNR=9.1						
AB31	Akbulak array	15.01	331	⇑P	Pn	05 17 14.4	-0.7
	0.9nm,0.5s,baz=157,slow=11,SNR=36						
AB31				⇑S	Sn	05 19 57.1	-3.5
	1.2nm,0.6s,baz=153,slow=23,SNR=6.2						
BVAR	Borovoye Array	16.40	358	P	P	05 17 34.4	+1.0
	0.4nm,0.3s,baz=179,slow=13,SNR=5.9						
AKTO	Aktyubinsk	16.71	330	P	P	05 17 39.5	+2.7
	0.3nm,0.3s,baz=128,slow=11,SNR=5.4						
AKTO	Aktyubinsk	16.71	330	⇑P	P	05 17 39.7	+2.9
	3.4nm,1.1s						
AKTO				⇑S	Sn	05 20 38.7	-2.9
	2.0nm,0.7s						
ZALV	Zalesovo Beam	19.76	24	P	P	05 18 08.7	-1.4
	1.7nm,0.3s,baz=204,slow=10,SNR=16						
FINES	FINESS Array B	37.42	326	P	P	05 20 52.5	+1.1
	0.6nm,0.4s,baz=122,slow=9.7,SNR=11						
ARCES	ARCESS Array B	41.06	338	P	P	05 21 22.1	+0.6
	7.7nm,1.2s,baz=114,slow=9.0,SNR=3.7						
NOA	NORSAR Array B	44.33	323	P	P	05 21 48.7	+0.5
	0.5nm,0.4s,baz=96,slow=7.7,SNR=5.6						
MA2	Magadan	54.20	38	LR	LR	05 45 43.5	
	comp=Z,22nm,18.2s,baz=70,slow=36						
YKA	Yellowknife Ar	81.11	3	P	P	05 25 50.5	-1.7
	0.2nm,0.7s,baz=355,slow=5.0,SNR=4.6						

IDC 26 05:24:25.4±3.3, 10.°67S×120.°24E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/22, mbtmp3.4/3, ML3.3/2, Error ellipse: s-maj=270.0km s-min=31.9km az=49.0, Suma region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.42	126	Pn	Pn	05 28 15.7	-1.8
	0.1nm,0.3s,baz=297,slow=13,SNR=4.8						
WRA				Sn	Sn	05 31 06.4	-14
	0.1nm,0.3s,baz=298,slow=22,SNR=1.4						
ASAR	Alice Springs	18.35	137	P	P	05 28 42.5	+0.8
	0.1nm,0.3s,baz=313,slow=12,SNR=8.9						
MKAR	Makanchi Array	66.49	333	P	P	05 35 16.9	0.0
	0.3nm,0.6s,baz=144,slow=8.1,SNR=3.7						

IDC 26 05:33:07.3±3.2, 10.°53S×120.°37E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/34, mbtmp3.4/3, ML3.1/2, MS3.2/1, Ms1 3.2/1, ms1mx2.3/26, Error ellipse: s-maj=270.1km s-min=32.1km az=50.0, Suma region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.39	126	Pn	Pn	05 36 57.3	-1.7
	0.1nm,0.3s,baz=299,slow=13,SNR=2.4						
WRA				Sn	Sn	05 39 46.4	-15
	0.0nm,0.3s,baz=306,slow=15,SNR=1.1						
ASAR	Alice Springs	18.36	137	P	P	05 37 24.4	+0.7
	0.1nm,0.3s,baz=312,slow=12,SNR=6.8						
PSI	Prapat	25.12	301	LR	LR	05 48 49.7	
	comp=Z,51nm,18.7s,baz=122,slow=38						
MKAR	Makanchi Array	66.43	332	P	P	05 43 58.4	0.0
	0.3nm,0.6s,baz=141,slow=7.8,SNR=3.8						

*IDC **26** 05:47:28.2±0.9, 27.°98N×84.°57E, h0km, mb3.8/13, mb1 3.9/15, mb1mx3.6/69, mbtmp3.8/15, ML3.9/2, Error ellipse: s-maj=27.9km s-min=18.1km az=53.0*

ISC 26 05:47:29.9±0.9, 28.°0N±0.°2×84.°5E±0.°2, h10km, n15, σ0$58/15, mb3.7/13, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.28	123	Pn	Pn	05 51 19.3	+0.6
	0.3nm,0.3s,baz=305,slow=11,SNR=2.2						
MKAR	Makanchi Array	18.84	355	P	P	05 51 50.3	+0.4
	0.2nm,0.3s,baz=174,slow=11,SNR=10						
KURBB	Kurchatov Arra	23.05	350	P	P	05 52 35.6	+0.4
	0.8nm,0.6s,baz=173,slow=9.9,SNR=12						
ZALV	Zalesovo Beam	25.92	0	P	P	05 53 02.1	+0.1
	0.6nm,0.3s,baz=199,slow=12,SNR=3.9						
SONM	Songino Array	26.09	35	P	P	05 53 04.1	+0.2
	1.0nm,0.6s,baz=227,slow=11,SNR=5.8						
BRTR	Keskin Array B	43.34	299	P	P	05 55 32.0	-0.4
	0.3nm,0.5s,baz=81,slow=8.9,SNR=2.3						
FINES	FINESS Array B	50.82	328	P	P	05 56 30.6	+0.3
	0.9nm,0.4s,baz=112,slow=6.7,SNR=17						
ARCES	ARCESS Array B	53.33	338	P	P	05 56 49.3	+0.4
	4.0nm,1.0s,baz=92,slow=8.1,SNR=4.9						
HFS	Hagfors	56.66	326	P	P	05 57 13.4	+0.3
	3.2nm,0.8s,baz=87,slow=8.8,SNR=2.3						
WRA	Warramunga Arr	67.75	129	P	P	05 58 27.7	-0.3
	0.7nm,0.6s,baz=322,slow=6.6,SNR=6.3						
ASAR	Alice Springs	70.03	132	P	P	05 58 42.0	-0.1
	0.3nm,0.5s,baz=315,slow=6.6,SNR=4.3						
TORD	Torodi Ar. Bea	77.71	278	P	P	05 59 27.0	-0.5
	0.2nm,0.5s,baz=61,slow=3.5,SNR=2.4						
ILAR	Eielson Array	79.30	20	P	P	05 59 34.8	-0.5
	0.3nm,0.6s,baz=316,slow=5.9,SNR=5.6						
KOWA	Kowa	82.08	282	P	P	05 59 52.3	+1.2
	1.3nm,0.7s,baz=56,slow=3.6,SNR=4.1						
YKA	Yellowknife Ar	88.52	9	P	P	06 00 21.5	-0.9
	0.1nm,0.7s,baz=332,slow=4.7,SNR=2.4						

*IDC **26** 05:51:51.7±1.5, 10.°80S×120.°12E, h0km, mb3.7/4, mb1 3.7/8, mb1mx3.5/49, mbtmp3.6/8, ML3.2/3, Error ellipse: s-maj=59.9km s-min=21.7km az=47.0*

ISC 26 05:51:56.5±1.1, 10.°92S±0.°09×120.°2E±0.°1, h35km, n8, σ1$46/10, mb3.8/4, Suma region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	3.47	79	Pn	Pn	05 52 48.2	+0.2
	4.2nm,0.3s,baz=284,slow=12,SNR=3.8						
BATI				Sn	Sn	05 53 27.1	-0.9
	1.7nm,0.3s,baz=11,slow=20,SNR=1.7						
FITZ	Fitzroy Crossi	8.86	144	Pn	Pn	05 54 01.9	-0.2
	0.2nm,0.3s,baz=339,slow=14,SNR=2.8						
FITZ				Sn	Sn	05 55 38.9	-2.0
	0.6nm,0.3s,baz=185,slow=22,SNR=12						
WRA	Warramunga Arr	16.30	125	Pn	Pn	05 55 42.9	0.0
	0.1nm,0.3s,baz=298,slow=13,SNR=1.8						
ASAR	Alice Springs	18.19	136	P	P	05 56 09.5	+3.1
	baz=315,slow=12,SNR=6.8						
SONM	Songino Array	59.77	349	P	P	06 01 57.3	-0.7
	0.7nm,0.6s,baz=164,slow=6.1,SNR=4.6						
MKAR	Makanchi Array	66.70	333	P	P	06 02 43.9	0.0
	0.4nm,0.7s,baz=140,slow=8.4,SNR=5.3						
KURBB	Kurchatov Arra	71.21	333	P	P	06 03 11.8	+0.1
	0.2nm,0.4s,baz=146,slow=5.6,SNR=2.8						
ZALV	Zalesovo Beam	71.25	339	P	P	06 03 11.4	-0.5
	0.6nm,0.5s,baz=134,slow=6.4,SNR=3.9						

*IDC **26** 05:54:48.9±1.2, 10.°68S×120.°16E, h0km, mb4.1/4, mb1 4.2/9, mb1mx3.8/43, mbtmp4.1/9, ML4.0/5, MS3.2/1, Ms1 3.2/1, ms1mx2.4/29, Error ellipse: s-maj=39.6km s-min=21.3km az=49.0*

ISC 26 05:54:53.0±0.9, 10.°85S±0.°08×120.°37E±0.°08, h35km, n11, σ3$42/15, mb4.2/4, Suma region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	3.30	79	Pn	Pn	05 55 44.6	+2.3
	26nm,0.3s,baz=252,slow=3.2,SNR=18						
BATI				Sn	Sn	05 56 23.5	+3.1
	18nm,0.3s,baz=16,slow=21,SNR=12						
KAPI	Kappang	5.83	354	Pn	Pn	05 56 16.1	-1.0
	2.0nm,0.3s,baz=112,slow=4.5,SNR=5.3						
KAPI				LR	LR	05 58 57.2	
	comp=Z,220nm,18.8s,baz=203,slow=44						
FITZ	Fitzroy Crossi	8.83	145	Pn	Pn	05 57 01.5	+3.2
	1.3nm,0.3s,baz=323,slow=11,SNR=8.6						
FITZ				Sn	Sn	05 58 36.1	-0.5
	1.4nm,0.3s,baz=187,slow=20,SNR=3.4						
SIJI	Sorong	14.68	48	Pn	Pn	05 58 17.1	-1.2
	1.1nm,0.3s,baz=241,slow=14,SNR=3.9						
WRA	Warramunga Arr	16.21	126	Pn	Pn	05 58 38.6	+0.3
	0.4nm,0.3s,baz=297,slow=13,SNR=13						
WRA				Sn	Sn	06 01 29.1	-8.1
	0.2nm,0.3s,baz=298,slow=24,SNR=3.0						
ASAR	Alice Springs	18.14	136	P	P	05 59 05.7	+3.3
	0.6nm,0.3s,baz=314,slow=12,SNR=32						
ASAR				S	Sn	06 02 18.1	-5.7
	0.1nm,0.3s,baz=310,slow=23,SNR=7.4						
SONM	Songino Array	59.73	349	P	P	06 04 54.0	-0.4
	1.7nm,0.6s,baz=166,slow=7.5,SNR=8.6						
MKAR	Makanchi Array	66.71	333	P	P	06 05 40.3	-0.2
	1.1nm,0.6s,baz=149,slow=7.4,SNR=13						
KURBB	Kurchatov Arra	71.21	333	P	P	06 06 08.2	-0.1
	0.7nm,0.6s,baz=142,slow=5.8,SNR=11						
ZALV	Zalesovo Beam	71.24	339	P	P	06 06 07.6	-0.8
	2.9nm,0.6s,baz=143,slow=4.2,SNR=11						
TORD	Torodi Ar. Bea	120.09	279	PKP	PKiKP	06 13 42.6	+1.3
	0.9nm,1.2s,baz=88,slow=3.1,SNR=1.9						

*IDC **26** 05:55:33.0±1.2, 10.°64S×120.°06E, h0km, mb4.1/4, mb1 4.2/7, mb1mx3.8/41, mbtmp4.2/7, ML4.0/3, Error ellipse: s-maj=61.0km s-min=24.5km az=57.0*

ISC 26 05:55:37.5±1.0, 10.°57S±0.°10×120.°6E±0.°1, h31km, n10, σ1$86/11, mb4.2/4, Suma region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	3.04	84	Sn	Sb	05 57 08.0	+0.2
	9.4nm,0.3s,baz=347,slow=21,SNR=6.3						
FITZ	Fitzroy Crossi	8.94	147	Pn	Pn	05 57 46.6	+1.9
	0.8nm,0.3s,baz=318,slow=9.9,SNR=4.7						
FITZ				Sn	Sn	05 59 20.4	-4.0
	1.0nm,0.3s,baz=174,slow=17,SNR=2.8						
SIJI	Sorong	14.33	48	Pn	P	05 59 04.8	-0.3
	1.4nm,0.3s,baz=288,slow=20,SNR=2.1						
WRA	Warramunga Arr	16.20	127	Pn	Pn	05 59 23.8	+0.7
	0.5nm,0.3s,baz=297,slow=13,SNR=5.9						
ASAR	Alice Springs	18.19	137	P	P	05 59 50.2	+2.2
	0.5nm,0.3s,baz=315,slow=12,SNR=8.3						
SONM	Songino Array	59.49	349	P	P	06 05 37.7	-0.1
	1.3nm,0.6s,baz=168,slow=8.5,SNR=5.9						
MKAR	Makanchi Array	66.56	332	P	P	06 06 24.2	-0.4
	1.1nm,0.6s,baz=142,slow=8.0,SNR=7.4						
ZALV	Zalesovo Beam	71.06	339	P	P	06 06 51.3	-1.1
	2.8nm,0.6s,baz=142,slow=5.1,SNR=8.5						
KURBB	Kurchatov Arra	71.06	333	P	P	06 06 51.7	-0.8
	0.6nm,0.6s,baz=142,slow=5.7,SNR=7.7						
TORD	Torodi Ar. Bea	120.27	279	PKP	PKiKP	06 14 27.1	+0.4
	0.7nm,0.8s,baz=87,slow=1.4,SNR=3.3						

*JMA **26** 05:56:30.9, 24.°88N×121.°96E, h35km, M2.2*
*TAP **26** 05:56:30.2, 24.°85N×122.°01E, h8km, ML3.1, B*

ISC 26 05:56:30.5±0.9, 24.°89N±0.°02×122.°02E±0.°02, h11km±5km, n62, σ0$56/84, 5C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGS		0.09	243	*i* P	Pg	05 56 32.6	-0.5
	baz=259						
EGS				S	Sg	05 56 34.2	-0.7
	baz=259						
TWB1	Santiao Chiao	0.13	347	⇑*i* P	Pg	05 56 34.0	+0.3
	baz=355						
TWB1				S	Sg	05 56 36.4	+0.5
	baz=355						
NTC	Toucheng	0.18	260	⇑*i* P	Pg	05 56 34.3	-0.1
	baz=270						
NTC				*e*S	Sg	05 56 37.1	0.0
	baz=270						
TIPB	Shuangxi	0.20	296	⇑*i* P	Pg	05 56 35.1	+0.3
	baz=304						
TIPB				S	Sg	05 56 38.3	+0.6
	baz=304						
ILA	Ilan	0.28	244	S	Sg	05 56 40.4	+0.4
	baz=250						
NWF	Wu-fen Shan	0.28	310	*e*P	Pb	05 56 37.1	-0.6
	baz=315						
NWF				S	Sb	05 56 42.0	-0.6
	baz=315						
WFSB	Wu-fen Shan	0.28	310	⇑P	Pb	05 56 37.1	-0.6
	baz=315						
WFSB				*e*S	Sb	05 56 41.9	-0.6
	baz=315						
TWC	Suao	0.32	210	⇑*i* P	Pg	05 56 36.3	-0.6
	baz=209						
TNOU	National Taiwa	0.35	320	*e*P	Pb	05 56 38.3	-0.4
	baz=323						
TNOU				S	Sb	05 56 43.5	-0.8
	baz=323						
TWE	Neicheng	0.36	243	P	Pg	05 56 37.4	-0.3
	baz=246						
NDS	Dongshan	0.37	228	*e*P	Pg	05 56 38.0	+0.1
	baz=232						
NDS				*e*S	Sb	05 56 43.9	-1.1
	baz=232						
TWA	M

NACB	**Ninganchiao**	**0.81**	**209**	P	**Pg**	**05 56 45.7**	**-0.4**
	baz=211						
NACB				*e*S	**Sg**	**05 56 56.9**	**+0.2**
	baz=211						
ETLH	**Xiulin Townshi**	**0.83**	**216**	*e*P	**Pg**	**05 56 46.5**	**-0.2**
	baz=228						
ETLH				*e*S	**Sg**	**05 56 58.0**	**+0.4**
	baz=228						
TWD	**Chiawan**	**0.89**	**206**	*e*P	**Pg**	**05 56 47.2**	**-0.5**
	baz=200						
LIOB	**Emei**	**0.94**	**256**	*e*P	**Pn**	**05 56 49.9**	**+0.1**
	baz=258						
LIOB				*e*S	**Sn**	**05 57 04.0**	**+0.7**
	baz=258						
SBCB	**Hsinchu**	**0.94**	**265**	*e*P	**Pn**	**05 56 50.0**	**+0.2**
	baz=286						
JYNG	**Yonagunijimaku**	**0.95**	**117**	P	**Pg**	**05 56 48.8**	**0.0**
JYNG				S	**Sg**	**05 57 00.9**	**-0.2**
FUSS	**Fushou**	**0.95**	**228**	*e*P	**Pg**	**05 56 48.7**	**-0.2**
	baz=221						
NSTT	**Nanjuang**	**0.96**	**255**	*e*P	**Pn**	**05 56 50.2**	**+0.2**
	baz=249						
NSTT				*e*S	**Sn**	**05 57 03.5**	**-0.1**
	baz=249						
TWT	**Tachien**	**0.99**	**231**	*e*P	**Pb**	**05 56 49.9**	**0.0**
	baz=226						
YOJ	**Yonaguni jima**	**0.99**	**115**	P	**Pg**	**05 56 49.4**	**-0.3**
YOJ				S	**Sg**	**05 57 03.1**	**+0.4**
YOJ	**Yonaguni jima**	**0.99**	**115**	*e*P	**Pg**	**05 56 49.4**	**-0.3**
	baz=114						
TDCB	**Techi**	**1.01**	**231**	*e*P	**Pb**	**05 56 50.4**	**+0.4**
	baz=226						
WHF	**Hehuan Shan**	**1.01**	**223**	*e*P	**Pg**	**05 56 49.9**	**-0.2**
	baz=225						
WHF				*e*S	**Sb**	**05 57 03.7**	**0.0**
	baz=225						
CHGB	**Renai**	**1.13**	**223**	*e*P	**Pg**	**05 56 51.7**	**-0.5**
	baz=214						
WHP	**Taichung City**	**1.15**	**238**	*e*P	**Pg**	**05 56 52.5**	**-0.2**
	baz=241						
ESL	**Shilin**	**1.19**	**207**	*e*P	**Pg**	**05 56 52.5**	**-1.0**
	baz=209						
OWD	**Renai**	**1.21**	**220**	*e*P	**Pg**	**05 56 52.7**	**-1.0**
	baz=223						
TWQ1	**Liyutan**	**1.25**	**245**	*e*P	**Pg**	**05 56 53.8**	**-0.9**
	baz=266						
VWDT	**VWDT**	**1.38**	**216**	*e*P	**Pn**	**05 56 56.2**	**+0.4**
	baz=218						
SMLT	**Sun Moon Lake**	**1.43**	**226**	*e*P	**Pg**	**05 56 58.7**	**+0.7**
	baz=219						
TYC	**Yuchr**	**1.44**	**228**	*e*P	**Pg**	**05 56 59.4**	**+1.2**
	baz=221						
HGSD	**Ruisui**	**1.49**	**202**	*e*P	**Pg**	**05 56 59.8**	**+0.6**
	baz=192						
WJS	**Zhushan**	**1.58**	**228**	*e*P	**Pn**	**05 56 59.0**	**+0.5**
	baz=223						
YULB	**Yu-li**	**1.63**	**204**	*e*P	**Pn**	**05 57 00.1**	**+0.9**
	baz=208						
IRIF	**Iriomote-Funau**	**1.65**	**109**	P	**Pn**	**05 56 59.1**	**-0.3**
ALS	**Alishan**	**1.76**	**219**	*e*P	**Pg**	**05 57 04.6**	**+0.2**
	baz=209						
CHN5	**Tsauling**	**1.77**	**224**	*e*P	**Pg**	**05 57 05.1**	**+0.5**
	baz=219						
HATJ	**Hateruma jima**	**1.82**	**117**	P	**Pn**	**05 57 01.7**	**-0.1**
ELDTW	**Lidau**	**1.92**	**209**	*e*P	**Pb**	**05 57 06.7**	**+1.0**
	baz=213						
JKRS	**Kuro-shima**	**1.92**	**109**	P	**Pn**	**05 57 03.1**	**-0.1**
JIJ	**Ishigaki jima**	**2.00**	**105**	P	**Pn**	**05 57 04.4**	**+0.1**

*NORS **26** 05:56:42.5±0.0,43°.39N×46°.24E,h14km,MPVA3.9*
*MOS **26** 05:56:43.5±0.0,43°.38N×46°.17E,h13km,MPVA3.7*
ISC 26 05:56:43.1±1.3,43°.42N±0'.04×46°.22E±0'.03,h5km±9km, n35,σ1ˢ35/61,7C-6D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.38**	**235**	*e*Pg	**Pg**	**05 56 50.5**	**+0.1**
GROC				*e*		05 56 55.0	
GROC				pmax	pmax		
	comp=Z,171nm,0.3s						
GROC				smax	smax		
	comp=E,252nm,0.6s						
GROC				smax	smax		
	comp=N,511nm,0.4s						
GROC				smax	smax		
	comp=N,423nm,0.4s						
GROC	**Groznyy**	**0.38**	**235**	*e*Pg	**Pb**	**05 56 51.4**	**-0.8**
GROC				*e*Sg	**Sb**	**05 56 58.1**	**-0.2**
DVE	**Vedeno**	**0.47**	**188**	*ce*PG	**Pb**	**05 56 52.9**	**-0.9**
DVE				*e*S	**Sg**	**05 56 57.9**	**-0.3**
DVE				pmax	pmax		
	comp=Z,52nm,0.5s						
DVE				smax	smax		
	comp=Z,157nm,0.5s						
DVE	**Vedeno**	**0.47**	**188**	*e*Pg	**Pb**	**05 56 53.0**	**-0.9**
DVE				*e*Sg	**Sb**	**05 57 00.4**	**-0.7**
DBC	**Dubki**	**0.60**	**132↓**	*e*PG	**Pn**	**05 56 56.8**	**-1.5**
DBC				*e*		05 57 06.7	
DBC				pmax	pmax		
	comp=Z,36nm,0.5s						
DBC				smax	smax		
	comp=N,160nm,0.6s						
DBC	**Dubki**	**0.60**	**132**	*e*Pg	**Pn**	**05 56 56.9**	**-1.4**
DBC				*e*Sg	**Sn**	**05 57 06.9**	**-1.6**
KRNR	**Karanay**	**0.78**	**139↑**	*e*PG	**Pn**	**05 56 59.4**	**-1.4**
KRNR				*e*		05 57 11.8	
KRNR				pmax	pmax		
	comp=Z,22nm,0.4s						
KRNR				smax	smax		
	comp=E,70nm,0.4s						
KRNR	**Karanay**	**0.78**	**139**	*e*Pg	**Pn**	**05 56 59.7**	**-1.1**
KRNR				*e*Sg	**Sn**	**05 57 11.8**	**-1.1**
BUJR	**Buynaksk**	**0.88**	**132↓**	*e*PG	**Pn**	**05 57 04.4**	**+2.2**
BUJR				*e*		05 57 17.4	
BUJR				pmax	pmax		
	comp=Z,58nm,0.3s						
BUJR				smax	smax		
	comp=N,239nm,0.6s						
ARKR	**Arakani**	**1.00**	**145↑**	*e*PG	**Pn**	**05 57 03.7**	**-0.1**
ARKR				*e*		05 57 19.0	
ARKR				pmax	pmax		
	comp=Z,45nm,0.3s						
ARKR				smax	smax		
	comp=N,60nm,0.3s						
ARKR	**Arakani**	**1.00**	**145**	*e*Pg	**Pn**	**05 57 03.9**	**+0.2**
ARKR				*e*Sg	**Sn**	**05 57 18.7**	**+0.5**
TRKR	**Terskaya**	**1.12**	**286**	*e*PG	**Pg**	**05 57 05.6**	**+1.0**
TRKR				*e*S	**Sn**	**05 57 22.7**	**+1.6**
TRKR	**Terskaya**	**1.12**	**286**	*e*Pg	**Pg**	**05 57 05.6**	**+1.0**
TRKR				*e*Sg	**Sn**	**05 57 22.7**	**+1.6**
GNBR	**Gunib**	**1.17**	**152↓**	*e*PG	**Pg**	**05 57 07.4**	**+1.9**
GNBR				*e*		05 57 24.4	
GNBR				pmax	pmax		
	comp=Z,29nm,0.5s						
GNBR				smax	smax		
	comp=N,93nm,0.5s						
GNBR	**Gunib**	**1.17**	**152**	*e*Pg	**Pg**	**05 57 07.5**	**+1.9**
GNBR				*e*Sg	**Sn**	**05 57 24.4**	**+2.0**
VLKR	**Vladikavkaz**	**1.19**	**252**	*de*PG	**Pg**	**05 57 06.7**	**+0.9**
VLKR				pmax	pmax		
	comp=Z,141nm,0.5s						
VLKR	**Vladikavkaz**	**1.19**	**252**	*e*Pg	**Pg**	**05 57 06.7**	**+0.9**
VLKR				*e*Sg	**Sn**	**05 57 24.0**	**+1.1**
BTKR	**Batakoyurt**	**1.22**	**268**	*e*PG	**Pg**	**05 57 06.7**	**+0.2**
BTKR				*e*S	**Sg**	**05 57 24.6**	**+2.3**
BTKR	**Batakoyurt**	**1.22**	**268**	*e*Pg	**Pg**	**05 57 06.7**	**+0.2**
BTKR				*e*Sg	**Sg**	**05 57 24.6**	**+2.3**
ARNR	**Ardon**	**1.43**	**261**	*e*Pg	**Pg**	**05 57 09.9**	**-0.6**
ARNR				*e*Sg	**Sg**	**05 57 31.1**	**+2.0**
LACR	**Lac**	**1.52**	**248**	*ce*PG	**Pn**	**05 57 09.9**	**-1.2**
LACR				pmax	pmax		
	comp=Z,50nm,0.3s						
LACR	**Lac**	**1.52**	**248**	*e*Pg	**Pb**	**05 57 11.0**	**-0.9**
LACR				*e*Sg	**Sg**	**05 57 30.8**	**-1.3**
STDR	**Stavd-Durt**	**1.57**	**269**	*e*PG	**Pg**	**05 57 12.6**	**-0.6**
STDR				*e*S	**Sg**	**05 57 35.7**	**+2.2**
STDR	**Stavd-Durt**	**1.57**	**269**	*e*Pg	**Pg**	**05 57 12.6**	**-0.6**
STDR				*e*Sg	**Sg**	**05 57 35.7**	**+2.2**
ZEI	**Tsey**	**1.81**	**250**	*d i*PN	**Pb**	**05 57 15.1**	**-1.7**
ZEI				pmax	pmax		
	comp=Z,48nm,0.2s						
ZEI	**Tsey**	**1.81**	**250**	*e*Pg	**Pb**	**05 57 15.1**	**-1.7**
ZEI				*e*Sg	**Sb**	**05 57 38.6**	**-1.2**
DIGR	**Digorskoe uzhe**	**2.00**	**256**	*e*PN	**Pb**	**05 57 18.2**	**-1.8**
DIGR				pmax	pmax		
	comp=Z,4.0nm,0.2s						
DIGR	**Digorskoe uzhe**	**2.00**	**256**	*e*Pg	**Pb**	**05 57 18.2**	**-1.8**
DIGR				*e*Sg	**Sb**	**05 57 43.6**	**-1.6**
AKT	**Akhty**	**2.24**	**149**	*e*PN	**Pg**	**05 57 25.0**	**-1.0**
AKT				*e*		05 57 29.0	
AKT				*e*		05 57 30.0	
AKT				*e*S	**Sg**	**05 57 56.5**	**+1.5**
AKT				*e*		05 58 02.5	
AKT				pmax	pmax		
	comp=Z,18nm,0.5s						
AKT				smax	smax		
	comp=E,48nm,0.3s						
AKT				smax	smax		
	comp=N,38nm,0.4s						
AKT				smax	smax		
	comp=E,41nm,0.3s						
KBZ	**Khabaz**	**2.43**	**278**	*de*PN	**Pn**	**05 57 24.0**	**+0.6**
SHA1	**Shidzhatmaz**	**2.61**	**278**	*ce*PN	**Pn**	**05 57 24.6**	**-1.4**
KIV	**Kislovodsk**	**2.62**	**283↑**	*e*PN	**Pn**	**05 57 26.5**	**+0.5**
KIV				*e*S	**Sb**	**05 58 02.3**	**-0.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GOF	**Gofitskoye**	**2.81**	**307↑**	*e*PN	**Pg**	**05 57 36.0**	**-0.9**
GOF				*e*S	**Sg**	**05 58 12.2**	**-1.0**
GOF				pmax	pmax		
	comp=Z,17nm,0.7s						
GOF				smax	smax		
	comp=N,41nm,0.8s						
GOF				smax	smax		
	comp=E,31nm,0.6s						
MNK	**Minsk**	**16.31**	**319**	*i* P	**Pn**	**06 00 31.7**	**-0.9**
	comp=E,2.0nm,0.9s						
MNK				*i* P	**Pn**	**06 00 31.7**	**-0.9**
	comp=N,26nm,1.0s						
MNK				*i* P	**Pn**	**06 00 31.7**	**-0.9**
	comp=Z,7.0nm,0.6s						
MNK				*i* PP	**PnPn**	**06 00 40.7**	**-0.7**
MNK				*i* PPP	PPP	06 00 48.3	
MNK				*i* S	**Sn**	**06 03 33.9**	**+0.2**
MNK				*i* SS	**SnSn**	**06 03 48.3**	**+1.7**
MNK				*i* SSS	SSS	06 04 01.9	
MNK				*i* LQ	LQ	06 05 22.5	
MNK				*i* LR	LR	06 06 35.7	
MNK				*i* LRM	MLR	06 07 42.1	
	comp=E,11nm,19.5s						
MNK				*i* LRM	MLR	06 07 42.1	
	comp=Z,61nm,22.1s						
MNK				*i* LRM	MLR	06 07 44.5	
	comp=N,79nm,20.4s						
FFC	**Flin Flon**	**78.54**	**342**	*i* P	**P**	**06 08 47.1**	**+2.0**

*IDC **26** 06:02:59.3±0.9,28°.41N×87°.17E,h0km,mb3.7/9, mb1 3.8/11,mb1mx3.6/45,mbtmp3.7/11,ML3.8/2,Error ellipse: s-maj=37.9km s-min=17.1km az=58.0*
ISC 26 06:03:00.6±0.9,28°.4N±0'.2×87°.2E±0'.2,h10km,n11, σ0ˢ75/11,mb3.7/9,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.62**	**130**	Pn	**Pn**	**06 06 27.3**	**-0.4**
	0.3nm,0.3s,baz=315,slow=13,SNR=1.3						
MKAR	**Makanchi Array**	**18.76**	**349**	P	**P**	**06 07 19.9**	**+0.1**
	0.1nm,0.3s,baz=163,slow=13,SNR=3.3						
KURBB	**Kurchatov Arra**	**23.15**	**346**	P	**P**	**06 08 07.3**	**+0.4**
	1.6nm,0.7s,baz=165,slow=10.0,SNR=10						
SONM	**Songino Array**	**24.47**	**32**	P	**P**	**06 08 18.9**	**-0.9**
	0.5nm,0.4s,baz=206,slow=9.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**25.59**	**357**	P	**P**	**06 08 29.9**	**+0.2**
	1.4nm,0.8s,baz=185,slow=11,SNR=4.0						
AKASG	**Malin Array Be**	**48.53**	**314**	P	**P**	**06 11 42.7**	**-0.9**
	0.1nm,0.3s,baz=89,slow=6.3,SNR=1.7						
FINES	**FINESS Array B**	**51.73**	**328**	P	**P**	**06 12 08.2**	**+0.4**
	0.7nm,0.6s,baz=60,slow=8.2,SNR=1.4						
ARCES	**ARCESS Array B**	**53.85**	**337**	P	**P**	**06 12 24.5**	**+1.1**
	2.7nm,1.0s,baz=101,slow=7.4,SNR=1.2						
WRA	**Warramunga Arr**	**66.22**	**131**	P	**P**	**06 13 49.5**	**+0.5**
	0.4nm,0.3s,baz=328,slow=6.7,SNR=8.9						
ASAR	**Alice Springs**	**68.59**	**134**	P	**P**	**06 14 04.7**	**+0.8**
	0.9nm,0.6s,baz=319,slow=6.2,SNR=14						
TORD	**Torodi Ar. Bea**	**79.96**	**280**	P	**P**	**06 15 10.2**	**-0.3**
	0.6nm,0.9s,baz=61,slow=4.6,SNR=4.3						

*IDC **26** 06:03:33.6±0.9,28°.49N×87°.28E,h0km,mb3.8/12, mb1 3.9/13,mb1mx3.7/41,mbtmp3.8/13,ML3.5/1,MS2.8/4, Ms1 2.9/4,ms1mx2.5/44,Error ellipse: s-maj=26.9km s-min=17.3km az=48.0*
ISC 26 06:03:34.8±0.9,28°.4N±0'.1×87°.3E±0'.1,h10km,n16, σ0ˢ89/14,mb3.9/12,MS2.9/3,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.57**	**130**	Pn	**P**	**06 07 06.5**	**-1.3**
	0.2nm,0.3s,baz=327,slow=6.5,SNR=1.6						
CMAR				LR	LR	06 13 48.1	
	comp=Z,25nm,19.4s,baz=160,slow=42						
MKAR	**Makanchi Array**	**18.75**	**349**	P	**P**	**06 07 51.9**	**-2.0**
	0.1nm,0.3s,baz=152,slow=13,SNR=2.5						
KURBB	**Kurchatov Arra**	**23.14**	**346**	P	**P**	**06 08 40.5**	**-0.6**
	2.2nm,0.6s,baz=161,slow=10,SNR=3.8						
SONM	**Songino Array**	**24.40**	**32**	P	**P**	**06 08 53.7**	**+0.3**
	1.2nm,0.7s,baz=224,slow=8.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**25.56**	**357**	P	**P**	**06 09 03.1**	**-0.6**
	1.8nm,0.7s,baz=183,slow=12,SNR=6.5						
ZALV				LR	LR	06 21 03.6	
	comp=Z,11nm,21.1s,baz=72,slow=41						
AKTO	**Aktyubinsk**	**31.20**	**323**	LR	LR	06 24 46.0	
	comp=Z,26nm,18.2s,baz=115,slow=41						
KSRS	**Korea Array**	**35.04**	**64**	LR	LR	06 25 45.9	
	comp=Z,32nm,18.1s,baz=166,slow=38						
USRK	**Ussuriysk Ar.**	**38.80**	**54**	P	**P**	**06 11 00.0**	**+0.3**
	1.7nm,0.5s,baz=257,slow=9.1,SNR=6.0						
MJAR	**Matsushiro Arr**	**43.28**	**66**	P	**P**	**06 11 37.2**	**+0.4**
	0.8nm,0.7s,baz=278,slow=13,SNR=4.4						
AKASG	**Malin Array Be**	**48.57**	**314**	P	**P**	**06 12 18.1**	**-0.1**
	0.7nm,0.5s,baz=87,slow=6.1,SNR=1.5						
FINES	**FINESS Array B**	**51.75**	**328**	P	**P**	**06 12 42.5**	**+0.3**
	0.9nm,0.6s,baz=126,slow=9.7,SNR=3.8						
ARCES	**ARCESS Array B**	**53.86**	**337**	P	**P**	**06 12 58.6**	**+0.9**
	4.5nm,1.1s,baz=108,slow=7.7,SNR=2.0						
GERES	**GERESS Array B**	**58.68**	**312**	P	**P**	**06 13 32.4**	**-0.1**
	0.5nm,0.8s,baz=59,slow=8.4,SNR=2.2						
WRA	**Warramunga Arr**	**66.17**	**131**	P	**P**	**06 14 23.4**	**+0.6**
	1.0nm,0.5s,baz=327,slow=6.7,SNR=8.3						
ASAR	**Alice Springs**	**68.55**	**134**	P	**P**	**06 14 38.8**	**+0.8**
	1.6nm,0.7s,baz=318,slow=6.3,SNR=12						
TORD	**Torodi Ar. Bea**	**80.05**	**280**	P	**P**	**06 15 45.5**	**+0.2**
	0.4nm,0.5s,baz=63,slow=4.9,SNR=5.0						

IDC 26 06:07:15.4±3.3,10°.61S×120°.21E,h0km,mb3.4/1, mb1 3.6/3,mb1mx3.3/36,mbtmp3.4/3,ML3.3/2,Error ellipse: s-maj=265.3km s-min=32.1km az=49.0,Suma region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.47**	**126**	Pn	**Pn**	**06 11 06.7**	**-1.5**
	0.1nm,0.3s,baz=297,slow=13,SNR=6.2						
WRA				Sn	Sn	06 14 00.1	-12
	0.1nm,0.3s,baz=286,slow=27,SNR=2.0						
ASAR	**Alice Springs**	**18.41**	**137**	P	P	06 11 33.1	+0.7
	0.1nm,0.3s,baz=315,slow=12,SNR=13						
MKAR	**Makanchi Array**	**66.43**	**333**	P	P	06 18 06.5	0.0
	0.2nm,0.5s,baz=147,slow=8.1,SNR=3.0						

*IDC **26** 06:16:10.4±1.1,27°.75N×85°.54E,h0km,mb3.8/9, mb1 4.0/11,mb1mx3.6/47,mbtmp3.8/11,ML4.3/2,Error ellipse: s-maj=36.1km s-min=18.1km az=54.0*
ISC 26 06:16:12.3±1.1,27°.8N±0'.2×85°.5E±0'.2,h10km,n11, σ0ˢ76/11,mb3.9/9,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.45**	**124**	Pn	**Pn**	**06 19 51.4**	**+1.0**
	0.5nm,0.3s,baz=313,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**19.15**	**353**	P	**P**	**06 20 35.9**	**+0.2**
	0.7nm,0.3s,baz=176,slow=11,SNR=24						
KURBB	**Kurchatov Arra**	**23.42**	**349**	P	**P**	**06 21 22.2**	**+0.8**
	0.9nm,0.7s,baz=168,slow=9.9,SNR=12						
GEYT	**Alibeck**	**25.05**	**301**	P	**P**	**06 21 36.9**	**+0.1**
	1.2nm,0.4s,baz=102,slow=6.1,SNR=2.3						
SONM	**Songino Array**	**25.80**	**34**	P	**P**	**06 21 43.1**	**-0.4**
	1.7nm,0.5s,baz=216,slow=10,SNR=7.5						
ZALV	**Zalesovo Beam**	**26.15**	**359**	P	**P**	**06 21 46.2**	**-0.3**
	1.0nm,0.3s,baz=180,slow=10,SNR=7.3						
FINES	**FINESS Array B**	**51.45**	**328**	P	**P**	**06 25 16.3**	**-1.1**
	1.4nm,0.8s,baz=116,slow=8.7,SNR=7.4						
ARCES	**ARCESS Array B**	**53.85**	**338**	P	**P**	**06 25 35.4**	**+0.3**
	2.2nm,0.8s,baz=98,slow=8.7,SNR=4.9						
GERES	**GERESS Array B**	**57.94**	**312**	P	**P**	**06 26 05.5**	**+0.6**
	0.1nm,0.4s,baz=72,slow=6.3,SNR=1.7						
WRA	**Warramunga Arr**	**66.95**	**130**	P	**P**	**06 27 04.7**	**-0.7**
	0.7nm,0.5s,baz=323,slow=6.5,SNR=8.0						
ASAR	**Alice Springs**	**69.25**	**133**	P	**P**	**06 27 19.1**	**-0.7**
	0.5nm,0.7s,baz=316,slow=6.5,SNR=2.1						

IDC 26 06:29:36.8±2.2,10°.46S×120°.47E,h0km,mb3.5/1, mb1 3.7/3,mb1mx3.5/21,mbtmp3.5/3,ML3.2/2,Error ellipse: s-maj=70.6km s-min=28.7km az=39.0,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.15**	**86**	Pn	Pn	06 30 27.9	+0.1
	baz=265,slow=6.6						
WRA	**Warramunga Arr**	**16.36**	**127**	Pn	Pn	06 33 26.6	-1.5
	0.1nm,0.3s,baz=300,slow=13,SNR=3.2						
WRA				Sn	Sn	06 36 14.1	-16
	0.0nm,0.3s,baz=303,slow=21,SNR=2.3						
ASAR	**Alice Springs**	**18.35**	**137**	P	P	06 33 53.6	+0.5
	0.1nm,0.3s,baz=318,slow=13,SNR=8.2						
MKAR	**Makanchi Array**	**66.41**	**332**	P	P	06 40 27.7	0.0
	0.3nm,0.7s,baz=138,slow=7.5,SNR=4.8						

IDC 26 06:29:56.9±4.0,27°.71N×85°.55E,h0km,mb3.5/2, mb1 3.6/3,mb1mx3.2/32,mbtmp3.4/3,ML3.4/1,MS3.3/4, Ms1 3.3/4,ms1mx2.7/42,Error ellipse: s-maj=121.8km s-min=36.1km az=75.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.22**	**353**	P	P	06 34 22.3	-0.2
	0.1nm,0.3s,baz=170,slow=11,SNR=5.5						
SONM	**Songino Array**	**25.84**	**33**	P	P	06 35 30.3	+0.3
	0.3nm,0.4s,baz=207,slow=9.1,SNR=2.5						
PSI	**Prapat**	**27.88**	**150**	LR	LR	06 47 55.3	
	comp=Z,43nm,20.4s,baz=107,slow=39						
JHJ	**Hachijo jima 2**	**46.66**	**69**	LR	LR	06 57 18.3	
	comp=Z,25nm,18.9s,baz=222,slow=35						
ASAJ	**Asahikawa**	**48.07**	**54**	LR	LR	07 00 59.8	
	comp=Z,71nm,20.6s,baz=35,slow=39						
TIXI	**Tiksi**	**49.98**	**16**	LR	LR	07 00 34.1	
	comp=Z,30nm,20.3s,baz=225,slow=37						
WRA	**Warramunga Arr**	**66.88**	**130**	P	P	06 40 51.0	-0.1
	0.6nm,1.1s,baz=323,slow=6.6,SNR=2.7						

*IDC **26** 06:42:01.2±1.6,10°.71S×120°.15E,h0km,mb3.7/3, mb1 3.7/7,mb1mx3.5/41,mbtmp3.6/7,ML3.4/4,Error ellipse: s-maj=59.3km s-min=22.1km az=48.0*
ISC 26 06:42:05.9±1.1,10°.64S±0'.09×120°.70E±0'.09,h31km,n7, σ2ˢ64/11,mb3.9/3,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.94**	**82**	Pn	**Pb**	**06 42 57.1**	**-0.7**
	9.6nm,0.3s,baz=310,slow=1.2,SNR=6.5						
BATI				Sn	**Sb**	**06 43 35.3**	**+2.0**
	5.9nm,0.3s,baz=2.3,slow=20,SNR=6.8						
FITZ	**Fitzroy Crossi**	**8.82**	**148**	Pn	**Pn**	**06 44 14.6**	**+3.2**
	0.4nm,0.3s,baz=325,slow=11,SNR=7.6						
FITZ				Sn	**Sn**	**06 45 48.2**	**-1.6**
	0.7nm,0.3s,baz=190,slow=20,SNR=8.4						
WRA	**Warramunga Arr**	**16.07**	**127**	Pn	**P**	**06 45 51.8**	**-1.1**
	0.1nm,0.3s,baz=298,slow=13,SNR=4.6						
WRA				Sn	**Sn**	**06 48 43.8**	**-3.4**
	0.1nm,0.3s,baz=299,slow=27,SNR=1.5						
ASAR	**Alice Springs**	**18.06**	**138**	P	**P**	**06 46 17.9**	**+3.0**
	0.1nm,0.3s,baz=316,slow=12,SNR=8.4						
ASAR				S	**Sn**	**06 49 31.5**	**-3.9**
	0.1nm,0.3s,baz=305,slow=22,SNR=2.0						
SONM	**Songino Array**	**59.59**	**349**	P	**P**	**06 52 06.9**	**0.0**
	0.4nm,0.4s,baz=166,slow=7.7,SNR=2.0						
MKAR	**Makanchi Array**	**66.68**	**332**	P	**P**	**06 52 52.6**	**-1.2**
	0.3nm,0.7s,baz=149,slow=7.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**71.17**	**339**	P	**P**	**06 53 20.5**	**-1.0**
	0.4nm,0.4s,baz=144,slow=5.2,SNR=3.8						

*IDC **26** 06:46:42.9±1.6,10°.63S×120°.14E,h0km,mb3.8/3, mb1 3.8/6,mb1mx3.6/47,mbtmp3.8/6,ML3.7/3,Error ellipse: s-maj=60.5km s-min=23.6km az=48.0*
ISC 26 06:46:47.4±1.1,10°.63S±0'.10×120°.70E±0'.09,h31km,n7, σ2ˢ79/11,mb3.9/3,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**2.94**	**82**	Pn	**Pb**	**06 47 38.8**	**-0.4**
	9.6nm,0.3s,baz=266,slow=3.0,SNR=6.4						
BATI				Sn	**Sb**	**06 48 15.9**	**+1.1**
	8.5nm,0.3s,baz=37,slow=20,SNR=5.5						
FITZ	**Fitzroy Crossi**	**8.83**	**148**	Pn	**Pn**	**06 48 55.9**	**+2.9**
	0.4nm,0.3s,baz=323,slow=9.9,SNR=8.0						
FITZ				Sn	**Sn**	**06 50 28.6**	**-3.0**
	1.6nm,0.3s,baz=163,slow=21,SNR=11						
WRA	**Warramunga Arr**	**16.08**	**127**	Pn	**Pn**	**06 50 32.8**	**+1.4**
	0.1nm,0.3s,baz=299,slow=13,SNR=2.6						
WRA				Sn	**Sn**	**06 53 25.9**	**-2.9**
	0.1nm,0.3s,baz=296,slow=23,SNR=2.9						
ASAR	**Alice Springs**	**18.07**	**138**	P	**P**	**06 51 00.2**	**+3.7**
	0.3nm,0.3s,baz=312,slow=12,SNR=11						
ASAR				S	**Sn**	**06 54 13.0**	**-4.1**
	0.1nm,0.3s,baz=300,slow=20,SNR=4.4						
SONM

mb5.8/80,Ms7.2/93,Ms7 7.1/86

IDC ***26*** *07:09:07.1±0.3,27.7°.77N×86.0°.05E,h0km,mb5.7/44, mb1 5.7/46,mb1mx5.7/47,mbtmp5.7/46,ML5.2/2,MS6.6/52, Ms1 6.6/52,ms1mx6.4/62,Error ellipse: s-maj=10.7km s-min=8.9km az=44.0*

MOS ***26*** *07:09:08.9±0.9,27.7°.77N×86.0°.01E,h25km,mb6.6/108, MS6.9/90,Error ellipse: s-maj=5.2km s-min=3.0km az=115.8*

NEIC ***26*** *07:09:09.8,27.7°.76N×85.8°.98E,h30km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.78; Mθθ=1.06; Mφφ=-0.28; Mrθ=6.10; Mθφ=-1.76; Mφr=-1.58; Fault plane solution: M₀6.61000×10¹⁸ NP1:φs282.97000°, δ84.43000°,λ=-101.14000°. NP2:φs166.72000°, δ12.44000°,λ=-26.79000°. Principal axes: T 7.0689, Plg38.0000°, Azm23.0000°; N -1.0345, Plg11.0000°, Azm284.0000°; P -6.0344, Plg49.0000°, Azm181.0000°;*

NEIC ***26*** *07:09:10.7±1.7,27.7°.75N±0.07×86.0°.02E±0.06,h23km±2km, mb6.7/349,Ms_20 7.0/905,Mwb6.5/115,Mww6.7, Mwc6.8(GCMT) Error ellipse: s-maj=9.9km s-min=7.6km az=175.0*

NDI ***26*** *07:09:10.5±3.7,27.6°.68N×85.9°.91E,h10km,mb6.7,ML6.4, mb6.7(NEIC)*

DMN ***26*** *07:09:10.5±0.1,27.7°.75N×86.0°.04E,h2km,Ml6.9/7,Error ellipse: s-maj=9999.9km s-min=9999.9km az=0.0*

DNK ***26*** *07:09:16.2±1.9,27.8°.85N×85.8°.89E,h62km±44km,mb6.6, Ms7.1*

GCMT ***26*** *07:09:19.7±0.0,27.5°.56N×85.7°.95E,h21km,MW6.7/176, Moment Tensor Solution. s169,c440; s176,c774; Duration: 58s4 Moment tensor: Scale 10¹⁹Nm; Mrr0.60±.00; Mθθ-0.67±.00; Mφφ0.07±.00; Mrθ1.20±.02; Mθφ0.20±.00; Mφr-0.23±.01; Best double couple: M₀1.39000×10¹⁹ NP1:φs289.00000°,δ14.00000°, λ98.00000°. NP2:φs101.00000°,δ76.00000°,λ88.00000°. Principal axes: T 1.3280, Plg59.0000°, Azm9.0000°; N 0.1250, Plg2.0000°, Azm102.0000°; P -1.4520, Plg31.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *07:09:20,27.39N×85.86E,h26km,Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.53; Mθθ-0.61; Mφφ0.08; Mrθ1.30; Mθφ0.16; Mφr-0.24; Fault plane solution: M₀1.46000×10¹⁹ NP1:φs285.00000°, δ12.00000°,λ95.00000°. NP2:φs100.00000°,δ78.00000°, λ89.00000°. Principal axes: T 1.3938, Plg57.0000°, Azm9.0000°; N 0.1159, Plg1.0000°, Azm101.0000°; P -1.5097, Plg33.0000°, Azm191.0000°;*

NEIC ***26*** *07:09:21,27.56N×85.96E,h17km,Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.49; Mθθ-0.61; Mφφ0.12; Mrθ1.65; Mθφ0.20; Mφr-0.23; Fault plane solution: M₀1.77000×10¹⁹ NP1:φs296.00000°, δ10.00000°,λ108.00000°. NP2:φs98.00000°,δ81.00000°, λ87.00000°. Principal axes: T 1.6812, Plg54.0000°, Azm4.0000°; N 0.1637, Plg3.0000°, Azm98.0000°; P -1.8449, Plg35.0000°, Azm191.0000°;*

ISC 26 07:09:09.3±0.2,27.74N±0.02×85.98E±0.02,h13km±1km, h13km:pP-P,n2277,σ1s84/2293,mb6.6/443,MS7.0/629, 787C-128D,Fault plane solution: NP1:φs115.06959°, δ56.40285°,λ74.07244°. **NP2:**φs322.35098°,δ36.77704°, λ112.44466°. **Principal axes:** T Plg73.2656°, Azm342.6992°; N Plg13.2134°, Azm124.0433°; P Plg10.0842°, Azm216.4364°; **Nepal**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.20**	**333**	*e*Pg		**Pb**		**07 09 15.0**	**0.0**
JIRN	**Jiri**	**0.20**	**112**	*e*Pg		**Pg**		**07 09 14.4**	**+0.3**
PKI	**Pulchoki**	**0.53**	**252**	*e*Pg		**Pb**		**07 09 21.7**	**+1.0**
PKIN	**Phulchoki**	**0.54**	**253**	*e*Pg		**Pb**		**07 09 21.8**	**+1.0**
KKN	**Kakani**	**0.62**	**275**	*e*Pg		**Pb**		**07 09 23.0**	**+0.8**
DMN	**Daman**	**0.78**	**261**	*e*Pg		**Pn**		**07 09 26.0**	**-0.3**
RAMN	**Ramite**	**0.96**	**145**	*e*Pg		**Pg**		**07 09 27.2**	**-0.7**
GKN	**Gorkha**	**1.22**	**283**	*e*Pg		**Pg**		**07 09 33.7**	**+0.9**
ODAN	**Odare**	**1.53**	**124**	*e*Pg		**Pb**		**07 09 38.0**	**+0.4**
ODAN				*e*Sg		**Sb**		**07 09 57.7**	**+0.7**
TAPN	**Taplejung**	**1.58**	**104**	*e*Pg		**Pg**		**07 09 40.2**	**+0.4**
DANN	**Dangsing**	**2.05**	**288**	*e*Pg		**Pg**		**07 09 49.3**	**+0.5**
KOLN	**Koldanda**	**2.11**	**271**	*e*Pg		**Pg**		**07 09 50.8**	**+1.0**
KOLN				*e*Sg		**Sg**		**07 10 18.5**	**+1.3**
GTK	**Tadong**	**2.37**	**100**	*e*P		**Pb**		**07 09 52.9**	**+1.0**
GTK				IAML				07 10 37.9	
	comp=E,300μm,0.7s								
PYUN	**Piuthan**	**2.67**	**278**	*e*Pg		**Pg**		**07 10 01.1**	**+0.6**
HARN	**Harre**	**3.87**	**281**	*e*Pn		**Pn**		**07 10 10.5**	**+1.9**
HARN				*e*Sn		**Sn**		**07 10 53.6**	**-0.3**
	comp=E,108μm,0.4s								
BHMN	**Bhimchula**	**3.87**	**285**	*e*Pn		**Pn**		**07 10 11.1**	**+2.3**
BHMN				*e*Sn		**Sn**		**07 10 53.6**	**-0.7**
BOK	**Bokaro**	**3.93**	**181**	*e*P		**Pn**		**07 10 11.8**	**+2.5**
BOK				*e*S		**Sn**		**07 10 53.3**	**-1.9**
BOK				IAML				07 11 22.4	
	comp=E,76μm,1.0s								
GBAN	**Gaibana**	**3.96**	**285**	*e*Pn		**Pn**		**07 10 11.6**	**+1.6**
GBAN				*e*Sn		**Sn**		**07 10 56.1**	**-0.4**
	comp=E,89μm,0.5s								
GNKN	**Gaynekanda**	**4.20**	**283**	*e*Pn		**Pn**		**07 10 14.8**	**+1.6**
GNKN				*e*Sn		**Sn**		**07 11 01.3**	**-0.8**
	comp=E,149μm,0.7s								
PUSN	**Pusma**	**4.30**	**286**	*e*Pn		**Pn**		**07 10 16.3**	**+1.7**
PUSN				*e*Sn		**Sn**		**07 11 04.0**	**-0.7**
	comp=E,81μm,0.6s								
BADN	**Badegauja**	**4.36**	**284**	*e*Pn		**Pn**		**07 10 17.1**	**+1.7**
BADN				*e*Sn		**Sn**		**07 11 05.0**	**-1.2**
	comp=E,40μm,0.4s								
BAYN	**Bayana**	**4.54**	**293**	*e*Pn		**Pn**		**07 10 19.9**	**+1.8**
BAYN				*e*Sn		**Sn**		**07 11 09.7**	**-1.2**
	comp=E,87μm,0.5s								
GHAN	**Ghanteswor**	**4.92**	**288**	*e*Pn		**Pn**		**07 10 24.6**	**+1.3**
GHAN				*e*Sn		**Sn**		**07 11 18.6**	**-1.6**
	comp=E,24μm,0.4s								
LSA	**Lhasa**	**4.95**	**65**	Pn		**Pn**		**07 10 26.5**	**+2.8**
LSA				LR		LR			
	comp=E,881μm,6.4s								
LSA				LR		LR			
	comp=E,885μm,11.4s								
LSA				LR		LR			
	comp=E,1179μm,11.4s								
LSA	**Lhasa**	**4.95**	**65**	P		**Pn**		**07 10 25.7**	**+2.0**
LSA	**Lhasa**	**4.95**	**65**	P		**Pn**		**07 10 26.2**	**+2.5**
LSA	**Lhasa**	**4.95**	**65**	Pn		**Pn**		**07 10 26.2**	**+2.5**
SHL	**Shillong**	**5.71**	**111**	P		**Pn**		**07 10 33.7**	**-0.2**
SHL	**Shillong**	**5.71**	**111**	*e*P		**Pn**		**07 10 34.6**	**+0.7**
SHL				IAML				07 12 21.1	
	comp=N,89μm,0.8s								
SHL				IAML				07 12 25.8	
	comp=E,88μm,0.8s								
SHL	**Shillong**	**5.71**	**111**	Pn		**Pn**		**07 10 33.7**	**-0.2**
AGT	**Agartala**	**6.11**	**128**	*e*P		**Pn**		**07 10 42.1**	**+2.9**
AGT				IAML				07 12 50.3	
	comp=N,82μm,0.8s								
BELO	**BELONIA**	**6.66**	**131**	*e*P		**Pn**		**07 10 50.8**	**+3.9**
BELO				*e*S		**Sn**		**07 12 01.6**	**-1.0**
ITAN	**ITANAGAR**	**6.91**	**93**	*e*P		**Pn**		**07 10 51.1**	**+0.9**
ZIRO	**ZIRO**	**6.99**	**90**	*e*P		**Pn**		**07 10 52.4**	**+0.9**
DDI	**Dehra Dun**	**7.40**	**292**	*e*P		**Pn**		**07 11 00.1**	**+3.0**
KOHI	**KOHIMA**	**7.54**	**104**	*e*P		**Pn**		**07 10 59.2**	**+0.1**
KOHI				IAML				07 13 22.8	
	comp=E,89μm,1.0s								
IMP	**Imphal**	**7.71**	**110**	*e*P		**Pn**		**07 11 01.4**	**0.0**
IMP				*e*P		**Sn**		**07 12 32.8**	**+4.1**
IMP				IAML				07 12 43.4	
	comp=E,34μm,1.2s								
IMP				IAML				07 12 44.0	
	comp=N,27μm,1.0s								
MOKO	**MOKOCHONG**	**7.74**	**99**	*e*P		**Pn**		**07 11 01.8**	**-0.1**
MOKO				*e*S		**Sn**		**07 12 26.9**	**-2.6**
MOKO				IAML				07 12 40.6	
	comp=N,47μm,0.5s								
MOKO				IAML				07 12 41.4	
	comp=E,46μm,0.7s								
SMLA	**Simla**	**8.39**	**296**	*e*P		**Pn**		**07 11 11.1**	**+0.4**
SMLA				*e*S		**Sn**		**07 12 40.9**	**-4.3**
SMLA				IAML				07 12 53.4	
	comp=E,69μm,0.7s								
SMLA				IAML				07 12 53.9	
	comp=N,48μm,1.0s								
LKP	**Lekhapani**	**8.77**	**90**	*e*P		**Pn**		**07 11 15.9**	**+0.1**
LKP				IAML				07 13 58.2	
	comp=N,60μm,1.3s								
BHPL	**Bhopal**	**8.93**	**242**	*e*P		**Pn**		**07 11 15.7**	**-2.4**
BHPL				IAML				07 13 04.2	
	comp=N,14μm,0.5s								
BHPL				IAML				07 13 12.9	
	comp=E,12μm,0.3s								
DHRM	**DHARAMSHALA**	**9.52**	**301**	*e*P		**Pn**		**07 11 26.1**	**-0.2**
DHRM				*e*S		**Sn**		**07 13 08.2**	**-5.1**
DHRM				IAML				07 13 16.0	
	comp=N,39μm,0.8s								
DHRM				IAML				07 13 20.0	
	comp=E,39μm,0.6s								
THN	**Thein Dam**	**10.04**	**300**	*e*P		**Pn**		**07 11 33.5**	**+0.3**
THN				*e*S		**Sn**		**07 13 23.0**	**-2.8**
AJM	**Ajmer**	**10.18**	**266**	⇑*i*P		**Pn**		**07 11 34.0**	**-1.2**
AJM				*i*S		**Sn**		**07 13 26.0**	**-3.2**
HYB	**Hyderabad**	**12.35**	**215**	*i*P		**Pn**		**07 12 02.0**	**-2.9**
	comp=E,700nm,1.0s								
HYB				*e*S		**Sn**		**07 14 25.0**	**+2.6**
CHCP	**Chirah Chowk**	**12.43**	**301**	P		**Pn**		**07 12 03.6**	**-2.3**
NIL	**Nilore**	**12.43**	**301**	P		**Pn**		**07 12 04.1**	**-1.9**
NIL	**Nilore**	**12.43**	**301**	Pn		**Pn**		**07 12 04.1**	**-1.9**
NIL	**Nilore**	**12.43**	**301**	⇑P		**Pn**		**07 12 03.7**	**-2.3**
CEP	**Cherat**	**13.53**	**300**	P		**Pn**		**07 12 17.5**	**-3.5**
CEP				S		**Sn**		**07 14 47.0**	**-4.3**
KSH	**Kashi**	**14.39**	**327**	⇑*i*P		**Pn**		**07 12 28.5**	**-4.3**
KSH				pP		P		07 12 36.0	-3.8
KSH				S		Sn		07 15 03.3	-9.0
KSH				sS		S		07 15 14.0	-18
KSH				pmax		pmax			
	comp=E,1μm,1.2s								
KSH				pmax		pmax			
	comp=E,28μm,3.6s								
KSH				LR		LR			
	comp=E,383μm,8.5s								
KSH				LR		LR			
	comp=E,634μm,9.7s								
KSH				LR		LR			
	comp=E,436μm,7.6s								
POO	**Poona**	**14.43**	**233**	*e*P		**Pn**		**07 12 29.8**	**-3.6**
POO				IAmb		IAmb		07 12 39.9	
	comp=E,2μm,0.9s								
MHMT	**Maesarieng**	**14.54**	**128**	P		**Pn**		**07 12 31.9**	**-3.0**
	comp=Z,25μmcomp=Z,2μm,1.3s								
CM33	**Chiang Mai Arr**	**14.85**	**124**	P		**Pn**		**07 12 36.0**	**-3.1**
CHTO	**Chiang Mai**	**14.85**	**124**	P		**Pn**		**07 12 37.5**	**-1.5**
CHTO	**Chiang Mai**	**14.85**	**124**	Pn		**Pn**		**07 12 37.5**	**-1.5**
CHTO	**Chiang Mai**	**14.85**	**124**	P		**Pn**		**07 12 38.0**	**-1.0**
CHTO				P		**Pn**		**07 12 38.0**	**-1.0**
CHTO	**Chiang Mai**	**14.85**	**124**	⇑P		**Pn**		**07 12 35.8**	**-3.3**
CMMT	**Chiang Mai**	**14.85**	**124**	P		**Pn**		**07 12 35.0**	**-4.1**
	comp=Z,35μmcomp=Z,11μmcomp=Z,823nm,1.2s								
CM32	**Chiang Mai Arr**	**14.88**	**125**	P		**Pn**		**07 12 37.0**	**-2.5**
CM34	**Chiang Mai Arr**	**14.98**	**123**	P		**Pn**		**07 12 38.0**	**-2.8**
CM15	**Chiang Mai Arr**	**15.06**	**125**	P		**Pn**		**07 12 39.8**	**-2.2**
	comp=Z,503nmcomp=Z,7μmcomp=Z,1μm,0.8s								
CM13	**Chiang Mai Arr**	**15.07**	**125**	P		**Pn**		**07 12 39.0**	**-3.0**
	comp=Z,464nmcomp=Z,9μmcomp=Z,1μm,0.9s								
CM31	**Chiang Mai Arr**	**15.07**	**125**	P		**Pn**		**07 12 40.0**	**-2.1**
	comp=Z,44μmcomp=Z,236μmcomp=Z,19μm,1.0s								
CM31	**Chiang Mai Arr**	**15.07**	**125**			**Pn**		**07 12 40.4**	**-1.6**
CM31	**Chiang Mai Arr**	**15.07**	**125**	P		**Pn**		**07 12 40.6**	**-1.5**
	SNR=306								
CM31				P		**Pn**		**07 12 40.6**	**-1.5**
	SNR=306								
CM31				P		**Pn**		**07 12 40.6**	**-1.5**
	SNR=306								
CMAR	**Chiang Mai Arr**	**15.07**	**125**	Pn		**Pn**		**07 12 40.0**	**-2.0**
	comp=Z,1.2nm,0.3s,baz=303,slow=13,SNR=128								
CMAR				LR		LR		07 20 37.9	
	comp=Z,82μm,18.3s,baz=352,slow=46								
CMAR				ScP		**ScP**		**07 21 21.9**	**-1.8**
	comp=Z,0.8nm,0.3s,baz=302,slow=5.2,SNR=3.1								
CMAR	**Chiang Mai Arr**	**15.07**	**125**			**Pn**		**07 12 39.4**	**-2.7**
CM35	**Chiang Mai Arr**	**15.09**	**124**	P		**Pn**		**07 12 39.0**	**-3.3**
CM02	**Chiang Mai Arr**	**15.09**	**125**	P		**Pn**		**07 12 40.0**	**-2.4**
	comp=Z,10μmcomp=Z,1μm,1.0s								
CM01	**Chiang Mai Arr**	**15.11**	**125**	P		**Pn**		**07 12 40.4**	**-2.2**
	comp=Z,742nmcomp=Z,9μmcomp=Z,947nm,1.0s								
CM05	**Chiang Mai Arr**	**15.11**	**125**	P		**Pn**		**07 12 40.0**	**-2.6**
	comp=Z,595nmcomp=Z,8μmcomp=Z,1μm,0.9s								
CM09	**Chiang Mai Arr**	**15.12**	**125**	P		**Pn**		**07 12 40.5**	**-2.1**
	comp=Z,735nmcomp=Z,9μmcomp=Z,1μm,0.8s								
CM04	**Chiang Mai Arr**	**15.14**	**125**	P		**Pn**		**07 12 40.8**	**-2.2**
	comp=Z,601nmcomp=Z,10μmcomp=Z,944nm,1.3s								
CM36	**Chiang Mai Arr**	**15.15**	**125**	P		**Pn**		**07 12 40.0**	**-3.0**
KMI	**Kunming**	**15.24**	**96**	⇑P		**Pn**		**07 12 42.5**	**-2.0**
KMI				pP		P		07 12 46.5	-2.9
KMI				sP		pP		07 12 48.3	-5.5
KMI				PP		**sP**		**07 12 55.0**	**-0.6**
KMI				S		**Sn**		**07 15 31.3**	**-2.0**
KMI				sS		S		07 15 42.3	-7.8
KMI				pmax		pmax			
	comp=Z,460nm,1.5s								
KMI				pmax		pmax			
	comp=Z,8μm,5.0s								
KMI				LR		LR			
	comp=Z,109μm,12.8s								
KMI				LR		LR			
	comp=Z,214μm,12.0s								
KMI				LR		LR			
	comp=Z,236μm,13.5s								
BHUJ	**Bhuj**	**15.40**	**257**	*e*P		**Pn**		**07 12 43.4**	**-2.9**
BHUJ				IAML				07 16 00.6	
	comp=N,4μm,0.9s								
MDRS	**Chennai**	**15.55**	**201**	*e*P		**Pn**		**07 12 48.1**	**-0.2**
MDRS				IAmb		IAmb		07 12 55.1	
	comp=Z,6μm,1.1s								
CD2	**Chengdu**	**15.83**	**74**	⇑P		**Pn**		**07 12 49.5**	**-2.4**
CD2				pP		pP		07 13 00.8	+0.5
CD2				sP		sP		07 13 05.0	+2.7
CD2				S		**Sn**		**07 15 48.3**	**+1.1**
CD2				pmax		pmax			
	comp=Z,390nm,0.7s								
CD2				pmax		pmax			
	comp=Z,6μm,4.2s								
CD2				LR		LR			
	comp=Z,690μm,13.7s								
CD2				LR		LR			
	comp=Z,829μm,12.8s								
CD2				LR		LR			
	comp=Z,986μm,11.8s								
PRZ	**Przheval'sk**	**15.95**	**339**	P		**Pn**		**07 12 52.8**	**-0.8**
PRZ				pmax		pmax			
	comp=Z,10μm,1.9s								
PRZ	**Przheval'sk**	**15.95**	**339**			**Pn**		**07 12 52.8**	**-0.8**
PRZ				IAmb		IAmb		07 13 09.8	
	comp=Z,10μm,1.9s								
KBL	**Kabul**	**16.00**	**299**	P		**Pn**		**07 12 50.5**	**-3.8**
KBL				pmax		pmax			
	comp=Z,4μm,1.1s								
KBL	**Kabul**	**16.00**	**299**	Pn		**Pn**		**07 12 50.5**	**-3.8**
KDJ	**Kajisay**	**16.05**	**336**	P		**Pn**		**07 12 53.6**	**-1.3**
KDJ				pmax		pmax			
	comp=Z,2μm,0.9s								
KDJ	**Kajisay**	**16.05**	**336**	Pn		**Pn**		**07 12 53.6**	**-1.3**
WMQ	**Urumqi**	**16.11**	**4**	P		**Pn**		**07 12 54.3**	**-1.2**
WMQ				pP		P		07 13 00.8	+2.0
WMQ				sP		sP		07 13 07.3	+2.1
WMQ				S		**Sn**		**07 15 58.5**	**+4.5**
WMQ				SS		**S**		**07 16 13.0**	**+5.6**
WMQ				pmax		pmax			
	comp=Z,2μm,1.3s								
WMQ				pmax		pmax			
	comp=Z,66μm,6.3s								
WMQ				LR		LR			
	comp=Z,775μm,14.1s								
WMQ				LR		LR			
	comp=Z,169μm,13.1s								
WMQ				LR		LR			
	comp=Z,760μm,17.1s								
NANT	**Nan**	**16.18**	**120**	P		**Pn**		**07 12 54.5**	**-1.9**
	comp=Z,92μmcomp=Z,13μm,0.9s								
SUKH	**Sukhothai**	**16.20**	**126**	P		**Pn**		**07 12 55.1**	**-1.7**
	comp=Z,17μmcomp=Z,2μm,0.8s								
SHLS	**Shalkode**	**16.27**	**343**	⇑*i*P		**Pn**		**07 12 54.2**	**-3.3**
	baz=344								
SHLS	**Shalkode**	**16.27**	**343**	*c i*P		**Pn**		**07 12 54.2**	**-3.3**
GTA	**Gaotai**	**16.36**	**41**	⇑P		**Pn**		**07 12 55.8**	**-3.0**
GTA				pP		P		07 13 00.0	-1.7
GTA				sP		pP		07 13 04.8	-1.4
GTA				S		**Sn**		**07 15 55.8**	**-4.5**
GTA				sS		S		07 16 04.3	-8.4
GTA				pmax		pmax			
	comp=Z,160nm,1.4s								
GTA				pmax		pmax			
	comp=Z,2μm,7.0s								
GTA				LR		LR			
	comp=Z,429μm,13.1s								
GTA				LR		LR			
	comp=Z,661μm,13.8s								
GTA				LR		LR			
	comp=Z,810μm,12.7s								
UZB	**Uzynbulak**	**16.38**	**342**	⇑*i*P		**Pn**		**07 12 57.3**	**-1.7**
	baz=341								
UZB				*e*S		**Sn**		**07 16 00.1**	**-0.5**
	baz=341								
UZB	**Uzynbulak**	**16.38**	**342**	*c i*P		**Pn**		**07 12 57.3**	**-1.7**
UZB				*e*S		**Sn**		**07 16 00.1**	**-0.5**
PDGK	**Podgornoye**	**16.42**	**343**	P		**Pn**		**07 12 57.5**	**-2.0**
SATY	**Saty**	**16.48**	**340**	*i*P		**Pn**		**07 12 59.0**	**-1.3**
	comp=Z,1μm,1.0s,baz=340								
SATY	**Saty**	**16.48**	**340**	*i*P		**Pn**		**07 12 58.9**	**-1.3**
SATY				pmax		pmax			
	comp=Z,1μm,1.0s								
ULHL	**Ulahol**	**16.51**	**334**	P		**Pn**		**07 12 59.1**	**-1.7**
	SNR=258								
UMPA	**Umpang Tak**	**16.55**	**131**	P		**Pn**		**07 13 02.0**	**+0.8**
	comp=Z,16μmcomp=Z,2μm,0.9s								
BOOM	**Boomskoye usch**	**16.84**	**334**	P		**Pn**		**07 13 03.6**	**-1.3**
BOOM	**Boomskoye usch**	**16.84**	**334**	Pn		**Pn**		**07 13 03.5**	**-1.3**
PHIT	**Phitsanulok**	**16.96**	**125**	P		**Pn**		**07 13 06.6**	**+0.2**
	comp=Z,55μmcomp=Z,7μm,1.2s								
MDOK	**Medeo**	**17.01**	**337**	*i*P		**Pn**		**07 13 05.3**	**-1.7**
	baz=337								
MDOK				LR		LR		07 19 12.2	
	comp=Z,429μm,13.3s,baz=337								
MDOK	**Medeo**	**17.01**	**337**	*i*P		**Pn**		**07 13 05.3**	**-1.7**
MDOK				MLR		MLR			
	comp=Z,429μm,13.0s								
KNDC	**Almaty**	**17.08**	**337**	P		**Pn**		**07 13 06.9**	**-0.9**
AAA	**Alma-Ata**	**17.09**	**337**	*e*P		**Pn**		**07 13 07.0**	**-0.9**
	comp=Z,27μm,2.3s,baz=337								
AAA				LR		LR		07 19 19.4	
	comp=Z,319μm,12.9s,baz=337								
AAA	**Alma-Ata**	**17.09**	**337**	*e*P		**Pn**		**07 13 07.5**	**-0.5**
PBA	**Port Blair**	**17.21**	**157**	*e*P		P		07 13 11.3	+0.2
PBA				IAmb		IAmb		07 13 32.3	
	comp=Z,5μm,1.2s								
PBA	**Port Blair**	**17.21**	**157**	P		Pn		07 13 09.7	+0.2
PBA				IAmb		IAmb		07 13 31.9	
	comp=Z,12μm,1.5s								
PBA	**Port Blair**	**17.21**	**157**	P		P		07 13 11.1	0.0
	SNR=130								
PBA	**Port Blair**	**17.21**	**157**	⇓P		Pn		07 13 07.1	-2.4
UCH	**Uchtor**	**17.22**	**330**	P		**Pn**		**07 13 07.5**	**-2.4**
	SNR=254								
LZH	**Lanzhou**	**17.28**	**57**	⇑P		**Pn**		**07 13 08.0**	**-2.5**
LZH				pP		P		07 13 12.5	+0.6
LZH				sP		pP		07 13 16.5	0.0
LZH				PP		**PnPn**		**07 13 26.3**	**+5.8**
LZH				*e*S		**Sn**		**07 16 20.0**	**-2.7**
LZH				sS		S		07 16 25.5	-6.1
LZH				SS		**SnSn**		**07 16 44.3**	**+8.2**
LZH				pmax		pmax			
	comp=Z,4μm,1.3s								
LZH				pmax		pmax			
	comp=Z,47μm,5.7s								
LZH				LR		LR			
	comp=Z,586μm,13.0s								
LZH				LR		LR			
	comp=Z,618μm,13.6s								
LZH				LR		LR			
	comp=Z,791μm,16.3s								
TKM2	**Tokmak 2**	**17.34**	**334**	P		**Pn**		**07 13 09.6**	**-1.5**
	SNR=144								
TKM2	**Tokmak 2**	**17.34**	**334**	P		**Pn**		**07 13 09.8**	**-1.3**
KBK	**Karagaybulak**	**17.38**	**332**	P		**P**		**07 13 14.0**	**+1.1**
	SNR=34								
UTHA	**Uthaitani**	**17.40**	**131**	P		**Pn**		**07 13 11.6**	**-0.3**
	comp=Z,16μmcomp=Z,2μm,1.1s								
KHLT	**Khaolaem Dam**	**17.41**	**135**	P		**Pn**		**07 13 10.4**	**-1.6**
	comp=Z,12μmcomp=Z,1μm,1.2s								
AML	**Almayashu**	**17.51**	**328**	P		**Pn**		**07 13 11.0**	**-2.5**
	SNR=223								
AAK	**Ala-Archa**	**17.55**	**331**	P		**Pn**		**07 13 12.3**	**-1.5**
	SNR=64								
AAK	**Ala-Archa**	**17.55**	**331**	P		**Pn**		**07 13 12.5**	**-1.3**
AAK	**Ala-Archa**	**17.55**	**331**	P		**Pn**		**07 13 12.3**	**-1.5**
BTK	**Batken**	**17.56**	**318**	P		**Pn**		**07 13 10.7**	**-3.1**
BTK				pmax		pmax			
	comp=Z,2μm,0.9s								
BTK	**Batken**	**17.56**	**318**	P		**Pn**		**07 13 10.7**	**-3.1**
FRU1	**Bishkek**	**17.64**	**331**	P		**Pn**		**07 13 13.9**	**-0.8**
FRU1				pmax		pmax			
	comp=Z,4μm,1.3s								
FRU1	**Bishkek**	**17.64**	**331**	P		**Pn**		**07 13 13.9**	**-0.8**
CHMS	**Chumysh**	**17.74**	**332**	P		**Pn**		**07 13 14.3**	**-1.7**
	SNR=58								
EKS2	**Erkin-Say**	**17.89**	**330**	P		**Pn**		**07 13 16.9**	**-1.1**
	SNR=337								
USP	**Ospenovka**	**18.07**	**332**	P		**P**		**07 13 20.2**	**-0.2**
	SNR=70								
SRDT	**SRDT**	**18.09**	**135**	P		**P**		**07 13 21.0**	**+0.3**
	comp=Z,12μmcomp=Z,692nm,1.3s								
SGDS	**Sogindy**	**

SRAK Srakaew 20.26 129 P Pn 07 13 50.0 +3.5
comp=Z,107µmcomp=Z,14µm,1.0s
PATY Pattaya 20.27 134 P Pn 07 13 46.4 -0.2
comp=Z,18µmcomp=Z,2µm,1.0s
XAN Xi'an 20.65 67 P **P** **07 13 47.5 -1.2**
XAN pP Pn 07 13 51.5 +0.5
XAN sP sP 07 13 54.5 -0.8
XAN PP **PnPn** **07 14 11.3 +4.8**
XAN S **S** **07 17 39.8 +0.6**
XAN sS Sn 07 17 44.5 +0.7
XAN SS **SnSn** **07 18 07.0 +8.5**
XAN pmax pmax
comp=Z,150nm,1.2s
XAN pmax pmax
comp=Z,29µm,7.1s
XAN LR LR
comp=Z,267µm,14.4s
XAN LR LR
comp=Z,356µm,12.7s
XAN LR LR
comp=Z,413µm,12.7s
ENH Enshi 20.71 77 P **P** **07 13 49.0 -0.4**
ENH IAmb IAmb 07 14 34.8
comp=Z,3µm,0.9s
PALK Pallekele 20.96 195 P **P** **07 13 53.3 +1.2**
comp=Z,62nm,1.1s,baz=116,slow=12,SNR=28
PALK S **S** **07 17 36.4 -9.1**
comp=Z,118nm,0.8s,baz=207,slow=21,SNR=1.2
PALK LR LR 07 22 48.5
comp=Z,110µm,21.7s,baz=107,slow=39
PALK Pallekele 20.96 195 *d iP* **P** **07 13 53.2 +1.0**
PALK pmax pmax
comp=Z,2µm,1.1s
PALK Pallekele 20.96 195 P **P** **07 13 53.4 +1.2**
PALK IAmb IAmb 07 14 19.1
comp=Z,3µm,1.4s
HRA Herat 21.36 294 P **P** **07 13 56.7 +0.2**
UBPT Khong Chiam 21.93 120 P **P** **07 14 02.0 -0.5**
comp=Z,27µmcomp=Z,14µmcomp=Z,618nm,1.1s
UBPT Khong Chiam 21.93 120 P **P** **07 14 02.0 -0.5**
UBPT Khong Chiam 21.93 120 ⇑P **P** **07 14 02.0 -0.5**
DGZ Jazzator, Alta 21.96 3 *c iP* **P** **07 14 02.0 -0.8**
DGZ pmax pmax
comp=Z,1µm,0.7s
DGZ MLR MLR
comp=Z,653µm,14.0s
HALK Hakmana 22.11 194 ⇓P **P** **07 14 05.8 +1.2**
SURT Suratani 22.25 145 P **P** **07 14 07.8 +1.7**
comp=Z,1µmcomp=Z,74nm,1.1s
MNCI Minicoy 22.88 215 P **P** **07 14 13.6 +0.9**
MNCI IAmb IAmb 07 14 51.8
comp=Z,3µm,1.0s
MNCI IAMs_20 IAMs_20 07 23 18.7
comp=Z,505µm,19.0s
MNCI Minicoy 22.88 215 ⇑P **P** **07 14 13.8 +1.1**
MNCY Minicoy 22.91 215 *eP* **P** **07 14 14.6 +1.6**
PKDT Phuket 22.94 147 P **P** **07 14 13.9 +0.6**
SEM Semipalatinsk 23.06 351 ⇑*iP* **P** **07 14 13.5 -1.0**
baz=350
SEM LR LR 07 23 02.2
comp=Z,145µm,14.6s,baz=350
SEM Semipalatinsk 23.06 351 *c iP* **P** **07 14 13.5 -1.0**
SEM MLR MLR
comp=Z,145µm,15.0s
QIZ Qiongzhong 23.52 106 P **P** **07 14 19.3 0.0**
QIZ pP **pP** **07 14 23.5 -0.3**
QIZ sP **sP** **07 14 26.5 +0.8**
QIZ S **S** **07 18 34.8 +1.8**
QIZ pmax pmax
comp=Z,25µm,6.5s
QIZ LR LR
comp=Z,45µm,22.6s
QIZ LR LR
comp=Z,48µm,16.2s
QIZ Qiongzhong 23.52 106 P **P** **07 14 18.9 -0.4**
QIZ IAmb IAmb 07 14 39.5
comp=Z,2µm,1.2s
KURBB Kurchatov Arra 23.55 348 P **P** **07 14 19.2 +0.1**
comp=Z,200nm,0.8s,baz=168,slow=8.8,SNR=229
KURBB S **S** **07 18 34.4 +1.6**
comp=Z,43nm,0.8s,baz=183,slow=10,SNR=1.6
KURBB ScP **ScP** **07 21 44.6 +2.4**
comp=Z,26nm,0.9s,baz=184,slow=1.9,SNR=3.1
KURBB Kurchatov Arra 23.55 348 P **P** **07 14 18.9 -0.3**
BTO Baotou 23.59 51 P **P** **07 14 18.5 -1.3**
BTO S **S** **07 18 28.5 -5.3**
BTO pmax pmax
comp=Z,2µm,1.7s
BTO LR LR
comp=Z,802µm,14.3s
KURK Kurchatov 23.62 348 P **P** **07 14 19.3 -0.6**
KURK Kurchatov 23.62 348 P **P** **07 14 19.2 -0.6**
TIY Taiyuan 24.31 59 *eP* **P** **07 14 26.0 -0.6**
TIY pP **sP** **07 14 35.8 +2.4**
TIY S **S** **07 18 48.0 +2.6**
TIY pmax pmax
comp=Z,260nm,0.8s
TIY pmax pmax
comp=Z,11µm,3.5s
TIY LR LR
comp=Z,483µm,13.5s
TIY LR LR
comp=Z,194µm,14.0s
TIY LR LR
comp=Z,504µm,14.3s
BRZS Berezniki 24.43 339 ⇑*iP* **P** **07 14 28.7 +1.1**
comp=Z,5µm,2.3s,baz=339
BRZS Berezniki 24.43 339 *c iP* **P** **07 14 28.7 +1.1**
BRZS pmax pmax
comp=Z,5µm,2.3s
LHMI Lhok Sumawe 24.70 153 P **P** **07 14 30.2 +0.1**
LHMI Lhok Sumawe 24.70 153 ⇑P **P** **07 14 32.1 +1.9**
LHMI Lhok Sumawe 24.70 153 P **P** **07 14 32.7 +2.5**
comp=Z,159µmcomp=Z,83µmcomp=Z,4µm,1.7s
HHC Hu-ho-hao-te 24.75 51 *eP* **P** **07 14 31.0 +0.3**
HHC sP sP 07 14 41.8 +4.3
HHC S **S** **07 18 54.0 +1.4**
HHC sS sS 07 19 03.3 +2.6
HHC pmax pmax
comp=Z,350nm,2.0s
HHC pmax pmax
comp=Z,35µm,6.1s
HHC LR LR
comp=Z,360µm,11.8s
HHC LR LR
comp=Z,493µm,13.7s
HHC LR LR
comp=Z,722µm,13.9s
WHN Wuhan 24.91 77 ⇑P **P** **07 14 31.3 -0.8**
WHN pP **pP** **07 14 34.0 -2.9**
WHN sP **sP** **07 14 37.5 -1.0**
WHN S **S** **07 18 52.0 -3.1**
WHN pmax pmax
comp=Z,64nm,1.1s
WHN LR LR
comp=Z,385µm,12.8s
WHN LR LR
comp=Z,133µm,12.6s
WHN LR LR
comp=Z,232µm,9.9s
WBK Wadi Bani Khal 24.95 264 P **P** **07 14 35.1 +2.6**
SNR=212
WBK P **P** **07 14 35.1 +2.6**
SNR=212
WBK P **P** **07 14 35.1 +2.6**
SNR=212
WBK S **S** **07 19 00.4 +4.6**
WBK S **S** **07 19 00.4 +4.6**
WBK S **S** **07 19 00.4 +4.6**
WSAR Wadi Sarin 25.07 266 P **P** **07 14 35.5 +1.9**
comp=Z,130nm,0.8s,baz=122,slow=7.4,SNR=35
WSAR S **S** **07 19 00.5 +2.7**
comp=Z,44nm,1.0s,baz=92,slow=20,SNR=0.7
WSAR LR LR 07 25 15.1
comp=Z,80µm,18.9s,baz=100,slow=38
WSAR Wadi Sarin 25.07 266 P **P** **07 14 36.0 +2.4**
SNR=120
GZH Guangzhou 25.12 94 P **P** **07 14 34.8 +0.8**
GZH S **S** **07 19 00.5 +1.9**
GZH LR LR
comp=Z,65µm,11.2s
GZH LR LR
comp=Z,88µm,12.6s
ASHT Ashkhabad 25.24 301 P **P** **07 14 34.6 -0.3**
ASHT pmax pmax
comp=Z,2µm,1.0s

ASHT Ashkhabad 25.24 301 P **P** **07 14 34.6 -0.3**
ASHT IAmb IAmb 07 15 08.8
comp=Z,2µm,1.0s
MLSI Meulaboh, Aceh 25.37 155 P **P** **07 14 35.8 -0.5**
comp=Z,70µmcomp=Z,12µmcomp=Z,604nm,0.9s
BIDO Bidbid 25.44 267 P **P** **07 14 39.1 +2.2**
SNR=118
BIDO P **P** **07 14 39.1 +2.2**
SNR=118
GEYT Alibeck 25.44 301 P **P** **07 14 38.5 +1.7**
comp=Z,118nm,0.6s,baz=120,slow=8.8,SNR=129
GEYT S **S** **07 19 09.9 +6.5**
comp=Z,72nm,1.0s,baz=168,slow=16,SNR=1.2
GEYT LR LR 07 26 47.9
comp=Z,94µm,21.2s,baz=70,slow=42
GEYT Alibeck 25.44 301 P **P** **07 14 37.4 +0.5**
GYA0B ALIBECK ARRAY 25.44 301 P **P** **07 14 38.6 +1.8**
MCO Taipa Grande 25.60 96 P **P** **07 14 38.0 -0.3**
SONM Songino Array 25.61 33 P **P** **07 14 39.2 +0.8**
comp=Z,211nm,0.7s,baz=219,slow=9.5,SNR=471
SONM LR LR 07 24 42.3
comp=Z,74µm,20.6s,baz=222,slow=36
SONM P3KPbc 07 47 36.8
comp=Z,2.4nm,0.7s,baz=48,slow=5.0,SNR=6.3
SONM Songino Array 25.61 33 P **P** **07 14 38.5 +0.1**
SMDO Samad 25.63 266 P **P** **07 14 41.0 +2.2**
SNR=214
SMDO P **P** **07 14 41.0 +2.2**
SNR=214
SMDO P **P** **07 14 41.0 +2.2**
SNR=214
JMDO Jabal Madar 25.78 264 P **P** **07 14 43.0 +2.9**
SNR=107
JMDO P **P** **07 14 43.0 +2.9**
SNR=107
JMDO P **P** **07 14 43.0 +2.9**
SNR=107
ULN Ulaanbaatar 25.95 34 *ceP* **P** **07 14 41.4 -0.1**
ULN pmax pmax
comp=Z,2µm,2.5s
ULN MLR MLR
comp=Z,932µm,13.0s
ULN Ulaanbaatar 25.95 34 P **P** **07 14 41.8 +0.3**
ULN IAmb IAmb 07 14 51.4
comp=Z,2µm,0.8s
ULN Ulaanbaatar 25.95 34 P **P** **07 14 42.2 +0.7**
ULN P **P** **07 14 42.2 +0.7**
ULN Ulaanbaatar 25.95 34 ⇑P **P** **07 14 41.8 +0.3**
HKC Hong Kong Obse 26.09 96 ⇑P **P** **07 14 43.0 +0.2**
HOQ Hoqain 26.14 267 P **P** **07 14 46.0 +2.6**
SNR=98
HOQ P **P** **07 14 46.0 +2.6**
SNR=98
HOQ P **P** **07 14 46.0 +2.6**
SNR=98
ZAK Zakamensk 26.18 26 *eP* **P** **07 14 43.7 +0.2**
ZAK pmax pmax
comp=Z,1µm,1.2s
ZAA0 Zalesovo Array 26.20 358 P **P** **07 14 44.0 +0.5**
ZAA0 IAmb IAmb 07 14 53.5
comp=Z,3µm,1.4s
ZALV Zalesovo Beam 26.20 358 P **P** **07 14 43.9 +0.4**
comp=Z,492nm,0.8s,baz=182,slow=8.9,SNR=264
ZALV LR LR 07 26 57.8
comp=Z,755µm,18.3s,baz=181,slow=41
ZALV P3KPbc 07 47 33.0
comp=Z,5.3nm,0.9s,baz=352,slow=4.9,SNR=6.5
ZALV Zalesovo Beam 26.20 358 P **P** **07 14 43.3 -0.2**
ZALV *PP **sP** **07 14 49.9 -0.3**
ZALV Zalesovo Beam 26.20 358 P **P** **07 14 43.2 -0.2**
ZALV pP **sP** **07 14 49.9 -0.3**
KULM Kulim 26.33 145 P **P** **07 14 46.0 +1.0**
KULM IAmb IAmb 07 14 58.1
comp=Z,1µm,0.9s
KULM Kulim 26.33 145 ⇑P **P** **07 14 46.0 +1.0**
MHTO MHTO 26.35 261 P **P** **07 14 48.0 +2.8**
SNR=179
MHTO P **P** **07 14 48.0 +2.8**
SNR=179
MOY Mondy 26.44 21 *eP* **P** **07 14 45.0 -0.8**
MOY pmax pmax
comp=Z,4µm,2.1s
BSY Bisya 26.47 266 P **P** **07 14 49.0 +2.7**
SNR=165
BSY P **P** **07 14 49.0 +2.7**
SNR=165
BSY P **P** **07 14 49.0 +2.7**
SNR=165
BANOM Banah 26.52 273 *i* P **P** **07 14 45.4 -1.3**
SNR=8.6
BANOM Banah 26.52 273 P **P** **07 14 49.3 +2.5**
BANOM P **P** **07 14 49.3 +2.5**
TPTI 26.59 154 P **P** **07 14 46.5 -0.8**
comp=Z,33µmcomp=Z,6µmcomp=Z,249nm,1.0s
SHME Shamm 26.64 273 *i* P **P** **07 14 48.0 +0.3**
SNR=6.1
SHME Shamm 26.64 273 P **P** **07 14 50.7 +3.0**
SNR=17
SHME P **P** **07 14 50.7 +3.0**
SNR=17
MDH Madha 26.64 272 *i* P **P** **07 14 47.8 0.0**
SNR=13
MDH Madha 26.64 272 P **P** **07 14 51.4 +3.6**
SNR=18
MDH P **P** **07 14 51.4 +3.6**
SNR=18
MDH P **P** **07 14 51.4 +3.6**
SNR=18
SOHO SOHO 26.69 269 *i* P **P** **07 14 48.4 +0.1**
SNR=16
SOHO SOHO 26.69 269 P **P** **07 14 50.8 +2.5**
SOHO P **P** **07 14 50.8 +2.5**
MASF Masafi 26.75 272 P **P** **07 14 52.4 +3.5**
SNR=32
MASF P **P** **07 14 52.4 +3.5**
SNR=32
MSFE Esma-Masafi 26.75 272 *i* P **P** **07 14 50.1 +1.2**
SNR=13
UOSS Minazif 26.80 271 *i* P **P** **07 14 49.0 -0.3**
SNR=9.0
UOSS Minazif 26.80 271 P **P** **07 14 49.4 +0.2**
UOSS Minazif 26.80 271 P **P** **07 14 52.1 +2.9**
UOSS P **P** **07 14 52.1 +2.9**
UOSS P **P** **07 14 52.1 +2.9**
UOSS Minazif 26.80 271 ⇑P **P** **07 14 49.8 +0.5**
HATD Hatta, Dubai 26.89 271 *i* P **P** **07 14 50.8 +0.7**
SNR=29
HATD Hatta, Dubai 26.89 271 P **P** **07 14 55.0 +4.9**
SNR=34
HATD P **P** **07 14 55.0 +4.9**
SNR=34
HATD P **P** **07 14 55.0 +4.9**
SNR=34
ARQ Araqi 26.91 267 P **P** **07 14 53.1 +2.9**
SNR=84
ARQ P **P** **07 14 53.1 +2.9**
SNR=84
ARQ P **P** **07 14 53.1 +2.9**
SNR=84
TSI Tuntungan 26.93 151 P **P** **07 14 54.9 +4.5**
comp=Z,77µmcomp=Z,16µmcomp=Z,752nm,1.2s
DQM DQM 27.11 260 P **P** **07 14 55.0 +3.0**
SNR=64
DQM P **P** **07 14 55.0 +3.0**
SNR=64
DQM P **P** **07 14 55.0 +3.0**
SNR=64
IPM Ipoh 27.21 146 P **P** **07 14 53.4 +0.4**
NAZ Nazwa, Dubai 27.27 271 *i* P **P** **07 14 54.8 +1.4**
SNR=17
TLY Talaya 27.36 24 P **P** **07 14 55.5 +1.4**
comp=Z,7.3nm,0.4s,baz=219,slow=9.5,SNR=50
TLY LR LR 07 27 18.9
comp=Z,339µm,21.8s,baz=216,slow=40
TLY Talaya 27.36 24 *eP* **P** **07 14 55.5 +1.4**
TLY *eS* **S** **07 19 31.8 -1.7**
TLY pmax pmax
comp=Z,2µm,2.1s
TLY MLR MLR
comp=Z,766µm,17.0s
TLY Talaya 27.36 24 P **P** **07 14 55.2 +1.2**
TLY IAMs_20 IAMs_20 07 26 53.2
comp=Z,396µm,20.0s
TLY Talaya 27.36 24 P **P** **07 14 54.9 +0.9**
TLY P **P** **07 14 54.9 +0.9**
TLY P **P** **07 14 54.9 +0.9**

TLY Talaya 27.36 24 ⇑P **P** **07 14 55.5 +1.4**
FAQ Al Faqa, Dubai 27.38 271 *i* P **P** **07 14 53.7 -0.8**
SNR=26
ALNE Al Ain 27.41 269 *i* P **P** **07 14 55.1 +0.4**
SNR=14
ALNE Al Ain 27.41 269 P **P** **07 14 57.0 +2.3**
SNR=80
ALNE P **P** **07 14 57.0 +2.3**
SNR=80
ASUD Al Ashush, Dub 27.64 271 *i* P **P** **07 14 55.4 -1.4**
SNR=7.3
ASUD Al Ashush, Dub 27.64 271 P **P** **07 15 00.3 +3.4**
SNR=16
ASUD P **P** **07 15 00.3 +3.4**
SNR=16
ASUD P **P** **07 15 00.3 +3.4**
SNR=16
TIA Tai'an 27.65 64 P **P** **07 14 56.8 0.0**
TIA S **S** **07 19 42.0 +3.7**
TIA pmax pmax
comp=Z,200nm,1.4s
TIA pmax pmax
comp=Z,21µm,10.6s
TIA LR LR
comp=Z,88µm,13.7s
TIA LR LR
comp=Z,168µm,20.1s
TIA LR LR
comp=Z,310µm,20.6s
PSI Prapat 27.71 151 P **P** **07 14 56.5 -1.0**
comp=Z,40nm,0.9s,baz=360,slow=6.9,SNR=13
PSI LR LR 07 28 49.5
comp=Z,71µm,19.3s,baz=271,slow=43
BJT Baijiatuau 27.76 56 P **P** **07 14 58.4 +0.7**
BJT pmax pmax
comp=Z,2µm,1.7s
BJT MLR MLR
comp=Z,354µm,19.0s
BJT Baijiatuau 27.76 56 P **P** **07 14 58.4 +0.7**
BJT Baijiatuau 27.76 56 IAMs_20 IAMs_20 07 27 09.6
comp=Z,354µm,19.0s
BJI Beijing 27.77 56 P **P** **07 14 58.5 +0.7**
BJI pP **pP** **07 15 01.3 -1.3**
BJI S **S** **07 19 42.5 +2.4**
BJI pmax pmax
comp=Z,96nm,1.8s
BJI pmax pmax
comp=Z,19µm,9.2s
BJI LR LR
comp=Z,265µm,17.7s
BJI LR LR
comp=Z,136µm,17.5s
BJI LR LR
comp=Z,252µm,20.8s
BVAR Borovoye Array 27.79 340 P **P** **07 14 58.4 +0.6**
comp=Z,60nm,0.8s,baz=140,slow=23,SNR=138
BVAR P3KPbc 07 47 26.0
comp=Z,3.2nm,0.7s,baz=298,slow=3.1,SNR=11
RPSI Rantau Prapat 27.81 151 P **P** **07 14 57.1 -1.2**
RPSI Rantau Prapat 27.81 151 P **P** **07 14 56.5 -1.7**
BRVK Borovoye 27.85 340 *ceP* **P** **07 14 58.6 +0.2**
BRVK pmax pmax
comp=Z,567nm,2.5s
BRVK MLR MLR
comp=Z,375µm,13.0s
BRVK Borovoye 27.85 340 P **P** **07 14 58.8 +0.4**
BRVK IAmb IAmb 07 15 58.1
comp=Z,2µm,1.9s
BRVK Borovoye 27.85 340 P **P** **07 14 57.7 -0.6**
BRVK P **P** **07 14 57.7 -0.6**
BRVK Borovoye 27.85 340 ⇑P **P** **07 14 58.9 +0.5**
IRK Irkutsk 28.05 24 *eP* **P** **07 15 01.2 +1.1**
IRK pmax pmax
comp=Z,3µm,3.2s
UMZA Um Al Zommool 28.28 267 P **P** **07 15 03.7 +1.1**
UMZA P **P** **07 15 03.7 +1.1**
UMZA P **P** **07 15 03.7 +1.1**
GSI Gunungsitoli 28.54 155 P **P** **07 15 06.6 +1.9**
GSI Gunungsitoli 28.54 155 ⇓P **P** **07 15 06.7 +1.9**
GSI Gunungsitoli 28.54 155 P **P** **07 15 06.6 +1.9**
comp=Z,91µmcomp=Z,44µmcomp=Z,2µm,1.1s
NJ2 Nanjing 28.76 73 ⇑*iP* **P** **07 15 06.5 -0.2**
NJ2 pP **pP** **07 15 10.3 -1.3**
NJ2 sP **sP** **07 15 13.8 +0.7**
NJ2 S **S** **07 19 54.0 -1.9**
NJ2 sS **pS** **07 20 02.5 +1.3**
NJ2 ScS **ScS** **07 25 52.5 +1.1**
NJ2 pmax pmax
comp=Z,490nm,1.7s
NJ2 pmax pmax
comp=Z,4µm,10.4s
NJ2 LR LR
comp=Z,104µm,13.0s
NJ2 LR LR
comp=Z,282µm,13.0s
NJ2 LR LR
comp=Z,337µm,14.0s
MZWR Madinat Zayed 29.14 270 P **P** **07 15 10.9 +0.8**
MZWR P **P** **07 15 10.9 +0.8**
MZWR P **P** **07 15 10.9 +0.8**
KNMB Chin-men Tao 29.24 89 P **P** **07 15 11.0 -0.1**
KNMB IAmb IAmb 07 15 31.0
comp=Z,5µm,2.5s
QZH Quanzhou 29.31 88 ⇑*iP* **P** **07 15 11.0 -0.7**
QZH S **S** **07 20 03.3 -1.4**
QZH pmax pmax
comp=Z,270nm,1.7s
QZH pmax pmax
comp=Z,10µm,7.2s
QZH LR LR
comp=Z,131µm,24.2s
QZH LR LR
comp=Z,24µm,19.4s
QZH LR LR
comp=Z,105µm,15.2s
AB31 Akbulak array 29.36 324 *i* P **P** **07 15 12.9 +1.1**
ABKAR Akbulak array 29.36 324 P **P** **07 15 11.8 0.0**
ABKAR Akbulak array 29.36 324 P **P** **07 15 12.9 +1.0**
ABKAR IAmb IAmb 07 15 21.3
comp=Z,622nm,0.7s
ABKAR Akbulak array 29.36 324 ⇑P **P** **07 15 12.9 +1.0**
SHAO Shalim 29.52 257 *i* P **P** **07 15 14.7 +1.1**
SNR=11
SHAO Shalim 29.52 257 P **P** **07 15 16.6 +3.0**
SNR=28
SHAO P **P** **07 15 16.6 +3.0**
SNR=28
SHAO P **P** **07 15 16.6 +3.0**
SNR=28
MNSI Mandailing Nat 29.79 152 P **P** **07 15 16.2 +0.3**
comp=Z,53µmcomp=Z,20µmcomp=Z,656nm,1.3s
PBSI Pulau Batu 30.05 155 P **P** **07 15 21.2 +3.0**
comp=Z,69µmcomp=Z,27µmcomp=Z,1µm,1.0s
DMTO DMTO 30.23 257 P **P** **07 15 23.0 +3.1**
SNR=23
DMTO P **P** **07 15 23.0 +3.1**
SNR=23
DOK Doka 30.58 260 P **P** **07 15 25.0 +2.0**
SNR=67
DOK P **P** **07 15 25.0 +2.0**
SNR=67
DOK P **P** **07 15 25.0 +2.0**
SNR=67
SSE Sheshan 30.77 75 P **P** **07 15 25.0 +0.5**
SSE S **S** **07 20 28.0 +0.5**
SSE pmax pmax
comp=Z,26nm,0.8s
SSE pmax pmax
comp=Z,1µm,7.4s
BKNI Bangkinang 30.85 150 P **P** **07 15 25.4 +0.1**
BKNI Bangkinang 30.85 150 ⇑P **P** **07 15 25.7 +0.4**
BKNI Bangkinang 30.85 150 P **P** **07 15 25.9 +0.6**
comp=Z,48µmcomp=Z,31µmcomp=Z,2µm,1.3s
MYKOM Kota Tinggi 30.95 143 P **P** **07 15 26.4 +0.1**
RBK Rabkut 30.97 258 P **P** **07 15 29.0 +2.5**
SNR=123
RBK P **P** **07 15 29.0 +2.5**
SNR=123
RBK P **P** **07 15 29.0 +2.5**
SNR=123
SLWR Sila 31.00 271 P **P** **07 15 27.1 +0.5**
SLWR P **P** **07 15 27.1 +0.5**
SLWR P **P** **07 15 27.1 +0.5**
AKTO Aktyubinsk 31.07 324 LR LR 07 29 27.5
comp=Z,588µm,19.0s,baz=133,slow=39
AKTO P3KPbc 07 47 10.3

comp=Z,0.9nm,0.5s,baz=230,slow=23,SNR=1.8
WHFO Wadi Hawf 31.17 259 P **P** **07 15 30.0 +1.7**
SNR=158
WHFO P **P** **07 15 30.0 +1.7**
SNR=158
WHFO P **P** **07 15 30.0 +1.7**
SNR=158
TPUB Ta-pu 31.52 90 P **P** **07 15 30.8 -0.4**
SISI Saibi 31.53 154 P P 07 15 41.8 +11
DL2 Dalian 31.62 60⇑*i*P **P** **07 15 32.3 +0.4**
DL2 S **S** **07 20 41.0 +0.4**
DL2 pmax pmax
comp=Z,980nm,0.9s
DL2 pmax pmax
comp=Z,14μm,9.7s
DL2 LR LR
comp=Z,236μm,14.7s
DL2 LR LR
comp=Z,473μm,15.9s
DL2 LR LR
comp=Z,715μm,16.7s
SSLB Suanglung 31.68 89 P **P** **07 15 32.3 -0.4**
ABTO Aybut 31.82 258 P **P** **07 15 36.0 +2.0**
SNR=131
ABTO P **P** **07 15 36.0 +2.0**
SNR=131
ABTO P **P** **07 15 36.0 +2.0**
SNR=131
YHNB Yeheng 31.84 87 P **P** **07 15 33.6 -0.5**
CIT Chita 31.84 33 *e*P **P** **07 15 33.6 -0.2**
CIT *e* 07 16 33.9
CIT *e* 07 16 48.5
CIT pmax pmax
comp=Z,1μm,3.2s
TWG Pinlang 32.04 91 P **P** **07 15 37.0 +1.3**
TWG IAmb IAmb 07 15 54.1
comp=Z,654nm,1.0s
YULB Yu-li 32.09 90 P **P** **07 15 36.9 +0.7**
YULB IAmb IAmb 07 16 04.1
comp=Z,1μm,1.1s
NACB Ninganchiao 32.15 88 P **P** **07 15 37.2 +0.4**
YOJ Yonaguni jima 33.34 87 P **P** **07 15 46.5 -0.6**
YOJ pmax pmax
comp=Z,312nm,0.9s
YOJ MLR MLR
comp=Z,42μm,22.0s
YOJ Yonaguni jima 33.34 87 P **P** **07 15 46.5 -0.6**
YOJ Yonaguni jima 33.34 87⇑P P 07 15 52.9 +5.8
QRN Al-Qurain 33.45 281 *e*P 07 15 50.8
ABRA Dolores 33.48 100 *e*P **P** **07 15 49.2 +0.8**
UMR Umm Al-Rimmam 33.53 282 *e*P 07 15 48.5
BBP Basco 33.56 95 *e*P P 07 15 56.3 +7.3
HIA Hailar 33.64 41 P **P** **07 15 49.8 +0.2**
HIA pmax pmax
comp=Z,371nm,0.8s
HIA MLR MLR
comp=Z,444μm,18.0s
HIA Hailar 33.64 41 P **P** **07 15 49.8 +0.2**
SNY Shenyang 33.65 55⇑P **P** **07 15 49.5 -0.1**
SNY S **S** **07 21 13.3 +1.2**
SNY pmax pmax
comp=Z,150nm,1.6s
SNY pmax pmax
comp=Z,3μm,4.3s
SNY LR LR
comp=Z,121μm,12.2s
SNY LR LR
comp=Z,169μm,12.6s
SNY LR LR
comp=Z,244μm,13.5s
SOCY Socotra 33.68 249 P **P** **07 15 49.6 -0.7**
SOCY Socotra 33.68 249 P **P** **07 15 50.2 -0.1**
SNR=145
SOCY Socotra 33.68 249⇑P **P** **07 15 49.4 -0.9**
RDF Al-Radifah 33.75 281 *e*P 07 15 50.7
JMBI JAMBI 33.78 147 P **P** **07 15 53.1 +2.1**
comp=Z,15μmcomp=Z,1μm,1.3s
APYP Conner 33.86 99 *e*P **P** **07 15 52.0 +0.3**
AKT Akhty 34.05 304⇑*i*P **P** **07 15 54.9 +1.6**
AKT *e* 07 17 09.5
AKT *e*S **S** **07 21 21.9 +3.3**
AKT pmax pmax
comp=Z,1μm,1.1s
RST Umm Al-Ruwaisa 34.16 282 *e*P 07 15 53.6
SVE Sverdlovsk 34.20 335*d i*P **P** **07 15 55.4 +1.2**
SVE *e*S **S** **07 21 20.9 +0.7**
SVE pmax pmax
comp=Z,2μm,1.7s
SVE MLR MLR
comp=Z,335μm,14.0s
SVE MLR MLR
comp=N,163μm,15.0s
SVE MLR MLR
comp=E,190μm,14.0s
SGCP Mt. Cagua 34.41 98 *e*P P 07 16 02.7 +6.2
CVP Callao Caves 34.43 99⇓*i*P **P** **07 15 56.4 -0.2**
MASI Maura Aman, Be 34.47 150 P **P** **07 16 00.6 +3.6**
comp=E,14μmcomp=E,1μm,1.3s
MAK Makhachkala 34.53 306*d i*P **P** **07 15 58.7 +1.4**
MAK *e* 07 17 08.1
MAK *e*S **S** **07 21 27.7 +1.9**
MAK *e*SS **SnSn** **07 23 34.3 -2.8**
MAK pmax pmax
comp=Z,521nm,1.0s
MAK pmax pmax
comp=Z,13μm,10.1s
MAK smax smax
comp=E,6μm,2.9s
MAK smax smax
comp=N,51μm,16.3s
MAK MLR MLR
comp=Z,100μm,13.0s
MAK MLR MLR
comp=N,121μm,15.0s
MAK MLR MLR
comp=E,148μm,14.0s
ARU Arti 34.71 333 P3KPbc 07 46 55.8
comp=E,2.6nm,0.6s,baz=130,slow=22,SNR=3.5
ARU Arti 34.71 333*c i*P **P** **07 15 59.4 +0.7**
ARU 07 17 13.4
ARU PPP PPP 07 17 29.7
ARU 07 18 33.5
ARU S **S** **07 21 32.9 +4.8**
ARU SS **SnSn** **07 23 40.9 -0.1**
ARU SSS SSS 07 24 03.1
ARU 07 26 21.8
ARU pmax pmax
comp=Z,518nm,1.0s
ARU pmax pmax
comp=Z,5μm,6.8s
ARU MLR MLR
comp=Z,135μm,15.0s
ARU Arti 34.71 333 P **P** **07 15 59.4 +0.7**
ARU IAmb IAmb 07 16 07.8
comp=Z,2μm,1.6s
ARU IAMs_20 IAMs_20 07 31 05.1
comp=Z,222μm,22.0s
ARU Arti 34.71 333⇑P **P** **07 15 59.4 +0.7**
LUBP Lubang 34.81 107 *e*P **P** **07 15 60.0 0.0**
MACP Maragondon, Ca 34.96 105 *e*P **P** **07 16 00.9 -0.3**
KSM Kuching 34.99 134 P **P** **07 16 02.4 +0.8**
KSM Kuching 34.99 134⇑P **P** **07 16 02.4 +0.8**
KSI Kapahiang 35.08 150 P **P** **07 16 01.5 -0.8**
comp=Z,16μmcomp=Z,774nm,1.0s
TGY Tagaytay City 35.22 105 LR LR 07 32 13.9
comp=Z,21μm,18.2s,baz=298,slow=40
INCN Inchon 35.37 64 P **P** **07 16 04.1 -0.5**
INCN pmax pmax
comp=Z,5μm,1.8s
INCN MLR MLR
comp=Z,80μm,19.0s
INCN Inchon 35.37 64 P **P** **07 16 04.0 -0.5**
INCN Inchon 35.37 64 P **P** **07 16 04.9 +0.3**
INCN P **P** **07 16 04.9 +0.3**
INCN Inchon 35.37 64⇑P **P** **07 16 04.2 -0.4**
ENPP El Nido 35.41 111 *e*P **P** **07 16 04.9 -0.2**
BATP Bataraza 35.44 116 *e*P **P** **07 16 05.6 +0.2**
PMBI Palembang 35.46 146 P **P** **07 16 06.7 +1.2**
PMBI Palembang 35.46 146 P **P** **07 16 07.4 +1.9**
comp=Z,40μmcomp=Z,47μmcomp=Z,3μm,1.3s
PPBI Pangkal Pinang 35.50 144 P **P** **07 16 06.8 +0.9**
comp=Z,34μmcomp=Z,20μmcomp=Z,618nm,1.2s
SBUM Sibu 35.51 130 P **P** **07 16 06.8 +0.8**
SBUM Sibu 35.51 130⇑P **P** **07 16 07.2 +1.2**
LHSI Lahat 35.65 149 P **P** **07 16 06.9 -0.3**
comp=Z,29μmcomp=Z,8μmcomp=Z,465nm,1.3s
LQP Lukban 35.73 105⇑*e*P **P** **07 16 08.3 +0.2**
POLP Polilio Island 35.79 104 *e*P **P** **07 16 08.8 +0.4**
GROC Groznyy 35.81 306 *e*P **P** **07 16 10.1 +1.8**
GROC *e* 07 17 29.5
GROC *e* 07 18 35.3
GROC *e*S **S** **07 21 50.6 +5.2**
GROC pmax pmax
comp=Z,887nm,0.8s
MNAI Manna 35.87 150 P **P** **07 16 08.9 -0.1**
MNAI IAmb IAmb 07 16 49.2
comp=Z,543nm,0.8s
MNAI Manna 35.87 150⇓P **P** **07 16 13.6 +4.5**
MNAI Manna 35.87 150 P P 07 16 18.5 +9.4
TJN Taejon 35.90 66*ce*P **P** **07 16 07.7 -1.4**
KKM Kota Kinabalu 35.90 121 P **P** **07 16 10.8 +1.3**
KKM IAmb IAmb 07 16 27.7
comp=Z,1μm,1.2s
KKM Kota Kinabalu 35.90 121⇑P **P** **07 16 10.8 +1.3**
BOD Bodaibo 35.92 25 *e*P **P** **07 16 09.3 +0.2**
BOD pmax pmax
comp=Z,968nm,1.4s
GNI Garni 36.08 301 P **P** **07 16 13.0 +2.2**
GNI Garni 36.08 301*ce*P **P** **07 16 13.0 +2.2**
GNI pmax pmax
comp=Z,812nm,1.7s
GNI MLR MLR
comp=Z,49μm,15.0s
GNI Garni 36.08 301 P **P** **07 16 13.1 +2.2**
GNI IAmb IAmb 07 17 21.3
comp=Z,2μm,1.4s
GNI Garni 36.08 301 P **P** **07 16 14.0 +3.1**
GNI P **P** **07 16 14.0 +3.1**
GNI Garni 36.08 301⇑P **P** **07 16 13.2 +2.3**
SJMP San Jose 36.17 108 *e*P **P** **07 16 11.8 +0.1**
KS19 Wonju Array Si 36.35 64 P **P** **07 16 12.2 -0.8**
KS19 IAmb IAmb 07 16 23.6
comp=Z,3μm,2.0s
KSAR Wonju Array Be 36.36 64 P **P** **07 16 11.5 -1.6**
KSAR Wonju Array Be 36.36 64 P **P** **07 16 11.5 -1.6**
KSRS Korea Array 36.39 64 P **P** **07 16 12.3 -1.0**
comp=Z,38nm,0.7s,baz=258,slow=7.9,SNR=129
KSRS LR LR 07 32 46.1
comp=Z,78μm,18.2s,baz=268,slow=39
KSRS P3KPbc 07 46 51.4
comp=Z,0.4nm,0.4s,baz=128,slow=14,SNR=1.5
MDSI Maura Dua 36.53 148 P **P** **07 16 12.5 -2.2**
comp=Z,26μmcomp=Z,6μmcomp=Z,197nm,1.3s
RAYN Ar Rayn 36.62 273 *i* P **P** **07 16 15.7 +0.1**
SNR=96
RAYN Ar Rayn 36.62 273 P **P** **07 16 15.3 -0.2**
RAYN pmax pmax
comp=Z,456nm,1.3s
RAYN MLR MLR
comp=Z,78μm,21.0s
RAYN Ar Rayn 36.62 273 P **P** **07 16 15.3 -0.2**
JCNP Jose Panganiba 36.65 104 *e*P **P** **07 16 15.4 -0.3**
TPI Tanjungpandan 36.81 142 P **P** **07 16 18.3 +1.2**
comp=Z,330nm,1.2s
STKI Sintang 36.81 134 P **P** **07 16 19.8 +2.6**
CUYO Cuyo Island 36.92 110 *e*P **P** **07 16 17.7 -0.3**
LWLI Liwa 36.95 149 P **P** **07 16 17.7 -0.7**
comp=Z,9μmcomp=Z,607nm,0.8s
ZEI Tsey 37.09 305 *e*P **P** **07 16 17.8 -1.8**
ZEI pmax pmax
comp=Z,881nm,1.4s
AKH Akhalkalaki 37.18 303⇑P **P** **07 16 23.3 +3.0**
DGAR Diego Garcia 37.31 202 P **P** **07 16 21.7 +0.4**
DGAR pmax pmax
comp=Z,3μm,1.9s
DGAR MLR MLR
comp=Z,99μm,20.0s
DGAR Diego Garcia 37.31 202 P **P** **07 16 21.7 +0.4**
DGAR IAmb IAmb 07 16 34.0
comp=Z,3μm,1.9s
DGAR Diego Garcia 37.31 202 P **P** **07 16 21.9 +0.6**
DGAR P **P** **07 16 21.9 +0.6**
DGAR Diego Garcia 37.31 202⇓P **P** **07 16 23.8 +2.5**
NCK Nalchik 37.44 306 *i* P **P** **07 16 23.2 +0.9**
NCK pmax pmax
comp=Z,648nm,0.7s
NCK MLR MLR
comp=Z,89μm,17.0s
JOW Kunigami 37.47 81 P **P** **07 16 21.8 -0.8**
JOW IAmb IAmb 07 16 41.1
comp=Z,2μm,2.1s
JOW Kunigami 37.47 81⇑P **P** **07 16 21.4 -1.3**
H08S3 Diego Garcia H 37.50 202 P **P** **07 16 25.3 +2.7**
baz=9.7,slow=13,SNR=111
H08S2 Diego Garcia H 37.52 202 P **P** **07 16 24.8 +2.1**
baz=9.7,slow=13,SNR=129
H08S1 Diego Garcia H 37.52 202 P **P** **07 16 26.0 +3.2**
baz=9.7,slow=13,SNR=70
JTU Tsushima 37.56 69 P **P** **07 16 22.9 -0.4**
JTU IAMs_20 IAMs_20 07 33 23.3
comp=Z,132μm,18.0s
JTU Tsushima 37.56 69⇑P **P** **07 16 22.9 -0.4**
KASI Kota Agung 37.59 149 P **P** **07 16 22.0 -1.7**
comp=Z,27μmcomp=Z,6μmcomp=Z,449nm,0.7s
SCSP San Jose Seism 37.65 104 *e*P P 07 16 32.8 +8.6
BELG Belogornoye 37.65 321 *i* P **P** **07 16 24.1 +0.3**
BELG pmax pmax
comp=Z,213nm,0.9s
BELG MLR MLR
comp=Z,68μm,16.0s
BLSI Bandar Lampung 37.80 148 P **P** **07 16 28.4 +2.8**
comp=Z,18μmcomp=Z,7μmcomp=Z,377nm,1.2s
PYA1 Pyatigorsk 37.90 307 *i* P **P** **07 16 26.7 +0.5**
PYA1 pmax pmax
comp=Z,7.0nm,0.5s
KBZ Khabaz 37.98 306 P **P** **07 16 27.6 +0.8**
comp=Z,143nm,0.8s,baz=89,slow=8.6,SNR=94
KBZ LR LR 07 34 47.1
comp=Z,66μm,20.2s,baz=84,slow=40
KBZ Khabaz 37.98 306*ce*P **P** **07 16 27.4 +0.6**
KBZ pmax pmax
comp=Z,271nm,0.9s
KBZ MLR MLR
comp=Z,105μm,16.0s
RCP Roxas 38.00 108⇑*e*P **P** **07 16 30.8 +3.5**
NEY Neytrino 38.02 306*c i*P **P** **07 16 29.1 +1.7**
NEY pmax pmax
comp=Z,99nm,0.8s
GOF Gofitskoye 38.14 309⇑*i*P **P** **07 16 29.0 +0.9**
GOF *e*S **S** **07 22 26.8 +6.0**
GOF pmax pmax
comp=Z,435nm,1.4s
GOF smax smax
comp=E,403nm,1.4s
GOF smax smax
comp=N,906nm,1.7s
KIV Kislovodsk 38.17 307⇓P **P** **07 16 30.0 +1.5**
KIV Kislovodsk 38.17 307 *i* P **P** **07 16 29.8 +1.3**
SNR=47
KIV Kislovodsk 38.17 307 *e*P **P** **07 16 29.2 +0.7**
KIV *e* 07 17 57.1
KIV *e*PPP PPP 07 18 14.7
KIV *e*S **S** **07 22 23.7 +2.1**
KIV pmax pmax
comp=Z,1μm,1.1s
KIV pmax pmax
comp=Z,136nm,2.2s
KIV MLR MLR
comp=Z,195μm,16.0s
KIV Kislovodsk 38.17 307 P **P** **07 16 28.8 +0.2**
KIV Kislovodsk 38.17 307 P **P** **07 16 30.3 +1.8**
KIV P **P** **07 16 30.3 +1.8**
KIV P **P** **07 16 30.3 +1.8**
KIV S **S** **07 22 24.4 +2.8**
KIV S **S** **07 22 24.4 +2.8**
KIV S **S** **07 22 24.4 +2.8**
KIV Kislovodsk 38.17 307⇑P **P** **07 16 29.4 +0.9**
MYLDM Lahad Datu 38.20 120 P **P** **07 16 30.0 +1.1**
MYLDM IAmb IAmb 07 16 47.4
comp=Z,2μm,1.5s
MYLDM Lahad Datu 38.20 120⇑P **P** **07 16 30.4 +1.5**
GUIM Jordan 38.35 109 *e*P **P** **07 16 30.4 +0.2**
CHVG Ch'k'valeri 38.40 305⇓P **P** **07 16 33.1 +2.7**
MDJ Mudanjiang 38.52 52 P **P** **07 16 30.8 -0.5**
MDJ pP pP 07 16 37.0 +0.7
MDJ sP sP 07 16 39.5 +1.3
MDJ PP **PP** **07 17 58.0 -1.4**
MDJ S **S** **07 22 28.0 +1.4**
MDJ pmax pmax
comp=Z,73nm,1.0s
MDJ pmax pmax
comp=Z,13μm,12.5s
MDJ LR LR
comp=Z,189μm,19.9s
MDJ LR LR
comp=Z,43μm,19.2s
MDJ LR LR
comp=Z,340μm,15.7s
MDJ Mudanjiang 38.52 52 P **P** **07 16 30.6 -0.7**
MDJ IAMs_20 IAMs_20 07 33 40.3
comp=Z,275μm,21.0s
BATM Batumi 38.55 303⇑P **P** **07 16 33.9 +2.3**
JSU Suzuyama 38.65 73 P **P** **07 16 32.0 -0.6**
JSU IAmb IAmb 07 16 52.1
comp=Z,3μm,2.1s
JSU Suzuyama 38.65 73⇑P **P** **07 16 32.0 -0.6**
CNOP Candoni, Negro 38.81 110 *e*P **P** **07 16 34.4 +0.3**
JNU Nakatsue 38.86 71 P **P** **07 16 34.5 +0.2**
JNU IAMs_20 IAMs_20 07 34 11.9
comp=Z,131μm,18.0s
MARD Mardin 38.98 296 P **P** **07 16 37.2 +1.7**
PBKI Pangkalan Bun 39.09 137 P **P** **07 16 39.2 +2.8**
comp=Z,22μmcomp=Z,945nm,1.0s
KOPT Kop Dagi 39.30 300 P **P** **07 16 40.3 +1.9**
MSHR Mys Shultsa 39.32 56*ce*P **P** **07 16 37.7 -0.4**
MSHR pmax pmax
comp=Z,399nm,0.9s
MSHR MLR MLR
comp=Z,161μm,13.0s
DBJI Dramaga 39.56 146 P **P** **07 16 39.3 -1.0**
comp=Z,32μmcomp=Z,384nm,1.3s
LLP Lapu-Lapu 39.66 108 *e*P **P** **07 16 41.2 0.0**
LLP *e*S **S** **07 22 43.7 -0.7**
MTKI Muara Teweh, K 39.81 131 P **P** **07 16 44.4 +2.0**
comp=Z,13μmcomp=Z,11μmcomp=Z,418nm,1.1s
ZEA Zeya 39.81 38 *e*P **P** **07 16 42.4 +0.4**
ZEA pmax pmax
comp=N,110nm,0.8s
ZEA pmax pmax
comp=E,80nm,0.7s
ZEA pmax pmax
comp=Z,230nm,0.7s
ZEA pmax pmax
comp=E,2μm,6.0s
ZEA pmax pmax
comp=N,1μm,6.2s
ZEA pmax pmax
comp=Z,4μm,8.4s
ZEA pmax pmax
comp=E,8μm,14.6s
ZEA pmax pmax
comp=N,4μm,15.3s
ZEA pmax pmax
comp=Z,11μm,13.7s
ZEA MLR MLR
comp=E,260μm,19.0s
ZEA MLR MLR
comp=N,200μm,16.0s
ZEA MLR MLR
comp=Z,360μm,18.0s
OCLP Ormoc 39.83 107 *e*P **P** **07 16 42.9 +0.3**
KIRV Kirov 39.89 331 LR LR 07 35 10.4
comp=Z,173μm,20.8s,baz=124,slow=39
KIRV Kirov 39.89 331*ce*P **P** **07 16 43.2 +0.7**
KTUT Trabzon 39.93 302⇓P **P** **07 16 45.0 +1.8**
USA0B Ussuriysk Arra 40.14 53 P **P** **07 16 44.7 -0.2**
USA0B pmax pmax
comp=Z,237nm,0.9s
USA0B MLR MLR
comp=Z,94μm,21.0s
USA0B Ussuriysk Arra 40.14 53 P **P** **07 16 44.7 -0.2**
USRK Ussuriysk Ar. 40.14 53 P **P** **07 16 44.4 -0.5**
comp=Z,47nm,0.8s,baz=259,slow=8.0,SNR=73
USRK LR LR 07 35 21.2
comp=Z,89μm,19.2s,baz=251,slow=39
USRK Ussuriysk Ar. 40.14 53 P **P** **07 16 44.2 -0.7**
LEM Lembang 40.23 145 LR LR 07 35 25.1
comp=Z,69μm,21.9s,baz=312,slow=39
SOC Sochi 40.24 306 *e*P **P** **07 16 43.5 -2.2**
SOC *e* 07 18 14.6
SOC *e*PPP PPP 07 18 44.0
SOC *e*S **S** **07 22 51.6 -0.9**
SOC *e*SS **SS** **07 25 49.8 -0.8**
SOC *e*SSS SSS 07 26 12.1
SOC pmax pmax
comp=Z,519nm,1.0s
SOC MLR MLR
comp=Z,28μm,12.0s
JMZ Minamidaito 2 40.27 82 P **P** **07 16 46.3 +0.2**
JMZ IAmb IAmb 07 17 09.5
comp=Z,2μm,1.3s
JMZ Minamidaito 2 40.27 82⇑P **P** **07 16 46.9 +0.7**
PAGZ Pagadian 40.50 112 *e*P **P** **07 16 48.9 +0.8**
MSLP Maasin 40.51 108 *e*P P 07 16 53.9 +5.7
JHS Saijyo 40.59 68 P **P** **07 16 48.1 -0.7**
JHS Saijyo 40.59 68⇑P **P** **07 16 48.0 -0.7**
VRH Novokhopyorsk 40.60 318 *e*P **P** **07 16 48.8 +0.2**
VRH *e* 07 18 25.2
VRH *e*S **S** **07 22 57.7 0.0**
VRH pmax pmax
comp=Z,3μm,0.8s
VRH pmax pmax
comp=Z,3μm,0.9s
VRH smax smax
comp=N,14μm,10.4s
VRH MLR MLR
comp=Z,132μm,14.0s
KLR Kul'dur 40.98 46 LR LR 07 35 55.1
comp=Z,128μm,18.2s,baz=254,slow=39
KLR Kul'dur 40.98 46*ce*P **P** **07 16 51.3 -0.5**
KLR pmax pmax
comp=Z,394nm,0.9s
KLR MLR MLR
comp=Z,110μm,11.0s
SMKI Samarinda 41.03 128 P P 07 17 01.2 +8.7
COCO West Island 41.06 164 P **P** **07 16 52.9 +0.3**
COCO pmax pmax
comp=Z,3μm,1.7s
COCO West Island 41.06 164 P **P** **07 16 52.9 +0.3**
COCO IAmb IAmb 07 17 14.4
comp=Z,3μm,1.7s
CGP Cagayan de Oro 41.25 110⇓*e*P P 07 17 01.6 +7.2
JMN Monobe 41.31 69 P **P** **07 16 55.0 +0.2**
JMN IAmb IAmb 07 17 08.0
comp=Z,1μm,0.8s
JMN Monobe 41.31 69⇑P **P** **07 16 54.5 -0.3**
BKB Balikpapan 41.40 129 P P 07 17 02.4 +6.9
NRIK Noril'sk 41.64 1 P **P** **07 16 57.7 +0.8**
comp=Z,581nm,0.8s,baz=162,slow=6.2
NRIK S **S** **07 23 13.6 +0.9**
comp=Z,57nm,1.1s,baz=183,slow=19,SNR=1.8
NRIK LR LR 07 36 34.5
comp=Z,656μm,19.2s,baz=184,slow=40
NRIK Noril'sk 41.64 1*ce*P **P** **07 16 57.6 +0.7**
NRIK pmax pmax
comp=Z,2μm,0.8s
NRIK MLR MLR
comp=Z,562μm,16.0s
NRIK Noril'sk 41.64 1 P **P** **07 16 57.9 +1.0**
NRIK IAmb IAmb 07 17 06.7
comp=Z,1μm,0.8s
BBKI Banjar Baru 41.66 134 P **P** **07 16 59.4 +1.7**
comp=Z,19μmcomp=Z,852nm,1.0s
BUTP Butuan 41.75 109 *e*P P 07 17 05.1 +6.6
GLSP General Luna, 41.76 107 *e*P **P** **07 16 57.1 -1.4**
GAZ Gaziantep 41.82 296 P **P** **07 17 00.5 +1.5**
SMRI Semarang 41.90 142 P **P** **07 16 59.6 0.0**
SMRI IAmb IAmb 07 17 13.5
comp=Z,2μm,1.1s
SMRI Semarang 41.90 142⇑P **P** **07 17 01.4 +1.8**
SMRI Semarang 41.90 142 P **P** **07 17 02.0 +2.4**
comp=Z,52μmcomp=Z,56μmcomp=Z,2μm,1.1s
VORD Divnogorie 42.00 317 *e*P **P** **07 17 00.1 +0.1**
VORD *e* 07 18 42.3
VORD *e*S **S** **07 23 17.3 -1.1**
VORD *e*SS **SS** **07 26 16.1 -9.2**
VORD pmax pmax
comp=Z,2μm,1.0s
VORD pmax pmax
comp=Z,2μm,1.2s
VORD smax smax
comp=N,1μm,4.3s
VORD MLR MLR
comp=Z,70μm,13.0s

ANN	**Anapa**	**42.02**	**307**	*ce*	P		**P**	**07 17 00.1**	**-0.2**
ANN				*e*				07 18 52.2	
ANN				*e*	PPP	PPP		07 19 06.6	
ANN				*e*	S		**S**	**07 23 19.4**	**+0.5**
ANN				*e*	SS		**SS**	**07 26 25.4**	**-0.6**
ANN				*e*	SSS	SSS		07 27 01.4	
ANN					pmax	pmax			
	comp=Z,791nm,0.9s								
ANN					pmax	pmax			
	comp=N,197nm,1.2s								
ANN					pmax	pmax			
	comp=E,198nm,0.7s								
ANN					pmax	pmax			
	comp=N,350nm,1.1s								
ANN					pmax	pmax			
	comp=Z,5μm,3.2s								
ANN					pmax	pmax			
	comp=E,2μm,3.3s								
ANN					smax	smax			
	comp=E,2μm,2.2s								
ANN					smax	smax			
	comp=N,42μm,17.4s								
ANN					MLR	MLR			
	comp=N,122μm,15.0s								
ANN					MLR	MLR			
	comp=Z,145μm,14.0s								
ANN					MLR	MLR			
	comp=E,122μm,15.0s								
VSR	**Storozhevoye**	**42.14**	**317**	*e*	P		**P**	**07 17 00.6**	**-0.6**
VSR				*e*				07 18 48.5	
VSR				*e*	S		**S**	**07 23 20.6**	**0.0**
VSR				*e*	SS		**SS**	**07 26 18.0**	**-10**
VSR					pmax	pmax			
	comp=Z,2μm,1.2s								
VSR					pmax	pmax			
	comp=Z,4μm,1.6s								
VSR					smax	smax			
	comp=N,15μm,10.9s								
VSR					MLR	MLR			
	comp=Z,95μm,14.0s								
SKMP	**Bagumbayan, Su**	**42.20**	**113**	*e*	P		**P**	**07 17 01.8**	**-0.3**
VORR	**Voronezh**	**42.24**	**318**	*e*	P		**P**	**07 17 03.1**	**+1.1**
VORR					pmax	pmax			
	comp=Z,2μm,1.6s								
KCP	**Kidapawan**	**42.37**	**112**	⇓*e*	P		**P**	**07 17 05.3**	**+1.7**
TOKA	**Tokat**	**42.39**	**300**		P		**P**	**07 17 05.3**	**+1.8**
JWT	**Wachi**	**42.45**	**67**		P		**P**	**07 17 04.1**	**+0.1**
JWT	**Wachi**	**42.45**	**67**	⇑	P		**P**	**07 17 04.0**	**+0.1**
XMIS	**Christmas Isla**	**42.50**	**151**		P		**P**	**07 17 04.5**	**0.0**
TOLI2	**Tolitoli**	**42.56**	**122**		P		**P**	**07 17 05.3**	**+0.3**
UGM	**Wanagama**	**42.66**	**143**		P		P	07 17 20.6	+15
LPSR	**Galich'ya Gora**	**42.67**	**319**	*e*	P		**P**	**07 17 05.9**	**+0.4**
LPSR				*e*				07 18 53.7	
LPSR				*e*	S		**S**	**07 23 31.5**	**+3.2**
LPSR				*e*	SS		**SS**	**07 26 32.3**	**-6.2**
LPSR					pmax	pmax			
	comp=Z,3μm,1.2s								
LPSR					pmax	pmax			
	comp=Z,3μm,1.2s								
LPSR					smax	smax			
	comp=N,14μm,9.2s								
LPSR					MLR	MLR			
	comp=Z,239μm,16.0s								
DAV	**Davao City (W)**	**42.74**	**111**		P		**P**	**07 17 07.8**	**+1.3**
DAV	**Davao City (W)**	**42.74**	**111**		P		**P**	**07 17 07.1**	**+0.6**
DAV					P		**P**	**07 17 07.1**	**+0.6**
HWQ	**Hawqa**	**43.03**	**292**	*e*	P		**P**	**07 17 10.5**	**+1.6**
RCY	**Rachaya**	**43.20**	**290**	*e*	P		**P**	**07 17 12.3**	**+2.0**
SHBL	**Chebaa**	**43.29**	**290**	*e*	P		**P**	**07 17 13.2**	**+2.2**
BHL	**Bhannes**	**43.31**	**291**	*e*	P		**P**	**07 17 13.2**	**+2.2**
QRWL	**Qaraoun**	**43.32**	**291**	*e*	P		**P**	**07 17 13.2**	**+2.1**
DIKM	**Dikmen**	**43.36**	**302**	⇑	P		**P**	**07 17 12.5**	**+1.2**
MATI	**Mati**	**43.37**	**111**	*e*	P		**P**	**07 17 14.0**	**+2.4**
DDMP	**Don Marcelino,**	**43.38**	**112**	*e*	P		**P**	**07 17 11.2**	**-0.6**
DQRL	**Deir Qamar**	**43.40**	**291**	*e*	P		**P**	**07 17 14.1**	**+2.3**
ATD	**Arta Tunnel**	**43.45**	**257**		P		**P**	**07 17 13.5**	**+1.1**
ATD	**Arta Tunnel**	**43.45**	**257**		P		**P**	**07 17 14.5**	**+2.1**
	SNR=75								
ATD	**Arta Tunnel**	**43.45**	**257**	⇑	P		**P**	**07 17 13.6**	**+1.1**
ATD	**Arta Tunnel**	**43.45**	**257**	*i*	P		**P**	**07 17 12.8**	**+0.4**
ATD					IAmb	IAmb		07 17 31.9	
	comp=Z,4μm,2.4s								
ATD					IVMs_BB	IVMs_BB		07 35 11.4	
	comp=Z,18μm,17.2s								
TEY	**Ternei**	**43.52**	**53**	⇓*e*	P		**P**	**07 17 11.1**	**-1.3**
TEY				*e*				07 19 05.6	
TEY				*e*	S		**S**	**07 23 36.5**	**-4.4**
TEY					pmax	pmax			
	comp=Z,50nm,2.2s								
TEY					pmax	pmax			
	comp=Z,13μm,14.6s								
TEY					smax	smax			
	comp=N,17μm,18.3s								
TEY					smax	smax			
	comp=E,13μm,15.7s								
TEY					MLR	MLR			
	comp=E,100μm,14.0s								
TEY					MLR	MLR			
	comp=N,58μm,12.0s								
TEY					MLR	MLR			
	comp=Z,158μm,14.0s								
MMAI	**Mount Meron Ar**	**43.61**	**290**		LR	LR		07 39 13.9	
	comp=Z,52μm,19.9s,baz=70,slow=41								
GHAJ	**Ghor Haditha**	**43.71**	**287**		P		**P**	**07 17 16.2**	**+2.0**
GHAJ					IAmb	IAmb		07 17 37.7	
	comp=Z,3μm,1.5s								
MRSI	**Marisa**	**43.84**	**122**		P		**P**	**07 17 16.6**	**+1.2**
	comp=Z,18μmcomp=Z,14μmcomp=Z,734nm,1.2s								
KMMI	**Kalianget**	**43.91**	**138**		P		**P**	**07 17 18.1**	**+2.2**
	comp=Z,42μmcomp=Z,25μmcomp=Z,608nm,0.9s								
JGF	**Kuroka**	**44.01**	**66**		P		**P**	**07 17 15.4**	**-1.3**
JGF					IAmb	IAmb		07 17 27.1	
	comp=Z,3μm,2.6s								
JGF	**Kuroka**	**44.01**	**66**	⇑	P		**P**	**07 17 15.6**	**-1.1**
GRNR	**Gornyy**	**44.27**	**45**	⇑ *i*	P		**P**	**07 17 18.3**	**-0.2**
GRNR				*e*	S		**S**	**07 23 55.4**	**+3.6**
GRNR					pmax	pmax			
	comp=E,50nm,1.1s								
GRNR					pmax	pmax			
	comp=N,20nm,0.9s								
GRNR					pmax	pmax			
	comp=Z,110nm,1.2s								
GRNR					smax	smax			
	comp=N,4.0nm,0.9s								
GRNR					MLR	MLR			
	comp=E,93μm,12.0s								
GRNR					MLR	MLR			
	comp=N,33μm,16.0s								
GRNR					MLR	MLR			
	comp=Z,130μm,12.0s								
BZK	**Bozkurt**	**44.31**	**303**	⇑	P		**P**	**07 17 20.0**	**+1.1**
MOS	**Moscow**	**44.36**	**323**	*e*	P		**P**	**07 17 17.3**	**-1.8**
MOS				*e*				07 19 03.2	
MOS				*e*	S		**S**	**07 23 45.2**	**-7.7**
MOS				*e*	SS		**SS**	**07 27 09.6**	**-1.9**
MOS					pmax	pmax			
	comp=Z,3μm,1.6s								
MOS					pmax	pmax			
	comp=Z,11μm,2.4s								
MOS					smax	smax			
	comp=N,13μm,3.8s								
MOS					smax	smax			
	comp=E,10μm,3.8s								
MOS					MLR	MLR			
	comp=E,334μm,17.0s								
MOS					MLR	MLR			
	comp=Z,356μm,17.0s								
SIM	**Simferopol'**	**44.38**	**307**	*c i*	P		**P**	**07 17 19.2**	**-0.3**
SIM				*e*				07 19 09.0	
SIM				*e*	S		**S**	**07 23 55.0**	**+1.4**
SIM					pmax	pmax			
	comp=Z,2μm,1.5s								
EIL	**Elat**	**44.51**	**285**		LR	LR		07 40 08.1	
	comp=Z,53μm,20.2s,baz=95,slow=42								
EIL	**Elat**	**44.51**	**285**	⇑	P		**P**	**07 17 21.6**	**+1.0**
ILGA	**Ilgaz**	**44.51**	**301**		P		**P**	**07 17 21.9**	**+1.2**
ILGA					IAmb	IAmb		07 17 38.8	
	comp=Z,858nm,1.1s								
APSI	**Ampana**	**44.55**	**124**		P		**P**	**07 17 22.4**	**+1.3**
	comp=Z,13μmcomp=Z,8μmcomp=Z,530nm,1.0s								
BR131	**Keskin Array S**	**44.57**	**300**		P		**P**	**07 17 21.3**	**+0.1**
BR131					pmax	pmax			
	comp=Z,1μm,1.5s								
BR131	**Keskin Array S**	**44.57**	**300**		P		**P**	**07 17 21.3**	**+0.1**
BR131					IAmb	IAmb		07 17 43.7	
	comp=Z,1μm,1.5s								
BR131	**Keskin Array S**	**44.57**	**300**		P		**P**	**07 17 21.8**	**+0.5**
	SNR=247								
BR131					P		**P**	**07 17 21.8**	**+0.5**
	SNR=247								
BR131					S		**S**	**07 23 60.0**	**+3.2**
BR131					S		**S**	**07 23 60.0**	**+3.2**
BRTR	**Keskin Array B**	**44.57**	**300**		P		**P**	**07 17 21.9**	**+0.7**
	comp=Z,50nm,1.2s,baz=106,slow=4.0,SNR=110								
BRTR	**Keskin Array B**	**44.57**	**300**	*i*	P		**P**	**07 17 21.6**	**+0.4**
BRTR					pmax	pmax			
	comp=Z,50nm,1.2s								
BRTR	**Keskin Array B**	**44.57**	**300**		P		**P**	**07 17 20.7**	**-0.5**
JSD	**Sado**	**44.58**	**63**		P		**P**	**07 17 19.8**	**-1.3**
JSD					IAmb	IAmb		07 17 31.2	
	comp=Z,4μm,2.6s								
JSD	**Sado**	**44.58**	**63**	⇑	P		**P**	**07 17 19.6**	**-1.5**
MJB9	**Matsu-Tunnel**	**44.62**	**65**		P		**P**	**07 17 20.7**	**-0.8**
MJB9					IAmb	IAmb		07 17 32.1	
	comp=Z,3μm,2.0s								
MAJO	**Matsushiro**	**44.63**	**65**	*c i*	P		**P**	**07 17 20.6**	**-0.9**
MAJO					pmax	pmax			
	comp=Z,144nm,1.1s								
MAJO	**Matsushiro**	**44.63**	**65**		P		**P**	**07 17 20.8**	**-0.7**
MAJO					IAmb	IAmb		07 17 32.2	
	comp=Z,3μm,2.0s								
MAJO	**Matsushiro**	**44.63**	**65**	⇑	P		**P**	**07 17 20.8**	**-0.7**
MAT	**Matsushiro**	**44.63**	**65**		P		**P**	**07 17 20.5**	**-1.0**
MAT					S		**S**	**07 23 54.0**	**-3.4**
MJAR	**Matsushiro Arr**	**44.63**	**65**		P		**P**	**07 17 21.5**	**-0.1**
	comp=Z,31nm,0.8s,baz=277,slow=11,SNR=79								
MJAR					LR	LR		07 39 02.0	
	comp=Z,29μm,18.8s,baz=275,slow=40								
MJAR	**Matsushiro Arr**	**44.63**	**65**		P		**P**	**07 17 20.5**	**-1.1**
MJAR					pP		**sP**	**07 17 28.3**	**+0.2**
SGSI	**Sangihe**	**44.63**	**115**		P		P	07 17 33.4	+12
ABJI	**Asem Bagus**	**44.66**	**138**		P		P	07 17 27.0	+5.1
	comp=Z,40μmcomp=Z,25μmcomp=Z,929nm,1.1s								
TTSI	**Tana Toraja**	**44.70**	**128**		P		**P**	**07 17 23.6**	**+1.3**
	comp=Z,21μmcomp=Z,21μmcomp=Z,1μm,1.1s								
YAK	**Yakutsk**	**44.73**	**28**		LR	LR		07 37 35.6	
	comp=Z,237μm,20.4s,baz=244,slow=38								
YAK	**Yakutsk**	**44.73**	**28**	*c i*	P		**P**	**07 17 21.9**	**-0.1**
YAK				*e*	*P		**pP**	**07 17 27.3**	**+0.4**
YAK				*e*				07 19 02.0	
YAK				*e*	PPP	PPP		07 19 45.9	
YAK				*e*	S		**S**	**07 23 59.0**	**+0.8**
YAK				*e*	*SS		**sS**	**07 24 09.7**	**+3.4**
YAK				*e*	SS		**ScS**	**07 27 21.1**	**+2.1**
YAK				*e*	SSS	SSS		07 28 04.4	
YAK					pmax	pmax			
	comp=Z,248nm,0.9s								
YAK					pmax	pmax			
	comp=N,77nm,1.4s								
YAK					pmax	pmax			
	comp=E,120nm,1.4s								
YAK					pmax	pmax			
	comp=Z,3μm,3.7s								
YAK					pmax	pmax			
	comp=N,2μm,3.1s								
YAK					pmax	pmax			
	comp=E,2μm,3.1s								
YAK					smax	smax			
	comp=N,1μm,2.3s								
YAK					smax	smax			
	comp=E,557nm,2.3s								
YAK					MLR	MLR			
	comp=Z,142μm,15.0s								
YAK					MLR	MLR			
	comp=N,46μm,16.0s								
YAK					MLR	MLR			
	comp=E,106μm,15.0s								
YAK	**Yakutsk**	**44.73**	**28**		P		**P**	**07 17 21.6**	**-0.3**
YAK					IAmb	IAmb		07 17 30.5	
	comp=Z,1μm,0.7s								
YAK					IAMs_20	IAMs_20		07 37 12.7	
	comp=Z,237μm,20.0s								
YAK	**Yakutsk**	**44.73**	**28**	⇑	P		**P**	**07 17 21.8**	**-0.1**
OBN	**Obninsk**	**44.74**	**322**	⇑	P		**P**	**07 17 22.7**	**+0.6**
OBN	**Obninsk**	**44.74**	**322**	*c i*	P		**P**	**07 17 22.1**	**0.0**
OBN				*i*				07 19 04.4	
OBN				*i*				07 19 11.5	
OBN				*i*	S		**S**	**07 23 54.5**	**-4.0**
OBN				*i*	SS		**SS**	**07 27 18.0**	**-0.9**
OBN					pmax	pmax			
	comp=Z,2μm,1.0s								
OBN					MLR	MLR			
	comp=Z,279μm,19.0s								
OBN	**Obninsk**	**44.74**	**322**		P		**P**	**07 17 22.3**	**+0.2**
OBN	**Obninsk**	**44.74**	**322**	⇑	P		**P**	**07 17 22.2**	**+0.1**
JSG	**Sagara**	**44.78**	**68**		P		**P**	**07 17 22.9**	**+0.2**
JSG					IAmb	IAmb		07 17 34.1	
	comp=Z,2μm,1.6s								
JSG	**Sagara**	**44.78**	**68**	⇑	P		**P**	**07 17 22.9**	**+0.2**
CSS	**Mathiatis**	**45.11**	**293**		P		**P**	**07 17 26.1**	**+0.7**
CSS					IAmb	IAmb		07 17 36.0	
	comp=Z,3μm,2.0s								
CSS	**Mathiatis**	**45.11**	**293**	⇑	P		**P**	**07 17 26.1**	**+0.7**
JAGI	**Jajag, Banyuwa**	**45.15**	**139**		P		**P**	**07 17 25.6**	**-0.3**
JAGI	**Jajag, Banyuwa**	**45.15**	**139**	⇑	P		**P**	**07 17 28.5**	**+2.6**
JAGI	**Jajag, Banyuwa**	**45.15**	**139**		P		**P**	**07 17 28.6**	**+2.7**
	comp=Z,25μmcomp=Z,13μmcomp=Z,334nm,1.0s								
ANTO	**Ankara**	**45.22**	**300**		P		**P**	**07 17 27.0**	**+0.7**
ANTO					pmax	pmax			
	comp=Z,545nm,1.1s								
ANTO	**Ankara**	**45.22**	**300**		P		**P**	**07 17 27.0**	**+0.7**
BR231	**Keskin MP Arra**	**45.23**	**300**		P		**P**	**07 17 27.1**	**+0.6**
SPSI	**Sidrap Palu**	**45.32**	**129**		P		**P**	**07 17 29.0**	**+1.8**
	comp=Z,20μmcomp=Z,20μmcomp=Z,841nm,1.6s								
KMSI	**Cibinong**	**45.33**	**120**		P		**P**	**07 17 31.3**	**+4.0**
	comp=Z,774nmcomp=Z,18μmcomp=Z,2μm,1.0s								
KLMR	**Klimovskoe**	**45.36**	**330**	*e*	P		**P**	**07 17 24.9**	**-2.0**
KLMR				*e*				07 19 11.5	
KLMR				*e*	S		**S**	**07 24 06.8**	**-0.5**
KLMR					pmax	pmax			
	comp=Z,2μm,1.5s								
KLMR					MLR	MLR			
	comp=Z,201μm,16.0s								
KLMR	**Klimovskoe**	**45.36**	**330**	*e*	P		**P**	**07 17 25.0**	**-2.0**
KLMR					AMP			07 17 36.3	
	comp=Z,2μm,1.5s								
KLMR				*e*	PP		**PP**	**07 19 11.6**	**-1.4**
KLMR				*e*	S		**S**	**07 24 06.8**	**-0.5**
KLMR				*e*	S		**S**	**07 24 06.8**	**-0.5**
KLMR				*e*	SS		**SS**	**07 27 31.3**	**+1.1**
KLMR				*e*	SS		**SS**	**07 27 31.3**	**+1.1**
KLMR					LQ	LQ		07 32 48.3	
KLMR					LQ	LQ		07 32 48.3	
KLMR					LR	LR		07 36 09.8	
KLMR					AMP			07 37 56.3	
	comp=Z,201μm,16.1s								
LEF	**Lefka**	**45.45**	**293**	⇓	P		**P**	**07 17 29.5**	**+1.5**
LUWI	**Luwuk**	**45.47**	**123**		P		**P**	**07 17 28.2**	**-0.2**
LUWI					IAmb	IAmb		07 17 56.3	
	comp=Z,1μm,1.1s								
LUWI	**Luwuk**	**45.47**	**123**	⇑	P		**P**	**07 17 27.4**	**-1.0**
LUWI	**Luwuk**	**45.47**	**123**		P		**P**	**07 17 31.2**	**+2.8**
	comp=Z,16μmcomp=Z,16μmcomp=Z,997nm,0.9s								
SRBI	**Singaraja**	**45.48**	**137**		P		**P**	**07 17 29.4**	**+1.0**
	comp=Z,37μmcomp=Z,26μmcomp=Z,1μm,1.3s								
BNSI	**Bone**	**45.87**	**129**		P		**P**	**07 17 36.3**	**+4.8**
	comp=Z,22μmcomp=Z,7μmcomp=Z,382nm,2.0s								
KAPI	**Kappang**	**46.07**	**130**		P		**P**	**07 17 33.0**	**-0.1**
	comp=Z,106nm,1.1s,baz=298,slow=6.5,SNR=12								
KAPI	**Kappang**	**46.07**	**130**		P		**P**	**07 17 33.0**	**-0.1**
KAPI	**Kappang**	**46.07**	**130**		P		**P**	**07 17 32.7**	**-0.4**
KAPI	**Kappang**	**46.07**	**130**		P		**P**	**07 17 33.2**	**+0.1**
KAPI					P		**P**	**07 17 33.2**	**+0.1**
KAPI					P		**P**	**07 17 33.2**	**+0.1**
KAPI	**Kappang**	**46.07**	**130**	⇓	P		**P**	**07 17 33.2**	**+0.1**
KDZE	**Karadeniz Ereo**	**46.22**	**302**	⇑	P		**P**	**07 17 36.6**	**+2.5**
JYT	**Yasato**	**46.25**	**65**		P		**P**	**07 17 32.7**	**-1.7**
JYT					IAmb	IAmb		07 17 44.0	
	comp=Z,2μm,1.3s								
JYT	**Yasato**	**46.25**	**65**	⇑	P		**P**	**07 17 32.6**	**-1.7**
JHJ	**Hachijo jima 2**	**46.29**	**70**		LR	LR		07 39 08.6	
	comp=Z,121μm,18.2s,baz=279,slow=39								
JHJ2	**Mitsune**	**46.32**	**70**		P		**P**	**07 17 33.7**	**-1.2**
JHJ2					IAmb	IAmb		07 18 08.7	
	comp=Z,1μm,1.2s								
JHJ2					IAMs_20	IAMs_20		07 38 58.2	
	comp=Z,127μm,18.0s								
JHJ2	**Mitsune**	**46.32**	**70**	⇓	P		P	07 17 40.5	+5.6
MDUB	**Mudurnu**	**46.43**	**301**		P		**P**	**07 17 35.5**	**-0.3**
BKSI	**Bulukumba**	**46.54**	**130**		P		**P**	**07 17 38.4**	**+1.6**
	comp=Z,21μmcomp=Z,8μmcomp=Z,317nm,0.9s								
JMM	**Marumori**	**46.59**	**63**		P		**P**	**07 17 36.1**	**-1.0**
JMM					IAMs_20	IAMs_20		07 38 05.2	
	comp=Z,94μm,21.0s								
JMM	**Marumori**	**46.59**	**63**	⇑	P		**P**	**07 17 36.0**	**-1.0**
JTM	**Tenmabayashi**	**46.65**	**59**		P		**P**	**07 17 36.0**	**-1.4**
JTM					IAMs_20	IAMs_20		07 38 05.9	
	comp=Z,139μm,20.0s								
JTM	**Tenmabayashi**	**46.65**	**59**	⇑	P		**P**	**07 17 36.5**	**-1.0**
JEW	**Eniwo**	**46.91**	**56**		P		**P**	**07 17 39.2**	**-0.2**
JEW					IAMs_20	IAMs_20		07 38 39.3	
	comp=Z,169μm,20.0s								
JEW	**Eniwo**	**46.91**	**56**	⇓	P		**P**	**07 17 39.6**	**+0.2**
TWSI	**Taliwang, Sumb**	**47.00**	**136**		P		**P**	**07 17 43.5**	**+3.1**
	comp=Z,14μmcomp=Z,3μmcomp=Z,121nm,1.4s								
ISP	**Isparta**	**47.10**	**297**		P		**P**	**07 17 41.0**	**-0.2**
ISP					pmax	pmax			
	comp=Z,2μm,1.8s								
ISP	**Isparta**	**47.10**	**297**		P		**P**	**07 17 41.0**	**-0.2**
ISP					IAmb	IAmb		07 17 58.9	
	comp=Z,2μm,1.8s								
NKL	**Nikolayevsk**	**47.31**	**42**	*e*	P		**P**	**07 17 43.0**	**+0.6**
NKL				*e*	S		**S**	**07 24 29.8**	**-5.6**
NKL					pmax	pmax			
	comp=E,36nm,0.7s								
NKL					pmax	pmax			
	comp=N,1.0nm,0.8s								
NKL					pmax	pmax			
	comp=Z,207nm,1.3s								
NKL					pmax	pmax			
	comp=Z,726nm,3.7s								
NKL					smax	smax			
	comp=E,208nm,3.2s								
NKL					smax	smax			
	comp=N,1.0nm,4.2s								
NKL					MLR	MLR			
	comp=E,4μm,20.0s								
NKL					MLR	MLR			
	comp=N,11nm,19.0s								
NKL					MLR	MLR			
	comp=Z,147μm,12.0s								
BSSI	**Bau Bau, Buton**	**47.39**	**130**		P		**P**	**07 17 47.1**	**+3.6**
	comp=Z,14μmcomp=Z,10μmcomp=Z,302nm,1.0s								
PLAI	**Plampang**	**47.63**	**135**		P		**P**	**07 17 48.0**	**+2.7**
	comp=Z,22μmcomp=Z,8μmcomp=Z,228nm,1.4s								
ELL	**Elmali**	**47.69**	**296**		P		**P**	**07 17 46.5**	**+0.7**
ELL					pmax	pmax			
	comp=Z,4μm,0.8s								
ELL	**Elmali**	**47.69**	**296**		P		**P**	**07 17 46.5**	**+0.7**
ASAJ	**Asahikawa**	**47.74**	**54**		LR	LR		07 39 40.5	
	comp=Z,83μm,18.4s,baz=287,slow=38								
ASAJ	**Asahikawa**	**47.74**	**54**		P		**P**	**07 17 45.6**	**-0.3**
ASAJ					pmax	pmax			
	comp=Z,436nm,1.1s								
ASAJ					MLR	MLR			
	comp=Z,114μm,21.0s								
JKA	**Kamikawa-asahi**	**47.75**	**54**		P		**P**	**07 17 45.6**	**-0.4**
JKA					IAMs_20	IAMs_20		07 39 30.4	
	comp=Z,114μm,21.0s								
TNTI	**Ternate**	**47.84**	**117**		P		**P**	**07 17 51.8**	**+4.7**
	comp=Z,8μmcomp=Z,9μmcomp=Z,382nm,1.4s								
YSS	**Yuzh-Sakhalins**	**47.94**	**51**	*ce*	P		**P**	**07 17 47.2**	**-0.2**
YSS				*e*				07 19 16.2	
YSS				*e*	S		**S**	**07 24 44.6**	**+0.1**
YSS					pmax	pmax			
	comp=Z,750nm,1.0s								
YSS					pmax	pmax			
	comp=Z,12μm,12.7s								
YSS					pmax	pmax			
	comp=E,5μm,14.4s								
YSS					pmax	pmax			
	comp=Z,8μm,12.5s								
YSS					pmax	pmax			
	comp=E,3μm,11.8s								
YSS					smax	smax			
	comp=E,11μm,14.7s								
YSS					MLR	MLR			
	comp=Z,206μm,18.0s								
YSS					MLR	MLR			
	comp=E,158μm,16.0s								
YSS	**Yuzh-Sakhalins**	**47.94**	**51**		P		**P**	**07 17 46.9**	**-0.5**
YSS					IAmb	IAmb		07 17 55.5	
	comp=Z,1μm,1.2s								
YSS	**Yuzh-Sakhalins**	**47.94**	**51**	⇑	P		**P**	**07 17 47.0**	**-0.3**
AKAS	**Kas**	**47.99**	**295**		P		**P**	**07 17 46.2**	**-1.9**
KSL	**Kastellorizon**	**48.01**	**295**		P		**P**	**07 17 46.7**	**-1.4**
ISK	**Istanbul-Kandi**	**48.03**	**302**		P		**P**	**07 17 47.3**	**-0.9**
JURR	**Jurilovca**	**48.10**	**307**	⇑	P		**P**	**07 17 49.7**	**+1.1**
TLCR		**48.15**	**307**	⇑	P		**P**	**07 17 50.1**	**+1.1**
ERM	**Erimo**	**48.18**	**57**	*ce*	P		**P**	**07 17 50.6**	**+1.3**
ERM					pmax	pmax			
	comp=Z,188nm,1.0s								
ERM	**Erimo**	**48.18**	**57**		P		**P**	**07 17 49.2**	**-0.1**
ERM					IAmb	IAmb		07 18 06.6	
	comp=Z,953nm,1.1s								
ERM	**Erimo**	**48.18**	**57**		IAMs_20	IAMs_20		07 39 07.2	
	comp=Z,145μm,20.0s								
ERM	**Erimo**	**48.18**	**57**	⇑	P		**P**	**07 17 49.3**	**-0.1**
JEM	**Erimo**	**48.18**	**57**		IAMs_20	IAMs_20		07 39 09.4	
	comp=Z,161μm,20.0s								
TYV	**Tymovskoe**	**48.19**	**45**	*e*	P		**P**	**07 17 49.7**	**+0.5**
TYV				*e*	S		**S**	**07 24 52.6**	**+4.6**
TYV					pmax	pmax			
	comp=Z,228nm,1.2s								
TYV					pmax	pmax			
	comp=Z,6μm,9.2s								
TYV					smax	smax			
	comp=E,48nm,2.5s								
TYV					smax	smax			
	comp=N,10μm,10.4s								
TYV					MLR	MLR			
	comp=Z,111μm,11.0s								
KIS	**Kishinev**	**48.20**	**310**	*e*	P		**P**	**07 17 49.0**	**-0.4**
	comp=Z,230nm,2.0s								
KIS	**Kishinev**	**48.20**	**310**	*e*	PcP	PcP

TLBR	Topalu	48.69	306	⇑	P		P	07 17 54.6	+1.4
HARR	Harsova	48.77	306	⇑	P		P	07 17 55.1	+1.3
SCHL	Schela	48.85	307	⇑	P		P	07 17 54.8	+0.4
VASR	Vaslui	48.89	309	⇑	P		P	07 17 56.3	+1.6
YER	Yerkesik	48.94	296		P		P	07 17 54.0	-1.4
TUDR		48.96	308	⇑	P		P	07 17 56.8	+1.5
IAS	Iasi	49.07	310	⇓	P		P	07 17 56.8	+0.7
GHRR		49.15	308	⇑	P		P	07 17 59.2	+2.5
ARG	Arkhangelos	49.18	295		P		P	07 17 56.7	-0.4
ARG	Arkhangelos	49.18	295	⇑	P		P	07 17 57.2	+0.1
AMRR	Amara	49.20	306	⇑	P		P	07 17 59.5	+2.4
WBSI	Waikabubak, Su	49.27	134		P		P	07 18 00.6	+2.6
	comp=Z,12μmcomp=Z,859nm,0.8s								
PETR	Petresti	49.27	308	⇑	P		P	07 17 59.5	+1.8
PUL	Pulkovo	49.28	327	*ce*	P		P	07 17 59.1	+1.6
PUL						pmax	pmax		
	comp=Z,2μm,1.0s								
PGOR	Pogoanele	49.44	307	⇑	P		P	07 18 01.5	+2.6
GRER		49.45	307	⇓	P		P	07 18 01.6	+2.6
MNK	Minsk	49.51	319	*c*	*i* P		P	07 17 59.0	-0.4
MNK	Minsk	49.51	319		*i* P		P	07 17 59.0	-0.4
	comp=E,176nm,1.3s								
MNK					*i* P		P	07 17 59.0	-0.4
	comp=N,274nm,1.1s								
MNK					*i* P		P	07 17 59.0	-0.4
	comp=Z,676nm,0.8s								
MNK					*i* PcP		PcP	07 19 20.8	-0.4
MNK					*i* PP		PP	07 19 53.3	-0.2
MNK					*i* PPP		PPP	07 20 45.6	
MNK					*i* S		S	07 25 07.5	+0.9
MNK					*i* SS		SS	07 28 40.8	+2.6
MNK					*i* SSS		SSS	07 29 59.6	
MNK					*i* LQ		LQ	07 35 20.9	
MNK					*i* LR		LR	07 39 07.0	
MNK					*i* LRM		MLR	07 41 17.2	
	comp=E,20μm,22.4s								
MNK					*i* LRM		MLR	07 41 17.2	
	comp=N,62μm,18.9s								
MNK					*i* LRM		MLR	07 41 17.2	
	comp=Z,152μm,20.6s								
JCJ	Chichijima	49.51	77		LR		LR	07 41 18.3	
	comp=Z,17μm,18.6s,baz=312,slow=39								
LEHL	Lehliu	49.57	306	⇓	P		P	07 18 02.1	+2.2
VRI	Vrincioaia	49.62	308	⇑	P		P	07 18 01.8	+1.5
BISRR	Bisoca	49.63	308	⇓	P		P	07 18 02.1	+1.6
PLOR	Plostina	49.67	308	⇑	P		P	07 18 02.7	+1.9
TESR	Tescani	49.68	309	⇑	P		P	07 18 01.4	+0.6
BODT	Bodrum	49.72	296		P		P	07 17 58.7	-2.6
EDRB	Edirne	49.72	303		P		P	07 18 02.7	+1.5
ISR	Istrita	49.76	307	⇓	P		P	07 18 03.8	+2.3
TIXI	Tiksi	49.85	16	*c*	*i* P		P	07 18 01.0	-0.6
TIXI	Tiksi	49.85	16		P		P	07 18 01.0	-0.6
TIXI					IAmb		IAmb	07 18 08.4	
	comp=Z,594nm,0.9s								
TIXI	Tiksi	49.85	16	⇑	P		P	07 18 01.2	-0.4
NIS1	Nisyros Isl.	49.88	296		P		P	07 18 03.2	+0.7
NEHR	Nehoiu	49.93	307	⇑	P		P	07 18 04.9	+2.1
PRAR	RASCA	49.98	310	⇑	P		P	07 18 04.1	+1.0
SMG	Samos	50.02	297		P		P	07 18 03.0	-0.5
KARP	Karpathos	50.04	294		P		P	07 18 03.3	-0.5
KARP	Karpathos	50.04	294		P		P	07 18 03.9	+0.1
KARP					IAmb		IAmb	07 18 12.4	
	comp=Z,1μm,1.1s								
KARP	Karpathos	50.04	294	⇑	P		P	07 18 04.0	+0.3
BIZ	Bicaz	50.06	309	⇑	P		P	07 18 04.6	+0.9
SECR		50.09	307	⇓	P		P	07 18 06.4	+2.4
YUK	Yuzh-Kuril'sk	50.10	54	*c*	*i* P		P	07 18 02.7	-1.3
YUK					*e*			07 19 22.1	
YUK					*e*			07 19 57.9	
YUK					*e* PPP		PPP	07 20 52.2	
YUK					*i* S		S	07 25 14.6	-0.4
YUK					*e*			07 27 54.1	
YUK					*e* SSS		SSS	07 30 13.0	
YUK						pmax	pmax		
	comp=Z,6μm,1.1s								
YUK						pmax	pmax		
	comp=N,2μm,0.7s								
YUK						pmax	pmax		
	comp=E,2μm,1.0s								
YUK						pmax	pmax		
	comp=Z,8μm,1.1s								
YUK						MLR	MLR		
	comp=Z,68μm,14.0s								
YUK						MLR	MLR		
	comp=N,53μm,13.0s								
YUK						MLR	MLR		
	comp=E,62μm,13.0s								
NLAI	Namlea	50.16	121		P		P	07 18 10.1	+5.3
	comp=E,6μmcomp=E,442nm,0.9s								
MLR	Muntele Rosu	50.17	307	⇑	P		P	07 18 06.6	+1.9
MLR	Muntele Rosu	50.17	307		P		P	07 18 06.2	+1.5
MLR						pmax	pmax		
	comp=Z,1μm,0.9s								
MLR	Muntele Rosu	50.17	307		P		P	07 18 06.2	+1.5
SGRR	Singureni	50.18	306	⇑	P		P	07 18 06.4	+1.8
EZN	Ezine	50.19	300		P		P	07 18 06.3	+1.5
NACGM	Naroch	50.20	320		*i* P		P	07 18 04.4	-0.2
NACGM					*i* P		P	07 18 04.4	-0.2
NACGM					*i* P		P	07 18 04.4	-0.2
NACGM					*i* PP		PP	07 19 59.8	0.0
NACGM					*i* PPP		PPP	07 20 55.1	
NACGM					*i* S		S	07 25 14.2	-2.0
NACGM					*i* SS		SS	07 28 49.3	+0.1
NACGM					*i* SSS		SSS	07 30 18.7	
NACGM					*i* LQ		LQ	07 35 42.4	
NACGM					*i* LR		LR	07 38 46.8	
ENEZ	Enez	50.25	301		P		P	07 17 58.1	-7.1
OZUR		50.28	308	⇑	P		P	07 18 06.5	+1.1
IDID	Didziasalis	50.28	320	*eP*			P	07 18 05.8	+0.6
PRK	Paraskevi	50.29	299		P		P	07 18 05.9	+0.4
ALN	Alexandroupoli	50.31	302		P		P	07 18 05.4	-0.3
ALN	Alexandroupoli	50.31	302		P		P	07 18 06.2	+0.5
ALN						pmax	pmax		
	comp=Z,2μm,1.7s								
ALN	Alexandroupoli	50.31	302		P		P	07 18 06.2	+0.5
ALN					IAmb		IAmb	07 18 23.9	
	comp=Z,2μm,1.7s								
ALN	Alexandroupoli	50.31	302	⇑	P		P	07 18 06.1	+0.4
LVZ	Lovozero	50.35	337	*ce*	P		P	07 18 05.3	-0.3
LVZ						pmax	pmax		
	comp=Z,755nm,0.8s								
LVZ						MLR	MLR		
	comp=Z,324μm,13.0s								
LVZ	Lovozero	50.35	337		P		P	07 18 05.3	-0.3
LVZ	Lovozero	50.35	337	⇑	P		P	07 18 05.4	-0.3
MMRI	Maumere	50.38	131	⇓	P		P	07 18 05.8	-0.7
MMRI	Maumere	50.38	131		P		P	07 18 10.8	+4.4
	comp=Z,19μmcomp=Z,13μmcomp=Z,924nm,1.0s								
BASI	Baing, Sumba	50.46	134		P		P	07 18 10.3	+3.3
	comp=Z,12μmcomp=Z,9μmcomp=Z,717nm,1.0s								
GADA	Gvkgeada	50.49	301		P		P	07 18 05.5	+1.5
CHOS	Chios island	50.55	298		P		P	07 18 07.7	+0.1
DOPR	Dopca	50.55	308	⇑	P		P	07 18 09.4	+1.9
IIGN	Ignalina	50.58	320	*eP*			P	07 18 08.2	+0.7
SIGR	SIGRI	50.62	299		P		P	07 18 07.7	-0.3
APA	Apatity	50.64	337	⇓	*i* P		P	07 18 08.3	+0.6
APA					*i* S		S	07 25 18.0	-3.8
APA					*i*			07 27 56.0	
APA					*i* SS		SS	07 28 55.0	-0.7
APA						pmax	pmax		
	comp=Z,262nm,0.8s								
APA						MLR	MLR		
	comp=Z,290μm,13.0s								
ZIMR		50.64	305	⇑	P		P	07 18 09.8	+1.7
ISAL	Salakas	50.66	321	*eP*			P	07 18 08.8	+0.7
BURAR	Bucovina Array	50.67	310	⇓	P		P	07 18 09.3	+0.9
BURAR	Bucovina Array	50.67	310		P		P	07 18 08.5	+0.1
RDO	Rodhopi	50.68	302		P		P	07 18 08.0	-0.4
RDO	Rodhopi	50.68	302	⇑	P		P	07 18 08.7	+0.3
BUR08	Bucovina Ar. S	50.68	310		P		P	07 18 08.9	+0.4
SMTH	Samothraki Isl	50.74	301		P		P	07 18 08.3	-0.6
VSU	Vasula	50.80	324	*eP*			P	07 18 09.8	+0.8
VSU	Vasula	50.80	324	⇑	P		P	07 18 09.1	0.0
VOIR		50.80	307	⇓	P		P	07 18 10.0	+0.6
HUMR	Humele	50.88	306	⇑	P		P	07 18 12.3	+2.3
STFAR	Stefanesti-Arg	50.88	307	⇑	P		P	07 18 11.3	+1.3
STIA	Sitia Lasithi	50.96	294		P		P	07 18 14.8	+4.2
LIA	Limnos Island	51.06	300		P		P	07 18 11.2	-0.1
ARR	Arges	51.10	307	⇑	P		P	07 18 12.5	+0.8
APE	Apeiranthos	51.13	297	⇑	P		P	07 18 12.6	+0.6
APE	Apeiranthos	51.13	297	⇑	P		P	07 18 12.2	+0.2
PLVB	Pleven	51.20	305	⇓	P		P	07 18 13.4	+1.1
ARCR	ARCALIA	51.26	310	⇓	P		P	07 18 14.7	+2.0
THR8	Santorini-Mono	51.27	296		P		P	07 18 12.6	-0.3
SANT	Santorini	51.29	296		P		P	07 18 12.5	-0.6
SANT	Santorini	51.29	296	⇑	P		P	07 18 13.4	+0.2
SANT	Santorini	51.29	296		P		P	07 18 12.6	-0.6
SANT	Santorini	51.29	296	⇑	P		P	07 18 12.5	-0.6
SNT1	Gialos, Santor	51.31	296		P		P	07 18 16.5	+3.3
VLAD	Vladila	51.32	306	⇓	P		P	07 18 14.8	+1.6
THR3	Thira Island,	51.33	296		P		P	07 18 13.6	+0.2
SNT5	Nea Kammeni, S	51.33	296		P		P	07 18 13.8	+0.4
NPS	Neapolis	51.34	294		P		P	07 18 14.6	+1.1
THAS	Thassos island	51.34	301		P		P	07 18 13.1	-0.3
SAP3	Santorini-Thir	51.37	296		P		P	07 18 13.2	-0.5
KAVA	Kavala	51.46	302		P		P	07 18 14.6	+0.3
LAST	Lasithi	51.46	294		P		P	07 18 14.8	+0.3
KUR	Kuril'sk	51.48	53	*c*	*i* P		P	07 18 13.8	-0.6
KUR					*i* S		S	07 25 43.1	+8.9
KUR						pmax	pmax		
	comp=Z,12μm,14.4s								
KUR						pmax	pmax		
	comp=E,7μm,14.7s								
KUR						pmax	pmax		
	comp=Z,1μm,1.2s								
KUR						pmax	pmax		
	comp=E,448nm,1.8s								
KUR						pmax	pmax		
	comp=N,856nm,1.2s								
KUR						MLR	MLR		
	comp=Z,74μm,16.0s								
KUR						MLR	MLR		
	comp=N,26μm,13.0s								
KUR						MLR	MLR		
	comp=E,79μm,16.0s								
LVV	L'vov	51.48	313	*eP*			P	07 18 14.6	+0.2
LVV				*eS*			S	07 25 32.6	-1.5
LVV				*e*				07 28 07.2	
LVV						pmax	pmax		
	comp=Z,1μm,1.7s								
LVV						MLR	MLR		
	comp=N,29μm,14.0s								
LVV						MLR	MLR		
	comp=E,68μm,14.0s								
LVV						MLR	MLR		
	comp=Z,78μm,14.0s								
SKY	Skiros Island	51.66	299		P		P	07 18 15.6	-0.3
LOT	Lotru	51.70	307	⇑	P		P	07 18 17.5	+1.3
FIA1	FINESS Array S	51.71	328		P		P	07 18 16.0	+0.1
FIA1					IAmb		IAmb	07 18 24.5	
	comp=Z,812nm,1.0s								
FINES	FINESS Array B	51.71	328		P		P	07 18 15.9	+0.1
	comp=Z,128nm,0.7s,baz=105,slow=8.1,SNR=168								
FINES					S		S	07 25 36.1	-0.7
	comp=Z,25nm,1.0s,baz=219,slow=2.4,SNR=2.3								
FINES					LR		LR	07 41 56.7	
	comp=Z,242μm,19.5s,baz=102,slow=38								
FINES	FINESS Array B	51.71	328	*i*	P		P	07 18 15.8	-0.1
FINES						pmax	pmax		
	comp=Z,128nm,0.7s								
FINES	FINESS Array B	51.71	328		P		P	07 18 15.6	-0.2
HRKL	Herakleio	51.74	295		P		P	07 18 21.8	+5.3
CJR	Cluj-Napoca	51.78	309	⇓	P		P	07 18 18.3	+1.6
BMR	Baia Mare	51.83	310	⇑	P		P	07 18 19.0	+2.0
KARY	Karystos	51.86	298		P		P	07 18 19.5	+2.1
PABE	Paberze	51.87	320	*eP*			P	07 18 17.6	+0.5
PABE	Paberze	51.87	320		P		P	07 18 17.4	+0.2
IDI	Anoyia	51.92	295		P		P	07 18 17.6	-0.3
IDI	Anoyia	51.92	295	⇑	P		P	07 18 19.0	+1.1
IDI	Anoyia	51.92	295		P		P	07 18 17.4	-0.5
IDI	Anoyia	51.92	295	⇓	P		P	07 18 18.4	+0.5
SWI	Sorong	51.92	116		P		P	07 18 13.3	-4.8
OUR	Ouranopolis	51.93	301		P		P	07 18 18.1	+0.3
SIJI	Sorong	51.93	116		P		P	07 18 17.4	-0.8
	comp=Z,44nm,0.8s,baz=320,slow=12,SNR=14								
KYMI	Kymi, Euboea I	52.04	299		P		P	07 18 19.3	+0.6
BAIL	Bailesti	52.08	306	⇑	P		P	07 18 20.8	+1.9
SRE	Strehaia	52.14	307	⇑	P		P	07 18 20.5	+1.1
EREA	Eretria	52.20	299		P		P	07 18 20.6	+0.7
SUW	Suwalki	52.20	318	*eP*			P	07 18 19.2	-0.5
SUW				*eS*			S	07 25 49.2	+5.4
SUW				*e* ScS			ScS	07 28 16.6	+7.4
SUW				*e* L			L	07 42 35.7	
	comp=Z,240μm,21.2s								
SUW	Suwalki	52.20	318	*eP*			P	07 18 19.8	+0.1
SUW	Suwalki	52.20	318		P		P	07 18 19.2	-0.5
SUW						pmax	pmax		
	comp=Z,1μm,1.0s								
SUW						MLR	MLR		
	comp=Z,245μm,21.0s								
SUW	Suwalki	52.20	318		P		P	07 18 19.1	-0.5
SUW					IAmb		IAmb	07 18 28.4	
	comp=Z,1μm,1.0s								
SUW	Suwalki	52.20	318	⇑	P		P	07 18 18.9	-0.7
PAIG	Paliouri	52.21	301		P		P	07 18 20.0	+0.1
PRNS	Prines Rethymn	52.22	295		P		P	07 18 29.7	+10
DION	Dionisos Attik	52.25	298		P		P	07 18 18.8	-1.5
VTS	Vitosha	52.27	304	⇑	P		P	07 18 21.7	+1.1
VTS	Vitosha	52.27	304		P		P	07 18 21.4	+0.8
VTS						pmax	pmax		
	comp=Z,1μm,1.2s								
VTS						MLR	MLR		
	comp=Z,12μm,22.0s								
VTS	Vitosha	52.27	304		P		P	07 18 21.4	+0.8
VTS					IAmb		IAmb	07 18 30.0	
	comp=Z,1μm,1.2s								
VTS	Vitosha	52.27	304	⇑	P		P	07 18 21.3	+0.8
DEV	Deva	52.29	308	⇑	P		P	07 18 21.9	+1.5
PTL	Penteli	52.31	298		P		P	07 18 20.2	-0.5
PLG	Polygyros	52.33	301		P		P	07 18 21.2	+0.3
KWP	Kalwaria Pacla	52.34	313	*eP*			P	07 18 21.3	+0.5
KWP				*eS*			S	07 25 53.1	+7.1
KWP				*e* ScS			ScS	07 28 18.6	+8.2
KWP				*e* L			L	07 43 02.5	
	comp=Z,82μm,18.1s								
KWP	Kalwaria Pacla	52.34	313		P		P	07 18 21.3	+0.5
KWP						MLR	MLR		
	comp=Z,84μm,19.0s								
KWP	Kalwaria Pacla	52.34	313		P		P	07 18 21.3	+0.5
KWP					IAMs_20		IAMs_20	07 43 44.8	
	comp=Z,84μm,19.0s								
MTSE	Matsula	52.34	324	*eP*			P	07 18 20.6	+0.1
SOH	Sokhos	52.35	302		P		P	07 18 21.4	+0.3
ATHU	Athens Univers	52.38	298		P		P	07 18 21.0	-0.2
DRGR		52.39	309	⇑	P		P	07 18 22.5	+1.3
VLY	Voula,Athens	52.39	298		P		P	07 18 20.1	-1.2
GZR	Gura Zlata	52.40	307	⇑	P		P	07 18 21.7	+0.3
ATH	Athens Observa	52.43	298		P		P	07 18 21.4	-0.2
VAM	Vamos	52.45	295		P		P	07 18 21.5	-0.3
BATI	Baumata	52.48	131		P		P	07 18 24.5	+2.3
	comp=Z,10μmcomp=Z,6μmcomp=Z,404nm,0.8s								
SOEI	Soe	52.56	130		P		P	07 18 21.3	-1.6
SOEI	Soe	52.56	130	⇑	P		P	07 18 21.2	-1.8
SOEI	Soe	52.56	130		P		P	07 18 21.7	-1.2
	comp=Z,22μmcomp=Z,32μmcomp=Z,3μm,1.0s								
HORT	Hortiatis	52.57	301		P		P	07 18 22.2	-0.5
IMMV	Iera Moni Meta	52.62	295		P		P	07 18 23.0	0.0
UZH	Uzhgorod	52.62	312	⇓	*i* P		P	07 18 21.1	-1.7
UZH					*i*			07 18 29.2	
UZH					*e*			07 18 34.6	
UZH					*i*			07 20 21.6	
UZH					*i* S		S	07 25 42.9	-6.8
UZH					*i*			07 25 53.3	
UZH						MLR	MLR		
	comp=Z,13μm,14.0s								
NEO	Neokhori	52.63	300		P		P	07 18 21.9	-1.2
XOR	Xorichti	52.65	300		P		P	07 18 22.0	-1.3
KNT	Kendrikon	52.66	302		P		P	07 18 23.2	-0.1
THE	Thessaloniki	52.67	301		P		P	07 18 23.2	-0.1
HERR	Herculane	52.69	307	⇑	P		P	07 18 25.5	+2.1
SMIA	Simia	52.70	299		P		P	07 18 25.2	+1.6
VILL	Villia	52.72	298		P		P	07 18 24.4	+0.6
ATAL	Atalanti	52.87	299		P		P	07 18 25.1	+0.2
VAY	Valandovo	52.89	302	⇑	*i* P		P	07 18 25.0	+0.1
VAY					*i* S		S	07 25 51.6	-2.0
LKR	Lokris	52.90	299		P		P	07 18 24.3	-0.7
KRND	KRANIDI	52.97	297		P		P	07 18 30.2	+4.6
LOUT	Loutraki	53.01	298		P		P	07 18 30.7	+4.8
LTK	Loutraki	53.01	298		P		P	07 18 23.8	-2.1
SLIT	Slitere, Latvi	53.01	323	*eP*			P	07 18 25.9	+0.4
SLIT	Slitere, Latvi	53.01	323	⇑	P		P	07 18 24.9	-0.7
PBUR	Paburge	53.07	321	*eP*			P	07 18 26.5	+0.5
LIT	Litokhoron	53.09	301		P		P	07 18 25.9	-0.6
LIT	Litokhoron	53.09	301		P		P	07 18 26.0	-0.6
LIT						pmax	pmax		
	comp=Z,670nm,1.3s								
LIT	Litokhoron	53.09	301		P		P	07 18 26.0	-0.6
LIT	Litokhoron	53.09	301	⇑	P		P	07 18 25.8	-0.6
STIP	Stip	53.13	303	*i*	P		P	07 18 25.3	-1.4
STIP				*i*	S		S	07 25 58.0	+1.0
SIRR	Siria	53.14	309	⇓	P		P	07 18 28.0	+1.2
MDVR	Moldovita	53.20	307	⇓	P		P	07 18 28.4	+1.2
BZS	Buzias	53.20	308	⇑	P		P	07 18 28.0	+0.8
THAL	Thalero	53.25	298		P		P	07 18 32.8	+5.2
BOVS	Bovan	53.29	305	⇑	P		P	07 18 28.3	+0.4
AGG	Agios Georgios	53.36	300		P		P	07 18 27.5	-1.0
AGG						pmax	pmax		
	comp=Z,591nm,1.1s								
AGG	Agios Georgios	53.36	300		P		P	07 18 27.5	-1.0
AGG					IAmb		IAmb	07 18 44.4	
	comp=Z,591nm,1.1s								
AGG	Agios Georgios	53.36	300	⇑	P		P	07 18 27.4	-1.1
BANR	Banloc	53.56	308	⇓	P		P	07 18 31.6	+1.8
BEL	Belsk	53.57	316	*eP*			P	07 18 30.1	+0.3
BEL				*eS*			S	07 26 10.0	+7.5
BEL				*e* ScS			ScS	07 28 27.9	+9.0
BEL				*e* L			L	07 43 50.5	
	comp=Z,207μm,19.7s								
BEL	Belsk	53.57	316	⇑	P		P	07 18 30.0	+0.3
KEV	Kevo	53.63	338		P		P	07 18 29.9	0.0
KEV						pmax	pmax		
	comp=Z,1μm,1.0s								
KEV						MLR	MLR		
	comp=Z,152μm,19.0s								
KEV	Kevo	53.63	338		P		P	07 18 29.9	0.0
KEV					IAmb		IAmb	07 18 38.9	
	comp=Z,1μm,1.0s								
KEV					IAMs_20		IAMs_20	07 42 46.1	
	comp=Z,152μm,19.0s								
KEV	Kevo	53.63	338	⇑	P		P	07 18 30.1	+0.2
SKO	Skopje	53.66	303	⇑	*i* P		P	07 18 30.6	0.0
SKO				*i*	S		S	07 26 07.5	+3.4
AMBH	Ambrzfalva	53.78	309	⇓	P		P	07 18 33.5	+2.1
MA2	Magadan	53.80	35		LR		LR	07 43 07.9	
	comp=Z,265μm,19.7s,baz=262,slow=38								
MA2	Magadan	53.80	35	*c*	*i* P		P	07 18 30.4	-0.9
MA2						pmax	pmax		
	comp=Z,460nm,1.1s								
MA2						MLR	MLR		
	comp=Z,238μm,18.0s								
MA2	Magadan	53.80	35		P		P	07 18 30.8	-0.5
MA2					IAmb		IAmb	07 18 42.3	
	comp=Z,795nm,1.2s								
MA2	Magadan	53.80	35	⇑	P		P	07 18 31.0	-0.3
KECS	Kecovo	53.83	311	*eP*			P	07 18 32.6	+0.9
KECS						pmax	pmax		
	comp=Z,160nm,1.3s								
KECS	Kecovo	53.83	311	*eP*			P	07 18 32.6	+0.9
SBV	Sambava	53.84	225		P		P	07 18 35.1	+3.0
	SNR=17								
SBV	Sambava	53.84	225	⇓	P		P	07 18 34.0	+1.9
FNA	Florina	53.85	302		P		P	07 18 31.6	-0.5
FNA						pmax	pmax		
	comp=Z,482nm,0.9s								
FNA	Florina	53.85	302		P		P	07 18 31.6	-0.5
FNA					IAmb		IAmb	07 18 48.6	
	comp=Z,482nm,0.9s								
FNA	Florina	53.85	302	⇑	P		P	07 18 31.6	-0.5
NIE	Niedzica	53.91	313	*eP*			P	07 18 33.6	+1.2
NIE				*eS*			S	07 26 13.6	+6.2
NIE				*e* ScS			ScS	07 28 31.1	+10
NIE				*eL*			L	07 44 20.9	
	comp=Z,34μm,20.3s								
LODK	Lodwar	53.92	253		P		P	07 18 33.4	+0.4
LODK					IAmb		IAmb	07 18 49.2	
	comp=Z,2μm,2.2s								
LODK	Lodwar	53.92	253		P		P	07 18 34.7	+1.7
	SNR=43								
FAKI	Fak Fak	53.95	117		P		P	07 18 32.2	-0.9
FAKI					IAmb		IAmb	07 18 51.1	
	comp=Z,607nm,1.2s								
FAKI	Fak Fak	53.95	117		P		P	07 18 32.6	-0.4
	comp=Z,13μmcomp=Z,11μmcomp=Z,458nm,1.0s								
ITM	Ithomi	53.96	297		P		P	07 18 31.6	-1.4
ITM					IAmb		IAmb	07 19 17.2	
	comp=Z,996nm,1.5s								
ITM	Ithomi	53.96	297	⇑	P		P	07 18 31.5	-1.4
ARA0	ARCESS Array S	54.05	338	*eP*			P	07 18 33.6	+0.6
ARCES	ARCESS Array B	54.05	338		P		P	07 18 33.5	+0.4
	comp=Z,448nm,0.9s,baz=100,slow=7.0,SNR=197								
ARCES					S		S	07 26 07.5	-1.1
	comp=Z,8.0nm,0.9s,baz=145,slow=34,SNR=1.3								
ARCES					LR		LR	07 43 19.9	
	comp=Z,147μm,18.6s,baz=115,slow=38								
ARCES	ARCESS Array B	54.05	338		P		P	07 18 32.8	-0.2
OHR	Ohrid	54.24	302	*i*	P		P	07 18 33.8	-1.1
OHR				*i*

PDG	**Podgorica**	**55.21**	**304**	P	**P**	**07 18 41.4**	**-0.4**
PDG				IAmb	IAmb	07 18 59.0	
	comp=Z,487nm,0.9s						
PDG	**Podgorica**	**55.21**	**304**	⇑P	**P**	**07 18 41.4**	**-0.4**
PDG	**Podgorica**	**55.21**	**304**	⇑P	**P**	**07 18 41.4**	**-0.4**
TTG	**Podgorica**	**55.21**	**304**	⇑*i*P	**P**	**07 18 41.4**	**-0.4**
MORH	**Mrgy, Hungar**	**55.23**	**309**	⇑P	**P**	**07 18 42.3**	**+0.4**
MORH	**Mrgy, Hungar**	**55.23**	**309**	⇑*i*P	**P**	**07 18 42.0**	**+0.1**
HAPS	**Han Pijesak,BI**	**55.23**	**306**	*e*P	**P**	**07 18 42.1**	**-0.1**
RAC	**Raciborz**	**55.25**	**313**	*e*P	**P**	**07 18 42.4**	**+0.4**
RAC				*e*S	S	**07 26 25.6**	**+0.3**
RAC				MLR	MLR		
	comp=Z,147μm,18.4s						
SRO2	**Moca**	**55.27**	**311**	*e*P	**P**	**07 18 42.8**	**+0.6**
SRO2				pmax	pmax		
	comp=Z,986nm,1.2s						
SRO2	**Moca**	**55.27**	**311**	*e*P	**P**	**07 18 42.8**	**+0.6**
ULC	**Ulcinj**	**55.28**	**304**	⇑*i*P	**P**	**07 18 41.6**	**-0.9**
OKC	**Ostrava-Krasne**	**55.29**	**313**	AMS	AMS	07 45 00.0	
	comp=Z,110μm,16.1s						
DRME	**Dracevica, Mon**	**55.30**	**304**	⇑*i*P	**P**	**07 18 42.1**	**-0.4**
DRME	**Dracevica, Mon**	**55.30**	**304**	⇑*i*P	**P**	**07 18 42.3**	**-0.2**
SRO	**Srobarova**	**55.32**	**311**	*e*P	**P**	**07 18 43.8**	**+1.3**
SRO	**Srobarova**	**55.32**	**311**	*e*P	**P**	**07 18 43.8**	**+1.3**
NKY	**Niksic**	**55.35**	**305**	⇓*i*P	**P**	**07 18 43.2**	**+0.1**
UPM	**Unac-Piva**	**55.37**	**305**	*e*P	**P**	**07 18 43.3**	**0.0**
NKME	**Niksic**	**55.39**	**305**	⇓*i*P	**P**	**07 18 43.1**	**-0.1**
CEME	**Cevo**	**55.45**	**304**	⇑*i*P	**P**	**07 18 43.3**	**-0.4**
BUM	**Brajici-Budva**	**55.50**	**304**	⇑*i*P	**P**	**07 18 43.7**	**-0.3**
UPP	**Uppsala**	**55.62**	**325**	*e*P	**P**	**07 18 44.8**	**+0.4**
JAVC	**Velka Javorina**	**55.67**	**312**	⇑*i*P	**P**	**07 18 46.2**	**+1.0**
JAVC				*e*S	S	**07 26 31.8**	**+0.8**
JAVC				*e*		07 28 41.5	
JAVC				*e*		07 31 22.7	
BRY	**Bratogost**	**55.67**	**305**	⇑*i*P	**P**	**07 18 45.2**	**-0.2**
BRY	**Bratogost**	**55.67**	**305**	⇑*i*P	**P**	**07 18 45.3**	**-0.2**
MORC	**Moravsky Berou**	**55.69**	**313**	⇑*i*P	**P**	**07 18 45.6**	**+0.3**
MORC				*e*S	S	**07 26 31.8**	**+0.5**
MORC				*e*		07 28 33.7	
MORC				*e*		07 31 20.5	
MORC	**Moravsky Berou**	**55.69**	**313**	P	**P**	**07 18 45.2**	**-0.1**
MORC				pmax	pmax		
	comp=Z,826nm,1.3s						
MORC	**Moravsky Berou**	**55.69**	**313**	P	**P**	**07 18 45.2**	**-0.1**
MORC				IAmb	IAmb	07 18 54.2	
	comp=Z,826nm,1.3s						
MORC	**Moravsky Berou**	**55.69**	**313**	⇑P	**P**	**07 18 45.5**	**+0.3**
GKP	**Gorka Klasztor**	**55.72**	**317**	*e*P	**P**	**07 18 45.5**	**+0.1**
GKP				*e*S	S	**07 26 37.3**	**+5.8**
GKP				*e*ScS	ScS	**07 28 42.5**	**+8.3**
GKP				*e*L	L	07 44 50.0	
	comp=Z,227μm,20.3s						
GKP	**Gorka Klasztor**	**55.72**	**317**	*e*P	**P**	**07 18 46.0**	**+0.7**
HCY	**Herceg Novi**	**55.77**	**304**	⇑*i*P	**P**	**07 18 45.4**	**-0.5**
HCY	**Herceg Novi**	**55.77**	**304**	⇑*i*P	**P**	**07 18 45.5**	**-0.5**
JETT	**Jettan, Norway**	**55.79**	**337**	*e*P	**P**	**07 18 46.2**	**+0.6**
JETT				*e*S	S	**07 26 33.7**	**+1.7**
TREB	**Trebinje**	**55.84**	**305**	*e*P	**P**	**07 18 46.5**	**+0.1**
SMOL	**Smolenice**	**55.85**	**312**	*e*P	**P**	**07 18 46.6**	**+0.2**
SMOL				pmax	pmax		
	comp=Z,446nm,2.3s						
SMOL	**Smolenice**	**55.85**	**312**	*e*P	**P**	**07 18 46.6**	**+0.2**
MODS	**Modra-Piesok**	**55.97**	**311**	*e*P	**P**	**07 18 46.5**	**-0.7**
MODS				pmax	pmax		
	comp=Z,379nm,1.2s						
MODS	**Modra-Piesok**	**55.97**	**311**	*e*P	**P**	**07 18 46.5**	**-0.7**
MODS				*e*PP	PP	**07 20 59.1**	**+7.2**
MODS				*e*S	S	**07 26 33.3**	**-1.6**
MODS				*e*L	L	07 46 21.6	
BAKI	**Biak**	**56.04**	**112**	P	P	07 18 59.2	+11
ZST	**Bratislava**	**56.10**	**311**	*e*P	**P**	**07 18 48.5**	**+0.4**
ZST				pmax	pmax		
	comp=Z,6μm,2.6s						
ZST	**Bratislava**	**56.10**	**311**	*e*P	**P**	**07 18 48.5**	**+0.4**
ZST				*e*PP	PP	07 21 03.1	+10
ZST				*e*S	S	**07 26 44.9**	**+8.3**
SCTE	**Santa Cesarea**	**56.15**	**301**	P	**P**	**07 18 47.1**	**-1.6**
SCTE				IAmb	IAmb	07 19 04.0	
	comp=Z,530nm,1.1s						
KRLC	**Kraliky**	**56.16**	**314**	*e*P	**P**	**07 18 48.6**	**0.0**
KRLC				*e*S	S	**07 26 29.6**	**-7.9**
KRLC				MLR	MLR		
	comp=Z,138μm,15.1s						
KRLC	**Kraliky**	**56.16**	**314**	*e*P	**P**	**07 18 48.6**	**0.0**
KRLC				*e*S	S	**07 26 29.6**	**-7.9**
KRLC				AMS	AMS	07 45 10.0	
	comp=Z,138μm,15.1s						
TRO	**Tromso**	**56.31**	**337**	*e*P	**P**	**07 18 49.6**	**+0.3**
TRO				IVmB_BB		07 18 58.0	
	comp=Z,12μm,1.3s						
TRO				*e*S	S	**07 26 39.9**	**+1.1**
TRO				IVMs_BB	IVMs_BB	07 43 55.8	
	comp=Z,118μm,12.8s						
VRAC	**Vranov**	**56.34**	**313**	⇑P	**P**	**07 18 50.6**	**+0.7**
VRAC	**Vranov**	**56.34**	**313**	⇑*i*P	**P**	**07 18 50.4**	**+0.5**
VRAC				*e*S	S	**07 26 41.8**	**+1.9**
VRAC				*e*		07 28 38.5	
VRAC				*e*		07 31 33.9	
GUMO	**Guam**	**56.40**	**92**	LR	LR	07 43 03.8	
	comp=Z,10μm,21.3s,baz=279,slow=36						
GUMO	**Guam**	**56.40**	**92**	⇓P	P	07 18 56.4	+5.6
BLY	**Banja Luka**	**56.41**	**307**	⇑*i*P	**P**	**07 18 50.9**	**+0.5**
BLY	**Banja Luka**	**56.41**	**307**	⇑P	**P**	**07 18 50.8**	**+0.4**
KSP	**Ksiaz**	**56.42**	**314**	*e*P	**P**	**07 18 51.0**	**+0.5**
KSP				*e*S	S	**07 26 46.4**	**+5.5**
KSP				*e*ScS	ScS	**07 28 47.5**	**+8.2**
KSP				*e*L	L	07 45 46.9	
	comp=Z,253μm,19.2s						
KSP	**Ksiaz**	**56.42**	**314**	⇑P	**P**	**07 18 50.7**	**+0.2**
DPC	**Dobruska-Polom**	**56.43**	**314**	*e*P	**P**	**07 18 51.2**	**+0.6**
DPC				*e*S	S	**07 26 38.9**	**-2.3**
DPC				MLR	MLR		
	comp=Z,184μm,15.8s						
DPC	**Dobruska-Polom**	**56.43**	**314**	*e*P	**P**	**07 18 51.2**	**+0.6**
DPC				*e*S	S	**07 26 38.9**	**-2.3**
DPC				AMS	AMS	07 45 20.0	
	comp=Z,184μm,15.8s						
OSTC	**Ostas**	**56.49**	**314**	*e*P	**P**	**07 18 51.5**	**+0.6**
OSTC				AMS	AMS	07 45 40.0	
	comp=Z,222μm,18.1s						
BEHE	**Becsehely**	**56.49**	**309**	⇑*i*P	**P**	**07 18 54.1**	**+3.1**
KRUC	**Moravsky**	**56.49**	**312**	⇑*i*P	**P**	**07 18 51.2**	**+0.3**
KRUC				*e*S	S	**07 26 41.6**	**-0.2**
KRUC				*e*		07 28 44.9	
KRUC				*e*		07 31 36.2	
BLEU	**Blekinge**	**56.49**	**321**	*e*P	**P**	**07 18 50.5**	**-0.3**
MGRS	**Mrkonjic Grad**	**56.52**	**307**	*e*P	**P**	**07 18 52.5**	**+1.2**
HOPEN	**Hopen**	**56.56**	**346**	*e*P	**P**	**07 18 49.8**	**-1.3**
HOPEN				IVmB_BB		07 19 00.7	
	comp=Z,11μm,1.6s						
HOPEN				*e*S	S	**07 26 43.3**	**+1.3**
HOPEN				IVMs_BB	IVMs_BB	07 47 11.5	
	comp=Z,64μm,15.5s						
MRAK	**Mrakovica**	**56.58**	**307**	⇑*i*P	**P**	**07 18 52.3**	**+0.6**
CHVC	**Chvalec**	**56.59**	**314**	*e*P	**P**	**07 18 52.0**	**+0.3**
CHVC				*e*S	S	**07 26 46.3**	**+3.2**
CHVC				AMS	AMS	07 45 40.0	
	comp=Z,236μm,17.6s						
UPC	**Upice**	**56.62**	**314**	AMS	AMS	07 45 40.0	
	comp=Z,245μm,17.5s						
SKR	**Severo-Kuril's**	**56.72**	**46**	*ce*P	**P**	**07 18 51.5**	**-1.0**
RER	**Riviere de l'E**	**56.72**	**214**	P	**P**	**07 18 53.3**	**+0.4**
RER				IAmb	IAmb	07 19 02.4	
	comp=Z,537nm,1.0s						
RER	**Riviere de l'E**	**56.72**	**214**	P	**P**	**07 18 54.0**	**+1.1**
	SNR=5.8						
RER	**Riviere de l'E**	**56.72**	**214**	⇑P	**P**	**07 18 54.1**	**+1.2**
KOGS	**Kog**	**56.85**	**309**	⇑*i*P	**P**	**07 18 53.7**	**+0.2**
KOGS				*e*S	S	**07 26 47.2**	**+0.5**
KOGS				*e*ScS	ScS	**07 28 48.8**	**+6.2**
CONA	**Conrad Observa**	**56.95**	**311**	*i* P	**P**	**07 18 54.6**	**+0.2**
	comp=Z,396nm,1.6s,SNR=179						
CONA				*e*S	S	**07 26 48.2**	**0.0**
	comp=Z,28nm,1.5s						
CONA				*e*P	P'P'df	07 48 38.7	-13
	comp=Z,10nm,1.3s						
BSD	**Bornholm Skovb**	**57.03**	**320**	*e*P	**P**	**07 18 54.1**	**-0.5**
BSD	**Bornholm Skovb**	**57.03**	**320**	*i* P	**P**	**07 18 53.6**	**-1.1**
BSD				IAmb	IAmb	07 19 03.6	
	comp=Z,179nm,0.7s						
BSD				IAMs_20	IAMs_20	07 45 11.4	
	comp=Z,187μm,19.4s						
BSD	**Bornholm Skovb**	**57.03**	**320**	*i* P	**P**	**07 18 53.5**	**-1.1**
BSD				pmax	pmax		
	comp=Z,180nm,0.7s						
BSD				MLR	MLR		
	comp=Z,190μm,19.0s						
BSD	**Bornholm Skovb**	**57.03**	**320**	⇑P	**P**	**07 18 53.7**	**-1.0**
GIRL	**Giralia**	**57.04**	**149**	P	**P**	**07 18 55.0**	**0.0**
GIRL				IAmb	IAmb	07 19 10.5	
	comp=Z,885nm,1.1s						
GIRL	**Giralia**	**57.04**	**149**	⇑P	**P**	**07 18 56.4**	**+1.4**
TREC	**Trest**	**57.06**	**313**	*e*P	**P**	**07 18 55.8**	**+0.8**
TREC	**Trest**	**57.06**	**313**	*e*P	**P**	**07 18 55.8**	**+0.8**
N2IH	**Innhavet**	**57.12**	**335**	*e*P	**P**	**07 18 54.5**	**-0.5**
N2ST	**Straumen**	**57.17**	**334**	*e*P	**P**	**07 18 54.8**	**-0.7**
ARSA	**Arzberg**	**57.25**	**310**	*i* P	**P**	**07 18 56.2**	**-0.3**
	comp=Z,168nm,1.4s,SNR=87						
ARSA				*e*S	S	**07 26 54.9**	**+2.9**
	comp=Z,32nm,1.9s						
ARSA				*e*P	P'P'df	07 48 42.8	-8.1
	comp=Z,12nm,1.4s						
FAUS	**Fauske**	**57.30**	**334**	*e*P	**P**	**07 18 57.5**	**+1.2**
FAUS				IVmB_BB		07 19 04.6	
	comp=Z,11μm,3.3s						
FAUS				*e*S	S	**07 26 52.1**	**+0.3**
FAUS				IVMs_BB	IVMs_BB	07 44 52.7	
	comp=Z,84μm,14.2s						
STEI	**Steigen**	**57.38**	**335**	*e*P	**P**	**07 18 57.1**	**+0.2**
STEI				IVmBBB		07 19 05.5	
	comp=Z,10μm,2.5s						
STEI				*e*S	S	**07 26 54.3**	**+1.5**
STEI				IVMs_BB	IVMs_BB	07 44 47.0	
	comp=Z,76μm,15.5s						
BJO1	**Bjornoya**	**57.38**	**343**	*e*P	**P**	**07 18 56.4**	**-0.4**
BJO1				IVmB_BB		07 19 04.9	
	comp=Z,11μm,0.7s						
BJO1				*e*S	S	**07 26 52.4**	**-0.3**
BJO1				IVMs_BB	IVMs_BB	07 46 43.9	
	comp=Z,50μm,15.4s						
MATE	**Matera**	**57.38**	**302**	⇑P	**P**	**07 18 57.4**	**+0.1**
MATE	**Matera**	**57.38**	**302**	⇑P	**P**	**07 18 56.0**	**-1.4**
N2TV	**TVrnvik**	**57.38**	**335**	*e*P	**P**	**07 18 55.7**	**-1.2**
CRES	**Cresnjev**	**57.48**	**309**	⇑*i*P	**P**	**07 18 58.6**	**+0.6**
MOR8	**Moi Rana**	**57.52**	**333**	*e*P	**P**	**07 18 58.2**	**+0.3**
MOR8				IVmBBB		07 19 05.4	
	comp=Z,12μm,3.1s						
MOR8				*e*PP	PP	**07 21 04.5**	**-0.7**
MOR8				*e*S	S	**07 26 53.0**	**-1.9**
MOR8				*e*ScS	ScS	**07 28 46.4**	**-0.4**
MOR8				IVMs_BB	IVMs_BB	07 45 04.5	
	comp=Z,81μm,12.9s						
PEA0B	**Petropavlovsk-**	**57.52**	**43**	P	**P**	**07 18 56.2**	**-2.0**
PEA0B				pmax	pmax		
	comp=Z,3μm,2.7s						
PEA0B				MLR	MLR		
	comp=Z,103μm,19.0s						
PEA0B	**Petropavlovsk-**	**57.52**	**43**	P	**P**	**07 18 56.2**	**-2.0**
PEA0B				IAmb	IAmb	07 19 08.1	
	comp=Z,3μm,2.6s						
PEA0B				IAMs_20	IAMs_20	07 46 19.5	
	comp=Z,103μm,19.0s						
PETK	**Petropavlovsk-**	**57.52**	**43**	P	**P**	**07 18 56.9**	**-1.3**
	comp=Z,9.3nm,0.6s,baz=225,slow=0.8,SNR=7.5						
PETK				LR	LR	07 46 30.5	
	comp=Z,96μm,19.0s,baz=278,slow=39						
PETK				PKP2bc		07 48 54.4	
	comp=Z,8.7nm,1.0s,baz=54,slow=7.5,SNR=5.5						
PETK	**Petropavlovsk-**	**57.52**	**43**	P	**P**	**07 18 57.1**	**-1.1**
PETK	**Petropavlovsk-**	**57.52**	**43**	P	**P**	**07 18 57.1**	**-1.1**
PVCC	**Panska Ves**	**57.54**	**314**	*e*P	**P**	**07 18 59.2**	**+0.9**
PVCC				MLR	MLR		
	comp=Z,231μm,16.5s						
PVCC	**Panska Ves**	**57.54**	**314**	*e*P	**P**	**07 18 59.2**	**+0.9**
PVCC				AMS	AMS	07 46 20.0	
	comp=Z,231μm,16.5s						
DEL	**Delary**	**57.57**	**321**	*i* P	**P**	**07 18 57.8**	**-0.7**
PERS	**Pernice**	**57.61**	**310**	⇑*e*P	**P**	**07 18 59.3**	**+0.3**
PRU	**Pruhonice**	**57.61**	**314**	*e*P	**P**	**07 18 59.5**	**+0.7**
PRU				MLR	MLR		
	comp=Z,199μm,16.1s						
PRU	**Pruhonice**	**57.61**	**314**	*e*P	**P**	**07 18 59.5**	**+0.7**
PRU				AMS	AMS	07 46 10.0	
	comp=Z,199μm,16.1s						
TIP	**Timpagrande**	**57.61**	**301**	⇑P	**P**	**07 18 59.4**	**+0.3**
TIP	**Timpagrande**	**57.61**	**301**	P	**P**	**07 18 59.0**	**-0.2**
TIP				IAmb	IAmb	07 19 23.1	
	comp=Z,534nm,1.0s						
TIP	**Timpagrande**	**57.61**	**301**	⇑P	**P**	**07 18 59.0**	**-0.2**
SOKA	**Soboth**	**57.66**	**310**	*i* P	**P**	**07 18 59.8**	**+0.5**
	comp=Z,286nm,1.3s,SNR=130						
SOKA				*e*S	S	**07 26 57.1**	**-0.4**
	comp=Z,56nm,1.8s						
SOKA				*e*P	**P'P'df**	**07 48 45.7**	**-4.6**
	comp=Z,4.4nm,0.9s						
PRA	**Prague**	**57.67**	**314**	AMS	AMS	07 46 10.0	
	comp=Z,204μm,15.9s						
MRVN	**Minervino Murg**	**57.69**	**303**	⇑P	**P**	**07 18 58.0**	**-1.6**
NBB05	**Inndyr**	**57.75**	**334**	*e*P	**P**	**07 18 59.7**	**+0.2**
NBB17	**Glomfjord B¥r**	**57.76**	**334**	*e*P	**P**	**07 18 60.0**	**+0.4**
LUNU	**Lund**	**57.85**	**320**	*i* P	**P**	**07 19 00.3**	**-0.1**
RUE	**Ruedersdorf**	**57.86**	**317**	⇑P	**P**	**07 19 00.8**	**+0.3**
NBB30	**Finnes**	**57.86**	**334**	*e*P	**P**	**07 19 00.5**	**+0.1**
CKRC	**Cesky Krumlov**	**57.88**	**312**	*e*P	**P**	**07 19 01.1**	**+0.3**
CKRC				*e*S	S	**07 26 57.5**	**-2.7**
SGRT	**San Giovanni R**	**57.90**	**304**	P	**P**	**07 19 00.7**	**-0.5**
SGRT				IAmb	IAmb	07 19 17.7	
	comp=Z,1μm,1.3s						
BRG	**Berggiesshubel**	**57.90**	**315**	⇑*i*P	**P**	**07 19 01.2**	**+0.3**
BRG				Amp		07 19 03.8	
	comp=Z,316nm,1.3s						
BRG				*ex*	x	07 19 07.1	
BRG				Amp		07 19 10.4	
	comp=Z,831nm,1.2s						
BRG				PP	PP	07 21 17.9	+8.9
BRG				Amp		07 21 25.1	
	comp=Z,373nm,1.1s						
BRG	**Berggiesshubel**	**57.90**	**315**	S	**S**	**07 27 03.0**	**+2.7**
RGN	**Rugen**	**57.98**	**319**	P	**P**	**07 19 01.7**	**+0.4**
RGN				IAmb	IAmb	07 19 10.5	
	comp=Z,1μm,1.1s						
RGN	**Rugen**	**57.98**	**319**	⇑P	**P**	**07 19 01.7**	**+0.4**
PBCC	**Pribram**	**57.99**	**313**	*e*P	**P**	**07 19 01.7**	**+0.1**
OBKA	**Obir**	**58.01**	**309**	*i* P	**P**	**07 19 02.2**	**+0.4**
	comp=Z,194nm,1.1s,SNR=104						
OBKA				*e*S	S	**07 27 02.9**	**+0.8**
	comp=Z,57nm,1.9s						
OBKA				*e*P	P'P'df	07 48 59.9	+10
	comp=Z,16nm,1.8s						
MOA	**Molln**	**58.03**	**311**	*i* P	**P**	**07 19 01.8**	**-0.1**
	comp=Z,172nm,1.4s,SNR=91						
MOA				*e*P	P'P'df	07 48 40.7	-9.1
	comp=Z,14nm,1.4s						
LOF	**Lofoten**	**58.03**	**335**	*e*P	**P**	**07 19 00.7**	**-0.8**
LOF				*e*S	S	**07 26 58.1**	**-3.3**
LOF				*e*SS	SS	**07 30 54.6**	**+2.4**
LOF				IVMs_BB	IVMs_BB	07 45 15.6	
	comp=Z,82μm,15.0s						
KONS	**Konsvik**	**58.07**	**333**	*e*P	**P**	**07 19 01.2**	**-0.6**
KONS				*e*S	S	**07 27 05.6**	**+3.5**
LJU	**Ljubljana**	**58.09**	**309**	⇑*i*P	**P**	**07 19 02.9**	**+0.5**
LJU				*e*		07 21 21.1	
LJU				*e*		07 22 37.6	
LJU				*e*S	S	**07 27 03.4**	**+0.4**
LJU				*e*ScS	ScS	**07 28 56.2**	**+4.5**
LJU				*e*		07 33 32.3	
PET	**Petropavlovsk**	**58.10**	**43**	*c* iP	**P**	**07 19 01.2**	**-1.0**
PET				*e*		07 21 17.6	
PET				*e*S	S	**07 27 09.1**	**+6.2**
PET				pmax	pmax		
	comp=Z,179nm,1.9s						
PET				pmax	pmax		
	comp=Z,12μm,14.5s						
PET				pmax	pmax		
	comp=Z,13μm,14.2s						
PET				pmax	pmax		
	comp=Z,6μm,20.8s						
PET				smax	smax		
	comp=N,6μm,22.3s						
PET				smax	smax		
	comp=E,8μm,19.0s						
PET				smax	smax		
	comp=N,11μm,22.0s						
PET				smax	smax		
	comp=E,5μm,19.2s						
PET				MLR	MLR		
	comp=Z,192μm,16.0s						
PET				MLR	MLR		
	comp=Z,193μm,16.0s						
PET	**Petropavlovsk**	**58.10**	**43**	P	**P**	**07 19 00.6**	**-1.7**
PET				IAMs_20	IAMs_20	07 46 45.8	
	comp=Z,149μm,18.0s						
PET	**Petropavlovsk**	**58.10**	**43**	⇑P	**P**	**07 19 00.5**	**-1.8**
STOK	**Stokkvaagen**	**58.10**	**333**	*e*P	**P**	**07 19 02.6**	**+0.6**
STOK				*e*S	S	**07 27 04.2**	**+1.8**
NBB40	**Tonnes**	**58.12**	**333**	*e*P	**P**	**07 19 02.1**	**+0.1**
BORU	**Boraas**	**58.13**	**323**	*e*P	**P**	**07 19 02.0**	**-0.4**
FABU	**Falkenberg**	**58.18**	**322**	*i* P	**P**	**07 19 02.4**	**-0.4**
CEY	**Cerknica**	**58.20**	**309**	⇑*i*P	**P**	**07 19 03.6**	**+0.4**
N2SV	**S rvWgen**	**58.21**	**335**	*e*P	**P**	**07 19 00.1**	**-2.7**
GEC2	**GERESS Array S**	**58.28**	**312**	P	**P**	**07 19 03.8**	**+0.1**
GEC2				IAmb	IAmb	07 19 12.4	
	comp=Z,585nm,1.2s						
GERES	**GERESS Array B**	**58.28**	**312**	P	**P**	**07 19 03.8**	**+0.1**
	comp=Z,20nm,0.8s,baz=92,slow=6.0,SNR=113						
GERES				LR	LR	07 47 32.2	
	comp=Z,57μm,20.1s,baz=66,slow=40						
GERES				PKPPKP		07 48 37.9	
	comp=Z,0.9nm,0.8s,baz=270,slow=0.9,SNR=4.9						
GERES				PKP2bc		07 48 52.9	
	comp=Z,1.6nm,0.9s,baz=207,slow=2.7,SNR=3.9						
GERES				P4KPbc		07 56 20.4	
	comp=Z,0.7nm,0.9s,baz=48,slow=2.0,SNR=4.1						
GERES	**GERESS Array B**	**58.28**	**312**	P	**P**	**07 19 02.8**	**-0.9**
KHC	**Kasperske Hory**	**58.32**	**313**	*e*P	**P**	**07 19 03.8**	**-0.1**
KHC				*e*		07 19 09.0	
KHC				*e*S	S	**07 27 03.5**	**-2.5**
KHC				MLR	MLR		
	comp=Z,114μm,15.2s						
KHC	**Kasperske Hory**	**58.32**	**313**	*e*P	**P**	**07 19 03.8**	**-0.1**
KHC				*e*pP	**pP**	**07 19 09.0**	**-0.1**
KHC				*e*S	S	**07 27 03.5**	**-2.5**
KHC				AMS	AMS	07 46 50.0	
	comp=Z,114μm,15.2s						
KHC	**Kasperske Hory**	**58.32**	**313**	P	**P**	**07 19 04.1**	**+0.2**
KHC				IAmb	IAmb	07 19 12.8	
	comp=Z,522nm,1.2s						
KHC				IAMs_20	IAMs_20	07 47 10.9	
	comp=Z,106μm,20.0s						
KHC	**Kasperske Hory**	**58.32**	**313**	⇑P	**P**	**07 19 04.1**	**+0.2**
COP	**Copenhagen**	**58.42**	**320**	*i* P	**P**	**07 19 04.5**	**+0.1**
COP				IAmb	IAmb	07 19 12.9	
	comp=Z,646nm,1.2s						
COP				IAMs_20	IAMs_20	07 45 50.7	
	comp=Z,150μm,16.3s						
COP	**Copenhagen**	**58.42**	**320**	*i* P	**P**	**07 19 04.4**	**+0.1**
COP				pmax	pmax		
	comp=Z,650nm,1.2s						
COP				MLR	MLR		
	comp=Z,150μm,16.0s						
CLL	**Collm**	**58.45**	**315**	⇑*i*P	**P**	**07 19 04.4**	**-0.3**
	comp=Z,843nm,2.3s						
CLL				*e*Plp		07 19 09.0	
	comp=Z,7μm,19.7s						
CLL				*i* pP	**pP**	**07 19 10.0**	**+0.2**
	comp=Z,412nm,1.2s						
CLL				*e*Pmax		07 19 18.0	
CLL				*e*PP	PP	07 21 24.0	+10
CLL				*e*PPPP		07 22 54.0	
CLL				*e*S	S	**07 27 09.0**	**+1.6**
	comp=N,24μm,24.1s						
CLL				*e*S	S	**07 27 09.0**	**+1.6**
	comp=E,7μm,22.1s						
CLL				*e*		07 28 42.0	
CLL				*e*ScS	ScS	**07 29 00.0**	**+5.9**
CLL				*e*SS	SS	**07 31 00.0**	**+0.6**
CLL				*e*		07 32 12.0	
CLL				*e*SSS	SSS	07 33 36.0	
CLL				Lm	MLR	07 46 00.0	
	comp=N,88μm,18.6s						
CLL				Lm	MLR	07 46 00.0	
	comp=E,104μm,18.9s						
CLL				Lm	MLR	07 46 00.0	
	comp=Z,170μm,18.5s						
CLL				Lmax		07 46 00.0	
CLL				*e*PKPPKPc	**P'P'df**	**07 48 46.0**	**-3.1**
CLL	**Collm**	**58.45**	**315**	⇑*i*P	**P**	**07 19 04.4**	**-0.3**
CLL				*i*		07 19 10.0	
CLL				*e*S	S	**07 27 09.0**	**+1.6**
CLL				pmax	pmax		
	comp=Z,412nm,1.2s						
CLL				MLR	MLR		
	comp=Z,170μm,18.5s						
CLL	**Collm**	**58.45**	**315**	P	**P**	**07 19 04.5**	**-0.3**
CEL	**Celeste**	**58.45**	**300**	P	**P**	**07 19 05.2**	**+0.2**
CEL	**Celeste**	**58.45**	**300**	⇑P	**P**	**07 19 05.2**	**+0.2**
NSS	**Namsos**	**58.47**	**331**	*e*P	**P**	**07 19 03.9**	**-0.7**
NSS				IVmB_BB		07 19 12.3	
	comp=Z,10μm,2.9s						
NSS				*e*S	S	**07 27 03.8**	**-3.5**
NSS				IVMs_BB	IVMs_BB	07 45 14.8	
	comp=Z,73μm,12.2s						
N2RO	**R st**	**58.53**	**334**	*e*P	**P**	**07 19 04.2**	**-0.8**
MBWA	**Marble Bar**	**58.55**	**143**	⇓P	**P**	**07 19 06.0**	**+0.3**
NC405	**NORSAR Array S**	**58.57**	**327**	P	**P**	**07 19 05.2**	**-0.2**
ONAU	**Onsala**	**58.60**	**322**	*i* P	**P**	**07 19 05.0**	**-0.6**
MYKA	**Terra Mystica**	**58.61**	**310**	*i* P	**P**	**07 19 06.0**	**-0.1**
	comp=Z,71nm,1.5s,SNR=46						
MYKA				*e*S	S	**07 27 16.0**	**+6.1**
	comp=Z,14nm,1.3s						
MYKA				*e*P	P'P'df

NKC eS S 07 27 10.5 -3.2
NKC AMS AMS 07 46 50.0
comp=Z,291µm,16.0s
PSA00 Pilbara Seismi 58.95 143 P P 07 19 08.1 -0.4
PSA00 Pilbara Seismi 58.95 143 P P 07 19 07.2 -1.3
PSA00 IAmb IAmb 07 19 25.9
comp=Z,125nm,0.9s
NAO01 NORSAR Array S 58.98 326 P P 07 19 07.5 -0.8
NAO01 IAmb IAmb 07 19 16.1
comp=Z,661nm,0.9s
NBO00 NORSAR Array S 59.03 327 P P 07 19 07.8 -0.8
NC204 NORSAR Array S 59.03 327 P P 07 19 07.9 -0.8
DODT Dodoma, Tanzan 59.06 243 *i* P P 07 19 09.2 -0.4
ZOU Zoufplan 59.08 310 P P 07 19 08.8 -0.7
OSL Oslo 59.10 325 *e*P P 07 19 09.0 0.0
OSL eS S 07 27 13.7 -1.9
TBLU Trondheim 59.22 329 *e*P P 07 19 08.3 -1.6
TBLU IVmB_BB 07 19 17.0
comp=Z,9µm,2.0s
TBLU eS S 07 27 16.8 -0.3
TBLU eSS SS 07 31 12.2 +1.2
TBLU IVMs_BB IVMs_BB 07 46 14.3
comp=Z,59µm,17.9s
STAL STALIGIAL 59.31 309 P P 07 19 10.2 -0.6
STAL IAmb IAmb 07 19 18.6
comp=Z,1µm,1.2s
ABTA Abfaltersbach 59.36 310 *i* P P 07 19 10.4 -0.9
comp=Z,178nm,0.9s,SNR=45
ABTA eS S 07 27 21.1 +1.4
comp=Z,49nm,1.7s
ABTA eP P'P'df 07 49 00.5 +13
comp=Z,14nm,1.1s
FLTG Flechtingen 59.42 317 P P 07 19 11.0 -0.4
AQU L'Aquila 59.50 305 P P 07 19 12.5 +0.3
AQU pmax pmax
comp=Z,607nm,1.0s
AQU MLR MLR
comp=Z,38µm,18.0s
AQU L'Aquila 59.50 305 ⇑*i*P P 07 19 12.6 +0.3
AQU L'Aquila 59.50 305 P P 07 19 12.5 +0.3
AQU IAmb IAmb 07 19 38.5
comp=Z,607nm,1.0s
AQU L'Aquila 59.50 305 ⇑P P 07 19 12.4 +0.1
MTN Manton Dam 59.51 127 P P 07 19 11.6 -0.9
MTN Manton Dam 59.51 127 ⇓P P 07 19 14.1 +1.6
FITZ Fitzroy Crossi 59.60 135 LR LR 07 47 22.3
comp=Z,9µm,21.5s,baz=307,slow=39
FITZ Fitzroy Crossi 59.60 135 P P 07 19 13.4 +0.4
FITZ Fitzroy Crossi 59.60 135 ⇑P P 07 19 13.1 0.0
NRCA Norcia 59.62 305 P P 07 19 13.3 +0.2
NRCA IAmb IAmb 07 19 22.7
comp=Z,891nm,1.2s
KONO Kongsberg 59.68 325*c* *i*P P 07 19 12.5 -0.6
KONO pmax pmax
comp=Z,230nm,1.3s
KONO Kongsberg 59.68 325 P P 07 19 12.8 -0.3
KONO IAmb IAmb 07 19 21.4
comp=Z,530nm,1.0s
KONO Kongsberg 59.68 325 *e*P P 07 19 12.8 -0.3
KONO IVmBBB 07 19 21.4
comp=Z,10µm,2.5s
KONO eS S 07 27 23.4 +0.3
KONO Kongsberg 59.68 325 ⇑P P 07 19 12.6 -0.5
ABPO Ambohimpanom 59.73 223 P P 07 19 14.9 +0.7
ABPO pmax pmax
comp=Z,2µm,2.2s
ABPO Ambohimpanom 59.73 223 P P 07 19 14.9 +0.7
ABPO IAmb IAmb 07 19 30.3
comp=Z,2µm,2.1s
ABPO Ambohimpanom 59.73 223 IAMs_20 IAMs_20 07 42 01.2
comp=Z,150µm,19.0s
ABPO Ambohimpanom 59.73 223 ⇑P P 07 19 14.8 +0.7
ABPO Ambohimpanom 59.73 223 *i* P P 07 19 17.1 +2.9
ABPO IAmb IAmb 07 19 28.8
comp=Z,2µm,2.1s
ABPO IVMs_BB IVMs_BB 07 41 50.7
comp=Z,51µm,18.8s
GRA1 Grafenberg Arr 59.78 314 P P 07 19 13.7 -0.3
GRFO Grafenberg 59.78 314 P P 07 19 14.6 +0.6
GRFO pmax pmax
comp=Z,2µm,1.6s
GRFO MLR MLR
comp=Z,212µm,19.0s
GRFO Grafenberg 59.78 314 P P 07 19 14.6 +0.6
DOMB Dombas 59.81 328 *e*P P 07 19 13.8 -0.2
DOMB IVmB_BB 07 19 14.7
comp=Z,2µm,1.6s
DOMB eS S 07 27 24.8 -0.1
DOMB eSS SS 07 31 21.1 +0.7
DOMB IVMs_BB IVMs_BB 07 46 17.5
comp=Z,97µm,14.8s
KNRA Kununurra 59.85 131 P P 07 19 15.1 +0.3
RAFF Raffo Rosso 59.87 299 P P 07 19 15.9 +1.1
WTTA Wattenberg 59.87 311 *i* P P 07 19 14.2 -0.7
comp=Z,507nm,1.0s,SNR=132
WTTA eS S 07 27 29.0 +2.5
comp=Z,80nm,1.5s
WTTA *e*P P'P'df 07 48 54.9 +7.9
comp=Z,34nm,1.5s
WATA Walderalm 59.90 311 *i* P P 07 19 14.1 -0.9
comp=Z,308nm,1.1s,SNR=80
WATA eS S 07 27 27.9 +1.2
comp=Z,47nm,1.4s
WATA *e*P P'P'df 07 48 54.3 +7.3
comp=Z,31nm,1.4s
KBS Kingsbay 59.91 348 *i* P P 07 19 14.6 +0.1
KBS IAMs_20 IAMs_20 07 50 29.2
comp=Z,348µm,17.3s
KBS Kingsbay 59.91 348 *i* P P 07 19 14.7 +0.3
KBS pmax pmax
comp=Z,250nm,0.8s
KBS Kingsbay 59.91 348 P P 07 19 14.6 +0.1
KBS IAmb IAmb 07 19 32.5
comp=Z,1µm,1.6s
KBS Kingsbay 59.91 348 IAMs_20 IAMs_20 07 49 04.8
comp=Z,96µm,18.0s
KBS Kingsbay 59.91 348 *e*P P 07 19 14.7 +0.3
KBS IVmBBB 07 19 23.8
comp=Z,8µm,2.3s
KBS eS S 07 27 26.9 +1.2
KBS IVMs_BB IVMs_BB 07 50 34.1
comp=Z,57µm,16.2s
KBS Kingsbay 59.91 348 ⇑P P 07 19 15.2 +0.8
MURB Monte Urbino 59.96 306 P P 07 19 15.7 +0.2
MBAR Mbarara 59.97 252*c* *i*P P 07 19 15.5 -0.5
MBAR pmax pmax
comp=Z,637nm,2.1s
MBAR pmax pmax
comp=Z,154nm,1.7s
MBAR MLR MLR
comp=Z,22µm,19.0s
MBAR Mbarara 59.97 252 P P 07 19 15.9 -0.1
MBAR Mbarara 59.97 252 P P 07 19 16.3 +0.3
MBAR Mbarara 59.97 252 ⇑P P 07 19 15.9 -0.1
MBAR Mbarara 59.97 252 *e*P P 07 19 16.2 +0.2
MBAR eS S 07 27 24.9 -3.5
MBAR Mbarara 59.97 252 *i* P P 07 19 15.5 -0.5
MBAR IAmb IAmb 07 19 30.4
comp=Z,3µm,2.6s
MBAR IVMs_BB IVMs_BB 07 47 31.4
comp=Z,9µm,18.6s
CTI Castel Tesino 60.07 309 P P 07 19 15.6 -0.6
CTI pmax pmax
comp=Z,2µm,2.1s
CTI MLR MLR
comp=Z,43µm,21.0s
CTI Castel Tesino 60.07 309 P P 07 19 15.6 -0.6
GOET G??ttrup 60.09 322 *i* P P 07 19 16.7 +0.8
GOET IAmb IAmb 07 19 24.8
comp=Z,1µm,1.1s
GOET *i* S S 07 27 23.7 -4.8
GOET IAMs_20 IAMs_20 07 46 39.6
comp=Z,274µm,17.0s
SQTA Sankt Quirin 60.17 311 *i* P P 07 19 16.0 -0.9
comp=Z,166nm,1.0s,SNR=111
SQTA eS S 07 27 29.4 -0.8
comp=Z,34nm,1.4s
SQTA *e*P P'P'df 07 48 53.8 +7.3
comp=Z,32nm,1.7s
MUD Monsted U'grnd 60.17 321 ⇑*i*P P 07 19 17.2 +0.6
MUD IAmb IAmb 07 19 25.4
comp=Z,739nm,1.2s
MUD IAMs_20 IAMs_20 07 46 53.0
comp=Z,242µm,18.1s
MUD Monsted U'grnd 60.17 321 ⇑*i*P P 07 19 17.1 +0.6
MUD pmax pmax
comp=Z,740nm,1.2s
MUD MLR MLR
comp=Z,240µm,18.0s
MUD Monsted U'grnd 60.17 321 ⇑P P 07 19 17.0 +0.5
TEOL Teolo 60.18 309 P P 07 19 16.2 -0.6
GENI Genyem 60.18 111 ⇑P P 07 19 17.4 +0.2
GENI Genyem 60.18 111 P P 07 19 18.1 +0.9
comp=Z,22µmcomp=Z,18µmcomp=Z,972nm,1.9s
MOTA Moosalm 60.22 311 *i* P P 07 19 16.3 -0.9
comp=Z,570nm,0.9s,SNR=187
MOTA eS S 07 27 26.8 -4.0
comp=Z,40nm,1.3s
MOTA *e*P P'P'df 07 48 49.5 +3.1
comp=Z,41nm,1.4s
SKAR Skarslia 60.26 326 *e*P P 07 19 17.3 +0.2
SKAR IVmBBB 07 19 26.1
comp=Z,8µm,1.7s
SKAR eS S 07 27 30.5 -0.1
SKAR IVMs_BB IVMs_BB 07 46 32.6
comp=Z,84µm,16.6s
MGAB Montegabbione 60.33 306 ⇑P P 07 19 16.9 -1.0
HOMB Homborsund 60.35 324 *i* P P 07 19 17.3 -0.4
HOMB Homborsund 60.35 324 *e*P P 07 19 18.5 +0.8
HOMB eS S 07 27 30.8 -1.0
KDU Kakadu 60.37 125 ⇓P P 07 19 17.9 -0.5
RETA Reutte 60.42 311 *i* P P 07 19 17.8 -0.7
comp=Z,191nm,1.3s,SNR=109
RETA eS S 07 27 32.8 -0.5
comp=Z,36nm,1.9s
RETA *e*P P'P'df 07 48 46.4 +0.4
comp=Z,22nm,1.7s
MOL Molde 60.48 329 *e*P P 07 19 17.8 -0.8
MOL IVmBBB 07 19 26.8
comp=Z,8µm,1.9s
MOL eS S 07 27 33.7 +0.3
FETA Feichten 60.52 311 *i* P P 07 19 18.6 -0.7
comp=Z,172nm,1.3s,SNR=114
FETA eS S 07 27 29.2 -5.6
comp=Z,85nm,1.3s
FETA *e*P P'P'df 07 48 55.1 +9.2
comp=Z,19nm,1.3s
CORL Corleone 60.53 300 P P 07 19 18.2 -1.2
CLTB Caltabellotta 60.67 299 P P 07 19 19.6 -0.8
CLTB pP sP 07 19 27.8 +0.6
CLTB IAmb IAmb 07 19 36.6
comp=Z,663nm,1.1s
CLTB Caltabellotta 60.67 299 ⇑P P 07 19 19.8 -0.6
AKN Aaknes 60.77 328 *e*P P 07 19 19.1 -1.5
AKN eS S 07 27 36.8 -0.4
AKN eSS SS 07 31 39.7 +4.3
OSSC Osservatorio P 60.83 307 P P 07 19 20.6 -0.7
ZCCA Zocca 60.85 307 P P 07 19 22.9 +1.4
SALO Salr 60.92 309 P P 07 19 21.8 -0.1
SALO IAMs_20 IAMs_20 07 50 03.8
comp=Z,100µm,18.0s
SALO Salr 60.92 309 ⇑P P 07 19 22.2 +0.3
BILL Bilibino 60.98 25*de*P P 07 19 22.0 +0.2
BILL pmax pmax
comp=Z,1µm,2.4s
BILL MLR MLR
comp=Z,117µm,14.0s
BILL Bilibino 60.98 25 P P 07 19 22.6 +0.8
BILL IAMs_20 IAMs_20 07 48 01.8
comp=Z,126µm,19.0s
SNART Snartemo 61.03 324 *i* P P 07 19 22.1 -0.2
SNART Snartemo 61.03 324 *e*P P 07 19 22.4 +0.1
SNART eS S 07 27 41.9 +1.4
DAVA Damuels 61.05 311 *i* P P 07 19 22.2 -0.7
comp=Z,350nm,1.2s,SNR=138
DAVA eS S 07 27 46.0 +4.6
comp=Z,51nm,1.6s
DAVA *e*P P'P'df 07 48 53.3 +8.2
comp=Z,19nm,1.2s
ODD1 Odda 61.16 326 *e*P P 07 19 24.3 +1.0
ODD1 eS S 07 27 44.5 +2.4
HLG Helgoland 61.18 319 ⇓P P 07 19 26.6 +3.2
PRMA PARMA 61.23 308 P P 07 19 24.7 +0.8
STU Stuttgart 61.23 313 P P 07 19 24.1 +0.2
STU pmax pmax
comp=Z,595nm,1.0s
STU MLR MLR
comp=Z,192µm,18.0s
STU Stuttgart 61.23 313 P P 07 19 24.1 +0.2
STU IAmb IAmb 07 19 32.6
comp=Z,595nm,1.0s
STU Stuttgart 61.23 313 ⇑P P 07 19 23.0 -0.9
HYA Hoyanger 61.24 327 *e*P P 07 19 24.5 +0.8
HYA eS S 07 27 45.0 +1.9
CASP Castiglione de 61.25 306 P P 07 19 21.8 -2.3
BLS5 Blasjo 61.30 325 *e*P P 07 19 25.0 +0.8
BLS5 eS S 07 27 41.4 -2.5
MFRI Mfriga 61.30 241 *i* P P 07 19 25.7 +0.7
MFRI IAmb IAmb 07 19 57.4
comp=Z,512nm,1.4s
MFRI IVMs_BB IVMs_BB 07 42 00.1
comp=Z,21µm,23.0s
VLC Villacollemand 61.30 307 P P 07 19 24.3 -0.3
VLC IAMs_20 IAMs_20 07 50 43.1
comp=Z,68µm,18.0s
VLC Villacollemand 61.30 307 ⇑P P 07 19 24.2 -0.3
BAKO Makambako 61.42 241 *i* P P 07 19 26.7 +0.9
BAKO IAmb IAmb 07 19 43.2
comp=Z,417nm,1.1s
BAKO IVMs_BB IVMs_BB 07 42 19.4
comp=Z,22µm,21.8s
KIDE Kidegembe 61.51 241 *i* P P 07 19 27.1 +0.6
KIDE IAmb IAmb 07 19 42.9
comp=Z,352nm,1.4s
KIDE IVMs_BB IVMs_BB 07 42 06.6
comp=Z,19µm,22.7s
IBBN Ibbenburen 61.54 317 ⇑P P 07 19 26.1 +0.2
BANG Mbangamawe 61.55 240 *i* P P 07 19 26.4 -0.2
BANG IAmb IAmb 07 19 42.5
comp=Z,342nm,1.0s
BANG IVMs_BB IVMs_BB 07 42 15.2
comp=Z,23µm,22.4s
TUE Stuetta 61.56 310 P P 07 19 25.6 -0.9
TUE IAmb IAmb 07 19 43.4
comp=Z,468nm,1.0s
TUE IAMs_20 IAMs_20 07 50 15.0
comp=Z,82µm,19.0s
TUE Stuetta 61.56 310 ⇑P P 07 19 25.7 -0.8
WINO Wino 61.59 240 *i* P P 07 19 25.7 -1.3
WINO IAmb IAmb 07 19 44.3
comp=Z,597nm,1.2s
WINO IVMs_BB IVMs_BB 07 42 07.8
comp=Z,20µm,22.1s
KIMO Ikongo 61.61 239 *i* P P 07 19 27.4 +0.4
KIMO IAmb IAmb 07 19 44.6
comp=Z,567nm,1.2s
KIMO IVMs_BB IVMs_BB 07 41 51.1
comp=Z,25µm,22.8s
GAWA Igawa 61.69 242 *i* P P 07 19 27.3 -0.3
GAWA IAmb IAmb 07 19 45.0
comp=Z,425nm,1.4s
GAWA IVMs_BB IVMs_BB 07 42 40.9
comp=Z,20µm,21.9s
BER Bergen 61.75 326 *e*P P 07 19 27.4 +0.3
BER IVmBBB 07 19 36.2
comp=Z,7µm,2.3s
BER eS S 07 27 49.6 +0.2
FOO Floro 61.75 328 *e*P P 07 19 27.6 +0.5
FOO IVmB_BB 07 19 36.1
comp=Z,6µm,2.5s
FOO eS S 07 27 48.7 -0.7
ASK Askoy 61.80 326 *e*P P 07 19 28.4 +0.9
ASK eS S 07 27 49.6 -0.6
UWEM Njombe 61.81 241 *i* P P 07 19 27.0 -1.6
UWEM IAmb IAmb 07 19 43.2
comp=Z,172nm,1.0s
UWEM IVMs_BB IVMs_BB 07 42 16.1
comp=Z,20µm,23.0s
BOB Bobbio (Coli) 61.84 308 ⇑P P 07 19 27.5 -0.7
BFO Black Forest 61.88 312 P P 07 19 27.8 -0.6
BFO pmax pmax
comp=Z,303nm,1.4s
BFO MLR MLR
comp=Z,155µm,19.0s
BFO Black Forest 61.88 312 P P 07 19 27.8 -0.6
BFO Black Forest 61.88 312 P P 07 19 27.7 -0.6
MSSA Maissana 61.88 308 P P 07 19 27.9 -0.6
MSSA IAmb IAmb 07 19 42.0
comp=Z,456nm,0.8s
NGEA Songea 61.88 239 *i* P P 07 19 29.5 +0.6
NGEA IAmb IAmb 07 19 46.7
comp=Z,715nm,1.1s
NGEA IVMs_BB IVMs_BB 07 41 47.9
comp=Z,22µm,23.7s
KMY Karmoy 61.94 325 *e*P P 07 19 30.0 +1.5
KMY eS S 07 27 54.0 +2.1
SUE Sulen 61.95 327 *e*P P 07 19 29.6 +1.2
SUE IVmBBB 07 19 37.6
comp=Z,7µm,1.5s
SUE eS S 07 27 49.0 -3.0
KIPE Kipengere 61.98 241 *i* P P 07 19 29.7 0.0
KIPE IAmb IAmb 07 19 44.0
comp=Z,2µm,2.4s
KIPE IVMs_BB IVMs_BB 07 42 09.5
comp=Z,18µm,25.0s
CHML Chimala 62.01 242 *i* P P 07 19 29.1 -0.6
CHML IAmb IAmb 07 19 48.3
comp=Z,863nm,1.0s
CHML IVMs_BB IVMs_BB 07 43 11.3
comp=Z,18µm,22.0s
ZINI Mgazini 62.01 239 *i* P P 07 19 29.1 -0.6
ZINI IAmb IAmb 07 19 47.3
comp=Z,253nm,1.0s
ZINI IVMs_BB IVMs_BB 07 42 27.7
comp=Z,24µm,22.4s
TOLA Matola 62.05 241 *i* P P 07 19 26.3 -3.9
TOLA IAmb IAmb 07 39 13.4
comp=Z,655nm,0.3s
BUMI Ibumi 62.10 240 *i* P P 07 19 30.4 0.0
BUMI IAmb IAmb 07 19 48.4
comp=Z,549nm,1.0s
BUMI IVMs_BB IVMs_BB 07 42 11.3
comp=Z,21µm,22.7s
VOI Vohitsoka 62.21 222 P P 07 19 31.6 +0.7
VOI IAMs_20 IAMs_20 07 43 24.1
comp=Z,90µm,19.0s
VOI Vohitsoka 62.21 222 P P 07 19 32.9 +2.0
SNR=27
VOI Vohitsoka 62.21 222 ⇑P P 07 19 30.6 -0.2
LIGA Liganga 62.21 239 *i* P P 07 19 32.7 +1.7
LIGA IVMsBB 07 42 33.5
comp=Z,24µm,22.1s
MAKE Makete 62.22 241 *i* P P 07 19 32.3 +0.9
MAKE IAmb IAmb 07 19 49.1
comp=Z,402nm,1.1s
MAKE IVMs_BB IVMs_BB 07 42 31.6
comp=Z,19µm,23.8s
UKWA Ukwama 62.24 241 *i* P P 07 19 30.9 -0.6
UKWA IAmb IAmb 07 19 49.0
comp=Z,228nm,1.1s
UKWA IVMs_BB IVMs_BB 07 42 31.6
comp=Z,20µm,23.0s
UNDA Madunda 62.29 241 *i* P P 07 19 30.7 -1.0
UNDA IAmb IAmb 07 19 49.7
comp=Z,254nm,0.9s
UNDA IVMs_BB IVMs_BB 07 42 30.6
comp=Z,19µm,22.4s
JILO Lwanjilo 62.31 242 *i* P P 07 19 32.6 +0.7
JILO IAmb IAmb 07 19 50.1
comp=Z,760nm,1.4s
JILO IVMs_BB IVMs_BB 07 43 23.0
comp=Z,19µm,21.5s
KURU Muhukuru 62.38 239 *i* P P 07 19 32.3 +0.1
KURU IAmb IAmb 07 19 49.8
comp=Z,492nm,1.2s
KURU IVMs_BB IVMs_BB 07 42 02.1
comp=Z,20µm,23.4s
NIND Nindi 62.39 240 *i* P P 07 19 33.3 +1.0
NIND IAmb IAmb 07 19 49.8
comp=Z,223nm,1.1s
NIND IVMs_BB IVMs_BB 07 42 32.1
comp=Z,21µm,22.1s
LOSI Makongolosi 62.42 243 *i* P P 07 19 32.3 -0.2
LOSI IAmb IAmb 07 19 56.4
comp=Z,265nm,1.2s
LOSI IVMs_BB IVMs_BB 07 43 49.5
comp=Z,20µm,21.0s
NKAL Nkalisi 62.43 242 *i* P P 07 19 32.9 +0.3
NKAL IAmb IAmb 07 19 51.1
comp=Z,774nm,1.1s
NKAL IVMs_BB IVMs_BB 07 43 00.5
comp=Z,22µm,22.4s
TIRI Matiri 62.54 240 *i* P P 07 19 33.3 0.0
TIRI IAmb IAmb 07 19 51.0
comp=Z,695nm,1.2s
TIRI IVMs_BB IVMs_BB 07 42 44.8
comp=Z,21µm,22.9s
MZUN Kiwira 62.60 242 *i* P P 07 19 35.2 +1.5
MZUN IAmb IAmb 07 19 52.1
comp=Z,1µm,1.4s
MZUN IVMs_BB IVMs_BB 07 43 30.8
comp=Z,22µm,20.7s
PGF Pioggiola 62.65 306 P P 07 19 32.8 -0.9
ECH Echery 62.67 312 P P 07 19 33.1 -0.5
ECH pmax pmax
comp=Z,286nm,1.1s
ECH MLR MLR
comp=Z,174µm,18.0s
ECH Echery 62.67 312 P P 07 19 33.1 -0.5
ECH Echery 62.67 312 ⇑P P 07 19 33.1 -0.5
PDHT Panda Hill 62.72 242 *i* P P 07 19 35.8 +1.3
PDHT IAmb IAmb 07 19 57.0
comp=Z,412nm,1.2s
PDHT IVMs_BB IVMs_BB 07 43 36.4
comp=Z,24µm,21.7s
MKIL Mkili 62.77 240 *i* P P 07 19 36.0 +1.3
MKIL IAmb IAmb 07 19 52.5
comp=Z,684nm,1.1s
MKIL IVMs_BB IVMs_BB 07 42 39.7
comp=Z,22µm,22.7s
ILOM Ilombo 62.82 242 *i* P P 07 19 36.9 +1.5
ILOM IAmb IAmb 07 19 57.7
comp=Z,475nm,1.3s
ILOM IVMs_BB IVMs_BB 07 43 26.1
comp=Z,26µm,22.1s
MONC Moncucco Torin 62.83 309 ⇑P P 07 19 34.5 -0.2
BTNL Ternell 62.85 315 *d*P P 07 19 34.8 0.0
MBAM Mbamba Bay 62.91 239 *i* P P 07 19 36.0 +0.4
MBAM IAmb IAmb 07 19 53.4
comp=Z,389nm,1.1s
MBAM IVMs_BB IVMs_BB 07 42 33.0
comp=Z,19µm,24.0s
MEM Membach 62.92 315 *b*P P 07 19 35.2 0.0
SENIN Lac Senin/Sane 62.97 310 P P 07 19 35.8 -0.1
SENIN IAmb IAmb 07 19 46.7
comp=Z,716nm,1.1s
SENIN IAMs_20 IAMs_20 07 51 00.9
comp=Z,108µm,18.0s
BHOU Houvegnez 62.98 315 *b*P P 07 19 36.0 +0.4
BHOU *dx* x 07 19 52.6
BHOU *d*PcP **PcP** 07 20 13.5 0.0
ITUM Tunduma 63.01 242 *i* P P 07 19 37.5 +1.0
ITUM IAmb IAmb 07 19 55.1
comp=Z,552nm,1.4s
ITUM IVMs_BB IVMs_BB 07 43 43.1
comp=Z,24µm,20.9s
WLF Walferdange 63.02 314 *d*P P 07 19 36.6 +0.7
WLF Walferdange 63.02 314 P P 07 19 36.4 +0.5
WLF pmax pmax
comp=Z,928nm,1.1s
WLF MLR MLR
comp=Z,105µm,18.0s
WLF Walferdange 63.02 314 P P 07 19 36.4 +0.5
WLF IAmb IAmb 07 19 48.3
comp=Z,928nm,1.1s
WLF IAMs_20 IAMs_20 07 49 55.4
comp=Z,105µm,18.0s
WLF Walferdange 63.02 314 ⇑P P 07 19 36.5 +0.5
BEBN Eben Emael 63.09 315 *b*P P 07 19 36.1 -0.2
BEBN *dx* x 07 19 52.7
VSL Villasalto 63.12 302 P P 07 19 36.0 -0.8
VSL IAmb IAmb 07 19 52.7
comp=Z,852nm,1.6s
VSL Villasalto 63.12 302 ⇑P P 07 19 35.9 -0.8
BSTI Sart Tilman 63.20 315 *d*P P 07 19 37.5 +0.5
BSTI *dx* x 07 19 53.8
MORW Morawa 63.40 151 P P 07 19 38.6 0.0
MORW IAmb IAmb 07 20 00.8
comp=Z,537nm,1.1s
MORW Morawa 63.40 151 ⇑P P 07 19 38.1 -0.4
BCLA Clavier 63.40 315 *b*P P 07 19 38.5 0.0
BCLA *dp*P **pP** 07 19 42.9 -0.7
BCLA *dx* x 07 19 55.0
BCLA *d*PcP **PcP** 07 20 13.9 -1.4
RCHB Rochefort 63.51 315 *b*P P 07 19 39.2 +0.1

RCHB dx x 07 19 54.8
BGES Gesves 63.55 315 bP **P** **07 19 38.9 -0.5**
BGES dx x 07 19 55.7
BNI Bardonecchia 63.69 309 P **P** **07 19 40.2 -0.4**
BNI pmax pmax
comp=Z,370nm,0.9s
BNI MLR MLR
comp=Z,45µm,19.0s
BNI Bardonecchia 63.69 309 P **P** **07 19 40.2 -0.4**
BNI IAmb IAmb 07 20 02.0
comp=Z,370nm,0.9s
BNI Bardonecchia 63.69 309 ⇑P **P** **07 19 40.1 -0.4**
BMRD Maredsous 63.76 315 dP **P** **07 19 40.8 +0.1**
BMRD dx x 07 19 57.1
UCC Uccle 63.91 316 dP **P** **07 19 41.6 -0.1**
UCC dx x 07 19 52.1
UCC Uccle 63.91 316 P **P** **07 19 41.6 -0.1**
UCC pmax pmax
comp=Z,584nm,1.5s
UCC Uccle 63.91 316 P **P** **07 19 41.6 -0.1**
UCC IAmb IAmb 07 19 58.7
comp=Z,584nm,1.5s
DOU Dourbes 63.92 315 bP **P** **07 19 41.7 -0.1**
TAMR Tamra 63.97 300 ⇑P **P** **07 19 42.4 0.0**
SNF Seneffe 64.02 315 dP **P** **07 19 42.3 -0.2**
KEST Kesra 64.16 298 P **P** **07 19 44.4 +0.6**
comp=Z,390nm,0.8s,baz=31,slow=3.5,SNR=125
KEST S **S** **07 28 19.8 -1.0**
comp=Z,24nm,1.2s,baz=338,slow=14,SNR=2.0
KEST LR LR 07 54 35.6
comp=Z,15µm,18.0s,baz=10,slow=42
KEST P4KPbc 07 56 48.0
comp=Z,0.7nm,0.5s,baz=351,slow=10,SNR=3.6
KEST Kesra 64.16 298 P **P** **07 19 44.4 +0.6**
KEST Kesra 64.16 298 P **P** **07 19 44.7 +1.0**
SNR=354
KEST P **P** **07 19 44.7 +1.0**
SNR=354
NOR Nord 64.57 351 *i* P **P** **07 19 45.0 -0.6**
NOR ⇑*i*P **pP** **07 19 45.5 -5.2**
NOR IAMs_20 IAMs_20 07 52 60.0
comp=Z,197µm,17.2s
NOR Nord 64.57 351 *i* P **P** **07 19 45.0 -0.6**
NOR MLR MLR
comp=Z,200µm,17.0s
LRW Lerwick 64.99 327 ⇓P **P** **07 19 49.5 +0.9**
SSB Saint Sauveur 65.10 310 P **P** **07 19 49.4 -0.3**
SSB pmax pmax
comp=Z,641nm,1.2s
SSB MLR MLR
comp=Z,54µm,19.0s
SSB Saint Sauveur 65.10 310 P **P** **07 19 49.4 -0.3**
SSB IAmb IAmb 07 19 58.0
comp=Z,640nm,1.2s
SSB Saint Sauveur 65.10 310 IAMs_20 IAMs_20 07 52 18.4
comp=Z,54µm,19.0s
SSB Saint Sauveur 65.10 310 ⇑P **P** **07 19 49.5 -0.3**
ZOMB Zomba 65.14 235 *i* P **P** **07 19 49.8 -0.5**
ZOMB IAmb IAmb 07 20 07.2
comp=Z,348nm,1.6s
ZOMB IVMs_BB IVMs_BB 07 47 19.4
comp=Z,6µm,17.0s
CMAH Djebel Manchou 65.39 300 P **P** **07 19 52.0 +0.2**
ABSA Djebel Ababsia 65.45 299 P **P** **07 19 52.7 +0.5**
JMIC Jan Mayen 65.50 339 *e*P **P** **07 19 52.6 +0.8**
JMIC *e*S **S** **07 28 32.9 -3.0**
AIS Amsterdam Isla 65.66 187 P **P** **07 19 54.7 +1.6**
AIS IAmb IAmb 07 20 06.3
comp=Z,890nm,1.2s
AIS IAMs_20 IAMs_20 07 44 10.7
comp=Z,58µm,20.0s
WACR West Acre 65.72 318⇑*e*P **P** **07 19 53.2 -0.3**
WACR IAMs_20 IAMs_20 07 51 01.7
comp=Z,110µm,21.6s
MANU Manus Island 65.93 106 P **P** **07 19 56.1 +0.6**
CKFL Kef-Lekhel 66.00 300 P **P** **07 19 55.6 -0.2**
LMK Market Rasen 66.09 319⇑*e*P **P** **07 19 55.6 -0.2**
LMK IAMs_20 IAMs_20 07 51 29.8
comp=Z,109µm,18.5s
GDLE Glaisdale, N Y 66.13 320 *e*P **P** **07 19 56.0 -0.2**
GDLE IAMs_20 IAMs_20 07 51 05.8
comp=Z,145µm,18.5s
CASM Ain Smara 66.22 300 P **P** **07 19 56.3 -0.8**
CTEI Djebel Teioual 66.34 300 P **P** **07 19 58.4 +0.4**
HMNX Herstmonceux 66.37 316⇑*e*P **P** **07 19 56.6 -1.1**
HMNX IAMs_20 IAMs_20 07 52 09.3
comp=Z,226µm,17.9s
DRUM Mains of Drumt 66.41 323⇑*e*P **P** **07 19 57.8 -0.1**
DRUM IAMs_20 IAMs_20 07 50 32.6
comp=Z,124µm,18.8s
WRKA Warakurna 66.44 138 ⇑P **P** **07 19 58.5 0.0**
DAG Danmarks Havn 66.49 346⇑*i*P **P** **07 19 57.6 -0.5**
DAG IAmb IAmb 07 20 06.5
comp=Z,693nm,1.2s
DAG IAMs_20 IAMs_20 07 54 02.2
comp=Z,146µm,19.4s
DAG Danmarks Havn 66.49 346⇑*i*P **P** **07 19 57.5 -0.5**
DAG pmax pmax
comp=Z,690nm,1.2s
DAG MLR MLR
comp=Z,150µm,19.0s
DAG Danmarks Havn 66.49 346 ⇑P **P** **07 19 57.6 -0.5**
MLA1 Latheron 66.51 325 *e*P **P** **07 19 58.3 -0.2**
WB0 Warramunga Arr 66.52 130 P **P** **07 19 59.0 -0.1**
WB0 IAmb IAmb 07 20 17.7
comp=Z,865nm,1.3s
DFRA Djebel Bou Aff 66.60 300 P **P** **07 19 59.8 +0.2**
WRA Warramunga Arr 66.60 130 P **P** **07 19 59.7 +0.1**
comp=Z,108nm,0.8s,baz=322,slow=6.4,SNR=374
WRA S **S** **07 28 54.6 +3.9**
comp=Z,9.9nm,1.1s,baz=313,slow=13,SNR=7.1
WRA PKP2bc 07 48 31.5
comp=Z,2.6nm,0.8s,baz=129,slow=3.1,SNR=7.8
WRA LR LR 07 51 41.0
comp=Z,20µm,21.8s,baz=300,slow=38
WRA P4KPbc 07 56 57.2
comp=Z,0.8nm,0.9s,baz=322,slow=4.9,SNR=3.0
WRA Warramunga Arr 66.60 130 P **P** **07 19 59.2 -0.4**
WRAB Tennant Creek 66.60 130 P **P** **07 19 59.8 +0.2**
WRAB pmax pmax
comp=Z,2µm,1.7s
WRAB MLR MLR
comp=Z,21µm,22.0s
WRAB Tennant Creek 66.60 130 P **P** **07 19 59.8 +0.2**
WRAB Tennant Creek 66.60 130 ⇑P **P** **07 19 59.7 +0.2**
WB2 Warramunga Arr 66.61 130 P **P** **07 19 59.9 +0.3**
MCD Coleburn Disti 66.64 324 *e*P **P** **07 19 58.8 -0.5**
EDMD Edmundbyers 66.67 321⇑*e*P **P** **07 19 59.4 -0.2**
EDMD IAMs_20 IAMs_20 07 51 08.4
comp=Z,142µm,20.4s
HPK Haverah Park 66.71 320⇑*e*P **P** **07 19 59.8 -0.1**
HPK IAMs_20 IAMs_20 07 51 34.3
comp=Z,123µm,19.4s
ESY Stoneypath 66.74 322⇑*e*P **P** **07 19 59.0 -1.0**
WR0 Warramunga Arr 66.75 130 P **P** **07 20 00.5 -0.1**
WR0 IAmb IAmb 07 20 19.3
comp=Z,994nm,1.6s
EDU Dundee 66.79 323⇑*e*P **P** **07 20 00.1 -0.2**
MAHO Mahon 66.79 304 *e*P **P** **07 19 57.6 -3.0**
MAHO *i* S **S** **07 28 49.9 -2.7**
MAHO Mahon 66.79 304 ⇑P **P** **07 20 00.7 0.0**
CWF Charnwood Fore 66.85 319 *e*P **P** **07 20 00.5 -0.3**
CWF IAMs_20 IAMs_20 07 51 43.8
comp=Z,105µm,20.2s
LBWR Ladybower, Pea 66.92 319 *e*P **P** **07 20 01.0 -0.2**
LBWR IAMs_20 IAMs_20 07 51 53.5
comp=Z,99µm,18.4s
EBL Broad Law 67.01 322⇑*e*P **P** **07 20 00.8 -1.0**
EDI Edinburgh 67.05 322⇑*e*P **P** **07 20 01.8 -0.2**
EDI IAMs_20 IAMs_20 07 51 16.2
comp=Z,163µm,20.3s
SET Setif 67.07 300 P **P** **07 20 03.0 +0.4**
WOL Wolverton 67.20 317 *e*P **P** **07 20 02.7 -0.2**
WOL IAMs_20 IAMs_20 07 52 44.2
comp=Z,202µm,18.0s
ESK Eskdalemuir 67.23 322 P **P** **07 20 02.9 -0.2**
ESK pmax pmax
comp=Z,632nm,1.1s
ESK MLR MLR
comp=Z,203µm,18.0s
ESK Eskdalemuir 67.23 322 P **P** **07 20 02.9 -0.2**
ESK IAmb IAmb 07 20 20.3
comp=Z,632nm,1.1s
ESK Eskdalemuir 67.23 322 ⇑P **P** **07 20 02.8 -0.2**

SOFL Sornfelli, Far 67.23 329 *e*P P 07 20 09.3 +6.2
NWAO Narrogin (SRO) 67.24 152 PKPPKP 07 48 31.6
comp=Z,19nm,1.2s,baz=86,slow=2.3,SNR=3.9
NWAO LR LR 07 50 54.3
comp=Z,17µm,20.9s,baz=335,slow=37
NWAO Narrogin (SRO) 67.24 152 P **P** **07 20 02.7 -0.7**
NWAO pmax pmax
comp=Z,1µm,1.5s
NWAO MLR MLR
comp=Z,32µm,22.0s
NWAO Narrogin (SRO) 67.24 152 P **P** **07 20 02.7 -0.7**
NWAO IAmb IAmb 07 20 24.7
comp=Z,1µm,1.5s
NWAO Narrogin (SRO) 67.24 152 P **P** **07 20 02.5 -0.8**
NWAO IAmb IAmb 07 20 24.8
comp=Z,1µm,1.4s
NWAO Narrogin (SRO) 67.24 152 P **P** **07 20 02.7 -0.7**
NWAO P **P** **07 20 02.7 -0.7**
MDO Dochfour 67.26 324 *e*P **P** **07 20 02.8 -0.5**
STNC Stoke 67.28 319⇑*e*P **P** **07 20 03.0 -0.5**
STNC IAMs_20 IAMs_20 07 52 15.9
comp=Z,105µm,17.0s
SMY Shemya 67.34 41 P **P** **07 20 03.6 -0.3**
SMY pmax pmax
comp=Z,1µm,1.0s
SMY MLR MLR
comp=Z,48µm,18.0s
SMY Shemya 67.34 41 P **P** **07 20 03.6 -0.3**
SMY IAMs_20 IAMs_20 07 52 17.3
comp=Z,48µm,18.0s
SMY Shemya 67.34 41 ⇑P **P** **07 20 04.2 +0.3**
KESW Keswick, Cumbr 67.37 321⇑*e*P **P** **07 20 04.2 +0.2**
KESW IAMs_20 IAMs_20 07 52 00.5
comp=Z,122µm,18.2s
SWN1 Swindon 67.49 317⇑*e*P **P** **07 20 03.9 -0.9**
SWN1 IAMs_20 IAMs_20 07 52 20.3
comp=Z,163µm,20.6s
EAB Aberfoyle 67.60 323⇑*e*P **P** **07 20 05.2 -0.3**
STRD Stroud 67.63 318 *e*P **P** **07 20 05.3 -0.4**
STRD IAMs_20 IAMs_20 07 52 24.0
comp=Z,149µm,20.7s
KAC Achnashellach 67.73 324⇑*e*P **P** **07 20 05.7 -0.6**
DBG Daneborg 67.78 344⇑*i*P **P** **07 20 06.8 +0.5**
DBG IAmb IAmb 07 20 15.9
comp=Z,386nm,1.0s
DBG IAMs_20 IAMs_20 07 55 23.7
comp=Z,53µm,16.5s
PGBU Glenifferbraes 67.78 322⇑*e*P **P** **07 20 06.4 -0.2**
PGBU IAMs_20 IAMs_20 07 51 37.1
comp=Z,162µm,19.8s
NEWG New Galloway 67.85 322⇑*e*P **P** **07 20 07.2 +0.1**
NEWG IAMs_20 IAMs_20 07 52 21.9
comp=Z,183µm,17.0s
OLDB Oldbury-Upon-S 67.89 318⇑*e*P **P** **07 20 06.5 -0.8**
OLDB IAMs_20 IAMs_20 07 53 17.7
comp=Z,136µm,17.1s
FOEL Foel Wylfa 67.92 319 *e*P **P** **07 20 06.7 -0.9**
FOEL IAMs_20 IAMs_20 07 52 34.5
comp=Z,122µm,17.4s
KPL Plockton 67.96 324 *e*P **P** **07 20 06.9 -0.7**
KPL IAMs_20 IAMs_20 07 51 33.8
comp=Z,151µm,18.2s
MONM Monmouth 67.99 318⇑*e*P **P** **07 20 07.5 -0.5**
MONM IAMs_20 IAMs_20 07 52 33.8
comp=Z,128µm,20.6s
MCH1 Michaelchurch 68.06 318⇑*e*P **P** **07 20 07.9 -0.4**
MCH1 IAMs_20 IAMs_20 07 53 34.2
comp=Z,127µm,16.6s
MCH1 Michaelchurch 68.06 318 ⇑P **P** **07 20 08.0 -0.4**
GAL1 Galloway 68.19 321 *e*P **P** **07 20 08.8 -0.4**
GAL1 IAMs_20 IAMs_20 07 52 41.4
comp=Z,198µm,16.6s
LLW Llanuwchllyn 68.20 319 *e*P **P** **07 20 08.8 -0.4**
IOMK Kirk Michael 68.29 321 *e*P **P** **07 20 09.5 -0.3**
IOMK IAMs_20 IAMs_20 07 52 47.9
comp=Z,254µm,17.4s
JQE Queens East 68.31 315 *e*P **P** **07 20 09.2 -0.8**
LEWI Lewis, Hebride 68.34 325 *e*P **P** **07 20 10.3 +0.2**
LEWI IAMs_20 IAMs_20 07 51 42.6
comp=Z,187µm,17.9s
JLP Les Platons 68.34 315⇑*e*P **P** **07 20 09.3 -0.9**
WIM Isle of Man 68.38 321⇑*e*P **P** **07 20 10.4 0.0**
JSA Saint Aubin 68.40 315⇑*e*P **P** **07 20 09.1 -1.5**
JSA IAMs_20 IAMs_20 07 54 14.2
comp=Z,118µm,16.1s
JSA Saint Aubin 68.40 315 ⇑P **P** **07 20 07.9 -2.6**
WME Myndd Eilian 68.40 320⇑*e*P **P** **07 20 10.4 -0.1**
JVM Valle D.L. Mar 68.41 315⇑*e*P **P** **07 20 10.2 -0.5**
WLF1 Llynfaes 68.48 320⇑*e*P **P** **07 20 10.9 -0.1**
WLF1 IAMs_20 IAMs_20 07 52 38.4
comp=Z,215µm,18.9s
WPS Cemaes, Angles 68.51 320 *e*P **P** **07 20 10.9 -0.2**
WPS IAMs_20 IAMs_20 07 52 38.4
comp=Z,102µm,18.6s
YRC Rhoscolyn 68.60 320⇑*e*P **P** **07 20 11.1 -0.6**
CLGH Cloghs, Cushen 68.89 322 *e*P **P** **07 20 13.4 -0.1**
CLGH IAMs_20 IAMs_20 07 52 22.2
comp=Z,180µm,19.9s
ALE Alert 68.91 356 IAMs_20 IAMs_20 07 52 34.7
comp=Z,87µm,20.0s
AS31 Alice Springs 68.91 133 P **P** **07 20 13.9 -0.3**
ASAR Alice Springs 68.91 133 P **P** **07 20 13.9 -0.2**
comp=Z,56nm,0.8s,baz=316,slow=6.2,SNR=354
ASAR S **S** **07 29 20.2 +1.8**
comp=Z,4.8nm,1.0s,baz=318,slow=5.4,SNR=1.6
ASAR PKP2bc 07 48 26.3
comp=Z,11nm,1.0s,baz=136,slow=3.8,SNR=5.1
ASAR LR LR 07 53 22.2
comp=Z,7µm,21.0s,baz=300,slow=39
ASAR P4KPbc 07 57 08.8
comp=Z,0.4nm,0.8s,baz=308,slow=4.4,SNR=3.0
ASAR Alice Springs 68.91 133 P **P** **07 20 13.6 -0.5**
ASAR **P'P'df** **07 48 22.1 -1.3**
DYA Yadsworthy 69.09 317 *e*P **P** **07 20 13.8 -1.1**
DYA IAMs_20 IAMs_20 07 54 04.2
comp=Z,219µm,17.8s
RSBS Rosebush, Pemb 69.10 319⇑*e*P **P** **07 20 13.8 -1.1**
RSBS IAMs_20 IAMs_20 07 54 15.6
comp=Z,77nm,15.9s
COEN Coen 69.19 119 P **P** **07 20 15.7 -0.3**
HTL Hartland 69.25 317 *e*P **P** **07 20 15.8 -0.1**
HTL IAMs_20 IAMs_20 07 53 24.7
comp=Z,158µm,20.3s
DSB Dublin 69.63 320 P **P** **07 20 18.0 -0.1**
DSB IAmb IAmb 07 20 35.6
comp=Z,3µm,2.9s
DSB IAMs_20 IAMs_20 07 53 14.7
comp=Z,77µm,20.0s
DSB Dublin 69.63 320 ⇑P **P** **07 20 17.9 -0.3**
PMG Port Moresby 69.73 113 PKP2bc 07 48 23.9
comp=Z,25nm,1.0s,baz=43,slow=7.6,SNR=5.0
PMG Port Moresby 69.73 113*e*P **P** **07 20 20.0 +0.7**
PMG pmax pmax
comp=Z,425nm,2.5s
PMG Port Moresby 69.73 113 P **P** **07 20 19.7 +0.3**
PMG Port Moresby 69.73 113 ⇑P **P** **07 20 19.6 +0.3**
SCO Scoresbysund 69.86 340 *i* P **P** **07 20 20.4 +1.2**
SCO IAMs_20 IAMs_20 07 55 41.4
comp=Z,64µm,16.7s
SCO Scoresbysund 69.86 340 P **P** **07 20 20.2 +0.9**
SCO pmax pmax
comp=Z,824nm,1.6s
SCO MLR MLR
comp=Z,63µm,18.0s
SCO Scoresbysund 69.86 340 P **P** **07 20 20.2 +0.9**
SCO IAmb IAmb 07 20 38.0
comp=Z,824nm,1.6s
SCO IAMs_20 IAMs_20 07 55 56.0
comp=Z,63µm,18.0s
SCO Scoresbysund 69.86 340 ⇑P **P** **07 20 20.2 +0.9**
CCA1 Carnmenellis 69.96 317⇑*e*P **P** **07 20 20.2 -0.1**
CCA1 IAMs_20 IAMs_20 07 54 39.4
comp=Z,174µm,17.6s
EBNR Beni Rached 70.00 301 P **P** **07 20 21.7 +0.9**
ECHA Ech Chlef 70.17 301 P **P** **07 20 22.5 +0.7**
EANR 'Ain N'Sour 70.44 301 P **P** **07 20 23.3 -0.3**
LSZ Lusaka 70.44 240 P **P** **07 20 23.9 +0.1**
LSZ pmax pmax
comp=Z,292nm,1.0s
LSZ MLR MLR
comp=Z,49µm,18.0s
LSZ Lusaka 70.44 240 P **P** **07 20 23.9 +0.1**
LSZ Lusaka 70.44 240 IAMs_20 IAMs_20 07 52 03.5
comp=Z,49µm,18.0s
LSZ Lusaka 70.44 240 *i* P **P** **07 20 24.5 +0.7**

LSZ IAmb IAmb 07 20 45.1
comp=Z,301nm,1.0s
LSZ IVMs_BB IVMs_BB 07 51 59.5
comp=Z,18µm,17.6s
GAMB Gambell 70.69 27 P **P** **07 20 24.8 +0.4**
GAMB IAmb IAmb 07 20 36.7
comp=Z,841nm,1.6s
FORT Forrest 70.70 142 P **P** **07 20 24.7 -0.3**
FORT Forrest 70.70 142 ⇓P **P** **07 20 25.2 +0.3**
OKGL Djebel Kef Gue 70.76 301 P **P** **07 20 25.0 -0.5**
AMKA Amchitka 70.82 41 P **P** **07 20 25.0 -0.5**
OJGS Djebel Guires 70.86 301 P **P** **07 20 26.0 -0.2**
RABL Rabaul 71.13 105 P **P** **07 20 28.5 +0.5**
OJBR Djebel Berber 71.14 301 P **P** **07 20 27.0 -0.9**
PATS Pohnpei 71.22 92 P **P** **07 20 28.9 +0.3**
TNA Tin City 71.41 25 P **P** **07 20 30.0 +1.2**
TNA IAMs_20 IAMs_20 07 55 47.7
comp=Z,48µm,20.0s
TNA Tin City 71.41 25 ⇑P **P** **07 20 29.3 +0.5**
CART Cartagena 71.44 303 P **P** **07 20 29.6 +0.1**
CART pP **sP** **07 20 35.8 -0.6**
CART Cartagena 71.44 303 ⇑P **P** **07 20 29.4 -0.1**
ODJA Bouhanifia 71.61 301 P **P** **07 20 31.0 +0.3**
TAM Tamanrasset 71.70 287 P **P** **07 20 31.7 +0.2**
TAM pmax pmax
comp=Z,6µm,3.0s
TAM MLR MLR
comp=Z,25µm,22.0s
TAM Tamanrasset 71.70 287 P **P** **07 20 31.7 +0.2**
TAM Tamanrasset 71.70 287 ⇑P **P** **07 20 31.8 +0.2**
TAM Tamanrasset 71.70 287 ⇑P **P** **07 20 31.8 +0.2**
USTO Oran 71.77 301 P P 07 20 39.0 +7.5
NEEM North Greenlan 71.95 351⇑*i*P **P** **07 20 32.5 +0.2**
NEEM IAmb IAmb 07 20 43.3
comp=Z,2µm,1.1s
NEEM IAMs_20 IAMs_20 07 55 35.3
comp=Z,136µm,19.2s
RDOG Red Dog Mine 72.00 22 P **P** **07 20 32.9 +0.6**
RDOG pP **sP** **07 20 39.0 -0.4**
RDOG IAmb IAmb 07 20 44.7
comp=Z,845nm,1.6s
UCM Universidad Co 72.09 307 *e*P **P** **07 20 32.7 -0.7**
UCM *e*S **S** **07 29 54.5 -0.7**
OTSS Djebel Tessala 72.12 301 P P 07 20 41.0 +7.2
A21K Barrow 72.13 17 P **P** **07 20 33.4 +0.3**
A21K IAmb IAmb 07 20 43.3
comp=Z,492nm,1.1s
A21K IAMs_20 IAMs_20 07 55 54.3
comp=Z,71µm,18.0s
BORG Borgarnes 72.24 335 IAMs_20 IAMs_20 07 52 46.0
comp=Z,84µm,18.0s
BORG Borgarnes 72.24 335 ⇑P **P** **07 20 37.5 +3.7**
VAL Valentia 72.30 320 ⇑P **P** **07 20 34.8 +0.4**
EUNU Eureka 72.35 359 P **P** **07 20 35.1 +0.7**
EUNU IAmb IAmb 07 20 46.5
comp=Z,2µm,1.4s
EUNU IAMs_20 IAMs_20 07 54 12.5
comp=Z,123µm,21.0s
EUNU Eureka 72.35 359 ⇑P **P** **07 20 34.9 +0.5**
ITZ Itezhi-Tezhi 72.40 241 *i* P **P** **07 20 35.9 +0.3**
ITZ *i* 07 20 49.0
ITZ *i* 07 20 49.1
ITZ Itezhi-Tezhi 72.40 241 *e*P **P** **07 20 34.6 -1.0**
ITZ *i* S **S** **07 29 58.4 -1.0**
ANM Nome 72.83 25 P **P** **07 20 38.3 +0.9**
ANM pmax pmax
comp=Z,682nm,1.5s
ANM MLR MLR
comp=Z,91µm,21.0s
ANM Nome 72.83 25 P **P** **07 20 38.3 +0.9**
ANM IAmb IAmb 07 20 49.2
comp=Z,682nm,1.5s
ANM IAMs_20 IAMs_20 07 55 40.4
comp=Z,91µm,21.0s
ESBB Sonseca Array 72.84 306 P **P** **07 20 37.8 -0.2**
ESDC Sonseca Array 72.84 306 P **P** **07 20 37.9 0.0**
comp=Z,98nm,0.8s,baz=59,slow=5.7,SNR=140
ESDC S **S** **07 30 05.0 +1.1**
comp=Z,0.5nm,0.9s,baz=304,slow=39,SNR=1.2
ESDC PKPPKP **P'P'df** **07 48 21.0 -3.7**
comp=Z,1.0nm,0.9s,baz=270,slow=7.4,SNR=4.7
ESDC LR LR 07 58 03.1
comp=Z,35µm,18.1s,baz=45,slow=40
ESDC Sonseca Array 72.84 306 P **P** **07 20 36.9 -1.0**
ESDC IAmb IAmb 07 20 55.4
comp=Z,941nm,1.9s
ADK Adak 72.95 40 IAMs_20 IAMs_20 07 56 23.5
comp=Z,43µm,18.0s
ADK Adak 72.95 40 ⇓P P 07 20 45.4 +7.1
SUMG Summit 73.11 345⇑*i*P **P** **07 20 39.6 +0.2**
SUMG IAmb IAmb 07 20 50.3
comp=Z,2µm,1.2s
SUMG IAMs_20 IAMs_20 07 59 15.8
comp=Z,96µm,17.3s
SUMG Summit 73.11 345 P **P** **07 20 39.9 +0.5**
SUMG *PP **sP** **07 20 45.8 -0.6**
SUMG pmax pmax
comp=Z,2µm,1.1s
SUMG Summit 73.11 345 P **P** **07 20 39.9 +0.5**
SUMG pP **sP** **07 20 45.8 -0.6**
SUMG IAMs_20 IAMs_20 07 58 35.6
comp=Z,85µm,18.0s
SUMG Summit 73.11 345 ⇑P **P** **07 20 39.7 +0.2**
PAB San Pablo 73.16 306 P **P** **07 20 39.9 0.0**
PAB pmax pmax
comp=Z,583nm,1.2s
PAB MLR MLR
comp=Z,36µm,18.0s
PAB San Pablo 73.16 306 P **P** **07 20 39.9 0.0**
PAB IAmb IAmb 07 20 55.4
comp=Z,583nm,1.1s
PAB San Pablo 73.16 306 ⇑P **P** **07 20 39.8 0.0**
WAKE Wake Island 73.28 77 ⇑P P 07 20 47.4 +6.6
H11N2 WAKE ISLAND Hy 73.31 76 P **P** **07 20 44.4 +3.7**
baz=280,slow=7.8,SNR=8.6
H11N1 WAKE ISLAND Hy 73.31 76 P **P** **07 20 44.4 +3.7**
baz=280,slow=7.8,SNR=7.9
H11N3 WAKE ISLAND Hy 73.33 76 P **P** **07 20 44.4 +3.6**
baz=280,slow=7.8,SNR=7.2
MELI Melilla 73.74 302 *e*P **P** **07 20 41.1 -2.2**
MELI *i* S **SKiKP** **07 30 13.1 +0.4**
PBRG Braganca 73.98 309⇑*e*P **P** **07 20 44.4 -0.2**
PBRG comp=Z,735nm,2.0s *e*S **S** **07 30 16.1 -0.6**
SPIA Saint Paul Isl 74.14 33 IAMs_20 IAMs_20 07 56 46.3
comp=Z,72µm,18.0s
ATKA Atka Island 74.23 39 ⇓P P 07 20 50.9 +5.2
EMAL Malaga-Limoner 74.29 303 *e*P **P** **07 20 44.3 -2.2**
EMAL *i* S **SKiKP** **07 30 15.0 +1.5**
MVO Moncorvo 74.43 308⇑*e*P **P** **07 20 47.4 +0.1**
comp=Z,901nm,1.5s
MVO *e*S **S** **07 30 18.7 -3.1**
MVO Moncorvo 74.43 308 *e*LR LR 07 51 39.9
comp=Z,37µm,18.0s
TULEG Thule 74.80 354 *i* P **P** **07 20 48.1 -0.6**
TULEG IAmb IAmb 07 21 04.0
comp=Z,453nm,1.0s
TULEG IAMs_20 IAMs_20 07 56 37.2
comp=Z,75µm,21.3s
TULEG Thule 74.80 354 P **P** **07 20 48.1 -0.6**
TULEG IAmb IAmb 07 20 54.9
comp=Z,438nm,0.9s
TULEG IAMs_20 IAMs_20 07 56 43.9
comp=Z,74µm,21.0s
PVLZ Peæn de 74.81 302 *e*P **P** **07 20 47.4 -2.1**
PVLZ *i* S **S** **07 30 22.1 -4.0**
POLO Lamas de Olo 74.87 309⇑*e*P **P** **07 20 49.9 0.0**
comp=Z,268nm,1.6s
POLO *e*S **S** **07 30 26.2 -0.6**
PCAB Cabril 74.90 309⇑*e*P **P** **07 20 49.9 -0.1**
comp=Z,1µm,1.7s
LIJA Lijar 74.95 304 *e*P **P** **07 20 50.0 -0.5**
PGAV Gavieira, Arco 74.96 310⇑*e*P **P** **07 20 50.6 +0.2**
comp=Z,859nm,1.8s
PGAV *e*S **S** **07 30 26.5 -1.3**
PGAV Gavieira, Arco 74.96 310 *e*LR LR 07 50 22.5
comp=Z,43µm,18.0s
REAL Reales 74.97 303 *e*P **P** **07 20 49.4 -1.3**
MTE Manteigas 75.09 308⇑*e*P **P** **07 20 51.5 +0.4**
comp=Z,1µm,1.5s
MTE *e*S **S** **07 30 29.5 +0.3**
MTE Manteigas 75.09 308 *e*LR LR 07 51 58.2
comp=Z,26µm,18.0s
MTE Manteigas 75.09 308 P **P** **07 20 51.5 +0.4**

MTE IAmb IAmb 07 21 09.1
comp=Z,1µm,1.4s
MTE Manteigas 75.09 308 ⇑P P 07 20 51.3 +0.2
PVIS Viseu 75.21 308⇑eP P 07 20 52.3 +0.5
comp=Z,957nm,1.7s
CTA Charters Tower 75.23 122 LR LR 07 56 47.6
comp=Z,9µm,21.8s,baz=294,slow=38
CTAO Charters Tower 75.23 122 P **P 07 20 52.0 0.0**
CTAO pmax pmax
comp=Z,1µm,1.8s
CTAO MLR MLR
comp=Z,11µm,22.0s
CTAO Charters Tower 75.23 122 P **P 07 20 52.0 0.0**
CTAO IAmb IAmb 07 21 16.5
comp=Z,1µm,1.8s
CTAO Charters Tower 75.23 122 ⇑P P 07 20 51.8 -0.2
PCBR Castelo Branco 75.27 307⇑eP P 07 20 52.2 +0.1
comp=Z,559nm,1.5s
CEU Ceuta 75.33 303 *eP* **P 07 20 49.9 -2.6**
CEU *i* S **S 07 30 25.4 -6.4**
PMRV Marv??o 75.38 307⇑eP P 07 20 52.8 +0.1
comp=Z,644nm,2.0s
PMRV *eS* **S 07 30 32.7 +0.4**
PBAR Barrancos 75.63 306⇑eP P 07 20 54.6 +0.4
comp=Z,2µm,1.7s
PBAR *eS* **S 07 30 35.3 +0.2**
CNIL Conil 75.64 304 *eP* **P 07 20 54.9 +0.6**
TOLK Toolik Lake Re 75.69 18 P **P 07 20 54.6 +0.6**
TOLK IAmb IAmb 07 21 11.7
comp=Z,977nm,1.1s
TOLK IAMs_20 IAMs_20 07 57 51.5
comp=Z,75µm,21.0s
ICESG Greenland Ices 75.72 342⇑*i*P **P 07 20 54.8 +0.3**
ICESG IAmb IAmb 07 21 03.6
comp=Z,2µm,1.2s
ICESG IAMs_20 IAMs_20 08 00 47.4
comp=Z,50µm,17.8s
SFS San Fernando 75.72 304 *eP* **P 07 20 52.1 -2.6**
SFS *eS* **S 07 30 33.8 -2.3**
SFS San Fernando 75.72 304 IAMs_20 IAMs_20 08 00 15.7
comp=Z,38µm,19.0s
SFS San Fernando 75.72 304 ⇑P P 07 20 55.0 +0.3
PESTR Estremoz 75.74 306⇑eP P 07 20 54.8 -0.1
comp=Z,759nm,1.7s
PESTR *eS* **S 07 30 36.5 +0.1**
PESTR Estremoz 75.74 306 P **P 07 20 54.6 -0.3**
PESTR Estremoz 75.74 306 ⇑P P 07 20 54.7 -0.1
COI Coimbra 75.78 308 P **P 07 20 55.3 +0.3**
COI pmax pmax
comp=Z,735nm,1.3s
COI MLR MLR
comp=Z,38µm,21.0s
COI Coimbra 75.78 308⇑eP P 07 20 55.3 +0.3
comp=Z,1µm,2.0s
COI *eS* **S 07 30 37.4 +0.8**
COI Coimbra 75.78 308 P **P 07 20 55.3 +0.3**
COI IAmb IAmb 07 21 12.8
comp=Z,734nm,1.2s
PCAS Casmilo, Conde 75.90 308⇑eP P 07 20 56.0 +0.3
comp=Z,678nm,2.0s
PCAS *eS* **S 07 30 37.6 -0.5**
IFR Ifrane 76.10 301 *eP* **P 07 20 53.0 -4.3**
IFR *i* S **S 07 30 40.2 -0.7**
PMTG Montargil 76.11 307⇑eP P 07 20 57.0 +0.1
comp=Z,680nm,1.8s
PMTG *eS* **S 07 30 38.6 -1.8**
IMAR Indian Mountai 76.14 21 P **P 07 20 55.9 -0.6**
EVO Evora 76.18 306 *eP* **P 07 20 56.8 -0.6**
EVO *i* S **S 07 30 37.6 -3.6**
EVO Evora 76.18 306⇑eP P 07 20 57.7 +0.4
comp=Z,1µm,1.7s
EKNA AfricaArray - 76.23 268 *eP* P 07 21 07.4 +9.4
PBEJ Beja 76.29 306⇑eP P 07 20 58.0 +0.1
comp=Z,157nm,1.3s
PSBE So Bento 76.33 308⇑eP P 07 20 58.7 +0.5
comp=Z,2µm,1.8s
PSBE *eS* **S 07 30 43.2 +0.3**
PVAQ Vaqueiros 76.44 305⇑eP P 07 20 59.0 +0.2
comp=Z,2µm,1.6s
PVAQ *eS* **S 07 30 42.6 -1.4**
PVAQ Vaqueiros 76.44 305 *e*LR LR 07 51 51.3
comp=Z,33µm,18.0s
PVAQ Vaqueiros 76.44 305 P **P 07 20 58.1 -0.7**
PVAQ IAmb IAmb 07 21 16.6
comp=Z,790nm,1.1s
PVAQ IAMs_20 IAMs_20 07 59 53.7
comp=Z,41µm,18.0s
COLD Coldfoot 76.44 19 P **P 07 20 58.9 +0.6**
COLD IAmb IAmb 07 21 09.9
comp=Z,582nm,1.1s
COLD IAMs_20 IAMs_20 07 58 20.4
comp=Z,63µm,21.0s
UPNV Upernavik 76.49 349⇑*i*P **P 07 20 58.2 -0.2**
UPNV IAmb IAmb 07 21 12.9
comp=Z,375nm,0.9s
UPNV IAMs_20 IAMs_20 07 59 53.1
comp=Z,190µm,17.7s
PCVE Castro Verde 76.58 305⇑eP P 07 20 59.7 +0.1
comp=Z,666nm,1.9s
PCVE *eS* **S 07 30 45.3 -0.3**
PBDV Barranco-do-Ve 76.66 305⇑eP P 07 21 00.8 +0.7
comp=Z,2µm,1.6s
PBDV *eS* **S 07 30 45.6 -1.0**
BBOO Buckleboo 76.74 138 P **P 07 21 00.1 -0.3**
BBOO IAmb IAmb 07 21 22.0
comp=Z,622nm,1.1s
NIKH Nikolski High 76.79 37 IAMs_20 IAMs_20 07 56 16.0
comp=Z,84µm,20.0s
PMAFR Mafra 76.91 307⇑eP P 07 21 01.9 +0.5
comp=Z,2µm,2.2s
PMAFR *eS* **S 07 30 49.4 +0.2**
LIS Lisbon 76.92 307 *eP* **P 07 21 01.5 0.0**
LIS *eS* **S 07 30 49.4 +0.2**
LIS IAMs_20 IAMs_20 07 58 51.6
comp=Z,42µm,18.4s
LIS Lisbon 76.92 307 *eP* **P 07 21 01.5 0.0**
LIS *eS* **S 07 30 49.4 +0.2**
LIS Lisbon 76.92 307⇑eP P 07 21 02.1 +0.7
comp=Z,2µm,1.7s
PMST Lisbon--Monsan 76.93 307 *eP* **P 07 21 02.0 +0.4**
comp=Z,1µm,1.6s
PTEO Sao Teotonio 77.11 306⇑eP P 07 21 02.9 +0.4
comp=Z,1µm,1.9s
TTA Tatalina 77.22 24 P **P 07 21 03.8 +1.0**
TTA pmax pmax
comp=Z,1µm,1.8s
TTA MLR MLR
comp=Z,59µm,22.0s
TTA Tatalina 77.22 24 P **P 07 21 03.8 +1.0**
TTA IAmb IAmb 07 21 15.8
comp=Z,1µm,1.8s
TTA IAMs_20 IAMs_20 07 59 54.3
comp=Z,59µm,22.0s
TTA Tatalina 77.22 24 ⇑P P 07 21 03.8 +1.0
RTC Rabat Centre 77.22 302 ⇑P P 07 21 03.5 +0.2
PFVI Vila Bisbo 77.35 305⇑eP P 07 21 04.4 +0.4
comp=Z,1µm,1.7s
PFVI *eS* **S 07 30 52.9 -1.2**
PFVI Vila Bisbo 77.35 305 P **P 07 21 04.1 +0.1**
PFVI IAMs_20 IAMs_20 08 00 19.0
comp=Z,47µm,19.0s
ANGG Ammassalik, Gr 77.44 339 *i*P **P 07 21 02.5 -1.4**
ANGG IAmb IAmb 07 21 21.5
comp=Z,1µm,1.2s
ANGG IAMs_20 IAMs_20 08 02 36.4
comp=Z,53µm,16.3s
ANGG Ammassalik, Gr 77.44 339 P **P 07 21 03.9 +0.1**
ANGG IAmb IAmb 07 21 21.9
comp=Z,903nm,1.2s
ANGG IAMs_20 IAMs_20 08 00 19.3
comp=Z,48µm,18.0s
ANGG Ammassalik, Gr 77.44 339 ⇑P P 07 21 04.1 +0.2
MLY Manley 77.72 21 P **P 07 21 06.3 +0.8**
MLY IAmb IAmb 07 21 23.3
comp=Z,599nm,1.1s
MLY IAMs_20 IAMs_20 07 58 53.3
comp=Z,96µm,19.0s
QLP Quilpie 77.79 129 ⇑P P 07 21 07.1 +0.7
AKUT Akutan 77.82 35 P **P 07 21 05.2 -0.9**
AKUT IAMs_20 IAMs_20 07 56 60.0
comp=Z,74µm,20.0s
AKUT Akutan 77.82 35 ⇓P P 07 21 05.0 -1.2
RES Resolute Bay 77.83 0 P **P 07 21 05.9 0.0**
comp=Z,23nm,1.0s,baz=310,slow=3.3,SNR=47
RES S **S 07 31 00.4 +2.5**
comp=Z,3.6nm,1.0s,baz=332,slow=23,SNR=1.2
RES Resolute Bay 77.83 0 P **P 07 21 05.9 0.0**
RES IAMs_20 IAMs_20 07 57 22.2
comp=Z,75µm,21.0s
RES Resolute Bay 77.83 0 ⇑P P 07 21 05.8 0.0
BMAR Burnt Mountain 77.89 18 P **P 07 21 07.5 +1.0**
ISOG Isortoq, Green 77.90 340 *i*P **P 07 21 06.2 -0.2**
ISOG IAMs_20 IAMs_20 08 00 35.4
comp=Z,47µm,17.0s
ISOG Isortoq, Green 77.90 340 ⇓P P 07 21 06.8 +0.4
AVE Averroes 77.93 301 *eP* **P 07 21 05.0 -2.3**
AVE *i* S **S 07 30 57.9 -2.6**
AVE Averroes 77.93 301 ⇑P P 07 21 07.4 +0.1
PAF Port-aux-Franc 78.02 190 ⇓P P 07 21 15.7 +8.6
I23K Minto, Yukon-K 78.08 21 P **P 07 21 08.1 +0.6**
I23K IAmb IAmb 07 21 25.4
comp=Z,895nm,1.5s
BPAW Bear Paw Mtn. 78.25 22 P **P 07 21 08.9 +0.4**
BPAW IAmb IAmb 07 21 19.7
comp=Z,656nm,1.1s
BPAW IAMs_20 IAMs_20 08 00 02.3
comp=Z,76µm,19.0s
LBTB Lobatse 78.30 234 P **P 07 21 09.3 -0.1**
LBTB pmax pmax
comp=Z,519nm,1.0s
LBTB Lobatse 78.30 234 P **P 07 21 09.3 -0.1**
LBTB IAmb IAmb 07 21 28.2
comp=Z,519nm,0.9s
LBTB Lobatse 78.30 234 ⇑P P 07 21 09.4 0.0
LBTB Lobatse 78.30 234 *i*P **P 07 21 10.4 +1.0**
LBTB IAmb IAmb 07 21 25.1
comp=Z,795nm,1.3s
LBTB IVMs_BB IVMs_BB 07 51 56.4
comp=Z,21µm,22.0s
FYU Fort Yukon 78.33 19 P **P 07 21 10.1 +1.3**
FYU IAmb IAmb 07 21 27.4
comp=Z,1µm,1.2s
FYU IAMs_20 IAMs_20 08 00 38.4
comp=Z,75µm,18.0s
NEA2 Nenana 78.55 21 P **P 07 21 10.2 +0.1**
NEA2 IAmb IAmb 07 21 21.9
comp=Z,1µm,1.2s
NEA2 IAMs_20 IAMs_20 07 59 29.2
comp=Z,79µm,19.0s
MDM Murphy Dome 78.56 21 P **P 07 21 10.6 +0.4**
MDM IAmb IAmb 07 21 22.3
comp=Z,957nm,1.2s
MDM IAMs_20 IAMs_20 08 00 19.5
comp=Z,92µm,18.0s
KWAJ Kwajalein Atol 78.59 86 ⇑P P 07 21 19.1 +7.9
PPLA Purkeypile 78.61 23 P **P 07 21 10.3 -0.3**
KTH Kantishna Hill 78.63 22 P **P 07 21 11.0 +0.4**
KTH IAMs_20 IAMs_20 07 59 29.2
comp=Z,71µm,20.0s
BWN Browne 78.70 22 P **P 07 21 11.2 +0.3**
BWN IAmb IAmb 07 21 19.4
comp=Z,771nm,0.9s
BWN IAMs_20 IAMs_20 07 59 33.7
comp=Z,85µm,19.0s
POKR Poker Plat Res 78.70 20 P **P 07 21 11.7 +0.8**
POKR IAmb IAmb 07 21 20.9
comp=Z,521nm,1.0s
TCOL CIGO, UAF Yank 78.73 21 P **P 07 21 11.3 +0.2**
TCOL IAMs_20 IAMs_20 08 00 25.1
comp=Z,90µm,19.0s
COLA College 78.74 21 P **P 07 21 11.5 +0.4**
COLA pmax pmax
comp=Z,5µm,2.5s
COLA MLR MLR
comp=Z,85µm,19.0s
COLA College 78.74 21 P **P 07 21 11.5 +0.4**
COLA College 78.74 21 IAMs_20 IAMs_20 08 00 25.1
comp=Z,85µm,19.0s
COLA College 78.74 21 ⇑P P 07 21 10.5 -0.6
HTT Hallett 78.88 137 ⇑P P 07 21 12.4 +0.1
TRF Thorofare Moun 78.91 22 P **P 07 21 12.1 -0.2**
TRF IAMs_20 IAMs_20 07 59 38.8
comp=Z,69µm,20.0s
CCB Clear Creek Bu 78.91 21 P **P 07 21 10.1 -2.0**
CCB IAmb IAmb 07 21 23.7
comp=Z,3µm,2.5s
CCB IAMs_20 IAMs_20 08 00 29.8
comp=Z,94µm,19.0s
WRH Wood River Hil 78.94 21 P **P 07 21 11.8 -0.4**
WRH IAMs_20 IAMs_20 08 00 21.5
comp=Z,80µm,19.0s
PRP Porcupine Dome 78.99 19 P **P 07 21 13.5 +0.8**
PRP IAMs_20 IAMs_20 07 59 60.0
comp=Z,64µm,18.0s
TOA0 Torodi Ar. Sit 79.01 279 P **P 07 21 12.0 -1.5**
TOA0 Torodi Ar. Sit 79.01 279 P **P 07 21 13.1 -0.4**
SNR=89
TORD Torodi Ar. Bea 79.01 279 P **P 07 21 12.7 -0.8**
comp=Z,32nm,0.9s,baz=49,slow=5.2,SNR=61
TORD S **S 07 31 07.0 -5.5**
comp=Z,2.9nm,1.0s,baz=126,slow=1.4,SNR=1.7
TORD PKP2bc 07 47 51.3
comp=Z,1.0nm,0.8s,baz=265,slow=4.3,SNR=4.0
TORD LR LR 08 01 03.7
comp=Z,63µm,18.4s,baz=70,slow=39
TORD Torodi Ar. Bea 79.01 279 P **P 07 21 11.9 -1.5**
IL31 79.11 20 P **P 07 21 12.5 -0.6**
ILAR Eielson Array 79.11 20 P **P 07 21 12.3 -0.8**
comp=Z,62nm,0.7s,baz=303,slow=4.7,SNR=216
ILAR PP **PP 07 24 10.5 -1.3**
comp=Z,23nm,1.0s,baz=307,slow=4.8,SNR=1.7
ILAR S **S 07 31 11.6 -0.4**
comp=Z,1.6nm,0.9s,baz=344,slow=3.1,SNR=1.4
ILAR PKKP **PKKPdf 07 39 51.2 -1.4**
comp=Z,0.8nm,0.7s,baz=204,slow=3.0,SNR=4.1
ILAR PKKPbc **PKKPbc 07 40 06.3 +0.6**
comp=Z,1.8nm,0.8s,baz=214,slow=1.7,SNR=3.2
ILAR PKKPab 07 41 08.3
comp=Z,0.9nm,0.8s,baz=182,slow=2.8,SNR=4.0
ILAR PKP2bc 07 47 54.2
comp=Z,1.3nm,0.9s,baz=354,slow=0.2,SNR=5.0
ILAR LR LR 08 00 12.4
comp=Z,77µm,19.1s,baz=322,slow=39
ILAR Eielson Array 79.11 20 P **P 07 21 11.2 -1.9**
MCK McKinley 79.17 22 P **P 07 21 13.0 -0.6**
MCK pmax pmax
comp=Z,3µm,2.5s
MCK MLR MLR
comp=Z,90µm,22.0s
MCK McKinley 79.17 22 P **P 07 21 13.0 -0.6**
MCK IAMs_20 IAMs_20 07 59 26.7
comp=Z,90µm,22.0s
HDA Harding Lake 79.34 21 IAMs_20 IAMs_20 08 00 52.2
comp=Z,87µm,18.0s
DY2G Dye2 79.35 342 *i*P **P 07 21 15.0 +0.3**
DY2G IAmb IAmb 07 21 33.4
comp=Z,5µm,1.8s
DY2G IAMs_20 IAMs_20 08 03 04.8
comp=Z,70µm,16.8s
RND Reindeer 79.42 22 P **P 07 21 14.5 -0.5**
RND pmax pmax
comp=Z,292nm,0.9s
RND MLR MLR
comp=Z,81µm,20.0s
RND Reindeer 79.42 22 P **P 07 21 14.5 -0.5**
RND IAMs_20 IAMs_20 07 59 56.2
comp=Z,81µm,20.0s
SKT Skwentna 79.44 24 P **P 07 21 15.2 +0.1**
SKT IAMs_20 IAMs_20 07 59 03.0
comp=Z,53µm,20.0s
STKA Stephens Creek 79.48 134 P **P 07 21 15.5 -0.1**
comp=Z,86nm,0.9s,baz=315,slow=6.2,SNR=44
STKA S **S 07 31 19.6 +2.8**
comp=Z,2.8nm,0.8s,baz=81,slow=20,SNR=1.5
STKA LR LR 07 59 51.2
comp=Z,18µm,21.9s,baz=297,slow=38
STKA Stephens Creek 79.48 134 P **P 07 21 15.2 -0.4**
STKA pmax pmax
comp=Z,55nm,1.0s
STKA MLR MLR
comp=Z,3µm,20.0s
STKA Stephens Creek 79.48 134 P **P 07 21 15.2 -0.4**
CUT Chulitna 79.61 23 P **P 07 21 15.9 0.0**
CUT IAMs_20 IAMs_20 08 00 37.4
comp=Z,86µm,18.0s
SDPT Sand Point 79.76 32 P **P 07 21 15.8 -1.1**
INK Inuvik 79.89 14 P **P 07 21 17.6 +0.3**
comp=Z,80nm,0.9s,baz=337,slow=6.9,SNR=100
INK S **S 07 31 18.4 -1.6**
comp=Z,4.1nm,1.0s,baz=156,slow=25,SNR=1.5
INK PKPPKP **P'P'df 07 48 05.5 -6.9**
comp=Z,6.2nm,1.2s,baz=180,slow=6.8,SNR=5.4
INK LR LR 08 00 45.2
comp=Z,38µm,21.0s,baz=314,slow=39
INK Inuvik 79.89 14 P **P 07 21 17.6 +0.3**
INK IAMs_20 IAMs_20 08 00 25.2
comp=Z,58µm,22.0s
INK Inuvik 79.89 14 ⇑P P 07 21 17.4 +0.1
RSO Redoubt South 79.97 25 P **P 07 21 17.6 -0.6**
CRZF Crozet Islands 80.03 203 IAMs_20 IAMs_20 07 51 20.7
comp=Z,72µm,20.0s
SFJD Kangerlussuaq 80.06 344 P **P 07 21 18.0 -0.3**
comp=Z,76nm,0.9s,baz=55,slow=5.5,SNR=37
SFJD S **S 07 31 20.2 -1.7**
comp=Z,5.1nm,0.9s,baz=73,slow=13,SNR=1.5
SFJD Kangerlussuaq 80.06 344⇑*i*P **P 07 21 18.0 -0.3**
SFJD IAMs_20 IAMs_20 08 03 36.1
comp=Z,42µm,15.6s
SFJD Kangerlussuaq 80.06 344⇑*i*P **P 07 21 18.0 -0.3**
SFJD MLR MLR
comp=Z,42µm,16.0s
SFJD Kangerlussuaq 80.06 344 P **P 07 21 18.0 -0.3**
SFJD IAmb IAmb 07 21 29.3
comp=Z,504nm,1.1s
SFJD Kangerlussuaq 80.06 344 IAMs_20 IAMs_20 08 01 16.3
comp=Z,59µm,21.0s
SFJD Kangerlussuaq 80.06 344 ⇑P P 07 21 17.8 -0.5
SUA Susitna One 80.06 24 P **P 07 21 18.9 +0.3**
SUA IAmb IAmb 07 21 30.5
comp=Z,2µm,1.8s
CAPN Captain Cook N 80.37 25 IAMs_20 IAMs_20 07 59 24.7
comp=Z,57µm,20.0s
HNR Honiara 80.44 106 P **P 07 21 20.0 -1.1**
comp=Z,46nm,0.7s,baz=178,slow=2.8,SNR=6.5
HNR S **S 07 31 26.4 -1.1**
comp=Z,24nm,0.4s,baz=179,slow=14,SNR=1.6
HNR LR LR 07 55 37.1
comp=Z,6µm,22.0s,baz=298,slow=35
HNR Honiara 80.44 106 P **P 07 21 20.3 -0.9**
HNR pmax pmax
comp=Z,425nm,1.1s
HNR MLR MLR
comp=Z,6µm,21.0s
HNR Honiara 80.44 106 P **P 07 21 20.3 -0.9**
FIS Fire Island 80.47 24 P **P 07 21 21.4 +0.8**
GHO Glory Hole Cre 80.50 23 P **P 07 21 21.6 +0.7**
GHO IAMs_20 IAMs_20 08 01 05.1
comp=Z,87µm,18.0s
PMR Palmer 80.55 23 P **P 07 21 21.3 +0.3**
PMR pmax pmax
comp=Z,1µm,1.4s
PMR Palmer 80.55 23 P **P 07 21 21.3 +0.3**
PMR IAmb IAmb 07 21 38.2
comp=Z,1µm,1.4s
PMR IAMs_20 IAMs_20 08 02 48.4
comp=Z,62µm,19.0s
SCRK Sand Creek 80.56 20 P **P 07 21 21.3 +0.1**
SCRK IAmb IAmb 07 21 39.5
comp=Z,392nm,0.8s
RC01 Rabbit Creek A 80.68 24 P **P 07 21 21.9 +0.2**
RC01 IAmb IAmb 07 21 42.0
comp=Z,584nm,1.0s
EPYK Eagle Plains 80.73 16 P **P 07 21 21.8 -0.1**
EPYK IAmb IAmb 07 21 33.4
comp=Z,2µm,2.0s
EPYK IAMs_20 IAMs_20 08 02 16.6
comp=Z,37µm,18.0s
C36M Paulatuk 80.76 10 P **P 07 21 21.5 -0.5**
C36M IAmb IAmb 07 21 38.6
comp=Z,725nm,1.1s
BOSA Boshof 80.76 231 P **P 07 21 22.7 0.0**
comp=Z,73nm,0.8s,baz=53,slow=4.7,SNR=40
BOSA S **S 07 31 27.1 -3.5**
comp=Z,4.1nm,1.1s,baz=91,slow=18,SNR=1.5
BOSA LR LR 07 55 01.6
comp=Z,49µm,19.6s,baz=54,slow=34
BOSA Boshof 80.76 231 P **P 07 21 22.8 0.0**
BOSA pmax pmax
comp=Z,3µm,2.5s
BOSA Boshof 80.76 231 P **P 07 21 22.8 +0.1**
BOSA IAmb IAmb 07 21 38.3
comp=Z,3µm,2.5s
BOSA Boshof 80.76 231 ⇑P P 07 21 22.6 -0.2
BOSA Boshof 80.76 231 *i*P **P 07 21 22.4 -0.3**
BOSA IAmb IAmb 07 21 36.9
comp=Z,3µm,2.5s
BOSA IVMs_BB IVMs_BB 07 56 10.2
comp=Z,20µm,18.4s
DOT Dot Lake 80.78 20 P **P 07 21 22.0 -0.3**
EGAK Eagle 80.80 19 P **P 07 21 22.5 +0.2**
EGAK IAMs_20 IAMs_20 08 01 11.5
comp=Z,86µm,20.0s
PAX Paxson 80.83 21 P **P 07 21 22.6 0.0**
PAX pmax pmax
comp=Z,625nm,1.4s
PAX MLR MLR
comp=Z,72µm,19.0s
PAX Paxson 80.83 21 P **P 07 21 22.6 0.0**
PAX IAMs_20 IAMs_20 08 01 38.5
comp=Z,72µm,19.0s
KNK Knik Glacier 80.91 23 IAMs_20 IAMs_20 08 01 17.9
comp=Z,90µm,18.0s
HOM Homer 80.92 26 P **P 07 21 22.0 -1.0**
HOM IAmb IAmb 07 21 33.7
comp=Z,962nm,1.0s
HOM IAMs_20 IAMs_20 08 00 42.1
comp=Z,67µm,18.0s
TSUM Tsumeb 80.96 243 P **P 07 21 24.2 +0.1**
TSUM Tsumeb 80.96 243 *i*P **P 07 21 24.4 +0.4**
TSUM IAmb IAmb 07 21 39.6
comp=Z,259nm,1.2s
TSUM IVMs_BB IVMs_BB 07 53 59.2
comp=Z,13µm,23.2s
SCM Sheep Creek Mo 81.01 23 P **P 07 21 24.1 +0.5**
SCM pmax pmax
comp=Z,587nm,0.8s
SCM MLR MLR
comp=Z,87µm,19.0s
SCM Sheep Creek Mo 81.01 23 P **P 07 21 24.1 +0.5**
SCM IAmb IAmb 07 21 43.7
comp=Z,587nm,0.8s
SCM IAMs_20 IAMs_20 08 01 33.5
comp=Z,87µm,19.0s
O22K Cooper Landing 81.09 24 P **P 07 21 24.2 +0.3**
O22K IAmb IAmb 07 21 56.5
comp=Z,755nm,0.8s
O22K IAMs_20 IAMs_20 07 59 57.7
comp=Z,62µm,21.0s
K27K Chicken 81.09 19 P **P 07 21 24.9 +0.9**
K27K IAmb IAmb 07 21 36.5
comp=Z,2µm,1.9s
K27K IAMs_20 IAMs_20 08 01 17.5
comp=Z,61µm,19.0s
BRLK Bradley Lake 81.14 25 P **P 07 21 24.3 0.0**
CNPM China Poot 81.16 26 P **P 07 21 23.9 -0.5**
CNPM IAmb IAmb 07 21 36.0
comp=Z,684nm,1.2s
CNPM IAMs_20 IAMs_20 08 00 13.6
comp=Z,62µm,19.0s
M24K Tolsona, Glenn 81.21 22 P **P 07 21 25.7 +1.1**
M24K IAmb IAmb 07 21 42.8
comp=Z,1µm,1.2s
M24K IAMs_20 IAMs_20 08 00 52.7
comp=Z,65µm,21.0s
PWL Port Wells 81.34 24 P **P 07 21 25.7 +0.4**
PWL IAmb IAmb 07 21 37.4
comp=Z,1µm,1.6s
PWL IAMs_20 IAMs_20 08 03 25.1
comp=Z,50µm,21.0s
MENT Mentasta 81.40 21 P **P 07 21 26.0 +0.4**
MENT IAmb IAmb 07 21 37.0
comp=Z,4µm,3.0s
SEW Seward 81.45 25 P **P 07 21 26.0 +0.2**
SEW IAmb IAmb 07 21 37.7
comp=Z,2µm,1.7s
SEW IAMs_20 IAMs_20 08 00 19.1
comp=Z,67µm,20.0s
KLU Klutina 81.73 22 P **P 07 21 28.2 +0.7**
KLU IAmb IAmb 07 21 39.9
comp=Z,1µm,1.4s
KLU IAMs_20 IAMs_20 08 02 05.5
comp=Z,76µm,18.0s
GLI Glacier Island 81.76 23 P **P 07 21 27.9 +0.4**
GLI IAMs_20 IAMs_20 08 01 37.3
comp=Z,58µm,18.0s
KDAK Kodiak Island 81.76 28 P **P 07 21 28.1 +0.6**
comp=Z,243nm,0.6s,baz=25,slow=2.9,SNR=66

KDAK S **S** 07 31 37.0 -3.0
comp=Z,15nm,1.0s,baz=281,slow=18,SNR=2.3
KDAK LR LR 08 01 24.6
comp=Z,116µm,18.1s,baz=312,slow=38
KDAK Kodiak Island 81.76 28 P **P** **07 21 28.2 +0.6**
KDAK pmax pmax
comp=Z,5µm,2.2s
KDAK MLR MLR
comp=Z,129µm,22.0s
KDAK Kodiak Island 81.76 28 P **P** **07 21 28.2 +0.6**
KDAK Kodiak Island 81.76 28 ⇑P **P** **07 21 27.9 +0.4**
KDAK ⇑P **P** **07 21 28.2 +0.6**
KDAK ⇑P **sP** **07 21 34.0 -0.6**
OHAK Old Harbor 81.83 28 P **P** **07 21 28.6 +0.7**
OHAK IAmb IAmb 07 21 40.1
comp=Z,2µm,1.3s
OHAK IAMs_20 IAMs_20 08 00 35.5
comp=Z,89µm,19.0s
DAWY Dawson 81.84 18 P **P** **07 21 28.1 +0.2**
DAWY IAmb IAmb 07 21 39.7
comp=Z,2µm,2.2s
DAWY IAMs_20 IAMs_20 08 02 52.1
comp=Z,70µm,19.0s
SII Sitkinak Islan 81.87 29 P **P** **07 21 28.6 +0.4**
L27K Beaver Creek, 81.89 20 P **P** **07 21 29.2 +1.0**
BCAR Beaver Creek A 81.90 20 P **P** **07 21 29.3 +1.0**
EIDS Eidsvold 81.93 124 P **P** **07 21 29.1 +0.2**
EIDS IAmb IAmb 07 21 53.5
comp=Z,846nm,1.7s
FID Port Fidalgo 82.07 23 P **P** **07 21 29.8 +0.6**
N25K Chitina, Valde 82.09 22 P **P** **07 21 30.4 +1.1**
N25K IAmb IAmb 07 21 47.5
comp=Z,1µm,1.2s
N25K IAMs_20 IAMs_20 08 01 51.0
comp=Z,78µm,20.0s
EYAK Cordova Ski Ar 82.46 23 P **P** **07 21 32.2 +1.1**
GLB Gilahina Butte 82.47 22 P **P** **07 21 31.9 +0.7**
GLB IAmb IAmb 07 21 43.9
comp=Z,2µm,1.9s
GLB IAMs_20 IAMs_20 08 02 04.0
comp=Z,73µm,19.0s
BMRM Bremner River 82.55 22 P **P** **07 21 32.5 +0.8**
BMRM IAmb IAmb 07 21 43.2
comp=Z,583nm,1.0s
BMRM IAMs_20 IAMs_20 08 01 56.2
comp=Z,66µm,20.0s
NUUK Nuuk 82.58 343 ⇑*i*P **P** **07 21 31.6 -0.1**
NUUK IAmb IAmb 07 21 42.6
comp=Z,729nm,1.0s
NUUK IAMs_20 IAMs_20 08 05 11.8
comp=Z,93µm,16.2s
VRDI Verde Repeater 82.75 22 P **P** **07 21 33.5 +0.6**
VRDI IAMs_20 IAMs_20 08 02 12.2
comp=Z,87µm,20.0s
MCARA McCarthy VSAT 82.77 21 P **P** **07 21 33.9 +1.1**
RAGM Ragged Mountai 82.95 23 P **P** **07 21 35.0 +1.3**
Q23K Middleton Isla 83.05 24 IAMs_20 IAMs_20 08 05 03.4
comp=Z,42µm,21.0s
MID Middleton Isla 83.05 24 IAMs_20 IAMs_20 08 05 12.5
comp=Z,49µm,18.0s
NRS Narsarsuaq 83.07 339 *i*P **P** **07 21 34.2 -0.1**
NRS IAmb IAmb 07 21 47.5
comp=Z,282nm,0.6s
NRS IAMs_20 IAMs_20 08 04 36.3
comp=Z,49µm,17.6s
NRS Narsarsuaq 83.07 339 P **P** **07 21 34.4 +0.1**
NRS pmax pmax
comp=Z,296nm,0.8s
NRS Narsarsuaq 83.07 339 P **P** **07 21 34.4 +0.1**
NRS IAmb IAmb 07 21 47.3
comp=Z,296nm,0.8s
NRS IAMs_20 IAMs_20 08 04 43.1
comp=Z,48µm,18.0s
NRS Narsarsuaq 83.07 339 ⇑P **P** **07 21 34.4 +0.1**
CRQM Cirque 83.20 22 P **P** **07 21 36.1 +0.8**
TGL Tana Glacier 83.30 22 P **P** **07 21 36.4 +0.8**
KAIM Kayak Island 83.37 23 P **P** **07 21 37.1 +1.2**
KAIM IAmb IAmb 07 21 47.9
comp=Z,602nm,1.1s
KOWA Kowa 83.38 283 P **P** **07 21 36.8 0.0**
BARN Barnard Glacie 83.45 21 P **P** **07 21 37.6 +1.0**
BARN IAMs_20 IAMs_20 08 02 08.9
comp=Z,75µm,21.0s
CTGM Chitina Glacie 83.63 21 P **P** **07 21 38.4 +1.0**
CTGM IAMs_20 IAMs_20 08 02 14.6
comp=Z,86µm,22.0s
GRNC Granite Creek 83.67 21 P **P** **07 21 38.6 +0.9**
GRNC IAMs_20 IAMs_20 08 02 04.6
comp=Z,57µm,21.0s
LOGN Logan Glacier 83.84 21 P **P** **07 21 39.4 +0.9**
LOGN IAmb IAmb 07 21 51.3
comp=Z,591nm,1.2s
YAH Yahtse 83.95 22 P **P** **07 21 40.4 +1.2**
YAH IAMs_20 IAMs_20 08 03 00.1
comp=Z,73µm,19.0s
TABL Table Mountain 84.09 21 P **P** **07 21 41.0 +1.2**
PCA Pinnacle 84.64 21 P **P** **07 21 43.6 +1.1**
PCA IAmb IAmb 07 22 02.4
comp=Z,638nm,1.0s
PCA IAMs_20 IAMs_20 08 04 45.3
comp=Z,70µm,18.0s
PMPST Porto Santo, M 84.67 305 ⇑*e*P **P** **07 21 43.0 -0.1**
comp=Z,918nm,1.8s
PMPST Porto Santo, M 84.67 305 *e*S **S** **07 32 09.9 -0.6**
PMPS Porto Santo 84.69 305 *e*P P 07 21 48.8 +5.7
comp=Z,935nm,1.7s
HYT Haines Junctio 84.92 20 P **P** **07 21 44.9 +0.9**
HYT IAmb IAmb 07 22 01.8
comp=Z,654nm,1.1s
HYT IAMs_20 IAMs_20 08 04 16.7
comp=Z,46µm,19.0s
BCPM Bancas Point 84.95 21 P **P** **07 21 45.2 +1.3**
BCPM IAmb IAmb 07 21 56.8
comp=Z,690nm,1.2s
BCPM IAMs_20 IAMs_20 08 03 05.4
comp=Z,93µm,22.0s
ARMA Armidale 85.27 128 P **P** **07 21 46.3 +0.2**
ARMA IAmb IAmb 07 22 04.2
comp=Z,2µm,2.5s
PMAR Madeira 85.28 304 ⇑*e*P **P** **07 21 46.6 +0.3**
comp=Z,1µm,1.7s
PMAR Madeira 85.28 304 *e*S **S** **07 32 14.6 -2.2**
YKU2 Yakutat 85.28 21 IAMs_20 IAMs_20 08 03 17.2
comp=Z,51µm,21.0s
FUL Funchal 85.30 304 *e*P **P** **07 21 46.3 +0.1**
comp=Z,988nm,1.7s
PMOZ Porto Moniz, M 85.43 305 *e*P **P** **07 21 47.3 +0.3**
comp=Z,873nm,1.6s
PMOZ Porto Moniz, M 85.43 305 *e*S **S** **07 32 18.0 -0.2**
PMOZ Porto Moniz, M 85.43 305 *e*LR LR 07 54 25.7
comp=Z,14µm,18.0s
PMOZ Porto Moniz, M 85.43 305 ⇓P P 07 21 52.9 +5.9
PMOZ ⇓P pP 07 21 52.9 +0.6
TOO Toolangi 85.63 137 P **P** **07 21 48.1 +0.5**
TOO pmax pmax
comp=Z,416nm,1.2s
TOO MLR MLR
comp=Z,40µm,22.0s
TOO Toolangi 85.63 137 P **P** **07 21 48.1 +0.5**
TOO IAmb IAmb 07 22 05.5
comp=Z,416nm,1.1s
TOO IAMs_20 IAMs_20 08 01 13.4
comp=Z,40µm,22.0s
TOO Toolangi 85.63 137 ⇓P **P** **07 21 48.8 +1.2**
TOO ⇑P **PcP** **07 21 51.5 +1.0**
TOO ⇓P **sP** **07 21 54.3 -0.3**
TOO ⇑P **pP** **07 21 59.8 +7.1**
WHY Whitehorse 85.83 19 P **P** **07 21 48.7 +0.2**
WHY pP **sP** **07 21 54.9 -0.5**
WHY IAmb IAmb 07 21 59.5
comp=Z,441nm,1.1s
WHY IAMs_20 IAMs_20 08 04 22.6
comp=Z,71µm,19.0s
SUR Sutherland 86.09 230 P **P** **07 21 50.8 +0.6**
SUR IAmb IAmb 07 22 00.3
comp=Z,449nm,1.1s
SUR Sutherland 86.09 230 IAMs_20 IAMs_20 07 57 37.9
comp=Z,62µm,19.0s
SUR Sutherland 86.09 230 ⇑P **P** **07 21 50.9 +0.6**
SUR ⇑P **PcP** **07 21 51.3 -1.6**
SUR ⇑P **sP** **07 22 00.5 +3.4**
SUR Sutherland 86.09 230 *i*P **P** **07 21 50.8 +0.6**
CAN Canberra 86.42 133 P **P** **07 21 51.6 0.0**
CAN pmax pmax
comp=Z,5µm,2.9s

CAN Canberra 86.42 133 P **P** **07 21 51.6 0.0**
CAN Canberra 86.42 133 ⇓P **P** **07 21 52.2 +0.6**
FRB Frobisher Bay 86.63 349 P **P** **07 21 51.5 -0.7**
comp=Z,45nm,0.8s,baz=9.2,slow=5.7,SNR=64
FRB S **SKSac** **07 32 14.8 -3.5**
comp=Z,5.5nm,1.1s,baz=226,slow=22,SNR=1.9
FRB Frobisher Bay 86.63 349 ⇑P **P** **07 21 51.4 -0.7**
FRB ⇓P **pP** **07 21 57.3 0.0**
SKAG Skagway 86.67 20 P **P** **07 21 53.6 +1.2**
SKAG IAmb IAmb 07 22 03.5
comp=Z,344nm,0.9s
MACI Morro de la Ar 87.20 300 P **P** **07 21 55.3 -0.6**
MACI IAmb IAmb 07 22 11.0
comp=Z,377nm,1.0s
BESE Bessie Mountai 87.53 20 P **P** **07 21 57.8 +1.1**
BESE IAMs_20 IAMs_20 08 05 09.7
comp=Z,66µm,20.0s
DBIC Dimbokro 87.67 276 P **P** **07 21 57.9 -0.3**
comp=Z,53nm,0.8s,baz=49,slow=4.9,SNR=18
DBIC S **SKSac** **07 32 22.4 -4.0**
comp=Z,13nm,1.1s,baz=225,slow=23,SNR=1.9
DBIC LR LR 08 04 08.8
comp=Z,31µm,19.8s,baz=47,slow=38
DBIC Dimbokro 87.67 276 P **P** **07 21 57.9 -0.3**
DBIC IAmb IAmb 07 22 19.4
comp=Z,1µm,1.9s
JIS Juneau Island 87.93 20 P **P** **07 21 59.8 +1.3**
JIS IAmb IAmb 07 22 18.5
comp=Z,602nm,1.2s
JIS IAMs_20 IAMs_20 08 05 21.1
comp=Z,75µm,19.0s
BART Pico Bartolome 88.34 312 *e*P **P** **07 22 01.9 +0.9**
comp=Z,384nm,1.8s
PCALD Caldeiras da R 88.53 312 *e*P **P** **07 22 02.6 +0.7**
comp=Z,565nm,1.3s
CMLA Cha da Macela 88.58 312 *e*P **P** **07 22 03.0 +0.9**
comp=Z,1µm,1.4s
GRON Grota Negra 88.58 312 *e*P **P** **07 22 02.6 +0.5**
comp=Z,636nm,1.4s
YKA Yellowknife Ar 88.58 9 P **P** **07 22 01.0 -0.5**
comp=Z,28nm,0.8s,baz=339,slow=4.5,SNR=113
YKA PKKPbc **PKKPbc** **07 39 40.6 -3.2**
comp=Z,4.1nm,0.9s,baz=154,slow=2.6,SNR=8.8
YKA PKPPKP 07 47 41.7
comp=Z,0.8nm,0.9s,baz=155,slow=3.0,SNR=5.3
YKA LR LR 08 04 44.6
comp=Z,79µm,20.7s,baz=0.0,slow=38
SIT Sitka 88.63 21 P **P** **07 22 02.8 +0.9**
SIT pmax pmax
comp=Z,2µm,2.1s
SIT Sitka 88.63 21 P **P** **07 22 02.8 +0.9**
SIT IAMs_20 IAMs_20 08 06 35.7
comp=Z,85µm,20.0s
PSET Sete Cidades 88.67 313 *e*P **P** **07 22 03.8 +1.2**
comp=Z,1µm,1.1s
PDA Ponta Delgada 88.68 313 *e*P **P** **07 22 03.5 +1.0**
comp=Z,904nm,1.4s
PSMN Pico do Norte, 88.70 312 *e*P **P** **07 22 02.7 0.0**
comp=Z,988nm,1.8s
PSMA Santa Maria 88.75 312 *e*P **P** **07 22 03.9 +1.0**
comp=Z,1µm,1.6s
DLBC Dease Lake 89.05 18 P **P** **07 22 04.8 +0.8**
comp=Z,28nm,0.9s,baz=344,slow=5.4,SNR=36
DLBC S **SKSac** **07 32 32.1 -1.3**
comp=Z,3.4nm,0.9s,baz=62,slow=27,SNR=2.0
DLBC Dease Lake 89.05 18 P **P** **07 22 04.8 +0.8**
PSCM Serra do Cume 89.07 314 *e*P **P** **07 22 04.8 +0.4**
comp=Z,399nm,1.3s
PAGU Aguiva, Azore 89.08 314 *e*P **P** **07 22 05.2 +0.8**
comp=Z,550nm,1.5s
PGRA Graciosa 89.43 315 *e*P **P** **07 22 06.3 +0.3**
comp=Z,638nm,1.8s
PMAN Manadas 89.73 314 *e*P **P** **07 22 08.5 +1.0**
comp=Z,534nm,0.9s
ROSA Rosais 89.77 314 *e*P **P** **07 22 08.3 +0.6**
comp=Z,485nm,1.1s
PICO Pico 90.02 314 *e*P **P** **07 22 11.0 +2.1**
comp=Z,639nm,1.2s
PCAN Candelaria 90.08 314 *e*P **P** **07 22 11.3 +2.2**
comp=Z,864nm,1.7s
WRAK Wrangell Islan 90.09 20 P **P** **07 22 09.7 +1.0**
WRAK IAmb IAmb 07 22 26.8
comp=Z,457nm,1.4s
WRAK Wrangell Islan 90.09 20 IAMs_20 IAMs_20 08 06 37.2
comp=Z,74µm,19.0s
PCED Cedros 90.12 315 *e*P **P** **07 22 10.4 +1.1**
comp=Z,589nm,1.6s
HOR Horta 90.13 315 *e*P **P** **07 22 12.6 +3.3**
CALA Caldeira 90.15 315 *e*P **P** **07 22 10.7 +1.2**
comp=Z,660nm,1.0s
PFCBR Castelo Branco 90.19 315 *e*P **P** **07 22 10.2 +0.6**
CRAG Craig 90.64 21 P **P** **07 22 11.8 +0.5**
CRAG IAMs_20 IAMs_20 08 07 35.8
comp=Z,42µm,20.0s
H07N1 FLORES T-PHASE 90.98 317 *e*P **P** **07 22 14.2 +0.9**
H07S1 FLORES T-PHASE 91.22 316 *e*P **P** **07 22 13.6 -0.8**
DZM Mont Dzumac 92.11 114 *e*P **P** **07 22 19.7 +0.9**
comp=Z,431nm,1.6s
DZM Mont Dzumac 92.11 114 *e*S **S** **07 33 20.7 -0.5**
comp=Z,31µm,26.1s
DZM *e*SS **SS** **07 39 33.6 +2.4**
comp=Z,13µm,31.4s
DZM Mont Dzumac 92.11 114 *e*LR LR 07 51 49.2
comp=Z,28µm,24.1s
DZM Mont Dzumac 92.11 114 P **P** **07 22 19.1 +0.3**
comp=Z,11nm,1.0s,baz=46,slow=19,SNR=4.3
DZM Mont Dzumac 92.11 114 P **P** **07 22 19.2 +0.3**
DZM IAmb IAmb 07 22 36.8
comp=Z,277nm,1.3s
DZM Mont Dzumac 92.11 114 ⇑P P 07 22 24.5 +5.7
DZM ⇑P sP 07 22 24.9 -0.9
DZM ⇑P pP 07 22 28.6 +4.8
DIB Dawson Inlet, 92.74 22 IAMs_20 IAMs_20 08 06 52.5
comp=Z,32µm,19.0s
FCC Fort Churchill 93.83 0 P **P** **07 22 25.4 -0.6**
FCC pmax pmax
comp=Z,283nm,1.2s
FCC MLR MLR
comp=Z,62µm,20.0s
FCC Fort Churchill 93.83 0 P **P** **07 22 25.4 -0.6**
FCC IAmb IAmb 07 22 37.1
comp=Z,283nm,1.2s
FCC IAMs_20 IAMs_20 08 07 25.4
comp=Z,62µm,20.0s
MBO M'Bour 94.47 289 IAMs_20 IAMs_20 08 10 46.7
comp=Z,32µm,20.0s
BBB Bella Bella 95.00 20 P **P** **07 22 32.3 +0.8**
comp=Z,34nm,0.8s,baz=313,slow=4.9,SNR=3.9
BBB PP **PP** **07 26 17.1 -2.7**
comp=Z,4.7nm,0.7s,baz=272,slow=21,SNR=1.1
BBB S **SKSac** **07 33 07.8 +1.0**
comp=Z,5.5nm,0.8s,baz=129,slow=4.3,SNR=1.5
BBB Bella Bella 95.00 20 P **P** **07 22 31.1 -0.4**
BBB IAMs_20 IAMs_20 08 08 29.1
comp=Z,45µm,21.0s
CASY Casey 95.58 170 P **P** **07 22 33.0 -0.6**
CASY Casey 95.58 170 IAMs_20 IAMs_20 07 59 24.2
comp=Z,34µm,22.0s
CASY Casey 95.58 170 ⇑P P 07 22 40.9 +7.4
MAW Mawson 96.62 189 P **P** **07 22 38.7 +0.5**
comp=Z,25nm,1.0s,baz=341,slow=5.4,SNR=12
MAW S **SKSac** **07 33 14.1 +0.1**
comp=Z,3.3nm,0.8s,baz=196,slow=20,SNR=1.8
MAW PKKPbc **PKKPbc** **07 39 22.2 -2.0**
comp=Z,7.8nm,0.9s,baz=306,slow=15,SNR=2.7
MAW LR LR 08 01 34.1
comp=Z,25µm,19.4s,baz=5.5,slow=33
DRLN Deer Lake 96.72 337 P **P** **07 22 39.4 0.0**
DRLN IAmb IAmb 07 22 50.9
comp=Z,410nm,1.2s
FFC Flin Flon 97.59 5 P **P** **07 22 42.7 -0.6**
FFC pmax pmax
comp=Z,190nm,1.4s
FFC MLR MLR
comp=Z,48µm,19.0s
FFC Flin Flon 97.59 5 P **P** **07 22 42.7 -0.6**
FFC Flin Flon 97.59 5 IAMs_20 IAMs_20 08 09 29.9
comp=Z,48µm,19.0s
PGC Sidney 99.52 19 IAMs_20 IAMs_20 08 11 03.8
comp=Z,61µm,21.0s
A05A Maple Falls 99.60 18 IAMs_20 IAMs_20 08 11 09.7
comp=Z,53µm,22.0s
MSVF Nonsavu 99.83 105 PP **PP** **07 26 54.9 -4.0**
comp=Z,16nm,1.1s,baz=199,slow=6.5,SNR=2.4
B06A Marblemount 100.20 18 IAMs_20 IAMs_20 08 11 29.6
comp=Z,60µm,22.0s
NLWA Neilton Lookou 100.53 20 IAMs_20 IAMs_20 08 12 25.3

comp=Z,57µm,21.0s
D05A Enumclaw 101.27 19 IAMs_20 IAMs_20 08 17 00.9
comp=Z,26µm,20.0s
E03A Lebam 101.38 20 IAMs_20 IAMs_20 08 12 04.8
comp=Z,60µm,22.0s
NEW Newport 101.56 16 P **Pdif** **07 23 01.4 +0.2**
comp=Z,7.2nm,0.9s,baz=336,slow=4.8,SNR=14
NEW PP **PP** **07 27 07.8 -2.3**
comp=Z,4.9nm,1.0s,baz=32,slow=6.3,SNR=3.2
NEW S **SKSac** **07 33 39.5 -0.9**
comp=Z,2.7nm,0.9s,baz=143,slow=18,SNR=1.9
NEW Newport 101.56 16 IAMs_20 IAMs_20 08 13 26.3
comp=Z,53µm,19.0s
LTY Liberty 101.58 18 IAMs_20 IAMs_20 08 13 49.1
comp=Z,37µm,19.0s
C09A Chrisman Ranch 101.71 16 IAMs_20 IAMs_20 08 14 52.4
comp=Z,42µm,19.0s
LON Longmire 101.72 19 IAMs_20 IAMs_20 08 17 13.7
comp=Z,47µm,19.0s
LMN Caledonia Moun 102.10 340 IAMs_20 IAMs_20 08 14 51.4
comp=Z,42µm,20.0s
SYO Syowa Base 102.21 195 ⇓*e*Pdiff **Pdif** **07 23 04.2 +1.0**
SYO Syowa Base 102.21 195 ⇑*e*pPdiff pPdif 07 23 12.2 +3.8
SYO Syowa Base 102.21 195 ⇑*e*PKiKP **PKiKP** **07 27 27.0 +1.9**
SYO Syowa Base 102.21 195 ⇓*i*pPKiKP PKiKP 07 27 33.5 +8.4
D08A Wollman Farm, 102.23 17 IAMs_20 IAMs_20 08 13 41.2
comp=Z,60µm,21.0s
PQI Presque Isle 102.29 342 IAMs_20 IAMs_20 08 16 23.4
comp=Z,38µm,18.0s
ULM Lac du Bonnet 102.34 1 P **Pdif** **07 23 04.4 -0.2**
comp=Z,11nm,0.9s,baz=336,slow=3.6,SNR=10
ULM PP **PP** **07 27 16.3 +0.5**
comp=Z,34nm,1.0s,baz=345,slow=8.3,SNR=5.6
ULM S **SKSac** **07 33 37.9 -6.0**
comp=Z,3.6nm,1.0s,baz=294,slow=23,SNR=1.5
ULM PKKPbc **PKKPbc** **07 39 06.1 -0.9**
comp=Z,8.2nm,0.9s,baz=220,slow=3.2,SNR=4.9
ULM Lac du Bonnet 102.34 1 IAMs_20 IAMs_20 08 15 47.4
comp=Z,62µm,20.0s
E07A Sunnyside 102.44 18 IAMs_20 IAMs_20 08 14 47.9
comp=Z,36µm,20.0s
E63A Oxbow 102.63 342 IAMs_20 IAMs_20 08 14 45.4
comp=Z,40µm,19.0s
E08A Dider Farm, El 102.72 17 IAMs_20 IAMs_20 08 15 15.1
comp=Z,59µm,18.0s
HAL Halifax 102.80 338 IAMs_20 IAMs_20 08 15 43.9
comp=Z,39µm,20.0s
E09A Wood Farm, Sta 102.94 17 IAMs_20 IAMs_20 08 15 05.8
comp=Z,38µm,20.0s
F07A Phinny Hill Vi 103.03 18 IAMs_20 IAMs_20 08 15 19.5
comp=Z,41µm,19.0s
VLDQ Val d'Or 103.05 349 IAMs_20 IAMs_20 08 16 07.3
comp=Z,63µm,19.0s
F64A Sherman 103.12 342 IAMs_20 IAMs_20 08 13 14.2
comp=Z,47µm,20.0s
COR Corvallis 103.21 21 IAMs_20 IAMs_20 08 13 30.5
comp=Z,42µm,22.0s
EGMT Eagleton 103.27 11 IAMs_20 IAMs_20 08 15 35.5
comp=Z,40µm,21.0s
GGN Saint George 103.38 341 IAMs_20 IAMs_20 08 16 17.8
comp=Z,52µm,20.0s
H04A Detroit Lake 103.47 20 IAMs_20 IAMs_20 08 13 19.3
comp=Z,40µm,22.0s
F63A Nahmakanta, Br 103.48 342 IAMs_20 IAMs_20 08 14 34.5
comp=Z,49µm,22.0s
G65A Princeton 103.51 341 IAMs_20 IAMs_20 08 15 34.4
comp=Z,35µm,20.0s
MSO Missoula 103.63 14 IAMs_20 IAMs_20 08 14 32.0
comp=Z,60µm,19.0s
F10A Beach Ranch, E 103.67 16 IAMs_20 IAMs_20 08 15 02.3
comp=Z,48µm,20.0s
G08A Pilot Rock 103.85 18 IAMs_20 IAMs_20 08 18 43.3
comp=Z,22µm,18.0s
EMMW East Machias 103.93 341 IAMs_20 IAMs_20 08 16 50.5
comp=Z,36µm,20.0s
PKME Peaks-Kenny Pk 103.93 342 IAMs_20 IAMs_20 08 16 14.6
comp=Z,51µm,20.0s
B35A Bob, Littlefor 104.25 360 IAMs_20 IAMs_20 08 12 38.1
comp=Z,47µm,22.0s
AGMN Agassiz Nation 104.30 1 IAMs_20 IAMs_20 08 17 35.1
comp=Z,51µm,19.0s
G62A West of Eustis 104.30 343 IAMs_20 IAMs_20 08 15 37.6
comp=Z,44µm,20.0s
KEBM Edson Butte 104.40 23 IAMs_20 IAMs_20 08 12 37.0
comp=Z,45µm,20.0s
MDND Maddock 104.60 4 IAMs_20 IAMs_20 08 14 41.1
comp=Z,41µm,19.0s
EYMN Ely 104.63 358 IAMs_20 IAMs_20 08 14 29.9
comp=Z,62µm,20.0s
PINE Pine Mountain 104.66 20 IAMs_20 IAMs_20 08 14 18.7
comp=Z,28µm,22.0s
WVL Waterville 104.68 342 IAMs_20 IAMs_20 08 15 31.6
comp=Z,51µm,21.0s
PLID Pearl Lake 104.80 16 IAMs_20 IAMs_20 08 14 35.3
comp=Z,40µm,20.0s
I07A Izee 104.81 19 IAMs_20 IAMs_20 08 16 25.8
comp=Z,36µm,20.0s
KBO Bosley Butte 105.02 23 IAMs_20 IAMs_20 08 13 40.5
comp=Z,39µm,20.0s
H62A Milan 105.06 343 IAMs_20 IAMs_20 08 15 47.5
comp=Z,67µm,21.0s
HUMO Hull Mountain 105.10 22 IAMs_20 IAMs_20 08 13 19.4
comp=Z,47µm,20.0s
LAO LASA Array 105.11 9 IAMs_20 IAMs_20 08 14 45.8
comp=Z,55µm,18.0s
BOZ Bozeman (W) 105.28 13 IAMs_20 IAMs_20 08 17 01.5
comp=Z,48µm,20.0s
RPZ Rata Peaks 105.29 132 IAMs_20 IAMs_20 08 11 23.9
comp=Z,25µm,22.0s
DLMT Dillon 105.31 13 IAMs_20 IAMs_20 08 16 02.4
comp=Z,42µm,20.0s
I63A Otisfield 105.40 343 IAMs_20 IAMs_20 08 14 46.7
comp=Z,36µm,20.0s
FRNY Flat Rock 105.41 345 IAMs_20 IAMs_20 08 16 23.5
comp=Z,62µm,20.0s
D32A Dogwood Acres, 105.43 2 IAMs_20 IAMs_20 08 16 41.1
comp=Z,51µm,19.0s
LBNH Lisbon 105.57 344 IAMs_20 IAMs_20 08 17 34.9
comp=Z,48µm,18.0s
K05A Summer Lake 105.64 20 IAMs_20 IAMs_20 08 14 26.8
comp=Z,53µm,21.0s
KRMB Red Mountain 105.74 23 IAMs_20 IAMs_20 08 12 47.6
comp=Z,28µm,22.0s
J08A Circle Bar Ran 105.77 18 IAMs_20 IAMs_20 08 17 05.1
comp=Z,32µm,18.0s
E28A Huff 105.79 5 IAMs_20 IAMs_20 08 14 33.8
comp=Z,58µm,20.0s
LONY Lake Ozonia 105.83 346 IAMs_20 IAMs_20 08 17 54.8
comp=Z,58µm,19.0s
PLVO Plevna 105.94 348 IAMs_20 IAMs_20 08 14 24.8
comp=Z,60µm,22.0s
YBH Yreka Blue Hor 105.96 22 PKiKP **PKiKP** **07 27 30.9 -2.3**
comp=Z,3.8nm,0.8s,baz=298,slow=7.7,SNR=3.5
YBH S **SKSac** **07 33 59.0 -2.1**
comp=Z,2.0nm,0.9s,baz=130,slow=6.8,SNR=2.1
YBH Yreka Blue Hor 105.96 22 IAMs_20 IAMs_20 08 13 41.4
comp=Z,42µm,21.0s
E38A The Farm, Brul 105.97 358 IAMs_20 IAMs_20 08 15 19.4
comp=Z,52µm,21.0s
RLMT Red Lodge 106.17 11 IAMs_20 IAMs_20 08 17 11.1
comp=Z,54µm,20.0s
FFD Franklin Falls 106.22 343 IAMs_20 IAMs_20 08 16 42.1
comp=Z,65µm,21.0s
JCC Jacoby Creek, 106.33 23 IAMs_20 IAMs_20 08 13 06.1
comp=Z,27µm,20.0s
NCB Newcomb 106.37 345 IAMs_20 IAMs_20 08 15 42.9
comp=Z,54µm,22.0s
KHMM Horse Mountain 106.38 23 IAMs_20 IAMs_20 08 13 01.5
comp=Z,29µm,20.0s
MFID Camas Ranch 106.42 16 IAMs_20 IAMs_20 08 16 24.9
comp=Z,56µm,20.0s
DELO Deloro Mine 106.55 348 IAMs_20 IAMs_20 08 14 52.6
comp=Z,62µm,21.0s
MOD Modoc Plateau 106.57 20 IAMs_20 IAMs_20 08 14 33.4
comp=Z,47µm,21.0s
SADO Sadowa 106.58 349 Pdiff **Pdif** **07 23 22.3 -1.2**
comp=Z,1.0nm,0.4s,baz=304,slow=13,SNR=1.7
SADO PKiKP **PKiKP** **07 27 32.7 -1.4**
comp=Z,1.9nm,0.5s,baz=315,slow=7.5,SNR=3.6
SADO PP **PP** **07 27 47.0 -0.3**
comp=Z,14nm,0.9s,baz=15,slow=5.0,SNR=3.7
WVOR Wild Horse Val 106.58 19 IAMs_20 IAMs_20 08 18 01.5
comp=Z,23µm,18.0s
H17A Grant Village 106.64 12 IAMs_20 IAMs_20 08 16 50.5
comp=Z,54µm,20.0s
F36A Milaca 106.75 360 IAMs_20 IAMs_20 08 14 16.0
comp=Z,46µm,22.0s
FLWY Flagg Ranch 106.92 12 IAMs_20 IAMs_20 08 17 12.0

comp=Z,55µm,20.0s
WDC Whiskeytown Da 107.05 22 IAMs_20 IAMs_20 08 17 02.1
comp=Z,32µm,21.0s
K62A Royalston 107.13 343 IAMs_20 IAMs_20 08 18 15.9
comp=Z,58µm,19.0s
WES Weston 107.15 343 IAMs_20 IAMs_20 08 17 21.7
comp=Z,50µm,19.0s
BCX Boston College 107.16 342 IAMs_20 IAMs_20 08 17 24.9
comp=Z,50µm,20.0s
MOOW Moose Ponds 107.23 13 IAMs_20 IAMs_20 08 17 31.3
comp=Z,58µm,21.0s
G40A Rib Lake 107.26 357 IAMs_20 IAMs_20 08 18 41.5
comp=Z,49µm,19.0s
J57A Williamstown 107.29 346 IAMs_20 IAMs_20 08 15 44.6
comp=Z,57µm,20.0s
SPMN Marine on St. 107.38 359 IAMs_20 IAMs_20 08 17 05.7
comp=Z,43µm,21.0s
LOHW Long Hollow 107.39 13 IAMs_20 IAMs_20 08 17 26.3
comp=Z,58µm,20.0s
URZ Urewera 107.41 124 PKiKP PKiKP 07 27 34.3 -1.4
comp=Z,6.4nm,0.9s,baz=304,slow=23,SNR=1.7
L64A Middleborough 107.44 342 IAMs_20 IAMs_20 08 17 46.6
comp=Z,27µm,19.0s
KCPM Cahto Peak 107.49 24 IAMs_20 IAMs_20 08 21 48.8
comp=Z,24µm,19.0s
SNOW Snow King Moun 107.50 13 IAMs_20 IAMs_20 08 16 42.5
comp=Z,58µm,20.0s
REDW Red Top Meadow 107.58 13 IAMs_20 IAMs_20 08 16 43.6
comp=Z,57µm,21.0s
J56A Wolcott 107.60 347 IAMs_20 IAMs_20 08 17 23.4
comp=Z,47µm,20.0s
BRYW Bryant College 107.64 343 IAMs_20 IAMs_20 08 17 46.8
comp=Z,59µm,19.0s
L63A North Scituate 107.72 343 IAMs_20 IAMs_20 08 17 48.5
comp=Z,58µm,19.0s
M65A Busby, Falmout 107.73 342 IAMs_20 IAMs_20 08 19 32.4
comp=Z,36µm,19.0s
J55A Hilton 107.79 348 IAMs_20 IAMs_20 08 14 17.6
comp=Z,62µm,22.0s
K58A Earlville 107.83 346 IAMs_20 IAMs_20 08 18 05.7
comp=Z,43µm,20.0s
M64A Tiverton 107.90 342 IAMs_20 IAMs_20 08 17 47.8
comp=Z,52µm,20.0s
UCCT U. Connecticut 107.94 343 IAMs_20 IAMs_20 08 18 59.6
comp=Z,47µm,19.0s
MEDO Medina 108.01 348 IAMs_20 IAMs_20 08 18 13.3
comp=Z,49µm,18.0s
AHID Auburn Hatcher 108.10 13 IAMs_20 IAMs_20 08 20 08.4
comp=Z,41µm,18.0s
L59A Walton 108.25 345 IAMs_20 IAMs_20 08 19 37.7
comp=Z,44µm,19.0s
M63A Gales Ferry 108.26 343 IAMs_20 IAMs_20 08 18 02.0
comp=Z,41µm,20.0s
HOPS Hopland Field 108.28 23 IAMs_20 IAMs_20 08 16 05.0
comp=Z,29µm,20.0s
ORV Oroville 108.32 22 IAMs_20 IAMs_20 08 16 25.7
comp=Z,33µm,22.0s
MMNY Mt. Morris Dam 108.33 348 IAMs_20 IAMs_20 08 14 33.7
comp=Z,64µm,22.0s
BW06 Boulder Array 108.40 12 IAMs_20 IAMs_20 08 18 13.1
comp=Z,52µm,21.0s
PDAR Pinedale Array 108.40 12 Pdiff Pdif 07 23 34.5 +2.6
comp=Z,0.5nm,0.8s,baz=14,slow=4.2,SNR=4.0
PDAR PKiKP PKiKP 07 27 37.0 -0.9
comp=Z,5.1nm,0.7s,baz=76,slow=2.3,SNR=8.4
PDAR PKKPbc PKKPbc 07 38 46.5 -2.2
comp=Z,1.4nm,0.5s,baz=132,slow=4.3,SNR=7.1
BEKR Beckworth 108.41 21 IAMs_20 IAMs_20 08 15 35.0
comp=Z,51µm,21.0s
BINY Binghamton 108.45 346 IAMs_20 IAMs_20 08 18 23.9
comp=Z,52µm,20.0s
GDXM Geysers 108.55 23 IAMs_20 IAMs_20 08 16 22.8
comp=Z,38µm,19.0s
I37A Lemond, Waseca 108.60 360 IAMs_20 IAMs_20 08 19 23.8
comp=Z,53µm,19.0s
L56A Greenwood 108.83 347 IAMs_20 IAMs_20 08 17 47.1
comp=Z,53µm,21.0s
ECSD EROS Data Cent 108.84 2 IAMs_20 IAMs_20 08 20 23.3
comp=Z,54µm,19.0s
PAHR Pah Rah Range 108.86 20 IAMs_20 IAMs_20 08 16 36.8
comp=Z,37µm,20.0s
K22A Casper 109.02 10 IAMs_20 IAMs_20 08 19 22.4
comp=Z,55µm,21.0s
AFDM Forest Hills D 109.04 22 IAMs_20 IAMs_20 08 16 46.9
comp=Z,35µm,21.0s
K50A Casco 109.06 351 IAMs_20 IAMs_20 08 15 54.0
comp=Z,50µm,21.0s
ELK Elko 109.08 17 Pdiff Pdif 07 23 38.8 +3.7
comp=Z,0.3nm,0.3s,baz=357,slow=2.0,SNR=1.8
ELK Elko 109.08 17 IAMs_20 IAMs_20 08 18 20.3
comp=Z,53µm,19.0s
MCCM Marconi Confer 109.11 24 IAMs_20 IAMs_20 08 18 29.8
comp=Z,26µm,22.0s
HWUT Hardware Ranch 109.12 14 IAMs_20 IAMs_20 08 16 57.3
comp=Z,40µm,22.0s
VCNR Virginia City 109.15 21 IAMs_20 IAMs_20 08 16 09.8
comp=Z,40µm,22.0s
RUBR Rubicon Trail 109.22 21 IAMs_20 IAMs_20 08 19 29.4
comp=Z,28µm,19.0s
PNTR Pine Nut 109.36 21 IAMs_20 IAMs_20 08 17 16.2
comp=Z,22µm,20.0s
YERR Yerington 109.57 21 IAMs_20 IAMs_20 08 18 47.7
comp=Z,28µm,21.0s
M56A Emporium 109.58 347 IAMs_20 IAMs_20 08 16 37.0
comp=Z,56µm,22.0s
ALLY Alegheny Colle 109.78 349 IAMs_20 IAMs_20 08 20 39.1
comp=Z,50µm,18.0s
LUPA Lehigh Univers 109.84 345 IAMs_20 IAMs_20 08 17 37.8
comp=Z,64µm,22.0s
RWWY Rawlins 109.85 10 IAMs_20 IAMs_20 08 16 20.6
comp=Z,33µm,22.0s
K31A O'Neill 109.86 4 IAMs_20 IAMs_20 08 21 16.2
comp=Z,54µm,19.0s
KVN Kaiserville 109.86 20 IAMs_20 IAMs_20 08 16 34.3
comp=Z,38µm,20.0s
N58A Sunbury 109.91 346 IAMs_20 IAMs_20 08 19 07.5
comp=Z,59µm,20.0s
WAKR Walker 109.94 21 IAMs_20 IAMs_20 08 19 27.7
comp=Z,26µm,21.0s
CMB Columbia Colle 110.06 22 IAMs_20 IAMs_20 08 19 46.9
comp=Z,22µm,20.0s
M53A WI Miller and 110.07 349 IAMs_20 IAMs_20 08 17 51.1
comp=Z,51µm,20.0s
M52A Chesterland 110.08 350 IAMs_20 IAMs_20 08 19 31.1
comp=Z,55µm,20.0s
RYN Ryan 110.12 20 IAMs_20 IAMs_20 08 20 06.2
comp=Z,30µm,18.0s
DUG Dugway, Tooele 110.19 15 IAMs_20 IAMs_20 08 18 14.7
comp=Z,47µm,21.0s
SSPA Standing Stone 110.34 347 IAMs_20 IAMs_20 08 19 44.1
comp=Z,47µm,19.0s
NVAR Mina Array Bea 110.36 20 Pdiff Pdif 07 23 41.6 +0.8
comp=Z,0.1nm,0.3s,baz=343,slow=2.8,SNR=1.7
NVAR PKiKP PKiKP 07 27 41.2 -0.5
comp=Z,3.2nm,0.7s,baz=326,slow=2.8,SNR=3.2
NVAR PKKPbc PKKPbc 07 38 40.8 -1.5
comp=Z,1.9nm,0.7s,baz=176,slow=4.2,SNR=4.1
NV11 Mina Array Sit 110.41 20 IAMs_20 IAMs_20 08 21 34.9
comp=Z,34µm,18.0s
M50A Fremont 110.46 351 IAMs_20 IAMs_20 08 16 36.1
comp=Z,57µm,21.0s
LHV Little Huntoon 110.47 20 IAMs_20 IAMs_20 08 20 19.5
comp=Z,41µm,18.0s
L42A Oliver, Polo 110.49 357 IAMs_20 IAMs_20 08 17 41.0
comp=Z,53µm,20.0s
L40A Anamosa 110.50 358 IAMs_20 IAMs_20 08 20 41.2
comp=Z,31µm,19.0s
WUPA West Chester U 110.53 345 IAMs_20 IAMs_20 08 20 23.0
comp=Z,39µm,18.0s
HQIL Hanson Quary C 110.58 355 IAMs_20 IAMs_20 08 17 26.2
comp=Z,63µm,21.0s
L34A Svendsen Farm, 110.61 2 IAMs_20 IAMs_20 08 21 45.2
comp=Z,55µm,19.0s
SCIA State Center 110.70 359 IAMs_20 IAMs_20 08 16 41.5
comp=Z,60µm,22.0s
N53A Lisbon 110.72 349 IAMs_20 IAMs_20 08 18 21.9
comp=Z,50µm,20.0s
O56A Blue Knob Stat 110.83 347 IAMs_20 IAMs_20 08 17 15.0
comp=Z,53µm,21.0s
SAO San Andreas Ge 110.85 23 IAMs_20 IAMs_20 08 16 59.8
comp=Z,30µm,21.0s
MDPB Devils Postpil 110.85 21 IAMs_20 IAMs_20 08 18 04.7
comp=Z,37µm,22.0s
SPR3 Spring Creek 3 110.95 17 IAMs_20 IAMs_20 08 16 49.1
comp=Z,29µm,21.0s
BGNE Belgrade 111.10 3 IAMs_20 IAMs_20 08 19 32.1
comp=Z,50µm,19.0s
O20A White River Ci 111.19 12 IAMs_20 IAMs_20 08 18 05.0
comp=Z,50µm,22.0s

R11A Troy Canyon, C 111.23 18 IAMs_20 IAMs_20 08 17 57.4
comp=Z,46µm,21.0s
SDMD Soldier's Deli 111.30 346 IAMs_20 IAMs_20 08 19 50.5
comp=Z,34µm,20.0s
O53A New Philadelph 111.32 350 IAMs_20 IAMs_20 08 18 06.9
comp=Z,47µm,21.0s
P57A Homestead Farm 111.48 347 IAMs_20 IAMs_20 08 20 28.2
comp=Z,52µm,19.0s
O52A Adamsville 111.55 350 IAMs_20 IAMs_20 08 20 15.9
comp=Z,51µm,20.0s
PMPB Monarch Peak 111.57 23 IAMs_20 IAMs_20 08 17 41.8
comp=Z,30µm,21.0s
ACSO Alum Creek Sta 111.60 351 IAMs_20 IAMs_20 08 17 45.4
comp=Z,52µm,22.0s
MCWV Mont Chateau 111.66 348 IAMs_20 IAMs_20 08 21 33.0
comp=Z,32µm,18.0s
N41A Harden Midland 111.84 357 IAMs_20 IAMs_20 08 19 02.6
comp=Z,56µm,20.0s
P52A Corning 112.07 350 IAMs_20 IAMs_20 08 20 52.6
comp=Z,55µm,20.0s
P53A Whipple 112.09 349 IAMs_20 IAMs_20 08 21 35.3
comp=Z,41µm,18.0s
Q56A Snyder Ridge, 112.14 348 IAMs_20 IAMs_20 08 21 56.6
comp=Z,55µm,20.0s
PAGB Antelope Grade 112.19 23 IAMs_20 IAMs_20 08 18 00.4
comp=Z,29µm,21.0s
PRN Pahroc Range 112.26 18 IAMs_20 IAMs_20 08 18 49.7
comp=Z,59µm,21.0s
SMCO Snowmass 112.34 11 IAMs_20 IAMs_20 08 19 39.4
comp=Z,57µm,20.0s
TPNV Topopah Spring 112.35 19 IAMs_20 IAMs_20 08 22 15.1
comp=Z,29µm,19.0s
P51A Williamsport 112.35 351 IAMs_20 IAMs_20 08 20 52.2
comp=Z,44µm,18.0s
Q54A Coxs Mills 112.49 349 IAMs_20 IAMs_20 08 21 47.9
comp=Z,52µm,20.0s
Q52A Bidwell 112.74 350 IAMs_20 IAMs_20 08 21 53.6
comp=Z,48µm,20.0s
PV10 Paradox Valley 112.75 13 IAMs_20 IAMs_20 08 22 40.6
comp=Z,40µm,19.0s
PV14 Lion Creek, Pa 112.75 13 IAMs_20 IAMs_20 08 21 10.5
comp=Z,38µm,20.0s
PV04 Paradox Valley 112.76 13 IAMs_20 IAMs_20 08 21 10.6
comp=Z,43µm,20.0s
PV07 Paradox Valley 112.76 12 IAMs_20 IAMs_20 08 21 01.6
comp=Z,30µm,19.0s
PV19 Morning Glory 112.82 13 IAMs_20 IAMs_20 08 21 31.3
comp=Z,30µm,19.0s
PV16 Nyswonger Mesa 112.83 13 IAMs_20 IAMs_20 08 21 02.6
comp=Z,31µm,20.0s
Q51A Peebles 112.84 351 IAMs_20 IAMs_20 08 18 33.1
comp=Z,52µm,21.0s
ISA Isabella, Lake 112.85 21 IAMs_20 IAMs_20 08 18 40.7
comp=Z,43µm,22.0s
PV11 David Mesa, Pa 112.85 13 IAMs_20 IAMs_20 08 21 14.2
comp=Z,39µm,20.0s
PV17 East Wray Mesa 112.86 13 IAMs_20 IAMs_20 08 21 34.2
comp=Z,36µm,19.0s
PV15 Paradox Valley 112.89 12 IAMs_20 IAMs_20 08 23 46.0
comp=Z,28µm,19.0s
PV18 Skein Mesa, Pa 112.90 13 IAMs_20 IAMs_20 08 21 34.3
comp=Z,30µm,19.0s
P38A Dawn 112.98 360 IAMs_20 IAMs_20 08 23 04.0
comp=Z,50µm,19.0s
PV13 Radium Mtn., P 113.00 13 IAMs_20 IAMs_20 08 21 08.9
comp=Z,33µm,21.0s
P40A Paris 113.06 358 IAMs_20 IAMs_20 08 23 32.8
comp=Z,38µm,18.0s
SHPR Sheep Range 113.07 18 IAMs_20 IAMs_20 08 18 49.4
comp=Z,40µm,22.0s
S57A Dark Hollow, R 113.33 347 IAMs_20 IAMs_20 08 21 39.2
comp=Z,51µm,19.0s
KSU1 Kansas State U 113.47 2 IAMs_20 IAMs_20 08 24 43.7
comp=Z,49µm,19.0s
OSI Osito Audit: C 113.73 22 IAMs_20 IAMs_20 08 19 12.0
comp=Z,21µm,20.0s
T59A Double "B" Far 113.80 346 IAMs_20 IAMs_20 08 21 03.6
comp=Z,56µm,20.0s
VNDA Vanda 113.88 167 Pdiff Pdif 07 23 58.0 +2.9
comp=Z,0.3nm,0.7s,baz=300,slow=4.1,SNR=1.5
VNDA PKiKP PKiKP 07 27 45.7 -1.1
comp=Z,1.6nm,0.7s,baz=272,slow=13,SNR=2.6
VNDA PKKPbc PKKPbc 07 38 30.2 -1.0
comp=Z,5.3nm,1.0s,baz=98,slow=1.2,SNR=6.2
SDCO Great Sand Dun 113.98 10 IAMs_20 IAMs_20 08 22 42.6
comp=Z,48µm,20.0s
MVCO Mesa Verde 113.98 13 IAMs_20 IAMs_20 08 20 48.8
comp=Z,30µm,21.0s
BBSR BB Station 114.03 333 IAMs_20 IAMs_20 08 23 58.7
comp=Z,34µm,19.0s
R32A Long Quarter, 114.04 4 IAMs_20 IAMs_20 08 24 43.0
comp=Z,53µm,20.0s
R40A Maddies Statio 114.30 358 IAMs_20 IAMs_20 08 20 42.7
comp=Z,48µm,19.0s
MWC Mount Wilson 114.30 22 IAMs_20 IAMs_20 08 22 14.1
comp=Z,26µm,20.0s
PASC Pasadena Art C 114.31 22 IAMs_20 IAMs_20 08 22 15.3
comp=Z,23µm,21.0s
U59A Littleton 114.44 346 IAMs_20 IAMs_20 08 19 41.7
comp=Z,54µm,22.0s
CCM Cathedral Cave 114.50 358 IAMs_20 IAMs_20 08 22 05.1
comp=Z,46µm,20.0s
SBA Scott Base 114.98 167 IAMs_20 IAMs_20 08 10 12.0
comp=Z,24µm,21.0s
WUAZ Wupatki 114.99 16 IAMs_20 IAMs_20 08 19 59.7
comp=Z,56µm,22.0s
PFO Pinyon Flats O 115.38 21 IAMs_20 IAMs_20 08 17 49.6
comp=Z,31µm,22.0s
MGMO Mountain Grove 115.43 358 PKiKP 07 27 49.2 -1.9
MGMO IAMs_20 IAMs_20 08 23 36.7
comp=Z,44µm,18.0s
T35A Sooner Cattle 115.65 2 IAMs_20 IAMs_20 08 21 29.5
comp=Z,46µm,21.0s
OK032 Salt Plains WL 115.68 4 IAMs_20 IAMs_20 08 22 07.5
comp=Z,44µm,19.0s
SNAA Sanae 115.68 201 PKPdf PKiKP 07 27 50.2 -0.2
SNAA Sanae 115.68 201 PKKPbc PKKPbc 07 38 23.2 -1.8
comp=Z,6.8nm,1.1s,baz=229,slow=3.3,SNR=3.7
SNAA Sanae 115.68 201 PKiKP PKiKP 07 27 50.3 -0.2
SNAA Sanae 115.68 201 PKiKP PKiKP 07 27 50.3 -0.2
SNAA IAMs_20 IAMs_20 08 11 27.1
comp=Z,39µm,21.0s
W18A Petrified Fore 115.74 14 IAMs_20 IAMs_20 08 21 40.7
comp=Z,49µm,20.0s
109C Camp Elliot, M 115.84 22 IAMs_20 IAMs_20 08 20 23.9
comp=Z,25µm,22.0s
V52A Sevierville 116.00 351 PKiKP 07 27 51.9 -0.4
V52A IAMs_20 IAMs_20 08 19 08.8
comp=Z,46µm,21.0s
X16A Lo Mia Camp, P 116.02 16 PKiKP 07 27 52.0 -0.6
V53A Saluda 116.05 350 PKiKP 07 27 52.4 -0.1
V53A IAMs_20 IAMs_20 08 23 59.2
comp=Z,41µm,19.0s
CLTN Cedars of Leba 116.10 353 PKiKP 07 27 51.5 -0.9
V51A Loudon 116.15 351 PKiKP 07 27 52.1 -0.4
U38A Gravette 116.17 0 PKiKP 07 27 51.6 -0.9
TJX Tijuana 116.21 22 IAMs_20 IAMs_20 08 23 45.5
comp=Z,25µm,20.0s
TKL Tuckaleechee C 116.21 351 PKP PKiKP 07 27 52.4 -0.3
comp=Z,13nm,0.8s,baz=184,slow=3.7,SNR=8.6
TKL PP PP 07 28 52.9 -3.7
comp=Z,35nm,1.1s,baz=5.9,slow=3.3,SNR=4.6
TKL Tuckaleechee C 116.21 351 PKiKP PKPdf 07 27 52.8 +0.1
TKL Tuckaleechee C 116.21 351 PKPdf 07 27 52.8 +0.1
TKL IAMs_20 IAMs_20 08 21 01.3
comp=Z,38µm,20.0s
WVT Waverly 116.21 354 PKiKP PKiKP 07 27 52.3 -0.3
WVT Waverly 116.21 354 PKiKP 07 27 52.2 -0.3
U40A Yellville 116.24 359 PKPdf 07 27 53.0 +0.3
X18A Snowflake 116.26 15 PKiKP 07 27 51.8 -1.2
TKX Tecate 116.30 21 IAMs_20 IAMs_20 08 25 02.9
comp=Z,21µm,18.0s
KMSC Kings Mountain 116.32 348 PKiKP 07 27 52.5 -0.4
HHAR Hobbs 116.32 360 PKiKP 07 27 52.2 -0.7
HHAR IAMs_20 IAMs_20 08 20 04.3
comp=Z,38µm,22.0s
QUOK Quay 116.38 2 IAMs_20 IAMs_20 08 23 34.0
comp=Z,44µm,20.0s
GLA Glamis 116.40 19 IAMs_20 IAMs_20 08 21 13.3
comp=Z,29µm,22.0s
RMX La Rumorosa 116.43 21 IAMs_20 IAMs_20 08 19 17.0
comp=Z,22µm,22.0s
LCAR Lake Charles 116.48 357 IAMs_20 IAMs_20 08 23 14.4
comp=Z,39µm,19.0s
V48A Smith Brothers 116.50 353 PKiKP 07 27 52.7 -0.5
CPCT Cooper Cave 116.52 351 PKPdf PKPdf 07 27 53.4 +0.1
ANMO Albuquerque 116.56 11 PKP PKPdf 07 27 53.0 -0.6

comp=Z,3.6nm,0.9s,baz=334,slow=3.9,SNR=3.2
ANMO PP PP 07 28 57.3 -2.0
comp=Z,20nm,1.0s,baz=345,slow=4.6,SNR=4.3
ANMO PKKPbc PKKPbc 07 38 23.5 +2.0
comp=Z,3.7nm,1.0s,baz=127,slow=7.2,SNR=4.0
ANMO Albuquerque 116.56 11 PKiKP PKPdf 07 27 53.0 -0.6
ANMO Albuquerque 116.56 11 PKPdf PKPdf 07 27 51.5 -2.1
OK031 S. Brethren Rd 116.60 3 IAMs_20 IAMs_20 08 25 48.6
comp=Z,44µm,20.0s
UABX UABC, Campus M 116.60 20 IAMs_20 IAMs_20 08 19 48.9
comp=Z,31µm,22.0s
OK030 Cody Creek RV 116.62 3 IAMs_20 IAMs_20 08 23 44.3
comp=Z,42µm,20.0s
FCAR Ozark Folk Cen 116.69 358 PKPdf 07 27 52.8 -0.8
FCAR IAMs_20 IAMs_20 08 23 59.0
comp=Z,40µm,20.0s
OK029 Liberty Lake 116.72 3 PKPdf 07 27 52.7 -1.0
BG3 Lake Jocassee 116.73 350 IAMs_20 IAMs_20 08 23 40.2
comp=Z,34µm,20.0s
W52A Murphy 116.78 351 PKPdf 07 27 53.2 -0.6
W52A IAMs_20 IAMs_20 08 21 19.5
comp=Z,47µm,20.0s
CPBX Cerro Prieto 116.84 20 IAMs_20 IAMs_20 08 19 55.2
comp=Z,22µm,22.0s
Y59A Loris 116.95 346 IAMs_20 IAMs_20 08 20 43.1
comp=Z,57µm,22.0s
HBAR Harrisburg 116.97 357 IAMs_20 IAMs_20 08 24 38.4
comp=Z,50µm,19.0s
VNA2 Neumayer--Watz 117.02 202 PKPdf PKPdf 07 27 53.0 0.0
JSC Jenkinsville 117.14 348 IAMs_20 IAMs_20 08 25 00.1
comp=Z,35µm,18.0s
Y58A Scranton 117.20 347 IAMs_20 IAMs_20 08 23 56.6
comp=Z,51µm,19.0s
Y57A Sumter 117.24 347 IAMs_20 IAMs_20 08 22 48.6
comp=Z,52µm,20.0s
W45A Hickory Valley 117.28 356 PKPdf 07 27 54.2 -0.5
VNA1 Neumayer--Stat 117.28 202 PKPdf PKiKP 07 27 53.6 +0.1
BNM Barren Site 117.30 12 PKPdf PKPdf 07 27 55.0 -0.1
HDBT Hernando Brdge 117.34 356 IAMs_20 IAMs_20 08 24 48.4
comp=Z,51µm,20.0s
PLAL Pickwick Lake 117.37 355 PKPdf 07 27 53.8 -1.1
HODGE Hodges 117.37 349 IAMs_20 IAMs_20 08 23 59.0
comp=Z,47µm,19.0s
W39A Magazine 117.41 360 IAMs_20 IAMs_20 08 27 39.0
comp=Z,42µm,19.0s
X51A Calhoun 117.43 351 PKPdf 07 27 55.0 0.0
QSPA South Pole Qui 117.54 180 PKPdf PKPdf 07 27 53.6 -0.6
QSPA South Pole Qui 117.54 180 IAMs_20 IAMs_20 08 14 21.1
comp=Z,32µm,21.0s
WMOK Wichita Mounta 117.70 4 IAMs_20 IAMs_20 08 23 25.9
comp=Z,38µm,20.0s
VNA3 Neumayer Olymp 117.79 201 PKPdf PKPdf 07 27 54.1 -0.3
X48A Hartselle 117.80 353 PKPdf PKPdf 07 27 55.3 -0.4
214A Organ Pipe Nat 118.00 18 IAMs_20 IAMs_20 08 24 36.8
comp=Z,27µm,18.0s
X37A Clayton 118.00 1 PKiKP 07 27 56.4 +0.2
X37A IAMs_20 IAMs_20 08 25 55.7
comp=Z,50µm,19.0s
Y52A Lilburn 118.01 351 PKPdf 07 27 56.1 0.0
MIAR Mount Ida 118.05 360 IAMs_20 IAMs_20 08 27 06.2
comp=Z,45µm,18.0s
NHSC New Hope 118.08 347 IAMs_20 IAMs_20 08 23 18.8
comp=Z,36µm,19.0s
X40A Basin Creek Fa 118.10 359 IAMs_20 IAMs_20 08 24 43.5
comp=Z,52µm,20.0s
TUC Tucson 118.19 16 PKiKP PKiKP 07 27 57.7 +1.0
TUC Tucson 118.19 16 PKPdf PKiKP 07 27 57.7 +1.0
TUC Tucson 118.19 16 IAMs_20 IAMs_20 08 22 12.6
comp=Z,45µm,22.0s
Y49A Blount Mountai 118.32 353 PKPdf 07 27 55.8 -1.0
GOGA Godfrey 118.37 350 IAMs_20 IAMs_20 08 25 30.4
comp=Z,39µm,20.0s
CCAR Cane Creek 118.64 358 IAMs_20 IAMs_20 08 22 56.8
comp=Z,47µm,19.0s
Z51A Franklin 118.70 352 PKPdf 07 27 57.1 -0.5
154A Montrose 119.09 349 PKPdf 07 27 58.2 0.0
154A IAMs_20 IAMs_20 08 26 02.6
comp=Z,51µm,20.0s
Z47A Carrollton 119.14 354 PKPdf PKPdf 07 27 57.6 -0.7
152A Waverly Hall 119.28 351 PKPdf 07 27 58.5 -0.1
257A Skidaway Islan 119.34 347 IAMs_20 IAMs_20 08 24 01.3
comp=Z,46µm,21.0s
GDL2 Guadalupe Moun 119.59 10 PKPdf 07 27 58.5 -0.9
146A Union 119.77 355 PKiKP 07 28 00.9 +1.2
146A IAMs_20 IAMs_20 08 24 13.7
comp=Z,39µm,18.0s
MNTX Cornudas Mount 119.91 11 PKPdf PKPdf 07 27 59.4 -0.5
MNTX IAMs_20 IAMs_20 08 23 53.9
comp=Z,48µm,20.0s
TIGA Tifton 120.32 350 IAMs_20 IAMs_20 08 25 41.1
comp=Z,50µm,20.0s
WHTX Lake Whitney, 120.51 3 IAMs_20 IAMs_20 08 23 20.4
comp=Z,54µm,22.0s
237A Washetta, Mont 120.57 2 IAMs_20 IAMs_20 08 27 21.8
comp=Z,38µm,19.0s
NBPV Pedro Velho 120.57 279 eP PKiKP 07 28 02.6 +1.0
456A Hilliard 120.75 348 IAMs_20 IAMs_20 08 27 10.5
comp=Z,46µm,18.0s
RCBR Riachuelo 120.83 280 eP PKiKP 07 28 03.0 +0.8
346A Big Creek Wild 121.05 355 PKPdf 07 28 01.4 -0.6
HSIG 121.28 17 IAMs_20 IAMs_20 08 26 52.5
comp=Z,22µm,19.0s
NBRF Rio Formoso - 121.48 277 eP PKiKP 07 28 05.2 +1.8
435B Jarrell 121.71 4 PKPdf 07 28 02.5 -0.8
435B IAMs_20 IAMs_20 08 24 18.0
comp=Z,45µm,21.0s
441A DeRidder 121.83 359 IAMs_20 IAMs_20 08 25 25.3
comp=Z,50µm,20.0s
JCT Junction City 121.85 6 PKiKP PKPdf 07 28 02.7 -1.0
JCT Junction City 121.85 6 PKPdf PKPdf 07 28 02.7 -1.0
JCT IAMs_20 IAMs_20 08 24 49.8
comp=Z,45µm,20.0s
NBCL Cascavel-CE 122.12 283 eP PKiKP 07 28 05.2 +0.5
NBLI Livramento-PB 122.47 279 eP PKPdf 07 28 04.2 -1.1
TX31 Lajitas Ar. Si 122.50 10 PKPdf PKPdf 07 28 04.3 -0.7
TX32 Lajitas Array 122.50 10 PKPdf PKPdf 07 28 04.2 -0.9
TXAR Lajitas Array 122.51 10 PKP PKPdf 07 28 04.5 -0.5
comp=Z,16nm,0.9s,baz=28,slow=0.6,SNR=23
TXAR PP PP 07 29 35.6 -4.5
comp=Z,26nm,0.9s,baz=353,slow=4.0,SNR=4.4
TXAR PKKPbc PKKPbc 07 37 58.8 -0.6
comp=Z,1.4nm,0.7s,baz=173,slow=4.9,SNR=7.7
TXAR SKKPbc SKKPbc 07 41 58.5 +13
comp=Z,3.2nm,1.0s,baz=174,slow=5.8,SNR=3.4
NBAN Anadia - AL 122.93 277 eP PKiKP 07 28 07.2 +0.9
NBMO Morrinhos-CE 123.16 285 eP PKiKP 07 28 08.1 +1.3
DWPF Disney Wildern 123.17 347 IAMs_20 IAMs_20 08 30 05.8
comp=Z,45µm,19.0s
BELA Belgrano 2 123.22 193 PKPdf PKPdf 07 28 04.5 -0.3
735A Kenedy 123.61 4 IAMs_20 IAMs_20 08 25 18.5
comp=Z,48µm,22.0s
NBPB Pedra_Branca-C 123.89 283 eP PKiKP 07 28 09.1 +0.9
060A Indiantown 123.98 345 IAMs_20 IAMs_20 08 27 13.2
comp=Z,47µm,20.0s
NBMA Muriti-CE 124.06 280 eP PKiKP 07 28 09.0 +0.4
HPIG 124.50 13 IAMs_20 IAMs_20 08 30 41.4
comp=Z,37µm,19.0s
NBLA Lagarto - SE 124.85 276 eP PKPdf 07 28 09.9 +0.2
KVTX Kingsville 124.91 4 IAMs_20 IAMs_20 08 28 19.8
comp=Z,34µm,19.0s
NBPS Pedro II - PI 124.91 285 eP PKPdf 07 28 08.1 -1.9
ANWB Willy Bob 125.11 322 eP PKiKP 07 28 10.6 +0.1
ANWB Willy Bob 125.11 322 IAMs_20 IAMs_20 08 21 43.4
comp=Z,19µm,20.0s
061Z Ochoppi 125.23 346 IAMs_20 IAMs_20 08 30 12.3
comp=Z,39µm,20.0s
ANBD Bethesda, Anti 125.60 321 eP PKiKP 07 28 12.2 +0.7
BPA Boggy Peak 125.66 321 eP PKiKP 07 28 12.6 +1.0
SEUS St. Eustatius 125.91 323 eP PKiKP 07 28 22.6 +10
SEUS St. Eustatius 125.91 323 IAMs_20 IAMs_20 08 21 29.3
comp=Z,31µm,21.0s
SKI Saint Kitts 125.91 322 eP PKiKP 07 28 23.5 +11
ABD La Joyeuse, An 125.91 320 eP PKiKP 07 28 18.3 +6.2
MLYT Lee's Yard 126.10 321 eP PKiKP 07 28 13.2 +0.6
MAGL Barre de l'ile 126.21 320 eP PKiKP 07 28 18.5 +5.8
GRTK Grand Turk 126.27 333 IAMs_20 IAMs_20 08 28 55.8
comp=Z,31µm,20.0s
CBE Ff, Capester 126.30 320 eP PKiKP 07 28 22.9 +10
TDBA Terre de Bas, 126.50 320 eP PKiKP 07 28 14.6 +1.3
SLBS Sierra La Lagu 126.62 18 IAMs_20 IAMs_20 08 33 19.9
comp=Z,35µm,19.0s
CDVI St. Croix 126.63 325 eP PKiKP 07 28 16.6 +3.1
DSLB Salisbury 126.70 320 eP PKiKP 07 28 24.8 +11
MTP Monte Pirata 126.74 326 PKPdf PKPdf 07 28 11.4 -1.9
CBYP Canovanas 126.74 326 PKPdf 07 28 13.1 -0.3

GCPR	Guaynabo City	126.83	326			PKPdf	07 28 13.2	-0.2
NBPN	Ponto Novo - B	126.91	277	*e*P		PKiKP	07 28 14.2	+0.1
ILAM	Ilet Lapin Mar	126.91	319	*e*P		PKiKP	07 28 26.0	+12
SJG	San Juan	127.03	326	PKP		PKPdf	07 28 13.0	-0.8
	comp=Z,9,8nm,0.7s,baz=56,slow=7.3,SNR=7.3							
SJG	San Juan	127.03	326	*e*P		PKiKP	07 28 18.5	+4.2
SJG	San Juan	127.03	326	PKIKP		PKPdf	07 28 13.0	-0.8
SJG	San Juan	127.03	326			PKPdf	07 28 13.0	-0.8
SJG	San Juan	127.03	326	*e*P		PKiKP	07 28 17.0	+2.7
PDPR	Patillas Dam,	127.04	326			PKPdf	07 28 12.5	-1.3
FDF	Fort de France	127.11	319	*e*P		PKiKP	07 28 18.5	+3.9
FDF	Fort de France	127.11	319	PKIKP		PKPdf	07 28 12.5	-1.6
FDF				MLR		MLR		
	comp=Z,25μm,20.0s							
FDF	Fort de France	127.11	319	PKPdf		PKPdf	07 28 12.5	-1.6
FDF				IAMs_20		IAMs_20	08 23 39.4	
	comp=Z,25μm,20.0s							
AOPR	Arecibo Observ	127.12	327	*e*P		PKiKP	07 28 17.5	+2.9
MPOM	Morne Pois Mar	127.16	318	*e*P		PKiKP	07 28 20.8	+6.1
BIM	Bigot	127.23	319	*e*P		PKiKP	07 28 15.4	+0.6
OBIP	Obispado Ponce	127.31	327	PKPdf		PKPdf	07 28 13.4	-0.9
BBGH	Gun Hill	127.40	316	IAMs_20		IAMs_20	08 22 29.6	
	comp=Z,40μm,21.0s							
ICMP	Isla Caja de M	127.40	326	PKPdf		PKPdf	07 28 12.8	-1.7
MPR	Mayaguez	127.42	327			PKPdf	07 28 13.1	-1.5
SLBI	Saint Lucia, B	127.56	318	*e*P		PKiKP	07 28 24.4	+8.9
MLPR	Magueyes Islan	127.58	327	PKPdf		PKPdf	07 28 14.5	-0.4
GDU01	Guandu, BA	127.59	274	*e*P		PKPdf	07 28 15.1	+0.2
PPT2	Papeete2	128.12	91	*e*PP		PP	07 30 17.5	-2.1
PPT2	comp=Z,1μm,23.7s							
				*e*Sdif		Sdif	07 38 22.1	-2.0
PPT2	comp=Z,5μm,27.2s							
				*e*SS		SS	07 47 33.2	-1.0
	comp=Z,17μm,29.0s							
PPT2	Papeete2	128.12	91	*e*LR		LR	08 08 39.5	
	comp=Z,17μm,25.5s							
SVB	Belmont	128.32	318	*e*P		PKiKP	07 28 28.4	+11
SDDR	Presa de Saban	128.60	332	PKPdf		PKPdf	07 28 16.2	-0.7
SDDR				IAMs_20		IAMs_20	08 30 26.8	
	comp=Z,47μm,20.0s							
SDDR	Presa de Saban	128.60	332	*e*P		PKiKP	07 28 17.3	-0.2
SOR	Soroa	128.65	347	PKIKP		PKPdf	07 28 16.8	-0.1
SOR	Soroa	128.65	347	PKPdf		PKPdf	07 28 16.8	-0.1
SOR				IAMs_20		IAMs_20	08 30 47.9	
	comp=Z,48μm,21.0s							
GCMP	Grenada, Carri	129.04	317	*e*P		PKiKP	07 28 26.8	+8.4
ZAIG	Zacatecas	129.12	10	PKPdf		PKPdf	07 28 15.9	-2.2
ZAIG				IAMs_20		IAMs_20	08 27 54.5	
	comp=Z,38μm,21.0s							
GTBY	Guantanamo Bay	129.21	337	IAMs_20		IAMs_20	08 31 05.3	
	comp=Z,21μm,20.0s							
GTBY	Guantanamo Bay	129.21	337	*e*P		PKiKP	07 28 22.2	+3.6
TOSP	Speyside	129.42	316	*e*P		PKiKP	07 28 32.2	+13
TMAB	Tom-Au,PA,Br	129.42	292	*e*P		PKPdf	07 28 18.6	+0.1
GRGR	Grenville	129.46	317	*e*P		PKiKP	07 28 21.9	+2.7
NAN01	Guarapari, ES	129.68	269	*e*P		PKPdf	07 28 18.0	-0.8
TBI	Tubuai	130.13	98	*e*PKIKP		PKiKP	07 28 20.4	+0.1
	comp=Z,266nm,1.3s							
TBI	Tubuai	130.13	98	*e*PP		PP	07 30 29.6	-3.0
	comp=Z,1μm,28.0s							
TBI				*e*Sdif		Sdif	07 38 37.3	-3.2
	comp=Z,3μm,28.5s							
TBI				*e*SS		SS	07 47 58.7	-0.2
	comp=Z,20μm,29.5s							
TBI	Tubuai	130.13	98	*e*LQ		LQ	08 03 36.8	
	comp=Z,18μm,33.8s							
TBI				*e*LR		LR	08 09 25.6	
	comp=Z,17μm,30.0s							
RIB01	Linhares ES	130.44	268	*e*P		PKPdf	07 28 19.6	-0.6
TRN	Trinidad (W)	130.46	316	*e*P		PKiKP	07 28 25.0	+3.7
BSFB	Barra de Sao F	130.67	268	*e*P		PKPdf	07 28 20.5	-0.1
HOPE	Hope Point	130.84	221	IAMs_20		IAMs_20	08 23 40.1	
	comp=Z,18μm,19.0s							
SJMB	Sao Joao De Ma	130.93	269	*e*P		PKiKP	07 28 21.9	-0.2
LCCY	Blossom Villag	130.98	342			PKPdf	07 28 20.5	-0.8
MCPB	Macapa, AP	131.45	297	*e*P		PKPdf	07 28 22.2	-0.2
MTDJ	Mount Denham	131.60	339	IAMs_20		IAMs_20	08 32 48.6	
	comp=Z,30μm,20.0s							
MTDJ	Mount Denham	131.60	339	*e*P		PKiKP	07 28 24.4	+0.8
SDBA	SAO DESIDERIO	131.73	278	*e*P		PKiKP	07 28 23.4	-0.5
TEIG	Tepich	132.00	353	PKhKP		PKPpre	07 28 18.2	
	comp=Z,7.5nm,0.8s,baz=350,slow=18,SNR=2.6							
TEIG				PKP		PKiKP	07 28 23.8	-0.4
	comp=Z,20nm,0.8s,baz=354,slow=5.5,SNR=15							
TEIG				SKPbc		SKPbc	07 31 48.5	-0.6
	comp=Z,145nm,1.1s,baz=356,slow=4.7,SNR=7.9							
TEIG	Tepich	132.00	353	*e*P		PKPdf	07 28 19.1	-4.1
JANB	Januaria	132.32	275	*e*P		PKiKP	07 28 25.2	+0.2
SMTB	Santa Maria do	132.42	284	*e*P		PKiKP	07 28 24.9	-0.4
TAOE	Nuku Hiva Isla	132.68	76	IAMs_20		IAMs_20	08 26 42.1	
	comp=Z,18μm,20.0s							
PRPB	Parauapebas	132.94	289	*e*P		PKiKP	07 28 25.9	-0.4
UNM	Universidad Na	132.95	7	IAMs_20		IAMs_20	08 39 31.8	
	comp=Z,19μm,20.0s							
VAS01	Vassouras-RJ	134.10	265	*e*P		PKiKP	07 28 28.2	-0.2
MALB	Monte Alegre	134.10	297	*e*P		PKiKP	07 28 28.0	-0.6
PEXB	Peixe	134.56	281	*e*P		PKiKP	07 28 29.4	-0.2
MAN01	Angra dos Reis	134.73	264	*e*P		PKiKP	07 28 29.2	-0.5
BSCB	Bom Sucesso	134.88	267	*e*P		PKiKP	07 28 30.1	0.0
ESAR	Angra dos Reis	135.19	264	*e*P		PKiKP	07 28 29.8	-0.7
URIC	Uribia, Colomb	135.36	328	*e*P		PKiKP	07 28 30.4	-0.7
DABV	Dabajuro	135.39	326	*e*P		PKiKP	07 28 34.5	+3.2
PETF	Flores	135.43	354			PKPdf	07 28 27.7	-2.0
CMIG	Matias Romero	135.43	1	PKhKP		PKPpre	07 28 19.1	
	comp=Z,3.3nm,0.7s,baz=12,slow=4.9,SNR=6.1							
BDFB	Brasilia	135.82	276	PKhKP		PKPpre	07 28 24.5	
	comp=Z,4.0nm,0.9s,baz=120,slow=3.6,SNR=4.2							
BDFB				PP		PP	07 31 07.2	-2.1
	comp=Z,6.9nm,0.8s,baz=229,slow=5.1,SNR=1.7							
CCIG	Comitan	136.21	357	IAMs_20		IAMs_20	08 37 05.9	
	comp=Z,31μm,20.0s							
PARB	Paraibuna	136.33	264	*e*P		PKPdf	07 28 31.9	+0.7
SNDB	Serra Nova Dou	137.10	283	*e*P		PKPdf	07 28 32.8	0.0
SDV	Santo Domingo	137.13	325	IAMs_20		IAMs_20	08 27 50.2	
	comp=Z,20μm,22.0s							
PRVC	Isla de Provid	137.33	342	*e*P		PKPdf	07 28 31.5	-1.8
APG	El Apazote	137.37	355	PKhKP		PKPpre	07 28 23.8	
	comp=Z,16nm,0.8s,baz=301,slow=17,SNR=9.9							
VAO	Valinhos	137.42	265	*e*P		PKPdf	07 28 33.7	+0.4
ESQI	Esquipulas	137.71	353			PKPdf	07 28 32.1	-2.1
RCLB	Rio Claro- Sao	137.75	266	*e*P		PKiKP	07 28 35.5	-0.3
SOCV	Socops	137.75	325	*e*P		PKPdf	07 28 32.9	-1.2
TGUH	Tegucigalpa,Un	137.94	350	IAMs_20		IAMs_20	08 38 06.0	
	comp=Z,38μm,19.0s							
TGUH	Tegucigalpa,Un	137.94	350	*e*P		PKPdf	07 28 29.4	-5.2
SPB	Sao Paulo	137.99	265	IAMs_20		IAMs_20	08 26 06.8	
	comp=Z,30μm,22.0s							
SPB	Sao Paulo	137.99	265	*e*P		PKiKP	07 28 36.1	-0.1
ARGC	Ariguani, Magd	138.00	330	*e*P		PKPdf	07 28 31.8	-2.8
NPGB	Novo Progresso	138.02	292	*e*P		PKPdf	07 28 33.3	-1.3
PET01	Itanhaem-SP	138.04	264	*e*P		PKPdf	07 28 35.2	+0.9
ELOV	Elorza	138.10	322	*e*P		PKPdf	07 28 29.5	-5.3
BB19B	Bebedouro	138.22	269	*e*P		PKPdf	07 28 33.6	-1.2
PMSA	Palmer Station	138.36	199	IAMs_20		IAMs_20	08 26 06.5	
	comp=Z,35μm,20.0s							
SJCC	San Jacinto, C	138.38	331	*e*P		PKPdf	07 28 29.4	-6.0
MATN	Matagalpa	138.82	348	IAMs_20		IAMs_20	08 35 59.3	
	comp=Z,39μm,21.0s							
SMLC	San Martn de	138.86	329	*e*P		PKPdf	07 28 34.7	-1.5
ARAG	Araguaiana, MT	139.19	278	*e*P		PKPdf	07 28 36.6	0.0
CRIN	San Cristobal	139.24	350	IAMs_20		IAMs_20	08 39 39.4	
	comp=Z,34μm,20.0s							
ITRB	Iturama	139.40	272	*e*P		PKPdf	07 28 36.9	-0.1
PAMC	Pamplona, Colo	139.49	326	*e*P		PKiKP	07 28 39.3	-0.9
FRTB	Fartura	139.81	266	*e*P		PKPdf	07 28 38.2	+0.6
BRRC	Barranca, Sant	140.18	327	*e*P		PKPdf	07 28 33.3	-5.3
BARC	Barichara	140.37	326	*e*P		PKPdf	07 28 40.2	+1.0
ZARC	Zaragoza, Cauc	140.38	329	*e*P		PKPdf	07 28 34.3	-4.6
CLDB	Colider	140.42	287	*e*P		PKPdf	07 28 39.3	+0.3
UREC	San Jos de Ur	140.44	330	*e*P		PKPdf	07 28 34.7	-4.4
COVE	Coope Vega, Sa	140.65	345	IAMs_20		IAMs_20	08 34 33.9	
	comp=Z,39μm,21.0s							
UPD2	Meteti	140.74	334	*e*P		PKPdf	07 28 34.7	-4.9
PCMB	Pacaembu	140.81	269	*e*P		PKPdf	07 28 40.4	+0.9
BCIP	Isla Barro Col	140.83	337	PKIKP		PKPdf	07 28 37.6	-2.1
BCIP	Isla Barro Col	140.83	337	PKPdf		PKPdf	07 28 37.6	-2.1
BCIP				IAMs_20		IAMs_20	08 38 34.3	
	comp=Z,21μm,20.0s							
BCIP	Isla Barro Col	140.83	337	*e*P		PKPdf	07 28 39.1	-0.7
UPA	Univ. de Panam	140.90	337	*e*P		PKPdf	07 28 38.3	-1.6
RUSC	La Rusia	140.93	326	*e*P		PKPdf	07 28 37.5	-3.0
BATAN	Batan	141.00	343	IAMs_20		IAMs_20	08 35 36.3	
	comp=Z,35μm,22.0s							
PTBC	PUERTO BERRIO	141.03	328	*e*P		PKPdf	07 28 35.1	-5.1
JTS	Las Juntas de	141.19	346	PKP		PKPdf	07 28 40.5	+0.1
	comp=Z,12nm,0.9s,baz=306,slow=5.7,SNR=8.2							
JTS	Las Juntas de	141.19	346	PKPdf		PKPdf	07 28 38.8	-1.6
JTS	Las Juntas de	141.19	346	IAMs_20		IAMs_20	08 36 18.0	
	comp=Z,42μm,22.0s							
JTS	Las Juntas de	141.19	346	*e*P		PKiKP	07 28 42.5	-0.6
ORTG	Ortega, Santa	141.23	346	IAMs_20		IAMs_20	08 39 36.2	
	comp=Z,25μm,20.0s							
HDC	Heredia	141.28	344	IAMs_20		IAMs_20	08 36 32.5	
	comp=Z,27μm,22.0s							
SPBC	San Pablo de B	141.62	327	*e*P		PKPdf	07 28 39.7	-1.6
PEZE	Perez Zeledon,	141.76	343			PKPdf	07 28 40.1	-1.5
CAO2	Cobano, Puntar	141.81	346			PKPdf	07 28 39.3	-2.2
HELC	Santa Helena	141.83	329	*e*P		PKPdf	07 28 37.9	-4.1
PTGC	Puerto Gaitan,	141.87	323	*e*P		PKPdf	07 28 36.1	-5.5
PTAC	Punta Ardita,	141.94	333	*e*P		PKPdf	07 28 40.0	-1.7
CNOCA	NORCASIA, CALD	142.08	328	*e*P		PKPdf	07 28 41.4	-0.7
NORC	Norcasia	142.08	328	*e*P		PKPdf	07 28 37.9	-4.2
CNLB	Canela	142.19	257	*e*P		PKPdf	07 28 42.8	+0.9
AZU	Azuero	142.26	337	*e*P		PKPdf	07 28 42.1	-0.2
CHIC	Chingaza	142.33	326	*e*P		PKPdf	07 28 39.8	-3.1
CBOC	Ciudad Bolivar	142.34	330	*e*P		PKPdf	07 28 37.5	-5.1
PTGB	Pitanga	142.37	265	*e*P		PKPdf	07 28 42.9	+0.6
TRCB	Terra Rica	142.38	268	*e*P		PKPdf	07 28 42.3	0.0
ROSC	El Rosal	142.44	327	PKhKP		PKPpre	07 28 39.0	
	comp=Z,30nm,0.7s,baz=73,slow=4.3,SNR=21							
ROSC	El Rosal	142.44	327	*e*P		PKPdf	07 28 39.3	-3.8
GUY2C	Guyana, Caldas	142.61	328	*e*P		PKPdf	07 28 39.1	-4.5
SOLC	Bahia Solano	142.61	332	*e*P		PKPdf	07 28 42.1	-0.8
SOLC	Bahia Solano	142.61	332	*e*P		PKPdf	07 28 38.3	-4.7
VILC	Villavicencio,	142.76	325	*e*P		PKPdf	07 28 39.9	-3.5
RKT	Rikitea	142.85	92	*e*PKIKP		PKPdf	07 28 43.9	+0.9
	comp=Z,149nm,1.0s							
RKT	Rikitea	142.85	92	*e*SS		SS	07 50 25.4	-5.3
	comp=Z,15μm,32.2s							
RKT	Rikitea	142.85	92	*e*LR		LR	08 15 23.6	
	comp=Z,11μm,30.2s							
TOLC	Tolima	143.15	328	*e*P		PKPbc	07 28 40.7	-0.4
GUVC	San Jose del G	143.52	322	*e*P		PKPbc	07 28 42.1	+0.3
ORTC	Ortega, Tolima	143.70	327	*e*P		PKPab	07 28 40.0	-1.6
PIZC	Pizarro, Choco	143.73	331	*e*P		PKPbc	07 28 42.5	+0.2
EFI	East Falkland	144.00	218	PKIKP		PKPdf	07 28 43.7	-0.4
EFI	East Falkland	144.00	218	PKPdf		PKPdf	07 28 43.7	-0.4
EFI	East Falkland	144.00	218	IAMs_20		IAMs_20	08 23 07.8	
	comp=Z,26μm,22.0s							
YOTC	Yotoco, Valle	144.15	329	*e*P		PKPab	07 28 43.3	-0.1
YOTC	Yotoco, Valle	144.15	329	*e*P		PKPab	07 28 42.2	-1.2
AQDB	Aquidauana	144.39	273	*e*P		PKPbc	07 28 44.7	+0.5
MACC	Macarena, Meta	144.51	324	*e*P		PKPab	07 28 42.1	-2.5
MACC	Macarena, Meta	144.51	324	*e*P		PKPab	07 28 42.5	-2.1
MALC	Bahia Malaga	144.57	330	*e*P		PKPdf	07 28 46.4	0.0
MALC	Bahia Malaga	144.57	330	*e*P		PKPab	07 28 43.9	-0.8
BETC	Betania	144.86	326	*e*P		PKPdf	07 28 47.5	+0.5
MARP	Paez Belalcaza	144.97	327	*e*P		PKPbc	07 28 46.8	+0.1
VILB	Vilhena	145.19	288	*e*P		PKPbc	07 28 46.8	-0.2
GARC	Garzon, Huila	145.31	326	*e*P		PKPbc	07 28 47.5	-0.2
SAML	Samuel	145.43	297	IAMs_20		IAMs_20	08 39 55.6	
	comp=Z,22μm,21.0s							
PTLB	Pontes e Lacer	145.46	283	*e*P		PKPbc	07 28 47.6	-0.2
PCON	Cinco Dias	145.63	328	*e*P		PKPab	07 28 51.0	+1.7
SOTA	Rioblanco	145.90	328	*e*P		PKPab	07 28 51.8	+1.5
CRUC	La Cruz	146.56	328	*e*P		PKiKP	07 28 54.0	-0.6
PTLC	Puerto Leguiza	146.68	323	*e*P		PKiKP	07 28 54.6	+0.2
CCUFI	Cufio, Nario	147.04	328	*e*P		PKiKP	07 28 56.3	+0.5
GCLP	Volcan Galeras	147.04	328	*e*P		PKPab	07 28 54.4	-0.3
CTUM2	Tumaco	147.13	331	*e*P		PKiKP	07 28 55.1	-0.2
TUMC	Tumaco	147.13	331	*e*P		PKiKP	07 28 55.3	0.0
CPUP	Villa Florida	147.36	264	PKP		PKPdf	07 28 49.8	-0.9
	comp=Z,23nm,1.0s,baz=85,slow=2.8,SNR=27							
CPUP				PKPbc		PKPbc	07 28 52.5	-0.6
	comp=Z,149nm,1.0s,baz=80,slow=4.3,SNR=52							
CPUP	Villa Florida	147.36	264	PKIKP		PKPdf	07 28 50.4	-0.3
CPUP	Villa Florida	147.36	264			PKPdf	07 28 50.4	-0.3
SIV	San Ignacio	147.37	284	PKPbc		PKPbc	07 28 53.4	-0.1
	comp=Z,102nm,1.0s,baz=102,slow=3.3,SNR=120							
CMBC	Cumbal	147.52	329	*e*P		PKiKP	07 29 00.5	+3.8
ETMB	Extrema	148.33	299	*e*P		PKPdf	07 28 52.7	0.0
OTAV	Otavalo	148.42	329	PKIKP		PKPdf	07 28 52.8	-0.7
OTAV				MLR		MLR		
	comp=Z,19μm,21.0s							
OTAV	Otavalo	148.42	329			PKPdf	07 28 52.8	-0.7
OTAV	Otavalo	148.42	329	IAMs_20		IAMs_20	08 36 57.3	
	comp=Z,19μm,21.0s							
OTAV	Otavalo	148.42	329	*e*P		PKPbc	07 28 56.7	-0.2
OTAV	Otavalo	148.42	329	*e*P		PKPdf	07 28 54.8	+1.3
LPA	La Plata	148.48	248	PKIKP		PKPdf	07 28 44.8	-7.5
LPA	La Plata	148.48	248	PKP		PKPbc	07 28 54.8	-1.1
LPA				SKIKP			07 32 22.3	
LPA				SKP			07 32 32.3	
LPA				PKS		PKSdf	07 32 38.3	+11
LPA				PPP		PPP	07 35 26.6	
LPA				SKIKS			07 35 49.0	
LPA				SDIFF			07 41 10.5	
LPA				PPS		PPS	07 45 06.6	
LPA				SS		SS	07 51 37.0	+2.6
LPA				SSS		SSS	07 57 17.3	
LPA				SSS		SSS	08 10 27.2	
MG02	Cerro Sombrero	148.93	210	IAMs_20		IAMs_20	08 33 41.5	
	comp=Z,16μm,20.0s							
GO10	Punta Arenas	149.44	208			PKiKP	07 28 58.6	-0.3
GO10				IAMs_20		IAMs_20	08 30 11.7	
	comp=Z,26μm,20.0s							
MG04	Isla Riesco	149.87	207	IAMs_20		IAMs_20	08 30 53.1	
	comp=Z,23μm,20.0s							
GO09	Cerro Castillo	151.36	209			PKPdf	07 28 56.3	-0.1
GO09				IAMs_20		IAMs_20	08 35 45.6	
	comp=Z,19μm,20.0s							
PAYG	Puerto Ayora	152.85	352	IAMs_20		IAMs_20	08 40 07.2	
	comp=Z,20μm,22.0s							
LPAZ	La Paz	153.49	290	PKP		PKPdf	07 29 00.9	-0.3
	comp=Z,11nm,1.0s,baz=38,slow=3.0,SNR=14							
LPAZ				PKPbc		PKiKP	07 29 09.7	+0.6
	comp=Z,21nm,0.9s,baz=57,slow=3.5,SNR=15							
LPAZ	La Paz	153.49	290	PKIKP		PKPdf	07 29 01.0	-0.3
LPAZ	La Paz	153.49	290	PKPdf		PKPdf	07 29 00.5	-0.8
LPAZ	La Paz	153.49	290	*e*P		PKPbc	07 29 05.6	-3.4
LPAZ	La Paz	153.49	290	*e*P		PKPdf	07 29 01.7	+0.4
TCA	Tanti	154.18	255	*e*P		PKPdf	07 29 00.7	-0.5
SLA	San Lorenzo	154.27	270	*e*P		PKPdf	07 28 59.5	-2.1
SLA				*e*P		pPKPdf	07 29 07.7	+0.8
ATAH	Atahualpa	154.72	321	PKP		PKPdf	07 29 03.3	+0.4
	comp=Z,6.8nm,0.7s,baz=359,slow=19,SNR=6.1							
ATAH				PKPbc		PKiKP	07 29 11.5	0.0
	comp=Z,14nm,0.8s,baz=347,slow=2.1,SNR=10							
ATAH				PKPab		PKPab	07 29 27.4	+1.3
	comp=Z,36nm,0.8s,baz=64,slow=3.0,SNR=11							
MNMC	Minye Minye	156.04	286			PKPdf	07 29 04.2	-0.2
MNMC				IAMs_20		IAMs_20	08 39 45.8	
	comp=Z,28μm,21.0s							
PB08	IPOC Station P	156.08	283	IAMs_20		IAMs_20	08 41 28.9	
	comp=Z,30μm,21.0s							
AP01	Chacalluta	156.34	288	IAMs_20		IAMs_20	08 45 18.4	
	comp=Z,22μm,20.0s							
LL02	Futaleuf	156.36	223	PKPdf		PKPdf	07 29 02.9	-0.8
LL02				IAMs_20		IAMs_20	08 35 27.2	
	comp=Z,19μm,22.0s							
PB11	IPOC Station P	156.36	284	IAMs_20		IAMs_20	08 40 52.2	
	comp=Z,21μm,21.0s							
PSGCX	Pisagua	156.69	285	IAMs_20		IAMs_20	08 43 33.1	
	comp=Z,19μm,20.0s							
PB01	IPOC Station P	156.71	281			PKPdf	07 29 04.7	-0.2
PB01				IAMs_20		IAMs_20	08 44 35.7	
	comp=Z,21μm,21.0s							
LVC	Limon Verde	156.72	277	PKP		PKPdf	07 29 05.8	+0.5
	comp=Z,3.1nm,0.6s,baz=107,slow=6.5,SNR=6.2							
LVC				PKPab		PKPab	07 29 31.7	-3.0
	comp=Z,20nm,0.8s,baz=323,slow=7.9,SNR=4.3							
LVC	Limon Verde	156.72	277	PKIKP		PKPdf	07 29 03.9	-1.4
LVC	Limon Verde	156.72	277	PKPdf		PKPdf	07 29 03.9	-1.4
LVC	Limon Verde	156.72	277	IAMs_20		IAMs_20	08 40 12.7	
	comp=Z,19μm,22.0s							
PLCA	Paso Flores	156.75	230	PKP		PKPdf	07 29 04.8	+0.4
	comp=Z,20nm,1.0s,baz=134,slow=3.5,SNR=22							
PLCA	Paso Flores	156.75	230	PKPdf		PKPdf	07 29 03.6	-0.8
PLCA	Paso Flores	156.75	230	*e*P		PKPdf	07 29 05.3	+0.9
PB09	IPOC Station P	156.76	279			PKPdf	07 29 04.7	-0.4
PB09				IAMs_20		IAMs_20	08 42 01.1	
	comp=Z,17μm,21.0s							
TA02	Huaiquique	156.97	284	IAMs_20		IAMs_20	08 40 56.5	
	comp=Z,20μm,22.0s							
TA01	Diego Aracena	157.13	283	IAMs_20		IAMs_20	08 45 36.8	
	comp=Z,20μm,21.0s							
LL01	San Ignacio de	157.15	225			PKPdf	07 29 02.6	-2.1
LL01				IAMs_20		IAMs_20	08 33 41.3	
	comp=Z,19μm,22.0s							
PATCX	Punta Patache	157.20	282	IAMs_20		IAMs_20	08 46 30.7	
	comp=Z,16μm,20.0s							
PB07	IPOC Station P	157.29	280	IAMs_20		IAMs_20	08 42 21.4	
	comp=Z,33μm,22.0s							
PB06	IPOC Station P	157.34	277	IAMs_20		IAMs_20	08 44 42.9	
	comp=Z,22μm,22.0s							
PB15	IPOC Station P	157.40	276	IAMs_20		IAMs_20	08 45 22.5	
	comp=Z,16μm,20.0s							
GO07	Milladeo Hill,	157.49	222	IAMs_20		IAMs_20	08 36 27.1	
	comp=Z,27μm,21.0s							
RTLL	Cerro Villicun	157.50	255	*e*P		PKPdf	07 29 02.4	-3.2
RTCV	Cerro Valdivia	157.53	253	*e*P		PKPdf	07 29 06.3	+0.7
NNA	Nana	157.54	311	PKP		PKPdf	07 29 05.5	-0.6
	comp=Z,6.9nm,0.9s,baz=360,slow=1.5,SNR=6.8							
NNA				PKPab		PKPab	07 29 38.7	+0.8
	comp=Z,103nm,1.0s,baz=352,slow=3.9,SNR=7.0							
NNA	Nana	157.54	311	IAMs_20		IAMs_20	08 45 10.1	
	comp=Z,17μm,20.0s							
LL07	Hotel Espejo d	157.54	223	PKPdf		PKPdf	07 29 03.2	-2.0
LL07						PKPab	07 29 38.6	+1.6
LL07				IAMs_20		IAMs_20	08 57 05.6	
	comp=Z,19μm,20.0s							
ZON	Zonda	157.66	254	PKIKP		PKPdf	07 29 04.6	-1.2
ZON	Zonda	157.66	254			PKPdf	07 29 04.6	-1.2
PB04	IPOC Station P	157.73	279	IAMs_20		IAMs_20	08 43 17.1	
	comp=Z,32μm,21.0s							
AC02	Maricunga	157.87	267	PKPdf		PKPdf	07 29 05.4	-1.4
LL04	Puerto Octay	157.91	228			PKPdf	07 29 05.2	-0.6
LL04				PKPab		PKPab	07 29 40.1	+1.3
RTLS	Leoncito	158

AGT	Agartala	6.15	127	*e*P		Pn	07 27 38.5	+3.3			
DDI	Dehra Dun	7.34	293	*e*P		Pn	07 27 53.8	+2.2			
DDI				*e*S		Sn	07 29 13.2	-1.4			
DDI				IAML			07 29 17.4				
	comp=N,4μm,0.4s										
DDI				IAML			07 29 19.2				
	comp=E,2μm,0.4s										
KOHI	KOHIMA	7.61	103	*e*P		Pn	07 27 56.2	+0.8			
KOHI				*e*S		Sn	07 29 19.7	-1.8			
MOKO	MOKOCHONG	7.82	98	*e*P		Pn	07 27 58.6	+0.3			
MOKO				*e*S		Sn	07 29 22.7	-3.8			
MOKO				IAML			07 29 30.3				
	comp=E,564nm,0.7s										
MOKO				IAML			07 29 31.7				
	comp=N,510nm,0.5s										
SMLA	Simla	8.34	296	*e*P		Pn	07 28 05.9	+0.6			
SMLA				*e*S		Sn	07 29 35.7	-3.3			
SMLA				IAML			07 29 38.0				
	comp=E,1μm,0.6s										
SMLA				IAML			07 29 38.8				
	comp=N,1μm,0.6s										
BHPL	Bhopal	8.84	242	*e*P		Pn	07 28 10.2	-2.0			
BHPL				*e*S		Sn	07 29 44.0	-7.4			
BHPL				IAML			07 29 50.1				
	comp=E,263nm,0.6s										
BHPL				IAML			07 29 52.7				
	comp=N,257nm,0.6s										
LKP	Lekhapani	8.85	90	*e*P		Pn	07 28 12.2	-0.1			
LKP				*e*S		Sn	07 29 46.4	-5.3			
DHRM	DHARAMSHALA	9.47	301	*e*P		Pn	07 28 20.2	-0.8			
DHRM				*e*S		Sn	07 30 00.6	-6.6			
DHRM				IAML			07 30 05.4				
	comp=E,1μm,0.8s										
DHRM				IAML			07 30 07.2				
	comp=N,2μm,0.7s										
HYB	Hyderabad	12.26	215	*i* P		Pn	07 28 58.0	-1.1			
NIL	Nilore	12.38	302	P		Pn	07 28 59.8	-1.0			
NIL	Nilore	12.38	302	Pn		Pn	07 28 59.8	-1.0			
KSH	Kashi	14.38	328	P		Pn	07 29 24.3	-3.8			
KSH				pmax		pmax					
	comp=N,160nm,2.1s										
CM33	Chiang Mai Arr	14.89	124	P		P	07 29 51.0	+10			
CM34	Chiang Mai Arr	15.02	123	P		P	07 29 49.0	+6.9			
CM13	Chiang Mai Arr	15.11	125	P		P	07 29 55.0	+12			
	comp=N,18nm,0.8s										
CM31	Chiang Mai Arr	15.12	125	Pn		Pn	07 29 37.3	-0.7			
CMAR	Chiang Mai Arr	15.12	125	Pn		Pn	07 29 36.0	-2.1			
	comp=N,0.4nm,0.3s,baz=304,slow=12,SNR=7.8										
CMAR	Chiang Mai Arr	15.12	125	P		Pn	07 29 36.0	-2.1			
CMAR	Chiang Mai Arr	15.12	125			Pn	07 29 37.3	-0.8			
CM35	Chiang Mai Arr	15.13	124	P		P	07 29 51.0	+7.7			
CM02	Chiang Mai Arr	15.13	125	P		P	07 29 52.0	+8.7			
	comp=N,24nm,1.0s										
CM05	Chiang Mai Arr	15.15	125	P		P	07 29 53.0	+9.4			
	comp=N,17nm,0.8s										
CM09	Chiang Mai Arr	15.16	125	P		P	07 29 52.0	+8.4			
	comp=N,25nm,1.0s										
CM04	Chiang Mai Arr	15.18	125	P		P	07 29 55.5	+12			
	comp=N,26nm,1.2s										
CM36	Chiang Mai Arr	15.19	124	P		P	07 29 55.0	+11			
KMI	Kunming	15.32	96	⇑P		Pn	07 29 42.0	+1.1			
KMI				pmax		pmax					
	comp=N,12nm,0.9s										
KBL	Kabul	15.95	299	P		Pn	07 29 47.3	-1.7			
KBL				pmax		pmax					
	comp=Z,57nm,1.0s										
KBL	Kabul	15.95	299	Pn		Pn	07 29 47.3	-1.7			
KBL				IAmb		IAmb	07 30 02.5				
	comp=Z,57nm,1.0s										
KDJ	Kajisay	16.06	336	P		Pn	07 29 49.5	-0.9			
KDJ				pmax		pmax					
	comp=Z,63nm,0.8s										
KDJ	Kajisay	16.06	336	Pn		Pn	07 29 49.5	-0.9			
KDJ				IAmb		IAmb	07 29 57.5				
	comp=Z,63nm,0.8s										
WMQ	Urumqi	16.16	5	*e*P		Pn	07 29 52.0	+0.5			
WMQ				pP		P	07 29 55.0	+0.3			
WMQ				pmax		pmax					
	comp=Z,110nm,1.3s										
SUKH	Sukhothai	16.25	126	P		P	07 30 02.0	+6.4			
	comp=Z,46nm,0.8s										
SHLS	Shalkode	16.28	343	*e*P		Pn	07 29 50.5	-2.6			
	baz=344										
SHLS	Shalkode	16.28	343	*e*P		Pn	07 29 50.5	-2.6			
UZB	Uzynbulak	16.39	342	*e*P		Pn	07 29 53.0	-1.6			
	baz=342										
UZB	Uzynbulak	16.39	342	*e*P		Pn	07 29 52.9	-1.6			
GTA	Gaotai	16.45	41	⇓P		P	07 29 58.0	0.0			
GTA				pP		sP	07 30 02.5	-3.4			
GTA				sP		pP	07 30 06.3	+2.8			
GTA				pmax		pmax					
	comp=Z,47nm,0.9s										
SATY	Saty	16.49	340	*e*P		Pn	07 29 53.9	-1.9			
	baz=340										
SATY	Saty	16.49	340	*e*P		Pn	07 29 53.8	-1.9			
BOOM	Boomskoye usch	16.84	334	P		Pn	07 29 59.7	-0.5			
BOOM				pmax		pmax					
	comp=Z,80nm,1.4s										
BOOM	Boomskoye usch	16.84	334	Pn		Pn	07 29 59.7	-0.5			
TNSS	Tian-Shan	16.94	337	*e*P		Pn	07 29 59.2	-2.5			
	baz=337										
TNSS	Tian-Shan	16.94	337	*e*P		Pn	07 29 59.2	-2.5			
MDOK	Medeo	17.02	337	*e*P		Pn	07 30 00.7	-1.8			
	baz=337										
MDOK	Medeo	17.02	337	*e*P		Pn	07 30 00.6	-1.8			
AAA	Alma-Ata	17.10	337	*e*P		Pn	07 30 02.3	-1.1			
	baz=337										
AAA	Alma-Ata	17.10	337	*e*P		Pn	07 30 02.3	-1.1			
LZH	Lanzhou	17.38	57	⇓P		P	07 30 09.0	+0.7			
LZH				pP		pP	07 30 11.8	-2.0			
LZH				sP		sP	07 30 14.5	-1.8			
LZH				pmax		pmax					
	comp=Z,58nm,1.0s										
UTHA	Uthaitani	17.44	131	P		P	07 30 15.8	+7.0			
	comp=Z,44nm,0.8s										
BTK	Batken	17.54	319	P		Pn	07 30 07.5	-1.4			
BTK				pmax		pmax					
	comp=Z,115nm,1.2s										
BTK	Batken	17.54	319	Pn		Pn	07 30 07.5	-1.4			
BTK				IAmb		IAmb	07 30 15.4				
	comp=Z,115nm,1.2s										
AAK	Ala-Archa	17.55	331	P		Pn	07 30 08.4	-0.8			
AAK				pmax		pmax					
	comp=Z,62nm,1.3s										
AAK	Ala-Archa	17.55	331			Pn	07 30 08.4	-0.8			
SGDS	Sogindy	18.17	333	*e*P		Pn	07 30 15.4	-1.3			
	baz=333										
SGDS	Sogindy	18.17	333	*e*P		Pn	07 30 15.3	-1.3			
TDK	Taldyqorghan	18.28	343	*e*P		Pn	07 30 16.4	-1.5			
	comp=Z,70nm,0.8s,baz=343										
TDK	Taldyqorghan	18.28	343	*e*P		Pn	07 30 16.4	-1.5			
TDK				pmax		pmax					
	comp=Z,70nm,0.8s										
GYA	Guiyang	18.55	89	*e*P		Pn	07 30 27.5	+6.1			
GYA				pmax		pmax					
	comp=Z,7.0nm,0.6s										
NONG	Nongkai	18.55	117	P		Pn	07 30 32.0	+11			
MK31	Makanchi Array	19.28	353	P		P	07 30 28.7	-0.3			
MK31				pmax		pmax					
	comp=Z,36nm,0.8s										
MK31	Makanchi Array	19.28	353			P	07 30 28.7	-0.3			
MK31				IAmb		IAmb	07 30 30.1				
	comp=Z,36nm,0.8s										
MKAR	Makanchi Array	19.28	353	P		P	07 30 29.1	+0.2			
	comp=Z,9.3nm,0.3s,baz=177,slow=11,SNR=50										
MKAR	Makanchi Array	19.28	353	P		P	07 30 28.9	-0.1			
MAKZ	Makanchi	19.33	352	P		P	07 30 29.7	+0.2			
MAKZ				pmax		pmax					
	comp=Z,33nm,0.7s										
MAKZ	Makanchi	19.33	352	P		P	07 30 29.7	+0.2			
MAKZ				IAmb		IAmb	07 30 32.4				
	comp=Z,32nm,0.7s										
IUG	Iuzhnay	19.37	322	*e*P		P	07 30 28.8	-1.4			
	baz=322										
IUG	Iuzhnay	19.37	322	*e*P		P	07 30 28.7	-1.4			
CHM	Chimkent	19.72	322	*e*P		P	07 30 32.6	-1.2			
	baz=322										
CHM	Chimkent	19.72	322	*e*P		P	07 30 32.6	-1.2			
KK31	Karatay Array	19.79	325	P		P	07 30 34.0	-0.5			
KK31				pmax		pmax					
	comp=Z,51nm,1.5s										
KK31	Karatay Array	19.79	325	P		P	07 30 34.0	-0.5			
KKAR	Karatay Array	19.79	325	P		P	07 30 34.5	-0.1			
KKAR				pmax		pmax					
	comp=Z,51nm,1.5s										
KKAR	Karatay Array	19.79	325	P		P	07 30 34.5	-0.1			
KKAR	Karatay Array	19.79	325			P	07 30 34.0	-0.5			
SRAK	Srakaew	20.30	129	P		Pn	07 30 54.1	+12			
PATY	Pattaya	20.30	133	P		Pn	07 30 47.3	+5.0			
	comp=Z,46nm,0.7s										
XAN	Xi'an	20.74	67	P		P	07 30 45.8	+0.8			
XAN				pP		sP	07 30 49.5	-3.6			
XAN				pmax		pmax					
	comp=Z,21nm,0.6s										
ENH	Enshi	20.80	77			P	07 30 45.8	+0.1			
ENH				IAmb		IAmb	07 31 02.2				
	comp=Z,47nm,0.9s										
PALK	Pallekele	20.90	195	P		Pn	07 30 51.7	+2.4			
	comp=Z,17nm,0.6s,baz=110,slow=13,SNR=5.9										
PALK	Pallekele	20.90	195	P		P	07 30 47.3	+0.5			
PALK				pmax		pmax					
	comp=Z,103nm,1.4s										
PALK	Pallekele	20.90	195	P		P	07 30 47.3	+0.5			
PALK				IAmb		IAmb	07 30 56.2				
	comp=Z,103nm,1.4s										
UBPT	Khong Chiam	21.98	120	P		P	07 31 06.8	+8.4			
UBPT	Khong Chiam	21.98	120	P		P	07 30 58.3	-0.1			
DGZ	Jazzator, Alta	22.01	3	*i* P		P	07 30 59.4	+0.8			
DGZ				pmax		pmax					
	comp=Z,35nm,0.9s										
MNCI	Minicoy	22.80	215	P		P	07 31 08.0	+0.8			
MNCI				IAmb		IAmb	07 31 18.1				
	comp=Z,89nm,1.3s										
KURBB	Kurchatov Arra	23.57	348	P		P	07 31 15.6	+0.9			
	comp=Z,25nm,0.6s,baz=166,slow=10.0,SNR=42										
KURBB				ScP		ScP	07 38 35.0	-2.0			
	comp=Z,1.2nm,0.9s,baz=165,slow=1.6,SNR=5.4										
KURK	Kurchatov	23.65	348	P		P	07 31 15.6	+0.2			
BRZS	Berezniki	24.45	339	*e*P		P	07 31 21.1	-1.9			
	baz=339										
BRZS	Berezniki	24.45	339	*e*P		P	07 31 21.0	-1.9			
HHC	Hu-ho-hao-te	24.85	51	*e*P		P	07 31 25.8	-1.0			
WSAR	Wadi Sarin	24.98	266	P		P	07 31 30.0	+2.0			
	comp=Z,6.5nm,0.6s,baz=129,slow=8.5,SNR=6.7										
GEYT	Alibeck	25.39	301	P		P	07 31 33.8	+2.1			
	comp=Z,2.6nm,0.5s,baz=104,slow=13,SNR=4.9										
GEYT	Alibeck	25.39	301	P		P	07 31 33.1	+1.4			
SONM	Songino Array	25.69	33	P		P	07 31 35.5	+1.1			
	comp=Z,38nm,0.8s,baz=222,slow=9.5,SNR=55										
SONM	Songino Array	25.69	33	P		P	07 31 34.6	+0.3			
SONM				IAmb		IAmb	07 31 42.9				
	comp=Z,39nm,0.8s										
ULN	Ulaanbaatar	26.03	34	*ce*P		P	07 31 38.6	+1.1			
ULN				pmax		pmax					
	comp=Z,37nm,0.6s										
ULN	Ulaanbaatar	26.03	34	P		P	07 31 37.0	-0.6			
ZAA0	Zalesovo Array	26.24	359	P		P	07 31 38.9	-0.2			
ZAA0				IAmb		IAmb	07 31 42.4				
	comp=Z,33nm,0.7s										
ZALV	Zalesovo Beam	26.24	359	P		P	07 31 39.5	+0.4			
	comp=Z,43nm,0.6s,baz=182,slow=9.3,SNR=35										
ZALV	Zalesovo Beam	26.24	359	P		P	07 31 39.2	0.0			
ZAK	Zakamensk	26.25	26	*e*P		P	07 31 39.6	+0.2			
ZAK				pmax		pmax					
	comp=Z,18nm,1.5s										
KULM	Kulim	26.34	145	P		P	07 31 40.7	+0.3			
KULM				IAmb		IAmb	07 31 48.1				
	comp=Z,14nm,0.7s										
MOY	Mondy	26.51	21	*e*P		P	07 31 46.0	+4.2			
IPM	Ipoh	27.22	145	P		P	07 31 48.1	-0.2			
IPM				IAmb		IAmb	07 31 49.7				
	comp=Z,19nm,1.1s										
BVAR	Borovoye Array	27.80	340	P		P	07 31 53.4	+0.2			
	comp=Z,2.5nm,0.5s,baz=140,slow=16,SNR=12										
BRVK	Borovoye	27.86	340	*i* P		P	07 31 54.2	+0.5			
BRVK				pmax		pmax					
	comp=Z,7.0nm,1.0s										
BRVK	Borovoye	27.86	340	P		P	07 31 52.9	-0.8			
GSI	Gunungsitoli	28.53	155	P		P	07 31 59.7	-0.3			
GSI				IAmb		IAmb	07 32 11.5				
	comp=Z,29nm,0.8s										
NJ2	Nanjing	28.85	73	*e*P		P	07 32 03.3	+0.5			
NJ2				pmax		pmax					
	comp=Z,45nm,0.6s										
AB31	Akbulak array	29.34	324	*e*P		P	07 32 07.9	+0.9			
ABKAR	Akbulak array	29.34	324	P		P	07 32 07.2	+0.2			
ABKAR	Akbulak array	29.34	324	P		P	07 32 07.5	+0.5			
ABKAR				IAmb		IAmb	07 32 08.9				
	comp=Z,23nm,0.6s										
AKTO	Aktyubinsk	31.05	325	P		P	07 32 23.0	+0.9			
	comp=Z,8.7nm,0.4s,baz=118,slow=7.5,SNR=10										
AKTO	Aktyubinsk	31.05	325	P		P	07 32 23.0	+0.9			
SOCY	Socotra	33.59	249	P		P	07 32 43.8	-1.0			
HIA	Hailar	33.73	41	*i* P		P	07 32 47.5	+1.9			
HIA				pmax		pmax					
	comp=Z,8.0nm,0.9s										
ARU	Arti	34.71	333	*c i*P		P	07 32 54.0	+0.1			
ARU							07 34 06.6				
ARU				S		S	07 38 23.3	+0.2			
ARU				pmax		pmax					
	comp=Z,115nm,2.3s										
ARU	Arti	34.71	333	P		P	07 32 54.4	+0.5			
KS19	Wonju Array Si	36.44	64	P		P	07 33 09.4	+0.4			
KSRS	Korea Array	36.48	64	P		P	07 33 08.2	-1.2			
	comp=Z,2.2nm,0.6s,baz=281,slow=8.8,SNR=5.1										
RAYN	Ar Rayn	36.54	273	P		P	07 33 10.5	+0.4			
RAYN				pmax		pmax					
	comp=Z,13nm,1.5s										
RAYN	Ar Rayn	36.54	273	P		P	07 33 10.5	+0.4			
ZEI	Tsey	37.05	305	*e*P		P	07 33 15.2	+0.7			
ZEI				pmax		pmax					
	comp=Z,7.0nm,0.7s										
JOW	Kunigami	37.56	81	P		P	07 33 18.5	-0.2			
BELG	Belogornoye	37.63	322	*i* P		P	07 33 19.2	+0.3			
BELG				pmax		pmax					
	comp=Z,3.0nm,0.9s										
KBZ	Khabaz	37.94	306	P		P	07 33 22.9	+1.2			
	comp=Z,1.7nm,0.8s,baz=83,slow=8.1,SNR=1.5										
KIV	Kislovodsk	38.13	307	*e*P		P	07 33 23.7	+0.2			
KIV				pmax		pmax					
	comp=Z,22nm,1.0s										
KIRV	Kirov	39.89	331	P		P	07 33 38.8	+1.0			
	comp=Z,27nm,0.5s,baz=82,slow=2.8,SNR=9.0										
KIRV	Kirov	39.89	331	*ce*P		P	07 33 38.0	+0.2			
SOC	Sochi	40.20	306	*e*P		P	07 33 44.2	+3.6			
SOC				*e*			07 35 18.5				
SOC				*e*S		S	07 39 53.5	+6.8			
SOC				*e*S		ScP	07 40 03.9	+31			
SOC				*e*SSS		SSS	07 43 11.7				
SOC				pmax		pmax					
	comp=Z,4.0nm,0.4s										
SOC				MLR		MLR					
	comp=Z,8μm,16.0s										
USA0B	Ussuriysk Arra	40.24	53	P		P	07 33 40.0	-0.9			
USA0B				pmax		pmax					
	comp=Z,2.0nm,0.6s										
USA0B	Ussuriysk Arra	40.24	53	P		P	07 33 40.0	-0.9			
USRK	Ussuriysk Ar.	40.24	53	P		P	07 33 41.0	0.0			
	comp=Z,3.7nm,0.5s,baz=259,slow=8.2,SNR=19										
USRK	Ussuriysk Ar.	40.24	53	P		P	07 33 40.8	-0.1			
USRK	Ussuriysk Ar.	40.24	53	P		P	07 33 40.8	-0.1			
KLR	Kul'dur	41.07	46	P		P	07 33 48.2	+0.4			
	comp=Z,5.8nm,0.8s,baz=272,slow=9.7,SNR=5.7										
KLR	Kul'dur	41.07	46	*ce*P		P	07 33 47.0	-0.8			
KLR				pmax		pmax					
	comp=Z,225nm,6.1s										
NRIK	Noril'sk	41.69	1	P		P	07 33 53.5	+0.9			
	comp=Z,42nm,0.5s,baz=174,slow=6.3,SNR=66										
NRIK	Noril'sk	41.69	1	*ce*P		P	07 33 53.6	+1.1			
NRIK				pmax		pmax					
	comp=Z,43nm,0.9s										
NRIK	Noril'sk	41.69	1	P		P	07 33 53.4	+0.9			
JWT	Wachi	42.54	67	P		P	07 34 00.6	+0.6			
JWT				IAmb		IAmb	07 34 10.5				
	comp=Z,15nm,1.0s										
ATD	Arta Tunnel	43.36	257	P		P	07 34 08.0	+1.1			
	comp=Z,7.1nm,0.6s,baz=90,slow=20										
BZK	Bozkurt	44.26	303	⇑P		P	07 34 15.9	+2.2			
BRTR	Keskin Array B	44.52	300	P		P	07 34 17.1	+1.0			
	comp=Z,0.5nm,0.4s,baz=116,slow=8.3,SNR=2.8										
MJAR	Matsushiro Arr	44.72	65	P		P	07 34 18.0	+0.4			
	comp=Z,1.9nm,0.7s,baz=278,slow=9.8,SNR=7.4										
OBN	Obninsk	44.73	322	*ce*P		P	07 34 17.7	+0.5			
OBN				pmax		pmax					
	comp=Z,63nm,1.7s										
YAK	Yakutsk	44.81	28	P		P	07 34 17.5	-0.4			
	comp=Z,15nm,0.6s,baz=229,slow=3.1,SNR=5.5										
YAK	Yakutsk	44.81	28	*ce*P		P	07 34 18.4	+0.6			
YAK				pmax		pmax					
	comp=Z,31nm,0.8s										
YAK	Yakutsk	44.81	28	P		P	07 34 18.1	+0.3			
KLMR	Klimovskoe	45.36	330	*e*P		P	07 34 20.8	-1.4			
KLMR				*e*			07 36 07.8				
KLMR				pmax		pmax					
	comp=Z,46nm,1.4s										
KLMR	Klimovskoe	45.36	330	*e*P		P	07 34 20.8	-1.4			
KLMR				AMP			07 34 25.5				
	comp=Z,46nm,1.4s										
KLMR				*e*PP		PP	07 36 07.8	-0.5			
ELL	Elmali	47.63	296	P		P	07 34 40.5	-0.1			
ELL				pmax		pmax					
	comp=Z,84nm,0.7s										
ELL	Elmali	47.63	296	P		P	07 34 40.5	-0.1			
AKASG	Malin Array Be	48.19	315	P		P	07 34 44.2	-0.3			
	comp=Z,3.3nm,0.5s,baz=81,slow=6.7,SNR=12										
AKASG	Malin Array Be	48.19	315	P		P	07 34 45.1	+0.6			
AKBB	Malin Array Si	48.19	315	P		P	07 34 44.3	-0.2			
AKBB				pmax		pmax					
	comp=Z,10.0nm,0.8s										
AKBB	Malin Array Si	48.19	315	P		P	07 34 44.2	-0.2			
AKBB				IAmb		IAmb	07 34 51.4				
	comp=Z,9.7nm,0.8s										
ERM	Erimo	48.28	57	P		P	07 34 45.4	+0.1			
ERM				pmax		pmax					
	comp=Z,36nm,1.0s										
ERM	Erimo	48.28	57	P		P	07 34 45.4	+0.1			
SORM	Soroca	48.54	311	⇑P		P	07 34 47.5	+0.3			
SORM	Soroca	48.54	311	⇑P		P	07 34 47.6	+0.3			
CFR	Carcaliu	48.59	307	⇓P		P	07 34 48.8	+1.2			
CFR	Carcaliu	48.59	307	⇓P		P	07 34 48.8	+1.2			
MNK	Minsk	49.49	319	*i* P		P	07 34 51.5	-3.0			
	comp=E,5.0nm,1.1s										
MNK				*i* P		P	07 34 51.5	-3.0			
	comp=N,28nm,1.2s										
MNK				*i* P		P	07 34 51.5	-3.0			
	comp=Z,14nm,0.7s										
MNK				*i* PcP		PcP	07 36 13.9	-2.4			
MNK				*i* PP		PP	07 36 45.7	-2.9			
MNK				*i* PPP		PPP	07 37 38.1				
MNK				*i* S		S	07 41 56.0	-5.1			
MNK				*i* SS		SS	07 45 29.4	-3.4			
MNK				*i* SSS		SSS	07 46 48.7				
MNK				*i* LR		LR	07 55 44.5				
MNK				*i* LRM		MLR	07 58 05.6				
	comp=Z,9μm,17.2s										
MNK				*i* LRM		MLR	07 58 11.0				
	comp=N,5μm,20.8s										
MNK				*i* LRM		MLR	07 58 21.9				
	comp=E,1μm,18.1s										
VRI	Vrincioaia	49.58	308	⇑P		P	07 34 55.5	+0.2			
VRI	Vrincioaia	49.58	308	⇑P		P	07 34 55.5	+0.2			
PLOR	Plostina	49.64	308	⇑P		P	07 34 56.7	+0.9			
PLOR	Plostina	49.64	308	⇑P		P	07 34 56.7	+0.9			
TIXI	Tiksi	49.91	16	P		P	07 34 57.3	-0.1			
TIXI				pmax		pmax					
	comp=Z,13nm,0.6s										
TIXI	Tiksi	49.91	16	P		P	07 34 57.2	-0.1			
TIXI				IAmb		IAmb	07 34 58.0				
	comp=Z,13nm,0.6s										
MLR	Muntele Rosu	50.13	308	⇓P		P	07 35 00.3	+0.7			
MLR	Muntele Rosu	50.13	308	P		P	07 35 00.0	+0.3			
MLR				pmax		pmax					
	comp=Z,14nm,0.8s										
MLR	Muntele Rosu	50.13	308	P		P	07 34 60.0	+0.3			
MLR				IAmb		IAmb	07 35 09.5				
	comp=Z,14nm,0.8s										
LVZ	Lovozero	50.36	337	P		P	07 35 01.2	+0.3			
LVZ				pmax		pmax					
	comp=Z,57nm,1.3s										
LVZ	Lovozero	50.36	337	P		P	07 35 01.2	+0.3			
DOPR	Dopca	50.52	308	⇑P		P	07 35 03.1	+0.6			
IIGN	Ignalina	50.56	320	*e*P		P	07 35 03.0	+0.4			
BURAR	Bucovina Array	50.63	310	⇑P		P	07 35 03.5	+0.1			
BURAR	Bucovina Array	50.63	310	⇑P		P	07 35 03.5	+0.1			
BURAR	Bucovina Array	50.63	310	P		P	07 35 03.4	0.0			
BUR08	Bucovina Ar. S	50.64	310	P		P	07 35 04.0	+0.5			
BUR08				IAmb		IAmb	07 35 19.8

LOF	**Lofoten**	58.04	335	*e*P		**P**	**07 35 56.2**	**-0.6**
KONS	**Konsvik**	58.07	333	*e*P		**P**	**07 35 57.4**	**+0.3**
GEC2	**GERESS Array S**	58.24	312	P		**P**	**07 35 59.0**	**+0.3**
GERES	**GERESS Array B**	58.24	312	P		**P**	**07 35 58.7**	**-0.1**
	comp=N,0.5nm,0.4s,baz=84,slow=7.0,SNR=7.3							
KHC	**Kasperske Hory**	58.29	313	*e*P		**P**	**07 35 59.1**	**+0.1**
KHC	**Kasperske Hory**	58.29	313	*e*P		**P**	**07 35 59.1**	**+0.1**
NSS	**Namsos**	58.46	331	*e*P		**P**	**07 36 00.2**	**+0.3**
NC405	**NORSAR Array S**	58.56	327	P		**P**	**07 36 00.2**	**-0.4**
NC602	**NORSAR Array S**	58.65	326	P		**P**	**07 36 01.5**	**+0.3**
NC602	**NORSAR Array S**	58.65	326	*e*P		**P**	**07 36 01.6**	**+0.4**
NC300	**NORSAR Array S**	58.70	327	P		**P**	**07 36 01.6**	**0.0**
NC303	**NORSAR Array S**	58.73	327	P		**P**	**07 36 01.5**	**-0.3**
NB201	**NORSAR Array S**	58.77	327	P		**P**	**07 36 01.7**	**-0.3**
NB201				IAmb		IAmb	07 36 07.2	
	comp=Z,3.6nm,0.6s							
NB2	**NORSAR Subarra**	58.81	327	P		**P**	**07 36 01.5**	**-0.9**
	baz=91,slow=6.9							
NOA	**NORSAR Array B**	58.81	327	P		**P**	**07 36 01.9**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=88,slow=7.0,SNR=12							
HSPB	**Hornsund (broa**	58.82	346	*e*P		**P**	**07 36 02.9**	**+0.8**
SPA0	**Spitsbergen Ar**	58.91	347	P		**P**	**07 36 03.6**	**+0.8**
PSA00	**Pilbara Seismi**	58.96	143			**S**	**07 44 11.4**	**+1.9**
NC204	**NORSAR Array S**	59.02	327	*e*P		**P**	**07 36 03.6**	**-0.3**
STAL	**STALIGIAL**	59.27	309	P		**P**	**07 36 05.6**	**-0.2**
STAL				IAmb		IAmb	07 36 16.6	
	comp=Z,14nm,0.9s							
NRCA	**Norcia**	59.58	305	P		**P**	**07 36 08.4**	**+0.3**
NRCA				IAmb		IAmb	07 36 19.1	
	comp=Z,9.0nm,0.8s							
FITZ	**Fitzroy Crossi**	59.62	135	P		**P**	**07 36 07.2**	**-1.3**
	comp=Z,3.2nm,0.7s,baz=345,slow=11							
FITZ	**Fitzroy Crossi**	59.62	135	P		**P**	**07 36 08.0**	**-0.5**
FITZ				IAmb		IAmb	07 36 26.7	
	comp=Z,7.6nm,1.1s							
ABPO	**Ambohimpanom**	59.64	223			**S**	**07 44 21.8**	**+3.0**
KONO	**Kongsberg**	59.67	325	*e*P		**P**	**07 36 08.6**	**+0.3**
DOMB	**Dombas**	59.80	328	*e*P		**P**	**07 36 09.0**	**-0.2**
KNRA	**Kununurra**	59.88	131	P		**P**	**07 36 10.4**	**+0.1**
KNRA				IAmb		IAmb	07 36 21.1	
	comp=Z,19nm,1.1s							
MURB	**Monte Urbino**	59.92	306	P		**P**	**07 36 10.5**	**+0.1**
MURB				IAmb		IAmb	07 36 20.2	
	comp=Z,19nm,1.1s							
KBS	**Kingsbay**	59.94	348	*e*P		**P**	**07 36 10.6**	**+0.8**
CTI	**Castel Tesino**	60.03	309	P		**P**	**07 36 11.2**	**+0.1**
CTI				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CTI	**Castel Tesino**	60.03	309	P		**P**	**07 36 11.2**	**+0.1**
CTI				IAmb		IAmb	07 36 21.7	
	comp=Z,5.0nm,0.8s							
BILL	**Bilibino**	61.05	25	*i* P		**P**	**07 36 16.6**	**-1.0**
BILL				*i*			07 36 28.0	
BILL				pmax		pmax		
	comp=Z,8.0nm,1.2s							
BLS5	**Blasjo**	61.28	325	*e*P		**P**	**07 36 19.0**	**-0.4**
VOI	**Vohitsoka**	62.12	221	P		**P**	**07 36 25.6**	**+0.1**
MORW	**Morawa**	63.40	151	P		**P**	**07 36 33.4**	**-0.4**
MORW				IAmb		IAmb	07 36 42.5	
	comp=Z,14nm,1.2s							
KEST	**Kesra**	64.11	298	P		**P**	**07 36 39.3**	**+0.7**
	comp=Z,5.6nm,0.6s,baz=77,slow=1.9,SNR=10.0							
KEST	**Kesra**	64.11	298	P		**P**	**07 36 38.8**	**+0.1**
NOR	**Nord**	64.60	351	*i* P		**P**	**07 36 40.8**	**-0.3**
NOR				IAmb		IAmb	07 36 41.5	
	comp=Z,3.4nm,0.7s							
NOR	**Nord**	64.60	351	*i* P		**P**	**07 36 40.7**	**-0.3**
NOR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
DAG	**Danmarks Havn**	66.51	346	*i* P		**P**	**07 36 54.0**	**+0.5**
DAG				IAmb		IAmb	07 36 56.4	
	comp=Z,3.9nm,1.0s							
DAG	**Danmarks Havn**	66.51	346	*i* P		**P**	**07 36 53.9**	**+0.5**
DAG				pmax		pmax		
	comp=Z,4.0nm,1.0s							
WB0	**Warramunga Arr**	66.56	130	P		**P**	**07 36 55.1**	**+0.6**
WRA	**Warramunga Arr**	66.64	130	P		**P**	**07 36 55.7**	**+0.6**
	comp=Z,11nm,0.5s,baz=323,slow=6.5,SNR=95							
WRA	**Warramunga Arr**	66.64	130	P		**P**	**07 36 55.4**	**+0.3**
WRA	**Warramunga Arr**	66.64	130	P		**P**	**07 36 55.4**	**+0.3**
WRAB	**Tennant Creek**	66.64	130	*ce* P		**P**	**07 36 56.1**	**+1.0**
WRAB				pmax		pmax		
	comp=Z,8.0nm,0.8s							
WRAB	**Tennant Creek**	66.64	130	P		**P**	**07 36 56.0**	**+0.9**
WB2	**Warramunga Arr**	66.65	130	P		**P**	**07 36 55.8**	**+0.7**
WR0	**Warramunga Arr**	66.79	130	P		**P**	**07 36 56.4**	**+0.4**
WR0				IAmb		IAmb	07 36 57.2	
	comp=Z,8.9nm,0.6s							
NWAO	**Narrogin (SRO)**	67.25	152	P		**P**	**07 36 57.8**	**-0.9**
NWAO				pmax		pmax		
	comp=Z,12nm,0.9s							
NWAO	**Narrogin (SRO)**	67.25	152	P		**P**	**07 36 57.8**	**-0.9**
NWAO				IAmb		IAmb	07 37 06.9	
	comp=Z,12nm,0.8s							
AS31	**Alice Springs**	68.94	133	P		**P**	**07 37 10.1**	**+0.6**
ASAR	**Alice Springs**	68.94	133	P		**P**	**07 37 10.1**	**+0.5**
	comp=Z,6.2nm,0.6s,baz=315,slow=6.3,SNR=83							
ASAR	**Alice Springs**	68.94	133	P		**P**	**07 37 09.7**	**+0.1**
ASAR	**Alice Springs**	68.94	133	P		**P**	**07 37 09.7**	**+0.1**
LSZ	**Lusaka**	70.35	240	P		**P**	**07 37 18.7**	**+0.2**
LSZ				pmax		pmax		
	comp=Z,8.0nm,0.7s							
LSZ	**Lusaka**	70.35	240	P		**P**	**07 37 18.7**	**+0.2**
LSZ				IAmb		IAmb	07 37 19.5	
	comp=Z,8.2nm,0.7s							
NEEM	**North Greenlan**	71.98	351	*i* P		**P**	**07 37 28.2**	**+0.5**
NEEM				IAmb		IAmb	07 37 35.0	
	comp=Z,18nm,0.7s							
A21K	**Barrow**	72.20	17	P		**P**	**07 37 29.1**	**+0.5**
A21K				IAmb		IAmb	07 37 34.8	
	comp=Z,12nm,1.2s							
A21K	**Barrow**	72.20	17	P			07 37 29.2	
	baz=304							
EUNU	**Eureka**	72.39	359	P		**P**	**07 37 30.5**	**+0.7**
EUNU				IAmb		IAmb	07 37 35.6	
	comp=Z,8.3nm,1.1s							
ESDC	**Sonseca Array**	72.80	306	P		**P**	**07 37 34.2**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=56,slow=5.7,SNR=8.7							
ANM	**Nome**	72.91	25	P			07 37 34.4	
	baz=299							
PAB	**San Pablo**	73.12	306	P		**P**	**07 37 34.3**	**-0.6**
PAB				pmax		pmax		
	comp=Z,12nm,1.3s							
PAB	**San Pablo**	73.12	306	P		**P**	**07 37 34.3**	**-0.6**
PAB				IAmb		IAmb	07 37 38.2	
	comp=Z,12nm,1.3s							
SUMG	**Summit**	73.14	345	*i* P		**P**	**07 37 35.3**	**+0.5**
SUMG				IAmb		IAmb	07 37 39.7	
	comp=Z,4.4nm,1.1s							
SUMG	**Summit**	73.14	345	*i* P		**P**	**07 37 35.2**	**+0.5**
SUMG				pmax		pmax		
	comp=Z,4.0nm,1.1s							
TULEG	**Thule**	74.84	354	*i* P		**P**	**07 37 43.7**	**-0.4**
TULEG				IAmb		IAmb	07 37 49.2	
	comp=Z,6.3nm,0.7s							
TULEG	**Thule**	74.84	354	P		**P**	**07 37 43.8**	**-0.4**
TULEG				IAmb		IAmb	07 37 51.8	
	comp=Z,31nm,1.5s							
ICESG	**Greenland Ices**	75.73	342	*i* P		**P**	**07 37 50.3**	**+0.4**
ICESG				IAmb		IAmb	07 37 56.4	
	comp=Z,16nm,0.6s							
TOLK	**Toolik Lake Re**	75.76	18	P		**P**	**07 37 49.7**	**0.0**
TOLK				IAmb		IAmb	07 38 02.1	
	comp=Z,7.4nm,0.8s							
TOLK	**Toolik Lake Re**	75.76	18	P			07 37 50.7	
	baz=311							
COLD	**Coldfoot**	76.51	19	P			07 37 54.8	
	baz=311							
BBOO	**Buckleboo**	76.77	138	P		**P**	**07 37 56.0**	**+0.2**
TTA	**Tatalina**	77.29	24	P		**P**	**07 37 59.6**	**+1.1**
TTA				pmax		pmax		
	comp=Z,10.0nm,1.4s							
TTA	**Tatalina**	77.29	24	P		**P**	**07 37 59.6**	**+1.1**
TTA				IAmb		IAmb	07 38 06.5	
	comp=Z,10.0nm,1.4s							
TTA	**Tatalina**	77.29	24	P			07 37 58.4	
	baz=307							
MLY	**Manley**	77.79	21	P		**P**	**07 38 01.9**	**+0.8**
MLY				IAmb		IAmb	07 38 11.8	
	comp=Z,9.6nm,1.0s							
MLY	**Manley**	77.79	21	P			07 38 02.1	
	baz=311							
RES	**Resolute Bay**	77.88	0	P		**P**	**07 38 00.2**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=247,slow=17,SNR=1.3							
RES	**Resolute Bay**	77.88	0	P		**P**	**07 38 01.5**	**+0.1**
	comp=Z,3.0nm,1.0s							
RES	**Resolute Bay**	77.88	0	P		**P**	**07 38 01.5**	**+0.1**
CHUM	**Lake Minchumin**	78.01	23	P			07 38 03.0	
	baz=310							
I23K	**Minto, Yukon-K**	78.15	21	P		**P**	**07 38 03.7**	**+0.6**
I23K	**Minto, Yukon-K**	78.15	21	P			07 38 03.4	
	baz=312							
LBTB	**Lobatse**	78.21	234	P		**P**	**07 38 03.9**	**-0.2**
LBTB				pmax		pmax		
	comp=Z,15nm,0.9s							
LBTB	**Lobatse**	78.21	234	P		**P**	**07 38 03.9**	**-0.2**
LBTB				IAmb		IAmb	07 38 05.5	
	comp=Z,15nm,0.9s							
BPAW	**Bear Paw Mtn.**	78.32	22	P		**P**	**07 38 04.8**	**+0.7**
BPAW				IAmb		IAmb	07 38 12.5	
	comp=Z,6.2nm,0.8s							
BPAW	**Bear Paw Mtn.**	78.32	22	P			07 38 04.9	
	baz=311							
NEA2	**Nenana**	78.62	21	P		**P**	**07 38 06.1**	**+0.4**
NEA2				IAmb		IAmb	07 38 13.6	
	comp=Z,12nm,0.8s							
NEA2	**Nenana**	78.62	21	P			07 38 06.0	
	baz=312							
MDM	**Murphy Dome**	78.63	21	P		**P**	**07 38 06.3**	**+0.5**
MDM				IAmb		IAmb	07 38 17.0	
	comp=Z,9.4nm,1.0s							
PPLA	**Purkeypile**	78.69	23	P		**P**	**07 38 06.5**	**+0.2**
PPLA				IAmb		IAmb	07 38 20.1	
	comp=Z,7.5nm,0.8s							
PPLA	**Purkeypile**	78.69	23	P			07 38 06.6	
	baz=310							
POKR	**Poker Plat Res**	78.77	20	P			07 38 07.4	
	baz=314							
TCOL	**CIGO, UAF Yank**	78.81	21	P			07 38 07.2	
	baz=313							
TORD	**Torodi Ar. Bea**	78.94	279	P		**P**	**07 38 06.8**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=59,slow=3.9,SNR=11							
TORD	**Torodi Ar. Bea**	78.94	279	P		**P**	**07 38 07.8**	**-0.5**
CCB	**Clear Creek Bu**	78.98	21	P		**P**	**07 38 07.7**	**+0.1**
TRF	**Thorofare Moun**	78.98	22	P			07 38 09.2	
	baz=311							
PRP	**Porcupine Dome**	79.06	19	P		**P**	**07 38 09.5**	**+1.2**
PRP				IAmb		IAmb	07 38 15.2	
	comp=Z,8.1nm,1.0s							
PRP	**Porcupine Dome**	79.06	19	P			07 38 09.6	
	baz=315							
IL31		79.18	20	P		**P**	**07 38 08.3**	**-0.5**
ILAR	**Eielson Array**	79.18	20	P		**P**	**07 38 08.2**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=307,slow=4.6,SNR=20							
ILAR	**Eielson Array**	79.18	20	P		**P**	**07 38 08.1**	**-0.7**
ILAR	**Eielson Array**	79.18	20	P		**P**	**07 38 08.1**	**-0.7**
MCK	**McKinley**	79.24	22	P			07 38 09.8	
	baz=312							
RND	**Reindeer**	79.49	22	P		**P**	**07 38 10.4**	**-0.2**
RND				pmax		pmax		
	comp=Z,6.0nm,0.7s							
RND	**Reindeer**	79.49	22	P		**P**	**07 38 10.3**	**-0.2**
RND				IAmb		IAmb	07 38 17.4	
	comp=Z,5.8nm,0.7s							
STKA	**Stephens Creek**	79.51	134	P		**P**	**07 38 10.2**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=304,slow=4.7,SNR=6.6							
SKT	**Skwentna**	79.52	24	P		**P**	**07 38 11.3**	**+0.6**
SKT				IAmb		IAmb	07 38 11.8	
	comp=Z,13nm,0.6s							
SKT	**Skwentna**	79.52	24	P			07 38 11.1	
	baz=311							
CUT	**Chulitna**	79.68	23	P			07 38 11.7	
	baz=312							
SPCR	**Spurr Chakacha**	79.78	25	P			07 38 12.0	
	baz=310							
WAT2	**Susitna Watana**	79.88	22	P			07 38 12.3	
	baz=313							
INK	**Inuvik**	79.95	14	P		**P**	**07 38 13.0**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=340,slow=7.2,SNR=4.7							
INK	**Inuvik**	79.95	14	P		**P**	**07 38 13.2**	**+0.3**
INK				pmax		pmax		
	comp=Z,8.0nm,1.2s							
INK	**Inuvik**	79.95	14	P		**P**	**07 38 13.2**	**+0.3**
INK	**Inuvik**	79.96	14	P			07 38 11.4	
	baz=325							
SUA	**Susitna One**	80.14	24	P			07 38 14.3	
	baz=311							
PMR	**Palmer**	80.63	23	P		**P**	**07 38 16.9**	**+0.3**
PMR				pmax		pmax		
	comp=Z,8.0nm,0.7s							
PMR	**Palmer**	80.63	23	P		**P**	**07 38 16.9**	**+0.3**
PMR				IAmb		IAmb	07 38 17.4	
	comp=Z,8.1nm,0.7s							
PMR	**Palmer**	80.63	23	P			07 38 16.8	
	baz=313							
SCRK	**Sand Creek**	80.63	20	P		**P**	**07 38 17.2**	**+0.4**
SCRK				IAmb		IAmb	07 38 24.2	
	comp=Z,8.2nm,0.7s							
SCRK	**Sand Creek**	80.63	20	P			07 38 16.9	
	baz=317							
BOSA	**Boshof**	80.67	231	P		**P**	**07 38 17.5**	**0.0**
	comp=Z,5.7nm,0.8s,baz=53,slow=6.3,SNR=8.5							
BOSA	**Boshof**	80.67	231	P		**P**	**07 38 17.6**	**+0.1**
BOSA				pmax		pmax		
	comp=Z,7.0nm,1.0s							
BOSA	**Boshof**	80.67	231	P		**P**	**07 38 17.6**	**+0.1**
RC01	**Rabbit Creek A**	80.75	24	P			07 38 17.4	
	baz=312							
SML	**Sawmill**	80.76	23	P			07 38 18.1	
	baz=313							
EPYK	**Eagle Plains**	80.80	16	P			07 38 17.5	
	baz=323							
C36M	**Paulatuk**	80.81	10	P			07 38 17.9	
	baz=333							
KNK	**Knik Glacier**	80.99	23	P			07 38 19.2	
	baz=313							
K27K	**Chicken**	81.16	19	P			07 38 20.1	
	baz=318							
BRSE	**Bradley Lake S**	81.28	25	P			07 38 20.6	
	baz=312							
M24K	**Tolsona, Glenn**	81.28	22	P			07 38 21.6	
	baz=315							
HARP	**HAARP**	81.41	21	P			07 38 22.4	
	baz=316							
KLU	**Kiutina**	81.80	22	P			07 38 24.0	
	baz=315							
KDAK	**Kodiak Island**	81.84	27	P		**P**	**07 38 23.6**	**+0.5**
	comp=Z,13nm,0.5s,baz=311,slow=4.2,SNR=27							
KDAK	**Kodiak Island**	81.84	27	P		**P**	**07 38 23.5**	**+0.3**
KDAK				pmax		pmax		
	comp=Z,67nm,1.4s							
KDAK	**Kodiak Island**	81.84	27	P		**P**	**07 38 23.5**	**+0.3**
DAWY	**Dawson**	81.91	18	P		**P**	**07 38 23.9**	**+0.4**
L27K	**Beaver Creek,**	81.96	20	P			07 38 24.8	
	baz=318							
N25K	**Chitina, Valde**	82.17	22	P			07 38 25.9	
	baz=316							
EYAK	**Cordova Ski Ar**	82.54	23	P			07 38 28.0	
	baz=316							
BMRM	**Bremner River**	82.63	22	P			07 38 28.3	
	baz=316							
MCARA	**McCarthy VSAT**	82.84	21	P		**P**	**07 38 29.2**	**+0.8**
MCARA	**McCarthy VSAT**	82.84	21	P			07 38 29.4	
	baz=318							
CRQE	**Cirque**	83.29	22	P			07 38 31.9	
	baz=318							
KOWA	**Kowa**	83.31	283	P		**P**	**07 38 31.5**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=48,slow=4.3,SNR=4.8							
CTG	**Chitna Glacier**	83.70	21	P			07 38 33.0	
	baz=319							
PINM	**Pinnacle**	84.71	21	P			07 38 38.5	
	baz=320							
WHY	**Whitehorse**	85.90	19	P			07 38 44.4	
	baz=324							
SUR	**Sutherland**	86.00	230	P		**P**	**07 38 44.8**	**-0.1**
	comp=Z,7.1nm,0.9s,baz=62,slow=7.8,SNR=5.1							
FRB	**Frobisher Bay**	86.66	349	P		**P**	**07 38 47.1**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=24,slow=5.7,SNR=6.1							
DBIC	**Dimbokro**	87.60	276	P		**P**	**07 38 52.9**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=28,slow=6.3,SNR=6.7							
YKA	**Yellowknife Ar**	88.64	9	P		**P**	**07 38 56.6**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=334,slow=4.6,SNR=3.6							
TXAR	**Lajitas Array**	122.56	10	PKP		**PKPdf**	**07 44 59.6**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=62,slow=1.2,SNR=4.0							
TXAR	**Lajitas Array**	122.56	10	PKIKP		**PKPdf**	**07 44 59.9**	**-0.5**
TXAR	**Lajitas Array**	122.56	10			**PKPdf**	**07 44 59.9**	**-0.5**
GUY2C	**Guyana, Caldas**	142.60	328	*e*P		**PKPdf**	**07 45 35.2**	**-3.5**
TOLC	**Tolima**	143.14	328	*e*P		PKPbc	07 45 37.3	+1.0
ORTC	**Ortega, Tolima**	143.69	327	*e*P		PKPab	07 45 36.1	-0.6
YOTC	**Yotoco, Valle**	144.15	329	*e*P		**PKPab**	**07 45 37.9**	**-0.7**
MACC	**Macarena, Meta**	144.50	323	*e*P		**PKPab**	**07 45 40.0**	**+0.3**
MARP	**Paez Belalcaza**	144.96	327	*e*P		**PKPab**	**07 45 40.4**	**-1.4**
PCON	**Cinco Dias**	145.62	327	*e*P		**PKiKP**	**07 45 48.4**	**+0.2**
SOTA	**Rioblanco**	145.89	328	*e*P		**PKPdf**	**07 45 44.9**	**+0.4**
CPUP	**Villa Florida**	147.27	264	PKPbc		**PKPdf**	**07 45 47.2**	**+1.4**
	comp=Z,2.4nm,0.9s,baz=74,slow=4.9,SNR=5.4							

JMA 26 07:27:48.4±0.1, 32°.85N×140°.97E, h61km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.00**	**285**	P		P	Pn	07 28 06.9	+0.4
JHCJ	**Hachijojimakas**	**1.01**	**283**	P		P	Pn	07 28 06.9	+0.3
JHCJ				*e*S		Sn		07 28 19.9	-0.2
JAOM	**Aogashimamukai**	**1.09**	**250**	P		P	Pn	07 28 07.9	+0.3
JAOM				*e*S		Sn		07 28 22.0	+0.1
JMKN	**Mikurajimanish**	**1.55**	**312**	P		P	Pn	07 28 14.3	+0.5
JMKN				S		Sn		07 28 32.9	-0.1
BSO1	**Boso 1**	**1.80**	**0**	P		P	Pn	07 28 17.5	+0.9
BSO3	**Boso 3**	**1.98**	**349**	P		P	Pn	07 28 20.2	+0.8
JIM2	**Oshima 3**	**2.26**	**326**	P		P	Pn	07 28 24.1	+0.7
JIM2				*e*S		Sn		07 28 50.0	-0.2
JIZS	**Izushimoda**	**2.55**	**317**	P		P	Pn	07 28 28.7	+1.3
JIZS				S		Sn		07 28 58.6	+1.4
JOD2	**Odawara 2**	**2.87**	**328**	P		P	Pn	07 28 32.7	+1.0
JOD2				*e*S		Sn		07 29 04.2	-0.9
TK02	**Tokai 2**	**2.90**	**293**	P		P	Pn	07 28 33.7	+1.8
TK04	**Tokai 4**	**3.00**	**302**	P		P	Pn	07 28 35.5	+2.1
SHZ3	**Shizuoka 3**	**3.19**	**315**	P		P	Pn	07 28 38.6	+2.5
JYN	**Shimob**	**3.32**	**323**	P		P	Pn	07 28 40.2	+2.3
JRY	**Ryogami san**	**3.59**	**332**	P		P	Pn	07 28 43.4	+1.8
JAG	**Ashikaga**	**3.78**	**341**	P		P	Pn	07 28 44.8	+0.6
JIE	**Ise**	**3.88**	**295**	P		P	Pn	07 28 46.9	+1.4
MAT	**Matsushiro**	**4.33**	**329**	P		P	Pn	07 28 53.6	+1.9
MAT				*e*S		Sn		07 29 41.9	+1.0

*IDC **26** 07:31:31.4±1.7, 27°.71N×85°.82E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.6/75, mbtmp3.9/8, ML4.0/1, Error ellipse: s-maj=55.5km s-min=24.3km az=62.0*

ISC 26 07:31:34.5±1.8, 27°.8N±0°.2×85°.8E±0°.4, h19km, n8, σ0s62/8, mb4.0/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.20**	**353**	P		P	**Pn**	**07 35 57.0**	**-1.0**
	0.4nm,0.3s,baz=172,slow=9.5,SNR=5.9								
KURBB	**Kurchatov Arra**	**23.49**	**348**	P		P		**07 36 43.5**	**+0.6**
	0.6nm,0.5s,baz=164,slow=9.3,SNR=3.3								
SONM	**Songino Array**	**25.66**	**33**	P		P	**P**	**07 37 03.1**	**0.0**
	2.6nm,0.7s,baz=220,slow=9.9,SNR=5.9								
ZALV	**Zalesovo Beam**	**26.17**	**359**	P		P	**P**	**07 37 08.0**	**+0.6**
	1.0nm,0.4s,baz=165,slow=6.0,SNR=3.2								
NRIK	**Noril'sk**	**41.62**	**1**	P		P	**P**	**07 39 21.2**	**+0.2**
	1.3nm,0.4s,baz=180,slow=9.6,SNR=3.6								
FINES	**FINESS Array B**	**51.61**	**328**	P		P	**P**	**07 40 39.1**	**-0.2**
	0.6nm,0.4s,baz=80,slow=4.5,SNR=3.6								
ARCES	**ARCESS Array B**	**53.97**	**338**	P		P	**P**	**07 40 57.0**	**+0.2**
	1.1nm,0.5s,baz=103,slow=6.5,SNR=6.1								
WRA	**Warramunga Arr**	**66.73**	**130**	P		P	**P**	**07 42 24.5**	**-0.1**
	1.1nm,1.0s,baz=323,slow=6.4,SNR=6.9								

*BJI **26** 07:36:20.9±0.0, 27°.36N×85°.58E, h10km, mb4.7/20*
*IDC **26** 07:36:25.0±0.7, 27°.67N×85°.97E, h0km, mb4.2/27, mb1 4.3/29, mb1mx4.1/71, mbtmp4.2/29, ML4.3/2, Error ellipse: s-maj=17.7km s-min=13.0km az=31.0*
*DMN **26** 07:36:26.4±0.3, 27°.92N×86°.06E, h25km, Ml5.1/5, Error ellipse: s-maj=8.8km s-min=2.6km az=15.0*
*NEIC **26** 07:36:26.6±1.4, 27°.76N±0°.09×85°.98E±0°.05, h10km±1km, mb4.7/49, Error ellipse: s-maj=15.1km s-min=6.4km az=168.0*
*NDI **26** 07:36:29.2±3.5, 27°.61N×85°.95E, h10km, ML4.5, mb4.7(NEIC)*

ISC 26 07:36:27.8±1.0, 27°.63N±0°.04×85°.98E±0°.02, h23km±7km, n129, σ1s45/145, mb4.5/53, 6C-2D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.29**	**343**	*e*Sg			**Sb**	**07 36 36.0**	**-3.6**
PKI	**Pulchoki**	**0.51**	**264**	*e*Pg			**Pn**	**07 36 40.2**	**+0.2**
PKI				*e*Sg			**Sn**	**07 36 49.1**	**+1.0**
PKIN	**Phulchoki**	**0.52**	**264**	*e*Pg			**Pn**	**07 36 40.3**	**+0.2**
KKN	**Kakani**	**0.64**	**285**	*e*Pg			**Pb**	**07 36 41.1**	**+0.7**
KKN				*e*Sg			**Sb**	**07 36 50.5**	**+1.5**
DMN	**Daman**	**0.77**	**269**	*e*Pg			**Pn**	**07 36 44.5**	**+0.9**
DMN				*e*Sg			**Sn**	**07 36 57.0**	**+2.4**
RAMN	**Ramite**	**0.88**	**140**	*e*Pg			**Pn**	**07 36 46.5**	**+1.5**

comp=E,1.3nm,0.3s,baz=179,slow=9.9,SNR=26
MKAR Makanchi Array 19.35 352 P **P** 07 40 50.9 -0.8
MAKZ Makanchi 19.40 352 P **P** 07 40 51.3 -0.9
KURBB Kurchatov Arra 23.65 348 P **P** 07 41 38.8 +1.5
comp=E,1.9nm,0.6s,baz=161,slow=8.4,SNR=14
HHC Hu-ho-hao-te 24.82 51 *e*P **P** 07 41 49.0 +0.5
HHC pmax pmax
comp=E,17nm,1.0s
GEYT Alibeck 25.49 301 P **P** 07 41 56.2 +1.7
comp=E,1.5nm,0.6s,baz=105,slow=17,SNR=3.8
SONM Songino Array 25.70 33 P **P** 07 41 56.9 +0.6
comp=E,6.9nm,0.7s,baz=217,slow=9.6,SNR=16
SONM Songino Array 25.70 33 P **P** 07 41 57.1 +0.7
ULN Ulaanbaatar 26.04 33 P **P** 07 41 59.2 -0.2
ULN IAmb IAmb 07 42 03.4
comp=Z,9.6nm,0.8s
ZAA0 Zalesovo Array 26.31 358 P **P** 07 42 00.6 -1.0
ZALV Zalesovo Beam 26.31 358 P **P** 07 42 02.2 +0.6
comp=Z,3.0nm,0.4s,baz=180,slow=7.9,SNR=12
ZALV Zalesovo Beam 26.31 358 P **P** 07 42 01.1 -0.5
BVAR Borovoye Array 27.89 340 P **P** 07 42 15.4 -0.5
comp=Z,0.5nm,0.5s,baz=170,slow=9.5,SNR=2.1
GSI Gunungsitoli 28.44 155 P **P** 07 42 19.6 -1.5
GSI IAmb IAmb 07 42 21.5
comp=Z,15nm,1.1s
NJ2 Nanjing 28.79 73 *e*P **P** 07 42 23.8 -0.3
NJ2 pmax pmax
comp=Z,14nm,0.5s
KNMB Chin-men Tao 29.25 89 P **P** 07 42 27.1 -1.1
ABKAR Akbulak array 29.44 324 P **P** 07 42 28.2 -1.5
ABKAR Akbulak array 29.44 324 P **P** 07 42 28.8 -0.9
ABKAR IAmb IAmb 07 42 31.8
comp=Z,4.2nm,0.5s
AKTO Aktyubinsk 31.15 325 P **P** 07 42 45.5 +0.7
comp=Z,1.8nm,0.5s,baz=123,slow=14,SNR=3.7
KS19 Wonju Array Si 36.40 64 P **P** 07 43 30.4 -0.2
KS19 IAmb IAmb 07 43 33.0
comp=Z,8.8nm,0.8s
KSRS Korea Array 36.44 64 P **P** 07 43 30.9 0.0
comp=Z,2.2nm,0.6s,baz=260,slow=8.4,SNR=6.6
KBZ Khabaz 38.04 307 P **P** 07 43 46.0 +1.6
comp=Z,1.1nm,0.8s,baz=258,slow=1.8,SNR=2.4
MYLDM Lahad Datu 38.15 120 P **P** 07 43 46.2 +0.6
MYLDM IAmb IAmb 07 43 48.4
comp=Z,16nm,1.0s
KIRV Kirov 39.98 331 P **P** 07 44 01.3 +0.9
comp=Z,4.6nm,0.5s,baz=153,slow=6.8,SNR=2.2
USRK Ussuriysk Ar. 40.21 53 P **P** 07 44 02.9 +0.4
comp=Z,1.6nm,0.5s,baz=244,slow=7.8,SNR=5.1
USRK Ussuriysk Ar. 40.21 53 P **P** 07 44 01.7 -0.8
KLR Kul'dur 40.21 46 P **P** 07 44 09.9 +0.4
comp=Z,1.7nm,0.6s,baz=282,slow=8.0,SNR=5.5
JMN Monobe 41.35 69 P **P** 07 44 11.6 -0.6
JMN IAmb IAmb 07 44 15.2
comp=Z,8.2nm,0.8s
NRIK Noril'sk 41.75 1 P **P** 07 44 15.6 +0.7
comp=Z,5.2nm,0.5s,baz=170,slow=6.3,SNR=14
NRIK Noril'sk 41.75 1 P **P** 07 44 14.9 0.0
NRIK IAmb IAmb 07 44 16.7
comp=Z,8.6nm,0.8s
GAZ Gaziantep 41.87 296 P **P** 07 44 16.5 +0.1
GAZ IAmb IAmb 07 44 26.5
comp=Z,6.4nm,0.7s
JWT Wachi 42.49 67 P **P** 07 44 22.5 +1.1
JWT IAmb IAmb 07 44 24.4
comp=Z,11nm,1.3s
KLMR Klimovskoe 45.45 330 *e*P **P** 07 44 42.9 -1.9
KLMR AMP 07 44 47.8
comp=Z,10.0nm,1.1s
ISP Isparta 47.15 297 P **P** 07 44 58.8 +0.2
ISP IAmb IAmb 07 45 00.4
comp=Z,5.5nm,1.1s
ELL Elmali 47.73 296 P **P** 07 45 02.3 -0.9
JKA Kamikawa-asahi 47.81 54 P **P** 07 45 04.1 +0.6
AKASG Malin Array Be 48.29 315 P **P** 07 45 06.7 -0.4
comp=Z,2.2nm,0.6s,baz=81,slow=6.7,SNR=10
AKBB Malin Array Si 48.29 315 P **P** 07 45 06.9 -0.3
AKBB IAmb IAmb 07 45 08.2
comp=Z,2.6nm,0.7s
VRI Vrincioaia 49.68 308 ⇑P **P** 07 45 19.9 +1.9
PLOR Plostina 49.74 308 ⇓P **P** 07 45 19.9 +1.5
TIXI Tiksi 49.95 16 P **P** 07 45 19.3 -0.2
comp=Z,2.5nm,0.5s,baz=197,slow=3.3,SNR=5.7
TIXI Tiksi 49.95 16 P **P** 07 45 19.0 -0.5
MLR Muntele Rosu 50.23 308 ⇑P **P** 07 45 25.1 +2.8
BURAR Bucovina Array 50.73 310 ⇑P **P** 07 45 27.2 +1.2
BURAR Bucovina Array 50.73 310 P **P** 07 45 25.8 -0.2
ARR Arges 51.16 307 ⇑P **P** 07 45 30.5 +1.3
SANT Santorini 51.33 296 P **P** 07 45 30.2 -0.3
FIA1 FINESS Array S 51.80 328 P **P** 07 45 33.7 +0.1
FIA1 IAmb IAmb 07 45 41.4
comp=Z,15nm,1.2s
FINES FINESS Array B 51.80 328 P **P** 07 45 34.0 +0.4
comp=Z,1.3nm,0.5s,baz=106,slow=7.0,SNR=10
PABE Paberze 51.95 320 P **P** 07 45 33.4 -1.4
VTS Vitosha 52.33 304 ⇓P **P** 07 45 40.4 +2.3
VTS Vitosha 52.33 304 P **P** 07 45 36.5 -1.6
DRGR 52.45 309 ⇑P **P** 07 45 40.3 +1.5
ARCES ARCESS Array B 54.15 338 P **P** 07 45 51.8 +0.9
comp=Z,6.3nm,0.8s,baz=105,slow=8.2,SNR=20
ARCES ARCESS Array B 54.15 338 P **P** 07 45 49.0 -1.9
ARCES IAmb IAmb 07 45 59.2
comp=Z,7.1nm,1.1s
SEY Seymchan 55.06 31 P **P** 07 45 58.1 +0.6
comp=Z,4.0nm,0.8s,baz=247,slow=8.0,SNR=9.5
PDG Podgorica 55.27 304 P **P** 07 45 58.8 -0.5
PDG IAmb IAmb 07 46 05.8
comp=Z,4.7nm,0.7s
MORC Moravsky Berou 55.76 313 P **P** 07 46 02.6 -0.2
PET Petropavlovsk 58.18 43 P **P** 07 46 19.2 -0.6
GERES GERESS Array B 58.35 312 P **P** 07 46 21.7 +0.5
comp=Z,0.3nm,0.4s,baz=78,slow=7.4,SNR=5.1
CEL Celeste 58.51 300 P **P** 07 46 22.7 +0.2
CEL IAmb IAmb 07 46 25.1
comp=Z,18nm,1.0s
NC405 NORSAR Array S 58.66 327 P **P** 07 46 23.4 +0.3
TRI Trieste 58.73 309 P **P** 07 46 23.3 -0.5
TRI IAmb IAmb 07 46 37.5
comp=Z,11nm,1.0s
NC602 NORSAR Array S 58.75 326 P **P** 07 46 23.4 -0.4
NC303 NORSAR Array S 58.82 327 P **P** 07 46 24.4 +0.2
NOA NORSAR Array B 58.90 327 P **P** 07 46 24.9 +0.1
comp=Z,1.0nm,0.6s,baz=88,slow=6.9,SNR=4.6
STAL STALIGIAL 59.37 309 P **P** 07 46 27.9 -0.5
STAL IAmb IAmb 07 46 28.4
comp=Z,9.3nm,1.5s
BILL Bilibino 61.07 25 P **P** 07 46 39.6 0.0
MSSA Maissana 61.95 308 P **P** 07 46 46.4 +0.5
KEST Kesra 64.21 298 P **P** 07 47 03.0 +1.8
comp=Z,5.6nm,0.9s,baz=350,slow=8.1,SNR=5.7
WB0 Warramunga Arr 66.45 130 P **P** 07 47 16.3 +0.6
WB0 IAmb IAmb 07 47 17.7
comp=Z,7.9nm,1.2s
WRA Warramunga Arr 66.54 130 P **P** 07 47 18.2 +2.0
comp=Z,3.4nm,0.7s,baz=323,slow=6.6,SNR=15
WB2 Warramunga Arr 66.55 130 P **P** 07 47 17.4 +1.2
WB2 IAmb IAmb 07 47 27.2
comp=Z,10nm,1.2s
WR0 Warramunga Arr 66.69 130 P **P** 07 47 18.0 +0.8
WR0 IAmb IAmb 07 47 30.7
comp=Z,9.4nm,1.3s
ASAR Alice Springs 68.84 133 P **P** 07 47 32.5 +1.7
comp=Z,1.1nm,0.6s,baz=315,slow=6.3,SNR=12
NEEM North Greenlan 72.06 351 *i* P **P** 07 47 50.7 +0.7
NEEM IAmb IAmb 07 47 52.7
comp=Z,5.3nm,0.8s
EUNU Eureka 72.46 359 P **P** 07 47 51.3 -0.8
ESDC Sonseca Array 72.90 306 P **P** 07 47 56.0 +0.6
comp=Z,1.2nm,0.7s,baz=54,slow=5.2,SNR=8.3
TOLK Toolik Lake Re 75.80 18 P **P** 07 48 11.1 -0.6
COI Coimbra 75.84 308 P **P** 07 48 11.4 -0.9
COLD Coldfoot 76.55 19 P **P** 07 48 15.0 -0.9
COLD IAmb IAmb 07 48 25.6
comp=Z,18nm,1.3s
MLY Manley 77.82 21 P **P** 07 48 23.4 +0.2
MLY IAmb IAmb 07 48 29.1
comp=Z,17nm,1.5s
AKUT Akutan 77.91 35 P **P** 07 48 22.8 -0.9
PPLA Purkeypile 78.71 23 P **P** 07 48 29.2 +0.9
PPLA IAmb IAmb 07 48 45.6
comp=Z,11nm,1.2s
TORD Torodi Ar. Bea 79.02 279 P **P** 07 48 30.1 -0.5
comp=Z,2.1nm,1.1s,baz=58,slow=4.9,SNR=3.8
ILAR Eielson Array 79.21 20 P **P** 07 48 29.9 -0.8
comp=Z,2.7nm,1.0s,baz=317,slow=5.3,SNR=4.5

RND Reindeer 79.52 22 P **P** 07 48 31.8 -0.8
RND IAmb IAmb 07 48 35.8
comp=Z,12nm,1.1s
SCRK Sand Creek 80.66 20 P **P** 07 48 39.1 +0.3
SCRK IAmb IAmb 07 48 40.7
comp=Z,4.1nm,1.0s
KDAK Kodiak Island 81.86 27 P **P** 07 48 44.9 -0.1
comp=Z,4.8nm,0.6s,baz=39,slow=1.9,SNR=7.0
DBIC Dimbokro 87.68 276 P **P** 07 49 15.3 +0.1
comp=Z,2.0nm,0.8s,baz=349,slow=5.8,SNR=1.9
ROSA Rosais 89.85 314 P **P** 07 49 24.7 -0.3
QSPA South Pole Qui 117.43 180 PKP **PKPdf** 07 55 09.9 -1.0
comp=Z,1.1nm,0.9s,baz=262,slow=13,SNR=2.3
TXAR Lajitas Array 122.61 10 PKP **PKiKP** 07 55 22.6 +0.2
comp=Z,0.2nm,0.8s,baz=122,slow=1.2,SNR=2.3

*NEIC **26** 07:43:17.5±1.4, 27.03N±0.07×85.99E±0.06, h10km±1km, mb4.3/15, Error ellipse: s-maj=12.9km s-min=8.3km az=166.0*
*IDC **26** 07:43:21.9±1.8, 27.21N×85.91E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.6/61, mbtmp3.9/10, ML4.0/1, Error ellipse: s-maj=52.8km s-min=27.6km az=58.0*
ISC 26 07:43:17.6±0.8, 26.9N±0.1×85.96E±0.1°, h10km, n32, σ1§90/25, mb4.1/14, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.35**	**58**	Pn	**Pn**	**07 44 36.6**	**-1.3**
SHL	**Shillong**	**5.49**	**103**	Pn	**Pn**	**07 44 37.9**	**-1.9**
NIL	**Nilore**	**12.85**	**304**	Pn	**Pn**	**07 46 19.6**	**-0.8**
BOOM	**Boomskoye usch**	**17.55**	**335**	P	**Pn**	**07 47 20.8**	**-1.7**
MK31	**Makanchi Array**	**20.04**	**353**	P	**P**	**07 47 49.8**	**-0.9**
MKAR	**Makanchi Array**	**20.04**	**353**	P	**Pn**	**07 47 52.5**	**+0.1**
	0.4nm,0.3s,baz=174,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	**20.04**	**353**	P	**P**	**07 47 49.5**	**-1.3**
MAKZ	**Makanchi**	**20.09**	**352**	P	**P**	**07 47 49.3**	**-2.0**
KK31	**Karatay Array**	**20.45**	**326**	P	**P**	**07 47 54.4**	**-0.8**
KK31				IAmb	IAmb	07 48 13.3	
	comp=Z,18nm,1.4s						
KKAR	**Karatay Array**	**20.45**	**326**	P	**P**	**07 47 53.6**	**-1.6**
KKAR	**Karatay Array**	**20.45**	**326**	P	**P**	**07 47 54.5**	**-0.7**
KKAR				IAmb	IAmb	07 48 13.3	
	comp=Z,18nm,1.4s						
ENH	**Enshi**	**20.92**	**75**	P	Pn	07 48 01.2	-1.8
ENH				IAmb	IAmb	07 48 17.9	
	comp=Z,32nm,1.3s						
UBPT	**Khong Chiam**	**21.55**	**119**	P	**P**	**07 48 07.5**	**+0.2**
UBPT				IAmb	IAmb	07 48 13.3	
	comp=Z,29nm,1.3s						
KURBB	**Kurchatov Arra**	**24.33**	**348**	P	**P**	**07 48 38.5**	**+3.1**
	comp=Z,0.8nm,0.8s,baz=168,slow=9.1,SNR=5.3						
GYA0B	**ALIBECK ARRAY**	**25.84**	**302**	P	**P**	**07 48 48.9**	**-0.4**
GYA0B				IAmb	IAmb	07 49 04.8	
	comp=Z,4.8nm,0.8s						
SONM	**Songino Array**	**26.29**	**32**	P	**P**	**07 48 57.3**	**+3.9**
	comp=Z,1.7nm,0.7s,baz=228,slow=9.9,SNR=2.6						
ULN	**Ulaanbaatar**	**26.63**	**33**	P	**P**	**07 48 55.0**	**-1.5**
ULN				IAmb	IAmb	07 49 13.2	
	comp=Z,9.2nm,1.4s						
ZAA0	**Zalesovo Array**	**27.00**	**359**	P	**P**	**07 49 00.7**	**+1.1**
ZALV	**Zalesovo Beam**	**27.00**	**359**	P	**P**	**07 49 03.1**	**+3.6**
	comp=Z,1.5nm,0.4s,baz=204,slow=9.8,SNR=4.0						
RPSI	**Rantau Prapat**	**27.11**	**151**	P	**P**	**07 49 00.8**	**-0.1**
RPSI				IAmb	IAmb	07 49 05.9	
	comp=Z,11nm,1.3s						
GSI	**Gunungsitoli**	**27.82**	**154**	P	**P**	**07 49 07.3**	**+0.1**
ABKAR	**Akbulak array**	**30.00**	**325**	P	**P**	**07 49 24.8**	**-1.6**
ABKAR				IAmb	IAmb	07 49 26.3	
	comp=Z,6.0nm,1.1s						
JNU	**Nakatsue**	**39.15**	**70**	P	**P**	**07 50 46.2**	**+0.5**
NRIK	**Noril'sk**	**42.45**	**1**	P	P	07 51 16.2	+3.9
	comp=Z,1.2nm,0.3s,baz=175,slow=5.0,SNR=4.0						
FINES	**FINESS Array B**	**52.38**	**328**	P	**P**	**07 52 33.7**	**+4.0**
	comp=Z,2.6nm,1.0s,baz=150,slow=8.4,SNR=3.4						
ARCES	**ARCESS Array B**	**54.79**	**338**	P	P	07 52 51.4	+4.1
	comp=Z,3.0nm,0.7s,baz=27,slow=8.6,SNR=3.7						
SEY	**Seymchan**	**55.67**	**31**	P	P	07 52 58.3	+4.6
	baz=233,slow=20						
WLF	**Walferdange**	**63.57**	**314**	P	**P**	**07 53 48.4**	**0.0**
WRA	**Warramunga Arr**	**66.11**	**130**	P	P	07 54 12.7	+7.4
	comp=Z,0.4nm,0.4s,baz=322,slow=6.6,SNR=1.1						
ILAR	**Eielson Array**	**79.87**	**20**	P	P	07 55 30.4	+4.2
	comp=Z,0.4nm,0.6s,baz=305,slow=4.0,SNR=6.1						
ILAR	**Eielson Array**	**79.87**	**20**	P	**P**	**07 55 25.8**	**-0.4**
YKA	**Yellowknife Ar**	**89.38**	**9**	P	P	07 56 18.2	+4.0
	comp=Z,0.2nm,0.7s,baz=330,slow=4.6,SNR=2.6						

*IDC **26** 07:50:25.2±0.9, 27.70N×85.97E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.6/51, mbtmp3.8/13, ML4.1/2, Error ellipse: s-maj=35.8km s-min=16.5km az=54.0*
*NEIC **26** 07:50:26.0±1.8, 27.73N±0.08×86.01E±0.05, h10km±1km, mb4.2/11, Error ellipse: s-maj=14.2km s-min=6.8km az=162.0*
*NDI **26** 07:50:28.4±3.3, 27.73N×85.97E, h10km, ML3.9, mb4.2(NEIC)*
ISC 26 07:50:27.4±0.5, 27.77N±0.06×85.97E±0.05, h19km, n39, σ1§84/45, mb3.9/16, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOK	**Bokaro**	**3.96**	**181**	*e*P	**Pn**	**07 51 30.4**	**+3.4**
BOK				*e*S	**Sn**	**07 52 14.2**	**+1.2**
BOK				IAML		07 52 32.9	
	comp=E,168nm,0.3s						
BOK				IAML		07 52 33.8	
	comp=N,111nm,0.3s						
LSA	**Lhasa**	**4.94**	**66**	Pn	**Pn**	**07 51 39.6**	**-1.5**
SHL	**Shillong**	**5.73**	**111**	*e*P	**Pn**	**07 51 51.6**	**0.0**
SHL				*e*S	**Sn**	**07 52 54.6**	**-2.4**
SHL				IAML		07 52 56.4	
	comp=N,234nm,0.3s						
SHL	**Shillong**	**5.73**	**111**		**Pn**	**07 51 49.4**	**-2.2**
KOHI	**KOHIMA**	**7.56**	**104**	*e*P	**Pn**	**07 52 17.1**	**+0.4**
KOHI				*e*S	**Sn**	**07 53 40.2**	**-1.8**
KOHI				IAML		07 53 48.2	
	comp=N,22nm,0.5s						
MOKO	**MOKOCHONG**	**7.76**	**99**	*e*P	**Pn**	**07 52 19.4**	**0.0**
MOKO				*e*S	**Sn**	**07 53 43.5**	**-3.4**
MOKO				IAML		07 53 49.4	
	comp=N,35nm,0.5s						
SMLA	**Simla**	**8.37**	**296**	*e*P	**Pn**	**07 52 29.6**	**+1.9**
SMLA				*e*S	**Sn**	**07 53 59.8**	**-1.8**
SMLA				IAML		07 54 06.5	
	comp=E,61nm,0.4s						
BHPL	**Bhopal**	**8.93**	**242**	*e*P	**Pn**	**07 52 34.0**	**-1.5**
BHPL				*e*S	**Sn**	**07 54 09.0**	**-6.7**
DHRM	**DHARAMSHALA**	**9.49**	**300**	*e*P	**Pn**	**07 52 43.8**	**+0.5**
DHRM				*e*S	**Sn**	**07 54 26.1**	**-3.5**
DHRM				IAML		07 54 30.1	
	comp=E,539nm,0.3s						
DHRM				IAML		07 54 30.3	
	comp=N,380nm,0.5s						
NIL	**Nilore**	**12.41**	**301**	Pn	**Pn**	**07 53 22.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**15.10**	**125**	Pn	**Pn**	**07 54 00.7**	**+0.9**
	comp=N,0.5nm,0.3s,baz=224,slow=7.3,SNR=4.1						
PBA	**Port Blair**	**17.24**	**157**	Pn	Pn	07 54 25.0	-2.2
PBA				IAmb	IAmb	07 54 26.6	
	comp=Z,40nm,1.0s						
AAK	**Ala-Archa**	**17.52**	**331**	Pn	**Pn**	**07 54 30.2**	**-0.5**
AAK				IAmb	IAmb	07 54 38.5	
	comp=Z,4.0nm,1.1s						
MK31	**Makanchi Array**	**19.21**	**352**	P	**P**	**07 54 50.7**	**+0.5**
MKAR	**Makanchi Array**	**19.21**	**352**	P	**Pn**	**07 54 52.2**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=178,slow=9.7,SNR=6.5						
KURBB	**Kurchatov Arra**	**23.52**	**348**	P	**P**	**07 55 38.1**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=165,slow=8.9,SNR=4.9						
KURK	**Kurchatov**	**23.59**	**348**	P	**P**	**07 55 38.1**	**+1.4**
GEYT	**Alibeck**	**25.41**	**301**	P	**P**	**07 55 56.6**	**+2.8**
	comp=Z,1.2nm,0.5s,baz=113,slow=11,SNR=4.1						
SONM	**Songino Array**	**25.59**	**33**	P	**P**	**07 55 57.3**	**+2.0**
	comp=Z,1.3nm,0.6s,baz=225,slow=9.0,SNR=4.9						
ZAA0	**Zalesovo Array**	**26.17**	**358**	P	**P**	**07 55 58.8**	**-1.6**
ZAA0				IAmb	IAmb	07 56 07.5	
	comp=Z,1.7nm,0.6s						
ZALV	**Zalesovo Beam**	**26.17**	**358**	P	**P**	**07 56 01.6**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=183,slow=8.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**26.17**	**358**	P	**P**	**07 56 01.4**	**+1.0**
ABKAR	**Akbulak array**	**29.33**	**324**	P	**P**	**07 56 29.7**	**+1.0**
ABKAR				IAmb	IAmb	07 56 33.1	
	comp=Z,5.5nm,1.4s						
YOJ	**Yonaguni jima**	**33.35**	**87**	P	**P**	**07 57 04.1**	**-0.3**

SOCY Socotra 33.68 249 P **P** 07 57 05.7 -1.8
SOCY IAmb IAmb 07 57 15.5
comp=Z,8.4nm,1.4s
NRIK Noril'sk 41.61 1 P **P** 07 58 13.8 -0.1
NRIK IAmb IAmb 07 58 16.9
comp=Z,1.9nm,0.8s
FINES FINESS Array B 51.68 328 P **P** 07 59 33.5 +0.7
comp=Z,1.7nm,0.9s,baz=114,slow=6.8,SNR=3.9
ARCES ARCESS Array B 54.02 338 P **P** 07 59 51.1 +1.1
comp=Z,2.0nm,0.8s,baz=74,slow=4.3,SNR=3.8
NOA NORSAR Array B 58.78 327 P **P** 08 00 24.4 +0.3
comp=Z,0.5nm,0.7s,baz=110,slow=6.6,SNR=1.8
WB0 Warramunga Arr 66.55 130 P **P** 08 01 16.6 +0.2
WB0 IAmb IAmb 08 01 23.3
comp=Z,5.4nm,1.1s
WRA Warramunga Arr 66.63 130 P **P** 08 01 17.8 +0.9
comp=Z,0.8nm,0.4s,baz=322,slow=6.4,SNR=19
WRA Warramunga Arr 66.63 130 P **P** 08 01 17.0 +0.1
WR0 Warramunga Arr 66.78 130 P **P** 08 01 17.8 -0.1
ASAR Alice Springs 68.94 133 P **P** 08 01 32.1 +0.6
comp=Z,0.4nm,0.6s,baz=316,slow=6.4,SNR=9.4
EUNU Eureka 72.32 359 P **P** 08 01 52.1 +0.8
ESDC Sonseca Array 72.81 306 P **P** 08 01 55.8 +0.9
comp=Z,0.5nm,0.7s,baz=65,slow=6.6,SNR=2.8
OHAK Old Harbor 81.81 28 P **P** 08 02 44.4 -0.5
DAWY Dawson 81.81 18 P **P** 08 02 45.2 +0.4
YKA Yellowknife Ar 88.55 9 P **P** 08 03 17.9 -0.6
comp=Z,0.1nm,0.6s,baz=349,slow=6.3,SNR=2.4

*IDC **26** 07:54:29.1±2.3, 27.68N×86.07E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.3/52, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=74.7km s-min=29.1km az=64.0*
ISC 26 07:54:32.1±2.0, 27.7N±0.3×86.1E±0.4, h19km, n6, σ1§03/6, mb3.6/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.31**	**352**	P	**P**	**07 58 54.8**	**-1.2**
	0.1nm,0.3s,baz=173,slow=11,SNR=3.6						
KURBB	**Kurchatov Arra**	**23.62**	**348**	P	**P**	**07 59 42.0**	**+0.2**
	0.3nm,0.5s,baz=170,slow=11,SNR=2.0						
SONM	**Songino Array**	**25.59**	**33**	P	**P**	**08 00 00.9**	**+0.7**
	0.5nm,0.7s,baz=207,slow=9.8,SNR=2.0						
ZALV	**Zalesovo Beam**	**26.25**	**358**	P	**P**	**08 00 05.0**	**-0.9**
	0.4nm,0.3s,baz=177,slow=8.1,SNR=1.8						
ARCES	**ARCESS Array B**	**54.14**	**338**	P	**P**	**08 03 56.1**	**+0.6**
	1.5nm,0.7s,baz=109,slow=8.1,SNR=1.4						
WRA	**Warramunga Arr**	**66.50**	**130**	P	**P**	**08 05 20.6**	**-0.2**
	0.5nm,0.9s,baz=323,slow=6.5,SNR=1.6						

*IDC **26** 07:56:38.8±1.9, 27.89N×86.11E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.4/44, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=75.8km s-min=23.0km az=68.0*
ISC 26 07:56:41.9±1.9, 27.9N±0.2×86.1E±0.4, h19km, n6, σ0§91/6, mb3.8/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.07**	**352**	P	**P**	**08 01 01.9**	**-1.2**
	0.1nm,0.3s,baz=170,slow=13,SNR=2.6						
SONM	**Songino Array**	**25.39**	**33**	P	**P**	**08 02 08.1**	**+0.1**
	0.3nm,0.4s,baz=207,slow=9.2,SNR=1.7						
ZALV	**Zalesovo Beam**	**26.01**	**358**	P	**P**	**08 02 14.4**	**+1.0**
	0.6nm,0.4s,baz=183,slow=8.7,SNR=2.2						
ARCES	**ARCESS Array B**	**53.91**	**338**	P	**P**	**08 06 04.0**	**+0.3**
	1.9nm,0.8s,baz=97,slow=7.4,SNR=0.9						
WRA	**Warramunga Arr**	**66.65**	**130**	P	**P**	**08 07 31.3**	**-0.2**
	0.5nm,0.5s,baz=322,slow=6.3,SNR=6.2						
ASAR	**Alice Springs**	**68.97**	**133**	P	**P**	**08 07 46.0**	**-0.1**
	0.5nm,0.7s,baz=313,slow=6.4,SNR=5.4						

*IDC **26** 08:02:37.2±1.6, 10.68S×120.24E, h0km, mb3.7/2, mb1 3.6/6, mb1mx3.4/38, mbtmp3.5/6, ML3.4/4, Error ellipse: s-maj=45.8km s-min=22.3km az=40.0*
ISC 26 08:02:41.8±1.4, 10.6S±0.1×120.7E±0.1, h31km, n6, σ2§38/8, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.99**	**83**	Pn	**Pb**	**08 03 32.7**	**-1.7**
	5.8nm,0.3s,baz=331,slow=3.2,SNR=5.2						
BATI				Sn	**Sb**	**08 04 12.1**	**+1.6**
	5.7nm,0.3s,baz=348,slow=18,SNR=8.3						
FITZ	**Fitzroy Crossi**	**8.88**	**148**	Pn	**Pn**	**08 04 49.6**	**+1.6**
	0.3nm,0.3s,baz=331,slow=6.9,SNR=16						
FITZ				Sn	**Sn**	**08 06 23.6**	**-3.5**
	0.6nm,0.3s,baz=180,slow=24,SNR=9.1						
WRA	**Warramunga Arr**	**16.13**	**127**	Pn	**Pn**	**08 06 27.6**	**+1.2**
	0.1nm,0.3s,baz=297,slow=13,SNR=5.0						
ASAR	**Alice Springs**	**18.12**	**137**	P	**P**	**08 06 53.9**	**+2.5**
	0.1nm,0.3s,baz=313,slow=12,SNR=7.5						
MKAR	**Makanchi Array**	**66.62**	**332**	P	**P**	**08 13 29.2**	**-0.2**
	0.3nm,0.7s,baz=126,slow=7.4,SNR=3.4						
ZALV	**Zalesovo Beam**	**71.12**	**339**	P	**P**	**08 13 56.1**	**-1.0**
	0.7nm,0.4s,baz=128,slow=4.2,SNR=3.5						

*IDC **26** 08:05:35.0±1.5, 10.72S×120.19E, h0km, mb3.7/4, mb1 3.7/8, mb1mx3.5/47, mbtmp3.6/8, ML3.5/4, Error ellipse: s-maj=58.5km s-min=21.8km az=46.0*
ISC 26 08:05:39.8±1.1, 10.6S±0.1×120.70E±0.09, h31km, n8, σ2§86/11, mb3.9/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.94**	**82**	Pn	**Pb**	**08 06 30.6**	**-1.0**
	13nm,0.3s,baz=316,slow=4.3,SNR=8.1						
BATI				Sn	**Sb**	**08 07 09.5**	**+2.3**
	5.3nm,0.3s,baz=37,slow=23,SNR=2.4						
FITZ	**Fitzroy Crossi**	**8.82**	**148**	Pn	**Pn**	**08 07 47.8**	**+2.6**
	0.5nm,0.3s,baz=310,slow=7.8,SNR=1.6						
FITZ				Sn	**Sn**	**08 09 20.9**	**-2.7**
	1.7nm,0.3s,baz=191,slow=20,SNR=1.2						
WRA	**Warramunga Arr**	**16.07**	**127**	Pn	**Pn**	**08 09 25.1**	**+1.5**
	0.1nm,0.3s,baz=302,slow=14,SNR=3.0						
WRA				Sn	**Sn**	**08 12 15.1**	**-5.8**
	0.1nm,0.3s,baz=304,slow=26,SNR=2.8						
ASAR	**Alice Springs**	**18.06**	**138**	P	**P**	**08 09 51.1**	**+2.4**
	0.1nm,0.3s,baz=313,slow=12,SNR=9.3						
SONM	**Songino Array**	**59.59**	**349**	P	**P**	**08 15 40.6**	**-0.1**
	0.6nm,0.5s,baz=168,slow=8.8,SNR=2.3						
MKAR	**Makanchi Array**	**66.68**	**332**	P	**P**	**08 16 26.9**	**-0.7**
	0.4nm,0.5s,baz=134,slow=8.0,SNR=3.8						
ZALV	**Zalesovo Beam**	**71.17**	**339**	P	**P**	**08 16 54.2**	**-1.2**
	0.5nm,0.3s,baz=132,slow=4.3,SNR=2.2						
KURBB	**Kurchatov Arra**	**71.18**	**333**	P	**P**	**08 16 54.7**	**-0.8**
	0.2nm,0.

GTK IAML 08 11 55.2
comp=E,358nm,0.2s
BOK Bokaro 4.01 180 *eP* **Pn 08 11 39.4 -0.6**
BOK *eS* **Sb 08 12 41.9 +4.1**
SHL Shillong 5.85 111 Pn **Pn 08 12 05.1 -0.3**
KOHI KOHIMA 7.67 104 *eS* **Sn 08 13 54.7 -2.3**
KOHI IAML 08 14 03.5
comp=N,234nm,0.5s
SMLA Simla 8.25 296 *eP* **Pn 08 12 35.7 -2.5**
SMLA *eS* Sn 08 13 59.2 -12
SMLA IAML 08 14 16.8
comp=E,49nm,0.6s
DHRM DHARAMSHALA 9.38 300 *eP* **Pn 08 12 52.8 -1.0**
DHRM *eS* Sn 08 14 24.8 -14
DHRM IAML 08 14 42.6
comp=N,290nm,0.7s
NIL Nilore 12.29 301 Pn **Pn 08 13 32.2 -1.3**
MK31 Makanchi Array 19.14 353 P **Pn 08 15 02.4 0.0**
MKAR Makanchi Array 19.14 353 P **Pn 08 15 03.7 +1.2**
comp=N,0.3nm,0.3s,baz=174,slow=12,SNR=10
MKAR Makanchi Array 19.14 353 P **P 08 15 02.0 +0.5**
KK31 Karatay Array 19.66 325 P **P 08 15 06.8 -0.5**
KURBB Kurchatov Arra 23.44 348 P **P 08 15 49.6 +2.2**
comp=N,0.6nm,0.6s,baz=166,slow=9.6,SNR=6.2
KURK Kurchatov 23.51 348 P **P 08 15 49.6 +1.5**
SONM Songino Array 25.59 33 P **P 08 16 11.4 +3.9**
comp=N,1.2nm,0.6s,baz=243,slow=6.5,SNR=3.7
SONM Songino Array 25.59 33 P **P 08 16 06.9 -0.7**
SONM IAmb IAmb 08 16 17.2
comp=Z,1.6nm,0.8s
ZALV Zalesovo Beam 26.11 359 P **P 08 16 14.9 +3.0**
comp=Z,1.1nm,0.5s,baz=187,slow=8.7,SNR=5.4
ZALV Zalesovo Beam 26.11 359 P **P 08 16 14.1 +2.1**
IPM Ipoh 27.35 145 P **P 08 16 22.5 -1.1**
IPM IAmb IAmb 08 16 26.8
comp=Z,12nm,1.3s
ABKAR Akbulak array 29.22 324 P **P 08 16 40.7 +0.8**
ABKAR IAmb IAmb 08 16 43.3
comp=Z,1.5nm,0.5s
NRIK Noril'sk 41.56 1 P **P 08 18 27.8 +2.3**
comp=Z,0.6nm,0.3s,baz=184,slow=8.5,SNR=3.6
JGF Kuroka 44.08 66 P **P 08 18 47.4 +0.8**
JGF IAmb IAmb 08 19 03.5
comp=Z,12nm,1.5s
BR131 Keskin Array S 44.43 299 P **P 08 18 47.5 -1.8**
BR131 IAmb IAmb 08 18 55.8
comp=Z,3.7nm,1.2s
JSD Sado 44.64 63 P **P 08 18 50.7 -0.2**
JSD IAmb IAmb 08 19 02.9
comp=Z,10nm,1.3s
FINES FINESS Array B 51.58 328 P **P 08 19 45.7 +1.6**
comp=Z,1.0nm,0.7s,baz=120,slow=27,SNR=1.5
PABE Paberze 51.73 320 P **P 08 19 43.8 -1.6**
ARCES ARCESS Array B 53.93 338 P **P 08 20 03.3 +1.9**
comp=Z,1.5nm,0.7s,baz=102,slow=7.5,SNR=1.5
HFS Hagfors 57.46 326 P **P 08 20 28.3 +1.4**
comp=Z,2.1nm,0.8s,baz=71,slow=11,SNR=2.5
MURB Monte Urbino 59.82 306 P **P 08 20 41.0 -2.7**
BILL Bilibino 60.95 25 P **P 08 20 49.6 -1.3**
BILL IAmb IAmb 08 20 56.1
comp=Z,3.1nm,0.5s
WRA Warramunga Arr 66.75 130 P **P 08 21 30.0 +0.2**
comp=Z,0.2nm,0.5s,baz=325,slow=6.6,SNR=5.5
WRA Warramunga Arr 66.75 130 P **P 08 21 29.2 -0.5**
WR0 Warramunga Arr 66.90 130 P **P 08 21 30.8 0.0**
AS31 Alice Springs 69.06 133 P **P 08 21 41.3 -3.0**
AS31 IAmb IAmb 08 21 57.8
comp=Z,1.4nm,1.3s
ASAR Alice Springs 69.06 133 P **P 08 21 44.5 +0.3**
comp=Z,0.2nm,0.6s,baz=314,slow=6.8,SNR=4.6
ASAR Alice Springs 69.06 133 P **P 08 21 43.8 -0.5**

*IDC **26** 08:13:39.5±1.9, 27.°66N×85.°85E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.3/58, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=75.7km s-min=23.2km az=68.0*
ISC 26 08:13:42.5±1.9, 27.7N±0.2×85.9E±0.4, h19km, n6, σ0.955/6, mb3.4/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.26**	**353**	P	**Pn**	**08 18 06.2**	**-0.7**
	0.2nm,0.3s,baz=170,slow=12,SNR=4.4						
SONM	**Songino Array**	**25.70**	**33**	P	**P**	**08 19 11.8**	**+0.3**
	0.7nm,0.8s,baz=203,slow=11,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.23**	**359**	P	**P**	**08 19 16.3**	**+0.2**
	0.4nm,0.4s,baz=180,slow=4.3,SNR=2.0						
ARCES	**ARCESS Array B**	**54.04**	**338**	P	**P**	**08 23 05.6**	**+0.3**
	3.2nm,0.9s,baz=106,slow=6.7,SNR=1.0						
WRA	**Warramunga Arr**	**66.67**	**130**	P	**P**	**08 24 32.5**	**+0.1**
	0.4nm,0.9s,baz=325,slow=6.5,SNR=6.3						
ASAR	**Alice Springs**	**68.98**	**133**	P	**P**	**08 24 46.4**	**-0.4**
	0.2nm,0.7s,baz=306,slow=6.4,SNR=4.1						

IDC 26 08:16:39.5±3.0, 28.°07N×86.°45E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.2/58, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=198.8km s-min=27.1km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.98**	**351**	P	Pn	08 21 02.8	-0.3
	0.1nm,0.3s,baz=166,slow=10,SNR=3.2						
ARCES	**ARCESS Array B**	**53.91**	**338**	P	P	08 26 04.1	-0.3
	1.6nm,0.8s,baz=116,slow=8.1,SNR=1.3						
WRA	**Warramunga Arr**	**66.50**	**130**	P	P	08 27 31.6	+0.2
	0.4nm,0.5s,baz=322,slow=6.6,SNR=9.0						
ASAR	**Alice Springs**	**68.84**	**134**	P	P	08 27 45.8	-0.3
	0.1nm,0.5s,baz=316,slow=6.6,SNR=1.4						

*IDC **26** 08:19:35.0±1.2, 52.°71N×27.°67E, h0km, mb3.2/1, mb1 3.7/3, mb1mx3.1/44, mbtmp3.5/3, ML2.9/2, Error ellipse: s-maj=38.5km s-min=8.6km az=72.0*
ISC 26 08:19:36.3±1.2, 52.86N±0.08×27.83E±0.10, h10km, n9, σ1°72/13, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**2.33**	**158**	Pg	**Pn**	**08 20 15.3**	**+0.7**
	8.5nm,0.3s,baz=336,slow=17,SNR=27						
AKASG				Lg	Lg	08 20 46.5	
	14nm,0.3s,baz=336,slow=30,SNR=14						
IDID	**Didziasalis**	**2.54**	**346**	*eP*	**Pb**	**08 20 23.1**	**+1.2**
IDID				*eS*	**Sb**	**08 20 54.5**	**+1.2**
IDID				IAML		08 21 07.7	
	comp=Z,12nm,0.5s						
IIGN	**Ignalina**	**2.67**	**340**	*eP*	**Pb**	**08 20 25.2**	**+1.0**
IIGN				*eS*	**Sb**	**08 20 58.1**	**+1.2**
IIGN				IAML		08 21 13.4	
	comp=Z,8.8nm,0.4s						
ISAL	**Salakas**	**2.90**	**341**	*eP*	**Pb**	**08 20 26.8**	**-1.1**
ISAL				*eS*	**Sb**	**08 21 04.0**	**+0.6**
ISAL				IAML		08 21 19.0	
	comp=Z,6.5nm,0.7s						
SUW	**Suwalki**	**3.01**	**294**	*eP*	**Pg**	**08 20 35.1**	**+1.2**
SUW				*eS*	**Sb**	**08 21 05.5**	**-1.2**
PABE	**Paberze**	**3.49**	**321**	*eP*	**Pb**	**08 20 38.2**	**+0.1**
FINES	**FINESS Array B**	**8.66**	**354**	Pn	**Pn**	**08 21 39.8**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=163,slow=14,SNR=16						
FINES				Sn	Sn	08 23 11.6	-7.5
	comp=Z,0.1nm,0.3s,baz=179,slow=26,SNR=1.2						
FINES				Lg	Lg	08 24 13.0	
	comp=Z,0.3nm,0.3s,baz=187,slow=26,SNR=3.9						
ARCES	**ARCESS Array B**	**16.77**	**357**	Pn	**Pn**	**08 23 26.9**	**-4.0**
	baz=182,slow=14,SNR=1.7						
YKA	**Yellowknife Ar**	**61.24**	**341**	P	**P**	**08 29 51.2**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=22,slow=6.6,SNR=1.9						

*IDC **26** 08:22:10.7±1.9, 27.°73N×85.°76E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.3/60, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=58.5km s-min=30.8km az=57.0*
*NEIC **26** 08:22:12.3±1.6, 28.°01N±0.0×85.°85E±0.°06, h10km±1km, mb4.4/11, Error ellipse: s-maj=14.1km s-min=7.3km az=210.0*
ISC 26 08:22:13.3±0.7, 27.°9N±0.1×85.°9E±0.1, h19km, n19, σ1°51/19, mb4.3/10, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**5.87**	**112**	Pn	**Pn**	**08 23 36.8**	**-2.7**
NIL	**Nilore**	**12.25**	**301**	Pn	**Pn**	**08 25 06.0**	**-0.9**
BTK	**Batken**	**17.35**	**318**	Pn	**Pn**	**08 26 12.7**	**-1.8**
BTK				IAmb	IAmb	08 26 20.2	
	comp=Z,4.7nm,1.2s						
MK31	**Makanchi Array**	**19.04**	**352**	P	**P**	**08 26 33.7**	**-0.6**
MKAR	**Makanchi Array**	**19.04**	**352**	P	**Pn**	**08 26 35.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=172,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	**19.04**	**352**	P	**P**	**08 26 33.1**	**-1.2**
SONM	**Songino Array**	**25.50**	**33**	P	**P**	**08 27 43.2**	**+2.7**
	comp=Z,0.7nm,0.6s,baz=217,slow=7.2,SNR=4.9						
SONM	**Songino Array**	**25.50**	**33**	P	**P**	**08 27 41.0**	**+0.5**
GSI	**Gunungsitoli**	**28.75**	**155**	P	**P**	**08 28 10.4**	**+0.6**
GSI				IAmb	IAmb	08 28 24.0	
	comp=Z,13nm,1.1s						
ARU	**Arti**	**34.50**	**333**	P	**P**	**08 29 00.8**	**+0.9**
ARU				IAmb	IAmb	08 29 04.5	
	comp=Z,4.0nm,1.3s						
KSM	**Kuching**	**35.20**	**134**	P	**P**	**08 29 07.9**	**+1.5**
KSM				IAmb	IAmb	08 29 10.8	
	comp=Z,7.6nm,1.0s						
KS19	**Wonju Array Si**	**36.35**	**64**	P	**P**	**08 29 15.9**	**-0.3**
MYLDM	**Lahad Datu**	**38.38**	**120**	P	**P**	**08 29 35.5**	**+1.9**
MYLDM				IAmb	IAmb	08 29 41.9	
	comp=Z,10nm,1.0s						
GAZ	**Gaziantep**	**41.65**	**296**	P	**P**	**08 29 59.5**	**-1.2**
GAZ				IAmb	IAmb	08 30 04.0	
	comp=Z,4.9nm,0.4s						
FINES	**FINESS Array B**	**51.50**	**328**	P	**P**	**08 31 18.6**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=129,slow=13,SNR=3.8						
ARCES	**ARCESS Array B**	**53.84**	**338**	P	**P**	**08 31 36.1**	**+1.5**
	comp=Z,3.8nm,1.0s,baz=103,slow=7.5,SNR=4.0						
WRA	**Warramunga Arr**	**66.80**	**130**	P	**P**	**08 33 04.0**	**0.0**
	comp=Z,0.7nm,1.0s,baz=323,slow=6.6,SNR=2.4						
WRH	**Wood River Hil**	**78.80**	**21**	P	**P**	**08 34 12.8**	**-1.7**
WRH				IAmb	IAmb	08 34 22.4	
	comp=Z,4.4nm,1.4s						
DLBC	**Dease Lake**	**88.90**	**18**	P	**P**	**08 35 06.7**	**+0.4**

*IDC **26** 08:26:45.1±1.5, 27.°64N×85.°71E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.5/60, mbtmp3.9/9, ML3.9/1, MS4.8/1, Ms1 4.8/1, ms1mx3.6/66, Error ellipse: s-maj=53.8km s-min=21.3km az=64.0*
ISC 26 08:26:46.7±1.6, 27.7N±0.2×85.7E±0.4, h10km, n10, σ0.924/9, mb3.8/8, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.30**	**353**	P	**P**	**08 31 11.4**	**-0.4**
	0.4nm,0.3s,baz=175,slow=11,SNR=12						
PALK	**Pallekele**	**20.82**	**194**	LR	LR	08 40 18.3	
	comp=Z,3µm,18.5s,baz=92,slow=39						
KURBB	**Kurchatov Arra**	**23.58**	**349**	P	**P**	**08 31 57.7**	**+0.3**
	1.1nm,0.6s,baz=167,slow=9.9,SNR=11						
SONM	**Songino Array**	**25.81**	**33**	P	**P**	**08 32 18.1**	**-0.1**
	2.0nm,0.8s,baz=216,slow=10,SNR=6.5						
ZALV	**Zalesovo Beam**	**26.28**	**359**	P	**P**	**08 32 21.9**	**-0.2**
	1.4nm,0.6s,baz=186,slow=9.2,SNR=7.9						
NRIK	**Noril'sk**	**41.73**	**1**	P	**P**	**08 34 35.8**	**+0.2**
	2.4nm,0.5s,baz=170,slow=6.7,SNR=6.8						
FINES	**FINESS Array B**	**51.66**	**328**	P	**P**	**08 35 53.2**	**-0.2**
	0.8nm,0.6s,baz=90,slow=8.0,SNR=5.0						
ARCES	**ARCESS Array B**	**54.04**	**338**	P	**P**	**08 36 11.0**	**+0.1**
	2.2nm,0.7s,baz=115,slow=8.3,SNR=4.4						
WRA	**Warramunga Arr**	**66.74**	**130**	P	**P**	**08 37 38.4**	**0.0**
	0.8nm,1.1s,baz=323,slow=6.8,SNR=1.9						
ASAR	**Alice Springs**	**69.03**	**133**	P	**P**	**08 37 52.9**	**0.0**
	0.4nm,0.7s,baz=315,slow=6.0,SNR=1.5						

IDC 26 08:28:30.2±2.1, 27.°74N×86.°08E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.3/60, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=95.9km s-min=29.1km az=60.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.25**	**352**	P	P	08 32 55.8	-0.4
	0.3nm,0.3s,baz=174,slow=10,SNR=7.4						
ZALV	**Zalesovo Beam**	**26.20**	**358**	P	P	08 34 06.8	+0.4
	0.8nm,0.3s,baz=190,slow=7.5,SNR=4.6						
AKTO	**Aktyubinsk**	**31.12**	**324**	P	P	08 34 50.3	0.0
	0.5nm,0.4s,baz=113,slow=7.7,SNR=1.8						
ARCES	**ARCESS Array B**	**54.09**	**338**	P	P	08 37 56.1	-0.2
	2.7nm,0.9s,baz=102,slow=8.4,SNR=1.7						
WRA	**Warramunga Arr**	**66.53**	**130**	P	P	08 39 22.1	-0.1
	0.5nm,0.9s,baz=322,slow=6.5,SNR=1.7						

IDC 26 08:32:19.3±2.0, 27.°24N×85.°84E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.3/56, mbtmp3.6/5, ML3.4/1, Error ellipse: s-maj=76.5km s-min=27.3km az=67.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.72**	**353**	P	P	08 36 49.4	-1.0
	0.1nm,0.3s,baz=174,slow=10,SNR=3.7						
SONM	**Songino Array**	**26.09**	**33**	P	P	08 37 55.1	+0.3
	0.8nm,0.7s,baz=218,slow=12,SNR=2.6						
ARCES	**ARCESS Array B**	**54.47**	**338**	P	P	08 41 48.6	+0.4
	2.0nm,0.8s,baz=113,slow=9.2,SNR=1.4						
WRA	**Warramunga Arr**	**66.38**	**130**	P	P	08 43 09.4	-0.9
	0.4nm,0.5s,baz=316,slow=7.1,SNR=1.7						
ASAR	**Alice Springs**	**68.63**	**133**	P	P	08 43 25.5	+0.8
	0.3nm,0.4s,baz=314,slow=6.3,SNR=1.3						

*DJA **26** 08:37:40.9±0.5, 9.°S±5.°×12.°3E±.°, h112km±4km, M3.9/5, mb4.4/2, MLv3.7/5*
*IDC **26** 08:37:45.2±1.5, 8.°91S×124.°20E, h0km, mb3.8/2, mb1 4.0/5, mb1mx3.5/56, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=43.4km s-min=19.3km az=89.0*
ISC 26 08:37:38.0±1.8, 8.1S±0.1×123.7E±0.1, h35km, n11, σ2°49/11, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.48**	**251**	P	**Pn**	**08 37 58.4**	**-3.7**
MMRI				S	**Sn**	**08 38 22.6**	**+2.3**
SOEI	**Soe**	**1.71**	**159**	P	**Pn**	**08 38 08.2**	**+2.8**
BATI	**Baumata**	**2.05**	**180**	Pn	**Pn**	**08 38 11.9**	**+2.0**
	83nm,0.3s,baz=4.6,slow=3.0,SNR=50						
BATI				Sn	**Sn**	**08 38 32.0**	**-2.4**
	51nm,0.3s,baz=264,slow=22,SNR=10.0						
BATI	**Baumata**	**2.05**	**180**	P	**Pn**	**08 38 11.7**	**+1.7**
BATI				S	**Sn**	**08 38 33.6**	**-0.8**
BASI	**Baing, Sumba**	**3.67**	**236**	P	Pn	08 38 26.3	-5.9
BSSI	**Bau Bau, Buton**	**3.71**	**302**	P	**Pn**	**08 38 30.8**	**-2.1**
FITZ	**Fitzroy Crossi**	**10.08**	**169**	Pn	**Pn**	**08 39 58.5**	**-1.8**
	0.4nm,0.3s,baz=330,slow=6.7,SNR=9.4						
FITZ				Sn	Sn	08 41 41.2	-11
	0.4nm,0.3s,baz=292,slow=18,SNR=4.3						
WRA	**Warramunga Arr**	**15.64**	**140**	Pn	**Pn**	**08 41 15.3**	**-0.6**
	0.3nm,0.3s,baz=318,slow=14,SNR=11						
WRA				Sn	Sn	08 43 56.1	-12
	0.2nm,0.3s,baz=318,slow=19,SNR=5.7						
ASAR	**Alice Springs**	**18.30**	**149**	P	**Pn**	**08 41 50.5**	**+1.4**
	0.3nm,0.3s,baz=320,slow=11,SNR=64						
ASAR				S	Sn	08 45 01.2	-11
	0.1nm,0.3s,baz=310,slow=20,SNR=5.3						
MKAR	**Makanchi Array**	**65.90**	**330**	P	P	08 48 39.8	+19
	0.6nm,0.7s,baz=140,slow=7.0,SNR=2.0						
ZALV	**Zalesovo Beam**	**69.98**	**337**	P	P	08 49 03.2	+18
	0.6nm,0.4s,baz=159,slow=8.5,SNR=1.7						

*BJI **26** 08:40:54.6±0.0, 27.°70N×85.°86E, h12km, mb4.5/39*
*IDC **26** 08:40:54.9±0.5, 27.°67N×85.°96E, h0km, mb4.4/31, mb1 4.5/33, mb1mx4.4/63, mbtmp4.4/33, ML4.2/2, Error ellipse: s-maj=15.5km s-min=11.4km az=30.0*
*NEIC **26** 08:40:55.8±1.9, 27.°73N±0.0°08×85.°85E±0.°05, h10km±1km, mb4.6/77, Error ellipse: s-maj=13.2km s-min=6.6km az=169.0*
*DMN **26** 08:40:56.8±0.2, 27.°82N×86.°01E, h25km, Ml5.4/6, Error ellipse: s-maj=8.0km s-min=2.6km az=16.0*
*NDI **26** 08:40:58.2±4.1, 27.°69N×85.°94E, h10km, ML4.6, mb4.6(NEIC)*
ISC 26 08:40:56.8±0.8, 27.71N±0.°04×85.°91E±0.°02, h16km±5km, n228, σ1°90/252, mb4.5/86, 9C-4D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**0.20**	**352**	*eP*	**Pb**	**08 41 02.5**	**+0.2**
GUN				*eSg*	**Sb**	**08 41 06.2**	**+0.3**
JIRN	**Jiri**	**0.25**	**102**	*eSg*	**Sg**	**08 41 06.5**	**-0.2**
PKI	**Pulchoki**	**0.47**	**252**	*eP*	**Pn**	**08 41 09.3**	**+0.2**
PKI				*eSg*	**Sn**	**08 41 16.8**	**-0.4**
	23µm,0.3s						
PKIN	**Phulchoki**	**0.47**	**253**	*eP*	**Pn**	**08 41 09.2**	**0.0**
KKN	**Kakani**	**0.56**	**278**	*eP*	**Pn**	**08 41 10.4**	**0.0**
KKN				*eSg*	**Sn**	**08 41 18.8**	**-0.7**
	9µm,0.2s						
DMN	**Daman**	**0.72**	**262**	*eP*	**Pn**	**08 41 13.5**	**+0.9**
DMN				*eSg*	**Sn**	**08 41 25.0**	**+1.6**
	11µm,0.3s						
RAMN	**Ramite**	**0.98**	**141**	*eP*	**Pb**	**08 41 15.7**	**+0.2**
GKN	**Gorkha**	**1.16**	**285**	*eP*	**Pg**	**08 41 21.0**	**+1.7**
GKN				*eSg*	**Sg**	**08 41 37.0**	**+2.5**
	5µm,0.3s						
ODAN	**Odare**	**1.57**	**123**	*eP*	**Pg**	**08 41 27.0**	**0.0**
ODAN				*eSg*	**Sg**	**08 41 47.2**	**-0.3**
	4µm,0.2s						
TAPN	**Taplejung**	**1.64**	**102**	*eP*	**Pb**	**08 41 27.3**	**+0.5**
TAPN				*eSg*	**Sb**	**08 41 48.0**	**+0.6**
	5µm,0.4s						
DANN	**Dangsing**	**2.00**	**289**	*eP*	**Pb**	**08 41 33.9**	**+0.9**
DANN				*eSg*	**Sg**	**08 42 02.0**	**+0.6**
	5µm,0.3s						
KOLN	**Koldanda**	**2.05**	**272**	*eP*	**Pg**	**08 41 35.9**	**-0.3**
KOLN				*eSg*	**Sg**	**08 42 04.2**	**+1.4**
	6µm,0.2s						
PYUN	**Piuthan**	**2.61**	**279**	*eSg*	**Sg**	**08 42 22.0**	**+1.2**
	8µm,0.4s						
BOK	**Bokaro**	**3.90**	**180**	*eP*	**Pn**	**08 41 59.6**	**+3.5**
BOK				*eS*	**Sn**	**08 42 44.3**	**+2.7**
BOK				IAML		08 42 46.6	
	comp=E,332nm,0.1s						
BOK				IAML		08 42 47.0	
	comp=N,360nm,0.2s						
LSA	**Lhasa**	**5.01**	**66**	Pn	**Pn**	**08 42 10.5**	**-1.2**
SHL	**Shillong**	**5.76**	**110**	*eP*	**Pn**	**08 42 23.0**	**+1.2**
SHL				*eS*	**Sn**	**08 43 26.4**	**-1.2**
SHL	**Shillong**	**5.76**	**110**	Pn	**Pn**	**08 42 22.9**	**+1.2**
DDI	**Dehra Dun**	**7.35**	**293**	*eP*	**Pn**	**08 42 47.1**	**+3.6**
DDI				*eS*	**Sn**	**08 44 07.2**	**+0.5**
DDI				IAML		08 44 10.7	
	comp=N,2µm,0.3s						
DDI				IAML		08 44 11.5	
	comp=E,2µm,0.3s						
KOHI	**KOHIMA**	**7.59**	**103**	*eP*	**Pn**	**08 42 47.6**	**+0.7**
KOHI				*eS*	**Sn**	**08 44 07.3**	**-5.6**
IMP	**Imphal**	**7.76**	**110**	*eP*	**Pn**	**08 42 51.3**	**+2.1**
MOKO	**MOKOCHONG**	**7.80**	**98**	*eP*	**Pn**	**08 42 50.6**	**+0.8**
MOKO				*eS*	**Sn**	**08 44 12.3**	**-5.5**
MOKO				IAML		08 44 21.1	
	comp=E,211nm,0.6s						
MOKO				IAML		08 44 24.2	
	comp=N,132nm,0.5s						
BHPL	**Bhopal**	**8.87**	**242**	*eP*	**Pn**	**08 43 03.3**	**-1.0**
BHPL				*eS*	**Sn**	**08 44 37.2**	**-6.7**
BHPL				IAML		08 44 41.3	
	comp=N,304nm,0.2s						
BHPL				IAML		08 44 43.9	
	comp=E,251nm,0.2s						
BHK	**Bhakra**	**9.05**	**296**	*ex*	**Pn**	**08 43 06.4**	**-0.4**
DHRM	**DHARAMSHALA**	**9.48**	**301**	*eP*	**Pn**	**08 43 13.2**	**+0.3**
DHRM				*eS*	**Sn**	**08 44 55.8**	**-3.4**
DHRM				IAML		08 44 59.9	
	comp=E,3µm,0.3s						
DHRM				IAML		08 45 00.8	
	comp=N,2µm,0.3s						
AJM	**Ajmer**	**10.12**	**266**	*eP*	**Pn**	**08 43 20.0**	**-1.4**
AJM				*i S*	**Sn**	**08 45 08.0**	**-6.6**
HYB	**Hyderabad**	**12.29**	**215**	*i P*	Pn	08 43 45.0	-6.3
HYB				*eS*	**Sn**	**08 46 10.0**	**+2.0**
NIL	**Nilore**	**12.39**	**302**		**Pn**	**08 43 51.0**	**-1.5**
KSH	**Kashi**	**14.38**	**327**	P	**Pn**	**08 44 17.5**	**-2.3**
KSH				pmax	pmax		
	comp=N,21nm,1.0s						
CHTO	**Chiang Mai**	**14.89**	**124**		**Pn**	**08 44 26.7**	**0.0**
CM33	**Chiang Mai Arr**	**14.89**	**124**	P	**P**	**08 44 33.0**	**+0.7**
CMMT	**Chiang Mai**	**14.89**	**124**	P	**P**	**08 44 32.6**	**+0.2**
CM32	**Chiang Mai Arr**	**14.92**	**124**	P	**P**	08 44 40.2	+7.5
CM34	**Chiang Mai Arr**	**15.02**	**123**	P	**P**	**08 44 35.0**	**+1.2**
CM15	**Chiang Mai Arr**	**15.10**	**125**	P	**P**	**08 44 37.6**	**+2.9**
CM13	**Chiang Mai Arr**	**15.11**	**125**	P	**P**	**08 44 36.9**	**+2.0**
CMAR	**Chiang Mai Arr**	**15.11**	**125**	Pn	**Pn**	**08 44 27.8**	**-1.9**
	comp=N,0.1nm,0.3s,baz=304,slow=14,SNR=7.5						
CM02	**Chiang Mai Arr**	**15.13**	**125**	P	**P**	**08 44 37.3**	**+2.3**
CM01	**Chiang Mai Arr**	**15.15**	**125**	P	**P**	**08 44 37.8**	**+2.6**
CM05	**Chiang Mai Arr**	**15.15**	**125**	P	**P**	**08 44 37.0**	**+1.7**
CM09	**Chiang Mai Arr**	**15.15**	**125**	P	**P**	**08 44 38.0**	**+2.7**
CM04	**Chiang Mai Arr**	**15.18**	**125**	P	**P**	**08 44 38.0**	**+2.5**
CM36	**Chiang Mai Arr**	**15.18**	**124**	P	**P**	**08 44 37.0**	**+1.4**
PRZ	**Przheval'sk**	**15.95**	**339**		**Pn**	**08 44 39.2**	**-1.5**
KBL	**Kabul**	**15.96**	**299**	Pn	**Pn**	**08 44 38.5**	**-2.3**
KBL				IAmb	IAmb	08 44 46.9	
	comp=Z,28nm,1.1s						
KDJ	**Kajisay**	**16.05**	**336**		**Pn**	**08 44 40.8**	**-1.2**
KDJ				IAmb	IAmb	08 44 50.1	
	comp=Z,21nm,0.8s						
WMQ	**Urumqi**	**16.14**	**5**	*eP*	**P**	**08 44 45.5**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,31nm,0.7s						
SUKH	**Sukhothai**	**16.24**	**126**	P	**P**	**08 44 54.0**	**+6.7**
GTA	**Gaotai**	**16.42**	**41**	⇓P	**P**	**08 44 50.0**	**+0.6**
GTA				pP	pP	08 44 54.8	+0.3
GTA				sP	sP	08 44 58.5	+1.5
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
ULHL	**Ulahol**	**16.50**	**334**	P	**Pn**	**08 44 47.2**	**-0.6**
	SNR=9.8						
UMPA	**Umpang Tak**	**16.58**	**131**	P	P	08 45 02.5	+11
DRK	**Karamyk**	**16.59**	**319**	Pn	**Pn**	**08 44 42.0**	**-7.0**
BOOM	**Boomskoye usch**	**16.83**	**334**	Pn	**Pn**	**08 44 50.2**	**-1.7**
GAR	**Garm**	**17.19**	**315**		**Pn**	**08 44 52.5**	**-3.9**
UCH	**Uchtor**	**17.20**	**330**	P	**Pn**	**08 44 55.4**	**-1.5**
	SNR=14						

comp=Z,6.8nm,0.6s
SONM Songino Array 25.66 33 P P 08 46 27.5 +1.6
comp=Z,14nm,0.7s,baz=219,slow=9.8,SNR=18
SONM Songino Array 25.66 33 P P 08 46 27.4 +1.6
SONM IAmb IAmb 08 46 30.2
comp=Z,14nm,0.8s
ULN Ulaanbaatar 26.00 34 P P 08 46 29.0 0.0
ULN IAmb IAmb 08 46 33.1
comp=Z,14nm,0.7s
ZAA0 Zalesovo Array 26.22 359 P P 08 46 29.6 -1.2
ZAA0 IAmb IAmb 08 46 34.8
comp=Z,8.5nm,0.7s
ZALV Zalesovo Beam 26.22 359 P P 08 46 31.9 +1.1
comp=Z,11nm,0.5s,baz=184,slow=9.5,SNR=29
ZALV Zalesovo Beam 26.22 359 P P 08 46 31.2 +0.5
IPM Ipoh 27.23 145 P P 08 46 38.3 -1.8
IPM IAmb IAmb 08 46 58.8
comp=Z,11nm,1.2s
TLY Talaya 27.41 24 P P 08 46 39.7 -1.8
BVAR Borovoye Array 27.79 340 P P 08 46 46.0 +1.1
comp=Z,1.2nm,0.4s,baz=164,slow=13,SNR=18
BRVK Borovoye 27.85 340 P P 08 46 43.7 -1.7
NJ2 Nanjing 28.82 73 *eP* **P 08 46 56.0 +1.7**
NJ2 pmax pmax
comp=Z,11nm,0.5s
ABKAR Akbulak array 29.34 324 P P 08 46 58.1 -0.6
ABKAR Akbulak array 29.34 324 P P 08 46 58.4 -0.3
ABKAR IAmb IAmb 08 47 01.5
comp=Z,18nm,0.5s
MYKOM Kota Tinggi 30.97 143 P P 08 47 11.9 -1.6
AKTO Aktyubinsk 31.05 325 P P 08 47 15.3 +1.5
comp=Z,8.7nm,0.6s
SOCY Socotra 33.62 249 P P 08 47 31.2 -5.5
SOCY IAmb IAmb 08 47 38.0
comp=Z,4.3nm,0.6s
ARU Arti 34.70 333 P P 08 47 47.0 +1.4
ARU Arti 34.70 333 P P 08 47 45.8 +0.2
ARU IAmb IAmb 08 47 48.0
comp=Z,11nm,0.6s
INCN Inchon 35.43 64 P P 08 47 51.6 -0.6
KSRS Korea Array 36.45 64 P P 08 48 00.8 -0.1
comp=Z,1.8nm,0.7s,baz=258,slow=8.5,SNR=6.5
KBZ Khabaz 37.95 306 P P 08 48 14.8 +1.3
comp=Z,3.0nm,0.8s,baz=135,slow=7.9,SNR=11
USRK Ussuriysk Ar. 40.21 53 P P 08 48 32.4 0.0
comp=Z,2.6nm,0.6s,baz=260,slow=7.7,SNR=7.6
NRIK Noril'sk 41.67 1 P P 08 48 45.8 +1.7
comp=Z,17nm,0.7s,baz=170,slow=6.1,SNR=37
NRIK Noril'sk 41.67 1 P P 08 48 44.7 +0.6
XMIS Christmas Isla 42.52 151 P P 08 48 50.4 -1.2
BR131 Keskin Array S 44.53 300 P P 08 49 06.0 -2.0
BRTR Keskin Array B 44.53 300 P P 08 49 08.9 +1.0
comp=Z,0.9nm,0.6s,baz=113,slow=11,SNR=7.7
BRTR Keskin Array B 44.53 300 P P 08 49 06.2 -1.8
MJAR Matsushiro Arr 44.69 65 P P 08 49 09.4 +0.2
comp=Z,0.9nm,0.7s,baz=282,slow=11,SNR=5.9
KLMR Klimovskoe 45.35 330 *eP* **P 08 49 12.6 -1.3**
KLMR Klimovskoe 45.35 330 AMP 08 49 28.2
comp=Z,18nm,1.4s
JEW Eniwo 46.97 56 P P 08 49 27.2 +0.2
ELL Elmali 47.64 296 P P 08 49 31.4 -1.0
AKASG Malin Array Be 48.19 315 P P 08 49 36.8 +0.5
comp=Z,1.5nm,0.5s,baz=79,slow=7.2,SNR=12
SORM Soroca 48.54 311 ⇑P P 08 49 40.2 +1.1
CFR Carcaliu 48.59 307 ⇑P P 08 49 41.4 +1.9
HARR Harsova 48.73 306 ⇓P P 08 49 42.6 +2.0
MNK Minsk 49.49 319 *i* P **P 08 49 42.3 -3.9**
comp=E,5.0nm,0.9s
MNK *i* P **P 08 49 42.3 -3.9**
comp=N,33nm,1.1s
MNK *i* P **P 08 49 42.3 -3.9**
comp=Z,10.0nm,0.7s
MNK *i* PcP **PcP 08 51 04.9 -3.1**
MNK *i* PP **PP 08 51 36.3 -4.0**
MNK *i* PPP PPP 08 52 27.9
MNK *i* S **S 08 56 49.7 -3.2**
MNK *i* SS **SS 09 00 15.6 -9.0**
MNK *i* SSS SSS 09 01 39.7
MNK *i* LR LR 09 10 27.6
MNK *i* LRM MLR 09 12 10.7
comp=Z,736nm,19.0s
MNK *i* LRM MLR 09 12 27.9
comp=E,38nm,12.7s
MNK *i* LRM MLR 09 12 53.2
comp=N,954nm,18.1s
TESR Tescani 49.65 309 ⇑P P 08 49 49.2 +1.6
TIXI Tiksi 49.89 16 P P 08 49 48.7 -0.2
TIXI IAmb IAmb 08 49 50.2
comp=Z,5.9nm,0.8s
BIZ Bicaz 50.02 309 ⇑P P 08 49 51.6 +1.2
MLR Muntele Rosu 50.14 308 P P 08 49 50.5 -1.0
MLR IAmb IAmb 08 49 55.0
comp=Z,14nm,0.9s
NACGM Naroch 50.18 320 *i* P **P 08 49 52.7 +1.2**
NACGM *i* P **P 08 49 52.7 +1.2**
NACGM *i* P **P 08 49 52.7 +1.2**
NACGM *i* Pb **pP 08 49 54.0 -3.2**
comp=Z,25nm,1.1s
NACGM *i* PP **PP 08 51 49.1 +2.6**
NACGM *i* PPP PPP 08 52 47.1
NACGM *i* S **S 08 57 07.0 +4.4**
NACGM *i* SS **SS 09 00 40.7 +5.1**
NACGM *i* SSS SSS 09 02 11.7
NACGM *i* LR LR 09 10 42.6
IDID Didziasalis 50.26 320 *eP* **P 08 49 52.8 +0.8**
LVZ Lovozero 50.34 337 P P 08 49 52.6 0.0
IIGN Ignalina 50.56 320 *eP* **P 08 49 56.1 +1.7**
ISAL Salakas 50.64 321 *eP* **P 08 49 56.2 +1.2**
BUR08 Bucovina Ar. S 50.65 310 P P 08 49 54.6 -0.7
BUR08 IAmb IAmb 08 50 15.1
comp=Z,11nm,1.4s
FIA1 FINESS Array S 51.70 328 P P 08 50 03.1 +0.3
FIA1 IAmb IAmb 08 50 26.8
comp=Z,13nm,1.2s
FINES FINESS Array B 51.70 328 P P 08 50 03.7 +0.9
comp=Z,15nm,1.1s,baz=108,slow=7.4,SNR=32
FINES FINESS Array B 51.70 328 P P 08 50 03.5 +0.8
PABE Paberze 51.85 320 *eP* **P 08 50 05.0 +1.0**
PABE Paberze 51.85 320 P P 08 50 03.1 -0.9
VTS Vitosha 52.23 304 ⇓P P 08 50 09.2 +1.9
VTS Vitosha 52.23 304 P P 08 50 06.5 -0.8
VTS IAmb IAmb 08 50 10.2
comp=Z,5.6nm,0.9s
KWP Kalwaria Pacla 52.31 313 P P 08 50 06.2 -1.4
MTSE Matsula 52.33 324 *eP* **P 08 50 06.8 -0.7**
DRGR 52.35 309 ⇑P P 08 50 09.4 +1.4
GZR Gura Zlata 52.37 307 ⇑P P 08 50 09.5 +1.3
MDVR Moldsvita 53.16 307 ⇑P P 08 50 15.4 +1.4
ARCES ARCESS Array B 54.05 338 P P 08 50 21.2 +1.1
comp=Z,13nm,0.8s,baz=99,slow=7.6,SNR=30
SEY Seymchan 55.02 31 P P 08 50 28.1 +1.0
comp=Z,8.0nm,0.8s,baz=257,slow=7.1,SNR=28
PDG Podgorica 55.17 304 P P 08 50 27.6 -1.1
PDG IAmb IAmb 08 50 30.1
comp=Z,8.0nm,0.9s
MORH Mrgy, Hungar 55.19 309 ⇑P P 08 50 30.0 +1.3
MORC Moravsky Berou 55.66 313 P P 08 50 30.6 -1.5
MORC IAmb IAmb 08 50 34.5
comp=Z,5.8nm,1.1s
KRLC Kraliky 56.13 314 *eP* **P 08 50 36.4 +0.9**
DPC Dobruska-Polom 56.41 314 *eP* **P 08 50 38.5 +1.1**
CHVC Chvalec 56.56 314 *eP* **P 08 50 39.7 +1.2**
CONA Conrad Observa 56.92 311 *i* P **P 08 50 42.5 +1.3**
comp=Z,9.1nm,1.8s,SNR=4.6
ARSA Arzberg 57.22 310 *eP* **P 08 50 43.8 +0.6**
comp=Z,2.9nm,0.9s
PRU Pruhonice 57.58 314 *eP* **P 08 50 47.0 +1.3**
SOKA Soboth 57.62 310 *eP* **P 08 50 47.2 +1.0**
comp=Z,2.3nm,0.5s
BRG Berggiesshubel 57.87 315 *eP* **P 08 50 49.0 +1.3**
BRG Amp 08 50 50.0
comp=Z,11nm,1.2s
BRG *ex* x 08 50 54.3
BRG Amp 08 50 55.8
comp=Z,5.9nm,1.0s
OBKA Obir 57.98 309 *eP* **P 08 50 46.8 -1.8**
comp=Z,3.9nm,0.9s
MOA Molln 57.99 311 *eP* **P 08 50 48.5 -0.1**
comp=Z,6.4nm,1.3s
GERES GERESS Array B 58.25 312 P P 08 50 51.4 +0.9
comp=Z,0.8nm,0.5s,baz=78,slow=6.2,SNR=13
GERES GERESS Array B 58.25 312 P P 08 50 50.3 -0.2
KHC Kasperske Hory 58.29 313 *eP* **P 08 50 51.8 +1.0**
NC405 NORSAR Array S 58.56 327 P P 08 50 52.8 +0.5
NC405 IAmb IAmb 08 51 19.4
comp=Z,2.8nm,0.9s
MYKA Terra Mystica 58.58 310 *eP* **P 08 50 53.7 +0.9**
comp=Z,1.2nm,0.4s
NC300 NORSAR Array S 58.70 327 P P 08 50 54.0 +0.6
KBA Koelnbreinsper 58.72 310 *eP* **P 08 50 50.7 -3.3**
comp=Z,1.3nm,0.6s
NC303 NORSAR Array S 58.72 327 P P 08 50 53.7 +0.2
NB201 NORSAR Array S 58.76 327 P P 08 50 54.0 +0.2
NOA NORSAR Array B 58.80 327 P P 08 50 54.4 +0.3
comp=Z,2.2nm,0.5s,baz=168,slow=8.8,SNR=11
STAL STALIGIAL 59.27 309 P P 08 50 56.8 -0.9
STAL IAmb IAmb 08 50 59.3
comp=Z,12nm,1.2s
ABTA Abfaltersbach 59.33 310 *eP* **P 08 50 58.1 +0.1**
comp=Z,5.0nm,1.1s
WTTA Wattenberg 59.84 311 *eP* **P 08 51 01.7 0.0**
comp=Z,5.8nm,1.0s
WATA Walderalm 59.87 311 *eP* **P 08 51 01.2 -0.6**
comp=Z,3.9nm,0.8s
SQTA Sankt Quirin 60.14 311 *eP* **P 08 51 03.6 -0.1**
comp=Z,5.0nm,0.6s
MOTA Moosalm 60.19 311 *eP* **P 08 51 03.8 -0.2**
comp=Z,7.4nm,0.8s
RETA Reutte 60.39 311 *i* P **P 08 51 04.7 -0.7**
comp=Z,2.6nm,0.6s,SNR=5.3
FETA Feichten 60.49 311 *i* P **P 08 51 05.6 -0.5**
comp=Z,2.3nm,0.6s,SNR=5.3
SALO Salr 60.89 309 P P 08 51 07.5 -1.2
DAVA Damuels 61.02 311 *eP* **P 08 51 09.3 -0.4**
comp=Z,7.5nm,0.7s
MSSA Maissana 61.85 308 P P 08 51 14.4 -0.8
SENIN Lac Senin/Sane 62.94 310 P P 08 51 21.5 -1.2
SENIN IAmb IAmb 08 51 24.8
comp=Z,5.2nm,0.7s
KEST Kesra 64.11 298 P P 08 51 32.1 +1.6
comp=Z,9.6nm,0.8s,baz=80,slow=1.0,SNR=11
KEST Kesra 64.11 298 P P 08 51 29.2 -1.3
NOR Nord 64.59 351 *i* P **P 08 51 32.8 +0.1**
NOR IAmb IAmb 08 51 34.0
comp=Z,2.0nm,0.7s
MANU Manus Island 65.98 106 P P 08 51 43.5 +0.7
WB0 Warramunga Arr 66.55 130 P P 08 51 46.8 +0.5
WRA Warramunga Arr 66.64 130 P P 08 51 47.5 +0.7
comp=Z,3.8nm,0.5s,baz=323,slow=6.7,SNR=23
WRA Warramunga Arr 66.64 130 P P 08 51 46.5 -0.3
WB2 Warramunga Arr 66.64 130 P P 08 51 47.0 +0.1
WB2 IAmb IAmb 08 51 48.7
comp=Z,5.7nm,0.7s
ASAR Alice Springs 68.94 133 P P 08 52 02.2 +0.9
comp=Z,2.0nm,0.6s,baz=316,slow=6.3,SNR=37
ASAR Alice Springs 68.94 133 P P 08 52 02.0 +0.7
NEEM North Greenlan 71.96 351 *i* P **P 08 52 20.3 +0.9**
NEEM IAmb IAmb 08 52 22.4
comp=Z,12nm,0.9s
A21K Barrow 72.17 17 P P 08 52 19.7 -0.6
A21K IAmb IAmb 08 52 21.9
comp=Z,3.3nm,0.8s
ESDC Sonseca Array 72.80 306 P P 08 52 25.7 +0.9
comp=Z,2.6nm,0.8s,baz=54,slow=6.1,SNR=19
ESDC Sonseca Array 72.80 306 P P 08 52 22.9 -1.8
SUMG Summit 73.12 345 *i* P **P 08 52 28.0 +1.5**
SUMG IAmb IAmb 08 52 28.9
comp=Z,3.4nm,0.8s
SUMG Summit 73.12 345 P P 08 52 25.8 -0.7
SUMG IAmb IAmb 08 52 28.9
comp=Z,5.6nm,0.9s
ICESG Greenland Ices 75.72 342 *i* P **P 08 52 42.6 +1.0**
ICESG IAmb IAmb 08 52 43.8
comp=Z,5.8nm,0.6s
TOLK Toolik Lake Re 75.73 18 P P 08 52 41.8 +0.5
TOLK IAmb IAmb 08 52 43.5
comp=Z,7.0nm,0.9s
COLD Coldfoot 76.49 19 P P 08 52 44.3 -1.2
COLD IAmb IAmb 08 52 48.0
comp=Z,3.5nm,1.0s
FYU Fort Yukon 78.37 19 P P 08 52 55.5 -0.6
FYU IAmb IAmb 08 52 59.3
comp=Z,8.7nm,1.1s
NEA2 Nenana 78.59 21 P P 08 52 56.4 -1.0
NEA2 IAmb IAmb 08 52 59.4
comp=Z,8.1nm,0.9s
MDM Murphy Dome 78.60 21 P P 08 52 57.1 -0.3
MDM IAmb IAmb 08 52 59.6
comp=Z,14nm,1.3s
TORD Torodi Ar. Bea 78.95 279 P P 08 53 00.5 +0.3
comp=Z,0.7nm,0.6s,baz=64,slow=3.9,SNR=4.6
TORD Torodi Ar. Bea 78.95 279 P P 08 52 58.3 -1.9
IL31 79.15 20 P P 08 52 59.7 -0.6
IL31 IAmb IAmb 08 53 01.5
comp=Z,4.4nm,0.9s
ILAR Eielson Array 79.15 20 P P 08 53 00.7 +0.2
comp=Z,2.1nm,0.7s,baz=304,slow=4.5,SNR=24
ILAR PP **PP 08 55 56.9 -2.4**
comp=Z,0.4nm,0.7s,baz=301,slow=7.7,SNR=4.1
ILAR Eielson Array 79.15 20 P P 08 52 59.9 -0.5
RND Reindeer 79.46 22 P P 08 53 02.5 +0.3
RND IAmb IAmb 08 53 03.5
comp=Z,3.2nm,0.7s
STKA Stephens Creek 79.51 134 P P 08 53 03.1 +0.3
comp=Z,2.8nm,0.9s,baz=312,slow=4.6,SNR=4.0
STKA Stephens Creek 79.51 134 P P 08 53 03.0 +0.3
INK Inuvik 79.93 14 P P 08 53 05.3 +0.8
comp=Z,3.0nm,0.9s,baz=352,slow=6.5,SNR=9.1
INK Inuvik 79.93 14 IAmb IAmb 08 53 07.2
comp=Z,7.4nm,1.3s
SUA Susitna One 80.11 24 P P 08 53 06.2 +0.4
SUA IAmb IAmb 08 53 07.7
comp=Z,7.0nm,0.8s
GHO Glory Hole Cre 80.55 23 P P 08 53 09.3 +1.1
GHO IAmb IAmb 08 53 30.2
comp=Z,6.9nm,0.5s
SCRK Sand Creek 80.60 20 P P 08 53 08.9 +0.4
SCRK IAmb IAmb 08 53 10.3
comp=Z,6.3nm,0.8s
BOSA Boshof 80.70 231 P P 08 53 10.4 +0.9
comp=Z,4.1nm,1.0s,baz=200,slow=5.6,SNR=2.7
EGAK Eagle 80.84 19 P P 08 53 10.5 +1.0
EGAK IAmb IAmb 08 53 11.0
comp=Z,3.5nm,0.9s
KDAK Kodiak Island 81.81 27 P P 08 53 15.9 +1.2
comp=Z,12nm,0.7s,baz=272,slow=6.4,SNR=6.9
N25K Chitina, Valde 82.14 22 P P 08 53 17.1 +0.5
N25K IAmb IAmb 08 53 18.9
comp=Z,6.2nm,0.8s
MCARA McCarthy VSAT 82.81 21 P P 08 53 20.6 +0.6
CRQM Cirque 83.24 22 P P 08 53 20.8 -1.7
HYT Haines Junctio 84.97 20 P P 08 53 30.4 -0.7
HYT IAmb IAmb 08 53 33.7
comp=Z,6.8nm,0.9s
WHY Whitehorse 85.87 19 P P 08 53 34.8 -0.9
WHY IAmb IAmb 08 53 37.1
comp=Z,4.1nm,0.8s
DBIC Dimbokro 87.62 276 P P 08 53 45.9 +1.0
comp=Z,1.4nm,0.5s,baz=14,slow=3.9,SNR=4.6
YKA Yellowknife Ar 88.61 9 P P 08 53 49.3 +0.6
comp=Z,1.0nm,0.8s,baz=341,slow=4.6,SNR=13
DLBC Dease Lake 89.09 18 P P 08 53 52.2 +1.1
comp=Z,4.5nm,1.1s,baz=353,slow=4.1,SNR=3.3
TXAR Lajitas Array 122.54 10 PKP **PKPdf 08 59 52.2 +0.1**
comp=Z,0.4nm,0.8s,baz=294,slow=1.2,SNR=4.5
TXAR Lajitas Array 122.54 10 PKPdf 08 59 51.5 -0.7
CPUP Villa Florida 147.30 264 PKPbc **PKPbc 09 00 39.5 -0.5**
comp=Z,2.7nm,0.9s,baz=70,slow=3.0,SNR=6.9

*BJI **26** 08:46:12.2±0.0, 27.61N×85.45E, h13km, mb4.4/22*
*IDC **26** 08:46:15.4±0.7, 27.83N×85.68E, h0km, mb4.1/28, mb1 4.3/30, mb1mx4.1/77, mbtmp4.1/30, ML4.7/2, MS5.4/2, Ms1 5.5/2, ms1mx4.0/47, Error ellipse: s-maj=18.6km s-min=14.0km az=33.0*
*NDI **26** 08:46:16.6±3.8, 27.08N×85.38E, h10km, ML4.3, mb4.4(NEIC)*
*DMN **26** 08:46:16.9±0.2, 27.95N×85.81E, h2km, Ml4.9/6, Error ellipse: s-maj=7.7km s-min=2.4km az=15.0*
*NEIC **26** 08:46:17.1±1.0, 27.92N±0.05×85.80E±0.05, h10km±1km, mb4.4/44, Error ellipse: s-maj=9.7km s-min=6.0km az=208.0*
ISC 26 08:46:16.5±1.0, 27.86N±0.05×85.71E±0.02, h9km±6km, n154,σ1s21/163, mb4.3/52, 3C-3D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
GUN	**Gumba**	**0.16**	**71**	*eP*g	**Pg**	**08 46 18.8**	**-1.4**
KKN	**Kakani**	**0.39**	**260**	*eP*g	**Pn**	**08 46 26.9**	**-1.6**
PKI	**Pulchoki**	**0.39**	**223**	*eP*g	**Pn**	**08 46 27.3**	**-1.3**
PKIN	**Phulchoki**	**0.40**	**225**	*eP*g	**Pn**	**08 46 27.3**	**-1.3**
DMN	**Daman**	**0.59**	**245**	*eP*g	**Pn**	**08 46 31.0**	**-0.3**
GKN	**Gorkha**	**0.96**	**279**	*eP*g	**Pn**	**08 46 37.0**	**+0.7**
GKN				*eS*g	**Sn**	**08 46 50.1**	**-0.1**
	2μm,0.3s						
RAMN	**Ramite**	**1.20**	**139**	*eP*g	**Pb**	**08 46 39.6**	**0.0**
DANN	**Dangsing**	**1.79**	**286**	*eP*g	**Pg**	**08 46 51.9**	**+1.0**
DANN				*eS*g	**Sg**	**08 47 15.3**	**+1.1**
	3μm,0.4s						
ODAN	**Odare**	**1.79**	**123**	*eP*g	**Pg**	**08 46 50.7**	**-0.3**
ODAN				*eS*g	**Sb**	**08 47 12.6**	**+0.2**
	1μm,0.2s						
TAPN	**Taplejung**	**1.84**	**105**	*eP*g	**Pb**	**08 46 50.5**	**-0.1**
TAPN				*eS*g	**Sb**	**08 47 13.7**	**-0.2**
	718nm,0.3s						
KOLN	**Koldanda**	**1.87**	**268**	*eP*g	**Pg**	**08 46 52.6**	**+0.2**
KOLN				*eS*g	**Sg**	**08 47 19.0**	**+2.3**
	6μm,0.4s						
PYUN	**Piuthan**	**2.42**	**276**	*eP*n	**Pb**	**08 46 58.2**	**-2.1**
PYUN	**Piuthan**	**2.42**	**276**	*eP*g	**Pg**	**08 47 02.7**	**-0.2**
PYUN				*eS*g	**Sg**	**08 47 35.6**	**+1.3**
	2μm,0.3s						
LSA	**Lhasa**	**5.11**	**68**	Pn	**Pn**	**08 47 30.5**	**-3.2**
SHL	**Shillong**	**5.97**	**111**	*eP*	**Pn**	**08 47 45.9**	**+0.7**
SHL				*eS*	**Sn**	**08 48 51.5**	**-2.4**
SHL	**Shillong**	**5.97**	**111**		**Pn**	**08 47 44.2**	**-1.1**
KOHI	**KOHIMA**	**7.80**	**104**	*eP*	**Pn**	**08 48 11.1**	**+0.8**
KOHI				*eS*	**Sn**	**08 49 38.5**	**-0.3**
KOHI				IAML		08 49 41.6	
	comp=N,75nm,0.6s						
KOHI				IAML		08 49 54.3	
	comp=E,104nm,0.7s						
IMP	**Imphal**	**7.98**	**110**	*eP*	**Pn**	**08 48 13.2**	**+0.5**
IMP				IAML		08 49 46.6	
	comp=N,765nm,0.6s						
MOKO	**MOKOCHONG**	**8.00**	**99**	*eP*	**Pn**	**08 48 13.5**	**+0.5**
MOKO				*eS*	**Sn**	**08 49 39.9**	**-3.8**
MOKO				IAML		08 49 46.2	
	comp=E,176nm,0.5s						
MOKO				IAML		08 49 47.1	
	comp=N,168nm,0.5s						
SMLA	**Simla**	**8.13**	**296**	*eP*	**Pn**	**08 48 14.2**	**-0.4**
SMLA				*eS*	**Sn**	**08 49 45.5**	**-1.1**
SMLA				IAML		08 49 47.8	
	comp=E,134nm,0.3s						
SMLA				IAML		08 49 48.4	
	comp=N,127nm,0.5s						
DHRM	**DHARAMSHALA**	**9.25**	**300**	*eP*	**Pn**	**08 48 30.0**	**-0.3**
DHRM				*eS*	**Sn**	**08 50 11.4**	**-3.3**
DHRM				IAML		08 50 16.6	
	comp=E,974nm,0.4s						
NIL	**Nilore**	**12.17**	**301**	Pn	**Pn**	**08 49 09.9**	**-0.1**
HYB	**Hyderabad**	**12.31**	**214**	*i* P	**Pn**	**08 49 10.0**	**-2.1**
CHTO	**Chiang Mai**	**15.11**	**124**	Pn	**Pn**	**08 49 49.5**	**-0.8**
CMAR	**Chiang Mai Ar**	**15.34**	**125**	Pn	**Pn**	**08 49 54.0**	**+0.8**
	comp=E,0.7nm,0.3s,baz=302,slow=14,SNR=1.8						
KBL	**Kabul**	**15.73**	**299**	Pn	**Pn**	**08 49 58.1**	**-0.4**
KBL				IAmb	IAmb	08 50 04.7	
	comp=Z,21nm,1.1s						
PRZ	**Przheval'sk**	**15.76**	**340**	Pn	**Pn**	**08 49 57.9**	**-0.9**
PRZ				IAmb	IAmb	08 50 06.4	
	comp=Z,9.8nm,0.6s						
KDJ	**Kajisay**	**15.85**	**336**		**Pn**	**08 49 58.9**	**-1.1**
WMQ	**Urumqi**	**16.01**	**5**	*eP*	**Pn**	**08 50 03.8**	**+1.9**
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
DRK	**Karamyk**	**16.36**	**319**	Pn	**Pn**	**08 50 04.7**	**-2.0**
DRK				IAmb	IAmb	08 50 11.2	
	comp=Z,14nm,0.5s						
GTA	**Gaotai**	**16.43**	**42**	⇓P	**P**	**08 50 10.5**	**+0.3**
GTA				pP	pP	08 50 14.5	+1.2
GTA				sP	sP	08 50 18.5	+3.7
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BOOM	**Boomskoye usch**	**16.62**	**334**		**Pn**	**08 50 08.2**	**-1.6**
GAR	**Garm**	**16.96**	**315**	Pn	**Pn**	**08 50 12.8**	**-1.3**
GAR				IAmb	IAmb	08 50 19.4	
	comp=Z,20nm,1.1s						
BTK	**Batken**	**17.31**	**318**		**Pn**	**08 50 15.7**	**-2.8**
BTK				IAmb	IAmb	08 50 22.5	
	comp=Z,18nm,0.9s						
AAK	**Ala-Archa**	**17.33**	**331**	P	**Pn**	**08 50 16.7**	**-2.1**
GYA	**Guiyang**	**18.70**	**89**	*eP*	**Pn**	**08 50 42.5**	**+6.8**
GYA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MK31	**Makanchi Array**	**19.09**	**353**		**P**	**08 50 38.8**	**-0.5**
MKAR	**Makanchi Array**	**19.09**	**353**	P	**P**	**08 50 40.0**	**+0.6**
	comp=Z,3.3nm,0.3s,baz=176,slow=11,SNR=56						
MKAR	**Makanchi Array**	**19.09**	**353**	P	**P**	**08 50 39.1**	**-0.3**
MAKZ	**Makanchi**	**19.14**	**352**	P	**P**	**08 50 38.6**	**-1.4**
MAKZ				IAmb	IAmb	08 50 41.9	
	comp=Z,12nm,0.4s						
KK31	**Karatay Array**	**19.56**	**325**	P	**P**	**08 50 44.3**	**-0.2**
KKAR	**Karatay Array**	**19.56**	**325**	P	**P**	**08 50 44.4**	**-0.2**
XAN	**Xi'an**	**20.82**	**67**	P	**P**	08 50 50.5	-7.8
XAN				pP	Pn	08 50 54.5	-6.3
XAN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ENH	**Enshi**	**20.91**	**78**	P	**P**	**08 50 58.9**	**-0.5**
ENH				IAmb	IAmb	08 51 06.8	
	comp=Z,11nm,0.6s						
KURBB	**Kurchatov Arra**	**23.38**	**348**	P	**P**	**08 51 25.3**	**0.0**
	comp=Z,3.0nm,0.6s,baz=168,slow=9.8,SNR=18						
HHC	**Hu-ho-hao-te**	**24.86**	**52**	*eP*	**P**	**08 51 40.0**	**+0.5**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
GEYT	**Alibeck**	**25.17**	**301**	P	**P**	**08 51 42.5**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=140,slow=12,SNR=4.7						
SONM	**Songino Array**	**25.63**	**33**	P	**P**	**08 51 47.2**	**+0.8**
	comp=Z,4.9nm,0.6s,baz=215,slow=11,SNR=11						
SONM	**Songino Array**	**25.63**	**33**	P	**P**	**08 51 46.6**	**+0.3**
SONM				IAmb	IAmb	08 51 50.3	
	comp=Z,5.7nm,0.9s						
ULN	**Ulaanbaatar**	**25.98**	**34**	P	**P**	**08 51 48.8**	**-0.7**
ULN				IAmb	IAmb	08 51 57.3	
	comp=Z,11nm,0.9s						
ZAA0	**Zalesovo Array**	**26.07**	**359**	P	**P**	**08 51 49.9**	**-0.3**
ZAA0				IAmb	IAmb	08 51 52.4	
	comp=Z,12nm,1.3s						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**08 51 51.0**	**+0.8**
	comp=Z,5.4nm,0.3s,baz=181,slow=9.4,SNR=14						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**08 51 50.2**	**+0.1**
BVAR	**Borovoye Array**	**27.59**	**340**	P	**P**	**08 52 04.9**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=164,slow=17,SNR=3.2						
GSI	**Gunungsitoli**	**28.75**	**155**	P	**P**	**08 52 13.7**	**-0.7**
NJ2	**Nanjing**	**28.95**	**74**	*eP*	**P**	**08 52 15.8**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ABKAR	**Akbulak array**	**29.12**	**324**	P	**P**	**08 52 17.6**	**+0.1**
ABKAR	**Akbulak array**	**29.12**	**324**	P	**P**	**08 52 17.5**	**-0.1**
ABKAR				IAmb	IAmb	08 52 19.8	
	comp=Z,2.7nm,0.6s						
AKTO	**Aktyubinsk**	**30.83**	**325**	P	**P**	**08 52 33.6**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=116,slow=6.4,SNR=4.3						
ARU	**Arti**	**34.49**	**333**	P	**P**	**08 53 05.5**	**+0.9**
	comp=Z,2.4nm,0.4s,baz=116,slow=7.1,SNR=12						
KSRS	**Korea Array**	**36.55**	**64**	P	**P**	**08 53 24.6**	**+2.2**
	comp=Z,0.6nm,0.5s,baz=5.9,slow=36,SNR=2.3						
BELG	**Belogornoye**	**37.40**	**322**	LR	LR	09 10 09.7	
	comp=Z,6μm,21.3s,baz=276,slow=38						
NRIK	**Noril'sk**	**41.53**	**1**	P	**P**	**08 54 04.9**	**+1.2**
	comp=Z,3.2nm,0.4s,baz=176,slow=7.3,SNR=8.7						
NRIK	**Noril'sk**	**41.53**	**1**	P	**P**	**08 54 03.4**	**-0.4**
NRIK				IAmb	IAmb	08 54 05.8	
	comp=Z,9.0nm,1.0s						
BR131	**Keskin Array S**	**44.30**	**299**	P	**P**	**08 54 25.6**	**-1.3**
BRTR	**Keskin Array B**	**44.30**	**299**	P	**P**	**08 54 26.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=98,slow=2.5,SNR=4.1						
BRTR	**Keskin Array B**	**44.30**	**299**	P	**P**	**08 54 25.7**	**-1.2**
MJB9	**Matsu-Tunnel**	**44.79**	**65**		**S**	**09 01 08.7**	**+0.7**
ELL	**Elmali**	**47.42**	**296**	P	**P**	**08 54 51.8**	**+0.3**
AKASG	**Malin Array Be**	**47.96**	**314**	P	**P**	**08 54 54.9**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=76,slow=7.3,SNR=4.4						
VRI	**Vrincioaia**	**49.36**	**308**	⇑P	**P**	**08 55 08.2**	**+2.0**
PLOR	**Plostina**	**49.41**	**308**	⇓P	**P**	**08 55 08.6**	**+2.0**
TIXI	**Tiksi**	**49.80**	**16**	P	**P**	**08 55 09.0**	**-0.1**
	comp=Z,3.8nm,0.4s,baz=225,slow=3.7,SNR=13						
TIXI	**Tiksi**	**49.80**	**16**	P	**P**	**08 55 08.9**	**-0.2**
TIXI				IAmb	IAmb	08 55 10.0	
	comp=Z,5.2nm

MLR	**Muntele Rosu**	**49.91**	**307**	P		**P**	**08 55 10.7**	**+0.2**
IIGN	**Ignalina**	**50.33**	**320**	*e*P		**P**	**08 55 14.0**	**+0.5**
BURAR	**Bucovina Array**	**50.41**	**310**	⇑P		**P**	**08 55 15.4**	**+1.1**
BURAR	**Bucovina Array**	**50.41**	**310**	P		**P**	**08 55 14.3**	**+0.1**
BUR08	**Bucovina Ar. S**	**50.42**	**310**	P		**P**	**08 55 13.5**	**-0.9**
BUR08				IAmb		IAmb	08 55 26.5	
	comp=Z,5.4nm,1.4s							
ISAL	**Salakas**	**50.42**	**321**	*e*P		**P**	**08 55 14.6**	**+0.6**
VSU	**Vasula**	**50.56**	**324**	*e*P		**P**	**08 55 15.3**	**+0.3**
FIA1	**FINESS Array S**	**51.48**	**328**	P		**P**	**08 55 22.3**	**+0.4**
FIA1				IAmb		IAmb	08 55 22.8	
	comp=Z,9.1nm,0.8s							
FINES	**FINESS Array B**	**51.48**	**328**	P		**P**	**08 55 22.6**	**+0.6**
	comp=Z,2.8nm,0.4s,baz=108,slow=7.8,SNR=46							
FINES	**FINESS Array B**	**51.48**	**328**	P		**P**	**08 55 21.9**	**-0.1**
PABE	**Paberze**	**51.63**	**320**	*e*P		**P**	**08 55 23.7**	**+0.6**
PABE	**Paberze**	**51.63**	**320**	P		**P**	**08 55 23.2**	**+0.1**
VTS	**Vitosha**	**52.00**	**304**	⇑P		**P**	**08 55 28.4**	**+2.0**
MTSE	**Matsula**	**52.11**	**324**	*e*P		**P**	**08 55 24.7**	**-2.0**
KEV	**Kevo**	**53.42**	**338**	P		**P**	**08 55 36.9**	**+0.7**
ARA0	**ARCESS Array S**	**53.85**	**338**	*e*P		**P**	**08 55 40.4**	**+0.9**
ARCES	**ARCESS Array B**	**53.85**	**338**	P		**P**	**08 55 40.0**	**+0.6**
	comp=Z,5.6nm,0.7s,baz=86,slow=7.0,SNR=18							
KTK1	**Kautokeino**	**54.48**	**337**	*e*P		**P**	**08 55 44.7**	**+0.8**
HAMF	**Hammerfest**	**54.78**	**339**	*e*P		**P**	**08 55 47.0**	**+0.9**
PDG	**Podgorica**	**54.95**	**304**	P		**P**	**08 55 48.2**	**+0.4**
PDG				IAmb		IAmb	08 55 48.7	
	comp=Z,5.4nm,0.9s							
SEY	**Seymchan**	**54.99**	**31**	P		**P**	**08 55 47.8**	**0.0**
	comp=Z,2.5nm,0.7s,baz=58,slow=22,SNR=9.6							
UPP	**Uppsala**	**55.38**	**325**	*e*P		**P**	**08 55 49.7**	**-0.9**
JETT	**Jettan, Norway**	**55.58**	**337**	*e*P		**P**	**08 55 53.6**	**+1.5**
TRO	**Tromso**	**56.11**	**337**	*e*P		**P**	**08 55 56.4**	**+0.7**
DPC	**Dobruska-Polom**	**56.18**	**314**	*e*P		**P**	**08 55 56.5**	**-0.1**
CONA	**Conrad Observa**	**56.69**	**311**	*e*P		**P**	**08 56 00.3**	**0.0**
	comp=Z,1.8nm,0.6s							
ARSA	**Arzberg**	**56.99**	**310**	*e*P		**P**	**08 56 04.4**	**+2.0**
	comp=Z,1.5nm,0.7s							
STEI	**Steigen**	**57.16**	**335**	*e*P		**P**	**08 56 04.0**	**+0.8**
MOR8	**Moi Rana**	**57.30**	**333**	*e*P		**P**	**08 56 03.9**	**-0.3**
HFS	**Hagfors**	**57.37**	**326**	P		**P**	**08 56 05.1**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=97,slow=7.3,SNR=30							
SOKA	**Soboth**	**57.40**	**310**	*e*P		**P**	**08 56 06.7**	**+1.3**
	comp=Z,1.9nm,0.5s							
BRG	**Berggiesshubel**	**57.65**	**315**	*e*P		**P**	**08 56 07.9**	**+1.0**
BRG				Amp			08 56 08.6	
	comp=Z,1.8nm,0.9s							
OBKA	**Obir**	**57.75**	**309**	*e*P		**P**	**08 56 06.9**	**-0.9**
	comp=Z,6.0nm,1.1s							
MOA	**Molln**	**57.77**	**311**	*e*P		**P**	**08 56 07.4**	**-0.5**
	comp=Z,1.2nm,0.6s							
KONS	**Konsvik**	**57.85**	**333**	*e*P		**P**	**08 56 08.7**	**+0.6**
GERES	**GERESS Array B**	**58.02**	**312**	P		**P**	**08 56 09.7**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=84,slow=8.0,SNR=7.4							
KHC	**Kasperske Hory**	**58.07**	**313**	*e*P		**P**	**08 56 09.9**	**-0.1**
NSS	**Namsos**	**58.24**	**331**	*e*P		**P**	**08 56 11.4**	**+0.5**
NC602	**NORSAR Array S**	**58.43**	**326**	*e*P		**P**	**08 56 12.4**	**+0.1**
NC300	**NORSAR Array S**	**58.48**	**327**	P		**P**	**08 56 12.8**	**+0.2**
KBA	**Koelnbreinsper**	**58.49**	**310**	*e*P		**P**	**08 56 12.6**	**-0.6**
	comp=Z,0.5nm,0.4s							
NB2	**NORSAR Subarra**	**58.58**	**327**	P		**P**	**08 56 12.8**	**-0.6**
	baz=91,slow=6.9							
NOA	**NORSAR Array B**	**58.58**	**327**	P		**P**	**08 56 13.2**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=46,slow=12,SNR=4.3							
HSPB	**Hornsund (broa**	**58.62**	**346**	*e*P		**P**	**08 56 13.9**	**+0.6**
NAO01	**NORSAR Array S**	**58.75**	**326**	P		**P**	**08 56 14.2**	**-0.2**
NC204	**NORSAR Array S**	**58.80**	**327**	P		**P**	**08 56 14.6**	**-0.3**
KONO	**Kongsberg**	**59.45**	**325**	*e*P		**P**	**08 56 18.9**	**-0.4**
DOMB	**Dombas**	**59.58**	**328**	*e*P		**P**	**08 56 20.5**	**+0.3**
WTTA	**Wattenberg**	**59.61**	**311**	*e*P		**P**	**08 56 20.4**	**-0.5**
	comp=Z,1.8nm,0.7s							
WATA	**Walderalm**	**59.64**	**311**	*e*P		**P**	**08 56 20.8**	**-0.3**
	comp=Z,3.2nm,1.0s							
KBS	**Kingsbay**	**59.74**	**348**	*e*P		**P**	**08 56 21.6**	**+0.5**
SQTA	**Sankt Quirin**	**59.91**	**311**	*e*P		**P**	**08 56 22.1**	**-0.8**
	comp=Z,1.7nm,0.4s							
MOTA	**Moosalm**	**59.96**	**311**	*e*P		**P**	**08 56 22.6**	**-0.7**
	comp=Z,2.3nm,0.7s							
FETA	**Feichten**	**60.27**	**310**	*e*P		**P**	**08 56 23.2**	**-2.2**
	comp=Z,2.1nm,1.1s							
DAVA	**Damuels**	**60.79**	**311**	*e*P		**P**	**08 56 25.9**	**-3.1**
	comp=Z,6.9nm,1.2s							
MSSA	**Maissana**	**61.62**	**308**	P		**P**	**08 56 34.8**	**+0.2**
KEST	**Kesra**	**63.89**	**298**	P		**P**	**08 56 50.3**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=146,slow=2.4,SNR=6.3							
WRA	**Warramunga Arr**	**66.86**	**130**	P		**P**	**08 57 09.8**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=323,slow=6.4,SNR=9.6							
WB2	**Warramunga Arr**	**66.87**	**130**	P		**P**	**08 57 08.8**	**-0.4**
EKA	**Eskdalemuir Ar**	**66.95**	**322**	P		**P**	**08 57 08.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=85,slow=6.6,SNR=5.2							
WR0	**Warramunga Arr**	**67.01**	**130**	P		**P**	**08 57 08.5**	**-1.6**
AS31	**Alice Springs**	**69.17**	**133**	P		**P**	**08 57 23.4**	**-0.2**
ASAR	**Alice Springs**	**69.17**	**133**	P		**P**	**08 57 24.1**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=312,slow=8.0,SNR=5.1							
EUNU	**Eureka**	**72.22**	**359**	P		**P**	**08 57 41.1**	**-0.4**
EUNU				IAmb		IAmb	08 57 43.4	
	comp=Z,7.5nm,1.2s							
ESDC	**Sonseca Array**	**72.57**	**306**	P		**P**	**08 57 44.3**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=75,slow=5.2,SNR=6.1							
ESDC	**Sonseca Array**	**72.57**	**306**	P		**P**	**08 57 44.5**	**+0.3**
ESDC				IAmb		IAmb	08 57 45.8	
	comp=Z,3.6nm,1.3s							
SUMG	**Summit**	**72.94**	**345**	P		**P**	**08 57 46.2**	**0.0**
SUMG				IAmb		IAmb	08 57 49.6	
	comp=Z,6.4nm,0.9s							
I23K	**Minto, Yukon-K**	**78.05**	**21**	P		**P**	**08 58 15.8**	**+0.6**
I23K				IAmb		IAmb	08 58 35.5	
	comp=Z,3.5nm,1.1s							
PPLA	**Purkeypile**	**78.60**	**23**	P		**P**	**08 58 18.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**78.76**	**279**	P		**P**	**08 58 19.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=53,slow=4.6,SNR=4.2							
TORD	**Torodi Ar. Bea**	**78.76**	**279**	P		**P**	**08 58 20.1**	**+0.1**
CCB	**Clear Creek Bu**	**78.88**	**21**	P		**P**	**08 58 19.5**	**-0.2**
CCB				IAmb		IAmb	08 58 22.8	
	comp=Z,2.4nm,1.2s							
ILAR	**Eielson Array**	**79.08**	**20**	P		**P**	**08 58 20.2**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=302,slow=4.6,SNR=5.6							
ILAR				LR		LR	09 39 05.7	
	comp=Z,2μm,19.4s,baz=134,slow=40							
INK	**Inuvik**	**79.83**	**14**	P		**P**	**08 58 25.5**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=198,slow=2.4,SNR=5.0							
YKA	**Yellowknife Ar**	**98.50**	**9**	P		**P**	**08 59 08.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=340,slow=4.6,SNR=6.3							
TXAR	**Lajitas Array**	**122.43**	**10**	PKP		**PKPdf**	**09 05 12.5**	**-0.3**
	comp=Z,0.1nm,0.4s,baz=213,slow=0.6,SNR=4.5							
SIV	**San Ignacio**	**147.11**	**284**	PKPbc		**PKPbc**	**09 06 00.6**	**0.0**
	comp=Z,3.0nm,0.8s,baz=122,slow=5.0,SNR=5.3							
CPUP	**Villa Florida**	**147.14**	**264**	PKPbc		**PKPbc**	**09 05 59.9**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=284,slow=1.5,SNR=3.2							

IDC 26 08:50:07.5±1.8, 27°.45N×85°.47E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.4/68, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=105.7km s-min=21.8km az=61.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.47**	**353**	P		P	P	08 54 34.7	-1.2
	0.1nm,0.3s,baz=173,slow=11,SNR=2.9								
ZALV	**Zalesovo Beam**	**26.48**	**359**	P		P	P	08 55 46.9	+0.7
	0.7nm,0.4s,baz=164,slow=8.4,SNR=1.8								
FINES	**FINESS Array B**	**51.72**	**328**	P		P	P	08 59 16.0	-0.3
	1.1nm,0.7s,baz=97,slow=10,SNR=1.4								
ARCES	**ARCESS Array B**	**54.15**	**338**	P		P	P	08 59 34.4	+0.2
	4.7nm,1.0s,baz=102,slow=7.6,SNR=2.6								
WRA	**Warramunga Arr**	**66.77**	**130**	P		P	P	09 01 01.1	0.0
	0.3nm,0.5s,baz=321,slow=6.7,SNR=7.6								
ASAR	**Alice Springs**	**69.05**	**133**	P		P	P	09 01 15.3	-0.1
	0.3nm,0.6s,baz=314,slow=6.0,SNR=5.9								

*IDC **26** 08:50:36.9±1.6, 27°.48N×85°.55E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.4/67, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=61.3km s-min=22.9km az=63.0*

ISC 26 08:50:38.5±1.6, 27°.5N±0°.2×85°.6E±0°.4, h10km, n7, σ0s70/7, mb3.7/6, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.40**	**353**	P		P	**Pn**	**08 55 04.9**	**-0.8**
	0.2nm,0.3s,baz=172,slow=11,SNR=4.5								
SONM	**Songino Array**	**25.98**	**33**	P		P	**P**	**08 56 12.2**	**+0.7**
	0.8nm,0.6s,baz=198,slow=8.8,SNR=2.0								
ZALV	**Zalesovo Beam**	**26.39**	**359**	P		P	**P**	**08 56 14.6**	**-0.3**
	0.7nm,0.5s,baz=181,slow=8.5,SNR=2.6								
FINES	**FINESS Array B**	**51.69**	**328**	P		P	**P**	**08 59 45.7**	**+0.3**
	2.5nm,1.0s,baz=95,slow=17,SNR=1.5								
ARCES	**ARCESS Array B**	**54.10**	**338**	P		P	**P**	**09 00 03.6**	**+0.5**
	2.7nm,0.9s,baz=104,slow=7.6,SNR=1.4								
WRA	**Warramunga Arr**	**66.77**	**130**	P		P	**P**	**09 01 29.8**	**-0.6**
	0.4nm,0.7s,baz=324,slow=6.5,SNR=4.9								
ASAR	**Alice Springs**	**69.05**	**133**	P		P	**P**	**09 01 44.9**	**+0.1**
	0.2nm,0.8s,baz=316,slow=5.2,SNR=1.2								

IDC 26 08:55:22.9±2.1, 27°.68N×85°.88E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.3/63, mbtmp3.7/5, ML3.7/1, MS4.8/1, Ms1 4.8/1, ms1mx3.4/50, Error ellipse: s-maj=105.3km s-min=29.9km az=61.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.29**	**353**	P		P	P	08 59 49.0	-0.3
	0.2nm,0.3s,baz=181,slow=11,SNR=6.0								
ZALV	**Zalesovo Beam**	**26.26**	**359**	P		P	P	09 01 00.1	+0.4
	0.3nm,0.3s,baz=182,slow=4.3,SNR=1.4								
TIXI	**Tiksi**	**49.93**	**16**	LR		LR		09 28 59.5	
	comp=Z,956nm,20.1s,baz=20,slow=40								
FINES	**FINESS Array B**	**51.72**	**328**	P		P	P	09 04 31.4	-0.2
	1.8nm,1.1s,baz=109,slow=21,SNR=1.1								
ARCES	**ARCESS Array B**	**54.08**	**338**	P		P	P	09 04 49.0	0.0
	5.9nm,1.2s,baz=113,slow=6.9,SNR=1.6								
WRA	**Warramunga Arr**	**66.63**	**130**	P		P	P	09 06 15.5	-0.1
	0.3nm,0.8s,baz=326,slow=6.1,SNR=1.9								

*IDC **26** 08:58:50.6±1.6, 27°.68N×85°.92E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.5/54, mbtmp3.8/9, ML4.0/1, Error ellipse: s-maj=47.5km s-min=27.5km az=56.0*

ISC 26 08:58:53.9±1.6, 27°.8N±0°.2×86°.0E±0°.3, h19km, n9, σ0s89/9, mb3.9/8, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.23**	**352**	P		P	**P**	**09 03 17.1**	**+0.2**
	0.4nm,0.3s,baz=174,slow=12,SNR=16								
KURBB	**Kurchatov Arra**	**23.53**	**348**	P		P	**P**	**09 04 03.6**	**+0.9**
	0.9nm,0.6s,baz=165,slow=9.6,SNR=10								
SONM	**Songino Array**	**25.59**	**33**	P		P	**P**	**09 04 21.1**	**-0.9**
	1.7nm,0.6s,baz=217,slow=8.7,SNR=4.3								
ZALV	**Zalesovo Beam**	**26.18**	**358**	P		P	**P**	**09 04 28.3**	**+1.3**
	1.9nm,0.6s,baz=189,slow=10,SNR=7.6								
FINES	**FINESS Array B**	**51.70**	**328**	P		P	**P**	**09 07 59.0**	**-0.4**
	1.6nm,0.9s,baz=133,slow=11,SNR=4.4								
ARCES	**ARCESS Array B**	**54.04**	**338**	P		P	**P**	**09 08 17.1**	**+0.5**
	4.0nm,1.0s,baz=106,slow=7.6,SNR=4.2								
HFS	**Hagfors**	**57.59**	**326**	P		P	**P**	**09 08 41.6**	**-0.5**
	1.4nm,0.8s,baz=103,slow=6.7,SNR=5.2								
NOA	**NORSAR Array B**	**58.80**	**327**	P		P	**P**	**09 08 49.8**	**-0.9**
	0.4nm,0.6s,baz=56,slow=0.4,SNR=1.6								
WRA	**Warramunga Arr**	**66.62**	**130**	P		P	**P**	**09 09 43.6**	**+0.2**
	0.4nm,0.7s,baz=322,slow=6.5,SNR=1.7								

*IDC **26** 09:00:21.4±0.6, 17°.89S×168°.35E, h0km, mb4.4/17, mb1 4.6/19, mb1mx4.4/31, mbtmp4.4/19, ML5.1/2, MS4.2/2, Ms1 4.2/2, ms1mx3.9/35, Error ellipse: s-maj=21.3km s-min=15.3km az=111.0*

*BJI **26** 09:00:26.6±0.0, 17°.58S×168°.43E, h39km, mB5.5/13, mb5.0/37, Ms5.4/4, Ms7 5.2/4*

*NOU **26** 09:00:27.6, 18°.12S×168°.05E, h9km, MLv4.9, Vanuatu Islands*

*NEIC **26** 09:00:28±0.8, 18°.00S±0°.07×168°.18E±0°.08, h45km±5km, mb4.9/80, Error ellipse: s-maj=11.3km s-min=10.3km az=84.0*

ISC 26 09:00:26.6±0.3, 18°.01S±0°.04×168°.20E±0°.06, h32km, n191, σ0s86/186, mb4.8/61, 1C-10D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DVP	**Devils Point**	**0.29**	**357**	P		P	**Pn**	**09 00 36.7**	**+2.2**
LIFNC	**LIFOU**	**2.90**	**198**	P		P	**Pn**	**09 01 10.2**	**-0.3**
MARNC	**Mare, Loyalty**	**3.46**	**183**	P		P	**Pn**	**09 01 18.3**	**+0.1**
YATNC	**Mamie plateau,**	**4.21**	**197**	P		P	**Pn**	**09 01 30.0**	**+1.4**
YATNC	**Mamie plateau,**	**4.21**	**197**	P		P	**Pn**	**09 01 29.5**	**+0.9**
DZM	**Mont Dzumac**	**4.36**	**202**	Pn		Pn	**Pn**	**09 01 31.6**	**+0.9**
	65nm,0.3s,baz=107,slow=23,SNR=732								
DZM				Sn		Sn	**Sn**	**09 02 20.4**	**-0.2**
	48nm,0.3s,baz=117,slow=23,SNR=7.8								
DZM				LR		LR	LR	09 02 43.3	
	comp=Z,966nm,19.6s,baz=18,slow=31								
DZM	**Mont Dzumac**	**4.36**	**202**	P		**Pn**	**Pn**	**09 01 32.5**	**+1.7**
DZM	**Mont Dzumac**	**4.36**	**202**	P		**Pn**	**P**	**09 01 32.3**	**+1.5**
NOUC	**Port Laguerre**	**4.44**	**203**	P		**Pn**	**Pn**	**09 01 33.3**	**+1.5**
NOUC	**Port Laguerre**	**4.44**	**203**	P		**Pn**	**Pn**	**09 01 33.7**	**+1.9**
KOUNC	**Koumac, New Ca**	**4.48**	**235**	P		**Pn**	**Pn**	**09 01 33.7**	**+1.4**
OUENC	**Ouen Island, N**	**4.57**	**196**	P		**Pn**	**Pn**	**09 01 35.5**	**+2.0**
OUENC	**Ouen Island, N**	**4.57**	**196**	P		**Pn**	**Pn**	**09 01 36.0**	**+2.5**
ONTNC	**Ouen Toro**	**4.58**	**201**	P		**Pn**	**Pn**	**09 01 35.6**	**+2.0**
ONTNC	**Ouen Toro**	**4.58**	**201**	P		**Pn**	**Pn**	**09 01 35.4**	**+1.8**
PINNC	**Pines Island,**	**4.63**	**189**	P		**Pn**	**Pn**	**09 01 36.5**	**+2.2**
MSVF	**Nonsavu**	**9.38**	**90**	Pn		**Pn**	**Pn**	**09 02 41.0**	**+1.3**
HNR	**Honiara**	**11.70**	**316**	Pn		**Pn**	**Pn**	**09 03 11.6**	**+0.2**
	15nm,0.3s,baz=179,slow=0.5,SNR=18								
HNR	**Honiara**	**11.70**	**316**	Pn		**Pn**		**09 03 12.3**	**+0.9**
HNR	**Honiara**	**11.70**	**316**	P		**Pn**		**09 03 13.5**	**+2.1**
	262nm,0.9s								
EIDS	**Eidsvold**	**17.50**	**242**	P		**P**		**09 04 29.6**	**+0.4**
OUZ	**Omahuta**	**17.80**	**165**	P		**P**		**09 04 33.0**	**+0.7**
OUZ				IAmb		IAmb		09 04 53.0	
	comp=Z,155nm,1.7s								
ARMA	**Armidale**	**19.49**	**228**	P		**Pn**		**09 04 53.0**	**+0.4**
CTA	**Charters Tower**	**20.85**	**261**	P		Pn		09 05 07.7	-0.8
	comp=Z,4.2nm,0.8s,baz=100,slow=16,SNR=3.7								
CTAO	**Charters Tower**	**20.85**	**261**	P		**P**		**09 05 05.9**	**0.0**
RABL	**Rabaul**	**20.86**	**309**	P		**P**		**09 05 05.5**	**-0.5**
HIZ	**Hauiti**	**21.24**	**165**	P		**P**		**09 05 10.7**	**+0.8**
URZ	**Urewera**	**21.62**	**161**	P		**P**		**09 05 16.6**	**+2.6**
	comp=Z,22nm,0.8s,baz=121,slow=23,SNR=3.3								
URZ				LR		LR		09 13 01.3	
	comp=Z,2μm,18.2s,baz=31,slow=35								
URZ	**Urewera**	**21.62**	**161**	P		**P**		**09 05 14.3**	**+0.3**
URZ				IAmb		IAmb		09 05 50.8	
	comp=Z,123nm,1.7s								
PMG	**Port Moresby**	**22.14**	**290**	P		**P**		**09 05 19.7**	**-0.1**
BKZ	**Black Stump Fm**	**22.28**	**163**	P		**P**		**09 05 21.7**	**+0.6**
BFZ	**Bien Farm**	**23.63**	**165**	P		**P**		**09 05 35.5**	**+0.6**
TUWZ	**Tuamarina**	**23.85**	**169**	P		**P**		**09 05 37.1**	**+0.2**
BHW	**Baring Head**	**24.01**	**168**	P		**P**		**09 05 37.7**	**-0.7**
THZ	**Tophouse**	**24.01**	**171**	P		**P**		**09 05 38.8**	**+0.2**
THZ				IAmb		IAmb		09 05 53.7	
	comp=Z,46nm,0.9s								
MSWZ	**Moikau Station**	**24.10**	**167**	P		**P**		**09 05 39.6**	**+0.3**
BSWZ	**Blackbirch Sta**	**24.12**	**170**	P		**P**		**09 05 39.1**	**-0.3**
PLWZ	**Palliser**	**24.24**	**167**	P		**P**		**09 05 40.9**	**+0.3**
CAN	**Canberra**	**24.25**	**221**	P		**P**		**09 05 40.9**	**+0.1**
CAN				IAmb		IAmb		09 06 09.9	
	comp=Z,30nm,0.7s								
COEN	**Coen**	**24.39**	**276**	P		**P**		**09 05 42.0**	**-0.2**
KHZ	**Kahutara**	**24.75**	**171**	P		**P**		**09 05 45.5**	**+0.4**
KHZ				IAmb		IAmb		09 05 48.1	
	comp=Z,26nm,0.8s								
KNTN	**Kanton**	**24.84**	**55**	P		**P**		**09 05 46.2**	**0.0**
LTZ	**Lake Taylor**	**24.93**	**173**	P		**P**		**09 05 47.2**	**+0.3**
LTZ				IAmb		IAmb		09 05 56.4	
	comp=Z,45nm,1.1s								
MQZ	**McQueen's Vall**	**25.89**	**173**	P		**P**		**09 05 55.9**	**+0.4**
MQZ				IAmb		IAmb		09 05 57.4	
	comp=Z,35nm,1.0s								
STKA	**Stephens Creek**	**27.70**	**235**	P		**P**		**09 06 13.3**	**+1.3**
	comp=Z,14nm,0.9s,baz=63,slow=8.1,SNR=16								
STKA	**Stephens Creek**	**27.70**	**235**	P		**P**		**09 06 12.3**	**+0.2**
TOO	**Toolangi**	**27.86**	**221**	P		**P**		**09 06 13.6**	**+0.2**
TOO				IAmb		IAmb		09 06 20.0	
	comp=Z,36nm,1.4s								
WR0	**Warramunga Arr**	**31.86**	**261**	P		**P**		**09 06 49.1**	**+0.1**
WB0	**Warramunga Arr**	**32.01**	**261**	P		**P**		**09 06 50.4**	**+0.1**
WB0				IAmb		IAmb		09 07 07.2	
	comp=Z,22nm,1.6s								
WB2	**Warramunga Arr**	**32.04**	**261**	P		**P**		**09 06 50.3**	**-0.3**
WRAB	**Tennant Creek**	**32.04**	**261**	P		**P**		**09 06 50.2**	**-0.4**
WRA	**Warramunga Arr**	**32.05**	**261**	P		**P**		**09 06 50.9**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=78,slow=6.3,SNR=9.7								
WRA	**Warramunga Arr**	**32.05**	**261**	P		**P**		**09 06 50.2**	**-0.5**
BBOO	**Buckleboo**	**32.41**	**237**	P		**P**		**09 06 53.8**	**+0.2**
AS31	**Alice Springs**	**32.49**	**254**	P		**P**		**09 06 54.6**	**0.0**
ASAR	**Alice Springs**	**32.49**	**254**	P		**P**		**09 06 54.2**	**-0.3**
	comp=Z,3.6nm,0.8s,baz=76,slow=9.1,SNR=28								
ASAR	**Alice Springs**	**32.49**	**254**	P		**P**	**P**	**09 06 54.8**	**+0.2**
MTN	**Manton Dam**	**36.06**	**273**	P		**P**	**P**	**09 07 25.0**	**-0.5**
KNRA	**Kununurra**	**37.77**	**267**	P		**P**	**P**	**09 07 39.8**	**-0.2**
FAKI	**Fak Fak**	**38.29**	**289**	P		**P**	**P**	**09 07 43.8**	**-0.7**
FAKI				IAmb		IAmb	IAmb	09 07 46.0	
	comp=Z,34nm,1.1s								
FORT	**Forrest**	**38.50**	**243**	P		**P**	**P**	**09 07 46.1**	**0.0**
FORT				IAmb		IAmb	IAmb	09 08 06.6	
	comp=Z,30nm,1.0s								
FITZ	**Fitzroy Crossi**	**40.40**	**263**	P		**P**	**P**	**09 08 01.8**	**-0.2**
LUWI	**Luwuk**	**47.68**	**286**	P		**P**	**P**	**09 09 00.5**	**+0.1**
NWAO	**Narrogin (SRO)**	**47.91**	**242**	P		**P**	**P**	**09 09 01.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**47.91**	**242**	P		**P**	**P**	**09 09 01.1**	**-0.9**
NWAO				IAmb		IAmb	IAmb	09 09 39.5	
	comp=Z,47nm,1.6s								
MORW	**Morawa**	**48.73**	**247**	P		**P**	**P**	**09 09 08.5**	**0.0**
TOLI2	**Tolitoli**	**50.37**	**287**	P		**P**	**P**	**09 09 20.1**	**-1.0**
TOLI2				IAmb		IAmb	IAmb	09 09 22.0	
	comp=Z,20nm,1.3s								
JOW	**Kunigami**	**59.06**	**318**	P		**P**	**P**	**09 10 23.5**	**-0.4**
JOW				IAmb		IAmb	IAmb	09 10 40.6	
	comp=Z,17nm,1.0s								
VNDA	**Vanda**	**59.62**	**182**	P		**P**	**P**	**09 10 27.5**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=359,slow=5.9,SNR=9.1								
VNDA	**Vanda**	**59.62**	**182**	P		**P**	**P**	**09 10 27.1**	**+0.1**
SBA	**Scott Base**	**59.88**	**180**	P		**P**	**P**	**09 10 28.6**	**-0.1**
SBA				IAmb		IAmb	IAmb	09 10 32.1	
	comp=Z,15nm,1.1s								
KSM	**Kuching**	**60.15**	**282**	P		**P**	**P**	**09 10 31.3**	**-0.4**
KSM				IAmb		IAmb	IAmb	09 10 48.6	
	comp=Z,10nm,0.8s								
JGF	**Kuroka**	**60.81**	**331**	P		**P**	**P**	**09 10 34.6**	**-1.1**
JGF				IAmb		IAmb	IAmb	09 10 39.7	
	comp=Z,6.7nm,0.9s								
CASY	**Casey**	**60.86**	**203**	P		**P**	**P**	**09 10 35.2**	**-0.4**
CASY				IAmb		IAmb	IAmb	09 10 37.4	
	comp=Z,8.4nm,0.9s								
JSU	**Suzuyama**	**61.13**	**323**	P		**P**	**P**	**09 10 37.4**	**-0.6**
MJAR	**Matsushiro Arr**

comp=Z,5.3nm,1.0s
SHPR Sheep Range 90.28 52 P **P** 09 13 24.7 +0.1
SNAA Sanae 90.33 183 P **P** 09 13 25.4 +1.2
SNAA Sanae 90.33 183 P **P** 09 13 24.9 +0.7
comp=Z,2.1nm,0.7s,baz=166,slow=8.2,SNR=3.8
SNAA Sanae 90.33 183 P **P** 09 13 24.4 +0.2
J08A Circle Bar Ran 90.64 44 P **P** 09 13 26.2 +0.1
J08A IAmb IAmb 09 13 27.1
comp=Z,5.0nm,0.9s
VNA3 Neumayer Olymp 90.96 181 P **P** 09 13 27.2 +0.1
EGAK Eagle 91.09 19 P **P** 09 13 27.0 -0.5
G08A Pilot Rock 91.12 42 P **P** 09 13 28.0 -0.3
G08A IAmb IAmb 09 13 29.7
comp=Z,4.7nm,0.9s
VNA2 Neumayer--Watz 91.24 181 P **P** 09 13 29.1 +0.8
baz=177,slow=3.0
TOLK Toolik Lake Re 91.59 14 P **P** 09 13 29.9 +0.1
TOLK IAmb IAmb 09 14 04.5
comp=Z,11nm,1.8s
X16A Lo Mia Camp, P 92.36 55 P **P** 09 13 34.9 +0.5
X16A IAmb IAmb 09 13 36.0
comp=Z,3.8nm,1.2s
U15A North Rim 92.40 53 P **P** 09 13 34.4 -0.3
U15A IAmb IAmb 09 13 36.2
comp=Z,6.6nm,1.2s
WMQ Urumqi 95.65 314 *e*P **P** 09 13 50.0 +0.9
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ pmax pmax
comp=Z,160nm,4.7s
TXAR Lajitas Array 97.05 62 P **P** 09 13 55.4 -0.4
comp=Z,0.3nm,0.9s,baz=212,slow=4.4,SNR=3.1
YKA Yellowknife Ar 100.04 27 P **Pdif** 09 14 07.5 -0.8
comp=Z,0.3nm,0.4s,baz=255,slow=4.6,SNR=5.4
MKAR Makanchi Array 100.18 316 P **Pdif** 09 14 09.0 -0.4
comp=Z,0.7nm,0.6s,baz=91,slow=6.1,SNR=8.2
MKAR Makanchi Array 100.18 316 Pdif **Pdif** 09 14 08.4 -0.9
NRIK Noril'sk 103.44 339 Pdiff **Pdif** 09 14 22.4 -0.9
comp=Z,1.2nm,0.5s,baz=92,slow=4.1,SNR=4.5
KURBB Kurchatov Arra 103.50 319 Pdiff **Pdif** 09 14 23.8 -0.2
comp=Z,0.2nm,0.7s,baz=105,slow=3.6,SNR=5.4
BVAR Borovoye Array 108.85 321 Pdiff **Pdif** 09 14 48.3 +0.6
comp=Z,0.4nm,0.5s,baz=116,slow=3.4,SNR=3.5
ARU Arti 115.67 325 PKP **PKiKP** 09 19 04.5 -0.8
comp=Z,1.2nm,0.5s,baz=66,slow=1.1,SNR=8.0
BELG Belogornoye 122.65 321 PKP **PKPdf** 09 19 18.1 -0.7
comp=Z,13nm,0.8s,baz=114,slow=3.9,SNR=4.5
ARCES ARCESS Array B 123.64 345 PKP **PKPdf** 09 19 19.2 -1.1
comp=Z,1.6nm,0.5s,baz=74,slow=1.3,SNR=20
ARCES ARCESS Array B 123.64 345 **PKPdf** 09 19 19.6 -0.7
FINES FINESS Array B 129.09 338 PKP **PKPdf** 09 19 30.1 -0.8
comp=Z,2.5nm,0.8s,baz=5.7,slow=1.9,SNR=8.4
NOA NORSAR Array B 134.01 345 PKP **PKPdf** 09 19 40.0 -0.3
comp=Z,1.0nm,0.7s,baz=32,slow=1.9,SNR=4.6
BRTR Keskin Array B 135.28 309 PKP **PKPdf** 09 19 43.2 -0.3
comp=Z,1.0nm,0.9s,baz=111,slow=2.8,SNR=5.1
BRG Berggiesshubel 141.34 334 *e*PKP **PKPdf** 09 19 50.4 -3.6
BRG Amp 09 19 52.2
comp=Z,3.6nm,0.8s
CLL Collm 141.40 335 *e*PKPpre PKPpre 09 19 50.0
CLL *e*PKPdf **PKPdf** 09 19 54.0 -0.1
CONA Conrad Observa 142.59 329 *e*P **PKPdf** 09 19 54.6 -1.9
comp=Z,2.9nm,1.1s
CKRC Cesky Krumlov 142.69 331 *e*PKP **PKiKP** 09 19 58.5 -1.2
KHC Kasperske Hory 142.80 332 *e*PKP **PKiKP** 09 19 59.1 -0.8
GERES GERESS Array B 142.95 332 PKhKP PKPpre 09 19 52.9
comp=Z,0.6nm,0.3s,baz=39,slow=3.0,SNR=9.2
ARSA Arzberg 143.22 329 *e*P PKPbc 09 19 55.8 +1.2
comp=Z,0.8nm,0.5s
MOA Molln 143.41 330 *e*P PKPbc 09 19 55.2 +0.1
comp=Z,3.1nm,0.5s
SOKA Soboth 143.86 328 *e*P PKPbc 09 19 56.2 -0.3
comp=Z,6.1nm,0.5s
OBKA Obir 144.22 328 *e*P **PKPab** 09 19 57.0 -0.2
comp=Z,7.5nm,0.9s
KBA Koelnbreinsper 144.40 330 *i* P **PKPab** 09 19 57.7 -0.3
comp=Z,4.7nm,0.6s,SNR=5.6
VNDS Vrh nad Dolski 144.42 328 *e*PKPbc **PKPab** 09 19 58.0 +0.1
BTNL Ternell 144.48 340 *d*PKPdf **PKPab** 09 19 58.0 +0.1
MEM Membach 144.50 340 *d*PKP PKPbc 09 19 58.2 0.0
MYKA Terra Mystica 144.58 329 *i* P **PKPab** 09 19 57.9 -0.6
comp=Z,8.3nm,0.5s,SNR=5.0
BSTI Sart Tilman 144.66 341 *d*PKPdf PKPbc 09 19 58.9 +0.2
BCLA Clavier 144.89 341 *d*PKP PKPbc 09 19 59.7 +0.2
BGES Gesves 144.99 341 *d*PKP **PKPab** 09 19 59.2 -0.6
WATA Walderalm 145.03 332 *i* P **PKPbc** 09 19 59.7 -0.5
comp=Z,9.1nm,0.6s,SNR=9.0
ABTA Abfaltersbach 145.03 330 *i* P **PKPbc** 09 19 59.5 -0.7
comp=Z,26nm,0.6s,SNR=22
WTTA Wattenberg 145.06 332 *i* P **PKPbc** 09 20 00.1 -0.3
comp=Z,12nm,0.6s,SNR=8.7
SNF Seneffe 145.12 342 *d*PKP **PKPbc** 09 20 00.2 0.0
MOTA Moosalm 145.23 332 *i* P **PKPbc** 09 20 00.7 -0.2
comp=Z,23nm,0.6s,SNR=16
WLF Walferdange 145.27 339 *d*PKP **PKPdf** 09 20 01.2 +0.2
RETA Reutte 145.27 333 *i* P **PKPbc** 09 20 00.6 -0.3
comp=Z,13nm,0.5s,SNR=8.8
SQTA Sankt Quirin 145.28 332 *i* P **PKPbc** 09 20 00.9 -0.2
comp=Z,32nm,0.6s,SNR=21
DOU Dourbes 145.39 341 *d*PKP **PKPbc** 09 20 00.9 -0.2
FETA Feichten 145.64 332 *i* P **PKPbc** 09 20 02.4 +0.1
comp=Z,28nm,0.7s,SNR=23
DAVA Damuels 145.81 333 *i* P **PKPbc** 09 20 02.6 -0.2
comp=Z,17nm,1.0s,SNR=7.8
KEST Kesra 154.26 317 PKPab **PKPab** 09 20 38.6 +0.7
comp=Z,3.0nm,0.7s,baz=284,slow=6.8,SNR=4.2
KEST Kesra 154.26 317 PKPdf **PKPdf** 09 20 15.4 -0.3
KEST **sPKPbc** 09 20 37.6 0.0
ESDC Sonseca Array 157.37 344 PKPab **PKPab** 09 20 50.2 -0.7
comp=Z,1.3nm,0.6s,baz=13,slow=3.6,SNR=9.1
TORD Torodi Ar. Bea 166.13 251 PKP **PKPdf** 09 20 28.1 -1.3
comp=Z,1.4nm,0.9s,baz=283,slow=1.1,SNR=6.2
TORD PKPab **PKPab** 09 21 30.3 +0.2
comp=Z,0.5nm,0.8s,baz=134,slow=4.3,SNR=2.3
TORD Torodi Ar. Bea 166.13 251 PKPdf **PKPdf** 09 20 28.4 -1.0
TORD **PKPab** 09 21 29.9 -0.2

IDC ***26*** *09:02:29.6±1.8,28°.93N×83°.73E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.3/47, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=88.9km s-min=24.9km az=60.0, Nepal*

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.87**	**357**	P		P		09 06 41.6	+1.2
	0.2nm,0.3s,baz=175,slow=11,SNR=10								
ZALV	**Zalesovo Beam**	**25.01**	**2**	P		P		09 07 54.3	-0.7
	0.5nm,0.3s,baz=188,slow=8.4,SNR=2.0								
FINES	**FINESS Array B**	**49.65**	**328**	P		P		09 11 22.7	0.0
	3.6nm,1.0s,baz=96,slow=9.6,SNR=5.7								
ARCES	**ARCESS Array B**	**52.20**	**338**	P		P		09 11 41.4	-0.5
	2.6nm,1.0s,baz=102,slow=8.4,SNR=1.3								
WRA	**Warramunga Arr**	**68.89**	**129**	P		P		09 13 36.6	+0.1
	0.2nm,0.3s,baz=322,slow=6.5,SNR=12								

IDC ***26*** *09:02:55.9±1.3,60°.31S×47°.58W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/20, mbtmp3.8/4, Error ellipse: s-maj=69.0km s-min=26.5km az=48.0*

ISC 26 09:02:57.9±1.1, 60°.3S±0°.3×47°.6W±0°.4, h10km, n12, σ1§18/9, mb3.9/3, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.87**	**141**	P		P		09 07 40.6	+0.9
	2.7nm,0.9s,baz=250,slow=12,SNR=3.7								
PLCA	**Paso Flores**	**24.17**	**314**	P		P		09 08 14.5	+0.3
	2.4nm,0.9s,baz=156,slow=5.0,SNR=6.5								
SIV	**San Ignacio**	**45.30**	**342**	P		P		09 11 16.3	+0.6
	1.2nm,0.8s,baz=180,slow=16,SNR=1.0								
H10N3	**ASCENSION HYDR**	**57.94**	**40**	T		T		10 15 55.7	
	baz=200,slow=74,SNR=3.7								
H10N1	**ASCENSION HYDR**	**57.94**	**40**	T		T		10 15 53.9	
	baz=200								
H10N2	**ASCENSION HYDR**	**57.95**	**40**	T		T		10 15 56.3	
	baz=200,slow=74,SNR=4.5								
TORD	**Torodi Ar. Bea**	**83.09**	**48**	P		P		09 15 23.3	-0.2
	0.8nm,0.7s,baz=215,slow=6.0,SNR=4.8								
CMAR	**Chiang Mai Arr**	**131.88**	**135**	PKP		**PKPdf**		09 22 09.4	-1.7
	0.6nm,0.4s,baz=191,slow=2.4,SNR=1.4								
ILAR	**Eielson Array**	**144.86**	**313**	PKP		**PKPab**		09 22 31.9	-0.7
	2.5nm,0.9s,baz=149,slow=2.1,SNR=18								
BVAR	**Borovoye Array**	**146.34**	**74**	PKPbc		**PKPdf**		09 22 36.6	+0.3
	1.1nm,0.7s,baz=275,slow=8.3,SNR=5.3								
MKAR	**Makanchi Array**	**148.18**	**92**	PKPbc		**PKPdf**		09 22 41.0	+1.4
	1.2nm,0.7s,baz=222,slow=1.6,SNR=5.0								
KURBB	**Kurchatov Arra**	**148.83**	**84**	PKPbc		**PKPbc**		09 22 43.1	-1.3
	0.7nm,0.7s,baz=237,slow=3.2,SNR=4.9								

IDC ***26*** *09:14:29.6±1.0,35°.77N×69°.04E, h0km, mb3.9/8, mb1 3.9/13, mb1mx3.6/54, mbtmp3.8/13, ML3.4/5, MS4.6/1, Ms1 4.6/1, ms1mx3.3/60, Error ellipse: s-maj=22.1km s-min=19.7km az=59.0*

NNC ***26*** *09:14:34.6±5.8, 36°.15N×68°.90E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=49.0km s-min=43.4km az=134.0*

NEIC ***26*** *09:14:36.7±1.3, 35°.98N±0°.03×68°.81E±0°.10, h71km±11km, mb4.1/5, Error ellipse: s-maj=11.8km s-min=3.1km az=71.0*

ISC 26 09:14:34.6±0.6, 35°.89N±0°.06×68°.84E±0°.06, h35km, n57, σ1§60/61, mb4.0/9, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.35**	**173**			**Pn**		09 15 00.2	+2.9
CEP	**Cherat**	**3.26**	**128**	P		Pn		09 15 28.6	+5.2
CEP				S		Sn		09 16 15.0	+14
GAR	**Garm**	**3.32**	**20**	Pn		**Pn**		09 15 26.1	+1.8
NIL	**Nilore**	**4.26**	**120**			**Pn**		09 15 41.0	+3.9
CHCP	**Chirah Chowk**	**4.27**	**120**	P		Pn		09 15 41.2	+4.1
DRK	**Karamyk**	**4.29**	**32**	Pn		**Pn**		09 15 38.9	+1.2
BTK	**Batken**	**4.45**	**20**			**Pn**		09 15 41.3	+1.6
TAS	**Tashkent**	**5.44**	**4**	Pn		**Pn**		09 15 53.4	+0.1
THN	**Thein Dam**	**6.66**	**119**	*e*P		Pn		09 16 16.0	+6.0
THN				*e*S		**Sn**		09 17 28.0	+3.4
DHRM	**DHARAMSHALA**	**7.17**	**118**	*e*P		**Pn**		09 16 17.3	+0.1
DHRM				*e*S		**Sn**		09 17 38.6	+1.0
DHRM				IAML				09 17 41.1	
	comp=N,1μm,0.5s								
AML	**Almayashu**	**7.29**	**30**	P		**Pn**		09 16 19.3	+0.4
	SNR=55								
KK31	**Karatay Array**	**7.32**	**10**	⇓Pn		**Pn**		09 16 19.7	+0.6
	comp=N,4.0nm,0.5s,baz=197,slow=15,SNR=14								
KK31				⇑Sn		**Sn**		09 17 41.8	+0.9
	comp=N,5.2nm,0.4s,baz=190,slow=20								
KK31	**Karatay Array**	**7.32**	**10**	Pn		**Pn**		09 16 20.2	+1.1
KKAR	**Karatay Array**	**7.32**	**10**	Pn		**Pn**		09 16 19.7	+0.7
UCH	**Uchtor**	**7.71**	**33**	P		**Pn**		09 16 25.6	+0.7
	SNR=29								
EKS2	**Erkin-Say**	**7.77**	**28**	P		**Pn**		09 16 26.2	+0.9
	SNR=6.1								
AAK	**Ala-Archa**	**8.04**	**31**	P		**Pn**		09 16 30.2	+1.1
	SNR=16								
AAK	**Ala-Archa**	**8.04**	**31**	⇑Pn		**Pn**		09 16 29.5	+0.5
	comp=N,7.0nm,0.5s								
AAK				⇓Sn		**Sn**		09 17 59.4	+0.6
	comp=N,9.6nm,0.7s								
AAK	**Ala-Archa**	**8.04**	**31**			**Pn**		09 16 29.6	+0.5
SMLA	**Simla**	**8.42**	**122**	*e*P		**Pn**		09 16 34.6	+0.5
SMLA				*e*S		**Sn**		09 18 07.9	+0.1
SMLA				IAML				09 18 10.6	
	comp=E,79nm,0.5s								
SMLA				IAML				09 18 11.9	
	comp=N,68nm,0.5s								
CHMS	**Chumysh**	**8.44**	**31**	P		**Pn**		09 16 35.6	+1.1
	SNR=11								
USP	**Ospenovka**	**8.56**	**29**	P		**Pn**		09 16 36.1	0.0
	SNR=5.4								
ULHL	**Ulahol**	**8.57**	**40**	P		**Pn**		09 16 36.3	0.0
	SNR=14								
BOOM	**Boomskoye usch**	**8.59**	**38**			**Pn**		09 16 36.7	+0.1
TKM2	**Tokmak 2**	**8.75**	**35**	P		**Pn**		09 16 39.3	+0.4
	SNR=21								
TKM2	**Tokmak 2**	**8.75**	**35**	⇑Pn		**Pn**		09 16 38.8	-0.1
	comp=N,4.9nm,0.5s								
TKM2				⇑Sn		**Sn**		09 18 17.0	+0.6
	comp=N,2.6nm,0.5s								
GEYT	**Alibeck**	**8.83**	**287**	Pn		**Pn**		09 16 39.7	0.0
	comp=N,0.6nm,0.3s,baz=118,slow=12,SNR=12								
GEYT				Sn		**Sn**		09 18 17.9	-0.1
	comp=N,0.5nm,0.3s,baz=74,slow=42,SNR=2.1								
GEYT				Lg		Lg		09 19 22.7	
	baz=161,slow=28,SNR=1.6								
GEYT	**Alibeck**	**8.83**	**287**			**Pn**		09 16 41.3	+1.6
GYA0B	**ALIBECK ARRAY**	**8.83**	**287**			**Pn**		09 16 40.9	+1.1
KDJ	**Kajisay**	**9.00**	**44**			**Pn**		09 16 42.9	+0.7
BHPL	**Bhopal**	**14.64**	**147**	*e*P		**Pn**		09 17 56.8	-2.5
MAKZ	**Makanchi**	**14.69**	**38**			**Pn**		09 17 59.1	-0.7
MK31	**Makanchi Array**	**14.84**	**39**	Pn		**Pn**		09 17 59.9	-1.9
MKAR	**Makanchi Array**	**14.84**	**39**	Pn		**Pn**		09 17 58.9	-2.9
	comp=N,0.1nm,0.3s,baz=226,slow=17,SNR=3.2								
MKAR	**Makanchi Array**	**14.84**	**39**			**Pn**		09 18 00.9	-0.8
AB31	**Akbulak array**	**14.87**	**337**	⇑Pn		**Pn**		09 18 00.5	-1.6
	comp=N,3.1nm,0.5s,baz=357,slow=13,SNR=74								
ABKAR	**Akbulak array**	**14.87**	**337**	Pn		**Pn**		09 18 00.7	-1.4
KURBB	**Kurchatov Arra**	**16.31**	**22**	Pn		**Pn**		09 18 16.6	-4.3
	comp=N,0.0nm,0.3s,baz=214,slow=11,SNR=4.6								
AKTO	**Aktyubinsk**	**16.52**	**335**	Pn		**Pn**		09 18 24.1	+0.6
	comp=N,0.4nm,0.3s,baz=128,slow=12,SNR=3.3								
AKTO				Sn		Sn		09 21 14.5	-11
	comp=N,0.2nm,0.3s,baz=129,slow=7.1,SNR=2.1								
BVAR	**Borovoye Array**	**17.17**	**3**	P		**Pn**		09 18 30.5	-1.1
	comp=N,0.4nm,0.3s,baz=200,slow=16,SNR=7.4								
BRVK	**Bovoye**	**17.20**	**3**	P		**Pn**		09 18 32.1	+0.1
ZALV	**Zalesovo Beam**	**21.22**	**27**	P		**P**		09 19 16.5	-0.7
	comp=N,7.0nm,0.5s,baz=224,slow=10,SNR=16								
ZALV	**Zalesovo Beam**	**21.22**	**27**	P		**P**		09 19 16.1	-1.1
ARU	**Arti**	**21.70**	**344**	P		**P**		09 19 24.5	+2.2
	comp=N,1.0nm,0.5s,baz=227,slow=3.7,SNR=4.9								
ARU	**Arti**	**21.70**	**344**	P		**P**		09 19 20.6	-1.7
ARU				IAmb		IAmb		09 19 34.6	
	comp=Z,8.8nm,0.9s								
SHL	**Shillong**	**22.27**	**111**	P		**P**		09 19 28.5	-0.4
SHL				IAmb		IAmb		09 19 31.9	
	comp=Z,9.7nm,0.8s								
TLY	**Talaya**	**29.33**	**47**	P		**P**		09 20 31.8	-2.1
PALK	**Pallekele**	**30.48**	**156**	LR		LR		09 33 29.4	
	comp=Z,1μm,18.8s,baz=83,slow=38								
FINES	**FINESS Array B**	**37.03**	**327**	P		**P**		09 21 42.6	+1.8
	comp=Z,2.0nm,0.9s,baz=119,slow=11,SNR=1.8								
FINES	**FINESS Array B**	**37.03**	**327**	P		**P**		09 21 38.9	-1.9
ARCES	**ARCESS Array B**	**41.06**	**338**	P		**P**		09 22 16.1	+1.7
	comp=Z,1.8nm,0.8s,baz=111,slow=8.8,SNR=1.5								
NOA	**NORSAR Array B**	**43.83**	**324**	P		**P**		09 22 38.0	+1.0
	comp=Z,0.6nm,0.8s,baz=177,slow=11,SNR=2.0								
TORD	**Torodi Ar. Bea**	**63.95**	**268**	P		**P**		09 25 05.5	+0.9
	comp=Z,0.6nm,0.4s,baz=49,slow=6.1,SNR=10								
TORD	**Torodi Ar. Bea**	**63.95**	**268**	P		**P**		09 25 02.5	-2.1
TORD				IAmb		IAmb		09 25 14.4	
	comp=Z,1.1nm,1.1s								
WRA	**Warramunga Arr**	**83.17**	**120**	P		**P**		09 26 56.7	-0.7
	comp=Z,0.5nm,0.6s,baz=327,slow=4.8,SNR=9.5								
ASAR	**Alice Springs**	**85.36**	**123**	P		**P**		09 27 08.4	0.0
	comp=Z,1.0nm,0.8s,baz=305,slow=4.9,SNR=11								
ASAR	**Alice Springs**	**85.36**	**123**	P		**P**		09 27 06.9	-1.5

IDC ***26*** *09:37:26.8±0.8, 29°.17N×51°.36E, h0km, mb4.3/24, mb1 4.4/29, mb1mx4.2/59, mbtmp4.3/29, ML3.8/4, Error ellipse: s-maj=17.2km s-min=13.3km az=176.0*

NEIC ***26*** *09:37:28.0±0.8, 29°.22N±0°.08×51°.29E±0°.09, h10km±1km, mb4.3/46, mb_Lg4.4(TEH), Error ellipse: s-maj=14.4km s-min=12.7km az=146.0*

TEH ***26*** *09:37:28.7, 29°.27N×51°.37E, h8km, ML4.4*

THR ***26*** *09:37:29.0±0.4, 29°.25N×51°.38E, h14km±6km, ML4.2*

DSN ***26*** *09:37:31.4±1.6, 29°.04N×51°.42E, h10km, ML4.6/10, Error ellipse: s-maj=16.4km s-min=9.6km az=170.0*

OMAN ***26*** *09:37:35.6±0.4, 29°.08N×51°.49E, h33km, Error ellipse: s-maj=12.3km s-min=7.2km az=18.0*

ISC 26 09:37:29.3±0.4, 29°.21N±0°.03×51°.33E±0°.03, h17km, n287, σ1§55/311, mb4.3/54, 15C-7D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AHBU	**AHRAM**	**0.34**	**186**	*e*Pg		**Pb**		09 37 37.1	+0.1
KAZ1	**Kazerun**	**0.49**	**33**	*e*Pg		**Pg**		09 37 37.7	-1.6
KAZ1				*e*Sg		**Sg**		09 37 44.6	-1.4
SHI	**Shiraz**	**1.12**	**67**	*e*Pg		**Pb**		09 37 49.6	-0.7
SHI				*e*Sg		**Sb**		09 38 04.2	-0.4
QIR1	**Qir**	**1.67**	**115**	*e*Pg		**Pb**		09 38 00.4	+0.8
QIR1				*e*				09 38 43.5	
	comp=Z,55μm,0.8s								
ABEH	**Behbahan**	**1.68**	**326**	*e*Pg		**Pb**		09 38 00.1	+0.4
KLNJ	**Kolanjah**	**1.81**	**7**	*e*Pg		**Pb**		09 38 02.0	-0.2
KLNJ				*e*				09 38 42.2	
	comp=Z,21μm,0.8s								
JHRM	**Jahrom**	**2.09**	**109**	*e*				09 38 52.2	
	comp=Z,41μm,0.7s								
JHRM				*e*Pn		**Pb**		09 38 06.3	-0.5
LMD1	**Lamerd**	**2.46**	**139**	*e*Pn		**Pb**		09 38 12.2	-1.0
LMD1				*e*				09 39 12.8	
	comp=Z,24μm,0.9s								
IRAM	**Ramesheh**	**2.75**	**19**	*e*Pn		**Pn**		09 38 14.9	+2.1
QRN	**Al-Qurain**	**3.03**	**262**	*e*P				09 38 19.1	
LAR1	**LAR**	**3.08**	**119**	*e*				09 39 31.3	
	comp=Z,24μm,0.6s								
SHK1	**Shahrekord**	**3.13**	**353**	*e*Pn		**Pn**		09 38 19.9	+1.7
UMR	**Umm Al-Rimmam**	**3.18**	**277**	*e*P				09 38 21.3	
IGAR	**Gharneh**	**3.24**	**11**	*e*Pn		**Pn**		09 38 21.8	+2.1
RDF	**Al-Radifah**	**3.32**	**266**	*e*P				09 38 23.3	
ISAD	**Sadrabad**	**3.38**	**36**	*e*Pn		**Pn**		09 38 24.2	+2.7
IPIR	**Pirpir**	**3.49**	**354**	*e*Pn		**Pn**		09 38 25.2	+2.1
IMEH	**Mehriz**	**3.57**	**52**	*e*Pn		**Pn**		09 38 26.9	+2.7
KHOR	**Al-Khor Airpor**	**3.57**	**177**	P		**Pn**		09 38 27.2	+3.2
SHGR	**Shooshtar-Gavs**	**3.62**	**324**	*e*Pn		**Pn**		09 38 21.8	-2.9
SHGR				*e*Sg		**Sn**		09 39 08.8	+1.8
SHGR				IAML				09 39 11.5	
	comp=E,429nm,0.6s								
SHGR				IAML				09 39 16.6	
	comp=N,374nm,0.2s								
SHGR	**Shooshtar-Gavs**	**3.62**	**324**	*e*Pn		**Pn**		09 38 26.3	+1.7
SHGR	**Shooshtar-Gavs**	**3.62**	**324**	*e*Pn		**Pn**		09 38 26.3	+1.7
IZEF	**Zefreh**	**3.77**	**13**	*e*Pn		**Pn**		09 38 28.6	+1.6
RST	**Umm Al-Ruwaisa**	**3.80**	**275**	*e*P				09 38 29.8	
NASN	**Na'in**	**3.80**	**19**	*e*Pn		**Pn**		09 38 28.2	+0.8
NASN	**Na'in**	**3.80**	**19**	*e*Pn		**Pn**		09 38 28.9	+1.5
NASN				*e*S		**Sn**		09 39 12.6	+0.8
NASN	**Na'in**	**3.80**	**19**	*e*Pn		**Pn**		09 38 28.9	+1.5
ICHK	**Chekchek**	**4.02**	**40**	*e*Pn		**Pn**		09 38 32.5	+2.1
IKLH	**Kolahrood**	**4.10**	**3**	*e*Pn		**Pn**		09 38 32.6	+1.1
YZKH	**Yazd**	**4.23**	**41**	*e*Pn		**Pn**		09 38 35.5	+2.4
YZKH	**Yazd**	**4.23**	**41**	*e*Pn		**Pn**		09 38 34.7	+1.5
YZKH	**Yazd**	**4.23**	**41**	*e*Pn		**Pn**		09 38 34.7	+1.5
IBAF	**Bafgh**	**4.36**	**56**	*e*Pn		**Pn**		09 38 37.1	+2.1
TRNA	**Turayna**	**4.46**	**181**	P		**Pn**		09 38 40.7	+4.6
ANAR	**Anarak**	**4.47**	**27**	*e*Pn		**Pn**		09 38 37.7	+1.3
QAM	**Ghamsar**	**4.54**	**1**	*e*Pn		**Pn**		09 38 39.0	+1.5
KHGB	**Koh Gabri**	**4.62**	**74**	*e*Pn		**Pn**		09 38 40.6	+2.0
KHGB				*e*				09 40 03.0	
	comp=Z,2μm,0.9s								
GENO	**Geno**	**4.63**	**112**	*e*Pn		**Pn**		09 38 40.7	+2.0
KHMZ	**Khomeyn**	**4.67**	**346**	*e*Pn		**Pn**		09 38 41.0	+1.7
KHMZ	**Khomeyn**	**4.67**	**346**	*e*Pn		**Pn**		09 38 41.0	+1.7
NGRK	**Negar Kerman**	**4.73**	**83**	*e*Pn		**Pn**		09 38 42.5	+2.3
NGRK				*e*				09 38 45.8	
	comp=Z,2μm,0.3s								
KRBR	**Kerman**	**4.79**	**79**	*e*Pn		**Pn**		09 38 42.1	+1.1
KRBR	**Kerman**	**4.79**	**79**	*e*Pn		**Pn**		09 38 42.5	+1.5
KRBR				*e*Sg		**Sb**		09 39 55.9	+5.4
KRBR	**Kerman**	**4.79**	**79**	*e*Pn		**Pn**		09 38 42.5	+1.5
TVBK	**TV Kerman**	**4.79**	**79**	*e*Pn		**Pn**		09 38 43.4	+2.4
TVBK				*e*				09 39 02.6	
	comp=Z,3μm,0.4s								
KRSH	**Karshahi**	**4.80**	**8**	*e*Pn		**Pn**		09 38 42.5	+1.5
DHL1	**Dehloran**	**4.91**	**316**	*e*Pn		**Pn**		09 38 42.9	+0.5
SLWR	**Sila**	**5.13**	**176**	*e*Pn		**Pn**		09 38 48.1	+2.8
SLWR	**Sila**	**5.13**	**176**	P		**Pn**		09 38 48.8	+3.4
SLWR				S		**Sn**		09 39 47.0	+2.8
ISFB	**Sefidab**	**5.19**	**8**	*e*Pn		**Pn**		09 38 47.4	+1.1
IKFM	**Kafar-mosalman**	**5.24**	**326**	*e*Pn		**Pn**		09 38 48.2	+1.4
SHME	**Shamm**	**5.30**	**125**	*e*Pn		**Pn**		09 38 46.7	-1.0
SHME	**Shamm**	**5.30**	**125**	P		**Pn**		09 38 50.8	+3.1
SHME				S		**Sn**		09 39 48.1	-0.3
IDOB	**Doab**	**5.30**	**330**	*e*Pn		**Pn**		09 38 48.7	+0.7
ASAO	**Ashtian**	**5.44**	**349**	*e*Pn		**Pn**		09 38 51.9	+2.0
ASAO	**Ashtian**	**5.44**	**349**	*e*Pn		**Pn**		09 38 51.6	+1.8
ASAO	**Ashtian**	**5.44**	**349**	*e*Pn		**

ZHDN	Zahedan	8.28	86	ePn		Pn	09 39 29.9	+1.1
BSY	Bisya	8.32	139	P		Pn	09 39 31.4	+2.1
	SNR=23							
WSAR	Wadi Sarin	8.84	131	Pn		Pn	09 39 36.8	+0.3
	comp=Z,1.8nm,0.3s,baz=334,slow=6.8,SNR=13							
WSAR				Sn		Sn	09 41 09.5	-6.2
	comp=Z,1.3nm,0.3s,baz=301,slow=23,SNR=1.6							
WSAR	Wadi Sarin	8.84	131	P		Pn	09 39 38.7	+2.3
	SNR=11							
SBZV	Sabzevar	8.90	35	ePn		Pn	09 39 38.2	+0.9
JMDO	Jabal Madar	9.14	137	P		Pn	09 39 42.4	+1.9
WBK	Wadi Bani Khal	9.51	132	P		Pn	09 39 48.2	+2.7
ISFR	Sfrayin	9.61	34	ePn		Pn	09 39 48.5	+1.3
MHTO	MHTO	10.15	142	P		Pn	09 39 55.9	+1.6
	SNR=27							
GEYT	Alibeck	10.37	31	Pn		Pn	09 39 58.8	+1.4
	comp=Z,0.5nm,0.3s,baz=211,slow=14,SNR=7.8							
GEYT	Alibeck	10.37	31			Pn	09 39 57.5	+0.1
GYA0B	ALIBECK ARRAY	10.37	31	Pn		Pn	09 39 56.8	-0.6
SHAO	Shalim	11.81	160	*i* P		Pn	09 40 16.0	-1.1
	SNR=19							
RBK	Rabkut	11.94	167	P		Pn	09 40 18.5	-0.4
GNI	Garni	12.18	335	Pn		Pn	09 40 25.3	+3.0
	comp=Z,0.6nm,0.3s,baz=243,slow=2.2,SNR=5.0							
GNI	Garni	12.18	335			Pn	09 40 21.3	-1.0
GAZ	Gaziantep	14.23	308	Pn		Pn	09 40 48.8	-1.4
KBL	Kabul	15.95	66			Pn	09 41 13.0	-0.2
KBZ	Khabaz	15.99	337	Pn		P	09 41 15.2	-1.5
	comp=Z,0.5nm,0.3s,baz=147,slow=8.3,SNR=20							
KIV	Kislovodsk	16.26	337			Pn	09 41 16.4	-0.6
CSS	Mathiatis	16.29	295			Pn	09 41 16.9	-0.5
CSS				IAmb		IAmb	09 41 23.6	
	comp=Z,17nm,0.8s							
SOCY	Socotra	17.11	171			Pn	09 41 23.3	-4.7
SOCY				IAmb		IAmb	09 41 29.2	
	comp=Z,18nm,0.7s							
CHGR	Chuyangaron	17.51	53	P		Pn	09 41 32.7	-0.1
BR131	Keskin Array S	17.94	310	P		Pn	09 41 38.0	-0.1
BRTR	Keskin Array B	17.94	310	P		Pn	09 41 38.1	0.0
	comp=Z,0.1nm,0.3s,baz=131,slow=13,SNR=17							
BRTR	Keskin Array B	17.94	310	P		Pn	09 41 37.2	-0.9
GAR	Garm	18.48	53	P		P	09 41 43.6	-1.0
GAR				IAmb		IAmb	09 41 51.4	
	comp=Z,16nm,0.8s							
ANTO	Ankara	18.58	310	P		P	09 41 44.4	-1.2
NIL	Nilore	19.21	71	P		P	09 41 52.7	+0.2
NIL				IAmb		IAmb	09 41 57.7	
	comp=Z,12nm,0.7s							
DRK	Karamyk	19.72	53	P		P	09 41 57.5	-0.9
KK31	Karatay Array	20.72	43	P		P	09 42 08.5	-0.4
KKAR	Karatay Array	20.72	43	P		P	09 42 08.9	0.0
KKAR				IAmb		IAmb	09 42 16.5	
	comp=Z,6.9nm,0.8s							
ABKAR	Akbulak array	21.07	16	P		P	09 42 12.9	+0.2
ABKAR	Akbulak array	21.07	16	P		P	09 42 12.6	0.0
ARSB	Arslanbob	21.35	50	P		P	09 42 15.6	-0.3
ARSB				IAmb		IAmb	09 42 18.8	
	comp=Z,13nm,0.7s							
AKTO	Aktyubinsk	21.80	12	P		P	09 42 20.4	0.0
	comp=Z,8.0nm,0.7s,baz=198,slow=11,SNR=14							
KSH	Kashi	22.73	57	P		P	09 42 27.5	-3.1
KSH				pP		pP	09 42 32.5	-3.1
KSH				pmax		pmax		
	comp=Z,8.0nm,0.6s							
KSH				pmax		pmax		
	comp=Z,330nm,11.1s							
AAK	Ala-Archa	22.96	48	P		P	09 42 32.8	-0.3
AAK				IAmb		IAmb	09 42 40.9	
	comp=Z,6.8nm,0.8s							
IDI	Anoyia	23.14	292	P		P	09 42 35.7	+0.9
	comp=Z,15nm,0.8s,baz=71,slow=14,SNR=8.7							
BELG	Belogornoye	23.33	354	P		P	09 42 36.4	0.0
	comp=Z,27nm,0.9s,baz=266,slow=2.1,SNR=5.5							
BOOM	Boomskoye usch	23.85	50	P		P	09 42 42.3	+0.4
BOOM				IAmb		IAmb	09 42 45.6	
	comp=Z,7.2nm,0.8s							
TLCR		23.89	318	⇓P		P	09 42 44.0	+2.1
TPGR	Topolog	23.94	317	⇑P		P	09 42 43.5	+1.0
HARR	Harsova	24.14	316	⇓P		P	09 42 45.3	+0.9
CFR	Carcaliu	24.28	317	⇓P		P	09 42 46.1	+0.4
KDJ	Kajisay	24.53	51	P		P	09 42 48.2	0.0
KDJ				IAmb		IAmb	09 42 52.0	
	comp=Z,8.4nm,1.1s							
ISR	Istrita	25.21	316	⇑P		P	09 42 56.4	+2.3
VASR	Vaslui	25.30	320	⇑P		P	09 42 56.8	+2.0
VRI	Vrincioaia	25.48	317	⇑P		P	09 42 58.4	+1.8
PRZ	Przheval'sk	25.50	51	P		P	09 42 58.2	+1.2
PLOR	Plostina	25.52	317	⇑P		P	09 42 59.7	+2.7
IAS	Iasi	25.75	321	⇑P		P	09 43 02.0	+3.1
MLR	Muntele Rosu	25.76	316	P		P	09 43 00.8	+1.5
	comp=Z,13nm,0.7s,baz=351,slow=7.6,SNR=27							
MLR	Muntele Rosu	25.76	316	⇓P		P	09 43 01.3	+2.1
MLR	Muntele Rosu	25.76	316	P		P	09 42 57.9	-1.3
TESR	Tescani	25.88	319	⇑P		P	09 43 01.6	+1.5
SORM	Soroca	25.89	323	⇑P		P	09 43 00.8	+0.6
LIT	Litokhoron	25.99	302	P		P	09 43 00.6	-0.7
LIT				IAmb		IAmb	09 43 06.6	
	comp=Z,4.8nm,0.7s							
OZUR		26.16	317	⇓P		P	09 43 04.7	+1.9
VTS	Vitosha	26.26	308	⇓P		P	09 43 01.7	-2.1
VOIR		26.28	315	⇑P		P	09 43 05.7	+1.8
DOPR	Dopca	26.34	317	⇑P		P	09 43 06.4	+2.0
BIZ	Bicaz	26.43	319	⇑P		P	09 43 07.3	+2.2
ARR	Arges	26.50	315	⇑P		P	09 43 06.1	+0.2
STIP	Stip	26.68	306	*i* P		P	09 43 07.9	+0.4
FNA	Florina	26.99	303	P		P	09 43 10.2	-0.2
FNA				IAmb		IAmb	09 43 14.8	
	comp=Z,6.8nm,1.0s							
AKASG	Malin Array Be	27.16	328	P		P	09 43 11.5	-0.2
	comp=Z,1.6nm,0.3s,baz=133,slow=8.8,SNR=18							
AKASG	Malin Array Be	27.16	328	P		P	09 43 10.6	-1.1
AKBB	Malin Array Si	27.16	328	P		P	09 43 10.9	-0.8
BURAR	Bucovina Array	27.30	320	⇑P		P	09 43 14.7	+1.6
BURAR	Bucovina Array	27.30	320	P		P	09 43 12.7	-0.4
BURAR				IAmb		IAmb	09 43 22.0	
	comp=Z,3.5nm,0.7s							
BUR08	Bucovina Ar. S	27.33	320	P		P	09 43 13.3	0.0
BUR08				IAmb		IAmb	09 43 31.3	
	comp=Z,8.5nm,1.1s							
BRVK	Borovoye	27.61	25	P		P	09 43 15.7	+0.1
BRVK				IAmb		IAmb	09 43 22.7	
	comp=Z,8.4nm,1.2s							
BVAR	Borovoye Array	27.62	25	P		P	09 43 16.0	+0.3
	comp=Z,3.3nm,0.8s,baz=180,slow=10,SNR=16							
GZR	Gura Zlata	27.68	314	⇑P		P	09 43 17.4	+1.0
ARU	Arti	27.69	9	P		P	09 43 18.0	+1.7
	comp=Z,0.4nm,0.3s,baz=230,slow=20,SNR=2.0							
MDVR	Moldovita	28.11	312	⇓P		P	09 43 21.7	+1.4
DRGR		28.36	316	⇑P		P	09 43 23.9	+1.4
KURBB	Kurchatov Arra	29.59	36	P		P	09 43 34.1	+0.8
	comp=Z,2.4nm,0.7s,baz=236,slow=9.1,SNR=16							
MK31	Makanchi Array	29.79	45	P		P	09 43 35.1	-0.1
MKAR	Makanchi Array	29.79	45	P		P	09 43 35.9	+0.7
	comp=Z,1.8nm,0.6s,baz=237,slow=7.8,SNR=15							
MKAR	Makanchi Array	29.79	45	P		P	09 43 35.1	0.0
CRVS	Cervenica-Dubn	30.12	319	*e*P		P	09 43 40.8	+2.8
NACGM	Naroch	31.18	332	*i* P		P	09 43 45.9	-1.3
NACGM				*i* P		P	09 43 45.9	-1.3
NACGM				*i* P		P	09 43 45.9	-1.3
NACGM				*i* PP		PnPn	09 44 49.2	+0.2
NACGM				*i* PPP		PPP	09 45 02.9	
NACGM				*i* S		S	09 48 52.0	-0.4
NACGM				*i* SS		ScP	09 50 26.5	+2.4
NACGM				*i* LQ		LQ	09 54 31.4	
NACGM				*i* LR		LR	09 56 28.8	
LANS	Liptovska Anna	31.39	318	*e*P		P	09 43 51.4	+2.1
IIGN	Ignalina	31.72	333	*e*P		P	09 43 52.2	+0.2
ISAL	Salakas	31.92	333	*e*P		P	09 43 52.8	-1.0
SUW	Suwalki	32.13	328	*e*P		P	09 43 55.5	-0.1
JAVC	Velka Javorina	32.32	317	*e*P		P	09 44 02.3	+4.8
WMQ	Urumqi	32.38	53	*e*P		P	09 44 00.0	+1.9
KLMR	Klimovskoe	32.62	349	*e*P		P	09 43 58.6	-1.3
KLMR				AMP			09 43 59.9	
	comp=Z,14nm,0.6s							
MORC	Moravsky Berou	32.79	318	*e*P		P	09 44 01.8	+0.2
MORC	Moravsky Berou	32.79	318	P		P	09 44 01.0	-0.6
MORC				IAmb		IAmb	09 44 08.2	
	comp=Z,4.9nm,0.8s							
ARSA	Arzberg	33.03	313	*e*P		P	09 44 04.2	+0.5
	comp=Z,1.9nm,0.8s							
CONA	Conrad Observa	33.06	314	*e*P		P	09 44 04.1	+0.1
	comp=Z,1.6nm,0.7s							
VRAC	Vranov	33.15	317	*e*P		P	09 44 05.3	+0.6
KRUC	Moravsky	33.17	316	*e*P		P	09 44 05.5	+0.7
KRLC	Kraliky	33.36	318	*e*P		P	09 44 07.0	+0.4
NRCA	Norcia	33.48	304	P		P	09 44 06.5	-1.2
NRCA				IAmb		IAmb	09 44 13.4	
	comp=Z,3.9nm,0.7s							
DPC	Dobruska-Polom	33.75	319	*e*P		P	09 44 10.0	+0.1
OSTC	Ostas	33.90	319	*e*P		P	09 44 11.0	-0.2
MURB	Monte Urbino	33.98	305	P		P	09 44 11.4	-0.7
CHVC	Chvalec	34.01	319	*e*P		P	09 44 12.8	+0.7
MOA	Molln	34.03	314	*e*P		P	09 44 12.3	-0.1
	comp=Z,3.2nm,0.9s							
KBA	Koelnbreinsper	34.38	312	*i* P		P	09 44 16.6	+0.9
	comp=Z,6.2nm,0.6s,SNR=4.9							
ZAA0	Zalesovo Array	34.66	35	P		P	09 44 17.8	+0.1
ZALV	Zalesovo Beam	34.66	35	P		P	09 44 18.1	+0.4
	comp=Z,2.5nm,0.4s,baz=250,slow=8.6,SNR=17							
ZALV	Zalesovo Beam	34.66	35	P		P	09 44 17.4	-0.3
GERES	GERESS Array B	34.73	315	P		P	09 44 18.4	-0.1
	comp=Z,0.6nm,0.6s,baz=99,slow=8.6,SNR=6.3							
GERES	GERESS Array B	34.73	315	P		P	09 44 17.5	-1.1
ABTA	Abfaltersbach	34.83	311	*e*P		P	09 44 19.9	+0.5
	comp=Z,1.9nm,0.6s							
KHC	Kasperske Hory	34.91	315	*e*P		P	09 44 20.5	+0.5
MTSE	Matsula	35.04	335	*e*P		P	09 44 21.1	+0.2
CTI	Castel Tesino	35.22	310	P		P	09 44 22.3	-0.5
CTI				IAmb		IAmb	09 44 29.6	
	comp=Z,3.2nm,0.8s							
BRG	Berggiesshubel	35.34	318	*e*P		P	09 44 28.8	+5.1
BRG				Amp			09 44 30.9	
	comp=Z,3.8nm,0.8s							
WTTA	Wattenberg	35.55	312	*i* P		P	09 44 26.1	+0.4
	comp=Z,8.3nm,1.2s,SNR=5.6							
WATA	Walderalm	35.61	312	*e*P		P	09 44 25.6	-0.5
	comp=Z,6.3nm,0.8s							
SQTA	Sankt Quirin	35.82	311	*i* P		P	09 44 28.0	+0.1
	comp=Z,5.2nm,0.8s,SNR=5.5							
MOTA	Moosalm	35.92	312	*i* P		P	09 44 28.1	-0.8
	comp=Z,6.2nm,1.0s,SNR=5.2							
CLL	Collm	36.06	319	*e*P		P	09 44 29.0	-0.8
	comp=Z,6.0nm,1.2s							
CLL				*e*			09 44 35.0	
CLL				*e*PP		PnPn	09 45 49.0	-1.8
CLL	Collm	36.06	319	P		P	09 44 29.3	-0.5
CLL				IAmb		IAmb	09 44 36.8	
	comp=Z,3.0nm,0.7s							
FETA	Feichten	36.08	311	*e*P		P	09 44 30.2	0.0
	comp=Z,7.7nm,1.5s							
RETA	Reutte	36.18	312	*e*P		P	09 44 31.0	0.0
	comp=Z,6.5nm,0.9s							
FIA1	FINESS Array S	36.32	340	P		P	09 44 31.9	0.0
FINES	FINESS Array B	36.32	340	P		P	09 44 31.7	-0.2
	comp=Z,1.8nm,0.5s,baz=145,slow=9.9,SNR=19							
DAVA	Damuels	36.71	311	*e*P		P	09 44 35.3	-0.3
	comp=Z,8.3nm,0.8s							
SENIN	Lac Senin/Sane	38.23	309	P		P	09 44 48.4	-0.2
BNI	Bardonecchia	38.44	307	P		P	09 44 49.1	-1.2
BNI				IAmb		IAmb	09 44 58.3	
	comp=Z,8.4nm,1.1s							
LVZ	Lovozero	39.98	350	P		P	09 45 02.2	-0.5
GTA	Gaotai	40.89	62	P		P	09 45 12.5	+1.7
GTA				pP		pP	09 45 15.8	-0.4
GTA				sP		sP	09 45 18.5	0.0
GTA				pmax		pmax		
	comp=Z,16nm,1.1s							
NC405	NORSAR Array S	41.29	332	P		P	09 45 13.3	-0.3
NC405				IAmb		IAmb	09 45 33.2	
	comp=Z,9.8nm,1.1s							
NB201	NORSAR Array S	41.43	332	P		P	09 45 13.9	-0.8
NB2	NORSAR Subarra	41.45	332	P		P	09 45 14.3	-0.6
	baz=122,slow=8.6							
NOA	NORSAR Array B	41.45	332	P		P	09 45 14.4	-0.6
	comp=Z,2.6nm,0.7s,baz=122,slow=8.3,SNR=12							
SNART	Snartemo	41.97	327	*e*P		P	09 45 18.9	-0.3
SKAR	Skarslia	42.51	330	*e*P		P	09 45 24.1	+0.5
BLS5	Blasjo	42.78	328	*e*P		P	09 45 25.4	-0.4
DOMB	Dombas	42.86	332	*e*P		P	09 45 26.6	+0.2
ARA0	ARCESS Array S	43.01	347	*e*P		P	09 45 28.1	+0.6
ARCES	ARCESS Array B	43.01	347	P		P	09 45 27.9	+0.4
	comp=Z,1.5nm,0.4s,baz=149,slow=7.6,SNR=25							
ARCES	ARCESS Array B	43.01	347	P		P	09 45 27.3	-0.2
KTK1	Kautokeino	43.05	346	*e*P		P	09 45 28.2	+0.3
NSS	Namsos	43.11	336	*e*P		P	09 45 29.0	+0.6
MOR8	Moi Rana	43.31	339	*e*P		P	09 45 30.4	+0.5
BER	Bergen	43.70	329	*e*P		P	09 45 33.8	+0.7
ASK	Askoy	43.80	329	*e*P		P	09 45 34.5	+0.6
FAUS	Fauske	43.85	341	*e*P		P	09 45 34.8	+0.5
KONS	Konsvik	43.93	339	*e*P		P	09 45 35.4	+0.5
JETT	Jettan, Norway	44.11	345	*e*P		P	09 45 37.1	+0.7
STEI	Steigen	44.24	341	*e*P		P	09 45 37.5	+0.1
HAMF	Hammerfest	44.28	347	*e*P		P	09 45 38.4	+0.8
FOO	Floro	44.34	330	*e*P		P	09 45 38.5	+0.3
TRO	Tromso	44.51	344	*e*P		P	09 45 39.9	+0.4
NRIK	Noril'sk	45.24	17	P		P	09 45 46.0	+0.7
	comp=Z,3.4nm,0.8s,baz=226,slow=5.5,SNR=7.6							
ESDC	Sonseca Array	46.14	298	P		P	09 45 53.2	+0.2
	comp=Z,0.4nm,0.5s,baz=74,slow=6.8,SNR=4.6							
ESDC	Sonseca Array	46.14	298	P		P	09 45 52.6	-0.4
TOA0	Torodi Ar. Sit	48.60	262	P		P	09 46 11.2	-1.2
TORD	Torodi Ar. Bea	48.60	262	P		P	09 46 13.1	+0.7
	comp=Z,3.6nm,0.6s,baz=60,slow=8.1,SNR=28							
TORD	Torodi Ar. Bea	48.60	262	P		P	09 46 12.2	-0.1
TORD				IAmb		IAmb	09 46 15.5	
	comp=Z,3.0nm,0.8s							
HHC	Hu-ho-hao-te	49.79	60	*e*P		P	09 46 19.8	-1.5
HHC				pmax		pmax		
	comp=Z,17nm,0.9s							
HHC				pmax		pmax		
	comp=Z,150nm,7.6s							
SPA0	Spitsbergen Ar	51.48	351	P		P	09 46 32.6	-0.7
KBS	Kingsbay	52.63	351	*e*P		P	09 46 42.0	+0.1
KOWA	Kowa	52.97	266	P		P	09 46 45.0	-0.3
DBIC	Dimbokro	57.37	259	P		P	09 47 17.9	+0.9
	comp=Z,5.8nm,0.5s,baz=34,slow=7.2,SNR=14							
DBIC	Dimbokro	57.37	259	P		P	09 47 16.3	-0.7
KSRS	Korea Array	62.91	60	P		P	09 47 54.1	-0.7
	comp=Z,1.5nm,0.6s,baz=283,slow=6.5,SNR=7.5							
SEY	Seymchan	69.20	29	P		P	09 48 35.7	+0.9
	comp=Z,2.5nm,0.6s,baz=269,slow=5.5,SNR=12							
ILAR	Eielson Array	85.25	8	P		P	09 50 04.6	-0.2
	comp=Z,1.4nm,0.6s,baz=325,slow=4.3,SNR=20							
YKA	Yellowknife Ar	87.92	354	P		P	09 50 16.8	-1.0
	comp=Z,1.1nm,0.9s,baz=15,slow=4.7,SNR=11							
WRA	Warramunga Arr	93.69	111	P		P	09 50 44.8	-0.6
	comp=Z,0.4nm,0.5s,baz=315,slow=4.1,SNR=7.2							
ASAR	Alice Springs	95.17	114	P		P	09 50 51.4	-0.8
	comp=Z,0.5nm,0.5s,baz=307,slow=4.5,SNR=11							

IDC 26 09:38:24.5±3.0, 27.88N×86.21E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.3/62, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=192.7km s-min=26.4km az=61.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	19.13	352	P	Pn	09 42 49.6	-0.2
	0.1nm,0.3s,baz=174,slow=12,SNR=4.1						
ARCES	ARCESS Array B	54.00	338	P		09 47 49.6	-0.4
	2.8nm,0.9s,baz=100,slow=10,SNR=1.6						
WRA	Warramunga Arr	66.54	130	P		09 49 16.6	+0.1
	0.4nm,0.5s,baz=322,slow=6.6,SNR=10						
ASAR	Alice Springs	68.86	133	P		09 49 31.1	-0.1
	0.2nm,0.6s,baz=316,slow=6.5,SNR=5.1						

IDC 26 09:42:03.3±1.4, 27.49N×85.52E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.5/65, mbtmp3.9/10, ML4.2/2, Error ellipse: s-maj=67.0km s-min=17.3km az=60.0
NEIC 26 09:42:03.6±1.6, 27.4N±0.1×85.9E±0.1, h10km±1km, mb4.3/10, Error ellipse: s-maj=19.9km s-min=18.7km az=243.0
DMN 26 09:42:07.6±0.1, 27.76N×85.91E, h2km, Ml4.6/7, Error ellipse: s-maj=3.9km s-min=1.8km az=15.0
NDI 26 09:42:08.4±3.8, 27.65N×85.78E, h10km, ML4.2, mb4.3(NEIC)

ISC 26 09:42:06.5±0.8, 27.80N±0.04×85.93E±0.02, h17km±6km, n55, σ1°46/67, mb4.0/11, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUN	Gumba	0.12	341	*e*Pg	Pb	09 42 10.8	+0.2
GUN	Gumba	0.12	341	*e*Pg	Pb	09 42 10.8	+0.2
GUN				*e*Sg	Sg	09 42 13.9	+0.4
	23μm,0.2s						
PKI	Pulchoki	0.51	244	*e*Pg	Pg	09 42 17.2	+0.3
PKI				*e*Sg	Sg	09 42 24.1	+0.3
	1μm,0.2s						
PKIN	Phulchoki	0.52	245	*e*Pg	Pg	09 42 17.3	+0.3
KKN	Kakani	0.57	270	*e*Pg	Pg	09 42 18.3	+0.3
KKN	Kakani	0.57	270	*e*Pg	Pg	09 42 18.3	+0.3
KKN				*e*Sg	Sg	09 42 25.5	-0.2
	3μm,0.2s						
DMN	Daman	0.75	256	*e*Pg	Pb	09 42 21.6	+0.3
RAMN	Ramite	1.03	144	*e*Pg	Pb	09 42 25.6	-0.5
GKN	Gorkha	1.16	281	*e*Pg	Pb	09 42 29.0	+0.8
GKN	Gorkha	1.16	281	*e*Pg	Pb	09 42 29.0	+0.8
GKN				*e*Sg	Sg	09 42 44.5	+0.3
	2μm,0.2s						
ODAN	Odare	1.60	125	*e*Pg	Pb	09 42 36.8	+1.0
ODAN	Odare	1.60	125	*e*Pg	Pg	09 42 37.5	+0.1
ODAN				*e*Sg	Sg	09 42 58.2	-0.1
	2μm,0.4s						
ODAN				*e*Sg	Sb	09 42 58.7	+2.9
	478nm,0.2s						
TAPN	Taplejung	1.65	105	*e*Pn	Pb	09 42 37.1	+0.5
TAPN	Taplejung	1.65	105	*e*Pn	Pb	09 42 37.1	+0.5
TAPN	Taplejung	1.65	105	*e*Pg	Pg	09 42 38.6	+0.4
TAPN	Taplejung	1.65	105	*e*Pg	Pg	09 42 38.7	+0.5
TAPN				*e*Sg	Sg	09 43 00.2	+0.6
	777nm,0.3s						
TAPN				*e*Sg	Sg	09 43 00.3	+0.6
	511nm,0.3s						
DANN	Dangsing	1.99	287	*e*Pn	Pn	09 42 41.5	+1.8
DANN	Dangsing	1.99	287	*e*Pn	Pb	09 42 42.0	-0.5
DANN	Dangsing	1.99	287	*e*Pg	Pb	09 42 43.5	+1.0
DANN				*e*Sg	Sg	09 43 09.9	-0.8
	638nm,0.2s						
KOLN	Koldanda	2.06	270	*e*Pn	Pb	09 42 43.3	-0.3
KOLN	Koldanda	2.06	270	*e*Pg	Pg	09 42 45.8	-0.3
KOLN	Koldanda	2.06	270	*e*Pg	Pg	09 42 45.9	-0.2
KOLN				*e*Sg	Sg	09 43 12.3	-0.6
	756nm,0.3s						
GTK	Tadong	2.42	101	*e*P	Pb	09 42 49.1	-0.7
BOK	Bokaro	3.98	181	*e*P	Pn	09 43 08.6	+1.8
BOK				*e*S	Sb	09 44 08.7	+4.5
BOK				IAML		09 44 17.7	
	comp=E,139nm,0.8s						
LSA	Lhasa	4.96	66	Pn	Pn	09 43 19.6	-1.1
SHL	Shillong	5.77	111	*e*P	Pn	09 43 32.4	+0.8
SHL				*e*S	Sn	09 44 36.8	-0.8
SHL	Shillong	5.77	111	Pn	Pn	09 43 27.5	-4.1
KOHI	KOHIMA	7.60	104	*e*P	Pn	09 44 03.1	+6.5
KOHI				*e*S	Sn	09 45 23.4	+0.9
KOHI				IAML		09 45 28.8	
	comp=E,20nm,0.6s						
MOKO	MOKOCHONG	7.80	99	*e*P	Pn	09 44 04.5	+5.1
MOKO				*e*S	Sn	09 45 25.4	-2.0
SMLA	Simla	8.32	296	*e*P	Pn	09 44 07.8	+1.3
BHPL	Bhopal	8.91	241	*e*P	Pn	09 44 13.5	-1.1
BHPL				*e*S	Sn	09 45 46.0	-8.7
BHPL				IAML		09 45 50.1	
	comp=N,549nm,0.2s						
DHRM	DHARAMSHALA	9.45	300⇑	*e*P	Pn	09 44 20.8	-1.3
DHRM				*e*S	Sn	09 46 04.3	-3.7
DHRM				IAML		09 46 06.2	
	comp=N,345nm,0.3s						
DHRM				IAML		09 46 10.6	
	comp=E,429nm,0.4s						
CMAR	Chiang Mai Arr	15.15	125	Pn	Pn	09 45 38.3	-1.5
	comp=E,0.4nm,0.3s,baz=306,slow=9.9,SNR=2.0						
GAR	Garm	17.14	315		P	09 46 08.6	+1.6
GAR				IAmb	IAmb	09 46 31.1	
	comp=Z,19nm,0.6s						
MK31	Makanchi Array	19.18	352	P	Pn	09 46 30.9	+0.8
MKAR	Makanchi Array	19.18	352	P	Pn	09 46 30.7	+0.5
	comp=Z,0.6nm,0.3s,baz=178,slow=11,SNR=16						
KURBB	Kurchatov Arra	23.48	348	P	P	09 47 16.9	+1.8
	comp=Z,1.1nm,0.5s,baz=165,slow=9.8,SNR=7.1						
ZAA0	Zalesovo Array	26.14	359	P	P	09 47 40.5	+1.0
ZAA0				IAmb	IAmb	09 47 44.0	
	comp=Z,2.2nm,0.6s						
ZALV

BARS				eSg	**Sg**	09 57 33.3	+0.9	
STON	**Ston**	**1.72**	**243**	ePn	**Pg**	09 57 10.7	+0.2	
STON				Sn	**Sg**	09 57 34.7	+2.0	
MDVR	**Moldovita**	**1.78**	**50**	⇑P	**Pn**	09 57 09.3	+0.4	
MDVR				⇑S	**Sn**	09 57 31.7	-0.2	
ZAGS	**Zajecar**	**1.78**	**84**	ePn	**Pn**	09 57 09.1	+0.3	
ZAGS				eSg	**Sg**	09 57 35.8	+1.0	
RICI	**Ricice**	**1.93**	**266**	ePn	**Pb**	09 57 13.7	+0.5	
RICI				Sn	**Sg**	09 57 41.7	+2.0	
PRVS	**Prvonek**	**2.04**	**124**	ePn	**Pb**	09 57 13.7	-1.3	
PRVS				eSg	**Sg**	09 57 42.1	-0.9	
MAKA	**Makarska**	**2.05**	**260**	ePn	**Pg**	09 57 16.3	-0.5	
MAKA				Sn	**Sg**	09 57 43.4	+0.1	
BLKB	**Belogradchik**	**2.10**	**90**	⇑S	**Sb**	09 57 42.0	-0.3	
ZAPS	**Zavoj**	**2.11**	**100**	ePn	**Pb**	09 57 15.6	-0.6	
ZAPS				eSg	**Sg**	09 57 46.9	+1.5	
BLY	**Banja Luka**	**2.16**	**301**	ePn	**Pn**	09 57 15.2	+1.1	
BLY				eSn	**Sn**	09 57 41.4	+0.2	
HERR	**Herculane**	**2.25**	**56**	⇑P	**Pn**	09 57 15.7	+0.4	
HERR				⇓S	**Sn**	09 57 43.1	-0.2	
BOSS	**Bosilegrad**	**2.29**	**120**	ePn	**Pn**	09 57 16.9	+1.0	
BOSS				eSg	**Sg**	09 57 50.9	-0.3	
BZS	**Buzias**	**2.35**	**33**	⇑P	**Pn**	09 57 17.7	+1.1	
BZS				⇑S	**Sn**	09 57 43.9	-1.9	
SRE	**Strehaia**	**2.66**	**67**	⇓P	**Pn**	09 57 20.6	-0.2	
MORH	**Mrgy, Hungar**	**2.68**	**343**	ePn	**Pn**	09 57 21.4	+0.3	
MORH				eSn	**Sn**	09 57 55.3	+1.5	
VTS	**Vitosha**	**2.73**	**111**	⇓P	**Pb**	09 57 25.7	-1.2	
GZR	**Gura Zlata**	**2.75**	**50**	⇑P	**Pn**	09 57 22.6	+0.4	
MORI	**Morici**	**2.96**	**275**	ePn	**Pb**	09 57 28.1	-2.6	
MORI				Sn	**Sb**	09 58 06.3	-0.8	
DRGR		**3.75**	**32**	⇑P	**Pn**	09 57 36.6	+0.7	
DRGR				⇑S	**Sn**	09 58 19.2	-1.2	
ARR	**Arges**	**3.86**	**62**	⇓P	**Pn**	09 57 39.0	+1.4	
VOIR		**4.16**	**63**	⇑P	**Pn**	09 57 41.0	-0.6	
VYHS	**Vyhne**	**4.88**	**353**	eSN	**Sn**	09 58 50.2	+2.1	
MODS	**Modra-Piesok**	**5.03**	**341**	eSN	**Sn**	09 58 49.9	-1.9	

*TAP **26** 10:00:20.7,24.˚10N×122.˚43E,h31km,ML2.6,D*
*JMA **26** 10:00:20.0±0.1,23.˚99N×122.˚42E,h18km±3km,M2.2*
ISC 26 10:00:18.7±1.2**,24.˚01N**±0.˚02×**122.˚42E**±0.˚02**, h9**km±10km**, n74,** σ0.**967**/118**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.65**	**48**	P	**Pb**	**10 00 32.6**	**+0.3**
JYNG				S	**Sb**	**10 00 41.7**	**+0.2**
YOJ	**Yonaguni jima**	**0.70**	**50**	P	**Pb**	**10 00 33.6**	**+0.4**
YOJ				eS	**Sb**	**10 00 43.0**	**0.0**
YOJ	**Yonaguni jima** baz=55	**0.70**	**50**	P	**Pb**	**10 00 33.5**	**+0.3**
YOJ	baz=55			S	**Sb**	**10 00 43.0**	**0.0**
EWUT	**Wuta** baz=300	**0.73**	**307**	eP	**Pb**	**10 00 34.3**	**+0.7**
TWD	**Chiawan** baz=268	**0.76**	**275**	eP	**Pb**	**10 00 34.6**	**+0.5**
NACB	**Ninganchiao** baz=262	**0.77**	**282**	P	**Pb**	**10 00 34.7**	**+0.4**
NACB	baz=262			S	**Sb**	**10 00 45.8**	**+0.9**
TWC	**Suao** baz=314	**0.79**	**319**	P	**Pb**	**10 00 34.5**	**-0.2**
TWC	baz=314			eS	**Sg**	**10 00 44.2**	**0.0**
ETLH	**Xiulin Townshi** baz=277	**0.88**	**283**	P	**Pb**	**10 00 36.3**	**+0.1**
ETLH	baz=277			eS	**Sb**	**10 00 48.2**	**+0.1**
NDS	**Dongshan** baz=309	**0.89**	**314**	eP	**Pb**	**10 00 36.7**	**+0.3**
NDS	baz=309			S	**Sb**	**10 00 48.0**	**-0.4**
ESL	**Shilin** baz=243	**0.92**	**258**	eP	**Pn**	**10 00 38.1**	**+0.2**
ESL	baz=243			eS	**Sb**	**10 00 49.6**	**+0.2**
EGFH	**Guangfu** baz=245	**0.97**	**250**	eP	**Pb**	**10 00 38.1**	**+0.3**
TWE	**Neicheng** baz=312	**0.98**	**316**	P	**Pb**	**10 00 38.1**	**+0.1**
TWE	baz=312			S	**Sb**	**10 00 50.8**	**-0.3**
NTC	**Toucheng** baz=323	**0.99**	**328**	eP	**Pb**	**10 00 38.4**	**+0.2**
NTC	baz=323			eS	**Sb**	**10 00 51.1**	**-0.3**
ENTT	**Nioudou** baz=304	**1.00**	**309**	eP	**Pn**	**10 00 39.3**	**+0.3**
ENTT	baz=304			eS	**Sb**	**10 00 51.4**	**-0.1**
NDT	**Datong Townshi** baz=300	**1.01**	**306**	eP	**Pn**	**10 00 39.3**	**+0.1**
NDT	baz=300			eS	**Sb**	**10 00 52.6**	**+0.6**
NNSB	**Datong** baz=289	**1.03**	**294**	P	**Pb**	**10 00 39.1**	**+0.3**
NNSB	baz=289			S	**Sb**	**10 00 52.7**	**+0.1**
NNSH	**Datong** baz=288	**1.03**	**294**	P	**Pb**	**10 00 39.1**	**+0.2**
NNSH	baz=288			eS	**Sb**	**10 00 52.5**	**-0.1**
NNS	**Nan Shan** baz=289	**1.04**	**294**	P	**Pb**	**10 00 39.4**	**+0.3**
NNS	baz=289			S	**Sb**	**10 00 53.2**	**+0.2**
HGSD	**Ruisui** baz=236	**1.05**	**241**	eP	**Pg**	**10 00 38.7**	**-0.2**
WHF	**Hehuan Shan** baz=259	**1.06**	**277**	eP	**Pg**	**10 00 39.6**	**+0.4**
WHF	baz=259			eS	**Sb**	**10 00 54.0**	**+0.2**
TWB1	**Santiao Chiao** baz=351	**1.07**	**339**	eP	**Pg**	**10 00 39.1**	**-0.1**
TWB1	baz=351			eS	**Sg**	**10 00 52.4**	**-0.7**
TIPB	**Shuangxi** baz=327	**1.10**	**331**	eP	**Pg**	**10 00 40.0**	**+0.1**
TIPB	baz=327			S	**Sg**	**10 00 53.3**	**-0.8**
FUSS	**Fushou** baz=278	**1.10**	**283**	eP	**Pb**	**10 00 40.3**	**+0.2**
NWLT	**Wulai** baz=308	**1.13**	**313**	eP	**Pn**	**10 00 41.1**	**+0.3**
NWLT	baz=308			eS	**Sg**	**10 00 55.0**	**-0.1**
OWD	**Renai** baz=263	**1.14**	**267**	eP	**Pg**	**10 00 40.5**	**-0.1**
CHGB	**Renai** baz=256	**1.14**	**273**	eP	**Pg**	**10 00 40.7**	**0.0**
CHGB	baz=256			eS	**Sg**	**10 00 55.8**	**+0.3**
YHNB	**Yeheng** baz=289	**1.15**	**305**	eP	**Pg**	**10 00 40.9**	**0.0**
YHNB	baz=289			eS	**Sg**	**10 00 55.4**	**-0.6**
TWT	**Tachien** baz=266	**1.16**	**282**	eP	**Pn**	**10 00 41.7**	**+0.3**
TWT	baz=266			eS	**Sb**	**10 00 56.4**	**+0.1**
NSK	**Sanguang** baz=289	**1.17**	**305**	eP	**Pb**	**10 00 41.1**	**-0.1**
NSK	baz=289			eS	**Sg**	**10 00 55.5**	**-1.0**
TDCB	**Techi** baz=266	**1.18**	**282**	eP	**Pb**	**10 00 41.6**	**+0.3**
TDCB	baz=266			eS	**Sg**	**10 00 56.6**	**0.0**
VWDT	**VWDT** baz=246	**1.20**	**258**	eP	**Pb**	**10 00 41.9**	**+0.3**
YULB	**Yu-li** baz=251	**1.20**	**239**	eP	**Pb**	**10 00 41.2**	**-0.4**
YULB	baz=251			eS	**Sb**	**10 00 57.0**	**-0.3**
EYUL	**Yuli** baz=233	**1.21**	**237**	eP	**Pb**	**10 00 41.6**	**-0.1**
EYUL	baz=233			eS	**Sb**	**10 00 57.8**	**+0.3**
TWF1	**Yuli** baz=223	**1.22**	**238**	eP	**Pn**	**10 00 41.8**	**-0.3**
TWF1	baz=223			eS	**Sb**	**10 00 58.1**	**+0.2**
TWA	**Mucha** baz=334	**1.23**	**322**	eP	**Pb**	**10 00 41.5**	**-0.7**
IRIF	**Iriomote-Funau**	**1.24**	**75**	P	**Pn**	**10 00 42.6**	**+0.3**
IRIF				eS	**Sn**	**10 00 59.4**	**+0.2**
TATO	**Taipei** baz=314	**1.28**	**319**	eP	**Pg**	**10 00 43.6**	**+0.3**
TATO	baz=314			eS	**Sg**	**10 00 59.9**	**0.0**
FULB	**Fuli** baz=229	**1.31**	**232**	eP	**Pn**	**10 00 42.7**	**-0.6**
CHKT	**Chengkung** baz=224	**1.33**	**227**	eP	**Pb**	**10 00 44.3**	**+0.5**
WPL	**Puli Township** baz=266	**1.34**	**270**	eP	**Pn**	**10 00 44.1**	**+0.5**
SSLB	**Suanglung** baz=246	**1.36**	**261**	eP	**Pn**	**10 00 44.2**	**+0.2**
WHP	**Taichung City** baz=266	**1.37**	**281**	eP	**Pb**	**10 00 45.0**	**+0.4**
WHP	baz=266			eS	**Sb**	**10 01 02.1**	**-0.2**
SMLT	**Sun Moon Lake** baz=261	**1.40**	**265**	eP	**Pn**	**10 00 44.8**	**+0.2**
LIOB	**Emei** baz=292	**1.43**	**297**	eP	**Pb**	**10 00 45.9**	**+0.4**
LIOB	baz=292			eS	**Sn**	**10 01 03.7**	**-0.1**
NSTT	**Nanjuang** baz=291	**1.43**	**296**	eS	**Sn**	**10 01 03.4**	**-0.6**
TYC	**Yuchr** baz=262	**1.43**	**266**	eP	**Pg**	**10 00 46.4**	**+0.2**
TYC	baz=262			eS	**Sn**	**10 01 03.5**	**-0.4**
EDH	**Donghe** baz=213	**1.46**	**225**	eP	**Pn**	**10 00 45.0**	**-0.3**
EDH	baz=213			eS	**Sn**	**10 01 01.5**	**-3.0**
WHYT	**Xinyi Township** baz=246	**1.47**	**258**	eP	**Pb**	**10 00 46.5**	**+0.2**
JKRS	**Kuro-shima**	**1.47**	**81**	P	**Pb**	**10 00 46.7**	**+0.4**
JKRS				eS	**Sg**	**10 01 06.2**	**+0.1**
ELDTW	**Lidau** baz=234	**1.52**	**238**	eP	**Pn**	**10 00 45.8**	**-0.5**
WJS	**Zhushan** baz=260	**1.56**	**263**	eP	**Pb**	**10 00 48.4**	**+0.6**
ALS	**Alishan** baz=248	**1.56**	**252**	eP	**Pn**	**10 00 47.6**	**+0.6**
ALS	baz=248			eS	**Sn**	**10 01 07.7**	**+0.2**
LDUT	**Ludao** baz=211	**1.59**	**213**	eP	**Pn**	**10 00 46.2**	**-0.9**
LDUT	baz=211			eS	**Sn**	**10 01 05.4**	**-2.4**
JIJ	**Ishigaki jima**	**1.61**	**77**	P	**Pn**	**10 00 47.8**	**+0.4**
JIJ				S	**Sn**	**10 01 07.3**	**-1.1**
LONT	**Longtian** baz=237	**1.62**	**227**	eP	**Pb**	**10 00 49.4**	**+0.6**
CHN5	**Tsauling** baz=252	**1.65**	**256**	eP	**Pb**	**10 00 49.3**	**0.0**
TWGBT	**Beinan** baz=234	**1.71**	**226**	eP	**Pb**	**10 00 50.3**	**-0.1**
TWG	**Pinlang** baz=235	**1.71**	**226**	eP	**Pn**	**10 00 49.0**	**+0.2**
STYH	**Taoyuan** baz=229	**1.72**	**241**	eP	**Pn**	**10 00 49.6**	**+0.6**
STYH	baz=229			eS	**Sn**	**10 01 11.7**	**+0.6**
STYT	**Tauyuan** baz=229	**1.74**	**241**	eP	**Pn**	**10 00 50.1**	**+0.8**
STYT	baz=229			eS	**Sn**	**10 01 12.0**	**+0.3**
TPUB	**Ta-pu** baz=244	**1.79**	**247**	eP	**Pb**	**10 00 51.2**	**-0.5**
TPUB	baz=244			eS	**Sn**	**10 01 13.7**	**+1.0**
CHN4	**Tsaushan** baz=246	**1.80**	**249**	eP	**Pb**	**10 00 51.7**	**-0.2**
CHN4	baz=246			eS	**Sb**	**10 01 15.4**	**+0.8**
JISG	**Ishigakijimahi**	**1.82**	**71**	eS	**Sn**	**10 01 12.8**	**-0.7**
WTP	**Ta-pu** baz=242	**1.82**	**246**	eP	**Pn**	**10 00 51.6**	**+1.2**
WTP	baz=242			eS	**Sn**	**10 01 14.8**	**+1.2**
SLGT	**Liugui** baz=227	**1.92**	**238**	eP	**Pb**	**10 00 54.2**	**+0.3**
SLGT	baz=227			eS	**Sb**	**10 01 18.6**	**+0.6**
CHN1	**Nanshi** baz=242	**1.92**	**245**	eP	**Pb**	**10 00 54.3**	**+0.3**
CHN1	baz=242			eS	**Sb**	**10 01 18.2**	**+0.1**
TSMG	**Majia** baz=221	**2.08**	**232**	eP	**Pb**	**10 00 56.0**	**-0.8**
MASBT	**Mashibuluo** baz=221	**2.15**	**230**	eP	**Pn**	**10 00 56.7**	**+1.9**
EAST	**Anshuo** baz=219	**2.17**	**222**	eP	**Pn**	**10 00 57.1**	**+2.0**
SSPT	**Xinbi** baz=221	**2.28**	**229**	eP	**Pb**	**10 00 59.1**	**-1.0**
SCZT	**Fangliau** baz=224	**2.33**	**226**	eP	**Pb**	**10 00 59.5**	**-1.3**
SLIU	**Shizi** baz=218	**2.33**	**220**	eP	**Pn**	**10 00 59.3**	**+2.1**
VWUC	**VWUC** baz=287	**2.88**	**290**	eP	**Pn**	**10 01 03.9**	**-0.8**
PTMZ	**Houxiangcun** baz=286	**3.17**	**289**	eP	**Pn**	**10 01 08.8**	**-0.1**

IDC 26 10:03:52.0±13.0**, 27.˚71N×85.˚87E, h0**km**, mb4.0**/2**, mb1 3.9**/3**, mb1mx3.3**/53**, mbtmp3.8**/3**, ML3.7**/1**, Error ellipse: s-maj=312.8km s-min=134.8km az=120.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=178,slow=9.9,SNR=6.5	**19.26**	**353**	P	**P**	10 08 18.1	+0.1
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=188,slow=9.0,SNR=3.8	**26.23**	**359**	P	**P**	10 09 28.3	-0.2
ARCES	**ARCESS Array B** 3.5nm,0.9s,baz=102,slow=8.4,SNR=2.5	**54.04**	**338**	P	**P**	10 13 17.8	0.0

*IDC **26** 10:18:13.4±5.9,36.˚13S×178.˚25E,h195km±67km, mb3.2/2, mb1 3.5/3, mb1mx3.2/40, mbtmp3.8/3, Error ellipse: s-maj=114.5km s-min=49.5km az=178.0*
*WEL **26** 10:18:14.5,36.˚5±9.˚×17.˚8E±˚, h229km±8km, M3.7/42, MLv3.7/42, Error ellipse: s-maj=0.0km s-min=0.0km az=3.8*
ISC 26 10:18:16.3±1.4**, 36.˚49S**±0.˚10×**178.˚00E**±0.˚10**, h231**km±7km**, n89,** σ1.**911/97**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.09**	**167**	P	**Pn**	**10 18 48.8**	**-1.1**
MXZ				S	**S**	**10 19 13.2**	**-3.0**
HAZ	**Te Kaha**	**1.27**	**188**	P	**Pn**	**10 18 50.1**	**-0.9**
HAZ				S	**S**	**10 19 16.4**	**-1.9**
WMGZ	**Waiomatatini S**	**1.36**	**166**	P	**Pn**	**10 18 51.5**	**-0.2**
WMGZ				S	**S**	**10 19 18.3**	**-1.2**
PKGZ	**Pakihiroa**	**1.39**	**178**	P	**Pn**	**10 18 51.6**	**-0.4**
PUZ	**Puketiti**	**1.59**	**173**	P	**Pn**	**10 18 49.8**	**-3.7**
TWGZ	**Tauwhareparae**	**1.68**	**181**	P	**Pn**	**10 18 55.1**	**+0.8**
TWGZ				S	**S**	**10 19 24.9**	**+0.8**
OPRZ	**Ohinepanea**	**1.77**	**220**	P	**Pn**	**10 18 54.8**	**-0.3**
MARZ	**Manawahe**	**1.83**	**215**	P	**Pn**	**10 18 55.9**	**+0.3**
KUZ	**Kuaotunu**	**1.85**	**262**	P	**Pn**	**10 18 54.1**	**-1.7**
TGRZ	**Tauranga**	**1.86**	**228**	P	**Pn**	**10 18 55.7**	**-0.2**
MWZ	**Matawai**	**1.88**	**191**	P	**Pn**	**10 18 56.1**	**+0.1**
EDRZ	**Edgecumbe**	**1.90**	**212**	P	**Pn**	**10 18 56.7**	**+0.4**
URZ	**Urewera** 52nm,0.3s,baz=315,slow=4.3,SNR=75	**1.90**	**202**	P	**Pn**	**10 18 56.1**	**-0.1**
URZ	6.5nm,0.3s,baz=217,slow=20,SNR=1.9			S	**S**	**10 19 26.9**	**-0.6**
URZ	**Urewera**	**1.90**	**202**	P	**Pn**	**10 18 56.0**	**-0.2**
TKGZ	**Te Karaka**	**1.94**	**184**	P	**Pn**	**10 18 57.0**	**+0.4**
TKGZ				S	**S**	**10 19 28.1**	**-0.2**
CNGZ	**Carnagh Statio**	**1.99**	**175**	P	**Pn**	**10 18 57.8**	**+0.8**
RAGZ	**Rawiri**	**2.05**	**193**	P	**Pn**	**10 18 58.6**	**+0.9**
GRZ	**Great Barrier**	**2.07**	**276**	P	**Pn**	**10 18 55.4**	**-2.4**
KARZ	**Kaharoa**	**2.07**	**222**	P	**Pn**	**10 18 58.3**	**+0.4**
KMRZ	**Kaimai**	**2.13**	**230**	P	**Pn**	**10 18 58.8**	**+0.4**
MUGZ	**Murupara**	**2.21**	**206**	P	**Pn**	**10 18 59.7**	**+0.5**
RIGZ	**Rimuhau**	**2.22**	**185**	P	**Pn**	**10 18 59.8**	**+0.5**
RIGZ				S	**S**	**10 19 33.5**	**+0.4**
HSRZ	**Hossack Road**	**2.29**	**217**	P	**Pn**	**10 19 02.2**	**+2.1**
HRRZ	**Handcock Road**	**2.33**	**215**	P	**Pn**	**10 19 01.7**	**+1.2**
SNGZ	**Shannon Statio**	**2.34**	**193**	P	**Pn**	**10 19 01.3**	**+0.7**
TOZ	**Tahuroa Road**	**2.35**	**238**	P	**Pn**	**10 19 01.2**	**+0.6**
PRGZ	**Paritu Road**	**2.43**	**182**	P	**Pn**	**10 19 02.2**	**+0.7**
ALRZ	**Allen Road**	**2.45**	**212**	P	**Pn**	**10 19 02.4**	**+0.7**
RAHZ	**Arahi**	**2.52**	**196**	P	**Pn**	**10 19 03.1**	**+0.7**
KNZ	**Kokohu**	**2.54**	**186**	P	**Pn**	**10 19 02.8**	**+0.3**
KNZ				S	**S**	**10 19 39.2**	**+0.3**
KUTZ	**Kaahu Road**	**2.64**	**220**	P	**Pn**	**10 19 05.2**	**+1.5**
WHHZ	**Waihua**	**2.65**	**193**	P	**Pn**	**10 19 04.6**	**+0.8**
MRHZ	**Matea Rd**	**2.65**	**208**	P	**Pn**	**10 19 04.1**	**+0.3**
MHGZ	**Mahia Peninsul**	**2.66**	**182**	P	**Pn**	**10 19 04.6**	**+0.8**
TLZ	**Tolley Road**	**2.68**	**226**	P	**Pn**	**10 19 05.6**	**+1.4**
NMHZ	**Naumai**	**2.77**	**200**	P	**Pn**	**10 19 06.3**	**+1.2**
HATZ	**Hinemaiaia**	**2.83**	**212**	P	**Pn**	**10 19 06.3**	**+0.6**
WATZ	**Wairara**	**2.85**	**218**	P	**Pn**	**10 19 07.3**	**+1.3**
ARHZ	**Aropaoanui**	**2.88**	**196**	P	**Pn**	**10 19 07.0**	**+0.8**
BKZ	**Black Stump Fm**	**2.92**	**204**	P	**Pn**	**10 19 07.1**	**+0.3**
WCZ	**Waipu Caves**	**3.01**	**280**	P	**Pn**	**10 19 05.8**	**-1.9**
MCHZ	**McNeill Hill**	**3.12**	**199**	P	**Pn**	**10 19 09.9**	**+1.0**
KWHZ	**Kaweka Forest**	**3.18**	**203**	P	**Pn**	**10 19 09.9**	**+0.3**
NTVZ	**North Tongarir**	**3.19**	**215**	P	**Pn**	**10 19 11.0**	**+1.2**
TMVZ	**Te Maari**	**3.19**	**214**	P	**Pn**	**10 19 10.9**	**+1.1**
ETVZ	**East Tongariro**	**3.20**	**214**	P	**Pn**	**10 19 10.7**	**+0.7**
HIZ	**Hauiti**	**3.21**	**230**	P	**Pn**	**10 19 12.0**	**+2.0**
OTVZ	**Oturere**	**3.24**	**214**	P	**Pn**	**10 19 11.3**	**+0.8**
SNVZ	**South Ngauruho**	**3.27**	**214**	P	**Pn**	**10 19 11.7**	**+0.9**
BHHZ	**Black Hill Sta**	**3.36**	**207**	P	**Pn**	**10 19 11.8**	**+0.1**
KRHZ	**Kereru**	**3.40**	**202**	P	**Pn**	**10 19 12.1**	**-0.1**
MOVZ	**Moawhango**	**3.41**	**211**	P	**Pn**	**10 19 12.1**	**-0.2**
KAHZ	**Kahuranaki**	**3.41**	**195**	P	**Pn**	**10 19 13.0**	**+0.6**
PXZ	**Pawanui**	**3.64**	**194**	P	**Pn**	**10 19 15.1**	**+0.1**
VRZ	**Vera Road**	**3.67**	**223**	P	**Pn**	**10 19 16.7**	**+1.4**
PNHZ	**Pukenui**	**3.70**	**202**	P	**Pn**	**10 19 15.4**	**-0.2**
WPHZ	**Waipukurau**	**3.77**	**199**	P	**Pn**	**10 19 16.7**	**+0.2**
TSZ	**Takapari Road**	**3.90**	**204**	P	**Pn**	**10 19 17.8**	**-0.3**
PRHZ	**Porangahau**	**3.92**	**195**	P	**Pn**	**10 19 18.8**	**+0.6**
DVHZ	**Dannevirke**	**4.06**	**200**	P	**Pn**	**10 19 19.6**	**-0.4**
ANWZ	**Angora Road**	**4.14**	**196**	P	**Pn**	**10 19 21.1**	**+0.3**
POWZ	**Post Office Ro**	**4.27**	**204**	P	**Pn**	**10 19 22.4**	**0.0**
PRWZ	**Pori Road**	**4.36**	**201**	P	**Pn**	**10 19 23.5**	**0.0**
BFZ	**Birch Farm**	**4.40**	**198**	P	**Pn**	**10 19 23.6**	**-0.4**
MRZ	**Mangatainoka R**	**4.57**	**204**	P	**Pn**	**10 19 25.4**	**-0.8**
TIWZ	**Tintock**	**4.58**	**201**	P	**Pn**	**10 19 26.1**	**-0.2**
CPWZ	**Castlepoint**	**4.63**	**197**	P	**Pn**	**10 19 27.7**	**+0.9**
HOWZ	**Holdsworth Sta**	**4.81**	**203**	P	**Pn**	**10 19 28.1**	**-1.0**
OGWZ	**Otaki Gorge**	**4.85**	**206**	P	**Pn**	**10 19 28.9**	**-0.7**
TMWZ	**Te Maipa**	**4.89**	**199**	P	**Pn**	**10 19 29.6**	**-0.5**
KIW	**Kapiti Island**	**4.99**	**208**	P	**Pn**	**10 19 30.3**	**-0.9**
MTW	**Mount Morrison**	**5.05**	**202**	P	**Pn**	**10 19 31.1**	**-1.0**
CAW	**Cannon Point**	**5.14**	**206**	P	**Pn**	**10 19 32.1**	**-1.2**
TRWZ	**Traveller**	**5.22**	**200**	P	**Pn**	**10 19 33.5**	**-0.6**
DUWZ	**D'Urville Isla**	**5.36**	**215**	P	**Pn**	**10 19 34.6**	**-1.3**
MSWZ	**Moikau Station**	**5.36**	**203**	P	**Pn**	**10 19 34.9**	**-1.1**
PLWZ	**Palliser**	**5.50**	**202**	P	**Pn**	**10 19 36.4**	**-1.3**
TCW	**Tory Channel**	**5.53**	**211**	P	**Pn**	**10 19 36.6**	**-1.4**
TUWZ	**Tuamarina**	**5.85**	**211**	P	**Pn**	**10 19 40.6**	**-1.5**
BSWZ	**Blackbirch Sta**	**6.12**	**210**	P	**Pn**	**10 19 44.4**	**-1.1**
THZ	**Tophouse**	**6.58**	**215**	P	**Pn**	**10 19 50.0**	**-1.5**
KHZ	**Kahutara**	**6.85**	**209**	P	**Pn**	**10 19 53.2**	**-1.5**
GVZ	**Greta Valley S**	**7.51**	**209**	P	**Pn**	**10 20 01.8**	**-1.5**
LTZ	**Lake Taylor**	**7.68**	**213**	P	**Pn**	**10 20 03.8**	**-1.6**
MQZ	**McQueen's Vall**	**8.29**	**208**	P	**Pn**	**10 20 11.0**	**-2.1**
ODZ	**Otahua Downs**	**10.20**	**211**	P	**Pn**	**10 20 37.2**	**-0.3**
ASAR	**Alice Springs** 0.7nm,0.7s,baz=117,slow=7.9,SNR=14	**39.92**	**276**	P	**P**	**10 25 30.0**	**+1.7**
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=120,slow=7.8,SNR=12	**41.48**	**281**	P	**P**	**10 25 42.2**	**+1.2**
FINES	**FINESS Array B** 1.5nm,0.9s,baz=228,slow=1.7,SNR=1.2	**149.42**	**334**	PKPbc	**PKPbc**	**10 37 36.8**	**-0.3**

*IDC **26** 10:22:53.4±1.3,10.˚59S×120.˚30E,h0km,mb4.2/6, mb1 4.3/11,mb1mx3.9/56,mbtmp4.2/11,ML4.2/5,Error ellipse: s-maj=36.2km s-min=18.3km az=38.0*
*DJA **26** 10:22:57.3±0.9,11.˚5±6.˚×12.˚0E±˚,h11km±4km,M4.1/7, mb4.5/1,mB5.8/1,MLv3.9/7,Mw(mB)5.4/1*
*NEIC **26** 10:22:58.4±1.0,10.˚62S±0.˚08×120.˚37E±0.˚07,h53km±8km, mb4.2/20,Error ellipse: s-maj=11.4km s-min=10.6km az=176.0*
ISC 26 10:22:56.7±0.5**, 10.˚72S**±0.˚05×**120.˚35E**±0.˚04**, h31**km**, n56,** σ2.**512/62**, mb4.4/11**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.54**	**25**	P	**Pb**	**10 23 06.7**	**-1.2**
BASI				S	**Sb**	**10 23 12.7**	**-2.9**
WBSI	**Waikabubak, Su**	**1.43**	**319**	P	**Pb**	**10 23 21.9**	**-0.8**
WBSI				S	**Sb**	**10 23 40.8**	**+0.3**
MMRI	**Maumere**	**2.78**	**42**	Pn	**Pn**	**10 23 39.3**	**+0.2**
MMRI	**Maumere**	**2.78**	**42**	P	**Pn**	**10 23 39.4**	**+0.2**
PLAI	**Plampang**	**3.15**	**306**	P	**Pn**	**10 23 46.1**	**+1.8**
PLAI				S	**Sn**	**10 24 22.6**	**+1.7**
BATI	**Baumata** 43nm,0.3s,baz=296,slow=2.6,SNR=32	**3.30**	**81**	Pn	**Pn**	**10 23 48.7**	**+2.3**
BATI	31nm,0.3s,baz=21,slow=22,SNR=13			Sn	**Sn**	**10 24 28.2**	**+3.6**
BATI	**Baumata**	**3.30**	**81**	P	**Pn**	**10 23 48.1**	**+1.8**
BATI				S	**Sn**	**10 24 28.5**	**+3.9**
TWSI	**Taliwang, Sumb**	**3.94**	**300**	P	**Pn**	**10 23 57.5**	**+2.4**
TWSI				S	**Sn**	**10 24 43.1**	**+2.7**
SOEI	**Soe**	**3.97**	**76**		**Pn**	**10 23 56.9**	**+1.2**
SOEI	**Soe**	**3.97**	**76**	P	**Pn**	**10 23 57.8**	**+2.1**
SOEI				S	**Sn**	**10 24 46.3**	**+5.0**
JAGI	**Jajag, Banyuwa**	**6.50**	**290**	Pn	**Pn**	**10 24 31.3**	**+0.9**
FITZ	**Fitzroy Crossi** 2.2nm,0.3s,baz=328,slow=12,SNR=36	**8.95**	**146**	Pn	**Pn**	**10 25 06.0**	**+2.1**
FITZ	4.6nm,0.3s,baz=180,slow=23,SNR=12			Sn	**Sn**	**10 26 40.7**	**-3.1**
FITZ	**Fitzroy Crossi**	**8.95**	**146**		**Pn**	**10 25 06.5**	**+2.5**
KNRA	**Kununurra**	**9.56**	**122**	Pn	**Pn**	**10 25 13.8**	**+1.5**
UGM	**Wanagama**	**10.09**	**285**	Pn	**Pn**	**10 25 20.9**	**+1.3**
MTN	**Manton Dam**	**10.77**	**102**		**Pn**	**10 25 29.8**	**+0.9**
PSA00	**Pilbara Seismi**	**10.81**	**182**	Pn	**Pn**	**10 25 32.1**	**+2.7**
GIRL	**Giralia**	**13.22**	**205**	Pn	**Pn**	**10 26 04.8**	**+2.3**
FAKI	**Fak Fak**	**14.12**	**58**	Pn	**Pn**	**10 26 14.8**	**+0.1**
SIJI	**Sorong** 0.6nm,0.3s,baz=256,slow=12,SNR=4.6	**14.61**	**49**	Pn	**Pn**	**10 26 21.0**	**-0.4**
WB0	**Warramunga Ar

MAJO	**Matsushiro**	**49.92**	**19**	P		**P**		**10 31 45.7**	**-2.0**
MAJO				IAmb		IAmb		10 31 48.3	
	comp=Z,3.9nm,0.9s								
LTZ	**Lake Taylor**	**55.16**	**135**	P		**P**		**10 32 25.8**	**-0.7**
THZ	**Tophouse**	**55.28**	**134**	P		**P**		**10 32 26.8**	**-0.6**
SONM	**Songino Array**	**59.60**	**349**	P		**P**		**10 32 58.3**	**+0.6**
	comp=Z,2.8nm,0.5s,baz=161,slow=9.2,SNR=2.9								
MKAR	**Makanchi Array**	**66.58**	**333**	P		**P**		**10 33 44.8**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=139,slow=7.7,SNR=11								
MKAR	**Makanchi Array**	**66.58**	**333**	P		**P**		**10 33 43.0**	**-1.0**
ARSB	**Arslanbob**	**67.68**	**323**	P		**P**		**10 33 49.1**	**-2.1**
KURBB	**Kurchatov Arra**	**71.09**	**333**	P		**P**		**10 34 12.8**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=152,slow=4.1,SNR=4.1								
ZAA0	**Zalesovo Array**	**71.11**	**339**	P		**P**		**10 34 10.9**	**-1.0**
ZAA0				IAmb		IAmb		10 34 12.7	
	comp=Z,4.1nm,0.7s								
ZALV	**Zalesovo Beam**	**71.11**	**339**	P		**P**		**10 34 12.1**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=142,slow=4.1,SNR=17								
ZALV	**Zalesovo Beam**	**71.11**	**339**	P		**P**		**10 34 10.5**	**-1.4**
QSPA	**South Pole Qui**	**79.29**	**180**	P		**P**		**10 34 58.7**	**-0.4**
QSPA				IAmb		IAmb		10 35 15.4	
	comp=Z,5.2nm,1.2s								
ABKAR	**Akbulak array**	**79.72**	**325**	P		**P**		**10 35 00.5**	**-1.0**

*IDC **26** 10:27:41.0±7.5, 1°.11N×97°.17E, h0km, mb4.0/2, mb1 3.8/4, mb1mx3.3/61, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=136.5km s-min=28.6km az=163.0*
*DJA **26** 10:27:45.7±1.3, 1°.14N×97°.17E±1°.0, h32km±7km, M3.5/7, MLv3.5/7*
ISC 26 10:27:43.7±1.3, 1°.41N±0°.06×97°.13E±0°.09, h10km, n14, σ2s01/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.46**	**103**	P		**Pn**	**10 27 56.4**	**0.0**
GSI				S		**Sb**	**10 28 05.1**	**+4.3**
TPTI		**1.84**	**2**	P		**Pn**	**10 28 15.8**	**+0.5**
TPTI				S		**Sb**	**10 28 40.5**	**+0.1**
PBSI	**Pulau Batu**	**1.86**	**142**	P		**Pn**	**10 28 15.7**	**+0.1**
PBSI				S		**Sn**	**10 28 35.1**	**-4.1**
PSI	**Prapat**	**2.27**	**52**	Pn		**Pn**	**10 28 21.1**	**-0.2**
	5.7nm,0.3s,baz=180,slow=2.1,SNR=18							
PSI				Pg		**Pb**	**10 28 23.3**	**-1.5**
	5.7nm,0.3s,baz=180,slow=4.0,SNR=14							
PSI				Sn		**Sb**	**10 28 52.7**	**-0.2**
	3.0nm,0.3s,baz=180,slow=17,SNR=6.5							
MNSI	**Mandailing Nat**	**2.53**	**104**	P		**Pn**	**10 28 25.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**17.03**	**6**	P		**P**	**10 31 44.5**	**+0.5**
	0.3nm,0.3s,baz=208,slow=12,SNR=6.0							
H08S2	**Diego Garcia H**	**26.17**	**250**	T		T	11 00 24.0	
	baz=70,slow=76,SNR=900							
H08S3	**Diego Garcia H**	**26.17**	**250**	T		T	11 00 15.1	
	baz=70,slow=76,SNR=771							
H08S1	**Diego Garcia H**	**26.18**	**250**	T		T	11 00 16.1	
	baz=70,slow=76,SNR=1133							
H01W3	**Cape Leeuwin H**	**39.47**	**158**	T		T	11 16 54.2	
	baz=334,slow=76,SNR=5.9							
H01W2	**Cape Leeuwin H**	**39.48**	**158**	T		T	11 16 52.7	
	baz=334,slow=76,SNR=5.6							
H01W1	**Cape Leeuwin H**	**39.48**	**158**	T		T	11 16 54.3	
	baz=334,slow=76,SNR=5.4							
MKAR	**Makanchi Array**	**47.02**	**346**	P		**P**	**10 36 16.5**	**+1.2**
	0.5nm,0.4s,baz=161,slow=8.9,SNR=4.3							
ZALV	**Zalesovo Beam**	**53.34**	**351**	P		**P**	**10 37 04.0**	**+1.0**
	1.4nm,0.4s,baz=171,slow=6.9,SNR=7.1							

*NEIC **26** 10:28:09.3±0.8, 21°.2S±0°.1×178°.46W±0°.09, h520km±7km, mb4.3/38, Error ellipse: s-maj=16.4km s-min=11.7km az=203.0*
*IDC **26** 10:28:10.7±1.9, 21°.36S×178°.56W, h532km±20km, mb3.3/9, mb1 3.5/12, mb1mx3.2/46, mbtmp4.2/12, Error ellipse: s-maj=24.3km s-min=18.6km az=141.0*
ISC 26 10:28:10.4±0.5, 21°.21S±0°.09×178°.51W±0°.10, h532km, n108, σ1s09/111, mb4.2/24, 3C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.74**	**316**	P		**P**	**10 29 37.9**	**+0.7**
	2.2nm,0.3s,baz=134,slow=6.7,SNR=11							
MSVF	**Nonsavu**	**4.74**	**316**	P		**P**	**10 29 35.5**	**-1.6**
AFI	**Afiamalu**	**9.69**	**43**	P		**P**	**10 30 22.5**	**-2.6**
	6.5nm,0.3s,baz=284,slow=4.4,SNR=9.5							
AFI				S		S	10 32 09.4	-6.3
	1.1nm,0.3s,baz=299,slow=19,SNR=3.1							
AFI	**Afiamalu**	**9.69**	**43**	P		**P**	**10 30 22.9**	**-2.2**
DZM	**Mont Dzumac**	**14.02**	**264**	P		**P**	**10 31 09.6**	**-0.4**
	0.3nm,0.3s,baz=80,slow=17,SNR=1.8							
OUZ	**Omahuta**	**15.58**	**205**	P		**P**	**10 31 25.2**	**-0.8**
HAZ	**Te Kaha**	**16.80**	**190**	P		**P**	**10 31 38.8**	**+1.0**
PUZ	**Puketiti**	**17.03**	**189**	P		**P**	**10 31 41.8**	**+1.7**
TWGZ	**Tauwhareparae**	**17.18**	**189**	P		**P**	**10 31 43.2**	**+1.7**
KMRZ	**Kaimai**	**17.26**	**195**	P		**P**	**10 31 44.4**	**+2.2**
TOZ	**Tahuroa Road**	**17.26**	**196**	P		**P**	**10 31 44.6**	**+2.5**
MWZ	**Matawai**	**17.40**	**190**	P		**P**	**10 31 43.6**	**0.0**
URZ	**Urewera**	**17.41**	**192**	P		**P**	**10 31 41.8**	**-1.7**
	1.7nm,0.3s,baz=127,slow=20,SNR=19							
URZ	**Urewera**	**17.41**	**192**	P		**P**	**10 31 43.1**	**-0.4**
URZ	**Urewera**	**17.41**	**192**	P		**P**	**10 31 41.6**	**-1.9**
CNGZ	**Carnagh Station**	**17.45**	**189**	P		**P**	**10 31 46.0**	**+2.2**
RIGZ	**Rimuhau**	**17.73**	**190**	P		**P**	**10 31 47.6**	**+1.1**
WATZ	**Wairara**	**18.13**	**195**	P		**P**	**10 31 56.2**	**+6.1**
HIZ	**Hauiti**	**18.17**	**197**	P		**P**	**10 31 50.1**	**-0.3**
HATZ	**Hinemaiaia**	**18.22**	**194**	P		**P**	**10 31 50.8**	**-0.2**
BKZ	**Black Stump Fm**	**18.40**	**192**	P		**P**	**10 31 51.9**	**-0.8**
BKZ	**Black Stump Fm**	**18.40**	**192**	P		**P**	**10 31 51.5**	**-1.2**
NTVZ	**North Tongarir**	**18.51**	**194**	P		**P**	**10 31 54.0**	**+0.3**
TMVZ	**Te Maari**	**18.52**	**194**	P		**P**	**10 31 54.8**	**+1.0**
OTVZ	**Oturere**	**18.58**	**194**	P		**P**	**10 31 54.8**	**+0.4**
MCHZ	**McNeill Hill**	**18.63**	**192**	P		**P**	**10 31 55.1**	**+0.4**
VRZ	**Vera Road**	**18.77**	**196**	P		**P**	**10 31 58.2**	**+2.3**
BHHZ	**Black Hill Sta**	**18.80**	**193**	P		**P**	**10 31 55.3**	**-1.0**
KRHZ	**Kereru**	**18.89**	**192**	P		**P**	**10 31 56.8**	**-0.3**
KAHZ	**Kahuranaki**	**18.94**	**191**	P		**P**	**10 31 58.4**	**+0.9**
DVHZ	**Dannevirke**	**19.56**	**192**	P		**P**	**10 32 03.8**	**+0.6**
BFZ	**Birch Farm**	**19.91**	**192**	P		**P**	**10 32 05.0**	**-1.3**
BFZ	**Birch Farm**	**19.91**	**192**	P		**P**	**10 32 05.1**	**-1.3**
QRZ	**Quartz Range**	**20.98**	**199**	P		**P**	**10 32 15.3**	**-0.7**
TUWZ	**Tuamarina**	**21.14**	**196**	P		**P**	**10 32 17.4**	**0.0**
BSWZ	**Blackbirch Sta**	**21.43**	**196**	P		**P**	**10 32 20.4**	**+0.4**
KHZ	**Kahutara**	**22.17**	**196**	P		**P**	**10 32 26.9**	**+0.2**
OXZ	**Oxford**	**23.42**	**198**	P		**P**	**10 32 37.0**	**-0.8**
LBZ	**Lake Benmore**	**24.94**	**199**	P		**P**	**10 32 51.1**	**-0.2**
WKZ	**Wanaka**	**25.71**	**201**	P		**P**	**10 32 58.3**	**+0.2**
WHZ	**Wether Hill Ro**	**27.00**	**201**	P		**P**	**10 33 09.1**	**-0.4**
CTA	**Charters Tower**	**32.95**	**266**	P		**P**	**10 34 01.4**	**+0.1**
	2.7nm,0.6s,baz=84,slow=10.0,SNR=5.3							
CTAO	**Charters Tower**	**32.95**	**266**	P		**P**	**10 34 00.7**	**-0.5**
CTAO				IAmb		IAmb	10 34 27.0	
	comp=Z,7.4nm,1.1s							
TOO	**Toolangi**	**35.09**	**234**	P		**P**	**10 34 18.7**	**-0.3**
COEN	**Coen**	**37.16**	**275**	P		**P**	**10 34 36.8**	**+0.5**
COEN				IAmb		IAmb	10 34 45.9	
	comp=Z,15nm,1.4s							
BBOO	**Buckleboo**	**41.80**	**244**	P		**P**	**10 35 13.4**	**-0.2**
BBOO				IAmb		IAmb	10 35 24.0	
	comp=Z,14nm,1.1s							
ASAR	**Alice Springs**	**43.89**	**258**	P		**P**	**10 35 30.1**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=88,slow=8.4,SNR=9.6							
FAKI	**Fak Fak**	**51.20**	**284**	P		**P**	**10 36 24.8**	**-0.1**
SIJI	**Sorong**	**52.96**	**286**	P		**P**	**10 36 37.9**	**+0.3**
	comp=Z,6.0nm,0.3s,baz=114,slow=3.1,SNR=3.7							
VNDA	**Vanda**	**57.16**	**185**	P		**P**	**10 37 04.9**	**-1.0**
QSPA	**South Pole Qui**	**68.86**	**180**	P		**P**	**10 38 21.5**	**+0.1**
MJAR	**Matsushiro Arr**	**70.50**	**324**	P		**P**	**10 38 31.5**	**0.0**
	comp=Z,1.6nm,0.5s,baz=155,slow=6.2,SNR=9.1							
MJAR	**Matsushiro Arr**	**70.50**	**324**	P		**P**	**10 38 31.0**	**-0.4**
MAJO	**Matsushiro**	**70.50**	**324**	P		**P**	**10 38 32.3**	**+0.9**
MAJO				IAmb		IAmb	10 38 58.6	
	comp=Z,12nm,1.5s							
USRK	**Ussuriysk Ar.**	**79.28**	**326**	P		**P**	**10 39 21.6**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=117,slow=5.4,SNR=4.5							
USRK	**Ussuriysk Ar.**	**79.28**	**326**	P		**P**	**10 39 20.6**	**+0.2**
NVAR	**Mina Array Bea**	**81.87**	**44**	P		**P**	**10 39 35.2**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=224,slow=8.6,SNR=4.1							
K05A	**Summer Lake**	**82.82**	**39**			**P**	**10 39 39.1**	**+0.1**
K05A				IAmb		IAmb	10 39 56.9	
	comp=Z,8.3nm,1.5s							
PINE	**Pine Mountain**	**83.44**	**38**	P		**P**	**10 39 41.9**	**-0.2**
SUA	**Susitna One**	**85.36**	**13**	P		**P**	**10 39 51.4**	**+0.5**
SUA				IAmb		IAmb	10 40 01.7	
	comp=Z,11nm,1.3s							

TTA	**Tatalina**	**85.72**	**10**	P		**P**		**10 39 53.0**	**+0.3**
SCM	**Sheep Creek Mo**	**86.44**	**14**	P		**P**		**10 39 56.1**	**+0.1**
SCM				IAmb		IAmb		10 39 57.8	
	comp=Z,6.0nm,0.7s								
N25K	**Chitina, Valde**	**86.89**	**15**	P		**P**		**10 39 57.9**	**-0.3**
GLB	**Gilahina Butte**	**86.95**	**16**	P		**P**		**10 39 59.0**	**+0.5**
GLB				IAmb		IAmb		10 40 14.9	
	comp=Z,5.3nm,1.1s								
LOGN	**Logan Glacier**	**87.19**	**17**	P		**P**		**10 40 00.1**	**+0.4**
RND	**Reindeer**	**87.50**	**13**	P		**P**		**10 40 00.9**	**-0.1**
RND				IAmb		IAmb		10 40 02.8	
	comp=Z,4.7nm,0.8s								
MCK	**McKinley**	**87.77**	**13**	P		**P**		**10 40 02.0**	**-0.2**
MCK				IAmb		IAmb		10 40 26.0	
	comp=Z,6.2nm,1.4s								
TXAR	**Lajitas Array**	**87.84**	**58**	P		**P**		**10 40 05.5**	**+2.1**
	comp=Z,0.3nm,0.8s,baz=224,slow=3.5,SNR=4.6								
MLY	**Manley**	**88.58**	**11**	P		**P**		**10 40 06.2**	**+0.2**
MLY				IAmb		IAmb		10 40 06.6	
	comp=Z,1.8nm,0.6s								
WRH	**Wood River Hil**	**88.60**	**13**	P		**P**		**10 40 06.3**	**+0.3**
WRH				IAmb		IAmb		10 40 07.1	
	comp=Z,2.7nm,0.6s								
DOT	**Dot Lake**	**88.77**	**15**	P		**P**		**10 40 07.3**	**+0.4**
CCB	**Clear Creek Bu**	**88.81**	**13**	P		**P**		**10 40 07.0**	**+0.1**
CCB				IAmb		IAmb		10 40 07.5	
	comp=Z,3.6nm,0.6s								
IMAR	**Indian Mountai**	**88.94**	**10**	P		**P**		**10 40 08.0**	**+0.5**
I23K	**Minto, Yukon-K**	**88.95**	**12**	P		**P**		**10 40 07.7**	**+0.1**
I23K				IAmb		IAmb		10 40 08.7	
	comp=Z,5.9nm,1.4s								
IL31		**89.11**	**13**	P		**P**		**10 40 08.0**	**-0.3**
IL31				IAmb		IAmb		10 40 15.0	
	comp=Z,4.8nm,1.5s								
ILAR	**Eielson Array**	**89.11**	**13**	P		**P**		**10 40 08.8**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=218,slow=5.2,SNR=16								
ILAR	**Eielson Array**	**89.11**	**13**	P		**P**		**10 40 08.4**	**0.0**
PDAR	**Pinedale Array**	**89.81**	**43**	P		**P**		**10 40 13.9**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=202,slow=3.7,SNR=7.2								
PDAR	**Pinedale Array**	**89.81**	**43**			**P**		**10 40 12.4**	**-0.1**
DAWY	**Dawson**	**90.27**	**16**	P		**P**		**10 40 14.0**	**+0.2**
DAWY				IAmb		IAmb		10 40 16.4	
	comp=Z,4.4nm,1.2s								
EGAK	**Eagle**	**90.41**	**15**	P		**P**		**10 40 14.1**	**-0.4**
BVAR	**Borovoye Array**	**119.31**	**320**	PKP		**PKPdf**		**10 45 58.1**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=209,slow=2.6,SNR=11								
ARCES	**ARCESS Array B**	**129.53**	**349**	PKP		**PKPdf**		**10 46 18.5**	**+0.5**
	comp=Z,4.5nm,1.0s,baz=34,slow=1.8,SNR=9.7								
ARCES	**ARCESS Array B**	**129.53**	**349**			**PKPdf**		**10 46 17.8**	**-0.1**
FINES	**FINESS Array B**	**136.31**	**343**	PKP		**PKPdf**		**10 46 31.4**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=64,slow=4.4,SNR=5.6								
FINES	**FINESS Array B**	**136.31**	**343**			**PKPdf**		**10 46 31.2**	**+0.3**
AKASG	**Malin Array Be**	**143.40**	**330**	PKP		PKPab		10 46 42.3	0.0
	comp=Z,1.4nm,0.5s,baz=43,slow=4.2,SNR=17								
BRTR	**Keskin Array B**	**146.95**	**311**	PKPbc		**PKPbc**		**10 46 53.8**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=156,slow=4.7,SNR=5.3								
BRTR	**Keskin Array B**	**146.95**	**311**			**PKPbc**		**10 46 53.6**	**0.0**
CLL	**Collm**	**148.64**	**346**	PKPdf		**PKPdf**		**10 46 52.7**	**-0.1**
CLL				PKPbc		**PKPbc**		**10 46 57.4**	**+0.2**
DPC	**Dobruska-Polom**	**148.65**	**342**	*eP*KP		**PKiKP**		**10 46 58.6**	**+0.1**
KHC	**Kasperske Hory**	**150.52**	**344**	*eP*KP		**PKiKP**		**10 47 02.7**	**+0.3**
KHC	**Kasperske Hory**	**150.52**	**344**	PKPdf		**PKPdf**		**10 46 55.6**	**-0.3**
KHC						**PKPbc**		**10 47 02.4**	**+0.5**
CKRC	**Cesky Krumlov**	**150.60**	**343**	*eP*KP		**PKiKP**		**10 47 03.1**	**+0.6**
GERES	**GERESS Array B**	**150.75**	**343**	PKPbc		**PKPbc**		**10 47 03.2**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=47,slow=2.2,SNR=11								
GERES	**GERESS Array B**	**150.75**	**343**	PKPdf		**PKPdf**		**10 46 55.9**	**-0.4**
GERES						**PKPbc**		**10 47 03.0**	**+0.5**
GERES				PKPab		**PKPab**		**10 47 12.6**	**+0.7**
CONA	**Conrad Observa**	**150.94**	**340**	*eP*		**PKiKP**		**10 47 03.7**	**+0.4**
	comp=Z,2.4nm,0.6s								
MOA	**Molln**	**151.50**	**342**	*eP*		**PKPbc**		**10 47 04.8**	**+0.6**
	comp=Z,1.1nm,0.5s								
SOKA	**Soboth**	**152.31**	**340**	*eP*		**PKPbc**		**10 47 04.2**	**-1.8**
	comp=Z,2.8nm,0.6s								
KBA	**Koelnbreinsper**	**152.46**	**342**	*eP*		**PKiKP**		**10 47 07.7**	**+1.1**
	comp=Z,0.8nm,0.4s								
OBKA	**Obir**	**152.61**	**340**	*eP*		**PKPbc**		**10 47 04.6**	**-2.1**
	comp=Z,2.9nm,0.8s								
WATA	**Walderalm**	**152.69**	**345**	*eP*		**PKPbc**		**10 47 06.7**	**-0.2**
	comp=Z,1.9nm,0.4s								
WTTA	**Wattenberg**	**152.74**	**345**	*eP*		**PKPbc**		**10 47 07.3**	**+0.2**
	comp=Z,1.9nm,0.4s								
MOTA	**Moosalm**	**152.79**	**346**	*eP*		**PKPbc**		**10 47 07.5**	**+0.4**
	comp=Z,4.0nm,1.3s								
SQTA	**Sankt Quirin**	**152.88**	**345**	*eP*		**PKPbc**		**10 47 07.8**	**+0.5**
	comp=Z,3.3nm,0.9s								
ABTA	**Abfaltersbach**	**152.99**	**343**	*eP*		**PKPbc**		**10 47 06.4**	**-1.2**
	comp=Z,2.6nm,0.5s								
DAVA	**Damuels**	**153.11**	**347**	*eP*		**PKiKP**		**10 47 09.3**	**+1.3**
	comp=Z,0.5nm,0.4s								
FETA	**Feichten**	**153.18**	**346**	*eP*		**PKiKP**		**10 47 08.8**	**+0.7**
	comp=Z,2.9nm,1.1s								

*IDC **26** 10:31:22.3±0.5, 10°.43S×120°.53E, h0km, mb4.5/20, mb1 4.6/24, mb1mx4.3/51, mbtmp4.5/24, ML4.5/4, Error ellipse: s-maj=21.3km s-min=12.1km az=70.0*
*BJI **26** 10:31:24.2±0.0, 11°.02S×120°.67E, h54km, mb5.3/11, mb4.9/36, Ms4.7/1, Ms7 4.5/1*
*DJA **26** 10:31:25.1±0.9, 11°.5S±6°×12°.0E±°, h12km±4km, M4.7/11, mb4.9/6, mB5.2/4, MLv4.6/11, Mw(mB)4.6/4, MwMwp5.7/1, Mwp5.8/1*
*NEIC **26** 10:31:25.8±0.8, 10°.62S±0°.04×120°.41E±0°.05, h35km±1km, mb4.3/36, Error ellipse: s-maj=11.0km s-min=2.9km az=50.0*
ISC 26 10:31:25.6±0.3, 10°.69S±0°.04×120°.47E±0°.04, h31km, n131, σ1s85/138, mb4.5/48, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.48**	**13**	P		**Pb**	**10 31 35.0**	**-0.8**
BASI				S		**Sn**	**10 31 44.6**	**+0.8**
WBSI	**Waikabubak, Su**	**1.49**	**315**	P		**Pn**	**10 31 50.6**	**+0.4**
WBSI				S		**Sb**	**10 32 10.1**	**-1.1**
MMRI	**Maumere**	**2.69**	**41**			**Pn**	**10 32 06.9**	**+0.1**
MMRI				Sn		**Sn**	**10 32 37.4**	**-0.9**
MMRI	**Maumere**	**2.69**	**41**	P		**Pn**	**10 32 07.3**	**+0.6**
BATI	**Baumata**	**3.18**	**82**	Pn		**Pn**	**10 32 17.6**	**+4.1**
	155nm,0.3s,baz=273,slow=12,SNR=87							
BATI				Sn		**Sn**	**10 32 53.7**	**+3.2**
	100nm,0.3s,baz=34,slow=22,SNR=16							
BATI	**Baumata**	**3.18**	**82**	P		**Pn**	**10 32 17.5**	**+3.9**
BATI				S		**Sb**	**10 32 56.7**	**-3.2**
PLAI	**Plampang**	**3.23**	**305**	P		**Pn**	**10 32 14.1**	**-0.1**
PLAI				S		**Sn**	**10 32 52.2**	**+0.5**
SOEI	**Soe**	**3.86**	**76**	Pn		**Pn**	**10 32 23.4**	**+0.5**
SOEI	**Soe**	**3.86**	**76**	P		**Pn**	**10 32 26.7**	**+3.8**
SOEI				S		**Sn**	**10 33 11.9**	**+4.6**
TWSI	**Taliwang, Sumb**	**4.03**	**299**	P		**Pn**	**10 32 25.2**	**0.0**
TWSI				S		**Sn**	**10 33 12.5**	**+1.1**
KAPI	**Kappang**	**5.69**	**353**	Pn		**Pn**	**10 32 49.0**	**+1.1**
	9.9nm,0.3s,baz=150,slow=10,SNR=11							
KAPI	**Kappang**	**5.69**	**353**	Pn		**Pn**	**10 32 46.7**	**-1.3**
BNSI	**Bone**	**6.26**	**357**	P		**Pn**	**10 32 58.9**	**+3.0**
	0.3nm1µm86nm,0.8s							
JAGI	**Jajag, Banyuwa**	**6.61**	**289**	Pn		**Pn**	**10 32 59.5**	**-1.2**
SPSI	**Sidrap Palu**	**6.72**	**354**	P		**Pn**	**10 33 03.6**	**+1.4**
	0.2nm54nm,0.7s							
TTSI	**Tana Toraja**	**7.63**	**355**	P		**Pn**	**10 33 18.4**	**+3.8**
	0.2nm27nm,0.6s							
FITZ	**Fitzroy Crossi**	**8.90**	**146**	Pn		**Pn**	**10 33 34.0**	**+1.9**
	4.6nm,0.3s,baz=326,slow=14,SNR=24							
FITZ				Sn		**Sn**	**10 35 08.6**	**-2.9**
	3.0nm,0.3s,baz=309,slow=7.9,SNR=3.5							
FITZ	**Fitzroy Crossi**	**8.90**	**146**			**Pn**	**10 33 33.4**	**+1.2**
BBKI	**Banjar Baru**	**9.10**	**322**	P		Pn	10 33 45.3	+10
KNRA	**Kununiurra**	**9.48**	**122**	Pn		**Pn**	**10 33 41.1**	**+1.1**
NLAI	**Namlea**	**9.91**	**42**	P		Pn	10 33 54.2	+8.3
UGM	**Wanagama**	**10.19**	**285**	Pn		**Pn**	**10 33 48.9**	**-1.0**
MTN	**Manton Dam**	**10.66**	**103**	Pn		**Pn**	**10 33 57.5**	**+1.2**
PSA00	**Pilbara Seismi**	**10.83**	**183**			**Pn**	**10 34 00.2**	**+1.6**
LEM	**Lembang**	**13.27**	**286**	Pn		**Pn**	**10 34 30.6**	**-1.4**
	3.5nm,0.3s,baz=44,slow=16,SNR=3.6							
GIRL	**Giralia**	**13.29**	**206**	Pn		**Pn**	**10 34 32.9**	**+0.7**
FAKI	**Fak Fak**	**14.01**	**57**			**Pn**	**10 34 41.6**	**-0.6**
SIJI	**Sorong**	**14.51**	**48**	Pn		**Pn**	**10 34 48.6**	**-0.3**
	2.0nm,0.3s,baz=217,slow=7.1,SNR=13							
SBUM	**Sibu**	**15.42**	**327**			**Pn**	**10 34 59.3**	**-1.7**
KSM	**Kuching**	**15.76**	**320**			**Pn**	**10 35 04.0**	**-1.3**
KSM				IAmb		IAmb	10 35 11.0	
	comp=Z,14nm,0.7s							
MYLDM	**Lahad Datu**	**15.89**	**353**	Pn		**Pn**	**10 35 05.8**	**-1.3**

WB0	**Warramunga Arr**	**16.18**	**126**	Pn		**Pn**		**10 35 11.9**	**+1.1**
WRA	**Warramunga Arr**	**16.23**	**126**	Pn		**Pn**		**10 35 11.5**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=307,slow=15,SNR=26								
WRA				Sn		**Sn**		**10 38 01.0**	**-10**
	comp=Z,1.0nm,0.3s,baz=296,slow=22,SNR=6.7								
WRA	**Warramunga Arr**	**16.23**	**126**			**Pn**		**10 35 11.7**	**+0.3**
WRAB	**Tennant Creek**	**16.23**	**126**	Pn		**Pn**		**10 35 12.1**	**+0.6**
WRAB				IAmb		IAmb		10 35 23.8	
	comp=Z,17nm,0.9s								
WB2	**Warramunga Arr**	**16.23**	**126**	Pn		**Pn**		**10 35 12.2**	**+0.7**
WR0	**Warramunga Arr**	**16.39**	**126**	Pn		**Pn**		**10 35 14.5**	**+1.0**
WR0				IAmb		IAmb		10 35 23.9	
	comp=Z,19nm,0.9s								
KKM	**Kota Kinabalu**	**17.16**	**346**	Pn		**Pn**		**10 35 21.2**	**-2.0**
KKM				IAmb		IAmb		10 35 21.9	
	comp=Z,39nm,1.2s								
AS31	**Alice Springs**	**18.18**	**137**	P		**P**		**10 35 36.5**	**+0.6**
ASAR	**Alice Springs**	**18.18**	**137**	P		**P**		**10 35 38.6**	**+2.8**
	comp=Z,2.7nm,0.3s,baz=316,slow=12,SNR=138								
ASAR				S		**Sn**		**10 38 50.8**	**-7.1**
	comp=Z,0.8nm,0.3s,baz=310,slow=24,SNR=13								
ASAR	**Alice Springs**	**18.18**	**137**			**P**		**10 35 36.8**	**+1.0**
MNAI	**Manna**	**18.46**	**289**	P		**P**		**10 35 37.8**	**-1.2**
MORW	**Morawa**	**18.74**	**192**	P		**P**		**10 35 42.2**	**+0.3**
MORW				IAmb		IAmb		10 36 03.2	
	comp=Z,21nm,1.3s								
NWAO	**Narrogin (SRO)**	**22.33**	**187**	P		**P**		**10 36 23.3**	**+2.6**
	comp=Z,7.8nm,0.9s,baz=5.2,slow=11,SNR=1.9								
NWAO				S		**S**		**10 40 23.4**	**-1.2**
	comp=Z,6.5nm,0.4s,baz=284,slow=18,SNR=6.9								
NWAO	**Narrogin (SRO)**	**22.33**	**187**	P		**P**		**10 36 21.4**	**+0.7**
NWAO				IAmb		IAmb		10 36 35.4	
	comp=Z,12nm,0.9s								
RPSI	**Rantau Prapat**	**25.23**	**301**	P		**P**		**10 36 47.9**	**-1.1**
RPSI				IAmb		IAmb		10 36 50.1	
	comp=Z,9.0nm,0.8s								
PSI	**Prapat**	**25.29**	**301**	P		**P**		**10 36

BVAR Borovoye Array 76.46 332 P **P** 10 43 12.6 +0.4
comp=Z,3.1nm,0.7s,baz=197,slow=4.6,SNR=21
BRVK Borovoye 76.53 332 **P** **P** 10 43 12.1 -0.5
BRVK IAmb IAmb 10 43 13.8
comp=Z,4.7nm,0.8s
QSPA South Pole Qui 79.31 180 P **P** 10 43 31.1 +3.0
comp=Z,2.5nm,0.9s,baz=273,slow=0.3,SNR=12
QSPA South Pole Qui 79.31 180 P **P** 10 43 27.0 -1.1
QSPA IAmb IAmb 10 43 43.3
comp=Z,7.0nm,1.2s
ABKAR Akbulak array 79.77 325 P **P** 10 43 30.6 -0.1
ABKAR Akbulak array 79.77 325 P **P** 10 43 30.0 -0.6
ABKAR IAmb IAmb 10 43 33.3
comp=Z,2.9nm,0.8s
IMAR Indian Mountai 97.97 24 **P** 10 44 57.0 -1.2
BPAW Bear Paw Mtn. 98.90 26 P **P** 10 45 01.8 -0.7
ILAR Eielson Array 100.72 26 P **Pdif** 10 45 10.0 -0.6
comp=Z,1.1nm,0.5s,baz=147,slow=2.1,SNR=3.1
FINES FINESS Array B 101.41 331 P **Pdif** 10 45 14.1 +0.5
comp=Z,2.7nm,0.8s,baz=79,slow=7.2,SNR=4.7
TORD Torodi Ar. Bea 120.16 279 PKP **PKiKP** 10 50 16.1 +1.6
comp=Z,1.4nm,0.6s,baz=76,slow=1.8,SNR=8.5
TORD Torodi Ar. Bea 120.16 279 **PKPdf** 10 50 14.0 -0.5
CPUP Villa Florida 143.13 183 PKP **PKiKP** 10 51 00.5 0.0
comp=Z,1.1nm,0.5s,baz=147,slow=2.1,SNR=3.1
CPUP Villa Florida 143.13 183 **PKPdf** 10 50 55.9 -1.4
LPAZ La Paz 151.87 162 PKPbc **PKiKP** 10 51 22.2 +2.6
comp=Z,1.9nm,1.0s,baz=243,slow=2.3,SNR=4.9
LPAZ La Paz 151.87 162 **PKPdf** 10 51 09.7 -3.0
LPAZ PKPbc **PKiKP** 10 51 20.6 +1.0

*IDC **26** 10:34:44.4±4.3, 27.78N±0.4×85.6E±0.5, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.5/60, mbtmp3.9/6, ML3.9/1, MS4.7/1, Ms1 4.7/1, ms1mx3.5/38, Error ellipse: s-maj=90.8km s-min=76.5km az=95.0*

ISC 26 10:34:47.2±2.3, 27.8BN±0.4×85.6E±0.5, h18km, n8, σ0.50/7, mb4.1/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM33	**Chiang Mai Arr**	**15.22**	**123**	**P**	**P**	**10 38 26.0**	**-0.3**
MKAR	**Makanchi Array**	**19.09**	**353**	P	**Pn**	**10 39 09.1**	**-0.6**
	0.3nm,0.3s,baz=172,slow=12,SNR=14						
KURBB	**Kurchatov Arra**	**23.37**	**349**	P	**P**	**10 39 54.9**	**+0.3**
	0.3nm,0.3s,baz=169,slow=13,SNR=1.7						
ZALV	**Zalesovo Beam**	**26.09**	**359**	P	**P**	**10 40 20.0**	**+0.3**
	2.3nm,0.5s,baz=182,slow=9.5,SNR=10.0						
FINES	**FINESS Array B**	**51.42**	**328**	P	**P**	**10 43 50.5**	**-0.3**
	1.8nm,0.7s,baz=108,slow=6.2,SNR=7.4						
ARCES	**ARCESS Array B**	**53.81**	**338**	P	**P**	**10 44 08.6**	**+0.1**
	2.1nm,0.8s,baz=112,slow=8.8,SNR=4.7						
GERES	**GERESS Array B**	**57.92**	**312**	LR	LR	11 11 01.7	
	comp=Z,758nm,21.1s,baz=120,slow=38						
YKA	**Yellowknife Ar**	**88.54**	**9**	P	**P**	**10 47 39.0**	**+0.5**
	0.2nm,0.7s,baz=347,slow=4.6,SNR=3.9						

*IDC **26** 10:36:02.6±0.5, 10.37S×120.50E, h0km, mb4.5/20, mb1 4.6/24, mb1mx4.4/46, mbtmp4.6/24, ML4.6/4, Error ellipse: s-maj=21.1km s-min=12.6km az=61.0*

*NEIC **26** 10:36:06.6±1.0, 10.62S±0.06×120.30E±0.07, h35km±2km, mb4.6/54, Error ellipse: s-maj=10.9km s-min=9.4km az=102.0*

*DJA **26** 10:36:07.7±0.6, 10.5S±10.×12.1E±.°, h17km±7km, M4.8/7, mb5.0/1, mb5.0/1, MLv4.7/7, Mw(mB)4.4/1*

ISC 26 10:36:06.2±0.3, 10.59S±0.04×120.39E±0.04, h31km, n154, σ1.9s40/158, mb4.7/68, 1C, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.41**	**26**	P	**Pb**	**10 36 14.2**	**-1.1**
BASI				S	**Sb**	**10 36 18.6**	**-3.0**
WBSI	**Waikabubak, Su**	**1.37**	**314**	P	**Pn**	**10 36 28.9**	**-0.3**
WBSI				S	**Sn**	**10 36 45.4**	**-0.9**
MMRI	**Maumere**	**2.66**	**43**	Pn	**Pb**	**10 36 48.7**	**-4.6**
MMRI	**Maumere**	**2.66**	**43**	P	**Pn**	**10 36 43.0**	**-4.0**
PLAI	**Plampang**	**3.12**	**304**	P	**Pn**	**10 36 54.1**	**+0.8**
PLAI				S	**Sn**	**10 37 29.4**	**-0.1**
BATI	**Baumata**	**3.24**	**83**	Pn	Pb	10 36 57.5	-5.6
	167nm,0.3s,baz=298,slow=1.3,SNR=39						
BATI				Sn	**Sn**	**10 37 34.6**	**+2.1**
	174nm,0.3s,baz=39,slow=22,SNR=11						
BATI	**Baumata**	**3.24**	**83**	P	**Pn**	**10 36 55.7**	**+0.7**
BATI				S	**Sn**	**10 37 34.5**	**+2.0**
SOEI	**Soe**	**3.90**	**78**	Pn	**Pn**	**10 37 05.8**	**+1.6**
SOEI	**Soe**	**3.90**	**78**	P	**Pn**	**10 37 04.9**	**+0.7**
TWSI	**Taliwang, Sumb**	**3.92**	**298**	P	**Pn**	**10 37 06.2**	**+1.9**
TWSI				S	**Sn**	**10 37 49.7**	**+0.4**
DNP	**Denpasar**	**5.45**	**290**	P	**Pn**	**10 37 23.6**	**-1.8**
DNP				S	**Sn**	**10 38 27.8**	**+0.7**
KAPI	**Kappang**	**5.58**	**353**	Pn	**Pn**	**10 37 28.6**	**+1.5**
	8.0nm,0.3s,baz=178,slow=6.8,SNR=8.2						
KAPI				Sn	**Sn**	**10 38 31.8**	**+1.6**
	baz=5.1,slow=19,SNR=1.7						
KAPI	**Kappang**	**5.58**	**353**	Pn	**Pn**	**10 37 27.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**6.51**	**288**	Pn	**Pn**	**10 37 39.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**9.03**	**146**	Pn	**Pn**	**10 38 14.6**	**+0.1**
	4.7nm,0.3s,baz=264,slow=4.8,SNR=5.3						
FITZ				Sn	**Sn**	**10 39 48.7**	**-6.4**
	7.0nm,0.3s,baz=192,slow=20,SNR=9.8						
FITZ	**Fitzroy Crossi**	**9.03**	**146**	Pn	**Pn**	**10 38 14.8**	**+0.4**
KNRA	**Kununurra**	**9.59**	**123**	Pn	**Pn**	**10 38 23.0**	**+0.8**
LUWI	**Luwuk**	**9.78**	**14**	Pn	**Pn**	**10 38 25.9**	**+1.1**
BKB	**Balikpapan**	**9.90**	**339**	Pn	**Pn**	**10 38 27.9**	**+1.4**
UGM	**Wanagama**	**10.10**	**284**	Pn	**Pn**	**10 38 28.6**	**-0.6**
SMRI	**Semarang**	**10.45**	**289**	Pn	**Pn**	**10 38 33.1**	**-0.9**
MTN	**Manton Dam**	**10.75**	**103**	Pn	**Pn**	**10 38 38.9**	**+0.7**
PSA00	**Pilbara Seismi**	**10.93**	**183**	Pn	**Pn**	**10 38 40.3**	**-0.2**
TOLI2	**Tolitoli**	**11.63**	**2**	Pn	**Pn**	**10 38 51.0**	**+0.7**
LEM	**Lembang**	**13.17**	**285**	Pn	**Pn**	**10 39 12.0**	**+0.6**
	4.0nm,0.3s,baz=31,slow=11,SNR=5.5						
GIRL	**Giralia**	**13.35**	**205**	Pn	**Pn**	**10 39 13.0**	**-0.6**
FAKI	**Fak Fak**	**14.02**	**58**		**Pn**	**10 39 24.1**	**+1.3**
SIJI	**Sorong**	**14.49**	**49**	Pn	**Pn**	**10 39 27.6**	**-1.8**
	1.8nm,0.3s,baz=183,slow=5.8,SNR=11						
SBUM	**Sibu**	**15.30**	**327**		**Pn**	**10 39 39.1**	**-0.9**
KSM	**Kuching**	**15.63**	**319**	P	**P**	**10 39 47.7**	**-0.5**
KSM				IAmb	IAmb	10 39 51.3	
	comp=Z,23nm,0.7s						
MYLDM	**Lahad Datu**	**15.78**	**353**	P	**P**	**10 39 50.5**	**+0.6**
WB0	**Warramunga Arr**	**16.29**	**126**	Pn	**P**	**10 39 53.3**	**-2.3**
WRA	**Warramunga Arr**	**16.34**	**126**	Pn	**Pn**	**10 39 51.5**	**-2.0**
	comp=Z,1.6nm,0.3s,baz=297,slow=14,SNR=5.5						
WRA	**Warramunga Arr**	**16.34**	**126**		**P**	**10 39 54.5**	**-1.6**
WRAB	**Tennant Creek**	**16.34**	**126**	Pn	**P**	**10 39 54.4**	**-1.8**
WB2	**Warramunga Arr**	**16.35**	**126**	Pn	**P**	**10 39 54.2**	**-2.1**
WR0	**Warramunga Arr**	**16.51**	**126**	Pn	**P**	**10 39 56.1**	**-1.9**
WR0				IAmb	IAmb	10 40 04.0	
	comp=Z,33nm,0.9s						
KKM	**Kota Kinabalu**	**17.04**	**346**		**P**	**10 40 03.0**	**-1.0**
AS31	**Alice Springs**	**18.30**	**137**		**Pn**	**10 40 17.7**	**-0.2**
ASAR	**Alice Springs**	**18.30**	**137**	P	**Pn**	**10 40 19.0**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=316,slow=13,SNR=18						
ASAR	**Alice Springs**	**18.30**	**137**	P	**Pn**	**10 40 17.2**	**-0.6**
MORW	**Morawa**	**18.83**	**192**		**Pn**	**10 40 22.4**	**-1.8**
FORT	**Forrest**	**21.31**	**162**	P	**P**	**10 40 51.1**	**+0.6**
FORT				IAmb	IAmb	10 41 12.0	
	comp=Z,21nm,0.8s						
NWAO	**Narrogin (SRO)**	**22.42**	**187**	P	**P**	**10 41 01.3**	**-1.1**
NWAO				IAmb	IAmb	10 41 21.9	
	comp=Z,25nm,1.1s						
COEN	**Coen**	**22.51**	**101**	P	**P**	**10 41 04.2**	**+0.7**
COEN				IAmb	IAmb	10 41 05.9	
	comp=Z,38nm,1.5s						
RPSI	**Rantau Prapat**	**25.12**	**301**	P	**P**	**10 41 27.8**	**-0.8**
RPSI				IAmb	IAmb	10 41 30.1	
	comp=Z,11nm,0.7s						
PSI	**Prapat**	**25.18**	**301**	P	**P**	**10 41 29.4**	**+0.1**
	comp=Z,10nm,0.8s,baz=180,slow=7.0,SNR=14						
KULM	**Kulim**	**25.21**	**308**	P	**P**	**10 41 27.9**	**-1.5**
KULM				IAmb	IAmb	10 41 28.2	
	comp=Z,13nm,1.1s						
BBOO	**Buckleboo**	**26.40**	**149**	P	**P**	**10 41 40.2**	**+0.2**
CTA	**Charters Tower**	**26.63**	**114**	P	**P**	**10 41 43.5**	**+1.2**
	comp=Z,5.2nm,0.9s,baz=264,slow=13,SNR=4.0						
MANU	**Manus Island**	**28.10**	**74**	P	**P**	**10 41 56.0**	**+0.6**
MANU				IAmb	IAmb	10 42 23.1	
	comp=Z,25nm,1.5s						
STKA	**Stephens Creek**	**28.86**	**140**	P	**P**	**10 42 04.4**	**+2.3**
	comp=Z,2.7nm,0.8s,baz=322,slow=11,SNR=4.1						
STKA	**Stephens Creek**	**28.86**	**140**	P	**P**	**10 42 02.0**	**0.0**
UBPT	**Khong Chiam**	**29.65**	**330**	P	**P**	**10 42 08.7**	**-0.5**
UBPT				IAmb	IAmb	10 42 10.6	
	comp=Z,10.0nm,1.1s						
PATY	**Pattaya**	**30.36**	**320**	P	**P**	**10 42 17.0**	**+1.5**
	comp=Z,13μmcomp=Z,42nm,0.7s						
SRAK	**Srakaew**	**30.48**	**323**	P	**P**	**10 42 14.0**	**-2.5**
	comp=Z,4μmcomp=Z,422nm,0.8s						
CHAI	**Chaiyaphum**	**32.02**	**325**	P	**P**	**10 42 31.5**	**+1.4**
	comp=Z,603nmcomp=Z,36nm,0.8s						
NONG	**Nongkai**	**33.18**	**329**	P	**P**	**10 42 42.7**	**+2.5**
	comp=Z,17nm,1.0s						
KHLT	**Khaolaem Dam**	**33.22**	**319**	P	**P**	**10 42 42.9**	**+2.3**
	comp=Z,4μmcomp=Z,9.7nm,0.8s						
UTHA	**Uthaitani**	**33.25**	**321**	P	**P**	**10 42 42.2**	**+1.3**
	comp=Z,312nmcomp=Z,31nm,0.8s						
PHIT	**Phitsanulok**	**33.94**	**324**	P	**P**	**10 42 48.7**	**+1.8**
	comp=Z,135nm,0.9s						
UMPA	**Umpang Tak**	**34.10**	**321**	P	**P**	**10 42 48.9**	**+0.6**
	comp=Z,27nm,1.0s						
UTTA	**Uttaradit**	**34.30**	**325**	P	**P**	**10 42 51.5**	**+1.5**
	comp=Z,24nm,0.8s						
SUKH	**Sukhothai**	**34.63**	**323**	P	**P**	**10 42 54.5**	**+1.7**
	comp=Z,26nm,0.8s						
CM04	**Chiang Mai Arr**	**35.73**	**324**	P	**P**	**10 43 04.1**	**+1.8**
	comp=Z,67nmcomp=Z,8.2nm,1.0s						
CM05	**Chiang Mai Arr**	**35.75**	**324**	P	**P**	**10 43 04.2**	**+1.7**
	comp=Z,5.0nm,1.3s						
CM36	**Chiang Mai Arr**	**35.75**	**324**	P	**P**	**10 43 03.0**	**+0.4**
CM01	**Chiang Mai Arr**	**35.76**	**324**	P	**P**	**10 43 04.8**	**+2.3**
	comp=Z,5.4nm,0.7s						
CM09	**Chiang Mai Arr**	**35.76**	**324**	P	**P**	**10 43 04.3**	**+1.8**
	comp=Z,8.3nm,0.8s						
CM02	**Chiang Mai Arr**	**35.77**	**324**	P	**P**	**10 43 04.0**	**+1.3**
	comp=Z,62nmcomp=Z,5.1nm,0.8s						
CM13	**Chiang Mai Arr**	**35.79**	**324**	P	**P**	**10 43 04.0**	**+1.2**
	comp=Z,6.4nm,0.8s						
CM31	**Chiang Mai Arr**	**35.80**	**324**	P	**P**	**10 43 02.8**	**-0.1**
CM31				IAmb	IAmb	10 43 04.9	
	comp=Z,5.9nm,0.8s						
CMAR	**Chiang Mai Arr**	**35.80**	**324**	P	**P**	**10 43 03.6**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=152,slow=6.8,SNR=22						
CMAR	**Chiang Mai Arr**	**35.80**	**324**	P	**P**	**10 43 03.2**	**+0.3**
CM15	**Chiang Mai Arr**	**35.80**	**324**	P	**P**	**10 43 04.0**	**+1.0**
	comp=Z,110nmcomp=Z,6.2nm,0.7s						
CM35	**Chiang Mai Arr**	**35.85**	**324**	P	**P**	**10 43 04.0**	**+0.7**
CM32	**Chiang Mai Arr**	**36.01**	**324**	P	**P**	**10 43 08.0**	**+3.3**
CMMT	**Chiang Mai**	**36.07**	**324**	P	**P**	**10 43 05.4**	**+0.1**
	comp=Z,6.5nm,1.0s						
CHTO	**Chiang Mai**	**36.08**	**324**	P	**P**	**10 43 05.1**	**-0.2**
CHTO				IAmb	IAmb	10 43 07.0	
	comp=Z,11nm,1.0s						
CM33	**Chiang Mai Arr**	**36.08**	**324**	P	**P**	**10 43 06.0**	**+0.7**
MHMT	**Maesarieng**	**36.18**	**322**	P	**P**	**10 43 07.9**	**+1.7**
	comp=Z,11nm,0.7s						
GYA	**Guiyang**	**39.17**	**340**	*e*P	**P**	**10 43 32.0**	**+0.5**
GYA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KMI	**Kunming**	**39.45**	**334**	⇑P	**P**	**10 43 36.5**	**+2.5**
KMI				pP	sP	10 43 46.8	+0.4
KMI				pmax	pmax		
	comp=Z,20nm,0.6s						
KMI				LR	LR		
	comp=Z,270nm,18.5s						
KMI				LR	LR		
	comp=Z,500nm,16.3s						
KMI				LR	LR		
	comp=Z,340nm,18.6s						
WHN	**Wuhan**	**41.31**	**352**	P	**P**	**10 43 50.0**	**+1.0**
ENH	**Enshi**	**41.96**	**346**	P	**P**	**10 43 53.9**	**-0.6**
NJ2	**Nanjing**	**42.43**	**358**	*e*P	**P**	**10 43 59.5**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,25nm,0.5s						
XAN	**Xi'an**	**45.70**	**347**	P	**P**	**10 44 24.0**	**-0.5**
XAN				pP	pwP	10 44 34.0	+0.7
XAN				pmax	pmax		
	comp=Z,21nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,4.9s						
XAN				LR	LR		
	comp=Z,370nm,18.4s						
XAN				LR	LR		
	comp=Z,190nm,17.3s						
XAN				LR	LR		
	comp=Z,660nm,19.5s						
JHS	**Saijyo**	**46.92**	**14**	P	**P**	**10 44 34.1**	**+0.2**
JHS				IAmb	IAmb	10 44 53.7	
	comp=Z,14nm,1.3s						
H08S2	**Diego Garcia H**	**47.35**	**269**	T	T	11 35 13.0	
	baz=96,slow=75,SNR=14						
H08S3	**Diego Garcia H**	**47.36**	**269**	T	T	11 35 20.7	
	baz=96						
H08S1	**Diego Carcia H**	**47.37**	**269**	T	T	11 35 21.8	
	baz=96,slow=75						
KSAR	**Wonju Array Be**	**48.30**	**8**	P	**P**	**10 44 44.8**	**+0.2**
KSRS	**Korea Array**	**48.31**	**8**	P	**P**	**10 44 43.8**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=196,slow=8.7,SNR=8.3						
JGF	**Kuroka**	**48.66**	**18**	P	**P**	**10 44 47.2**	**-0.3**
JGF				IAmb	IAmb	10 45 10.3	
	comp=Z,5.7nm,1.1s						
LZH	**Lanzhou**	**48.98**	**342**	*e*P	**P**	**10 44 51.8**	**+1.7**
LZH				pP	sP	10 45 02.0	-0.6
LZH				sP	pwP	10 45 07.3	+8.3
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
MAJO	**Matsushiro**	**49.79**	**19**	P	**P**	**10 44 56.1**	**0.0**
MAJO				IAmb	IAmb	10 44 57.1	
	comp=Z,5.7nm,0.9s						
MAT	**Matsushiro**	**49.79**	**19**	P	**P**	**10 44 53.6**	**-2.5**
MJAR	**Matsushiro Arr**	**49.79**	**19**	P	**P**	**10 44 54.1**	**-2.0**
	comp=Z,3.3nm,0.7s,baz=195,slow=8.5,SNR=13						
MJAR	**Matsushiro Arr**	**49.79**	**19**	P	**P**	**10 44 55.1**	**-1.1**
BJT	**Baijiatuan**	**50.51**	**356**		**P**	**10 45 00.6**	**-0.8**
BJI	**Beijing**	**50.53**	**356**	P	**P**	**10 45 00.5**	**-1.1**
BJI				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC	**Hu-ho-hao-te**	**51.83**	**351**	*e*P	**P**	**10 45 12.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
GTA	**Gaotai**	**53.30**	**340**	*e*P	**P**	**10 45 23.3**	**+0.8**
GTA				pP	sP	10 45 34.8	-0.2
GTA				sP	pwP	10 45 39.8	+8.3
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JTM	**Tenmabayashi**	**54.58**	**19**	P	**P**	**10 45 30.1**	**-1.5**
USA0B	**Ussuriysk Arra**	**55.54**	**10**	P	**P**	**10 45 37.9**	**-0.6**
USRK	**Ussuriysk Ar.**	**55.54**	**10**	P	**P**	**10 45 37.5**	**-1.0**
	comp=Z,4.8nm,0.6s,baz=189,slow=7.1,SNR=15						
USRK	**Ussuriysk Ar.**	**55.54**	**10**	P	**P**	**10 45 38.0**	**-0.5**
JKA	**Kamikawa-asahi**	**58.07**	**19**	P	**P**	**10 45 55.8**	**-0.6**
ULN	**Ulaanbaatar**	**59.39**	**350**	P	**P**	**10 46 06.0**	**+0.3**
SONM	**Songino Array**	**59.48**	**349**	P	**P**	**10 46 06.4**	**0.0**
	comp=Z,11nm,0.7s,baz=166,slow=9.4,SNR=14						
SONM	**Songino Array**	**59.48**	**349**		**P**	**10 46 06.2**	**-0.1**
WMQ	**Urumqi**	**61.78**	**334**	*e*P	**P**	**10 46 23.8**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,68nm,4.1s						
TLY	**Talaya**	**63.69**	**348**	P	**P**	**10 46 34.8**	**+0.3**
	comp=Z,9.4nm,0.7s,baz=269,slow=4.0,SNR=10						
TLY	**Talaya**	**63.69**	**348**	P	**P**	**10 46 34.9**	**+0.3**
KSH	**Kashi**	**64.69**	**323**	P	**P**	**10 46 41.8**	**+0.3**
KSH				pmax	pmax		
	comp=Z,17nm,0.9s						
KSH				pmax	pmax		
	comp=Z,280nm,6.2s						
KDJ	**Kajisay**	**65.74**	**326**	P	**P**	**10 46 47.6**	**-0.7**
KDJ				IAmb	IAmb	10 46 49.8	
	comp=Z,7.1nm,1.2s						
KBL	**Kabul**	**66.18**	**315**		**P**	**10 46 51.3**	**-0.1**
MK31	**Makanchi Array**	**66.49**	**332**		**P**	**10 46 52.6**	**-0.2**
MKAR	**Makanchi Array**	**66.49**	**332**	P	**P**	**10 46 53.2**	**+0.3**
	comp=Z,8.6nm,0.6s,baz=141,slow=7.6,SNR=60						
MKAR	**Makanchi Array**	**66.49**	**332**	P	**P**	**10 46 52.9**	**0.0**
MAKZ	**Makanchi**	**66.65**	**332**	P	**P**	**10 46 53.9**	**0.0**
MAKZ				IAmb	IAmb	10 46 54.3	
	comp=Z,3.5nm,0.8s						
BOOM	**Boomskoye usch**	**66.66**	**326**	P	**P**	**10 46 53.9**	**-0.3**
AAK	**Ala-Archa**	**67.56**	**325**	P	**P**	**10 47 00.0**	**+0.1**
WSAR	**Wadi Sarin**	**69.13**	**300**	P	**P**	**10 47 11.0**	**+1.0**
	comp=Z,6.0nm,0.8s,baz=178,slow=3.7,SNR=3.8						
SOCY	**Socotra**	**69.73**	**287**	P	**P**	**10 47 13.2**	**-0.7**
SOCY				IAmb	IAmb	10 47 22.4	
	comp=Z,7.8nm,0.9s						
KK31	**Karatay Array**	**70.14**	**323**	P	**P**	**10 47 15.0**	**-0.8**
KKAR	**Karatay Array**	**70.14**	**323**	P	**P**	**10 47 15.0**	**-0.8**
VNDA	**Vanda**	**70.21**	**171**	P	P	10 47 19.0	+3.4
	comp=Z,1.1nm,0.9s,baz=310,slow=7.4,SNR=5.2						
VNDA	**Vanda**	**70.21**	**171**	P	**P**	**10 47 16.3**	**+0.6**
VNDA				IAmb	IAmb	10 47 35.2	
	comp=Z,7.2nm,1.4s						
PEA0B	**Petropavlovsk-**	**70.99**	**23**	P	**P**	**10 47 21.3**	**+0.6**
PETK	**Petropavlovsk-**	**70.99**	**23**	P	**P**	**10 47 21.2**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=191,slow=6.0,SNR=4.9						
KURBB	**Kurchatov Arra**	**71.00**	**333**	P	**P**	**10 47 21.0**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=147,slow=5.6,SNR=35						
ZAA0	**Zalesovo Array**	**71.01**	**339**	P	**P**	**10 47 19.8**	**-1.0**
ZALV	**Zalesovo Beam**	**71.01**	**339**	P	**P**	**10 47 20.4**	**-0.4**
	comp=Z,16nm,0.6s,baz=141,slow=4.5,SNR=60						
MA2	**Magadan**	**74.07**	**16**	P	**P**	**10 47 39.0**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=182,slow=6.7,SNR=6.0						
MA2	**Magadan**	**74.07**	**16**	P	**P**	**10 47 39.8**	**+0.9**
MA2				IAmb	IAmb	10 47 41.8	
	comp=Z,8.3nm,0.9s						
GEYT	**Alibeck**	**75.53**	**314**	P	**P**	**10 47 49.2**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=191,slow=12,SNR=7.0						
GEYT	**Alibeck**	**75.53**	**314**	P	**P**	**10 47 47.9**	**0.0**
GEYT				IAmb	IAmb	10 47 50.2	
	comp=Z,4.1nm,1.0s						
GYA0B	**ALIBECK ARRAY**	**75.53**	**314**	P	**P**	**10 47 47.5**	**-0.4**
GYA0B				IAmb	IAmb	10 47 49.7	
	comp=Z,5.1nm,0.8s						
BVAR	**Borovoye Array**	**76.34**	**332**	P	**P**	**10 47 52.4**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=143,slow=18,SNR=26						
BRVK	**Borovoye**	**76.41**	**332**	P	**P**	**10 47 52.2**	**-0.3**
BRVK				IAmb	IAmb	10 47 53.8	
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**79.41**	**180**	P	**P**	**10 48 11.1**	**+1.9**
	comp=Z,3.2nm,0.9s,baz=358,slow=0.9,SNR=9.5						
QSPA	**South Pole Qui**	**79.41**	**180**	P	**P**	**10 48 09.2**	**0.0**
QSPA				IAmb	IAmb	10 48 23.4	
	comp=Z,11nm,1.2s						
ABKAR	**Akbulak array**	**79.65**	**325**	P	**P**	**10 48 10.3**	**-0.2**
ABKAR	**Akbulak array**	**79.65**	**325**	P	**P**	**10 48 10.6**	**+0.1**
ABKAR				IAmb	IAmb	10 48 12.1	
	comp=Z,8.4nm,1.2s						
TIXI	**Tiksi**	**82.25**	**3**	P	**P**	**10 48 23.0**	**-1.0**
TIXI				IAmb	IAmb	10 48 24.0	
	comp=Z,3.9nm,0.9s						
ARU	**Arti**	**83.92**	**330**	P	**P**	**10 48 32.6**	**-0.3**
KBZ	**Khabaz**	**88.37**	**315**	P	**P**	**10 48 56.7**	**+1.6**
	comp=Z,1.7nm,0.7s,baz=188,slow=9.5,SNR=5.8						
SNAA	**Sanae**	**89.84**	**195**	P	**P**	**10 49 04.4**	**+2.7**
VNA3	**Neumayer Olymp**	**91.83**	**194**	P	**P**	**10 49 12.4**	**+1.6**
KLMR	**Klimovskoe**	**94.76**	**331**	*e*P	**P**	**10 49 23.0**	**-1.4**
KLMR				AMP		10 49 26.7	
	comp=Z,27nm,1.5s						
FINES	**FINESS Array B**	**101.29**	**331**	P	**Pdif**	**10 49 54.0**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=318,slow=10,SNR=4.1						
TORD	**Torodi Ar. Bea**	**120.08**	**279**	PKP	**PKiKP**	**10 54 56.2**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=45,slow=2.1,SNR=9.2						
LPAZ	**La Paz**	**151.99**	**162**	PKPbc	**PKiKP**	**10 56 02.4**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=160,slow=3.2,SNR=5.1						

*IDC **26** 10:37:56.2±0.4, 10.39S×120.56E, h0km, mb4.9/31, mb1 4.9/35, mb1mx4.8/44, mbtmp4.9/35, ML4.9/4, MS4.4/14, Ms1 4.4/14, ms1mx4.2/33, Error ellipse: s-maj=14.7km s-min=10.2km az=70.0*

*DJA **26** 10:37:59.3±0.8, 11.5S±6.×12.0E±.°, h14km±4km, M5.1/8, mb5.5/8, mB5.5/8, MLv5.1/6, Mw(mB)5.0/8, MwMwp5.1/1, Mwp5.4/1*

*MOS **26** 10:37:59.0±1.1, 10.46S×120.49E, h36km, mb5.4/63, Error ellipse: s-maj=9.4km s-min=4.6km az=112.8*

*NEIC **26** 10:38:00.1±1.8, 10.59S±0.04×120.41E±0.05, h35km±1km, mb5.1/98, Error ellipse: s-maj=10.1km s-min=3.2km az=131.0*

ISC 26 10:37:59.8±0.2, 10.58S±0.04×120.44E±0.03, h31km, n485, σ1.9s35/481, mb5.2/142, MS4.3/15, 17C-2D, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.38**	**20**	P	**Pb**	**10 38 08.7**	**+0.1**
BASI				S	**Sn**	**10 38 18.6**	**+3.0**
WBSI	**Waikabubak, Su**	**1.40**	**312**	P	**Pn**	**10

WB2 Warramunga Arr 16.32 126 Pn 10 41 45.8 -1.0
WR0 Warramunga Arr 16.48 126 Pn 10 41 47.4 -1.5
KASI Kota Agung 16.57 286 P **P 10 41 54.3 +2.0**
comp=Z,3µmcomp=Z,392nm,1.1s
KKM Kota Kinabalu 17.05 346 Pn 10 41 55.8 -0.3
LHSI Lahat 18.07 291 P **P 10 42 14.1 +5.2**
DAV Davao City (W) 18.27 16 LR LR 10 49 56.4
comp=Z,700nm,19.4s,baz=231,slow=40
ASPA Alice Springs 18.27 137 P **Pn 10 42 12.4 +1.2**
baz=18
AS31 Alice Springs 18.28 137 P 10 42 10.8 -0.4
ASAR Alice Springs 18.28 137 P **Pn 10 42 12.2 +1.0**
comp=Z,4.3nm,0.3s,baz=316,slow=12,SNR=26
ASAR S **Sn 10 45 25.9 -8.6**
comp=Z,0.8nm,0.3s,baz=311,slow=24,SNR=11
ASAR LR LR 10 50 02.0
comp=Z,2µm,18.9s,baz=306,slow=40
ASAR Alice Springs 18.28 137 P P 10 42 10.9 -0.3
ASAR Alice Springs 18.28 137 P P 10 42 10.9 -0.3
MNAI Manna 18.40 288 P P 10 42 11.8 -0.8
MORW Morawa 18.85 192 P Pn 10 42 18.7 +0.6
baz=19,SNR=7.4
MORW Morawa 18.85 192 P P 10 42 17.4 0.0
BLDU Ballidu 20.23 189 P Pn 10 42 34.4 -0.2
baz=20,SNR=4.2
MYKOM Kota Tinggi 20.59 306 P P 10 42 36.3 -0.2
KMBL Kambalda 20.73 177 P **P 10 42 39.4 +1.5**
baz=21,SNR=6.4
QIS Mount Isa 20.93 121 P Pn 10 42 42.8 -0.1
baz=21,SNR=6.4
KLBR Kellerberrin 21.06 186 P P 10 42 43.6 +2.2
baz=21,SNR=6.8
FORT Forrest 21.31 162 P P 10 42 44.1 0.0
FORT IAmb IAmb 10 43 01.9
comp=Z,56nm,0.9s
MUN Mundaring 21.65 190 P **P 10 42 49.7 +1.9**
baz=22,SNR=4.8
BKNI Bangkinang 22.13 298 P P 10 42 52.8 -0.3
BKNI IAmb IAmb 10 43 06.6
comp=Z,134nm,1.1s
NWAO Narrogin (SRO) 22.43 187 P P 10 42 59.1 +2.9
comp=Z,37nm,1.1s,baz=28,slow=8.4,SNR=3.6
NWAO LR LR 10 52 38.3
comp=Z,2µm,19.5s,baz=12,slow=39
NWAO Narrogin (SRO) 22.43 187 P **P 10 42 57.1 +0.8**
baz=22,SNR=4.0
NWAO Narrogin (SRO) 22.43 187 P P 10 42 56.2 0.0
NWAO pmax pmax
comp=Z,88nm,1.4s
NWAO Narrogin (SRO) 22.43 187 P P 10 42 56.2 0.0
NWAO IAmb IAmb 10 43 09.2
comp=Z,88nm,1.4s
NWAO Narrogin (SRO) 22.43 187 P P 10 42 55.4 -0.9
NWAO IAmb IAmb 10 43 09.3
comp=Z,70nm,1.4s
COEN Coen 22.46 101 P **P 10 42 57.1 +0.4**
baz=22
COEN Coen 22.46 101 P P 10 42 56.0 -0.7
COEN IAmb IAmb 10 43 00.8
comp=Z,50nm,1.1s
MTSU Mount Surprise 24.30 111 P **P 10 43 17.9 +3.1**
baz=24,SNR=9.9
IPM Ipoh 24.45 307 P P 10 43 15.4 -0.8
TGY Tagaytay City 24.53 1 P P 10 43 16.7 -0.2
comp=Z,165nm,0.4s,baz=308,slow=21,SNR=5.8
RPSI Rantau Prapat 25.16 300 P P 10 43 22.4 -0.1
RPSI IAmb IAmb 10 43 24.0
comp=Z,32nm,0.9s
PSI Prapat 25.21 301 P P 10 43 22.9 -0.3
comp=Z,25nm,0.8s,baz=180,slow=6.5,SNR=14
PSI Prapat 25.21 301 P P 10 43 22.4 -0.8
PSI pmax pmax
comp=Z,32nm,0.9s
KULM Kulim 25.24 308 P P 10 43 22.8 -0.5
PMG Port Moresby 26.33 90 P P 10 43 33.0 -0.3
comp=Z,21nm,0.8s,baz=244,slow=7.3,SNR=5.9
PMG Port Moresby 26.33 90 *i* P **P 10 43 28.2 -5.1**
PMG pmax pmax
comp=Z,19nm,0.8s
PMG Port Moresby 26.33 90 P P 10 43 33.9 +0.6
PMG IAmb IAmb 10 43 49.0
comp=Z,28nm,0.9s
BBOO Buckleboo 26.39 149 P P 10 43 35.4 +1.8
baz=26,SNR=6.2
BBOO Buckleboo 26.39 149 P P 10 43 34.2 +0.7
BBOO IAmb IAmb 10 43 39.0
comp=Z,37nm,1.0s
CTA Charters Tower 26.59 114 P P 10 43 36.4 +0.8
comp=Z,16nm,0.9s,baz=284,slow=13,SNR=10
CTAO Charters Tower 26.59 114 P P 10 43 36.6 +1.0
CTAO pmax pmax
comp=Z,31nm,1.1s
CTAO Charters Tower 26.59 114 P P 10 43 36.6 +1.0
MANU Manus Island 28.05 74 P P 10 43 48.8 +0.1
MANU IAmb IAmb 10 43 57.7
comp=Z,28nm,0.9s
STKA Stephens Creek 28.83 140 P P 10 43 57.3 +1.8
comp=Z,11nm,0.9s,baz=337,slow=8.9,SNR=5.4
STKA LR LR 10 56 18.8
comp=Z,612nm,18.9s,baz=318,slow=38
STKA Stephens Creek 28.83 140 P **P 10 43 58.1 +2.6**
baz=29,SNR=4.2
STKA Stephens Creek 28.83 140 P P 10 43 55.6 +0.1
STKA pmax pmax
comp=Z,3.0nm,1.0s
STKA Stephens Creek 28.83 140 P P 10 43 55.5 +0.1
UBPT Khong Chiam 29.67 330 P P 10 44 02.6 -0.4
UBPT IAmb IAmb 10 44 04.8
comp=Z,28nm,1.1s
PATY Pattaya 30.38 320 P **P 10 44 10.0 +0.7**
comp=Z,75nm,0.8s
SRAK Srakaew 30.50 323 P **P 10 44 07.8 -2.6**
comp=Z,5µmcomp=Z,805nm,0.9s
RMQ Roma 31.05 125 P **P 10 44 15.7 +0.4**
baz=31,SNR=4.4
PHET Kaeng Krachan 31.17 318 P P 10 44 18.1 +1.8
comp=Z,17nm,0.7s
KHON Khomkaen 31.93 327 P P 10 44 24.2 +1.3
comp=Z,51nm,0.9s
CHAI Chaiyaphum 32.04 325 P P 10 44 25.0 +1.1
comp=Z,770nmcomp=Z,88nm,0.9s
NONG Nongkai 33.19 329 P P 10 44 34.6 +0.6
comp=Z,55nm,1.5s
UTHA Uthaitani 33.27 321 P P 10 44 35.9 +1.2
comp=Z,749nmcomp=Z,82nm,1.0s
TPUB Ta-pu 33.67 0 P P 10 44 37.2 -0.9
YULB Yu-li 33.77 1 P P 10 44 39.3 +0.3
YULB IAmb IAmb 10 44 41.3
comp=Z,24nm,0.9s
PHIT Phitsanulok 33.96 324 P P 10 44 42.4 +1.7
comp=Z,7µmcomp=Z,316nm,0.9s
UMPA Umpang Tak 34.13 321 P P 10 44 42.6 +0.4
comp=Z,5µmcomp=Z,58nm,1.0s
SSLB Suanglung 34.16 1 P P 10 44 41.3 -1.1
SSLB IAmb IAmb 10 44 42.8
comp=Z,46nm,1.3s
UTTA Uttaradit 34.32 325 P P 10 44 45.3 +1.5
comp=Z,603nmcomp=Z,48nm,1.0s
SUKH Sukhothai 34.65 323 P P 10 44 48.1 +1.5
comp=Z,63nm,1.0s
YNG Young 34.78 137 P P 10 44 51.2 +3.4
baz=35,SNR=8.8
YOJ Yonaguni jima 34.92 4 P P 10 44 48.4 -0.5
YOJ pmax pmax
comp=Z,125nm,1.1s
YOJ Yonaguni jima 34.92 4 P P 10 44 48.4 -0.5
YHNB Yeheng 35.05 1 P P 10 44 49.1 -1.1
YHNB IAmb IAmb 10 45 05.4
comp=Z,48nm,1.2s
TOO Toolangi 35.06 144 P P 10 44 50.4 +0.3
TOO pmax pmax
comp=Z,21nm,1.0s
TOO Toolangi 35.06 144 P P 10 44 50.4 +0.3
TOO IAmb IAmb 10 44 55.5
comp=Z,21nm,1.0s
ARMA Armidale 35.06 129 P P 10 44 49.3 -1.1
ARMA IAmb IAmb 10 45 05.4
comp=Z,42nm,1.4s
CM04 Chiang Mai Arr 35.75 324 P P 10 44 57.0 +0.8
comp=Z,230nmcomp=Z,25nm,1.1s
CM05 Chiang Mai Arr 35.77 323 P P 10 44 57.8 +1.4
comp=Z,157nmcomp=Z,12nm,1.1s
CM36 Chiang Mai Arr 35.77 324 P P 10 44 57.0 +0.6
CM09 Chiang Mai Arr 35.78 324 P P 10 44 58.0 +1.6
comp=Z,184nmcomp=Z,22nm,1.1s
CM01 Chiang Mai Arr 35.78 324 P P 10 44 58.0 +1.6
comp=Z,198nmcomp=Z,22nm,1.1s
CM02 Chiang Mai Arr 35.80 324 P P 10 44 58.1 +1.5
comp=Z,162nmcomp=Z,18nm,1.3s
CM13 Chiang Mai Arr 35.81 323 P P 10 44 57.9 +1.2
comp=Z,169nmcomp=Z,18nm,1.2s
CM31 Chiang Mai Arr 35.82 324 P P 10 44 58.0 +1.3
comp=Z,6µmcomp=Z,492nm,1.1s
CM31 Chiang Mai Arr 35.82 324 P P 10 44 57.1 +0.4
CM31 IAmb IAmb 10 44 58.8
comp=Z,30nm,1.1s
CMAR Chiang Mai Arr 35.82 324 P P 10 44 57.5 +0.8
comp=Z,13nm,1.0s,baz=149,slow=6.7,SNR=35
CMAR PcP **PcP 10 47 26.7 +2.7**
comp=Z,2.9nm,0.9s,baz=176,slow=3.3,SNR=5.6
CMAR LR LR 11 01 18.8
comp=Z,1µm,18.2s,baz=195,slow=39
CMAR Chiang Mai Arr 35.82 324 *i* P **P 10 44 57.9 +1.2**
CMAR pmax pmax
comp=Z,10.0nm,0.9s
CMAR Chiang Mai Arr 35.82 324 P P 10 44 56.9 +0.2
CMAR **PcP 10 47 24.4 +0.3**
CM15 Chiang Mai Arr 35.82 323 P P 10 44 58.2 +1.4
comp=Z,176nmcomp=Z,16nm,1.1s
CM35 Chiang Mai Arr 35.87 324 P P 10 44 58.0 +0.8
CM34 Chiang Mai Arr 36.01 324 P P 10 44 59.0 +0.6
CM32 Chiang Mai Arr 36.02 324 P P 10 45 00.0 +1.5
CMMT Chiang Mai 36.09 324 P P 10 44 59.1 0.0
comp=Z,378nmcomp=Z,19nm,1.1s
CHTO Chiang Mai 36.09 324 P P 10 44 59.5 +0.4
CHTO pmax pmax
comp=Z,34nm,1.0s
CHTO Chiang Mai 36.09 324 P P 10 44 59.5 +0.4
CHTO IAmb IAmb 10 45 00.9
comp=Z,34nm,1.0s
CM33 Chiang Mai Arr 36.10 324 P P 10 44 59.0 -0.2
MHMT Maesarieng 36.20 322 P P 10 45 00.0 0.0
comp=Z,36nm,1.2s
JOW Kunigami 37.96 11 LR LR 11 01 54.2
comp=Z,310nm,20.4s,baz=192,slow=38
HNR Honiara 38.90 92 P P 10 45 24.3 +1.2
HNR pmax pmax
comp=Z,64nm,0.7s
HNR Honiara 38.90 92 P P 10 45 24.2 +1.2
GYA Guiyang 39.18 340 ⇑P **P 10 45 25.5 +0.2**
GYA pmax pmax
comp=Z,4.0nm,1.0s
KMI Kunming 39.46 334 ⇑P **P 10 45 29.5 +1.7**
KMI pP sP 10 45 41.0 +0.9
KMI sP pwP 10 45 54.0 +18
KMI pmax pmax
comp=Z,53nm,1.0s
KMI LR LR
comp=N,390nm,17.1s
KMI LR LR
comp=E,440nm,15.9s
KMI LR LR
comp=Z,370nm,19.6s
WHN Wuhan 41.30 352 ⇑P **P 10 45 43.3 +0.7**
WHN sP **sP 10 45 54.5 -0.5**
WHN pmax pmax
comp=Z,140nm,1.1s
ENH Enshi 41.96 346 P P 10 45 48.0 -0.1
ENH IAmb IAmb 10 45 49.1
comp=Z,61nm,0.9s
NJ2 Nanjing 42.42 358 *e*P P 10 46 02.0 +10
NJ2 pmax pmax
comp=Z,12nm,0.5s
JSU Suzuyama 42.93 13 P P 10 45 55.0 -0.9
JCJ Chichijima 42.99 29 P P 10 45 55.7 -0.7
comp=Z,64nm,0.7s,baz=270,slow=20,SNR=1.4
PALK Pallekele 43.36 293 LR LR 11 06 22.6
comp=Z,374nm,18.8s,baz=224,slow=39
CD2 Chengdu 44.26 339 *e*P P 10 46 15.5 +8.8
SHL Shillong 45.44 323 P P 10 46 15.6 -0.7
SHL pmax pmax
comp=Z,45nm,1.0s
SHL Shillong 45.44 323 P P 10 46 15.6 -0.7
XAN Xi'an 45.71 347 P P 10 46 17.5 -0.7
XAN pP pwP 10 46 28.0 -1.0
XAN sP sP 10 46 31.8 +1.2
XAN pmax pmax
comp=Z,67nm,1.3s
XAN pmax pmax
comp=Z,440nm,6.8s
XAN LR LR
comp=N,310nm,15.7s
XAN LR LR
comp=E,240nm,17.1s
XAN LR LR
comp=Z,480nm,18.7s
TIA Tai'an 46.65 356 P P 10 46 24.3 -1.2
TIA pmax pmax
comp=Z,12nm,1.1s
H08S2 Diego Garcia H 47.40 269 T T 11 37 00.5
baz=96,slow=76,SNR=18
H08S3 Diego Garcia H 47.41 269 T T 11 37 17.2
baz=96,slow=76,SNR=23
H08S1 Diego Carcia H 47.42 269 T T 11 37 08.1
baz=96,slow=76,SNR=15
JWT Wachi 47.76 17 P P 10 46 33.5 -0.7
JWT IAmb IAmb 10 46 34.9
comp=Z,20nm,1.1s
KSAR Wonju Array Be 48.28 8 P P 10 46 37.2 -0.9
KSAR Wonju Array Be 48.28 8 P P 10 46 37.2 -0.9
KSRS Korea Array 48.29 8 P P 10 46 37.5 -0.7
comp=Z,7.4nm,0.8s,baz=187,slow=8.7,SNR=24
KSRS PcP **PcP 10 48 06.0 +1.3**
comp=Z,3.4nm,1.0s,baz=197,slow=3.7,SNR=5.8
JGF Kuroka 48.63 18 P P 10 46 40.5 -0.5
LZH Lanzhou 48.99 342 *e*P **P 10 46 44.5 +0.7**
LZH pP pwP 10 46 55.3 +2.6
LZH sP sP 10 47 00.3 +4.0
LZH pmax pmax
comp=Z,36nm,1.3s
LZH pmax pmax
comp=Z,120nm,6.2s
LZH LR LR
comp=N,350nm,14.6s
LZH LR LR
comp=E,350nm,14.7s
LZH LR LR
comp=Z,280nm,17.9s
LSA Lhasa 48.99 326 P P 10 46 44.4 0.0
LSA pmax pmax
comp=Z,54nm,1.3s
LSA Lhasa 48.99 326 P P 10 46 44.4 0.0
MAJO Matsushiro 49.77 19 *i* P **P 10 46 48.3 -1.3**
MAJO pmax pmax
comp=Z,49nm,1.7s
MAJO Matsushiro 49.77 19 P P 10 46 48.2 -1.3
MAJO IAmb IAmb 10 46 49.5
comp=Z,21nm,0.9s
MAT Matsushiro 49.77 19 P P 10 46 47.3 -2.3
MJAR Matsushiro Arr 49.77 19 P P 10 46 47.6 -2.0
comp=Z,20nm,1.1s,baz=193,slow=7.8,SNR=23
MJAR PcP **PcP 10 48 11.1 +0.9**
comp=Z,4.4nm,1.0s,baz=206,slow=4.1,SNR=5.0
MJAR LR LR 11 09 14.9
comp=Z,176nm,18.7s,baz=195,slow=38
BJT Baijiatuau 50.50 356 P P 10 46 54.1 -0.9
BJT pmax pmax
comp=Z,80nm,1.2s
BJT Baijiatuau 50.50 356 P P 10 46 54.1 -0.9
BJI Beijing 50.52 356 P P 10 46 55.0 -0.2
BJI S S 10 54 21.0 +14
BJI pmax pmax
comp=Z,56nm,1.1s
BJI pmax pmax
comp=Z,190nm,3.6s
JSD Sado 51.16 18 P P 10 46 59.3 -0.7
JMM Marumori 51.82 20 P P 10 47 04.5 -0.5
HHC Hu-ho-hao-te 51.83 351 *e*P **P 10 47 05.5 +0.4**
HHC pmax pmax
comp=Z,46nm,1.0s
HHC pmax pmax
comp=Z,220nm,5.1s
GTA Gaotai 53.31 340 P P 10 47 16.8 +0.6
GTA pP pwP 10 47 27.5 +2.3
GTA sP sP 10 47 31.5 +2.8
GTA pmax pmax
comp=Z,17nm,1.3s
MSHR Mys Shultsa 53.80 10*ce*P **P 10 47 19.8 +0.3**
MSHR pmax pmax
comp=Z,23nm,0.9s
JTM Tenmabayashi 54.55 19 P P 10 47 24.3 -0.7
USA0B Ussuriysk Arra 55.52 10 P P 10 47 31.3 -0.7
USA0B pmax pmax
comp=Z,15nm,0.8s
USA0B Ussuriysk Arra 55.52 10 P P 10 47 31.3 -0.7
USA0B IAmb IAmb 10 47 32.4
comp=Z,15nm,0.8s
USRK Ussuriysk Ar. 55.52 10 P P 10 47 31.3 -0.7
comp=Z,12nm,0.7s,baz=198,slow=7.7,SNR=20
USRK Ussuriysk Ar. 55.52 10 P P 10 47 31.1 -0.9
MDJ Mudanjiang 55.56 8 P P 10 47 31.4 -0.8
MDJ IAmb IAmb 10 47 32.8
comp=Z,29nm,1.0s
BKZ Black Stump Fm 57.20 130 P P 10 47 45.6 +1.3
ASAJ Asahikawa 58.04 19 P P 10 47 49.6 -0.3
ASAJ pmax pmax
comp=Z,44nm,0.9s
JKA Kamikawa-asahi 58.04 19 P P 10 47 49.6 -0.2
ULN Ulaanbaatar 59.39 350*ce*P **P 10 47 59.7 +0.3**
ULN pmax pmax
comp=Z,39nm,1.5s
ULN Ulaanbaatar 59.39 350 P P 10 47 59.2 -0.2
SONM Songino Array 59.48 349 P P 10 48 00.4 +0.3
comp=Z,19nm,0.7s,baz=165,slow=8.9,SNR=22
SONM Songino Array 59.48 349 P P 10 48 00.5 +0.5
SONM pmax pmax
comp=Z,20nm,0.8s
SONM Songino Array 59.48 349 P P 10 48 00.5 +0.5
SONM IAmb IAmb 10 48 01.4
comp=Z,20nm,0.8s
HIA Hailar 59.59 359 *i* P **P 10 48 00.3 -0.3**
HIA pmax pmax
comp=Z,11nm,1.3s
HIA Hailar 59.59 359 P P 10 48 00.4 -0.2
HIA IAmb IAmb 10 48 01.5
comp=Z,34nm,1.5s
KLR Kul'dur 60.38 9 P **P 10 48 05.1 -0.9**
comp=Z,3.6nm,1.0s,baz=185,slow=6.1,SNR=11
KLR Kul'dur 60.38 9*ce*P **P 10 48 05.3 -0.7**
KLR pmax pmax
comp=Z,9.0nm,1.4s
YSS Yuzh-Sakhalins 60.65 17*ce*P **P 10 48 08.1 +0.3**
YSS pmax pmax
comp=Z,81nm,1.2s
YSS Yuzh-Sakhalins 60.65 17 P P 10 48 07.5 -0.4
WMQ Urumqi 61.79 334 *e*P P 10 48 25.0 +9.2
ZAK Zakamensk 62.53 348 *e*P **P 10 48 20.2 -0.4**
ZAK pmax pmax
comp=Z,18nm,1.0s
GRNR Gornyy 62.66 11⇑*i*P **P 10 48 21.6 +0.2**
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=E,70nm,12.0s
GRNR MLR MLR
comp=N,80nm,16.0s
GRNR MLR MLR
comp=Z,140nm,14.0s
NIL Nilore 62.83 317 P P 10 48 22.4 -0.5
NIL pmax pmax
comp=Z,17nm,1.1s
NIL Nilore 62.83 317 P P 10 48 22.4 -0.5
NIL IAmb IAmb 10 48 46.5
comp=Z,17nm,1.1s
TLY Talaya 63.69 348 P P 10 48 28.8 +0.6
comp=Z,20nm,0.7s,baz=227,slow=4.1,SNR=15
TLY Talaya 63.69 348 *e*P **P 10 48 28.0 -0.2**
TLY P **pwP 10 48 39.7 +2.4**
TLY pmax pmax
comp=Z,6.0nm,0.9s
TLY Talaya 63.69 348 P P 10 48 28.2 0.0
TLY IAmb IAmb 10 48 29.8
comp=Z,22nm,0.8s
IRK Irkutsk 64.10 349 *e*P **P 10 48 27.3 -3.6**
IRK pmax pmax
comp=Z,54nm,2.2s
TYV Tymovskoe 64.17 15 *e*P **P 10 48 32.1 +0.8**
TYV pmax pmax
comp=Z,200nm,4.9s
TYV pmax pmax
comp=Z,26nm,1.0s
MOY Mondy 64.24 347 *e*P **P 10 48 32.3 +0.4**
MOY pmax pmax
comp=Z,1.0nm,1.8s
ZEA Zeya 64.33 4 *e*P **P 10 48 31.9 -0.4**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.2s
KSH Kashi 64.72 323 P P 10 48 35.5 +0.2
KSH pP pP 10 48 42.5 -2.1
KSH S **S 10 57 14.5 +0.6**
KSH sS pS 10 57 26.3 +1.0
KSH pmax pmax
comp=Z,38nm,1.0s
KSH pmax pmax
comp=Z,710nm,10.2s
KSH LR LR
comp=N,310nm,10.2s
KSH LR LR
comp=E,330nm,11.4s
KSH LR LR
comp=Z,290nm,6.6s
SHLS Shalkode 65.24 328 *e*P **P 10 48 36.0 -2.7**
comp=Z,35nm,1.2s,baz=328
SHLS Shalkode 65.24 328 *e*P **P 10 48 35.9 -2.7**
SHLS pmax pmax
comp=Z,35nm,1.2s
UZB Uzynbulak 65.46 328 *e*P **P 10 48 38.8 -1.3**
comp=Z,15nm,0.9s,baz=328
UZB Uzynbulak 65.46 328 *e*P **P 10 48 38.8 -1.3**
UZB pmax pmax
comp=Z,15nm,0.9s
SATY Saty 65.73 327 *e*P **P 10 48 40.7 -1.2**
comp=Z,22nm,1.1s,baz=327
SATY Saty 65.73 327 *e*P **P 10 48 40.6 -1.2**
SATY pmax pmax
comp=Z,22nm,1.1s
KDJ Kajisay 65.75 326 P P 10 48 42.4 +0.3
KDJ pmax pmax
comp=Z,27nm,1.2s
KDJ Kajisay 65.75 326 P P 10 48 42.4 +0.3
KDJ IAmb IAmb 10 48 43.7
comp=Z,26nm,1.2s
ZSN Zaisan 65.87 334 *e*P **P 10 48 41.7 -0.9**
comp=Z,5.9nm,0.9s,baz=334
ZSN Zaisan 65.87 334 *e*P **P 10 48 41.6 -0.9**
ZSN pmax pmax
comp=Z,6.0nm,0.9s
KBL Kabul 66.21 315 P P 10 48 44.9 -0.3
KBL pmax pmax
comp=Z,19nm,0.7s
KBL Kabul 66.21 315 P P 10 48 44.9 -0.3
KBL IAmb IAmb 10 48 47.4
comp=Z,19nm,0.7s
TNSS Tian-Shan 66.49 327 *e*P **P 10 48 46.0 -1.1**
baz=327
TNSS Tian-Shan 66.49 327 *e*P **P 10 48 45.9 -1.1**
MK31 Makanchi Array 66.51 332*c i*P **P 10 48 46.5 -0.1**
MK31 Makanchi Array 66.51 332 P P 10 48 46.2 -0.4
MK31 IAmb IAmb 10 48 47.8
comp=Z,18nm,0.8s
MKAR Makanchi Array 66.51 332 P P 10 48 47.0 +0.4
comp=Z,18nm,0.7s,baz=139,slow=7.6,SNR=35
MKAR Makanchi Array 66.51 332*ce*P **P 10 48 46.7 +0.1**
MKAR pmax pmax
comp=Z,18nm,0.7s
MKAR Makanchi Array 66.51 332 P P 10 48 46.0 -0.6
MDOK Medeo 66.52 327 *e*P **P 10 48 45.8 -1.1**
baz=327
MDOK Medeo 66.52 327 *e*P **P 10 48 45.8 -1.1**
AAA Alma-Ata 66.63 327 *e*P **P 10 48 46.6 -0.9**
baz=327
AAA Alma-Ata 66.63 327 *e*P **P 10 48 46.6 -0.9**
DGZ Jazzator, Alta 66.64 337 *i* P **P 10 48 48.1 +0.6**
DGZ pmax pmax
comp=Z,19nm,0.7s
MAKZ Makanchi 66.66 332 P P 10 48 46.6 -1.0
MAKZ pmax pmax
comp=Z,14nm,1.0s
MAKZ Makanchi 66.66 332 P P 10 48 46.6 -1.0
MAKZ IAmb IAmb 10 48 48.1
comp=Z,14nm,1.0s
BOOM Boomskoye usch 66.68 326 P P 10 48 47.5 -0.5
BOOM pmax pmax
comp=Z,33nm,1.1s

BOOM Boomskoye usch 66.68 326 P P 10 48 47.5 -0.5
TDK Taldyqorghan 67.08 329 eP P 10 48 49.2 -1.1
comp=Z,40nm,1.2s,baz=329
TDK Taldyqorghan 67.08 329 eP P 10 48 49.2 -1.1
TDK pmax pmax
comp=Z,40nm,1.2s
TKM2 Tokmak 2 67.15 326 P P 10 48 50.9 -0.2
SNR=9.5
UCH Uchtor 67.31 325 P P 10 48 52.9 +0.5
SNR=9.9
KBK Karagaybulak 67.34 325 P P 10 48 53.2 +1.0
SNR=9.7
AAK Ala-Archa 67.58 325 P P 10 48 53.5 -0.2
AAK pmax pmax
comp=Z,27nm,1.0s
AAK Ala-Archa 67.58 325 P P 10 48 53.5 -0.2
AAK lAmb lAmb 10 48 55.4
comp=Z,27nm,1.0s
AML Almayashu 67.72 324 P P 10 48 55.2 +0.4
SNR=34
GAR Garm 67.86 320 P P 10 48 55.4 -0.1
USP Ospenovka 67.99 326 P P 10 48 56.6 +0.5
SNR=7.5
EKS2 Erkin-Say 68.01 325 P P 10 48 57.4 +1.1
SNR=17
SGDS Sogindy 68.03 326 eP P 10 48 54.8 -1.7
comp=Z,13nm,1.1s,baz=326
SGDS Sogindy 68.03 326 eP P 10 48 54.7 -1.7
SGDS pmax pmax
comp=Z,13nm,1.1s
MAW Mawson 68.25 200 P P 10 48 59.5 +2.2
comp=Z,10nm,1.2s,baz=47,slow=9.1,SNR=5.4
MAW Mawson 68.25 200 P P 10 48 57.6 +0.3
MAW pmax pmax
comp=Z,3.0nm,1.2s
MAW Mawson 68.25 200 P P 10 48 57.6 +0.3
BOD Bodaibo 68.36 356 eP P 10 48 57.9 -0.1
BOD pmax pmax
comp=Z,27nm,1.3s
CHGR Chuyangaron 68.41 319 P P 10 48 59.5 +0.6
WSAR Wadi Sarin 69.17 300 P P 10 49 05.0 +1.1
comp=Z,11nm,0.9s,baz=116,slow=9.1,SNR=5.3
BTLS Baital 69.39 327 eP P 10 49 03.8 -0.9
baz=327
BTLS Baital 69.39 327 eP P 10 49 03.8 -0.9
DZA Taraz 69.56 324 eP P 10 49 04.6 -1.4
baz=324
DZA Taraz 69.56 324 eP P 10 49 04.5 -1.4
SOCY Socotra 69.77 287 P P 10 49 08.2 +0.4
SOCY lAmb lAmb 10 49 22.6
comp=Z,19nm,1.0s
TAS Tashkent 69.85 321 P P 10 49 08.0 +0.3
TAS pmax pmax
comp=Z,46nm,0.6s
TAS Tashkent 69.85 321 P P 10 49 08.0 +0.3
IUG luzhnay 69.88 322 eP P 10 49 06.7 -1.3
baz=322
IUG luzhnay 69.88 322 eP P 10 49 06.7 -1.3
SEM Semipalatinsk 70.10 334 eP P 10 49 07.7 -1.7
comp=Z,9.1nm,0.9s,baz=334
SEM Semipalatinsk 70.10 334 eP P 10 49 07.6 -1.7
SEM pmax pmax
comp=Z,9.0nm,0.9s
KK31 Karatay Array 70.17 323 P P 10 49 09.1 -0.5
KK31 pmax pmax
comp=Z,11nm,1.0s
KK31 Karatay Array 70.17 323 P P 10 49 09.1 -0.5
KK31 lAmb lAmb 10 49 11.5
comp=Z,11nm,1.0s
KKAR Karatay Array 70.17 323 P P 10 49 09.9 +0.3
KKAR pmax pmax
comp=Z,11nm,1.0s
KKAR Karatay Array 70.17 323 P P 10 49 09.9 +0.3
KKAR lAmb lAmb 10 49 11.5
comp=Z,11nm,1.0s
KKAR Karatay Array 70.17 323 P P 10 49 09.1 -0.5
VNDA Vanda 70.22 171 P P 10 49 11.6 +2.2
comp=Z,5.8nm,1.0s,baz=306,slow=4.7,SNR=9.2
VNDA Vanda 70.22 171 P P 10 49 10.0 +0.6
VNDA pmax pmax
comp=Z,9.0nm,1.2s
VNDA Vanda 70.22 171 P P 10 49 10.0 +0.6
OPO Ambohidratompo 70.95 254 P P 10 49 17.6 +2.5
comp=Z,7.1nm,0.9s,baz=120,slow=2.6,SNR=5.9
PETK Petropavlovsk- 70.96 23 P P 10 49 14.7 +0.5
comp=Z,7.0nm,0.7s,baz=199,slow=6.3,SNR=12
PETK Petropavlovsk- 70.96 23 P P 10 49 14.2 0.0
KURBB Kurchatov Arra 71.01 333 P P 10 49 14.7 +0.2
comp=Z,8.9nm,0.6s,baz=143,slow=5.2,SNR=32
ZAA0 Zalesovo Array 71.02 339 P P 10 49 13.3 -1.2
ZALV Zalesovo Beam 71.02 339 P P 10 49 14.2 -0.3
comp=Z,44nm,0.8s,baz=141,slow=4.5,SNR=57
ZALV Zalesovo Beam 71.02 339 iP P 10 49 13.8 -0.7
ZALV pmax pmax
comp=Z,44nm,0.8s
ZALV Zalesovo Beam 71.02 339 P P 10 49 13.7 -0.8
KURK Kurchatov 71.04 333 P P 10 49 14.7 0.0
YAK Yakutsk 72.74 5 P P 10 49 24.6 -0.1
comp=Z,11nm,0.3s,baz=302,slow=1.3,SNR=7.0
YAK Yakutsk 72.74 5 eP P 10 49 23.6 -1.1
YAK pmax pmax
comp=Z,30nm,0.8s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK Yakutsk 72.74 5 P P 10 49 23.9 -0.7
BRZS Berezniki 73.30 330 eP P 10 49 27.3 -1.1
comp=E,20nm,1.1s,baz=330
BRZS Berezniki 73.30 330 eP P 10 49 27.2 -1.1
BRZS pmax pmax
comp=Z,20nm,1.1s
MA2 Magadan 74.05 16 P P 10 49 32.9 +0.5
comp=Z,11nm,0.7s,baz=201,slow=4.1,SNR=11
MA2 Magadan 74.05 16 ceP P 10 49 33.2 +0.8
MA2 pmax pmax
comp=Z,18nm,0.9s
MA2 Magadan 74.05 16 P P 10 49 32.9 +0.5
MA2 lAmb lAmb 10 49 33.8
comp=Z,16nm,0.9s
GEYT Alibeck 75.56 314 P P 10 49 43.1 +1.4
comp=Z,4.7nm,0.5s,baz=143,slow=5.2,SNR=14
GEYT LR LR 11 26 31.6
comp=Z,176nm,20.6s,baz=235,slow=39
GEYT Alibeck 75.56 314 P P 10 49 42.3 +0.6
GYA0B ALIBECK ARRAY 75.56 314 P P 10 49 42.3 +0.6
GYA0B lAmb lAmb 10 49 44.2
comp=Z,29nm,1.2s
BVAR Borovoye Array 76.35 332 P P 10 49 45.9 0.0
comp=Z,13nm,0.8s,baz=138,slow=18,SNR=34
BRVK Borovoye 76.42 332 ceP P 10 49 46.2 0.0
BRVK pmax pmax
comp=Z,57nm,1.7s
BRVK Borovoye 76.42 332 P P 10 49 46.2 0.0
BRVK lAmb lAmb 10 49 47.7
comp=Z,32nm,1.1s
SYO Syowa Base 76.91 201 eP P 10 49 47.6 -1.2
SEY Seymchan 77.32 14 iP P 10 49 51.4 +0.3
QSPA South Pole Qui 79.42 180 P P 10 50 04.9 +2.0
comp=Z,12nm,1.1s,baz=109,slow=0.4,SNR=12
QSPA South Pole Qui 79.42 180 P P 10 50 02.9 -0.1
QSPA lAmb lAmb 10 50 06.0
comp=Z,21nm,1.2s
ABKAR Akbulak array 79.67 325 P P 10 50 04.6 +0.3
ABKAR lAmb lAmb 10 50 05.9
comp=Z,42nm,1.4s
ABKAR Akbulak array 79.67 325 P P 10 50 04.0 -0.4
RAYN Ar Rayn 80.67 296 P P 10 50 10.8 +0.4
RAYN pmax pmax
comp=Z,9.0nm,1.1s
RAYN Ar Rayn 80.67 296 P P 10 50 10.8 +0.4
TIXI Tiksi 82.24 3 P P 10 50 16.7 -0.9
TIXI pmax pmax
comp=Z,24nm,1.1s
TIXI Tiksi 82.24 3 P P 10 50 16.6 -0.9
TIXI lAmb lAmb 10 50 18.4
comp=Z,24nm,1.1s
NRIK Noril'sk 82.97 349 P P 10 50 21.9 +0.6
comp=Z,8.5nm,0.9s,baz=139,slow=4.5,SNR=15
NRIK LR LR 11 30 06.2
comp=Z,198nm,21.9s,baz=150,slow=38
NRIK Noril'sk 82.97 349 ceP P 10 50 22.0 +0.6
NRIK pmax pmax
comp=Z,23nm,1.2s
NRIK Noril'sk 82.97 349 P P 10 50 21.1 -0.3
NRIK lAmb lAmb 10 50 24.5
comp=Z,24nm,1.2s
KMBO Kilima Mbogo 83.10 270 P P 10 50 25.6 +1.9
comp=Z,4.1nm,1.0s,baz=72,slow=5.1,SNR=6.3
SVE Sverdlovsk 83.14 331 ieP P 10 50 22.9 +0.3
SVE pmax pmax
comp=Z,58nm,1.3s
ARU Arti 83.93 330 ciP P 10 50 26.6 0.0
ARU 10 53 37.7
ARU S S 11 00 46.6 -1.6
ARU SS SS 11 06 13.5 -3.4
ARU pmax pmax
comp=Z,45nm,1.2s
ARU Arti 83.93 330 P P 10 50 26.2 -0.4
AKT Akhty 84.31 314 eP P 10 50 30.7 +1.6
AKT pmax pmax
comp=Z,52nm,1.4s
BILL Bilibino 84.91 16 iP P 10 50 28.3 -3.1
BILL i 10 50 36.3
BILL pmax pmax
comp=Z,2.0nm,0.9s
GROC Groznyy 86.22 315 eP P 10 50 39.5 +1.1
GROC pmax pmax
comp=Z,19nm,0.4s
ZEI Tsey 87.42 314 eP P 10 50 45.4 +0.8
ZEI pmax pmax
comp=Z,15nm,1.1s
BELG Belogornoye 88.06 324 iP P 10 50 47.3 +0.2
BELG pmax pmax
comp=Z,23nm,1.1s
NEY Neytrino 88.38 314 iP P 10 50 47.3 -1.8
NEY pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 88.39 315 P P 10 50 50.4 +1.5
comp=Z,5.4nm,1.0s,baz=152,slow=1.9,SNR=9.8
KBZ Khabaz 88.39 315 ceP P 10 50 49.5 +0.6
KBZ pmax pmax
comp=Z,5.0nm,0.9s
KIV Kislovodsk 88.60 315 eP P 10 50 51.2 +1.1
KIV pmax pmax
comp=Z,11nm,0.9s
GOF Gofitskoye 88.67 316 ieP P 10 50 51.4 +1.2
GOF pmax pmax
comp=Z,46nm,1.0s
KIRV Kirov 89.31 330 ceP P 10 50 52.2 -0.6
LSZ Lusaka 89.40 255 P P 10 50 53.8 -0.7
LSZ pmax pmax
comp=Z,12nm,1.2s
LSZ Lusaka 89.40 255 P P 10 50 53.8 -0.7
LSZ lAmb lAmb 10 50 57.6
comp=Z,12nm,1.1s
SNAA Sanae 89.86 195 P P 10 50 57.3 +1.8
SNAA Sanae 89.86 195 iP P 10 50 56.4 +0.9
SNAA Sanae 89.86 195 P P 10 50 56.4 +0.9
SNAA lAmb lAmb 10 50 59.5
comp=Z,12nm,1.1s
BELA Belgrano 2 90.58 185 P P 10 50 58.8 +0.1
BELA lAmb lAmb 10 51 02.2
comp=Z,16nm,1.2s
VNA2 Neumayer--Watz 91.49 195 P P 10 51 05.6 +2.6
BR131 Keskin Array S 94.24 309 P P 10 51 16.8 +0.4
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 94.24 309 P 10 51 16.8 +0.4
BR131 lAmb lAmb 10 51 17.6
comp=Z,3.9nm,0.8s
BRTR Keskin Array B 94.24 309 P P 10 51 17.0 +0.6
comp=Z,1.6nm,0.9s,baz=114,slow=5.5,SNR=7.9
BRTR LR LR 11 40 14.1
comp=Z,70nm,18.8s,baz=90,slow=40
BRTR Keskin Array B 94.24 309 P P 10 51 16.4 0.0
MOS Moscow 94.64 326 eP P 10 51 15.9 -1.7
KLMR Klimovskoe 94.77 331 eP P 10 51 15.5 -2.6
KLMR pmax pmax
comp=Z,45nm,1.3s
KLMR Klimovskoe 94.77 331 eP P 10 51 15.5 -2.6
KLMR AMP 10 51 19.1
comp=Z,45nm,1.3s
OBN Obninsk 95.11 325 iP P 10 51 19.6 -0.2
OBN i 10 51 26.7
OBN pmax pmax
comp=Z,13nm,1.3s
TTA Tatalina 96.41 27 P P 10 51 25.4 -0.3
TTA pmax pmax
comp=Z,8.0nm,1.1s
TTA Tatalina 96.41 27 P P 10 51 25.4 -0.3
TTA lAmb lAmb 10 51 27.1
comp=Z,7.8nm,1.1s
A21K Barrow 97.69 19 P P 10 51 31.1 -0.1
IMAR Indian Mountai 97.88 24 P Pdif 10 51 32.6 +0.4
AKASG Malin Array Be 98.87 320 P P 10 51 36.7 -0.2
comp=Z,0.6nm,0.5s,baz=83,slow=4.4,SNR=6.4
AKASG Malin Array Be 98.87 320 P P 10 51 35.8 -1.1
AKASG pmax pmax
comp=Z,2.0nm,1.3s
AKASG Malin Array Be 98.87 320 P P 10 51 35.8 -1.1
MLY Manley 99.01 25
MLY lAmb lAmb 10 51 39.5
comp=Z,5.2nm,0.9s
I23K Minto, Yukon-K 99.60 25 Pdif Pdif 10 51 39.7 -0.2
MCK McKinley 99.68 27 P Pdif 10 51 40.2 -0.1
MCK pmax pmax
comp=Z,13nm,1.0s
MCK McKinley 99.68 27 Pdif Pdif 10 51 40.2 -0.1
RND Reindeer 99.69 27 P Pdif 10 51 39.6 -0.8
RND pmax pmax
comp=Z,14nm,0.9s
RND Reindeer 99.69 27 Pdif Pdif 10 51 39.6 -0.8
TOLK Toolik Lake Re 99.77 22 Pdif Pdif 10 51 41.5 +0.9
TOLK lAmb lAmb 10 51 42.7
comp=Z,6.0nm,1.1s
MNK Minsk 100.01 324 iP Pdif 10 51 37.6 -4.3
comp=E,1.0nm,0.6s
MNK iP Pdif 10 51 37.6 -4.3
comp=N,17nm,0.9s
MNK iP Pdif 10 51 37.6 -4.3
comp=Z,8.0nm,0.8s
MNK iPP PP 10 55 43.4 -4.0
MNK iPPP PPP 10 57 50.8
MNK iS SKSac 11 02 13.7 -4.7
MNK iPS PS 11 04 44.1 -2.7
MNK iSS SS 11 10 06.1 -1.9
MNK iSSS SSS 11 13 56.5
MNK iLR LR 11 33 27.7
MNK iLRM MLR 11 36 48.3
comp=E,32nm,21.7s
MNK iLRM MLR 11 36 50.9
comp=Z,117nm,23.1s
MNK iLRM MLR 11 37 13.9
comp=N,90nm,17.4s
ILAR Eielson Array 100.63 26 P Pdif 10 51 43.3 -1.1
comp=N,2.3nm,1.1s,baz=264,slow=4.2,SNR=8.8
ILAR Eielson Array 100.63 26 P Pdif 10 51 43.6 -0.9
ILAR Eielson Array 100.63 26 Pdif Pdif 10 51 43.6 -0.9
FINES FINESS Array B 101.30 331 P Pdif 10 51 47.6 +0.1
comp=N,2.4nm,0.9s,baz=129,slow=2.7,SNR=6.2
FINES FINESS Array B 101.30 331 P Pdif 10 51 48.3 +0.8
FINES FINESS Array B 101.30 331 Pdif 10 51 48.3 +0.8
UZH Uzhgorod 103.24 318 eP Pdif 10 51 54.6 -1.8
YKA Yellowknife Ar 115.03 25 PKP PKPdf 10 56 38.4 +1.0
comp=N,0.6nm,0.8s,baz=285,slow=1.8,SNR=7.4
TOA0 Torodi Ar. Sit 120.13 279 PKPdf PKPdf 10 56 48.2 -0.4
TORD Torodi Ar. Bea 120.13 279 PKP PKiKP 10 56 50.1 +1.3
comp=N,3.9nm,0.8s,baz=58,slow=1.7,SNR=16
TORD Torodi Ar. Bea 120.13 279 PKiKP 10 56 49.7 +1.0
NVAR Mina Array Bea 120.90 51 PKP PKiKP 10 56 51.1 +1.2
comp=N,0.6nm,0.8s,baz=224,slow=2.5,SNR=2.7
EGMT Eagleton 123.90 38 PKPdf 10 56 55.2 +0.1
FFC Flin Flon 124.72 28 PKIKP PKiKP 10 56 56.6 -0.1
FFC Flin Flon 124.72 28 PKPdf PKiKP 10 56 56.6 -0.1
KOWA Kowa 125.75 280 PKiKP 10 57 00.1 +0.2
DBIC Dimbokro 125.83 271 PKP PKiKP 10 57 00.8 +0.8
comp=N,6.8nm,0.9s,baz=31,slow=1.1,SNR=6.1
DBIC Dimbokro 125.83 271 PKPdf 10 56 58.5 -1.1
PDAR Pinedale Array 126.07 44 PKP PKiKP 10 57 00.9 +0.8
comp=N,1.1nm,0.9s,baz=204,slow=2.0,SNR=6.6
PDAR Pinedale Array 126.07 44 PKPdf PKPdf 10 56 58.5 -1.1
RWWY Rawlins 128.09 45 PKPdf 10 57 03.9 +0.3
ULM Lac du Bonnet 130.43 30 PKP PKiKP 10 57 08.1 -0.1
comp=N,1.7nm,0.8s,baz=263,slow=2.7,SNR=3.6
ECSD EROS Data Cent 133.98 37 PKPdf PKPdf 10 57 14.6 +0.2
TXAR Lajitas Array 134.86 59 PKhKP PKPpre 10 57 05.9
comp=N,0.7nm,1.0s,baz=286,slow=4.6,SNR=4.3
TXAR PKP PKiKP 10 57 17.5 -0.4
comp=N,0.9nm,1.0s,baz=18,slow=0.4,SNR=3.9
CPUP Villa Florida 143.25 183 PKP PKPdf 10 57 32.6 +0.9
comp=N,2.8nm,1.0s,baz=104,slow=4.2,SNR=4.4
CPUP Villa Florida 143.25 183 PKPdf 10 57 31.8 0.0
143A Socs Landing, 143.35 48 PKPdf 10 57 31.2 -0.6
WCI Wyandotte Cave 143.51 37 PKIKP PKPdf 10 57 30.9 -1.0
WCI Wyandotte Cave 143.51 37 PKPdf PKPdf 10 57 30.9 -1.0
W45A Hickory Valley 143.60 43 PKPbc 10 57 30.8 +1.3
OXF Oxford 143.81 44 PKIKP PKPbc 10 57 31.0 +0.9
OXF Oxford 143.81 44 PKPbc 10 57 31.0 +0.8
WVT Waverly 143.91 41 PKIKP PKPbc 10 57 31.4 +1.0
WVT Waverly 143.91 41 PKPdf PKPbc 10 57 31.4 +1.0
Y45A Yeager Farm, C 144.07 45 PKPdf PKPdf 10 57 33.2 +0.2
M53A W M Miller and 144.08 28 PKPdf 10 57 31.9 -0.9
R49A Shelbyville 144.12 35 PKPdf 10 57 32.6 -0.3
G62A West of Eustis 144.22 13 PKPdf 10 57 32.5 -0.4
VBMS Vicksburg 144.24 48 PKPdf 10 57 33.4 +0.1
J57A Williamstown 144.31 21 PKPbc 10 57 32.0 +0.7
NCB Newcomb 144.39 18 PKPdf 10 57 33.0 -0.2
P51A Williamsport 144.42 32 PKPbc 10 57 32.5 +0.6
344A Westbrook Farm 144.46 50 PKPdf PKPdf 10 57 34.7 +1.0
M54A Oil Creek Stat 144.48 26 PKPbc 10 57 32.4 +0.3
VT1 Waterbury 144.49 16 PKPbc 10 57 32.6 +0.6
N53A Lisbon 144.51 28 PKPbc 10 57 32.4 +0.3
LMN Caledonia Moun 144.57 6 PKPdf 10 57 32.9 -0.6
O52A Adamsville 144.57 30 PKPbc 10 57 32.7 +0.4
R50A Paris 144.60 35 PKPbc 10 57 33.0 +0.5
Q51A Peebles 144.61 33 PKPdf PKPdf 10 57 33.2 -0.6
H62A Milan 144.68 14 PKPdf PKPdf 10 57 33.5 -0.2
J59A Piesco 144.76 19 PKPdf PKPdf 10 57 33.7 -0.2
O53A New Philadelph 144.77 29 PKPbc 10 57 33.1 +0.1
N54A Moraine State 144.78 27 PKPdf 10 57 33.9 -0.1
P52A Sornjee 144.79 31 PKPab 10 57 32.9 -0.1
V48A Smith Brothers 144.79 40 PKPdf 10 57 34.0 -0.2
LBNH Lisbon 144.80 15 PKIKP PKPdf 10 57 33.8 -0.2
LBNH Lisbon 144.80 15 PKPdf 10 57 33.8 -0.2
G65A Princeton 144.82 10 PKPdf 10 57 33.8 -0.1
L56A Greenwood 144.83 24 PKPdf PKPbc 10 57 33.4 +0.2
CLTN Cedars of Leba 144.88 39 PKPdf 10 57 34.2 -0.1
M55A Ridgway 144.90 25 PKPbc 10 57 33.8 +0.4
U49A Red Boiling Sp 144.95 38 PKPdf 10 57 34.5 0.0
K58A Earlville 145.00 21 PKPdf 10 57 34.4 0.0
GGN Saint George 145.02 9 PKPbc 10 57 33.8 +0.2
WVL Waterville 145.03 13 PKPbc 10 57 33.2 -0.4
PB15 IPOC Station P 145.04 164 PKPdf 10 57 36.1 +0.8
ACCN Adirondack Com 145.09 18 PKPdf 10 57 34.5 0.0
T50A Nancy 145.18 37 PKPdf 10 57 35.2 +0.4
O54A Avella 145.22 29 PKPdf 10 57 35.1 +0.3
Q52A Bidwell 145.22 32 PKPdf 10 57 34.8 0.0
P53A Whipple 145.27 30 PKPdf 10 57 35.2 +0.3
I62A Tamworth 145.29 15 PKPdf 10 57 35.5 +0.7
I63A Otisfield 145.31 14 PKPdf 10 57 35.5 +0.7
EMMW East Machias 145.32 10 PKPdf 10 57 35.6 +0.8
BINY Binghamton 145.37 22 PKPdf 10 57 35.5 +0.5
X48A Hartselle 145.44 42 PKPbc 10 57 35.2 -0.1
S51A Beattyville 145.47 35 PKPab 10 57 35.7 +0.2
FFD Franklin Falls 145.59 16 PKPdf 10 57 33.1 -2.2
M57A Sunshine Farm, 145.68 24 PKPab 10 57 37.1 +1.0
TRY Troy 145.68 19 PKPab 10 57 36.3 +0.2
SWET Sewanee 145.69 40 PKPab 10 57 36.7 +0.3
L59A Walton 145.71 21 PKPab 10 57 36.3 0.0
R53A Hurricane 145.86 32 PKPab 10 57 37.0 +0.1
Q54A Coxs Mills 145.93 30 PKPab 10 57 37.6 +0.4
SSPA Standing Stone 145.96 25 PKPab 10 57 37.8 +0.6
O56A Blue Knob Stat 145.97 26 PKPab 10 57 37.9 +0.5
KSPA Keystone Colle 146.01 22 PKPbc 10 57 37.0 +0.2
W5OA Signal Mountai 146.09 40 PKPdf 10 57 36.9 +0.1
Y49A Blount Mountai 146.31 43 PKPdf 10 57 36.8 +0.1
N58A Sunbury 146.26 24 PKPbc 10 57 37.9 +0.3
V51A Loudon 146.29 38 PKPab 10 57 39.0 +0.4
LRAL Lakeview Retre 146.30 44 PKPab 10 57 38.9 +0.1
FPAL Fort Paine 146.32 41 PKPab 10 57 39.1 +0.2
K63A Dunstable 146.35 16 PKPab 10 57 38.9 +0.3
CPCT Cooper Cave 146.42 39 PKPab 10 57 39.2 +0.1
N59A State Game Lan 146.56 23 PKPab 10 57 39.7 +0.1
S54A Dingess, Beckl 146.59 32 PKPab 10 57 39.8 -0.1
KSCT Kent School, K 146.65 19 PKPab 10 57 39.8 0.0
Q56A Snyder Ridge, 146.68 28 PKPab 10 57 39.9 -0.2
TKL Tuckaleechee C 146.73 38 PKP2 PKPbc 10 57 39.8 +0.6
TKL Tuckaleechee C 146.73 38 PKPbc 10 57 39.8 +0.6
PAGS Pennsylvania G 146.78 24 PKPab 10 57 40.3 -0.1
X51A Calhoun 146.78 40 PKPab 10 57 40.3 -0.3
R55A Marlinton 146.83 30 PKPbc 10 57 39.9 +0.5
P57A Homestead Farm 146.86 27 PKPab 10 57 40.4 -0.3
MVL Millersville 147.13 24 PKPab 10 57 41.1 -0.7
WSPT Westport, CT 147.20 19 PKPbc 10 57 40.1 -0.2
Z51A Franklin 147.36 42 PKPab 10 57 42.1 -0.8
BLA Blacksburg 147.50 32 PKP2 PKPbc 10 57 41.9 +0.5
BLA Blacksburg 147.50 32 PKPbc 10 57 41.9 +0.5
P60A Greenville 147.57 23 PKPbc 10 57 42.0 +0.6
BG3 Lake Jocassee 147.69 38 PKiKP 10 57 43.7 -0.2
Y52A Lilburn 147.74 40 PKPbc 10 57 42.1 0.0
CCIG Comitan 147.83 76 PKPab 10 57 45.5 0.0
PB08 IPOC Station P 148.04 163 PKPbc 10 57 44.2 +0.5
152A Waverly Hall 148.06 43 PKPbc 10 57 43.1 +0.1
V55A Taylorsville 148.08 35 PKPbc 10 57 43.7 +0.8
PB11 IPOC Station P 148.25 162 PKPbc 10 57 43.3 -0.7
T57A Hurt 148.26 31 PKiKP 10 57 44.5 -0.6
PAULI Pauline 148.47 37 PKiKP 10 57 46.1 +0.5
KMSC Kings Mountain 148.52 36 PKPbc 10 57 44.7 +0.6
HODGE Hodges 148.61 38 PKiKP 10 57 46.7 +0.9
MNMC Minye Minye 148.86 161 PKPbc 10 57 44.7 -1.1
BDFB Brasilia 151.55 204 PKPbc PKiKP 10 57 53.9 +1.3
comp=N,10.0nm,1.1s,baz=198,slow=3.5,SNR=5.5
LPAZ La Paz 151.99 162 PKPbc PKiKP 10 57 55.7 +1.7
comp=N,8.7nm,1.0s,baz=139,slow=2.4,SNR=11

*IDC **26** 10:43:19.4±1.5, 10°.84S×120°.09E, h0km, mb4.1/3, mb1 4.2/8, mb1mx3.8/37, mbtmp4.1/8, ML3.8/4, Error ellipse: s-maj=53.9km s-min=21.7km az=49.0*
ISC 26 10:43:23.6±1.2, 10°.84S±0°.09×120°.3E±0°.1, h35km, n8, σ2s95/12, mb4.2/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.41**	**80**	Pn	**Pn**		**10 44 16.1**	**+1.7**
	20nm,0.3s,baz=270,slow=11,SNR=1.2							
BATI				Sn	**Sn**		**10 44 54.6**	**+1.0**
	20nm,0.3s,baz=354,slow=21,SNR=2.0							
KAPI	**Kappang**	**5.81**	**355**	Pn	**Pn**		**10 44 48.0**	**+0.8**
	1.0nm,0.3s,baz=168,slow=9.3,SNR=1.7							
KAPI				Sn	**Sn**		**10 45 49.2**	**-3.5**
	0.5nm,0.3s,baz=233,slow=19,SNR=1.8							
FITZ	**Fitzroy Crossi**	**8.90**	**145**	Pn	**Pn**		**10 45 31.7**	**+1.9**
	0.7nm,0.3s,baz=324,slow=12,SNR=1.2							
FITZ				Sn	**Sn**		**10 47 06.5**	**-2.5**
	2.1nm,0.3s,baz=173,slow=19,SNR=2.7							
WRA	**Warramunga Arr**	**16.31**	**125**	Pn	**Pn**		**10 47 11.3**	**+1.2**
	baz=308,slow=14,SNR=1.4							
WRA				Sn	**Sn**		**10 50 03.2**	**-6.9**
	0.3nm,0.3s,baz=294,slow=22,SNR=2.1							
ASAR	**Alice Springs**	**18.22**	**136**	P	**Pn**		**10 47 35.0**	**+1.2**
	0.3nm,0.3s,baz=311,slow=12,SNR=2.1							
MKAR	**Makanchi Array**	**66.65**	**333**	P	**P**		**10 54 11.5**	**+0.8**
	1.2nm,0.6s,baz=129,slow=7.3,SNR=5.8							
KURBB	**Kurchatov Arra**	**71.15**	**333**	P	**P**		**10 54 39.5**	**+0.9**
	0.8nm,0.6s,baz=144,slow=5.5,SNR=5.4							
ZALV	**Zalesovo Beam**	**71.19**	**339**	P	**P**		**10 54 39.0**	**+0.3**
	2.4nm,0.6s,baz=142,slow=4.3,SNR=7.5							

*IDC **26** 10:43:44.6±1.8, 27°.80N×85°.25E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.6/50, mbtmp3.8/7, ML4.1/1, Error ellipse: s-maj=79.8km s-min=28.4km az=57.0*
ISC 26 10:43:46.4±1.8, 27°.8N±0°.3×85°.2E±0°.5, h12km, n7, σ0s30/7, mb3.9/6, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.10**	**354**	P	**P**		**10 48 08.8**	**-0.2**
	0.5nm,0.3s,baz=183,slow=11,SNR=8.2							
KURBB	**Kurchatov Arra**	**23.35**	**349**	P	**P**		**10 48 54.7**	**+0.1**
	1.0nm,0.2s,baz=164,slow=9.1,SNR=2.5							
FINES	**FINESS Array B**	**51.30**	**328**	P	**P**		**10 52 50.5**	**+0.4**
	1.9nm,0.8s,baz=104,slow=8.0,SNR=4.1							
ARCES	**ARCESS Array B**	**53.74**	**338**	P	**P**		**10 53 08.3**	**+0.2**
	2.0nm,0.7s,baz=101,slow=7.8,SNR=5.8							
NOA	**NORSAR Array B**	**58.39**	**327**	P	**P**		**10 53 41.2**	**-0.3**
	0.9nm,0.9s,baz=107,slow=5.2,SNR=1.7							
WRA	**Warramunga Arr**	**67.16**	**129**	P	**P**		**10 54 40.5**	**0.0**
	0.6nm,0.8s,baz=322,slow=6.5,SNR=2.1							
ILAR	**Eielson Array**	**79.28**	**20**	P	**P**		**10 55 51.6**	**+0.1**
	0.6nm,0.9s,baz=317,slow=6.4,SNR=4.7							

*IDC **26** 10:44:38.0±1.3, 10°.64S×120°.24E, h0km, mb4.2/6, mb1 4.4/12, mb1mx4.0/37, mbtmp4.3/12, ML4.3/6, Error ellipse: s-maj=33.4km s-min=18.8km az=45.0*
*NEIC **26** 10:44:42.5±1.3, 10°.66S±0°.07×120°.46E±0°.05, h35km±2km, mb4.3/12, Error ellipse: s-maj=13.0km s-min=6.1km az=214.0*

ISC 26 10:44:42.0±0.6, **10°.73S**±0°.06×**120°.42E**±0°.06, **h31**km, **n40, σ2s00/44, mb4.3/8, Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.75**	**41**	Pn	**Pn**	**10 45 24.3**	**+0.3**
BATI	**Baumata**	**3.23**	**81**	Pn	**Pn**	**10 45 34.3**	**+3.6**
	37nm,0.3s,baz=295,slow=1.6,SNR=5.0						
BATI				Sn	**Sn**	**10 46 12.7**	**+4.5**
	27nm,0.3s,baz=19,slow=21,SNR=5.8						
SOEI	**Soe**	**3.91**	**76**	Pn	**Pn**	**10 45 39.5**	**-0.6**
KAPI	**Kappang**	**5.72**	**353**	Pn	**Pn**	**10 46 04.1**	**-0.8**
	2.7nm,0.3s,baz=135,slow=4.2,SNR=6.6						
KAPI				Sn	**Sn**	**10 47 10.6**	**+1.0**
	1.2nm,0.3s,baz=233,slow=20,SNR=1.3						
KAPI	**Kappang**	**5.72**	**353**		**Pn**	**10 46 05.1**	**+0.2**
JAGI	**Jajag, Banyuwa**	**6.58**	**289**	Pn	**Pn**	**10 46 17.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**8.90**	**146**	Pn	**Pn**	**10 46 50.8**	**+2.3**
	2.3nm,0.3s,baz=334,slow=14,SNR=2.5						
FITZ				Sn	**Sn**	**10 48 25.8**	**-2.0**
	1.9nm,0.3s,baz=180,slow=19,SNR=2.1						
FITZ	**Fitzroy Crossi**	**8.90**	**146**		**Pn**	**10 46 49.7**	**+1.1**
KNRA	**Kununurra**	**9.49**	**122**	Pn	**Pn**	**10 46 57.4**	**+0.7**
UGM	**Wanagama**	**10.16**	**285**	Pn	**Pn**	**10 47 06.4**	**+0.5**
MTN	**Manton Dam**	**10.70**	**102**	Pn	**Pn**	**10 47 13.6**	**+0.4**
PSA00	**Pilbara Seismi**	**10.79**	**183**	Pn	**Pn**	**10 47 16.8**	**+2.3**
GIRL	**Giralia**	**13.24**	**206**	Pn	**Pn**	**10 47 50.0**	**+2.1**
FAKI	**Fak Fak**	**14.07**	**57**	Pn	**Pn**	**10 47 58.9**	**-0.5**
SIJI	**Sorong**	**14.57**	**48**	Pn	**Pn**	**10 48 06.1**	**-0.1**
	1.0nm,0.3s,baz=272,slow=8.2,SNR=5.0						
WB0	**Warramunga Arr**	**16.19**	**125**	Pn	**Pn**	**10 48 28.1**	**+0.7**
WB0				IAmb	IAmb	10 48 45.5	
	comp=Z,19nm,1.2s						
WRA	**Warramunga Arr**	**16.24**	**126**	Pn	**Pn**	**10 48 28.9**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=297,slow=13,SNR=5.2						
WRA				Sn	Sn	10 51 17.4	-10
	comp=Z,0.1nm,0.3s,baz=292,slow=24,SNR=2.3						
WRA	**Warramunga Arr**	**16.24**	**126**		**Pn**	**10 48 28.2**	**+0.2**
WRAB	**Tennant Creek**	**16.24**	**126**	Pn	**Pn**	**10 48 28.1**	**+0.1**
WRAB				IAmb	IAmb	10 48 36.8	
	comp=Z,44nm,1.4s						
WB2	**Warramunga Arr**	**16.25**	**126**	Pn	**Pn**	**10 48 27.9**	**-0.2**
WB2				IAmb	IAmb	10 48 36.6	
	comp=Z,23nm,1.1s						
WR0	**Warramunga Arr**	**16.41**	**126**	Pn	**Pn**	**10 48 30.5**	**+0.4**
WR0				IAmb	IAmb	10 48 38.1	
	comp=Z,27nm,1.2s						
AS31	**Alice Springs**	**18.18**	**137**	P	**Pn**	**10 48 52.7**	**+0.4**
ASAR	**Alice Springs**	**18.18**	**137**	P	**P**	**10 48 54.8**	**+2.5**
	comp=Z,1.6nm,0.3s,baz=314,slow=12,SNR=10						
ASAR				S	**Sn**	**10 52 05.1**	**-9.4**
	comp=Z,0.1nm,0.3s,baz=308,slow=22,SNR=3.8						
ASAR	**Alice Springs**	**18.18**	**137**	P	**Pn**	**10 48 52.9**	**+0.6**
CTAO	**Charters Tower**	**26.55**	**114**	P	**P**	**10 50 16.5**	**-0.9**
USRK	**Ussuriysk Ar.**	**55.67**	**10**	P	**P**	**10 54 14.6**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=180,slow=6.2,SNR=6.3						
USRK	**Ussuriysk Ar.**	**55.67**	**10**	P	**P**	**10 54 13.9**	**-1.3**
SONM	**Songino Array**	**59.63**	**349**	P	**P**	**10 54 43.3**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=165,slow=6.0,SNR=2.5						
SONM	**Songino Array**	**59.63**	**349**	P	**P**	**10 54 42.2**	**-1.0**
SONM				IAmb	IAmb	10 54 44.1	
	comp=Z,1.8nm,0.6s						
MK31	**Makanchi Array**	**66.63**	**332**	P	**P**	**10 55 28.0**	**-1.5**
MK31				IAmb	IAmb	10 55 36.8	
	comp=Z,2.9nm,1.2s						
MKAR	**Makanchi Array**	**66.63**	**332**	P	**P**	**10 55 29.9**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=152,slow=7.2,SNR=8.2						
MKAR	**Makanchi Array**	**66.63**	**332**		**P**	**10 55 28.5**	**-1.1**
PETK	**Petropavlovsk-**	**71.11**	**23**	P	**P**	**10 55 57.8**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=186,slow=4.5,SNR=4.9						
PETK	**Petropavlovsk-**	**71.11**	**23**	P	**P**	**10 55 56.5**	**-0.8**
KURBB	**Kurchatov Arra**	**71.13**	**333**	P	**P**	**10 55 57.2**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=143,slow=5.8,SNR=8.4						
ZAA0	**Zalesovo Array**	**71.15**	**339**	P	**P**	**10 55 56.3**	**-1.1**
ZALV	**Zalesovo Beam**	**71.15**	**339**	P	**P**	**10 55 57.1**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=141,slow=5.1,SNR=11						
ZALV	**Zalesovo Beam**	**71.15**	**339**	P	**P**	**10 55 56.1**	**-1.4**
QSPA	**South Pole Qui**	**79.27**	**180**	P	**P**	**10 56 44.5**	**+0.2**
QSPA				IAmb	IAmb	10 56 49.8	
	comp=Z,6.0nm,1.5s						
ABKAR	**Akbulak array**	**79.78**	**325**	P	**P**	**10 56 46.7**	**-0.4**

*IDC **26** 10:48:41.6±1.6, 10°.66S×120°.25E, h0km, mb3.9/2, mb1 4.0/7, mb1mx3.7/34, mbtmp3.9/7, ML3.7/5, Error ellipse: s-maj=42.9km s-min=21.5km az=44.0*

ISC 26 10:48:45.7±1.1, **10°.66S**±0°.08×**120°.68E**±0°.10, **h31**km, **n10, σ3s21/12, Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.97**	**82**	Pn	**Pb**	**10 49 36.9**	**-1.0**
	9.3nm,0.3s,baz=264,slow=9.2,SNR=5.8						
BATI				Sn	**Sb**	**10 50 16.4**	**+2.6**
	10.0nm,0.3s,baz=19,slow=22,SNR=5.6						
KAPI	**Kappang**	**5.68**	**351**	Pn	**Pn**	**10 50 07.2**	**-0.8**
	0.7nm,0.3s,baz=118,slow=18,SNR=1.2						
KAPI				Sn	**Sn**	**10 51 11.5**	**-0.7**
	0.6nm,0.3s,baz=172,slow=8.4,SNR=2.0						
FITZ	**Fitzroy Crossi**	**8.82**	**148**	Pn	**Pn**	**10 50 53.7**	**+2.6**
	0.8nm,0.3s,baz=320,slow=11,SNR=1.8						
FITZ				Sn	**Sn**	**10 52 28.0**	**-1.6**
	0.8nm,0.3s,baz=186,slow=17,SNR=3.0						
WRA	**Warramunga Arr**	**16.08**	**127**	Pn	**Pn**	**10 52 31.9**	**+2.3**
	0.3nm,0.3s,baz=307,slow=15,SNR=2.9						
WRA				Sn	**Sn**	**10 55 22.7**	**-4.3**
	0.1nm,0.3s,baz=298,slow=26,SNR=2.0						
ASAR	**Alice Springs**	**18.07**	**137**	P	**P**	**10 52 58.0**	**+3.4**
	0.4nm,0.3s,baz=314,slow=12,SNR=6.9						
ASAR				S	**Sn**	**10 56 09.0**	**-6.2**
	0.1nm,0.3s,baz=307,slow=23,SNR=3.7						
H08S2	**Diego Garcia H**	**47.63**	**269**	T	T	11 48 02.0	
	baz=97						
H08S3	**Diego Garcia H**	**47.64**	**269**	T	T	11 48 00.9	
	baz=97						
H08S1	**Diego Carcia H**	**47.65**	**269**	T	T	11 48 00.8	
	baz=97						
MKAR	**Makanchi Array**	**66.68**	**332**	P	**P**	**10 59 33.2**	**-0.3**
	0.6nm,0.5s,baz=139,slow=6.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**71.17**	**339**	P	**P**	**11 00 00.7**	**-0.5**
	0.6nm,0.3s,baz=125,slow=7.2,SNR=3.0						

WEL 26 10:49:19.3±1.3, **34°.S**±25°×**17°.9E**±3°.4, **h274**km±41km, **M3.9/9, MLv3.9/9, Error ellipse: s-maj=0.0km s-min=0.0km az=118.1, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**3.92**	**188**	P	Pn	10 50 23.5	+0.4
WMGZ				S	S	10 51 12.7	-1.4
HAZ	**Te Kaha**	**3.96**	**195**	P	Pn	10 50 23.2	-0.4
HAZ				S	S	10 51 15.3	+0.3
PKGZ	**Pakihiroa**	**4.03**	**192**	P	Pn	10 50 23.9	-0.6
PKGZ				S	S	10 51 17.3	+0.7
PUZ	**Puketiti**	**4.18**	**189**	P	Pn	10 50 26.2	0.0
PUZ				S	S	10 51 19.6	-0.1
TWGZ	**Tauwhareparae**	**4.33**	**192**	P	Pn	10 50 28.9	+1.0
TWGZ				S	S	10 51 25.2	+2.4
MWZ	**Matawai**	**4.57**	**196**	P	Pn	10 50 30.9	+0.2
MWZ				S	S	10 51 29.3	+1.4
CNGZ	**Carnagh Statio**	**4.59**	**189**	P	Pn	10 50 31.2	+0.2
URZ	**Urewera**	**4.60**	**200**	P	Pn	10 50 30.1	-1.0
URZ				S	S	10 51 28.0	-0.5
TKGZ	**Te Karaka**	**4.61**	**192**	P	Pn	10 50 31.0	-0.1
TKGZ				S	S	10 51 30.2	+1.6
RIGZ	**Rimuhau**	**4.88**	**192**	P	Pn	10 50 32.4	-2.0
RIGZ				S	S	10 51 32.5	-2.0
MUGZ	**Murupara**	**4.91**	**202**	P	Pn	10 50 34.8	+0.1
NMHZ	**Naumai**	**5.47**	**199**	P	Pn	10 50 41.7	+0.2
BHHZ	**Black Hill Sta**	**6.05**	**203**	P	Pn	10 50 46.7	-1.8
KRHZ	**Kereru**	**6.10**	**200**	P	Pn	10 50 47.4	-1.7
KRHZ				S	S	10 51 59.6	-1.7
KAHZ	**Kahuranaki**	**6.11**	**196**	P	Pn	10 50 49.0	-0.2
PXZ	**Pawanui**	**6.34**	**196**	P	Pn	10 50 51.2	-0.8
PXZ				S	S	10 52 08.5	+1.9
PNHZ	**Pukenui**	**6.40**	**200**	P	Pn	10 50 51.1	-1.7
PNHZ				S	S	10 52 07.1	-0.9
PRHZ	**Porangahau**	**6.62**	**197**	P	Pn	10 50 55.9	+0.4
BFZ	**Birch Farm**	**7.11**	**198**	P	Pn	10 50 59.8	-1.6
BFZ				S	S	10 52 21.6	-2.2
MRZ	**Mangatainoka R**	**7.27**	**202**	P	Pn	10 51 00.8	-2.7
MRZ				S	S	10 52 25.6	-2.1
HOWZ	**Holdsworth Sta**	**7.51**	**201**	P	Pn	10 51 03.9	-2.6
HOWZ				S	S	10 52 29.9	-3.1
OGWZ	**Otaki Gorge**	**7.54**	**203**	P	Pn	10 51 04.7	-2.2
TMWZ	**Te Maipa**	**7.60**	**199**	P	Pn	10 51 05.8	-1.7
CAW	**Cannon Point**	**7.84**	**203**	P	Pn	10 51 07.9	-2.7

*KRNET **26** 10:55:19.7±0.1, 40°.52N×73°.27E, h16km, mb2.4*
*NNC **26** 10:55:21.9±13.0, 40°.67N×72°.87E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=119.6km s-min=61.3km az=167.0*

ISC 26 10:55:19.4±1.1, **40°.52N**±0°.03×**73°.30E**±0°.03, **h10**km±14km, **n16, σ0s81/30, 22C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.39**	**271**	⇑*i*P	**Pg**	**10 55 27.0**	**-0.1**
	baz=71						
OHH				⇑*i*S	**Sg**	**10 55 32.3**	**+0.1**
	baz=71						
SFK	**Sufi-Kurgan**	**0.53**	**162**	⇓*i*P	**Pg**	**10 55 29.9**	**+0.2**
	baz=61						
SFK				⇓*i*S	**Sg**	**10 55 37.3**	**+0.5**
	baz=61						
ARSB	**Arslanbob**	**0.84**	**344**	⇓*i*P	**Pb**	**10 55 35.5**	**-0.7**
	baz=45						
ARSB				⇓*i*S	**Sg**	**10 55 47.2**	**+0.7**
	baz=45						
ARSB	**Arslanbob**	**0.84**	**344**	P	**Pb**	**10 55 35.9**	**-0.2**
DRK	**Karamyk**	**1.55**	**228**	⇑*i*P	**Pb**	**10 55 48.5**	**+0.2**
	baz=28						
DRK				⇑*i*S	**Sg**	**10 56 09.1**	**-0.1**
	baz=28						
ARLS	**Aral**	**1.55**	**30**	⇓*i*P	**Pb**	**10 55 48.2**	**-0.1**
	baz=31						
ARLS				⇓*i*S	**Sg**	**10 56 09.1**	**-0.1**
	baz=31						
AML	**Almayashu**	**1.64**	**10**	⇑*i*P	**Pb**	**10 55 50.1**	**+0.2**
	baz=11						
AML				⇑*i*S	**Sg**	**10 56 12.0**	**-0.1**
	baz=11						
TRKS	**Terek-Say**	**1.92**	**302**	⇑*e*P	**Pb**	**10 55 53.9**	**-0.7**
	baz=1.0						
TRKS				⇑*i*S	**Sb**	**10 56 18.9**	**+0.3**
	baz=1.0						
UCH	**Uchtor**	**1.94**	**28**	⇑*i*P	**Pb**	**10 55 55.4**	**+0.3**
	baz=28						
UCH				⇑*i*S	**Sg**	**10 56 21.0**	**-0.7**
	baz=28						
BTK	**Batken**	**1.95**	**257**	⇑*i*P	**Pb**	**10 55 55.2**	**+0.2**
	baz=57						
BTK				⇑*i*S	**Sg**	**10 56 20.6**	**-1.5**
	baz=57						
MNAS	**Manas**	**2.05**	**343**	⇑*i*P	**Pb**	**10 55 56.6**	**-0.3**
	baz=44						
MNAS				⇑*i*S	**Sb**	**10 56 23.3**	**+0.8**
	baz=44						
AAK	**Ala-Archa**	**2.30**	**23**	⇑*i*P	**Pb**	**10 56 00.7**	**-0.4**
	baz=23						
AAK				⇑*i*S	**Sb**	**10 56 30.4**	**+0.8**
	baz=23						
AAK	**Ala-Archa**	**2.30**	**23**	Pn	**Pb**	**10 56 01.2**	**+0.2**
	2.2nm,0.4s						
AAK				Sn	**Sb**	**10 56 29.8**	**+0.2**
	5.8nm,0.5s						
ULHL	**Ulahol**	**2.81**	**51**	⇑*i*P	**Pb**	**10 56 07.8**	**-2.0**
	baz=51						
ULHL				⇑*i*S	**Sb**	**10 56 42.7**	**-1.6**
	baz=51						
TKM2	**Tokmak 2**	**2.95**	**35**	⇑Pn	**Pb**	**10 56 13.6**	**+1.4**
	1.3nm,0.6s						
TKM2				⇑Sn	**Sb**	**10 56 50.0**	**+1.5**
	2.0nm,0.5s						
KK31	**Karatay Array**	**3.32**	**322**	⇑Pg	**Pb**	**10 56 18.4**	**+0.1**
	0.5nm,0.3s						
KK31				⇑Lg	Lg	10 56 59.4	
	2.0nm,0.6s,baz=156,slow=26,SNR=4.5						

*IDC **26** 10:55:29.4±0.8, 10°.25S×120°.80E, h0km, mb4.3/10, mb1 4.4/13, mb1mx4.1/29, mbtmp4.3/13, ML4.1/3, MS3.7/1, Ms1 3.7/1, ms1mx3.1/30, Error ellipse: s-maj=33.2km s-min=17.6km az=64.0*
*DJA **26** 10:55:31.4±0.7, 11°.S±4°×12°.0E±°, h11km±3km, M4.4/7, mb4.6/3, MLv4.3/7*
*NEIC **26** 10:55:33.1±1.4, 10°.58S±0°.07×120°.34E±0°.07, h35km±2km, mb4.3/26, Error ellipse: s-maj=12.0km s-min=10.7km az=229.0*

ISC 26 10:55:32.7±0.4, **10°.66S**±0°.04×**120°.35E**±0°.04, **h31**km, **n80, σ1s75/87, mb4.2/19, Sumba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.50**	**27**	P	**Pb**	**10 55 41.9**	**-1.2**
BASI				S	**Sb**	**10 55 50.1**	**-0.2**
WBSI	**Waikabubak, Su**	**1.39**	**317**	P	**Pb**	**10 55 57.1**	**-0.9**
WBSI				S	**Sb**	**10 56 15.7**	**+0.3**
MMRI	**Maumere**	**2.74**	**43**	Pn	**Pn**	**10 56 15.4**	**+0.7**
MMRI	**Maumere**	**2.74**	**43**	P	**Pn**	**10 56 15.1**	**+0.5**
PLAI	**Plampang**	**3.12**	**306**	P	**Pn**	**10 56 21.1**	**+1.3**
PLAI				S	**Sn**	**10 56 57.7**	**+1.6**
BATI	**Baumata**	**3.29**	**82**	Pn	**Pn**	**10 56 24.6**	**+2.4**
	48nm,0.3s,baz=292,slow=1.7,SNR=49						
BATI				Sn	**Sn**	**10 57 02.5**	**+2.2**
	19nm,0.3s,baz=24,slow=21,SNR=12						
BATI	**Baumata**	**3.29**	**82**	P	**Pn**	**10 56 23.5**	**+1.3**
BATI				S	**Sn**	**10 57 03.3**	**+3.0**
TWSI	**Taliwang, Sumb**	**3.92**	**299**	P	**Pn**	**10 56 31.5**	**+0.7**
TWSI				S	**Sn**	**10 57 17.7**	**+2.0**
SOEI	**Soe**	**3.96**	**77**	Pn	**Pn**	**10 56 33.1**	**+1.6**
SOEI	**Soe**	**3.96**	**77**	P	**Pn**	**10 56 33.5**	**+2.0**
SOEI				S	**Sn**	**10 57 19.2**	**+2.2**
KAPI	**Kappang**	**5.64**	**354**	Pn	**Pn**	**10 56 56.6**	**+2.1**
	4.2nm,0.3s,baz=181,slow=4.9,SNR=7.8						
KAPI				Sn	**Sn**	**10 58 00.8**	**+2.4**
	baz=236,slow=8.1,SNR=1.4						
KAPI				LR	LR	10 59 26.8	
	comp=Z,713nm,18.9s,baz=258,slow=45						
KAPI	**Kappang**	**5.64**	**354**	Pn	**Pn**	**10 56 54.8**	**+0.3**
SRBI	**Singaraja**	**5.68**	**296**	P	**Pn**	**10 56 55.7**	**+0.7**
	0.4nm42nm,0.8s						
JAGI	**Jajag, Banyuwa**	**6.49**	**289**	Pn	**Pn**	**10 57 06.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**8.99**	**146**	Pn	**Pn**	**10 57 41.5**	**+1.0**
	1.6nm,0.3s,baz=343,slow=9.2,SNR=21						
FITZ				Sn	**Sn**	**10 59 15.7**	**-5.1**
	3.1nm,0.3s,baz=170,slow=24,SNR=13						
FITZ	**Fitzroy Crossi**	**8.99**	**146**	Pn	**Pn**	**10 57 42.3**	**+1.8**
KNRA	**Kununurra**	**9.59**	**122**	Pn	**Pn**	**10 57 50.3**	**+1.6**
UGM	**Wanagama**	**10.07**	**285**	Pn	**Pn**	**10 57 56.3**	**+0.9**
MTN	**Manton Dam**	**10.78**	**103**	Pn	**Pn**	**10 58 06.1**	**+1.0**
PSA00	**Pilbara Seismi**	**10.86**	**182**	Pn	**Pn**	**10 58 07.9**	**+1.9**
GIRL	**Giralia**	**13.27**	**205**	Pn	**Pn**	**10 58 40.8**	**+1.7**
FAKI	**Fak Fak**	**14.09**	**58**	Pn	**Pn**	**10 58 50.5**	**+0.1**
SIJI	**Sorong**	**14.57**	**49**	Pn	**Pn**	**10 58 56.4**	**-0.6**
	0.6nm,0.3s,baz=232,slow=8.8,SNR=7.3						
SBUM	**Sibu**	**15.34**	**328**	P	**P**	**10 59 10.9**	**-0.5**
WB0	**Warramunga Arr**	**16.29**	**125**		**Pn**	**10 59 19.5**	**+0.2**
WB0				IAmb	IAmb	10 59 29.9	
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**16.34**	**126**	Pn	**Pn**	**10 59 18.7**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=308,slow=14,SNR=29						
WRA				Sn	Sn	11 02 06.4	-14
	comp=Z,0.2nm,0.3s,baz=291,slow=24,SNR=8.5						
WRA	**Warramunga Arr**	**16.34**	**126**		**Pn**	**10 59 20.7**	**+0.7**
WRAB	**Tennant Creek**	**16.34**	**126**	Pn	**Pn**	**10 59 20.4**	**+0.4**
WB2	**Warramunga Arr**	**16.34**	**126**		**Pn**	**10 59 20.8**	**+0.7**
WR0	**Warramunga Arr**	**16.50**	**126**		**Pn**	**10 59 23.0**	**+0.9**
AS31	**Alice Springs**	**18.28**	**137**	P	**Pn**	**10 59 44.3**	**+0.2**
ASAR	**Alice Springs**	**18.28**	**137**	P	**Pn**	**10 59 45.2**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=313,slow=12,SNR=61						
ASAR				S	Sn	11 02 55.5	-12
	comp=Z,0.2nm,0.3s,baz=308,slow=24,SNR=4.1						
MORW	**Morawa**	**18.75**	**192**		**Pn**	**10 59 50.0**	**+0.2**
MORW				IAmb	IAmb	10 59 56.6	
	comp=Z,25nm,1.4s						
FORT	**Forrest**	**21.26**	**161**	P	**P**	**11 00 17.1**	**+0.6**
FORT				IAmb	IAmb	11 00 32.1	
	comp=Z,17nm,0.9s						
NWAO	**Narrogin (SRO)**	**22.34**	**187**	P	**P**	**11 00 34.3**	**+6.2**
	comp=Z,6.4nm,1.0s,baz=0.0,slow=16,SNR=1.9						
NWAO				S	**S**	**11 04 28.5**	**-3.5**
	comp=Z,5.1nm,0.6s,baz=98,slow=19,SNR=2.0						
NWAO	**Narrogin (SRO)**	**22.34**	**187**	P	**P**	**11 00 28.6**	**+0.6**
NWAO				IAmb	IAmb	11 00 41.1	
	comp=Z,9.6nm,0.9s						
COEN	**Coen**	**22.54**	**101**	P	**P**	**11 00 30.3**	**-0.1**
COEN				IAmb	IAmb	11 00 34.4	
	comp=Z,7.1nm,0.9s						
RPSI	**Rantau Prapat**	**25.12**	**301**	P	**P**	**11 00 55.2**	**+0.1**
RPSI				IAmb	IAmb	11 00 59.3	
	comp=Z,6.6nm,1.0s						
PSI	**Prapat**	**25.17**	**301**	P	**P**	**11 00 56.8**	**+1.1**
	comp=Z,4.0nm,0.6s,baz=180,slow=6.9,SNR=5.6						
BBOO	**Buckleboo**	**26.36**	**149**	P	**P**	**11 01 06.8**	**+0.6**
STKA	**Stephens Creek**	**28.83**	**140**	P	**P**	**11 01 27.6**	**-0.8**
EIDS	**Eidsvold**	**32.57**	**121**	P	**P**	**11 02 00.0**	**-1.5**
PHIT	**Phitsanulok**	**33.97**	**324**	P	**P**	**11 02 16.0**	**+2.3**
SUKH	**Sukhothai**	**34.66**	**324**	P	**P**	**11 02 21.0**	**+1.4**
CM04	**Chiang Mai Arr**	**35.76**	**324**	P	**P**	**11 02 31.5**	**+2.4**
CM05	**Chiang Mai Arr**	**35.78**	**324**	P	**P**	**11 02 33.0**	**+3.7**
CM13	**Chiang Mai Arr**	**35.82**	**324**	P	**P**	**11 02 33.4**	**+3.8**
CM31	**Chiang Mai Arr**	**35.83**	**324**	P	**P**	**11 02 29.1**	**-0.6**
CM31				IAmb	IAmb	11 02 43.2	
	comp=Z,3.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**35.83**	**324**	P	**P**	**11 02 31.0**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=144,slow=6.6,SNR=13						
CMAR	**Chiang Mai Arr**	**35.83**	**324**	P	**P**	**11 02 29.4**	**-0.3**
CM35	**Chiang Mai Arr**	**35.88**	**324**	P	**P**	**11 02 31.0**	**+0.9**
CMMT	**Chiang Mai**	**36.10**	**324**	P	**P**	**11 02 33.0**	**+0.9**
CHTO	**Chiang Mai**	**36.10**	**324**	P	**P**	**11 02 31.1**	**-0.9**
CHTO				IAmb	IAmb	11 02 34.5	
	comp=Z,4.7nm,0.9s						
H08S2	**Diego Garcia H**	**47.31**	**269**	T	T	11 54 41.7	
	baz=96,slow=76,SNR=13						
H08S3	**Diego Garcia H**	**47.32**	**269**	T	T	11 54 49.9	
	baz=96,slow=76,SNR=9.4						
H08S1	**Diego Carcia H**	**47.33**	**269**	T	T	11 54 38.8	
	baz=96,slow=76,SNR=11						
KSRS	**Korea Array**	**48.39**	**8**	P	**P**	**11 04 07.7**	**-4.1**
	comp=Z,1.3nm,0.8s,baz=183,slow=6.9,SNR=4.8						
MAJO	**Matsushiro**	**49.87**	**19**	P	**P**	**11 04 21.8**	**-1.5**
MJAR	**Matsushiro Ar**	**49.87**	**19**	P	**P**	**11 04 20.7**	**-2.5**
	comp=Z,1.5nm,0.6s,baz=205,slow=10.0,SNR=4.5						
SONM	**Songino Array**	**59.54**	**349**	P	**P**	**11 05 33.6**	**+0.3**
	comp=Z,6.4nm,0.6s,baz=166,slow=8.4,SNR=11						
SONM	**Songino Array**	**59.54**	**349**	P	**P**	**11 05 32.5**	**-0.8**
KDJ	**Kajisay**	**65.77**	**326**	P	**P**	**11 06 14.0**	**-1.1**
KDJ				IAmb	IAmb	11 06 16.9	
	comp=Z,5.9nm,1.4s						
MK31	**Makanchi Array**	**66.53**	**333**	P	**P**	**11 06 18.6**	**-1.0**
MK31				IAmb	IAmb	11 06 20.9	
	comp=Z,3.1nm,0.7s						
MKAR	**Makanchi Array**	**66.53**	**333**	P	**P**	**11 06 20.3**	**+0.7**
	comp=Z,3.6nm,0.6s,baz=142,slow=7.7,SNR=31						
MKAR	**Makanchi Array**	**66.53**	**333**		**P**	**11 06 19.0**	**-0.6**
BOOM	**Boomskoye usch**	**66.69**	**326**	P	**P**	**11 06 20.3**	**-0.7**
KKAR	**Karatay Array**	**70.17**	**323**	P	**P**	**11 06 41.2**	**-1.3**
ZAA0	**Zalesovo Array**	**71.06**	**339**	P	**P**	**11 06 47.1**	**-0.5**
ZALV	**Zalesovo Beam**	**71.06**	**339**	P	**P**	**11 06 47.4**	**-0.2**
	comp=Z,8.1nm,0.6s,baz=141,slow=4.4,SNR=33						
ZALV	**Zalesovo Beam**	**71.06**	**339**	P	**P**	**11 06 46.5**	**-1.1**
PETK	**Petropavlovsk-**	**71.07**	**23**	P	**P**	**11 06 45.8**	**-1.9**
GEYT	**Alibeck**	**75.55**	**314**	P	**P**	**11 07 16.4**	**+1.9**
	comp=Z,0.9nm,0.5s,baz=160,slow=9.0,SNR=2.3						
GEYT	**Alibeck**	**75.55**	**314**	P	**P**	**11 07 13.2**	**-1.3**
GEYT				IAmb	IAmb	11 07 17.1	
	comp=Z,2.0nm,0.9s						
QSPA	**South Pole Qui**	**79.34**	**180**	P	**P**	**11 07 35.2**	**-0.2**
ABKAR	**Akbulak array**	**79.68**	**325**	P	**P**	**11 07 37.1**

comp=Z,79nm,0.3s
YUK pmax pmax
comp=N,47nm,0.2s
YUK pmax pmax
comp=E,69nm,0.4s
YUK smax smax
comp=N,68nm,0.5s
YUK smax smax
comp=E,108nm,0.5s
YUK Yuzh-Kuril'sk 5.80 246 *e*P **Pn 11 38 17.5 -1.6**
YUK AMB AMB 11 38 18.4
comp=E,50nm,0.5s
YUK AMB AMB 11 38 18.4
comp=E,60nm,0.5s
YUK AMB AMB 11 38 18.4
comp=E,80nm,0.5s
YUK *e*S **Sn 11 39 20.3 -4.0**
YUK A A 11 39 30.0
comp=E,70nm,0.5s
YUK A A 11 39 30.0
comp=E,110nm,0.5s
GRPR Tuman 5.88 246 PN Pn 11 38 14.8 -5.4
GRPR *e*S **Sn 11 39 25.3 -0.9**
RUSJ Misakicho 6.16 249 *e*PN Pn 11 38 19.6 -4.5
RUSJ *e*S **Sn 11 39 34.0 +0.8**
NMR Nemuro--Hokkai 6.23 241 *e*PN Pn 11 38 18.6 -6.4
NMR Nemuro--Hokkai 6.23 241 *e*P **Pn 11 38 23.7 -1.3**
NMR *e*S **Sn 11 39 30.4 -4.5**
PEA0B Petropavlovsk- 7.12 22 *i* PN **Pn 11 38 37.0 -0.3**
PETK Petropavlovsk- 7.12 22 Pn **Pn 11 38 37.0 -0.2**
comp=E,14nm,0.3s,baz=167,slow=12,SNR=23
YSS Yuzh-Sakhalins 7.21 277 *e*PN **Pn 11 38 40.2 +1.8**
YSS MLR MLR
comp=Z,200nm,12.0s
YSS Yuzh-Sakhalins 7.21 277 *e*P **Pn 11 38 38.8 +0.4**
YSS AMB AMB 11 38 40.7
comp=Z,10.0nm,0.4s
JKA Kamikawa-asahi 7.89 256 *e*P **Pn 11 38 47.2 -0.7**
ASAJ Asahikawa 7.90 256 Pn **Pn 11 38 47.1 -0.7**
comp=Z,0.5nm,0.3s,baz=73,slow=15,SNR=1.6
TYV Tymovskoe 8.19 305 *e*PN Pn 11 39 00.8 +8.9
TYV pmax pmax
comp=Z,7.0nm,1.3s
TYV Tymovskoe 8.19 305 *e*P **Pn 11 38 53.0 +1.1**
TYV AMB AMB 11 38 55.7
comp=Z,10.0nm,0.7s
ERM Erimo 8.56 241 *i* PN **Pn 11 38 57.4 +0.5**
EKMR Ekimchan 14.58 304 *e*P **Pn 11 40 16.4 -2.7**
KLR Kul'dur 14.64 288 *i* P **Pn 11 40 22.2 +2.2**
MJAR Matsushiro Arr 15.06 233 Pn **Pn 11 40 25.8 +0.2**
comp=Z,0.0nm,0.3s,baz=27,slow=12,SNR=1.0
USRK Ussuriysk Ar. 15.12 269 Pn **Pn 11 40 26.0 -0.2**
baz=76,slow=13,SNR=2.9
KSRS Korea Array 20.84 253 P **P 11 41 35.5 +1.7**
comp=Z,0.7nm,0.7s,baz=51,slow=11,SNR=2.4
BILL Bilibino 22.52 13 *i* P **P 11 41 51.2 -0.4**
BILL pmax pmax
comp=Z,1.0nm,1.1s
BILL Bilibino 22.52 13 *e*P **P 11 41 52.2 +0.6**
H11N2 WAKE ISLAND Hy 29.05 153 T T 12 14 29.6
baz=340,slow=76,SNR=50
H11N1 WAKE ISLAND Hy 29.06 153 T T 12 14 43.4
baz=340,slow=76,SNR=46
H11N3 WAKE ISLAND Hy 29.06 153 T T 12 14 43.6
baz=340,slow=76,SNR=40
H11S1 WAKE ISLAND Hy 30.13 154 T T 12 15 52.6
baz=340,slow=76,SNR=44
H11S3 WAKE ISLAND Hy 30.14 154 T T 12 16 03.4
baz=340,slow=76,SNR=34
H11S2 WAKE ISLAND Hy 30.15 154 T T 12 15 51.0
baz=340,slow=76,SNR=43
ILAR Eielson Array 36.61 38 P **P 11 43 57.7 +0.1**
comp=Z,0.2nm,0.8s,baz=267,slow=5.9,SNR=1.8
NRIK Noril'sk 38.93 329 *i* P **P 11 44 16.8 -0.3**
NRIK pmax pmax
comp=Z,1.0nm,0.9s
INK Inuvik 41.73 32 P **P 11 44 40.9 +0.7**
comp=Z,0.7nm,0.7s,baz=296,slow=4.6,SNR=2.1
MKAR Makanchi Array 47.09 298 P **P 11 45 23.9 +0.5**
comp=Z,0.7nm,0.8s,baz=64,slow=8.2,SNR=5.8
MKAR Makanchi Array 47.09 298 *e*P **P 11 45 23.1 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 47.09 298 *e*P **P 11 45 23.1 -0.3**
YKA Yellowknife Ar 50.99 37 *e*P **P 11 45 53.7 +0.7**
comp=Z,0.4nm,0.6s,baz=296,slow=6.8,SNR=5.8
YKA Yellowknife Ar 50.99 37 *e*P **P 11 45 54.5 +1.5**
CMAR Chiang Mai Arr 52.42 257 P **P 11 46 04.7 +0.5**
comp=Z,0.4nm,0.3s,baz=35,slow=6.8,SNR=4.5
FINES FINESS Array B 64.21 335 P **P 11 47 26.8 +0.9**
comp=Z,0.6nm,0.4s,baz=42,slow=6.3,SNR=9.7
NOA NORSAR Array B 68.40 341 P **P 11 47 54.0 +1.3**
comp=Z,1.0nm,0.8s,baz=29,slow=6.6,SNR=5.1
WRA Warramunga Arr 68.40 199 P **P 11 47 52.1 -1.1**
comp=Z,0.8nm,0.9s,baz=20,slow=7.1,SNR=3.3
AKASG Malin Array Be 71.72 326 P **P 11 48 14.1 +0.9**
comp=Z,0.3nm,0.3s,baz=32,slow=6.5,SNR=4.4
AKASG Malin Array Be 71.72 326 *e*P **P 11 48 14.7 +1.5**
ASAR Alice Springs 72.09 199 P **P 11 48 15.7 0.0**
comp=Z,1.2nm,0.6s,baz=6.9,slow=5.6,SNR=23
CLL Collm 76.64 336 *e*P **P 11 48 39.0 -2.9**
TXAR Lajitas Array 77.49 61 P **P 11 48 47.2 +0.1**
comp=Z,0.8nm,0.6s,baz=303,slow=4.1,SNR=15

IDC ***26*** *11:49:47.5±1.5, 40.96N×93.94E, h0km, mb3.5/2, mb1 3.7/7, mb1mx3.4/49, mbtmp3.5/7, ML3.5/5, MS4.4/1, Ms1 4.4/1, ms1mx2.8/36, Error ellipse: s-maj=31.5km s-min=18.7km az=34.0*

ISC 26 11:49:49.3±1.0, 41.0N±0.2×93.66E±0.09, h10km, n13, σ2s17/18, 4C-1D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**4.97**	**107**	⇓P	**Pn**	**11 51 04.0**	**-0.1**
GTA				P*g*	**Pb**	**11 51 16.8**	**+0.3**
GTA				S*n*	**Sn**	**11 52 00.0**	**-1.8**
GTA				S*g*	**Sb**	**11 52 19.0**	**+2.6**
GTA				smax	smax		
comp=N,50nm,0.6s							
GTA				smax	smax		
comp=E,44nm,0.8s							
WMQ	**Urumqi**	**5.24**	**304**	*e*Pn	**Pn**	**11 51 08.5**	**+0.8**
WMQ				S*n*	**Sn**	**11 52 11.8**	**+3.7**
WMQ				smax	smax		
comp=N,120nm,0.7s							
WMQ				smax	smax		
comp=E,150nm,0.7s							
MK31	**Makanchi Array**	**10.04**	**309**	⇑Pn	**Pn**	**11 52 15.6**	**+2.1**
comp=E,0.9nm,0.5s,baz=115,slow=14,SNR=18							
MK31				⇑S*n*	**Sn**	**11 54 05.3**	**-0.8**
comp=E,3.6nm,0.7s,baz=117,slow=27,SNR=6.0							
MKAR	**Makanchi Array**	**10.04**	**309**	Pn	**Pn**	**11 52 13.1**	**-0.4**
comp=E,0.5nm,0.3s,baz=115,slow=14,SNR=13							
MKAR				S*n*	**Sn**	**11 54 04.2**	**-1.8**
comp=E,0.5nm,0.3s,baz=117,slow=24,SNR=6.2							
MKAR				L*g*	L*g*	11 55 12.8	
comp=E,0.2nm,0.3s,baz=107,slow=30,SNR=5.4							
MAKZ	**Makanchi**	**10.23**	**308**	⇑Pn	**Pn**	**11 52 19.2**	**+3.1**
comp=E,1.8nm,0.8s							
MAKZ				⇑S*n*	**Sn**	**11 54 05.9**	**-4.9**
comp=E,2.9nm,0.7s							
SONM	**Songino Array**	**11.37**	**49**	Pn	**Pn**	**11 52 31.2**	**-0.7**
comp=E,1.2nm,0.3s,baz=234,slow=15,SNR=6.2							
SONM				L*g*	L*g*	11 55 43.6	
comp=E,0.7nm,0.3s,baz=235,slow=25,SNR=6.4							
TLY	**Talaya**	**12.70**	**29**	L*g*	L*g*	11 56 24.6	
comp=E,0.0nm,0.3s,baz=135,slow=4.3,SNR=4.0							
ZALV	**Zalesovo Beam**	**14.24**	**338**	Pn	**Pn**	**11 53 12.3**	**+1.4**
comp=E,0.2nm,0.3s,baz=129,slow=11,SNR=1.4							
KURBB	**Kurchatov Arra**	**14.25**	**318**	Pn	**Pn**	**11 53 10.2**	**-0.8**
comp=E,0.1nm,0.3s,baz=121,slow=13,SNR=6.6							
KURBB				L*g*	L*g*	11 57 26.4	
comp=E,0.0nm,0.3s,baz=117,slow=32,SNR=2.5							
BVAR	**Borovoye Array**	**19.80**	**315**	P	**P**	**11 54 20.0**	**+0.4**
comp=E,0.3nm,0.3s,baz=133,slow=11,SNR=5.5							
GERES	**GERESS Array B**	**54.70**	**307**	LR	LR	12 24 36.4	
comp=E,424nm,21.9s,baz=302,slow=38							
ILAR	**Eielson Array**	**64.47**	**24**	P	**P**	**12 00 25.0**	**-0.6**
comp=E,0.5nm,0.7s,baz=301,slow=5.4,SNR=6.1							
ASAR	**Alice Springs**	**74.41**	**142**	P	**P**	**12 01 26.4**	**-1.0**
comp=E,0.3nm,0.6s,baz=339,slow=6.3,SNR=4.7							

NOU 26 12:00:18.1, 18.22S×168.90E, h0km, MLv3.9, Vanuatu Islands, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVP	**Devils Point**	**0.84**	**306**	P	Pg	12 00 34.1	-0.1
LIFNC	**LIFOU**	**2.99**	**211**	P	Pn	12 01 06.8	+0.1
MARNC	**Mare, Loyalty**	**3.35**	**194**	P	Pn	12 01 10.7	-1.0
YATNC	**Mamie plateau,**	**4.26**	**206**	P	Pn	12 01 23.4	-0.9
YATNC	**Mamie plateau,**	**4.26**	**206**	P	Pn	12 01 23.9	-0.4
DZM	**Mont Dzumac**	**4.47**	**211**	P	Pn	12 01 27.4	+0.1
DZM	**Mont Dzumac**	**4.47**	**211**	P	Pn	12 01 27.2	-0.1
NOUC	**Port Laguerre**	**4.57**	**212**	P	Pn	12 01 27.9	-0.6
NOUC	**Port Laguerre**	**4.57**	**212**	P	Pn	12 01 28.2	-0.3
PINNC	**Pines Island,**	**4.58**	**197**	P	Pn	12 01 29.7	+1.1
PINNC	**Pines Island,**	**4.58**	**197**	P	Pn	12 01 29.9	+1.3
OUENC	**Ouen Island, N**	**4.60**	**204**	P	Pn	12 01 24.4	-4.6
ONTNC	**Ouen Toro**	**4.67**	**209**	P	Pn	12 01 25.4	-4.5

IDC ***26*** *12:02:36.3±1.4, 5.69S×147.39E, h219km±18km, mb3.3/7, mb1 3.5/9, mb1mx3.2/44, mbtmp3.9/9, Error ellipse: s-maj=40.4km s-min=9.8km az=114.0*

ISC 26 12:02:35.0±0.8, 5.53S±0.08×147.2E±0.1, h200km, n11, σ1s31/14, mb3.5/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.85**	**181**	P	**Pn**	**12 03 36.2**	**+1.3**
2.2nm,0.3s,baz=348,slow=10.0,SNR=9.2							
PMG				S	**Sn**	**12 04 21.5**	**-0.6**
7.4nm,0.3s,baz=14,slow=7.5,SNR=9.8							
HNR	**Honiara**	**13.22**	**108**	S	**S**	**12 08 02.7**	**-0.2**
10nm,0.3s,baz=166,slow=5.6,SNR=2.8							
WRA	**Warramunga Arr**	**19.01**	**220**	P	**P**	**12 06 41.9**	**-0.1**
0.5nm,0.3s,baz=45,slow=11,SNR=20							
WRA				S	**S**	**12 10 04.5**	**-2.7**
0.0nm,0.3s,baz=40,slow=20,SNR=4.5							
ASAR	**Alice Springs**	**22.11**	**214**	P	**P**	**12 07 14.7**	**+0.2**
1.4nm,0.8s,baz=50,slow=8.1,SNR=12							
ASAR				S	**S**	**12 11 03.2**	**-0.3**
0.6nm,0.8s,baz=32,slow=20,SNR=4.6							
FITZ	**Fitzroy Crossi**	**24.48**	**237**	P	**P**	**12 07 38.0**	**+2.1**
7.2nm,0.4s,baz=51,slow=10,SNR=12							
KSRS	**Korea Array**	**46.39**	**339**	P	**P**	**12 10 41.7**	**+0.3**
1.0nm,0.7s,baz=159,slow=8.1,SNR=4.5							
USRK	**Ussuriysk Ar.**	**51.37**	**346**	P	**P**	**12 11 19.5**	**+0.4**
0.8nm,0.6s,baz=181,slow=8.6,SNR=1.5							
PETK	**Petropavlovsk-**	**59.09**	**7**	P	**P**	**12 12 15.1**	**+0.9**
0.7nm,0.5s,baz=159,slow=5.2,SNR=8.4							
MKAR	**Makanchi Array**	**77.26**	**320**	P	**P**	**12 14 06.6**	**-0.7**
0.3nm,0.5s,baz=95,slow=7.8,SNR=2.7							
ILAR	**Eielson Array**	**84.98**	**23**	P	**P**	**12 14 46.0**	**-1.5**
0.9nm,0.9s,baz=249,slow=5.2,SNR=7.0							
TORD	**Torodi Ar. Bea**	**145.16**	**285**	PKPbc	**PKPbc**	**12 21 48.7**	**-1.0**
0.6nm,0.5s,baz=67,slow=3.9,SNR=16							

TAP 26 12:07:25.6, 23.89N×121.77E, h44km, ML1.9, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.25**	**320**	P	Pn	12 07 34.0	+0.2
baz=321							
TWD				S	Sn	12 07 40.5	+1.1
baz=321							
ESL	**Shilin**	**0.32**	**257**	*e*P	Pn	12 07 34.6	+0.2
baz=256							
ESL				*e*S	Sn	12 07 41.1	+0.5
baz=256							
NACB	**Ninganchiao**	**0.33**	**331**	*e*P	Pn	12 07 34.6	0.0
baz=330							
NACB				*e*S	Sn	12 07 41.7	+0.9
baz=330							
EGFH	**Guangfu**	**0.38**	**235**	*e*P	Pn	12 07 35.5	+0.4
baz=235							
ETLH	**Xiulin Townshi**	**0.41**	**320**	*e*P	Pn	12 07 35.8	+0.2
baz=320							
ETLH				*e*S	Sn	12 07 43.1	+0.5
baz=320							
HGSD	**Ruisui**	**0.51**	**219**	*e*P	Pn	12 07 37.4	+0.7
baz=218							
WHF	**Hehuan Shan**	**0.53**	**299**	P	Pn	12 07 37.5	+0.1
baz=299							
WHF				S	Sn	12 07 46.1	+0.4
baz=299							
OWD	**Renai**	**0.55**	**277**	*e*P	Pn	12 07 37.7	+0.4
baz=277							
OWD				*e*S	Sn	12 07 46.4	+0.8
baz=277							
CHGB	**Renai**	**0.57**	**288**	*e*P	Pn	12 07 38.1	+0.4
baz=287							
CHGB				*e*S	Sn	12 07 47.0	+0.7
baz=287							
VWDT	**VWDT**	**0.59**	**257**	*e*P	Pn	12 07 38.3	+0.6
baz=257							
FUSS	**Fushou**	**0.60**	**307**	P	Pn	12 07 38.6	+0.5
baz=306							
FUSS				S	Sn	12 07 47.8	+0.8
baz=306							
NNSB	**Datong**	**0.65**	**327**	*e*P	Pn	12 07 39.0	+0.4
baz=326							
NNSB				*e*S	Sn	12 07 48.7	+0.8
baz=326							
NNSH	**Datong**	**0.65**	**327**	P	Pn	12 07 39.1	+0.5
baz=326							
NNSH				S	Sn	12 07 48.9	+1.0
baz=326							
YULB	**Yu-li**	**0.66**	**221**	*e*P	Pn	12 07 39.3	+0.7
baz=221							
NNS	**Nan Shan**	**0.66**	**327**	*e*P	Pn	12 07 39.0	+0.3
baz=327							
NNS				*e*S	Sn	12 07 49.3	+1.1
baz=327							
NDT	**Datong Townshi**	**0.75**	**342**	*e*P	Pn	12 07 40.6	+0.8
baz=341							
NDT				*e*S	Sn	12 07 50.8	+0.6
baz=341							
SSLB	**Suanglung**	**0.75**	**263**	*e*P	Pn	12 07 40.6	+0.7
baz=262							
SSLB				*e*S	Sn	12 07 50.6	+0.3
baz=262							
ENTT	**Nioudou**	**0.77**	**346**	*e*P	Pn	12 07 40.9	+0.7
baz=346							
ENTT				*e*S	Sn	12 07 51.7	+1.0
baz=346							
TWE	**Neicheng**	**0.84**	**354**	*e*P	Pn	12 07 42.1	+1.1
baz=354							
WHP	**Taichung City**	**0.85**	**297**	*e*P	Pn	12 07 43.0	+1.7
baz=297							
YHNB	**Yeheng**	**0.86**	**335**	*e*P	Pn	12 07 41.7	+0.3
baz=335							
YHNB				*e*S	Sn	12 07 53.5	+0.7
baz=335							
NSK	**Sanguang**	**0.87**	**335**	*e*P	Pn	12 07 42.1	+0.5
baz=334							
NSK				*e*S	Sn	12 07 53.9	+0.7
baz=334							

TAP 26 12:07:29.2, 22.64N×121.23E, h44km±1km, ML2.3, A, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.22**	**82**	P	Pn	12 07 37.6	+0.6
baz=82							
LDUT				S	Sn	12 07 44.5	+1.9
baz=82							
TWGBT	**Beinan**	**0.22**	**321**	*e*P	Pn	12 07 37.2	+0.1
baz=321							
TWGBT				*e*S	Sn	12 07 43.0	+0.4
baz=321							
TWG	**Pinlang**	**0.23**	**320**	P	Pn	12 07 37.2	0.0
baz=321							
TWG				S	Sn	12 07 43.2	+0.5
baz=321							
ECL	**Taimali**	**0.26**	**260**	*e*P	Pn	12 07 37.3	-0.1
baz=259							
ECL				*e*S	Sn	12 07 43.5	+0.4
baz=259							
LONT	**Longtian**	**0.28**	**340**	P	Pn	12 07 37.7	0.0
baz=340							
LONT				*e*S	Sn	12 07 45.1	+1.6
baz=340							
EDH	**Donghe**	**0.34**	**12**	*e*P	Pn	12 07 38.5	+0.3
baz=11							
EDH				*e*S	Sn	12 07 45.3	+0.8
baz=11							
TAW	**Tawu**	**0.42**	**228**	*e*P	Pn	12 07 38.9	-0.2
baz=226							
EAST	**Anshuo**	**0.44**	**234**	*e*P	Pn	12 07 39.8	+0.4
baz=233							
CHKT	**Chengkung**	**0.47**	**15**	*e*P	Pn	12 07 40.0	+0.3
baz=16							
CHKT				*e*S	Sn	12 07 48.5	+1.2
baz=16							
TSMG	**Majia**	**0.55**	**277**	P	Pn	12 07 41.2	+0.5
baz=276							
TSMG				S	Sn	12 07 49.9	+1.0
baz=276							
MASBT	**Mashibuluo**	**0.55**	**267**	*e*P	Pn	12 07 41.4	+0.5
baz=266							
MASBT				*e*S	Sn	12 07 50.4	+1.3
baz=266							
FULB	**Fuli**	**0.56**	**6**	*e*P	Pn	12 07 41.2	+0.2
baz=212							
FULB	**Fuli**	**0.56**	**6**	*e*P	Pn	12 07 41.1	+0.2
baz=5.0							
FULB				*e*S	Sn	12 07 50.6	+1.4
baz=5.0							
SSD	**Sandimen**	**0.56**	**281**	P	Pn	12 07 41.5	+0.6
baz=280							
SSD				S	Sn	12 07 50.8	+1.5
baz=280							
ELDTW	**Lidau**	**0.58**	**340**	*e*P	Pn	12 07 42.8	+1.5
baz=340							
SLIU	**Shizi**	**0.58**	**223**	*e*P	Pn	12 07 41.7	+0.5
baz=223							
SLIU				*e*S	Sn	12 07 51.4	+1.6
baz=223							
SCZT	**Fangliau**	**0.63**	**245**	*e*P	Pn	12 07 42.6	+0.8
baz=244							
SCZT				*e*S	Sn	12 07 52.2	+1.4
baz=244							
SSPT	**Xinbi**	**0.63**	**256**	*e*P	Pn	12 07 43.3	+1.5
baz=255							
SLGT	**Liugui**	**0.64**	**303**	*e*P	Pn	12 07 42.6	+0.6
baz=302							
SLGT				*e*S	Sn	12 07 52.6	+1.4
baz=302							
LAY	**Lan-yu**	**0.67**	**154**	*e*P	Pn	12 07 41.8	-0.6
baz=153							
LAY				*e*S	Sn	12 07 52.2	+0.3
baz=153							
SCST	**Cishan**	**0.72**	**290**	*e*P	Pn	12 07 43.1	0.0
baz=289							
SCST				*e*S	Sn	12 07 54.1	+1.0
baz=289							
TWM1	**Shoushan**	**0.77**	**284**	*e*P	Pn	12 07 44.7	+1.0
baz=283							

IDC ***26*** *12:11:04.5±1.6, 10.65S×120.15E, h0km, mb4.0/2, mb1 4.0/6, mb1mx3.6/48, mbtmp4.0/6, ML3.8/4, MS2.8/1, Ms1 2.8/1, ms1mx2.3/44, Error ellipse: s-maj=53.0km s-min=22.7km az=50.0*

ISC 26 12:11:08.5±1.1, 10.63S±0.09×120.67E±0.10, h31km, n7, σ3s12/11, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.97**	**82**	Pn	**Pb**	**12 12 00.2**	**-0.6**
14nm,0.3s,baz=301,slow=0.8,SNR=19							
BATI				S*n*	**Sb**	**12 12 39.4**	**+2.6**
8.6nm,0.3s,baz=27,slow=22,SNR=9.9							
KAPI	**Kappang**	**5.65**	**351**	Pn	**Pn**	**12 12 29.3**	**-1.1**
0.6nm,0.3s,baz=137,slow=19,SNR=2.0							
KAPI				LR	LR	12 15 20.4	
comp=Z,86nm,19.6s,baz=216,slow=46							
FITZ	**Fitzroy Crossi**	**8.85**	**148**	Pn	**Pn**	**12 13 17.3**	**+3.0**
0.9nm,0.3s,baz=344,slow=8.4,SNR=14							
FITZ				S*n*	**Sn**	**12 14 51.4**	**-1.6**
0.9nm,0.3s,baz=181,slow=19,SNR=12							
WRA	**Warramunga Arr**	**16.10**	**127**	Pn	**P**	**12 14 54.5**	**-1.2**
0.4nm,0.3s,baz=296,slow=13,SNR=17							
WRA				S*n*	**Sn**	**12 17 45.8**	**-4.6**
0.1nm,0.3s,baz=305,slow=25,SNR=3.7							
ASAR	**Alice Springs**	**18.09**	**137**	P	**P**	**12 15 21.5**	**+3.7**
0.5nm,0.3s,baz=314,slow=12,SNR=42							
ASAR				S	**Sn**	**12 18 34.1**	**-4.6**
0.1nm,0.3s,baz=310,slow=24,SNR=6.6							
MKAR	**Makanchi Array**	**66.65**	**332**	P	**P**	**12 21 56.1**	**-0.1**
0.6nm,0.5s,baz=149,slow=7.2,SNR=7.7							
ZALV	**Zalesovo Beam**	**71.14**	**339**	P	**P**	**12 22 23.4**	**-0.5**
1.2nm,0.6s,baz=145,slow=5.3,SNR=5.5							

IDC ***26*** *12:12:04.9±0.7, 31.53S×177.97W, h0km, mb4.4/10, mb1 4.5/15, mb1mx4.3/34, mbtmp4.4/15, ML4.6/5, MS3.6/14, Ms1 3.6/14, ms1mx3.4/37, Error ellipse: s-maj=21.6km s-min=16.9km az=114.0*

NEIC ***26*** *12:12:07.8±1.1, 31.64S±0.07×177.8W±0.1, h36km±5km, mb4.7/32, Error ellipse: s-maj=18.0km s-min=8.8km az=102.0*

ISC 26 12:12:08.5±0.4, 31.62S±0.04×177.89W±0.09, h35km, n166, σ1s75/164, mb4.7/23, MS3.6/15, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.35**	**359**	P	**Pn**	**12 12 44.3**	**-0.4**
GLKZ				S	**Sn**	**12 13 08.9**	**-3.4**
RAO	**Raoul Island**	**2.36**	**359**	Pn	**Pn**	**12 12 44.4**	**-0.4**
278nm,0.3s,baz=106,slow=11,SNR=10							
RAO				S*n*	**Sn**	**12 13 10.1**	**-2.5**
2μm,0.3s,baz=148,slow=19,SNR=11							
RIZ	**Raoul Island**	**2.37**	**359**	P	**Pn**	**12 12 46.3**	**+1.4**
RIZ				S	**Sn**	**12 13 09.7**	**-3.1**
MXZ	**Matakaoa Point**	**6.70**	**207**	Pn	**Pn**	**12 13 43.8**	**-0.7**
MXZ	**Matakaoa Point**	**6.70**	**207**	P	**Pn**	**12 13 44.2**	**-0.2**
MXZ				S	**Sn**	**12 14 59.1**	**-0.5**
WMGZ	**Waiomatatini S**	**6.89**	**205**	P	**Pn**	**12 13 47.8**	**+0.8**
WMGZ				S	**Sn**	**12 15 03.6**	**-0.5**
PKGZ	**Pakihiroa**	**7.08**	**207**	P	**Pn**	**12 13 49.3**	**-0.3**
PKGZ				S	**Sn**	**12 15 04.7**	**-4.2**
HAZ	**Te Kaha**	**7.08**	**209**	P	**Pn**	**12 13 49.8**	**+0.2**
HAZ				S	**Sn**	**12 15 07.7**	**-1.1**
PUZ	**Puketiti**	**7.17**	**205**	P	**Pn**	**12 13 49.9**	**-1.0**
PUZ				S	**Sn**	**12 15 09.8**	**-1.3**
TWGZ	**Tauwhareparae**	**7.37**	**206**	P	**Pn**	**12 13 53.7**	**+0.1**
TWGZ				S	**Sn**	**12 15 14.6**	**-1.4**
CNGZ	**Carnagh Statio**	**7.55**	**204**	P	**Pn**	**12 13 55.8**	**-0.3**
TKGZ	**Te Karaka**	**7.64**	**206**	P	**Pn**	**12 13 56.6**	**-0.7**
TKGZ				S	**Sn**	**12 15 20.7**	**-2.1**
MWZ	**Matawai**	**7.68**	**208**	P	**Pn**	**12 13 57.5**	**-0.4**
MWZ				S	**Sn**	**12 15 22.7**	**-1.0**
TGRZ	**Tauranga**	**7.76**	**217**	P	**Pn**	**12 14 03.7**	**+4.7**
URZ	**Urewera**	**7.79**	**210**	Pn	**Pn**	**12 13 59.2**	**-0.1**
8.5nm,0.3s,baz=120,slow=23,SNR=31							
URZ				S*n*	**Sn**	**12 15 24.7**	**-1.5**
29nm,0.3s,baz=43,slow=24,SNR=10							
URZ	**Urewera**	**7.79**	**210**	Pn	**Pn**	**12 13 58.6**	**-0.8**
URZ	**Urewera**	**7.79**	**210**	P	**Pn**	**12 13 58.3**	**-1.0**
URZ				S	**Sn**	**12 15 24.7**	**-1.5**
RAGZ	**Rawiri**	**7.86**	**208**	S	**Sn**	**12 15 27.2**	**-1.0**
RIGZ	**Rimuhau**	**7.91**	**206**	P	**Pn**	**12 14 00.4**	**-0.7**
RIGZ				S	**Sn**	**12 15 27.2**	**-2.2**
LIRZ	**Lichensteins R**	**7.92**	**215**	P	Pn	12 14 08.5	+7.4
OUZ	**Omahuta**	**7.97**	**241**	Pn	**Pn**	**12 14 01.5**	**-0.3**
KMRZ	**Kaimai**	**8.02**	**218**	P	**Pn**	**12 14 07.1**	**+4.6**
PRGZ	**Paritu Road**	**8.06**	**204**	P	**Pn**	**12 14 02.8**	**-0.4**
PRGZ				S	**Sn**	**12 15 29.7**	**-3.3**
MUGZ	**Murupara**	**8.12**	**211**	P	**Pn**	**12 14 02.8**	**-1.1**
MUGZ				S	**Sn**	**12 15 31.9**	**-2.5**
SNGZ	**Shannon Statio**	**8.14**	**207**	P	**Pn**	**12 14 04.9**	**+0.7**
KNZ	**Kokohu**	**8.22**	**205**	P	**Pn**	**12 14

KRHZ	**Kereru**	**9.26**	209	P	**Pn**	12 14 18.5	-1.1
PXZ	**Pawanui**	**9.41**	205	P	**Pn**	12 14 19.8	-1.7
PNHZ	**Pukenui**	**9.56**	208	P	**Pn**	12 14 22.1	-1.6
BFZ	**Birch Farm**	**10.20**	206	Pn	**Pn**	12 14 32.2	-0.3
BFZ	**Birch Farm**	**10.20**	206	P	**Pn**	12 14 28.8	-3.7
MRZ	**Mangatainoka R**	**10.45**	208	P	**Pn**	12 14 32.2	-3.6
MTW	**Mount Morrison**	**10.90**	207	P	**Pn**	12 14 39.0	-3.0
CAW	**Cannon Point**	**11.03**	209	P	**Pn**	12 14 39.8	-4.0
PLWZ	**Palliser**	**11.35**	207	Pn	**Pn**	12 14 47.9	-0.3
TCW	**Tory Channel**	**11.46**	211	P	**Pn**	12 14 45.8	-3.7
TUWZ	**Tuamarina**	**11.78**	212	Pn	**Pn**	12 14 53.3	-0.7
TUWZ	**Tuamarina**	**11.78**	212	P	**Pn**	12 14 50.7	-3.3
NNZ	**Nelson**	**11.87**	214	Pn	**Pn**	12 14 54.2	-1.1
BSWZ	**Blackbirch Sta**	**12.04**	211	Pn	**Pn**	12 14 57.5	-0.1
THZ	**Tophouse**	**12.52**	213	Pn	**Pn**	12 15 03.5	-0.7
THZ	**Tophouse**	**12.52**	213	P	**Pn**	12 15 01.0	-3.2
KHZ	**Kahutara**	**12.76**	210	Pn	**Pn**	12 15 07.4	+0.1
KHZ	**Kahutara**	**12.76**	210	P	**Pn**	12 15 03.2	-4.1
LTZ	**Lake Taylor**	**13.61**	212	Pn	**Pn**	12 15 18.3	-0.7
OXZ	**Oxford**	**14.14**	211		**Pn**	12 15 25.4	-0.8
OXZ	**Oxford**	**14.14**	211	P	Pn	12 15 20.0	-6.2
MSVF	**Nonsavu**	**14.31**	344	Pn	**Pn**	12 15 27.1	-1.6
	0.2nm,0.3s,baz=215,slow=12,SNR=1.5						
MSVF				LR	LR	12 20 02.9	
	comp=Z,262nm,19.7s,baz=177,slow=34						
RPZ	**Rata Peaks**	**14.89**	213	Pn	**Pn**	**12 15 32.9**	**-3.5**
	0.8nm,0.3s,baz=140,slow=7.9,SNR=1.8						
RPZ				Sn	Sn	12 18 06.2	-14
	2.4nm,0.3s,baz=318,slow=22,SNR=8.2						
RPZ	**Rata Peaks**	**14.89**	213		**Pn**	**12 15 35.7**	**-0.7**
ODZ	**Otahua Downs**	**16.11**	211	Pn	**Pn**	**12 15 52.2**	**-0.1**
ODZ				IAmb	IAmb	12 15 53.9	
	comp=Z,46nm,1.4s						
WKZ	**Wanaka**	**16.69**	214	P	**P**	**12 16 01.5**	**-0.2**
WKZ				IAmb	IAmb	12 16 13.3	
	comp=Z,76nm,1.4s						
DZM	**Mont Dzumac**	**16.89**	300	*e*LR	LR	12 19 46.7	
	comp=Z,445nm,24.4s						
DZM	**Mont Dzumac**	**16.89**	300	Pn	**Pn**	**12 16 00.9**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=144,slow=17,SNR=1.8						
DZM				Sn	Sn	12 18 56.3	-13
	comp=Z,0.2nm,0.3s,baz=127,slow=20,SNR=1.7						
DZM				LR	LR	12 21 02.8	
	comp=Z,302nm,20.1s,baz=171,slow=32						
MLZ	**Mavora Lakes**	**17.52**	214		**Pn**	**12 16 09.8**	**-0.2**
WHZ	**Wether Hill Ro**	**17.99**	214	P	**Pn**	**12 16 15.0**	**-0.7**
WHZ				IAmb	IAmb	12 16 28.1	
	comp=Z,68nm,1.5s						
AFI	**Afiamalu**	**18.50**	19	P	**P**	**12 16 20.8**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=192,slow=14,SNR=1.9						
ARMA	**Armidale**	**26.11**	265	P	**P**	**12 17 40.1**	**+0.8**
ARMA				IAmb	IAmb	12 17 59.9	
	comp=Z,27nm,1.4s						
TBI	**Tubuai**	**26.48**	79	*e*LR	LR	12 24 09.8	
	comp=Z,190nm,26.8s						
TBI	**Tubuai**	**26.48**	79	*e*T	T	12 45 07.9	
	comp=Z,32nm,0.3s						
EIDS	**Eidsvold**	**27.91**	275	P	**P**	**12 17 56.1**	**+0.7**
PAE	**Paea**	**29.14**	68	*e*T	T	12 48 23.0	
	comp=Z,7.8nm,0.2s						
PPT2	**Papeete2**	**29.18**	68	*e*LR	LR	12 25 29.7	
	comp=Z,170nm,25.5s						
PPT2	**Papeete2**	**29.18**	68	*e*T	T	12 48 27.2	
	comp=Z,6.7nm,0.3s						
PPT	**Papeete**	**29.20**	68	LR	LR	12 29 59.6	
	comp=Z,48nm,18.5s,baz=174,slow=37						
HNR	**Honiara**	**30.18**	312	P	**P**	**12 18 17.2**	**+1.7**
	comp=Z,57nm,0.5s,baz=128,slow=7.4,SNR=7.0						
HNR				LR	LR	12 28 26.3	
	comp=Z,89nm,20.0s,baz=192,slow=33						
HNR	**Honiara**	**30.18**	312	P	**P**	**12 18 16.1**	**+0.5**
MEH	**Mehetia**	**30.23**	70	*e*T	T	12 49 46.3	
	comp=Z,18nm,0.3s						
TOO	**Toolangi**	**30.59**	249	P	**P**	**12 18 18.9**	**-0.2**
TOO				IAmb	IAmb	12 18 45.8	
	comp=Z,21nm,1.2s						
VAH	**Vaihoa**	**32.06**	66	*e*T	T	12 52 00.5	
	comp=Z,27nm,0.2s						
CTA	**Charters Tower**	**34.10**	281	P	**P**	**12 18 51.7**	**+1.7**
	comp=Z,15nm,0.4s,baz=106,slow=11,SNR=54						
CTAO	**Charters Tower**	**34.10**	281	P	**P**	**12 18 49.5**	**-0.6**
STKA	**Stephens Creek**	**34.31**	259	P	**P**	**12 18 53.8**	**+2.0**
	comp=Z,6.2nm,0.6s,baz=103,slow=11,SNR=18						
STKA				LR	LR	12 31 36.3	
	comp=Z,94nm,19.2s,baz=29,slow=34						
STKA	**Stephens Creek**	**34.31**	259	P	**P**	**12 18 52.4**	**+0.6**
BBOO	**Buckleboo**	**38.74**	256	P	**P**	**12 19 29.7**	**+0.2**
BBOO				IAmb	IAmb	12 19 35.8	
	comp=Z,34nm,1.4s						
RKT	**Rikitea**	**38.84**	88	*e*LR	LR	12 29 53.5	
	comp=Z,240nm,25.8s						
AS31	**Alice Springs**	**43.15**	268	P	**P**	**12 20 05.8**	**-0.2**
AS31				IAmb	IAmb	12 20 07.3	
	comp=Z,7.5nm,0.5s						
ASAR	**Alice Springs**	**43.15**	268	P	**P**	**12 20 06.5**	**+0.5**
	comp=Z,17nm,0.5s,baz=106,slow=7.4,SNR=231						
ASAR				LR	LR	12 37 21.7	
	comp=Z,65nm,18.4s,baz=120,slow=35						
ASAR	**Alice Springs**	**43.15**	268	P	**P**	**12 20 06.0**	**0.0**
WR0	**Warramunga Arr**	**44.07**	273	P	**P**	**12 20 13.8**	**+0.4**
WB2	**Warramunga Arr**	**44.24**	273	P	**P**	**12 20 15.1**	**+0.4**
WRAB	**Tennant Creek**	**44.24**	273	P	**P**	**12 20 15.1**	**+0.3**
WRA	**Warramunga Arr**	**44.25**	273	P	**P**	**12 20 15.3**	**+0.5**
	comp=Z,47nm,0.5s,baz=112,slow=7.8,SNR=452						
WRA	**Warramunga Arr**	**44.25**	273	P	**P**	**12 20 14.9**	**+0.1**
WB0	**Warramunga Arr**	**44.28**	274	P	**P**	**12 20 15.4**	**+0.4**
FORT	**Forrest**	**45.83**	256	P	**P**	**12 20 26.9**	**-0.4**
SBA	**Scott Base**	**46.83**	184	P	**P**	**12 20 34.1**	**-0.3**
SBA				IAmb	IAmb	12 20 44.3	
	comp=Z,9.9nm,1.5s						
VNDA	**Vanda**	**46.89**	186	P	**P**	**12 20 37.2**	**+2.3**
	comp=Z,0.7nm,0.9s,baz=352,slow=8.9,SNR=1.6						
VNDA	**Vanda**	**46.89**	186	P	**P**	**12 20 33.5**	**-1.5**
MTN	**Manton Dam**	**50.27**	280	P	**P**	**12 21 01.3**	**-0.4**
KNRA	**Kununurra**	**50.90**	275	P	**P**	**12 21 07.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**52.46**	271	P	**P**	**12 21 18.4**	**+0.4**
	comp=Z,2.6nm,0.4s,baz=134,slow=4.7,SNR=12						
FITZ				LR	LR	12 42 27.8	
	comp=Z,88nm,19.9s,baz=134,slow=35						
FITZ	**Fitzroy Crossi**	**52.46**	271	P	**P**	**12 21 18.5**	**+0.4**
FITZ				IAmb	IAmb	12 21 19.6	
	comp=Z,14nm,1.2s						
CASY	**Casey**	**54.11**	208	P	**P**	**12 21 28.6**	**-0.9**
MORW	**Morawa**	**56.28**	254	P	**P**	**12 21 45.3**	**-0.5**
MORW				IAmb	IAmb	12 22 09.8	
	comp=Z,11nm,1.2s						
SIJI	**Sorong**	**56.87**	292	LR	LR	12 48 14.9	
	comp=Z,19nm,18.0s,baz=278,slow=38						
SOEI	**Soe**	**57.63**	279	P	**P**	**12 21 55.2**	**-0.4**
SOEI				IAmb	IAmb	12 22 21.0	
	comp=Z,13nm,1.1s						
BATI	**Baumata**	**57.90**	278	LR	LR	12 46 06.6	
	comp=Z,120nm,18.3s,baz=96,slow=35						
QSPA	**South Pole Qui**	**58.49**	180	P	**P**	**12 22 00.1**	**-0.9**
BELA	**Belgrano 2**	**68.57**	172	P	**P**	**12 23 05.7**	**-1.4**
BELA				IAmb	IAmb	12 23 20.6	
	comp=Z,6.1nm,1.0s						
MAW	**Mawson**	**71.20**	201	P	**P**	**12 23 26.6**	**+3.1**
	comp=Z,3.8nm,0.7s,baz=100,slow=6.9,SNR=5.5						
MAW				LR	LR	12 53 50.6	
	comp=Z,74nm,18.0s,baz=237,slow=35						
MAW	**Mawson**	**71.20**	201	P	**P**	**12 23 23.1**	**-0.3**
SNAA	**Sanae**	**76.94**	178	P	**P**	**12 24 01.0**	**+4.0**
SNAA	**Sanae**	**76.94**	178	PcP	**PcP**	**12 24 06.9**	**-1.1**
VNA3	**Neumayer Olymp**	**77.08**	176	P	**P**	**12 24 01.7**	**+4.0**
VNA3	**Neumayer Olymp**	**77.08**	176	PcP	**PcP**	**12 24 08.5**	**-0.1**
VNA2	**Neumayer--Watz**	**77.52**	177	P	**P**	**12 24 04.4**	**+4.2**
	baz=174,slow=3.8						
VNA2	**Neumayer--Watz**	**77.52**	177	PcP	**PcP**	**12 24 10.8**	**+0.3**
	baz=172,slow=4.6						
VNA1	**Neumayer--Stat**	**77.75**	176	P	**P**	**12 24 05.5**	**+4.1**
VNA1	**Neumayer--Stat**	**77.75**	176	PcP	**PcP**	**12 24 12.2**	**+0.8**
JWT	**Wachi**	**79.71**	323	P	**P**	**12 24 11.9**	**-0.7**
JWT				IAmb	IAmb	12 24 30.5	
	comp=Z,7.3nm,1.1s						
H03S2	**Juan Fernandez**	**79.72**	123	T	T	13 53 07.1	
	baz=236,slow=74						
H03S1	**Juan Fernandez**	**79.73**	123	T	T	13 53 06.6	
	baz=236,slow=74						
H03S3	**Juan Fernandez**	**79.73**	123	T	T	13 53 05.7	
	baz=236,slow=74						
H03N3	**Juan Fernandez**	**79.92**	123	T	T	13 53 16.8	
	baz=241,slow=72						
H03N2	**Juan Fernandez**	**79.92**	123	T	T	13 53 14.8	
	baz=241,slow=72						
H03N1	**Juan Fernandez**	**79.93**	123	T	T	13 53 14.7	
	baz=241,slow=72						
PSI	**Prapat**	**85.65**	276	LR	LR	13 02 50.2	
	comp=Z,51nm,20.2s,baz=256,slow=36						
PEA0B	**Petropavlovsk-**	**87.01**	346	P	**P**	**12 24 49.3**	**-0.5**
PETK	**Petropavlovsk-**	**87.01**	346	P	**P**	**12 24 51.1**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=121,slow=7.2,SNR=7.7						
PETK	**Petropavlovsk-**	**87.01**	346		**P**	**12 24 48.9**	**-0.9**
NJ2	**Nanjing**	**87.11**	311	*e*P	**P**	**12 24 51.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MDPB	**Devils Postpil**	**88.08**	43	P	**P**	**12 24 54.4**	**-1.3**
MDPB				IAmb	IAmb	12 25 21.9	
	comp=Z,1.7nm,0.7s						
USRK	**Ussuriysk Ar.**	**88.23**	326	LR	LR	13 01 37.3	
	comp=Z,16nm,18.7s,baz=66,slow=34						
NVAR	**Mina Array Bea**	**89.07**	43	P	**P**	**12 25 03.7**	**+3.5**
	comp=Z,0.2nm,0.3s,baz=224,slow=7.5,SNR=2.2						
KLR	**Kul'dur**	**92.13**	330	P	**P**	**12 25 15.2**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=114,slow=4.3,SNR=5.0						
TXAR	**Lajitas Array**	**92.97**	57	LR	LR	13 01 58.8	
	comp=Z,22nm,18.6s,baz=0.0,slow=32						
PDAR	**Pinedale Array**	**96.95**	44	PKKPbc	PKKPbc	12 42 19.9	+1.5
	comp=Z,0.3nm,0.6s,baz=87,slow=2.0,SNR=4.2						
PDAR				LR	LR	13 00 09.2	
	comp=Z,18nm,21.8s,baz=198,slow=30						
HHC	**Hu-ho-hao-te**	**97.14**	314	*e*P	**P**	**12 25 34.5**	**-2.8**
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
ILAR	**Eielson Array**	**99.09**	13	P	**Pdif**	**12 25 45.9**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=207,slow=5.8,SNR=1.7						
ILAR	**Eielson Array**	**99.09**	13	P	**Pdif**	**12 25 44.9**	**-0.4**
MKAR	**Makanchi Array**	**118.62**	310	PKP	**PKPdf**	**12 30 52.4**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=103,slow=3.5,SNR=10						
ZALV	**Zalesovo Beam**	**119.00**	318	PKP	**PKiKP**	**12 30 53.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=106,slow=3.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**119.00**	318		**PKPdf**	**12 32 52.6**	**-0.3**
ARCES	**ARCESS Array B**	**139.80**	348	PKhKP	PKPpre	12 31 27.1	
	comp=Z,3.6nm,0.9s,baz=39,slow=3.1,SNR=6.1						
ARCES				PKP	**PKiKP**	**12 31 33.6**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=76,slow=1.1,SNR=3.2						
ARCES	**ARCESS Array B**	**139.80**	348		**PKPdf**	**12 31 31.1**	**-0.7**
KBZ	**Khabaz**	**145.85**	302	PKPbc	**PKPab**	**12 31 45.4**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=204,slow=4.3,SNR=4.8						
FINES	**FINESS Array B**	**146.32**	339	PKPbc	**PKPab**	**12 31 46.0**	**+0.4**
	comp=Z,11nm,0.7s,baz=48,slow=3.6,SNR=41						
NOA	**NORSAR Array B**	**149.97**	351	PKPbc	**PKiKP**	**12 31 56.4**	**+1.0**
	comp=Z,3.9nm,0.6s,baz=14,slow=4.1,SNR=18						
NACGM	**Naroch**	**150.88**	330	*i* PKP	**PKiKP**	**12 31 59.2**	**+1.8**
NACGM				*i* PKP	**PKiKP**	**12 31 59.2**	**+1.8**
NACGM				*i* PKP	**PKiKP**	**12 31 59.2**	**+1.8**
NACGM				*i* PP	PP	12 36 02.0	+28
NACGM				*i* SKS	SKSdf	12 39 10.3	+14
NACGM				*i* PPP	PPP	12 39 43.2	
NACGM				*i* PS		12 46 05.3	
NACGM				*i* SSS	SSS	12 55 53.9	
AKASG	**Malin Array Be**	**152.32**	321	PKPbc	**PKiKP**	**12 32 01.2**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=56,slow=2.4,SNR=15						
AKASG	**Malin Array Be**	**152.32**	321		**PKPbc**	**12 31 60.0**	**-0.3**
AKASG				PKPab	**pPKPbc**	**12 32 08.9**	**-1.0**
BRTR	**Keskin Array B**	**153.24**	296	PKPbc	**PKiKP**	**12 32 04.2**	**+1.2**
	comp=Z,1.4nm,0.5s,baz=141,slow=4.4,SNR=8.7						
BRTR	**Keskin Array B**	**153.24**	296	PKPdf	**PKPdf**	**12 31 55.2**	**-0.2**
BRTR					**PKPbc**	**12 32 02.4**	**-0.5**
BRTR				PKPab	**pPKPbc**	**12 32 13.3**	**+0.7**
CLL	**Collm**	**158.75**	341	*e*PKPab	**PKPab**	**12 32 38.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**161.61**	179	PKPab	**PKPab**	**12 32 53.1**	**+2.0**
	comp=Z,0.9nm,0.6s,baz=182,slow=3.7,SNR=7.2						
TORD	**Torodi Ar. Bea**	**161.61**	179	PKPdf	**PKPdf**	**12 32 05.6**	**-0.8**
TORD					**PKPab**	**12 32 49.0**	**-2.1**
ESDC	**Sonseca Array**	**170.57**	30	PKP	**PKPdf**	**12 32 15.8**	**+3.0**
	comp=Z,1.0nm,1.1s,baz=349,slow=2.9,SNR=3.9						
ESDC	**Sonseca Array**	**170.57**	30		**PKPdf**	**12 32 12.3**	**-0.6**

*IDC **26** 12:12:11.6±2.3,38°.25N×141°.83E,h61km±23km, mb3.2/7, mb1 3.5/12,mb1mx3.3/52,mbtmp3.5/12,ML3.0/5,MS2.4/1, Ms1 2.4/1,ms1mx2.1/26,Error ellipse: s-maj=28.6km s-min=16.0km az=136.0*
*JMA **26** 12:12:11.0,38°.18N×141°.77E,h57km±1km,M3.9*
JMA Felt I J1.

ISC 26 12:12:10.7±1.2,38°.18N±0°.05×141°.85E±0°.10,h53km±9km, n32,σ1°33/40,mb3.5/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.33**	294	P	**Pn**	**12 12 20.6**	**+0.2**
JIKH				*i* S	**Sn**	**12 12 27.5**	**+0.2**
JIO	**Ouri**	**0.48**	305	P	**Pn**	**12 12 22.0**	**+0.1**
JIO				S	**Sn**	**12 12 29.8**	**-0.1**
JKMT	**Kesennumamotoy**	**0.69**	335	P	**Pn**	**12 12 24.7**	**+0.2**
JKMT				S	**Sn**	**12 12 34.4**	**-0.1**
JMM	**Marumori**	**0.89**	250	P	**Pn**	**12 12 26.5**	**-0.5**
JMM				S	**Sn**	**12 12 37.8**	**-1.2**
JMK	**Ichinoseki**	**0.91**	328	P	**Pn**	**12 12 27.6**	**+0.2**
JMK				S	**Sn**	**12 12 39.6**	**0.0**
JOU	**Okura**	**0.95**	282	P	**Pn**	**12 12 27.7**	**-0.1**
JOU				S	**Sn**	**12 12 39.9**	**-0.6**
JFK	**Kawauchi**	**1.12**	224	P	**Pn**	**12 12 29.9**	**-0.2**
JFK				*e*S	**Sn**	**12 12 44.0**	**-0.5**
JOM	**Ohasama**	**1.36**	342	P	**Pn**	**12 12 33.7**	**+0.3**
JOM				*e*S	**Sn**	**12 12 50.6**	**+0.2**
JFT	**Otama**	**1.36**	242	P	**Pn**	**12 12 33.7**	**+0.3**
JFT				S	**Sn**	**12 12 50.1**	**-0.4**
JYK	**Kaneyama**	**1.38**	303	P	**Pn**	**12 12 33.5**	**-0.1**
JYS	**Shirataka**	**1.40**	272	P	**Pn**	**12 12 34.0**	**+0.1**
JRG	**Rokugo**	**1.54**	322	P	**Pn**	**12 12 36.3**	**+0.5**
JRG				*e*S	**Sn**	**12 12 55.7**	**+1.0**
JYA	**Atsumi**	**1.73**	284	P	**Pn**	**12 12 38.2**	**-0.1**
MJAR	**Matsushiro Arr**	**3.33**	242	P	**Pn**	**12 13 01.0**	**+0.7**
	0.3nm,0.3s,baz=61,slow=10,SNR=30						
MJAR				S	**Sn**	**12 13 40.7**	**+2.1**
	0.4nm,0.3s,baz=268,slow=9.4,SNR=5.1						
MJAR				LR	LR	12 14 35.9	
	comp=Z,60nm,20.1s,baz=200,slow=43						
MAT	**Matsushiro**	**3.33**	242	P	**Pn**	**12 13 01.9**	**+1.6**
MAT				*e*S	**Sn**	**12 13 39.7**	**+1.1**
JHJ	**Hachijo jima 2**	**5.32**	199	P	**Pn**	**12 13 27.7**	**+0.1**
	4.6nm,0.3s,baz=28,slow=15,SNR=1.3						
JHJ				S	**Sn**	**12 14 23.2**	**-4.4**
	6.6nm,0.3s,baz=253,slow=19,SNR=1.5						
ASAJ	**Asahikawa**	**5.96**	5	P	**Pn**	**12 13 35.6**	**-0.7**
	0.8nm,0.3s,baz=215,slow=15,SNR=12						
ASAJ				S	**Sn**	**12 14 38.7**	**-4.4**
	0.3nm,0.3s,baz=195,slow=20,SNR=1.7						
USRK	**Ussuriysk Ar.**	**9.55**	312	P	**Pn**	**12 14 26.4**	**+0.8**
	baz=122,slow=14,SNR=9.8						
KSRS	**Korea Array**	**11.04**	271	P	**Pn**	**12 14 48.4**	**+2.6**
	0.1nm,0.3s,baz=85,slow=14,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**28.46**	123	T	T	12 48 18.8	
	baz=316,slow=75,SNR=176						
H11N1	**WAKE ISLAND Hy**	**28.47**	123	T	T	12 48 19.4	
	baz=316,slow=75,SNR=180						
H11N3	**WAKE ISLAND Hy**	**28.48**	123	T	T	12 48 20.1	
	baz=316,slow=75,SNR=140						
H11S1	**WAKE ISLAND Hy**	**29.22**	125	T	T	12 49 17.2	
	baz=318,slow=76,SNR=51						
H11S3	**WAKE ISLAND Hy**	**29.22**	125	T	T	12 49 16.7	
	baz=318,slow=76,SNR=90						
H11S2	**WAKE ISLAND Hy**	**29.23**	125	T	T	12 49 15.7	
	baz=318,slow=76,SNR=69						
ZALV	**Zalesovo Beam**	**41.41**	311	P	**P**	**12 19 50.3**	**-1.3**
	0.5nm,0.4s,baz=71,slow=6.7,SNR=2.1						
CMAR	**Chiang Mai Arr**	**42.13**	254	P	**P**	**12 19 57.8**	**-0.1**
	0.3nm,0.3s,baz=69,slow=9.0,SNR=1.3						
MKAR	**Makanchi Array**	**43.81**	301	P	**P**	**12 20 10.6**	**-0.7**
	0.5nm,0.6s,baz=86,slow=9.8,SNR=5.5						
ILAR	**Eielson Array**	**48.34**	33	P		**12 20 46.8**	**+0.1**
	0.4nm,0.7s,baz=266,slow=6.0,SNR=6.0						
YKA	**Yellowknife Ar**	**62.65**	31	P	**P**	**12 22 28.6**	**-0.7**
	0.4nm,0.9s,baz=294,slow=6.0,SNR=3.9						
PDAR	**Pinedale Array**	**76.62**	46	P	**P**	**12 23 56.1**	**+0.2**
	0.3nm,0.6s,baz=263,slow=3.5,SNR=4.0						
TXAR	**Lajitas Array**	**89.15**	53	P	**P**	**12 25 01.2**	**+0.4**
	0.2nm,0.6s,baz=238,slow=2.0,SNR=4.7						

*IDC **26** 12:33:47.4±1.6,27°.58N×85°.91E,h0km,mb3.6/8, mb1 3.7/9,mb1mx3.4/52,mbtmp3.6/9,ML3.5/1,MS3.9/1, Ms1 3.9/1,ms1mx2.5/58,Error ellipse: s-maj=60.1km s-min=22.3km az=63.0*

ISC 26 12:33:50.5±1.6,27°.6N±0°.2×85°.9E±0°.3,h19km,n10, σ0°34/9,mb3.6/8,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.35**	352	P	**Pn**	**12 38 15.8**	**-0.2**
	0.2nm,0.3s,baz=172,slow=12,SNR=5.2						
KURBB	**Kurchatov Arra**	**23.65**	348	P	**P**	**12 39 00.8**	**+0.3**
	0.2nm,0.5s,baz=168,slow=9.7,SNR=4.7						
SONM	**Songino Array**	**25.74**	33	P	**P**	**12 39 20.0**	**+0.1**
	0.7nm,0.5s,baz=213,slow=7.7,SNR=2.3						
ZALV	**Zalesovo Beam**	**26.32**	359	P	**P**	**12 39 25.0**	**+0.1**
	0.5nm,0.3s,baz=197,slow=8.9,SNR=2.8						
YAK	**Yakutsk**	**44.87**	28	LR	LR	13 02 18.6	
	comp=Z,142nm,20.4s,baz=93,slow=38						
FINES	**FINESS Array B**	**51.78**	328	P	**P**	**12 42 56.3**	**-0.2**
	2.3nm,0.9s,baz=112,slow=15,SNR=2.5						
ARCES	**ARCESS Array B**	**54.14**	338	P	**P**	**12 43 14.3**	**+0.4**
	3.8nm,0.9s,baz=101,slow=9.3,SNR=2.3						
WRA	**Warramunga Arr**	**66.58**	130	P	**P**	**12 44 39.4**	**-0.3**
	0.6nm,1.1s,baz=324,slow=6.3,SNR=1.4						
ASAR	**Alice Springs**	**68.88**	133	P	**P**	**12 44 54.5**	**+0.4**
	0.3nm,0.9s,baz=314,slow=5.8,SNR=1.8						
ILAR	**Eielson Array**	**79.24**	20	P	**P**	**12 45 53.8**	**-0.3**
	0.3nm,0.8s,baz=298,slow=4.9,SNR=1.7						

*IDC **26** 12:34:40.4±0.8,27°.63N×85°.77E,h0km,mb3.9/17, mb1 4.0/19,mb1mx3.8/54,mbtmp3.8/19,ML4.0/1,MS2.9/1, Ms1 3.0/1,ms1mx2.4/56,Error ellipse: s-maj=25.7km s-min=14.8km az=50.0*
*NEIC **26** 12:34:41.3±0.8,27°.57N±0°.09×85°.72E±0°.06,h8km±3km, mb4.0/22,Error ellipse: s-maj=14.0km s-min=5.4km az=209.0*

ISC 26 12:34:41.3±0.7,27°.6N±0°.1×85°.75E±0°.09,h10km,n53, σ0°58/53,mb3.9/23,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**5.21**	64	Pn	**Pn**	**12 36 00.2**	**+0.5**
SHL	**Shillong**	**5.84**	108	Pn	**Pn**	**12 36 08.0**	**-0.2**
NIL	**Nilore**	**12.36**	303		**Pn**	**12 37 36.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**15.14**	124	Pn	**Pn**	**12 38 14.4**	**-0.9**
	baz=303,slow=13,SNR=9.1						
CMAR	**Chiang Mai Arr**	**15.14**	124		**Pn**	**12 38 15.4**	**+0.1**
KBL	**Kabul**	**15.91**	300	Pn	**Pn**	**12 38 25.5**	**0.0**
KBL				IAmb	IAmb	12 38 36.9	
	comp=Z,9.2nm,0.9s						
KDJ	**Kajisay**	**16.14**	337		**Pn**	**12 38 28.6**	**+0.2**
MK31	**Makanchi Array**	**19.40**	353	P	**P**	**12 39 07.4**	**0.0**
MKAR	**Makanchi Array**	**19.40**	353	P	**P**	**12 39 07.2**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=176,slow=12,SNR=12						
MKAR	**Makanchi Array**	**19.40**	353	P	**P**	**12 39 07.6**	**+0.2**
MAKZ	**Makanchi**	**19.45**	352	P	**P**	**12 39 07.8**	**-0.2**
KK31	**Karatay Array**	**19.83**	325		**P**	**12 39 12.6**	**+0.4**
KK31				IAmb	IAmb	12 39 21.1	
	comp=Z,2.3nm,0.8s						
KKAR	**Karatay Array**	**19.83**	325	P	**P**	**12 39 11.7**	**-0.5**
KURBB	**Kurchatov Arra**	**23.69**	349	P	**P**	**12 39 53.6**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=167,slow=9.8,SNR=10						
SONM	**Songino Array**	**25.87**	33	P	**P**	**12 40 14.1**	**+0.8**
	comp=Z,4.6nm,0.7s,baz=219,slow=9.7,SNR=12						
SONM	**Songino Array**	**25.87**	33	P	**P**	**12 40 13.3**	**0.0**
ULN	**Ulaanbaatar**	**26.21**	34	P	**P**	**12 40

*IDC **26** 12:55:01.1±0.4,1°.63S×100°.44E,h51km±3km,mb4.2/43, mb1 4.3/46,mb1mx4.1/66,mbtmp4.5/46,MS3.4/10, Ms1 3.4/0,ms1mx3.1/47,Error ellipse: s-maj=12.5km s-min=7.7km az=50.0*

*DJA **26** 12:55:03.1±0.3,2°.S±3°×10°.0E±°,h51km±3km,M4.8/19, mB5.3/7,mb4.9/18,MLv4.9/19,Mw(mB)4.8/7*

ISC 26 12:55:00.8±0.3,1.79S±0.04×100.26E±0.05,h56km,n211, σ155/228,mb4.7/76,MS3.3/9,12C-1D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SDSI	**Sungai Dareh**	**1.44**	**54**	P		**Pn**	**12 55 26.2**	**+1.5**
BKNI	**Bangkinang**	**2.24**	**20**	Pn		**Pn**	**12 55 36.9**	**+1.3**
BKNI	**Bangkinang**	**2.24**	**20**	P		**Pn**	**12 55 37.2**	**+1.6**
MASI	**Maura Aman, Be**	**2.39**	**124**	P		**Pn**	**12 55 39.7**	**+2.1**
MASI				S		**Sn**	**12 56 09.7**	**+3.9**
RGRI	**Rengat**	**2.52**	**55**	P		**Pn**	**12 55 41.8**	**+2.5**
MNSI	**Mandailing Nat**	**2.66**	**345**	P		**Pn**	**12 55 43.0**	**+1.8**
KSI	**Kapahiang**	**2.97**	**129**	P		**Pn**	**12 55 48.9**	**+3.3**
JMBI	**JAMBI**	**3.38**	**87**	P		**Pn**	**12 55 53.3**	**+2.1**
LHSI	**Lahat**	**3.83**	**122**	P		**Pn**	**12 56 01.1**	**+3.7**
GSI	**Gunungsitoli**	**4.08**	**319**	Pn		**Pn**	**12 56 01.6**	**+0.8**
GSI	**Gunungsitoli**	**4.08**	**319**	P		**Pn**	**12 56 01.2**	**+0.4**
PMBI	**Palembang**	**4.65**	**104**	Pn		**Pn**	**12 56 06.7**	**-1.8**
RPSI	**Rantau Prapat**	**4.65**	**343**	Pn		**Pn**	**12 56 10.5**	**+1.9**
MDSI	**Maura Dua**	**4.74**	**125**	P		**Pn**	**12 56 12.8**	**+3.0**
PSI	**Prapat**	**4.75**	**344**	P		**Pn**	**12 56 08.9**	**-1.1**
	3.3nm,0.3s,baz=180,slow=12,SNR=23							
PSI				S		**Sn**	**12 57 02.1**	**-1.8**
	7.5nm,0.3s,baz=180,slow=1.5,SNR=4.3							
LWLI	**Liwa**	**4.96**	**130**	P		**Pn**	**12 56 17.3**	**+4.3**
MYKOM	**Kota Tinggi**	**5.05**	**45**	Pn		**Pn**	**12 56 15.5**	**+1.4**
TSI	**Tuntungan**	**5.52**	**342**	P		**Pn**	**12 56 24.7**	**+4.2**
	0.8nm15µm226nm,1.1s							
KASI	**Kota Agung**	**5.62**	**131**	P		**Pn**	**12 56 24.0**	**+2.1**
	1.3nm3µm188nm,0.6s							
PPBI	**Pangkal Pinang**	**5.88**	**94**	P		Pn	12 56 40.4	+15
TPTI		**5.89**	**328**	P		**Pn**	**12 56 27.4**	**+1.9**
	0.3nm37nm,0.6s							
IPM	**Ipoh**	**6.27**	**7**	Pn		**Pn**	**12 56 32.9**	**+2.0**
KULM	**Kulim**	**7.04**	**3**	Pn		**Pn**	**12 56 43.2**	**+1.8**
TPI	**Tanjungpandan**	**7.45**	**98**	P		**Pn**	**12 56 47.7**	**+0.8**
	21nm,0.7s							
LEM	**Lembang**	**8.88**	**125**	P		**Pn**	**12 57 07.8**	**+1.1**
	4.1nm,0.3s,baz=294,slow=20,SNR=2.2							
LEM				LR		LR	13 01 21.3	
	comp=Z,133nm,20.1s,baz=252,slow=43							
XMIS	**Christmas Isla**	**10.16**	**148**	Pn		**Pn**	**12 57 22.2**	**-1.9**
KSM	**Kuching**	**10.55**	**72**	Pn		**Pn**	**12 57 29.5**	**0.0**
STKI	**Sintang**	**11.36**	**81**	P		Pn	12 57 52.1	+12
UGM	**Wanagama**	**11.89**	**121**	Pn		**Pn**	**12 57 46.9**	**-0.9**
JAGI	**Jajag, Banyuwa**	**15.34**	**116**	Pn		**Pn**	**12 58 32.1**	**-1.8**
JAGI				IAmb		IAmb	12 58 35.6	
	comp=Z,53nm,1.2s							
UBPT	**Khong Chiam**	**17.73**	**17**	P		**P**	**12 59 05.6**	**+1.5**
KKM	**Kota Kinabalu**	**17.73**	**64**	P		**Pn**	**12 59 03.9**	**-0.2**
TWSI	**Taliwang, Sumb**	**17.92**	**113**	P		**Pn**	**12 59 08.6**	**+2.3**
	comp=Z,18nm,0.6s							
MYLDM	**Lahad Datu**	**19.49**	**69**	P		**P**	**12 59 23.2**	**-0.3**
TTSI	**Tana Toraja**	**19.58**	**94**	P		Pn	12 59 42.0	+16
KAPI	**Kappang**	**19.71**	**100**	P		**P**	**12 59 26.5**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=273,slow=15,SNR=8.4							
KAPI				LR		LR	13 07 43.7	
	comp=Z,137nm,20.6s,baz=270,slow=39							
KAPI	**Kappang**	**19.71**	**100**			**P**	**12 59 24.5**	**-1.4**
KAPI				IAmb		IAmb	12 59 33.9	
	comp=Z,30nm,1.0s							
BNSI	**Bone**	**19.98**	**98**	P		**Pn**	**12 59 32.0**	**+1.0**
	comp=Z,49nm,1.3s							
CM31	**Chiang Mai Arr**	**20.16**	**356**	P		**P**	**12 59 31.7**	**+1.0**
CMAR	**Chiang Mai Arr**	**20.16**	**356**	P		**P**	**12 59 30.4**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=186,slow=9.4,SNR=16							
CMAR				pP		**pP**	**12 59 42.4**	**-0.7**
	comp=Z,3.4nm,0.5s,baz=186,slow=6.5							
CMAR				LR		LR	13 06 50.9	
	comp=Z,70nm,18.4s,baz=188,slow=36							
CMAR	**Chiang Mai Arr**	**20.16**	**356**	P		**P**	**12 59 31.1**	**+0.4**
CHTO	**Chiang Mai**	**20.52**	**356**	P		Pn	12 59 35.8	-1.4
TOLI2	**Tolitoli**	**20.72**	**82**	P		**Pn**	**12 59 36.8**	**0.0**
APSI	**Ampana**	**21.40**	**88**	P		P	12 59 54.9	+11
PALK	**Pallekele**	**21.49**	**295**	P		**P**	**12 59 48.3**	**+3.1**
	comp=Z,11nm,0.9s,baz=214,slow=8.0,SNR=7.2							
PALK				LR		LR	13 06 47.9	
	comp=Z,120nm,21.8s,baz=219,slow=33							
PALK	**Pallekele**	**21.49**	**295**	P		**P**	**12 59 45.2**	**0.0**
MRSI	**Marisa**	**21.79**	**84**	P		**P**	**12 59 50.9**	**+2.6**
	comp=Z,68nm,1.1s							
BASI	**Baing, Sumba**	**21.85**	**113**	P		**P**	**12 59 53.8**	**+4.8**
	comp=Z,79nm,0.7s							
LUWI	**Luwuk**	**22.52**	**88**	P		**P**	**12 59 54.6**	**-1.6**
QIZ	**Qiongzhong**	**22.73**	**24**	P		**P**	**13 00 01.0**	**+2.7**
QIZ				S		**S**	**13 04 08.5**	**+5.4**
QIZ				LR		LR		
	comp=Z,140nm,12.7s							
QIZ				LR		LR		
	comp=Z,110nm,14.2s							
QIZ				LR		LR		
	comp=Z,120nm,32.4s							
GTOI	**Gorontalo**	**22.87**	**84**	P		**P**	**13 00 00.0**	**+0.1**
	comp=Z,38nm,0.8s							
BATI	**Baumata**	**24.71**	**111**	P		**P**	**13 00 18.8**	**+1.7**
	comp=Z,6.0nm,0.4s,baz=248,slow=19,SNR=2.1							
FITZ	**Fitzroy Crossi**	**29.71**	**125**	P		**P**	**13 01 01.4**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=263,slow=10,SNR=8.2							
FITZ				pP		**pP**	**13 01 15.4**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=299,slow=7.4,SNR=4.3							
FITZ	**Fitzroy Crossi**	**29.71**	**125**	P		**P**	**13 01 00.6**	**-1.4**
KNRA	**Kununurra**	**31.30**	**118**	P		**P**	**13 01 14.0**	**-2.0**
TPUB	**Ta-pu**	**31.86**	**37**	P		**P**	**13 01 20.9**	**0.0**
FAKI	**Fak Fak**	**31.98**	**93**	P		**P**	**13 01 21.3**	**-0.7**
FAKI				IAmb		IAmb	13 01 29.1	
	comp=Z,28nm,1.2s							
LSA	**Lhasa**	**32.50**	**345**	P		**P**	**13 01 26.3**	**-0.6**
LSA				IAmb		IAmb	13 01 30.8	
	comp=Z,8.2nm,1.1s							
CD2	**Chengdu**	**32.69**	**6**	*eP*		**P**	**13 01 30.0**	**+2.0**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
H01W3	**Cape Leeuwin H**	**35.37**	**160**	T		T	13 39 08.7	
	baz=337,slow=76							
H01W2	**Cape Leeuwin H**	**35.39**	**160**	T		T	13 39 07.9	
	baz=337,slow=76							
H01W1	**Cape Leeuwin H**	**35.39**	**160**	T		T	13 39 07.0	
	baz=337,slow=76							
XAN	**Xi'an**	**36.56**	**12**	P		**P**	**13 02 00.3**	**-1.1**
XAN				pP		pP	13 02 14.5	-1.0
XAN				pmax		pmax		
	comp=Z,21nm,0.6s							
XAN				pmax		pmax		
	comp=Z,98nm,5.2s							
LZH	**Lanzhou**	**37.83**	**5**	*eP*		**P**	**13 02 16.5**	**+4.2**
LZH				pP		sP	13 02 30.5	-2.5
LZH				sP		pP	13 02 38.5	+12
LZH				pmax		pmax		
	comp=Z,23nm,1.3s							
WB0	**Warramunga Arr**	**37.85**	**121**	P		**P**	**13 02 11.6**	**-1.0**
WB0				IAmb		IAmb	13 02 26.8	
	comp=Z,7.9nm,1.0s							
WRA	**Warramunga Arr**	**37.87**	**121**	P		**P**	**13 02 11.5**	**-1.2**
	comp=Z,4.2nm,0.4s,baz=296,slow=12,SNR=49							
WRA				pP		**pP**	**13 02 25.8**	**-1.1**
	comp=Z,2.4nm,0.5s,baz=314,slow=9.5,SNR=6.0							
WRA				PcP		**PcP**	**13 04 29.1**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=311,slow=2.5,SNR=5.3							
WRA	**Warramunga Arr**	**37.87**	**121**	P		**P**	**13 02 11.5**	**-1.2**
WRAB	**Tennant Creek**	**37.88**	**121**	P		**P**	**13 02 11.8**	**-1.0**
WRAB				IAmb		IAmb	13 02 13.0	
	comp=Z,7.2nm,0.7s							
WB2	**Warramunga Arr**	**37.88**	**121**	P		**P**	**13 02 11.9**	**-0.9**
WB2				IAmb		IAmb	13 02 13.0	
	comp=Z,7.2nm,0.6s							
NJ2	**Nanjing**	**37.99**	**26**	*eP*		**P**	**13 02 16.8**	**+3.3**
NJ2				pmax		pmax		
	comp=Z,17nm,0.5s							
WR0	**Warramunga Arr**	**38.05**	**121**	P		**P**	**13 02 13.6**	**-0.6**
WR0				IAmb		IAmb	13 02 14.2	
	comp=Z,9.0nm,0.8s							
FORT	**Forrest**	**39.03**	**140**	P		**P**	**13 02 21.4**	**-0.9**
AS31	**Alice Springs**	**39.16**	**126**	P		**P**	**13 02 21.5**	**-2.1**
ASAR	**Alice Springs**	**39.16**	**126**	P		**P**	**13 02 23.8**	**+0.2**
	comp=Z,6.2nm,0.7s,baz=305,slow=7.9,SNR=165							
ASAR				pP		**pP**	**13 02 36.1**	**-1.7**
	comp=Z,7.7nm,0.5s,baz=303,slow=7.9,SNR=10							
ASAR				PcP		**PcP**	**13 04 33.0**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=306,slow=2.8,SNR=4.2							
ASAR				ScP		**ScP**	**13 08 15.8**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=302,slow=7.1,SNR=4.1							
ASAR	**Alice Springs**	**39.16**	**126**	P		**P**	**13 02 21.3**	**-2.3**
NIL	**Nilore**	**43.47**	**327**	P		**P**	**13 02 58.4**	**-0.4**
NIL				IAmb		IAmb	13 03 14.4	
	comp=Z,18nm,0.7s							
HHC	**Hu-ho-hao-te**	**43.67**	**12**	*eP*		**P**	**13 03 01.5**	**+1.2**
HHC				pmax		pmax		
	comp=Z,11nm,0.9s							
HHC				pmax		pmax		
	comp=Z,83nm,5.5s							
BBOO	**Buckleboo**	**45.62**	**136**	P		**P**	**13 03 12.8**	**-3.1**
KSRS	**Korea Array**	**46.71**	**31**	P		**P**	**13 03 23.1**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=227,slow=7.9,SNR=6.9							
KSRS				pP		**pP**	**13 03 35.6**	**-3.2**
	comp=Z,2.4nm,0.9s,baz=223,slow=7.2,SNR=5.0							
KSRS				LR		LR	13 22 34.6	
	comp=Z,26nm,21.4s,baz=195,slow=36							
WMQ	**Urumqi**	**46.78**	**348**	*eP*		**P**	**13 03 26.5**	**+1.6**
WMQ				pP		pP	13 03 41.5	+2.2
WMQ				pmax		pmax		
	comp=Z,10.0nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,160nm,4.1s							
PMG	**Port Moresby**	**47.24**	**101**	LR		LR	13 25 37.8	
	comp=Z,31nm,19.4s,baz=258,slow=39							
JHS	**Saijyo**	**47.81**	**37**	P		**P**	**13 03 32.7**	**-0.2**
JHS				IAmb		IAmb	13 03 58.4	
	comp=Z,20nm,1.3s							
SOCY	**Socotra**	**48.01**	**288**	P		**P**	**13 03 35.6**	**+0.7**
PRZ	**Przheval'sk**	**48.29**	**338**	P		**P**	**13 03 36.9**	**+0.2**
PRZ				IAmb		IAmb	13 04 00.9	
	comp=Z,13nm,0.8s							
CTAO	**Charters Tower**	**48.45**	**115**	P		**P**	**13 03 36.7**	**-1.4**
KDJ	**Kajisay**	**48.45**	**337**	P		**P**	**13 03 38.2**	**+0.2**
GAR	**Garm**	**49.05**	**329**	P		**P**	**13 03 42.9**	**+0.4**
GAR				IAmb		IAmb	13 04 08.5	
	comp=Z,7.7nm,0.8s							
STKA	**Stephens Creek**	**49.09**	**132**	P		**P**	**13 03 43.2**	**+0.3**
	comp=Z,3.3nm,0.5s,baz=304,slow=7.0,SNR=7.7							
STKA				pP		**pP**	**13 03 57.8**	**+0.4**
	comp=Z,8.5nm,0.7s,baz=302,slow=8.6,SNR=9.2							
STKA	**Stephens Creek**	**49.09**	**132**	P		**P**	**13 03 41.6**	**-1.3**
BOOM	**Boomskoye usch**	**49.25**	**336**	P		**P**	**13 03 43.2**	**-0.8**
UCH	**Uchtor**	**49.62**	**335**	P		**P**	**13 03 48.8**	**+1.5**
	SNR=6.4							
SONM	**Songino Array**	**49.71**	**5**	P		**P**	**13 03 47.5**	**0.0**
	comp=Z,3.5nm,0.6s,baz=184,slow=9.2,SNR=12							
SONM				pP		**pP**	**13 04 02.3**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=198,slow=9.0,SNR=4.5							
SONM				PcP		**PcP**	**13 05 08.4**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=196,slow=4.8,SNR=1.4							
SONM				ScP		**ScP**	**13 08 57.0**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=188,slow=5.8,SNR=3.6							
SONM	**Songino Array**	**49.71**	**5**	P		**P**	**13 03 47.3**	**-0.2**
TKM2	**Tokmak 2**	**49.75**	**336**	P		**P**	**13 03 49.5**	**+1.7**
	SNR=15							
AML	**Almayashu**	**49.89**	**334**	P		**P**	**13 03 50.6**	**+1.3**
	SNR=7.2							
AAK	**Ala-Archa**	**49.96**	**335**	P		**P**	**13 03 48.2**	**-1.2**
AAK				IAmb		IAmb	13 04 06.5	
	comp=Z,3.9nm,0.8s							
EKS2	**Erkin-Say**	**50.29**	**335**	P		**P**	**13 03 54.1**	**+2.2**
	SNR=9.0							
USP	**Ospenovka**	**50.48**	**336**	P		**P**	**13 03 54.6**	**+1.3**
	SNR=14							
MK31	**Makanchi Array**	**50.90**	**344**	P		**P**	**13 03 57.1**	**+0.8**
MK31				IAmb		IAmb	13 03 58.6	
	comp=Z,4.3nm,0.7s							
MKAR	**Makanchi Array**	**50.90**	**344**	P		**P**	**13 03 57.1**	**+0.8**
	comp=Z,4.7nm,0.5s,baz=160,slow=9.1,SNR=50							
MKAR				pP		**pP**	**13 04 10.4**	**-0.5**
	comp=Z,3.9nm,0.6s,baz=154,slow=8.1,SNR=7.1							
MAKZ	**Makanchi**	**51.00**	**344**	P		**P**	**13 03 57.1**	**+0.1**
MAJO	**Matsushiro**	**51.95**	**39**	P		**P**	**13 04 03.7**	**-0.7**
MAT	**Matsushiro**	**51.95**	**39**	P		**P**	**13 04 03.6**	**-0.7**
MJAR	**Matsushiro Arr**	**51.95**	**39**	P		**P**	**13 04 03.5**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=225,slow=7.7,SNR=11							
MJAR				pP		**pP**	**13 04 17.0**	**-2.3**
	comp=Z,2.1nm,0.9s,baz=221,slow=8.0,SNR=4.9							
MJAR				LR		LR	13 27 12.5	
	comp=Z,35nm,18.4s,baz=240,slow=37							
KK31	**Karatay Array**	**52.09**	**333**	P		**P**	**13 04 04.2**	**-1.0**
KK31				IAmb		IAmb	13 04 31.2	
	comp=Z,4.0nm,0.8s							
KKAR	**Karatay Array**	**52.09**	**333**	P		**P**	**13 04 04.4**	**-0.8**
JSD	**Sado**	**52.92**	**38**	P		**P**	**13 04 11.1**	**-0.4**
JSD				IAmb		IAmb	13 04 28.1	
	comp=Z,15nm,1.1s							
TLY	**Talaya**	**53.35**	**3**	LR		LR	13 28 38.4	
	comp=Z,61nm,18.4s,baz=144,slow=38							
USA0B	**Ussuriysk Arra**	**53.85**	**28**	P		**P**	**13 04 17.8**	**-0.4**
USA0B				IAmb		IAmb	13 04 19.1	
	comp=Z,6.8nm,0.7s							
USRK	**Ussuriysk Ar.**	**53.85**	**28**	P		**P**	**13 04 17.9**	**-0.3**
	comp=Z,5.9nm,0.5s,baz=226,slow=3.9,SNR=26							
USRK				pP		**pP**	**13 04 33.1**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=260,slow=2.1,SNR=4.1							
USRK	**Ussuriysk Ar.**	**53.85**	**28**	P		**P**	**13 04 17.7**	**-0.5**
EIDS	**Eidsvold**	**54.23**	**120**	P		**P**	**13 04 18.7**	**-2.6**
EIDS				IAmb		IAmb	13 04 25.1	
	comp=Z,20nm,1.5s							
JMM	**Marumori**	**54.39**	**39**	P		**P**	**13 04 21.8**	**-0.4**
KURBB	**Kurchatov Arra**	**55.42**	**343**	P		**P**	**13 04 29.7**	**+0.3**
	comp=Z,4.4nm,0.9s,baz=162,slow=7.0,SNR=28							
GEYT	**Alibeck**	**55.46**	**320**	P		**P**	**13 04 30.1**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=160,slow=9.1,SNR=9.2							
GYA0B	**ALIBECK ARRAY**	**55.46**	**320**	P		**P**	**13 04 29.9**	**-0.1**
GYA0B				IAmb		IAmb	13 04 31.6	
	comp=Z,7.5nm,0.9s							
VOI	**Vohitsoka**	**55.66**	**245**	P		**P**	**13 04 30.2**	**-1.7**
CAN	**Canberra**	**56.16**	**132**	P		**P**	**13 04 32.6**	**-2.5**
ARMA	**Armidale**	**56.31**	**126**	P		**P**	**13 04 34.3**	**-2.1**
ZAA0	**Zalesovo Array**	**57.01**	**349**	P		**P**	**13 04 40.6**	**-0.1**
ZAA0				IAmb		IAmb	13 04 44.8	
	comp=Z,7.2nm,0.8s							
ZALV	**Zalesovo Beam**	**57.01**	**349**	P		**P**	**13 04 40.7**	**0.0**
	comp=Z,5.7nm,0.6s,baz=176,slow=5.5,SNR=26							
ZALV				pP		**pP**	**13 04 53.5**	**-2.0**
	comp=Z,1.5nm,0.3s,baz=174,slow=6.0,SNR=5.4							
ZALV	**Zalesovo Beam**	**57.01**	**349**	P		**P**	**13 04 40.1**	**-0.5**
KLR	**Kul'dur**	**57.63**	**24**	P		**P**	**13 04 44.9**	**-0.3**
	comp=Z,2.1nm,0.4s,baz=231,slow=7.1,SNR=11							
ATD	**Arta Tunnel**	**58.57**	**285**	LR		LR	13 26 43.1	
	comp=Z,23nm,18.1s,baz=77,slow=32							
JKA	**Kamikawa-asahi**	**59.29**	**34**	P		**P**	**13 04 57.0**	**+0.1**
BVAR	**Borovoye Array**	**60.08**	**340**	P		**P**	**13 05 01.7**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=179,slow=8.9,SNR=15							
BVAR				pP		**pP**	**13 05 15.5**	**-1.6**
	comp=Z,3.4nm,0.5s,baz=181,slow=13,SNR=12							
BRVK	**Borovoye**	**60.14**	**340**	P		**P**	**13 05 02.7**	**+0.2**
ABKAR	**Akbulak array**	**61.58**	**331**	P		**P**	**13 05 12.0**	**-0.4**
ABKAR	**Akbulak array**	**61.58**	**331**	P		**P**	**13 05 12.2**	**-0.2**
KMBO	**Kilima Mbogo**	**62.99**	**270**	P		**P**	**13 05 24.1**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=69,slow=9.7,SNR=6.6							
AKTO	**Aktyubinsk**	**63.30**	**331**	P		**P**	**13 05 23.6**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=112,slow=3.7,SNR=7.1							
AKTO				pP		**pP**	**13 05 37.9**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=26,slow=3.0,SNR=4.9							
CASY	**Casey**	**64.77**	**175**	P		**P**	**13 05 31.7**	**-1.4**
ARU	**Arti**	**67.12**	**336**	P		**P**	**13 05 47.6**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=125,slow=2.7,SNR=5.7							
ARU				pP		**pP**	**13 06 02.2**	**-1.4**
	comp=Z,1.4nm,0.4s,baz=175,slow=4.4,SNR=2.7							
ARU	**Arti**	**67.12**	**336**	P		**P**	**13 05 48.1**	**-0.4**
ARU				IAmb		IAmb	13 06 03.8	
	comp=Z,8.8nm,1.0s							
YAK	**Yakutsk**	**67.47**	**15**	P		**P**	**13 05 49.7**	**-0.9**
	comp=Z,2.4nm,0.3s,baz=190,slow=1.3,SNR=2.7							
YAK	**Yakutsk**	**67.47**	**15**	P		**P**	**13 05 49.8**	**-0.7**
YAK				IAmb		IAmb	13 05 50.4	
	comp=Z,9.4nm,0.7s							
KBZ	**Khabaz**	**68.32**	**319**	P		**P**	**13 05 57.1**	**+0.9**
	comp=Z,8.3nm,0.8s,baz=123,slow=5.8,SNR=28							
EIL	**Elat**	**69.63**	**302**	P		**P**	**13 06 06.1**	**+1.4**
	comp=Z,10.0nm,0.8s,baz=316,slow=2.4,SNR=8.2							
MMAI	**Mount Meron Ar**	**70.13**	**306**	P		**P**	**13 06 09.3**	**+1.6**
	comp=Z,6.3nm,0.7s,baz=128,slow=7.7,SNR=5.4							
MAW	**Mawson**	**70.55**	**194**	P		**P**	**13 06 12.3**	**+2.7**
	comp=Z,4.0nm,0.9s,baz=20,slow=10,SNR=6.1							
MAW	**Mawson**	**70.55**	**194**	P		**P**	**13 06 06.9**	**-2.7**
NRIK	**Noril'sk**	**71.52**	**355**	P		**P**	**13 06 15.0**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=156,slow=10.0,SNR=2.1							
KIRV	**Kirov**	**72.29**	**335**	P		**P**	**13 06 21.1**	**+0.9**
	comp=Z,7.4nm,0.6s,baz=68,slow=4.3,SNR=3.9							
PEA0B	**Petropavlovsk-**	**72.57**	**32**	P		**P**	**13 06 21.1**	**-0.9**
PETK	**Petropavlovsk-**	**72.57**	**32**	P		**P**	**13 06 21.6**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=133,slow=1.2,SNR=14							
PETK				pP		**pP**	**13 06 36.0**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=182,slow=12,SNR=2.3							
PETK	**Petropavlovsk-**	**72.57**	**32**	P		**P**	**13 06 21.3**	**-0.7**
MA2	**Magadan**	**72.73**	**24**	P		**P**	**13 06 22.8**	**0.0**
	comp=Z,2.1nm,0.3s,baz=181,slow=12,SNR=5.0							
MA2	**Magadan**	**72.73**	**24**	P		**P**	**13 06 22.6**	**-0.3**
MA2				IAmb		IAmb	13 06 24.8	
	comp=Z,22nm,1.5s							
BR131	**Keskin Array S**	**73.38**	**312**	P		**P**	**13 06 26.2**	**-1.0**
BR131				IAmb		IAmb	13 06 28.2	
	comp=Z,5.2nm,0.8s							
BRTR	**Keskin Array B**	**73.38**	**312**	P		**P**	**13 06 27.2**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=130,slow=7.3,SNR=22							
BRTR	**Keskin Array B**	**73.38**	**312**	P		**P**	**13 06 26.3**	**-1.0**
TIXI	**Tiksi**	**75.61**	**9**	P		**P**	**13 06 38.6**	**-0.8**
BOSA	**Boshof**	**75.99**	**241**	P		**P**	**13 06 45.0**	**+2.3**
	comp=Z,5.2nm,0.7s,baz=90,slow=3.9,SNR=14							
BOSA				LR		LR	13 32 45.5	
	comp=Z,24nm,20.6s,baz=172,slow=30							
BOSA	**Boshof**	**75.99**	**241**	P		**P**	**13 06 41.8**	**-0.9**
BOSA				IAmb		IAmb	13 06 46.2	
	comp=Z,5.8nm,0.9s							
KLMR	**Klimovskoe**	**77.76**	**334**	*eP*		**P**	**13 06 51.0**	**-0.7**
KLMR				AMP			13 07 03.6	
	comp=Z,5.0nm,1.4s							
SYO	**Syowa Base**	**78.15**	**199**	⇑*eX*		**P**	**13 06 57.0**	**+3.3**
BKZ	**Black Stump Fm**	**78.20**	**130**	P		**P**	**13 06 53.7**	**-1.0**
SORM	**Soroca**	**79.35**	**320**	⇑P		**P**	**13 07 01.6**	**+0.9**
AKASG	**Malin Array Be**	**79.48**	**322**	P		**P**	**13 07 02.2**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=93,slow=4.3,SNR=2.5							
AKASG	**Malin Array Be**	**79.48**	**322**	P		**P**	**13 07 00.6**	**-0.8**
VRI	**Vrincioaia**	**79.88**	**317**	⇑P		**P**	**13 07 05.0**	**+1.3**
TESR	**Tescani**	**80.08**	**318**	⇑P		**P**	**13 07 05.7**	**+1.0**
SUR	**Sutherland**	**80.13**	**238**	P		**P**	**13 07 04.7**	**-0.9**
SUR				IAmb		IAmb	13 07 21.1	
	comp=Z,18nm,1.3s							
MLR	**Muntele Rosu**	**80.33**	**317**	P		**P**	**13 07 07.5**	**+1.2**
	comp=Z,4.9nm,0.9s,baz=58,slow=0.6,SNR=7.2							
MLR	**Muntele Rosu**	**80.33**	**317**	⇑P		**P**	**13 07 08.0**	**+1.7**
MLR	**Muntele Rosu**	**80.33**	**317**	P		**P**	**13 07 06.3**	**0.0**
MLR				IAmb		IAmb	13 07 24.7	
	comp=Z,10.0nm,1.0s							
BIZ	**Bicaz**	**80.54**	**318**	⇑P		**P**	**13 07 08.9**	**+1.7**
PRAR	**RASCA**	**80.55**	**319**	⇑P		**P**	**13 07 08.8**	**+1.5**
BURAR	**Bucovina Array**	**81.28**	**319**	⇓P		**P**	**13 07 13.4**	**+2.1**
BURAR	**Bucovina Array**	**81.28**	**

*BJI **26** 13:11:15.5±0.0,27.°90N×85.°40E,h10km,mB4.6/19, mb4.2/32,Ms3.8/15,Ms7 3.5/14*
*NEIC **26** 13:11:15.2±1.2,27.°81N±0.°09×85.°41E±0.°09,h10km±1km, mb4.5/61,Error ellipse: s-maj=15.7km s-min=11.7km az=210.0*
*DMN **26** 13:11:15.4±0.1,27.°90N×85.°61E,h20km,Ml5.2/4,Error ellipse: s-maj=3.5km s-min=1.5km az=7.0*
*NDI **26** 13:11:16.8±3.5,27.°73N×85.°51E,h10km,ML4.2, mb4.5(NEIC)*

ISC 26 13:11:15.5±0.9,27°.81N±0'.04×85°.53E±0'.02,h13km±5km, n152,σ1s97/170,mb4.4/56,MS3.4/7,1C-1D,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.22**	**264**	*eP*	**Pg**		**Pn**	**13 11 23.2**	**+2.6**
PKIN	**Phulchoki**	**0.27**	**207**	*eP*	**Pg**		**Pb**	**13 11 23.5**	**+1.2**
PKI	**Pulchoki**	**0.27**	**204**	*eP*	**Pg**		**Pb**	**13 11 23.4**	**+1.0**
PKI				*eSg*			**Sb**	**13 11 29.3**	**+2.3**
GUN	**Gumba**	**0.32**	**73**	*eP*	**Pg**		**Pg**	**13 11 21.8**	**-0.5**
GUN				*eSg*			**Sg**	**13 11 25.5**	**-1.4**
DMN	**Daman**	**0.43**	**242**	*eP*	**Pg**		**Pb**	**13 11 26.2**	**+1.1**
DMN				*eSg*			**Sb**	**13 11 33.5**	**+1.9**
	5μm,0.2s								
GKN	**Gorkha**	**0.81**	**284**	*eP*	**Pg**		**Pn**	**13 11 32.6**	**-0.3**
RAMN	**Ramite**	**1.28**	**132**	*eP*	**Pg**		**Pn**	**13 11 39.8**	**+0.4**
DANN	**Dangsing**	**1.65**	**289**	*eP*	**Pg**		**Pg**	**13 11 46.8**	**-0.6**
DANN				*eSg*			**Sg**	**13 12 09.4**	**+0.5**
	2μm,0.3s								
KOLN	**Koldanda**	**1.71**	**269**	*eP*	**Pg**		**Pg**	**13 11 48.4**	**-0.1**
KOLN				*eSg*			**Sg**	**13 12 12.1**	**+1.4**
	4μm,0.4s								
ODAN	**Odare**	**1.91**	**119**	*eP*	**Pg**		**Pb**	**13 11 51.1**	**+0.8**
ODAN				*eSg*			**Sb**	**13 12 15.8**	**+1.6**
	3μm,0.2s								
TAPN	**Taplejung**	**1.99**	**103**	*eP*	**Pg**		**Pb**	**13 11 52.1**	**+0.3**
TAPN				*eSg*			**Sb**	**13 12 17.9**	**+1.3**
	5μm,0.4s								
BOK	**Bokaro**	**4.01**	**175**	*eP*			**Pn**	**13 12 19.2**	**+2.4**
LSA	**Lhasa**	**5.28**	**68**	Pn			**Pn**	**13 12 37.4**	**+2.8**
SHL	**Shillong**	**6.11**	**110**	*eP*			**Pn**	**13 12 45.5**	**-0.2**
SHL				*eS*			**Sn**	**13 13 51.9**	**-3.6**
SHL	**Shillong**	**6.11**	**110**	Pn			**Pn**	**13 12 46.0**	**+0.3**
DDI	**Dehra Dun**	**7.00**	**293**	*eP*			**Pn**	**13 13 01.0**	**+3.1**
DDI				*eS*			**Sn**	**13 14 13.6**	**-3.8**
DDI				IAML				13 14 19.7	
	comp=N,618nm,0.4s								
DDI				IAML				13 14 22.0	
	comp=E,506nm,0.4s								
KOHI	**KOHIMA**	**7.94**	**103**	*eP*			**Pn**	**13 13 11.1**	**+0.2**
KOHI				*eS*			**Sn**	**13 14 39.4**	**-1.3**
KOHI				IAML				13 14 46.6	
	comp=E,95nm,0.4s								
SMLA	**Simla**	**8.00**	**296**	*eP*			**Pn**	**13 13 12.8**	**+1.3**
SMLA				*eS*			**Sn**	**13 14 39.4**	**-2.5**
SMLA				IAML				13 14 42.4	
	comp=E,276nm,0.5s								
SMLA				IAML				13 14 42.8	
	comp=N,193nm,0.4s								
MOKO	**MOKOCHONG**	**8.15**	**98**	*eP*			**Pn**	**13 13 13.9**	**+0.2**
MOKO				*eS*			**Sn**	**13 14 39.7**	**-6.0**
MOKO				IAML				13 14 45.7	
	comp=N,145nm,0.7s								
MOKO				IAML				13 14 46.5	
	comp=E,162nm,0.7s								
BHPL	**Bhopal**	**8.62**	**240**	*eP*			**Pn**	**13 13 18.4**	**-1.7**
BHPL				*eS*			**Sn**	**13 14 50.2**	**-7.1**
BHPL				IAML				13 14 55.1	
	comp=E,91nm,0.4s								
BHPL				IAML				13 14 58.0	
	comp=N,70nm,0.3s								
DHRM	**DHARAMSHALA**	**9.14**	**301**	*eP*			**Pn**	**13 13 26.8**	**-0.5**
DHRM				*eS*			**Sn**	**13 15 06.2**	**-4.1**
DHRM				IAML				13 15 10.3	
	comp=E,109nm,0.4s								
AJM	**Ajmer**	**9.79**	**265**	⇓*iP*			**Pn**	**13 13 35.0**	**-1.1**
AJM				*i* S			**Sn**	**13 15 19.0**	**-7.0**
NIL	**Nilore**	**12.06**	**302**	Pn			**Pn**	**13 14 05.4**	**-1.7**
HYB	**Hyderabad**	**12.19**	**213**	*iP*			**Pn**	**13 14 07.0**	**-1.9**
HYB				*eS*			**Sn**	**13 16 24.0**	**-0.8**
KSH	**Kashi**	**14.12**	**328**	P			**Pn**	**13 14 31.5**	**-3.8**
KSH				pP			P	13 14 38.8	-4.2
KSH				pmax		pmax			
	comp=E,5.0nm,0.5s								
KSH				pmax		pmax			
	comp=E,190nm,3.4s								
POO	**Poona**	**14.16**	**232**	*eP*			**Pn**	**13 14 33.0**	**-3.0**
POO				*eS*			Sn	13 17 02.0	-11
CHTO	**Chiang Mai**	**15.22**	**123**	P			**Pn**	**13 14 55.3**	**+0.1**
CHTO				IAmb		IAmb		13 14 56.2	
	comp=Z,11nm,0.8s								
CM33	**Chiang Mai Arr**	**15.22**	**123**	P			**P**	**13 14 55.0**	**-0.2**
CMMT	**Chiang Mai**	**15.22**	**123**	P			**P**	**13 14 54.0**	**-1.3**
	comp=Z,0.0nmcomp=Z,7.8nm,0.8s								
CM32	**Chiang Mai Arr**	**15.25**	**124**	P			**P**	**13 14 56.0**	**+0.4**
CM15	**Chiang Mai Arr**	**15.43**	**124**	P			**P**	**13 14 57.0**	**-0.6**
	comp=Z,0.0nmcomp=Z,112nmcomp=Z,9.1nm,0.9s								
CM13	**Chiang Mai Arr**	**15.44**	**124**	P			**Pn**	**13 14 52.5**	**-0.6**
	comp=Z,0.0nmcomp=Z,61nmcomp=Z,8.6nm,1.0s								
CM31	**Chiang Mai Arr**	**15.44**	**124**	P			**P**	**13 14 58.4**	**+0.7**
	comp=Z,1.0nmcomp=Z,258nm,0.6s								
CM31	**Chiang Mai Arr**	**15.44**	**124**				**Pn**	**13 14 54.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**15.44**	**124**	Pn			**Pn**	**13 14 50.2**	**-3.0**
	baz=303,slow=13,SNR=12								
CMAR				LR		LR		13 21 19.0	
	comp=Z,67nm,18.6s,baz=3.5,slow=39								
CM02	**Chiang Mai Arr**	**15.46**	**124**	P			**P**	**13 14 58.0**	**+0.1**
	comp=Z,0.0nmcomp=Z,75nmcomp=Z,12nm,0.8s								
CM35	**Chiang Mai Arr**	**15.46**	**123**	P			**P**	**13 14 57.0**	**-0.9**
CM01	**Chiang Mai Arr**	**15.48**	**124**	P			**P**	**13 14 58.0**	**-0.1**
	comp=Z,0.0nmcomp=Z,74nmcomp=Z,9.1nm,0.7s								
CM05	**Chiang Mai Arr**	**15.48**	**124**	P			**Pn**	**13 14 56.0**	**+2.3**
	comp=Z,0.0nmcomp=Z,57nmcomp=Z,8.0nm,0.7s								
CM09	**Chiang Mai Arr**	**15.49**	**124**	P			**P**	**13 14 59.0**	**+0.8**
	comp=Z,0.0nmcomp=Z,11nm,0.6s								
CM04	**Chiang Mai Arr**	**15.51**	**124**	P			**P**	**13 14 59.1**	**+0.7**
	comp=Z,0.0nmcomp=Z,9.5nm,0.7s								
CM36	**Chiang Mai Arr**	**15.52**	**124**	P			**P**	**13 14 59.0**	**+0.5**
KBL	**Kabul**	**15.62**	**299**	P			**P**	**13 15 00.3**	**+0.5**
KBL				IAmb		IAmb		13 15 01.9	
	comp=Z,11nm,0.7s								
KDJ	**Kajisay**	**15.82**	**337**	Pn			**Pn**	**13 14 55.9**	**-2.3**
WMQ	**Urumqi**	**16.07**	**6**	*eP*			**Pn**	**13 15 02.5**	**+1.3**
WMQ				sP			sP	13 15 10.0	-0.7
WMQ				pmax		pmax			
	comp=Z,17nm,0.9s								
WMQ				pmax		pmax			
	comp=Z,150nm,4.9s								
GTA	**Gaotai**	**16.57**	**42**	*eP*			**P**	**13 15 10.3**	**+0.1**
GTA				pP			pP	13 15 14.5	+0.1
GTA				sP			sP	13 15 17.0	+0.6
GTA				pmax		pmax			
	comp=Z,4.0nm,1.0s								
GTA				pmax		pmax			
	comp=Z,53nm,5.1s								
GTA				LR		LR			
	comp=Z,93nm,14.2s								
GTA				LR		LR			
	comp=Z,150nm,13.8s								
GTA				LR		LR			
	comp=Z,130nm,12.7s								
SUKH	**Sukhothai**	**16.57**	**125**	P			**P**	**13 15 10.7**	**+0.5**
	comp=Z,0.1nmcomp=Z,14nm,0.6s								
BOOM	**Boomskoye usch**	**16.59**	**334**	Pn			**Pn**	**13 15 07.5**	**-0.5**
ARSB	**Arslanbob**	**16.96**	**326**	Pn			**Pn**	**13 15 09.1**	**-3.6**
UTTA	**Uttaradit**	**17.08**	**123**	P			**P**	**13 15 15.7**	**-0.1**
	comp=Z,0.0nmcomp=Z,11nm,0.8s								
AAK	**Ala-Archa**	**17.30**	**332**	Pn			**Pn**	**13 15 16.0**	**-0.9**
LZH	**Lanzhou**	**17.57**	**57**	*eP*			**Pn**	**13 15 19.0**	**-1.4**
LZH				pmax		pmax			
	comp=Z,18nm,1.0s								
LZH				pmax		pmax			
	comp=Z,59nm,4.6s								
LZH				LR		LR			
	comp=Z,180nm,12.5s								
LZH				LR		LR			
	comp=Z,180nm,13.6s								
LZH				LR		LR			
	comp=Z,170nm,15.7s								
UTHA	**Uthaitani**	**17.75**	**131**	P			**P**	**13 15 24.9**	**+1.6**
GYA	**Guiyang**	**18.86**	**89**	⇑P			**Pn**	**13 15 37.3**	**+1.2**
GYA				pmax		pmax			
	comp=Z,3.0nm,0.6s								
NONG	**Nongkai**	**18.88**	**117**	P			**Pn**	**13 15 38.1**	**+1.8**
	comp=Z,11nm,0.8s								
MK31	**Makanchi Array**	**19.12**	**353**	P			**P**	**13 15 38.0**	**-0.1**
MKAR	**Makanchi Array**	**19.12**	**353**	P			**P**	**13 15 38.5**	**+0.3**
	comp=Z,3.1nm,0.3s,baz=177,slow=11,SNR=95								
MKAR				LR		LR		13 24 14.8	
	comp=Z,146nm,18.3s,baz=147,slow=41								
MKAR	**Makanchi Array**	**19.12**	**353**	P			**P**	**13 15 37.4**	**-0.8**
MAKZ	**Makanchi**	**19.17**	**353**	P			**P**	**13 15 38.9**	**+0.2**
MAKZ				IAmb		IAmb		13 15 40.2	
	comp=Z,8.0nm,0.5s								
KK31	**Karatay Array**	**19.51**	**325**	P			**P**	**13 15 41.9**	**-0.6**
KKAR	**Karatay Array**	**19.51**	**325**	P			**P**	**13 15 41.9**	**-0.6**
SRAK	**Srakaew**	**20.62**	**128**	P			Pn	13 16 02.0	+5.0
	comp=Z,95nm,0.7s								
PALK	**Pallekele**	**20.94**	**194**	P			Pn	13 16 04.5	+3.8
	comp=Z,8.5nm,0.4s,baz=112,slow=12,SNR=18								
PALK				S			**S**	**13 19 53.2**	**+1.8**
	comp=Z,1.8nm,0.5s,baz=210,slow=12,SNR=1.7								
XAN	**Xi'an**	**20.98**	**67**	P			Pn	13 16 04.0	+2.8
XAN				pP			sP	13 16 07.8	+3.1
XAN				S			Sn	13 19 57.8	-0.3
XAN				pmax		pmax			
	comp=Z,5.0nm,0.7s								
XAN				LR		LR			
	comp=Z,140nm,12.7s								
XAN				LR		LR			
	comp=Z,130nm,11.4s								
ENH	**Enshi**	**21.08**	**78**	P			**P**	**13 16 02.3**	**+2.6**
ENH				IAmb		IAmb		13 16 14.0	
	comp=Z,12nm,0.7s								
KURBB	**Kurchatov Arra**	**23.39**	**349**	P			**P**	**13 16 24.3**	**+0.4**
	comp=Z,3.2nm,0.4s,baz=166,slow=10,SNR=46								
KURK	**Kurchatov**	**23.47**	**349**	P			**P**	**13 16 24.3**	**-0.4**
HHC	**Hu-ho-hao-te**	**25.02**	**52**	*eP*			**P**	**13 16 41.0**	**+1.7**
HHC				S			**S**	**13 21 10.0**	**+6.9**
HHC				sS			sS	13 21 14.0	+3.4
HHC				pmax		pmax			
	comp=Z,11nm,0.9s								
HHC				pmax		pmax			
	comp=Z,72nm,4.8s								
HHC				LR		LR			
	comp=Z,140nm,10.0s								
HHC				LR		LR			
	comp=Z,180nm,12.6s								
HHC				LR		LR			
	comp=Z,150nm,13.3s								
GEYT	**Alibeck**	**25.06**	**301**	P			**P**	**13 16 37.3**	**-2.4**
	comp=Z,0.6nm,0.4s,baz=99,slow=8.9,SNR=1.9								
GEYT				LR		LR		13 28 58.3	
	comp=Z,78nm,18.0s,baz=70,slow=42								
SONM	**Songino Array**	**25.76**	**34**	P			**P**	**13 16 46.2**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=220,slow=10.0,SNR=19								
SONM				LR		LR		13 28 04.5	
	comp=Z,134nm,21.2s,baz=184,slow=39								
SONM	**Songino Array**	**25.76**	**34**	P			**P**	**13 16 46.7**	**+0.7**
SONM				IAmb		IAmb		13 16 55.7	
	comp=Z,6.6nm,1.0s								
ULN	**Ulaanbaatar**	**26.10**	**34**	P			**P**	**13 16 47.4**	**-1.8**
ULN				IAmb		IAmb		13 17 02.8	
	comp=Z,8.2nm,0.9s								
ZAA0	**Zalesovo Array**	**26.11**	**359**	P			**P**	**13 16 49.1**	**+0.2**
ZAA0				IAmb		IAmb		13 16 55.5	
	comp=Z,14nm,1.2s								
ZALV	**Zalesovo Beam**	**26.11**	**359**	P			**P**	**13 16 49.4**	**+0.4**
	comp=Z,3.7nm,0.3s,baz=185,slow=9.4,SNR=17								
ZALV	**Zalesovo Beam**	**26.11**	**359**	P			**P**	**13 16 48.2**	**-0.8**
KULM	**Kulim**	**26.62**	**145**	P			**P**	**13 16 55.6**	**+1.7**
KULM				IAmb		IAmb		13 16 59.0	
	comp=Z,11nm,0.7s								
BVAR	**Borovoye Array**	**27.58**	**340**	P			**P**	**13 17 01.5**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=178,slow=7.4,SNR=6.6								
GSI	**Gunungsitoli**	**28.77**	**154**	P			**P**	**13 17 15.1**	**+1.9**
GSI				IAmb		IAmb		13 17 36.4	
	comp=Z,16nm,1.0s								
ABKAR	**Akbulak array**	**29.07**	**324**	P			**P**	**13 17 15.7**	**+0.3**
ABKAR	**Akbulak array**	**29.07**	**324**	P			**P**	**13 17 15.8**	**+0.3**
ABKAR				IAmb		IAmb		13 17 26.1	
	comp=Z,2.2nm,0.8s								
NJ2	**Nanjing**	**29.12**	**73**	*eP*			**P**	**13 17 16.8**	**+0.7**
NJ2				pmax		pmax			
	comp=Z,11nm,0.5s								
AKTO	**Aktyubinsk**	**30.77**	**325**	P			**P**	**13 17 30.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=90,slow=9.1,SNR=2.2								
SOCY	**Socotra**	**33.34**	**249**	P			**P**	**13 17 52.8**	**-0.8**
SOCY				IAmb		IAmb		13 17 53.5	
	comp=Z,13nm,1.5s								
ARU	**Arti**	**34.46**	**334**	P			**P**	**13 18 02.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=99,slow=19,SNR=2.6								
KSRS	**Korea Array**	**36.71**	**64**	P			**P**	**13 18 22.3**	**0.0**
	comp=Z,0.4nm,0.4s,baz=259,slow=8.0,SNR=2.6								
KLR	**Kul'dur**	**41.21**	**46**	P			**P**	**13 18 58.6**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=267,slow=9.4,SNR=4.1								
NRIK	**Noril'sk**	**41.57**	**1**	P			**P**	**13 19 03.8**	**+1.2**
NRIK				IAmb		IAmb		13 19 10.3	
	comp=Z,9.7nm,1.1s								
BRTR	**Keskin Array B**	**44.19**	**299**	P			**P**	**13 19 25.6**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=72,slow=4.7,SNR=1.8								
KLMR	**Klimovskoe**	**45.10**	**330**	*eP*			**P**	**13 19 31.3**	**+0.1**
KLMR				AMP				13 19 33.2	
	comp=Z,8.0nm,1.1s								
JMM	**Marumori**	**46.91**	**63**	P			**P**	**13 19 45.9**	**+0.1**
ELL	**Elmali**	**47.30**	**296**	P			**P**	**13 19 49.2**	**+0.2**
AKASG	**Malin Array Be**	**47.88**	**314**	P			**P**	**13 19 53.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=78,slow=7.0,SNR=1.9								
AKASG				LR		LR		13 42 29.6	
	comp=Z,24nm,20.0s,baz=205,slow=39								
MNK	**Minsk**	**49.20**	**319**	*iP*			**P**	**13 20 03.5**	**+0.2**
	comp=E,1.0nm,0.6s								
MNK				*i* P			**P**	**13 20 03.5**	**+0.2**
	comp=N,44nm,1.0s								
MNK				*i* P			**P**	**13 20 03.5**	**+0.2**
	comp=Z,7.0nm,0.6s								
MNK				*i* PP			**PP**	**13 21 57.7**	**+0.9**
MNK				*i* PPP			PPP	13 22 49.9	
MNK				*i* S			**S**	**13 27 11.2**	**+2.8**
MNK				*i* SS			**SS**	**13 30 44.9**	**+5.5**
MNK				*i* SSS			SSS	13 32 00.3	
MNK				*i* LR			LR	13 41 10.2	
MNK				*i* LRM			MLR	13 43 35.7	
	comp=E,44nm,21.7s								
MNK				*i* LRM			MLR	13 43 48.7	
	comp=N,452nm,23.2s								
MNK				*i* LRM			MLR	13 44 10.4	
	comp=Z,233nm,23.1s								
MLR	**Muntele Rosu**	**49.81**	**307**	P			**P**	**13 20 09.4**	**+1.2**
MLR				IAmb		IAmb		13 20 12.0	
	comp=Z,4.5nm,0.8s								
TIXI	**Tiksi**	**49.88**	**17**	P			**P**	**13 20 08.4**	**+0.2**
TIXI				IAmb		IAmb		13 20 15.7	
	comp=Z,4.6nm,1.0s								
BURAR	**Bucovina Array**	**50.31**	**310**	P			**P**	**13 20 11.7**	**-0.3**
FIA1	**FINESS Array S**	**51.44**	**328**	P			**P**	**13 20 19.8**	**-0.2**
FIA1				IAmb		IAmb		13 20 20.4	
	comp=Z,9.4nm,1.1s								
FINES	**FINESS Array B**	**51.44**	**328**	P			**P**	**13 20 19.8**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=106,slow=7.1,SNR=18								
IDI	**Kenoyia**		**51.52**	**294**	P		**P**	**13 20 20.4**	**-0.8**
KEV	**Kevo**		**53.41**	**338**	P		**P**	**13 20 35.3**	**+0.7**
ARCES	**ARCESS Array B**		**53.83**	**338**	P		**P**	**13 20 38.3**	**+0.6**
	comp=Z,3.1nm,0.6s,baz=103,slow=7.8,SNR=37								
ARCES	**ARCESS Array B**		**53.83**	**338**	IAmb		IAmb	13 21 01.9	
	comp=Z,13nm,1.3s								
HFS	**Hagfors**		**57.31**	**326**	P		**P**	**13 21 02.6**	**-0.3**
	comp=Z,2.7nm,0.4s,baz=113,slow=9.1,SNR=17								
GERES	**GERESS Array B**		**57.93**	**312**	P		**P**	**13 21 07.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=80,slow=8.1,SNR=3.3								
NC303	**NORSAR Array S**		**58.45**	**327**	P		**P**	**13 21 10.6**	**-0.3**
NB201	**NORSAR Array S**		**58.49**	**327**	P		**P**	**13 21 10.7**	**-0.5**
NOA	**NORSAR Array B**		**58.53**	**327**	P		**P**	**13 21 10.6**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=47,slow=8.7,SNR=5.8								
NOA				LR		LR		13 47 59.3	
	comp=Z,24nm,19.5s,baz=45,slow=38								
NAO01	**NORSAR Array S**		**58.70**	**326**	P		**P**	**13 21 11.7**	**-0.9**
NC204	**NORSAR Array S**		**58.75**	**327**	P		**P**	**13 21 12.4**	**-0.6**
STAL	**STALIGIAL**		**58.95**	**309**	P		**P**	**13 21 14.3**	**-0.3**
STAL				IAmb		IAmb		13 21 14.5	
	comp=Z,3.3nm,0.8s								
NRCA	**Norcia**		**59.25**	**305**	P		**P**	**13 21 16.6**	**-0.2**
NRCA				IAmb		IAmb		13 21 30.3	
	comp=Z,3.5nm,0.8s								
CTI	**Castel Tesino**		**59.71**	**309**	P		**P**	**13 21 19.9**	**-0.1**
CTI				IAmb		IAmb		13 21 30.6	
	comp=Z,2.5nm,1.0s								
FITZ	**Fitzroy Crossi**		**59.93**	**135**	P		**P**	**13 21 22.5**	**+0.9**
FITZ				IAmb		IAmb		13 21 50.2	
	comp=Z,10nm,1.4s								
DAVOX	**Davos/Dischmat**		**60.79**	**310**	P		**P**	**13 21 26.3**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=0.0,slow=10,SNR=3.9								
TUE	**Stuetta**		**61.21**	**310**	P		**P**	**13 21 30.0**	**-0.3**
TUE					IAmb		IAmb	13 21 40.6	
	comp=Z,3.5nm,0.9s								
MSSA	**Maissana**		**61.52**	**308**	P		**P**	**13 21 31.7**	**-0.7**
BFO	**Black Forest**		**61.53**	**312**	P		**P**	**13 21 31.9**	**-0.3**
BFO					IAmb		IAmb	13 21 49.7	
	comp=Z,8.3nm,1.5s								
SENIN	**Lac Senin/Sane**		**62.62**	**310**	P		**P**	**13 21 39.1**	**-0.7**
SENIN					IAmb		IAmb	13 21 42.8	
	comp=Z,3.7nm,0.8s								
BNI	**Bardonecchia**		**63.34**	**309**	P		**P**	**13 21 43.5**	**-1.1**
BNI					IAmb		IAmb	13 22 03.8	
	comp=Z,3.6nm,0.9s								
MORW	**Morawa**		**63.66**	**150**	P		**P**	**13 21 46.3**	**-0.3**
KEST	**Kesra**		**63.77**	**298**	P		**P**	**13 21 47.4**	**-0.1**
	comp=Z,4.7nm,0.7s,baz=113,slow=1.7,SNR=6.4								
KEST	**Kesra**		**63.77**	**298**	P		**P**	**13 21 48.1**	**+0.6**
WB0	**Warramunga Arr**		**66.87**	**130**	P		**P**	**13 22 08.1**	**+0.4**
WRA	**Warramunga Arr**		**66.96**	**130**	P		**P**	**13 22 08.3**	**+0.2**
	comp=Z,4.2nm,0.7s,baz=320,slow=6.5,SNR=8.9								
WRA	**Warramunga Arr**		**66.96**	**130**	IAmb		IAmb	13 22 09.6	
	comp=Z,0.3nm,1.2s								
WB2	**Warramunga Arr**		**66.97**	**130**	P		**P**	**13 22 08.6**	**+0.4**
WR0	**Warramunga Arr**		**67.11**	**130**	P		**P**	**13 22 09.6**	**+0.5**
NWAO	**Narrogin (SRO)**		**67.50**	**151**	P		**P**	**13 22 10.6**	**-0.7**
	comp=Z,12nm,0.7s,baz=329,slow=6.8,SNR=5.9								
NWAO	**Narrogin (SRO)**		**67.50**	**151**	P		**P**	**13 22 10.7**	**-0.7**
AS31	**Alice Springs**		**69.25**	**133**	P		**P**	**13 22 23.0**	**+0.4**
ASAR	**Alice Springs**		**69.25**	**133**	P		**P**	**13 22 22.9**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=322,slow=7.0,SNR=14								
ASAR	**Alice Springs**		**69.25**	**133**	P		**P**	**13 22 23.3**	**+0.8**
A21K	**Barrow**		**72.18**	**17**	P		**P**	**13 22 40.1**	**+0.6**
A21K					IAmb		IAmb	13 22 46.7	
	comp=Z,2.8nm,0.8s								
EUNU	**Eureka**		**72.27**	**359**	P		**P**	**13 22 41.7**	**+1.6**
EUNU					IAmb		IAmb	13 22 46.6	
	comp=Z,3.0nm,0.9s								
ESBB	**Sonseca Array**		**72.47**	**306**	P		**P**	**13 22 42.5**	**+0.4**
ESBB					IAmb		IAmb	13 23 08.6	
	comp=Z,4.0nm,1.0s								
ESDC	**Sonseca Array**		**72.47**	**306**	P		**P**	**13 22 42.0**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=59,slow=5.8,SNR=4.3								
TOLK	**Toolik Lake Re**		**75.74**	**18**	P		**P**	**13 23 01.2**	**+0.6**
TOLK					IAmb		IAmb	13 23 06.7	
	comp=Z,3.3nm,0.9s								
COLD	**Coldfoot**		**76.50**	**19**	P		**P**	**13 23 05.9**	**+1.0**
COLD					IAmb		IAmb	13 23 15.1	
	comp=Z,4.5nm,1.4s								
BBOO	**Buckleboo**		**77.06**	**138**	P		**P**	**13 23 08.7**	**+0.2**
MLY	**Manley**		**77.79**	**21**	P		**P**	**13 23 12.7**	**+0.4**
MLY					IAmb		IAmb	13 23 18.6	
	comp=Z,3.7nm,1.1s								
BMAR	**Burnt Mountain**		**77.94**	**18**	P		**P**	**13 23 13.6**	**+0.6**
LBTB	**Lobatse**		**78.03**	**233**	P		**P**	**13 23 14.5**	**+0.4**
LBTB					IAmb		IAmb	13 23 15.6	
	comp=Z,3.9nm,0.8s								
TORD	**Torodi Ar. Bea**		**78.61**	**279**	P		**P**	**13 23 16.8**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=59,slow=4.5,SNR=7.1								
TORD	**Torodi Ar. Bea**		**78.61**	**279**	P		**P**	**13 23 16.7**	**-0.9**
ILAR	**Eielson Array**		**79.17**	**20**	P		**P**	**13 23 17.9**	**-2.0**
	comp=Z,0.3nm,0.7s,baz=324,slow=5.9,SNR=4.1								
RND	**Reindeer**		**79.49**	**22**	P		**P**	**13 23 21.8**	**+0.1**
RND					IAmb		IAmb	13 23 43.1	
	comp=Z,5.0nm,1.3s								
STKA	**Stephens Creek**		**79.82**	**134**	P		**P**	**13 23 24.1**	**+0.

0.5nm,0.6s,baz=139,slow=5.5,SNR=9.1
BVAR Borovoye Array 76.45 331 P **P** **13 27 40.0 -0.5**
0.6nm,0.7s,baz=150,slow=12,SNR=4.2

*IDC **26** 13:23:28.9±3.8, 28°.53N×87°.56E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.3/54, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=196.5km s-min=21.0km az=64.0*
ISC 26 13:23:31.9±3.6, 28°.8N±0°.6×8°.8E±°, h10km, n6, σ1s41/6, mb3.6/4, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.22**	**134**	Pn	**Pn**	**13 26 52.9**	**-0.6**
	0.0nm,0.3s,baz=303,slow=13,SNR=5.1						
MKAR	**Makanchi Array**	**18.55**	**347**	P	**P**	**13 27 48.3**	**-0.3**
	0.2nm,0.3s,baz=175,slow=11,SNR=7.6						
KURBB	**Kurchatov Arra**	**22.99**	**344**	P	**P**	**13 28 35.3**	**-1.3**
	0.4nm,0.5s,baz=166,slow=9.4,SNR=6.1						
ZALV	**Zalesovo Beam**	**25.24**	**355**	P	**P**	**13 28 59.3**	**+1.4**
	1.1nm,0.4s,baz=188,slow=7.5,SNR=4.0						
WRA	**Warramunga Arr**	**65.81**	**132**	P	**P**	**13 34 17.2**	**-0.4**
	0.4nm,0.8s,baz=322,slow=6.5,SNR=5.9						
ASAR	**Alice Springs**	**68.23**	**135**	P	**P**	**13 34 34.3**	**+1.3**
	0.2nm,0.7s,baz=316,slow=6.6,SNR=2.1						

*IDC **26** 13:33:30.0±1.5, 10°.69S×120°.14E, h0km, mb4.0/3, mb1 3.9/7, mb1mx3.6/41, mbtmp3.8/7, ML3.5/4, Error ellipse: s-maj=57.9km s-min=21.2km az=47.0*
ISC 26 13:33:34.5±1.1, 10°.68S±0°.09×120°.68E±0°.09, h31km, n7, σ3s46/11, mb4.2/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.97**	**81**	Pn	**Pb**	**13 34 26.1**	**-0.7**
	13nm,0.3s,baz=349,slow=0.8,SNR=15						
BATI				Sn	**Sb**	**13 35 05.1**	**+2.5**
	6.9nm,0.3s,baz=38,slow=23,SNR=9.1						
FITZ	**Fitzroy Crossi**	**8.80**	**147**	Pn	**Pn**	**13 35 42.7**	**+3.1**
	0.3nm,0.3s,baz=322,slow=4.8,SNR=16						
FITZ				Sn	**Sn**	**13 37 16.7**	**-1.0**
	0.9nm,0.3s,baz=186,slow=20,SNR=10						
WRA	**Warramunga Arr**	**16.06**	**127**	Pn	**P**	**13 37 21.0**	**-0.3**
	0.1nm,0.3s,baz=297,slow=13,SNR=7.7						
WRA				Sn	**Sn**	**13 40 10.9**	**-4.6**
	0.1nm,0.3s,baz=255,slow=5.9,SNR=2.5						
ASAR	**Alice Springs**	**18.04**	**137**	P	**P**	**13 37 47.6**	**+4.3**
	0.2nm,0.3s,baz=313,slow=12,SNR=12						
ASAR				S	**Sn**	**13 40 57.5**	**-6.0**
	0.0nm,0.3s,baz=305,slow=23,SNR=4.0						
SONM	**Songino Array**	**59.63**	**349**	P	**P**	**13 43 34.9**	**-0.8**
	1.0nm,0.4s,baz=185,slow=8.5,SNR=2.7						
MKAR	**Makanchi Array**	**66.70**	**332**	P	**P**	**13 44 21.9**	**-0.7**
	0.6nm,0.5s,baz=139,slow=7.5,SNR=9.0						
ZALV	**Zalesovo Beam**	**71.20**	**339**	P	**P**	**13 44 49.0**	**-1.2**
	1.3nm,0.5s,baz=140,slow=4.8,SNR=5.7						

IDC 26 13:35:14.5±1.3, 46°.13N×152°.86E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.3/59, mbtmp3.6/6, ML2.8/2, Error ellipse: s-maj=43.7km s-min=26.6km az=133.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**7.53**	**258**	Pn	Pn	13 37 05.3	-0.1
	0.3nm,0.3s,baz=112,slow=19,SNR=1.5						
PETK	**Petropavlovsk-**	**7.66**	**22**	Pn	Pn	13 37 07.2	0.0
	0.2nm,0.3s,baz=175,slow=12,SNR=8.5						
H11N2	**WAKE ISLAND Hy**	**28.75**	**152**	T	T	14 12 51.4	
	baz=340,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.77**	**152**	T	T	14 12 54.3	
	baz=340,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.77**	**152**	T	T	14 12 54.7	
	baz=340,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.83**	**153**	T	T	14 14 12.6	
	baz=340,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.84**	**153**	T	T	14 14 26.3	
	baz=340,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.85**	**153**	T	T	14 14 12.9	
	baz=340,slow=76						
INK	**Inuvik**	**42.27**	**32**	P	P	13 43 10.0	+0.9
	0.5nm,0.6s,baz=249,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**71.56**	**198**	P	P	13 46 37.7	+0.4
	0.2nm,0.6s,baz=19,slow=5.9,SNR=2.1						
AKASG	**Malin Array Be**	**71.96**	**326**	P	P	13 46 39.1	-0.3
	0.7nm,0.4s,baz=35,slow=6.4,SNR=4.8						
TXAR	**Lajitas Array**	**77.95**	**60**	P	P	13 47 14.0	-0.6
	0.3nm,0.6s,baz=306,slow=4.2,SNR=6.0						

*IDC **26** 13:40:28.7±1.7, 10°.72S×120°.14E, h0km, mb3.7/2, mb1 3.6/6, mb1mx3.4/50, mbtmp3.5/6, ML3.3/4, Error ellipse: s-maj=60.1km s-min=23.3km az=46.0*
ISC 26 13:40:33.5±1.4, 10°.69S±0°.10×120°.7E±0°.1, h31km, n6, σ3s57/10, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.94**	**81**	Pn	**Pb**	**13 41 24.8**	**-0.5**
	4.9nm,0.3s,baz=283,slow=7.2,SNR=7.0						
BATI				Sn	**Sb**	**13 42 03.2**	**+2.3**
	3.4nm,0.3s,baz=350,slow=20,SNR=6.1						
FITZ	**Fitzroy Crossi**	**8.77**	**148**	Pn	**Pn**	**13 42 41.4**	**+3.1**
	0.3nm,0.3s,baz=321,slow=11,SNR=15						
FITZ				Sn	**Sn**	**13 44 15.8**	**-0.4**
	0.8nm,0.3s,baz=180,slow=21,SNR=11						
WRA	**Warramunga Arr**	**16.03**	**127**	Pn	**P**	**13 44 19.2**	**-0.8**
	0.1nm,0.3s,baz=297,slow=13,SNR=5.2						
WRA				Sn	**Sn**	**13 47 09.3**	**-4.4**
	0.1nm,0.3s,baz=230,slow=28,SNR=1.2						
ASAR	**Alice Springs**	**18.02**	**137**	P	**P**	**13 44 45.7**	**+3.7**
	0.1nm,0.3s,baz=317,slow=12,SNR=12						
ASAR				S	**Sn**	**13 47 55.9**	**-6.0**
	0.0nm,0.3s,baz=306,slow=22,SNR=2.2						
MKAR	**Makanchi Array**	**66.73**	**332**	P	**P**	**13 51 20.7**	**-0.9**
	0.4nm,0.7s,baz=136,slow=7.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**71.22**	**339**	P	**P**	**13 51 47.6**	**-1.8**
	0.5nm,0.5s,baz=130,slow=5.8,SNR=2.2						

*NIED **26** 13:41:27.5, 37°.37N×141°.89E, h39km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr0.00; Mθθ-0.48; Mφφ0.48; Mrθ1.35; Mθφ1.04; Mφr0.57; Fault plane solution: M0 1.85000×10^14 NP1:φs75.00000°, δ90.00000°, λ52.00000°. NP2:φs344.00000°, δ38.00000°, λ179.00000°.*
*JMA **26** 13:41:27.4±0.2, 37°.37N×141°.89E, h39km±4km, M3.6*
*IDC **26** 13:41:51.2±1.8, 37°.24N×136°.87E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.3/61, mbtmp3.7/3, Error ellipse: s-maj=54.3km s-min=15.5km az=29.0*
ISC 26 13:41:25.7±3.4, 37°.38N±0°.06×142°.0E±0°.1, h14km±23km, n17, σ0s97/27, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.85**	**269**	P	**Pb**	**13 41 42.6**	**+0.2**
JFK				S	**Sb**	**13 41 52.7**	**-1.0**
JMST	**Minamisoumatoc**	**0.91**	**292**	P	**Pb**	**13 41 43.4**	**+0.2**
JMST				S	**Sb**	**13 41 54.3**	**-0.9**
ONAJ	**Iwakimizuishiy**	**0.96**	**253**	P	**Pb**	**13 41 43.9**	**-0.2**
ONAJ				eS	**Sb**	**13 41 55.2**	**-1.5**
JIKH	**Ishinomakikobu**	**1.00**	**338**	P	**Pb**	**13 41 45.1**	**+0.2**
JIKH				S	**Sb**	**13 41 57.1**	**-0.8**
JMM	**Marumori**	**1.04**	**298**	P	**Pb**	**13 41 45.5**	**+0.1**
JMM				eS	**Sb**	**13 41 58.2**	**-0.7**
JIO	**Ouri**	**1.17**	**336**	P	**Pn**	**13 41 47.6**	**-0.1**
JIO				S	**Sb**	**13 42 01.3**	**-1.5**
JFT	**Otama**	**1.29**	**277**	P	**Pn**	**13 41 49.8**	**+0.5**
JFT				S	**Sn**	**13 42 05.2**	**-1.2**
JHO	**Hitachi**	**1.34**	**236**	P	**Pn**	**13 41 48.9**	**-1.2**
JOU	**Okura**	**1.41**	**314**	P	**Pn**	**13 41 51.6**	**+0.6**
JOU				S	**Sn**	**13 42 09.2**	**-0.3**
JMK	**Ichinoseki**	**1.67**	**340**	P	**Pn**	**13 41 55.3**	**+0.8**
JMK				eS	**Sn**	**13 42 14.6**	**-1.2**
JFY	**Yanaizu**	**1.79**	**271**	P	**Pn**	**13 41 57.1**	**+0.9**
JFY				S	**Sn**	**13 42 19.0**	**+0.3**
JYK	**Kaneyama**	**1.98**	**321**	P	**Pn**	**13 41 59.7**	**+0.9**
JYK				eS	**Sn**	**13 42 23.6**	**+0.2**
MJAR	**Matsushiro Arr**	**3.11**	**255**	Pg	**Pn**	**13 42 14.8**	**+0.4**
	0.2nm,0.3s,baz=334,slow=15,SNR=11						
MJAR				Lg	Lg	13 42 34.7	
	0.3nm,0.3s,baz=85,slow=15,SNR=5.0						
MAT	**Matsushiro**	**3.11**	**256**	P	**Pn**	**13 42 15.9**	**+1.5**
MAT				eS	**Sn**	**13 42 53.4**	**+2.0**
MKAR	**Makanchi Array**	**44.30**	**302**	P	**P**	**13 49 35.4**	**+0.4**
	0.6nm,0.8s,baz=86,slow=9.6,SNR=6.2						
WRA	**Warramunga Arr**	**57.47**	**188**	P	P	13 51 37.5	+23
	0.6nm,0.3s,baz=2.0,slow=7.7,SNR=23						
ASAR	**Alice Springs**	**61.19**	**188**	P	P	13 52 05.0	+25
	0.5nm,1.0s,baz=0.4,slow=6.7,SNR=5.4						

*ROM **26** 13:49:34.7±0.2, 39°.96N±0°.02×15°.46E±0°.04, h299km±2km, ML2.9/17, Error ellipse: s-maj=3.0km s-min=1.7km az=88.0*
*IDC **26** 13:49:46.9±16.0, 40°.90N×15°.80E, h297km±68km, mb2.7/2, mb1 2.7/5, mb1mx2.5/44, mbtmp3.4/5, Error ellipse: s-maj=192.6km s-min=106.0km az=177.0*
ISC 26 13:49:36.7±1.3, 39°.9N±0°.1×15°.4E±0°.1, h286km±11km, n36, σ0s63/44, 4C-8D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BULG	**Bulgheria - Ca**	**0.14**	**350**	P	**Pn**	**13 50 13.8**	**+0.7**
MGR	**Morigerati**	**0.22**	**30**	P	**Pn**	**13 50 13.7**	**+0.6**
CUC	**Castrocucco**	**0.32**	**81**	P	**Pn**	**13 50 13.6**	**+0.3**
CMPR	**Campora**	**0.38**	**348**	P	**Pn**	**13 50 13.7**	**+0.3**
MTSN	**Montesano sull**	**0.42**	**39**	P	**Pn**	**13 50 13.9**	**+0.4**
MCEL	**Monticello**	**0.49**	**38**	P	**Pn**	**13 50 14.5**	**+0.8**
CDRU	**Civita di Ruta**	**0.55**	**352**	P	**Pn**	**13 50 14.3**	**+0.4**
T0702	**Acquaformosa (**	**0.57**	**113**	P	**Pn**	**13 50 14.1**	**+0.1**
T0702				S	**S**	**13 50 43.3**	**-0.2**
T0702				AML	AML		
	comp=E,68μm,0.7s						
T0702				AML	AML		
	comp=N,75μm,1.1s						
CET2	**Cetraro**	**0.59**	**134**	P	**Pn**	**13 50 14.1**	**0.0**
CET2				S	**S**	**13 50 42.6**	**-1.0**
CET2				AML	AML		
	comp=E,136μm,0.9s						
CET2				AML	AML		
	comp=N,154μm,0.5s						
CET2				AML	AML		
	comp=E,136μm,0.9s						
SALB	**San Lorenzo Be**	**0.72**	**95**	↑P	**Pn**	**13 50 14.7**	**+0.2**
SALB				S	**S**	**13 50 43.5**	**-1.0**
SALB				AML	AML		
	comp=E,72μm,0.7s						
SALB				AML	AML		
	comp=N,46μm,1.3s						
TDS	**Terranova Siba**	**0.77**	**111**	P	**Pn**	**13 50 15.5**	**+0.9**
TDS				S	**S**	**13 50 44.5**	**-0.1**
TDS				AML	AML		
	comp=E,46μm,0.8s						
TDS				AML	AML		
	comp=E,46μm,0.8s						
TDS				AML	AML		
	comp=N,33μm,1.0s						
CAR1	**CAROLEI**	**0.93**	**138**	↓P	**Pn**	**13 50 15.3**	**0.0**
CAR1				AML	AML		
	comp=E,85μm,1.2s						
CAR1				AML	AML		
	comp=E,86μm,1.2s						
CAR1				AML	AML		
	comp=E,86μm,1.2s						
CAR1				AML	AML		
	comp=N,74μm,1.0s						
SPS2	**Spezzano della**	**0.97**	**132**	P	**Pn**	**13 50 16.2**	**+0.7**
SPS2				S	**S**	**13 50 46.4**	**+0.2**
SPS2				AML	AML		
	comp=N,42μm,0.4s						
SPS2				AML	AML		
	comp=E,28μm,1.0s						
SPS2				AML	AML		
	comp=N,42μm,0.4s						
CELI	**Celico**	**1.01**	**122**	↓P	**Pn**	**13 50 16.6**	**+0.9**
CELI				S	**S**	**13 50 46.4**	**-0.4**
CELI				AML	AML		
	comp=E,218μm,0.6s						
CELI				AML	AML		
	comp=N,260μm,0.5s						
TIP	**Timpagrande**	**1.29**	**126**	↓P	**Pn**	**13 50 17.6**	**+0.4**
TIP				AML	AML		
	comp=N,62μm,0.8s						
TIP				AML	AML		
	comp=E,48μm,0.5s						
TIP				AML	AML		
	comp=N,62μm,0.8s						
AMUR	**Altamura**	**1.33**	**43**	↑P	**Pn**	**13 50 17.1**	**-0.2**
AMUR				AML	AML		
	comp=E,40μm,1.1s						
AMUR				AML	AML		
	comp=N,18μm,1.6s						
AMUR				AML	AML		
	comp=N,18μm,1.6s						
SERS	**Sersale**	**1.34**	**132**	↓P	**Pn**	**13 50 18.1**	**+0.4**
SERS				S	**S**	**13 50 49.3**	**-0.8**
SERS				AML	AML		
	comp=E,59μm,1.3s						
SERS				AML	AML		
	comp=N,102μm,0.3s						
SERS				AML	AML		
	comp=E,59μm,1.3s						
LADO	**San Nicola del**	**1.38**	**118**	P	**Pn**	**13 50 18.1**	**+0.4**
JOPP	**Joppolo**	**1.39**	**164**	↓P	**Pn**	**13 50 17.8**	**0.0**
JOPP				AML	AML		
	comp=E,68μm,0.4s						
JOPP				AML	AML		
	comp=N,82μm,0.2s						
NOCI	**Noci**	**1.52**	**56**	↑P	**Pn**	**13 50 18.4**	**-0.2**
NOCI				AML	AML		
	comp=E,31μm,0.9s						
NOCI				AML	AML		
	comp=N,32μm,0.8s						
MILZ	**Milazzo**	**1.68**	**185**	P	**Pn**	**13 50 19.9**	**+0.2**
MSRU	**Castanea**	**1.68**	**177**	P	**Pn**	**13 50 20.1**	**+0.3**
PLAC	**Placanica**	**1.69**	**151**	↓P	**Pn**	**13 50 20.3**	**+0.4**
PLAC				S	**S**	**13 50 53.3**	**-1.0**
PLAC				AML	AML		
	comp=E,130μm,1.3s						
PLAC				AML	AML		
	comp=N,107μm,0.3s						
MPNC	**Port Mandanici**	**1.80**	**181**	P	**Pn**	**13 50 21.5**	**+0.8**
MPNC				AML	AML		
	comp=E,100μm,0.5s						
MPNC				AML	AML		
	comp=N,81μm,1.1s						
GMB	**Gambarie**	**1.80**	**169**	↑P	**Pn**	**13 50 21.8**	**+0.9**
GMB				AML	AML		
	comp=E,379μm,0.4s						
GMB				AML	AML		
	comp=N,407μm,0.2s						
MCSR	**Castroreale**	**1.88**	**184**	↓P	**Pn**	**13 50 22.4**	**+1.0**
MCSR				AML	AML		
	comp=E,86μm,0.4s						
MCSR				AML	AML		
	comp=N,70μm,0.3s						
SOI	**Samo**	**1.94**	**165**	↓P	**Pn**	**13 50 22.3**	**+0.5**
MTTG	**Motta San Giov**	**1.95**	**173**	P	**Pn**	**13 50 22.7**	**+0.8**
MPAZ	**Palizzi**	**2.04**	**167**	P	**Pn**	**13 50 23.1**	**+0.4**
MPAZ				AML	AML		
	comp=E,146μm,0.5s						
MPAZ				AML	AML		
	comp=N,144μm,0.5s						
SCTE	**Santa Cesarea**	**2.35**	**86**	P	**Pn**	**13 50 25.5**	**+0.3**
SCTE				AML	AML		
	comp=E,56μm,0.7s						
SCTE				AML	AML		
	comp=N,73μm,1.0s						
THTN	**Thala**	**6.89**	**233**	P	**Pn**	**13 51 16.2**	**-0.4**
DAVOX	**Davos/Dischmat**	**7.93**	**331**	P	**Pn**	**13 51 31.1**	**+1.7**
	comp=N,0.4nm,0.3s,baz=237,slow=18,SNR=6.5						
GERES	**GERESS Array B**	**8.98**	**353**	P	**Pn**	**13 51 42.2**	**0.0**
	comp=N,0.1nm,0.3s,baz=164,slow=15,SNR=4.3						
HFS	**Hagfors**	**20.24**	**358**	P	**P**	**13 53 50.1**	**-0.5**
	comp=N,0.2nm,0.3s,baz=176,slow=11,SNR=5.4						
NOA	**NORSAR Array B**	**21.28**	**354**	P	**P**	**13 54 01.0**	**+0.1**
	comp=N,0.9nm,0.8s,baz=170,slow=9.7,SNR=2.0						
FINES	**FINESS Array B**	**22.50**	**13**	P	**P**	**13 54 12.5**	**+0.5**
	comp=N,1.0nm,0.7s,baz=201,slow=7.4,SNR=5.9						

*NEIC **26** 13:58:39.1±1.1, 63°.53N±0°.03×147°.79W±0°.07, h85km±4km, Error ellipse: s-maj=4.8km s-min=3.4km az=54.0*
*AEIC **26** 13:58:39.2±1.1, 63°.53N±0°.03×147°.82W±0°.04, h82km±5km, ML3.1/125, ML3.3/119(NEIC), Error ellipse: s-maj=4.5km s-min=2.2km az=210.0*
*IDC **26** 13:58:40.2±2.1, 63°.75N×147°.84W, h104km±13km, mb3.2/1, mb1 2.9/3, mb1mx2.7/49, mbtmp3.2/3, Error ellipse: s-maj=25.9km s-min=17.7km az=11.0*
ISC 26 13:58:38.3±0.8, 63°.54N±0°.03×147°.82W±0°.04, h90km±7km, n162, σ0s92/137, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RND	**Reindeer**	**0.48**	**254**		**Pn**	**13 58 53.5**	**+0.5**
RND					**Sn**	**13 59 04.3**	**+0.3**
RND	**Reindeer**	**0.48**	**254**	IAML		13 59 04.8	
	comp=E,1μm,0.5s						
RND				IAML		13 59 05.0	
	comp=N,889nm,0.7s						
MCK	**McKinley**	**0.54**	**292**		**Pn**	**13 58 53.6**	**+0.2**
MCK					**Sn**	**13 59 04.6**	**0.0**
MCK	**McKinley**	**0.54**	**292**	IAML		13 59 05.1	
	comp=N,982nm,0.7s						
MCK				IAML		13 59 05.5	
	comp=E,1μm,0.2s						
MCK	**McKinley**	**0.54**	**292**	P		13 58 53.7	
	baz=112,SNR=48						
WAT2	**Susitna Watana**	**0.68**	**211**		**Pn**	**13 58 54.9**	**+0.2**
WAT2					**Sn**	**13 59 06.8**	**-0.1**
WAT1	**Susitna Watana**	**0.79**	**205**		**Pn**	**13 58 56.0**	**+0.3**
WAT1					**Sn**	**13 59 08.7**	**0.0**
WAT7	**Susitna Watana**	**0.85**	**214**		**Pn**	**13 58 56.5**	**0.0**
WRH	**Wood River Hil**	**0.94**	**353**		**Pn**	**13 58 57.9**	**+0.5**
WRH	**Wood River Hil**	**0.94**	**353**	IAML		13 59 12.1	
	comp=E,624nm,0.6s						
WRH				IAML		13 59 12.1	
	comp=N,946nm,0.6s						
HDA	**Harding Lake**	**0.95**	**23**		**Pn**	**13 58 58.4**	**+0.9**
HDA					**Sn**	**13 59 12.0**	**+0.2**
WAT6	**Susitna Watana**	**0.96**	**178**		**Pn**	**13 58 58.4**	**+0.6**
WAT6					**Sn**	**13 59 12.7**	**+0.4**
WAT6	**Susitna Watana**	**0.96**	**178**	P		13 58 58.3	
	baz=358,SNR=30						
BWN	**Browne**	**0.97**	**312**		**Pn**	**13 58 57.5**	**-0.1**
BWN	**Browne**	**0.97**	**312**	IAML		13 59 11.7	
	comp=E,690nm,0.6s						
PS09	**TAPS Pump Stn9**	**0.99**	**66**		**Pn**	**13 58 59.0**	**+1.1**
HUR	**Hurricane**	**1.00**	**236**		**Pn**	**13 58 58.3**	**+0.3**
PS08	**TAPS Pump Stn8**	**1.10**	**23**		**Pn**	**13 58 59.9**	**+0.8**
PS08					**Sn**	**13 59 14.7**	**-0.1**
CCB	**Clear Creek Bu**	**1.11**	**0**		**Pn**	**13 58 59.8**	**+0.5**
CCB	**Clear Creek Bu**	**1.11**	**0**	IAML		13 59 15.5	
	comp=E,728nm,0.4s						
CCB				IAML		13 59 15.9	
	comp=N,371nm,0.5s						
TRF	**Thorofare Moun**	**1.11**	**266**		**Pn**	**13 59 00.3**	**+0.8**
TRF	**Thorofare Moun**	**1.11**	**266**	IAML		13 59 16.7	
	comp=N,844nm,0.7s						
TRF				IAML		13 59 17.1	
	comp=E,642nm,0.6s						
TRF	**Thorofare Moun**	**1.11**	**266**	P		13 59 00.4	
	baz=85,SNR=59						
NEA2	**Nenana**	**1.19**	**333**		**Pn**	**13 59 00.6**	**+0.3**
NEA2					**Sn**	**13 59 16.0**	**-0.7**
NEA2	**Nenana**	**1.19**	**333**	IAML		13 59 16.9	
	comp=N,528nm,0.6s						
NEA2				IAML		13 59 16.9	
	comp=E,402nm,0.7s						
NEA2	**Nenana**	**1.19**	**333**	P		13 59 00.5	
	baz=152,SNR=380						
PAX	**Paxson**	**1.21**	**117**		**Pn**	**13 59 01.7**	**+1.2**
PAX	**Paxson**	**1.21**	**117**	P		13 59 01.5	
	baz=299,SNR=46						
IL31		**1.30**	**18**		**Pn**	**13 59 02.3**	**+0.8**
ILAR	**Eielson Array**	**1.30**	**18**	P	**Pn**	**13 59 02.1**	**+0.5**
	comp=E,32nm,0.3s,baz=200,slow=13,SNR=1576						
ILAR				S	**Sn**	**13 59 18.9**	**-0.2**
	comp=E,52nm,0.3s,baz=203,slow=18,SNR=28						
ILAR	**Eielson Array**	**1.30**	**18**		**Pn**	**13 59 01.6**	**0.0**
COLA	**College**	**1.34**	**359**		**Pn**	**13 59 02.7**	**+0.7**
TCOL	**CIGO, UAF Yank**	**1.34**	**359**		**Pn**	**13 59 02.8**	**+0.8**
TCOL	**CIGO, UAF Yank**	**1.34**	**359**	P		13 59 02.8	
	baz=179,SNR=279						
KTH	**Kantishna Hill**	**1.39**	**272**		**Pn**	**13 59 03.1**	**+0.4**
KTH	**Kantishna Hill**	**1.39**	**272**	IAML		13 59 22.4	
	comp=E,301nm,1.0s						
MDM	**Murphy Dome**	**1.44**	**353**		**Pn**	**13 59 03.9**	**+0.6**
BPAW	**Bear Paw Mtn.**	**1.51**	**293**		**Pn**	**13 59 04.4**	**+0.2**
BPAW	**Bear Paw Mtn.**	**1.51**	**293**	IAML		13 59 23.7	
	comp=N,209nm,0.7s						
BPAW	**Bear Paw Mtn.**	**1.51**	**293**	P		13 59 04.4	
	baz=111,SNR=54						
POKR	**Poker Plat Res**	**1.59**	**6**		**Pn**	**13 59 06.0**	**+0.8**
POKR	**Poker Plat Res**	**1.59**	**6**	IAML		13 59 26.4	
	comp=N,331nm,0.5s						
POKR	**Poker Plat Res**	**1.59**	**6**	P		13 59 06.0	
	baz=186,SNR=24						
CUT	**Chulitna**	**1.60**	**226**		**Pn**	**13 59 05.8**	**+0.5**
CUT	**Chulitna**	**1.60**	**226**	IAML		13 59 29.1	
	comp=N,410nm,0.6s						
CUT	**Chulitna**	**1.60**	**226**	P		13 59 05.8	
	baz=44,SNR=17						
M24K	**Tolsona, Glenn**	**1.62**	**152**		**Pn**	**13 59 06.9**	**+1.2**
M24K	**Tolsona, Glenn**	**1.62**	**152**	IAML		13 59 33.4	
	comp=E,445nm,0.9s						
M24K	**Tolsona, Glenn**	**1.62**	**152**	P		13 59 06.7	
	baz=333,SNR=12						
DOT	**Dot Lake**	**1.68**	**85**		**Pn**	**13 59 07.0**	**+0.6**
SCM	**Sheep Creek Mo**	**1.73**	**172**		**Pn**	**13 59 07.8**	**+0.7**
SCM	**Sheep Creek Mo**	**1.73**	**172**	IAML		13 59 33.2	
	comp=N,348nm,0.6s						
SCM				IAML		13 59 33.9	
	comp=E,318nm,1.0s						
I23K	**Minto, Yukon-K**	**1.75**	**338**		**Pn**	**13 59 07.9**	**+0.8**
I23K	**Minto, Yukon-K**	**1.75**	**338**	P		13 59 07.9	
	baz=157,SNR=163						
SML	**Sawmill**	**1.76**	**188**	P		13 59 08.1	
	baz=7.6,SNR=47						
SCRK	**Sand Creek**	**1.76**	**74**		**Pn**	**13 59 08.1**	**+0.6**
SCRK	**Sand Creek**	**1.76**	**74**	P		13 59 08.0	
	baz=257,SNR=21						
PS07	**TAPS Pump Stn7**	**1.79**	**354**		**Pn**	**13 59 08.8**	**+1.0**
PS11	**TAPS Pump St11**	**1.82**	**143**		**Pn**	**13 59 09.4**	**+1.3**
GHO	**Glory Hole Cre**	**1.85**	**197**		**Pn**	**13 59 09.7**	**+1.1**
GHO	**Glory Hole Cre**	**1.85**	**197**	IAML		13 59 37.6	
	comp=E,275nm,0.7s						
GHO				IAML		13 59 38.9	
	comp=N,376nm,0.6s						
MENT	**Mentasta**	**1.95**	**106**		**Pn**	**13 59 10.8**	**+0.9**
MENT	**Mentasta**	**1.95**	**106**	IAML		13 59 40.1	
	comp=E,269nm,0.3s						
MENT				IAML		13 59 40.2	
	comp=N,256nm,0.6s						
MLY	**Manley**	**1.96**	**321**		**Pn**	**13 59 10.8**	**

SUA	**Susitna One**	**2.49 214**	IAML		13 59 53.9	
	comp=E,168nm,0.8s					
SUA			IAML		13 59 54.3	
	comp=N,180nm,0.9s					
SUA	**Susitna One**	**2.49 214**	P		13 59 18.7	
	baz=32,SNR=18					
K27K	**Chicken**	**2.60 77**		**Pn**	**13 59 19.2**	**+0.9**
K27K	**Chicken**	**2.60 77**	IAML		13 59 49.7	
	comp=E,92nm,0.6s					
DIV	**Divide**	**2.60 158**		**Pn**	**13 59 18.2**	**-0.3**
RC01	**Rabbit Creek A**	**2.62 201**		**Pn**	**13 59 20.9**	**+2.3**
RC01	**Rabbit Creek A**	**2.62 201**	P		13 59 19.9	
	baz=19,SNR=18					
GLI	**Glacier Island**	**2.69 172**		**Pn**	**13 59 19.8**	**+0.1**
GLI	**Glacier Island**	**2.69 172**	IAML		14 00 02.4	
	comp=E,171nm,0.7s					
GLI			IAML		14 00 03.8	
	comp=N,156nm,0.4s					
PWL	**Port Wells**	**2.70 185**		**Pn**	**13 59 20.5**	**+0.7**
L27K	**Beaver Creek,**	**2.75 97**		**Pn**	**13 59 20.8**	**+0.4**
L27K	**Beaver Creek,**	**2.75 97**	P		13 59 20.8	
	baz=282,SNR=16					
BC03		**2.77 97**		**Pn**	**13 59 21.1**	**+0.5**
BCAR	**Beaver Creek A**	**2.77 97**		**Pn**	**13 59 20.6**	**-0.1**
STLK	**Strandline Lak**	**2.77 224**		**Pn**	**13 59 22.4**	**+1.6**
GLB	**Gilahina Butte**	**2.81 137**		**Pn**	**13 59 21.6**	**+0.3**
GLB	**Gilahina Butte**	**2.81 137**	IAML		14 00 13.3	
	comp=N,57nm,0.9s					
FID	**Port Fidalgo**	**2.87 167**		**Pn**	**13 59 22.4**	**+0.3**
FID	**Port Fidalgo**	**2.87 167**	IAML		14 00 09.7	
	comp=E,157nm,0.4s					
BMRM	**Bremner River**	**2.99 148**		**Pn**	**13 59 23.6**	**-0.1**
BMRM	**Bremner River**	**2.99 148**	IAML		14 00 11.0	
	comp=N,120nm,0.7s					
BMRM			IAML		14 00 12.6	
	comp=E,106nm,0.4s					
SPCP	**Crater Peak Br**	**3.05 223**		**Pn**	**13 59 26.0**	**+1.4**
VRDI	**Verde Repeater**	**3.08 137**		**Pn**	**13 59 26.0**	**+0.9**
VRDI	**Verde Repeater**	**3.08 137**	IAML		14 00 27.3	
	comp=N,46nm,1.1s					
SPCN	**Chakachatna No**	**3.09 223**		**Pn**	**13 59 26.1**	**+1.1**
MCARA	**McCarthy VSAT**	**3.10 132**		**Pn**	**13 59 26.5**	**+1.3**
MCARA	**McCarthy VSAT**	**3.10 132**	IAML		14 00 29.9	
	comp=N,105nm,0.8s					
MCARA			IAML		14 00 30.2	
	comp=E,72nm,0.8s					
EYAK	**Cordova Ski Ar**	**3.16 161**		**Pn**	**13 59 25.9**	**+0.1**
EGAK	**Eagle**	**3.17 64**		**Pn**	**13 59 26.9**	**+0.9**
EGAK	**Eagle**	**3.17 64**	IAML		14 00 34.4	
	comp=E,46nm,0.5s					
EGAK			IAML		14 00 35.2	
	comp=E,49nm,0.6s					
O22K	**Cooper Landing**	**3.20 197**		**Pn**	**13 59 27.6**	**+1.1**
O22K	**Cooper Landing**	**3.20 197**	P		13 59 27.4	
	baz=16,SNR=8.1					
FYU	**Fort Yukon**	**3.23 19**		**Pn**	**13 59 28.2**	**+1.4**
SLKM	**Skilak Lake**	**3.25 201**		**Pn**	**13 59 28.6**	**+1.4**
GOAT	**Goat Mountain**	**3.31 153**		**Pn**	**13 59 28.0**	**0.0**
BVCY	**Beaver Creek**	**3.37 106**		**Pn**	**13 59 28.9**	**+0.1**
PTPK	**Patty Peak**	**3.43 131**		**Pn**	**13 59 31.1**	**+1.3**
RAGM	**Ragged Mountai**	**3.50 153**		**Pn**	**13 59 30.8**	**+0.2**
PS05	**TAPS Pump Stn5**	**3.50 341**		**Pn**	**13 59 32.0**	**+1.5**
IM03		**3.53 317**		**Pn**	**13 59 31.7**	**+0.8**
IMAR	**Indian Mountai**	**3.53 317**		**Pn**	**13 59 31.2**	**+0.3**
SEW	**Seward**	**3.54 193**		**Pn**	**13 59 32.0**	**+1.0**
CRQM	**Cirque**	**3.55 140**		**Pn**	**13 59 31.6**	**+0.1**
CRQM	**Cirque**	**3.55 140**	IAML		14 00 35.3	
	comp=E,68nm,1.1s					
BALM	**Baldy**	**3.58 132**		**Pn**	**13 59 32.4**	**+0.7**
HMT	**Hamilton**	**3.63 151**		**Pn**	**13 59 32.0**	**-0.3**
TGL	**Tana Glacier**	**3.65 138**		**Pn**	**13 59 32.2**	**-0.4**
TGL	**Tana Glacier**	**3.65 138**	IAML		14 00 44.3	
	comp=N,48nm,0.8s					
TGL			IAML		14 00 46.4	
	comp=E,54nm,1.0s					
KIAG	**Kiagna River**	**3.66 133**		**Pn**	**13 59 33.0**	**+0.1**
YUK2	**White River**	**3.67 116**		**Pn**	**13 59 34.0**	**+1.1**
DFR	**Drift River**	**3.74 220**		**Pn**	**13 59 35.2**	**+1.3**
TTA	**Tatalina**	**3.76 264**		**Pn**	**13 59 34.3**	**+0.2**
TTA	**Tatalina**	**3.76 264**	P		13 59 34.3	
	baz=77,SNR=7.6					
TT01	**Tatalina**	**3.77 264**		**Pn**	**13 59 34.5**	**+0.3**
DAWY	**Dawson**	**3.77 78**		**Pn**	**13 59 35.0**	**+0.8**
DAWY	**Dawson**	**3.77 78**	IAML		14 00 35.3	
	comp=E,31nm,0.7s					
KHIT	**Khitrov Hills**	**3.78 143**		**Pn**	**13 59 34.4**	**0.0**
NICHA	**Nichawak Mount**	**3.78 149**		**Pn**	**13 59 34.6**	**+0.2**
BARN	**Barnard Glacie**	**3.80 128**		**Pn**	**13 59 36.2**	**+1.4**
YUK3	**Moose Creek**	**3.83 114**		**Pn**	**13 59 36.5**	**+1.3**
COLD	**Coldfoot**	**3.83 346**		**Pn**	**13 59 36.5**	**+1.5**
COLD	**Coldfoot**	**3.83 346**	P		13 59 36.5	
	baz=164,SNR=33					
RSO	**Redoubt South**	**3.87 219**		**Pn**	**13 59 37.1**	**+1.4**
GRIN	**Grindle Hills**	**3.90 145**		**Pn**	**13 59 36.6**	**+0.6**
RED	**Redoubt Volcan**	**3.91 219**		**Pn**	**13 59 37.5**	**+1.4**
SUCK	**Suckling Hills**	**3.97 149**		**Pn**	**13 59 36.9**	**0.0**
SUCK	**Suckling Hills**	**3.97 149**	IAML		14 01 56.0	
	comp=E,54nm,2.6s					
CTGM	**Chitina Glacie**	**3.98 128**		**Pn**	**13 59 38.4**	**+1.1**
GRNC	**Granite Creek**	**4.00 132**		**Pn**	**13 59 37.8**	**+0.3**
BRSE	**Bradley Lake S**	**4.06 201**		**Pn**	**13 59 39.0**	**+0.9**
BRLK	**Bradley Lake**	**4.06 202**		**Pn**	**13 59 39.2**	**+1.0**
BRLK	**Bradley Lake**	**4.06 202**	IAML		14 00 39.7	
	comp=E,47nm,0.5s					
BRLK			IAML		14 00 40.6	
	comp=N,45nm,0.7s					
KULT	**Kultieth River**	**4.09 142**		**Pn**	**13 59 38.9**	**+0.3**
SNH	**Sunshine Point**	**4.11 143**		**Pn**	**13 59 39.5**	**+0.6**
BM03	**Burnt Mountain**	**4.12 18**		**Pn**	**13 59 40.2**	**+1.3**
BMAR	**Burnt Mountain**	**4.13 18**		**Pn**	**13 59 39.7**	**+0.7**
LOGN	**Logan Glacier**	**4.20 127**		**Pn**	**13 59 40.8**	**+0.6**
YAH	**Yahtse**	**4.29 135**		**Pn**	**13 59 41.2**	**-0.2**
YAH			IAML		14 01 18.4	
	comp=N,32nm,1.3s					
YAH			IAML		14 02 06.6	
	comp=E,26nm,2.5s					
HOM	**Homer**	**4.30 207**		**Pn**	**13 59 42.1**	**+0.7**
IVE	**Iliamna Volcan**	**4.31 217**		**Pn**	**13 59 42.8**	**+1.2**
CNPM	**China Poot**	**4.35 204**		**Pn**	**13 59 43.1**	**+1.1**
TABL	**Table Mountain**	**4.42 132**	Pn	**Pn**	**13 59 43.6**	**+0.4**
TABL			IAML		14 00 39.8	
	comp=N,21nm,3.4s					
TABL			IAML		14 01 18.2	
	comp=E,20nm,1.7s					
PCA	**Pinnacle**	**4.98 131**		**Pn**	**13 59 50.7**	**+0.1**
TOLK	**Toolik Lake Re**	**5.17 353**		**Pn**	**13 59 55.1**	**+1.9**
TOLK	**Toolik Lake Re**	**5.17 353**	IAML		14 01 15.3	
	comp=N,9.5nm,3.6s					
TOLK			IAML		14 01 35.9	
	comp=E,11nm,3.1s					
TOLK	**Toolik Lake Re**	**5.17 353**	P		13 59 54.6	
	baz=171,SNR=9.7					
YUK5	**Granite Creek**	**5.23 113**		**Pn**	**13 59 54.8**	**+0.6**
EPYK	**Eagle Plains**	**5.50 54**	Pn	**Pn**	**13 59 58.5**	**+0.9**
HYT	**Haines Junctio**	**5.54 115**	Pn	**Pn**	**13 59 59.5**	**+1.1**
KDAK	**Kodiak Island**	**6.23 204**		**Pn**	**14 00 07.6**	**0.0**
KABU	**Katmai Buttres**	**6.42 218**		**Pn**	**14 00 10.7**	**+0.5**
OHAK	**Old Harbor**	**6.89 206**		**Pn**	**14 00 16.6**	**0.0**
SKAG	**Skagway**	**7.24 119**	Pn	**Pn**	**14 00 21.4**	**+0.2**
INK	**Inuvik**	**7.54 44**	P	**Pn**	**14 00 26.4**	**+1.1**
	comp=E,0.2nm,0.3s,baz=239,slow=17,SNR=8.3					
INK			S	**Sn**	**14 01 46.7**	**-2.3**
	comp=E,0.1nm,0.3s,baz=320,slow=23,SNR=2.2					
INK	**Inuvik**	**7.54 44**		**Pn**	**14 00 25.7**	**+0.5**
ANM	**Nome**	**7.77 285**	Pn	**Pn**	**14 00 30.3**	**+1.8**
JIS	**Juneau Island**	**8.40 123**	Pn	**Pn**	**14 00 35.8**	**-1.2**
A21K	**Barrow**	**8.50 341**	Pn	**Pn**	**14 00 39.6**	**+1.2**
DLBC	**Dease Lake**	**10.02 113**	Pn	**Pn**	**14 00 56.4**	**-2.8**
C36M	**Paulatuk**	**11.08 48**	Pn	**Pn**	**14 01 12.6**	**-0.8**
YKA	**Yellowknife Ar**	**15.02 79**	P	**P**	**14 02 08.2**	**-0.4**
	comp=E,0.0nm,0.3s,baz=291,slow=9.7,SNR=4.3					
EUNU	**Eureka**	**23.41 23**	P	**P**	**14 03 40.9**	**+2.1**
MKAR	**Makanchi Array**	**63.11 324**	P	**P**	**14 08 54.9**	**-1.1**
	comp=E,0.3nm,0.4s,baz=38,slow=6.5,SNR=6.3					

*IDC **26** 14:05:22.9±2.2, 19°.29S×176°.12W, h224km±21km, mb3.7/17, mb1 3.9/19, mb1mx3.8/40, mbtmp4.3/19, Error ellipse: s-maj=16.0km s-min=9.7km az=114.0*
*NEIC **26** 14:05:31.1±1.0, 19°.1S±0°.1×176°.3W±0°.1, h300km±6km, mb4.6/54, Error ellipse: s-maj=17.3km s-min=15.1km az=177.0*

ISC 26 14:05:27.5±0.4, 19°.22S±0°.07×176°.14W±0°.07, h269km, n122, σ1§12/124, mb4.5/52, 2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**		**5.71 284**	P		**Pn**		**14 06 54.7**	**+2.0**
	2.5nm,0.3s,baz=118,slow=11,SNR=18								
MSVF				S		**S**		**14 08 03.2**	**+2.2**
	0.2nm,0.3s,baz=188,slow=19,SNR=0.9								
MSVF	**Nonsavu**		**5.71 284**	Pn		**Pn**		**14 06 55.0**	**+2.3**
NIUE	**Niue**		**5.87 90**			Pn		14 06 49.8	-4.8
AFI	**Afiamalu**		**6.74 39**	P		Pn		14 06 59.1	-6.2
	6.7nm,0.3s,baz=72,slow=1.7,SNR=11								
AFI				S		S		14 08 08.8	-15
	30nm,0.3s,baz=205,slow=20,SNR=11								
FUNA	**Funafuti**		**11.56 336**	Pn		**Pn**		**14 08 01.9**	**-3.4**
DZM	**Mont Dzumac**		**16.55 257**	*eP*		**Pn**		**14 09 06.5**	**+1.0**
	105nm,1.1s								
DZM	**Mont Dzumac**		**16.55 257**	P		**Pn**		**14 09 06.6**	**+1.2**
	2.2nm,0.3s,baz=91,slow=19,SNR=25								
DZM	**Mont Dzumac**		**16.55 257**	P		**Pn**		**14 09 06.5**	**+1.0**
OUZ	**Omahuta**		**18.34 208**	P		**P**		**14 09 22.0**	**-0.6**
OUZ				IAmb		IAmb		14 09 46.8	
	comp=Z,40nm,1.2s								
URZ	**Urewera**		**19.86 196**	P		**P**		**14 09 36.4**	**-2.3**
	comp=Z,5.3nm,0.3s,baz=302,slow=23,SNR=36								
URZ				S		**S**		**14 13 02.9**	**-4.3**
	comp=Z,0.3nm,0.3s,baz=303,slow=23,SNR=2.4								
URZ	**Urewera**		**19.86 196**	P		**P**		**14 09 36.5**	**-2.3**
URZ				IAmb		IAmb		14 09 46.7	
	comp=Z,36nm,0.9s								
BKZ	**Black Stump Fm**		**20.87 196**	P		**P**		**14 09 46.8**	**-2.6**
BHW	**Baring Head**		**23.41 197**	P		**P**		**14 10 11.6**	**-1.1**
TUWZ	**Tuamarina**		**23.70 199**	P		**P**		**14 10 15.0**	**-0.3**
THZ	**Tophouse**		**24.33 200**	P		**P**		**14 10 21.0**	**-0.1**
ARMA	**Armidale**		**31.20 243**	P		**P**		**14 11 23.1**	**+0.8**
ARMA				IAmb		IAmb		14 11 47.9	
	comp=Z,22nm,1.2s								
RABL	**Rabaul**		**34.35 292**	P		**P**		**14 11 47.6**	**-1.9**
RABL				IAmb		IAmb		14 11 58.7	
	comp=Z,21nm,0.6s								
CTAO	**Charters Tower**		**35.38 262**	P		**P**		**14 11 58.2**	**-0.1**
PMG	**Port Moresby**		**36.81 280**	P		**P**		**14 12 10.6**	**+0.2**
PMG				IAmb		IAmb		14 12 12.2	
	comp=Z,39nm,0.9s								
COEN	**Coen**		**39.28 271**	P		**P**		**14 12 30.2**	**-0.8**
STKA	**Stephens Creek**		**39.92 243**	P		**P**		**14 12 36.0**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=102,slow=12,SNR=6.2								
STKA	**Stephens Creek**		**39.92 243**	P		**P**		**14 12 36.4**	**+0.3**
BBOO	**Buckleboo**		**44.69 243**	P		**P**		**14 13 14.1**	**-0.2**
BBOO				IAmb		IAmb		14 13 16.3	
	comp=Z,27nm,1.4s								
JAY	**Jayapura**		**45.34 286**	P		**P**		**14 13 21.0**	**+1.3**
	comp=Z,19nm,0.8s								
GENI	**Genyem**		**45.80 286**	P		**P**		**14 13 25.1**	**+1.9**
	comp=Z,120nm,0.8s								
WR0	**Warramunga Arr**		**46.34 260**	P		**P**		**14 13 26.7**	**-0.7**
WB0	**Warramunga Ar**		**46.50 261**	P		**P**		**14 13 28.0**	**-0.6**
WB0				IAmb		IAmb		14 13 29.4	
	comp=Z,18nm,0.6s								
WB2	**Warramunga Arr**		**46.52 260**	P		**P**		**14 13 28.0**	**-0.7**
WB2				IAmb		IAmb		14 13 29.6	
	comp=Z,16nm,0.6s								
WRAB	**Tennant Creek**		**46.52 260**	P		**P**		**14 13 28.1**	**-0.7**
WRAB				IAmb		IAmb		14 13 29.2	
	comp=Z,14nm,0.7s								
AS31	**Alice Springs**		**46.53 255**	P		**P**		**14 13 28.4**	**-0.5**
AS31				IAmb		IAmb		14 13 30.4	
	comp=Z,18nm,0.7s								
ASAR	**Alice Springs**		**46.53 255**	P		**P**		**14 13 28.6**	**-0.2**
	comp=Z,56nm,0.6s,baz=89,slow=8.4,SNR=613								
ASAR				S		**S**		**14 19 54.9**	**-1.8**
	comp=Z,3.1nm,0.8s,baz=92,slow=16,SNR=15								
ASAR	**Alice Springs**		**46.53 255**	P		**P**		**14 13 27.9**	**-1.0**
WRA	**Warramunga Arr**		**46.53 260**	P		**P**		**14 13 28.4**	**-0.5**
	comp=Z,10nm,0.5s,baz=98,slow=5.8,SNR=194								
WRA				S		**S**		**14 19 55.1**	**-1.6**
	comp=Z,1.9nm,0.9s,baz=95,slow=13,SNR=7.9								
WRA	**Warramunga Arr**		**46.53 260**	P		**P**		**14 13 27.7**	**-1.2**
MTN	**Manton Dam**		**50.92 269**	P		**P**		**14 14 01.4**	**-0.8**
MTN				IAmb		IAmb		14 14 03.2	
	comp=Z,31nm,0.7s								
FORT	**Forrest**		**51.41 246**	P		**P**		**14 14 04.3**	**-1.2**
FORT				IAmb		IAmb		14 14 29.2	
	comp=Z,24nm,1.0s								
KNRA	**Kununurra**		**52.51 265**	P		**P**		**14 14 13.2**	**-0.6**
KNRA				IAmb		IAmb		14 14 14.5	
	comp=Z,17nm,0.7s								
FAKI	**Fak Fak**		**52.95 281**	P		**P**		**14 14 16.0**	**-1.1**
FAKI				IAmb		IAmb		14 14 21.2	
	comp=Z,22nm,1.3s								
SIJI	**Sorong**		**54.63 283**	P		**P**		**14 14 29.1**	**-0.1**
	comp=Z,16nm,0.7s,baz=134,slow=8.4,SNR=12								
SWI	**Sorong**		**54.64 283**	P		**P**		**14 14 32.0**	**+2.7**
	comp=Z,2μmcomp=Z,31nm,0.7s								
FITZ	**Fitzroy Crossi**		**54.95 261**	P		**P**		**14 14 31.6**	**+0.2**
	baz=152,slow=10,SNR=1.5								
FITZ	**Fitzroy Crossi**		**54.95 261**	P		**P**		**14 14 31.4**	**0.0**
SOEI	**Soe**		**58.23 270**	P		**P**		**14 14 55.5**	**+0.8**
SOEI	**Soe**		**58.23 270**	P		**P**		**14 14 56.7**	**+2.0**
	comp=Z,59nm,0.7s								
SBA	**Scott Base**		**59.26 184**	P		**P**		**14 15 02.3**	**+1.8**
VNDA	**Vanda**		**59.34 185**	P		**P**		**14 15 01.8**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=5.3,slow=6.8,SNR=12								
VNDA	**Vanda**		**59.34 185**	P		**P**		**14 15 03.1**	**+2.0**
PSA00	**Pilbara Seismi**		**59.67 256**	P		**P**		**14 15 03.9**	**-0.4**
PSA00				IAmb		IAmb		14 15 05.7	
	comp=Z,19nm,1.1s								
MBWA	**Marble Bar**		**59.85 256**	P		**P**		**14 15 05.6**	**+0.1**
MORW	**Morawa**		**61.94 247**	P		**P**		**14 15 19.5**	**+0.1**
MORW				IAmb		IAmb		14 15 41.4	
	comp=Z,18nm,1.5s								
GIRL	**Giralia**		**64.59 254**	P		**P**		**14 15 37.6**	**+0.8**
TOLI2	**Tolitoli**		**65.08 281**	P		**P**		**14 15 38.6**	**-1.5**
TOLI2				IAmb		IAmb		14 15 42.1	
	comp=Z,5.3nm,0.7s								
CASY	**Casey**		**65.86 205**	P		**P**		**14 15 44.8**	**+0.6**
CASY				IAmb		IAmb		14 15 45.7	
	comp=Z,9.4nm,0.9s								
JYT	**Yasato**		**68.89 323**	P		**P**		**14 16 02.9**	**-0.6**
JGF	**Kuroka**		**70.10 321**	P		**P**		**14 16 10.7**	**-0.3**
JGF				IAmb		IAmb		14 16 17.6	
	comp=Z,12nm,1.5s								
MJAR	**Matsushiro Ar**		**70.25 322**	P		**P**		**14 16 11.3**	**-0.5**
	comp=Z,2.5nm,0.6s,baz=157,slow=6.0,SNR=15								
MJAR	**Matsushiro Arr**		**70.25 322**	P		**P**		**14 16 10.7**	**-1.1**
MAJO	**Matsushiro**		**70.25 322**	P		**P**		**14 16 11.2**	**-0.6**
MAT	**Matsushiro**		**70.25 322**	P		**P**		**14 16 11.5**	**-0.3**
ADK	**Adak**		**70.80 360**	P		**P**		**14 16 14.5**	**-0.2**
QSPA	**South Pole Qui**		**70.84 180**	P		**P**		**14 16 16.2**	**+1.1**
QSPA				IAmb		IAmb		14 16 17.3	
	comp=Z,13nm,0.9s								
JWT	**Wachi**		**71.07 320**	P		**P**		**14 16 16.1**	**-0.6**
JWT				IAmb		IAmb		14 16 42.1	
	comp=Z,13nm,1.3s								
KKM	**Kota Kinabalu**		**71.15 284**	P		**P**		**14 16 16.9**	**-0.9**
KKM				IAmb		IAmb		14 16 25.7	
	comp=Z,28nm,1.4s								
JSD	**Sado**		**71.27 323**	P		**P**		**14 16 17.1**	**-0.8**
UGM	**Wanagama**		**71.75 268**	P		**P**		**14 16 20.9**	**-0.4**
JHS	**Saijyo**		**72.30 318**	P		**P**		**14 16 22.6**	**-1.5**
SSLB	**Suanglung**		**74.76 302**	P		**P**		**14 16 37.3**	**-1.3**
TPUB	**Ta-pu**		**74.78 302**	P		**P**		**14 16 37.5**	**-1.3**
KSM	**Kuching**		**74.99 277**	P		**P**		**14 16 39.7**	**-0.4**
KSM				IAmb		IAmb		14 16 43.7	
	comp=Z,8.1nm,0.9s								
PEA0B	**Petropavlovsk-**		**75.51 344**	P		**P**		**14 16 41.9**	**-0.2**
PEA0B				IAmb		IAmb		14 16 57.8	
	comp=Z,34nm,1.5s								
PETK	**Petropavlovsk-**		**75.51 344**	P		**P**		**14 16 42.2**	**0.0**
	comp=Z,4.9nm,0.9s,baz=124,slow=6.7,SNR=8.8								
PETK	**Petropavlovsk-**		**75.51 344**	P		**P**		**14 16 41.9**	**-0.2**
XMIS	**Christmas Isla**		**75.58 264**	P		**P**		**14 16 43.6**	**+0.1**
KSRS	**Korea Array**		**77.12 317**	P		**P**		**14 16 52.3**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=123,slow=5.3,SNR=4.7								
NVAR	**Mina Array Bea**		**78.90 43**	P		**P**		**14 17 02.3**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=224,slow=6.2,SNR=4.6								
NV11	**Mina Array Sit**		**79.00 43**	P		**P**		**14 17 02.1**	**+0.1**
TPNV	**Topopah Spring**		**79.40 45**	P		**P**		**14 17 04.7**	**+0.4**
NJ2	**Nanjing**		**80.44 309**	*eP*		**P**		**14 17 10.3**	**+0.6**
NJ2				pmax		pmax			
	comp=Z,12nm,0.5s								
MDJ	**Mudanjiang**		**80.50 324**	P		**P**		**14 17 10.2**	**+0.5**
MDJ				IAmb		IAmb		14 17 12.0	
	comp=Z,20nm,1.1s								
KLR	**Kul'dur**		**82.34 329**	P		**P**		**14 17 20.1**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=57,slow=6.8,SNR=5.3								
CN2	**Changchun**		**82.38 322**	*eP*		**P**		**14 17 20.5**	**+0.9**
MAW	**Mawson**		**83.35 199**	P		**P**		**14 17 24.8**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=141,slow=9.1,SNR=2.5								
MAW	**Mawson**		**83.35 199**	IAmb		IAmb		14 17 30.9	
	comp=Z,1.9nm,1.4s								
TRF	**Thorofare Moun**		**84.85 11**	P		**P**		**14 17 31.0**	**-0.8**
TRF				IAmb		IAmb		14 17 31.8	
	comp=Z,6.0nm,1.0s								
TXAR	**Lajitas Array**		**84.89 57**	P		**P**		**14 17 34.1**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=220,slow=7.9,SNR=3.5								
MCK	**McKinley**		**85.36 12**	P		**P**		**14 17 33.9**	**-0.3**
MCK				IAmb		IAmb		14 17 34.6	
	comp=Z,6.9nm,1.1s								
SEY	**Seymchan**		**85.55 346**	P		**P**		**14 17 35.0**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=160,slow=5.5,SNR=24								
WRH	**Wood River Hil**		**86.19 12**	P		**P**		**14 17 37.8**	**-0.4**
WRH				IAmb		IAmb		14 17 50.6	
	comp=Z,10nm,1.4s								
ILAR	**Eielson Array**		**86.70 12**	P		**P**		**14 17 40.9**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=230,slow=6.3,SNR=6.9								
PDAR	**Pinedale Array**		**86.84 43**	P		**P**		**14 17 43.6**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=255,slow=3.5,SNR=2.5								
XAN	**Xi'an**		**88.77 307**	P		**P**		**14 17 52.5**	**+1.3**
XAN				pmax		pmax			
	comp=Z,10.0nm,1.0s								
XAN				pmax		pmax			
	comp=Z,94nm,6.2s								
SNAA	**Sanae**		**89.22 178**	P		**P**		**14 17 52.3**	**-0.4**
VNA3	**Neumayer Olymp**		**89.28 176**	P		**P**		**14 17 53.4**	**+0.4**
HHC	**Hu-ho-hao-te**		**89.73 314**	*eP*		**P**		**14 17 57.0**	**+1.4**
HHC				pmax		pmax			
	comp=Z,19nm,1.1s								
HHC				pmax		pmax			
	comp=Z,78nm,6.3s								
VNA2	**Neumayer--Watz**		**89.75 176**	P		**P**		**14 17 55.6**	**+0.5**
	baz=186,slow=3.2								
CMAR	**Chiang Mai Arr**		**91.35 289**	P		**P**		**14 18 04.8**	**+1.3**
	comp=Z,3.0nm,1.0s,baz=115,slow=2.9,SNR=15								
CMAR	**Chiang Mai Arr**		**91.35 289**	P		**P**		**14 18 03.1**	**-0.4**
INK	**Inuvik**		**92.59 15**	P		**P**		**14 18 07.5**	**-0.5**
	comp=Z,2.0nm,0.9s,baz=236,slow=2.9,SNR=8.2								
LZH	**Lanzhou**		**93.40 307**	⇓P		**P**		**14 18 13.8**	**+1.0**
LZH				pP		pwP		14 19 26.3	+6.3
LZH				sP		sP		14 20 04.0	+19
LZH				pmax		pmax			
	comp=Z,17nm,1.4s								
LZH				pmax		pmax			
	comp=Z,93nm,8.7s								
YKA	**Yellowknife Ar**		**94.63 24**	P		**P**		**14 18 17.3**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=234,slow=4.1,SNR=3.6								
ARCES	**ARCESS Array B**		**127.97 351**	PKP		**PKPdf**		**14 24 00.9**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=3.8,slow=2.7,SNR=10								
ARCES	**ARCESS Array B**		**127.97 351**			**PKPdf**		**14 24 00.6**	**-0.1**
CLL	**Collm**		**147.18 349**	⇓*i*PKPbc		**PKPbc**		**14 24 39.1**	**+0.2**
	comp=Z,5.0nm,0.8s								
CLL				*e*PKPab		**PKPab**		**14 24 42.0**	**+0.8**
	comp=Z,3.0nm,0.5s								
CLL				*e*				14 24 48.0	
OSTC	**Ostas**		**147.23 345**	*e*PKP		**PKiKP**		**14 24 40.3**	**-0.9**
BRTR	**Keskin Array B**		**147.23 315**	PKPbc		**PKPbc**		**14 24 39.9**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=137,slow=4.5,SNR=23								

	comp=E,224nm,0.3s						
GRPR				smax	smax		
	comp=E,1μm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.2s						
GRPR	**Tuman**	**0.92**	**340**	*i* P	**Pn**	**14 07 49.2**	**-0.1**
GRPR				AMB	AMB	14 07 49.9	
	comp=N,520nm,0.4s						
GRPR				AMB	AMB	14 07 49.9	
	comp=N,220nm,0.4s						
GRPR				AMB	AMB	14 07 49.9	
	comp=N,680nm,0.4s						
GRPR				*e*S	**Sn**	**14 08 01.4**	**-0.8**
GRPR				A	A	14 08 03.0	
	comp=N,2μm,0.4s						
GRPR				A	A	14 08 03.0	
	comp=N,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.94**	**344**	*c i* PN	**Pn**	**14 07 49.1**	**-0.5**
YUK				*i* S	**Sn**	**14 08 01.9**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**0.94**	**344**	*i* P	**Pn**	**14 07 49.1**	**-0.5**
YUK				AMB	AMB	14 07 49.4	
	comp=N,280nm,0.3s						
YUK				*i* S	**Sn**	**14 08 01.9**	**-0.7**
YUK				A	A	14 08 02.7	
	comp=N,530nm,0.4s						
YUK				A	A	14 08 02.7	
	comp=N,1μm,0.4s						
JNSB	**Nemuroshibetsu**	**1.09**	**307**	P	**Pn**	**14 07 51.4**	**-0.1**
JAK	**Akkeshi**	**1.12**	**264**	P	**Pn**	**14 07 51.6**	**-0.2**
JAK				*e*S	**Sn**	**14 08 06.1**	**-0.5**
JRA	**Rausu**	**1.13**	**316**	P	**Pn**	**14 07 52.1**	**+0.1**
JRA				*e*S	**Sn**	**14 08 07.1**	**+0.2**
JNK	**Nakash**	**1.18**	**293**	P	**Pn**	**14 07 52.1**	**-0.5**
JNK				*e*S	**Sn**	**14 08 06.8**	**-1.3**
RUSJ	**Misakicho**	**1.20**	**325**	⇓ *i* PN	**Pn**	**14 07 53.2**	**+0.3**
RUSJ				*e*S	**Sn**	**14 08 09.9**	**+1.4**
JOB	**Onbets**	**1.76**	**263**	*e*S	**Sn**	**14 08 20.6**	**-1.1**
JAR	**Ashorobuto**	**1.79**	**276**	P	**Pn**	**14 08 00.8**	**+0.1**
JAR				*e*S	**Sn**	**14 08 22.4**	**-0.2**
JTKR	**Abashiri--Toko**	**1.87**	**297**	P	**Pn**	**14 08 02.1**	**+0.3**
JTKR				*e*S	**Sn**	**14 08 24.7**	**+0.2**
JCH	**Churui**	**2.16**	**257**	P	**Pn**	**14 08 05.2**	**-0.4**
JCH				*e*S	**Sn**	**14 08 29.7**	**-1.6**
KUR	**Kuril'sk**	**2.42**	**29**	*c i* PN	**Pn**	**14 08 10.1**	**+0.9**
KUR				*e*S	**Sn**	**14 08 37.5**	**-0.2**
KUR				pmax	pmax		
	comp=Z,32nm,0.3s						
KUR				pmax	pmax		
	comp=N,11nm,0.2s						
KUR				pmax	pmax		
	comp=E,16nm,0.2s						
KUR				smax	smax		
	comp=N,117nm,0.2s						
KUR				smax	smax		
	comp=E,48nm,0.2s						
KUR	**Kuril'sk**	**2.42**	**29**	*i* P	**Pn**	**14 08 10.1**	**+0.9**
KUR				AMB	AMB	14 08 11.0	
	comp=E,30nm,0.3s						
KUR				*e*S	**Sn**	**14 08 38.0**	**+0.3**
KUR				A	A	14 08 40.4	
	comp=E,90nm,0.2s						
KUR				A	A	14 08 40.4	
	comp=E,110nm,0.2s						
ERM	**Erimo**	**2.52**	**245**	*e*PN	**Pn**	**14 08 12.0**	**+1.5**
JKA	**Kamikawa-asahi**	**2.80**	**292**	*e*P	**Pn**	**14 08 15.5**	**+1.1**
ASAJ	**Asahikawa**	**2.80**	**292**	Pn	**Pn**	**14 08 15.5**	**+1.0**
	comp=E,6.4nm,0.3s,baz=125,slow=9.9,SNR=60						
ASAJ				Sn	**Sn**	**14 08 52.8**	**+5.7**
	comp=E,2.7nm,0.3s,baz=198,slow=33,SNR=6.1						
ILAR	**Eielson Array**	**42.39**	**36**	P	**P**	**14 15 19.9**	**+0.7**
	comp=E,0.2nm,0.4s,baz=266,slow=8.1,SNR=4.4						
ILAR	**Eielson Array**	**42.39**	**36**	P	**P**	**14 15 20.0**	**+0.7**
MKAR	**Makanchi Array**	**44.27**	**298**	P	**P**	**14 15 33.7**	**-0.9**
	comp=E,0.2nm,0.5s,baz=80,slow=7.9,SNR=2.6						
FINES	**FINESS Array B**	**65.11**	**333**	P	**P**	**14 18 04.0**	**-1.0**
	comp=E,1.5nm,0.9s,baz=60,slow=8.3,SNR=5.4						

IDC 26 14:19:07.5±1.7, 8°.79S×159°.78E, *h*0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/32, mbtmp3.7/5, MS2.6/1, Ms1 2.6/1, ms1mx2.2/38, Error ellipse: s-maj=45.1km s-min=9.2km az=67.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.66**	**166**	Pg	Pg	14 19 20.9	+0.7
	407nm,0.3s,baz=228,slow=8.9,SNR=374						
HNR				Lg	Lg	14 19 29.0	
	1μm,0.3s,baz=242,slow=2.0,SNR=59						
HNR				LR	LR	14 19 31.2	
	comp=Z,312nm,21.8s,baz=294,slow=36						
GUMO	**Guam**	**26.71**	**326**	LR	LR	14 34 41.6	
	comp=Z,12nm,20.3s,baz=169,slow=35						
WRA	**Warramunga Arr**	**26.98**	**243**	P	P	14 24 51.8	+0.5
	0.7nm,0.4s,baz=73,slow=10.0,SNR=12						
H11S2	**WAKE ISLAND Hy 27.95**	**14**		T	T	14 53 48.9	
	baz=195,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy 27.95**	**14**		T	T	14 53 49.8	
	baz=195,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy 27.97**	**14**		T	T	14 53 51.4	
	baz=195,slow=76,SNR=12						
ASAR	**Alice Springs**	**28.84**	**236**	P	P	14 25 08.0	+0.1
	0.2nm,0.4s,baz=62,slow=11,SNR=8.5						
H11N1	**WAKE ISLAND Hy 29.17**	**14**		T	T	14 55 22.1	
	baz=194,slow=76,SNR=8.9						
H11N3	**WAKE ISLAND Hy 29.18**	**14**		T	T	14 55 26.1	
	baz=194,slow=76,SNR=8.4						
H11N2	**WAKE ISLAND Hy 29.19**	**14**		T	T	14 55 27.6	
	baz=194,slow=76,SNR=8.4						
CMAR	**Chiang Mai Arr**	**65.83**	**295**	P	P	14 29 54.5	-0.8
	0.5nm,0.3s,baz=116,slow=4.1,SNR=4.6						
SONM	**Songino Array**	**73.44**	**326**	P	P	14 30 42.6	+0.8
	0.9nm,0.8s,baz=115,slow=6.8,SNR=2.6						
MKAR	**Makanchi Array**	**87.89**	**318**	P	P	14 31 58.3	-0.9
	0.4nm,0.6s,baz=105,slow=8.7,SNR=4.1						

JMA 26 14:27:41.8, 36°.80N×138°.54E, *h*5km±3km, M1.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGK	**Kuni**	**0.25**	**161**	P	Pg	14 27 47.0	+0.3
MAT	**Matsushiro**	**0.37**	**226**	P	Pg	14 27 48.7	-0.3
MAT				S	Sg	14 27 53.4	-0.4
MAT	**Matsushiro**	**0.37**	**226**	P	Pn	14 27 53.9	0.0
MAT				S	Sb	14 27 58.6	+1.6
MAT	**Matsushiro**	**0.37**	**226**	P	Pg	14 27 48.7	-0.3
MAT	**Matsushiro**	**0.37**	**226**	S	Sb	14 27 58.6	+1.6
JNG	**Nsakai**	**0.53**	**222**	P	Pg	14 27 51.7	-0.3
JNG				S	Sg	14 27 58.4	-0.5
JKT	**Katashina**	**0.57**	**93**	S	Sg	14 28 00.5	+0.3
JAG	**Ashikaga**	**0.82**	**117**	P	Pg	14 27 57.7	+0.1

JMA 26 14:27:46.7±0.1, 36°.79N×138°.54E, *h*3km±2km, M1.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNG	**Nsakai**	**0.52**	**223**	P	Pg	14 27 56.8	+0.1
JNG				S	Sg	14 28 03.6	+0.1
JKT	**Katashina**	**0.57**	**92**	S	Sg	14 28 05.5	+0.5
JAG	**Ashikaga**	**0.82**	**116**	P	Pg	14 28 02.8	+0.4

*IDC **26** 14:32:34.3±1.2, 27°.72N×84°.95E, *h*0km, mb3.6/7, mb1 3.8/8, mb1mx3.4/59, mbtmp3.6/8, ML3.5/1, MS4.0/2, Ms1 4.0/2, ms1mx2.7/47, Error ellipse: s-maj=37.8km s-min=23.3km az=66.0*

ISC 26 14:32:35.9±1.2, 27°.7N±0°.2×85°.0E±0°.2, *h*10km, n10, σ0$89/8, mb3.6/7, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.14**	**354**	P	**P**	**14 36 58.2**	**-1.0**
	0.1nm,0.3s,baz=170,slow=11,SNR=12						
KURBB	**Kurchatov Arra**	**23.37**	**350**	P	**P**	**14 37 44.4**	**-0.1**
	0.6nm,0.7s,baz=173,slow=9.6,SNR=6.0						
SONM	**Songino Array**	**26.09**	**34**	P	**P**	**14 38 10.5**	**+0.6**
	2.6nm,0.7s,baz=223,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**26.18**	**360**	P	**P**	**14 38 10.5**	**+0.1**
	0.5nm,0.5s,baz=168,slow=35,SNR=3.1						
KLR	**Kul'dur**	**41.62**	**46**	LR	LR	14 59 06.3	
	comp=Z,96nm,20.8s,baz=177,slow=38						
FINES	**FINESS Array B**	**51.24**	**328**	P	**P**	**14 41 40.7**	**+1.2**
	1.3nm,0.8s,baz=108,slow=13,SNR=1.0						
GERES	**GERESS Array B**	**57.62**	**312**	LR	LR	15 11 45.6	
	comp=Z,236nm,19.7s,baz=300,slow=41						
WRA	**Warramunga Arr**	**67.29**	**129**	P	**P**	**14 43 31.3**	**+0.1**
	0.6nm,0.7s,baz=322,slow=6.4,SNR=15						
TORD	**Torodi Ar. Bea**	**78.13**	**279**	P	**P**	**14 44 35.4**	**-0.4**
	0.3nm,0.7s,baz=42,slow=5.3,SNR=2.3						
YKA	**Yellowknife Ar**	**88.72**	**9**	P	**P**	**14 45 28.5**	**-0.9**
	0.2nm,0.6s,baz=341,slow=4.9,SNR=3.6						

*ROM **26** 14:42:52.0±0.2, 44°.507N±0°.010×7°.34E±0°.02, *h*7km±2km, ML1.3/3, Error ellipse: s-maj=1.5km s-min=0.9km az=243.0*
*LDG **26** 14:42:52.8±0.1, 44°.49N×7°.26E, *h*12km, Md1.6/2, Ml1.8/8, Error ellipse: s-maj=1.8km s-min=1.1km az=67.0*
*GEN **26** 14:42:53.0, 44°.49N×7°.28E, *h*12km±2km, Ml0.9*
*STR **26** 14:42:53.7±1.4, 44°.N±6°×±°, *h*6km, MLv1.1/4, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

ISC 26 14:42:52.6±0.8, 44°.50N±0°.02×7°.29E±0°.02, *h*14km±5km, n36, σ0°39/68, 1C, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZZ	**Stroppo**	**0.12**	**274**	P	**Pg**	**14 42 56.3**	**+0.2**
PZZ				S	**Sg**	**14 42 58.4**	**-0.2**
PZZ	**Stroppo**	**0.12**	**274**	P	**Pg**	**14 42 56.3**	**+0.2**
PZZ				S	**Sg**	**14 42 58.4**	**-0.2**
PZZ	**Stroppo**	**0.12**	**274**	P	**Pg**	**14 42 56.3**	**+0.2**
PZZ				S	**Sg**	**14 42 58.4**	**-0.2**
PZZ				AML	AML		
	comp=E,191μm,0.2s						
PZZ				AML	AML		
	comp=N,314μm,0.2s						
PZZ	**Stroppo**	**0.12**	**274**	S	**Sg**	**14 42 58.4**	**-0.2**
STV	**Sant Anna di V**	**0.25**	**174**	P	**Pg**	**14 42 58.2**	**+0.2**
STV				S	**Sg**	**14 43 01.5**	**-0.3**
STV	**Sant Anna di V**	**0.25**	**174**	P	**Pg**	**14 42 58.2**	**+0.2**
STV				S	**Sg**	**14 43 01.5**	**-0.3**
STV	**Sant Anna di V**	**0.25**	**174**	⇑P	**Pg**	**14 42 58.2**	**+0.2**
STV				S	**Sg**	**14 43 01.5**	**-0.3**
STV				AML	AML		
	comp=N,36μm,0.2s						
STV				AML	AML		
	comp=E,41μm,0.8s						
STV	**Sant Anna di V**	**0.25**	**174**	S	**Sg**	**14 43 01.5**	**-0.3**
ENR	**Entracque**	**0.29**	**161**	P	**Pg**	**14 42 58.8**	**+0.1**
ENR				S	**Sg**	**14 43 02.8**	**0.0**
ENR	**Entracque**	**0.29**	**161**	P	**Pg**	**14 42 58.8**	**+0.1**
ENR				S	**Sg**	**14 43 02.8**	**0.0**
ENR	**Entracque**	**0.29**	**161**	P	**Pg**	**14 42 58.8**	**+0.1**
ENR				S	**Sg**	**14 43 02.7**	**0.0**
ENR				AML	AML		
	comp=N,128μm,0.9s						
ENR				AML	AML		
	comp=E,174μm,0.2s						
ENR	**Entracque**	**0.29**	**161**	S	**Sg**	**14 43 02.7**	**0.0**
BHB	**Bricherasio**	**0.34**	**357**	P	**Pg**	**14 42 59.7**	**+0.1**
BHB				S	**Sg**	**14 43 04.1**	**-0.3**
BHB	**Bricherasio**	**0.34**	**357**	P	**Pg**	**14 42 59.7**	**+0.1**
BHB				S	**Sg**	**14 43 04.0**	**-0.3**
BHB	**Bricherasio**	**0.34**	**357**	P	**Pg**	**14 42 59.8**	**+0.1**
BHB				S	**Sg**	**14 43 04.0**	**-0.4**
ISO	**Isola**	**0.36**	**209**	Pg	**Pg**	**14 42 60.0**	**+0.1**
ISO				Sg	**Sg**	**14 43 04.3**	**-0.5**
MBDF	**Montbardon**	**0.43**	**302**	*e*Pg	**Pg**	**14 43 01.5**	**+0.2**
MBDF				*e*Sg	**Sg**	**14 43 07.5**	**+0.3**
	comp=E,7.5nm,0.2s						
GBOS	**Grotte di Boss**	**0.47**	**123**	P	**Pb**	**14 43 02.5**	**-0.3**
GBOS				S	**Sg**	**14 43 08.2**	**-0.1**
TURF	**col de Turini**	**0.53**	**172**	Pg	**Pg**	**14 43 03.4**	**+0.3**
TURF				Sg	**Sg**	**14 43 09.8**	**-0.3**
SAOF	**Saorge**	**0.55**	**159**	Pg	**Pg**	**14 43 03.5**	**+0.1**
SAOF				Sg	**Sg**	**14 43 10.3**	**-0.3**
SAOF	**Saorge**	**0.55**	**159**	P	**Pb**	**14 43 04.3**	**+0.3**
SAOF				S	**Sg**	**14 43 09.7**	**-0.9**
RRL	**Rocca Remolon**	**0.55**	**320**	P	**Pg**	**14 43 03.8**	**+0.2**
RRL				S	**Sg**	**14 43 11.4**	**+0.5**
RRL	**Rocca Remolon**	**0.55**	**320**	P	**Pg**	**14 43 03.7**	**+0.1**
RRL				S	**Sg**	**14 43 11.4**	**+0.5**
RRL	**Rocca Remolon**	**0.55**	**320**	P	**Pg**	**14 43 03.8**	**+0.2**
RRL				S	**Sg**	**14 43 11.3**	**+0.5**
SBF	**Sospel**	**0.64**	**170**	*e*Pg	**Pg**	**14 43 05.0**	**-0.2**
SBF				*e*Sg	**Sg**	**14 43 13.5**	**-0.2**
	comp=E,2.1nm,0.2s						
RSP	**Reno Superiore**	**0.65**	**359**	P	**Pg**	**14 43 04.9**	**-0.4**
CALF	**Calern**	**0.79**	**200**	Pg	**Pg**	**14 43 07.8**	**-0.2**
CALF				Sg	**Sg**	**14 43 18.2**	**-0.2**
PCP	**Piancastagn**	**0.90**	**87**	P	**Pb**	**14 43 10.2**	**+0.1**
PCP				S	**Sg**	**14 43 21.3**	**-0.5**
PCP	**Piancastagn**	**0.90**	**87**	P	**Pb**	**14 43 10.1**	**+0.1**
PCP				S	**Sg**	**14 43 21.5**	**-0.4**
FRF	**La Foret Royal**	**1.04**	**207**	*e*Pg	**Pb**	**14 43 12.2**	**-0.3**
FRF				*e*Sg	**Sb**	**14 43 25.3**	**-0.8**
	comp=E,2.5nm,0.2s						
LPG	**La Plagne**	**1.07**	**339**	*e*Pg	**Pn**	**14 43 14.0**	**+0.5**
LPG				*e*Sg	**Sg**	**14 43 27.5**	**+0.2**
	comp=E,1.3nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.09**	**293**	*e*Pg	**Pb**	**14 43 12.4**	**-0.9**
ORIF				*e*Sg	**Sb**	**14 43 26.3**	**-1.1**
	comp=E,2.4nm,0.3s						
LPL	**La Plagne**	**1.09**	**339**	*e*Pg	**Pn**	**14 43 14.6**	**+0.8**
LPL				*e*Sg	**Sb**	**14 43 27.1**	**-0.6**
	comp=E,1.1nm,0.2s						
LMR	**La Mourre**	**1.29**	**206**	*e*Pg	**Pb**	**14 43 17.0**	**+0.3**
LMR				*e*Sg	**Sb**	**14 43 33.0**	**-0.2**
	comp=E,2.5nm,0.2s						
SMRF	**Simiane la Rot**	**1.34**	**248**	*e*Pg	**Pb**	**14 43 17.5**	**0.0**
SMRF				*e*Sg	**Sn**	**14 43 34.7**	**+0.1**
	comp=E,1.4nm,0.3s						
PGF	**Pioggiola**	**2.31**	**147**	*e*Pn	**Pn**	**14 43 31.5**	**+1.1**
PGF				*e*Sn	**Sn**	**14 43 58.4**	**-0.3**
	comp=E,1.3nm,0.6s						

*IDC **26** 14:44:10.2±1.5, 10°.63S×120°.19E, *h*0km, mb3.5/3, mb1 3.6/6, mb1mx3.4/44, mbtmp3.6/6, ML3.5/3, Error ellipse: s-maj=47.6km s-min=22.9km az=38.0*

ISC 26 14:44:14.5±1.3, 10°.6S±0°.1×120°.6E±0°.1, *h*31km, n7, σ2$25/9, mb3.6/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.03**	**83**	Pn	**Pb**	**14 45 06.1**	**-1.6**
	4.6nm,0.3s,baz=274,slow=3.6,SNR=7.0						
BATI				Sn	**Sb**	**14 45 46.2**	**+1.9**
	3.5nm,0.3s,baz=326,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**8.89**	**147**	Pn	**Pn**	**14 46 22.9**	**+2.0**
	0.3nm,0.3s,baz=345,slow=11,SNR=22						
FITZ				Sn	**Sn**	**14 47 56.5**	**-3.5**
	0.9nm,0.3s,baz=188,slow=21,SNR=12						
WRA	**Warramunga Arr**	**16.16**	**127**	Pn	**Pn**	**14 47 59.5**	**0.0**
	0.1nm,0.3s,baz=297,slow=13,SNR=6.8						
ASAR	**Alice Springs**	**18.14**	**137**	P	**P**	**14 48 26.6**	**+2.3**
	0.3nm,0.3s,baz=325,slow=12,SNR=5.3						
MKAR	**Makanchi Array**	**66.61**	**332**	P	**P**	**14 55 01.5**	**-0.4**
	0.3nm,0.6s,baz=147,slow=7.5,SNR=3.2						
ZALV	**Zalesovo Beam**	**71.11**	**339**	P	**P**	**14 55 28.2**	**-1.5**
	0.8nm,0.6s,baz=134,slow=6.2,SNR=2.6						
KURBB	**Kurchatov Arra**	**71.11**	**333**	P	**P**	**14 55 30.2**	**+0.5**
	0.2nm,0.5s,baz=146,slow=5.9,SNR=2.5						

*BJI **26** 14:44:47.4±0.0, 27°.59N×85°.80E, *h*10km, mB4.4/9, mb4.4/37, Ms3.7/11, Ms7 3.5/10*
*IDC **26** 14:44:48.2±0.8, 27°.58N×85°.90E, *h*0km, mb3.9/20, mb1 4.1/22, mb1mx3.9/47, mbtmp3.9/22, ML3.5/2, MS3.1/5, Ms1 3.1/5, ms1mx2.7/45, Error ellipse: s-maj=21.9km s-min=14.8km az=40.0*
*NEIC **26** 14:44:50.5±1.4, 27°.69N±0°.08×85°.97E±0°.04, *h*10km±1km, mb4.5/45, Error ellipse: s-maj=14.5km s-min=3.9km az=161.0*
*DMN **26** 14:44:50.5±0.1, 27°.69N×85°.96E, *h*10km, Ml4.9/5, Error ellipse: s-maj=4.0km s-min=1.5km az=14.0*
*NDI **26** 14:44:54.3±67.0, 28°.44N×86°.30E, *h*10km, ML4.3, mb4.5(NEIC)*

ISC 26 14:44:50.9±0.9, 27°.63N±0°.04×85°.91E±0°.02, *h*21km±6km, n124, σ1$76/140, mb4.3/44, MS3.2/7, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIRN	**Jiri**	**0.25**	**82**	*e*Pg	**Pb**	**14 44 55.7**	**-1.8**
GUN	**Gumba**	**0.28**	**354**	*e*Pg	**Pb**	**14 44 55.7**	**-2.1**
PKI	**Pulchoki**	**0.45**	**263**	*e*Pg	**Pb**	**14 45 00.7**	**+0.4**
PKI				*e*Sg	**Sb**	**14 45 07.7**	**+1.0**
	17μm,0.4s						
PKIN	**Phulchoki**	**0.46**	**264**	*e*Pg	**Pb**	**14 45 00.8**	**+0.3**
KKN	**Kakani**	**0.58**	**286**	*e*Pg	**Pb**	**14 45 02.8**	**+0.1**
KKN				*e*Sg	**Sb**	**14 45 11.1**	**+0.4**
DMN	**Daman**	**0.72**	**269**	*e*Pg	**Pb**	**14 45 04.6**	**-0.3**
DMN				*e*Sg	**Sb**	**14 45 14.4**	**0.0**
	7μm,0.6s						
RAMN	**Ramite**	**0.91**	**138**	*e*Pg	**Pb**	**14 45 07.8**	**-0.4**
GKN	**Gorkha**	**1.19**	**289**	*e*Pg	**Pb**	**14 45 13.7**	**+0.8**
ODAN	**Odare**	**1.52**	**120**	*e*Pg	**Pb**	**14 45 19.2**	**+0.6**
ODAN				*e*Sg	**Sb**	**14 45 39.1**	**+1.6**
	3μm,0.3s						
TAPN	**Taplejung**	**1.62**	**99**	*e*Pg	**Pb**	**14 45 20.0**	**-0.3**
TAPN				*e*Sg	**Sb**	**14 45 40.8**	**+0.4**
	739nm,0.3s						
DANN	**Dangsing**	**2.04**	**291**	*e*Pg	**Pb**	**14 45 28.5**	**+1.1**
DANN				*e*Sg	**Sb**	**14 45 54.9**	**+2.5**
	630nm,0.2s						
KOLN	**Koldanda**	**2.06**	**275**	*e*Pg	**Pb**	**14 45 29.1**	**+1.4**
KOLN				*e*Sg	**Sb**	**14 45 56.7**	**+3.8**
	4μm,0.5s						
PYUN	**Piuthan**	**2.63**	**281**	*e*Sg	**Sb**	**14 46 14.6**	**+5.2**
	1μm,0.4s						
BOK	**Bokaro**	**3.82**	**180**	*e*P	**Pn**	**14 45 51.8**	**+3.3**
BOK				*e*S	**Sn**	**14 46 35.5**	**+2.7**
LSA	**Lhasa**	**5.04**	**65**	Pn	**Pn**	**14 46 08.0**	**+2.2**
LSA	**Lhasa**	**5.04**	**65**	Pn	**Pn**	**14 46 07.8**	**+2.0**
SHL	**Shillong**	**5.72**	**110**	*e*P	**Pn**	**14 46 14.8**	**-0.1**
SHL				*e*S	**Sn**	**14 47 18.0**	**-2.1**
SHL				IAML		14 47 20.1	
	comp=E,613nm,0.3s						
SHL				IAML		14 47 21.7	
	comp=N,805nm,0.3s						
SHL	**Shillong**	**5.72**	**110**	Pn	**Pn**	**14 46 14.9**	**-0.1**
DDI	**Dehra Dun**	**7.39**	**293**	*e*P	**Pn**	**14 46 40.4**	**+2.8**
DDI				*e*S	**Sn**	**14 47 59.4**	**-1.4**
DDI				IAML		14 48 06.4	
	comp=N,244nm,0.3s						
KOHI	**KOHIMA**	**7.57**	**103**	*e*P	**Pn**	**14 46 41.0**	**+0.7**
KOHI				*e*S	**Sn**	**14 48 04.9**	**-0.7**
MOKO	**MOKOCHONG**	**7.79**	**98**	*e*P	**Pn**	**14 46 43.5**	**+0.3**
MOKO				*e*S	**Sn**	**14 48 11.3**	**+0.5**
SMLA	**Simla**	**8.39**	**297**	*e*P	**Pn**	**14 46 52.7**	**+1.4**
SMLA				*e*S	**Sn**	**14 48 22.8**	**-2.6**
SMLA				IAML		14 48 35.2	
	comp=E,87nm,0.6s						
SMLA				IAML		14 48 35.6	
	comp=N,61nm,0.3s						
BHPL	**Bhopal**	**8.83**	**242**	*e*P	**Pn**	**14 46 56.1**	**-1.3**
BHPL				*e*S	**Sn**	**14 48 29.5**	**-6.8**
BHPL				IAML		14 48 34.3	
	comp=N,96nm,0.6s						
BHPL				IAML		14 48 34.5	
	comp=E,101nm,0.6s						
DHRM	**DHARAMSHALA**	**9.53**	**301**	*e*P	**Pn**	**14 47 05.6**	**-1.5**
DHRM				*e*S	**Sn**	**14 48 48.1**	**-5.5**
DHRM				IAML		14 48 57.1	
	comp=E,529nm,0.8s						
AJM	**Ajmer**	**10.11**	**266**	*e*P	**Pn**	**14 47 16.0**	**+1.0**
AJM				*i* S	**Sn**	**14 49 01.0**	**-6.9**
HYB	**Hyderabad**	**12.22**	**215**	*i* P	**Pn**	**14 47 41.0**	**-2.9**
HYB				*e*S	**Sn**	**14 50 01.0**	**+1.4**
NIL	**Nilore**	**12.44**	**302**	Pn	**Pn**	**14 47 44.8**	**-2.0**
KSH	**Kashi**	**14.45**	**328**	P	**Pn**	**14 48 11.8**	**-2.6**
KSH				pP	P	14 48 16.8	-4.2
KSH				pmax	pmax		
	comp=E,6.0nm,0.8s						
CM33	**Chiang Mai Arr**	**14.84**	**123**	P	**P**	**14 48 26.0**	**+0.7**
CHTO	**Chiang Mai**	**14.84**	**123**	P	**P**	**14 48 25.4**	**+0.1**
CM32	**Chiang Mai Arr**	**14.87**	**124**	P	P	14 48 38.0	+12
CM34	**Chiang Mai Arr**	**14.97**	**123**	P	**P**	**14 48 28.0**	**+1.3**
CM15	**Chiang Mai Arr**	**15.05**	**125**	P	**Pn**	**14 48 22.0**	**-0.5**
	comp=E,5.9nm,0.9s						
CM13	**Chiang Mai Arr**	**15.06**	**125**	P	**Pn**	**14 48 22.0**	**-0.6**
	comp=E,36nmcomp=E,4.3nm,0.7s						
CM31	**Chiang Mai Arr**	**15.06**	**125**	P	**P**	**14 48 30.2**	**+2.4**
	comp=E,162nm,0.9s						
CMAR	**Chiang Mai Arr**	**15.06**	**125**	Pn	**Pn**	**14 48 21.1**	**-1.4**
	comp=E,0.0nm,0.3s,baz=303,slow=13,SNR=19						
CMAR	**Chiang Mai Arr**	**15.06**	**125**	P	**P**	**14 48 28.9**	**+1.1**
CM35	**Chiang Mai Arr**	**15.08**	**123**	P	**P**	**14 48 29.0**	**+1.0**
CM02	**Chiang Mai Arr**	**15.08**	**125**	P	**Pn**	**14 48 22.6**	**-0.2**
	comp=E,44nmcomp=E,6.0nm,0.9s						
CM01	**Chiang Mai Arr**	**15.10**	**125**	P	**P**	**14 48 30.6**	**+2.4**
	comp=E,71nmcomp=E,6.1nm,0.9s						
CM05	**Chiang Mai Arr**	**15.10**	**125**	P	**Pn**	**14 48 22.8**	**-0.3**
	comp=E,41nmcomp=E,4.3nm,0.8s						
CM09	**Chiang Mai Arr**	**15.10**	**124**	P	**P**	**14 48 30.9**	**+2.7**
	comp=E,61nmcomp=E,5.9nm,0.7s						
CM04	**Chiang Mai Arr**	**15.12**	**125**	P	**P**	**14 48 30.0**	**+1.5**
	comp=E,66nmcomp=E,6.6nm,0.8s						
CM36	**Chiang Mai Arr**	**15.13**	**124**	P	**P**	**14 48 30.0**	**+1.4**
KBL	**Kabul**	**16.00**	**300**	Pn	**Pn**	**14 48 32.8**

NJ2					pmax	pmax			
	comp=Z,9.0nm,0.5s								
ABKAR	**Akbulak array**	**29.41**	**324**		P	**P**	**14 50 54.1**	**+1.3**
KSRS	**Korea Array**	**36.49**	**64**		P	**P**	**14 51 54.5**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=259,slow=8.8,SNR=6.8								
USRK	**Ussuriysk Ar.**	**40.26**	**53**		P	**P**	**14 52 26.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=260,slow=7.2,SNR=4.1								
USRK					LR	LR	15 08 27.5		
	comp=Z,21nm,18.0s,baz=243,slow=35								
NRIK	**Noril'sk**	**41.75**	**1**		P	**P**	**14 52 39.6**	**+1.3**
	comp=Z,4.1nm,0.6s,baz=184,slow=5.9,SNR=5.0								
NRIK	**Noril'sk**	**41.75**	**1**		P	**P**	**14 52 38.9**	**+0.6**
NRIK					IAmb	IAmb	14 52 40.7		
	comp=Z,5.3nm,0.7s								
ATD	**Arta Tunnel**	**43.37**	**257**		LR	LR	15 09 29.2		
	comp=Z,30nm,19.8s,baz=106,slow=34								
YSS	**Yuzh-Sakhalins**	**48.05**	**50**		P	**P**	**14 53 30.2**	**+1.5**
AKASG	**Malin Array Be**	**48.25**	**315**		P	**P**	**14 53 30.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=79,slow=7.2,SNR=2.1								
AKBB	**Malin Array Si**	**48.25**	**315**		P	**P**	**14 53 30.5**	**+0.3**
AKBB					IAmb	IAmb	14 53 53.7		
	comp=Z,6.2nm,1.4s								
MNK	**Minsk**	**49.56**	**319**	*i*	P	P	14 53 35.6	-4.6	
	comp=E,3.0nm,0.7s								
MNK				*i*	P	P	14 53 35.6	-4.6	
	comp=N,13nm,0.7s								
MNK				*i*	P	P	14 53 35.6	-4.6	
	comp=Z,8.0nm,0.7s								
MNK				*i*	PcP	**PcP**	**14 54 57.5**	**-4.2**	
MNK				*i*	PP	**PP**	**14 55 29.8**	**-4.5**	
MNK				*i*	PPP	PPP	14 56 22.0		
MNK				*i*	S	**S**	**15 00 42.4**	**-4.5**	
MNK				*i*	SS	**SS**	**15 04 17.1**	**-1.7**	
MNK				*i*	SSS	SSS	15 05 35.6		
MNK				*i*	LR	LR	15 13 33.7		
MNK				*i*	LRM	MLR	15 17 10.1		
	comp=E,42nm,22.3s								
MNK				*i*	LRM	MLR	15 17 16.6		
	comp=Z,274nm,24.9s								
MNK				*i*	LRM	MLR	15 17 18.0		
	comp=N,396nm,19.7s								
LVZ	**Lovozero**	**50.43**	**337**		P	**P**	**14 53 46.5**	**-0.1**	
FIA1	**FINESS Array S**	**51.77**	**328**		P	**P**	**14 53 56.9**	**+0.2**	
FIA1					IAmb	IAmb	14 54 02.1		
	comp=Z,26nm,1.4s								
FINES	**FINESS Array B**	**51.77**	**328**		P	**P**	**14 53 57.5**	**+0.8**	
	comp=Z,1.2nm,0.5s,baz=116,slow=8.5,SNR=9.4								
ARCES	**ARCESS Array B**	**54.13**	**338**		P	**P**	**14 54 15.4**	**+1.3**	
	comp=Z,2.1nm,0.7s,baz=34,slow=4.8,SNR=6.2								
ARCES	**ARCESS Array B**	**54.13**	**338**		IAmb	IAmb	14 54 39.5		
	comp=Z,11nm,1.2s								
SEY	**Seymchan**	**55.09**	**31**		P	**P**	**14 54 21.9**	**+0.7**	
	comp=Z,1.9nm,0.6s,baz=269,slow=6.3,SNR=12								
GERES	**GERESS Array B**	**58.31**	**312**		P	**P**	**14 54 45.1**	**+0.8**	
	comp=Z,0.1nm,0.3s,baz=74,slow=7.6,SNR=2.2								
NC405	**NORSAR Array S**	**58.63**	**327**		P	**P**	**14 54 46.7**	**+0.4**	
NC602	**NORSAR Array S**	**58.72**	**326**		P	**P**	**14 54 47.2**	**+0.3**	
NC303	**NORSAR Array S**	**58.80**	**327**		P	**P**	**14 54 47.5**	**+0.1**	
NB201	**NORSAR Array S**	**58.84**	**327**		P	**P**	**14 54 48.1**	**+0.4**	
NOA	**NORSAR Array B**	**58.88**	**327**		P	**P**	**14 54 47.9**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=104,slow=7.1,SNR=3.4								
NAO01	**NORSAR Array S**	**59.04**	**327**		P	**P**	**14 54 49.0**	**-0.1**	
NAO01					IAmb	IAmb	14 55 12.9		
	comp=Z,9.7nm,1.0s								
NC204	**NORSAR Array S**	**59.09**	**327**		P	**P**	**14 54 49.4**	**-0.1**	
KNRA	**Kununurra**	**59.82**	**131**		P	**P**	**14 54 55.8**	**+0.8**	
MORW	**Morawa**	**63.33**	**151**		P	**P**	**14 55 18.5**	**0.0**	
WB0	**Warramunga Arr**	**66.49**	**130**		P	**P**	**14 55 40.1**	**+0.8**	
WRA	**Warramunga Arr**	**66.58**	**130**		P	**P**	**14 55 41.0**	**+1.2**	
	comp=Z,0.9nm,0.4s,baz=322,slow=6.4,SNR=20								
WRAB	**Tennant Creek**	**66.58**	**130**		P	**P**	**14 55 40.4**	**+0.5**	
WB2	**Warramunga Arr**	**66.59**	**130**		P	**P**	**14 55 40.6**	**+0.7**	
WB2					IAmb	IAmb	14 55 45.8		
	comp=Z,12nm,1.4s								
WR0	**Warramunga Arr**	**66.73**	**130**		P	**P**	**14 55 41.1**	**+0.3**	
WR0					IAmb	IAmb	14 55 49.9		
	comp=Z,11nm,1.5s								
ASAR	**Alice Springs**	**68.88**	**133**		P	**P**	**14 55 55.0**	**+0.6**	
	comp=Z,0.7nm,0.6s,baz=310,slow=6.4,SNR=5.8								
EUNU	**Eureka**	**72.46**	**359**		P	**P**	**14 56 16.2**	**+0.8**	
EUNU					IAmb	IAmb	14 56 23.4		
	comp=Z,3.6nm,1.2s								
ESDC	**Sonseca Array**	**72.86**	**306**		P	**P**	**14 56 19.5**	**+1.0**	
	comp=Z,1.1nm,1.0s,baz=46,slow=5.5,SNR=4.5								
ESDC					LR	LR	15 34 08.6		
	comp=Z,17nm,19.2s,baz=255,slow=41								
TULEG	**Thule**	**74.90**	**354**		P	**P**	**14 56 30.1**	**+0.4**	
TULEG					IAmb	IAmb	14 56 45.1		
	comp=Z,8.5nm,1.3s								
TOLK	**Toolik Lake Re**	**75.82**	**18**		P	**P**	**14 56 36.6**	**+1.4**	
TOLK					IAmb	IAmb	14 56 37.7		
	comp=Z,2.7nm,0.9s								
COLD	**Coldfoot**	**76.57**	**19**		P	**P**	**14 56 40.9**	**+1.5**	
BBOO	**Buckleboo**	**76.70**	**138**		P	**P**	**14 56 41.0**	**+0.5**	
NIKH	**Nikolski High**	**76.92**	**37**		P	**P**	**14 56 41.8**	**+0.2**	
TTA	**Tatalina**	**77.34**	**24**		P	**P**	**14 56 42.6**	**-1.3**	
TTA					IAmb	IAmb	14 56 59.7		
	comp=Z,5.9nm,1.4s								
MLY	**Manley**	**77.84**	**21**		P	**P**	**14 56 48.2**	**+1.6**	
MLY					IAmb	IAmb	14 56 53.8		
	comp=Z,5.2nm,1.1s								
I23K	**Minto, Yukon-K**	**78.20**	**21**		P	**P**	**14 56 49.8**	**+1.3**	
I23K					IAmb	IAmb	14 56 55.1		
	comp=Z,3.8nm,1.3s								
BPAW	**Bear Paw Mtn.**	**78.37**	**22**		P	**P**	**14 56 50.6**	**+1.1**	
BPAW					IAmb	IAmb	14 56 52.3		
	comp=Z,3.1nm,1.0s								
NEA2	**Nenana**	**78.67**	**21**		P	**P**	**14 56 52.4**	**+1.2**	
NEA2					IAmb	IAmb	14 56 53.2		
	comp=Z,3.0nm,0.8s								
MDM	**Murphy Dome**	**78.69**	**21**		P	**P**	**14 56 52.0**	**+0.7**	
MDM					IAmb	IAmb	14 56 53.0		
	comp=Z,2.3nm,0.8s								
PPLA	**Purkeypile**	**78.74**	**23**		P	**P**	**14 56 53.3**	**+1.5**	
PPLA					IAmb	IAmb	14 57 04.4		
	comp=Z,20nm,1.4s								
POKR	**Poker Plat Res**	**78.82**	**20**		P	**P**	**14 56 53.6**	**+1.6**	
POKR					IAmb	IAmb	14 56 53.9		
	comp=Z,2.5nm,0.7s								
TORD	**Torodi Ar. Bea**	**78.97**	**279**		P	**P**	**14 56 53.6**	**-0.1**	
	comp=Z,0.6nm,0.7s,baz=63,slow=3.6,SNR=2.2								
CCB	**Clear Creek Bu**	**79.03**	**21**		P	**P**	**14 56 53.5**	**+0.4**	
CCB					IAmb	IAmb	14 57 04.3		
	comp=Z,4.6nm,1.4s								
WRH	**Wood River Hil**	**79.06**	**21**		P	**P**	**14 56 54.3**	**+1.0**	
PRP	**Porcupine Dome**	**79.12**	**19**		P	**P**	**14 56 55.3**	**+1.5**	
PRP					IAmb	IAmb	14 56 56.4		
	comp=Z,2.4nm,0.8s								
IL31		**79.23**	**20**		P	**P**	**14 56 54.8**	**+0.7**	
ILAR	**Eielson Array**	**79.23**	**20**		P	**P**	**14 56 54.6**	**+0.4**	
	comp=Z,1.1nm,0.6s,baz=312,slow=4.7,SNR=16								
MCK	**McKinley**	**79.29**	**22**		P	**P**	**14 56 55.7**	**+1.1**	
RND	**Reindeer**	**79.54**	**22**		P	**P**	**14 56 56.7**	**+0.7**	
RND					IAmb	IAmb	14 57 16.1		
	comp=Z,6.7nm,1.3s								
SKT	**Skwentna**	**79.56**	**24**		P	**P**	**14 56 57.3**	**+1.1**	
SKT					IAmb	IAmb	14 56 57.9		
	comp=Z,7.5nm,0.5s								
YKA	**Yellowknife Ar**	**88.70**	**9**		P	**P**	**14 57 43.1**	**+0.6**	
	comp=Z,0.5nm,0.7s,baz=336,slow=4.5,SNR=7.6								

IDC ***26*** *14:57:02.9±0.7, 28.10N×84.65E, h0km, mb4.0/20, mb1 4.1/22, mb1mx4.0/39, mbtmp4.0/22, ML4.1/2, MS3.3/4, Ms1 3.3/4, ms1mx2.7/43, Error ellipse: s-maj=21.3km s-min=13.1km az=45.0*

DMN ***26*** *14:57:02.3±0.5, 28.35N×84.89E, h25km, Ml4.9/5, Error ellipse: s-maj=11.4km s-min=4.0km az=11.0*

BJI ***26*** *14:57:03.6±0.0, 28.20N×84.70E, h10km, mb4.5/14, mb4.3/30, Ms3.8/8, Ms7 3.5/8*

NEIC ***26*** *14:57:04.4±1.2, 28.12N±0.05×84.65E±0.09, h10km±1km, mb4.3/45, Error ellipse: s-maj=15.3km s-min=5.5km az=62.0*

NDI ***26*** *14:57:04.7±4.5, 28.08N×84.73E, h10km±25km, ML4.0, mb4.3(NEIC)*

ISC 26 14:57:05.0±1.1**, 28.18N**±0.04×**84.74E**±0.03**, h15**km±7km**, n116,** σ1§**73**/136**, mb4.2**/40**, MS3.6**/4**, 1C, Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.20**	**209**	*e*		P	**Pb**	**14 57 09.8**	**-0.6**
GKN	**Gorkha**	**0.20**	**209**	*e*		P	**Pb**	**14 57 11.8**	**+1.4**
KKN	**Kakani**	**0.61**	**129**	*e*		P	**Pg**	**14 57 16.4**	**-0.7**
KKN						*e*Sg	**Sg**	**14 57 24.4**	**-0.9**
	17μm,0.2s								
DMN	**Daman**	**0.65**	**150**	*e*		P	**Pg**	**14 57 17.6**	**-0.3**
DMN						*e*Sg	**Sg**	**14 57 27.6**	**+1.1**
	10μm,0.4s								
PKIN	**Phulchoki**	**0.83**	**136**	*e*		P	**Pg**	**14 57 20.5**	**-0.8**
PKI	**Pulchoki**	**0.84**	**136**	*e*		P	**Pg**	**14 57 20.6**	**-0.9**
PKI						*e*Sg	**Sg**	**14 57 31.9**	**-0.8**
	3μm,0.3s								
DANN	**Dangsing**	**0.89**	**281**	*e*		P	**Pn**	**14 57 21.6**	**-1.6**
GUN	**Gumba**	**1.04**	**105**	*e*		P	**Pb**	**14 57 23.6**	**-1.3**
GUN						*e*Sg	**Sb**	**14 57 34.4**	**-4.0**
	2μm,0.2s								
KOLN	**Koldanda**	**1.09**	**248**	*e*		P	**Pn**	**14 57 26.7**	**+0.8**
KOLN						*e*Sg	**Sn**	**14 57 43.6**	**+2.8**
PYUN	**Piuthan**	**1.55**	**268**	*e*		P	**Pg**	**14 57 34.5**	**-0.4**
PYUN						*e*Sg	**Sg**	**14 57 56.5**	**+1.4**
	8μm,0.4s								
RAMN	**Ramite**	**2.05**	**126**	*e*		P	**Pn**	**14 57 40.8**	**+1.6**
ODAN	**Odare**	**2.69**	**119**	*e*		P	**Pn**	**14 57 50.9**	**+2.9**
ODAN						*e*Sg	**Sb**	**14 58 25.7**	**-0.2**
	2μm,0.4s								
TAPN	**Taplejung**	**2.75**	**107**	*e*		P	**Pn**	**14 57 52.0**	**+3.1**
TAPN						*e*Sg	**Sn**	**14 58 26.4**	**+4.3**
	399nm,0.3s								
BOK	**Bokaro**	**4.48**	**166**	*e*	P		**Pn**	**14 58 13.9**	**+1.5**
BOK					eS		**Sn**	**14 59 04.3**	**0.0**
LSA	**Lhasa**	**5.81**	**73**	Pn			**Pn**	**14 58 31.9**	**+0.7**
DDI	**Dehra Dun**	**6.22**	**292**	*e*	P		**Pn**	**14 58 39.4**	**+3.0**
DDI					eS		**Sn**	**14 59 47.6**	**+0.4**
DDI					IAML			14 59 52.0	
	comp=E,319nm,0.5s								
DDI					IAML			14 59 55.9	
	comp=N,339nm,0.4s								
SHL	**Shillong**	**6.88**	**111**	Pn			**Pn**	**14 58 45.0**	**-0.6**
SMLA	**Simla**	**7.22**	**296**	*e*	P		**Pn**	**14 58 51.5**	**+1.6**
SMLA					eS		**Sn**	**15 00 10.4**	**-1.2**
BHPL	**Bhopal**	**8.23**	**235**	*e*	P		**Pn**	**14 59 02.2**	**-1.7**
BHPL					eS		**Sn**	**15 00 29.7**	**-6.9**
BHPL					IAML			15 00 36.4	
	comp=N,112nm,0.4s								
BHPL					IAML			15 00 41.2	
	comp=E,87nm,0.4s								
DHRM	**DHARAMSHALA**	**8.36**	**301**	*e*	P		**Pn**	**14 59 06.2**	**+0.4**
DHRM					eS		**Sn**	**15 00 36.4**	**-3.7**
DHRM					IAML			15 00 39.6	
	comp=N,73nm,0.6s								
DHRM					IAML			15 00 42.6	
	comp=E,121nm,0.6s								
KOHI	**KOHIMA**	**8.71**	**104**	*e*	P		Pn	14 59 06.9	-3.7
KOHI					eS		**Sn**	**15 00 44.0**	**-4.5**
KOHI					IAML			15 00 52.2	
	comp=E,71nm,0.6s								
KOHI					IAML			15 00 54.9	
	comp=N,54nm,1.0s								
MOKO	**MOKOCHONG**	**8.89**	**100**	*e*	P		**Pn**	**14 59 12.8**	**-0.3**
MOKO					eS		**Sn**	**15 00 49.5**	**-3.6**
MOKO					IAML			15 00 55.6	
	comp=E,63nm,0.6s								
MOKO					IAML			15 00 56.0	
	comp=N,75nm,0.4s								
LKP	**Lekhapani**	**9.87**	**92**	*e*	P		**Pn**	**14 59 26.0**	**-0.4**
LKP					eS		**Sn**	**15 01 13.4**	**-3.6**
LKP					IAML			15 01 20.9	
	comp=N,56nm,0.5s								
NIL	**Nilore**	**11.27**	**302**	Pn			**Pn**	**14 59 44.7**	**-0.9**
HYB	**Hyderabad**	**12.13**	**209**	*i*	P		**Pn**	**14 59 55.0**	**-2.4**
HYB					eS		**Sn**	**15 02 10.0**	**-2.5**
KSH	**Kashi**	**13.45**	**330**		P		**Pn**	**15 02 12.8**	**-2.6**
KSH					S		**Sn**	**15 02 40.8**	**-3.8**
KSH					sS		S	15 02 51.5	-17
KSH					pmax	pmax			
	comp=N,15nm,0.6s								
KSH					pmax	pmax			
	comp=N,120nm,3.5s								
KSH					LR	LR			
	comp=N,190nm,5.4s								
KSH					LR	LR			
	comp=N,120nm,5.9s								
KSH					LR	LR			
	comp=N,180nm,8.3s								
KBL	**Kabul**	**14.83**	**299**				**Pn**	**15 00 31.2**	**-3.2**
KDJ	**Kajisay**	**15.22**	**338**		Pn		**Pn**	**15 00 38.4**	**-1.2**
KDJ					IAmb	IAmb		15 00 52.8	
	comp=Z,6.0nm,0.8s								
DRK	**Karamyk**	**15.56**	**320**		Pn		**Pn**	**15 00 42.7**	**-1.4**
DRK					IAmb	IAmb		15 00 49.7	
	comp=Z,22nm,0.9s								
MHMT	**Maesarieng**	**15.67**	**127**		P		**P**	**15 00 52.0**	**+2.6**
WMQ	**Urumqi**	**15.79**	**8**	*e*	P		**P**	**15 00 50.5**	**-0.2**
WMQ					pmax	pmax			
	comp=Z,13nm,0.8s								
WMQ					pmax	pmax			
	comp=Z,96nm,4.1s								
BOOM	**Boomskoye usch**	**15.97**	**336**		Pn		**Pn**	**15 00 48.4**	**-0.8**
BOOM					IAmb	IAmb		15 00 55.5	
	comp=Z,13nm,1.1s								
CM33	**Chiang Mai Arr**	**16.00**	**123**		P		**Pn**	**15 00 52.0**	**+2.3**
CHTO	**Chiang Mai**	**16.00**	**123**				**P**	**15 00 52.9**	**-0.2**
CM32	**Chiang Mai Arr**	**16.03**	**123**		P		**P**	**15 00 53.0**	**-0.4**
CM15	**Chiang Mai Arr**	**16.21**	**124**		P		**P**	**15 00 55.9**	**+0.5**
CM13	**Chiang Mai Arr**	**16.22**	**124**		P		**P**	**15 00 58.0**	**+2.4**
CM31	**Chiang Mai Arr**	**16.22**	**124**		P		**P**	**15 01 01.1**	**+5.6**
CM31	**Chiang Mai Arr**	**16.22**	**124**				**P**	**15 00 55.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**16.22**	**124**		Pn		**Pn**	**15 00 53.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=311,slow=11,SNR=15								
CMAR					LR	LR		15 09 09.2	
	comp=Z,31nm,18.9s,baz=305,slow=45								
CMAR	**Chiang Mai Arr**	**16.22**	**124**				**P**	**15 00 55.4**	**-0.1**
CM02	**Chiang Mai Arr**	**16.24**	**124**		P		**P**	**15 00 57.3**	**+1.6**
CM35	**Chiang Mai Arr**	**16.24**	**122**		P		**P**	**15 00 56.0**	**+0.2**
CM01	**Chiang Mai Arr**	**16.26**	**124**		P		**P**	**15 00 58.0**	**+2.1**
CM05	**Chiang Mai Arr**	**16.26**	**124**		P		**P**	**15 00 58.6**	**+2.6**
CM09	**Chiang Mai Arr**	**16.27**	**123**		P		**P**	**15 00 58.2**	**+2.2**
ARSB	**Arslanbob**	**16.27**	**327**		Pn		**Pn**	**15 00 50.0**	**-3.1**
CM04	**Chiang Mai Arr**	**16.29**	**124**		P		**P**	**15 00 58.2**	**+2.0**
CM36	**Chiang Mai Arr**	**16.30**	**123**		P		**P**	**15 00 56.0**	**-0.4**
GTA	**Gaotai**	**16.78**	**44**		P		**P**	**15 01 02.0**	**+0.3**
GTA					pP		pP	15 01 07.3	+0.7
GTA					sP		sP	15 01 10.8	+1.9
GTA					pmax	pmax			
	comp=Z,2.0nm,1.2s								
GTA					pmax	pmax			
	comp=Z,36nm,4.9s								
GTA					LR	LR			
	comp=Z,55nm,10.2s								
GTA					LR	LR			
	comp=Z,76nm,12.4s								
GTA					LR	LR			
	comp=Z,69nm,10.9s								
LZH	**Lanzhou**	**17.98**	**59**	*e*	P		**P**	**15 01 16.3**	**+1.3**
LZH					sP		pP	15 01 20.5	+0.5
LZH					pmax	pmax			
	comp=Z,18nm,1.0s								
MK31	**Makanchi Array**	**18.68**	**355**		P		**P**	**15 01 22.8**	**+0.2**
MKAR	**Makanchi Array**	**18.68**	**355**		P		**P**	**15 01 22.3**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=172,slow=12,SNR=35								
MKAR	**Makanchi Array**	**18.68**	**355**		P		**P**	**15 01 22.9**	**+0.3**
MAKZ	**Makanchi**	**18.73**	**354**		P		**P**	**15 01 23.1**	**+0.1**
KK31	**Karatay Array**	**18.82**	**326**		P		**P**	**15 01 23.0**	**-1.1**
KKAR	**Karatay Array**	**18.82**	**326**		P		**P**	**15 01 22.9**	**-1.1**
GYA	**Guiyang**	**19.55**	**90**	⇑	P		**P**	**15 01 33.3**	**+1.0**
GYA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
XAN	**Xi'an**	**21.49**	**68**		P		**P**	**15 01 56.0**	**+2.8**
XAN					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KURBB	**Kurchatov Arra**	**22.91**	**350**		P		**P**	**15 02 08.4**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=168,slow=10.0,SNR=41								
GEYT	**Alibeck**	**24.27**	**300**		P		**P**	**15 02 22.9**	**+1.2**
	comp=Z,2.8nm,0.6s,baz=98,slow=11,SNR=7.4								
GEYT					LR	LR		15 14 20.0	
	comp=Z,48nm,18.1s,baz=295,slow=43								
GEYT	**Alibeck**	**24.27**	**300**		P		**P**	**15 02 20.3**	**-1.4**
GEYT					IAmb	IAmb		15 02 26.4	
	comp=Z,3.1nm,0.8s								
HHC	**Hu-ho-hao-te**	**25.35**	**53**	*e*	P		**P**	**15 02 33.3**	**+1.8**
HHC					pmax	pmax			
	comp=Z,25nm,1.2s								
HHC					pmax	pmax			
	comp=Z,100nm,5.3s								
ZAA0	**Zalesovo Array**	**25.75**	**0**		P		**P**	**15 02 35.0**	**+0.3**
ZAA0					IAmb	IAmb		15 02 36.4	
	comp=Z,4.7nm,0.6s								
ZALV	**Zalesovo Beam**	**25.75**	**0**		P		**P**	**15 02 35.6**	**+0.8**
	comp=Z,4.0nm,0.5s,baz=186,slow=10.0,SNR=25								
SONM	**Songino Array**	**25.85**	**35**		P		**P**	**15 02 37.7**	**+1.7**
	comp=Z,1.5nm,0.6s,baz=221,slow=11,SNR=7.2								
SONM	**Songino Array**	**25.85**	**35**		P		**P**	**15 02 37.2**	**+1.2**
ULN	**Ulaanbaatar**	**26.20**	**35**		P		**P**	**15 02 40.6**	**+1.4**
ULN					IAmb	IAmb		15 02 43.3	
	comp=Z,2.8nm,0.7s								
BVAR	**Borovoye Array**	**27.01**	**341**		P		**P**	**15 02 47.1**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=167,slow=13,SNR=6.9								
BRVK	**Borovoye**	**27.07**	**341**		P		**P**	**15 02 46.9**	**+0.1**
ABKAR	**Akbulak array**	**28.37**	**325**		P		**P**	**15 02 58.9**	**+0.5**
ABKAR					IAmb	IAmb		15 03 00.1	
	comp=Z,2.4nm,0.7s								
ARU	**Arti**	**33.83**	**334**		P		**P**	**15 03 46.6**	**+0.2**
KBZ	**Khabaz**	**36.84**	**306**		P		**P**	**15 04 12.9**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=100,slow=4.6,SNR=4.1								
KSRS	**Korea Array**	**37.18**	**64**		P		**P**	**15 04 17.9**	**+2.4**
	comp=Z,1.0nm,0.7s,baz=259,slow=7.2,SNR=5.3								
NRIK	**Noril'sk**	**41.23**	**2**		P		**P**	**15 04 49.7**	**+0.8**
	comp=Z,4.4nm,0.7s,baz=173,slow=6.2,SNR=6.1								
NRIK	**Noril'sk**	**41.23**	**2**		P		**P**	**15 04 50.1**	**+1.3**
NRIK					IAmb	IAmb		15 04 51.6	
	comp=Z,4.2nm,0.7s								
BRTR	**Keskin Array B**	**43.41**	**299**		P		**P**	**15 05 08.3**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=99,slow=7.6,SNR=5.7								
ELL	**Elmali**	**46.51**	**295**		P		**P**	**15 05 32.3**	**+0.3**
AKASG	**Malin Array Be**	**47.13**	**314**		P		**P**	**15 05 36.1**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=77,slow=7.3,SNR=8.4								
AKASG	**Malin Array Be**	**47.13**	**314**		IAmb	IAmb		15 05 37.3	
	comp=Z,0.7nm,0.8s								
MNK	**Minsk**	**48.47**	**319**	*i*	P		**P**	**15 05 45.7**	**-1.0**
	comp=E,2.0nm,0.6s								
MNK				*i*	P		**P**	**15 05 45.7**	**-1.0**
	comp=N,22nm,0.9s								
MNK				*i*	P		**P**	**15 05 45.7**	**-1.0**
	comp=Z,9.0nm,0.6s								
MNK				*i*	PcP		**PcP**	**15 07 12.2**	**-0.5**
MNK				*i*	PP		**PP**	**15 07 38.4**	**-1.0**
MNK				*i*	PPP		PPP	15 08 26.4	
MNK				*i*	S		**S**	**15 12 45.5**	**-1.5**
MNK				*i*	SS		**SS**	**15 16 17.8**	**+1.2**
MNK				*i*	SSS		SSS	15 17 18.9	
MNK				*i*	LQ		LQ	15 22 39.7	
MNK				*i*	LR		LR	15 26 20.5	
MNK				*i*	LRM		MLR	15 28 01.9	
	comp=N,326nm,21.0s								
MNK				*i*	LRM		MLR	15 28 03.4	
	comp=E,6.0nm,14.5s								
MNK				*i*	LRM		MLR	15 28 11.3	
	comp=Z,136nm,19.5s								
BURAR	**Bucovina Array**	**49.55**	**310**		P		**P**	**15 05 55.5**	**+0.2**
BURAR					IAmb	IAmb		15 05 57.1	
	comp=Z,2.0nm,0.8s								
BUR08	**Bucovina Ar. S**	**49.56**	**310**		P		**P**	**15 05 55.6**	**+0.2**
BUR08					IAmb	IAmb		15 06 11.8	
	comp=Z,2.3nm,1.2s								
TIXI	**Tiksi**	**49.74**	**17**		P		**P**	**15 05 56.4**	**+0.2**
TIXI					IAmb	IAmb		15 05 57.5	
	comp=Z,3.2nm,1.0s								
FIA1	**FINESS Array S**	**50.76**	**328**		P		**P**	**15 06 04.6**	**+0.5**
FINES	**FINESS Array B**	**50.76**	**328**		P		**P**	**15 06 04.5**	**+0.4**
	comp=Z,2.5nm,0.4s,baz=109,slow=8.1,SNR=38								
FINES					LR	LR		15 29 33.5	
	comp=Z,58nm,18.0s,baz=44,slow=38								
PABE	**Paberze**	**50.84**	**320**		P		**P**	**15 06 04.9**	**+0.1**
ARCES	**ARCESS Array B**	**53.24**	**338**		P		**P**	**15 06 23.5**	**+1.0**
	comp=Z,4.1nm,0.7s,baz=88,slow=6.7,SNR=13								
ARCES	**ARCESS Array B**	**53.24**	**338**		IAmb	IAmb		15 06 24.4	
	comp=Z,20nm,1.4s								
NOA	**NORSAR Array B**	**57.85**	**327**		P		**P**	**15 06 54.5**	**-1.4**

comp=Z,1µm,0.3s
NBG Las Nubes 0.85 309 eP Pn 15 26 07.7 -0.4
NBG eS Sb 15 26 19.3 +1.1
COEG Centro de Oper 0.88 120⇑ eP Pn 15 26 08.6 +0.3
PCG Pacaya 0.97 290 eP Pn 15 26 09.6 -0.2
MRL Marmol 1.02 359⇑ iP Pg 15 26 09.8 -0.3
MRL Marmol 1.02 359 eP Pn 15 26 10.7 +0.4
MRL eS Sn 15 26 25.0 +0.4
PQSS Presa 15 de Se 1.16 112⇓ iP Pn 15 26 13.1 +1.1
PQSS IAML 15 26 30.7
comp=Z,237nm,0.2s
FUG Fuego 3 1.21 289 eP Pg 15 26 13.3 -0.5
FUG eS Sg 15 26 29.2 -0.3
TECA Tecapa 1.26 116 eP Pg 15 26 15.4 +0.6

*NEIC **26** 15:34:46.7±1.7,25.01S±0.06×68.81W±0.01,h89km±5km, mb4.5/45,ML4.8(GUC),Error ellipse: s-maj=8.0km s-min=1.5km az=180.0*
*SJA **26** 15:34:46.1±0.7,24.94S×69.12W,h134km±6km,ML4.4, MW4.2*
*GUC **26** 15:34:48.0±0.8,24.94S×69.16W,h116km±5km,ML4.8*
*IDC **26** 15:34:48.9±0.5,24.84S×68.79W,h107km±4km,mb4.0/15, mb1 4.1/17,mb1mx4.1/29,mbtmp4.4/17,MS2.7/2, Ms1 2.7/2,ms1mx2.5/22,Error ellipse: s-maj=16.3km s-min=8.4km az=83.0*
*VAO **26** 15:34:49.6±0.5,24.82S×68.81W,h108km,mb4.4*
ISC 26 15:34:47.5±0.4,24.92S±0.03×68.98W±0.04,h99km±4km, n223,σ1§51/246,mb4.5/37,6C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GO02	**Mina Guanaco**	**0.61**	**246**	*i* P		**Pn**	**15 35 05.2**	**+0.8**
GO02				*i* S		**Sn**	**15 35 18.4**	**+1.3**
GO02	**Mina Guanaco**	**0.61**	**246**			**Pn**	**15 35 05.2**	**+0.8**
PB14	**IPOC Station P**	**1.33**	**282**	*i* P		**Pn**	**15 35 12.3**	**+0.3**
PB14				*i* S		**Sn**	**15 35 30.2**	**-0.2**
PB14	**IPOC Station P**	**1.33**	**282**			**Pn**	**15 35 12.3**	**+0.3**
PB14	**IPOC Station P**	**1.33**	**282**	*e*P		**Pn**	**15 35 12.5**	**+0.5**
PB14				*e*S		**Sn**	**15 35 31.5**	**+1.1**
PB14				IAML			15 35 32.2	
	comp=Z,6µm,0.4s							
PB15	**IPOC Station P**	**1.76**	**345**	⇓ *i* P		**Pn**	**15 35 18.4**	**+1.1**
PB15				*i* S		**Sn**	**15 35 42.1**	**+2.2**
PB15				IAML			15 35 46.1	
	comp=E,21µm,0.4s							
PB15	**IPOC Station P**	**1.76**	**345**			**Pn**	**15 35 18.5**	**+1.2**
PB15	**IPOC Station P**	**1.76**	**345**	*e*P		**Pn**	**15 35 18.5**	**+1.2**
PB15				*e*S		**Sn**	**15 35 42.3**	**+2.5**
AC01	**Pan de Azucar**	**1.91**	**230**	⇑ *i* P		**Pn**	**15 35 18.6**	**-0.3**
AC01				*i* S		**Sn**	**15 35 41.3**	**-1.6**
AC01				IAML			15 35 47.3	
	comp=N,5µm,0.5s							
AC01	**Pan de Azucar**	**1.91**	**230**			**Pn**	**15 35 18.4**	**-0.5**
AC02	**Maricunga**	**1.91**	**184**	⇑ *i* P		**Pn**	**15 35 20.9**	**+1.5**
AC02				*i* S		**Sn**	**15 35 45.2**	**+1.5**
AC02	**Maricunga**	**1.91**	**184**			**Pn**	**15 35 20.8**	**+1.3**
PB10	**IPOC Station P**	**2.01**	**314**	*e*P		**Pn**	**15 35 19.9**	**-0.3**
PB10				*i* S		**Sn**	**15 35 44.5**	**-0.6**
PB10				IAML			15 35 52.5	
	comp=N,3µm,0.7s							
PB10	**IPOC Station P**	**2.01**	**314**			**Pn**	**15 35 20.7**	**+0.5**
PB10	**IPOC Station P**	**2.01**	**314**	*e*P		**Pn**	**15 35 20.8**	**+0.6**
PB10				*e*S		**Sn**	**15 35 46.1**	**+1.0**
PB10				IAML			15 35 48.0	
	comp=Z,2µm,0.7s							
PB06	**IPOC Station P**	**2.27**	**346**	⇓ *i* P		**Pn**	**15 35 24.8**	**+1.1**
PB06				*i* S		**Sn**	**15 35 52.2**	**+0.7**
PB06				IAML			15 35 54.1	
	comp=N,4µm,0.4s							
PB06	**IPOC Station P**	**2.27**	**346**			**Pn**	**15 35 24.8**	**+1.1**
PB06	**IPOC Station P**	**2.27**	**346**	*e*P		**Pn**	**15 35 24.9**	**+1.1**
PB06				*e*S		**Sn**	**15 35 53.1**	**+1.7**
PB06				IAML			15 35 59.5	
	comp=Z,2µm,0.5s							
LVC	**Limon Verde**	**2.30**	**2**	P		**Pn**	**15 35 25.4**	**+1.1**
	comp=Z,55nm,0.3s,baz=174,slow=9.6,SNR=415							
LVC				S		**Sn**	**15 35 53.1**	**+0.6**
	comp=Z,230nm,0.3s,baz=162,slow=20,SNR=42							
LVC	**Limon Verde**	**2.30**	**2**	*e*P		**Pn**	**15 35 25.7**	**+1.3**
LVC				*e*S		**Sn**	**15 35 53.4**	**+0.9**
LVC	**Limon Verde**	**2.30**	**2**	*e*P		**Pn**	**15 35 25.6**	**+1.3**
LVC	**Limon Verde**	**2.30**	**2**	*e*P		**Pn**	**15 35 25.5**	**+1.2**
LVC				*e*S		**Sn**	**15 35 54.1**	**+1.6**
LVC				IAML			15 35 57.6	
	comp=Z,880nm,0.4s							
PB05	**IPOC Station P**	**2.34**	**331**	⇑ *i* P		**Pn**	**15 35 25.2**	**+0.5**
PB05				*i* S		**Sn**	**15 35 53.8**	**+0.7**
PB05				IAML			15 36 00.6	
	comp=E,4µm,0.4s							
PB05	**IPOC Station P**	**2.34**	**331**	*e*P		**Pn**	**15 35 25.2**	**+0.5**
PB05				*e*S		**Sn**	**15 35 54.0**	**+0.9**
PB05				IAML			15 36 04.9	
	comp=Z,2µm,0.8s							
PB04	**IPOC Station P**	**2.79**	**337**	⇑ *i* P		**Pn**	**15 35 30.6**	**0.0**
PB04				IAML			15 36 12.0	
	comp=N,2µm,0.4s							
PB04	**IPOC Station P**	**2.79**	**337**			**Pn**	**15 35 30.5**	**0.0**
PB04	**IPOC Station P**	**2.79**	**337**	*e*P		**Pn**	**15 35 30.7**	**0.0**
PB04				*e*S		**Sn**	**15 36 04.1**	**+0.3**
PB04				IAML			15 36 17.6	
	comp=Z,1µm,0.6s							
GO03	**Copiap**	**2.89**	**203**	⇑ *i* P		**Pn**	**15 35 31.4**	**-0.5**
GO03	**Copiap**	**2.89**	**203**	Pn		**Pn**	**15 35 31.3**	**-0.5**
GO03	**Copiap**	**2.89**	**203**	*e*P		**Pn**	**15 35 31.7**	**-0.2**
GO03				*e*S		**Sn**	**15 36 05.9**	**-0.1**
PB03	**IPOC Station P**	**2.94**	**346**	*i* P		**Pn**	**15 35 33.1**	**+0.5**
PB03				IAML			15 36 08.6	
	comp=N,3µm,0.4s							
PB03	**IPOC Station P**	**2.94**	**346**	*e*P		**Pn**	**15 35 33.2**	**+0.5**
PB03				*e*S		**Sn**	**15 36 07.8**	**+0.3**
PB03				IAML			15 36 11.8	
	comp=Z,2µm,0.9s							
FSA	**Cafayete**	**2.96**	**114**	*e*P		**Pn**	**15 35 34.8**	**+1.9**
PB09	**IPOC Station P**	**3.12**	**355**	⇓ *i* P		**Pn**	**15 35 36.3**	**+1.2**
PB09				IAML			15 36 07.1	
	comp=N,2µm,0.4s							
PB09	**IPOC Station P**	**3.12**	**355**			**Pn**	**15 35 36.3**	**+1.2**
PB09	**IPOC Station P**	**3.12**	**355**	*e*P		**Pn**	**15 35 36.3**	**+1.2**
PB09				*e*S		**Sn**	**15 36 06.7**	**-4.9**
PB09				IAML			15 36 39.2	
	comp=Z,1µm,0.5s							
SLA	**San Lorenzo**	**3.16**	**87**	*e*P		**Pn**	**15 35 38.4**	**+2.8**
PB07	**IPOC Station P**	**3.29**	**345**	*e*P		**Pn**	**15 35 37.2**	**0.0**
PB07				IAML			15 36 30.3	
	comp=N,2µm,0.4s							
PB07	**IPOC Station P**	**3.29**	**345**			**Pn**	**15 35 37.3**	**0.0**
PB07	**IPOC Station P**	**3.29**	**345**	*e*P		**Pn**	**15 35 37.4**	**+0.2**
PB07				*e*S		**Sn**	**15 36 15.4**	**-0.2**
PB07				IAML			15 36 31.0	
	comp=Z,1µm,0.5s							
AC04	**Llanos de Chal**	**3.77**	**209**	⇑ *i* P		**Pn**	**15 35 41.1**	**-2.5**
AC04	**Llanos de Chal**	**3.77**	**209**	Pn		**Pn**	**15 35 41.0**	**-2.7**
PB01	**IPOC Station P**	**3.89**	**353**	*e*P		**Pn**	**15 35 45.2**	**-0.1**
PB01				*i* S		**Sn**	**15 36 29.9**	**-0.1**
PB01	**IPOC Station P**	**3.89**	**353**			**Pn**	**15 35 45.1**	**-0.1**
YJA	**Yavi**	**4.19**	**50**	*e*P		**Pn**	**15 35 52.3**	**+2.6**
PATCX	**Punta Patache**	**4.22**	**345**			**Pn**	**15 35 48.5**	**-1.3**
LCO	**Las Campanas**	**4.36**	**200**	Pn		**Pn**	**15 35 49.8**	**-2.0**
TA01	**Diego Aracena**	**4.47**	**345**	*e*P		**Pn**	**15 35 51.2**	**-1.9**
TA01	**Diego Aracena**	**4.47**	**345**			**Pn**	**15 35 51.2**	**-1.9**
CYA	**Choya**	**4.51**	**142**	*e*P		**Pn**	**15 35 55.1**	**+1.4**
TA02	**Huaiquique**	**4.75**	**347**			**Pn**	**15 35 55.2**	**-1.7**
PB08	**IPOC Station P**	**4.76**	**358**	Pn		**Pn**	**15 35 56.4**	**-0.9**
PB11	**IPOC Station P**	**5.17**	**353**	Pn		**Pn**	**15 36 00.9**	**-1.9**
ACDV	**Cuesta del Vie**	**5.23**	**181**	*e*P		**Pn**	**15 36 04.2**	**+0.7**
ACDV				IAML			15 37 07.3	
	comp=Z,71nm,0.4s							
AROD	**Rodeo**	**5.25**	**185**	*e*P		**Pn**	**15 36 04.3**	**+0.5**
PSGCX	**Pisagua**	**5.40**	**348**	Pn		**Pn**	**15 36 03.4**	**-2.4**
GO04	**Tololo Observa**	**5.48**	**197**	Pn		**Pn**	**15 36 03.5**	**-3.4**
MNMC	**Minye Minye**	**5.79**	**354**			**Pn**	**15 36 09.7**	**-1.5**
CO03	**El Pedregal**	**6.09**	**194**	Pn		**Pn**	**15 36 12.3**	**-2.8**
CO02	**Combarbal**	**6.51**	**195**	Pn		**Pn**	**15 36 17.0**	**-3.9**
ACHE	**Chepes**	**6.55**	**162**	*e*P		**Pn**	**15 36 20.6**	**-0.7**
ACHE				*e*S		**Sn**	**15 37 31.9**	**-2.7**
PB16	**IPOC Station P**	**6.57**	**356**			**Pn**	**15 36 21.7**	**-0.5**
ZON	**Zonda**	**6.61**	**178**	Pn		**Pn**	**15 36 20.1**	**-1.9**
RTLS	**Leoncito**	**6.86**	**182**	*e*P		**Pn**	**15 36 24.8**	**-0.9**
RTLS				IAML			15 38 47.0	
	comp=Z,52nm,1.0s							
RTCV	**Cerro Valdivia**	**6.93**	**177**	*e*P		**Pn**	**15 36 25.6**	**-0.9**
RTCV				*e*S		**Sn**	**15 37 39.0**	**-4.8**
RTCV				IAML			15 37 43.1	
	comp=Z,33nm,0.3s							
AUSP	**Uspallata**	**7.29**	**183**	*e*P		**Pn**	**15 36 30.4**	**-1.1**
ASAL	**Salagasta**	**7.64**	**179**	*e*P		**Pn**	**15 36 35.1**	**-1.1**
ASAL				*e*S		**Sn**	**15 38 01.8**	**+0.5**
ASAL				IAML			15 39 09.2	
	comp=Z,23nm,1.2s							
ARCO	**CERRO ARCO**	**7.89**	**180**	*e*P		**Pn**	**15 36 38.6**	**-1.1**
ARCO				IAML			15 39 11.9	
	comp=Z,32nm,0.9s							
VA03	**San Esteban**	**7.94**	**190**			**Pn**	**15 36 37.3**	**-2.9**
AAGR	**Agrelo**	**8.14**	**179**	*e*P		**Pn**	**15 36 41.8**	**-1.2**
AAGR				IAML			15 38 18.3	
	comp=Z,23nm,0.4s							
ROC1	**El Roble**	**8.22**	**192**	*e*P		**Pn**	**15 36 39.5**	**-4.8**
PEL	**Peldehue**	**8.33**	**190**	Pn		**Pn**	**15 36 42.2**	**-3.3**
MT02	**Curacav**	**8.52**	**192**			Pn	15 36 43.2	-4.9
MT05	**Renca**	**8.58**	**190**	Pn		**Pn**	**15 36 45.8**	**-3.1**
LPAZ	**La Paz**	**8.62**	**5**	P		**Pn**	**15 36 48.4**	**-1.7**
	comp=Z,0.8nm,0.3s,baz=181,slow=7.6,SNR=26							
LPAZ				LR		LR	15 41 09.7	
	comp=Z,30nm,20.2s,baz=203,slow=45							
LPAZ	**La Paz**	**8.62**	**5**	Pn		**Pn**	**15 36 49.1**	**-1.0**
LPAZ	**La Paz**	**8.62**	**5**	*e*P		**Pn**	**15 36 50.6**	**+0.5**
LPAZ	**La Paz**	**8.62**	**5**	*e*P		**Pn**	**15 36 50.8**	**+0.7**
MT09	**Talagante**	**9.00**	**191**			**Pn**	**15 36 50.1**	**-4.5**
VA05	**Santo Domingo**	**9.01**	**194**			Pn	15 36 49.0	-5.6
MT01	**Popeta**	**9.13**	**192**	Pn		Pn	15 36 50.8	-5.6
BO01	**Tunca**	**9.62**	**190**	Pn		Pn	15 36 57.2	-5.8
BO02	**Sierra Bellavi**	**9.96**	**189**	Pn		Pn	15 37 02.5	-5.3
BO02	**Sierra Bellavi**	**9.96**	**189**	*e*P		**Pn**	**15 37 06.1**	**-1.6**
CPUP	**Villa Florida**	**10.61**	**100**	P		**Pn**	**15 37 12.8**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=162,slow=19,SNR=4.6							
SIV	**San Ignacio**	**11.56**	**41**	P		**Pn**	**15 37 25.1**	**-4.4**
	comp=Z,8.7nm,0.3s,baz=245,slow=9.6,SNR=73							
SIV				S		**Sn**	**15 39 28.0**	**-8.7**
	comp=Z,0.4nm,0.3s,baz=307,slow=21,SNR=1.3							
SIV				LR		LR	15 42 15.0	
	comp=Z,60nm,20.9s,baz=184,slow=39							
BI02	**San Fabin de**	**11.87**	**189**	Pn		**Pn**	**15 37 31.4**	**-2.1**
H03N1	**Juan Fernandez**	**12.13**	**223**	T		T	15 49 53.7	
	baz=43,slow=72,SNR=29							
H03N2	**Juan Fernandez**	**12.15**	**223**	T		T	15 49 52.9	
	baz=43,slow=72,SNR=26							
H03N3	**Juan Fernandez**	**12.15**	**223**	T		T	15 49 56.3	
	baz=43,slow=72,SNR=25							
AQDB	**Aquidauana**	**13.03**	**73**	*e*P		**Pn**	**15 37 48.6**	**-0.2**
VILB	**Vilhena**	**14.51**	**36**	*e*P		**Pn**	**15 38 05.8**	**-2.2**
NNA	**Nana**	**14.86**	**329**	P		**Pn**	**15 38 10.5**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=226,slow=18,SNR=1.8							
TRCB	**Terra Rica**	**15.10**	**85**	*e*P		**Pn**	**15 38 15.7**	**+0.1**
ITAB	**Concordia**	**15.31**	**102**	*e*P		**Pn**	**15 38 19.0**	**+0.8**
PLCA	**Paso Flores**	**15.82**	**184**	P		**Pn**	**15 38 23.2**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=11,slow=14,SNR=24							
PLCA				PcP		**PcP**	**15 43 18.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=326,slow=3.6,SNR=4.3							
PLCA	**Paso Flores**	**15.82**	**184**	Pn		**Pn**	**15 38 23.1**	**-1.6**
PLCA	**Paso Flores**	**15.82**	**184**	*e*P		**P**	**15 38 27.0**	**+0.6**
LL04	**Puerto Octay**	**16.20**	**189**			**Pn**	**15 38 29.2**	**0.0**
PCMB	**Pacaembu**	**16.61**	**82**	*e*P		**Pn**	**15 38 33.6**	**-0.8**
CNLB	**Canela**	**16.72**	**109**	*e*P		**P**	**15 38 36.3**	**-0.1**
FRTB	**Fartura**	**17.79**	**89**	*e*P		**P**	**15 38 47.2**	**-1.1**
ITRB	**Iturama**	**17.99**	**77**	*e*P		**P**	**15 38 50.1**	**-0.3**
TER01	**Tubaro-SC**	**18.09**	**106**	*e*P		**P**	**15 38 51.6**	**+0.1**
ARAG	**Araguaiana, MT**	**18.51**	**64**	*e*P		**P**	**15 38 55.6**	**-0.5**
CLDB	**Colider**	**18.75**	**44**	*e*P		**P**	**15 38 58.7**	**-0.1**
BB19B	**Bebedouro**	**19.21**	**83**	*e*P		**P**	**15 39 03.2**	**-0.6**
PET01	**Itanhaem-SP**	**19.75**	**93**	*e*P		**P**	**15 39 08.8**	**-0.8**
RCLB	**Rio Claro- Sao**	**19.80**	**87**	*e*P		**P**	**15 39 09.4**	**-0.8**
VAO	**Valinhos**	**20.21**	**89**	*e*P		**P**	**15 39 14.0**	**-0.6**
PARB	**Paraibuna**	**21.37**	**91**	*e*P		**P**	**15 39 26.9**	**-0.2**
BDFB	**Brasilia**	**21.70**	**69**	P		**P**	**15 39 28.0**	**-2.7**
	comp=Z,5.3nm,0.5s,baz=229,slow=13,SNR=9.5							
BDFB	**Brasilia**	**21.70**	**69**	P		**P**	**15 39 28.5**	**-2.2**
NPGB	**Novo Progresso**	**22.04**	**39**	*e*P		**P**	**15 39 32.8**	**-1.4**
BSCB	**Bom Sucesso**	**22.62**	**85**	*e*P		**P**	**15 39 39.5**	**-0.8**
MACA	**Manacapuru-AM**	**23.06**	**22**	*e*P		**P**	**15 39 44.2**	**-0.3**
PEXB	**Peixe**	**23.34**	**61**	*e*P		**P**	**15 39 46.1**	**-1.2**
ITTB	**Itaituba**	**24.08**	**34**	*e*P		**P**	**15 39 53.4**	**-0.4**
JANB	**Januaria**	**25.13**	**72**	*e*P		**P**	**15 40 03.9**	**+0.4**
SMTB	**Santa Maria do**	**25.89**	**56**	*e*P		**P**	**15 40 10.1**	**-0.3**
SDBA	**SAO DESIDERIO**	**25.93**	**66**	*e*P		**P**	**15 40 10.2**	**-0.6**
MALB	**Monte Alegre**	**26.98**	**34**	*e*P		**P**	**15 40 20.4**	**+0.4**
RIB01	**Linhares ES**	**27.03**	**84**	*e*P		**P**	**15 40 20.8**	**+0.3**
NAN01	**Guarapari, ES**	**27.74**	**81**	*e*P		**P**	**15 40 26.6**	**-0.2**
NBIT	**Itapeh - BA**	**29.44**	**76**	*e*P		**P**	**15 40 41.8**	**-0.2**
GDU01	**Guandu, BA**	**29.83**	**74**	*e*P		**P**	**15 40 45.6**	**+0.1**
NBLA	**Lagarto - SE**	**32.64**	**71**	*e*P		**P**	**15 41 10.3**	**+0.1**
NBAN	**Anadia - AL**	**34.59**	**70**	*e*P		**P**	**15 41 26.2**	**-0.9**
VNA3	**Neumayer Olymp**	**56.88**	**161**	P		**P**	**15 44 21.8**	**+0.2**
VNA2	**Neumayer--Watz**	**57.47**	**160**	P		**P**	**15 44 25.8**	**+0.1**
	baz=290,slow=7.7							
SNAA	**Sanae**	**59.09**	**160**	P		**P**	**15 44 37.0**	**0.0**
SNAA	**Sanae**	**59.09**	**160**	P		**P**	**15 44 36.9**	**-0.2**
SNAA				IAmb		IAmb	15 44 38.0	
	comp=Z,6.8nm,1.1s							
TXAR	**Lajitas Array**	**63.41**	**326**	P		**P**	**15 45 07.5**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=158,slow=8.6,SNR=7.4							
TXAR				pP		**pP**	**15 45 33.8**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=146,slow=6.6,SNR=2.5							
TX31	**Lajitas Ar. Si**	**63.41**	**326**	P		**P**	**15 45 07.5**	**+0.8**
TX31				IAmb		IAmb	15 45 13.9	
	comp=Z,14nm,1.4s							
KSPA	**Keystone Colle**	**66.44**	**354**	P		**P**	**15 45 27.1**	**+1.1**
L63A	**North Scituate**	**66.49**	**358**	P		**P**	**15 45 27.6**	**+1.3**
BRYW	**Bryant College**	**66.54**	**358**	P		**P**	**15 45 27.9**	**+1.3**
R40A	**Maddies Statio**	**66.57**	**340**	P		**P**	**15 45 27.4**	**+0.5**
R40A				IAmb		IAmb	15 45 53.8	
	comp=Z,7.6nm,1.0s							
M56A	**Emporium**	**66.61**	**352**	P		**P**	**15 45 27.9**	**+0.8**
M56A				IAmb		IAmb	15 45 54.2	
	comp=Z,5.4nm,0.8s							
HRV	**Adam Dziewonsk**	**67.13**	**358**	P		**P**	**15 45 32.0**	**+1.6**
HRV				IAmb		IAmb	15 45 41.5	
	comp=Z,14nm,1.4s							
K58A	**Earlville**	**67.62**	**355**	P		**P**	**15 45 34.7**	**+1.2**
P40A	**Paris**	**67.64**	**341**	P		**P**	**15 45 33.9**	**+0.2**
P40A				IAmb		IAmb	15 45 34.4	
	comp=Z,6.7nm,0.8s							
J59A	**Piesco**	**68.23**	**356**	P		**P**	**15 45 38.7**	**+1.4**
J59A				IAmb		IAmb	15 46 03.1	
	comp=Z,6.7nm,1.1s							
J56A	**Wolcott**	**68.24**	**354**	P		**P**	**15 45 37.6**	**+0.3**
J56A				IAmb		IAmb	15 46 04.4	
	comp=Z,6.7nm,0.8s							
J57A	**Williamstown**	**68.30**	**354**	P		**P**	**15 45 38.2**	**+0.5**
J57A				IAmb		IAmb	15 45 39.1	
	comp=Z,4.8nm,0.8s							
I63A	**Otisfield**	**68.65**	**359**	P		**P**	**15 45 41.6**	**+1.8**
I63A				IAmb		IAmb	15 46 02.1	
	comp=Z,15nm,1.3s							
PECO	**Prince Edward**	**68.91**	**354**	P		**P**	**15 45 42.0**	**+0.5**
PECO				IAmb		IAmb	15 45 42.8	
	comp=Z,5.8nm,0.8s							
ANMO	**Albuquerque**	**69.33**	**328**	P		**P**	**15 45 46.6**	**+2.1**
LONY	**Lake Ozonia**	**69.39**	**356**	P		**P**	**15 45 45.5**	**+1.0**
LONY				IAmb		IAmb	15 46 12.2	
	comp=Z,6.0nm,1.1s							
FRNY	**Flat Rock**	**69.54**	**357**	P		**P**	**15 45 46.8**	**+1.4**
FRNY				IAmb		IAmb	15 46 13.2	
	comp=Z,6.0nm,1.2s							
DBIC	**Dimbokro**	**69.80**	**72**	P		**P**	**15 45 47.2**	**-0.4**
	comp=Z,9.3nm,0.5s,baz=215,slow=7.7,SNR=20							
DBIC	**Dimbokro**	**69.80**	**72**	P		**P**	**15 45 47.6**	**-0.1**
G62A	**West of Eustis**	**69.81**	**359**	P		**P**	**15 45 48.2**	**+1.2**
G62A				IAmb		IAmb	15 46 16.6	
	comp=Z,8.1nm,1.0s							
SADO	**Sadowa**	**69.97**	**352**	P		**P**	**15 45 47.8**	**-0.1**
SADO				IAmb		IAmb	15 46 15.1	
	comp=Z,4.8nm,0.9s							
PLVO	**Plevna**	**70.01**	**354**	P		**P**	**15 45 48.6**	**+0.4**
PLVO				IAmb		IAmb	15 45 48.9	
	comp=Z,5.1nm,1.0s							
LMN	**Caledonia Moun**	**70.53**	**3**	P		**P**	**15 45 52.3**	**+0.9**
I42A	**Draeger Farm,**	**70.88**	**345**	P		**P**	**15 45 53.6**	**+0.1**
I42A				IAmb		IAmb	15 46 20.6	
	comp=Z,7.0nm,0.7s							
TRQ	**Mont Tremblant**	**70.98**	**356**	P		**P**	**15 45 53.9**	**-0.3**
SDCO	**Great Sand Dun**	**71.16**	**330**	P		**P**	**15 45 57.2**	**+1.5**
BGNE	**Belgrade**	**71.32**	**337**	P		**P**	**15 45 56.6**	**+0.3**
BATG	**Bathurst New B**	**71.91**	**2**	P		**P**	**15 45 59.6**	**-0.1**
BATG				IAmb		IAmb	15 46 12.0	
	comp=Z,9.0nm,1.0s							
ECSD	**EROS Data Cent**	**72.88**	**339**	P		**P**	**15 46 05.8**	**+0.3**
ECSD				IAmb		IAmb	15 46 33.2	
	comp=Z,4.3nm,1.1s							
SMCO	**Snowmass**	**72.99**	**330**	P		**P**	**15 46 08.4**	**+1.6**
VNDA	**Vanda**	**73.49**	**190**	P		**P**	**15 46 09.9**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=122,slow=5.0,SNR=6.1							
VNDA				pP		**pP**	**15 46 38.0**	**+2.6**
	comp=Z,1.2nm,0.9s,baz=126,slow=2.7,SNR=4.2							
KOWA	**Kowa**	**74.46**	**66**	P		**P**	**15 46 15.2**	**-0.1**
	comp=Z,12nm,0.6s,baz=239,slow=5.9,SNR=34							
KOWA	**Kowa**	**74.46**	**66**	P		**P**	**15 46 15.7**	**+0.3**
DRLN	**Deer Lake**	**74.55**	**8**	P		**P**	**15 46 15.9**	**+0.8**
PSUT	**Pine Spring**	**75.84**	**325**	P		**P**	**15 46 25.4**	**+2.3**
PDAR	**Pinedale Array**	**77.04**	**331**	P		**P**	**15 46 30.2**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=123,slow=7.2,SNR=3.9							
PDAR				pP		**pP**	**15 46 58.4**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=136,slow=11,SNR=2.9							
PDAR	**Pinedale Array**	**77.04**	**331**	P		**P**	**15 46 31.3**	**+1.5**
HWUT	**Hardware Ranch**	**77.05**	**329**	P		**P**	**15 46 31.0**	**+1.2**
LHV	**Little Huntoon**	**78.13**	**322**	P		**P**	**15 46 37.8**	**+2.2**
LHV				IAmb		IAmb	15 46 51.1	
	comp=Z,8.0nm,1.4s							
NVAR	**Mina Array Bea**	**78.15**	**323**	P		**P**	**15 46 37.0**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=132,slow=5.4,SNR=2.2							
ULM	**Lac du Bonnet**	**78.55**	**343**	P		**P**	**15 46 37.8**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=161,slow=6.3,SNR=7.0							
ULM				pP		**pP**	**15 47 04.8**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=161,slow=4.6,SNR=7.0							
ULM	**Lac du Bonnet**	**78.55**	**343**	P		**P**	**15 46 38.0**	**+0.4**
ULM				IAmb		IAmb	15 47 05.4	
	comp=Z,4.3nm,0.7s							
TOA0	**Torodi Ar. Sit**	**78.58**	**70**	P		**P**	**15 46 38.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**78.58**	**70**	P		**P**	**15 46 38.6**	**-0.1**
	comp=Z,19nm,0.6s,baz=261,slow=5.2,SNR=194							
TORD				pP		**pP**	**15 47 06.0**	**+0.2**
	comp=Z,3.3nm,0.5s,baz=258,slow=5.4,SNR=3.4							
TORD	**Torodi Ar. Bea**	**78.58**	**70**	P		**P**	**15 46 38.9**	**+0.2**
RLMT	**Red Lodge**	**78.79**	**332**	P		**P**	**15 46 41.2**	**+1.7**
RLMT				IAmb		IAmb	15 47 08.7	
	comp=Z,4.0nm,0.9s							
YNE	**Yellowstone No**	**79.02**	**332**	P		**P**	**15 46 42.2**	**+1.5**
YNE				IAmb		IAmb	15 47 09.9	
	comp=Z,5.9nm,0.9s							
PNTR	**Pine Nut**	**79.33**	**322**	P		**P**	**15 46 44.6**	**+2.0**
YHL	**Hebgen Lake**	**79.40**	**331**	P		**P**	**15 46 44.7**	**+1.8**
BCYI	**Bear Canyon**	**79.99**	**329**	P		**P**	**15 46 46.7**	**+0.7**

NACB				*eS*	**Sb**	**15 51 50.4**	**0.0**
	baz=264								
IRIF	**Iriomote-Funau**	**1.06**	**69**	P	**Pn**	**15 51 39.2**	**-0.1**
IRIF				*eS*	**Sb**	**15 51 53.9**	**+1.0**
HATJ	**Hateruma jima**	**1.07**	**85**	P	**Pb**	**15 51 39.7**	**+0.2**
HATJ				*eS*	**Sb**	**15 51 54.2**	**+1.1**
NDS	**Dongshan**	**1.07**	**309**	*eP*	**Pb**	**15 51 39.9**	**+0.2**
	baz=305								
NDS				*eS*	**Sb**	**15 51 54.1**	**+0.9**
	baz=305								
ETLH	**Xiulin Townshi**	**1.09**	**283**	*eP*	**Pn**	**15 51 39.4**	**-0.3**
	baz=266								
ETLH				*eS*	**Sb**	**15 51 54.2**	**+0.5**
	baz=266								
ESL	**Shilin**	**1.11**	**263**	P	**Pn**	**15 51 39.3**	**-0.8**
	baz=248								
ESL				*eS*	**Sn**	**15 51 53.8**	**-1.0**
	baz=248								
ILA	**Ilan**	**1.14**	**315**	*eP*	**Pb**	**15 51 41.4**	**+0.7**
	baz=312								
ILA				*eS*	**Sb**	**15 51 57.1**	**+2.0**
	baz=312								
EGFH	**Guangfu**	**1.15**	**255**	*eP*	**Pn**	**15 51 40.5**	**0.0**
	baz=253								
EGFH				*eS*	**Sn**	**15 51 54.6**	**-1.0**
	baz=253								
NTC	**Toucheng**	**1.15**	**320**	P	**Pb**	**15 51 40.8**	**-0.2**
	baz=333								
NTC				S	**Sb**	**15 51 56.5**	**+0.9**
	baz=333								
TWE	**Neicheng**	**1.17**	**311**	*eP*	**Pb**	**15 51 41.2**	**+0.1**
	baz=308								
TWE				*eS*	**Sb**	**15 51 56.0**	**+0.1**
	baz=308								
ENTT	**Nioudou**	**1.19**	**305**	*eP*	**Pb**	**15 51 41.8**	**+0.2**
	baz=302								
ENTT				*eS*	**Sb**	**15 51 58.2**	**+1.7**
	baz=302								
TWB1	**Santiao Chiao**	**1.20**	**330**	P	**Pn**	**15 51 40.9**	**-0.3**
	baz=329								
TWB1				*eS*	**Sb**	**15 51 56.7**	**-0.1**
	baz=329								
HGSD	**Ruisui**	**1.21**	**247**	*eP*	**Pn**	**15 51 41.2**	**-0.1**
	baz=245								
HGSD				*eS*	**Sn**	**15 51 56.4**	**-0.7**
	baz=245								
NDT	**Datong Townshi**	**1.21**	**302**	*eP*	**Pb**	**15 51 42.6**	**+0.6**
	baz=285								
NDT				S	**Sb**	**15 51 58.3**	**+1.1**
	baz=285								
NNSB	**Datong**	**1.24**	**292**	*eP*	**Pn**	**15 51 42.0**	**+0.2**
	baz=277								
NNSB				*eS*	**Sb**	**15 51 58.1**	**0.0**
	baz=277								
NNSH	**Datong**	**1.24**	**292**	*eP*	**Pn**	**15 51 42.1**	**+0.2**
	baz=277								
NNSH				*eS*	**Sb**	**15 51 58.4**	**+0.3**
	baz=277								
TIPB	**Shuangxi**	**1.25**	**324**	*eP*	**Pb**	**15 51 42.2**	**-0.4**
	baz=336								
TIPB				*eS*	**Sb**	**15 51 57.9**	**-0.4**
	baz=336								
NNS	**Nan Shan**	**1.25**	**293**	*eP*	**Pn**	**15 51 42.2**	**+0.2**
	baz=277								
NNS				*eS*	**Sb**	**15 51 59.2**	**+0.8**
	baz=277								
WHF	**Hehuan Shan**	**1.27**	**278**	*eP*	**Pn**	**15 51 42.3**	**-0.3**
	baz=262								
WHF				*eS*	**Sn**	**15 51 59.0**	**-0.2**
	baz=262								
JKRS	**Kuro-shima**	**1.28**	**77**	P	**Pb**	**15 51 42.9**	**-0.2**
JKRS				S	**Sb**	**15 52 00.1**	**+0.9**
FUSS	**Fushou**	**1.31**	**283**	*eP*	**Pn**	**15 51 43.3**	**+0.3**
	baz=280								
FUSS				*eS*	**Sb**	**15 52 00.5**	**+0.3**
	baz=280								
NWLT	**Wulai**	**1.32**	**308**	*eP*	**Pb**	**15 51 44.1**	**+0.3**
	baz=306								
NWLT				*eS*	**Sb**	**15 52 01.5**	**+1.3**
	baz=306								
OWD	**Renai**	**1.34**	**270**	*eP*	**Pn**	**15 51 43.2**	**-0.1**
	baz=267								
OWD				*eS*	**Sn**	**15 51 59.7**	**-0.8**
	baz=267								
CHGB	**Renai**	**1.34**	**274**	*eP*	**Pn**	**15 51 43.5**	**0.0**
	baz=272								
CHGB				*eS*	**Sn**	**15 52 00.0**	**-0.7**
	baz=272								
YHNB	**Yeheng**	**1.35**	**302**	*eP*	**Pb**	**15 51 43.9**	**-0.5**
	baz=283								
YHNB				*eS*	**Sb**	**15 52 01.3**	**0.0**
	baz=283								
NWF	**Wu-fen Shan**	**1.35**	**325**	*eP*	**Pb**	**15 51 43.8**	**-0.6**
	baz=323								
NWF				*eS*	**Sb**	**15 52 00.7**	**-0.6**
	baz=323								
WFSB	**Wu-fen Shan**	**1.35**	**325**	*eP*	**Pb**	**15 51 43.7**	**-0.7**
	baz=323								
WFSB				*eS*	**Sb**	**15 52 01.3**	**0.0**
	baz=323								
YULB	**Yu-li**	**1.36**	**245**	*eP*	**Pn**	**15 51 43.3**	**-0.1**
	baz=232								
YULB				*eS*	**Sn**	**15 52 00.7**	**0.0**
	baz=232								
EYUL	**Yuli**	**1.36**	**243**	*eP*	**Pn**	**15 51 43.6**	**+0.2**
	baz=241								
EYUL				*eS*	**Sn**	**15 52 00.0**	**-0.7**
	baz=241								
NSK	**Sanguang**	**1.37**	**301**	*eP*	**Pn**	**15 51 43.9**	**+0.3**
	baz=283								
NSK				*eS*	**Sb**	**15 52 01.8**	**0.0**
	baz=283								
TWT	**Tachien**	**1.37**	**282**	*eP*	**Pb**	**15 51 44.8**	**+0.1**
	baz=268								
TWF1	**Yuli**	**1.37**	**244**	*eP*	**Pn**	**15 51 43.7**	**0.0**
	baz=241								
TWF1				*eS*	**Sn**	**15 52 01.4**	**+0.2**
	baz=241								
TDCB	**Techi**	**1.38**	**282**	*eP*	**Pn**	**15 51 43.7**	**-0.2**
	baz=267								
TDCB				*eS*	**Sn**	**15 52 01.1**	**-0.6**
	baz=267								
VWDT	**VWDT**	**1.39**	**262**	*eP*	**Pn**	**15 51 44.1**	**+0.3**
	baz=259								
VWDT				*eS*	**Sn**	**15 52 00.8**	**-0.7**
	baz=259								
TNOU	**National Taiwa**	**1.42**	**326**	*eP*	**Pn**	**15 51 44.0**	**-0.2**
	baz=324								
TNOU				*eS*	**Sb**	**15 52 02.5**	**-0.7**
	baz=324								
NHDH	**Xindian Distri**	**1.42**	**315**	*eP*	**Pb**	**15 51 45.4**	**-0.1**
	baz=329								
NHDH				*eS*	**Sb**	**15 52 04.2**	**+1.0**
	baz=329								
JIJ	**Ishigaki jima**	**1.43**	**74**	P	**Pn**	**15 51 44.6**	**+0.2**
JIJ				S	**Sn**	**15 52 02.7**	**+0.2**
FULB	**Fuli**	**1.45**	**239**	*eP*	**Pn**	**15 51 44.6**	**-0.1**
	baz=225								
FULB				*eS*	**Sn**	**15 52 02.8**	**-0.3**
	baz=225								
CHKT	**Chengkung**	**1.45**	**234**	*eP*	**Pn**	**15 51 44.7**	**0.0**
	baz=220								
CHKT				*eS*	**Sn**	**15 52 01.2**	**-1.9**
	baz=220								
YM01	**YM01**	**1.53**	**321**	*eP*	**Pn**	**15 51 46.2**	**+0.4**
	baz=319								
YM01				*eS*	**Sb**	**15 52 05.6**	**-0.8**
	baz=319								
WPL	**Puli Township**	**1.54**	**272**	*eP*	**Pn**	**15 51 46.1**	**+0.2**
	baz=270								
WPL				*eS*	**Sn**	**15 52 05.3**	**0.0**
	baz=270								
YM08	**YM08**	**1.55**	**322**	*eP*	**Pb**	**15 51 47.2**	**-0.6**
	baz=320								
YM08				*eS*	**Sb**	**15 52 06.5**	**-0.4**
	baz=320								
SSLB	**Suanglung**	**1.55**	**264**	*eP*	**Pn**	**15 51 46.6**	**+0.5**
	baz=261								
SSLB				*eS*	**Sn**	**15 52 05.8**	**+0.2**
	baz=261								
DPDB	**Guoxing**	**1.57**	**273**	*eP*	**Pn**	**15 51 47.3**	**+0.9**
	baz=270								
DPDB				*eS*	**Sb**	**15 52 07.3**	**-0.2**
	baz=270								
EDH	**Donghe**	**1.57**	**231**	*eP*	**Pn**	**15 51 45.8**	**-0.6**
	baz=219								
EDH				*eS*	**Sn**	**15 52 04.2**	**-1.9**
	baz=219								
WHP	**Taichung City**	**1.58**	**282**	*eP*	**Pb**	**15 51 48.1**	**-0.2**
	baz=268								
WHP				*eS*	**Sb**	**15 52 07.8**	**-0.1**
	baz=268								
ANP	**Anpu**	**1.59**	**320**	*eP*	**Pn**	**15 51 47.1**	**+0.5**
	baz=319								
ANP				*eS*	**Sb**	**15 52 07.1**	**-1.0**
	baz=319								
TWS1	**Kuangyinshan**	**1.59**	**316**	*eP*	**Pb**	**15 51 47.6**	**-0.7**
	baz=330								
TWS1				*eS*	**Sb**	**15 52 08.0**	**0.0**
	baz=330								
SMLT	**Sun Moon Lake**	**1.59**	**267**	*eP*	**Pn**	**15 51 47.5**	**+0.7**
	baz=265								
SMLT				*eS*	**Sn**	**15 52 06.8**	**0.0**
	baz=265								
TWY	**Chenhua**	**1.61**	**324**	*eP*	**Pn**	**15 51 47.5**	**+0.6**
	baz=323								
TWY				*eS*	**Sb**	**15 52 07.8**	**-0.9**
	baz=323								
YUS	**Yu-Shan**	**1.62**	**253**	*eP*	**Pn**	**15 51 47.9**	**+0.5**
	baz=251								
YUS				*eS*	**Sn**	**15 52 07.2**	**-0.7**
	baz=251								
LIOB	**Emei**	**1.63**	**295**	*eP*	**Pb**	**15 51 48.8**	**-0.4**
	baz=293								
LIOB				*eS*	**Sb**	**15 52 09.7**	**+0.5**
	baz=293								
TYC	**Yuchr**	**1.63**	**268**	*eP*	**Pn**	**15 51 48.2**	**+1.0**
	baz=266								
TYC				*eS*	**Sb**	**15 52 08.8**	**-0.5**
	baz=266								
NSTT	**Nanjuang**	**1.64**	**294**	*eP*	**Pb**	**15 51 49.0**	**-0.2**
	baz=292								
NSTT				*eS*	**Sb**	**15 52 09.5**	**+0.1**
	baz=292								
JISG	**Ishigakijimahi**	**1.65**	**68**	P	**Pn**	**15 51 47.3**	**-0.1**
JISG				*eS*	**Sn**	**15 52 07.2**	**-0.7**
WHYT	**Xinyi Township**	**1.66**	**261**	*eP*	**Pn**	**15 51 48.5**	**+1.0**
	baz=246								
WHYT				*eS*	**Sn**	**15 52 09.3**	**+1.1**
	baz=246								
NCUH	**Zhongli**	**1.66**	**307**	*eP*	**Pb**	**15 51 49.3**	**-0.3**
	baz=305								
NCUH				*eS*	**Sb**	**15 52 10.8**	**+0.7**
	baz=305								
LDUT	**Ludao**	**1.68**	**220**	*eP*	**Pn**	**15 51 47.2**	**-0.5**
	baz=219								
LDUT				*eS*	**Sn**	**15 52 06.9**	**-1.7**
	baz=219								
ELDTW	**Lidau**	**1.68**	**243**	*eP*	**Pn**	**15 51 47.6**	**-0.3**
	baz=241								
ELDTW				*eS*	**Sn**	**15 52 08.0**	**-0.8**
	baz=241								
PCYT	**Pengchaiyu**	**1.74**	**343**	*eP*	**Pn**	**15 51 47.9**	**-0.7**
	baz=341								
ALS	**Alishan**	**1.74**	**255**	*eP*	**Pn**	**15 51 49.9**	**+0.9**
	baz=253								
ALS				*eS*	**Sn**	**15 52 11.3**	**+0.7**
	baz=253								
LONT	**Longtian**	**1.74**	**233**	*eP*	**Pn**	**15 51 48.2**	**-0.5**
	baz=221								
LONT				*eS*	**Sn**	**15 52 10.0**	**-0.3**
	baz=221								
WJS	**Zhushan**	**1.76**	**266**	*eP*	**Pb**	**15 51 51.5**	**+0.2**
	baz=264								
WJS				*eS*	**Sb**	**15 52 14.8**	**+1.9**
	baz=264								
WWF	**Wufeng**	**1.78**	**273**	*eP*	**Pb**	**15 51 51.3**	**-0.3**
	baz=271								
WWF				*eS*	**Sb**	**15 52 15.6**	**+2.1**
	baz=271								
NMLH	**Miaoli**	**1.78**	**289**	*eP*	**Pb**	**15 51 50.9**	**-0.9**
	baz=287								
NMLH				*eS*	**Sb**	**15 52 13.5**	**-0.1**
	baz=287								
WNT	**Mingjian**	**1.79**	**268**	*eP*	**Pb**	**15 51 51.7**	**-0.2**
	baz=265								
WNT				*eS*	**Sb**	**15 52 14.0**	**+0.1**
	baz=265								
WNT1	**Nantou City**	**1.79**	**269**	*eS*	**Sb**	**15 52 15.3**	**+1.3**
	baz=266								
TCU	**Taichung**	**1.81**	**276**	*eP*	**Pb**	**15 51 51.0**	**-1.1**
	baz=274								
TCU				*eS*	**Sb**	**15 52 14.2**	**-0.1**
	baz=274								
TWGBT	**Beinan**	**1.83**	**232**	*eP*	**Pn**	**15 51 50.2**	**+0.2**
	baz=220								
TWGBT				*eS*	**Sn**	**15 52 11.8**	**-0.7**
	baz=220								
CHN5	**Tsauling**	**1.83**	**259**	*eP*	**Pb**	**15 51 52.6**	**-0.1**
	baz=246								
CHN5				*eS*	**Sb**	**15 52 15.1**	**-0.1**
	baz=246								
TWG	**Pinlang**	**1.84**	**232**	*eP*	**Pn**	**15 51 50.7**	**+0.7**
	baz=220								
TWG				*eS*	**Sn**	**15 52 11.8**	**-0.8**
	baz=220								
WDJ	**Dajia District**	**1.87**	**282**	*eP*	**Pb**	**15 51 52.6**	**-0.6**
	baz=280								
WDJ				*eS*	**Sb**	**15 52 16.1**	**+0.1**
	baz=280								
STYH	**Taoyuan**	**1.88**	**246**	*eP*	**Pn**	**15 51 52.1**	**+1.4**
	baz=234								
STYH				*eS*	**Sn**	**15 52 13.8**	**0.0**
	baz=234								
STYT	**Tauyuan**	**1.90**	**246**	*eP*	**Pn**	**15 51 52.0**	**+1.0**
	baz=234								
STYT				*eS*	**Sn**	**15 52 15.7**	**+1.4**
	baz=234								
WCHH	**Zhanghua**	**1.91**	**274**	*eS*	**Sb**	**15 52 17.5**	**+0.3**
	baz=271								
WGK	**Gukeng**	**1.92**	**262**	*eS*	**Sb**	**15 52 17.1**	**-0.6**
	baz=260								
WDLH	**Douliu**	**1.94**	**262**	*eP*	**Pn**	**15 51 52.8**	**+1.3**
	baz=260								
WDLH				*eS*	**Sb**	**15 52 18.6**	**+0.3**
	baz=260								
TPUB	**Ta-pu**	**1.96**	**251**	*eP*	**Pn**	**15 51 53.4**	**+1.6**
	baz=238								
TPUB				*eS*	**Sb**	**15 52 17.7**	**-1.0**
	baz=238								
WTP	**Ta-pu**	**1.99**	**249**	*eP*	**Pb**	**15 51 54.2**	**-1.1**
	baz=237								
WTP				*eS*	**Sb**	**15 52 19.7**	**0.0**
	baz=237								
JTJ	**Tarama**	**2.00**	**70**	P	**Pb**	**15 51 54.0**	**-1.4**
JTJ				*eS*	**Sn**	**15 52 17.1**	**+0.5**
ECL	**Taimali**	**2.06**	**229**	*eP*	**Pn**	**15 51 53.1**	**0.0**
	baz=227								
ECL				*eS*	**Sn**	**15 52 17.2**	**-0.9**
	baz=227								
SLGT	**Liugui**	**2.07**	**243**	*eP*	**Pb**	**15 51 55.5**	**-1.1**
	baz=231								
SLGT				*eS*	**Sn**	**15 52 20.2**	**+1.9**
	baz=231								
WTK	**Tuku**	**2.08**	**263**	*eP*	**Pb**	**15 51 55.9**	**-0.9**
	baz=261								
WTK				*eS*	**Sb**	**15 52 21.6**	**-0.6**
	baz=261								
SGST	**Jiashian**	**2.08**	**245**	*eP*	**Pn**	**15 51 55.3**	**+1.9**
	baz=233								
SGST				*eS*	**Sb**	**15 52 21.6**	**-0.7**
	baz=233								
CHY	**Chiayi**	**2.08**	**258**	*eP*	**Pb**	**15 51 56.0**	**-0.9**
	baz=255								
CHY				*eS*	**Sb**	**15 52 20.8**	**-1.4**
	baz=255								
CHN1	**Nanshi**	**2.09**	**249**	*eP*	**Pb**	**15 51 56.2**	**-0.7**
	baz=246								
CHN1				*eS*	**Sb**	**15 52 21.5**	**-0.9**
	baz=246								
SNST	**Tainan City**	**2.10**	**250**	*eS*	**Sb**	**15 52 22.4**	**-0.4**
	baz=248								
SSD	**Sandimen**	**2.21**	**237**	*eP*	**Pn**	**15 51 56.4**	**+1.2**
	baz=228								
SSD				*eS*	**Sn**	**15 52 23.1**	**+1.4**
	baz=228								
TSMG	**Majia**	**2.22**	**236**	*eP*	**Pn**	**15 51 56.4**	**+1.1**
	baz=228								
TSMG				*eS*	**Sn**	**15 52 23.5**	**+1.5**
	baz=228								
WSF	**Szhu**	**2.24**	**262**	*eS*	**Sb**	**15 52 26.2**	**-0.6**
	baz=260								
SCST	**Cishan**	**2.25**	**242**	*eP*	**Pb**	**15 51 58.8**	**-0.8**
	baz=230								
SCST				*eS*	**Sb**	**15 52 26.9**	**0.0**
	baz=230								
EAST	**Anshuo**	**2.28**	**227**	*eP*	**Pn**	**15 51 56.2**	**0.0**
	baz=226								
MASBT	**Mashibuluo**	**2.28**	**234**	*eP*	**Pn**	**15 51 57.1**	**+1.0**
	baz=225								
MASBT				*eS*	**Sn**	**15 52 23.8**	**+0.2**
	baz=225								
SSPT	**Xinbi**	**2.41**	**233**	*eP*	**Pn**	**15 52 00.0**	**+2.2**
	baz=225								
SSPT				*eS*	**Sn**	**15 52 28.5**	**+1.8**
	baz=225								
SLIU	**Shizi**	**2.43**	**225**	*eP*	**Pn**	**15 51 59.6**	**+1.5**
	baz=233								
SCZT	**Fangliau**	**2.44**	**230**	*eP*	**Pn**	**15 52 00.1**	**+1.8**
	baz=221								
SCZT				*eS*	**Sn**	**15 52 28.5**	**+0.9**
	baz=221								
HEN	**Hengchun**	**2.62**	**222**	*eS*	**Sn**	**15 52 32.7**	**+0.8**
	baz=220								
WDGT	**Dungji**	**2.82**	**256**	*eP*	**Pn**	**15 52 05.0**	**+1.4**
	baz=255								
PNG	**Penghu**	**2.85**	**263**	*eP*	**Pn**	**15 52 05.5**	**+1.6**
	baz=261								
VWUC	**VWUC**	**3.08**	**290**	*eP*	**Pn**	**15 52 07.0**	**-0.1**
	baz=288								
PTMZ	**Houxiangcun**	**3.38**	**289**	*eP*	**Pn**	**15 52 11.6**	**+0.4**
	baz=287								

*IDC **26** 16:02:27.2±1.8,27.°56N×85.°79E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.4/36,mbtmp3.7/6,ML3.5/1,Error ellipse: s-maj=59.3km s-min=26.5km az=62.0*

ISC 26 16:02:30.2±1.8,27.°6N±0.°3×85.°8E±0.°4,h19km,n6,σ0°86/6, mb3.8/5,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.37**	**353**	P	**P**	**16 06 53.9**	**-0.8**
	0.1nm,0.3s,baz=180,slow=11,SNR=5.9						
SONM	**Songino Array**	**25.84**	**33**	P	**P**	**16 08 00.3**	**-0.2**
	0.7nm,0.6s,baz=211,slow=8.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.35**	**359**	P	**P**	**16 08 05.5**	**+0.7**
	0.3nm,0.4s,baz=188,slow=9.0,SNR=3.6						
FINES	**FINESS Array B**	**51.74**	**328**	P	**P**	**16 11 35.6**	**-0.4**
	2.2nm,1.0s,baz=104,slow=5.9,SNR=1.3						
ARCES	**ARCESS Array B**	**54.12**	**338**	P	**P**	**16 11 54.5**	**+0.9**
	3.1nm,0.8s,baz=103,slow=8.4,SNR=2.7						
WRA	**Warramunga Arr**	**66.66**	**130**	P	**P**	**16 13 19.8**	**-0.1**
	0.3nm,0.4s,baz=324,slow=6.4,SNR=6.1						

KRSC 26 16:16:14.3±1.7,49.°71N×157.°75E,h47km±25km,ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.43**	**313**	*eP*	**Pn**	**16 16 38.3**	**+0.6**
SKR				*eS*	**Sn**	**16 16 56.2**	**+0.8**
PAU	**Pauzhetka**	**1.86**	**342**	*eP*	**Pn**	**16 16 46.0**	**+2.4**
PAU				*eS*	**Sn**	**16 17 09.7**	**+3.9**
RUS	**Russkaya**	**2.77**	**10**	*eP*	**Pn**	**16 16 59.0**	**+2.9**
RUS				*eS*	**Sn**	**16 17 31.7**	**+3.5**
MTVR	**Mutnovka**	**2.79**	**5**	*eP*	**Pn**	**16 16 59.8**	**+3.3**
MTVR				*eS*	**Sn**	**16 17 32.2**	**+3.2**
GRL	**Gorelyy**	**2.85**	**4**	*eP*	**Pn**	**16 17 00.8**	**+3.5**
GRL				*eS*	**Sn**	**16 17 35.5**	**+5.0**
KRMR	**Karymshinskiy**	**3.13**	**4**	*eP*	**Pn**	**16 17 05.6**	**+4.5**
APC	**Apacha**	**3.24**	**354**	*eP*	**Pn**	**16 17 06.1**	**+3.6**
PET	**Petropavlovsk**	**3.37**	**9**	*eP*	**Pn**	**16 17 07.1**	**+2.9**
PET				*eS*	**Sn**	**16 17 45.8**	**+2.9**
DALK	**Dalny**	**3.38**	**10**	*eP*	**Pn**	**16 17 08.1**	**+3.6**
DALK				*eS*	**Sn**	**16 17 47.1**	**+3.8**
UGLR	**Uglovaya**	**3.57**	**10**	*eP*	**Pn**	**16 17 11.3**	**+4.2**
AVH	**Avacha**	**3.61**	**9**	*eP*	**Pn**	**16 17 11.9**	**+4.2**
SMAR	**Somma**	**3.62**	**10**	*eP*	**Pn**	**16 17 12.6**	**+4.7**
KOK	**Koryaka**	**3.63**	**8**	*eP*	**Pn**	**16 17 12.6**	**+4.6**
SDLR	**Sedlovina**	**3.64**	**11**	*eP*	**Pn**	**16 17 11.5**	**+3.3**
KRER	**Koryakskii**	**3.65**	**9**	*eP*	**Pn**	**16 17 12.7**	**+4.3**
SPN	**Mys Shipunski**	**3.68**	**22**	*eP*	**Pn**	**16 17 12.5**	**+4.0**
KRX	**Arik**	**3.69**	**8**	*eP*	**Pn**	**16 17 13.5**	**+4.6**
GNL	**Ganaly**	**3.99**	**2**	*eP*	**Pn**	**16 17 17.5**	**+4.5**
MKZ	**Mys Kozlova**	**5.43**	**25**	*eP*	**Pn**	**16 17 36.0**	**+3.4**
KZV	**Kizimen**	**5.63**	**15**	*eP*	**Pn**	**16 17 40.1**	**+4.6**
TUMD	**Tumrok D**	**5.73**	**15**	*eP*	**Pn**	**16 17 41.1**	**+4.3**
TUMR	**Tumrok**	**5.77**	**14**	*eP*	**Pn**	**16 17 42.7**	**+5.4**
KBTR	**Krutoberegovo**	**7.19**	**23**	*eP*	**Pn**	**16 18 00.5**	**+3.8**
SRKR	**Sorokina**	**7.25**	**15**	*eP*	**Pn**	**16 18 02.5**	**+4.9**

*IDC **26** 16:23:36.7±0.9,27.°67N×85.°19E,h0km,mb3.7/15, mb1 3.9/16,mb1mx3.6/61,mbtmp3.7/16,ML3.8/1,Error ellipse: s-maj=28.8km s-min=18.6km az=55.0*

ISC 26 16:23:38.0±0.9,27.°7N±0.°2×85.°2E±0.°2,h10km,n17, σ0°89/17,mb3.6/15,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.58**	**123**	Pn	**P**	**16 27 21.3**	**-0.9**
	0.0nm,0.3s,baz=316,slow=7.6,SNR=4.4						
MKAR	**Makanchi Array**	**19.24**	**354**	P	**P**	**16 28 03.0**	**+0.5**
	0.3nm,0.3s,baz=174,slow=11,SNR=19						
KURBB	**Kurchatov Arra**	**23.50**	**349**	P	**P**	**16 28 48.3**	**+0.4**
	1.5nm,0.8s,baz=174,slow=9.8,SNR=18						
SONM	**Songino Array**	**26.04**	**34**	P	**P**	**16 29 10.1**	**-1.5**
	0.8nm,0.8s,baz=226,slow=10.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.27**	**359**	P	**P**	**16 29 13.2**	**-0.1**
	0.8nm,0.6s,baz=188,slow=10.0,SNR=5.2						
NRIK	**Noril'sk**	**41.74**	**1**	P	**P**	**16 31 27.7**	**+0.8**
	1.3nm,0.5s,baz=173,slow=7.3,SNR=5.4						
AKASG	**Malin Array Be**	**47.80**	**315**	P	**P**	**16 32 14.9**	**-0.6**
	0.2nm,0.3s,baz=76,slow=7.1,SNR=2.8						
MLR	**Muntele Rosu**	**49.69**	**308**	P	**P**	**16 32 30.2**	**-0.1**
	3.3nm,0.7s,baz=160,slow=5.4,SNR=6.2						
FINES	**FINESS Array B**	**51.43**	**328**	P	**P**	**16 32 43.6**	**+0.7**
	1.2nm,0.9s,baz=108,slow=10,SNR=4.4						
ARCES	**ARCESS Array B**	**53.88**	**338**	P	**P**	**16 33 01.3**	**+0.2**
	2.8nm,1.0s,baz=58,slow=16,SNR=1.8						
GERES	**GERESS Array B**	**57.84**	**312**	P	**P**	**16 33 30.3**	**+0.5**
	0.3nm,0.6s,baz=58,slow=2.4,SNR=2.0						
WRA	**Warramunga Arr**	**67.07**	**129**	P	**P**	**16 34 34.1**	**+2.2**
	0.9nm,0.8s,baz=324,slow=6.4,SNR=3.6						
ASAR	**Alice Springs**	**69.35**	**133**	P	**P**	**16 34 46.0**	**-0.1**
	0.6nm,0.7s,baz=313,slow=6.1,SNR=7.9						
ESDC	**Sonseca Array**	**72.34**	**306**	P	**P**	**16 35 03.8**	**-0.5**
	0.2nm,0.4s,baz=40,slow=6.7,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.36**	**279**	P	**P**	**16 35 38.5**	**-0.7**
	0.4nm,0.6s,baz=73,slow=4.2,SNR=2.7						
ILAR	**Eielson Array**	**79.41**	**20**	P	**P**	**16 35 43.6**	**-0.5**
	0.

baz=338,slow=75,SNR=10
H11S1 WAKE ISLAND Hy 30.34 150 T T 17 03 48.4
baz=339,slow=76,SNR=3.9
H11S3 WAKE ISLAND Hy 30.35 150 T T 17 03 49.3
baz=339,slow=76,SNR=4.9
H11S2 WAKE ISLAND Hy 30.36 150 T T 17 03 51.6
baz=339,slow=76,SNR=5.8
YKA Yellowknife Ar 52.32 36 P **P 16 35 09.2 -1.4**
0.3nm,0.7s,baz=297,slow=7.0,SNR=4.9
NVAR Mina Array Bea 64.00 61 P **P 16 36 33.2 +0.2**
0.2nm,0.6s,baz=298,slow=12,SNR=2.6
TXAR Lajitas Array 79.05 59 P **P 16 38 04.0 +0.5**
0.3nm,0.6s,baz=295,slow=4.7,SNR=2.5

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*BJI **26** 16:26:02.3±0.0,27.65N×85.80E,h10km,mB5.4/56, mb5.3/89,Ms5.3/91,Ms7 5.2/86*

*NEIC **26** 16:26:05.4,27.77N×85.78E,h11km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr3.02; Mθθ-2.97; Mφφ-0.05; Mrθ2.10; Mrφ0.99; Mθφ-0.45; Fault plane solution: M0 3.82000×10^16 NP1:φs104.06000°, δ62.21000°, λ86.94000°. NP2:φs290.59000°, δ27.95000°, λ95.78000°. Principal axes: T 3.6870, Plg73.0000°, Azm7.0000°; N 0.2456, Plg3.0000°, Azm105.0000°; P -3.9326, Plg17.0000°, Azm196.0000°;*

*MOS **26** 16:26:05.0±0.9,27.86N×85.75E,h17km,mb5.7/54, MS4.9/31 Error ellipse: s-maj=5.2km s-min=2.9km az=114.5*

*DMN **26** 16:26:06.9±0.1,27.83N×85.87E,h10km,Ml5.8/6,Error ellipse: s-maj=3.9km s-min=1.5km az=12.0*

*NEIC **26** 16:26:06.7±1.5,27.83N±0.07×85.87E±0.04,h14km±1km, mb5.6/304,Mwb5.0/50,Error ellipse: s-maj=11.5km s-min=6.3km az=173.0*

*NDI **26** 16:26:07.6±3.1,27.63N×85.74E,h10km,ML5.4, mb5.6(NEIC)*

*IDC **26** 16:26:08.4±1.2,27.76N×85.86E,h26km±7km,mb5.1/52, mb1 5.1/54,mb1mx5.0/61,mbtmp5.2/54,ML4.7/2,MS4.6/23, Ms1 4.6/23,ms1mx4.5/33,Error ellipse: s-maj=6.9km s-min=6.5km az=43.0*

*GCMT **26** 16:26:09.0±0.1,27.56N±0.01×85.90E±0.01,h20km, MW5.2/129,Moment Tensor Solution. s89,c115; s129,c233; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr5.38±.15; Mθθ-5.14±.11; Mφφ-0.23±.09; Mrθ5.14±.24; Mrφ2.23±.07; Mθr-0.18±.19; Best double couple: M0 7.68500×10^16 NP1:φs305.00000°,δ26.00000°, λ115.00000°. NP2:φs98.00000°,δ66.00000°,λ78.00000°. Principal axes: T 7.5350, Plg67.0000°, Azm347.0000°; N 0.3040, Plg11.0000°, Azm103.0000°; P -7.8360, Plg21.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 16:26:06.5±0.3,27.80N±0.02×85.82E±0.02,h17km±1km, h17km:pP-P,n1217,σ1s42/1350,mb5.6/352,MS5.0/70, 435C-91D,Fault plane solution: NP1:φs110.00255°, δ58.23075°,λ74.66711°. **NP2:φs**317.51178°,δ34.92381°, λ113.12190°. **Principal axes:** T Plg72.1867°, Azm342.3259°; N Plg12.9917°, Azm118.2170°; P Plg11.9744°, Azm211.0217°; **Nepal**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.12**	**24**	*e*Pg		**Pb**		**16 26 10.4**	**-0.2**
JIRN	**Jiri**	**0.35**	**113**	*e*Pg		**Pb**		**16 26 14.6**	**0.0**
PKI	**Pulchoki**	**0.43**	**238**	*e*Pg		**Pb**		**16 26 16.7**	**+0.8**
PKI				*e*Sg		**Sb**		**16 26 23.3**	**+1.1**
PKIN	**Phulchoki**	**0.44**	**240**	*e*Pg		**Pb**		**16 26 16.8**	**+0.8**
KKN	**Kakani**	**0.48**	**269**	*e*Pg		**Pb**		**16 26 17.2**	**+0.5**
KKN				*e*Sg		**Sb**		**16 26 23.8**	**+0.2**
DMN	**Daman**	**0.66**	**254**	*e*Pg		**Pn**		**16 26 20.7**	**-0.7**
DMN				*e*Sg		**Sn**		**16 26 30.6**	**-1.0**
GKN	**Gorkha**	**1.07**	**281**	*e*Pg		**Pg**		**16 26 27.7**	**+0.5**
GKN				*e*Sg		**Sn**		**16 26 41.5**	**+0.1**
	13μm,0.3s								
RAMN	**Ramite**	**1.09**	**141**	*e*Pg		**Pb**		**16 26 26.8**	**-0.3**
ODAN	**Odare**	**1.68**	**124**	*e*Pg		**Pb**		**16 26 37.8**	**+0.7**
ODAN				*e*Sg		**Sg**		**16 26 59.9**	**-0.8**
	18μm,0.3s								
TAPN	**Taplejung**	**1.73**	**105**	*e*Pg		**Pb**		**16 26 38.7**	**+0.6**
TAPN				*e*Sg		**Sb**		**16 27 00.3**	**+0.6**
	16μm,0.4s								
DANN	**Dangsing**	**1.90**	**287**	*e*Pg		**Pg**		**16 26 42.7**	**-0.4**
DANN				*e*Sg		**Sg**		**16 27 08.0**	**+0.1**
	9μm,0.2s								
KOLN	**Koldanda**	**1.97**	**270**	*e*Pg		**Pg**		**16 26 44.2**	**-0.1**
KOLN				*e*Sg		**Sg**		**16 27 09.5**	**-0.5**
	16μm,0.3s								
GTK	**Tadong**	**2.51**	**100**	*e*P		**Pb**		**16 26 49.3**	**-1.9**
GTK				*e*S		**Sb**		**16 27 19.9**	**-2.0**
GTK				IAML				16 27 25.5	
	comp=N,38μm,0.5s								
PYUN	**Piuthan**	**2.52**	**277**	*e*Pg		**Pg**		**16 26 55.0**	**+0.1**
PYUN				*e*Sg		**Sg**		**16 27 27.2**	**-0.5**
	comp=N,23μm,0.4s								
BOK	**Bokaro**	**3.99**	**179**	*e*P		**Pn**		**16 27 09.0**	**+2.1**
BOK				IAML				16 28 14.1	
	comp=N,7μm,0.6s								
LSA	**Lhasa**	**5.04**	**67**	P		**Pn**		**16 27 22.6**	**+0.8**
LSA	**Lhasa**	**5.04**	**67**			**Pn**		**16 27 22.6**	**+0.8**
SHL	**Shillong**	**5.86**	**111**	P		**Pn**		**16 27 32.8**	**0.0**
SHL	**Shillong**	**5.86**	**111**	*e*P		**Pn**		**16 27 33.4**	**+0.6**
SHL				*e*S		**Sn**		**16 28 37.7**	**-2.0**
SHL				IAML				16 28 38.8	
	comp=E,3μm,0.6s								
SHL	**Shillong**	**5.86**	**111**	Pn		**Pn**		**16 27 32.8**	**0.0**
ZIRO	**ZIRO**	**7.12**	**90**	*e*P		**Pn**		**16 27 51.3**	**+1.1**
ZIRO				*e*S		**Sn**		**16 29 08.8**	**-2.0**
ZIRO				IAML				16 29 16.4	
	comp=N,12μm,0.5s								
ZIRO				IAML				16 29 16.7	
	comp=E,11μm,0.5s								
DDI	**Dehra Dun**	**7.25**	**292**	*e*P		**Pn**		**16 27 54.1**	**+2.4**
DDI				*e*S		**Sn**		**16 29 12.2**	**-1.5**
DDI				IAML				16 29 15.1	
	comp=E,5μm,0.4s								
DDI				IAML				16 29 17.4	
	comp=N,12μm,0.5s								
KOHI	**KOHIMA**	**7.69**	**104**	*e*P		**Pn**		**16 27 58.9**	**+1.0**
KOHI				*e*S		**Sn**		**16 29 24.0**	**-0.7**
KOHI				IAML				16 29 26.9	
	comp=N,3μm,0.7s								
KOHI				IAML				16 29 28.9	
	comp=E,3μm,1.1s								
SMLA	**Simla**	**8.24**	**296**	*e*P		**Pn**		**16 28 06.0**	**+0.7**
SMLA				*e*S		**Sn**		**16 29 34.9**	**-3.2**
SMLA				IAML				16 29 39.4	
	comp=E,3μm,0.6s								
BHPL	**Bhopal**	**8.84**	**241**	*e*P		**Pn**		**16 28 11.2**	**-2.4**
BHPL				*e*S		Sn		16 29 43.3	-10
BHPL				IAML				16 29 48.4	
	comp=E,973nm,0.5s								
BHPL				IAML				16 29 50.4	
	comp=N,1μm,0.4s								
DHRM	**DHARAMSHALA**	**9.37**	**301**	*e*P		**Pn**		**16 28 20.3**	**-0.7**
DHRM				*e*S		**Sn**		**16 30 01.8**	**-4.3**
DHRM				IAML				16 30 09.6	
	comp=N,2μm,0.9s								
DHRM				IAML				16 30 11.1	
	comp=E,2μm,0.3s								
NIL	**Nilore**	**12.28**	**301**	P		**Pn**		**16 28 59.4**	**-1.3**
NIL	**Nilore**	**12.28**	**301**			**Pn**		**16 28 59.4**	**-1.3**
HYB	**Hyderabad**	**12.32**	**214**	*i* P		**Pn**		**16 28 59.0**	**-2.2**
	comp=E,350nm,1.0s								
HYB				*e*S		**Sn**		**16 31 22.0**	**+3.8**
KSH	**Kashi**	**14.27**	**328**	⇑*i* P		**Pn**		**16 29 23.8**	**-4.0**
KSH				pP		P		16 29 30.5	-4.5
KSH				sP				16 29 36.5	
KSH				pmax	pmax				
	comp=E,78nm,1.0s								
KSH				LR	LR				
	comp=E,3μm,7.6s								
KSH				LR	LR				
	comp=E,6μm,8.1s								
KSH				LR	LR				
	comp=E,5μm,9.9s								
MHMT	**Maesarieng**	**14.69**	**128**	P		**Pn**		**16 29 31.0**	**-2.6**
CHTO	**Chiang Mai**	**15.00**	**124**	P		**Pn**		**16 29 35.2**	**-2.6**
CHTO	**Chiang Mai**	**15.00**	**124**	Pn		**Pn**		**16 29 35.2**	**-2.6**
CM33	**Chiang Mai Arr**	**15.00**	**124**	P		**Pn**		**16 29 35.0**	**-2.8**
CM32	**Chiang Mai Arr**	**15.03**	**125**	P		**Pn**		**16 29 37.0**	**-1.2**
CM34	**Chiang Mai Arr**	**15.13**	**123**	P		**Pn**		**16 29 40.0**	**+0.5**
CM15	**Chiang Mai Arr**	**15.21**	**125**	P		**Pn**		**16 29 38.9**	**-1.8**
	comp=E,807nmcomp=E,96nm,0.9s								
CM13	**Chiang Mai Arr**	**15.22**	**125**	P		**Pn**		**16 29 38.9**	**-1.9**
	comp=E,704nmcomp=E,90nm,0.7s								
CM31	**Chiang Mai Arr**	**15.22**	**125**	P		**Pn**		**16 29 39.1**	**-1.7**
	comp=E,18μmcomp=E,3μm,0.9s								
CM31	**Chiang Mai Arr**	**15.22**	**125**	Pn		**Pn**		**16 29 39.1**	**-1.7**
CMAR	**Chiang Mai Arr**	**15.22**	**125**	Pn		**Pn**		**16 29 38.8**	**-2.0**
	comp=E,0.4nm,0.3s,baz=304,slow=13,SNR=58								
CMAR						LR	LR	16 37 30.0	
	comp=E,1μm,18.1s,baz=346,slow=45								
CMAR						ScP	**ScP**	**16 38 18.1**	**-2.0**
	comp=E,0.1nm,0.3s,baz=294,slow=4.2,SNR=5.6								
CMAR	**Chiang Mai Arr**	**15.22**	**125**				**Pn**	**16 29 38.2**	**-2.6**
CM35	**Chiang Mai Arr**	**15.24**	**124**	P		**Pn**		**16 29 38.0**	**-3.0**
CM02	**Chiang Mai Arr**	**15.24**	**125**	P		**Pn**		**16 29 39.0**	**-2.0**
	comp=E,768nmcomp=E,114nm,0.9s								
CM01	**Chiang Mai Arr**	**15.26**	**125**	P		**Pn**		**16 29 39.6**	**-1.6**
	comp=E,783nmcomp=E,91nm,0.8s								
CM05	**Chiang Mai Arr**	**15.26**	**125**	P		**Pn**		**16 29 39.5**	**-1.8**
	comp=E,598nmcomp=E,76nm,1.1s								
CM09	**Chiang Mai Arr**	**15.27**	**125**	P		**Pn**		**16 29 39.0**	**-2.4**
	comp=E,880nmcomp=E,107nm,0.9s								
CM04	**Chiang Mai Arr**	**15.29**	**125**	P		**Pn**		**16 29 40.0**	**-1.7**
	comp=E,785nmcomp=E,124nm,0.9s								
CM36	**Chiang Mai Arr**	**15.30**	**124**	P		**Pn**		**16 29 40.0**	**-1.7**
KMI	**Kunming**	**15.38**	**96**	⇑P		**Pn**		**16 29 42.0**	**-1.1**
KMI				pP		P		16 29 46.0	-1.7
KMI				sP		pP		16 29 49.3	-3.8
KMI				PP		**sP**		**16 29 56.8**	**+1.6**
KMI				S		**Sn**		**16 32 33.3**	**0.0**
KMI				sS		S		16 32 42.0	-7.4
KMI				SS		**SnSn**		**16 32 55.0**	**+9.0**
KMI				pmax	pmax				
	comp=E,61nm,0.9s								
KMI				pmax	pmax				
	comp=E,330nm,3.5s								
KMI				LR	LR				
	comp=E,2μm,10.6s								
KMI				LR	LR				
	comp=E,3μm,13.3s								
KMI				LR	LR				
	comp=E,3μm,12.5s								
PRZ	**Przheval'sk**	**15.85**	**340**	P		**Pn**		**16 29 46.7**	**-2.2**
PRZ				pmax	pmax				
	comp=E,75nm,0.7s								
PRZ	**Przheval'sk**	**15.85**	**340**	Pn		**Pn**		**16 29 46.7**	**-2.2**
KBL	**Kabul**	**15.85**	**299**	P		**Pn**		**16 29 44.7**	**-4.4**
KBL				pmax	pmax				
	comp=Z,218nm,1.0s								
KBL	**Kabul**	**15.85**	**299**	Pn		**Pn**		**16 29 44.7**	**-4.4**
KDJ	**Kajisay**	**15.94**	**336**	P		**Pn**		**16 29 47.8**	**-2.4**
KDJ				pmax	pmax				
	comp=Z,176nm,0.9s								
KDJ	**Kajisay**	**15.94**	**336**				**Pn**	**16 29 47.8**	**-2.4**
CD2	**Chengdu**	**15.94**	**74**	P		**Pn**		**16 29 48.5**	**-1.6**
CD2				pP		P		16 29 56.0	+2.3
CD2				S		**Sn**		**16 32 49.3**	**+2.7**
CD2				pmax	pmax				
	comp=Z,50nm,0.5s								
CD2				pmax	pmax				
	comp=Z,290nm,3.5s								
CD2				LR	LR				
	comp=Z,8μm,10.6s								
CD2				LR	LR				
	comp=Z,10μm,11.6s								
CD2				LR	LR				
	comp=Z,14μm,10.2s								
WMQ	**Urumqi**	**16.06**	**5**	P		**Pn**		**16 29 50.8**	**-0.8**
WMQ				pP		P		16 29 56.8	+1.9
WMQ				PP		**sP**		**16 30 03.8**	**+1.2**
WMQ				S		**Sn**		**16 32 55.3**	**+6.0**
WMQ				pmax	pmax				
	comp=Z,160nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,1μm,3.8s								
WMQ				LR	LR				
	comp=Z,9μm,12.7s								
WMQ				LR	LR				
	comp=Z,4μm,12.3s								
WMQ				LR	LR				
	comp=Z,10μm,13.9s								
SHLS	**Shalkode**	**16.17**	**343**	*e*P		**Pn**		**16 29 50.2**	**-2.9**
	baz=344								
SHLS	**Shalkode**	**16.17**	**343**	*e*P		**Pn**		**16 29 50.1**	**-2.9**
UZB	**Uzynbulak**	**16.27**	**342**	⇑*i*P		**Pn**		**16 29 53.3**	**-1.2**
	comp=Z,133nm,1.7s,baz=342								
UZB	**Uzynbulak**	**16.27**	**342**	*c i*P		**Pn**		**16 29 53.2**	**-1.2**
UZB				pmax	pmax				
	comp=Z,133nm,1.7s								
PDGK	**Podgornoye**	**16.32**	**343**	P		**Pn**		**16 29 53.1**	**-1.9**
SUKH	**Sukhothai**	**16.35**	**126**	P		**Pn**		**16 29 54.5**	**-0.9**
	comp=Z,3μmcomp=Z,326nm,0.8s								
SATY	**Saty**	**16.37**	**340**	⇑*i*P		**Pn**		**16 29 54.7**	**-1.0**
	comp=Z,104nm,1.3s,baz=340								
SATY	**Saty**	**16.37**	**340**	*c i*P		**Pn**		**16 29 54.6**	**-1.0**
SATY				pmax	pmax				
	comp=Z,104nm,1.3s								
ULHL	**Ulahol**	**16.39**	**334**	P		**P**		**16 30 01.6**	**+2.9**
	SNR=12								
GTA	**Gaotai**	**16.41**	**42**	⇑P		**Pn**		**16 29 53.8**	**-2.3**
GTA				pP		P		16 29 59.5	+0.7
GTA				sP		pP		16 30 02.5	-1.6
GTA				S		**Sn**		**16 32 55.8**	**-2.1**
GTA				sS		S		16 33 04.5	-5.5
GTA				pmax	pmax				
	comp=Z,31nm,1.5s								
GTA				pmax	pmax				
	comp=Z,250nm,5.4s								
GTA				LR	LR				
	comp=Z,3μm,13.5s								
GTA				LR	LR				
	comp=Z,5μm,12.0s								
GTA				LR	LR				
	comp=Z,6μm,13.1s								
DRK	**Karamyk**	**16.47**	**319**	Pn		**Pn**		**16 29 53.9**	**-3.2**
KPKS	**Kokpek**	**16.66**	**342**	⇑*e*P		**Pn**		**16 29 58.3**	**-1.0**
	comp=Z,139nm,1.1s,baz=342								
KPKS	**Kokpek**	**16.66**	**342**	*ce*P		**Pn**		**16 29 58.3**	**-1.0**
KPKS				pmax	pmax				
	comp=Z,139nm,1.1s								
UMPA	**Umpang Tak**	**16.69**	**131**	P		**P**		**16 30 02.8**	**+0.8**
	comp=Z,1μmcomp=Z,150nm,0.8s								
BOOM	**Boomskoye usch**	**16.72**	**334**	P		**Pn**		**16 29 57.1**	**-3.0**
BOOM				pmax	pmax				
	comp=Z,186nm,1.3s								
BOOM	**Boomskoye usch**	**16.72**	**334**	Pn		**Pn**		**16 29 57.1**	**-3.0**
TNSS	**Tian-Shan**	**16.82**	**337**	*e*P		**Pn**		**16 29 59.7**	**-1.9**
	baz=337								
TNSS	**Tian-Shan**	**16.82**	**337**	*e*P		**Pn**		**16 29 59.6**	**-1.9**
UTTA	**Uttaradit**	**16.86**	**123**	P		**Pn**		**16 30 02.5**	**+0.8**
	comp=Z,1μmcomp=Z,121nm,1.2s								
MDOK	**Medeo**	**16.90**	**337**	*i* P		**Pn**		**16 30 00.8**	**-1.5**
	baz=337								
MDOK				LR	LR			16 35 28.8	
	comp=Z,3μm,13.6s,baz=337								
MDOK	**Medeo**	**16.90**	**337**	*i* P		**Pn**		**16 30 00.8**	**-1.5**
MDOK				MLR	MLR				
	comp=Z,3μm,14.0s								
AAA	**Alma-Ata**	**16.98**	**337**	*e*P		**Pn**		**16 30 02.6**	**-0.7**
	comp=Z,164nm,1.0s,baz=337								
AAA				LR	LR			16 36 01.0	
	comp=Z,2μm,12.5s,baz=337								
AAA	**Alma-Ata**	**16.98**	**337**	*e*P		**P**		**16 30 08.0**	**+2.9**
UCH	**Uchtor**	**17.09**	**330**	P		**Pn**		**16 30 02.5**	**-2.5**
	SNR=51								
PHIT	**Phitsanulok**	**17.11**	**125**	P		**P**		**16 30 06.0**	**-0.6**
	comp=Z,6μmcomp=Z,725nm,1.0s								
ARSB	**Arslanbob**	**17.11**	**325**	P		**Pn**		**16 30 01.1**	**-4.0**
ARSB				pmax	pmax				
	comp=Z,108nm,0.8s								
ARSB	**Arslanbob**	**17.11**	**325**	Pn		**Pn**		**16 30 01.1**	**-4.0**
TKM2	**Tokmak 2**	**17.22**	**334**	P		**Pn**		**16 30 05.3**	**-1.1**
	SNR=31								
TKM2	**Tokmak 2**	**17.22**	**334**	P		**Pn**		**16 30 03.5**	**-2.9**
KBK	**Karagaybulak**	**17.26**	**332**	P		**P**		**16 30 11.4**	**+3.1**
	SNR=125								
PBA	**Port Blair**	**17.32**	**157**			Pn		16 30 08.1	+0.5
PBA						IAmb	IAmb	16 30 16.6	
	comp=Z,323nm,1.1s								
LZH	**Lanzhou**	**17.37**	**57**	⇓P		**Pn**		**16 30 07.3**	**-0.9**
LZH				pP		P		16 30 10.5	+1.0
LZH				sP		pP		16 30 12.5	-2.6
LZH				PP		sP		16 30 26.3	+8.9
LZH				*e*S		**Sn**		**16 33 17.5**	**-3.7**
LZH				sS		S		16 33 26.0	-3.7
LZH				SS		**SnSn**		**16 33 39.5**	**+4.9**
LZH				pmax	pmax				
	comp=Z,280nm,1.3s								
LZH				pmax	pmax				
	comp=Z,1μm,4.9s								
LZH				LR	LR				
	comp=Z,7μm,12.5s								
LZH				LR	LR				
	comp=Z,7μm,11.9s								
LZH				LR	LR				
	comp=Z,7μm,13.6s								
AML	**Almayashu**	**17.39**	**328**	P		**Pn**		**16 30 06.4**	**-2.3**
	SNR=39								
BTK	**Batken**	**17.42**	**318**	P		**Pn**		**16 30 04.9**	**-3.9**
BTK				pmax	pmax				
	comp=Z,183nm,0.8s								
BTK	**Batken**	**17.42**	**318**	Pn		**Pn**		**16 30 04.9**	**-3.9**
AAK	**Ala-Archa**	**17.43**	**331**	P		**Pn**		**16 30 09.1**	**+0.1**
	SNR=51								
AAK	**Ala-Archa**	**17.43**	**331**	P		**Pn**		**16 30 07.7**	**-1.3**
AAK	**Ala-Archa**	**17.43**	**331**	Pn		**Pn**		**16 30 07.3**	**-1.7**
FRU1	**Bishkek**	**17.52**	**332**	P		**Pn**		**16 30 09.4**	**-0.6**
FRU1				pmax	pmax				
	comp=Z,223nm,1.4s								
FRU1	**Bishkek**	**17.52**	**332**	Pn		**Pn**		**16 30 09.4**	**-0.6**
UTHA	**Uthaitani**	**17.55**	**131**	P		**Pn**		**16 30 10.8**	**+0.4**
	comp=Z,2μmcomp=Z,198nm,0.8s								
CHMS	**Chumysh**	**17.62**	**332**	P		**Pn**		**16 30 10.0**	**-1.3**
	SNR=55								
EKS2	**Erkin-Say**	**17.77**	**330**	P		**Pn**		**16 30 12.8**	**-0.3**
	SNR=124								
USP	**Ospenovka**	**17.95**	**332**	P		**Pn**		**16 30 15.1**	**-0.1**
	SNR=51								
SGDS	**Sogindy**	**18.05**	**333**	*e*P		**Pn**		**16 30 15.0**	**-1.5**
	baz=333								
SGDS	**Sogindy**	**18.05**	**333**	*e*P		**Pn**		**16 30 15.0**	**-1.5**
TDK	**Taldyqorghan**	**18.16**	**343**	*i* P		**Pn**		**16 30 17.2**	**-0.6**
	comp=Z,248nm,1.0s,baz=343								
TDK				LR	LR			16 36 35.7	
	comp=Z,2μm,12.6s,baz=343								
TDK	**Taldyqorghan**	**18.16**	**343**	*i* P		**Pn**		**16 30 17.2**	**-0.6**
TDK				pmax	pmax				
	comp=Z,248nm,1.0s								
TDK				MLR	MLR				
	comp=Z,2μm,13.0s								
SRDT	**SRDT**	**18.23**	**135**	P		**P**		**16 30 21.0**	**+2.0**
	comp=Z,9μmcomp=Z,42nm,1.0s								
GYA	**Guiyang**	**18.60**	**89**	⇑P		**P**		**16 30 21.5**	**-1.7**
GYA				S		**Sn**		**16 33 47.5**	**-3.7**
GYA				SS		**SnSn**		**16 34 08.5**	**+3.5**
NONG	**Nongkai**	**18.65**	**118**	P		**Pn**		**16 30 24.0**	**+0.1**
	comp=Z,220nm,0.9s								
CHAI	**Chaiyaphum**	**19.09**	**125**	P		**Pn**		**16 30 31.0**	**+1.8**
	comp=Z,1μmcomp=Z,144nm,0.9s								
DZA	**Taraz**	**19.10**	**326**	*e*P		**P**		**16 30 28.1**	**-0.4**
	baz=326								
DZA	**Taraz**	**19.10**	**326**	*e*P		**P**		**16 30 28.0**	**-0.4**
TAS	**Tashkent**	**19.12**	**319**	P		**P**		**16 30 26.0**	**-2.6**
TAS				pmax	pmax				
	comp=Z,355nm,1.1s								
TAS	**Tashkent**	**19.12**	**319**			**P**		**16 30 26.0**	**-2.6**
TAS				IAmb	IAmb			16 30 38.9	
	comp=Z,355nm,1.1s								
MK31	**Makanchi Array**	**19.16**	**353**	*e*P		**Pn**		**16 30 29.7**	**-0.3**
MK31	**Makanchi Array**	**19.16**	**353**			**P**		**16 30 28.8**	**-0.3**
MKAR	**Makanchi Array**	**19.16**	**353**	P		**Pn**		**16 30 29.8**	**-0.2**
	comp=Z,12nm,0.3s,baz=175,slow=12,SNR=336								
MKAR				S		**Sn**		**16 34 04.1**	**-0.2**
	baz=152,slow=9.8,SNR=1.4								
MKAR				ScP		**ScP**		**16 38 26.0**	**-1.7**
	baz=97,slow=2.8,SNR=6.4								
MKAR				LR	LR			16 39 06.9	
	comp=Z,3μm,18.9s,baz=174,slow=40								
MKAR	**Makanchi Array**	**19.16**	**353**	P		**P**		**16 30 28.6**	**-0.5**
MKAR				S		**Sn**		**16 34 04.1**	**-0.2**
MKAR	**Makanchi Array**	**19.16**	**353**	P		**P**		**16 30 28.6**	**-0.5**
MAKZ	**Makanchi**	**19.21**	**352**	P		**P**		**16 30 30.1**	**+0.5**
MAKZ	**Makanchi**	**19.21**	**352**	P		**P**		**16 30 29.9**	**+0.2**
IUG	**luzhnay**	**19.25**	**322**	*i* P		**P**		**16 30 29.1**	**-1.1**
	baz=322								
IUG	**luzhnay**	**19.25**	**322**	*i* P		**P**		**16 30 29.1**	**-1.1**
CHM	**Chimkent**	**19.60**	**322**	*e*P		**P**		**16 30 33.0**	**-1.0**
	baz=322								
CHM	**Chimkent**	**19.60**	**322**	*e*P		**P**		**16 30 32.9**	**-1.0**
BTLS	**Baital**	**19.61**	**334**	*e*P		**P**		**16 30 33.7**	**-0.2**
	comp=Z,54nm,1.4s,baz=334								
BTLS	**Baital**	**19.61**	**334**	*e*P		**P**		**16 30 33.7**	**-0.2**
BTLS				pmax	pmax				
	comp=Z,54nm,1.4s								
ZSN	**Zaisan**	**19.63**	**358**	*e*P		**P**		**16 30 32.7**	**-1.6**
	baz=358								
ZSN	**Zaisan**	**19.63**	**358**	*e*P		**P**		**16 30 32.6**	**-1.6**
PHET	**Kaeng Krachan**	**19.64**	**136**	P		**Pn**		**16 30 37.5**	**+1.6**
	comp=Z,1μmcomp=Z,112nm,1.0s								
KK31	**Karatay Array**	**19.67**	**325**	*i* P		**P**		**16 30 33.7**	**-0.9**
KK31	**Karatay Array**	**19.67**	**325**			**P**		**16 30 33.7**	**-0.9**
KKAR	**Karatay Array**	**19.67**	**325**	P		**P**		**16 30 33.8**	**-0.8**
KKAR				pmax	pmax				
	comp=Z,93nm,1.2s								
KKAR	**Karatay Array**	**19.67**	**325**			**P**		**16 30 33.6**	**-1.0**
KKAR	**Karatay Array**	**19.67**	**325**	P		**P**		**16 30 33.8**	**-0.8**
SRAK	**Srakaew**	**20.41**	**129**	P		Pn		16 30 49.5	+4.5
	comp=Z,9μmcomp=Z,1μm,0.9s								
PATY	**Pattaya**	**20.41**	**133**	P		Pn		16 30 47.1	+2.1
	comp=Z,7

BTO S **S** **16 35 24.5 -6.7**
BTO pmax pmax
comp=Z,580nm,1.4s
BTO LR LR
comp=Z,8μm,8.6s
BTO LR LR
comp=Z,14μm,11.9s
QIZ Qiongzhong 23.67 106 P **P** **16 31 18.3 +0.9**
QIZ pP **pP** **16 31 20.8 -2.4**
QIZ S **S** **16 35 32.8 +1.1**
QIZ sS **pS** **16 35 39.0 +0.9**
QIZ SS **SnSn** **16 36 08.5 -0.9**
QIZ pmax pmax
comp=Z,74nm,1.1s
QIZ pmax pmax
comp=Z,540nm,3.8s
QIZ LR LR
comp=Z,550nm,10.3s
QIZ LR LR
comp=Z,580nm,15.2s
QIZ Qiongzhong 23.67 106 P **P** **16 31 17.5 +0.2**
TRTT Trang 23.80 144 P **P** **16 31 19.4 +0.9**
BRZS Berezniki 24.33 339 *e*P **P** **16 31 22.2 -1.0**
baz=339
BRZS Berezniki 24.33 339 *e*P **P** **16 31 22.2 -1.0**
TIY Taiyuan 24.39 59 *e*P **P** **16 31 24.5 +0.4**
TIY S **S** **16 35 42.5 -0.6**
TIY pmax pmax
comp=Z,120nm,0.9s
TIY pmax pmax
comp=Z,720nm,3.5s
TIY LR LR
comp=Z,4μm,11.6s
TIY LR LR
comp=Z,2μm,11.8s
TIY LR LR
comp=Z,4μm,11.4s
LHMI Lhok Sumawe 24.82 153 P **P** **16 31 28.2 +0.3**
LHMI Lhok Sumawe 24.82 153 P **P** **16 31 30.8 +2.9**
comp=Z,3μmcomp=Z,286nm,0.8s
HHC Hu-ho-hao-te 24.82 52 *e*P **P** **16 31 29.0 +1.0**
HHC sP sP 16 31 36.8 +0.7
HHC S **S** **16 35 52.0 +2.0**
HHC pmax pmax
comp=Z,130nm,1.4s
HHC pmax pmax
comp=Z,770nm,4.1s
HHC LR LR
comp=Z,3μm,11.2s
HHC LR LR
comp=Z,4μm,11.8s
HHC LR LR
comp=Z,5μm,12.1s
WSAR Wadi Sarin 24.93 266 P **P** **16 31 31.1 +2.2**
comp=Z,16nm,0.6s,baz=118,slow=7.1,SNR=22
WSAR S **S** **16 35 50.0 -1.9**
comp=Z,5.5nm,0.9s,baz=62,slow=18,SNR=1.3
WSAR ScP **ScP** **16 38 41.9 -0.9**
comp=Z,14nm,1.0s,baz=106,slow=2.7,SNR=3.8
WSAR LR LR 16 41 54.2
comp=Z,749nm,18.8s,baz=102,slow=38
WHN Wuhan 25.03 77 ⇓P **P** **16 31 30.3 +0.5**
WHN S **S** **16 35 58.3 +5.0**
WHN pmax pmax
comp=Z,130nm,1.2s
WHN LR LR
comp=Z,5μm,10.4s
WHN LR LR
comp=Z,2μm,9.3s
WHN LR LR
comp=Z,3μm,9.2s
GEYT Alibeck 25.29 301 P **P** **16 31 34.0 +1.9**
comp=Z,40nm,0.8s,baz=117,slow=8.5,SNR=55
GEYT S **S** **16 36 01.0 +3.6**
comp=Z,1.6nm,0.5s,baz=64,slow=15,SNR=1.2
GEYT Alibeck 25.29 301 P **P** **16 31 33.0 +0.9**
GYA0B ALIBECK ARRAY 25.29 301 P **P** **16 31 32.3 +0.2**
GYA0B IAmb IAmb 16 31 36.3
comp=Z,99nm,1.1s
SONM Songino Array 25.63 33 P **P** **16 31 36.9 +1.7**
comp=Z,202nm,0.8s,baz=219,slow=10.0,SNR=392
SONM PcP **PcP** **16 35 08.3 +2.6**
comp=Z,5.2nm,1.0s,baz=228,slow=5.3,SNR=1.7
SONM ScP **ScP** **16 38 44.0 -0.4**
comp=Z,3.3nm,1.0s,baz=230,slow=3.7,SNR=4.2
SONM LR LR 16 43 11.9
comp=Z,2μm,21.6s,baz=222,slow=40
SONM Songino Array 25.63 33 P **P** **16 31 36.1 +0.9**
SONM IAmb IAmb 16 31 39.9
comp=Z,169nm,0.8s
ULN Ulaanbaatar 25.97 34*ce*P **P** **16 31 39.4 +1.0**
ULN pmax pmax
comp=Z,345nm,1.0s
ULN Ulaanbaatar 25.97 34 P **P** **16 31 39.3 +1.0**
ZAA0 Zalesovo Array 26.13 359 P **P** **16 31 40.3 +0.8**
ZAA0 IAmb IAmb 16 31 42.6
comp=Z,239nm,1.1s
ZALV Zalesovo Beam 26.13 359 P **P** **16 31 40.4 +0.9**
comp=Z,72nm,0.7s,baz=183,slow=8.6,SNR=155
ZALV PcP **PcP** **16 35 06.7 +0.2**
comp=Z,7.0nm,0.9s,baz=174,slow=5.8,SNR=2.0
ZALV ScS ScS 16 42 30.2 -4.9
comp=Z,2.9nm,1.0s,baz=169,slow=8.7,SNR=4.4
ZALV LR LR 16 42 39.9
comp=Z,515nm,18.1s,baz=186,slow=38
ZAK Zakamensk 26.18 26 *e*P **P** **16 31 41.7 +1.6**
ZAK pmax pmax
comp=Z,101nm,1.3s
MOY Mondy 26.43 21 *e*P **P** **16 31 44.3 +1.9**
MOY pmax pmax
comp=Z,265nm,1.9s
KULM Kulim 26.46 145 P **P** **16 31 43.6 +0.8**
KULM IAmb IAmb 16 31 52.8
comp=Z,157nm,0.8s
UOSS Minazif 26.66 271 P **P** **16 31 44.2 -0.5**
TSI Tuntungan 27.05 151 P P 16 31 59.0 +11
IPM Ipoh 27.34 145 P **P** **16 31 50.2 -0.6**
TLY Talaya 27.36 24 P **P** **16 31 53.0 +2.3**
comp=Z,5.8nm,0.8s,baz=231,slow=11,SNR=15
TLY LR LR 16 44 07.1
comp=Z,2μm,20.1s,baz=216,slow=39
TLY Talaya 27.36 24 *e*P **P** **16 31 53.0 +2.3**
TLY pmax pmax
comp=Z,74nm,1.5s
TLY MLR MLR
comp=Z,3μm,11.0s
TLY Talaya 27.36 24 P **P** **16 31 50.3 -0.4**
BVAR Borovoye Array 27.68 340 P **P** **16 31 53.3 -0.2**
comp=Z,5.9nm,0.4s,baz=166,slow=13,SNR=34
BVAR PcP **PcP** **16 35 10.2 0.0**
comp=Z,1.4nm,0.5s,baz=174,slow=4.3,SNR=1.5
BVAR ScP **ScP** **16 38 49.0 -1.3**
comp=Z,0.8nm,0.4s,baz=165,slow=6.0,SNR=3.3
BRVK Borovoye 27.74 340*ce*P **P** **16 31 54.1 +0.1**
BRVK pmax pmax
comp=Z,62nm,1.8s
BRVK Borovoye 27.74 340 P **P** **16 31 54.3 +0.2**
TIA Tai'an 27.75 64 P **P** **16 31 55.0 +0.7**
TIA S **S** **16 36 35.8 -0.4**
TIA pmax pmax
comp=Z,89nm,1.3s
TIA pmax pmax
comp=Z,370nm,3.9s
TIA LR LR
comp=Z,1μm,13.3s
TIA LR LR
comp=Z,2μm,10.8s
TIA LR LR
comp=Z,3μm,13.2s
PSI Prapat 27.83 151 P **P** **16 31 55.6 +0.3**
comp=Z,14nm,1.0s,baz=359,slow=12,SNR=7.8
PSI PcP **PcP** **16 35 12.3 +0.9**
comp=Z,9.6nm,0.8s,baz=0.0,slow=2.0,SNR=3.2
PSI ScP **ScP** **16 38 51.6 +0.1**
comp=Z,5.9nm,0.4s,baz=1.0,slow=7.3,SNR=4.6
PSI LR LR 16 44 25.3
comp=Z,460nm,20.8s,baz=6.0,slow=39
BJT Baijiatuau 27.84 56 P **P** **16 31 55.3 +0.2**
BJT pmax pmax
comp=Z,29nm,0.9s
BJT Baijiatuau 27.84 56 P **P** **16 31 55.3 +0.2**
BJI Beijing 27.85 56 P **P** **16 31 56.5 +1.4**
BJI S **S** **16 36 39.5 +1.8**
BJI pmax pmax
comp=Z,34nm,0.9s
BJI LR LR
comp=Z,3μm,11.8s
BJI LR LR
comp=Z,2μm,12.0s
BJI LR LR
comp=Z,1μm,20.2s
RPSI Rantau Prapat 27.93 151 P **P** **16 31 55.1 -0.9**
RPSI Rantau Prapat 27.93 151 P **P** **16 31 55.6 -0.4**
RPSI **ScP** **16 38 51.6 0.0**
IRK Irkutsk 28.05 24 *e*P **P** **16 31 57.9 +1.1**
IRK pmax pmax
comp=Z,110nm,2.4s
GSI Gunungsitoli 28.65 155 P **P** **16 32 02.3 -0.1**
GSI IAmb IAmb 16 32 09.3
comp=Z,150nm,1.1s
GSI Gunungsitoli 28.65 155 P **P** **16 32 05.2 +2.7**
comp=Z,146nm,1.1s
NJ2 Nanjing 28.87 73⇑*i*P **P** **16 32 05.0 +0.7**
NJ2 pP **pP** **16 32 08.5 -1.4**
NJ2 sP **sP** **16 32 11.8 -0.4**
NJ2 S **S** **16 36 56.5 +2.5**
NJ2 sS **sS** **16 37 03.5 -0.2**
NJ2 pmax pmax
comp=Z,37nm,1.3s
NJ2 LR LR
comp=Z,1μm,9.6s
NJ2 LR LR
comp=Z,3μm,13.0s
NJ2 LR LR
comp=Z,3μm,12.5s
AB31 Akbulak array 29.23 324 *e*P **P** **16 32 08.5 +1.2**
ABKAR Akbulak array 29.23 324 P **P** **16 32 08.1 +0.8**
KNMB Chin-men Tao 29.38 89 P **P** **16 32 09.4 +0.5**
KNMB IAmb IAmb 16 32 10.7
comp=Z,65nm,0.8s
QZH Quanzhou 29.45 88 P **P** **16 32 08.0 -1.5**
QZH S **S** **16 37 01.8 -1.3**
QZH LR LR
comp=Z,1μm,14.7s
QZH LR LR
comp=Z,2μm,16.6s
MNSI Mandailing Nat 29.91 152 P **P** **16 32 15.0 +1.3**
comp=Z,886nmcomp=Z,77nm,0.8s
SSE Sheshan 30.89 75 P **P** **16 32 20.5 -1.7**
SSE pmax pmax
comp=Z,21nm,0.8s
AKTO Aktyubinsk 30.93 325 P **P** **16 32 23.2 +0.8**
comp=Z,27nm,0.6s,baz=124,slow=8.5,SNR=78
BKNI Bangkinang 30.97 149 P **P** **16 32 23.3 +0.3**
BKNI Bangkinang 30.97 149 P **P** **16 32 23.5 +0.5**
comp=Z,2μmcomp=Z,183nm,0.8s
MYKOM Kota Tinggi 31.09 143 P **P** **16 32 24.1 +0.1**
TPUB Ta-pu 31.66 90 P **P** **16 32 30.0 +0.9**
TPUB IAmb IAmb 16 32 52.8
comp=Z,58nm,1.1s
DL2 Dalian 31.71 60⇑*i*P **P** **16 32 30.5 +1.2**
DL2 S **S** **16 37 41.3 +3.0**
DL2 pmax pmax
comp=Z,170nm,0.9s
DL2 pmax pmax
comp=Z,310nm,3.6s
DL2 LR LR
comp=Z,2μm,13.7s
DL2 LR LR
comp=Z,4μm,16.0s
DL2 LR LR
comp=Z,6μm,14.4s
SSLB Suanglung 31.82 89 P **P** **16 32 31.1 +0.6**
YHNB Yeheng 31.98 87 P **P** **16 32 32.6 +0.6**
TWG Pinlang 32.18 91 P **P** **16 32 33.6 -0.1**
TWG IAmb IAmb 16 32 37.2
comp=Z,80nm,0.9s
YULB Yu-li 32.22 90 P **P** **16 32 35.4 +1.3**
NACB Ninganchiao 32.29 88 P **P** **16 32 35.4 +0.8**
NACB IAmb IAmb 16 32 37.9
comp=Z,84nm,1.0s
QRN Al-Qurain 33.31 281 *e*P 16 32 43.1
UMR Umm Al-Rimmam 33.38 282 *e*P 16 32 44.4
SOCY Socotra 33.57 249 P **P** **16 32 45.6 -0.4**
SOCY IAmb IAmb 16 32 51.5
comp=Z,42nm,0.9s
RDF Al-Radifah 33.60 281 *e*P 16 32 46.4
HIA Hailar 33.69 41 P **P** **16 32 47.5 +0.9**
HIA pmax pmax
comp=Z,63nm,0.9s
HIA Hailar 33.69 41 P **P** **16 32 47.5 +0.9**
HIA IAmb IAmb 16 32 48.7
comp=Z,62nm,0.9s
AKT Akhty 33.90 304 *e*P **P** **16 32 50.4 +1.7**
AKT *e* 16 34 01.8
AKT *e* 16 35 28.1
AKT *e*S **S** **16 38 14.8 +2.2**
AKT pmax pmax
comp=Z,139nm,1.3s
JMBI JAMBI 33.91 147 P **P** **16 32 51.4 +2.6**
comp=Z,126nm,0.9s
RST Umm Al-Ruwaisa 34.01 282 *e*P 16 32 49.5
SVE Sverdlovsk 34.08 335*di*P **P** **16 32 51.5 +1.6**
SVE pmax pmax
comp=Z,175nm,1.5s
SVE MLR MLR
comp=Z,2μm,15.0s
MAK Makhachkala 34.39 306 *e*P P 16 32 47.6 -5.1
MAK *e* 16 34 03.1
MAK *e*S **S** **16 38 15.3 -4.5**
MAK pmax pmax
comp=Z,57nm,0.7s
ARU Arti 34.59 333 P **P** **16 32 55.4 +1.1**
comp=Z,18nm,0.6s,baz=137,slow=5.7,SNR=66
ARU LR LR 16 47 35.2
comp=Z,648nm,21.3s,baz=128,slow=37
ARU Arti 34.59 333*ci*P **P** **16 32 55.4 +1.1**
ARU 16 34 11.6
ARU PPP PPP 16 34 22.2
ARU S **S** **16 38 27.6 +5.0**
ARU SS **SnSn** **16 40 35.9 +1.2**
ARU pmax pmax
comp=Z,59nm,0.7s
ARU MLR MLR
comp=Z,685nm,14.0s
ARU Arti 34.59 333 P **P** **16 32 55.0 +0.7**
ARU IAmb IAmb 16 32 56.6
comp=Z,102nm,1.1s
KSM Kuching 35.14 134 P **P** **16 32 59.8 +0.4**
CN2 Changchun 35.51 53 *e*P **P** **16 33 02.5 +0.1**
CN2 *es*P sP 16 33 09.5 -0.8
CN2 *e*S **S** **16 38 36.0 -1.1**
CN2 pmax pmax
comp=Z,80nm,1.1s
CN2 pmax pmax
comp=Z,220nm,3.0s
CN2 LR LR
comp=Z,1μm,13.0s
CN2 LR LR
comp=Z,1μm,13.0s
CN2 LR LR
comp=Z,2μm,15.0s
PPBI Pangkal Pinang 35.63 143 P **P** **16 33 05.3 +1.7**
GROC Groznyy 35.66 306 *e*P **P** **16 33 03.9 +0.2**
GROC *e*S **S** **16 38 43.0 +3.6**
GROC pmax pmax
comp=Z,157nm,1.2s
SBUM Sibu 35.66 130 P **P** **16 33 05.4 +1.5**
LHSI Lahat 35.77 149 P **P** **16 33 09.2 +4.3**
comp=Z,39nm,1.4s
BOD Bodaibo 35.92 26 *e*P **P** **16 33 06.4 +0.7**
BOD pmax pmax
comp=Z,151nm,1.6s
GNI Garni 35.92 301 P **P** **16 33 07.8 +1.6**
comp=Z,49nm,1.1s,baz=162,slow=2.3,SNR=48
GNI S **S** **16 38 48.5 +4.6**
comp=Z,2.7nm,0.4s,baz=155,slow=7.8,SNR=1.7
GNI Garni 35.92 301*ce*P **P** **16 33 08.8 +2.6**
GNI pmax pmax
comp=Z,76nm,1.2s
GNI Garni 35.92 301 P **P** **16 33 07.3 +1.1**
GNI IAmb IAmb 16 33 11.2
comp=Z,100nm,1.1s
TJN Taejon 35.99 66*ce*P **P** **16 33 06.0 -0.6**
KKM Kota Kinabalu 36.05 121 P **P** **16 33 09.3 +1.8**
KKM IAmb IAmb 16 33 10.6
comp=Z,119nm,1.5s
KS19 Wonju Array Si 36.44 64 P **P** **16 33 08.7 -1.7**
CLDR Caldiran 36.45 299 *e*P **P** **16 33 12.4 +1.6**
KSAR Wonju Array Be 36.45 64 P **P** **16 33 10.1 -0.4**
KSAR Wonju Array Be 36.45 64 P **P** **16 33 10.1 -0.4**
RAYN Ar Rayn 36.48 273 P **P** **16 33 10.8 -0.2**
RAYN pmax pmax
comp=Z,43nm,1.2s
RAYN Ar Rayn 36.48 273 P **P** **16 33 10.8 -0.2**
KSRS Korea Array 36.48 64 P **P** **16 33 10.4 -0.3**
comp=Z,24nm,0.8s,baz=261,slow=8.3,SNR=85
KSRS PcP **PcP** **16 35 34.1 -0.4**
comp=Z,2.6nm,0.9s,baz=280,slow=4.2,SNR=2.2
KSRS ScP **ScP** **16 39 18.1 -2.3**
comp=Z,3.7nm,1.0s,baz=253,slow=4.2,SNR=7.7
KSRS LR LR 16 48 00.1
comp=Z,606nm,18.5s,baz=268,slow=36
CUKT Cukurca 36.57 296 *e*P **P** **16 33 12.7 +1.0**
MDSI Maura Dua 36.66 148 P **P** **16 33 10.9 -1.5**
comp=Z,15nm,0.8s
VANB Van 36.82 298 *e*P **P** **16 33 15.4 +1.6**
TPI Tanjungpandan 36.94 142 P **P** **16 33 16.9 +2.0**
comp=Z,35nm,1.0s
ZEI Tsey 36.94 305 *e*P **P** **16 33 13.6 -1.3**
ZEI pmax pmax
comp=Z,126nm,1.4s
STKI Sintang 36.96 134 P **P** **16 33 17.8 +2.8**
AKH Akhalkalaki 37.03 303⇑P **P** **16 33 18.9 +3.2**
LWLI Liwa 37.07 149 P P 16 33 22.1 +6.0
comp=Z,83nm,0.4s
AKDM Akdamar-Van 37.12 298 *e*P **P** **16 33 18.3 +1.9**
AGRB Hanur-Agry 37.20 300 *e*P **P** **16 33 19.9 +2.7**
NCK Nalchik 37.29 306 *i* P **P** **16 33 18.4 +0.8**
NCK pmax pmax
comp=Z,53nm,0.6s
DGAR Diego Garcia 37.32 202 *i* P **P** **16 33 18.4 +0.4**
BELG Belogornoye 37.51 322 P **P** **16 33 20.0 +0.7**
comp=Z,55nm,0.6s,baz=342,slow=1.4,SNR=27
BELG Belogornoye 37.51 322 P **P** **16 33 20.0 +0.7**
JOW Kunigami 37.59 81 P **P** **16 33 20.5 +0.1**
JTU Tsushima 37.66 69 P **P** **16 33 20.3 -0.5**
JTU IAmb IAmb 16 33 22.7
comp=Z,129nm,1.0s
KASI Kota Agung 37.72 149 P **P** **16 33 26.0 +4.6**
comp=Z,66nm,0.8s
KBZ Khabaz 37.83 306 P **P** **16 33 23.0 +0.9**
comp=Z,14nm,0.9s,baz=156,slow=7.5,SNR=43
KBZ Khabaz 37.83 306*ce*P **P** **16 33 23.2 +1.1**
KBZ pmax pmax
comp=Z,34nm,1.2s
GURO Guroymak-BITLI 37.88 298 *e*P **P** **16 33 25.4 +2.6**
NEY Neytrino 37.88 306*ci*P **P** **16 33 25.5 +2.7**
NEY pmax pmax
comp=Z,21nm,1.3s
GOF Gofitskoye 37.99 309⇑*i*P **P** **16 33 24.8 +1.3**
GOF *e*S **S** **16 39 17.7 +2.8**
GOF pmax pmax
comp=Z,76nm,1.1s
GOF smax smax
comp=N,35nm,1.0s
SHA1 Shidzhatmaz 38.01 306*ci*P **P** **16 33 25.5 +1.6**
KIV Kislovodsk 38.02 307⇑P **P** **16 33 25.5 +1.6**
KIV Kislovodsk 38.02 307 *e*P **P** **16 33 25.1 +1.2**
KIV *e*S **S** **16 39 18.8 +3.2**
KIV pmax pmax
comp=Z,107nm,2.8s
KIV pmax pmax
comp=Z,119nm,1.0s
KIV MLR MLR
comp=Z,1μm,16.0s
KIV Kislovodsk 38.02 307 P **P** **16 33 24.8 +0.8**
KOPR Koprukoy-ERZUR 38.11 300 *e*P **P** **16 33 27.6 +2.8**
CHVG Ch'k'valeri 38.25 305⇓P **P** **16 33 28.8 +3.0**
MYLDM Lahad Datu 38.35 120 P **P** **16 33 27.5 +0.7**
MYLDM IAmb IAmb 16 33 30.2
comp=Z,103nm,1.5s
VRTB Varto-Mus 38.36 299 *e*P **P** **16 33 29.9 +3.0**
SVAN Silvan-Diyarba 38.51 297 *e*P **P** **16 33 30.5 +2.4**
MDJ Mudanjiang 38.59 52 P **P** **16 33 28.3 -0.3**
MDJ pP pP 16 33 32.0 -2.5
MDJ sP sP 16 33 33.8 -2.7
MDJ pmax pmax
comp=Z,29nm,0.9s
MDJ pmax pmax
comp=Z,220nm,8.2s
MDJ LR LR
comp=Z,890nm,10.0s
MDJ LR LR
comp=Z,1μm,12.1s
MDJ LR LR
comp=Z,3μm,14.2s
MDJ Mudanjiang 38.59 52 P **P** **16 33 28.7 +0.2**
JSU Suzuyama 38.76 73 P **P** **16 33 30.3 0.0**
JSU IAmb IAmb 16 33 31.8
comp=Z,80nm,1.0s
BNGB Bingl 38.95 299 *e*P **P** **16 33 34.3 +2.5**
CHOM Cayeli-Rize 39.04 302 *e*P **P** **16 33 34.9 +2.5**
YEDI Yedisu-Bingol 39.08 299 *e*P **P** **16 33 35.0 +2.0**
PBKI Pangkalan Bun 39.23 136 P **P** **16 33 37.5 +3.3**
comp=Z,139μmcomp=Z,3μmcomp=Z,178nm,1.0s
DYBB Diyarbakir 39.34 297 *e*P **P** **16 33 37.4 +2.4**
MSHR Mys Shultsa 39.40 56*ce*P **P** **16 33 36.2 +0.8**
MSHR pmax pmax
comp=Z,63nm,1.0s
DBJI Dramaga 39.69 146 P P 16 33 49.2 +11
KIRV Kirov 39.77 331 P **P** **16 33 39.1 +0.9**
comp=Z,85nm,0.6s,baz=123,slow=4.7,SNR=43
KIRV Kirov 39.77 331*ce*P **P** **16 33 39.3 +1.1**
KTUT Trabzon 39.78 302⇑P **P** **16 33 40.8 +2.3**
ZEA Zeya 39.84 38 *e*P **P** **16 33 40.0 +1.1**
ZEA *e*S **S** **16 39 34.5 -8.1**
ZEA pmax pmax
comp=E,20nm,0.7s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.8s
ZEA pmax pmax
comp=Z,100nm,4.1s
ZEA MLR MLR
comp=E,2μm,13.0s
ZEA MLR MLR
comp=N,2μm,16.0s
ZEA MLR MLR
comp=Z,3μm,15.0s
GUZR Guzeripl' **39.86 306***ci*P **P** **16 33 40.4 +1.1**
MTKI Muara Teweh, K 39.95 131 P **P** **16 33 42.2 +2.0**
comp=Z,21nm,0.8s
SOC Sochi 40.09 306 *e*P **P** **16 33 39.8 -1.3**
SOC *e* 16 35 10.7
SOC *e*S **S** **16 39 48.3 +1.8**
SOC pmax pmax
comp=Z,28nm,0.9s
SOC MLR MLR
comp=Z,202nm,17.0s
USA0B Ussuriysk Arra 40.22 53*ci*P **P** **16 33 42.7 +0.6**
USA0B Ussuriysk Arra 40.22 53 P **P** **16 33 42.2 +0.1**
USRK Ussuriysk Ar. 40.22 53 P **P** **16 33 42.5 +0.4**
comp=Z,22nm,0.8s,baz=259,slow=8.1,SNR=57
USRK LR LR 16 51 22.5
comp=Z,598nm,21.7s,baz=249,slow=38
USRK Ussuriysk Ar. 40.22 53 P **P** **16 33 42.3 +0.2**
URFA Urfa 40.38 296 *e*P **P** **16 33 44.9 +1.2**
JMZ Minamidaito 2 40.39 82 P **P** **16 33 44.3 +0.5**
JMZ IAmb IAmb 16 33 46.4
comp=Z,130nm,1.0s
VRH Novokhopyorsk 40.46 318 *e*P **P** **16 33 44.3 +0.3**
VRH pmax pmax
comp=Z,440nm,1.4s
VRH MLR MLR
comp=Z,970nm,16.0s
JHS Saijyo 40.70 68 P **P** **16 33 46.0 -0.2**
MALT Malatya 40.70 297 *e*P **P** **16 33 48.7 +2.4**
KLR Kul'dur 41.04 46 P **P** **16 33 49.0 +0.2**
comp=Z,39nm,0.9s,baz=265,slow=8.8,SNR=76
KLR Kul'dur 41.04 46*ce*P **P** **16 33 49.3 +0.5**
KLR pmax pmax
comp=Z,50nm,1.0s
JMN Monobe 41.42 70 P **P** **16 33 51.0 -1.2**
JMN IAmb IAmb 16 33 54.7
comp=Z,109nm,0.8s
DARE Darende-Malaty 41.44 298 *e*P **P** **16 33 54.7 +2.3**
NRIK Noril'sk 41.58 1 P **P** **16 33 54.6 +1.5**
comp=Z,147nm,0.5s,baz=167,slow=6.4,SNR=433
NRIK PcP **PcP** **16 35 50.9 +0.9**
comp=Z,19nm,0.8s,baz=135,slow=5.7,SNR=2.6
NRIK LR LR 16 53 22.7
comp=Z,4μm,18.6s,baz=184,slow=39
NRIK Noril'sk 41.58 1 P **P** **16 33 54.2 +1.1**
NRIK 16 35 50.9

NRIK						pmax	pmax			YAK				*e*SS	**pS**	16 41 02.3	+0.5	**MFTR**	**Murfatlar**	48.27 306	⇓P	**P**	16 34 47.8	+1.2
	comp=Z,394nm,1.1s									YAK				*e*SS	**ScS**	16 44 16.0	+0.8	**TPGR**	**Topolog**	48.28 307	⇑P	**P**	16 34 47.9	+1.2
NRIK	**Noril'sk**	**41.58**	**1**	P	**P**	**16 33 54.2**	**+1.1**	YAK				*e*SSS	SSS	16 45 00.1		**KULA**	**Kula-Manisa**	48.35 298	*e*P	**P**	16 34 47.9	+0.4
RSDY	**Resadiye-TOKAT**	**41.60 301**		*e*P	**P**	**16 33 55.6**	**+2.0**	YAK					pmax	pmax		**SORM**	**Soroca**	48.43 311	⇓P	**P**	16 34 48.2	+0.5
GAZ	**Gaziantep**	**41.67 296**		*e*P	**P**	**16 33 56.2**	**+1.9**		comp=Z,99nm,0.8s							**CTYL**	**Yalikoy Yolu**	48.44 302	*e*P	**P**	16 34 48.7	+0.8
GAZ	**Gaziantep**	**41.67 296**		P	**P**	**16 33 55.8**	**+1.4**	YAK					pmax	pmax		**KCTX**	**Karacabey (Bur**	48.45 300	*e*P	**P**	16 34 48.9	+0.8
GAZ				IAmb	IAmb	16 33 57.4			comp=N,24nm,1.1s							**CFR**	**Carcaliu**	48.48 307	⇑P	**P**	16 34 49.0	+0.8
	comp=Z,109nm,1.1s							YAK					pmax	pmax		**SLVT**	**Silivri**	48.51 302	*e*P	**P**	16 34 49.5	+1.0
BBKI	**Banjar Baru**	**41.80 133**		P	**P**	**16 33 57.5**	**+2.0**		comp=E,69nm,1.3s							**HARR**	**Harsova**	48.62 306	⇑P	**P**	16 34 50.4	+1.1
	comp=Z,2µmcomp=Z,100nm,1.1s							YAK					pmax	pmax		**VARL**	**Varlezi**	48.69 308	⇑P	**P**	16 34 51.7	+1.9
SVSK	**Karacayir**	**41.84 300**		*e*P	**P**	**16 33 57.7**	**+2.2**		comp=Z,89nm,3.1s							**VASR**	**Vaslui**	48.75 309	⇓P	**P**	16 34 51.3	+1.0
VORD	**Divnogorie**	**41.86 317**		*e*P	**P**	**16 33 55.7**	**+0.2**	YAK					pmax	pmax		**EDC**	**Edincik**	48.82 301	*e*P	**P**	16 34 51.6	+0.6
VORD				pmax	pmax				comp=N,62nm,3.1s							**PETR**	**Petresti**	49.12 308	⇑P	**P**	16 34 55.1	+2.0
	comp=Z,170nm,1.1s							YAK					pmax	pmax		**PUL**	**Pulkovo**	49.15 327	*ce*P	**P**	16 34 54.5	+1.4
ANN	**Anapa**	**41.88 307**		*e*P	**P**	**16 33 55.8**	**+0.1**		comp=E,100nm,2.7s							PUL				pmax	pmax			
ANN				*e*		16 35 34.3		YAK					smax	smax			comp=Z,271nm,0.8s							
ANN				*e*		16 35 47.8			comp=N,20nm,1.5s							**ODBI**	**Odobesti**	49.24 308	⇑P	**P**	16 34 56.2	+2.1
ANN				*e*PPP	PPP	16 36 00.7		YAK					smax	smax		**KRBG**	**Karabiga-Canak**	49.25 301	*e*P	**P**	16 34 54.8	+0.6
ANN				*e*S	**S**	**16 40 14.2**	**+1.2**		comp=E,23nm,1.5s							**MNK**	**Minsk**	49.38 319	*e*P	**P**	16 34 54.0	-0.9
ANN				pmax	pmax			YAK					MLR	MLR		MNK				pmax	pmax			
	comp=Z,71nm,0.7s								comp=Z,674nm,15.0s								comp=Z,310nm,2.0s							
ANN				MLR	MLR			YAK					MLR	MLR		**MNK**	**Minsk**	49.38 319	*i* P	**P**	16 34 54.0	-1.0
	comp=Z,512nm,15.0s								comp=N,182nm,17.0s								comp=E,20nm,1.3s							
KMRS	**Kahramanmaras**	**41.91 296**		*e*P	**P**	**16 33 58.0**	**+1.8**	YAK					MLR	MLR		MNK			*i* P	**P**	16 34 54.0	-1.0
VSR	**Storozhevoye**	**42.00 317**		*e*P	**P**	**16 33 56.7**	**0.0**		comp=E,548nm,15.0s								comp=N,28nm,1.2s							
VSR				pmax	pmax			**YAK**	**Yakutsk**	**44.74**	**28**	P	**P**	**16 34 18.9**	**+0.3**	MNK			*i* P	**P**	16 34 54.0	-1.0
	comp=Z,120nm,0.9s							**ABJI**	**Asem Bagus**	**44.80**	**138**	P	**P**	**16 34 21.8**	**+2.1**		comp=Z,117nm,1.1s							
VSR				MLR	MLR				comp=E,102nm,1.0s							MNK			*i* PcP	**PcP**	**16 36 15.8**	**-1.4**	
	comp=Z,1µm,14.0s							**TTSI**	**Tana Toraja**	**44.85**	**128**	P	**P**	**16 34 22.1**	**+2.0**	MNK			*i* PP	**PP**	**16 36 48.2**	**-0.6**	
SMRI	**Semarang**	**42.03 142**		P	**P**	**16 34 00.2**	**+2.9**		comp=E,1µmcomp=E,145nm,1.0s							MNK			*i* PPP	PPP	16 37 40.4		
	comp=Z,273nm,1.1s							**AFSR**	**Afar-Bala (An**	**44.87 299**		*e*P	**P**	**16 34 20.5**	**+0.4**	MNK			*i* S	**S**	**16 42 01.4**	**+0.5**	
VORR	**Voronezh**	**42.10 318**		*e*P	**P**	**16 33 57.0**	**-0.5**	**CSS**	**Mathiatis**	**44.96 293**		P	**P**	**16 34 20.4**	**-0.5**	MNK			*i* SS	**SS**	**16 45 35.5**	**+3.2**	
VORR				pmax	pmax			CSS				IAmb	IAmb	16 34 29.4		MNK			*i* SSS	SSS	16 46 54.2		
	comp=Z,400nm,1.4s								comp=Z,41nm,0.9s							MNK			*i* LQ	LQ	16 52 15.2		
TOKT	**Tokat**	**42.19 300**		*e*P	**P**	**16 34 00.5**	**+2.0**	**ANTO**	**Ankara**	**45.07 300**		P	**P**	**16 34 21.3**	**-0.4**	MNK			*i* LR	LR	16 56 01.2		
SARI	**SarD1z-Kayseri**	**42.28 298**		*e*P	**P**	**16 34 00.5**	**+1.1**	ANTO				pmax	pmax			MNK			*i* LRM	MLR	16 58 03.2		
TAHT	**Tahtakopru-Hat**	**42.53 295**		*e*P	**P**	**16 34 03.0**	**+1.8**		comp=Z,71nm,1.3s								comp=Z,1µm,19.6s							
LPSR	**Galich'ya Gora**	**42.53 319**		*e*P	**P**	**16 34 01.5**	**+0.5**	**ANTO**	**Ankara**	**45.07 300**		P	**P**	**16 34 21.3**	**-0.4**	MNK			*i* LRM	MLR	16 58 06.1		
LPSR				pmax	pmax			ANTO				IAmb	IAmb	16 34 24.2			comp=E,83nm,18.1s							
	comp=Z,330nm,1.1s								comp=Z,71nm,1.2s							MNK			*i* LRM	MLR	16 58 11.3		
LPSR				MLR	MLR			**LOD**	**Lodumlu**	**45.09 300**		*e*P	**P**	**16 34 22.0**	**+0.1**		comp=N,345nm,16.6s							
	comp=Z,2µm,19.0s							**KLMR**	**Klimovskoe**	**45.24 330**		*e*P	**P**	**16 34 20.9**	**-1.7**	**VRI**	**Vrincioaia**	49.47 308	⇑P	**P**	16 34 57.5	+1.7
JWT	**Wachi**	**42.55**	**67**	P	**P**	**16 34 02.1**	**+0.7**	KLMR				*e*		16 36 02.3		**PLOR**	**Plostina**	49.53 308	⇑P	**P**	16 34 58.3	+2.0
KVT	**Kavak**	**42.59 301**		*e*P	**P**	**16 34 03.6**	**+1.8**	KLMR				*e*S	**S**	**16 41 00.0**	**-1.8**	**TESR**	**Tescani**	49.53 309	⇑P	**P**	16 34 57.3	+1.0
XMIS	**Christmas Isla**	**42.63 150**		P	**P**	**16 34 02.5**	**+0.4**	KLMR				*e*SS	**SS**	**16 44 22.9**	**-1.4**	**GCAM**	**G?zelcaml?**	49.55 297	*e*P	**P**	16 34 57.3	+0.7
XMIS				IAmb	IAmb	16 34 16.3		KLMR				pmax	pmax			**ISR**	**Istrita**	49.61 307	⇑P	**P**	16 34 58.5	+1.5
	comp=Z,123nm,1.4s								comp=Z,185nm,1.2s							**DKL**	**Dikili**	49.67 299	*e*P	**P**	16 34 57.8	+0.4
TOLI2	**Tolitoli**	**42.71 122**		P	**P**	**16 34 02.8**	**-0.1**	KLMR				MLR	MLR			**NEHR**	**Nehoiu**	49.78 307	⇑P	**P**	16 34 59.9	+1.7
BNN	**Bunyan**	**42.72 298**		*e*P	**P**	**16 34 03.5**	**+0.6**		comp=Z,840nm,12.0s							**TIXI**	**Tiksi**	49.83 16	P	**P**	16 34 58.5	+0.4
KOZT	**Kozan**	**42.77 296**		*e*P	**P**	**16 34 04.9**	**+1.7**	**KLMR**	**Klimovskoe**	**45.24 330**		*e*P	**P**	**16 34 20.9**	**-1.7**		comp=N,55nm,0.5s,baz=221,slow=4.1,SNR=261							
UGM	**Wanagama**	**42.79 142**		P	**P**	**16 34 02.9**	**-0.7**	KLMR				AMP		16 34 24.6		TIXI				S	**S**	**16 42 05.4**	**-1.3**	
CEYT	**Ceyhan**	**42.85 295**		*e*P	**P**	**16 34 06.0**	**+2.2**		comp=Z,185nm,1.2s								comp=N,1.5nm,0.8s,baz=270,slow=17,SNR=6.0							
DIKM	**Dikmen**	**43.21 302**		⇑P	**P**	**16 34 08.3**	**+1.6**	KLMR				*e*PcP	**PcP**	**16 36 02.3**	**-0.1**	TIXI				PKP2ab		17 06 40.5		
DIKM	**Dikmen**	**43.21 302**		*e*P	**P**	**16 34 08.0**	**+1.3**	KLMR				*e*S	**S**	**16 41 00.0**	**-1.8**		comp=N,0.7nm,0.3s,baz=228,slow=0.9,SNR=3.6							
SNOP	**Sinop**	**43.26 303**		*e*P	**P**	**16 34 08.2**	**+1.1**	KLMR				*e*S	**S**	**16 41 00.0**	**-1.8**	**TIXI**	**Tiksi**	49.83 16	P	**P**	16 34 58.2	+0.1
ATD	**Arta Tunnel**	**43.33 257**		P	**P**	**16 34 08.8**	**+0.8**	KLMR				*e*SS	**SS**	**16 44 23.0**	**-1.4**	**PRAR**	**RASCA**	49.83 310	⇓P	**P**	16 35 00.1	+1.6
	comp=Z,17nm,0.8s,baz=73,slow=8.7,SNR=8.0							KLMR				*e*SS	**SS**	**16 44 23.0**	**-1.4**	**SMG**	**Samos**	49.87 297	P	**P**	16 34 59.5	+0.5
ATD	**Arta Tunnel**	**43.33 257**		P	**P**	**16 34 07.9**	**-0.1**	KLMR				LQ	LQ	16 49 47.1		**GELI**	**Tayfur-Gelibol**	49.88 301	*e*P	**P**	16 34 59.9	+0.9
KARA	**Karaisali**	**43.39 296**		*e*P	**P**	**16 34 09.9**	**+1.7**	KLMR				LQ	LQ	16 49 47.1		**KARP**	**Karpathos**	49.89 294	P	**P**	16 34 59.8	+0.6
MMAI	**Mount Meron Ar**	**43.46 290**		P	**P**	**16 34 11.5**	**+2.6**	KLMR				LR	LR	16 52 45.5		**BIZ**	**Bicaz**	49.91 309	⇑P	**P**	16 35 00.3	+1.2
	comp=Z,24nm,0.9s,baz=84,slow=8.7,SNR=21							KLMR				AMP		16 54 34.8		**MLR**	**Muntele Rosu**	50.02 307	P	**P**	16 35 02.1	+2.0
MMAI				PcP	**PcP**	**16 35 58.7**	**+1.7**		comp=Z,840nm,12.1s								comp=N,144nm,0.9s,baz=81,slow=2.1,SNR=148							
	comp=Z,6.6nm,0.8s,baz=75,slow=6.1,SNR=2.9							**JAGI**	**Jajag, Banyuwa**	**45.29 139**		P	**P**	**16 34 23.2**	**-0.4**	**MLR**	**Muntele Rosu**	50.02 307	⇑P	**P**	16 35 02.2	+2.0
CORM	**Corum**	**43.66 300**		*e*P	**P**	**16 34 11.0**	**+0.5**	JAGI				IAmb	IAmb	16 34 49.6		**MLR**	**Muntele Rosu**	50.02 307	P	**P**	16 35 01.8	+1.6
MERS	**Mersin**	**43.84 295**		*e*P	**P**	**16 34 13.5**	**+1.6**		comp=Z,48nm,1.0s							**EZN**	**Ezine**	50.04 300	*e*P	**P**	16 35 00.8	+0.6
MRSI	**Marisa**	**43.99 122**		P	**P**	**16 34 15.3**	**+2.0**	**LEF**	**Lefka**	**45.30 293**	⇓P	**P**	**16 34 25.1**	**+1.7**	**NACGM**	**Naroch**	50.06 320	*i* P	**P**	16 35 00.9	+0.7
	comp=Z,842nmcomp=Z,92nm,0.8s							**LEF**	**Lefka**	**45.30 293**	*e*P	**P**	**16 34 25.2**	**+1.7**	NACGM			*i* P	**P**	16 35 00.9	+0.7
KMMI	**Kalianget**	**44.05 138**		P	P	16 34 21.7	+8.0	**SPSI**	**Sidrap Palu**	**45.47 129**		P	**P**	**16 34 27.3**	**+2.3**	NACGM			*i* P	**P**	16 35 00.9	+0.7
JGF	**Kuroka**	**44.12**	**66**	P	**P**	**16 34 13.3**	**-0.8**		comp=Z,739nmcomp=Z,45nm,0.9s							NACGM			*i* PcP	**PcP**	**16 36 15.7**	**-4.0**	
BZK	**Bozkurt**	**44.16 303**		⇑P	**P**	**16 34 16.0**	**+1.7**	**LADK**	**Ladik-KONYA**	**45.47 297**	*e*P	**P**	**16 34 25.0**	**0.0**	NACGM			*i* PP	**PP**	**16 37 00.5**	**+5.4**	
BZK	**Bozkurt**	**44.16 303**		*e*P	**P**	**16 34 15.8**	**+1.5**	**KMSI**	**Cibinong**	**45.48 120**		P	**P**	**16 34 28.3**	**+3.2**	NACGM			*i* PPP	PPP	16 38 00.4		
KIZK	**Mersin**	**44.16 295**		*e*P	**P**	**16 34 15.6**	**+1.2**		comp=Z,1µmcomp=Z,135nm,1.0s							NACGM			*i* S	**S**	**16 42 10.5**	**0.0**	
EREN	**Erenkoy**	**44.22 293**		*e*P	**P**	**16 34 16.8**	**+1.9**	**KONT**	**Konya--Tatoy**	**45.49 297**	*e*P	**P**	**16 34 26.2**	**+1.2**	NACGM			*i* ScS	ScS	16 44 12.9	-38	
MOS	**Moscow**	**44.23 323**		*e*P	**P**	**16 34 14.0**	**-0.6**	**LUWI**	**Luwuk**	**45.62 123**		P	**P**	**16 34 25.8**	**-0.4**	NACGM			*i* SS	SS	16 45 29.4	-14	
MOS				*e*S	**S**	**16 40 41.0**	**-6.3**	LUWI				IAmb	IAmb	16 34 50.8		NACGM			*i* SSS	SSS	16 47 22.6		
MOS				*e*SS	**SS**	**16 43 59.5**	**-5.8**		comp=Z,64nm,0.8s							NACGM			*i* LQ	LQ	16 53 09.5		
MOS				pmax	pmax			**SRBI**	**Singaraja**	**45.62 137**		P	**P**	**16 34 28.5**	**+2.4**	NACGM			*i* LR	LR	16 56 47.2		
	comp=Z,245nm,1.5s								comp=Z,2µmcomp=Z,112nm,1.6s							**PRK**	**Paraskevi**	50.14 299	P	**P**	16 35 02.0	+1.0
MOS				pmax	pmax			**GAZI**	**Gazipasa**	**45.66 295**	*e*P	**P**	**16 34 27.0**	**+0.7**	**IDID**	**Didziasalis**	50.15 320	*e*P	**P**	16 35 01.2	+0.4
	comp=Z,600nm,1.8s							**BNSI**	**Bone**	**46.02 129**	P	P	16 34 39.9	+11	**ALN**	**Alexandroupoli**	50.16 301	P	**P**	16 35 01.1	-0.1
MOS				MLR	MLR			**SVRH**	**Sivrihisar-ESK**	**46.06 299**	*e*P	**P**	**16 34 30.3**	**+0.7**	**ALN**	**Alexandroupoli**	50.16 301	P	**P**	16 35 01.7	+0.6
	comp=E,2µm,17.0s							**KDZE**	**Karadeniz Ereo**	**46.07 302**	⇓P	**P**	**16 34 30.9**	**+1.3**	ALN				pmax	pmax			
MOS				MLR	MLR			**KAPI**	**Kappang**	**46.21 130**		P	**P**	**16 34 30.8**	**-0.1**		comp=Z,80nm,1.4s							
	comp=Z,2µm,17.0s							KAPI				pmax	pmax			**ALN**	**Alexandroupoli**	50.16 301		P	**P**	**16 35 01.7**	**+0.6**
SIM	**Simferopol'**	**44.24 307**		*e*P	**P**	**16 34 14.5**	**-0.4**		comp=Z,57nm,1.2s							ALN				IAmb	IAmb	16 35 03.3		
SIM				S	**S**	**16 40 47.0**	**-0.7**	**KAPI**	**Kappang**	**46.21 130**		P	**P**	**16 34 30.8**	**-0.1**		comp=Z,80nm,1.4s							
SIM				pmax	pmax			KAPI				IAmb	IAmb	16 34 38.8		**YUK**	**Yuzh-Kuril'sk**	50.17 54	*c i* P	**P**	16 35 01.1	-0.1	
	comp=Z,259nm,1.3s								comp=Z,57nm,1.2s							**LVZ**	**Lovozero**	50.24 337	*ce*P	**P**	16 35 01.4	0.0	
GRNR	**Gornyy**	**44.32**	**45**	⇑ *i* P	**P**	**16 34 16.0**	**+0.5**	**MDUB**	**Mudurnu**	**46.28 301**	P	**P**	**16 34 30.7**	**-0.6**	LVZ				pmax	pmax			
GRNR				*e*S	**S**	**16 40 53.9**	**+5.1**	**JYT**	**Yasato**	**46.35**	**65**	P	**P**	**16 34 30.0**	**-1.8**		comp=Z,199nm,1.0s							
GRNR				pmax	pmax			**JHJ**	**Hachijo jima 2**	**46.40**	**70**	P	**P**	**16 34 32.0**	**-0.2**	**LVZ**	**Lovozero**	50.24 337	P	**P**	16 35 01.2	-0.2
	comp=E,20nm,1.2s								comp=Z,90nm,0.8s,baz=244,slow=9.1,SNR=4.6							**CHOS**	**Chios Island**	50.40 298	P	**P**	16 35 03.8	+0.7
GRNR				pmax	pmax			**JHJ2**	**Mitsune**	**46.42**	**70**	P	**P**	**16 34 31.4**	**-1.0**	**DOPR**	**Dopca**	50.41 308	⇑P	**P**	16 35 04.3	+1.3
	comp=N,5.0nm,0.7s							**CIFT**	**Cifteler, Eski**	**46.42 299**	*e*P	**P**	**16 34 32.9**	**+0.5**	**IIGN**	**Ignalina**	50.44 320	*e*P	**P**	16 35 02.3	-0.8
GRNR				pmax	pmax			**JMM**	**Marumori**	**46.68**	**63**	P	**P**	**16 34 33.8**	**-0.6**	**SIGR**	**SIGRI**	50.47 299	P	**P**	16 35 03.4	-0.1
	comp=Z,40nm,1.2s							**SRCK**	**Saricakaya, Es**	**46.73 300**	*e*P	**P**	**16 34 35.5**	**+0.8**	**ZIMR**			50.49 305	⇑P	**P**	16 35 05.2	+1.6
GRNR				smax	smax			**JTM**	**Tenmabayashi**	**46.74**	**59**	P	**P**	**16 34 32.5**	**-2.2**	**BURAR**	**Bucovina Array**	50.52 310	⇑P	**P**	16 35 05.1	+1.1
	comp=E,8.0nm,1.0s							JTM				IAmb	IAmb	16 34 37.2		**BURAR**	**Bucovina Array**	50.52 310	P	**P**	16 35 03.7	-0.2
GRNR				MLR	MLR				comp=Z,109nm,1.1s							BURAR			pP	**pP**	**16 35 10.0**	**0.0**	
	comp=N,430nm,11.0s							**GULT**	**Gulveren**	**46.80 301**	*e*P	**P**	**16 34 36.0**	**+0.6**	**APA**	**Apatity**	50.52 337	⇓ *i* P	**P**	16 35 02.5	-1.0	
GRNR				MLR	MLR			**SHUT**	**Suhut-Afyon**	**46.87 298**	*e*P	**P**	**16 34 36.9**	**+0.9**	APA				pmax	pmax			
	comp=E,740nm,11.0s							**ISP**	**Isparta**	**46.95 297**	P	**P**	**16 34 35.9**	**-0.7**		comp=Z,44nm,0.8s							
GRNR				MLR	MLR			ISP				pmax	pmax			APA				MLR	MLR			
	comp=Z,1µm,10.0s								comp=Z,71nm,1.2s								comp=Z,2µm,11.0s							
EIL	**Elat**	**44.35 285**		P	**P**	**16 34 17.5**	**+1.5**	**ISP**	**Isparta**	**46.95 297**		P	**P**	**16 34 35.9**	**-0.7**	**MMRI**	**Maumere**	50.53 130	P	**P**	16 35 02.6	-1.5	
	comp=Z,14nm,0.8s,baz=68,slow=2.4,SNR=12							ISP				IAmb	IAmb	16 34 38.2		MMRI				IAmb	IAmb	16 35 04.1		
EIL				S	**S**	**16 40 50.5**	**+0.7**		comp=Z,71nm,1.2s								comp=Z,83nm,0.8s							
	comp=Z,4.4nm,1.1s,baz=84,slow=18,SNR=1.2							**KORT**	**Korkueli**	**47.16 296**	*e*P	**P**	**16 34 39.2**	**+0.9**	**MMRI**	**Maumere**	50.53 130	P	**P**	16 35 03.7	-0.5	
KAMT	**Kaman**	**44.37 299**		*e*P	**P**	**16 34 17.3**	**+1.1**	**ADVT**	**Abdulvahap**	**47.39 301**	*e*P	**P**	**16 34 40.5**	**+0.6**		comp=Z,1µmcomp=Z,109nm,0.7s							
YESY	**Yesilyurt**	**44.41 297**		*e*P	**P**	**16 34 18.1**	**+1.6**	**HRT**	**Hereke**	**47.43 301**	*e*P	**P**	**16 34 40.8**	**+0.6**	**RDO**	**Rodhopi**	50.53 302	P	**P**	16 35 04.4	+0.5
BR131	**Keskin Array S**	**44.42 299**	*c i* P		**P**	**16 34 17.0**	**+0.3**	**SILT**	**Sile**	**47.43 302**	*e*P	**P**	**16 34 40.9**	**+0.7**	**ISAL**	**Salakas**	50.53 321	*e*P	**P**	16 35 03.8	+0.1
BR131	**Keskin Array S**	**44.42 299**	P		**P**	**16 34 16.7**	**+0.1**	**ELL**	**Elmali**	**47.54 296**	*e*P	**P**	**16 34 42.3**	**+1.1**	**BUR08**	**Bucovina Ar. S**	50.53 310	P	**P**	16 35 03.9	-0.1	
BRTR	**Keskin Array B**	**44.42 299**	P		**P**	**16 34 17.4**	**+0.8**	**ELL**	**Elmali**	**47.54 296**	P	**P**	**16 34 41.8**	**+0.6**	BUR08				IAmb	IAmb	16 35 06.1		
	comp=Z,13nm,0.8s,baz=111,slow=7.0,SNR=75							**ELL**	**Elmali**	**47.54 296**	P	**P**	**16 34 41.8**	**+0.6**		comp=Z,51nm,1.1s							
BRTR				PcP	**PcP**	**16 36 00.6**	**+0.3**	**TVSB**	**Tavsanli**	**47.66 299**	*e*P	**P**	**16 34 42.0**	**-0.1**	**SMTH**	**Samothraki Isl**	50.59 301	P	**P**	16 35 04.6	+0.2
	comp=Z,5.4nm,0.9s,baz=151,slow=4.8,SNR=2.5							**GEMT**	**Gemlik**	**47.81 301**	*e*P	**P**	**16 34 43.6**	**+0.5**	**VOIR**		50.66 307	⇑P	**P**	16 35 05.8	+0.9
BRTR				ScP	**ScP**	**16 39 49.5**	**-2.1**	**ASAJ**	**Asahikawa**	**47.82**	**54**	P	**P**	**16 34 43.5**	**+0.4**	**VSU**	**Vasula**	50.66 324	*e*P	**P**	16 35 05.1	+0.4
	comp=Z,2.2nm,0.8s,baz=121,slow=4.9,SNR=4.4								comp=Z,30nm,0.7s,baz=253,slow=7.5,SNR=19							**STFAR**	**Stefanesti-Arg**	50.73 307	⇑P	**P**	16 35 07.2	+1.8
BRTR	**Keskin Array B**	**44.42 299**		P	**P**	**16 34 16.9**	**+0.3**	**JKA**	**Kamikawa-asahi**	**47.82**	**54**	P	**P**	**16 34 42.9**	**-0.3**	**ARR**	**Arges**	50.95 307	⇑P	**P**	16 35 08.3	+1.2
SERE	**Sereflikochisa**	**44.50 298**		*e*P	**P**	**16 34 18.6**	**+1.4**	JKA				IAmb	IAmb	16 34 46.5		**APE**	**Apeiranthos**	50.98 297	⇑P	**P**	16 35 08.4	+0.9
OBN	**Obninsk**	**44.61 322**		P	**P**	**16 34 18.3**	**+0.7**		comp=Z,58nm,0.9s							**ARCR**	**ARCALIA**	51.11 310	⇑P	**P**	16 35 10.1	+1.9
	comp=Z,29nm,0.8s,baz=63,slow=2.1,SNR=46							**KSL**	**Kastellorizon**	**47.86 295**	P	**P**	**16 34 43.2**	**-0.4**	**SANT**	**Santorini**	51.14 296	⇑P	**P**	16 35 08.8	+0.2
OBN	**Obninsk**	**44.61 322**	⇑P		**P**	**16 34 18.5**	**+0.9**	**ISK**	**Istanbul-Kandi**	**47.88 301**	*e*P	**P**	**16 34 44.2**	**+0.6**	**SANT**	**Santorini**	51.14 296	P	**P**	16 35 08.1	-0.5	
OBN	**Obninsk**	**44.61 322**	*c i* P		**P**	**16 34 18.0**	**+0.3**	**KLYT**	**Kilyos**	**47.88 302**	*e*P	**P**	**16 34 44.6**	**+1.0**	**THR3**	**Thira Island,**	51.18 296	P	**P**	16 35 09.1	+0.2	
OBN			*e*			16 34 23.5		**TLCR**		**48.00 307**	⇑P	**P**	**16 34 45.3**	**+0.8**	**SNT5**	**Nea Kammeni, S**	51.18 296	P	**P**	16 35 08.8	-0.1	
OBN			*i*			16 36 00.6		**YSS**	**Yuzh-Sakhalins**	**48.00**	**51**	⇑ *e*P	**P**	**16 34 45.4**	**+0.9**	**NPS**	**Neapolis**	51.19 294	P	**P**	16 35 09.2	+0.2
OBN			*i*			16 34 04.6		YSS				*e*S	**S**	**16 41 40.2**	**-1.5**	**KAVA**	**Kavala**	51.31 302	P	**P**	16 35 10.6	+0.8
OBN			*i*	S	**S**	**16 40 48.5**	**-4.3**		comp=Z,100nm,1.0s							**LVV**	**L'vov**	51.34 313	*e*P	**P**	16 35 10.3	+0.4
OBN			*i*	SS	**SS**	**16 44 12.8**	**+0.1**	YSS				pmax	pmax			LVV			*e*		16 36 19.8		
	comp=Z,225nm,1.1s								comp=Z,400nm,3.8s							LVV			*e*S	**S**	**16 42 24.9**	**-3.5**	
OBN				pmax	pmax			YSS				MLR	MLR			LVV			*e*PS	SPn	16 42 37.0	+1.1	
	comp=Z,2µm,19.0s								comp=Z,1µm,12.0s							LVV			*e*		16 44 53.1		
OBN	**Obninsk**	**44.61 322**		P	**P**	**16 34 18.1**	**+0.5**	YSS				MLR	MLR			LVV			*e*SS	**SS**	**16 46 07.2**	**+3.3**	
JSD	**Sado**	**44.67**	**63**	P	**P**	**16 34 17.8**	**-0.7**		comp=E,900nm,14.0s							LVV			pmax	pmax			
GTOI	**Gorontalo**	**44.70 121**		P	**P**	**16 34 18.7**	**-0.2**	**YSS**	**Yuzh-Sakhalins**	**48.00**	**51**	P	**P**	**16 34 42.3**	**-2.2**		comp=Z,10.0nm,1.4s							
	comp=Z,458nmcomp=Z,43nm,1.1s							**AKASG**	**Malin Array Be**	**48.08 314**		P	**P**	**16 34 45.0**	**-0.1**	LVV				MLR	MLR			
MAJO	**Matsushiro**	**44.73**	**65** *c i* P		**P**	**16 34 18.8**	**-0.2**		comp=E,8.7nm,0.5s,baz=75,slow=7.3,SNR=115								comp=N,100nm,14.0s							
MAJO				pmax	pmax			AKASG				PcP	**PcP**	**16 36 11.6**	**-1.0**	LVV				MLR	MLR			
	comp=Z,74nm,1.9s								comp=E,7.9nm,0.8s,baz=80,slow=5.8,SNR=4.3								comp=E,400nm,14.0s							
MAJO	**Matsushiro**	**44.73**	**65**	P	**P**	**16 34 18.6**	**-0.3**	AKASG				PP	**PP**	**16 36 37.8**	**+0.8**	LVV				MLR	MLR			
MAT	**Matsushiro**	**44.73**	**65**	P	**P**	**16 34 18.6**	**-0.4**		comp=E,6.1nm,0.6s,baz=80,slow=9.2,SNR=5.2								comp=Z,500nm,14.0s							
MAT				S	**S**	**16 40 54.4**	**-0.7**	AKASG				LR	LR	16 57 59.6		**LOT**	**Lotru**	51.55 307	⇑P	**P**	16 35 12.6	+0.9
MJAR	**Matsushiro Arr**	**44.73**	**65**	P	**P**	**16 34 19.3**	**+0.3**		comp=E,846nm,18.1s,baz=75,slow=40							**FIA1**	**FINESS Array S**	51.59 328	P	**P**	16 35 11.8	+0.2	
	comp=Z,17nm,0.9s,baz=277,slow=9.7,SNR=68							**AKASG**	**Malin Array Be**	**48.08 314**	P	**P**	**16 34 44.4**	**-0.6**	FIA1				IAmb	IAmb	16 35 13.4		
MJAR				PcP	**PcP**	**16 36 01.5**	**+0.3**	**AKBB

IDI Anoyia 51.77 294 P **P** 16 35 13.0 -0.4
IDI IAmb IAmb 16 35 20.5
comp=Z,59nm,0.9s
NVR Nevrokopi 51.77 302 P **P** 16 35 13.5 +0.2
PAIG Paliouri 52.06 300 P **P** 16 35 16.1 +0.7
SUW Suwalki 52.06 318 *e*P **P** 16 35 15.2 0.0
SUW Suwalki 52.06 318 *e*P **P** 16 35 15.4 +0.2
SUW Suwalki 52.06 318 P **P** 16 35 14.4 -0.8
SUW pmax pmax
comp=Z,208nm,1.1s
SUW Suwalki 52.06 318 P **P** 16 35 14.4 -0.8
SWI Sorong 52.08 115 P **P** 16 35 16.2 +0.4
comp=Z,39nm,0.9s
DION Dionisos Attik 52.10 298 P **P** 16 35 15.9 +0.1
VTS Vitosha 52.12 304 ⇑P **P** 16 35 17.4 +1.4
VTS Vitosha 52.12 304 P **P** 16 35 16.7 +0.7
VTS pmax pmax
comp=Z,117nm,1.1s
VTS Vitosha 52.12 304 P **P** 16 35 16.7 +0.7
VTS IAmb IAmb 16 35 18.6
comp=Z,117nm,1.1s
DEV Deva 52.14 308 ⇑P **P** 16 35 17.8 +1.8
PLG Polygyros 52.18 301 P **P** 16 35 17.2 +0.8
KWP Kalwaria Pacla 52.20 313 *e*P **P** 16 35 17.2 +0.8
KWP Kalwaria Pacla 52.20 313 P **P** 16 35 16.5 +0.1
KWP Kalwaria Pacla 52.20 313 P **P** 16 35 16.5 +0.1
PUNG Punghina 52.21 306 ⇑P **P** 16 35 18.3 +1.8
MTSE Matsula 52.21 324 *e*P **P** 16 35 16.8 +0.5
VLY Voula,Athens 52.24 298 P **P** 16 35 15.9 -0.9
DRGR 52.24 309 ⇑P **P** 16 35 18.0 +1.2
GZR Gura Zlata 52.26 307 ⇑P **P** 16 35 17.1 +0.2
TRPA Tarpa 52.32 311 ⇑P **P** 16 35 18.4 +1.1
HORT Hortiatis 52.42 301 P **P** 16 35 18.1 -0.1
IMMV Iera Moni Meta 52.47 295 P **P** 16 35 19.2 +0.7
UZH Uzhgorod 52.48 312 ⇑*i*P **P** 16 35 17.6 -0.8
UZH *i* 16 35 22.7
UZH *e* 16 35 25.1
XOR Xorichti 52.50 300 P **P** 16 35 18.6 -0.2
KNT Kendrikon 52.51 302 P **P** 16 35 19.2 +0.4
HERR Herculane 52.54 307 ⇑P **P** 16 35 19.3 +0.4
BATI Baumata 52.63 131 P **P** 16 35 19.1 -0.8
comp=Z,51nm,0.7s
SOEI Soe 52.71 130 P **P** 16 35 19.3 -1.4
SOEI Soe 52.71 130 P **P** 16 35 20.1 -0.5
comp=Z,2µmcomp=Z,186nm,0.8s
VAY Valandovo 52.74 302 *i*P **P** 16 35 21.2 +0.7
LTK Loutraki 52.86 298 P **P** 16 35 19.8 -1.6
SLIT Slitere, Latvi 52.88 323 *e*P **P** 16 35 21.1 -0.1
GRG Griva 52.91 302 P **P** 16 35 21.8 0.0
PBUR Paburge 52.93 321 *e*P **P** 16 35 22.1 +0.4
LIT Litokhoron 52.94 301 P **P** 16 35 21.6 -0.4
LIT Litokhoron 52.94 301 P **P** 16 35 21.4 -0.6
LIT pmax pmax
comp=Z,84nm,1.3s
LIT Litokhoron 52.94 301 P **P** 16 35 21.4 -0.6
LIT IAmb IAmb 16 35 23.2
comp=Z,84nm,1.3s
STIP Stip 52.98 303 *i*P **P** 16 35 21.3 -1.0
SIRR Siria 52.99 309 ⇓P **P** 16 35 24.1 +1.8
CRVS Cervenica-Dubn 53.02 312 *e*P **P** 16 35 23.6 +1.1
CRVS pmax pmax
comp=Z,93nm,1.6s
CRVS Cervenica-Dubn 53.02 312 *e*P **P** 16 35 23.6 +1.1
MDVR Moldovita 53.05 307 ⇑P **P** 16 35 24.0 +1.2
BZS Buzias 53.06 308 ⇑P **P** 16 35 23.8 +1.1
VLI Veliai 53.09 297 P **P** 16 35 21.1 -2.0
BOVS Bovan 53.15 305 ⇑P **P** 16 35 24.0 +0.6
KTI Kastanea 53.19 301 P **P** 16 35 23.6 -0.4
AGG Agios Georgios 53.21 299 P **P** 16 35 23.3 -0.7
AGG Agios Georgios 53.21 299 P **P** 16 35 22.8 -1.2
AGG pmax pmax
comp=Z,95nm,1.1s
AGG Agios Georgios 53.21 299 P **P** 16 35 22.8 -1.2
AGG IAmb IAmb 16 35 24.5
comp=Z,95nm,1.1s
THL Klokotos Trika 53.38 300 P **P** 16 35 24.3 -0.9
VLX Vlachokerasia 53.42 297 P **P** 16 35 24.4 -1.3
BEL Belsk 53.43 316 *e*P **P** 16 35 26.1 +0.7
KZN Kozani 53.46 301 P **P** 16 35 25.6 -0.3
KLV Kalavryta, Ach 53.49 298 P **P** 16 35 24.8 -1.4
TRIZ Trizonia 53.51 299 P **P** 16 35 25.6 -0.5
SKO Skopje 53.51 303 *i*P **P** 16 35 26.7 +0.6
KEV Kevo 53.52 338 P **P** 16 35 26.0 +0.3
KEV pmax pmax
comp=Z,201nm,1.1s
KEV Kevo 53.52 338 P **P** 16 35 26.0 +0.3
ANX Ano Chora 53.59 299 P **P** 16 35 25.5 -1.4
EVR Evrytania 53.63 299 P **P** 16 35 26.1 -1.1
KECS Kecovo 53.68 311 *e*P **P** 16 35 28.3 +1.0
KECS Kecovo 53.68 311 *e*P **P** 16 35 28.2 +1.0
FNA Florina 53.70 302 P **P** 16 35 27.4 -0.2
FNA Florina 53.70 302 P **P** 16 35 26.9 -0.7
FNA pmax pmax
comp=Z,57nm,1.2s
FNA Florina 53.70 302 P **P** 16 35 26.9 -0.7
FNA IAmb IAmb 16 35 28.8
comp=Z,57nm,1.2s
NIE Niedzica 53.77 313 *e*P **P** 16 35 29.5 +1.6
ITM Ithomi 53.81 297 P **P** 16 35 27.2 -1.3
LODK Lodwar 53.81 253 P **P** 16 35 28.0 -0.8
KPRO Kipourio 53.82 301 P **P** 16 35 27.9 -0.6
MA2 Magadan 53.82 35 P **P** 16 35 28.7 +0.5
comp=Z,73nm,0.8s,baz=261,slow=6.7,SNR=43
MA2 Magadan 53.82 35 P **P** 16 35 28.1 -0.1
MA2 pmax pmax
comp=Z,116nm,1.0s
MA2 Magadan 53.82 35 P **P** 16 35 28.1 -0.1
ARA0 ARCESS Array S 53.94 338 *e*P **P** 16 35 29.9 +1.0
ARCES ARCESS Array B 53.94 338 P **P** 16 35 29.9 +1.0
comp=Z,139nm,0.9s,baz=90,slow=6.9,SNR=233
ARCES LR LR 17 00 07.4
comp=Z,841nm,18.3s,baz=115,slow=38
ARCES ARCESS Array B 53.94 338 P **P** 16 35 29.1 +0.2
ARCES pmax pmax
comp=Z,201nm,1.1s
ARCES ARCESS Array B 53.94 338 P **P** 16 35 29.1 +0.2
NEST Nestorio 53.99 301 P **P** 16 35 29.6 -0.2
OHR Ohrid 54.09 302 *i*P **P** 16 35 32.4 +1.9
FAKI Fak Fak 54.10 117 P **P** 16 35 30.0 -0.8
FAKI IAmb IAmb 16 35 31.6
comp=Z,37nm,0.8s
FAKI Fak Fak 54.10 117 P **P** 16 35 30.8 0.0
comp=Z,58nm,1.0s
PSZ Piszkesteto 54.10 311 ⇑P **P** 16 35 31.6 +1.2
PSZ Piszkesteto 54.10 311 P **P** 16 35 30.3 -0.2
PSZ pmax pmax
comp=Z,74nm,1.3s
PSZ Piszkesteto 54.10 311 P **P** 16 35 30.3 -0.2
PSZ IAmb IAmb 16 35 32.7
comp=Z,74nm,1.3s
KBN Korca 54.16 302 P **P** 16 35 30.7 -0.3
LANS Liptovska Anna 54.32 312 *e*P **P** 16 35 33.3 +1.3
LANS pmax pmax
comp=Z,15nm,1.4s
LANS Liptovska Anna 54.32 312 *e*P **P** 16 35 33.3 +1.3
AAL Aland 54.33 326 *e*P **P** 16 35 31.0 -0.8
DIVS Divibare 54.34 306 ⇑*i*P **P** 16 35 32.7 +0.4
DIVS Divibare 54.34 306 P **P** 16 35 32.0 -0.2
FRGS Fruska Gora 54.36 307 ⇓P **P** 16 35 33.2 +0.8
FRGS Fruska Gora 54.36 307 ⇑*i*P **P** 16 35 32.7 +0.3
LKD2 Lefkada island 54.53 299 P **P** 16 35 32.2 -1.5
IVA Berane 54.54 305 *e*P **P** 16 35 33.8 0.0
KTK1 Kautokeino 54.57 337 *e*P **P** 16 35 34.0 +0.5
TEKS Tekeris 54.62 307 ⇑*i*P **P** 16 35 35.0 +0.8
IGT Igoumenitsa 54.67 300 P **P** 16 35 33.4 -1.2
VLS Valsamata 54.69 299 P **P** 16 35 33.1 -1.7
TIR Tirane 54.76 303 ⇑P **P** 16 35 35.8 +0.6
TIR Tirane 54.76 303 P **P** 16 35 34.3 -1.0
TIR pmax pmax
comp=Z,165nm,1.2s
TIR Tirane 54.76 303 P **P** 16 35 34.2 -1.0
KMBO Kilima Mbogo 54.76 247 P **P** 16 35 36.4 +0.5
comp=Z,12nm,0.9s,baz=43,slow=11,SNR=19
KMBO Kilima Mbogo 54.76 247 *i*P **P** 16 35 37.0 +1.1
KMBO pmax pmax
comp=Z,25nm,1.0s
VYHS Vyhne 54.78 311 *e*P **P** 16 35 35.9 +0.6
VYHS pmax pmax
comp=Z,45nm,1.3s
VYHS Vyhne 54.78 311 *e*P **P** 16 35 35.9 +0.6
BBLS Lazići 54.78 306 ⇑*i*P **P** 16 35 36.3 +0.8
KOME Kolasin 54.82 305 *e*P **P** 16 35 36.2 +0.4

PLE Pljevlja 54.85 305 *e*P **P** 16 35 36.2 +0.1
HAMF Hammerfest 54.87 339 *e*P **P** 16 35 36.9 +1.4
SEY Seymchan 54.99 31 P **P** 16 35 37.6 +1.1
comp=Z,124nm,0.8s,baz=251,slow=5.4,SNR=419
KEK Kerkira 55.05 301 P **P** 16 35 36.0 -1.4
KOLL Kolacno 55.06 312 *e*P **P** 16 35 38.2 +0.9
PDG Podgorica 55.06 304 ⇑P **P** 16 35 37.5 0.0
PDG Podgorica 55.06 304 ⇑*i*P **P** 16 35 37.4 0.0
PDG Podgorica 55.06 304 P **P** 16 35 36.9 -0.5
PDG IAmb IAmb 16 35 38.6
comp=Z,105nm,1.1s
TTG Podgorica 55.06 304 *e*P **P** 16 35 37.4 0.0
MORH Mrgy, Hungar 55.08 309 ⇑*i*P **P** 16 35 38.0 +0.5
HAPS Han Pijesak,BI 55.08 306 ⇑*i*P **P** 16 35 37.8 +0.1
SRO2 Moca 55.12 311 *e*P **P** 16 35 38.1 +0.3
SRO2 pmax pmax
comp=Z,101nm,1.0s
SRO2 Moca 55.12 311 *e*P **P** 16 35 38.0 +0.3
ULC Ulcinj 55.13 303 *e*P **P** 16 35 37.6 -0.4
DRME Dracevica, Mon 55.15 304 ⇑*i*P **P** 16 35 38.0 -0.1
DRME Dracevica, Mon 55.15 304 *e*P **P** 16 35 38.2 +0.1
OKC Ostrava-Krasne 55.15 313 *e*P **P** 16 35 39.1 +1.2
OKC MLR MLR
comp=Z,700nm,16.5s
OKC Ostrava-Krasne 55.15 313 *e*P **P** 16 35 39.1 +1.2
OKC AMS AMS 17 01 50.0
comp=Z,700nm,16.5s
SRO Srobarova 55.17 311 *e*P **P** 16 35 39.5 +1.4
SRO pmax pmax
comp=Z,121nm,1.2s
SRO Srobarova 55.17 311 *e*P **P** 16 35 39.5 +1.4
UPM Unac-Piva 55.22 305 ⇑*i*P **P** 16 35 39.1 +0.3
UPM Unac-Piva 55.22 305 *e*P **P** 16 35 38.6 -0.2
NKME Niksic 55.24 304 *e*P **P** 16 35 38.7 -0.1
CEME Cevo 55.30 304 *e*P **P** 16 35 39.2 0.0
BUM Brajici-Budva 55.35 304 *e*P **P** 16 35 39.6 0.0
UPP Uppsala 55.49 325 *e*P **P** 16 35 40.5 +0.3
JAVC Velka Javorina 55.52 312 ⇑*i*P **P** 16 35 42.0 +1.3
BRY Bratogost 55.52 305 ⇑*i*P **P** 16 35 41.1 +0.2
BRY Bratogost 55.52 305 *e*P **P** 16 35 40.9 0.0
MORC Moravsky Berou 55.55 313 ⇑*i*P **P** 16 35 41.5 +0.6
MORC Moravsky Berou 55.55 313 P **P** 16 35 40.7 -0.2
MORC pmax pmax
comp=Z,77nm,1.3s
MORC Moravsky Berou 55.55 313 P **P** 16 35 40.7 -0.2
MORC IAmb IAmb 16 35 43.0
comp=Z,77nm,1.3s
GKP Gorka Klasztor 55.59 317 *e*P **P** 16 35 41.4 +0.4
GKP Gorka Klasztor 55.59 317 *e*P **P** 16 35 40.8 -0.2
HCY Herceg Novi 55.62 304 ⇑*i*P **P** 16 35 41.3 -0.2
HCY Herceg Novi 55.62 304 *e*P **P** 16 35 41.2 -0.2
JETT Jettan, Norway 55.68 337 *e*P **P** 16 35 42.8 +1.3
TREB Trebinje 55.69 304 ⇑*i*P **P** 16 35 41.8 -0.1
SMOL Smolenice 55.71 312 *e*P **P** 16 35 42.6 +0.5
SMOL pmax pmax
comp=Z,11nm,1.2s
SMOL Smolenice 55.71 312 *e*P **P** 16 35 42.5 +0.5
MODS Modra-Piesok 55.82 311 *e*P **P** 16 35 42.4 -0.4
MODS pmax pmax
comp=Z,36nm,1.2s
MODS Modra-Piesok 55.82 311 *e*P **P** 16 35 42.3 -0.5
ZST Bratislava 55.95 311 *e*P **P** 16 35 44.5 +0.8
ZST pmax pmax
comp=Z,59nm,1.1s
ZST Bratislava 55.95 311 *e*P **P** 16 35 44.5 +0.8
SCTE Santa Cesarea 56.00 301 P **P** 16 35 43.0 -1.2
SCTE IAmb IAmb 16 35 44.3
comp=Z,80nm,1.1s
KRLC Kraliky 56.02 313 *e*P **P** 16 35 44.8 +0.6
KRLC MLR MLR
comp=Z,800nm,13.7s
KRLC Kraliky 56.02 313 *e*P **P** 16 35 44.8 +0.6
KRLC AMS AMS 17 02 10.0
comp=Z,800nm,13.7s
VRAC Vranov 56.20 313 ⇑*i*P **P** 16 35 46.4 +0.9
TRO Tromso 56.20 337 *e*P **P** 16 35 45.8 +0.6
BLY Banja Luka 56.26 307 ⇑*i*P **P** 16 35 46.7 +0.7
KSP Ksiaz 56.28 314 *e*P **P** 16 35 46.8 +0.8
DPC Dobruska-Polom 56.29 314 *e*P **P** 16 35 47.2 +1.0
DPC MLR MLR
comp=Z,1µm,14.4s
DPC Dobruska-Polom 56.29 314 *e*P **P** 16 35 47.2 +1.0
DPC AMS AMS 17 02 10.0
comp=Z,1µm,14.4s
BEHE Becsehely 56.34 309 ⇑*i*P **P** 16 35 50.3 +3.7
KRUC Moravsky 56.34 312 ⇑*i*P **P** 16 35 47.1 +0.6
OSTC Ostas 56.34 314 *e*P **P** 16 35 47.2 +0.7
OSTC AMS AMS 17 02 20.0
comp=Z,1µm,14.4s
BLEU Blekinge 56.36 321 *i*P **P** 16 35 46.6 +0.2
BLEU Blekinge 56.36 321 *i*P **P** 16 35 46.6 +0.2
MGRS Mrkonjic Grad 56.37 307 *e*P **P** 16 35 47.8 +0.9
MRAK Mrakovica 56.43 307 ⇑*i*P **P** 16 35 48.1 +0.8
CHVC Chvalec 56.45 314 *e*P **P** 16 35 48.1 +0.8
CHVC AMS AMS 17 02 30.0
comp=Z,1µm,18.8s
HOPEN Hopen 56.47 346 *e*P **P** 16 35 48.8 +1.8
UPC Upice 56.48 314 *e*P **P** 16 35 48.7 +1.2
UPC MLR MLR
comp=Z,1µm,18.5s
UPC Upice 56.48 314 *e*P **P** 16 35 48.7 +1.2
UPC AMS AMS 17 02 30.0
comp=Z,1µm,18.5s
KOGS Kog 56.71 309 ⇑*i*P **P** 16 35 49.8 +0.6
SKR Severo-Kuril's 56.77 46 *e*P P 16 35 54.9 +5.4
SKR *e*S S 16 43 54.0 +12
SKR MLR MLR
comp=Z,800nm,14.0s
SKR MLR MLR
comp=Z,900nm,15.0s
CONA Conrad Observa 56.80 311 *i*P **P** 16 35 50.6 +0.6
comp=Z,92nm,1.3s,SNR=49
BSD Bornholm Skovb 56.89 320 *e*P **P** 16 35 49.8 -0.5
BSD Bornholm Skovb 56.89 320 *e*P **P** 16 35 50.0 -0.3
BSD Bornholm Skovb 56.89 320 *e*P **P** 16 35 50.0 -0.3
BSD Bornholm Skovb 56.89 320 *e*P **P** 16 35 50.0 -0.3
N2IH Innhavet 57.00 335 *e*P **P** 16 35 51.9 +1.0
ARSA Arzberg 57.11 310 *i*P **P** 16 35 52.7 +0.7
comp=Z,41nm,1.2s,SNR=25
MATE Matera 57.23 302 ⇓P **P** 16 35 53.5 +0.6
STEI Steigen 57.26 335 *e*P **P** 16 35 53.0 +0.3
N2TV TVrnvik 57.26 334 *e*P **P** 16 35 53.3 +0.6
CRES Cresnjev 57.33 309 ⇑*i*P **P** 16 35 54.4 +0.8
PVCC Panska Ves 57.39 314 *e*P **P** 16 35 55.1 +1.1
PVCC MLR MLR
comp=Z,1µm,17.5s
PVCC Panska Ves 57.39 314 *e*P **P** 16 35 55.1 +1.1
PVCC AMS AMS 17 03 10.0
comp=Z,1µm,17.5s
MOR8 Moi Rana 57.40 333 *e*P **P** 16 35 53.3 -0.5
DEL Delary 57.44 321 *i*P **P** 16 35 54.5 +0.4
DEL Delary 57.44 321 *i*P **P** 16 35 54.5 +0.4
TIP Timpagrande 57.46 301 ⇑P **P** 16 35 54.9 +0.2
TIP Timpagrande 57.46 301 P **P** 16 35 54.5 -0.2
TIP IAmb IAmb 16 35 56.2
comp=Z,70nm,1.2s
PRU Pruhonice 57.46 314 *e*P **P** 16 35 55.3 +0.9
PRU MLR MLR
comp=Z,1µm,15.3s
PRU Pruhonice 57.46 314 *e*P **P** 16 35 55.3 +0.9
PRU AMS AMS 17 03 00.0
comp=Z,1µm,15.3s
SOKA Soboth 57.51 310 *i*P **P** 16 35 55.7 +0.7
comp=Z,71nm,1.1s,SNR=52
BOJS Bojanci 57.52 308 ⇑*i*P **P** 16 35 55.7 +0.8
PRA Prague 57.52 314 *e*P **P** 16 35 56.3 +1.4
PRA MLR MLR
comp=Z,1µm,17.6s
PRA Prague 57.52 314 *e*P **P** 16 35 56.3 +1.4
PRA AMS AMS 17 03 10.0
comp=Z,1µm,17.6s
PEA0B Petropavlovsk- 57.57 43 *ce*P **P** 16 35 55.8 +0.7
PEA0B Petropavlovsk- 57.57 43 P **P** 16 35 55.6 +0.4
PEA0B IAmb IAmb 16 35 56.5
comp=Z,58nm,1.4s
PETK Petropavlovsk- 57.57 43 P **P** 16 35 54.5 -0.6
comp=Z,7.0nm,0.9s,baz=260,slow=11,SNR=21
NBB05 Inndyr 57.63 334 *e*P **P** 16 35 56.2 +0.9
LUNU Lund 57.71 320 *i*P **P** 16 35 57.1 +1.1
LUNU Lund 57.71 320 *i*P **P** 16 35 57.1 +1.1
CKRC Cesky Krumlov 57.74 312 *e*P **P** 16 35 56.5 +0.1
CKRC *ex* x 16 36 02.4
NBB30 Finnes 57.74 334 *e*P **P** 16 35 56.7 +0.6

SGRT San Giovanni R 57.75 304 P **P** 16 35 55.5 -1.2
SGRT IAmb IAmb 16 35 57.9
comp=Z,89nm,1.1s
BRG Berggiesshubel 57.76 315 ⇑*i*P **P** 16 35 57.3 +0.8
BRG Amp 16 35 58.6
comp=Z,95nm,1.1s
BRG *ex* x 16 36 03.2
BRG Amp 16 36 03.9
comp=Z,32nm,0.9s
BRG *ex* x 16 36 13.1
BRG Amp 16 36 14.0
comp=Z,17nm,0.9s
BRG *ex* x 16 36 27.5
BRG Amp 16 36 28.3
comp=Z,20nm,1.0s
OBKA Obir 57.86 309 *i*P **P** 16 35 57.6 +0.2
comp=Z,56nm,1.0s,SNR=26
MOA Molln 57.88 311 *i*P **P** 16 35 57.7 +0.3
comp=Z,29nm,0.9s,SNR=28
LOF Lofoten 57.92 335 *e*P **P** 16 35 57.6 +0.3
BJUU Bjuv 57.92 321 *i*P **P** 16 35 58.3 +0.8
BJUU Bjuv 57.92 321 *i*P **P** 16 35 58.3 +0.8
LJU Ljubljana 57.94 309 ⇑*i*P **P** 16 35 59.0 +1.1
KONS Konsvik 57.95 333 *e*P **P** 16 35 58.2 +0.6
BORU Boraas 57.99 323 *i*P **P** 16 35 58.7 +0.7
BORU Boraas 57.99 323 *i*P **P** 16 35 58.7 +0.7
FABU Falkenberg 58.05 322 *i*P **P** 16 35 58.9 +0.5
FABU Falkenberg 58.05 322 *i*P **P** 16 35 58.9 +0.5
CEY Cerknica 58.06 309 ⇑*i*P **P** 16 35 59.5 +0.8
N2SV S rvVgen 58.10 335 *e*P **P** 16 35 58.2 -0.4
GEC2 GERESS Array S 58.13 312 P **P** 16 35 59.4 +0.1
GEC2 IAmb IAmb 16 36 00.5
comp=Z,42nm,1.2s
GERES GERESS Array B 58.13 312 P **P** 16 35 59.8 +0.5
comp=Z,7.4nm,0.7s,baz=90,slow=5.9,SNR=81
GERES PcP **PcP** 16 36 51.2 +0.4
comp=Z,5.0nm,0.8s,baz=76,slow=5.6,SNR=4.2
GERES PKP2bc 17 05 53.5
comp=Z,0.3nm,0.8s,baz=225,slow=1.7,SNR=4.9
GERES GERESS Array B 58.13 312 P **P** 16 35 59.5 +0.2
GERES pP **pP** 16 36 04.7 -0.7
PET Petropavlovsk 58.15 43 *e*P **P** 16 36 02.9 +3.7
PET *e*S **S** 16 44 02.2 +2.5
PET pmax pmax
comp=Z,100nm,14.1s
PET MLR MLR
comp=Z,2µm,15.0s
PET MLR MLR
comp=Z,2µm,16.0s
PET Petropavlovsk 58.15 43 P **P** 16 35 57.8 -1.4
KHC Kasperske Hory 58.18 313 *c*P **P** 16 35 58.6 -1.0
KHC pmax pmax
comp=Z,128nm,1.3s
KHC Kasperske Hory 58.18 313 *e*P **P** 16 35 59.7 +0.1
KHC *e*pP **pP** 16 36 05.3 -0.4
KHC AMS AMS 17 03 30.0
comp=Z,700nm,13.7s
KHC Kasperske Hory 58.18 313 P **P** 16 35 59.6 +0.1
KHC IAmb IAmb 16 36 01.5
comp=Z,70nm,1.3s
CEL Celeste 58.30 300 P **P** 16 36 00.7 +0.1
CLL Collm 58.30 315 ⇑*i*P **P** 16 36 00.5 +0.2
comp=Z,47nm,1.2s
CLL *e*PP **PP** 16 38 12.0 +2.8
CLL *e*PPPP 16 39 54.0
CLL *e*S **S** 16 43 59.0 -2.9
CLL *e*ScS **ScS** 16 45 52.0 +2.7
CLL *e*SS **SS** 16 47 54.0 +0.5
CLL *e* 16 49 06.0
CLL *e*SSS SSS 16 50 30.0
CLL Lm MLR 17 03 00.0
comp=Z,800nm,18.8s
CLL Collm 58.30 315 P **P** 16 36 00.0 -0.3
CLL pmax pmax
comp=Z,41nm,1.1s
CLL Collm 58.30 315 P **P** 16 35 60.0 -0.3
CLL IAmb IAmb 16 36 01.9
comp=Z,41nm,1.1s
NSS Namsos 58.34 331 *e*P **P** 16 36 00.2 -0.1
N2RO R st 58.41 334 *e*P **P** 16 36 00.9 +0.2
NC405 NORSAR Array S 58.44 327 P **P** 16 36 01.1 0.0
ONAU Onsala 58.47 322 *i*P **P** 16 36 02.0 +0.7
ONAU Onsala 58.47 322 *i*P **P** 16 36 02.0 +0.7
MYKA Terra Mystica 58.47 310 *i*P **P** 16 36 01.6 0.0
comp=Z,17nm,1.1s,SNR=8.1
TRI Trieste 58.52 309 P **P** 16 36 01.6 -0.3
TRI pmax pmax
comp=Z,116nm,1.1s
TRI Trieste 58.52 309 P **P** 16 36 01.6 -0.3
NC602 NORSAR Array S 58.53 326 P **P** 16 36 01.2 -0.5
NC602 IAmb IAmb 16 36 02.5
comp=Z,78nm,1.1s
TJOU Tjoern 58.59 323 *i*P **P** 16 36 01.7 -0.4
TJOU Tjoern 58.59 323 *i*P **P** 16 36 01.7 -0.4
KBA Koelnbreinsper 58.60 310 *i*P **P** 16 36 02.6 -0.1
comp=Z,27nm,1.1s,SNR=6.2
NC303 NORSAR Array S 58.61 327 P **P** 16 36 02.2 -0.1
NC303 IAmb IAmb 16 36 03.1
comp=Z,40nm,0.8s
NB201 NORSAR Array S 58.65 327 P **P** 16 36 02.1 -0.5
NB201 IAmb IAmb 16 36 03.8
comp=Z,76nm,1.1s
NB2 NORSAR Subarra 58.69 327 P **P** 16 36 02.4 -0.5
baz=88,slow=6.9
NOA NORSAR Array B 58.69 327 P **P** 16 36 02.7 -0.2
comp=Z,28nm,0.8s,baz=88,slow=6.9,SNR=74
NOA LR LR 17 02 54.3
comp=Z,1µm,18.1s,baz=85,slow=38
HSPB Hornsund (broa 58.70 346 *e*P **P** 16 36 03.8 +1.1
HSPB Hornsund (broa 58.70 346 *e*P **P** 16 36 03.9 +1.2
PAOL Paolisi 58.75 303 P **P** 16 36 02.8 -0.9
PAOL IAmb IAmb 16 36 04.7
comp=Z,41nm,1.2s
STRU Stroemstad 58.77 324 *i*P **P** 16 36 03.7 +0.3
STRU Stroemstad 58.77 324 *i*P **P** 16 36 03.7 +0.3
NKC Novy Kostel 58.78 314 *e*P **P** 16 36 04.5 +0.8
NKC MLR MLR
comp=Z,2µm,16.5s
NKC Novy Kostel 58.78 314 *e*P **P** 16 36 04.5 +0.8
NKC AMS AMS 17 03 50.0
comp=Z,2µm,16.5s
NAO01 NORSAR Array S 58.85 326 P **P** 16 36 03.5 -0.5
NBO00 NORSAR Array S 58.90 327 P **P** 16 36 03.5 -0.9
NC204 NORSAR Array S 58.90 327 P **P** 16 36 04.0 -0.4
ZOU Zoufplan 58.93 310 P **P** 16 36 04.1 -1.0
OSL Oslo 58.97 325 *e*P **P** 16 36 05.3 +0.5
INTR Introdacqua 59.05 304 P **P** 16 36 05.2 -0.6
PSA00 Pilbara Seismi 59.08 143 P **P** 16 36 05.6 -0.5
STAL STALIGiAL 59.16 309 P **P** 16 36 06.0 -0.5
ABTA Abfaltersbach 59.22 310 *e*P **P** 16 36 06.3 -0.6
comp=Z,48nm,1.1s
AQU L'Aquila 59.35 305 P **P** 16 36 07.6 -0.3
AQU pmax pmax
comp=Z,80nm,1.0s
AQU L'Aquila 59.35 305 ⇑*i*P **P** 16 36 08.4 +0.5
AQU L'Aquila 59.35 305 P **P** 16 36 07.6 -0.3
AQU IAmb IAmb 16 36 34.2
comp=Z,80nm,1.0s
NRCA Norcia 59.47 305 P **P** 16 36 08.4 -0.3
NRCA IAmb IAmb 16 36 09.9
comp=Z,40nm,0.8s
KONO Kongsberg 59.55 325 *ce*P **P** 16 36 09.0 +0.2
KONO pmax pmax
comp=Z,70nm,1.1s
KONO Kongsberg 59.55 325 P **P** 16 36 08.6 -0.2
KONO IAmb IAmb 16 36 10.3
comp=Z,56nm,1.0s
KONO Kongsberg 59.55 325 *e*P **P** 16 36 09.4 +0.6
GRA1 Grafenberg Arr 59.63 313 P **P** 16 36 10.0 +0.4
GRF Grafenberg Arr 59.63 313 P **P** 16 36 10.0 +0.4
GRF pmax pmax
comp=Z,149nm,1.4s
GRFO Grafenberg 59.63 313 P **P** 16 36 10.1 +0.5
GRFO pmax pmax
comp=Z,157nm,1.4s
GRFO Grafenberg 59.63 313 P **P** 16 36 10.1 +0.5
MTN Manton Dam 59.66 127 P **P** 16 36 09.5 -0.7
MTN IAmb IAmb 16 36 33.8
comp=Z,36nm,1.2s
DOMB Dombas 59.68 328 *e*P **P** 16 36 10.0 +0.2
ABPO Ambohimpanom 59.68 223 P **P** 16 36 10.2 -0.3
ABPO pmax pmax
comp=Z,37nm,1.2s
ABPO Ambohimpanom 59.68 223 P **P** 16 36 10.2 -0.3

ABPO IAmb IAmb 16 36 16.8
comp=Z,37nm,1.2s
RAFF Raffo Rosso 59.72 299 P **P** **16 36 11.0 +0.6**
WTTA Wattenberg 59.73 311 *i* P **P** **16 36 10.2 -0.3**
comp=Z,70nm,1.0s,SNR=30
FITZ Fitzroy Crossi 59.74 135 P **P** **16 36 10.8 +0.1**
WATA Walderalm 59.76 311 *i* P **P** **16 36 10.0 -0.7**
comp=Z,59nm,1.2s,SNR=23
MURB Monte Urbino 59.81 306 P **P** **16 36 10.9 -0.1**
KBS Kingsbay 59.82 348 P **P** **16 36 10.8 +0.4**
KBS pmax pmax
comp=Z,38nm,0.9s
KBS Kingsbay 59.82 348 P **P** **16 36 10.8 +0.4**
KBS IAmb IAmb 16 36 11.9
comp=Z,38nm,0.9s
KBS Kingsbay 59.82 348 *eP* **P** **16 36 11.6 +1.1**
MBAR Mbarara 59.86 251 *i* P **P** **16 36 11.5 -0.3**
MBAR pmax pmax
comp=Z,24nm,1.4s
MBAR Mbarara 59.86 251 P **P** **16 36 10.3 -1.5**
MBAR IAmb IAmb 16 36 17.9
comp=Z,61nm,1.3s
CTI Castel Tesino 59.92 309 P **P** **16 36 11.4 -0.4**
CTI pmax pmax
comp=Z,36nm,1.0s
CTI Castel Tesino 59.92 309 P **P** **16 36 11.3 -0.4**
CTI IAmb IAmb 16 36 12.9
comp=Z,36nm,1.0s
KNRA Kununurra 59.99 131 P **P** **16 36 12.6 +0.2**
KNRA IAmb IAmb 16 36 13.8
comp=Z,36nm,0.8s
SQTA Sankt Quirin 60.02 311 *i* P **P** **16 36 11.9 -0.6**
comp=Z,81nm,1.1s,SNR=29
TEOL Teolo 60.03 308 P **P** **16 36 12.1 -0.3**
MUD Monsted U'grnd 60.04 321 *i* P **P** **16 36 12.0 -0.2**
MUD Monsted U'grnd 60.04 321 *i* P **P** **16 36 13.2 +1.0**
MUD Monsted U'grnd 60.04 321 *i* P **P** **16 36 13.2 +1.0**
MOTA Moosalm 60.07 311 *i* P **P** **16 36 12.3 -0.6**
comp=Z,84nm,1.0s,SNR=28
SKAR Skarslia 60.13 326 *eP* **P** **16 36 13.7 +0.9**
HOMB Homborsund 60.22 324 *i* P **P** **16 36 14.0 +0.6**
HOMB Homborsund 60.22 324 *i* P **P** **16 36 14.0 +0.6**
HOMB Homborsund 60.22 324 *eP* **P** **16 36 13.9 +0.5**
RETA Reutte 60.28 311 *i* P **P** **16 36 13.9 -0.2**
comp=Z,54nm,1.1s,SNR=24
GENI Genyem 60.33 111 P **P** **16 36 16.4 +1.6**
comp=Z,93nm,1.3s
MOL Molde 60.36 329 *eP* **P** **16 36 14.1 -0.2**
CORL Corleone 60.38 300 P **P** **16 36 13.5 -1.5**
CORL IAmb IAmb 16 36 42.5
comp=Z,58nm,0.9s
FETA Feichten 60.38 310 *i* P **P** **16 36 14.3 -0.7**
comp=Z,61nm,1.2s,SNR=24
LATE Laterza 60.46 305 P **P** **16 36 14.0 -1.5**
LATE IAmb IAmb 16 36 16.1
comp=Z,48nm,1.1s
CLTB Caltabellotta 60.52 299 P **P** **16 36 15.2 -0.8**
CLTB IAmb IAmb 16 36 17.0
comp=Z,63nm,1.1s
AKN Aaknes 60.64 328 *eP* **P** **16 36 17.0 +0.7**
OSSC Osservatorio P 60.68 306 P **P** **16 36 16.1 -0.7**
OSSC IAmb IAmb 16 36 18.9
comp=Z,33nm,1.0s
JAY Jayapura 60.73 110 P P 16 36 29.6 +12
SALO Salr 60.77 309 P **P** **16 36 17.8 +0.2**
SNART Snartemo 60.90 324 *i* P **P** **16 36 19.0 +1.0**
SNART Snartemo 60.90 324 *i* P **P** **16 36 19.0 +1.0**
SNART Snartemo 60.90 324 *eP* **P** **16 36 18.8 +0.8**
DAVA Damuels 60.90 311 *i* P **P** **16 36 18.3 -0.2**
comp=Z,136nm,1.1s,SNR=50
BILL Bilibino 60.98 25*d* *i*P **P** **16 36 19.7 +1.2**
BILL *i* 16 36 31.2
BILL *i* 16 37 02.5
BILL *i* 16 38 36.3
BILL *i* S **S** **16 44 29.6 -6.2**
BILL pmax pmax
comp=Z,97nm,1.4s
BILL MLR MLR
comp=Z,592nm,16.0s
BILL Bilibino 60.98 25 P **P** **16 36 19.5 +1.0**
DAVOX Davos/Dischmat 60.99 310 LR LR 17 08 16.5
comp=Z,392nm,18.6s,baz=58,slow=41
ODD1 Odda 61.03 326 *eP* **P** **16 36 20.0 +1.0**
STU Stuttgart 61.09 313 P **P** **16 36 19.3 -0.3**
STU pmax pmax
comp=Z,64nm,0.9s
STU Stuttgart 61.09 313 P **P** **16 36 19.3 -0.3**
STU IAmb IAmb 16 36 21.4
comp=Z,64nm,0.9s
CASP Castiglione de 61.10 306 P **P** **16 36 18.5 -1.3**
HYA Hoyanger 61.12 327 *eP* **P** **16 36 20.3 +0.9**
VLC Villacollemand 61.16 307 P **P** **16 36 20.0 -0.1**
BLS5 Blasjo 61.16 325 *eP* **P** **16 36 21.4 +1.5**
TUE Stuetta 61.41 310 P **P** **16 36 21.4 -0.7**
TUE IAmb IAmb 16 36 24.1
comp=Z,41nm,0.9s
BER Bergen 61.62 326 *eP* **P** **16 36 23.5 +0.6**
FOO Floro 61.62 328 *eP* **P** **16 36 23.6 +0.7**
ASK Askoy 61.67 326 *eP* **P** **16 36 23.9 +0.6**
BFO Black Forest 61.74 312 P **P** **16 36 23.5 -0.5**
BFO pmax pmax
comp=Z,23nm,1.2s
BFO Black Forest 61.74 312 P **P** **16 36 23.5 -0.5**
MSSA Maissana 61.74 308 P **P** **16 36 23.7 -0.4**
VOI Vohitsoka 62.16 221 P **P** **16 36 27.0 -0.2**
ECH Echery 62.53 312 P **P** **16 36 28.5 -0.8**
ECH pmax pmax
comp=Z,29nm,1.0s
ECH Echery 62.53 312 P **P** **16 36 28.5 -0.8**
ECH IAmb IAmb 16 36 30.6
comp=Z,29nm,1.0s
BTNL Ternell 62.71 315 *dP* **P** **16 36 30.9 +0.4**
comp=Z,42nm,1.1s
MEM Membach 62.78 315 *bP* **P** **16 36 31.3 +0.4**
comp=Z,36nm,1.1s
SENIN Lac Senin/Sane 62.82 310 P **P** **16 36 31.5 -0.1**
BHOU Houvegnez 62.84 315 *bP* **P** **16 36 32.1 +0.9**
comp=Z,45nm,1.1s
WLF Walferdange 62.88 314 *bP* **P** **16 36 32.8 +1.2**
comp=Z,67nm,1.1s
WLF Walferdange 62.88 314 P **P** **16 36 32.2 +0.6**
WLF pmax pmax
comp=Z,138nm,1.1s
WLF Walferdange 62.88 314 P **P** **16 36 32.2 +0.6**
BEBN Eben Emael 62.95 315 *dP* **P** **16 36 32.4 +0.4**
VSL Villasalto 62.96 302 P **P** **16 36 31.5 -0.9**
VSL IAmb IAmb 16 36 33.6
comp=Z,33nm,1.1s
BSTI Sart Tilman 63.06 315 *bP* **P** **16 36 33.5 +0.7**
BCLA Clavier 63.26 315 *dP* **P** **16 36 34.5 +0.5**
comp=Z,33nm,1.1s
RCHB Rochefort 63.36 315 *dP* **P** **16 36 35.2 +0.5**
comp=Z,29nm,1.1s
BGES Gesves 63.40 315 κP **P** **16 36 35.9 +0.8**
comp=Z,31nm,1.2s
MORW Morawa 63.52 151 P **P** **16 36 35.7 -0.3**
MORW IAmb IAmb 16 36 42.8
comp=Z,37nm,1.1s
BNI Bardonecchia 63.54 309 P **P** **16 36 35.8 -0.5**
BNI pmax pmax
comp=Z,66nm,1.2s
BNI Bardonecchia 63.54 309 P **P** **16 36 35.8 -0.5**
BNI IAmb IAmb 16 36 37.6
comp=Z,66nm,1.2s
BMRD Maredsous 63.62 315 *dP* **P** **16 36 36.9 +0.5**
comp=Z,19nm,1.1s
DOU Dourbes 63.77 315 *dP* **P** **16 36 38.3 +0.8**
comp=Z,12nm,1.1s
SNF Seneffe 63.88 315 *dP* **P** **16 36 38.4 +0.3**
comp=Z,40nm,1.1s
KEST Kesra 64.01 298 P **P** **16 36 40.5 +1.1**
comp=Z,131nm,0.9s,baz=354,slow=1.4,SNR=104
KEST LR LR 17 10 57.7
comp=Z,166nm,18.1s,baz=284,slow=42
KEST Kesra 64.01 298 P **P** **16 36 39.7 +0.3**
NOR Nord 64.49 351 *i* P **P** **16 36 42.0 +0.3**
NOR IAmb IAmb 16 36 42.8
comp=Z,48nm,1.0s
NOR Nord 64.49 351 *i* P **P** **16 36 42.0 +0.3**
NOR pmax pmax
comp=Z,48nm,1.0s
SSB Saint Sauveur 64.95 310 P **P** **16 36 44.7 -0.7**
SSB pmax pmax
comp=Z,67nm,1.1s
SSB Saint Sauveur 64.95 310 P **P** **16 36 44.7 -0.7**

SSB IAmb IAmb 16 36 46.8
comp=Z,67nm,1.1s
WACR West Acre 65.58 318 *eP* **P** **16 36 49.5 +0.2**
WACR IAmb IAmb 16 36 50.5
comp=Z,221nm,0.9s
LMK Market Rasen 65.96 319 *eP* **P** **16 36 52.1 +0.5**
LMK IAmb IAmb 16 36 53.0
comp=Z,218nm,1.1s
MANU Manus Island 66.08 106 P **P** **16 36 54.0 +0.9**
MLA1 Latheron 66.38 325⇑ *eP* **P** **16 36 54.7 +0.4**
DAG Danmarks Havn 66.39 346⇑ *iP* **P** **16 36 54.5 +0.5**
DAG IAmb IAmb 16 36 55.6
comp=Z,82nm,1.0s
DAG Danmarks Havn 66.39 346⇑ *iP* **P** **16 36 54.5 +0.5**
DAG pmax pmax
comp=Z,82nm,1.0s
MCD Coleburn Disti 66.51 324⇑ *eP* **P** **16 36 55.8 +0.6**
EDMD Edmundbyers 66.53 321 *eP* **P** **16 36 55.3 0.0**
HPK Haverah Park 66.57 320 *eP* **P** **16 36 56.1 +0.5**
HPK IAmb IAmb 16 36 56.4
comp=Z,45nm,0.8s
ESY Stoneypath 66.61 322 *eP* **P** **16 36 55.7 -0.1**
WB0 Warramunga Arr 66.67 130 P **P** **16 36 56.8 +0.2**
WRA Warramunga Arr 66.75 130 P **P** **16 36 58.0 +0.9**
comp=Z,47nm,0.7s,baz=322,slow=6.7,SNR=22
WRA S **S** **16 45 47.1 -1.6**
comp=Z,0.6nm,0.9s,baz=109,slow=11,SNR=2.2
WRA PKP2bc 17 05 27.7
comp=Z,3.8nm,0.9s,baz=133,slow=2.7,SNR=11
WRA Warramunga Arr 66.75 130 *i* P **P** **16 36 55.5 -1.6**
WRA pmax pmax
comp=Z,51nm,0.7s
WRA Warramunga Arr 66.75 130 P **P** **16 36 57.0 -0.2**
WRAB Tennant Creek 66.75 130*ce*P **P** **16 36 58.0 +0.9**
WRAB pmax pmax
comp=Z,50nm,0.8s
WRAB Tennant Creek 66.75 130 P **P** **16 36 57.6 +0.5**
WB2 Warramunga Arr 66.76 130 P **P** **16 36 57.6 +0.4**
LBWR Ladybower, Pea 66.78 319 *eP* **P** **16 36 57.0 0.0**
WR0 Warramunga Arr 66.90 130 P **P** **16 36 57.9 -0.2**
WR0 IAmb IAmb 16 36 59.8
comp=Z,39nm,0.8s
EDI Edinburgh 66.92 322 *eP* **P** **16 36 57.8 +0.1**
EKA Eskdalemuir Ar 67.06 322 LR LR 17 08 57.3
comp=Z,953nm,18.2s,baz=55,slow=38
ESK Eskdalemuir 67.09 322 P **P** **16 36 58.9 0.0**
ESK pmax pmax
comp=Z,80nm,1.1s
ESK Eskdalemuir 67.09 322 P **P** **16 36 58.9 0.0**
MDO Dochfour 67.13 324 *eP* **P** **16 36 58.9 -0.2**
KESW Keswick, Cumbr 67.24 321 *eP* **P** **16 37 00.3 +0.5**
KESW IAmb IAmb 16 37 01.3
comp=Z,104nm,1.0s
NWAO Narrogin (SRO) 67.36 152 P **P** **16 37 00.2 -0.6**
NWAO pmax pmax
comp=Z,37nm,0.9s
NWAO Narrogin (SRO) 67.36 152 P **P** **16 37 00.1 -0.7**
NWAO IAmb IAmb 16 37 01.2
comp=Z,46nm,0.9s
NWAO Narrogin (SRO) 67.36 152 P **P** **16 37 00.2 -0.6**
NWAO IAmb IAmb 16 37 01.2
comp=Z,37nm,0.9s
SMY Shemya 67.39 41 P **P** **16 37 01.3 +0.5**
SMY pmax pmax
comp=Z,379nm,1.1s
SMY Shemya 67.39 41 P **P** **16 37 01.3 +0.5**
STRD Stroud 67.49 318 *eP* **P** **16 37 01.3 -0.1**
STRD IAmb IAmb 16 37 02.3
comp=Z,131nm,1.1s
KAC Achnashellach 67.59 324 *eP* **P** **16 37 02.1 +0.1**
PGBU Glenifferbraes 67.65 322 *eP* **P** **16 37 02.4 0.0**
DBG Daneborg 67.68 344⇑ *iP* **P** **16 37 03.0 +0.7**
DBG IAmb IAmb 16 37 04.3
comp=Z,54nm,0.9s
NEWG New Galloway 67.71 322 *eP* **P** **16 37 03.2 +0.4**
NEWG IAmb IAmb 16 37 03.8
comp=Z,44nm,1.0s
FOEL Foel Wylfa 67.78 319 *eP* **P** **16 37 02.9 -0.4**
FOEL IAmb IAmb 16 37 03.8
comp=Z,146nm,1.0s
KPL Plockton 67.83 324 *eP* **P** **16 37 03.2 -0.3**
MONM Monmouth 67.85 318 *eP* **P** **16 37 03.5 -0.3**
MONM IAmb IAmb 16 37 05.2
comp=Z,97nm,1.0s
MCH1 Michaelchurch 67.92 318 *eP* **P** **16 37 04.1 -0.1**
MCH1 IAmb IAmb 16 37 05.2
comp=Z,118nm,1.3s
LAWE Loch Awe, Argy 68.01 323 *eP* **P** **16 37 05.1 +0.5**
LAWE IAmb IAmb 16 37 06.0
comp=Z,59nm,1.0s
GAL1 Galloway 68.05 321 *eP* **P** **16 37 05.3 +0.4**
GAL1 IAmb IAmb 16 37 06.2
comp=Z,40nm,0.9s
IOMK Kirk Michael 68.15 321 *eP* **P** **16 37 05.9 +0.3**
IOMK IAmb IAmb 16 37 06.6
comp=Z,160nm,1.1s
WIM Isle of Man 68.25 321 *eP* **P** **16 37 06.8 +0.6**
YLL Llanberis 68.26 320 *eP* **P** **16 37 06.2 -0.1**
WLF1 Llynfaes 68.35 320 *eP* **P** **16 37 07.1 +0.3**
WLF1 IAmb IAmb 16 37 08.3
comp=Z,102nm,1.0s
YRC Rhoscolyn 68.46 320⇑ *eP* **P** **16 37 08.1 +0.6**
DYA Yadsworthy 68.95 317 *eP* **P** **16 37 10.4 -0.3**
RSBS Rosebush, Pemb 68.96 318 *eP* **P** **16 37 10.9 +0.3**
RSBS IAmb IAmb 16 37 11.9
comp=Z,91nm,1.1s
AS31 Alice Springs 69.06 133 P **P** **16 37 12.1 +0.4**
ASAR Alice Springs 69.06 133 P **P** **16 37 12.3 +0.7**
comp=Z,30nm,0.7s,baz=315,slow=6.2,SNR=237
ASAR S **S** **16 46 20.2 +3.9**
comp=Z,0.6nm,0.9s,baz=329,slow=8.7,SNR=1.4
ASAR PKP2bc 17 05 19.7
comp=Z,2.0nm,1.1s,baz=143,slow=3.3,SNR=7.3
ASAR LR LR 17 11 59.0
comp=Z,141nm,19.4s,baz=298,slow=40
ASAR Alice Springs 69.06 133 P **P** **16 37 12.2 +0.5**
COEN Coen 69.34 119 P **P** **16 37 14.4 +0.8**
DSB Dublin 69.49 320 P **P** **16 37 13.3 -0.6**
SCO Scoresbysund 69.75 340 P **P** **16 37 16.5 +1.3**
SCO pmax pmax
comp=Z,51nm,1.2s
SCO Scoresbysund 69.75 340 P **P** **16 37 16.5 +1.3**
SCO IAmb IAmb 16 37 18.1
comp=Z,51nm,1.2s
PMG Port Moresby 69.88 113 P **P** **16 37 17.2 +0.3**
PMG pmax pmax
comp=Z,55nm,1.0s
PMG Port Moresby 69.88 113 P **P** **16 37 17.2 +0.3**
PMG IAmb IAmb 16 37 18.9
comp=Z,55nm,0.9s
GAMB Gambell 70.69 27 P **P** **16 37 21.5 +0.4**
GAMB IAmb IAmb 16 37 24.3
comp=Z,69nm,1.5s
GAMB Gambell 70.69 27 P 16 37 22.0
baz=294
FORT Forrest 70.84 142 P **P** **16 37 22.7 +0.3**
FORT IAmb IAmb 16 37 24.0
comp=Z,33nm,0.8s
AMKA Amchitka 70.86 41 P **P** **16 37 22.2 -0.2**
PATS Pohnpei 71.36 92 P **P** **16 37 26.6 +0.6**
TNA Tin City 71.41 25 P **P** **16 37 26.0 +0.6**
TNA IAmb IAmb 16 37 28.0
comp=Z,47nm,1.5s
TNA Tin City 71.42 25 P 16 37 26.6
baz=296
NEEM North Greenlan 71.87 351 *i* P **P** **16 37 28.9 +0.5**
NEEM IAmb IAmb 16 37 30.1
comp=Z,154nm,1.0s
RDOG Red Dog Mine 71.99 22 P **P** **16 37 29.4 +0.5**
RDOG IAmb IAmb 16 37 38.2
comp=Z,80nm,1.5s
RDOG Red Dog Mine 72.00 22 P 16 37 30.1
baz=300
A21K Barrow 72.11 17 P **P** **16 37 29.8 +0.2**
A21K IAmb IAmb 16 37 31.7
comp=Z,73nm,1.1s
A21K Barrow 72.11 17 P 16 37 30.5
baz=304,SNR=14
EUNU Eureka 72.29 359 P **P** **16 37 31.2 +0.7**
EUNU IAmb IAmb 16 37 33.1
comp=Z,92nm,1.1s
ESBB Sonseca Array 72.69 306 P **P** **16 37 33.8 +0.1**
ESBB IAmb IAmb 16 37 35.5
comp=Z,58nm,1.3s
ESDC Sonseca Array 72.69 306 P **P** **16 37 33.8 +0.1**

comp=Z,22nm,1.0s,baz=54,slow=6.3,SNR=72
ESDC Sonseca Array 72.69 306 P **P** **16 37 33.8 +0.1**
ANM Nome 72.83 25 P **P** **16 37 34.6 +0.6**
ANM pmax pmax
comp=Z,45nm,1.1s
ANM Nome 72.83 25 P **P** **16 37 34.6 +0.6**
ANM IAmb IAmb 16 37 36.9
comp=Z,45nm,1.1s
ANM Nome 72.83 25 P 16 37 35.5
baz=299
PAB San Pablo 73.01 306 P **P** **16 37 35.5 -0.1**
PAB pmax pmax
comp=Z,63nm,1.3s
PAB San Pablo 73.01 306 P **P** **16 37 35.5 -0.1**
PAB IAmb IAmb 16 37 37.4
comp=Z,63nm,1.2s
SUMG Summit 73.02 345⇑ *iP* **P** **16 37 36.7 +1.2**
SUMG IAmb IAmb 16 37 37.7
comp=Z,154nm,1.0s
SUMG Summit 73.02 345 P **P** **16 37 35.6 +0.2**
SUMG pmax pmax
comp=Z,186nm,1.1s
SUMG Summit 73.02 345 P **P** **16 37 35.6 +0.2**
GSTR Great Sitkin T 73.27 40 P **P** **16 37 35.7 -1.1**
TDRA Tendrara 73.76 299 P 16 37 42.0
PBRG Braganca 73.83 309 *eP* **P** **16 37 41.0 +0.6**
comp=Z,57nm,1.8s
MVO Moncorvo 74.28 308 *eP* **P** **16 37 43.8 +0.8**
comp=Z,68nm,1.0s
HORN Hornachuelos 74.32 305 P 16 37 43.7
TULEG Thule 74.72 354⇑ *iP* **P** **16 37 44.6 -0.2**
TULEG IAmb IAmb 16 37 45.8
comp=Z,54nm,0.9s
TULEG Thule 74.72 354 P **P** **16 37 44.6 -0.2**
TULEG IAmb IAmb 16 37 46.1
comp=Z,62nm,1.0s
POLO Lamas de Olo 74.73 309 *eP* **P** **16 37 46.0 +0.3**
comp=Z,23nm,1.6s
PCAB Cabril 74.75 309 *eP* **P** **16 37 46.3 +0.6**
comp=Z,91nm,1.9s
PGAV Gavieira, Arco 74.82 310 *eP* **P** **16 37 47.1 +0.9**
MTE Manteigas 74.94 308 *eP* **P** **16 37 47.8 +0.9**
comp=Z,60nm,0.9s
MTE Manteigas 74.94 308 P **P** **16 37 46.9 0.0**
MTE IAmb IAmb 16 37 49.1
comp=Z,54nm,1.1s
PVIS Viseu 75.06 308 *eP* **P** **16 37 48.3 +0.8**
comp=Z,71nm,1.8s
PCBR Castelo Branco 75.12 307 *eP* **P** **16 37 48.5 +0.7**
comp=Z,51nm,1.4s
PMRV Marv??o 75.23 307 *eP* **P** **16 37 49.2 +0.7**
comp=Z,41nm,1.5s
CTAO Charters Tower 75.38 122 P **P** **16 37 50.0 +0.5**
CTAO pmax pmax
comp=Z,54nm,1.1s
CTAO Charters Tower 75.38 122 P **P** **16 37 50.0 +0.5**
CTAO IAmb IAmb 16 37 51.6
comp=Z,54nm,1.1s
PBAR Barrancos 75.48 306 *eP* **P** **16 37 50.7 +0.8**
comp=Z,108nm,1.5s
PESTR Estremoz 75.60 306 *eP* **P** **16 37 51.2 +0.6**
comp=Z,57nm,1.7s
PESTR Estremoz 75.60 306 P **P** **16 37 50.4 -0.2**
ICESG Greenland Ices 75.61 342⇑ *iP* **P** **16 37 51.6 +1.1**
ICESG IAmb IAmb 16 37 52.6
comp=Z,251nm,1.0s
TOLK Toolik Lake Re 75.68 18 P **P** **16 37 51.3 +0.7**
TOLK IAmb IAmb 16 37 53.0
comp=Z,69nm,0.9s
TOLK Toolik Lake Re 75.68 18 P 16 37 51.8
baz=311,SNR=66
PMTG Montargil 75.96 307 *eP* **P** **16 37 53.3 +0.6**
EVO Evora 76.03 306 *eP* **P** **16 37 53.9 +0.8**
comp=Z,65nm,1.2s
ARF Arif 76.10 298 P 16 37 56.0
IMAR Indian Mountai 76.13 21 P **P** **16 37 53.6 +0.5**
PBEJ Beja 76.14 306 *eP* **P** **16 37 54.9 +1.2**
comp=Z,14nm,1.3s
PSBE So Bento 76.18 307 *eP* **P** **16 37 55.2 +1.2**
comp=Z,99nm,1.7s
PVAQ Vaqueiros 76.29 305 *eP* **P** **16 37 55.4 +0.9**
comp=Z,84nm,1.2s
PVAQ Vaqueiros 76.29 305 P **P** **16 37 54.8 +0.3**
PVAQ IAmb IAmb 16 37 56.5
comp=Z,84nm,1.1s
PVAQ Vaqueiros 76.29 305 P 16 37 55.4
UPNV Upernavik 76.40 349⇑ *iP* **P** **16 37 54.7 +0.2**
UPNV IAmb IAmb 16 37 55.9
comp=Z,52nm,1.0s
COLD Coldfoot 76.43 19 P **P** **16 37 55.6 +0.8**
COLD IAmb IAmb 16 37 57.4
comp=Z,53nm,1.0s
COLD Coldfoot 76.43 19 P 16 37 56.1
baz=311,SNR=51
PBDV Barranco-do-Ve 76.51 305 *eP* **P** **16 37 57.6 +1.7**
comp=Z,150nm,1.4s
PMAFR Mafra 76.76 307 *eP* **P** **16 37 59.5 +2.3**
BBOO Buckleboo 76.88 138 P **P** **16 37 57.8 0.0**
BBOO IAmb IAmb 16 37 59.2
comp=Z,86nm,0.9s
TTA Tatalina 77.22 24 P **P** **16 38 00.5 +1.1**
TTA pmax pmax
comp=Z,77nm,1.4s
TTA Tatalina 77.22 24 P **P** **16 38 00.5 +1.1**
TTA IAmb IAmb 16 38 02.6
comp=Z,77nm,1.4s
TTA Tatalina 77.22 24 P 16 38 01.2
baz=307
ANGG Ammassalik, Gr 77.33 339 *i* P **P** **16 38 00.3 +0.5**
ANGG IAmb IAmb 16 38 01.5
comp=Z,108nm,1.0s
ANGG Ammassalik, Gr 77.33 339 P **P** **16 38 00.6 +0.7**
TZRR Tazzarine 77.42 298 P 16 38 03.0
MLY Manley 77.71 21 P **P** **16 38 02.9 +0.7**
MLY IAmb IAmb 16 38 04.7
comp=Z,59nm,1.0s
MLY Manley 77.71 21 P 16 38 03.4
baz=311,SNR=60
ZGR Zagora 77.74 298 P 16 38 05.0
RES Resolute Bay 77.77 0 P **P** **16 38 02.7 +0.5**
comp=Z,8.1nm,0.9s,baz=16,slow=8.7,SNR=22
RES Resolute Bay 77.77 0 P **P** **16 38 02.4 +0.2**
RES pmax pmax
comp=Z,20nm,1.2s
RES Resolute Bay 77.77 0 P **P** **16 38 02.4 +0.2**
AKUT Akutan 77.85 35 P **P** **16 38 01.7 -1.2**
BMAR Burnt Mountain 77.88 18 P **P** **16 38 04.2 +1.2**
CHUM Lake Minchumin 77.93 23 P 16 38 05.1
baz=310,SNR=17
I23K Minto, Yukon-K 78.07 21 P **P** **16 38 04.6 +0.6**
I23K IAmb IAmb 16 38 06.7
comp=Z,71nm,1.2s
I23K Minto, Yukon-K 78.07 21 P 16 38 05.3
baz=312,SNR=37
LBTB Lobatse 78.23 234 P **P** **16 38 05.6 0.0**
LBTB pmax pmax
comp=Z,73nm,0.9s
LBTB Lobatse 78.23 234 P **P** **16 38 05.6 0.0**
LBTB IAmb IAmb 16 38 12.0
comp=Z,73nm,0.9s
BPAW Bear Paw Mtn. 78.24 22 P **P** **16 38 05.8 +0.8**
BPAW IAmb IAmb 16 38 07.3
comp=Z,46nm,0.9s
BPAW Bear Paw Mtn. 78.24 22 P 16 38 06.1
baz=311,SNR=43
OUZM OUZ 78.30 299 P 16 38 08.0
FYU Fort Yukon 78.32 19 P **P** **16 38 06.2 +0.9**
NEA2 Nenana 78.54 21 P **P** **16 38 07.2 +0.6**
NEA2 Nenana 78.54 21 P 16 38 07.5
baz=312,SNR=76
MDM Murphy Dome 78.55 21 P **P** **16 38 06.8 +0.1**
PPLA Purkeypile 78.61 23 P **P** **16 38 08.0 +0.8**
PPLA Purkeypile 78.61 23 P 16 38 08.6
baz=310,SNR=18
KTH Kantishna Hill 78.62 22 P **P** **16 38 07.7 +0.5**
KTH IAmb IAmb 16 38 09.6
comp=Z,78nm,1.3s
POKR Poker Plat Res 78.69 20 P **P** **16 38 08.6 +1.1**
POKR IAmb IAmb 16 38 09.9
comp=Z,62nm,0.9s
POKR Poker Plat Res 78.69 20 P 16 38 08.7
baz=314,SNR=17
BWN Browne 78.69 22 P **P** **16 38 08.5 +1.0**
TCOL CIGO, UAF Yank 78.72 21 P **P** **16 38 08.0 +0.3**
TCOL IAmb IAmb 16 38 09.8

comp=Z,71nm,1.0s
TCOL CIGO, UAF Yank 78.73 21 P 16 38 08.5
baz=313,SNR=18
COLA College 78.73 21 *i* P **P** **16 38 08.3 +0.7**
COLA pmax pmax
comp=Z,83nm,1.1s
COLA College 78.73 21 P **P** **16 38 08.3 +0.7**
COLA lAmb lAmb 16 38 09.8
comp=Z,71nm,1.0s
TOA0 Torodi Ar. Sit 78.86 279 P **P** **16 38 08.8 -0.5**
TORD Torodi Ar. Bea 78.86 279 P **P** **16 38 08.9 -0.4**
comp=Z,12nm,0.9s,baz=54,slow=4.6,SNR=49
TORD Torodi Ar. Bea 78.86 279 P **P** **16 38 08.8 -0.4**
TORD pP **pP** **16 38 13.7 -1.6**
CCB Clear Creek Bu 78.90 21 P **P** **16 38 08.7 +0.1**
TRF Thorofare Moun 78.90 22 P **P** **16 38 09.1 +0.3**
TRF Thorofare Moun 78.90 22 P 16 38 09.3
baz=312,SNR=6.5
WRH Wood River Hil 78.93 21 P **P** **16 38 08.7 -0.1**
PRP Porcupine Dome 78.98 19 P **P** **16 38 10.5 +1.2**
PRP lAmb lAmb 16 38 12.1
comp=Z,101nm,1.2s
PRP Porcupine Dome 78.98 19 P 16 38 10.6
baz=315
OUK Oukaimeden 79.03 299 P 16 38 11.4
IL31 79.10 20 P **P** **16 38 09.6 0.0**
IL31 lAmb lAmb 16 38 11.0
comp=Z,40nm,1.1s
ILAR Eielson Array 79.10 20 P **P** **16 38 09.9 +0.2**
comp=Z,19nm,0.9s,baz=301,slow=4.3,SNR=134
ILAR PP **PP** **16 41 07.3 -1.0**
comp=Z,10.0nm,0.9s,baz=309,slow=7.0,SNR=12
ILAR Eielson Array 79.10 20 P **P** **16 38 09.7 -0.1**
MCK McKinley 79.16 22 P **P** **16 38 10.3 +0.2**
MCK pmax pmax
comp=Z,40nm,1.0s
MCK McKinley 79.16 22 P **P** **16 38 10.3 +0.2**
MCK lAmb lAmb 16 38 12.2
comp=Z,40nm,1.0s
MCK McKinley 79.16 22 P 16 38 11.0
baz=313,SNR=17
DY2G Dye2 79.25 342⇑ *i* P **P** **16 38 11.6 +0.8**
DY2G lAmb lAmb 16 38 13.3
comp=Z,205nm,1.3s
RND Reindeer 79.41 22 P **P** **16 38 11.8 +0.2**
RND pmax pmax
comp=Z,45nm,1.0s
RND Reindeer 79.41 22 P **P** **16 38 11.8 +0.2**
RND lAmb lAmb 16 38 13.0
comp=Z,45nm,1.0s
SKT Skwentna 79.44 24 P **P** **16 38 12.3 +0.7**
SKT Skwentna 79.44 24 P 16 38 12.5
baz=311,SNR=45
CUT Chulitna 79.61 23 P **P** **16 38 12.9 +0.5**
CUT lAmb lAmb 16 38 33.7
comp=Z,51nm,1.0s
CUT Chulitna 79.61 23 P 16 38 13.3
baz=312,SNR=5.8
STKA Stephens Creek 79.62 134 P **P** **16 38 13.3 +0.3**
comp=Z,24nm,0.9s,baz=312,slow=6.9,SNR=32
STKA Stephens Creek 79.62 134 P **P** **16 38 13.2 +0.2**
SPCR Spurr Chakacha 79.70 25 P 16 38 14.4
baz=310,SNR=5.4
TTIG Tnine Tigouga, 79.76 299 P 16 38 16.0
WAT2 Susitna Watana 79.80 22 P 16 38 13.7
baz=313
INK Inuvik 79.86 14 P **P** **16 38 14.6 +0.8**
comp=Z,27nm,0.9s,baz=329,slow=6.9,SNR=69
INK PP **PP** **16 41 14.9 +0.3**
comp=Z,6.1nm,1.0s,baz=346,slow=8.2,SNR=4.4
INK Inuvik 79.86 14 P **P** **16 38 14.4 +0.6**
INK pmax pmax
comp=Z,50nm,1.1s
INK Inuvik 79.86 14 P **P** **16 38 14.4 +0.6**
INK lAmb lAmb 16 38 16.0
comp=Z,50nm,1.1s
INK Inuvik 79.86 14 P 16 38 14.5
baz=325
SFJD Kangerlussuaq 79.96 344⇑ *i* P **P** **16 38 14.4 0.0**
SFJD lAmb lAmb 16 38 15.6
comp=Z,43nm,1.0s
SFJD Kangerlussuaq 79.96 344 P **P** **16 38 14.7 +0.4**
SFJD pmax pmax
comp=Z,66nm,1.0s
SFJD Kangerlussuaq 79.96 344 P **P** **16 38 14.7 +0.4**
SFJD lAmb lAmb 16 38 15.9
comp=Z,66nm,0.9s
RSO Redoubt South 79.97 25 P **P** **16 38 15.3 +0.5**
SUA Susitna One 80.06 24 P **P** **16 38 15.5 +0.4**
SUA lAmb lAmb 16 38 17.2
comp=Z,61nm,1.0s
SUA Susitna One 80.06 24 P 16 38 16.0
baz=311,SNR=6.7
WAT6 Susitna Watana 80.35 22 P 16 38 17.0
baz=314,SNR=23
GHO Glory Hole Cre 80.50 23 P **P** **16 38 17.6 +0.1**
GHO lAmb lAmb 16 38 31.5
comp=Z,52nm,1.1s
PMR Palmer 80.55 23 P **P** **16 38 17.7 +0.1**
PMR pmax pmax
comp=Z,56nm,0.9s
PMR Palmer 80.55 23 P **P** **16 38 17.7 +0.1**
PMR lAmb lAmb 16 38 19.6
comp=Z,56nm,0.9s
PMR Palmer 80.55 23 P 16 38 18.5
baz=313,SNR=22
SCRK Sand Creek 80.55 20 P 16 38 18.6
baz=317
RC01 Rabbit Creek A 80.68 24 P **P** **16 38 18.8 +0.4**
RC01 lAmb lAmb 16 38 20.4
comp=Z,83nm,1.0s
RC01 Rabbit Creek A 80.68 24 P 16 38 19.2
baz=312,SNR=11
SML Sawmill 80.68 23 P 16 38 19.5
baz=313,SNR=21
BOSA Boshof 80.69 231 P **P** **16 38 18.7 -0.3**
comp=Z,34nm,0.9s,baz=46,slow=3.4,SNR=16
BOSA LR LR 17 13 21.9
comp=Z,616nm,18.1s,baz=24,slow=35
BOSA Boshof 80.69 231 P **P** **16 38 18.3 -0.7**
BOSA pmax pmax
comp=Z,47nm,1.0s
BOSA Boshof 80.69 231 P **P** **16 38 18.3 -0.7**
BOSA lAmb lAmb 16 38 25.0
comp=Z,47nm,0.9s
EPYK Eagle Plains 80.71 16 P **P** **16 38 18.6 +0.2**
EPYK lAmb lAmb 16 38 20.1
comp=Z,42nm,0.9s
EPYK Eagle Plains 80.71 16 P 16 38 18.9
baz=323
C36M Paulatuk 80.72 10 P **P** **16 38 18.1 -0.2**
C36M lAmb lAmb 16 38 19.9
comp=Z,81nm,1.2s
C36M Paulatuk 80.72 10 P 16 38 18.4
baz=334
DOT Dot Lake 80.77 20 P **P** **16 38 18.9 +0.1**
EGAK Eagle 80.78 19 P **P** **16 38 18.9 +0.1**
EGAK lAmb lAmb 16 38 20.9
comp=Z,39nm,1.1s
EGAK Eagle 80.78 19 P 16 38 19.5
baz=319
PAX Paxson 80.82 21 P **P** **16 38 19.3 +0.1**
PAX pmax pmax
comp=Z,45nm,1.3s
PAX Paxson 80.82 21 P **P** **16 38 19.3 +0.1**
PAX Paxson 80.82 21 P 16 38 19.9
baz=316,SNR=6.9
KNK Knik Glacier 80.91 23 P 16 38 20.8
baz=313
SCM Sheep Creek Mo 81.01 23 P **P** **16 38 21.0 +0.8**
SCM pmax pmax
comp=Z,90nm,1.0s
SCM Sheep Creek Mo 81.01 23 P **P** **16 38 21.0 +0.8**
SCM lAmb lAmb 16 38 22.5
comp=Z,90nm,1.0s
K27K Chicken 81.08 19 P **P** **16 38 21.3 +0.9**
K27K lAmb lAmb 16 38 23.3
comp=Z,85nm,1.2s
K27K Chicken 81.08 19 P 16 38 21.9
baz=318
O22K Cooper Landing 81.09 24 P **P** **16 38 21.1 +0.6**
O22K lAmb lAmb 16 38 26.7
comp=Z,85nm,0.8s
O22K Cooper Landing 81.09 24 P 16 38 21.2
baz=312
BRLK Bradley Lake 81.14 25 P **P** **16 38 20.8 0.0**

CNPM China Poot 81.16 26 P **P** **16 38 20.7 -0.3**
CNPM lAmb lAmb 16 38 24.6
comp=Z,52nm,0.8s
M24K Tolsona, Glenn 81.20 22 P **P** **16 38 22.1 +0.9**
M24K lAmb lAmb 16 38 23.5
comp=Z,63nm,0.9s
M24K Tolsona, Glenn 81.20 22 P 16 38 22.9
baz=315,SNR=9.0
BRSE Bradley Lake S 81.21 25 P 16 38 21.5
baz=312
HARP HAARP 81.33 21 P 16 38 23.6
baz=316
PWL Port Wells 81.33 24 P **P** **16 38 22.7 +0.8**
PWL lAmb lAmb 16 38 24.1
comp=Z,101nm,1.3s
SEW Seward 81.45 25 P **P** **16 38 22.7 +0.3**
SEW lAmb lAmb 16 38 24.4
comp=Z,84nm,1.1s
SEW Seward 81.45 25 P 16 38 23.2
baz=313,SNR=8.2
KLU Klutina 81.72 22 P **P** **16 38 24.1 +0.1**
KLU lAmb lAmb 16 38 26.7
comp=Z,102nm,1.4s
KLU Klutina 81.73 22 P 16 38 25.4
baz=315,SNR=14
GLI Glacier Island 81.76 23 P 16 38 25.0
baz=314
KDAK Kodiak Island 81.77 27 P **P** **16 38 25.0 +0.9**
comp=Z,47nm,0.5s,baz=324,slow=3.1,SNR=75
KDAK Kodiak Island 81.77 27 P **P** **16 38 25.1 +0.9**
KDAK pmax pmax
comp=Z,98nm,1.0s
KDAK Kodiak Island 81.77 27 P **P** **16 38 25.1 +0.9**
DAWY Dawson 81.82 18 P **P** **16 38 24.7 +0.3**
DAWY lAmb lAmb 16 38 26.5
comp=Z,40nm,1.1s
OHAK Old Harbor 81.84 28 P **P** **16 38 24.9 +0.4**
OHAK Old Harbor 81.84 28 P 16 38 25.8
baz=310,SNR=7.4
L27K Beaver Creek, 81.88 20 P **P** **16 38 25.7 +0.9**
L27K lAmb lAmb 16 38 27.7
comp=Z,50nm,1.1s
L27K Beaver Creek, 81.88 20 P 16 38 26.3
baz=319
BCAR Beaver Creek A 81.89 20 P **P** **16 38 25.6 +0.8**
FID Port Fidalgo 82.06 23 P **P** **16 38 26.5 +0.8**
N25K Chitina, Valde 82.08 22 P **P** **16 38 26.4 +0.5**
N25K lAmb lAmb 16 38 28.8
comp=Z,88nm,1.0s
N25K Chitina, Valde 82.09 22 P 16 38 27.5
baz=316,SNR=27
EYAK Cordova Ski Ar 82.46 23 P **P** **16 38 28.9 +1.2**
EYAK lAmb lAmb 16 38 30.0
comp=Z,60nm,1.1s
EYAK Cordova Ski Ar 82.46 23 P 16 38 29.4
baz=316
GLB Gilahina Butte 82.46 22 P **P** **16 38 28.6 +0.8**
NUUK Nuuk 82.48 343⇑ *i* P **P** **16 38 28.3 +0.6**
NUUK lAmb lAmb 16 38 29.2
comp=Z,102nm,1.0s
BMRM Bremner River 82.55 22 P **P** **16 38 29.1 +0.8**
BMRM lAmb lAmb 16 38 30.8
comp=Z,66nm,1.0s
BMRM Bremner River 82.55 22 P 16 38 29.7
baz=317
VRDI Verde Repeater 82.74 22 P **P** **16 38 30.3 +0.8**
VRDI lAmb lAmb 16 38 32.1
comp=Z,86nm,1.2s
MCARA McCarthy VSAT 82.76 21 P **P** **16 38 30.5 +1.2**
MCARA McCarthy VSAT 82.76 21 P 16 38 31.2
baz=318
RAGM Ragged Mountai 82.95 23 P **P** **16 38 31.6 +1.2**
RAGM lAmb lAmb 16 38 33.2
comp=Z,53nm,0.7s
NRS Narsarsuaq 82.96 338 *i* P **P** **16 38 31.0 +0.7**
NRS lAmb lAmb 16 38 32.1
comp=Z,38nm,1.0s
NRS Narsarsuaq 82.96 338 P **P** **16 38 30.4 +0.1**
NRS pmax pmax
comp=Z,43nm,1.0s
NRS Narsarsuaq 82.96 338 P **P** **16 38 30.4 +0.1**
NRS lAmb lAmb 16 38 31.9
comp=Z,42nm,1.0s
HMT Hamilton 83.12 23 P **P** **16 38 31.9 +0.6**
HMT lAmb lAmb 16 38 34.0
comp=Z,86nm,1.3s
CRQM Cirque 83.19 22 P **P** **16 38 32.8 +1.0**
CRQE Cirque 83.21 22 P 16 38 33.3
baz=318
KOWA Kowa 83.23 283 P **P** **16 38 32.5 -0.1**
KOWA lAmb lAmb 16 38 39.2
comp=Z,65nm,1.4s
BARN Barnard Glacie 83.44 21 P **P** **16 38 34.2 +1.1**
CTG Chitna Glacier 83.62 21 P 16 38 35.7
baz=319
CTGM Chitina Glacie 83.62 21 P **P** **16 38 35.4 +1.4**
GRNC Granite Creek 83.66 21 P **P** **16 38 35.2 +1.0**
GRNC lAmb lAmb 16 38 37.1
comp=Z,50nm,1.0s
LOGN Logan Glacier 83.83 21 P **P** **16 38 36.3 +1.2**
LOGN lAmb lAmb 16 38 44.2
comp=Z,61nm,1.2s
YAH Yahtse 83.94 22 P **P** **16 38 37.1 +1.4**
PCA Pinnacle 84.63 21 P **P** **16 38 39.7 +0.7**
PINM Pinnacle 84.63 21 P 16 38 41.0
baz=320
HYT Haines Junctio 84.91 20 P **P** **16 38 41.6 +1.1**
TOO Toolangi 85.77 137 P **P** **16 38 46.0 +1.1**
TOO pmax pmax
comp=Z,38nm,1.1s
TOO Toolangi 85.77 137 P **P** **16 38 46.0 +1.1**
TOO lAmb lAmb 16 38 47.4
comp=Z,38nm,1.1s
WHY Whitehorse 85.81 19 P **P** **16 38 45.8 +0.8**
WHY lAmb lAmb 16 38 47.0
comp=Z,45nm,1.0s
WHY Whitehorse 85.81 19 P 16 38 45.8
baz=325
SUR Sutherland 86.02 230 P **P** **16 38 46.8 +0.3**
SUR lAmb lAmb 16 38 53.6
comp=Z,55nm,1.1s
SKAG Skagway 86.66 20 P 16 38 51.1
baz=324
BESE Bessie Mountai 87.52 20 P **P** **16 38 54.2 +0.9**
DBIC Dimbokro 87.53 276 P **P** **16 38 54.2 +0.1**
comp=Z,9.3nm,0.7s,baz=33,slow=4.9,SNR=12
DBIC Dimbokro 87.53 276 P **P** **16 38 54.2 +0.1**
DBIC lAmb lAmb 16 39 00.3
comp=Z,28nm,1.0s
JIS Juneau Island 87.91 20 P **P** **16 38 56.5 +1.5**
YKA Yellowknife Ar 88.54 9 P **P** **16 38 58.0 +0.1**
comp=Z,13nm,0.9s,baz=341,slow=4.5,SNR=116
YKA PP **PP** **16 42 23.2 -2.1**
comp=Z,2.8nm,0.8s,baz=344,slow=8.0,SNR=5.5
YKA PKKPbc **PKKPbc** **16 56 38.1 -2.3**
comp=Z,0.8nm,0.8s,baz=150,slow=2.7,SNR=11
YKA PKPPKP **P'P'df** **17 04 46.0 -6.7**
comp=Z,0.4nm,0.7s,baz=141,slow=3.1,SNR=6.1
DLBC Dease Lake 89.03 18 P **P** **16 39 01.4 +0.9**
DLBC lAmb lAmb 16 39 03.3
comp=Z,30nm,1.1s
DZM Mont Dzumac 92.26 114 *e*LR LR 17 09 01.6
comp=Z,212nm,23.1s
FCC Fort Churchill 93.77 360 P **P** **16 39 22.6 +0.3**
FCC pmax pmax
comp=Z,29nm,1.3s
FCC Fort Churchill 93.77 360 P **P** **16 39 22.6 +0.3**
FCC lAmb lAmb 16 39 23.7
comp=Z,28nm,1.2s
MAW Mawson 96.66 189 P **P** **16 39 34.9 0.0**
comp=Z,3.2nm,0.8s,baz=325,slow=12,SNR=5.0
MAW PP **PP** **16 43 29.0 -1.1**
comp=Z,1.5nm,0.7s,baz=349,slow=10,SNR=2.5
MAW PKKPbc **PKKPbc** **16 56 19.1 -1.7**
comp=Z,2.9nm,0.9s,baz=242,slow=6.2,SNR=4.3
MAW Mawson 96.66 189 P **P** **16 39 35.8 +0.8**
MAW pmax pmax
comp=Z,3.0nm,1.2s
MAW Mawson 96.66 189 P **P** **16 39 35.8 +0.8**
FFC Flin Flon 97.54 5 P **P** **16 39 39.4 -0.2**
FFC pmax pmax
comp=Z,17nm,1.3s
FFC Flin Flon 97.54 5 P **P** **16 39 39.4 -0.2**
FFC lAmb lAmb 16 39 40.9
comp=Z,17nm,1.2s
SYO Syowa Base 102.24 195⇑ *e*Pdiff **Pdif** **16 40 01.5 +1.6**

ULM Lac du Bonnet 102.28 1 P **Pdif** **16 40 01.1 +0.3**
comp=Z,1.3nm,0.7s,baz=60,slow=8.1,SNR=4.9
ULM PKKPbc **PKKPbc** **16 56 03.5 -0.1**
comp=Z,1.9nm,0.8s,baz=180,slow=6.5,SNR=3.2
PDAR Pinedale Array 108.37 12 PKiKP **PKiKP** **16 44 33.5 -0.9**
comp=Z,0.9nm,0.8s,baz=15,slow=3.7,SNR=3.9
PDAR PKKPbc **PKKPbc** **16 55 43.6 -1.8**
comp=Z,0.2nm,0.5s,baz=140,slow=7.2,SNR=3.5
PDAR PKKP **PKKPdf** **16 55 57.3 -1.1**
comp=Z,1.4nm,0.9s,baz=213,slow=5.1,SNR=3.7
PDAR PKKPab **PKKPab** **16 56 01.8 +0.3**
comp=Z,1.4nm,0.9s,baz=166,slow=4.5,SNR=6.4
NVAR Mina Array Bea 110.35 20 PKiKP **PKiKP** **16 44 38.7 +0.4**
comp=Z,0.2nm,0.3s,baz=249,slow=2.5,SNR=2.3
NVAR PP **PP** **16 45 12.3 +0.4**
comp=Z,2.9nm,1.0s,baz=328,slow=4.6,SNR=6.9
NVAR PKKPbc **PKKPbc** **16 55 38.9 0.0**
comp=Z,0.9nm,0.4s,baz=96,slow=5.5,SNR=6.0
NVAR PKKP **PKKPdf** **16 55 54.8 +0.1**
comp=Z,0.9nm,0.8s,baz=57,slow=4.1,SNR=4.3
VNDA Vanda 113.97 167 PKiKP **PKiKP** **16 44 42.8 -0.7**
comp=Z,1.5nm,0.9s,baz=282,slow=4.6,SNR=7.0
VNDA PKKPbc **PKKPbc** **16 55 24.9 -2.6**
comp=Z,1.3nm,1.1s,baz=154,slow=4.9,SNR=3.0
SNAA Sanae 115.69 201 PKPdf **PKiKP** **16 44 45.8 -1.3**
U40A Yellville 116.17 359 **PKiKP** **16 44 48.0 -1.1**
ANMO Albuquerque 116.52 11 P 16 44 50.6
baz=348
VNA2 Neumayer--Watz 117.03 202 PKPdf **PKiKP** **16 44 49.6 0.0**
LENM Lemitar 117.19 12 **PKiKP** **16 44 51.4 0.0**
VNA1 Neumayer--Stat 117.29 202 PKPdf **PKiKP** **16 44 55.7 +5.6**
WMOK Wichita Mounta 117.65 4 PKiKP **PKPdf** **16 44 50.7 -1.4**
WMOK Wichita Mounta 117.65 4 **PKPdf** **16 44 50.7 -1.4**
WMOK Wichita Mounta 117.65 4 P 16 44 51.1
baz=356
VNA3 Neumayer Olymp 117.80 201 PKPdf **PKPdf** **16 44 50.8 -0.3**
MIAR Mount Ida 117.99 359 PKiKP **PKPdf** **16 44 51.2 -1.5**
MIAR Mount Ida 117.99 359 **PKPdf** **16 44 51.2 -1.5**
MIAR Mount Ida 117.99 359 P 16 44 52.3
baz=0.7
TUC Tucson 118.17 16 PKiKP **PKPdf** **16 44 52.7 -0.5**
TUC Tucson 118.17 16 **PKPdf** **16 44 52.7 -0.5**
TUC Tucson 118.17 16 P 16 44 53.7
baz=343
121A Cookes Peak, D 118.62 13 **PKPdf** **16 44 53.2 -1.0**
121A Cookes Peak, D 118.62 13 P 16 44 54.7
baz=346
MNTX Cornudas Mount 119.88 11 PKPdf **PKPdf** **16 44 55.6 -0.8**
MNTX Cornudas Mount 119.88 11 P 16 44 56.6
baz=349
RAR Rarotonga 120.56 99 PKP **PKiKP** **16 44 58.9 +1.0**
comp=Z,18nm,0.8s,baz=259,slow=5.2,SNR=2.6
JCT Junction City 121.80 6 PKiKP **PKPdf** **16 44 59.2 -1.0**
JCT Junction City 121.80 6 PKPdf **PKPdf** **16 44 59.2 -1.0**
JCT Junction City 121.80 6 P 16 44 59.6
baz=354
TX31 Lajitas Ar. Si 122.47 10 PKPdf **PKPdf** **16 45 00.9 -0.6**
TX32 Lajitas Array 122.47 10 PKPdf **PKPdf** **16 45 01.0 -0.6**
TXAR Lajitas Array 122.47 10 PKP **PKPdf** **16 45 01.2 -0.3**
comp=Z,3.4nm,0.7s,baz=298,slow=0.4,SNR=29
TXAR PKKPbc **PKKPbc** **16 54 56.4 +0.2**
comp=Z,0.6nm,0.8s,baz=180,slow=0.9,SNR=3.6
TXAR Lajitas Array 122.47 10 **PKiKP** **16 45 00.9 -0.7**
NBLA Lagarto - SE 124.71 276 *e*P **PKiKP** **16 45 07.4 +1.1**
NBPN Ponto Novo - B 126.77 277 *e*P **PKiKP** **16 45 10.7 +0.3**
GDU01 Guandu, BA 127.45 274 *e*P **PKiKP** **16 45 12.1 +0.3**
PPT2 Papeete2 128.25 91 *e*LR LR 17 25 32.6
comp=Z,122nm,23.5s
MDP Montagnes des 128.28 303 PKP **PKiKP** **16 45 13.4 -0.1**
comp=Z,19nm,0.8s,baz=20,slow=9.3,SNR=3.8
TMAB Tom-Au,PA,Br 129.27 292 *e*P **PKiKP** **16 45 16.5 +1.0**
TBI Tubuai 130.28 98 *e*LR LR 17 26 27.3
comp=Z,113nm,30.5s
BSFB Barra de Sao F 130.54 268 *e*P **PKiKP** **16 45 19.6 +1.8**
SJMB Sao Joao De Ma 130.79 269 *e*P **PKiKP** **16 45 18.3 -0.1**
ALF01 Guarapari-ES 131.04 266 *e*P **PKiKP** **16 45 19.9 +1.2**
MCPB Macapa, AP 131.30 297 *e*P **PKiKP** **16 45 20.2 +0.7**
SDBA SAO DESIDERIO 131.58 278 *e*P **PKiKP** **16 45 20.1 0.0**
JANB Januaria 132.18 275 *e*P **PKiKP** **16 45 21.7 +0.4**
CAM01 Campos-RJ 132.25 265 *e*P **PKiKP** **16 45 21.0 -0.2**
SMTB Santa Maria do 132.27 284 *e*P **PKPdf** **16 45 18.9 -1.6**
PLCV Puerto La Cruz 132.62 319 **SKPab** **16 48 49.4 +0.5**
PCRV Puerto La Cruz 132.63 319 SKPbc **SKPab** **16 48 49.4 +0.4**
comp=Z,17nm,1.0s,baz=212,slow=8.4,SNR=3.4
PRPB Parauapebas 132.79 289 *e*P **PKiKP** **16 45 22.3 -0.2**
DIAM Diamantina, MG 132.85 270 *e*P **PKiKP** **16 45 22.8 +0.1**
DUB01 Friburgo-RJ 132.96 265 *e*P **PKiKP** **16 45 22.8 +0.1**
MALB Monte Alegre 133.95 297 *e*P **PKiKP** **16 45 24.7 -0.2**
VAS01 Vassouras-RJ 133.96 265 *e*P **PKiKP** **16 45 24.9 +0.2**
PEXB Peixe 134.42 281 *e*P **PKiKP** **16 45 26.2 +0.4**
MAN01 Angra dos Reis 134.60 264 *e*P **PKiKP** **16 45 25.6 -0.4**
BSCB Bom Sucesso 134.74 267 *e*P **PKiKP** **16 45 25.9 -0.5**
ESAR Angra dos Reis 135.06 264 *e*P **PKiKP** **16 45 26.4 -0.5**
CMIG Matias Romero 135.37 1 PKP **PKiKP** **16 45 27.7 0.0**
comp=Z,0.8nm,0.4s,baz=70,slow=12,SNR=2.5
BDFB Brasilia 135.68 276 PKhKP PKPpre 16 45 24.6
comp=Z,1.0nm,0.4s,baz=72,slow=3.0,SNR=2.2
ITTB Itaituba 136.63 295 *e*P **PKiKP** **16 45 29.6 -0.8**
SNDB Serra Nova Dou 136.96 283 *e*P **PKiKP** **16 45 30.3 -0.7**
SDV Santo Domingo 137.00 325 PKP **PKPdf** **16 45 29.9 +0.3**
comp=Z,5.1nm,0.5s,baz=40,slow=5.0,SNR=5.3
VAO Valinhos 137.28 265 *e*P **PKiKP** **16 45 30.7 -0.8**
APG El Apazote 137.30 355 PKhKP PKPpre 16 45 27.8
comp=Z,3.7nm,0.3s,baz=90,slow=9.3,SNR=3.9
APG SKPbc **SKPbc** **16 49 00.9 -1.9**
comp=Z,4.2nm,0.3s,baz=48,slow=1.5,SNR=4.0
RCLB Rio Claro- Sao 137.62 266 *e*P **PKiKP** **16 45 31.7 -0.5**
NPGB Novo Progresso 137.87 292 *e*P **PKiKP** **16 45 32.1 -0.8**
PMSA Palmer Station 138.38 199 *e*P **PKiKP** **16 45 32.1 -0.2**
ARAG Araguaiana, MT 139.04 278 *e*P **PKiKP** **16 45 34.3 -0.9**
CNLB Canela 142.07 257 *e*P **PKiKP** **16 45 40.0 -1.1**
PTGB Pitanga 142.24 265 *e*P **PKiKP** **16 45 40.6 -1.0**
ROSC El Rosal 142.31 326 PKhKP PKPpre 16 45 35.5
comp=Z,19nm,0.9s,baz=27,slow=6.8,SNR=11
ROSC El Rosal 142.31 326 **PKPdf** **16 45 35.2 -4.3**
ROSC El Rosal 142.31 326 PKPpre PKPpre 16 45 35.2
GUY2C Guyana, Caldas 142.48 328 *e*P **PKPdf** **16 45 35.5 -4.4**
ITAB Concordia 142.84 261 *e*P **PKPdf** **16 45 41.0 +1.5**
TOLC Tolima 143.02 328 *e*P PKPbc 16 45 37.8 +0.4
ORTC Ortega, Tolima 143.57 327 *e*P PKPab 16 45 37.3 -0.4
YOTC Yotoco, Valle 144.03 329 *e*P **PKPab** **16 45 37.8 -1.7**
MACC Macarena, Meta 144.38 323 *e*P PKPbc 16 45 41.1 +0.2
MALC Bahia Malaga 144.45 330 *e*P **PKPab** **16 45 39.9 -1.0**
BETC Betania 144.73 326 *e*P **PKPab** **16 45 41.8 -0.2**
MARP Paez Belalcaza 144.84 327 *e*P **PKPab** **16 45 42.4 -0.4**
VILB Vilhena 145.03 288 *e*P **PKPdf** **16 45 43.5 -0.2**
GARC Garzon, Huila 145.19 326 *e*P **PKPbc** **16 45 43.3 -0.5**
PTLB Pontes e Lacer 145.31 283 *e*P **PKPdf** **16 45 44.5 +0.4**
PCON Cinco Dias 145.50 327 *e*P **PKPab** **16 45 46.7 +1.2**
SOTA Rioblanco 145.77 328 *e*P **PKPdf** **16 45 43.8 -1.9**
PTLC Puerto Leguiza 146.54 323 *e*P **PKPbc** **16 45 46.7 +0.3**
GCUF Volcan Galeras 146.92 328 *e*P **PKPab** **16 45 50.8 0.0**
SIV San Ignacio 147.22 284 PKPbc **PKPdf** **16 45 47.1 -0.3**
comp=Z,48nm,0.8s,baz=100,slow=4.5,SNR=129
CPUP Villa Florida 147.23 264 PKPbc **PKPdf** **16 45 46.9 -0.2**
comp=Z,18nm,0.9s,baz=81,slow=3.1,SNR=34
CPUP Villa Florida 147.23 264 **PKPdf** **16 45 46.5 -0.5**
ETMB Extrema 148.18 299 *e*P **PKPdf** **16 45 50.5 +1.4**
OTAV Otavalo 148.30 329 PKP2 **PKPdf** **16 45 51.1 +1.2**
OTAV Otavalo 148.30 329 PKPbc **PKPdf** **16 45 51.1 +1.2**
OTAV Otavalo 148.30 329 *e*P **PKPbc** **16 45 52.8 -0.4**
OTAV Otavalo 148.30 329 *e*P **PKPdf** **16 45 51.5 +1.6**
GO10 Punta Arenas 149.43 208 **PKPab** **16 45 59.6 +0.5**
GO09 Cerro Castillo 151.35 209 **PKPbc** **16 45 58.6 -0.4**
CZSB Cruzeiro do Su 151.52 310 *e*P **PKPdf** **16 45 56.2 +1.9**
LPAZ La Paz 153.34 290 PKP **PKPdf** **16 45 57.5 -0.2**
comp=Z,3.5nm,1.1s,baz=16,slow=5.9,SNR=6.6
LPAZ PKPbc **pPKPdf** **16 46 04.4 +0.5**
comp=Z,6.9nm,0.8s,baz=11,slow=9.2,SNR=18
LPAZ La Paz 153.34 290 PKPdf **PKPdf** **16 45 56.4 -1.3**
ATAH Atahualpa 154.58 321 PKP **PKPdf** **16 45 58.6 -0.7**
comp=Z,2.2nm,0.6s,baz=112,slow=11,SNR=1.8
ATAH PKPab **PKPab** **16 46 24.4 +2.2**
comp=Z,14nm,0.9s,baz=50,slow=6.3,SNR=7.6
PB11 IPOC Station P 156.21 284 PKPab **PKPab** **16 46 28.0 -0.8**
LVC Limon Verde 156.58 277 PKP **PKPdf** **16 46 00.9 -0.8**
comp=Z,0.6nm,0.5s,baz=106,slow=4.6,SNR=3.1
PLCA Paso Flores 156.68 230 PKP **PKPdf** **16 46 00.1 -0.8**
comp=Z,6.5nm,1.1s,baz=101,slow=2.3,SNR=7.3
PLCA PKPab **PKPab** **16 46 29.4 -0.8**
comp=Z,2.9nm,0.9s,baz=25,slow=7.3,SNR=2.3
PLCA Paso Flores 156.68 230 PKIKP **PKPdf** **16 46 00.5 -0.4**
PLCA Paso Flores 156.68 230 **PKPdf** **16 46 00.5 -0.4**
PLCA Paso Flores 156.68 230 *e*P **PKPdf** **16 46 01.4 +0.5**

NNA	**Nana**	**157.39**	**311**	PKPab	**PKPab**	**16 46 34.5 +0.7**
	comp=Z,12nm,0.8s,baz=14,slow=7.9,SNR=5.0					
MT02	**Curacav**	**159.44**	**249**		**PKPdf**	**16 46 03.3 -1.1**

*IDC **26** 16:57:22.1±1.1,27°.69N×85°.88E, h0km, mb3.7/9, mb1 3.7/11, mb1mx3.4/67, mbtmp3.6/11, ML3.6/2 Error ellipse: s-maj=40.0km s-min=16.9km az=58.0*

ISC 26 16:57:24.8±1.3, 27°.7N±0°.2×86°.0E±0°.2, h19km, n11, σ0s90/11, mb3.7/9, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.04**	**125**	Pn	**Pn**	**17 00 55.0**	**-1.4**
	0.1nm,0.3s,baz=323,slow=7.3,SNR=2.2						
MKAR	**Makanchi Array**	**19.32**	**352**	P	**P**	**17 01 49.0**	**+0.2**
	0.3nm,0.3s,baz=174,slow=10,SNR=14						
KURBB	**Kurchatov Arra**	**23.62**	**348**	P	**P**	**17 02 34.4**	**-0.2**
	0.5nm,0.5s,baz=166,slow=9.6,SNR=5.6						
SONM	**Songino Array**	**25.68**	**33**	P	**P**	**17 02 54.6**	**+0.9**
	0.7nm,0.5s,baz=222,slow=10,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.28**	**358**	P	**P**	**17 02 58.1**	**-0.8**
	0.9nm,0.6s,baz=167,slow=8.8,SNR=4.7						
KSRS	**Korea Array**	**36.43**	**64**	P	**P**	**17 04 28.2**	**-0.1**
	0.4nm,0.6s,baz=271,slow=8.5,SNR=1.7						
ARCES	**ARCESS Array B**	**54.12**	**338**	P	**P**	**17 06 48.2**	**0.0**
	1.4nm,0.7s,baz=71,slow=5.3,SNR=3.9						
HFS	**Hagfors**	**57.66**	**326**	P	**P**	**17 07 13.5**	**-0.1**
	1.5nm,0.6s,baz=119,slow=11,SNR=5.0						
NOA	**NORSAR Array B**	**58.87**	**327**	P	**P**	**17 07 21.4**	**-0.8**
	0.5nm,0.7s,baz=70,slow=6.6,SNR=1.6						
WRA	**Warramunga Arr**	**66.56**	**130**	P	**P**	**17 08 15.1**	**+1.1**
	0.9nm,0.6s,baz=323,slow=6.5,SNR=17						
ASAR	**Alice Springs**	**68.87**	**133**	P	**P**	**17 08 29.5**	**+1.0**
	0.5nm,0.6s,baz=314,slow=6.3,SNR=13						

JMA 26 17:00:46.0±0.2, 24°.98N×123°.42E, h20km, M2.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.64**	**216**	P	Pb	17 00 58.1	-0.3
YOJ				*e*S	Sb	17 01 06.4	-0.5
JYNG	**Yonagunijimaku**	**0.68**	**219**	P	Pb	17 00 58.8	-0.4
JYNG				S	Sb	17 01 07.9	-0.3
IRIF	**Iriomote-Funau**	**0.70**	**156**	P	Pb	17 00 59.3	-0.2
IRIF				S	Sb	17 01 08.8	0.0
JISG	**Ishigakijimahi**	**0.90**	**116**	P	Pb	17 01 02.7	-0.2
JISG				*e*S	Sb	17 01 14.3	-0.2
JIJ	**Ishigaki jima**	**0.90**	**133**	P	Pb	17 01 02.2	-0.7
JIJ				S	Sb	17 01 13.6	-0.9
JKRS	**Kuro-shima**	**0.91**	**144**	P	Pb	17 01 03.0	-0.2
JKRS				S	Sb	17 01 14.9	0.0
HATJ	**Hateruma jima**	**0.98**	**159**	P	Pb	17 01 04.2	-0.2
HATJ				*e*S	Sb	17 01 16.6	-0.3
JTJ	**Tarama**	**1.21**	**106**	P	Pb	17 01 08.5	+0.2

TAP 26 17:00:48.5, 24°.44N×121°.81E, h13km±1km, ML1.0, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.03**	**284**	P	Pg	17 00 51.7	+0.8
	baz=282						
EWUT				S	Sg	17 00 53.2	+0.7
	baz=282						
TWC	**Suao**	**0.17**	**11**	P	Pb	17 00 53.2	-0.3
	baz=14						
TWC				*e*S	Sg	17 00 55.9	+0.5
	baz=14						
NDS	**Dongshan**	**0.21**	**336**	*e*P	Pb	17 00 54.1	-0.1
	baz=335						
NDS				*e*S	Sb	17 00 57.5	-0.6
	baz=335						
ENTT	**Nioudou**	**0.30**	**312**	*e*P	Pb	17 00 56.2	+0.5
	baz=312						
ENTT				S	Sb	17 01 00.4	-0.2
	baz=312						
NACB	**Ninganchiao**	**0.33**	**217**	*i* P	Pb	17 00 56.0	-0.2
	baz=216						
NACB				*e*S	Sb	17 01 00.9	-0.4
	baz=216						
ETLH	**Xiulin Townshi**	**0.38**	**233**	*e*S	Sb	17 01 02.7	-0.1
	baz=232						
NNSB	**Datong**	**0.39**	**269**	S	Sb	17 01 03.5	+0.3
	baz=268						
NNSH	**Datong**	**0.39**	**269**	*e*P	Pb	17 00 57.7	+0.4
	baz=268						
NNSH				*i* S	Sb	17 01 03.4	+0.2
	baz=268						
NNS	**Nan Shan**	**0.40**	**270**	S	Sb	17 01 03.5	0.0
	baz=269						

*IDC **26** 17:01:21.3±1.2, 35°.52N×27°.91E, h0km, mb3.5/3, mb1 3.4/7, mb1mx3.3/43, mbtmp3.3/7, ML3.0/4, Error ellipse: s-maj=28.7km s-min=16.1km az=170.0*
*ISK **26** 17:01:22.7, 35°.57N×27°.77E, h8km, ML3.1/17*
*ATH **26** 17:01:23.6, 35°.62N×27°.75E, h16km±5km, ML2.8/2, Error ellipse: s-maj=5.2km s-min=1.5km az=209.0*
*THE **26** 17:01:24.0, 35°.59N×27°.76E, h3km±2km, ML2.8/4, Error ellipse: s-maj=2.9km s-min=1.0km az=328.0*
*DDA **26** 17:01:27.0, 35°.73N×27°.85E, h51km±999km, ML2.8*

ISC 26 17:01:22.8±1.2, 35°.52N±0°.03×27°.81E±0°.03, h10km±8km, n65, σ1s19/93, mb3.5/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.53**	**273**	P	**Pg**	**17 01 32.4**	**-0.6**
KARP				S	**Sg**	**17 01 40.1**	**+0.1**
KARP				AML	AML	17 01 45.5	
	comp=N,3337μm,0.5s						
KARP				AML	AML	17 01 46.2	
	comp=E,2542μm,0.4s						
KARP	**Karpathos**	**0.53**	**273**	P	**Pg**	**17 01 32.7**	**-0.4**
KARP				S	**Sb**	**17 01 42.0**	**+0.2**
	comp=E,1μm,0.5s						
KARP	**Karpathos**	**0.53**	**273**	PG	**Pg**	**17 01 32.6**	**-0.5**
KARP				SG	**Sg**	**17 01 40.2**	**+0.1**
ARG	**Arkhangelos**	**0.74**	**21**	P	**Pg**	**17 01 36.5**	**-0.6**
ARG				S	**Sg**	**17 01 46.7**	**0.0**
ARG				AML	AML	17 01 48.3	
	comp=E,2038μm,0.3s						
ARG				AML	AML	17 01 48.7	
	comp=N,1755μm,0.6s						
ARG	**Arkhangelos**	**0.74**	**21**	P	**Pg**	**17 01 36.8**	**-0.3**
ARG				S	**Sb**	**17 01 48.9**	**+1.0**
	comp=N,900nm,0.4s						
ARG	**Arkhangelos**	**0.74**	**21**	PG	**Pg**	**17 01 36.8**	**-0.3**
ARG				SG	**Sb**	**17 01 47.0**	**-0.9**
NIS1	**Nisyros Isl.**	**1.19**	**335**	P	**Pg**	**17 01 41.1**	**-1.6**
NIS1	**Nisyros Isl.**	**1.19**	**335**	PN	**Pb**	**17 01 45.4**	**-0.1**
NIS1				SN	**Sn**	**17 02 00.8**	**-1.0**
TURN	**Turunc**	**1.30**	**16**	*i* P	**Pg**	**17 01 48.3**	**+0.5**
TURN				*i* S	**Sn**	**17 02 06.9**	**+2.5**
TURN				IAML		17 02 10.0	
	comp=E,196nm,0.4s						
TURN				IAML		17 02 11.0	
	comp=N,235nm,0.4s						
TURN	**Turunc**	**1.30**	**16**	PN	**Pn**	**17 01 47.3**	**+0.3**
TURN				SN	**Sn**	**17 02 05.1**	**+0.7**
ZKR	**Zakros**	**1.36**	**253**	P	**Pn**	**17 01 48.2**	**+0.4**
ZKR	**Zakros**	**1.36**	**253**	P	**Pn**	**17 01 48.3**	**+0.4**
ZKR				S	**Sb**	**17 02 06.9**	**+1.1**
	comp=N,422nm,0.8s						
ZKR	**Zakros**	**1.36**	**253**	PN	**Pn**	**17 01 48.5**	**+0.6**
ZKR				SN	**Sg**	**17 02 07.5**	**+0.9**
STIA	**Sitia Lasithi**	**1.44**	**258**	P	**Pn**	**17 01 49.5**	**+0.6**
STIA				S	**Sn**	**17 02 07.5**	**-0.3**
DALY	**Dalyan (Mula)**	**1.46**	**28**	*i* P	**Pb**	**17 01 50.6**	**+0.5**
DALY				*i* S	**Sg**	**17 02 11.5**	**+1.6**
DALY				IAML		17 02 20.0	
	comp=E,139nm,0.6s						
DALY				IAML		17 02 20.0	
	comp=N,160nm,0.4s						
DALY	**Dalyan (Mula)**	**1.46**	**28**	PN	**Pn**	**17 01 49.4**	**+0.2**
DALY				SN	**Sg**	**17 02 09.3**	**-0.6**
FETY	**Fethiye**	**1.52**	**43**	P	**Pn**	**17 01 50.2**	**+0.2**
FETY				S	**Sn**	**17 02 10.3**	**+0.4**
FETY	**Fethiye**	**1.52**	**43**	*i* P	**Pn**	**17 01 49.1**	**-1.0**
FETY	**Fethiye**	**1.52**	**43**	PN	**Pn**	**17 01 50.5**	**+0.5**
BDRM	**Kayabasi**	**1.57**	**349**	*i* P	**Pn**	**17 01 51.0**	**+0.2**
BDRM				*i* P	**Pb**	**17 01 51.9**	**0.0**
BDRM				*i* S	**Sn**	**17 02 09.9**	**-1.1**
BDRM				*i* S	**Sb**	**17 02 10.3**	**-1.4**
BDRM				IAML		17 02 16.0	
	comp=E,149nm,0.5s						
BDRM				IAML		17 02 21.0	
	comp=N,154nm,0.5s						
KSL	**Kastellorizon**	**1.57**	**66**	P	**Pn**	**17 01 51.4**	**+0.7**
KSL	**Kastellorizon**	**1.57**	**66**	P	**Pn**	**17 01 51.5**	**+0.7**
KSL				S	**Sn**	**17 02 12.2**	**+1.0**
	comp=N,88nm,0.6s						
BODT	**Bodrum**	**1.59**	**346**	P	**Pn**	**17 01 49.6**	**-1.4**
BODT				S	**Sn**	**17 02 10.5**	**-1.1**
BODT	**Bodrum**	**1.59**	**346**	PN	**Pn**	**17 01 49.9**	**-1.1**
AKAS	**Kas**	**1.62**	**64**	*i* P	**Pn**	**17 01 51.8**	**+0.2**
AKAS				*i* S	**Sn**	**17 02 13.5**	**+0.9**
AKAS	**Kas**	**1.62**	**64**	PN	**Pn**	**17 01 51.3**	**-0.3**
YER	**Yerkesik**	**1.65**	**13**	P	**Pn**	**17 01 52.6**	**+0.7**
YER	**Yerkesik**	**1.65**	**13**	PN	**Pn**	**17 01 52.4**	**+0.5**
MULA	**Mugla, Merkez-**	**1.78**	**13**	*i* P	**Pg**	**17 01 58.4**	**+1.4**
MULA				*i* S	**Sn**	**17 02 15.3**	**-1.1**
NPS	**Neapolis**	**1.81**	**262**	P	**Pb**	**17 01 55.9**	**-0.1**
LAST	**Lasithi**	**1.94**	**260**	P	**Pn**	**17 01 57.7**	**+1.9**
DDIM	**Aydin, Didim**	**1.98**	**347**	*i* P	**Pn**	**17 01 56.8**	**+0.4**
CAEL	**Denizli, Camel**	**2.01**	**37**	*i* P	**Pn**	**17 01 59.2**	**-0.3**
SANT	**Santorini**	**2.08**	**295**	P	**Pb**	**17 01 59.7**	**-1.0**
SANT	**Santorini**	**2.08**	**295**	PN	**Pn**	**17 01 58.4**	**+0.6**
ELL	**Elmali**	**2.10**	**54**	PN	**Pn**	**17 01 59.2**	**+1.1**
THR6	**Thira Island,**	**2.12**	**294**	P	**Pn**	**17 01 59.5**	**+1.2**
THR6	**Thira Island,**	**2.12**	**294**	P	**Pn**	**17 01 59.0**	**+0.7**
AYDN	**Tasoluk**	**2.13**	**2**	*i* P	**Pb**	**17 02 00.7**	**-0.9**
AYDN				*i* S	**Sn**	**17 02 23.4**	**-1.8**
TAVA	**DENIZLI_Tavas**	**2.13**	**24**	*i* P	**Pn**	**17 02 00.4**	**+1.8**
TAVA				*i* S	**Sg**	**17 02 31.2**	**-0.2**
TAVA				IAML		17 02 37.0	
	comp=E,80nm,0.5s						
TAVA				IAML		17 02 40.0	
	comp=N,72nm,0.5s						
THR3	**Thira Island,**	**2.14**	**295**	P	**Pn**	**17 01 59.0**	**+0.5**
THR3	**Thira Island,**	**2.14**	**295**	P	**Pn**	**17 01 59.1**	**+0.5**
GCAM	**G?elcami?**	**2.22**	**348**	PN	**Pn**	**17 02 00.4**	**+0.7**
GOLH	**Golhisar**	**2.22**	**39**	*i* P	**Pb**	**17 02 02.1**	**-0.9**
SMG	**Samos**	**2.32**	**341**	P	**Pn**	**17 02 01.5**	**+0.5**
IDI	**Anoyia**	**2.39**	**265**	Pn	**Pn**	**17 02 03.5**	**+1.4**
	comp=N,3.1nm,0.3s,baz=76,slow=21,SNR=15						
IDI				Sn	**Sb**	**17 02 34.6**	**-1.0**
	comp=N,1.9nm,0.3s,baz=116,slow=22,SNR=2.7						
IDI	**Anoyia**	**2.39**	**265**	P	**Pn**	**17 02 04.1**	**+2.0**
IDI	**Anoyia**	**2.39**	**265**	PN	**Pn**	**17 02 03.3**	**+1.2**
APE	**Apeiranthos**	**2.40**	**311**	P	**Pn**	**17 02 03.2**	**+1.0**
APE	**Apeiranthos**	**2.40**	**311**	PN	**Pn**	**17 02 02.8**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.42**	**2**	PN	**Pn**	**17 02 03.1**	**+0.6**
KORT	**Korkueli**	**2.53**	**54**	PN	**Pn**	**17 02 05.5**	**+1.4**
DGB	**zmir**	**2.63**	**344**	*i* P	**Pn**	**17 02 05.0**	**-0.3**
URLA	**Izmir**	**2.99**	**341**	*i* P	**Pn**	**17 02 10.3**	**0.0**
URLA	**Izmir**	**2.99**	**341**	PN	**Pn**	**17 02 10.7**	**+0.4**
IMMV	**Iera Moni Meta**	**3.12**	**270**	PN	**Pn**	**17 02 13.6**	**+1.5**
CHOS	**Chios island**	**3.18**	**334**	PN	**Pn**	**17 02 13.9**	**+0.9**
SEDI	**Konya, Seydise**	**3.72**	**58**	*i* P	**Pn**	**17 02 23.7**	**+3.3**
DURS	**Dursunbey**	**4.11**	**7**	*i* P	**Pn**	**17 02 26.8**	**+1.1**
BRTR	**Keskin Array B**	**6.25**	**46**	Pn	**Pn**	**17 02 55.9**	**+0.7**
	comp=N,0.1nm,0.3s,baz=225,slow=17,SNR=2.3						
BRTR				Sn	**Sn**	**17 04 06.1**	**-0.6**
	comp=N,0.0nm,0.3s,baz=206,slow=26,SNR=1.4						
MMAI	**Mount Meron Ar**	**6.77**	**110**	Pn	**Pn**	**17 03 00.2**	**-2.0**
	comp=N,1.1nm,0.3s,baz=300,slow=13,SNR=7.6						
MMAI				Sn	**Sn**	**17 04 17.8**	**-1.7**
	comp=N,0.9nm,0.3s,baz=303,slow=29,SNR=2.0						
EIL	**Elat**	**8.39**	**132**	Pn	**Pn**	**17 03 22.9**	**-1.5**
	comp=N,0.2nm,0.3s,baz=13,slow=12,SNR=2.3						
EIL				Sn	**Sn**	**17 04 53.4**	**-5.8**
	comp=N,0.5nm,0.3s,baz=326,slow=16,SNR=2.4						
ESDC	**Sonseca Array**	**25.44**	**289**	P	**P**	**17 06 51.1**	**+0.4**
	comp=N,0.8nm,0.7s,baz=81,slow=9.5,SNR=6.4						
TORD	**Torodi Ar. Bea**	**32.41**	**233**	P	**P**	**17 07 53.4**	**+0.4**
	comp=N,0.6nm,0.5s,baz=33,slow=8.7,SNR=8.2						
MKAR	**Makanchi Array**	**41.77**	**57**	P	**P**	**17 09 12.8**	**+0.6**
	comp=N,0.3nm,0.6s,baz=276,slow=8.1,SNR=2.7						

*MDD **26** 17:17:45.8±0.7, 37°.18N×13°.24W, h0km, mb3.8/8, Error ellipse: s-maj=4.9km s-min=3.6km az=43.0, PRXIMO*
*INMG **26** 17:17:46.9±1.5, 37°.01N×13°.52W, h10km, ML2.4, Error ellipse: s-maj=11.2km s-min=8.2km az=52.0*

ISC 26 17:17:42.1±3.5, 37°.2N±0°.1×13°.3W±0°.2, h10km, n41, σ2s27/59, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.56**	**90**	P	**Pn**	**17 18 37.8**	**+0.4**
	3.6nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**17 19 16.6**	**-3.1**
	8.4nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.56**	**90**	*e*Pn	**Pn**	**17 18 38.4**	**+0.9**
PFVI				*e*Sn	**Sn**	**17 19 17.2**	**-2.4**
PFVI				A	A	17 19 21.5	
	13nm,0.7s						
PMAFR	**Mafra**	**3.60**	**60**	S	**Sn**	**17 19 19.9**	**-0.6**
	2.2nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**3.60**	**60**	*e*Sn	**Sn**	**17 19 21.1**	**+0.7**
PMAFR				A	A	17 19 21.4	
	22nm,0.9s						
PTEO	**Sao Teotonio**	**3.65**	**84**	S	**Sn**	**17 19 19.5**	**-2.2**
	6.9nm,0.7s						
PTEO	**Sao Teotonio**	**3.65**	**84**	*e*Sn	**Sn**	**17 19 19.5**	**-2.2**
PTEO				A	A	17 19 24.1	
	14nm,0.7s						
PSBE	**So Bento**	**4.20**	**56**	*e*Pn	**Pn**	**17 18 49.0**	**+2.8**
PSBE				*e*Sn	**Sn**	**17 19 36.1**	**+0.8**
PSBE				A	A	17 19 41.9	
	3.9nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.28**	**88**	S	**Sn**	**17 19 35.3**	**-1.9**
	9.1nm,0.8s						
PBDV	**Barranco-do-Ve**	**4.28**	**88**	*e*Sn	**Sn**	**17 19 35.3**	**-1.9**
PBDV				A	A	17 19 38.6	
	9.1nm,0.8s						
EVO	**Evora**	**4.37**	**71**	S	**Sn**	**17 19 37.5**	**-2.0**
	4.8nm,0.3s						
EVO	**Evora**	**4.37**	**71**	*e*Sn	**Sn**	**17 19 37.5**	**-2.0**
EVO				A	A	17 19 40.1	
	4.8nm,0.3s						
PBEJ	**Beja**	**4.38**	**78**	S	**Sn**	**17 19 38.9**	**-0.8**
	1.5nm,0.5s						
PBEJ	**Beja**	**4.38**	**78**	*e*Sn	**Sn**	**17 19 38.9**	**-0.8**
PBEJ				A	A	17 19 50.0	
	3.0nm,0.5s						
PMTG	**Montargil**	**4.39**	**64**	P	**Pn**	**17 18 51.6**	**+2.8**
PMTG				S	**Sn**	**17 19 39.1**	**-0.9**
	3.3nm,0.4s						
PMTG	**Montargil**	**4.39**	**64**	*e*Pn	**Pn**	**17 18 51.6**	**+2.8**
PMTG				*e*Sn	**Sn**	**17 19 39.1**	**-0.9**
PMTG				A	A	17 19 43.5	
	3.3nm,0.4s						
PVAQ	**Vaqueiros**	**4.45**	**86**	P	**Pn**	**17 18 52.4**	**+2.9**
PVAQ				S	**Sn**	**17 19 39.1**	**-2.2**
	6.0nm,0.1s						
PVAQ	**Vaqueiros**	**4.45**	**86**	*e*Pn	**Pn**	**17 18 52.4**	**+2.9**
PVAQ				*e*Sn	**Sn**	**17 19 39.1**	**-2.2**
PVAQ				A	A	17 19 43.8	
	6.0nm,0.1s						
EGRO	**El Granado**	**4.63**	**85**	S	**Sn**	**17 19 43.5**	**-2.5**
	2.7nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**4.69**	**52**	S	**Sn**	**17 19 47.9**	**+0.6**
	0.9nm,0.1s						
PCAS	**Casmilo, Conde**	**4.69**	**52**	*e*Sn	**Sn**	**17 19 47.9**	**+0.6**
PCAS				A	A	17 19 51.1	
	0.9nm,0.1s						
PESTR	**Estremoz**	**4.78**	**68**	*e*Sn	**Sn**	**17 19 48.8**	**-0.9**
PESTR				A	A	17 19 57.1	
	2.9nm,0.6s						
PBAR	**Barrancos**	**5.04**	**77**	S	**Sn**	**17 19 53.7**	**-2.4**
	2.1nm,0.5s						
PBAR	**Barrancos**	**5.04**	**77**	*e*Sn	**Sn**	**17 19 53.7**	**-2.4**
PBAR				A	A	17 20 10.8	
	2.1nm,0.5s						
PMRV	**Marv??o**	**5.13**	**63**	P	**Pn**	**17 19 01.9**	**+3.0**
PMRV				S	**Sn**	**17 19 57.2**	**-1.0**
	2.7nm,0.3s						
PMRV	**Marv??o**	**5.13**	**63**	*e*Pn	**Pn**	**17 19 01.9**	**+3.0**
PMRV				*e*Sn	**Sn**	**17 19 57.2**	**-1.0**
PMRV				A	A	17 19 59.9	
	2.7nm,0.3s						
PCBR	**Castelo Branco**	**5.25**	**59**	S	**Sn**	**17 19 59.6**	**-1.5**
	1.2nm,0.7s						
PCBR	**Castelo Branco**	**5.25**	**59**	*e*Sn	**Sn**	**17 19 59.6**	**-1.5**
PCBR				A	A	17 20 11.7	
	2.4nm,0.7s						
EMIN	**Mina Concepcio**	**5.29**	**82**	P	**Pn**	**17 19 03.2**	**+2.0**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**17 19 59.2**	**-3.0**
	1.5nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**5.45**	**49**	S	**Sn**	**17 20 05.6**	**-0.6**
PVIS	**Viseu**	**5.45**	**49**	*e*Sn	**Sn**	**17 20 05.6**	**-0.6**
MTE	**Manteigas**	**5.49**	**53**	S	**Sn**	**17 20 07.6**	**+0.5**
	2.2nm,0.8s						
MTE	**Manteigas**	**5.49**	**53**	*e*Sn	**Sn**	**17 20 07.6**	**+0.5**
MTE				A	A	17 20 14.2	
	4.4nm,0.8s						
PGAV	**Gavieira, Arco**	**6.11**	**38**	P	**Pn**	**17 19 14.8**	**+2.3**
PGAV				S	**Sn**	**17 20 20.6**	**-1.9**
	3.2nm,0.8s						
PGAV	**Gavieira, Arco**	**6.11**	**38**	*e*Pn	**Pn**	**17 19 14.8**	**+2.3**
PGAV				*e*Sn	**Sn**	**17 20 20.6**	**-1.9**
PGAV				A	A	17 20 27.2	
	3.2nm,0.8s						
ELOB	**Lobios**	**6.14**	**40**	P	**Pn**	**17 19 13.4**	**+0.5**
	0.3nm,0.1s,SNR=4.0						
ELOB				S	**Sn**	**17 20 20.5**	**-2.7**
	0.3nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.25**	**49**	P	**Pn**	**17 19 15.7**	**+1.4**
	0.3nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**17 20 22.0**	**-3.8**
	0.6nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.25**	**49**	*e*Pn	**Pn**	**17 19 16.2**	**+1.8**
MVO				*e*Sn	**Sn**	**17 20 24.1**	**-1.7**
MVO				A	A	17 20 27.6	
	2.7nm,0.7s						
ECAB	**El Cabril**	**6.30**	**80**	P	**Pn**	**17 19 16.4**	**+1.3**
	0.1nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**17 20 24.4**	**-2.8**
	0.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.59**	**29**	P	**Pn**	**17 19 20.7**	**+1.6**
	1.9nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**17 20 27.9**	**-6.4**
	0.6nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.84**	**34**	P	**Pn**	**17 19 23.9**	**+1.5**
	1.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**17 20 34.7**	**-5.7**
	0.1nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**7.68**	**36**	P	**Pn**	**17 19 35.6**	**+1.6**
	0.3nm,0.1s,SNR=7.9						

IDC 26 17:20:55.5±3.5, 27°.46N×85°.77E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.2/43, mbtmp3.3/4, ML3.4/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/43, Error ellipse: s-maj=103.3km s-min=31.0km az=72.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.07**	**124**	Pn	Pn	17 24 31.7	+1.9
	0.1nm,0.3s,baz=315,slow=9.9,SNR=4.2						
MKAR	**Makanchi Array**	**19.50**	**353**	P	P	17 25 24.6	+0.5
	0.1nm,0.3s,baz=176,slow=11,SNR=3.9						
SONM	**Songino Array**	**25.94**	**33**	P	P	17 26 29.5	-0.1
	0.5nm,0.7s,baz=224,slow=10,SNR=2.3						
ASF	**Jabal al Asfar**	**42.38**	**289**	LR	LR	17 48 05.2	
	comp=Z,5.8nm,20.9s,baz=314,slow=38						
ATD	**Arta Tunnel**	**43.21**	**257**	LR	LR	17 45 33.8	
	comp=Z,38nm,21.8s,baz=31,slow=34						
WRA	**Warramunga Arr**	**66.57**	**130**	P	P	17 31 47.4	-0.3
	0.3nm,0.8s,baz=322,slow=6.5,SNR=6.1						

*IDC **26** 17:31:01.5±1.4, 10°.64S×120°.14E, h0km, mb3.7/4, mb1 3.7/9, mb1mx3.5/53, mbtmp3.6/9, ML3.4/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/39, Error ellipse: s-maj=51.2km s-min=20.0km az=50.0*

ISC 26 17:31:06.0±1.1, 10°.5S±0°.1×120°.7E±0°.1, h31km, n9, σ2s03/10, mb3.9/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**2.93**	**85**	Pn	**Pb**	**17 31 58.1**	**+0.5**
	10nm,0.3s,baz=294,slow=3.9,SNR=23						
KAPI	**Kappang**	**5.51**	**350**	Pn	**Pn**	**17 32 24.8**	**-1.3**
	baz=67,slow=6.2,SNR=3.9						
FITZ	**Fitzroy Crossi**	**8.96**	**148**	Pn	**Pn**	**17 33 14.7**	**+1.4**
	0.3nm,0.3s,baz=342,slow=11,SNR=24						
FITZ				Sn	**Sn**	**17 34 49.6**	**-3.6**
	0.4nm,0.3s,baz=25,slow=8.4,SNR=1.8						
WRA	**Warramunga Arr**	**16.16**	**127**	Pn	**P**	**17 34 53.0**	**-1.1**
	0.1nm,0.3s,baz=297,slow=13,SNR=4.8						
WRA				LR	LR	17 42 28.7	
	comp=Z,132nm,18.0s,baz=50,slow=42						
ASAR	**Alice Springs**	**18.18**	**138**	P	**P**	**17 35 19.3**	**+3.0**
	0.1nm,0.3s,baz=314,slow=12,SNR=10.0						
SONM	**Songino Array**	**59.44**	**349**	P	**P**	**17 41 06.6**	**+0.7**
	0.5nm,0.6s,baz=169,slow=9.0,SNR=2.9						
MKAR	**Makanchi Array**	**66.54**	**332**	P	**P**	**17 41 53.7**	**+0.7**
	0.3nm,0.3s,baz=155,slow=7.5,SNR=3

KAPI	**Kappang**	**5.63**	**351**	Pn		**Pn**	17 37 38.8	-0.3
	0.8nm,0.3s,baz=135,slow=7.0,SNR=1.5							
FITZ	**Fitzroy Crossi**	**8.86**	**148**	Pn		**Pn**	17 38 26.1	+2.8
	0.5nm,0.3s,baz=335,slow=11,SNR=2.6							
FITZ				Sn		**Sn**	17 40 00.4	-1.7
	0.3nm,0.3s,baz=205,slow=21,SNR=1.4							
WRA	**Warramunga Arr**	**16.11**	**127**	Pn		**P**	17 40 04.8	+0.1
	0.1nm,0.3s,baz=296,slow=13,SNR=1.5							
WRA				Sn		**Sn**	17 42 54.5	-4.9
	0.1nm,0.3s,baz=300,slow=23,SNR=3.0							
ASAR	**Alice Springs**	**18.10**	**138**	P		**P**	17 40 31.1	+4.3
	0.1nm,0.3s,baz=314,slow=12,SNR=5.5							
ASAR				S		**Sn**	17 43 43.2	-4.6
	0.0nm,0.3s,baz=305,slow=22,SNR=5.6							
SONM	**Songino Array**	**59.55**	**349**	P		**P**	17 46 18.3	+0.3
	0.8nm,0.6s,baz=168,slow=9.0,SNR=4.7							
MKAR	**Makanchi Array**	**66.64**	**332**	P		**P**	17 47 04.2	-0.8
	0.6nm,0.6s,baz=148,slow=8.0,SNR=5.0							
ZALV	**Zalesovo Beam**	**71.13**	**339**	P		**P**	17 47 31.4	-1.3
	1.3nm,0.6s,baz=152,slow=3.8,SNR=5.6							
KURBB	**Kurchatov Arra**	**71.14**	**333**	P		**P**	17 47 30.9	-2.0
	0.4nm,0.6s,baz=141,slow=5.6,SNR=6.2							

*IDC **26** 17:38:43.7±1.1,27.95N×85.26E,h0km,mb3.7/10,*
mb1 3.9/12,mb1mx3.5/63,mbtmp3.8/12,ML4.0/2,MS3.4/1,
Ms1 3.4/1,ms1mx2.4/45,Error ellipse: s-maj=33.7km
s-min=17.7km az=54.0
*NDI **26** 17:38:46.7±2.8,27.90N×85.26E,h10km,ML3.6*
ISC 26 17:38:44.0±0.6,**27.86N**±0.08×**85.28E**±0.05,**h10**km,**n21,**
σ2s32/26,mb3.8/10,1C,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**3.00**	**100**	*eP*		**Pb**	**17 39 36.3**	**-1.3**
GTK				*eS*		**Sb**	**17 40 11.4**	**-2.9**
GTK				IAML			17 40 21.7	
	comp=N,161nm,0.3s							
BOK	**Bokaro**	**4.08**	**172**	*eP*		**Pn**	**17 39 50.4**	**+3.9**
BOK				IAML			17 40 59.3	
	comp=N,76nm,0.6s							
BOK				IAML			17 41 00.0	
	comp=E,247nm,0.6s							
SHL	**Shillong**	**6.33**	**110**	*eP*		**Pn**	**17 40 17.5**	**-0.1**
SHL				*eS*		**Sn**	**17 41 29.4**	**-0.7**
ZIRO	**ZIRO**	**7.61**	**90**	*eP*		**Pn**	**17 40 36.5**	**+1.4**
SMLA	**Simla**	**7.78**	**297**	*eP*		**Pn**	**17 40 40.1**	**+2.8**
SMLA				*eS*		**Sn**	**17 42 02.1**	**-3.4**
SMLA				IAML			17 42 07.2	
	comp=E,95nm,0.4s							
KOHI	**KOHIMA**	**8.17**	**103**	⇑*eP*		**Pn**	**17 40 45.6**	**+2.7**
KOHI				*eS*		**Sn**	**17 42 11.6**	**-3.8**
KOHI				IAML			17 42 18.2	
	comp=N,24nm,0.6s							
BHPL	**Bhopal**	**8.45**	**239**	*eP*		**Pn**	**17 40 47.2**	**+0.7**
BHPL				*eS*		**Sn**	**17 42 18.5**	**-3.5**
BHPL				IAML			17 42 23.3	
	comp=N,26nm,0.6s							
BHPL				IAML			17 42 23.7	
	comp=E,28nm,0.4s							
DHRM	**DHARAMSHALA**	**8.93**	**302**	*eP*		**Pn**	**17 40 52.8**	**-0.4**
DHRM				*eS*		**Sn**	**17 42 28.7**	**-5.3**
DHRM				IAML			17 42 32.2	
	comp=E,50nm,0.5s							
CMAR	**Chiang Mai Arr**	**15.65**	**124**	Pn		**Pn**	**17 42 25.4**	**+0.6**
	comp=E,0.2nm,0.3s,baz=313,slow=12,SNR=1.4							
MKAR	**Makanchi Array**	**19.05**	**354**	P		**P**	**17 43 06.9**	**+0.6**
	comp=E,0.5nm,0.3s,baz=173,slow=12,SNR=24							
KURBB	**Kurchatov Arra**	**23.31**	**349**	P		**P**	**17 43 51.2**	**-0.7**
	comp=E,2.1nm,1.0s,baz=163,slow=11,SNR=7.8							
GEYT	**Alibeck**	**24.84**	**301**	P		**P**	**17 44 07.4**	**+0.8**
	comp=E,1.1nm,0.4s,baz=76,slow=6.1,SNR=2.0							
SONM	**Songino Array**	**25.85**	**34**	P		**P**	**17 44 17.3**	**+1.5**
	comp=E,1.3nm,0.6s,baz=219,slow=10,SNR=9.3							
ZALV	**Zalesovo Beam**	**26.07**	**359**	P		**P**	**17 44 18.2**	**+0.7**
	comp=E,3.0nm,0.5s,baz=184,slow=9.2,SNR=15							
KSRS	**Korea Array**	**36.89**	**64**	P		**P**	**17 45 53.0**	**+0.1**
	comp=E,0.5nm,0.4s,baz=263,slow=8.0,SNR=4.5							
JHJ	**Hachijo jima 2**	**46.83**	**70**	LR		LR	18 06 58.2	
	comp=E,38nm,20.0s,baz=72,slow=36							
FINES	**FINESS Array B**	**51.28**	**328**	P		**P**	**17 47 48.4**	**+0.5**
	comp=E,0.8nm,0.5s,baz=90,slow=5.9,SNR=4.2							
ARCES	**ARCESS Array B**	**53.71**	**338**	P		**P**	**17 48 06.5**	**+0.8**
	comp=E,2.6nm,0.8s,baz=98,slow=8.7,SNR=5.7							
WRA	**Warramunga Arr**	**67.16**	**130**	P		**P**	**17 49 40.4**	**+2.0**
	comp=E,0.4nm,0.7s,baz=322,slow=6.4,SNR=6.2							
ASAR	**Alice Springs**	**69.45**	**133**	P		**P**	**17 49 54.7**	**+2.0**
	comp=E,0.2nm,0.6s,baz=317,slow=5.2,SNR=5.8							
YKA	**Yellowknife Ar**	**88.56**	**9**	P		**P**	**17 51 36.9**	**+0.2**
	comp=E,0.1nm,0.6s,baz=333,slow=5.6,SNR=2.5							

*SOME **26** 17:40:07.5,44.80N×78.97E,h5km*
*NNC **26** 17:40:08.5±0.8,44.78N×79.01E,h0km,mb3.0,mpv2.8,*
Error ellipse: s-maj=6.0km s-min=4.4km az=1.0
ISC 26 17:40:08.0±1.2,**44.79N**±0.03×**78.99E**±0.03,**h1**km±12km,
n33,σ1s02/54,7C-3D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TDK	**Taldyqorghan**	**0.47**	**298**	*eP*		**Pg**	**17 40 17.0**	**0.0**
	26nm,0.2s							
TDK				*eS*		**Sg**	**17 40 23.8**	**+0.7**
	42nm,0.2s							
DJR	**Jarkent**	**0.73**	**128**	*eP*		**Pg**	**17 40 21.4**	**-0.6**
	5.0nm,0.1s							
DJR				*eS*		**Sg**	**17 40 31.3**	**-0.1**
	34nm,0.2s							
DJR	**Jarkent**	**0.73**	**128**	P		**Pg**	**17 40 21.4**	**-0.6**
	5.0nm,0.1s							
DJR				S		**Sg**	**17 40 31.3**	**-0.1**
	34nm,0.2s							
ARXS	**Arharly**	**1.01**	**236**	*eP*		**Pg**	**17 40 27.4**	**+0.1**
	13nm,0.2s							
ARXS				*eS*		**Sn**	**17 40 42.0**	**-2.3**
	16nm,0.2s							
ARXS	**Arharly**	**1.01**	**236**	P		**Pg**	**17 40 27.4**	**+0.1**
	13nm,0.2s							
ARXS				S		**Sn**	**17 40 42.0**	**-2.3**
	16nm,0.2s							
KPKS	**Kokpek**	**1.34**	**190**	*eP*		**Pg**	**17 40 33.8**	**+0.2**
	8.0nm,0.1s							
KPKS				*eS*		**Sg**	**17 40 52.6**	**+1.6**
	54nm,0.5s							
PDGK	**Podgornoye**	**1.50**	**166**	P		**Pb**	**17 40 36.1**	**-0.6**
	1.5nm,0.2s							
PDGK				S		**Sg**	**17 40 55.9**	**-0.3**
	2.0nm,0.2s							
PDGK	**Podgornoye**	**1.50**	**166**	⇑P		**Pb**	**17 40 35.7**	**-1.0**
	1.9nm,0.7s							
PDGK				⇑S		**Sg**	**17 40 56.5**	**+0.4**
	11nm,0.5s							
UZB	**Uzynbulak**	**1.64**	**179**	*eP*		**Pb**	**17 40 38.3**	**-0.7**
	3.9nm,0.2s							
UZB				*eS*		**Sg**	**17 41 00.5**	**-0.1**
	18nm,0.2s							
UZB	**Uzynbulak**	**1.64**	**179**	P		**Pb**	**17 40 38.3**	**-0.7**
	3.9nm,0.2s							
UZB				S		**Sg**	**17 41 00.5**	**-0.1**
	18nm,0.2s							
SATY	**Saty**	**1.78**	**194**	*eP*		**Pg**	**17 40 41.7**	**-0.3**
	5.5nm,0.1s							
SATY				*eS*		**Sg**	**17 41 06.2**	**+1.2**
	18nm,0.1s							
SATY	**Saty**	**1.78**	**194**	P		**Pg**	**17 40 41.7**	**-0.3**
	5.5nm,0.1s							
SATY				S		**Sg**	**17 41 06.2**	**+1.2**
	18nm,0.1s							
KTBS	**Karatobe**	**1.98**	**238**	*eP*		**Pb**	**17 40 43.9**	**-0.9**
	4.3nm,0.4s							
KTBS				*eS*		**Sg**	**17 41 10.4**	**-1.1**
	38nm,0.4s							
KTBS	**Karatobe**	**1.98**	**238**	Pg		**Pb**	**17 40 43.9**	**-0.9**
	4.3nm,0.4s							
KTBS				Lg		Lg	17 41 10.9	
	38nm,0.4s							
KOTS	**Kotyrbulak**	**2.06**	**222**	*eP*		**Pb**	**17 40 45.6**	**-0.7**
	4.5nm,0.4s							
KOTS				*eS*		**Sg**	**17 41 13.1**	**-1.1**
	11nm,0.2s							
KOTS	**Kotyrbulak**	**2.06**	**222**	Pg		**Pb**	**17 40 45.6**	**-0.7**
	4.5nm,0.4s							
KOTS				Lg		Lg	17 41 13.1	
	11nm,0.2s							
MDOK	**Medeo**	**2.14**	**222**	*eP*		**Pb**	**17 40 47.0**	**-0.6**
	3.7nm,0.4s							
MDOK				*eS*		**Sg**	**17 41 15.9**	**-1.0**
	7.6nm,0.2s							
MDOK	**Medeo**	**2.14**	**222**	Pn		**Pb**	**17 40 46.5**	**-1.2**
	1.6nm,0.4s							
MDOK				Sn		**Sg**	**17 41 15.5**	**-1.3**
	11nm,0.7s							
MDOK	**Medeo**	**2.14**	**222**	Pg		**Pb**	**17 40 47.0**	**-0.6**
	3.7nm,0.4s							
MDOK				Lg		Lg	17 41 16.6	
	7.6nm,0.2s							
TNSS	**Tian-Shan**	**2.29**	**221**	*eP*		**Pb**	**17 40 50.4**	**0.0**
	1.1nm,0.2s							
TNSS				*eS*		**Sg**	**17 41 21.1**	**-0.4**
	6.7nm,0.3s							
TNSS	**Tian-Shan**	**2.29**	**221**	Pg		**Pb**	**17 40 50.3**	**0.0**
	1.1nm,0.2s							
TNSS				Lg		Lg	17 41 21.1	
	6.7nm,0.3s							
IZV	**Izvestkoviy**	**2.45**	**225**	*eP*		**Pb**	**17 40 52.7**	**-0.3**
	0.6nm,0.1s							
IZV				*eS*		**Sg**	**17 41 25.2**	**-1.5**
	2.5nm,0.1s							
IZV	**Izvestkoviy**	**2.45**	**225**	Pg		**Pb**	**17 40 52.7**	**-0.3**
	0.6nm,0.1s							
IZV				Lg		Lg	17 41 25.2	
	2.5nm,0.1s							
MTBS	**Maitube**	**2.48**	**229**	*eP*		**Pb**	**17 40 53.5**	**+0.1**
	1.8nm,0.2s							
MTBS				*eS*		**Sg**	**17 41 26.5**	**-1.2**
	20nm,0.3s							
MTBS	**Maitube**	**2.48**	**229**	Pg		**Pb**	**17 40 53.5**	**+0.1**
	1.8nm,0.2s							
MTBS				Lg		Lg	17 41 26.5	
	20nm,0.3s							
KRBS	**Karabastau**	**2.62**	**247**	*eP*		**Pb**	**17 40 54.9**	**-0.9**
KRBS				*eS*		**Sb**	**17 41 28.9**	**+0.4**
KRBS	**Karabastau**	**2.62**	**247**	Pg		**Pb**	**17 40 54.9**	**-0.9**
KRBS				Lg		Lg	17 41 28.8	
DGS	**Degeres**	**2.79**	**238**	*eP*		**Pb**	**17 40 58.2**	**-0.4**
	1.2nm,0.2s							
DGS				*eS*		**Sb**	**17 41 34.6**	**+1.3**
	5.8nm,0.5s							
DGS	**Degeres**	**2.79**	**238**	Pg		**Pb**	**17 40 58.2**	**-0.4**
	1.2nm,0.2s							
DGS				Lg		Lg	17 41 34.6	
	5.8nm,0.5s							
MAKZ	**Makanchi**	**2.91**	**45**	⇑Pg		**Pg**	**17 41 02.7**	**-0.9**
	1.3nm,0.8s							
MAKZ				⇓Lg		Lg	17 41 37.1	
	1.4nm,0.5s							
MK31	**Makanchi Array**	**3.06**	**48**	⇑Pn		**Pn**	**17 40 59.4**	**+1.9**
	0.2nm,0.5s,baz=221,slow=15,SNR=5.4							
MK31				⇑Lg		Lg	17 41 42.7	
	0.2nm,0.2s,baz=231,slow=28,SNR=8.7							
TKM2	**Tokmak 2**	**3.08**	**234**	⇓Pn		**Pb**	**17 41 02.1**	**-1.6**
	1.5nm,0.8s							
TKM2				⇑Lg		Lg	17 41 47.9	
	1.2nm,0.3s							
AAK	**Ala-Archa**	**3.90**	**238**	⇓Pn		**Pn**	**17 41 11.9**	**+2.7**
	0.8nm,0.5s							
AAK				⇑Lg		Lg	17 42 17.9	
	2.1nm,0.6s							

*IDC **26** 17:54:27.9±0.6,32.29S×71.79W,h0km,mb4.6/8,*
mb1 4.4/12,mb1mx4.2/31,mbtmp4.4/12,ML4.5/3,MS3.8/6,
Ms1 3.7/6,ms1mx3.4/21,Error ellipse: s-maj=28.6km
s-min=16.1km az=95.0
*NEIC **26** 17:54:31.7±2.0,32.30S±0.04×71.89W±0.08,h22km±4km,*
Error ellipse: s-maj=10.6km s-min=5.0km az=110.0
*GUC **26** 17:54:31.5±0.7,32.32S×71.79W,h36km±4km,ML4.5*
*SJA **26** 17:54:32.7±0.7,32.50S×71.78W,h24km±4km,ML4.4,*
MW4.6
ISC 26 17:54:30.8±1.3,**32.25S**±0.03×**72.05W**±0.03,**h25**km±9km,
n121,σ1s93/146,mb4.7/9,MS3.9/3,8C-5D,Off coast of
central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.84**	**156**	⇑*iP*		**Pb**	**17 54 45.8**	**-0.9**
VA01				*i* S		**Sb**	**17 54 56.5**	**-1.1**
VA01	**Torpederas**	**0.84**	**156**			**Pb**	**17 54 45.6**	**-1.1**
ROC1	**El Roble**	**1.13**	**130**	*eP*		**Pn**	**17 54 49.5**	**-1.8**
ROCH	**El Roble**	**1.13**	**130**	⇓*iP*		**Pn**	**17 54 49.5**	**-1.8**
ROCH				*i* S		**Sn**	**17 55 02.7**	**-3.5**
ROCH				IAML			17 55 04.0	
	comp=N,17μm,0.3s							
MT02	**Curacav**	**1.26**	**143**	*eP*		**Pn**	**17 54 51.7**	**-1.2**
MT02				*eS*		**Sn**	**17 55 07.1**	**-2.0**
MT02	**Curacav**	**1.26**	**143**			**Pn**	**17 54 51.7**	**-1.2**
VA03	**San Esteban**	**1.36**	**112**	⇓*iP*		**Pn**	**17 54 52.7**	**-1.7**
VA03				*i* S		**Sn**	**17 55 08.4**	**-3.4**
VA03				IAML			17 55 09.2	
	comp=N,29μm,0.3s							
VA03	**San Esteban**	**1.36**	**112**			**Pn**	**17 54 52.6**	**-1.7**
VA03	**San Esteban**	**1.36**	**112**	*eP*		**Pn**	**17 54 52.8**	**-1.7**
VA03				*eS*		**Sn**	**17 55 08.6**	**-3.2**
VA03				IAML			17 55 11.1	
	comp=Z,11μm,0.3s							
CO02	**Combarbal**	**1.38**	**41**	⇓*iP*		**Pn**	**17 54 54.5**	**-0.1**
CO02				*i* S		**Sn**	**17 55 11.0**	**-1.0**
CO02	**Combarbal**	**1.38**	**41**	Pn		**Pn**	**17 54 54.5**	**-0.1**
VA05	**Santo Domingo**	**1.45**	**165**	⇑*iP*		**Pn**	**17 54 55.2**	**-0.2**
VA05				*eS*		**Sn**	**17 55 13.3**	**-0.3**
VA05				IAML			17 55 26.4	
	comp=E,12μm,0.4s							
VA05	**Santo Domingo**	**1.45**	**165**			**Pn**	**17 54 55.1**	**-0.2**
PEL	**Peldehue**	**1.45**	**128**	⇓*iP*		**Pn**	**17 54 54.6**	**-1.0**
PEL				*i* S		**Sn**	**17 55 11.6**	**-2.3**
PEL				IAML			17 55 14.7	
	comp=N,20μm,0.4s							
PEL	**Peldehue**	**1.45**	**128**			**Pn**	**17 54 54.6**	**-1.0**
PEL	**Peldehue**	**1.45**	**128**	*eP*		**Pn**	**17 54 54.6**	**-1.0**
PEL				*eS*		**Sn**	**17 55 10.4**	**-3.5**
MT05	**Renca**	**1.58**	**136**	⇑*iP*		**Pn**	**17 54 56.8**	**-0.6**
MT05				*i* S		**Sn**	**17 55 15.9**	**-1.2**
MT05				IAML			17 55 23.0	
	comp=E,20μm,0.4s							
MT05	**Renca**	**1.58**	**136**			**Pn**	**17 54 56.5**	**-0.9**
MT01	**Popeta**	**1.74**	**158**	⇑*iP*		**Pn**	**17 54 59.4**	**-0.1**
MT01				*i* S		**Sn**	**17 55 20.1**	**-0.9**
MT01				IAML			17 55 27.1	
	comp=E,6μm,0.3s							
MT01	**Popeta**	**1.74**	**158**	Pn		**Pn**	**17 54 59.4**	**-0.1**
MT09	**Talagante**	**1.76**	**150**	⇑*iP*		**Pn**	**17 55 00.1**	**+0.2**
MT09				*i* S		**Sn**	**17 55 21.9**	**+0.3**
MT09				IAML			17 55 25.7	
	comp=N,8μm,0.2s							
MT09	**Talagante**	**1.76**	**150**			**Pn**	**17 55 00.1**	**+0.2**
FSR	**Penalolen**	**1.77**	**134**	*eP*		**Pn**	**17 55 00.8**	**+0.8**
FSR				*eS*		**Sn**	**17 55 21.9**	**+0.1**
MT03	**Universidad Ad**	**1.79**	**134**	⇑*iP*		**Pn**	**17 55 00.1**	**-0.1**
MT03				*i* S		**Sn**	**17 55 21.4**	**-0.9**
MT03				IAML			17 55 26.7	
	comp=N,12μm,0.2s							
MT03	**Universidad Ad**	**1.79**	**134**			**Pn**	**17 54 59.9**	**-0.4**
MT03	**Universidad Ad**	**1.79**	**134**	*eP*		**Pn**	**17 54 60.0**	**-0.3**
MT03				*eS*		**Sn**	**17 55 19.8**	**-2.5**
MT03				IAML			17 55 29.8	
	comp=Z,4μm,0.6s							
CO03	**El Pedregal**	**1.83**	**40**	⇑*iP*		**Pn**	**17 55 01.8**	**+1.0**
CO03				*eS*		**Sn**	**17 55 22.7**	**-0.5**
CO03	**El Pedregal**	**1.83**	**40**	Pn		**Pn**	**17 55 01.5**	**+0.8**
LMEL	**Las Melosas**	**2.22**	**136**	*eP*		**Pn**	**17 55 06.4**	**+0.1**
LMEL				*i* S		**Sn**	**17 55 33.0**	**0.0**
LMEL				IAML			17 55 42.2	
	comp=N,4μm,0.2s							
BO03	**Pichilemu**	**2.24**	**178**	⇑*iP*		**Pn**	**17 55 06.1**	**-0.2**
BO03				*eS*		**Sb**	**17 55 43.2**	**+5.4**
AUSP	**Uspallata**	**2.26**	**90**	*eP*		**Pn**	**17 55 08.6**	**+1.8**
BO01	**Tunca**	**2.28**	**160**			**Pn**	**17 55 06.8**	**-0.1**
GO04	**Tololo Observa**	**2.33**	**28**	Pn		**Pn**	**17 55 08.5**	**+0.6**
RTLS	**Leoncito**	**2.38**	**80**	*eP*		**Pn**	**17 55 11.2**	**+2.6**
RTLS				IAML			17 55 46.8	
	comp=Z,2μm,0.4s							
ARCO	**CERRO ARCO**	**2.70**	**103**	*eP*		**Pn**	**17 55 15.7**	**+2.9**
ARCO				IAML			17 55 57.5	
	comp=Z,1μm,0.6s							
ASAL	**Salagasta**	**2.74**	**98**	*eP*		**Pn**	**17 55 16.1**	**+2.8**
BO02	**Sierra Bellavi**	**2.75**	**158**	Pn		**Pn**	**17 55 13.6**	**+0.3**
BO02	**Sierra Bellavi**	**2.75**	**158**	*eP*		**Pn**	**17 55 13.8**	**+0.4**
BO02				IAML			17 55 54.2	
	comp=Z,3μm,0.7s							
AAGR	**Agrelo**	**2.84**	**108**	*eP*		**Pn**	**17 55 17.1**	**+2.4**
AAGR				*eS*		**Sb**	**17 55 59.5**	**+4.2**
AAGR				IAML			17 56 04.1	
	comp=Z,1μm,1.2s							
ZON	**Zonda**	**2.95**	**77**	*eP*		**Pn**	**17 55 18.5**	**+2.3**
ZON				IAML			17 56 06.5	
	comp=Z,802nm,0.8s							
RTCV	**Cerro Valdivia**	**3.00**	**83**	*eP*		**Pn**	**17 55 19.5**	**+2.6**
RTCV				IAML			17 56 06.5	
	comp=Z,1μm,1.6s							
AROD	**Rodeo**	**3.03**	**47**	*eP*		**Pb**	**17 55 22.1**	**-2.2**
ACCO	**Cerro Coronel**	**3.04**	**58**	*eP*		**Pb**	**17 55 21.6**	**-2.9**
ACCO				IAML			17 56 04.4	
	comp=Z,1μm,1.2s							
RTLL	**Cerro Villicun**	**3.18**	**74**	*eP*		**Pn**	**17 55 21.6**	**+2.3**
RTLL				IAML			17 56 09.1	
	comp=Z,2μm,0.3s							
ACDV	**Cuesta del Vie**	**3.26**	**51**	*eP*		**Pb**	**17 55 26.0**	**-2.0**
ACDV				*eS*		**Sb**	**17 56 08.9**	**+1.6**
ACDV				IAML			17 56 13.7	
	comp=Z,859nm,1.0s							
LCO	**Las Campanas**	**3.43**	**20**	Pn		**Pn**	**17 55 23.6**	**+0.5**
COIS	**El Sosneado**	**3.51**	**145**	*eP*		**Pn**	**17 55 23.7**	**-0.1**
PUMA	**Malargue**	**3.89**	**147**	*eP*		**Pn**	**17 55 31.9**	**+2.8**
RFA	**San Rafael**	**3.91**	**131**	*eP*		**Pn**	**17 55 31.1**	**+1.8**
RFA				IAML			17 56 36.3	
	comp=Z,418nm,1.1s							
AGUA	**GUANDACOL**	**4.12**	**49**	*eP*		**Pn**	**17 55 35.7**	**+3.5**
AGUA				IAML			17 56 54.5	
	comp=Z,1μm,1.2s							
AC04	**Llanos de Chal**	**4.12**	**12**	Pn		**Pn**	**17 55 32.2**	**-0.1**
EDS3	**Malargue**	**4.14**	**149**	*eP*		**Pn**	**17 55 35.3**	**+2.7**
AVFE	**Valle Fertil**	**4.23**	**69**	*eP*		**Pn**	**17 55 35.1**	**+1.3**
AVFE				IAML			17 56 41.1	
	comp=Z,612nm,1.2s							
BI02	**San Fabin de**	**4.45**	**172**	Pn		**Pn**	**17 55 37.0**	**+0.3**
ACHE	**Chepes**	**4.72**	**78**	*eP*		**Pn**	**17 55 41.3**	**+0.7**
GO03	**Copiap**	**4.90**	**19**	Pn		**Pn**	**17 55 43.1**	**+0.1**
MRA	**San Martin**	**5.36**	**93**	*eP*		**Pn**	**17 55 49.2**	**-0.2**
MRA				IAML			17 57 18.3	
	comp=Z,349nm,0.6s							
CANA	**Caviahue**	**5.68**	**172**	*eP*		**Pn**	**17 55 55.5**	**+1.8**
H03N1	**Juan Fernandez**	**5.90**	**257**	Pn		**Pn**	**17 55 59.8**	**+3.4**
	baz=118,slow=19,SNR=17							
H03N1				Sn		**Sn**	**17 56 58.6**	**-4.4**
H03N1				T		T	18 02 38.7	
	baz=84,slow=73,SNR=2139							
H03N3	**Juan Fernandez**	**5.91**	**256**	Pn		**Pn**	**17 55 59.5**	**+2.9**
	baz=118,slow=19,SNR=26							
H03N3				Sn		**Sn**	**17 56 59.4**	**-4.0**
H03N3				T		T	18 02 36.1	
	baz=84,slow=73,SNR=780							
H03N2	**Juan Fernandez**	**5.91**	**257**	Pn		**Pn**	**17 55 59.7**	**+3.2**
	baz=118,slow=19,SNR=11							
H03N2				Sn		**Sn**	**17 57 04.0**	**+0.6**
H03N2				T		T	18 02 39.5	
	baz=84,slow=73,SNR=894							
AC02	**Maricunga**	**5.97**	**26**	Pn		**Pn**	**17 55 58.9**	**+0.9**
H03S3	**Juan Fernandez**	**5.97**	**253**	Pn		**Pn**	**17 56 01.1**	**+3.7**
H03S3				Sn		**Sn**	**17 57 02.2**	**-2.7**
	baz=232,slow=78,SNR=4.3							
H03S3				T		T	18 02 33.4	
	baz=82,slow=75,SNR=125							
H03S1	**Juan Fernandez**	**5.97**	**253**	Pn		**Pn**	**17 55 59.3**	**+1.9**
H03S1				Sn		**Sn**	**17 57 01.0**	**-3.9**
	baz=232,slow=78,SNR=3.7							
H03S1				T		T	18 02 32.1	
	baz=82,slow=75,SNR=95							
H03S2	**Juan Fernandez**	**5.99**	**253**	Pn		**Pn**	**17 55 59.8**	**+2.2**
H03S2				Sn		**Sn**	**17 57 00.1**	**-5.1**
	baz=232,slow=78,SNR=3.3							
H03S2				T		T	18 02 29.7	
	baz=82,slow=75,SNR=177							
AC01	**Pan de Azucar**	**6.21**	**12**			**Pn**	**17 56 00.2**	**-0.8**
CYA	**Choya**	**6.60**	**56**	*eP*		**Pn**	**17 56 07.9**	**+1.6**
CYA				IAML			17 58 06.0	
	comp=Z,182nm,2.1s							
FSA	**Cafayete**	**8.10**	**42**	*eP*		**Pn**	**17 56 28.9**	**+1.9**
PLCA	**Paso Flores**	**8.55**	**172**	Pn		**Pn**	**17 56 33.0**	**-0.1**
	comp=Z,3.5nm,0.3s,baz=335,slow=11,SNR=161							
PLCA				Sn		**Sn**	**17 58 06.6**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=2.9,slow=10,SNR=1.5							
PLCA				LR		LR	17 59 49.1	
	comp=Z,330nm,18.6s,baz=320,slow=38							
PLCA	**Paso Flores**	**8.55**	**172**	Pn		**Pn**	**17 56 33.6**	**+0.6**
PLCA	**Paso Flores**	**8.55**	**172**	*eP*		**Pn**	**17 56 33.8**	**+0.7**
LL04	**Puerto Octay**	**8.64**	**182**	Pn		**Pn**	**17 56 32.4**	**-1.9**
PB05	**IPOC Station P**	**9.51**	**10**	*eP*		**Pn**	**17 56 43.4**	**-2.9**
LVC	**Limon Verde**	**10.00**	**17**	Pn		**Pn**	**17 56 50.7**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=174,slow=10,SNR=1.9							
LVC				Sn		Sn	17 59 00.1	+15
	comp=Z,2.1nm,0.3s,baz=232,slow=22,SNR=4.2							
LVC				LR		LR	18 00 53.8	
	comp=Z,418nm,18.4s,baz=215,slow=39							
LVC	**Limon Verde**	**10.00**

H11S3	**WAKE ISLAND Hyl**	**25.79**	**270**	T	T	20 32 36.0	
	baz=118,slow=75,SNR=111						
H11N3	**WAKE ISLAND Hyl**	**26.14**	**272**	T	T	20 33 00.5	
	baz=117,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hyl**	**26.15**	**272**	T	T	20 32 57.1	
	baz=117,slow=75,SNR=7.9						
H11N2	**WAKE ISLAND Hyl**	**26.16**	**272**	T	T	20 33 01.3	
	baz=117,slow=75,SNR=80						
BVAR	**Borovoye Array**	**145.99**	**41**	PKPbc	**PKPab**	**18 14 08.8**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=204,slow=3.3,SNR=17						
YAK	**Yakutsk**	**147.08**	**341**	PKPbc	**PKPbc**	**18 14 11.5**	**+0.7**
	baz=84,slow=1.2						
RPSI	**Rantau Prapat**	**149.40**	**162**		**PKPbc**	**18 14 18.3**	**-0.1**
PSI	**Prapat**	**149.50**	**162**	PKPbc	**PKPbc**	**18 14 18.3**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=177,slow=4.5,SNR=4.5						
KURBB	**Kurchatov Arra**	**151.59**	**41**	PKP	**PKPdf**	**18 14 15.6**	**-0.6**
	comp=Z,0.6nm,0.2s,baz=307,slow=2.8,SNR=4.4						
KURBB				PKPbc	**PKiKP**	**18 14 23.4**	**+0.6**
	comp=Z,4.3nm,0.6s,baz=296,slow=3.0,SNR=29						
KURK	**Kurchatov**	**151.59**	**41**		**PKPdf**	**18 14 15.7**	**-0.5**
KURK					**PKiKP**	**18 14 23.4**	**+0.6**
ZALV	**Zalesovo Beam**	**152.74**	**30**	PKPbc	**PKiKP**	**18 14 25.8**	**+0.6**
	comp=Z,4.1nm,0.6s,baz=294,slow=3.1,SNR=20						
ZALV	**Zalesovo Beam**	**152.74**	**30**		**PKiKP**	**18 14 25.9**	**+0.8**
MKAR	**Makanchi Array**	**155.59**	**46**	PKP	**PKPdf**	**18 14 23.0**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=307,slow=5.2,SNR=2.2						
MKAR				PKPab	**PKPab**	**18 14 49.0**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=284,slow=2.8,SNR=7.5						

IDC 26 18:06:15.3±16.0, **3°.92N**×**123°.66E, h468**km±214km, **mb2.7**/3, **mb1 3.0**/4, **mb1mx2.4**/58, **mbtmp3.8**/4, **Error ellipse: s-maj=286.5km s-min=27.5km az=57.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**14.03**	**180**	P	P	18 09 15.8	0.0
	0.8nm,0.3s,baz=27,slow=6.8,SNR=2.4						
WRA	**Warramunga Arr**	**25.93**	**156**	P	P	18 11 09.0	0.0
	0.4nm,0.3s,baz=336,slow=9.5,SNR=16						
ASAR	**Alice Springs**	**29.18**	**160**	P	P	18 11 37.5	-0.1
	0.2nm,0.3s,baz=337,slow=8.1,SNR=14						
MKAR	**Makanchi Array**	**55.69**	**327**	P	P	18 15 06.2	-0.1
	0.4nm,0.5s,baz=124,slow=8.8,SNR=4.7						

NEIC ***26*** *18:06:31.5±1.8, 27°.76N±0°.08×85°.4E±0°.1, h10km±1km, mb4.2/8, Error ellipse: s-maj=21.9km s-min=8.3km az=240.0*

IDC ***26*** *18:06:32.4±1.4, 27°.79N×85°.48E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.4/62, mbtmp3.6/8, ML3.3/2, Error ellipse: s-maj=58.6km s-min=19.7km az=62.0*

NDI ***26*** *18:06:36.0±1.6, 27°.77N×85°.48E, h10km, ML3.2, mb4.2(NEIC)*

ISC 26 18:06:34.0±0.6, **27°.87N**±0°.09×**85°.52E**±0°.06, **h18**km, **n24,** σ1§**78**/28, **mb4.0**/9, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.79**	**101**	*eP*	**Pb**	**18 07 21.6**	**-1.9**
GTK				*eS*	**Sn**	**18 07 54.4**	**+3.1**
GTK				IAML		18 08 02.8	
	comp=N,135nm,0.2s						
GTK				IAML		18 08 03.7	
	comp=E,122nm,0.3s						
BOK	**Bokaro**	**4.07**	**175**	*eP*	**Pn**	**18 07 37.5**	**+2.1**
SHL	**Shillong**	**6.14**	**110**	*eP*	**Pn**	**18 08 05.4**	**+1.4**
SHL				*eS*	**Sn**	**18 09 11.7**	**-2.2**
SHL	**Shillong**	**6.14**	**110**	Pn	**Pn**	**18 08 04.3**	**+0.4**
SMLA	**Simla**	**7.97**	**296**	*eP*	**Pn**	**18 08 31.0**	**+2.1**
SMLA				*eS*	**Sn**	**18 09 56.9**	**-1.8**
SMLA				IAML		18 09 59.6	
	comp=E,24nm,0.5s						
SMLA				IAML		18 10 00.1	
	comp=N,13nm,0.6s						
KOHI	**KOHIMA**	**7.97**	**104**	*eP*	**Pn**	**18 08 31.4**	**+2.3**
KOHI				*eS*	**Sn**	**18 09 57.6**	**-1.3**
KOHI				IAML		18 10 03.6	
	comp=E,16nm,0.8s						
NIL	**Nilore**	**12.02**	**302**	Pn	**Pn**	**18 09 23.1**	**-1.3**
CMAR	**Chiang Mai Arr**	**15.48**	**124**	Pn	**Pn**	**18 10 10.4**	**-1.2**
	comp=E,0.0nm,0.3s,baz=303,slow=13,SNR=1.3						
CMAR	**Chiang Mai Arr**	**15.48**	**124**		**Pn**	**18 10 10.1**	**-1.5**
KDJ	**Kajisay**	**15.77**	**337**	Pn	**Pn**	**18 10 13.7**	**-1.7**
KDJ				IAmb	IAmb	18 10 18.1	
	comp=Z,17nm,0.9s						
ARSB	**Arslanbob**	**16.91**	**326**	Pn	**Pn**	**18 10 27.9**	**-1.9**
MK31	**Makanchi Array**	**19.06**	**353**	P	**P**	**18 10 54.4**	**-0.9**
MKAR	**Makanchi Array**	**19.06**	**353**	P	**Pn**	**18 10 55.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=179,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**19.06**	**353**	P	**P**	**18 10 55.0**	**-0.4**
SONM	**Songino Array**	**25.72**	**34**	P	**P**	**18 12 05.4**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=228,slow=6.6,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.06**	**359**	P	**P**	**18 12 09.1**	**+2.8**
	comp=Z,0.5nm,0.4s,baz=183,slow=12,SNR=2.6						
KULM	**Kulim**	**26.67**	**145**	P	**P**	**18 12 10.5**	**-1.6**
KULM				IAmb	IAmb	18 12 38.6	
	comp=Z,12nm,1.3s						
YULB	**Yu-li**	**32.49**	**90**	P	**P**	**18 13 03.6**	**-0.1**
FINES	**FINESS Array B**	**51.39**	**328**	P	**P**	**18 15 39.3**	**+1.9**
	comp=Z,2.3nm,1.0s,baz=108,slow=8.9,SNR=2.1						
LODK	**Lodwar**	**53.57**	**252**	P	**P**	**18 15 52.0**	**-2.3**
LODK				IAmb	IAmb	18 16 08.7	
	comp=Z,3.0nm,1.2s						
ARCES	**ARCESS Array B**	**53.78**	**338**	P	**P**	**18 15 55.7**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=97,slow=7.5,SNR=1.3						
WRA	**Warramunga Arr**	**67.00**	**130**	P	**P**	**18 17 27.3**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=323,slow=6.6,SNR=6.0						
AS31	**Alice Springs**	**69.30**	**133**	P	**P**	**18 17 40.7**	**+0.2**
AS31				IAmb	IAmb	18 17 41.1	
	comp=Z,1.7nm,1.4s						
ASAR	**Alice Springs**	**69.30**	**133**	P	**P**	**18 17 41.9**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=312,slow=6.0,SNR=20						

JMA ***26*** *18:10:17.7±0.2, 30°.18N×139°.33E, h458km±4km, M4.0*

NEIC ***26*** *18:10:19.0±1.4, 29°.99N±0°.10×138°.62E±0°.08, h438km±7km, mb4.1/83, Error ellipse: s-maj=14.4km s-min=10.1km az=182.0*

IDC ***26*** *18:10:18.0±0.6, 30°.03N×138°.71E, h428km±6km, mb3.4/27, mb1 3.5/35, mb1mx3.4/67, mbtmp4.2/35, Error ellipse: s-maj=10.7km s-min=7.7km az=81.0*

ISC 26 18:10:18.0±0.4, **30°.05N**±0°.06×**138°.72E**±0°.06, **h428**km, **n177,** σ1§**22**/190, **mb4.0**/74, **4C-2D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.15**	**17**	*eS*	**S**	**18 12 18.5**	**0.0**
JHJ	**Hachijo jima 2**	**3.19**	**16**	P	**P**	**18 11 26.3**	**+1.6**
	31nm,0.3s,baz=94,slow=22,SNR=38						
JHJ				S	**S**	**18 12 19.9**	**+0.8**
	58nm,0.3s,baz=68,slow=22,SNR=7.3						
JHJ2	**Mitsune**	**3.20**	**17**	P	**P**	**18 11 25.7**	**+1.0**
JHJ2	**Mitsune**	**3.20**	**17**	P	**P**	**18 11 26.5**	**+1.8**
JMKN	**Mikurajimanish**	**3.91**	**11**	P	**P**	**18 11 31.7**	**+0.9**
CBIJ	**Chichi jima**	**4.24**	**133**	P	**P**	**18 11 33.5**	**-0.5**
CBIJ				S	**S**	**18 12 33.4**	**-2.4**
JCJ	**Chichijima**	**4.24**	**133**	P	**P**	**18 11 33.9**	**-0.1**
	56nm,0.3s,baz=3.5,slow=18,SNR=94						
JCJ				S	**S**	**18 12 33.4**	**-2.4**
	83nm,0.3s,baz=258,slow=18,SNR=14						
JIE	**Ise**	**4.65**	**339**	P	**P**	**18 11 41.4**	**+3.7**
BSO1	**Boso 1**	**4.98**	**22**	*eS*	**S**	**18 12 45.2**	**-2.4**
BSO3	**Boso 3**	**4.98**	**17**	P	**P**	**18 11 41.1**	**+0.5**
JOD2	**Odawara 2**	**5.21**	**3**	P	**P**	**18 11 43.9**	**+0.7**
JOD2				*eS*	**S**	**18 12 52.0**	**-0.9**
JNY	**Yasuok**	**5.34**	**352**	P	**P**	**18 11 47.1**	**+2.5**
JMN	**Monobe**	**5.51**	**313**	P	**P**	**18 11 49.4**	**+3.1**
JGF	**Kuroka**	**5.66**	**349**	P	**P**	**18 11 50.2**	**+2.4**
JHU	**Hanno**	**5.81**	**5**	P	**P**	**18 11 49.4**	**+0.1**
JHU				*eS*	**S**	**18 13 01.4**	**-2.7**
JWT	**Wachi**	**5.92**	**333**	P	**P**	**18 11 53.4**	**+2.9**
JRY	**Ryogami san**	**5.96**	**1**	P	**P**	**18 11 51.7**	**+0.8**
JRY				*eS*	**S**	**18 13 04.8**	**-2.2**
JYT	**Yasato**	**6.29**	**11**	P	**P**	**18 11 53.9**	**-0.4**
JYT	**Yasato**	**6.29**	**11**	P	**P**	**18 11 53.3**	**-1.0**
JAG	**Ashikaga**	**6.39**	**5**	P	**P**	**18 11 54.8**	**-0.6**
JAG				*eS*	**S**	**18 13 10.2**	**-5.1**
MJAR	**Matsushiro Arr**	**6.49**	**356**	P	**P**	**18 11 57.0**	**+0.4**
	0.3nm,0.3s,baz=180,slow=11,SNR=24						
MJAR				S	**S**	**18 13 16.4**	**-1.0**
	0.1nm,0.3s,baz=196,slow=23,SNR=3.1						
MAJO	**Matsushiro**	**6.49**	**356**	P	**P**	**18 11 57.4**	**+0.8**
MAT	**Matsushiro**	**6.49**	**356**	P	**P**	**18 11 57.1**	**+0.6**
MAT				S	**S**	**18 13 15.6**	**-1.8**
JHO	**Hitachi**	**6.73**	**13**	P	**P**	**18 11 58.9**	**-0.5**
JHS	**Saijyo**	**6.83**	**318**	P	**P**	**18 12 03.2**	**+2.6**
JNU	**Nakatsue**	**7.35**	**297**	P	**P**	**18 12 07.0**	**+0.8**
	2.2nm,0.3s,baz=79,slow=0.9,SNR=4.8						
JFK	**Kawauchi**	**7.52**	**13**	*eS*	**S**	**18 13 33.1**	**-4.7**
JSJ	**Shimokoshiki**	**7.91**	**284**	P	**P**	**18 12 14.5**	**+2.2**
JSD	**Sado**	**7.98**	**357**	P	**P**	**18 12 12.5**	**-0.4**
JMM	**Marumori**	**7.99**	**12**	P	**P**	**18 12 13.2**	**+0.2**
JTM	**Tenmabayashi**	**10.89**	**10**	P	**P**	**18 12 46.2**	**+1.5**
KSRS	**Korea Array**	**11.62**	**312**	P	**P**	**18 12 54.3**	**+1.4**
	1.1nm,0.3s,baz=126,slow=10,SNR=39						
KS19	**Wonju Array Si**	**11.69**	**312**	P	**P**	**18 12 54.7**	**+1.1**
ERM	**Erimo**	**12.47**	**16**	P	**P**	**18 13 03.6**	**+1.6**
ASAJ	**Asahikawa**	**14.38**	**11**	P	**P**	**18 13 25.0**	**+2.2**
	1.0nm,0.3s,baz=223,slow=12,SNR=7.9						
JKA	**Kamikawa-asahi**	**14.38**	**11**	P	**P**	**18 13 24.1**	**+1.3**
USA0B	**Ussuriysk Arra**	**15.10**	**341**	P	**P**	**18 13 31.5**	**+1.0**
USA0B				IAmb	IAmb	18 13 32.4	
	comp=Z,8.1nm,0.9s						
USRK	**Ussuriysk Ar.**	**15.10**	**341**	P	**P**	**18 13 31.7**	**+1.1**
	baz=165,slow=8.1,SNR=7.8						
USRK	**Ussuriysk Ar.**	**15.10**	**341**	P	**P**	**18 13 31.5**	**+1.0**
NACB	**Ninganchiao**	**16.32**	**253**	P	**P**	**18 13 41.9**	**-2.0**
YULB	**Yu-li**	**16.91**	**251**	P	**P**	**18 13 48.9**	**-1.2**
YULB				IAmb	IAmb	18 13 59.1	
	comp=Z,13nm,1.1s						
SSLB	**Suanglung**	**17.02**	**253**	P	**P**	**18 13 50.9**	**-0.4**
YSS	**Yuzh-Sakhalins**	**17.17**	**9**	P	**P**	**18 13 53.3**	**+0.8**
TPUB	**Ta-pu**	**17.50**	**252**	P	**P**	**18 13 56.4**	**0.0**
TIA	**Tai'an**	**19.08**	**294**	P	**P**	**18 14 11.0**	**-1.2**
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
KLR	**Kul'dur**	**19.88**	**346**	P	**P**	**18 14 20.7**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=175,slow=14,SNR=4.6						
ENH	**Enshi**	**25.25**	**278**	P	**P**	**18 15 06.0**	**-2.0**
ENH				IAmb	IAmb	18 15 10.5	
	comp=Z,4.5nm,0.7s						
XAN	**Xi'an**	**25.52**	**287**	P	**P**	**18 15 10.5**	**0.0**
XAN				pmax	pmax		
	comp=Z,11nm,0.6s						
XAN				pmax	pmax		
	comp=Z,46nm,6.2s						
PEA0B	**Petropavlovsk-**	**26.90**	**26**	P	**P**	**18 15 22.6**	**+0.2**
PEA0B				IAmb	IAmb	18 15 51.2	
	comp=Z,16nm,1.4s						
PETK	**Petropavlovsk-**	**26.90**	**26**	P	**P**	**18 15 22.6**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=164,slow=0.9,SNR=8.3						
PETK	**Petropavlovsk-**	**26.90**	**26**	P	**P**	**18 15 22.9**	**+0.5**
GYA	**Guiyang**	**28.41**	**271**	*eP*	**P**	**18 15 36.5**	**+0.3**
GYA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**30.48**	**315**	P	**P**	**18 15 54.3**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=125,slow=8.2,SNR=8.4						
SONM	**Songino Array**	**30.48**	**315**	P	**P**	**18 15 53.7**	**-0.3**
MA2	**Magadan**	**30.64**	**12**	P	**P**	**18 15 55.5**	**+0.5**
	baz=204,slow=8.0						
GTA	**Gaotai**	**33.09**	**297**	‖P	**P**	**18 16 16.5**	**-0.1**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SEY	**Seymchan**	**34.06**	**11**	P	**P**	**18 16 24.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=173,slow=8.1,SNR=3.5						
CHAI	**Chaiyaphum**	**36.45**	**256**	P	**P**	**18 16 46.0**	**+1.0**
	comp=Z,20nm,1.0s						
UTTA	**Uttaradit**	**36.81**	**259**	P	**P**	**18 16 49.3**	**+1.3**
	comp=Z,9.8nm,1.0s						
SRAK	**Srakaew**	**37.36**	**253**	P	**P**	**18 16 50.0**	**-2.5**
CM34	**Chiang Mai Arr**	**37.53**	**262**	P	**P**	**18 16 54.0**	**0.0**
CM35	**Chiang Mai Arr**	**37.60**	**262**	P	**P**	**18 16 55.0**	**+0.5**
CM33	**Chiang Mai Arr**	**37.72**	**262**	P	**P**	**18 16 55.0**	**-0.5**
CHTO	**Chiang Mai**	**37.73**	**262**	P	**P**	**18 16 55.7**	**+0.1**
CHTO				IAmb	IAmb	18 16 56.7	
	comp=Z,6.0nm,0.7s						
CM09	**Chiang Mai Arr**	**37.84**	**261**	P	**P**	**18 16 58.0**	**+1.5**
	comp=Z,3.5nm,0.7s						
CM31	**Chiang Mai Arr**	**37.88**	**262**	P	**P**	**18 16 58.0**	**+1.2**
	comp=Z,1.3nm,0.7s						
CM31	**Chiang Mai Arr**	**37.88**	**262**	P	**P**	**18 16 56.4**	**-0.4**
CM31				IAmb	IAmb	18 16 58.1	
	comp=Z,3.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**37.88**	**262**	P	**P**	**18 16 57.3**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=64,slow=5.2,SNR=21						
CMAR				PcP	**PcP**	**18 19 01.7**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=96,slow=1.4,SNR=4.3						
CMAR	**Chiang Mai Arr**	**37.88**	**262**	P	**P**	**18 16 56.9**	**+0.1**
CM02	**Chiang Mai Arr**	**37.88**	**261**	P	**P**	**18 16 59.0**	**+2.1**
	comp=Z,3.0nm,0.8s						
LSA	**Lhasa**	**41.01**	**282**	P	**P**	**18 17 23.3**	**+0.7**
TIXI	**Tiksi**	**42.00**	**355**	P	**P**	**18 17 29.3**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=56,slow=1.3,SNR=5.4						
TIXI	**Tiksi**	**42.00**	**355**	P	**P**	**18 17 29.4**	**0.0**
KULM	**Kulim**	**43.50**	**243**	P	**P**	**18 17 40.0**	**-2.0**
KULM				IAmb	IAmb	18 17 57.5	
	comp=Z,19nm,1.5s						
SPIA	**Saint Paul Isl**	**44.38**	**37**	P	**P**	**18 17 48.6**	**+0.3**
ZAA0	**Zalesovo Array**	**45.26**	**318**	P	**P**	**18 17 54.0**	**-1.2**
ZAA0				IAmb	IAmb	18 17 55.5	
	comp=Z,2.6nm,0.5s						
ZALV	**Zalesovo Beam**	**45.26**	**318**	P	**P**	**18 17 54.6**	**-0.6**
	comp=Z,2.3nm,0.4s,baz=101,slow=7.8,SNR=10.0						
ZALV				PcP	**PcP**	**18 19 26.0**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=64,slow=3.4,SNR=3.8						
ZALV				ScP	**ScP**	**18 22 35.1**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=145,slow=5.4,SNR=3.7						
MK31	**Makanchi Array**	**46.26**	**308**	P	**P**	**18 18 02.6**	**-0.5**
MKAR	**Makanchi Array**	**46.26**	**308**	P	**P**	**18 18 02.9**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=86,slow=9.6,SNR=18						
MKAR				PcP	**PcP**	**18 19 30.3**	**0.0**
	comp=Z,0.7nm,0.5s,baz=83,slow=8.1,SNR=4.2						
GSI	**Gunungsitoli**	**48.39**	**242**	P	**P**	**18 18 19.6**	**0.0**
ANM	**Nome**	**48.76**	**28**	P	**P**	**18 18 23.4**	**+1.8**
ANM				IAmb	IAmb	18 18 37.3	
	comp=Z,9.2nm,1.4s						
KURBB	**Kurchatov Arra**	**48.80**	**313**	P	**P**	**18 18 21.8**	**-0.4**
	comp=Z,3.8nm,0.4s,baz=92,slow=7.6,SNR=58						
WB0	**Warramunga Arr**	**49.70**	**185**	P	**P**	**18 18 29.3**	**+0.1**
WB0				IAmb	IAmb	18 18 30.0	
	comp=Z,10nm,1.3s						
WB2	**Warramunga Arr**	**49.88**	**185**	P	**P**	**18 18 30.7**	**+0.2**
WB2				IAmb	IAmb	18 18 35.4	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**49.88**	**185**	P	**P**	**18 18 30.8**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=1.0,slow=7.7,SNR=24						
WRA	**Warramunga Arr**	**49.88**	**185**	P	**P**	**18 18 30.1**	**-0.4**
WR0	**Warramunga Arr**	**49.88**	**185**	P	**P**	**18 18 30.4**	**-0.1**
WR0				IAmb	IAmb	18 18 52.7	
	comp=Z,14nm,1.4s						
BOOM	**Boomskoye usch**	**51.05**	**302**	P	**P**	**18 18 38.7**	**-0.5**
BOOM				IAmb	IAmb	18 18 59.8	
	comp=Z,18nm,1.1s						
AAK	**Ala-Archa**	**52.09**	**303**	P	**P**	**18 18 46.2**	**-0.5**
TTA	**Tatalina**	**52.49**	**32**	P	**P**	**18 18 49.9**	**+0.7**
ARSB	**Arslanbob**	**53.41**	**301**	P	**P**	**18 18 56.9**	**+0.6**
ARSB				IAmb	IAmb	18 18 57.9	
	comp=Z,3.1nm,0.5s						
AS31	**Alice Springs**	**53.60**	**185**	P	**P**	**18 18 57.5**	**-0.1**
ASAR	**Alice Springs**	**53.61**	**185**	P	**P**	**18 18 58.0**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=359,slow=5.9,SNR=56						
BVAR	**Borovoye Array**	**53.81**	**316**	P	**P**	**18 18 58.3**	**-0.4**
	comp=Z,5.1nm,0.4s,baz=108,slow=12,SNR=36						
RSO	**Redoubt South**	**53.84**	**35**	P	**P**	**18 19 00.2**	**+1.1**
BRVK	**Borovoye**	**53.87**	**316**	P	**P**	**18 18 59.3**	**+0.1**
BRVK				IAmb	IAmb	18 18 59.9	
	comp=Z,4.5nm,0.6s						
SPU	**Mount Spurr**	**54.21**	**34**	P	**P**	**18 19 00.9**	**-0.6**
PPLA	**Purkeypile**	**54.23**	**32**	P	**P**	**18 19 03.2**	**+1.4**
PPLA				IAmb	IAmb	18 19 20.0	
	comp=Z,16nm,1.4s						
SKT	**Skwentna**	**54.49**	**33**	P	**P**	**18 19 04.8**	**+1.3**
CNPM	**China Poot**	**54.59**	**36**	P	**P**	**18 19 04.9**	**+0.7**
BRLK	**Bradley Lake**	**54.77**	**36**	P	**P**	**18 19 05.6**	**+0.2**
BPAW	**Bear Paw Mtn.**	**54.83**	**30**	P	**P**	**18 19 07.7**	**+1.8**
BPAW				IAmb	IAmb	18 19 08.5	
	comp=Z,4.5nm,0.9s						
SUA	**Susitna One**	**54.85**	**34**	P	**P**	**18 19 06.9**	**+0.8**
KK31	**Karatay Array**	**54.90**	**304**	P	**P**	**18 19 07.0**	**+0.3**
KK31				IAmb	IAmb	18 19 07.6	
	comp=Z,5.2nm,0.7s						
KKAR	**Karatay Array**	**54.90**	**304**	P	**P**	**18 19 06.7**	**+0.1**
KKAR				IAmb	IAmb	18 19 07.5	
	comp=Z,5.2nm,0.7s						
MLY	**Manley**	**54.99**	**29**	P	**P**	**18 19 06.9**	**-0.1**
TRF	**Thorofare Moun**	**55.11**	**31**	P	**P**	**18 19 08.6**	**+0.6**
TRF				IAmb	IAmb	18 19 36.5	
	comp=Z,11nm,1.4s						
RC01	**Rabbit Creek A**	**55.34**	**34**	P	**P**	**18 19 10.1**	**+0.7**
RC01				IAmb	IAmb	18 19 34.3	
	comp=Z,9.0nm,0.9s						
SEW	**Seward**	**55.49**	**35**	P	**P**	**18 19 10.6**	**+0.2**
BWN	**Browne**	**55.50**	**30**	P	**P**	**18 19 11.8**	**+1.3**
BWN				IAmb	IAmb	18 19 17.2	
	comp=Z,6.4nm,1.0s						
TOLK	**Toolik Lake Re**	**55.72**	**25**	P	**P**	**18 19 13.1**	**+1.0**
MCK	**McKinley**	**55.73**	**31**	P	**P**	**18 19 13.4**	**+1.2**
MCK				IAmb	IAmb	18 19 13.9	
	comp=Z,9.4nm,1.2s						
RND	**Reindeer**	**55.76**	**31**	P	**P**	**18 19 13.1**	**+0.7**
RND				IAmb	IAmb	18 19 13.8	
	comp=Z,7.3nm,0.6s						
PWL	**Port Wells**	**56.02**	**34**	P	**P**	**18 19 14.4**	**+0.1**
PWL				IAmb	IAmb	18 19 31.4	
	comp=Z,18nm,1.2s						
MDM	**Murphy Dome**	**56.06**	**29**	P	**P**	**18 19 14.6**	**+0.2**
MDM				IAmb	IAmb	18 19 16.2	
	comp=Z,7.3nm,1.4s						
WRH	**Wood River Hil**	**56.11**	**30**	P	**P**	**18 19 15.8**	**+1.0**
CCB	**Clear Creek Bu**	**56.23**	**30**	P	**P**	**18 19 16.0**	**+0.5**
CCB				IAmb	IAmb	18 19 25.1	
	comp=Z,6.8nm,1.5s						
SCM	**Sheep Creek Mo**	**56.48**	**33**	P	**P**	**18 19 18.7**	**+1.3**
GLI	**Glacier Island**	**56.63**	**34**	P	**P**	**18 19 17.2**	**-1.2**
IL31		**56.63**	**30**	P	**P**	**18 19 19.1**	**+0.8**
IL31				IAmb	IAmb	18 19 21.7	
	comp=Z,6.6nm,1.4s						
ILAR	**Eielson Array**	**56.63**	**30**	P	**P**	**18 19 18.4**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=258,slow=4.7,SNR=18						
FID	**Port Fidalgo**	**56.94**	**34**	P	**P**	**18 19 20.3**	**-0.3**
KLU	**Klutina**	**57.16**	**34**	P	**P**	**18 19 23.2**	**+1.0**
KLU				IAmb	IAmb	18 19 41.5	
	comp=Z,7.3nm,0.7s						
N25K	**Chitina, Valde**	**57.79**	**33**	P	**P**	**18 19 28.0**	**+1.5**
N25K				IAmb	IAmb	18 19 32.8	
	comp=Z,7.6nm,1.2s						
BMRM	**Bremner River**	**57.84**	**34**	P	**P**	**18 19 28.0**	**+1.2**
BMRM				IAmb	IAmb	18 19 37.9	
	comp=Z,16nm,1.3s						
DOT	**Dot Lake**	**57.90**	**31**	P	**P**	**18 19 28.1**	**+0.9**
DOT				IAmb	IAmb	18 19 28.7	
	comp=Z,5.1nm,0.8s						
SCRK	**Sand Creek**	**57.91**	**31**	P	**P**	**18 19 28.2**	**+0.9**
SCRK				IAmb	IAmb	18 19 28.8	
	comp=Z,4.2nm,0.6s						
GLB	**Gilahina Butte**	**58.18**	**34**	P	**P**	**18 19 30.5**	**+1.3**
GLB				IAmb	IAmb	18 19 45.1	
	comp=Z,8.4nm,1.2s						
VRDI	**Verde Repeater**	**58.37**	**34**	P	**P**	**18 19 31.5**	**+0.9**
VRDI				IAmb	IAmb	18 19 38.0	
	comp=Z,9.5nm,1.2s						
MCARA	**McCarthy VSAT**	**58.56**	**34**	P	**P**	**18 19 33.2**	**+1.5**
MCARA				IAmb	IAmb	18 20 01.6	
	comp=Z,10nm,1.2s						
TGL	**Tana Glacier**	**58.72**	**34**	P	**P**	**18 19 33.2**	**+0.3**
K27K	**Chicken**	**58.75**	**30**	P	**P**	**18 19 34.2**	**+1.3**
L27K	**Beaver Creek,**	**58.95**	**32**	P	**P**	**18 19 35.7**	**+1.3**
BCAR	**Beaver Creek A**	**58.97**	**32**	P	**P**	**18 19 35.4**	**+0.9**
EGAK	**Eagle**	**59.08**	**29**	P	**P**	**18 19 35.9**	**+0.8**
GRNC	**Granite Creek**	**59.25**	**34**	P	**P**	**18 19 37.6**	**+1.0**
DAWY	**Dawson**	**59.92**	**30**	P	**P**	**18 19 42.1**	**+1.3**
ARU	**Arti**	**60.22**	**321**	P	**P**	**18 19 42.

	comp=Z,22nm,1.6s						
WRA	**Warramunga Arr**	**16.36 126**	Pn	**Pn**	**18 19 07.3**	**-0.9**	
	comp=Z,0.3nm,0.3s,baz=295,slow=13,SNR=7.5						
WRA			Sn	Sn	18 21 50.9	-18	
	comp=Z,0.0nm,0.3s,baz=294,slow=22,SNR=2.4						
WB2	**Warramunga Arr**	**16.37 126**	Pn	**Pn**	**18 19 07.1**	**-1.1**	
WR0	**Warramunga Arr**	**16.53 126**	Pn	**Pn**	**18 19 09.7**	**-0.6**	
WR0			IAmb	IAmb	18 19 24.0		
	comp=Z,21nm,1.7s						
KKM	**Kota Kinabalu**	**17.08 346**	Pn	**Pn**	**18 19 13.0**	**-4.4**	
KKM			IAmb	IAmb	18 19 40.3		
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**18.30 137**		**Pn**	**18 19 34.1**	**+1.8**	
ASAR	**Alice Springs**	**18.30 137**	P	**Pn**	**18 19 34.1**	**+1.8**	
	comp=Z,0.4nm,0.3s,baz=315,slow=12,SNR=28						
ASAR			S	Sn	18 22 46.2	-10	
	comp=Z,0.1nm,0.3s,baz=307,slow=23,SNR=4.6						
PMG	**Port Moresby**	**26.45 90**	P	**P**	**18 20 54.3**	**-0.8**	
MKAR	**Makanchi Array**	**66.51 333**	P	**P**	**18 26 08.5**	**+1.1**	
	comp=Z,1.1nm,0.6s,baz=145,slow=6.7,SNR=8.0						
KK31	**Karatay Array**	**70.15 323**	P	**P**	**18 26 29.3**	**-0.9**	
KK31			IAmb	IAmb	18 27 30.4		
	comp=Z,2.4nm,0.8s						
KKAR	**Karatay Array**	**70.15 323**	P	**P**	**18 26 29.1**	**-1.2**	
KURBB	**Kurchatov Arra**	**71.02 333**	P	**P**	**18 26 36.6**	**+1.3**	
	comp=Z,0.5nm,0.6s,baz=142,slow=5.5,SNR=8.2						
ZALV	**Zalesovo Beam**	**71.04 339**	P	**P**	**18 26 35.8**	**+0.4**	
	comp=Z,1.5nm,0.6s,baz=130,slow=5.1,SNR=7.8						
ZALV	**Zalesovo Beam**	**71.04 339**	P	**P**	**18 26 34.4**	**-1.0**	
KURK	**Kurchatov**	**71.05 333**	P	**P**	**18 26 36.6**	**+1.1**	

JMA 26 18:16:07.4±0.3, 24°.97N×123°.40E, h28km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.66**	**219**	P	Pb	18 16 20.0	-0.4
IRIF	**Iriomote-Funau**	**0.70**	**155**	P	Pb	18 16 20.8	-0.3
IRIF				*e*S	Sb	18 16 29.5	-0.9
JIJ	**Ishigaki jima**	**0.91**	**132**	P	Pn	18 16 23.9	-0.4
JIJ				*e*S	Sb	18 16 35.2	-1.0
JISG	**Ishigakijimahi**	**0.91**	**115**	*e*S	Sb	18 16 35.9	-0.5
JKRS	**Kuro-shima**	**0.92**	**143**	P	Pn	18 16 24.5	+0.1
JKRS				*e*S	Sn	18 16 36.6	-0.1

TAP 26 18:16:24.5, 24°.85N×122°.02E, h15km, ML1.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.16**	**349**	*i* P	Pg	18 16 28.8	+0.2
	baz=343						
TWB1				S	Sg	18 16 31.5	+0.1
	baz=343						
NTC	**Toucheng**	**0.17**	**272**	*i* P	Pg	18 16 29.0	+0.2
	baz=272						
NTC				*e*S	Sg	18 16 31.9	+0.3
	baz=272						
TIPB	**Shuangxi**	**0.22**	**305**	*i* P	Pb	18 16 29.9	-0.2
	baz=297						
TIPB				*i* S	Sg	18 16 33.1	+0.2
	baz=297						
TWC	**Suao**	**0.28**	**213**	*i* P	Pg	18 16 30.8	+0.2
	baz=219						
TWC				*i* S	Sg	18 16 34.3	-0.4
	baz=219						
TWE	**Neicheng**	**0.35**	**248**	*i* P	Pb	18 16 32.1	-0.3
	baz=244						
NDS	**Dongshan**	**0.35**	**232**	P	Pb	18 16 32.1	-0.3
	baz=235						
NDS				*e*S	Sg	18 16 37.2	+0.5
	baz=235						
TNOU	**National Taiwa**	**0.38**	**323**	P	Pb	18 16 33.2	+0.3
	baz=321						
TNOU				S	Sb	18 16 38.5	-0.1
	baz=321						
TWA	**Mucha**	**0.42**	**288**	*e*P	Pb	18 16 33.7	0.0
	baz=281						
TWA				S	Sb	18 16 39.7	-0.1
	baz=281						
EWUT	**Wuta**	**0.46**	**209**	*e*P	Pg	18 16 33.3	-0.4
	baz=216						
EWUT				S	Sb	18 16 40.8	-0.1
	baz=216						
ENTT	**Nioudou**	**0.46**	**243**	*i* P	Pb	18 16 34.4	0.0
	baz=244						
NWLT	**Wulai**	**0.48**	**261**	*i* P	Pg	18 16 34.2	+0.1
	baz=263						
NWLT				*e*S	Sb	18 16 41.3	-0.2
	baz=263						
YM01	**YM01**	**0.51**	**306**	P	Pb	18 16 35.5	+0.4
	baz=305						
NDT	**Datong Townshi**	**0.52**	**242**	P	Pb	18 16 35.3	-0.1
	baz=238						
YHNB	**Yeheng**	**0.61**	**253**	*e*P	Pg	18 16 36.8	+0.1
	baz=261						
NNSB	**Datong**	**0.72**	**234**	P	Pn	18 16 39.8	-0.4
	baz=235						
NNSH	**Datong**	**0.72**	**234**	*e*P	Pn	18 16 39.5	-0.7
	baz=238						
NNS	**Nan Shan**	**0.72**	**236**	*e*P	Pb	18 16 38.9	+0.1
	baz=236						
NACB	**Ninganchiao**	**0.78**	**210**	P	Pn	18 16 40.5	-0.5
	baz=214						
NACB				S	Sb	18 16 50.1	+0.1
	baz=214						
ETLH	**Xiulin Townshi**	**0.81**	**218**	P	Pn	18 16 41.4	0.0
	baz=221						
ETLH				S	Sb	18 16 51.8	+0.8
	baz=221						
FUSS	**Fushou**	**0.93**	**230**	P	Pn	18 16 43.8	+0.6
	baz=225						
FUSS				S	Sn	18 16 56.0	-0.3
	baz=225						
LIOB	**Emei**	**0.94**	**258**	*e*P	Pn	18 16 43.8	+0.6
	baz=252						
CHGB	**Renai**	**1.10**	**225**	*e*P	Pg	18 16 46.6	+0.8
	baz=222						
WHP	**Taichung City**	**1.13**	**240**	P	Pg	18 16 47.9	+1.5
	baz=232						
OWD	**Renai**	**1.18**	**221**	*e*P	Pg	18 16 48.0	+0.7
	baz=225						

*NEIC **26** 18:16:49.0±0.7, 20°.05S×178°.1W±0°.2, h507km±21km, mb4.3/9, Error ellipse: s-maj=28.2km s-min=12.0km az=59.0*
*IDC **26** 18:16:50.5±3.1, 20°.00S×177°.93W, h498km±31km, mb3.0/7, mb1 3.3/8, mb1mx3.0/34, mbtmp3.9/8, Error ellipse: s-maj=65.4km s-min=20.5km az=147.0*
ISC 26 18:16:49.5±0.8, 19°.9S±0°.1×178°.1W±0°.1, h500km, n25, σ1°85/26, mb3.8/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.29**	**300**	P	**P**	**18 18 09.9**	**-0.6**
AFI	**Afiamalu**	**8.48**	**46**	P	**P**	**18 18 51.5**	**+0.4**
	3.8nm,0.3s,baz=197,slow=20,SNR=2.5						
AFI				S	**S**	**18 20 25.8**	**-5.0**
	2.6nm,0.3s,baz=40,slow=22,SNR=2.0						
AFI	**Afiamalu**	**8.48**	**46**	P	**P**	**18 18 51.6**	**+0.5**
BSWZ	**Blackbirch Sta**	**22.77**	**196**	P	**P**	**18 21 11.6**	**-1.4**
CAN	**Canberra**	**32.79**	**235**	P	**P**	**18 22 39.3**	**-1.5**
CAN				IAmb	IAmb	18 22 43.1	
	comp=Z,11nm,1.1s						
RABL	**Rabaul**	**32.97**	**294**	P	**P**	**18 22 41.0**	**-1.5**
RABL				IAmb	IAmb	18 22 44.1	
	comp=Z,9.0nm,0.8s						
PATS	**Pohnpei**	**35.34**	**317**	P	**P**	**18 23 01.1**	**-1.3**
TOO	**Toolangi**	**36.19**	**233**	P	**P**	**18 23 09.2**	**-0.2**
BBOO	**Buckleboo**	**42.76**	**243**	P	**P**	**18 24 00.7**	**-1.7**
BBOO				IAmb	IAmb	18 24 13.0	
	comp=Z,6.5nm,1.1s						
AS31	**Alice Springs**	**44.60**	**256**	P	**P**	**18 24 15.1**	**-1.8**
ASAR	**Alice Springs**	**44.60**	**256**	P	**P**	**18 24 18.9**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=85,slow=8.5,SNR=5.7						
ASAR				PcP	**PcP**	**18 25 49.9**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=111,slow=3.8,SNR=4.2						
ASAR	**Alice Springs**	**44.60**	**256**	P	**P**	**18 24 18.1**	**+1.2**
WB0	**Warramunga Arr**	**44.61**	**262**	P	**P**	**18 24 18.0**	**+1.0**
WB2	**Warramunga Arr**	**44.62**	**261**	P	**P**	**18 24 16.5**	**-0.6**
WB2				IAmb	IAmb	18 24 22.5	
	comp=Z,5.5nm,1.1s						
WRAB	**Tennant Creek**	**44.62**	**262**	P	**P**	**18 24 13.8**	**-3.4**
WRAB				IAmb	IAmb	18 24 14.3	
	comp=Z,5.9nm,0.4s						
WRA	**Warramunga Arr**	**44.63**	**261**	P	**P**	**18 24 18.6**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=97,slow=7.8,SNR=4.9						
PETK	**Petropavlovsk-**	**75.71**	**345**	P	**P**	**18 27 44.5**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=111,slow=8.1,SNR=4.4						
SEY	**Seymchan**	**85.82**	**347**	P	**P**	**18 28 37.0**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=195,slow=5.9,SNR=4.9						
TXAR	**Lajitas Array**	**86.80**	**57**	P	**P**	**18 28 42.2**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=311,slow=28,SNR=3.1						
ILAR	**Eielson Array**	**87.78**	**13**	P	**P**	**18 28 44.9**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=220,slow=6.7,SNR=2.3						
CMAR	**Chiang Mai Arr**	**89.88**	**290**	P	**P**	**18 28 58.1**	**+2.9**
	comp=Z,0.5nm,0.4s,baz=93,slow=4.6,SNR=2.1						
AKASG	**Malin Array Be**	**142.50**	**331**	PKhKP	PKPpre	18 35 22.3	
	comp=Z,0.8nm,0.4s,baz=41,slow=4.1,SNR=5.1						
BRTR	**Keskin Array B**	**146.42**	**313**	PKPbc	**PKPbc**	**18 35 35.4**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=106,slow=4.7,SNR=5.3						
CLL	**Collm**	**147.50**	**347**	*i* PKPbc	**PKiKP**	**18 35 38.0**	**-0.5**
	comp=Z,8.0nm,1.0s						
GERES	**GERESS Array B**	**149.65**	**345**	PKPbc	**PKPbc**	**18 35 42.9**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=35,slow=4.9,SNR=4.3						

*RHSSO **26** 18:49:29.6±0.7, 42°.34N×20°.36E, h5km±3km, ML2.7/12*
*PDG **26** 18:49:31.7±0.2, 42°.40N×20°.14E, h6km, MD2.3/2, ML2.8/14, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*TIR **26** 18:49:31.4, 42°.32N×20°.19E, h0km±12km, Md2.8, Ml2.8*
*BEO **26** 18:49:31.8±0.2, 42°.43N×20°.26E, h0km, ML2.4/16*
ISC 26 18:49:30.7±1.1, 42°.41N±0°.02×20°.23E±0°.02, h3km±9km, n82, σ1°917/138, 21C-9D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCI	**Bajram Curri**	**0.13**	**252**	P	**Pg**	**18 49 33.9**	**+0.6**
	baz=296						
BCI				S	**Sg**	**18 49 35.6**	**+0.6**
	baz=296						
BCI				AMP			
	comp=N,35nm,0.1s,baz=296						
PVY	**Plav**	**0.28**	**313**	*e*Pg	**Pg**	**18 49 36.3**	**+0.2**
PVY				*i* Sg	**Sg**	**18 49 40.4**	**+0.7**
PUK	**Puka**	**0.44**	**215**	P	**Pg**	**18 49 39.4**	**+0.2**
	baz=219						
PUK				S	**Sg**	**18 49 45.8**	**+0.8**
	baz=219						
IVA	**Berane**	**0.53**	**332**	⇓*i* Pg	**Pg**	**18 49 41.1**	**+0.2**
IVA				*i* Sg	**Sg**	**18 49 49.2**	**+1.4**
KOME	**Kolasin**	**0.69**	**310**	⇓*i* Pg	**Pg**	**18 49 43.7**	**-0.3**
KOME				*i* Sg	**Sb**	**18 49 54.0**	**-1.5**
PDG	**Podgorica**	**0.72**	**272**	*e*Pg	**Pg**	**18 49 43.9**	**-0.7**
PDG				*e*Sg	**Sg**	**18 49 53.7**	**-0.3**
PDG	**Podgorica**	**0.72**	**272**	⇑P	**Pg**	**18 49 44.4**	**-0.2**
PDG				⇑S	**Sb**	**18 49 55.0**	**-1.3**
PDG	**Podgorica**	**0.72**	**272**	⇑*i* Pg	**Pg**	**18 49 43.8**	**-0.8**
PDG				*e*Sg	**Sb**	**18 49 55.5**	**-0.8**
TTG	**Podgorica**	**0.72**	**272**	⇑*i* Pg	**Pg**	**18 49 43.9**	**-0.7**
TTG				*i* Sg	**Sb**	**18 49 54.4**	**-1.9**
DRME	**Dracevica, Mon**	**0.81**	**255**	⇑*i* Pg	**Pg**	**18 49 45.3**	**-0.9**
DRME				*e*Sg	**Sb**	**18 49 57.6**	**-1.2**
DRME	**Dracevica, Mon**	**0.81**	**255**	⇓*i* Pg	**Pg**	**18 49 45.4**	**-0.8**
DRME				*i* Sg	**Sb**	**18 49 57.1**	**-1.7**
ULC	**Ulcinj**	**0.86**	**239**	*e*Pg	**Pg**	**18 49 46.4**	**-0.8**
ULC				*i* Sg	**Sb**	**18 49 58.9**	**-1.3**
CEME	**Cevo**	**0.98**	**279**	⇑*i* Pg	**Pg**	**18 49 48.7**	**-0.9**
CEME				*i* Sg	**Sb**	**18 50 03.1**	**-0.8**
SKO	**Skopje**	**1.00**	**115**	*e*Pg	**Pg**	**18 49 49.8**	**0.0**
SKO				*e*Sg	**Sg**	**18 50 03.0**	**+0.3**
SKO	**Skopje**	**1.00**	**115**	*i* Pn	**Pg**	**18 49 49.2**	**-0.6**
BUM	**Brajici-Budva**	**1.00**	**264**	⇑*i* Pg	**Pg**	**18 49 48.9**	**-1.0**
BUM				*i* Sg	**Sb**	**18 50 03.6**	**-0.7**
NKY	**Niksic**	**1.00**	**294**	⇑*i* Pg	**Pg**	**18 49 49.2**	**-0.7**
NKY				*i* Sg	**Sb**	**18 50 04.1**	**-0.3**
NKME	**Niksic**	**1.01**	**291**	⇑*i* Pg	**Pg**	**18 49 49.3**	**-0.8**
NKME				*i* Sg	**Sb**	**18 50 04.3**	**-0.4**
SELS	**Selova**	**1.04**	**38**	*e*Pg	**Pg**	**18 49 51.0**	**+0.3**
SELS				*e*Sg	**Sg**	**18 50 02.6**	**-1.6**
TIR	**Tirane**	**1.09**	**195**	*e*Pg	**Pn**	**18 49 52.8**	**-0.1**
TIR				*e*Sg	**Sn**	**18 50 08.4**	**-0.2**
TIR	**Tirane**	**1.09**	**195**	⇑P	**Pn**	**18 49 53.2**	**+0.3**
TIR				⇑S	**Sn**	**18 50 09.5**	**+1.0**
TIR	**Tirane**	**1.09**	**195**	P	**Pg**	**18 49 52.0**	**+0.3**
	baz=195						
TIR				S	**Sb**	**18 50 06.8**	**-0.1**
	baz=195						
PLE	**Pljevlja**	**1.11**	**326**	⇓*i* Pg	**Pg**	**18 49 51.7**	**-0.4**
PLE				*i* Sg	**Sn**	**18 50 08.7**	**-0.6**
IVAS	**Ivanjica**	**1.17**	**357**	*e*Pg	**Pg**	**18 49 53.3**	**+0.1**
IVAS				*e*Sg	**Sg**	**18 50 09.1**	**+0.7**
BARS	**Barje**	**1.24**	**70**	*e*Pg	**Pn**	**18 49 52.7**	**-2.3**
BARS				*e*Sg	**Sb**	**18 50 09.4**	**-1.7**
UPM	**Unac-Piva**	**1.26**	**310**	*e*Pg	**Pg**	**18 49 54.6**	**-0.3**
UPM				*e*Sg	**Sn**	**18 50 13.8**	**+0.8**
UPM	**Unac-Piva**	**1.26**	**310**	*e*Pg	**Pg**	**18 49 54.2**	**-0.7**
UPM				*i* Sg	**Sn**	**18 50 13.2**	**+0.2**
HCY	**Herceg Novi**	**1.29**	**272**	⇓*i* Pg	**Pb**	**18 49 54.6**	**-1.0**
HCY	**Herceg Novi**	**1.29**	**272**	⇑*i* Pg	**Pb**	**18 49 54.3**	**-1.3**
HCY				*i* Sg	**Sn**	**18 50 13.4**	**0.0**
BRY	**Bratogost**	**1.34**	**292**	⇑*i* Pg	**Pn**	**18 49 55.4**	**-1.1**
BRY				*i* Sg	**Sn**	**18 50 15.6**	**+0.6**
OHR	**Ohrid**	**1.36**	**162**	*i* Pn	**Pn**	**18 49 56.3**	**-0.3**
PRVS	**Prvonek**	**1.37**	**85**	*e*Pg	**Pn**	**18 49 56.9**	**+0.1**
PRVS				*e*Sg	**Sb**	**18 50 14.8**	**-0.1**
RUDO	**Rudo**	**1.37**	**333**	⇑*i* Pg	**Pn**	**18 49 55.2**	**-1.5**
RUDO				*e*Sg	**Sn**	**18 50 16.4**	**+1.0**
TREB	**Trebinje**	**1.43**	**283**	*e*Pn	**Pn**	**18 49 56.8**	**-0.7**
TREB				*e*Sn	**Sg**	**18 50 18.2**	**+1.7**
GRUS	**Gruza**	**1.52**	**13**	*e*Pg	**Pn**	**18 49 59.0**	**+0.1**
GRUS				*e*Sg	**Sg**	**18 50 20.5**	**+0.8**
BBLS	**Lazići**	**1.58**	**338**	*e*Pg	**Pb**	**18 50 00.3**	**-0.3**
BBLS				*e*Sg	**Sb**	**18 50 20.7**	**-0.4**
BBLS	**Lazići**	**1.58**	**338**	*e*Pn	**Pn**	**18 49 59.9**	**+0.2**
BBLS				*e*Sn	**Sb**	**18 50 21.1**	**0.0**
STIP	**Stip**	**1.62**	**115**	*i* Pn	**Pb**	**18 50 01.8**	**+0.6**
BOSS	**Bosilegrad**	**1.67**	**86**	*e*Pg	**Pn**	**18 50 00.5**	**-0.3**
BOSS				*e*Sg	**Sn**	**18 50 23.3**	**+0.6**
DIVS	**Divibare**	**1.70**	**354**	*e*Pn	**Pn**	**18 50 01.5**	**+0.1**
DIVS				*e*Sn	**Sn**	**18 50 24.1**	**+0.4**
DIVS	**Divibare**	**1.70**	**354**	*e*Pn	**Pn**	**18 50 01.2**	**-0.2**
DIVS				*e*Sn	**Sn**	**18 50 23.7**	**0.0**
TRUS	**Trudelj**	**1.82**	**4**	*e*Pn	**Pb**	**18 50 04.6**	**-0.1**
TRUS				*e*Sn	**Sb**	**18 50 27.0**	**-0.1**
HAPS	**Han Pijesak,Bl**	**1.92**	**331**	*e*Pn	**Pn**	**18 50 04.4**	**-0.1**
HAPS				*e*Sn	**Sn**	**18 50 29.5**	**+0.2**
STON	**Ston**	**1.93**	**285**	*e*Pn	**Pb**	**18 50 05.5**	**-0.9**
STON				Sn	**Sg**	**18 50 33.9**	**+1.3**
ZAPS	**Zavoj**	**1.97**	**63**	*e*Pn	**Pn**	**18 50 05.6**	**+0.6**
ZAGS	**Zajecar**	**2.03**	**45**	*e*Pn	**Pn**	**18 50 06.0**	**+0.2**
ZAGS				*e*Sn	**Sn**	**18 50 33.2**	**+1.5**
VAY	**Valandovo**	**2.05**	**121**	*e*Pn	**Pb**	**18 50 08.4**	**-0.3**
VAY				*e*Sn	**Sn**	**18 50 33.7**	**+1.4**
BLKB	**Belogradchik**	**2.16**	**55**	⇑S	**Sn**	**18 50 35.6**	**+0.5**
TEKS	**Tekeris**	**2.20**	**347**	*e*Pn	**Pb**	**18 50 10.8**	**-0.4**
TEKS	**Tekeris**	**2.20**	**347**	*e*Pn	**Pn**	**18 50 08.3**	**+0.1**
TEKS				*e*Sn	**Sn**	**18 50 37.0**	**+1.0**
VTS	**Vitosha**	**2.23**	**84**	*e*Pn	**Pn**	**18 50 08.8**	**+0.1**
VTS				*e*Sn	**Sn**	**18 50 36.9**	**+0.1**
VTS	**Vitosha**	**2.23**	**84**	⇓P	**Pn**	**18 50 09.4**	**+0.7**
KUBS	**Kucevo**	**2.26**	**27**	*e*Pn	**Pn**	**18 50 09.2**	**+0.1**
MAKA	**Makarska**	**2.52**	**292**	*e*Pn	**Pn**	**18 50 15.8**	**-0.8**
MAKA				Sn	**Sb**	**18 50 48.8**	**+0.8**
RICI	**Ricice**	**2.52**	**297**	*e*Pn	**Pb**	**18 50 16.3**	**-0.4**
RICI				Sn	**Sg**	**18 50 50.6**	**-1.1**
MDVR	**Moldovita**	**2.61**	**24**	⇓P	**Pn**	**18 50 14.3**	**+0.5**
MDVR				⇑S	**Sn**	**18 50 45.0**	**-1.1**
FRGS	**Fruska Gora**	**2.77**	**354**	⇑P	**Pn**	**18 50 16.0**	**-0.1**
FRGS	**Fruska Gora**	**2.77**	**354**	*e*Pn	**Pn**	**18 50 15.9**	**-0.1**
FRGS				*e*Sn	**Sn**	**18 50 50.1**	**+0.1**
HVAR	**Hvar**	**2.89**	**287**	*e*Pn	**Pn**	**18 50 19.8**	**+2.2**
HVAR				Sn	**Sb**	**18 50 57.1**	**-1.6**
HERR	**Herculane**	**2.94**	**32**	⇑P	**Pn**	**18 50 17.8**	**-0.5**
MGRS	**Mrkonjic Grad**	**3.05**	**312**	*e*Pn	**Pn**	**18 50 20.4**	**+0.5**
MGRS				*e*Sn	**Sn**	**18 50 57.8**	**+0.9**
KIJV	**Kijevo**	**3.22**	**301**	*e*Pn	**Pb**	**18 50 26.4**	**-2.2**
KIJV				Sn	**Sb**	**18 51 07.8**	**-0.4**
BLY	**Banja Luka**	**3.22**	**318**	*e*Pn	**Pn**	**18 50 22.5**	**+0.3**
BLY				*e*Sn	**Sn**	**18 51 02.3**	**+1.1**
BZS	**Buzias**	**3.36**	**17**	⇑P	**Pn**	**18 50 24.5**	**+0.3**
BZS				⇑S	**Sn**	**18 51 03.4**	**-1.1**
GZR	**Gura Zlata**	**3.51**	**31**	⇓P	**Pn**	**18 50 26.5**	**+0.3**
MRAK	**Mrakovica**	**3.55**	**318**	*e*Pn	**Pn**	**18 50 27.1**	**+0.3**
ZIRJ	**Zirje**	**3.59**	**292**	*e*Pn	**Pn**	**18 50 29.6**	**+2.4**
ZIRJ				Sn	**Sb**	**18 51 13.6**	**-5.2**
MORH	**Mrgy, Hungar**	**3.98**	**344**	⇑P	**Pn**	**18 50 32.5**	**-0.1**
MORH	**Mrgy, Hungar**	**3.98**	**344**	*e*Pn	**Pn**	**18 50 31.9**	**-0.6**
MORH				*e*Sn	**Sn**	**18 51 19.3**	**-0.4**
DUGI	**Dugi Otok**	**4.10**	**294**	*e*Pn	**Pn**	**18 50 36.7**	**+2.4**
DUGI				Sn	**Sn**	**18 51 26.9**	**+4.1**
DRGR		**4.73**	**21**	⇓P	**Pn**	**18 50 43.3**	**+0.3**
BEHE	**Becsehely**	**4.76**	**330**	*e*Pn	**Pn**	**18 50 42.8**	**-0.5**
CRES	**Cresnjev**	**4.85**	**316**	*e*Pn	**Pn**	**18 50 44.9**	**+0.3**
BRJN	**Brijuni**	**5.33**	**300**	*e*Pn	**Pn**	**18 50 53.2**	**+2.1**
CEY	**Cerknica**	**5.35**	**311**	*e*Pn	**Pn**	**18 50 51.3**	**-0.1**
SOKA	**Soboth**	**5.66**	**321**	*e*Pn	**Pn**	**18 50 56.9**	**+1.1**
	comp=N,0.3nm,0.2s						
OBKA	**Obir**	**5.78**	**317**	*e*Pn	**Pn**	**18 50 59.8**	**+2.4**
	comp=N,0.4nm,0.2s						
ARSA	**Arzberg**	**5.89**	**327**	*e*Pn	**Pn**	**18 51 00.2**	**+1.3**
	comp=N,1.2nm,0.4s						
MYKA	**Terra Mystica**	**6.33**	**314**	*e*Pn	**Pn**	**18 51 07.2**	**+2.3**
	comp=N,0.4nm,0.3s						
CONA	**Conrad Observa**	**6.33**	**332**	*e*Pn	**Pn**	**18 51 07.2**	**+2.2**
	comp=N,0.2nm,0.3s						
MOA	**Molln**	**6.89**	**324**	*e*Pn	**Pn**	**18 51 14.6**	**+2.1**
	comp=N,0.2nm,0.2s						
KHC	**Kasperske Hory**	**8.18**	**328**	*e*SN	**Sn**	**18 53 07.3**	**+4.2**

*IDC **26** 18:54:48.0±0.8, 28°.02N×84°.91E, h0km, mb3.9/22, mb1 4.1/24, mb1mx3.9/47, mbtmp4.0/24, ML4.1/2, MS2.9/6, Ms1 2.9/6, ms1mx2.7/36, Error ellipse: s-maj=21.2km s-min=14.4km az=37.0*
*BJI **26** 18:54:48.4±0.0, 28°.10N×84°.90E, h10km, mB4.5/14, mb4.2/24, Ms3.6/7, Ms7 3.4/8*
*DMN **26** 18:54:48.8±0.2, 28°.26N×85°.10E, h10km, Ml5.1/2, Error ellipse: s-maj=4.3km s-min=1.8km az=8.0*
*NEIC **26** 18:54:49.1±1.7, 27°.99N±0°.09×84°.77E±0°.04, h10km±1km, mb4.4/49, Error ellipse: s-maj=15.9km s-min=5.3km az=184.0*
*NDI **26** 18:54:52.1±4.4, 28°.03N×84°.97E, h10km, ML4.1, mb4.4(NEIC)*
ISC 26 18:54:51.4±0.9, 28°.04N±0°.05×84°.96E±0°.02, h23km±7km, n133, σ1°83/151, mb4.2/44, MS2.9/6, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GKN	**Gorkha**	**0.29**	**263**	*e*Pg	**Pb**	**18 54 58.1**	**-0.1**
GKN				*e*Sg	**Sb**	**18 55 04.0**	**+1.1**
KKN	**Kakani**	**0.38**	**131**	*e*Pg	**Pb**	**18 54 58.9**	**-0.7**
KKN				*e*Sg	**Sb**	**18 55 04.7**	**-0.5**
DMN	**Daman**	**0.45**	**163**	*e*Pg	**Pb**	**18 55 01.3**	**+0.5**
DMN				*e*Sg	**Sb**	**18 55 09.3**	**+2.1**
	31µm,0.3s						
PKIN	**Phulchoki**	**0.60**	**140**	*e*Pg	**Pb**	**18 55 03.5**	**+0.1**
PKIN				*e*Sg	**Sb**	**18 55 12.1**	**+0.5**
PKI	**Pulchoki**	**0.61**	**139**	*e*Pg	**Pb**	**18 55 03.6**	**-0.1**
PKI				*e*Sg	**Sb**	**18 55 12.0**	**0.0**
GUN	**Gumba**	**0.82**	**99**	*e*Pg	Pb	18 55 03.8	-3.5
GUN				*e*Sg	**Sb**	**18 55 13.9**	**-4.2**
DANN	**Dangsing**	**1.10**	**287**	*e*Pg	**Pb**	**18 55 12.5**	**+0.5**
DANN				*e*Sg	**Sn**	**18 55 26.8**	**+0.3**
KOLN	**Koldanda**	**1.23**	**258**	*e*Pg	**Pb**	**18 55 15.7**	**+1.5**
KOLN				*e*Sg	**Sb**	**18 55 33.2**	**+3.5**
	3µm,0.2s						
PYUN	**Piuthan**	**1.74**	**273**	*e*Pg	**Pb**	**18 55 23.3**	**+0.4**
PYUN				*e*Sg	**Sb**	**18 55 47.4**	**+3.0**
	3µm,0.4s						
RAMN	**Ramite**	**1.81**	**126**	*e*Pg	**Pn**	**18 55 23.6**	**+2.1**
ODAN	**Odare**	**2.46**	**118**	*e*Pg	**Pb**	**18 55 34.8**	**-0.3**
ODAN				*e*Sg	**Sn**	**18 56 04.9**	**+5.1**
TAPN	**Taplejung**	**2.53**	**105**	*e*Pg	**Pn**	**18 55 34.8**	**+3.4**

GTA LR LR
comp=Z,56nm,12.0s
AAK Ala-Archa 16.86 332 Pn 18 58 43.3 -2.8
UTTA Uttaradit 17.63 122 P P 18 59 03.5 +7.0
PBA Port Blair 17.85 154 P 18 58 59.8 +0.8
PBA IAmb IAmb 18 59 12.5
comp=Z,15nm,0.8s
MK31 Makanchi Array 18.84 354 Pn 18 59 10.6 +0.2
MKAR Makanchi Array 18.84 354 P Pn **18 59 10.5 +0.1**
comp=Z,2.3nm,0.3s,baz=176,slow=12,SNR=82
MKAR Makanchi Array 18.84 354 P P **18 59 10.2 +0.5**
MAKZ Makanchi 18.88 354 P P **18 59 09.1 -1.1**
MAKZ IAmb IAmb 18 59 23.8
comp=Z,10nm,0.6s
KK31 Karatay Array 19.04 326 P P **18 59 10.5 -1.4**
KKAR Karatay Array 19.04 326 P P **18 59 10.6 -1.3**
KKAR Karatay Array 19.04 326 P P **18 59 10.7 -1.2**
GYA Guiyang 19.36 90 ⇑P Pn **18 59 22.3 +5.4**
GYA pmax pmax
comp=Z,2.0nm,1.1s
NONG Nongkai 19.43 117 P Pn 18 59 28.0 +10
PALK Pallekele 21.04 192 LR LR 19 07 21.7
comp=Z,90nm,20.1s,baz=70,slow=36
XAN Xi'an 21.36 68 P P **18 59 36.8 -0.5**
XAN pP pP 18 59 40.8 -3.7
XAN pmax pmax
comp=Z,9.0nm,0.7s
KURBB Kurchatov Arra 23.08 350 P P **18 59 55.3 0.0**
comp=Z,1.8nm,0.8s,baz=176,slow=9.9,SNR=17
KURK Kurchatov 23.16 350 P P **18 59 55.3 -0.8**
GEYT Alibeck 24.51 301 P P **19 00 11.5 +2.3**
comp=Z,2.1nm,0.8s,baz=105,slow=11,SNR=4.7
GEYT Alibeck 24.51 301 P P **19 00 08.0 -1.2**
SONM Songino Array 25.86 34 P P **19 00 22.8 +1.5**
comp=Z,3.0nm,0.7s,baz=220,slow=9.9,SNR=17
SONM Songino Array 25.86 34 P P **19 00 22.1 +0.7**
ZAA0 Zalesovo Array 25.89 360 P P **19 00 20.4 -1.0**
ZAA0 IAmb IAmb 19 00 22.8
comp=Z,3.9nm,0.7s
ZALV Zalesovo Beam 25.89 360 P P **19 00 22.2 +0.8**
comp=Z,3.6nm,0.6s,baz=184,slow=9.7,SNR=20
ZALV LR LR 19 10 56.5
comp=Z,10.0nm,18.4s,baz=206,slow=37
BVAR Borovoye Array 27.20 341 P P **19 00 33.8 +0.5**
comp=Z,0.8nm,0.5s,baz=163,slow=12,SNR=3.3
TLY Talaya 27.47 26 LR LR 19 12 10.2
comp=Z,27nm,18.3s,baz=179,slow=38
PSI Prapat 28.42 150 LR LR 19 13 22.7
comp=Z,32nm,20.0s,baz=26,slow=39
ABKAR Akbulak array 28.59 325 P P **19 00 46.0 +0.3**
ABKAR Akbulak array 28.59 325 P P **19 00 45.5 -0.2**
ARU Arti 34.04 334 P P **19 01 33.4 -0.2**
ARU IAmb IAmb 19 01 35.0
comp=Z,6.0nm,0.6s
KS19 Wonju Array Si 37.02 64 P P **19 01 59.1 -0.3**
KS19 IAmb IAmb 19 02 03.4
comp=Z,7.6nm,1.1s
KSRS Korea Array 37.07 64 P P **19 01 59.3 -0.5**
comp=Z,1.6nm,0.6s,baz=261,slow=7.9,SNR=12
MYLDM Lahad Datu 39.13 119 P P **19 02 16.5 -0.9**
MYLDM IAmb IAmb 19 02 31.0
comp=Z,11nm,1.1s
USRK Ussuriysk Ar. 40.69 54 P P **19 02 30.4 +0.3**
comp=Z,1.2nm,0.5s,baz=266,slow=6.7,SNR=6.6
USRK Ussuriysk Ar. 40.69 54 P P **19 02 28.4 -1.7**
NRIK Noril'sk 41.36 1 P P **19 02 36.1 +0.8**
comp=Z,1.3nm,0.3s,baz=163,slow=7.8,SNR=3.7
BRTR Keskin Array B 43.64 299 P P **19 02 55.2 +0.8**
comp=Z,0.5nm,0.8s,baz=111,slow=7.9,SNR=3.7
BRTR Keskin Array B 43.64 299 P P **19 02 52.5 -1.9**
MJAR Matsushiro Arr 45.32 65 P P **19 03 07.9 +0.1**
comp=Z,0.7nm,0.7s,baz=280,slow=7.9,SNR=4.1
AKASG Malin Array Be 47.36 314 P P **19 03 23.3 -0.2**
comp=Z,1.6nm,0.5s,baz=78,slow=7.4,SNR=9.6
AKBB Malin Array Si 47.36 314 P P **19 03 22.4 -1.1**
AKBB IAmb IAmb 19 03 39.2
comp=Z,5.4nm,1.1s
MNK Minsk 48.70 319 *i* P P **19 03 35.0 +1.2**
comp=E,2.0nm,1.1s
MNK *i* P P **19 03 35.0 +1.2**
comp=N,8.0nm,0.8s
MNK *i* P P **19 03 35.0 +1.2**
comp=Z,5.0nm,0.8s
MNK *i* PcP PcP **19 05 01.3 +2.5**
MNK *i* PP PP **19 05 27.7 +0.9**
MNK *i* PPP PPP 19 06 15.9
MNK *i* S S **19 10 36.0 +1.2**
MNK *i* SS SS **19 14 07.4 +2.5**
MNK *i* SSS SSS 19 15 17.1
MNK *i* LQ LQ 19 21 03.4
MNK *i* LR LR 19 23 52.0
MNK *i* LRM MLR 19 26 04.3
comp=Z,49nm,17.2s
MNK *i* LRM MLR 19 26 16.4
comp=E,3.0nm,12.1s
MNK *i* LRM MLR 19 26 22.8
comp=N,44nm,15.3s
BUR08 Bucovina Ar. S 49.80 310 P P **19 03 41.6 -0.9**
TIXI Tiksi 49.82 17 P P **19 03 41.9 -0.2**
comp=N,2.5nm,0.5s,baz=238,slow=3.3,SNR=17
TIXI Tiksi 49.82 17 P P **19 03 42.0 -0.2**
TIXI IAmb IAmb 19 03 43.1
comp=Z,3.6nm,0.8s
FIA1 FINESS Array S 50.98 328 P P **19 03 51.2 +0.1**
FINES FINESS Array B 50.98 328 P P **19 03 51.0 0.0**
comp=Z,3.2nm,0.6s,baz=102,slow=7.7,SNR=18
ARCES ARCESS Array B 53.44 338 P P **19 04 08.8 -0.4**
comp=Z,2.2nm,0.6s,baz=92,slow=6.2,SNR=9.9
ARCES ARCESS Array B 53.44 338 P P **19 04 09.1 -0.1**
SEY Seymchan 55.18 31 P P **19 04 23.0 +1.1**
comp=Z,1.0nm,0.7s,baz=78,slow=22,SNR=6.6
GERES GERESS Array B 57.41 312 P P **19 04 38.1 -0.2**
comp=Z,0.3nm,0.6s,baz=114,slow=4.8,SNR=3.0
NC405 NORSAR Array S 57.83 327 P P **19 04 39.5 -1.4**
NOA NORSAR Array B 58.07 327 P P **19 04 42.0 -0.6**
comp=Z,0.5nm,0.8s,baz=228,slow=10,SNR=3.8
NOA LR LR 19 33 59.1
comp=Z,7.7nm,20.0s,baz=255,slow=40
NC204 NORSAR Array S 58.28 327 P P **19 04 43.2 -0.9**
SPA0 Spitsbergen Ar 58.39 347 P P **19 04 44.9 +0.3**
WB0 Warramunga Arr 67.41 129 P P **19 05 46.4 +1.1**
WB0 IAmb IAmb 19 05 48.8
comp=Z,7.0nm,1.1s
WRA Warramunga Arr 67.49 129 P P **19 05 46.9 +1.0**
comp=Z,1.0nm,0.8s,baz=321,slow=6.5,SNR=8.3
WRA Warramunga Arr 67.49 129 P P **19 05 47.0 +1.1**
WRAB Tennant Creek 67.49 129 P P **19 05 47.6 +1.8**
WB2 Warramunga Arr 67.50 129 P P **19 05 48.1 +2.2**
WR0 Warramunga Arr 67.64 129 P P **19 05 47.6 +0.8**
ASAR Alice Springs 69.78 133 P P **19 06 00.9 +0.8**
comp=Z,0.5nm,0.7s,baz=314,slow=6.2,SNR=9.3
EUNU Eureka 72.03 358 P P **19 06 13.4 +0.3**
EUNU IAmb IAmb 19 06 14.8
comp=Z,5.8nm,0.8s
TULEG Thule 74.41 354 P P **19 06 26.2 -0.8**
TULEG IAmb IAmb 19 06 32.3
comp=Z,5.3nm,1.0s
TOLK Toolik Lake Re 75.69 18 P P **19 06 35.2 +0.5**
TOLK IAmb IAmb 19 06 36.6
comp=Z,4.9nm,0.8s
MLY Manley 77.76 21 P P **19 06 46.8 +0.4**
MLY IAmb IAmb 19 06 48.5
comp=Z,1.9nm,0.8s
TORD Torodi Ar. Bea 78.07 279 P P **19 06 48.9 0.0**
comp=Z,0.2nm,0.5s,baz=67,slow=4.5,SNR=1.8
AKUT Akutan 78.09 35 P P **19 06 48.4 +0.1**
BPAW Bear Paw Mtn. 78.31 22 P P **19 06 49.5 0.0**
BPAW IAmb IAmb 19 06 59.2
comp=Z,4.0nm,1.2s
MDM Murphy Dome 78.60 20 P P **19 06 50.6 -0.4**
MDM IAmb IAmb 19 07 01.5
comp=Z,8.5nm,1.5s
PPLA Purkeypile 78.69 23 P P **19 06 52.7 +1.0**
ILAR Eielson Array 79.14 20 P P **19 06 54.0 0.0**
comp=Z,1.1nm,0.7s,baz=308,slow=4.7,SNR=11
RND Reindeer 79.47 22 P P **19 06 55.4 -0.5**
RND IAmb IAmb 19 07 09.4
comp=Z,6.5nm,1.3s
SKT Skwentna 79.53 24 P P **19 06 56.8 +0.6**
SKT IAmb IAmb 19 06 57.4
comp=Z,4.2nm,0.7s
INK Inuvik 79.81 14 P P **19 06 57.7 +0.2**
comp=Z,1.7nm,0.8s,baz=22,slow=9.1,SNR=6.8
INK Inuvik 79.81 14 P P **19 06 58.0 +0.5**
INK IAmb IAmb 19 06 59.8
comp=Z,3.7nm,1.1s
SCRK Sand Creek 80.59 20 P P **19 07 02.8 +0.8**
SCRK IAmb IAmb 19 07 03.6
comp=Z,2.7nm,0.8s
C36M Paulatuk 80.62 10 P P **19 07 01.7 -0.2**
EPYK Eagle Plains 80.69 16 P P **19 07 03.3 +0.9**
EPYK IAmb IAmb 19 07 14.0
comp=Z,6.2nm,1.4s
DOT Dot Lake 80.81 20 P P **19 07 03.8 +0.8**
DOT IAmb IAmb 19 07 15.8
comp=Z,2.6nm,1.1s
SCM Sheep Creek Mo 81.08 22 P P **19 07 05.4 +0.8**
K27K Chicken 81.11 19 P P **19 07 05.8 +1.2**
K27K IAmb IAmb 19 07 19.5
comp=Z,3.5nm,1.1s
DAWY Dawson 81.83 18 P P **19 07 08.5 0.0**
DAWY IAmb IAmb 19 07 21.9
comp=Z,3.7nm,1.3s
KDAK Kodiak Island 81.91 27 P P **19 07 09.2 +0.3**
OHAK Old Harbor 81.99 28 P P **19 07 10.2 +0.9**
YKA Yellowknife Ar 88.43 9 P P **19 07 41.5 +0.1**
comp=Z,0.6nm,0.6s,baz=336,slow=4.7,SNR=10.0

*IDC **26** 18:59:49.0±2.1,27.75N×86.17E,h0km,mb3.5/5, mb1 3.6/6,mb1mx3.2/54,mbtmp3.5/6,ML3.4/1,Error ellipse: s-maj=65.9km s-min=28.7km az=62.0*
ISC 26 18:59:51.9±1.8,27.8N±0.2×86.2E±0.4,h19km,n6,σ0.58/6, mb3.6/5,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.21**	**352**	P	**Pn**	**19 04 15.1**	**-0.6**
	0.1nm,0.3s,baz=171,slow=11,SNR=4.6						
KURBB	**Kurchatov Arra**	**23.53**	**348**	P	**P**	**19 05 01.3**	**+0.6**
	0.3nm,0.4s,baz=164,slow=10,SNR=4.7						
SONM	**Songino Array**	**25.48**	**33**	P	**P**	**19 05 18.9**	**0.0**
	0.5nm,0.7s,baz=215,slow=12,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.15**	**358**	P	**P**	**19 05 25.3**	**+0.6**
	0.7nm,0.5s,baz=192,slow=7.0,SNR=3.6						
FINES	**FINESS Array B**	**51.75**	**328**	P	**P**	**19 08 57.7**	**-0.1**
	1.0nm,0.8s,baz=338,slow=28,SNR=1.6						
WRA	**Warramunga Arr**	**66.52**	**130**	P	**P**	**19 10 40.7**	**-0.1**
	0.4nm,0.9s,baz=322,slow=6.4,SNR=2.0						

*ATH **26** 18:59:58.5,35.02N×26.92E,h10km±3km,ML2.8/3,Error ellipse: s-maj=5.4km s-min=1.2km az=336.0*
*DDA **26** 18:59:58.0,34.97N×27.39E,h8km±139km,ML2.1*
ISC 26 18:59:57.7±2.4,35.0N±0.1×26.92E±0.06,h11km±14km, n13,σ0.88/20,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.56**	**21**	P	**Pb**	**19 00 09.0**	**-0.6**
KARP				S	**Sg**	**19 00 17.1**	**+0.9**
KARP				AML	AML	19 00 18.1	
	comp=N,6578μm,0.3s						
KARP				AML	AML	19 00 18.3	
	comp=E,4808μm,0.3s						
ZKR	**Zakros**	**0.58**	**279**	P	**Pb**	**19 00 09.3**	**-0.5**
ZKR				S	**Sb**	**19 00 17.9**	**-0.3**
ZKR				AML	AML	19 00 19.8	
	comp=E,1619μm,0.2s						
ZKR				AML	AML	19 00 22.2	
	comp=N,831μm,0.3s						
NPS	**Neapolis**	**1.09**	**283**	P	**Pn**	**19 00 18.9**	**-0.1**
NPS				S	**Sn**	**19 00 33.8**	**-0.3**
NPS				AML	AML	19 00 37.0	
	comp=E,969μm,0.3s						
NPS				AML	AML	19 00 39.2	
	comp=N,563μm,0.5s						
LAST	**Lasithi**	**1.19**	**277**	P	**Pn**	**19 00 20.6**	**+0.3**
LAST				S	**Sn**	**19 00 36.3**	**-0.2**
IDI	**Anoyia**	**1.68**	**280**	P	**Pb**	**19 00 29.9**	**+1.2**
TURN	**Turunc**	**2.06**	**31**	*i* P	**Pb**	**19 00 34.9**	**-0.1**
TURN				*i* S	**Sb**	**19 01 01.7**	**+1.1**
TURN				IAML		19 01 05.0	
	comp=N,20nm,0.4s						
BDRM	**Kayabasi**	**2.08**	**12**	*i* P	**Pb**	**19 00 36.0**	**+0.5**
BDRM				*i* S	**Sb**	**19 01 00.1**	**-1.3**
BDRM				IAML		19 01 14.0	
	comp=N,9.7nm,0.6s						
DALY	**Dalyan (Mula)**	**2.28**	**38**	*i* P	**Pn**	**19 00 36.2**	**+1.0**
DALY				*i* S	**Sb**	**19 01 06.4**	**-0.6**
DALY				IAML		19 01 22.0	
	comp=N,19nm,0.6s						
FETY	**Fethiye**	**2.39**	**47**	*i* P	**Pn**	**19 00 36.2**	**-0.6**
AKAS	**Kas**	**2.50**	**60**	*i* P	**Pn**	**19 00 38.3**	**-0.1**
MULA	**Mugla, Merkez-**	**2.50**	**27**	*i* P	**Pg**	**19 00 44.8**	**-0.9**
TAVA	**DENIZLI_Tavas**	**2.92**	**33**	*i* P	**Pn**	**19 00 44.8**	**+0.6**
GOLH	**Golhisar**	**3.08**	**43**	*i* P	**Pn**	**19 00 48.1**	**+1.8**

*NEIC **26** 19:07:25.8±0.7,36.29N±0.01×97.53W±0.02,h0km±9km, Error ellipse: s-maj=2.1km s-min=1.9km az=213.0*
*TUL **26** 19:07:25.8±0.9,36.28N±0.02×97.51W±0.02,h5km±7km, ML3.3,mb_Lg3.5/132(NEIC),Mwr3.3/30(NEIC),Error ellipse: s-maj=2.3km s-min=1.9km az=190.0*
*NEIC **26** 19:07:25.8,36.29N×97.52W,h3km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.22; Mθθ=1.25; Mϕϕ=-1.03; Mrθ=-0.48; Mθϕ=0.25; Mϕr=0.16; Fault plane solution: M0=1.28000×10¹⁴ NP1:φs217.90000°, δ68.27000°,λ178.72000°. NP2:φs308.37000°,δ88.81000°, λ21.73000°. Principal axes: T 1.4062, Plg16.0000°, Azm175.0000°; N -0.2956, Plg68.0000° , Azm311.0000°; P -1.1107, Plg14.0000°, Azm81.0000°;*
*ANF **26** 19:07:25.8±0.2,36.29N×97.53W,h5km,ML4.1/18 Error ellipse: s-maj=2.4km s-min=2.3km az=116.0*
*IDC **26** 19:07:28.2±1.9,36.45N×97.89W,h0km,mb3.1/2, mb1 3.4/6,mb1mx3.3/42,mbtmp3.1/6,ML3.1/4,MS2.6/2, Ms1 2.6/2,ms1mx2.2/19,Error ellipse: s-maj=33.3km s-min=12.4km az=111.0*
ISC 26 19:07:26.3±0.6,36.30N±0.02×97.53W±0.03,h10km,n118, σ1.53/72,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.42**	**300**		**Pb**	**19 07 34.5**	**-1.4**
CROK				Sg	**Sb**	**19 07 40.8**	**-1.4**
OK029	**Liberty Lake**	**0.50**	**173**		**Pg**	**19 07 35.4**	**-0.7**
GC02	**Grant County #**	**0.61**	**335**		**Pg**	**19 07 38.0**	**-0.2**
BCOK	**Bluff Creek, N**	**0.64**	**186**		**Pg**	**19 07 38.0**	**-0.7**
BCOK				IAmb_Lg		19 07 46.8	
	comp=Z,1μm,0.9s						
OK031	**S. Brethren Rd**	**0.66**	**121**		**Pg**	**19 07 38.2**	**-0.7**
QUOK	**Quay**	**0.68**	**100**		**Pg**	**19 07 38.7**	**-0.7**
OK030	**Cody Creek RV**	**0.71**	**121**		**Pg**	**19 07 39.2**	**-0.8**
KAN13	**South Haven SW**	**0.72**	**3**		**Pg**	**19 07 39.9**	**-0.2**
OK025	**Westminster Rd**	**0.73**	**168**		**Pg**	**19 07 39.6**	**-0.8**
OK025				IAmb_Lg		19 07 48.9	
	comp=Z,314nm,0.9s						
KAN14	**Manchester OK**	**0.74**	**332**		**Pg**	**19 07 39.8**	**-0.9**
OK032	**Salt Plains WL**	**0.75**	**313**		**Pg**	**19 07 39.7**	**-1.0**
OK032				Sg	**Sb**	**19 07 50.9**	**-0.8**
KAN17	**Caldwell West**	**0.77**	**346**		**Pg**	**19 07 40.9**	**-0.3**
KAN09	**Caldwell North**	**0.84**	**355**		**Pg**	**19 07 42.1**	**-0.4**
KAN05	**Bluff City Nor**	**0.86**	**341**		**Pg**	**19 07 42.4**	**-0.4**
KAN01	**Argonia South**	**0.88**	**348**		**Pg**	**19 07 42.7**	**-0.5**
OKCFA	**Oklahoma City**	**0.88**	**176**		**Pg**	**19 07 42.3**	**-1.0**
OKCFA				IAmb_Lg		19 07 53.8	
	comp=Z,351nm,0.9s						
OKCFA	**Oklahoma City**	**0.88**	**176**	P	**Pg**	**19 07 42.3**	**-1.0**
	baz=357,SNR=17						
OKCFA				S	**Sg**	**19 07 54.2**	**-0.5**
	baz=357						
OKCFA	**Oklahoma City**	**0.88**	**176**	P		19 07 42.3	
	baz=357,SNR=17						
OKCFA				S		19 07 54.2	
	baz=357						
OKCSW	**OKLAHOMA CITY**	**0.89**	**175**		**Pg**	**19 07 42.5**	**-1.0**
KAN10	**Anthony SW Sta**	**0.94**	**331**		**Pg**	**19 07 44.0**	**-0.5**
KAN16	**Harper SW Stat**	**1.02**	**335**	Pg	**Pg**	**19 07 45.4**	**-0.6**
T35A	**Sooner Cattle**	**1.03**	**53**		**Pg**	**19 07 45.2**	**-0.8**
T35B	**Sooner Cattle**	**1.03**	**53**	P	**Pg**	**19 07 45.2**	**-0.9**
	baz=232						
T35B				S	**Sg**	**19 07 58.8**	**-0.6**
	baz=232						
T35B	**Sooner Cattle**	**1.03**	**53**	P		19 07 45.2	
	baz=232						
T35B				S		19 07 58.8	
	baz=232						
FNO	**Franklin**	**1.04**	**174**	Pg	**Pg**	**19 07 45.9**	**-0.5**
FNO				IAmb_Lg		19 07 58.7	
	comp=Z,345nm,1.0s						
KAN12	**Harper NE Stat**	**1.07**	**340**		**Pg**	**19 07 46.0**	**-0.8**
U32A	**Winter Ranch,**	**1.19**	**274**		**Pn**	**19 07 48.0**	**-1.0**
U32A	**Winter Ranch,**	**1.19**	**274**	P	**Pn**	**19 07 48.0**	**-1.0**
	baz=94						
U32A				S	**Sn**	**19 08 04.8**	**-0.5**
	baz=94						
U32A	**Winter Ranch,**	**1.19**	**274**	P		19 07 48.0	
	baz=94						
U32A				S		19 08 04.8	
	baz=94						
TUL1	**Leonard**	**1.46**	**105**	P	**Pn**	**19 07 51.9**	**-0.8**
	baz=286						
TUL1				S	**Sn**	**19 08 11.8**	**-0.1**
	baz=286						
TUL1	**Leonard**	**1.46**	**105**	P		19 07 51.9	
	baz=286,SNR=69						
TUL1				S		19 08 11.8	
	baz=286						
TUL1	**Leonard**	**1.46**	**105**	P		19 07 51.9	
	baz=286						
TUL1				S		19 08 11.8	
	baz=286						
WMOK	**Wichita Mounta**	**1.86**	**214**	Pn	**Pb**	**19 07 58.6**	**-1.8**
WMOK				IAmb_Lg		19 08 27.2	
	comp=Z,159nm,0.8s						
WMOK	**Wichita Mounta**	**1.86**	**214**	P	**Pb**	**19 07 58.6**	**-1.8**
	baz=33,SNR=90						
WMOK				S	**Sg**	**19 08 23.5**	**-2.5**
	baz=33						
WMOK	**Wichita Mounta**	**1.86**	**214**	P		19 07 58.6	
	baz=33						
WMOK				S		19 08 23.7	
	baz=33						
WMOK	**Wichita Mounta**	**1.86**	**214**	P		19 07 58.6	
	baz=33,SNR=90						
WMOK				S		19 08 23.5	
	baz=33						
R32A	**Long Quarter,**	**2.32**	**336**		**Pb**	**19 08 06.0**	**-2.3**
R32A	**Long Quarter,**	**2.32**	**336**	P	**Pn**	**19 08 05.5**	**+0.9**
	baz=156,SNR=35						
R32A				S	**Sb**	**19 08 35.0**	**-2.0**
	baz=156						
R32A	**Long Quarter,**	**2.32**	**336**	P		19 08 05.5	
	baz=156,SNR=35						
R32A				S		19 08 35.0	
	baz=156						
X37A	**Clayton**	**2.45**	**133**		**Pn**	**19 08 07.0**	**+0.7**
X37A				IAmb_Lg		19 08 46.4	
	comp=Z,146nm,0.8s						
X37A	**Clayton**	**2.45**	**133**	P	**Pn**	**19 08 07.0**	**+0.7**
	baz=315,SNR=20						
X37A	**Clayton**	**2.45**	**133**	P		19 08 07.0	
	baz=315,SNR=20						
U38A	**Gravette**	**2.54**	**86**	IAmb_Lg		19 08 46.7	
	comp=Z,90nm,0.8s						
U38A	**Gravette**	**2.54**	**86**	P	**Pn**	**19 08 08.6**	**+1.0**
	baz=267,SNR=86						
U38A	**Gravette**	**2.54**	**86**	P		19 08 08.6	
	baz=267,SNR=86						
KSU1	**Kansas State U**	**2.89**	**14**	Pn	**Pn**	**19 08 13.3**	**+0.8**
KSU1				IAmb_Lg		19 09 04.8	
	comp=Z,105nm,0.8s						
KSU1	**Kansas State U**	**2.89**	**14**	P	**Pn**	**19 08 12.7**	**+0.3**
	baz=194						
KSU1	**Kansas State U**	**2.89**	**14**	P		19 08 13.5	
	baz=194,SNR=27						
KSU1	**Kansas State U**	**2.89**	**14**	P		19 08 12.7	
	baz=194						
CBKS	**Cedar Bluff**	**3.06**	**326**	IAmb_Lg		19 09 07.1	
	comp=Z,114nm,0.7s						
CBKS	**Cedar Bluff**	**3.06**	**326**	P	**Pn**	**19 08 14.3**	**-0.5**
	baz=144						
CBKS	**Cedar Bluff**	**3.06**	**326**	P		19 08 14.3	
	baz=144						
W39A	**Magazine**	**3.24**	**109**	IAmb_Lg		19 09 15.0	
	comp=Z,175nm,0.8s						
W39A	**Magazine**	**3.24**	**109**	P	**Pn**	**19 08 17.4**	**+0.2**
	baz=291,SNR=29						
W39A	**Magazine**	**3.24**	**109**	P		19 08 18.3	
	baz=291,SNR=13						
W39A	**Magazine**	**3.24**	**109**	P		19 08 17.4	
	baz=291,SNR=29						
S39A	**Bolivar**	**3.65**	**66**		**Pn**	**19 08 23.4**	**+0.7**
S39A				IAmb_Lg		19 09 26.3	
	comp=Z,122nm,0.8s						
S39A	**Bolivar**	**3.65**	**66**	P	**Pn**	**19 08 23.5**	**+0.7**
	baz=248,SNR=29						
S39A	**Bolivar**	**3.65**	**66**	P		19 08 23.5	
	baz=248,SNR=29						
MIAR	**Mount Ida**	**3.67**	**117**	Pn	**Pn**	**19 08 24.2**	**+1.0**
MIAR	**Mount Ida**	**3.67**	**117**	P	**Pn**	**19 08 24.1**	**+1.0**
	baz=300,SNR=26						
MIAR	**Mount Ida**	**3.67**	**117**	P		19 08 24.2	
	baz=300,SNR=13						
MIAR				S		19 09 07.9	
	baz=300						
MIAR	**Mount Ida**	**3.67**	**117**	P		19 08 24.1	
	baz=300,SNR=26						
Z38A	**Mt. Pleasant**	**3.68**	**145**	IAmb_Lg		19 09 31.9	
	comp=Z,128nm,0.8s						
U40A	**Yellville**	**3.78**	**88**		**Pn**	**19 08 25.0**	**+0.4**
U40A				IAmb_Lg		19 09 26.1	
	comp=Z,96nm,0.7s						
U40A	**Yellville**	**3.78**	**88**	P	**Pn**	**19 08 24.8**	**+0.2**
	baz=270						
U40A	**Yellville**	**3.78**	**88**	P		19 08 25.1	
	baz=270,SNR=14						
U40A	**Yellville**	**3.78**	**88**	P		19 08 24.8	
	baz=270						
U40A				P		19 08 24.8	
	baz=270						
ABTX	**Abilene, Hawle**	**4.06**	**206**	IAmb_Lg		19 09 35.5	
	comp=Z,114nm,0.8s						
X40A	**Basin Creek Fa**	**4.24**	**114**		**Pn**	**19 08 32.5**	**+1.6**
X40A				IAmb_Lg		19 09 41.4	
	comp=Z,77nm,0.8s						
X40A	**Basin Creek Fa**	**4.24**	**114**	P		19 08 32.5	
	baz=297						
WHTX	**Lake Whitney,**	**4.29**	**179**		**Pn**	**19 08 32.3**	**+0.6**
WHTX	**Lake Whitney,**	**4.29**	**179**	P	**Pn**	**19 08 32.3**	**+0.6**
	baz=359,SNR=8.7						
WHTX	**Lake Whitney,**	**4.29**	**179**	P		19 08 32.6	
	baz=359,SNR=9.6						
WHTX				Sb		19 09 36.6	
	baz=359						
WHTX	**Lake Whitney,**	**4.29**	**179**	P		19 08 32.3	
	baz=359,SNR=8.7						
MGMO	**Mountain Grove**	**4.31**	**77**	IAmb_Lg		19 09 43.8	
	comp=Z,102nm,0.9s						
WHAR	**Woolly Hollow**	**4.38**	**102**	IAmb_Lg		19 09 50.3	
	comp=Z,78nm,0.8s						
FCAR	**Ozark Folk Cen**	**4.40**	**94**	IAmb_Lg		19 09 49.1	
	comp=Z,59nm,0.9s						
N33B	**J Bar K, Exete**	**4.43**	**1**	P	**Pn**	**19 08 33.6**	**0.0**
	baz=181						
N33B	**J Bar K, Exete**	**4.43**	**1**	P		19 08 33.6	
	baz=181						
N33A	**J Bar K, Exete**	**4.44**	**1**	Pn	**Pn**	**19 08 33.7**	**+0.1**
N33A				IAmb_Lg		19 09 57.1	
	comp=Z,105nm,1.0s						
W41B	**Gary Mavity, V**	**4.44**	**103**	P		19 08 34.9	
	baz=286						
237A	**Washetta, Mont**	**4.52**	**161**		**Pn**	**19 08 34.5**	**-0.2**
237A	**Washetta, Mont**	**4.52**	**161**	P	**Pn**	**19 08 34.5**	**-0.2**
	baz=342						
237A	**Washetta, Mont**	**4.52**	**161**	P		19 08 34.5	
	baz=342						
P38A	**Dawn**	**4.58**	**42**	IAmb_Lg		19 10 01.4	
	comp=Z,106nm,0.8s						
P38A	**Dawn**	**4.58**	**42**	P	**Pn**	**19 08 36.2**	**+0.5**
	baz=224,SNR=5.5						
P38A	**Dawn**	**4.58**	**42**	P		19 08 36.2	
	baz=224,SNR=5.5						
KSCO	**Kaye Shedlock'**	**4.87**	**305**	Sb		19 09 57.7	
	baz=122						
MSTX	**Muleshoe**	**4.88**	**243**	Sb		19 09 57.1	
	baz=60						
Z41A	**Richland Creek**	**4.93**	**127**	S		19 09 37.5	
	baz=309						
NATX	**Nacogdoches**	**5.11**	**151**	IAmb_Lg		19 10 16.4	
	comp=Z,49nm,1.0s						
BGNE	**Belgrade**	**5.13**	**355**		**Pn**	**19 08 43.5**	**+0.4**
BGNE	**Belgrade**	**5.13**	**355**	S	**Sn**	**19 09 43.6**	**+1.1**
	baz=174						
BGNE	**Belgrade**	**5.13**	**355**	P		19 08 43.6	

baz=174,SNR=6.8
BGNE Belgrade 5.13 355 S 19 09 43.6
baz=174
CCAR Cane Creek 5.28 115 IAmb_Lg 19 10 23.2
comp=Z,86nm,0.9s
CCM Cathedral Cave 5.32 69 **Pn** **19 08 46.2 +0.5**
CCM IAmb_Lg 19 10 20.0
comp=Z,68nm,0.7s
P40A Paris 5.40 52 IAmb_Lg 19 10 21.5
comp=Z,129nm,0.8s
435B Jarrell 5.50 180 IAmb_Lg 19 10 28.9
comp=Z,45nm,0.8s
T25A Trinidad 5.59 281 IAmb_Lg 19 10 35.9
comp=Z,78nm,0.8s
T25A Trinidad 5.59 281 P 19 08 50.4
baz=97,SNR=9.7
N38A Joes South For 5.61 36 Pn **Pn** **19 08 50.2 +0.4**
FVM French Village 5.92 71 IAmb_Lg 19 10 37.8
comp=Z,85nm,0.9s
GNAR Gosnell 6.09 91 IAmb_Lg 19 10 55.2
comp=Z,96nm,0.8s
143A Socs Landing, 6.20 124 IAmb_Lg 19 10 55.2
comp=Z,61nm,0.9s
PEBM Pemiscott Bayo 6.20 89 IAmb_Lg 19 10 49.4
comp=Z,96nm,1.0s
HALT Halls 6.64 91 IAmb_Lg 19 11 12.7
comp=Z,50nm,0.8s
S44A Carbondale 6.77 76 IAmb_Lg 19 11 05.9
comp=Z,99nm,0.8s
SIUC Southern Illin 6.80 76 IAmb_Lg 19 11 02.3
comp=Z,92nm,0.9s
OXF Oxford 6.87 103 IAmb_Lg 19 11 16.0
comp=Z,51nm,1.0s
W45A Hickory Valley 6.88 97 IAmb_Lg 19 11 09.5
comp=Z,64nm,0.8s
Y45A Yeager Farm, C 6.98 108 IAmb_Lg 19 11 14.5
comp=Z,36nm,0.9s
UTMT University of 7.00 87 IAmb_Lg 19 11 21.6
comp=Z,100nm,0.8s
ISCO Idaho Springs 7.27 301 IAmb_Lg 19 11 18.6
comp=Z,40nm,0.8s
ISCO Idaho Springs 7.27 301 P 19 09 13.7
baz=116,SNR=7.3
ANMO Albuquerque 7.39 262 Pn **Pn** **19 09 14.9 +0.5**
comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=1.9
ANMO Pg Pg 19 09 40.6 -7.2
comp=Z,0.5nm,0.3s,baz=82,slow=17,SNR=11
ANMO Lg Lg 19 11 16.7
comp=Z,1.8nm,0.3s,baz=350,slow=18,SNR=7.7
ANMO LR LR 19 12 15.8
comp=Z,49nm,18.6s,baz=117,slow=40
ECSD EROS Data Cent 7.46 5 P 19 09 14.5
baz=186
ECSD S 19 10 38.6
baz=186
L40A Anamosa 7.56 38 IAmb_Lg 19 11 34.8
comp=Z,70nm,0.9s
PLAL Pickwick Lake 7.81 97 IAmb_Lg 19 11 41.4
comp=Z,31nm,1.0s
WVT Waverly 7.84 88 IAmb_Lg 19 11 36.2
comp=Z,32nm,1.2s
PHWY Pilot Hill 7.95 311 IAmb_Lg 19 11 50.4
comp=Z,55nm,0.8s
Y22D IRIS PASSCAL I 8.00 257 IAmb_Lg 19 11 54.2
comp=Z,89nm,0.9s
O44A Mansfield 8.11 59 IAmb_Lg 19 11 58.5
comp=Z,76nm,0.8s
SUSD Miller 8.21 353 IAmb_Lg 19 12 01.1
comp=Z,45nm,0.9s
I37A Lemond, Waseca 8.33 21 IAmb_Lg 19 12 09.0
comp=Z,52nm,0.8s
TXAR Lajitas Array 8.65 218 Pn **Pn** **19 09 31.8 +0.2**
comp=Z,0.2nm,0.3s,baz=48,slow=11,SNR=6.2
TXAR Pg Pg 19 10 03.6 -8.3
comp=Z,0.6nm,0.3s,baz=55,slow=15,SNR=7.2
TXAR Sn **Sn** **19 11 14.8 +5.5**
comp=Z,0.3nm,0.3s,baz=32,slow=14,SNR=2.5
TXAR Lg Lg 19 11 55.4
comp=Z,0.6nm,0.3s,baz=47,slow=35,SNR=4.4
JFWS Jewell Farm 8.67 38 IAmb_Lg 19 12 01.5
comp=Z,76nm,0.8s
MVCO Mesa Verde 8.85 279 IAmb_Lg 19 12 27.6
comp=Z,20nm,1.1s
M44A Midewin, Midew 8.98 53 IAmb_Lg 19 12 10.3
comp=Z,64nm,1.0s
CLTN Cedars of Leba 9.06 88 IAmb_Lg 19 12 14.2
comp=Z,24nm,1.1s
SFIN Lafayette 9.15 60 IAmb_Lg 19 12 14.1
comp=Z,62nm,0.8s
WCI Wyandotte Cave 9.16 74 IAmb_Lg 19 12 23.9
comp=Z,54nm,1.1s
WCI Wyandotte Cave 9.16 74 P 19 09 40.7
baz=261
PV13 Radium Mtn., P 9.20 285 IAmb_Lg 19 12 25.5
comp=Z,28nm,1.0s
PV03 Paradox Valley 9.23 286 IAmb_Lg 19 12 31.5
comp=Z,20nm,1.3s
I40A Norwalk 9.25 33 IAmb_Lg 19 12 37.1
comp=Z,34nm,0.8s
PV11 David Mesa, Pa 9.26 286 IAmb_Lg 19 12 42.7
comp=Z,42nm,1.2s
RWWY Rawlins 9.26 308 IAmb_Lg 19 12 27.1
comp=Z,43nm,1.0s
RSSD Black Hills 9.26 330 IAmb_Lg 19 12 25.7
comp=Z,32nm,1.0s
RSSD Black Hills 9.26 330 P 19 09 41.3
baz=145
121A Cookes Peak, D 9.27 249 IAmb_Lg 19 12 35.8
comp=Z,23nm,1.1s
PV16 Nyswonger Mesa 9.29 286 IAmb_Lg 19 12 39.2
comp=Z,27nm,1.3s
PV04 Paradox Valley 9.30 286 IAmb_Lg 19 12 34.6
comp=Z,28nm,1.1s
U49A Red Boiling Sp 9.48 85 IAmb_Lg 19 12 35.1
comp=Z,20nm,1.1s
SWET Sewanee 9.49 93 IAmb_Lg 19 12 23.1
comp=Z,19nm,0.8s
F33A 5 Mile Ranch, 9.58 5 IAmb_Lg 19 12 31.1
comp=Z,20nm,1.0s
SPMN Marine on St. 9.61 20 IAmb_Lg 19 12 40.6
comp=Z,26nm,0.8s
W50A Signal Mountai 9.99 93 IAmb_Lg 19 12 49.9
comp=Z,23nm,0.8s
TKL Tuckaleechee C 11.17 89 Lg Lg 19 13 12.5
comp=Z,0.6nm,0.3s,baz=186,slow=24,SNR=4.3
PDAR Pinedale Array 11.31 309 Pn **Pn** **19 10 06.9 -1.2**
comp=Z,0.1nm,0.3s,baz=114,slow=13,SNR=3.2
PDAR Pg 19 10 53.7
comp=Z,0.2nm,0.3s,baz=117,slow=15,SNR=4.9
PDAR Sn **Sn** **19 12 21.4 +6.7**
comp=Z,0.2nm,0.3s,baz=111,slow=16,SNR=2.0
PDAR Lg Lg 19 13 18.4
comp=Z,0.4nm,0.3s,baz=106,slow=26,SNR=2.5
PDAR LR LR 19 14 31.2
comp=Z,29nm,19.9s,baz=14,slow=38
ULM Lac du Bonnet 14.00 4 Pn **Pn** **19 10 40.3 -4.3**
comp=Z,0.2nm,0.3s,baz=179,slow=12,SNR=1.9
ULM Sn Sn 19 13 08.2 -12
comp=Z,0.2nm,0.3s,baz=93,slow=20,SNR=2.1
ULM Lg Lg 19 14 37.2
comp=Z,0.2nm,0.3s,baz=111,slow=22,SNR=1.6
SADO Sadowa 16.32 53 Lg Lg 19 15 54.8
comp=Z,0.3nm,0.3s,baz=343,slow=4.9,SNR=4.3
YKA Yellowknife Ar 28.29 343 P **P** **19 13 22.3 +2.7**
comp=Z,0.1nm,0.6s,baz=137,slow=9.3,SNR=2.1
ILAR Eielson Array 40.71 330 P **P** **19 15 08.4 +1.7**
comp=Z,0.3nm,0.7s,baz=106,slow=6.7,SNR=3.2

IDC ***26*** *19:12:39.3±2.3, 27.6°N×85.8°E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/35, mbtmp3.5/6, ML3.3/2, Error ellipse: s-maj=70.5km s-min=27.3km az=62.0*
ISC 26 19:12:42.3±2.0, 27.7N±0.3×85.8E±0.4, h19km, n6, σ0.65/6, mb3.5/4, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.16**	**124**	Pn		Pn		**19 16 16.1**	**+0.6**
	0.0nm,0.3s,baz=312,slow=11,SNR=1.8								
MKAR	**Makanchi Array**	**19.31**	**353**	P		**P**		**19 17 06.2**	**+0.1**
	0.2nm,0.3s,baz=181,slow=10,SNR=5.2								
SONM	**Songino Array**	**25.77**	**33**	P		**P**		**19 18 11.4**	**-0.5**
	0.6nm,0.7s,baz=223,slow=11,SNR=5.1								
ZALV	**Zalesovo Beam**	**26.28**	**359**	P		**P**		**19 18 17.0**	**+0.6**
	0.5nm,0.5s,baz=181,slow=9.7,SNR=2.7								
ARCES	**ARCESS Array B**	**54.07**	**338**	P		**P**		**19 22 05.4**	**+0.1**
	2.2nm,0.8s,baz=104,slow=7.7,SNR=2.0								
WRA	**Warramunga Arr**	**66.67**	**130**	P		**P**		**19 23 31.7**	**-0.5**

0.4nm,0.9s,baz=323,slow=6.4,SNR=1.8

NEIC ***26*** *19:21:37.2±0.9, 31.54°N×0.02°×115.67°W±0.02°, h3km±9km, Error ellipse: s-maj=3.2km s-min=1.9km az=54.0*
PAS ***26*** *19:21:38.0±1.9, 31.53°N×0.02°×115.66°W±0.02°, h9km±6km, Error ellipse: s-maj=3.4km s-min=1.9km az=52.0*
ECX ***26*** *19:21:38.5±0.7, 31.51°N×115.66°W, h5km±4km, MD2.9, ML3.1, Fault plane solution: NP1:φs138.00000°, δ46.00000°, λ-103.00000°.*
MEX ***26*** *19:21:38.7±0.3, 31.17°N×116.01°W, h5km, MD3.7*
ISC 26 19:21:37.2±1.1, 31.56N±0.02×115.65W±0.02, h2km±15km, n46, σ0.56/62, 4C-7D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.51**	**99**	⇑*i*	*P*	**Pg**		**19 21 46.8**	**-0.3**
ECBX					*eS*	**Sg**		**19 21 53.6**	**-0.1**
SPIG	**San Pedro Mart**	**0.53**	**163**	*i*	*P*	**Pg**		**19 21 47.6**	**+0.2**
	baz=285,slow=7.4								
SPIG				*i*	S	**Sg**		**19 21 54.6**	**+0.2**
SPIG	**San Pedro Mart**	**0.53**	**163**	*eP*		**Pg**		**19 21 47.5**	**+0.1**
SPIG				⇓*i*	*P*	**Pg**		**19 21 47.7**	**+0.2**
SPIG				*eS*		**Sg**		**19 21 54.1**	**-0.2**
SPX	**San Pedro Mart**	**0.54**	**163**			**Pg**		**19 21 47.6**	**0.0**
SPX						**Sg**		**19 21 54.4**	**-0.3**
SPX	**San Pedro Mart**	**0.54**	**163**	IAML				19 21 55.6	
	comp=E,262nm,0.1s								
SPX				IAML				19 21 58.9	
	comp=N,243nm,0.1s								
SPX	**San Pedro Mart**	**0.54**	**163**	⇓*i*	*P*	**Pg**		**19 21 47.7**	**0.0**
SPX				*eS*		**Sg**		**19 21 54.2**	**-0.5**
SVX	**San Vicente**	**0.57**	**246**	⇑*i*	*P*	**Pg**		**19 21 48.1**	**0.0**
SVX				*eS*		**Sg**		**19 21 55.6**	**+0.1**
SFX	**San Felipe**	**0.86**	**127**			**Pg**		**19 21 53.6**	**0.0**
SFX						**Sg**		**19 22 04.8**	**0.0**
SFX	**San Felipe**	**0.86**	**127**	IAML				19 22 06.0	
	comp=N,382nm,0.3s								
SFX				IAML				19 22 07.7	
	comp=E,356nm,0.4s								
SFX	**San Felipe**	**0.86**	**127**	⇓*eP*		**Pg**		**19 21 53.6**	**0.0**
SFX				*eS*		**Sg**		**19 22 04.8**	**0.0**
GUVIX	**Guadalupe Vict**	**0.89**	**33**			**Pb**		**19 21 55.9**	**+0.6**
GUVIX						**Sg**		**19 22 07.0**	**+1.3**
CPBX	**Cerro Prieto**	**0.91**	**19**	IAML				19 22 16.9	
	comp=E,2µm,0.2s								
CPBX				⇑*e*				19 22 16.9	
CCX	**Cicese**	**0.92**	**290**			**Pg**		**19 21 54.8**	**-0.1**
CCX						**Sg**		**19 22 07.0**	**+0.2**
CCX	**Cicese**	**0.92**	**290**	IAML				19 22 07.8	
	comp=E,216nm,0.5s								
CCX				IAML				19 22 08.0	
	comp=N,340nm,0.4s								
CCX	**Cicese**	**0.92**	**290**	⇓*eP*		**Pg**		**19 21 54.8**	**-0.1**
CCX				*eS*		**Sg**		**19 22 07.1**	**+0.2**
SGL	**Mount Signal**	**1.09**	**356**			**Pg**		**19 21 58.2**	**+0.1**
SGL						**Sg**		**19 22 13.0**	**+0.7**
RMX	**La Rumorosa**	**1.10**	**341**			**Pg**		**19 21 57.5**	**-0.9**
RMX						**Sg**		**19 22 11.0**	**-1.7**
RMX	**La Rumorosa**	**1.10**	**341**	IAML				19 22 14.3	
	comp=N,256nm,0.2s								
RMX	**La Rumorosa**	**1.10**	**341**	⇓*eP*		**Pg**		**19 21 57.5**	**-0.9**
RMX				*eS*		**Sg**		**19 22 12.8**	**+0.1**
YUH	**Yuha Desert**	**1.11**	**348**			**Pg**		**19 21 58.4**	**-0.1**
YUH						**Sg**		**19 22 13.5**	**+0.6**
CBX	**Cerro Bola**	**1.15**	**311**			**Pg**		**19 21 59.1**	**-0.1**
CBX						**Sg**		**19 22 14.3**	**+0.2**
CBX	**Cerro Bola**	**1.15**	**311**	IAML				19 22 15.7	
	comp=E,179nm,0.2s								
CBX				IAML				19 22 18.5	
	comp=N,110nm,0.5s								
CBX	**Cerro Bola**	**1.15**	**311**	*eP*		**Pg**		**19 21 59.1**	**-0.1**
CBX				*eS*		**Sg**		**19 22 14.3**	**+0.2**
CBX				IAML				19 22 15.8	
	comp=E,352nm,0.2s								
CBX				⇑*e*				19 22 15.8	
IKP	**In-Ko-Pah, Jac**	**1.16**	**340**			**Pg**		**19 21 59.4**	**0.0**
IKP						**Sg**		**19 22 14.4**	**0.0**
IKP	**In-Ko-Pah, Jac**	**1.16**	**340**	⇓*eP*		**Sg**		**19 21 59.5**	**0.0**
WESC	**Westside Schoo**	**1.20**	**357**			**Pb**		**19 22 00.9**	**+0.2**
WESC						**Sg**		**19 22 15.4**	**-0.4**
TJIG	**Tijuana**	**1.23**	**315**	*i*	*P*	**Pg**		**19 22 00.3**	**-0.6**
TJIG				*i*	S	**Sg**		**19 22 16.4**	**-0.6**
TJIG	**Tijuana**	**1.23**	**315**	*eP*		**Pg**		**19 22 00.2**	**-0.6**
TJIG				*eS*		**Sg**		**19 22 16.7**	**-0.2**
COK2	**Cook Ranch 2**	**1.29**	**357**			**Pg**		**19 22 01.9**	**-0.1**
TKX	**Tecate**	**1.30**	**321**			**Pg**		**19 22 01.4**	**-0.6**
TKX						**Sg**		**19 22 18.5**	**-0.4**
CRR	**Carrizo Plain**	**1.35**	**348**			**Pn**		**19 22 02.6**	**-0.6**
BAR	**Barrett**	**1.42**	**322**			**Pn**		**19 22 03.2**	**-0.8**
BAR				IAML				19 22 24.4	
	comp=E,149nm,0.2s								
BAR	**Barrett**	**1.42**	**322**	⇓*eP*		**Pn**		**19 22 03.3**	**-0.8**
CBKC	**Canebrake**	**1.43**	**339**			**Pb**		**19 22 04.7**	**0.0**
MONP2	**Monument Peak**	**1.48**	**334**			**Pn**		**19 22 05.3**	**+0.1**
MONP2	**Monument Peak**	**1.48**	**334**	*eP*		**Pn**		**19 22 05.1**	**-0.1**
SDRC	**San Diego Road**	**1.61**	**317**			**Pn**		**19 22 06.6**	**0.0**
109C	**Camp Elliot, M**	**1.81**	**317**			**Pn**		**19 22 09.7**	**+0.2**
113A	**Mohawk Valley,**	**2.00**	**52**			**Pn**		**19 22 10.7**	**-1.4**
PFO	**Pinyon Flats O**	**2.16**	**342**			**Pn**		**19 22 11.4**	**+0.7**
214A	**Organ Pipe Nat**	**2.45**	**80**			**Pn**		**19 22 16.9**	**-1.4**
CSP	**Cedar Springs**	**3.09**	**333**			**Pb**		**19 22 34.1**	**+1.1**
MWC	**Mount Wilson**	**3.34**	**323**			**Pb**		**19 22 37.5**	**+0.2**
MWC	**Mount Wilson**	**3.34**	**323**	IAML				19 23 12.6	
	comp=N,24nm,3.5s								
MWC				IAML				19 23 23.1	
	comp=E,21nm,2.2s								
X16A	**Lo Mia Camp, P**	**4.54**	**50**	Pn		**Pn**		**19 22 47.5**	**+0.3**
X16A				IAML				19 25 39.5	
	comp=N,4.0nm,4.9s								
X16A				IAML				19 25 45.0	
	comp=E,4.6nm,4.5s								
U15A	**North Rim**	**5.60**	**29**	Pn		**Pn**		**19 23 02.5**	**+0.7**

MEX ***26*** *19:28:58.1±1.1, 14.49°N×92.19°W, h83km±21km, MD3.9*
GCG ***26*** *19:29:00.6±0.6, 14.32°N×92.21°W, h62km±27km, MD3.4*
ISC 26 19:28:56.0±3.9, 14.3N±0.1×92.43W±0.07, h14km±26km, n8, σ1.36/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**0.60**	**15**	*eP*		**Pn**		**19 29 10.0**	**0.0**
THIG				*i*	S	**Sn**		**19 29 19.9**	**+0.4**
ERG	**Entre ros, C**	**0.84**	**82**	*eP*		**Pn**		**19 29 14.5**	**+1.1**
ERG				*eS*		**Sb**		**19 29 24.5**	**+1.1**
FUG	**Fuego 3**	**1.54**	**85**	*eP*		**Pn**		**19 29 23.4**	**+0.2**
FUG				*eS*		**Sn**		**19 29 41.9**	**-1.2**
PCIG		**1.57**	**331**	*eP*		**Pn**		**19 29 23.3**	**-0.1**
PCIG				*eS*		**Sn**		**19 29 42.1**	**-1.4**
PCG	**Pacaya**	**1.76**	**88**	*eS*		**Sn**		**19 29 47.7**	**-1.1**
CCIG	**Comitan**	**1.96**	**8**	*eP*		**Pb**		**19 29 30.8**	**-0.9**
CCIG				*eS*		**Sn**		**19 29 54.8**	**+1.3**
TGIG		**2.53**	**345**	*i*	*P*	**Pn**		**19 29 38.3**	**+1.6**
TGIG				*eS*		**Sn**		**19 30 04.8**	**-2.5**
CMIG	**Matias Romero**	**3.62**	**320**	*eP*		**Pn**		**19 29 52.3**	**+0.5**
CMIG				*eS*		**Sn**		**19 30 35.7**	**+1.3**

IDC 26 19:55:23.2±63.0, 19.06S×176.67E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.5/36, mbtmp3.8/3, Error ellipse: s-maj=1101.0km s-min=149.6km az=78.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.99**	**241**	P		P		20 02 09.3	+0.5
	0.6nm,0.3s,baz=76,slow=8.8,SNR=6.0								
WRA	**Warramunga Arr**	**39.84**	**261**	P		P		20 02 58.5	-0.3
	0.2nm,0.3s,baz=97,slow=7.5,SNR=1.4								
ASAR	**Alice Springs**	**39.98**	**256**	P		P		20 02 59.5	-0.4
	1.1nm,0.4s,baz=89,slow=9.2,SNR=43								

IDC ***26*** *20:02:56.5±1.7, 27.70N×85.59E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.3/61, mbtmp3.5/6, ML3.2/1, Error ellipse: s-maj=59.8km s-min=24.4km az=65.0*
ISC 26 20:02:59.1±1.8, 27.9N±0.2×85.6E±0.4, h10km, n6, σ0.62/5, mb3.8/5, Nepal

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

MKAR	**Makanchi Array**	**19.08**	**353**	P		**Pn**		**20 07 21.9**	**-0.6**
	0.1nm,0.3s,baz=177,slow=11,SNR=3.9								
KURBB	**Kurchatov Arra**	**23.36**	**349**	P		**P**		**20 08 08.2**	**+0.6**
	0.5nm,0.6s,baz=175,slow=12,SNR=2.9								
SONM	**Songino Array**	**25.70**	**34**	P		**P**		**20 08 29.6**	**+0.2**
	0.8nm,0.7s,baz=220,slow=10,SNR=7.6								
FINES	**FINESS Array B**	**51.43**	**328**	P		**P**		**20 12 04.0**	**0.0**
	1.3nm,0.9s,baz=77,slow=6.3,SNR=1.2								
WRA	**Warramunga Arr**	**66.95**	**130**	P		**P**		**20 13 52.0**	**-0.1**
	0.3nm,0.4s,baz=321,slow=6.6,SNR=1.8								
ASAR	**Alice Springs**	**69.25**	**133**	P		P		20 14 03.3	-3.3
	1.0nm,1.2s,baz=321,slow=7.3,SNR=2.2								

IDC ***26*** *20:08:25.4±1.5, 10.66S×120.11E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.4/42, mbtmp3.5/8, ML3.5/4, Error ellipse: s-maj=57.8km s-min=21.4km az=47.0*
ISC 26 20:08:30.2±1.1, 10.65S±0.1×120.63E±0.10, h31km, n8, σ2.09/10, mb3.6/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.00**	**83**	Pn		**Pb**		**20 09 21.9**	**-1.1**
	13nm,0.3s,baz=305,slow=2.8,SNR=22								
BATI				Sn		**Sb**		**20 10 00.2**	**+0.9**
	3.4nm,0.3s,baz=5.6,slow=22,SNR=13								
FITZ	**Fitzroy Crossi**	**8.91**	**148**	Pn		**Pn**		**20 10 38.2**	**+1.3**
	0.3nm,0.3s,baz=328,slow=15,SNR=20								
FITZ				Sn		**Sn**		**20 12 12.5**	**-3.7**
	0.3nm,0.3s,baz=291,slow=23,SNR=2.5								
WRA	**Warramunga Arr**	**16.16**	**127**	Pn		**Pn**		**20 12 16.4**	**+1.2**
	0.1nm,0.3s,baz=298,slow=13,SNR=2.2								
ASAR	**Alice Springs**	**18.15**	**137**	P		**P**		**20 12 43.3**	**+3.1**
	0.1nm,0.3s,baz=315,slow=12,SNR=9.9								
SONM	**Songino Array**	**59.52**	**349**	P		**P**		**20 18 30.5**	**-0.1**
	0.3nm,0.7s,baz=156,slow=7.3,SNR=2.9								
MKAR	**Makanchi Array**	**66.59**	**332**	P		**P**		**20 19 17.1**	**-0.4**
	0.4nm,0.6s,baz=125,slow=7.4,SNR=1.8								
ZALV	**Zalesovo Beam**	**71.09**	**339**	P		**P**		**20 19 44.1**	**-1.2**
	0.5nm,0.5s,baz=107,slow=9.2,SNR=2.4								
KURBB	**Kurchatov Arra**	**71.09**	**333**	P		**P**		**20 19 45.1**	**-0.3**
	0.2nm,0.5s,baz=139,slow=5.7,SNR=2.4								

IDC ***26*** *20:08:56.4±1.8, 27.68N×85.04E, h0km, mb3.6/5, mb1 3.6/7, mb1mx3.3/56, mbtmp3.5/7, ML3.4/2, MS2.3/1, Ms1 2.5/1, ms1mx2.1/44, Error ellipse: s-maj=56.5km s-min=25.7km az=64.0*
ISC 26 20:08:58.0±1.6, 27.7N±0.2×85.2E±0.3, h10km, n7, σ1.28/7, mb3.6/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.61**	**123**	Pn		**P**		**20 12 41.7**	**-0.7**
	0.1nm,0.3s,baz=322,slow=11,SNR=4.4								
CMAR				LR		LR		20 19 30.7	
	comp=Z,13nm,20.6s,baz=217,slow=40								
MKAR	**Makanchi Array**	**19.17**	**354**	P		**Pn**		**20 13 21.2**	**-1.4**
	0.1nm,0.3s,baz=165,slow=10.0,SNR=4.6								
SONM	**Songino Array**	**25.97**	**34**	P		**P**		**20 14 32.6**	**+1.7**
	1.0nm,0.6s,baz=221,slow=9.9,SNR=13								
ZALV	**Zalesovo Beam**	**26.20**	**359**	P		**P**		**20 14 32.5**	**-0.2**
	0.3nm,0.3s,baz=204,slow=9.5,SNR=2.9								
FINES	**FINESS Array B**	**51.38**	**328**	P		**P**		**20 18 03.4**	**+0.8**
	1.3nm,0.9s,baz=88,slow=7.4,SNR=1.4								
ASAR	**Alice Springs**	**69.38**	**133**	P		**P**		**20 20 06.6**	**+0.3**
	0.2nm,0.5s,baz=317,slow=6.1,SNR=5.1								
YKA	**Yellowknife Ar**	**88.69**	**9**	P		**P**		**20 21 50.7**	**-0.7**
	0.1nm,0.6s,baz=339,slow=4.7,SNR=3.8								

IDC ***26*** *20:11:09.4±0.7, 0.35S×125.06E, h0km, mb3.9/13, mb1 4.0/16, mb1mx3.9/43, mbtmp4.0/16, ML3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/37, Error ellipse: s-maj=26.7km s-min=14.6km az=71.0*
DJA ***26*** *20:11:13.8±0.2, 0.°S±2.°×12.°5E±.°, h10km, M4.4/13, mb4.5/3, mB4.9/2, MLv4.3/13, Mw(mB)4.2/2*
NEIC ***26*** *20:11:16.3±2.8, 0.40S±0.08×125.30E±0.05, h54km±8km, mb4.1/11, Error ellipse: s-maj=11.5km s-min=6.5km az=159.0*
ISC 26 20:11:16.6±0.5, 0.40S±0.05×125.28E±0.06, h57km, n49, σ1.56/49, mb4.0/18, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.62**	**307**	P		**Pn**		**20 11 39.1**	**-3.8**
KMSI				S		**Sn**		**20 12 08.6**	**+5.9**
SANI	**Sanana**	**1.79**	**157**	P		**Pn**		**20 11 43.4**	**-1.7**
TNTI	**Ternate**	**2.39**	**61**			**Pn**		**20 11 53.8**	**+0.3**
TNTI	**Ternate**	**2.39**	**61**	P		**Pn**		**20 11 53.1**	**-0.3**
GTOI	**Gorontalo**	**2.49**	**294**	P		**Pn**		**20 11 55.9**	**+1.2**
LUWI	**Luwuk**	**2.58**	**256**			**Pn**		**20 11 58.1**	**+2.0**
LUWI	**Luwuk**	**2.58**	**256**	P		Pn		20 12 01.1	+5.1
NLAI	**Namlea**	**3.36**	**147**	P		**Pn**		**20 12 06.0**	**-0.6**
MRSI	**Marisa**	**3.45**	**285**	P		**Pn**		**20 12 07.2**	**-0.7**
APSI	**Ampana**	**3.66**	**262**	P		**Pn**		**20 12 10.7**	**-0.1**
TOLI2	**Tolitoli**	**4.74**	**288**			**Pn**		**20 12 24.2**	**-1.4**
SIJI	**Sorong**	**6.01**	**94**	Pn		**Pn**		**20 12 44.6**	**+1.6**
	2.2nm,0.3s,baz=231,slow=22,SNR=14								
TTSI	**Tana Toraja**	**6.05**	**244**	P		**Pn**		**20 12 43.8**	**+0.2**
	0.2nm751nm34nm,0.7s								
BNSI	**Bone**	**6.52**	**232**	P		**Pn**		**20 12 50.1**	**+0.2**
	0.1nm20nm,0.6s								
SPSI	**Sidrap Palu**	**6.54**	**237**	P		**Pn**		**20 12 51.3**	**+1.0**
KAPI	**Kappang**	**7.17**	**230**	Pn		**Pn**		**20 12 59.4**	**+0.4**
	1.5nm,0.3s,baz=70,slow=20,SNR=2.9								
KAPI				Sn		**Sn**		**20 14 17.9**	**-1.2**
	1.7nm,0.3s,baz=125,slow=23,SNR=1.8								
FAKI	**Fak Fak**	**7.40**	**110**	Pn		**Pn**		**20 13 00.3**	**-1.8**
MYLDM	**Lahad Datu**	**8.75**	**309**	Pn		**Pn**		**20 13 20.5**	**-0.1**
BATI	**Baumata**	**9.87**	**189**	LR		LR		20 17 55.6	
	comp=Z,109nm,19.2s,baz=346,slow=41								
KSM	**Kuching**	**15.08**	**277**	Pn		**Pn**		**20 14 47.4**	**+1.0**
KSM				IAmb		IAmb		20 14 51.7	
	comp=Z,10nm,0.5s								
KNRA	**Kununurra**	**15.56**	**167**	Pn		**Pn**		**20 14 52.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**17.59**	**179**	P		**P**		**20 15 18.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=288,slow=18,SNR=2.0								
FITZ	**Fitzroy Crossi**	**17.59**	**179**			**Pn**		**20 15 16.1**	**-1.8**
LEM	**Lembang**	**18.74**	**250**	P		**P**		**20 15 29.6**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=313,

KURK	**Kurchatov**	**64.47**	**329**	P	**P**	**20**	**21**	**47.4** **+0.2**
NRIK	**Noril'sk**	**74.08**	**347**	P	**P**	**20**	**22**	**45.9** **-0.4**
	comp=Z,1.4nm,0.4s,baz=141,slow=3.9,SNR=4.1							
AKTO	**Aktyubinsk**	**76.00**	**323**	P	**P**	**20**	**22**	**57.4** **-0.4**
	comp=Z,3.0nm,0.7s,baz=96,slow=7.4,SNR=7.6							
BRTR	**Keskin Array B**	**91.52**	**310**	P	**P**	**20**	**24**	**16.2** **-1.3**
	comp=Z,0.7nm,1.0s,baz=102,slow=3.0,SNR=3.8							
TORD	**Torodi Ar. Bea**	**122.71**	**285**	PKP	**PKPdf**	**20**	**30**	**06.9** **-0.2**
	comp=Z,0.4nm,0.7s,baz=57,slow=1.9,SNR=2.5							

*ISK **26** 20:14:00.1, 40˚.77N×25˚.59E, h9km, ML2.4/14*
*THE **26** 20:14:00.5, 40˚.74N×25˚.58E, h9km, ML2.1/6, Error ellipse: s-maj=0.9km s-min=0.3km az=75.0*
*ATH **26** 20:14:00.2, 40˚.76N×25˚.56E, h14km±2km, ML2.0/7, Error ellipse: s-maj=2.2km s-min=0.8km az=88.0*
*DDA **26** 20:14:00.7, 40˚.72N×25˚.61E, h7km±2km, ML2.4*
*SOF **26** 20:14:02.0, 40˚.84N×25˚.51E, h17km, MD2.6*

ISC 26 20:13:60.0±0.9, 40˚.77N±0˚.02×25˚.55E±0˚.02, h15km±8km, n59, σ0°48/89, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SMTH	**Samothraki Isl**	**0.30**	**182**	P		**Pg**		**20 14 06.2**	**-0.1**
SMTH				S		**Sg**		**20 14 10.5**	**-0.1**
SMTH				AML		AML		20 14 10.8	
	comp=N,593μm,0.2s								
SMTH				AML		AML		20 14 11.3	
	comp=E,422μm,0.1s								
SMTH	**Samothraki Isl**	**0.30**	**182**	P		**Pg**		**20 14 06.2**	**-0.1**
RDO	**Rodhopi**	**0.37**	**359**	P		**Pb**		**20 14 08.1**	**-0.2**
RDO				S		**Sb**		**20 14 13.4**	**-0.5**
RDO				AML		AML		20 14 13.8	
	comp=N,549μm,0.1s								
RDO				AML		AML		20 14 19.1	
	comp=E,702μm,0.1s								
RDO	**Rodhopi**	**0.37**	**359**	P		**Pb**		**20 14 08.1**	**-0.2**
RDO				S		**Sb**		**20 14 14.5**	**+0.6**
	comp=E,188nm,0.1s								
RDO	**Rodhopi**	**0.37**	**359**	PG		**Pb**		**20 14 08.2**	**-0.1**
RDO				SG		**Sb**		**20 14 13.4**	**-0.5**
ALN	**Alexandroupoli**	**0.40**	**72**	P		**Pg**		**20 14 08.1**	**+0.1**
ALN				S		**Sg**		**20 14 13.5**	**0.0**
ALN				AML		AML		20 14 14.5	
	comp=N,944μm,0.4s								
ALN				AML		AML		20 14 15.2	
	comp=E,690μm,0.3s								
ALN	**Alexandroupoli**	**0.40**	**72**	P		**Pg**		**20 14 08.1**	**+0.1**
ALN				S		**Sg**		**20 14 13.7**	**+0.2**
	comp=E,412nm,0.5s								
ALN	**Alexandroupoli**	**0.40**	**72**	PG		**Pg**		**20 14 08.0**	**0.0**
ALN				SG		**Sg**		**20 14 13.9**	**+0.4**
ENEZ	**Enez**	**0.46**	**94**	PG		**Pg**		**20 14 09.3**	**+0.1**
ENEZ				SG		**Sg**		**20 14 15.7**	**+0.3**
CAVK	**Edirne/Enez-Ca**	**0.48**	**100**	*i* P		**Pg**		**20 14 09.6**	**+0.1**
CAVK				IAML				20 14 16.0	
	comp=N,393nm,0.2s								
CAVK				*i* S		**Sg**		**20 14 16.0**	**+0.1**
GADA	**Gvkgeada**	**0.64**	**155**	PG		**Pb**		**20 14 12.9**	**0.0**
THAS	**Thassos island**	**0.65**	**255**	P		**Pb**		**20 14 12.9**	**-0.1**
THAS				S		**Sb**		**20 14 21.5**	**-0.4**
THAS				AML		AML		20 14 24.6	
	comp=N,377μm,0.3s								
THAS				AML		AML		20 14 25.6	
	comp=E,384μm,0.2s								
THAS	**Thassos island**	**0.65**	**255**	P		**Pb**		**20 14 13.0**	**-0.1**
THAS				S		**Sb**		**20 14 23.1**	**+1.2**
	comp=E,190nm,0.2s								
ERIK	**Erikli-Kesan**	**0.74**	**98**	PG		**Pg**		**20 14 14.2**	**-0.2**
ERIK				SG		**Sg**		**20 14 24.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.80**	**118**	PG		**Pg**		**20 14 15.3**	**-0.2**
GELI				SG		**Sb**		**20 14 26.3**	**+0.1**
KAVA	**Kavala**	**0.81**	**286**	P		**Pb**		**20 14 16.1**	**+0.3**
KAVA				S		**Sb**		**20 14 27.2**	**+0.6**
KAVA				AML		AML		20 14 30.6	
	comp=N,499μm,0.2s								
KAVA				AML		AML		20 14 30.9	
	comp=E,566μm,0.2s								
KAVA	**Kavala**	**0.81**	**286**	P		**Pb**		**20 14 16.2**	**+0.3**
KAVA				S		**Sn**		**20 14 28.8**	**0.0**
	comp=E,138nm,0.2s								
KESN	**Edirne-Kesan**	**0.86**	**86**	*i* P		**Pn**		**20 14 18.1**	**+0.2**
KESN				*i* S		**Sg**		**20 14 27.8**	**-0.4**
ECEA	**Canakkale, Ece**	**0.87**	**146**	*i* P		**Pg**		**20 14 16.0**	**-0.9**
ECEA				*i* S		**Sg**		**20 14 28.3**	**0.0**
ECEA				IAML				20 14 32.0	
	comp=E,106nm,0.4s								
KDZ	**Kurdzhali**	**0.88**	**354**	Pg		**Pn**		**20 14 18.4**	**+0.5**
KVLA	**Kavala**	**0.90**	**281**	P		**Pn**		**20 14 18.3**	**+0.2**
LIA	**Limnos Island**	**0.92**	**198**	P		**Pg**		**20 14 17.3**	**-0.4**
LIA				S		**Sg**		**20 14 29.5**	**-0.2**
LIA				AML		AML		20 14 31.6	
	comp=E,165μm,0.3s								
LIA				AML		AML		20 14 31.8	
	comp=N,119μm,0.4s								
LIA	**Limnos Island**	**0.92**	**198**	P		**Pg**		**20 14 17.4**	**-0.4**
LIA				S		**Sb**		**20 14 30.3**	**+0.7**
	comp=N,72nm,0.4s								
LPK	**Lapseki**	**1.01**	**113**	PG		**Pb**		**20 14 17.8**	**-1.3**
BOZC	**Bozcaada**	**1.01**	**157**	*i* P		**Pg**		**20 14 19.4**	**0.0**
BOZC				*i* P		**Pn**		**20 14 19.9**	**+0.3**
BOZC				*i* S		**Sb**		**20 14 32.2**	**0.0**
BOZC				*i* S		**Sg**		**20 14 32.4**	**-0.3**
BOZC	**Bozcaada**	**1.01**	**157**	PG		**Pb**		**20 14 19.3**	**+0.2**
RZN	**Rozhen**	**1.11**	**326**	P		**Pn**		**20 14 21.8**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.24**	**93**	PN		**Pb**		**20 14 23.2**	**0.0**
SART	**Tekirdag**	**1.24**	**93**	*i* P		**Pb**		**20 14 23.2**	**0.0**
OUR	**Ouranopolis**	**1.27**	**250**	P		**Pb**		**20 14 23.4**	**-0.2**
OUR				S		**Sg**		**20 14 40.8**	**-0.2**
OUR	**Ouranopolis**	**1.27**	**250**	P		**Pb**		**20 14 23.6**	**0.0**
OUR				S		**Sg**		**20 14 41.7**	**+0.7**
	comp=N,178nm,0.3s								
OUR	**Ouranopolis**	**1.27**	**250**	PN		**Pg**		**20 14 24.8**	**+0.3**
DIM	**Dimitrovgrad**	**1.28**	**360**	P		**Pg**		**20 14 24.8**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.28**	**143**	*i* P		**Pg**		**20 14 24.3**	**-0.4**
BAYC				*i* S		**Sb**		**20 14 40.2**	**+0.1**
BAYC				IAML				20 14 42.0	
	comp=E,62nm,0.6s								
MAR6	**Marsite Statio**	**1.31**	**92**	PN		**Pb**		**20 14 24.5**	**+0.2**
MAR4	**Marsite Statio**	**1.33**	**89**	PN		**Pb**		**20 14 24.9**	**+0.2**
KOCA	**Canakkale, Ayv**	**1.35**	**160**	*i* P		**Pb**		**20 14 25.2**	**+0.2**
KOCA				*i* S		**Sn**		**20 14 42.5**	**+0.6**
GZKV	**Gazikoy-Tekird**	**1.35**	**91**	PN		**Pb**		**20 14 25.3**	**+0.3**
KRBG	**Karabiga-Canak**	**1.39**	**105**	PN		**Pb**		**20 14 25.5**	**-0.1**
NVR	**Nevrokopi**	**1.40**	**295**	P		**Pb**		**20 14 25.9**	**0.0**
NVR				S		**Sg**		**20 14 44.2**	**-1.0**
NVR				AML		AML		20 14 47.5	
	comp=N,40μm,0.2s								
NVR				AML		AML		20 14 48.7	
	comp=E,54μm,0.2s								
NVR	**Nevrokopi**	**1.40**	**295**	P		**Pb**		**20 14 25.9**	**0.0**
EDRB	**Edirne**	**1.40**	**40**	PN		**Pg**		**20 14 26.2**	**-0.8**
PLD	**Plovdiv**	**1.47**	**335**	PN		**Pg**		**20 14 27.7**	**-0.6**
PLD	**Plovdiv**	**1.47**	**335**	P		**Pg**		**20 14 28.6**	**+0.3**
KIRK	**Kırklareli**	**1.54**	**49**	*i* P		**Pb**		**20 14 27.8**	**-0.5**
KIRK				*i* S		**Sg**		**20 14 49.8**	**+0.1**
MRMT	**Marmara Adasi**	**1.57**	**96**	PN		**Pn**		**20 14 27.8**	**+0.4**
SIGR	**SIGRI**	**1.58**	**171**	P		**Pn**		**20 14 27.5**	**+0.1**
SIGR	**SIGRI**	**1.58**	**171**	PN		**Pb**		**20 14 28.4**	**-0.5**
KNL	**Balıkesir**	**1.59**	**108**	*i* P		**Pb**		**20 14 28.9**	**-0.1**
KNL				*i* S		**Sg**		**20 14 50.3**	**-0.9**
MMB	**Musomiste**	**1.60**	**301**	P		**Pb**		**20 14 29.5**	**+0.3**
MAR9	**Marsite Statio**	**1.65**	**95**	PN		**Pn**		**20 14 29.1**	**+0.7**
PAIG	**Paliouri**	**1.66**	**240**	P		**Pn**		**20 14 28.3**	**-0.2**
BUHA	**Balikesir, Bur**	**1.73**	**137**	*i* P		**Pb**		**20 14 31.7**	**+0.3**
BUHA				*i* S		**Sb**		**20 14 53.8**	**+0.8**
ARMN	**Kirklareli, Me**	**1.79**	**52**	*i* P		**Pb**		**20 14 33.0**	**+0.6**
JMB	**Yambol**	**1.86**	**24**	P		**Pg**		**20 14 35.4**	**-0.3**
BALY	**Balya**	**1.89**	**122**	*i* P		**Pb**		**20 14 33.4**	**-0.9**
VIZE	**Kirklareli, Vi**	**1.91**	**64**	*i* P		**Pg**		**20 14 35.5**	**-1.2**
KNT	**Kendrikon**	**2.04**	**282**	P		**Pb**		**20 14 35.2**	**-1.6**
STIP	**Stip**	**2.70**	**291**	*i* Pn		**Pn**		**20 14 42.3**	**-0.5**

IDC 26 20:16:18.3±5.2, 3.99S×151.55E, h95km±46km, mb3.6/6, mb1 3.7/7, mb1mx3.4/43, mbtmp3.9/7, MS2.9/5, Ms1 2.9/5, ms1mx2.6/35, Error ellipse: s-maj=79.2km s-min=23.8km az=117.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PMG	**Port Moresby**	**6.92**	**219**	P		Pn		20 17 58.9	+1.7
	0.7nm,0.3s,baz=232,slow=8.0,SNR=2.2								
HNR	**Honiara**	**9.94**	**123**	LR		LR		20 22 11.6	
	comp=Z,138nm,19.3s,baz=254,slow=36								
GUMO	**Guam**	**18.68**	**339**	LR		LR		20 26 43.1	
	comp=Z,28nm,18.3s,baz=196,slow=33								
WRA	**Warramunga Arr**	**23.08**	**225**	P		P		20 21 14.5	-1.6
	7.6nm,1.0s,baz=52,slow=10.0,SNR=11								
ASAR	**Alice Springs**	**25.94**	**219**	P		P		20 21 43.0	+1.0
	1.7nm,0.9s,baz=52,slow=9.3,SNR=13								
FITZ	**Fitzroy Crossi**	**28.97**	**239**	P		P		20 22 07.4	-1.8
	4.5nm,1.1s,baz=65,slow=9.4,SNR=2.7								
MJAR	**Matsushiro Arr**	**42.21**	**344**	LR		LR		20 39 36.9	
	comp=Z,12nm,20.3s,baz=245,slow=33								
KSRS	**Korea Array**	**46.73**	**334**	LR		LR		20 42 03.9	
	comp=Z,9.4nm,21.2s,baz=180,slow=33								
KLR	**Kul'dur**	**55.73**	**344**	LR		LR		20 46 45.9	
	comp=Z,18nm,21.3s,baz=148,slow=33								
PETK	**Petropavlovsk-**	**57.13**	**4**	P		P		20 25 53.7	-1.2
	2.2nm,1.0s,baz=142,slow=7.3,SNR=1.9								
SONM	**Songino Array**	**64.98**	**328**	P		P		20 26 49.2	+0.9
	0.7nm,1.0s,baz=133,slow=4.6,SNR=4.3								
ILAR	**Eielson Array**	**81.89**	**22**	P		P		20 28 26.5	-0.5
	0.2nm,0.7s,baz=262,slow=6.3,SNR=2.1								
TORD	**Torodi Ar. Bea**	**148.87**	**289**	PKPbc		PKiKP		20 35 57.4	0.0
	0.5nm,0.9s,baz=63,slow=2.7,SNR=2.4								

*INET **26** 20:20:13.5, 12˚.41N×87˚.84W, h29km, MW3.5*

SNET 26 20:20:14.5±1.1, 12˚.52N×87˚.98W, h31km±5km, ML3.4, 1C-3D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
CNCH	**Conchagua**	**0.77**	**11**	*e*P		Pn		20 20 28.8	-0.6
CNCH				*e*S		Sn		20 20 40.8	+0.9
LCND	**La Caada**	**0.79**	**7**	↓*i*P		Pn		20 20 29.1	-0.5
LCND				*e*S		Sn		20 20 41.2	+0.8
LCND				IAML				20 20 44.1	
	comp=Z,3μm,0.2s								
LCY	**Lacayo**	**0.95**	**341**	*e*P		Pn		20 20 32.0	+0.2
ALJI	**Alcalda de J**	**0.98**	**325**	*e*P		Pn		20 20 32.4	+0.2
ALJI				IAML				20 20 50.0	
	comp=Z,995nm,0.2s								
PACA	**Pacayal**	**1.00**	**341**	*e*P		Pn		20 20 33.0	+0.4
PACA				*e*S		Sb		20 20 46.9	+0.7
PACA				IAML				20 20 49.2	
	comp=Z,553nm,0.1s								
TECA	**Tecapa**	**1.09**	**332**	*e*P		Pn		20 20 34.0	+0.1
TECA				*e*S		Sb		20 20 49.1	+0.1
COEB	**Comit de Eme**	**1.11**	**331**	*e*P		Pb		20 20 34.7	-0.5
COEB				IAML				20 21 00.8	
	comp=Z,563nm,0.3s								
FAGO	**Alcalda de S**	**1.17**	**354**	↓*i*P		Pn		20 20 34.8	0.0
FAGO				*e*S		Sb		20 20 51.3	+0.2
PQSS	**Presa 15 de Se**	**1.23**	**333**	↑*e*P		Pn		20 20 36.2	+0.5
PQSS				IAML				20 20 56.2	
	comp=Z,328nm,0.1s								
COEG	**Centro de Oper**	**1.40**	**321**	*e*P		Pn		20 20 38.2	+0.2
COEG				IAML				20 21 03.0	
	comp=Z,781nm,0.3s								
LFRS	**El Faro**	**1.52**	**316**	*e*P		Pn		20 20 40.1	+0.4
LFRS				*e*S		Sn		20 20 59.2	+0.7
TGUH	**Tegucigalpa,Un**	**1.68**	**24**	↓*i*P		Pn		20 20 41.0	-0.9

*NEIC **26** 20:23:06.5±2.3, 17˚.40S±0˚.09×174˚.21W±0˚.10, h92km±8km, mb4.6/22, Error ellipse: s-maj=13.6km s-min=13.0km az=109.0*
*IDC **26** 20:23:13.9±3.4, 17˚.41S×174˚.43W, h149km±30km, mb3.7/16, mb1 4.0/16, mb1mx3.9/35, mbtmp4.2/16, MS3.1/5, Ms1 3.1/5, ms1mx2.8/31, Error ellipse: s-maj=20.7km s-min=12.2km az=145.0*

ISC 26 20:23:12.1±0.4, 17˚.44S±0˚.09×174˚.29W±0˚.08, h139km, n89, σ1°03/84, mb4.3/28, 6C-2D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
AFI	**Afiamalu**	**4.26**	**35**	P		Pn		20 24 08.5	-7.2
	14nm,0.3s,baz=273,slow=18,SNR=9.6								
AFI				S		Sn		20 24 52.2	-13
	155nm,0.3s,baz=58,slow=22,SNR=20								
AFI	**Afiamalu**	**4.26**	**35**	P		Pn		20 24 10.4	-5.2
NIUE	**Niue**	**4.46**	**112**	Pn		Pn		20 24 12.8	-5.3
MSVF	**Nonsavu**	**7.31**	**267**	P		**Pn**		**20 24 59.9**	**+3.5**
	2.1nm,0.3s,baz=104,slow=17,SNR=25								
MSVF	**Nonsavu**	**7.31**	**267**			**Pn**		**20 24 57.8**	**+1.4**
RAR	**Rarotonga**	**14.21**	**108**	P		**Pn**		**20 26 26.6**	**-0.5**
	4.8nm,0.3s,baz=263,slow=10,SNR=9.5								
RAR	**Rarotonga**	**14.21**	**108**	P		**Pn**		**20 26 25.9**	**-1.3**
DZM	**Mont Dzumac**	**18.70**	**253**	eLR		LR		20 32 16.6	
	comp=Z,140nm,29.2s								
OUZ	**Omahuta**	**20.74**	**209**	P		**P**		**20 27 40.0**	**-1.7**
URZ	**Urewera**	**22.07**	**198**	LR		LR		20 35 34.7	
	comp=Z,78nm,21.1s,baz=31,slow=34								
URZ	**Urewera**	**22.07**	**198**	P		**P**		**20 27 54.9**	**-0.9**
URZ				IAmb		IAmb		20 28 15.0	
	comp=Z,34nm,1.1s								
BKZ	**Black Stump Fm**	**23.09**	**199**	P		**P**		**20 28 05.4**	**-0.3**
BKZ				IAmb		IAmb		20 28 33.5	
	comp=Z,41nm,1.4s								
PPT2	**Papeete2**	**23.57**	**94**	eLR		LR		20 33 52.6	
	comp=Z,117nm,27.8s								
PPT	**Papeete**	**23.57**	**94**	LR		LR		20 35 28.2	
	comp=Z,26nm,19.6s,baz=355,slow=31								
TBI	**Tubuai**	**23.99**	**108**	eLR		LR		20 33 59.4	
	comp=Z,151nm,34.5s								
LTZ	**Lake Taylor**	**27.73**	**202**	P		**P**		**20 28 48.7**	**+1.1**
LTZ				IAmb		IAmb		20 28 51.0	
	comp=Z,17nm,1.0s								
OXZ	**Oxford**	**28.29**	**201**	P		**P**		**20 28 52.4**	**-0.1**
RPZ	**Rata Peaks**	**28.98**	**202**	LR		LR		20 40 59.0	
	comp=Z,63nm,19.4s,baz=34,slow=37								
WHZ	**Wether Hill Ro**	**32.00**	**204**	P		**P**		**20 29 26.0**	**+0.9**
CTA	**Charters Tower**	**37.39**	**260**	P		**P**		**20 30 11.4**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=84,slow=9.4,SNR=5.9								
CTAO	**Charters Tower**	**37.39**	**260**	P		**P**		**20 30 12.0**	**+0.1**
CTAO				IAmb		IAmb		20 30 13.3	
	comp=Z,6.4nm,0.8s								
TOO	**Toolangi**	**40.53**	**232**	P		**P**		**20 30 37.1**	**-0.7**
STKA	**Stephens Creek**	**42.30**	**242**	P		**P**		**20 30 51.5**	**-0.8**
	comp=Z,3.9nm,0.8s,baz=91,slow=7.5,SNR=6.9								
STKA	**Stephens Creek**	**42.30**	**242**	P		**P**		**20 30 51.5**	**-0.8**
BBOO	**Buckleboo**	**47.07**	**241**	P		**P**		**20 31 29.4**	**-0.6**
BBOO				IAmb		IAmb		20 31 30.5	
	comp=Z,12nm,0.8s								
WR0	**Warramunga Arr**	**48.38**	**259**	P		**P**		**20 31 40.0**	**-0.4**
WR0				IAmb		IAmb		20 31 55.1	
	comp=Z,6.5nm,1.2s								
WB0	**Warramunga Arr**	**48.54**	**259**	P		**P**		**20 31 40.7**	**-0.9**
WB2	**Warramunga Arr**	**48.56**	**259**	P		**P**		**20 31 41.1**	**-0.6**
WB2				IAmb		IAmb		20 31 41.3	
	comp=Z,5.4nm,0.8s								
WRA	**Warramunga Arr**	**48.57**	**259**	P		**P**		**20 31 40.9**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=96,slow=7.0,SNR=27								
WRA	**Warramunga Arr**	**48.57**	**259**	P		**P**		**20 31 39.8**	**-2.1**
AS31	**Alice Springs**	**48.69**	**254**	P		**P**		**20 31 42.1**	**-0.6**
AS31				IAmb		IAmb		20 31 44.4	
	comp=Z,4.9nm,0.8s								
ASAR	**Alice Springs**	**48.69**	**254**	P		**P**		**20 31 42.1**	**-0.6**
	comp=Z,17nm,0.6s,baz=89,slow=8.4,SNR=121								
ASAR				PcP		**PcP**		**20 33 06.9**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=104,slow=3.9,SNR=4.7								
ASAR				S		**S**		**20 38 32.5**	**-2.4**
	comp=Z,0.7nm,0.7s,baz=90,slow=15,SNR=5.6								
ASAR	**Alice Springs**	**48.69**	**254**	P		**P**		**20 31 41.7**	**-1.0**
FORT	**Forrest**	**53.75**	**244**	P		**P**		**20 32 18.5**	**-1.8**
KNRA	**Kununurra**	**54.44**	**263**	P		**P**		**20 32 24.2**	**-1.3**
FITZ	**Fitzroy Crossi**	**56.97**	**259**	P		**P**		**20 32 43.2**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=93,slow=16,SNR=2.2								
FITZ	**Fitzroy Crossi**	**56.97**	**259**	P		**P**		**20 32 41.5**	**-2.0**
SBA	**Scott Base**	**61.16**	**185**	P		**P**		**20 33 13.3**	**+1.9**
SBA				IAmb		IAmb		20 33 14.9	
	comp=Z,3.7nm,0.8s								
VNDA	**Vanda**	**61.27**	**186**	P		**P**		**20 33 13.7**	**+1.5**
	comp=Z,1.4nm,0.7s,baz=13,slow=6.2,SNR=11								
VNDA	**Vanda**	**61.27**	**186**	P		**P**		**20 33 12.8**	**+0.6**
NWAO	**Narrogin (SRO)**	**62.89**	**242**	P		**P**		**20 33 22.7**	**-1.0**
MJAR	**Matsushiro Arr**	**69.95**	**321**	P		**P**		**20 34 08.0**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=154,slow=5.9,SNR=2.3								
JSD	**Sado**	**70.91**	**322**	P		**P**		**20 34 14.2**	**0.0**
JSD				IAmb		IAmb		20 34 15.1	
	comp=Z,13nm,0.9s								
QSPA	**South Pole Qui**	**72.62**	**180**	P		**P**		**20 34 25.8**	**+1.6**
QSPA				IAmb		IAmb		20 34 26.4	
	comp=Z,5.7nm,0.8s								
PETK	**Petropavlovsk-**	**74.31**	**343**	P		**P**		**20 34 34.5**	**+0.5**
	comp=Z,3.7nm,0.7s,baz=126,slow=9.3,SNR=8.2								
PETK	**Petropavlovsk-**	**74.31**	**343**	P		**P**		**20 34 35.0**	**+1.0**
TPUB	**Ta-pu**	**75.36**	**300**	P		**P**		**20 34 39.5**	**-1.2**
TPUB				IAmb		IAmb		20 34 41.5	
	comp=Z,8.2nm,0.8s								
NVAR	**Mina Array Bea**	**76.41**	**42**	P		**P**		**20 34 47.2**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=229,slow=10,SNR=4.5								
NVAR				pP		**pP**		**20 35 19.2**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=221,slow=7.7,SNR=2.4								
LEM	**Lembang**	**76.66**	**267**	P		**P**		**20 34 49.3**	**+0.8**
	comp=Z,18nm,0.7s,baz=9.0,slow=9.3,SNR=6.8								
KSRS	**Korea Array**	**77.02**	**316**	P		**P**		**20 34 50.1**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=125,slow=4.9,SNR=5.5								
KSRS				LR		LR		21 05 10.9	
	comp=Z,5.9nm,19.9s,baz=130,slow=33								
TXAR	**Lajitas Array**	**82.45**	**56**	P		**P**		**20 35 20.1**	**+0.7**
	comp=Z,1.0nm,1.0s,baz=212,slow=5.9,SNR=4.6								
PDAR	**Pinedale Array**	**84.34**	**42**	P		**P**		**20 35 29.5**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=218,slow=3.1,SNR=24								
ILAR	**Eielson Array**	**84.60**	**11**	P		**P**		**20 35 29.1**	**-0.3**
	comp=Z,1.1nm,1.0s,baz=212,slow=6.4,SNR=6.6								
MAW	**Mawson**	**85.60**	**199**	P		**P**		**20 35 34.6**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=144,slow=6.3,SNR=2.4								
VNA3	**Neumayer Olymp**	**90.92**	**175**	P		**P**		**20 36 00.4**	**+0.7**
SNAA	**Sanae**	**90.93**	**177**	P		**P**		**20 36 00.4**	**+0.5**
VNA2	**Neumayer--Watz**	**91.40**	**176**	P		**P**		**20 36 02.9**	**+0.9**
	baz=192,slow=3.0								
YKA	**Yellowknife Ar**	**92.30**	**24**	P		**P**		**20 36 05.4**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=98,slow=7.8,SNR=4.7								
YKA				LR		LR		21 11 34.7	
	comp=Z,18nm,20.4s,baz=0.0,slow=31								
CMAR	**Chiang Mai Arr**	**92.44**	**288**	P		**P**		**20 36 08.2**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=104,slow=2.2,SNR=7.5								
CLL	**Collm**	**145.71**	**352**	↑*i*PKPbc		**PKPab**		**20 42 35.8**	**+0.7**
	comp=Z,7.0nm,1.0s								
BURAR	**Bucovina Array**	**145.90**	**336**	↑P		**PKiKP**		**20 42 37.5**	**-1.2**
DPC	**Dobruska-Polom**	**146.08**	**348**	*e*PKP		**PKPab**		**20 42 37.4**	**+0.8**
BIZ	**Bizoz**	**146.10**	**335**	↓P		**PKiKP**		**20 42 38.5**	**-0.5**
KRLC	**Kraliky**	**146.24**	**347**	*e*PKP		**PKiKP**		**20 42 38.3**	**-1.0**
ARCR	**ARCALIA**	**146.67**	**337**	↑P		**PKiKP**		**20 42 39.7**	**-0.5**
BRTR	**Keskin Array B**	**147.15**	**318**	PKP		**PKPdf**		**20 42 36.6**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=115,slow=0.8,SNR=8.6								
BRTR				PKPbc		**PKPbc**		**20 42 40.1**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=199,slow=2.6,SNR=4.6								
MLR	**Muntele Rosu**	**147.32**	**333**	PKPbc		**PKPbc**		**20 42 40.6**	**+1.0**
	comp=Z,2.4nm,0.9s,baz=294,slow=3.4,SNR=5.6								
DRGR		**147.53**	**338**	↑P		**PKiKP**		**20 42 41.5**	**-0.6**
KHC	**Kasperske Hory**	**147.75**	**350**	*e*PKP		**PKiKP**		**20 42 41.9**	**-0.5**
CKRC	**Cesky Krumlov**	**147.92**	**349**	*e*PKP		**PKPbc

BHPL	**Bhopal**	**8.89**	**240**	*e*P	**Pn**	**20 41 26.4**	**-2.3**
BHPL				*e*S	**Sn**	**20 43 02.0**	**-6.4**
BHPL				IAML		20 43 09.1	
	comp=N,81nm,0.2s						
DHRM	**DHARAMSHALA**	**9.30**	**300**	*e*P	**Pn**	**20 41 33.2**	**-1.3**
DHRM				*e*S	**Sn**	**20 43 12.8**	**-6.0**
DHRM				IAML		20 43 24.8	
	comp=E,81nm,0.6s						
DHRM				IAML		20 43 25.0	
	comp=N,58nm,0.3s						
NIL	**Nilore**	**12.21**	**301**	Pn	**Pn**	**20 42 12.9**	**-1.3**
HYB	**Hyderabad**	**12.41**	**214**	*i* P	**Pn**	**20 42 15.0**	**-1.9**
HYB				*e*S	**Sn**	**20 44 37.0**	**+2.2**
KSH	**Kashi**	**14.16**	**327**	P	**Pn**	**20 42 39.0**	**-1.8**
KSH				pmax	pmax		
	comp=N,9.0nm,0.7s						
KSH				pmax	pmax		
	comp=N,110nm,5.4s						
CHTO	**Chiang Mai**	**15.07**	**124**	Pn	**Pn**	**20 42 52.5**	**-0.7**
CM33	**Chiang Mai Arr**	**15.07**	**124**	P	P	20 43 05.0	+6.6
CM32	**Chiang Mai Arr**	**15.10**	**125**	P	**P**	**20 43 05.0**	**+6.3**
CM34	**Chiang Mai Arr**	**15.20**	**124**	P	**P**	**20 43 03.0**	**+3.2**
CM15	**Chiang Mai Arr**	**15.29**	**125**	P	**P**	**20 43 06.2**	**+5.5**
CM13	**Chiang Mai Arr**	**15.29**	**125**	P	P	20 43 13.1	+12
CM31	**Chiang Mai Arr**	**15.30**	**125**	P	P	20 43 15.4	+14
CMAR	**Chiang Mai Arr**	**15.30**	**125**	Pn	**Pn**	**20 42 56.1**	**-0.1**
	comp=N,0.2nm,0.3s,baz=303,slow=14,SNR=11						
CM35	**Chiang Mai Arr**	**15.31**	**124**	P	**P**	**20 43 05.0**	**+4.0**
CM02	**Chiang Mai Arr**	**15.31**	**125**	P	**P**	**20 43 07.0**	**+6.0**
CM04	**Chiang Mai Arr**	**15.36**	**125**	P	**P**	**20 43 06.0**	**+4.4**
CM36	**Chiang Mai Arr**	**15.37**	**125**	P	**P**	**20 43 06.0**	**+4.3**
WMQ	**Urumqi**	**15.94**	**5**	*e*P	**P**	**20 43 06.5**	**-1.5**
WMQ				pP	pP	20 43 09.5	-4.8
WMQ				pmax	pmax		
	comp=N,15nm,0.8s						
WMQ				pmax	pmax		
	comp=N,120nm,4.5s						
GTA	**Gaotai**	**16.32**	**42**	P	**P**	**20 43 12.8**	**+0.5**
GTA				pP	pP	20 43 18.0	-0.8
GTA				sP	sP	20 43 21.5	+0.8
GTA				pmax	pmax		
	comp=N,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=N,38nm,4.9s						
GTA				LR	LR		
	comp=N,85nm,10.9s						
GTA				LR	LR		
	comp=N,120nm,12.7s						
GTA				LR	LR		
	comp=N,89nm,10.9s						
LZH	**Lanzhou**	**17.31**	**57**	*e*P	**Pn**	**20 43 19.8**	**-2.1**
LZH				pP	P	20 43 22.5	-0.8
LZH				sP	pP	20 43 26.3	-3.2
LZH				PP	**PnPn**	**20 43 32.8**	**+0.8**
LZH				pmax	pmax		
	comp=N,19nm,1.0s						
LZH				pmax	pmax		
	comp=N,65nm,4.9s						
LZH				LR	LR		
	comp=N,180nm,11.4s						
LZH				LR	LR		
	comp=N,160nm,11.9s						
LZH				LR	LR		
	comp=N,140nm,14.6s						
BTK	**Batken**	**17.33**	**318**	Pn	**Pn**	**20 43 20.9**	**-1.2**
BTK				IAmb	IAmb	20 43 29.0	
	comp=Z,15nm,0.8s						
MK31	**Makanchi Array**	**19.05**	**353**	P	**Pn**	**20 43 43.6**	**+0.6**
MKAR	**Makanchi Array**	**19.05**	**353**	P	**Pn**	**20 43 43.5**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=174,slow=10,SNR=34						
MKAR				LR	LR	20 52 17.7	
	comp=Z,50nm,18.1s,baz=160,slow=41						
MKAR	**Makanchi Array**	**19.05**	**353**	P	**Pn**	**20 43 43.3**	**+0.3**
XAN	**Xi'an**	**20.71**	**67**	P	**P**	**20 43 57.5**	**-3.0**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PALK	**Pallekele**	**21.10**	**194**	P	**P**	**20 44 05.8**	**+1.1**
	comp=Z,2.4nm,0.7s,baz=227,slow=19,SNR=2.4						
PALK	**Pallekele**	**21.10**	**194**	P	**P**	**20 44 03.2**	**-1.5**
PALK				IAmb	IAmb	20 44 10.6	
	comp=Z,14nm,1.4s						
KURBB	**Kurchatov Arra**	**23.34**	**348**	P	**P**	**20 44 29.4**	**+1.2**
	comp=Z,3.5nm,0.6s,baz=165,slow=9.8,SNR=29						
KURK	**Kurchatov**	**23.41**	**348**	P	**P**	**20 44 29.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**24.76**	**52**	*e*P	**P**	**20 44 42.0**	**+0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,87nm,6.9s						
GEYT	**Alibeck**	**25.22**	**300**	P	**P**	**20 44 48.6**	**+2.7**
	comp=Z,1.8nm,0.5s,baz=105,slow=14,SNR=4.4						
SONM	**Songino Array**	**25.53**	**33**	P	**P**	**20 44 50.1**	**+1.4**
	comp=Z,8.1nm,0.7s,baz=218,slow=10.0,SNR=44						
ULN	**Ulaanbaatar**	**25.88**	**34**	P	**P**	**20 44 51.7**	**-0.2**
ULN				IAmb	IAmb	20 44 55.8	
	comp=Z,9.9nm,0.7s						
ZAA0	**Zalesovo Array**	**26.02**	**359**	P	**P**	**20 44 53.6**	**+0.8**
ZAA0				IAmb	IAmb	20 44 55.5	
	comp=Z,13nm,1.3s						
ZALV	**Zalesovo Beam**	**26.02**	**359**	P	**P**	**20 44 53.7**	**+0.9**
	comp=Z,3.8nm,0.4s,baz=184,slow=9.4,SNR=22						
ZALV				LR	LR	20 55 41.3	
	comp=Z,20nm,20.1s,baz=218,slow=38						
ZALV	**Zalesovo Beam**	**26.02**	**359**	P	**P**	**20 44 53.5**	**+0.6**
BVAR	**Borovoye Array**	**27.57**	**340**	P	**P**	**20 45 08.5**	**+1.6**
	comp=Z,0.7nm,0.6s,baz=212,slow=5.3,SNR=4.6						
ABKAR	**Akbulak array**	**29.13**	**324**	P	**P**	**20 45 21.8**	**+1.1**
ABKAR	**Akbulak array**	**29.13**	**324**	P	**P**	**20 45 20.1**	**-0.7**
ABKAR				IAmb	IAmb	20 45 23.6	
	comp=Z,1.8nm,0.7s						
SOCY	**Socotra**	**33.61**	**249**	P	**P**	**20 45 59.9**	**-0.8**
SOCY				IAmb	IAmb	20 46 03.9	
	comp=Z,4.3nm,1.0s						
ARU	**Arti**	**34.48**	**333**	P	**P**	**20 46 08.8**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=136,slow=7.2,SNR=10.0						
ARU	**Arti**	**34.48**	**333**	P	**P**	**20 46 08.2**	**+0.5**
ARU				IAmb	IAmb	20 46 09.8	
	comp=Z,10.0nm,1.4s						
KSRS	**Korea Array**	**36.44**	**64**	P	**P**	**20 46 24.0**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=32,slow=26,SNR=5.0						
AKH	**Akhalkalaki**	**36.96**	**303**	⇑P	**P**	**20 46 32.5**	**+3.1**
USRK	**Ussuriysk Ar.**	**40.15**	**54**	P	**P**	**20 46 56.9**	**+1.0**
KLR	**Kul'dur**	**40.96**	**46**	P	**P**	**20 47 02.6**	**0.0**
	comp=Z,0.5nm,0.6s,baz=268,slow=8.8,SNR=3.8						
NRIK	**Noril'sk**	**41.47**	**1**	P	**P**	**20 47 07.4**	**+0.9**
	comp=Z,6.3nm,0.7s,baz=162,slow=6.3,SNR=7.1						
BRTR	**Keskin Array B**	**44.36**	**299**	P	**P**	**20 47 31.6**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=123,slow=7.2,SNR=6.0						
AKASG	**Malin Array Be**	**47.99**	**314**	P	**P**	**20 47 58.7**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=82,slow=6.7,SNR=9.8						
AKASG	**Malin Array Be**	**47.99**	**314**	P	**P**	**20 47 56.6**	**-2.0**
AKBB	**Malin Array Si**	**47.99**	**314**	P	**P**	**20 47 58.5**	**-0.2**
AKBB				IAmb	IAmb	20 47 59.2	
	comp=Z,2.4nm,0.7s						
CFR	**Carcaliu**	**48.40**	**307**	⇑P	**P**	**20 48 04.3**	**+2.3**
MNK	**Minsk**	**49.28**	**319**	*i* P	**P**	**20 48 03.9**	**-4.6**
	comp=E,2.0nm,0.8s						
MNK				*i* P	**P**	**20 48 03.9**	**-4.6**
	comp=N,12nm,1.0s						
MNK				*i* P	**P**	**20 48 03.9**	**-4.6**
	comp=Z,5.0nm,0.7s						
MNK				*i* PcP	**PcP**	**20 49 26.4**	**-4.8**
MNK				*i* PP	**PP**	**20 49 58.0**	**-4.4**
MNK				*i* PPP	PPP	20 50 49.7	
MNK				*i* S	**S**	**20 55 10.4**	**-3.3**
MNK				*i* SS	**SS**	**20 58 48.2**	**+3.2**
MNK				*i* SSS	SSS	21 00 01.7	
MNK				*i* LR	LR	21 09 07.0	
MNK				*i* LRM	MLR	21 11 34.5	
	comp=E,5.0nm,16.6s						
MNK				*i* LRM	MLR	21 11 59.1	
	comp=Z,62nm,19.6s						
MNK				*i* LRM	MLR	21 12 07.1	
	comp=N,24nm,13.8s						
VRI	**Vrincioaia**	**49.39**	**308**	⇓P	**P**	**20 48 11.2**	**+1.6**
PLOR	**Plostina**	**49.45**	**308**	⇑P	**P**	**20 48 11.8**	**+1.7**
GIRR	**Girov**	**49.56**	**309**	⇑P	**P**	**20 48 12.0**	**+1.1**
TIXI	**Tiksi**	**49.72**	**16**	P	**P**	**20 48 11.9**	**+0.3**
	comp=N,3.1nm,0.5s,baz=5.5,slow=1.2,SNR=3.6						
TIXI	**Tiksi**	**49.72**	**16**	P	**P**	**20 48 10.9**	**-0.7**
TIXI				IAmb	IAmb	20 48 12.8	
	comp=Z,3.4nm,0.5s						
MLR	**Muntele Rosu**	**49.95**	**307**	P	**P**	**20 48 16.0**	**+2.0**
	comp=Z,5.7nm,0.7s,baz=356,slow=4.5,SNR=24						
MLR	**Muntele Rosu**	**49.95**	**307**	⇑P	**P**	**20 48 16.7**	**+2.7**
MLR	**Muntele Rosu**	**49.95**	**307**	P	**P**	**20 48 16.1**	**+2.1**
DOPR	**Dopca**	**50.33**	**308**	⇑P	**P**	**20 48 17.9**	**+1.2**
IIGN	**Ignalina**	**50.35**	**320**	*e*P	**P**	**20 48 17.0**	**+0.4**
BURAR	**Bucovina Array**	**50.44**	**310**	⇑P	**P**	**20 48 18.7**	**+1.0**
BURAR	**Bucovina Array**	**50.44**	**310**	P	**P**	**20 48 18.3**	**+0.7**
BURAR				IAmb	IAmb	20 48 19.3	
	comp=Z,1.5nm,0.7s						
BUR08	**Bucovina Ar. S**	**50.45**	**310**	P	**P**	**20 48 18.0**	**+0.3**
BUR08				IAmb	IAmb	20 48 24.1	
	comp=Z,3.2nm,1.1s						
VSU	**Vasula**	**50.56**	**324**	*e*P	**P**	**20 48 18.7**	**+0.5**
VOIR		**50.58**	**307**	⇑P	**P**	**20 48 19.8**	**+1.1**
ARR	**Arges**	**50.87**	**307**	⇑P	**P**	**20 48 22.0**	**+1.1**
FIA1	**FINESS Array S**	**51.48**	**328**	P	**P**	**20 48 25.7**	**+0.6**
FINES	**FINESS Array B**	**51.48**	**328**	P	**P**	**20 48 25.9**	**+0.8**
	comp=Z,1.8nm,0.4s,baz=111,slow=7.9,SNR=31						
FINES	**FINESS Array B**	**51.48**	**328**	P	**P**	**20 48 25.5**	**+0.4**
PABE	**Paberze**	**51.64**	**320**	*e*P	**P**	**20 48 27.1**	**+0.7**
VTS	**Vitosha**	**52.05**	**304**	⇓P	**P**	**20 48 31.6**	**+1.8**
KWP	**Kalwaria Pacla**	**52.11**	**313**	P	**P**	**20 48 31.2**	**+1.2**
MTSE	**Matsula**	**52.11**	**324**	*e*P	**P**	**20 48 28.9**	**-0.9**
DRGR		**52.16**	**309**	⇓P	**P**	**20 48 32.5**	**+2.0**
KEV	**Kevo**	**53.41**	**338**	P	**P**	**20 48 39.9**	**+0.7**
ARCES	**ARCESS Array B**	**53.83**	**338**	P	**P**	**20 48 43.6**	**+1.2**
	comp=Z,3.4nm,0.5s,baz=107,slow=7.8,SNR=30						
VYHS	**Vyhne**	**54.69**	**311**	*e*P	**P**	**20 48 50.8**	**+1.8**
PDG	**Podgorica**	**54.99**	**304**	⇑P	**P**	**20 48 51.2**	**-0.1**
MORH	**Mrgy, Hungar**	**55.00**	**309**	⇑P	**P**	**20 48 52.5**	**+1.3**
KRLC	**Kraliky**	**55.93**	**313**	*e*P	**P**	**20 48 58.7**	**+0.7**
DPC	**Dobruska-Polom**	**56.20**	**314**	*e*P	**P**	**20 49 00.5**	**+0.6**
CONA	**Conrad Observa**	**56.72**	**311**	*e*P	**P**	**20 49 04.0**	**+0.3**
	comp=Z,1.8nm,0.9s						
ARSA	**Arzberg**	**57.02**	**310**	*e*P	**P**	**20 49 06.0**	**+0.3**
	comp=Z,1.5nm,0.6s						
HFS	**Hagfors**	**57.37**	**326**	P	**P**	**20 49 08.4**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=100,slow=8.1,SNR=7.0						
SOKA	**Soboth**	**57.43**	**310**	*e*P	**P**	**20 49 09.2**	**+0.5**
	comp=Z,1.1nm,0.5s						
OBKA	**Obir**	**57.78**	**309**	*e*P	**P**	**20 49 14.3**	**+3.1**
	comp=Z,2.5nm,0.8s						
GERES	**GERESS Array B**	**58.05**	**312**	P	**P**	**20 49 13.4**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=79,slow=6.9,SNR=4.3						
KHC	**Kasperske Hory**	**58.09**	**313**	*e*P	**P**	**20 49 12.6**	**-0.7**
NOA	**NORSAR Array B**	**58.58**	**327**	P	**P**	**20 49 16.2**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=88,slow=6.9,SNR=3.6						
WATA	**Walderalm**	**59.67**	**311**	*e*P	**P**	**20 49 26.1**	**+1.6**
	comp=Z,4.1nm,1.0s						
SQTA	**Sankt Quirin**	**59.94**	**311**	*e*P	**P**	**20 49 25.9**	**-0.4**
	comp=Z,1.1nm,0.4s						
MOTA	**Moosalm**	**59.99**	**311**	*e*P	**P**	**20 49 25.8**	**-0.8**
	comp=Z,3.2nm,1.1s						
RETA	**Reutte**	**60.19**	**311**	*e*P	**P**	**20 49 25.3**	**-2.6**
	comp=Z,3.5nm,1.2s						
FETA	**Feichten**	**60.30**	**310**	*e*P	**P**	**20 49 28.1**	**-0.6**
	comp=Z,4.2nm,1.2s						
DAVA	**Damuels**	**60.82**	**311**	*e*P	**P**	**20 49 31.9**	**-0.4**
	comp=Z,7.5nm,1.2s						
KEST	**Kesra**	**63.94**	**298**	P	**P**	**20 49 54.7**	**+1.4**
	comp=Z,6.7nm,0.8s,baz=351,slow=11,SNR=6.7						
WRA	**Warramunga Arr**	**66.83**	**130**	P	**P**	**20 50 13.0**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=324,slow=6.5,SNR=12						
EKA	**Eskdalemuir Ar**	**66.97**	**322**	P	**P**	**20 50 12.6**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=75,slow=8.2,SNR=1.6						
ASAR	**Alice Springs**	**69.14**	**133**	P	**P**	**20 50 26.9**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=315,slow=6.8,SNR=6.3						
LSZ	**Lusaka**	**70.41**	**240**	P	**P**	**20 50 35.1**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=62,slow=7.0,SNR=2.8						
ESDC	**Sonseca Array**	**72.61**	**306**	P	**P**	**20 50 48.2**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=62,slow=5.4,SNR=6.6						
TORD	**Torodi Ar. Bea**	**78.84**	**279**	P	**P**	**20 51 23.7**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=69,slow=3.6,SNR=4.7						
ILAR	**Eielson Array**	**78.99**	**20**	P	**P**	**20 51 23.5**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=304,slow=3.2,SNR=6.3						

SOME ***26*** *20:41:52.7, 42.°57N×75.°12E, h5km*
KNET ***26*** *20:41:52.1±0.3, 42.°56N×75.°10E, h18km±2km, ml2.3, Error ellipse: s-maj=2.9km s-min=1.9km az=173.0*
KRNET ***26*** *20:41:52.8±0.1, 42.°57N×75.°11E, h18km, mb3.1*
NNC ***26*** *20:41:53.2±0.2, 42.°62N×75.°10E±0.°01, h0km±1km, mb3.7, mpv3.6, Error ellipse: s-maj=3.7km s-min=0.8km az=161.0*
ISC 26 20:41:53.0±0.8, 42.°59N±0.°02×75.°10E±0.°01, h14km±5km, n82, σ1°9⁄14/153, 40C-24D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBK	**Karagaybulak**	**0.13**	**303**	⇑*i*P	**Pg**	**20 41 56.7**	**0.0**
KBK	baz=6.0			⇑*i*S	**Sg**	**20 41 59.2**	**0.0**
KBK	**Karagaybulak**	**0.13**	**303**	P	**Pg**	**20 41 56.7**	**0.0**
KBK	329nm,0.1s,SNR=1093			⇓S	**Sg**	**20 41 59.2**	**0.0**
FRU1	**Bishkek**	**0.41**	**303**	⇑*i*P	**Pg**	**20 42 01.7**	**+0.4**
FRU1	baz=6.0			⇑*i*S	**Sb**	**20 42 08.1**	**-0.2**
AAK	**Ala-Archa**	**0.45**	**277**	⇓*i*P	**Pg**	**20 42 01.9**	**-0.1**
AAK	baz=79			⇓*i*S	**Sg**	**20 42 08.3**	**+0.3**
AAK	**Ala-Archa**	**0.45**	**277**	P	**Pg**	**20 42 02.1**	**+0.1**
AAK	81nm,0.2s,SNR=78			⇓S	**Sg**	**20 42 08.3**	**+0.3**
AAK	**Ala-Archa**	**0.45**	**277**	⇑P	**Pg**	**20 42 02.0**	**+0.1**
AAK	259nm,0.3s 20nm,0.2s			⇑S	**Sg**	**20 42 08.3**	**+0.3**
CHMS	**Chumysh**	**0.49**	**328**	⇑*i*P	**Pg**	**20 42 02.7**	**+0.1**
CHMS	93nm,0.3s baz=29			⇑*i*S	**Sg**	**20 42 09.7**	**+0.6**
CHMS	**Chumysh**	**0.49**	**328**	⇑P	**Pg**	**20 42 02.8**	**+0.2**
CHMS	259nm,0.1s,SNR=71 197nm,0.2s			⇓S	**Sg**	**20 42 09.7**	**+0.6**
TKM2	**Tokmak 2**	**0.50**	**47**	⇓*i*P	**Pg**	**20 42 02.6**	**-0.3**
TKM2	baz=46			⇓*i*S	**Sg**	**20 42 09.4**	**-0.2**
TKM2	**Tokmak 2**	**0.50**	**47**	P	**Pg**	**20 42 02.8**	**-0.1**
TKM2	34nm,0.1s,SNR=92 438nm,0.1s			⇓S	**Sg**	**20 42 09.4**	**-0.2**
TKM2	**Tokmak 2**	**0.50**	**47**	⇑P	**Pg**	**20 42 02.7**	**-0.1**
TKM2	11nm,0.2s 55nm,0.1s			⇑S	**Sg**	**20 42 09.4**	**-0.2**
UCH	**Uchtor**	**0.56**	**231**	⇓*i*P	**Pg**	**20 42 03.7**	**-0.4**
UCH	baz=32			⇓*i*S	**Sg**	**20 42 11.4**	**-0.2**
UCH	**Uchtor**	**0.56**	**231**	⇑P	**Pg**	**20 42 04.0**	**-0.1**
UCH	36nm,0.3s,SNR=109 105nm,0.2s			⇓S	**Sg**	**20 42 11.5**	**-0.2**
BOOM	**Boomskoye usch**	**0.63**	**98**	⇑*i*P	**Pg**	**20 42 04.8**	**-0.5**
BOOM	baz=97			⇑*i*S	**Sg**	**20 42 13.0**	**-0.7**
KST	**Kastek**	**0.78**	**54**	*e*P	**Pb**	**20 42 08.0**	**-0.5**
KST	baz=53			*e*S	**Sb**	**20 42 18.6**	**-0.5**
KST	**Kastek**	**0.78**	**54**	*e*P	**Pb**	**20 42 08.0**	**-0.5**
KST	37nm,0.2s 97nm,0.7s			*e*S	**Sb**	**20 42 18.6**	**-0.5**
KST	**Kastek**	**0.78**	**54**	P	**Pb**	**20 42 08.0**	**-0.5**
KST	37nm,0.2s 97nm,0.7s			S	**Sb**	**20 42 18.6**	**-0.5**
USP	**Ospenovka**	**0.81**	**327**	⇓*i*P	**Pb**	**20 42 08.4**	**-0.5**
USP	baz=28			⇓*i*S	**Sb**	**20 42 19.6**	**-0.2**
USP	**Ospenovka**	**0.81**	**327**	⇓P	**Pb**	**20 42 08.5**	**-0.4**
USP	57nm,0.1s,SNR=309 26nm,0.1s			⇑S	**Sb**	**20 42 19.5**	**-0.3**
DGS	**Degeres**	**0.82**	**37**	*e*P	**Pb**	**20 42 08.4**	**-0.8**
DGS	baz=36 baz=36			*e*S	**Sb**	**20 42 19.8**	**-0.4**
DGS	**Degeres**	**0.82**	**37**	*e*P	**Pb**	**20 42 08.4**	**-0.8**
DGS	7.7nm,0.1s 64nm,0.2s			*e*S	**Sb**	**20 42 19.7**	**-0.4**
DGS	**Degeres**	**0.82**	**37**	P	**Pb**	**20 42 08.4**	**-0.8**
DGS	7.7nm,0.1s 64nm,0.2s			S	**Sb**	**20 42 19.7**	**-0.4**
ULHL	**Ulahol**	**0.91**	**111**	⇑*i*P	**Pb**	**20 42 09.5**	**-1.2**
ULHL	baz=11			⇑*i*S	**Sb**	**20 42 21.5**	**-1.3**
ULHL	**Ulahol**	**0.91**	**111**	⇑P	**Pb**	**20 42 10.0**	**-0.8**
ULHL	13nm,0.1s,SNR=96 38nm,0.1s			⇑S	**Sb**	**20 42 22.0**	**-0.8**
ARLS	**Aral**	**0.93**	**219**	⇓*i*P	**Pb**	**20 42 10.1**	**-0.8**
ARLS	baz=19			⇓*i*S	**Sg**	**20 42 22.6**	**-0.4**
SGDS	**Sogindy**	**0.93**	**339**	P	**Pb**	**20 42 10.7**	**-0.3**
SGDS	35nm,0.1s 27nm,0.1s			S	**Sg**	**20 42 23.6**	**+0.4**
EKS2	**Erkin-Say**	**0.98**	**275**	⇑*i*P	**Pb**	**20 42 11.2**	**-0.6**
EKS2	baz=76			⇑*i*S	**Sg**	**20 42 24.6**	**-0.1**
EKS2	**Erkin-Say**	**0.98**	**275**	⇑P	**Pg**	**20 42 12.2**	**+0.3**
EKS2	12nm,0.1s,SNR=79 16nm,0.2s			⇓S	**Sn**	**20 42 25.7**	**-0.5**
MTBS	**Maitube**	**1.12**	**60**	*e*P	**Pn**	**20 42 14.1**	**-0.3**
MTBS	baz=60			*e*S	**Sn**	**20 42 29.1**	**-0.6**
MTBS	**Maitube**	**1.12**	**60**	*e*P	**Pn**	**20 42 14.1**	**-0.3**
MTBS	24nm,0.1s 112nm,0.2s			*e*S	**Sn**	**20 42 29.0**	**-0.6**
MTBS	**Maitube**	**1.12**	**60**	P	**Pn**	**20 42 14.0**	**-0.3**
MTBS	24nm,0.1s 112nm,0.2s			S	**Sn**	**20 42 29.0**	**-0.6**
AML	**Almayashu**	**1.14**	**247**	⇓*i*P	**Pb**	**20 42 13.8**	**-0.9**
AML	baz=48			⇓*i*S	**Sn**	**20 42 29.5**	**-1.0**
AML	**Almayashu**	**1.14**	**247**	P	**Pg**	**20 42 14.6**	**-0.3**
AML	7.5nm,0.1s,SNR=12 34nm,0.2s			⇓S	**Sg**	**20 42 29.7**	**0.0**
KRBS	**Karabastau**	**1.19**	**21**	*e*P	**Pn**	**20 42 14.5**	**-0.8**
KRBS	baz=20			*e*S	**Sb**	**20 42 30.2**	**-0.5**
KRBS	**Karabastau**	**1.19**	**21**	*e*P	**Pn**	**20 42 14.5**	**-0.8**
KRBS	4.0nm,0.2s 40nm,0.2s			*e*S	**Sb**	**20 42 30.2**	**-0.5**
KRBS	**Karabastau**	**1.19**	**21**	P	**Pn**	**20 42 14.5**	**-0.8**
KRBS	4.0nm,0.2s 40nm,0.2s			S	**Sb**	**20 42 30.2**	**-0.5**
IZV	**Izvestkoviy**	**1.20**	**67**	*e*P	**Pb**	**20 42 15.5**	**-0.2**
IZV	baz=67			*e*S	**Sg**	**20 42 31.7**	**-0.1**
IZV	**Izvestkoviy**	**1.20**	**67**	*e*P	**Pb**	**20 42 15.5**	**-0.1**
IZV	22nm,0.1s 38nm,0.2s			*e*S	**Sg**	**20 42 31.7**	**-0.1**
IZV	**Izvestkoviy**	**1.20**	**67**	P	**Pb**	**20 42 15.5**	**-0.1**
IZV	22nm,0.1s 38nm,0.2s			S	**Sg**	**20 42 31.7**	**-0.1**
MRKS	**Merke**	**1.39**	**277**	*e*P	**Pb**	**20 42 18.8**	**0.0**
MRKS	baz=78			*e*S	**Sg**	**20 42 37.5**	**-0.3**
MRKS	**Merke**	**1.39**	**277**	*e*P	**Pb**	**20 42 18.8**	**0.0**
MRKS	12nm,0.2s 49nm,0.2s			*e*S	**Sg**	**20 42 37.5**	**-0.3**
MRKS	**Merke**	**1.39**	**277**	P	**Pb**	**20 42 18.8**	**0.0**
MRKS	12nm,0.2s 49nm,0.2s			S	**Sg**	**20 42 37.5**	**-0.3**
TNSS	**Tian-Shan**	**1.43**	**71**	*e*P	**Pb**	**20 42 19.6**	**-0.2**
TNSS	baz=70			*e*S	**Sg**	**20 42 38.7**	**-0.6**
TNSS	**Tian-Shan**	**1.43**	**71**	*e*P	**Pb**	**20 42 19.6**	**-0.2**
TNSS	11nm,0.2s 16nm,0.2s			*e*S	**Sg**	**20 42 38.7**	**-0.6**
TNSS	**Tian-Shan**	**1.43**	**71**	P	**Pb**	**20 42 19.6**	**-0.2**
TNSS	11nm,0.2s 16nm,0.2s			S	**Sg**	**20 42 38.7**	**-0.6**
AAA	**Alma-Ata**	**1.47**	**64**	*e*P	**Pb**	**20 42 20.3**	**+0.1**
AAA	baz=64			*e*S	**Sg**	**20 42 40.1**	**-0.3**
AAA	**Alma-Ata**	**1.47**	**64**	*e*P	**Pb**	**20 42 20.3**	**+0.1**
AAA	38nm,0.2s 37nm,0.2s			*e*S	**Sg**	**20 42 40.1**	**-0.3**
AAA	**Alma-Ata**	**1.47**	**64**	P	**Pb**	**20 42 20.3**	**+0.1**
AAA	38nm,0.2s 37nm,0.2s			S	**Sg**	**20 42 40.1**	**-0.3**
KNDC	**Almaty**	**1.51**	**65**	⇓P	**Pg**	**20 42 21.4**	**-0.7**
KNDC	23nm,0.3s 45nm,0.3s			⇑S	**Sg**	**20 42 42.0**	**+0.3**
MDOK	**Medeo**	**1.54**	**67**	*e*P	**Pb**	**20 42 21.6**	**+0.1**
MDOK	baz=67			*e*S	**Sg**	**20 42 42.3**	**-0.5**
MDOK	**Medeo**	**1.54**	**67**	*e*P	**Pb**	**20 42 21.6**	**+0.1**
MDOK	20nm,0.4s 24nm,0.3s			*e*S	**Sg**	**20 42 42.3**	**-0.5**
MDOK	**Medeo**	**1.54**	**67**	⇑P	**Pb**	**20 42 21.5**	**0.0**
MDOK	7.5nm,0.3s 17nm,0.4s			⇑S	**Sg**	**20 42 42.4**	**-0.5**
MDOK	**Medeo**	**1.54**	**67**	Pg	**Pb**	**20 42 21.6**	**+0.1**
MDOK	20nm,0.4s 24nm,0.3s			Lg	Lg	20 42 42.3	
KDJ	**Kajisay**	**1.61**	**106**	⇓*i*P	**Pb**	**20 42 22.2**	**-0.4**
KDJ	baz=5.0 baz=5.0			⇓*i*S	**Sg**	**20 42 43.5**	**-1.3**
KOTS	**Kotyrbulak**	**1.61**	**66**	*e*P	**Pg**	**20 42

SATY	**Saty**	**2.48**	**78**	*eP*		**Pb**	**20 42 37.9**	**+0.5**
	19nm,0.3s								
SATY				*eS*		**Sg**	**20 43 10.7**	**-2.0**
	18nm,0.2s								
SATY	**Saty**	**2.48**	**78**	Pg		**Pb**	**20 42 37.9**	**+0.5**
	19nm,0.3s								
SATY				Lg		Lg	20 43 10.7		
	18nm,0.2s								
ARXS	**Arharly**	**2.57**	**50**	*eP*		**Pb**	**20 42 38.7**	**-0.2**
	13nm,0.3s								
ARXS				*eS*		**Sg**	**20 43 12.8**	**-2.7**
	45nm,0.3s								
ARXS	**Arharly**	**2.57**	**50**	Pg		**Pb**	**20 42 38.7**	**-0.2**
	13nm,0.3s								
ARXS				Lg		Lg	20 43 12.8		
	45nm,0.3s								
BTLS	**Baital**	**2.57**	**343**	*eP*		**Pb**	**20 42 39.4**	**+0.5**
	10nm,0.3s								
BTLS				*eS*		**Sb**	**20 43 12.8**	**+2.5**
	2.9nm,0.3s								
BTLS	**Baital**	**2.57**	**343**	Pg		**Pb**	**20 42 39.4**	**+0.5**
	10nm,0.3s								
BTLS				Lg		Lg	20 43 12.8		
	2.9nm,0.3s								
OHH	**Osh**	**2.69**	**221⇑**	*eP*		**Pn**	**20 42 37.5**	**+1.5**
	baz=21								
OHH				*⇑iS*		**Sb**	**20 43 10.8**	**-3.2**
	baz=21								
SFK	**Sufi-Kurgan**	**2.84**	**206⇑**	*iP*		**Pn**	**20 42 39.8**	**+1.7**
	baz=6.0								
SFK				*⇑iS*		**Sn**	**20 43 14.0**	**+1.8**
	baz=6.0								
UZB	**Uzynbulak**	**2.94**	**78**	*eP*		**Pb**	**20 42 45.2**	**0.0**
	7.2nm,0.5s								
UZB				*eS*		**Sb**	**20 43 23.6**	**+2.5**
	17nm,0.3s								
UZB	**Uzynbulak**	**2.94**	**78**	Pg		**Pb**	**20 42 45.2**	**0.0**
	7.2nm,0.5s								
UZB				Lg		Lg	20 43 23.6		
	17nm,0.3s								
TRKS	**Terek-Say**	**3.13**	**252⇑**	*eP*		**Pn**	**20 42 44.0**	**+1.9**
	baz=51								
TRKS				*⇑iS*		**Sn**	**20 43 21.6**	**+2.2**
	baz=51								
SHLS	**Shalkode**	**3.26**	**78**	*eP*		**Pg**	**20 42 58.8**	**+3.4**
	4.0nm,0.1s								
SHLS				*eS*		**Sg**	**20 43 46.0**	**+8.4**
	13nm,0.3s								
SHLS	**Shalkode**	**3.26**	**78**	Pg		**Pg**	**20 42 58.8**	**+3.4**
	4.0nm,0.1s								
SHLS				Lg		Lg	20 43 46.0		
	13nm,0.3s								
PDGK	**Podgornoye**	**3.31**	**76**	Pg		**Pb**	**20 42 51.9**	**+0.4**
	4.5nm,0.7s								
PDGK				Lg		Lg	20 43 35.2		
	3.7nm,0.8s								
PDGK	**Podgornoye**	**3.31**	**76**	*⇑*Pg		**Pb**	**20 42 51.2**	**-0.3**
	6.9nm,0.6s								
PDGK				*⇑*Lg		Lg	20 43 36.7		
	9.0nm,0.6s								
TDK	**Taldyqorghan**	**3.40**	**44**	*eP*		**Pg**	**20 42 57.0**	**-1.2**
	9.0nm,0.1s								
TDK				*eS*		**Sg**	**20 43 43.2**	**+1.0**
	14nm,0.2s								
TDK	**Taldyqorghan**	**3.40**	**44**	Pg		**Pg**	**20 42 57.0**	**-1.2**
	9.0nm,0.1s								
TDK				Lg		Lg	20 43 43.2		
	14nm,0.2s								
KK31	**Karatay Array**	**3.41**	**280**	*⇓*Pg		**Pg**	**20 42 56.9**	**-1.4**
	0.4nm,0.3s,baz=97,slow=15,SNR=10.0								
KK31				*⇑*Lg		Lg	20 43 38.0		
	2.0nm,0.3s,baz=99,slow=30,SNR=12								
IUG	**Iuzhnay**	**3.78**	**265**	*eP*		**Pg**	**20 43 03.4**	**-2.0**
	41nm,0.4s								
IUG				*eS*		**Sg**	**20 43 54.0**	**-0.3**
	18nm,0.5s								
IUG	**Iuzhnay**	**3.78**	**265**	Pg		**Pg**	**20 43 03.4**	**-2.0**
	41nm,0.4s								
IUG				Lg		Lg	20 43 54.1		
	18nm,0.5s								

IDC ***26*** *20:56:31.1±0.8, 28°.99S×178°.52W, h200km±7km, mb3.3/4, mb1 3.4/4, mb1mx3.3/21, mbtmp3.8/4, Error ellipse: s-maj=34.4km s-min=24.5km az=38.0*

ISC 26 20:56:31.7±0.8, 29°.4S±0°.1×178°.7W±0°.2, h200km, n10, σ1°72/13, **mb3.4/4, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.69**	**78**	P		**Pn**	**20 56 59.0**	**-0.6**
	179nm,0.3s,baz=96,slow=23,SNR=5.4							
RAO				S		**Sn**	**20 57 20.6**	**-0.6**
	159nm,0.3s,baz=57,slow=22,SNR=3.9							
URZ	**Urewera**	**9.50**	**200**	P		**Pn**	**20 58 44.1**	**-0.2**
	0.4nm,0.3s,baz=124,slow=22,SNR=1.0							
URZ				S		**Sn**	**21 00 27.5**	**-3.1**
	3.8nm,0.3s,baz=237,slow=23,SNR=6.5							
ASAR	**Alice Springs**	**42.57**	**266**	P		**P**	**21 04 08.7**	**+0.5**
	0.4nm,0.5s,baz=100,slow=7.1,SNR=11							
ASAR				PcP		**PcP**	**21 05 56.8**	**+0.1**
	0.3nm,0.7s,baz=120,slow=4.2,SNR=4.8							
WRA	**Warramunga Arr**	**43.46**	**271**	P		**P**	**21 04 16.0**	**+0.7**
	0.7nm,0.3s,baz=109,slow=7.8,SNR=14							
VNDA	**Vanda**	**49.03**	**186**	P		**P**	**21 05 01.0**	**+3.2**
	0.4nm,0.6s,baz=355,slow=9.0,SNR=6.1							
MAW	**Mawson**	**73.03**	**201**	P		**P**	**21 07 40.6**	**+1.4**
	1.2nm,0.7s,baz=166,slow=4.2,SNR=1.6							
FINES	**FINESS Array B**	**144.00**	**340**	PKP		**PKPab**	**21 15 39.6**	**-0.9**
	0.6nm,0.3s,baz=55,slow=3.4,SNR=14							
NOA	**NORSAR Array B**	**147.67**	**351**	PKPbc		**PKPbc**	**21 15 50.5**	**-1.5**
	0.2nm,0.6s,baz=38,slow=3.0,SNR=1.3							
AKASG	**Malin Array Be**	**150.14**	**323**	PKPbc		**PKPbc**	**21 15 56.6**	**-1.7**
	0.3nm,0.3s,baz=50,slow=3.0,SNR=2.5							
TORD	**Torodi Ar. Bea**	**163.82**	**181**	PKPab		**PKPab**	**21 17 04.8**	**+0.1**
	0.3nm,0.6s,baz=189,slow=2.4,SNR=2.7							

NEIC ***26*** *21:10:30.0±1.1, 14°.33S±0°.07×73°.68W±0°.08, h62km±6km, mb4.6/88, Error ellipse: s-maj=12.3km s-min=7.6km az=49.0*

IDC ***26*** *21:10:30.7±1.7, 14°.14S×73°.48W, h61km±15km, mb4.1/14, mb1 4.4/19, mb1mx4.3/30, mbtmp4.4/19, MS3.4/8, Ms1 3.4/8, ms1mx3.1/33, Error ellipse: s-maj=20.7km s-min=10.4km az=45.0*

VAO ***26*** *21:10:32.7±0.3, 14°.28S×73°.35W, h60km, mb4.7*

ISC 26 21:10:32.4±0.3, 14°.34S±0°.04×73°.63W±0°.06, h87km, n246, σ1°54/244, **mb4.6/53, 1C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.91**	**306**	P		**Pn**	**21 11 29.5**	**-0.7**
	82nm,0.3s,baz=130,slow=10,SNR=109							
NNA				S		**Sn**	**21 12 13.0**	**-2.1**
	56nm,0.3s,baz=222,slow=20,SNR=6.7							
NNA	**Nana**	**3.91**	**306**	Pn		**Pn**	**21 11 29.4**	**-0.9**
NNA						**Sn**	**21 12 10.7**	**-4.5**
AP01	**Chacalluta**	**5.10**	**142**			**Pn**	**21 11 44.8**	**-1.6**
PB16	**IPOC Station P**	**5.60**	**136**			**Pn**	**21 11 54.8**	**+1.0**
PB16						**Sn**	**21 12 56.2**	**-1.0**
LPAZ	**La Paz**	**5.64**	**111**	P		**Pn**	**21 11 56.9**	**+2.5**
	37nm,0.3s,baz=295,slow=10,SNR=630							
LPAZ				S		**Sn**	**21 13 00.2**	**+2.0**
	baz=193,slow=22,SNR=1.8							
LPAZ				LR		LR	21 14 00.6	
	comp=Z,274nm,18.1s,baz=288,slow=38							
LPAZ	**La Paz**	**5.64**	**111**	Pn		**Pn**	**21 11 56.5**	**+2.1**
LPAZ						**Sn**	**21 12 55.7**	**-2.5**
MNMC	**Minye Minye**	**6.13**	**142**			**Pn**	**21 11 59.7**	**-1.1**
PSGC	**Pisagua**	**6.21**	**148**	*eP*		**Pn**	**21 12 00.0**	**-1.6**
PSGC				*i* S		**Sn**	**21 13 05.3**	**-6.0**
PSGCX	**Pisagua**	**6.21**	**148**	Pn		**Pn**	**21 12 00.0**	**-1.6**
PB11	**IPOC Station P**	**6.59**	**145**	*eP*		**Pn**	**21 12 05.0**	**-1.8**
PB11				*i* S		**Sn**	**21 13 15.8**	**-5.0**
PB11	**IPOC Station P**	**6.59**	**145**	Pn		**Pn**	**21 12 05.1**	**-1.8**
CZSB	**Cruzeiro do Su**	**6.63**	**8**	*eP*		**Pn**	**21 12 04.8**	**-2.6**
TA02	**Huaiquique**	**6.78**	**151**	*eP*		**Pn**	**21 12 07.9**	**-1.4**
TA02	**Huaiquique**	**6.78**	**151**			**Pn**	**21 12 08.0**	**-1.2**
HMBC	**Humberstone**	**6.90**	**149**	*eP*		**Pn**	**21 12 09.2**	**-1.9**
TA01	**Diego Aracena**	**7.01**	**153**	*eP*		**Pn**	**21 12 10.6**	**-1.8**
TA01	**Diego Aracena**	**7.01**	**153**			**Pn**	**21 12 10.6**	**-1.8**
PB08	**IPOC Station P**	**7.18**	**144**	*eP*		**Pn**	**21 12 14.0**	**-1.1**
PB08	**IPOC Station P**	**7.18**	**144**			**Pn**	**21 12 13.6**	**-1.5**
PATCX	**Punta Patache**	**7.25**	**153**			**Pn**	**21 12 13.6**	**-2.1**
PB01	**IPOC Station P**	**7.74**	**150**	*eP*		**Pn**	**21 12 20.5**	**-2.1**
PB01	**IPOC Station P**	**7.74**	**150**			**Pn**	**21 12 20.5**	**-2.1**
PB07	**IPOC Station P**	**8.16**	**155**	*eP*		**Pn**	**21 12 26.2**	**-2.1**
PB07	**IPOC Station P**	**8.16**	**155**			**Pn**	**21 12 26.0**	**-2.3**
PB03	**IPOC Station P**	**8.50**	**155**	*eP*		**Pn**	**21 12 30.8**	**-2.2**
PB09	**IPOC Station P**	**8.51**	**151**	*eP*		**Pn**	**21 12 32.0**	**-1.0**
PB09	**IPOC Station P**	**8.51**	**151**			**Pn**	**21 12 31.5**	**-1.5**
ETMB	**Extrema**	**8.53**	**59**	*eP*		**Pn**	**21 12 29.9**	**-3.3**
ATAH	**Atahualpa**	**8.56**	**326**	P		**Pn**	**21 12 32.2**	**-1.8**
	3.3nm,0.3s,baz=150,slow=12,SNR=12							
ATAH				S		**Sn**	**21 14 06.3**	**-2.8**
	1.3nm,0.3s,baz=58,slow=16,SNR=1.5							
PB04	**IPOC Station P**	**8.61**	**158**	*eP*		**Pn**	**21 12 31.5**	**-2.9**
PB04	**IPOC Station P**	**8.61**	**158**			**Pn**	**21 12 31.7**	**-2.7**
PB04						**Sn**	**21 14 05.8**	**-4.2**
PB05	**IPOC Station P**	**9.07**	**160⇑**	*eP*		**Pn**	**21 12 37.8**	**-2.8**
PB06	**IPOC Station P**	**9.16**	**156**	*eP*		**Pn**	**21 12 39.5**	**-2.5**
PB06	**IPOC Station P**	**9.16**	**156**			**Pn**	**21 12 39.0**	**-3.0**
LVC	**Limon Verde**	**9.36**	**152**	P		**Pn**	**21 12 43.9**	**-0.9**
	6.6nm,0.3s,baz=7.9,slow=7.0,SNR=44							
LVC				S		**Sn**	**21 14 23.8**	**-4.8**
	1.5nm,0.3s,baz=213,slow=21,SNR=3.1							
LVC	**Limon Verde**	**9.36**	**152**	Pn		**Pn**	**21 12 44.0**	**-0.8**
LVC	**Limon Verde**	**9.36**	**152**	*eP*		**Pn**	**21 12 44.0**	**-0.9**
PB10	**IPOC Station P**	**9.57**	**163**	Pn		**Pn**	**21 12 44.7**	**-2.7**
PB15	**IPOC Station P**	**9.66**	**157**			**Pn**	**21 12 46.7**	**-2.0**
PB15						**Sn**	**21 14 33.5**	**-2.1**
GO02	**Mina Guanaco**	**11.41**	**161**	Pn		**Pn**	**21 13 11.1**	**-1.6**
SAML	**Samuel**	**11.55**	**63**			**Pn**	**21 13 10.4**	**-3.9**
SIV	**San Ignacio**	**12.23**	**99**	P		**Pn**	**21 13 22.2**	**-1.3**
	6.3nm,0.3s,baz=282,slow=11,SNR=59							
AC02	**Maricunga**	**13.12**	**162**	Pn		**Pn**	**21 13 35.0**	**-0.8**
VILB	**Vilhena**	**13.12**	**86**	*eP*		**Pn**	**21 13 31.9**	**-3.6**
GO03	**Copiap**	**13.56**	**167**	Pn		**Pn**	**21 13 42.2**	**+1.0**
GO03						**Sn**	**21 16 06.5**	**-3.8**
AC04	**Llanos de Chal**	**14.00**	**171**			**Pn**	**21 13 46.6**	**-0.3**
PTLB	**Pontes e Lacer**	**14.05**	**96**	*eP*		**Pn**	**21 13 43.4**	**-4.2**
PTLC	**Puerto Leguiza**	**14.47**	**355**	*eP*		Pn	21 13 43.9	-9.1
LCO	**Las Campanas**	**14.85**	**170**	Pn		**Pn**	**21 13 57.7**	**-0.4**
OTAV	**Otavalo**	**15.25**	**341**	Pn		**Pn**	**21 14 02.2**	**-1.3**
OTAV	**Otavalo**	**15.25**	**341**	*eP*		**Pn**	**21 14 02.2**	**-0.3**
OTAV	**Otavalo**	**15.25**	**341**	*eP*		**Pn**	**21 14 05.6**	**-0.9**
GCUF	**Volcan Galeras**	**15.90**	**346**	*eP*		**Pn**	**21 14 08.7**	**-3.0**
GO04	**Tololo Observa**	**15.97**	**171**	P		**Pn**	**21 14 10.5**	**-1.7**
GO04						IAmb	IAmb	21 14 17.8
	comp=Z,61nm,1.0s							
CRUC	**La Cruz**	**16.15**	**348**	*eP*		**Pn**	**21 14 15.1**	**+0.5**
MACC	**Macarena, Meta**	**16.38**	**359**	*eP*		**Pn**	**21 14 15.1**	**-2.1**
GARC	**Garzon, Huila**	**16.53**	**353**	*eP*		**Pn**	**21 14 20.2**	**+0.9**
SOTA	**Rioblanco**	**16.64**	**350**	*eP*		**Pn**	**21 14 20.8**	**0.0**
CO03	**El Pedregal**	**16.64**	**171**	P		**Pn**	**21 14 18.4**	**-2.0**
PCON	**Cinco Dias**	**16.79**	**350**	*eP*		**Pn**	**21 14 22.5**	**-0.3**
MACA	**Manacapuru-AM**	**16.93**	**50**	*eP*		**Pn**	**21 14 22.9**	**-1.1**
CO02	**Combarbal**	**16.96**	**172**			**P**	**21 14 24.2**	**-0.7**
BETC	**Betania**	**17.01**	**354**	*eP*		**Pn**	**21 14 22.2**	**-2.8**
MARP	**Paez Belalcaza**	**17.23**	**352**	*eP*		**Pn**	**21 14 27.6**	**-0.3**
ZON	**Zonda**	**17.77**	**166**			**Pn**	**21 14 33.3**	**-0.2**
CLDB	**Colider**	**17.74**	**81**	*eP*		**P**	**21 14 33.2**	**-0.4**
AQDB	**Aquidauana**	**18.16**	**112**	*eP*		**Pn**	**21 14 37.9**	**-1.0**
PP1B	**Ponte de Pedra**	**18.31**	**103**	*eP*		**Pn**	**21 14 40.0**	**-0.8**
VILC	**Villavicencio,**	**18.33**	**360**	*eP*		**Pn**	**21 14 41.1**	**0.0**
YOTC	**Yotoco, Valle**	**18.41**	**351**	*eP*		**P**	**21 14 36.3**	**-4.6**
VA03	**San Esteban**	**18.55**	**172**	Pn		**Pn**	**21 14 43.7**	**+0.1**
ANIL	**Santa Ana**	**18.79**	**354**	*eP*		**Pn**	**21 14 47.7**	**+0.9**
CHIC	**Chingaza**	**18.85**	**360**	*eP*		**Pn**	**21 14 49.9**	**+2.3**
TOLC	**Tolima**	**18.88**	**355**	*eP*		**Pn**	**21 14 47.7**	**-0.2**
PEL	**Peldehue**	**18.91**	**172**	P		**Pn**	**21 14 46.4**	**-1.4**
PEL						IAmb	IAmb	21 14 50.1
	comp=Z,27nm,0.7s							
MT02	**Curacav**	**18.97**	**174**	P		**Pn**	**21 14 49.0**	**+0.5**
ROSC	**El Rosal**	**19.07**	**358**	P		**Pn**	**21 14 50.8**	**+0.6**
	comp=Z,3.1nm,0.3s,baz=174,slow=5.8,SNR=13							
ROSC				LR		LR	21 23 02.0	
	comp=Z,102nm,20.4s,baz=78,slow=40							
ROSC	**El Rosal**	**19.07**	**358**	P		**P**	**21 14 47.5**	**-1.1**
ROSC	**El Rosal**	**19.07**	**358**	*eP*		**Pn**	**21 14 51.8**	**+1.6**
PTGA	**Pitinga**	**19.12**	**46**	Pn		**Pn**	**21 14 51.1**	**+0.7**
NPGB	**Novo Progresso**	**19.35**	**70**	*eP*		**P**	**21 14 49.4**	**-1.9**
CPUP	**Villa Florida**	**19.36**	**131**	P		**Pn**	**21 14 52.5**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=310,slow=11,SNR=36							
CPUP				LR		LR	21 23 59.3	
	comp=Z,145nm,21.5s,baz=314,slow=42							
CPUP	**Villa Florida**	**19.36**	**131**			**Pn**	**21 14 52.0**	**-1.2**
CPUP	**Villa Florida**	**19.36**	**131**	*eP*		**Pn**	**21 14 52.7**	**-0.5**
MT09	**Talagante**	**19.50**	**173**	P		**Pn**	**21 14 53.3**	**-1.5**
GUY2C	**Guyana, Caldas**	**19.52**	**355**	*eP*		**Pn**	**21 14 55.9**	**+0.3**
MT01	**Popeta**	**19.56**	**174**	P		**Pn**	**21 14 54.1**	**-1.3**
MT01						IAmb	IAmb	21 14 59.5
	comp=Z,21nm,0.8s							
H03N1	**Juan Fernandez**	**19.61**	**193**	T		T	21 33 45.9	
	baz=17,slow=74,SNR=117							
H03N2	**Juan Fernandez**	**19.61**	**193**	T		T	21 33 47.0	
	baz=17,slow=74,SNR=62							
H03N3	**Juan Fernandez**	**19.63**	**193**	T		T	21 33 44.6	
	baz=17,slow=74,SNR=46							
NORC	**Norcasia**	**19.81**	**356**	*eP*		**P**	**21 14 56.7**	**+0.5**
SPBC	**San Pablo de B**	**19.87**	**359**	*eP*		**P**	**21 14 57.4**	**+0.5**
BO01	**Tunca**	**20.09**	**174**	P		Pn	21 14 59.8	-1.8
RUSC	**La Rusia**	**20.11**	**2**	*eP*		**P**	**21 14 59.2**	**-0.7**
ITTB	**Itaituba**	**20.23**	**62**	*eP*		**P**	**21 15 00.5**	**-0.2**
HELC	**Santa Helena**	**20.49**	**355**	*eP*		**P**	**21 15 04.6**	**+0.8**
BO02	**Sierra Bellavi**	**20.52**	**173**	P		Pn	21 15 04.3	-2.4
BO02						IAmb	IAmb	21 15 08.7
	comp=Z,30nm,0.8s							
PTBC	**PUERTO BERRIO,**	**20.76**	**358**	*eP*		**P**	**21 15 06.1**	**-0.4**
BARC	**Barichara**	**20.80**	**1**	*eP*		**P**	**21 15 06.9**	**-0.2**
BOAV	**Boa Vista**	**21.10**	**39**	*eP*		**P**	**21 15 13.0**	**+3.0**
ARAG	**Araguaiana, MT**	**21.11**	**96**	*eP*		**P**	**21 15 10.7**	**+0.5**
TRCB	**Terra Rica**	**21.58**	**116**	*eP*		**P**	**21 15 14.6**	**-0.6**
ZARC	**Zaragoza, Cauc**	**21.73**	**357**	*eP*		**P**	**21 15 15.3**	**-1.5**
SNDB	**Serra Nova Dou**	**21.87**	**86**	*eP*		**P**	**21 15 18.1**	**-0.3**
ITQB	**Itaqui**	**21.89**	**137**	*eP*		**P**	**21 15 19.9**	**+1.5**
UREC	**San Jos de Ur**	**22.03**	**355**	*eP*		**P**	**21 15 22.5**	**+2.5**
BI02	**San Fabin de**	**22.33**	**175**	P		**P**	**21 15 25.1**	**+2.0**
BI02						IAmb	IAmb	21 15 32.0
	comp=Z,18nm,0.8s							
PCMB	**Pacaembu**	**22.45**	**112**	*eP*		**P**	**21 15 25.0**	**+0.5**
PTGB	**Pitanga**	**22.76**	**120**	*eP*		**P**	**21 15 27.2**	**-0.6**
MALB	**Monte Alegre**	**22.80**	**59**	*eP*		**P**	**21 15 28.3**	**+0.1**
ITRB	**Iturama**	**22.87**	**107**	*eP*		**P**	**21 15 29.1**	**+0.3**
SMLC	**San Martn de**	**23.00**	**359**	*eP*		**P**	**21 15 27.7**	**-2.4**
MOTC	**Monteria, Cord**	**23.06**	**355**	*eP*		**P**	**21 15 28.5**	**-2.2**
SDV	**Santo Domingo**	**23.27**	**8**	P		**P**	**21 15 31.0**	**-1.9**
	comp=Z,5.2nm,0.3s,baz=19,slow=16,SNR=1.6							
ITAB	**Conc dia**	**23.79**	**126**	*eP*		**P**	**21 15 38.4**	**+1.1**
SJCC	**San Jacinto, C**	**24.13**	**356**	*eP*		**P**	**21 15 41.8**	**+1.4**
FRTB	**Fartura**	**24.44**	**115**	*eP*		**P**	**21 15 44.2**	**+1.0**
CPSB	**Cacapava Do Su**	**24.51**	**134**	*eP*		**P**	**21 15 44.9**	**+1.1**
PEXB	**Peixe**	**24.75**	**88**	*eP*		**P**	**21 15 45.6**	**-0.5**
BDFB	**Brasilia**	**24.77**	**96**	P		**P**	**21 15 44.7**	**-1.7**
	comp=Z,2.5nm,0.5s,baz=275,slow=11,SNR=7.0							
BDFB	**Brasilia**	**24.77**	**96**	P		**P**	**21 15 46.2**	**-0.2**
PRPB	**Parauapebas**	**24.78**	**73**	*eP*		**P**	**21 15 47.5**	**+1.2**
BB19B	**Bebedouro**	**24.81**	**109**	*eP*		**P**	**21 15 47.4**	**+0.8**
PLTB	**Pedras Altas**	**25.23**	**137**	*eP*		**P**	**21 15 51.1**	**+0.8**
CNLB	**Canela**	**25.79**	**129**	*eP*		**P**	**21 15 56.1**	**+0.6**
RCLB	**Rio Claro- Sao**	**26.00**	**112**	*eP*		**P**	**21 15 58.4**	**+0.9**
SMTB	**Santa Maria do**	**26.07**	**81**	*eP*		**P**	**21 15 58.4**	**+0.3**
SPB	**Sao Paulo**	**26.39**	**114**	*eP*		**P**	**21 15 58.3**	**-2.6**
PLCA	**Paso Flores**	**26.43**	**175**	P		**P**	**21 16 03.4**	**+2.2**
	comp=Z,2.5nm,0.8s,baz=340,slow=13,SNR=5.1							
VAO	**Valinhos**	**26.65**	**113**	*eP*		**P**	**21 16 04.3**	**+1.0**
TER01	**Tubaro-SC**	**26.75**	**126**	*eP*		**P**	**21 16 04.3**	**+0.3**
JANB	**Januaria**	**28.36**	**95**	*eP*		**P**	**21 16 18.9**	**+0.3**
DUB01	**Friburgo-RJ**	**30.62**	**109**	*eP*		**P**	**21 16 40.0**	**+1.3**
GDU01	**Guandu, BA**	**33.02**	**93**	*eP*		**P**	**21 16 59.9**	**+0.1**
NBPB	**Pedra_Branca-C**	**34.61**	**79**	*eP*		**P**	**21 17 14.2**	**+0.7**
RCBR	**Riachuelo**	**38.04**	**81**	*eP*		**P**	**21 17 42.4**	**-0.4**
NBRF	**Rio Formoso -**	**38.11**	**86**	*eP*		**P**	**21 17 44.5**	**+1.2**
PMSA	**Palmer Station**	**50.80**	**175**	*eP*		**P**	**21 19 26.6**	**+3.0**
MIAR	**Mount Ida**	**52.19**	**339**			**P**	**21 19 34.6**	**+0.3**
MIAR						IAmb	IAmb	21 19 35.3
	comp=Z,6.2nm,0.8s							
TX31	**Lajitas Ar. Si**	**52.22**	**326**			**P**	**21 19 34.2**	**-0.6**
TXAR	**Lajitas Array**	**52.22**	**326**	P		**P**	**21 19 35.3**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=141,slow=8.1,SNR=11							
TXAR	**Lajitas Array**	**52.22**	**326**			**P**	**21 19 34.7**	**-0.1**
WCI	**Wyandotte Cave**	**53.62**	**348**			**P**	**21 19 43.8**	**-1.1**
Q44A	**Meyer Farm, Va**	**54.89**	**345**	P		**P**	**21 19 53.4**	**-0.6**
MSTX	**Muleshoe**	**55.49**	**331**	P		**P**	**21 19 58.3**	**-0.2**
MSTX						IAmb	IAmb	21 20 00.2
	comp=Z,7.9nm,1.1s							
121A	**Cookes Peak, D**	**56.92**	**326**	P		**P**	**21 20 08.7**	**-0.3**
121A						IAmb	IAmb	21 20 15.7
	comp=Z,8.2nm,1.1s							
R32A	**Long Quarter,**	**57.51**	**337**	P		**P**	**21 20 12.4**	**-0.3**
L42A	**Oliver, Polo**	**57.98**	**346**	P		**P**	**21 20 16.4**	**+0.5**
ANMO	**Albuquerque**	**58.08**	**328**			**P**	**21 20 16.2**	**-0.9**
J47A	**Sunmer**	**58.21**	**350**	P		**P**	**21 20 16.6**	**-0.8**
DELO	**Deloro Mine**	**58.69**	**357**	P		**P**	**21 20 20.6**	**-0.1**
T25A	**Trinidad**	**58.84**	**331**	P		**P**	**21 20 21.5**	**-0.7**
X16A	**Lo Mia Camp, P**	**60.36**	**324**	P		**P**	**21 20 32.7**	**-0.1**
X16A						IAmb	IAmb	21 20 35.2
	comp=Z,4.7nm,0.8s							
MVCO	**Mesa Verde**	**60.88**	**328**	P		**P**	**21 20 36.3**	**0.0**
MVCO						IAmb	IAmb	21 20 38.0
	comp=Z,3.2nm,0.8s							
Y14A	**Wickenburg**	**60.92**	**323**	P		**P**	**21 20 36.7**	**+0.3**
Y14A						IAmb	IAmb	21 20 38.2
	comp=Z,4.6nm,0.7s							
WUAZ	**Wupatki**	**61.13**	**325**	P		**P**	**21 20 37.9**	**0.0**
ISCO	**Idaho Springs**	**61.55**	**332**			**P**	**21 20 40.7**	**-0.1**
ISCO						IAmb	IAmb	21 20 42.6
	comp=Z,5.7nm,1.1s							
PV01	**Paradox Valley**	**61.63**	**329**	P		**P**	**21 20 41.4**	**+0.1**
PV01						IAmb	IAmb	21 20 43.5
	comp=Z,7.8nm,1.0s							
SMCO	**Snowmass**	**61.68**	**331**			**P**	**21 20 41.8**	**-0.1**
SMCO						IAmb	IAmb	21 20 43.9
	comp=Z,4.8nm,0.8s							
PV15	**Paradox Valley**	**61.75**	**329**	P		**P**	**21 20 42.1**	**0.0**
PV13	**Radium Mtn., P**	**61.77**	**329**	P		**P**	**21 20 42.1**	**-0.2**
PV13						IAmb	IAmb	21 20 44.1
	comp=Z,5.3nm,0.8s							
SPMN	**Marine on St.**	**61.78**	**345**	P		**P**	**21 20 41.6**	**-0.3**
SPMN						IAmb	IAmb	21 20 43.0
	comp=Z,8.1nm,1.1s							
U15A	**North Rim**	**62.30**	**325**	P		**P**	**21 20 45.9**	**0.0**
U15A						IAmb	IAmb	21 20 48.1
	comp=Z,3.3nm,0.9s							
F36A	**Milaca**	**62.56**	**344**	P		**P**	**21 20 47.1**	**0.0**
F36A						IAmb	IAmb	21 20 47.7
	comp=Z,6.4nm,0.9s							
KNB	**Kanab**	**63.02**	**325**			**P**	**21 20 49.9**	**-0.6**

NEEM	**North Greenlan**	**92.54**	**5**	*i* P		**P**	**21 23 34.8**	**+1.0**
NEEM				IAmb		IAmb	21 23 35.4	
	comp=Z,3.5nm,1.0s							
INK	**Inuvik**	**92.74**	**341**			**P**	**21 23 35.4**	**+1.0**
BCAR	**Beaver Creek A**	**93.15**	**335**		P	**P**	**21 23 37.4**	**+0.8**
K27K	**Chicken**	**93.68**	**336**		P	**P**	**21 23 39.6**	**+0.7**
ILAR	**Eielson Array**	**95.90**	**336**		P	**P**	**21 23 49.2**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=108,slow=2.9,SNR=5.6							
ILAR	**Eielson Array**	**95.90**	**336**		P	**P**	**21 23 49.5**	**+0.5**
MATP	**Matopo**	**96.06**	**113**		LR	LR	22 05 18.5	
	comp=Z,19nm,18.5s,baz=185,slow=34							
MDM	**Murphy Dome**	**96.50**	**336**		P	**P**	**21 23 52.6**	**+0.8**
TRF	**Thorofare Moun**	**96.86**	**334**			**P**	**21 23 54.2**	**+0.6**
BPAW	**Bear Paw Mtn.**	**97.35**	**334**			Pdif	21 23 56.3	+0.5
GERES	**GERESS Array B**	**98.91**	**42**		P	**P**	**21 24 02.9**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=312,slow=6.5,SNR=4.5							
NOA	**NORSAR Array B**	**99.94**	**29**		LR	LR	22 04 58.4	
	comp=Z,6.3nm,21.3s,baz=330,slow=33							
KBZ	**Khabaz**	**118.90**	**48**		PKP	**PKiKP**	**21 29 11.9**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=192,slow=1.0,SNR=4.7							
ASAR	**Alice Springs**	**133.61**	**216**		PKP	**PKiKP**	**21 29 40.8**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=144,slow=1.9,SNR=8.4							
ASAR	**Alice Springs**	**133.61**	**216**			**PKiKP**	**21 29 39.9**	**-1.2**
WRA	**Warramunga Arr**	**136.21**	**220**		PKP	**PKiKP**	**21 29 46.1**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=154,slow=1.7,SNR=7.5							
WRA	**Warramunga Arr**	**136.21**	**220**			**PKPdf**	**21 29 44.5**	**-0.2**
ZALV	**Zalesovo Beam**	**137.00**	**19**		PKP	**PKiKP**	**21 29 46.1**	**-0.8**
	comp=Z,6.9nm,0.8s,baz=303,slow=2.5,SNR=29							
MKAR	**Makanchi Array**	**141.89**	**27**		PKhKP	PKPpre	21 29 51.4	
	comp=Z,0.5nm,0.7s,baz=12,slow=3.5,SNR=1.3							
MJAR	**Matsushiro Ar**	**144.00**	**314**		PKhKP	PKPpre	21 29 54.8	
	comp=Z,1.5nm,0.7s,baz=82,slow=2.5,SNR=4.7							
SONM	**Songino Array**	**146.61**	**360**		PKPbc	**PKPab**	**21 30 05.1**	**-0.3**
	comp=Z,8.5nm,0.7s,baz=325,slow=1.7,SNR=8.5							
KSRS	**Korea Array**	**150.05**	**324**		PKPbc	**PKiKP**	**21 30 14.3**	**+0.1**
	comp=Z,6.5nm,1.0s,baz=340,slow=0.9,SNR=17							
CMAR	**Chiang Mai Arr**	**171.78**	**59**		PKP	**PKPdf**	**21 30 33.0**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=291,slow=2.3,SNR=9.6							

*INET **26** 21:31:36.7,9.46N×84.53W, h5km, MW3.4*
UPA 26 21:31:35.6±1.8, 9.53N×84.59W, h0km±8km, MW4.2, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HDC	**Heredia**	**0.66**	**45**	*i* P	Pb	21 31 50.5	+0.3
HDC				*eS*	Sb	21 32 00.0	+0.1
JTS	**Las Juntas de**	**0.83**	**335**	*i* P	Pb	21 31 53.2	+0.1
JTS				*eS*	Sn	21 32 06.3	-1.4
BATAN	**Batan**	**1.32**	**65**	*eP*	Pg	21 32 01.1	+0.2
BATAN				*eS*	Sn	21 32 19.4	-0.3
DRK0	**Durika**	**1.35**	**101**	*eP*	Pg	21 31 60.0	-1.6
DRK0				*eS*	Sn	21 32 20.6	-0.1
PTJ1	**Puerto Jimnez**	**1.61**	**128**	*eP*	Pn	21 32 04.8	-0.5
PTJ1				*eS*	Sn	21 32 26.5	-0.3
PIRO	**Carate, Puerto**	**1.67**	**132**	*eP*	Pn	21 32 06.4	+0.3
PIRO				*eS*	Sg	21 32 30.3	+1.0
CDITO	**Canoas**	**1.94**	**119**	*eP*	Pn	21 32 08.9	-1.1
BRU2	**Volcan**	**2.01**	**111**	*eP*	Pn	21 32 09.8	-1.2
BRU2				*eS*	Sn	21 32 37.3	+0.4

*IDC **26** 21:35:22.1±1.1, 27.99N×84.58E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.4/57, mbtmp3.5/9, ML3.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/47, Error ellipse: s-maj=37.0km s-min=20.9km az=56.0*
ISC 26 21:35:23.7±1.1, 28.0N±0.2×84.6E±0.2, h10km, n10, σ0s27/9, mb3.6/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.25**	**123**		Pn	**Pn**	**21 39 12.4**	**+0.1**
	0.1nm,0.3s,baz=308,slow=12,SNR=5.6							
MKAR	**Makanchi Array**	**18.83**	**355**		P	**Pn**	**21 39 44.1**	**0.0**
	0.1nm,0.3s,baz=182,slow=11,SNR=4.7							
PALK	**Pallekele**	**20.96**	**191**		LR	LR	21 49 15.5	
	comp=Z,25nm,18.1s,baz=315,slow=40							
KURBB	**Kurchatov Arra**	**23.00**	**350**		P	**P**	**21 40 28.8**	**-0.1**
	0.5nm,0.6s,baz=174,slow=10,SNR=5.8							
SONM	**Songino Array**	**26.06**	**35**		P	**P**	**21 40 57.1**	**-0.3**
	0.4nm,0.5s,baz=227,slow=9.1,SNR=5.4							
FINES	**FINESS Array B**	**50.82**	**328**		P	**P**	**21 44 24.4**	**+0.3**
	0.6nm,0.4s,baz=111,slow=8.2,SNR=13							
ARCES	**ARCESS Array B**	**53.33**	**338**		P	**P**	**21 44 43.0**	**+0.3**
	2.6nm,0.8s,baz=100,slow=9.2,SNR=4.3							
WRA	**Warramunga Arr**	**67.73**	**129**		P	**P**	**21 46 21.9**	**+0.2**
	0.6nm,0.9s,baz=322,slow=6.5,SNR=2.1							
ASAR	**Alice Springs**	**70.01**	**132**		P	**P**	**21 46 35.7**	**-0.2**
	0.3nm,0.6s,baz=310,slow=7.2,SNR=2.4							
TORD	**Torodi Ar. Bea**	**77.75**	**278**		P	**P**	**21 47 21.2**	**-0.3**
	0.3nm,0.6s,baz=66,slow=5.4,SNR=4.2							

WEL 26 21:38:59.4, 40.5S±2.1×17.4E±0.1, h81km±3km, M3.3/30, ML3.6/30, MLv3.3/30, Error ellipse: s-maj=0.0km s-min=0.0km az=46.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.37**	**200**	P	Pn	21 39 12.8	+0.5
DUWZ				S	Sn	21 39 22.9	+1.1
KIW	**Kapiti Island**	**0.75**	**123**	P	Pn	21 39 16.0	+0.3
KIW				S	Sn	21 39 27.5	-0.2
TCW	**Tory Channel**	**0.77**	**169**	P	Pn	21 39 16.7	+0.8
TCW				S	Sn	21 39 29.1	+0.9
OGWZ	**Otaki Gorge**	**0.90**	**114**	P	Pn	21 39 17.4	+0.1
NNZ	**Nelson**	**0.94**	**215**	P	Pn	21 39 18.7	+1.0
NNZ				S	Sn	21 39 32.6	+1.3
OHWZ	**Ohakea**	**0.97**	**76**	P	Pn	21 39 18.9	+0.8
OHWZ				S	Sn	21 39 33.3	+1.2
WAZ	**Wanganui**	**0.98**	**45**	P	Pn	21 39 18.5	+0.3
WAZ				S	Sn	21 39 33.6	+1.3
TUWZ	**Tuamarina**	**0.98**	**186**	P	Pn	21 39 19.0	+0.8
TUWZ				S	Sn	21 39 33.3	+0.9
CAW	**Cannon Point**	**0.99**	**132**	P	Pn	21 39 19.0	+0.7
LREZ	**Lake Rotokare**	**1.02**	**14**	P	Pn	21 39 19.2	+0.5
NMEZ	**Namu Road**	**1.05**	**351**	P	Pn	21 39 19.0	0.0
NMEZ				S	Sn	21 39 33.8	+0.1
BHW	**Baring Head**	**1.13**	**148**	P	Pn	21 39 20.7	+0.7
MRZ	**Mangatainoka R**	**1.16**	**101**	P	Pn	21 39 20.2	-0.2
HOWZ	**Holdsworth Sta**	**1.17**	**113**	P	Pn	21 39 20.8	+0.2
HOWZ				S	Sn	21 39 35.7	-0.9
NEZ	**North Egmont**	**1.18**	**0**	P	Pn	21 39 20.8	+0.1
NBEZ	**Newall Road No**	**1.19**	**352**	P	Pn	21 39 20.8	0.0
QRZ	**Quartz Range**	**1.24**	**252**	P	Pn	21 39 21.5	0.0
PKE	**Pukeiti**	**1.26**	**356**	P	Pn	21 39 21.7	+0.1
DREZ	**Durham Road**	**1.26**	**4**	P	Pn	21 39 21.7	0.0
BSRZ	**Blackbirch Sta**	**1.27**	**187**	P	Pn	21 39 23.4	+1.5
POWZ	**Post Office Ro**	**1.28**	**88**	P	Pn	21 39 22.8	+0.8
MTW	**Mount Morrison**	**1.29**	**124**	P	Pn	21 39 21.7	-0.2
MSWZ	**Moikau Station**	**1.31**	**138**	P	Pn	21 39 22.7	+0.4
PAWZ	**Paruwai Farm**	**1.38**	**133**	P	Pn	21 39 23.4	+0.2
TIWZ	**Tintock**	**1.41**	**104**	P	Pn	21 39 23.3	-0.3
VRZ	**Vera Road**	**1.42**	**22**	P	Pn	21 39 23.8	0.0
PLWZ	**Palliser**	**1.43**	**142**	P	Pn	21 39 24.1	+0.3
PRWZ	**Pori Road**	**1.44**	**95**	P	Pn	21 39 25.5	+1.5
TSZ	**Takapari Road**	**1.49**	**75**	P	Pn	21 39 24.1	-0.5
TMWZ	**Te Maipa**	**1.52**	**116**	P	Pn	21 39 25.2	+0.2
TRWZ	**Traveller**	**1.54**	**128**	P	Pn	21 39 25.7	+0.5
THZ	**Tophouse**	**1.59**	**214**	P	Pn	21 39 27.2	+1.3
DVHZ	**Dannevirke**	**1.60**	**85**	P	Pn	21 39 27.6	+1.6
MOVZ	**Moawhango**	**1.65**	**51**	P	Pn	21 39 26.1	-0.6
BFZ	**Birch Farm**	**1.66**	**99**	P	Pn	21 39 26.4	-0.4
PNHZ	**Pukenui**	**1.71**	**72**	P	Pn	21 39 26.5	-0.9
WTVZ	**West Tongariro**	**1.77**	**41**	P	Pn	21 39 29.4	+1.1
OTVZ	**Oturere**	**1.77**	**44**	P	Pn	21 39 30.0	+1.6
BHHZ	**Black Hill Sta**	**1.80**	**58**	P	Pn	21 39 29.6	+0.9
KRVZ	**Karewarewa**	**1.81**	**42**	P	Pn	21 39 30.0	+1.1
NTVZ	**North Tongarir**	**1.82**	**43**	P	Pn	21 39 30.3	+1.2
TMVZ	**Te Maari**	**1.82**	**44**	P	Pn	21 39 30.2	+1.1
KRHZ	**Kereru**	**1.93**	**66**	P	Pn	21 39 30.5	+0.2
KHZ	**Kahutara**	**2.01**	**192**	P	Pn	21 39 32.4	+1.1
HIZ	**Hauiti**	**2.02**	**17**	P	Pn	21 39 31.1	-0.5
DSZ	**Denniston Nort**	**2.15**	**232**	P	Pn	21 39 34.4	+1.1
KAHZ	**Kahuranaki**	**2.24**	**74**	P	Pn	21 39 33.3	-1.1
TLZ	**Tolley Road**	**2.40**	**28**	P	Pn	21 39 36.6	-0.1
GVZ	**Greta Valley S**	**2.63**	**197**	P	Pn	21 39 40.1	+0.3
LTZ	**Lake Taylor**	**2.70**	**210**	P	Pn	21 39 40.8	+0.2
TOZ	**Tahuroa Road**	**2.93**	**23**	P	Pn	21 39 43.4	-0.4
OXZ	**Oxford**	**3.25**	**207**	P	Pn	21 39 47.0	-1.1
OKCZ	**Okains Bay**	**3.36**	**193**	P	Pn	21 39 49.0	-0.6
AWAZ	**Awhitu Peninsu**	**3.41**	**8**	P	Pn	21 39 50.0	-0.2
MQZ	**McQueen's Vall**	**3.42**	**198**	P	Pn	21 39 49.0	-1.4
AKCZ	**Akaroa Harbour**	**3.53**	**194**	P	Pn	21 39 51.1	-0.8
WTAZ	**Waiatarua**	**3.53**	**6**	P	Pn	21 39 51.9	-0.1
ETAZ	**East Tamaki Re**	**3.55**	**11**	P	Pn	21 39 51.7	-0.5
RACZ	**Rakaia**	**3.58**	**203**	P	Pn	21 39 51.1	-1.4
WACZ	**Wakanui South**	**3.87**	**205**	P	Pn	21 39 55.4	-1.0
FOZ	**Fox Glacier**	**4.43**	**225**	P	Pn	21 40 05.2	+1.2
TMZ	**Timaru**	**4.54**	**209**	P	Pn	21 40 04.2	-1.5
ODZ	**Otahua Downs**	**5.24**	**208**	P	Pn	21 40 14.8	-0.4

*NEIC **26** 21:45:33.1±1.5, 15.7S±0.1×174.7W±0.1, h260km±7km, mb4.0/6, Error ellipse: s-maj=19.5km s-min=13.3km az=149.0*
*IDC **26** 21:45:34.0±1.6, 15.60S×174.87W, h258km±15km, mb3.7/19, mb1 3.9/21, mb1mx3.7/49, mbtmp4.3/21, Error ellipse: s-maj=18.5km s-min=10.7km az=144.0*
ISC 26 21:45:32.5±0.4, 15.63S±0.08×174.78W±0.07, h250km, n84, σ0s86/86, mb3.9/26, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.37**	**60**	P	**Pn**	**21 46 30.9**	**+1.7**
	18nm,0.3s,baz=298,slow=4.6,SNR=9.6						
AFI				S	**S**	**21 47 13.1**	**-0.9**
	56nm,0.3s,baz=178,slow=24,SNR=11						
AFI	**Afiamalu**	**3.37**	**60**	Pn	**Pn**	**21 46 30.0**	**+0.8**
AFI				S	**S**	**21 47 14.5**	**+0.5**
NIUE	**Niue**	**5.76**	**127**	Pn	**Pn**	**21 46 58.1**	**+0.4**
NIUE				S	**S**	**21 48 05.4**	**-0.3**
MSVF	**Nonsavu**	**7.19**	**252**	P	**Pn**	**21 47 18.0**	**+2.4**
	0.6nm,0.3s,baz=115,slow=11,SNR=8.3						
MSVF	**Nonsavu**	**7.19**	**252**		**Pn**	**21 47 16.9**	**+1.3**
ARMA	**Armidale**	**34.09**	**239**	P	**P**	**21 51 53.4**	**-0.5**
STKA	**Stephens Creek**	**42.77**	**240**	P	**P**	**21 53 05.9**	**0.0**
	3.5nm,1.1s,baz=33,slow=3.0,SNR=3.3						
WR0	**Warramunga Arr**	**48.31**	**257**	P	**P**	**21 53 47.7**	**-1.6**
WB0	**Warramunga Arr**	**48.46**	**257**	P	**P**	**21 53 49.0**	**-1.4**
WB0				IAmb	IAmb	21 54 01.9	
	comp=Z,4.9nm,0.9s						
WB2	**Warramunga Arr**	**48.49**	**257**	P	**P**	**21 53 49.5**	**-1.1**
WB2				IAmb	IAmb	21 53 51.1	
	comp=Z,5.5nm,0.8s						
WRA	**Warramunga Arr**	**48.50**	**257**	P	**P**	**21 53 50.2**	**-0.5**
	comp=Z,4.3nm,0.7s,baz=91,slow=7.0,SNR=21						
WRA	**Warramunga Arr**	**48.50**	**257**	P	**P**	**21 53 49.5**	**-1.2**
AS31	**Alice Springs**	**48.78**	**252**	P	**P**	**21 53 52.2**	**-0.7**
AS31				IAmb	IAmb	21 53 53.3	
	comp=Z,7.0nm,0.7s						
ASAR	**Alice Springs**	**48.78**	**252**	P	**P**	**21 53 52.4**	**-0.5**
	comp=Z,27nm,0.7s,baz=85,slow=8.5,SNR=189						
ASAR	**Alice Springs**	**48.78**	**252**	P	**P**	**21 53 52.0**	**-0.8**
FORT	**Forrest**	**54.13**	**243**	P	**P**	**21 54 30.6**	**-1.6**
SIJI	**Sorong**	**55.19**	**280**	P	**P**	**21 54 40.0**	**0.0**
	comp=Z,16nm,0.7s,baz=85,slow=8.2,SNR=5.5						
VNDA	**Vanda**	**63.02**	**186**	P	**P**	**21 55 34.1**	**+1.6**
	comp=Z,2.3nm,0.9s,baz=0.4,slow=6.5,SNR=10						
MJAR	**Matsushiro Arr**	**68.27**	**321**	P	**P**	**21 56 06.4**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=207,slow=34,SNR=2.3						
MJAR	**Matsushiro Ar**	**68.27**	**321**	P	**P**	**21 56 06.3**	**-0.4**
PETK	**Petropavlovsk-**	**72.45**	**343**	P	**P**	**21 56 31.6**	**0.0**
	comp=Z,4.5nm,0.7s,baz=131,slow=8.3,SNR=10						
YBH	**Yreka Blue Hor**	**74.59**	**38**	P	**P**	**21 56 46.0**	**+1.6**
	comp=Z,3.2nm,0.8s,baz=138,slow=1.7,SNR=6.5						
YBH	**Yreka Blue Hor**	**74.59**	**38**	P	**P**	**21 56 43.6**	**-0.7**
NVAR	**Mina Array Bea**	**75.39**	**43**	P	**P**	**21 56 50.6**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=223,slow=10.0,SNR=7.4						
NVAR	**Mina Array Bea**	**75.39**	**43**	P	**P**	**21 56 48.8**	**-0.4**
KSRS	**Korea Array**	**75.40**	**316**	P	**P**	**21 56 50.0**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=262,slow=31,SNR=4.8						
KVN	**Kaiserville**	**75.87**	**42**	P	**P**	**21 56 51.5**	**-0.3**
KVN				IAmb	IAmb	21 56 54.0	
	comp=Z,3.5nm,1.1s						
ELK	**Elko**	**78.64**	**42**	P	**P**	**21 57 08.3**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=249,slow=12,SNR=5.1						
G08A	**Pilot Rock**	**78.90**	**37**	P	**P**	**21 57 08.8**	**+0.4**
G08A				IAmb	IAmb	21 57 10.9	
	comp=Z,3.8nm,1.1s						
F10A	**Beach Ranch, E**	**80.29**	**37**	P	**P**	**21 57 16.0**	**+0.3**
HLID	**Hailey**	**80.65**	**40**	P	**P**	**21 57 16.5**	**-1.3**
HLID				IAmb	IAmb	21 57 20.2	
	comp=Z,3.3nm,0.9s						
NEW	**Newport**	**81.65**	**35**	P	**P**	**21 57 23.3**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=187,slow=8.1,SNR=2.3						
TXAR	**Lajitas Array**	**81.84**	**57**	P	**P**	**21 57 26.7**	**+2.3**
	comp=Z,0.4nm,0.6s,baz=197,slow=5.6,SNR=2.4						
ANMO	**Albuquerque**	**81.97**	**50**	P	**P**	**21 57 23.9**	**-1.1**
CCB	**Clear Creek Bu**	**82.64**	**11**		**P**	**21 57 27.4**	**-0.1**
CCB				IAmb	IAmb	21 57 28.3	
	comp=Z,2.3nm,0.5s						
ILAR	**Eielson Array**	**82.93**	**12**	P	**P**	**21 57 28.6**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=225,slow=5.7,SNR=13						
ILAR	**Eielson Array**	**82.93**	**12**	P	**P**	**21 57 29.0**	**0.0**
PD31	**Pinedale Array**	**83.33**	**42**	P	**P**	**21 57 31.9**	**0.0**
PD31				IAmb	IAmb	21 57 33.2	
	comp=Z,1.9nm,0.8s						
PDAR	**Pinedale Array**	**83.33**	**42**	P	**P**	**21 57 32.5**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=212,slow=3.3,SNR=20						
PDAR	**Pinedale Array**	**83.33**	**42**	P	**P**	**21 57 31.8**	**-0.1**
MAW	**Mawson**	**87.15**	**199**	P	**P**	**21 57 50.2**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=147,slow=9.1,SNR=6.8						
INK	**Inuvik**	**88.81**	**14**	P	**P**	**21 57 56.9**	**-0.7**
	comp=Z,1.3nm,1.1s,baz=177,slow=8.6,SNR=2.7						
YKA	**Yellowknife Ar**	**90.84**	**24**	P	**P**	**21 58 07.3**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=239,slow=4.7,SNR=7.2						
CMAR	**Chiang Mai Arr**	**91.43**	**289**	P	**P**	**21 58 11.6**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=95,slow=2.6,SNR=5.7						
ARCES	**ARCESS Array B**	**124.65**	**351**	PKP	**PKPdf**	**22 04 01.3**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=11,slow=1.8,SNR=12						
FINES	**FINESS Array B**	**131.87**	**347**	PKP	**PKiKP**	**22 04 16.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=15,slow=5.8,SNR=6.2						
CLL	**Collm**	**143.87**	**352**	*i* PKPdf	PKPbc	22 04 35.8	-0.5
	comp=Z,3.0nm,0.6s						
OSTC	**Ostas**	**144.05**	**348**	*e*PKP	**PKPdf**	**22 04 37.4**	**-0.9**
BURAR	**Bucovina Array**	**144.07**	**337**		PKPbc	22 04 37.0	-0.1
DPC	**Dobruska-Polom**	**144.22**	**348**	*e*PKP	**PKPdf**	**22 04 37.9**	**-0.7**
KMBO	**Kilima Mbogo**	**144.24**	**245**	PKP	**PKPdf**	**22 04 39.6**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=52,slow=5.8,SNR=5.0						
KRLC	**Kraliky**	**144.39**	**347**	*e*PKP	**PKPab**	**22 04 37.5**	**-0.3**
MORC	**Moravsky Berou**	**144.50**	**346**	*e*PKP	**PKPdf**	**22 04 38.6**	**-0.5**
MORC	**Moravsky Berou**	**144.50**	**346**		**PKPdf**	**22 04 38.3**	**-0.8**
PRU	**Pruhonice**	**144.91**	**350**	*e*PKP	**PKPab**	**22 04 40.0**	**+0.3**
NKC	**Novy Kostel**	**144.99**	**352**	*e*PKP	**PKPab**	**22 04 40.2**	**+0.2**
VRAC	**Vranov**	**145.15**	**347**	*e*PKP	**PKPab**	**22 04 40.9**	**+0.3**
JAVC	**Velka Javorina**	**145.33**	**346**	*e*PKP	**PKPab**	**22 04 42.4**	**+1.0**
KRUC	**Moravsky**	**145.43**	**347**	*e*PKP	**PKPab**	**22 04 41.5**	**-0.2**
BR131	**Keskin Array S**	**145.49**	**320**		**PKPbc**	**22 04 41.1**	**-0.7**
BRTR	**Keskin Array B**	**145.49**	**320**	PKPbc	**PKPab**	**22 04 42.0**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=81,slow=3.2,SNR=30						
BRTR	**Keskin Array B**	**145.49**	**320**		**PKPdf**	**22 04 40.6**	**-0.6**
MLR	**Muntele Rosu**	**145.51**	**334**		**PKPdf**	**22 04 40.9**	**-0.2**
KHC	**Kasperske Hory**	**145.90**	**350**	*e*PKP	**PKPbc**	**22 04 42.5**	**-0.1**
CKRC	**Cesky Krumlov**	**146.07**	**349**	*e*PKP	**PKPab**	**22 04 43.3**	**-0.9**
GERES	**GERESS Array B**	**146.16**	**350**	PKPbc	**PKPab**	**22 04 43.7**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=27,slow=3.5,SNR=21						
CONA	**Conrad Observa**	**146.62**	**347**	*e*P	**PKPab**	**22 04 45.4**	**-1.0**
	comp=Z,1.9nm,0.5s						
MOA	**Molln**	**147.01**	**349**	*e*P	**PKPbc**	**22 04 46.1**	**+0.3**
	comp=Z,1.8nm,0.6s						
BFO	**Black Forest**	**147.29**	**356**	PKPdf	**PKPdf**	**22 04 44.0**	**+0.1**
ARSA	**Arzberg**	**147.33**	**347**	*e*P	**PKPbc**	**22 04 45.4**	**-1.4**
	comp=Z,0.2nm,0.2s						
RETA	**Reutte**	**147.91**	**353**	*i* P	**PKPbc**	**22 04 48.5**	**+0.2**
	comp=Z,4.1nm,0.9s						
KBA	**Koelnbreinsper**	**147.93**	**350**	*e*P	**PKPbc**	**22 04 48.1**	**-0.4**
	comp=Z,1.3nm,0.4s						
WATA	**Walderalm**	**147.95**	**352**	*e*P	**PKPbc**	**22 04 48.9**	**+0.3**
	comp=Z,0.5nm,0.2s						
SOKA	**Soboth**	**147.98**	**347**	*e*P	**PKPbc**	**22 04 48.6**	**+0.1**
	comp=Z,0.6nm,0.4s						
MOTA	**Moosalm**	**148.00**	**352**	*e*P	**PKPbc**	**22 04 48.7**	**0.0**
	comp=Z,1.7nm,0.6s						
WTTA	**Wattenberg**	**148.01**	**352**	*e*P	**PKPbc**	**22 04 48.8**	**0.0**
	comp=Z,3.8nm,0.5s						
SQTA	**Sankt Quirin**	**148.11**	**352**	*e*P	**PKPbc**	**22 04 49.1**	**+0.2**
	comp=Z,1.0nm,0.3s						
DAVA	**Damuels**	**148.20**	**354**	*e*P	**PKiKP**	**22 04 49.6**	**-1.1**
	comp=Z,2.9nm,0.6s						
OBKA	**Obir**	**148.24**	**348**	*e*P	**PKPbc**	**22 04 48.8**	**-0.5**
	comp=Z,0.3nm,0.4s						
MYKA	**Terra Mystica**	**148.31**	**349**	*e*P	**PKPbc**	**22 04 48.7**	**-0.7**
	comp=Z,2.7nm,0.6s						
FETA	**Feichten**	**148.37**	**353**	*e*P	**PKPbc**	**22 04 49.9**	**+0.2**
	comp=Z,1.3nm,0.6s						
ABTA	**Abfaltersbach**	**148.39**	**350**	*e*P	**PKPbc**	**22 04 49.2**	**-0.4**
	comp=Z,4.6nm,0.8s						
ESDC	**Sonseca Array**	**154.73**	**17**	PKPab	**PKPab**	**22 05 20.8**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=335,slow=4.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**175.78**	**125**	PKP	**PKPdf**	**22 05 12.0**	**-1.6**
	comp=Z,1.0nm,1.0s,baz=204,slow=3.2,SNR=3.9						
TORD				PKPab	**PKPab**	**22 06 51.9**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=235,slow=5.1,SNR=2.6						

*IDC **26** 21:47:18.6±1.1, 10.69S×120.16E, h0km, mb4.0/6, mb1 4.1/11, mb1mx3.8/44, mbtmp4.0/11, ML3.9/5, MS3.2/4, Ms1 3.2/4, ms1mx2.6/43, Error ellipse: s-maj=45.3km s-min=18.7km az=49.0*
*DJA **26** 21:47:23.4±0.7, 11.5S±4.1×12.0E±1.1, h18km±6km, M4.0/7, mb4.4/3, MLv3.8/7*
ISC 26 21:47:22.8±0.7, 10.71S±0.07×120.40E±0.06, h31km, n23, σ2s32/27, mb4.2/6, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.52**	**20**	P	**Pb**	**21 47 32.3**	**-1.3**
WSI	**Waingapu**	**1.04**	**354**	P	**Pn**	**21 47 41.5**	**+0.2**
WBSI	**Waikabubak, Su**	**1.45**	**317**	P	**Pn**	**21 47 47.4**	**+0.4**
MMRI	**Maumere**	**2.74**	**42**	P	**Pn**	**21 48 02.6**	**-2.1**
PLAI	**Plampang**	**3.19**	**306**	P	**Pn**	**21 48 11.7**	**+0.8**
PLAI				S	Sn	**21 48 48.3**	**+0.4**
BATI	**Baumata**	**3.25**	**81**	Pn	**Pn**	**21 48 14.8**	**+3.1**
	42nm,0.3s,baz=307,slow=2.5,SNR=47						
BATI				Sn	Sn	**21 48 53.4**	**+4.0**
	20nm,0.3s,baz=123,slow=9.8,SNR=18						
BATI	**Baumata**	**3.25**	**81**	P	**Pn**	**21 48 14.4**	**+2.7**
SOEI	**Soe**	**3.92**	**76**	P	**Pn**	**21 48 24.4**	**+3.3**
TWSI	**Taliwang, Sumb**	**3.98**	**299**	P	**Pn**	**21 48 22.5**	**+0.7**
KAPI	**Kappang**	**5.69**	**353**	Pn	**Pn**	**21 48 46.0**	**+0.6**
	1.9nm,0.3s,baz=200,slow=4.3,SNR=4.5						

HATJ				*e*S		**Sn**	**21 54 46.2**	**-1.6**
IRIF	**Iriomote-Funau**	**1.86**	**280**	P		**Pn**	**21 54 26.3**	**-0.4**
IRIF				*e*S		**Sn**	**21 54 49.5**	**-0.6**
JKE	**Kume jima 2**	**2.48**	**22**	P		**Pn**	**21 54 34.7**	**-0.6**
JKE				*e*S		**Sn**	**21 55 04.7**	**-0.8**
YOJ	**Yonaguni jima**	**2.52**	**280**	P		**Pn**	**21 54 35.4**	**-0.5**
YOJ				*e*S		**Sn**	**21 55 05.3**	**-1.3**
JJT3	**Tamagusuku3**	**2.81**	**41**	*e*S		**Sn**	**21 55 11.5**	**-2.1**
JAGN	**Aguni-jima**	**2.89**	**28**	P		**Pn**	**21 54 40.8**	**-0.1**
JAGN				*e*S		**Sn**	**21 55 12.9**	**-2.8**
MJAR	**Matsushiro Arr**	**16.46**	**38**	P		**P**	**21 57 50.4**	**+1.8**
	0.0nm,0.3s,baz=221,slow=8.9,SNR=6.2							
SONM	**Songino Array**	**28.30**	**332**	P		**P**	**21 59 51.4**	**+2.9**
	0.5nm,0.9s,baz=142,slow=7.3,SNR=2.2							
MKAR	**Makanchi Array**	**41.38**	**314**	P		**P**	**22 01 40.3**	**-0.9**
	0.6nm,0.5s,baz=106,slow=10,SNR=5.5							
ZALV	**Zalesovo Beam**	**42.69**	**325**	P		**P**	**22 01 49.7**	**-2.0**
	0.4nm,0.5s,baz=113,slow=7.9,SNR=2.1							
WRA	**Warramunga Arr**	**44.50**	**168**	P		P	22 01 54.6	-12
	0.5nm,0.5s,baz=344,slow=9.2,SNR=4.6							
ASAR	**Alice Springs**	**48.07**	**170**	P		P	22 02 24.1	-11
	0.2nm,0.4s,baz=352,slow=7.1,SNR=4.2							
YKA	**Yellowknife Ar**	**81.46**	**24**	P		**P**	**22 06 12.6**	**+0.8**
	0.4nm,0.8s,baz=300,slow=5.0,SNR=5.6							

*IDC **26** 22:10:02.1±1.0,35˚.44N×28˚.50E,h0km,mb3.6/9, mb1 3.6/17,mb1mx3.5/62,mbtmp3.5/17,ML3.4/8,MS2.1/1, Ms1 2.1/1,ms1mx1.7/55,Error ellipse: s-maj=20.4km s-min=14.5km az=169.0*

*ATH **26** 22:10:03.3,35˚.47N×28˚.34E,h87km±5km,ML3.0/4,Error ellipse: s-maj=8.3km s-min=2.9km az=338.0*

*DDA **26** 22:10:04.6,35˚.40N×28˚.56E,h24km± 1km,MW3.6*

*ISK **26** 22:10:05.6,35˚.40N×28˚.58E,h21km,ML3.2/18*

*NIC **26** 22:10:06.5±0.0,35˚.39N×28˚.61E,h26km±2km,MI3.7/3*

*HLW **26** 22:10:07.7,35˚.19N×28˚.61E,h30km± 10km,Md4.0,MI3.9*

*THE **26** 22:10:09.1,35˚.47N×28˚.53E,h29km±26km,ML2.9/6,Error ellipse: s-maj=26.8km s-min=0.9km az=153.0*

ISC 26 22:10:06.1±1.1,**35˚.36N**±0˚.03×**28˚.58E**±0˚.02,**h31**km±9km, **n132,**σ1§**49**/175,**mb3.5**/9,**6C,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.93**	**337**	P	**Pn**	**22 10 23.1**	**+0.1**
ARG				S	**Sb**	**22 10 36.4**	**+0.8**
ARG				AML	AML	22 10 43.7	
	comp=E,2100μm,0.4s						
ARG				AML	AML	22 10 49.6	
	comp=N,1792μm,0.9s						
ARG	**Arkhangelos**	**0.93**	**337**	P	**Pb**	**22 10 23.7**	**0.0**
ARG				S	**Sn**	**22 10 34.8**	**-0.4**
	comp=N,1μm,0.6s						
ARG	**Arkhangelos**	**0.93**	**337**	P	**Pb**	**22 10 23.7**	**0.0**
ARG				S	**Sn**	**22 10 34.8**	**-0.4**
ARG	**Arkhangelos**	**0.93**	**337**	PG	**Pb**	**22 10 23.7**	**0.0**
ARG				SG	**Sb**	**22 10 36.6**	**+0.9**
ARG	**Arkhangelos**	**0.93**	**337**	⇑P	**Pb**	**22 10 23.7**	**0.0**
ARG				S	**Sb**	**22 10 36.5**	**+0.8**
KSL	**Kastellorizon**	**1.14**	**46**	P	**Pb**	**22 10 27.2**	**0.0**
KSL				AML	AML	22 11 01.8	
	comp=E,657μm,0.7s						
KSL				AML	AML	22 11 02.0	
	comp=N,532μm,1.0s						
KSL	**Kastellorizon**	**1.14**	**46**	P	**Pb**	**22 10 27.4**	**+0.2**
KSL				S	**Sb**	**22 10 41.3**	**-0.3**
	comp=N,292nm,0.7s						
KSL	**Kastellorizon**	**1.14**	**46**	P	**Pb**	**22 10 27.4**	**+0.2**
KSL				S	**Sb**	**22 10 41.3**	**-0.3**
KSL	**Kastellorizon**	**1.14**	**46**	⇑P	**Pb**	**22 10 26.8**	**-0.4**
KARP	**Karpathos**	**1.17**	**279**	P	**Pn**	**22 10 25.6**	**-0.7**
KARP				S	**Sn**	**22 10 39.4**	**-1.8**
KARP				AML	AML	22 10 47.9	
	comp=E,2266μm,0.8s						
KARP				AML	AML	22 10 50.2	
	comp=N,2347μm,0.7s						
KARP	**Karpathos**	**1.17**	**279**	P	**Pb**	**22 10 27.7**	**-0.1**
KARP				S	**Sb**	**22 10 42.0**	**-0.6**
	comp=N,1μm,0.7s						
KARP	**Karpathos**	**1.17**	**279**	P	**Pb**	**22 10 27.7**	**-0.1**
KARP				S	**Sb**	**22 10 42.0**	**-0.6**
KARP	**Karpathos**	**1.17**	**279**	PN	**Pb**	**22 10 27.5**	**-0.3**
KARP				SN	**Sb**	**22 10 42.9**	**+0.3**
KARP	**Karpathos**	**1.17**	**279**	⇑P	**Pb**	**22 10 27.6**	**-0.1**
KARP				S	**Sb**	**22 10 43.2**	**+0.6**
KARP				AML	AML	22 10 47.1	
	comp=N,2.2nm,0.7s						
KARP				AML	AML	22 10 47.1	
	comp=N,2.2nm,0.7s						
KARP				AML	AML	22 10 49.8	
	comp=N,2.3nm,0.7s						
KARP				AML	AML	22 10 49.8	
	comp=N,2.3nm,0.7s						
AKAS	**Kas**	**1.21**	**44**	*i* P	**Pn**	**22 10 26.8**	**-0.2**
AKAS				*i* S	**Sb**	**22 10 44.2**	**+0.4**
AKAS				IAML		22 10 58.0	
	comp=N,239nm,0.4s						
AKAS				IAML		22 11 09.0	
	comp=E,123nm,1.0s						
AKAS	**Kas**	**1.21**	**44**	PN	**Pn**	**22 10 27.5**	**+0.5**
FETY	**Fethiye**	**1.34**	**18**	P	**Pn**	**22 10 28.4**	**-0.2**
FETY				S	**Sn**	**22 10 45.2**	**-0.2**
FETY	**Fethiye**	**1.34**	**18**	P	**Pn**	**22 10 28.4**	**-0.2**
FETY				S	**Sn**	**22 10 45.2**	**-0.2**
FETY	**Fethiye**	**1.34**	**18**	*i* P	**Pn**	**22 10 27.9**	**-0.7**
FETY	**Fethiye**	**1.34**	**18**	PN	**Pn**	**22 10 28.4**	**-0.2**
TURN	**Turunc**	**1.44**	**349**	*i* P	**Pn**	**22 10 30.8**	**+0.8**
TURN				*i* S	**Sb**	**22 10 49.6**	**-0.5**
TURN				IAML		22 10 53.0	
	comp=N,202nm,0.5s						
TURN				IAML		22 11 03.0	
	comp=E,154nm,0.5s						
TURN	**Turunc**	**1.44**	**349**	PN	**Pb**	**22 10 30.9**	**-1.3**
DALY	**Dalyan (Mula)**	**1.45**	**2**	*i* P	**Pb**	**22 10 31.3**	**-1.2**
DALY	**Dalyan (Mula)**	**1.45**	**2**	PN	**Pn**	**22 10 31.1**	**+0.9**
NIS1	**Nisyros Isl.**	**1.68**	**318**	PN	**Pn**	**22 10 34.5**	**+1.2**
AKUM	**Antalya-Kumluc**	**1.73**	**56**	*i* P	**Pn**	**22 10 35.0**	**+1.0**
AKUM				*i* S	**Sn**	**22 10 55.2**	**+0.2**
AKUM				IAML		22 10 58.0	
	comp=E,76nm,0.5s						
AKUM				IAML		22 11 12.0	
	comp=N,49nm,0.5s						
ELL	**Elmali**	**1.75**	**38**	PN	**Pn**	**22 10 35.4**	**+0.9**
YER	**Yerkesik**	**1.79**	**352**	P	**Pb**	**22 10 36.5**	**-1.7**
YER	**Yerkesik**	**1.79**	**352**	P	**Pb**	**22 10 36.5**	**-1.7**
YER	**Yerkesik**	**1.79**	**352**	PN	**Pn**	**22 10 35.6**	**+0.8**
CAEL	**Denizli, Camel**	**1.86**	**19**	*i* P	**Pn**	**22 10 36.4**	**+0.5**
MULA	**Mugla, Merkez-**	**1.90**	**354**	*i* P	**Pb**	**22 10 39.1**	**-1.1**
ZKR	**Zakros**	**1.95**	**263**	P	**Pn**	**22 10 38.3**	**+1.3**
ZKR				S	**Sn**	**22 11 02.4**	**+2.0**
	comp=N,162nm,0.5s						
ZKR	**Zakros**	**1.95**	**263**	P	**Pn**	**22 10 38.3**	**+1.3**
ZKR				S	**Sn**	**22 11 02.4**	**+2.0**
ZKR	**Zakros**	**1.95**	**263**	PN	**Pn**	**22 10 38.5**	**+1.5**
ZKR	**Zakros**	**1.95**	**263**	P	**Pn**	**22 10 38.4**	**+1.5**
BODT	**Bodrum**	**1.98**	**329**	P	**Pn**	**22 10 37.3**	**-0.2**
BODT				S	**Sn**	**22 10 59.5**	**-1.8**
BODT	**Bodrum**	**1.98**	**329**	P	**Pn**	**22 10 37.3**	**-0.2**
BODT				S	**Sn**	**22 10 59.5**	**-1.8**
GOLH	**Golhisar**	**2.03**	**23**	*i* P	**Pb**	**22 10 40.9**	**-1.6**
GOLH				IAML		22 10 54.0	
	comp=E,23nm,1.5s						
GOLH				*i* S	**Sb**	**22 11 05.9**	**-1.5**
GOLH				IAML		22 11 07.0	
	comp=N,143nm,0.6s						
TAVA	**DENIZLI_Tavas**	**2.12**	**7**	*i* P	**Pn**	**22 10 40.9**	**+1.5**
KORT	**Korkueli**	**2.18**	**41**	*i* P	**Pb**	**22 10 43.2**	**-1.7**
KORT				*i* S	**Sb**	**22 11 11.0**	**-0.5**
KORT				IAML		22 11 19.0	
	comp=E,92nm,0.5s						
KORT	**Korkueli**	**2.18**	**41**	PN	**Pn**	**22 10 41.6**	**+1.3**
ANTB	**Antalya**	**2.28**	**47**	PN	**Pn**	**22 10 42.9**	**+1.4**
AYDN	**Tasoluk**	**2.36**	**346**	*i* P	**Pn**	**22 10 44.6**	**+1.8**
AYDN				*i* S	**Sn**	**22 11 10.5**	**-0.2**
AYDN				IAML		22 11 13.0	
	comp=E,55nm,0.6s						
AYDN				IAML		22 11 20.0	
	comp=N,37nm,0.7s						
NPS	**Neapolis**	**2.43**	**269**	P	**Pn**	**22 10 44.9**	**+1.3**
NPS	**Neapolis**	**2.43**	**269**	P	**Pn**	**22 10 45.6**	**+2.0**
NPS				S	**Sn**	**22 11 13.2**	**+1.0**
	comp=N,302nm,0.4s						

NPS	**Neapolis**	**2.43**	**269**	P		**Pn**	**22 10 45.6**	**+2.0**
NPS				S		**Sn**	**22 11 13.2**	**+1.0**
BUCA	**Burdur, Bucak-**	**2.53**	**39**	*i* P		**Pn**	**22 10 46.5**	**+1.3**
BUCA				*i* S		**Sb**	**22 11 18.1**	**-3.6**
BUCA				IAML			22 11 30.0	
	comp=N,34nm,0.7s							
BUCA				IAML			22 11 31.0	
	comp=E,46nm,0.6s							
LAST	**Lasithi**	**2.54**	**266**	P		**Pn**	**22 10 46.5**	**+1.2**
LAST	**Lasithi**	**2.54**	**266**	P		**Pn**	**22 10 47.0**	**+1.7**
LAST				S		**Sn**	**22 11 16.5**	**+1.3**
	comp=E,65nm,0.7s							
LAST	**Lasithi**	**2.54**	**266**	P		**Pn**	**22 10 47.0**	**+1.7**
LAST				S		**Sn**	**22 11 16.5**	**+1.3**
GCAM	**G?zelcaml?**	**2.57**	**336**	PN		**Pn**	**22 10 46.2**	**+0.6**
BRDR	**BURDUR-Merkez**	**2.62**	**27**	*i* P		**Pn**	**22 10 47.3**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**2.64**	**348**	PN		**Pn**	**22 10 47.9**	**+1.3**
BCK	**Bucak**	**2.65**	**37**	PN		**Pn**	**22 10 48.2**	**+1.4**
SANT	**Santorini**	**2.72**	**293**	PN		**Pn**	**22 10 49.5**	**+1.8**
SMG	**Samos**	**2.73**	**330**	P		**Pn**	**22 10 48.0**	**+0.2**
SMG	**Samos**	**2.73**	**330**	P		**Pn**	**22 10 48.2**	**+0.4**
SMG	**Samos**	**2.73**	**330**	P		**Pn**	**22 10 48.2**	**+0.4**
THT2	**Imerovigli**	**2.78**	**294**	PN		**Pn**	**22 10 50.2**	**+1.8**
BASM	**Basmaki-Afyon**	**2.81**	**24**	PN		**Pn**	**22 10 50.6**	**+1.6**
KEPZ	**Antalya-Kepez**	**2.89**	**57**	*i* P		**Pn**	**22 10 50.8**	**+0.7**
KEPZ				*i* S		**Sn**	**22 11 23.6**	**-0.2**
KEPZ				IAML			22 11 26.0	
	comp=E,35nm,0.9s							
KEPZ				IAML			22 11 37.0	
	comp=N,30nm,0.8s							
OSC1	**CSNet OBS 1**	**2.90**	**129**	P		**Pn**	**22 10 50.8**	**+0.6**
OSC1				S		**Sn**	**22 11 26.2**	**+2.2**
ISP	**Isparta**	**2.91**	**32**	PN		**Pn**	**22 10 51.9**	**+1.5**
APE	**Apeiranthos**	**2.99**	**306**	P		**Pn**	**22 10 51.9**	**+0.4**
APE				AML	AML		22 11 24.9	
	comp=N,148μm,0.4s							
APE				AML	AML		22 11 25.7	
	comp=E,88μm,0.4s							
APE	**Apeiranthos**	**2.99**	**306**	P		**Pn**	**22 10 52.0**	**+0.5**
APE	**Apeiranthos**	**2.99**	**306**	P		**Pn**	**22 10 52.0**	**+0.5**
APE	**Apeiranthos**	**2.99**	**306**	PN		**Pn**	**22 10 52.2**	**+0.7**
APE	**Apeiranthos**	**2.99**	**306**	⇑P		**Pn**	**22 10 51.8**	**+0.4**
DGB	**zmir**	**3.01**	**334**	*i* P		**Pn**	**22 10 50.5**	**-1.1**
IDI	**Anoyia**	**3.02**	**270**	Pn		**Pn**	**22 10 52.4**	**+0.6**
	comp=E,2.3nm,0.3s,baz=29,slow=8.3,SNR=30							
IDI				Sn		**Sn**	**22 11 25.8**	**-1.1**
	comp=E,6.1nm,0.3s,baz=135,slow=22,SNR=3.4							
IDI				LR		LR	22 12 16.2	
	comp=E,34nm,18.9s,baz=90,slow=45							
IDI	**Anoyia**	**3.02**	**270**	P		**Pn**	**22 10 52.8**	**+1.1**
AKMS	**Akamas**	**3.10**	**95**	P		**Pn**	**22 10 53.7**	**+0.8**
AKMS				AML	AML		22 11 27.6	
	comp=E,0.6nm,0.4s							
AKMS				AML	AML		22 11 28.8	
	comp=E,0.4nm,0.8s							
MANT	**Manisa**	**3.12**	**360**	*i* P		**Pn**	**22 10 53.0**	**-0.4**
KULA	**Kula-Manisa**	**3.15**	**1**	PN		**Pn**	**22 10 54.7**	**+1.1**
KZIL	**AFYON_Kizioren**	**3.15**	**23**	*i* P		**Pn**	**22 10 56.2**	**+2.6**
GAZI	**Gazipasa**	**3.16**	**73**	*i* P		**Pn**	**22 10 53.0**	**-0.7**
GAZI				*i* S		**Sn**	**22 11 28.9**	**-1.6**
BAGO	**Egridir - ISPA**	**3.17**	**33**	*i* P		**Pn**	**22 10 53.8**	**-0.1**
ALFC	**Alefka**	**3.30**	**92**	⇑P		**Pn**	**22 10 56.5**	**+0.9**
ALFC				AML	AML		22 11 33.8	
	comp=E,0.4nm,0.3s							
ALFC				AML	AML		22 11 34.6	
	comp=E,0.6nm,0.7s							
SEDI	**Konya, Seydise**	**3.31**	**50**	*i* P		**Pn**	**22 10 58.0**	**+2.2**
SEDI				*i* S		**Sn**	**22 11 37.8**	**+3.7**
SEDI				IAML			22 11 41.0	
	comp=E,69nm,0.6s							
SEDI				IAML			22 11 42.0	
	comp=N,42nm,0.7s							
ZEYE	**Izmir, Urla-Ze**	**3.32**	**331**	*i* P		**Pn**	**22 10 55.4**	**-0.4**
NATA	**Nata**	**3.33**	**99**	P		**Pn**	**22 10 57.3**	**+1.3**
NATA				S		**Sn**	**22 11 36.3**	**+1.9**
USAK	**Uak-Merkez**	**3.37**	**6**	*i* P		**Pn**	**22 10 57.1**	**+0.5**
URLA	**Izmir**	**3.39**	**333**	*i* P		**Pn**	**22 10 56.2**	**-0.6**
LEF	**Lefka**	**3.54**	**93**	*i* P		**Pn**	**22 10 56.3**	**-2.6**
VAM	**Vamos**	**3.58**	**272**	P		**Pn**	**22 11 01.8**	**+2.4**
SZAC	**Souni**	**3.58**	**98**	P		**Pn**	**22 11 00.4**	**+0.9**
YVAC	**Isparta, Yalva**	**3.60**	**36**	*i* P		**Pn**	**22 11 03.6**	**+3.7**
DEMI	**Demirci**	**3.68**	**2**	*i* P		**Pn**	**22 11 00.3**	**-0.5**
DOGA	**KONYA_Doganhis**	**3.70**	**41**	*i* P		**Pn**	**22 11 04.3**	**+3.1**
DOGA				*i* S		**Sn**	**22 11 46.0**	**+2.2**
DOGA				IAML			22 11 50.0	
	comp=N,38nm,0.6s							
DOGA				IAML			22 11 54.0	
	comp=E,31nm,0.7s							
ERMK	**Ermenek**	**3.74**	**69**	*i* P		**Pn**	**22 11 05.2**	**+3.3**
IMMV	**Iera Moni Meta**	**3.75**	**273**	P		**Pn**	**22 11 04.6**	**+2.7**
GDZ	**Gediz**	**3.79**	**11**	*i* P		**Pn**	**22 11 00.6**	**-1.9**
ZEDA	**zmir-Bergama**	**3.79**	**342**	*i* P		**Pn**	**22 11 02.5**	**+0.2**
ASGA	**Asgata**	**3.88**	**97**	P		**Pn**	**22 11 04.2**	**+0.7**
CSS	**Mathiatis**	**3.92**	**94**	P		**Pn**	**22 11 04.6**	**+0.5**
KKBE	**Karaman, Kazim**	**3.98**	**61**	*i* P		**Pn**	**22 11 07.7**	**+2.6**
KKBE				*i* S		**Sn**	**22 11 51.7**	**+0.9**
KKBE				IAML			22 11 57.0	
	comp=N,26nm,0.4s							
KKBE				IAML			22 11 57.0	
	comp=E,29nm,1.0s							
STEP	**BALIKESIR_Sava**	**4.07**	**351**	*i* P		**Pn**	**22 11 06.0**	**-0.1**
GULN	**MERSIN_Gulnar**	**4.12**	**77**	*i* P		**Pn**	**22 11 07.7**	**+0.8**
GULN				*i* S		**Sn**	**22 11 53.3**	**-0.7**
GULN				IAML			22 11 57.0	
	comp=N,60nm,0.7s							
GULN				IAML			22 11 58.0	
	comp=E,57nm,0.5s							
MVOU	**Mavrovouni**	**4.16**	**93**	⇑P		**Pn**	**22 11 08.1**	**+0.7**
MATC	**Matruh**	**4.16**	**196**	P		**Pn**	**22 11 06.7**	**-0.7**
	baz=198							
DURS	**Dursunbey**	**4.23**	**359**	*i* P		**Pn**	**22 11 08.5**	**0.0**
BUHA	**Balikesir, Bur**	**4.30**	**344**	*i* P		**Pn**	**22 11 09.0**	**-0.3**
ALIN	**Konya, Altinte**	**4.53**	**48**	*i* P		**Pn**	**22 11 15.8**	**+3.2**
SLUM	**Salum**	**4.78**	**217**	P		**Pn**	**22 11 16.3**	**+0.4**
	baz=219							
SLUM				AMP			22 12 00.0	
	baz=219							
SLUM				S		**Sn**	**22 12 05.9**	**-4.2**
	baz=219							
HMYD	**Mayadein**	**5.86**	**161**	P		**Pn**	**22 11 30.8**	**-0.1**
	baz=160							
BRTR	**Keskin Array B**	**5.93**	**41**	Pn		**Pn**	**22 11 34.0**	**+2.1**
	comp=E,0.2nm,0.3s,baz=234,slow=12,SNR=10							
BRTR				Sn		**Sn**	**22 12 40.6**	**+1.9**
	comp=E,0.3nm,0.3s,baz=212,slow=25,SNR=13							
HNAT	**Natroun**	**5.97**	**163**	P		**Pn**	**22 11 32.0**	**-0.3**
	baz=162							
KOT	**Kottamia**	**6.07**	**152**	P		**Pn**	**22 11 32.5**	**-1.3**
	baz=151							
MMAI	**Mount Meron Ar**	**6.12**	**111**	Pn		**Pn**	**22 11 34.5**	**0.0**
	comp=E,2.5nm,0.3s,baz=318,slow=13,SNR=30							
MMAI				Sn		**Sn**	**22 12 40.5**	**-3.0**
	comp=E,4.6nm,0.3s,baz=313,slow=31,SNR=11							
HHAG	**Hagoal**	**6.16**	**150**	P		**Pn**	**22 11 34.6**	**-0.4**
	baz=149							
GLL	**Jalalah**	**6.35**	**154**	P		**Pn**	**22 11 37.1**	**-0.4**
	baz=154							
RYAN	**Fayoum**	**6.42**	**167**	P		**Pn**	**22 11 38.5**	**-0.1**
	baz=166							
SWA2		**6.65**	**204**	P		**Pn**	**22 11 41.5**	**-0.1**
	baz=206							
SWA2				S		**Sn**	**22 12 50.3**	**-6.0**
	baz=206							
NBNS	**Bani Suef**	**7.11**	**160**	P		**Pn**	**22 11 48.3**	**+0.4**
	baz=160							
EIL	**Elat**	**7.82**	**135**	Pn		**Pn**	**22 11 57.8**	**+0.1**
	comp=E,0.6nm,0.3s,baz=345,slow=4.2,SNR=16							
EIL				Sn		**Sn**	**22 13 18.6**	**-6.6**
	comp=E,1.9nm,0.3s,baz=359,slow=8.1,SNR=11							
HBST	**Basata**	**8.04**	**138**	P		**Pn**	**22 12 01.1**	**+0.4**
	baz=137							
HFRF	**Wahat Farafira**	**8.19**	**182**	P		**Pn**	**22 12 02.9**	**+0.1**
	baz=182							
HKAT	**Jabal Katrina**	**8.22**	**145**	P		**Pn**	**22 12 03.7**	**-0.2**
	baz=144							
MLR	**Muntele Rosu**	**10.31**	**350**	Pn		**Pn**	**22 12 29.9**	**-2.1**
	comp=E,0.0nm,0.3s,baz=207,slow=18,SNR=1.8							
KEST	**Kesra**	**15.66**	**277**	Pn		**Pn**	**22 13 45.5**	**+1.0**
	comp=E,0.2nm,0.3s,baz=68,slow=4.4,SNR=4.9							
VRAC	**Vranov**	**16.48**	**331**	Pn		**Pn**	**22 13 55.2**	**+0.3**
	comp=E,0.1nm,0.3s,baz=117,slow=14,SNR=1.7							
GERES	**GERESS Array B**	**17.37**	**325**	P		**Pn**	**22 14 06.2**	**0.0**
	comp=E,0.1nm,0.3s,baz=263,slow=39,SNR=3.5							
ESDC	**Sonseca Array**	**26.08**	**289**	P		**P**	**22 15 37.1**	**+0.2**
	comp=E,0.6nm,0.9s,baz=84,slow=9.9,SNR=10.0							

AKTO	**Aktyubinsk**	**26.09**	**46**	P		**P**	**22 15 37.9**	**+1.1**
	comp=E,1.5nm,0.4s,baz=241,slow=7.0,SNR=6.3							
FINES	**FINESS Array B**	**26.15**	**357**	P		**P**	**22 15 36.6**	**-0.6**
	comp=E,0.8nm,0.5s,baz=157,slow=10,SNR=7.7							
HFS	**Hagfors**	**26.60**	**343**	P		**P**	**22 15 40.5**	**-0.8**
	comp=E,0.5nm,0.4s,baz=147,slow=8.3,SNR=5.0							
TORD	**Torodi Ar. Bea**	**32.82**	**234**	P		**P**	**22 16 36.9**	**0.0**
	comp=E,0.6nm,0.8s,baz=30,slow=9.7,SNR=4.5							
MKAR	**Makanchi Array**	**41.33**	**57**	P		**P**	**22 17 49.9**	**+1.1**
	comp=E,0.5nm,0.6s,baz=277,slow=6.2,SNR=1.7							
ZALV	**Zalesovo Beam**	**42.85**	**46**	P		**P**	**22 18 01.3**	**+0.2**
	comp=E,0.5nm,0.4s,baz=273,slow=8.8,SNR=2.2							
SONM	**Songino Array**	**57.18**	**52**	P		**P**	**22 19 51.8**	**+1.7**
	comp=E,0.2nm,0.4s,baz=276,slow=7.3,SNR=2.2							
YKA	**Yellowknife Ar**	**78.08**	**343**	P		**P**	**22 22 00.2**	**-1.3**
	comp=E,0.1nm,0.6s,baz=35,slow=5.9,SNR=2.7							

IDC 26 22:11:44.0±7.2,**28˚.33N**×**85˚.22E**,**h0**km,**mb3.7**/3, **mb1 3.6**/4,**mb1mx3.2**/58,**mbtmp3.5**/4,**ML3.2/1**,**MS3.4**/1, **Ms1 3.4**/1,**ms1mx2.4**/47,**Error ellipse: s-maj=137.2km s-min=56.2km az=173.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.57**	**354**	P	P	22 16 02.4	-0.1
	0.1nm,0.3s,baz=172,slow=11,SNR=1.8						
SONM	**Songino Array**	**25.48**	**34**	P	P	22 17 13.9	0.0
	0.2nm,0.4s,baz=226,slow=7.7,SNR=2.3						
FINES	**FINESS Array B**	**50.86**	**328**	P	P	22 20 46.1	-0.2
	0.6nm,0.5s,baz=103,slow=10,SNR=4.9						
ARCES	**ARCESS Array B**	**53.25**	**338**	P	P	22 21 03.9	-0.1
	1.6nm,0.8s,baz=104,slow=7.9,SNR=6.0						
OPO	**Ambohidratompo**	**59.39**	**223**	LR	LR	22 43 03.2	
	comp=Z,29nm,19.0s,baz=340,slow=32						

*IDC **26** 22:13:33.2±6.2,51˚.74N×178˚.53E,h104km±60km,mb3.5/8, mb1 3.8/10,mb1mx3.3/60,mbtmp4.0/10,Error ellipse: s-maj=37.6km s-min=20.0km az=164.0*

*NEIC **26** 22:13:35.6±1.1,51˚.9N±0˚.2×178˚.15E±0˚.06,h141km±11km, mb4.1/34,ML3.3(AEIC),Error ellipse: s-maj=28.2km s-min=1.5km az=190.0*

*AEIC **26** 22:13:36±1.3,52˚.0N±0˚.1×178˚.2E±0˚.1,h144km±5km,Error ellipse: s-maj=20.3km s-min=6.8km az=198.0*

ISC 26 22:13:35.6±0.8,**51˚.8N**±0˚.1×**178˚.05E**±0˚.05,**h150**km,**n62,** σ1§**40**/60,**mb3.9**/17,**Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	**Amchitka**	**0.86**	**115**	Pn	**Pn**	**22 13 59.1**	**-0.1**
AMKA				Sn	**Sn**	**22 14 15.7**	**-1.5**
SMY	**Shemya**	**2.62**	**293**		**Pn**	**22 14 16.7**	**-1.4**
SMY				Sn	**Sn**	**22 14 50.5**	**-0.4**
ADK	**Adak**	**3.27**	**86**	Pn	**Pn**	**22 14 24.9**	**-1.3**
ADK				Sn	**Sn**	**22 15 03.5**	**-2.0**
ATKA	**Atka Island**	**4.81**	**82**		**Pn**	**22 14 45.3**	**-1.1**
NIKH	**Nikolski High**	**8.11**	**76**	Pn	**Pn**	**22 15 29.4**	**-0.9**
SPIA	**Saint Paul Isl**	**8.71**	**47**	Pn	**Pn**	**22 15 38.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**12.49**	**284**	Pn	**P**	**22 16 30.6**	**-3.1**
PETK	**Petropavlovsk-**	**12.49**	**284**	P	**P**	**22 16 32.0**	**-1.8**
	0.5nm,0.3s,baz=96,slow=18,SNR=21						
PETK				S	**Sn**	**22 18 42.0**	**-4.1**
	0.2nm,0.3s,baz=16,slow=27,SNR=1.6						
PETK	**Petropavlovsk-**	**12.49**	**284**	Pn	**Pn**	**22 16 28.9**	**+0.9**
TTA	**Tatalina**	**17.77**	**41**	P	**P**	**22 17 31.1**	**-0.9**
KDAK	**Kodiak Island**	**17.89**	**59**	P

PV13					IAmb	IAmb	22 22 25.9			
	comp=Z,5.3nm,1.2s									
KAN17	**Caldwell West**	**58.65**	**69**	P	**P**	**P**	**22 23 17.0**	**+0.2**		
WRA	**Warramunga Arr**	**80.96**	**221**	P	**P**	**P**	**22 25 36.2**	**+3.1**		
	comp=Z,0.7nm,0.7s,baz=28,slow=5.7,SNR=2.9									

IDC ***26*** *22:30:35.9±0.8, 27°42N×85°56E, h0km, mb3.9/16, mb1 4.0/18, mb1mx3.7/54, mbtmp3.9/18, ML4.2/2, Error ellipse: s-maj=25.6km s-min=16.7km az=53.0*
DMN ***26*** *22:30:37.8±0.1, 27°56N×85°73E, h10km, Ml4.6/3, Error ellipse: s-maj=3.1km s-min=1.3km az=14.0*
ISC 26 22:30:37.9±1.0, **27°54N**±0°05×**85°69E**±0°03, **h13**km±6km, **n30**, σ0**92**/39, **mb3.9**/16, **Nepal**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PKI	**Pulchoki**	**0.25**	**277**		*e*Pg		**Pg**	**22 30 43.9**	**+0.5**
PKI					*e*Sg		**Sg**	**22 30 48.0**	**+0.9**
PKIN	**Phulchoki**	**0.26**	**278**		*e*Pg		**Pg**	**22 30 44.0**	**+0.4**
GUN	**Gumba**	**0.41**	**25**		*e*Pg		**Pg**	**22 30 45.5**	**-0.7**
GUN					*e*Sg		**Sg**	**22 30 51.3**	**-0.4**
KKN	**Kakani**	**0.44**	**304**		*e*Pg		**Pb**	**22 30 46.6**	**-1.1**
KKN					*e*Sg		**Sb**	**22 30 54.0**	**-0.3**
DMN	**Daman**	**0.52**	**278**		*e*Pg		**Pb**	**22 30 48.8**	**-0.3**
DMN					*e*Sg		**Sb**	**22 30 55.9**	**-0.8**
RAMN	**Ramite**	**1.00**	**126**		*e*Pg		**Pg**	**22 30 56.1**	**-1.3**
GKN	**Gorkha**	**1.04**	**297**		*e*Pg		**Pn**	**22 30 58.1**	**-0.3**
GKN					*e*Sg		**Sb**	**22 31 11.5**	**0.0**
	3μm,0.3s								
ODAN	**Odare**	**1.66**	**114**		*e*Pg		**Pg**	**22 31 09.0**	**-0.9**
ODAN					*e*Sg		**Sb**	**22 31 30.3**	**+0.8**
	932nm,0.3s								
TAPN	**Taplejung**	**1.81**	**96**		*e*Pg		**Pb**	**22 31 11.0**	**-0.1**
TAPN					*e*Sg		**Sb**	**22 31 34.5**	**+0.7**
	626nm,0.3s								
KOLN	**Koldanda**	**1.86**	**277**		*e*Pg		**Pg**	**22 31 12.6**	**-1.2**
KOLN					*e*Sg		**Sg**	**22 31 39.4**	**+1.4**
DANN	**Dangsing**	**1.89**	**296**		*e*Pg		**Pg**	**22 31 12.7**	**-1.5**
PYUN	**Piuthan**	**2.45**	**284**		*e*Pg		**Pg**	**22 31 24.4**	**-0.6**
PYUN					*e*Sg		**Sg**	**22 31 55.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**15.18**	**124**		Pn		**Pn**	**22 34 10.3**	**-1.8**
	0.3nm,0.3s,baz=304,slow=15,SNR=6.5								
MKAR	**Makanchi Array**	**19.40**	**353**		P		**Pn**	**22 35 05.0**	**+0.1**
	0.8nm,0.3s,baz=178,slow=11,SNR=26								
KURBB	**Kurchatov Arra**	**23.69**	**349**		P		**P**	**22 35 50.7**	**+1.4**
	4.9nm,0.7s,baz=178,slow=9.4,SNR=4.6								
SONM	**Songino Array**	**25.91**	**33**		P		**P**	**22 36 11.7**	**+1.8**
	2.5nm,0.6s,baz=218,slow=10,SNR=21								
ZALV	**Zalesovo Beam**	**26.39**	**359**		P		**P**	**22 36 15.2**	**+1.3**
	1.8nm,0.3s,baz=176,slow=10,SNR=13								
BVAR	**Borovoye Array**	**27.88**	**340**		P		**P**	**22 36 27.8**	**+0.4**
	0.7nm,0.4s,baz=155,slow=12,SNR=9.8								
NRIK	**Noril'sk**	**41.84**	**1**		P		**P**	**22 38 28.6**	**+1.4**
	2.4nm,0.5s,baz=156,slow=5.2,SNR=4.1								
AKASG	**Malin Array Be**	**48.17**	**315**		P		**P**	**22 39 17.3**	**-0.5**
	0.2nm,0.3s,baz=81,slow=6.9,SNR=3.2								
FINES	**FINESS Array B**	**51.74**	**328**		P		**P**	**22 39 44.7**	**-0.1**
	1.0nm,0.6s,baz=106,slow=7.2,SNR=12								
ARCES	**ARCESS Array B**	**54.14**	**338**		P		**P**	**22 40 03.1**	**+0.7**
	1.0nm,0.5s,baz=104,slow=8.2,SNR=21								
NOA	**NORSAR Array B**	**58.84**	**327**		P		**P**	**22 40 35.7**	**-0.4**
	0.8nm,0.9s,baz=108,slow=5.1,SNR=1.4								
KEST	**Kesra**	**64.02**	**298**		P		**P**	**22 41 11.8**	**+0.2**
	4.0nm,0.8s,baz=35,slow=2.7,SNR=6.1								
WRA	**Warramunga Arr**	**66.68**	**130**		P		**P**	**22 41 29.2**	**+0.4**
	0.4nm,0.3s,baz=323,slow=6.6,SNR=7.0								
ASAR	**Alice Springs**	**68.97**	**133**		P		**P**	**22 41 43.6**	**+0.4**
	0.5nm,0.6s,baz=313,slow=6.3,SNR=6.0								
ESDC	**Sonseca Array**	**72.74**	**306**		P		**P**	**22 42 06.2**	**+0.1**
	0.7nm,0.8s,baz=72,slow=4.8,SNR=6.0								
TORD	**Torodi Ar. Bea**	**78.78**	**279**		P		**P**	**22 42 40.5**	**-0.5**
	0.4nm,0.7s,baz=53,slow=5.0,SNR=6.0								
ILAR	**Eielson Array**	**79.38**	**20**		P		**P**	**22 42 42.6**	**-0.8**
	0.5nm,0.9s,baz=308,slow=4.4,SNR=3.3								
YKA	**Yellowknife Ar**	**88.81**	**9**		P		**P**	**22 43 31.3**	**-0.1**
	0.3nm,0.7s,baz=344,slow=4.9,SNR=6.3								

IDC ***26*** *22:32:04.2±1.7, 13°01S×31°78E, h0km, mb3.8/3, mb1 4.0/6, mb1mx3.5/48, mbtmp4.0/6, ML3.8/3, Error ellipse: s-maj=38.4km s-min=35.2km az=128.0*
LSZ ***26*** *22:32:05.0±0.3, 9°35S×25°68E, h10km, MD4.2*
ISC 26 22:32:05.2±2.8, **13°06S**±0°05×**31°71E**±0°05, **h12**km±19km, **n62**, σ1**°70/72**, **mb3.8**/3, **Zambia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VWZMW	**Thunduwike**	**2.61**	**44**		*i* P		**Pn**	**22 32 47.6**	**+0.2**
VWZMW					*i* S		**Sn**	**22 33 17.9**	**-1.2**
VWZMW					IAML			22 33 22.9	
	comp=Z,953nm,0.2s								
ENUK	**Enukweni**	**2.83**	**49**		*i* P		**Pn**	**22 32 51.2**	**+0.5**
ENUK					*i* S		**Sn**	**22 33 24.7**	**-0.3**
ENUK					IAML			22 33 27.0	
	comp=Z,2μm,0.2s								
BOLE	**Bolero**	**2.87**	**44**		*i* P		**Pn**	**22 32 51.0**	**+0.1**
BOLE					*i* S		**Sn**	**22 33 21.7**	**-3.8**
BOLE					IAML			22 33 33.2	
	comp=Z,1μm,0.2s								
THAZ	**Thazima**	**2.88**	**40**		*i* P		**Pn**	**22 32 51.4**	**+0.2**
THAZ					*i* S		**Sn**	**22 33 25.7**	**-0.2**
THAZ					IAML			22 33 29.6	
	comp=Z,595nm,0.3s								
THAN	**Thanula**	**2.89**	**57**		*i* P		**Pn**	**22 32 52.2**	**+1.0**
THAN					*i* S		**Sn**	**22 33 23.8**	**-2.1**
THAN					IAML			22 33 31.3	
	comp=Z,784nm,0.4s								
NGON	**Ngonga**	**3.04**	**46**		*i* P		**Pn**	**22 32 53.3**	**+0.1**
NGON					IAML			22 33 34.7	
	comp=Z,839nm,0.3s								
CHEL	**Chelinda**	**3.20**	**40**		*i* P		**Pn**	**22 32 56.2**	**+0.5**
CHEL					IAML			22 33 40.1	
	comp=Z,812nm,0.4s								
NTHA	**Nthalire**	**3.29**	**35**		*i* P		**Pn**	**22 32 58.0**	**+1.3**
NTHA					IAML			22 33 39.6	
	comp=Z,543nm,0.1s								
MLOW	**Mlowe**	**3.33**	**48**		*i* P		**Pn**	**22 32 56.9**	**-0.3**
MLOW					IAML			22 33 45.7	
	comp=Z,2μm,0.4s								
LIVA	**Livingstonia**	**3.38**	**44**		*i* P		**Pn**	**22 32 58.1**	**+0.1**
LIVA					IAML			22 33 46.7	
	comp=Z,1μm,0.2s								
WENY	**Wenya**	**3.40**	**32**		*i* P		**Pn**	**22 32 58.0**	**-0.3**
WENY					IAML			22 33 45.6	
	comp=Z,898nm,0.2s								
MBAM	**Mbamba Bay**	**3.51**	**60**		*i* P		**Pb**	**22 33 04.8**	**-2.6**
MBAM					IAML			22 33 55.8	
	comp=Z,1μm,0.6s								
MKIL	**Mkili**	**3.62**	**54**		*i* P		**Pb**	**22 33 08.0**	**-1.4**
MKIL					IAML			22 34 03.0	
	comp=Z,1μm,0.4s								
KALO	**Kalowe**	**3.66**	**31**		*i* P		**Pn**	**22 33 01.6**	**-0.1**
KALO					IAML			22 33 58.1	
	comp=Z,243nm,0.2s								
CPMW	**Chitipa**	**3.67**	**25**		*i* P		**Pn**	**22 33 01.6**	**-0.3**
CPMW					IAML			22 33 58.7	
	comp=Z,420nm,0.2s								
KAPK	**Kapoka**	**3.68**	**28**		*i* P		**Pn**	**22 33 01.3**	**-0.8**
KAPK					IAML			22 34 02.1	
	comp=Z,618nm,0.2s								
KARM1	**KARONGA**	**3.76**	**35**		*i* P		**Pn**	**22 33 02.9**	**-0.2**
KARM1					IAML			22 34 00.4	
	comp=Z,259nm,0.4s								
TIRI	**Matiri**	**3.85**	**54**		*i* P		**Pb**	**22 33 12.4**	**-0.9**
TIRI					IAML			22 34 04.3	
	comp=Z,404nm,0.4s								
ITUM	**Tunduma**	**3.91**	**22**		*i* P		**Pn**	**22 33 04.9**	**-0.4**
ITUM					IAML			22 34 03.6	
	comp=Z,191nm,0.4s								
NIND	**Nindi**	**4.04**	**44**		*i* P		**Pn**	**22 33 06.4**	**-0.6**
NIND					IAML			22 34 07.6	
	comp=Z,316nm,0.2s								
LSZ	**Lusaka**	**4.07**	**237**		*i* P		**Pb**	**22 33 14.4**	**-2.4**
LSZ					IAML			22 34 17.1	
	comp=Z,215nm,1.3s								
LSZ	**Lusaka**	**4.07**	**237**		*i* P		**Pb**	**22 33 14.5**	**-2.4**
LSZ					IAML			22 34 17.2	
	comp=Z,215nm,1.3s								
ILOM	**Ilombo**	**4.08**	**23**		*i* P		**Pn**	**22 33 07.6**	**-0.1**
ILOM					IAML			22 34 15.1	
	comp=Z,355nm,0.5s								
KURU	**Muhukuru**	**4.11**	**64**		*i* P		**Pn**	**22 33 09.3**	**+1.4**
UNDA	**Madunda**	**4.18**	**41**		*i* P		**Pb**	**22 33 18.0**	**-0.9**
UNDA					IAML			22 34 20.6	
	comp=Z,962nm,0.6s								
LIGA	**Liganga**	**4.20**	**56**		*i* P		**Pn**	**22 33 09.8**	**+0.6**
LIGA					IAML			22 34 16.7	
	comp=Z,304nm,0.5s								
ZOMB	**Zomba**	**4.22**	**124**		*i* P		**Pn**	**22 33 10.7**	**+1.2**
ZOMB					S		**Sn**	**22 34 00.6**	**+1.8**
ZOMB	**Zomba**	**4.22**	**124**		*i* P		**Pn**	**22 33 10.7**	**+1.2**
ZOMB					S		**Sn**	**22 34 00.6**	**+1.8**
ZOMB	**Zomba**	**4.22**	**124**		*i* P		**Pn**	**22 33 11.0**	**+1.5**
ZOMB					IAML			22 34 19.2	
	comp=Z,188nm,0.7s								
ZOMB	**Zomba**	**4.22**	**124**		*i* P		**Pn**	**22 33 11.0**	**+1.5**
ZOMB					IAML			22 34 19.1	
	comp=Z,188nm,0.7s								
BUMI	**Ibumi**	**4.30**	**48**		*i* P		**Pn**	**22 33 09.7**	**-1.0**
BUMI					IAML			22 34 14.6	
	comp=Z,746nm,0.2s								
PDHT	**Panda Hill**	**4.32**	**21**		*i* P		**Pn**	**22 33 11.5**	**+0.5**
PDHT					IAML			22 34 25.8	
	comp=Z,344nm,0.3s								
UKWA	**Ukwama**	**4.34**	**35**		*i* P		**Pb**	**22 33 22.6**	**+0.9**
UKWA					IAML			22 34 22.2	
	comp=Z,1μm,0.3s								
NKAL	**Nkalisi**	**4.35**	**28**		*i* P		**Pn**	**22 33 13.8**	**+2.5**
NKAL					IAML			22 34 25.8	
	comp=Z,285nm,0.4s								
ZINI	**Mgazini**	**4.39**	**54**		*i* P		**Pn**	**22 33 12.4**	**+0.6**
ZINI					IAML			22 34 20.1	
	comp=Z,308nm,0.2s								
MAKE	**Makete**	**4.44**	**32**		*i* P		**Pn**	**22 33 15.2**	**+2.6**
MAKE					*i* S		**Sn**	**22 34 02.5**	**-2.0**
MAKE					IAML			22 34 20.4	
	comp=Z,581nm,0.4s								
MAKE	**Makete**	**4.44**	**32**		*i* P		Pn	22 33 16.4	+3.8
MAKE					IAML			22 34 20.5	
	comp=Z,581nm,0.4s								
NGEA	**Songea**	**4.55**	**59**		*i* P		**Pn**	**22 33 14.8**	**+0.8**
NGEA					IAML			22 34 30.2	
	comp=Z,363nm,0.8s								
KIPE	**Kipengere**	**4.60**	**36**		*i* P		**Pn**	**22 33 13.5**	**-1.4**
KIPE					IAML			22 34 30.4	
	comp=Z,266nm,0.4s								
UWEM	**Njombe**	**4.67**	**41**		*i* P		**Pn**	**22 33 14.2**	**-1.6**
UWEM					IAML			22 34 31.1	
	comp=Z,480nm,0.4s								
JILO	**Lwanjilo**	**4.67**	**23**		*i* P		**Pn**	**22 33 15.3**	**-0.6**
JILO					IAML			22 34 32.0	
	comp=Z,70nm,0.5s								
CHML	**Chimala**	**4.78**	**29**		*i* P		**Pn**	**22 33 17.0**	**-0.2**
CHML					IAML			22 34 47.5	
	comp=Z,354nm,1.0s								
WINO	**Wino**	**4.81**	**47**		*i* P		**Pn**	**22 33 16.8**	**-0.9**
WINO					IAML			22 34 37.2	
	comp=Z,298nm,0.3s								
BANG	**Mbangamawe**	**4.85**	**53**		*i* P		**Pn**	**22 33 18.3**	**+0.2**
BANG					IAML			22 34 34.0	
	comp=Z,497nm,0.4s								
KIMO	**Ikongo**	**4.85**	**61**		*i* P		**Pn**	**22 33 18.3**	**+0.1**
KIMO					IAML			22 34 35.0	
	comp=Z,339nm,0.6s								
LOSI	**Makongolosi**	**4.86**	**17**		*i* P		**Pn**	**22 33 17.8**	**-0.5**
LOSI					IAML			22 34 45.1	
	comp=Z,90nm,0.6s								
KIDE	**Kidegembe**	**4.97**	**41**		*i* P		**Pn**	**22 33 19.5**	**-0.4**
KIDE					IAML			22 34 37.2	
	comp=Z,285nm,0.2s								
GAWA	**Igawa**	**5.01**	**32**		*i* P		**Pn**	**22 33 19.9**	**-0.5**
GAWA					IAML			22 34 42.3	
	comp=Z,119nm,1.0s								
MFRI	**Mfriga**	**5.15**	**44**		*i* P		**Pn**	**22 33 21.7**	**-0.6**
MFRI					IAML			22 34 43.9	
	comp=Z,564nm,0.3s								
BAKO	**Makambako**	**5.17**	**36**		*i* P		**Pn**	**22 33 22.0**	**-0.7**
BAKO					IAML			22 34 43.5	
	comp=Z,163nm,0.4s								
ITZ	**Itezhi-Tezhi**	**6.13**	**243**		*i* P		**Pn**	**22 33 39.0**	**+3.2**
ITZ					*i*			22 33 39.0	
	baz=357,slow=16								
ITZ					*i* S		**Sn**	**22 34 47.5**	**+1.6**
ITZ	**Itezhi-Tezhi**	**6.13**	**243**		*e*P		**Pn**	**22 33 40.5**	**+4.7**
ITZ					*i*			22 33 40.5	
	baz=18,slow=18								
ITZ					*e*S		**Sn**	**22 34 48.7**	**+2.7**
ITZ					IAML			22 35 26.6	
	comp=Z,189nm,0.7s								
DODT	**Dodoma, Tanzan**	**7.90**	**31**		*i* P		**Pn**	**22 34 01.5**	**+1.3**
DODT	**Dodoma, Tanzan**	**7.90**	**31**		*i* P		**Pn**	**22 34 01.4**	**+1.3**
BUJA	**Bujumbura/Buru**	**9.87**	**346**		*i* P		**Pn**	**22 34 26.6**	**-0.5**
MBAR	**Mbarara**	**12.41**	**355**		Pn		**Pn**	**22 35 01.2**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=342,slow=20,SNR=1.8								
MBAR					Sn		Sn	22 37 10.7	-10
	comp=Z,1.6nm,0.3s,baz=24,slow=22,SNR=1.7								
MBAR					Lg		Lg	22 38 20.8	
	comp=Z,2.0nm,0.3s,baz=89,slow=16,SNR=4.6								
MBAR	**Mbarara**	**12.41**	**355**		*i* P		**Pn**	**22 35 03.0**	**+1.0**
KMBO	**Kilima Mbogo**	**13.06**	**25**		Pn		**Pn**	**22 35 09.5**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=203,slow=16,SNR=2.8								
KMBO					Lg		Lg	22 38 45.8	
	comp=Z,0.2nm,0.3s,baz=299,slow=8.8,SNR=3.0								
BOSA	**Boshof**	**16.60**	**200**		Pn		**Pn**	**22 35 58.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=24,slow=11,SNR=7.3								
BOSA					Sn		Sn	22 38 55.2	-7.3
	comp=Z,0.2nm,0.3s,baz=140,slow=8.7,SNR=4.0								
BOSA					Lg		Lg	22 40 43.7	
	comp=Z,0.3nm,0.3s,baz=124,slow=17,SNR=7.0								
TORD	**Torodi Ar. Bea**	**39.54**	**310**		P		**P**	**22 39 37.5**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=123,slow=8.5,SNR=6.8								
CMAR	**Chiang Mai Arr**	**73.31**	**66**		P		**P**	**22 43 38.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=263,slow=7.2,SNR=1.6								
MKAR	**Makanchi Array**	**74.81**	**33**		P		**P**	**22 43 46.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=214,slow=7.0,SNR=1.7								

IDC ***26*** *22:32:33.1±0.5, 27°48N×85°70E, h0km, mb4.3/28, mb1 4.4/30, mb1mx4.2/54, mbtmp4.3/30, ML4.0/2, MS3.2/9, Ms1 3.3/9, ms1mx2.9/57, Error ellipse: s-maj=15.8km s-min=11.6km az=32.0*
DMN ***26*** *22:32:34.7±0.1, 27°56N×85°74E, h10km, Ml4.9/2, Error ellipse: s-maj=3.1km s-min=1.3km az=14.0*
BJI ***26*** *22:32:34.1±0.0, 27°66N×85°78E, h8km, mB4.5/22, mb4.4/38, Ms3.8/22, Ms7.3.6/21*
NEIC ***26*** *22:32:34.7±1.1, 27°53N±0°04×85°68E±0°05, h10km±1km, mb4.6/61, Error ellipse: s-maj=8.5km s-min=6.5km az=222.0*
NDI ***26*** *22:32:36.0±2.4, 27°52N×85°66E, h10km, ML4.1, mb4.6(NEIC)*
ISC 26 22:32:34.1±0.8, **27°50N**±0°03×**85°68E**±0°02, **h9**km±5km, **n202**, σ1**°57**/226, **mb4.5**/69, **MS3.5**/10, **5C-3D, Nepal**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PKI	**Pulchoki**	**0.25**	**288**		*e*Pg		**Pg**	**22 32 40.9**	**-0.1**
PKI					*e*Sg		**Sb**	**22 32 45.6**	**0.0**
PKIN	**Phulchoki**	**0.26**	**288**		*e*Pg		**Pb**	**22 32 41.0**	**-0.2**
PKIN					*e*Sg		**Sb**	**22 32 45.8**	**-0.1**
	45μm,0.3s								
GUN	**Gumba**	**0.45**	**23**		*e*Pg		**Pg**	**22 32 42.5**	**-0.5**
GUN					*e*Sg		**Sg**	**22 32 47.6**	**-1.4**
KKN	**Kakani**	**0.46**	**310**		*e*Pg		**Pg**	**22 32 43.6**	**+0.5**
KKN					*e*Sg		**Sb**	**22 32 51.1**	**-0.4**
DMN	**Daman**	**0.52**	**283**		*e*Pg		**Pb**	**22 32 45.8**	**+0.3**
DMN					*e*Sg		**Sb**	**22 32 52.9**	**-0.4**
	13μm,0.3s								
RAMN	**Ramite**	**0.98**	**123**		*e*Pg		**Pg**	**22 32 53.1**	**+0.1**
GKN	**Gorkha**	**1.05**	**299**		*e*Pg		**Pn**	**22 32 55.0**	**-0.2**
GKN					*e*Sg		**Sn**	**22 33 09.8**	**-0.3**
ODAN	**Odare**	**1.65**	**112**		*e*Pg		**Pg**	**22 33 05.8**	**0.0**
ODAN					*e*Sg		**Sg**	**22 33 27.0**	**-0.2**
	2μm,0.4s								
TAPN	**Taplejung**	**1.81**	**94**		*e*Pg		**Pb**	**22 33 08.1**	**+0.5**
TAPN					*e*Sg		**Sb**	**22 33 30.1**	**-0.4**
	1μm,0.3s								
KOLN	**Koldanda**	**1.86**	**279**		*e*Pg		**Pg**	**22 33 09.6**	**-0.2**
KOLN					*e*Sg		**Sg**	**22 33 35.4**	**+1.4**
DANN	**Dangsing**	**1.90**	**297**		*e*Pg		**Pb**	**22 33 09.7**	**+0.6**
DANN					*e*Sg		**Sg**	**22 33 35.6**	**+0.4**
PYUN	**Piuthan**	**2.46**	**285**		*e*Sg		**Sg**	**22 33 52.7**	**-0.4**
GTK	**Tadong**	**2.60**	**93**		*e*P		**Pb**	**22 33 19.4**	**-1.6**
BOK	**Bokaro**	**3.69**	**177**		*e*P		**Pn**	**22 33 33.6**	**+2.3**
BOK					IAML			22 33 45.6	
	comp=N,571nm,0.3s								
LSA	**Lhasa**	**5.29**	**64**		Pn		**Pn**	**22 33 56.1**	**+2.4**
LSA					Sn		**Sn**	**22 34 55.4**	**+0.4**
SHL	**Shillong**	**5.88**	**108**		*e*P		**Pn**	**22 34 04.6**	**+3.0**
SHL	**Shillong**	**5.88**	**108**		Pn		**Pn**	**22 34 01.8**	**+0.2**
SHL					Sn		**Sn**	**22 35 07.8**	**-1.4**
DDI	**Dehra Dun**	**7.25**	**295**		IAML			22 33 50.2	
	comp=E,226nm,0.4s								
DDI					IAML			22 33 50.7	
	comp=N,330nm,0.5s								
DDI					*e*P		**Pn**	**22 34 22.8**	**+2.5**
KOHI	**KOHIMA**	**7.75**	**101**		IAML			22 35 56.1	
	comp=N,94nm,0.9s								
KOHI					IAML			22 35 58.2	
	comp=E,153nm,0.6s								
MOKO	**MOKOCHONG**	**7.98**	**96**		*e*P		**Pn**	**22 34 29.8**	**-0.6**
MOKO					IAML			22 34 33.8	
	comp=N,71nm,0.4s								
MOKO					IAML			22 34 33.9	
	comp=E,72nm,0.4s								
SMLA	**Simla**	**8.27**	**298**		IAML			22 34 11.2	
	comp=E,146nm,0.4s								
SMLA					IAML			22 34 12.6	
	comp=N,81nm,0.4s								
SMLA					*e*P		**Pn**	**22 34 34.8**	**+0.6**
DHRM	**DHARAMSHALA**	**9.42**	**302**		*e*P		**Pn**	**22 34 50.3**	**+0.1**
DHRM					IAML			22 34 55.1	
	comp=E,200nm,0.8s								
DHRM					IAML			22 34 56.3	
	comp=N,227nm,0.7s								
AJM	**Ajmer**	**9.90**	**267**		*e*S		**Sn**	**22 36 40.0**	**-7.8**
HYB	**Hyderabad**	**11.99**	**215**		*i* P		**Pn**	**22 35 24.0**	**-1.3**
HYB					*e*S		**Sn**	**22 37 42.0**	**+2.6**
NIL	**Nilore**	**12.34**	**303**				**Pn**	**22 35 28.6**	**-1.3**
MHMT	**Maesarieng**	**14.61**	**127**		P		**Pn**	**22 36 03.0**	**+2.0**
	comp=N,18nm,0.7s								
CHTO	**Chiang Mai**	**14.94**	**123**		Pn		**Pn**	**22 36 03.9**	**-1.6**
CM33	**Chiang Mai Arr**	**14.94**	**123**		P		**Pn**	**22 36 07.0**	**+1.4**
CM32	**Chiang Mai Arr**	**14.97**	**123**		P		**Pn**	**22 36 08.0**	**+2.1**
CM34	**Chiang Mai Arr**	**15.07**	**122**		P		**P**	**22 36 13.0**	**+0.3**
CM15	**Chiang Mai Arr**	**15.15**	**124**		P		**P**	**22 36 17.4**	**+3.8**
CM13	**Chiang Mai Arr**	**15.15**	**124**		P		**P**	**22 36 12.2**	**-1.4**
	comp=N,89nmcomp=N,9.6nm,0.8s								
CM31	**Chiang Mai Arr**	**15.16**	**124**		P		**P**	**22 36 18.9**	**+5.2**
CMAR	**Chiang Mai Arr**	**15.16**	**124**		Pn		**Pn**	**22 36 07.4**	**-1.1**
	comp=N,0.1nm,0.3s,baz=304,slow=13,SNR=11								
CMAR					LR		LR	22 43 22.0	
	comp=N,41nm,20.2s,baz=300,slow=43								
CM02	**Chiang Mai Arr**	**15.18**	**124**		P		**P**	**22 36 13.0**	**-0.8**
	comp=N,118nmcomp=N,17nm,0.9s								
CM35	**Chiang Mai Arr**	**15.18**	**122**		P		**P**	**22 36 15.0**	**+1.1**
CM01	**Chiang Mai Arr**	**15.19**	**124**		P		**P**	**22 36 13.2**	**-0.8**
	comp=N,120nmcomp=N,18nm,0.8s								
CM05	**Chiang Mai Arr**	**15.20**	**124**		P		**P**	**22 36 13.1**	**-0.9**
	comp=N,72nmcomp=N,12nm,0.8s								
CM09	**Chiang Mai Arr**	**15.20**	**124**		P		**P**	**22 36 15.0**	**+0.9**
	comp=N,124nmcomp=N,15nm,0.8s								
CM04	**Chiang Mai Arr**	**15.22**	**124**		P		**P**	**22 36 13.0**	**-1.3**
	comp=N,126nmcomp=N,17nm,0.8s								
CM36	**Chiang Mai Arr**	**15.23**	**123**		P		**P**	**22 36 16.0**	**+1.5**
KBL	**Kabul**	**15.89**	**300**		Pn		**Pn**	**22 36 16.9**	**-1.2**
KBL					IAmb		IAmb	22 36 23.5	
	comp=Z,34nm,0.8s								
SUKH	**Sukhothai**	**16.28**	**125**		P		**P**	**22 36 27.0**	**+0.9**
	comp=Z,40nm,0.8s								
WMQ	**Urumqi**	**16.37**	**5**		*e*P		**P**	**22 36 26.0**	**-1.0**
WMQ					pP		pP	22 36 28.8	-1.1
WMQ					pmax		pmax		
	comp=Z,21nm,1.1s								
WMQ					pmax		pmax		
	comp=Z,170nm,4.9s								
WMQ					LR		LR

HHC	**Hu-ho-hao-te**	**25.11**	**51**	*e*P		**P**		**22 38 00.3**	**+1.0**
HHC				pmax		pmax				
	comp=Z,13nm,1.1s									
HHC				pmax		pmax				
	comp=Z,87nm,5.1s									
HHC				LR		LR				
	comp=Z,94nm,10.4s									
HHC				LR		LR				
	comp=Z,110nm,13.1s									
HHC				LR		LR				
	comp=Z,140nm,12.1s									
GEYT	**Alibeck**	**25.33**	**301**	P		**P**		**22 38 03.5**	**+2.2**
	comp=Z,2.1nm,0.5s,baz=115,slow=10.0,SNR=6.4									
GYA0B	**ALIBECK ARRAY**	**25.33**	**301**	P		**P**		**22 38 00.9**	**-0.3**
SONM	**Songino Array**	**25.95**	**33**	P		**P**		**22 38 08.1**	**+1.2**
	comp=Z,11nm,0.6s,baz=220,slow=10,SNR=33									
SONM				LR		LR		22 49 49.4		
	comp=Z,52nm,20.2s,baz=241,slow=40									
SONM	**Songino Array**	**25.95**	**33**	P		**P**		**22 38 07.2**	**+0.3**
SONM				IAmb		IAmb		22 38 11.3		
	comp=Z,8.8nm,0.8s									
KULM	**Kulim**	**26.28**	**144**	P		**P**		**22 38 09.9**	**-0.1**
KULM				IAmb		IAmb		22 38 17.2		
	comp=Z,18nm,0.9s									
ULN	**Ulaanbaatar**	**26.29**	**34**	P		**P**		**22 38 10.1**	**+0.1**
ULN				IAmb		IAmb		22 38 14.3		
	comp=Z,12nm,0.7s									
ZAA0	**Zalesovo Array**	**26.43**	**359**	P		**P**		**22 38 11.6**	**+0.6**
ZAA0				IAmb		IAmb		22 38 12.8		
	comp=Z,12nm,0.8s									
ZALV	**Zalesovo Beam**	**26.43**	**359**	P		**P**		**22 38 11.9**	**+0.9**
	comp=Z,7.0nm,0.3s,baz=179,slow=9.9,SNR=39									
ZALV				LR		LR		22 50 15.3		
	comp=Z,92nm,18.2s,baz=180,slow=40									
ZALV	**Zalesovo Beam**	**26.43**	**359**	P		**P**		**22 38 11.2**	**+0.2**
PSI	**Prapat**	**27.63**	**150**	LR		LR		22 51 23.4		
	comp=Z,51nm,18.9s,baz=271,slow=41									
BVAR	**Borovoye Array**	**27.92**	**340**	P		**P**		**22 38 24.6**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=159,slow=13,SNR=29									
BRVK	**Borovoye**	**27.98**	**340**	P		**P**		**22 38 25.1**	**+0.2**
BRVK				IAmb		IAmb		22 38 26.8		
	comp=Z,6.3nm,0.8s									
NJ2	**Nanjing**	**29.08**	**73**	*e*P		**P**		**22 38 34.8**	**-0.2**
NJ2				pmax		pmax				
	comp=Z,5.0nm,0.5s									
ABKAR	**Akbulak array**	**29.40**	**325**	P		**P**		**22 38 37.9**	**+0.4**
ABKAR	**Akbulak array**	**29.40**	**325**	P		**P**		**22 38 38.0**	**+0.4**
ABKAR				IAmb		IAmb		22 38 39.7		
	comp=Z,5.1nm,1.1s									
ARU	**Arti**	**34.80**	**334**	P		**P**		**22 39 24.8**	**-0.1**
ARU				IAmb		IAmb		22 39 26.7		
	comp=Z,8.4nm,0.8s									
RAYN	**Ar Rayn**	**36.37**	**273**	P		**P**		**22 39 38.8**	**0.0**
KSRS	**Korea Array**	**36.73**	**63**	P		**P**		**22 39 41.3**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=256,slow=9.6,SNR=4.3									
KBZ	**Khabaz**	**37.91**	**307**	P		**P**		**22 39 52.7**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=110,slow=12,SNR=2.0									
USRK	**Ussuriysk Ar.**	**40.50**	**53**	P		**P**		**22 40 13.3**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=261,slow=8.9,SNR=6.0									
USRK	**Ussuriysk Ar.**	**40.50**	**53**	P		**P**		**22 40 13.5**	**+0.2**
KLR	**Kul'dur**	**41.34**	**46**	P		**P**		**22 40 21.2**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=271,slow=9.4,SNR=3.9									
NRIK	**Noril'sk**	**41.89**	**1**	P		**P**		**22 40 25.5**	**+1.2**
	comp=Z,13nm,0.7s,baz=168,slow=6.4,SNR=14									
NRIK				LR		LR		23 00 00.4		
	comp=Z,69nm,19.2s,baz=107,slow=39									
NRIK	**Noril'sk**	**41.89**	**1**	P		**P**		**22 40 24.6**	**+0.3**
NRIK				IAmb		IAmb		22 40 26.4		
	comp=Z,12nm,0.7s									
MMAI	**Mount Meron Ar**	**43.45**	**290**	P		**P**		**22 40 39.8**	**+2.2**
	comp=Z,1.1nm,0.5s,baz=93,slow=11,SNR=4.9									
BRTR	**Keskin Array B**	**44.46**	**300**	P		**P**		**22 40 46.6**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=115,slow=8.8,SNR=5.3									
BRTR	**Keskin Array B**	**44.46**	**300**	P		**P**		**22 40 45.2**	**-0.6**
KLMR	**Klimovskoe**	**45.44**	**330**	*e*P		**P**		**22 40 52.4**	**-0.6**
KLMR				AMP				22 41 00.3		
	comp=Z,10.0nm,1.3s									
ELL	**Elmali**	**47.55**	**296**	P		**P**		**22 41 10.9**	**+0.8**
AKASG	**Malin Array Be**	**48.20**	**315**	P		**P**		**22 41 14.6**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=84,slow=6.7,SNR=10									
AKASG	**Malin Array Be**	**48.20**	**315**	P		**P**		**22 41 14.8**	**0.0**
AKBB	**Malin Array Si**	**48.20**	**315**	P		**P**		**22 41 14.2**	**-0.6**
AKBB				IAmb		IAmb		22 41 24.6		
	comp=Z,3.9nm,0.8s									
SORM	**Soroca**	**48.53**	**311**	⇑P		**P**		**22 41 17.4**	**0.0**
MNK	**Minsk**	**49.52**	**320**	*i* P		**P**		**22 41 25.4**	**+0.6**
	comp=E,1.0nm,1.1s									
MNK				*i* P		**P**		**22 41 25.4**	**+0.6**
	comp=N,11nm,1.4s									
MNK				*i* P		**P**		**22 41 25.4**	**+0.6**
	comp=Z,6.0nm,0.8s									
MNK				*i* PcP		**PcP**		**22 42 46.9**	**+0.2**
MNK				*i* PP		**PP**		**22 43 19.9**	**+0.9**
MNK				*i* PPP		PPP		22 44 12.5		
MNK				*i* S		**S**		**22 48 33.4**	**+0.9**
MNK				*i* SS		**SS**		**22 52 07.9**	**+3.7**
MNK				*i* SSS		SSS		22 53 27.4		
MNK				*i* LQ		LQ		22 58 49.3		
MNK				*i* LR		LR		23 02 35.8		
MNK				*i* LRM		MLR		23 04 46.5		
	comp=N,26nm,15.4s									
MNK				*i* LRM		MLR		23 05 05.1		
	comp=Z,72nm,17.2s									
MNK				*i* LRM		MLR		23 05 23.2		
	comp=E,7.0nm,18.1s									
VRI	**Vrincioaia**	**49.56**	**308**	⇑P		**P**		**22 41 26.8**	**+1.5**
PLOR	**Plostina**	**49.61**	**308**	⇓P		**P**		**22 41 27.5**	**+1.7**
MLR	**Muntele Rosu**	**50.11**	**308**	P		**P**		**22 41 29.8**	**+0.1**
MLR				IAmb		IAmb		22 41 32.3		
	comp=Z,6.2nm,0.8s									
TIXI	**Tiksi**	**50.15**	**16**	P		**P**		**22 41 29.5**	**+0.1**
TIXI				IAmb		IAmb		22 41 30.3		
	comp=Z,2.8nm,0.6s									
NACGM	**Naroch**	**50.21**	**320**	*i* P		**P**		**22 41 28.2**	**-1.9**
NACGM				*i* P		**P**		**22 41 28.2**	**-1.9**
NACGM				*i* P		**P**		**22 41 28.2**	**-1.9**
NACGM				*i* PcP		**PcP**		**22 42 49.1**	**-0.1**
NACGM				*i* PP		**PP**		**22 43 22.9**	**-2.4**
NACGM				*i* PPP		PPP		22 44 15.9		
NACGM				*i* S		**S**		**22 48 37.1**	**-5.0**
NACGM				*i* SS		SS		22 52 00.6	-15
NACGM				*i* SSS		SSS		22 53 41.6		
NACGM				*i* LQ		LQ		22 58 57.5		
NACGM				*i* LR		LR		23 02 37.0		
IDID	**Didziasalis**	**50.30**	**320**	*e*P		**P**		**22 41 31.6**	**+0.9**
IIGN	**Ignalina**	**50.59**	**320**	*e*P		**P**		**22 41 34.1**	**+1.1**
BURAR	**Bucovina Array**	**50.62**	**310**	⇑P		**P**		**22 41 34.2**	**+0.7**
BURAR	**Bucovina Array**	**50.62**	**310**	P		**P**		**22 41 33.2**	**-0.2**
BUR08	**Bucovina Ar. S**	**50.63**	**310**	P		**P**		**22 41 33.4**	**-0.2**
ISAL	**Salakas**	**50.68**	**321**	*e*P		**P**		**22 41 34.4**	**+0.8**
ARR	**Arges**	**51.03**	**308**	⇑P		**P**		**22 41 36.9**	**+0.4**
SANT	**Santorini**	**51.15**	**296**	P		**P**		**22 41 36.0**	**-1.6**
ARCR	**ARCALIA**	**51.20**	**310**	P		**P**		**22 41 39.7**	**+1.9**
IDI	**Anoyia**	**51.77**	**295**	P		**P**		**22 41 42.3**	**0.0**
FIA1	**FINESS Array S**	**51.77**	**328**	P		**P**		**22 41 41.3**	**-0.4**
FINES	**FINESS Array B**	**51.78**	**328**	P		**P**		**22 41 42.1**	**+0.3**
	comp=Z,3.4nm,0.6s,baz=107,slow=7.7,SNR=28									
PABE	**Paberze**	**51.89**	**320**	*e*P		**P**		**22 41 43.3**	**+0.6**
PABE	**Paberze**	**51.89**	**320**	P		**P**		**22 41 42.8**	**+0.1**
VTS	**Vitosha**	**52.18**	**304**	⇓P		**P**		**22 41 46.7**	**+1.4**
KWP	**Kalwaria Pacla**	**52.31**	**313**	*e*P		**P**		**22 41 47.0**	**+1.0**
KWP	**Kalwaria Pacla**	**52.31**	**313**	P		**P**		**22 41 46.0**	**0.0**
KWP				IAmb		IAmb		22 41 47.5		
	comp=Z,6.6nm,0.6s									
DRGR		**52.33**	**309**	⇑P		**P**		**22 41 47.0**	**+0.7**
MTSE	**Matsula**	**52.38**	**324**	*e*P		**P**		**22 41 46.8**	**+0.5**
KEV	**Kevo**	**53.75**	**338**	P		**P**		**22 41 55.5**	**-0.7**
ITM	**Ithomi**	**53.83**	**297**	P		**P**		**22 41 55.8**	**-1.6**
ARCES	**ARCESS Array B**	**54.18**	**338**	P		**P**		**22 42 00.1**	**+0.7**
	comp=Z,4.9nm,0.5s,baz=105,slow=8.3,SNR=44									
ARCES	**ARCESS Array B**	**54.18**	**338**	P		**P**		**22 41 59.8**	**+0.4**
ARCES				IAmb		IAmb		22 42 01.0		
	comp=Z,7.2nm,0.8s									
PDG	**Podgorica**	**55.13**	**304**	P		**P**		**22 42 06.2**	**-0.5**
PDG				IAmb		IAmb		22 42 07.4		
	comp=Z,5.3nm,0.8s									
MORH	**Mrgy, Hungar**	**55.17**	**309**	⇓P		**P**		**22 42 07.3**	**+0.3**
UPP	**Uppsala**	**55.66**	**325**	*e*P		**P**		**22 42 10.5**	**+0.2**
KRLC	**Kraliky**	**56.13**	**314**	*e*P		**P**		**22 42 14.6**	**+0.7**
DPC	**Dobruska-Polom**	**56.41**	**314**	*e*P		**P**		**22 42 15.2**	**-0.7**
CHVC	**Chvalec**	**56.56**	**314**	*e*P		**P**		**22 42 17.1**	**+0.2**
CONA	**Conrad Observa**	**56.91**	**311**	*e*P		**P**		**22 42 20.0**	**+0.5**
	comp=Z,3.7nm,1.0s									
TIP	**Timpagrande**	**57.50**	**301**	P		**P**		**22 42 23.3**	**-0.5**
TIP				IAmb		IAmb		22 42 39.3		
	comp=Z,5.6nm,1.2s									
PRU	**Pruhonice**	**57.58**	**314**	*e*P		**P**		**22 42 23.9**	**-0.2**
SOKA	**Soboth**	**57.61**	**310**	*e*P		**P**		**22 42 24.8**	**+0.3**
	comp=Z,1.7nm,0.5s									
SGRT	**San Giovanni R**	**57.81**	**304**	P		**P**		**22 42 25.8**	**-0.2**
BRG	**Berggiesshubel**	**57.88**	**315**	*e*P		**P**		**22 42 26.9**	**+0.7**
BRG				Amp				22 42 28.4		
	comp=Z,3.8nm,1.0s									
OBKA	**Obir**	**57.96**	**310**	*e*P		**P**		**22 42 26.4**	**-0.6**
	comp=Z,3.9nm,0.9s									
GERES	**GERESS Array B**	**58.24**	**312**	P		**P**		**22 42 29.1**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=82,slow=6.5,SNR=7.4									
GERES	**GERESS Array B**	**58.24**	**312**	P		**P**		**22 42 28.8**	**-0.1**
KHC	**Kasperske Hory**	**58.29**	**313**	*e*P		**P**		**22 42 28.3**	**-0.9**
MYKA	**Terra Mystica**	**58.56**	**310**	*e*P		**P**		**22 42 29.4**	**-1.7**
	comp=Z,0.9nm,0.4s									
NC405	**NORSAR Array S**	**58.63**	**327**	P		**P**		**22 42 30.9**	**-0.4**
NOA	**NORSAR Array B**	**58.87**	**327**	P		**P**		**22 42 32.5**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=88,slow=7.0,SNR=10									
NOA				LR		LR		23 09 19.6		
	comp=Z,44nm,18.8s,baz=85,slow=38									
NAO01	**NORSAR Array S**	**59.03**	**327**	P		**P**		**22 42 33.0**	**-1.1**
SPA0	**Spitsbergen Ar**	**59.06**	**347**	P		**P**		**22 42 34.0**	**0.0**
NC204	**NORSAR Array S**	**59.08**	**327**	P		**P**		**22 42 33.9**	**-0.6**
INTR	**Introdacqua**	**59.12**	**304**	P		**P**		**22 42 34.6**	**-0.5**
INTR				IAmb		IAmb		22 42 36.0		
	comp=Z,5.5nm,0.8s									
STAL	**STALIGIAL**	**59.25**	**309**	P		**P**		**22 42 35.0**	**-0.9**
STAL				IAmb		IAmb		22 42 45.8		
	comp=Z,5.9nm,1.0s									
ABTA	**Abfaltersbach**	**59.31**	**310**	*e*P		**P**		**22 42 39.7**	**+3.3**
	comp=Z,1.7nm,0.7s									
NRCA	**Norcia**	**59.54**	**305**	P		**P**		**22 42 37.8**	**-0.2**
NRCA				IAmb		IAmb		22 42 47.8		
	comp=Z,6.1nm,1.0s									
FITZ	**Fitzroy Crossi**	**59.62**	**135**	P		**P**		**22 42 39.1**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=333,slow=2.3,SNR=1.7									
WTTA	**Wattenberg**	**59.83**	**311**	*e*P		**P**		**22 42 39.3**	**-0.7**
	comp=Z,1.5nm,0.5s									
WATA	**Walderalm**	**59.86**	**311**	*e*P		**P**		**22 42 39.3**	**-0.9**
	comp=Z,3.3nm,0.8s									
CTI	**Castel Tesino**	**60.02**	**309**	P		**P**		**22 42 41.1**	**-0.1**
SQTA	**Sankt Quirin**	**60.12**	**311**	*e*P		**P**		**22 42 41.0**	**-1.0**
	comp=Z,2.3nm,0.5s									
MOTA	**Moosalm**	**60.17**	**311**	*e*P		**P**		**22 42 41.6**	**-0.8**
	comp=Z,6.5nm,0.9s									
RETA	**Reutte**	**60.38**	**311**	*e*P		**P**		**22 42 43.1**	**-0.6**
	comp=Z,3.9nm,0.9s									
FETA	**Feichten**	**60.48**	**311**	*e*P		**P**		**22 42 43.4**	**-1.1**
	comp=Z,1.4nm,0.6s									
DAVA	**Damuels**	**61.00**	**311**	*e*P		**P**		**22 42 47.5**	**-0.5**
	comp=Z,4.1nm,0.8s									
TUE	**Stuetta**	**61.51**	**310**	P		**P**		**22 42 49.2**	**-2.4**
TUE				IAmb		IAmb		22 42 51.6		
	comp=Z,4.0nm,0.9s									
MSSA	**Maissana**	**61.82**	**308**	P		**P**		**22 42 52.9**	**-0.6**
SENIN	**Lac Senin/Sane**	**62.92**	**310**	P		**P**		**22 43 00.8**	**-0.2**
SENIN				IAmb		IAmb		22 43 02.3		
	comp=Z,4.1nm,0.8s									
KEST	**Kesra**	**64.04**	**298**	P		**P**		**22 43 09.4**	**+0.9**
	comp=Z,13nm,0.8s,baz=350,slow=1.2,SNR=20									
KEST	**Kesra**	**64.04**	**298**	P		**P**		**22 43 08.1**	**-0.4**
WRA	**Warramunga Arr**	**66.65**	**130**	P		**P**		**22 43 26.5**	**+1.1**
	comp=Z,1.6nm,0.4s,baz=324,slow=6.5,SNR=15									
DAG	**Danmarks Havn**	**66.66**	**346**	*i* P		**P**		**22 43 24.0**	**-0.6**
DAG				*i* P		**pP**		**22 43 24.8**	**-3.1**
DAG				IAmb		IAmb		22 43 25.9		
	comp=Z,3.8nm,0.6s									
ASAR	**Alice Springs**	**68.94**	**133**	P		**P**		**22 43 40.6**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=318,slow=6.3,SNR=17									
ASAR	**Alice Springs**	**68.94**	**133**	P		**P**		**22 43 39.7**	**-0.1**
NEEM	**North Greenlan**	**72.15**	**351**	*i* P		**P**		**22 43 59.3**	**+0.4**
NEEM				IAmb		IAmb		22 44 00.5		
	comp=Z,10nm,0.6s									
EUNU	**Eureka**	**72.59**	**359**	P		**P**		**22 44 01.5**	**+0.3**
EUNU				IAmb		IAmb		22 44 02.6		
	comp=Z,3.2nm,0.8s									
ESDC	**Sonseca Array**	**72.76**	**306**	P		**P**		**22 44 03.2**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=53,slow=5.3,SNR=21									
ESDC	**Sonseca Array**	**72.76**	**306**	P		**P**		**22 44 02.5**	**-0.4**
SUMG	**Summit**	**73.28**	**345**	*i* P		**P**		**22 44 06.7**	**+0.9**
SUMG				IAmb		IAmb		22 44 07.9		
	comp=Z,7.6nm,0.8s									
SUMG	**Summit**	**73.28**	**345**	P		**P**		**22 44 05.8**	**-0.1**
ICESG	**Greenland Ices**	**75.86**	**342**	*i* P		**P**		**22 44 22.0**	**+1.1**
ICESG				IAmb		IAmb		22 44 22.8		
	comp=Z,9.8nm,0.7s									
MLY	**Manley**	**78.04**	**21**	P		**P**		**22 44 33.4**	**+0.6**
MLY				IAmb		IAmb		22 44 34.7		
	comp=Z,4.9nm,1.0s									
BMAR	**Burnt Mountain**	**78.20**	**18**	P		**P**		**22 44 34.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**78.78**	**279**	P		**P**		**22 44 37.2**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=63,slow=4.8,SNR=15									
NEA2	**Nenana**	**78.86**	**21**	P		**P**		**22 44 37.8**	**+0.5**
NEA2				IAmb		IAmb		22 44 39.1		
	comp=Z,5.9nm,0.8s									
MDM	**Murphy Dome**	**78.88**	**21**	P		**P**		**22 44 37.8**	**+0.4**
MDM				IAmb		IAmb		22 44 39.9		
	comp=Z,7.2nm,1.1s									
ILAR	**Eielson Array**	**79.43**	**20**	P		**P**		**22 44 40.0**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=304,slow=4.9,SNR=18									
ILAR	**Eielson Array**	**79.43**	**20**	P		**P**		**22 44 40.6**	**+0.2**
STKA	**Stephens Creek**	**79.50**	**134**	P		**P**		**22 44 41.1**	**-0.1**
	comp=Z,5.4nm,1.1s,baz=300,slow=7.9,SNR=4.1									
STKA	**Stephens Creek**	**79.50**	**134**	P		**P**		**22 44 41.0**	**-0.2**
SKT	**Skwentna**	**79.77**	**24**	P		**P**		**22 44 42.9**	**+0.5**
SCRK	**Sand Creek**	**80.88**	**20**	P		**P**		**22 44 48.6**	**+0.2**
SCRK				IAmb		IAmb		22 44 49.9		
	comp=Z,4.1nm,0.8s									
BCAR	**Beaver Creek A**	**82.22**	**20**	P		**P**		**22 44 55.8**	**+0.4**
DBIC	**Dimbokro**	**87.44**	**276**	P		**P**		**22 45 22.3**	**-0.2**
	comp=Z,3.5nm,0.8s,baz=44,slow=7.3,SNR=5.2									
YKA	**Yellowknife Ar**	**88.86**	**9**	P		**P**		**22 45 28.2**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=338,slow=4.5,SNR=15									
CPUP	**Villa Florida**	**147.07**	**263**	PKPbc		**PKPdf**		**22 52 15.8**	**0.0**
	comp=Z,0.6nm,0.4s,baz=28,slow=8.2,SNR=3.1									
CPUP	**Villa Florida**	**147.07**	**263**	PKPdf		**PKPdf**		**22 52 15.4**	**-0.3**

IDC **26** *22:42:22.6s 1.0, 27.˚55N×85.˚69E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.6/55, mbtmp3.8/10, ML3.9/2, Error ellipse: s-maj=35.6km s-min=17.8km az=60.0*
DMN **26** *22:42:24.4s 0.1, 27.˚81N×85.˚75E, h2km, Ml4.6/5, Error ellipse: s-maj=1.7km s-min=0.8km az=5.0*

ISC 26 22:42:23.8s1.1, 27.74N±0.˚05×85.73E±0.˚02, h5km±9km, n24, σ0s95/32, mb3.9/8, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.22**	**38**	*e*Pg		**Pg**	**22 42 28.0**	**-0.2**
GUN				*e*Sg		**Sg**	**22 42 30.4**	**-0.8**
	109μm,0.4s							
PKI	**Pulchoki**	**0.33**	**239**	*e*Pg		**Pb**	**22 42 32.2**	**-0.2**
PKI				*e*Sg		**Sb**	**22 42 37.9**	**-0.2**
	10μm,0.6s							
PKIN	**Phulchoki**	**0.33**	**241**	*e*Pg		**Pb**	**22 42 32.2**	**-0.2**
KKN	**Kakani**	**0.40**	**278**	*e*Pg		**Pb**	**22 42 32.5**	**-1.0**
KKN				*e*Sg		**Sg**	**22 42 38.2**	**+1.4**
DMN	**Daman**	**0.56**	**257**	*e*Pg		**Pb**	**22 42 36.1**	**-0.3**
GKN	**Gorkha**	**1.00**	**286**	*e*Pg		**Pb**	**22 42 43.6**	**-0.2**
GKN				*e*Sg		**Sb**	**22 42 57.2**	**-0.1**
	634nm,0.3s							
RAMN	**Ramite**	**1.10**	**135**	*e*Pg		**Pn**	**22 42 46.1**	**-0.2**
ODAN	**Odare**	**1.72**	**120**	*e*Pg		**Pg**	**22 42 57.1**	**+0.3**
ODAN	**Odare**	**1.72**	**120**	*e*Pg		**Pg**	**22 42 57.1**	**+0.3**
ODAN				*e*Sg		**Sg**	**22 43 19.7**	**+0.5**
	3μm,0.3s							
TAPN	**Taplejung**	**1.81**	**102**	*e*Pg		**Pb**	**22 42 57.6**	**0.0**
TAPN				*e*Sg		**Sb**	**22 43 21.0**	**+0.3**
	1μm,0.2s							
DANN	**Dangsing**	**1.84**	**290**	*e*Pg		**Pb**	**22 42 58.3**	**+0.1**
KOLN	**Koldanda**	**1.88**	**271**	*e*Pg		**Pb**	**22 42 59.2**	**+0.3**
KOLN				*e*Sg		**Sg**	**22 43 24.8**	**+0.4**
	929nm,0.5s							
PYUN	**Piuthan**	**2.45**	**279**	*e*Pn		**Pn**	**22 43 05.1**	**+0.4**
PYUN	**Piuthan**	**2.45**	**279**	*e*Pg		**Pg**	**22 43 10.2**	**-0.6**
PYUN				*e*Sg		**Sg**	**22 43 42.3**	**-0.2**
	1μm,0.6s							
CMAR	**Chiang Mai Arr**	**15.26**	**124**	Pn		**Pn**	**22 45 59.1**	**-1.1**
	0.3nm,0.3s,baz=306,slow=11,SNR=1.7							
MKAR	**Makanchi Array**	**19.21**	**353**	P		**P**	**22 46 48.2**	**-0.5**
	0.2nm,0.3s,baz=168,slow=11,SNR=3.3							
KURBB	**Kurchatov Arra**	**23.50**	**348**	P		**P**	**22 47 36.2**	**+1.6**
	0.9nm,0.2s,baz=166,slow=9.9,SNR=3.6							
SONM	**Songino Array**	**25.73**	**33**	P		**P**	**22 47 55.7**	**+0.4**
	0.8nm,0.6s,baz=219,slow=9.6,SNR=9.8							
ZALV	**Zalesovo Beam**	**26.19**	**359**	P		**P**	**22 48 00.3**	**+1.0**
	1.1nm,0.7s,baz=182,slow=9.8,SNR=5.7							
FINES	**FINESS Array B**	**51.59**	**328**	P		**P**	**22 51 33.4**	**+2.5**
	0.9nm,0.7s,baz=99,slow=8.7,SNR=6.2							
ARCES	**ARCESS Array B**	**53.97**	**338**	P		**P**	**22 51 50.0**	**+1.6**
	4.4nm,1.1s,baz=115,slow=10.0,SNR=3.6							
WRA	**Warramunga Arr**	**66.78**	**130**	P		**P**	**22 53 15.7**	**-1.0**
	1.6nm,0.7s,baz=324,slow=6.6,SNR=12							
ASAR	**Alice Springs**	**69.08**	**133**	P		**P**	**22 53 30.3**	**-0.8**
	1.2nm,0.7s,baz=322,slow=6.4,SNR=11							
TORD	**Torodi Ar. Bea**	**78.79**	**279**	P		**P**	**22 54 26.1**	**-2.1**
	0.6nm,0.8s,baz=42,slow=5.0,SNR=4.4							

DJA **26** *22:53:10.3s 2.7, 4.˚3E×13.˚3E×15.˚3E×2.˚3, h63km±13km, M5.1/10, mb4.6/10, mB5.2/3, MLv5.4/2, Mw(mB)4.6/3, MwMwp4.4/1, Mwp4.8/1*
NEIC **26** *22:53:11.4s 1.5, 3.˚94S×0.˚09×153.˚20E±0.˚07, h59km±6km, mb4.6/24, Error ellipse: s-maj=12.4km s-min=10.1km az=181.0*
IDC **26** *22:53:14.9s 2.1, 4.˚05S×153.˚33E, h88km±18km, mb4.0/22, mb1 4.1/25, mb1mx3.9/59, mbtmp4.3/25, MS3.2/6, Ms1 3.2/6, ms1mx2.8/39, Error ellipse: s-maj=19.2km s-min=9.7km az=109.0*

ISC 26 22:53:09.3s0.4, 3.˚99S±0.˚06×153.˚21E±0.˚07, h35km, n70, σ1s47/68, mb4.5/33, MS3.3/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.06**	**259**	Pn		**Pn**	**22 53 28.8**	**+1.0**
RABL				Sn		Sn	22 53 45.2	+3.9
MANU	**Manus Island**	**6.15**	**288**			**Pn**	**22 54 40.6**	**+2.9**
PMG	**Port Moresby**	**8.06**	**228**	P		Pn	22 55 09.9	+5.9
	2.4nm,0.3s,baz=27,slow=7.6,SNR=4.2							
PMG				S		Sn	22 56 40.9	+6.9
	2.4nm,0.3s,baz=281,slow=22,SNR=2.7							
PMG	**Port Moresby**	**8.06**	**228**	Pn		Pn	22 55 07.5	+3.5
PMG				Sn		Sn	22 56 40.8	+6.8
HNR	**Honiara**	**8.60**	**129**	P		**Pn**	**22 55 14.9**	**+3.6**
	11nm,0.3s,baz=321,slow=19,SNR=1.5							
HNR				S		**Sn**	**22 56 45.1**	**-2.1**
	19nm,0.3s,baz=178,slow=15,SNR=1.5							
HNR				LR		LR	22 58 31.9	
	comp=Z,330nm,18.7s,baz=318,slow=37					

comp=Z,2.0nm,1.1s,baz=180,slow=6.0,SNR=4.0

INK	**Inuvik**	**87.56**	**21**	P	**P**	**23 05 52.5**	**-0.7**
BVAR	**Borovoye Array**	**88.84**	**323**	P	**P**	**23 05 58.6**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=116,slow=12,SNR=6.8						
YKA	**Yellowknife Ar**	**94.53**	**28**	P	**P**	**23 06 25.3**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=268,slow=4.6,SNR=6.2						
BOSA	**Boshof**	**120.43**	**234**	PKP	**PKPdf**	**23 11 56.4**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=85,slow=1.9,SNR=3.8						
BOSA	**Boshof**	**120.43**	**234**		**PKPdf**	**23 11 55.9**	**-2.1**
MATP	**Matopo**	**120.58**	**244**	PKP	**PKPdf**	**23 11 56.5**	**-1.9**
	comp=Z,1.6nm,0.7s,baz=68,slow=2.4,SNR=4.3						
GERES	**GERESS Array B**	**123.58**	**329**	PKP	**PKPdf**	**23 12 02.2**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=41,slow=2.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**150.43**	**290**	PKPbc	**PKPbc**	**23 12 57.1**	**-1.1**
	comp=Z,4.6nm,0.8s,baz=48,slow=2.1,SNR=23						

IDC 26 23:00:31.0±6.6, 27.65N×85.78E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.3/71, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=121.8km s-min=51.1km az=172.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.31**	**353**	P	P	23 04 57.4	-0.2
	0.2nm,0.3s,baz=180,slow=11,SNR=7.8						
SONM	**Songino Array**	**25.77**	**33**	P	P	23 06 03.6	0.0
	1.0nm,0.6s,baz=216,slow=10,SNR=7.6						
ZALV	**Zalesovo Beam**	**26.28**	**359**	P	P	23 06 08.2	+0.2
	0.6nm,0.3s,baz=175,slow=7.1,SNR=4.3						
FINES	**FINESS Array B**	**51.69**	**328**	P	P	23 09 39.5	-0.1
	0.6nm,0.5s,baz=98,slow=7.4,SNR=5.8						
ARCES	**ARCESS Array B**	**54.07**	**338**	P	P	23 09 56.9	-0.2
	2.1nm,0.8s,baz=104,slow=7.6,SNR=6.2						

TRN 26 23:04:16.6, 14.42N×60.63W, h26km, MD3.6, 3C-4D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPOM	**Morne Pois Mar**	**0.22**	**276**	*i*P	Pn	23 04 24.3	0.0
MPOM				*e*S	Sb	23 04 29.1	+2.4
MVM	**Montagne Vaucl**	**0.29**	**297**	*e*P	Pn	23 04 25.2	-0.1
LPMF	**Morne Lapointe**	**0.36**	**295**	*e*P	Pn	23 04 26.2	0.0
ZAM	**Aeronautique**	**0.41**	**291**	*e*P	Pn	23 04 27.1	+0.1
ILAM	**Ilet Lapin Mar**	**0.42**	**326**	*i*P	Pn	23 04 26.8	-0.3
ILAM				*i* S	Sn	23 04 33.7	-0.3
TRMF	**Trois Ilets**	**0.42**	**286**	*e*P	Pn	23 04 27.3	+0.2
BIM	**Bigot**	**0.44**	**282**	*e*P	Pn	23 04 27.6	+0.3
BIM				*e*S	Sn	23 04 35.1	+0.7
SLW	**Petit Monier**	**0.50**	**217**	*e*P	Pn	23 04 28.7	+0.5
SLW				*e*S	Sn	23 04 38.2	+2.2
SLBI	**Saint Lucia, B**	**0.52**	**220**	*e*P	Pn	23 04 28.2	-0.2
SLBI				*e*S	Sn	23 04 36.6	+0.2
FDF	**Fort de France**	**0.59**	**302**	*e*P	Pn	23 04 29.3	-0.1
FDF				*e*S	Sn	23 04 38.9	+0.6
SLPA	**Patience**	**0.63**	**206**	*e*P	Pn	23 04 31.9	+1.9
SLPA				*e*S	Sn	23 04 40.8	+1.6
BAMF	**Morne Balai**	**0.64**	**308**	*e*P	Pn	23 04 30.5	+0.4
GBMF	**Grand Be**	**0.64**	**306**	*e*P	Pn	23 04 30.6	+0.4
PML	**Morne Lenard**	**0.64**	**304**	*e*P	Pn	23 04 30.8	+0.7
CXM	**Morne La Croix**	**0.65**	**307**	*e*P	Pn	23 04 30.9	+0.5
SVN	**Savane Anatole**	**0.67**	**309**	*e*P	Pn	23 04 30.9	+0.5
PCM	**Pelee Case Pet**	**0.68**	**305**	*e*P	Pn	23 04 31.3	+0.6
SLB	**Belfond**	**0.71**	**214**	*e*P	Pn	23 04 32.5	+1.4
SLB				*e*S	Sn	23 04 43.2	+1.8
SLDE	**Delcer**	**0.74**	**214**	*e*P	Pn	23 04 32.4	+0.9
SLDE				*e*S	Sn	23 04 44.6	+2.6
MCLT	**Moule a Chique**	**0.77**	**203**	*e*P	Pb	23 04 31.7	+0.2
MCLT				*e*S	Sn	23 04 44.6	+2.0
DLPL	**La Plaine**	**1.08**	**327**	*e*P	Pb	23 04 37.4	+0.7
DLPL				*e*S	Sb	23 04 52.3	+1.8
SVV	**Soufriere Volc**	**1.24**	**207**	*e*P	Pb	23 04 39.9	+0.5
SVV				*e*S	Sb	23 04 56.7	+1.8
DSLB	**Salisbury**	**1.27**	**323**	*e*P	Pb	23 04 40.5	+0.6
DSLB				*e*S	Sb	23 04 58.3	+2.5
SVB	**Belmont**	**1.29**	**208**	*e*P	Pb	23 04 39.8	-0.5
SVB				*e*S	Sb	23 04 56.5	0.0
MAGL	**Barre de l'ile**	**1.64**	**338**	*e*P	Pn	23 04 44.9	+1.0
BBGH	**Gun Hill**	**1.64**	**141**	*e*P	Pb	23 04 45.4	-0.9
BBGH				*e*S	Sb	23 05 05.6	-1.0
TDBA	**Terre de Bas,**	**1.72**	**326**	*e*P	Pb	23 04 47.6	0.0
TBG	**Guadaloupe-3**	**1.73**	**326**	*e*P	Pb	23 04 46.8	-0.9
TBG				*e*S	Sb	23 05 08.4	-0.5
CBE	**Ff, Capester**	**1.89**	**330**	*e*P	Pb	23 04 49.0	-1.5
GCMP	**Grenada, Carri**	**2.08**	**202**	*e*P	Pn	23 04 51.1	+1.3
GCMP				*e*S	Sn	23 05 16.6	+1.8
ABD	**La Joyeuse, An**	**2.20**	**338**	*e*P	Pn	23 04 53.0	+1.4
GRGR	**Grenville**	**2.48**	**204**	*e*P	Pn	23 04 56.8	+1.3
GRGR				*e*S	Sn	23 05 26.0	+0.9
ANBD	**Bethesda, Anti**	**2.83**	**337**	*e*P	Pn	23 05 01.5	+1.3
ANBD				*e*S	Sn	23 05 33.7	+0.2
ANWB	**Willy Bob**	**3.41**	**341**	*e*P	Pn	23 05 10.2	+1.9
ANWB				*e*S	Sn	23 05 48.3	+0.4

*IDC **26** 23:08:37.1±0.5, 0.59N×29.59W, h0km, mb4.1/18, mb1 4.3/19, mb1mx4.0/51, mbtmp4.2/19, ML4.3/1, MS3.7/8, Ms1 3.7/8, ms1mx3.3/64, Error ellipse: s-maj=21.7km s-min=12.1km az=151.0*
*NEIC **26** 23:08:37.8±1.0, 0.5N±0.1×29.6W±0.1, h10km±1km, mb4.6/17, Error ellipse: s-maj=28.3km s-min=10.0km az=123.0*

ISC 26 23:08:40.0±0.4, 0.66N±0.08×29.74W±0.08, h19km, n103, σ1s91/97, mb4.4/37, MS3.7/7, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**8.90**	**224**	Pn	**Pn**	**23 10 46.1**	**-1.8**
	3.3nm,0.3s,baz=24,slow=15,SNR=29						
RCBR				Sn	**Sn**	**23 12 21.9**	**-5.8**
	1.6nm,0.3s,baz=311,slow=20,SNR=2.1						
RCBR				LR	LR	23 13 38.6	
	comp=Z,775nm,18.9s,baz=86,slow=34						
RCBR	**Riachuelo**	**8.90**	**224**		**Pn**	**23 10 46.0**	**-1.8**
RCBR	**Riachuelo**	**8.90**	**224**	*e*P	**Pn**	**23 10 46.0**	**-1.8**
NBPV	**Pedro Velho**	**8.95**	**218**	*e*P	**Pn**	**23 10 46.7**	**-1.6**
NBPA	**Parau_RN**	**9.73**	**229**	*e*P	**Pn**	**23 10 56.4**	**-2.6**
NBCL	**Cascavel-CE**	**9.82**	**240**	*e*P	**Pn**	**23 10 56.6**	**-3.7**
NBRF	**Rio Formoso -**	**10.71**	**210**	*e*P	**Pn**	**23 11 11.7**	**-0.9**
NBLI	**Livramento-PB**	**10.73**	**222**	*e*P	**Pn**	**23 11 11.0**	**-1.9**
NBMO	**Morrinhos-CE**	**11.02**	**249**	*e*P	**Pn**	**23 11 12.2**	**-4.6**
NBPB	**Pedra_Branca-C**	**11.60**	**238**	*e*P	**Pn**	**23 11 21.6**	**-3.1**
NBMA	**Muriti-CE**	**12.02**	**228**	*e*P	**Pn**	**23 11 28.3**	**-2.1**
NBAN	**Anadia - AL**	**12.14**	**212**	*e*P	**Pn**	**23 11 30.3**	**-1.9**
NBPS	**Pedro II - PI**	**12.72**	**247**	*e*P	**Pn**	**23 11 35.8**	**-4.3**
NBTA	**Tacaratu-PE**	**12.77**	**220**	*e*P	**Pn**	**23 11 40.3**	**-0.4**
NBLA	**Lagarto - SE**	**14.07**	**214**	*e*P	**Pn**	**23 11 57.8**	**-0.6**
NBPN	**Ponto Novo - B**	**15.45**	**222**	*e*P	**Pn**	**23 12 15.3**	**-1.8**
SACV	**Santiago Islan**	**15.46**	**23**	Pn	**Pn**	**23 12 14.8**	**-2.5**
GDU01	**Guandu, BA**	**17.29**	**214**	*e*P	**Pn**	**23 12 40.6**	**+0.1**
H10N3	**ASCENSION HYDR**	**17.38**	**119**	T	T	23 30 34.3	
	baz=299,slow=75,SNR=1744						
H10N2	**ASCENSION HYDR**	**17.39**	**119**	T	T	23 30 34.8	
	baz=299,slow=75,SNR=838						
H10N1	**ASCENSION HYDR**	**17.41**	**119**	T	T	23 30 35.9	
	baz=299,slow=75,SNR=1372						
MBO	**M'Bour**	**18.61**	**42**	P	**P**	**23 12 54.7**	**-1.7**
MBO				IAmb	IAmb	23 13 00.6	
	comp=Z,57nm,1.0s						
SDBA	**SAO DESIDERIO**	**19.87**	**229**	*e*P	**P**	**23 13 09.8**	**-0.6**
SMTB	**Santa Maria do**	**20.14**	**242**	*e*P	**P**	**23 13 12.5**	**-0.8**
NAN01	**Guarapari, ES**	**21.03**	**209**	*e*P	**P**	**23 13 23.6**	**+0.7**
PRPB	**Parauapebas**	**21.16**	**251**	*e*P	**P**	**23 13 23.2**	**-1.1**
JANB	**Januaria**	**21.25**	**222**	*e*P	**P**	**23 13 24.9**	**-0.4**
BSFB	**Barra de Sao F**	**22.23**	**209**	*e*P	**P**	**23 13 35.9**	**+0.2**
SJMB	**Sao Joao De Ma**	**22.28**	**210**	*e*P	**P**	**23 13 39.3**	**+3.0**
MCPB	**Macapa, AP**	**22.34**	**267**	*e*P	**P**	**23 13 37.4**	**+0.4**
RIB01	**Linhares ES**	**22.43**	**207**	*e*P	**P**	**23 13 40.8**	**+2.9**
MDP	**Montagnes des**	**23.29**	**281**	LR	LR	23 21 49.3	
	comp=Z,96nm,18.2s,baz=91,slow=34						
DIAM	**Diamantina, MG**	**23.29**	**215**	*e*P	**P**	**23 13 48.4**	**+1.4**
ALF01	**Guarapari-ES**	**23.72**	**206**	*e*P	**P**	**23 13 55.5**	**+4.5**
BDFB	**Brasilia**	**24.25**	**227**	P	**P**	**23 13 55.4**	**-0.8**
	comp=Z,5.2nm,0.8s,baz=37,slow=8.8,SNR=6.1						
BDFB				LR	LR	23 22 29.0	
	comp=Z,328nm,20.7s,baz=340,slow=34						
BDFB	**Brasilia**	**24.25**	**227**	P	**P**	**23 13 54.9**	**-1.3**
MALB	**Monte Alegre**	**24.65**	**264**	*e*P	**P**	**23 13 59.9**	**+0.1**
SNDB	**Serra Nova Dou**	**24.81**	**239**	*e*P	**P**	**23 14 01.7**	**+0.5**
CAM01	**Campos-RJ**	**25.19**	**207**	*e*P	**P**	**23 14 08.1**	**+3.5**
DBIC	**Dimbokro**	**25.53**	**76**	P	**P**	**23 14 06.3**	**-1.4**
	comp=Z,15nm,0.8s,baz=244,slow=12,SNR=13						
DBIC				LR	LR	23 22 50.0	
	comp=Z,74nm,18.6s,baz=232,slow=34						
DBIC	**Dimbokro**	**25.53**	**76**	P	**P**	**23 14 06.0**	**-1.7**
BSCB	**Bom Sucesso**	**26.06**	**213**	*e*P	**P**	**23 14 15.5**	**+2.9**
VAS01	**Vassouras-RJ**	**26.42**	**210**	*e*P	**P**	**23 14 19.9**	**+4.1**
ITTB	**Itaituba**	**26.45**	**259**	*e*P	**P**	**23 14 15.4**	**-0.7**
NPGB	**Novo Progresso**	**26.68**	**253**	*e*P	**P**	**23 14 19.4**	**+1.3**
ARAG	**Araguaiana, MT**	**27.20**	**232**	*e*P	**P**	**23 14 25.2**	**+2.5**
PARB	**Paraibuna**	**28.41**	**212**	*e*P	**P**	**23 14 37.2**	**+3.5**
RCLB	**Rio Claro- Sao**	**28.75**	**216**	*e*P	**P**	**23 14 40.0**	**+3.3**
KOWA	**Kowa**	**28.91**	**60**	P	**P**	**23 14 37.2**	**-0.9**
	comp=Z,4.5nm,1.0s,baz=263,slow=19,SNR=5.5						
KOWA	**Kowa**	**28.91**	**60**	IAmb	IAmb	23 14 50.7	
	comp=Z,9.6nm,1.2s						
MACA	**Manacapuru-AM**	**31.16**	**263**	*e*P	**P**	**23 15 00.0**	**+2.0**
TRCB	**Terra Rica**	**32.25**	**222**	*e*P	**P**	**23 15 10.5**	**+2.9**
VILB	**Vilhena**	**33.10**	**245**	*e*P	**P**	**23 15 16.5**	**+1.5**
PTLB	**Pontes e Lacer**	**33.16**	**240**	*e*P	**P**	**23 15 16.2**	**+0.6**
TOA0	**Torodi Ar. Sit**	**33.52**	**67**	P	**P**	**23 15 17.0**	**-1.7**
TOA0				IAmb	IAmb	23 15 21.7	
	comp=Z,8.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**33.52**	**67**	P	**P**	**23 15 17.6**	**-1.2**
	comp=Z,2.6nm,1.0s,baz=254,slow=9.1,SNR=6.3						
TORD				PcP	**PcP**	**23 18 00.2**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=272,slow=4.0,SNR=2.5						
TORD				LR	LR	23 26 45.9	
	comp=Z,92nm,21.5s,baz=250,slow=33						
TORD	**Torodi Ar. Bea**	**33.52**	**67**	P	**P**	**23 15 17.0**	**-1.7**
SAML	**Samuel**	**34.65**	**253**	P	**P**	**23 15 28.9**	**+0.3**
SAML				IAmb	IAmb	23 15 29.7	
	comp=Z,6.5nm,1.0s						
SIV	**San Ignacio**	**35.08**	**240**	P	**P**	**23 15 32.6**	**+0.3**
	comp=Z,5.1nm,0.9s,baz=93,slow=10,SNR=19						
ETMB	**Extrema**	**37.76**	**253**	*e*P	**P**	**23 15 54.9**	**-0.3**
CPUP	**Villa Florida**	**37.78**	**223**	P	**P**	**23 15 55.5**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=49,slow=8.9,SNR=8.3						
CPUP	**Villa Florida**	**37.78**	**223**	P	**P**	**23 15 54.9**	**-0.3**
CPUP				IAmb	IAmb	23 15 56.3	
	comp=Z,13nm,1.5s						
CPUP	**Villa Florida**	**37.78**	**223**	*e*P	**P**	**23 15 56.1**	**+0.9**
LPAZ	**La Paz**	**41.45**	**244**	P	**P**	**23 16 27.3**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=51,slow=3.9,SNR=12						
LPAZ	**La Paz**	**41.45**	**244**	*e*P	**P**	**23 16 26.6**	**0.0**
LPAZ	**La Paz**	**41.45**	**244**	*e*P	**P**	**23 16 27.6**	**+0.9**
LVC	**Limon Verde**	**44.60**	**236**	*e*P	**P**	**23 16 54.4**	**+2.6**
ROSC	**El Rosal**	**44.71**	**276**	P	**P**	**23 16 53.5**	**+0.6**
	comp=Z,6.7nm,0.4s,baz=118,slow=21,SNR=6.0						
ESDC	**Sonseca Array**	**45.40**	**28**	P	**P**	**23 16 57.4**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=218,slow=8.8,SNR=9.6						
ESDC	**Sonseca Array**	**45.40**	**28**	P	**P**	**23 16 56.9**	**-0.7**
GO02	**Mina Guanaco**	**46.30**	**233**	P	**P**	**23 17 04.9**	**-0.2**
AC02	**Maricunga**	**46.73**	**231**	P	**P**	**23 17 08.2**	**-0.6**
AC02				IAmb	IAmb	23 17 22.8	
	comp=Z,7.1nm,1.4s						
KEST	**Kesra**	**50.35**	**42**	LR	LR	23 38 02.7	
	comp=Z,171nm,21.8s,baz=200,slow=35						
BI02	**San Fabin de**	**53.48**	**222**	P	**P**	**23 17 58.7**	**-0.7**
BI02				IAmb	IAmb	23 18 00.7	
	comp=Z,5.4nm,1.1s						
ESPN	**Las Esperanzas**	**55.30**	**284**	P	**P**	**23 18 12.7**	**-0.1**
DAVOX	**Davos/Dischmat**	**57.48**	**31**	LR	LR	23 41 20.2	
	comp=Z,52nm,18.7s,baz=262,slow=34						
LL02	**Futaleuf**	**57.67**	**215**	P	**P**	**23 18 28.3**	**-0.9**
LL02				IAmb	IAmb	23 18 39.6	
	comp=Z,9.3nm,1.1s						
DAVA	**Damuels**	**57.81**	**31**	*e*P	**P**	**23 18 30.3**	**0.0**
	comp=Z,5.7nm,1.0s						
FETA	**Feichten**	**58.08**	**32**	*e*P	**P**	**23 18 31.2**	**-1.1**
	comp=Z,4.0nm,1.1s						
RETA	**Reutte**	**58.40**	**31**	*e*P	**P**	**23 18 33.8**	**-0.6**
	comp=Z,3.4nm,1.1s						
SQTA	**Sankt Quirin**	**58.46**	**32**	*e*P	**P**	**23 18 34.2**	**-0.7**
	comp=Z,5.0nm,1.1s						
MOTA	**Moosalm**	**58.48**	**31**	*e*P	**P**	**23 18 34.5**	**-0.5**
	comp=Z,4.1nm,1.1s						
WTTA	**Wattenberg**	**58.71**	**32**	*e*P	**P**	**23 18 34.9**	**-1.8**
	comp=Z,4.4nm,1.3s						
WATA	**Walderalm**	**58.73**	**32**	*e*P	**P**	**23 18 34.4**	**-2.4**
	comp=Z,2.4nm,1.0s						
ABTA	**Abfaltersbach**	**58.85**	**33**	*e*P	**P**	**23 18 37.4**	**-0.2**
	comp=Z,5.9nm,1.2s						
LBTB	**Lobatse**	**59.26**	**120**	P	**P**	**23 18 40.6**	**-0.2**
	comp=Z,5.6nm,1.1s,baz=246,slow=4.7,SNR=4.5						
KBA	**Koelnbreinsper**	**59.51**	**33**	*e*P	**P**	**23 18 43.0**	**+0.8**
	comp=Z,2.2nm,1.1s						
OBKA	**Obir**	**59.83**	**34**	*e*P	**P**	**23 18 45.8**	**+1.4**
	comp=Z,4.5nm,1.0s						
BOSA	**Boshof**	**60.08**	**124**	P	**P**	**23 18 46.6**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=317,slow=10,SNR=5.0						
MOA	**Molln**	**60.47**	**33**	*e*P	**P**	**23 18 47.3**	**-1.3**
	comp=Z,1.9nm,0.7s						
GERES	**GERESS Array B**	**60.78**	**31**	P	**P**	**23 18 49.7**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=211,slow=7.6,SNR=11						
ARSA	**Arzberg**	**60.80**	**34**	*e*P	**P**	**23 18 50.5**	**-0.4**
	comp=Z,2.1nm,0.6s						
CONA	**Conrad Observa**	**61.39**	**33**	*e*P	**P**	**23 18 54.4**	**-0.5**
	comp=Z,2.6nm,1.0s						
PSZ	**Piszkesteto**	**63.64**	**35**	P	**P**	**23 19 09.8**	**-0.2**
PSZ				IAmb	IAmb	23 19 11.2	
	comp=Z,6.9nm,1.1s						
MLR	**Muntele Rosu**	**66.14**	**39**	LR	LR	23 46 37.8	
	comp=Z,64nm,18.7s,baz=262,slow=34						
BRTR	**Keskin Array B**	**69.34**	**47**	P	**P**	**23 19 46.0**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=232,slow=6.5,SNR=6.7						
AKASG	**Malin Array Be**	**70.33**	**35**	P	**P**	**23 19 50.8**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=248,slow=6.1,SNR=6.2						
ULM	**Lac du Bonnet**	**74.43**	**322**	P	**P**	**23 20 19.4**	**+2.5**
	comp=Z,0.8nm,0.4s,baz=121,slow=5.9,SNR=2.0						
TXAR	**Lajitas Array**	**75.68**	**300**	P	**P**	**23 20 27.5**	**+2.8**
	comp=Z,0.9nm,0.6s,baz=122,slow=8.6,SNR=4.6						
TXAR	**Lajitas Array**	**75.68**	**300**	P	**P**	**23 20 25.6**	**+0.9**
PDAR	**Pinedale Array**	**82.07**	**313**	P	**P**	**23 21 01.7**	**+2.0**
	comp=Z,0.2nm,0.7s,baz=152,slow=2.7,SNR=2.1						
YKA	**Yellowknife Ar**	**87.04**	**332**	P	**P**	**23 21 26.6**	**+2.6**
	comp=Z,0.2nm,0.8s,baz=101,slow=5.7,SNR=2.9						
ASAR	**Alice Springs**	**152.16**	**146**	PKPbc	**PKiKP**	**23 28 36.7**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=205,slow=1.9,SNR=2.3						

*IDC **26** 23:11:50.6±2.9, 24.21S±0.2×179.89E, h533km±27km, mb3.0/4, mb1 3.3/6, mb1mx3.0/25, mbtmp4.0/6, Error ellipse: s-maj=39.9km s-min=24.9km az=141.0*

ISC 26 23:11:51.7±0.9, 24.1S±0.2×179.8E±0.2, h550km, n13, σ0s97/13, mb3.5/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.58**	**345**	P	**P**	**23 13 35.2**	**-0.7**
	1.7nm,0.3s,baz=113,slow=23,SNR=8.3						
DZM	**Mont Dzumac**	**12.49**	**277**	P	**P**	**23 14 36.0**	**+0.6**
	0.6nm,0.3s,baz=80,slow=17,SNR=8.1						
ASAR	**Alice Springs**	**41.85**	**261**	P	**P**	**23 18 54.3**	**+0.2**
	0.6nm,0.8s,baz=92,slow=7.4,SNR=4.6						
WRA	**Warramunga Arr**	**42.24**	**266**	P	**P**	**23 18 57.1**	**-0.2**
	0.7nm,0.6s,baz=106,slow=7.9,SNR=5.1						
MAW	**Mawson**	**77.48**	**200**	P	**P**	**23 22 50.1**	**-0.1**
	2.2nm,0.8s,baz=108,slow=3.2,SNR=2.7						
TXAR	**Lajitas Array**	**90.68**	**58**	P	**P**	**23 23 57.6**	**+1.3**
	1.1nm,0.8s,baz=275,slow=4.4,SNR=3.5						
ARU	**Arti**	**126.98**	**324**	PKP	**PKiKP**	**23 29 53.7**	**+0.2**
	0.5nm,0.4s,baz=239,slow=5.9,SNR=2.1						
FINES	**FINESS Array B**	**138.62**	**341**	PKhKP	PKPpre	23 30 07.4	
	1.7nm,1.0s,baz=70,slow=6.3,SNR=5.2						
HFS	**Hagfors**	**142.75**	**349**	PKP	**PKPdf**	**23 30 19.9**	**-2.1**
	2.2nm,0.4s,baz=77,slow=3.2,SNR=30						
AKASG	**Malin Array Be**	**145.08**	**327**	PKPbc	**PKPbc**	**23 30 27.7**	**+0.4**
	0.8nm,0.5s,baz=41,slow=4.3,SNR=4.1						
BRTR	**Keskin Array B**	**147.60**	**307**	PKPbc	**PKPbc**	**23 30 35.6**	**+0.9**
	0.4nm,0.6s,baz=141,slow=5.6,SNR=5.2						
MLR	**Muntele Rosu**	**150.00**	**322**	PKPbc	**PKiKP**	**23 30 41.5**	**+0.5**
	0.5nm,0.4s,baz=146,slow=3.6,SNR=1.7						
TORD	**Torodi Ar. Bea**	**160.93**	**189**	PKP	**PKPdf**	**23 30 56.0**	**-0.7**
	0.5nm,1.2s,baz=246,slow=0.2,SNR=1.4						
TORD				PKPab	**PKPab**	**23 32 10.5**	**-0.8**
	0.3nm,0.7s,baz=206,slow=5.1,SNR=2.4						

IDC 26 23:28:00.5±1.4, 24.45N×144.54E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.3/66, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=60.6km s-min=29.1km az=88.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.38**	**322**	Pn	Pn	23 28 53.0	-1.5
	3.0nm,0.3s,baz=322,slow=22,SNR=1.6						
JCJ				Sn	Sn	23 29 26.1	-9.3
	12nm,0.3s,baz=276,slow=23,SNR=9.5						
WRA	**Warramunga Arr**	**45.23**	**194**	P	P	23 36 19.4	-0.3
	0.5nm,0.3s,baz=18,slow=8.3,SNR=8.8						
YKA	**Yellowknife Ar**	**73.45**	**28**	P	P	23 39 34.7	+0.3
	0.1nm,0.5s,baz=285,slow=6.1,SNR=1.5						
FINES	**FINESS Array B**	**81.24**	**335**	P	P	23 40 18.5	+0.4
	1.3nm,0.8s,baz=46,slow=6.0,SNR=4.8						

*IDC **26** 23:29:52.6±2.8, 13.10S×32.46E, h0km, mb3.6/2, mb1 3.7/4, mb1mx3.2/62, mbtmp3.6/4, ML3.4/2, MS4.5/1, Ms1 4.5/1, ms1mx3.0/30, Error ellipse: s-maj=69.5km s-min=30.7km az=119.0*
*LSZ **26** 23:30:06.4±0.3, 16.43S×32.17E, h10km, MD4.0*

ISC 26 23:29:52.2±0.7, 13.02S±0.03×31.81E±0.04, h10km, n53, σ2s05/54, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VWZMW	**Thunduwike**	**2.52**	**43**	*i*P	**Pg**	**23 30 40.8**	**+0.3**
VWZMW				*i*S	**Sg**	**23 31 11.8**	**-1.3**
VWZMW				IAML		23 31 16.3	
	comp=Z,579nm,0.1s						
ENUK	**Enukweni**	**2.73**	**48**	*i*P	**Pg**	**23 30 44.3**	**-0.3**
ENUK				*i*S	**Sb**	**23 31 16.1**	**+0.9**
ENUK				IAML		23 31 22.0	
	comp=Z,729nm,0.2s						
BOLE	**Bolero**	**2.77**	**43**	*i*P	**Pg**	**23 30 44.2**	**-1.2**
BOLE				IAML		23 31 21.6	
	comp=Z,454nm,0.3s						
THAN	**Thanula**	**2.78**	**57**	*i*P	**Pg**	**23 30 47.2**	**+1.6**
THAN				*i*S	**Sb**	**23 31 16.0**	**-0.3**
THAN				IAML		23 31 24.6	
	comp=Z,301nm,0.3s						
THAZ	**Thazima**	**2.79**	**39**	*i*P	**Pg**	**23 30 44.4**	**-1.3**
THAZ				IAML		23 31 21.4	
	comp=Z,342nm,0.2s						
NGON	**Ngonga**	**2.94**	**45**	*i*P	**Pb**	**23 30 46.5**	**+1.8**
NGON				IAML		23 31 27.3	
	comp=Z,391nm,0.1s						
CHEL	**Chelinda**	**3.11**	**39**	*i*P	**Pg**	**23 30 52.6**	**+0.8**
CHEL				IAML		23 31 32.2	
	comp=Z,473nm,0.1s						
NTHA	**Nthalire**	**3.20**	**34**	*i*P	**Pb**	**23 30 51.2**	**+2.0**
NTHA				IAML		23 31 31.7	
	comp=Z,346nm,0.2s						
MLOW	**Mlowe**	**3.23**	**47**	*i*P	**Pg**	**23 30 54.4**	**+0.3**
MLOW				IAML		23 31 38.8	
	comp=Z,1μm,0.4s						
LIVA	**Livingstonia**	**3.28**	**43**	*i*P	**Pb**	**23 30 50.9**	**+0.2**
LIVA				IAML		23 31 41.1	
	comp=Z,588nm,

baz=313,slow=1.1
ITZ *i* 23 31 22.5
baz=149,slow=16
ITZ *e*Pg Pb 23 31 35.2 -5.8
ITZ *e*S **Sn 23 32 38.8 +2.9**
ITZ IAML 23 33 19.8
comp=Z,73nm,0.5s
KMBO Kilima Mbogo 12.99 25 Pn **Pn 23 32 55.5 -1.7**
comp=Z,0.1nm,0.3s,baz=211,slow=17,SNR=2.2
KMBO Lg Lg 23 36 38.3
comp=Z,0.1nm,0.3s,baz=94,slow=19,SNR=1.9
BOSA Boshof 16.67 200 Pn **P 23 33 49.2 +0.7**
comp=Z,0.1nm,0.3s,baz=23,slow=14,SNR=2.8
BOSA Sn **Sn 23 36 48.0 -3.5**
comp=Z,0.1nm,0.3s,baz=87,slow=19,SNR=1.9
BOSA Lg Lg 23 38 40.0
comp=Z,0.2nm,0.3s,baz=75,slow=7.5,SNR=5.7
TORD Torodi Ar. Bea 39.59 310 P P 23 37 30.3 +6.2
comp=Z,0.5nm,0.7s,baz=129,slow=7.6,SNR=5.3
IDI Anoyia 48.49 352 LR LR 00 00 01.8
comp=Z,517nm,19.4s,baz=290,slow=37
KBZ Khabaz 57.37 10 P **P 23 39 43.2 +2.5**
comp=Z,0.4nm,0.5s,baz=180,slow=5.1,SNR=1.8

IDC ***26*** *23:35:25.6±0.5, 8.36S×79.99W, h0km, mb4.6/34, mb1 4.7/38, mb1mx4.7/49, mbtmp4.6/38, ML4.1/4, MS5.3/37, Ms1 5.3/37, ms1mx5.3/40, Error ellipse: s-maj=16.7km s-min=8.7km az=48.0*

ARE ***26*** *23:35:25±3.1, 8.45S±0.06×80.23W±0.08, h23km±3km, Error ellipse: s-maj=0.0km s-min=0.0km az=168.0*

BJI ***26*** *23:35:27.0±0.0, 8.30S×79.90W, h15km, mB5.4/28, Ms5.6/38, Ms7 5.5/37*

VAO ***26*** *23:35:28.9±0.4, 8.32S×79.73W, h10km, mb5.1*

MOS ***26*** *23:35:29.4±1.2, 8.27S×79.81W, h33km, mb5.4/12, MS5.0/18, Error ellipse: s-maj=11.0km s-min=5.3km az=104.6*

NEIC ***26*** *23:35:29.7±1.6, 8.32S±0.05×79.83W±0.02, h22km±1km, mb5.4/537, Ms_20 5.2/547, Mwb5.6/65, Mww5.6, ML5.7(ARE), Mwc5.7(GCMT), Error ellipse: s-maj=9.3km s-min=3.3km az=191.0*

NEIC ***26*** *23:35:29.6, 8.31S×79.84W, h19km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 1.72; Mθθ -0.53; Mϕϕ -1.19; Mrθ 0.07; Mϕθ 0.34; Mϕr -2.18; Fault plane solution: Mo 2.68000×10^17 NP1:ϕs 173.77000°, δ 72.78000°, λ 96.53000°. NP2:ϕs 332.65000°, δ 18.38000°, λ 69.87000°. Principal axes: T 2.8874, Plg 62.0000°, Azm 94.0000°; N -0.4748, Plg 6.0000°, Azm 352.0000°; P -2.4127, Plg 27.0000°, Azm 259.0000°;*

GCMT ***26*** *23:35:31.7±0.1, 8.33S±0.01×80.16W±0.01, h26km, MW5.7/147, Moment Tensor Solution. s141,c260; s147,c304; Duration: 196 Moment tensor: Scale 10^17 Nm; Mrr 2.18±.04; Mθθ -0.18±.02; Mϕϕ -2.00±.03; Mrθ 0.46±.06; Mϕθ 0.59±.02; Mϕr -4.32±.09; Best double couple: Mo 4.85900×10^17 NP1:ϕs 335.00000°, δ 14.00000°, λ 73.00000°. NP2:ϕs 173.00000°, δ 77.00000°, λ 94.00000°. Principal axes: T 4.8900, Plg 58.0000°, Azm 88.0000°; N -0.0630, Plg 4.0000°, Azm 352.0000°; P -4.8290, Plg 32.0000°, Azm 259.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *23:35:32, 8.40S×80.12W, h24km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 1.99; Mθθ -0.03; Mϕϕ -1.96; Mrθ 0.38; Mϕθ 0.68; Mϕr -3.47; Fault plane solution: Mo 4.07000×10^17 NP1:ϕs 331.00000°, δ 16.00000°, λ 70.00000°. NP2:ϕs 172.00000°, δ 75.00000°, λ 96.00000°. Principal axes: T 4.0064, Plg 60.0000°, Azm 90.0000°; N 0.1224, Plg 6.0000°, Azm 351.0000°; P -4.1288, Plg 30.0000°, Azm 258.0000°;*

NEIC ***26*** *23:35:35, 8.31S×80.33W, h24km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 1.78; Mθθ 0.20; Mϕϕ -1.98; Mrθ 0.76; Mϕθ 0.04; Mϕr -2.74; Fault plane solution: Mo 3.41000×10^17 NP1:ϕs 13.00000°, δ 18.00000°, λ 115.00000°. NP2:ϕs 167.00000°, δ 74.00000°, λ 82.00000°. Principal axes: T 3.3576, Plg 61.0000°, Azm 65.0000°; N 0.1091, Plg 7.0000°, Azm 169.0000°; P -3.4668, Plg 28.0000°, Azm 263.0000°;*

ISC 26 23:35:26.8±0.2, 8.41S±0.03×80.01W±0.04, h10km, n946, σ 1.371/645, mb5.4/305, MS5.2/324, 18C-10D, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATAH	**Atahualpa**	**2.04**	**52**	Pn		**Pg**	**23 36 04.6**	**-1.3**
	388nm,0.3s,baz=286,slow=4.1,SNR=793							
ATAH				Sn		**Sg**	**23 36 32.2**	**-0.2**
	994nm,0.3s,baz=314,slow=23,SNR=7.3							
NNA	**Nana**	**4.73**	**139**	Pn		**Pn**	**23 36 40.7**	**+2.4**
	71nm,0.3s,baz=324,slow=11,SNR=112							
NNA				Pg		**Pb**	**23 36 49.1**	**-0.8**
	254nm,0.3s,baz=329,slow=12,SNR=24							
NNA				Sn		**Sn**	**23 37 35.9**	**+2.6**
	163nm,0.3s,baz=352,slow=22,SNR=2.0							
NNA				LR		LR	23 38 43.4	
	comp=Z,56μm,18.3s,baz=307,slow=42							
NNA	**Nana**	**4.73**	**139**	*ce*P		**Pn**	**23 36 38.7**	**+0.3**
NNA				pmax		pmax		
	comp=Z,423nm,1.0s							
NNA	**Nana**	**4.73**	**139**	Pn		**Pn**	**23 36 38.6**	**+0.3**
OTAV	**Otavalo**	**8.73**	**10**	P		**Pn**	**23 37 34.5**	**+0.8**
OTAV	**Otavalo**	**8.73**	**10**	Pn		**Pn**	**23 37 34.5**	**+0.8**
OTAV	**Otavalo**	**8.73**	**10**	*e*P		**Pn**	**23 37 34.4**	**+0.8**
PAYG	**Puerto Ayora**	**12.80**	**306**			**Pn**	**23 38 29.7**	**+0.6**
YOTC	**Yotoco, Valle**	**12.84**	**17**	*e*P		Pn	23 38 35.6	+5.9
ORTC	**Ortega, Tolima**	**13.12**	**21**	*e*P		**P**	**23 38 39.5**	**-4.3**
TOLC	**Tolima**	**13.73**	**20**	*e*P		**P**	**23 38 47.8**	**-3.0**
VILC	**Villavicencio,**	**13.94**	**27**	*e*P		**P**	**23 38 50.3**	**-2.6**
LPAZ	**La Paz**	**13.99**	**125**	Pn		**Pn**	**23 38 48.0**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=304,slow=8.9,SNR=15							
LPAZ	**La Paz**	**13.99**	**125**	P		**Pn**	**23 38 47.4**	**+1.6**
LPAZ	**La Paz**	**13.99**	**125**	Pn		**Pn**	**23 38 47.4**	**+1.6**
LPAZ	**La Paz**	**13.99**	**125**	*e*P		**Pn**	**23 38 46.5**	**+0.6**
PB16	**IPOC Station P**	**14.19**	**135**			**Pn**	**23 38 49.3**	**+0.7**
GUY2C	**Guyana, Caldas**	**14.31**	**19**	*e*P		**Pn**	**23 38 53.2**	**+3.1**
ROSC	**El Rosal**	**14.33**	**24**	Pn		**P**	**23 38 55.2**	**-2.3**
	comp=Z,0.9nm,0.3s,baz=131,slow=17,SNR=4.5							
ROSC				Sn		**Sn**	**23 41 32.2**	**+2.6**
	comp=Z,1.5nm,0.3s,baz=177,slow=15,SNR=2.0							
ROSC				LR		LR	23 44 26.8	
	comp=Z,26μm,18.4s,baz=208,slow=38							
ROSC	**El Rosal**	**14.33**	**24**	P		**Pn**	**23 38 51.9**	**+1.6**
ROSC	**El Rosal**	**14.33**	**24**	*e*P		**P**	**23 38 56.7**	**-0.9**
CHIC	**Chingaza**	**14.38**	**26**	*e*P		**P**	**23 38 54.5**	**-3.6**
PSGCX	**Pisagua**	**14.68**	**140**	Pn		**Pn**	**23 38 54.4**	**-0.4**
MNMC	**Minye Minye**	**14.68**	**138**			**Pn**	**23 38 56.3**	**+1.2**
CBOC	**Ciudad Bolivar**	**14.72**	**16**	*e*P		**Pn**	**23 38 56.9**	**+1.3**
NORC	**Norcasia**	**14.79**	**20**	*e*P		**Pn**	**23 38 56.4**	**0.0**
PB11	**IPOC Station P**	**15.09**	**139**	Pn		**Pn**	**23 39 01.4**	**+0.9**
PB11				IAmb		IAmb	23 39 20.8	
	comp=Z,249nm,1.3s							
HELC	**Santa Helena**	**15.17**	**17**	*e*P		**P**	**23 39 05.6**	**-1.3**
TA01	**Diego Aracena**	**15.37**	**143**			**Pn**	**23 39 06.2**	**+2.2**
TA01				IAmb		IAmb	23 39 24.0	
	comp=Z,232nm,1.3s							
PATCX	**Punta Patache**	**15.58**	**143**			**Pn**	**23 39 08.9**	**+2.1**
PATCX				IAmb		IAmb	23 39 15.3	
	comp=Z,532nm,1.9s							
PB08	**IPOC Station P**	**15.69**	**139**			**Pn**	**23 39 08.7**	**+0.1**
RUSC	**La Rusia**	**15.79**	**26**	*e*P		**Pn**	**23 39 11.0**	**+1.0**
PTBC	**PUERTO BERRIO,**	**15.85**	**21**	*e*P		**Pn**	**23 39 08.0**	**-2.2**
PB01	**IPOC Station P**	**16.15**	**142**			**Pn**	**23 39 15.6**	**+1.4**
BARC	**Barichara**	**16.38**	**25**	*e*P		**Pn**	**23 39 18.2**	**+0.9**
PB07	**IPOC Station P**	**16.44**	**145**			**Pn**	**23 39 19.1**	**+1.1**
ZARC	**Zaragoza, Cauc**	**16.61**	**18**	*e*P		**Pn**	**23 39 19.7**	**-0.3**
SAML	**Samuel**	**16.64**	**93**	P		**Pn**	**23 39 17.9**	**-2.5**
SAML				pmax		pmax		
	comp=Z,343nm,1.2s							
SAML	**Samuel**	**16.64**	**93**	Pn		**Pn**	**23 39 17.9**	**-2.5**
SAML				IAmb		IAmb	23 39 30.1	
	comp=Z,343nm,1.2s							
BRRC	**Barranca, Sant**	**16.64**	**22**	*e*P		**Pn**	**23 39 15.5**	**-4.9**
UREC	**San Jos de Ur**	**16.66**	**16**	*e*P		**Pn**	**23 39 18.8**	**-1.9**
PB04	**IPOC Station P**	**16.78**	**147**			**Pn**	**23 39 24.0**	**+1.7**
PB04				IAmb		IAmb	23 39 38.1	
	comp=Z,288nm,1.2s							
TAMC	**Tame, Arauca**	**16.87**	**29**	*e*P		**P**	**23 39 24.4**	**-1.0**
PB09	**IPOC Station P**	**16.87**	**143**	P		**P**	**23 39 27.3**	**+1.8**
PB09				IAmb		IAmb	23 39 30.6	
	comp=Z,305nm,1.2s							
CAPC	**Capurgana**	**17.14**	**9**	*e*P		**Pn**	**23 39 23.3**	**-3.4**
RIOS	**Rincon, Osa**	**17.35**	**348**	P		**P**	**23 39 30.5**	**-0.1**
RIOS				IAmb		IAmb	23 39 47.8	
	comp=Z,434nm,1.6s							
PB06	**IPOC Station P**	**17.39**	**146**	P		**P**	**23 39 31.7**	**+0.4**
BCIP	**Isla Barro Col**	**17.46**	**1**	P		**Pn**	**23 39 30.6**	**0.0**
BCIP				pmax		pmax		
	comp=Z,433nm,1.6s							
BCIP	**Isla Barro Col**	**17.46**	**1**	Pn		**Pn**	**23 39 30.6**	**0.0**
BCIP				IAmb		IAmb	23 40 13.5	
	comp=Z,433nm,1.6s							
BCIP	**Isla Barro Col**	**17.46**	**1**	*e*P		**Pn**	**23 39 27.0**	**-3.7**
LCBC	**Los crdobas,**	**17.53**	**12**	*e*P		**Pn**	**23 39 30.9**	**-0.7**
PB10	**IPOC Station P**	**17.54**	**150**	P		**P**	**23 39 33.9**	**+1.1**
MOTC	**Monteria, Cord**	**17.61**	**14**	*e*P		**Pn**	**23 39 32.3**	**-0.3**
LVC	**Limon Verde**	**17.70**	**144**	P		**P**	**23 39 37.0**	**+2.2**
	comp=Z,2.3nm,0.3s,baz=315,slow=9.5,SNR=55							
LVC				LR		LR	23 46 04.6	
	comp=Z,13μm,21.3s,baz=298,slow=36							
LVC	**Limon Verde**	**17.70**	**144**	P		**P**	**23 39 37.2**	**+2.4**
LVC				pmax		pmax		
	comp=Z,160nm,1.2s							
LVC	**Limon Verde**	**17.70**	**144**	P		**P**	**23 39 37.2**	**+2.4**
LVC	**Limon Verde**	**17.70**	**144**	*e*P		**P**	**23 39 35.9**	**+1.0**
PB15	**IPOC Station P**	**17.85**	**147**	P		**Pn**	**23 39 36.1**	**+0.4**
PEZE	**Perez Zeledon,**	**18.05**	**348**	P		**P**	**23 39 40.6**	**+2.1**
PEZE				IAmb		IAmb	23 40 03.2	
	comp=Z,444nm,1.7s							
SMLC	**San Martn de**	**18.09**	**19**	*e*P		**Pn**	**23 39 36.3**	**-2.2**
PB14	**IPOC Station P**	**18.55**	**152**	P		**Pn**	**23 39 45.5**	**+1.0**
PB14				IAmb		IAmb	23 40 00.1	
	comp=Z,206nm,1.1s							
CAO2	**Cobano, Puntar**	**18.68**	**344**	P		**Pn**	**23 39 46.8**	**+1.1**
BATAN	**Batan**	**18.69**	**350**	P		**Pn**	**23 39 46.6**	**+0.9**
BATAN				IAmb		IAmb	23 40 15.1	
	comp=Z,278nm,1.3s							
HDC	**Heredia**	**18.74**	**347**			**Pn**	**23 39 49.1**	**+2.5**
HDC				IAmb		IAmb	23 40 20.8	
	comp=Z,447nm,1.7s							
SJCC	**San Jacinto, C**	**18.81**	**15**	*e*P		**Pn**	**23 39 46.9**	**-0.4**
LL2C	**La Loma 2 Cana**	**19.00**	**20**	*e*P		**P**	**23 39 47.7**	**-1.2**
ARGC	**Ariguani, Magd**	**19.03**	**18**	*e*P		**Pn**	**23 39 50.3**	**+0.4**
LL3C	**La Loma 3 Cana**	**19.17**	**20**	*e*P		**P**	**23 39 49.5**	**-1.2**
JTS	**Las Juntas de**	**19.22**	**345**	P		**Pn**	**23 39 54.2**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=228,slow=4.4,SNR=12							
JTS				LR		LR	23 46 27.9	
	comp=Z,11μm,18.8s,baz=233,slow=34							
JTS	**Las Juntas de**	**19.22**	**345**	*i* P		**Pn**	**23 39 52.8**	**+0.6**
JTS				pmax		pmax		
	comp=Z,66nm,1.4s							
JTS	**Las Juntas de**	**19.22**	**345**			**Pn**	**23 39 53.9**	**+1.7**
GO02	**Mina Guanaco**	**19.40**	**150**	Pn		**Pn**	**23 39 56.6**	**+2.0**
GO02				IAmb		IAmb	23 40 01.4	
	comp=Z,148nm,0.9s							
ORTG	**Ortega, Santa**	**19.42**	**344**	P		**Pn**	**23 39 55.0**	**+0.2**
COVE	**Coope Vega, Sa**	**19.50**	**347**	P		**Pn**	**23 39 57.0**	**+1.4**
SDV	**Santo Domingo**	**19.55**	**29**	P		**Pn**	**23 39 56.3**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=207,slow=10,SNR=21							
SDV				S		**S**	**23 43 40.5**	**+4.3**
	comp=Z,1.2nm,0.3s,baz=292,slow=17,SNR=1.5							
SDV				LR		LR	23 49 08.1	
	comp=Z,17μm,18.1s,baz=212,slow=42							
SDV	**Santo Domingo**	**19.55**	**29**	P		**Pn**	**23 39 55.7**	**-0.7**
SDV				IAmb		IAmb	23 40 10.3	
	comp=Z,215nm,1.4s							
AC01	**Pan de Azucar**	**19.78**	**154**	P		**Pn**	**23 39 59.6**	**+0.7**
AC01				IAmb		IAmb	23 40 16.2	
	comp=Z,196nm,1.3s							
MACA	**Manacapuru-AM**	**19.91**	**76**	*e*P		**P**	**23 39 57.2**	**-1.7**
SIV	**San Ignacio**	**19.97**	**114**	P		**P**	**23 40 00.4**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=298,slow=11,SNR=3.2							
SIV				S		**Sn**	**23 43 45.6**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=248,slow=21,SNR=1.7							
SIV				LR		LR	23 48 04.5	
	comp=Z,24μm,18.9s,baz=302,slow=38							
VILB	**Vilhena**	**19.98**	**105**	*e*P		**P**	**23 39 60.0**	**+0.4**
SMRC	**Santa Marta, M**	**20.28**	**17**	*e*P		**P**	**23 40 03.2**	**+0.4**
CRJC	**Cerrejon, Guaj**	**20.56**	**20**	*e*P		**P**	**23 40 03.8**	**-2.2**
ACON	**Acoyapa**	**20.88**	**346**	P		Pn	23 40 11.0	-0.9
ACON				IAmb		IAmb	23 40 30.5	
	comp=Z,277nm,1.5s							
ACON				IAMs_20		IAMs_20	23 47 31.0	
	comp=Z,12μm,18.0s							
ESPN	**Las Esperanzas**	**20.91**	**348**	IAmb		IAmb	23 40 30.6	
	comp=Z,284nm,1.3s							
ESPN				IAMs_20		IAMs_20	23 47 23.5	
	comp=Z,8μm,18.0s							
BAUV	**El Baul**	**20.95**	**35**	*e*P		P	23 39 59.3	-11
AC02	**Maricunga**	**21.03**	**152**	P		**P**	**23 40 13.8**	**+2.4**
AC02				IAmb		IAmb	23 40 29.3	
	comp=Z,294nm,1.2s							
AC02				IAMs_20		IAMs_20	23 46 52.6	
	comp=Z,6μm,21.0s							
GO03	**Copiap**	**21.20**	**155**	P		**P**	**23 40 15.5**	**+2.7**
GO03				IAmb		IAmb	23 40 35.9	
	comp=Z,156nm,1.2s							
PTGA	**Pitinga**	**21.37**	**70**	P		**P**	**23 40 14.1**	**-0.6**
	comp=Z,61nm,0.7s,baz=249,slow=12,SNR=72							
PTGA				S		**S**	**23 44 08.2**	**-3.9**
	comp=Z,10.0nm,0.7s,baz=307,slow=18,SNR=1.2							
PTGA				LR		LR	23 49 26.3	
	comp=Z,34μm,20.2s,baz=246,slow=39							
AC04	**Llanos de Chal**	**21.42**	**158**	P		**P**	**23 40 17.4**	**+2.3**
URIC	**Uribia, Colomb**	**21.51**	**22**	*e*P		**P**	**23 40 14.2**	**-2.0**
PTLB	**Pontes e Lacer**	**21.57**	**111**	*e*P		**P**	**23 40 17.2**	**+0.3**
MATN	**Matagalpa**	**22.00**	**344**	P		**P**	**23 40 23.6**	**+2.1**
MATN				IAMs_20		IAMs_20	23 47 55.6	
	comp=Z,10μm,19.0s							
CRIN	**San Cristobal**	**22.11**	**341**	P		**P**	**23 40 25.5**	**+2.8**
CRIN				IAMs_20		IAMs_20	23 47 27.1	
	comp=Z,7μm,20.0s							
LCO	**Las Campanas**	**22.29**	**158**	P		**P**	**23 40 26.9**	**+2.2**
LCO				pmax		pmax		
	comp=Z,260nm,1.5s							
LCO				MLR		MLR		
	comp=Z,5μm,22.0s							
LCO	**Las Campanas**	**22.29**	**158**	P		**P**	**23 40 26.9**	**+2.2**
LCO				IAmb		IAmb	23 41 03.3	
	comp=Z,260nm,1.5s							
GO04	**Tololo Observa**	**23.31**	**160**	P		**P**	**23 40 36.9**	**+1.5**
TGUH	**Tegucigalpa,Un**	**23.45**	**342**	P		**P**	**23 40 38.0**	**+1.2**
TGUH				IAmb		IAmb	23 41 33.7	
	comp=Z,154nm,1.2s							
TGUH				IAMs_20		IAMs_20	23 48 18.8	
	comp=Z,6μm,20.0s							
SNET	**Serv Nac Est T**	**23.79**	**337**	P		**P**	**23 40 41.8**	**+1.8**
SNET				IAMs_20		IAMs_20	23 48 11.0	
	comp=Z,6μm,20.0s							
CO03	**El Pedregal**	**23.95**	**160**	IAmb		IAmb	23 40 57.4	
	comp=Z,105nm,1.1s							
CO03				IAMs_20		IAMs_20	23 48 44.8	
	comp=Z,5μm,18.0s							
ITTB	**Itaituba**	**24.45**	**82**	*e*P		**P**	**23 40 45.7**	**-0.4**
NPGB	**Novo Progresso**	**24.46**	**89**	*e*P		**P**	**23 40 45.3**	**-1.0**
MTO3	**Montecristo**	**24.48**	**338**	P		**P**	**23 40 48.5**	**+1.8**
ESQI	**Esquipulas**	**24.63**	**338**	P		**P**	**23 40 50.1**	**+2.3**
H03N2	**Juan Fernandez**	**24.93**	**178**	T		T	00 06 58.5	
	baz=357,slow=75,SNR=2248							
H03N1	**Juan Fernandez**	**24.93**	**178**	T		T	00 06 59.2	
	baz=357,slow=75,SNR=4183							
H03N3	**Juan Fernandez**	**24.95**	**178**	T		T	00 06 40.8	
	baz=357,slow=75,SNR=2294							
ZON	**Zonda**	**25.32**	**157**	P		**P**	**23 40 55.4**	**+1.4**
ZON				pmax		pmax		
	comp=Z,65nm,1.0s							
ZON				MLR		MLR		
	comp=Z,4μm,21.0s							
ZON	**Zonda**	**25.32**	**157**	P		**P**	**23 40 55.4**	**+1.4**
ZON				IAmb		IAmb	23 41 08.2	
	comp=Z,66nm,1.0s							
APG	**El Apazote**	**25.47**	**336**	P		**P**	**23 40 57.1**	**+1.6**
	comp=Z,7.2nm,0.9s,baz=148,slow=9.9,SNR=12							
APG				S		**S**	**23 45 24.6**	**+1.5**
	comp=Z,3.4nm,0.9s,baz=241,slow=23,SNR=2.4							
APG				LR		LR	23 49 43.9	
	comp=Z,7μm,18.1s,baz=150,slow=34							
RTAL	**Retalhuleu**	**25.56**	**333**	IAMs_20		IAMs_20	23 49 01.5	
	comp=Z,6μm,21.0s							
VA01	**Torpederas**	**25.69**	**164**	P		**P**	**23 40 57.6**	**+0.4**
VA01				IAmb		IAmb	23 41 15.7	
	comp=Z,76nm,1.2s							
VA01				IAMs_20		IAMs_20	23 49 23.1	
	comp=Z,5μm,19.0s							
VA03	**San Esteban**	**25.77**	**161**	P		**P**	**23 41 00.2**	**+2.1**
VA03				IAmb		IAmb	23 41 16.4	
	comp=Z,162nm,1.3s							
VA03				IAMs_20		IAMs_20	23 49 47.0	
	comp=Z,5μm,18.0s							
MT02	**Curacav**	**26.05**	**163**	P		**P**	**23 41 01.8**	**+1.3**
MT02				IAMs_20		IAMs_20	23 50 02.6	
	comp=Z,5μm,18.0s							
PEL	**Peldehue**	**26.08**	**162**	P		**P**	**23 41 02.4**	**+1.5**
PEL				pmax		pmax		
	comp=Z,76nm,1.1s							
PEL				MLR		MLR		
	comp=Z,5μm,18.0s							
PEL	**Peldehue**	**26.08**	**162**	P		**P**	**23 41 02.4**	**+1.5**
PEL				IAmb		IAmb	23 41 19.9	
	comp=Z,76nm,1.1s							
PEL				IAMs_20		IAMs_20	23 49 47.4	
	comp=Z,5μm,18.0s							
PP1B	**Ponte de Pedra**	**26.10**	**113**	*e*P		**P**	**23 41 01.9**	**+0.8**
HUEH	**Huehuetenango**	**26.18**	**334**	IAMs_20		IAMs_20	23 49 13.8	
	comp=Z,6μm,21.0s							
VA05	**Santo Domingo**	**26.30**	**164**	P		**P**	**23 41 05.0**	**+2.3**
VA05				IAMs_20		IAMs_20	23 49 50.1	
	comp=Z,5μm,18.0s							
MT05	**Renca**	**26.30**	**162**	P		**P**	**23 41 04.1**	**+1.3**
MT05				IAmb		IAmb	23 41 20.8	
	comp=Z,183nm,1.2s							
MT05				IAMs_20		IAMs_20	23 49 54.0	
	comp=Z,5μm,19.0s							
AQDB	**Aquidauana**	**26.37**	**120**	*e*P		**P**	**23 41 03.7**	**+0.2**
MALB	**Monte Alegre**	**26.44**	**77**	*e*P		**P**	**23 41 03.5**	**-0.7**
MT03	**Universidad Ad**	**26.46**	**162**	P		**P**	**23 41 05.7**	**+1.4**
MT03				IAmb		IAmb	23 41 56.1	
	comp=Z,144nm,1.2s							
MT03				IAMs_20		IAMs_20	23 50 08.3	
	comp=Z,5μm,19.0s							
MTDJ	**Mount Denham**	**26.58**	**5**	P		**P**	**23 41 06.6**	**+1.2**
MTDJ				IAmb		IAmb	23 41 34.3	
	comp=Z,179nm,1.4s							
MT09	**Talagante**	**26.58**	**163**	P		**P**	**23 41 06.8**	**+1.4**
MT09				IAmb		IAmb	23 41 31.2	
	comp=Z,103nm,1.4s							
MT09				IAMs_20		IAMs_20	23 50 01.6	
	comp=Z,5μm,18.0s							
MT01	**Popeta**	**26.59**	**164**	P		**P**	**23 41 07.2**	**+1.9**
MT01				IAMs_20		IAMs_20	23 50 17.9	
	comp=Z,5μm,18.0s							
PETF	**Flores**	**26.99**	**339**	P		**P**	**23 41 10.6**	**+1.6**
BO01	**Tunca**	**27.13**	**164**	P		**P**	**23 41 11.7**	**+1.5**
BO01				IAMs_20		IAMs_20	23 50 25.2	
	comp=Z,5μm,18.0s							
CCIG	**Comitan**	**27.31**	**334**	P		**P**	**23 41 14.6**	**+2.4**
CCIG				IAMs_20		IAMs_20	23 50 10.8	
	comp=Z,6μm,20.0s							
GRGR	**Grenville**	**27.37**	**42**	*e*P		**P**	**23 41 07.3**	**-5.2**
GRGR	**Grenville**	**27.37**	**42**	P		**P**	**23 41 11.7**	**-0.8**
JAKH	**Jacmel**	**27.49**	**16**	P		**P**	**23 41 13.2**	**-0.4**
JAKH				IAmb		IAmb	23 41 49.4	
	comp=Z,138nm,1.2s							
TOSP	**Speyside**	**27.54**	**45**	P		**P**	**23 41 15.2**	**+1.2**
BO02	**Sierra Bellavi**	**27.59**	**163**	IAMs_20		IAMs_20	23 50 23.2	
	comp=Z,5μm,19.0s							
LGNH	**Logne**	**27.73**	**15**	P		**P**	**23 41 16.3**	**+0.6**
LGNH				IAmb		IAmb	23 42 12.7	
	comp=Z,92nm,1.0s							
GCMP	**Grenada, Carri**	**27.78**	**42**	*e*P		**P**	**23 41 14.8**	**-1.4**
LCCY	**Blossom Villag**	**27.90**	**360**	P		**P**	**23 41 17.2**	**0.0**
CPUP	**Villa Florida**	**27.95**	**132**	P		**P**	**23 41 18.7**	**+1.1**
	comp=Z,12nm,1.0s,baz=316,slow=8.9,SNR=24							
CPUP				LR		LR	23 54 31.9	
	comp=Z,9μm,20.5s,baz=322,slow=41							
CPUP	**Villa Florida**	**27.95**	**132**	IAmb		IAmb	23 41 31.1	
	comp=Z,168nm,1.5s							
CBCY	**The Bluff, Cay**	**27.97**	**0**	P		**P**	**23 41 17.7**	**-0.1**
SVB	**Belmont**	**28.47**	**41**	*e*P		P	23 41 09.1	-13
ARAG	**Araguaiana, MT**	**28.48**	**107**	*e*P		**P**	**23 41 22.3**	**-0.2**
SDDR	**Presa de Saban**	**28.54**	**17**	P		**P**	**23 41 24.0**	**+1.0**
GTBY	**Guantanamo Bay**	**28.57**	**10**	P		**P**	**23 41 23.6**	**+0.4**
GTBY				IAmb		IAmb	23 41 45.6	
	comp=Z,104nm,1.1s							
MCPB	**Macapa, AP**	**28.97**	**75**	*e*P		**P**	**23 41 26.7**	**-0.2**
MCLT	**Moule a Chique**	**29.00**	**41**	*e*P		**P**	**23 41 23.7**	**-3.4**
MLPR	**Magueyes Islan**	**29.17**	**26**	P		**P**	**23 41 28.7**	**+0.2**
SLBI	**Saint Lucia, B**	**29.21**	**40**	*e*P		P	23 41 23.7	-5.2
**CMIG

comp=Z,55nm,0.9s
BPA Boggy Peak 31.01 35 *e*P P 23 41 39.1 -5.8
ANBD Bethesda, Anti 31.07 35 *e*P **P 23 41 47.6 +2.3**
ABVI Anegada Island 31.08 30 P **P 23 41 44.3 -1.1**
SOR Soroa 31.15 355 P **P 23 41 46.0 0.0**
SOR pmax pmax
comp=Z,80nm,1.7s
SOR MLR MLR
comp=Z,4µm,22.0s
SOR Soroa 31.15 355 P **P 23 41 46.0 0.0**
SOR IAmb IAmb 23 42 34.6
comp=Z,80nm,1.7s
SOR IAMs_20 IAMs_20 23 52 12.6
comp=Z,4µm,22.0s
PTGB Pitanga 31.20 125 *e*P **P 23 41 47.7 +1.0**
PEXB Peixe 31.40 99 *e*P **P 23 41 48.8 +0.4**
ANWB Willy Bob 31.55 35 *e*P **P 23 41 46.4 -3.2**
ANWB Willy Bob 31.55 35 P **P 23 41 48.1 -1.5**
ANWB IAmb IAmb 23 42 51.2
comp=Z,59nm,0.8s
ANWB IAMs_20 IAMs_20 23 55 32.5
comp=Z,4µm,20.0s
TLIG Tlapa 31.66 325 P **P 23 41 51.5 +0.8**
TLIG IAMs_20 IAMs_20 23 51 45.4
comp=Z,6µm,19.0s
SMTB Santa Maria do 32.05 93 *e*P **P 23 41 54.3 +0.2**
BDFB Brasilia 32.07 106 P **P 23 41 54.7 +0.3**
comp=Z,12nm,0.8s,baz=267,slow=9.6,SNR=15
BDFB LR LR 23 55 41.6
comp=Z,26µm,18.6s,baz=279,slow=38
BDFB Brasilia 32.07 106 P **P 23 41 53.8 -0.6**
BDFB pmax pmax
comp=Z,88nm,1.3s
BDFB Brasilia 32.07 106 P **P 23 41 53.8 -0.6**
BDFB IAmb IAmb 23 42 05.8
comp=Z,88nm,1.3s
TMAB Tom-Au,PA,Br 32.31 81 *e*P **P 23 41 56.9 +0.5**
ITAB Concordia 32.34 129 *e*P **P 23 41 56.9 +0.3**
CPSB Cacapava Do Su 33.10 135 *e*P **P 23 42 04.5 +1.3**
LPA La Plata 33.25 146 *e*P P 23 41 55.6 -8.8
LPA pP sP 23 42 09.3 +0.7
LPA sP pP 23 42 18.7 +11
LPA PP **PnPn 23 43 12.2 -2.4**
LPA PPP PPP 23 43 24.4
LPA PCP PcP 23 45 03.2 +16
LPA S **S 23 47 21.3 -3.2**
LPA PS 23 47 33.4
LPA PSP PSP 23 47 50.2
LPA SS **SnSn 23 49 23.5 -1.1**
LPA SSS SSS 23 49 40.5
LPA PKIKP PKiKP 23 51 59.6 -13
LPA SCS **ScS 23 52 35.7 +3.7**
LPA PKIKS 23 55 49.8
PLCA Paso Flores 33.27 167 P **P 23 42 06.2 +1.6**
comp=Z,11nm,1.0s,baz=345,slow=10,SNR=16
PLCA PcP **PcP 23 44 47.5 +0.6**
comp=Z,3.9nm,0.8s,baz=336,slow=5.1,SNR=3.3
PLCA Paso Flores 33.27 167 P **P 23 42 06.1 +1.5**
PLCA 23 44 47.5
PLCA pmax pmax
comp=Z,66nm,1.4s
PLCA Paso Flores 33.27 167 P **P 23 42 06.1 +1.5**
PLCA IAmb IAmb 23 42 34.1
comp=Z,66nm,1.4s
PLCA Paso Flores 33.27 167 *e*P **P 23 42 06.7 +2.1**
LL03 Petrohue 33.29 170 P **P 23 42 05.8 +1.2**
LL05 Los Muermos 33.37 171 P **P 23 42 05.9 +0.5**
LL05 IAmb IAmb 23 42 25.4
comp=Z,87nm,1.1s
RPN Rapa Nui 33.42 232 LR LR 23 51 54.9
comp=Z,9µm,21.3s,baz=68,slow=30
PLTB Pedras Altas 33.80 137 *e*P **P 23 42 10.7 +1.4**
CNLB Canela 34.37 131 *e*P **P 23 42 15.1 +0.8**
LL01 San Ignacio de 34.49 170 P **P 23 42 16.1 +1.1**
SPB Sao Paulo 34.64 120 P **P 23 42 16.3 -0.3**
SPB IAmb IAmb 23 42 28.7
comp=Z,52nm,0.9s
SPB Sao Paulo 34.64 120 *e*P **P 23 42 17.7 +1.0**
SDBA SAO DESIDERIO 34.73 100 *e*P **P 23 42 17.7 +0.1**
LL07 Hotel Espejo d 34.77 172 P **P 23 42 18.6 +1.1**
MOIG Morelia 34.84 323 P **P 23 42 20.1 +1.5**
MOIG IAmb IAmb 23 42 39.9
comp=Z,25nm,0.6s
VAO Valinhos 34.85 118 *e*P **P 23 42 18.3 -0.2**
GO07 Milladeo Hill, 35.02 172 P **P 23 42 20.7 +1.1**
PET01 Itanhaem-SP 35.02 121 *e*P **P 23 42 19.9 -0.1**
TER01 Tubaro-SC 35.29 129 *e*P **P 23 42 20.7 -1.5**
LL02 Futaleuf 35.38 170 IAmb IAmb 23 42 40.8
comp=Z,57nm,1.4s
JANB Januaria 35.53 104 *e*P **P 23 42 23.5 -1.0**
BSCB Bom Sucesso 36.21 114 *e*P **P 23 42 29.7 -0.6**
ZAIG Zacatecas 38.05 325 P **P 23 42 47.6 +1.5**
ZAIG IAMs_20 IAMs_20 23 56 01.8
comp=Z,4µm,19.0s
553A Crawfordville 38.61 354 IAMs_20 IAMs_20 23 58 47.2
comp=Z,3µm,18.0s
SJMB Sao Joao De Ma 39.02 109 *e*P **P 23 42 53.9 -0.1**
BSFB Barra de Sao F 39.36 109 *e*P **P 23 42 55.5 -1.4**
KVTX Kingsville 39.72 335 P **P 23 43 01.5 +1.9**
KVTX IAmb IAmb 23 43 17.3
comp=Z,163nm,1.3s
RIB01 Linhares ES 39.86 110 *e*P **P 23 43 00.4 -0.7**
NAN01 Guarapari, ES 39.88 108 *e*P **P 23 43 01.0 -0.2**
BRAL Brewton 39.93 351 P **P 23 43 02.0 +0.7**
352A Blakely 39.94 353 P **P 23 43 01.8 +0.4**
352A IAmb IAmb 23 43 09.8
comp=Z,128nm,1.7s
352A IAMs_20 IAMs_20 00 00 06.5
comp=Z,3µm,19.0s
GDU01 Guandu, BA 39.99 101 *e*P **P 23 43 02.0 -0.2**
NBMO Morrinhos-CE 40.06 85 *e*P **P 23 43 02.6 -0.2**
NBPB Pedra_Branca-C 40.21 89 *e*P **P 23 43 03.8 -0.3**
346A Big Creek Wild 40.59 348 P **P 23 43 08.2 +1.4**
735A Kenedy 40.83 336 P **P 23 43 10.2 +1.3**
NBMA Muriti-CE 40.85 92 *e*P **P 23 43 09.2 -0.2**
154A Montrose 40.90 356 P **P 23 43 08.5 -0.8**
154A IAmb IAmb 23 43 28.5
comp=Z,62nm,1.1s
441A DeRidder 40.94 343 IAMs_20 IAMs_20 00 02 36.4
comp=Z,2µm,19.0s
344A Westbrook Farm 40.94 346 P **P 23 43 10.6 +0.9**
833A Chaparral WMA, 41.04 334 P 23 43 13.8
baz=150
833A S 23 49 22.7
baz=150
152A Waverly Hall 41.09 354 P **P 23 43 10.3 -0.6**
152A IAMs_20 IAMs_20 00 00 33.0
comp=Z,3µm,18.0s
342A Flagon Creek P 41.28 344 P **P 23 43 12.8 +0.4**
342A IAMs_20 IAMs_20 23 59 37.4
comp=Z,2µm,21.0s
NHSC New Hope 41.28 360 IAMs_20 IAMs_20 00 00 43.4
comp=Z,3µm,19.0s
NBTA Tacaratu-PE 41.44 94 *e*P **P 23 43 13.9 -0.3**
VBMS Vicksburg 41.62 347 P 23 43 16.1
baz=164
VBMS Vicksburg 41.63 347 P **P 23 43 16.2 +0.9**
NBCL Cascavel-CE 41.65 87 *e*P **P 23 43 15.6 -0.3**
NBLA Lagarto - SE 41.67 97 *e*P **P 23 43 15.2 -0.9**
GOGA Godfrey 41.72 356 P 23 43 15.5
baz=175
146A Union 41.72 348 IAmb IAmb 23 43 25.1
comp=Z,186nm,1.9s
GOGA Godfrey 41.72 356 IAMs_20 IAMs_20 00 00 39.3
comp=Z,2µm,19.0s
LRAL Lakeview Retre 41.74 351 P 23 43 15.5
baz=169,SNR=7.4
Z51A Franklin 41.78 353 IAMs_20 IAMs_20 00 00 55.3
comp=Z,3µm,19.0s
Z47A Carrollton 42.08 350 IAmb IAmb 23 43 38.4
comp=Z,49nm,0.9s
Y52A Lilburn 42.21 355 P **P 23 43 21.1 +1.0**
NATX Nacogdoches 42.33 341 P 23 43 22.2
baz=158,SNR=6.8
435B Jarrell 42.46 337 P 23 43 23.0
baz=154
435B S 23 49 43.4
baz=154
HODGE Hodges 42.46 357 P **P 23 43 22.2 +0.1**
435B Jarrell 42.46 337 P **P 23 43 23.0 +0.8**
435B IAmb IAmb 23 43 36.6
comp=Z,59nm,1.1s
Y49A Blount Mountai 42.47 352 P **P 23 43 23.3 +1.1**
JSC Jenkinsville 42.47 358 P **P 23 43 22.0 -0.2**
JSC pmax pmax
comp=Z,39nm,1.7s
JSC Jenkinsville 42.47 358 P **P 23 43 22.0 -0.2**
NBPA Parau_RN 42.63 89 *e*P **P 23 43 23.6 -0.3**
NBLI Livramento-PB 42.65 92 *e*P **P 23 43 24.2 +0.1**
237A Washetta, Mont 42.92 340 P **P 23 43 27.6 +1.7**
237A IAMs_20 IAMs_20 00 02 04.1
comp=Z,2µm,22.0s
X51A Calhoun 42.98 354 P **P 23 43 26.6 +0.2**
X51A IAMs_20 IAMs_20 00 01 42.1
comp=Z,3µm,18.0s
PAULI Pauline 43.03 358 P **P 23 43 27.2 +0.5**
FPAL Fort Paine 43.04 353 IAMs_20 IAMs_20 00 01 43.6
comp=Z,3µm,19.0s
HPIG 43.05 326 IAMs_20 IAMs_20 23 58 38.2
comp=Z,4µm,22.0s
JCT Junction City 43.08 335 P 23 43 27.4
baz=150
JCT Junction City 43.08 335 P **P 23 43 28.4 +1.1**
JCT pmax pmax
comp=Z,27nm,1.1s
JCT MLR MLR
comp=Z,1µm,20.0s
JCT Junction City 43.08 335 P **P 23 43 28.4 +1.1**
BBSR BB Station 43.10 19 P **P 23 43 28.5 +1.2**
BBSR IAmb IAmb 23 44 21.8
comp=Z,92nm,1.2s
NBAN Anadia - AL 43.19 95 *e*P **P 23 43 28.0 -0.4**
Z41A Richland Creek 43.19 344 P 23 43 28.6
baz=161
Z41A S 23 49 54.9
baz=161
GO09 Cerro Castillo 43.20 173 P **P 23 43 30.2 +2.3**
GO09 IAmb IAmb 23 43 42.8
comp=Z,69nm,1.2s
SLBS Sierra La Lagu 43.28 318 P **P 23 43 30.3 +1.2**
KMSC Kings Mountain 43.33 358 P **P 23 43 29.9 +0.8**
CNNC Cliffs of the 43.46 3 IAMs_20 IAMs_20 00 00 40.8
comp=Z,2µm,19.0s
WHTX Lake Whitney, 43.49 338 P 23 43 31.0
baz=154
WHTX S 23 49 59.5
baz=154
WHTX Lake Whitney, 43.49 338 P **P 23 43 32.7 +2.1**
WHTX IAmb IAmb 23 43 42.6
comp=Z,142nm,1.8s
CCAR Cane Creek 43.55 346 P **P 23 43 33.1 +2.2**
OXF Oxford 43.60 349 P 23 43 30.4
baz=166
OXF Oxford 43.60 349 P **P 23 43 32.5 +1.1**
OXF pmax pmax
comp=Z,68nm,1.2s
OXF Oxford 43.60 349 P **P 23 43 32.5 +1.1**
OXF IAmb IAmb 23 43 47.3
comp=Z,68nm,1.2s
W50A Signal Mountai 43.66 354 IAmb IAmb 23 43 41.0
comp=Z,88nm,1.8s
W50A IAMs_20 IAMs_20 00 02 03.0
comp=Z,3µm,18.0s
SWET Sewanee 43.75 353 IAMs_20 IAMs_20 00 02 05.3
comp=Z,2µm,19.0s
LPIG La Paz 43.81 318 LR LR 23 58 17.4
comp=Z,1µm,18.9s,baz=122,slow=31
Z38A Mt. Pleasant 43.82 342 IAmb IAmb 23 43 47.7
comp=Z,75nm,1.1s
RCBR Riachuelo 43.82 90 P **P 23 43 32.7 -0.9**
RCBR pmax pmax
comp=Z,57nm,1.3s
RCBR MLR MLR
comp=Z,13µm,19.0s
RCBR Riachuelo 43.82 90 P **P 23 43 32.7 -0.9**
PLAL Pickwick Lake 43.82 350 P **P 23 43 32.9 -0.3**
CPCT Cooper Cave 43.83 355 P **P 23 43 34.2 +1.0**
CPCT IAMs_20 IAMs_20 00 01 52.4
comp=Z,2µm,19.0s
TX32 Lajitas Array 43.91 330 P **P 23 43 35.4 +1.4**
TXAR Lajitas Array 43.91 330 P **P 23 43 35.3 +1.2**
comp=Z,1.1nm,0.7s,baz=107,slow=6.0,SNR=4.2
TXAR LR LR 00 00 24.6
comp=Z,3µm,18.2s,baz=0.0,slow=34
TXAR Lajitas Array 43.91 330 P **P 23 43 36.4 +2.4**
TXAR Lajitas Array 43.91 330 P **P 23 43 36.4 +2.4**
X43A Marvell 43.91 347 P 23 43 34.1
baz=164
TKL Tuckaleechee C 43.97 356 P **P 23 43 34.1 -0.2**
comp=Z,2.3nm,0.8s,baz=223,slow=8.8,SNR=2.1
TKL LR LR 00 00 44.5
comp=Z,3µm,21.6s,baz=178,slow=35
TKL Tuckaleechee C 43.97 356 P **P 23 43 35.0 +0.7**
TKL pmax pmax
comp=Z,70nm,1.6s
TKL Tuckaleechee C 43.97 356 P **P 23 43 35.0 +0.7**
TKL IAmb IAmb 23 43 42.5
comp=Z,70nm,1.6s
V52A Sevierville 44.14 356 IAmb IAmb 23 43 53.5
comp=Z,81nm,1.7s
V51A Loudon 44.16 355 P **P 23 43 37.8 +2.0**
V51A IAmb IAmb 23 44 02.0
comp=Z,114nm,1.9s
W45A Hickory Valley 44.19 349 IAmb IAmb 23 43 51.9
comp=Z,113nm,1.2s
MET Memphis--Engin 44.30 348 P **P 23 43 37.9 +0.9**
X40A Basin Creek Fa 44.36 345 P 23 43 37.7
baz=162
X40A S 23 50 11.3
baz=162
X40A Basin Creek Fa 44.36 345 P **P 23 43 38.3 +0.9**
X40A IAmb IAmb 23 43 49.6
comp=Z,129nm,1.6s
NBRF Rio Formoso - 44.36 94 *e*P **P 23 43 37.4 -0.5**
V48A Smith Brothers 44.38 352 IAmb IAmb 23 43 46.8
comp=Z,105nm,1.6s
V48A IAMs_20 IAMs_20 00 02 26.1
comp=Z,2µm,20.0s
MIAR Mount Ida 44.61 344 P 23 43 40.2
baz=160,SNR=13
MIAR Mount Ida 44.61 344 IAmb IAmb 23 43 52.5
comp=Z,124nm,1.6s
Z35A Perchaven, San 44.63 339 IAmb IAmb 23 43 56.0
comp=Z,45nm,0.8s
LPAR Lepanto 44.84 348 P **P 23 43 43.3 +2.0**
MG04 Isla Riesco 44.85 173 P **P 23 43 44.3 +3.2**
W41B Gary Mavity, V 44.86 346 P 23 43 41.9
baz=162,SNR=13
W41B S 23 50 17.4
baz=162
HBAR Harrisburg 44.87 348 P **P 23 43 42.8 +1.3**
ABTX Abilene, Hawle 44.89 336 P 23 43 42.5
baz=152
ABTX S 23 50 19.2
baz=152
ABTX Abilene, Hawle 44.89 336 IAmb IAmb 23 43 56.0
comp=Z,74nm,1.1s
WVT Waverly 44.91 351 P **P 23 43 40.8 -1.0**
WVT pmax pmax
comp=Z,51nm,1.5s
WVT Waverly 44.91 351 P **P 23 43 40.8 -1.0**
WVT IAmb IAmb 23 44 10.7
comp=Z,50nm,1.5s
HALT Halls 44.95 349 P **P 23 43 43.2 +1.0**
U49A Red Boiling Sp 45.01 353 P **P 23 43 43.1 +0.5**
U49A IAMs_20 IAMs_20 00 03 02.7
comp=Z,2µm,18.0s
GNAR Gosnell 45.13 349 P **P 23 43 43.8 +0.2**
LNXT Lenox 45.16 349 P **P 23 43 45.1 +1.3**
T57A Hurt 45.17 1 P **P 23 43 44.9 +1.0**
T57A IAmb IAmb 23 43 53.0
comp=Z,92nm,1.7s
T59A Double "B" Far 45.20 3 P **P 23 43 44.7 +0.6**
T59A IAmb IAmb 23 43 55.6
comp=Z,123nm,1.6s
PEBM Pemiscott Bayo 45.24 349 P **P 23 43 44.7 +0.2**
W39A Magazine 45.28 344 P 23 43 45.6
baz=160,SNR=11
W39A S 23 50 25.7
baz=160
BLA Blacksburg 45.38 360 IAMs_20 IAMs_20 00 02 43.9
comp=Z,2µm,20.0s
T50A Nancy 45.41 355 P **P 23 43 47.0 +1.1**
T50A IAMs_20 IAMs_20 00 02 52.4
comp=Z,2µm,19.0s
FCAR Ozark Folk Cen 45.52 346 IAmb IAmb 23 43 54.4
comp=Z,71nm,1.0s
PENMO Penman 45.53 349 P **P 23 43 47.6 +0.9**
HICK Hickman 45.54 350 P **P 23 43 46.9 +0.1**
T47A Sharon Grove 45.64 352 P **P 23 43 47.6 0.0**
T47A IAMs_20 IAMs_20 00 03 15.6
comp=Z,2µm,19.0s
HENM Henderson Moun 45.76 349 P **P 23 43 49.7 +1.2**
PARMO Parma 45.76 349 P **P 23 43 48.2 -0.3**
JSRW J. Sargeant Re 45.90 2 P **P 23 43 51.2 +1.5**
T45A Paducah 45.91 350 P **P 23 43 50.1 +0.4**
S57A Dark Hollow, R 45.94 1 S 23 50 29.8
baz=181
S57A Dark Hollow, R 45.94 1 P **P 23 43 50.6 +0.7**
S57A IAMs_20 IAMs_20 00 02 08.1
comp=Z,2µm,21.0s
S54A Dingess, Beckl 45.98 359 P **P 23 43 51.1 +0.7**
S54A IAmb IAmb 23 44 06.2
comp=Z,45nm,1.3s
S54A IAMs_20 IAMs_20 00 02 05.4
comp=Z,3µm,22.0s
U40A Yellville 46.13 346 P 23 43 51.9
baz=162,SNR=32
U40A S 23 50 35.9
baz=162
R58B Mineral 46.17 2 P 23 43 50.3
baz=183
R58B S 23 50 35.2
baz=183
R58B Mineral 46.17 2 IAmb IAmb 23 44 00.9
comp=Z,54nm,1.2s
R58B IAMs_20 IAMs_20 00 03 48.2
comp=Z,2µm,18.0s
CBN Corbin Frederi 46.44 3 P **P 23 43 54.2 +0.4**
CBN IAmb IAmb 23 44 02.8
comp=Z,55nm,1.3s
CBN IAMs_20 IAMs_20 00 04 15.6
comp=Z,2µm,18.0s
WMOK Wichita Mounta 46.44 339 P 23 43 53.8
baz=154
R55A Marlinton 46.45 360 IAMs_20 IAMs_20 00 04 41.7
comp=Z,2µm,19.0s
R57A Stanardsville 46.48 2 S 23 50 40.5
baz=182
TUL1 Leonard 46.52 342 P 23 43 54.6
baz=158
TUL1 S 23 50 42.5
baz=158
R56A Bull Pasture M 46.57 1 S 23 50 41.7
baz=181
OKCFA Oklahoma City 46.59 340 P **P 23 43 56.5 +1.4**
OKCFA IAmb IAmb 23 44 10.7
comp=Z,56nm,1.2s
U38A Gravette 46.61 344 IAmb IAmb 23 44 07.2
comp=Z,38nm,1.1s
R50A Paris 46.62 355 P **P 23 43 56.0 +0.7**
R50A IAmb IAmb 23 44 01.9
comp=Z,64nm,1.7s
S44A Carbondale 46.67 350 IAmb IAmb 23 44 11.6
comp=Z,78nm,1.3s
MNTX Cornudas Mount 46.68 330 IAmb IAmb 23 44 07.9
comp=Z,80nm,1.8s
MNTX IAMs_20 IAMs_20 00 02 10.3
comp=Z,2µm,18.0s
MNTX Cornudas Mount 46.68 330 P 23 43 56.7
baz=144
SIUC Southern Illin 46.68 350 IAmb IAmb 23 44 11.6
comp=Z,72nm,1.1s
USIN University of 46.68 352 IAmb IAmb 23 44 13.4
comp=Z,45nm,1.1s
R49A Shelbyville 46.71 354 IAMs_20 IAMs_20 00 03 32.6
comp=Z,2µm,20.0s
OK025 Westminster Rd 46.71 341 IAmb IAmb 23 44 11.8
comp=Z,41nm,0.7s
EFI East Falkland 46.76 161 *i* P **P 23 43 55.5 -0.7**
EFI pmax pmax
comp=Z,36nm,1.0s
WCI Wyandotte Cave 46.76 353 P **P 23 43 56.0 -0.5**
WCI pmax pmax
comp=Z,31nm,1.3s
WCI MLR MLR
comp=Z,2µm,18.0s
WCI Wyandotte Cave 46.76 353 P **P 23 43 56.0 -0.5**
WCI IAMs_20 IAMs_20 00 03 59.2
comp=Z,2µm,18.0s
BCOK Bluff Creek, N 46.87 340 IAMs_20 IAMs_20 00 07 25.5
comp=Z,2µm,19.0s
OK029 Liberty Lake 46.94 341 P **P 23 43 59.5 +1.6**
OK029 IAmb IAmb 23 44 13.7
comp=Z,44nm,0.8s
QUOK Quay 47.05 341 P **P 23 44 00.5 +1.8**
QUOK IAMs_20 IAMs_20 00 03 53.2
comp=Z,2µm,19.0s
Q58A Fox Den Farm, 47.15 2 S 23 50 49.2
baz=183
Q56A Snyder Ridge, 47.21 1 S 23 50 50.2
baz=181
Q56A Snyder Ridge, 47.21 1 IAMs_20 IAMs_20 00 02 56.8
comp=Z,2µm,20.0s
Q57A Strasburg 47.22 2 S 23 50 51.1
baz=182
Q51A Peebles 47.29 356 P **P 23 43 58.9 -1.7**
Q51A IAmb IAmb 23 44 24.5
comp=Z,46nm,1.4s
MSTX Muleshoe 47.36 334 P 23 44 01.9
baz=148
MSTX S 23 50 55.3
baz=148
CCM Cathedral Cave 47.40 348 P **P 23 44 01.2 -0.2**
CCM pmax pmax
comp=Z,132nm,1.3s
CCM Cathedral Cave 47.40 348 P **P 23 44 01.2 -0.2**
OLIL Olney 47.50 351 P **P 23 44 03.3 +1.1**
SDMD Soldier's Deli 47.66 3 P **P 23 44 03.5 0.0**
P56A Dayton Farm, R 47.68 1 S 23 50 56.9
baz=181
P57A Homestead Farm 47.68 2 P **P 23 44 04.0 +0.5**
P57A IAmb IAmb 23 44 05.6
comp=Z,39nm,1.4s
P57A IAMs_20 IAMs_20 00 04 34.2
comp=Z,2µm,19.0s
HSIG 47.69 322 P **P 23 44 07.3 +3.4**
BLO Bloomington 47.72 353 P **P 23 44 04.1 +0.2**
BLO pmax pmax
comp=Z,41nm,1.4s
BLO MLR MLR
comp=Z,2µm,19.0s
BLO Bloomington 47.72 353 P **P 23 44 04.1 +0.2**
BLO IAmb IAmb 23 44 10.4
comp=Z,41nm,1.4s
BLO IAMs_20 IAMs_20 00 04 38.5
comp=Z,2µm,19.0s
P51A Williamsport 47.73 357 P **P 23 44 04.0 0.0**
P51A IAmb IAmb 23 44 12.6
comp=Z,97nm,1.9s
SLM Saint Louis 47.76 349 P **P 23 44 04.3 +0.1**
SLM pmax pmax
comp=Z,35nm,0.8s
SLM MLR MLR
comp=Z,1µm,22.0s
SLM Saint Louis 47.76 349 P **P 23 44 04.3 +0.1**
SLM IAmb IAmb 23 44 16.9
comp=Z,35nm,0.8s
CROK Carrier 47.76 340 P **P 23 44 05.3 +1.0**
CROK IAMs_20 IAMs_20 00 07 44.2
comp=Z,2µm,19.0s
Q44A Meyer Farm, Va 47.81 351 IAmb IAmb 23 44 17.2
comp=Z,52nm,0.9s
MCWV Mont Chateau 47.82 0 P **P 23 44 05.7 +1.0**
P52A Corning 47.84 358 S 23 50 56.4
baz=177
P52A Corning 47.84 358 P **P 23 44 05.1 +0.3**
P52A IAMs_20 IAMs_20 00 03 14.6
comp=Z,3µm,22.0s
P48A Milroy 47.89 354 P **P 23 44 05.0 -0.2**
P48A IAmb IAmb 23 44 10.3
comp=Z,66nm,1.8s
P48A IAMs_20 IAMs_20 00 01 56.9
comp=Z,2µm,22.0s
P49A Miami Univ. Ec 47.90 355 S 23 50 56.5
baz=174
P49A Miami Univ. Ec 47.90 355 P **P 23 44 05.4 +0.1**
P49A IAMs_20 IAMs_20 00 04 47.4
comp=Z,3µm,19.0s
U32A Winter Ranch, 48.00 339 P **P 23 44 07.2 +1.1**
U32A IAmb IAmb 23 44 19.9
comp=Z,52nm,0.9s
P61A Hammonton 48.08 5 P **P 23 44 07.5 +0.9**
OK032 Salt Plains WL 48.11 340 P **P 23 44 07.4 +0.4**
P60A Greenville 48.14 5 P 23 44 06.4
baz=186

P60A S 23 51 03.1
baz=186
P60A Greenville 48.15 5 P **P** **23 44 06.5 -0.6**
P60A IAmb IAmb 23 44 16.9
comp=Z,95nm,1.6s
P46A Rosedale 48.24 353 P **P** **23 44 07.6 -0.4**
P46A IAMs_20 IAMs_20 00 04 55.4
comp=Z,2µm,19.0s
MVL Millersville 48.28 4 P **P** **23 44 08.0 -0.2**
MVL IAmb IAmb 23 44 18.3
comp=Z,73nm,1.5s
O52A Adamsville 48.31 358 P **P** **23 44 08.5 0.0**
O52A IAmb IAmb 23 44 17.4
comp=Z,32nm,1.1s
O58A Lewisberry 48.37 3 P 23 44 08.3
baz=184
O58A S 23 51 07.1
baz=184
O57A Amberson 48.42 2 P 23 44 08.9
baz=183
O57A S 23 51 05.7
baz=183
O53A New Philadelph 48.42 359 P **P** **23 44 09.2 -0.1**
O53A IAmb IAmb 23 44 20.5
comp=Z,90nm,1.8s
O53A IAMs_20 IAMs_20 00 03 50.1
comp=Z,2µm,20.0s
KAN16 Harper SW Stat 48.45 341 P **P** **23 44 12.0 +2.4**
O56A Blue Knob Stat 48.45 1 P 23 44 09.5
baz=182
O56A S 23 51 06.8
baz=182
O56A Blue Knob Stat 48.45 1 P **P** **23 44 08.2 -1.4**
O56A IAmb IAmb 23 44 25.9
comp=Z,113nm,2.0s
O56A IAMs_20 IAMs_20 00 03 43.6
comp=Z,2µm,20.0s
ACSO Alum Creek Sta 48.47 357 P 23 44 09.5
baz=176
ACSO Alum Creek Sta 48.47 357 IAMs_20 IAMs_20 00 05 49.0
comp=Z,3µm,19.0s
319A Douglas 48.48 326 P **P** **23 44 11.5 +1.5**
PAGS Pennsylvania G 48.48 3 IAmb IAmb 23 44 18.8
comp=Z,84nm,1.6s
KAN12 Harper NE Stat 48.49 341 P **P** **23 44 11.1 +1.2**
O49A Covington 48.52 356 IAmb IAmb 23 44 21.1
comp=Z,37nm,1.2s
O61A Allentown 48.52 6 S 23 51 10.8
baz=187
121A Cookes Peak, D 48.57 328 P 23 44 11.3
baz=142
121A S 23 51 15.3
baz=142
121A Cookes Peak, D 48.57 328 P **P** **23 44 12.5 +1.6**
121A IAmb IAmb 23 44 24.0
comp=Z,83nm,1.5s
121A IAMs_20 IAMs_20 00 02 49.2
comp=Z,3µm,20.0s
O59A Robesonia 48.60 4 P 23 44 10.5
baz=185
O59A S 23 51 10.6
baz=185
P43A Skaggs, Pawnee 48.61 350 IAmb IAmb 23 44 23.7
comp=Z,45nm,1.0s
O60A Telford 48.66 5 P 23 44 10.8
baz=186
O60A S 23 51 12.8
baz=186
SSPA Standing Stone 48.84 2 P **P** **23 44 12.2 -0.2**
SSPA IAmb IAmb 23 44 20.7
comp=Z,94nm,1.6s
SSPA Standing Stone 48.84 2 IAMs_20 IAMs_20 00 05 18.8
comp=Z,2µm,19.0s
O44A Mansfield 48.95 351 P **P** **23 44 11.8 -1.5**
LUPA Lehigh Univers 48.95 5 IAmb IAmb 23 44 22.9
comp=Z,66nm,1.3s
N57A Milroy 48.97 2 P 23 44 12.7
baz=183
N57A S 23 51 13.9
baz=183
N53A Lisbon 48.97 359 P **P** **23 44 13.4 -0.1**
N53A IAmb IAmb 23 45 47.1
comp=Z,70nm,1.8s
SFIN Lafayette 48.98 353 P 23 44 11.6
baz=170
SFIN S 23 51 09.3
baz=170
SFIN Lafayette 48.98 353 IAmb IAmb 23 44 25.6
comp=Z,35nm,0.9s
SFIN IAMs_20 IAMs_20 00 05 27.9
comp=Z,2µm,19.0s
N58A Sunbury 49.09 3 S 23 51 15.3
baz=184
N58A Sunbury 49.09 3 IAmb IAmb 23 44 22.9
comp=Z,48nm,1.4s
N58A IAMs_20 IAMs_20 00 06 04.5
comp=Z,1µm,18.0s
N56A West Decatur 49.10 2 P 23 44 14.1
baz=182
N56A S 23 51 17.6
baz=182
N54A Moraine State 49.12 0 S 23 51 14.3
baz=180
N54A Moraine State 49.12 0 P **P** **23 44 14.9 +0.2**
N54A IAmb IAmb 23 44 39.8
comp=Z,88nm,1.8s
N54A IAMs_20 IAMs_20 00 03 24.5
comp=Z,3µm,22.0s
N51A Ashland 49.13 358 IAmb IAmb 23 44 38.5
comp=Z,71nm,1.5s
N59A State Game Lan 49.23 4 P 23 44 15.1
baz=185,SNR=6.0
N59A S 23 51 19.9
baz=185
N59A State Game Lan 49.23 4 P **P** **23 44 15.4 -0.2**
N59A IAMs_20 IAMs_20 00 07 57.6
comp=Z,1µm,18.0s
N49A Columbus Grove 49.23 356 IAmb IAmb 23 44 31.2
comp=Z,50nm,1.1s
N60A Cedar Hill Far 49.24 5 P 23 44 15.7
baz=186
N60A S 23 51 20.3
baz=186
CPNY Central Park 49.27 6 P **P** **23 44 16.4 +0.7**
CPNY IAmb IAmb 23 44 23.4
comp=Z,38nm,1.3s
N47A Urbana 49.32 354 IAmb IAmb 23 44 27.7
comp=Z,74nm,1.2s
N47A IAMs_20 IAMs_20 00 05 22.8
comp=Z,2µm,19.0s
N62A Caumsett State 49.46 7 S 23 51 22.0
baz=188
LENM Lemitar 49.46 330 P **P** **23 44 19.8 +2.2**
HDIL Hopedale 49.47 351 P 23 44 16.5
baz=168
PAL Palisades 49.49 6 S 23 51 23.5
baz=188
PAL Palisades 49.49 6 P **P** **23 44 17.1 -0.3**
PAL pmax pmax
comp=Z,18nm,1.0s
PAL MLR MLR
comp=Z,1µm,19.0s
PAL Palisades 49.49 6 P **P** **23 44 17.1 -0.3**
ODNJ Ogdensburg 49.49 5 P **P** **23 44 18.6 +1.1**
ODNJ IAmb IAmb 23 44 28.4
comp=Z,55nm,1.8s
M51A Elyria 49.53 358 P 23 44 16.8
baz=177
M57A Sunshine Farm, 49.57 3 P 23 44 18.4
baz=184
M57A S 23 51 23.3
baz=184
M57A Sunshine Farm, 49.57 3 IAmb IAmb 23 44 27.9
comp=Z,87nm,1.6s
M57A IAMs_20 IAMs_20 00 06 01.1
comp=Z,1µm,19.0s
TRNY Table Rock, Ra 49.59 6 IAmb IAmb 23 44 27.5
comp=Z,29nm,1.1s
M53A WI Miller and 49.60 359 S 23 51 20.6
baz=179
M53A WI Miller and 49.60 359 P **P** **23 44 18.6 +0.3**
M53A IAmb IAmb 23 44 33.8
comp=Z,45nm,1.4s
M53A IAMs_20 IAMs_20 00 06 51.3
comp=Z,2µm,19.0s
M58A Price's Panora 49.64 4 S 23 51 23.9
baz=184

M54A Oil Creek Stat 49.67 0 S 23 51 23.3
baz=180
M54A Oil Creek Stat 49.67 0 IAmb IAmb 23 44 48.4
comp=Z,36nm,1.4s
M54A IAMs_20 IAMs_20 00 03 51.9
comp=Z,3µm,22.0s
M56A Emporium 49.67 2 P 23 44 19.7
baz=182
M56A S 23 51 23.3
baz=182
M56A Emporium 49.67 2 IAMs_20 IAMs_20 00 05 53.9
comp=Z,2µm,20.0s
WSPT Westport, CT 49.71 7 P **P** **23 44 19.3 +0.2**
KSU1 Kansas State U 49.72 343 P 23 44 19.4
baz=158
KSU1 Kansas State U 49.72 343 IAmb IAmb 23 45 01.5
comp=Z,31nm,0.9s
M60A Port Jervis 49.73 5 P 23 44 19.1
baz=187
M60A S 23 51 27.2
baz=187
M61A Granite Spring 49.80 6 S 23 51 27.7
baz=188
ALLY Alegheny Colle 49.81 360 P **P** **23 44 19.1 -0.8**
ALLY IAmb IAmb 23 44 35.4
comp=Z,108nm,1.8s
ANMO Albuquerque 49.84 331 P **P** **23 44 20.4 -0.1**
comp=Z,3.5nm,0.9s,baz=144,slow=8.8,SNR=12
ANMO LR LR 00 04 10.1
comp=Z,2µm,18.9s,baz=156,slow=35
ANMO Albuquerque 49.84 331 *ce* P **P** **23 44 21.0 +0.4**
ANMO pmax pmax
comp=Z,27nm,2.6s
ANMO Albuquerque 49.84 331 P **P** **23 44 21.3 +0.8**
ANMO IAmb IAmb 23 44 43.3
comp=Z,46nm,1.2s
ANMO Albuquerque 49.84 331 IAMs_20 IAMs_20 00 03 49.8
comp=Z,2µm,19.0s
ANMO Albuquerque 49.84 331 P 23 44 20.9
baz=145
KSPA Keystone Colle 49.87 4 P **P** **23 44 20.1 -0.2**
KSPA IAmb IAmb 23 44 29.7
comp=Z,59nm,1.4s
M59A Waymart 49.88 4 P 23 44 20.0
baz=186
M59A S 23 51 28.3
baz=186
TUC Tucson 50.02 326 P 23 44 26.4
baz=138
TUC Tucson 50.02 326 P **P** **23 44 23.2 +1.4**
TUC pmax pmax
comp=Z,20nm,1.2s
TUC Tucson 50.02 326 P **P** **23 44 23.2 +1.4**
TUC Tucson 50.02 326 IAMs_20 IAMs_20 00 03 00.7
comp=Z,3µm,21.0s
M62A Hamden 50.03 7 P 23 44 22.0
baz=189
M62A S 23 51 30.7
baz=189
M63A Gales Ferry 50.10 8 P 23 44 22.9
baz=190
M63A S 23 51 33.4
baz=190
M63A Gales Ferry 50.10 8 P **P** **23 44 22.4 +0.3**
M63A IAmb IAmb 23 44 31.9
comp=Z,66nm,1.2s
L57A Andrews Acres 50.24 3 P 23 44 29.4
baz=184
L57A S 23 51 32.0
baz=184
KSCT Kent School, K 50.24 6 P **P** **23 44 23.8 +0.6**
L48A N Adams 50.27 356 P **P** **23 44 23.5 +0.1**
L48A IAmb IAmb 23 44 38.9
comp=Z,73nm,1.4s
ERPA Erie 50.28 0 P **P** **23 44 24.2 +0.7**
ERPA IAMs_20 IAMs_20 00 04 10.5
comp=Z,3µm,22.0s
L56A Greenwood 50.35 2 P 23 44 29.7
baz=183
L56A S 23 51 32.8
baz=183
L56A Greenwood 50.35 2 IAmb IAmb 23 44 33.2
comp=Z,100nm,1.9s
L56A IAMs_20 IAMs_20 00 06 24.7
comp=Z,2µm,19.0s
L58A Harry Jones Me 50.35 4 P 23 44 24.2
baz=185
L58A S 23 51 34.5
baz=185
M64A Tiverton 50.36 9 P **P** **23 44 23.9 -0.2**
M64A IAmb IAmb 23 44 38.6
comp=Z,68nm,1.8s
M64A IAMs_20 IAMs_20 00 08 13.8
comp=Z,2µm,19.0s
L60A Shokan 50.43 6 P 23 44 25.1
baz=187
L60A S 23 51 36.0
baz=187
CBKS Cedar Bluff 50.44 340 P 23 44 25.4
baz=154
CBKS Cedar Bluff 50.44 340 P **P** **23 44 25.7 +0.9**
CBKS pmax pmax
comp=Z,38nm,1.1s
CBKS MLR MLR
comp=Z,1µm,21.0s
CBKS Cedar Bluff 50.44 340 P **P** **23 44 25.7 +0.9**
CBKS IAmb IAmb 23 44 35.6
comp=Z,38nm,1.1s
M65A Busby, Falmout 50.46 9 IAMs_20 IAMs_20 00 08 05.4
comp=Z,1µm,18.0s
UCCT U. Connecticut 50.46 8 P **P** **23 44 25.4 +0.5**
UCCT IAmb IAmb 23 44 48.5
comp=Z,41nm,1.3s
HQIL Hanson Quary C 50.48 352 IAMs_20 IAMs_20 00 06 14.5
comp=Z,2µm,19.0s
BINY Binghamton 50.49 4 P 23 44 25.1
baz=185
BINY Binghamton 50.49 4 IAmb IAmb 23 44 34.2
comp=Z,36nm,1.1s
L46A Eue Claire 50.50 354 P **P** **23 44 25.8 +0.6**
L46A IAMs_20 IAMs_20 00 06 17.1
comp=Z,2µm,20.0s
L59A Walton 50.55 5 P 23 44 25.5
baz=186
L59A Walton 50.55 5 IAmb IAmb 23 44 34.9
comp=Z,61nm,1.4s
AAM Ann Arbor 50.57 356 P 23 44 24.3
baz=175
AAM Ann Arbor 50.57 356 P **P** **23 44 26.2 +0.5**
AAM pmax pmax
comp=Z,113nm,1.9s
AAM Ann Arbor 50.57 356 P **P** **23 44 26.2 +0.5**
AAM IAmb IAmb 23 44 32.4
comp=Z,114nm,1.9s
WVNY West Valley, N 50.58 1 P **P** **23 44 25.8 0.0**
L63A North Scituate 50.61 8 P 23 44 26.5
baz=190
L63A S 23 51 39.1
baz=190
L63A North Scituate 50.61 8 P **P** **23 44 25.5 -0.4**
L62A Suffield 50.64 7 P 23 44 26.5
baz=189
L62A S 23 51 40.7
baz=189
L62A Suffield 50.64 7 P **P** **23 44 25.9 -0.3**
L62A IAmb IAmb 23 44 35.6
comp=Z,42nm,1.1s
L62A IAMs_20 IAMs_20 00 07 26.3
comp=Z,2µm,20.0s
BRYW Bryant College 50.68 8 P **P** **23 44 26.1 -0.4**
L61A Hillsdale 1, H 50.70 6 P 23 44 26.3
baz=188,SNR=8.1
L61A S 23 51 40.7
baz=188
T25A Trinidad 50.75 335 P 23 44 28.4
baz=148
T25A S 23 51 43.8
baz=148
T25A Trinidad 50.75 335 P **P** **23 44 28.2 +0.8**
L64A Middleborough 50.80 9 S 23 51 42.2
baz=192
L64A Middleborough 50.80 9 P **P** **23 44 27.1 -0.2**
L64A IAmb IAmb 23 46 01.5
comp=Z,69nm,1.8s
L64A IAMs_20 IAMs_20 00 08 35.3
comp=Z,1µm,19.0s
L44A Lake County Fo 50.86 352 P **P** **23 44 27.3 -0.5**

L44A IAmb IAmb 23 44 34.6
comp=Z,67nm,1.2s
L44A IAMs_20 IAMs_20 00 06 35.6
comp=Z,2µm,19.0s
K56A Middlesex 50.92 3 S 23 51 39.3
baz=183
214A Organ Pipe Nat 50.92 324 **P** **23 44 30.4 +1.8**
214A IAMs_20 IAMs_20 00 04 01.7
comp=Z,2µm,20.0s
214A Organ Pipe Nat 50.92 324 P 23 44 34.2
baz=136
214A S 23 51 46.4
baz=136
MMNY Mt. Morris Dam 50.93 2 P **P** **23 44 27.4 -0.9**
MMNY IAmb IAmb 23 44 34.3
comp=Z,41nm,1.2s
L42A Oliver, Polo 50.94 351 IAmb IAmb 23 44 58.6
comp=Z,97nm,1.4s
L42A IAMs_20 IAMs_20 00 10 10.8
comp=Z,2µm,19.0s
K57A Scipio Center 50.99 3 P 23 44 27.9
baz=184
K50A Casco 50.99 358 P **P** **23 44 26.8 -2.0**
K50A IAmb IAmb 23 44 35.8
comp=Z,39nm,0.8s
L61B Northampton 51.05 7 P 23 44 28.8
baz=189
K58A Earlville 51.08 4 P 23 44 28.9
baz=185
K58A S 23 51 42.7
baz=185
K58A Earlville 51.08 4 IAmb IAmb 23 44 39.2
comp=Z,86nm,1.6s
K60A Five Rivers En 51.08 6 P 23 44 30.6
baz=188
N35A Tabor 51.10 345 IAmb IAmb 23 44 40.6
comp=Z,40nm,0.8s
BCX Boston College 51.14 8 P **P** **23 44 28.6 -1.3**
K59A Cooperstown 51.15 5 P 23 44 29.8
baz=186
K59A S 23 51 46.3
baz=186
WES Weston 51.17 8 P **P** **23 44 29.1 -1.0**
WES pmax pmax
comp=Z,46nm,1.5s
WES MLR MLR
comp=Z,1µm,19.0s
WES Weston 51.17 8 P **P** **23 44 29.1 -1.0**
K61A Williamstown 51.20 6 P 23 44 29.7
baz=188
K61A S 23 51 48.0
baz=188
TRY Troy 51.22 6 P **P** **23 44 30.4 -0.2**
TRY IAmb IAmb 23 44 54.4
comp=Z,99nm,1.3s
HRV Adam Dziewonsk 51.25 8 P **P** **23 44 31.6 +0.8**
HRV pmax pmax
comp=Z,50nm,1.5s
HRV MLR MLR
comp=Z,1µm,19.0s
HRV Adam Dziewonsk 51.25 8 P **P** **23 44 31.6 +0.8**
HRV IAmb IAmb 23 44 40.0
comp=Z,50nm,1.4s
X18A Snowflake 51.26 328 P **P** **23 44 32.7 +1.5**
L40A Anamosa 51.27 349 IAmb IAmb 23 44 43.1
comp=Z,95nm,1.2s
K62A Royalston 51.32 7 P 23 44 29.7
baz=190
K62A S 23 51 50.6
baz=190
K62A Royalston 51.32 7 IAMs_20 IAMs_20 00 07 44.2
comp=Z,2µm,20.0s
K43A Burlington 51.43 352 P **P** **23 44 33.1 +1.0**
K43A IAmb IAmb 23 44 40.8
comp=Z,82nm,1.3s
K43A IAMs_20 IAMs_20 00 08 02.7
comp=Z,2µm,20.0s
K63A Dunstable 51.43 8 P 23 44 31.4
baz=190
K63A S 23 51 51.0
baz=190
K63A Dunstable 51.44 8 IAmb IAmb 23 44 41.2
comp=Z,59nm,1.4s
K63A IAMs_20 IAMs_20 00 09 10.2
comp=Z,1µm,19.0s
J54A Appleton 51.45 1 P **P** **23 44 32.8 +0.5**
J55A Hilton 51.46 2 P **P** **23 44 32.2 -0.2**
J55A IAmb IAmb 23 44 40.4
comp=Z,55nm,1.5s
SCIA State Center 51.51 347 P 23 44 32.4
baz=163
J56A Wolcott 51.52 3 P 23 44 31.1
baz=184
J56A S 23 51 49.1
baz=184
J56A Wolcott 51.52 3 IAmb IAmb 23 44 41.7
comp=Z,56nm,1.5s
J56A IAMs_20 IAMs_20 00 07 20.6
comp=Z,1µm,19.0s
J47A Sunmer 51.59 356 P **P** **23 44 33.8 +0.5**
J47A IAmb IAmb 23 44 55.2
comp=Z,40nm,1.0s
W18A Petrified Fore 51.60 329 P 23 44 36.1
baz=141
W18A S 23 51 57.3
baz=141
W18A Petrified Fore 51.60 329 P **P** **23 44 35.0 +1.2**
W18A IAmb IAmb 23 44 54.9
comp=Z,94nm,1.2s
KSCO Kaye Shedlock' 51.65 338 P 23 44 34.6
baz=151
KSCO Kaye Shedlock' 51.65 338 P **P** **23 44 33.7 -0.4**
KSCO IAmb IAmb 23 45 08.3
comp=Z,56nm,1.4s
J57A Williamstown 51.70 4 P 23 44 33.0
baz=185
SDCO Great Sand Dun 51.73 334 P 23 44 35.3
baz=147
SDCO Great Sand Dun 51.73 334 IAmb IAmb 23 44 46.2
comp=Z,81nm,1.8s
J60A Lant Hill Farm 51.75 6 P 23 44 34.2
baz=188,SNR=7.7
J59A Piesco 51.87 5 P 23 44 34.9
baz=187
J59A S 23 51 55.6
baz=187
ACCN Adirondack Com 51.87 6 IAmb IAmb 23 44 59.0
comp=Z,61nm,1.3s
J59A Piesco 51.87 5 IAmb IAmb 23 44 44.9
comp=Z,80nm,1.8s
J59A IAMs_20 IAMs_20 00 07 57.8
comp=Z,1µm,19.0s
SPX San Pedro Mart 51.89 321 P **P** **23 44 37.1 +0.9**
SPX IAMs_20 IAMs_20 00 02 17.5
comp=Z,2µm,21.0s
JFWS Jewell Farm 51.92 350 P 23 44 34.5
baz=167
JFWS Jewell Farm 51.92 350 IAMs_20 IAMs_20 00 10 50.8
comp=Z,2µm,19.0s
J62A Henniker 51.92 8 P 23 44 35.3
baz=190
J62A S 23 51 58.2
baz=190
J61A Chester 51.95 7 P 23 44 36.6
baz=189
J61A S 23 51 58.4
baz=189
I51A Listowel 51.97 359 S 23 51 52.6
baz=178
I58A Old Forge 52.05 5 P 23 44 36.2
baz=186
113A Mohawk Valley, 52.07 324 P **P** **23 44 38.9 +1.8**
J63A Strafford 52.08 8 S 23 51 59.3
baz=191
PECO Prince Edward 52.16 3 P **P** **23 44 37.0 -0.6**
PECO IAmb IAmb 23 44 46.3
comp=Z,50nm,1.5s
FFD Franklin Falls 52.19 8 P **P** **23 44 38.4 +0.7**
FFD IAmb IAmb 23 45 01.8
comp=Z,48nm,1.3s
FFD IAMs_20 IAMs_20 00 09 13.1
comp=Z,1µm,19.0s
I57A Carthage 52.24 4 P 23 44 37.9
baz=185
I59A Olmsteadville 52.25 6 P 23 44 38.2
baz=187
I59A S 23 52 00.7

baz=187
BGNE Belgrade 52.30 343 P 23 44 38.5
baz=157
BGNE S 23 52 01.1
baz=157
BGNE Belgrade 52.30 343 P **P** **23 44 39.7 +1.0**
BGNE IAmb IAmb 23 44 50.8
comp=Z,103nm,1.4s
S22A 4UR Ranch, Cre 52.31 333 P 23 44 40.0
baz=146
L34A Svendsen Farm, 52.33 345 IAmb IAmb 23 44 49.5
comp=Z,38nm,0.9s
HNH Hanover 52.34 7 IAmb IAmb 23 45 03.0
comp=Z,53nm,1.3s
I60A Shoreham 52.36 6 P 23 44 39.0
baz=188,SNR=7.3
I60A S 23 52 03.7
baz=188
NCB Newcomb 52.39 5 IAmb IAmb 23 44 50.8
comp=Z,60nm,1.8s
I45A Fountain 52.50 354 IAMs_20 IAMs_20 00 07 36.0
comp=Z,3µm,19.0s
I61A Oroboro, Fairl 52.57 7 P 23 44 40.8
baz=190,SNR=7.4
I61A S 23 52 06.6
baz=190
Q24A Divide 52.61 335 P 23 44 41.9
baz=148
Q24A S 23 52 10.1
baz=148
I62A Tamworth 52.62 8 P 23 44 42.0
baz=191
I62A S 23 52 07.8
baz=191
I62A Tamworth 52.63 8 IAmb IAmb 23 44 49.4
comp=Z,84nm,1.9s
I62A IAMs_20 IAMs_20 00 09 33.7
comp=Z,1µm,19.0s
MVCO Mesa Verde 52.64 331 IAmb IAmb 23 44 54.2
comp=Z,66nm,1.6s
MVCO IAMs_20 IAMs_20 00 05 58.0
comp=Z,2µm,18.0s
MVCO Mesa Verde 52.64 331 P 23 44 42.3
baz=143
I42A Draeger Farm, 52.67 352 IAMs_20 IAMs_20 00 08 50.7
comp=Z,2µm,21.0s
DELO Deloro Mine 52.72 2 P **P** **23 44 41.9 +0.2**
DELO IAmb IAmb 23 44 48.6
comp=Z,76nm,1.9s
H53A Bobcaygeon 52.75 1 P 23 44 46.6
baz=182
H53A S 23 52 02.7
baz=182
WUAZ Wupatki 52.76 328 IAmb IAmb 23 44 55.4
comp=Z,100nm,1.5s
WUAZ Wupatki 52.76 328 P 23 44 44.0
baz=140,SNR=6.5
H57A Richville 52.79 4 P 23 44 41.7
baz=186
H58A Gabriels 52.84 5 P 23 44 42.4
baz=187
GLA Glamis 52.89 323 P **P** **23 44 45.2 +1.9**
GLA pmax pmax
comp=Z,26nm,1.1s
GLA Glamis 52.89 323 P **P** **23 44 45.2 +1.9**
GLA IAMs_20 IAMs_20 00 04 58.9
comp=Z,2µm,18.0s
GLA Glamis 52.89 323 P 23 44 48.5
baz=135
VT1 Waterbury 52.90 7 IAmb IAmb 23 44 52.5
comp=Z,72nm,1.6s
VT1 IAMs_20 IAMs_20 00 08 55.8
comp=Z,1µm,20.0s
I63A Otisfield 52.90 9 P 23 44 42.8
baz=192
I63A S 23 52 12.1
baz=192
I63A Otisfield 52.91 9 P **P** **23 44 43.3 +0.2**
I63A IAmb IAmb 23 44 44.2
comp=Z,59nm,1.8s
LBNH Lisbon 52.91 7 P 23 44 43.4
baz=190
I64A Boothbay 52.92 9 P 23 44 43.1
baz=193
I40A Norwalk 52.94 350 IAMs_20 IAMs_20 00 11 21.6
comp=Z,2µm,19.0s
SADO Sadowa 52.94 1 P **P** **23 44 42.8 -0.5**
comp=Z,4.5nm,0.9s,baz=155,slow=11,SNR=3.6
SADO LR LR 00 06 34.7
comp=Z,2µm,21.5s,baz=193,slow=35
SADO Sadowa 52.94 1 IAmb IAmb 23 44 58.2
comp=Z,65nm,1.8s
UABX UABC, Campus M 52.97 322 IAMs_20 IAMs_20 00 06 12.0
comp=Z,1µm,21.0s
LONY Lake Ozonia 53.01 5 P 23 44 42.8
baz=186,SNR=5.8
LONY Lake Ozonia 53.01 5 IAMs_20 IAMs_20 00 08 41.4
comp=Z,1µm,19.0s
H43A Windswept, Lux 53.10 353 P **P** **23 44 44.2 -0.2**
H43A IAmb IAmb 23 44 57.1
comp=Z,39nm,0.9s
H43A IAMs_20 IAMs_20 00 08 36.8
comp=Z,2µm,19.0s
H59A Cadyville 53.11 6 P 23 44 43.6
baz=188
H60A Morristown 53.13 7 S 23 52 13.8
baz=189
OGNE Ogallala 53.13 339 P 23 44 45.4
baz=152
OGNE Ogallala 53.13 339 P **P** **23 44 46.1 +1.2**
OGNE IAmb IAmb 23 44 57.7
comp=Z,131nm,1.9s
H61A Lyndonville 53.20 7 P 23 44 45.0
baz=190
PLVO Plevna 53.27 3 P **P** **23 44 45.5 -0.2**
H62A Milan 53.34 8 P 23 44 47.2
baz=191
H62A S 23 52 18.8
baz=191
H62A Milan 53.34 8 P **P** **23 44 46.8 +0.5**
H62A IAMs_20 IAMs_20 00 10 03.5
comp=Z,2µm,19.0s
SWSC Sam W. Stewart 53.40 322 S 23 52 15.1
baz=134
PV01 Paradox Valley 53.42 332 IAmb IAmb 23 45 00.1
comp=Z,91nm,1.7s
G57A Newington 53.45 4 P 23 44 45.9
baz=186
G57A S 23 52 14.9
baz=186
CBX Cerro Bola 53.50 321 P **P** **23 44 50.0 +2.1**
ISCO Idaho Springs 53.51 336 P 23 44 48.5
baz=148
ISCO Idaho Springs 53.51 336 IAMs_20 IAMs_20 00 08 58.4
comp=Z,2µm,22.0s
PV15 Paradox Valley 53.55 332 IAmb IAmb 23 45 08.0
comp=Z,48nm,1.0s
PV15 IAMs_20 IAMs_20 00 06 46.7
comp=Z,2µm,19.0s
WVL Waterville 53.55 9 P **P** **23 44 47.6 -0.2**
WVL IAMs_20 IAMs_20 00 10 39.0
comp=Z,1µm,19.0s
PV02 Paradox Valley 53.56 332 IAmb IAmb 23 45 01.0
comp=Z,88nm,1.5s
PV02 IAMs_20 IAMs_20 00 10 11.0
comp=Z,2µm,18.0s
PV13 Radium Mtn., P 53.56 332 IAmb IAmb 23 45 00.8
comp=Z,101nm,1.6s
PV13 IAMs_20 IAMs_20 00 06 30.1
comp=Z,2µm,19.0s
SMCO Snowmass 53.56 334 IAmb IAmb 23 45 06.0
comp=Z,81nm,1.9s
SMCO IAMs_20 IAMs_20 00 06 46.9
comp=Z,1µm,21.0s
I37A Lemond, Waseca 53.57 348 IAmb IAmb 23 44 59.7
comp=Z,70nm,1.4s
G58A Ormstown 53.58 5 P 23 44 47.9
baz=187
H63A New Sharon 53.58 9 P 23 44 48.8
baz=192
H63A S 23 52 22.4
baz=192
G54A Lake Saint Pet 53.58 2 P 23 44 53.0
baz=182
K31A O'Neill 53.59 343 P **P** **23 44 48.2 -0.1**
PV05 Paradox Valley 53.62 332 IAmb IAmb 23 45 01.1
comp=Z,101nm,1.6s
PV03 Paradox Valley 53.65 332 IAmb IAmb 23 45 01.4
comp=Z,88nm,1.6s
PV03 IAMs_20 IAMs_20 00 06 30.4
comp=Z,2µm,19.0s
PV18 Skein Mesa, Pa 53.67 332 IAmb IAmb 23 45 01.5
comp=Z,74nm,1.5s
PV18 IAMs_20 IAMs_20 00 06 33.0
comp=Z,2µm,19.0s
PV12 Saucer Basin, 53.68 332 IAmb IAmb 23 45 29.0
comp=Z,46nm,1.1s
BC3 Big Chuckawall 53.69 323 P 23 44 50.4
baz=134
H64A Troy 53.69 10 P 23 44 49.4
baz=193
G60A Masonville 53.70 7 P 23 44 49.0
baz=189,SNR=5.6
PV16 Nyswonger Mesa 53.73 332 IAmb IAmb 23 45 02.0
comp=Z,96nm,1.7s
PV16 IAMs_20 IAMs_20 00 06 33.5
comp=Z,2µm,20.0s
BAR Barrett 53.76 321 IAMs_20 IAMs_20 00 05 07.8
comp=Z,2µm,18.0s
PV19 Morning Glory 53.76 332 IAMs_20 IAMs_20 00 06 34.3
comp=Z,3µm,20.0s
PV20 West Nyswonger 53.77 332 IAmb IAmb 23 45 02.2
comp=Z,64nm,1.6s
PV22 Blue Mesa, Par 53.85 332 IAmb IAmb 23 45 02.0
comp=Z,90nm,2.0s
PV22 IAMs_20 IAMs_20 00 06 52.6
comp=Z,2µm,19.0s
IRM Iron Mountain 53.86 324 P 23 44 52.8
baz=135
U15A North Rim 53.94 328 IAmb IAmb 23 45 03.4
comp=Z,58nm,1.8s
G61A St-Isidore-de- 53.98 7 P 23 44 51.6
baz=190,SNR=6.7
ECSD EROS Data Cent 54.04 345 P 23 44 49.8
baz=159,SNR=11
ECSD EROS Data Cent 54.04 345 IAmb IAmb 23 45 02.2
comp=Z,72nm,1.6s
G62A West of Eustis 54.05 8 P 23 44 52.0
baz=191,SNR=9.8
G62A West of Eustis 54.06 8 IAmb IAmb 23 45 01.6
comp=Z,83nm,1.3s
G62A IAMs_20 IAMs_20 00 08 34.5
comp=Z,1µm,21.0s
G63A Kingsbury 54.09 9 P 23 44 52.3
baz=192
109C Camp Elliot, M 54.16 321 IAMs_20 IAMs_20 00 04 15.7
comp=Z,2µm,20.0s
H66A Whiting 54.17 11 P 23 44 52.2
baz=195
BELC Belle Mtn. Jos 54.25 323 P 23 44 55.6
baz=134
PFO Pinyon Flats O 54.26 322 P **P** **23 44 54.8 +1.4**
comp=Z,0.9nm,0.4s,baz=263,slow=4.1,SNR=1.7
PFO Pinyon Flats O 54.26 322 *ce*P **P** **23 44 54.2 +0.8**
PFO pmax pmax
comp=Z,23nm,1.1s
PFO Pinyon Flats O 54.26 322 IAMs_20 IAMs_20 00 03 39.1
comp=Z,2µm,22.0s
PKME Peaks-Kenny Pk 54.29 9 P 23 44 53.9
baz=193
F59A Saint Guilaume 54.40 6 P 23 44 53.8
baz=189
F42A Maple Grove Fa 54.41 353 IAMs_20 IAMs_20 00 09 26.6
comp=Z,2µm,20.0s
G65A Princeton 54.52 11 P 23 44 54.2
baz=195
G65A Princeton 54.52 11 IAmb IAmb 23 45 24.9
comp=Z,39nm,1.2s
G65A IAMs_20 IAMs_20 00 08 12.8
comp=Z,2µm,22.0s
RKT Rikitea 54.58 248 *e*S **S** **23 52 34.3 -1.4**
comp=Z,3µm,26.8s
RKT *e*LQ LQ 23 58 41.9
RKT comp=Z,1µm,28.5s *e*LR LR 00 00 50.2
comp=Z,8µm,25.8s
RKT Rikitea 54.58 248 *e*T T 00 43 21.3
comp=Z,21nm,0.2s
GGN Saint George 54.58 11 IAmb IAmb 23 45 25.5
comp=Z,42nm,1.4s
GMRC Granite Mounta 54.60 324 P 23 45 03.0
baz=135
F60A Warwick 54.61 7 P 23 44 54.8
baz=190
SPMN Marine on St. 54.61 349 P 23 44 54.6
baz=164
SPMN Marine on St. 54.61 349 IAmb IAmb 23 45 03.9
comp=Z,112nm,1.8s
SPMN IAMs_20 IAMs_20 00 12 42.1
comp=Z,1µm,20.0s
KNB Kanab 54.66 328 IAmb IAmb 23 46 18.0
comp=Z,58nm,1.4s
MURC Murrieta 54.70 322 P 23 45 02.9
baz=133
PKCU Pink Cliffs 54.72 329 P **P** **23 44 58.6 +1.7**
PKCU IAmb IAmb 23 45 17.1
comp=Z,72nm,1.2s
PHWY Pilot Hill 54.72 337 P **P** **23 44 57.0 +0.2**
PHWY IAmb IAmb 23 45 08.9
comp=Z,39nm,1.5s
E55A Montcerf-Lytto 54.73 3 P 23 44 54.5
baz=185
HAL Halifax 54.84 14 P **P** **23 44 57.2 0.0**
HAL Halifax 54.84 14 P **P** **23 44 57.1 0.0**
HAL IAmb IAmb 23 45 10.0
comp=Z,71nm,1.6s
E58A La Victoria 54.86 6 P 23 44 56.9
baz=188
COWI Conover 54.87 352 P **P** **23 44 58.3 +0.9**
COWI IAMs_20 IAMs_20 00 09 32.9
comp=Z,2µm,19.0s
LCMT Little Creek M 54.88 328 IAmb IAmb 23 45 10.9
comp=Z,48nm,1.4s
E56A St. Veronique 54.88 4 P 23 44 55.3
baz=186
E43A Lone Tree Farm 54.89 354 IAMs_20 IAMs_20 00 09 09.3
comp=Z,3µm,20.0s
O20A White River Ci 54.90 334 P 23 44 58.9
baz=145,SNR=6.1
O20A White River Ci 54.90 334 IAmb IAmb 23 45 17.4
comp=Z,35nm,1.2s
O20A IAMs_20 IAMs_20 00 07 27.5
comp=Z,3µm,19.0s
F64A Sherman 55.02 10 P 23 44 58.6
baz=194
F64A Sherman 55.03 10 IAMs_20 IAMs_20 00 09 04.1
comp=Z,1µm,20.0s
HEC Hector Ludlow 55.03 324 P 23 45 05.6
baz=134
E59A St. Maurice 55.05 6 P 23 44 59.1
baz=189
E60A Ste Agathe de 55.06 7 P 23 44 57.6
baz=190
MTPU Mount Pierson 55.11 329 P **P** **23 45 01.8 +2.0**
SZCU Shurtz Canyon 55.23 328 P **P** **23 45 02.7 +2.2**
SZCU IAmb IAmb 23 45 13.6
comp=Z,66nm,1.5s
E61A Lac Etchemin 55.25 8 P 23 45 00.6
baz=191
SUSD Miller 55.32 344 P **P** **23 45 01.0 +0.2**
SUSD IAmb IAmb 23 45 11.6
comp=Z,76nm,1.2s
D55A Sainte-Anne-du 55.33 4 P 23 44 58.7
baz=185
CCUT Cedar City 55.34 328 P **P** **23 45 02.9 +1.5**
F36A Milaca 55.37 349 IAmb IAmb 23 45 10.5
comp=Z,42nm,1.3s
D56A ZEC Mazanza, M 55.41 4 P 23 45 00.1
baz=186
SHPR Sheep Range 55.55 326 IAmb IAmb 23 45 15.6
comp=Z,56nm,1.3s
E63A Oxbow 55.56 10 IAMs_20 IAMs_20 00 09 20.1
comp=Z,1µm,20.0s
D58A Chemin du LacG 55.62 6 P 23 45 01.8
baz=188,SNR=6.7
D59A Saint-Raymond 55.64 7 P 23 45 02.7
baz=190
D60A Saint Jean D'O 55.66 8 P 23 45 03.6
baz=191
LMN Caledonia Moun 55.71 13 IAmb IAmb 23 45 15.9
comp=Z,50nm,1.3s
E38A The Farm, Brul 55.73 350 IAmb IAmb 23 45 10.7
comp=Z,85nm,1.9s
E38A IAMs_20 IAMs_20 00 10 40.6
comp=Z,1µm,21.0s
D41A Chassel 55.74 353 IAmb IAmb 23 45 33.5
comp=Z,42nm,1.0s
D41A IAMs_20 IAMs_20 00 10 16.9
comp=Z,2µm,20.0s
SHOC Shoshone, Teco 55.75 324 P 23 45 09.0
baz=135
DECC Green Verdugo 55.84 322 P 23 45 10.7
baz=132
PQI Presque Isle 55.87 10 IAmb IAmb 23 46 04.5
comp=Z,76nm,1.8s
PQI IAMs_20 IAMs_20 00 09 38.3
comp=Z,1µm,20.0s
F33A 5 Mile Ranch, 55.94 346 IAmb IAmb 23 45 16.8
comp=Z,88nm,1.6s
D61A St Aubert, Com 56.05 8 P 23 45 06.3
baz=192
EDW2 Edwards Air Fo 56.05 322 P 23 45 13.5
baz=133
PRN Pahroc Range 56.14 327 IAMs_20 IAMs_20 00 07 09.7
comp=Z,2µm,21.0s
D63A Stockholm 56.20 10 P 23 45 07.8
baz=194
LRMC Laurel Mtn Rad 56.28 323 P 23 45 15.2
baz=133
K22A Casper 56.28 337 P 23 45 08.4
baz=148,SNR=6.8
MPU Maple Canyon 56.36 331 IAmb IAmb 23 45 21.2
comp=Z,53nm,1.7s
TPNV Topopah Spring 56.47 325 P 23 45 11.3
baz=135
TPNV Topopah Spring 56.48 325 IAmb IAmb 23 45 21.7
comp=Z,124nm,1.9s
TPNV IAMs_20 IAMs_20 00 07 58.9
comp=Z,2µm,18.0s
FURC Furnace Creek, 56.48 325 P 23 45 12.3
baz=134
NLU North Lily Min 56.53 331 IAmb IAmb 23 45 22.6
comp=Z,49nm,1.8s
RSSD Black Hills 56.63 339 P 23 45 10.7
baz=151
RSSD Black Hills 56.63 339 P **P** **23 45 11.0 +0.6**
RSSD pmax pmax
comp=Z,31nm,1.3s
RSSD MLR MLR
comp=Z,1µm,20.0s
RSSD Black Hills 56.63 339 P **P** **23 45 11.0 +0.6**
ARVC Arvin 56.73 322 P 23 45 18.6
baz=132
BATG Bathurst New B 56.81 11 IAmb IAmb 23 45 12.3
comp=Z,79nm,1.5s
ISA Isabella, Lake 56.87 323 pP **pP** **23 45 19.7 +4.5**
ISA IAMs_20 IAMs_20 00 07 25.3
comp=Z,1µm,21.0s
ISA Isabella, Lake 56.87 323 P 23 45 17.1
baz=133
EYMN Ely 57.02 351 P 23 45 11.7
baz=166
EYMN Ely 57.02 351 IAMs_20 IAMs_20 00 11 36.8
comp=Z,1µm,20.0s
DUG Dugway, Tooele 57.07 330 P 23 45 15.0
baz=140,SNR=8.5
DUG Dugway, Tooele 57.07 330 IAmb IAmb 23 45 26.6
comp=Z,88nm,1.6s
DUG IAMs_20 IAMs_20 00 08 33.3
comp=Z,2µm,19.0s
R11A Troy Canyon, C 57.12 327 P 23 45 16.0
baz=137
R11A Troy Canyon, C 57.12 327 IAMs_20 IAMs_20 00 07 52.5
comp=Z,2µm,21.0s
CWC Cottonwood Cre 57.17 324 P 23 45 18.0
baz=133
D32A Dogwood Acres, 57.33 346 IAmb IAmb 23 45 32.0
comp=Z,37nm,1.1s
D32A IAMs_20 IAMs_20 00 13 11.2
comp=Z,1µm,20.0s
VES Vestal, Richgr 57.36 323 P 23 45 16.5
baz=132
SMMC Simmler 57.56 321 P 23 45 22.1
baz=131
HWUT Hardware Ranch 57.58 332 IAmb IAmb 23 45 35.1
comp=Z,26nm,0.8s
HWUT IAMs_20 IAMs_20 00 08 34.5
comp=Z,2µm,20.0s
BW06 Boulder Array 57.62 335 P 23 45 16.6
baz=145
PDAR Pinedale Array 57.62 335 P **P** **23 45 17.1 -0.4**
comp=Z,0.6nm,0.4s,baz=133,slow=10,SNR=10
PDAR LR LR 00 09 24.4
comp=Z,1µm,21.6s,baz=158,slow=35
PDAR Pinedale Array 57.62 335 P **P** **23 45 16.9 -0.6**
BW06 Boulder Array 57.62 335 IAMs_20 IAMs_20 00 11 21.4
comp=Z,2µm,19.0s
PAGB Antelope Grade 57.99 322 IAMs_20 IAMs_20 00 06 11.0
comp=Z,1µm,19.0s
AGMN Agassiz Nation 58.17 348 P 23 45 20.2
baz=161
AGMN Agassiz Nation 58.17 348 IAmb IAmb 23 45 31.9
comp=Z,24nm,0.8s
MDPB Devils Postpil 58.57 324 IAMs_20 IAMs_20 00 07 15.1
comp=Z,2µm,21.0s
NV11 Mina Array Sit 58.59 325 IAMs_20 IAMs_20 00 09 24.6
comp=Z,1µm,20.0s
MDND Maddock 58.64 345 P 23 45 24.1
baz=157,SNR=6.1
PMPB Monarch Peak 58.65 322 IAMs_20 IAMs_20 00 06 10.4
comp=Z,1µm,20.0s
REDW Red Top Meadow 58.66 334 IAmb IAmb 23 46 12.5
comp=Z,46nm,1.3s
REDW IAMs_20 IAMs_20 00 10 01.9
comp=Z,2µm,20.0s
LHV Little Huntoon 58.66 325 IAMs_20 IAMs_20 00 09 37.5
comp=Z,1µm,20.0s
NVAR Mina Array Bea 58.67 325 P **P** **23 45 26.1 +1.1**
comp=Z,3.2nm,1.0s,baz=158,slow=6.7,SNR=9.1
NVAR LR LR 00 09 46.4
comp=Z,1µm,19.6s,baz=130,slow=35
NVAR Mina Array Bea 58.67 325 P **P** **23 45 25.6 +0.7**
ELK Elko 58.70 329 P **P** **23 45 26.1 +1.1**
comp=Z,3.8nm,0.9s,baz=132,slow=4.0,SNR=13
ELK Elko 58.70 329 IAmb IAmb 23 45 37.7
comp=Z,63nm,1.6s
SNOW Snow King Moun 58.70 334 IAMs_20 IAMs_20 00 10 15.9
comp=Z,2µm,19.0s
LOHW Long Hollow 58.75 334 IAMs_20 IAMs_20 00 10 28.4
comp=Z,2µm,18.0s
MOOW Moose Ponds 58.92 334 IAMs_20 IAMs_20 00 10 32.9
comp=Z,2µm,18.0s
RYN Ryan 58.93 325 IAMs_20 IAMs_20 00 09 45.7
comp=Z,1µm,20.0s
KVN Kaiserville 58.99 326 IAMs_20 IAMs_20 00 11 48.2
comp=Z,1µm,18.0s
FLWY Flagg Ranch 59.17 335 IAmb IAmb 23 45 47.6
comp=Z,57nm,1.4s
FLWY IAMs_20 IAMs_20 00 09 48.5
comp=Z,1µm,21.0s
WAKR Walker 59.37 325 IAMs_20 IAMs_20 00 07 55.2
comp=Z,2µm,19.0s
YPP Pitchstone Pla 59.37 335 IAmb IAmb 23 45 51.7
comp=Z,33nm,1.6s
H17A Grant Village 59.37 335 P 23 45 32.3
baz=144
H17A Grant Village 59.38 335 IAmb IAmb 23 45 48.2
comp=Z,97nm,1.9s
H17A IAMs_20 IAMs_20 00 12 02.8
comp=Z,2µm,18.0s
SAO San Andreas Ge 59.40 322 IAMs_20 IAMs_20 00 06 01.3
comp=Z,1µm,20.0s
TAOE Nuku Hiva Isla 59.40 265 *e*S **S** **23 53 37.4 -2.5**
comp=Z,4µm,23.9s
TAOE *e*LR LR 00 03 03.9
comp=Z,6µm,24.5s,baz=93
TAOE Nuku Hiva Isla 59.40 265 *e*T T 00 49 24.2
comp=Z,34nm,0.3s
TAOE Nuku Hiva Isla 59.40 265 P **P** **23 45 31.4 +1.1**
RLMT Red Lodge 59.44 336 P 23 45 29.9
baz=146
RLMT Red Lodge 59.44 336 IAmb IAmb 23 46 27.9
comp=Z,53nm,1.9s
RLMT IAMs_20 IAMs_20 00 10 31.3
comp=Z,2µm,21.0s
LKWY Lake 59.44 335 IAMs_20 IAMs_20 00 11 02.5
comp=Z,2µm,19.0s
YMP Mirror Lake Pl 59.48 335 P **P** **23 45 30.7 +0.2**
YERR Yerington 59.59 325 IAmb IAmb 23 45 44.0
comp=Z,29nm,1.1s
YERR IAMs_20 IAMs_20 00 07 50.0
comp=Z,2µm,21.0s
CMB Columbia Colle 59.60 324 IAMs_20 IAMs_20 00 10 02.5
comp=Z,1µm,18.0s

YUF **Upper Falls** 59.61 335 P **P** 23 45 31.6 +0.3
LAO **LASA Array** 59.62 339 P **P** 23 45 30.3 -0.8
LAO IAmb IAmb 23 45 48.9
comp=Z,65nm,1.6s
LAO IAMs_20 IAMs_20 00 11 32.0
comp=Z,1μm,22.0s
PNTR **Pine Nut** 59.86 325 P 23 45 38.4 +5.3
PNTR IAMs_20 IAMs_20 00 08 34.2
comp=Z,1μm,20.0s
ULM **Lac du Bonnet** 60.03 348 P **P** **23 45 32.6 -1.1**
comp=Z,7.0nm,0.7s,baz=166,slow=5.8,SNR=16
ULM **Lac du Bonnet** 60.03 348 *i* P **P** **23 45 32.3 -1.4**
ULM **Lac du Bonnet** 60.03 348 IAmb IAmb 23 45 48.1
comp=Z,42nm,1.2s
VCNR **Virginia City** 60.03 325 IAmb IAmb 23 45 47.1
comp=Z,35nm,1.2s
VCNR IAMs_20 IAMs_20 00 08 02.7
comp=Z,1μm,20.0s
RUBR **Rubicon Trail** 60.15 325 IAMs_20 IAMs_20 00 10 17.0
comp=Z,2μm,20.0s
PAHR **Pah Rah Range** 60.16 326 IAmb IAmb 23 45 48.1
comp=Z,58nm,1.2s
PAHR IAMs_20 IAMs_20 00 10 46.3
comp=Z,1μm,20.0s
HLID **Hailey** 60.42 332 IAmb IAmb 23 45 54.5
comp=Z,85nm,1.9s
HLID IAMs_20 IAMs_20 00 13 59.8
comp=Z,1μm,19.0s
HLID **Hailey** 60.42 332 P 23 45 37.6
baz=140,SNR=8.5
DGMT **Dagmar** 60.51 342 P 23 45 37.1
baz=152
BOZ **Bozeman (W)** 60.79 335 IAmb IAmb 23 45 51.4
comp=Z,58nm,1.8s
BOZ IAMs_20 IAMs_20 00 11 29.1
comp=Z,2μm,19.0s
BOZ **Bozeman (W)** 60.79 335 P 23 45 39.5
baz=143,SNR=8.4
BEKR **Beckworth** 60.82 325 IAmb IAmb 23 45 52.4
comp=Z,34nm,1.1s
BEKR IAMs_20 IAMs_20 00 08 56.6
comp=Z,1μm,20.0s
MFID **Camas Ranch** 60.98 331 IAmb IAmb 23 46 01.0
comp=Z,34nm,1.1s
MFID IAMs_20 IAMs_20 00 11 05.7
comp=Z,2μm,19.0s
DLMT **Dillon** 61.01 334 IAmb IAmb 23 45 60.0
comp=Z,40nm,1.6s
DLMT **PcP** **23 46 24.2 +0.2**
DLMT IAMs_20 IAMs_20 00 11 09.1
comp=Z,1μm,20.0s
ORV **Oroville** 61.26 324 IAMs_20 IAMs_20 00 08 31.4
comp=Z,1μm,20.0s
GDXM **Geysers** 61.53 323 IAMs_20 IAMs_20 00 07 30.7
comp=Z,1μm,20.0s
WVOR **Wild Horse Val** 61.67 328 IAmb IAmb 23 45 57.6
comp=Z,47nm,1.5s
WVOR IAMs_20 IAMs_20 00 10 29.2
comp=Z,2μm,21.0s
HOPS **Hopland Field** 61.82 323 IAMs_20 IAMs_20 00 07 26.2
comp=Z,1μm,20.0s
O03E **Paynes Creek** 61.93 325 P 23 45 47.6
baz=132
EGMT **Eagleton** 62.03 338 P 23 45 47.0
baz=146,SNR=5.3
EGMT **Eagleton** 62.03 338 IAmb IAmb 23 46 06.2
comp=Z,41nm,1.3s
EGMT IAMs_20 IAMs_20 00 12 30.8
comp=Z,1μm,19.0s
MOD **Modoc Plateau** 62.18 327 IAmb IAmb 23 46 01.3
comp=Z,56nm,1.2s
MOD IAMs_20 IAMs_20 00 10 08.6
comp=Z,1μm,22.0s
PLID **Pearl Lake** 62.32 332 IAMs_20 IAMs_20 00 12 07.0
comp=Z,2μm,20.0s
O02D **Mt. Diablo Mer** 62.42 324 P 23 45 49.6
baz=131
WDC **Whiskeytown Da** 62.54 325 pP 23 45 58.1 +4.0
KCPM **Cahto Peak** 62.57 323 IAMs_20 IAMs_20 00 07 60.0
comp=Z,1μm,20.0s
MSO **Missoula** 62.74 334 IAmb IAmb 23 46 13.7
comp=Z,19nm,0.9s
MSO IAMs_20 IAMs_20 00 12 22.9
comp=Z,2μm,21.0s
MSO **Missoula** 62.74 334 P 23 45 52.9
baz=141,SNR=7.4
M04C **Macdoel** 62.94 326 P 23 45 54.6
baz=132
K05A **Summer Lake** 63.07 327 IAMs_20 IAMs_20 00 10 48.9
comp=Z,2μm,22.0s
M02C **Callahan** 63.25 325 P 23 45 54.8
baz=131
YBH **Yreka Blue Hor** 63.39 325 LR LR 00 12 33.2
comp=Z,1μm,20.2s,baz=138,slow=35
YBH **Yreka Blue Hor** 63.39 325 P **P** **23 45 56.3 -0.4**
YBH pmax pmax
comp=Z,16nm,1.1s
YBH **Yreka Blue Hor** 63.39 325 P **P** **23 45 56.3 -0.4**
YBH IAMs_20 IAMs_20 00 12 40.7
comp=Z,1μm,20.0s
KHMM **Horse Mountain** 63.42 324 pP pP 23 46 04.8 +4.6
K04D **Chiloquin, OR** 63.46 327 P 23 45 58.2
baz=132
L04D **Klamath Falls** 63.49 326 P 23 45 59.2
baz=132
F10A **Beach Ranch, E** 63.55 332 IAMs_20 IAMs_20 00 12 55.6
comp=Z,1μm,20.0s
JTMT **Jette** 63.60 335 IAmb IAmb 23 46 09.6
comp=Z,56nm,1.9s
JTMT IAMs_20 IAMs_20 00 13 11.7
comp=Z,2μm,20.0s
J05D **Fort Rock, OR** 63.63 328 P 23 45 59.4
baz=133
PINE **Pine Mountain** 63.83 328 P **P** **23 46 01.1 +1.3**
PINE IAmb IAmb 23 46 31.6
comp=Z,27nm,1.1s
PINE IAMs_20 IAMs_20 00 12 00.0
comp=Z,2μm,22.0s
G08A **Pilot Rock** 63.88 330 IAmb IAmb 23 46 20.2
comp=Z,34nm,1.4s
KRMB **Red Mountain** 63.94 325 IAMs_20 IAMs_20 00 09 43.1
comp=Z,1μm,21.0s
J04D **Umpqua Nationa** 64.07 327 P 23 46 03.4
baz=132
HUMO **Hull Mountain** 64.11 326 IAMs_20 IAMs_20 00 11 26.6
comp=Z,1μm,20.0s
L02E **Cave Junction** 64.17 325 P 23 46 07.1
baz=131
E09A **Wood Farm, Sta** 64.38 332 IAMs_20 IAMs_20 00 13 28.5
comp=Z,2μm,18.0s
I05D **Terrebonne, OR** 64.41 328 P 23 46 04.8
baz=133
K02D **Willamette Mer** 64.56 326 P 23 46 05.8
baz=131
I04A **Tendick Farm,** 64.60 327 P 23 46 10.5
baz=132
E08A **Dider Farm, El** 64.80 331 IAMs_20 IAMs_20 00 13 18.5
comp=Z,2μm,19.0s
G05D **Wamic, OR** 65.02 329 P 23 46 18.5
baz=134
I03D **Drain, OR** 65.05 327 P 23 46 15.3
baz=131
H04A **Detroit Lake** 65.09 328 IAMs_20 IAMs_20 00 11 57.4
comp=Z,2μm,21.0s
D08A **Wollman Farm,** 65.14 332 IAMs_20 IAMs_20 00 13 50.7
comp=Z,2μm,18.0s
NEW **Newport** 65.22 334 P 23 46 09.0
baz=139
NEW **Newport** 65.22 334 LR LR 00 13 47.3
comp=Z,1μm,21.8s,baz=142,slow=35
NEW **Newport** 65.22 334 IAmb IAmb 23 46 27.7
comp=Z,31nm,1.4s
NEW **Newport** 65.22 334 IAMs_20 IAMs_20 00 13 35.6
comp=Z,1μm,21.0s
E07A **Sunnyside** 65.23 331 IAmb IAmb 23 46 29.2
comp=Z,24nm,1.1s
C09A **Chrisman Ranch** 65.39 333 IAMs_20 IAMs_20 00 13 56.1
comp=Z,1μm,20.0s
F05D **White Salmon** 65.54 329 P 23 46 18.9
baz=134
FFC **Flin Flon** 65.55 346 P **P** **23 46 10.1 -0.3**
FFC pmax pmax
comp=Z,45nm,1.9s
FFC MLR MLR
comp=Z,1μm,20.0s
FFC **Flin Flon** 65.55 346 P **P** **23 46 10.1 -0.3**
FFC IAmb IAmb 23 46 26.9
comp=Z,46nm,1.9s
FFC **Flin Flon** 65.55 346 IAMs_20 IAMs_20 00 18 26.5
comp=Z,1μm,20.0s
COR **Corvallis** 65.61 327 IAMs_20 IAMs_20 00 13 19.3
comp=Z,2μm,21.0s
B08A **Colville Reser** 66.28 333 IAmb IAmb 23 46 32.6
comp=Z,33nm,1.6s
B08A IAMs_20 IAMs_20 00 14 20.8
comp=Z,2μm,19.0s
E03A **Lebam** 67.06 329 IAMs_20 IAMs_20 00 15 33.5
comp=Z,1μm,19.0s
B06A **Marblemount** 67.40 332 IAMs_20 IAMs_20 00 13 51.3
comp=Z,2μm,21.0s
NLWA **Neilton Lookou** 67.78 329 **PcP** **23 46 56.2 +4.6**
TBI **Tubuai** 67.89 248 *e*S **S** **23 55 22.9 -2.2**
comp=Z,3μm,31.5s
TBI **Tubuai** 67.89 248 *e*LR LR 00 07 01.5
comp=Z,5μm,26.0s,baz=86
TBI **Tubuai** 67.89 248 *e*T T 00 59 58.7
comp=Z,22nm,0.3s
FCC **Fort Churchill** 67.90 352 IAmb IAmb 23 47 04.0
comp=Z,27nm,1.1s
FCC IAMs_20 IAMs_20 00 17 37.5
comp=Z,2μm,19.0s
A05A **Maple Falls** 68.02 332 IAMs_20 IAMs_20 00 15 12.7
comp=Z,2μm,19.0s
PPT **Papeete** 68.10 254 LR LR 00 08 30.6
comp=Z,1μm,18.3s,baz=76,slow=29
PPT2 **Papeete2** 68.10 254 *e*S **S** **23 55 25.5 -2.4**
comp=Z,3μm,27.0s
PPT2 **Papeete2** 68.10 254 *e*LR LR 00 07 06.1
comp=Z,7μm,26.2s,baz=92
MACI **Morro de la Ar** 71.27 56 P **P** **23 46 48.2 +1.1**
PMOZ **Porto Moniz, M** 72.40 52 *e*PP PP 23 49 34.9 0.0
PMOZ *e*S **S** **23 56 18.5 +0.7**
PMOZ **Porto Moniz, M** 72.40 52 *e*LR LR 00 11 52.3
comp=Z,2μm,20.0s
FRB **Frobisher Bay** 72.47 5 P **P** **23 46 52.9 -0.4**
comp=Z,4.7nm,0.6s,baz=191,slow=6.1,SNR=7.1
PMPS **Porto Santo,** 73.16 52 *e*P **P** **23 46 58.1 0.0**
comp=Z,201nm,1.6s
PMPST **Porto Santo, M** 73.17 52 *e*P **P** **23 46 58.0 -0.1**
comp=Z,155nm,1.6s
NRS **Narsarsuaq** 74.46 17 P **P** **23 47 04.3 -0.7**
NRS pmax pmax
comp=Z,132nm,1.6s
NRS MLR MLR
comp=Z,1μm,19.0s
NRS **Narsarsuaq** 74.46 17 P **P** **23 47 04.3 -0.7**
NRS IAMs_20 IAMs_20 00 21 00.8
comp=Z,1μm,19.0s
YKA **Yellowknife Ar** 75.55 344 P **P** **23 47 10.4 -1.0**
comp=Z,2.4nm,0.7s,baz=140,slow=6.0,SNR=50
YKA LR LR 00 22 56.6
comp=Z,1μm,18.1s,baz=0.0,slow=38
VNA3 **Neumayer Olymp** 75.81 162 P **P** **23 47 13.5 +0.6**
VNA1 **Neumayer--Stat** 76.10 161 P **P** **23 47 15.4 +1.0**
DBIC **Dimbokro** 76.40 81 P **P** **23 47 17.6 +0.3**
comp=Z,16nm,0.8s,baz=244,slow=6.2,SNR=17
DBIC LR LR 00 18 35.3
comp=Z,6μm,21.6s,baz=245,slow=34
VNA2 **Neumayer--Watz** 76.44 161 P **P** **23 47 16.9 +0.4**
baz=299,slow=6.4
DLBC **Dease Lake** 77.83 336 IAmb IAmb 23 47 36.1
comp=Z,33nm,1.1s
SNAA **Sanae** 78.03 162 P **P** **23 47 25.8 +0.4**
SNAA **Sanae** 78.03 162 *ce*P **P** **23 47 25.8 +0.4**
SNAA pmax pmax
comp=Z,34nm,1.1s
SNAA **Sanae** 78.03 162 P **P** **23 47 26.0 +0.5**
SNAA IAmb IAmb 23 47 39.2
comp=Z,46nm,1.0s
SFJD **Kangerlussuaq** 78.16 11 P **P** **23 47 24.2 -1.7**
comp=Z,3.1nm,0.8s,baz=214,slow=7.3,SNR=5.2
SFJD **Kangerlussuaq** 78.16 11 P **P** **23 47 24.2 -1.7**
SFJD pmax pmax
comp=Z,49nm,1.6s
SFJD MLR MLR
comp=Z,1μm,22.0s
SFJD **Kangerlussuaq** 78.16 11 IAMs_20 IAMs_20 00 21 34.6
comp=Z,1μm,22.0s
SFJD **Kangerlussuaq** 78.16 11 IAmb IAmb 23 47 25.6
comp=Z,49nm,1.6s
DY2G **Dye2** 78.62 13 ⇑*i*P **P** **23 47 28.0 -0.9**
KOWA **Kowa** 78.70 73 P **P** **23 47 30.4 +0.3**
ANGG **Ammassalik, Gr** 80.14 16 IAMs_20 IAMs_20 00 20 28.8
comp=Z,1μm,22.0s
PFVI **Vila Bisbo** 80.34 50 *e*PP PP 23 50 50.0 +8.4
PFVI *e*SKS S 23 57 54.9 +10
PMAFR **Mafra** 80.58 48 *e*SKS S 23 57 57.4 +10
LIS **Lisbon** 80.60 49 *e*P **P** **23 47 40.1 +0.3**
LIS IAMs_20 IAMs_20 00 21 04.1
comp=N,4μm,24.9s
LIS **Lisbon** 80.60 49 *e*P **P** **23 47 40.2 +0.3**
PBDV **Barranco-do-Ve** 81.06 50 *e*SKS S 23 58 01.2 +9.0
PCVE **Castro Verde** 81.09 50 *e*P **P** **23 47 44.7 +2.1**
PCVE **Castro Verde** 81.09 50 *e*SKS S 23 58 01.3 +8.8
PSBE **So Bento** 81.11 48 *e*P **P** **23 47 41.5 -1.2**
PSBE **So Bento** 81.11 48 *e*SKS S 23 58 08.9 +16
PVAQ **Vaqueiros** 81.27 50 *e*P **P** **23 47 43.5 0.0**
comp=N,72nm,2.1s
PVAQ **Vaqueiros** 81.27 50 *e*SKS **S** **23 57 59.4 +5.1**
PVAQ **Vaqueiros** 81.27 50 *e*LQ LQ 00 10 14.4
PVAQ *e*LR LR 00 15 27.4
comp=N,3μm,18.0s
EVO **Evora** 81.39 49 *e*P **P** **23 47 44.5 +0.4**
comp=N,39nm,1.5s
PMTG **Montargil** 81.39 48 *e*P **P** **23 47 43.8 -0.3**
PMTG **Montargil** 81.39 48 *e*SKS **S** **23 58 02.1 +6.6**
PCAS **Casmilo, Conde** 81.50 47 *e*P **P** **23 47 44.3 -0.4**
PCAS **Casmilo, Conde** 81.50 47 *e*SKS **S** **23 58 03.6 +6.9**
COI **Coimbra** 81.61 47 *e*P **P** **23 47 46.5 +1.2**
comp=N,76nm,1.4s
COI **Coimbra** 81.61 47 *e*SKS **S** **23 58 04.5 +6.8**
COI **Coimbra** 81.61 47 IAMs_20 IAMs_20 00 19 50.0
comp=Z,2μm,22.0s
QSPA **South Pole Qui** 81.70 180 P **P** **23 47 46.6 +1.2**
PESTR **Estremoz** 81.80 49 *e*P **P** **23 47 45.9 -0.5**
comp=Z,45nm,1.7s
PBAR **Barrancos** 82.01 50 *e*P **P** **23 47 47.4 0.0**
PBAR **Barrancos** 82.01 50 *e*SKS S 23 58 12.5 +11
PMRV **Marv??o** 82.12 48 *e*P **P** **23 47 46.7 -1.3**
PMRV **Marv??o** 82.12 48 *e*SKS **S** **23 58 08.5 +5.4**
PMRV **Marv??o** 82.12 48 *e*LR LR 00 15 51.9
comp=Z,2μm,20.0s
PVIS **Viseu** 82.15 47 *e*P **P** **23 47 47.8 -0.4**
comp=Z,36nm,1.5s
PVIS **Viseu** 82.15 47 *e*P **P** **23 47 48.7 +0.5**
comp=Z,36nm,1.5s
PVIS A A 23 48 10.0
comp=Z,38nm,1.3s
PCBR **Castelo Branco** 82.18 48 *e*P **P** **23 47 49.4 +1.1**
comp=Z,32nm,1.7s
ICESG **Greenland Ices** 82.23 14 ⇑*i*P **P** **23 47 47.2 -1.2**
ICESG IAmb IAmb 23 47 48.6
comp=Z,71nm,1.4s
PGAV **Gavieira, Arco** 82.27 46 *e*P **P** **23 47 48.4 -0.5**
PGAV **Gavieira, Arco** 82.27 46 *e*SKS **S** **23 58 06.8 +2.1**
PGAV **Gavieira, Arco** 82.27 46 *e*LR LR 00 14 43.2
comp=Z,1μm,18.0s
MTE **Manteigas** 82.30 47 *e*P **P** **23 47 48.8 -0.2**
MTE **Manteigas** 82.30 47 *e*PP PP 23 50 49.1 -8.7
MTE *e*SKS **S** **23 58 08.2 +3.2**
MTE **Manteigas** 82.30 47 *e*LQ LQ 00 10 04.6
MTE *e*LR LR 00 14 55.9
comp=Z,2μm,24.0s
PCAB **Cabril** 82.36 46 *e*P **P** **23 47 49.2 -0.1**
comp=Z,52nm,1.8s
POLO **Lamas de Olo** 82.42 46 *e*P **P** **23 47 48.7 -1.0**
comp=Z,21nm,1.6s
POLO **Lamas de Olo** 82.42 46 *e*PP PP 23 50 59.5 +0.7
POLO *e*SKS **S** **23 58 10.3 +4.0**
MDT **Midelt** 82.43 55 P **P** **23 47 50.9 +1.0**
comp=Z,7.5nm,0.9s,baz=266,slow=4.6,SNR=7.9
PVRL **Vila Real** 82.45 46 *e*P **P** **23 47 50.8 +1.1**
comp=Z,38nm,1.9s
NVL **N'lazarevskaya** 82.73 160 *e*P **P** **23 47 48.5 -2.1**
NVL pmax pmax
comp=Z,50nm,1.6s
MVO **Moncorvo** 82.91 47 *e*P **P** **23 47 51.7 -0.5**
comp=Z,40nm,1.5s
MVO **Moncorvo** 82.91 47 *e*SKS **S** **23 58 18.1 +6.9**
MVO **Moncorvo** 82.91 47 *e*LQ LQ 00 10 07.4
MVO *e*LR LR 00 14 45.9
comp=Z,1μm,22.0s
PBRG **Braganca** 83.31 46 *e*P **P** **23 47 53.9 -0.3**
comp=Z,63nm,2.2s
C36M **Paulatuk** 83.31 346 IAMs_20 IAMs_20 00 26 02.2
comp=Z,1μm,22.0s
RES **Resolute Bay** 83.43 356 P **P** **23 47 53.0 -1.1**
comp=Z,3.7nm,1.0s,baz=166,slow=4.5,SNR=7.7
LOGN **Logan Glacier** 83.78 334 IAMs_20 IAMs_20 00 23 51.2
comp=Z,1μm,21.0s
TORD **Torodi Ar. Bea** 83.90 76 P **P** **23 47 57.2 -0.5**
comp=Z,20nm,0.9s,baz=281,slow=4.6,SNR=62
TORD LR LR 00 25 27.7
comp=Z,3μm,18.0s,baz=295,slow=36
TORD **Torodi Ar. Bea** 83.90 76 P **P** **23 47 56.9 -0.9**
PAB **San Pablo** 84.41 49 P **P** **23 48 00.8 +0.9**
PAB pmax pmax
comp=Z,39nm,1.5s
PAB **San Pablo** 84.41 49 P **P** **23 48 00.8 +0.9**
PAB IAmb IAmb 23 48 01.1
comp=Z,39nm,1.4s
ESDC **Sonseca Array** 84.73 49 P **P** **23 48 01.9 +0.3**
comp=Z,6.1nm,1.0s,baz=267,slow=5.2,SNR=26
ESDC LR LR 00 23 51.0
comp=Z,3μm,19.4s,baz=250,slow=34
ESDC **Sonseca Array** 84.73 49 P **P** **23 48 01.5 0.0**
DAWY **Dawson** 84.77 338 IAmb IAmb 23 48 13.3
comp=Z,25nm,1.2s
BORG **Borgarnes** 84.87 22 P **P** **23 48 01.9 +0.4**
comp=Z,32nm,1.0s,baz=160,slow=5.0,SNR=4.0
BORG **Borgarnes** 84.87 22 P **P** **23 48 01.9 +0.4**
BORG pmax pmax
comp=Z,205nm,1.6s
BORG **Borgarnes** 84.87 22 IAmb IAmb 23 48 03.0
comp=Z,205nm,1.6s
MCARA **McCarthy VSAT** 84.91 334 P 23 48 02.5
baz=118
MCARA **McCarthy VSAT** 84.91 334 IAmb IAmb 23 48 14.7
comp=Z,28nm,0.9s
EPYK **Eagle Plains** 85.07 340 P 23 48 02.3
baz=124
SUMG **Summit** 85.15 12 ⇑*i*P **P** **23 48 03.1 -0.2**
SUMG IAmb IAmb 23 48 04.4
comp=Z,57nm,1.2s
SUMG **Summit** 85.15 12 ⇑*i*P **P** **23 48 03.1 -0.2**
SUMG pmax pmax
comp=Z,57nm,1.2s
INK **Inuvik** 85.19 343 P 23 48 02.9
baz=127,SNR=17
INK **Inuvik** 85.19 343 P **P** **23 48 02.7 -0.3**
comp=Z,8.1nm,0.8s,baz=118,slow=5.1,SNR=26
INK LR LR 00 28 53.2
comp=Z,1μm,19.1s,baz=104,slow=38
BCAR **Beaver Creek A** 85.20 336 P **P** **23 48 02.6 -0.7**
L27K **Beaver Creek,** 85.21 336 P 23 48 03.7
baz=119,SNR=18
L27K **Beaver Creek,** 85.21 336 IAmb IAmb 23 48 16.0
comp=Z,36nm,1.1s
GLB **Gilahina Butte** 85.27 334 IAmb IAmb 23 48 11.0
comp=Z,16nm,1.0s
GLB IAMs_20 IAMs_20 00 25 43.7
comp=Z,1μm,21.0s
K27K **Chicken** 85.78 337 P 23 48 06.8
baz=119
K27K **Chicken** 85.78 337 IAmb IAmb 23 48 09.6
comp=Z,32nm,1.1s
EGAK **Eagle** 85.80 338 P 23 48 06.0
baz=120,SNR=22
MENT **Mentasta** 85.92 336 IAmb IAmb 23 48 19.1
comp=Z,40nm,1.5s
KLU **Klutina** 86.20 334 P 23 48 08.2
baz=115
KLU **Klutina** 86.20 334 IAmb IAmb 23 48 20.4
comp=Z,32nm,1.0s
DOT **Dot Lake** 86.38 336 IAmb IAmb 23 48 21.2
comp=Z,25nm,1.1s
SCRK **Sand Creek** 86.50 337 IAmb IAmb 23 48 21.9
comp=Z,22nm,1.0s
SCRK **Sand Creek** 86.50 337 P 23 48 09.9
baz=117,SNR=14
SBA **Scott Base** 86.60 191 P **P** **23 48 13.5 +3.4**
SBA pmax pmax
comp=Z,65nm,1.9s
SBA **Scott Base** 86.60 191 P **P** **23 48 13.5 +3.4**
SBA IAmb IAmb 23 48 41.7
comp=Z,65nm,1.9s
PAX **Paxson** 86.64 335 P 23 48 10.3
baz=116
NEEM **North Greenlan** 87.27 6 ⇑*i*P **P** **23 48 13.7 +0.2**
NEEM IAmb IAmb 23 48 16.3
comp=Z,80nm,1.1s
KNK **Knik Glacier** 87.28 333 IAMs_20 IAMs_20 00 35 07.0
comp=Z,1μm,22.0s
WAT6 **Susitna Watana** 87.43 335 P 23 48 14.0
baz=113,SNR=9.5
PMR **Palmer** 87.65 333 IAMs_20 IAMs_20 00 27 15.7
comp=Z,1μm,21.0s
VNDA **Vanda** 87.69 191 P **P** **23 48 16.6 +1.2**
comp=Z,2.1nm,0.8s,baz=117,slow=3.4,SNR=13
VNDA LR LR 00 19 10.4
comp=Z,1μm,21.3s,baz=126,slow=30
VNDA **Vanda** 87.69 191 IAmb IAmb 23 48 34.8
comp=Z,30nm,1.7s
RC01 **Rabbit Creek A** 87.73 333 pP 23 48 22.5 +3.6
PRP **Porcupine Dome** 87.78 338 IAmb IAmb 23 48 28.2
comp=Z,31nm,1.2s
PRP **Porcupine Dome** 87.78 338 P 23 48 15.8
baz=116
HDA **Harding Lake** 87.85 336 IAMs_20 IAMs_20 00 29 20.8
comp=Z,947nm,20.0s
WAT2 **Susitna Watana** 87.94 335 P 23 48 16.2
baz=113
IL31 87.98 337 IAmb IAmb 23 48 28.5
comp=Z,22nm,1.1s
ILAR **Eielson Array** 87.98 337 P **P** **23 48 15.9 -0.9**
comp=Z,5.4nm,0.9s,baz=146,slow=3.5,SNR=42
ILAR LR LR 00 28 38.5
comp=Z,871nm,20.3s,baz=120,slow=36
ILAR **Eielson Array** 87.98 337 P **P** **23 48 15.3 -1.5**
ILAR **Eielson Array** 87.98 337 P **P** **23 48 15.3 -1.5**
RND **Reindeer** 88.22 335 IAMs_20 IAMs_20 00 29 33.8
comp=Z,1μm,21.0s
BMAR **Burnt Mountain** 88.28 340 P **P** **23 48 18.0 -0.2**
CCB **Clear Creek Bu** 88.29 336 IAmb IAmb 23 48 30.2
comp=Z,22nm,1.2s
WRH **Wood River Hil** 88.33 336 IAmb IAmb 23 48 26.1
comp=Z,15nm,1.0s
WRH IAMs_20 IAMs_20 00 27 40.5
comp=Z,1μm,21.0s
POKR **Poker Plat Res** 88.33 337 IAmb IAmb 23 48 28.5
comp=Z,32nm,1.1s
POKR **Poker Plat Res** 88.33 337 P 23 48 17.5
baz=114
MCK **McKinley** 88.38 335 IAmb IAmb 23 48 30.9
comp=Z,21nm,1.0s
MCK IAMs_20 IAMs_20 00 29 25.0
comp=Z,1μm,21.0s
MCK **McKinley** 88.38 335 P 23 48 17.3
baz=112
COLA **College** 88.40 337 *i* P **P** **23 48 18.7 -0.1**
COLA pmax pmax
comp=Z,12nm,1.2s
COLA **College** 88.40 337 P **P** **23 48 18.3 -0.5**
COLA **College** 88.40 337 IAMs_20 IAMs_20 00 26 34.3
comp=Z,963nm,22.0s
EUNU **Eureka** 88.40 359 IAmb IAmb 23 48 31.6
comp=Z,34nm,1.2s
TCOL **CIGO, UAF Yank** 88.40 337 IAMs_20 IAMs_20 00 26 33.3
comp=Z,1μm,22.0s
TCOL **CIGO, UAF Yank** 88.40 337 P 23 48 19.0
baz=113
CUT **Chulitna** 88.45 334 IAMs_20 IAMs_20 00 29 54.8
comp=Z,885nm,21.0s
MDM **Murphy Dome** 88.58 337 IAMs_20 IAMs_20 00 26 50.1
comp=Z,983nm,22.0s
BWN **Browne** 88.77 336 IAMs_20 IAMs_20 00 27 05.3
comp=Z,1μm,21.0s
NEA2 **Nenana** 88.77 336 IAMs_20 IAMs_20 00 27 53.1
comp=Z,1μm,20.0s
NEA2 **Nenana** 88.77 336 P 23 48 20.1
baz=112,SNR=18
TRF **Thorofare Moun** 88.84 335 P 23 48 21.0
baz=111
TRF **Thorofare Moun** 88.84 335 IAMs_20 IAMs_20 00 29 54.1
comp=Z,1μm,21.0s
SKT **Skwentna** 88.85 333 IAmb IAmb 23 48 33.0
comp=Z,27nm,1.0s
SKT IAMs_20 IAMs_20 00 29 36.5
comp=Z,1μm,21.0s
SKT **Skwentna** 88.85 333 P 23 48 20.4
baz=110,SNR=5.8

I23K	Minto, Yukon-K	89.10	337		IAMs_20	IAMs_20	00 26 52.7			
	comp=Z,1µm,21.0s									
I23K	Minto, Yukon-K	89.10	337		P		23 48 22.3			
	baz=112,SNR=8.1									
KTH	Kantishna Hill	89.14	335		IAmb	IAmb	23 48 34.3			
	comp=Z,32nm,1.2s									
BPAW	Bear Paw Mtn.	89.36	335		P		23 48 22.5			
	baz=110,SNR=8.5									
BPAW	Bear Paw Mtn.	89.36	335		IAMs_20	IAMs_20	00 29 54.9			
	comp=Z,948nm,20.0s									
PPLA	Purkeypile	89.45	334		P		23 48 24.0			
	baz=109,SNR=5.7									
PPLA	Purkeypile	89.45	334		IAMs_20	IAMs_20	00 30 36.3			
	comp=Z,935nm,18.0s									
EKA	Eskdalemuir Ar	89.46	34		P	P	23 48 23.9	-0.1		
	comp=Z,2.9nm,0.8s,baz=258,slow=3.9,SNR=4.7									
MLY	Manley	89.59	336		P		23 48 23.5			
	baz=111,SNR=16									
MLY	Manley	89.60	336		IAmb	IAmb	23 48 36.4			
	comp=Z,30nm,1.0s									
MLY					IAMs_20	IAMs_20	00 30 43.0			
	comp=Z,1µm,19.0s									
CHUM	Lake Minchumin	89.84	335		P		23 48 25.0			
	baz=109									
COLD	Coldfoot	90.19	339		IAmb	IAmb	23 48 40.3			
	comp=Z,34nm,1.2s									
COLD	Coldfoot	90.19	339		P		23 48 27.7			
	baz=111,SNR=10.0									
TOLK	Toolik Lake Re	90.49	340		P		23 48 28.5			
	baz=112,SNR=6.1									
TOLK	Toolik Lake Re	90.49	340		IAmb	IAmb	23 48 41.0			
	comp=Z,20nm,1.1s									
TOLK					IAMs_20	IAMs_20	00 31 12.3			
	comp=Z,1µm,19.0s									
IMAR	Indian Mountai	91.10	337		P	P	23 48 30.3	-1.1		
DAG	Danmarks Havn	91.84	12	⇑	*i*P	P	23 48 34.0	-0.6		
DAG					IAmb	IAmb	23 48 35.2			
	comp=Z,14nm,1.1s									
DAG	Danmarks Havn	91.84	12	⇑	*i*P	P	23 48 34.0	-0.6		
DAG					pmax	pmax				
	comp=Z,15nm,1.1s									
SSB	Saint Sauveur	92.09	45		IAMs_20	IAMs_20	00 31 04.2			
	comp=Z,1µm,19.0s									
SYO	Syowa Base	92.33	162	⇑	*e*P	P	23 48 36.4	-0.7		
SYO	Syowa Base	92.33	162	⇓	*e*PcP	P	23 48 38.2	+1.1		
SYO	Syowa Base	92.33	162	⇑	*e*pP	pP	23 48 45.0	+4.6		
UCC	Uccle	92.90	39		*d*P	P	23 48 39.6	-0.5		
DOU	Dourbes	92.93	40		*d*P	P	23 48 39.8	-0.5		
BMRD	Maredsous	93.08	40		*d*P	P	23 48 40.6	-0.3		
BGES	Gesves	93.29	40		*d*P	P	23 48 41.5	-0.5		
BSTI	Sart Tilman	93.62	40		*d*P	P	23 48 44.1	+0.7		
A21K	Barrow	93.65	342		P		23 48 43.5			
	baz=105									
WLF	Walferdange	93.86	41		*d*P	P	23 48 45.1	+0.6		
MEM	Membach	93.91	40		*d*P	P	23 48 44.9	+0.1		
BTNL	Ternell	93.98	40		*d*P	P	23 48 45.7	+0.5		
ECH	Echery	94.31	42		IAMs_20	IAMs_20	00 33 27.9			
	comp=Z,1µm,19.0s									
KEST	Kesra	94.32	55		P	P	23 48 47.6	+0.5		
	comp=Z,6.4nm,0.8s,baz=262,slow=6.0,SNR=6.7									
KEST					LR	LR	00 30 26.9			
	comp=Z,1µm,20.7s,baz=192,slow=35									
TSUM	Tsumeb	94.36	110		P	P	23 48 48.1	+0.4		
NOR	Nord	94.49	8		*e*P	P	23 48 45.8	-1.0		
NOR					IAmb	IAmb	23 48 47.6			
	comp=Z,14nm,1.4s									
NOR	Nord	94.49	8		*e*P	P	23 48 45.8	-1.0		
NOR					pmax	pmax				
	comp=Z,14nm,1.4s									
VSL	Villasalto	94.81	51		IAMs_20	IAMs_20	00 28 33.3			
	comp=Z,1µm,21.0s									
RDOG	Red Dog Mine	95.09	338		IAMs_20	IAMs_20	00 34 03.7			
	comp=Z,985nm,21.0s									
BFO	Black Forest	95.11	42		IAMs_20	IAMs_20	00 28 56.9			
	comp=Z,800nm,20.0s									
ANM	Nome	95.54	334		IAMs_20	IAMs_20	00 34 02.1			
	comp=Z,842nm,19.0s									
STU	Stuttgart	95.73	42		IAMs_20	IAMs_20	00 29 46.3			
	comp=Z,971nm,20.0s									
NIKH	Nikolski High	95.95	323		IAMs_20	IAMs_20	00 22 24.2			
	comp=Z,969nm,22.0s									
DAVOX	Davos/Dischmat	95.98	44		P	P	23 48 54.3	-0.3		
	comp=Z,1.0nm,0.5s,baz=358,slow=6.4,SNR=4.6									
VLC	Villacollemand	96.07	46		IAMs_20	IAMs_20	00 30 32.5			
	comp=Z,1µm,20.0s									
TNA	Tin City	96.73	335		IAMs_20	IAMs_20	00 37 18.5			
	comp=Z,642nm,20.0s									
GRFO	Grafenberg	97.13	41		IAMs_20	IAMs_20	00 35 55.5			
	comp=Z,844nm,19.0s									
GRA1	Grafenberg Arr	97.14	41		IAMs_20	IAMs_20	00 35 55.5			
	comp=Z,838nm,19.0s									
NOA	NORSAR Array B	97.88	29		LR	LR	00 32 52.1			
	comp=Z,704nm,19.0s,baz=270,slow=35									
CLL	Collm	98.38	39		*i* Pdif	Pdif	23 49 05.3	+0.2		
	comp=Z,90nm,2.5s									
CLL					*e*PP	PP	23 53 00.0	-5.1		
CLL					*e*SKSac	SKSac	23 59 36.0	-7.1		
CLL					*e*SKKSac	SKKSac	00 00 02.0	-11		
CLL					*e*		00 00 46.0			
CLL					*e*PS	PS	00 02 02.0	+2.9		
CLL					*e*PPS	PPS	00 02 51.0			
CLL					*e*(Sdif)		00 03 30.0			
CLL					*e*SS	SS	00 07 19.0	+1.6		
CLL					*e*SSS	SSS	00 11 04.0			
CLL					*e*		00 13 07.0			
CLL					Lm	MLR	00 34 00.0			
	comp=N,400nm,19.5s									
CLL					Lm	MLR	00 34 00.0			
	comp=E,1µm,19.9s									
CLL					Lm	MLR	00 34 00.0			
	comp=Z,1µm,18.6s									
CLL	Collm	98.38	39		*i* P	Pdif	23 49 05.3	+0.2		
CLL					pmax	pmax				
	comp=Z,90nm,2.5s									
CLL					MLR	MLR				
	comp=Z,1µm,18.6s									
KBS	Kingsbay	98.57	11		IAMs_20	IAMs_20	00 30 23.0			
	comp=Z,775nm,22.0s									
KHC	Kasperske Hory	98.64	42		*e*pP	pP	23 49 15.8	+6.2		
GERES	GERESS Array B	98.70	42		LR	LR	00 31 48.0			
	comp=Z,919nm,21.3s,baz=256,slow=34									
BOSA	Boshof	99.19	121		P	Pdif	23 49 09.8	+0.3		
	comp=Z,3.2nm,0.9s,baz=198,slow=3.2,SNR=3.7									
BOSA					LR	LR	00 32 45.1			
	comp=Z,2µm,18.2s,baz=266,slow=35									
MAW	Mawson	99.68	166		LR	LR	00 32 13.5			
	comp=Z,951nm,19.7s,baz=236,slow=34									
CEL	Celeste	99.77	53		IAMs_20	IAMs_20	00 36 26.6			
	comp=Z,1µm,21.0s									
DPC	Dobruska-Polom	100.45	40		*e*PDIFF	Pdif	23 49 15.9	+1.5		
KRUC	Moravsky	100.48	42		*e*PDIFF	Pdif	23 49 14.2	-0.3		
VRAC	Vranov	100.62	41		*e*PDIFF	Pdif	23 49 15.8	+0.7		
KRLC	Kraliky	100.74	41		*e*PDIFF	Pdif	23 49 13.2	-2.5		
MORC	Moravsky Berou	101.24	41		*e*PDIFF	Pdif	23 49 14.7	-3.2		
PDG	Podgorica	102.45	48		IAMs_20	IAMs_20	00 33 07.5			
	comp=Z,863nm,22.0s									
DIVS	Divibare	102.97	47		IAMs_20	IAMs_20	00 34 44.2			
	comp=Z,904nm,20.0s									
UZH	Uzhgorod	104.39	42		*e*P	Pdif	23 49 32.8	+0.9		
BILL	Bilibino	106.52	339		IAMs_20	IAMs_20	00 42 17.0			
	comp=Z,637nm,19.0s									
MLR	Muntele Rosu	107.13	45		IAMs_20	IAMs_20	00 44 40.0			
	comp=Z,808nm,19.0s									
MNK	Minsk	107.17	36		*i* PP	PP	23 54 10.9	0.0		
	comp=E,1.0nm,1.2s									
MNK					*i* PP	PP	23 54 10.9	0.0		
	comp=N,4.0nm,1.0s									
MNK					*i* PP	PP	23 54 10.9	0.0		
	comp=Z,6.0nm,1.2s									
MNK					*i* PPP	PPP	23 56 26.5			
MNK					*i* SKS	SKSdf	00 01 03.1	-2.1		
MNK					*i* SS	SS	00 09 16.8	-1.7		
MNK					*i* SSS	SSS	00 13 18.6			
MNK					*i* LQ	LQ	00 31 20.1			
MNK					*i* LR	LR	00 36 29.8			
MNK					*i* LRM	MLR	00 38 59.0			
	comp=N,451nm,22.4s									
MNK					*i* LRM	MLR	00 40 02.1			
	comp=E,111nm,19.7s									
MNK					*i* LRM	MLR	00 40 05.5			
	comp=Z,722nm,16.9s									
DZM	Mont Dzumac	108.21	244		*e*PP	PP	23 54 17.4	-2.0		
DZM					*e*SP	SP	00 03 37.3	-4.9		
	comp=Z,462nm,25.8s									
DZM					*e*SS	SS	00 09 32.3	-1.9		
	comp=Z,2µm,26.9s									
DZM	Mont Dzumac	108.21	244		*e*LR	LR	00 25 42.3			
	comp=Z,3µm,25.8s									
ISP	Isparta	111.31	53		IAMs_20	IAMs_20	00 43 53.0			
	comp=Z,817nm,21.0s									
OBN	Obninsk	111.91	34		*i* PKIKP	PKiKP	23 53 58.2	-3.9		
OBN					pmax	pmax				
	comp=Z,3.0nm,1.0s									
ANTO	Ankara	112.82	50		IAMs_20	IAMs_20	00 51 16.0			
	comp=Z,730nm,19.0s									
BRTR	Keskin Array B	113.48	50	*c*	*i* PKIKP	PKiKP	23 54 05.4	-0.4		
BRTR					pmax	pmax				
	comp=Z,1.0nm,0.8s									
SEY	Seymchan	113.92	337		*i* PKIKP	PKiKP	23 54 07.4	+1.7		
TIXI	Tiksi	114.34	350		*i* PKIKP	PKPdf	23 54 08.9	+2.6		
H11N3	WAKE ISLAND Hyl	114.47	288		T	T	01 58 25.8			
	baz=91,slow=75,SNR=154									
H11N2	WAKE ISLAND Hyl	114.48	288		T	T	01 58 23.1			
	baz=91,slow=75,SNR=116									
H11N1	WAKE ISLAND Hyl	114.49	288		T	T	01 58 23.3			
	baz=91,slow=75,SNR=173									
H11S2	WAKE ISLAND Hyl	114.65	286		T	T	01 58 34.4			
	baz=92,slow=74									
H11S1	WAKE ISLAND Hyl	114.65	286		T	T	01 58 39.3			
	baz=92,slow=74									
H11S3	WAKE ISLAND Hyl	114.66	286		T	T	01 58 35.7			
	baz=92									
PET	Petropavlovsk	115.25	325		IAMs_20	IAMs_20	00 32 57.5			
	comp=Z,474nm,21.0s									
TOKA	Tokat	115.53	49			PKiKP	23 54 07.8	-1.8		
PEA0B	Petropavlovsk-	115.76	326		IAMs_20	IAMs_20	00 33 06.8			
	comp=Z,499nm,21.0s									
MMAI	Mount Meron Ar	115.81	57		PKP	PKPdf	23 54 10.4	0.0		
	comp=Z,1.1nm,0.7s,baz=328,slow=5.1,SNR=4.0									
MA2	Magadan	116.33	334		IAMs_20	IAMs_20	00 54 57.7			
	comp=Z,581nm,20.0s									
SOC	Sochi	117.14	45		*i* PKIKP	PKPdf	23 54 08.4	-4.1		
SOC					*e*PPP	PPP	23 57 48.5			
SOC					*e*		00 05 08.6			
SOC					*e*SSS	SSS	00 15 47.5			
KIV	Kislovodsk	119.11	44		*i* PKIKP	PKPdf	23 54 15.4	-1.0		
KIV					*e*		23 55 34.4			
KIV					*e*		00 05 23.0			
KIV					*e*SS	SS	00 11 53.0	-4.2		
KIV					*e*SSS	SSS	00 16 17.4			
KIV					pmax	pmax				
	comp=Z,7.0nm,1.0s									
KIV	Kislovodsk	119.11	44		IAMs_20	IAMs_20	00 55 21.9			
	comp=Z,391nm,19.0s									
KBZ	Khabaz	119.32	44		PKP	PKPdf	23 54 16.8	+0.1		
	comp=Z,4.3nm,0.8s,baz=227,slow=2.4,SNR=19									
KBZ	Khabaz	119.32	44	*c*	*i* PKIKP	PKPdf	23 54 17.2	+0.5		
GNI	Garni	121.70	48		PKP	PKPdf	23 54 21.9	+0.3		
	comp=Z,2.6nm,0.8s,baz=243,slow=2.3,SNR=4.2									
GNI	Garni	121.70	48		IAMs_20	IAMs_20	00 55 25.0			
	comp=Z,624nm,20.0s									
YAK	Yakutsk	122.23	344		IAMs_20	IAMs_20	00 56 17.7			
	comp=Z,584nm,19.0s									
MAK	Makhachkala	122.74	44		*i* P	Pdif	23 50 52.0	-1.6		
MAK					*i*		23 54 21.5			
MAK					*e*		23 55 58.4			
MAK					*e*		00 01 17.8			
MAK					*e*SS	SS	00 12 36.7	-6.9		
MAK					pmax	pmax				
	comp=Z,76nm,0.9s									
STKA	Stephens Creek	123.58	223		PKP	PKPdf	23 54 23.9	-1.5		
	comp=Z,1.0nm,0.5s,baz=0.0,slow=5.1,SNR=2.3									
RAYN	Ar Rayn	125.81	67		PKIKP	PKPdf	23 54 29.8	0.0		
RAYN	Ar Rayn	125.81	67		PKPdf	PKPdf	23 54 29.8	0.0		
CTA	Charters Tower	126.40	238		PKP	PKPdf	23 54 30.6	-0.4		
	comp=Z,7.7nm,1.1s,baz=59,slow=5.9,SNR=3.0									
YSS	Yuzh-Sakhalins	127.12	324		IAMs_20	IAMs_20	01 01 56.2			
	comp=Z,603nm,19.0s									
ABKAR	Akbulak array	127.30	32		PKPdf	PKPdf	23 54 31.8	-0.1		
JKA	Kamikawa-asahi	128.70	321		IAMs_20	IAMs_20	00 52 03.8			
	comp=Z,684nm,20.0s									
ERM	Erimo	129.40	319		IAMs_20	IAMs_20	00 48 19.5			
	comp=Z,697nm,20.0s									
BVAR	Borovoye Array	129.45	23		PKP	PKPdf	23 54 35.7	-0.2		
	comp=Z,0.9nm,0.8s,baz=197,slow=4.5,SNR=5.0									
JTM	Tenmabayashi	131.37	318		IAMs_20	IAMs_20	00 45 02.4			
	comp=Z,666nm,20.0s									
KLR	Kul'dur	131.39	333	*c*	*i* PKIKP	PKPdf	23 54 39.6	-0.1		
GEYT	Alibeck	132.18	45		PKP	PKPdf	23 54 41.8	+0.3		
	comp=Z,1.8nm,0.8s,baz=252,slow=3.0,SNR=9.1									
ZALV	Zalesovo Beam	132.97	12		PKP	PKPdf	23 54 42.2	-0.3		
	comp=Z,2.5nm,0.6s,baz=318,slow=2.0,SNR=22									
ZALV	Zalesovo Beam	132.97	12		PKIKP	PKPdf	23 54 41.2	-1.3		
ZALV	Zalesovo Beam	132.97	12			PKPdf	23 54 41.2	-1.3		
ASAR	Alice Springs	134.02	225		PKhKP	PKPpre	23 54 40.3			
	comp=Z,1.0nm,0.8s,baz=116,slow=3.2,SNR=4.9									
ASAR					PKP	PKPdf	23 54 45.3	-0.2		
	comp=Z,2.7nm,0.7s,baz=126,slow=2.2,SNR=14									
ASAR	Alice Springs	134.02	225		PKIKP	PKPdf	23 54 44.4	-1.1		
ASAR	Alice Springs	134.02	225		PKPdf	PKPdf	23 54 44.4	-1.1		
USRK	Ussuriysk Ar.	134.78	328		PKP	PKPdf	23 54 46.6	+0.4		
	comp=Z,0.6nm,0.6s,baz=22,slow=4.7,SNR=2.0									
H01W1	Cape Leeuwin H	134.90	196		T	T	02 25 18.2			
	baz=154,slow=76,SNR=7.4									
H01W2	Cape Leeuwin H	134.90	196		T	T	02 25 17.3			
	baz=154,slow=76,SNR=8.4									
H01W3	Cape Leeuwin H	134.91	196		T	T	02 25 17.1			
	baz=154,slow=76,SNR=4.9									
MJAR	Matsushiro Ar	135.41	315		PKP	PKPdf	23 54 47.6	0.0		
	comp=Z,1.3nm,0.4s,baz=111,slow=1.5,SNR=6.2									
WB2	Warramunga Arr	135.99	230		PKPdf	PKPdf	23 54 49.2	+0.1		
WRAB	Tennant Creek	135.99	230	*c*	*i* PKIKP	PKPdf	23 54 49.9	+0.7		
WRAB					pmax	pmax				
	comp=Z,28nm,1.7s									
WRA	Warramunga Arr	135.99	230		PKP	PKPdf	23 54 47.8	-1.4		
	comp=Z,7.8nm,0.8s,baz=133,slow=1.5,SNR=24									
WRA	Warramunga Arr	135.99	230		PKIKP	PKPdf	23 54 47.2	-2.0		
WRA	Warramunga Arr	135.99	230			PKPdf	23 54 47.2	-2.0		
TLY	Talaya	136.75	357		*e*PKIKP	PKPdf	23 54 49.1	-0.6		
TLY					pmax	pmax				
	comp=Z,32nm,2.0s									
TLY	Talaya	136.75	357		IAMs_20	IAMs_20	00 55 21.0			
	comp=Z,660nm,22.0s									
ZAK	Zakamensk	138.07	357		*e*PKIKP	PKPdf	23 54 50.9	-1.4		
ZAK					pmax	pmax				
	comp=Z,7.0nm,1.4s									
MKAR	Makanchi Array	138.86	19		PKhKP	PKPpre	23 54 44.3			
	comp=Z,0.9nm,0.8s,baz=1.8,slow=3.8,SNR=3.5									
MKAR					PKP	PKPdf	23 54 53.7	-0.1		
	comp=Z,0.9nm,0.7s,baz=333,slow=4.1,SNR=4.4									
MKAR	Makanchi Array	138.86	19	*c*	*i* PKIKP	PKPdf	23 54 54.2	+0.5		
MKAR					pmax	pmax				
	comp=Z,1.0nm,0.7s									
AAK	Ala-Archa	139.20	29		PKP	PKPdf	23 54 55.1	+0.5		
	comp=Z,3.0nm,0.9s,baz=199,slow=3.2,SNR=4.0									
JMN	Monobe	139.89	314		IAMs_20	IAMs_20	00 48 01.0			
	comp=Z,569nm,20.0s									
ULN	Ulaanbaatar	140.22	353		PKIKP	PKPdf	23 54 56.9	+0.6		
ULN	Ulaanbaatar	140.22	353		PKPdf	PKPdf	23 54 56.9	+0.6		
ULN	Ulaanbaatar	140.22	353		IAMs_20	IAMs_20	01 02 06.8			
	comp=Z,637nm,21.0s									
SONM	Songino Array	140.33	353		PKhKP	PKPpre	23 54 48.9			
	comp=Z,0.4nm,0.6s,baz=336,slow=3.2,SNR=6.2									
SONM					PKP	PKPdf	23 54 57.4	+0.9		
	comp=Z,3.2nm,0.9s,baz=8.9,slow=0.7,SNR=8.9									
SONM	Songino Array	140.33	353		PKHKP	PKPpre	23 54 48.3			
SONM	Songino Array	140.33	353			PKPpre	23 54 48.3			
KSRS	Korea Array	141.59	323		PKhKP	PKPpre	23 54 52.4			
	comp=Z,1.1nm,0.7s,baz=56,slow=1.9,SNR=2.5									
INCN	Inchon	142.33	324		IAMs_20	IAMs_20	00 52 14.2			
	comp=Z,559nm,20.0s									
WMQ	Urumqi	143.12	15		*e*PKP	PKPdf	23 55 02.3	+0.7		
WMQ					LR	LR				
	comp=Z,780nm,20.7s									
WMQ					LR	LR				
	comp=Z,820nm,23.9s									
WMQ					LR	LR				
	comp=Z,1µm,25.1s									
JSU	Suzuyama	143.51	313		IAMs_20	IAMs_20	00 47 16.0			
	comp=Z,579nm,22.0s									
DL2	Dalian	143.94	331		PKP	PKPab	23 54 58.8	-1.4		
DL2					PP	PP	23 58 18.5	+2.8		
DL2					SS	SS	00 17 04.5	+5.3		
DL2					AMB	AMB				
	comp=Z,220nm,6.6s									
DL2					LR	LR				
	comp=Z,190nm,18.2s									
DL2					LR	LR				
	comp=Z,360nm,18.0s									
DL2					LR	LR				
	comp=Z,560nm,19.6s									
NIL	Nilore	144.80	41		PKIKP	PKPab	23 55 03.2	-0.4		
NIL	Nilore	144.80	41			PKPab	23 55 03.2	-0.4		
BJI	Beijing	145.34	338		PKPbc	PKPbc	23 55 04.0	-1.2		
BJI					LR	LR				
	comp=Z,430nm,22.4s									
BJI					LR	LR				
	comp=Z,340nm,22.0s									
BJI					LR	LR				
	comp=Z,830nm,24.6s									
HHC	Hu-ho-hao-te	146.09	344		*e*PKPbc	PKPdf	23 55 06.5	-0.4		
HHC					PP	PP	23 58 28.3	0.0		
HHC					AMB	AMB				
	comp=Z,120nm,11.2s									
HHC					LR	LR				
	comp=Z,590nm,18.1s									
HHC					LR	LR				
	comp=Z,430nm,17.7s									
HHC					LR	LR				
	comp=Z,890nm,20.6s									
BHUJ	Bhuj	147.39	60		*e*P	PKPdf	23 55 10.2	+0.9		
BHUJ					IAmb	IAmb	23 55 22.8			
	comp=Z,475nm,1.9s									
DHRM	DHARAMSHALA	147.65	40		*e*P	PKPdf	23 55 09.2	-0.7		
DHRM					IAmb	IAmb	23 55 26.8			
	comp=Z,272nm,1.5s									
TIY	Taiyuan	148.73	341		*e*PKPbc	PKPbc	23 55 13.8	-1.3		
SMLA	Simla	148.95	40		*e*P	PKPdf	23 55 11.7	0.0		
SMLA					IAmb	IAmb	23 55 20.3			
	comp=Z,128nm,1.6s									
GTA	Gaotai	149.13	0		PKPbc	PKPdf	23 55 12.5	+0.5		
GTA					PP	PP	23 58 45.5	-0.4		
GTA					SS	SS	00 17 53.8	-3.5		
GTA					AMB	AMB				
	comp=Z,270nm,6.2s									
GTA					LR	LR				
	comp=Z,510nm,18.9s									
GTA					LR	LR				
	comp=Z,280nm,18.5s									
GTA					LR	LR				
	comp=Z,650nm,19.6s									
SSE	Sheshan	150.00	322		PKPbc	PKPdf	23 55 10.0	-3.4		
SSE					LR	LR				
	comp=Z,200nm,20.0s									
SSE					LR	LR				
	comp=Z,140nm,22.7s									
SSE					LR	LR				
	comp=Z,240nm,22.9s									
DDI	Dehra Dun	150.06	40		*e*P	PKPdf	23 55 11.5	-2.1		
NJ2	Nanjing	150.66	326		*e*PKPbc	PKPdf	23 55 13.8	-0.6		
NJ2					pPKP	pPKPdf	23 55 18.0	+0.3		
NJ2					PKPab	sPKPbc	23 55 26.0	+1.7		
NJ2					LR	LR				
	comp=Z,380nm,19.3s									
NJ2					LR	LR				
	comp=Z,390nm,21.7s									
NJ2					LR	LR				
	comp=Z,520nm,17.3s									
TNTI	Ternate	151.70	256		IAMs_20	IAMs_20	00 53 43.8			
	comp=Z,339nm,20.0s									
LZH	Lanzhou	152.22	353		pPKP	PKPdf	23 55 10.8	-6.1		
LZH	Lanzhou	152.22	353		PKPbc	PKiKP	23 55 28.3	+4.4		
LZH	Lanzhou	152.22	353		PP	PP	23 58 58.5	-5.3		
LZH					AMB	AMB				
	comp=Z,220nm,9.0s									
LZH					LR	LR				
	comp=N,570nm,18.5s									
LZH					LR	LR				
	comp=E,550nm,18.0s									
LZH					LR	LR				
	comp=Z,530nm,20.7s									
POO	Poona	152.69	66		*e*P	PKPdf	23 55 18.2	+0.3		
XAN	Xi'an	153.20	343		PKPbc	PKPdf	23 55 17.5	-0.7		
XAN					pPKP	sPKPdf	23 55 24.0	+1.3		
XAN					PKPab	PKPab	23 55 36.3	-0.9		
XAN					PP	PP	23 59 07.3	-2.0		
XAN					SKS	SKSdf	00 02 20.0	-5.7		
XAN					SKKS	SKKSac	00 05 55.3	-5.9		
XAN					SS	SS	00 18 37.0	-5.5		
XAN					AMB	AMB				
	comp=Z,150nm,7.6s									
XAN					LR	LR				
	comp=Z,620n

ellipse: s-maj=0.5km s-min=0.5km az=90.0
ROM ***26*** *23:42:38.1±0.1, 41°.762N×0°.004×13°.556E±0°.005, h8km, ML3.2/69, Error ellipse: s-maj=0.5km s-min=0.2km az=201.0*
LDG ***26*** *23:42:38.0±0.1, 41°.79N×13°.58E, h10km, Ml2.7/15, Error ellipse: s-maj=3.7km s-min=2.6km az=25.0*
IDC ***26*** *23:42:40.0±1.9, 41°.89N×13°.55E, h0km, mb3.4/2, mb1 3.6/6, mb1mx3.2/72, mbtmp3.5/6, ML3.3/4, Error ellipse: s-maj=24.9km s-min=17.8km az=68.0*
BEO ***26*** *23:42:43.9±0.7, 41°.97N×13°.96E, h0km, ML3.2/10*
PRU ***26*** *23:42:44.6±0.0, 41°.91N×12°.83E, h18km*
ISC 26 23:42:39.2±0.8, 41°.76N±0°.02×13°.55E±0°.02, h12km±5km, n210, σ2ˢ17/282, 44C-31D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VVLD	**Villa Vallelon**	**0.12**	**26**	⇑P	**Pg**	**23 42 41.5**	**-0.9**
VVLD				S	**Sg**	**23 42 43.6**	**-1.1**
VVLD				AML	AML		
	comp=E,24100μm,0.4s						
VVLD				AML	AML		
	comp=N,15100μm,1.4s						
VVLD				AML	AML		
	comp=N,15050μm,1.4s						
VVLD				AML	AML		
	comp=E,24100μm,0.4s						
POFI	**Posta Fibreno**	**0.13**	**111**	⇑P	**Pg**	**23 42 41.5**	**-0.9**
POFI				S	**Sg**	**23 42 43.8**	**-1.1**
POFI				AML	AML		
	comp=N,69800μm,0.4s						
POFI				AML	AML		
	comp=E,67350μm,0.3s						
POFI				AML	AML		
	comp=N,69800μm,0.4s						
POFI				AML	AML		
	comp=E,67350μm,0.3s						
POFI				AML	AML		
	comp=E,73900μm,0.3s						
POFI				AML	AML		
	comp=N,72350μm,0.3s						
POFI				AML	AML		
	comp=E,67350μm,0.3s						
POFI				AML	AML		
	comp=N,69800μm,0.4s						
POFI				AML	AML		
	comp=E,73900μm,0.3s						
POFI				AML	AML		
	comp=N,72350μm,0.3s						
GUAR	**Guarcino**	**0.18**	**280**	⇑P	**Pg**	**23 42 42.8**	**-0.5**
GUAR				S	**Sg**	**23 42 45.9**	**-0.2**
GUAR				AML	AML		
	comp=E,25850μm,0.3s						
GUAR				AML	AML		
	comp=N,31700μm,0.3s						
GUAR				AML	AML		
	comp=N,31700μm,0.3s						
GUAR				AML	AML		
	comp=E,25850μm,0.3s						
PTQR	**Pietraquaria**	**0.28**	**337**	⇓P	**Pg**	**23 42 44.5**	**-0.5**
PTQR				S	**Sg**	**23 42 49.2**	**+0.2**
PTQR				AML	AML		
	comp=E,11600μm,1.0s						
PTQR				AML	AML		
	comp=N,10395μm,0.2s						
GIUL	**Giuliano Di Ro**	**0.30**	**227**	⇓P	**Pg**	**23 42 45.1**	**-0.3**
GIUL				S	**Sg**	**23 42 49.6**	**+0.1**
GIUL				AML	AML		
	comp=E,6830μm,0.9s						
GIUL				AML	AML		
	comp=N,9150μm,1.3s						
GIUL				AML	AML		
	comp=E,6835μm,0.9s						
INTR	**Introdacqua**	**0.36**	**47**	⇑P	**Pg**	**23 42 45.8**	**-0.8**
INTR				S	**Sg**	**23 42 51.5**	**+0.1**
CERA	**Filignano**	**0.39**	**115**	⇑P	**Pg**	**23 42 45.9**	**-1.0**
CERA				S	**Sg**	**23 42 52.2**	**+0.1**
CERA				AML	AML		
	comp=E,10215μm,0.4s						
CERA				AML	AML		
	comp=N,13350μm,0.6s						
CERA				AML	AML		
	comp=E,10550μm,0.4s						
CERA				AML	AML		
	comp=N,13300μm,0.6s						
CERA				AML	AML		
	comp=N,13750μm,0.6s						
CERA				AML	AML		
	comp=E,10175μm,0.4s						
RNI2	**Rionero Sannit**	**0.45**	**97**	⇑P	**Pg**	**23 42 47.7**	**-0.4**
RNI2				AML	AML		
	comp=N,9420μm,1.2s						
RNI2				AML	AML		
	comp=E,12900μm,0.9s						
RNI2				AML	AML		
	comp=N,9435μm,1.2s						
RNI2				AML	AML		
	comp=E,13050μm,0.9s						
RNI2				AML	AML		
	comp=N,9885μm,1.2s						
RCAV	**Rocca di Cave**	**0.46**	**281**	P	**Pg**	**23 42 47.5**	**-0.8**
RCAV				S	**Sg**	**23 42 55.0**	**+0.6**
RCAV				AML	AML		
	comp=N,6325μm,0.5s						
RCAV				AML	AML		
	comp=E,6080μm,1.3s						
RCAV				AML	AML		
	comp=E,6070μm,1.3s						
RCAV				AML	AML		
	comp=N,6330μm,0.5s						
CERT	**Cerreto**	**0.46**	**294**	⇓P	**Pg**	**23 42 47.6**	**-0.7**
CERT				S	**Sg**	**23 42 55.0**	**+0.4**
CERT				AML	AML		
	comp=E,15150μm,0.4s						
CERT				AML	AML		
	comp=N,5135μm,1.4s						
CERT				AML	AML		
	comp=N,5130μm,1.4s						
T0110	**Collepietro**	**0.49**	**20**	P	**Pg**	**23 42 48.1**	**-0.8**
T0110				S	**Sg**	**23 42 55.7**	**+0.2**
T0110				AML	AML		
	comp=E,5995μm,0.4s						
T0110				AML	AML		
	comp=N,7250μm,1.3s						
FAGN	**Fagnano**	**0.50**	**3**	⇑P	**Pg**	**23 42 48.0**	**-1.1**
FAGN				S	**Sg**	**23 42 56.6**	**+0.8**
FAGN				AML	AML		
	comp=N,6230μm,0.4s						
FAGN				AML	AML		
	comp=E,9190μm,0.4s						
LATB	**Latina**	**0.52**	**239**	⇓P	**Pg**	**23 42 48.2**	**-1.1**
LATB				S	**Sg**	**23 42 56.1**	**0.0**
LATB				AML	AML		
	comp=E,1955μm,0.4s						
LATB				AML	AML		
	comp=N,1145μm,0.6s						
LATB				AML	AML		
	comp=E,1950μm,0.4s						
LATB				AML	AML		
	comp=N,1140μm,0.6s						
MIDA	**Miranda**	**0.54**	**103**	⇑P	**Pg**	**23 42 48.6**	**-1.1**
MIDA				S	**Sg**	**23 42 56.7**	**-0.3**
MIDA				AML	AML		
	comp=E,5120μm,0.4s						
MIDA				AML	AML		
	comp=N,5895μm,0.4s						
MIDA				AML	AML		
	comp=E,5090μm,0.4s						
MIDA				AML	AML		
	comp=N,6225μm,0.4s						
MIDA				AML	AML		
	comp=E,5115μm,0.4s						
LPEL	**Lama dei Pelig**	**0.55**	**59**	⇑P	**Pg**	**23 42 48.7**	**-1.3**
LPEL				S	**Sg**	**23 42 57.0**	**-0.3**
LPEL				AML	AML		
	comp=E,3815μm,0.8s						
LPEL				AML	AML		
	comp=N,2855μm,0.5s						
VIVA	**Pratoni del Vi**	**0.58**	**269**	P	**Pg**	**23 42 49.8**	**-0.8**
VIVA				AML	AML		
	comp=N,15150μm,0.5s						
VIVA				AML	AML		
	comp=E,11850μm,1.2s						
FIAM	**Fiamignano**	**0.60**	**328**	⇓P	**Pg**	**23 42 49.6**	**-1.3**
FIAM				S	**Sg**	**23 42 58.7**	**-0.2**
FIAM				AML	AML		
	comp=E,3595μm,0.6s						
FIAM				AML	AML		
	comp=N,2330μm,0.6s						
AQU	**L'Aquila**	**0.60**	**349**	*e*Pn	**Pg**	**23 42 49.9**	**-1.1**
AQU	**L'Aquila**	**0.60**	**349**	⇓P	**Pg**	**23 42 49.9**	**-1.1**
AQU				AML	AML		
	comp=E,2295μm,1.0s						
AQU				AML	AML		
	comp=N,2950μm,1.2s						
AQU				AML	AML		
	comp=E,2295μm,1.6s						
AQU				AML	AML		
	comp=N,2815μm,1.2s						
VAGA	**Valle Agricola**	**0.62**	**124**	⇑P	**Pg**	**23 42 50.0**	**-1.2**
VAGA				AML	AML		
	comp=E,2330μm,1.3s						
VAGA				AML	AML		
	comp=N,4305μm,0.5s						
VAGA				AML	AML		
	comp=N,4460μm,0.5s						
VAGA				AML	AML		
	comp=E,2430μm,1.3s						
VAGA				AML	AML		
	comp=N,4310μm,0.5s						
RDP	**Rocca di Papa**	**0.62**	**270**	⇓P	**Pg**	**23 42 50.6**	**-0.8**
RDP				AML	AML		
	comp=N,14350μm,0.5s						
RDP				AML	AML		
	comp=E,16050μm,1.5s						
RMP	**Rome, Mte Porz**	**0.64**	**275**	⇓P	**Pg**	**23 42 50.6**	**-1.0**
RMP				S	**Sb**	**23 43 01.0**	**-0.2**
RMP				AML	AML		
	comp=E,7630μm,1.3s						
RMP				AML	AML		
	comp=N,6375μm,1.4s						
LAV9	**Lanuvio**	**0.64**	**263**	⇓P	**Pg**	**23 42 50.9**	**-0.8**
LAV9				AML	AML		
	comp=E,14150μm,1.2s						
LAV9				AML	AML		
	comp=E,28950μm,1.1s						
LAV9				AML	AML		
	comp=N,13300μm,1.4s						
LAV9				AML	AML		
	comp=E,28950μm,1.1s						
LAV9				AML	AML		
	comp=N,12950μm,1.4s						
MSC	**Monte Massico**	**0.65**	**151**	P	**Pg**	**23 42 50.6**	**-1.2**
MTCE	**Montecelio**	**0.66**	**294**	⇓P	**Pg**	**23 42 50.8**	**-1.2**
MTCE				S	**Sg**	**23 43 00.6**	**0.0**
MTCE				AML	AML		
	comp=E,3590μm,0.6s						
MTCE				AML	AML		
	comp=N,3050μm,1.0s						
MODR	**Mondragone**	**0.66**	**158**	P	**Pg**	**23 42 50.6**	**-1.5**
MODR				AML	AML		
	comp=E,1450μm,0.6s						
MODR				AML	AML		
	comp=N,2480μm,0.5s						
MA9	**Marino**	**0.67**	**271**	⇓P	**Pg**	**23 42 51.1**	**-1.1**
MA9				S	**Sg**	**23 43 01.3**	**+0.3**
MA9				AML	AML		
	comp=E,6620μm,0.6s						
MA9				AML	AML		
	comp=N,5330μm,0.4s						
GIGS	**Gran Sasso**	**0.69**	**1**	P	**Pg**	**23 42 51.5**	**-1.0**
GIGS				AML	AML		
	comp=E,154μm,0.5s						
GIGS				AML	AML		
	comp=N,132μm,0.6s						
SAMA	**S.Maria delle**	**0.72**	**272**	⇓P	**Pg**	**23 42 51.9**	**-1.2**
SAMA				S	**Sg**	**23 43 02.7**	**+0.2**
SAMA				AML	AML		
	comp=N,2460μm,0.8s						
SAMA				AML	AML		
	comp=E,3175μm,0.6s						
SGG	**Gregorio Mates**	**0.73**	**121**	⇑P	**Pg**	**23 42 52.2**	**-1.0**
SGG				AML	AML		
	comp=N,11nm,1.1s						
SGG				AML	AML		
	comp=E,8.0nm,0.6s						
SGG				AML	AML		
	comp=N,11nm,1.1s						
SGG				AML	AML		
	comp=N,2920μm,1.1s						
SGG				AML	AML		
	comp=E,2650μm,0.6s						
PIGN	**Pignataro Magg**	**0.73**	**140**	P	**Pg**	**23 42 52.4**	**-1.1**
PIGN				AML	AML		
	comp=N,1290μm,0.8s						
PIGN				AML	AML		
	comp=E,1220μm,0.6s						
PIGN				AML	AML		
	comp=E,1245μm,0.6s						
PIGN				AML	AML		
	comp=N,1330μm,0.7s						
TRIV	**Trivento**	**0.75**	**89**	⇑P	**Pg**	**23 42 52.4**	**-1.3**
TRIV				AML	AML		
	comp=E,1530μm,0.6s						
TRIV				AML	AML		
	comp=N,1170μm,0.8s						
TRIV				AML	AML		
	comp=E,1760μm,0.6s						
TRIV				AML	AML		
	comp=N,1170μm,0.8s						
TRIV				AML	AML		
	comp=E,1680μm,0.6s						
TRIV				AML	AML		
	comp=E,1800μm,0.6s						
TRIV				AML	AML		
	comp=N,1585μm,1.1s						
TRIV				AML	AML		
	comp=N,1580μm,1.1s						
CAFR	**Castel Frentan**	**0.75**	**52**	⇑P	**Pg**	**23 42 52.7**	**-1.1**
CAFR				AML	AML		
	comp=E,1775μm,1.4s						
CAFR				AML	AML		
	comp=N,1815μm,0.3s						
CAFR				AML	AML		
	comp=E,1855μm,0.6s						
CAMP	**Campotosto**	**0.78**	**352**	P	**Pg**	**23 42 53.0**	**-1.3**
RM33	**Pellescritta (**	**0.79**	**342**	P	**Pg**	**23 42 52.9**	**-1.5**
RM33				AML	AML		
	comp=E,2305μm,0.9s						
RM33				AML	AML		
	comp=E,2310μm,0.9s						
RM33				AML	AML		
	comp=N,2105μm,0.9s						
BSSO	**Busso**	**0.81**	**105**	⇑P	**Pg**	**23 42 53.8**	**-1.1**
BSSO				AML	AML		
	comp=N,2800μm,1.0s						
BSSO				AML	AML		
	comp=N,1028μm,1.1s						
BSSO				AML	AML		
	comp=E,1630μm,1.0s						
BSSO				AML	AML		
	comp=N,2805μm,1.0s						
BSSO				AML	AML		
	comp=E,3815μm,1.0s						
PTRJ	**Pietraroja**	**0.83**	**118**	⇑P	**Pg**	**23 42 53.9**	**-1.4**
PTRJ				AML	AML		
	comp=N,1700μm,0.5s						
PTRJ				AML	AML		
	comp=E,1720μm,0.7s						
PTRJ				AML	AML		
	comp=N,1855μm,0.5s						
PTRJ				AML	AML		
	comp=E,1975μm,0.7s						
TERO	**Teramo**	**0.86**	**3**	⇑P	**Pg**	**23 42 54.0**	**-1.8**
TERO				AML	AML		
	comp=E,2340μm,0.8s						
TERO				AML	AML		
	comp=N,2705μm,0.7s						
TERO				AML	AML		
	comp=E,953μm,0.9s						
TERO				AML	AML		
	comp=N,1105μm,0.7s						
TERO				AML	AML		
	comp=N,2710μm,0.7s						
FRES	**Fresagrandinar**	**0.86**	**75**	⇑P	**Pg**	**23 42 54.0**	**-1.8**
SMA1	**SAN MARTINO**	**0.88**	**350**	P	**Pg**	**23 42 55.1**	**-1.1**
SMA1				AML	AML		
	comp=E,2930μm,0.6s						
SMA1				AML	AML		
	comp=N,2770μm,0.8s						
SRES	**S.Oreste - Sor**	**0.91**	**302**	P	**Pg**	**23 42 54.7**	**-2.1**
SRES				S	**Sg**	**23 43 08.9**	**+0.3**
SRES				AML	AML		
	comp=E,1495μm,0.9s						
SRES				AML	AML		
	comp=N,1325μm,0.5s						
LNSS	**Leonessa**	**0.92**	**336**	⇑P	**Pg**	**23 42 55.3**	**-1.7**
LNSS				AML	AML		
	comp=E,2470μm,0.9s						
LNSS				AML	AML		
	comp=N,2455μm,1.2s						
LNSS				AML	AML		
	comp=N,2460μm,1.2s						
SACR	**S. Croce Del S**	**0.94**	**112**	P	**Pg**	**23 42 55.5**	**-1.8**
SACR				AML	AML		
	comp=E,1012μm,1.4s						
SACR				AML	AML		
	comp=N,1245μm,0.7s						
SACR				AML	AML		
	comp=E,1100μm,1.4s						
SACR				AML	AML		
	comp=N,1275μm,0.7s						
VENT	**Ventotene**	**0.97**	**186**	P	**Pg**	**23 42 56.2**	**-1.7**
VENT				S	**Sg**	**23 43 10.5**	**-0.1**
VITU	**Vitulano (BN)**	**1.00**	**125**	P	**Pg**	**23 42 57.1**	**-1.3**
VITU				AML	AML		
	comp=E,677μm,0.4s						
VITU				AML	AML		
	comp=E,676μm,0.4s						
VITU				AML	AML		
	comp=N,2245μm,0.4s						
VITU				AML	AML		
	comp=E,1735μm,0.9s						
VITU				AML	AML		
	comp=N,2340μm,0.4s						
CIGN	**Sant'Elia a Pi**	**1.02**	**96**	P	**Pg**	**23 42 56.9**	**-1.9**
GATE	**Gambatesa**	**1.05**	**103**	P	**Pb**	**23 42 58.5**	**-0.9**
PAOL	**Paolisi**	**1.06**	**133**	⇓P	**Pb**	**23 42 59.0**	**-0.5**
PAOL				AML	AML		
	comp=E,560μm,0.4s						
PAOL				AML	AML		
	comp=E,564μm,0.7s						
PAOL				AML	AML		
	comp=N,1044μm,0.8s						
PAOL				AML	AML		
	comp=N,1032μm,0.8s						
PSB1	**Pescosannita**	**1.09**	**119**	⇓P	**Pb**	**23 42 58.7**	**-1.3**
PSB1				AML	AML		
	comp=E,1260μm,0.6s						
PSB1				AML	AML		
	comp=E,1260μm,0.6s						
PSB1				AML	AML		
	comp=N,922μm,1.1s						
PSB1				AML	AML		
	comp=N,1010μm,1.1s						
CESX	**Cesi**	**1.11**	**320**	P	**Pb**	**23 42 59.2**	**-1.3**
CESX				AML	AML		
	comp=E,1105μm,0.9s						
CESX				AML	AML		
	comp=N,1155μm,1.6s						
NRCA	**Norcia**	**1.12**	**343**	P	**Pb**	**23 42 58.7**	**-1.9**
NRCA				AML	AML		
	comp=N,953μm,0.9s						
NRCA				AML	AML		
	comp=E,859μm,0.5s						
NRCA				AML	AML		
	comp=E,840μm,0.5s						
NRCA				AML	AML		
	comp=N,908μm,0.9s						
MELA	**Melanico ??? S**	**1.18**	**92**	P	**Pb**	**23 42 59.0**	**-2.5**
MELA				AML	AML		
	comp=E,1305μm,0.5s						
MELA				AML	AML		
	comp=E,1265μm,0.5s						
MELA				AML	AML		
	comp=N,1175μm,0.6s						
MELA				AML	AML		
	comp=N,1135μm,0.6s						
TOLF	**Tolfa**	**1.20**	**285**	⇑P	**Pn**	**23 43 00.2**	**-1.6**
TOLF				AML	AML		
	comp=N,1011μm,0.6s						
TOLF				AML	AML		
	comp=E,1084μm,0.6s						
MRB1	**Monte Rocchett**	**1.24**	**120**	P	**Pn**	**23 43 02.4**	**-0.1**
MRB1				AML	AML		
	comp=E,1530μm,0.6s						
MRB1				AML	AML		
	comp=N,1560μm,0.5s						
MRB1				AML	AML		
	comp=E,1525μm,0.6s						
MRB1				AML	AML		
	comp=N,1605μm,0.5s						
MOMA	**Monte Martano**	**1.27**	**325**	P	**Pn**	**23 43 02.0**	**-0.9**
MOMA				AML	AML		
	comp=N,1235μm,1.3s						
MOMA				AML	AML		
	comp=N,1030μm,1.3s						
MOMA				AML	AML		
	comp=E,938μm,0.6s						
MOMA				AML	AML		
	comp=E,974μm,0.8s						
FDMO	**Fiordimonte**	**1.32**	**345**	P	**Pn**	**23 43 02.7**	**-0.8**
FDMO				AML	AML		
	comp=E,508μm,0.4s						
FDMO				AML	AML		
	comp=N,634μm,1.3s						
CESI	**CESI - Serrava**	**1.33**	**339**	P	**Pn**	**23 43 04.0**	**+0.3**
CESI				AML	AML		
	comp=E,239μm,1.4s						
CESI				AML	AML		
	comp=N,372μm,1.6s						
CSP1	**Cessapalombo**	**1.35**	**349**	P	**Pn**	**23 43 03.5**	**-0.6**
ASSB	**Assisi San Ben**	**1.44**	**333**	P	**Pn**	**23 43 05.0**	**-0.2**
ASSB				AML	AML		
	comp=E,573μm,1.3s						
ASSB				AML	AML		
	comp=N,887μm,1.1s						
CAFE	**Carife**	**1.47**	**120**	⇓P	**Pn**	**23 43 05.5**	**0.0**
CAFE				AML	AML		
	comp=N,360μm,1.4s						
CAFE				AML	AML		
	comp=E,472μm,0.7s						
SGTA	**Sant Agata di**	**1.50**	**114**	⇓P	**Pb**	**23 43 06.7**	**-0.3**
SGTA				AML	AML		
	comp=N,472μm,0.6s						
SGTA				AML	AML		
	comp=E,537μm,0.8s						
SNAL	**S. Angelo Dei**	**1.50**	**123**	⇓P	**Pn**	**23 43 05.8**	**-0.3**
SNAL				AML	AML		
	comp=E,572μm,0.8s						
SNAL				AML	AML		
	comp=E,564μm,0.8s						
SNAL				AML	AML		
	comp=N,489μm,1.6s						
SNAL				AML	AML		
	comp=N,544μm,1.1s						
TREM	**Isole Tremiti**	**1.51**	**75**	AML	AML		
	comp=N,938μm,0.6s						
TREM				AML	AML		
	comp=E,974μm,0.7s						
MGAB	**Montegabbione**	**1.57**	**318**	P	**Pn**	**23 43 07.2**	**+0.2**
MGAB				AML	AML		
	comp=E,578μm,1.3s						
MGAB				AML	AML		
	comp=N,426μm,0.6s						
MGAB				AML	AML		
	comp=E,660μm,1.3s						
MGAB				AML	AML		
	comp=N,420μm,0.4s						
ATCC	**AVT- Casa Cast**	**1.57**	**335**	P	**Pb**	**23 43 08.3**	**+0.1**
ATCC				AML	AML		
	comp=E,911μm,1.2s						
ATCC				AML	AML		
	comp=N,948μm,0.6s						
EL6	**Elcito**	**1.60**	**348**	P	**Pg**	**23 43 09.9**	**0.0**
EL6				AML	AML		
	comp=N,1140μm,1.2s						
EL6				AML	AML		
	comp=E,965μm,0.7s						
SACS	**San Casciano d**	**1.63**	**312**	⇑P	**Pn**	**23 43 08.3**	**+0.4**
SACS				AML	AML		
	comp=E,246μm,1.5s						
SACS				AML	AML		
	comp=N,354μm,1.2s						
CING	**Cingoli**	**1.63**	**351**	P	**Pg**	**23 43 10.2**	**-0.3**
CING				AML	AML		
	comp=N,370μm,0.7s						
CING				AML	AML		
	comp=E,574μm,0.8s						
FOSV	**Fossato di Vic**	**1.64**	**339**	P	**Pg**	**23 43 10.2**	**-0.4**

FOSV AML AML
comp=N,644µm,0.7s
FOSV AML AML
comp=E,433µm,1.2s
SGRT San Giovanni R 1.64 90 P **Pn 23 43 08.3 +0.3**
SGRT AML AML
comp=N,382µm,0.7s
SGRT AML AML
comp=E,492µm,1.5s
VULT Monte Vulture 1.75 117 ⇓P **Pn 23 43 10.0 +0.4**
VULT AML AML
comp=N,558µm,0.6s
VULT AML AML
comp=E,414µm,0.9s
MRLC Muro Lucano 1.77 124 ⇓P **Pn 23 43 09.6 -0.2**
MRLC AML AML
comp=N,222µm,1.4s
MRLC AML AML
comp=E,206µm,0.6s
ARVD Arcevia 1.79 346 ⇑P **Pb 23 43 11.6 -0.4**
ARVD AML AML
comp=E,374µm,0.9s
ARVD AML AML
comp=N,296µm,1.2s
CAPA Cerignola FG 1.81 109 P **Pn 23 43 10.8 +0.7**
CAPA AML AML
comp=N,765µm,1.0s
CAPA AML AML
comp=E,732µm,1.6s
ATMI Monte Miggiano 1.83 329 P **Pb 23 43 13.4 +0.7**
ATMI AML AML
comp=N,728µm,0.8s
ATMI AML AML
comp=E,709µm,1.2s
CDRU Civita di Ruta 1.84 133 ⇑P **Pn 23 43 10.0 -0.6**
CDRU AML AML
comp=E,109µm,0.8s
CDRU AML AML
comp=N,101µm,0.3s
FRON Frontone 1.86 341 P **Pb 23 43 13.6 +0.5**
FRON AML AML
comp=E,334µm,1.4s
FRON AML AML
comp=N,354µm,0.5s
ATPI Pietralunga - 1.89 334 AML AML
comp=N,359µm,0.8s
ATPI AML AML
comp=E,277µm,0.9s
CAFI Castiglion Fio 1.96 324 P **Pn 23 43 13.3 +1.0**
CAFI AML AML
comp=N,174µm,0.8s
CAFI AML AML
comp=E,178µm,1.3s
PALZ Palazzo San Ge 1.99 113 ⇑P **Pn 23 43 13.2 +0.5**
PALZ AML AML
comp=E,476µm,1.4s
PALZ AML AML
comp=N,506µm,1.5s
MRVN Minervino Murg 2.11 109 ⇓P **Pn 23 43 14.5 +0.2**
MRVN AML AML
comp=E,97µm,1.2s
MRVN AML AML
comp=N,152µm,0.6s
MTSN Montesano sull 2.24 131 ⇓P **Pn 23 43 16.8 +0.6**
MTSN AML AML
comp=N,90µm,0.6s
MTSN AML AML
comp=E,106µm,0.8s
CASP Castiglione de 2.24 298 P **Pn 23 43 15.7 -0.4**
ZIRJ Zirje 2.44 39 *e*Pn **Pn 23 43 18.7 -0.2**
AMUR Altamura 2.45 109 ⇑P **Pn 23 43 19.8 +0.7**
AMUR AML AML
comp=E,172µm,0.5s
AMUR AML AML
comp=N,153µm,1.3s
MIGL Miglionico 2.47 117 ⇓P **Pn 23 43 20.5 +1.2**
MIGL AML AML
comp=N,454µm,0.8s
MIGL AML AML
comp=E,405µm,0.9s
DUGI Dugi Otok 2.49 26 *e*Pn **Pn 23 43 20.1 +0.5**
HVAR Hvar 2.57 56 *e*Pn **Pn 23 43 21.7 +1.0**
MATE Matera 2.63 114 ⇑P **Pn 23 43 22.0 +0.6**
NOCI Noci 2.82 109 ⇑P **Pn 23 43 25.3 +1.1**
NOCI AML AML
comp=N,122µm,1.3s
NOCI AML AML
comp=E,92µm,0.4s
KIJV Kijevo 3.07 42 *e*Pn **Pn 23 43 28.8 +1.2**
KIJV Sn **Sn 23 44 00.8 -3.4**
RICI Ricice 3.16 56 *e*Pn **Pn 23 43 29.5 +0.7**
SPS2 Spezzano della 3.25 138 S **Sn 23 44 09.0 +0.1**
STON Ston 3.27 69 *e*Pn **Pn 23 43 30.1 -0.1**
PGF Pioggiola 3.47 285 *e*P **Pn 23 43 33.1 -0.1**
PGF *e*Sn **Sn 23 44 09.7 -4.6**
comp=E,10nm,0.4s
PGF Pioggiola 3.47 285 P **Pn 23 43 33.6 +0.4**
PGF AML AML
comp=E,65µm,1.0s
PGF AML AML
comp=N,53µm,0.7s
TIP Timpagrande 3.56 135 ⇑P **Pn 23 43 37.2 +2.9**
GRI Girifalco 3.67 142 P **Pn 23 43 36.7 +0.9**
TREB Trebinje 3.69 73 *e*Pn **Pn 23 43 37.4 +1.3**
TREB *e*Sn **Sn 23 44 16.2 -3.3**
TREB Trebinje 3.69 73 *e*Pn **Pn 23 43 37.0 +0.9**
MGRS Mrkonjic Grad 3.71 43 *e*Pn **Pn 23 43 36.9 +0.6**
HCY Herceg Novi 3.74 78 *e*Pn **Pn 23 43 37.2 +0.4**
HCY Herceg Novi 3.74 78 ⇓*i*Pn **Pn 23 43 37.8 +1.0**
HCY *i* Sn **Sn 23 44 23.0 +2.2**
BRY Bratogost 3.87 71 *e*Pn **Pn 23 43 39.6 +0.9**
BRY Bratogost 3.87 71 ⇓*i*Pn **Pn 23 43 39.7 +1.0**
BRY *i* Sn **Sn 23 44 26.2 +2.1**
VSL Villasalto 3.90 236 ⇑P **Pn 23 43 37.9 -1.1**
VSL S **Sn 23 44 24.0 -0.7**
VSL AML AML
comp=E,25µm,1.1s
VSL AML AML
comp=N,27µm,1.5s
TRI Trieste 3.95 2 ⇑P **Pn 23 43 42.8 +3.2**
BLY Banja Luka 3.99 40 *e*Pn **Pn 23 43 41.1 +0.9**
BLY *e*Sn **Sn 23 44 25.1 -1.9**
BLY Banja Luka 3.99 40 *e*Pn **Pn 23 43 38.6 -1.6**
BUM Brajici-Budva 4.02 81 ⇑*i*Pn **Pn 23 43 41.7 +1.1**
BUM *i* Sn **Sn 23 44 29.7 +2.1**
CEY Cerknica 4.03 9 *e*Pn **Pn 23 43 41.7 +1.0**
CGL Cagliari Serpe 4.03 235 ⇑P **Pn 23 43 39.9 -1.0**
MRAK Mrakovica 4.06 36 *e*Pn **Pn 23 43 42.1 +0.8**
CEME Cevo 4.07 77 ⇑*i*Pn **Pn 23 43 42.4 +1.1**
CEME *i* Sn **Sn 23 44 31.0 +2.1**
NKME Niksic 4.13 74 ⇑*i*Pn **Pn 23 43 43.3 +1.1**
NKME *i* Sn **Sn 23 44 32.5 +2.0**
NKY Niksic 4.17 74 *e*Pn **Pn 23 43 43.8 +1.0**
NKY *i* Sn **Sn 23 44 33.5 +2.0**
UPM Unac-Piva 4.21 68 *e*Pn **Pn 23 43 44.8 +1.4**
UPM Unac-Piva 4.21 68 ⇓*i*Pn **Pn 23 43 44.4 +1.0**
UPM *i* Sn **Sn 23 44 34.5 +1.8**
DRME Dracevica, Mon 4.22 82 *e*Pn **Pn 23 43 44.7 +1.3**
DRME Dracevica, Mon 4.22 82 ⇑*i*Pn **Pn 23 43 44.5 +1.1**
DRME *i* Sn **Sn 23 44 34.5 +1.9**
ULC Ulcinj 4.26 85 ⇓*i*Pn **Pn 23 43 45.0 +1.1**
ULC *i* Sn **Sn 23 44 35.5 +2.0**
CRES Cresnjev 4.29 18 *e*Pn **Pn 23 43 44.1 -0.2**
PDG Podgorica 4.30 79 *e*Pn **Pn 23 43 45.6 +1.2**
PDG *e*Sn **Sn 23 44 32.9 -1.5**
PDG Podgorica 4.30 79 ⇑P **Pn 23 43 46.2 +1.8**
PDG Podgorica 4.30 79 *e*Pn **Pn 23 43 45.4 +1.0**
TTG Podgorica 4.30 79 ⇓*i*Pn **Pn 23 43 45.6 +1.2**
TTG *i* Sn **Sn 23 44 36.5 +2.1**
KOME Kolasin 4.55 74 *e*Pn **Pn 23 43 49.2 +1.2**
KOME *i* Sn **Sn 23 44 42.7 +1.7**
PLE Pljevlja 4.59 68 *e*Pn **Pn 23 43 49.7 +1.2**
PLE *i* Sn **Sn 23 44 43.6 +1.8**
HAPS Han Pijesak,Bl 4.59 58 *e*Pn **Pn 23 43 49.9 +1.3**
HAPS *e*Sn **Sn 23 44 38.7 -3.3**
HAPS Han Pijesak,Bl 4.59 58 *e*Pn **Pn 23 43 48.8 +0.2**
RUDO Rudo 4.67 65 *e*Pn **Pn 23 43 46.3 -3.3**
TIR Tirane 4.76 93 *e*Pn **Pn 23 43 51.7 +1.0**
TIR *e*Sn **Sn 23 44 44.0 -1.8**
TIR Tirane 4.76 93 ⇑P **Pn 23 43 52.2 +1.5**
BBLS Lazići 4.79 62 *e*Pn **Pn 23 43 52.0 +0.7**
BBLS *e*Sn **Sn 23 44 42.2 -4.6**
BBLS Lazići 4.79 62 *e*Pn **Pn 23 43 53.3 +2.0**

OBKA Obir 4.80 8 Pn **Pn 23 43 53.3 +1.9**
comp=N,1.2nm,0.3s,SNR=5.4
OBKA *e*Sn **Sn 23 44 47.4 +0.5**
comp=N,11nm,0.7s
IVA Berane 4.83 75 *e*Pn **Pn 23 43 53.0 +1.2**
IVA *i* Sn **Sn 23 44 49.4 +1.6**
PVY Plav 4.83 78 ⇓*i*Pn **Pn 23 43 53.1 +1.2**
PVY *i* Sn **Sn 23 44 49.4 +1.5**
MYKA Terra Mystica 4.87 1 *e*Pn **Pn 23 43 54.7 +2.4**
comp=N,1.3nm,0.2s
MYKA *e*Sn **Sn 23 44 49.6 +1.0**
comp=N,7.1nm,0.7s
SBF Sospel 4.96 297 *e*P **Pn 23 43 53.8 +0.2**
SBF *e*Sn **Sn 23 44 44.8 -6.2**
comp=N,17nm,0.8s
SOKA Soboth 5.03 12 *e*Sn **Sn 23 44 53.9 +1.3**
comp=N,3.0nm,0.4s
ABTA Abfaltersbach 5.04 352 Pn **Pn 23 43 55.5 +0.8**
comp=N,3.2nm,0.5s,SNR=5.1
ABTA *e*Sn **Sn 23 44 54.4 +1.5**
comp=N,13nm,0.9s
IVAS Ivanjica 5.19 67 *e*Pn **Pn 23 43 57.4 +0.6**
IVAS *e*Sn **Sn 23 44 53.4 -3.3**
DIVS Divibare 5.27 62 *e*Pn **Pn 23 43 57.9 0.0**
DIVS *e*Sn **Sn 23 44 53.8 -4.8**
DIVS Divibare 5.27 62 *e*Pn **Pn 23 43 58.7 +0.8**
KBA Koelnbreinsper 5.32 358 *e*Pn **Pn 23 44 00.9 +2.3**
comp=N,1.0nm,0.3s
KBA *e*Sn **Sn 23 44 59.5 -0.3**
comp=N,2.6nm,0.3s
FRF La Foret Royal 5.40 292 *e*P **Pn 23 43 59.3 -0.2**
FRF *e*Sn **Sn 23 44 55.3 -6.3**
comp=N,0.2nm,0.2s
LMR La Mourre 5.43 289 *e*P **Pn 23 43 59.7 -0.3**
LMR La Mourre 5.43 289 *e*Pg **Pb 23 44 16.7 +2.7**
LMR *e*Sn **Sn 23 44 56.4 -6.1**
comp=N,9.3nm,0.6s
TRUS Trudelj 5.60 62 *e*Pn **Pn 23 44 03.0 +0.7**
TRUS *e*Sn **Sn 23 45 01.7 -4.8**
FETA Feichten 5.63 340 *e*Pn **Pn 23 44 06.5 +3.6**
comp=N,1.2nm,0.5s
FETA *e*Sn **Sn 23 45 07.7 +0.1**
comp=N,3.1nm,0.7s
ARSA Arzberg 5.67 14 *e*Pn **Pn 23 44 06.2 +3.0**
comp=N,4.6nm,0.8s
ARSA *e*Sn **Sn 23 45 09.2 +1.0**
comp=N,1.5nm,0.3s
DAVOX Davos/Dischmat 5.67 334 Pn **Pn 23 44 05.4 +2.0**
comp=N,0.3nm,0.3s,baz=147,slow=17,SNR=2.9
DAVOX Sn **Sn 23 45 08.5 +0.1**
comp=N,0.3nm,0.3s,baz=107,slow=19,SNR=1.6
WTTA Wattenberg 5.67 347 *e*Pn **Pn 23 44 06.4 +3.0**
comp=N,0.8nm,0.3s
WTTA *e*Sn **Sn 23 45 08.6 +0.1**
comp=N,7.5nm,0.6s
FRGS Fruska Gora 5.68 51 *e*Pn **Pn 23 44 06.7 +3.3**
SQTA Sankt Quirin 5.71 344 *e*Pn **Pn 23 44 06.3 +2.4**
comp=N,0.6nm,0.2s
SQTA *e*Sn **Sn 23 45 10.1 +0.7**
comp=N,5.8nm,0.4s
WATA Walderalm 5.75 346 *e*Pn **Pn 23 44 07.3 +2.8**
comp=N,0.9nm,0.3s
WATA *e*Sn **Sn 23 45 10.2 -0.2**
comp=N,1.9nm,0.3s
MBDF Montbardon 5.77 303 *e*P **Pn 23 44 06.2 +1.4**
MBDF *e*Sn **Sn 23 45 04.2 -6.8**
comp=N,0.7nm,0.2s
MORH Mrgy, Hungar 5.77 38 *e*Pn Pn 23 43 59.5 -5.1
SELS Selova 5.78 73 *e*Pn **Pn 23 44 05.5 +0.7**
MOTA Moosalm 5.85 343 *e*Pn **Pn 23 44 08.9 +3.0**
comp=N,0.5nm,0.3s
MOTA *e*Sn **Sn 23 45 14.5 +1.6**
comp=N,5.4nm,0.7s
RETA Reutte 6.06 342 *e*Pn **Pn 23 44 11.0 +2.3**
comp=N,0.9nm,0.3s
RETA *e*Sn **Sn 23 45 18.9 +1.0**
comp=N,4.0nm,0.7s
MOA Molln 6.11 5 Pn **Pn 23 44 10.1 +0.8**
comp=N,1.7nm,0.5s,SNR=13
MOA *e*Sn **Sn 23 45 19.2 +0.1**
comp=N,0.6nm,0.2s
DAVA Damuels 6.11 336 *e*Pn **Pn 23 44 12.4 +2.9**
comp=N,1.2nm,0.4s
DAVA *e*Sn **Sn 23 45 20.0 +0.6**
comp=N,1.3nm,0.3s
LPG La Plagne 6.19 309 *e*P **Pn 23 44 13.3 +2.7**
LPL La Plagne 6.21 309 *e*P **Pn 23 44 12.8 +1.9**
BARS Barje 6.22 78 *e*Pn **Pn 23 44 09.8 -1.0**
BARS *e*Sn **Sn 23 45 18.7 -3.2**
SMRF Simiane la Rot 6.26 293 *e*P **Pn 23 44 13.1 +1.6**
SMRF *e*Sn **Sn 23 45 16.2 -6.8**
comp=N,0.6nm,0.4s
BOVS Bovan 6.29 70 *e*Pn **Pn 23 44 12.0 +0.2**
BOVS Bovan 6.29 70 ⇑P **Pn 23 44 12.7 +0.9**
CONA Conrad Observa 6.38 14 Pn **Pn 23 44 14.6 +1.5**
comp=N,0.8nm,0.3s,SNR=6.6
CONA *e*Sn **Sn 23 45 24.3 -1.6**
comp=N,1.6nm,0.4s
ORIF Oris-en-Rattie 6.42 302 *e*P **Pn 23 44 15.6 +1.9**
STIP Stip 6.46 88 *i* Pn **Pn 23 44 17.8 +3.6**
MDVR Moldovita 6.68 60 ⇓P **Pn 23 44 17.9 +0.8**
BOSS Bosilegrad 6.68 81 *e*Pn **Pn 23 44 18.3 +1.1**
ZAGS Zajecar 6.71 69 *e*Pn **Pn 23 44 18.4 +0.9**
KEST Kesra 6.86 210 Pn **Pn 23 44 22.6 +2.9**
comp=N,1.0nm,0.3s,baz=7.4,slow=12,SNR=19
KEST Sn **Sn 23 45 34.9 -2.9**
baz=310,slow=18,SNR=1.0
ZAPS Zavoj 6.88 74 *e*Pn **Pn 23 44 21.5 +1.6**
CKRC Cesky Krumlov 7.08 4 *e*PN **Pn 23 44 25.6 +3.0**
CKRC *e*SN **Sn 23 45 41.4 -1.6**
GERES GERESS Array B 7.08 1 Pn **Pn 23 44 23.6 +0.9**
comp=N,0.4nm,0.3s,baz=174,slow=13,SNR=10
GERES Sn **Sn 23 45 42.1 -1.1**
comp=N,0.6nm,0.3s,baz=175,slow=25,SNR=7.5
VIVF Saint-Julien-l 7.17 298 *e*P **Pn 23 44 25.4 +1.4**
VIVF *e*Sn **Sn 23 45 37.7 -7.7**
comp=N,0.4nm,0.3s
HERR Herculane 7.18 61 ⇓P **Pn 23 44 26.7 +2.7**
CABF La Chapelle 7.23 315 *e*P **Pn 23 44 26.6 +1.9**
CABF *e*Sn **Sn 23 45 39.2 -7.6**
comp=N,0.2nm,0.2s
VTS Vitosha 7.24 80 ⇑P **Pn 23 44 26.4 +1.4**
KHC Kasperske Hory 7.37 0 *e*PN **Pn 23 44 28.6 +2.0**
KHC *e*SN **Sn 23 45 47.1 -3.1**
LASF Ste Croix 7.48 291 *e*P **Pn 23 44 29.9 +1.7**
LASF *e*Sn **Sn 23 45 45.0 -7.9**
comp=N,0.4nm,0.3s
GZR Gura Zlata 7.62 58 ⇓P **Pn 23 44 31.2 +1.1**
VYHS Vyhne 7.70 27 *e*PN **Pn 23 44 33.0 +1.9**
VYHS *e*SN **Sn 23 45 55.3 -2.9**
HINF Hinteralfeld 7.70 324 *e*P **Pn 23 44 33.4 +2.2**
HINF *e*Sn **Sn 23 45 50.6 -7.7**
comp=N,3.6nm,0.7s
DEV Deva 7.92 56 P **Pn 23 44 35.9 +1.8**
CDF Champ du Feu 7.99 328 *e*P **Pn 23 44 35.2 0.0**
CDF Champ du Feu 7.99 328 *e*Pg Pb 23 45 04.6 +7.0
HAU Haudompre 8.07 323 *e*P **Pn 23 44 38.5 +2.3**
HAU Haudompre 8.07 323 *e*Pg Pg 23 45 07.0 -6.5
HAU *e*Sn **Sn 23 45 58.8 -8.5**
comp=N,4.2nm,0.6s
DRGR 8.27 49 ⇑P **Pn 23 44 41.8 +2.8**
MTLF Montolieu 8.52 284 *e*P **Pn 23 44 44.2 +1.9**
MTLF *e*Sn **Sn 23 46 10.2 -8.1**
comp=N,0.3nm,0.3s
ARR Arges 8.81 62 ⇑P **Pn 23 44 49.5 +3.0**
LOR Lormes 8.84 312 *e*P **Pn 23 44 48.0 +1.2**
LOR Lormes 8.84 312 *e*Pg Pg 23 45 22.1 -6.3
CAF Calviac 8.95 295 *e*P **Pn 23 44 49.5 +1.2**
MEZF Maizieres J'vi 9.02 321 *e*Pn **Pn 23 44 45.8 -3.4**
MEZF *e*Sn Sn 23 46 21.7 -9.0
comp=N,0.6nm,0.2s
VOIR 9.12 62 ⇑P **Pn 23 44 53.2 +2.6**
MLR Muntele Rosu 9.73 63 Pn **Pn 23 45 01.5 +2.4**
comp=N,0.1nm,0.3s,baz=256,slow=8.3,SNR=5.9
MLR Muntele Rosu 9.73 63 ⇑P **Pn 23 45 02.0 +2.9**
OZUR 9.83 60 ⇑P **Pn 23 45 03.0 +2.7**
NEHR Nehoiu 9.94 64 ⇑P **Pn 23 45 04.6 +2.7**
BAIF Baives 10.54 325 *e*P **Pn 23 45 13.0 +3.0**
BAIF Baives 10.54 325 *e*Pg Pn 23 45 51.8 +42
FINES FINESS Array B 21.12 17 P **P 23 47 25.9 +2.5**
comp=N,1.1nm,0.7s,baz=210,slow=11,SNR=4.7
MKAR Makanchi Array 48.05 59 P **P 23 51 19.9 +1.6**
comp=N,0.4nm,0.8s,baz=292,slow=9.2,SNR=1.9

*IDC **26** 23:54:44.0±1.7, 43°.68N×105°.35W, h0km, mb3.8/1, mb1 3.7/5, mb1mx3.3/52, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=44.1km s-min=8.3km az=150.0*
*ANF **26** 23:54:46.0±0.4, 43°.78N×105°.24W, h1km, ML3.6/15, Error ellipse: s-maj=4.8km s-min=3.4km az=97.0, Hypocentre not reviewed by the ISC*
*NEIC **26** 23:54:46.4±1.6, 43°.77N±0°.03×105°.27W±0°.07, h0km±2km, ML3.3/68, Error ellipse: s-maj=9.3km s-min=3.2km az=68.0*

ISC 26 23:54:46.1±0.8, 43°.85N±0°.07×105°.17W±0°.06, h0km, n103, σ1s08/103, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.86**	**71**		**Pg**	**23 55 03.2**	**+0.6**
RSSD	**Black Hills**	**0.86**	**71**	P		23 55 03.2	
	baz=249						
K22A	**Casper**	**1.55**	**220**		**Pn**	**23 55 11.7**	**-3.5**
K22A				IAML		23 55 36.2	
	comp=N,564nm,0.3s						
K22A				IAML		23 55 36.9	
	comp=E,606nm,0.3s						
K22A	**Casper**	**1.55**	**220**	P		23 55 11.8	
	baz=39,SNR=283						
K22A				S		23 55 34.4	
	baz=39						
PHWY	**Pilot Hill**	**2.55**	**185**		**Pn**	**23 55 28.1**	**-0.9**
RWWY	**Rawlins**	**2.63**	**216**		**Pn**	**23 55 28.6**	**-1.4**
RWWY				IAML		23 56 05.0	
	comp=E,249nm,0.8s						
RWWY				IAML		23 56 08.3	
	comp=E,176nm,0.6s						
LAO	**LASA Array**	**2.94**	**346**		**Pn**	**23 55 34.2**	**+0.1**
LAO	**LASA Array**	**2.94**	**346**	P		23 55 35.4	
	baz=166						
LAO				Sb		23 56 17.5	
	baz=166						
N23A	**Red Feather La**	**3.00**	**191**	P		23 55 34.7	
	baz=10,SNR=51						
N23A				Sb		23 56 17.0	
	baz=10						
RLMT	**Red Lodge**	**3.20**	**295**	Pn	**Pn**	**23 55 37.3**	**-0.6**
RLMT				IAML		23 56 32.5	
	comp=E,70nm,0.7s						
RLMT				IAML		23 56 42.5	
	comp=E,58nm,0.7s						
RLMT	**Red Lodge**	**3.20**	**295**	P		23 55 37.4	
	baz=114,SNR=20						
BW06	**Boulder Array**	**3.38**	**253**		**Pn**	**23 55 39.9**	**-0.5**
BW06				IAML		23 56 29.9	
	comp=E,49nm,0.4s						
BW06				IAML		23 56 40.5	
	comp=E,54nm,0.7s						
BW06	**Boulder Array**	**3.38**	**253**	P		23 55 39.5	
	baz=71,SNR=34						
PD31	**Pinedale Array**	**3.38**	**253**		**Pn**	**23 55 39.8**	**-0.6**
PDAR	**Pinedale Array**	**3.38**	**253**	Pn	**Pn**	**23 55 39.0**	**-1.4**
	comp=E,6.1nm,0.3s,baz=76,slow=12,SNR=73						
PDAR				Lg	Lg	23 56 24.3	
	comp=E,11nm,0.3s,baz=74,slow=32,SNR=13						
PDAR	**Pinedale Array**	**3.38**	**253**	Pn	**Pn**	**23 55 39.1**	**-1.2**
YNE	**Yellowstone No**	**3.66**	**290**		**Pn**	**23 55 43.4**	**-0.8**
YNE				IAML		23 56 41.9	
	comp=N,57nm,0.7s						
YNE				IAML		23 56 54.1	
	comp=E,50nm,0.8s						
YMP	**Mirror Lake Pl**	**3.69**	**286**		**Pn**	**23 55 44.3**	**-0.4**
YMP				IAML		23 56 45.2	
	comp=N,80nm,0.7s						
OGNE	**Ogallala**	**3.71**	**140**	Pn	**Pn**	**23 55 45.5**	**+0.7**
OGNE	**Ogallala**	**3.71**	**140**	P		23 55 44.9	
	baz=321,SNR=12						
GCMT	**Greycliff**	**3.75**	**303**		**Pn**	**23 55 45.1**	**-0.2**
LKWY	**Lake**	**3.83**	**283**		**Pn**	**23 55 46.5**	**-0.1**
LKWY				IAML		23 56 17.4	
	comp=N,49nm,0.6s						
H17A	**Grant Village**	**3.93**	**280**		**Pn**	**23 55 47.5**	**-0.5**
H17A	**Grant Village**	**3.93**	**280**	P		23 55 48.8	
	baz=97,SNR=8.6						
LOHW	**Long Hollow**	**3.95**	**268**		**Pn**	**23 55 48.1**	**0.0**
LOHW				IAML		23 56 52.7	
	comp=N,30nm,0.8s						
FLWY	**Flagg Ranch**	**4.00**	**275**	IAML		23 57 00.5	
	comp=N,53nm,2.0s						
FLWY				IAML		23 57 00.6	
	comp=N,31nm,1.1s						
MOOW	**Moose Ponds**	**4.04**	**271**	Pn	**Pn**	**23 55 49.7**	**+0.3**
YNR	**Norris Junctio**	**4.05**	**284**		**Pn**	**23 55 49.7**	**0.0**
ISCO	**Idaho Springs**	**4.06**	**185**	Pn	**Pn**	**23 55 48.8**	**-0.9**
ISCO				IAML		23 56 56.7	
	comp=N,26nm,0.7s						
ISCO	**Idaho Springs**	**4.06**	**185**	P		23 55 49.4	
	baz=3.9,SNR=8.6						
ISCO				Sb		23 56 49.0	
	baz=3.9						
SNOW	**Snow King Moun**	**4.07**	**267**		**Pn**	**23 55 48.3**	**-1.6**
SNOW				IAML		23 57 04.3	
	comp=N,53nm,0.9s						
SNOW				IAML		23 57 06.5	
	comp=N,40nm,0.8s						
REDW	**Red Top Meadow**	**4.16**	**265**		**Pn**	**23 55 49.9**	**-1.2**
REDW				IAML		23 56 59.2	
	comp=N,54nm,0.7s						
REDW				IAML		23 57 06.9	
	comp=N,45nm,0.8s						
E28A	**Huff**	**4.18**	**48**		**Pn**	**23 55 52.2**	**+1.2**
YHH	**Holmes Hill**	**4.19**	**285**	Pn	**Pn**	**23 55 50.4**	**-1.1**
O20A	**White River Ci**	**4.36**	**213**		**Pn**	**23 55 52.5**	**-1.2**
O20A				IAML		23 57 04.0	
	comp=N,54nm,0.9s						
O20A				IAML		23 57 04.5	
	comp=E,43nm,0.7s						
O20A	**White River Ci**	**4.36**	**213**	P		23 55 53.2	
	baz=30,SNR=9.0						
YHB	**Horse Butte**	**4.42**	**284**		**Pn**	**23 55 54.0**	**-0.6**
YHL	**Hebgen Lake**	**4.43**	**285**		**Pn**	**23 55 53.9**	**-1.0**
YHL				IAML		23 57 11.3	
	comp=N,26nm,0.9s						
YHL				IAML		23 57 14.0	
	comp=E,34nm,0.7s						
AHID	**Auburn Hatcher**	**4.46**	**258**		**Pn**	**23 55 53.6**	**-1.6**
AHID				IAML		23 57 09.2	
	comp=N,61nm,0.8s						
AHID				IAML		23 57 32.2	
	comp=E,31nm,1.0s						
SUSD	**Miller**	**4.51**	**80**	Pn	**Pn**	**23 55 56.1**	**+0.4**
ECR	**Eagle Creek**	**4.59**	**262**		**Pn**	**23 55 57.7**	**+0.7**
QLMT	**Earthquake Lak**	**4.60**	**285**		**Pn**	**23 55 56.8**	**-0.3**
RDMU	**Red Mountain**	**4.63**	**226**		**Pn**	**23 55 56.7**	**-0.7**
RDMU				IAML		23 57 10.2	
	comp=N,34nm,0.9s						
RDMU				IAML		23 57 12.2	
	comp=E,34nm,0.8s						
DGMT	**Dagmar**	**4.67**	**8**	Pn	**Pn**	**23 56 00.0**	**+2.1**
DGMT	**Dagmar**	**4.67**	**8**	P		23 55 59.9	
	baz=189						
DGMT				Sb		23 57 11.4	
	baz=189						
K31A	**O'Neill**	**4.84**	**102**	Pn	**Pn**	**23 56 00.3**	**+0.1**
SMCO	**Snowmass**	**4.86**	**197**	Pn	**Pn**	**23 56 00.0**	**-0.8**
SMCO				IAML		23 57 24.4	
	comp=E,30nm,0.7s						
SMCO				IAML		23 57 28.4	
	comp=E,19nm,0.9s						
Q24A	**Divide**	**4.88**	**180**	Pb		23 56 11.0	
	baz=359						
Q24A				Sb		23 57 15.7	
	baz=359						
BOZ	**Bozeman (W)**	**4.93**	**293**		**Pn**	**23 56 00.4**	**-1.1**
BOZ				IAML		23 57 19.8	
	comp=E,18nm,1.2s						
BOZ				IAML		23 57 26.8	
	comp=E,15nm,0.8s						
BOZ	**Bozeman (W)**	**4.93**	**293**	P		23 56 01.5	
	baz=110						
BOZ				Sb		23 57 16.0	
	baz=110						
KSCO	**Kaye Shedlock'**	**5.19**	**158**		**Pn**	**23 56 04.1**	**-1.0**
KSCO	**Kaye Shedlock'**	**5.19**	**158**	P		23 56 04.4	
	baz=339,SNR=5.8						
HWUT	**Hardware Ranch**	**5.22**	**247**	Pn	**Pn**	**23 56 05.0**	**-0.6**
HWUT				IAML		23 57 40.7	
	comp=E,36nm,0.8s						
HWUT				IAML		23 57 45.7	

comp=E,31nm,0.8s

EGMT	Eagleton	5.26	324		Pn	23 56 06.0	-0.1
EGMT	Eagleton baz=142	5.26	324	P		23 56 06.3	
HRY	Holter Researc	5.51	304		Pn	23 56 09.4	0.0
DLMT	Dillon	5.52	289	Pn	Pn	23 56 07.9	-1.7
LRM	Limekiln Ridge	5.54	293		Pn	23 56 09.1	-1.0
MDND	Maddock	5.58	42	Pn	Pn	23 56 10.4	+0.1
MDND	Maddock baz=226	5.58	42	Sb		23 57 40.6	
MCMT	McKenzie Canyo	5.60	283		Pn	23 56 11.6	+0.7
JLU	Jordanelle	5.68	237		Pn	23 56 11.1	-0.9
BGNE	Belgrade	5.72	113	Pn	Pn	23 56 12.7	+0.4
BGNE	Belgrade baz=297	5.72	113	P		23 56 12.6	
CTU	Camp Tracy	5.81	239	Pn	Pn	23 56 12.8	-0.9
SPUT	South Promonto	5.94	247	Pn	Pn	23 56 15.8	+0.2
BCYI	Bear Canyon	5.95	277		Pn	23 56 15.4	-0.3
HVU	Hansel Valley	5.96	252	Pn	Pn	23 56 13.6	-2.2
HVU				Pg	Pb	23 56 33.5	+2.5
PV22	Blue Mesa, Par	5.97	208	Pn	Pn	23 56 15.3	-0.5
PV07	Paradox Valley	6.01	207		Pn	23 56 15.3	-1.2
P17A	Butcher Ranch,	6.04	226		Pn	23 56 15.5	-1.4
PV15	Paradox Valley	6.04	206		Pn	23 56 15.9	-1.0
SDCO	Great Sand Dun	6.10	183		Pn	23 56 17.6	-0.1
PV04	Paradox Valley	6.13	209	Pn	Pn	23 56 17.6	-0.5
MPU	Maple Canyon	6.16	234	Pn	Pn	23 56 16.7	-1.8
ECSD	EROS Data Cent	6.19	88	Pn	Pn	23 56 20.0	+1.2
PV10	Paradox Valley	6.20	209	Pn	Pn	23 56 19.6	+0.5
PV20	West Nyswonger	6.20	209	Pn	Pn	23 56 18.4	-0.7
PV11	David Mesa, Pa	6.21	208		Pn	23 56 18.6	-0.6
PV19	Morning Glory	6.24	209	Pn	Pn	23 56 18.6	-1.0
PV02	Paradox Valley	6.25	207	Pn	Pn	23 56 19.4	-0.3
PV17	East Wray Mesa	6.25	209	Pn	Pn	23 56 20.1	+0.3
PV01	Paradox Valley	6.26	205		Pn	23 56 19.1	-0.8
PV18	Skein Mesa, Pa	6.27	208		Pn	23 56 19.2	-0.8
PV13	Radium Mtn., P	6.32	207		Pn	23 56 19.9	-0.8
CBKS	Cedar Bluff	6.48	139	Pn	Pn	23 56 23.1	+0.3
PV05	Paradox Valley	6.48	209		Pn	23 56 20.6	-2.5
N33A	J Bar K, Exete	6.51	116	Pn	Pn	23 56 22.8	-0.4
BGU	Big Grassy Mou	6.51	246	Pn	Pn	23 56 22.5	-0.8
F33A	5 Mile Ranch,	6.62	69		Pn	23 56 23.6	-1.0
Q16A	Castle Valley	6.68	225	Pn	Pn	23 56 24.0	-1.7
HLID	Hailey	6.71	271	Pn	Pn	23 56 26.6	+0.6
T25A	Trinidad	6.72	175	Pn	Pn	23 56 25.1	-1.2
DUG	Dugway, Tooele	6.76	240		Pn	23 56 24.6	-2.1
DUG	Dugway, Tooele baz=55	6.76	240	P		23 56 25.3	
MSO	Missoula	6.87	299	Pn	Pn	23 56 28.2	+0.1
MVCO	Mesa Verde	7.10	202	Pn	Pn	23 56 29.9	-1.5
R32A	Long Quarter,	7.28	136	Pn	Pn	23 56 34.2	+0.4
JTMT	Jette	7.47	305	Pn	Pn	23 56 36.4	0.0
MSU	Marysvale	7.50	227	Pn	Pn	23 56 35.5	-1.6
TCRU	Three Creeks R	7.58	229	Pn	Pn	23 56 37.6	-0.5
AGMN	Agassiz Nation	7.85	52	Pn	Pn	23 56 41.9	+0.4
MTPU	Mount Pierson	7.86	225	Pn	Pn	23 56 41.0	-1.0
WALA	Waterton Lakes	7.98	314	Pn	Pn	23 56 42.2	-1.1
KSU1	Kansas State U	7.98	124	Pn	Pn	23 56 44.1	+0.8
ELK	Elko	8.08	251	Pn	Pn	23 56 43.2	+0.2
PSUT	Pine Spring	8.43	234	Pn	Pn	23 56 48.3	-1.4
F36A	Milaca	8.51	72	Pn	Pn	23 56 50.9	+0.2
KAN05	Bluff City Nor	8.72	138	Pn	Pn	23 56 53.4	-0.2
F10A	Beach Ranch, E	8.82	288	Pn	Pn	23 56 54.8	-0.1
CCUT	Cedar City	8.85	227	Pn	Pn	23 56 54.5	-0.9
ULM	Lac du Bonnet comp=E,1.2nm,0.3s,baz=230,slow=12,SNR=14	9.01	41	Pn	Pn	23 56 56.1	-1.2
ULM				Pg		23 57 23.9	
ULM	comp=E,0.2nm,0.3s,baz=222,slow=16,SNR=1.7			Lg	Lg	23 59 27.3	
ULM	comp=E,0.4nm,0.3s,baz=142,slow=18,SNR=4.6 Lac du Bonnet	9.01	41	Pn	Pn	23 56 57.7	+0.3
K38A	Parkersburg	9.13	93	Pn	Pn	23 56 59.0	0.0
B35A	Bob, Littlefor	9.14	56	Pn	Pn	23 56 58.0	-1.2
T35A	Sooner Cattle	9.56	133	Pn	Pn	23 57 05.2	+0.2
WUAZ	Wupatki	9.59	212	Pn	Pn	23 57 04.8	-0.8
P38A	Dawn	9.66	112	Pn	Pn	23 57 06.2	-0.2
NVAR	Mina Array Bea comp=E,0.2nm,0.3s,baz=58,slow=11,SNR=1.6	11.28	246	Pn	Pn	23 57 25.9	-2.8
YKA	Yellowknife Ar comp=E,0.1nm,0.3s,baz=150,slow=9.0,SNR=7.7	19.48	347	P	P	23 59 13.4	-0.8
ARCES	ARCESS Array B comp=E,0.8nm,0.7s,baz=329,slow=8.4,SNR=5.0	61.29	18	P	P	00 05 01.8	-0.9

*IDC **27** 00:01:47.3±1.0, 27°.71N×86°.01E, h0km, mb3.8/14, mb1 3.9/15, mb1mx3.6/50, mbtmp3.8/15, ML4.1/1, MS4.2/2, Ms1 4.2/2, ms1mx3.2/40, Error ellipse: s-maj=29.9km s-min=18.9km az=56.0*

*NDI **27** 00:01:49.4±3.6, 27°.48N×85°.85E, h10km, ML3.7*

ISC 27 00:01:48.7±0.6, 27°.50N±0°.09×85°.82E±0°.06, h19km, n21, σ1§98/25, mb3.8/14, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	5.76	108	eP	Pn	00 03 14.2	+0.8
SHL				eS	Sn	00 04 16.3	-2.8
KOHI	KOHIMA	7.63	102	eP	Pn	00 03 36.4	-2.6
KOHI				eS	Sn	00 05 03.0	-2.0
KOHI	comp=E,26nm,0.6s			IAML		00 05 09.7	
KOHI	comp=N,22nm,0.5s			IAML		00 05 10.5	
SMLA	Simla	8.38	298	eP	Pn	00 03 49.9	+0.8
SMLA				eS	Sn	00 05 20.9	-2.2
SMLA	comp=E,104nm,0.5s			IAML		00 05 24.3	
SMLA	comp=N,82nm,0.5s			IAML		00 05 28.8	
BHPL	Bhopal	8.69	243	eP	Pn	00 03 53.9	+0.3
BHPL				eS	Sn	00 05 27.3	-3.8
BHPL	comp=E,15nm,0.4s			IAML		00 05 32.3	
DHRM	DHARAMSHALA	9.52	302	eP	Pn	00 04 05.1	+0.1
DHRM				eS	Sn	00 05 47.4	-4.3
DHRM	comp=E,54nm,0.5s			IAML		00 05 51.3	
DHRM	comp=N,45nm,0.7s			IAML		00 05 52.7	
MKAR	Makanchi Array comp=N,0.6nm,0.3s,baz=180,slow=10,SNR=14	19.46	353	P	P	00 06 13.8	-0.5
KURBB	Kurchatov Arra comp=N,1.0nm,0.5s,baz=167,slow=9.3,SNR=8.7	23.75	348	P	P	00 06 59.9	+0.2
GEYT	Alibeck comp=N,0.5nm,0.4s,baz=119,slow=12,SNR=2.6	25.44	301	P	P	00 07 18.7	+3.3
SONM	Songino Array comp=N,1.7nm,0.6s,baz=225,slow=9.4,SNR=12	25.88	33	P	P	00 07 19.0	-0.4
ZALV	Zalesovo Beam comp=N,2.5nm,0.5s,baz=189,slow=11,SNR=12	26.44	359	P	P	00 07 24.3	+0.1
BVAR	Borovoye Array comp=N,0.3nm,0.4s,baz=161,slow=14,SNR=4.9	27.96	340	P	P	00 07 38.3	+0.4
AKTO	Aktyubinsk comp=N,0.8nm,0.3s,baz=105,slow=9.2,SNR=4.9	31.18	325	P	P	00 08 07.1	+0.6
NRIK	Noril'sk comp=N,1.3nm,0.4s,baz=164,slow=5.8,SNR=5.3	41.88	1	P	P	00 09 36.8	-0.7
YAK	Yakutsk comp=N,125nm,20.1s,baz=82,slow=37	45.01	28	LR	LR	00 29 20.8	
FINES	FINESS Array B comp=N,0.6nm,0.5s,baz=94,slow=5.2,SNR=6.5	51.84	328	P	P	00 10 55.6	+0.3
ARCES	ARCESS Array B comp=N,1.2nm,0.6s,baz=107,slow=8.1,SNR=9.6	54.22	338	P	P	00 11 13.3	+0.5
NOA	NORSAR Array B comp=N,0.3nm,0.5s,baz=91,slow=7.1,SNR=1.6	58.94	327	P	P	00 11 45.8	-0.7
WRA	Warramunga Arr comp=N,0.6nm,0.7s,baz=324,slow=6.7,SNR=4.9	66.56	130	P	P	00 12 39.6	+1.8
WRA	comp=N,457nm,19.9s,baz=130,slow=40			LR	LR	00 46 43.7	
ASAR	Alice Springs comp=N,0.2nm,0.7s,baz=304,slow=6.6,SNR=1.4	68.85	133	P	P	00 12 54.1	+1.9
TORD	Torodi Ar. Bea comp=N,0.4nm,1.1s,baz=63,slow=6.4,SNR=1.9	78.91	279	P	P	00 13 54.3	+2.9
ILAR	Eielson Array comp=N,0.3nm,0.6s,baz=299,slow=4.9,SNR=2.6	79.38	20	P	P	00 13 53.0	-0.2

*IDC **27** 00:18:49.0±1.9, 36°.05S×178°.52E, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.8/21, mbtmp4.0/2, MS4.7/3, Ms1 4.7/3, ms1mx3.9/19, Error ellipse: s-maj=85.5km s-min=45.7km az=17.0*

*WEL **27** 00:19:25.5±0.9, 37°.S±8°.×17°.7E±°, h231km±8km, M3.5/31, MLv3.5/31, Error ellipse: s-maj=0.0km s-min=0.0km az=35.2*

ISC 27 00:19:22.6±1.0, 36°.75S±0°.07×177°.18E±0°.08, h262km±6km,

n94, σ1§05/103, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	1.12	155	P	Pn	00 19 59.0	-0.5
KUZ	Kuaotunu	1.17	270	P	Pn	00 19 59.1	-0.8
OPRZ	Ohinepanea	1.21	204	P	Pn	00 20 00.4	+0.4
MXZ	Matakaoa Point	1.21	133	P	Pn	00 20 00.4	+0.3
MXZ				S	S	00 20 29.0	-0.8
TGRZ	Tauranga	1.23	217	P	Pn	00 20 00.8	+0.7
PKGZ	Pakihiroa	1.35	148	P	Pn	00 20 01.3	+0.3
WMGZ	Waiomatatini S	1.46	138	P	Pn	00 20 02.1	+0.4
WMGZ				S	S	00 20 31.0	-1.6
GRZ	Great Barrier	1.47	289	P	Pn	00 20 00.8	-1.1
KARZ	Kaharoa	1.48	210	P	Pn	00 20 03.2	+1.3
OMRZ	Omania	1.50	205	P	Pn	00 20 04.5	+2.4
URZ	Urewera	1.51	182	P	Pn	00 20 02.0	-0.1
URZ				S	S	00 20 32.5	-0.9
TWGZ	Tauwhareparae	1.56	156	P	Pn	00 20 03.4	+0.9
TWGZ				S	S	00 20 33.5	-0.7
PUZ	Puketiti	1.58	147	P	Pn	00 20 02.9	+0.3
PUZ				S	S	00 20 31.9	-2.4
MWZ	Matawai	1.61	170	P	Pn	00 20 03.3	+0.4
MWZ				S	S	00 20 32.7	-2.1
TOZ	Tahuroa Road	1.66	233	P	Pn	00 20 04.2	+1.0
RAGZ	Rawiri	1.76	174	P	Pn	00 20 04.7	+0.6
RAGZ				S	S	00 20 35.8	-1.1
MUGZ	Murupara	1.76	191	P	Pn	00 20 04.3	+0.3
MUGZ				S	S	00 20 35.2	-1.6
TKGZ	Te Karaka	1.77	163	P	Pn	00 20 04.6	+0.6
TKGZ				S	S	00 20 35.5	-1.4
HRRZ	Handcock Road	1.79	203	P	Pn	00 20 05.7	+1.4
GRRZ	Galatos Road	1.81	208	P	Pn	00 20 06.4	+1.9
ETAZ	East Tamaki Re	1.82	263	P	Pn	00 20 04.8	+0.3
RUTZ	Ruatahuna	1.87	185	P	Pn	00 20 05.3	+0.3
CNGZ	Carnagh Statio	1.92	155	P	Pn	00 20 06.3	+1.0
ALRZ	Allen Road	1.93	200	P	Pn	00 20 06.5	+1.1
EPAZ	Eden Park BICE	1.96	265	P	Pn	00 20 05.7	0.0
HBAZ	Herne Bay Bore	1.97	266	P	Pn	00 20 06.1	+0.3
RIGZ	Rimuhau	2.01	167	P	Pn	00 20 06.9	+0.8
RIGZ				S	S	00 20 39.8	-0.9
SNGZ	Shannon Statio	2.04	177	P	Pn	00 20 07.1	+0.7
SNGZ				S	S	00 20 39.6	-1.5
TLZ	Tolley Road	2.05	219	P	Pn	00 20 08.5	+2.0
AWAZ	Awhitu Peninsu	2.06	260	P	Pn	00 20 06.8	+0.3
RVAZ	Riverhead Bore	2.09	269	P	Pn	00 20 06.5	-0.3
MTHZ	Maungataniwha	2.12	187	P	Pn	00 20 07.4	+0.3
RAHZ	Arahi	2.17	182	P	Pn	00 20 08.3	+0.8
MRHZ	Matea Rd	2.17	196	P	Pn	00 20 08.1	+0.5
PRGZ	Paritu Road	2.24	166	P	Pn	00 20 09.2	+1.0
WATZ	Wairara	2.27	210	P	Pn	00 20 10.2	+1.7
KNZ	Kokohu	2.31	170	P	Pn	00 20 09.1	+0.4
HATZ	Hinemaiaia	2.31	202	P	Pn	00 20 09.4	+0.6
WHHZ	Waihua	2.33	179	P	Pn	00 20 09.9	+0.9
NMHZ	Naumai	2.37	187	P	Pn	00 20 10.4	+1.0
RATZ	Rangitukua	2.39	207	P	Pn	00 20 10.8	+1.1
WCZ	Waipu Caves	2.43	289	P	Pn	00 20 09.4	-0.6
MHGZ	Mahia Peninsul	2.47	167	P	Pn	00 20 11.4	+1.0
BKZ	Black Stump Fm	2.48	192	P	Pn	00 20 10.5	0.0
ARHZ	Aropaoanui	2.52	183	P	Pn	00 20 11.6	+0.8
HIZ	Hauiti	2.55	226	P	Pn	00 20 13.1	+1.9
NTVZ	North Tongarir	2.63	206	P	Pn	00 20 13.6	+1.5
TMVZ	Te Maari	2.64	206	P	Pn	00 20 13.6	+1.5
ETVZ	East Tongariro	2.66	206	P	Pn	00 20 13.5	+1.1
WTVZ	West Tongariro	2.68	208	P	Pn	00 20 14.4	+1.9
OTVZ	Oturere	2.69	206	P	Pn	00 20 13.6	+0.8
MCHZ	McNeill Hill	2.72	188	P	Pn	00 20 13.7	+0.8
NGZ	Ngauruhoe	2.73	207	P	Pn	00 20 14.5	+1.3
KWHZ	Kaweka Forest	2.74	192	P	Pn	00 20 13.7	+0.6
TUVZ	Tutino	2.79	205	P	Pn	00 20 14.7	+0.9
WNVZ	Wahianoa	2.87	205	P	Pn	00 20 15.1	+0.5
BHHZ	Black Hill Sta	2.88	197	P	Pn	00 20 14.4	-0.1
MOVZ	Moawhango	2.89	203	P	Pn	00 20 14.6	0.0
CKHZ	Cape Kidnapper	2.91	182	P	Pn	00 20 15.4	+0.7
KRHZ	Kereru	2.96	192	P	Pn	00 20 15.6	+0.2
VRZ	Vera Road	3.05	218	P	Pn	00 20 18.6	+2.3
KAHZ	Kahuranaki	3.05	184	P	Pn	00 20 16.9	+0.6
PNHZ	Pukenui	3.26	193	P	Pn	00 20 18.3	-0.2
OUZ	Omahuta	3.28	297	P	Pn	00 20 18.3	-0.6
PXZ	Pawanui	3.29	184	P	Pn	00 20 18.9	+0.1
WPHZ	Waipukurau	3.37	190	P	Pn	00 20 19.6	0.0
TSZ	Takapari Road	3.44	196	P	Pn	00 20 20.5	0.0
WAZ	Wanganui	3.47	209	P	Pn	00 20 21.6	+0.8
PRHZ	Porangahau	3.54	187	P	Pn	00 20 21.6	0.0
DVHZ	Dannevirke	3.64	192	P	Pn	00 20 22.1	-0.6
ANWZ	Angora Road	3.75	188	P	Pn	00 20 24.5	+0.6
POWZ	Post Office Ro	3.81	196	P	Pn	00 20 24.3	-0.3
PRWZ	Puri Road	3.92	194	P	Pn	00 20 26.3	+0.1
BFZ	Birch Farm	4.00	190	P	Pn	00 20 26.7	+0.1
TIWZ	Tintock	4.15	194	P	Pn	00 20 28.2	-0.4
CPWZ	Castlepoint	4.23	190	P	Pn	00 20 29.8	+0.3
HOWZ	Holdsworth Sta	4.35	197	P	Pn	00 20 29.7	-1.2
TMWZ	Te Maipa	4.47	193	P	Pn	00 20 31.8	-0.6
KIW	Kapiti Island	4.48	203	P	Pn	00 20 31.6	-0.8
TRWZ	Traveller	4.79	194	P	Pn	00 20 35.6	-0.5
MSWZ	Moikau Station	4.90	197	P	Pn	00 20 36.8	-0.6
KHZ	Kahutara	6.32	205	P	Pn	00 20 54.1	-0.7
GVZ	Greta Valley S	6.98	206	P	Pn	00 21 01.9	-1.2
MQZ	McQueen's Vall	7.77	205	P	Pn	00 21 11.1	-1.7
RACZ	Rakaia	7.97	207	P	Pn	00 21 13.3	-2.0
ARCZ	Arundel	8.53	211	P	Pn	00 21 21.1	-1.3
TMZ	Timaru	8.96	210	P	Pn	00 21 27.1	-0.8
STKA	Stephens Creek comp=Z,557nm,20.6s,baz=130,slow=36	29.68	269	LR	LR	00 37 32.2	
ASAR	Alice Springs 2.1nm,0.6s,baz=118,slow=8.0,SNR=30	39.29	277	P	P	00 26 28.3	+1.8
ASAR	comp=Z,1µm,20.7s,baz=140,slow=38			LR	LR	00 44 18.9	
WRA	Warramunga Arr 0.8nm,0.5s,baz=124,slow=7.5,SNR=6.4	40.88	282	P	P	00 26 40.3	+0.7
CMAR	Chiang Mai Arr comp=Z,536nm,19.4s,baz=326,slow=38	91.84	292	LR	LR	01 18 17.7	
FINES	FINESS Array B 0.4nm,0.9s,baz=28,slow=3.3,SNR=6.8	149.35	333	PKPbc	PKPbc	00 38 39.1	-0.3
BRTR	Keskin Array B 0.1nm,0.3s,baz=12,slow=2.1,SNR=3.5	151.33	287	PKPbc	PKPbc	00 38 44.7	-0.4
TORD	Torodi Ar. Bea 0.2nm,0.7s,baz=169,slow=3.7,SNR=1.4	156.16	191	PKPab	PKPab	00 39 17.1	+2.1

*IDC **27** 00:20:09.8±5.7, 27°.48N×85°.92E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.4/47, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=103.9km s-min=52.3km az=164.0*

ISC 27 00:20:13.3±5.3, 27°.6N±0°.7×85°.9E±0°.4, h19km, n7, σ0§66/7, mb3.7/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array 0.2nm,0.3s,baz=174,slow=9.3,SNR=6.6	19.40	353	P	P	00 24 37.7	-0.5
KURBB	Kurchatov Arra 0.2nm,0.4s,baz=162,slow=8.9,SNR=3.6	23.70	348	P	P	00 25 24.5	+0.8
SONM	Songino Array 0.4nm,0.5s,baz=214,slow=9.9,SNR=2.5	25.79	33	P	P	00 25 42.9	-0.2
ZALV	Zalesovo Beam 0.5nm,0.3s,baz=185,slow=10,SNR=4.8	26.37	359	P	P	00 25 48.1	0.0
FINES	FINESS Array B 1.8nm,0.9s,baz=90,slow=7.6,SNR=4.3	51.81	328	P	P	00 29 19.3	-0.4
ARCES	ARCESS Array B 0.9nm,0.5s,baz=110,slow=8.0,SNR=7.9	54.18	338	P	P	00 29 37.9	+0.8
NOA	NORSAR Array B 0.8nm,0.9s,baz=97,slow=7.4,SNR=3.5	58.91	327	P	P	00 30 10.6	-0.3

*IDC **27** 00:39:14.9±0.8, 27°.67N×84°.82E, h0km, mb3.9/13, mb1 4.0/15, mb1mx3.8/39, mbtmp3.9/15, ML4.1/2, Error ellipse: s-maj=27.6km s-min=16.8km az=56.0*

*NDI **27** 00:39:15.5±3.0, 27°.09N×84°.70E, h10km, ML3.8, mb4.1(NEIC)*

*DMN **27** 00:39:16.4±0.1, 27°.76N×85°.11E, h15km, Ml4.8/3, Error ellipse: s-maj=2.7km s-min=1.0km az=17.0*

*NEIC **27** 00:39:16.3±1.5, 27°.7N±0°.1×84°.96E±0°.08, h10km±1km, mb4.1/31, Error ellipse: s-maj=20.6km s-min=4.1km az=215.0*

ISC 27 00:39:16.9±0.8, 27°.76N±0°.05×85°.07E±0°.03, h11km±5km, n84, σ1§30/97, mb4.1/25, 5C, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMN	Daman	0.16	167	ePg	Pg	00 39 20.7	0.0
DMN				eSg	Sg	00 39 23.8	+0.5
KKN	Kakani	0.19	82	ePg	Pg	00 39 20.6	-0.6
KKN				eSg	Sg	00 39 23.1	-1.1
PKI	Pulchoki	0.36	122	ePg	Pg	00 39 23.3	-0.9
PKI				eSg	Sg	00 39 28.8	-0.3
GKN	Gorkha	0.45	302	ePg	Pb	00 39 26.1	-0.8
GKN				eSg	Sb	00 39 33.3	-0.3
GUN	Gumba	0.74	78	ePg	Pg	00 39 30.6	-0.6
DANN	Dangsing 2µm,0.2s	1.29	297	eSg	Sn	00 39 59.2	+0.7
KOLN	Koldanda 3µm,0.5s	1.30	271	eSg	Sn	00 39 59.6	+1.1
RAMN	Ramite	1.59	120	ePg	Pn	00 39 45.7	+0.6
RAMN				eSg	Sn	00 40 05.8	+0.1
PYUN	Piuthan	1.87	281	ePg	Pg	00 39 52.3	-0.4
PYUN	Piuthan	1.87	281	ePg	Pg	00 39 52.3	-0.4
PYUN				eSg	Sg	00 40 16.4	-0.5
PYUN	3µm,0.7s			eSg	Sb	00 40 16.7	+2.2
ODAN	Odare	2.26	113	ePg	Pb	00 39 58.1	+0.4
ODAN				eSg	Sb	00 40 26.8	+1.1
TAPN	Taplejung	2.38	99	ePg	Pb	00 39 59.9	-0.1
TAPN				eSg	Sb	00 40 31.2	+1.7
BOK	Bokaro	4.02	169	eP	Pn	00 40 11.8	-6.6
BOK	comp=N,447nm,0.3s			IAML		00 41 00.1	
BOK	comp=E,480nm,0.5s			IAML		00 41 00.8	
LSA	Lhasa	5.68	69	Pn	Pn	00 40 43.1	+1.5
SHL	Shillong	6.48	108	eP	Pn	00 40 51.7	-0.6
SHL				eS	Sn	00 42 02.1	-4.2
SHL	Shillong	6.48	108	Pn	Pn	00 40 52.1	-0.2
SMLA	Simla comp=N,32nm,0.4s	7.66	298	eP	Pn	00 41 09.1	+0.7
SMLA				IAML		00 41 15.9	
SMLA	comp=E,28nm,0.3s			IAML		00 41 17.4	
BHPL	Bhopal	8.24	239	eP	Pn	00 41 07.7	-8.7
BHPL				eS	Sn	00 42 24.3	-25
KOHI	KOHIMA comp=E,57nm,0.8s	8.34	102	eS	Sn	00 42 49.8	-2.2
KOHI				IAML		00 42 54.3	
KOHI	comp=N,46nm,0.5s			IAML		00 42 55.2	
MOKO	MOKOCHONG	8.55	98	eP	Pn	00 41 22.0	+1.3
MOKO				eS	Sn	00 42 54.5	-2.8
MOKO	comp=N,67nm,0.4s			IAML		00 42 57.5	
MOKO	comp=E,65nm,0.5s			IAML		00 43 03.5	
DHRM	DHARAMSHALA	8.82	303	eP	Pn	00 41 24.2	-0.2
DHRM				eS	Sn	00 42 57.3	-6.6
DHRM	comp=E,58nm,0.5s			IAML		00 43 04.2	
DHRM	comp=N,52nm,0.5s			IAML		00 43 06.6	
NIL	Nilore	11.73	303	Pn	Pn	00 42 02.7	-1.5
CHTO	Chiang Mai	15.54	122	Pn	Pn	00 42 55.9	-0.1
CMAR	Chiang Mai Arr comp=N,0.4nm,0.3s,baz=313,slow=10,SNR=9.8	15.76	123	Pn	P	00 43 01.8	-1.0
CMAR	Chiang Mai Arr	15.76	123	Pn	Pn	00 42 59.9	+1.0
KMI	Kunming comp=Z,11nm,0.6s	16.05	95	↑P pmax	P pmax	00 43 08.5	+2.3
KMI	comp=N,3µm,10.7s			LR	LR		
KMI	comp=E,3µm,13.7s			LR	LR		
KMI	comp=Z,4µm,15.0s			LR	LR		
DRK	Karamyk	16.06	320	Pn	Pn	00 43 02.1	-0.8
DRK	comp=Z,13nm,0.8s			IAmb	IAmb	00 43 10.8	
WMQ	Urumqi	16.16	7	eP	P	00 43 06.5	-0.7
GAR	Garm	16.63	316		Pn	00 43 10.1	+0.1
GAR	comp=Z,28nm,1.2s			IAmb	IAmb	00 43 17.9	
ARSB	Arslanbob comp=Z,6.9nm,0.8s	16.77	327	Pn	Pn	00 43 10.0	-1.8
ARSB				IAmb	IAmb	00 43 13.5	
GTA	Gaotai	16.88	43	eP	P	00 43 16.5	+1.2
GTA				pP	sP	00 43 21.8	+1.4
GTA				sP	pP	00 43 24.5	+5.7
GTA	comp=Z,5.0nm,0.9s			pmax	pmax		
BTK	Batken	17.01	320		Pn	00 43 13.8	-1.0
MK31	Makanchi Array	19.12	354		P	00 43 40.6	+0.8
MKAR	Makanchi Array comp=Z,0.2nm,0.3s,baz=172,slow=11,SNR=14	19.12	354	P	Pn	00 43 41.0	+0.4
MKAR	Makanchi Array	19.12	354	P	P	00 43 40.4	+0.7
KK31	Karatay Array	19.32	326	P	P	00 43 42.3	+0.3
KK31	comp=Z,13nm,1.4s			IAmb	IAmb	00 43 46.6	
KKAR	Karatay Array	19.32	326	P	P	00 43 42.3	+0.4
KKAR	comp=Z,13nm,1.4s			IAmb	IAmb	00 43 46.6	
KKAR	Karatay Array	19.32	326	P	P	00 43 41.4	-0.5
HRA	Herat	20.61	294	P	Pn	00 43 56.6	-2.0
KURBB	Kurchatov Arra comp=Z,1.6nm,0.8s,baz=174,slow=9.6,SNR=7.9	23.36	349	P	P	00 44 26.2	+1.0
KURK	Kurchatov	23.44	350	P	P	00 44 26.2	+0.3
HHC	Hu-ho-hao-te comp=Z,15nm,0.8s	25.37	52	eP pmax	P pmax	00 44 46.3	+2.2
HHC	comp=Z,63nm,5.7s			pmax	pmax		
SONM	Songino Array comp=Z,7.6nm,0.7s,baz=226,slow=9.7,SNR=32	26.03	34	P	P	00 44 51.6	+1.6
SONM	Songino Array	26.03	34	P	P	00

MNK				*i* LR	LR	01 08 34.0		
MNK				*i* LRM	MLR	01 10 33.4		
	comp=N,119nm,17.6s							
MNK				*i* LRM	MLR	01 10 42.2		
	comp=Z,59nm,19.0s							
MNK				*i* LRM	MLR	01 11 05.3		
	comp=E,6.0nm,14.9s							
VRI	**Vrincioaia**	**48.97**	**308**	⇑P	**P**	**00 48 05.1**	**+1.8**	
PLOR	**Plostina**	**49.02**	**308**	⇑P	**P**	**00 48 04.6**	**+0.9**	
MLR	**Muntele Rosu**	**49.51**	**307**	⇑P	**P**	**00 48 09.1**	**+1.6**	
MLR	**Muntele Rosu**	**49.51**	**307**	P	**P**	**00 48 08.5**	**+0.9**	
MLR				IAmb	IAmb	00 48 12.0		
	comp=Z,5.5nm,1.1s							
BURAR	**Bucovina Array**	**50.03**	**310**	⇑P	**P**	**00 48 12.4**	**+1.0**	
BURAR	**Bucovina Array**	**50.03**	**310**	P	**P**	**00 48 11.2**	**-0.3**	
BURAR				IAmb	IAmb	00 48 12.6		
	comp=Z,0.9nm,0.8s							
BUR08	**Bucovina Ar. S**	**50.04**	**310**	P	**P**	**00 48 11.9**	**+0.4**	
TIXI	**Tiksi**	**50.05**	**17**	P	**P**	**00 48 11.4**	**+0.3**	
TIXI				IAmb	IAmb	00 48 12.9		
	comp=Z,2.9nm,0.6s							
FINES	**FINESS Array B**	**51.26**	**328**	P	**P**	**00 48 20.1**	**-0.3**	
	comp=Z,1.1nm,0.6s,baz=110,slow=8.3,SNR=7.0							
PDG	**Podgorica**	**54.53**	**304**	P	**P**	**00 48 43.8**	**-1.0**	
PDG				IAmb	IAmb	00 48 46.6		
	comp=Z,2.7nm,0.9s							
NOA	**NORSAR Array B**	**58.35**	**327**	P	**P**	**00 49 10.6**	**-1.2**	
	comp=Z,0.6nm,1.0s,baz=86,slow=4.5,SNR=1.1							
WRA	**Warramunga Arr**	**67.24**	**129**	P	**P**	**00 50 12.2**	**+0.6**	
	comp=Z,0.9nm,0.6s,baz=323,slow=6.4,SNR=8.8							
ASAR	**Alice Springs**	**69.52**	**133**	P	**P**	**00 50 26.4**	**+0.6**	
	comp=Z,1.0nm,0.6s,baz=320,slow=6.7,SNR=9.0							
ESDC	**Sonseca Array**	**72.17**	**306**	P	**P**	**00 50 41.0**	**-0.8**	
	comp=Z,0.8nm,0.9s,baz=64,slow=5.9,SNR=4.1							
TORD	**Torodi Ar. Bea**	**78.21**	**279**	P	**P**	**00 51 16.1**	**-0.9**	
	comp=Z,0.5nm,0.6s,baz=58,slow=4.0,SNR=5.0							
TORD	**Torodi Ar. Bea**	**78.21**	**279**	IAmb	IAmb	00 51 17.1		
	comp=Z,0.7nm,0.8s							
ILAR	**Eielson Array**	**79.36**	**20**	P	**P**	**00 51 22.7**	**+0.3**	
	comp=Z,0.6nm,0.7s,baz=314,slow=6.2,SNR=6.0							
YKA	**Yellowknife Ar**	**88.68**	**9**	P	**P**	**00 52 09.8**	**-0.2**	
	comp=Z,0.5nm,0.7s,baz=339,slow=4.7,SNR=8.4							

IDC 27 00:47:51.7±18.0**, 26°31N**×**85°14E, h0**km**, mb3.5**/4**,**
mb1 3.6/4**, mb1mx3.2**/34**, mbtmp3.6**/4**, Error ellipse:**
s-maj=312.2km s-min=75.7km az=18.0, Nepal-India
border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**20.57**	**354**	P	P	00 52 31.6	-0.4
	0.6nm,0.6s,baz=179,slow=10,SNR=5.5						
KURBB	**Kurchatov Arra**	**24.80**	**350**	P	P	00 53 14.8	-0.5
	0.2nm,0.2s,baz=172,slow=10.0,SNR=1.9						
SONM	**Songino Array**	**27.21**	**32**	P	P	00 53 37.0	-0.2
	0.9nm,0.8s,baz=222,slow=8.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**27.61**	**360**	P	P	00 53 41.5	+0.9
	0.7nm,0.5s,baz=184,slow=11,SNR=4.7						

*KRNET **27** 00:58:53.4±0.1, 39°.00N×70°.23E, mb3.4*
*NNC **27** 00:58:53.1±2.9, 38°.74N×70°.24E, h0km, mb4.0, mpv3.6,*
Error ellipse: s-maj=22.5km s-min=13.7km az=3.0
ISC 27 00:58:54.2±1.6**, 38°.98N**±0°.10**×70°.34E**±0°.05**, h10km, n11,**
σ3°65/23, 15C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.03**	**316**	⇓*i*P	**Pg**	**00 58 55.0**	**-1.2**
	baz=93						
GAR				⇓*i*S	**Sg**	**00 58 56.3**	**-1.3**
	baz=93						
BTK	**Batken**	**1.14**	**19**	⇓*i*P	**Pb**	**00 59 15.1**	**-0.9**
	baz=23						
BTK				⇓*i*S	**Sb**	**00 59 30.9**	**0.0**
	baz=23						
DRK	**Karamyk**	**1.24**	**66**	⇑*i*P	**Pg**	**00 59 18.1**	**+0.1**
	baz=68						
DRK				⇑*i*S	**Sn**	**00 59 36.1**	**+1.3**
	baz=68						
TRKS	**Terek-Say**	**2.62**	**13**	⇑*i*P	**Pn**	**00 59 37.8**	**+1.1**
	baz=16						
TRKS				⇑*i*S	**Sn**	**01 00 10.2**	**+1.6**
	baz=16						
ARSB	**Arslanbob**	**3.09**	**40**	⇓*i*P	**Pn**	**00 59 45.8**	**+2.6**
	baz=41						
ARSB				⇓*i*S	**Sb**	**01 00 23.8**	**-3.5**
	baz=41						
KK31	**Karatay Array**	**4.12**	**2**	Pn	**Pn**	**01 00 01.4**	**+4.2**
	1.9nm,0.4s,baz=170,slow=12,SNR=26						
KK31				⇑Sn	**Sb**	**01 00 53.3**	**-3.3**
	11nm,0.7s,baz=181,slow=29,SNR=5.3						
KK31				⇓Lg	Lg	01 01 10.7	
	6.4nm,0.5s,baz=180,slow=29						
UCH	**Uchtor**	**4.54**	**43**	⇑*i*P	**Pn**	**01 00 05.9**	**+2.5**
	baz=44						
UCH				⇑*i*S	**Sn**	**01 00 58.8**	**+2.4**
	baz=44						
AAK	**Ala-Archa**	**4.82**	**39**	⇓Pn	**Pn**	**01 00 11.2**	**+4.2**
	10nm,0.9s						
AAK				⇑Pg	**Pg**	**01 00 22.6**	**-4.0**
	10nm,0.9s						
AAK				⇑Sn	**Sb**	**01 01 11.3**	**-5.8**
	21nm,1.2s						
TKM2	**Tokmak 2**	**5.60**	**44**	⇑Pn	**Pn**	**01 00 20.9**	**+3.3**
	7.2nm,0.5s						
TKM2				⇑Sn	**Sn**	**01 01 30.0**	**+7.9**
	16nm,1.4s						
TKM2				⇑Lg	Lg	01 02 01.4	
	6.7nm,0.7s						
AB31	**Akbulak array**	**12.69**	**327**	⇓P	**Pn**	**01 01 53.9**	**-0.6**
	1.4nm,0.7s,baz=137,slow=15,SNR=24						
AB31				⇑S	**Sn**	**01 04 20.4**	**+4.6**
	2.3nm,0.6s,baz=152,slow=24,SNR=7.9						
AKTO	**Aktyubinsk**	**14.39**	**327**	⇑P	**P**	**01 02 20.9**	**-4.0**
	2.4nm,0.8s						
AKTO				⇑S	**Sn**	**01 05 02.1**	**+4.6**
	5.0nm,1.3s						

*IDC **27** 01:15:49.3±1.2, 27°.59N×85°.94E, h0km, mb3.7/10,*
mb1 3.9/12, mb1mx3.6/49, mbtmp3.7/12, ML4.1/2, Error
ellipse: s-maj=45.9km s-min=18.6km az=59.0
*NEIC **27** 01:15:51.1±1.9, 27°.5N±0°.1×85°.8E±0°.1, h10km±1km,*
mb4.3/12, Error ellipse: s-maj=22.8km s-min=15.7km
az=216.0
*NDI **27** 01:15:52.2±3.5, 27°.66N×85°.92E, h7km±24km, ML3.9,*
mb4.3(NEIC)
ISC 27 01:15:52.3±0.6**, 27°.57N**±0°.06×**85°.84E**±0°.06**, h19**km**, n38,**
σ1°98/43, mb3.9/15**, 2C, Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOK	**Bokaro**	**3.75**	**179**	*e*P	**Pn**	**01 16 53.2**	**+3.9**
BOK				*e*S	**Sn**	**01 17 36.4**	**+3.4**
BOK				IAML		01 17 39.8	
	comp=E,193nm,0.1s						
BOK				IAML		01 17 39.9	
	comp=N,183nm,0.1s						
LSA	**Lhasa**	**5.13**	**64**	Pn	**Pn**	**01 17 11.8**	**+3.2**
SHL	**Shillong**	**5.77**	**109**	*e*P	**Pn**	**01 17 16.4**	**-0.7**
SHL				*e*S	**Sn**	**01 18 19.4**	**-3.5**
SHL	**Shillong**	**5.77**	**109**	Pn	**Pn**	**01 17 17.0**	**-0.1**
KOHI	**KOHIMA**	**7.63**	**102**	*e*P	**Pn**	**01 17 42.4**	**-0.2**
SMLA	**Simla**	**8.36**	**297**	⇑*e*P	**Pn**	**01 17 56.3**	**+3.9**
SMLA				*e*S	**Sn**	**01 19 21.2**	**-5.0**
SMLA				IAML		01 19 27.6	
	comp=E,235nm,0.4s						
BHPL	**Bhopal**	**8.74**	**242**	*e*P	**Pn**	**01 17 58.7**	**+0.9**
BHPL				*e*S	**Sn**	**01 19 31.8**	**-4.0**
BHPL				IAML		01 19 36.3	
	comp=N,38nm,0.3s						
BHPL				IAML		01 19 37.1	
	comp=E,34nm,0.2s						
DHRM	**DHARAMSHALA**	**9.50**	**302**	⇑*e*P	**Pn**	**01 18 07.5**	**-0.8**
DHRM				*e*S	**Sn**	**01 19 50.4**	**-4.4**
DHRM				IAML		01 19 55.5	
	comp=N,182nm,0.5s						
NIL	**Nilore**	**12.42**	**302**	Pn	**Pn**	**01 18 50.3**	**+2.2**
CMAR	**Chiang Mai Arr**	**15.08**	**124**	Pn	**Pn**	**01 19 21.0**	**-3.5**
	comp=N,0.6nm,0.3s,baz=309,slow=12,SNR=4.7						
MK31	**Makanchi Array**	**19.40**	**353**	P	**Pn**	**01 20 19.8**	**+1.5**
MKAR	**Makanchi Array**	**19.40**	**353**	P	**P**	**01 20 16.9**	**-0.2**
	comp=N,0.2nm,0.3s,baz=179,slow=13,SNR=3.5						
MKAR	**Makanchi Array**	**19.40**	**353**	P	**Pn**	**01 20 17.9**	**-0.5**
KURBB	**Kurchatov Arra**	**23.69**	**348**	P	**P**	**01 21 02.7**	**0.0**
	comp=N,0.5nm,0.5s,baz=168,slow=9.4,SNR=5.2						
KURK	**Kurchatov**	**23.76**	**349**	P	**P**	**01 21 02.7**	**-0.7**
SONM	**Songino Array**	**25.82**	**33**	P	**P**	**01 21 22.2**	**-0.3**
	comp=N,1.2nm,0.7s,baz=213,slow=11,SNR=9.4						
SONM	**Songino Array**	**25.82**	**33**	P	**P**	**01 21 22.3**	**-0.1**
ZALV	**Zalesovo Beam**	**26.37**	**359**	P	**P**	**01 21 26.0**	**-1.1**
	comp=N,0.4nm,0.3s,baz=188,slow=8.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.37**	**359**	P	**P**	**01 21 26.2**	**-0.9**
ABKAR	**Akbulak array**	**29.42**	**324**	P	**P**	**01 21 56.2**	**+1.7**
ABKAR				IAmb	IAmb	01 21 56.9	
	comp=Z,1.3nm,0.6s						
FINES	**FINESS Array B**	**51.79**	**328**	P	**P**	**01 24 58.7**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=89,slow=8.2,SNR=7.3						
FINES	**FINESS Array B**	**51.79**	**328**	P	**P**	**01 24 59.2**	**+0.7**
ARCES	**ARCESS Array B**	**54.16**	**338**	P	**P**	**01 25 16.9**	**+0.9**
	comp=Z,3.8nm,1.0s,baz=99,slow=5.6,SNR=4.1						
ARCES	**ARCESS Array B**	**54.16**	**338**	P	**P**	**01 25 16.1**	**+0.1**
ARCES				IAmb	IAmb	01 25 33.1	
	comp=Z,11nm,1.4s						
NOA	**NORSAR Array B**	**58.89**	**327**	P	**P**	**01 25 49.4**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=87,slow=7.2,SNR=3.4						
WB0	**Warramunga Arr**	**66.51**	**130**	P	**P**	**01 26 41.4**	**+0.3**
WRA	**Warramunga Arr**	**66.59**	**130**	P	**P**	**01 26 41.9**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=322,slow=6.4,SNR=6.6						
WRA	**Warramunga Arr**	**66.59**	**130**	P	**P**	**01 26 41.6**	**-0.1**
WB2	**Warramunga Arr**	**66.60**	**130**	P	**P**	**01 26 42.0**	**+0.4**
ASAR	**Alice Springs**	**68.89**	**133**	P	**P**	**01 26 55.8**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=319,slow=6.6,SNR=4.1						
TOLK	**Toolik Lake Re**	**75.90**	**18**	P	**P**	**01 27 38.2**	**+0.9**
TOLK				IAmb	IAmb	01 27 38.8	
	comp=Z,1.7nm,0.8s						
IMAR	**Indian Mountai**	**76.35**	**21**	P	**P**	**01 27 40.3**	**+0.4**
PPLA	**Purkeypile**	**78.82**	**23**	P	**P**	**01 27 54.9**	**+1.0**
PPLA				IAmb	IAmb	01 28 02.9	
	comp=Z,10.0nm,1.4s						
ILAR	**Eielson Array**	**79.31**	**20**	P	**P**	**01 27 56.0**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=310,slow=5.5,SNR=5.2						
RND	**Reindeer**	**79.62**	**22**	P	**P**	**01 27 58.4**	**+0.2**
RND				IAmb	IAmb	01 28 17.0	
	comp=Z,7.5nm,1.5s						
SUA	**Susitna One**	**80.27**	**24**	P	**P**	**01 28 02.8**	**+1.0**
SCRK	**Sand Creek**	**80.77**	**20**	P	**P**	**01 28 04.9**	**+0.5**
SCRK				IAmb	IAmb	01 28 05.3	
	comp=Z,1.5nm,0.7s						
YKA	**Yellowknife Ar**	**88.77**	**9**	P	**P**	**01 28 44.3**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=334,slow=5.2,SNR=3.5						

*IDC **27** 01:24:57.3±1.1, 37°.37N×135°.44E, h367km±14km, mb2.8/6,*
mb1 3.1/10, mb1mx2.8/49, mbtmp3.6/10, Error ellipse:
s-maj=23.3km s-min=14.9km az=59.0
*JMA **27** 01:24:57.2±0.1, 37°.31N×135°.44E, h365km±2km, M2.9*
ISC 27 01:24:56.6±0.8**, 37°.41N**±0°.07×**135°.50E**±0°.07**, h365**km**, n20,**
σ1°57/26, mb3.0/6**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYTA	**Yamagatataniai**	**2.07**	**151**	P	**Pn**	**01 25 50.1**	**+0.2**
JYTA				S	**Sn**	**01 26 30.8**	**-1.9**
JOI	**OKI**	**2.12**	**239**	P	**Pn**	**01 25 50.3**	**+0.1**
JWT	**Wachi**	**2.13**	**182**	P	**Pn**	**01 25 50.3**	**0.0**
JWT				S	**Sn**	**01 26 31.4**	**-2.0**
JSD	**Sado**	**2.28**	**73**	P	**Pn**	**01 25 52.7**	**+1.5**
MAT	**Matsushiro**	**2.34**	**111**	P	**Pn**	**01 25 52.5**	**+0.7**
MAT				S	**Sn**	**01 26 36.2**	**+0.1**
MAT	**Matsushiro**	**2.34**	**111**	P	**Pn**	**01 25 52.5**	**+0.7**
MJAR	**Matsushiro Arr**	**2.34**	**111**	P	**Pn**	**01 25 53.0**	**+1.2**
	1.5nm,0.3s,baz=286,slow=9.1,SNR=76						
JIE	**Ise**	**3.17**	**162**	P	**Pn**	**01 25 59.0**	**+0.3**
JAG	**Ashikaga**	**3.32**	**106**	P	**Pn**	**01 26 00.8**	**+0.8**
JMK	**Ichinoseki**	**4.76**	**69**	P	**Pn**	**01 26 15.7**	**+1.4**
JMK				S	**Sn**	**01 27 17.5**	**+0.3**
BSO1	**Boso 1**	**5.22**	**120**	P	**Pn**	**01 26 20.0**	**+1.2**
BSO1				S	**Sn**	**01 27 24.4**	**-1.1**
KSRS	**Korea Array**	**6.03**	**273**	P	**Pn**	**01 26 28.9**	**+0.7**
	0.1nm,0.3s,baz=93,slow=12,SNR=8.0						
USRK	**Ussuriysk Ar.**	**7.28**	**340**	P	**P**	**01 26 44.5**	**+0.9**
	baz=148,slow=11,SNR=6.1						
ASAJ	**Asahikawa**	**8.59**	**37**	P	**Pn**	**01 26 58.5**	**+0.7**
	2.1nm,0.3s,baz=245,slow=8.3,SNR=7.7						
ASAJ				S	**Sn**	**01 28 31.0**	**-5.9**
	0.7nm,0.3s,baz=46,slow=26,SNR=1.9						
SONM	**Songino Array**	**23.68**	**305**	P	**P**	**01 29 37.2**	**+0.2**
	0.3nm,0.4s,baz=119,slow=12,SNR=3.0						
MKAR	**Makanchi Array**	**39.90**	**301**	P	**P**	**01 31 56.2**	**-0.2**
	0.4nm,0.6s,baz=96,slow=10,SNR=2.8						
KURBB	**Kurchatov Arra**	**42.03**	**307**	P	**P**	**01 32 13.7**	**+0.2**
	0.4nm,0.3s,baz=90,slow=8.7,SNR=4.4						
WRA	**Warramunga Arr**	**57.06**	**181**	P	**P**	**01 34 05.9**	**0.0**
	0.8nm,0.4s,baz=357,slow=7.5,SNR=23						
ASAR	**Alice Springs**	**60.77**	**182**	P	**P**	**01 34 31.5**	**+0.3**
	0.4nm,0.5s,baz=16,slow=12,SNR=7.1						
PDAR	**Pinedale Array**	**80.67**	**43**	P	**P**	**01 36 31.3**	**+1.2**
	0.1nm,0.5s,baz=351,slow=4.6,SNR=2.0						

IDC 27 01:41:08.8±8.6**, 27°.70N**×**85°.95E, h0**km**, mb3.7**/3**,**
mb1 3.7/4**, mb1mx3.3**/37**, mbtmp3.6**/4**, ML3.5**/1**, MS4.2**/1**,**
Ms1 4.2/1**, ms1mx2.8**/39**, Error ellipse: s-maj=147.9km**
s-min=66.1km az=3.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.27**	**352**	P	P	01 45 34.5	-0.5
	0.2nm,0.3s,baz=181,slow=13,SNR=4.7						
SONM	**Songino Array**	**25.65**	**33**	P	P	01 46 40.1	-0.2
	0.8nm,0.7s,baz=225,slow=8.2,SNR=5.8						
ZALV	**Zalesovo Beam**	**26.23**	**358**	P	P	01 46 46.1	+0.8
	0.4nm,0.4s,baz=186,slow=11,SNR=2.6						
YAK	**Yakutsk**	**44.78**	**28**	LR	LR	02 09 30.9	
	comp=Z,265nm,20.5s,baz=94,slow=38						
ARCES	**ARCESS Array B**	**54.07**	**338**	P	P	01 50 34.6	-0.3
	2.1nm,0.9s,baz=90,slow=6.5,SNR=1.8						

*IDC **27** 01:51:10.3±5.8, 46°.10N×150°.77E, h0km, mb3.8/7,*
mb1 4.0/7, mb1mx3.5/42, mbtmp3.8/7, Error ellipse:
s-maj=147.0km s-min=38.7km az=169.0
*SKHL **27** 01:51:15.2±0.3, 44°.80N×151°.00E, h114km±5km, mb4.7/5,*
mbv5.0/3, msh5.1/1, msha5.6/3
*MOS **27** 01:51:16.7±1.1, 45°.02N×150°.81E, h122km, mb4.0/6, Error*
ellipse: s-maj=16.0km s-min=11.4km az=75.4
*NEIC **27** 01:51:26.4±1.2, 46°.0N±0°.2×151°.0E±0°.2, h137km±14km,*
mb4.2/8, Error ellipse: s-maj=41.9km s-min=5.3km
az=144.0
ISC 27 01:51:17.2±0.9**, 45°.0N**±0°.1×**150°.92E**±0°.08**, h100**km**, n61,**
σ1°19/64, mb3.9/13**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.17**	**276**	*i* PN	**Pn**	**01 51 51.5**	**-0.4**
KUR				*e*S	**Sn**	**01 52 18.7**	**+0.2**
KUR	**Kuril'sk**	**2.17**	**276**	*i* P	**Pn**	**01 51 51.9**	**0.0**
KUR				AMB	AMB	01 51 52.6	
	80nm,0.4s						
KUR				AMB	AMB	01 51 52.6	
	40nm,0.4s						
KUR				AMB	AMB	01 51 52.6	
	180nm,0.4s						
KUR				AMB	AMB	01 51 55.0	
	400nm,2.0s						
KUR				*i* S	**Sn**	**01 52 19.2**	**+0.7**
KUR				A	A	01 52 20.2	
	660nm,0.3s						
KUR				A	A	01 52 20.2	
	250nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.75**	**256**	PN	**Pn**	**01 52 12.7**	**-0.3**
YUK				S	**Sn**	**01 52 56.8**	**+0.6**
YUK				pmax	pmax		
	comp=N,50nm,0.2s						
YUK				pmax	pmax		
	comp=Z,112nm,0.2s						
YUK				smax	smax		
	comp=N,192nm,0.6s						
YUK				smax	smax		
	comp=E,63nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.75**	**256**	*e*P	**Pn**	**01 52 11.7**	**-1.3**
YUK				AMB	AMB	01 52 15.1	
	comp=E,500nm,2.0s						
YUK				AMB	AMB	01 52 16.0	
	comp=E,50nm,0.2s						
YUK				AMB	AMB	01 52 16.0	
	comp=E,110nm,0.2s						
YUK				*e*S	**Sn**	**01 52 54.3**	**-1.9**
YUK				A	A	01 52 58.5	
	comp=E,800nm,2.0s						
YUK				A	A	01 52 58.5	
	comp=E,900nm,2.0s						
YUK				A	A	01 52 59.0	
	comp=E,190nm,0.4s						
YUK				A	A	01 52 59.0	
	comp=E,60nm,0.4s						
GRPR	**Tuman**	**3.83**	**256**	*e*PN	**Pn**	**01 52 15.7**	**+1.7**
GRPR				*e*S	**Sn**	**01 52 59.3**	**+1.3**
GRPR				smax	smax		
	comp=N,224nm,0.3s						
GRPR				smax	smax		
	comp=E,169nm,0.3s						
GRPR	**Tuman**	**3.83**	**256**	*e*P	**Pn**	**01 52 14.7**	**+0.7**
GRPR				*e*S	**Sn**	**01 52 59.3**	**+1.3**
GRPR				A	A	01 53 06.0	
	comp=E,220nm,0.3s						
GRPR				A	A	01 53 06.0	
	comp=E,170nm,0.3s						
NMR	**Nemuro--Hokkai**	**4.09**	**248**	*e*PN	**Pn**	**01 52 17.3**	**-0.2**
NMR				*e*S	**Sn**	**01 53 04.4**	**+0.2**
NMR	**Nemuro--Hokkai**	**4.09**	**248**	*e*P	**Pn**	**01 52 17.3**	**-0.2**
NMR				*e*S	**Sn**	**01 53 03.5**	**-0.7**
YSS	**Yuzh-Sakhalins**	**6.00**	**292**	*e*P	**Pn**	**01 52 43.8**	**+0.4**
YSS				AMB	AMB	01 52 46.0	
	comp=E,10.0nm,0.5s						
JEM	**Erimo**	**6.40**	**245**	Pn	Pn	01 52 55.3	+6.5
ERM	**Erimo**	**6.40**	**245**	Pn	Pn	01 53 02.0	+13
SKR	**Severo-Kuril's**	**6.65**	**30**	*e*PN	**Pn**	**01 52 53.6**	**+1.5**
SKR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SKR	**Severo-Kuril's**	**6.65**	**30**	*e*P	**Pn**	**01 52 52.7**	**+0.6**
SKR				AMB	AMB	01 52 54.2	
	comp=Z,40nm,0.3s						
SKR				AMB	AMB	01 52 57.4	
	comp=Z,100nm,2.0s						
PAU	**Pauzhetka**	**7.54**	**29**	*e*P	**Pn**	**01 53 05.3**	**+1.0**
TYV	**Tymovskoe**	**8.05**	**319**	*e*PN	**Pn**	**01 53 10.4**	**-0.8**
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
TYV	**Tymovskoe**	**8.05**	**319**	*e*P	**Pn**	**01 53 12.1**	**+0.9**
TYV				AMB	AMB	01 53 13.6	
	comp=Z,10.0nm,0.5s						
JTM	**Tenmabayashi**	**8.38**	**243**	Pn	Pn	01 53 35.3	+20
PET	**Petropavlovsk**	**9.47**	**30**	*i* PN	Pn	01 53 40.0	+10
PET	**Petropavlovsk**	**9.47**	**30**	*e*P	**Pn**	**01 53 30.2**	**-0.2**
MAJO	**Matsushiro**	**12.82**	**233**	*i* PN	Pn	01 54 08.5	-7.2
EKMR	**Ekimchan**	**14.24**	**311**	*e*P	**Pn**	**01 54 31.2**	**-2.8**
BMKR	**Bomnak**	**17.14**	**312**	*e*P	**Pn**	**01 55 07.8**	**-2.5**
SEY	**Seymchan**	**17.96**	**2**	*i* P	**Pn**	**01 55 22.0**	**+2.0**
SEY	**Seymchan**	**17.96**	**2**	*e*P	**Pn**	**01 55 22.0**	**+2.0**
KROS	**Kirovskiy**	**18.03**	**310**	*e*P	**P**	**01 55 20.4**	**+0.2**
KSAR	**Wonju Array Be**	**18.87**	**254**	P	Pn	01 55 39.3	+8.2
BILL	**Bilibino**	**24.42**	**14**	*e*P	**P**	**01 56 28.4**	**+2.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL	**Bilibino**	**24.42**	**14**	*e*P	**P**	**01 56 26.1**	**+0.2**
IMAR	**Indian Mountai**	**36.05**	**35**	P	**P**	**01 58 07.0**	**-1.6**
IMAR				PcP	**PcP**	**02 00 33.9**	**+1.5**
FIS	**Fire Island**	**37.39**	**43**	P	**P**	**01 58 18.0**	**-1.9**
SML	**Sawmill**	**38.27**	**42**	P	**P**	**01 58 26.5**	**-0.9**
ILAR	**Eielson Array**	**38.84**	**37**	P	**P**	**01 58 30.6**	**-1.5**
	comp=Z,0.6nm,1.1s,baz=275,slow=8.8,SNR=2.6						
NRIK	**Noril'sk**	**39.46**	**330**	*i* P	**P**	**01 58 36.2**	**-0.9**
NRIK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
L27K	**Beaver Creek**	**41.18**	**40**	P	**P**	**01 58 51.4**	**0.0**
BCAR	**Beaver Creek A**	**41.20**	**40**	P	**P**	**01 58 51.4**	**-0.2**
BARN	**Barnard Glacie**	**41.54**	**43**	P	**P**	**01 58 54.5**	**-0.1**
BARN				IAmb	IAmb	01 59 09.4	
	comp=Z,5.6nm,1.1s						
CTGM	**Chitina Glacie**	**41.71**	**43**	P	**P**	**01 58 55.5**	**-0.4**
CTGM				IAmb	IAmb	01 59 03.4	
	comp=Z,8.9nm,1.2s						
INK	**Inuvik**	**43.92**	**31**	P	**P**	**01 59 12.6**	**-0.8**
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
INK	**Inuvik**	**43.92**	**31**	P	**P**	**01 59 12.6**	**-0.8**
C36M	**Paulatuk**	**47.07**	**29**	P	**P**	**01 59 37.3**	**-0.9**
C36M				IAmb	IAmb	01 59 39.2	
	comp=Z,6.8nm,1.2s						
YKA	**Yellowknife Ar**	**53.21**	**35**	P	**P**	**02 00 23.2**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=297,slow=7.0,SNR=3.6						
YKA	**Yellowknife Ar**	**53.21**	**35**	*e*P	**P**	**02 00 24.6**	**-0.1**
ABKAR	**Akbulak array**	**58.35**	**310**	P	**P**	**02 01 02.2**	**+0.6**
ARCES	**ARCESS Array B**	**58.97**	**340**	P	**P**	**02 01 04.1**	**-1.4**
	comp=Z,3.2nm,0.9s,baz=34,slow=6.7,SNR=2.0						
ARCES	**ARCESS Array B**	**58.97**	**340**	P	**P**	**02 01 05.0**	**-0.5**
SUMG	**Summit**	**62.51**	**3**	P	**P**	**02 01 30.4**	**+

ISC 27 02:12:18.8±1.3, 28°0N±0°2 × 85°1E±0°2, h12km, n8, σ0§53/7, mb3.4/5, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.83**	**124**	Pn	**Pn**	**02 16 01.8**	**+0.2**
	baz=316,slow=9.9,SNR=1.7						
MKAR	**Makanchi Array**	**18.91**	**354**	P	**Pn**	**02 16 39.6**	**-0.2**
	0.2nm,0.3s,baz=174,slow=12,SNR=6.9						
SONM	**Songino Array**	**25.81**	**34**	P	**P**	**02 17 49.3**	**-0.6**
	0.2nm,0.4s,baz=224,slow=10,SNR=1.5						
ZALV	**Zalesovo Beam**	**25.94**	**360**	P	**P**	**02 17 51.1**	**+0.3**
	0.4nm,0.5s,baz=159,slow=6.2,SNR=1.8						
MJAR	**Matsushiro Arr**	**45.20**	**65**	LR	LR	02 39 02.7	
	comp=Z,42nm,19.3s,baz=195,slow=36						
FINES	**FINESS Array B**	**51.11**	**328**	P	**P**	**02 21 21.1**	**+0.2**
	1.9nm,0.8s,baz=116,slow=8.7,SNR=5.4						
ARCES	**ARCESS Array B**	**53.54**	**338**	P	**P**	**02 21 39.7**	**+0.7**
	1.7nm,0.9s,baz=46,slow=3.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**78.23**	**279**	P	**P**	**02 24 18.5**	**-0.4**
	0.2nm,0.5s,baz=57,slow=4.3,SNR=5.7						

IDC 27 02:15:05.8±2.1, 27°87N×85°14E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/53, mbtmp3.5/4, ML3.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/37, Error ellipse: s-maj=62.5km s-min=33.1km az=65.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.02**	**354**	P	Pn	02 19 30.2	+0.3
	0.1nm,0.3s,baz=166,slow=11,SNR=4.6						
MKAR				LR	LR	02 26 36.5	
	comp=Z,16nm,20.1s,baz=42,slow=36						
SONM	**Songino Array**	**25.90**	**34**	P	P	02 20 39.3	-0.3
	0.8nm,0.8s,baz=226,slow=9.8,SNR=4.9						
JNU	**Nakatsue**	**39.52**	**71**	LR	LR	02 42 01.4	
	comp=Z,98nm,19.9s,baz=340,slow=41						
FINES	**FINESS Array B**	**51.20**	**328**	P	P	02 24 10.2	-0.5
	0.4nm,0.6s,baz=111,slow=16,SNR=1.5						
ASAR	**Alice Springs**	**69.55**	**133**	P	P	02 26 17.0	+0.2
	0.2nm,0.6s,baz=322,slow=5.9,SNR=1.7						

IDC 27 02:17:06.0±3.0, 16°95S×173°01W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/42, mbtmp3.9/4, Error ellipse: s-maj=211.7km s-min=31.9km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.61**	**241**	P	P	02 25 12.0	-0.3
	0.8nm,0.3s,baz=58,slow=16,SNR=1.8						
WRA	**Warramunga Arr**	**49.88**	**258**	P	P	02 26 01.2	-0.4
	0.3nm,0.3s,baz=95,slow=6.7,SNR=10						
ASAR	**Alice Springs**	**50.01**	**253**	P	P	02 26 02.9	+0.3
	3.4nm,0.6s,baz=90,slow=7.8,SNR=38						
NVAR	**Mina Array Bea**	**75.22**	**42**	P	P	02 28 51.1	0.0
	0.2nm,0.5s,baz=214,slow=6.4,SNR=1.8						

IDC ***27*** *02:23:05.9±1.3, 1°.90N×126°.25E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/44, mbtmp3.7/6, ML3.5/1, Error ellipse: s-maj=104.4km s-min=18.4km az=70.0*

ISC 27 02:23:11.9±1.5, 1°.9N±0°.3×126°.5E±0°.8, h47km, n6, σ0§76/6, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.93**	**182**	P	**P**	**02 27 39.8**	**-0.1**
	0.1nm,0.3s,baz=13,slow=14,SNR=1.3						
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	**02 28 12.9**	**-0.6**
	2.4nm,0.5s,baz=338,slow=11,SNR=2.2						
ASAR	**Alice Springs**	**26.45**	**165**	P	**P**	**02 28 45.6**	**+0.9**
	1.2nm,0.5s,baz=350,slow=14,SNR=7.7						
SONM	**Songino Array**	**48.92**	**342**	P	**P**	**02 31 53.5**	**+0.1**
	0.3nm,0.5s,baz=148,slow=8.1,SNR=2.2						
MKAR	**Makanchi Array**	**58.90**	**326**	P	**P**	**02 33 06.5**	**+0.3**
	0.4nm,0.4s,baz=118,slow=8.3,SNR=6.0						
KURBB	**Kurchatov Arra**	**63.13**	**328**	P	**P**	**02 33 34.0**	**-0.6**
	0.9nm,0.5s,baz=131,slow=6.4,SNR=6.9						

IDC ***27*** *02:28:16.5±1.0, 22°.96N×124°.86E, h0km, mb3.7/10, mb1 3.8/12, mb1mx3.7/45, mbtmp3.7/12, ML3.4/2, MS3.1/7, Ms1 3.1/7, ms1mx2.8/47, Error ellipse: s-maj=34.0km s-min=19.2km az=78.0*

NIED ***27*** *02:28:21.1, 23°.10N×124°.90E, h49km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.27; Mθθ1.06; Mϕϕ-0.79; Mrθ0.87; Mϕθ0.19; Mrϕ-0.58; Fault plane solution: M₀1.42000×10¹⁵ NP1: ϕs303.00000°, δ83.00000°, λ-50.00000°. NP2:ϕs41.00000°, δ41.00000°, λ-170.00000°.*

JMA ***27*** *02:28:21.0±0.2, 23°.10N×124°.90E, h49km, M4.0*

ISC 27 02:28:19.9±0.7, 23°05N±0°.05×124°85E±0°.06, h24km, n31, σ1§48/41, mb3.6/10, MS3.0/6, 2D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**1.39**	**316**	P	**Pb**	**02 28 44.2**	**-0.9**
HATJ				S	**Sn**	**02 29 01.4**	**+0.1**
JKRS	**Kuro-shima**	**1.41**	**327**	P	**Pb**	**02 28 45.1**	**-0.4**
JKRS				S	**Sb**	**02 29 02.5**	**-0.6**
JIJ	**Ishigaki jima**	**1.46**	**334**	P	**Pb**	**02 28 45.3**	**-1.0**
JIJ				S	**Sn**	**02 29 02.1**	**-1.0**
JTJ	**Tarama**	**1.59**	**355**	P	**Pb**	**02 28 47.1**	**-1.4**
JTJ				S	**Sn**	**02 29 06.1**	**-0.2**
JISG	**Ishigakijimahi**	**1.61**	**342**	P	**Pb**	**02 28 47.3**	**-1.6**
JISG				S	**Sn**	**02 29 07.1**	**+0.4**
IRIF	**Iriomote-Funau**	**1.64**	**321**	P	**Pb**	**02 28 48.2**	**-1.2**
IRIF				S	**Sn**	**02 29 08.2**	**+0.7**
JMJ2	**Miyako jima3**	**1.74**	**14**	P	**Pn**	**02 28 48.5**	**0.0**
JMJ2				eS	**Sn**	**02 29 09.2**	**-0.7**
JOGS	**Gusukube**	**1.77**	**16**	P	**Pn**	**02 28 49.3**	**+0.3**
JOGS				eS	**Sn**	**02 29 10.6**	**-0.3**
JIRB	**Irabujima**	**1.79**	**9**	P	**Pn**	**02 28 49.3**	**0.0**
JIRB				eS	**Sn**	**02 29 10.7**	**-0.6**
JIKM	**Ikemajima**	**1.90**	**11**	P	**Pn**	**02 28 50.7**	**0.0**
JIKM				eS	**Sn**	**02 29 12.9**	**-1.0**
YOJ	**Yonaguni jima**	**2.19**	**310**	P	**Pn**	**02 28 56.2**	**+1.4**
YOJ				S	**Sn**	**02 29 21.4**	**+0.2**
JYNG	**Yonagunijimaku**	**2.23**	**309**	P	**Pb**	**02 28 56.9**	**-2.7**
JYNG				S	**Sn**	**02 29 22.4**	**+0.2**
JKE	**Kume jima 2**	**3.70**	**28**	P	**Pn**	**02 29 14.3**	**-1.3**
JKE				eS	**Sn**	**02 29 55.4**	**-3.1**
CVP	**Callao Caves**	**6.03**	**209**	i| eP	**Pn**	**02 29 46.3**	**-1.3**
CVP				i S	**Sn**	**02 30 50.1**	**-5.9**
LQP	**Lukban**	**9.43**	**200**	i| eP	**Pn**	**02 30 35.1**	**+0.7**
KSRS	**Korea Array**	**14.60**	**10**	Pn	**Pn**	**02 31 43.8**	**-1.0**
	0.2nm,0.3s,baz=190,slow=13,SNR=2.7						
KSRS				LR	LR	02 37 07.0	
	comp=Z,52nm,20.1s,baz=198,slow=36						
MJAR	**Matsushiro Arr**	**17.72**	**38**	P	**P**	**02 32 26.9**	**+1.1**
	0.1nm,0.3s,baz=231,slow=10.0,SNR=6.7						
USRK	**Ussuriysk Ar.**	**21.90**	**14**	P	**P**	**02 33 12.5**	**+1.4**
	2.0nm,0.6s,baz=202,slow=11,SNR=5.5						
CMAR	**Chiang Mai Arr**	**24.64**	**264**	LR	LR	02 43 30.5	
	comp=Z,21nm,18.9s,baz=240,slow=37						
KLR	**Kul'dur**	**26.69**	**10**	P	**P**	**02 33 57.8**	**+0.8**
	0.5nm,0.4s,baz=212,slow=14,SNR=2.3						
KAPI	**Kappang**	**28.34**	**191**	LR	LR	02 44 17.5	
	comp=Z,31nm,20.5s,baz=308,slow=34						
SONM	**Songino Array**	**28.79**	**334**	P	**P**	**02 34 16.6**	**+0.6**
	0.3nm,0.5s,baz=155,slow=8.7,SNR=2.4						
PETK	**Petropavlovsk-**	**39.00**	**31**	LR	LR	02 52 02.7	
	comp=Z,22nm,20.1s,baz=295,slow=36						
MKAR	**Makanchi Array**	**41.49**	**315**	P	**P**	**02 36 07.5**	**+2.4**
	0.6nm,0.4s,baz=103,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**43.04**	**326**	P	**P**	**02 36 18.0**	**+0.5**
	1.8nm,0.5s,baz=118,slow=7.6,SNR=7.0						
ZALV				LR	LR	02 53 52.4	
	comp=Z,25nm,20.8s,baz=121,slow=36						
WRA	**Warramunga Arr**	**43.72**	**167**	P	**P**	**02 36 23.1**	**-0.3**
	0.9nm,0.6s,baz=347,slow=9.1,SNR=4.7						
KURBB	**Kurchatov Arra**	**45.15**	**319**	P	**P**	**02 36 34.2**	**-0.2**
	0.2nm,0.3s,baz=110,slow=7.7,SNR=1.8						
ASAR	**Alice Springs**	**47.26**	**169**	P	**P**	**02 36 50.4**	**-1.0**
	0.2nm,0.4s,baz=353,slow=8.1,SNR=1.8						
NRIK	**Noril'sk**	**51.39**	**344**	LR	LR	03 00 49.3	
	comp=Z,40nm,19.6s,baz=162,slow=38						
FINES	**FINESS Array B**	**74.10**	**330**	P	**P**	**02 39 54.2**	**+0.4**
	1.7nm,1.0s,baz=54,slow=7.1,SNR=2.3						
FINES				LR	LR	03 14 11.7	
	comp=Z,26nm,18.4s,baz=66,slow=37						
YKA	**Yellowknife Ar**	**82.67**	**24**	P	**P**	**02 40 42.6**	**+1.5**

0.3nm,1.0s,baz=304,slow=5.0,SNR=2.6

IDC 27 02:33:34.0±2.0, 27°76N×85°62E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.2/43, mbtmp3.6/4, ML3.6/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/43, Error ellipse: s-maj=57.7km s-min=32.3km az=63.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.18**	**353**	P	P	02 37 59.1	0.0
	0.2nm,0.3s,baz=178,slow=11,SNR=5.0						
SONM	**Songino Array**	**25.76**	**33**	P	P	02 39 06.4	0.0
	1.3nm,0.7s,baz=219,slow=10,SNR=7.0						
FINES	**FINESS Array B**	**51.53**	**328**	P	P	02 42 41.1	-0.1
	0.5nm,0.5s,baz=104,slow=8.0,SNR=5.8						
OPO	**Ambohidratompo**	**59.22**	**223**	LR	LR	03 05 43.3	
	comp=Z,38nm,20.2s,baz=98,slow=33						
ASAR	**Alice Springs**	**69.16**	**133**	P	P	02 44 42.5	0.0
	0.2nm,0.4s,baz=321,slow=7.3,SNR=2.6						

TAP 27 02:34:50.6, 24°41N×121°65E, h31km, ML2.0, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.12**	**71**	*eP*	Pn	02 34 56.8	+0.3
	baz=71						
EWUT				*eS*	Sb	02 35 01.2	+1.1
	baz=71						
NDT	**Datong Townshi**	**0.23**	**327**	P	Pn	02 34 57.9	-0.2
	baz=327						
NDT				S	Sn	02 35 02.9	+0.2
	baz=327						
NDS	**Dongshan**	**0.23**	**14**	*eP*	Pb	02 34 57.7	+0.3
	baz=14						
NDS				*eS*	Sn	02 35 02.5	-0.2
	baz=14						
NACB	**Ninganchiao**	**0.24**	**193**	*eP*	Pb	02 34 57.6	+0.2
	baz=192						
NACB				S	Sn	02 35 02.8	0.0
	baz=192						
NNSH	**Datong**	**0.25**	**275**	P	Pn	02 34 58.1	-0.2
	baz=275						
NNSH				*eS*	Sn	02 35 03.3	+0.1
	baz=275						
ENTT	**Nioudou**	**0.25**	**342**	P	Pn	02 34 58.0	-0.2
	baz=342						
ENTT				S	Sn	02 35 03.3	+0.2
	baz=342						
NNSB	**Datong**	**0.25**	**275**	*eP*	Pn	02 34 58.1	-0.2
	baz=275						
NNSB				*eS*	Sn	02 35 03.3	+0.1
	baz=275						
ETLH	**Xiulin Townshi**	**0.25**	**218**	P	Pn	02 34 58.1	-0.3
	baz=218						
ETLH				S	Sn	02 35 03.2	0.0
	baz=218						
NNS	**Nan Shan**	**0.26**	**278**	P	Pn	02 34 58.2	-0.3
	baz=277						
NNS				S	Sn	02 35 03.5	+0.1
	baz=277						
TWC	**Suao**	**0.27**	**41**	*eP*	Pn	02 34 58.3	-0.2
	baz=43						
TWC				*eS*	Sn	02 35 03.4	-0.2
	baz=43						
TWE	**Neicheng**	**0.32**	**2**	*eP*	Pn	02 34 58.9	-0.3
	baz=5.0						
TWE				*eS*	Sn	02 35 04.6	-0.1
	baz=5.0						
TWD	**Chiawan**	**0.33**	**189**	*eP*	Pb	02 34 58.5	-0.1
	baz=187						
YHNB	**Yeheng**	**0.36**	**316**	*eP*	Pb	02 34 59.4	+0.2
	baz=316						
YHNB				*eS*	Sb	02 35 05.1	+0.2
	baz=316						
NWLT	**Wulai**	**0.40**	**340**	*eP*	Pb	02 34 59.9	+0.3
	baz=339						
NWLT				*eS*	Sb	02 35 05.9	+0.3
	baz=339						
FUSS	**Fushou**	**0.40**	**247**	*eP*	Pn	02 35 00.3	-0.3
	baz=247						
FUSS				*eS*	Sn	02 35 06.9	-0.4
	baz=247						
WHF	**Hehuan Shan**	**0.44**	**234**	*eP*	Pn	02 35 00.9	-0.3
	baz=233						
WHF				*eS*	Sn	02 35 08.0	-0.3
	baz=233						
TWT	**Tachien**	**0.46**	**251**	*eS*	Sn	02 35 08.8	+0.3
	baz=250						
TDCB	**Techi**	**0.47**	**252**	*eP*	Pn	02 35 01.4	-0.1
	baz=251						
TDCB				*eS*	Sn	02 35 08.4	-0.4
	baz=251						
NTC	**Toucheng**	**0.48**	**20**	*eP*	Pn	02 35 01.2	-0.2
	baz=19						
CHGB	**Renai**	**0.56**	**232**	*eP*	Pn	02 35 02.6	-0.1
	baz=231						
CHGB				*eS*	Sn	02 35 11.1	+0.1
	baz=231						
TIPB	**Shuangxi**	**0.59**	**16**	*eP*	Pn	02 35 02.7	-0.2
	baz=15						
BACT	**New Taipei Cit**	**0.62**	**342**	*eS*	Sn	02 35 12.9	+0.7
	baz=342						
OWD	**Renai**	**0.62**	**224**	*eP*	Pb	02 35 03.2	0.0
	baz=224						
WHP	**Taichung City**	**0.66**	**259**	*eP*	Pn	02 35 04.3	+0.4
	baz=258						
WHP				*eS*	Sn	02 35 13.5	+0.3
	baz=258						
WFSB	**Wu-fen Shan**	**0.67**	**10**	*eP*	Pn	02 35 04.4	+0.3
	baz=10.0						
VWDT	**VWDT**	**0.80**	**216**	*eP*	Pn	02 35 06.1	+0.1
	baz=215						
SSLB	**Suanglung**	**0.89**	**226**	*eP*	Pb	02 35 07.7	+0.1
	baz=226						
YULB	**Yu-li**	**1.06**	**198**	*eP*	Pn	02 35 09.8	+0.5
	baz=197						

JMA 27 02:35:28.6±0.2, 23°91N×123°32E, h31km±3km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.47**	**72**	P	Pb	02 35 38.3	-0.3
HATJ				S	Sb	02 35 45.0	-0.4
IRIF	**Iriomote-Funau**	**0.56**	**41**	P	Pb	02 35 39.7	-0.4
IRIF				S	Sb	02 35 47.7	-0.3
YOJ	**Yonaguni jima**	**0.62**	**333**	P	Pb	02 35 40.7	-0.3
YOJ				S	Sn	02 35 49.9	-0.2
JKRS	**Kuro-shima**	**0.71**	**62**	P	Pn	02 35 42.5	0.0
JKRS				S	Sb	02 35 51.7	-0.3
JIJ	**Ishigaki jima**	**0.88**	**59**	P	Pn	02 35 44.5	-0.3
JIJ				eS	Sn	02 35 56.4	-0.1
JISG	**Ishigakijimahi**	**1.13**	**53**	P	Pn	02 35 48.3	0.0

SNET ***27*** *02:37:43.9±0.9, 13°.90N×91°.22W, h15km±5km, ML3.4*

GCG ***27*** *02:37:44.3±0.4, 13°.76N×91°.28W, h24km±3km, MD3.5*

ISC 27 02:37:42.2±2.0, 13°7N±0°.1×91°40W±0°.08, h22km±8km, n20, σ0§43/28, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.74**	**347**	*eP*	**Pn**	**02 37 57.9**	**+0.5**
RTAL	**Retalhuleu**	**0.86**	**341**	*eP*	**Pb**	**02 37 58.0**	**-0.4**
RTAL				*eS*	**Sb**	**02 38 09.3**	**-0.2**
FUG	**Fuego 3**	**0.91**	**36**	*eP*	**Pb**	**02 37 59.6**	**+0.2**
PCG	**Pacaya**	**1.02**	**49**	*eP*	**Pn**	**02 38 01.7**	**+0.2**
NBG	**Las Nubes**	**1.34**	**49**	*eP*	**Pb**	**02 38 06.9**	**+0.1**
NBG				*eS*	**Sb**	**02 38 24.2**	**+0.5**
HUEH	**Huehuetenango**	**1.60**	**356**	*eP*	**Pn**	**02 38 09.7**	**+0.3**
HUEH				*eS*	**Sn**	**02 38 29.5**	**-0.1**
RTR	**El Retiro**	**1.71**	**84**	*eP*	**Pn**	**02 38 11.3**	**+0.4**
RTR				*eS*	**Sn**	**02 38 32.4**	**+0.1**
SBLS	**San Blas**	**1.73**	**86**	*eP*	**Pn**	**02 38 11.3**	**+0.1**
SNJE	**San Jose**	**1.75**	**85**	*eP*	**Pn**	**02 38 11.6**	**+0.2**
LALI	**Alcalda de L**	**2.03**	**96**	*eP*	**Pn**	**02 38 15.1**	**-0.1**
LALI				*eS*	**Sn**	**02 38 39.5**	**-0.4**
BOQS	**Boqueron**	**2.06**	**89**	*eP*	**Pn**	**02 38 16.0**	**+0.3**
MTO3	**Montecristo**	**2.09**	**71**	i| *iP*	**Pn**	**02 38 15.6**	**-0.6**
MTO3				*eS*	**Sn**	**02 38 41.3**	**-0.4**
UEES	**Universidad Ev**	**2.10**	**90**	IAML		02 38 44.8	
	comp=Z,263nm,0.3s						
SNET	**Serv Nac Est T**	**2.11**	**90**	*eP*	**Pn**	**02 38 15.9**	**-0.3**
SNET				*eS*	**Sn**	**02 38 41.2**	**-0.7**
MRL	**Marmol**	**2.15**	**50**	*eP*	**Pn**	**02 38 16.6**	**-0.3**
MRL	**Marmol**	**2.15**	**50**	*eP*	**Pn**	**02 38 17.5**	**+0.6**
ESQI	**Esquipulas**	**2.17**	**67**	*eP*	**Pn**	**02 38 16.4**	**-0.7**
LFRS	**El Faro**	**2.27**	**92**	*eP*	**Pn**	**02 38 19.1**	**+0.6**
LFRS				*eS*	**Sn**	**02 38 45.8**	**-0.2**
PAVA	**Las Pavas**	**2.39**	**90**	*eP*	**Pn**	**02 38 20.7**	**+0.5**
COEG	**Centro de Oper**	**2.45**	**92**	*eP*	**Pn**	**02 38 21.7**	**+0.7**
COEG				*eS*	**Sn**	**02 38 50.6**	**+0.3**
COEG				IAML		02 38 57.8	
	comp=Z,256nm,0.6s						

NOU ***27*** *02:52:21.6, 37°.69S×176°.31E, h277km, MLv4.3, North Island, New Zealand*

WEL 27 02:52:29.4, 38°S±3°×17°6E±°, h217km±4km, M3.3/42, MLv3.3/42, Error ellipse: s-maj=0.0km s-min=0.0km az=140.1, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARZ	**Kaharoa**	**0.09**	**144**	P	Pn	02 52 57.7	+0.1
KMRZ	**Kaimai**	**0.21**	**299**	P	Pn	02 52 58.0	+0.2
OMRZ	**Omania**	**0.22**	**136**	P	Pn	02 52 57.9	+0.1
TGRZ	**Tauranga**	**0.23**	**16**	P	Pn	02 52 57.6	-0.2
OPRZ	**Ohinepanea**	**0.32**	**71**	P	Pn	02 52 57.6	-0.3
HSRZ	**Hossack Road**	**0.36**	**172**	P	Pn	02 52 58.5	+0.4
TARZ	**Mount Tarawera**	**0.39**	**138**	P	Pn	02 52 58.3	+0.3
GRRZ	**Galatos Road**	**0.40**	**188**	P	Pn	02 52 58.3	+0.1
HRRZ	**Handcock Road**	**0.45**	**169**	P	Pn	02 52 58.4	+0.1
EDRZ	**Edgecumbe**	**0.47**	**110**	P	Pn	02 52 58.3	-0.1
RRRZ	**Republican Roa**	**0.47**	**146**	P	Pn	02 52 57.8	-0.6
TOZ	**Tahuroa Road**	**0.58**	**292**	P	Pn	02 52 58.9	+0.1
TOZ				S	S	02 53 21.6	+0.1
ALRZ	**Allen Road**	**0.62**	**168**	P	Pn	02 52 58.7	-0.2
MUGZ	**Murupara**	**0.70**	**139**	P	Pn	02 52 58.9	-0.4
MUGZ				S	S	02 53 21.5	-1.2
URZ	**Urewera**	**0.80**	**113**	P	Pn	02 52 59.1	-0.6
URZ				S	S	02 53 21.1	-2.3
MRHZ	**Matea Rd**	**0.90**	**168**	P	Pn	02 53 00.0	-0.3
MRHZ				S	S	02 53 22.0	-2.7
WIZ	**White Island**	**0.91**	**63**	P	Pn	02 52 59.1	-1.3
RTZ	**Ruatahuna**	**0.92**	**137**	P	Pn	02 53 00.2	-0.2
RTZ				S	S	02 53 23.5	-1.3
HATZ	**Hinemaiaia**	**0.94**	**184**	P	Pn	02 53 00.3	-0.3
HATZ				S	S	02 53 23.0	-2.0
RATZ	**Rangitukua**	**0.97**	**199**	P	Pn	02 53 00.8	0.0
MTHZ	**Maungataniwha**	**1.04**	**150**	P	Pn	02 53 01.1	-0.1
MTHZ				S	S	02 53 24.3	-1.7
RITZ	**Rihia Road**	**1.06**	**194**	P	Pn	02 53 01.6	+0.4
RAGZ	**Rawiri**	**1.12**	**120**	P	Pn	02 53 01.8	+0.1
MWZ	**Matawai**	**1.13**	**110**	P	Pn	02 53 01.5	-0.3
MWZ				S	S	02 53 25.6	-1.3
HIZ	**Hauiti**	**1.19**	**241**	P	Pn	02 53 02.2	+0.1
HIZ				S	S	02 53 27.7	+0.1
RAHZ	**Arahi**	**1.20**	**144**	P	Pn	02 53 02.7	+0.4
RAHZ				S	S	02 53 26.7	-1.2
NTVZ	**North Tongarir**	**1.21**	**199**	P	Pn	02 53 02.4	0.0
TMVZ	**Te Maari**	**1.22**	**198**	P	Pn	02 53 02.5	0.0
SNGZ	**Shannon Statio**	**1.23**	**133**	P	Pn	02 53 02.8	+0.3
BKZ	**Black Stump Fm**	**1.24**	**169**	P	Pn	02 53 02.4	-0.2
BKZ				S	S	02 53 26.2	-2.3
ETVZ	**East Tongariro**	**1.24**	**197**	P	Pn	02 53 02.7	+0.1
NMHZ	**Naumai**	**1.25**	**157**	P	Pn	02 53 03.5	+0.8
TWVZ	**Taurewa**	**1.26**	**207**	P	Pn	02 53 02.8	0.0
TWVZ				S	S	02 53 28.1	-0.8
OTVZ	**Oturere**	**1.28**	**198**	P	Pn	02 53 03.1	+0.2
HAZ	**Te Kaha**	**1.28**	**82**	P	Pn	02 53 01.8	-1.0
TUVZ	**Tukino**	**1.38**	**197**	P	Pn	02 53 03.7	0.0
WHHZ	**Waihua**	**1.40**	**144**	P	Pn	02 53 04.2	+0.5
TKGZ	**Te Karaka**	**1.40**	**111**	P	Pn	02 53 04.0	+0.2
ETAZ	**East Tamaki Re**	**1.41**	**315**	P	Pn	02 53 02.5	-1.3
TWGZ	**Tauwhareparae**	**1.44**	**100**	P	Pn	02 53 04.2	+0.1
RIGZ	**Rimuhau**	**1.46**	**122**	P	Pn	02 53 04.7	+0.4
ARHZ	**Aropaoanui**	**1.46**	**154**	P	Pn	02 53 04.8	+0.6
KWHZ	**Kaweka Forest**	**1.48**	**173**	P	Pn	02 53 04.6	+0.1
MOVZ	**Moawhango**	**1.49**	**193**	P	Pn	02 53 04.0	-0.6
PKGZ	**Pakihiroa**	**1.50**	**88**	P	Pn	02 53 04.5	-0.2
AWAZ	**Awhitu Peninsu**	**1.51**	**305**	P	Pn	02 53 04.7	0.0
MTVZ	**Mangateitei**	**1.54**	**201**	P	Pn	02 53 04.9	0.0
BHHZ	**Black Hill Sta**	**1.54**	**183**	P	Pn	02 53 04.5	-0.4
MCHZ	**McNeill Hill**	**1.55**	**165**	P	Pn	02 53 05.6	+0.7
KNZ	**Kokohu**	**1.59**	**133**	P	Pn	02 53 05.5	+0.2
VRZ	**Vera Road**	**1.62**	**223**	P	Pn	02 53 05.8	+0.3
WTAZ	**Waiatarua**	**1.63**	**308**	P	Pn	02 53 06.1	+0.3
PUZ	**Puketiti**	**1.65**	**95**	P	Pn	02 53 05.5	-0.4
PRGZ	**Paritu Road**	**1.65**	**127**	P	Pn	02 53 06.1	+0.2
CNGZ	**Carnagh Statio**	**1.68**	**109**	P	Pn	02 53 06.9	+0.8
KRHZ	**Kereru**	**1.70**	**175**	P	Pn	02 53 06.3	0.0
MXZ	**Matakaoa Point**	**1.73**	**78**	P	Pn	02 53 06.7	+0.1
WMGZ	**Waiomatatini S**	**1.77**	**86**	P	Pn	02 53 06.8	-0.1
MHGZ	**Mahia Peninsul**	**1.81**	**132**	P	Pn	02 53 07.7	+0.4
CKHZ	**Cape Kidnapper**	**1.84**	**158**	P	Pn	02 53 07.9	+0

	SNR=129						
QUBA				S	Sb	03 05 56.2	+1.7
XNQ	**Khinalig**	**0.18**	**255**	P	**Pn**	**03 05 50.7**	**-1.1**
	SNR=837						
XNQ				S	Sb	03 05 57.1	+1.9
QSAR	**Qusar**	**0.31**	**344**	P	**Pb**	**03 05 51.6**	**-0.7**
	SNR=318						
QSAR				S	Sn	03 05 58.6	-0.2
SIZA	**Siyzn**	**0.42**	**110**	P	**Pb**	**03 05 52.9**	**-1.0**
	SNR=32						
SIZA				S	Sb	03 06 01.0	+0.7
KSMR	**Kasumkent**	**0.42**	**334**	⇑*i* PG	**Pb**	**03 05 53.0**	**-1.0**
KSMR				pmax	pmax		
	comp=Z,2μm,1.0s						
KSMR	**Kasumkent**	**0.42**	**334**	*i* Pg	**Pb**	03 05 53.0	-1.0
KSMR				*e*Sg	**Sb**	03 06 01.0	+0.7
IML	**Ismayilli**	**0.45**	**199**	P	**Pb**	**03 05 53.7**	**-0.7**
	SNR=37						
IML				S	Sn	03 06 03.4	+1.1
PQL	**Pirkuli**	**0.46**	**159**	P	**Pb**	**03 05 53.9**	**-0.8**
	SNR=138						
PQL				S	Sn	03 06 04.6	+1.8
QBL	**Gabala**	**0.49**	**236**	P	**Pb**	**03 05 54.3**	**-0.7**
	SNR=48						
QBL				S	Sn	03 06 04.5	+1.1
AKT	**Akhty**	**0.55**	**298**	⇓*i* PG	**Pb**	**03 05 54.7**	**-1.3**
AKT				*e*		03 06 03.7	
AKT				pmax	pmax		
	comp=Z,256nm,0.2s						
AKT				smax	smax		
	comp=N,765nm,0.4s						
AKT				smax	smax		
	comp=E,2μm,0.3s						
AKT				smax	smax		
	comp=E,2μm,0.3s						
AKT	**Akhty**	**0.55**	**298**	*i* Pg	**Pb**	**03 05 54.9**	**-1.2**
AKT				*e*Sg	**Sb**	**03 06 03.7**	**-0.1**
ATGJ	**Altiaghaj**	**0.56**	**130**	P	**Pb**	**03 05 54.9**	**-1.2**
	SNR=12						
ATGJ				S	Sb	03 06 04.7	+0.8
GBS	**Qobustan**	**0.81**	**148**	P	**Pn**	**03 05 59.7**	**-0.5**
	SNR=9.0						
GBS				S	Sb	03 06 13.4	+2.5
KDMR	**Kurdemir**	**0.86**	**190**	P	**Pn**	**03 05 59.5**	**-1.2**
	SNR=2.7						
KDMR				S	Sb	03 06 14.2	+2.1
SEKA	**Sheki**	**0.89**	**270**	PG	**Pn**	**03 06 00.2**	**-1.1**
SEKA	**Sheki**	**0.89**	**270**	P	**Pn**	**03 05 59.1**	**-2.2**
	SNR=124						
SEKA				S	Sn	03 06 14.0	+0.7
MNGR	**Mingechevir, A**	**1.08**	**246**	PG	**Pn**	03 06 04.0	+0.3
MNGR	**Mingechevir, A**	**1.08**	**246**	P	**Pn**	03 06 03.8	+0.1
	SNR=13						
MNGR				S	Sn	03 06 19.5	+1.8
ZRD	**Zardab**	**1.08**	**209**	P	**Pn**	**03 06 02.7**	**-1.0**
	SNR=40						
ZRD				S	Sb	03 06 19.7	+1.3
URKR	**Urkarakh**	**1.10**	**330**	⇓*i* PG	**Pn**	**03 06 03.0**	**-1.1**
URKR				*e*		03 06 18.2	
URKR				pmax	pmax		
	comp=Z,159nm,0.3s						
URKR				smax	smax		
	comp=N,583nm,0.6s						
URKR	**Urkarakh**	**1.10**	**330**	*i* Pg	**Pn**	03 06 03.1	-1.1
URKR				*e*Sg	**Sn**	03 06 18.2	-0.2
GOBA	**Gobu**	**1.32**	**128**	Pn	**Pn**	03 06 06.7	-0.3
	SNR=3.1						
GOBA				Sn	**Sn**	03 06 24.2	+0.6
KMKR	**Kumukh**	**1.32**	**314**	⇑*i* PG	**Pn**	03 06 07.0	-0.3
KMKR				pmax	pmax		
	comp=Z,1μm,0.2s						
KMKR	**Kumukh**	**1.32**	**314**	*i* Pg	**Pn**	03 06 07.0	-0.3
KMKR				*e*Sg	**Sn**	03 06 25.0	+0.9
BRDA	**Brd**	**1.32**	**224**	Pn	**Pn**	03 06 07.1	0.0
	SNR=3.1						
BRDA				Sn	**Sn**	03 06 25.7	+1.9
SGKR	**Sergokala**	**1.35**	**337**	⇓*i* PG	**Pn**	03 06 06.7	-0.9
SGKR				pmax	pmax		
	comp=Z,117nm,0.3s						
SGKR	**Sergokala**	**1.35**	**337**	*i* Pg	**Pn**	03 06 07.1	-0.5
SGKR				*e*Sg	**Sn**	03 06 25.2	+0.7
ALIB	**Äli-Bayra**	**1.35**	**159**	Pn	**Pn**	03 06 07.7	+0.2
	SNR=6.0						
ALIB				Sg	**Sb**	03 06 27.8	+1.6
NDR	**Nardaran**	**1.38**	**117**	Pn	**Pn**	03 06 07.6	-0.3
NDR				Sg	**Sn**	03 06 26.3	+1.2
ZKTA	**Zakatala**	**1.38**	**288**	Pn	**Pn**	03 06 07.2	-0.9
	SNR=15						
ZKTA				Sg	**Sb**	03 06 28.4	+1.2
AGDM	**Agdam**	**1.47**	**221**	Pn	**Pn**	03 06 07.8	-1.4
	SNR=24						
AGDM				Sn	**Sn**	03 06 27.7	+0.2
GNBR	**Gunib**	**1.57**	**318**	⇑*e*PN	**Pn**	03 06 10.8	+0.1
GNBR				pmax	pmax		
	comp=Z,33nm,0.5s						
GNBR	**Gunib**	**1.57**	**318**	*e*Pg	**Pn**	03 06 10.9	+0.1
GNBR				*e*Sg	**Sn**	03 06 29.4	-0.7
BLQ	**Beylaqan**	**1.62**	**203**	Pn	**Pn**	03 06 10.3	-1.0
BLQ				Sn	**Sn**	03 06 32.2	+1.0
GANJ	**Ganja**	**1.66**	**250**	PN	**Pn**	03 06 09.8	-2.0
GANJ	**Ganja**	**1.66**	**250**	Pn	**Pn**	03 06 09.8	-2.0
	SNR=21						
GANJ				Sn	**Sn**	03 06 30.7	-1.4
ARKR	**Arakani**	**1.72**	**324**	⇓*e*PN	**Pn**	03 06 12.6	-0.1
ARKR				pmax	pmax		
	comp=Z,46nm,0.5s						
ARKR	**Arakani**	**1.72**	**324**	*i* Pg	**Pn**	03 06 12.6	-0.1
ARKR				*e*Sg	**Sn**	03 06 36.0	+2.2
MAK	**Makhachkala**	**1.86**	**340**	⇓*i* PN	**Pn**	03 06 12.1	-2.4
MAK				pmax	pmax		
	comp=Z,82nm,0.4s						
MAK	**Makhachkala**	**1.86**	**340**	*e*Pg	**Pn**	03 06 15.0	+0.5
MAK				*e*Sg	**Sn**	03 06 38.3	+1.4
BUJR	**Buynaksk**	**1.86**	**330**	⇓*e*PN	**Pn**	03 06 14.7	+0.1
BUJR				pmax	pmax		
	comp=Z,35nm,0.7s						
BUJR	**Buynaksk**	**1.86**	**330**	*e*Pg	**Pn**	03 06 14.6	+0.1
BUJR				*e*Sg	**Sn**	03 06 40.3	+3.1
QRD	**Qoradiz**	**1.94**	**205**	Pn	**Pn**	03 06 13.4	-2.2
QRD				Sn	**Sn**	03 06 36.8	-2.1
KRNR	**Karanay**	**1.94**	**326**	⇑*e*PN	**Pn**	03 06 15.6	-0.2
KRNR				pmax	pmax		
	comp=Z,17nm,0.2s						
KRNR	**Karanay**	**1.94**	**326**	*e*Pg	**Pn**	03 06 15.7	-0.2
KRNR				*e*Sg	**Sn**	03 06 37.1	-2.2
GLBA	**Clilabad**	**1.98**	**180**	Pn	**Pn**	03 06 15.1	-1.0
GLBA				Sn	**Sn**	03 06 37.9	-2.0
GDB	**GEDABAY**	**2.05**	**257**	Pn	**Pn**	03 06 15.0	-2.3
	SNR=40						
GDB				Sn	**Sn**	03 06 40.0	-2.0
DLMR	**Dylym**	**2.26**	**325**	⇑*e*PN	Pn	03 06 23.3	+3.3
DLMR				*e*		03 06 51.9	
DLMR				pmax	pmax		
	comp=Z,42nm,0.5s						
DLMR				smax	smax		
	comp=N,307nm,0.5s						
QZX	**Qazax, Azerbai**	**2.27**	**267**	Pn	**Pn**	03 06 18.9	-1.4
	SNR=9.7						
QZX				Sn	**Sn**	03 06 45.1	-2.3
YRD	**Yardimli**	**2.31**	**183**	Pn	**Pn**	03 06 18.4	-2.5
	SNR=7.9						
YRD				Sn	**Sn**	03 06 46.8	-1.5
DVE	**Vedeno**	**2.41**	**317**	*e*PN	Pn	03 06 25.5	+3.3
DVE				pmax	pmax		
	comp=Z,9.0nm,0.3s						
DVE	**Vedeno**	**2.41**	**317**	*e*Pn	**Pb**	03 06 26.6	-0.8
DVE				*e*Sn	**Sb**	03 06 59.1	+2.3
LRK	**Lerik**	**2.58**	**181**	Pn	**Pn**	03 06 22.0	-2.6
	SNR=6.0						
LRK				Sn	**Sn**	03 06 56.3	+1.3
ASTR	**Astara**	**2.68**	**173**	Pn	**Pn**	03 06 24.0	-1.7
ASTR				Sn	**Sn**	03 06 58.8	+1.6
GROC	**Groznyy**	**2.76**	**317**	*e*PN	**Pn**	03 06 29.6	+2.7
GROC				*e*S	**Sb**	03 07 05.1	-1.5
GROC				pmax	pmax		
	comp=Z,21nm,0.3s						
GROC				smax	smax		
	comp=N,41nm,0.8s						
GROC				smax	smax		
	comp=E,43nm,0.4s						
GROC				smax	smax		
	comp=E,51nm,0.6s						
GROC				MLR	MLR		
	comp=Z,34nm,2.0s						

GROC	**Groznyy**	**2.76**	**317**	*e*Pn	Pn	03 06 31.0	+4.2
GROC				*e*Sn	**Sb**	**03 07 08.7**	**+2.1**
SBZ	**Shahbuz**	**2.83**	**231**	Pn	**Pn**	**03 06 27.2**	**-0.7**
	SNR=6.2						
SBZ				Sn	**Sn**	**03 07 02.2**	**+1.1**
ORD	**Ordubad**	**2.93**	**219**	Pn	**Pn**	**03 06 28.3**	**-1.1**
	SNR=6.0						
ORD				Sn	**Sn**	**03 07 02.4**	**-1.2**
GNI	**Garni**	**2.96**	**250**	*i* PN	**Pn**	**03 06 30.7**	**+0.8**
GNI				pmax	pmax		
	comp=Z,17nm,0.5s						
GNI	**Garni**	**2.96**	**250**	*e*Pn	**Pb**	**03 06 36.0**	**-0.9**
GNI				*e*Sn	**Sb**	**03 07 15.0**	**+2.3**
NAX	**Nakhchivan**	**3.01**	**228**	Pg	**Pb**	**03 06 37.4**	**-0.2**
NAX				Sg	**Sb**	**03 07 19.7**	**+5.7**
KBZ	**Khabaz**	**4.76**	**304**	*i* PN	Pn	03 06 58.1	+3.7
SHA1	**Shidzhatmaz**	**4.92**	**303**	*i* PN	**Pn**	**03 06 58.6**	**+1.8**
KIV	**Kislovodsk**	**5.01**	**305**	*e*PN	**Pn**	**03 06 59.8**	**+1.9**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ANN	**Anapa**	**8.78**	**298**	*i* P	Pn	03 07 53.0	+3.5
AKTO	**Aktyubinsk**	**11.40**	**33**	⇑P	**Pn**	**03 08 24.3**	**-1.1**
	comp=Z,2.7nm,1.1s						
AKTO				⇑S	Sn	03 10 18.2	-13
	comp=Z,2.1nm,0.8s						
AB31	**Akbulak array**	**11.44**	**41**	⇓P	Pn	03 08 26.8	+0.9
	comp=Z,0.4nm,0.6s,baz=236,slow=13,SNR=4.6						
AB31				⇓S	Sn	03 10 21.4	-11
	comp=Z,0.4nm,0.4s,baz=230,slow=23,SNR=4.0						
WRA	**Warramunga Arr**	**99.94**	**108**	*i* P	**Pdif**	**03 19 27.3**	**+0.4**

IDC 27 03:25:41.5±3.4, 4.°18S×151.°94E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/24, mbtmp3.6/4, Error ellipse: s-maj=111.6km s-min=34.9km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.23**	**226**	P	P	03 30 49.6	-0.9
	0.4nm,0.5s,baz=52,slow=10,SNR=2.0						
ASAR	**Alice Springs**	**26.05**	**220**	P	P	03 31 16.9	0.0
	0.3nm,0.6s,baz=56,slow=8.4,SNR=4.9						
FITZ	**Fitzroy Crossi**	**29.21**	**240**	P	P	03 31 46.6	+1.4
	2.4nm,0.9s,baz=68,slow=11,SNR=1.4						
MKAR	**Makanchi Array**	**79.29**	**319**	P	P	03 37 49.0	-0.1
	0.4nm,0.7s,baz=110,slow=6.7,SNR=1.9						
TORD	**Torodi Ar. Bea**	**149.29**	**289**	PKPbc	PKPbc	03 45 32.4	-1.0
	0.5nm,1.0s,baz=87,slow=2.8,SNR=2.2						

*RSNC **27** 03:37:20.4±1.7, 4.°70N×75.°74W, h133km±5km, ML2.9*
*IDC **27** 03:37:22.1±1.0, 4.°64N×74.°88W, h198km±7km, mb3.1/5, mb1 3.4/5, mb1mx3.0/26, mbtmp3.6/5, Error ellipse: s-maj=47.4km s-min=21.3km az=52.0*
ISC 27 03:37:19.2±0.9, 4.°70N±0.°03×75.°75W±0.°03, h143km±6km, n37, σ1s23/64, mb3.3/5, 4C-9D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANIL	**Santa Ana**	**0.40**	**121**	⇓*i* P	**Pn**	**03 37 39.6**	**0.0**
ANIL				*e*S	**Sn**	**03 37 53.7**	**-1.3**
TOLC	**Tolima**	**0.44**	**105**	⇓*i* P	**Pn**	**03 37 40.0**	**+0.2**
TOLC				*e*S	**Sn**	**03 37 54.1**	**-1.3**
GUY2C	**Guyana, Caldas**	**0.65**	**36**	⇓*i* P	**Pn**	**03 37 41.4**	**+0.3**
GUY2C				*i*		03 37 42.6	
	comp=Z,160nm,0.2s						
GUY2C				*e*S	**Sn**	**03 37 57.2**	**-0.5**
YOTC	**Yotoco, Valle**	**0.93**	**220**	⇓*i* P	**Pn**	**03 37 42.1**	**-0.7**
YOTC				*e*S	**Sn**	**03 37 58.5**	**-2.2**
ORTC	**Ortega, Tolima**	**0.93**	**147**	⇓*i* P	**Pn**	**03 37 42.3**	**-0.4**
ORTC				*e*S	**Sn**	**03 37 59.4**	**-1.2**
ORTC				*i*		03 38 02.8	
	comp=Z,148nm,0.2s						
CBOC	**Ciudad Bolivar**	**1.19**	**347**	⇓*i* P	**Pn**	**03 37 45.7**	**+0.5**
CBOC				*e*S	**Sn**	**03 38 04.5**	**-0.5**
CBOC				*i*		03 38 08.2	
	comp=Z,171nm,0.5s						
NORC	**Norcasia**	**1.23**	**45**	⇓*i* P	**Pn**	**03 37 45.5**	**+0.1**
NORC				*i*		03 37 46.0	
	comp=Z,109nm,0.7s						
NORC				*e*S	**Sn**	**03 38 04.5**	**-1.0**
ROSC	**El Rosal**	**1.43**	**84**	P	**Pn**	**03 37 49.0**	**+1.1**
	comp=Z,17nm,0.3s,baz=24,slow=4.8,SNR=20						
ROSC				S	**Sn**	**03 38 12.3**	**+2.7**
	comp=Z,7.3nm,0.3s,baz=246,slow=21,SNR=12						
ROSC	**El Rosal**	**1.43**	**84**	⇓*i* P	**Pn**	**03 37 48.9**	**+1.1**
ROSC				*i*		03 37 52.1	
	comp=Z,35nm,0.4s						
ROSC				*e*S	**Sn**	**03 38 10.8**	**+1.2**
HELC	**Santa Helena**	**1.50**	**8**	⇓*i* P	**Pn**	**03 37 48.9**	**+0.3**
HELC				*e*S	**Sn**	**03 38 10.8**	**-0.2**
HELC				*i*		03 38 11.9	
	comp=Z,90nm,0.6s						
PIZC	**Pizarro, Choco**	**1.63**	**279**	⇑*i* P	**Pn**	**03 37 51.1**	**+1.5**
PIZC				*e*S	**Sn**	**03 38 14.2**	**+1.3**
MALC	**Bahia Malaga**	**1.72**	**247**	⇑*e*P	**Pn**	**03 37 51.7**	**+1.1**
MALC				*i*		03 37 53.7	
	comp=Z,100nm,0.4s						
MALC				*e*S	**Sn**	**03 38 14.9**	**+0.2**
MARP	**Paez Belalcaza**	**1.85**	**186**	*e*P	**Pn**	**03 37 52.6**	**+0.1**
MARP				*e*S	**Sn**	**03 38 17.2**	**-0.8**
MARP				*i*		03 38 20.3	
	comp=Z,34nm,0.3s						
SPBC	**San Pablo de B**	**1.92**	**60**	*e*P	**Pn**	**03 37 53.2**	**+0.2**
SPBC				*e*S	**Sn**	**03 38 18.0**	**-0.9**
SPBC				*i*		03 38 22.3	
	comp=Z,30nm,0.4s						
CHIC	**Chingaza**	**2.01**	**92**	*e*P	**Pn**	**03 37 55.5**	**+1.1**
CHIC				*e*S	**Sn**	**03 38 21.1**	**-0.3**
BETC	**Betania**	**2.03**	**171**	*e*P	**Pn**	**03 37 53.6**	**-0.7**
BETC				*e*S	**Sn**	**03 38 19.5**	**-1.7**
VILC	**Villavicencio,**	**2.13**	**106**	⇑*i* P	**Pn**	**03 37 56.5**	**+0.9**
VILC				*i*		03 37 57.5	
	comp=Z,92nm,0.2s						
VILC				*e*S	**Sn**	**03 38 24.8**	**+1.4**
PTBC	**PUERTO BERRIO,**	**2.24**	**35**	*e*P	**Pn**	**03 37 56.7**	**0.0**
PTBC				*e*S	**Sn**	**03 38 23.6**	**-2.0**
PTBC				*i*		03 38 27.1	
	comp=Z,69nm,0.4s						
SOLC	**Bahia Solano**	**2.25**	**313**	*e*P	**Pn**	**03 37 56.9**	**+0.1**
SOLC				*e*S	**Sn**	**03 38 25.2**	**-0.6**
SOLC				*i*		03 38 34.4	
	comp=Z,18nm,0.6s						
PCON	**Cinco Dias**	**2.44**	**195**	*e*P	**Pn**	**03 38 00.4**	**+0.6**
PCON				*i*		03 38 03.4	
	comp=Z,36nm,0.2s						
PCON				*e*S	**Sn**	**03 38 31.1**	**+0.1**
GARC	**Garzon, Huila**	**2.51**	**174**	*e*P	**Pn**	**03 37 59.4**	**-0.9**
GARC				*e*S	**Sn**	**03 38 29.8**	**-2.2**
GARC				*i*		03 38 32.1	
	comp=Z,38nm,0.3s						
SOTA	**Rioblanco**	**2.69**	**199**	*e*P	**Pn**	**03 38 03.1**	**+0.3**
SOTA				*e*S	**Sn**	**03 38 36.0**	**-0.4**
SOTA				*i*		03 38 42.0	
	comp=Z,34nm,0.7s						
RUSC	**La Rusia**	**2.91**	**66**	*e*P	**Pn**	**03 38 06.1**	**+0.6**
RUSC				*e*S	**Sn**	**03 38 40.9**	**-0.3**
RUSC				*i*		03 38 45.9	
	comp=Z,18nm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.91**	**18**	⇑*i* P	**Pn**	**03 38 05.7**	**+0.5**
ZARC				*e*S	**Sn**	**03 38 39.8**	**-1.0**
URUC	**San Jos de Ur**	**3.04**	**4**	*e*P	**Pn**	**03 38 07.1**	**+0.3**
URUC				*e*S	**Sn**	**03 38 41.5**	**-2.1**
URUC				*i*		03 38 44.8	
	comp=Z,49nm,0.4s						
BRRC	**Barranca, Sant**	**3.13**	**40**	*e*P	**Pn**	**03 38 07.5**	**-0.5**
BRRC				*e*S	**Sn**	**03 38 42.9**	**-2.9**
BRRC				*i*		03 38 46.1	
	comp=Z,42nm,0.5s						
BARC	**Barichara**	**3.17**	**53**	*e*P	**Pn**	**03 38 08.8**	**+0.1**
BARC				*i*		03 38 49.8	
	comp=Z,60nm,0.3s						
PTAC	**Punta Ardita,**	**3.18**	**320**	*e*P	**Pn**	**03 38 09.0**	**+0.4**
PTAC				*e*S	**Sn**	**03 38 45.5**	**-1.3**
CRUC	**La Cruz**	**3.33**	**201**	*e*P	**Pn**	**03 38 11.4**	**+0.5**
GCUF	**Volcan Galeras**	**3.80**	**205**	*e*P	**Pn**	**03 38 16.8**	**-0.3**
GCUF				*i*		03 38 18.8	
	comp=Z,18nm,0.2s						
GCUF				*e*S	**Sn**	**03 38 59.5**	**-2.5**
SMLC	**San Martn de**	**4.40**	**22**	*e*P	**Pn**	**03 38 24.1**	**-0.5**
SMLC				*e*S	**Sn**	**03 39 12.1**	**-3.4**
SMLC				*i*		03 39 14.6	
	comp=Z,44nm,0.2s						

SIV	**San Ignacio**	**25.17**	**145**	P	P	03 42 24.1	-7.4
	comp=Z,1.7nm,0.9s,baz=142,slow=2.4,SNR=3.1						
PDAR	**Pinedale Array**	**48.33**	**327**	P	**P**	**03 45 47.9**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=113,slow=9.1,SNR=2.3						
NVAR	**Mina Array Bea**	**51.17**	**317**	P	**P**	**03 46 10.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=152,slow=4.1,SNR=2.6						
YKA	**Yellowknife Ar**	**64.38**	**341**	P	**P**	**03 47 38.8**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=134,slow=6.6,SNR=5.8						
DBIC	**Dimbokro**	**70.52**	**85**	P	P	03 48 11.1	-8.0
	comp=Z,3.4nm,0.9s,baz=259,slow=5.2,SNR=2.1						
ASAR	**Alice Springs**	**145.76**	**234**	PKPbc	**PKPdf**	**03 56 41.5**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=127,slow=3.6,SNR=5.1						

*IDC **27** 04:12:24.2±3.9, 8.°62S×80.°25W, h45km±32km, mb3.5/5, mb1 3.7/7, mb1mx3.4/29, mbtmp3.8/7, ML3.6/2, MS3.2/9, Ms1 3.2/9, ms1mx3.0/25, Error ellipse: s-maj=36.1km s-min=14.7km az=91.0*
ISC 27 04:12:23.0±1.1, 8.°58S±0.°08×80.°3W±0.°1, h35km, n13, σ1s46/10, mb3.8/5, MS3.2/4, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**2.40**	**53**	P	**Pn**	**04 13 00.5**	**+0.2**
	26nm,0.3s,baz=231,slow=5.3,SNR=37						
ATAH				S	**Sn**	**04 13 29.4**	**+0.8**
	35nm,0.3s,baz=323,slow=20,SNR=9.0						
ATAH				LR	LR	04 14 07.0	
	comp=Z,436nm,21.0s,baz=255,slow=44						
NNA	**Nana**	**4.83**	**135**	P	**Pn**	**04 13 34.9**	**+1.6**
	2.6nm,0.3s,baz=334,slow=9.9,SNR=3.7						
NNA				S	**Sn**	**04 14 26.9**	**-1.2**
	3.0nm,0.3s,baz=247,slow=15,SNR=1.6						
NNA				LR	LR	04 15 39.3	
	comp=Z,164nm,21.4s,baz=308,slow=41						
LPAZ	**La Paz**	**14.17**	**124**	LR	LR	04 21 41.6	
	comp=Z,102nm,21.2s,baz=245,slow=40						
ROSC	**El Rosal**	**14.62**	**24**	LR	LR	04 22 09.5	
	comp=Z,58nm,20.3s,baz=38,slow=40						
SDV	**Santo Domingo**	**19.86**	**29**	LR	LR	04 25 10.0	
	comp=Z,90nm,19.3s,baz=256,slow=39						
PTGA	**Pitinga**	**21.73**	**70**	P	**P**	**04 17 09.5**	**-2.1**
	1.6nm,0.3s,baz=219,slow=11,SNR=5.0						
PTGA				LR	LR	04 26 20.1	
	comp=Z,114nm,21.2s,baz=232,slow=39						
CPUP	**Villa Florida**	**28.08**	**132**	LR	LR	04 31 00.9	
	comp=Z,62nm,19.5s,baz=242,slow=40						
MDP	**Montagnes des**	**30.78**	**65**	LR	LR	04 31 19.3	
	comp=Z,34nm,21.8s,baz=254,slow=37						
YKA	**Yellowknife Ar**	**75.63**	**344**	P	**P**	**04 24 04.1**	**0.0**
	0.1nm,0.7s,baz=136,slow=5.0,SNR=2.3						
DBIC	**Dimbokro**	**76.75**	**81**	P	**P**	**04 24 12.2**	**+0.6**
	2.7nm,0.8s,baz=216,slow=0.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**84.26**	**76**	P	**P**	**04 24 52.2**	**+0.3**
	0.7nm,1.0s,baz=251,slow=4.9,SNR=3.7						
TORD				LR	LR	05 00 37.0	
	comp=Z,22nm,19.9s,baz=285,slow=34						
ILAR	**Eielson Array**	**88.01**	**337**	P	**P**	**04 25 10.1**	**+0.9**
	0.4nm,0.9s,baz=114,slow=2.2,SNR=3.2						
WRA	**Warramunga Arr**	**135.63**	**230**	PKP	**PKPdf**	**04 31 38.6**	**-2.1**
	0.6nm,0.8s,baz=107,slow=3.8,SNR=2.4						

*GUC **27** 04:13:48.7±0.7, 19.°93S×69.°14W, h99km±3km, ML3.5*
*IDC **27** 04:13:49.7±1.6, 20.°01S×68.°79W, h122km±17km, mb3.3/2, mb1 3.5/5, mb1mx3.2/26, mbtmp3.7/5, Error ellipse: s-maj=40.6km s-min=16.0km az=103.0*
ISC 27 04:13:47.8±0.9, 19.°92S±0.°04×69.°22W±0.°08, h101km±8km, n16, σ1s19/28, 5C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.23**	**166**	⇓*e*P	**Pn**	**04 14 03.0**	**+0.1**
PB08				*e*S	**Sn**	**04 14 14.4**	**+0.4**
PB08				IAML		04 14 16.5	
	comp=E,2μm,0.2s						
PB11	**IPOC Station P**	**0.44**	**291**	⇓*e*P	**Pn**	**04 14 03.8**	**+0.2**
PB11				*e*S	**Sn**	**04 14 15.8**	**+0.4**
PB11				IAML		04 14 16.5	
	comp=E,5μm,0.3s						
MNMC	**Minye Minye**	**0.86**	**335**	*e*P	**Pn**	**04 14 08.1**	**+0.9**
MNMC				*e*S	**Sn**	**04 14 23.2**	**+1.5**
MNMC				IAML		04 14 24.1	
	comp=N,3μm,0.6s						
PSGC	**Pisagua**	**0.91**	**290**	⇑*i* P	**Pn**	**04 14 08.0**	**+0.4**
PSGC				*i* S	**Sn**	**04 14 23.0**	**+0.6**
PSGC				IAML		04 14 24.0	
	comp=N,1μm,0.3s						
TA02	**Huaiquique**	**0.93**	**248**	⇑*e*P	**Pn**	**04 14 08.1**	**+0.5**
TA02				*e*S	**Sn**	**04 14 23.7**	**+1.2**
TA02				IAML		04 14 24.6	
	comp=E,3μm,0.1s						
TA01	**Diego Aracena**	**1.11**	**234**	⇑*e*P	**Pn**	**04 14 09.6**	**0.0**
TA01				*e*S	**Sn**	**04 14 26.3**	**+0.3**
TA01				IAML		04 14 27.3	
	comp=E,788nm,0.4s						
PB01	**IPOC Station P**	**1.15**	**193**	⇑*e*P	**Pn**	**04 14 10.6**	**+0.4**
PB01				*e*S	**Sn**	**04 14 27.4**	**+0.4**
PB01				IAML		04 14 29.0	
	comp=N,1μm,0.3s						
PATCX	**Punta Patache**	**1.26**	**224**	⇑*e*P	**Pn**	**04 14 11.4**	**+0.1**
PATCX				*e*S	**Sn**	**04 14 29.7**	**+0.6**
PATCX				IAML		04 14 34.1	
	comp=E,832nm,0.

	1µm,0.4s							
ODAN	**Odare**	**2.36**	**120**	*e*Pg		**Pb**	**04 15 29.1**	**+0.6**
ODAN				*e*Sg		**Sg**	**04 15 59.3**	**-3.1**
	675nm,0.3s							
TAPN	**Taplejung**	**2.41**	**107**	*e*Pg		**Pb**	**04 15 29.1**	**-0.3**
TAPN				*e*Sg		**Sb**	**04 16 00.4**	**+1.5**
	575nm,0.3s							
GTK	**Tadong**	**3.18**	**103**	*e*P		**Pn**	**04 15 37.0**	**+1.4**
GTK				*e*S		**Sn**	**04 16 13.4**	**+0.3**
GTK				IAML			04 16 22.9	
	comp=N,400nm,0.4s							
GTK				IAML			04 16 24.5	
	comp=E,304nm,0.2s							
BOK	**Bokaro**	**4.32**	**171**	*e*P		**Pn**	**04 15 54.3**	**+3.2**
BOK				*e*S		**Sn**	**04 16 43.8**	**+2.8**
LSA	**Lhasa**	**5.54**	**72**	Pn		Pb	04 16 15.6	-7.1
SHL	**Shillong**	**6.54**	**111**	*e*P		**Pn**	**04 16 23.3**	**+1.4**
SHL				*e*S		**Sn**	**04 17 31.8**	**-4.3**
SHL				IAML			04 17 38.6	
	comp=N,542nm,0.3s							
SHL	**Shillong**	**6.54**	**111**			**Pn**	**04 16 23.4**	**+1.6**
SMLA	**Simla**	**7.56**	**296**	*e*P		**Pn**	**04 16 36.9**	**+1.4**
SMLA				*e*S		**Sn**	**04 17 57.5**	**-3.2**
SMLA				IAML			04 18 01.2	
	comp=N,46nm,0.3s							
SMLA				IAML			04 18 01.4	
	comp=E,77nm,0.5s							
BHPL	**Bhopal**	**8.44**	**237**	*e*P		**Pn**	**04 16 48.8**	**+1.0**
BHPL				*e*S		**Sn**	**04 18 17.4**	**-5.2**
BHPL				IAML			04 18 23.6	
	comp=N,53nm,0.3s							
BHPL				IAML			04 18 23.8	
	comp=E,473nm,0.3s							
DHRM	**DHARAMSHALA**	**8.69**	**301**	*e*P		**Pn**	**04 16 50.6**	**-0.7**
DHRM				*e*S		**Sn**	**04 18 25.5**	**-3.4**
DHRM				IAML			04 18 31.7	
	comp=E,541nm,0.4s							
NIL	**Nilore**	**11.60**	**302**	Pn		**Pn**	**04 17 29.8**	**-1.3**
HYB	**Hyderabad**	**12.21**	**211**	*i* P		**Pn**	**04 17 39.0**	**-0.4**
HYB				*e*S		**Sn**	**04 19 49.0**	**-6.1**
POO	**Poona**	**14.04**	**230**	*e*P		**Pn**	**04 18 03.0**	**-1.4**
KBL	**Kabul**	**15.16**	**299**	P		**Pn**	**04 18 20.4**	**+0.6**
CHTO	**Chiang Mai**	**15.67**	**123**	P		**P**	**04 18 31.7**	**+1.4**
CM31	**Chiang Mai Arr**	**15.90**	**124**	P		**P**	**04 18 34.0**	**+1.2**
CM31				IAmb		IAmb	04 18 34.7	
	comp=Z,6.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**15.90**	**124**	Pn		**P**	**04 18 32.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=309,slow=10,SNR=11							
CMAR				LR		LR	04 25 22.8	
	comp=Z,28nm,19.1s,baz=76,slow=40							
BTK	**Batken**	**16.80**	**319**	P		**Pn**	**04 18 39.6**	**-1.1**
BTK				IAmb		IAmb	04 18 47.0	
	comp=Z,5.4nm,0.7s							
AAK	**Ala-Archa**	**16.89**	**332**	LR		LR	04 26 18.9	
	comp=Z,59nm,18.9s,baz=151,slow=41							
MK31	**Makanchi Array**	**18.82**	**354**	P		**Pn**	**04 19 05.6**	**+0.2**
MKAR	**Makanchi Array**	**18.82**	**354**	P		**Pn**	**04 19 06.4**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=177,slow=12,SNR=38							
MKAR	**Makanchi Array**	**18.82**	**354**	P		**Pn**	**04 19 05.5**	**0.0**
KKAR	**Karatay Array**	**19.08**	**326**	P		**P**	**04 19 07.7**	**-0.1**
PALK	**Pallekele**	**21.11**	**192**	LR		LR	04 27 05.4	
	comp=Z,61nm,19.5s,baz=128,slow=35							
KURBB	**Kurchatov Arra**	**23.07**	**349**	P		**P**	**04 19 51.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=173,slow=9.4,SNR=2.1							
KURK	**Kurchatov**	**23.14**	**349**	P		**P**	**04 19 51.1**	**-0.2**
SONM	**Songino Array**	**25.75**	**34**	P		**P**	**04 20 17.6**	**+1.7**
	comp=Z,1.7nm,0.6s,baz=230,slow=8.8,SNR=9.1							
SONM	**Songino Array**	**25.75**	**34**	P		**P**	**04 20 17.5**	**+1.6**
ZAA0	**Zalesovo Array**	**25.85**	**360**	P		**P**	**04 20 17.6**	**+1.1**
ZAA0				IAmb		IAmb	04 20 25.5	
	comp=Z,2.4nm,0.7s							
ZALV	**Zalesovo Beam**	**25.85**	**360**	P		**P**	**04 20 17.7**	**+1.1**
	comp=Z,2.1nm,0.5s,baz=182,slow=9.1,SNR=11							
ZALV	**Zalesovo Beam**	**25.85**	**360**	P		**P**	**04 20 17.1**	**+0.6**
ULN	**Ulaanbaatar**	**26.10**	**35**	P		**P**	**04 20 20.5**	**+1.4**
ULN				IAmb		IAmb	04 20 24.0	
	comp=Z,4.5nm,0.8s							
BVAR	**Borovoye Array**	**27.21**	**340**	P		**P**	**04 20 29.8**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=176,slow=11,SNR=1.6							
TLY	**Talaya**	**27.38**	**25**	LR		LR	04 32 07.1	
	comp=Z,22nm,18.2s,baz=208,slow=38							
YAK	**Yakutsk**	**44.79**	**28**	LR		LR	04 41 18.1	
	comp=Z,22nm,19.8s,baz=264,slow=36							
AKASG	**Malin Array Be**	**47.43**	**314**	P		**P**	**04 23 19.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=82,slow=6.6,SNR=1.6							
FINES	**FINESS Array B**	**51.02**	**328**	P		**P**	**04 23 45.6**	**-1.3**
	comp=Z,2.0nm,0.9s,baz=145,slow=5.1,SNR=3.1							
ARCES	**ARCESS Array B**	**53.45**	**338**	P		**P**	**04 24 04.1**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=64,slow=8.5,SNR=6.5							
HFS	**Hagfors**	**56.89**	**326**	LR		LR	04 48 20.0	
	comp=Z,323nm,20.9s,baz=4.5,slow=36							
WB0	**Warramunga Arr**	**67.33**	**129**	P		**P**	**04 25 41.7**	**+1.4**
WRA	**Warramunga Arr**	**67.41**	**129**	P		**P**	**04 25 42.1**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=323,slow=6.6,SNR=9.7							
WRA	**Warramunga Arr**	**67.41**	**129**	P		**P**	**04 25 42.1**	**+1.2**
WB2	**Warramunga Arr**	**67.42**	**129**	P		**P**	**04 25 42.2**	**+1.3**
WR0	**Warramunga Arr**	**67.56**	**129**	P		**P**	**04 25 43.0**	**+1.1**
NWAO	**Narrogin (SRO)**	**67.91**	**151**	P		**P**	**04 25 44.0**	**+0.3**
ASAR	**Alice Springs**	**69.70**	**133**	P		**P**	**04 25 56.5**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=305,slow=6.4,SNR=4.4							
EUNU	**Eureka**	**72.00**	**358**	P		**P**	**04 26 10.0**	**+1.6**
EUNU				IAmb		IAmb	04 26 15.8	
	comp=Z,3.0nm,1.2s							
TOLK	**Toolik Lake Re**	**75.61**	**18**	P		**P**	**04 26 31.0**	**+1.3**
TOLK				IAmb		IAmb	04 26 37.7	
	comp=Z,4.0nm,1.4s							
BMAR	**Burnt Mountain**	**77.81**	**18**	P		**P**	**04 26 44.4**	**+2.2**
TORD	**Torodi Ar. Bea**	**78.20**	**279**	P		**P**	**04 26 45.2**	**0.0**
	comp=Z,0.3nm,0.7s,baz=46,slow=3.7,SNR=2.1							
TORD	**Torodi Ar. Bea**	**78.20**	**279**	P		**P**	**04 26 44.5**	**-0.7**
TORD				IAmb		IAmb	04 27 02.7	
	comp=Z,1.3nm,1.4s							
ILAR	**Eielson Array**	**79.06**	**20**	P		**P**	**04 26 48.7**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=288,slow=3.5,SNR=3.3							
YKA	**Yellowknife Ar**	**88.37**	**9**	P		**P**	**04 27 36.3**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=343,slow=4.7,SNR=5.3							

IDC ***27*** *04:20:12.1±1.2,27.°77N×85.°66E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.4/46,mbtmp3.6/7,ML3.5/1,Error ellipse: s-maj=41.7km s-min=24.4km az=57.0*

ISC 27 04:20:15.0±1.2,27.°8N±0.°2×85.°7E±0.°2,h18km,n7,σ0s61/7, mb3.6/6,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.11**	**353**	P	**Pn**	**04 24 37.0**	**-0.8**
	0.1nm,0.3s,baz=174,slow=12,SNR=5.8						
SONM	**Songino Array**	**25.66**	**33**	P	**P**	**04 25 44.5**	**+0.6**
	0.7nm,0.7s,baz=224,slow=10,SNR=3.7						
FINES	**FINESS Array B**	**51.49**	**328**	P	**P**	**04 29 19.4**	**+0.3**
	0.5nm,0.5s,baz=76,slow=8.0,SNR=5.2						
ARCES	**ARCESS Array B**	**53.86**	**338**	P	**P**	**04 29 36.9**	**+0.2**
	1.9nm,0.9s,baz=90,slow=8.5,SNR=4.2						
WRA	**Warramunga Arr**	**66.87**	**130**	P	**P**	**04 31 05.6**	**-0.6**
	0.4nm,0.6s,baz=324,slow=6.4,SNR=2.5						
ASAR	**Alice Springs**	**69.17**	**133**	P	**P**	**04 31 20.8**	**+0.2**
	0.3nm,0.7s,baz=324,slow=6.2,SNR=2.2						
TORD	**Torodi Ar. Bea**	**78.74**	**279**	P	**P**	**04 32 17.0**	**0.0**
	0.1nm,0.5s,baz=82,slow=2.6,SNR=1.0						

AZER ***27*** *04:54:56.8±0.3,38.°64N×45.°02E,h2km±1km,ml3.5/27, Error ellipse: s-maj=5.0km s-min=3.0km az=240.0*
ISK ***27*** *04:54:56.2,38.°58N×44.°94E,h5km,ML3.3/8*
TEH ***27*** *04:54:56.6,38.°51N×44.°96E,h8km,ML3.4*
DDA ***27*** *04:54:57.2,38.°48N×44.°96E,h5km±2km,ML3.2*
NSSP ***27*** *04:54:57.2,38.°52N×45.°00E,h8km,Ms3.4*

ISC 27 04:54:56.6±1.1,38.°51N±0.°02×44.°98E±0.°02,h3km±11km, n89,σ1s36/132,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMRD	**Marand**	**0.60**	**70**	*e*Sg	**Sb**	**04 55 18.6**	**-0.4**
IMRD				*e*Pg	**Pb**	**04 55 09.3**	**-0.7**
NAX	**Nakhchivan**	**0.77**	**31**	P	**Pb**	**04 55 12.6**	**-0.2**
	SNR=32						
NAX				S	**Sb**	**04 55 23.5**	**-0.3**
OZAP	**Van, Ozalp-Mer**	**0.79**	**281**	*i* P	**Pg**	**04 55 11.5**	**-0.2**
OZAP				*i* S	**Sb**	**04 55 23.2**	**-1.0**
BASK	**Baskale_VAN**	**0.89**	**239**	*i* P	**Pg**	**04 55 13.7**	**-0.1**
BASK				*i* S	**Sb**	**04 55 27.4**	**0.0**
BASK	**Baskale_VAN**	**0.89**	**239**	*e*Pg	**Pg**	**04 55 13.7**	**-0.1**
ORD	**Ordubad**	**0.90**	**62**	P	**Pb**	**04 55 14.8**	**-0.1**
	SNR=243						
ORD				S	**Sb**	**04 55 27.8**	**+0.4**
ITBZ	**Tabriz**	**0.96**	**107**	*e*Pg	**Pg**	**04 55 14.7**	**-0.4**
SBZ	**Shahbuz**	**0.99**	**27**	P	**Pb**	**04 55 16.2**	**-0.3**
	SNR=94						
SBZ				S	**Sb**	**04 55 29.9**	**-0.1**
CLDR	**Caldiran**	**1.04**	**308**	*i* P	**Pg**	**04 55 14.8**	**-1.7**
CLDR				*i* S	**Sg**	**04 55 30.0**	**-0.1**
CLDR	**Caldiran**	**1.04**	**308**	PG	**Pg**	**04 55 15.2**	**-1.3**
CLDR				SG	**Sb**	**04 55 30.9**	**-0.7**
CLDR	**Caldiran**	**1.04**	**308**	*e*Pg	**Pg**	**04 55 15.3**	**-1.3**
YOVA	**Hakkari_Yksek**	**1.07**	**211**	*i* P	**Pn**	**04 55 18.0**	**-0.8**
YOVA				*i* S	**Sb**	**04 55 31.7**	**-0.8**
YOVA	**Hakkari_Yksek**	**1.07**	**211**	*e*Pg	**Pn**	**04 55 18.0**	**-0.8**
VMUR	**Van-Muradiye**	**1.20**	**294**	*i* P	**Pn**	**04 55 20.6**	**+0.1**
VMUR				*i* S	**Sn**	**04 55 37.3**	**-0.1**
VMUR				IAML		04 55 41.0	
	comp=N,464nm,0.5s						
VMUR	**Van-Muradiye**	**1.20**	**294**	*e*Pg	**Pn**	**04 55 20.6**	**+0.1**
HYR	**Heyderabad**	**1.21**	**355**	P	**Pb**	**04 55 19.2**	**-1.0**
HYR				S	**Sb**	**04 55 35.5**	**-0.8**
TVAN	**Van**	**1.23**	**271**	*i* P	**Pn**	**04 55 21.0**	**-0.1**
TVAN	**Van**	**1.23**	**271**	*e*Pg	**Pn**	**04 55 20.9**	**-0.1**
VANB	**Van**	**1.25**	**274**	PN	**Pb**	**04 55 20.1**	**-0.8**
VANB	**Van**	**1.25**	**274**	*e*Pg	**Pn**	**04 55 20.3**	**-0.8**
HAKT	**HAKKARI**	**1.38**	**227**	*i* P	**Pg**	**04 55 22.9**	**-0.3**
HAKT	**HAKKARI**	**1.38**	**227**	*e*Pg	**Pg**	**04 55 22.9**	**-0.3**
DYDN	**Diyadin**	**1.44**	**316**	*i* P	**Pg**	**04 55 24.8**	**+0.6**
DYDN				*i* S	**Sg**	**04 55 44.7**	**+1.8**
DYDN				IAML		04 55 48.0	
	comp=N,356nm,1.2s						
DYDN	**Diyadin**	**1.44**	**316**	*e*Pg	**Pg**	**04 55 24.8**	**+0.6**
NRKZ	**NAREK**	**1.50**	**351**	*i* P	**Pb**	**04 55 25.1**	**-0.3**
NRKZ				*i* S	**Sg**	**04 55 45.8**	**+0.8**
GEVA	**Gevas**	**1.52**	**263**	*i* P	**Pb**	**04 55 25.2**	**-0.4**
GEVA				*i* S	**Sg**	**04 55 47.8**	**+2.3**
GEVA	**Gevas**	**1.52**	**263**	*e*Pn	**Pb**	**04 55 25.2**	**-0.4**
IGDI	**IGDIR**	**1.52**	**333**	*i* P	**Pb**	**04 55 25.0**	**-0.6**
IGDI	**IGDIR**	**1.52**	**333**	*e*Pn	**Pb**	**04 55 24.9**	**-0.6**
TASB	**TASBURUN-IGDIR**	**1.58**	**339**	PN	**Pb**	**04 55 25.6**	**-0.9**
TASB				SN	**Sg**	**04 55 46.7**	**-0.6**
TASB	**TASBURUN-IGDIR**	**1.58**	**339**	*e*Pn	**Pb**	**04 55 26.0**	**-0.5**
AKDM	**Akdamar-Van**	**1.58**	**264**	PN	**Pb**	**04 55 26.3**	**-0.3**
AKDM				SN	**Sg**	**04 55 47.9**	**+0.5**
AKDM	**Akdamar-Van**	**1.58**	**264**	*e*Pn	**Pb**	**04 55 25.9**	**-0.7**
IHRS	**Heris**	**1.63**	**96**	*e*Pg	**Pb**	**04 55 27.3**	**-0.3**
IHRS				*e*		04 55 32.0	
	comp=Z,9µm,0.2s						
GNI	**Garni**	**1.64**	**354**	*i* P	**Pg**	**04 55 29.0**	**+0.8**
GNI				*i* S	**Sg**	**04 55 52.9**	**+3.4**
GNI	**Garni**	**1.64**	**354**	PN	**Pn**	**04 55 26.5**	**-0.1**
CUKT	**Cukurca**	**1.66**	**221**	*i* P	**Pg**	**04 55 28.1**	**-0.5**
CUKT	**Cukurca**	**1.66**	**221**	PN	**Pg**	**04 55 28.0**	**-0.5**
CUKT	**Cukurca**	**1.66**	**221**	*e*Pn	**Pg**	**04 55 28.0**	**-0.5**
METS	**Metsamor**	**1.78**	**337**	*i* P	**Pg**	**04 55 30.1**	**-0.6**
METS				*i* S	**Sg**	**04 55 55.0**	**+1.2**
ADCV	**BITLIS_Adilcev**	**1.79**	**280**	*i* P	**Pg**	**04 55 31.1**	**+0.2**
ADCV				*i* S	**Sg**	**04 55 56.1**	**+2.0**
ADCV	**BITLIS_Adilcev**	**1.79**	**280**	*e*Pn	**Pg**	**04 55 31.1**	**+0.2**
KAPZ	**Kaputan**	**1.82**	**353**	*i* P	**Pg**	**04 55 31.5**	**0.0**
KAPZ				*i* S	**Sg**	**04 55 57.2**	**+2.1**
VNNZ	**Vanand**	**1.82**	**331**	*i* P	**Pg**	**04 55 31.3**	**-0.3**
VNNZ				*i* S	**Sg**	**04 55 56.7**	**+1.5**
MAHB	**Mahabad**	**1.84**	**161**	*e*Pn	**Pg**	**04 55 31.5**	**-0.4**
MAHB				*e*		04 56 04.0	
	comp=Z,4µm,0.4s						
AGRB	**Hanur-Agry**	**1.87**	**305**	PN	**Pn**	**04 55 29.9**	**+0.1**
AGRB	**Hanur-Agry**	**1.87**	**305**	*e*Pn	**Pb**	**04 55 30.3**	**-1.4**
KOTA	**Agri, Merkez-K**	**1.88**	**314**	*i* P	**Pg**	**04 55 32.1**	**-0.7**
ARUZ	**Aruch**	**1.90**	**339**	*i* P	**Pg**	**04 55 33.4**	**+0.4**
ARUZ				*i* S	**Sg**	**04 56 00.7**	**+3.1**
PERV	**Siirt/Pervari-**	**2.00**	**254**	*i* P	**Pg**	**04 55 36.1**	**+1.1**
PERV				*i* S	**Sg**	**04 56 02.2**	**+1.3**
PERV				IAML		04 56 16.0	
	comp=N,225nm,0.7s						
QRD	**Qoradiz**	**2.06**	**62**	P	**Pb**	**04 55 34.6**	**0.0**
	SNR=6.9						
QRD				S	**Sg**	**04 56 02.7**	**0.0**
ISRB	**Sarab**	**2.23**	**107**	*e*Pn	**Pb**	**04 55 36.7**	**-1.0**
ISRB				*e*		04 55 53.5	
	comp=Z,2µm,0.4s						
SIRT	**Sirnak**	**2.24**	**244**	PN	**Pb**	**04 55 36.1**	**-1.8**
SIRT	**Sirnak**	**2.24**	**244**	*e*Pn	**Pb**	**04 55 36.2**	**-1.7**
BLIS	**Bitlis-Merkez**	**2.25**	**268**	*i* P	**Pg**	**04 55 39.8**	**+0.1**
GDB	**GEDABAY**	**2.29**	**15**	P	**Pb**	**04 55 38.0**	**-0.7**
	SNR=7.5						
GDB				S	**Sb**	**04 56 08.1**	**+0.7**
AGDM	**Agdam**	**2.30**	**45**	P	**Pb**	**04 55 38.3**	**-0.5**
	SNR=8.6						
AGDM				S	**Sg**	**04 56 09.0**	**-1.4**
GURO	**Guroymak-BITLI**	**2.31**	**272**	PN	**Pn**	**04 55 36.3**	**+0.5**
GURO	**Guroymak-BITLI**	**2.31**	**272**	*e*Pn	**Pb**	**04 55 37.2**	**-1.8**
BLQ	**Beylaqan**	**2.34**	**58**	P	**Pb**	**04 55 38.7**	**-0.8**
	SNR=14						
BLQ				S	**Sg**	**04 56 11.2**	**-0.8**
GANJ	**Ganja**	**2.37**	**26**	P	**Pb**	**04 55 38.8**	**-1.3**
	SNR=12						
GANJ				S	**Sb**	**04 56 10.4**	**+0.7**
EAK	**Akyaka**	**2.41**	**334**	*i* P	**Pb**	**04 55 41.5**	**+0.6**
BRDA	**Brd**	**2.44**	**44**	P	**Pb**	**04 55 40.1**	**-1.1**
	SNR=4.7						
BRDA				S	**Sg**	**04 56 13.4**	**-1.7**
SRTM	**Siirt_Merkez**	**2.46**	**259**	*i* P	**Pg**	**04 55 42.6**	**-1.2**
SRTM				*i* S	**Sg**	**04 56 17.3**	**+1.7**
SRTM				IAML		04 56 23.0	
	comp=N,164nm,1.2s						
SRTM				IAML		04 56 24.0	
	comp=E,97nm,1.1s						
QZX	**Qazax, Azerbai**	**2.56**	**7**	P	**Pb**	**04 55 41.5**	**-1.8**
	SNR=26						
QZX				S	**Sb**	**04 56 16.5**	**+1.3**
YRD	**Yardimli**	**2.58**	**80**	P	**Pb**	**04 55 42.9**	**-0.9**
	SNR=36						
YRD				S	**Sg**	**04 56 18.6**	**-1.1**
LRK	**Lerik**	**2.64**	**86**	P	**Pb**	**04 55 43.8**	**-0.9**
	SNR=9.0						
LRK				S	**Sg**	**04 56 20.1**	**-1.3**
ZRD	**Zardab**	**2.74**	**49**	P	**Pb**	**04 55 44.4**	**-1.9**
	SNR=6.6						
ZRD				S	**Sb**	**04 56 20.9**	**+0.6**
GLBA	**Clilabad**	**2.76**	**74**	P	**Pb**	**04 55 45.0**	**-1.7**
	SNR=11						
GLBA				S	**Sb**	**04 56 22.7**	**+1.7**
MNGR	**Mingechevir, A**	**2.78**	**35**	S	**Sb**	**04 56 21.2**	**-0.3**
HOMI	**Horasan**	**2.83**	**304**	*i* P	**Pg**	**04 55 49.5**	**-1.4**
KOPR	**Koprukoy-ERZUR**	**2.84**	**302**	PN	**Pn**	**04 55 43.7**	**+0.6**
LKRN	**Lenkeran, Azer**	**2.98**	**85**	P	**Pb**	**04 55 48.5**	**-1.9**
	SNR=4.2						
LKRN				S	**Sb**	**04 56 28.8**	**+1.5**
ASTR	**Astara**	**2.99**	**88**	P	**Pb**	**04 55 48.8**	**-1.8**
	SNR=14						
ASTR				S	**Sb**	**04 56 29.0**	**+1.5**
SAAT	**Saatly**	**3.00**	**62**	P	**Pb**	**04 55 48.0**	**-2.7**
	SNR=3.2						
SAAT				S	**Sb**	**04 56 27.5**	**-0.2**
DDFL	**Dedoflistskaro**	**3.06**	**16**	S	**Sb**	**04 56 28.4**	**-1.2**
BTNK	**Botanikuri**	**3.17**	**358**	S	**Sb**	**04 56 31.5**	**-1.2**
SEKA	**Sheki**	**3.19**	**32**	P	**Pb**	**04 55 51.0**	**-3.0**
	SNR=7.3						
SEKA				S	**Sb**	**04 56 34.2**	**+0.8**
QBL	**Gabala**	**3.28**	**41**	P	**Pn**	**04 55 51.8**	**+2.7**
	SNR=3.6						
QBL				S	**Sb**	**04 56 35.4**	**-0.5**
IML	**Ismayili**	**3.36**	**46**	S	**Sb**	**04 56 37.9**	**-0.4**
ZKTA	**Zakatala**	**3.37**	**22**	S	**Sb**	**04 56 37.2**	**-1.1**
LGD	**Lagodekhi**	**3.46**	**16**	S	**Sb**	**04 56 38.4**	**-2.6**
PQL	**Pirkuli**	**3.60**	**50**	P	**Pn**	**04 56 56.0**	**+2.5**
	SNR=6.2						
PQL				S	**Sb**	**04 56 44.4**	**-0.8**
XNQ	**Khinaliq**	**3.60**	**42**	P	**Pn**	**04 55 55.9**	**+2.3**
	SNR=5.7						
XNQ				S	**Sb**	**04 56 43.2**	**-2.2**
ATGJ	**Altiaghaj**	**3.85**	**51**	P	**Pn**	**04 55 59.5**	**+2.5**
	SNR=6.5						
ATGJ				S	**Sb**	**04 56 48.9**	**-3.5**
QSAR	**Qusar**	**3.92**	**39**	S	**Sb**	**04 56 51.0**	**-3.2**
IDHR	**Dehrash**	**3.97**	**163**	*e*Pn	**Pn**	**04 56 01.8**	**+3.1**
IGHG	**Ghaleghazi**	**4.37**	**162**	*e*Pn	**Pn**	**04 56 08.3**	**+4.1**
QABG	**Abgarm-Qazvin**	**4.62**	**126**	*e*Pn	**Pn**	**04 56 08.2**	**+0.5**

IDC 27 05:04:57.0±1.8,27.°67N×85.°66E,h0km,mb3.6/4,
mb1 3.7/5,mb1mx3.4/50,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=61.8km s-min=26.8km az=66.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.27**	**353**	P	P	05 09 23.1	0.0
	0.2nm,0.3s,baz=176,slow=11,SNR=7.5						
SONM	**Songino Array**	**25.81**	**33**	P	P	05 10 30.2	+0.2
	0.9nm,0.5s,baz=216,slow=10,SNR=5.6						
FINES	**FINESS Array B**	**51.62**	**328**	P	P	05 14 04.8	-0.2
	0.6nm,0.7s,baz=98,slow=10,SNR=1.6						
WRA	**Warramunga Arr**	**66.78**	**130**	P	P	05 15 50.3	-0.3
	0.3nm,0.6s,baz=323,slow=6.4,SNR=1.9						
ASAR	**Alice Springs**	**69.08**	**133**	P	P	05 16 05.3	+0.2
	0.2nm,0.5s,baz=324,slow=6.2,SNR=2.5						

DSN ***27*** *05:34:27.0±1.0,26.°82N×53.°36E,h10km,ML5.5/12,Error ellipse: s-maj=11.2km s-min=6.4km az=4.0*
IDC ***27*** *05:34:27.6±0.4,26.°38N×53.°52E,h0km,mb4.6/35, mb1 4.7/42,mb1mx4.6/52,mbtmp4.6/42,ML4.2/6,MS3.9/25, Ms1 3.9/25,ms1mx3.7/49,Error ellipse: s-maj=11.3km s-min=10.1km az=32.0*
THR ***27*** *05:34:28.7±0.6,26.°36N×53.°57E,h15km,ML4.9*
MOS ***27*** *05:34:29.4±0.9,26.°41N×53.°54E,h22km,mb5.0/65, MS4.0/6,Error ellipse: s-maj=5.8km s-min=3.5km az=105.4*
GCMT ***27*** *05:34:29.5±0.3,26.°18N±0.°02×53.°59E±0.°03,h17km±1km, MW4.8/68,Moment Tensor Solution. s22,c24; s68,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.39±.10; Mθθ=-1.44±.07; Mφφ=0.04±.07; Mrθ=0.53±.18; Mφθ=0.54±.05; Mφr=1.00±.23; Best double couple: M0=1.85100×10^16 NP1:φs=314.00000°,δ49.00000°,λ133.00000°. NP2: φs=80.00000°,δ57.00000°,λ52.00000°. Principal axes: T 2.0700, Plg59.0000°, Azm293.0000°; N -0.4450, Plg31.0000°, Azm102.0000°; P -1.6320, Plg5.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
TEH ***27*** *05:34:31.5,26.°42N×53.°57E,h20km,ML4.9*
NEIC ***27*** *05:34:33.2±1.5,26.°41N±0.°05×53.°46E±0.°06,h37km±6km, Error ellipse: s-maj=8.5km s-min=7.8km az=49.0*
OMAN ***27*** *05:34:33.9±1.2,26.°58N×53.°60E,h30km±17km,ml5.0/11, Mwp5.0/3,Error ellipse: s-maj=16.7km s-min=4.5km az=2.0*

ISC 27 05:34:31.7±0.9,26.°36N±0.°03×53.°51E±0.°02,h28km±6km, n528,σ1s21/578,mb4.8/149,MS4.0/31,46C-7D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**1.03**	**343**	*e*Pg	**Pb**	**05 34 50.4**	**-0.5**
LMD1				*e*Sg	**Sb**	**05 35 05.0**	**+1.0**
LMD1				*e*		05 35 11.4	
	comp=Z,38µm,0.3s						
LAR1	**LAR**	**1.52**	**30**	*e*Pg	**Pb**	**05 34 58.1**	**-1.2**
KHOR	**Al-Khor Airpor**	**1.94**	**248**	P	**Pb**	**05 35 06.0**	**-0.4**
KHOR				P	**Pb**	**05 35 06.0**	**-0.4**
KHOR				S	**Sb**	**05 35 32.9**	**+2.8**
KHOR				S	**Sb**	**05 35 32.9**	**+2.8**
JHRM	**Jahrom**	**2.14**	**2**	Pn	**Pn**	**05 35 06.7**	**+1.0**
JHRM	**Jahrom**	**2.14**	**2**	*e*Pn	**Pn**	**05 35 06.8**	**+1.0**
QIR1	**Qir**	**2.15**	**349**	*e*		05 35 50.4	
	comp=Z,39µm,0.4s						
QIR1				*e*Pn	**Pn**	**05 35 06.3**	**+0.5**
AJN	**Ajban**	**2.23**	**143**	*e*P	**Pb**	**05 35 09.8**	**-1.5**
	SNR=39						
AJN				S	**Sb

KHGB **Koh Gabri** 4.78 32 *e*Pn **Pn** 05 35 42.8 +0.7
KHGB *e* 05 36 41.2
comp=Z,8µm,0.8s
KLNJ **Kolanjah** 4.93 340 *e*Pn **Pn** 05 35 44.7 +0.4
CHMN **Cheshme madani** 4.99 45 *e*Pn **Pn** 05 35 46.6 +1.5
CHMN *e* 05 35 53.3
comp=Z,15µm,0.3s
BIDO **Bidbid** 5.05 123 *e*Pn **Pn** 05 35 46.5 +0.9
ABEH **Behbahan** 5.11 327 *e*Pn **Pn** 05 35 48.3 +1.9
IMEH **Mehriz** 5.11 11 *e*Pn **Pn** 05 35 47.5 +0.9
KBAM **BAM** 5.18 57 *e*Pn **Pn** 05 35 48.3 +0.8
KBAM *e* 05 36 54.2
comp=Z,8µm,0.5s
QRN **Al-Qurain** 5.50 297 *e*P 05 35 51.5
IBAF **Bafgh** 5.52 19 *e*Pn **Pn** 05 35 52.6 +0.4
IRAM **Ramesheh** 5.52 350 *e*Pn **Pn** 05 35 52.5 +0.2
ISAD **Sadrabad** 5.54 2 *e*Pn **Pn** 05 35 53.9 +1.3
WSAR **Wadi Sarin** 5.59 123 Pn **Pn** 05 35 54.4 +1.3
comp=Z,5.1nm,0.3s,baz=312,slow=10,SNR=35
WSAR Sn **Sn** 05 36 53.8 -2.7
comp=Z,29nm,0.3s,baz=168,slow=18,SNR=8.6
WSAR LR LR 05 38 20.6
comp=Z,838nm,18.4s,baz=296,slow=42
RDF **Al-Radifah** 5.87 297 *e*P 05 35 57.3
ICHK **Chekchek** 5.92 7 *e*Pn **Pn** 05 35 58.4 +0.6
UMR **Umm Al-Rimmam** 6.03 303 *e*P 05 35 58.9
YZKH **Yazd** 6.09 9 *e*Pn **Pn** 05 36 01.0 +1.1
YZKH **Yazd** 6.09 9 *e*Pn **Pn** 05 36 01.0 +1.1
IGAR **Gharneh** 6.16 348 *e*Pn **Pn** 05 36 01.1 0.0
CHBR **Chabahar** 6.32 95 *e*Pn **Pn** 05 36 02.9 -0.2
CHBR **Chabahar** 6.32 95 *e*Pn **Pn** 05 36 02.9 -0.2
SHK1 **Shahrekord** 6.38 340 *e*Pn **Pn** 05 36 02.5 -1.5
RST **Umm Al-Ruwaisa** 6.56 300 *e*P 05 36 06.2
IZEF **Zefreh** 6.60 351 *e*Pn **Pn** 05 36 06.0 -1.1
IPIR **Pirpir** 6.71 341 *e*Pn **Pn** 05 36 09.1 +0.5
ANAR **Anarak** 6.81 2 *e*Pn **Pn** 05 36 09.6 -0.3
ZHDN **Zahedan** 7.14 63 *e*Pn **Pn** 05 36 15.0 +0.6
IKLH **Kolahrood** 7.14 347 *e*Pn **Pn** 05 36 14.1 -0.4
ZHSF **Zahedan** 7.20 62 *e*Pn **Pn** 05 36 15.1 -0.2
ZHSF **Zahedan** 7.20 62 *e*Pn **Pn** 05 36 15.1 -0.2
TPRV **Parvadeh(Tabas** 7.20 22 *e*Pn **Pn** 05 36 15.3 +0.1
QAM **Ghamsar** 7.59 347 *e*Pn **Pn** 05 36 21.5 +0.8
NHDN **Nehbandan** 7.62 47 *e*Pn **Pn** 05 36 21.3 +0.3
KRSH **Karshahi** 7.68 351 *e*Pn **Pn** 05 36 21.2 -0.7
IKOO **Kooshah** 7.72 37 *e*Pn **Pn** 05 36 22.1 -0.3
RAYN **Ar Rayn** 7.79 251 *i* P **Pn** 05 36 23.6 +0.3
SNR=27
RAYN **Ar Rayn** 7.79 251 P **Pn** 05 36 23.4 +0.1
RAYN 05 37 49.4
RAYN **Ar Rayn** 7.79 251 Pn **Pn** 05 36 23.4 +0.1
RAYN Sn **Sn** 05 37 49.4 -1.3
TKDS **Koohdasht(Taba** 7.88 23 *e*Pn **Pn** 05 36 24.6 0.0
ITEG **Tejag** 7.96 34 *e*Pn **Pn** 05 36 26.6 +0.9
KHMZ **Khomeyn** 7.97 338 *e*Pn **Pn** 05 36 26.8 +0.8
KHMZ **Khomeyn** 7.97 338 *e*Pn **Pn** 05 36 26.8 +0.8
TNSJ **Nastanj** 8.04 19 *e*Pn **Pn** 05 36 25.2 -1.6
ISFB **Sefidab** 8.05 352 *e*Pn **Pn** 05 36 25.5 -1.3
IDAH **Dahanechah** 8.43 40 *e*Pn **Pn** 05 36 33.3 +1.0
AFRZ **Afriz** 8.51 33 *e*Pn **Pn** 05 36 34.3 +1.0
IMON **Monand** 8.66 37 *e*Pn **Pn** 05 36 36.8 +1.4
IKFM **Kafar-mosalman** 8.67 327 *e*Pn **Pn** 05 36 35.0 -0.2
IQOM **Qom** 8.72 347 *e*Pn **Pn** 05 36 34.3 -1.9
IDOB **Doab** 8.73 329 *e*Pn **Pn** 05 36 35.9 -0.4
IVRN **Varamin** 8.75 350 *e*Pn **Pn** 05 36 35.3 -1.1
HSAM **Samen** 8.90 333 *e*Pn **Pn** 05 36 37.4 -1.3
ILAS **Lasjerd** 9.01 357 *e*Pn **Pn** 05 36 38.7 -1.5
IANJ **Anjilo** 9.09 2 *e*Pn **Pn** 05 36 41.8 +0.5
HAGD **Aghdareh** 9.24 337 *e*Pn **Pn** 05 36 44.1 +0.8
SHRT **Shahrakht** 9.35 37 *e*Pn **Pn** 05 36 45.9 +1.3
SHRT **Shahrakht** 9.35 37 *e*Pn **Pn** 05 36 45.9 +1.3
IBZA **Bozab** 9.44 330 *e*Pn **Pn** 05 36 45.4 -0.7
IRAZ **Razeghan** 9.53 342 *e*Pn **Pn** 05 36 47.1 -0.2
IALM **Almabolaq** 9.64 333 *e*Pn **Pn** 05 36 47.5 -1.4
KCHF **Cheshme Sefid,** 9.67 326 *e*Pn **Pn** 05 36 48.7 -0.5
KER **Kermanshah** 9.71 327 *e*Pn **Pn** 05 36 49.5 -0.2
IPRN **Peran** 9.91 354 *e*Pn **Pn** 05 36 52.7 +0.3
QABG **Abgarm-Qazvin** 9.91 341 *e*Pn **Pn** 05 36 50.4 -2.1
IGHG **Ghaleghazi** 9.95 325 *e*Pn **Pn** 05 36 51.5 -1.6
IGLO **Ghaloghah** 10.12 1 *e*Pn **Pn** 05 36 56.4 +1.0
ILIN **Lien** 10.23 328 *e*Pn **Pn** 05 36 55.6 -1.2
IDHR **Dehrash** 10.33 325 *e*Pn **Pn** 05 36 56.5 -1.8
QALM **Alamut, Qazvin** 10.34 347 *e*Pn **Pn** 05 36 55.9 -2.5
SBZV **Sabzevar** 10.60 18 *e*Pn **Pn** 05 37 05.2 +3.3
HRA **Herat** 10.99 41 Pn **Pn** 05 37 08.1 +0.7
JRKH **Jarkhoshk** 11.18 30 *e*Pn **Pn** 05 37 11.4 +1.7
IMYA **Miami** 11.44 28 *e*Pn **Pn** 05 37 14.3 +1.0
IKRD **Kardeh** 11.58 25 *e*Pn **Pn** 05 37 16.6 +1.2
GEYT **Alibeck** 12.18 18 Pn **Pn** 05 37 23.3 -0.1
comp=Z,0.3nm,0.3s,baz=217,slow=14,SNR=1.6
GEYT Lg Lg 05 40 52.8
comp=Z,0.4nm,0.3s,baz=260,slow=33,SNR=1.4
GEYT LR LR 05 43 01.4
comp=Z,573nm,18.9s,baz=45,slow=42
GEYT **Alibeck** 12.18 18 **Pn** 05 37 22.7 -0.7
MAHB **Mahabad** 12.32 329 *e*Pn **Pn** 05 37 23.7 -1.7
IHRS **Heris** 13.12 337 *e*Pn **Pn** 05 37 34.5 -1.8
IMRD **Marand** 13.96 334 *e*Pn **P** 05 37 52.2 -3.4
SOCY **Socotra** 14.10 178 Pn **Pn** 05 37 46.4 -3.4
GEVA **Gevas** 14.82 326 Pn **Pn** 05 37 57.1 -2.5
MARD **Mardin** 15.36 318 Pn **Pn** 05 38 04.4 -2.2
MARD IAmb IAmb 05 38 27.0
comp=Z,49nm,0.6s
GNI **Garni** 15.58 334 Pn **Pn** 05 38 09.6 +0.2
comp=Z,1.1nm,0.3s,baz=146,slow=8.7,SNR=4.0
GNI LR LR 05 44 36.7
comp=Z,251nm,19.3s,baz=146,slow=39
GNI **Garni** 15.58 334 *ce*P **Pn** 05 38 09.7 +0.2
GNI pmax pmax
comp=Z,23nm,0.7s
GNI **Garni** 15.58 334 Pn **Pn** 05 38 07.8 -1.6
GNI IAmb IAmb 05 38 24.6
comp=Z,69nm,0.8s
KBL **Kabul** 15.67 55 P **Pn** 05 38 10.3 -0.5
KBL pmax pmax
comp=Z,22nm,1.1s
KBL **Kabul** 15.67 55 **Pn** 05 38 10.3 -0.5
AKT **Akhty** 15.82 344 *e*P **Pn** 05 38 13.0 +0.4
AKT pmax pmax
comp=Z,30nm,0.3s
EIL **Elat** 16.72 286 Pn **Pn** 05 38 23.1 -0.9
comp=Z,0.5nm,0.3s,baz=47,slow=7.2,SNR=4.5
EIL Lg Lg 05 43 20.4
comp=Z,0.6nm,0.3s,baz=279,slow=13,SNR=1.2
EIL LR LR 05 45 59.5
comp=Z,469nm,19.7s,baz=100,slow=41
MMAI **Mount Meron Ar** 17.07 297 P **Pn** 05 38 27.8 -0.6
comp=Z,1.5nm,0.3s,baz=104,slow=16,SNR=18
MMAI LR LR 05 46 25.6
comp=Z,546nm,19.7s,baz=90,slow=42
THW **Thamme Wali** 17.10 64 P **Pn** 05 38 29.6 +0.8
MAK **Makhachkala** 17.28 345 *e*P **P** 05 38 34.9 +2.8
MAK pmax pmax
comp=Z,139nm,0.3s
MAK MLR MLR
comp=Z,532nm,17.0s
KOPT **Kop Dagi** 17.41 325 P **Pn** 05 38 31.6 -1.2
KOPT IAmb IAmb 05 38 45.8
comp=Z,67nm,1.3s
GAZ **Gaziantep** 17.53 312 P **Pn** 05 38 33.4 -0.8
CEP **Cherat** 17.56 61 P **P** 05 38 35.5 0.0
CEP S **S** 05 42 03.0 +6.2
DVE **Vedeno** 17.63 342 *i* P **Pn** 05 38 34.9 -0.4
DVE pmax pmax
comp=Z,30nm,0.9s
ATD **Arta Tunnel** 17.85 216 Lg Lg 05 44 01.9
comp=Z,0.6nm,0.3s,baz=104,slow=22,SNR=1.4
ATD LR LR 05 45 24.8
comp=Z,176nm,21.5s,baz=20,slow=37
ATD **Arta Tunnel** 17.85 216 P **Pn** 05 38 37.7 -0.4
GROC **Groznyy** 17.95 341 *e*P **P** 05 38 39.3 -0.2
GROC *e*S **Sn** 05 42 00.9 +2.5
GROC pmax pmax
comp=Z,79nm,0.8s
GROC MLR MLR
comp=Z,82nm,7.0s
CHGR **Chuyangaron** 17.99 43 P **Pn** 05 38 35.5 -4.3
CHGR IAmb IAmb 05 38 37.2
comp=Z,76nm,0.9s
ZEI **Tsey** 18.18 337 *e*P **P** 05 38 42.6 +0.3
ZEI pmax pmax
comp=Z,37nm,0.8s
NIL **Nilore** 18.57 62 P **P** 05 38 45.9 -0.6
NIL pmax pmax
comp=Z,21nm,0.8s
NIL **Nilore** 18.57 62 P **P** 05 38 45.9 -0.6
CHCP **Chirah Chowk** 18.58 62 P **P** 05 38 46.5 -0.1
NCK **Nalchik** 18.91 337 *i* P **Pn** 05 38 51.1 +0.2
NCK pmax pmax
comp=Z,84nm,0.7s
GAR **Garm** 18.91 44 P **P** 05 38 48.7 -1.6
GAR IAmb IAmb 05 38 52.4
comp=Z,22nm,0.5s
NEY **Neytrino** 19.01 335 *i* P **Pn** 05 38 53.5 +1.2
NEY pmax pmax
comp=Z,5.0nm,0.8s
CSS **Mathiatis** 19.34 301 P **P** 05 38 54.7 -0.2
CSS IAmb IAmb 05 38 58.8
comp=Z,40nm,0.9s
KBZ **Khabaz** 19.36 336 P **Pn** 05 38 56.0 -0.3
comp=Z,1.1nm,0.3s,baz=148,slow=7.0,SNR=35
KBZ **Khabaz** 19.36 336 *ce*P **Pn** 05 38 55.5 -0.7
KBZ pmax pmax
comp=Z,33nm,0.9s
SHA1 **Shidzhatmaz** 19.45 336 *i* P **Pn** 05 38 57.4 -0.3
KVAR **Kislovodsk Arr** 19.63 336 P **Pn** 05 38 59.1 -0.5
baz=73,slow=20,SNR=5.8
KIV **Kislovodsk** 19.63 336 *e*P **Pn** 05 38 58.9 -0.7
KIV *e*S **S** 05 42 38.2 0.0
KIV pmax pmax
comp=Z,265nm,1.1s
KIV MLR MLR
comp=Z,424nm,14.0s
KIV **Kislovodsk** 19.63 336 P **P** 05 38 58.2 +0.1
BTK **Batken** 19.86 42 P **P** 05 39 00.8 +0.1
BTK pmax pmax
comp=Z,22nm,0.8s
BTK **Batken** 19.86 42 P **P** 05 39 00.8 +0.1
DRK **Karamyk** 20.13 45 P **P** 05 39 03.9 +0.1
DRK IAmb IAmb 05 39 09.9
comp=Z,31nm,1.0s
POO **Poona** 20.33 108 *e*P **P** 05 39 04.0 -1.9
RPOR **Krasnaya Polya** 20.38 332 *i* P **P** 05 39 06.2 0.0
GOF **Gofitskoye** 20.47 338 *ie*P **P** 05 39 07.7 +0.5
GOF pmax pmax
comp=Z,48nm,0.6s
SOC **Sochi** 20.52 330 *e*P **P** 05 39 06.0 -1.7
SOC *e* 05 39 24.2
SOC *e*S **S** 05 42 55.3 -0.6
SOC *e*SS **SnSn** 05 43 20.1 +4.7
SOC *e*SSS SSS 05 43 40.0
SOC pmax pmax
comp=Z,52nm,1.1s
SOC MLR MLR
comp=Z,449nm,12.0s
GUZR **Guzeripl'** 20.68 332 *i* P **P** 05 39 09.2 -0.3
BR131 **Keskin Array S** 21.27 314 P **P** 05 39 16.4 +0.3
BR131 pmax pmax
comp=Z,32nm,0.7s
BR131 **Keskin Array S** 21.27 314 P **P** 05 39 16.4 +0.3
BR131 IAmb IAmb 05 39 17.8
comp=Z,32nm,0.7s
BRTR **Keskin Array B** 21.27 314 P **P** 05 39 16.7 +0.7
comp=Z,22nm,0.8s,baz=133,slow=13,SNR=101
BRTR PcP **PcP** 05 43 20.4 +0.2
comp=Z,0.9nm,0.8s,baz=150,slow=3.7,SNR=2.0
BRTR ScP **ScP** 05 46 56.4 +1.2
comp=Z,0.4nm,0.4s,baz=151,slow=7.6,SNR=2.8
BRTR LR LR 05 49 21.6
comp=Z,545nm,18.7s,baz=120,slow=42
BRTR **Keskin Array B** 21.27 314 P **P** 05 39 15.9 -0.1
KK31 **Karatay Array** 21.71 35 P **P** 05 39 19.9 -0.7
KK31 pmax pmax
comp=Z,12nm,0.8s
KK31 **Karatay Array** 21.71 35 P **P** 05 39 19.9 -0.7
KKAR **Karatay Array** 21.71 35 P **P** 05 39 19.4 -1.2
KKAR pmax pmax
comp=Z,12nm,0.8s
KKAR **Karatay Array** 21.71 35 P **P** 05 39 19.4 -1.2
KKAR **Karatay Array** 21.71 35 P **P** 05 39 19.5 -1.1
BR231 **Keskin MP Arra** 21.90 313 P **P** 05 39 24.2 +1.5
BR231 IAmb IAmb 05 39 27.1
comp=Z,30nm,0.9s
ANTO **Ankara** 21.90 313 P **P** 05 39 23.6 +0.9
ANTO pmax pmax
comp=Z,45nm,1.1s
ANTO **Ankara** 21.90 313 P **P** 05 39 23.6 +0.9
ANTO IAmb IAmb 05 39 32.1
comp=Z,45nm,1.1s
ARSB **Arslanbob** 21.94 42 P **P** 05 39 22.9 -0.3
ARSB pmax pmax
comp=Z,65nm,0.7s
ARSB **Arslanbob** 21.94 42 P **P** 05 39 22.9 -0.3
ILGA **Ilgaz** 21.97 317 P **P** 05 39 24.3 +0.7
ILGA IAmb IAmb 05 39 42.6
comp=Z,26nm,1.0s
ANN **Anapa** 22.50 329 *e*P **P** 05 39 29.5 +0.5
ANN pmax pmax
comp=Z,48nm,0.9s
ELL **Elmali** 22.57 303 P **P** 05 39 30.1 +0.2
ELL pmax pmax
comp=Z,132nm,1.0s
ELL **Elmali** 22.57 303 P **P** 05 39 30.1 +0.2
AKAS **Kas** 22.62 302 P **P** 05 39 30.3 -0.2
KSH **Kashi** 22.90 49 P **P** 05 39 30.0 -3.4
KSH S S 05 43 27.8 -14
KSH pmax pmax
comp=Z,12nm,0.3s
KSH pmax pmax
comp=Z,94nm,5.0s
KSH LR LR
comp=Z,2µm,10.2s
KSH LR LR
comp=Z,1µm,10.0s
KSH LR LR
comp=Z,750nm,7.3s
MDUB **Mudurnu** 23.26 313 P **P** 05 39 36.1 -0.9
AB31 **Akbulak array** 23.40 11 *i* P **P** 05 39 37.7 -0.5
ABKAR **Akbulak array** 23.40 11 P **P** 05 39 37.0 -1.2
AAK **Ala-Archa** 23.63 41 P **P** 05 39 40.1 -0.6
comp=Z,7.6nm,0.9s,baz=234,slow=7.2,SNR=13
AAK **Ala-Archa** 23.63 41 P **P** 05 39 41.6 +0.9
AAK pmax pmax
comp=Z,17nm,0.9s
AAK **Ala-Archa** 23.63 41 P **P** 05 39 41.6 +0.9
MANT **Manisa** 24.21 306 P **P** 05 39 46.3 +0.1
AKTO **Aktyubinsk** 24.29 7 P **P** 05 39 47.1 +0.6
comp=Z,15nm,0.7s,baz=212,slow=12,SNR=35
AKTO LR LR 05 50 50.1
comp=Z,220nm,18.6s,baz=142,slow=40
HYB **Hyderabad** 24.85 106 *i* P **P** 05 39 52.0 0.0
SANT **Santorini** 25.87 300 ⇑P **P** 05 40 01.5 +0.4
SANT **Santorini** 25.87 300 P **P** 05 40 01.2 +0.1
APE **Apeiranthos** 26.00 301 ⇑P **P** 05 40 02.8 +0.5
APE **Apeiranthos** 26.00 301 ⇑P **P** 05 40 02.8 +0.5
IDI **Anoyia** 26.07 297 P **P** 05 40 04.2 +1.2
comp=Z,11nm,0.4s,baz=90,slow=11,SNR=13
IDI **Anoyia** 26.07 297 ⇑P **P** 05 40 04.5 +1.5
IDI **Anoyia** 26.07 297 P **P** 05 40 04.0 +1.0
IDI IAmb IAmb 05 40 05.3
comp=Z,32nm,1.1s
BELG **Belogornoye** 26.38 352 P **P** 05 40 04.7 -0.8
comp=Z,39nm,0.7s,baz=204,slow=0.6,SNR=13
BELG **Belogornoye** 26.38 352 *i* P **P** 05 40 05.3 -0.2
BELG pmax pmax
comp=Z,9.0nm,0.9s
VRH **Novokhopyorsk** 26.39 343 *e*P **P** 05 40 04.3 -1.3
VRH pmax pmax
comp=Z,30nm,0.6s
VORD **Divnogorie** 26.87 340 *e*P **P** 05 40 09.2 -0.7
VORD pmax pmax
comp=Z,20nm,0.7s
ALN **Alexandroupoli** 26.94 310 P **P** 05 40 10.8 +0.1
ALN pmax pmax
comp=Z,16nm,0.9s
ALN **Alexandroupoli** 26.94 310 P **P** 05 40 10.8 +0.1
ALN IAmb IAmb 05 40 15.3
comp=Z,16nm,0.9s
PDGK **Podgornoye** 27.07 45 P **P** 05 40 11.2 -0.8
VSR **Storozhevoye** 27.13 340 *e*P **P** 05 40 10.6 -1.6
VSR pmax pmax
comp=Z,30nm,1.2s
TPGR **Topolog** 27.34 319 ⇑P **P** 05 40 14.3 +0.1
CFR **Carcaliu** 27.68 319 ⇑P **P** 05 40 18.0 +0.7
CFR **Carcaliu** 27.68 319 ⇑P **P** 05 40 18.0 +0.7
LPSR **Galich'ya Gora** 28.41 341 *e*P **P** 05 40 22.5 -1.2
LPSR pmax pmax
comp=Z,10.0nm,0.7s
ITM **Ithomi** 28.82 300 P **P** 05 40 28.2 +0.6
VRI **Vrincioaia** 28.89 319 ⇑P **P** 05 40 28.8 +0.8
VRI **Vrincioaia** 28.89 319 ⇑P **P** 05 40 28.8 +0.8
PLOR **Plostina** 28.93 319 ⇑P **P** 05 40 30.1 +1.7
PLOR **Plostina** 28.93 319 ⇑P **P** 05 40 30.1 +1.7
MLR **Muntele Rosu** 29.15 318 P **P** 05 40 30.1 -0.4
comp=Z,3.8nm,0.7s,baz=131,slow=6.4,SNR=12
MLR **Muntele Rosu** 29.15 318 ⇑P **P** 05 40 31.2 +0.7
MLR **Muntele Rosu** 29.15 318 ⇑P **P** 05 40 31.2 +0.7
MLR **Muntele Rosu** 29.15 318 P **P** 05 40 32.1 +1.6
TESR **Tescani** 29.29 320 ⇑P **P** 05 40 32.2 +0.6
BRVK **Borovoye** 29.48 21 *ce*P **P** 05 40 33.5 +0.3
BRVK pmax pmax
comp=Z,7.0nm,0.7s
BRVK **Borovoye** 29.48 21 **P** 05 40 33.3 +0.2
BRVK IAmb IAmb 05 40 34.1
comp=Z,8.2nm,0.6s
BVAR **Borovoye Array** 29.48 21 P **P** 05 40 33.0 -0.2
comp=Z,8.6nm,0.7s,baz=170,slow=19,SNR=38
BVAR PcP **PcP** 05 43 37.4 -0.8
comp=Z,1.2nm,0.6s,baz=216,slow=7.1,SNR=3.4
BVAR ScP **ScP** 05 47 19.6 +1.4
comp=Z,1.4nm,0.9s,baz=231,slow=9.1,SNR=4.3
VTS **Vitosha** 29.56 311 ⇑P **P** 05 40 34.0 -0.2
VTS **Vitosha** 29.56 311 P **P** 05 40 33.9 -0.3
VTS pmax pmax
comp=Z,6.0nm,1.0s
VTS **Vitosha** 29.56 311 P **P** 05 40 33.9 -0.3
VOIR 29.66 317 ⇑P **P** 05 40 36.3 +1.3
VOIR 29.66 317 ⇑P **P** 05 40 36.3 +1.3
DOPR **Dopca** 29.73 318 ⇑P **P** 05 40 35.7 +0.2
FNA **Florina** 30.20 307 P **P** 05 40 39.9 +0.1
FNA pmax pmax
comp=Z,5.0nm,0.8s
FNA **Florina** 30.20 307 P **P** 05 40 39.9 +0.1
ARU **Arti** 30.27 6 P **P** 05 40 40.4 +0.2
comp=Z,1.6nm,0.2s,baz=193,slow=8.9,SNR=4.3
ARU **Arti** 30.27 6 *c* *i*P **P** 05 40 40.1 0.0
ARU S **S** 05 45 39.5 +1.4
ARU pmax pmax
comp=Z,9.0nm,1.4s
ARU **Arti** 30.27 6 P **P** 05 40 40.7 +0.6
ARU IAmb IAmb 05 41 04.6
comp=Z,16nm,1.4s
MAKZ **Makanchi** 30.38 40 P **P** 05 40 41.9 +0.6
MAKZ pmax pmax
comp=Z,16nm,1.0s
MAKZ **Makanchi** 30.38 40 P **P** 05 40 41.9 +0.6
MAKZ IAmb IAmb 05 40 44.0
comp=Z,16nm,0.9s
MK31 **Makanchi Array** 30.56 41 P **P** 05 40 43.3 +0.5
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MK31 **Makanchi Array** 30.56 41 P **P** 05 40 43.3 +0.5
MKAR **Makanchi Array** 30.56 41 P **P** 05 40 43.3 +0.4
comp=Z,3.9nm,0.6s,baz=229,slow=11,SNR=32
MKAR PcP **PcP** 05 43 40.9 -0.2
comp=Z,0.4nm,0.3s,baz=250,slow=4.3,SNR=2.0
MKAR LR LR 05 53 07.5
comp=Z,171nm,19.1s,baz=244,slow=37
MKAR **Makanchi Array** 30.56 41 P **P** 05 40 42.9 +0.1
AKASG **Malin Array Be** 30.59 329 P **P** 05 40 42.4 -0.6
comp=Z,4.8nm,0.6s,baz=133,slow=8.0,SNR=18
AKASG PcP **PcP** 05 43 41.4 +0.4
comp=Z,1.6nm,0.6s,baz=99,slow=2.0,SNR=2.4
AKASG **Malin Array Be** 30.59 329 P **P** 05 40 42.4 -0.6
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG **Malin Array Be** 30.59 329 P **P** 05 40 42.4 -0.6
AKBB **Malin Array Si** 30.59 329 P **P** 05 40 41.9 -1.1
AKBB pmax pmax
comp=Z,10.0nm,0.7s
AKBB **Malin Array Si** 30.59 329 P **P** 05 40 41.9 -1.1
AKBB IAmb IAmb 05 40 43.0
comp=Z,10nm,0.7s
BURAR **Bucovina Array** 30.72 321 ⇑P **P** 05 40 45.3 +0.9
BURAR **Bucovina Array** 30.72 321 ⇑P **P** 05 40 45.3 +0.9
BURAR **Bucovina Array** 30.72 321 P **P** 05 40 44.6 +0.3
BUR08 **Bucovina Ar. S** 30.75 321 P **P** 05 40 45.4 +0.8
KURBB **Kurchatov Arra** 30.88 32 P **P** 05 40 46.3 +0.8
comp=Z,10nm,0.6s,baz=233,slow=8.7,SNR=58
KURBB PcP **PcP** 05 43 41.3 -0.5
comp=Z,0.4nm,0.5s,baz=242,slow=1.8,SNR=1.9
KURBB **Kurchatov Arra** 30.88 32 P **P** 05 40 45.7 +0.1
KURK **Kurchatov** 30.98 32 P **P** 05 40 46.3 -0.2
KURK **Kurchatov** 30.98 32 P **P** 05 40 46.3 -0.2
BOVS **Bovan** 30.99 312 ⇑P **P** 05 40 46.8 +0.1
GZR **Gura Zlata** 31.05 316 ⇑P **P** 05 40 47.9 +0.7
GZR **Gura Zlata** 31.05 316 ⇑P **P** 05 40 47.9 +0.7
OBN **Obninsk** 31.29 341 *ce*P **P** 05 40 49.4 +0.3
OBN *e* 05 41 49.0
OBN pmax pmax
comp=Z,13nm,0.8s
OBN MLR MLR
comp=Z,182nm,16.0s
OBN **Obninsk** 31.29 341 P **P** 05 40 49.8 +0.6
MDVR **Moldovita** 31.45 314 ⇑P **P** 05 40 51.7 +0.9
MOS **Moscow** 31.55 343 *e*P **P** 05 40 50.7 -0.7
MOS pmax pmax
comp=Z,40nm,0.7s
DRGR 31.75 318 ⇑P **P** 05 40 54.4 +1.0
DRGR 31.75 318 ⇑P **P** 05 40 54.4 +1.0
BZS **Buzias** 31.88 315 ⇑P **P** 05 40 55.1 +0.7
BZS **Buzias** 31.88 315 ⇑P **P** 05 40 55.1 +0.7
PALK **Pallekele** 32.09 121 P **P** 05 40 58.1 +1.4
comp=Z,3.2nm,0.6s,baz=51,slow=7.2,SNR=5.3
PALK **Pallekele** 32.09 121 P **P** 05 40 58.5 +1.9
PALK pmax pmax
comp=Z,11nm,1.1s
PALK **Pallekele** 32.09 121 P **P** 05 40 58.5 +1.9
PALK IAmb IAmb 05 41 00.4
comp=Z,11nm,1.1s
DIVS **Divibare** 32.31 312 P **P** 05 40 58.7 +0.3
KIRV **Kirov** 32.34 356 *ce*P **P** 05 40 58.7 +0.4
WMQ **Urumqi** 32.66 49 *e*P **P** 05 41 02.0 +0.6
WMQ pP sP 05 41 11.5 -1.5
WMQ sP pP 05 41 17.5 +7.9
WMQ pmax pmax
comp=Z,25nm,0.9s
WMQ pmax pmax
comp=Z,190nm,3.9s
WMQ LR LR
comp=Z,480nm,19.7s
WMQ LR LR
comp=Z,510nm,14.3s
WMQ LR LR
comp=Z,550nm,29.1s
FRGS **Fruska Gora** 32.84 314 ⇑P **P** 05 41 03.3 +0.4
KWP **Kalwaria Pacla** 33.22 323 P **P** 05 41 07.0 +0.8
KWP pmax pmax
comp=Z,13nm,0.6s
KWP **Kalwaria Pacla** 33.22 323 P **P** 05 41 07.0 +0.8
KWP IAmb IAmb 05 41 07.4
comp=Z,13nm,0.6s
LSA **Lhasa** 33.30 75 P **P** 05 41 08.8 +1.1
LSA pmax pmax
comp=Z,10.0nm,0.8s
LSA **Lhasa** 33.30 75 P **P** 05 41 08.8 +1.1
LSA IAmb IAmb 05 41 09.7
comp=Z,9.6nm,0.8s
CRVS **Cervenica-Dubn** 33.53 321 *e*P **P** 05 41 09.7 +0.8
CRVS pmax pmax
comp=Z,12nm,0.9s
CRVS **Cervenica-Dubn** 33.53 321 *e*P **P** 05 41 09.7 +0.8
MNK **Minsk** 33.85 333 *i* P **P** 05 41 08.5 -3.1
comp=E,2.0nm,1.0s
MNK *i* P **P** 05 41 08.5 -3.1
comp=N,32nm,1.0s
MNK *i* P **P** 05 41 08.5 -3.1
comp=Z,19nm,1.0s
MNK *i* PP **PnPn** 05 42 21.3 -3.2
MNK *i* PPP PPP 05 42 33.2
MNK *i* PcP **PcP** 05 43 47.0 -2.9
MNK *i* S **S** 05 46 30.3 -3.6
MNK *i* ScP **ScP** 05 47 29.1 -3.8
MNK *i* PcS **PcS** 05 47 33.1 -2.5
MNK *i* SS **SnSn** 05 48 38.0 -2.3
MNK *i* SSS SSS 05 48 54.5
MNK *i* ScS ScS 05 51 16.4 -18
MNK *i* LQ LQ 05 52 14.4
MNK *i* LR LR 05 54 33.8
MNK *i* LRM MLR 05 55 33.0
comp=N,626nm,19.3s
MNK *i* LRM MLR 05 55 34.2
comp=E,53nm,19.3s

MNK *i* LRM MLR 05 56 14.5
comp=Z,131nm,19.0s
KECS Kecovo 33.88 319 *e*P **P** **05 41 13.2 +1.2**
KECS Kecovo 33.88 319 *e*P **P** **05 41 13.2 +1.2**
MORH Mrgy, Hungar 34.01 315 ⇑P **P** **05 41 13.8 +0.7**
NACGM Naroch 34.58 333 *i* P **P** **05 41 18.1 +0.2**
NACGM *i* P **P** **05 41 18.1 +0.2**
NACGM *i* P **P** **05 41 18.1 +0.2**
NACGM *i* PP PnPn 05 42 09.1 -25
NACGM *i* PPP PPP 05 42 53.5
NACGM *i* S **S** **05 46 43.0 -2.3**
NACGM *i* SS **SnSn** **05 48 59.2 +1.2**
NACGM *i* SSS SSS 05 49 16.2
NACGM *i* LQ LQ 05 52 49.9
NACGM *i* LR LR 05 55 41.9
LANS Liptovska Anna 34.80 320 *e*P **P** **05 41 21.0 +1.1**
LANS pmax pmax
comp=Z,9.0nm,0.9s
LANS Liptovska Anna 34.80 320 *e*P **P** **05 41 21.0 +1.1**
VYHS Vyhne 34.86 319 *e*P **P** **05 41 21.6 +1.2**
VYHS Vyhne 34.86 319 *e*P **P** **05 41 21.6 +1.2**
IDID Didziasalis 34.89 333 *e*P **P** **05 41 21.3 +0.7**
DGZ Jazzator, Alta 34.99 39*c i*P **P** **05 41 22.5 +0.8**
DGZ pmax pmax
comp=Z,11nm,0.6s
IIGN Ignalina 35.13 333 *e*P **P** **05 41 23.3 +0.7**
ISAL Salakas 35.32 333 *e*P **P** **05 41 24.8 +0.5**
SUW Suwalki 35.56 329 *e*P **P** **05 41 26.2 -0.1**
SUW Suwalki 35.56 329 P **P** **05 41 25.5 -0.8**
SUW pmax pmax
comp=Z,43nm,1.1s
SUW Suwalki 35.56 329 P **P** **05 41 25.5 -0.8**
ZST Bratislava 35.78 317 *e*P **P** **05 41 32.4 +4.1**
ZST Bratislava 35.78 317 *e*P **P** **05 41 32.4 +4.1**
KLMR Klimovskoe 35.78 348 *e*P **P** **05 41 26.7 -1.5**
KLMR *e* 05 43 53.3
KLMR pmax pmax
comp=Z,37nm,0.6s
KLMR Klimovskoe 35.78 348 *e*P **P** **05 41 26.7 -1.5**
KLMR AMP 05 41 28.6
comp=Z,37nm,0.6s
KLMR *e*PcP **PcP** **05 43 53.4 -2.0**
KLMR LR LR 05 55 55.4
ZAA0 Zalesovo Array 35.98 32 P **P** **05 41 30.1 +0.2**
ZALV Zalesovo Beam 35.98 32 P **P** **05 41 30.0 +0.1**
comp=Z,45nm,0.5s,baz=239,slow=8.9,SNR=114
ZALV Zalesovo Beam 35.98 32 *i* P **P** **05 41 30.0 +0.1**
ZALV pmax pmax
comp=Z,46nm,0.5s
ZALV Zalesovo Beam 35.98 32 P **P** **05 41 29.8 -0.1**
PABE Paberze 36.17 332 *e*P **P** **05 41 31.8 +0.2**
PABE Paberze 36.17 332 P **P** **05 41 31.4 -0.2**
MORC Moravsky Berou 36.20 320 P **P** **05 41 32.3 +0.3**
MORC pmax pmax
comp=Z,6.0nm,1.0s
MORC Moravsky Berou 36.20 320 P **P** **05 41 32.2 +0.3**
AQU L'Aquila 36.38 306 P **P** **05 41 35.6 +1.9**
AQU pmax pmax
comp=Z,12nm,0.7s
AQU L'Aquila 36.38 306 P **P** **05 41 35.5 +1.9**
AQU IAmb IAmb 05 41 37.5
comp=Z,12nm,0.7s
ARSA Arzberg 36.39 315 *e*P **P** **05 41 32.8 -0.8**
comp=Z,4.0nm,0.9s
CONA Conrad Observa 36.43 316 *e*P **P** **05 41 32.8 -1.2**
comp=Z,6.8nm,1.1s
SOKA Soboth 36.50 314 *e*P **P** **05 41 34.5 -0.1**
comp=Z,3.6nm,0.6s
LJU Ljubljana 36.62 313 *i* P **P** **05 41 36.6 +1.0**
comp=Z,40nm,0.6s
NRCA Norcia 36.70 307 P **P** **05 41 37.3 +1.0**
NRCA IAmb IAmb 05 41 43.8
comp=Z,7.4nm,0.8s
OBKA Obir 36.76 313 *e*P **P** **05 41 37.1 +0.3**
comp=Z,14nm,1.5s
KRLC Kraliky 36.77 320 *e*P **P** **05 41 36.6 -0.2**
KRLC Kraliky 36.77 320 *e*P **P** **05 41 36.6 -0.2**
CRNS Crni Vrh 36.80 313 *i* P **P** **05 41 38.0 +0.8**
comp=Z,55nm,0.5s
TRI Trieste 37.02 312 P **P** **05 41 38.9 0.0**
TRI pmax pmax
comp=Z,21nm,1.2s
TRI Trieste 37.02 312 P **P** **05 41 38.9 0.0**
TRI IAmb IAmb 05 41 39.9
comp=Z,22nm,1.2s
GORS Gorjuse 37.06 313 *i* P **P** **05 41 40.0 +0.6**
comp=Z,23nm,0.6s
VSU Vasula 37.19 337 *e*P **P** **05 41 39.4 -0.7**
OSTC Ostas 37.31 320 *e*P **P** **05 41 41.3 -0.1**
MYKA Terra Mystica 37.39 313 *e*P **P** **05 41 42.7 +0.6**
comp=Z,3.4nm,0.5s
PBUR Paburge 37.39 331 *e*P **P** **05 41 42.1 +0.2**
MOA Molln 37.40 315 *e*P **P** **05 41 42.6 +0.5**
comp=Z,9.9nm,1.1s
CHVC Chvalec 37.42 320 *e*P **P** **05 41 41.6 -0.7**
KBA Koelnbreinsper 37.73 314 *i* P **P** **05 41 45.2 +0.1**
comp=Z,18nm,1.0s,SNR=6.4
ZOU Zoufplan 37.80 313 P **P** **05 41 46.0 +0.2**
ZOU IAmb IAmb 05 41 47.2
comp=Z,14nm,1.3s
STAL STALIGIAL 37.89 312 P **P** **05 41 46.2 -0.1**
STAL IAmb IAmb 05 41 47.2
comp=Z,14nm,1.1s
GERES GERESS Array B 38.11 317 P **P** **05 41 48.2 -0.1**
comp=Z,0.6nm,0.4s,baz=107,slow=7.1,SNR=5.8
GERES PcP **PcP** **05 44 03.5 +0.7**
comp=Z,1.5nm,0.5s,baz=131,slow=3.7,SNR=7.2
GERES ScP **ScP** **05 47 50.7 +1.9**
comp=Z,0.4nm,0.6s,baz=147,slow=5.5,SNR=1.8
GERES LR LR 06 00 09.4
comp=Z,81nm,18.7s,baz=110,slow=40
ABTA Abfaltersbach 38.16 313 *i* P **P** **05 41 49.2 +0.5**
comp=Z,11nm,0.7s,SNR=5.3
KHC Kasperske Hory 38.29 317 *e*P **P** **05 41 49.2 -0.5**
KHC Kasperske Hory 38.29 317 *e*P **P** **05 41 49.2 -0.5**
MTSE Matsula 38.43 335 *e*P **P** **05 41 50.6 0.0**
CTI Castel Tesino 38.53 312 P **P** **05 41 51.8 -0.1**
CTI pmax pmax
comp=Z,11nm,0.7s
CTI Castel Tesino 38.53 312 P **P** **05 41 51.8 -0.1**
CTI IAmb IAmb 05 41 52.5
comp=Z,11nm,0.7s
BRG Berggiesshubel 38.75 320 *e*P **P** **05 41 53.7 +0.2**
BRG Amp 05 41 54.4
comp=Z,3.9nm,0.8s
WTTA Wattenberg 38.89 314 *i* P **P** **05 41 54.8 -0.2**
comp=Z,21nm,0.5s,SNR=11
WATA Walderalm 38.95 314 *i* P **P** **05 41 55.0 -0.4**
comp=Z,15nm,0.6s,SNR=7.9
SQTA Sankt Quirin 39.16 313 *i* P **P** **05 41 57.0 -0.1**
comp=Z,22nm,0.5s,SNR=9.8
MOTA Moosalm 39.26 314 *i* P **P** **05 41 57.2 -0.8**
comp=Z,25nm,1.1s,SNR=6.3
FETA Feichten 39.41 313 *i* P **P** **05 41 59.2 -0.1**
comp=Z,11nm,0.6s,SNR=7.4
CLL Collm 39.47 320⇓ *i*P **P** **05 42 00.0 +0.5**
comp=Z,11nm,1.1s
CLL *e* 05 42 06.0
CLL *e*PcP **PcP** **05 44 08.0 +1.1**
comp=Z,7.0nm,0.7s
CLL Collm 39.47 320⇓ *i*P **P** **05 42 00.0 +0.5**
CLL *e* 05 42 06.0
CLL pmax pmax
comp=Z,11nm,1.1s
CLL Collm 39.47 320 P **P** **05 42 00.1 +0.7**
RETA Reutte 39.52 314 *e*P **P** **05 41 59.3 -0.8**
comp=Z,9.3nm,0.5s
FIA1 FINESS Array S 39.66 340 P **P** **05 42 00.5 -0.3**
FIA1 IAmb IAmb 05 42 01.6
comp=Z,15nm,0.9s
FINES FINESS Array B 39.66 340 P **P** **05 42 00.6 -0.3**
comp=Z,10nm,0.5s,baz=146,slow=8.1,SNR=91
FINES PcP **PcP** **05 44 07.0 -0.3**
comp=Z,1.9nm,0.6s,baz=132,slow=2.1,SNR=1.9
FINES LR LR 06 00 43.6
comp=Z,200nm,19.4s,baz=152,slow=40
FINES FINESS Array B 39.66 340 P **P** **05 42 00.4 -0.5**
GRA1 Grafenberg Arr 39.93 317 P **P** **05 42 03.0 -0.4**
GRA1 IAmb IAmb 05 42 04.0
comp=Z,18nm,0.5s
GRF Grafenberg Arr 39.93 317 P **P** **05 42 03.0 -0.4**
GRF pmax pmax
comp=Z,18nm,0.5s
DAVA Damuels 40.04 313 *i* P **P** **05 42 04.1 -0.5**
comp=Z,34nm,0.5s,SNR=22

GTA Gaotai 40.59 59 P **P** **05 42 09.8 +0.7**
GTA pP sP 05 42 20.0 -0.8
GTA sP pP 05 42 24.0 +6.6
GTA pmax pmax
comp=Z,11nm,0.9s
GTA pmax pmax
comp=Z,55nm,4.5s
GTA LR LR
comp=Z,250nm,15.3s
GTA LR LR
comp=Z,200nm,15.6s
GTA LR LR
comp=Z,200nm,16.4s
SENIN Lac Senin/Sane 41.54 311 P **P** **05 42 17.1 +0.2**
BNI Bardonecchia 41.70 309 P **P** **05 42 17.7 -0.5**
BNI pmax pmax
comp=Z,25nm,1.5s
BNI Bardonecchia 41.70 309 P **P** **05 42 17.7 -0.5**
BNI IAmb IAmb 05 42 31.5
comp=Z,25nm,1.5s
ECH Echery 42.06 314 P **P** **05 42 20.4 -0.5**
ECH pmax pmax
comp=Z,9.0nm,0.9s
ECH Echery 42.06 314 P **P** **05 42 20.4 -0.5**
CHTO Chiang Mai 42.45 90 P **P** **05 42 24.7 +0.3**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 42.45 90 P **P** **05 42 24.7 +0.3**
CMAR Chiang Mai Arr 42.56 91 P **P** **05 42 25.7 +0.3**
comp=Z,0.8nm,0.5s,baz=284,slow=9.5,SNR=5.5
CMAR PcP **PcP** **05 44 18.4 +0.8**
comp=Z,2.0nm,0.7s,baz=286,slow=5.1,SNR=6.3
CMAR LR LR 06 04 25.0
comp=Z,66nm,18.4s,baz=310,slow=42
APA Apatity 43.02 349⇓ *i*P **P** **05 42 27.2 -1.2**
APA pmax pmax
comp=Z,18nm,0.8s
APA MLR MLR
comp=Z,900nm,11.0s
WLF Walferdange 43.06 316 *d*P **P** **05 42 28.5 -0.5**
WLF Walferdange 43.06 316 P **P** **05 42 28.7 -0.4**
WLF pmax pmax
comp=Z,22nm,1.1s
WLF Walferdange 43.06 316 P **P** **05 42 28.7 -0.4**
WLF IAmb IAmb 05 42 29.8
comp=Z,22nm,1.1s
LZH Lanzhou 43.71 64 *e*P **P** **05 42 36.5 +1.8**
LZH pP sP 05 42 44.8 -1.6
LZH sP pP 05 42 51.3 +8.3
LZH pmax pmax
comp=Z,18nm,1.2s
LZH LR LR
comp=Z,250nm,15.2s
LZH LR LR
comp=Z,250nm,16.8s
LZH LR LR
comp=Z,140nm,16.3s
BMRD Maredsous 44.09 316 *d*P **P** **05 42 38.7 +1.4**
DOU Dourbes 44.15 316 *d*P **P** **05 42 38.2 +0.4**
KMI Kunming 44.15 80⇑P **P** **05 42 40.5 +2.1**
KMI pmax pmax
comp=Z,10.0nm,1.3s
OSL Oslo 44.52 331 *e*P **P** **05 42 41.0 +0.4**
NC602 NORSAR Array S 44.57 332 *e*P **P** **05 42 40.6 -0.4**
NC405 NORSAR Array S 44.70 333 P **P** **05 42 41.6 -0.4**
ZAK Zakamensk 44.75 44 *e*P **P** **05 42 41.0 -1.7**
ZAK pmax pmax
comp=Z,3.0nm,1.4s
HOMB Homborsund 44.76 328 *e*P **P** **05 42 42.5 0.0**
NB201 NORSAR Array S 44.84 332 P **P** **05 42 41.6 -1.5**
NB201 IAmb IAmb 05 43 00.7
comp=Z,18nm,1.1s
NB2 NORSAR Subarra 44.87 332 P **P** **05 42 42.6 -0.8**
baz=120,slow=7.9
NOA NORSAR Array B 44.87 332 P **P** **05 42 42.8 -0.7**
comp=Z,4.6nm,0.6s,baz=121,slow=7.6,SNR=27
NOA PcP **PcP** **05 44 24.5 -0.2**
comp=Z,2.7nm,0.9s,baz=112,slow=3.6,SNR=3.2
NOA LR LR 06 04 12.4
comp=Z,133nm,18.7s,baz=130,slow=40
NBO00 NORSAR Array S 45.05 332 P **P** **05 42 44.6 -0.2**
NBO00 IAmb IAmb 05 42 44.9
comp=Z,18nm,0.8s
OPO Ambohidratompo 45.08 188 P **P** **05 42 47.1 +1.5**
comp=Z,6.0nm,0.7s,baz=16,slow=12,SNR=7.6
NC204 NORSAR Array S 45.18 332 P **P** **05 42 45.4 -0.5**
TLY Talaya 45.28 42 LR LR 06 02 46.6
comp=Z,108nm,19.6s,baz=254,slow=38
TLY Talaya 45.28 42 *i* P **P** **05 42 47.3 +0.5**
TLY pmax pmax
comp=Z,1.0nm,0.8s
ABPO Ambohimpanom 45.51 188 P **P** **05 42 51.5 +2.5**
ABPO pmax pmax
comp=Z,11nm,0.9s
ABPO Ambohimpanom 45.51 188 P **P** **05 42 51.5 +2.5**
ABPO IAmb IAmb 05 42 57.0
comp=Z,11nm,0.9s
SKAR Skarslia 45.93 331 *e*P **P** **05 42 52.0 +0.1**
KEV Kevo 46.10 348 P **P** **05 42 52.8 -0.1**
KEV Kevo 46.10 348 P **P** **05 42 52.8 -0.1**
BLS5 Blasjo 46.21 329 *e*P **P** **05 42 54.6 +0.6**
ARA0 ARCESS Array S 46.22 347 *e*P **P** **05 42 53.9 0.0**
ARCES ARCESS Array B 46.22 347 P **P** **05 42 53.9 0.0**
comp=Z,3.9nm,0.5s,baz=147,slow=8.2,SNR=61
ARCES PcP **PcP** **05 44 29.3 +0.1**
comp=Z,2.7nm,0.6s,baz=155,slow=2.6,SNR=5.6
ARCES LR LR 06 05 54.7
comp=Z,109nm,18.8s,baz=155,slow=41
ARCES ARCESS Array B 46.22 347 P **P** **05 42 53.9 0.0**
ARCES pmax pmax
comp=Z,7.0nm,1.1s
ARCES ARCESS Array B 46.22 347 IAmb IAmb 05 42 54.2
comp=Z,7.0nm,1.1s
KTK1 Kautokeino 46.28 345 *e*P **P** **05 42 54.4 0.0**
SONM Songino Array 46.29 48 P **P** **05 42 55.2 +0.3**
comp=Z,1.4nm,0.8s,baz=259,slow=8.0,SNR=9.3
SONM LR LR 06 04 36.4
comp=Z,200nm,20.1s,baz=222,slow=39
SONM Songino Array 46.29 48 P **P** **05 42 54.8 -0.2**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 46.29 48 P **P** **05 42 54.8 -0.2**
ULN Ulaanbaatar 46.73 48*ce*P **P** **05 42 58.9 +0.4**
ULN pmax pmax
comp=Z,7.0nm,1.7s
FAUS Fauske 47.17 341 *e*P **P** **05 43 00.3 -1.0**
GYA Guiyang 47.31 77 P **P** **05 43 03.3 0.0**
GYA pmax pmax
comp=Z,2.0nm,0.6s
JETT Jettan, Norway 47.35 345 *e*P **P** **05 43 03.0 +0.2**
NRIK Noril'sk 47.42 16 P **P** **05 43 04.0 +0.7**
comp=Z,2.0nm,0.5s,baz=218,slow=6.7,SNR=5.4
NRIK LR LR 06 06 40.6
comp=Z,156nm,18.0s,baz=186,slow=41
NRIK Noril'sk 47.42 16*ce*P **P** **05 43 03.8 +0.5**
NRIK pmax pmax
comp=Z,7.0nm,1.1s
NRIK Noril'sk 47.42 16 P **P** **05 43 03.5 +0.3**
NRIK IAmb IAmb 05 43 27.4
comp=Z,6.4nm,0.9s
HAMF Hammerfest 47.48 347 *e*P **P** **05 43 03.8 +0.1**
STEI Steigen 47.55 342 *e*P **P** **05 43 03.2 -1.1**
TRO Tromso 47.76 344 *e*P **P** **05 43 06.0 +0.1**
XAN Xi'an 48.01 67 P **P** **05 43 08.0 -0.5**
XAN pP pP 05 43 17.8 +0.9
XAN S **S** **05 50 01.8 -3.2**
XAN sS sS 05 50 18.5 -0.4
XAN pmax pmax
comp=Z,9.0nm,1.0s
XAN pmax pmax
comp=Z,76nm,4.9s
XAN LR LR
comp=Z,200nm,14.1s
XAN LR LR
comp=Z,250nm,16.5s
XAN LR LR
comp=Z,340nm,17.6s
ENH Enshi 49.02 72 P **P** **05 43 16.8 +0.5**
ENH IAmb IAmb 05 43 18.7
comp=Z,12nm,0.9s
ESDC Sonseca Array 49.22 301 P **P** **05 43 17.8 +0.1**
comp=Z,2.8nm,0.8s,baz=76,slow=6.7,SNR=11
ESDC PcP **PcP** **05 44 41.5 +0.9**
comp=Z,1.4nm,0.8s,baz=68,slow=4.8,SNR=4.4
ESDC Sonseca Array 49.22 301 P **P** **05 43 17.5 -0.3**

PSI Prapat 49.42 111 P **P** **05 43 19.2 -0.4**
comp=Z,5.7nm,0.6s,baz=360,slow=6.0,SNR=5.2
PSI Prapat 49.42 111 P **P** **05 43 19.2 -0.4**
PSI pmax pmax
comp=Z,8.0nm,0.7s
RPSI Rantau Prapat 49.48 111 P **P** **05 43 19.6 -0.3**
RPSI IAmb IAmb 05 43 26.2
comp=Z,7.9nm,0.7s
RPSI Rantau Prapat 49.48 111 P **P** **05 43 19.2 -0.7**
HHC Hu-ho-hao-te 49.62 58 *e*P **P** **05 43 23.0 +2.1**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,53nm,6.6s
TOA0 Torodi Ar. Sit 50.20 265 P **P** **05 43 25.0 -0.4**
TOA0 IAmb IAmb 05 43 26.5
comp=Z,9.2nm,0.9s
TORD Torodi Ar. Bea 50.20 265 P **P** **05 43 25.4 0.0**
comp=Z,7.7nm,0.9s,baz=58,slow=7.5,SNR=39
TORD LR LR 06 06 55.0
comp=Z,236nm,21.8s,baz=80,slow=39
TORD Torodi Ar. Bea 50.20 265 P **P** **05 43 25.3 0.0**
TORD IAmb IAmb 05 43 26.5
comp=Z,7.4nm,0.9s
PBRG Braganca 51.24 304 *e*P **P** **05 43 33.6 +0.6**
MVO Moncorvo 51.48 303 *e*P **P** **05 43 35.7 +0.8**
PBAR Barrancos 51.72 299 *e*P **P** **05 43 36.7 +0.1**
PMRV Marv??o 51.88 301 *e*P **P** **05 43 37.9 +0.1**
PVRL Vila Real 52.00 303 *e*P **P** **05 43 39.6 +1.0**
POLO Lamas de Olo 52.05 303 *e*P **P** **05 43 40.2 +1.1**
HOPEN Hopen 52.10 352 *e*P **P** **05 43 39.1 +0.3**
PVIS Viseu 52.17 302 *e*P **P** **05 43 41.0 +1.1**
PGAV Gavieira, Arco 52.37 304 *e*P **P** **05 43 42.5 +1.0**
EVO Evora 52.45 300 *e*P **P** **05 43 42.5 +0.5**
BOD Bodaibo 52.45 36 *e*P **P** **05 43 40.8 -0.9**
BOD pmax pmax
comp=Z,29nm,2.0s
TIA Tai'an 54.40 63 P **P** **05 43 56.5 +0.2**
TIA pmax pmax
comp=Z,10.0nm,0.7s
TIA LR LR
comp=Z,220nm,16.7s
TIA LR LR
comp=Z,150nm,20.6s
TIA LR LR
comp=Z,150nm,13.7s
KOWA Kowa 54.80 270 P **P** **05 43 59.7 +0.2**
KOWA IAmb IAmb 05 44 00.9
comp=Z,9.0nm,0.9s
NJ2 Nanjing 56.56 68 *e*P **P** **05 44 12.3 +0.3**
NJ2 pmax pmax
comp=Z,12nm,0.5s
LBTB Lobatse 57.74 210 P **P** **05 44 21.7 +1.3**
LBTB pmax pmax
comp=Z,7.0nm,0.6s
LBTB Lobatse 57.74 210 P **P** **05 44 21.7 +1.3**
LBTB IAmb IAmb 05 44 23.0
comp=Z,7.0nm,0.6s
DBIC Dimbokro 58.77 261 P **P** **05 44 28.2 +0.4**
comp=Z,9.1nm,0.7s,baz=34,slow=7.2,SNR=12
DBIC LR LR 06 10 15.5
comp=Z,94nm,19.2s,baz=45,slow=36
DBIC Dimbokro 58.77 261 P **P** **05 44 27.6 -0.1**
DBIC pmax pmax
comp=Z,15nm,1.0s
DBIC Dimbokro 58.77 261 P **P** **05 44 27.6 -0.1**
DBIC IAmb IAmb 05 44 29.2
comp=Z,15nm,1.0s
CN2 Changchun 59.61 53 *e*P **P** **05 44 36.8 +3.7**
ZEA Zeya 59.71 41 *e*P **P** **05 44 33.9 +0.3**
ZEA pmax pmax
comp=Z,10.0nm,1.4s
ZEA MLR MLR
comp=E,200nm,15.0s
ZEA MLR MLR
comp=Z,200nm,14.0s
DAG Danmarks Havn 60.47 345 *i* P **P** **05 44 38.4 0.0**
DAG IAmb IAmb 05 44 39.0
comp=Z,4.0nm,0.7s
DAG Danmarks Havn 60.47 345 *i* P **P** **05 44 38.4 0.0**
DAG pmax pmax
comp=Z,4.0nm,0.7s
TIXI Tiksi 60.62 21 P **P** **05 44 39.0 -0.6**
TIXI pmax pmax
comp=Z,8.0nm,1.2s
TIXI Tiksi 60.62 21 P **P** **05 44 39.0 -0.6**
TIXI IAmb IAmb 05 44 41.5
comp=Z,8.0nm,1.2s
YAK Yakutsk 60.63 32*ce*P **P** **05 44 38.8 -0.9**
YAK pmax pmax
comp=Z,11nm,0.6s
BOSA Boshof 61.02 208 P **P** **05 44 43.5 +0.5**
comp=Z,3.4nm,0.7s,baz=34,slow=5.2,SNR=7.3
BOSA LR LR 06 11 31.0
comp=Z,106nm,19.8s,baz=18,slow=36
KSRS Korea Array 62.66 60 P **P** **05 44 53.1 -0.8**
comp=Z,3.8nm,0.6s,baz=277,slow=6.7,SNR=14
KSRS LR LR 06 16 16.4
comp=Z,80nm,18.2s,baz=154,slow=40
KLR Kul'dur 63.05 46*ce*P **P** **05 44 55.8 -0.5**
KLR pmax pmax
comp=Z,13nm,2.0s
USRK Ussuriysk Ar. 64.17 52 LR LR 06 17 17.3
comp=Z,108nm,18.3s,baz=266,slow=40
SUMG Summit 65.68 341 *i* P **P** **05 45 14.6 +0.9**
SUMG IAmb IAmb 05 45 15.5
comp=Z,18nm,0.9s
SUMG Summit 65.68 341 P **P** **05 45 14.4 +0.8**
SUMG pmax pmax
comp=Z,17nm,0.9s
SUMG Summit 65.68 341 P **P** **05 45 14.4 +0.8**
ICESG Greenland Ices 66.77 337 *i* P **P** **05 45 21.3 +0.7**
ICESG IAmb IAmb 05 45 23.4
comp=Z,10nm,0.7s
NEEM North Greenlan 67.58 347⇑ *i*P **P** **05 45 26.1 +0.6**
NEEM IAmb IAmb 05 45 26.9
comp=Z,22nm,1.0s
JWT Wachi 69.06 60 P **P** **05 45 35.3 +0.1**
JWT IAmb IAmb 05 45 35.4
comp=Z,6.2nm,0.8s
DY2G Dye2 69.92 335⇑ *i*P **P** **05 45 41.2 +0.9**
DY2G IAmb IAmb 05 45 41.8
comp=Z,22nm,0.7s
UPNV Upernavik 70.63 343 *i* P **P** **05 45 45.0 +0.8**
UPNV IAmb IAmb 05 45 46.5
comp=Z,7.7nm,0.8s
YSS Yuzh-Sakhalins 70.75 47 *i* P **P** **05 45 43.8 -1.5**
YSS pmax pmax
comp=Z,15nm,1.0s
SEY Seymchan 70.77 29 *i* P **P** **05 45 45.6 +0.4**
MA2 Magadan 71.19 32 P **P** **05 45 47.5 -0.3**
MA2 pmax pmax
comp=Z,13nm,0.8s
MA2 Magadan 71.19 32 P **P** **05 45 47.5 -0.3**
KAPI Kappang 71.23 106 P **P** **05 45 48.1 -0.7**
KAPI pmax pmax
comp=Z,25nm,1.4s
KAPI Kappang 71.23 106 P **P** **05 45 48.1 -0.7**
SFJD Kangerlussuaq 71.34 336 P **P** **05 45 48.5 0.0**
SFJD pmax pmax
comp=Z,11nm,1.2s
SFJD Kangerlussuaq 71.34 336 P **P** **05 45 48.5 0.0**
SFJD IAmb IAmb 05 45 49.7
comp=Z,11nm,1.1s
TULEG Thule 71.53 348⇑ *i*P **P** **05 45 49.5 0.0**
TULEG IAmb IAmb 05 45 50.7
comp=Z,12nm,0.8s
TULEG Thule 71.53 348 P **P** **05 45 49.5 0.0**
TULEG IAmb IAmb 05 45 50.7
comp=Z,12nm,0.8s
EUNU Eureka 71.61 353 P **P** **05 45 51.0 +0.9**
BILL Bilibino 73.83 21*de*P **P** **05 46 03.9 +0.6**
BILL *e* 05 48 48.6
BILL pmax pmax
comp=Z,6.0nm,0.9s
BILL MLR MLR
comp=Z,105nm,15.0s
BILL Bilibino 73.83 21 P **P** **05 46 04.0 +0.6**
BILL IAmb IAmb 05 46 04.8
comp=Z,7.0nm,0.8s
PETK Petropavlovsk- 77.31 37 P **P** **05 46 24.3 +0.7**
comp=Z,1.2nm,0.7s,baz=180,slow=1.3,SNR=3.6
PETK Petropavlovsk- 77.31 37 P **P** **05 46 23.4 -0.1**
SIJI Sorong 79.42 96 P **P** **05 46 35.5 -0.4**
comp=Z,6.4nm,0.4s,baz=221,slow=19,SNR=2.1

A21K	**Barrow**	**80.33**	**9**	P	**P**	**05 46 40.8**	**+1.0**		
TOLK	**Toolik Lake Re**	**83.77**	**8**	P	**P**	**05 46 58.5**	**+0.5**		
TOLK				IAmb	IAmb	05 47 01.3			
	comp=Z,11nm,0.9s								
ANM	**Nome**	**84.46**	**16**	P	**P**	**05 47 02.3**	**+0.8**		
ANM				pmax	pmax				
	comp=Z,19nm,0.8s								
ANM	**Nome**	**84.46**	**16**	P	**P**	**05 47 02.3**	**+0.8**		
C36M	**Paulatuk**	**84.56**	**359**	P	**P**	**05 47 01.6**	**-0.3**		
COLD	**Coldfoot**	**85.02**	**9**	P	**P**	**05 47 04.7**	**+0.4**		
COLD				IAmb	IAmb	05 47 06.3			
	comp=Z,6.7nm,0.9s								
INK	**Inuvik**	**85.48**	**3**	P	**P**	**05 47 06.5**	**0.0**		
	comp=Z,3.1nm,0.8s,baz=20,slow=6.3,SNR=13								
INK	**Inuvik**	**85.48**	**3**	P	**P**	**05 47 06.3**	**-0.2**		
INK				pmax	pmax				
	comp=Z,6.0nm,1.0s								
INK	**Inuvik**	**85.48**	**3**	P	**P**	**05 47 06.3**	**-0.2**		
INK				IAmb	IAmb	05 47 07.3			
	comp=Z,6.2nm,1.0s								
BMAR	**Burnt Mountain**	**85.52**	**7**	P	**P**	**05 47 08.2**	**+1.4**		
IMAR	**Indian Mountai**	**85.62**	**11**	P	**P**	**05 47 07.6**	**+0.3**		
FYU	**Fort Yukon**	**86.28**	**7**	P	**P**	**05 47 11.4**	**+0.9**		
MLY	**Manley**	**86.99**	**10**	P	**P**	**05 47 14.3**	**+0.2**		
EPYK	**Eagle Plains**	**87.24**	**4**	P	**P**	**05 47 15.4**	**+0.1**		
PRP	**Porcupine Dome**	**87.25**	**8**	P	**P**	**05 47 16.2**	**+0.6**		
PRP				IAmb	IAmb	05 47 18.7			
	comp=Z,8.1nm,0.8s								
MDM	**Murphy Dome**	**87.43**	**9**	P	**P**	**05 47 16.2**	**0.0**		
MDM				IAmb	IAmb	05 47 17.6			
	comp=Z,9.8nm,0.9s								
CCB	**Clear Creek Bu**	**87.79**	**9**	P	**P**	**05 47 17.1**	**-0.8**		
CCB				IAmb	IAmb	05 47 18.7			
	comp=Z,2.6nm,0.8s								
IL31		**87.79**	**9**	P	**P**	**05 47 17.5**	**-0.4**		
IL31				IAmb	IAmb	05 47 18.4			
	comp=Z,3.1nm,0.7s								
ILAR	**Eielson Array**	**87.79**	**9**	P	**P**	**05 47 17.6**	**-0.4**		
	comp=Z,2.9nm,0.8s,baz=324,slow=3.9,SNR=27								
ILAR				PKKPbc	**PKKPbc**	**06 05 04.8**	**-1.2**		
	comp=Z,0.5nm,0.8s,baz=189,slow=1.8,SNR=4.2								
ILAR				LR	LR	06 33 59.4			
	comp=Z,31nm,18.1s,baz=301,slow=41								
ILAR	**Eielson Array**	**87.79**	**9**	P	**P**	**05 47 17.3**	**-0.7**		
BPAW	**Bear Paw Mtn.**	**87.82**	**10**	P	**P**	**05 47 18.6**	**+0.5**		
EGAK	**Eagle**	**88.45**	**6**	P	**P**	**05 47 21.5**	**+0.4**		
EGAK				IAmb	IAmb	05 47 22.5			
	comp=Z,8.3nm,0.9s								
MCK	**McKinley**	**88.49**	**10**	P	**P**	**05 47 21.1**	**-0.2**		
MCK				pmax	pmax				
	comp=Z,8.0nm,0.7s								
MCK	**McKinley**	**88.49**	**10**	P	**P**	**05 47 21.1**	**-0.2**		
SCRK	**Sand Creek**	**88.92**	**8**	P	**P**	**05 47 24.4**	**+0.9**		
SCRK				IAmb	IAmb	05 47 24.8			
	comp=Z,8.2nm,0.9s								
K27K	**Chicken**	**89.09**	**7**	P	**P**	**05 47 25.1**	**+1.1**		
DOT	**Dot Lake**	**89.23**	**8**	P	**P**	**05 47 25.3**	**+0.5**		
DOT				IAmb	IAmb	05 47 26.1			
	comp=Z,5.3nm,0.8s								
DAWY	**Dawson**	**89.31**	**6**	P	**P**	**05 47 25.5**	**+0.3**		
DAWY				IAmb	IAmb	05 47 26.1			
	comp=Z,4.0nm,0.8s								
L27K	**Beaver Creek,**	**90.06**	**7**	P	**P**	**05 47 29.4**	**+0.7**		
L27K				IAmb	IAmb	05 47 30.2			
	comp=Z,3.4nm,0.8s								
SUA	**Susitna One**	**90.32**	**11**	P	**P**	**05 47 29.9**	**-0.1**		
GHO	**Glory Hole Cre**	**90.34**	**10**	P	**P**	**05 47 27.4**	**-2.6**		
WRA	**Warramunga Arr**	**90.87**	**112**	P	**P**	**05 47 32.7**	**-0.5**		
	comp=Z,1.4nm,0.6s,baz=311,slow=4.1,SNR=16								
YKA	**Yellowknife Ar**	**90.95**	**355**	P	**P**	**05 47 33.3**	**+0.6**		
	comp=Z,4.7nm,0.7s,baz=8.6,slow=4.8,SNR=127								
YKA				PKKPbc	**PKKPbc**	**06 04 56.1**	**-2.1**		
	comp=Z,0.1nm,0.6s,baz=169,slow=2.2,SNR=5.2								
YKA	**Yellowknife Ar**	**90.95**	**355**	*i* P	**P**	**05 47 33.2**	**+0.4**		
YKA				pmax	pmax				
	comp=Z,5.0nm,0.7s								
FCC	**Fort Churchill**	**91.03**	**344**	P	**P**	**05 47 33.8**	**+0.6**		
FCC				pmax	pmax				
	comp=Z,9.0nm,0.9s								
FCC	**Fort Churchill**	**91.03**	**344**	P	**P**	**05 47 33.8**	**+0.6**		
ASAR	**Alice Springs**	**92.23**	**115**	P	**P**	**05 47 39.4**	**0.0**		
	comp=Z,1.7nm,0.6s,baz=302,slow=4.5,SNR=22								
HYT	**Haines Junctio**	**92.67**	**5**	P	**P**	**05 47 41.8**	**+0.8**		
DLBC	**Dease Lake**	**95.48**	**2**	LR	LR	06 39 45.3			
	comp=Z,26nm,21.6s,baz=6.5,slow=41								
ULM	**Lac du Bonnet**	**99.04**	**341**	P	**Pdif**	**05 48 08.9**	**-1.1**		
	comp=Z,0.4nm,0.3s,baz=351,slow=3.9,SNR=3.8								
ULM				LR	LR	06 34 26.9			
	comp=Z,64nm,18.7s,baz=27,slow=36								
NVAR	**Mina Array Bea**	**115.10**	**353**	PKP	**PKPdf**	**05 53 11.9**	**+1.1**		
	comp=Z,0.3nm,0.6s,baz=149,slow=2.1,SNR=2.8								
CPUP	**Villa Florida**	**118.76**	**253**	PKP	**PKPdf**	**05 53 16.9**	**-0.9**		
	comp=Z,0.7nm,0.7s,baz=0.0,slow=8.1,SNR=3.6								
VNDA	**Vanda**	**119.50**	**166**	PKP	**PKiKP**	**05 53 18.2**	**+0.5**		
	comp=Z,0.3nm,0.7s,baz=225,slow=5.7,SNR=1.7								
TXAR	**Lajitas Array**	**120.46**	**337**	PKP	**PKPdf**	**05 53 20.7**	**-0.5**		
	comp=Z,0.2nm,0.6s,baz=110,slow=1.5,SNR=3.9								
TXAR	**Lajitas Array**	**120.46**	**337**		**PKPdf**	**05 53 20.2**	**-1.0**		
LPAZ	**La Paz**	**125.11**	**268**	PKP	**PKiKP**	**05 53 31.2**	**-0.1**		
	comp=Z,0.5nm,0.5s,baz=35,slow=16,SNR=1.9								
PLCA	**Paso Flores**	**131.98**	**238**	PKP	**PKiKP**	**05 53 43.4**	**-0.4**		
	comp=Z,0.7nm,0.7s,baz=333,slow=4.7,SNR=3.1								

IDC 27 05:35:47.9±3.4, 27°.80N×85°.68E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/55, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=104.6km s-min=32.1km az=72.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.14**	**353**	P	Pn	05 40 13.5	0.0
	0.2nm,0.3s,baz=176,slow=11,SNR=5.8						
SONM	**Songino Array**	**25.70**	**33**	P	P	05 41 20.1	+0.2
	0.7nm,0.5s,baz=226,slow=9.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.13**	**359**	P	P	05 41 22.8	-0.7
	0.8nm,0.4s,baz=163,slow=6.0,SNR=1.7						
WRA	**Warramunga Arr**	**66.85**	**130**	P	P	05 46 42.0	0.0
	0.5nm,1.0s,baz=326,slow=6.3,SNR=1.6						

IDC 27 05:59:58.9±1.4, 27°.79N×86°.01E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.6/61, mbtmp3.8/11, ML4.3/2, Error ellipse: s-maj=42.0km s-min=21.9km az=50.0
NEIC 27 06:00:00.4±2.2, 27°.84N±0°.06×86°.14E±0°.06, h10km±1km, mb4.0/13, Error ellipse: s-maj=11.5km s-min=8.1km az=155.0
NDI 27 06:00:01.7±3.1, 27°.67N×85°.98E, h10km, ML4.0, mb4.0(NEIC)
ISC 27 06:00:01.1±0.6, 27°.76N±0°.07×85°.90E±0°.05, h19km, n34, σ1s59/37, mb3.8/11, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.44**	**100**	*e*P	**Pn**	**06 00 41.2**	**+1.1**
GTK				*e*S	**Sn**	**06 01 08.9**	**-0.5**
GTK				IAML		06 01 14.1	
	comp=N,403nm,0.2s						
GTK				IAML		06 01 15.1	
	comp=E,394nm,0.2s						
BOK	**Bokaro**	**3.95**	**180**	*e*P	**Pn**	**06 01 03.4**	**+2.6**
BOK				IAML		06 02 08.5	
	comp=E,1μm,0.5s						
BOK				IAML		06 02 11.2	
	comp=N,576nm,0.2s						
LSA	**Lhasa**	**5.00**	**66**	Pn	**Pn**	**06 01 12.8**	**-2.7**
SHL	**Shillong**	**5.78**	**111**	*e*P	**Pn**	**06 01 26.3**	**+0.2**
SHL	**Shillong**	**5.78**	**111**	Pn	**Pn**	**06 01 25.2**	**-0.8**
SMLA	**Simla**	**8.32**	**296**	*e*P	**Pn**	**06 02 03.0**	**+2.2**
SMLA				*e*S	**Sn**	**06 03 33.8**	**-0.5**
SMLA				IAML		06 03 38.2	
	comp=N,36nm,0.4s						
SMLA				IAML		06 03 40.7	
	comp=E,70nm,0.4s						
BHPL	**Bhopal**	**8.88**	**241**	*e*P	**Pn**	**06 02 07.8**	**-0.7**
BHPL				*e*S	**Sn**	**06 03 42.8**	**-5.4**
DHRM	**DHARAMSHALA**	**9.45**	**301**	*e*P	**Pn**	**06 02 16.4**	**0.0**
DHRM				*e*S	**Sn**	**06 04 00.4**	**-1.9**
DHRM				IAML		06 04 04.0	
	comp=E,219nm,0.7s						
DHRM				IAML		06 04 04.1	
	comp=N,262nm,0.4s						
NIL	**Nilore**	**12.36**	**301**	Pn	**Pn**	**06 02 56.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**15.14**	**125**	Pn	**Pn**	**06 03 35.6**	**+1.5**
	comp=N,0.7nm,0.3s,baz=302,slow=16,SNR=4.0						
CMAR	**Chiang Mai Arr**	**15.14**	**125**		**Pn**	**06 03 34.6**	**+0.5**
KBL	**Kabul**	**15.93**	**299**	Pn	**Pn**	**06 03 45.9**	**+1.4**
KBL				IAmb	IAmb	06 03 51.2	
	comp=Z,4.4nm,0.8s						
BTK	**Batken**	**17.50**	**318**	Pn	**Pn**	**06 04 04.2**	**+0.1**
BTK				IAmb	IAmb	06 04 05.0	
	comp=Z,4.5nm,0.7s						
CHGR	**Chuyangaron**	**17.70**	**312**	Pn	**Pn**	**06 04 06.5**	**-0.2**
CHGR				IAmb	IAmb	06 04 29.1	
	comp=Z,9.2nm,0.7s						
MK31	**Makanchi Array**	**19.21**	**352**	P	**P**	**06 04 22.6**	**-1.3**
MKAR	**Makanchi Array**	**19.21**	**352**	P	**P**	**06 04 24.9**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=169,slow=12,SNR=21						
MKAR	**Makanchi Array**	**19.21**	**352**	P	**P**	**06 04 24.6**	**+0.7**
KURBB	**Kurchatov Arra**	**23.51**	**348**	P	**P**	**06 05 10.4**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=168,slow=10,SNR=6.9						
KURK	**Kurchatov**	**23.58**	**348**	P	**P**	**06 05 10.4**	**-0.1**
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**06 05 29.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=226,slow=9.8,SNR=7.1						
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**06 05 29.0**	**-0.4**
SONM				IAmb	IAmb	06 05 40.5	
	comp=Z,1.2nm,0.8s						
ZALV	**Zalesovo Beam**	**26.17**	**359**	P	**P**	**06 05 34.4**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=178,slow=7.2,SNR=4.6						
ABKAR	**Akbulak array**	**29.30**	**324**	P	**P**	**06 06 04.4**	**+2.2**
ABKAR				IAmb	IAmb	06 06 04.8	
	comp=Z,2.2nm,0.5s						
AKTO	**Aktyubinsk**	**31.00**	**325**	P	**P**	**06 06 18.9**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=96,slow=9.2,SNR=3.3						
AKASG	**Malin Array Be**	**48.15**	**314**	P	**P**	**06 08 40.7**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=79,slow=6.9,SNR=2.7						
BUR08	**Bucovina Ar. S**	**50.61**	**310**	P	**P**	**06 09 00.3**	**+1.4**
BUR08				IAmb	IAmb	06 09 20.9	
	comp=Z,4.0nm,1.4s						
FINES	**FINESS Array B**	**51.66**	**328**	P	**P**	**06 09 07.4**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=102,slow=7.3,SNR=8.3						
ARCES	**ARCESS Array B**	**54.01**	**338**	P	**P**	**06 09 24.8**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=108,slow=7.4,SNR=10						
ARCES	**ARCESS Array B**	**54.01**	**338**	IAmb	IAmb	06 09 32.1	
	comp=Z,12nm,1.4s						
NOA	**NORSAR Array B**	**58.76**	**327**	P	**P**	**06 09 57.8**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=87,slow=6.9,SNR=3.4						
WB0	**Warramunga Arr**	**66.59**	**130**	P	**P**	**06 10 50.5**	**+0.1**
WRA	**Warramunga Arr**	**66.67**	**130**	P	**P**	**06 10 51.3**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=323,slow=6.5,SNR=4.7						
WR0	**Warramunga Arr**	**66.82**	**130**	P	**P**	**06 10 49.5**	**-2.4**
NWAO	**Narrogin (SRO)**	**67.30**	**152**	P	**P**	**06 10 52.8**	**-1.8**

IDC 27 06:21:26.9±4.7, 34°.66N×22°.16E, h0km, mb3.6/3, mb1 3.4/5, mb1mx3.2/59, mbtmp3.4/5, ML3.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.1/44, Error ellipse: s-maj=87.5km s-min=22.1km az=4.0
THE 27 06:21:37.2, 35°.19N×22°.65E, h0km±3km, ML2.9/5, Error ellipse: s-maj=4.1km s-min=1.5km az=221.0
ISC 27 06:21:35.8±2.3, 35°.10N±0°.09×22°.50E±0°.09, h32km±13km, n15, σ1s17/19, mb3.5/3, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**1.01**	**40**	P	**Pb**	**06 21 53.6**	**-1.2**
ANKY				S	**Sn**	**06 22 05.7**	**-1.1**
	888nm,0.6s						
KTHR	**Kythira**	**1.23**	**19**	P	**Pb**	**06 21 58.0**	**-0.6**
KTHR				S	**Sb**	**06 22 13.4**	**-0.8**
	642nm,0.4s						
KTHA	**Kythira Island**	**1.25**	**21**	P	**Pb**	**06 21 58.1**	**-0.7**
KTHA				S	**Sb**	**06 22 15.3**	**+0.8**
	900nm,0.5s						
IMMV	**Iera Moni Meta**	**1.26**	**73**	P	**Pb**	**06 21 58.3**	**-0.8**
IMMV				S	**Sb**	**06 22 15.8**	**+0.7**
	685nm,0.7s						
GVD	**Gavdhos**	**1.33**	**101**	P	**Pb**	**06 21 59.9**	**-0.3**
VLI	**Veliai**	**1.66**	**12**	P	**Pb**	**06 22 05.4**	**-0.4**
VLI				S	**Sb**	**06 22 27.2**	**+0.9**
	212nm,0.7s						
PYL	**PYLOS**	**1.90**	**341**	P	**Pb**	**06 22 08.6**	**-1.2**
IDI	**Anoyia**	**1.97**	**84**	Pn	**Pn**	**06 22 07.7**	**+0.7**
	4.2nm,0.3s,baz=304,slow=16,SNR=23						
IDI				Lg	Lg	06 22 41.3	
	5.4nm,0.3s,baz=297,slow=18,SNR=2.6						
IDI	**Anoyia**	**1.97**	**84**	P	**Pn**	**06 22 08.1**	**+1.1**
AGG	**Agios Georgios**	**3.92**	**358**	P	**Pn**	**06 22 36.2**	**+2.4**
BRTR	**Keskin Array B**	**9.99**	**59**	Pn	**Pn**	**06 23 59.1**	**+1.9**
	0.1nm,0.3s,baz=239,slow=13,SNR=2.1						
BELG	**Belogornoye**	**24.87**	**38**	LR	LR	06 38 41.3	
	comp=Z,37nm,21.7s,baz=142,slow=41						
HFS	**Hagfors**	**25.70**	**350**	P	**P**	**06 27 02.4**	**-0.3**
	0.5nm,0.3s,baz=144,slow=10,SNR=1.6						
FINES	**FINESS Array B**	**26.46**	**4**	P	**P**	**06 27 09.3**	**-0.4**
	0.5nm,0.7s,baz=171,slow=9.7,SNR=1.0						
MKAR	**Makanchi Array**	**45.62**	**56**	P	**P**	**06 29 52.2**	**-0.9**
	0.3nm,0.3s,baz=284,slow=6.9,SNR=5.0						

IDC 27 06:23:11.6±1.9, 36°.21N×97°.43W, h0km, mb1 3.3/4, mb1mx3.1/75, mbtmp3.0/4, ML3.0/4, Error ellipse: s-maj=25.4km s-min=10.9km az=106.0
TUL 27 06:23:12.8±1.4, 36°.28N±0°.01×97°.51W±0°.02, h7km±6km, ML3.1, mb_Lg3.2/79(NEIC), Error ellipse: s-maj=2.7km s-min=1.5km az=70.0
NEIC 27 06:23:12.9±1.0, 36°.287N±0°.010×97°.51W±0°.01, h2km±8km, Error ellipse: s-maj=1.7km s-min=1.2km az=127.0
ANF 27 06:23:12.9±0.2, 36°.28N×97°.52W, h5km, ML3.9/21, Error ellipse: s-maj=2.6km s-min=2.5km az=156.0
ISC 27 06:23:12.9±1.0, 36°.28N±0°.02×97°.53W±0°.02, h13km±8km, n111, σ1s37/104, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.43**	**302**		**Pg**	**06 23 21.4**	**-0.1**
CROK				Sg	**Sg**	**06 23 27.9**	**+0.6**
OK029	**Liberty Lake**	**0.48**	**173**		**Pg**	**06 23 22.3**	**-0.1**
OK029				Sg	**Sb**	**06 23 30.9**	**+0.1**
BCOK	**Bluff Creek, N**	**0.62**	**186**		**Pg**	**06 23 24.9**	**-0.1**
BCOK				IAmb_Lg		06 23 33.5	
	comp=Z,525nm,1.0s						
BCOK				Sg	**Sg**	**06 23 33.6**	**+0.4**
GC02	**Grant County #**	**0.64**	**335**		**Pg**	**06 23 25.0**	**-0.3**
GC02				Sg	**Sg**	**06 23 33.8**	**+0.1**
OK031	**S. Brethren Rd**	**0.64**	**120**	Pg	**Pg**	**06 23 25.1**	**-0.3**
OK031				Sg	**Sg**	**06 23 33.6**	**-0.3**
QUOK	**Quay**	**0.67**	**99**		**Pg**	**06 23 25.6**	**-0.4**
QUOK				Sg	**Sg**	**06 23 34.4**	**-0.3**
OK030	**Cody Creek RV**	**0.69**	**120**	Pg	**Pg**	**06 23 26.1**	**-0.3**
OK030				Sg	**Sg**	**06 23 35.5**	**-0.1**
OK009	**Oakdale Elemen**	**0.70**	**173**	Pg	**Pg**	**06 23 26.3**	**-0.1**
OK025	**Westminster Rd**	**0.71**	**167**		**Pg**	**06 23 26.5**	**-0.2**
OK025				Sg	**Sg**	**06 23 35.7**	**-0.3**
KAN13	**South Haven SW**	**0.74**	**3**	Pg	**Pg**	**06 23 26.9**	**-0.3**
KAN13				Sg	**Sg**	**06 23 36.7**	**-0.2**
OK032	**Salt Plains WL**	**0.76**	**314**	Pg	**Pg**	**06 23 27.4**	**-0.3**
OK032				Sg	**Sg**	**06 23 37.9**	**+0.2**
KAN14	**Manchester OK**	**0.77**	**333**	Pg	**Pg**	**06 23 27.4**	**-0.4**
KAN14				Sg	**Sg**	**06 23 37.7**	**-0.1**
OKCFA	**Oklahoma City**	**0.86**	**176**		**Pg**	**06 23 29.2**	**-0.3**
OKCFA				IAmb_Lg		06 23 40.6	
	comp=Z,191nm,0.9s						
OKCFA	**Oklahoma City**	**0.86**	**176**	P	**Pg**	**06 23 29.2**	**-0.3**
	baz=357,SNR=24						
OKCFA				S	**Sg**	**06 23 41.1**	**+0.3**
	baz=357						
OKCFA	**Oklahoma City**	**0.86**	**176**	P		06 23 29.2	
	baz=357,SNR=24						
OKCFA				S		06 23 41.1	
	baz=357						
KAN09	**Caldwell North**	**0.86**	**355**	Pg	**Pg**	**06 23 29.2**	**-0.4**
OKCSW	**OKLAHOMA CITY**	**0.87**	**175**	Pg	**Pg**	**06 23 29.4**	**-0.3**
KAN05	**Bluff City Nor**	**0.88**	**342**	Pg	**Pg**	**06 23 29.4**	**-0.4**
KAN01	**Argonia South**	**0.90**	**348**	Pg	**Pg**	**06 23 29.7**	**-0.5**
KAN10	**Anthony SW Sta**	**0.96**	**332**		**Pg**	**06 23 30.9**	**-0.6**
KAN08	**Anthony NE Sta**	**1.01**	**340**	Pg	**Pg**	**06 23 32.0**	**-0.5**
FNO	**Franklin**	**1.02**	**174**	Pg	**Pg**	**06 23 32.8**	**+0.2**
T35A	**Sooner Cattle**	**1.04**	**52**		**Pg**	**06 23 32.1**	**-0.7**
T35B	**Sooner Cattle**	**1.04**	**52**	P	**Pg**	**06 23 32.1**	**-0.8**
	baz=232,SNR=143						
T35B				S	**Sg**	**06 23 45.7**	**-0.8**
	baz=232						
T35B	**Sooner Cattle**	**1.04**	**52**	P		06 23 32.1	
	baz=232,SNR=143						
T35B				S		06 23 45.7	
	baz=232						
KAN16	**Harper SW Stat**	**1.04**	**336**	Pg	**Pg**	**06 23 32.5**	**-0.5**
U32A	**Winter Ranch,**	**1.20**	**275**		**Pg**	**06 23 35.0**	**-0.9**
U32A	**Winter Ranch,**	**1.20**	**275**	P	**Pg**	**06 23 35.0**	**-0.9**
	baz=94,SNR=75						
U32A				S	**Sg**	**06 23 51.9**	**+0.4**
	baz=94						
U32A	**Winter Ranch,**	**1.20**	**275**	P		06 23 35.0	
	baz=94,SNR=75						
U32A				S		06 23 51.9	
	baz=94						
TUL1	**Leonard**	**1.45**	**104**	P	**Pn**	**06 23 38.9**	**0.0**
	baz=286						
TUL1				S	**Sb**	**06 23 58.4**	**+0.2**
	baz=286						
TUL1	**Leonard**	**1.45**	**104**	P		06 23 38.9	
	baz=286,SNR=125						
TUL1				S		06 23 58.6	
	baz=286						
TUL1	**Leonard**	**1.45**	**104**	P		06 23 38.9	
	baz=286						
TUL1				S		06 23 58.4	
	baz=286						
WMOK	**Wichita Mounta**	**1.84**	**214**		**Pn**	**06 23 45.4**	**+1.0**
WMOK	**Wichita Mounta**	**1.84**	**214**	P	**Pn**	**06 23 45.6**	**+1.3**
	baz=33,SNR=28						
WMOK				S	**Sb**	**06 24 10.5**	**+1.0**
	baz=33						
WMOK	**Wichita Mounta**	**1.84**	**214**	P		06 23 45.6	
	baz=33,SNR=8.4						
WMOK				S		06 24 10.6	
	baz=33						
WMOK	**Wichita Mounta**	**1.84**	**214**	P		06 23 45.6	
	baz=33,SNR=28						
WMOK				S		06 24 10.5	
	baz=33						
R32A	**Long Quarter,**	**2.34**	**337**		**Pn**	**06 23 52.2**	**+1.0**
R32A	**Long Quarter,**	**2.34**	**337**	P	**Pn**	**06 23 53.5**	**+2.3**
	baz=155,SNR=41						
R32A				S	**Sn**	**06 24 22.0**	**+2.2**
	baz=155						
R32A	**Long Quarter,**	**2.34**	**337**	P		06 23 53.5	
	baz=155,SNR=41						
R32A				S		06 24 22.0	
	baz=155						
X37A	**Clayton**	**2.44**	**133**		**Pn**	**06 23 53.9**	**+1.5**
X37A				IAmb_Lg		06 24 34.7	
	comp=Z,78nm,0.7s						
X37A	**Clayton**	**2.44**	**133**	P	**Pn**	**06 23 54.0**	**+1.5**
	baz=315,SNR=59						
X37A	**Clayton**	**2.44**	**133**	P		06 23 54.0	
	baz=315,SNR=59						
U38A	**Gravette**	**2.54**	**85**		**Pn**	**06 23 56.0**	**+2.2**
U38A	**Gravette**	**2.54**	**85**	P	**Pn**	**06 23 55.3**	**+1.5**
	baz=268,SNR=105						
U38A	**Gravette**	**2.54**	**85**	P		06 23 55.3	
	baz=268,SNR=105						
HHAR	**Hobbs**	**2.90**	**89**		**Pn**	**06 24 00.3**	**+1.5**
HHAR	**Hobbs**	**2.90**	**89**	P	**Pn**	**06 24 00.4**	**+1.6**
	baz=271,SNR=12						
HHAR	**Hobbs**	**2.90**	**89**	P		06 24 00.4	
	baz=271,SNR=12						
KSU1	**Kansas State U**	**2.91**	**14**	Pn	**Pn**	**06 24 00.3**	**+1.3**
KSU1	**Kansas State U**	**2.91**	**14**	P		06 24 00.4	
	baz=194,SNR=20						
Z35A	**Perchaven, San**	**2.95**	**176**	Pn	**Pn**	**06 24 00.7**	**+1.3**
Z35A	**Perchaven, San**	**2.95**	**176**	P	**Pn**	**06 24 01.1**	**+1.6**
	baz=356						
Z35A	**Perchaven, San**	**2.95**	**176**	P		06 24 01.1	
	baz=356						
CBKS	**Cedar Bluff**	**3.08**	**326**	Pn	**Pn**	**06 24 02.6**	**+1.2**
CBKS	**Cedar Bluff**	**3.08**	**326**	P		06 24 03.9	
	baz=144,SNR=7.6						
CBKS				Sb		06 24 48.6	
	baz=144						
W39A	**Magazine**	**3.23**	**108**	Pn	**Pn**	**06 24 05.0**	**+1.6**
W39A	**Magazine**	**3.23**	**108**	P	**Pn**	**06 24 04.6**	**+1.3**
	baz=291,SNR=11						
W39A	**Magazine**	**3.23**	**108**	P		06 24 05.5	
	baz=291,SNR=15						
W39A	**Magazine**	**3.23**	**108**	P		06 24 04.6	
	baz=291,SNR=11						
S39A	**Bolivar**	**3.65**	**66**	Pn	**Pn**	**06 24 10.6**	**+1.5**
S39A	**Bolivar**	**3.65**	**66**	P	**Pn**	**06 24 10.4**	**+1.3**
	baz=248,SNR=37						
S39A	**Bolivar**	**3.65**	**66**	P		06 24 10.4	
	baz=248,SNR=37						
MIAR	**Mount Ida**	**3.66**	**117**	Pn	**Pn**	**06 24 10.5**	**+1.2**
MIAR				IAmb_Lg		06 25 16.7	
	comp=Z,37nm,0.9s						
MIAR	**Mount Ida**	**3.66**	**117**	P	**Pn**	**06 24 10.7**	**+1.4**
	baz=300,SNR=56						
MIAR	**Mount Ida**	**3.66**	**117**	P		06 24 11.0	
	baz=300,

N35A	**Tabor**	**4.81**	**17**	P			06 24 26.3		
	baz=198,SNR=8.7								
MSTX	**Muleshoe**	**4.88**	**243**	Pn	**Pn**		**06 24 27.2**	**+1.1**	
MSTX	**Muleshoe**	**4.88**	**243**	Sb			06 25 44.3		
	baz=60								
KSCO	**Kaye Shedlock'**	**4.88**	**306**	Pn	**Pn**		**06 24 26.1**	**-0.1**	
KSCO				IAmb_Lg			06 26 00.9		
	comp=Z,47nm,0.8s								
KSCO	**Kaye Shedlock'**	**4.88**	**306**	Sb			06 25 44.0		
	baz=122								
Z41A	**Richland Creek**	**4.92**	**126**	P	**Pn**		**06 24 27.5**	**+1.0**	
Z41A				S	**Sn**		**06 25 24.1**	**+0.8**	
	baz=310								
Z41A				S	**Sn**		**06 25 24.1**	**+0.8**	
	baz=310								
Z41A	**Richland Creek**	**4.92**	**126**	S			06 25 23.2		
	baz=310								
Z41A	**Richland Creek**	**4.92**	**126**	P			06 24 27.5		
Z41A				P			06 24 27.5		
	baz=310								
Z41A				S			06 25 24.1		
	baz=310								
Z41A				S			06 25 24.1		
	baz=310								
BGNE	**Belgrade**	**5.15**	**355**	Pn	**Pn**		**06 24 30.3**	**+0.5**	
BGNE				IAmb_Lg			06 26 03.7		
	comp=Z,54nm,0.8s								
BGNE	**Belgrade**	**5.15**	**355**	P	**Pn**		**06 24 30.2**	**+0.4**	
	baz=174								
BGNE	**Belgrade**	**5.15**	**355**	P			06 24 30.2		
	baz=174,SNR=5.7								
BGNE	**Belgrade**	**5.15**	**355**	P			06 24 30.2		
	baz=174								
LCAR	**Lake Charles**	**5.16**	**90**	Pn	Pn		06 24 34.8	+5.0	
T42A	**Van Buren**	**5.23**	**80**	S	**Sn**		**06 25 32.6**	**+1.6**	
	baz=264								
T42A	**Van Buren**	**5.23**	**80**	S			06 25 32.6		
	baz=264								
CCM	**Cathedral Cave**	**5.32**	**69**		**Pn**		**06 24 33.8**	**+1.7**	
CCM				IAmb_Lg			06 26 03.4		
	comp=Z,32nm,0.8s								
P40A	**Paris**	**5.42**	**51**	Pn	**Pn**		**06 24 37.1**	**+3.7**	
P40A				IAmb_Lg			06 26 09.2		
	comp=Z,46nm,0.7s								
T25A	**Trinidad**	**5.60**	**281**	Pn	**Pn**		**06 24 37.1**	**+1.0**	
T25A				IAmb_Lg			06 26 15.8		
	comp=Z,24nm,0.7s								
T25A	**Trinidad**	**5.60**	**281**	P			06 24 37.3		
	baz=97								
T25A				Sb			06 26 05.3		
	baz=97								
N38A	**Joes South For**	**5.63**	**35**	IAmb_Lg			06 26 13.3		
	comp=Z,53nm,0.9s								
OGNE	**Ogallala**	**5.85**	**324**	IAmb_Lg			06 26 27.8		
	comp=Z,55nm,0.8s								
FVM	**French Village**	**5.92**	**71**	IAmb_Lg			06 26 26.4		
	comp=Z,29nm,0.8s								
JCT	**Junction City**	**6.08**	**199**	Pn	**Pn**		**06 24 46.1**	**+3.4**	
JCT	**Junction City**	**6.08**	**199**	P			06 24 44.3		
	baz=18								
GNAR	**Gosnell**	**6.09**	**91**	IAmb_Lg			06 26 27.9		
	comp=Z,49nm,0.8s								
143A	**Socs Landing,**	**6.18**	**123**	IAmb_Lg			06 26 35.1		
	comp=Z,29nm,0.8s								
PEBM	**Pemiscott Bayo**	**6.20**	**89**	IAmb_Lg			06 26 46.0		
	comp=Z,48nm,0.7s								
K31A	**O'Neill**	**6.41**	**352**	IAmb_Lg			06 26 39.0		
	comp=Z,30nm,0.8s								
HENM	**Henderson Moun**	**6.50**	**84**	IAmb_Lg			06 26 52.3		
	comp=Z,49nm,0.8s								
SDCO	**Great Sand Dun**	**6.55**	**285**	P			06 24 51.1		
	baz=100								
S44A	**Carbondale**	**6.77**	**75**	IAmb_Lg			06 26 56.5		
	comp=Z,36nm,0.7s								
SIUC	**Southern Illin**	**6.80**	**75**	IAmb_Lg			06 26 51.0		
	comp=Z,28nm,0.7s								
W45A	**Hickory Valley**	**6.88**	**97**	IAmb_Lg			06 27 03.3		
	comp=Z,36nm,0.7s								
P43A	**Skaggs, Pawnee**	**7.16**	**60**	P	**Pn**		**06 24 58.7**	**+1.4**	
	baz=244,SNR=5.7								
P43A	**Skaggs, Pawnee**	**7.16**	**60**	P			06 24 58.7		
	baz=244,SNR=5.7								
ISCO	**Idaho Springs**	**7.29**	**301**	P	**Pn**		**06 25 00.2**	**+0.8**	
	baz=116								
ISCO	**Idaho Springs**	**7.29**	**301**	P			06 25 00.5		
	baz=116								
ISCO	**Idaho Springs**	**7.29**	**301**	P			06 25 00.2		
	baz=116								
ANMO	**Albuquerque**	**7.39**	**262**	Pn	**Pn**		**06 25 01.9**	**+1.1**	
	comp=Z,0.1nm,0.3s,baz=145,slow=18,SNR=1.3								
ANMO				Pg	Pb		06 25 27.1	+5.9	
	comp=Z,0.5nm,0.3s,baz=82,slow=17,SNR=9.4								
ANMO				Lg	Lg		06 27 05.6		
	comp=Z,0.4nm,0.3s,baz=63,slow=13,SNR=2.8								
ECSD	**EROS Data Cent**	**7.48**	**5**	Pn	**Pn**		**06 25 01.6**	**-0.1**	
ECSD	**EROS Data Cent**	**7.48**	**5**	P	**Pn**		**06 25 01.2**	**-0.6**	
	baz=186								
ECSD	**EROS Data Cent**	**7.48**	**5**	P			06 25 01.4		
	baz=186,SNR=5.5								
ECSD	**EROS Data Cent**	**7.48**	**5**	P			06 25 01.2		
	baz=186								
L40A	**Anamosa**	**7.57**	**38**	IAmb_Lg			06 27 20.8		
	comp=Z,25nm,0.8s								
HDIL	**Hopedale**	**7.75**	**54**	P			06 25 06.8		
	baz=239								
HDIL				S			06 26 30.2		
	baz=239								
MNTX	**Cornudas Mount**	**7.96**	**237**	P			06 25 09.8		
	baz=53								
PHWY	**Pilot Hill**	**7.97**	**311**	IAmb_Lg			06 27 37.3		
	comp=Z,17nm,0.8s								
Y22D	**IRIS PASSCAL I**	**8.00**	**257**	IAmb_Lg			06 27 44.8		
	comp=Z,22nm,0.8s								
O44A	**Mansfield**	**8.11**	**59**	IAmb_Lg			06 27 35.3		
	comp=Z,34nm,0.9s								
I37A	**Lemond, Waseca**	**8.35**	**21**	IAmb_Lg			06 27 55.8		
	comp=Z,16nm,0.8s								
L42A	**Oliver, Polo**	**8.37**	**44**	IAmb_Lg			06 27 45.1		
	comp=Z,36nm,0.8s								
TXAR	**Lajitas Array**	**8.64**	**218**	Pn	**Pn**		**06 25 16.2**	**-1.5**	
	comp=Z,0.2nm,0.3s,baz=44,slow=10,SNR=20								
TXAR				Sn	**Sn**		**06 26 50.4**	**-4.7**	
	comp=Z,0.1nm,0.3s,baz=76,slow=16,SNR=1.4								
TXAR				Lg	Lg		06 27 40.6		
	comp=Z,1.0nm,0.3s,baz=52,slow=26,SNR=7.0								
JFWS	**Jewell Farm**	**8.69**	**38**	IAmb_Lg			06 27 48.6		
	comp=Z,32nm,0.8s								
SFIN	**Lafayette**	**9.16**	**60**	IAmb_Lg			06 28 09.4		
	comp=Z,31nm,0.8s								
WCI	**Wyandotte Cave**	**9.17**	**74**	P	**Pn**		**06 25 26.6**	**+1.8**	
	baz=261,SNR=8.0								
WCI	**Wyandotte Cave**	**9.17**	**74**	P			06 25 26.6		
	baz=261,SNR=8.0								
I40A	**Norwalk**	**9.26**	**33**	IAmb_Lg			06 28 24.2		
	comp=Z,14nm,0.8s								
RWWY	**Rawlins**	**9.27**	**309**	IAmb_Lg			06 28 17.3		
	comp=Z,14nm,1.0s								
K22A	**Casper**	**9.43**	**315**	IAmb_Lg			06 28 34.5		
	comp=Z,24nm,0.9s								
SPMN	**Marine on St.**	**9.63**	**20**	IAmb_Lg			06 28 26.3		
	comp=Z,17nm,1.1s								
TKL	**Tuckaleechee C**	**11.16**	**89**	Lg	Lg		06 28 52.8		
	comp=Z,0.3nm,0.3s,baz=186,slow=23,SNR=1.1								
PDAR	**Pinedale Array**	**11.32**	**309**	Pn	**Pn**		**06 25 57.1**	**+2.5**	
	comp=Z,0.1nm,0.3s,baz=113,slow=14,SNR=2.2								
PDAR				Pg			06 26 40.0		
	comp=Z,0.1nm,0.3s,baz=110,slow=18,SNR=2.3								
PDAR				Lg	Lg		06 29 09.8		
	comp=Z,0.3nm,0.3s,baz=109,slow=32,SNR=9.2								
ULM	**Lac du Bonnet**	**14.02**	**4**	Pn	**Pn**		**06 26 27.4**	**-3.8**	
	comp=Z,0.2nm,0.3s,baz=180,slow=10,SNR=2.0								
ULM				Sn	Sn		06 28 55.5	-11	
	comp=Z,0.1nm,0.3s,baz=118,slow=17,SNR=1.9								
ULM				Lg	Lg		06 30 24.9		
	comp=Z,0.1nm,0.3s,baz=270,slow=17,SNR=2.4								

*NEIC **27** 06:26:33.6±1.8, 11°.69S±0°.09×166°.20E±0°.10, h57km±9km, mb4.4/11, Error ellipse: s-maj=14.9km s-min=12.5km az=48.0*
*IDC **27** 06:26:35.1±3.5, 11°.59S×166°.10E, h68km±30km, mb3.8/10, mb1 4.0/12, mb1mx3.8/50, mbtmp4.2/12, ML4.1/2, MS3.3/10, Ms1 3.3/10, ms1mx3.0/34, Error ellipse: s-maj=23.4km s-min=21.3km az=126.0*

ISC 27 06:26:33.5±0.7, 11°.65S±0°.08×166°.22E±0°.0, h57km, n32, σ0§94/29, mb4.3/14, MS3.2/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.55**	**289**	P	**Pn**	**06 28 07.9**	**+0.6**
	16nm,0.3s,baz=70,slow=4.0,SNR=4.1						
HNR				S	**Sn**	**06 29 19.2**	**-1.4**
	13nm,0.3s,baz=192,slow=22,SNR=2.2						
HNR	**Honiara**	**6.55**	**289**		**Pn**	**06 28 07.9**	**+0.6**
HNR				Sn	**Sn**	**06 29 19.7**	**-0.9**
DZM	**Mont Dzumac**	**10.37**	**179**	P	**Pn**	**06 29 01.1**	**+1.5**
	0.4nm,0.3s,baz=131,slow=20,SNR=22						
DZM				S	**Sn**	**06 30 52.5**	**-1.8**
	0.2nm,0.3s,baz=317,slow=23,SNR=1.2						
DZM				LR	LR	06 32 14.7	
	comp=Z,104nm,18.6s,baz=16,slow=33						
DZM	**Mont Dzumac**	**10.37**	**179**	Pn	**Pn**	**06 29 01.2**	**+1.6**
DZM				Sn	**Sn**	**06 30 52.8**	**-1.5**
MSVF	**Nonsavu**	**12.94**	**119**	LR	LR	06 33 41.4	
	comp=Z,129nm,20.7s,baz=302,slow=33						
PMG	**Port Moresby**	**18.87**	**275**	LR	LR	06 38 02.3	
	comp=Z,80nm,19.8s,baz=46,slow=37						
CTA	**Charters Tower**	**20.94**	**244**	P	**P**	**06 31 12.8**	**+1.0**
	5.9nm,0.7s,baz=71,slow=13,SNR=6.9						
CTAO	**Charters Tower**	**20.94**	**244**	P	**P**	**06 31 12.1**	**+0.3**
CTAO				IAmb	IAmb	06 31 14.3	
	comp=Z,21nm,1.2s						
AFI	**Afiamalu**	**21.58**	**98**	LR	LR	06 38 11.1	
	comp=Z,63nm,19.9s,baz=264,slow=32						
AFI	**Afiamalu**	**21.58**	**98**	P	**P**	**06 31 17.3**	**-1.4**
AFI				IAmb	IAmb	06 31 24.2	
	comp=Z,22nm,1.1s						
STKA	**Stephens Creek**	**30.33**	**225**	P	**P**	**06 32 40.7**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=47,slow=10.0,SNR=8.8						
STKA				LR	LR	06 44 04.2	
	comp=Z,58nm,21.5s,baz=25,slow=35						
STKA	**Stephens Creek**	**30.33**	**225**	IAmb	IAmb	06 32 41.8	
	comp=Z,1.4nm,0.8s						
WR0	**Warramunga Arr**	**31.53**	**251**	P	**P**	**06 32 50.5**	**-0.1**
WR0				IAmb	IAmb	06 33 12.8	
	comp=Z,8.2nm,1.2s						
WB0	**Warramunga Arr**	**31.64**	**251**	P	**P**	**06 32 51.1**	**-0.4**
WB0				IAmb	IAmb	06 32 52.2	
	comp=Z,10nm,0.8s						
WB2	**Warramunga Arr**	**31.70**	**251**	P	**P**	**06 32 52.1**	**0.0**
WB2				IAmb	IAmb	06 33 14.4	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**31.71**	**251**	P	**P**	**06 32 51.8**	**-0.4**
	comp=Z,4.9nm,0.9s,baz=84,slow=9.1,SNR=18						
WRA	**Warramunga Arr**	**31.71**	**251**	P	**P**	**06 32 51.3**	**-0.9**
GUMO	**Guam**	**32.82**	**319**	LR	LR	06 46 06.9	
	comp=Z,24nm,20.4s,baz=198,slow=36						
AS31	**Alice Springs**	**32.94**	**244**	P	**P**	**06 33 02.2**	**-0.7**
AS31				IAmb	IAmb	06 33 02.9	
	comp=Z,1.2nm,0.6s						
ASAR	**Alice Springs**	**32.94**	**244**	P	**P**	**06 33 02.5**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=68,slow=9.6,SNR=45						
ASAR				LR	LR	06 44 59.2	
	comp=Z,56nm,21.6s,baz=119,slow=34						
ASAR	**Alice Springs**	**32.94**	**244**	P	**P**	**06 33 02.2**	**-0.7**
BBOO	**Buckleboo**	**34.76**	**228**	P	**P**	**06 33 18.9**	**+0.3**
KNRA	**Kununurra**	**36.58**	**259**	P	**P**	**06 33 34.4**	**0.0**
FITZ	**Fitzroy Crossi**	**39.67**	**256**	P	**P**	**06 33 59.2**	**-1.2**
	comp=Z,5.6nm,0.8s,baz=88,slow=7.4,SNR=7.8						
FITZ	**Fitzroy Crossi**	**39.67**	**256**	P	**P**	**06 34 00.2**	**-0.2**
FITZ				IAmb	IAmb	06 34 01.3	
	comp=Z,8.9nm,0.9s						
SONM	**Songino Array**	**79.42**	**324**	P	**P**	**06 38 33.8**	**0.0**
	comp=Z,0.3nm,0.4s,baz=81,slow=4.5,SNR=1.8						
ILAR	**Eielson Array**	**83.94**	**18**	P	**P**	**06 38 57.4**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=222,slow=7.6,SNR=5.6						
NVAR	**Mina Array Bea**	**86.06**	**50**	P	**P**	**06 39 09.2**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=236,slow=7.4,SNR=5.0						
NVAR				LR	LR	07 09 45.3	
	comp=Z,28nm,20.9s,baz=293,slow=30						
MKAR	**Makanchi Array**	**94.28**	**317**	P	**P**	**06 39 46.2**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=88,slow=6.8,SNR=7.9						
ANMO	**Albuquerque**	**94.41**	**55**	LR	LR	07 13 09.5	
	comp=Z,15nm,20.0s,baz=285,slow=30						
YKA	**Yellowknife Ar**	**95.30**	**27**	P	**P**	**06 39 50.6**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=254,slow=4.8,SNR=2.8						
TXAR	**Lajitas Array**	**95.71**	**61**	LR	LR	07 15 14.4	
	comp=Z,19nm,20.8s,baz=0.0,slow=30						

*IDC **27** 06:30:21.9±0.7, 22°.64S×67°.59W, h146km±6km, mb4.0/14, mb1 4.0/19, mb1mx3.9/37, mbtmp4.4/19, MS2.9/1, Ms1 2.9/1, ms1mx2.4/34, Error ellipse: s-maj=13.9km s-min=11.6km az=21.0*
*NEIC **27** 06:30:21.6±2.3, 22°.60S±0°.06×67°.60W±0°.08, h149km±6km, mb4.5/109, ML4.5(GUC), Error ellipse: s-maj=10.9km s-min=8.1km az=73.0*
*SJA **27** 06:30:21.5±0.6, 22°.57S×67°.82W, h168km±4km, ML4.3, MW3.9*
*VAO **27** 06:30:22.2±0.4, 22°.57S×67°.75W, h159km, mb4.6*
*GUC **27** 06:30:24.0±0.8, 22°.60S×67°.88W, h157km±6km, ML4.5*

ISC 27 06:30:21.7±0.6, 22°.66S±0°.04×67°.80W±0°.04, h154km±6km, n245, σ1§44/268, mb4.4/63, 11C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.02**	**273**	P	**Pn**	**06 30 49.2**	**+1.7**
	baz=81,slow=7.3						
LVC				S	**Sn**	**06 31 08.9**	**+1.8**
	105nm,0.3s,baz=278,slow=21,SNR=6.1						
LVC	**Limon Verde**	**1.02**	**273**	*eP*	**Pn**	**06 30 49.0**	**+1.6**
LVC				*i* S	**Sn**	**06 31 08.2**	**+1.1**
LVC	**Limon Verde**	**1.02**	**273**		**Pn**	**06 30 49.1**	**+1.6**
LVC				Sn	**Sn**	**06 31 08.5**	**+1.4**
LVC	**Limon Verde**	**1.02**	**273**	*eP*	**Pn**	**06 30 49.0**	**+1.6**
LVC	**Limon Verde**	**1.02**	**273**	*eP*	**Pn**	**06 30 49.0**	**+1.6**
LVC				*eS*	**Sn**	**06 31 08.4**	**+1.4**
PB09	**IPOC Station P**	**1.59**	**303**		**Pn**	**06 30 54.2**	**+1.5**
PB09				Sn	**Sn**	**06 31 17.1**	**+0.7**
PB15	**IPOC Station P**	**1.63**	**250**	⇑*eP*	**Pn**	**06 30 55.1**	**+1.9**
PB15				*eS*	**Sn**	**06 31 19.4**	**+2.1**
PB15	**IPOC Station P**	**1.63**	**250**		**Pn**	**06 30 55.0**	**+1.8**
PB15				Sn	**Sn**	**06 31 20.6**	**+3.3**
PB15	**IPOC Station P**	**1.63**	**250**	*eP*	**Pn**	**06 30 55.0**	**+1.9**
PB15				*eS*	**Sn**	**06 31 19.4**	**+2.1**
PB15				IAML		06 31 21.7	
	comp=Z,5μm,0.3s						
PB06	**IPOC Station P**	**1.63**	**268**	⇑*eP*	**Pn**	**06 30 54.6**	**+1.4**
PB06				*eS*	**Sn**	**06 31 18.5**	**+1.2**
PB06	**IPOC Station P**	**1.63**	**268**		**Pn**	**06 30 54.6**	**+1.4**
PB06				Sn	**Sn**	**06 31 18.4**	**+1.2**
PB06	**IPOC Station P**	**1.63**	**268**	*eP*	**Pn**	**06 30 54.5**	**+1.3**
PB06				*eS*	**Sn**	**06 31 19.3**	**+2.0**
PB06				IAML		06 31 23.0	
	comp=Z,921nm,0.5s						
PB03	**IPOC Station P**	**1.91**	**288**	⇑*iP*	**Pn**	**06 30 57.2**	**+1.0**
PB03				*i* S	**Sn**	**06 31 22.6**	**0.0**
PB03				IAML		06 31 24.4	
	comp=N,2μm,0.4s						
PB03	**IPOC Station P**	**1.91**	**288**	*eP*	**Pn**	**06 30 57.2**	**+1.0**
PB03				*eS*	**Sn**	**06 31 23.2**	**+0.6**
PB03				IAML		06 31 24.4	
	comp=Z,2μm,0.5s						
PB07	**IPOC Station P**	**2.14**	**295**	⇑*eP*	**Pn**	**06 30 60.0**	**+1.0**
PB07				*eS*	**Sn**	**06 31 27.0**	**-0.5**
PB07				IAML		06 31 29.1	
	comp=E,5μm,0.5s						
PB07	**IPOC Station P**	**2.14**	**295**		**Pn**	**06 30 59.9**	**+1.0**
PB07				Sn	**Sn**	**06 31 27.2**	**-0.4**
PB07	**IPOC Station P**	**2.14**	**295**	*eP*	**Pn**	**06 30 59.9**	**+1.0**
PB07				*eS*	**Sn**	**06 31 27.7**	**+0.1**
PB07				IAML		06 31 35.5	
	comp=Z,2μm,0.5s						
YJA	**Yavi**	**2.17**	**78**	*eP*	**Pn**	**06 31 01.6**	**+2.0**
YJA				*eS*	**Sn**	**06 31 30.6**	**+2.1**
PB04	**IPOC Station P**	**2.19**	**278**	⇑*eP*	**Pn**	**06 31 00.4**	**+0.9**
PB04				*eS*	**Sn**	**06 31 28.3**	**-0.3**
PB04				IAML		06 31 34.4	
	comp=N,2μm,0.5s						
PB04	**IPOC Station P**	**2.19**	**278**		**Pn**	**06 31 00.4**	**+0.9**
PB04	**IPOC Station P**	**2.19**	**278**	*eP*	**Pn**	**06 31 00.5**	**+0.9**
PB04				*eS*	**Sn**	**06 31 29.2**	**+0.6**
PB04				IAML		06 31 30.9	
	comp=Z,1μm,0.2s						
PB05	**IPOC Station P**	**2.22**	**265**	⇑*eP*	**Pn**	**06 31 01.0**	**+1.1**
PB05				*eS*	**Sn**	**06 31 28.9**	**-0.3**
PB05				IAML		06 31 39.3	
	comp=E,857nm,0.4s						
PB05	**IPOC Station P**	**2.22**	**265**	*eP*	**Pn**	**06 31 00.9**	**+1.1**
PB05				*eS*	**Sn**	**06 31 30.1**	**+1.0**
PB05				IAML		06 31 38.7	
	comp=Z,703nm,0.5s						
PB01	**IPOC Station P**	**2.25**	**315**	⇑*iP*	**Pn**	**06 31 00.6**	**+0.5**
PB01				*i* S	**Sn**	**06 31 29.3**	**-0.3**
PB01				IAML		06 31 30.3	
	comp=N,1μm,0.5s						
PB01	**IPOC Station P**	**2.25**	**315**		**Pn**	**06 31 00.6**	**+0.5**
PB01	**IPOC Station P**	**2.25**	**315**	*eP*	**Pn**	**06 31 00.6**	**+0.6**
PB01				*eS*	**Sn**	**06 31 29.5**	**-0.1**
PB01				IAML		06 31 30.3	
	comp=Z,550nm,0.4s						
PB10	**IPOC Station P**	**2.67**	**251**	⇑*eP*	**Pn**	**06 31 06.2**	**+1.0**
PB10				*eS*	**Sn**	**06 31 38.9**	**+0.2**
PB10	**IPOC Station P**	**2.67**	**251**	Pn	**Pn**	**06 31 06.1**	**+1.0**
PB10	**IPOC Station P**	**2.67**	**251**	*eP*	**Pn**	**06 31 06.4**	**+1.2**
PB10				*eS*	**Sn**	**06 31 40.2**	**+1.5**
PB08	**IPOC Station P**	**2.81**	**333**	⇓*eP*	**Pn**	**06 31 08.5**	**+1.2**
PB08				*eS*	**Sn**	**06 31 42.2**	**-0.1**
PB08				IAML		06 31 46.4	
	comp=E,875nm,0.7s						
PB08	**IPOC Station P**	**2.81**	**333**		**Pn**	**06 31 08.4**	**+1.2**
PB08	**IPOC Station P**	**2.81**	**333**	*eP*	**Pn**	**06 31 08.4**	**+1.2**
PB08				*eS*	**Sn**	**06 31 42.8**	**+0.5**
PB08				IAML		06 31 45.0	
	comp=Z,374nm,0.5s						
PATCX	**Punta Patache**	**2.85**	**310**	⇑*iP*	**Pn**	**06 31 07.3**	**-0.1**
PATCX				*i* S	**Sn**	**06 31 40.7**	**-2.1**
PATCX				IAML		06 31 51.6	
	comp=E,958nm,0.6s						
PATCX	**Punta Patache**	**2.85**	**310**		**Pn**	**06 31 07.3**	**-0.1**
PATCX	**Punta Patache**	**2.85**	**310**	*eP*	**Pn**	**06 31 07.5**	**+0.1**
SLA	**San Lorenzo**	**2.94**	**135**	*eP*	**Pn**	**06 31 11.3**	**+2.6**
SLA				*eS*	**Sn**	**06 31 49.5**	**+4.5**
GO02	**Mina Guanaco**	**2.98**	**213**	⇑*iP*	**Pn**	**06 31 11.1**	**+1.9**
GO02				*i* S	**Sn**	**06 31 47.7**	**+1.6**
GO02				IAML		06 31 50.9	
	comp=N,2μm,0.5s						
GO02	**Mina Guanaco**	**2.98**	**213**	Pn	**Pn**	**06 31 11.1**	**+1.9**
TA01	**Diego Aracena**	**3.04**	**313**	*i* S	**Sn**	**06 31 44.8**	**-2.1**
TA01				IAML		06 31 48.2	
	comp=N,826nm,0.4s						
TA01	**Diego Aracena**	**3.04**	**313**		**Pn**	**06 31 09.6**	**-0.2**
PB14	**IPOC Station P**	**3.08**	**230**		**Pn**	**06 31 11.8**	**+1.2**
PB14	**IPOC Station P**	**3.08**	**230**	*eP*	**Pn**	**06 31 12.1**	**+1.5**
PB14				*eS*	**Sn**	**06 31 50.0**	**+1.6**
PB14				IAML		06 32 05.3	
	comp=Z,316nm,0.5s						
TA02	**Huaiquique**	**3.22**	**317**	*eP*	**Pn**	**06 31 11.2**	**-0.8**
TA02				*i* S	**Sn**	**06 31 47.9**	**-3.1**
TA02				IAML		06 31 58.4	
	comp=N,873nm,0.1s						
TA02	**Huaiquique**	**3.22**	**317**		**Pn**	**06 31 11.4**	**-0.7**
PB11	**IPOC Station P**	**3.36**	**329**	⇓*iP*	**Pn**	**06 31 13.6**	**-0.5**
PB11				*i* S	**Sn**	**06 31 52.5**	**-2.1**
PB11				IAML		06 31 55.0	
	comp=N,2μm,0.5s						
PB11	**IPOC Station P**	**3.36**	**329**	Pn	**Pn**	**06 31 13.7**	**-0.3**
PB11	**IPOC Station P**	**3.36**	**329**	*eP*	**Pn**	**06 31 13.8**	**-0.3**
PB11				*eS*	**Sn**	**06 31 52.9**	**-1.7**
PB11				IAML		06 31 54.4	
	comp=Z,537nm,0.4s						
PSGC	**Pisagua**	**3.74**	**324**	IAML		06 32 01.6	
	comp=N,474nm,0.4s						
PSGCX	**Pisagua**	**3.74**	**324**	Pn	**Pn**	**06 31 17.3**	**-1.5**
FSA	**Cafayete**	**3.82**	**155**	*eP*	**Pn**	**06 31 22.4**	**+2.5**
MNMC	**Minye Minye**	**3.89**	**334**	⇓*iP*	**Pn**	**06 31 20.7**	**-0.3**
MNMC				*i* S	**Sn**	**06 32 05.3**	**-1.7**
MNMC	**Minye Minye**	**3.89**	**334**		**Pn**	**06 31 20.5**	**-0.4**
AC01	**Pan de Azucar**	**4.31**	**216**	IAML		06 32 21.4	
	comp=E,297nm,0.4s						
AC01	**Pan de Azucar**	**4.31**	**216**		**Pn**	**06 31 25.9**	**-0.1**
AC02	**Maricunga**	**4.33**	**196**	⇑*iP*	**Pn**	**06 31 28.5**	**+1.7**
AC02				IAML		06 32 28.4	
	comp=E,249nm,0.2s						
AC02	**Maricunga**	**4.33**	**196**	Pn	**Pn**	**06 31 28.3**	**+1.5**
PB16	**IPOC Station P**	**4.59**	**339**		**Pn**	**06 31 29.7**	**-0.7**
GO03	**Copiap**	**5.38**	**204**	Pn	**Pn**	**06 31 39.7**	**-0.6**
GO03	**Copiap**	**5.38**	**204**	*eP*	**Pn**	**06 31 40.0**	**-0.3**
GO03				*eS*	**Sn**	**06 32 41.0**	**-0.8**
CYA	**Choya**	**6.03**	**163**	*eP*	**Pn**	**06 31 50.8**	**+1.9**
AC04	**Llanos de Chal**	**6.26**	**207**	Pn	**Pn**	**06 31 49.6**	**-2.3**
LPAZ	**La Paz**	**6.35**	**357**	P	**Pn**	**06 31 54.4**	**+0.6**
	comp=E,6.0nm,0.3s,baz=157,slow=6.3,SNR=124						
LPAZ			

SPB				IAmb	IAmb	06 34 30.3		
	comp=Z,22nm,0.7s							
PET01	**Itanhaem-SP**	**18.90**	**99**	*e*P	**Pn**	**06 34 30.7**	**-2.3**
VAO	**Valinhos**	**19.21**	**95**	*e*P	**P**	**06 34 33.7**	**-0.4**
NPGB	**Novo Progresso**	**19.61**	**40**	*e*P	**P**	**06 34 37.1**	**-1.3**
BDFB	**Brasilia**	**19.94**	**73**	P	**P**	**06 34 41.7**	**-0.3**
	comp=Z,5.1nm,0.3s,baz=246,slow=12,SNR=61							
BDFB	**Brasilia**	**19.94**	**73**	P	**P**	**06 34 41.2**	**-0.9**
LL01	**San Ignacio de**	**20.04**	**190**	P	**P**	**06 34 43.3**	**+0.6**
PARB	**Paraibuna**	**20.43**	**96**	*e*P	**P**	**06 34 46.6**	**-0.6**
MACA	**Manacapuru-AM**	**20.58**	**21**	*e*P	**P**	**06 34 46.6**	**-2.1**
GO07	**Milladeo Hill,**	**20.97**	**192**	P	**P**	**06 34 52.2**	**-0.4**
GO07				IAmb	IAmb	06 35 04.4		
	comp=Z,22nm,1.2s							
PEXB	**Peixe**	**21.34**	**64**	*e*P	**P**	**06 34 55.3**	**-1.6**
BSCB	**Bom Sucesso**	**21.44**	**90**	*e*P	**P**	**06 34 56.9**	**-1.1**
ITTB	**Itaituba**	**21.61**	**34**	*e*P	**P**	**06 34 57.4**	**-2.4**
VAS01	**Vassouras-RJ**	**22.51**	**94**	*e*P	**P**	**06 35 08.3**	**-0.5**
JANB	**Januaria**	**23.46**	**75**	*e*P	**P**	**06 35 16.4**	**-1.2**
SMTB	**Santa Maria do**	**23.76**	**58**	*e*P	**P**	**06 35 19.4**	**-0.9**
PRPB	**Parauapebas**	**23.87**	**49**	*e*P	**P**	**06 35 20.2**	**-1.0**
SDBA	**SAO DESIDERIO**	**24.07**	**69**	*e*P	**P**	**06 35 21.4**	**-1.7**
MALB	**Monte Alegre**	**24.51**	**34**	*e*P	**P**	**06 35 25.6**	**-1.4**
SJMB	**Sao Joao De Ma**	**25.20**	**86**	*e*P	**P**	**06 35 31.8**	**-1.5**
BSFB	**Barra de Sao F**	**25.48**	**86**	*e*P	**P**	**06 35 34.2**	**-1.6**
RIB01	**Linhares ES**	**25.79**	**88**	*e*P	**P**	**06 35 38.0**	**-0.6**
BOAV	**Boa Vista**	**25.90**	**17**	*e*P	**P**	**06 35 38.9**	**-0.6**
NAN01	**Guarapari, ES**	**26.39**	**85**	*e*P	**P**	**06 35 44.0**	**+0.1**
MCPB	**Macapa, AP**	**26.95**	**37**	*e*P	**P**	**06 35 48.1**	**-0.9**
NBIT	**Itapeh - BA**	**27.90**	**79**	*e*P	**P**	**06 35 57.3**	**-0.2**
GDU01	**Guandu, BA**	**28.21**	**77**	*e*P	**P**	**06 35 59.3**	**-0.9**
NBLA	**Lagarto - SE**	**30.91**	**73**	*e*P	**P**	**06 36 21.9**	**-2.3**
MDP	**Montagnes des**	**31.32**	**30**	P	**P**	**06 36 27.5**	**-0.2**
	comp=Z,7.8nm,0.5s,baz=208,slow=10,SNR=11							
NBTA	**Tacaratu-PE**	**31.53**	**70**	*e*P	**P**	**06 36 28.6**	**-1.0**
NBMA	**Muriti-CE**	**31.81**	**66**	*e*P	**P**	**06 36 31.5**	**-0.6**
NBPB	**Pedra_Branca-C**	**32.12**	**62**	*e*P	**P**	**06 36 34.6**	**-0.1**
PCRV	**Puerto La Cruz**	**32.78**	**6**	P	**P**	**06 36 41.3**	**+0.9**
	comp=Z,4.3nm,0.7s,baz=169,slow=16,SNR=1.4							
NBAN	**Anadia - AL**	**32.84**	**72**	*e*P	**P**	**06 36 38.9**	**-2.1**
NBLI	**Livramento-PB**	**33.35**	**68**	*e*P	**P**	**06 36 45.6**	**+0.1**
NBCL	**Cascavel-CE**	**33.93**	**62**	*e*P	**P**	**06 36 49.7**	**-0.7**
RCBR	**Riachuelo**	**35.03**	**66**	P	**P**	**06 36 59.5**	**-0.5**
	comp=Z,14nm,0.9s,baz=245,slow=9.6,SNR=4.3							
RCBR	**Riachuelo**	**35.03**	**66**	P	**P**	**06 36 58.6**	**-1.4**
NBPV	**Pedro Velho**	**35.25**	**68**	*e*P	**P**	**06 36 58.5**	**-3.2**
JTS	**Las Juntas de**	**36.81**	**331**	P	**P**	**06 37 17.5**	**+2.5**
	comp=Z,2.0nm,0.6s,baz=7.2,slow=19							
FDF	**Fort de France**	**37.73**	**11**	P	**P**	**06 37 21.9**	**-0.9**
MLPR	**Magueyes Islan**	**40.39**	**1**	P	**P**	**06 37 43.5**	**-1.3**
MLPR				IAmb	IAmb	06 38 02.0		
	comp=Z,13nm,0.8s							
PDPR	**Patillas Dam,**	**40.47**	**3**	P	**P**	**06 37 43.9**	**-1.5**
PDPR				IAmb	IAmb	06 37 44.1		
	comp=Z,12nm,1.0s							
ANWB	**Willy Bob**	**40.51**	**9**	P	**P**	**06 37 46.4**	**+0.6**
SJG	**San Juan**	**40.55**	**2**	P	**P**	**06 37 45.5**	**-0.6**
SJG				IAmb	IAmb	06 37 51.9		
	comp=Z,10nm,0.8s							
MTO3	**Montecristo**	**42.46**	**328**	P	**P**	**06 38 03.9**	**+1.9**
MTO3				IAmb	IAmb	06 38 04.5		
	comp=Z,9.3nm,1.3s							
CCIG	**Comitan**	**45.45**	**326**	P	**P**	**06 38 27.0**	**+1.3**
CCIG				IAmb	IAmb	06 38 27.8		
	comp=Z,9.0nm,1.2s							
SOR	**Soroa**	**47.54**	**341**	P	**P**	**06 38 42.1**	**+0.4**
SOR				IAmb	IAmb	06 39 04.1		
	comp=Z,9.8nm,1.0s							
CMIG	**Matias Romero**	**47.57**	**324**	P	**P**	**06 38 43.5**	**+1.4**
	comp=Z,3.3nm,0.7s,baz=105,slow=4.5,SNR=6.0							
ZAIG	**Zacatecas**	**56.43**	**321**	P	**P**	**06 39 49.1**	**+1.3**
ZAIG				IAmb	IAmb	06 39 51.2		
	comp=Z,3.2nm,0.8s							
RGRS	**Roger Stewart**	**56.51**	**348**	P	**P**	**06 39 49.3**	**+1.5**
BIRD	**Birdtown, Kers**	**58.24**	**348**	P	**P**	**06 40 01.2**	**+1.2**
X48A	**Hartselle**	**59.67**	**342**	P	**P**	**06 40 10.1**	**+0.3**
TKL	**Tuckaleechee C**	**59.94**	**345**	P	**P**	**06 40 11.9**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=163,slow=8.0,SNR=5.8							
TKL	**Tuckaleechee C**	**59.94**	**345**	IAmb	IAmb	06 40 19.9		
	comp=Z,19nm,1.4s							
SWET	**Sewanee**	**60.07**	**343**	P	**P**	**06 40 12.8**	**+0.2**
V48A	**Smith Brothers**	**60.81**	**342**	P	**P**	**06 40 17.7**	**+0.1**
V48A				IAmb	IAmb	06 40 18.5		
	comp=Z,9.0nm,0.7s							
W45A	**Hickory Valley**	**60.97**	**340**	P	**P**	**06 40 18.5**	**-0.2**
CLTN	**Cedars of Leba**	**61.01**	**343**	P	**P**	**06 40 19.0**	**+0.2**
CLTN				IAmb	IAmb	06 40 19.9		
	comp=Z,5.8nm,0.7s							
JCT	**Junction City**	**61.12**	**329**	P	**P**	**06 40 19.4**	**-0.5**
JCT				IAmb	IAmb	06 40 22.4		
	comp=Z,6.5nm,0.8s							
WVT	**Waverly**	**61.46**	**342**	P	**P**	**06 40 22.0**	**+0.1**
MIAR	**Mount Ida**	**61.94**	**336**	P	**P**	**06 40 25.8**	**+0.6**
MIAR				IAmb	IAmb	06 40 26.2		
	comp=Z,5.8nm,0.7s							
T47A	**Sharon Grove**	**62.06**	**343**	P	**P**	**06 40 25.7**	**-0.2**
TXAR	**Lajitas Array**	**62.16**	**325**	P	**P**	**06 40 28.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=144,slow=7.2,SNR=6.5							
Z35A	**Perchaven, San**	**62.36**	**332**	P	**P**	**06 40 28.8**	**+0.8**
Z35A				IAmb	IAmb	06 40 29.9		
	comp=Z,12nm,1.1s							
LCAR	**Lake Charles**	**62.45**	**339**	P	**P**	**06 40 28.0**	**-0.5**
LCAR				IAmb	IAmb	06 40 30.4		
	comp=Z,9.2nm,1.3s							
T45A	**Paducah**	**62.53**	**341**	P	**P**	**06 40 29.4**	**+0.4**
W39A	**Magazine**	**62.59**	**336**	IAmb	IAmb	06 40 31.9		
	comp=Z,7.4nm,0.7s							
U40A	**Yellville**	**63.29**	**338**	IAmb	IAmb	06 40 35.7		
	comp=Z,7.7nm,1.1s							
CCM	**Cathedral Cave**	**64.29**	**340**	P	**P**	**06 40 40.6**	**0.0**
MSTX	**Muleshoe**	**65.42**	**328**	P	**P**	**06 40 49.0**	**+0.9**
MSTX				IAmb	IAmb	06 40 50.4		
	comp=Z,11nm,0.9s							
U32A	**Winter Ranch,**	**65.71**	**333**	P	**P**	**06 40 50.6**	**+0.8**
P40A	**Paris**	**65.89**	**340**	IAmb	IAmb	06 40 52.4		
	comp=Z,6.2nm,0.8s							
KAN12	**Harper NE Stat**	**66.08**	**334**	P	**P**	**06 40 53.2**	**+1.1**
R32A	**Long Quarter,**	**67.33**	**334**	IAmb	IAmb	06 41 02.4		
	comp=Z,9.0nm,0.8s							
L40A	**Anamosa**	**67.94**	**341**	P	**P**	**06 41 04.2**	**+0.3**
L40A				IAmb	IAmb	06 41 05.2		
	comp=Z,13nm,0.9s							
ANMO	**Albuquerque**	**68.03**	**326**	P	**P**	**06 41 05.9**	**+1.1**
ANMO				IAmb	IAmb	06 41 07.7		
	comp=Z,4.8nm,0.9s							
CBKS	**Cedar Bluff**	**68.08**	**334**	P	**P**	**06 41 04.8**	**0.0**
DBIC	**Dimbokro**	**68.09**	**72**	P	**P**	**06 41 05.2**	**-0.1**
	comp=Z,10.0nm,0.6s,baz=222,slow=7.0,SNR=18							
DBIC	**Dimbokro**	**68.09**	**72**	IAmb	IAmb	06 41 06.1		
	comp=Z,9.1nm,0.7s							
N35A	**Tabor**	**68.29**	**338**	P	**P**	**06 41 05.9**	**-0.2**
TUC	**Tucson**	**68.38**	**322**	P	**P**	**06 41 07.8**	**+0.9**
SCIA	**State Center**	**68.41**	**340**	P	**P**	**06 41 07.1**	**+0.4**
SCIA				IAmb	IAmb	06 41 07.9		
	comp=Z,16nm,1.0s							
JFWS	**Jewell Farm**	**68.45**	**342**	P	**P**	**06 41 06.3**	**-0.6**
JFWS				IAmb	IAmb	06 41 08.0		
	comp=Z,9.7nm,1.0s							
TRQ	**Mont Tremblant**	**68.83**	**355**	P	**P**	**06 41 09.8**	**+0.5**
SDCO	**Great Sand Dun**	**69.77**	**329**	IAmb	IAmb	06 41 18.4		
	comp=Z,6.9nm,1.1s							
I37A	**Lemond, Waseca**	**70.38**	**341**	IAmb	IAmb	06 41 20.0		
	comp=Z,11nm,0.9s							
MVCO	**Mesa Verde**	**70.82**	**327**	IAmb	IAmb	06 41 25.0		
	comp=Z,15nm,1.5s							
K31A	**O'Neill**	**70.96**	**336**	P	**P**	**06 41 23.1**	**+0.7**
K31A				IAmb	IAmb	06 41 24.3		
	comp=Z,8.7nm,0.7s							
WUAZ	**Wupatki**	**71.07**	**324**	IAmb	IAmb	06 41 26.9		
	comp=Z,6.9nm,0.9s							
ECSD	**EROS Data Cent**	**71.17**	**338**	IAmb	IAmb	06 41 24.9		
	comp=Z,6.7nm,1.2s							
F36A	**Milaca**	**72.09**	**341**	P	**P**	**06 41 28.7**	**-0.3**
F36A				IAmb	IAmb	06 41 30.6		
	comp=Z,7.3nm,0.9s							
O20A	**White River Ci**	**72.96**	**329**	IAmb	IAmb	06 41 37.7		
	comp=Z,8.3nm,0.9s							
KNB	**Kanab**	**72.96**	**324**	IAmb	IAmb	06 41 38.6		
	comp=Z,9.2nm,1.0s							
SRU	**San Rafael Swe**	**73.30**	**327**	IAmb	IAmb	06 41 39.4		
	comp=Z,5.8nm,0.7s							
MTPU	**Mount Pierson**	**73.37**	**325**	P	**P**	**06 41 39.4**	**+2.2**
CCUT	**Cedar City**	**73.65**	**324**	P	**P**	**06 41 41.4**	**+2.7**
RWWY	**Rawlins**	**73.70**	**330**	P	**P**	**06 41 40.4**	**+1.5**
RWWY				IAmb	IAmb	06 41 40.9		
	comp=Z,7.7nm,0.8s							
MSU	**Marysvale**	**73.71**	**325**	P	**P**	**06 41 41.5**	**+2.5**
TMUT	**Trail Mountain**	**73.79**	**326**	P	**P**	**06 41 39.0**	**-0.6**
TMUT				IAmb	IAmb	06 42 03.3		
	comp=Z,11nm,0.9s							
RDMU	**Red Mountain**	**73.94**	**328**	P	**P**	**06 41 41.2**	**+0.9**
RDMU				IAmb	IAmb	06 41 43.0		
	comp=Z,4.7nm,0.7s							
MWC	**Mount Wilson**	**74.04**	**318**	P	**P**	**06 41 42.7**	**+1.7**
RSSD	**Black Hills**	**74.28**	**334**	P	**P**	**06 41 42.2**	**0.0**
D32A	**Dogwood Acres,**	**74.31**	**340**	P	**P**	**06 41 41.9**	**0.0**
D32A				IAmb	IAmb	06 41 43.9		
	comp=Z,6.3nm,0.8s							
PDAR	**Pinedale Array**	**75.62**	**330**	P	**P**	**06 41 51.3**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=132,slow=8.2,SNR=8.7							
PDAR	**Pinedale Array**	**75.62**	**330**	P	**P**	**06 41 51.2**	**+1.2**
HWUT	**Hardware Ranch**	**75.71**	**328**	IAmb	IAmb	06 41 53.1		
	comp=Z,6.7nm,1.2s							
REDW	**Red Top Meadow**	**76.69**	**329**	P	**P**	**06 41 58.1**	**+2.1**
SNOW	**Snow King Moun**	**76.72**	**329**	P	**P**	**06 41 58.4**	**+2.2**
ULM	**Lac du Bonnet**	**76.73**	**342**	P	**P**	**06 41 56.2**	**+0.5**
	comp=Z,4.2nm,0.5s,baz=151,slow=6.0,SNR=15							
ULM	**Lac du Bonnet**	**76.73**	**342**	P	**P**	**06 41 56.1**	**+0.4**
ULM				IAmb	IAmb	06 41 56.6		
	comp=Z,5.0nm,0.6s							
LOHW	**Long Hollow**	**76.76**	**330**	P	**P**	**06 41 58.2**	**+1.9**
TOA0	**Torodi Ar. Sit**	**76.79**	**70**	P	**P**	**06 41 56.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**76.79**	**70**	P	**P**	**06 41 56.9**	**+0.1**
	comp=Z,12nm,0.5s,baz=254,slow=5.5,SNR=129							
TORD	**Torodi Ar. Bea**	**76.79**	**70**	P	**P**	**06 41 56.7**	**-0.2**
TORD				IAmb	IAmb	06 41 58.1		
	comp=Z,8.2nm,0.6s							
NVAR	**Mina Array Bea**	**77.04**	**322**	P	**P**	**06 42 00.1**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=155,slow=6.0,SNR=6.8							
FLWY	**Flagg Ranch**	**77.17**	**330**	IAmb	IAmb	06 42 02.0		
	comp=Z,6.5nm,0.9s							
YNE	**Yellowstone No**	**77.56**	**331**	IAmb	IAmb	06 42 03.8		
	comp=Z,4.6nm,0.8s							
YMR	**Madison River**	**77.74**	**330**	P	**P**	**06 42 04.1**	**+2.3**
YMR				IAmb	IAmb	06 42 05.5		
	comp=Z,7.4nm,1.1s							
PNTR	**Pine Nut**	**78.23**	**321**	P	**P**	**06 42 07.1**	**+2.5**
PNTR				IAmb	IAmb	06 42 08.2		
	comp=Z,5.5nm,0.8s							
PAHR	**Pah Rah Range**	**78.52**	**322**	P	**P**	**06 42 08.7**	**+2.6**
PAHR				IAmb	IAmb	06 42 09.6		
	comp=Z,8.4nm,0.9s							
HLID	**Hailey**	**78.57**	**327**	IAmb	IAmb	06 42 09.9		
	comp=Z,4.9nm,0.8s							
DLMT	**Dillon**	**79.02**	**330**	IAmb	IAmb	06 42 16.5		
	comp=Z,7.6nm,0.8s							
PLID	**Pearl Lake**	**80.46**	**328**	P	**P**	**06 42 18.5**	**+1.9**
PLID				IAmb	IAmb	06 42 19.4		
	comp=Z,4.5nm,0.8s							
MOD	**Modoc Plateau**	**80.51**	**323**	P	**P**	**06 42 19.0**	**+2.2**
BMO	**Blue Mountains**	**80.94**	**327**	P	**P**	**06 42 20.7**	**+1.7**
K05A	**Summer Lake**	**81.38**	**323**	P	**P**	**06 42 23.8**	**+2.3**
K05A				IAmb	IAmb	06 42 24.9		
	comp=Z,6.0nm,0.9s							
F10A	**Beach Ranch, E**	**81.69**	**328**	P	**P**	**06 42 25.1**	**+2.2**
F10A				IAmb	IAmb	06 42 27.2		
	comp=Z,13nm,1.5s							
BOSA	**Boshof**	**82.00**	**118**	P	**P**	**06 42 24.9**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=271,slow=2.7,SNR=5.9							
PINE	**Pine Mountain**	**82.12**	**324**	P	**P**	**06 42 26.8**	**+1.4**
PINE				IAmb	IAmb	06 42 28.6		
	comp=Z,4.8nm,0.8s							
C09A	**Chrisman Ranch**	**83.49**	**328**	P	**P**	**06 42 33.5**	**+1.4**
C09A				IAmb	IAmb	06 42 34.5		
	comp=Z,9.6nm,0.6s							
YKA	**Yellowknife Ar**	**92.62**	**340**	P	**P**	**06 43 16.5**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=133,slow=4.9,SNR=49							
VYHS	**Vyhne**	**104.48**	**43**	*e*PDIFF	**Pdif**	**06 44 12.1**	**+3.0**
VYHS				e		07 04 54.6		
ASAR	**Alice Springs**	**129.34**	**206**	PKP	**PKPdf**	**06 49 13.6**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=162,slow=2.6,SNR=5.9							
WRA	**Warramunga Arr**	**132.46**	**209**	PKP	**PKiKP**	**06 49 20.3**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=162,slow=1.7,SNR=12							
MKAR	**Makanchi Array**	**145.94**	**38**	PKPbc	**PKPab**	**06 49 44.3**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=300,slow=3.2,SNR=2.2							
MKAR	**Makanchi Array**	**145.94**	**38**	PKPbc	**PKPab**	**06 49 43.7**	**-0.3**

*IDC **27** 06:36:47.8±0.8, 6°.85N×73°.10W, h158km±13km, mb2.8/1, mb1 3.4/4, mb1mx3.0/34, mbtmp3.8/4, Error ellipse: s-maj=48.9km s-min=7.4km az=132.0*
*NEIC **27** 06:36:47.2±1.0, 6°.8N±0°.1×73°.0W±0°.1, h161km±13km, mb4.3/4, Error ellipse: s-maj=24.1km s-min=3.6km az=132.0*
*UPA **27** 06:36:48.0±1.1, 7°.05N×73°.30W, h0km±14km, MW4.6*
*RSNC **27** 06:36:48.0±1.9, 6°.81N×73°.11W, h144km±7km, ML3.5, Mw3.8, Fault plane solution: NP1:φs17.00000°, δ51.00000°, λ-143.00000°.*

ISC 27 06:36:46.5±0.8, 6°.87N±0°.03×73°.09W±0°.04, h154km±6km, n56, σ1°54/95, mb4.2/3, 12C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
BARC	**Barichara**	**0.29**	**199**	*i*P		**Pn**	**06 37 07.8**	**0.0**
BARC				*e*S		**Sn**	**06 37 22.5**	**-1.5**
BARC				*i*			06 37 24.0	
	comp=Z,726nm,0.3s							
BRRC	**Barranca, Sant**	**0.66**	**291**	*i*P		**Pn**	**06 37 09.7**	**+0.5**
BRRC				*e*S		**Sn**	**06 37 26.2**	**-0.3**
BRRC				*i*			06 37 27.8	
	comp=Z,431nm,0.7s							
RUSC	**La Rusia**	**0.97**	**180**	*i*P		**Pn**	**06 37 11.8**	**-0.1**
RUSC				*e*S		**Sn**	**06 37 29.7**	**-1.7**
RUSC				*i*			06 37 31.1	
	comp=Z,295nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	*i*P		**Pn**	**06 37 14.4**	**-1.0**
PTBC				*e*S		**Sn**	**06 37 35.3**	**-2.0**
PTBC				*i*			06 37 41.1	
	comp=Z,356nm,0.3s							
SPBC	**San Pablo de B**	**1.56**	**219**	*i*P		**Pn**	**06 37 16.8**	**-0.3**
SPBC				*e*S		**Sn**	**06 37 38.8**	**-1.6**
SPBC				*i*			06 37 45.8	
	comp=Z,252nm,0.4s							
ZARC	**Zaragoza, Cauc**	**1.86**	**290**	*i*P		**Pn**	**06 37 20.6**	**+0.3**
ZARC				*e*S		**Sn**	**06 37 46.8**	**+0.5**
ZARC				*i*			06 37 51.9	
	comp=Z,402nm,0.4s							
SMLC	**San Martn de**	**2.15**	**333**	*e*P		**Pn**	**06 37 24.2**	**+0.6**
SMLC				*e*S		**Sn**	**06 37 52.3**	**0.0**
SMLC				*i*			06 38 00.6	
	comp=Z,404nm,0.1s							
NORC	**Norcasia**	**2.19**	**234**	*i*P		**Pn**	**06 37 23.8**	**-0.5**
NORC				*e*S		**Sn**	**06 37 51.8**	**-1.4**
NORC				*i*			06 37 55.9	
	comp=Z,212nm,0.5s							
CHIC	**Chingaza**	**2.31**	**196**	*e*P		**Pn**	**06 37 26.3**	**+0.3**
CHIC				*e*S		**Sn**	**06 37 54.9**	**-1.5**
CHIC				*i*			06 37 58.5	
	comp=Z,81nm,0.4s							
ROSC	**El Rosal**	**2.36**	**211**	P		**Pn**	**06 37 28.1**	**+1.6**
	comp=Z,20nm,0.3s,baz=8.0,slow=1.9,SNR=35							
ROSC				S		**Sn**	**06 37 59.0**	**+1.7**
	comp=Z,73nm,0.3s,baz=208,slow=24,SNR=28							
ROSC	**El Rosal**	**2.36**	**211**	Pn		**Pn**	**06 37 27.7**	**+1.2**
ROSC				Sn		**Sn**	**06 37 58.2**	**+0.9**
ROSC	**El Rosal**	**2.36**	**211**	*e*P		**Pn**	**06 37 27.7**	**+1.2**
ROSC				*e*S		**Sn**	**06 37 56.2**	**-1.1**
ROSC				*i*			06 38 03.8	
	comp=Z,209nm,0.5s							
HELC	**Santa Helena**	**2.52**	**255**	*e*P		**Pn**	**06 37 28.7**	**+0.3**
HELC				*e*S		**Sn**	**06 37 59.6**	**-1.0**
HELC	**Santa Helena**	**2.52**	**255**	*e*P		**Pn**	**06 37 28.3**	**-0.1**
HELC				*e*S		**Sn**	**06 37 59.4**	**-1.2**
HELC				*i*			06 38 10.2	
	comp=Z,113nm,0.4s							
UREC	**San Jos de Ur**	**2.58**	**290**	*e*P		**Pn**	**06 37 28.1**	**-0.7**
UREC				*e*S		**Sn**	**06 37 59.9**	**-1.5**
UREC				*i*			06 38 13.6	
	comp=Z,171nm,0.3s							
SOCV	**Socops**	**2.62**	**57**	*e*P		**Pn**	**06 37 30.4**	**+1.1**
SOCV				*e*S		**Sn**	**06 38 01.8**	**-0.6**
LL2C	**La Loma 2 Cana**	**2.69**	**353**	*e*P		**Pn**	**06 37 31.6**	**+1.4**
LL2C				*e*S		**Sn**	**06 38 05.4**	**+1.4**
LL2C				*i*			06 38 14.8	
	comp=Z,246nm,0.4s							
GUY2C	**Guyana, Caldas**	**2.79**	**234**	*e*P		**Pn**	**06 37 32.2**	**+0.3**
GUY2C				*e*S		**Sn**	**06 38 06.0**	**-0.9**
GUY2C				*i*			06 38 13.2	
	comp=Z,157nm,0.4s							
VILC	**Villavicencio,**	**2.80**	**192**	*e*P		**Pn**	**06 37 31.3**	**-0.4**
VILC				*e*S		**Sn**	**06 38 04.9**	**-1.8**
VILC				*i*			06 38 14.4	
	comp=Z,118nm,0.3s							
PTGC	**Puerto Gaitan,**	**2.82**	**160**	*i*P		**Pn**	**06 37 31.1**	**-0.7**
PTGC				*i*			06 37 31.5	
	comp=Z,196nm,0.4s							
PTGC				*e*S		**Sn**	**06 38 03.7**	**-3.1**
LL3C	**La Loma 3 Cana**	**2.86**	**354**	*e*P		**Pn**	**06 37 33.6**	**+1.3**
LL3C				*e*S		**Sn**	**06 38 08.8**	**+1.1**
LL3C				*i*			06 38 18.5	
	comp=Z,187nm,0.6s							
CBOC	**Ciudad Bolivar**	**3.07**	**251**	*e*P		**Pn**	**06 37 36.0**	**+0.9**
CBOC				*i*			06 38 22.0	
	comp=Z,72nm,0.5s							
SDV	**Santo Domingo**	**3.15**	**50**	P		**Pn**	**06 37 37.6**	**+1.5**
	comp=Z,28nm,0.3s,baz=230,slow=9.8,SNR=74							
SDV				S		**Sn**	**06 38 16.8**	**+2.2**
	comp=Z,31nm,0.3s,baz=287,slow=20,SNR=22							
SDV	**Santo Domingo**	**3.15**	**50**			**Pn**	**06 37 37.5**	**+1.3**
SDV				Sn		**Sn**	**06 38 14.8**	**+0.2**
MONA	**Monteria**	**3.17**	**307**	*e*P		**Pn**	**06 37 35.2**	**-1.0**
MONA				*e*S		**Sn**	**06 38 11.5**	**-3.3**
TOLC	**Tolima**	**3.17**	**225**	*e*P		**Pn**	**06 37 37.6**	**+1.0**
TOLC				*e*S		**Sn**	**06 38 14.1**	**-1.2**
MOTC	**Monteria, Cord**	**3.18**	**307**	*i*P		**Pn**	**06 37 35.5**	**-0.8**
MOTC				*e*S		**Sn**	**06 38 14.4**	**-0.5**
MOTC				*i*			06 38 31.1	
	comp=Z,88nm,0.6s							
ARGC	**Ariguani, Magd**	**3.18**	**339**	*e*P		**Pn**	**06 37 38.3**	**+1.9**
ARGC				*e*S		**Sn**	**06 38 17.1**	**+2.1**
ARGC				*i*			06 38 22.5	
	comp=Z,82nm,0.3s							
ANIL	**Santa Ana**	**3.30**	**224**	*e*P		**Pn**	**06 37 38.3**	**+0.2**
ANIL				*e*S		**Sn**	**06 38 17.7**	**-0.4**
ANIL				*i*			06 38 29.7	
	comp=Z,173nm,0.4s							
ELOV	**Elorza**	**3.58**	**88**	*i*P		**Pn**	**06 37 42.4**	**+0.9**
ELOV				*e*S		**Sn**	**06 38 21.5**	**-2.6**
ORTC	**Ortega, Tolima**	**3.64**	**216**	*e*P		**Pn**	**06 37 42.3**	**0.0**
ORTC				*e*S		**Sn**	**06 38 25.3**	**-0.3**
ORTC				*i*			06 38 32.8	
	comp=Z,67nm,0.4s							
SJCC	**San Jacinto, C**	**3.65**	**326**	*e*P		**Pn**	**06 37 42.7**	**+0.3**
SJCC				*e*S		**Sn**	**06 38 22.9**	**-2.9**
SJCC	**San Jacinto, C**	**3.65**	**326**	*i*P		**Pn**	**06 37 42.2**	**-0.2**
SJCC				*e*S		**Sn**	**06 38 23.2**	**-2.6**
SJCC				*i*			06 38 27.4	
	comp=Z,150nm,0.5s							
CRJC	**Cerrejon, Guaj**	**4.13**	**3**	*e*P		**Pn**	**06 37 48.4**	**-0.3**
CRJC				*e*S		**Sn**	**06 38 34.7**	**-2.4**
CRJC				*i*			06 38 40.5	
	comp=Z,90nm,0.4s							
GUVC	**San Jose del G**	**4.32**	**174**	*e*P		**Pn**	**06 37 50.3**	**-0.9**
GUVC				*i*			06 38 44.0	
	comp=Z,92nm,0.3s							
YOTC	**Yotoco, Valle**	**4.33**	**229**	*e*P		**Pn**	**06 37 50.6**	**-0.7**
SMRC	**Santa Marta, M**	**4.41**	**345**	*e*P		**Pn**	**06 37 54.0**	**+1.6**
SMRC				*e*S	

WR0	**Warramunga Arr**	**44.07**	**259**	P	**P**	**07 23 18.5**	**-0.3**
WR0				IAmb	IAmb	07 23 24.9	
	comp=Z,6.8nm,1.1s						
WB0	**Warramunga Arr**	**44.22**	**259**	P	**P**	**07 23 19.4**	**-0.6**
WB0				IAmb	IAmb	07 23 23.3	
	comp=Z,15nm,1.4s						
WB2	**Warramunga Arr**	**44.24**	**259**	P	**P**	**07 23 19.1**	**-1.1**
WB2				IAmb	IAmb	07 23 44.2	
	comp=Z,14nm,1.5s						
WRA	**Warramunga Arr**	**44.26**	**259**	P	**P**	**07 23 19.7**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=95,slow=7.0,SNR=13						
WRA	**Warramunga Arr**	**44.26**	**259**	IAmb	IAmb	07 23 20.5	
	comp=Z,0.2nm,0.7s						
AS31	**Alice Springs**	**44.46**	**254**	P	**P**	**07 23 21.9**	**0.0**
AS31				IAmb	IAmb	07 23 22.4	
	comp=Z,4.7nm,0.6s						
ASAR	**Alice Springs**	**44.46**	**254**	P	**P**	**07 23 21.9**	**0.0**
	comp=Z,12nm,0.4s,baz=89,slow=8.1,SNR=226						
ASAR				S	**S**	**07 29 16.9**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=86,slow=16,SNR=4.2						
ASAR	**Alice Springs**	**44.46**	**254**	P	**P**	**07 23 21.6**	**-0.3**
FORT	**Forrest**	**49.76**	**244**	P	**P**	**07 24 01.0**	**-0.6**
KNRA	**Kununurra**	**50.08**	**264**	P	**P**	**07 24 04.4**	**+0.3**
KNRA				IAmb	IAmb	07 24 05.0	
	comp=Z,8.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.64**	**260**	P	**P**	**07 24 23.8**	**+1.1**
MORW	**Morawa**	**60.22**	**246**	P	**P**	**07 25 14.1**	**-0.6**
MORW				IAmb	IAmb	07 25 28.2	
	comp=Z,14nm,1.3s						
SBA	**Scott Base**	**60.77**	**183**	P	**P**	**07 25 17.6**	**+0.3**
VNDA	**Vanda**	**60.78**	**185**	P	**P**	**07 25 16.6**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=349,slow=7.8,SNR=2.0						
QSPA	**South Pole Qui**	**72.52**	**180**	P	**P**	**07 26 29.1**	**-1.2**
QSPA				IAmb	IAmb	07 26 29.9	
	comp=Z,6.0nm,1.1s						
PETK	**Petropavlovsk-**	**73.20**	**346**	P	**P**	**07 26 35.3**	**+1.2**
	comp=Z,1.7nm,0.7s,baz=119,slow=5.6,SNR=3.7						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**07 27 09.7**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=225,slow=8.8,SNR=11						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	**P**	**07 27 07.8**	**-1.4**
MAW	**Mawson**	**84.06**	**200**	P	**P**	**07 27 30.9**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=162,slow=9.6,SNR=1.6						
ILAR	**Eielson Array**	**85.62**	**13**	P	**P**	**07 27 39.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=221,slow=5.0,SNR=8.7						
ILAR	**Eielson Array**	**85.62**	**13**	P	**P**	**07 27 39.3**	**-0.1**
TXAR	**Lajitas Array**	**86.18**	**58**	P	**P**	**07 27 43.5**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=213,slow=6.4,SNR=11						
PDAR	**Pinedale Array**	**87.39**	**44**	P	**P**	**07 27 48.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=212,slow=2.9,SNR=6.3						
PDAR	**Pinedale Array**	**87.39**	**44**	P	**P**	**07 27 48.4**	**-0.1**

IDC ***27*** *07:22:24.3±1.1,27°.79N×85°.30E,h0km,mb3.8/6, mb1 3.8/7,mb1mx3.5/44,mbtmp3.7/7,ML3.6/1,MS2.9/1, Ms1 3.1/1,ms1mx2.4/49,Error ellipse: s-maj=41.0km s-min=22.3km az=57.0*

ISC 27 07:22:27.2±1.2,27°.8N±0°.2×85°.3E±0°.2,h18km,n8,σ0s51/7, mb3.7/6,Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.61**	**124**	LR	LR	07 33 41.8	
	comp=Z,44nm,19.2s,baz=42,slow=43						
MKAR	**Makanchi Array**	**19.07**	**354**	P	**Pn**	**07 26 49.1**	**-0.3**
	0.2nm,0.3s,baz=176,slow=11,SNR=4.5						
SONM	**Songino Array**	**25.83**	**34**	P	**P**	**07 27 57.9**	**+0.3**
	0.6nm,0.4s,baz=226,slow=8.7,SNR=4.3						
FINES	**FINESS Array B**	**51.32**	**328**	P	**P**	**07 31 30.9**	**+0.8**
	0.9nm,0.5s,baz=102,slow=8.6,SNR=5.8						
ARCES	**ARCESS Array B**	**53.74**	**338**	P	**P**	**07 31 47.5**	**-0.4**
	2.5nm,0.8s,baz=324,slow=6.5,SNR=5.5						
WRA	**Warramunga Arr**	**67.11**	**130**	P	**P**	**07 33 20.1**	**+0.1**
	0.7nm,0.8s,baz=324,slow=6.5,SNR=5.5						
ASAR	**Alice Springs**	**69.41**	**133**	P	**P**	**07 33 34.1**	**-0.2**
	0.2nm,0.7s,baz=314,slow=6.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**78.43**	**279**	P	**P**	**07 34 27.2**	**-0.2**
	0.2nm,0.5s,baz=47,slow=4.0,SNR=1.6						

RHSSO ***27*** *07:24:48.4±0.4,43°.90N×16°.94E,h9km±2km,ML3.0/11 PDG* ***27*** *07:24:49.1±0.3,44°.03N×17°.02E,h22km±1km,MD3.9/3, ML3.5/14,Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

ISC 27 07:24:47.4±1.1,43°.88N±0°.02×16°.94E±0°.02,h4km±9km, n70,σ1s22/129,16C-12D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIJV	**Kijevo**	**0.40**	**288**	*i* Pg	**Pg**	**07 24 54.0**	**-1.1**
KIJV				Sg	**Sg**	**07 25 00.5**	**+0.1**
RICI	**Ricice**	**0.41**	**159**	*i* Pg	**Pg**	**07 24 55.4**	**+0.1**
RICI				Sg	**Sg**	**07 25 02.1**	**+1.4**
MGRS	**Mrkonjic Grad**	**0.55**	**11**	*e*Pg	**Pg**	**07 24 57.8**	**-0.1**
MGRS				*e*Sg	**Sg**	**07 25 06.1**	**+1.1**
MAKA	**Makarska**	**0.59**	**174**	*e*Pg	**Pg**	**07 24 58.6**	**-0.2**
MAKA				Sg	**Sb**	**07 25 08.1**	**-1.0**
HVAR	**Hvar**	**0.79**	**207**	*e*Pg	**Pg**	**07 25 01.8**	**-0.6**
HVAR				Sg	**Sb**	**07 25 13.8**	**-0.8**
BLY	**Banja Luka**	**0.89**	**12**	*e*Pg	**Pg**	**07 25 04.3**	**-0.1**
BLY				*e*Sg	**Sg**	**07 25 16.2**	**+0.3**
MORI	**Morici**	**0.89**	**270**	*i* Pg	**Pg**	**07 25 03.2**	**-1.2**
MORI				Sg	**Sg**	**07 25 16.6**	**+0.7**
ZIRJ	**Zirje**	**0.96**	**257**	*e*Pg	**Pg**	**07 25 04.9**	**-0.9**
ZIRJ				Sg	**Sg**	**07 25 18.9**	**+0.6**
PRIJ	**Prijedor**	**1.11**	**352**	*e*Sg	**Sg**	**07 25 22.9**	**-0.1**
MRAK	**Mrakovica**	**1.13**	**359**	*e*Pg	**Pg**	**07 25 08.7**	**-0.4**
MRAK				*e*Sg	**Sg**	**07 25 23.7**	**-0.1**
STON	**Ston**	**1.15**	**151**	*e*Pg	**Pg**	**07 25 08.7**	**-0.7**
STON				Sg	**Sn**	**07 25 26.2**	**-0.3**
DUGI	**Dugi Otok**	**1.36**	**275**	*e*Pn	**Pn**	**07 25 12.9**	**-0.2**
DUGI				Sn	**Sn**	**07 25 32.9**	**+1.2**
HAPS	**Han Pijesak,BI**	**1.47**	**81**	*e*Pg	**Pn**	**07 25 14.1**	**-0.7**
HAPS				*e*Sg	**Sg**	**07 25 35.2**	**+0.6**
BRY	**Bratogost**	**1.52**	**129**	*e*Pn	**Pn**	**07 25 15.8**	**+0.2**
BRY	**Bratogost**	**1.52**	**129**	↑*i*Pn	**Pg**	**07 25 17.0**	**+0.4**
BRY				*i* Sn	**Sg**	**07 25 38.4**	**+2.1**
TREB	**Trebinje**	**1.56**	**138**	*e*Pn	**Pb**	**07 25 16.4**	**-0.3**
TREB				*e*Sn	**Sg**	**07 25 37.5**	**+0.2**
UPM	**Unac-Piva**	**1.58**	**115**	*e*Pn	**Pn**	**07 25 16.8**	**+0.4**
UPM	**Unac-Piva**	**1.58**	**115**	↓*i*Pn	**Pb**	**07 25 17.1**	**-0.2**
UPM				*i* Sn	**Sg**	**07 25 39.1**	**+0.8**
MOSL	**Moslavina**	**1.74**	**356**	*e*Pn	**Pn**	**07 25 18.2**	**-0.2**
MOSL				Sn	**Sg**	**07 25 43.5**	**+0.3**
RUDO	**Rudo**	**1.78**	**98**	*e*Pn	**Pn**	**07 25 19.5**	**+0.5**
RUDO				*e*Sn	**Sn**	**07 25 42.0**	**-0.2**
BBLS	**Lazići**	**1.79**	**90**	*e*Pn	**Pn**	**07 25 19.1**	**0.0**
BBLS				*e*Sn	**Sn**	**07 25 42.8**	**+0.5**
HCY	**Herceg Novi**	**1.83**	**141**	*e*Pn	**Pn**	**07 25 19.7**	**+0.1**
HCY	**Herceg Novi**	**1.83**	**141**	↑*i*Pn	**Pb**	**07 25 21.6**	**+0.2**
HCY				*i* Sn	**Sg**	**07 25 47.0**	**+0.9**
NKY	**Niksic**	**1.84**	**125**	↓*i*Pn	**Pb**	**07 25 21.2**	**-0.5**
NKY				*i* Sn	**Sg**	**07 25 46.2**	**-0.3**
NKME	**Niksic**	**1.85**	**126**	↓*i*Pn	**Pb**	**07 25 21.3**	**-0.4**
NKME				*i* Sn	**Sg**	**07 25 46.5**	**-0.1**
PLE	**Pljevlja**	**1.86**	**106**	↓*i*Pn	**Pn**	**07 25 20.8**	**+0.6**
PLE				*i* Sn	**Sb**	**07 25 45.5**	**-0.3**
CEME	**Cevo**	**1.97**	**132**	*e*Pn	**Pb**	**07 25 23.2**	**-0.6**
CEME				*i* Sn	**Sg**	**07 25 49.8**	**-0.8**
TEKS	**Tekeris**	**1.98**	**69**	*e*Pn	**Pn**	**07 25 21.4**	**-0.3**
TEKS				*e*Sn	**Sn**	**07 25 46.8**	**-0.2**
BUM	**Brajici-Budva**	**2.13**	**137**	↓*i*Pn	**Pb**	**07 25 25.6**	**-1.0**
BUM				*i* Sn	**Sb**	**07 25 54.1**	**+0.6**
KOME	**Kolasin**	**2.15**	**118**	*e*Pn	**Pn**	**07 25 25.1**	**+1.1**
KOME				*i* Sn	**Sb**	**07 25 53.1**	**-0.7**
CRES	**Cresnjev**	**2.21**	**332**	*e*Pn	**Pn**	**07 25 24.7**	**-0.2**
CRES				*e*Sn	**Sn**	**07 25 52.2**	**-0.5**
DIVS	**Divibare**	**2.22**	**83**	*e*Pn	**Pn**	**07 25 24.7**	**-0.3**
DIVS				*e*Sn	**Sn**	**07 25 52.7**	**-0.2**
PDG	**Podgorica**	**2.23**	**130**	↑P	**Pn**	**07 25 25.0**	**-0.1**
PDG				↓S	**Sb**	**07 25 56.5**	**+0.2**
PDG	**Podgorica**	**2.23**	**130**	*e*Pn	**Pn**	**07 25 26.6**	**+1.5**
PDG				*e*Sn	**Sn**	**07 25 53.5**	**+0.4**
TTG	**Podgorica**	**2.23**	**130**	↑*i*Pn	**Pb**	**07 25 26.8**	**-1.5**
TTG				*i* Sn	**Sb**	**07 25 56.0**	**-0.2**
KALN	**Kalnik**	**2.28**	**352**	*e*Pn	**Pn**	**07 25 26.2**	**+0.4**
DRME	**Dracevica, Mon**	**2.36**	**135**	*e*Pn	**Pn**	**07 25 28.3**	**+1.3**
DRME				*e*Sn	**Sn**	**07 25 57.1**	**+0.7**
DRME	**Dracevica, Mon**	**2.36**	**135**	↑*i*Pn	**Pb**	**07 25 28.8**	**-1.7**
DRME				*i* Sn	**Sb**	**07 25 59.5**	**-0.5**
IVA	**Berane**	**2.38**	**114**	↓*i*Pn	**Pn**	**07 25 28.2**	**+0.9**
IVA				*i* Sn	**Sn**	**07 25 58.6**	**+1.6**
FRGS	**Fruska Gora**	**2.42**	**57**	↑P	**Pn**	**07 25 27.3**	**-0.5**
FRGS				↓S	**Sn**	**07 25 58.0**	**+0.1**
FRGS	**Fruska Gora**	**2.42**	**57**	*e*Pn	**Pn**	**07 25 27.6**	**-0.2**
FRGS				*e*Sn	**Sn**	**07 25 58.0**	**+0.1**
BRJN	**Brijuni**	**2.50**	**295**	*e*Pg	**Pb**	**07 25 33.9**	**+1.0**
BRJN				Sn	**Sn**	**07 26 01.1**	**+1.2**
PVY	**Plav**	**2.56**	**119**	↑*i*Pn	**Pn**	**07 25 30.8**	**+1.1**
PVY				*i* Sn	**Sn**	**07 26 03.2**	**+1.8**
ULC	**Ulcinj**	**2.56**	**138**	↑*i*Pn	**Pn**	**07 25 31.5**	**+1.8**
ULC				*i* Sn	**Sb**	**07 26 04.5**	**-1.2**
CEY	**Cerknica**	**2.58**	**317**	*e*Pn	**Pn**	**07 25 30.7**	**+0.8**
CEY				*e*Sn	**Sn**	**07 26 01.5**	**-0.3**
MORH	**Mrgy, Hungar**	**2.63**	**27**	↑P	**Pn**	**07 25 29.3**	**-1.3**
MORH	**Mrgy, Hungar**	**2.63**	**27**	*e*Pn	**Pn**	**07 25 31.6**	**+1.0**
SOKA	**Soboth**	**3.10**	**335**	Pn	**Pn**	**07 25 37.6**	**+0.4**
	1.3nm,0.2s,SNR=5.4						
SOKA				*e*Sn	**Sn**	**07 26 14.4**	**-0.4**
	1.0nm,0.2s						
OBKA	**Obir**	**3.12**	**328**	*e*Pn	**Pn**	**07 25 37.6**	**+0.1**
	0.3nm,0.1s						
OBKA				*e*Sn	**Sn**	**07 26 15.4**	**+0.1**
	5.0nm,0.4s						
MATE	**Matera**	**3.23**	**183**	↑P	**Pn**	**07 25 36.3**	**-2.6**
MATE				↑S	**Sn**	**07 26 16.3**	**-1.6**
BOVS	**Bovan**	**3.46**	**92**	↑P	**Pn**	**07 25 41.5**	**-0.6**
BOVS				↑S	**Sn**	**07 26 27.1**	**+3.5**
ARSA	**Arzberg**	**3.51**	**344**	*e*Pn	**Pn**	**07 25 42.8**	**0.0**
	4.3nm,0.3s,SNR=6.4						
ARSA				*e*Sn	**Sn**	**07 26 21.8**	**-3.0**
	0.8nm,0.2s						
MDVR	**Moldovita**	**3.54**	**74**	↓P	**Pn**	**07 25 42.7**	**-0.5**
MYKA	**Terra Mystica**	**3.60**	**321**	*e*Pn	**Pn**	**07 25 44.7**	**+0.6**
	0.9nm,0.2s						
MYKA				*e*Sn	**Sn**	**07 26 24.7**	**-2.4**
	3.1nm,0.5s						
BZS	**Buzias**	**3.76**	**61**	↓P	**Pn**	**07 25 46.3**	**+0.1**
BZS				↑S	**Sn**	**07 26 32.6**	**+1.8**
HERR	**Herculane**	**4.05**	**74**	↓P	**Pn**	**07 25 49.8**	**-0.4**
KBA	**Koelnbreinsper**	**4.08**	**323**	*e*Pn	**Pn**	**07 25 52.4**	**+1.8**
	0.4nm,0.1s						
KBA				*e*Sg	**Sg**	**07 27 02.4**	**+4.1**
	4.5nm,0.5s						
CONA	**Conrad Observa**	**4.12**	**350**	Pn	**Pn**	**07 25 51.2**	**0.0**
	2.5nm,0.3s,SNR=5.7						
CONA				*e*Sn	**Sn**	**07 26 37.1**	**-2.8**
	0.9nm,0.2s						
ABTA	**Abfaltersbach**	**4.24**	**314**	*e*Pn	**Pn**	**07 25 53.5**	**+0.7**
	1.8nm,0.2s						
ABTA				*e*Sn	**Sn**	**07 26 42.0**	**-0.8**
	2.0nm,0.2s						
MOA	**Molln**	**4.39**	**336**	*e*Pn	**Pn**	**07 25 53.8**	**-1.0**
	1.2nm,0.1s						
MOA				*e*Sn	**Sn**	**07 26 49.5**	**+3.1**
	3.5nm,0.4s						
GZR	**Gura Zlata**	**4.43**	**68**	↑P	**Pn**	**07 25 54.7**	**-0.8**
GZR				↓S	**Sn**	**07 25 49.6**	**+2.0**
MODS	**Modra-Piesok**	**4.50**	**3**	*e*PN	**Pn**	**07 25 56.0**	**-0.4**
MODS				*e*SN	**Sn**	**07 26 46.6**	**-2.6**
VYHS	**Vyhne**	**4.80**	**15**	*e*PN	**Pn**	**07 26 01.5**	**+1.0**
VYHS				*e*SN	**Sn**	**07 26 55.3**	**-1.2**
KOLL	**Kolacno**	**4.81**	**12**	*e*SN	**Sn**	**07 26 55.1**	**-1.6**
DRGR		**5.01**	**52**	↑P	**Pn**	**07 26 02.1**	**-1.2**
WTTA	**Wattenberg**	**5.03**	**314**	Pn	**Pn**	**07 26 05.1**	**+1.4**
	1.8nm,0.2s,SNR=4.7						
WTTA				*e*Sn	**Sn**	**07 27 03.7**	**+1.3**
	5.0nm,0.4s						
WATA	**Walderalm**	**5.11**	**314**	*e*Pn	**Pn**	**07 26 06.5**	**+1.7**
	3.7nm,0.2s						
WATA				*e*Sn	**Sn**	**07 27 03.1**	**-1.2**
	1.3nm,0.2s						
SQTA	**Sankt Quirin**	**5.23**	**312**	*e*Pn	**Pn**	**07 26 08.5**	**+2.0**
	1.7nm,0.2s						
SQTA				*e*Sn	**Sn**	**07 27 09.1**	**+1.8**
	8.7nm,0.5s						
MOTA	**Moosalm**	**5.36**	**312**	*e*Pn	**Pn**	**07 26 09.7**	**+1.5**
	4.3nm,0.5s						
MOTA				*e*Sn	**Sn**	**07 27 12.8**	**+2.3**
	4.1nm,0.4s						
FETA	**Feichten**	**5.38**	**308**	*e*Pn	**Pn**	**07 26 07.4**	**-1.1**
	0.5nm,0.3s						
FETA				*e*Sn	**Sn**	**07 27 13.9**	**+2.9**
	1.9nm,0.6s						

NNC 27 07:26:15.0±0.4,50°.01N×78°.71E,h0km,mb3.6,mpv3.2, 11C-11D,Error ellipse: s-maj=9.0km s-min=2.2km az=77.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.59**	**348**	↓P	Pg	07 26 26.6	+0.3
KUR07				↓S	Sb	07 26 35.8	-1.3
KUR06	**Kurchatov Arra**	**0.61**	**349**	↑P	Pg	07 26 26.8	+0.1
KUR06				↑S	Sb	07 26 36.3	-1.4
KUR14	**Kurchatov Arra**	**0.61**	**353**	↑P	Pg	07 26 26.8	0.0
KUR14				↑S	Sb	07 26 36.3	-1.5
KUR15	**Kurchatov Arra**	**0.62**	**351**	↑P	Pg	07 26 26.9	0.0
KUR15				↓S	Sg	07 26 36.3	+1.3
KURBB	**Kurchatov Arra**	**0.63**	**350**	↑P	Pg	07 26 27.0	0.0
	32nm,0.4s						
KURBB				↓S	Sg	07 26 36.0	+0.8
	93nm,0.5s						
KUR16	**Kurchatov Arra**	**0.64**	**348**	↑P	Pg	07 26 27.4	+0.3
KUR16				↓S	Sg	07 26 36.9	+1.4
KUR17	**Kurchatov Arra**	**0.65**	**346**	↑P	Pg	07 26 27.6	+0.3
KUR17				↑S	Sb	07 26 37.2	-1.5
KUR05	**Kurchatov Arra**	**0.65**	**350**	↑P	Pg	07 26 27.4	0.0
KUR05				↓S	Sg	07 26 36.5	+0.8
MAKZ	**Makanchi**	**3.87**	**145**	↓Pg	Pb	07 27 24.7	+0.6
	16nm,1.4s						
MAKZ				↓Lg	Lg	07 28 18.3	
	22nm,0.9s						
MK31	**Makanchi Array**	**4.00**	**142**	↑Pn	Pn	07 27 19.2	+1.7
	1.2nm,0.6s,baz=324,slow=11,SNR=9.8						
MK31				Pg	Pb	07 27 28.8	+2.5
	1.9nm,0.5s,baz=327,slow=14,SNR=13						
MK31				↓Lg	Lg	07 28 21.6	
	11nm,0.5s,baz=327,slow=26,SNR=15						
DJR	**Jarkent**	**5.72**	**172**	Pg	Pb	07 27 56.8	+1.0
	1.9nm,0.5s						
DJR				Lg	Lg	07 29 09.8	
	4.3nm,0.5s						
BTLS	**Baital**	**5.88**	**214**	Pg	Pb	07 28 01.6	+3.2
	2.3nm,0.6s						
BTLS				Lg	Lg	07 29 18.0	
	1.0nm,0.3s						
BRVK	**Borovoye**	**6.08**	**303**	↓Sn	Sn	07 28 57.4	+1.2
	2.2nm,0.7s						
BRVK				↓Lg	Lg	07 29 27.8	
	2.2nm,0.6s						
KTBS	**Karatobe**	**6.45**	**193**	Pg	Pg	07 28 13.9	-4.5
	2.2nm,0.7s						
KTBS				Lg	Lg	07 29 38.8	
	22nm,0.6s						
PDGK	**Podgornoye**	**6.70**	**175**	Pg	Pg	07 28 19.2	-4.1
	1.6nm,1.2s						
PDGK				Lg	Lg	07 29 48.0	
	5.1nm,0.9s						

IDC 27 07:37:13.4±2.1,6°.80S×129°.67E,h0km,mb3.8/1, mb1 3.6/3,mb1mx3.4/25,mbtmp3.4/3,ML3.6/2,Error ellipse: s-maj=113.9km s-min=32.0km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.83**	**161**	Pn	Pn	07 40 29.9	-1.0
	0.3nm,0.3s,baz=340,slow=14,SNR=22						
WRA				Sn	Sn	07 42 52.6	-13
	0.3nm,0.3s,baz=329,slow=22,SNR=7.6						
ASAR	**Alice Springs**	**17.26**	**167**	P	P	07 41 16.9	-0.7
	0.1nm,0.3s,baz=350,slow=9.4,SNR=5.7						
MKAR	**Makanchi Array**	**67.88**	**327**	P	P	07 48 13.7	0.0
	0.6nm,0.5s,baz=121,slow=6.9,SNR=5.8						

KRNET ***27*** *07:44:47.5±0.1,40°.49N×72°.15E,h19km,mb3.3 ISU* ***27*** *07:44:48,40°.50N×72°.20E,h15km SOME* ***27*** *07:44:48.6,40°.52N×72°.30E,h10km NNC* ***27*** *07:45:00.8±3.4,41°.14N×72°.24E,h0km,mb3.9,mpv3.4, Error ellipse: s-maj=31.7km s-min=11.6km az=171.0*

ISC 27 07:44:47.4±1.1,40°.48N±0°.03×72°.18E±0°.02,h2km±10km, n45,σ1s47/76,25C-9D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.39**	**310**	*e*P	**Pg**	**07 44 55.0**	**+0.1**
FRG				*e*S	**Sg**	**07 44 59.0**	**-1.0**
OHH	**Osh**	**0.47**	**85**	↑*i*P	**Pg**	**07 44 57.1**	**+0.7**
	baz=86						
OHH				↑*i*S	**Sb**	**07 45 04.4**	**-1.4**
	baz=86						
OHH	**Osh**	**0.47**	**85**	*e*P	**Pg**	**07 44 57.0**	**+0.7**
OHH				*e*S	**Sg**	**07 45 04.0**	**+1.6**
NAM	**Namangan**	**0.64**	**322**	*e*P	**Pb**	**07 45 01.0**	**-0.4**
NAM				*e*S	**Sb**	**07 45 10.0**	**-0.8**
ARSB	**Arslanbob**	**1.04**	**36**	↑*i*P	**Pg**	**07 45 07.1**	**-0.3**
	baz=37						
ARSB				↑*i*S	**Sg**	**07 45 21.3**	**+0.4**
	baz=37						
ARSB	**Arslanbob**	**1.04**	**36**	*e*P	**Pg**	**07 45 07.0**	**-0.3**
ARSB				*e*S	**Sg**	**07 45 21.0**	**+0.1**
DRK	**Karamyk**	**1.04**	**196**	↑*i*P	**Pg**	**07 45 07.3**	**-0.1**
	baz=95						
DRK				↑*i*S	**Sg**	**07 45 21.1**	**+0.2**
	baz=95						
BTK	**Batken**	**1.12**	**248**	↑*i*P	**Pg**	**07 45 07.9**	**-1.0**
	baz=47						
BTK				↑*i*S	**Sg**	**07 45 23.2**	**-0.3**
	baz=47						
BTK	**Batken**	**1.12**	**248**	*i* P	**Pg**	**07 45 08.0**	**-1.0**
BTK				*i* S	**Sg**	**07 45 23.0**	**-0.5**
TRKS	**Terek-Say**	**1.31**	**324**	↓*i*P	**Pg**	**07 45 10.2**	**-2.3**
	baz=23						
TRKS				↓*i*S	**Sg**	**07 45 26.6**	**-2.9**
	baz=23						
AML	**Almayashu**	**2.01**	**34**	↓*i*P	**Pn**	**07 45 22.6**	**-0.1**
	baz=35						
AML				↓*i*S	**Sn**	**07 45 48.3**	**-0.3**
	baz=35						
AML	**Almayashu**	**2.01**	**34**	P	**Pn**	**07 45 22.0**	**-0.7**
	SNR=9.2						
MNAS	**Manas**	**2.02**	**7**	↑*e*P	**Pn**	**07 45 22.9**	**+0.3**
	baz=8.0						
MNAS				↑*i*S	**Sn**	**07 45 48.5**	**0.0**
	baz=8.0						
CHRV	**Charvak**	**2.04**	**305**	*e*P	**Pn**	**07 45 24.0**	**+1.1**
CHRV				*e*S	**Sb**	**07 45 51.0**	**-0.1**
GAR	**Garm**	**2.06**	**225**	↑*i*P	**Pn**	**07 45 22.8**	**-0.4**
	baz=24						
GAR				↑*i*S	**Sn**	**07 45 49.4**	**-0.1**
	baz=24						
ARLS	**Aral**	**2.13**	**49**	↑*i*P	**Pn**	**07 45 23.9**	**-0.2**
	baz=50						
ARLS				↑*i*S	**Sn**	**07 45 51.4**	**+0.2**
	baz=50						
IUG	**Iuzhnay**	**2.32**	**317**	*e*P	**Pg**	**07 45 33.4**	**+1.5**
	182nm,0.3s						
IUG				*e*S	**Sg**	**07 46 05.3**	**+3.4**
	75nm,0.5s						
IUG	**Iuzhnay**	**2.32**	**317**	P	**Pg**	**07 45 34.0**	**+2.2**
	649nm,0.5s						
IUG				S	**Sb**	**07 45 59.9**	**+0.7**
	55nm,0.3s						
MRKS	**Merke**	**2.39**	**19**	*e*P	**Pg**	**07 45 34.0**	**+0.6**
	16nm,0.4s						
MRKS				*e*S	**Sg**	**07 46 05.2**	**+0.8**
	29nm,0.4s						
MRKS	**Merke**	**2.39**	**19**	Pg	**Pg**	**07 45 35.0**	**+1.7**
	16nm,0.4s						
MRKS				Lg	Lg	07 46 01.8	
	32nm,0.4s						
UCH	**Uchtor**	**2.48**	**45**	↓*e*P	**Pn**	**07 45 29.6**	**+0.4**
	baz=45						
UCH				↓*i*S	**Sn**	**07 46 00.1**	**-0.2**
	baz=45						
UCH	**Uchtor**	**2.48**	**45**	P	**Pn**	**07 45 29.0**	**-0.2**
	SNR=7.5						
EKS2	**Erkin-Say**	**2.49**	**28**	↑*e*P	**Pn**	**07 45 29.3**	**+0.2**
	baz=29						
EKS2				↑*i*S	**Sn**	**07 45 59.4**	**-0.7**
	baz=29						
AAK	**Ala-Archa**	**2.77**	**38**	↑*i*P	**Pn**	**07 45 32.9**	**-0.1**
	baz=39						
AAK				↑*i*S	**Sn**	**07 46 06.7**	**-0.3**
	baz=39						
AAK	**Ala-Archa**	**2.77**	**38**	P	**Pn**	**07 45 35.0**	**+2.0**
	SNR=5.7						
KK31	**Karatay Array**

σ0ᵍ76/15, **mb3.4**/10, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.25**	**263**	P	P	07 54 25.9	+5.7
	2.3nm,0.3s,baz=138,slow=3.0,SNR=24						
DZM	**Mont Dzumac**	**14.86**	**249**	P	**P**	**07 56 12.4**	**+0.3**
	0.2nm,0.3s,baz=144,slow=15,SNR=1.7						
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**07 59 42.0**	**+0.4**
	1.9nm,0.5s,baz=80,slow=9.1,SNR=6.6						
WRA	**Warramunga Arr**	**44.58**	**259**	P	**P**	**08 00 27.6**	**-0.2**
	0.9nm,0.5s,baz=94,slow=6.9,SNR=34						
ASAR	**Alice Springs**	**44.79**	**254**	P	**P**	**08 00 30.1**	**+0.7**
	9.9nm,0.5s,baz=89,slow=8.1,SNR=176						
ASAR				PcP	**PcP**	**08 01 60.0**	**+0.3**
	0.8nm,0.6s,baz=108,slow=3.4,SNR=6.2						
VNDA	**Vanda**	**60.95**	**185**	P	**P**	**08 02 23.2**	**-0.3**
	0.4nm,0.9s,baz=343,slow=7.5,SNR=2.1						
NVAR	**Mina Array Bea**	**79.15**	**44**	P	**P**	**08 04 13.4**	**+1.0**
	0.4nm,0.7s,baz=232,slow=6.7,SNR=3.7						
MAW	**Mawson**	**84.30**	**200**	P	**P**	**08 04 37.0**	**-0.8**
	0.7nm,0.5s,baz=158,slow=11,SNR=1.4						
ILAR	**Eielson Array**	**85.42**	**13**	P	**P**	**08 04 42.4**	**-0.8**
	0.3nm,0.3s,baz=225,slow=5.2,SNR=7.2						
TXAR	**Lajitas Array**	**85.84**	**58**	P	**P**	**08 04 47.5**	**+1.3**
	0.3nm,0.7s,baz=218,slow=5.6,SNR=5.1						
PDAR	**Pinedale Array**	**87.08**	**44**	P	**P**	**08 04 52.6**	**+0.8**
	0.1nm,0.3s,baz=195,slow=3.5,SNR=3.5						
YKA	**Yellowknife Ar**	**93.92**	**25**	P	**P**	**08 05 21.9**	**-0.9**
	0.3nm,0.9s,baz=250,slow=5.0,SNR=3.8						
MKAR	**Makanchi Array**	**108.67**	**314**	PKiKP	**PKiKP**	**08 10 30.4**	**-0.4**
	0.3nm,0.7s,baz=103,slow=1.7,SNR=2.4						
BRTR	**Keskin Array B**	**144.31**	**315**	PKP	**PKPdf**	**08 11 37.6**	**-0.5**
	1.0nm,0.8s,baz=90,slow=2.5,SNR=4.3						
GERES	**GERESS Array B**	**147.07**	**345**	PKPbc	**PKiKP**	**08 11 46.6**	**-0.8**
	0.9nm,0.5s,baz=347,slow=5.5,SNR=6.7						

*IDC **27** 08:09:03.1±1.7, 37.15N×24.83E, h0ᵏᵐ, mb3.8/4, mb1 3.8/4, mb1mx3.3/44, mbtmp3.8/4, Error ellipse: s-maj=53.0km s-min=19.6km az=116.0*
*ATH **27** 08:09:05.9, 35.04N×26.87E, h10ᵏᵐ±3ᵏᵐ, ML2.8/4, Error ellipse: s-maj=7.1km s-min=1.2km az=329.0*
*THE **27** 08:09:06.1, 35.13N×26.82E, h0ᵏᵐ±1ᵏᵐ, ML2.7/7, Error ellipse: s-maj=5.0km s-min=0.6km az=152.0*
*ISK **27** 08:09:06.9, 35.17N×26.80E, h8ᵏᵐ, ML2.8/13*
*DDA **27** 08:09:06.9, 35.30N×26.53E, h7ᵏᵐ±5ᵏᵐ, ML2.4*

ISC 27 08:09:05.3±1.3, **35.10N**±0.04×**26.86E**±0.02, **h10**ᵏᵐ±9ᵏᵐ, **n51**, σ1ᵍ**25/77**, **mb3.7/4**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.51**	**29**	P	**Pb**	**08 09 16.4**	**-0.1**
KARP				S	**Sb**	**08 09 24.4**	**+0.4**
KARP				AML	AML	08 09 25.4	
	comp=N,8370μm,0.2s						
KARP				AML	AML	08 09 26.0	
	comp=E,8791μm,0.5s						
KARP	**Karpathos**	**0.51**	**29**	P	**Pb**	**08 09 16.3**	**-0.1**
KARP				S	**Sb**	**08 09 24.4**	**+0.4**
	comp=E,4μm,0.3s						
KARP	**Karpathos**	**0.51**	**29**	PG	**Pb**	**08 09 16.5**	**0.0**
KARP				SG	**Sb**	**08 09 24.3**	**+0.3**
ZKR	**Zakros**	**0.52**	**272**	P	**Pb**	**08 09 16.2**	**-0.5**
ZKR				S	**Sb**	**08 09 23.6**	**-0.7**
ZKR				AML	AML	08 09 25.9	
	comp=E,2900μm,0.7s						
ZKR				AML	AML	08 09 26.0	
	comp=N,1242μm,0.3s						
ZKR	**Zakros**	**0.52**	**272**	P	**Pb**	**08 09 16.2**	**-0.5**
ZKR				S	**Sb**	**08 09 24.0**	**-0.3**
	comp=N,1μm,0.5s						
ZKR	**Zakros**	**0.52**	**272**	PG	**Pb**	**08 09 16.3**	**-0.3**
ZKR				SG	**Sb**	**08 09 24.3**	**0.0**
STIA	**Sitia Lasithi**	**0.63**	**279**	P	**Pb**	**08 09 18.0**	**-0.5**
STIA				S	**Sb**	**08 09 28.5**	**+1.0**
FRMA	**Ierapetra Chan**	**0.92**	**265**	P	**Pg**	**08 09 21.3**	**-1.8**
FRMA				S	**Sg**	**08 09 35.2**	**+0.1**
NPS	**Neapolis**	**1.03**	**279**	P	**Pb**	**08 09 25.5**	**+0.2**
NPS	**Neapolis**	**1.03**	**279**	P	**Pb**	**08 09 25.6**	**+0.2**
NPS				S	**Sn**	**08 09 40.4**	**0.0**
	comp=N,615nm,0.5s						
LAST	**Lasithi**	**1.13**	**274**	P	**Pb**	**08 09 27.4**	**+0.4**
LAST				AML	AML	08 09 47.0	
	comp=N,548μm,0.6s						
LAST				AML	AML	08 09 54.5	
	comp=E,484μm,0.9s						
LAST	**Lasithi**	**1.13**	**274**	P	**Pg**	**08 09 26.8**	**-0.2**
LAST				S	**Sn**	**08 09 43.5**	**+0.5**
	comp=E,262nm,0.9s						
HRKL	**Herakleio**	**1.45**	**279**	PN	**Pg**	**08 09 33.4**	**+0.2**
ARG	**Arkhangelos**	**1.52**	**43**	P	**Pg**	**08 09 34.7**	**+0.2**
ARG	**Arkhangelos**	**1.52**	**43**	P	**Pb**	**08 09 34.1**	**+0.4**
ARG				S	**Sb**	**08 09 53.8**	**+0.8**
	comp=E,315nm,0.9s						
ARG	**Arkhangelos**	**1.52**	**43**	PN	**Pg**	**08 09 34.7**	**+0.2**
ARG				SN	**Sg**	**08 09 55.3**	**+1.0**
NIS1	**Nisyros Isl.**	**1.52**	**10**	PN	**Pg**	**08 09 33.9**	**-0.7**
NIS1				SN	**Sg**	**08 09 53.9**	**-0.4**
NISR	**Nisiros**	**1.52**	**8**	P	**Pb**	**08 09 33.6**	**-0.1**
IDI	**Anoyia**	**1.62**	**277**	Pn	**Pg**	**08 09 37.3**	**+0.8**
	comp=E,7.8nm,0.3s,baz=94,slow=16,SNR=30						
IDI				Sn	**Sg**	**08 09 59.9**	**+2.5**
	comp=E,12nm,0.3s,baz=329,slow=22,SNR=9.0						
IDI	**Anoyia**	**1.62**	**277**	P	**Pg**	**08 09 36.4**	**-0.1**
IDI				AML	AML	08 10 05.2	
	comp=E,303μm,0.4s						
IDI				AML	AML	08 10 08.6	
	comp=N,302μm,0.5s						
IDI	**Anoyia**	**1.62**	**277**	P	**Pb**	**08 09 35.4**	**0.0**
IDI				S	**Sg**	**08 09 57.0**	**-0.5**
	comp=N,150nm,0.4s						
IDI	**Anoyia**	**1.62**	**277**	PN	**Pg**	**08 09 35.9**	**-0.5**
KOSK	**Kos Island**	**1.65**	**3**	PN	**Pb**	**08 09 36.0**	**+0.1**
SANT	**Santorini**	**1.70**	**319**	PN	**Pb**	**08 09 36.6**	**-0.2**
BODT	**Bodrum**	**1.99**	**11**	PN	**Pb**	**08 09 40.9**	**-0.8**
TURN	**Turunc**	**2.02**	**34**	*i* P	**Pn**	**08 09 41.2**	**+1.8**
TURN				*i* S	**Sg**	**08 10 09.2**	**-1.0**
TURN				IAML		08 10 13.0	
	comp=E,35nm,0.6s						
TURN				IAML		08 10 16.0	
	comp=N,53nm,0.3s						
TURN	**Turunc**	**2.02**	**34**	PN	**Pb**	**08 09 41.9**	**-0.2**
BDRM	**Kayabasi**	**2.02**	**14**	*i* P	**Pn**	**08 09 37.7**	**-1.8**
BDRM				*i* S	**Sn**	**08 10 03.6**	**-1.2**
BDRM				IAML		08 10 12.0	
	comp=N,39nm,0.7s						
APE	**Apeiranthos**	**2.24**	**332**	P	**Pn**	**08 09 43.0**	**+0.4**
APE				S	**Sn**	**08 10 10.7**	**+0.4**
	comp=N,78nm,0.5s						
APE	**Apeiranthos**	**2.24**	**332**	PN	**Pn**	**08 09 43.2**	**+0.6**
DALY	**Dalyan (Mula)**	**2.25**	**40**	*i* P	**Pn**	**08 09 44.0**	**+1.4**
DALY				*i* S	**Sg**	**08 10 19.5**	**+1.8**
DALY				IAML		08 10 22.0	
	comp=N,33nm,0.6s						
DALY				IAML		08 10 28.0	
	comp=E,39nm,0.3s						
DALY	**Dalyan (Mula)**	**2.25**	**40**	PN	**Pb**	**08 09 45.1**	**-1.0**
YER	**Yerkesik**	**2.34**	**29**	PN	**Pn**	**08 09 46.1**	**+2.2**
FETY	**Fethiye**	**2.37**	**49**	PN	**Pb**	**08 09 47.2**	**-1.0**
IMMV	**Iera Moni Meta**	**2.38**	**280**	PN	**Pb**	**08 09 46.7**	**-1.6**
AKAS	**Kas**	**2.51**	**62**	*i* P	**Pn**	**08 09 46.7**	**+0.3**
AKAS				*i* S	**Sn**	**08 10 16.9**	**-0.2**
AYDN	**Tasoluk**	**2.69**	**18**	*i* P	**Pn**	**08 09 50.1**	**+1.4**
AYDN				*i* S	**Sn**	**08 10 20.4**	**-1.0**
CAEL	**Denizli, Camel**	**2.84**	**44**	*i* S	**Sb**	**08 10 32.8**	**+1.7**
DGB	**zmir**	**2.95**	**0**	*i* P	**Pn**	**08 09 52.6**	**+0.4**
DGB				*i* S	**Sg**	**08 10 42.6**	**+2.6**
DGB				IAML		08 11 11.0	
	comp=N,21nm,1.3s						
AYDB	**Zeytinkoy-Aydi**	**2.96**	**16**	PN	**Pn**	**08 09 54.9**	**+2.3**
GOLH	**Golhisar**	**3.06**	**45**	*i* P	**Pn**	**08 09 55.9**	**+2.0**
GOLH				*i* S	**Sb**	**08 10 35.2**	**-2.1**
URLA	**Izmir**	**3.26**	**356**	*i* P	**Pn**	**08 09 55.7**	**-0.9**
URLA				*i* S	**Sg**	**08 10 46.5**	**-3.5**
URLA				IAML		08 10 58.0	
	comp=N,10nm,0.9s						
KTHA	**Kythira Island**	**3.30**	**292**	PN	**Pn**	**08 09 59.9**	**+2.8**
MANT	**Manisa**	**3.65**	**21**	*i* P	**Pn**	**08 10 02.6**	**+0.4**
KEPZ	**Antalya-Kepez**	**4.25**	**64**	*i* P	**Pn**	**08 10 11.6**	**+1.4**
KEPZ				*i* S	**Sn**	**08 11 03.1**	**+3.2**
BUHA	**Balikesir, Bur**	**4.40**	**2**	*i* P	**Pn**	**08 10 13.7**	**+1.5**
BUHA				*i* S	Sn	08 10 46.3	-17
GAZI	**Gazipasa**	**4.59**	**74**	*i* P	**Pn**	**08 10 14.2**	**-0.7**
GAZI				*i* S	**Sn**	**08 11 05.4**	**-2.8**
TORD	**Torodi Ar. Bea**	**31.53**	**232**	P	**P**	**08 15 27.4**	**-0.5**
	comp=N,0.4nm,0.8s,baz=48,slow=7.9,SNR=2.0						
KURBB	**Kurchatov Arra**	**40.08**	**51**	P	**P**	**08 16 39.9**	**-0.9**
	comp=N,0.6nm,0.4s,baz=274,slow=9.3,SNR=2.4						
MKAR	**Makanchi Array**	**42.65**	**57**	P	**P**	**08 17 02.4**	**+0.4**
	comp=N,1.0nm,0.6s,baz=282,slow=6.4,SNR=7.7						
ZALV	**Zalesovo Beam**	**44.04**	**46**	P	**P**	**08 17 12.4**	**-0.7**
	comp=N,1.0nm,0.3s,baz=260,slow=7.2,SNR=2.0						

*IDC **27** 08:16:00.8±1.4, 36.57N×72.01E, h0ᵏᵐ, mb3.5/2, mb1 3.7/7, mb1mx3.3/66, mbtmp3.6/7, ML3.5/4, Error ellipse: s-maj=31.0km s-min=22.1km az=119.0*
*NNC **27** 08:16:04.8±4.8, 36.73N×71.38E, h0ᵏᵐ, mb3.8, mpv3.5, Error ellipse: s-maj=40.7km s-min=32.0km az=145.0*

ISC 27 08:16:02.9±1.2, **36.58N**±0.09×**71.7E**±0.1, **h10**ᵏᵐ, **n11**, σ2ᵍ**42/15**, **5C-1D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.43**	**19**	Pn	**Pn**	**08 17 39.1**	**+1.3**
	0.9nm,0.3s,baz=138,slow=3.6,SNR=8.5						
AAK				Sn	**Sn**	**08 18 53.4**	**+2.1**
	0.3nm,0.3s,baz=331,slow=18,SNR=1.7						
AAK	**Ala-Archa**	**6.43**	**19**	||P	**Pn**	**08 17 39.7**	**+1.9**
	5.0nm,1.0s						
AAK				⇑S	**Sn**	**08 18 53.6**	**+2.3**
	11nm,1.2s						
KK31	**Karatay Array**	**6.58**	**353**	P	**Pn**	**08 17 41.9**	**+2.3**
	1.2nm,0.3s,baz=178,slow=12,SNR=15						
KK31				⇑S	**Sn**	**08 18 56.5**	**+1.7**
	1.4nm,0.4s,baz=180,slow=22,SNR=4.6						
GEYT	**Alibeck**	**10.89**	**281**	Pn	**Pn**	**08 18 40.5**	**+1.7**
	1.0nm,0.3s,baz=106,slow=9.1,SNR=4.4						
MKAR	**Makanchi Array**	**12.92**	**34**	Pn	**Pn**	**08 19 05.5**	**-1.0**
	0.0nm,0.3s,baz=221,slow=9.9,SNR=2.1						
KURBB	**Kurchatov Arra**	**14.88**	**17**	Pn	**Pn**	**08 19 30.1**	**-3.1**
	baz=204,slow=10,SNR=1.4						
AB31	**Akbulak array**	**15.29**	**330**	⇑P	**Pn**	**08 19 37.6**	**-1.0**
	0.4nm,0.5s,baz=144,slow=13,SNR=12						
AB31				⇑S	**Sn**	**08 22 22.8**	**-5.1**
	0.9nm,0.6s,baz=159,slow=22,SNR=4.3						
AKTO	**Aktyubinsk**	**16.99**	**329**	P	**P**	**08 20 02.2**	**-0.1**
	0.6nm,0.3s,baz=127,slow=12,SNR=5.3						
AKTO	**Aktyubinsk**	**16.99**	**329**	⇑P	**Pn**	**08 19 59.3**	**-1.2**
	1.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**66.26**	**269**	P	**P**	**08 26 53.1**	**+1.5**
	0.2nm,0.7s,baz=53,slow=7.4,SNR=1.6						
WRA	**Warramunga Arr**	**81.57**	**122**	P	**P**	**08 28 19.3**	**-1.8**
	0.7nm,1.0s,baz=321,slow=5.0,SNR=5.6						

*IDC **27** 08:21:01.0±3.0, 28.06N×84.96E, h0ᵏᵐ, mb3.9/4, mb1 4.0/6, mb1mx3.4/68, mbtmp3.9/6, ML4.2/2, Error ellipse: s-maj=66.0km s-min=38.8km az=39.0*

ISC 27 08:21:02.5±2.2, **28.0N**±0.3×**85.0E**±0.3, **h12**ᵏᵐ, **n6**, σ1ᵍ**24/6**, **mb3.9/4**, **Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.99**	**124**	Pn	**Pn**	**08 24 47.4**	**-0.1**
	0.6nm,0.3s,baz=306,slow=11,SNR=4.4						
MKAR	**Makanchi Array**	**18.84**	**354**	P	**Pn**	**08 25 23.2**	**+0.4**
	0.3nm,0.3s,baz=175,slow=12,SNR=17						
SONM	**Songino Array**	**25.86**	**34**	P	**P**	**08 26 34.9**	**+0.8**
	0.5nm,0.5s,baz=205,slow=6.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**25.89**	**360**	P	**P**	**08 26 32.2**	**-1.9**
	1.3nm,0.3s,baz=189,slow=8.2,SNR=2.5						
FINES	**FINESS Array B**	**50.98**	**328**	P	**P**	**08 30 04.1**	**+0.4**
	1.0nm,0.8s,baz=136,slow=6.6,SNR=3.8						
ARCES	**ARCESS Array B**	**53.43**	**338**	P	**P**	**08 30 22.4**	**+0.4**
	3.3nm,1.0s,baz=96,slow=8.3,SNR=3.9						

*IDC **27** 08:21:26.2±1.0, 13.39N×121.26E, h0ᵏᵐ, mb3.7/7, mb1 3.8/7, mb1mx3.5/64, mbtmp3.7/7, MS3.1/10, Ms1 3.1/10, ms1mx2.9/57, Error ellipse: s-maj=35.8km s-min=9.6km az=66.0*
*MAN **27** 08:21:26.9, 13.72N×121.46E, h13ᵏᵐ, MS3.6*
MAN INTENSITY IV - SAN JUAN.

ISC 27 08:21:26.7±0.7, **13.51N**±0.04×**121.46E**±0.04, **h10**ᵏᵐ, **n26**, σ2ᵍ**09/25**, **mb3.5/7**, **MS3.1/8**, **2C-4D**, **Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.49**	**269**	||*e*P	**Pn**	**08 21 38.2**	**-1.7**
PGP				*i* S	**Sn**	**08 21 46.9**	**+4.1**
LQP	**Lukban**	**0.60**	**7**	||*e*P	**Pg**	**08 21 36.0**	**-2.5**
LQP				*i* S	**Sn**	**08 21 49.5**	**-1.9**
TGY	**Tagaytay City**	**0.78**	**319**	Pg	**Pg**	**08 21 40.7**	**-1.1**
	420nm,0.3s,baz=138,slow=2.7,SNR=15						
TGY				Lg	Lg	08 21 52.0	
	2μm,0.3s,baz=84,slow=18,SNR=15						
TGY	**Tagaytay City**	**0.78**	**319**	||*e*P	**Pb**	**08 21 41.4**	**-1.0**
TGY				*i* S	**Sn**	**08 21 53.1**	**-2.4**
GQP	**Guinayangan**	**1.04**	**68**	||*e*P	**Pg**	**08 21 45.0**	**-1.6**
GQP				*e*S	**Sb**	**08 21 59.2**	**-1.2**
MACP	**Maragondon, Ca**	**1.04**	**316**	*e*P	**Pg**	**08 21 43.8**	**-2.9**
MACP				*e*S	**Sg**	**08 21 58.6**	**-1.6**
LUBP	**Lubang**	**1.20**	**281**	*e*P	**Pn**	**08 21 48.0**	**-1.5**
LUBP				*e*S	**Sg**	**08 22 04.6**	**-0.8**
CUYO	**Cuyo Island**	**2.68**	**189**	*e*P	**Pb**	**08 22 12.8**	**-2.0**
JAP	**San Jose, Anti**	**2.79**	**170**	||*e*P	**Pn**	**08 22 09.7**	**-1.7**
ENPP	**El Nido**	**3.03**	**221**	*e*P	**Pb**	**08 22 18.1**	**-2.7**
ENPP				*e*S	**Sn**	**08 22 53.3**	**+2.1**
CVP	**Callao Caves**	**4.18**	**5**	||*e*P	**Pn**	**08 22 31.4**	**+0.8**
DAV	**Davao City (W)**	**7.58**	**147**	LR	LR	08 26 31.4	
	comp=Z,116nm,21.3s,baz=203,slow=40						
KAPI	**Kappang**	**18.48**	**185**	LR	LR	08 33 01.7	
	comp=Z,63nm,18.8s,baz=18,slow=38						
CMAR	**Chiang Mai Arr**	**22.19**	**286**	P	**P**	**08 26 24.4**	**+1.0**
	0.8nm,0.4s,baz=95,slow=7.1,SNR=1.4						
CMAR				LR	LR	08 34 43.6	
	comp=Z,20nm,20.0s,baz=115,slow=36						
KSRS	**Korea Array**	**24.53**	**12**	LR	LR	08 36 06.9	
	comp=Z,34nm,20.9s,baz=208,slow=36						
USRK	**Ussuriysk Ar.**	**31.89**	**14**	P	**P**	**08 27 55.4**	**+3.3**
	3.7nm,0.8s,baz=210,slow=11,SNR=6.4						
PMG	**Port Moresby**	**34.19**	**130**	LR	LR	08 43 46.9	
	comp=Z,23nm,19.6s,baz=164,slow=39						
WRA	**Warramunga Arr**	**35.58**	**159**	P	**P**	**08 28 24.8**	**+0.3**
	0.4nm,0.5s,baz=331,slow=11,SNR=7.3						
SONM	**Songino Array**	**36.45**	**343**	P	**P**	**08 28 32.5**	**+0.6**
	0.5nm,0.6s,baz=164,slow=10,SNR=2.1						
SONM				LR	LR	08 45 47.1	
	comp=Z,35nm,18.3s,baz=204,slow=40						
ASAR	**Alice Springs**	**38.90**	**162**	P	**P**	**08 28 52.8**	**+0.1**
	0.3nm,0.4s,baz=344,slow=7.4,SNR=8.8						
PETK	**Petropavlovsk-**	**48.84**	**28**	P	**P**	**08 30 15.3**	**+3.0**
	3.1nm,0.7s,baz=222,slow=2.0,SNR=4.9						
STKA	**Stephens Creek**	**49.08**	**157**	LR	LR	08 51 37.4	
	comp=Z,21nm,20.3s,baz=210,slow=37						
AAK	**Ala-Archa**	**49.72**	**315**	LR	LR	08 53 12.8	
	comp=Z,29nm,18.3s,baz=64,slow=38						
KURBB	**Kurchatov Arra**	**50.76**	**326**	P	**P**	**08 30 27.4**	**+0.6**
	0.4nm,0.6s,baz=127,slow=8.4,SNR=2.4						
TIXI	**Tiksi**	**58.28**	**3**	LR	LR	08 59 31.5	
	comp=Z,25nm,19.1s,baz=273,slow=39						
NOA	**NORSAR Array B**	**87.77**	**333**	LR	LR	09 16 17.3	
	comp=Z,16nm,19.9s,baz=50,slow=38						

*DDA **27** 08:23:59.3, 34.72N×26.44E, h6ᵏᵐ±5ᵏᵐ, ML3.4*
*ATH **27** 08:24:00.4, 34.76N×27.04E, h7ᵏᵐ±2ᵏᵐ, ML3.6/6, Error ellipse: s-maj=4.0km s-min=1.4km az=350.0*
*THE **27** 08:24:04.4, 35.00N×26.86E, h0ᵏᵐ±2ᵏᵐ, ML3.4/6, Error ellipse: s-maj=5.9km s-min=1.0km az=154.0*
*IDC **27** 08:24:05.4±1.1, 35.00N×26.89E, h0ᵏᵐ, mb3.5/7, mb1 3.6/12, mb1mx3.5/65, mbtmp3.5/12, ML3.8/5, MS2.7/3, Ms1 2.7/3, ms1mx2.2/47, Error ellipse: s-maj=25.4km s-min=11.6km az=1.0*
*ISK **27** 08:24:05.9, 35.31N×26.75E, h5ᵏᵐ, ML3.5/20*

ISC 27 08:24:05.1±1.4, **35.05N**±0.04×**26.86E**±0.02, **h3**ᵏᵐ±9ᵏᵐ, **n87**, σ1ᵍ**59/118**, **mb3.5/7**, **1C**, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.53**	**277**	P	**Pg**	**08 24 14.7**	**-0.5**
ZKR				S	**Sb**	**08 24 25.9**	**+0.8**
ZKR				AML	AML	08 24 27.0	
	comp=E,11805μm,0.9s						
ZKR				AML	AML	08 24 30.9	
	comp=N,3692μm,0.6s						
ZKR	**Zakros**	**0.53**	**277**	P	**Pg**	**08 24 14.7**	**-0.5**
ZKR				S	**Sb**	**08 24 24.0**	**-1.1**
	comp=N,4μm,0.8s						
ZKR	**Zakros**	**0.53**	**277**	PG	**Pg**	**08 24 14.7**	**-0.5**
ZKR				SG	**Sb**	**08 24 24.2**	**-0.9**
KARP	**Karpathos**	**0.56**	**27**	P	**Pg**	**08 24 15.0**	**-0.8**
KARP				S	**Sb**	**08 24 26.1**	**+0.1**
KARP				AML	AML	08 24 26.8	
	comp=E,48068μm,0.2s						
KARP				AML	AML	08 24 26.9	
	comp=N,79823μm,0.5s						
KARP	**Karpathos**	**0.56**	**27**	P	**Pb**	**08 24 17.5**	**-0.1**
KARP				S	**Sb**	**08 24 25.4**	**-0.6**
	comp=N,36μm,0.4s						
KARP	**Karpathos**	**0.56**	**27**	PG	**Pg**	**08 24 15.2**	**-0.6**
STIA	**Sitia Lasithi**	**0.65**	**284**	P	**Pg**	**08 24 16.8**	**-0.7**
STIA				S	**Sb**	**08 24 29.5**	**+1.1**
NPS	**Neapolis**	**1.04**	**282**	P	**Pg**	**08 24 24.4**	**-0.6**
NPS				S	**Sn**	**08 24 41.3**	**-0.4**
NPS				AML	AML	08 24 45.6	
	comp=E,3921μm,0.6s						
NPS				AML	AML	08 24 50.1	
	comp=N,3881μm,0.6s						
NPS	**Neapolis**	**1.04**	**282**	P	**Pg**	**08 24 24.5**	**-0.6**
NPS				S	**Sn**	**08 24 40.9**	**-0.8**
	comp=N,2μm,0.8s						
LAST	**Lasithi**	**1.14**	**276**	P	**Pg**	**08 24 25.6**	**-1.3**
LAST				AML	AML	08 24 53.3	
	comp=E,2722μm,0.6s						
LAST				AML	AML	08 24 58.2	
	comp=N,3290μm,0.7s						
LAST	**Lasithi**	**1.14**	**276**	P	**Pg**	**08 24 26.0**	**-0.9**
LAST				S	**Sn**	**08 24 43.2**	**-0.9**
	comp=N,1μm,0.6s						
HRKL	**Herakleio**	**1.46**	**281**	PN	**Pn**	**08 24 31.9**	**-0.5**
ARG	**Arkhangelos**	**1.56**	**41**	P	**Pn**	**08 24 31.9**	**-1.8**
ARG				S	**Sn**	**08 24 51.7**	**-2.8**
ARG				AML	AML	08 25 02.6	
	comp=E,4572μm,0.4s						
ARG				AML	AML	08 25 04.2	
	comp=N,2621μm,0.6s						
ARG	**Arkhangelos**	**1.56**	**41**	P	**Pn**	**08 24 32.8**	**-0.9**
ARG				S	**Sn**	**08 24 53.9**	**-0.6**
	comp=N,2μm,0.6s						
ARG	**Arkhangelos**	**1.56**	**41**	PN	**Pb**	**08 24 34.3**	**-0.3**
ARG				SN	**Sb**	**08 24 55.0**	**+0.3**
NIS1	**Nisyros Isl.**	**1.57**	**9**	PN	**Pn**	**08 24 32.4**	**-1.6**
NISR	**Nisiros**	**1.58**	**8**	P	**Pn**	**08 24 31.9**	**-2.1**
IDI	**Anoyia**	**1.63**	**279**	Pg	**Pg**	**08 24 35.8**	**-0.5**
	comp=N,16nm,0.3s,baz=78,slow=17,SNR=38						
IDI				Lg	Lg	08 24 58.2	
	comp=N,30nm,0.3s,baz=117,slow=20,SNR=6.3						
IDI	**Anoyia**	**1.63**	**279**	P	**Pn**	**08 24 33.4**	**-1.3**
IDI				AML	AML	08 25 06.1	
	comp=N,1863μm,0.6s						
IDI				AML	AML	08 25 08.7	
	comp=E,1696μm,0.6s						
IDI	**Anoyia**	**1.63**	**279**	P	**Pb**	**08 24 34.6**	**-1.2**
IDI	**Anoyia**	**1.63**	**279**	PN	**Pb**	**08 24 35.3**	**-0.5**
KOSK	**Kos Island**	**1.70**	**3**	PN	**Pn**	**08 24 34.6**	**-1.1**
BODT	**Bodrum**	**2.04**	**10**	PN	**Pn**	**08 24 39.2**	**-1.2**
BODT				SN	**Sn**	**08 25 03.0**	**-3.5**
TURN	**Turunc**	**2.06**	**33**	*i* P	**Pn**	**08 24 39.8**	**-0.8**
TURN				*i* S	**Sg**	**08 25 12.7**	**+1.4**
TURN				IAML		08 25 16.0	
	comp=E,210nm,0.3s						
TURN				IAML		08 25 17.0	
	comp=N,282nm,0.8s						
TURN	**Turunc**	**2.06**	**33**	PN	**Pn**	**08 24 40.8**	**+0.2**
BDRM	**Kayabasi**	**2.07**	**13**	*i* P	**Pn**	**08 24 39.8**	**-0.9**
BDRM				*i* S	**Sb**	**08 25 09.9**	**+0.4**
BDRM				IAML		08 25 30.0	
	comp=N,157nm,1.0s						
GVDS	**Gavdos**	**2.28**	**266**	PN	**Pb**	**08 24 45.9**	**-1.0**
GVD	**Gavdhos**	**2.28**	**266**	PN	**Pb**	**08 24 45.7**	**-1.3**
APE	**Apeiranthos**	**2.29**	**332**	P	**Pn**	**08 24 41.7**	**-2.1**
APE				S	**Sn**	**08 25 11.3**	**-1.2**
	comp=N,365nm,0.8s						
APE	**Apei

GNI	**Garni**	**15.06**	**65**	LR	LR	08 33 18.8	
	comp=N,18nm,19.2s,baz=346,slow=37						
MODS	**Modra-Piesok**	**15.10**	**335**	*e*PN	**Pn**	**08 27 33.9**	**-5.3**
MODS	**Modra-Piesok**	**15.10**	**335**	*e*P	**P**	**08 27 48.7**	**+4.1**
AKASG	**Malin Array Be**	**15.74**	**6**	Pn	**Pn**	**08 27 48.6**	**+1.0**
	comp=N,0.7nm,0.3s,baz=195,slow=10,SNR=4.6						
GERES	**GERESS Array B**	**16.87**	**329**	Pn	**P**	**08 28 04.0**	**-0.4**
	comp=N,0.2nm,0.3s,baz=141,slow=14,SNR=7.4						
ESDC	**Sonseca Array**	**24.86**	**290**	P	**P**	**08 29 28.6**	**-0.4**
	comp=N,0.4nm,0.7s,baz=82,slow=11,SNR=1.7						
NOA	**NORSAR Array B**	**27.88**	**344**	LR	LR	08 41 19.4	
	comp=N,11nm,19.2s,baz=315,slow=37						
TORD	**Torodi Ar. Bea**	**31.50**	**232**	P	**P**	**08 30 29.3**	**+0.9**
	comp=N,0.3nm,0.4s,baz=43,slow=9.8,SNR=2.4						
ARCES	**ARCESS Array B**	**34.55**	**359**	P	**P**	**08 30 56.4**	**+1.9**
	comp=N,0.9nm,0.7s,baz=208,slow=18,SNR=8.4						
KURBB	**Kurchatov Arra**	**40.11**	**51**	P	**P**	**08 31 41.9**	**0.0**
	comp=N,0.7nm,0.6s,baz=277,slow=8.7,SNR=3.5						
MAKZ	**Makanchi**	**42.46**	**57**	⇑Lg	Lg	08 32 04.2	
	comp=N,2.0nm,1.1s						
MKAR	**Makanchi Array**	**42.68**	**57**	P	**P**	**08 32 03.6**	**+0.5**
	comp=N,0.7nm,0.5s,baz=276,slow=7.5,SNR=5.9						
MKAR				LR	LR	08 52 25.2	
	comp=N,18nm,19.0s,baz=19,slow=40						
SONM	**Songino Array**	**58.48**	**51**	P	**P**	**08 34 03.3**	**+0.7**
	comp=N,0.3nm,0.5s,baz=270,slow=9.5,SNR=2.1						
YKA	**Yellowknife Ar**	**77.97**	**343**	P	**P**	**08 36 06.2**	**+1.9**
	comp=N,0.2nm,0.8s,baz=49,slow=6.8,SNR=3.8						

*IDC **27** 08:30:43.8±2.2,50.°17N×19.°00E,h0km,mb1 3.5/2, mb1mx3.0/58,mbtmp3.5/2,ML2.8/2,Error ellipse: s-maj=43.3km s-min=11.3km az=136.0*
*PRU **27** 08:30:43.2±0.0,50.°23N×18.°89E,h0km*
ISC 27 08:30:41.1±0.8,**50.°25N**±0.°04×**18.°99E**±0.°03,**h0**km,**n23,** σ0§**94**/40,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.68**	**233**	*e*PG	**Pg**	**08 30 53.6**	**-0.6**
OKC				*e*SG	**Sg**	**08 31 02.8**	**-0.2**
	comp=Z,21nm,0.3s						
MORC	**Moravsky Berou**	**1.04**	**244**	*e*PG	**Pb**	**08 31 01.7**	**-0.4**
MORC				*e*SG	**Sg**	**08 31 14.0**	**-0.7**
LANS	**Liptovska Anna**	**1.15**	**164**	*e*PG	**Pb**	**08 31 04.1**	**+0.3**
LANS				*e*SG	**Sb**	**08 31 19.7**	**+0.4**
LANS				*e*LG	Lg	08 31 24.5	
NIE	**Niedzica**	**1.19**	**134**	*e*Pg	**Pn**	**08 31 05.3**	**+0.2**
NIE				*e*Sg	**Sn**	**08 31 22.6**	**+0.6**
KRLC	**Kraliky**	**1.43**	**264**	*e*PG	**Pn**	**08 31 07.9**	**-0.5**
KRLC				*e*SG	**Sn**	**08 31 28.2**	**+0.3**
	comp=Z,15nm,0.3s						
JAVC	**Velka Javorina**	**1.64**	**212**	*e*PG	**Pg**	**08 31 14.4**	**+1.9**
JAVC				*e*SG	**Sg**	**08 31 34.9**	**+1.3**
VYHS	**Vyhne**	**1.76**	**183**	*e*PN	**Pn**	**08 31 13.0**	**+0.1**
VYHS				*e*SN	**Sn**	**08 31 36.4**	**+0.4**
VYHS				*e*LG	Lg	08 31 40.6	
OSTC	**Ostas**	**1.80**	**281**	*e*PG	**Pb**	**08 31 14.7**	**-0.2**
OSTC				*e*SG	**Sg**	**08 31 40.2**	**+1.3**
	comp=Z,11nm,0.7s						
VRAC	**Vranov**	**1.81**	**240**	Pn	**Pb**	**08 31 14.7**	**-0.5**
	3.1nm,0.3s,baz=57,slow=14,SNR=12						
VRAC				Lg	Lg	08 31 39.2	
	2.9nm,0.3s,baz=148,slow=22,SNR=8.5						
VRAC	**Vranov**	**1.81**	**240**	*e*PN	**Pn**	**08 31 14.2**	**+0.6**
VRAC				*e*SG	**Sb**	**08 31 38.5**	**0.0**
KSIA	**Ksiaz**	**1.82**	**290**	*e*Pb	**Pb**	**08 31 14.9**	**-0.4**
KSP				*e*Pg	**Pg**	**08 31 16.9**	**+1.0**
KSP				*e*Sg	**Sg**	**08 31 40.9**	**+1.4**
CHVC	**Chvalec**	**1.90**	**281**	*e*PG	**Pn**	**08 31 15.8**	**+0.9**
CHVC				*e*SG	**Sg**	**08 31 43.7**	**+1.4**
	comp=Z,17nm,0.8s						
UPC	**Upice**	**1.92**	**279**	*e*PG	**Pb**	**08 31 17.1**	**+0.1**
UPC				*e*SG	**Sg**	**08 31 44.9**	**+2.1**
	comp=Z,17nm,1.0s						
KECS	**Kecovo**	**2.02**	**150**	*e*SN	**Sg**	**08 31 46.4**	**+0.3**
KRUC	**Moravsky**	**2.06**	**236**	*e*PN	**Pn**	**08 31 17.5**	**+0.5**
CRVS	**Cervenica-Dubn**	**2.10**	**129**	*e*PN	**Pg**	**08 31 21.1**	**-0.3**
CRVS				*e*SN	**Sg**	**08 31 49.4**	**+0.7**
MODS	**Modra-Piesok**	**2.19**	**211**	*e*PG	**Pg**	**08 31 23.9**	**+0.9**
MODS				*e*SG	**Sg**	**08 31 50.9**	**-0.4**
PRU	**Pruhonice**	**2.87**	**266**	*e*PG	**Pb**	**08 31 33.2**	**0.0**
PRU				*e*SG	**Sg**	**08 32 12.6**	**-0.7**
	comp=Z,5.7nm,0.7s						
CKRC	**Cesky Krumlov**	**3.37**	**247**	*e*SG	**Sg**	**08 32 26.9**	**-2.3**
KHC	**Kasperske Hory**	**3.69**	**254**	*e*PG	**Pb**	**08 31 46.9**	**-0.2**
KHC				*e*SG	**Sg**	**08 32 39.0**	**-0.5**
	comp=Z,5.0nm,0.5s						
GERES	**GERESS Array B**	**3.72**	**250**	Pg	**Pg**	**08 31 51.6**	**-0.8**
	1.1nm,0.3s,baz=62,slow=17,SNR=8.7						
GERES				Lg	Lg	08 32 42.7	
	1.3nm,0.3s,baz=63,slow=29,SNR=5.1						
FINES	**FINESS Array B**	**11.89**	**17**	Pn	**Pn**	**08 33 29.9**	**-1.9**
	0.1nm,0.3s,baz=196,slow=12,SNR=4.7						
ARCES	**ARCESS Array B**	**19.60**	**7**	Pn	**P**	**08 35 10.8**	**+0.2**
	baz=193,slow=9.9,SNR=4.2						

*NEIC **27** 08:33:36.1±2.6,16.°28S±0.°08×72.°74W±0.°09,h35km±2km, Error ellipse: s-maj=17.0km s-min=9.9km az=227.0*
*ARE **27** 08:33:36±2.5,16.°27S±0.°09×72.°75W±0.°09,h36km±3km, ML4.3,mb4.7/12(NEIC),Error ellipse: s-maj=14.7km s-min=9.7km az=48.0*
*IDC **27** 08:33:43.4±2.8,15.°72S×72.°25W,h89km±20km,mb3.8/7, mb1 3.9/11,mb1mx3.6/45,mbtmp4.1/11,MS2.8/4, Ms1 2.8/4,ms1mx2.6/33,Error ellipse: s-maj=50.0km s-min=17.4km az=22.0*
ISC 27 08:33:39.1±0.6,**16.°34S**±0.°07×**72.°54W**±0.°08,**h76**km,**n59,** σ1§**69**/62,**mb4.3**/13,**Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**2.91**	**134**	*e*P	**Pn**	**08 34 25.8**	**+2.5**
AP01				*e*S	**Sn**	**08 34 59.9**	**+2.7**
AP01	**Chacalluta**	**2.91**	**134**	Pn	**Pn**	**08 34 21.4**	**-1.8**
AP01				Sn	**Sn**	**08 35 00.9**	**+3.7**
MNMC	**Minye Minye**	**3.95**	**135**	*e*P	**Pn**	**08 34 37.9**	**+0.3**
MNMC	**Minye Minye**	**3.95**	**135**	Pn	**Pn**	**08 34 38.6**	**+1.0**
PSGCX	**Pisagua**	**3.98**	**145**	Pn	**Pn**	**08 34 37.4**	**-0.4**
LPAZ	**La Paz**	**4.23**	**90**	P	**Pn**	**08 34 45.0**	**+3.3**
	2.0nm,0.3s,baz=272,slow=10,SNR=126						
LPAZ				LR	LR	08 36 46.2	
	comp=Z,189nm,20.2s,baz=272,slow=46						
LPAZ	**La Paz**	**4.23**	**90**		**Pn**	**08 34 45.2**	**+3.5**
LPAZ	**La Paz**	**4.23**	**90**	*e*P	**Pn**	**08 34 45.2**	**+3.5**
PB11	**IPOC Station P**	**4.37**	**142**	*e*P	**Pn**	**08 34 43.0**	**-0.3**
PB11	**IPOC Station P**	**4.37**	**142**	Pn	**Pn**	**08 34 43.1**	**-0.1**
TA02	**Huaiquique**	**4.53**	**150**		**Pn**	**08 34 45.2**	**-0.1**
TA01	**Diego Aracena**	**4.76**	**152**	Pn	**Pn**	**08 34 47.9**	**-0.6**
PB08	**IPOC Station P**	**4.97**	**140**	Pn	**Pn**	**08 34 52.0**	**+0.4**
PATCX	**Punta Patache**	**5.00**	**154**	Pn	**Pn**	**08 34 51.1**	**-0.7**
PB01	**IPOC Station P**	**5.50**	**149**	Pn	**Pn**	**08 34 58.0**	**-0.6**
PB07	**IPOC Station P**	**5.92**	**155**	Pn	**Pn**	**08 35 03.2**	**-1.2**
NNA	**Nana**	**6.01**	**315**	P	**Pn**	**08 35 06.2**	**+0.6**
	2.8nm,0.3s,baz=133,slow=12,SNR=6.2						
NNA				S	**Sn**	**08 36 18.4**	**+5.3**
	6.7nm,0.3s,baz=230,slow=23,SNR=6.4						
NNA				LR	LR	08 37 43.7	
	comp=Z,95nm,20.4s,baz=144,slow=41						
NNA	**Nana**	**6.01**	**315**	Pn	**Pn**	**08 35 02.2**	**-3.4**
PB09	**IPOC Station P**	**6.26**	**151**	Pn	**Pn**	**08 35 09.6**	**+0.5**
PB04	**IPOC Station P**	**6.38**	**160**	Pn	**Pn**	**08 35 09.2**	**-1.4**
PB06	**IPOC Station P**	**6.93**	**157**	Pn	**Pn**	**08 35 16.9**	**-1.3**
LVC	**Limon Verde**	**7.12**	**152**	P	**Pn**	**08 35 21.2**	**+0.3**
	2.9nm,0.3s,baz=334,slow=9.1,SNR=25						
LVC				S	**Sn**	**08 36 42.2**	**+1.7**
	4.4nm,0.3s,baz=99,slow=21,SNR=6.4						
LVC				LR	LR	08 38 04.2	
	comp=Z,86nm,19.1s,baz=314,slow=34						
PB10	**IPOC Station P**	**7.38**	**166**	Pn	**Pn**	**08 35 22.4**	**-1.8**
PB15	**IPOC Station P**	**7.42**	**158**	Pn	**Pn**	**08 35 23.8**	**-1.2**
GO02	**Mina Guanaco**	**9.21**	**163**	Pn	**Pn**	**08 35 48.7**	**-0.7**
AC02	**Maricunga**	**10.92**	**164**	Pn	**Pn**	**08 36 13.7**	**+0.7**
SIV	**San Ignacio**	**11.02**	**90**	P	**Pn**	**08 36 13.4**	**-0.6**
	0.3nm,0.3s,baz=278,slow=11,SNR=9.4						
SIV				LR	LR	08 40 13.4	
	comp=Z,17nm,20.9s,baz=277,slow=36						
SAML	**Samuel**	**11.71**	**52**		**Pn**	**08 36 20.4**	**-3.0**
PTGA	**Pitinga**	**19.85**	**40**	P	**P**	**08 38 00.2**	**-3.9**
	0.8nm,0.3s,baz=206,slow=14,SNR=9.4						
PTGA	**Pitinga**	**19.85**	**40**	P	**P**	**08 38 03.2**	**-1.0**
ORTC	**Ortega, Tolima**	**20.29**	**352**	*e*P	**P**	**08 38 08.4**	**-0.6**
TOLC	**Tolima**	**20.97**	**352**	*e*P	**P**	**08 38 18.1**	**+1.5**
GUY2C	**Guyana, Caldas**	**21.60**	**352**	*e*P	**P**	**08 38 23.8**	**+0.3**
CBOC	**Ciudad Bolivar**	**22.32**	**351**	*e*P	**P**	**08 38 30.0**	**-0.9**
PTBC	**PUERTO BERRIO,**	**22.81**	**355**	*e*P	**P**	**08 38 34.0**	**-1.8**
SMLC	**San Martn de**	**25.02**	**356**	*e*P	**P**	**08 38 54.5**	**-1.7**
WHTX	**Lake Whitney,**	**53.66**	**334**	P	**P**	**08 42 53.4**	**+0.3**
WHTX				IAmb	IAmb	08 42 54.3	
	comp=Z,6.8nm,0.8s						
MIAR	**Mount Ida**	**54.41**	**339**	P	**P**	**08 42 58.8**	**+0.3**
MIAR				IAmb	IAmb	08 44 26.1	
	comp=Z,14nm,1.6s						
TXAR	**Lajitas Array**	**54.45**	**326**	P	**P**	**08 42 59.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=147,slow=8.1,SNR=7.9						
TXAR	**Lajitas Array**	**54.45**	**326**	P	**P**	**08 42 59.5**	**+0.5**
TX31	**Lajitas Ar. Si**	**54.45**	**326**	P	**P**	**08 43 00.1**	**+1.0**
TX32	**Lajitas Array**	**54.45**	**326**	P	**P**	**08 42 60.0**	**+1.0**
W39A	**Magazine**	**55.07**	**339**	P	**P**	**08 43 04.6**	**+1.3**
W39A				IAmb	IAmb	08 44 05.5	
	comp=Z,8.7nm,1.3s						
FCAR	**Ozark Folk Cen**	**55.15**	**341**	P	**P**	**08 43 04.0**	**+0.2**
FCAR				IAmb	IAmb	08 44 54.3	
	comp=Z,16nm,1.7s						
U40A	**Yellville**	**55.81**	**340**	P	**P**	**08 43 08.0**	**-0.6**
U40A				IAmb	IAmb	08 43 08.8	
	comp=Z,3.0nm,0.8s						
S44A	**Carbondale**	**55.99**	**344**	P	**P**	**08 43 09.4**	**-0.4**
SIUC	**Southern Illin**	**56.01**	**344**	P	**P**	**08 43 09.5**	**-0.4**
SIUC				IAmb	IAmb	08 43 09.9	
	comp=Z,6.8nm,0.7s						
ANMO	**Albuquerque**	**60.32**	**328**	P	**P**	**08 43 40.4**	**0.0**
	comp=Z,0.9nm,0.6s,baz=127,slow=8.2,SNR=5.5						
ANMO	**Albuquerque**	**60.32**	**328**	IAmb	IAmb	08 43 42.2	
	comp=Z,1.3nm,0.9s						
ULM	**Lac du Bonnet**	**69.41**	**344**	P	**P**	**08 44 38.1**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=126,slow=6.4,SNR=5.9						
DBIC	**Dimbokro**	**70.73**	**77**	P	**P**	**08 44 46.9**	**-0.8**
	comp=Z,2.1nm,0.5s,baz=218,slow=3.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**78.99**	**73**	P	**P**	**08 45 35.5**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=256,slow=5.1,SNR=12						
TORD	**Torodi Ar. Bea**	**78.99**	**73**	P	**P**	**08 45 35.9**	**+0.6**
ESDC	**Sonseca Array**	**84.67**	**46**	P	**P**	**08 46 05.1**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=257,slow=5.1,SNR=6.3						
YKA	**Yellowknife Ar**	**85.22**	**342**	P	**P**	**08 46 07.3**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=149,slow=1.9,SNR=1.2						
WRA	**Warramunga Arr**	**135.31**	**217**	PKP	**PKiKP**	**08 52 52.9**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=322,slow=1.8,SNR=7.8						
SONM	**Songino Array**	**148.58**	**1**	PKPbc	**PKiKP**	**08 53 19.0**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=322,slow=1.8,SNR=7.8						
SONM	**Songino Array**	**148.58**	**1**	PKPbc	**PKiKP**	**08 53 19.2**	**+0.1**
KSRS	**Korea Array**	**152.27**	**323**	PKPbc	**PKiKP**	**08 53 28.9**	**+2.2**
	comp=Z,0.8nm,0.6s,baz=32,slow=2.4,SNR=2.2						

*IDC **27** 08:37:29.8±1.6,45.°72N×151.°61E,h46km±8km,mb3.5/9, mb1 3.6/14,mb1mx3.4/62,mbtmp3.7/14,ML3.3/4,MS3.3/9, Ms1 3.3/9,ms1mx2.9/48,Error ellipse: s-maj=39.7km s-min=16.4km az=162.0*
ISC 27 08:37:30.2±1.2,**45.°7N**±0.°2×**151.°6E**±0.°1,**h50**km,**n27,** σ0§**66**/18,**mb3.6**/11,**MS3.5**/5,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**6.58**	**259**	P	**Pn**	**08 39 05.2**	**+0.9**
	0.6nm,0.3s,baz=27,slow=14,SNR=1.6						
ASAJ				LR	LR	08 42 02.6	
	comp=Z,149nm,19.0s,baz=180,slow=41						
PETK	**Petropavlovsk-**	**8.39**	**26**	P	**Pn**	**08 39 29.4**	**+0.3**
	0.4nm,0.3s,baz=234,slow=12,SNR=1.3						
KLR	**Kul'dur**	**13.86**	**292**	LR	LR	08 46 39.1	
	comp=Z,101nm,18.0s,baz=94,slow=40						
MA2	**Magadan**	**13.88**	**358**	LR	LR	08 46 17.8	
	comp=Z,48nm,19.4s,baz=200,slow=38						
USRK	**Ussuriysk Ar.**	**13.96**	**271**	P	**Pn**	**08 40 44.0**	**-1.0**
	baz=84,slow=15,SNR=3.2						
USRK				LR	LR	08 46 31.7	
	comp=Z,89nm,19.0s,baz=7.4,slow=39						
SEY	**Seymchan**	**17.25**	**1**	P	**Pn**	**08 41 27.4**	**+0.3**
	0.2nm,0.3s,baz=90,slow=21,SNR=4.6						
KSRS	**Korea Array**	**19.48**	**253**	P	**Pn**	**08 41 53.9**	**-0.4**
	0.3nm,0.3s,baz=58,slow=11,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**28.85**	**149**	T	T	09 13 56.9	
	baz=338,SNR=46						
H11N1	**WAKE ISLAND Hy**	**28.86**	**149**	T	T	09 13 58.3	
	baz=338,slow=74,SNR=27						
H11N3	**WAKE ISLAND Hy**	**28.86**	**149**	T	T	09 13 58.4	
	baz=338,SNR=30						
H11S1	**WAKE ISLAND Hy**	**29.90**	**150**	T	T	09 15 17.6	
	baz=336,slow=74,SNR=43						
H11S3	**WAKE ISLAND Hy**	**29.91**	**150**	T	T	09 15 25.1	
	baz=336,slow=74,SNR=23						
H11S2	**WAKE ISLAND Hy**	**29.92**	**150**	T	T	09 15 26.9	
	baz=336,slow=74,SNR=24						
SONM	**Songino Array**	**30.68**	**291**	P	**P**	**08 43 39.3**	**-0.7**
	0.4nm,0.5s,baz=64,slow=10,SNR=4.0						
SONM				LR	LR	08 57 31.2	
	comp=Z,86nm,18.2s,baz=104,slow=39						
TLY	**Talaya**	**31.72**	**298**	LR	LR	08 57 57.4	
	comp=Z,77nm,18.1s,baz=98,slow=39						
ZALV	**Zalesovo Beam**	**42.35**	**306**	LR	LR	09 04 24.3	
	comp=Z,84nm,18.1s,baz=102,slow=38						
INK	**Inuvik**	**43.08**	**32**	P	**P**	**08 45 24.4**	**-0.3**
	1.0nm,0.9s,baz=315,slow=5.3,SNR=4.2						
INK				pP	**pP**	**08 45 37.9**	**+0.1**
	1.3nm,0.9s,baz=307,slow=13,SNR=2.5						
MKAR	**Makanchi Array**	**46.47**	**298**	P	**P**	**08 45 52.5**	**+0.4**
	0.4nm,0.5s,baz=62,slow=6.1,SNR=6.0						
YKA	**Yellowknife Ar**	**52.38**	**36**	P	**P**	**08 46 36.8**	**+0.1**
	0.4nm,0.8s,baz=301,slow=7.0,SNR=5.6						
YKA				pP	**pP**	**08 46 49.3**	**-0.6**
	0.6nm,0.8s,baz=295,slow=6.9,SNR=6.3						
ARCES	**ARCESS Array B**	**58.46**	**341**	P	**P**	**08 47 20.9**	**+0.5**
	3.0nm,0.9s,baz=43,slow=6.4,SNR=8.3						
ARCES				LR	LR	09 16 15.2	
	comp=Z,19nm,18.0s,baz=60,slow=40						
SUMG	**Summit**	**61.79**	**3**	*i* P	**P**	**08 47 44.5**	**+1.0**
SUMG				IAmb	IAmb	08 47 46.8	
	comp=Z,4.7nm,0.9s						
NVAR	**Mina Array Bea**	**63.85**	**61**	P	**P**	**08 47 57.7**	**0.0**
	comp=Z,0.2nm,0.4s,baz=306,slow=7.7,SNR=2.2						
FINES	**FINESS Array B**	**64.50**	**334**	P	**P**	**08 48 00.8**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=34,slow=8.5,SNR=18						
FINES				pP	**pP**	**08 48 13.8**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=37,slow=7.6,SNR=2.4						
NOA	**NORSAR Array B**	**68.84**	**341**	P	**P**	**08 48 29.3**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=27,slow=6.5,SNR=3.8						
ASAR	**Alice Springs**	**70.91**	**197**	pP	pP	08 48 54.8	-0.3
	comp=Z,0.6nm,0.8s,baz=24,slow=7.1,SNR=4.3						
TXAR	**Lajitas Array**	**78.92**	**59**	P	**P**	**08 49 27.8**	**-0.6**
	comp=Z,0.1nm,0.5s,baz=277,slow=2.4,SNR=2.1						
MMAI	**Mount Meron Ar**	**82.68**	**311**	LR	LR	09 31 16.3	
	comp=Z,28nm,18.9s,baz=205,slow=39						

*NEIC **27** 08:48:04.1±1.8,35.°58N±0.°04×121.°26W±0.°04,h5km±7km, Error ellipse: s-maj=6.8km s-min=2.5km az=217.0*
*ANF **27** 08:48:05.6±1.5,35.°77N×121.°06W,h10km,ML3.2/7,Error ellipse: s-maj=13.6km s-min=8.6km az=62.0,Hypocentre not reviewed by the ISC*
NCEDC 27 08:48:06.8±2.4,**35.°70N**±0.°04×**121.°06W**±0.°05,**h10**km±7km, **ML3.1**/22,**ML2.7**/56(NEIC),**Error ellipse: s-maj=7.5km s-min=2.9km az=48.0,Central California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAMR	**Ramage Ranch**	**0.17**	**114**		Pg	08 48 10.6	+0.2
RAMR					Sg	08 48 13.3	+0.5
PAPM	**Alder Peak**	**0.33**	**310**		Pg	08 48 13.1	-0.2
PKD	**Bear Valley Ra**	**0.48**	**60**		Pg	08 48 16.1	-0.1
TCHL	**Shandon**	**0.53**	**91**		Pg	08 48 17.4	+0.3
PMPB	**Monarch Peak**	**0.55**	**22**		Pg	08 48 17.7	+0.2
TSCN	**Private Proper**	**0.60**	**105**		Pg	08 48 18.5	+0.1
TRAM	**Private Proper**	**0.64**	**92**		Pg	08 48 19.2	0.0
PAGB	**Antelope Grade**	**0.66**	**87**		Pg	08 48 19.4	-0.1
THIS	**South End of C**	**0.67**	**88**		Pg	08 48 19.8	-0.1
THIS					Sb	08 48 30.1	0.0
BSMM	**Soledad Missio**	**0.74**	**336**		Pg	08 48 20.7	-0.4
HAST	**Hastings Reser**	**0.79**	**330**		Pg	08 48 21.6	-0.6
HAST					Sg	08 48 31.1	-1.4
BBNM	**San Benito**	**0.81**	**359**		Pg	08 48 22.2	-0.1
PDRM	**Domengine Ranc**	**0.84**	**41**		Pb	08 48 23.6	0.0
BJCM	**Johnson Can.**	**0.89**	**342**		Pg	08 48 23.2	-0.7
PMLM	**Mount Lospe**	**0.89**	**156**		Pg	08 48 23.5	-0.4
SCZ	**Santa Cruz**	**0.94**	**343**		Pg	08 48 24.0	-0.8
SMMC	**Simmler**	**0.95**	**114**	P		08 48 24.8	
	baz=295						
SMMC					S	08 48 38.6	
BLRM	**Lewis Ranch**	**0.98**	**350**		Pg	08 48 25.0	-0.6
SAO	**San Andreas Ge**	**1.10**	**343**		Pb	08 48 26.6	-1.4
HCOM	**Corn Cob Canyo**	**1.29**	**336**		Pn	08 48 29.7	-1.2
PKM	**Mcpherson Peak**	**1.30**	**128**	P		08 48 30.2	
	baz=309						
PKM				S		08 48 49.4	
	baz=309						
HFEM	**San Felipe**	**1.31**	**348**		Pn	08 48 30.1	-1.0
PACP	**Pacheco Peak**	**1.31**	**352**		Pn	08 48 30.7	-0.7
MOBB	**Monterey Bay O**	**1.33**	**318**		Pn	08 48 29.8	-1.5
GHS	**Gilroy Hot Spr**	**1.43**	**347**		Pn	08 48 31.5	-1.4
VOG	**Valley Oaks Go**	**1.49**	**65**	P		08 48 32.5	
	baz=246						
VOG				S		08 48 52.0	
	baz=246						
VES	**Vestal, Richgr**	**1.61**	**85**	P		08 48 33.9	
	baz=266						
VES				S		08 48 53.9	
	baz=266						
MHC	**Mount Hamilton**	**1.70**	**344**		Pn	08 48 35.5	-1.2
ARVC	**Arvin**	**1.91**	**107**	P		08 48 38.5	
	baz=288						
HELL	**Mitchell Peak,**	**1.91**	**59**		Pn	08 48 38.5	-1.0
JRSC	**Jasper Ridge**	**1.95**	**331**		Pn	08 48 38.4	-1.6
SCZ2	**Santa Cruz Isl**	**2.07**	**145**	P		08 48 40.8	
	baz=326						
ISA	**Isabella, Lake**	**2.10**	**90**		Pn	08 48 41.1	-1.1
ISA				IAML		08 49 13.6	
	comp=E,43nm,0.6s						
ISA				IAML		08 49 13.9	
	comp=N,51nm,0.4s						
ISA	**Isabella, Lake**	**2.10**	**90**	P		08 48 41.0	
	baz=272						
OSI	**Osito Audit: C**	**2.20**	**119**	IAML		08 49 23.8	
	comp=E,40nm,1.0s						
OSI				IAML		08 49 31.7	
	comp=N,42nm,0.7s						
CMB	**Columbia Colle**	**2.39**	**13**	Pn	Pn	08 48 45.8	-0.3
MDPB	**Devils Postpil**	**2.50**	**39**		Pn	08 48 48.2	+0.4
MDPB				IAML		08 49 29.1	
	comp=N,61nm,0.5s						
MDPB				IAML		08 49 30.7	
	comp=E,50nm,0.6s						
MDCM	**Deadman Creek**	**2.57**	**38**		Pn	08 48 50.1	+1.3
MTUM	**Tungsten Hills**	**2.59**	**50**		Pn	08 48 49.9	+0.8
MDRNC	**Doe Ridge**	**2.63**	**42**		Pn	08 48 51.0	+1.4
PASC	**Pasadena Art C**	**2.81**	**122**	Pn	Pn	08 48 50.7	-1.1
PASC				IAML		08 49 44.6	
	comp=N,21nm,2.9s						
MWC	**Mount Wilson**	**2.87**	**120**		Pn	08 48 52.1	-0.8
MWC				IAML		08 49 33.1	
	comp=E,26nm,0.5s						
MWC				IAML		08 49 48.8	
	comp=N,24nm,2.0s						
WAKR	**Walker**	**3.08**	**24**		Pn	08 48 57.1	+1.4
WAKR				IAML		08 49 44.7	
	comp=N,30nm,0.9s						
AFDM	**Forest Hills D**	**3.24**	**1**		Pn	08 48 58.2	+0.5
LHV	**Little Huntoon**	**3.26**	**38**		Pb	08 49 02.4	-2.4
LHV				IAML		08 49 53.5	
	comp=N,24nm,0.7s						
LHV				IAML		08 49 56.5	
	comp=E,26nm,0.8s						
NVAR	**Mina Array Bea**	**3.50**	**38**	Pn	Pn	08 49 02.3	+0.8
RYN	**Ryan**	**3.55**	**34**	Pn	Pn	08 49 04.0	+1.8
RYN				IAML		08 49 59.4	
	comp=E,13nm,0.5s		

DZM				LR	LR	09 28 37.0		
	comp=Z,259nm,20.0s,baz=18,slow=36							
MSVF	**Nonsavu**	**9.03**	**115**	LR	LR	09 28 32.3		
	comp=Z,519nm,19.7s,baz=317,slow=33							
HNR	**Honiara**	**10.40**	**295**	LR	LR	09 29 39.9		
	comp=Z,132nm,20.2s,baz=154,slow=36							
PMG	**Port Moresby**	**22.32**	**280**	LR	LR	09 35 48.3		
	comp=Z,133nm,18.3s,baz=66,slow=33							
CTA	**Charters Tower**	**22.96**	**252**	P	**P**	**09 28 39.1**	**+0.3**	
	3.3nm,0.7s,baz=82,slow=14,SNR=2.6							
STKA	**Stephens Creek**	**31.03**	**230**	P	**P**	**09 29 52.2**	**+0.3**	
	4.4nm,0.9s,baz=38,slow=6.6,SNR=6.3							
STKA				LR	LR	09 40 26.5		
	comp=Z,78nm,21.8s,baz=30,slow=33							
WRA	**Warramunga Arr**	**34.04**	**255**	P	**P**	**09 30 18.3**	**-0.1**	
	2.2nm,0.9s,baz=85,slow=9.0,SNR=9.7							
ASAR	**Alice Springs**	**34.88**	**249**	P	**P**	**09 30 23.9**	**-1.8**	
	3.6nm,0.9s,baz=83,slow=8.7,SNR=25							
ASAR				LR	LR	09 43 25.0		
	comp=Z,124nm,19.9s,baz=72,slow=34							
KSRS	**Korea Array**	**64.43**	**324**	LR	LR	10 02 26.4		
	comp=Z,12nm,18.0s,baz=162,slow=36							
PETK	**Petropavlovsk-**	**67.68**	**352**	LR	LR	09 58 06.6		
	comp=Z,42nm,21.8s,baz=146,slow=31							
CMAR	**Chiang Mai Arr**	**76.64**	**293**	LR	LR	10 06 14.9		
	comp=Z,8.1nm,21.7s,baz=220,slow=34							
SONM	**Songino Array**	**83.25**	**323**	P	**P**	**09 36 01.3**	**+0.9**	
	0.4nm,0.7s,baz=153,slow=9.7,SNR=3.7							
SONM				LR	LR	10 13 10.4		
	comp=Z,17nm,18.5s,baz=126,slow=36							
ILAR	**Eielson Array**	**85.27**	**17**	P	**P**	**09 36 10.2**	**+0.2**	
	0.6nm,0.6s,baz=240,slow=5.3,SNR=12							
PDAR	**Pinedale Array**	**92.96**	**47**	LR	LR	10 17 27.8		
	comp=Z,20nm,19.2s,baz=190,slow=35							
TXAR	**Lajitas Array**	**94.11**	**61**	LR	LR	10 10 29.1		
	comp=Z,12nm,21.0s,baz=0.0,slow=30							
YKA	**Yellowknife Ar**	**96.01**	**27**	P	**P**	**09 36 59.8**	**-0.7**	
	0.3nm,0.7s,baz=247,slow=4.6,SNR=5.2							

GCG ***27*** *09:30:41.0±0.4, 13.42N×90.31W, h62km±49km, MD3.4*
SNET ***27*** *09:30:42.0±1.1, 13.61N×90.27W, h69km±7km, ML2.5*

ISC 27 09:30:41.1±3.9, 13.6N±0.2×90.2W±0.1, h96km±37km, n11, σ0.91/10, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LALI	**Alcalda de L**	**0.89**	**95**	*eP*	Pn	09 30 59.4	-0.6
LALI				*eS*	**Sn**	**09 31 13.8**	**-0.5**
PCG	**Pacaya**	**0.90**	**336**	*eP*	Pn	09 31 00.2	-0.2
PCG				*eS*	**Sn**	**09 31 14.9**	**+0.1**
NBG	**Las Nubes**	**1.02**	**354**	*eP*	Pn	09 31 02.0	+0.3
NBG				*eS*	**Sn**	**09 31 18.7**	**+1.5**
FUG	**Fuego 3**	**1.05**	**326**	*eP*	**Pn**	**09 31 01.5**	**-0.5**
LFRS	**El Faro**	**1.14**	**87**	*eP*	Pn	09 31 03.0	0.0
MTO3	**Montecristo**	**1.19**	**46**	*eS*	**Sn**	**09 31 20.0**	**-0.4**
PAVA	**Las Pavas**	**1.27**	**83**	*eP*	Pn	09 31 05.0	+0.6
PAVA				*eS*	**Sn**	**09 31 22.9**	**+0.8**
ESQI	**Esquipulas**	**1.31**	**41**	*eP*	Pn	09 31 05.1	+0.2
ESQI				*eS*	**Sn**	**09 31 22.7**	**-0.3**
COEG	**Centro de Oper**	**1.32**	**88**	*eP*	Pn	09 31 05.5	+0.5
COEG				*eS*	**Sn**	**09 31 23.2**	**+0.1**
ALJI	**Alcalda de J**	**1.64**	**98**	*eS*	**Sn**	**09 31 31.0**	**+1.1**
COEB	**Comit de Eme**	**1.66**	**92**	*eP*	Pn	09 31 09.7	+0.4
COEB				*eS*	**Sn**	**09 31 30.9**	**+0.3**
COEB				IAML		09 31 33.2	
	comp=Z,48nm,0.5s						

IDC 27 09:32:13.2±3.5, 27.49N×84.79E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.3/54, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=113.6km s-min=27.7km az=80.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.37**	**355**	P	P	09 36 40.1	-0.4
	0.1nm,0.3s,baz=168,slow=12,SNR=5.1						
SONM	**Songino Array**	**26.40**	**34**	P	P	09 37 52.0	+0.5
	1.2nm,0.7s,baz=231,slow=9.3,SNR=6.9						
WRA	**Warramunga Arr**	**67.26**	**129**	P	P	09 43 09.5	-0.4
	0.5nm,0.6s,baz=323,slow=6.4,SNR=10						
ASAR	**Alice Springs**	**69.52**	**132**	P	P	09 43 24.3	+0.3
	0.4nm,0.6s,baz=316,slow=6.5,SNR=8.6						

DDA ***27*** *09:47:49.8, 36.08N×31.70E, h42km, ML2.4*
NIC ***27*** *09:47:51.2±0.0, 35.96N×31.85E, h32km±23km, Ml2.5/4*

ISC 27 09:47:50.2±1.2, 36.05N±0.03×31.77E±0.03, h33km±4km, n17, σ1.69/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.48**	**67**	*i* P	**Pn**	**09 48 01.3**	**+0.6**
GAZI				*i* S	**Sn**	**09 48 10.0**	**+2.1**
KEPZ	**Antalya-Kepez**	**0.86**	**351**	*i* P	**Pn**	**09 48 06.2**	**+0.2**
KEPZ				*i* S	**Sb**	**09 48 17.1**	**-1.0**
ALFC	**Alefka**	**1.12**	**143**	P	**Pb**	**09 48 09.2**	**-1.8**
ALFC				S	**Sn**	**09 48 22.2**	**-1.5**
ALFC				AML	AML	09 48 24.3	
	0.6nm,0.1s						
ALFC				AML	AML	09 48 24.3	
	0.6nm,0.1s						
ALFC				AML	AML	09 48 24.8	
	0.8nm,0.2s						
ALFC				AML	AML	09 48 24.8	
	0.8nm,0.2s						
AKMS	**Akamas**	**1.13**	**156**	P	**Pb**	**09 48 09.3**	**-1.9**
AKMS				S	**Sn**	**09 48 22.7**	**-1.3**
AKMS				AML	AML	09 48 32.1	
	0.7nm,0.3s						
AKMS				AML	AML	09 48 32.1	
	0.7nm,0.3s						
AKMS				AML	AML	09 48 32.6	
	0.5nm,0.5s						
AKMS				AML	AML	09 48 32.6	
	0.5nm,0.5s						
AKUM	**Antalya-Kumluc**	**1.19**	**284**	*i* P	**Pb**	**09 48 11.2**	**-1.0**
AKUM				*i* S	**Sb**	**09 48 29.4**	**+2.1**
SEDI	**Konya, Seydise**	**1.40**	**359**	*i* P	**Pb**	**09 48 14.7**	**-1.2**
SEDI				*i* S	**Sb**	**09 48 33.2**	**-0.2**
SEDI				IAML		09 48 43.0	
	comp=N,49nm,0.8s						
GULN	**MERSIN_Gulnar**	**1.44**	**84**	*i* P	**Pb**	**09 48 14.1**	**-2.4**
GULN				*i* S	**Sb**	**09 48 34.5**	**+0.1**
KORT	**Korkueli**	**1.49**	**310**	*i* P	**Pb**	**09 48 17.5**	**+0.1**
KKBE	**Karaman, Kazim**	**1.50**	**38**	*i* P	**Pb**	**09 48 16.7**	**-0.8**
KKBE				*i* S	**Sb**	**09 48 37.1**	**+0.8**
SZAC	**Souni**	**1.58**	**145**	P	**Pb**	**09 48 18.8**	**0.0**
SZAC				S	**Sb**	**09 48 43.3**	**+5.0**
SZAC				AML	AML	09 48 45.6	
	comp=N,0.2nm,0.3s						
SZAC				AML	AML	09 48 45.6	
	comp=N,0.2nm,0.3s						
ASGA	**Asgata**	**1.74**	**136**	P	**Pb**	**09 48 21.0**	**-0.5**
AKAS	**Kas**	**1.77**	**277**	*i* P	**Pn**	**09 48 19.5**	**+1.0**
AKAS				*i* S	**Sn**	**09 48 36.6**	**-3.2**
MVOU	**Mavrovouni**	**1.83**	**124**	P	**Pn**	**09 48 18.7**	**-0.6**
MVOU				S	**Sn**	**09 48 39.7**	**-1.7**
MVOU				AML	AML	09 48 51.8	
	comp=N,0.2nm,0.3s						
MVOU				AML	AML	09 48 51.8	
	comp=N,0.2nm,0.3s						
MVOU				AML	AML	09 48 52.3	
	comp=N,0.1nm,0.3s						
MVOU				AML	AML	09 48 52.3	
	comp=N,0.1nm,0.3s						
BAGO	**Egridir - ISPA**	**2.09**	**338**	*i* P	**Pn**	**09 48 24.4**	**+1.4**
YVAC	**Isparta, Yalva**	**2.26**	**349**	*i* P	**Pn**	**09 48 25.6**	**+0.3**
YVAC				*i* S	**Sn**	**09 48 52.0**	**0.0**
KERG	**Konya-Eregli**	**2.33**	**53**	*i* P	**Pn**	**09 48 27.3**	**+1.0**
KERG				*i* S	**Sn**	**09 48 55.0**	**+1.2**
KERG				IAML		09 49 07.0	
	comp=N,20nm,0.6s						
OSC1	**CSNet OBS 1**	**2.58**	**189**	P	**Pn**	**09 48 30.7**	**+1.2**
OSC1				S	**Sn**	**09 48 58.5**	**-1.2**

RSNC 27 10:14:36.9±0.8, 6.78N×73.17W, h160km±7km, ML2.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barchara**	**0.18**	**184**	*eP*	Pn	10 14 58.3	-0.4
BARC				*eS*	Sn	10 15 14.4	-1.0
BARC				*i*		10 15 14.9	
	comp=Z,55nm,0.3s						
BRRC	**Barranca, Sant**	**0.63**	**301**	*eP*	Pn	10 14 59.0	-1.0
BRRC				*eS*	Sn	10 15 17.4	-0.3
BRRC				*i*		10 15 21.3	
	comp=Z,24nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.30**	**260**	*eP*	Pn	10 15 05.2	-0.1
PTBC				*eS*	Sn	10 15 26.8	-0.3
PTBC				*i*		10 15 31.6	
	comp=Z,16nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.82**	**293**	*eP*	Pn	10 15 10.4	-0.3
ZARC				*eS*	Sn	10 15 36.3	-0.3
ZARC				*i*		10 15 42.6	
	comp=Z,19nm,0.3s						
NORC	**Norcasia**	**2.08**	**235**	*eS*	Sn	10 15 40.9	-1.0
NORC	**Norcasia**	**2.08**	**235**	*eS*	Sn	10 15 40.9	-1.0
SMLC	**San Martn de**	**2.20**	**336**	*eP*	Pn	10 15 15.0	0.0
SMLC				*eS*	Sn	10 15 43.1	-1.4
SMLC				*i*		10 15 46.1	
	comp=Z,12nm,0.1s						
MOTC	**Monteria, Cord**	**3.17**	**309**	*eS*	Sn	10 16 04.2	-1.4
MOTC				*i*		10 16 06.2	
	comp=Z,3.9nm,0.4s						

RSNC 27 10:14:37.0±1.1, 7.24N×73.31W, h118km±7km, ML2.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRRC	**Barranca, Sant**	**0.42**	**252**	*eP*	Pn	10 14 53.8	-0.4
BRRC				*eS*	Sn	10 15 07.0	-0.2
BARC	**Barichara**	**0.65**	**169**	*eP*	Pn	10 14 55.8	-0.3
BARC				*eS*	Sn	10 15 09.9	-0.5
PTBC	**PUERTO BERRIO,**	**1.33**	**239**	*eP*	Pn	10 15 01.2	-1.1
PTBC				*eS*	Sn	10 15 21.9	+0.2
RUSC	**La Rusia**	**1.35**	**170**	*eP*	Pn	10 15 02.5	-0.6
RUSC				*eS*	Sn	10 15 21.2	-1.6
RUSC				*i*		10 15 22.2	
	comp=Z,15nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.56**	**280**	*eP*	Pn	10 15 04.7	-0.3
ZARC				*eS*	Sn	10 15 25.6	-0.6
SMLC	**San Martn de**	**1.73**	**334**	*eP*	Pn	10 15 05.8	-1.2
SMLC				*eS*	Sn	10 15 27.9	-2.0
SMLC				*i*		10 15 32.4	
	comp=Z,15nm,0.1s						
SPBC	**San Pablo de B**	**1.75**	**206**	*eP*	Pn	10 15 07.2	-0.1
SPBC				*eS*	Sn	10 15 29.4	-1.1
SPBC				*i*		10 15 35.5	
	comp=Z,29nm,0.3s						
NORC	**Norcasia**	**2.27**	**223**	*eP*	Pn	10 15 14.4	+0.5
NORC				*i*		10 15 51.1	
	comp=Z,16nm,0.2s						
HELC	**Santa Helena**	**2.44**	**245**	*eS*	Sn	10 15 47.5	+1.1
HELC				*i*		10 15 57.3	
	comp=Z,13nm,0.3s						
CHIC	**Chingaza**	**2.62**	**189**	*eP*	Pn	10 15 16.5	-2.2
CHIC				*eS*	Sn	10 15 46.1	-4.6
CHIC				*i*		10 15 51.6	
	comp=Z,7.8nm,0.3s						
MOTC	**Monteria, Cord**	**2.79**	**303**	*eS*	Sn	10 15 51.8	-2.2
GUY2C	**Guyana, Caldas**	**2.86**	**226**	*eP*	Pn	10 15 23.1	+1.3
GUY2C				*eS*	Sn	10 15 57.6	+1.3
GUY2C				*i*		10 16 08.0	
	comp=Z,11nm,0.7s						
TOLC	**Tolima**	**3.31**	**217**	*eP*	Pn	10 15 27.5	-0.1
TOLC				*eS*	Sn	10 16 06.1	-0.6
TOLC				*i*		10 16 11.0	
	comp=Z,10nm,0.8s						

IDC ***27*** *10:15:35.1±2.4, 5.93S×102.76E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.6/45, mbtmp3.7/6, ML4.0/1, Error ellipse: s-maj=90.5km s-min=22.1km az=53.0*
DJA ***27*** *10:15:38.6±2.5, 6.5S±4×10.3E±*, h24km±27km, M4.2/9, mb4.1/1, MLv4.2/9*

ISC 27 10:15:42.8±1.0, 5.62S±0.09×103.29E±0.08, h35km, n19, σ1.27/19, mb3.7/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**0.98**	**52**	P	**Pn**	**10 15 59.2**	**-0.9**
LWLI				S	**Sn**	**10 16 13.6**	**+0.8**
KASI	**Kota Agung**	**1.21**	**85**	P	**Pn**	**10 16 02.4**	**-0.8**
KASI				S	**Sn**	**10 16 19.6**	**+1.2**
MNAI	**Manna**	**1.30**	**345**	P	**Pn**	**10 16 03.5**	**-1.0**
MNAI				S	**Sn**	**10 16 21.3**	**+0.7**
MDSI	**Maura Dua**	**1.44**	**38**	P	**Pn**	**10 16 06.3**	**-0.1**
LHSI	**Lahat**	**1.80**	**8**	P	**Pn**	**10 16 11.5**	**+0.1**
BLSI	**Bandar Lampung**	**1.97**	**83**	P	**Pn**	**10 16 12.7**	**-1.0**
KSI	**Kapahiang**	**2.08**	**341**	P	**Pn**	**10 16 15.0**	**-0.2**
CBJI	**Citeko**	**3.63**	**103**	P	**Pn**	**10 16 36.1**	**-0.5**
LEM	**Lembang**	**4.47**	**106**	Pn	**Pn**	**10 16 50.8**	**+2.5**
	6.2nm,0.3s,baz=319,slow=19,SNR=2.1						
BSI	**Banda Aceh**	**13.62**	**324**	P	**Pn**	**10 18 56.4**	**+2.7**
H08S2	**Diego Garcia H**	**30.65**	**265**	T	T	10 53 09.1	
	baz=88,slow=76,SNR=9.0						
H08S3	**Diego Garcia H**	**30.66**	**265**	T	T	10 53 15.2	
	baz=88,slow=76,SNR=9.3						
H08S1	**Diego Garcia H**	**30.67**	**265**	T	T	10 53 11.2	
	baz=88,slow=76,SNR=7.1						
WRA	**Warramunga Arr**	**33.37**	**118**	P	**P**	**10 22 17.1**	**-1.0**
	0.3nm,0.5s,baz=301,slow=9.6,SNR=5.6						
ASAR	**Alice Springs**	**34.50**	**124**	P	**P**	**10 22 27.8**	**-0.1**
	0.3nm,0.4s,baz=296,slow=7.3,SNR=15						
STKA	**Stephens Creek**	**44.31**	**131**	P	**P**	**10 23 49.0**	**-0.6**
	2.2nm,0.6s,baz=300,slow=8.8,SNR=6.8						
SONM	**Songino Array**	**53.30**	**3**	P	**P**	**10 24 58.7**	**+0.3**
	0.5nm,0.3s,baz=218,slow=8.8,SNR=4.2						
MKAR	**Makanchi Array**	**55.41**	**343**	P	**P**	**10 25 11.6**	**-2.0**
	0.4nm,0.5s,baz=146,slow=9.1,SNR=3.7						
TXAR	**Lajitas Array**	**145.29**	**44**	PKPbc	**PKPbc**	**10 35 16.8**	**-0.7**
	0.1nm,0.4s,baz=291,slow=0.8,SNR=2.5						

IDC ***27*** *10:27:49.9±1.2, 68.11N×146.39W, h0km, mb3.8/5, mb1 4.2/8, mb1mx3.7/51, mbtmp3.8/8, ML3.9/3, MS3.1/10, Ms1 3.1/10, ms1mx2.8/53, Error ellipse: s-maj=20.7km s-min=15.3km az=33.0*
AEIC ***27*** *10:27:49±1.6, 68.14N±0.04×146.2W±0.1, h8km±5km, ML3.9, ML4.0/54(NEIC), Error ellipse: s-maj=6.8km s-min=4.5km az=56.0*
NEIC ***27*** *10:27:50.7±1.7, 68.16N±0.05×146.11W±0.10, h17km±5km, Error ellipse: s-maj=7.3km s-min=4.7km az=204.0*

ISC 27 10:27:49.3±0.6, 68.25N±0.04×145.99W±0.04, h10km, n111, σ1.33/100, mb3.8/5, MS3.2/7, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BM01	**Burnt Mountain**	**0.97**	**145**		**Pg**	**10 28 07.3**	**-0.7**
BM01					**Sg**	**10 28 20.2**	**-0.5**
BMAR	**Burnt Mountain**	**0.98**	**146**		**Pg**	**10 28 07.0**	**-1.1**
BM03	**Burnt Mountain**	**0.98**	**147**		**Pg**	**10 28 06.9**	**-1.3**
PS04	**TAPS Pump Stn4**	**1.26**	**280**		**Pn**	**10 28 11.8**	**-1.2**
PS04					**Sb**	**10 28 28.6**	**-0.9**
TOLK	**Toolik Lake Re**	**1.38**	**288**		**Pn**	**10 28 14.4**	**-0.2**
TOLK					**Sn**	**10 28 32.9**	**-0.1**
TOLK	**Toolik Lake Re**	**1.38**	**288**	IAML		10 28 36.0	
	comp=N,3μm,1.0s						
TOLK				IAML		10 28 36.6	
	comp=E,2μm,0.6s						
TOLK	**Toolik Lake Re**	**1.38**	**288**	P		10 28 14.5	
	baz=110,SNR=821						
FYU	**Fort Yukon**	**1.71**	**170**		**Pn**	**10 28 18.5**	**-0.7**
FYU					**Sb**	**10 28 41.3**	**-1.1**
FYU	**Fort Yukon**	**1.71**	**170**	IAML		10 28 44.3	
	comp=E,2μm,1.0s						
COLD	**Coldfoot**	**1.90**	**239**		**Pn**	**10 28 21.0**	**-0.8**
COLD					**Sn**	**10 28 45.6**	**-0.2**
COLD	**Coldfoot**	**1.90**	**239**	P		10 28 21.0	
	baz=57,SNR=1000						
PS01	**TAPS Pump Stn**	**2.23**	**336**		**Pn**	**10 28 27.9**	**+1.7**
PS05	**TAPS Pump Stn5**	**2.30**	**233**		**Pn**	**10 28 25.9**	**-1.4**
PS05					**Sn**	**10 28 56.3**	**+0.7**
PRP	**Porcupine Dome**	**2.75**	**176**		**Pn**	**10 28 33.0**	**-0.5**
PRP					**Sn**	**10 29 06.2**	**-0.5**
PRP	**Porcupine Dome**	**2.75**	**176**	IAML		10 29 15.8	
	comp=N,714nm,0.6s						
PRP				IAML		10 29 22.2	
	comp=E,602nm,1.3s						
PS06	**TAPS Pump Stn6**	**2.81**	**213**		**Pn**	**10 28 33.1**	**-1.1**
PS07	**TAPS Pump Stn7**	**3.08**	**198**		**Pn**	**10 28 37.1**	**-0.9**
POKR	**Poker Plat Res**	**3.20**	**191**		**Pn**	**10 28 39.0**	**-0.5**
POKR					**Sn**	**10 29 16.3**	**-1.3**
POKR	**Poker Plat Res**	**3.20**	**191**	IAML		10 29 31.3	
	comp=E,524nm,0.8s						
POKR				IAML		10 29 33.0	
	comp=N,374nm,0.9s						
POKR	**Poker Plat Res**	**3.20**	**191**	P		10 28 38.9	
	baz=8.6,SNR=28						
I23K	**Minto, Yukon-K**	**3.39**	**205**		**Pn**	**10 28 40.9**	**-1.2**
I23K	**Minto, Yukon-K**	**3.39**	**205**	IAML		10 29 37.5	
	comp=N,416nm,0.8s						
I23K				IAML		10 29 39.4	
	comp=E,406nm,1.2s						
I23K	**Minto, Yukon-K**	**3.39**	**205**	P		10 28 40.8	
	baz=21,SNR=45						
MDM	**Murphy Dome**	**3.42**	**196**		**Pn**	**10 28 41.5**	**-1.2**
MDM	**Murphy Dome**	**3.42**	**196**	IAML		10 29 39.7	
	comp=N,368nm,0.7s						
MDM				IAML		10 29 40.0	
	comp=E,398nm,0.8s						
COLA	**College**	**3.47**	**193**		**Pn**	**10 28 41.5**	**-1.7**
COLA	**College**	**3.47**	**193**		**Pn**	**10 28 43.0**	**-0.3**
COLA				IAML		10 29 41.1	
	comp=E,2μm,0.5s						
COLA				IAML		10 29 43.7	
	comp=E,2μm,0.6s						
TCOL	**CIGO, UAF Yank**	**3.47**	**193**		**Pn**	**10 28 41.9**	**-1.3**
TCOL	**CIGO, UAF Yank**	**3.47**	**193**	P		10 28 42.2	
	baz=11,SNR=31						
IL31		**3.51**	**186**		**Pn**	**10 28 42.6**	**-1.2**
ILAR	**Eielson Array**	**3.51**	**186**	Pn	**Pn**	**10 28 43.1**	**-0.7**
	comp=E,9.5nm,0.3s,baz=360,slow=14,SNR=206						
ILAR				Lg	Lg	10 29 34.4	
	comp=E,46nm,0.3s,baz=4.8,slow=31,SNR=8.8						
ILAR	**Eielson Array**	**3.51**	**186**		**Pn**	**10 28 42.3**	**-1.5**
CCB	**Clear Creek Bu**	**3.69**	**192**		**Pn**	**10 28 46.1**	**-0.2**
CCB	**Clear Creek Bu**	**3.69**	**192**	IAML		10 29 46.0	
	comp=E,245nm,1.0s						
PS08	**TAPS Pump Stn8**	**3.74**	**186**		**Pn**	**10 28 46.5**	**-0.5**
MLY	**Manley**	**3.74**	**213**		**Pn**	**10 28 45.3**	**-1.8**
MLY	**Manley**	**3.74**	**213**	IAML		10 29 49.4	
	comp=E,214nm,1.6s						
MLY	**Manley**	**3.74**	**213**	P		10 28 46.0	
	baz=28,SNR=23						
IM03		**3.79**	**237**		**Pn**	**10 28 45.7**	**-1.9**
NEA2	**Nenana**	**3.87**	**200**		**Pn**	**10 28 47.3**	**-1.5**
NEA2	**Nenana**	**3.87**	**200**	P		10 28 47.4	
	baz=17,SNR=29						
HDA	**Harding Lake**	**3.87**	**186**		**Pn**	**10 28 48.4**	**-0.4**
HDA	**Harding Lake**	**3.87**	**186**	P		10 28 47.9	
	baz=4.3,SNR=32						
HDA				P		10 28 47.9	
	baz=4.3,SNR=32						
WRH	**Wood River Hil**	**3.88**	**194**		**Pn**	**10 28 48.0**	**-1.0**
WRH	**Wood River Hil**	**3.88**	**194**	IAML		10 29 51.3	
	comp=N,388nm,0.7s						
WRH				IAML		10 29 55.9	
	comp=E,291nm,0.9s						
EGAK	**Eagle**	**3.98**	**149**		**Pn**	**10 28 50.3**	**0.0**
EGAK	**Eagle**	**3.98**	**149**	IAML		10 30 06.8	
	comp=E,223nm,1.2s						
EGAK				IAML		10 30 07.1	
	comp=E,198nm,1.9s						
EGAK	**Eagle**	**3.98**	**149**	P		10 28 50.3	
	baz=331,SNR=27						
EPYK	**Eagle Plains**	**4.06**	**113**		**Pn**	**10 28 52.2**	**+0.8**
EPYK	**Eagle Plains**	**4.06**	**113**	P		10 28 52.0	
	baz=300,SNR=27						
BWN	**Browne**	**4.33**	**201**		**Pn**	**10 28 53.4**	**-1.7**
SCRK	**Sand Creek**	**4.37**	**168**		**Pn**	**10 28 55.7**	**0.0**
SCRK	**Sand Creek**	**4.37**	**168**	IAML		10 30 04.7	
	comp=E,175nm,0.8s						
SCRK	**Sand Creek**	**4.37**	**168**	P		10 28 55.7	
	baz=349,SNR=46						
K27K	**Chicken**	**4.52**	**158**		**Pn**	**10 28 57.8**	**0.0**
BPAW	**Bear Paw Mtn.**	**4.63**	**208**		**Pn**	**10 28 57.7**	**-1.6**
BPAW	**Bear Paw Mtn.**	**4.63**	**208**	IAML		10 30 32.2	
	comp=E,113nm,1.6s						
BPAW	**Bear Paw Mtn.**	**4.63**	**208**	P		10 28 57.7	
	baz=24,SNR=12						
INK	**Inuvik**	**4.63**	**83**	Pn	**Pn**	**10 29 00.3**	**+1.1**
	comp=E,2.5nm,0.3s,baz=285,slow=20,SNR=156						
INK				Sn	**Sn**	**10 29 53.1**	**+0.1**
	comp=E,4.9nm,0.3s,baz=4.4,slow=26,SNR=8.3						
INK				LR	LR	10 31 12.9	
	comp=E,152nm,18.6s,baz=288,slow=42						
INK	**Inuvik**	**4.63**	**83**		**Pn**	**10 29 00.1**	**+0.9**
INK	**Inuvik**	**4.63**	**83**	P		10 29 00.2	
	baz=274,SNR=21						
DOT	**Dot Lake**	**4.69**	**169**		**Pn**	**10 29 00.1**	**+0.1**
MCK	**McKinley**	**4.69**	**196**		**Pn**	**10 28 59.3**	**-0.8**
MCK	**McKinley**	**4.69**	**196**	IAML		10 30 16.5	
	comp=E,103nm,0.7s						
MCK				IAML		10 30 23.8	
	comp=N,163nm,0.9s						
MCK	**McKinley**	**4.69**	**196**	P		10 28 59.2	
	baz=13,SNR=20						
A21K	**Barrow**	**4.81**	**315**		**Pn**	**10 29 02.0**	**+0.5**
A21K	**Barrow**	**4.81**	**315**	P		10 29 01.9	
	baz=126,SNR=47						
DAWY	**Dawson**	**4.98**	**144**		**Pn**	**10 29 04.1**	**+0.1**
RND	**Reindeer**	**5.00**	**195**		**Pn**	**10 29 04.1**	**-0.3**
RND				IAML		10 30 30.2	
	comp=E,101nm,0.8s						
CHUM	**Lake Minchumin**	**5.08**	**213**	P		10 29 04.8	
	baz=28,SNR=16						
KTH	**Kantishna Hill**	**5.13**	**206**		**Pn**	**10 29 04.8**	**-1.3**
KTH	**Kantishna Hill**	**5.13**	**206**	IAML		10 30 32.8	
	comp=N,107nm,1.0s						
KTH				IAML		10 30 34.7	
	comp=E,106nm,1.4s						
**TRF

DLBC				LR	LR	10 36 13.5	
	comp=E,66nm,20.5s,baz=312,slow=42						
YKA	**Yellowknife Ar**	**14.16**	**99**	Pn	**Pn**	**10 31 06.6**	**-3.0**
	comp=E,0.7nm,0.3s,baz=301,slow=13,SNR=54						
YKA				Sn	Sn	10 33 37.3	-9.3
	comp=E,0.2nm,0.3s,baz=310,slow=21,SNR=4.6						
RES	**Resolute Bay**	**16.91**	**45**	Pn	**Pn**	**10 31 45.2**	**-0.3**
	comp=E,0.5nm,0.3s,baz=238,slow=8.8,SNR=11						
RES				S	**Sn**	**10 34 45.2**	**-7.8**
	comp=E,0.3nm,0.3s,baz=130,slow=16,SNR=6.3						
RES				LR	LR	10 39 24.1	
	comp=E,42nm,18.2s,baz=18,slow=41						
RES	**Resolute Bay**	**16.91**	**45**	Pn	**Pn**	**10 31 45.3**	**-0.2**
EUNU	**Eureka**	**18.81**	**28**		**Pn**	**10 32 10.5**	**+1.5**
FCC	**Fort Churchill**	**24.24**	**87**	P	**P**	**10 33 07.1**	**+1.2**
NEW	**Newport**	**24.70**	**129**	LR	LR	10 43 51.0	
	comp=E,34nm,21.9s,baz=308,slow=39						
SEY	**Seymchan**	**25.02**	**288**	P	**P**	**10 33 13.6**	**+0.7**
	comp=E,1.8nm,0.8s,baz=83,slow=7.5,SNR=7.9						
FRB	**Frobisher Bay**	**29.87**	**61**	LR	LR	10 47 15.8	
	comp=E,42nm,18.4s,baz=232,slow=39						
PDAR	**Pinedale Array**	**31.93**	**124**	P	**P**	**10 34 18.4**	**+3.4**
	comp=E,2.2nm,0.9s,baz=357,slow=4.6,SNR=15						
NVAR	**Mina Array Bea**	**33.53**	**139**	P	**P**	**10 34 30.9**	**+1.9**
	comp=E,1.5nm,0.8s,baz=330,slow=6.8,SNR=12						
NVAR				LR	LR	10 49 23.7	
	comp=E,64nm,18.4s,baz=3.5,slow=39						
KLR	**Kul'dur**	**42.81**	**287**	P	**P**	**10 35 47.9**	**+1.1**
	comp=E,0.6nm,0.4s,baz=27,slow=11,SNR=3.9						
TXAR	**Lajitas Array**	**46.14**	**125**	P	**P**	**10 36 16.0**	**+2.4**
	comp=E,0.5nm,0.8s,baz=343,slow=6.5,SNR=3.5						
MJAR	**Matsushiro Arr**	**51.41**	**273**	LR	LR	11 03 18.8	
	comp=E,20nm,18.1s,baz=260,slow=42						
AKTO	**Aktyubinsk**	**60.29**	**343**	LR	LR	11 07 00.5	
	comp=E,16nm,18.4s,baz=8.7,slow=39						
AKASG	**Malin Array Be**	**61.32**	**3**	LR	LR	11 05 22.5	
	comp=E,7.3nm,18.1s,baz=75,slow=37						
MSVF	**Nonsavu**	**89.62**	**214**	LR	LR	11 13 40.5	
	comp=E,23nm,21.4s,baz=61,slow=31						

KRSC 27 10:45:15.7±2.0, 48°31.N×156°24.E, h17km±31km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.38**	**358**	*eP*	Pn	10 45 54.8	+0.9
SKR				*eS*	Sn	10 46 23.2	+0.5
ALID	**Alaid**	**2.60**	**350**	*eP*	Pn	10 45 56.5	-0.7
PAU	**Pauzhetka**	**3.19**	**6**	*eP*	Pn	10 46 08.0	+3.0
PAU				*eS*	Sb	10 46 47.0	-3.3
MTVR	**Mutnovka**	**4.36**	**16**	*eP*	Pn	10 46 25.9	+4.6
MTVR				*eS*	Sn	10 47 17.4	+5.6
RUS	**Russkaya**	**4.38**	**19**	*eP*	Pn	10 46 24.8	+3.4
RUS				*eS*	Sn	10 47 16.5	+4.5
GRL	**Gorelyy**	**4.41**	**15**	*eP*	Pn	10 46 26.4	+4.5
GRL				*eS*	Sn	10 47 18.0	+5.0
KRMR	**Karymshinskiy**	**4.69**	**14**	*eP*	Pn	10 46 29.9	+4.3
KRMR				*eS*	Sn	10 47 25.9	+6.3
PET	**Petropavlovsk**	**4.97**	**17**	*eP*	Pn	10 46 33.7	+4.2
PET				*eS*	Sn	10 47 32.3	+5.8
DALK	**Dalny**	**5.00**	**18**	*eP*	Pn	10 46 34.3	+4.5
DALK				*eS*	Sn	10 47 32.3	+5.2
UGLR	**Uglovaya**	**5.18**	**18**	*eP*	Pn	10 46 37.7	+5.3
AVH	**Avacha**	**5.21**	**17**	*eP*	Pn	10 46 38.1	+5.2
KOK	**Koryaka**	**5.22**	**16**	*eP*	Pn	10 46 38.5	+5.5
SMAR	**Somma**	**5.22**	**17**	*eP*	Pn	10 46 37.6	+4.4
KRER	**Koryakskii**	**5.25**	**17**	*eP*	Pn	10 46 39.0	+5.4
SDLR	**Sedlovina**	**5.25**	**18**	*eP*	Pn	10 46 36.7	+3.2
KRX	**Arik**	**5.29**	**16**	*eP*	Pn	10 46 38.9	+4.9
SPN	**Mys Shipunski**	**5.37**	**25**	*eP*	Pn	10 46 39.5	+4.6
SPN				*eS*	Sn	10 47 42.0	+5.7
GNL	**Ganaly**	**5.50**	**11**	*eP*	Pn	10 46 42.3	+5.4
TUMR	**Tumrok**	**7.40**	**18**	*eP*	Pn	10 47 08.7	+5.8
KBTR	**Krutoberegovo**	**8.88**	**25**	*eP*	Pn	10 47 27.8	+4.7

ECX 27 10:58:20.0±0.7, 31°.56N×115°.61W, h13km±6km, MD2.0, ML2.2, Fault plane solution: NP1:ϑ=8 127.00000°, δ=27.00000°, λ=-124.00000°.
MEX 27 10:58:20.6±4.8, 31°.58N×115°.39W, h20km±999km, MD3.5
ISC 27 10:58:18.4±1.4, 31°.62N±0°.07×115°.59W±0°.04, h5km±18km, n17, σ0°.49/29, 8C-9D, Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECBX	**El Chinero**	**0.48**	**107**	*eP*	**Pg**	**10 58 27.5**	**-0.1**
ECBX				*eS*	**Sg**	**10 58 33.8**	**-0.1**
SPIG	**San Pedro Mart**	**0.58**	**170**	*eP*	**Pg**	**10 58 29.9**	**+0.3**
	baz=349,slow=7.9						
SPIG				*i* S	**Sg**	**10 58 36.6**	**-0.5**
SPIG	**San Pedro Mart**	**0.58**	**170**	↓*eP*	**Pg**	**10 58 29.5**	**0.0**
SPIG				*eS*	**Sg**	**10 58 37.2**	**+0.1**
SPX	**San Pedro Mart**	**0.59**	**170**	↓*eP*	**Pg**	**10 58 29.9**	**+0.2**
SPX				*eS*	**Sg**	**10 58 37.3**	**-0.1**
SPX				*e*		10 58 38.1	
SPX				IAML		10 58 38.1	
	comp=E,130nm,0.1s						
SPX				↑*e*		10 58 38.6	
SPX				IAML		10 58 38.6	
	comp=N,143nm,0.2s						
SVX	**San Vicente**	**0.64**	**243**	↑*iP*	**Pg**	**10 58 30.8**	**+0.2**
SVX				*eS*	**Sg**	**10 58 39.0**	**+0.2**
SFX	**San Felipe**	**0.85**	**132**	↓*eP*	**Pg**	**10 58 35.2**	**+0.4**
SFX				*eS*	**Sg**	**10 58 45.9**	**0.0**
CCX	**Cicese**	**0.95**	**286**	*eP*	**Pb**	**10 58 37.1**	**-0.3**
RMX	**La Rumorosa**	**1.07**	**337**	*eP*	**Pb**	**10 58 38.3**	**-1.1**
IKP	**In-Ko-Pah, Jac**	**1.12**	**337**	↓*eP*	**Pb**	**10 58 40.3**	**0.0**
CBX	**Cerro Bola**	**1.15**	**308**	↓*eP*	**Pb**	**10 58 40.9**	**0.0**
CBX				*eS*	**Sb**	**10 58 55.9**	**-0.2**
CBX				↓*e*		10 58 56.3	
CBX				IAML		10 58 56.3	
	comp=E,115nm,0.2s						
CBX				↑*e*		10 58 56.5	
CBX				IAML		10 58 56.5	
	comp=N,133nm,0.2s						
TJIG	**Tijuana**	**1.23**	**312**	↑*eP*	**Pn**	**10 58 41.8**	**-0.5**
TJIG				*eS*	**Sb**	**10 58 57.8**	**-0.6**
TJIG	**Tijuana**	**1.23**	**312**	↓*eP*	**Pn**	**10 58 41.8**	**-0.5**
TJIG				*eS*	**Sb**	**10 58 58.4**	**+0.1**
SWSC	**Sam W. Stewart**	**1.34**	**352**	↑*eP*	**Pn**	**10 58 44.6**	**+0.9**
BAR	**Barrett**	**1.40**	**319**	↓*eP*	**Pn**	**10 58 44.9**	**+0.2**
BAR				*eS*	**Sn**	**10 59 03.2**	**-0.4**
BAR				IAML		10 59 04.6	
	comp=N,29nm,0.2s						
BAR				↓*e*		10 59 04.6	
BAR				↑*e*		10 59 06.3	
BAR				IAML		10 59 06.3	
	comp=E,22nm,0.2s						
MONP2	**Monument Peak**	**1.46**	**331**	↓*eP*	**Pn**	**10 58 45.8**	**+0.2**
MONP2				*eS*	**Sn**	**10 59 05.0**	**-0.1**
SDRC	**San Diego Road**	**1.60**	**315**	*eP*	**Pn**	**10 58 48.4**	**+1.1**
MATG	**Mataguay Scout**	**1.82**	**331**	*eP*	**Pn**	**10 58 50.9**	**+0.5**
MATG				*eS*	**Sb**	**10 59 16.2**	**+0.9**

TRN 27 11:03:04.0, 11°.12N×62°.32W, h106km, MD3.4
FUNV 27 11:03:04.9, 10°.94N×62°.10W, h19km, MW3.3
ISC 27 11:03:02.5±1.5, 11°.07N±0°.04×62°.23W±0°.04, h126km±12km, n18, σ1°.63/31, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.92**	**117**	*eP*	**Pn**	**11 03 25.1**	**+0.9**
TRN				*eS*	**Sn**	**11 03 40.2**	**-0.4**
CRUV	**Carupano**	**1.06**	**248**	*eP*	**Pn**	**11 03 26.2**	**+0.5**
CRUV				*eS*	**Sn**	**11 03 41.0**	**-2.2**
GRGR	**Grenville**	**1.19**	**28**	*eP*	**Pn**	**11 03 27.0**	**0.0**
GRGR				*eS*	**Sn**	**11 03 44.8**	**-0.8**
GRGR	**Grenville**	**1.19**	**28**	*eP*	**Pn**	**11 03 27.0**	**0.0**
GRGR				*eS*	**Sn**	**11 03 44.6**	**-1.0**
TBH	**Brigand Hill**	**1.28**	**117**	*eP*	**Pn**	**11 03 30.2**	**+2.2**
TBH				*eS*	**Sn**	**11 03 47.8**	**+0.5**
TPR	**Prospect**	**1.43**	**85**	*eP*	**Pn**	**11 03 30.4**	**+0.9**
BOT	**Bacolet**	**1.49**	**86**	*eS*	**Sn**	**11 03 52.6**	**+1.4**
GCMP	**Grenada, Carri**	**1.61**	**29**	*eP*	**Pn**	**11 03 30.2**	**-1.4**
GCMP				*eS*	**Sn**	**11 03 51.9**	**-1.8**
SVB	**Belmont**	**2.38**	**24**	*eP*	**Pn**	**11 03 42.7**	**+1.6**
SVB				*eS*	**Sn**	**11 04 10.6**	**-0.1**
SVV	**Soufriere Volc**	**2.44**	**24**	*eP*	**Pn**	**11 03 43.0**	**+1.2**
SVV				*eS*	**Sn**	**11 04 11.6**	**-0.3**
PCRV	**Puerto La Cruz**	**2.53**	**250**	*eP*	**Pn**	**11 03 44.7**	**+1.7**
PCRV				*eS*	**Sn**	**11 04 14.2**	**+0.2**
MCLT	**Moule a Chique**	**2.91**	**26**	*eS*	**Sn**	**11 04 20.9**	**-1.8**
RIOV	**Rio Grande**	**3.01**	**172**	*eP*	**Pn**	**11 03 48.5**	**-0.8**
RIOV				*eS*	**Sn**	**11 04 21.9**	**-3.4**
SLBI	**Saint Lucia, B**	**3.18**	**23**	*eP*	**Pn**	**11 03 52.3**	**+1.0**
SLBI				*eS*	**Sn**	**11 04 27.7**	**-1.3**
PRGV	**PARIAGUAN**	**3.31**	**226**	*eP*	**Pn**	**11 03 54.7**	**+1.7**
PRGV				*eS*	**Sn**	**11 04 32.0**	**-0.1**
BIRV	**Birongo**	**4.01**	**262**	*eP*	**Pn**	**11 04 04.9**	**+2.5**
BIRV				*eS*	**Sn**	**11 04 50.5**	**+1.8**
BAUV	**El Baul**	**6.10**	**250**	*eP*	**Pn**	**11 04 29.9**	**-0.5**
BAUV	**El Baul**	**6.10**	**250**	*eS*	**Sn**	**11 05 35.4**	**-3.6**

IDC 27 11:09:58.4±2.5, 27°.70N×84°.96E, h0km, mb3.6/5, mb1 3.6/6, mb1mx3.3/50, mbtmp3.5/6, ML3.3/1, Error ellipse: s-maj=85.8km s-min=23.5km az=74.0
ISC 27 11:09:59.7±2.6, 27°.7N±0°.3×84°.9E±0°.6, h10km, n6, σ0s28/6, mb3.8/5, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.16**	**355**	P	**Pn**	**11 14 24.0**	**-0.1**
	0.1nm,0.3s,baz=174,slow=13,SNR=4.4						
KURBB	**Kurchatov Arra**	**23.39**	**350**	P	**P**	**11 15 08.8**	**+0.3**
	0.3nm,0.6s,baz=168,slow=9.1,SNR=2.2						
SONM	**Songino Array**	**26.16**	**34**	P	**P**	**11 15 34.5**	**+0.2**
	1.3nm,0.6s,baz=223,slow=11,SNR=8.7						
TIXI	**Tiksi**	**50.15**	**17**	P	**P**	**11 18 54.5**	**-0.3**
	1.6nm,0.4s,baz=207,slow=2.0,SNR=6.8						
WRA	**Warramunga Arr**	**67.32**	**129**	P	**P**	**11 20 55.0**	**-0.1**
	0.7nm,1.0s,baz=321,slow=6.3,SNR=6.5						
ASAR	**Alice Springs**	**69.59**	**132**	P	**P**	**11 21 09.3**	**+0.1**
	0.2nm,0.7s,baz=311,slow=6.0,SNR=1.8						

IDC 27 11:13:23.6±1.2, 46°.36N×154°.53E, h0km, mb3.3/4, mb1 3.6/6, mb1mx3.3/41, mbtmp3.4/6, ML2.8/2, MS2.6/2, Ms1 2.6/2, ms1mx2.2/25, Error ellipse: s-maj=40.0km s-min=25.4km az=138.0
ISC 27 11:13:26.9±1.1, 46°.4N±0°.2×154°.4E±0°.2, h20km, n8, σ0s78/6, mb3.5/4, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**7.00**	**16**	Pn	**Pn**	**11 15 07.7**	**-0.5**
	0.2nm,0.3s,baz=198,slow=12,SNR=14						
ASAJ	**Asahikawa**	**8.66**	**259**	Pn	**Pn**	**11 15 30.9**	**-0.1**
	0.2nm,0.3s,baz=94,slow=15,SNR=2.0						
YAK	**Yakutsk**	**21.08**	**327**	LR	LR	11 25 58.8	
	comp=Z,22nm,19.7s,baz=270,slow=36						
KSRS	**Korea Array**	**21.58**	**255**	LR	LR	11 27 53.1	
	comp=Z,10nm,18.9s,baz=190,slow=40						
MKAR	**Makanchi Array**	**47.89**	**298**	P	**P**	**11 22 03.6**	**+0.2**
	0.2nm,0.5s,baz=60,slow=6.5,SNR=2.6						
YKA	**Yellowknife Ar**	**50.63**	**37**	P	**P**	**11 22 25.1**	**+1.1**
	0.1nm,0.6s,baz=293,slow=6.7,SNR=2.6						
ASAR	**Alice Springs**	**72.21**	**200**	P	**P**	**11 24 50.2**	**-0.1**
	0.3nm,0.6s,baz=17,slow=5.9,SNR=5.3						
TXAR	**Lajitas Array**	**76.85**	**61**	P	**P**	**11 25 16.9**	**-0.6**
	0.4nm,0.7s,baz=298,slow=4.1,SNR=6.4						

JMA 27 11:13:44.8, 36°.63N×140°.53E, h10km±1km, M2.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.04**	**121**	P	Pg	11 13 46.7	0.0
JHO				S	Sg	11 13 47.9	-0.1
JHYU	**Hitachinakayam**	**0.29**	**171**	P	Pg	11 13 50.9	+0.2
JHYU				*eS*	Sg	11 13 54.9	+0.3
JYT	**Yasato**	**0.48**	**214**	P	Pg	11 13 54.1	-0.1
ONAJ	**Iwakimizuishiy**	**0.52**	**24**	P	Pg	11 13 54.8	-0.1
ONAJ				*eS*	Sg	11 14 02.0	+0.2
JFK	**Kawauchi**	**0.79**	**20**	P	Pg	11 13 59.4	-0.6
JFK				*eS*	Sg	11 14 09.9	-0.3
MAT	**Matsushiro**	**1.87**	**268**	P	Pn	11 14 17.0	+0.1
MAT				*eS*	Sn	11 14 36.1	-4.5

IDC 27 11:42:31.6±1.6, 10°.74S×120°.13E, h0km, mb3.6/3, mb1 3.6/7, mb1mx3.5/43, mbtmp3.5/7, ML3.2/4, Error ellipse: s-maj=61.2km s-min=22.3km az=49.0
ISC 27 11:42:36.5±1.2, 10°.91S±0°.08×120°.3E±0°.1, h35km, n7, σ3s17/11, mb3.6/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.37**	**78**	Pn	**Pn**	**11 43 28.2**	**+1.6**
	7.4nm,0.3s,baz=270,slow=2.0,SNR=2.7						
BATI				S	**Sn**	**11 44 06.8**	**+1.5**
	4.6nm,0.3s,baz=335,slow=23,SNR=1.5						
FITZ	**Fitzroy Crossi**	**8.81**	**145**	Pn	**Pn**	**11 44 44.4**	**+3.0**
	0.2nm,0.3s,baz=330,slow=10.0,SNR=23						
FITZ				S	**Sn**	**11 46 19.5**	**+0.1**
	0.9nm,0.3s,baz=185,slow=21,SNR=16						
WRA	**Warramunga Arr**	**16.22**	**125**	Pn	**Pn**	**11 46 23.3**	**+1.6**
	0.1nm,0.3s,baz=300,slow=13,SNR=5.1						
WRA				S	**Sn**	**11 49 17.3**	**-3.3**
	0.1nm,0.3s,baz=298,slow=24,SNR=1.9						
ASAR	**Alice Springs**	**18.12**	**136**	P	**Pn**	**11 46 47.9**	**+2.3**
	0.1nm,0.3s,baz=321,slow=13,SNR=9.9						
ASAR				S	**Sn**	**11 50 00.3**	**-6.6**
	0.0nm,0.3s,baz=306,slow=22,SNR=1.9						
SONM	**Songino Array**	**59.78**	**349**	P	**P**	**11 52 37.7**	**-0.5**
	0.2nm,0.4s,baz=168,slow=7.4,SNR=1.5						
MKAR	**Makanchi Array**	**66.74**	**333**	P	**P**	**11 53 23.9**	**-0.3**
	0.3nm,0.5s,baz=123,slow=8.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**71.28**	**339**	P	**P**	**11 53 50.1**	**-2.0**
	0.5nm,0.4s,baz=130,slow=6.4,SNR=1.4						

IDC 27 11:46:51.4±1.4, 26°.70N×141°.10E, h125km±15km, mb3.3/3, mb1 3.5/5, mb1mx3.1/45, mbtmp3.8/5, MS3.3/1, Ms1 3.3/1, ms1mx2.3/34, Error ellipse: s-maj=33.2km s-min=15.2km az=79.0
ISC 27 11:46:49.6±1.2, 26°.60N±0°.10×140°.8E±0°.1, h100km, n7, σ2s23/8, mb3.5/3, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.34**	**68**	P	**Pn**	**11 47 14.9**	**+1.0**
	131nm,0.3s,baz=31,slow=23,SNR=200						
JCJ				S	**Sn**	**11 47 31.7**	**-0.6**
	169nm,0.3s,baz=297,slow=23,SNR=21						
JHJ	**Hachijo jima 2**	**6.55**	**353**	P	**Pn**	**11 48 25.6**	**+2.2**
	2.0nm,0.3s,baz=47,slow=22,SNR=6.8						
JHJ				S	**Sn**	**11 49 34.0**	**-2.7**
	1.6nm,0.3s,baz=249,slow=18,SNR=1.5						
MJAR	**Matsushiro Arr**	**10.15**	**348**	P	**Pn**	**11 49 14.9**	**+2.6**
	0.1nm,0.3s,baz=163,slow=8.7,SNR=6.7						
WRA	**Warramunga Arr**	**46.69**	**189**	P	**P**	**11 55 08.7**	**+0.2**
	2.1nm,0.4s,baz=12,slow=8.7,SNR=30						
ZALV	**Zalesovo Beam**	**49.05**	**320**	LR	LR	12 17 00.6	
	comp=Z,29nm,18.5s,baz=42,slow=37						
ASAR	**Alice Springs**	**50.41**	**188**	P	**P**	**11 55 36.4**	**-0.6**
	0.2nm,0.6s,baz=12,slow=6.8,SNR=6.1						
YKA	**Yellowknife Ar**	**73.16**	**28**	P	**P**	**11 58 07.1**	**-2.0**
	0.4nm,0.5s,baz=294,slow=5.9,SNR=9.6						

NOU 27 11:48:49.5, 40°.90S×176°.46E, h46km, MLv3.6, North Island, New Zealand
WEL 27 11:48:51.7, 40°.6S±0°.7×175°.9E±0°.9, h29km±1km, M3.0/7, ML3.4/7, MLv3.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=108.2, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.11**	**52**	P	Pn	11 48 57.4	-0.2
PRWZ				S	Sb	11 49 01.7	+1.1
TIWZ	**Tintock**	**0.15**	**171**	P	Pn	11 48 57.8	-0.4
TIWZ				S	Sb	11 49 02.2	+0.9
MRZ	**Mangatainoka R**	**0.21**	**260**	P	Pb	11 48 58.5	+0.5
MRZ				S	Sb	11 49 03.2	+1.0
POWZ	**Post Office Ro**	**0.24**	**344**	P	Pb	11 48 58.7	+0.4
POWZ				S	Sb	11 49 03.5	+0.7
BFZ	**Birch Farm**	**0.30**	**101**	P	Pb	11 48 59.3	+0.2
BFZ				S	Sn	11 49 05.1	-0.6
HOWZ	**Holdsworth Sta**	**0.38**	**223**	P	Pn	11 49 00.7	-0.5
HOWZ				S	Sn	11 49 07.3	-0.3
CPWZ	**Castlepoint**	**0.39**	**138**	P	Pn	11 49 01.4	0.0
CPWZ				S	Sn	11 49 09.8	+2.0
DVHZ	**Dannevirke**	**0.40**	**36**	P	Pb	11 49 00.7	+0.1
TMWZ	**Te Maipa**	**0.48**	**177**	P	Pn	11 49 02.4	-0.3
ANWZ	**Angora Road**	**0.50**	**71**	P	Pn	11 49 02.6	-0.2
OGWZ	**Otaki Gorge**	**0.56**	**249**	P	Pn	11 49 03.8	+0.1
TSZ	**Takapari Road**	**0.57**	**8**	P	Pb	11 49 03.5	+0.3
OHWZ	**Ohakea**	**0.59**	**315**	P	Pn	11 49 05.0	+0.9
MTW	**Mount Morrison**	**0.60**	**207**	P	Pn	11 49 04.1	-0.2
PRHZ	**Porangahau**	**0.69**	**59**	P	Pb	11 49 04.9	-0.4
WPHZ	**Waipukurau**	**0.72**	**39**	P	Pn	11 49 06.1	+0.2
KIW	**Kapiti Island**	**0.76**	**251**	P	Pn	11 49 07.1	+0.7
PNHZ	**Pukenui**	**0.76**	**20**	P	Pn	11 49 06.8	+0.3
CAW	**Cannon Point**	**0.77**	**231**	P	Pn	11 49 07.0	+0.4
TRWZ	**Traveller**	**0.78**	**189**	P	Pb	11 49 06.6	-0.3
PAWZ	**Paruwai Farm**	**0.82**	**203**	P	Pb	11 49 08.1	+0.6
MSWZ	**Moikau Station**	**0.92**	**210**	P	Pn	11 49 08.3	-0.3
PXZ	**Pawanui**	**0.97**	**53**	P	Pn	11 49 09.1	-0.3
PLWZ	**Palliser**	**1.05**	**205**	P	Pn	11 49 09.9	-0.6
KRHZ	**Kereru**	**1.06**	**22**	P	Pn	11 49 11.0	+0.4
BHW	**Baring Head**	**1.08**	**223**	P	Pn	11 49 10.6	-0.2
WAZ	**Wanganui**	**1.09**	**322**	P	Pb	11 49 13.4	+1.4
KAHZ	**Kahuranaki**	**1.14**	**44**	P	Pn	11 49 11.6	-0.1
BHHZ	**Black Hill Sta**	**1.14**	**8**	P	Pb	11 49 12.9	0.0
MOVZ	**Moawhango**	**1.22**	**356**	P	Pb	11 49 14.0	-0.1
WNVZ	**Wahianoa**	**1.31**	**351**	P	Pb	11 49 15.9	+0.1
TCW	**Tory Channel**	**1.33**	**243**	P	Pn	11 49 14.4	+0.1
TRVZ	**Turoa**	**1.34**	**350**	P	Pb	11 49 16.6	+0.2
PKVZ	**Pokaka**	**1.39**	**343**	P	Pb	11 49 17.1	0.0
SNVZ	**South Ngauruho**	**1.45**	**353**	P	Pb	11 49 17.9	-0.2
OTVZ	**Oturere**	**1.47**	**354**	P	Pb	11 49 18.0	-0.4
DUWZ	**D'Urville Isla**	**1.48**	**262**	P	Pn	11 49 17.0	+0.6
ETVZ	**East Tongariro**	**1.49**	**356**	P	Pb	11 49 18.3	-0.5
TMVZ	**Te Maari**	**1.51**	**356**	P	Pb	11 49 18.7	-0.4
WTVZ	**West Tongariro**	**1.52**	**352**	P	Pb	11 49 19.0	-0.4
NTVZ	**North Tongariro**	**1.53**	**355**	P	Pb	11 49 19.0	-0.5
BKZ	**Black Stump Fm**	**1.54**	**19**	P	Pb	11 49 18.4	-1.2
KRVZ	**Karewarewa**	**1.54**	**354**	P	Pb	11 49 19.2	-0.4
LREZ	**Lake Rotokare**	**1.61**	**316**	P	Pb	11 49 21.7	+0.9
ARHZ	**Aropaoanui**	**1.62**	**33**	P	Pn	11 49 18.6	+0.4
RITZ	**Rihia Road**	**1.64**	**0**	P	Pb	11 49 22.7	+1.3
TUWZ	**Tuamarina**	**1.66**	**240**	P	Pn	11 49 18.6	-0.2
VRZ	**Vera Road**	**1.72**	**330**	P	Pb	11 49 22.4	-0.2
RATZ	**Rangitukua**	**1.76**	**358**	P	Pb	11 49 23.8	+0.5
BSWZ	**Blackbirch Sta**	**1.85**	**233**	P	Pn	11 49 21.1	-0.4
NEZ	**North Egmont**	**1.91**	**314**	P	Pb	11 49 30.9	+5.0
MTHZ	**Maungataniwha**	**1.93**	**24**	P	Pb	11 49 25.4	-0.8
KHEZ	**Kahui Hut**	**1.94**	**313**	P	Pb	11 49 26.3	-0.2
NMEZ	**Namu Road**	**1.94**	**308**	P	Pb	11 49 27.4	+1.1
NNZ	**Nelson**	**1.97**	**252**	P	Pb	11 49 26.5	-0.4
NBEZ	**Newall Road No**	**2.04**	**311**	P	Pb	11 49 28.6	+0.5
ALRZ	**Allen Road**	**2.09**	**11**	P	Pb	11 49 31.6	+2.6
KNZ	**Kokohu**	**2.13**	**42**	P	Pn	11 49 24.0	-1.2
HIZ	**Hauiti**	**2.25**	**340**	P	Pb	11 49 30.3	-1.3
THZ	**Tophouse**	**2.50**	**242**	P	Pb	11 49 33.6	-2.3
QRZ	**Quartz Range**	**2.54**	**264**	P	Pb	11 49 34.8	-1.7
TOZ	**Tahuroa Road**	**2.90**	**354**	P	Pb	11 49 43.3	+0.5

MAN 27 12:04:58.0, 5°.86N×126°.05E, h148km, MS3.5
NEIC 27 12:05:00.2±1.2, 6°.04N±0°.06×126°.0E±0°.1, h165km±6km, mb4.5/35, Error ellipse: s-maj=16.9km s-min=7.6km az=77.0
IDC 27 12:05:00.4±0.6, 6°.07N×126°.06E, h160km±6km, mb3.9/8, mb1 4.1/11, mb1mx3.5/53, mbtmp4.5/11, Error ellipse: s-maj=30.9km s-min=11.7km az=65.0
DJA 27 12:05:01.2±0.3, 6°.N±3°×12°.6E±°, h146km±3km, M4.7/25, mb4.6/25, mB5.2/9, MLv4.8/11, Mw(mB)4.5/9, MwMwp4.9/1, Mwp5.2/1
ISC 27 12:05:00.1±0.6, 6°.00N±0°.04×126°.01E±0°.06, h155km±5km, n95, σ1s37/111, mb4.5/28, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.31**	**290**	*eP*	**Pn**	**12 05 20.1**	**-1.1**
DDMP				*e

KULM	**Kulim**	**25.24**	**270**	P	**P**	**12 10 12.2**	**+0.2**
KULM				IAmb	IAmb	12 10 24.0	
	comp=Z,18nm,1.2s						
COEN	**Coen**	**26.14**	**139**	P	**P**	**12 10 19.5**	**-0.6**
COEN				IAmb	IAmb	12 10 32.1	
	comp=Z,23nm,1.4s						
NJ2	**Nanjing**	**26.77**	**346**	*e*P	**P**	**12 10 27.5**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WB0	**Warramunga Arr**	**26.90**	**162**	P	**P**	**12 10 26.5**	**-0.3**
WB0				IAmb	IAmb	12 10 36.7	
	comp=Z,19nm,1.4s						
WRAB	**Tennant Creek**	**27.04**	**163**	P	**P**	**12 10 26.7**	**-1.4**
WRAB				IAmb	IAmb	12 10 33.0	
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**27.05**	**163**	P	**P**	**12 10 27.8**	**-0.3**
	comp=Z,2.3nm,0.3s,baz=333,slow=11,SNR=40						
WRA	**Warramunga Arr**	**27.05**	**163**	P	**P**	**12 10 27.4**	**-0.8**
WB2	**Warramunga Arr**	**27.05**	**163**	P	**P**	**12 10 27.3**	**-0.8**
WB2				IAmb	IAmb	12 10 33.1	
	comp=Z,6.7nm,0.8s						
WR0	**Warramunga Arr**	**27.13**	**162**	P	**P**	**12 10 28.4**	**-0.4**
WR0				IAmb	IAmb	12 10 43.7	
	comp=Z,10nm,1.1s						
PSA00	**Pilbara Seismi**	**28.06**	**192**	P	**P**	**12 10 36.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**29.15**	**298**	P	**P**	**12 10 46.5**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=108,slow=8.6,SNR=2.2						
CMAR				ScP	**ScP**	**12 17 18.0**	**0.0**
	comp=Z,1.0nm,0.4s,baz=127,slow=1.5,SNR=10						
KMI	**Kunming**	**29.30**	**313**	⇑P	**P**	**12 10 52.0**	**+3.7**
KMI				pP	pP	12 11 19.0	-2.1
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AS31	**Alice Springs**	**30.47**	**166**	P	**P**	**12 10 58.3**	**-0.1**
ASAR	**Alice Springs**	**30.48**	**166**	P	**P**	**12 10 58.6**	**+0.2**
	comp=Z,8.3nm,0.6s,baz=336,slow=7.0,SNR=181						
ASAR				PcP	**PcP**	**12 13 54.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=342,slow=2.4,SNR=5.6						
MJB9	**Matsu-Tunnel**	**32.39**	**19**	P	**P**	**12 11 14.7**	**-0.4**
CD2	**Chengdu**	**32.41**	**323**	*e*P	**P**	**12 11 16.0**	**+0.6**
CTAO	**Charters Tower**	**32.69**	**143**	P	**P**	**12 11 17.1**	**-0.8**
CTAO				IAmb	IAmb	12 11 29.5	
	comp=Z,15nm,1.4s						
MORW	**Morawa**	**36.16**	**195**	P	**P**	**12 11 47.2**	**-0.4**
MORW				IAmb	IAmb	12 11 48.3	
	comp=Z,20nm,1.1s						
LZH	**Lanzhou**	**36.20**	**329**	*e*P	**P**	**12 11 51.3**	**+3.2**
LZH				pP	pP	12 12 22.8	+1.2
LZH				sP	sP	12 12 38.0	-1.0
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FORT	**Forrest**	**36.62**	**177**	P	**P**	**12 11 51.9**	**+0.4**
HHC	**Hu-ho-hao-te**	**37.03**	**342**	*e*P	**P**	**12 11 56.5**	**+1.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,70nm,6.6s						
MDJ	**Mudanjiang**	**38.59**	**4**	P	**P**	**12 12 10.5**	**+2.6**
MDJ				pP	pP	12 12 44.0	+2.3
MDJ				ScP	**S**	**12 17 52.3**	**-0.1**
MDJ				S	**ScP**	**12 17 55.8**	**+5.0**
MDJ				ScS	**ScS**	**12 22 02.3**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.1s						
NWAO	**Narrogin (SRO)**	**39.60**	**192**	P	**P**	**12 12 16.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**39.60**	**192**	P	**P**	**12 12 16.7**	**+0.3**
NWAO				IAmb	IAmb	12 12 17.4	
	comp=Z,15nm,0.5s						
BBOO	**Buckleboo**	**39.76**	**167**	P	**P**	**12 12 17.8**	**+0.1**
STKA	**Stephens Creek**	**40.49**	**159**	P	**P**	**12 12 24.6**	**+0.8**
	comp=Z,5.3nm,0.5s,baz=325,slow=7.6,SNR=10						
STKA	**Stephens Creek**	**40.49**	**159**	P	**P**	**12 12 24.0**	**+0.2**
TOO	**Toolangi**	**47.00**	**159**	P	**P**	**12 13 15.9**	**+0.2**
TOO				IAmb	IAmb	12 13 21.8	
	comp=Z,18nm,1.2s						
WMQ	**Urumqi**	**50.47**	**324**	*e*P	**P**	**12 13 43.8**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,44nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.9s						
MK31	**Makanchi Array**	**55.30**	**325**	P	**P**	**12 14 16.3**	**-1.1**
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**12 14 16.6**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=118,slow=7.3,SNR=14						
MKAR	**Makanchi Array**	**55.30**	**325**	P	**P**	**12 14 16.4**	**-1.1**
KK31	**Karatay Array**	**61.10**	**316**	P	**P**	**12 14 56.5**	**-1.3**
KKAR	**Karatay Array**	**61.10**	**316**	P	**P**	**12 14 56.3**	**-1.5**
ABKAR	**Akbulak array**	**69.95**	**320**	P	**P**	**12 15 53.1**	**-1.4**
CASY	**Casey**	**72.97**	**186**	P	**P**	**12 16 11.5**	**-0.6**
CASY				IAmb	IAmb	12 16 23.9	
	comp=Z,17nm,1.4s						
IMAR	**Indian Mountai**	**80.58**	**24**	P	**P**	**12 16 54.2**	**-0.8**
I23K	**Minto, Yukon-K**	**82.33**	**25**	P	**P**	**12 17 02.1**	**-2.0**
RND	**Reindeer**	**82.50**	**27**	P	**P**	**12 17 04.0**	**-1.1**
RND				IAmb	IAmb	12 17 05.9	
	comp=Z,7.5nm,1.5s						
KAIM	**Kayak Island**	**84.64**	**30**	P	**P**	**12 17 14.1**	**-1.9**
MAW	**Mawson**	**85.62**	**200**	P	**P**	**12 17 19.8**	**-0.8**
VNDA	**Vanda**	**85.75**	**173**	P	**P**	**12 17 21.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=329,slow=7.5,SNR=3.8						
VNDA	**Vanda**	**85.75**	**173**	P	**P**	**12 17 19.8**	**-1.4**
EGAK	**Eagle**	**85.83**	**25**	P	**P**	**12 17 20.4**	**-1.4**
EGAK				IAmb	IAmb	12 17 21.9	
	comp=Z,7.8nm,1.5s						
EUNU	**Eureka**	**92.51**	**5**	P	**P**	**12 17 51.7**	**-1.4**
EUNU				IAmb	IAmb	12 18 02.6	
	comp=Z,3.6nm,1.4s						
BURAR	**Bucovina Array**	**92.84**	**318**	P	**P**	**12 17 54.9**	**-0.5**
QSPA	**South Pole Qui**	**95.89**	**180**	P	**P**	**12 18 07.5**	**-1.3**
VYHS	**Vyhne**	**96.77**	**320**	*e*PDIFF	**P**	**12 18 12.9**	**-0.3**

IDC 27 12:17:08.2±3.2,27.68N×85.92E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.3/45,mbtmp3.6/4,MS3.1/1,Ms1 3.1/1, ms1mx2.4/38,Error ellipse: s-maj=108.7km s-min=29.0km az=72.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.29**	**352**	P	Pn	12 21 35.3	-0.2
	baz=179,slow=10,SNR=1.1						
SONM	**Songino Array**	**25.68**	**33**	P	P	12 22 40.2	+0.3
	0.5nm,0.4s,baz=213,slow=10,SNR=1.9						
ZALV	**Zalesovo Beam**	**26.25**	**359**	P	P	12 22 44.3	-0.6
	0.5nm,0.3s,baz=169,slow=8.8,SNR=1.9						
ATD	**Arta Tunnel**	**43.39**	**257**	LR	LR	12 41 30.9	
	comp=Z,24nm,18.8s,baz=58,slow=34						
WRA	**Warramunga Arr**	**66.61**	**130**	P	P	12 28 00.6	0.0
	0.6nm,1.1s,baz=323,slow=6.4,SNR=6.9						

*SOME **27** 12:19:41.1,44.68N×82.08E,h20km*
*NNC **27** 12:19:44.9±1.2,44.80N×81.74E,h0km,mb3.3,mpv3.0, Error ellipse: s-maj=17.6km s-min=4.4km az=121.0*
ISC 27 12:19:43.2±3.6,44.71N±0.09×81.9E±0.2,h6km±19km,n10, σ1§56/18,4C-2D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.55**	**257**	*e*P	**Pg**	**12 20 13.1**	**+0.1**
	4.1nm,0.2s						
DJR				*e*S	**Sg**	**12 20 36.2**	**+3.2**
	11nm,0.5s						
KTMS	**Ketmen**	**1.68**	**222**	*e*P	**Pn**	**12 20 13.6**	**+0.3**
	1.7nm,0.1s						
KTMS				*e*S	**Sb**	**12 20 36.8**	**+0.7**
	23nm,0.2s						
MAKZ	**Makanchi**	**2.10**	**2**	⇑Pn	**Pn**	**12 20 19.9**	**+0.9**
	1.4nm,0.3s						
MAKZ				⇑Sn	**Sb**	**12 20 47.8**	**-0.2**
	3.2nm,0.3s						
MK31	**Makanchi Array**	**2.10**	**7**	⇑Pn	**Pn**	**12 20 20.0**	**+1.0**
	0.4nm,0.2s,baz=185,slow=14,SNR=132						
MK31				⇓Sn	**Sb**	**12 20 47.6**	**-0.6**
	1.9nm,0.3s,baz=190,slow=27,SNR=19						
PDGK	**Podgornoye**	**2.22**	**232**	Pg	**Pn**	**12 20 22.4**	**+1.7**
	2.7nm,0.3s						
PDGK				Lg	Lg	12 20 52.5	
	3.6nm,0.3s						
PDGK	**Podgornoye**	**2.22**	**232**	⇑Pn	**Pn**	**12 20 22.5**	**+1.9**
	1.8nm,0.3s						
PDGK				⇓Sn	**Sb**	**12 20 52.7**	**+1.2**
	8.5nm,0.8s						
SHLS	**Shalkode**	**2.34**	**229**	*e*P	**Pn**	**12 20 21.4**	**-1.0**
	19nm,0.2s						
SHLS				*e*S	**Sn**	**12 20 50.2**	**-1.3**
	18nm,0.4s						
KPKS	**Kokpek**	**2.62**	**243**	*e*P	**Pb**	**12 20 30.1**	**-0.7**
	14nm,0.2s						
KPKS				*e*S	**Sg**	**12 21 05.4**	**-2.1**
	17nm,0.3s						
ARXS	**Arharly**	**2.95**	**262**	*e*P	**Pb**	**12 20 36.1**	**-0.2**
	3.4nm,0.4s						
ARXS				*e*S	**Sg**	**12 21 15.7**	**-2.3**
	10nm,0.5s						
ARXS	**Arharly**	**2.95**	**262**	Pg	**Pb**	**12 20 36.1**	**-0.2**
	3.4nm,0.4s						
ARXS				Lg	Lg	12 21 15.7	
	10nm,0.6s						

*NNC **27** 12:27:51.5±2.2,40.81N×69.93E,h0km,mb4.1,mpv3.7, Error ellipse: s-maj=16.4km s-min=10.2km az=46.0*
*SOME **27** 12:27:51.5,41.03N×69.88E,h5km*
*KRNET **27** 12:27:52.3±0.1,41.12N×69.76E,h19km,mb3.0*
ISC 27 12:27:52.4±1.2,41.07N±0.04×69.83E±0.05,h6km±12km, n18,σ2§01/30,21C-4D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	**Tashkent**	**0.48**	**303**	⇑*i*P	**Pg**	**12 28 00.4**	**-1.2**
	baz=1.0						
TAS				⇑*i*S	**Sg**	**12 28 06.4**	**-1.4**
	baz=1.0						
IUG	**Iuzhnay**	**1.09**	**8**	*e*P	**Pg**	**12 28 16.1**	**+2.8**
	4μm,0.2s						
IUG				*e*S	Sg	12 28 35.3	+7.9
	138nm,0.3s						
IUG	**Iuzhnay**	**1.09**	**8**	P	**Pg**	**12 28 16.1**	**+2.8**
	4μm,0.2s						
IUG				S	Sg	12 28 35.3	+7.9
	138nm,0.3s						
TRKS	**Terek-Say**	**1.09**	**65**	⇑*i*P	**Pn**	**12 28 12.9**	**-1.5**
	baz=72						
TRKS				⇑*i*S	**Sn**	**12 28 28.1**	**-1.8**
	baz=72						
BTK	**Batken**	**1.26**	**143**	⇑*e*P	**Pb**	**12 28 16.8**	**+0.2**
	baz=43						
BTK				⇑*i*S	**Sg**	**12 28 34.7**	**+1.8**
	baz=43						
KK31	**Karatay Array**	**2.10**	**14**	Pn	**Pg**	**12 28 31.6**	**-0.9**
	5.7nm,0.3s,baz=202,slow=14,SNR=128						
KK31				⇑Sn	**Sg**	**12 29 01.6**	**+1.9**
	15nm,0.4s,baz=207,slow=26,SNR=13						
DRK	**Karamyk**	**2.19**	**136**	⇑*i*P	**Pb**	**12 28 31.2**	**-1.4**
	baz=36						
DRK				⇑*i*S	**Sb**	**12 28 59.5**	**-0.6**
	baz=36						
OHH	**Osh**	**2.31**	**103**	⇓*i*P	**Pn**	**12 28 32.3**	**+1.2**
	baz=4.0						
OHH				⇓*i*S	**Sb**	**12 29 01.9**	**-1.4**
	baz=4.0						
ARSB	**Arslanbob**	**2.39**	**83**	⇑*i*P	**Pb**	**12 28 33.6**	**-2.4**
	baz=84						
ARSB				⇑*i*S	**Sb**	**12 29 03.3**	**-2.5**
	baz=84						
MNAS	**Manas**	**2.45**	**54**	⇑*i*P	**Pb**	**12 28 33.8**	**-3.2**
	baz=55						
MNAS				⇑*i*S	**Sb**	**12 29 04.2**	**-3.3**
	baz=55						
SFK	**Sufi-Kurgan**	**2.99**	**109**	⇑*i*P	**Pn**	**12 28 42.7**	**+2.1**
	baz=10.0						
SFK				⇑*i*S	**Sn**	**12 29 19.1**	**+2.2**
	baz=10.0						
MRKS	**Merke**	**3.04**	**55**	*e*P	**Pg**	**12 28 48.7**	**-1.9**
	6.6nm,0.5s						
MRKS				*e*S	**Sg**	**12 29 30.6**	**+0.6**
	17nm,0.4s						
MRKS	**Merke**	**3.04**	**55**	Pg	**Pb**	**12 28 47.9**	**+1.0**
	6.6nm,0.5s						
MRKS				Lg	Lg	12 29 30.2	
	17nm,0.4s						
AML	**Almayashu**	**3.09**	**69**	⇑*i*P	**Pn**	**12 28 43.7**	**+1.7**
	baz=70						
AML				⇑*i*S	**Sn**	**12 29 20.5**	**+1.0**
	baz=70						
ARLS	**Aral**	**3.47**	**75**	⇑*i*P	**Pn**	**12 28 48.7**	**+1.6**
	baz=76						
ARLS				⇑*i*S	**Sn**	**12 29 29.2**	**+0.6**
	baz=76						
AAK	**Ala-Archa**	**3.82**	**64**	⇑Pg	**Pg**	**12 29 03.8**	**-1.8**
	3.0nm,0.5s						
AAK				⇓Lg	Lg	12 29 55.9	
	3.4nm,0.5s						
SGDS	**Sogindy**	**4.29**	**55**	Pg	**Pb**	**12 29 10.5**	**+2.3**
	1.8nm,0.2s						
SGDS				Lg	Lg	12 30 08.2	
	4.4nm,0.6s						
TKM2	**Tokmak 2**	**4.68**	**65**	⇑Pg	**Pb**	**12 29 17.1**	**+2.1**
	4.0nm,1.1s						
TKM2				⇓Lg	Lg	12 30 22.4	
	2.9nm,0.6s						

*IDC **27** 12:33:03.4±1.4,27.87N×85.44E,h0km,mb3.6/7, mb1 3.7/9,mb1mx3.4/45,mbtmp3.5/9,ML3.3/2,MS4.2/2, Ms1 4.2/2,ms1mx3.3/26,Error ellipse: s-maj=55.6km s-min=18.1km az=61.0*
ISC 27 12:33:06.3±1.6,27.9N±0.2×85.4E±0.3,h18km,n11, σ1§01/9,mb3.6/7,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.58**	**124**	Pn	**Pn**	**12 36 45.6**	**+0.5**
	0.1nm,0.3s,baz=315,slow=10,SNR=1.9						
MKAR	**Makanchi Array**	**19.02**	**353**	P	**Pn**	**12 37 28.1**	**+0.1**
	0.1nm,0.3s,baz=170,slow=11,SNR=5.9						
KURBB	**Kurchatov Arra**	**23.29**	**349**	P	**P**	**12 38 14.3**	**+1.4**
	0.3nm,0.5s,baz=173,slow=10,SNR=2.5						
SONM	**Songino Array**	**25.75**	**34**	P	**P**	**12 38 35.8**	**-0.2**
	0.4nm,0.5s,baz=220,slow=11,SNR=3.7						
ZALV	**Zalesovo Beam**	**26.03**	**359**	P	**P**	**12 38 36.6**	**-1.6**
	0.4nm,0.3s,baz=169,slow=9.1,SNR=1.7						
KSRS	**Korea Array**	**36.77**	**64**	LR	LR	12 56 13.3	
	comp=Z,368nm,21.1s,baz=261,slow=38						
USRK	**Ussuriysk Ar.**	**40.46**	**54**	LR	LR	13 00 25.0	
	comp=Z,339nm,19.3s,baz=248,slow=41						
FINES	**FINESS Array B**	**51.31**	**328**	P	**P**	**12 42 08.5**	**-0.6**
	0.7nm,0.5s,baz=99,slow=12,SNR=3.8						
ARCES	**ARCESS Array B**	**53.72**	**338**	P	**P**	**12 42 27.7**	**+0.9**
	1.9nm,0.9s,baz=104,slow=8.0,SNR=9.7						
WRA	**Warramunga Arr**	**67.09**	**130**	P	**P**	**12 43 58.8**	**-0.2**
	0.2nm,0.4s,baz=322,slow=6.4,SNR=9.3						
ASAR	**Alice Springs**	**69.39**	**133**	P	**P**	**12 44 13.1**	**-0.2**
	0.2nm,0.4s,baz=315,slow=6.2,SNR=9.4						

*BJI **27** 12:35:50.2±0.0,27.06N×88.28E,h8km,mB4.9/51, mb4.9/73,Ms5.0/84,Ms7 4.7/74*
*MOS **27** 12:35:51.7±0.9,26.84N×88.10E,h31km,mb5.3/97, MS4.5/19,Error ellipse: s-maj=5.8km s-min=3.1km az=116.4*
*NDI **27** 12:35:51.4±3.9,26.84N×88.10E,h10km,ML5.2, mb5.1(NEIC)*
*BGR **27** 12:35:51.0±0.0,26.89N×87.88E,h10km,mb5.3,Ms4.3*
*IDC **27** 12:35:51.1±2.4,26.77N×88.06E,h14km±15km,mb4.7/44, mb1 4.7/46,mb1mx4.7/51,mbtmp4.8/46,ML4.7/2,MS4.2/19, Ms1 4.2/19,ms1mx4.1/29,Error ellipse: s-maj=10.5km s-min=8.9km az=41.0*
*GCMT **27** 12:35:52.9±0.2,26.66N±0.01×88.27E±0.01,h26km, MW5.0/116,Moment Tensor Solution. s55,c72; s116,c185; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.30±.15; $M_{\theta\theta}$-2.56±.10; $M_{\phi\phi}$4.86±.11; $M_{r\theta}$-1.48±.22; $M_{\theta\phi}$2.03±.08; $M_{\phi r}$-0.83±.18; Best double couple: M_o4.79400×10^{16} NP1:ϕ_s154.00000°,δ57.00000°, λ-157.00000°. NP2:ϕ_s52.00000°,δ71.00000°, λ-35.00000°. Principal axes: T 5.5570, Plg9.0000°, Azm106.0000°; N -1.5260, Plg51.0000°, Azm206.0000°; P -4.0310, Plg38.0000°, Azm9.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **27** 12:35:53.9±1.5,26.86N±0.07×88.06E±0.06,h32km±3km, mb5.1/201 Error ellipse: s-maj=9.8km s-min=7.5km az=201.0*
*DMN **27** 12:35:54.6±0.4,26.84N×88.06E,h2km,Ml5.5/2,Error ellipse: s-maj=8.0km s-min=7.6km az=111.0*

ISC 27 12:35:51.9±0.3,26.84N±0.03×88.08E±0.02,h20km±1km, h19km:pP-P,n767,σ1§46/857,mb5.2/261,MS4.5/52, 38C-41D,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**0.61**	**327**	*e*Pg	**Pg**	**12 36 05.0**	**+0.8**
TAPN				*e*Sg	**Sg**	**12 36 13.6**	**+1.1**
	43μm,0.2s						
ODAN	**Odare**	**0.62**	**272**	*e*Pg	**Pn**	**12 36 05.9**	**+0.1**
ODAN				*e*Sg	**Sn**	**12 36 14.6**	**-0.6**
	102μm,0.4s						
GTK	**Tadong**	**0.67**	**44**	*e*P	**Pb**	**12 36 03.5**	**-1.4**
GTK				*e*S	**Sb**	**12 36 11.1**	**-2.8**
GTK				IAML		12 36 12.2	
	comp=E,192μm,0.8s						
GTK				IAML		12 36 12.4	
	comp=N,94μm,0.4s						
RAMN	**Ramite**	**1.33**	**275**	*e*Pg	**Pg**	**12 36 18.9**	**+1.3**
GUN	**Gumba**	**2.23**	**299**	*e*Pn	**Pb**	**12 36 31.7**	**0.0**
GUN				*e*Sn	**Sb**	**12 36 57.7**	**-1.4**
	comp=N,10μm,0.3s						
PKI	**Pulchoki**	**2.49**	**288**	*e*Pn	**Pb**	**12 36 34.7**	**-1.4**
PKIN	**Phulchoki**	**2.50**	**288**	*e*Pn	**Pb**	**12 36 35.0**	**-1.3**
KKN	**Kakani**	**2.67**	**292**	*e*Pn	**Pb**	**12 36 36.7**	**-2.4**
KKN				*e*Sn	**Sn**	**12 37 07.7**	**+1.9**
	comp=N,2μm,0.2s						
DMN	**Daman**	**2.76**	**287**	*e*Pn	**Pn**	**12 36 38.0**	**+2.8**
DMN				*e*Sn	**Sn**	**12 37 10.2**	**+2.1**
GKN	**Gorkha**	**3.27**	**292**	*e*Pn	**Pn**	**12 36 45.3**	**+3.1**
GUWA	**GUWAHATI**	**3.30**	**100**	*e*P	**Pn**	**12 36 43.7**	**+1.3**
GUWA				IAML		12 37 35.9	
	comp=N,9μm,0.4s						
GUWA				IAML		12 37 38.3	
	comp=E,9μm,0.5s						
SHL	**Shillong**	**3.64**	**109**	P	**Pn**	**12 36 47.6**	**+0.3**
SHL	**Shillong**	**3.64**	**109**	*e*P	**Pn**	**12 36 47.6**	**+0.3**
SHL				IAML		12 37 44.2	
	comp=E,8μm,0.4s						
SHL				IAML		12 37 47.9	
	comp=N,10μm,0.5s						
SHL	**Shillong**	**3.64**	**109**	Pn	**Pn**	**12 36 47.6**	**+0.3**
LSA	**Lhasa**	**3.93**	**43**	Pg	**Pn**	**12 36 54.0**	**+2.4**
LSA				Sg	**Sb**	**12 37 49.8**	**+1.6**
LSA				LR	LR		
	comp=N,8μm,5.7s						
LSA				LR	LR		
	comp=N,10μm,3.9s						
LSA				LR	LR		
	comp=N,6μm,4.3s						
LSA	**Lhasa**	**3.93**	**43**	P	**Pn**	**12 36 51.2**	**-0.4**
LSA	**Lhasa**	**3.93**	**43**		**Pn**	**12 36 51.2**	**-0.4**
KOLN	**Koldanda**	**4.09**	**284**	*e*Pn	**Pn**	**12 36 56.2**	**+2.6**
AGT	**Agartala**	**4.11**	**135**	*e*P	**Pn**	**12 36 55.8**	**+2.3**
AGT				IAML		12 38 15.8	
	comp=N,17μm,0.7s						
AGT				IAML		12 38 17.6	
	comp=E,14μm,0.6s						
DANN	**Dangsing**	**4.12**	**292**	*e*Pn	**Pn**	**12 36 56.0**	**+2.0**
TEZP	**TEZPUR**	**4.23**	**92**	*e*P	**Pn**	**12 36 55.3**	**+0.1**
PYUN	**Piuthan**	**4.69**	**287**	*e*Pn	**Pn**	**12 37 03.5**	**+1.7**
BELO	**BELONIA**	**4.70**	**139**	*e*P	**Pn**	**12 37 04.7**	**+3.0**
SILR	**SILCHAR**	**4.72**	**115**	*e*P	**Pn**	**12 37 04.8**	**+2.7**
ZIRO	**ZIRO**	**5.19**	**81**	*e*P	**Pn**	**12 37 08.2**	**-0.4**
KOHI	**KOHIMA**	**5.53**	**100**	*e*P	**Pn**	**12 37 14.5**	**+1.3**
MOKO	**MOKOCHONG**	**5.79**	**94**	*e*P	**Pn**	**12 37 17.1**	**+0.3**
LKP	**Lekhapani**	**6.94**	**84**	*e*P	**Pn**	**12 37 31.8**	**-0.7**
DDI	**Dehra Dun**	**9.47**	**294**	*e*P	**Pn**	**12 38 10.2**	**+2.9**
DDI				*e*S	**Sn**	**12 39 50.0**	**-3.2**
DDI				IAML		12 39 55.0	
	comp=N,1μm,0.4s						
DDI				IAML		12 39 55.3	
	comp=E,1μm,0.4s						
BHPL	**Bhopal**	**10.30**	**252**	*e*P	**Pn**	**12 38 17.8**	**-0.9**
BHPL				IAML		12 40 09.0	
	comp=N,759nm,0.2s						
BHPL				IAML		12 40 10.5	
	comp=E,661nm,0.4s						
SMLA	**Simla**	**10.47**	**297**	*e*P	**Pn**	**12 38 21.6**	**+0.7**
DHRM	**DHARAMSHALA**	**11.59**	**301**	*e*P	**Pn**	**12 38 35.2**	**-1.2**
DHRM				*e*S	**Sn**	**12 40 38.3**	**-7.1**
DHRM				IAML		12 40 41.1	
	comp=E,890nm,1.0s						
DHRM				IAML		12 40 47.1	
	comp=N,622nm,1.1s						
AJM	**Ajmer**	**12.02**	**271**	⇑*e*P	**Pn**	**12 38 40.0**	**-2.2**
AJM				*e*S	Sn	12 40 45.0	-11
CM33	**Chiang Mai Arr**	**12.80**	**126**	P	**Pn**	**12 38 51.0**	**-1.4**
CHTO	**Chiang Mai**	**12.80**	**126**	P	**Pn**	**12 38 51.9**	**-1.0**
CHTO	**Chiang Mai**	**12.80**	**126**	Pn	**Pn**	**12 38 51.9**	**-1.0**
CM32	**Chiang Mai Arr**	**12.84**	**127**	P	**Pn**	**12 38 52.0**	**-1.4**
HYB	**Hyderabad**	**12.87**	**225**	*i*P	**Pn**	**12 38 52.0**	**-1.8**
HYB				*e*S	**Sn**	**12 41 19.0**	**+2.4**
HYB	**Hyderabad**	**12.87**	**225**	*e*P	**Pn**	**12 38 51.6**	**-2.2**
CM34	**Chiang Mai Arr**	**12.93**	**126**	P	**Pn**	**12 38 53.0**	**-1.6**
CM15	**Chiang Mai Arr**	**13.03**	**128**	P	**Pn**	**12 38 54.7**	**-1.2**
	comp=N,653nmcomp=N,85nm,0.9s						
CM13	**Chiang Mai Arr**	**13.03**	**128**	P	**Pn**	**12 38 54.0**	**-2.0**
	comp=N,786nmcomp=N,113nm,0.9s						
CM31	**Chiang Mai Arr**	**13.04**	**128**	P	**Pn**	**12 38 55.0**	**-1.0**
	comp=N,17μmcomp=N,3μm,0.9s						
CM31	**Chiang Mai Arr**	**13.04**	**128**	Pn	**Pn**	**12 38 54.9**	**-1.2**
CMAR	**Chiang Mai Arr**	**13.04**	**128**	Pn	**Pn**	**12 38 54.1**	**-1.9**
	comp=N,1.5nm,0.3s,baz=309,slow=13,SNR=188						
CMAR				LR	LR	12 44 44.4	
	comp=N,1μm,19.6s,baz=1.5,slow=41						
CMAR	**Chiang Mai Arr**	**13.04**	**128**	P	**Pn**	**12 38 55.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**13.04**	**128**	Pn	**Pn**	**12 38 55.3**	**-0.8**
CM35	**Chiang Mai Arr**	**13.04**	**126**	P	**Pn**	**12 38 54.0**	**-2.2**
CRAI	**Chiangrai**	**13.05**	**118**	P	**Pn**	**12 38 56.0**	**-0.2**
	comp=N,2μmcomp=N,34nm,0.8s						
CM02	**Chiang Mai Arr**	**13.05**	**128**	P

comp=Z,210nm,5.1s
GTA LR LR
comp=Z,3µm,16.4s
GTA LR LR
comp=Z,4µm,15.6s
SRDT SRDT 16.15 138 P **Pn** **12 39 38.0 +0.2**
comp=Z,5µmcomp=Z,19nm,1.0s
KSH Kashi 16.19 324 P **Pn** **12 39 34.3 -4.0**
KSH pP P 12 39 41.3 -0.1
KSH S **Sn** **12 42 37.3 -0.1**
KSH sS S 12 42 45.5 -4.8
KSH pmax pmax
comp=Z,380nm,1.6s
KSH LR LR
comp=Z,7µm,8.5s
KSH LR LR
comp=Z,2µm,12.6s
LZH Lanzhou 16.29 52 *e*P **Pn** **12 39 37.5 -2.2**
LZH pP pP 12 39 45.8 -2.5
LZH sP sP 12 39 50.3 -0.6
LZH S **Sn** **12 42 40.3 +0.3**
LZH sS S 12 42 48.0 -4.5
LZH SS **SnSn** **12 42 55.3 +2.2**
LZH pmax pmax
comp=Z,37nm,1.1s
LZH pmax pmax
comp=Z,310nm,6.0s
LZH LR LR
comp=Z,6µm,11.4s
LZH LR LR
comp=Z,4µm,12.5s
LZH LR LR
comp=Z,2µm,11.4s
NONG Nongkai 16.42 119 P **Pn** **12 39 41.5 +0.2**
comp=Z,5µmcomp=Z,82nm,0.9s
GYA Guiyang 16.62 87 ⇓P **Pn** **12 39 40.8 -3.1**
GYA pP P 12 39 46.0 -0.3
GYA S **Sn** **12 42 43.5 -4.6**
GYA LR LR
comp=Z,330nm,14.4s
CHAI Chaiyaphum 16.90 127 P **Pn** **12 39 48.2 +0.9**
comp=Z,832nmcomp=Z,106nm,0.9s
WMQ Urumqi 16.95 359 P **Pn** **12 39 47.0 -0.9**
WMQ pP pP 12 39 54.3 -1.4
WMQ S **S** **12 43 01.5 -4.2**
WMQ pmax pmax
comp=Z,130nm,0.9s
WMQ pmax pmax
comp=Z,380nm,5.7s
WMQ LR LR
comp=Z,2µm,13.3s
WMQ LR LR
comp=Z,2µm,14.9s
WMQ LR LR
comp=Z,1µm,20.1s
KHON Khomkaen 17.22 124 P **P** **12 39 54.4 +1.6**
comp=Z,3µmcomp=Z,79nm,0.9s
PRZ Przheval'sk 17.50 336 P **Pn** **12 39 54.0 -1.0**
PRZ pmax pmax
comp=Z,452nm,1.0s
PRZ Przheval'sk 17.50 336 **Pn** **12 39 54.0 -1.0**
PHET Kaeng Krachan 17.59 140 P **P** **12 39 57.0 +0.1**
comp=Z,915nmcomp=Z,84nm,0.8s
KDJ Kajisay 17.68 332 P **Pn** **12 39 56.4 -0.8**
KDJ pmax pmax
comp=Z,88nm,0.9s
KDJ Kajisay 17.68 332 P **Pn** **12 39 56.4 -0.8**
KDJ IAmb IAmb 12 40 02.6
comp=Z,88nm,0.8s
SHLS Shalkode 17.73 339 *e*P **Pn** **12 39 55.6 -2.2**
comp=Z,182nm,0.8s,baz=340
SHLS *e*S **Sn** **12 43 12.8 -2.0**
baz=340
SHLS Shalkode 17.73 339 *e*P **Pn** **12 39 55.5 -2.2**
SHLS *e*S **Sn** **12 43 12.7 -2.0**
SHLS pmax pmax
comp=Z,182nm,0.8s
PDGK Podgornoye 17.88 339 P **Pn** **12 39 58.6 -0.9**
SATY Saty 18.00 337 *e*P **P** **12 40 01.4 -0.1**
baz=336
SATY *e*S **Sn** **12 43 23.5 +2.2**
baz=336
SATY Saty 18.00 337 *e*P **P** **12 40 01.3 -0.1**
SATY *e*S **Sn** **12 43 23.5 +2.2**
KBL Kabul 18.07 300 P **Pn** **12 40 00.1 -1.9**
KBL pmax pmax
comp=Z,200nm,1.1s
KBL Kabul 18.07 300 **Pn** **12 40 00.1 -1.9**
KBL IAmb IAmb 12 40 05.7
comp=Z,200nm,1.1s
ULHL Ulahol 18.18 331 P **P** **12 40 06.9 +3.4**
SNR=9.7
SRAK Srakaew 18.25 132 P **P** **12 40 10.2 +5.9**
comp=Z,5µmcomp=Z,605nm,1.0s
KPKS Kokpek 18.26 338 *e*P **Pn** **12 40 04.2 -0.1**
comp=Z,79nm,0.8s,baz=337
KPKS *e*S **Sn** **12 43 29.6 +1.9**
baz=337
KPKS Kokpek 18.26 338 *e*P **Pn** **12 40 04.1 -0.1**
KPKS *e*S **Sn** **12 43 29.5 +1.9**
KPKS pmax pmax
comp=Z,79nm,0.8s
PATY Pattaya 18.31 137 P **P** **12 40 07.0 +2.1**
comp=Z,16µmcomp=Z,77nm,0.8s
BOOM Boomskoye usch 18.50 331 P **Pn** **12 40 07.3 0.0**
BOOM pmax pmax
comp=Z,188nm,1.2s
BOOM Boomskoye usch 18.50 331 P **Pn** **12 40 07.2 0.0**
BOOM IAmb IAmb 12 40 13.8
comp=Z,188nm,1.1s
TNSS Tian-Shan 18.53 334 *e*P **P** **12 40 07.4 -0.3**
baz=333
TNSS Tian-Shan 18.53 334 *e*P **P** **12 40 07.3 -0.3**
MDOK Medeo 18.60 334 *e*P **P** **12 40 08.1 0.0**
baz=334
MDOK *e*S **S** **12 43 38.0 -1.4**
baz=334
MDOK Medeo 18.60 334 *e*P **P** **12 40 08.1 0.0**
MDOK *e*S **S** **12 43 37.9 -1.4**
AAA Alma-Ata 18.69 334 *e*P **Pn** **12 40 09.6 +0.1**
comp=Z,109nm,0.7s,baz=334
AAA *e*S **S** **12 43 40.6 -0.5**
baz=334
AAA Alma-Ata 18.69 334 *e*P **Pn** **12 40 09.5 +0.1**
AAA *e*S **S** **12 43 40.5 -0.5**
AAA pmax pmax
comp=Z,109nm,0.7s
UCH Uchtor 18.95 328 P **P** **12 40 11.9 -0.4**
SNR=103
TKM2 Tokmak 2 19.00 331 P **Pn** **12 40 13.5 +0.2**
SNR=80
TKM2 Tokmak 2 19.00 331 P **Pn** **12 40 13.2 -0.1**
KBK Karagaybulak 19.08 329 P **Pn** **12 40 16.0 +1.8**
SNR=105
ENH Enshi 19.11 75 **P** **12 40 12.9 -0.7**
AAK Ala-Archa 19.28 328 P **Pn** **12 40 17.0 +0.4**
comp=Z,2.0nm,0.3s,baz=138,slow=9.7,SNR=47
AAK Ala-Archa 19.28 328 P **Pn** **12 40 17.9 +1.4**
SNR=61
AAK Ala-Archa 19.28 328 *i* P **Pn** **12 40 16.2 -0.4**
AAK pmax pmax
comp=Z,138nm,1.1s
AAK Ala-Archa 19.28 328 **P** **12 40 15.8 +0.3**
AAK IAmb IAmb 12 40 26.4
comp=Z,117nm,1.0s
AML Almayashu 19.28 326 P **P** **12 40 15.7 -0.1**
SNR=112
XAN Xi'an 19.33 63 P **P** **12 40 14.5 -1.6**
XAN pP pP 12 40 22.0 +0.1
XAN sP sP 12 40 25.5 +1.2
XAN S **Sn** **12 43 44.8 -8.7**
XAN SS **SnSn** **12 44 14.5 +6.8**
XAN pmax pmax
comp=Z,20nm,0.7s
XAN pmax pmax
comp=Z,140nm,5.7s
XAN LR LR
comp=Z,2µm,13.8s
XAN LR LR
comp=Z,2µm,12.5s
XAN LR LR
comp=Z,2µm,11.7s
CHMS Chumysh 19.44 329 P **Pn** **12 40 18.7 +0.3**
SNR=14
BTK Batken 19.48 317 P **P** **12 40 16.5 -1.2**
BTK pmax pmax
comp=Z,203nm,0.9s
BTK Batken 19.48 317 P **P** **12 40 16.5 -1.2**
EKS2 Erkin-Say 19.64 327 P **Pn** **12 40 21.8 +1.0**
SNR=51
TDK Taldyqorghan 19.72 339 *e*P **P** **12 40 20.6 +0.4**
comp=Z,111nm,0.9s,baz=339
TDK *e*S **Sn** **12 44 03.9 +1.2**
baz=339
TDK Taldyqorghan 19.72 339 *e*P **P** **12 40 20.5 +0.4**
TDK *e*S **Sn** **12 44 03.8 +1.2**
TDK pmax pmax
comp=Z,111nm,0.9s
USP Ospenovka 19.76 330 P **Pn** **12 40 21.9 -0.4**
SNR=36
SGDS Sogindy 19.85 330 *e*P **Pn** **12 40 22.6 -0.7**
baz=330
SGDS Sogindy 19.85 330 *e*P **Pn** **12 40 22.6 -0.7**
MK31 Makanchi Array 20.44 349 P **P** **12 40 28.0 0.0**
MK31 pmax pmax
comp=Z,56nm,0.8s
MK31 Makanchi Array 20.44 349 P **P** **12 40 28.0 0.0**
MK31 IAmb IAmb 12 40 30.8
comp=Z,56nm,0.8s
MKAR Makanchi Array 20.44 349 P **P** **12 40 27.9 -0.2**
comp=Z,49nm,0.6s,baz=161,slow=11,SNR=222
MKAR LR LR 12 49 21.7
comp=Z,226nm,18.1s,baz=158,slow=40
MKAR Makanchi Array 20.44 349 P **P** **12 40 27.7 -0.3**
MAKZ Makanchi 20.51 348 P **P** **12 40 28.5 -0.3**
MAKZ pmax pmax
comp=Z,130nm,1.0s
MAKZ Makanchi 20.51 348 P **P** **12 40 28.5 -0.3**
MAKZ IAmb IAmb 12 40 31.4
comp=Z,130nm,0.9s
PALK Pallekele 20.68 201 P **P** **12 40 30.6 -0.3**
comp=Z,6.5nm,0.6s,baz=117,slow=12,SNR=8.1
PALK Pallekele 20.68 201 P **P** **12 40 31.3 +0.5**
PALK pmax pmax
comp=Z,31nm,1.1s
PALK Pallekele 20.68 201 **P** **12 40 31.3 +0.5**
DZA Taraz 21.04 324 *e*P **P** **12 40 35.5 +0.9**
comp=Z,44nm,0.7s,baz=324
DZA Taraz 21.04 324 *e*P **P** **12 40 35.5 +0.9**
DZA pmax pmax
comp=Z,44nm,0.7s
IUG Iuzhnay 21.25 321 *e*P **P** **12 40 37.4 +0.5**
baz=320
IUG Iuzhnay 21.25 321 *e*P **P** **12 40 37.4 +0.5**
BTLS Baital 21.37 332 *e*P **P** **12 40 38.9 +0.9**
comp=Z,58nm,1.2s,baz=332
BTLS *e*S **S** **12 44 37.5 +3.1**
baz=332
BTLS Baital 21.37 332 *e*P **P** **12 40 38.9 +0.9**
BTLS *e*S **S** **12 44 37.5 +3.1**
BTLS pmax pmax
comp=Z,58nm,1.2s
QIZ Qiongzhong 21.48 107 P **P** **12 40 40.0 +0.6**
QIZ pP **pP** **12 40 43.3 -1.8**
QIZ sP **sP** **12 40 48.3 +0.4**
QIZ S **S** **12 44 39.0 +2.1**
QIZ sS Sn 12 44 46.0 +0.8
QIZ pmax pmax
comp=Z,50nm,0.8s
QIZ LR LR
comp=Z,800nm,14.3s
QIZ LR LR
comp=Z,680nm,11.4s
QIZ Qiongzhong 21.48 107 P **P** **12 40 39.5 +0.2**
QIZ IAmb IAmb 12 40 57.0
comp=Z,112nm,1.1s
CHM Chimkent 21.61 320 *e*P **P** **12 40 41.9 +1.3**
baz=320
CHM *e*S **S** **12 44 42.9 +3.7**
baz=320
CHM Chimkent 21.61 320 *e*P **P** **12 40 41.9 +1.3**
CHM *e*S **S** **12 44 42.9 +3.7**
KK31 Karatay Array 21.62 323 P **P** **12 40 41.3 +0.5**
KK31 pmax pmax
comp=Z,63nm,0.8s
KK31 Karatay Array 21.62 323 P **P** **12 40 41.3 +0.5**
KK31 IAmb IAmb 12 40 42.5
comp=Z,63nm,0.8s
KKAR Karatay Array 21.62 323 P **P** **12 40 41.3 +0.5**
KKAR pmax pmax
comp=Z,63nm,0.8s
KKAR Karatay Array 21.62 323 P **P** **12 40 41.3 +0.5**
KKAR IAmb IAmb 12 40 42.5
comp=Z,63nm,0.8s
BTO Baotou 22.76 47 P **P** **12 40 50.8 -2.3**
BTO S **S** **12 44 54.0 -7.0**
BTO pmax pmax
comp=Z,270nm,1.7s
BTO LR LR
comp=Z,3µm,13.1s
BTO LR LR
comp=Z,3µm,14.4s
DGZ Jazzator, Alta 22.84 359 *d* P **P** **12 40 54.3 +0.5**
DGZ pmax pmax
comp=Z,140nm,1.0s
LHMI Lhok Sumawe 23.09 157 P **P** **12 40 57.4 +0.8**
LHMI Lhok Sumawe 23.09 157 P **P** **12 40 59.7 +3.2**
comp=Z,4µmcomp=Z,488nm,0.9s
TIY Taiyuan 23.21 56 *e*P **P** **12 40 57.0 -0.7**
TIY S **S** **12 45 07.3 -1.4**
TIY pmax pmax
comp=Z,260nm,1.7s
TIY LR LR
comp=Z,2µm,12.3s
TIY LR LR
comp=Z,2µm,13.7s
TIY LR LR
comp=Z,3µm,14.4s
WHN Wuhan 23.32 75 ⇑P **P** **12 40 58.5 -0.3**
WHN S **S** **12 45 02.3 -8.2**
WHN pmax pmax
comp=Z,100nm,1.0s
WHN LR LR
comp=Z,6µm,11.4s
WHN LR LR
comp=Z,1µm,13.5s
WHN LR LR
comp=Z,6µm,11.4s
HRA Herat 23.43 295 P **P** **12 41 00.3 +0.2**
HHC Hu-ho-hao-te 23.90 48 *e*P **P** **12 41 05.3 +0.8**
HHC S **S** **12 45 20.3 +0.4**
HHC pmax pmax
comp=Z,71nm,1.3s
HHC pmax pmax
comp=Z,300nm,6.6s
HHC LR LR
comp=Z,4µm,18.2s
HHC LR LR
comp=Z,3µm,17.1s
HHC LR LR
comp=Z,1µm,13.9s
DLV T Lat 24.23 124 P **P** **12 41 08.1 +0.2**
DLV IAmb IAmb 12 41 10.3
comp=Z,47nm,0.9s
SEM Semipalatinsk 24.29 348 *e*P **P** **12 41 06.6 -1.5**
comp=Z,28nm,0.8s,baz=348
SEM Semipalatinsk 24.29 348 *e*P **P** **12 41 06.6 -1.5**
SEM pmax pmax
comp=Z,28nm,0.8s
KULM Kulim 24.55 149 P **P** **12 41 10.8 +0.2**
KULM IAmb IAmb 12 41 37.1
comp=Z,48nm,1.0s
KURBB Kurchatov Arra 24.85 345 P **P** **12 41 13.5 +0.6**
comp=Z,23nm,0.7s,baz=166,slow=9.2,SNR=106
KURBB S **S** **12 45 39.4 +4.7**
comp=Z,8.6nm,1.1s,baz=158,slow=18,SNR=4.0
KURBB ScP **ScP** **12 48 25.1 -1.4**
comp=Z,2.8nm,0.9s,baz=164,slow=2.5,SNR=5.3
KURK Kurchatov 24.92 346 P **P** **12 41 13.5 0.0**
KURK S **S** **12 45 39.4 +3.6**
SONM Songino Array 25.40 30 P **P** **12 41 19.1 +1.0**
comp=Z,45nm,0.9s,baz=218,slow=9.9,SNR=111
SONM Songino Array 25.40 30 P **P** **12 41 18.4 +0.3**
SONM pmax pmax
comp=Z,41nm,1.0s
SONM Songino Array 25.40 30 P **P** **12 41 18.4 +0.3**
SONM IAmb IAmb 12 41 22.9
comp=Z,41nm,1.0s
IPM Ipoh 25.44 149 P **P** **12 41 18.2 -0.4**
IPM IAmb IAmb 12 41 21.0
comp=Z,41nm,0.9s
ULN Ulaanbaatar 25.72 30 *ce*P **P** **12 41 21.5 +0.5**
ULN pmax pmax
comp=Z,69nm,0.8s
ULN MLR MLR
comp=Z,394nm,17.0s
ULN Ulaanbaatar 25.72 30 P **P** **12 41 21.4 +0.3**
ULN IAmb IAmb 12 41 25.5
comp=Z,65nm,0.8s
BRZS Berezniki 25.97 337 *e*P **P** **12 41 23.6 +0.4**
comp=Z,77nm,0.9s,baz=337
BRZS Berezniki 25.97 337 *e*P **P** **12 41 23.5 +0.4**
BRZS pmax pmax
comp=Z,77nm,0.9s
PSI Prapat 26.06 155 P **P** **12 41 24.7 +0.4**
comp=Z,23nm,0.8s,baz=360,slow=8.3,SNR=16
PSI LR LR 12 53 34.1
comp=Z,746nm,22.0s,baz=277,slow=41
PSI Prapat 26.06 155 P **P** **12 41 24.1 -0.2**
PSI pmax pmax
comp=Z,23nm,0.8s
RPSI Rantau Prapat 26.16 155 P **P** **12 41 24.1 -0.9**
ZAK Zakamensk 26.24 22 *e*P **P** **12 41 25.8 +0.2**
ZAK pmax pmax
comp=Z,30nm,0.9s
TIA Tai'an 26.38 62 P **P** **12 41 27.5 +0.5**
TIA pmax pmax
comp=Z,16nm,1.7s
TIA pmax pmax
comp=Z,61nm,4.0s
TIA LR LR
comp=Z,1µm,16.9s
TIA LR LR
comp=Z,760nm,18.0s
TIA LR LR
comp=Z,500nm,9.8s
MOY Mondy 26.66 18 *e*P **P** **12 41 30.2 +0.8**
MOY pmax pmax
comp=Z,49nm,2.2s
BJT Baijiatuau 26.75 53 P **P** **12 41 30.8 +0.6**
BJT pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuau 26.75 53 P **P** **12 41 30.8 +0.6**
BJI Beijing 26.77 53 P **P** **12 41 31.8 +1.5**
BJI S **S** **12 46 06.5 +1.3**
BJI pmax pmax
comp=Z,10.0nm,0.8s
BJI LR LR
comp=Z,7µm,17.9s
BJI LR LR
comp=Z,2µm,17.4s
WSAR Wadi Sarin 26.89 269 P **P** **12 41 30.7 -1.0**
comp=Z,9.5nm,0.7s,baz=166,slow=3.6,SNR=6.4
GSI Gunungsitoli 26.98 159 P **P** **12 41 33.0 +0.6**
GSI Gunungsitoli 26.98 159 P **P** **12 41 34.2 +1.8**
comp=Z,2µmcomp=Z,250nm,0.9s
ZAA0 Zalesovo Array 27.19 356 P **P** **12 41 34.3 +0.3**
ZALV Zalesovo Beam 27.19 356 P **P** **12 41 34.4 +0.3**
comp=Z,79nm,0.9s,baz=178,slow=8.9,SNR=169
ZALV LR LR 12 52 48.5
comp=Z,641nm,18.6s,baz=191,slow=37
NJ2 Nanjing 27.25 72 *e*P **P** **12 41 35.3 +0.5**
NJ2 sP **sP** **12 41 45.5 +2.1**
NJ2 PP **PnPn** **12 42 23.3 +4.8**
NJ2 S **S** **12 46 17.5 +4.5**
NJ2 sS **sS** **12 46 24.3 +1.3**
NJ2 SS **SnSn** **12 47 24.3 +2.9**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 pmax pmax
comp=Z,180nm,3.5s
NJ2 LR LR
comp=Z,840nm,10.6s
NJ2 LR LR
comp=Z,1µm,11.1s
NJ2 LR LR
comp=Z,1µm,12.5s
TLY Talaya 27.47 21 P **P** **12 41 38.1 +1.5**
comp=Z,2.7nm,0.8s,baz=192,slow=10,SNR=7.6
TLY LR LR 12 53 42.2
comp=Z,480nm,19.5s,baz=206,slow=39
TLY Talaya 27.47 21 *e*P **P** **12 41 37.5 +0.9**
TLY pmax pmax
comp=Z,30nm,1.1s
TLY MLR MLR
comp=Z,2µm,13.0s
TLY Talaya 27.47 21 P **P** **12 41 37.4 +0.8**
QZH Quanzhou 27.48 87 *e*P **P** **12 41 38.5 +1.5**
QZH S **S** **12 46 17.5 +0.6**
QZH LR LR
comp=Z,2µm,15.0s
QZH LR LR
comp=Z,540nm,14.2s
QZH LR LR
comp=Z,2µm,14.3s
GEYT Alibeck 27.50 301 P **P** **12 41 38.0 +1.0**
comp=Z,10nm,0.9s,baz=142,slow=5.6,SNR=10
GEYT Alibeck 27.50 301 P **P** **12 41 36.3 -0.8**
GYA0B ALIBECK ARRAY 27.50 301 P **P** **12 41 36.7 -0.4**
GYA0B IAmb IAmb 12 41 50.5
comp=Z,39nm,1.0s
IRK Irkutsk 28.15 21 *e*P **P** **12 41 42.9 +0.2**
IRK pmax pmax
comp=Z,46nm,1.8s
MNSI Mandailing Nat 28.15 155 P **P** **12 41 43.3 +0.3**
comp=Z,989nmcomp=Z,91nm,0.8s
BKNI Bangkinang 29.16 153 P **P** **12 41 50.5 -1.4**
BKNI Bangkinang 29.16 153 P **P** **12 41 52.4 +0.5**
comp=Z,2µmcomp=Z,110nm,0.5s
SSE Sheshan 29.21 74 P **P** **12 41 52.5 +0.2**
SSE S **S** **12 46 45.3 +1.3**
SSE pmax pmax
comp=Z,14nm,0.7s
SSE pmax pmax
comp=Z,53nm,3.7s
SSE LR LR
comp=Z,990nm,14.4s
SSE LR LR
comp=Z,750nm,12.7s
BVAR Borovoye Array 29.30 338 P **P** **12 41 52.7 -0.2**
comp=Z,2.7nm,0.7s,baz=151,slow=22,SNR=11
BRVK Borovoye 29.37 338 P **P** **12 41 52.9 -0.5**
BRVK pmax pmax
comp=Z,22nm,1.1s
BRVK Borovoye 29.37 338 P **P** **12 41 52.9 -0.5**
DL2 Dalian 30.47 58 *e*P **P** **12 42 05.0 +1.6**
DL2 S **S** **12 47 09.0 +5.4**
DL2 pmax pmax
comp=Z,44nm,1.0s
DL2 pmax pmax
comp=Z,79nm,4.4s
DL2 LR LR
comp=Z,2µm,17.4s
DL2 LR LR
comp=Z,550nm,15.1s
DL2 LR LR
comp=Z,1µm,16.0s
AB31 Akbulak array 31.19 323 *i* P **P** **12 42 10.6 +1.0**
ABKAR Akbulak array 31.19 323 P **P** **12 42 10.0 +0.4**
ABKAR IAmb IAmb 12 42 17.1
comp=Z,21nm,0.6s
ABKAR Akbulak array 31.19 323 P **P** **12 42 09.8 +0.2**
JMBI JAMBI 32.04 150 P **P** **12 42 20.0 +2.7**
comp=Z,72nm,0.4s
AKTO Aktyubinsk 32.89 324 P **P** **12 42 25.3 +0.8**
comp=Z,9.5nm,0.8s,baz=120,slow=9.0,SNR=26
AKTO LR LR 12 55 33.6
comp=Z,600nm,18.1s,baz=132,slow=36
HIA Hailar 33.13 39 P **P** **12 42 26.9 +0.2**
HIA pmax pmax
comp=Z,12nm,0.7s
HIA Hailar 33.13 39 P **P** **12 42 26.9 +0.2**
PPBI Pangkal Pinang 33.69 146 P **P** **12 42 32.7 +0.9**
comp=Z,10µmcomp=Z,22nm,0.6s
PMBI Palembang 33.70 149 P **P** **12 42 33.4 +1.5**
comp=Z,273nm,0.5s
CN2 Changchun 34.52 51 *e*P **P** **12 42 41.0 +2.2**
KS19 Wonju Array Si 35.09 62 P **P** **12 42 43.6 -0.2**
KSAR Wonju Array Be 35.10 62 P **P** **12 42 43.0 -0.9**
KSAR Wonju Array Be 35.10 62 P **P** **12 42 43.0 -0.9**
KSRS Korea Array 35.13 62 P **P** **12 42 43.5 -0.6**
comp=Z,3.0nm,0.6s,baz=255,slow=7.8,SNR=10
KSRS ScP **ScP** **12 48 59.0 -1.0**
comp=Z,1.9nm,1.0s,baz=245,slow=4.2,SNR=7.3
SOCY Socotra 35.15 252 P **P** **12 42 43.7 -0.9**
JOW Kunigami 35.76 81 P **P** **12 42 48.7 -1.0**
SVE Sverdlovsk 35.80 334 ⇓ *e*P **P** **12 42 51.0 +1.3**
SVE pmax pmax

comp=Z,39nm,0.8s
BOD Bodaibo 35.97 23 *e*P **P** **12 42 51.1 +0.1**
BOD pmax pmax
comp=Z,38nm,1.0s
AKT Akhty 36.10 304 *e*P **P** **12 42 54.3 +1.7**
AKT *e* 12 44 16.2
AKT pmax pmax
comp=Z,88nm,1.1s
MYLDM Lahad Datu 36.13 121 P **P** **12 42 52.0 -1.0**
MYLDM IAmb IAmb 12 43 17.7
comp=Z,24nm,1.1s
ARU Arti 36.36 333 P **P** **12 42 55.1 +0.7**
comp=Z,7.6nm,0.5s,baz=138,slow=5.2,SNR=43
ARU Arti 36.36 333*c i*P **P** **12 42 54.9 +0.5**
ARU 12 44 18.0
ARU PPP PPP 12 44 31.3
ARU S **S** **12 48 39.5 +5.0**
ARU SS **SnSn** **12 51 03.5 +1.1**
ARU pmax pmax
comp=Z,24nm,0.7s
ARU MLR MLR
comp=Z,692nm,19.0s
ARU Arti 36.36 333 P **P** **12 42 54.3 -0.2**
ARU IAmb IAmb 12 42 55.7
comp=Z,24nm,0.7s
MAK Makhachkala 36.57 307 *e*P **P** **12 42 51.8 -4.6**
MAK *e* 12 44 15.2
MAK *e*S **S** **12 48 32.2 -5.8**
MAK *e*SS **SnSn** **12 51 05.4 -2.4**
MAK pmax pmax
comp=Z,215nm,1.2s
MAK MLR MLR
comp=Z,624nm,14.0s
JNU Nakatsue 37.40 70 P **P** **12 43 04.7 +1.0**
comp=Z,8.7nm,0.8s,baz=258,slow=7.1,SNR=3.7
JNU Nakatsue 37.40 70 P **P** **12 43 03.6 -0.1**
JNU IAmb IAmb 12 43 24.4
comp=Z,31nm,1.2s
MTKI Muara Teweh, K 37.81 133 P P 12 43 15.3 +8.0
GROC Groznyy 37.85 307 *e*P **P** **12 43 09.4 +2.2**
GROC *e* 12 45 23.9
GROC pmax pmax
comp=Z,69nm,0.8s
GNI Garni 38.14 302 P **P** **12 43 11.4 +1.4**
comp=Z,20nm,0.8s,baz=170,slow=3.2,SNR=8.9
GNI Garni 38.14 302 *i*P **P** **12 43 12.3 +2.3**
GNI pmax pmax
comp=Z,31nm,0.9s
GNI Garni 38.14 302 P **P** **12 43 08.4 -1.6**
RAYN Ar Rayn 38.54 275 P **P** **12 43 12.1 -1.4**
RAYN pmax pmax
comp=Z,15nm,1.5s
RAYN Ar Rayn 38.54 275 P **P** **12 43 12.1 -1.4**
VLA Vladivostok 38.92 54 *i*P **P** **12 43 15.0 -1.3**
VLA pmax pmax
comp=Z,42nm,1.0s
ZEI Tsey 39.14 306 *e*P **P** **12 43 19.6 +1.2**
ZEI pmax pmax
comp=Z,31nm,0.9s
USA0B Ussuriysk Arra 39.20 52 *i*P **P** **12 43 15.4 -3.2**
USRK Ussuriysk Ar. 39.20 52 P **P** **12 43 19.5 +0.9**
comp=Z,5.9nm,0.9s,baz=266,slow=7.4,SNR=7.3
USRK Ussuriysk Ar. 39.20 52 P **P** **12 43 17.8 -0.8**
ZEA Zeya 39.40 36 *e*P **P** **12 43 21.2 +1.0**
ZEA *e*S **S** **12 49 19.2 -1.4**
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA smax smax
comp=E,100nm,8.4s
ZEA MLR MLR
comp=E,300nm,10.0s
ZEA MLR MLR
comp=Z,400nm,11.0s
NCK Nalchik 39.48 307⇓ *i*P **P** **12 43 21.9 +0.9**
NCK pmax pmax
comp=Z,15nm,0.3s
BELG Belogornoye 39.51 321 P **P** **12 43 21.6 +0.5**
comp=Z,47nm,0.9s,baz=277,slow=3.4,SNR=9.9
BELG Belogornoye 39.51 321*c i*P **P** **12 43 20.9 -0.2**
BELG pmax pmax
comp=Z,7.0nm,0.6s
BBKI Banjar Baru 39.70 135 P **P** **12 43 26.3 +3.3**
KBZ Khabaz 40.02 307 P **P** **12 43 25.2 -0.2**
comp=Z,7.3nm,0.8s,baz=128,slow=6.0,SNR=18
KBZ LR LR 13 01 37.8
comp=Z,198nm,21.8s,baz=88,slow=39
KBZ Khabaz 40.02 307*ce*P **P** **12 43 25.9 +0.5**
KBZ pmax pmax
comp=Z,11nm,0.9s
NEY Neytrino 40.06 306 *i*P **P** **12 43 27.6 +1.5**
NEY pmax pmax
comp=Z,9.0nm,0.8s
GOF Gofitskoye 40.16 309⇑ *e*P **P** **12 43 28.6 +2.0**
SHA1 Shidzhatmaz 40.19 307*d i*P **P** **12 43 28.6 +1.4**
KIV Kislovodsk 40.21 307 *e*P **P** **12 43 28.3 +1.2**
KIV pmax pmax
comp=Z,64nm,1.0s
KIV MLR MLR
comp=Z,593nm,16.0s
KIV Kislovodsk 40.21 307 P **P** **12 43 26.5 -0.6**
KIV pP **sP** **12 43 36.2 +0.3**
KIV IAmb IAmb 12 43 37.3
comp=Z,32nm,1.2s
KLR Kul'dur 40.29 44 P **P** **12 43 27.9 +0.3**
comp=Z,5.9nm,0.9s,baz=285,slow=10,SNR=9.4
KLR Kul'dur 40.29 44*ce*P **P** **12 43 27.4 -0.2**
KLR pmax pmax
comp=Z,33nm,1.4s
TOLI2 Tolitoli 40.50 124 P **P** **12 43 30.0 +0.3**
JWT Wachi 41.09 66 P **P** **12 43 34.7 +0.3**
KIRV Kirov 41.59 330 P **P** **12 43 38.2 +0.1**
comp=Z,23nm,0.6s,baz=126,slow=7.3,SNR=11
KIRV Kirov 41.59 330*c i*P **P** **12 43 38.0 -0.1**
MRSI Marisa 41.78 123 P **P** **12 43 41.5 +1.2**
comp=Z,28nm,0.8s
KMMI Kalianget 42.00 140 P **P** **12 43 43.4 +1.4**
comp=Z,60nm,0.8s
SOC Sochi 42.28 306 *e*P **P** **12 43 43.0 -1.0**
SOC *e* 12 45 19.0
SOC *e*S **S** **12 50 05.2 +1.4**
SOC *e*SSS SSS 12 53 56.3
SOC pmax pmax
comp=Z,41nm,0.9s
SOC MLR MLR
comp=Z,208nm,15.0s
GTOI Gorontalo 42.48 122 P **P** **12 43 45.1 -0.9**
comp=Z,12nm,0.9s
APSI Ampana 42.50 125 P P 12 44 00.0 +14
VRH Novokhopyorsk 42.52 318 *e*P **P** **12 43 46.4 +0.5**
VRH pmax pmax
comp=Z,60nm,0.6s
NRIK Noril'sk 42.53 360 P **P** **12 43 46.4 +0.7**
comp=Z,19nm,0.9s,baz=168,slow=6.6,SNR=27
NRIK LR LR 13 03 03.0
comp=Z,560nm,20.1s,baz=170,slow=38
NRIK Noril'sk 42.53 360*ce*P **P** **12 43 46.3 +0.6**
NRIK pmax pmax
comp=Z,52nm,1.6s
NRIK Noril'sk 42.53 360 P **P** **12 43 45.8 +0.1**
TTSI Tana Toraja 42.68 129 P **P** **12 43 48.3 +0.7**
comp=Z,2μmcomp=Z,33nm,1.0s
SPSI Sidrap Palu 43.31 130 P **P** **12 43 54.4 +1.7**
comp=Z,27nm,1.1s
MAJO Matsushiro 43.32 64 *i*P **P** **12 43 51.8 -0.8**
MAJO pmax pmax
comp=Z,11nm,0.8s
MAJO Matsushiro 43.32 64 P **P** **12 43 51.8 -0.8**
MAT Matsushiro 43.32 64 P **P** **12 43 52.1 -0.5**
MAT *e*S **S** **12 50 18.0 -1.3**
MJAR Matsushiro Arr 43.33 64 P **P** **12 43 53.1 +0.5**
comp=Z,3.7nm,0.7s,baz=278,slow=9.9,SNR=7.0
MJAR LR LR 13 04 24.2
comp=Z,216nm,18.2s,baz=285,slow=40
MJAR Matsushiro Arr 43.33 64 P **P** **12 43 52.3 -0.4**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR Matsushiro Arr 43.33 64 P **P** **12 43 52.3 -0.4**
SRBI Singaraja 43.56 139 P **P** **12 43 57.3 +2.6**
comp=Z,66nm,1.0s
GRNR Gornyy 43.62 43⇓ *i*P **P** **12 43 55.0 +0.2**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=N,320nm,13.0s
GRNR MLR MLR
comp=E,400nm,13.0s
GRNR MLR MLR
comp=Z,700nm,14.0s
GAZ Gaziantep 43.90 297 P **P** **12 43 56.7 -0.7**
GAZ IAmb IAmb 12 43 59.5
comp=Z,33nm,0.9s
VORD Divnogorie 43.94 317 *e*P **P** **12 43 57.3 0.0**
VORD pmax pmax
comp=Z,40nm,1.1s
ANN Anapa 44.05 308 *e*P **P** **12 43 58.7 +0.4**
ANN pmax pmax
comp=Z,37nm,1.0s
ANN MLR MLR
comp=Z,630nm,18.0s
KAPI Kappang 44.06 131 P **P** **12 43 59.6 +0.9**
KAPI pmax pmax
comp=Z,13nm,1.0s
KAPI Kappang 44.06 131 P **P** **12 43 59.6 +0.9**
VSR Storozhevoye 44.08 317 *e*P **P** **12 43 58.0 -0.4**
VSR pmax pmax
comp=Z,50nm,1.5s
LPSR Galich'ya Gora 44.58 319 *e*P **P** **12 44 03.1 +0.7**
LPSR pmax pmax
comp=Z,100nm,0.9s
YAK Yakutsk 44.69 26 P **P** **12 44 03.6 +0.5**
comp=Z,4.5nm,0.5s,baz=159,slow=0.3,SNR=5.7
YAK Yakutsk 44.69 26 *e*P **P** **12 44 02.3 -0.8**
YAK *e* 12 45 46.6
YAK *e*PPP PPP 12 46 23.4
YAK *e*S **S** **12 50 32.8 -5.6**
YAK *e*SS SS 12 53 47.5 -11
YAK *e*SSS SSS 12 54 43.3
YAK pmax pmax
comp=Z,22nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,63nm,2.8s
YAK pmax pmax
comp=N,25nm,2.2s
YAK pmax pmax
comp=E,60nm,2.4s
YAK smax smax
comp=N,66nm,5.0s
YAK smax smax
comp=E,68nm,5.0s
YAK Yakutsk 44.69 26 P **P** **12 44 02.8 -0.3**
YAK IAmb IAmb 12 44 04.1
comp=Z,26nm,1.1s
ATD Arta Tunnel 45.10 259 P **P** **12 44 07.9 +0.7**
comp=Z,15nm,0.8s,baz=314,slow=12,SNR=5.9
DIKM Dikmen 45.42 303⇑ P **P** **12 44 11.1 +1.8**
MOS Moscow 46.21 323 *e*P **P** **12 44 14.4 -0.9**
MOS *e*S **S** **12 51 02.7 +2.1**
MOS pmax pmax
comp=Z,47nm,0.9s
BZK Bozkurt 46.36 303⇑ P **P** **12 44 18.1 +1.3**
SIM Simferopol' 46.42 308 *e*P **P** **12 44 16.4 -0.7**
SIM 12 46 06.0
SIM pmax pmax
comp=Z,61nm,1.0s
OBN Obninsk 46.61 322 P **P** **12 44 18.6 +0.2**
comp=Z,5.9nm,0.4s,baz=294,slow=20,SNR=14
OBN Obninsk 46.61 322*ce*P **P** **12 44 18.2 -0.2**
OBN *e* 12 44 24.5
OBN *e*S **S** **12 51 05.1 -1.2**
OBN pmax pmax
comp=Z,131nm,1.7s
OBN MLR MLR
comp=Z,238nm,18.0s
OBN Obninsk 46.61 322 P **P** **12 44 18.0 -0.4**
BR131 Keskin Array S 46.64 300 P **P** **12 44 19.7 +0.6**
BR131 pmax pmax
comp=Z,15nm,1.1s
BR131 Keskin Array S 46.64 300 P **P** **12 44 19.7 +0.6**
BRTR Keskin Array B 46.64 300 P **P** **12 44 19.1 0.0**
comp=Z,6.3nm,0.9s,baz=126,slow=6.3,SNR=23
BRTR PcP **PcP** **12 45 53.0 +0.2**
comp=Z,5.2nm,1.0s,baz=126,slow=6.3,SNR=3.8
BRTR Keskin Array B 46.64 300 *i*P **P** **12 44 19.8 +0.6**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 46.64 300 P **P** **12 44 19.4 +0.2**
BRTR **PcP** **12 45 52.4 -0.5**
ASAJ Asahikawa 46.76 54 P **P** **12 44 19.8 0.0**
ASAJ pmax pmax
comp=Z,29nm,1.1s
JKA Kamikawa-asahi 46.76 54 P **P** **12 44 19.8 -0.1**
JKA IAmb IAmb 12 44 45.1
comp=Z,29nm,1.1s
YSS Yuzh-Sakhalins 47.08 50K *e*P **P** **12 44 22.6 +0.4**
YSS *e**SP **sP** **12 44 30.0 -1.0**
YSS *e* 12 46 19.6
YSS *e*S **S** **12 51 09.7 -3.5**
YSS pmax pmax
comp=Z,70nm,0.9s
YSS pmax pmax
comp=Z,200nm,3.6s
YSS MLR MLR
comp=Z,400nm,18.0s
YSS MLR MLR
comp=E,300nm,16.0s
YSS Yuzh-Sakhalins 47.08 50 P **P** **12 44 22.7 +0.4**
YSS pP **pP** **12 44 29.5 +0.7**
KLMR Klimovskoe 47.08 330 *e*P **P** **12 44 20.7 -1.3**
KLMR *e* 12 45 50.8
KLMR *e* 12 46 11.9
KLMR pmax pmax
comp=Z,51nm,1.3s
KLMR Klimovskoe 47.08 330 *e*P **P** **12 44 20.7 -1.3**
KLMR AMP 12 44 36.6
comp=Z,51nm,1.3s
KLMR *e*PcP **PcP** **12 45 50.9 -2.8**
KLMR *e*PP **PP** **12 46 12.0 -0.7**
KLMR LQ LQ 13 00 37.4
KLMR LQ LQ 13 00 37.4
KLMR LR LR 13 03 18.6
ERM Erimo 47.11 57 P **P** **12 44 22.3 -0.3**
ERM pmax pmax
comp=Z,41nm,1.1s
ERM Erimo 47.11 57 P **P** **12 44 22.3 -0.3**
JEM Erimo 47.11 57 P **P** **12 44 20.2 -2.3**
CSS Mathiatis 47.18 294 P **P** **12 44 22.6 -0.7**
CSS IAmb IAmb 12 44 39.1
comp=Z,10nm,0.7s
WBSI Waikabubak, Su 47.31 136 P **P** **12 44 23.1 -1.4**
comp=Z,50nm,0.8s
TYV Tymovskoe 47.50 44 *e*P **P** **12 44 26.5 +1.0**
TYV *e*S **S** **12 51 24.9 +5.7**
TYV pmax pmax
comp=Z,8.0nm,1.4s
TYV pmax pmax
comp=Z,200nm,4.1s
TYV smax smax
comp=N,600nm,7.8s
TYV MLR MLR
comp=Z,1μm,12.0s
YUK Yuzh-Kuril'sk 49.11 54 *e*P **P** **12 44 41.3 +3.3**
YUK S **S** **12 51 44.7 +2.6**
YUK MLR MLR
comp=Z,319nm,16.0s
ELL Elmali 49.76 297 P **P** **12 44 43.8 +0.5**
ELL pmax pmax
comp=Z,196nm,0.9s
ELL Elmali 49.76 297 P **P** **12 44 43.8 +0.5**
AKASG Malin Array Be 50.18 315 P **P** **12 44 45.7 -0.4**
comp=Z,9.1nm,0.6s,baz=75,slow=7.6,SNR=20
AKASG LR LR 13 08 24.1
comp=Z,241nm,18.0s,baz=70,slow=39
AKASG Malin Array Be 50.18 315 P **P** **12 44 45.9 -0.2**
AKASG pmax pmax
comp=Z,7.0nm,1.0s
AKASG Malin Array Be 50.18 315 P **P** **12 44 45.9 -0.2**
AKBB Malin Array Si 50.18 315 P **P** **12 44 45.4 -0.6**
AKBB pmax pmax
comp=Z,38nm,0.9s
AKBB Malin Array Si 50.18 315 P **P** **12 44 45.4 -0.6**
TLCR 50.18 308⇓ P **P** **12 44 46.8 +0.7**
TIXI Tiksi 50.20 16 P **P** **12 44 45.1 -0.7**
comp=Z,6.5nm,0.5s,baz=211,slow=3.7,SNR=20
TIXI Tiksi 50.20 16*ce*P **P** **12 44 44.5 -1.4**
TIXI pmax pmax
comp=Z,84nm,1.3s
TIXI Tiksi 50.20 16 P **P** **12 44 45.0 -0.8**
TIXI IAmb IAmb 12 44 52.9
comp=Z,14nm,0.5s
TPGR Topolog 50.46 307⇓ P **P** **12 44 48.9 +0.6**
SOEI Soe 50.56 131 P **P** **12 44 48.4 -1.1**
SOEI Soe 50.56 131 P P 12 45 03.0 +14
SORM Soroca 50.57 311⇓ P **P** **12 44 49.1 0.0**
CFR Carcaliu 50.66 308⇓ P **P** **12 44 50.7 +0.9**
HARR Harsova 50.81 307⇑ P **P** **12 44 51.7 +0.8**
MNK Minsk 51.41 320 *e*P **P** **12 44 55.0 -0.3**
MNK Minsk 51.41 320 *i*P **P** **12 44 54.9 -0.3**
comp=E,6.0nm,0.9s
MNK *i*P **P** **12 44 54.9 -0.3**
comp=N,23nm,0.9s
MNK *i*P **P** **12 44 54.9 -0.3**
comp=Z,80nm,0.9s
MNK *i*PcP **PcP** **12 46 09.0 -0.6**
MNK *i*PP **PP** **12 46 52.3 0.0**
MNK *i*PPP PPP 12 47 51.6
MNK *i*ScP ScP 12 49 51.6 -14
MNK *i*PcS PcS 12 49 58.0 -9.2
MNK *i*S **S** **12 52 15.7 +1.8**
MNK *i*ScS ScS 12 54 02.4 -42
MNK *i*SS SS 12 55 33.1 -16
MNK *i*SSS SSS 12 57 09.6
MNK *i*LQ LQ 13 03 37.0
MNK *i*LR LR 13 05 53.1
MNK *i*LRM MLR 13 09 39.9
comp=Z,429nm,16.6s
MNK *i*LRM MLR 13 09 45.4
comp=E,51nm,16.6s
MNK *i*LRM MLR 13 09 47.9
comp=N,217nm,16.6s
VRI Vrincioaia 51.65 309⇓ P **P** **12 44 59.0 +1.8**
BISRR Bisoca 51.66 308⇑ P **P** **12 44 59.1 +1.7**
TESR Tescani 51.70 309⇑ P **P** **12 44 58.3 +0.7**
PLOR Plostina 51.70 309⇓ P **P** **12 44 59.6 +1.9**
ISR Istrita 51.79 308⇓ P **P** **12 45 00.1 +1.7**
FAKI Fak Fak 51.88 118 P **P** **12 44 58.1 -1.2**
FAKI IAmb IAmb 12 44 59.0
comp=Z,24nm,0.8s
NEHR Nehoiu 51.95 308⇑ P **P** **12 45 01.2 +1.6**
BIZ Bicaz 52.07 310⇓ P **P** **12 45 01.5 +1.1**
NACGM Naroch 52.09 320 *i*P **P** **12 45 01.0 +0.6**
NACGM *i*P **P** **12 45 01.0 +0.6**
NACGM *i*P **P** **12 45 01.0 +0.6**
NACGM *i*PP **PP** **12 46 53.2 -5.3**
NACGM *i*PPP PPP 12 48 16.0
NACGM *i*S **S** **12 52 25.9 +2.7**
NACGM *i*SS SS 12 55 40.4 -20
NACGM *i*SSS SSS 12 57 51.2
NACGM *i*LQ LQ 13 03 15.9
NACGM *i*LR LR 13 09 33.2
KARP Karpathos 52.12 295 P **P** **12 45 00.3 -0.6**
MLR Muntele Rosu 52.20 308⇓ P **P** **12 45 03.5 +2.0**
MLR Muntele Rosu 52.20 308 P **P** **12 45 02.0 +0.5**
MLR pmax pmax
comp=Z,101nm,1.1s
MLR Muntele Rosu 52.20 308 P **P** **12 45 02.0 +0.5**
APA Apatity 52.20 337⇓ *i*P P 12 45 06.4 +5.4
APA pmax pmax
comp=Z,8.0nm,1.0s
APA MLR MLR
comp=Z,800nm,10.0s
ALN Alexandroupoli 52.38 302 P **P** **12 45 03.2 +0.5**
ALN Alexandroupoli 52.38 302 P **P** **12 45 02.8 +0.1**
ALN pmax pmax
comp=Z,35nm,1.1s
ALN Alexandroupoli 52.38 302 P **P** **12 45 02.8 +0.1**
ALN IAmb IAmb 12 45 04.7
comp=Z,35nm,1.1s
IIGN Ignalina 52.46 321 *e*P **P** **12 45 04.1 +1.0**
ISAL Salakas 52.54 321 *e*P **P** **12 45 04.9 +1.2**
DOPR Dopca 52.58 309⇑ P **P** **12 45 05.1 +1.0**
BURAR Bucovina Array 52.67 311⇓ P **P** **12 45 05.9 +1.0**
BURAR Bucovina Array 52.67 311 P **P** **12 45 05.0 0.0**
BURAR IAmb IAmb 12 45 07.2
comp=Z,19nm,0.8s
BUR08 Bucovina Ar. S 52.68 311 P **P** **12 45 05.0 0.0**
BUR08 IAmb IAmb 12 45 07.0
comp=Z,19nm,0.9s
RDO Rodhopi 52.74 303 P **P** **12 45 05.9 +0.5**
VOIR 52.83 308⇓ P **P** **12 45 06.8 +0.7**
ARR Arges 53.13 308⇑ P **P** **12 45 08.9 +0.6**
APE Apeiranthos 53.20 298⇑ P **P** **12 45 07.9 -1.1**
ARCR ARCALIA 53.27 310⇑ P **P** **12 45 10.9 +1.7**
SANT Santorini 53.36 297⇑ P **P** **12 45 09.4 -0.7**
SANT Santorini 53.36 297 P **P** **12 45 09.1 -1.0**
LVV L'vov 53.46 314 *e*P **P** **12 45 11.0 +0.4**
LVV *e*S **S** **12 52 40.7 -1.4**
LVV pmax pmax
comp=Z,20nm,1.2s
FIA1 FINESS Array S 53.46 328 P **P** **12 45 10.2 -0.2**
FIA1 IAmb IAmb 12 45 24.8
comp=Z,27nm,1.1s
FINES FINESS Array B 53.46 328 P **P** **12 45 10.2 -0.1**
comp=Z,10nm,0.8s,baz=105,slow=7.2,SNR=32
FINES LR LR 13 08 15.4
comp=Z,512nm,21.3s,baz=98,slow=36
FINES FINESS Array B 53.46 328 *i*P **P** **12 45 11.0 +0.6**
FINES pmax pmax
comp=Z,10.0nm,0.8s
FINES FINESS Array B 53.46 328 P **P** **12 45 10.8 +0.4**
MA2 Magadan 53.48 34*ce*P **P** **12 45 10.4 -0.1**
MA2 pmax pmax
comp=Z,20nm,1.0s
MA2 Magadan 53.48 34 P **P** **12 45 09.7 -0.8**
MA2 IAmb IAmb 12 45 11.6
comp=Z,23nm,1.1s
PABE Paberze 53.76 321 *e*P **P** **12 45 12.7 +0.1**
PABE Paberze 53.76 321 P **P** **12 45 12.8 +0.1**
PABE pP **pP** **12 45 19.4 +0.2**
CJR Cluj-Napoca 53.80 310⇑ P **P** **12 45 14.8 +1.7**
BMR Baia Mare 53.83 311⇑ P **P** **12 45 15.2 +1.9**
IDI Anoyia 53.99 295⇓ P **P** **12 45 14.4 -0.4**
IDI Anoyia 53.99 295 P **P** **12 45 14.0 -0.8**
IDI IAmb IAmb 12 45 41.7
comp=Z,15nm,1.1s
SUW Suwalki 54.11 319 *e*P **P** **12 45 15.4 +0.2**
SUW Suwalki 54.11 319 *e* **P** **12 45 15.3 0.0**
SUW *e*P **pP** **12 45 16.1 -5.8**
SUW Suwalki 54.11 319 P **P** **12 45 14.8 -0.5**
SUW pmax pmax
comp=Z,109nm,1.0s
SUW Suwalki 54.11 319 P **P** **12 45 14.8 -0.5**
MTSE Matsula 54.16 325 *e*P **P** **12 45 15.1 -0.5**
DEV Deva 54.31 309⇓ P **P** **12 45 18.3 +1.4**
VTS Vitosha 54.32 305⇑ P **P** **12 45 18.2 +1.0**
VTS Vitosha 54.32 305 P **P** **12 45 17.5 +0.3**
VTS pmax pmax
comp=Z,29nm,1.0s
VTS Vitosha 54.32 305 P **P** **12 45 17.5 +0.3**
VTS IAmb IAmb 12 45 19.6
comp=Z,29nm,1.0s
KWP Kalwaria Pacla 54.32 313 *e*P **P** **12 45 18.0 +1.1**
KWP Kalwaria Pacla 54.32 313 P **P** **12 45 17.1 +0.2**
KWP pmax pmax
comp=Z,1μm,1.1s
KWP Kalwaria Pacla 54.32 313 P **P** **12 45 17.1 +0.2**
DRGR 54.40 310⇓ P **P** **12 45 18.9 +1.3**
GZR Gura Zlata 54.43 308⇑ P **P** **12 45 18.1 +0.3**
UZH Uzhgorod 54.61 312⇓ *i*P **P** **12 45 19.8 +0.8**
HERR Herculane 54.72 307⇑ P **P** **12 45 20.3 +0.5**
SEY Seymchan 54.79 30 P **P** **12 45 20.4 +0.4**
comp=Z,22nm,0.9s,baz=246,slow=5.2,SNR=69
SEY Seymchan 54.79 30⇓ *i*P **P** **12 45 20.1 0.0**
VAY Valandovo 54.95 303 *i*P **P** **12 45 21.9 +0.4**
GRG Griva 55.12 303 P **P** **12 45 22.2 -0.6**
CRVS Cervenica-Dubn 55.15 312 *e*P **P** **12 45 24.6 +1.6**
CRVS pmax pmax
comp=Z,29nm,1.3s
CRVS Cervenica-Dubn 55.15 312 *e*P **P** **12 45 24.5 +1.6**
KEV Kevo 55.15 338 P **P** **12 45 23.0 +0.4**
KEV pmax pmax
comp=Z,27nm,1.1s
KEV Kevo 55.15 338 P **P** **12 45 23.0 +0.4**
KEV IAmb IAmb 12 45 50.8
comp=Z,27nm,1.1s
LIT Litokhoron 55.16 302 P **P** **12 45 22.6 -0.5**
LIT pmax pmax
comp=Z,25nm,1.1s
LIT Litokhoron 55.16 302 P **P** **12 45 22.6 -0.5**
LIT IAmb IAmb 12 45 24.1

comp=Z,25nm,1.1s
STIP Stip 55.19 304 *i* P **P 12 45 22.3 -1.0**
MDVR Moldovita 55.23 307 ⇑P **P 12 45 24.3 +0.7**
BZS Buzias 55.23 308 ⇑P **P 12 45 24.5 +1.0**
VLI Veliai 55.31 298 P **P 12 45 22.3 -2.0**
GIRL Giralia 55.31 150 P **P 12 45 24.5 +0.3**
AGG Agios Georgios 55.43 300 P **P 12 45 24.0 -1.1**
AGG Agios Georgios 55.43 300 P **P 12 45 23.6 -1.5**
AGG pmax pmax
comp=Z,26nm,1.0s
AGG Agios Georgios 55.43 300 P **P 12 45 23.6 -1.5**
AGG lAmb lAmb 12 45 25.4
comp=Z,26nm,1.0s
LODK Lodwar 55.47 255 P **P 12 45 25.0 -0.7**
BEL Belsk 55.52 316 *e*P **P 12 45 26.4 +0.9**
ARA0 ARCESS Array S 55.59 338 *e*P **P 12 45 26.7 +0.9**
ARCES ARCESS Array B 55.59 338 P **P 12 45 26.2 +0.5**
comp=Z,7.6nm,0.7s,baz=101,slow=6.4,SNR=16
ARCES LR LR 13 09 48.8
comp=Z,418nm,18.4s,baz=120,slow=37
ARCES ARCESS Array B 55.59 338 P **P 12 45 25.7 -0.1**
ARCES pmax pmax
comp=Z,18nm,1.2s
ARCES ARCESS Array B 55.59 338 P **P 12 45 25.7 -0.1**
ARCES lAmb lAmb 12 45 29.5
comp=Z,18nm,1.1s
THL Klokotos Trika 55.59 301 P **P 12 45 25.3 -0.9**
NIE Niedzica 55.90 313 *e*P **P 12 45 29.9 +1.6**
FNA Florina 55.91 303 P **P 12 45 27.6 -1.0**
FNA pmax pmax
comp=Z,25nm,1.0s
FNA Florina 55.91 303 P **P 12 45 27.6 -1.0**
FNA lAmb lAmb 12 45 29.6
comp=Z,25nm,1.0s
SKR Severo-Kuril's 56.01 45 *e*P P 12 45 43.7 +15
SKR MLR MLR
comp=Z,1μm,16.0s
SKR MLR MLR
comp=Z,1μm,14.0s
ITM Ithomi 56.03 298 P **P 12 45 28.1 -1.3**
ITM lAmb lAmb 12 45 29.2
comp=Z,30nm,1.5s
PYL PYLOS 56.23 298 P **P 12 45 29.2 -1.6**
KTK1 Kautokeino 56.24 337 *e*P **P 12 45 30.8 +0.4**
PSZ Piszkesteto 56.25 311 ⇑P **P 12 45 32.1 +1.2**
PSZ Piszkesteto 56.25 311 P **P 12 45 30.8 -0.1**
PSZ pmax pmax
comp=Z,17nm,0.9s
PSZ Piszkesteto 56.25 311 P **P 12 45 30.8 -0.1**
PSZ lAmb lAmb 12 45 32.9
comp=Z,17nm,0.9s
KMBO Kilima Mbogo 56.25 249 LR LR 13 09 12.4
comp=Z,178nm,18.4s,baz=92,slow=36
LANS Liptovska Anna 56.45 313 *e*P **P 12 45 33.8 +1.5**
LANS Liptovska Anna 56.45 313 *e*P **P 12 45 33.8 +1.5**
HAMF Hammerfest 56.49 339 *e*P **P 12 45 32.8 +0.6**
FRGS Fruska Gora 56.54 308 ⇑P **P 12 45 33.5 +0.5**
VYHS Vyhne 56.91 312 *e*P **P 12 45 36.5 +0.9**
VYHS pmax pmax
comp=Z,16nm,1.2s
VYHS Vyhne 56.91 312 *e*P **P 12 45 36.5 +0.9**
PETK Petropavlovsk- 56.92 42 P **P 12 45 37.5 +2.0**
comp=Z,3.1nm,0.9s,baz=282,slow=7.1,SNR=3.0
MORH Mrgy, Hungar 57.24 309 ⇑P **P 12 45 38.4 +0.5**
PDG Podgorica 57.26 305 ⇑P **P 12 45 37.7 -0.3**
SRO2 Moca 57.27 311 *e*P **P 12 45 38.8 +0.8**
SRO2 Moca 57.27 311 *e*P **P 12 45 38.8 +0.8**
OKC Ostrava-Krasne 57.27 314 *e*P **P 12 45 38.8 +0.8**
OKC Ostrava-Krasne 57.27 314 *e*P **P 12 45 38.8 +0.8**
SRO Srobarova 57.32 311 *e*P **P 12 45 39.7 +1.3**
SRO Srobarova 57.32 311 *e*P **P 12 45 39.7 +1.3**
JETT Jettan, Norway 57.34 337 *e*P **P 12 45 38.9 +0.6**
UPP Uppsala 57.42 326 *e*P **P 12 45 38.9 0.0**
MTN Manton Dam 57.48 128 P **P 12 45 38.7 -1.2**
MTN lAmb lAmb 12 46 04.9
comp=Z,24nm,1.4s
FITZ Fitzroy Crossi 57.65 137 P **P 12 45 41.2 +0.2**
JAVC Velka Javorina 57.65 313 *e*P **P 12 45 41.7 +0.9**
MORC Moravsky Berou 57.66 314 *e*P **P 12 45 41.4 +0.5**
MORC Moravsky Berou 57.66 314 P **P 12 45 41.1 +0.2**
MORC pmax pmax
comp=Z,29nm,0.8s
MORC Moravsky Berou 57.66 314 P **P 12 45 41.1 +0.2**
SMOL Smolenice 57.84 312 *e*P **P 12 45 43.1 +1.0**
SMOL Smolenice 57.84 312 *e*P **P 12 45 43.1 +1.0**
KNRA Kununurra 57.85 132 P **P 12 45 42.1 -0.3**
KNRA lAmb lAmb 12 45 53.7
comp=Z,16nm,0.9s
TRO Tromso 57.86 337 *e*P **P 12 45 41.5 -0.3**
MODS Modra-Piesok 57.96 312 *e*P **P 12 45 42.7 -0.2**
MODS pmax pmax
comp=Z,17nm,0.9s
MODS Modra-Piesok 57.96 312 *e*P **P 12 45 42.7 -0.2**
ZST Bratislava 58.09 312 *e*P **P 12 45 44.4 +0.6**
ZST pmax pmax
comp=Z,33nm,0.8s
ZST Bratislava 58.09 312 *e*P **P 12 45 44.4 +0.6**
KRLC Kraliky 58.13 314 *e*P **P 12 45 44.7 +0.6**
KRLC MLR MLR
comp=Z,300nm,14.5s
KRLC Kraliky 58.13 314 *e*P **P 12 45 44.7 +0.6**
KRLC AMS AMS 13 14 00.0
comp=Z,300nm,14.5s
VRAC Vranov 58.32 313 ⇓P **P 12 45 46.7 +1.2**
VRAC Vranov 58.32 313 *e*P **P 12 45 46.1 +0.7**
KSP Ksiaz 58.38 315 *e*P **P 12 45 46.8 +1.0**
OSTC Ostas 58.45 315 *e*P **P 12 45 46.7 +0.3**
OSTC *ex* x 12 45 54.8
OSTC AMS AMS 13 11 30.0
comp=Z,500nm,23.7s
KRUC Moravsky 58.47 313 *e*P **P 12 45 46.7 +0.2**
CHVC Chvalec 58.55 315 *e*P **P 12 45 47.5 +0.4**
CHVC AMS AMS 13 11 30.0
comp=Z,400nm,20.0s
UPC Upice 58.59 315 *e*P **P 12 45 47.8 +0.5**
UPC MLR MLR
comp=Z,400nm,14.5s
UPC Upice 58.59 315 *e*P **P 12 45 47.8 +0.5**
UPC AMS AMS 13 11 50.0
comp=Z,400nm,14.5s
FAUS Fauske 58.91 334 *e*P **P 12 45 48.7 -0.5**
CONA Conrad Observa 58.95 312 *i* P **P 12 45 50.4 +0.5**
comp=Z,28nm,0.9s,SNR=14
MOR8 Moi Rana 59.17 333 *e*P **P 12 45 50.8 -0.2**
ARSA Arzberg 59.26 311 *e*P **P 12 45 51.7 -0.3**
comp=Z,7.8nm,0.7s
PVCC Panska Ves 59.50 315 *e*P **P 12 45 54.1 +0.5**
PVCC Panska Ves 59.50 315 *e*P **P 12 45 54.1 +0.5**
PRU Pruhonice 59.58 314 *e*P **P 12 45 54.5 +0.4**
PRU *e* 12 46 02.7
PRU MLR MLR
comp=Z,300nm,14.8s
PRU Pruhonice 59.58 314 *e*P **P 12 45 54.5 +0.4**
PRU *e*pP **sP 12 46 02.7 -0.3**
PRU AMS AMS 13 15 00.0
comp=Z,300nm,14.8s
PERS Pernice 59.62 310 *i* P **P 12 45 54.9 +0.3**
comp=Z,29nm,1.0s
LOF Lofoten 59.63 335 *e*P **P 12 45 54.6 +0.4**
SOKA Soboth 59.67 310 *i* P **P 12 45 55.2 +0.3**
comp=Z,19nm,0.9s,SNR=11
TIP Timpagrande 59.67 301 P **P 12 45 54.2 -0.9**
TIP lAmb lAmb 12 46 09.2
comp=Z,28nm,1.2s
KONS Konsvik 59.72 333 *e*P **P 12 45 55.7 +0.9**
RUE Ruedersdorf 59.79 317 *e*P **P 12 45 55.7 +0.2**
comp=Z,36nm,0.7s,baz=82,slow=6.7
BRG Berggiesshubel 59.86 315 *i* P **P 12 45 56.6 +0.5**
BRG Amp 12 45 58.0
comp=Z,26nm,1.0s
BRG *ex* x 12 46 03.9
BRG Amp 12 46 05.4
comp=Z,29nm,1.4s
BRG *ex* x 12 46 11.9
BRG Amp 12 46 13.6
comp=Z,17nm,1.1s
BRG Berggiesshubel 59.86 315 *e*P **P 12 45 56.5 +0.5**
comp=Z,26nm,1.0s,baz=82,slow=6.7
CKRC Cesky Krumlov 59.87 313 *e*P **P 12 45 56.6 +0.4**
CKRC *ex* x 12 46 04.5
SGRT San Giovanni R 59.95 305 P **P 12 45 56.2 -0.7**
PBCC Pribram 59.96 314 *e*P **P 12 45 57.4 +0.6**
OBKA Obir 60.02 310 *e*P **P 12 45 57.7 +0.4**
comp=Z,19nm,0.9s
MOA Molln 60.02 312 *i* P **P 12 45 57.6 +0.3**
comp=Z,24nm,0.9s,SNR=10
HSPB Hornsund (broa 60.13 346 *e*P **P 12 45 58.5 +1.0**
SPA0 Spitsbergen Ar 60.19 347 P **P 12 45 57.7 -0.2**
FBE Freiberg 60.22 315 *e*P **P 12 45 59.3 +0.7**
comp=Z,57nm,1.3s,baz=82,slow=6.7
GEC2 GERESS Array S 60.26 313 P **P 12 45 58.8 -0.2**
GEC2 pP **pP 12 46 06.8 +1.1**
GEC2 GERESS Array S 60.26 313 *e*P **P 12 45 59.3 +0.3**
comp=Z,30nm,0.9s,baz=82,slow=6.7
GERES GERESS Array B 60.26 313 P **P 12 45 59.1 +0.2**
comp=Z,17nm,0.8s,baz=88,slow=7.0,SNR=48
GERES LR LR 13 15 16.7
comp=Z,145nm,18.7s,baz=73,slow=39
GERES GERESS Array B 60.26 313 P **P 12 45 59.0 0.0**
KHC Kasperske Hory 60.30 313 *e*P **P 12 45 59.4 +0.2**
KHC *e* 12 46 07.3
KHC MLR MLR
comp=Z,300nm,15.7s
KHC Kasperske Hory 60.30 313 *e*P **P 12 45 59.4 +0.2**
KHC *e*pP **sP 12 46 07.3 -0.8**
KHC AMS AMS 13 16 30.0
comp=Z,300nm,15.7s
NC405 NORSAR Array S 60.34 327 P **P 12 45 58.2 -1.0**
CLL Collm 60.40 316 *i* P **P 12 45 59.9 +0.2**
comp=Z,10.0nm,0.9s
CLL *e*pP PcP 12 47 24.0 +39
CLL *e*S **S 12 54 16.0 +2.4**
CLL *e* 12 59 06.0
CLL Collm 60.40 316 *i* P **P 12 45 59.9 +0.2**
CLL *e*S **S 12 54 16.0 +2.4**
CLL pmax pmax
comp=Z,10.0nm,0.9s
CLL Collm 60.40 316 *e*P **P 12 45 59.8 0.0**
comp=Z,9.6nm,0.9s,baz=82,slow=6.7
NC602 NORSAR Array S 60.44 327 *e*P **P 12 45 59.7 -0.2**
NC303 NORSAR Array S 60.51 327 P **P 12 45 59.9 -0.4**
CEL Celeste 60.52 301 P **P 12 46 00.7 -0.2**
NB201 NORSAR Array S 60.55 327 P **P 12 46 00.0 -0.6**
NB2 NORSAR Subarra 60.59 327 P **P 12 46 00.1 -0.8**
baz=87,slow=6.9
NOA NORSAR Array B 60.59 327 P **P 12 46 00.3 -0.6**
comp=Z,3.9nm,0.9s,baz=90,slow=6.7,SNR=11
NOA LR LR 13 13 35.0
comp=Z,355nm,20.4s,baz=95,slow=37
CADS Cadrg 60.62 310 *i* P **P 12 46 01.1 -0.3**
comp=Z,79nm,1.5s
MYKA Terra Mystica 60.62 310 *e*P **P 12 46 01.9 +0.5**
comp=Z,6.2nm,0.9s
KBA Koelnbreinsper 60.75 311 *e*P **P 12 46 02.1 -0.4**
comp=Z,4.9nm,0.5s
WET Wettzell 60.76 313 *e*P **P 12 46 02.7 +0.4**
comp=Z,25nm,0.9s,baz=82,slow=6.7
NC204 NORSAR Array S 60.80 327 P **P 12 46 01.7 -0.7**
TANN Tannenbergstha 60.85 315 *e*P **P 12 46 03.2 +0.3**
comp=Z,16nm,0.9s,baz=82,slow=6.7
NKC Novy Kostel 60.88 315 *e*P **P 12 46 03.7 +0.6**
NKC MLR MLR
comp=Z,500nm,29.8s
NKC Novy Kostel 60.88 315 *e*P **P 12 46 03.7 +0.6**
NKC AMS AMS 13 12 20.0
comp=Z,500nm,29.8s
WERN Wernitzgruen 60.92 315 *e*P **P 12 46 03.9 +0.5**
comp=Z,15nm,1.0s,baz=82,slow=6.7
GUNZ Gunzen 60.94 315 *e*P **P 12 46 03.9 +0.4**
comp=Z,23nm,0.9s,baz=82,slow=6.7
WERD Werda 60.95 315 *e*P **P 12 46 03.8 +0.3**
comp=Z,27nm,0.9s,baz=82,slow=6.7
BILL Bilibino 61.00 25*c* *i*P **P 12 46 04.1 +0.5**
BILL *i* 12 46 11.5
BILL *e* 12 48 17.8
BILL *e*S **S 12 54 22.7 +1.9**
BILL *e*SS **SS 12 58 18.2 -1.6**
BILL pmax pmax
comp=Z,35nm,1.1s
BILL MLR MLR
comp=Z,234nm,16.0s
BILL Bilibino 61.00 25 P **P 12 46 03.4 -0.2**
RJOB Jochberg 61.02 312 *e*P **P 12 46 04.1 -0.1**
comp=Z,69nm,1.2s,baz=82,slow=6.7
PLN Plauen 61.03 315 *e*P **P 12 46 04.4 +0.3**
comp=Z,14nm,0.9s,baz=82,slow=6.7
ROTZ Rotzenmuhle 61.10 314 *e*P **P 12 46 05.4 +0.8**
comp=Z,30nm,0.9s,baz=82,slow=6.7
MANZ Manzenberg 61.13 314 *e*P **P 12 46 05.6 +0.8**
comp=Z,31nm,1.3s,baz=82,slow=6.7
NEUB Neunburg 61.18 316 *e*P **P 12 46 05.2 +0.1**
comp=Z,24nm,0.9s,baz=82,slow=6.7
KBS Kingsbay 61.19 348 *e*P **P 12 46 05.5 +0.8**
STAL STALIGIÁL 61.32 310 P **P 12 46 05.3 -0.8**
MOX Moxa 61.35 315 *e*P **P 12 46 06.6 +0.3**
comp=Z,19nm,0.9s,baz=82,slow=6.7
MOX *e*L L 13 12 39.3
comp=Z,240nm,21.7s
FLTG Flechtingen 61.36 317 *e*P **P 12 46 06.0 -0.2**
comp=Z,22nm,0.9s,baz=82,slow=6.7
NRCA Norcia 61.66 306 P **P 12 46 08.3 -0.3**
NRCA lAmb lAmb 12 46 25.9
comp=Z,16nm,0.9s
BSEG Bad Segeberg 61.70 319 *e*P **P 12 46 09.3 +0.8**
comp=Z,49nm,0.9s,baz=82,slow=6.7
MORW Morawa 61.71 152 P **P 12 46 08.8 0.0**
MORW pP **pP 12 46 16.6 +1.3**
MORW lAmb lAmb 12 46 17.4
comp=Z,15nm,0.9s
ASSE Asse, Remlinge 61.73 317 *e*P **P 12 46 08.8 +0.1**
comp=Z,67nm,2.0s,baz=82,slow=6.7
GRF Grafenberg Arr 61.75 314 *e*P **P 12 46 09.9 +1.0**
comp=Z,39nm,1.2s,baz=82,slow=6.7
GRF *e*L L 13 13 17.9
comp=Z,276nm,21.9s
WTTA Wattenberg 61.87 311 *i* P **P 12 46 09.5 -0.6**
comp=Z,32nm,1.1s,SNR=9.7
WATA Walderalm 61.90 311 *e*P **P 12 46 09.5 -0.7**
comp=Z,17nm,0.9s
RAFF Raffo Rosso 61.94 300 P **P 12 46 09.5 -0.9**
CLZ Clausthal 61.95 317 *e*P **P 12 46 10.8 +0.5**
comp=Z,40nm,0.8s,baz=82,slow=6.7
MURB Monte Urbino 62.00 307 P **P 12 46 10.5 -0.3**
NRDL Niedersach Rie 62.02 317 *e*P **P 12 46 11.6 +1.0**
comp=Z,64nm,1.1s,baz=82,slow=6.7
SQTA Sankt Quirin 62.17 311 *i* P **P 12 46 11.4 -0.6**
comp=Z,18nm,0.9s,SNR=5.8
HOMB Homborsund 62.18 324 *e*P **P 12 46 12.2 +0.6**
MOTA Moosalm 62.22 312 *i* P **P 12 46 11.7 -0.6**
comp=Z,24nm,0.8s,SNR=11
MOL Molde 62.22 329 *e*P **P 12 46 12.4 +0.5**
GTTG Gottingen 62.25 316 *e*P **P 12 46 12.8 +0.5**
comp=Z,29nm,0.9s,baz=82,slow=6.7
UBBA Unterbreizbach 62.34 316 *e*P **P 12 46 13.3 +0.5**
comp=Z,19nm,1.5s,baz=82,slow=6.7
RETA Reutte 62.42 312 *i* P **P 12 46 13.2 -0.4**
comp=Z,19nm,1.0s,SNR=5.9
FETA Feichten 62.53 311 *i* P **P 12 46 13.9 -0.5**
comp=Z,16nm,1.0s,SNR=6.1
VOI Vohitsoka 62.81 224 P **P 12 46 16.6 +0.1**
VOI lAmb lAmb 12 46 33.4
comp=Z,14nm,0.9s
UBR Ueberruh 62.82 312 *e*P **P 12 46 15.8 -0.5**
comp=Z,19nm,0.8s,baz=82,slow=6.7
OSSC Osservatorio P 62.86 307 P **P 12 46 16.1 -0.4**
OSSC lAmb lAmb 12 46 17.1
comp=Z,21nm,1.0s
SALO Salr 62.94 310 P **P 12 46 17.2 +0.2**
MILB Miltenberg 62.96 315 *e*P **P 12 46 17.0 0.0**
comp=Z,12nm,1.1s,baz=82,slow=6.7
DAVA Damuels 63.05 312 *i* P **P 12 46 17.1 -0.8**
comp=Z,38nm,0.9s,SNR=9.8
STU Stuttgart 63.21 313 *e*P **P 12 46 19.0 +0.2**
comp=Z,36nm,0.7s,baz=82,slow=6.7
KASTN Kahler Asten 63.26 316 *e*P **P 12 46 19.4 +0.3**
comp=Z,13nm,1.1s,baz=82,slow=6.7
VLC Villacollemand 63.33 308 P **P 12 46 20.1 +0.5**
TNS Taunus Mts 63.42 315 *e*P **P 12 46 20.5 +0.3**
comp=Z,27nm,1.0s,baz=82,slow=6.7
IBBN Ibbenburen 63.47 317 *e*P **P 12 46 20.8 +0.4**
comp=Z,40nm,0.9s,baz=82,slow=6.7
TUE Stuetta 63.57 311 P **P 12 46 21.0 -0.4**
TUE lAmb lAmb 12 46 33.4
comp=Z,19nm,0.8s
MANU Manus Island 63.88 107 P **P 12 46 23.5 -0.2**
MANU lAmb lAmb 12 46 25.4
comp=Z,7.4nm,0.6s
BUG Bochum-Univer 63.93 317 *e*P **P 12 46 23.8 +0.4**
comp=Z,36nm,1.0s,baz=82,slow=6.7
AHRW Bad Neuenahr-A 64.22 316 *e*P **P 12 46 25.9 +0.6**
comp=Z,31nm,1.0s,baz=82,slow=6.7
WB0 Warramunga Arr 64.51 131 P **P 12 46 27.3 -0.4**
WRA Warramunga Arr 64.60 131 P **P 12 46 28.4 +0.2**
comp=Z,19nm,0.7s,baz=323,slow=6.8,SNR=95
WRA PKPPKP **P'P'df 13 15 18.5 +5.9**
comp=Z,3.0nm,1.2s,baz=120,slow=3.2,SNR=5.2
WRA Warramunga Arr 64.60 131 P **P 12 46 28.3 +0.1**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 64.60 131 P **P 12 46 28.3 +0.1**
WRAB Tennant Creek 64.60 131*d* *i*P **P 12 46 27.6 -0.6**
WRAB pmax pmax
comp=Z,21nm,0.7s
WRAB Tennant Creek 64.60 131 P **P 12 46 27.4 -0.7**
WB2 Warramunga Arr 64.61 131 P **P 12 46 28.3 +0.1**
ECH Echery 64.65 313 P **P 12 46 28.4 +0.1**
ECH pmax pmax
comp=Z,10.0nm,0.9s
ECH Echery 64.65 313 P **P 12 46 28.4 +0.1**
ECH lAmb lAmb 12 46 29.3
comp=Z,9.9nm,0.9s
WR0 Warramunga Arr 64.75 131 P **P 12 46 29.2 +0.1**
WR0 lAmb lAmb 12 46 30.3
comp=Z,13nm,0.8s
BTNL Ternell 64.80 316 *d*P **P 12 46 30.0 +0.8**
comp=Z,14nm,1.0s
MEM Membach 64.88 316 *d*P **P 12 46 28.3 -1.4**
BHOU Houvegnez 64.93 316 *d*P **P 12 46 31.2 +1.2**
SENIN Lac Senin/Sane 64.97 311 P **P 12 46 30.4 -0.2**
SENIN lAmb lAmb 12 46 31.4
comp=Z,15nm,0.8s
WLF Walferdange 64.99 315 *d*P **P 12 46 31.5 +1.2**
WLF Walferdange 64.99 315 P **P 12 46 30.9 +0.5**
WLF pmax pmax
comp=Z,60nm,1.2s
WLF Walferdange 64.99 315 P **P 12 46 30.9 +0.5**
WLF Walferdange 64.99 315 *e*P **P 12 46 31.2 +0.8**
comp=Z,55nm,1.1s,baz=82,slow=6.7
BCLA Clavier 65.36 316 *d*P **P 12 46 32.9 +0.1**
BGES Gesves 65.50 316 *d*P **P 12 46 33.2 -0.5**
NWAO Narrogin (SRO) 65.58 153 P **P 12 46 33.8 -0.5**
NWAO pmax pmax
comp=Z,21nm,1.0s
NWAO Narrogin (SRO) 65.58 153 P **P 12 46 33.5 -0.9**
NWAO Narrogin (SRO) 65.58 153 P **P 12 46 33.8 -0.5**
NWAO lAmb lAmb 12 46 42.6
comp=Z,21nm,1.0s
BNI Bardonecchia 65.71 310 P **P 12 46 35.0 -0.3**
BNI pmax pmax
comp=Z,13nm,1.0s
BNI Bardonecchia 65.71 310 P **P 12 46 35.0 -0.3**
BNI lAmb lAmb 12 46 41.9
comp=Z,13nm,1.0s
BMRD Maredsous 65.72 316 *d*P **P 12 46 35.4 +0.3**
DOU Dourbes 65.87 315 *d*P **P 12 46 35.5 -0.6**
KEST Kesra 66.23 299 P **P 12 46 39.1 +0.3**
comp=Z,27nm,0.9s,baz=308,slow=2.1,SNR=16
KEST LR LR 13 20 40.0
comp=Z,102nm,18.9s,baz=318,slow=41
KEST Kesra 66.23 299 P **P 12 46 38.8 0.0**
AS31 Alice Springs 66.94 134 P **P 12 46 43.3 +0.1**
ASAR Alice Springs 66.94 134 P **P 12 46 43.8 +0.5**
comp=Z,19nm,0.7s,baz=316,slow=6.5,SNR=279
ASAR PKPPKP **P'P'df 13 15 12.3 +4.0**
comp=Z,1.2nm,0.9s,baz=161,slow=3.9,SNR=6.3
ASAR Alice Springs 66.94 134 P **P 12 46 42.7 -0.6**
SSB Saint Sauveur 67.11 310 P **P 12 46 43.3 -0.9**
SSB pmax pmax
comp=Z,14nm,1.0s
SSB Saint Sauveur 67.11 310 P **P 12 46 43.3 -0.9**
SSB lAmb lAmb 12 46 44.7
comp=Z,14nm,1.0s
COEN Coen 67.12 120 P **P 12 46 43.9 -0.7**
DAG Danmarks Havn 67.81 346 ⇓ *i*P **P 12 46 48.0 0.0**
DAG lAmb lAmb 12 46 49.0
comp=Z,15nm,1.1s
DAG Danmarks Havn 67.81 346 ⇓ *i*P **P 12 46 47.9 0.0**
DAG pmax pmax
comp=Z,15nm,1.1s
FORT Forrest 68.86 144 P **P 12 46 55.2 +0.1**
DBG Daneborg 69.16 344 *i* P **P 12 46 57.5 +1.1**
DBG lAmb lAmb 12 46 58.2
comp=Z,22nm,1.0s
SCO Scoresbysund 71.33 341 *i* P **P 12 47 11.2 +1.3**
SCO lAmb lAmb 12 47 12.7
comp=Z,40nm,1.4s
SCO Scoresbysund 71.33 341 *i* P **P 12 47 11.1 +1.3**
SCO pmax pmax
comp=Z,40nm,1.4s
LSZ Lusaka 71.64 242 P **P 12 47 11.8 -0.8**
LSZ pmax pmax
comp=Z,8.0nm,0.8s
LSZ Lusaka 71.64 242 P **P 12 47 11.8 -0.8**
A21K Barrow 72.42 18 P **P 12 47 16.6 +0.3**
A21K lAmb lAmb 12 47 17.9
comp=Z,23nm,1.1s
A21K Barrow 72.42 18 P 12 47 16.7
baz=302,SNR=13
ANM Nome 72.84 26 P **P 12 47 18.1 -0.8**
ANM pmax pmax
comp=Z,16nm,1.0s
ANM Nome 72.84 26 P **P 12 47 18.1 -0.8**
ANM lAmb lAmb 12 47 21.1
comp=Z,16nm,1.0s
ANM Nome 72.84 26 P 12 47 20.0
baz=296
NEEM North Greenlan 73.12 351 ⇓ *i*P **P 12 47 20.9 +0.1**
NEEM lAmb lAmb 12 47 22.0
comp=Z,36nm,0.9s
CTAO Charters Tower 73.17 123 P **P 12 47 21.8 +0.2**
CTAO pmax pmax
comp=Z,15nm,1.1s
CTAO Charters Tower 73.17 123 P **P 12 47 21.8 +0.2**
EUNU Eureka 73.29 359 P **P 12 47 21.6 +0.1**
EUNU lAmb lAmb 12 47 23.6
comp=Z,21nm,0.9s
SUMG Summit 74.46 345 *i* P **P 12 47 29.3 +0.5**
SUMG lAmb lAmb 12 47 30.4
comp=Z,26nm,0.9s
SUMG Summit 74.46 345 P **P 12 47 28.8 0.0**
SUMG pmax pmax
comp=Z,30nm,1.0s
SUMG Summit 74.46 345 P **P 12 47 28.8 0.0**
SUMG lAmb lAmb 12 47 30.6
comp=Z,30nm,1.0s
BBOO Buckleboo 74.84 140 P **P 12 47 30.6 -0.4**
BBOO lAmb lAmb 12 47 40.0
comp=Z,20nm,0.9s
ESDC Sonseca Array 74.87 307 P **P 12 47 30.8 -0.6**
comp=Z,3.8nm,0.8s,baz=57,slow=5.6,SNR=17
ESDC Sonseca Array 74.87 307 P **P 12 47 31.1 -0.3**
TULEG Thule 75.88 355 *i* P **P 12 47 36.0 -0.5**
TULEG lAmb lAmb 12 47 37.0
comp=Z,11nm,0.8s
TULEG Thule 75.88 355 P **P 12 47 35.8 -0.7**
TULEG lAmb lAmb 12 47 37.3
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 75.96 19 P **P 12 47 36.8 -0.3**
TOLK lAmb lAmb 12 47 39.0
comp=Z,16nm,0.8s
TOLK Toolik Lake Re 75.96 19 P 12 47 37.8
baz=309,SNR=20
IMAR Indian Mountai 76.29 22 P **P 12 47 39.3 +0.3**
MVO Moncorvo 76.45 309 *e*P **P 12 47 40.4 0.0**
comp=Z,30nm,1.2s
COLD Coldfoot 76.66 20 P **P 12 47 41.0 0.0**
COLD lAmb lAmb 12 47 43.2
comp=Z,17nm,1.1s
COLD Coldfoot 76.66 20 P 12 47 41.9
baz=309,SNR=13
PCAB Cabril 76.91 310 *e*P **P 12 47 43.5 +0.5**
ICESG Greenland Ices 77.13 343 ⇓ *i*P **P 12 47 44.7 +0.6**
ICESG lAmb lAmb 12 47 45.6
comp=Z,66nm,0.9s
TTA Tatalina 77.25 25 P **P 12 47 44.7 +0.1**
TTA pmax pmax
comp=Z,13nm,1.3s
TTA Tatalina 77.25 25 P **P 12 47 44.7 +0.1**
TTA Tatalina 77.25 25 P 12 47 45.8
baz=305,SNR=6.2
STKA Stephens Creek 77.52 136 P **P 12 47 46.3 0.0**
comp=Z,5.8nm,0.6s,baz=324,slow=5.6,SNR=15
STKA Stephens Creek 77.52 136 P **P 12 47 45.9 -0.4**
STKA pmax pmax
comp=Z,2.0nm,1.1s

STKA	Stephens Creek	77.52	136	P		P		12 47 45.9	-0.4
PBAR	Barrancos	77.67	307	*e*P		P		12 47 47.4	+0.2
UPNV	Upernavik	77.72	350	*i* P		P		12 47 46.5	-0.3
UPNV				IAmb		IAmb		12 47 47.7	
	comp=Z,13nm,0.8s								
MLY	Manley	77.87	22	P		P		12 47 48.1	+0.2
MLY				IAmb		IAmb		12 47 49.9	
	comp=Z,19nm,1.2s								
MLY	Manley	77.87	22	P				12 47 48.8	
	baz=309,SNR=11								
CHUM	Lake Minchumin	78.04	23	P				12 47 50.1	
	baz=308,SNR=5.4								
BMAR	Burnt Mountain	78.17	18	P		P		12 47 49.6	+0.1
I23K	Minto, Yukon-K	78.25	21	P		P		12 47 49.9	0.0
I23K	Minto, Yukon-K	78.25	21	P				12 47 51.0	
	baz=310,SNR=7.2								
BPAW	Bear Paw Mtn.	78.36	23	P		P		12 47 50.8	+0.1
BPAW	Bear Paw Mtn.	78.37	23	P				12 47 51.1	
	baz=309,SNR=7.8								
PVAQ	Vaqueiros	78.48	306	*e*P		P		12 47 52.0	+0.2
	comp=Z,26nm,1.2s								
PVAQ	Vaqueiros	78.48	306	P		P		12 47 51.2	-0.5
PVAQ				IAmb		IAmb		12 48 13.2	
	comp=Z,36nm,1.4s								
FYU	Fort Yukon	78.58	19	P		P		12 47 51.4	-0.3
FYU				IAmb		IAmb		12 48 07.7	
	comp=Z,24nm,1.1s								
PPLA	Purkeypile	78.69	24	P		P		12 47 52.7	+0.1
PPLA	Purkeypile	78.69	24	P				12 47 53.4	
	baz=308								
NEA2	Nenana	78.70	22	P		P		12 47 52.5	0.0
NEA2				IAmb		IAmb		12 47 54.1	
	comp=Z,21nm,1.0s								
NEA2	Nenana	78.70	22	P				12 47 53.2	
	baz=310,SNR=15								
PBDV	Barranco-do-Ve	78.70	306	*e*P		P		12 47 53.7	+0.7
KTH	Kantishna Hill	78.73	23	P		P		12 47 53.3	+0.6
KTH				IAmb		IAmb		12 47 54.6	
	comp=Z,30nm,1.4s								
MDM	Murphy Dome	78.73	21	P		P		12 47 53.0	+0.4
MDM				IAmb		IAmb		12 47 54.5	
	comp=Z,30nm,1.0s								
POKR	Poker Plat Res	78.89	21	P				12 47 54.4	
	baz=311								
TCOL	CIGO, UAF Yank	78.91	21	P		P		12 47 53.9	+0.3
TCOL				IAmb		IAmb		12 47 55.2	
	comp=Z,20nm,1.1s								
TCOL	CIGO, UAF Yank	78.91	21	P				12 47 54.3	
	baz=311								
COLA	College	78.91	21	*d i*P		P		12 47 54.0	+0.4
COLA				pmax		pmax			
	comp=Z,19nm,1.1s								
COLA	College	78.91	21	P		P		12 47 53.9	+0.3
COLA				IAmb		IAmb		12 47 55.2	
	comp=Z,22nm,1.1s								
TRF	Thorofare Moun	79.02	23	P		P		12 47 55.2	+0.7
TRF				IAmb		IAmb		12 48 22.0	
	comp=Z,23nm,1.4s								
TRF	Thorofare Moun	79.02	23	P				12 47 56.2	
	baz=309								
WRH	Wood River Hil	79.10	22	P		P		12 47 54.4	-0.3
PRP	Porcupine Dome	79.21	20	P		P		12 47 55.9	+0.5
PRP				IAmb		IAmb		12 47 57.5	
	comp=Z,16nm,1.0s								
PRP	Porcupine Dome	79.21	20	P				12 47 56.8	
	baz=313								
IL31		79.29	21	P		P		12 47 55.1	-0.5
ILAR	Eielson Array	79.29	21	P		P		12 47 55.5	-0.2
	comp=Z,4.6nm,0.9s,baz=297,slow=4.8,SNR=38								
ILAR				PP		PP		12 50 59.1	+4.2
	comp=Z,1.6nm,0.8s,baz=306,slow=8.3,SNR=4.5								
ILAR	Eielson Array	79.29	21	P		P		12 47 54.7	-1.0
LBTB	Lobatse	79.30	235	P		P		12 47 56.9	+0.5
LBTB				pmax		pmax			
	comp=Z,28nm,1.2s								
LBTB	Lobatse	79.30	235	P		P		12 47 56.9	+0.5
LBTB				IAmb		IAmb		12 48 05.8	
	comp=Z,28nm,1.2s								
MCK	McKinley	79.30	22	P		P		12 47 54.5	-1.3
MCK				pmax		pmax			
	comp=Z,10.0nm,1.0s								
MCK	McKinley	79.30	22	P		P		12 47 54.5	-1.3
MCK	McKinley	79.30	22	P				12 47 55.8	
	baz=310								
SKT	Skwentna	79.49	24	P		P		12 47 55.6	-1.2
SKT	Skwentna	79.50	24	P				12 47 57.3	
	baz=308,SNR=8.0								
RND	Reindeer	79.54	23	P		P		12 47 56.6	-0.6
RND				pmax		pmax			
	comp=Z,22nm,1.4s								
RND	Reindeer	79.54	23	P		P		12 47 56.6	-0.6
RND				IAmb		IAmb		12 48 23.7	
	comp=Z,22nm,1.4s								
WAT2	Susitna Watana	79.92	23	P				12 47 59.1	
	baz=311								
SUA	Susitna One	80.11	25	P		P		12 47 59.5	-0.8
SUA				IAmb		IAmb		12 48 01.9	
	comp=Z,19nm,0.9s								
SUA	Susitna One	80.11	25	P				12 48 01.1	
	baz=309,SNR=5.9								
INK	Inuvik	80.30	15	P		P		12 48 01.0	-0.1
INK				pmax		pmax			
	comp=Z,16nm,1.0s								
INK	Inuvik	80.30	15	P		P		12 48 01.0	-0.1
INK				IAmb		IAmb		12 48 02.7	
	comp=Z,16nm,1.0s								
INK	Inuvik	80.31	15	P				12 48 01.4	
	baz=323,SNR=17								
WAT6	Susitna Watana	80.47	23	P				12 48 02.5	
	baz=312								
PMR	Palmer	80.62	24	P		P		12 48 03.1	+0.2
PMR				pmax		pmax			
	comp=Z,16nm,0.9s								
PMR	Palmer	80.62	24	P		P		12 48 03.0	+0.2
PMR				IAmb		IAmb		12 48 04.4	
	comp=Z,16nm,0.9s								
PMR	Palmer	80.62	24	P				12 48 03.2	
	baz=310,SNR=5.9								
RC01	Rabbit Creek A	80.73	25	P		P		12 48 03.0	-0.5
RC01				IAmb		IAmb		12 48 05.0	
	comp=Z,29nm,1.0s								
RC01	Rabbit Creek A	80.73	25	P				12 48 03.5	
	baz=310								
SCRK	Sand Creek	80.75	21	P		P		12 48 03.6	-0.1
SCRK				IAmb		IAmb		12 48 05.2	
	comp=Z,12nm,0.8s								
SCRK	Sand Creek	80.76	21	P				12 48 04.1	
	baz=314,SNR=14								
DY2G	Dye2	80.76	343	*i* P		P		12 48 04.3	+0.4
DY2G				IAmb		IAmb		12 48 05.1	
	comp=Z,23nm,0.9s								
SML	Sawmill	80.77	24	P				12 48 04.4	
	baz=311,SNR=7.5								
DOT	Dot Lake	80.96	21	P		P		12 48 04.4	-0.3
PAX	Paxson	80.97	22	P		P		12 48 05.0	+0.1
PAX				pmax		pmax			
	comp=Z,8.0nm,1.1s								
PAX	Paxson	80.97	22	P		P		12 48 05.0	+0.1
PAX	Paxson	80.98	22	P				12 48 05.4	
	baz=313								
TOA0	Torodi Ar. Sit	81.00	280	P		P		12 48 05.5	-0.3
TOA0				IAmb		IAmb		12 48 07.3	
	comp=Z,17nm,1.2s								
TORD	Torodi Ar. Bea	81.00	280	P		P		12 48 06.0	+0.2
	comp=Z,8.3nm,1.0s,baz=54,slow=4.5,SNR=26								
TORD				LR		LR		13 28 19.8	
	comp=Z,305nm,18.2s,baz=75,slow=39								
TORD	Torodi Ar. Bea	81.00	280	P		P		12 48 05.1	-0.7
EGAK	Eagle	81.04	19	P		P		12 48 04.7	-0.4
EGAK	Eagle	81.04	19	P				12 48 05.5	
	baz=317								
EPYK	Eagle Plains	81.06	17	P		P		12 48 04.7	-0.6
EPYK	Eagle Plains	81.06	17	P				12 48 05.2	
	baz=320,SNR=6.4								
SCM	Sheep Creek Mo	81.11	23	P		P		12 48 05.9	+0.2
SCM				pmax		pmax			
	comp=Z,17nm,0.8s								
SCM	Sheep Creek Mo	81.11	23	P		P		12 48 05.9	+0.2
SCM				IAmb		IAmb		12 48 07.4	
	comp=Z,17nm,0.8s								
BRLK	Bradley Lake	81.13	26	P		P		12 48 05.2	-0.5
BRLK				IAmb		IAmb		12 48 06.7	
	comp=Z,26nm,0.9s								
C36M	Paulatuk	81.29	11	P		P		12 48 06.2	-0.1
C36M				IAmb		IAmb		12 48 07.2	
	comp=Z,16nm,1.1s								
C36M	Paulatuk	81.29	11	P				12 48 06.3	
	baz=331,SNR=8.9								
K27K	Chicken	81.31	20	P		P		12 48 06.4	-0.1
K27K	Chicken	81.31	20	P				12 48 07.6	
	baz=316,SNR=12								
M24K	Tolsona, Glenn	81.33	23	P		P		12 48 06.0	-0.8
M24K				IAmb		IAmb		12 48 09.1	
	comp=Z,32nm,1.1s								
M24K	Tolsona, Glenn	81.33	23	P				12 48 08.3	
	baz=313								
PWL	Port Wells	81.39	24	P		P		12 48 07.0	-0.1
SFJD	Kangerlussuaq	81.43	345	*i* P		P		12 48 06.9	-0.2
SFJD				IAmb		IAmb		12 48 07.8	
	comp=Z,20nm,0.9s								
SFJD	Kangerlussuaq	81.43	345	P		P		12 48 06.5	-0.6
SFJD				pmax		pmax			
	comp=Z,32nm,1.0s								
SFJD	Kangerlussuaq	81.43	345	P		P		12 48 06.5	-0.6
HARP	HAARP	81.48	22	P				12 48 08.8	
	baz=314								
BOSA	Boshof	81.67	232	P		P		12 48 08.8	-0.3
	comp=Z,2.5nm,0.6s,baz=28,slow=3.4,SNR=9.4								
BOSA				LR		LR		13 22 25.8	
	comp=Z,134nm,18.5s,baz=50,slow=34								
BOSA	Boshof	81.67	232	P		P		12 48 09.6	+0.5
BOSA				pmax		pmax			
	comp=Z,29nm,1.5s								
BOSA	Boshof	81.67	232	P		P		12 48 09.6	+0.5
BOSA				IAmb		IAmb		12 48 26.3	
	comp=Z,29nm,1.4s								
KDAK	Kodiak Island	81.68	28	P		P		12 48 08.7	+0.1
KDAK				pmax		pmax			
	comp=Z,29nm,1.3s								
KDAK	Kodiak Island	81.68	28	P		P		12 48 08.7	+0.1
KDAK				IAmb		IAmb		12 48 32.9	
	comp=Z,29nm,1.2s								
OHAK	Old Harbor	81.73	29	P		P		12 48 09.3	+0.5
OHAK				IAmb		IAmb		12 48 18.0	
	comp=Z,29nm,1.0s								
GLI	Glacier Island	81.84	24	P				12 48 10.1	
	baz=312								
KLU	Klutina	81.84	23	P		P		12 48 09.2	-0.3
KLU	Klutina	81.84	23	P				12 48 10.8	
	baz=313								
DAWY	Dawson	82.09	19	P		P		12 48 09.8	-0.9
L27K	Beaver Creek,	82.09	21	P		P		12 48 10.3	-0.5
L27K	Beaver Creek,	82.09	21	P				12 48 11.8	
	baz=316,SNR=6.4								
BCAR	Beaver Creek A	82.10	21	P		P		12 48 11.5	+0.6
N25K	Chitina, Valde	82.22	23	P		P		12 48 10.3	-1.2
N25K				IAmb		IAmb		12 48 13.8	
	comp=Z,19nm,0.9s								
N25K	Chitina, Valde	82.22	23	P				12 48 12.6	
	baz=314								
BMRM	Bremner River	82.66	23	P		P		12 48 14.1	+0.3
BMRM				IAmb		IAmb		12 48 15.7	
	comp=Z,19nm,0.9s								
BMRM	Bremner River	82.66	23	P				12 48 14.9	
	baz=314								
VRDI	Verde Repeater	82.88	22	P		P		12 48 13.8	-1.3
MCARA	McCarthy VSAT	82.91	22	P		P		12 48 14.9	-0.1
MCARA	McCarthy VSAT	82.91	22	P				12 48 16.3	
	baz=316								
CRQM	Cirque	83.32	23	P		P		12 48 16.6	-0.7
CRQM				IAmb		IAmb		12 48 31.9	
	comp=Z,19nm,1.0s								
TGL	Tana Glacier	83.42	23	P		P		12 48 18.0	+0.1
BARN	Barnard Glacie	83.60	22	P		P		12 48 18.6	-0.2
TOO	Toolangi	83.70	138	P		P		12 48 18.6	-0.8
TOO				pmax		pmax			
	comp=Z,16nm,0.9s								
TOO	Toolangi	83.70	138	P		P		12 48 18.6	-0.8
TOO				IAmb		IAmb		12 48 28.9	
	comp=Z,16nm,0.8s								
NUUK	Nuuk	83.99	343	*i* P		P		12 48 20.2	-0.2
NUUK				IAmb		IAmb		12 48 21.3	
	comp=Z,23nm,0.9s								
YAH	Yahtse	84.08	22	P		P		12 48 20.4	-0.9
YAH				IAmb		IAmb		12 48 35.6	
	comp=Z,19nm,1.0s								
HYT	Haines Junctio	85.12	21	P		P		12 48 25.3	-1.2
HYT				IAmb		IAmb		12 48 28.4	
	comp=Z,13nm,0.9s								
KOWA	Kowa	85.41	284	P		P		12 48 28.8	+0.2
WHY	Whitehorse	86.06	20	P		P		12 48 30.5	-0.6
WHY				IAmb		IAmb		12 48 32.6	
	comp=Z,8.8nm,0.8s								
WHY	Whitehorse	86.06	20	P				12 48 31.8	
	baz=322								
SKAG	Skagway	86.87	21	P				12 48 36.8	
	baz=322								
YKA	Yellowknife Ar	89.15	10	P		P		12 48 45.4	-0.4
	comp=Z,5.2nm,0.9s,baz=339,slow=4.5,SNR=49								
YKA				PKKPbc		PKKPbc		13 06 21.9	-2.1
	comp=Z,0.2nm,0.5s,baz=150,slow=2.4,SNR=7.9								
DBIC	Dimbokro	89.64	277	P		P		12 48 48.0	-0.9
	comp=Z,7.9nm,0.9s,baz=60,slow=8.2,SNR=5.7								
DBIC	Dimbokro	89.64	277	P		P		12 48 48.4	-0.5
DBIC				pmax		pmax			
	comp=Z,33nm,1.4s								
DBIC	Dimbokro	89.64	277	P		P		12 48 48.4	-0.5
FCC	Fort Churchill	94.71	1	P		P		12 49 10.9	-0.7
FCC				pmax		pmax			
	comp=Z,6.0nm,1.1s								
FCC	Fort Churchill	94.71	1	P		P		12 49 10.8	-0.7
FCC				IAmb		IAmb		12 49 12.6	
	comp=Z,6.0nm,1.1s								
MAW	Mawson	96.02	189	LR		LR		13 28 56.1	
	comp=Z,87nm,18.9s,baz=246,slow=33								
SYO	Syowa Base	101.86	196	*e*X		Pdif		12 49 50.4	+7.2
PDAR	Pinedale Array	108.86	14	PKiKP		PKiKP		12 54 19.9	-0.4
	comp=Z,0.4nm,0.7s,baz=66,slow=1.8,SNR=4.7								
NVAR	Mina Array Bea	110.53	22	PKiKP		PKiKP		12 54 24.2	+0.7
	comp=Z,0.3nm,0.5s,baz=113,slow=3.9,SNR=4.5								
SNAA	Sanae	115.50	201	PKPdf		PKPdf		12 54 32.5	+0.9
VNA2	Neumayer--Watz	116.88	202	PKPdf		PKiKP		12 54 34.7	+0.5
U40A	Yellville	117.14	1	P				12 54 35.2	
	baz=359								
VNA3	Neumayer Olymp	117.64	201	PKPdf		PKiKP		12 54 35.8	+0.1
MNTX	Cornudas Mount	120.39	13	PKPdf		PKiKP		12 54 42.6	+0.2
MNTX	Cornudas Mount	120.39	13	P				12 54 42.9	
	baz=346								
JCT	Junction City	122.51	8	PKIKP		PKPdf		12 54 46.2	-0.3
JCT	Junction City	122.51	8	PKPdf		PKPdf		12 54 46.2	-0.3
JCT	Junction City	122.51	8	P				12 54 46.6	
	baz=352								
BELA	Belgrano 2	122.75	192			PKPdf		12 54 45.1	-0.2
TX31	Lajitas Array. Si	123.03	12	PKPdf		PKPdf		12 54 47.2	-0.3
TX32	Lajitas Array	123.03	12	PKPdf		PKPdf		12 54 47.4	-0.1
TXAR	Lajitas Array	123.03	12	PKP		PKiKP		12 54 47.9	+0.1
	comp=Z,2.4nm,0.9s,baz=309,slow=0.3,SNR=22								
TXAR	Lajitas Array	123.03	12	PKPdf		PKPdf		12 54 47.2	-0.3
HELC	Santa Helena	143.53	332	*e*P		PKPab		12 55 22.7	-0.2
NORC	Norcasia	143.81	330	*e*P		PKPbc		12 55 24.5	+0.3
CBOC	Ciudad Bolivar	144.03	332	*e*P		PKPbc		12 55 25.4	+0.4
CHIC	Chingaza	144.11	328	*e*P		PKPbc		12 55 25.4	-0.1
ROSC	El Rosal	144.20	329	PKP		PKPdf		12 55 27.2	-0.5
	comp=Z,37nm,0.9s,baz=136,slow=3.9,SNR=9.8								
ROSC	El Rosal	144.20	329	PKPdf		PKPbc		12 55 26.6	+0.8
ROSC	El Rosal	144.20	329	*e*P		PKPbc		12 55 26.4	+0.6
GUY2C	Guyana, Caldas	144.33	331	*e*P		PKPbc		12 55 26.8	+0.5
VILC	Villavicencio,	144.54	327	*e*P		PKPbc		12 55 27.0	+0.4
TOLC	Tolima	144.88	330	*e*P		PKPdf		12 55 28.5	-0.3
ANIL	Santa Ana	145.00	330	*e*P		PKPdf		12 55 28.9	-0.1
ORTC	Ortega, Tolima	145.44	330	*e*P		PKPbc		12 55 28.8	-0.5
YOTC	Yotoco, Valle	145.86	331	*e*P		PKPdf		12 55 29.6	-0.6
MALC	Bahia Malaga	146.25	333	*e*P		PKiKP		12 55 33.8	-1.2
MACC	Macarena, Meta	146.32	326	*e*P		PKPdf		12 55 31.2	+0.3
MARP	Paez Belalcaza	146.71	330	*e*P		PKPbc		12 55 33.7	+0.1
SAML	Samuel	147.51	298	PKP2		PKPdf		12 55 33.1	+0.3
SAML	Samuel	147.51	298			PKPdf		12 55 33.1	+0.3
SAML				PKPab		PKPab		12 55 36.5	-1.0
SOTA	Rioblanco	147.63	330	*e*P		PKPbc		12 55 37.1	+0.7
CRUC	La Cruz	148.29	331	*e*P		PKiKP		12 55 39.0	-0.6
PTLC	Puerto Leguiza	148.49	326	*e*P		PKPbc		12 55 38.3	+0.2
CPUP	Villa Florida	149.12	263	PKPbc		PKPbc		12 55 39.7	+0.4
	comp=Z,9.2nm,0.7s,baz=83,slow=3.0,SNR=33								
CPUP	Villa Florida	149.12	263	PKP2		PKPbc		12 55 39.4	+0.1
CPUP	Villa Florida	149.12	263			PKPbc		12 55 39.4	+0.1
CPUP				PKPab		pPKPdf		12 55 42.9	+0.9
SIV	San Ignacio	149.40	284	PKPbc		PKiKP		12 55 40.9	-0.5
	comp=Z,6.6nm,0.7s,baz=109,slow=4.8,SNR=20								
OTAV	Otavalo	150.12	332	PKIKP		PKPdf		12 55 36.7	-1.0
OTAV	Otavalo	150.12	332	PKPdf		PKPdf		12 55 36.7	-1.0
OTAV						PKPbc		12 55 42.9	+0.1
OTAV				PKPab		PKPab		12 55 48.5	0.0
OTAV	Otavalo	150.12	332	*e*P		PKiKP		12 55 43.8	+0.2
LPAZ	La Paz	155.56	291	PKPab		PKPab		12 56 09.6	-2.0
	comp=Z,7.8nm,0.8s,baz=46,slow=3.8,SNR=17								
LPAZ	La Paz	155.56	291	PKPdf		PKPdf		12 55 44.6	-1.1
LPAZ						PKPab		12 56 10.7	-0.9
LPAZ	La Paz	155.56	291	*e*P		PKPab		12 56 09.2	-2.4
PB08	IPOC Station P	158.10	283			PKPab		12 56 21.9	-0.4
PB11	IPOC Station P	158.39	284	PKPdf		PKPdf		12 55 48.0	-0.6
PB11						PKPab		12 56 22.6	-0.5
ZON	Zonda	159.19	251	PKIKP		PKPdf		12 55 48.1	-1.1
ZON								12 56 24.7	
ZON	Zonda	159.19	251	PKPdf		PKPdf		12 55 48.1	-1.1
ZON				PKPab		PKPab		12 56 24.7	-1.6

*IDC **27** 12:48:49.5±1.4,28°.90N×88°.02E,h0km,mb3.5/7, mb1 3.6/8,mb1mx3.4/41,mbtmp3.5/8,ML3.2/1,Error ellipse: s-maj=59.0km s-min=21.2km az=62.0*
ISC 27 12:48:51.0±1.6,28°.9N±0°.2×88°.0E±0°.3,h10km,n8,σ1§12/8, mb3.6/7,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	18.40	348	P		P		12 53 07.2	+1.0
	0.1nm,0.3s,baz=172,slow=13,SNR=3.1								
KURBB	Kurchatov Arra	22.83	344	P		P		12 53 52.9	-1.2
	0.2nm,0.5s,baz=141,slow=12,SNR=1.9								
SONM	Songino Array	23.66	32	P		P		12 54 01.9	-0.8
	0.2nm,0.5s,baz=227,slow=5.7,SNR=1.7								
ZALV	Zalesovo Beam	25.12	356	P		P		12 54 17.5	+1.6
	0.6nm,0.5s,baz=152,slow=9.8,SNR=1.2								
FINES	FINESS Array B	51.67	327	P		P		12 57 57.4	-0.4
	1.0nm,0.5s,baz=116,slow=8.3,SNR=5.1								
ARCES	ARCESS Array B	53.65	337	P		P		12 58 12.7	+0.4
	4.1nm,1.0s,baz=104,slow=7.5,SNR=2.6								
WRA	Warramunga Arr	66.03	132	P		P		12 59 38.1	0.0
	0.6nm,1.0s,baz=328,slow=6.6,SNR=4.6								
ASAR	Alice Springs	68.45	135	P		P		12 59 53.6	+0.1
	0.5nm,1.0s,baz=328,slow=6.2,SNR=2.1								

*MDD **27** 12:49:58.9±0.8,32°.99N×16°.54W,h30km±7km,mb4.2/6, Error ellipse: s-maj=10.4km s-min=4.8km az=159.0, PRXIMO SOLUCIÓN POBRE*
*INMG **27** 12:50:00.4±1.4,33°.03N×16°.51W,h31km±10km,MD2.7, ML3.0,Error ellipse: s-maj=11.9km s-min=6.1km az=157.0*
ISC 27 12:49:58.2±1.3,32°.76N±0°.08×16°.46W±0°.04,h11km±15km, n17,σ1§20/33,6C,Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMPS	Porto Santo	0.32	19	P		P	Pg	12 50 04.9	+0.3
PMPS				S		Sg		12 50 08.5	-0.4
	1μm,0.2s								
PMPS	Porto Santo	0.32	19	⇑*i* P		Pg		12 50 04.9	+0.3
PMPS				*e*S		Sg		12 50 08.4	-0.4
PMPS				A		A		12 50 09.2	
	2μm,0.2s								
PMPST	Porto Santo, M	0.34	18	⇑*i* P		Pg		12 50 04.9	-0.1
PMPST				*e*S		Sg		12 50 08.5	-1.0
PMPST				A		A		12 50 09.2	
	3μm,0.2s								
FUL	Funchal	0.38	254	P		Pn		12 50 08.7	-0.9
FUL				S		Sb		12 50 14.9	+2.0
	157nm,0.2s								
FUL	Funchal	0.38	254	⇑*i* P		Pn		12 50 08.7	-0.9
FUL				*e*S		Sb		12 50 14.9	+2.0
FUL				A		A		12 50 18.0	
	314nm,0.2s								
PMAR	Madeira	0.39	265	P		Pb		12 50 08.2	+1.0
PMAR				S		Sb		12 50 13.9	+0.7
	342nm,0.2s								
PMAR	Madeira	0.39	265	⇑*i* P		Pb		12 50 08.2	+1.0
PMAR				*e*S		Sb		12 50 13.9	+0.7
PMAR				A		A		12 50 15.6	
	683nm,0.2s								
PMOZ	Porto Moniz, M	0.63	276	⇑P		Pg		12 50 09.9	-0.4
	57nm,0.2s,SNR=18								
PMOZ				S		Sg		12 50 17.9	-0.8
	523nm,1.0s,SNR=7.9								
PMOZ	Porto Moniz, M	0.63	276	⇑*i* P		Pg		12 50 10.0	-0.4
PMOZ				*e*S		Sg		12 50 17.8	-0.9
PMOZ				A		A		12 50 23.5	
	303nm,0.7s								
EBAJ	Bajamar	4.20	179	P		Pn		12 51 04.3	+2.1
	3.3nm,0.2s,SNR=11								
EBAJ				S		Sn		12 51 50.4	-1.0
	1.4nm,0.3s,SNR=8.3								
TBT	Taburiente	4.25	198	P		Pn		12 51 02.3	-0.6
	2.8nm,0.2s,SNR=7.9								
TBT				S		Sn		12 51 50.5	-2.0
	11nm,1.1s,SNR=7.9								
EFAM	Famara	4.40	144	P		Pn		12 51 02.0	-2.9
	1.4nm,0.2s,SNR=4.0								
EFAM				S		Sn		12 51 55.7	-0.5
	8.4nm,0.6s,SNR=7.9								
EGOM	La Gomera	4.63	188	P		Pn		12 51 07.9	-0.1
	1.7nm,0.1s,SNR=7.

az=188.0
*NDI **27** 13:17:48.3±4.3,27.91N×84.79E,h10km,ML4.1, mb4.3(NEIC)*
ISC 27 13:17:45.5±0.6,27.88N±0.09×84.71E±0.06,h10km,n27, σ1§81/29,mb4.1/11,1C,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**3.50**	**98**	*e*S	**Sn**	**13 19 18.7**	**-3.1**
LSA	**Lhasa**	**5.94**	**71**	Pn	**Pn**	**13 19 16.8**	**+2.8**
SHL	**Shillong**	**6.82**	**108**	*e*P	**Pn**	**13 19 29.1**	**+3.3**
SHL	**Shillong**	**6.82**	**108**	Pn	**Pn**	**13 19 25.5**	**-0.3**
SMLA	**Simla**	**7.32**	**298**	*e*P	**Pn**	**13 19 35.7**	**+3.2**
SMLA				*e*S	**Sn**	**13 20 55.1**	**-0.6**
SMLA	comp=N,22nm,0.4s			IAML		13 21 00.0	
SMLA	comp=E,26nm,0.3s			IAML		13 21 03.8	
BHPL	**Bhopal**	**8.03**	**237**	*e*S	**Sn**	**13 21 11.0**	**-2.3**
DHRM	**DHARAMSHALA**	**8.48**	**303**	*e*P	**Pn**	**13 19 50.2**	**+1.5**
DHRM				*e*S	**Sn**	**13 21 21.9**	**-2.8**
DHRM	comp=E,205nm,0.3s			IAML		13 21 26.4	
DHRM	comp=N,137nm,0.2s			IAML		13 21 28.9	
KOHI	**KOHIMA**	**8.67**	**102**	*e*P	**Pn**	**13 19 50.1**	**-1.1**
KOHI				*e*S	**Sn**	**13 21 25.8**	**-3.5**
KOHI	comp=E,459nm,0.2s			IAML		13 21 34.5	
KOHI	comp=N,229nm,0.2s			IAML		13 21 34.9	
CMAR	**Chiang Mai Arr**	**16.09**	**123**	Pn	**P**	**13 21 34.9**	**-0.4**
	baz=308,slow=10,SNR=5.2						
MKAR	**Makanchi Array**	**18.97**	**355**	P	**Pn**	**13 22 07.0**	**-0.6**
	comp=N,0.3nm,0.3s,baz=174,slow=11,SNR=17						
KURBB	**Kurchatov Arra**	**23.19**	**350**	P	**P**	**13 22 51.7**	**-0.6**
	comp=N,0.4nm,0.5s,baz=174,slow=10,SNR=5.1						
KURK	**Kurchatov**	**23.27**	**350**	P	**P**	**13 22 51.7**	**-1.4**
ZALV	**Zalesovo Beam**	**26.04**	**0**	P	**P**	**13 23 18.3**	**-0.5**
	comp=N,0.4nm,0.4s,baz=183,slow=8.5,SNR=2.1						
ABKAR	**Akbulak array**	**28.59**	**325**	P	**P**	**13 23 41.3**	**-0.3**
ARU	**Arti**	**34.08**	**334**	P	**P**	**13 24 28.7**	**-1.3**
ARU	comp=Z,8.6nm,1.4s			IAmb	IAmb	13 24 31.3	
BELG	**Belogornoye**	**36.83**	**322**	LR	LR	13 40 51.0	
	comp=Z,63nm,20.5s,baz=167,slow=38						
FIA1	**FINESS Array S**	**50.99**	**328**	P	**P**	**13 26 46.2**	**-1.0**
FIA1	comp=Z,6.3nm,1.3s			IAmb	IAmb	13 26 51.0	
FINES	**FINESS Array B**	**50.99**	**328**	P	**P**	**13 26 46.9**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=111,slow=10,SNR=7.5						
ARCES	**ARCESS Array B**	**53.49**	**338**	P	**P**	**13 27 05.8**	**0.0**
	comp=Z,1.9nm,0.9s,baz=99,slow=7.5,SNR=3.7						
NOA	**NORSAR Array B**	**58.08**	**327**	P	**P**	**13 27 37.9**	**-0.8**
	comp=Z,0.5nm,1.0s,baz=77,slow=8.2,SNR=2.3						
WRA	**Warramunga Arr**	**67.56**	**129**	P	**P**	**13 28 45.2**	**+2.7**
	comp=Z,1.0nm,1.2s,baz=323,slow=6.3,SNR=1.5						
EUNU	**Eureka**	**72.18**	**358**	P	**P**	**13 29 09.2**	**-0.9**
EUNU	comp=Z,2.5nm,1.1s			IAmb	IAmb	13 29 32.7	
A21K	**Barrow**	**72.33**	**17**	P	**P**	**13 29 10.8**	**-0.2**
A21K	comp=Z,6.7nm,1.5s			IAmb	IAmb	13 29 16.7	
TOLK	**Toolik Lake Re**	**75.91**	**18**	P	**P**	**13 29 32.2**	**+0.2**
TOLK	comp=Z,3.1nm,1.3s			IAmb	IAmb	13 29 42.4	
CTAO	**Charters Tower**	**76.26**	**122**	P	**P**	**13 29 36.2**	**+1.6**
BBOO	**Buckleboo**	**77.60**	**138**	P	**P**	**13 29 42.9**	**+0.9**
BMAR	**Burnt Mountain**	**78.10**	**17**	P	**P**	**13 29 44.0**	**-0.4**

*JMA **27** 13:18:53.0±0.1,23.73N×122.89E,h56km,M2.6*
*TAP **27** 13:18:54.3,23.79N×122.85E,h31km,ML3.0,D*
ISC 27 13:18:50.4±1.2,23.66N±0.03×122.88E±0.02,h9km±9km, n90,σ1§93/142,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.79**	**4**	P	**Pg**	**13 19 07.5**	**+1.8**
JYNG				S	**Sg**	**13 19 17.5**	**+1.4**
YOJ	**Yonaguni jima**	**0.81**	**9**	P	**Pg**	**13 19 07.8**	**+1.7**
YOJ				S	**Sg**	**13 19 17.6**	**+0.9**
YOJ	**Yonaguni jima**	**0.81**	**9**	*i* P	**Pg**	**13 19 07.9**	**+1.9**
YOJ	baz=12			*i* S	**Sg**	**13 19 17.5**	**+0.9**
	baz=12						
HATJ	**Hateruma jima**	**0.94**	**65**	P	**Pg**	**13 19 09.8**	**+1.3**
HATJ				*e*S	**Sg**	**13 19 21.4**	**+0.7**
IRIF	**Iriomote-Funau**	**1.03**	**49**	P	**Pg**	**13 19 10.9**	**+0.6**
IRIF				*e*S	**Sg**	**13 19 23.3**	**-0.4**
JKRS	**Kuro-shima**	**1.18**	**61**	P	**Pg**	**13 19 13.4**	**+0.2**
JKRS				*e*S	**Sg**	**13 19 27.8**	**-0.8**
HWA	**Hwalien**	**1.21**	**285**	*e*P	**Pg**	**13 19 14.3**	**+0.6**
	baz=267						
TWD	**Chiawan**	**1.25**	**290**	*e*P	**Pg**	**13 19 14.1**	**-0.3**
TWD	baz=272			*e*S	**Sg**	**13 19 29.0**	**-1.6**
	baz=272						
EWUT	**Wuta**	**1.27**	**308**	P	**Pg**	**13 19 14.6**	**-0.3**
EWUT	baz=304			*e*S	**Sg**	**13 19 29.6**	**-1.9**
	baz=304						
NACB	**Ninganchiao**	**1.28**	**294**	P	**Pg**	**13 19 14.7**	**-0.4**
NACB	baz=276			*e*S	**Sg**	**13 19 29.8**	**-2.0**
	baz=276						
EGFH	**Guangfu**	**1.33**	**271**	*e*P	**Pg**	**13 19 16.0**	**0.0**
EGFH	baz=265			*e*S	**Sg**	**13 19 30.7**	**-2.6**
	baz=265						
ESL	**Shilin**	**1.33**	**277**	*i* P	Pg	13 19 15.4	-0.6
ESL	baz=261			*e*S	**Sg**	**13 19 30.5**	**-2.9**
	baz=261						
TWC	**Suao**	**1.33**	**315**	*e*P	**Pg**	**13 19 15.8**	**-0.3**
TWC	baz=300			*e*S	**Sg**	**13 19 31.1**	**-2.4**
	baz=300						
HGSD	**Ruisui**	**1.34**	**263**	*i* P	**Pg**	**13 19 16.1**	**-0.2**
HGSD	baz=258			*e*S	**Sg**	**13 19 32.1**	**-1.6**
	baz=258						
JIJ	**Ishigaki jima**	**1.35**	**58**	P	**Pg**	**13 19 15.2**	**-1.2**
JIJ				*e*S	**Sg**	**13 19 30.9**	**-3.1**
ETLH	**Xiulin Townshi**	**1.39**	**293**	P	**Pn**	**13 19 16.5**	**+0.4**
ETLH	baz=278			*e*S	**Sg**	**13 19 33.5**	**-1.8**
	baz=278						
NDS	**Dongshan**	**1.44**	**313**	*e*P	**Pn**	**13 19 17.6**	**+1.0**
NDS	baz=309			*e*S	**Sg**	**13 19 34.3**	**-2.4**
	baz=309						
EYUL	**Yuli**	**1.47**	**258**	P	**Pn**	**13 19 17.9**	**+0.9**
EYUL	baz=253			*e*S	**Sg**	**13 19 35.9**	**-1.7**
	baz=253						
YULB	**Yu-li**	**1.48**	**260**	P	**Pn**	**13 19 18.3**	**+1.1**
YULB	baz=255			*e*S	**Sg**	**13 19 35.3**	**-2.7**
	baz=255						
TWF1	**Yuli**	**1.48**	**258**	P	**Pn**	**13 19 18.4**	**+1.1**
TWF1	baz=254			*e*S	**Sg**	**13 19 36.3**	**-1.9**
	baz=254						
CHKT	**Chengkung**	**1.50**	**248**	*e*P	**Pn**	**13 19 18.1**	**+0.6**
CHKT	baz=244			*e*S	**Sn**	**13 19 35.7**	**-1.4**
	baz=244						
FULB	**Fuli**	**1.53**	**253**	P	**Pn**	**13 19 18.6**	**+0.7**
FULB	baz=248			*e*S	**Sn**	**13 19 37.0**	**-0.9**
	baz=248						
TWE	**Neicheng**	**1.53**	**314**	P	**Pn**	**13 19 18.7**	**+0.8**
TWE	baz=311			*e*S	**Sn**	**13 19 36.2**	**-1.8**
	baz=311						
ENTT	**Nioudou**	**1.55**	**309**	*e*P	**Pn**	**13 19 19.2**	**+1.0**
	baz=293						
WHF	**Hehuan Shan**	**1.55**	**288**	P	**Pn**	**13 19 19.2**	**+0.6**
WHF	baz=273			*e*S	**Sg**	**13 19 37.7**	**-2.8**
	baz=273						
NDT	**Datong Townshi**	**1.56**	**307**	*e*P	**Pn**	**13 19 19.1**	**+0.8**
NDT	baz=291			*e*S	**Sn**	**13 19 37.9**	**-0.9**
	baz=291						
NNSB	**Datong**	**1.57**	**300**	P	**Pn**	**13 19 19.4**	**+0.9**
	baz=284						
NNSB				*e*S	**Sn**	**13 19 37.6**	**-1.4**
	baz=284						
NNSH	**Datong**	**1.57**	**300**	P	**Pn**	**13 19 19.4**	**+0.9**
	baz=285						
NNSH				*e*S	**Sn**	**13 19 37.5**	**-1.6**
	baz=285						
NNS	**Nan Shan**	**1.58**	**300**	P	**Pn**	**13 19 19.7**	**+1.0**
	baz=285						
NNS				*e*S	**Sn**	**13 19 38.4**	**-1.0**
	baz=285						
OWD	**Renai**	**1.59**	**281**	P	**Pn**	**13 19 19.6**	**+0.8**
	baz=277						
OWD				*e*S	**Sn**	**13 19 38.0**	**-1.6**
	baz=277						
VWDT	**VWDT**	**1.59**	**274**	P	**Pn**	**13 19 20.2**	**+1.4**
	baz=260						
VWDT				*e*S	**Sn**	**13 19 39.0**	**-0.5**
	baz=260						
EDH	**Donghe**	**1.60**	**245**	P	**Pn**	**13 19 19.5**	**+0.6**
	baz=241						
EDH				*e*S	**Sn**	**13 19 38.1**	**-1.5**
	baz=241						
JISG	**Ishigakijimahi**	**1.60**	**54**	P	Pn	13 19 18.2	-0.7
JISG				*e*S	**Sn**	**13 19 36.7**	**-3.0**
FUSS	**Fushou**	**1.61**	**292**	P	**Pn**	**13 19 20.0**	**+0.8**
	baz=288						
FUSS				*e*S	**Sn**	**13 19 39.0**	**-1.2**
	baz=288						
CHGB	**Renai**	**1.61**	**285**	P	**Pn**	**13 19 20.0**	**+0.7**
	baz=271						
CHGB				*e*S	**Sn**	**13 19 38.0**	**-2.2**
	baz=271						
TIPB	**Shuangxi**	**1.62**	**324**	*e*P	**Pn**	**13 19 19.4**	**+0.1**
	baz=332						
LDUT	**Ludao**	**1.63**	**233**	P	**Pn**	**13 19 20.0**	**+0.8**
	baz=229						
LDUT				*e*S	**Sn**	**13 19 38.7**	**-1.5**
	baz=229						
NWLT	**Wulai**	**1.68**	**312**	P	**Pn**	**13 19 21.3**	**+1.3**
	baz=296						
NWLT				*e*S	**Sn**	**13 19 40.5**	**-1.2**
	baz=296						
TDCB	**Techi**	**1.68**	**291**	*e*P	**Pn**	**13 19 21.5**	**+1.3**
	baz=277						
YHNB	**Yeheng**	**1.70**	**307**	P	**Pn**	**13 19 21.6**	**+1.3**
	baz=292						
YHNB				*e*S	**Sn**	**13 19 40.1**	**-2.2**
	baz=292						
SSLB	**Suanglung**	**1.77**	**275**	*e*P	**Pn**	**13 19 22.5**	**+1.2**
	baz=271						
TWA	**Mucha**	**1.77**	**318**	P	**Pn**	**13 19 23.0**	**+1.8**
	baz=315						
TWA				*e*S	**Sn**	**13 19 43.5**	**-0.3**
	baz=315						
ELDTW	**Lidau**	**1.77**	**255**	P	**Pn**	**13 19 22.5**	**+1.1**
	baz=251						
ELDTW				*e*S	**Sn**	**13 19 41.9**	**-2.2**
	baz=251						
LONT	**Longtian**	**1.77**	**245**	P	**Pn**	**13 19 22.7**	**+1.4**
	baz=232						
LONT				*e*S	**Sn**	**13 19 43.6**	**-0.4**
	baz=232						
YUS	**Yu-Shan**	**1.78**	**265**	*e*P	**Pn**	**13 19 23.5**	**+1.7**
	baz=261						
WPL	**Puli Township**	**1.79**	**282**	*e*P	**Pn**	**13 19 22.8**	**+1.2**
	baz=278						
DPDB	**Guoxing**	**1.83**	**282**	P	**Pn**	**13 19 23.8**	**+1.8**
	baz=278						
SMLT	**Sun Moon Lake**	**1.83**	**277**	*e*P	**Pn**	**13 19 23.4**	**+1.3**
	baz=264						
TWGBT	**Beinan**	**1.85**	**244**	P	**Pn**	**13 19 23.4**	**+1.0**
	baz=231						
TWGBT				*e*S	**Sn**	**13 19 45.7**	**-0.2**
	baz=231						
TWG	**Pinlang**	**1.86**	**244**	P	**Pn**	**13 19 24.0**	**+1.6**
	baz=231						
TWG				*e*S	**Sn**	**13 19 45.5**	**-0.5**
	baz=231						
TYC	**Yuchr**	**1.87**	**278**	*e*P	**Pn**	**13 19 24.1**	**+1.6**
	baz=264						
WHP	**Taichung City**	**1.87**	**290**	P	**Pn**	**13 19 24.7**	**+2.0**
	baz=286						
WHP				*e*S	**Sn**	**13 19 46.8**	**+0.3**
	baz=286						
ALS	**Alishan**	**1.91**	**266**	P	**Pn**	**13 19 25.7**	**+2.4**
	baz=262						
ALS				*e*S	**Sn**	**13 19 46.9**	**-0.7**
	baz=262						
JTJ	**Tarama**	**1.93**	**59**	P	**Pn**	**13 19 23.4**	**0.0**
JTJ				*e*S	**Sn**	**13 19 46.4**	**-1.4**
LIOB	**Emei**	**1.96**	**300**	P	**Pn**	**13 19 26.4**	**+2.5**
	baz=286						
LIOB				*e*S	**Sn**	**13 19 49.7**	**+1.0**
	baz=286						
NSTT	**Nanjuang**	**1.97**	**300**	*e*P	**Pn**	**13 19 25.7**	**+1.8**
	baz=286						
NSTT				*e*S	**Sn**	**13 19 48.9**	**+0.2**
	baz=286						
WJS	**Zhushan**	**1.98**	**275**	*e*P	**Pn**	**13 19 26.8**	**+2.7**
	baz=272						
STYH	**Taoyuan**	**1.99**	**256**	P	**Pn**	**13 19 26.4**	**+2.2**
	baz=244						
STYH				*e*S	**Sn**	**13 19 50.0**	**+0.7**
	baz=244						
CHN5	**Tsauling**	**2.02**	**269**	P	**Pn**	**13 19 27.6**	**+2.9**
	baz=265						
WNT	**Mingjian**	**2.02**	**277**	P	**Pn**	**13 19 28.0**	**+3.3**
	baz=273						
WNT				*e*S	**Sn**	**13 19 52.0**	**+2.0**
	baz=273						
LAY	**Lan-yu**	**2.02**	**217**	*e*P	**Pn**	**13 19 25.3**	**+0.6**
	baz=225						
WNT1	**Nantou City**	**2.03**	**277**	*e*P	**Pn**	**13 19 28.1**	**+3.3**
	baz=274						
WWF	**Wufeng**	**2.03**	**281**	P	**Pn**	**13 19 28.3**	**+3.5**
	baz=270						
WWF				*e*S	**Sn**	**13 19 54.0**	**+3.7**
	baz=270						
ECL	**Taimali**	**2.06**	**240**	*e*P	**Pn**	**13 19 29.0**	**+3.8**
	baz=248						
TCU	**Taichung**	**2.07**	**284**	*e*P	**Pn**	**13 19 28.6**	**+3.2**
	baz=281						
NSY	**Sanyi**	**2.08**	**292**	*e*P	**Pn**	**13 19 27.4**	**+2.0**
	baz=288						
NSY				*e*S	**Sn**	**13 19 52.3**	**+0.8**
	baz=288						
TPUB	**Ta-pu**	**2.10**	**261**	P	**Pn**	**13 19 28.6**	**+2.8**
	baz=257						
TPUB				*e*S	**Sn**	**13 19 53.7**	**+1.8**
	baz=257						
WTP	**Ta-pu**	**2.12**	**259**	P	**Pn**	**13 19 29.4**	**+3.3**
	baz=256						
WDLH	**Douliu**	**2.15**	**271**	*e*P	**Pn**	**13 19 29.8**	**+3.4**
	baz=268						
SLGT	**Liugui**	**2.16**	**253**	*e*P	**Pn**	**13 19 28.9**	**+2.3**
	baz=241						
WDJ	**Dajia District**	**2.16**	**289**	*e*P	**Pn**	**13 19 29.1**	**+2.5**
	baz=286						
WCHH	**Zhanghua**	**2.17**	**282**	*e*P	**Pn**	**13 19 29.7**	**+3.1**
	baz=278						
SGST	**Jiashian**	**2.19**	**255**	P	**Pn**	**13 19 29.2**	**+2.3**
	baz=252						
CHN1	**Nanshi**	**2.21**	**258**	*e*P	**Pn**	**13 19 30.7**	**+3.4**
	baz=255						
CHN1				*e*S	**Sn**	**13 19 58.3**	**+3.6**
	baz=255						
TWK	**Hsinying**	**2.23**	**260**	*e*P	**Pn**	**13 19 31.1**	**+3.5**
	baz=257						
SSD	**Sandimen**	**2.26**	**247**	*e*P	**Pn**	**13 19 30.3**	**+2.4**
	baz=236						
EAST	**Anshuo**	**2.26**	**236**	*e*P	**Pn**	**13 19 29.6**	**+1.6**
	baz=243						
TSMG	**Majia**	**2.26**	**246**	*e*P	**Pn**	**13 19 31.6**	**+3.6**
	baz=242						
MASBT	**Mashibuluo**	**2.31**	**244**	P	**Pn**	**13 19 31.0**	**+2.3**
	baz=233						
SCST	**Cishan**	**2.32**	**251**	*e*P	**Pn**	**13 19 32.7**	**+3.9**
	baz=249						
SCST				*e*S	**Sn**	**13 20 01.1**	**+3.6**
	baz=249						
JIRB	**Irabujima**	**2.40**	**60**	P	**Pn**	**13 19 30.1**	**+0.3**
JIRB				*e*S	**Sn**	**13 19 56.9**	**-2.4**
ICHU	**Yijhu**	**2.40**	**263**	*e*P	**Pn**	**13 19 32.7**	**+2.8**
	baz=261						
SSPT	**Xinbi**	**2.43**	**242**	*e*P	**Pn**	**13 19 33.5**	**+3.2**
	baz=231						
SCZT	**Fangliau**	**2.44**	**239**	*e*P	**Pn**	**13 19 34.5**	**+4.0**
	baz=235						
JMJ	**Miyako jima 2**	**2.49**	**62**	*e*P	**Pn**	**13 19 31.4**	**+0.3**
	baz=64						
WDGT	**Dungji**	**2.98**	**263**	*e*P	**Pn**	**13 19 40.4**	**+2.5**
	baz=261						
PNG	**Penghu**	**3.05**	**269**	*e*P	**Pn**	**13 19 40.8**	**+2.0**
	baz=257						
VCHM	**Qimei**	**3.20**	**263**	*e*P	**Pn**	**13 19 42.8**	**+2.0**
	baz=261						
VWUC	**VWUC**	**3.40**	**294**	*e*P	**Pn**	**13 19 44.4**	**+0.8**
	baz=291						
PTMZ	**Houxiangcun**	**3.69**	**293**	*e*P	**Pn**	**13 19 48.4**	**+0.7**
	baz=290						

*NEIC **27** 13:20:58.6±0.9,20.81N±0.04×120.7E±0.1,h10km±1km, mb4.6/12,Error ellipse: s-maj=17.3km s-min=6.0km az=256.0*
*JMA **27** 13:21:03.9±0.2,21.09N×121.14E,h0km,M3.6*
*IDC **27** 13:21:17.6±5.8,20.55N×120.55E,h170km±61km, mb3.5/10,mb1 3.6/11,mb1mx3.3/52,mbtmp3.9/11,MS3.1/5, Ms1 3.2/5,ms1mx2.8/38,Error ellipse: s-maj=23.1km s-min=12.2km az=68.0*
ISC 27 13:21:01.5±0.6,20.84N±0.03×120.70E±0.07,h26km,n47, σ1§63/45,mb4.4/15,MS3.0/4,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBP	**Basco**	**1.25**	**108**	*e*P	Pn	13 21 20.1	-3.2
BBP				*e*S	Sn	13 21 28.7	-10
TWG	**Pinlang**	**2.00**	**10**	Pn	**Pn**	**13 21 33.2**	**-0.5**
TPUB	**Ta-pu**	**2.45**	**358**	Pn	**Pn**	**13 21 38.9**	**-1.0**
YULB	**Yu-li**	**2.60**	**12**	Pn	**Pn**	**13 21 41.5**	**-0.4**
SGCP	**Mt. Cagua**	**2.88**	**154**	*e*P	**Pn**	**13 21 44.4**	**-1.2**
SGCP				*e*S	**Sn**	**13 22 17.1**	**-2.3**
SSLB	**Suanglung**	**2.95**	**4**	Pn	**Pn**	**13 21 45.9**	**-0.8**
APYP	**Conner**	**3.00**	**170**	*e*P	**Pn**	**13 21 46.5**	**-0.9**
APYP				*e*S	**Sn**	**13 22 20.5**	**-2.1**
SZP	**Santa**	**3.28**	**184**	Pn	**Pn**	**13 21 51.6**	**+0.5**
CVP	**Callao Caves**	**3.29**	**161**	*e*P	**Pn**	**13 21 51.1**	**-0.3**
CVP				*i* S	**Sn**	**13 22 28.2**	**-1.5**
NACB	**Ninganchiao**	**3.42**	**14**	Pn	**Pn**	**13 21 52.3**	**-0.9**
YHNB	**Yeheng**	**3.87**	**9**	Pn	**Pn**	**13 21 58.5**	**-0.8**
JYNG	**Yonagunijimaku**	**4.15**	**30**	S	**Sn**	**13 22 49.3**	**-1.6**
KNMB	**Chin-men Tao**	**4.20**	**330**	Pn	**Pn**	**13 22 00.9**	**-3.0**
IRIF	**Iriomote-Funau**	**4.47**	**38**	P	**Pn**	**13 22 09.3**	**+1.8**
JKRS	**Kuro-shima**	**4.56**	**41**	P	**Pn**	**13 22 09.6**	**+0.8**
JIJ	**Ishigaki jima**	**4.74**	**42**	P	**Pn**	**13 22 11.8**	**+0.6**
JIJ				*e*S	**Sn**	**13 23 02.7**	**-2.6**
JISG	**Ishigakijimahi**	**5.00**	**41**	P	**Pn**	**13 22 15.2**	**+0.3**
JISG				S	**Sn**	**13 23 07.3**	**-4.6**
JIRB	**Irabujima**	**5.72**	**45**	*e*S	**Sn**	**13 23 27.1**	**-2.6**
KSRS	**Korea Array**	**17.71**	**19**	P	P	13 25 15.6	+8.6
	0.1nm,0.3s,baz=198,slow=12,SNR=5.3						
KSRS				LR	LR	13 33 39.7	
	comp=Z,50nm,18.2s,baz=220,slow=41						
CMAR	**Chiang Mai Arr**	**20.63**	**267**	P	Pn	13 25 42.9	+1.3
	2.0nm,0.7s,baz=71,slow=9.2,SNR=16						
CMAR				LR	LR	13 34 23.9	
	comp=Z,66nm,19.5s,baz=176,slow=38						
JHJ	**Hachijo jima 2**	**20.91**	**50**	LR	LR	13 33 11.4	
	comp=Z,66nm,21.6s,baz=36,slow=34						
MJAR	**Matsushiro Arr**	**21.87**	**41**	P	P	13 26 01.7	+9.3
	1.1nm,0.8s,baz=212,slow=7.8,SNR=2.8						
SIJI	**Sorong**	**23.92**	**153**	P	**P**	**13 26 13.2**	**-0.4**
	12nm,0.6s,baz=5.7,slow=9.5,SNR=7.2						
GUMO	**Guam**	**24.16**	**103**	LR	LR	13 33 53.7	
	comp=Z,33nm,20.2s,baz=243,slow=31						
FAKI	**Fak Fak**	**26.18**	**153**	P	**P**	**13 26 34.2**	**+0.1**
SONM	**Songino Array**	**29.31**	**340**	P	**P**	**13 27 04.4**	**+2.4**
	0.4nm,0.6s,baz=174,slow=7.2,SNR=1.6						
MTN	**Manton Dam**	**35.01**	**162**	P	**P**	**13 27 51.3**	**-0.7**
MTN				IAmb	IAmb	13 28 17.5	
	comp=Z,22nm,1.3s						
KNRA	**Kununurra**	**37.14**	**167**	P	**P**	**13 28 10.0**	**-0.3**
KNRA				IAmb	IAmb	13 28 13.6	
	comp=Z,36nm,1.5s						
MKAR	**Makanchi Array**	**40.49**	**319**	P	**P**	**13 28 40.9**	**+2.7**
	comp=Z,0.9nm,0.7s,baz=102,slow=11,SNR=2.9						
WB0	**Warramunga Arr**	**42.52**	**161**	P	**P**	**13 28 54.3**	**-0.7**
WB0				IAmb	IAmb	13 28 57.1	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**42.66**	**161**	P	**P**	**13 28 55.3**	**-0.9**
WRAB				IAmb	IAmb	13 28 58.4	
	comp=Z,8.4nm,0.9s						
WRA	**Warramunga Arr**	**42.67**	**161**	P	**P**	**13 28 55.5**	**-0.7**
	comp=Z,4.6nm,0.6s,baz=343,slow=9.2,SNR=56						
WRA	**Warramunga Arr**	**42.67**	**161**	P	**P**	**13 28 55.0**	**-1.2**
WRA				IAmb	IAmb	13 28 58.7	
	comp=Z,0.3nm,0.9s						
WB2	**Warramunga Arr**	**42.67**	**161**	P	**P**	**13 28 55.6**	**-0.7**
WB2				IAmb	IAmb	13 28 58.5	
	comp=Z,7.6nm,0.8s						
WR0	**Warramunga Arr**	**42.75**	**161**	P	**P**	**13 28 56.2**	**-0.7**
WR0				IAmb	IAmb	13 28 56.9	
	comp=Z,6.6nm,0.7s						
ZALV	**Zalesovo Beam**	**42.84**	**329**	P	**P**	**13 28 59.5**	**+2.2**
	comp=Z,2.1nm,0.6s,baz=112,slow=8.3,SNR=6.1						
ZALV	**Zalesovo Beam**	**42.84**	**329**	P	**P**	**13 28 57.0**	**-0.2**
KURK	**Kurchatov**	**44.41**	**322**	P	**P**	**13 29 12.8**	**+2.8**
KURBB	**Kurchatov Arra**	**44.42**	**322**	P	**P**	**13 29 12.8**	**+2.7**
	comp=Z,3.5nm,1.0s,baz=122,slow=7.6,SNR=7.2						
AS31	**Alice Springs**	**46.06**	**163**	P	**P**	**13 29 22.2**	**-1.2**
ASAR	**Alice Springs**	**46.07**	**163**	P	**P**	**13 29 23.4**	**0.0**
	comp=Z,3.0nm,0.6s,baz=349,slow=6.6,SNR=31						
ASAR	**Alice Springs**	**46.07**	**163**	P	**P**	**13 29 22.6**	**-0.8**
GAR	**Garm**	**46.66**	**304**	P	**P**	**13 29 28.0**	**-0.1**
SOCY	**Socotra**	**64.17**	**274**	P	**P**	**13 31 33.2**	**-1.3**
RND	**Reindeer**	**71.79**	**28**	P	**P**	**13 32 22.2**	**+0.6**
NOA	**NORSAR Array B**	**80.97**	**332**	LR	LR	14 14 40.1	
	comp=Z,17nm,18.9s,baz=300,slow=40						
YKA	**Yellowknife Ar**	**86.22**	**22**	P	**P**	**13 33 41.2**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=318,slow=4.6,SNR=5.2						

*TAP **27** 13:58:26.7,25.55N×122.37E,h231km,ML3.0,D*
*JMA **27** 13:58:28.7±0.3,25.34N×122.47E,h206km±3km,M2.7*
ISC 27 13:58:27.4±2.6,25.35N±0.10×122.49E±0.04, h220km±15km,n44,σ0§62/81,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCYT	**Pengchaiyu**	**0.47**	**306**	P	**Pn**	**13 58 56.5**	**-0.2**
	baz=287						
PCYT				*e*S	**S**	**13 59 19.6**	**+0.1**
	baz=287						
TWB1	**Santiao Chiao**	**0.57**	**233**	*e*P	**Pn**	**13 58 57.1**	**0.0**
	baz=207						
TNOU	**National Taiwa**	**0.68**	**253**	*e*P	**Pn**	**13 58 57.1**	**-0.4

NDT	**Datong Townshi**	**1.16 230**	P	**Pn**	**13 59 00.9**	**+0.6**
	baz=228						
NDT			S	**S**	**13 59 25.6**	**-0.2**
	baz=228						
YHNB	**Yeheng**	**1.22 236**	P	**Pn**	**13 59 00.8**	**0.0**
	baz=219						
YHNB			S	**S**	**13 59 26.3**	**-0.4**
	baz=219						
NNS	**Nan Shan**	**1.36 228**	P	**Pn**	**13 59 01.9**	**-0.1**
	baz=223						
NNS			S	**S**	**13 59 27.6**	**-1.1**
	baz=223						
NNSB	**Datong**	**1.36 228**	P	**Pn**	**13 59 02.0**	**+0.1**
	baz=223						
NNSB			S	**S**	**13 59 28.2**	**-0.4**
	baz=223						
NNSH	**Datong**	**1.36 228**	*e*P	**Pn**	**13 59 01.9**	**0.0**
	baz=223						
NNSH			*e*S	**S**	**13 59 28.3**	**-0.4**
	baz=223						
NACB	**Ninganchiao**	**1.43 215**	P	**Pn**	**13 59 02.3**	**0.0**
	baz=200						
NACB			S	**S**	**13 59 28.7**	**-0.7**
	baz=200						
ETLH	**Xiulin Townshi**	**1.46 219**	P	**Pn**	**13 59 02.7**	**0.0**
	baz=218						
ETLH			S	**S**	**13 59 29.8**	**-0.3**
	baz=218						
LIOB	**Emei**	**1.51 243**	P	**Pn**	**13 59 02.9**	**-0.1**
	baz=234						
LIOB			S	**S**	**13 59 29.8**	**-0.7**
	baz=234						
IRIF	**Iriomote-Funau**	**1.51 132**	P	**Pn**	**13 59 03.4**	**+0.4**
IRIF			S	**S**	**13 59 30.3**	**-0.3**
NSTT	**Nanjuang**	**1.53 242**	*e*S	**S**	**13 59 30.4**	**-0.4**
	baz=234						
FUSS	**Fushou**	**1.58 226**	P	**Pn**	**13 59 04.6**	**+0.7**
	baz=214						
FUSS			S	**S**	**13 59 31.6**	**-0.5**
	baz=214						
TDCB	**Techi**	**1.63 228**	*e*P	**Pn**	**13 59 05.4**	**+1.2**
	baz=221						
TDCB			*e*S	**S**	**13 59 31.6**	**-1.1**
	baz=221						
WHF	**Hehuan Shan**	**1.64 223**	*i* P	**Pn**	**13 59 05.2**	**+0.6**
	baz=212						
WHF			S	**S**	**13 59 32.4**	**-0.9**
	baz=212						
CHGB	**Renai**	**1.76 223**	P	**Pn**	**13 59 05.8**	**+0.4**
	baz=222						
CHGB			S	**S**	**13 59 34.6**	**-0.2**
	baz=222						
HATJ	**Hateruma jima**	**1.76 137**	P	**Pn**	**13 59 06.0**	**+0.9**
HATJ			S	**S**	**13 59 34.2**	**-0.2**
WHP	**Taichung City**	**1.76 233**	P	**Pn**	**13 59 05.3**	**0.0**
	baz=221						
WHP			S	**S**	**13 59 33.9**	**-0.8**
	baz=221						
JKRS	**Kuro-shima**	**1.77 128**	P	**Pn**	**13 59 05.8**	**+0.6**
JKRS			S	**S**	**13 59 34.1**	**-0.4**
JIJ	**Ishigaki jima**	**1.79 123**	P	**Pn**	**13 59 05.5**	**+0.1**
JIJ			S	**S**	**13 59 33.6**	**-1.3**
ESL	**Shilin**	**1.81 212**	*i* P	**Pn**	**13 59 06.2**	**+0.6**
	baz=200						
ESL			S	**S**	**13 59 34.9**	**-0.3**
	baz=200						
JISG	**Ishigakijimahi**	**1.82 114**	P	**Pn**	**13 59 06.2**	**+0.5**
JISG			S	**S**	**13 59 34.6**	**-0.7**
OWD	**Renai**	**1.83 221**	*e*P	**Pn**	**13 59 06.6**	**+0.6**
	baz=215						
OWD			*e*S	**S**	**13 59 36.1**	**+0.2**
	baz=215						
VWDT	**VWDT**	**2.01 218**	*e*P	**Pn**	**13 59 08.4**	**+1.0**
	baz=212						
VWDT			*e*S	**S**	**13 59 38.9**	**+0.3**
	baz=212						
TYC	**Yuchr**	**2.07 226**	*e*S	**S**	**13 59 38.2**	**-1.5**
	baz=226						
HGSD	**Ruisui**	**2.09 208**	*e*P	**Pn**	**13 59 08.4**	**+0.1**
	baz=209						
HGSD			*e*S	**S**	**13 59 41.0**	**+0.9**
	baz=209						
SSLB	**Suanglung**	**2.09 222**	*e*P	**Pn**	**13 59 08.9**	**+0.5**
	baz=224						
SSLB			*e*S	**S**	**13 59 40.0**	**-0.2**
	baz=224						
JTJ	**Tarama**	**2.13 109**	P	**Pn**	**13 59 09.5**	**+0.9**
JTJ			S	**S**	**13 59 40.3**	**-0.3**
YULB	**Yu-li**	**2.23 209**	*e*P	**Pn**	**13 59 08.9**	**-0.9**
	baz=202						
YULB			*e*S	**S**	**13 59 42.6**	**-0.1**
	baz=202						
ALS	**Alishan**	**2.39 220**	*e*P	**Pn**	**13 59 11.9**	**+0.2**
	baz=222						
ALS			*e*S	**S**	**13 59 46.0**	**-0.1**
	baz=222						
CHN5	**Tsauling**	**2.40 224**	*e*P	**Pn**	**13 59 12.1**	**+0.5**
	baz=224						
CHN5			*e*S	**S**	**13 59 45.0**	**-0.9**
	baz=224						
JIRB	**Irabujima**	**2.49 102**	P	**Pn**	**13 59 13.0**	**+0.6**
JIRB			S	**S**	**13 59 46.3**	**-1.0**
JMJ2	**Miyako jima3**	**2.64 103**	P	**Pn**	**13 59 14.9**	**+0.8**
JMJ2			*e*S	**S**	**13 59 49.3**	**-1.1**

*JMA **27** 14:04:19.8±0.2,23°.96N×122°.49E,h21$^{km}_{\pm 4}$km,M2.6*
*TAP **27** 14:04:20.1,23°.99N×122°.52E,h36$^{km}_{\pm 1}$km,ML3.0,D*
ISC 27 14:04:17.5±1.1,**23°.95N**±0°.02×**122°.52E**±0°.02,**h9**$^{km}_{\pm 9}$km,
n86,σ**0s69**/158,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.64**	**38**	P	**Pn**	**14 04 32.0**	**-0.8**
JYNG				*e*S	**Sb**	**14 04 40.0**	**+0.1**
YOJ	**Yonaguni jima**	**0.68**	**41**	P	**Pn**	**14 04 32.9**	**-0.5**
YOJ				*e*S	**Sb**	**14 04 41.5**	**+0.3**
YOJ	**Yonaguni jima**	**0.68**	**41**	P	**Pn**	**14 04 33.1**	**-0.3**
	baz=43						
YOJ				S	**Sb**	**14 04 41.5**	**+0.3**
	baz=43						
EWUT	**Wuta**	**0.84**	**306**	*e*P	**Pn**	**14 04 35.3**	**-0.3**
	baz=303						
EWUT				*e*S	**Sb**	**14 04 46.4**	**+0.7**
	baz=303						
NACB	**Ninganchiao**	**0.87**	**285**	P	**Pn**	**14 04 36.0**	**-0.1**
	baz=269						
NACB				S	**Sb**	**14 04 47.2**	**+0.5**
	baz=269						
TWC	**Suao**	**0.90**	**317**	*i* P	**Pb**	**14 04 35.6**	**+0.3**
	baz=306						
TWC				*i* S	**Sb**	**14 04 47.2**	**-0.2**
	baz=306						
ETLH	**Xiulin Townshi**	**0.98**	**285**	P	**Pb**	**14 04 37.3**	**+0.5**
	baz=272						
ETLH				S	**Sb**	**14 04 50.8**	**+0.9**
	baz=272						
NDS	**Dongshan**	**1.00**	**313**	*i* P	**Pn**	**14 04 38.0**	**+0.1**
	baz=311						
NDS				*i* S	**Sn**	**14 04 51.3**	**-0.8**
	baz=311						
ESL	**Shilin**	**1.00**	**263**	P	**Pb**	**14 04 37.5**	**+0.4**
	baz=252						
ESL				S	**Sg**	**14 04 50.2**	**+0.4**
	baz=252						
EGFH	**Guangfu**	**1.04**	**255**	*e*P	**Pg**	**14 04 37.7**	**+0.2**
	baz=252						
EGFH				*e*S	**Sg**	**14 04 51.4**	**+0.4**
	baz=252						
EGS		**1.04**	**329**	*i* P	**Pb**	**14 04 37.7**	**-0.1**
	baz=317						
EGS				S	**Sn**	**14 04 52.9**	**-0.2**
	baz=317						
TWE	**Neicheng**	**1.09**	**315**	*i* P	**Pn**	**14 04 38.8**	**-0.2**
	baz=313						
TWE				*i* S	**Sn**	**14 04 53.8**	**-0.5**
	baz=313						
NTC	**Toucheng**	**1.10**	**325**	*e*P	**Pn**	**14 04 39.4**	**+0.2**
	baz=324						
NTC				*e*S	**Sb**	**14 04 53.2**	**0.0**
	baz=324						
HGSD	**Ruisui**	**1.10**	**246**	P	**Pb**	**14 04 39.0**	**+0.2**
	baz=243						
HGSD				S	**Sg**	**14 04 53.2**	**+0.3**
	baz=243						
ENTT	**Nioudou**	**1.11**	**309**	*i* P	**Pn**	**14 04 39.2**	**-0.1**
	baz=294						
ENTT				*i* S	**Sn**	**14 04 55.1**	**+0.4**
	baz=294						
NDT	**Datong Townshi**	**1.12**	**306**	P	**Pn**	**14 04 40.0**	**+0.4**
	baz=292						
NDT				S	**Sb**	**14 04 54.6**	**+0.6**
	baz=292						
NNSB	**Datong**	**1.14**	**295**	P	**Pb**	**14 04 39.8**	**+0.2**
	baz=282						
NNSB				S	**Sg**	**14 04 53.8**	**-0.5**
	baz=282						
NNSH	**Datong**	**1.14**	**295**	*e*P	**Pb**	**14 04 39.8**	**+0.2**
	baz=283						
NNSH				*e*S	**Sb**	**14 04 54.8**	**+0.2**
	baz=283						
NNS	**Nan Shan**	**1.15**	**295**	*i* P	**Pb**	**14 04 40.0**	**+0.2**
	baz=283						
NNS				*i* S	**Sb**	**14 04 55.3**	**+0.4**
	baz=283						
TWB1	**Santiao Chiao**	**1.16**	**336**	*i* P	**Pn**	**14 04 40.0**	**-0.1**
	baz=349						
TWB1				*e*S	**Sg**	**14 04 54.5**	**-0.5**
	baz=349						
WHF	**Hehuan Shan**	**1.16**	**280**	P	**Pg**	**14 04 40.0**	**+0.1**
	baz=277						
WHF				*i* S	**Sg**	**14 04 55.3**	**+0.3**
	baz=277						
IRIF	**Iriomote-Funau**	**1.17**	**71**	P	**Pn**	**14 04 41.5**	**+1.3**
IRIF				S	**Sn**	**14 04 56.8**	**+0.5**
HATJ	**Hateruma jima**	**1.18**	**84**	P	**Pn**	**14 04 41.2**	**+0.9**
HATJ				*e*S	**Sn**	**14 04 58.0**	**+1.4**
TIPB	**Shuangxi**	**1.20**	**328**	*i* P	**Pn**	**14 04 41.3**	**+0.7**
	baz=327						
TIPB				*i* S	**Sb**	**14 04 56.3**	**+0.1**
	baz=327						
FUSS	**Fushou**	**1.20**	**285**	*e*P	**Pn**	**14 04 40.9**	**+0.1**
	baz=282						
FUSS				*e*S	**Sg**	**14 04 55.9**	**-0.4**
	baz=282						
OWD	**Renai**	**1.23**	**271**	*e*P	**Pn**	**14 04 41.5**	**+0.4**
	baz=268						
OWD				*e*S	**Sg**	**14 04 56.3**	**-0.8**
	baz=268						
CHGB	**Renai**	**1.23**	**275**	P	**Pn**	**14 04 41.5**	**+0.2**
	baz=273						
CHGB				S	**Sg**	**14 04 56.5**	**-0.8**
	baz=273						
NWLT	**Wulai**	**1.24**	**312**	*e*P	**Pn**	**14 04 41.5**	**+0.3**
	baz=310						
NWLT				*e*S	**Sn**	**14 04 57.8**	**-0.3**
	baz=310						
YULB	**Yu-li**	**1.25**	**244**	P	**Pg**	**14 04 41.7**	**+0.2**
	baz=232						
YULB				S	**Sg**	**14 04 57.4**	**-0.3**
	baz=232						
EYUL	**Yuli**	**1.25**	**242**	*e*P	**Pb**	**14 04 41.7**	**+0.3**
	baz=239						
EYUL				*e*S	**Sg**	**14 04 56.9**	**-1.0**
	baz=239						
YHNB	**Yeheng**	**1.27**	**305**	P	**Pg**	**14 04 41.9**	**0.0**
	baz=303						
YHNB				S	**Sg**	**14 04 57.4**	**-0.9**
	baz=303						
TWF1	**Yuli**	**1.27**	**242**	*i* P	**Pg**	**14 04 42.2**	**+0.4**
	baz=239						
TWF1				*i* S	**Sb**	**14 04 58.6**	**+0.5**
	baz=239						
VWDT	**VWDT**	**1.27**	**262**	P	**Pg**	**14 04 42.2**	**+0.2**
	baz=259						
VWDT				S	**Sb**	**14 04 57.4**	**-0.8**
	baz=259						
TDCB	**Techi**	**1.28**	**284**	*e*P	**Pg**	**14 04 42.4**	**+0.3**
	baz=282						
WFSB	**Wu-fen Shan**	**1.30**	**329**	*e*P	**Pb**	**14 04 42.0**	**-0.2**
	baz=328						
WFSB				S	**Sn**	**14 04 59.5**	**-0.1**
	baz=328						
TWA	**Mucha**	**1.33**	**321**	P	**Pg**	**14 04 43.1**	**-0.1**
	baz=335						
TWA				S	**Sn**	**14 05 00.5**	**+0.2**
	baz=335						
FULB	**Fuli**	**1.35**	**237**	P	**Pn**	**14 04 42.8**	**+0.2**
	baz=225						
FULB				S	**Sb**	**14 05 00.3**	**-0.2**
	baz=225						
CHKT	**Chengkung**	**1.35**	**232**	*i* P	**Pn**	**14 04 42.4**	**-0.2**
	baz=219						
CHKT				S	**Sb**	**14 04 58.8**	**-1.8**
	baz=219						
NHDH	**Xindian Distri**	**1.36**	**318**	P	**Pg**	**14 04 43.8**	**+0.2**
	baz=331						
TATO	**Taipei**	**1.39**	**318**	P	**Pg**	**14 04 44.7**	**+0.5**
	baz=332						
TATO				S	**Sg**	**14 05 02.9**	**+0.7**
	baz=332						
JKRS	**Kuro-shima**	**1.39**	**78**	P	**Pg**	**14 04 45.4**	**+1.1**
JKRS				*e*S	**Sg**	**14 05 02.6**	**+0.2**
SSLB	**Suanglung**	**1.44**	**264**	P	**Pn**	**14 04 44.3**	**+0.4**
	baz=261						
SSLB				*e*S	**Sn**	**14 05 02.7**	**-0.3**
	baz=261						
YM01	**YM01**	**1.47**	**324**	P	**Pb**	**14 04 44.7**	**-0.5**
	baz=323						
YM01				*e*S	**Sb**	**14 05 03.9**	**-0.2**
	baz=323						
WHP	**Taichung City**	**1.47**	**283**	*e*P	**Pb**	**14 04 45.5**	**+0.3**
	baz=272						
WHP				S	**Sn**	**14 05 03.9**	**0.0**
	baz=272						
EDH	**Donghe**	**1.48**	**229**	*e*P	**Pn**	**14 04 44.1**	**-0.2**
	baz=220						
EDH				S	**Sn**	**14 05 02.0**	**-1.9**
	baz=220						
SMLT	**Sun Moon Lake**	**1.48**	**268**	P	**Pb**	**14 04 45.3**	**-0.1**
	baz=265						
SMLT				S	**Sn**	**14 05 03.7**	**-0.4**
	baz=265						
YM08	**YM08**	**1.50**	**326**	*e*P	**Pg**	**14 04 45.7**	**-0.6**
	baz=324						
TYC	**Yuchr**	**1.52**	**269**	P	**Pn**	**14 04 45.7**	**+0.7**
	baz=266						
TYC				S	**Sn**	**14 05 04.4**	**-0.4**
	baz=266						
ANP	**Anpu**	**1.53**	**324**	*e*P	**Pg**	**14 04 46.8**	**-0.2**
	baz=323						
LIOB	**Emei**	**1.54**	**297**	*e*P	**Pg**	**14 04 46.8**	**-0.2**
	baz=295						
LIOB				*e*S	**Sg**	**14 05 06.5**	**-0.4**
	baz=295						
NSTT	**Nanjuang**	**1.54**	**296**	*e*P	**Pg**	**14 04 47.7**	**+0.6**
	baz=294						
NSTT				*e*S	**Sb**	**14 05 06.2**	**+0.2**
	baz=294						
JIJ	**Ishigaki jima**	**1.54**	**74**	P	**Pg**	**14 04 46.5**	**-0.6**
JIJ				S	**Sb**	**14 05 05.6**	**-0.4**
WHYT	**Xinyi Township**	**1.54**	**261**	*e*S	**Sn**	**14 05 05.4**	**-0.2**
	baz=248						
TWY	**Chenhua**	**1.56**	**328**	P	**Pb**	**14 04 46.0**	**-0.7**
	baz=327						
TWY				S	**Sn**	**14 05 03.5**	**-2.5**
	baz=327						
ELDTW	**Lidau**	**1.57**	**242**	*i* P	**Pn**	**14 04 46.0**	**+0.3**
	baz=239						
ELDTW				S	**Sn**	**14 05 05.2**	**-1.1**
	baz=239						
LDUT	**Ludao**	**1.59**	**217**	P	**Pn**	**14 04 46.0**	**+0.1**
	baz=215						
LDUT				S	**Sn**	**14 05 05.0**	**-1.7**
	baz=215						
ALS	**Alishan**	**1.63**	**255**	P	**Pb**	**14 04 47.9**	**0.0**
	baz=252						
ALS				S	**Sn**	**14 05 08.6**	**+0.6**
	baz=252						
LONT	**Longtian**	**1.64**	**231**	*e*P	**Pn**	**14 04 47.4**	**+0.7**
	baz=241						
LONT				*e*S	**Sn**	**14 05 06.9**	**-1.0**
	baz=241						
WJS	**Zhushan**	**1.64**	**266**	*e*P	**Pg**	**14 04 49.6**	**+0.6**
	baz=263						
WJS				*e*S	**Sb**	**14 05 09.4**	**+0.5**
	baz=263						
WNT	**Mingjian**	**1.68**	**268**	S	**Sb**	**14 05 10.7**	**+0.8**
	baz=265						
PCYT	**Pengchaiyu**	**1.72**	**346**	P	**Pn**	**14 04 47.4**	**-0.4**
	baz=346						
TWGBT	**Beinan**	**1.73**	**230**	P	**Pn**	**14 04 48.3**	**+0.4**
	baz=241						
TWGBT				S	**Sn**	**14 05 09.4**	**-0.9**
	baz=241						
TWG	**Pinlang**	**1.74**	**230**	P	**Pn**	**14 04 48.7**	**+0.7**
	baz=240						
TWG				S	**Sn**	**14 05 09.4**	**-0.9**
	baz=240						
JISG	**Ishigakijimahi**	**1.76**	**68**	P	**Pb**	**14 04 48.9**	**-1.1**
JISG				S	**Sn**	**14 05 10.9**	**+0.2**
STYH	**Taoyuan**	**1.77**	**245**	*e*P	**Pb**	**14 04 50.2**	**-0.1**
	baz=235						
STYH				*e*S	**Sn**	**14 05 10.7**	**-0.5**
	baz=235						
WDLH	**Douliu**	**1.83**	**262**	P	**Pb**	**14 04 51.2**	**-0.1**
	baz=260						
WDLH				*e*S	**Sb**	**14 05 14.3**	**0.0**
	baz=260						
TPUB	**Ta-pu**	**1.85**	**250**	P	**Pb**	**14 04 51.0**	**-0.6**
	baz=247						
TPUB				*e*S	**Sn**	**14 05 13.7**	**+0.7**
	baz=247						
WTP	**Ta-pu**	**1.88**	**249**	P	**Pb**	**14 04 51.9**	**-0.2**
	baz=246						
WTP				*e*S	**Sn**	**14 05 15.4**	**+1.6**
	baz=246						
SLGT	**Liugui**	**1.96**	**241**	*e*P	**Pb**	**14 04 53.8**	**+0.3**
	baz=233						
SLGT				*e*S	**Sn**	**14 05 15.6**	**-0.2**
	baz=233						
ECL	**Taimali**	**1.97**	**227**	P	**Pn**	**14 04 50.8**	**-0.3**
	baz=235						
ECL				S	**Sn**	**14 05 14.5**	**-1.5**
	baz=235						
SGST	**Jiashian**	**1.97**	**244**	P	**Pb**	**14 04 53.4**	**-0.3**
	baz=234						
SGST				S	**Sb**	**14 05 18.1**	**-0.3**
	baz=234						
CHN1	**Nanshi**	**1.98**	**248**	P	**Pb**	**14 04 53.4**	**-0.3**
	baz=245						
CHN1				*e*S	**Sb**	**14 05 18.5**	**-0.1**
	baz=245						
TWK	**Hsinying**	**1.98**	**250**	P	**Pb**	**14 04 53.8**	**0.0**
	baz=248						
TWK				S	**Sn**	**14 05 17.5**	**+1.2**
	baz=248						
LAY	**Lan-yu**	**2.10**	**205**	*e*P	**Pn**	**14 04 52.9**	**-0.1**
	baz=204						
SSD	**Sandimen**	**2.10**	**236**	*e*P	**Pn**	**14 04 54.8**	**+1.7**
	baz=229						
SSD				*e*S	**Sn**	**14 05 19.2**	**-0.1**
	baz=229						
JTJ	**Tarama**	**2.11**	**70**	P	**Pb**	**14 04 55.1**	**-0.9**
JTJ				*e*S	**Sn**	**14 05 20.1**	**+0.7**
TSMG	**Majia**	**2.12**	**235**	*e*P	**Pn**	**14 04 54.0**	**+0.8**
	baz=229						
TSMG				*e*S	**Sn**	**14 05 20.2**	**+0.5**
	baz=229						
SCST	**Cishan**	**2.14**	**241**	*e*P	**Pb**	**14 04 56.9**	**+0.4**
	baz=228						
SCST				*e*S	**Sb**	**14 05 24.0**	**+0.8**
	baz=228						
MASBT	**Mashibuluo**	**2.18**	**233**	*e*P	**Pn**	**14 04 55.5**	**+1.4**
	baz=225						
EAST	**Anshuo**	**2.19**	**225**	P	**Pn**	**14 04 54.4**	**+0.2**
	baz=231						
EAST				*e*S	**Sn**	**14 05 20.2**	**-1.3**
	baz=231						
SSPT	**Xinbi**	**2.31**	**231**	*e*P	**Pn**	**14 04 56.1**	**+0.3**
	baz=225						
SLIU	**Shizi**	**2.34**	**223**	*e*P	**Pb**	**14 04 58.9**	**-1.0**
	baz=229						
SCZT	**Fangliau**	**2.35**	**228**	*e*P	**Pn**	**14 04 56.5**	**+0.1**
	baz=220						
SCZT				*e*S	**Sn**	**14 05 24.0**	**-1.3**
	baz=220						
JIRB	**Irabujima**	**2.58**	**70**	*e*S	**Sn**	**14 05 31.1**	**+0.2**
JIKM	**Ikemajima**	**2.67**	**68**	*e*S	**Sn**	**14 05 34.5**	**+1.2**
WDGT	**Dungji**	**2.71**	**256**	*e*P	**Pn**	**14 05 03.5**	**+2.2**
	baz=254						

*DDA **27** 14:16:25.8,35°.02N×26°.55E,h7$^{km}_{\pm 5}$km,MW4.0*
*MOS **27** 14:16:28.7±1.5,34°.95N×26°.79E,h18km,mb4.6/17,Error ellipse: s-maj=7.1km s-min=4.1km az=84.7*
*NEIC **27** 14:16:29.9±2.1,35°.01N±0°.04×26°.84E±0°.06,h10$^{km}_{\pm 1}$km, mb4.5/33,ML4.0(ATH),Error ellipse: s-maj=9.1km s-min=5.6km az=127.0*
*NIC **27** 14:16:29.4±0.0,35°.02N×26°.88E,h3$^{km}_{\pm 3}$km,Ml4.5/3*
*ATH **27** 14:16:32.3,35°.17N×26°.82E,h11$^{km}_{\pm 2}$km,ML4.0/12,Error ellipse: s-maj=4.1km s-min=0.9km az=149.0*
*ISK **27** 14:16:32.1,35°.21N×26°.81E,h7km,ML4.0/20*
*THE **27** 14:16:32.0,35°.14N×26°.80E,h2$^{km}_{\pm 2}$km,ML3.9/7,Error ellipse: s-maj=4.7km s-min=0.8km az=154.0*
*IDC **27** 14:16:33.7±2.1,35°.29N×26°.73E,h33$^{km}_{\pm 16}$km,mb4.1/25, mb1 4.2/30,mb1mx4.0/54,mbtmp4.3/30,ML4.0/5,MS3.2/8, Ms1 3.2/8,ms1mx2.8/54,Error ellipse: s-maj=16.5km s-min=11.0km az=157.0*
*HLW **27** 14:16:35.6,34°.82N×27°.17E,h22$^{km}_{\pm 21}$km,Md4.5,Ml4.6*
ISC 27 14:16:30.6±1.0,**35°.02N**±0°.03×**26°.86E**±0°.02,**h16**$^{km}_{\pm 6}$km,
n295,σ**1s57**/327,**mb4.4**/51,**MS3.1**/6,**31C-5D,Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.53**	**280**	P	**Pg**	**14 16 41.4**	**+0.3**
ZKR				S	**Sg**	**14 16 49.0**	**+0.7**
ZKR				AML	AML	14 16 51.4	
	comp=E,34218μm,0.7s						
ZKR				AML	AML	14 16 51.5	
	comp=N,17030μm,0.4s						
ZKR	**Zakros**	**0.53**	**280**	P	**Pg**	**14 16 41.4**	**+0.3**
ZKR				S	**Sg**	**14 16 49.0**	**+0.7**
	comp=N,13μm,0.6s						
ZKR	**Zakros**	**0.53**	**280**	PG	**Pg**	**14 16 41.6**	**+0.5**
ZKR				SG	**Sb**	**14 16 49.8**	**+0.8**
ZKR	**Zakros**	**0.53**	**280**	P	**Pg**	**14 16 41.4**	**+0.3**
ZKR				S	**Sb**	**14 16 49.7**	**+0.7**
KARP	**Karpathos**	**0.58**	**25**	P	**Pg**	**14 16 41.3**	**-0.8**
KARP				S	**Sg**	**14 16 48.3**	**-1.5**
KARP				AML	AML	14 16 51.2	
	comp=N,90281μm,0.5s						
KARP				AML	AML	14 16 51.4	
KARP	**Karpathos**	**0.58**	**25**	P	**Pg**	**14 16 41.4**	**-0.6**
KARP				S	**Sg**	**14 16 49.7**	**-0.1**
	comp=N,53μm,0.5s						
KARP	**Karpathos**	**0.58**	**25**	PG	**Pg**	**14 16 41.5**	**-0.6**
KARP	**Karpathos**	**0.58**	**25**		**Pg**	**14 16 41.5**	**-0.5**
KARP				Sg	**Sg**	**14 16 48.8**	**-1.0**
KARP	**Karpathos**	**0.58**	**25**	⇑P	**Pg**	**14 16 41.4**	**-0.5**
KARP				S	**Sg**	**14 16 50.3**	**+0.5**
KARP				AML	AML	14 16 51.0	
	comp=N,122nm,0.4s						
KARP				AML	AML	14 16 51.0	
	comp=N,122nm,0.4s						
KARP				AML	AML	14 16 51.7	
	comp=N,87nm,0.3s						
KARP				AML	AML	14 16 51.7	
	comp=N,87nm,0.3s						
STIA	**Sitia Lasithi**	**0.65**	**286**	P	**Pg**	**14 16 43.3**	**-0.1**
STIA				S	**Sb**	**14 16 53.5**	**+1.1**
FRMA	**Ierapetra Chan**	**0.92**	**270**	P	**Pg**	**14 16 46.6**	**-1.8**
FRMA				S	**Sg**	**14 16 59.9**	**-0.6**
	comp=N,4μm,0.5s						
NPS	**Neapolis**	**1.05**	**284**	P	**Pg**	**14 16 50.8**	**0.0**
NPS				S	**Sg**	**14 17 04.7**	**+0.2**
NPS				AML	AML	14 17 14.5	
	comp=E,21549μm,0.5s						
NPS				AML	AML	14 17 14.7	
	comp=N,13431μm,0.5s						
NPS	**Neapolis**	**1.05**	**284**	P	**Pg**	**14 16 50.8**	**0.0**
NPS				S	**Sg**	**14 17 04.7**	**+0.2**
	comp=N,9μm,0.5s						
LAST	**Lasithi**	**1.14**	**277**	P	**Pg**	**14 16 52.1**	**-0.5**
LAST				S	**Sb**	**14 17 08.2**	**+1.7**
LAST				AML	AML	14 17 12.7	
	comp=N,7687μm,0.8s						
LAST				AML	AML	14 17 15.8	
	comp=E,4861μm,0.4s						
LAST	**Lasithi**	**1.14**	**277**	P	**Pg**	**14 16 52.1**	**-0.5**
LAST				S	**Sb**	**14 17 08.2**	**+1.7**
	comp=E,3μm,0.7s						
HRKL	**Herakleio**	**1.47**	**282**	PN	**Pb**	**14 16 58.8**	**+1.4**
IACM	**Heraklion**	**1.49**	**281**	P	**Pb**	**14 16 59.5**	**+1.7**
IACM				AML	AML	14 17 31.2	
	comp=E,31800μm,0.8s						
IACM				AML	AML	14 17 33.6	
	comp=N,27944μm,0.6s						
KSTL	**Kastelli Herak**	**1.49**	**281**	P	**Pn**	**14 16 55.0**	**-1.7**

ARG Arkhangelos 1.58 41 P **Pn** 14 16 59.4 +1.5
ARG S **Sn** 14 17 19.3 +1.3
ARG AML AML 14 17 27.9
comp=N,6837µm,0.7s
ARG AML AML 14 17 30.4
comp=E,9341µm,0.6s
ARG Arkhangelos 1.58 41 P **Pn** 14 16 59.4 +1.5
ARG S **Sn** 14 17 19.3 +1.3
comp=E,4µm,0.8s
ARG Arkhangelos 1.58 41 PN **Pn** 14 16 59.6 +1.7
ARG SN **Sn** 14 17 19.6 +1.6
ARG Arkhangelos 1.58 41 ⇑P **Pn** 14 16 59.3 +1.4
ARG S **Sn** 14 17 20.8 +2.8
NIS1 Nisyros Isl. 1.60 9 P **Pn** 14 16 58.9 +0.7
NIS1 Nisyros Isl. 1.60 9 PN **Pn** 14 16 58.9 +0.7
NISR Nisiros 1.60 8 P **Pn** 14 16 58.5 +0.3
NISR S **Sn** 14 17 17.9 -0.6
NISR AML AML 14 17 25.3
comp=N,14713µm,0.6s
NISR AML AML 14 17 25.4
comp=E,14054µm,0.5s
NISR Nisiros 1.60 8 P **Pn** 14 16 58.5 +0.3
NISR S **Sn** 14 17 17.9 -0.6
comp=E,7µm,0.5s
IDI Anoyia 1.63 280 Pg **Pb** 14 17 01.9 +1.5
comp=E,58nm,0.3s,baz=101,slow=18,SNR=304
IDI LR LR 14 17 21.2
comp=E,28nm,19.1s,baz=83,slow=32
IDI Lg Lg 14 17 22.6
comp=E,80nm,0.3s,baz=137,slow=23,SNR=6.0
IDI Anoyia 1.63 280 P **Pb** 14 17 01.6 +1.3
IDI AML AML 14 17 30.7
comp=E,3710µm,0.8s
IDI AML AML 14 17 35.4
comp=N,3977µm,0.7s
IDI Anoyia 1.63 280 ⇑P **Pb** 14 17 01.8 +1.5
IDI ⇑S **Sg** 14 17 25.8 +2.6
IDI Anoyia 1.63 280 PN **Pb** 14 17 01.3 +1.0
IDI SN **Sb** 14 17 22.5 +1.8
IDI Anoyia 1.63 280 **Pb** 14 17 01.3 +1.0
SIVA AML AML 14 17 32.6
comp=E,9262µm,0.6s
SIVA AML AML 14 17 36.2
comp=N,9581µm,0.5s
KOSK Kos Island 1.73 3 PN **Pn** 14 17 00.3 +0.4
SANT Santorini 1.76 320 P **Pn** 14 17 01.6 +1.1
SANT AML AML 14 17 30.9
comp=E,10386µm,0.5s
SANT AML AML 14 17 32.9
comp=N,3394µm,0.7s
SANT Santorini 1.76 320 P **Pn** 14 17 01.3 +0.8
SANT Santorini 1.76 320 ⇑P **Pn** 14 17 01.2 +0.7
SANT ⇑S **Sn** 14 17 24.8 +2.2
SANT Santorini 1.76 320 PN **Pn** 14 17 01.7 +1.2
SANT Santorini 1.76 320 Pn **Pn** 14 17 00.8 +0.4
SNT1 Gialos, Santor 1.81 321 P **Pn** 14 17 02.2 +1.1
SNT1 Gialos, Santor 1.81 321 P **Pn** 14 17 02.2 +1.1
SNT5 Nea Kammeni, S 1.82 320 P **Pn** 14 17 01.9 +0.7
SNT5 Nea Kammeni, S 1.82 320 P **Pn** 14 17 01.9 +0.7
THT2 Imerovigli 1.83 321 PN **Pn** 14 17 02.5 +1.1
BODT Bodrum 2.07 10 P **Pn** 14 17 04.4 -0.2
BODT Bodrum 2.07 10 PN **Pn** 14 17 04.5 -0.2
TURN Turunc 2.08 32 PN **Pn** 14 17 06.5 +1.7
BDRM Kayabasi 2.09 13 *i* P **Pn** 14 17 05.0 +0.1
BDRM *i* S **Sn** 14 17 33.6 +2.9
VAM Vamos 2.21 281 P **Pn** 14 17 09.5 +2.9
VAM AML AML 14 17 46.6
comp=N,4603µm,0.6s
VAM AML AML 14 17 51.0
comp=E,2916µm,0.6s
GVDS Gavdos 2.28 266 PN **Pb** 14 17 11.2 -0.1
GVD Gavdhos 2.28 266 P **Pb** 14 17 11.3 -0.1
GVD Gavdhos 2.28 266 PN **Pb** 14 17 11.2 -0.2
APE Apeiranthos 2.31 333 P **Pn** 14 17 08.4 +0.5
APE AML AML 14 17 43.1
comp=N,2172µm,0.5s
APE AML AML 14 17 46.7
comp=E,1386µm,0.4s
APE Apeiranthos 2.31 333 P **Pn** 14 17 08.4 +0.5
APE Apeiranthos 2.31 333 ⇑P **Pn** 14 17 08.6 +0.7
APE ⇑S **Sn** 14 17 35.7 -0.4
APE Apeiranthos 2.31 333 ⇑P **Pn** 14 17 08.6 +0.7
APE S **Sn** 14 17 35.7 -0.4
APE Apeiranthos 2.31 333 PN **Pn** 14 17 08.7 +0.7
APE Apeiranthos 2.31 333 P **Pn** 14 17 08.3 +0.4
DALY Dalyan (Mula) 2.31 39 *i* P **Pn** 14 17 09.8 +2.0
DALY *i* S **Sb** 14 17 43.2 +3.1
DALY Dalyan (Mula) 2.31 39 PN **Pn** 14 17 09.9 +2.0
IMMV Iera Moni Meta 2.39 281 P **Pn** 14 17 12.3 +3.2
IMMV Iera Moni Meta 2.39 281 PN **Pn** 14 17 12.1 +3.0
YER Yerkesik 2.40 28 PN **Pn** 14 17 10.8 +1.5
KSL Kastellorizon 2.49 62 ⇑P **Pn** 14 17 11.6 +1.2
MULA Mugla, Merkez- 2.52 28 *i* P **Pn** 14 17 12.4 +1.4
MULA *i* S **Sn** 14 17 45.5 +4.0
AKAS Kas 2.54 61 *i* P **Pn** 14 17 11.6 +0.3
AKAS *i* S **Sn** 14 17 45.0 +3.0
KNDR Palaiochora Ch 2.61 276 PN **Pb** 14 17 16.0 -0.9
MHLA Plaka, Milos I 2.62 312 P **Pn** 14 17 15.5 +3.3
SMG Samos 2.68 360 P **Pn** 14 17 13.0 -0.1
GCAM G?zelcami? 2.69 6 *i* P **Pn** 14 17 14.4 +1.2
GCAM G?zelcami? 2.69 6 PN **Pn** 14 17 14.6 +1.4
AYDN Tasoluk 2.76 17 *i* P **Pn** 14 17 15.7 +1.5
AYDN *i* S **Sn** 14 17 50.0 +2.8
CAEL Denizli, Camel 2.89 43 *i* P **Pn** 14 17 16.7 +0.5
CAEL *i* S **Sg** 14 18 04.2 +0.6
ELL Elmali 3.02 54 P **Pn** 14 17 19.9 +2.1
ELL Elmali 3.02 54 PN **Pn** 14 17 20.3 +2.5
ELL Elmali 3.02 54 Pn **Pn** 14 17 19.9 +2.1
DGB zmir 3.02 0 *i* P **Pn** 14 17 17.7 -0.1
DGB *i* S **Sg** 14 18 10.8 +3.1
AYDB Zeytinkoy-Aydi 3.04 16 PN **Pn** 14 17 19.8 +1.8
GOLH Golhisar 3.11 44 *i* P **Pn** 14 17 21.0 +1.9
GOLH *i* S **Sb** 14 18 06.2 +2.9
AKUM Antalya-Kumluc 3.12 64 *i* P **Pn** 14 17 20.0 +0.9
ZEYE Izmir, Urla-Ze 3.22 355 *i* P **Pn** 14 17 19.4 -1.0
ZEYE *i* S **Sg** 14 18 13.3 -0.8
KTHA Kythira Island 3.33 293 PN **Pn** 14 17 24.4 +2.4
URLA Izmir 3.34 356 *i* P **Pn** 14 17 20.5 -1.7
CHOS Chios Island 3.42 349 PN **Pn** 14 17 24.1 +0.8
KORT Korkueli 3.45 54 *i* P **Pn** 14 17 26.3 +2.5
KORT *i* S **Sb** 14 18 12.3 -0.9
KORT Korkueli 3.45 54 PN **Pn** 14 17 26.8 +3.0
ANTB Antalya 3.60 58 PN **Pn** 14 17 29.1 +3.4
MANT Manisa 3.72 21 *i* P **Pn** 14 17 28.3 +0.7
KULA Kula-Manisa 3.77 22 PN **Pn** 14 17 29.8 +1.6
SLUM Salum 3.78 202 P **Pn** 14 17 30.5 +2.3
baz=207
BASM Basmaki-Afyon 3.87 41 PN **Pn** 14 17 31.9 +2.4
OSC1 CSNet OBS 1 3.96 111 P **Pn** 14 17 31.9 +1.2
OSC1 S **Sn** 14 18 19.3 +2.5
DKL Dikili 4.04 1 PN **Pn** 14 17 33.5 +1.8
ISP Isparta 4.07 46 P **Pn** 14 17 33.7 +1.5
ISP Isparta 4.07 46 PN **Pn** 14 17 34.6 +2.4
ISP Isparta 4.07 46 Pn **Pn** 14 17 33.6 +1.5
AKMS Akamas 4.50 88 P **Pn** 14 17 38.2 +0.2
AKMS AML AML 14 18 31.1
comp=E,0.7nm,0.5s
AKMS AML AML 14 18 31.8
comp=E,1.2nm,0.5s
ITM Ithomi 4.54 300 Pn **Pn** 14 17 41.0 +2.4
NATA Nata 4.70 91 P **Pn** 14 17 41.8 +0.9
ALFC Alefka 4.71 87 ⇑P **Pn** 14 17 41.1 +0.1
ALFC AML AML 14 18 35.9
comp=E,1.4nm,0.6s
ALFC AML AML 14 18 36.3
comp=E,1.6nm,0.7s
OSC2 CSNet OBS 4 4.89 112 P **Pn** 14 17 44.9 +1.4
LEF Lefka 4.95 87 ⇑P **Pn** 14 17 45.6 +1.4
LEF ⇓S **Sn** 14 18 40.7 -0.5
SZAC Souni 4.96 91 ⇑P **Pn** 14 17 45.2 +0.8
ASGA Asgata 5.26 91 P **Pn** 14 17 48.2 -0.3
CSS Mathiatis 5.32 89 Pn **Pn** 14 17 49.8 +0.4
CSS Mathiatis 5.32 89 ⇑P **Pn** 14 17 49.7 +0.4
AGG Agios Georgios 5.39 319 P **Pn** 14 17 51.9 +1.6
AGG Agios Georgios 5.39 319 Pn **Pn** 14 17 51.9 +1.6
MVOU Mavrovouni 5.56 88 ⇑P **Pn** 14 17 53.3 +0.7
SWA2 5.88 192 P **Pn** 14 17 59.7 +2.7
baz=196
ALN Alexandroupoli 5.90 354 P **Pn** 14 17 58.0 +0.7
ALN Alexandroupoli 5.90 354 Pn **Pn** 14 17 58.0 +0.7
LIT Litokhoron 6.14 327 P **Pn** 14 18 02.2 +1.5
LIT Litokhoron 6.14 327 **Pn** 14 18 02.1 +1.5
SOH Sokhos 6.42 335 P **Pn** 14 18 08.1 +3.7
SOH pmax pmax
comp=Z,8.0nm,1.2s
MDUB Mudurnu 6.43 31 Pn **Pn** 14 18 05.6 +0.9
KOT Kottamia 6.59 139 P **Pn** 14 18 07.8 +0.9
baz=139
HSAF As Saff 6.70 142 P **Pn** 14 18 08.2 -0.1
baz=143
HHAG Hagoal 6.72 137 P **Pn** 14 18 09.0 +0.4
baz=138
BR231 Keskin MP Arra 6.73 43 Pn **Pn** 14 18 09.3 +0.5
ANTO Ankara 6.76 43 P **Pn** 14 18 10.2 +1.0
ANTO Ankara 6.76 43 Pn **Pn** 14 18 10.2 +1.0
GLL Jalalah 6.81 142 P **Pn** 14 18 10.6 +0.8
baz=142
GLL S Sn 14 19 18.5 -8.5
baz=142
GRG Griva 6.89 331 P **Pn** 14 18 14.0 +3.1
GRG pmax pmax
comp=Z,32nm,0.9s
VAY Valandovo 7.14 333 *i* P **Pn** 14 18 18.5 +4.2
BR131 Keskin Array S 7.15 47 P **Pn** 14 18 15.9 +1.3
BR131 Keskin Array S 7.15 47 **Pn** 14 18 15.9 +1.3
BRTR Keskin Array B 7.15 47 Pn **Pn** 14 18 14.9 +0.3
comp=Z,0.8nm,0.3s,baz=217,slow=13,SNR=8.8
BRTR Sn **Sn** 14 19 37.0 +1.4
comp=Z,0.2nm,0.3s,baz=216,slow=23,SNR=2.4
BRTR LR LR 14 21 53.7
comp=Z,410nm,18.6s,baz=244,slow=45
BRTR Keskin Array B 7.15 47 Pn **Pn** 14 18 15.4 +0.7
FNA Florina 7.20 325 P **Pn** 14 18 18.5 +3.3
FNA Florina 7.20 325 Pn **Pn** 14 18 18.4 +3.3
SUZ Suez 7.22 134 P **Pn** 14 18 16.1 +0.6
baz=134
MMAI Mount Meron Ar 7.37 103 Pn **Pn** 14 18 17.8 +0.2
comp=Z,6.6nm,0.3s,baz=286,slow=11,SNR=19
MMAI Sn **Sn** 14 19 38.5 -2.4
comp=Z,10nm,0.3s,baz=310,slow=22,SNR=9.1
ZAF Zafarana 7.49 138 P **Pn** 14 18 19.6 +0.5
baz=139
HWQ Hawqa 7.53 93 *e*P **Pn** 14 18 20.4 +0.7
RCY Rachaya 7.59 99 *e*P **Pn** 14 18 20.1 -0.6
STIP Stip 7.60 333 *i* P **Pn** 14 18 19.1 -1.5
OHR Ohrid 7.73 324 *i* P Pn 14 18 31.7 +9.2
VTS Vitosha 8.09 341 ⇑P **Pn** 14 18 30.1 +2.6
VTS Vitosha 8.09 341 ⇑P **Pn** 14 18 30.1 +2.6
VTS Vitosha 8.09 341 Pn **Pn** 14 18 29.8 +2.3
TAMRE El Minia 8.10 154 P **Pn** 14 18 28.9 +1.4
baz=154
SKO Skopje 8.13 330 *i* P Pn 14 18 35.6 +7.6
SCTE Santa Cesarea 8.35 310 Pn **Pn** 14 18 32.7 +1.7
GRB Gharib 8.42 141 P **Pn** 14 18 32.2 +0.3
baz=142
EIL Elat 8.68 126 Pn **Pn** 14 18 36.5 +1.0
comp=Z,0.3nm,0.3s,baz=338,slow=12,SNR=3.9
EIL Sn **Sn** 14 20 09.4 -3.6
comp=Z,3.4nm,0.3s,baz=9.3,slow=5.5,SNR=7.5
TR2 Tor 2 8.83 137 P **Pn** 14 18 37.5 -0.1
baz=137
HBST Basata 8.84 129 P **Pn** 14 18 38.1 +0.5
baz=129
HBST AMP 14 20 00.0
baz=129
TIP Timpagrande 9.07 300 Pn **Pn** 14 18 40.3 -0.6
HDHB Dhahab 9.11 131 P **Pn** 14 18 41.2 -0.1
baz=131
TR1 Tor 1 9.25 137 P **Pn** 14 18 43.8 +0.5
baz=137
PDG Podgorica 9.48 324 ⇑P **Pn** 14 18 46.3 -0.1
PDG Podgorica 9.48 324 Pn **Pn** 14 18 45.8 -0.6
HHRG Al Ghardaqah 9.67 142 P **Pn** 14 18 51.5 +2.4
baz=142
HDK1 Dakhla 9.70 166 P **Pn** 14 18 51.8 +2.3
baz=167
GTR Jabal at Tayr 10.01 160 P **Pn** 14 18 54.7 +1.0
baz=161
RAFF Raffo Rosso 10.34 286 Pn **Pn** 14 18 58.0 -0.3
MLR Muntele Rosu 10.48 356 Pn **Pn** 14 18 58.9 -1.3
comp=Z,0.2nm,0.3s,baz=219,slow=13,SNR=1.4
MLR LR LR 14 23 45.1
comp=Z,148nm,21.7s,baz=187,slow=42
MLR Muntele Rosu 10.48 356 ⇓P **Pn** 14 18 59.5 -0.7
MLR Muntele Rosu 10.48 356 ⇓P **Pn** 14 18 59.5 -0.7
MLR Muntele Rosu 10.48 356 Pn **Pn** 14 18 58.6 -1.6
VOIR 10.49 353 ⇓P **Pn** 14 19 03.6 +3.3
VOIR 10.49 353 ⇓P **Pn** 14 19 03.6 +3.3
DIVS Divibare 10.49 332 Pn **Pn** 14 18 59.5 -0.9
PLOR Plostina 10.82 359 ⇑P **Pn** 14 19 07.1 +2.4
PLOR Plostina 10.82 359 ⇑P **Pn** 14 19 07.1 +2.4
VRI Vrincioaia 10.83 360 ⇑P **Pn** 14 19 09.5 +4.6
VRI Vrincioaia 10.83 360 ⇑P **Pn** 14 19 09.5 +4.6
BURAR Bucovina Array 12.64 355 Pn **Pn** 14 19 29.9 +0.2
DUGI Dugi Otok 12.76 318 Sn Sn 14 21 42.9 -10
SOC Sochi 13.11 45 *e*P **Pn** 14 19 35.5 -0.6
SOC *e* 14 22 03.9
SOC pmax pmax
comp=Z,23nm,0.9s
SOC MLR MLR
comp=Z,78nm,16.0s
KEST Kesra 14.31 278 LR LR 14 26 20.0
comp=Z,44nn,20.4s,baz=338,slow=41
CRVS Cervenica-Dubn 14.43 346 *e*P **Pn** 14 19 54.1 0.0
CRVS Cervenica-Dubn 14.43 346 *e*P **Pn** 14 19 54.1 0.0
VYHS Vyhne 14.72 339 *e*P **Pn** 14 20 00.1 +2.1
VYHS Vyhne 14.72 339 *e*P **Pn** 14 20 00.1 +2.1
SHA1 Shidzhatmaz 14.98 50 *i* P **Pn** 14 20 04.1 +2.3
GNI Garni 15.07 65 LR LR 14 27 13.8
comp=Z,149nm,19.7s,baz=276,slow=42
KIV Kislovodsk 15.11 49 *e*P **Pn** 14 20 05.8 +2.4
KIV pmax pmax
comp=Z,40nm,1.0s
KIV MLR MLR
comp=Z,66nm,13.0s
MODS Modra-Piesok 15.12 335 *e*P **P** 14 20 09.8 +1.3
MODS Modra-Piesok 15.12 335 *e*P **P** 14 20 09.8 +1.3
KBZ Khabaz 15.13 50 Pn **Pn** 14 20 08.0 +4.4
comp=Z,0.3nm,0.3s,baz=245,slow=8.4,SNR=21
KBZ Khabaz 15.13 50 *i* P **Pn** 14 20 06.6 +3.1
KBZ pmax pmax
comp=Z,13nm,0.9s
ZEI Tsey 15.35 55 *e*P **P** 14 20 12.0 +0.6
ZEI pmax pmax
comp=Z,10.0nm,0.6s
NCK Nalchik 15.46 52 *i* P **Pn** 14 20 09.3 +1.3
AKASG Malin Array Be 15.77 6 Pn **Pn** 14 20 10.8 -1.0
comp=Z,3.7nm,0.3s,baz=194,slow=11,SNR=14
AKASG Malin Array Be 15.77 6*ce*P **Pn** 14 20 14.3 +2.5
AKASG pmax pmax
comp=Z,13nm,0.7s
AKBB Malin Array Si 15.77 6 P **Pn** 14 20 13.8 +2.0
AKBB pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 15.77 6 **Pn** 14 20 13.8 +2.0
MORC Moravsky Berou 16.25 338 P **P** 14 20 22.0 +0.9
MORC pmax pmax
comp=Z,3.0nm,0.9s
MORC Moravsky Berou 16.25 338 P **P** 14 20 22.0 +0.9
CKRC Cesky Krumlov 16.62 330 *e*P **Pn** 14 20 24.9 +2.1
GEC2 GERESS Array S 16.89 329 P **Pn** 14 20 28.5 +2.2
GERES GERESS Array B 16.89 329 Pn **Pn** 14 20 25.9 -0.3
comp=Z,0.4nm,0.3s,baz=141,slow=14,SNR=14
GERES GERESS Array B 16.89 329 P **Pn** 14 20 26.0 -0.3
GERES GERESS Array B 16.89 329 P **Pn** 14 20 27.7 +1.4
KHC Kasperske Hory 17.16 329 *e*P **Pn** 14 20 32.5 +2.9
KHC Kasperske Hory 17.16 329 *e*P **Pn** 14 20 32.5 +2.9
BNI Bardonecchia 18.37 309 P **Pn** 14 20 44.8 +0.2
BNI pmax pmax
comp=Z,16nm,1.5s
BNI Bardonecchia 18.37 309 P **Pn** 14 20 44.8 +0.2
LPG La Plagne 18.52 310 P **P** 14 20 46.3 -0.2
LPG pmax pmax
comp=Z,1.0nm,0.9s
LPL La Plagne 18.54 310 P **P** 14 20 43.7 -3.0
LPL pmax pmax
comp=Z,2.0nm,0.4s
SENIN Lac Senin/Sane 18.61 313 P **P** 14 20 46.5 -0.9
CLL Collm 19.10 333 *e*P **P** 14 20 53.0 +0.5
CLL *e*PP **PnPn** 14 21 04.0 -2.0
OBN Obninsk 21.19 16*ce*P **P** 14 21 16.0 +0.9
OBN *e* 14 21 34.8
OBN *e*S Sn 14 25 24.3 +7.3
OBN pmax pmax
comp=Z,8.0nm,0.9s
OBN MLR MLR
comp=Z,72nm,17.0s
SSF Saint Saulge 21.24 312 P **P** 14 21 14.0 -1.7
SSF pmax pmax
comp=Z,10.0nm,0.8s
BELG Belogornoye 22.82 34 P **P** 14 21 32.0 -0.6
comp=Z,20nm,0.6s,baz=309,slow=2.5,SNR=6.3
BELG Belogornoye 22.82 34*c i*P **P** 14 21 32.7 +0.1
BELG pmax pmax
comp=Z,7.0nm,0.9s
ESDC Sonseca Array 24.87 290 P **P** 14 21 52.6 +0.1
comp=Z,2.1nm,0.7s,baz=81,slow=9.6,SNR=13
ESDC Sonseca Array 24.87 290 IAmb IAmb 14 21 58.3
comp=Z,2.2nm,1.4s
GEYT Alibeck 25.25 74 P **P** 14 21 56.7 +0.8
comp=Z,4.3nm,0.5s,baz=276,slow=7.0,SNR=8.7
GEYT Alibeck 25.25 74 P **P** 14 21 56.3 +0.4
GEYT IAmb IAmb 14 21 58.0
comp=Z,4.3nm,0.6s
GYA0B ALIBECK ARRAY 25.25 74 P **P** 14 21 56.2 +0.3
GYA0B IAmb IAmb 14 21 58.0
comp=Z,5.8nm,0.6s
FINES FINESS Array B 26.44 359 P **P** 14 22 04.3 -2.1
comp=Z,1.2nm,0.5s,baz=158,slow=12,SNR=6.9
HFS Hagfors 26.54 345 P **P** 14 22 05.6 -1.7
comp=Z,2.5nm,0.7s,baz=165,slow=6.2,SNR=6.3
AKTO Aktyubinsk 27.33 46 P **P** 14 22 13.2 -1.4
comp=Z,2.7nm,0.6s,baz=249,slow=8.1,SNR=13
PESTR Estremoz 27.70 288 P **P** 14 22 17.1 -0.8
PESTR IAmb IAmb 14 22 32.9
comp=Z,4.8nm,0.9s
NAO01 NORSAR Array S 27.81 343 P **P** 14 22 16.4 -2.4
NOA NORSAR Array B 27.90 344 P **P** 14 22 16.5 -3.1
comp=Z,0.3nm,0.5s,baz=160,slow=6.2,SNR=3.7
NOA LR LR 14 34 19.3
comp=Z,30nm,18.8s,baz=160,slow=39
ABKAR Akbulak array 28.10 49 P **P** 14 22 21.7 +0.3
EKA Eskdalemuir Ar 28.96 324 P **P** 14 22 26.5 -2.5
comp=Z,6.4nm,1.1s,baz=121,slow=11,SNR=2.1
ARU Arti 30.35 35 P **P** 14 22 39.7 -1.6
comp=Z,1.8nm,0.2s,baz=237,slow=13,SNR=4.3
TOA0 Torodi Ar. Sit 31.49 232 P **P** 14 22 52.9 +1.2
TOA0 IAmb IAmb 14 22 55.6
comp=Z,3.2nm,0.9s
TORD Torodi Ar. Bea 31.49 232 P **P** 14 22 52.6 +0.9
comp=Z,1.4nm,0.4s,baz=32,slow=8.8,SNR=14
TORD LR LR 14 35 53.1
comp=Z,47nm,18.5s,baz=60,slow=37
TORD Torodi Ar. Bea 31.49 232 P **P** 14 22 53.0 +1.2
KK31 Karatay Array 34.52 63 P **P** 14 23 18.8 +0.7
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 34.52 63 P **P** 14 23 18.8 +0.7
KK31 IAmb IAmb 14 23 20.7
comp=Z,5.8nm,0.9s
KKAR Karatay Array 34.52 63 P **P** 14 23 18.8 +0.7
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 34.52 63 P **P** 14 23 18.8 +0.7
KKAR IAmb IAmb 14 23 20.7
comp=Z,5.8nm,0.9s
KKAR Karatay Array 34.52 63 P **P** 14 23 18.5 +0.4
ARCES ARCESS Array B 34.57 359 P **P** 14 23 16.0 -2.2
comp=Z,1.8nm,0.7s,baz=176,slow=8.7,SNR=10
ARCES LR LR 14 37 41.1
comp=Z,26nm,19.1s,baz=145,slow=37
ARCES ARCESS Array B 34.57 359 P **P** 14 23 16.0 -2.2
ARCES pmax pmax
comp=Z,10.0nm,1.4s
ARCES ARCESS Array B 34.57 359 IAmb IAmb 14 23 23.2
comp=Z,10nm,1.4s
GAR Garm 34.69 70 P **P** 14 23 21.1 +1.4
BRVK Borovoye 35.38 46*ce*P **P** 14 23 26.5 +1.2
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BRVK Borovoye 35.38 46 P **P** 14 23 25.7 +0.4
BRVK IAmb IAmb 14 23 27.6
comp=Z,6.0nm,1.2s
BVAR Borovoye Array 35.44 46 P **P** 14 23 25.1 -0.7
comp=Z,3.2nm,0.9s,baz=160,slow=4.7,SNR=8.3
EKS2 Erkin-Say 36.94 64 P **P** 14 23 41.2 +2.2
SNR=8.8
USP Ospenovka 37.43 63 P **P** 14 23 44.2 +1.3
SNR=5.1
AAK Ala-Archa 37.47 64 LR LR 14 43 24.2
comp=Z,17nm,18.1s,baz=312,slow=43
AAK Ala-Archa 37.47 64 P **P** 14 23 45.4 +1.9
SNR=12
AAK Ala-Archa 37.47 64*ce*P **P** 14 23 43.9 +0.4
AAK pmax pmax
comp=Z,25nm,0.9s
AAK Ala-Archa 37.47 64 P **P** 14 23 43.5 0.0
AAK IAmb IAmb 14 23 46.2
comp=Z,9.5nm,0.8s
UCH Uchtor 37.52 64 P **P** 14 23 46.2 +1.9
SNR=5.6
KBK Karagaybulak 37.80 64 P **P** 14 23 48.6 +2.3
SNR=5.5
TKM2 Tokmak 2 38.26 63 P **P** 14 23 51.7 +1.5
SNR=6.9
MAKZ Makanchi 42.47 57 P **P** 14 24 25.6 +0.8
MAKZ pmax pmax
comp=Z,8.0nm,0.7s
MAKZ Makanchi 42.47 57 P **P** 14 24 25.6 +0.8
MAKZ IAmb IAmb 14 24 26.7
comp=Z,7.9nm,0.7s
MK31 Makanchi Array 42.69 57*c i*P **P** 14 24 27.6 +1.0
MK31 Makanchi Array 42.69 57 P **P** 14 24 27.4 +0.9
MKAR Makanchi Array 42.69 57 P **P** 14 24 27.6 +1.1
comp=Z,16nm,0.6s,baz=280,slow=6.7,SNR=183
MKAR Makanchi Array 42.69 57 P **P** 14 24 27.3 +0.7
ZAA0 Zalesovo Array 44.10 46 P **P** 14 24 37.7 -0.1
ZALV Zalesovo Beam 44.10 46 P **P** 14 24 38.0 +0.3
comp=Z,14nm,0.5s,baz=268,slow=8.8,SNR=56
DGZ Jazzator, Alta 45.87 52*c i*P **P** 14 24 53.2 +1.1
DGZ pmax pmax
comp=Z,9.0nm,0.5s
WMQ Urumqi 46.87 60 *e*P **P** 14 25 02.5 +2.5
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,95nm,3.7s
NRIK Noril'sk 47.41 25 P **P** 14 25 04.0 +0.2
comp=Z,5.2nm,0.5s,baz=238,slow=5.0,SNR=8.8
NRIK Noril'sk 47.41 25*ce*P **P** 14 25 03.2 -0.6
NRIK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 47.41 25 P **P** 14 25 04.0 +0.2
TLY Talaya 55.68 47 *e*P **P** 14 26 07.1 +1.2
TLY pmax pmax
comp=Z,17nm,0.9s
ZAK Zakamensk 55.79 49 *e*P **P** 14 26 07.0 +0.2
ZAK pmax pmax
comp=Z,5.0nm,0.9s
GTA Gaotai 56.80 62 *e*P **P** 14 26 15.0 +0.8
GTA pP pP 14 26 19.0 +0.4
GTA sP pwP 14 26 22.0 +0.4
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,76nm,4.3s
GTA LR LR
comp=N,43nm,18.2s
GTA LR LR
comp=E,100nm,19.3s
GTA LR LR
comp=Z,41nn,15.3s
SONM Songino Array 58.49 51 P **P** 14 26 27.4 +1.3
comp=Z,4.3nm,0.7s,baz=286,slow=8.0,SNR=33
SONM Songino Array 58.49 51 P **P** 14 26 26.5 +0.5
SONM pmax pmax
comp=Z,3.0nm,0.6s
SONM Songino Array 58.49 51 P **P** 14 26 26.5 +0.5
SONM IAmb IAmb 14 26 27.9
comp=Z,3.0nm,0.6s
ULN Ulaanbaatar 58.90 51 P **P** 14 26 29.6 +0.7
ULN pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 58.90 51 P **P** 14 26 29.6 +0.7
TIXI Tiksi 60.80 21*ce*P **P** 14 26 40.7 -0.6
TIXI pmax pmax
comp=Z,7.0nm,0.7s
TIXI Tiksi 60.80 21 P **P** 14 26 40.3 -1.0
TIXI IAmb IAmb 14 26 41.4
comp=Z,3.9nm,1.0s
BOSA Boshof 63.31 182 P **P** 14 27 01.6 +2.9

comp=Z,0.7nm,0.4s,baz=358,slow=11,SNR=3.9
HHC Hu-ho-hao-te 64.55 57 *e*P **P 14 27 08.0 +1.0**
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,77nm,6.6s
CMAR Chiang Mai Arr 65.20 84 P **P 14 27 12.2 +0.8**
comp=Z,1.3nm,0.7s,baz=300,slow=8.2,SNR=13
CMAR Chiang Mai Arr 65.20 84 P **P 14 27 11.3 -0.1**
BILL Bilibino 72.85 15 *e*P **P 14 27 56.9 -1.2**
BILL pmax pmax
comp=Z,1.0nm,0.8s
KLR Kul'dur 72.95 42 *i* P **P 14 27 58.8 -0.3**
KLR pmax pmax
comp=Z,3.0nm,1.0s
C36M Paulatuk 73.76 350 P **P 14 28 02.3 -1.1**
C36M IAmb IAmb 14 28 02.9
comp=Z,2.7nm,0.5s
NJ2 Nanjing 73.89 62 *e*P **P 14 28 04.0 -0.9**
NJ2 pmax pmax
comp=Z,11nm,0.5s
A21K Barrow 73.92 1 P **P 14 28 03.9 -0.4**
A21K IAmb IAmb 14 28 04.9
comp=Z,4.6nm,0.8s
TRNY Table Rock, Ra 75.21 310 P **P 14 28 11.4 -1.0**
USA0B Ussuriysk Arra 75.95 46 P **P 14 28 16.3 -0.3**
USA0B pmax pmax
comp=Z,8.0nm,0.8s
USA0B Ussuriysk Arra 75.95 46 P **P 14 28 16.3 -0.3**
USRK Ussuriysk Ar. 75.95 46 P **P 14 28 16.8 +0.2**
comp=Z,6.5nm,0.7s,baz=297,slow=4.2,SNR=13
USRK Ussuriysk Ar. 75.95 46 P **P 14 28 16.3 -0.3**
TOLK Toolik Lake Re 76.61 359 P **P 14 28 19.7 -0.3**
TOLK IAmb IAmb 14 28 21.2
comp=Z,2.3nm,0.8s
KSRS Korea Array 77.26 53 P **P 14 28 24.6 +0.5**
comp=Z,3.3nm,0.8s,baz=302,slow=5.1,SNR=14
YKA Yellowknife Ar 78.00 343 P **P 14 28 26.8 -0.9**
comp=Z,1.1nm,0.8s,baz=36,slow=5.3,SNR=14
MLY Manley 80.26 359 P **P 14 28 39.6 -0.6**
ILAR Eielson Array 80.41 357 P **P 14 28 40.2 -0.8**
comp=Z,0.7nm,0.6s,baz=336,slow=3.1,SNR=9.9
WRH Wood River Hil 80.76 358 P **P 14 28 41.6 -1.1**
WRH IAmb IAmb 14 28 42.6
comp=Z,5.1nm,0.7s
ULM Lac du Bonnet 81.19 327 P **P 14 28 44.6 -0.7**
comp=Z,2.1nm,0.7s,baz=18,slow=4.0,SNR=5.4
MJAR Matsushiro Arr 84.37 49 P **P 14 29 02.0 -0.2**
comp=Z,2.9nm,0.8s,baz=315,slow=5.0,SNR=5.3
MJAR Matsushiro Arr 84.37 49 P **P 14 29 02.0 -0.2**
MJAR pmax pmax
comp=Z,2.0nm,0.8s
MJAR Matsushiro Arr 84.37 49 IAmb IAmb 14 29 03.6
comp=Z,1.7nm,0.8s
PDAR Pinedale Array 92.94 329 P **P 14 29 41.9 -1.4**
comp=Z,0.2nm,0.6s,baz=79,slow=8.0,SNR=3.5
ASAR Alice Springs 116.66 101 PKP **PKPdf 14 35 13.9 -0.4**
comp=Z,0.4nm,0.8s,baz=329,slow=2.0,SNR=3.4
ASAR Alice Springs 116.66 101 PKIKP **PKPdf 14 35 14.0 -0.4**

INET ***27*** *14:27:35.5, 12°.09N×87°.34W, h15km, MW4.1*
UCR ***27*** *14:27:36.5±1.9, 12°.16N×87°.24W, h35km±9km, ML3.2, MW4.4, mb4.4(NEIC)*
IDC ***27*** *14:27:36.9±0.8, 12°.39N×86°.98W, h79km±7km, mb4.0/13, mb1 4.2/17, mb1mx3.9/42, mbtmp4.2/17, MS3.0/8, Ms1 3.0/8, ms1mx2.8/39, Error ellipse: s-maj=24.5km s-min=8.1km az=51.0*
NEIC ***27*** *14:27:37.7±2.1, 12°.35N±0°.06×87°.04W±0°.07, h86km±5km, mb4.4/147, Error ellipse: s-maj=10.8km s-min=7.6km az=47.0*
SNET ***27*** *14:27:38.4±1.4, 12°.30N×87°.37W, h26km±9km, ML3.2*
ISC 27 14:27:36.2±0.6,**12°.25N**±0°.05×**87°.18W**±0°.05,**h78**km±5km, **n250,**σ1**9**0**5**/267,**mb4.4**/82,**2C-1D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**0.47**	**15**		**Pn**	**14 27 49.4**	**-0.2**
CRIN				Sn	**Sn**	**14 27 59.4**	**-0.1**
CNCH	**Conchagua**	**1.21**	**328**	*e*P	**Pn**	**14 27 57.6**	**-0.3**
CNCH				*e*S	**Sn**	**14 28 13.7**	**-0.4**
CNCH				IAML		14 28 16.4	
	comp=Z,323nm,0.2s						
CNCH	**Conchagua**	**1.21**	**328**	*e*P	**Pn**	**14 27 57.6**	**-0.3**
CNCH				*e*P	**Pn**	**14 27 57.6**	**-0.3**
CNCH				*e*S	**Sn**	**14 28 13.7**	**-0.4**
CNCH				IAML		14 28 16.4	
	comp=Z,323nm,0.2s						
BOAB	**BOACO BROADBAN**	**.49**	**82**		**Pn**	**14 28 00.9**	**-0.4**
VSM	**San Miguel**	**1.59**	**318**	*e*P	**Pn**	**14 28 03.2**	**+0.3**
VSM	**San Miguel**	**1.59**	**318**	*e*P	**Pn**	**14 28 03.2**	**+0.3**
LCY	**Lacayo**	**1.60**	**317**	*e*P	**Pn**	**14 28 02.8**	**-0.1**
LCY	**Lacayo**	**1.60**	**317**	*e*P	**Pn**	**14 28 02.8**	**-0.1**
PACA	**Pacayal**	**1.65**	**317**	*e*P	**Pn**	**14 28 04.0**	**+0.4**
PACA				*e*S	**Sn**	**14 28 23.5**	**-0.8**
PACA				IAML		14 28 25.8	
	comp=Z,783nm,0.3s						
PACA	**Pacayal**	**1.65**	**317**	*e*P	**Pn**	**14 28 04.0**	**+0.4**
PACA				*e*S	**Sn**	**14 28 23.5**	**-0.8**
PACA				IAML		14 28 25.8	
	comp=Z,783nm,0.3s						
TECA	**Tecapa**	**1.79**	**314**	*e*P	**Pn**	**14 28 05.4**	**-0.1**
TECA	**Tecapa**	**1.79**	**314**	*e*P	**Pn**	**14 28 05.4**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.80**	**357**	*e*P	**Pn**	**14 28 07.1**	**+1.5**
TGUH	**Tegucigalpa,Un**	**1.80**	**357**	*e*P	**Pn**	**14 28 07.1**	**+1.5**
TGUH	**Tegucigalpa,Un**	**1.80**	**357**		**Pn**	**14 28 06.8**	**+1.2**
ACON	**Acoyapa**	**1.98**	**98**		**Pn**	**14 28 08.1**	**+0.3**
GBS3	**Finca Las Img**	**2.23**	**131**	*i* P	**Pn**	**14 28 10.0**	**-1.2**
BUEV	**Buena Vista**	**2.25**	**130**	*e*P	**Pn**	**14 28 11.3**	**-0.3**
LAPC	**Finca la Perla**	**2.25**	**131**	*i* P	**Pn**	**14 28 10.6**	**-0.9**
BUAI	**Buenos Aires**	**2.26**	**127**	*i* P	**Pn**	**14 28 11.3**	**-0.3**
LFRS	**El Faro**	**2.29**	**307**	*e*P	**Pn**	**14 28 11.7**	**-0.4**
LFRS	**El Faro**	**2.29**	**307**	*e*P	**Pn**	**14 28 11.7**	**-0.4**
LBRS	**Las Brisas**	**2.35**	**309**	*e*P	**Pn**	**14 28 14.3**	**+1.5**
LBRS	**Las Brisas**	**2.35**	**309**	*e*P	**Pn**	**14 28 14.3**	**+1.5**
SNET	**Serv Nac Est T**	**2.46**	**306**	Pn	**Pn**	**14 28 17.2**	**+2.9**
HORNC	**Hornillas**	**2.48**	**128**	*i* P	**Pn**	**14 28 14.6**	**0.0**
HORNC				*i* S	**Sn**	**14 28 43.6**	**-0.5**
COLC	**Colonia**	**2.49**	**129**	*i* P	**Pn**	**14 28 15.0**	**+0.3**
ORTG	**Ortega, Santa**	**2.52**	**138**		**Pn**	**14 28 15.3**	**+0.1**
BOQS	**Boqueron**	**2.53**	**306**	*e*P	**Pn**	**14 28 15.8**	**+0.4**
BOQS				*e*S	**Sn**	**14 28 45.1**	**-0.3**
BOQS	**Boqueron**	**2.53**	**306**	*e*P	**Pn**	**14 28 15.8**	**+0.4**
BOQS				*e*S	**Sn**	**14 28 45.1**	**-0.3**
CUI	**Cuipilapa**	**2.53**	**129**	*e*P	**Pn**	**14 28 15.5**	**+0.3**
GUAI	**GUAI**	**2.56**	**140**	*i* P	**Pn**	**14 28 15.9**	**+0.4**
PLVR	**Palo Verde**	**2.60**	**136**	*e*P	**Pn**	**14 28 15.4**	**-1.0**
PLVR				*e*S	**Sn**	**14 28 45.1**	**-2.0**
PTEN	**Parque Tenorio**	**2.63**	**125**	*i* P	**Pn**	**14 28 16.6**	**0.0**
ACAL	**Aguas Claras**	**2.64**	**127**	*i* P	**Pn**	**14 28 17.0**	**+0.2**
GRZA	**Playa Garza**	**2.77**	**147**	*i* P	**Pn**	**14 28 17.9**	**-0.6**
SBLS	**San Blas**	**2.86**	**304**	*e*P	**Pn**	**14 28 20.9**	**+1.0**
SBLS	**San Blas**	**2.86**	**304**	*e*P	**Pn**	**14 28 20.9**	**+1.0**
INDI	**Punta indio, G**	**2.88**	**145**	*e*P	**Pn**	**14 28 18.8**	**-1.2**
RTR	**El Retiro**	**2.91**	**305**	*e*P	**Pn**	**14 28 22.3**	**+1.7**
RTR	**El Retiro**	**2.91**	**305**	*e*P	**Pn**	**14 28 22.3**	**+1.7**
JTS	**Las Juntas de**	**2.92**	**132**	P	**Pn**	**14 28 20.6**	**+0.1**
	comp=Z,15nm,0.3s,baz=22,slow=20,SNR=30						
JTS				S	**Sn**	**14 28 54.7**	**0.0**
	comp=Z,52nm,0.3s,baz=30,slow=22,SNR=9.9						
JTS				LR	LR	14 29 36.7	
	comp=Z,71nm,19.2s,baz=309,slow=42						
JTS	**Las Juntas de**	**2.92**	**132**	*e*P	**Pn**	**14 28 20.5**	**0.0**
JTS				*e*S	**Sn**	**14 28 54.7**	**0.0**
JTS	**Las Juntas de**	**2.92**	**132**		**Pn**	**14 28 20.2**	**-0.3**
CEDE	**Laguna Cedeo**	**2.99**	**126**	*e*P	**Pn**	**14 28 22.9**	**+1.4**
ARE1	**Arenal 1**	**2.99**	**126**	*e*P	**Pn**	**14 28 22.9**	**+1.4**
MTO3	**Montecristo**	**3.02**	**315**	*e*P	**Pn**	**14 28 22.4**	**+0.4**
MTO3				IAML		14 28 48.0	
	comp=Z,58nm,0.6s						
MTO3	**Montecristo**	**3.02**	**315**	*e*P	**Pn**	**14 28 22.4**	**+0.4**
MTO3				IAML		14 28 48.0	
	comp=Z,58nm,0.6s						
MTO3	**Montecristo**	**3.02**	**315**		**Pn**	**14 28 21.4**	**-0.6**
COVE	**Coope Vega, Sa**	**3.12**	**119**	*e*P	**Pn**	**14 28 23.1**	**0.0**
COVE	**Coope Vega, Sa**	**3.12**	**119**	Pn	**Pn**	**14 28 22.8**	**-0.3**
ESQI	**Esquipulas**	**3.12**	**318**		**Pn**	**14 28 23.1**	**-0.1**
CAO2	**Cobano, Puntar**	**3.26**	**141**		**Pn**	**14 28 27.1**	**+2.0**
LAFE	**Finca La Fe, P**	**3.29**	**137**	*e*P	**Pn**	**14 28 25.8**	**+0.3**
LCR2	**La Lucha 2**	**3.99**	**128**	*e*P	**Pn**	**14 28 37.5**	**+2.3**
CVTR	**Volcan Turrial**	**4.02**	**123**	*e*P	**Pn**	**14 28 36.8**	**+1.0**
RIMA	**Rio Macho**	**4.08**	**127**	*e*P	**Pn**	**14 28 37.7**	**+1.2**
APG	**El Apazote**	**4.21**	**311**	P	**Pn**	**14 28 38.6**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=126,slow=12,SNR=5.0						
CDM	**Cerro de Muert**	**4.29**	**128**	*e*P	**Pn**	**14 28 40.5**	**+0.9**
MRVA	**Moravia de Chi**	**4.39**	**123**	*e*P	**Pn**	**14 28 43.0**	**+2.4**
PEZE	**Perez Zeledon,**	**4.46**	**129**		**Pn**	**14 28 44.1**	**+2.5**
RTAL	**Retalhuleu**	**4.95**	**298**	Pn	**Pn**	**14 28 51.3**	**+3.2**
RIOS	**Rincon, Osa**	**5.04**	**134**		**Pn**	**14 28 51.2**	**+1.8**
CCIG	**Comitan**	**6.26**	**310**		**Pn**	**14 29 07.8**	**+1.6**
BCIP	**Isla Barro Col**	**7.83**	**112**	Pn	**Pn**	**14 29 27.7**	**+0.2**
TEIG	**Tepich**	**8.00**	**353**	Pn	**Pn**	**14 29 30.7**	**+0.9**
CMIG	**Matias Romero**	**8.88**	**304**	P	**Pn**	**14 29 42.3**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=130,slow=13,SNR=5.1						
CMIG				S	**Sn**	**14 31 18.4**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=325,slow=21,SNR=2.5						
TLIG	**Tlapa**	**12.21**	**297**	Pn	**Pn**	**14 30 28.6**	**+1.3**
PAYG	**Puerto Ayora**	**13.20**	**194**	Pn	**P**	**14 30 45.8**	**-1.9**
GTBY	**Guantanamo Bay**	**13.88**	**55**	P	**P**	**14 30 55.0**	**-0.2**
SDV	**Santo Domingo**	**16.60**	**100**	P	**Pn**	**14 31 24.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=270,slow=18,SNR=3.6						
SDV				LR	LR	14 38 15.5	
	comp=Z,62nm,20.0s,baz=318,slow=39						
SJG	**San Juan**	**21.10**	**71**	LR	LR	14 40 26.8	
	comp=Z,61nm,19.2s,baz=272,slow=37						
ATAH	**Atahualpa**	**21.14**	**155**	LR	LR	14 39 09.0	
	comp=Z,91nm,21.5s,baz=277,slow=33						
Y49A	**Blount Mountai**	**21.52**	**2**	P	**P**	**14 32 20.7**	**+1.8**
WHTX	**Lake Whitney,**	**21.81**	**336**	P	**P**	**14 32 23.1**	**+1.1**
WHTX				IAmb	IAmb	14 32 25.4	
	comp=Z,20nm,0.8s						
PCRV	**Puerto La Cruz**	**22.20**	**93**	P	**P**	**14 32 27.4**	**+1.0**
	comp=Z,5.3nm,0.5s,baz=317,slow=3.1,SNR=2.3						
HPIG		**22.69**	**313**	P	**P**	**14 32 32.7**	**+1.0**
TX31	**Lajitas Ar. Si**	**22.90**	**320**	P	**P**	**14 32 33.9**	**+0.1**
TX32	**Lajitas Array**	**22.90**	**320**	P	**P**	**14 32 33.9**	**+0.2**
TX32				IAmb	IAmb	14 32 36.0	
	comp=Z,12nm,0.7s						
TXAR	**Lajitas Array**	**22.90**	**320**	P	**P**	**14 32 34.3**	**+0.5**
	comp=Z,11nm,0.7s,baz=139,slow=9.5,SNR=123						
TXAR				PcP	**PcP**	**14 36 23.5**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=142,slow=5.3,SNR=6.9						
TXAR	**Lajitas Array**	**22.90**	**320**	P	**P**	**14 32 33.9**	**+0.2**
W50A	**Signal Mountai**	**22.91**	**4**	P	**P**	**14 32 35.3**	**+1.5**
MIAR	**Mount Ida**	**22.95**	**346**	P	**P**	**14 32 34.8**	**+0.8**
MIAR				IAmb	IAmb	14 32 35.7	
	comp=Z,8.8nm,0.7s						
BG3	**Lake Jocassee**	**22.97**	**9**	P	**P**	**14 32 35.8**	**+1.5**
CPCT	**Cooper Cave**	**23.22**	**6**	P	**P**	**14 32 37.6**	**+0.9**
ABTX	**Abilene, Hawle**	**23.28**	**333**	P	**P**	**14 32 37.4**	**+0.1**
ABTX				IAmb	IAmb	14 32 38.7	
	comp=Z,9.4nm,0.6s						
WHAR	**Wooly Hollow**	**23.40**	**349**	P	**P**	**14 32 39.0**	**+0.6**
X37A	**Clayton**	**23.46**	**343**	P	**P**	**14 32 39.6**	**+0.8**
X37A				IAmb	IAmb	14 32 42.0	
	comp=Z,15nm,0.8s						
TKL	**Tuckaleechee C**	**23.51**	**7**	P	**P**	**14 32 40.1**	**+0.7**
	comp=Z,6.1nm,0.6s,baz=177,slow=13,SNR=6.8						
TKL				pP	**pP**	**14 32 56.0**	**-0.3**
	comp=Z,7.6nm,0.8s,baz=196,slow=12,SNR=4.0						
TKL	**Tuckaleechee C**	**23.51**	**7**	P	**P**	**14 32 40.0**	**+0.7**
TKL				IAmb	IAmb	14 32 44.7	
	comp=Z,15nm,1.0s						
V51A	**Loudon**	**23.59**	**6**	P	**P**	**14 32 40.9**	**+0.9**
V51A				IAmb	IAmb	14 32 43.5	
	comp=Z,15nm,0.9s						
W39A	**Magazine**	**23.62**	**346**	P	**P**	**14 32 41.2**	**+1.0**
V53A	**Saluda**	**23.65**	**9**	P	**P**	**14 32 41.9**	**+1.3**
V53A				IAmb	IAmb	14 32 45.2	
	comp=Z,20nm,1.1s						
CLTN	**Cedars of Leba**	**23.75**	**2**	P	**P**	**14 32 42.7**	**+1.2**
CLTN				IAmb	IAmb	14 32 44.2	
	comp=Z,13nm,1.0s						
FCAR	**Ozark Folk Cen**	**23.96**	**350**	P	**P**	**14 32 43.2**	**-0.1**
LCAR	**Lake Charles**	**23.99**	**352**	P	**P**	**14 32 42.7**	**-0.8**
U49A	**Red Boiling Sp**	**24.19**	**3**	P	**P**	**14 32 47.2**	**+1.8**
U49A				IAmb	IAmb	14 32 48.6	
	comp=Z,8.4nm,0.7s						
U40A	**Yellville**	**24.54**	**349**	P	**P**	**14 32 48.5**	**-0.1**
V58A	**Windy Hill, Pi**	**24.55**	**16**	P	**P**	**14 32 50.0**	**+1.4**
V58A				IAmb	IAmb	14 32 51.1	
	comp=Z,16nm,0.8s						
T47A	**Sharon Grove**	**24.64**	**0**	P	**P**	**14 32 49.8**	**+0.4**
T47A				IAmb	IAmb	14 32 52.0	
	comp=Z,11nm,0.9s						
LPIG	**La Paz**	**24.89**	**301**	LR	LR	14 42 51.0	
	comp=Z,33nm,20.9s,baz=200,slow=37						
OK031	**S. Brethren Rd**	**25.16**	**341**	P	**P**	**14 32 53.6**	**-0.6**
QUOK	**Quay**	**25.32**	**342**	P	**P**	**14 32 55.2**	**-0.5**
MNTX	**Cornudas Mount**	**25.61**	**322**	P	**P**	**14 32 58.8**	**+0.4**
FVM	**French Village**	**25.79**	**354**	P	**P**	**14 33 00.1**	**+0.2**
MSTX	**Muleshoe**	**25.88**	**329**	P	**P**	**14 33 01.3**	**+0.4**
S39A	**Bolivar**	**25.93**	**349**	P	**P**	**14 33 01.1**	**-0.1**
S39A				IAmb	IAmb	14 33 02.2	
	comp=Z,10.0nm,0.7s						
CCM	**Cathedral Cave**	**25.96**	**353**	P	**P**	**14 33 01.4**	**0.0**
U32A	**Winter Ranch,**	**26.28**	**338**	P	**P**	**14 33 04.4**	**-0.1**
U32A				IAmb	IAmb	14 33 05.5	
	comp=Z,12nm,0.7s						
R40A	**Maddies Statio**	**26.33**	**351**	P	**P**	**14 33 04.2**	**-0.6**
Q51A	**Peebles**	**26.89**	**7**	P	**P**	**14 33 11.0**	**+1.2**
ANMO	**Albuquerque**	**28.57**	**325**	P	**P**	**14 33 26.6**	**+1.5**
	comp=Z,2.1nm,0.9s,baz=162,slow=11,SNR=3.8						
ANMO	**Albuquerque**	**28.57**	**325**	P	**P**	**14 33 27.2**	**+2.1**
T25A	**Trinidad**	**29.21**	**331**	P	**P**	**14 33 33.1**	**+2.2**
SSPA	**Standing Stone**	**29.43**	**14**	P	**P**	**14 33 34.0**	**+1.5**
SSPA				IAmb	IAmb	14 33 36.6	
	comp=Z,14nm,1.2s						
N33A	**J Bar K, Exete**	**29.78**	**344**	P	**P**	**14 33 35.9**	**+0.3**
SDCO	**Great Sand Dun**	**30.22**	**330**	P	**P**	**14 33 41.1**	**+1.3**
W18A	**Petrified Fore**	**30.60**	**322**	P	**P**	**14 33 45.0**	**+1.9**
W18A				IAmb	IAmb	14 33 46.3	
	comp=Z,6.9nm,0.8s						
X16A	**Lo Mia Camp, P**	**31.20**	**319**	P	**P**	**14 33 50.0**	**+1.6**
MVCO	**Mesa Verde**	**31.36**	**326**	P	**P**	**14 33 50.8**	**+1.0**
MVCO				IAmb	IAmb	14 33 52.0	
	comp=Z,6.0nm,0.9s						
BINY	**Binghamton**	**31.39**	**16**	P	**P**	**14 33 50.9**	**+1.2**
OGNE	**Ogallala**	**31.42**	**338**	P	**P**	**14 33 51.5**	**+1.4**
WUAZ	**Wupatki**	**31.86**	**321**	P	**P**	**14 33 55.9**	**+1.7**
ISCO	**Idaho Springs**	**31.92**	**333**	P	**P**	**14 33 56.0**	**+1.3**
K58A	**Earlville**	**32.01**	**16**	P	**P**	**14 33 55.7**	**+0.5**
K58A				IAmb	IAmb	14 33 58.3	
	comp=Z,6.5nm,0.9s						
SMCO	**Snowmass**	**32.06**	**330**	P	**P**	**14 33 57.0**	**+0.9**
SMCO				IAmb	IAmb	14 33 58.9	
	comp=Z,11nm,1.4s						
J56A	**Wolcott**	**32.18**	**14**	P	**P**	**14 33 57.0**	**+0.4**
M64A	**Tiverton**	**32.36**	**23**	P	**P**	**14 33 55.6**	**-2.6**
ECSD	**EROS Data Cent**	**32.41**	**347**	P	**P**	**14 33 57.6**	**-1.1**
J57A	**Williamstown**	**32.52**	**15**	P	**P**	**14 33 60.0**	**+0.4**
J57A				IAmb	IAmb	14 34 02.4	
	comp=Z,8.5nm,0.8s						
U15A	**North Rim**	**33.02**	**321**	P	**P**	**14 34 06.2**	**+1.7**
PHWY	**Pilot Hill**	**33.08**	**334**	P	**P**	**14 34 05.6**	**+0.7**
PHWY				IAmb	IAmb	14 34 08.2	
	comp=Z,4.1nm,0.7s						
SADO	**Sadowa**	**33.13**	**10**	P	**P**	**14 34 03.7**	**-1.2**
	comp=Z,4.0nm,0.7s,baz=203,slow=13,SNR=2.6						
SADO	**Sadowa**	**33.13**	**10**	IAmb	IAmb	14 34 27.6	
	comp=Z,8.7nm,1.2s						
W13A	**Hualapai Mount**	**33.21**	**318**	P	**P**	**14 34 07.8**	**+1.8**
SPMN	**Marine on St.**	**33.21**	**353**	P	**P**	**14 34 05.3**	**-0.3**
O20A	**White River Ci**	**33.42**	**330**	P	**P**	**14 34 09.2**	**+1.4**
PKCU	**Pink Cliffs**	**33.70**	**322**	P	**P**	**14 34 12.7**	**+2.3**
COWI	**Conover**	**33.78**	**358**	P	**P**	**14 34 09.8**	**-0.8**
SRU	**San Rafael Swe**	**33.83**	**326**	P	**P**	**14 34 12.6**	**+1.3**
F36A	**Milaca**	**33.93**	**352**	P	**P**	**14 34 10.8**	**-1.0**
F36A				IAmb	IAmb	14 34 11.6	
	comp=Z,4.3nm,0.8s						
LCMT	**Little Creek M**	**33.98**	**321**	P	**P**	**14 34 13.8**	**+1.2**
E43A	**Lone Tree Farm**	**34.02**	**0**	P	**P**	**14 34 12.2**	**-0.4**
LONY	**Lake Ozonia**	**34.02**	**16**	P	**P**	**14 34 12.7**	**0.0**
MTPU	**Mount Pierson**	**34.02**	**323**	P	**P**	**14 34 15.1**	**+1.8**
MTPU				IAmb	IAmb	14 34 17.0	
	comp=Z,6.0nm,0.8s						
Q16A	**Castle Valley**	**34.05**	**325**	P	**P**	**14 34 14.8**	**+1.6**
Q16A				IAmb	IAmb	14 34 17.4	
	comp=Z,8.5nm,1.3s						
RWWY	**Rawlins**	**34.16**	**333**	P	**P**	**14 34 14.4**	**+0.2**
P17A	**Butcher Ranch,**	**34.21**	**327**	P	**P**	**14 34 15.1**	**+0.5**
SZCU	**Shurtz Canyon**	**34.26**	**322**	P	**P**	**14 34 16.4**	**+1.3**
SZCU				IAmb	IAmb	14 34 17.7	
	comp=Z,4.3nm,0.8s						
MSU	**Marysvale**	**34.34**	**324**	P	**P**	**14 34 17.0**	**+1.3**
TMUT	**Trail Mountain**	**34.34**	**326**	P	**P**	**14 34 17.2**	**+1.4**
TMUT				IAmb	IAmb	14 34 20.3	
	comp=Z,3.5nm,0.7s						
TMUT					**PcP**	**14 36 51.4**	**+1.0**
F33A	**5 Mile Ranch,**	**34.37**	**349**	P	**P**	**14 34 14.7**	**-1.0**
CCUT	**Cedar City**	**34.40**	**322**	P	**P**	**14 34 18.0**	**+1.7**
E38A	**The Farm, Brul**	**34.45**	**355**	P	**P**	**14 34 15.9**	**-0.4**
FRNY	**Flat Rock**	**34.49**	**17**	P	**P**	**14 34 17.3**	**+0.6**
FRNY				IAmb	IAmb	14 34 19.0	
	comp=Z,4.0nm,0.8s						
TCRU	**Three Creeks R**	**34.56**	**324**	P	**P**	**14 34 18.9**	**+1.2**
TCRU				IAmb	IAmb	14 34 20.6	
	comp=Z,6.8nm,1.0s						
RSSD	**Black Hills**	**34.91**	**339**	P	**P**	**14 34 22.1**	**+1.5**
RSSD				IAmb	IAmb	14 34 23.4	
	comp=Z,4.6nm,0.7s						
MPU	**Maple Canyon**	**35.08**	**326**	P	**P**	**14 34 22.7**	**+0.6**
MPU				IAmb	IAmb	14 34 24.2	
	comp=Z,6.5nm,0.9s						
PSUT	**Pine Spring**	**35.33**	**322**	P	**P**	**14 34 25.7**	**+1.4**
PSUT				IAmb	IAmb	14 34 26.8	
	comp=Z,4.4nm,0.9s						
JLU	**Jordanelle**	**35.40**	**327**	P	**P**	**14 34 25.8**	**+0.9**
JLU				IAmb	IAmb	14 34 26.8	
	comp=Z,4.3nm,0.6s						
TCUT	**Toone Canyon**	**35.75**	**328**	P	**P**	**14 34 28.9**	**+1.0**
EYMN	**Ely**	**35.77**	**355**	P	**P**	**14 34 26.3**	**-1.4**
EYMN				IAmb	IAmb	14 34 27.1	
	comp=Z,3.3nm,0.7s						
G62A	**West of Eustis**	**35.80**	**20**	P	**P**	**14 34 28.9**	**+0.9**
DUG	**Dugway, Tooele**	**35.85**	**326**	P	**P**	**14 34 30.1**	**+1.4**
DUG				IAmb	IAmb	14 34 31.6	
	comp=Z,4.7nm,0.9s						
SPR3	**Spring Creek 3**	**35.92**	**323**	P	**P**	**14 34 30.4**	**+1.0**
SPR3				IAmb	IAmb	14 34 31.4	
	comp=Z,3.8nm,0.8s						
SPR3					**PcP**	**14 36 55.5**	**+0.5**
PD31	**Pinedale Array**	**36.08**	**332**	P	**P**	**14 34 30.7**	**+0.1**
PD31				IAmb	IAmb	14 34 31.8	
	comp=Z,3.7nm,0.7s						
PDAR	**Pinedale Array**	**36.08**	**332**	P	**P**	**14 34 31.2**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=128,slow=10.0,SNR=48						
PDAR				PcP	**PcP**	**14 36 56.0**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=106,slow=5.7,SNR=5.4						
BW06	**Boulder Array**	**36.08**	**332**	P	**P**	**14 34 30.7**	**0.0**
BW06				IAmb	IAmb	14 34 31.9	
	comp=Z,4.3nm,0.6s						
HWUT	**Hardware Ranch**	**36.19**	**328**	P	**P**	**14 34 32.2**	**+0.6**
AGMN	**Agassiz Nation**	**36.66**	**350**	P	**P**	**14 34 34.3**	**-1.0**
AGMN				IAmb	IAmb	14 34 34.9	
	comp=Z,4.8nm,0.8s						
AHID	**Auburn Hatcher**	**36.81**	**330**	P	**P**	**14 34 37.7**	**+0.9**
HVU	**Hansel Valley**	**36.94**	**327**	P	**P**	**14 34 38.9**	**+1.0**
HVU				IAmb	IAmb	14 34 40.6	
	comp=Z,4.5nm,0.9s						
MDND	**Maddock**	**36.98**	**346**	P	**P**	**14 34 37.5**	**-0.5**
REDW	**Red Top Meadow**	**37.14**	**331**	P	**P**	**14 34 40.4**	**+0.7**
ECR	**Eagle Creek**	**37.16**	**330**	P	**P**	**14 34 40.5**	**+0.6**
SNOW	**Snow King Moun**	**37.17**	**331**	P	**P**	**14 34 41.4**	**+1.4**
LOHW	**Long Hollow**	**37.22**	**331**	P	**P**	**14 34 41.0**	**+0.7**
LOHW				IAmb	IAmb	14 34 42.7	
	comp=Z,5.4nm,0.9s						
MOOW	**Moose Ponds**	**37.39**	**331**	P	**P**	**14 34 42.4**	**+0.6**
MOOW				IAmb	IAmb	14 34 43.8	
	comp=Z,3.9nm,0.6s						
ELK	**Elko**	**37.59**	**324**	P	**P**	**14 34 44.4**	**+0.9**
ELK				IAmb	IAmb	14 34 45.8	
	comp=Z,3.5nm,0.8s						
FLWY	**Flagg Ranch**	**37.62**	**332**	P	**P**

B08A				IAmb	IAmb	14 35 42.9
	comp=Z,3.0nm,0.7s					
LON	**Longmire**	**45.08**	**327**	P	**P**	**14 35 44.5 -0.1**
FCC	**Fort Churchill**	**46.71**	**355**	P	**P**	**14 35 56.2 -0.9**
FCC				IAmb	IAmb	14 35 57.0
	comp=Z,4.1nm,0.6s					
YKA	**Yellowknife Ar**	**53.88**	**345**	P	**P**	**14 36 50.3 -0.9**
	comp=Z,1.0nm,0.6s,baz=136,slow=8.2,SNR=25					
YKA				pP	**pP**	**14 37 09.1 -1.6**
	comp=Z,0.7nm,0.7s,baz=139,slow=8.1,SNR=5.5					
YKA				PcP	**PcP**	**14 37 55.2 -0.6**
	comp=Z,0.5nm,0.5s,baz=143,slow=4.3,SNR=9.3					
PLCA	**Paso Flores**	**54.92**	**165**	P	**P**	**14 36 59.4 +0.4**
	comp=Z,2.3nm,0.8s,baz=333,slow=9.5,SNR=4.9					
PLCA	**Paso Flores**	**54.92**	**165**	P	**P**	**14 37 00.1 +1.0**
RES	**Resolute Bay**	**62.57**	**358**	P	**P**	**14 37 50.3 -1.3**
RES				IAmb	IAmb	14 37 52.0
	comp=Z,2.3nm,0.7s					
DOT	**Dot Lake**	**64.72**	**336**	P	**P**	**14 38 05.5 -0.5**
DOT				IAmb	IAmb	14 38 06.7
	comp=Z,4.6nm,1.0s					
ILAR	**Eielson Array**	**66.31**	**336**	P	**P**	**14 38 15.5 -0.7**
	comp=Z,0.6nm,0.5s,baz=157,slow=4.7,SNR=12					
RND	**Reindeer**	**66.61**	**334**	P	**P**	**14 38 18.0 -0.2**
RND				IAmb	IAmb	14 38 18.9
	comp=Z,6.7nm,0.9s					
I23K	**Minto, Yukon-K**	**67.43**	**336**	P	**P**	**14 38 22.9 -0.3**
KTH	**Kantishna Hill**	**67.54**	**334**	P	**P**	**14 38 23.0 -1.1**
KTH				IAmb	IAmb	14 38 49.1
	comp=Z,7.8nm,1.4s					
BPAW	**Bear Paw Mtn.**	**67.74**	**335**	P	**P**	**14 38 24.4 -0.8**
BPAW				IAmb	IAmb	14 38 25.2
	comp=Z,2.1nm,0.6s					
EUNU	**Eureka**	**67.82**	**0**	P	**P**	**14 38 24.9 -0.7**
PPLA	**Purkeypile**	**67.88**	**333**	P	**P**	**14 38 25.2 -1.1**
MLY	**Manley**	**67.94**	**336**	P	**P**	**14 38 25.9 -0.6**
MLY				IAmb	IAmb	14 38 27.1
	comp=Z,4.8nm,1.1s					
TTA	**Tatalina**	**69.58**	**333**	P	**P**	**14 38 36.0 -0.8**
NOA	**NORSAR Array B**	**83.41**	**29**	LR	LR	15 16 09.6
	comp=Z,7.3nm,19.0s,baz=155,slow=35					
ARCES	**ARCESS Array B**	**86.22**	**19**	P	**P**	**14 40 08.0 -1.2**
	comp=Z,3.9nm,1.0s,baz=268,slow=6.3,SNR=0.9					
TIXI	**Tiksi**	**92.89**	**349**	P	**P**	**14 40 38.8 -1.3**
	comp=Z,0.8nm,0.3s,baz=343,slow=4.3,SNR=3.8					
TIXI	**Tiksi**	**92.89**	**349**	IAmb	IAmb	14 40 39.6
	comp=Z,1.1nm,0.5s					
SONM	**Songino Array**	**118.98**	**350**	PKP	**PKPdf**	**14 46 15.3 -1.0**
	comp=Z,0.4nm,0.4s,baz=250,slow=0.5,SNR=3.8					
KSRS	**Korea Array**	**120.58**	**328**	PKP	**PKPdf**	**14 46 19.6 +0.2**
	comp=Z,2.0nm,0.6s,baz=8.6,slow=1.9,SNR=14					
STKA	**Stephens Creek**	**131.22**	**238**	PKP	**PKiKP**	**14 46 41.9 +1.1**
	comp=Z,0.9nm,0.6s,baz=102,slow=7.4,SNR=3.8					
ASAR	**Alice Springs**	**139.44**	**248**	PKhKP	PKPpre	14 46 49.9
	comp=Z,0.2nm,0.6s,baz=109,slow=3.3,SNR=2.3					
ASAR				PKP	**PKPdf**	**14 46 56.9 +1.4**
	comp=Z,1.2nm,0.6s,baz=98,slow=1.8,SNR=16					
WRA	**Warramunga Arr**	**139.47**	**254**	PKhKP	PKPpre	14 46 49.9
	comp=Z,0.4nm,0.6s,baz=93,slow=3.4,SNR=2.3					
WRA				PKP	**PKiKP**	**14 46 57.5 -0.5**
	comp=Z,1.8nm,0.6s,baz=90,slow=2.4,SNR=21					
WRA	**Warramunga Arr**	**139.47**	**254**		**PKPdf**	**14 46 55.3 -0.3**
CMAR	**Chiang Mai Arr**	**148.90**	**349**	PKPbc	**PKPbc**	**14 47 15.3 -0.6**
	comp=Z,2.2nm,0.6s,baz=346,slow=3.1,SNR=17					
CMAR	**Chiang Mai Arr**	**148.90**	**349**		**PKPdf**	**14 47 11.2 -0.8**

IDC 27 14:31:52.2±2.7, 27.12N×84.65E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/46, mbtmp3.4/5, ML3.7/1, Error ellipse: s-maj=98.2km s-min=26.0km az=71.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.72**	**355**	P	P	14 36 23.2	-0.1
	0.2nm,0.3s,baz=183,slow=11,SNR=7.8						
KURBB	**Kurchatov Arra**	**23.93**	**350**	P	P	14 37 07.9	+0.1
	0.5nm,0.9s,baz=168,slow=9.5,SNR=3.9						
SONM	**Songino Array**	**26.76**	**34**	P	P	14 37 33.8	0.0
	0.6nm,0.6s,baz=211,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**67.13**	**129**	P	P	14 42 48.0	0.0
	0.5nm,0.9s,baz=320,slow=6.5,SNR=2.9						
ASAR	**Alice Springs**	**69.37**	**132**	P	P	14 43 02.1	0.0
	0.3nm,0.7s,baz=311,slow=6.0,SNR=3.0						

IDC 27 14:34:36.0±1.7, 27.65N×85.86E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.4/50, mbtmp3.5/8, ML3.6/2, MS2.3/1, Ms1 2.5/1, ms1mx2.1/33, Error ellipse: s-maj=61.4km s-min=21.7km az=63.0

ISC 27 14:34:38.9±1.6, 27.7N±0.2×85.8E±0.3, h19km, n9, σ0s73/8, mb3.5/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.16**	**125**	LR	LR	14 46 06.1	
	comp=Z,12nm,20.1s,baz=340,slow=46						
AAK	**Ala-Archa**	**17.53**	**331**	P	**Pn**	**14 38 41.3 -1.0**	
	0.1nm,0.3s,baz=165,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	**19.27**	**353**	P	**Pn**	**14 39 03.0 -0.4**	
	0.3nm,0.3s,baz=172,slow=12,SNR=14						
KURBB	**Kurchatov Arra**	**23.57**	**348**	P	**P**	**14 39 49.1 +1.0**	
	0.4nm,0.5s,baz=168,slow=10,SNR=5.1						
SONM	**Songino Array**	**25.72**	**33**	P	**P**	**14 40 08.0 -0.2**	
	0.4nm,0.5s,baz=227,slow=8.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.24**	**359**	P	**P**	**14 40 13.0 +0.4**	
	0.5nm,0.3s,baz=188,slow=11,SNR=4.9						
FINES	**FINESS Array B**	**51.68**	**328**	P	**P**	**14 43 44.6 +0.3**	
	0.7nm,0.8s,baz=98,slow=10.0,SNR=3.5						
WRA	**Warramunga Arr**	**66.68**	**130**	P	**P**	**14 45 28.3 -0.5**	
	0.2nm,0.5s,baz=324,slow=6.4,SNR=2.5						
ASAR	**Alice Springs**	**68.98**	**133**	P	**P**	**14 45 43.5 +0.2**	
	0.3nm,0.9s,baz=321,slow=7.2,SNR=1.4						

IDC 27 14:42:37.4±0.9, 27.64N×85.53E, h0km, mb3.8/10, mb1 3.8/12, mb1mx3.6/51, mbtmp3.7/12, ML3.6/2, Error ellipse: s-maj=32.1km s-min=17.1km az=61.0
NEIC 27 14:42:39.2±0.7, 27.68N±0.05×85.6E±0.1, h10km±1km, mb4.3/12, Error ellipse: s-maj=21.1km s-min=8.7km az=269.0
NDI 27 14:42:39.6±3.1, 27.63N×85.67E, h10km±18km, ML4.2, mb4.3(NEIC)
DMN 27 14:42:39.1±0.2, 27.88N×85.78E, h25km, Ml4.9/5, Error ellipse: s-maj=5.4km s-min=2.1km az=10.0

ISC 27 14:42:39.4±1.0, 27.72N±0.04×85.68E±0.02, h13km±7km, n51, σ1s93/65, mb4.0/14, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.26**	**43**	*e*Pg	**Pg**	**14 42 44.3**	**-0.8**
GUN				*e*Sg	**Sg**	**14 42 46.4**	**-2.5**
PKI	**Pulchoki**	**0.28**	**238**	*e*Pg	**Pn**	**14 42 48.9**	**-0.6**
PKI				*e*Sg	**Sb**	**14 42 54.8**	**+3.5**
	11μm,0.5s						
PKIN	**Phulchoki**	**0.29**	**240**	*e*Pg	**Pn**	**14 42 48.9**	**-0.7**
PKIN				*e*Sg	**Sb**	**14 42 55.7**	**+4.3**
KKN	**Kakani**	**0.36**	**281**	*e*Pg	**Pn**	**14 42 49.3**	**-1.2**
KKN				*e*Sg	**Sb**	**14 42 55.1**	**+1.7**
DMN	**Daman**	**0.52**	**258**	*e*Pg	**Pn**	**14 42 52.8**	**0.0**
DMN				*e*Sg	**Sn**	**14 43 01.3**	**-0.3**
	5μm,0.4s						
GKN	**Gorkha**	**0.96**	**287**	*e*Pg	**Pn**	**14 42 59.6**	**+0.8**
RAMN	**Ramite**	**1.12**	**133**	*e*Pg	**Pn**	**14 43 01.0**	**0.0**
ODAN	**Odare**	**1.75**	**119**	*e*Pg	**Pg**	**14 43 12.7**	**-0.3**
ODAN				*e*Sg	**Sg**	**14 43 35.5**	**-0.2**
	4μm,0.6s						
DANN	**Dangsing**	**1.81**	**291**	*e*Pg	**Pg**	**14 43 13.4**	**-0.7**
DANN				*e*Sg	**Sg**	**14 43 38.3**	**+0.6**
	1μm,0.2s						
TAPN	**Taplejung**	**1.84**	**101**	*e*Pg	**Pb**	**14 43 13.1**	**0.0**
TAPN				*e*Sg	**Sb**	**14 43 37.3**	**+1.2**
	660nm,0.3s						
KOLN	**Koldanda**	**1.84**	**272**	*e*Pg	**Pg**	**14 43 14.7**	**-0.1**
KOLN				*e*Sg	**Sg**	**14 43 40.4**	**+1.6**
	2μm,0.3s						
PYUN	**Piuthan**	**2.41**	**280**	*e*Pg	**Pg**	**14 43 24.8**	**-0.8**
PYUN				*e*Sg	**Sg**	**14 43 56.7**	**-0.2**
	1μm,0.3s						
GTK	**Tadong**	**2.63**	**98**	*e*P	**Pb**	**14 43 26.4**	**0.0**
GTK				*e*S	**Sn**	**14 43 55.5**	**+2.1**
GTK				IAML		14 44 02.4	
	comp=E,502nm,0.2s						
LSA	**Lhasa**	**5.19**	**66**	Pn	**Pn**	**14 43 58.5**	**+1.3**
SHL	**Shillong**	**5.95**	**110**	*e*P	**Pn**	**14 44 08.1**	**+0.7**
SHL				*e*S	**Sn**	**14 45 11.4**	**-4.1**
SHL	**Shillong**	**5.95**	**110**	Pn	**Pn**	**14 44 08.3**	**+0.9**
TEZP	**TEZPUR**	**6.44**	**98**	*e*P	**Pn**	**14 44 14.5**	**+0.7**
TEZP				*e*S	**Sn**	**14 45 24.1**	**-3.1**
ZIRO	**ZIRO**	**7.25**	**90**	*e*P	**Pn**	**14 44 26.6**	**+1.3**
ZIRO				*e*S	**Sn**	**14 45 44.2**	**-3.3**
SMLA	**Simla**	**8.16**	**297**	*e*P	**Pn**	**14 44 39.1**	**+1.6**
SMLA				*e*S	**Sn**	**14 46 07.1**	**-2.5**
SMLA				IAML		14 46 09.9	
	comp=E,77nm,0.4s						
BHPL	**Bhopal**	**8.69**	**241**	*e*P	**Pn**	**14 44 43.7**	**-1.2**
BHPL				*e*S	**Sn**	**14 46 16.1**	**-6.6**
BHPL				IAML		14 46 22.0	
	comp=N,105nm,0.3s						
BHPL				IAML		14 46 23.6	
	comp=E,72nm,0.3s						
DHRM	**DHARAMSHALA**	**9.30**	**301⇑**	*e*P	**Pn**	**14 44 52.9**	**-0.4**
DHRM				*e*S	**Sn**	**14 46 32.1**	**-5.9**
DHRM				IAML		14 46 36.7	
	comp=N,447nm,0.7s						
DHRM				IAML		14 46 38.1	
	comp=E,522nm,0.4s						
AJM	**Ajmer**	**9.91**	**265**	*e*S	**Sn**	**14 46 48.0**	**-4.8**
HYB	**Hyderabad**	**12.18**	**214**	*i* P	Pn	14 45 16.0	-17
HYB				*e*S	**Sn**	**14 47 47.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**15.28**	**124**	Pn	**Pn**	**14 46 16.4**	**+1.5**
	comp=E,0.1nm,0.3s,baz=307,slow=10,SNR=6.3						
WMQ	**Urumqi**	**16.15**	**5**	*e*P	**Pn**	**14 46 26.5**	**+0.4**
MK31	**Makanchi Array**	**19.22**	**353**	P	**P**	**14 47 03.7**	**+0.5**
MKAR	**Makanchi Array**	**19.22**	**353**	P	**P**	**14 47 04.0**	**+0.8**
	comp=E,0.2nm,0.3s,baz=181,slow=10,SNR=9.0						
MKAR	**Makanchi Array**	**19.22**	**353**	P	**P**	**14 47 03.5**	**+0.4**
MAKZ	**Makanchi**	**19.27**	**352**	P	**P**	**14 47 04.6**	**+0.9**
KURBB	**Kurchatov Arra**	**23.51**	**349**	P	**P**	**14 47 49.9**	**+1.0**
	comp=E,0.4nm,0.3s,baz=165,slow=10.0,SNR=3.4						
KURK	**Kurchatov**	**23.58**	**349**	P	**P**	**14 47 49.9**	**+0.3**
SONM	**Songino Array**	**25.76**	**33**	P	**P**	**14 48 11.1**	**+1.2**
	comp=E,1.7nm,0.5s,baz=215,slow=10.0,SNR=11						
SONM	**Songino Array**	**25.76**	**33**	P	**P**	**14 48 10.6**	**+0.7**
ULN	**Ulaanbaatar**	**26.11**	**34**	P	**P**	**14 48 14.2**	**+1.1**
ULN				IAmb	IAmb	14 48 21.3	
	comp=Z,2.8nm,0.6s						
ZALV	**Zalesovo Beam**	**26.21**	**359**	P	**P**	**14 48 15.1**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=186,slow=12,SNR=2.5						
TLY	**Talaya**	**27.48**	**25**	P	**P**	**14 48 26.1**	**+0.9**
	comp=Z,2.2nm,0.3s,baz=248,slow=19,SNR=6.7						
TLY	**Talaya**	**27.48**	**25**	IAmb	IAmb	14 48 30.0	
	comp=Z,3.4nm,0.7s						
ABKAR	**Akbulak array**	**29.22**	**324**	P	**P**	**14 48 41.3**	**+0.6**
ABKAR				IAmb	IAmb	14 48 42.9	
	comp=Z,1.0nm,0.6s						
NRIK	**Noril'sk**	**41.66**	**1**	P	**P**	**14 50 28.0**	**+0.8**
NRIK				IAmb	IAmb	14 50 34.1	
	comp=Z,5.4nm,1.4s						
FINES	**FINESS Array B**	**51.59**	**328**	P	**P**	**14 51 45.4**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=106,slow=8.8,SNR=1.2						
ARCES	**ARCESS Array B**	**53.97**	**338**	P	**P**	**14 52 03.3**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=104,slow=8.3,SNR=8.1						
ARCES	**ARCESS Array B**	**53.97**	**338**	IAmb	IAmb	14 52 24.0	
	comp=Z,9.8nm,1.2s						
NOA	**NORSAR Array B**	**58.68**	**327**	P	**P**	**14 52 34.5**	**-1.8**
	comp=Z,0.8nm,1.0s,baz=93,slow=6.6,SNR=1.6						
WB0	**Warramunga Arr**	**66.71**	**130**	P	**P**	**14 53 30.8**	**+0.4**
WRA	**Warramunga Arr**	**66.80**	**130**	P	**P**	**14 53 31.2**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=322,slow=6.5,SNR=12						
WB2	**Warramunga Arr**	**66.81**	**130**	P	**P**	**14 53 31.3**	**+0.3**
WB2				IAmb	IAmb	14 53 57.0	
	comp=Z,9.9nm,1.4s						
WR0	**Warramunga Arr**	**66.95**	**130**	P	**P**	**14 53 32.2**	**+0.4**
NWAO	**Narrogin (SRO)**	**67.36**	**152**	P	**P**	**14 53 34.5**	**+0.2**
ASAR	**Alice Springs**	**69.10**	**133**	P	**P**	**14 53 46.0**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=317,slow=6.2,SNR=12						
TORD	**Torodi Ar. Bea**	**78.75**	**279**	P	**P**	**14 54 42.1**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=47,slow=4.6,SNR=3.2						
TORD	**Torodi Ar. Bea**	**78.75**	**279**	IAmb	IAmb	14 54 46.4	
	comp=Z,0.9nm,1.2s						

IDC 27 14:43:32.0±1.4, 17.51S×178.94W, h527km±15km, mb3.2/9, mb1 3.5/11, mb1mx3.2/39, mbtmp4.1/11, Error ellipse: s-maj=50.8km s-min=13.4km az=150.0
NEIC 27 14:43:32.8±1.0, 17.6S±0.2×178.9W±0.2, h541km±6km, mb4.2/16, Error ellipse: s-maj=28.6km s-min=13.4km az=141.0

ISC 27 14:43:32.4±0.7, 17.6S±0.2×178.8W±0.1, h539km, n33, σ1s05/32, mb4.0/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.98**	**266**	P	**P**	**14 44 45.8**	**-0.7**
	1.1nm,0.3s,baz=88,slow=4.6,SNR=11						
MSVF	**Nonsavu**	**2.98**	**266**	P	**P**	**14 44 48.6**	**+2.1**
AFI	**Afiamalu**	**7.70**	**63**	P	**P**	**14 45 25.0**	**-2.0**
	3.9nm,0.3s,baz=313,slow=1.9,SNR=7.5						
AFI	**Afiamalu**	**7.70**	**63**	P	**P**	**14 45 24.3**	**-2.8**
DZM	**Mont Dzumac**	**14.56**	**250**	P	**P**	**14 46 37.0**	**-0.7**
ARMA	**Armidale**	**29.77**	**239**	P	**P**	**14 48 56.1**	**+0.5**
CTAO	**Charters Tower**	**33.11**	**260**	P	**P**	**14 49 23.7**	**-0.5**
CTAO				IAmb	IAmb	14 49 26.2	
	comp=Z,11nm,1.2s						
TOO	**Toolangi**	**37.08**	**230**	P	**P**	**14 49 57.6**	**+0.6**
TOO				IAmb	IAmb	14 50 00.5	
	comp=Z,8.5nm,0.9s						
STKA	**Stephens Creek**	**38.44**	**241**	P	**P**	**14 50 07.7**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=94,slow=11,SNR=9.8						
STKA	**Stephens Creek**	**38.44**	**241**	P	**P**	**14 50 08.6**	**+0.4**
BBOO	**Buckleboo**	**43.22**	**241**	P	**P**	**14 50 46.1**	**-0.2**
BBOO				IAmb	IAmb	14 50 47.0	
	comp=Z,7.8nm,0.9s						
WR0	**Warramunga Arr**	**44.11**	**259**	P	**P**	**14 50 52.2**	**-1.1**
WB0	**Warramunga Arr**	**44.26**	**259**	P	**P**	**14 50 53.2**	**-1.3**
WB0				IAmb	IAmb	14 50 56.3	
	comp=Z,7.1nm,1.2s						
WB2	**Warramunga Arr**	**44.29**	**259**	P	**P**	**14 50 53.5**	**-1.2**
WB2				IAmb	IAmb	14 51 16.5	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**44.30**	**259**	P	**P**	**14 50 53.9**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=93,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	**44.30**	**259**	IAmb	IAmb	14 50 54.7	
	comp=Z,0.2nm,0.8s						
AS31	**Alice Springs**	**44.50**	**254**	P	**P**	**14 50 55.8**	**-0.5**
AS31				IAmb	IAmb	14 50 56.8	
	comp=Z,3.4nm,0.6s						
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**14 50 56.2**	**-0.1**
	comp=Z,10nm,0.6s,baz=89,slow=8.0,SNR=243						
FORT	**Forest**	**49.79**	**244**	P	**P**	**14 51 35.4**	**-0.6**
KNRA	**Kununurra**	**50.12**	**264**	P	**P**	**14 51 38.1**	**-0.5**
KNRA				IAmb	IAmb	14 51 56.5	
	comp=Z,11nm,1.2s						
FITZ	**Fitzroy Crossi**	**52.69**	**260**	P	**P**	**14 51 57.2**	**+0.1**
QSPA	**South Pole Qui**	**72.49**	**180**	P	**P**	**14 54 04.7**	**+0.4**
QSPA				IAmb	IAmb	14 54 05.5	
	comp=Z,7.0nm,1.4s						
PET	**Petropavlovsk**	**72.94**	**346**	P	**P**	**14 54 06.5**	**-0.3**
PETK	**Petropavlovsk-**	**73.25**	**345**	P	**P**	**14 54 08.8**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=114,slow=5.7,SNR=4.1						
SII	**Sitkinak Islan**	**76.69**	**14**	P	**P**	**14 54 28.2**	**+0.5**
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**14 54 44.8**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=223,slow=9.3,SNR=5.7						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**14 54 44.2**	**+0.8**
ILAR	**Eielson Array**	**85.64**	**13**	P	**P**	**14 55 13.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=225,slow=5.2,SNR=16						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**14 55 18.6**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=214,slow=6.0,SNR=6.6						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**14 55 17.5**	**+0.5**
PDAR	**Pinedale Array**	**87.38**	**44**	P	**P**	**14 55 23.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=216,slow=3.6,SNR=6.0						
YKA	**Yellowknife Ar**	**94.19**	**25**	P	**P**	**14 55 54.0**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=246,slow=4.9,SNR=4.1						
GERES	**GERESS Array B**	**147.18**	**345**	PKPbc	**PKPbc**	**15 02 15.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=29,slow=3.0,SNR=3.6						

IDC 27 14:56:58.7±0.7, 27.74N×85.77E, h0km, mb3.9/18, mb1 4.0/21, mb1mx3.8/44, mbtmp3.9/21, ML3.6/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/47, Error ellipse: s-maj=23.4km s-min=14.7km az=49.0
BJI 27 14:56:59.0±0.0, 27.80N×85.90E, h10km, mB4.2/2, mb4.2/16, Ms3.7/5, Ms7 3.6/3
DMN 27 14:56:59.9±0.3, 27.95N×86.12E, h10km, Ml4.6/3, Error ellipse: s-maj=8.9km s-min=2.1km az=14.0
NEIC 27 14:57:00.1±1.7, 27.81N±0.06×85.89E±0.08, h10km±1km, mb4.0/24, Error ellipse: s-maj=13.5km s-min=8.3km az=126.0
NDI 27 14:57:02.4±3.7, 27.68N×85.99E, h10km, ML4.0, mb4.0(NEIC)

ISC 27 14:57:01.2±0.9, 27.78N±0.05×85.94E±0.03, h15km±5km, n94, σ1s96/100, mb4.0/26, 1C-1D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**0.14**	**338**	*e*Pg	**Pg**	**14 57 04.7**	**-0.6**
GUN				*e*Sg	**Sg**	**14 57 07.3**	**-0.7**
PKI	**Pulchoki**	**0.51**	**246**	*e*Pg	**Pn**	**14 57 14.2**	**-0.1**
PKIN	**Phulchoki**	**0.52**	**247**	*e*Pg	**Pn**	**14 57 14.3**	**-0.1**
KKN	**Kakani**	**0.58**	**271**	*e*Pg	**Pn**	**14 57 14.4**	**-0.7**
KKN				*e*Sg	**Sn**	**14 57 25.3**	**+0.8**
	4μm,0.2s						
DMN	**Daman**	**0.76**	**257**	*e*Pg	**Pn**	**14 57 18.4**	**+0.8**
RAMN	**Ramite**	**1.02**	**144**	*e*Pg	**Pg**	**14 57 19.5**	**-1.5**
GKN	**Gorkha**	**1.17**	**281**	*e*Pg	**Pn**	**14 57 24.6**	**+1.4**
ODAN	**Odare**	**1.59**	**125**	*e*Pg	**Pb**	**14 57 29.8**	**-0.6**
ODAN				*e*Sg	**Sb**	**14 57 50.7**	**+0.3**
	1μm,0.3s						
TAPN	**Taplejung**	**1.63**	**105**	*e*Pg	**Pn**	**14 57 28.8**	**-0.9**
TAPN				*e*Sg	**Sn**	**14 57 49.2**	**-1.4**
	748nm,0.3s						
DANN	**Dangsing**	**2.00**	**287**	*e*Sg	**Sg**	**14 58 06.1**	**+0.3**
	968nm,0.3s						
KOLN	**Koldanda**	**2.07**	**270**	*e*Sg	**Sg**	**14 58 10.3**	**+2.4**
GTK	**Tadong**	**2.41**	**100**	*e*P	**Pn**	**14 57 42.0**	**+1.8**
GTK				*e*S	**Sn**	**14 58 11.9**	**+2.3**
GTK				IAML		14 58 14.8	
	comp=E,2μm,0.3s						
GTK				IAML		14 58 15.3	
	comp=N,1μm,0.4s						
LSA	**Lhasa**	**4.96**	**66**	Pn	**Pn**	**14 58 17.5**	**+1.9**
LSA				LR	LR		
	comp=N,220nm,5.7s						
LSA				LR	LR		
	comp=N,540nm,6.8s						
LSA				LR	LR		
	comp=N,430nm,7.1s						
LSA	**Lhasa**	**4.96**	**66**		**Pn**	**14 58 17.4**	**+1.9**
GUWA	**GUWAHATI**	**5.37**	**106**	*e*P	**Pn**	**14 58 21.4**	**+0.5**
GUWA				*e*S	**Sn**	**14 59 21.4**	**-1.0**
SHL	**Shillong**	**5.76**	**111**	*e*P	**Pn**	**14 58 25.4**	**-1.0**
SHL				*e*S	**Sn**	**14 59 26.6**	**-5.7**
SHL	**Shillong**	**5.76**	**111**	Pn	**Pn**	**14 58 25.4**	**-1.0**
DDI	**Dehra Dun**	**7.35**	**292**	*e*P	**Pn**	**14 58 50.9**	**+2.9**
DDI				*e*S	**Sn**	**15 00 11.6**	**+0.4**
MOKO	**MOKOCHONG**	**7.79**	**99**	*e*P	**Pn**	**14 58 52.9**	**-1.3**
MOKO				*e*S	**Sn**	**15 00 16.3**	**-5.9**
MOKO				IAML		15 00 26.3	
	comp=N,96nm,0.3s						
MOKO				IAML		15 00 29.2	
	comp=E,68nm,0.3s						
SMLA	**Simla**	**8.34**	**296**	*e*P	**Pn**	**14 59 02.6**	**+1.0**
SMLA				*e*S	**Sn**	**15 00 34.5**	**-0.9**
SMLA				IAML		15 00 39.7	
	comp=N,104nm,0.5s						
SMLA				IAML		15 00 41.3	
	comp=E,96nm,0.5s						
BHPL	**Bhopal**	**8.92**	**241**	*e*P	**Pn**	**14 59 09.0**	**-0.6**
BHPL				*e*S	**Sn**	**15 00 45.4**	**-4.4**
BHPL				IAML		15 00 51.3	
	comp=N,92nm,0.3s						
DHRM	**DHARAMSHALA**	**9.46**	**300**	*e*P	**Pn**	**14 59 15.8**	**-1.4**
DHRM				*e*S	**Sn**	**15 01 00.2**	**-3.3**
DHRM				IAML		15 01 05.0	
	comp=N,76nm,0.6s						
DHRM				IAML		15 01 05.3	
	comp=E,82nm,0.6s						
AJM	**Ajmer**	**10.14**	**265‖**	*e*P	**Pn**	**14 59 28.0**	**+1.6**
HYB	**Hyderabad**	**12.36**	**215**	*i* P	**Pn**	**14 59 59.0**	**+2.2**
CHTO	**Chiang Mai**	**14.91**	**124**		**P**	**15 00 37.1**	**-0.1**
CM33	**Chiang Mai Arr**	**14.91**	**124**	P	**P**	**15 00 40.0**	**+2.8**
CMMT	**Chiang Mai**	**14.91**	**124**	P	**P**	**15 00 38.0**	**+0.8**
CM32	**Chiang Mai Arr**	**14.94**	**125**	P	**P**	15 00 47.0	+10
CM34	**Chiang Mai Arr**	**15.04**	**123**	P	**P**	**15 00 39.0**	**+0.4**
CM15	**Chiang Mai Arr**	**15.12**	**125**	P	**P**	15 00 46.6

BURAR	**Bucovina Array**	**50.61**	**310**	P	**P**	**15 05 59.6**	**0.0**
BURAR				IAmb	IAmb	15 06 04.4		
	comp=Z,0.8nm,0.8s							
FINES	**FINESS Array B**	**51.65**	**328**	P	**P**	**15 06 06.0**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=113,slow=8.4,SNR=12							
VTS	**Vitosha**	**52.21**	**304**	P	**P**	**15 06 11.8**	**+0.1**
VTS				IAmb	IAmb	15 06 13.8		
	comp=Z,2.9nm,0.8s							
KEV	**Kevo**	**53.57**	**338**	P	**P**	**15 06 21.4**	**+0.3**
ARCES	**ARCESS Array B**	**54.00**	**338**	P	**P**	**15 06 23.7**	**-0.6**
	comp=Z,3.9nm,0.8s,baz=81,slow=7.5,SNR=14							
NOA	**NORSAR Array B**	**58.76**	**327**	P	**P**	**15 06 56.1**	**-2.3**
	comp=Z,0.5nm,0.6s,baz=86,slow=7.1,SNR=3.6							
NOA				LR	LR	15 33 42.6		
	comp=Z,23nm,18.1s,baz=175,slow=38							
KEST	**Kesra**	**64.10**	**298**	P	**P**	**15 07 34.4**	**-0.7**
	comp=Z,5.7nm,0.8s,baz=268,slow=4.0,SNR=4.5							
KEST	**Kesra**	**64.10**	**298**	P	**P**	**15 07 36.2**	**+1.2**
WB0	**Warramunga Arr**	**66.58**	**130**	P	**P**	**15 07 50.9**	**-0.1**
WRA	**Warramunga Arr**	**66.66**	**130**	P	**P**	**15 07 51.9**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=323,slow=6.5,SNR=30							
WRA	**Warramunga Arr**	**66.66**	**130**	P	**P**	**15 07 51.5**	**-0.1**
WB2	**Warramunga Arr**	**66.67**	**130**	P	**P**	**15 07 52.0**	**+0.3**
WR0	**Warramunga Arr**	**66.81**	**130**	P	**P**	**15 07 52.6**	**+0.1**
AS31	**Alice Springs**	**68.97**	**133**	P	**P**	**15 08 05.8**	**-0.4**
AS31				IAmb	IAmb	15 08 19.6		
	comp=Z,0.8nm,1.0s							
ASAR	**Alice Springs**	**68.97**	**133**	P	**P**	**15 08 06.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=317,slow=6.1,SNR=16							
ASAR	**Alice Springs**	**68.97**	**133**	P	**P**	**15 08 06.2**	**+0.1**
ESDC	**Sonseca Array**	**72.78**	**306**	P	**P**	**15 08 29.0**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=60,slow=6.5,SNR=6.0							
TOLK	**Toolik Lake Re**	**75.66**	**18**	P	**P**	**15 08 44.1**	**-1.3**
TOLK				IAmb	IAmb	15 08 45.9		
	comp=Z,5.1nm,1.3s							
TORD	**Torodi Ar. Bea**	**78.97**	**279**	P	**P**	**15 09 05.0**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=45,slow=4.9,SNR=2.8							
TORD				LR	LR	15 47 25.2		
	comp=Z,19nm,20.9s,baz=115,slow=38							
TORD	**Torodi Ar. Bea**	**78.97**	**279**	IAmb	IAmb	15 09 11.7		
	comp=Z,0.6nm,0.8s							
ILAR	**Eielson Array**	**79.08**	**20**	P	**P**	**15 09 06.0**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=317,slow=3.5,SNR=4.7							
INK	**Inuvik**	**79.86**	**14**	P	**P**	**15 09 10.4**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=259,slow=10,SNR=2.1							
DBIC	**Dimbokro**	**87.63**	**276**	P	**P**	**15 09 50.3**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=22,slow=5.4,SNR=1.9							
YKA	**Yellowknife Ar**	**88.54**	**9**	P	**P**	**15 09 54.1**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=336,slow=4.8,SNR=4.2							

PGC 27 14:57:20.8±2.7, 51°37N×131°13W, h16km, ML3.1/12, 214km Sse of Sandspit, Bc Haida Gwaii Region, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HG4B	**Hotspring**	**0.92**	**357**	P	Pb	14 57 37.7	-0.6
HG4B				S	Sb	14 57 48.4	-1.9
BNB	**Barry Inlet**	**1.26**	**343**	P	Pn	14 57 43.6	-0.2
BNB				S	Sb	14 57 59.8	-0.5
HG1B	**Mitchell Dam**	**1.68**	**339**	Pn	Pn	14 57 49.2	-0.2
MOBC	**Moresby Island**	**1.85**	**344**	Pn	Pn	14 57 52.2	+0.4
MOBC				Sn	Sn	14 58 14.3	-0.6
MOBC				Sg	Sb	14 58 18.5	+1.5
DIB	**Dawson Inlet,**	**2.01**	**336**	Pn	Pn	14 57 53.8	-0.1
DIB				Sg	Sb	14 58 23.2	+1.6
HOLB	**Holberg**	**2.03**	**110**	Pn	Pn	14 57 54.1	-0.2
BBB	**Bella Bella**	**2.04**	**65**	Pn	Pn	14 57 53.1	-1.3
BBB				Sn	Sn	14 58 19.7	+0.1
BNAB	**Bonilla**	**2.15**	**8**	Pn	Pn	14 57 55.6	-0.2
BNAB				Sn	Sn	14 58 23.1	+1.0
PHC	**Port Hardy**	**2.43**	**105**	Pn	Pn	14 57 58.8	-0.9
HWKB	**Hawksbury Isla**	**2.54**	**28**	Pn	Pn	14 58 00.7	-0.5
HWKB				Sg	Sb	14 58 35.9	-0.9
GRNB	**Grenville Isla**	**2.58**	**16**	Pn	Pn	14 58 01.3	-0.6
GRNB				Sn	Sn	14 58 32.6	-0.2
MAYB	**Maynard**	**2.69**	**110**	Pn	Pn	14 58 03.6	+0.1
EDB	**Eliza Dome**	**2.96**	**119**	Pn	Pn	14 58 07.2	+0.2
RUBB	**Prince Rupert**	**3.00**	**10**	Pn	Pn	14 58 07.6	-0.1
KITB	**Kitimat**	**3.10**	**28**	Pn	Pn	14 58 08.5	-0.4
WOSB	**Woss**	**3.14**	**111**	Pn	Pn	14 58 09.9	+0.3
NCRB	**Newcastle Ridg**	**3.36**	**105**	Pn	Pn	14 58 12.7	0.0

IDC 27 14:58:10.3±2.0, 51°49N×130°82W, h0km, mb3.5/1, mb1 3.6/6, mb1mx3.3/47, mbtmp3.3/6, ML3.2/5, MS3.1/1, Ms1 3.2/1, ms1mx2.2/32, Error ellipse: s-maj=23.5km s-min=17.8km az=42.0, Queen Charlotte Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBB	**Bella Bella**	**1.82**	**66**	Pn	Pn	14 58 41.2	-1.6
	17nm,0.3s,baz=184,slow=23,SNR=3.4						
BBB				Sn	Sn	14 59 05.8	-0.7
	56nm,0.3s,baz=166,slow=21,SNR=16						
DLBC	**Dease Lake**	**6.98**	**3**	Pn	Pn	14 59 53.6	-0.2
	0.3nm,0.3s,baz=201,slow=14,SNR=1.8						
YKA	**Yellowknife Ar**	**14.08**	**32**	Pn	Pn	15 01 28.1	-2.6
	0.0nm,0.3s,baz=223,slow=12,SNR=1.7						
ILAR	**Eielson Array**	**15.72**	**334**	Pn	P	15 01 55.0	-1.9
	0.0nm,0.3s,baz=147,slow=12,SNR=2.7						
ILAR				LR	LR	15 07 03.2	
	comp=Z,70nm,18.5s,baz=136,slow=34						
NVAR	**Mina Array Bea**	**15.74**	**141**	Pn	P	15 01 55.8	-1.8
	0.1nm,0.3s,baz=338,slow=14,SNR=2.5						
PDAR	**Pinedale Array**	**16.84**	**113**	Pn	P	15 02 08.9	-0.9
	0.1nm,0.3s,baz=305,slow=8.3,SNR=10.0						
ULM	**Lac du Bonnet**	**21.97**	**79**	P	P	15 03 07.0	+1.5
	1.4nm,0.7s,baz=276,slow=6.7,SNR=3.7						

*JMA **27** 15:14:54.0, 23°.94N×121°.59E, h40km±1km, M3.4*
*TAP **27** 15:14:54.8, 23°.98N×121°.61E, h40km, ML3.8, B*
*NEIC **27** 15:14:54.1±1.2, 23°.93N±0°.03×121°.62E±0°.06, h40km±7km, Error ellipse: s-maj=7.7km s-min=4.1km az=110.0*
ISC 27 15:14:54.5±0.8, 23°.97N±0°.01×121°.64E±0°.02, h33km±2km, n145, σ1°20/245, 19C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.03**	**286**	P	**Pb**	**15 15 01.8**	**+1.8**
	baz=108						
HWA				S	**Sb**	**15 15 07.2**	**+3.4**
	baz=108						
TWD	**Chiawan**	**0.12**	**341**	⇑*i*P	**Pb**	**15 15 01.5**	**+1.1**
	baz=350						
TWD				*i* S	**Sb**	**15 15 06.0**	**+1.5**
	baz=350						
NACB	**Ninganchiao**	**0.21**	**349**	⇑*i*P	**Pn**	**15 15 01.8**	**+1.2**
	baz=350						
NACB				*i* S	**Sb**	**15 15 06.7**	**+1.0**
	baz=350						
NACB	**Ninganchiao**	**0.21**	**349**	Pn	**Pn**	**15 15 01.6**	**+1.0**
ESL	**Shilin**	**0.24**	**231**	⇓*i*P	**Pn**	**15 15 02.0**	**+0.7**
	baz=228						
ESL				S	**Sb**	**15 15 06.8**	**+0.5**
	baz=228						
ETLH	**Xiulin Townshi**	**0.28**	**329**	⇑*i*P	**Pn**	**15 15 02.5**	**+0.5**
	baz=334						
ETLH				S	**Sn**	**15 15 07.7**	**+1.2**
	baz=334						
EGFH	**Guangfu**	**0.35**	**213**	⇓*i*P	**Pb**	**15 15 03.2**	**+0.2**
	baz=215						
EGFH				S	**Sn**	**15 15 08.9**	**-0.1**
	baz=215						
WHF	**Hehuan Shan**	**0.38**	**297**	⇓*i*P	**Pb**	**15 15 04.1**	**+0.4**
	baz=294						
WHF				*i* S	**Sn**	**15 15 10.4**	**+0.3**
	baz=294						
OWD	**Renai**	**0.42**	**268**	⇓*i*P	**Pb**	**15 15 04.6**	**+0.6**
	baz=270						
OWD				S	**Sb**	**15 15 11.0**	**+0.4**
	baz=270						
CHGB	**Renai**	**0.43**	**282**	⇓*i*P	**Pb**	**15 15 04.9**	**+0.7**
	baz=278						
CHGB				*i* S	**Sb**	**15 15 11.5**	**+0.6**
	baz=278						
FUSS	**Fushou**	**0.45**	**308**	⇓*i*P	**Pb**	**15 15 05.2**	**+0.6**
	baz=312						
FUSS				*i* S	**Sb**	**15 15 12.0**	**+0.5**
	baz=312						
EWUT	**Wuta**	**0.49**	**15**	P	**Pb**	**15 15 05.3**	**+0.3**
	baz=10.0						
EWUT				*e*S	**Sb**	**15 15 12.3**	**+0.2**
	baz=10.0						
VWDT	**VWDT**	**0.50**	**245**	⇓*i*P	**Pb**	**15 15 05.8**	**+0.7**
	baz=236						
VWDT				S	**Sb**	**15 15 12.9**	**+0.5**
	baz=236						
TWT	**Tachien**	**0.51**	**304**	⇓*i*P	**Pb**	**15 15 06.1**	**+0.7**
	baz=307						
TWT				*i* S	**Sb**	**15 15 13.5**	**+0.7**
	baz=307						
HGSD	**Ruisui**	**0.51**	**202**	P	**Pb**	**15 15 06.0**	**+0.7**
	baz=209						
HGSD				S	**Sn**	**15 15 14.2**	**+1.1**
	baz=209						
NNSB	**Datong**	**0.51**	**333**	⇑*i*P	**Pb**	**15 15 05.6**	**+0.2**
	baz=339						
NNSB				*i* S	**Sb**	**15 15 12.9**	**-0.1**
	baz=339						
NNSH	**Datong**	**0.51**	**333**	⇑*i*P	**Pb**	**15 15 05.6**	**+0.2**
	baz=338						
NNSH				*i* S	**Sb**	**15 15 12.9**	**0.0**
	baz=338						
TDCB	**Techi**	**0.52**	**303**	⇓*i*P	**Pn**	**15 15 06.0**	**+0.4**
	baz=307						
TDCB				S	**Sb**	**15 15 13.1**	**0.0**
	baz=307						
NNS	**Nan Shan**	**0.53**	**333**	⇑*i*P	**Pn**	**15 15 05.8**	**0.0**
	baz=339						
NNS				*i* S	**Sb**	**15 15 13.3**	**0.0**
	baz=339						
WPL	**Puli Township**	**0.62**	**274**	P	**Pn**	**15 15 07.3**	**+0.4**
	baz=271						
WPL				*e*S	**Sn**	**15 15 16.3**	**+0.5**
	baz=271						
NDT	**Datong Townshi**	**0.64**	**350**	⇑*i*P	**Pn**	**15 15 07.3**	**+0.1**
	baz=345						
NDT				*e*S	**Sn**	**15 15 15.4**	**-0.8**
	baz=345						
SSLB	**Suanglung**	**0.65**	**254**	⇓*i*P	**Pn**	**15 15 07.5**	**+0.2**
	baz=255						
SSLB				S	**Sn**	**15 15 15.9**	**-0.6**
	baz=255						
SSLB	**Suanglung**	**0.65**	**254**		**Pn**	**15 15 07.2**	**-0.2**
DPDB	**Guoxing**	**0.65**	**276**	P	**Pn**	**15 15 07.9**	**+0.5**
	baz=272						
YULB	**Yu-li**	**0.65**	**209**	P	**Pn**	**15 15 06.4**	**-1.0**
	baz=206						
YULB	**Yu-li**	**0.65**	**209**		**Pn**	**15 15 06.3**	**-1.0**
NDS	**Dongshan**	**0.67**	**6**	*e*P	**Pn**	**15 15 07.2**	**-0.4**
	baz=358						
TWC	**Suao**	**0.67**	**17**	⇑*i*P	**Pn**	**15 15 07.8**	**+0.2**
	baz=12						
TWC				S	**Sb**	**15 15 19.4**	**+2.6**
	baz=12						
ENTT	**Nioudou**	**0.67**	**354**	⇑*i*P	**Pn**	**15 15 07.7**	**0.0**
	baz=3.0						
ENTT				S	**Sn**	**15 15 16.6**	**-0.4**
	baz=3.0						
SMLT	**Sun Moon Lake**	**0.68**	**263**	⇓*i*P	**Pn**	**15 15 08.1**	**+0.3**
	baz=259						
SMLT				*e*S	**Sn**	**15 15 17.1**	**-0.3**
	baz=259						
EYUL	**Yuli**	**0.68**	**205**	*e*P	**Pb**	**15 15 09.2**	**+1.1**
	baz=210						
TWF1	**Yuli**	**0.69**	**207**	⇑*i*P	**Pn**	**15 15 07.0**	**-0.9**
	baz=212						
TWF1				S	**Sn**	**15 15 15.8**	**-1.6**
	baz=212						
TYC	**Yuchr**	**0.72**	**265**	⇓*i*P	**Pn**	**15 15 08.5**	**+0.2**
	baz=264						
TYC				S	**Sn**	**15 15 18.5**	**+0.4**
	baz=264						
YHNB	**Yeheng**	**0.74**	**341**	⇑*i*P	**Pn**	**15 15 08.8**	**+0.2**
	baz=350						
YHNB				*i* S	**Sn**	**15 15 18.1**	**-0.7**
	baz=350						
YHNB	**Yeheng**	**0.74**	**341**		**Pn**	**15 15 08.6**	**0.0**
NSK	**Sanguang**	**0.75**	**340**	⇑*i*P	**Pn**	**15 15 08.9**	**+0.2**
	baz=349						
NSK				*i* S	**Sn**	**15 15 18.5**	**-0.5**
	baz=349						
TWE	**Neicheng**	**0.75**	**2**	⇑*i*P	**Pn**	**15 15 08.7**	**0.0**
	baz=5.0						
TWE				*e*S	**Sn**	**15 15 18.6**	**-0.3**
	baz=5.0						
WHYT	**Xinyi Township**	**0.77**	**249**	⇑*i*P	**Pn**	**15 15 10.0**	**+1.0**
	baz=248						
WHYT				S	**Sn**	**15 15 20.0**	**+0.5**
	baz=248						
ILA	**Ilan**	**0.80**	**7**	*e*P	**Pn**	**15 15 09.9**	**+0.5**
ILA				*e*S	**Sb**	**15 15 23.7**	**+3.1**
NWLT	**Wulai**	**0.81**	**351**	P	**Pn**	**15 15 09.7**	**0.0**
	baz=349						
NWLT				*e*S	**Sn**	**15 15 19.5**	**-1.0**
	baz=349						
FULB	**Fuli**	**0.83**	**202**	*e*P	**Pn**	**15 15 10.0**	**+0.1**
	baz=208						
FULB				*e*S	**Sn**	**15 15 21.8**	**+0.9**
	baz=208						
WJS	**Zhushan**	**0.84**	**260**	P	**Pn**	**15 15 11.4**	**+1.4**
	baz=259						
WJS				S	**Sb**	**15 15 23.2**	**+1.4**
	baz=259						
WWF	**Wufeng**	**0.86**	**275**	*e*P	**Pb**	**15 15 11.9**	**+0.9**
	baz=274						
WWF				*e*S	**Sb**	**15 15 24.4**	**+2.1**
	baz=274						
WNT	**Mingjian**	**0.88**	**264**	*e*P	**Pn**	**15 15 11.8**	**+1.3**
	baz=263						
WNT				*e*S	**Sb**	**15 15 24.2**	**+1.5**
	baz=263						
WNT1	**Nantou City**	**0.88**	**266**	*e*P	**Pb**	**15 15 12.2**	**+0.9**
	baz=256						
WNT1				*e*S	**Sb**	**15 15 24.4**	**+1.6**
	baz=256						
NSTT	**Nanjuang**	**0.88**	**319**	P	**Pn**	**15 15 11.8**	**+1.3**
	baz=325						
NSTT				S	**Sn**	**15 15 22.9**	**+0.8**
	baz=325						
LIOB	**Emei**	**0.88**	**320**	P	**Pn**	**15 15 12.1**	**+1.5**
	baz=307						
LIOB				S	**Sn**	**15 15 23.0**	**+0.8**
	baz=307						
ALS	**Alishan**	**0.89**	**239**	⇑*i*P	**Pn**	**15 15 11.9**	**+1.0**
	baz=229						
ALS				S	**Sn**	**15 15 24.0**	**+1.3**
	baz=229						
TCU	**Taichung**	**0.90**	**282**	P	**Pn**	**15 15 12.3**	**+1.6**
	baz=281						
TCU				S	**Sb**	**15 15 24.7**	**+1.4**
	baz=281						
NTC	**Toucheng**	**0.90**	**11**	*e*P	**Pn**	**15 15 11.4**	**+0.6**
	baz=4.0						
NTC				*e*S	**Sb**	**15 15 24.5**	**+1.1**
	baz=4.0						
CHKT	**Chengkung**	**0.90**	**196**	P	**Pn**	**15 15 10.7**	**-0.1**
	baz=201						
CHKT				S	**Sn**	**15 15 23.6**	**+1.0**
	baz=201						
NJD	**Zhudong**	**0.91**	**327**	*e*P	**Pb**	**15 15 12.7**	**+0.8**
	baz=332						
NJD				*e*S	**Sb**	**15 15 25.3**	**+1.5**
	baz=332						
NSY	**Sanyi**	**0.92**	**299**	P	**Pn**	**15 15 12.4**	**+1.4**
	baz=299						
NSY				S	**Sb**	**15 15 25.1**	**+1.2**
	baz=299						
CHN5	**Tsauling**	**0.95**	**247**	*e*P	**Pb**	**15 15 13.4**	**+0.8**
	baz=237						
CHN5				*e*S	**Sb**	**15 15 25.9**	**+0.9**
	baz=237						
NMLH	**Miaoli**	**0.96**	**306**	*e*P	**Pb**	**15 15 13.5**	**+0.9**
	baz=306						
NMLH				*e*S	**Sn**	**15 15 25.9**	**+1.8**
	baz=306						
ELDTW	**Lidau**	**0.96**	**216**	P	**Pn**	**15 15 11.2**	**-0.5**
	baz=208						
ELDTW				*e*S	**Sn**	**15 15 23.0**	**-1.3**
	baz=208						
HSN1	**Hsinchu**	**0.98**	**325**	*e*P	**Pn**	**15 15 13.2**	**+1.2**
	baz=325						
HSN1				*e*S	**Sb**	**15 15 27.1**	**+1.3**
	baz=325						
WDJ	**Dajia District**	**0.99**	**293**	*e*P	**Pn**	**15 15 12.9**	**+0.9**
	baz=292						
WDJ				*e*S	**Sn**	**15 15 26.2**	**+1.4**
	baz=292						
WCHH	**Zhanghua**	**0.99**	**277**	*e*P	**Pn**	**15 15 13.7**	**+1.6**
	baz=276						
WCHH				*e*S	**Sb**	**15 15 26.9**	**+0.9**
	baz=276						
NHDH	**Xindian Distri**	**0.99**	**354**	*e*P	**Pn**	**15 15 12.7**	**+0.6**
	baz=355						
NHDH				*e*S	**Sn**	**15 15 24.9**	**-0.1**
	baz=355						
TWA	**Mucha**	**1.01**	**357**	P	**Pn**	**15 15 12.7**	**+0.4**
	baz=4.0						
TWA				S	**Sn**	**15 15 25.4**	**0.0**
	baz=4.0						
TATO	**Taipei**	**1.01**	**352**	*e*P	**Pn**	**15 15 12.8**	**+0.5**
	baz=360						
TATO				*e*S	**Sn**	**15 15 25.4**	**0.0**
	baz=360						
TATO	**Taipei**	**1.01**	**352**		**Pn**	**15 15 12.6**	**+0.3**
SBCB	**Hsinchu**	**1.01**	**324**	*e*P	**Pn**	**15 15 13.2**	**+0.9**
	baz=324						
SBCB				*e*S	**Sb**	**15 15 27.6**	**+1.0**
	baz=324						
TIPB	**Shuangxi**	**1.01**	**10**	*e*P	**Pn**	**15 15 12.9**	**+0.5**
	baz=3.0						
TIPB				*e*S	**Sb**	**15 15 28.4**	**+1.8**
	baz=3.0						
WGK	**Gukeng**	**1.02**	**254**	*e*P	**Pn**	**15 15 14.0**	**+1.5**
	baz=253						
WGK				*e*S	**Sb**	**15 15 27.8**	**+0.9**
	baz=253						
EDH	**Donghe**	**1.04**	**197**	*e*P	**Pn**	**15 15 12.1**	**-0.5**
	baz=195						
EDH				*e*S	**Sn**	**15 15 26.1**	**+0.1**
	baz=195						
WDLH	**Douliu**	**1.04**	**255**	*e*P	**Pn**	**15 15 14.1**	**+1.4**
	baz=253						
WDLH				*e*S	**Sb**	**15 15 28.3**	**+0.8**
	baz=253						
NCUH	**Zhongli**	**1.08**	**338**	*e*P	**Pn**	**15 15 14.5**	**+1.2**
	baz=338						
NCU	**National Centr**	**1.08**	**338**	*e*S	**Sb**	**15 15 29.2**	**+0.7**
	baz=338						
TWB1	**Santiao Chiao**	**1.08**	**17**	*e*P	**Pn**	**15 15 14.4**	**+1.1**
	baz=9.0						
TWB1				*e*S	**Sb**	**15 15 29.2**	**+0.6**
	baz=9.0						
NWF	**Wu-fen Shan**	**1.11**	**7**	*e*P	**Pn**	**15 15 14.3**	**+0.6**
	baz=7.0						
NWF				*e*S	**Sb**	**15 15 32.0**	**+2.7**
	baz=7.0						
WFSB	**Wu-fen Shan**	**1.11**	**7**	*e*P	**Pn**	**15 15 14.2**	**+0.6**
	baz=7.0						
WFSB				*e*S	**Sb**	**15 15 30.3**	**+1.1**
	baz=7.0						
STYH	**Taoyuan**	**1.12**	**225**	*e*P	**Pn**	**15 15 14.8**	**+1.0**
	baz=221						
STYH				*e*S	**Sn**	**15 15 28.4**	**+0.4**
	baz=221						
STYT	**Tauyuan**	**1.14**	**225**	P	**Pn**	**15 15 14.9**	**+0.8**
	baz=221						
STYT				S	**Sn**	**15 15 29.0**	**+0.4**
	baz=221						
TPUB	**Ta-pu**	**1.14**	**234**	⇑*i*P	**Pn**	**15 15 15.5**	**+1.4**
	baz=223						
TPUB				*i* S	**Sn**	**15 15 30.5**	**+1.9**
	baz=223						
TPUB	**Ta-pu**	**1.14**	**234**		**Pn**	**15 15 15.3**	**+1.3**
TWS1	**Kuangyinshan**	**1.15**	**350**	*e*P	**Pn**	**15 15 15.0**	**+0.8**
	baz=3.0						
TWS1				*e*S	**Sn**	**15 15 29.9**	**+1.2**
	baz=3.0						
LONT	**Longtian**	**1.16**	**204**	*e*P	**Pn**	**15 15 13.1**	**-1.2**
	baz=191						
YM01	**YM01**	**1.17**	**357**	*e*P	**Pn**	**15 15 14.5**	**-0.1**
	baz=357						
WTK	**Tuku**	**1.18**	**257**	*e*P	**Pn**	**15 15 16.2**	**+1.6**
	baz=255						
WTK				*e*S	**Sb**	**15 15 32.0**	**+0.8**
	baz=255						
WTP	**Ta-pu**	**1.18**	**233**	⇑*i*P	**Pn**	**15 15 16.1**	**+1.4**
	baz=231						
WTP				S	**Sn**	**15 15 31.6**	**+1.9**
	baz=231						
TNOU	**National Taiwa**	**1.18**	**6**	*e*S	**Sb**	**15 15 32.5**	**+1.1**
	baz=6.0						
CHY	**Chiayi**	**1.21**	**247**	*e*P	**Pn**	**15 15 17.0**	**+2.0**
	baz=246						
CHY				*e*S	**Sb**	**15 15 33.0**	**+0.9**
	baz=246						
YM08	**YM08**	**1.22**	**358**	*e*P	**Pn**	**15 15 14.6**	**-0.5**
	baz=358						
ANP	**Anpu**	**1.22**	**355**	*e*P	**Pn**	**15 15 15.4**	**+0.1**
	baz=355						
WTCT	**Ta-ch'eng**	**1.25**	**265**	*e*S	**Sb**	**15 15 34.1**	**+1.0**
	baz=275						
TWG	**Pinlang**	**1.25**	**205**	P	**Pn**	**15 15 14.2**	**-1.5**
	baz=194						
TWG				*e*S	**Sn**	**15 15 29.3**	**-2.1**
	baz=194						
TWG	**Pinlang**	**1.25**	**205**		**Pn**	**15 15 14.2**	**-1.5**
TWGBT	**Beinan**	**1.25**	**204**	*e*P	**Pn**	**15 15 14.3**	**-1.4**
	baz=194						
TWGBT				*e*S	**Sn**	**15 15 28.9**	**-2.5**
	baz=194						
TWK	**Hsinying**	**1.26**	**237**	⇑*i*P	**Pn**	**15 15 17.3**	**+1.4**
	baz=225						
TWK				*i* S	**Sb**	**15 15 34.0**	**+0.2**
	baz=225						
CHN1	**Nanshi**	**1.28**	**233**	P	**Pn**	**15 15 17.4**	**+1.3**
	baz=231						
CHN1				S	**Sn**	**15 15 34.2**	**+2.1**
	baz=231						
SNST	**Tainan City**	**1.28**	**235**	*e*P	**Pn**	**15 15 17.7**	**+1.6**
	baz=233						
SNST				*e*S	**Sb**	**15 15 34.5**	**+0.2**
	baz=233						
JYNG	**Yonagunijimaku**	**1.29**	**68**	P	**Pn**	**15 15 17.0**	**+0.9**
JYNG				S	**Sn**	**15 15 33.0**	**+0.8**
TTN	**Taitung**	**1.29**	**201**	*e*P	**Pn**	**15 15 16.6**	**+0.5**
	baz=189						
LDUT	**Ludao**	**1.30**	**187**	*e*P	**Pn**	**15 15 16.0**	**-0.3**
	baz=180						
LDUT				*e*S	**Sn**	**15 15 32.6**	**+0.1**
	baz=180						
TWY	**Chenhua**	**1.30**	**359**	*e*P	**Pn**	**15 15 16.6**	**+0.3**
	baz=358						
SGST	**Jiashian**	**1.31**	**228**	⇑*i*P	**Pn**	**15 15 17.3**	**+0.8**
	baz=216						
SGST				S	**Sn**	**15 15 34.6**	**+1.8**
	baz=216						
SLGT	**Liugui**	**1.33**	**223**	*e*P	**Pn**	**15 15 18.3**	**+1.6**
	baz=222						
SLGT				*e*S	**Sn**	**15 15 35.5**	**+2.2**
	baz=222						
WSF	**Szhu**	**1.34**	**256**	*e*P	**Pn**	**15 15 18.6**	**+1.8**
	baz=255						
WSF				*e*S	**Sb**	**15 15 36.7**	**+0.9**
	baz=255						
YOJ	**Yonaguni jima**	**1.35**	**68**	P	**Pn**	**15 15 17.8**	**+0.9**
YOJ				S	**Sn**	**15 15 34.3**	**+0.7**
YOJ	**Yonaguni jima**	**1.35**	**68**	P	**Pn**	**15 15 17.8**	**+0.9**

	baz=214								
TWM1	**Shoushan**	**1.59**	**225**	*e*P		**Pb**	**15 15 23.3**	**-0.1**
	baz=223								
TWM1				*e*S		**Sb**	**15 15 45.8**	**+2.6**
	baz=223								
SGLT	**Jiouru**	**1.62**	**221**	*e*P		**Pb**	**15 15 23.5**	**-0.4**
	baz=206								
SGLT				*e*S		**Sb**	**15 15 46.5**	**+2.4**
	baz=206								
MASBT	**Mashibuluo**	**1.64**	**215**	*e*P		**Pn**	**15 15 21.2**	**+0.2**
	baz=212								
EAST	**Anshuo**	**1.74**	**205**	*e*P		**Pn**	**15 15 23.7**	**+1.3**
	baz=193								
SSPT	**Xinbi**	**1.77**	**214**	*e*P		**Pn**	**15 15 25.0**	**+2.2**
	baz=198								
SCZT	**Fangliau**	**1.84**	**211**	*e*P		**Pn**	**15 15 25.2**	**+1.4**
	baz=196								
SLIU	**Shizi**	**1.91**	**204**	*e*P		**Pn**	**15 15 26.8**	**+2.2**
	baz=193								
LAY	**Lan-yu**	**1.92**	**182**	*e*P		**Pn**	**15 15 24.1**	**-0.7**
	baz=177								
IRIF	**Iriomote-Funau**	**1.95**	**79**	P		**Pn**	**15 15 26.2**	**+1.0**
IRIF				*e*S		**Sn**	**15 15 49.4**	**+0.9**
WDGT	**Dungji**	**1.95**	**249**	*e*P		**Pn**	**15 15 25.9**	**+0.8**
	baz=248								
PNG	**Penghu**	**1.95**	**259**	*e*P		**Pn**	**15 15 26.1**	**+0.9**
	baz=257								
PNG				*e*S		**Sn**	**15 15 49.1**	**+0.6**
	baz=257								
HATJ	**Hateruma jima**	**1.98**	**87**	P		**Pn**	**15 15 26.9**	**+1.2**
HATJ				*e*S		**Sn**	**15 15 51.1**	**+1.7**
TWP	**Hsiaoliuchiu**	**2.00**	**216**	*e*P		**Pn**	**15 15 29.1**	**+3.2**
	baz=229								
TWK1	**Hengchun**	**2.16**	**201**	*e*P		**Pn**	**15 15 28.8**	**+0.7**
	baz=190								
TWKBT	**Hengchun**	**2.16**	**201**	*e*P		**Pn**	**15 15 28.4**	**+0.3**
	baz=190								
VCHM	**Qimei**	**2.16**	**250**	*e*P		**Pn**	**15 15 28.4**	**+0.3**
	baz=236								
VCHM				*e*S		**Sn**	**15 15 53.3**	**-0.5**
	baz=236								
JKRS	**Kuro-shima**	**2.18**	**82**	P		**Pn**	**15 15 29.8**	**+1.4**
JKRS				S		**Sn**	**15 15 56.6**	**+2.3**
VWUC	**VWUC**	**2.24**	**298**	*e*P		**Pn**	**15 15 28.5**	**-0.7**
	baz=298								
JIJ	**Ishigaki jima**	**2.32**	**80**	P		**Pn**	**15 15 31.0**	**+0.7**
JIJ				S		**Sn**	**15 15 57.5**	**-0.3**
JISG	**Ishigakijimahi**	**2.52**	**75**	P		**Pn**	**15 15 33.6**	**+0.6**
JISG				S		**Sn**	**15 16 02.2**	**-0.3**
PTMZ	**Houxiangcun**	**2.53**	**295**	*e*P		**Pn**	**15 15 32.6**	**-0.6**
	baz=295								
PTMZ				*e*S		**Sn**	**15 16 00.6**	**-2.2**
	baz=295								
MATB	**Ma-tsu**	**2.66**	**325**	*e*P		**Pn**	**15 15 34.1**	**-0.9**
	baz=326								
JTJ	**Tarama**	**2.88**	**76**	P		**Pn**	**15 15 38.9**	**+1.0**
JTJ				*e*S		**Sn**	**15 16 11.6**	**+0.2**
KNMB	**Chin-men Tao**	**3.01**	**280**	Pn		**Pn**	**15 15 39.5**	**-0.2**
JIRB	**Irabujima**	**3.33**	**74**	P		**Pn**	**15 15 45.5**	**+1.2**
JIRB				*e*S		**Sn**	**15 16 23.2**	**+0.4**
JIKM	**Ikemajima**	**3.42**	**73**	*e*S		**Sn**	**15 16 25.6**	**+0.6**
JMJ2	**Miyako jima3**	**3.45**	**76**	P		**Pn**	**15 15 47.3**	**+1.4**
JMJ2				*e*S		**Sn**	**15 16 26.9**	**+1.2**
JOGS	**Gusukube**	**3.53**	**76**	*e*S		**Sn**	**15 16 28.9**	**+1.4**
JOW	**Kunigami**	**6.64**	**63**	Pn		**Pn**	**15 16 29.3**	**-0.5**
JMZ	**Minamidaito 2**	**8.89**	**76**	Pn		**Pn**	**15 17 01.9**	**+1.3**
JSU	**Suzuyama**	**10.83**	**44**	Pn		**Pn**	**15 17 26.5**	**-0.7**
ENH	**Enshi**	**12.51**	**303**	Pn		**Pn**	**15 17 49.4**	**-0.7**
BRVK	**Borovoye**	**48.17**	**321**	P		**P**	**15 23 30.9**	**-0.6**
BRVK				IAmb		IAmb	15 23 44.0	
	comp=Z,4.0nm,1.4s								
CTAO	**Charters Tower**	**49.93**	**149**	P		**P**	**15 23 43.4**	**-1.8**
CTAO				IAmb		IAmb	15 23 48.7	
	comp=Z,13nm,1.4s								

*IDC **27** 15:25:25.1±2.2, 1.°72N×124.°71E, h196km±21km, mb3.1/4, mb1 3.3/8, mb1mx3.0/51, mbtmp3.9/8, Error ellipse: s-maj=33.9km s-min=13.6km az=65.0*
*NEIC **27** 15:25:26.9±1.0, 1.°71N±0.°09×124.°86E±0.°08, h219km±11km, mb4.2/13, Error ellipse: s-maj=14.9km s-min=8.9km az=219.0*
*DJA **27** 15:25:27.3±0.5, 2.°N±5.°×12.°5E±.°, h208km±4km, M3.7/9, MLv3.7/9*

ISC 27 15:25:26.2±0.7, 1.°75N±0.°05×124.°92E±0.°05, h200km, n32, σ1§80/38, mb4.0/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.50**	**219**	P	**Pn**	**15 26 03.1**	**+3.2**
KMSI				S	**Sn**	**15 26 29.5**	**+3.4**
SGSI	**Sangihe**	**2.02**	**18**	P	**Pn**	**15 26 06.7**	**+1.8**
SGSI				S	**Sn**	**15 26 39.0**	**+3.9**
GTOI	**Gorontalo**	**2.21**	**240**	P	**Pn**	**15 26 09.5**	**+2.6**
GTOI				S	**Sn**	**15 26 42.3**	**+3.7**
TNTI	**Ternate**	**2.63**	**112**	Pn	**Pn**	**15 26 13.3**	**+1.7**
TNTI	**Ternate**	**2.63**	**112**	P	**Pn**	**15 26 13.4**	**+1.7**
TNTI				S	**Sn**	**15 26 49.5**	**+2.5**
LUWI	**Luwuk**	**3.51**	**218**	Pn	**Pn**	**15 26 23.1**	**+1.1**
LUWI	**Luwuk**	**3.51**	**218**	P	**Pn**	**15 26 23.0**	**+1.1**
LUWI				S	**Sn**	**15 27 05.9**	**+0.2**
SANI	**Sanana**	**3.92**	**164**	P	**Pn**	**15 26 26.8**	**-0.3**
TOLI2	**Tolitoli**	**4.18**	**261**	Pn	**Pn**	**15 26 31.2**	**+0.9**
APSI	**Ampana**	**4.21**	**231**	P	**Pn**	**15 26 32.2**	**+1.6**
SIJI	**Sorong**	**6.86**	**112**	P	**Pn**	**15 27 06.3**	**+1.6**
	1.2nm,0.3s,baz=160,slow=21,SNR=5.3						
BATI	**Baumata**	**11.95**	**186**	P	**Pn**	**15 28 10.1**	**-0.5**
	1.4nm,0.3s,baz=274,slow=22,SNR=2.3						
MTN	**Manton Dam**	**15.76**	**157**		**P**	**15 28 56.1**	**-1.5**
JAY	**Jayapura**	**16.34**	**105**	P	**Pn**	**15 29 04.4**	**-0.5**
	0.6nm,0.3s,baz=245,slow=12,SNR=2.5						
KNRA	**Kununurra**	**17.73**	**168**		**P**	**15 29 18.9**	**-0.3**
KNRA				IAmb	IAmb	15 29 47.7	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.74**	**178**	P	**P**	**15 29 39.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=10,slow=10.0,SNR=9.2						
FITZ	**Fitzroy Crossi**	**19.74**	**178**	IAmb	IAmb	15 29 50.9	
	comp=Z,7.4nm,1.2s						
TPUB	**Ta-pu**	**21.82**	**349**	P	**P**	**15 30 00.5**	**-2.3**
TPUB				IAmb	IAmb	15 30 00.7	
	comp=Z,27nm,1.3s						
WB0	**Warramunga Arr**	**23.32**	**157**	P	**P**	**15 30 15.4**	**-1.2**
WB0				IAmb	IAmb	15 30 37.8	
	comp=Z,9.9nm,1.4s						
WRAB	**Tennant Creek**	**23.45**	**157**	P	**P**	**15 30 16.8**	**-1.0**
WRAB				IAmb	IAmb	15 30 37.4	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**23.46**	**157**	P	**P**	**15 30 16.8**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=331,slow=11,SNR=23						
WRA				S	**S**	**15 34 18.5**	**+2.0**
	comp=Z,1.6nm,0.8s,baz=330,slow=19,SNR=4.8						
WRA	**Warramunga Arr**	**23.46**	**157**	P	**P**	**15 30 16.4**	**-1.5**
WB2	**Warramunga Arr**	**23.46**	**157**	P	**P**	**15 30 16.7**	**-1.2**
WB2				IAmb	IAmb	15 30 17.5	
	comp=Z,4.0nm,0.8s						
WR0	**Warramunga Arr**	**23.55**	**157**	P	**P**	**15 30 17.5**	**-1.2**
WR0				IAmb	IAmb	15 30 31.6	
	comp=Z,4.8nm,1.1s						
AS31	**Alice Springs**	**26.73**	**161**	P	**P**	**15 30 46.8**	**-0.7**
ASAR	**Alice Springs**	**26.74**	**161**	P	**P**	**15 30 46.9**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=341,slow=7.8,SNR=15						
ASAR				PcP	**PcP**	**15 34 03.7**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=353,slow=2.2,SNR=5.4						
RABL	**Rabaul**	**27.86**	**102**	P	**P**	**15 30 59.0**	**+1.4**
JTU	**Tsushima**	**32.87**	**7**	P	**P**	**15 31 41.1**	**-0.2**
STKA	**Stephens Creek**	**37.00**	**156**	P	**P**	**15 32 16.1**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=334,slow=9.7,SNR=3.6						
MK31	**Makanchi Array**	**58.17**	**327**	P	**P**	**15 34 57.7**	**-1.6**
MKAR	**Makanchi Array**	**58.17**	**327**	P	**P**	**15 34 58.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=122,slow=7.9,SNR=11						
MKAR	**Makanchi Array**	**58.17**	**327**	P	**P**	**15 34 57.9**	**-1.4**

NNC 27 15:30:29.1±11.0, 36.°86N×69.°72E, h0km, mb3.8, mpv3.4, 3C-3D, Error ellipse: s-maj=90.2km s-min=80.5km az=166.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.26**	**5**	⇑Pn	Pn	15 32 04.9	+2.0
	0.7nm,0.3s,baz=186,slow=12,SNR=19						
KK31				⇓Sn	Sn	15 33 17.9	+2.8
	2.6nm,0.3s,baz=193,slow=24,SNR=12						
AAK	**Ala-Archa**	**6.84**	**31**	⇑Pn	Pn	15 32 11.2	+0.4
	1.4nm,0.6s						
AAK				⇓Sn	Sn	15 33 28.7	-0.8
	12nm,0.5s						
TKM2	**Tokmak 2**	**7.55**	**35**	⇓Pn	Pn	15 32 18.8	-1.8
	1.8nm,0.4s						
TKM2				⇑Sn	Sn	15 33 47.4	+0.4
	4.0nm,0.9s						

*IDC **27** 15:31:40.3±1.4, 26.°50S×177.°20W, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.7/46, mbtmp3.8/4, ML4.4/1, MS3.5/1, Ms1 3.4/1, ms1mx2.6/27, Error ellipse: s-maj=41.1km s-min=26.6km az=124.0*
*NEIC **27** 15:31:44.4±1.8, 26.°47S±0.°06×177.°1W±0.°2, h35km±2km, mb4.4/8, Error ellipse: s-maj=23.0km s-min=10.5km az=276.0*

ISC 27 15:31:44.4±0.8, 26.°5S±0.°1×177.°0W±0.°2, h35km, n17, σ1§14/17, mb4.2/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.87**	**196**	Pn	**Pn**	**15 32 27.2**	**-0.4**
	59nm,0.3s,baz=82,slow=17,SNR=2.2						
RAO				Sn	**Sn**	**15 33 00.5**	**-0.5**
	74nm,0.3s,baz=103,slow=23,SNR=8.5						
NIUE	**Niue**	**9.86**	**43**	Pn	**Pn**	**15 34 02.0**	**-1.8**
STKA	**Stephens Creek**	**36.35**	**252**	LR	LR	15 50 48.2	
	comp=Z,68nm,18.6s,baz=32,slow=32						
AS31	**Alice Springs**	**44.31**	**262**	P	**P**	**15 39 51.2**	**-0.1**
ASAR	**Alice Springs**	**44.31**	**262**	P	**P**	**15 39 51.5**	**+0.3**
	0.5nm,0.7s,baz=107,slow=7.1,SNR=22						
WR0	**Warramunga Arr**	**44.76**	**268**	P	**P**	**15 39 55.2**	**+0.3**
WR0				IAmb	IAmb	15 40 22.5	
	comp=Z,7.5nm,1.5s						
WB2	**Warramunga Arr**	**44.94**	**268**	P	**P**	**15 39 55.9**	**-0.3**
WB2				IAmb	IAmb	15 40 05.7	
	comp=Z,9.0nm,1.3s						
WRA	**Warramunga Arr**	**44.95**	**268**	P	**P**	**15 39 55.8**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=104,slow=7.1,SNR=7.1						
WB0	**Warramunga Arr**	**44.95**	**268**	P	**P**	**15 39 55.3**	**-1.1**
WB0				IAmb	IAmb	15 40 15.9	
	comp=Z,9.6nm,1.4s						
SBA	**Scott Base**	**51.99**	**184**	P	**P**	**15 40 51.0**	**+1.3**
SBA				IAmb	IAmb	15 40 52.0	
	comp=Z,2.7nm,0.9s						
VNDA	**Vanda**	**52.07**	**186**	P	**P**	**15 40 50.2**	**-0.1**
QSPA	**South Pole Qui**	**63.62**	**180**	P	**P**	**15 42 10.7**	**+1.0**
PMSA	**Palmer Station**	**75.48**	**156**	P	**P**	**15 43 25.4**	**+0.7**
NVAR	**Mina Array Bea**	**84.79**	**42**	P	**P**	**15 44 18.1**	**+2.6**
	comp=Z,0.6nm,0.9s,baz=210,slow=8.6,SNR=4.4						
NVAR	**Mina Array Bea**	**84.79**	**42**	P	**P**	**15 44 17.1**	**+1.6**
NOA	**NORSAR Array B**	**145.00**	**353**	PKPbc	**PKPdf**	**15 51 17.4**	**0.0**
	comp=Z,1.4nm,0.8s,baz=15,slow=5.0,SNR=4.1						
AKASG	**Malin Array Be**	**148.58**	**327**	PKPbc	**PKPbc**	**15 51 27.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=48,slow=3.4,SNR=4.8						

*IDC **27** 15:34:45.9±1.6, 27.°56N×85.°63E, h0km, mb4.0/9, mb1 4.0/11, mb1mx3.6/58, mbtmp3.9/11, ML3.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/50, Error ellipse: s-maj=48.9km s-min=18.0km az=66.0*

ISC 27 15:34:47.6±1.7, 27.°6N±0.°2×85.°7E±0.°3, h10km, n12, σ0§72/11, mb4.0/9, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.18**	**124**	Pn	**Pn**	**15 38 21.9**	**-0.3**
	0.0nm,0.3s,baz=308,slow=13,SNR=5.2						
AAK	**Ala-Archa**	**17.57**	**332**	LR	LR	15 45 51.8	
	comp=Z,49nm,18.8s,baz=288,slow=38						
MKAR	**Makanchi Array**	**19.36**	**353**	P	**P**	**15 39 12.7**	**-0.6**
	0.1nm,0.3s,baz=173,slow=1.1,SNR=13						
KURBB	**Kurchatov Arra**	**23.65**	**349**	P	**P**	**15 39 58.0**	**-0.9**
	1.2nm,0.2s,baz=170,slow=9.5,SNR=5.0						
SONM	**Songino Array**	**25.86**	**33**	P	**P**	**15 40 20.8**	**+1.3**
	1.9nm,0.6s,baz=221,slow=9.9,SNR=11						
ZALV	**Zalesovo Beam**	**26.34**	**359**	P	**P**	**15 40 23.8**	**+0.2**
	0.6nm,0.4s,baz=180,slow=8.3,SNR=5.9						
KSRS	**Korea Array**	**36.66**	**64**	P	**P**	**15 41 53.7**	**-0.8**
	0.4nm,0.5s,baz=257,slow=9.9,SNR=2.4						
NRIK	**Noril'sk**	**41.80**	**1**	P	**P**	**15 42 37.3**	**+0.4**
	1.5nm,0.4s,baz=173,slow=7.4,SNR=4.9						
TIXI	**Tiksi**	**50.05**	**16**	P	**P**	**15 43 41.9**	**-0.2**
	1.3nm,0.4s,baz=184,slow=3.3,SNR=5.1						
ARCES	**ARCESS Array B**	**54.10**	**338**	P	**P**	**15 44 12.2**	**-0.1**
	6.8nm,1.1s,baz=97,slow=6.5,SNR=1.8						
WRA	**Warramunga Arr**	**66.69**	**130**	P	**P**	**15 45 39.1**	**+0.1**
	1.0nm,0.8s,baz=322,slow=6.7,SNR=7.1						
ASAR	**Alice Springs**	**68.98**	**133**	P	**P**	**15 45 53.9**	**+0.5**
	0.4nm,0.7s,baz=318,slow=6.4,SNR=8.1						

*KRSC **27** 15:39:08.7±1.7, 50.°96N×158.°34E, h46km±23km, ML4.4*
*MOS **27** 15:39:10.0±0.6, 50.°91N×158.°25E, h47km, mb3.8/2, Error ellipse: s-maj=13.0km s-min=3.5km az=83.0*
*IDC **27** 15:39:11.3±0.7, 50.°97N×158.°13E, h42km±6km, mb3.5/16, mb1 3.7/19, mb1mx3.5/87, mbtmp3.7/19, ML3.1/4, MS3.0/6, Ms1 3.0/6, ms1mx2.7/35, Error ellipse: s-maj=13.1km s-min=9.0km az=103.0*

ISC 27 15:39:11.1±0.7, 50.°98N±0.°05×158.°16E±0.°05, h46km±6km, n116, σ1§57/140, mb3.8/16, MS3.0/4, 2D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.97**	**300**	PN	**Pn**	**15 39 28.7**	**+0.3**
PAU				S	**Sn**	**15 39 41.8**	**+0.7**
PAU	**Pauzhetka**	**0.97**	**300**	*i* P	**Pn**	**15 39 28.7**	**+0.3**
PAU				*e*S	**Sn**	**15 39 41.8**	**+0.7**
SKR	**Severo-Kuril's**	**1.33**	**258**	*e*PN	**Pn**	**15 39 33.5**	**+0.3**
SKR				*e*S	**Sn**	**15 39 49.9**	**+0.3**
SKR				pmax	pmax		
	comp=Z,22nm,0.2s						
SKR				smax	smax		
	comp=N,2μm,0.6s						
SKR				smax	smax		
	comp=E,2μm,0.6s						
SKR	**Severo-Kuril's**	**1.33**	**258**	*e*P	**Pn**	**15 39 33.4**	**+0.3**
SKR				*e*S	**Sn**	**15 39 50.3**	**+0.7**
RUS	**Russkaya**	**1.47**	**9**	PN	**Pn**	**15 39 34.1**	**-1.1**
RUS				S	**Sn**	**15 39 52.0**	**-1.2**
RUS	**Russkaya**	**1.47**	**9**	*e*P	**Pn**	**15 39 34.1**	**-1.1**
RUS				*e*S	**Sn**	**15 39 52.0**	**-1.2**
MTVR	**Mutnovka**	**1.50**	**1**	PN	**Pn**	**15 39 35.6**	**-0.2**
MTVR				S	**Sn**	**15 39 53.9**	**-0.4**
MTVR	**Mutnovka**	**1.50**	**1**	*i* P	**Pn**	**15 39 35.6**	**-0.2**
MTVR				*e*S	**Sn**	**15 39 53.9**	**-0.4**
GRL	**Gorelyy**	**1.57**	**358**	PN	**Pn**	**15 39 36.9**	**+0.2**
GRL				S	**Sn**	**15 39 55.9**	**-0.1**
GRL	**Gorelyy**	**1.57**	**358**	*i* P	**Pn**	**15 39 36.9**	**+0.2**
GRL				*e*S	**Sn**	**15 39 55.9**	**-0.1**
ALID	**Alaid**	**1.65**	**267**	PN	**Pn**	**15 39 38.6**	**+0.8**
ALID	**Alaid**	**1.65**	**267**	*e*P	**Pn**	**15 39 38.6**	**+0.8**
KRMR	**Karymshinskiy**	**1.85**	**360**	PN	**Pn**	**15 39 41.2**	**+0.8**
KRMR				S	**Sn**	**15 40 04.6**	**+2.0**
KRMR	**Karymshinskiy**	**1.85**	**360**	*i* P	**Pn**	**15 39 41.2**	**+0.8**
KRMR				*e*S	**Sn**	**15 40 04.6**	**+2.0**
APC	**Apacha**	**2.04**	**343**	PN	**Pn**	**15 39 43.6**	**+0.6**
APC				S	**Sn**	**15 40 08.7**	**+1.5**
APC	**Apacha**	**2.04**	**343**	*e*P	**Pn**	**15 39 43.6**	**+0.6**
APC				*e*S	**Sn**	**15 40 08.7**	**+1.5**
PET	**Petropavlovsk**	**2.07**	**8**	⇓*i*PN	**Pn**	**15 39 43.3**	**-0.1**
PET				*e*S	**Sn**	**15 40 08.0**	**+0.1**
PET				pmax	pmax		
	comp=Z,185nm,0.5s						
PET				smax	smax		
	comp=E,562nm,0.5s						
PET				smax	smax		
	comp=N,610nm,0.5s						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
PET	**Petropavlovsk**	**2.07**	**8**	*i* P	**Pn**	**15 39 43.2**	**-0.1**
PET				*e*S	**Sn**	**15 40 07.6**	**-0.3**
DALK	**Dalny**	**2.09**	**10**	PN	**Pn**	**15 39 43.5**	**-0.1**
DALK				S	**Sn**	**15 40 09.3**	**+1.0**
DALK	**Dalny**	**2.09**	**10**	*i* P	**Pn**	**15 39 43.5**	**-0.1**
DALK				*e*S	**Sn**	**15 40 09.3**	**+1.0**
PEA0B	**Petropavlovsk-**	**2.15**	**353**	*d* PN	**Pn**	**15 39 45.1**	**+0.6**
PETK	**Petropavlovsk-**	**2.15**	**353**	P	**Pn**	**15 39 45.3**	**+0.8**
	comp=Z,15nm,0.3s,baz=156,slow=14,SNR=170						
PETK				S	**Sn**	**15 40 11.9**	**+2.0**
	comp=Z,11nm,0.3s,baz=156,slow=16,SNR=6.0						
PETK				LR	LR	15 40 51.7	
	comp=Z,391nm,19.1s,baz=184,slow=46						
UGLR	**Uglovaya**	**2.27**	**10**	PN	**Pn**	**15 39 46.7**	**+0.5**
UGLR				S	**Sn**	**15 40 13.9**	**+0.9**
UGLR	**Uglovaya**	**2.27**	**10**	*e*P	**Pn**	**15 39 46.7**	**+0.5**
UGLR				*e*S	**Sn**	**15 40 13.9**	**+0.9**
NLC	**Nalytchevo**	**2.31**	**18**	PN	**Pn**	**15 39 46.1**	**-0.6**
NLC				S	**Sn**	**15 40 12.7**	**-1.2**
NLC	**Nalytchevo**	**2.31**	**18**	*e*P	**Pn**	**15 39 46.1**	**-0.6**
NLC				*e*S	**Sn**	**15 40 12.7**	**-1.2**
AVH	**Avacha**	**2.32**	**9**	PN	**Pn**	**15 39 47.7**	**+0.9**
AVH	**Avacha**	**2.32**	**9**	*e*P	**Pn**	**15 39 47.7**	**+0.9**
SMAR	**Somma**	**2.32**	**10**	PN	**Pn**	**15 39 47.5**	**+0.5**
SMAR	**Somma**	**2.32**	**10**	*e*P	**Pn**	**15 39 47.5**	**+0.5**
KOK	**Koryaka**	**2.33**	**7**	PN	**Pn**	**15 39 48.2**	**+1.1**
KOK				S	**Sn**	**15 40 16.5**	**+1.9**
KOK	**Koryaka**	**2.33**	**7**	*e*P	**Pn**	**15 39 48.2**	**+1.1**
KOK				*e*S	**Sn**	**15 40 16.5**	**+1.9**
SDLR	**Sedlovina**	**2.34**	**11**	PN	**Pn**	**15 39 46.9**	**-0.4**
SDLR	**Sedlovina**	**2.34**	**11**	*e*P	**Pn**	**15 39 46.9**	**-0.4**
KRER	**Koryakskii**	**2.36**	**9**	PN	**Pn**	**15 39 48.0**	**+0.5**
KRER	**Koryakskii**	**2.36**	**9**	*e*P	**Pn**	**15 39 48.0**	**+0.5**
KRX	**Arik**	**2.40**	**7**	PN	**Pn**	**15 39 48.8**	**+0.7**
KRX	**Arik**	**2.40**	**7**	*e*P	**Pn**	**15 39 48.8**	**+0.7**
SPN	**Mys Shipunski**	**2.41**	**28**	PN	**Pn**	**15 39 48.3**	**+0.2**
SPN				S	**Sn**	**15 40 16.7**	**+0.3**
SPN	**Mys Shipunski**	**2.41**	**28**	*e*P	**Pn**	**15 39 48.3**	**+0.2**
SPN				*e*S	**Sn**	**15 40 16.7**	**+0.3**
GNL	**Ganaly**	**2.72**	**357**	PN	**Pn**	**15 39 53.6**	**+1.2**
GNL	**Ganaly**	**2.72**	**357**	*e*P	**Pn**	**15 39 53.6**	**+1.2**
MKZ	**Mys Kozlova**	**4.19**	**30**	PN	**Pn**	**15 40 12.9**	**+0.5**
MKZ	**Mys Kozlova**	**4.19**	**30**	P	**Pn**	**15 40 12.9**	**+0.5**
KZV	**Kizimen**	**4.34**	**16**	PN	**Pn**	**15 40 16.0**	**+1.4**
KZV	**Kizimen**	**4.34**	**16**	*e*P	**Pn**	**15 40 16.0**	**+1.4**
TUMD	**Tumrok D**	**4.44**	**17**	*e*P	**Pn**	**15 40 18.1**	**+2.2**
TUMD				*e*S	**Sn**	**15 41 08.6**	**+2.3**
TUMR	**Tumrok**	**4.47**	**15**	PN	**Pn**	**15 40 18.1**	**+1.7**
TUMR				S	**Sn**	**15 41 08.6**	**+1.4**
TUMR	**Tumrok**	**4.47**	**15**	*e*P	**Pn**	**15 40 19.6**	**+3.2**
KMNR	**Kamenistaya**	**4.94**	**14**	PN	**Pn**	**15 40 25.1**	**+2.2**
KMNR	**Kamenistaya**	**4.94**	**14**	*e*P	**Pn**	**15 40 25.1**	**+2.2**
ESO	**Esso**	**4.96**	**4**	PN	**Pn**	**15 40 26.2**	**+3.1**
ESO	**Esso**	**4.96**	**4**	*e*P	**Pn**	**15 40 26.2**	**+3.1**
KIRR	**Kirishev**	**5.15**	**14**	PN	**Pn**	**15 40 27.5**	**+1.8**
KIRR	**Kirishev**	**5.15**	**14**	*e*P	**Pn**	**15 40 27.5**	**+1.8**
BZMR	**Bezymyannaya**	**5.16**	**15**	PN	**Pn**	**15 40 26.3**	**+0.5**
BZMR	**Bezymyannaya**	**5.16**	**15**	*e*P	**Pn**	**15 40 26.3**	**+0.5**
BZWR	**Bezymyannyi-We**	**5.18**	**15**	PN	**Pn**	**15 40 28.5**	**+2.3**
BZWR	**Bezymyannyi-We**	**5.18**	**15**	*e*P	**Pn**	**15 40 28.5**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**5.20**	**16**	PN	**Pn**	**15 40 28.1**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**5.20**	**16**	*e*P	**Pn**	**15 40 28.1**	**+1.8**
ZLN	**Zelenaya**	**5.29**	**16**	PN	**Pn**	**15 40 30.1**	**+2.5**
ZLN	**Zelenaya**	**5.29**	**16**	*e*P	**Pn**	**15 40 30.1**	**+2.5**
SRDR	**Sredinnyy**	**5.43**	**9**	PN	**Pn**	**15 40 32.5**	**+3.0**
SRDR	**Sredinnyy**	**5.43**	**9**	*e*P	**Pn**	**15 40 32.5**	**+3.0**
KLY	**Klyuchi**	**5.54**	**15**	PN	**Pn**	**15 40 33.7**	**+2.7**
KLY	**Klyuchi**	**5.54**	**15**	*e*P	**Pn**	**15 40 33.7**	**+2.7**
BDR	**Baidarnaya**	**5.88**	**17**	PN	**Pn**	**15 40 38.3**	**+2.6**
BDR	**Baidarnaya**	**5.88**	**17**	*e*P	**Pn**	**15 40 38.3**	**+2.6**
BDR				*e*S	**Sn**	**15 41 43.4**	**+1.6**
KBTR	**Krutoberegovo**	**5.93**	**26**	PN	**Pn**	**15 40 36.8**	**+0.6**
KBTR	**Krutoberegovo**	**5.93**	**26**	*e*P	**Pn**	**15 40 36.8**	**+0.6**
KBG	**Krutoberegovo**	**5.94**	**25**	PN	**Pn**	**15 40 38.6**	**+2.2**
KBG				S	**Sn**	**15 41 45.5**	**+2.5**
KBG	**Krutoberegovo**	**5.94**	**25**	*e*P	**Pn**	**15 40 38.6**	**+2.2**
KBG				*e*S	**Sn**	**15 41 45.5**	**+2.5**
SMKR

mb4.3/55,Error ellipse: s-maj=15.9km s-min=13.3km az=75.0
*DJA **27** 15:48:28.9±0.4,4˚N±5˚×12˚3E±˚,h508km±3km,M4.2/15, mB4.7/11, mb4.5/15,MLv4.7/12,Mw(mB)3.9/11*
*IDC **27** 15:48:29.1±1.0,3˚.62N×123˚.12E,h532km±13km, mb3.4/23, mb1 3.5/27,mb1mx3.3/71,mbtmp4.4/27,Error ellipse: s-maj=14.9km s-min=7.9km az=74.0*
ISC 27 15:48:27.0±0.4,**3˚.63N**±0˚.05×**123˚.07E**±0˚.07,**h500**km,**n140,** σ1§**54**/142,**mb4.2**/51,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**2.97**	**181**	P	**P**	**15 49 38.9**	**+1.1**
GTOI				S	**S**	**15 50 36.7**	**+1.4**
KMSI	**Cibinong**	**3.16**	**163**	P	**P**	**15 49 41.0**	**+1.9**
KMSI				S	**S**	**15 50 41.4**	**+3.7**
SKMP	**Bagumbayan, Su**	**3.23**	**27**	*e*P	**P**	**15 49 40.6**	**+1.1**
MRSI	**Marisa**	**3.33**	**200**	P	**P**	**15 49 42.9**	**+2.6**
TOLI2	**Tolitoli**	**3.39**	**223**	P	**P**	**15 49 43.2**	**+2.5**
DDMP	**Don Marcelino,**	**3.60**	**47**	*e*P	**P**	**15 49 42.8**	**+0.5**
PAGZ	**Pagadian**	**4.21**	**4**	*e*P	**P**	**15 49 50.3**	**+3.2**
DAV	**Davao City (W)**	**4.24**	**36**	P	**P**	**15 49 52.1**	**+4.7**
	13nm,0.3s,baz=138,slow=3.6,SNR=1.4						
DAV				S	**S**	**15 50 58.2**	**+5.3**
	29nm,0.3s,baz=271,slow=22,SNR=1.6						
MATI	**Mati**	**4.58**	**44**	*e*P	**P**	**15 49 50.5**	**+0.2**
LUWI	**Luwuk**	**4.64**	**184**	P	**P**	**15 49 52.1**	**+1.2**
LUWI	**Luwuk**	**4.64**	**184**	P	**P**	**15 49 52.9**	**+2.0**
LUWI				S	**S**	**15 50 59.8**	**+0.6**
APSI	**Ampana**	**4.72**	**198**	P	**P**	**15 49 54.0**	**+2.4**
MYLDM	**Lahad Datu**	**4.81**	**289**	P	**P**	**15 49 54.3**	**+2.0**
TNTI	**Ternate**	**5.14**	**123**	P	**P**	**15 49 56.0**	**+0.7**
TNTI	**Ternate**	**5.14**	**123**	P	**P**	**15 49 56.5**	**+1.2**
	1.0nm3μm104nm,0.5s						
BUTP	**Butuan**	**5.88**	**25**	*e*P	**P**	**15 50 05.5**	**+3.3**
CNOP	**Candoni, Negro**	**6.18**	**356**	*e*P	**P**	**15 50 05.9**	**+0.8**
SANI	**Sanana**	**6.35**	**153**	P	**P**	**15 50 06.1**	**-0.6**
	1.2nm1μm58nm,0.6s						
MSLP	**Maasin**	**6.71**	**15**	*e*P	**P**	**15 50 11.5**	**+1.3**
GLSP	**General Luna,**	**6.83**	**26**	*e*P	**P**	**15 50 11.8**	**+0.3**
GUIM	**Jordan**	**6.97**	**356**	*e*P	**P**	**15 50 13.2**	**+0.3**
KKM	**Kota Kinabalu**	**7.24**	**290**	P	**P**	**15 50 17.5**	**+1.7**
BATP	**Bataraza**	**7.34**	**315**	*e*P	**P**	**15 50 18.6**	**+1.8**
TTSI	**Tana Toraja**	**7.38**	**206**	P	**P**	**15 50 20.2**	**+3.1**
	0.3nm935nm92nm,0.5s						
OCLP	**Ormoc**	**7.53**	**12**	*e*P	P	15 50 25.2	+6.6
BKB	**Balikpapan**	**7.85**	**232**	P	**P**	**15 50 25.1**	**+3.1**
BKB	**Balikpapan**	**7.85**	**232**	P	**P**	**15 50 25.8**	**+3.9**
	0.9nm2μm246nm,0.8s						
NLAI	**Namlea**	**7.92**	**149**	P	**P**	**15 50 24.3**	**+1.7**
	0.3nm2μm76nm,0.8s						
SPSI	**Sidrap Palu**	**8.23**	**204**	P	**P**	**15 50 27.3**	**+1.5**
	3μm250nm,0.8s						
ENPP	**El Nido**	**8.35**	**335**	*e*P	**P**	**15 50 27.9**	**+0.8**
BNSI	**Bone**	**8.50**	**200**	P	**P**	**15 50 32.3**	**+3.6**
	2μm330nm,0.8s						
KAPI	**Kappang**	**9.20**	**201**	P	**P**	**15 50 38.6**	**+2.7**
	3.5nm,0.3s,baz=15,slow=6.3,SNR=21						
KAPI	**Kappang**	**9.20**	**201**	P	**P**	**15 50 39.2**	**+3.2**
SIJI	**Sorong**	**9.33**	**118**	P	**P**	**15 50 39.1**	**+1.8**
	2.1nm,0.3s,baz=155,slow=22,SNR=12						
LUBP	**Lubang**	**10.43**	**345**	*e*P	**P**	**15 50 48.0**	**-0.8**
JCNP	**Jose Panganiba**	**10.60**	**358**	*e*P	**P**	**15 50 50.7**	**-0.1**
MACP	**Maragondon, Ca**	**10.82**	**348**	*e*P	P	15 50 50.6	-2.5
BBKI	**Banjar Baru**	**10.83**	**320**	P	**P**	15 51 01.6	+8.4
SBUM	**Sibu**	**10.90**	**264**	P	**P**	**15 50 56.7**	**+2.8**
POLP	**Polillo Island**	**11.09**	**354**	*e*P	**P**	**15 50 56.4**	**+0.5**
FAKI	**Fak Fak**	**11.24**	**125**	P	**P**	**15 50 58.8**	**+1.1**
MMRI	**Maumere**	**12.21**	**184**	P	**P**	**15 51 09.9**	**+2.1**
KSM	**Kuching**	**12.93**	**261**	P	**P**	**15 51 17.1**	**+1.7**
SOEI	**Soe**	**13.35**	**175**	P	**P**	**15 51 20.9**	**+0.9**
BATI	**Baumata**	**13.75**	**178**	P	**P**	**15 51 25.8**	**+1.6**
	15nm,0.3s,baz=7.0,slow=2.0,SNR=24						
BATI	**Baumata**	**13.75**	**178**	P	**P**	**15 51 25.4**	**+1.2**
	90nm,1.0s						
APYP	**Conner**	**14.26**	**353**	*e*P	**P**	**15 51 29.1**	**-0.3**
DLV	**T Lat**	**16.64**	**301**	P	**P**	**15 51 55.4**	**+0.8**
UGM	**Wanagama**	**16.97**	**227**	P	**P**	**15 51 58.6**	**+0.9**
MTN	**Manton Dam**	**18.22**	**154**	P	**P**	**15 52 09.5**	**+0.1**
LEM	**Lembang**	**18.59**	**236**	P	**P**	**15 52 13.8**	**+0.7**
	2.5nm,0.3s,baz=164,slow=24,SNR=3.5						
TWG	**Pinlang**	**19.18**	**354**	P	**P**	**15 52 17.9**	**-0.3**
TWG				IAmb	IAmb	15 52 19.2	
	comp=Z,12nm,0.8s						
MYKOM	**Kota Tinggi**	**19.29**	**265**	P	**P**	**15 52 19.8**	**+0.5**
TPUB	**Ta-pu**	**19.70**	**353**	P	**P**	**15 52 23.9**	**+1.0**
YULB	**Yu-li**	**19.73**	**355**	P	**P**	**15 52 22.6**	**-0.5**
YULB				IAmb	IAmb	15 52 26.0	
	comp=Z,8.7nm,0.7s						
KNRA	**Kununurra**	**19.99**	**164**		**P**	**15 52 25.6**	**0.0**
SSLB	**Suanglung**	**20.15**	**354**	P	**P**	**15 52 27.5**	**+0.5**
MDSI	**Maura Dua**	**20.52**	**247**	P	**P**	**15 52 32.2**	**+1.6**
YHNB	**Yeheng**	**20.99**	**356**	P	**P**	**15 52 35.0**	**+0.3**
YHNB				IAmb	IAmb	15 52 47.9	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.73**	**173**	P	**P**	**15 52 41.6**	**+0.2**
	comp=Z,7.8nm,0.7s,baz=359,slow=7.1,SNR=20						
FITZ	**Fitzroy Crossi**	**21.73**	**173**	P	**P**	**15 52 41.4**	**0.0**
FITZ				IAmb	IAmb	15 52 42.5	
	comp=Z,9.5nm,0.8s						
IPM	**Ipoh**	**22.01**	**273**	P	**P**	**15 52 44.3**	**+0.3**
KULM	**Kulim**	**22.41**	**275**	P	**P**	**15 52 48.0**	**+0.3**
KULM				IAmb	IAmb	15 53 11.3	
	comp=Z,18nm,1.5s						
PSA00	**Pilbara Seismi**	**25.24**	**187**	P	**P**	**15 53 12.6**	**-0.1**
PSA00				IAmb	IAmb	15 53 36.1	
	comp=Z,25nm,1.4s						
GSI	**Gunungsitoli**	**25.57**	**265**	P	**P**	**15 53 15.1**	**-0.7**
GSI				IAmb	IAmb	15 53 16.2	
	comp=Z,18nm,0.9s						
WB0	**Warramunga Arr**	**25.77**	**155**	P	**P**	**15 53 16.4**	**-1.1**
WB0				IAmb	IAmb	15 53 17.1	
	comp=Z,8.7nm,0.9s						
WRAB	**Tennant Creek**	**25.90**	**155**	P	**P**	**15 53 17.8**	**-0.8**
WRAB				IAmb	IAmb	15 53 18.9	
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**25.91**	**155**	P	**P**	**15 53 17.8**	**-0.8**
	comp=Z,4.3nm,0.4s,baz=334,slow=9.8,SNR=124						
WRA				ScP	**ScP**	**15 59 20.0**	**-3.4**
	comp=Z,0.5nm,0.9s,baz=342,slow=3.3,SNR=5.6						
WRA	**Warramunga Arr**	**25.91**	**155**	P	**P**	**15 53 17.1**	**-1.6**
WB2	**Warramunga Arr**	**25.91**	**155**	P	**P**	**15 53 17.8**	**-0.9**
WB2				IAmb	IAmb	15 53 19.0	
	comp=Z,9.5nm,0.6s						
WR0	**Warramunga Arr**	**26.01**	**155**	P	**P**	**15 53 18.4**	**-1.1**
WR0				IAmb	IAmb	15 53 19.2	
	comp=Z,4.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**27.83**	**304**	P	**P**	**15 53 36.8**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=125,slow=7.1,SNR=14						
CMAR	**Chiang Mai Arr**	**27.83**	**304**	P	**P**	**15 53 35.9**	**+0.2**
CHTO	**Chiang Mai**	**28.00**	**304**	P	**P**	**15 53 37.9**	**+0.8**
CHTO				IAmb	IAmb	15 53 38.6	
	comp=Z,5.0nm,0.6s						
NJ2	**Nanjing**	**28.55**	**352**	*e*P	**P**	**15 53 43.3**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AS31	**Alice Springs**	**29.11**	**159**	P	**P**	**15 53 46.5**	**-0.3**
ASAR	**Alice Springs**	**29.11**	**159**	P	**P**	**15 53 46.7**	**0.0**
	comp=Z,2.5nm,0.4s,baz=337,slow=7.4,SNR=156						
ASAR				S	**S**	**15 58 00.0**	**-3.1**
	comp=Z,1.3nm,1.0s,baz=351,slow=22,SNR=5.8						
ASAR				ScP	**ScP**	**15 59 29.9**	**-3.3**
	comp=Z,0.9nm,0.8s,baz=333,slow=3.0,SNR=6.3						
ASAR	**Alice Springs**	**29.11**	**159**	P	**P**	**15 53 46.4**	**-0.4**
ENH	**Enshi**	**29.45**	**336**	P	**P**	**15 53 50.0**	**+0.3**
ENH				IAmb	IAmb	15 53 51.4	
	comp=Z,9.5nm,0.9s						
JTU	**Tsushima**	**31.30**	**10**	P	**P**	**15 54 05.5**	**0.0**
JTU				IAmb	IAmb	15 54 20.6	
	comp=Z,23nm,1.3s						
JMN	**Monobe**	**31.60**	**17**	P	**P**	**15 54 08.2**	**0.0**
JMN				IAmb	IAmb	15 54 09.2	
	comp=Z,15nm,0.8s						
MORW	**Morawa**	**33.20**	**191**	P	**P**	**15 54 21.7**	**0.0**
JWT	**Wachi**	**33.51**	**18**	P	**P**	**15 54 25.0**	**+0.7**
JWT				IAmb	IAmb	15 54 30.9	
	comp=Z,9.3nm,1.3s						
KSRS	**Korea Array**	**33.96**	**7**	P	**P**	**15 54 28.9**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=188,slow=9.9,SNR=8.2						
FORT	**Forrest**	**34.54**	**172**	P	**P**	**15 54 32.9**	**-0.1**
MJAR	**Matsushiro Arr**	**35.60**	**21**	P	**P**	**15 54 40.6**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=243,slow=19,SNR=6.2						
MJAR	**Matsushiro Arr**	**35.60**	**21**	IAmb	IAmb	15 54 41.6	
	comp=Z,1.3nm,0.9s						
LZH	**Lanzhou**	**36.86**	**334**	*e*P	**P**	**15 54 53.5**	**+1.0**
LZH				pP	pwP	15 56 25.5	+0.1
LZH				sP	sP	15 57 31.0	+15
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
JMM	**Marumori**	**37.74**	**23**	P	**P**	**15 54 59.5**	**0.0**
JMM				IAmb	IAmb	15 55 16.4	
	comp=Z,17nm,1.2s						
BBOO	**Buckleboo**	**38.27**	**162**	P	**P**	**15 55 04.0**	**+0.1**
BBOO				IAmb	IAmb	15 55 05.2	
	comp=Z,12nm,0.9s						
HHC	**Hu-ho-hao-te**	**38.48**	**346**	*e*P	**P**	**15 55 05.0**	**-0.6**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,77nm,5.7s						
STKA	**Stephens Creek**	**39.46**	**155**	P	**P**	**15 55 13.9**	**+0.3**
	comp=Z,6.2nm,0.7s,baz=330,slow=8.4,SNR=23						
STKA	**Stephens Creek**	**39.46**	**155**	P	**P**	**15 55 13.9**	**+0.3**
JTM	**Tenmabayashi**	**40.39**	**21**	P	**P**	**15 55 18.4**	**-2.5**
USA0B	**Ussuriysk Arra**	**41.17**	**10**	P	**P**	**15 55 26.0**	**-1.1**
USA0B				IAmb	IAmb	15 55 40.8	
	comp=Z,5.2nm,0.9s						
USRK	**Ussuriysk Ar.**	**41.17**	**10**	P	**P**	**15 55 26.2**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=200,slow=4.1,SNR=4.7						
USRK	**Ussuriysk Ar.**	**41.17**	**10**	P	**P**	**15 55 25.8**	**-1.3**
GTA	**Gaotai**	**41.40**	**332**	P	**P**	**15 55 30.0**	**+0.8**
GTA				pP	pP	15 57 02.8	+3.9
GTA				sP	sP	15 58 01.3	+6.4
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PALK	**Pallekele**	**42.32**	**277**	P	**P**	**15 55 36.7**	**0.0**
	comp=Z,4.7nm,0.8s,baz=190,slow=7.0,SNR=5.6						
PALK	**Pallekele**	**42.32**	**277**	P	**P**	**15 55 37.2**	**+0.5**
PALK				IAmb	IAmb	15 55 38.6	
	comp=Z,5.0nm,0.7s						
ARMA	**Armidale**	**43.48**	**143**	P	**P**	**15 55 47.5**	**+1.9**
ARMA				IAmb	IAmb	15 56 11.2	
	comp=Z,13nm,1.1s						
ASAJ	**Asahikawa**	**43.86**	**20**	P	**P**	**15 55 48.5**	**+0.2**
	comp=Z,6.0nm,0.8s,baz=236,slow=5.7,SNR=6.4						
JKA	**Kamikawa-asahi**	**43.86**	**20**	P	**P**	**15 55 48.5**	**+0.2**
JKA	**Kamikawa-asahi**	**43.86**	**20**	IAmb	IAmb	15 55 56.6	
	comp=Z,34nm,1.5s						
CAN	**Canberra**	**45.75**	**150**	P	**P**	**15 56 04.2**	**+1.2**
CAN				IAmb	IAmb	15 56 32.3	
	comp=Z,21nm,1.3s						
SONM	**Songino Array**	**46.33**	**344**	P	**P**	**15 56 07.8**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=157,slow=8.2,SNR=7.5						
SONM	**Songino Array**	**46.33**	**344**	P	**P**	**15 56 07.8**	**+0.5**
WMQ	**Urumqi**	**50.78**	**327**	*e*P	**P**	**15 56 41.5**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,29nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.9s						
MK31	**Makanchi Array**	**55.61**	**327**	P	**P**	**15 57 14.8**	**-0.1**
MKAR	**Makanchi Array**	**55.61**	**327**	P	**P**	**15 57 15.2**	**+0.4**
	comp=Z,4.9nm,0.3s,baz=124,slow=7.5,SNR=51						
MKAR				PcP	**PcP**	**15 58 06.1**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=126,slow=3.7,SNR=6.3						
MKAR	**Makanchi Array**	**55.61**	**327**	P	**P**	**15 57 14.7**	**-0.2**
MKAR					**PcP**	**15 58 05.6**	**-1.6**
MAKZ	**Makanchi**	**55.79**	**327**	P	**P**	**15 57 16.1**	**0.0**
MAKZ				IAmb	IAmb	15 57 17.1	
	comp=Z,10nm,1.3s						
KDJ	**Kajisay**	**56.03**	**320**	P	**P**	**15 57 18.8**	**+0.6**
KDJ				IAmb	IAmb	15 57 24.5	
	comp=Z,9.1nm,1.1s						
AAK	**Ala-Archa**	**58.02**	**319**	P	**P**	**15 57 31.9**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=40,slow=14,SNR=3.6						
AAK	**Ala-Archa**	**58.02**	**319**	IAmb	IAmb	15 57 34.6	
	comp=Z,2.0nm,0.7s						
KBL	**Kabul**	**58.71**	**309**	P	**P**	**15 57 36.5**	**-0.1**
ZALV	**Zalesovo Beam**	**59.07**	**335**	P	**P**	**15 57 37.6**	**-0.7**
	comp=Z,2.7nm,0.5s,baz=140,slow=6.3,SNR=7.8						
KURBB	**Kurchatov Arra**	**59.90**	**329**	P	**P**	**15 57 43.5**	**-0.5**
	comp=Z,4.6nm,0.5s,baz=128,slow=6.7,SNR=14						
KURK	**Kurchatov**	**59.91**	**329**	P	**P**	**15 57 43.5**	**-0.6**
KK31	**Karatay Array**	**60.85**	**318**	P	**P**	**15 57 49.8**	**-0.7**
KKAR	**Karatay Array**	**60.85**	**318**	P	**P**	**15 57 49.5**	**-1.0**
KKAR	**Karatay Array**	**60.85**	**318**	P	**P**	**15 57 49.6**	**-0.9**
KKAR				IAmb	IAmb	15 57 51.3	
	comp=Z,3.7nm,0.6s						
BVAR	**Borovoye Array**	**65.45**	**328**	P	**P**	**15 58 19.0**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=170,slow=9.0,SNR=7.6						
BRVK	**Borovoye**	**65.52**	**328**	P	**P**	**15 58 19.8**	**-0.5**
BRVK				IAmb	IAmb	15 58 20.9	
	comp=Z,6.5nm,1.1s						
TIXI	**Tiksi**	**68.03**	**2**	P	**P**	**15 58 34.6**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=291,slow=8.6,SNR=3.6						
TIXI	**Tiksi**	**68.03**	**2**	P	**P**	**15 58 34.4**	**-1.0**
GEYT	**Alibeck**	**68.13**	**309**	P	**P**	**15 58 36.4**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=134,slow=6.4,SNR=4.0						
SOCY	**Socotra**	**68.81**	**282**	P	**P**	**15 58 39.4**	**-2.0**
SOCY				IAmb	IAmb	15 58 40.4	
	comp=Z,16nm,0.9s						
NRIK	**Noril'sk**	**69.69**	**347**	P	**P**	**15 58 44.8**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=128,slow=5.8,SNR=7.6						
NRIK	**Noril'sk**	**69.69**	**347**	P	**P**	**15 58 45.0**	**-0.5**
NRIK				IAmb	IAmb	15 58 46.0	
	comp=Z,3.7nm,0.8s						
ABKAR	**Akbulak array**	**69.94**	**322**	P	**P**	**15 58 46.5**	**-1.0**
ABKAR				IAmb	IAmb	15 58 47.7	
	comp=Z,3.7nm,0.7s						
AKTO	**Aktyubinsk**	**71.49**	**322**	P	**P**	**15 58 55.6**	**-1.0**
	comp=Z,4.8nm,0.5s,baz=106,slow=7.2,SNR=23						
ARU	**Arti**	**73.09**	**328**	P	**P**	**15 59 04.7**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=136,slow=6.7,SNR=5.6						
RAYN	**Ar Rayn**	**77.17**	**293**	P	**P**	**15 59 28.2**	**-1.1**
VOI	**Vohitsoka**	**78.66**	**247**	P	**P**	**15 59 36.3**	**-1.3**
VOI				IAmb	IAmb	15 59 39.0	
	comp=Z,10nm,1.1s						
GEVA	**Gevas**	**79.92**	**308**	P	**P**	**15 59 44.1**	**+0.1**
KBZ	**Khabaz**	**80.40**	**314**	P	**P**	**15 59 46.4**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=174,slow=5.4,SNR=4.2						
ILAR	**Eielson Array**	**86.77**	**25**	PP	PP	16 03 52.2	+3.7
	comp=Z,0.6nm,0.9s,baz=259,slow=4.2,SNR=4.4						
ARCES	**ARCESS Array B**	**89.28**	**340**	P	**P**	**16 00 27.2**	**-1.8**
	comp=Z,2.3nm,0.9s,baz=68,slow=5.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**119.47**	**287**	PKP	**PKPdf**	**16 06 18.1**	**-2.4**
	comp=Z,0.6nm,0.6s,baz=38,slow=2.6,SNR=4.0						

*BJI **27** 15:51:44.6±0.0,27˚.68N×85˚.11E,h10km,mB4.5/6, mb4.3/21*
*IDC **27** 15:51:44.1±0.7,27˚.60N×85˚.17E,h0km,mb4.1/22, mb1 4.1/25,mb1mx3.9/60,mbtmp4.1/25,ML3.9/3,MS2.5/2, Ms1 2.6/2,ms1mx2.3/33,Error ellipse: s-maj=19.5km s-min=14.5km az=45.0*
*DMN **27** 15:51:45.5±0.1,27˚.67N×85˚.28E,h10km,Ml4.8/5,Error ellipse: s-maj=2.7km s-min=1.3km az=18.0*
*NDI **27** 15:51:46.8±2.5,27˚.52N×85˚.17E,h10km,ML4.0, mb4.3(NEIC)*
*NEIC **27** 15:51:46.1±1.6,27˚.7N±0˚.1×85˚.1E±0˚.1,h10km±1km, mb4.3/37, Error ellipse: s-maj=18.9km s-min=13.8km az=211.0*
ISC 27 15:51:46.0±0.7,**27˚.66N**±0˚.04×**85˚.22E**±0˚.02,**h11**km±4km, **n98**,σ1§**81**/113,**mb4.2**/34,**1D**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMN	**Daman**	**0.12**	**243**	*e*Pg	**Pg**	**15 51 49.5**	**+0.4**
DMN				*e*Sg	**Sg**	**15 51 52.2**	**+0.8**
KKN	**Kakani**	**0.14**	**21**	*e*Pg	**Pg**	**15 51 48.5**	**-0.9**
KKN				*e*Sg	**Sg**	**15 51 50.9**	**-1.0**
PKIN	**Phulchoki**	**0.17**	**119**	*e*Pg	**Pg**	**15 51 49.0**	**-1.0**
PKIN				*e*Sg	**Sg**	**15 51 51.5**	**-1.3**
PKI	**Pulchoki**	**0.19**	**119**	*e*Pg	**Pg**	**15 51 49.1**	**-1.1**
PKI	**Pulchoki**	**0.19**	**119**	*e*Pg	**Pg**	**15 51 49.2**	**-1.0**
PKI				*e*Sg	**Sg**	**15 51 52.2**	**-1.0**
GKN	**Gorkha**	**0.62**	**303**	*e*Pg	**Pg**	**15 51 58.0**	**-0.1**
GKN				*e*Sg	**Sb**	**15 52 07.3**	**-0.4**
	6μm,0.3s						
GUN	**Gumba**	**0.63**	**67**	*e*Pg	**Pg**	**15 51 57.2**	**-1.1**
GUN				*e*Sg	**Sg**	**15 52 04.3**	**-2.4**
	7μm,0.2s						
KOLN	**Koldanda**	**1.44**	**275**	*e*Pg	**Pg**	**15 52 14.0**	**+0.3**
KOLN				*e*Sg	**Sg**	**15 52 33.9**	**+1.4**
	3μm,0.3s						
DANN	**Dangsing**	**1.46**	**298**	*e*Pg	**Pg**	**15 52 14.4**	**+0.3**
DANN				*e*Sg	**Sg**	**15 52 33.0**	**-0.2**
	606nm,0.2s						
PYUN	**Piuthan**	**2.02**	**283**	*e*Pg	**Pb**	**15 52 23.7**	**+0.8**
PYUN				*e*Sg	**Sg**	**15 52 50.9**	**-0.2**
	2μm,0.4s						
ODAN	**Odare**	**2.09**	**112**	*e*Pg	**Pb**	**15 52 23.9**	**-0.1**
ODAN				*e*Sg	**Sb**	**15 52 50.4**	**+0.4**
	2μm,0.3s						
TAPN	**Taplejung**	**2.23**	**97**	*e*Pg	**Pb**	**15 52 26.3**	**-0.2**
TAPN				*e*Sg	**Sb**	**15 52 55.3**	**+1.1**
	2μm,0.5s						
GTK	**Tadong**	**3.02**	**96**	*e*P	**Pn**	**15 52 35.8**	**+1.9**
GTK				*e*S	**Sn**	**15 53 11.7**	**+1.5**
GTK				IAML		15 53 19.9	
	comp=N,864nm,0.4s						
GTK				IAML		15 53 20.1	
	comp=E,365nm,0.3s						
LSA	**Lhasa**	**5.59**	**67**	Pn	**Pn**	**15 53 12.5**	**+3.0**
LSA	**Lhasa**	**5.59**	**67**		**Pn**	**15 53 10.0**	**+0.5**
SHL	**Shillong**	**6.32**	**108**	*e*P	**Pn**	**15 53 19.7**	**+0.5**
SHL				*e*S	**Sn**	**15 54 27.5**	**-4.0**
SHL	**Shillong**	**6.32**	**108**	Pn	**Pn**	**15 53 19.5**	**+0.3**
SMLA	**Simla**	**7.83**	**298**	*e*P	**Pn**	**15 53 40.7**	**+0.9**
SMLA				*e*S	**Sn**	**15 55 03.9**	**-4.5**
SMLA				IAML		15 55 09.3	
	comp=E,172nm,0.4s						
SMLA				IAML		15 55 10.7	
	comp=N,115nm,0.4s						
BHPL	**Bhopal**	**8.31**	**240**	*e*P	**Pn**	**15 53 42.7**	**-3.7**
BHPL				*e*S	**Sn**	**15 55 13.0**	**-7.3**
BHPL				IAML		15 55 18.3	
	comp=E,75nm,0.4s						
BHPL				IAML		15 55 19.2	
	comp=N,69nm,0.3s						
MOKO	**MOKOCHONG**	**8.40**	**97**	*e*P	**Pn**	**15 53 48.6**	**+0.8**
DHRM	**DHARAMSHALA**	**8.99**	**303**	*e*P	**Pn**	**15 53 55.9**	**0.0**
DHRM				*e*S	**Sn**	**15 55 32.3**	**-5.0**
DHRM				IAML		15 55 41.8	
	comp=N,72nm,0.5s						
DHRM				IAML		15 55 42.7	
	comp=E,120nm,0.5s						
AJM	**Ajmer**	**9.50**	**265**	*e*P	**Pn**	**15 54 01.0**	**-1.9**
AJM				*i* S	**Sn**	**15 55 43.0**	**-6.7**
HYB	**Hyderabad**	**11.91**	**213**	*i* P	**Pn**	**15 54 40.0**	**+4.2**
KBL	**Kabul**	**15.45**	**300**	Pn	**Pn**	**15 55 21.0**	**-3.1**
KBL				IAmb	IAmb	15 55 32.0	
	comp=Z,8.2nm,0.6s						
CMAR	**Chiang Mai Arr**	**15.59**	**123**	Pn	**Pn**	**15 55 26.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=307,slow=12,SNR=7.8						
CMAR				LR	LR	16 02 26.9	
	comp=Z,26nm,20.6s,baz=339,slow=41						
CMAR	**Chiang Mai Arr**	**15.59**	**123**	P	**P**	**15 55 31.1**	**+1.1**
KMI	**Kunming**	**15.90**	**95**	||P	**P**	**15 55 32.0**	**-1.7**
KMI				pP	pP	15 55 36.3	-1.0
KMI				sP	sP	15 55 38.0	-0.9
KMI				PP	**PnPn**	**15 55 45.5**	**+7.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMQ	**Urumqi**	**16.25**	**6**	*e*P	**P**	**15 55 36.0**	**-1.3**
WMQ				sP	sP	15 55 42.5	0.0
WMQ				sP	pP	15 55 43.5	+2.6
WMQ				pmax	pmax		
	comp=Z,24nm,0.7s						
BOOM	**Boomskoye usch**	**16.61**	**335**	Pn	**Pn**	**15 55 37.6**	**-1.4**
BOOM				IAmb	IAmb	15 56 03.4	
	comp=Z,53nm,1.4s						
GTA	**Gaotai**	**16.86**	**42**	P	**P**	**15 55 45.3**	**+1.1**
GTA				pP	sP	15 55 50.0	+0.7
GTA				sP	pP	15 55 53.0	+5.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BTK	**Batken**	**17.18**	**320**	Pn	**Pn**	**15 55 42.8**	**-3.2**
AAK	**Ala-Archa**	**17.30**	**332**	P	**P**	**15 55 48.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=143,slow=12,SNR=5.2			

comp=Z,1.1nm,0.8s,baz=321,slow=6.5,SNR=11
WB2 Warramunga Arr 67.08 129 P **P** **16 02 40.7 +1.0**
WB2 IAmb IAmb 16 02 52.4
comp=Z,5.5nm,1.1s
WR0 Warramunga Arr 67.22 129 P **P** **16 02 41.3 +0.7**
AS31 Alice Springs 69.35 133 P **P** **16 02 55.1 +1.2**
ASAR Alice Springs 69.35 133 P **P** **16 02 54.1 +0.2**
comp=Z,1.0nm,0.7s,baz=310,slow=6.1,SNR=21
ASAR Alice Springs 69.35 133 P **P** **16 02 54.7 +0.8**
ESDC Sonseca Array 72.34 306 P **P** **16 03 12.2 +0.2**
comp=Z,1.0nm,0.7s,baz=57,slow=5.0,SNR=6.9
ESDC Sonseca Array 72.34 306 P **P** **16 03 11.3 -0.7**
ESDC IAmb IAmb 16 03 13.1
comp=Z,2.0nm,1.1s
EUNU Eureka 72.41 358 P **P** **16 03 13.1 +1.3**
EUNU IAmb IAmb 16 03 13.5
comp=Z,3.6nm,0.8s
PAB San Pablo 72.66 306 P **P** **16 03 14.5 +0.5**
PAB IAmb IAmb 16 03 18.4
comp=Z,8.6nm,1.1s
SUMG Summit 73.01 345 P **P** **16 03 16.7 +0.9**
SUMG IAmb IAmb 16 03 20.6
comp=Z,4.2nm,1.0s
PVAQ Vaqueiros 75.93 305 P **P** **16 03 33.5 +0.5**
TOLK Toolik Lake Re 75.97 18 P **P** **16 03 33.9 +1.2**
TOLK IAmb IAmb 16 03 41.0
comp=Z,4.1nm,1.3s
TOA0 Torodi Ar. Sit 78.36 279 P **P** **16 03 46.6 -0.4**
TOA0 IAmb IAmb 16 04 05.2
comp=Z,4.0nm,1.3s
TORD Torodi Ar. Bea 78.36 279 P **P** **16 03 46.4 -0.5**
comp=Z,1.3nm,0.7s,baz=56,slow=4.6,SNR=7.4
TORD Torodi Ar. Bea 78.36 279 P **P** **16 03 46.4 -0.5**
TORD IAmb IAmb 16 03 47.0
comp=Z,1.1nm,0.7s
DBIC Dimbokro 87.02 276 P **P** **16 04 31.8 -0.2**
comp=Z,1.9nm,0.5s,baz=333,slow=5.0,SNR=4.5
DBIC Dimbokro 87.02 276 IAmb IAmb 16 04 37.2
comp=Z,9.4nm,1.3s
YKA Yellowknife Ar 88.76 9 P **P** **16 04 39.0 -0.5**
comp=Z,0.6nm,0.7s,baz=339,slow=4.5,SNR=11

IDC 27 16:34:27.8±3.9, 27.69N×85.29E, h0km, mb3.2/3, mb1 3.3/5, mb1mx3.2/35, mbtmp3.1/5, ML3.2/2, Error ellipse: s-maj=180.8km s-min=25.9km az=64.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.55**	**123**	Pn	Pn	16 38 10.2	+1.7
	0.0nm,0.3s,baz=318,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**19.21**	**354**	P	P	16 38 52.4	-1.0
	0.1nm,0.3s,baz=177,slow=12,SNR=4.6						
KURBB	**Kurchatov Arra**	**23.47**	**349**	P	P	16 39 40.0	+1.0
	0.2nm,0.4s,baz=169,slow=9.0,SNR=2.5						
WRA	**Warramunga Arr**	**67.04**	**130**	P	P	16 45 22.8	-0.3
	0.6nm,1.0s,baz=322,slow=6.6,SNR=1.9						
ASAR	**Alice Springs**	**69.33**	**133**	P	P	16 45 37.3	-0.1
	0.2nm,0.8s,baz=318,slow=5.7,SNR=2.0						

SFS 27 16:48:23.0, 34.82N×3.61W, h68km, ML3.1, TLETA BOU BERKER (MARRUECOS)
MDD 27 16:48:24.0±1.8, 35.11N×3.89W, h0km, mbLg2.1/7, Error ellipse: s-maj=18.8km s-min=5.7km az=15.0, PRXIMO
ISC 27 16:48:24.0±1.8, 35.11N±0.05×3.81W±0.04, h18km±5km, n14, σ1°61/23, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVLZ	**Peæn de**	**0.41**	**279**	*eP*	**Pb**	**16 48 33.0**	**+0.4**
PVLZ				*eS*	**Sb**	**16 48 38.9**	**+0.4**
EMEL	**Melilla**	**0.73**	**75**	P	**Pg**	**16 48 38.2**	**-0.1**
	150nm,0.1s,SNR=5.6						
EMEL				S	**Sn**	**16 48 49.2**	**-0.7**
	323nm,0.2s,SNR=5.5						
MELI	**Melilla**	**0.74**	**75**	P	**Pb**	**16 48 38.1**	**-0.3**
	43nm,0.2s,SNR=4.0						
MELI				S	**Sn**	**16 48 50.7**	**+0.4**
	94nm,0.2s,SNR=7.9						
CEU	**Ceuta**	**1.50**	**302**	*eP*	**Pn**	**16 48 47.7**	**-2.2**
CEU				*eS*	**Sn**	**16 49 05.4**	**-3.5**
ECEU	**Ceuta**	**1.50**	**302**	S	**Sn**	**16 49 07.9**	**-1.1**
	6.0nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**1.65**	**332**	S	**Sn**	**16 49 13.4**	**+0.7**
	5.9nm,0.3s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.72**	**343**	*eS*	**Sn**	**16 49 15.1**	**+0.6**
ELGU	**Los Guajares,**	**1.76**	**5**	S	**Sn**	**16 49 17.1**	**+1.5**
	4.0nm,0.1s,SNR=7.9						
IFR	**Ifrane**	**1.93**	**215**	*eP*	**Pb**	**16 48 59.2**	**+0.6**
IFR				*eS*	**Sn**	**16 49 20.2**	**+0.4**
EBER	**Berja**	**1.93**	**23**	P	**Pn**	**16 48 55.9**	**-0.2**
	0.4nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**16 49 21.2**	**+1.2**
	5.3nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.75**	**12**	P	**Pb**	**16 49 11.0**	**-1.7**
	0.7nm,0.2s,SNR=7.9						
EQES				S	**Sb**	**16 49 45.1**	**-1.0**
	2.9nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**3.11**	**349**	P	**Pn**	**16 49 14.4**	**+2.2**
	0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**16 49 52.1**	**+3.2**
	0.4nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**3.23**	**337**	S	**Sn**	**16 49 53.5**	**+1.8**
	0.9nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**3.83**	**310**	P	**Pn**	**16 49 23.4**	**+1.5**
	0.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**16 50 06.7**	**+0.3**
	2.3nm,0.3s,SNR=7.9						

IDC 27 16:54:43.6±1.2, 27.56N×85.60E, h0km, mb3.8/10, mb1 3.8/12, mb1mx3.5/44, mbtmp3.7/12, ML3.5/2, Error ellipse: s-maj=45.7km s-min=16.4km az=61.0
DMN 27 16:54:46.2±0.2, 27.82N×85.89E, h25km, MI4.6/5, Error ellipse: s-maj=8.3km s-min=3.0km az=13.0
ISC 27 16:54:47.5±1.0, 27.79N±0.06×85.89E±0.04, h13km±6km, n21, σ1°16/29, mb3.8/10, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**0.12**	**356**	*eP*	**Pg**	**16 54 50.8**	**-0.3**
GUN				*eSg*	**Sg**	**16 54 53.8**	**+0.1**
	27µm,0.3s						
PKI	**Pulchoki**	**0.48**	**243**	*eP*	**Pg**	**16 54 56.5**	**-0.5**
PKI				*eSg*	**Sg**	**16 55 02.7**	**-0.7**
	1µm,0.3s						
KKN	**Kakani**	**0.54**	**271**	*eP*	**Pg**	**16 54 57.6**	**-0.5**
KKN				*eSg*	**Sg**	**16 55 04.7**	**-0.6**
	1µm,0.2s						
GKN	**Gorkha**	**1.13**	**281**	*eP*	**Pb**	**16 55 08.7**	**-0.3**
GKN				*eSg*	**Sb**	**16 55 23.9**	**+0.2**
	624nm,0.3s						
ODAN	**Odare**	**1.62**	**124**	*eP*	**Pn**	**16 55 17.6**	**+1.6**
	4µm,0.4s						
ODAN				*eSg*	**Sn**	**16 55 39.0**	**+2.0**
TAPN	**Taplejung**	**1.67**	**105**	*eP*	**Pn**	**16 55 18.0**	**+1.2**
DANN	**Dangsing**	**1.96**	**287**	*eP*	**Pn**	**16 55 23.0**	**+2.2**
DANN				*eSg*	**Sb**	**16 55 49.1**	**+1.3**
	743nm,0.4s						
KOLN	**Koldanda**	**2.03**	**270**	*eP*	**Pb**	**16 55 25.2**	**+0.9**
KOLN				*eSg*	**Sb**	**16 55 50.8**	**+1.2**
	1µm,0.3s						
PYUN	**Piuthan**	**2.58**	**278**	*eP*	**Pb**	**16 55 34.1**	**+0.3**
PYUN				*eSg*	**Sb**	**16 56 06.7**	**+1.1**
	586nm,0.4s						
CMAR	**Chiang Mai Arr**	**15.17**	**125**	Pn	**Pn**	**16 58 21.6**	**0.0**
	0.0nm,0.3s,baz=296,slow=13,SNR=2.3						
MKAR	**Makanchi Array**	**19.18**	**352**	P	**P**	**16 59 11.1**	**+0.2**
	0.4nm,0.3s,baz=173,slow=12,SNR=17						
KURBB	**Kurchatov Arra**	**23.48**	**348**	P	**P**	**16 59 56.1**	**-0.7**
	1.0nm,0.6s,baz=166,slow=9.8,SNR=7.3						
SONM	**Songino Array**	**25.61**	**33**	P	**P**	**17 00 17.3**	**+0.7**
	1.8nm,0.7s,baz=220,slow=10.0,SNR=12						
ZALV	**Zalesovo Beam**	**26.15**	**359**	P	**P**	**17 00 22.1**	**+0.8**
	1.0nm,0.4s,baz=171,slow=10,SNR=6.7						
BVAR	**Borovoye Array**	**27.71**	**340**	P	**P**	**17 00 35.5**	**+0.1**
	0.3nm,0.4s,baz=318,slow=42,SNR=2.4						
NRIK	**Nal'chik**	**41.60**	**1**	P	**P**	**17 02 34.7**	**-0.1**
	1.9nm,0.3s,baz=175,slow=6.6,SNR=9.1						
FINES	**FINESS Array B**	**51.63**	**328**	P	**P**	**17 03 52.1**	**-1.4**
	0.8nm,0.7s,baz=76,slow=12,SNR=1.8						
ARCES	**ARCESS Array B**	**53.98**	**338**	P	**P**	**17 04 09.9**	**-0.9**
	1.4nm,0.6s,baz=90,slow=8.5,SNR=5.6						
NOA	**NORSAR Array B**	**58.73**	**327**	P	**P**	**17 04 42.6**	**-2.2**
	0.7nm,0.8s,baz=82,slow=10,SNR=2.5						
WRA	**Warramunga Arr**	**66.70**	**130**	P	**P**	**17 05 37.2**	**-1.2**
	0.5nm,0.4s,baz=322,slow=6.4,SNR=11						
ASAR	**Alice Springs**	**69.00**	**133**	P	**P**	**17 05 51.2**	**-1.8**
	0.2nm,0.6s,baz=314,slow=6.3,SNR=9.4						

IDC 27 16:56:18.8±2.4, 27.62N×85.71E, h0km, mb3.3/5, mb1 3.4/7, mb1mx3.2/47, mbtmp3.3/7, ML3.4/2, MS3.3/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=86.2km s-min=22.1km az=68.0
ISC 27 16:56:20.4±2.5, 27.6N±0.3×85.7E±0.4, h10km, n9, σ0°46/7, mb3.5/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.22**	**124**	Pn	**Pn**	**16 59 55.6**	**+0.1**
	0.1nm,0.3s,baz=313,slow=10.0,SNR=3.0						
MKAR	**Makanchi Array**	**19.31**	**353**	P	**P**	**17 00 45.1**	**-0.4**
	0.1nm,0.3s,baz=182,slow=10,SNR=4.0						
KURBB	**Kurchatov Arra**	**23.59**	**349**	P	**P**	**17 01 31.3**	**+0.1**
	0.5nm,0.7s,baz=169,slow=10,SNR=4.0						
SONM	**Songino Array**	**25.82**	**33**	P	**P**	**17 01 51.7**	**-0.2**
	0.4nm,0.6s,baz=223,slow=9.8,SNR=2.5						
ZALV	**Zalesovo Beam**	**26.29**	**359**	P	**P**	**17 01 56.6**	**+0.7**
	0.6nm,0.6s,baz=168,slow=7.4,SNR=2.0						
AKTO	**Aktyubinsk**	**31.00**	**325**	LR	LR	17 15 30.1	
	comp=Z,21nm,18.6s,baz=244,slow=37						
FINES	**FINESS Array B**	**51.66**	**328**	LR	LR	17 29 06.7	
	comp=Z,65nm,19.1s,baz=162,slow=38						
WRA	**Warramunga Arr**	**66.73**	**130**	P	**P**	**17 07 12.2**	**+0.1**
	0.4nm,0.7s,baz=321,slow=6.8,SNR=2.0						
ASAR	**Alice Springs**	**69.03**	**133**	P	**P**	**17 07 26.2**	**-0.3**
	0.2nm,0.6s,baz=318,slow=6.3,SNR=4.4						

IDC 27 17:03:29.6±1.6, 27.87N×85.69E, h0km, mb3.7/8, mb1 3.7/10, mb1mx3.4/46, mbtmp3.6/10, ML3.4/2, Error ellipse: s-maj=55.2km s-min=20.6km az=62.0
ISC 27 17:03:31.0±1.6, 27.9N±0.2×85.7E±0.3, h10km, n10, σ0°93/10, mb3.8/8, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.32**	**125**	Pn	**Pn**	**17 07 06.8**	**-0.8**
	0.0nm,0.3s,baz=297,slow=13,SNR=4.4						
MKAR	**Makanchi Array**	**19.09**	**353**	P	**P**	**17 07 54.4**	**+0.5**
	0.2nm,0.3s,baz=171,slow=12,SNR=11						
KURBB	**Kurchatov Arra**	**23.39**	**348**	P	**P**	**17 08 38.9**	**-0.9**
	0.3nm,0.5s,baz=168,slow=9.5,SNR=3.4						
SONM	**Songino Array**	**25.62**	**33**	P	**P**	**17 09 02.0**	**+1.2**
	1.1nm,0.6s,baz=235,slow=9.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**17 09 04.3**	**-0.3**
	0.6nm,0.5s,baz=180,slow=11,SNR=2.6						
TIXI	**Tiksi**	**49.79**	**16**	P	**P**	**17 12 22.7**	**-0.8**
	0.9nm,0.3s,baz=277,slow=0.7,SNR=6.0						
FINES	**FINESS Array B**	**51.49**	**328**	P	**P**	**17 12 36.5**	**0.0**
	1.3nm,0.9s,baz=108,slow=7.5,SNR=1.6						
ARCES	**ARCESS Array B**	**53.86**	**338**	P	**P**	**17 12 54.0**	**+0.1**
	3.2nm,1.0s,baz=77,slow=4.7,SNR=2.1						
WRA	**Warramunga Arr**	**66.85**	**130**	P	**P**	**17 14 23.1**	**-0.4**
	0.5nm,0.8s,baz=322,slow=6.4,SNR=1.6						
ASAR	**Alice Springs**	**69.16**	**133**	P	**P**	**17 14 39.3**	**+1.4**
	0.3nm,0.8s,baz=317,slow=6.4,SNR=2.3						

NEIC 27 17:34:49.6±1.1, 2.04N±0.06×124.75E±0.07, h251km±9km, mb4.5/25, Error ellipse: s-maj=12.9km s-min=3.4km az=48.0
DJA 27 17:34:50.9±0.3, 2.7N×12.5E°, h239km, 3km, M4.4/12, mb4.5/10, mB4.8/6, MLv4.6/12, Mw(mB)4.1/6
IDC 27 17:34:52.6±1.6, 1.96N×124.86E, h284km±18km, mb3.4/7, mb1 3.7/11, mb1mx3.2/45, mbtmp4.2/11, Error ellipse: s-maj=22.0km s-min=10.0km az=74.0
ISC 27 17:34:50.0±0.4, 2.02N±0.05×124.78E±0.05, h250km, n79, σ1°22/84, mb4.3/19, 1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.64**	**209**	P	**Pn**	**17 35 31.1**	**+1.7**
KMSI				S	**S**	**17 35 59.9**	**-0.6**
SGSI	**Sangihe**	**1.82**	**24**	P	**Pn**	**17 35 30.8**	**-0.1**
SGSI				S	**S**	**17 36 02.9**	**-0.3**
GTOI	**Gorontalo**	**2.24**	**232**	P	**Pn**	**17 35 35.7**	**+1.0**
GTOI				S	**S**	**17 36 11.5**	**+1.5**
TNTI	**Ternate**	**2.87**	**116**	Pn	**Pn**	**17 35 41.1**	**0.0**
TNTI	**Ternate**	**2.87**	**116**	P	**Pn**	**17 35 41.5**	**+0.4**
TNTI				S	**S**	**17 36 21.6**	**+0.1**
MRSI	**Marisa**	**3.22**	**242**	P	**Pn**	**17 35 46.8**	**+1.9**
LUWI	**Luwuk**	**3.64**	**213**	Pn	**Pn**	**17 35 49.2**	**-0.5**
LUWI	**Luwuk**	**3.64**	**213**	P	**Pn**	**17 35 49.4**	**-0.3**
TOLI2	**Tolitoli**	**4.09**	**257**	Pn	**Pn**	**17 35 55.2**	**+0.2**
SANI	**Sanana**	**4.22**	**163**	P	**Pn**	**17 35 55.0**	**-1.4**
APSI	**Ampana**	**4.27**	**227**	P	**Pn**	**17 35 57.5**	**+0.4**
NLAI	**Namlea**	**5.72**	**156**	P	**Pn**	**17 36 14.8**	**+0.1**
	1.2nm2µm29nm,0.6s						
CGP	**Cagayan de Oro**	**6.39**	**359**	*eP*	**Pn**	**17 36 23.9**	**+0.8**
MYLDM	**Lahad Datu**	**7.01**	**297**	Pn	**Pn**	**17 36 30.9**	**+0.1**
TTSI	**Tana Toraja**	**7.06**	**225**	P	**Pn**	**17 36 32.6**	**+1.1**
SWI	**Sorong**	**7.09**	**114**	P	**Pn**	**17 36 35.5**	**+3.7**
SIJI	**Sorong**	**7.09**	**114**	P	**Pn**	**17 36 32.6**	**+0.6**
	1.6nm,0.3s,baz=304,slow=4.4,SNR=12						
SPSI	**Sidrap Palu**	**7.77**	**220**	P	**Pn**	**17 36 40.7**	**+0.2**
	0.1nm435nm34nm,0.8s						
BNSI	**Bone**	**7.90**	**216**	P	**Pn**	**17 36 43.7**	**+1.6**
	0.2nm626nm68nm,1.2s						
KAPI	**Kappang**	**8.60**	**216**	P	**Pn**	**17 36 52.0**	**+1.0**
	1.9nm,0.3s,baz=44,slow=8.3,SNR=8.3						
KAPI	**Kappang**	**8.60**	**216**	Pn	**Pn**	**17 36 49.1**	**-1.9**
KKM	**Kota Kinabalu**	**9.43**	**295**	Pn	**Pn**	**17 37 00.6**	**-1.0**
MMRI	**Maumere**	**10.88**	**193**	Pn	**Pn**	**17 37 19.2**	**-0.6**
MMRI	**Maumere**	**10.88**	**193**	P	**Pn**	**17 37 21.3**	**+1.5**
	1µm110nm,0.9s						
BBKI	**Banjar Baru**	**11.32**	**241**	P	**P**	**17 37 29.0**	**-0.2**
SOEI	**Soe**	**11.71**	**182**	Pn	**Pn**	**17 37 30.7**	**+0.5**
SOEI	**Soe**	**11.71**	**182**	P	**P**	**17 37 33.0**	**-0.6**
	1µm160nm,0.9s						
BATI	**Baumata**	**12.20**	**185**	P	**P**	**17 37 38.0**	**-0.9**
	69nm,0.3s,baz=12,slow=4.2,SNR=31						
BATI	**Baumata**	**12.20**	**185**	P	**P**	**17 37 38.5**	**-0.4**
	2µm141nm,0.5s						
SBUM	**Sibu**	**12.55**	**272**		**P**	**17 37 41.8**	**-1.0**
WBSI	**Waikabubak, Su**	**12.77**	**205**	P	**P**	**17 37 45.8**	**+0.6**
PLAI	**Plampang**	**12.84**	**213**	P	**P**	**17 37 44.6**	**-1.4**
	48nm,0.9s						
TWSI	**Taliwang, Sumb**	**13.27**	**216**	P	**P**	**17 37 50.9**	**+0.1**
	32nm,0.7s						
KSM	**Kuching**	**14.47**	**268**	P	**P**	**17 38 04.2**	**+0.1**
JAGI	**Jajag, Banyuwa**	**14.86**	**225**	P	**P**	**17 38 07.5**	**-0.9**
SZP	**Santa**	**16.01**	**345**	P	**P**	**17 38 20.7**	**-0.3**
SZP					IAmb	IAmb	17 38 26.7
	comp=Z,20nm,0.8s						
GENI	**Genyem**	**16.05**	**107**	P	**Pn**	**17 38 22.9**	**0.0**
MTN	**Manton Dam**	**16.06**	**157**	P	**P**	**17 38 21.6**	**+0.1**
JAY	**Jayapura**	**16.55**	**106**	P	**P**	**17 38 26.9**	**-0.2**
	comp=Z,2.0nm,0.3s,baz=240,slow=8.9,SNR=10						
JAY	**Jayapura**	**16.55**	**106**	P	**Pn**	**17 38 30.9**	**+2.1**
KNRA	**Kununurra**	**18.02**	**167**	P	**P**	**17 38 43.0**	**0.0**
FITZ	**Fitzroy Crossi**	**20.01**	**178**	P	**P**	**17 39 03.3**	**-0.9**
	comp=Z,4.9nm,0.3s,baz=21,slow=8.8,SNR=71						
FITZ	**Fitzroy Crossi**	**20.01**	**178**	P	**P**	**17 39 04.4**	**+0.2**
FITZ					IAmb	IAmb	17 39 06.3
	comp=Z,14nm,0.5s						
YULB	**Yu-li**	**21.51**	**351**	P	**P**	**17 39 16.4**	**-3.2**
YULB					IAmb	IAmb	17 39 22.0
	comp=Z,8.3nm,0.8s						
TPUB	**Ta-pu**	**21.53**	**350**	P	**P**	**17 39 17.7**	**-2.1**
MDSI	**Maura Dua**	**21.57**	**253**	P	**P**	**17 39 22.4**	**+2.1**
SSLB	**Suanglung**	**21.95**	**351**	P	**P**	**17 39 21.6**	**-2.1**
SSLB					IAmb	IAmb	17 39 28.8
	comp=Z,8.8nm,0.7s						
MANU	**Manus Island**	**22.94**	**100**	P	**P**	**17 39 31.4**	**-1.5**
MANU					IAmb	IAmb	17 39 36.2
	comp=Z,6.5nm,0.8s						
WB0	**Warramunga Arr**	**23.62**	**157**	P	**P**	**17 39 38.5**	**-0.4**
WB0					IAmb	IAmb	17 39 42.3
	comp=Z,7.5nm,0.6s						
WRA	**Warramunga Arr**	**23.76**	**157**	P	**P**	**17 39 39.0**	**-1.1**
	comp=Z,4.5nm,0.3s,baz=333,slow=11,SNR=64						
WRA					S	**S**	**17 43 31.6**	**-5.3**
	comp=Z,3.7nm,0.8s,baz=339,slow=16,SNR=7.6						
WRA	**Warramunga Arr**	**23.76**	**157**	P	**P**	**17 39 39.1**	**-1.1**
WB2	**Warramunga Arr**	**23.76**	**157**	P	**P**	**17 39 39.7**	**-0.5**
WB2					IAmb	IAmb	17 39 40.3
	comp=Z,8.1nm,0.6s						
WR0	**Warramunga Arr**	**23.85**	**157**	P	**P**	**17 39 40.4**	**-0.6**
WR0					IAmb	IAmb	17 39 49.0
	comp=Z,6.6nm,0.6s						
PSA00	**Pilbara Seismi**	**23.94**	**191**	P	**P**	**17 39 40.9**	**-0.8**
PSA00	**Pilbara Seismi**	**23.94**	**191**	P	**P**	**17 39 42.0**	**+0.3**
AS31	**Alice Springs**	**27.03**	**161**	P	**P**	**17 40 08.9**	**-0.7**
ASAR	**Alice Springs**	**27.03**	**161**	P	**P**	**17 40 09.2**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=345,slow=15,SNR=47						
ASAR	**Alice Springs**	**27.03**	**161**	P	**P**	**17 40 09.5**	**-0.1**
RABL	**Rabaul**	**28.06**	**103**	P	**P**	**17 40 19.8**	**+1.0**
NJ2	**Nanjing**	**30.39**	**350**	*eP*	**P**	**17 40 40.0**	**+0.9**
NJ2					pmax	pmax	
	comp=Z,10.0nm,0.5s						
MORW	**Morawa**	**32.02**	**195**	P	**P**	**17 40 53.0**	**-0.4**
MORW					IAmb	IAmb	17 40 53.7
	comp=Z,12nm,0.8s						
FORT	**Forrest**	**32.77**	**175**	P	**P**	**17 40 59.2**	**-0.6**
NWAO	**Narrogin (SRO)**	**35.48**	**191**	P	**P**	**17 41 22.9**	**-0.2**
	comp=Z,4.0nm,0.4s,baz=24,slow=8.6,SNR=9.0						
NWAO	**Narrogin (SRO)**	**35.48**	**191**	P	**P**	**17 41 22.6**	**-0.5**
NWAO					IAmb	IAmb	17 41 30.0
	comp=Z,36nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.48**	**191**	P	**P**	**17 41 22.8**	**-0.2**
NWAO					IAmb	IAmb	17 41 30.0
	comp=Z,34nm,1.4s						
BBOO	**Buckleboo**	**36.25**	**164**	P	**P**	**17 41 28.6**	**-1.0**
BBOO					IAmb	IAmb	17 41 30.1
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	**37.30**	**156**	P	**P**	**17 41 38.9**	**+0.5**
	comp=Z,2.0nm,0.4s,baz=337,slow=6.2,SNR=11						
STKA	**Stephens Creek**	**37.30**	**156**	P	**P**	**17 41 39.0**	**+0.5**
HHC	**Hu-ho-hao-te**	**40.46**	**345**	*eP*	**P**	**17 42 04.0**	**-0.6**
HHC					pmax	pmax	
	comp=Z,7.0nm,0.6s						
HHC					pmax	pmax	
	comp=Z,92nm,7.6s						
ARMA	**Armidale**	**41.19**	**144**	P	**P**	**17 42 11.5**	**+0.8**
ARMA					IAmb	IAmb	17 42 21.2
	comp=Z,51nm,1.5s						
USRK	**Ussuriysk Ar.**	**42.49**	**8**	P	**P**	**17 42 20.1**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=185,slow=6.2,SNR=6.1						
USRK	**Ussuriysk Ar.**	**42.49**	**8**	P	**P**	**17 42 20.4**	**-0.4**
GTA	**Gaotai**	**43.61**	**332**	*eP*	**P**	**17 42 30.8**	**+0.7**
GTA					pP	pP	17 43 22.5	+1.6
GTA					sP	sP	17 43 51.8	+3.2
GTA					pmax	pmax	
	comp=Z,1.0nm,0.9s						
TOO	**Toolangi**	**43.82**	**156**	P	**P**	**17 42 33.1**	**+1.5**
SONM	**Songino Array**	**48.33**	**343**	P	**P**	**17 43 06.3**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=169,slow=8.7,SNR=3.1						
WMQ	**Urumqi**	**53.04**	**327**	*eP*	**P**	**17 43 43.0**	**+1.3**
MKAR	**Makanchi Array**	**57.87**	**327**	P	**P**	**17 44 15.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=123,slow=7.9,SNR=13						
MA2	**Magadan**	**60.84**	**15**	P	**P**	**17 44 35.1**	**-0.7**
ABKAR	**Akbulak array**	**72.25**	**321**	P	**P**	**17 45 48.3**	**+0.2**

NEIC 27 17:36:03.2±1.5, 22.1S±0.2×177.83W±0.09, h375km±7km, mb4.5/12, Error ellipse: s-maj=24.0km s-min=11.7km az=175.0
IDC 27 17:36:05.0±2.6, 21.96S×178.08W, h383km±24km, mb3.5/11, mb1 3.7/13, mb1mx3.4/44, mbtmp4.3/13, Error ellipse: s-maj=31.7km s-min=15.7km az=152.0
ISC 27 17:36:03.1±0.6, 22.0S±0.1×177.88W±0.10, h373km, n33, σ1°33/31, mb3.8/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.71**	**317**	P	**Pn**	**17 37 33.0**	**+1.4**
	3.6nm,0.3s,baz=117,slow=21,SNR=22						
MSVF	**Nonsavu**	**5.71**	**317**	Pn	**Pn**	**17 37 33.4**	**+1.7**
NIUE	**Niue**	**8.00**	**70**	Pn	**Pn**	**17 37 56.9**	**-0.7**
AFI	**Afiamalu**	**9.91**	**37**	P	**Pn**	**17 38 16.8**	**-3.4**
	4.1nm,0.3s,baz=291,slow=6.2,SNR=7.3						
AFI	**Afiamalu**	**9.91**	**37**	Pn	Pn	17 38 15.3	-4.9
URZ	**Urewera**	**16.78**	**194**	P	**P**	**17 39 35.0**	**-0.7**
	1.0nm,0.3s,baz=126,slow=23,SNR=2.3						
BKZ	**Black Stump Fm**	**17.79**	**194**	P	**P**	**17 39 44.3**	**-2.3**
BKZ					IAmb	IAmb	17 40 04.3
	comp=Z,38nm,1.4s						
PLWZ	**Palliser**	**20.36**	**195**	P	**P**	**17 40 12.5**	**-0.2**
QRZ	**Quartz Range**	**20.46**	**201**	P	**P**	**17 40 12.2**	**-1.3**
THZ	**Tophouse**	**21.19**	**199**	P	**P**	**17 40 19.6**	**-0.5**
THZ					IAmb	IAmb	17 40 43.6
	comp=Z,44nm,1.2s						
LTZ	**Lake Taylor**	**22.31**	**199**	P	**P**	**17 40 29.6**	**-0.8**
ARMA	**Armidale**	**28.55**	**247**	P	**P**	**17 41 27.4**	**+1.1**

*CRAAG **27** 18:11:04.4, 37°.09N×3°.07E, MI3.5*
ISC 27 18:11:03.4±1.1, 37°.24N±0°.06×3°.00E±0°.07, h12km, n11, σ1§75/16, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABA	**Alger-Bouzarea**	**0.43**	**176**	P	**Pg**	**18 11 11.4**	**-0.5**
ABA	**Alger-Bouzarea**	**0.43**	**176**	P	**Pg**	**18 11 11.4**	**-0.5**
ABMS	**Boumerdes**	**0.62**	**142**	P	**Pg**	**18 11 14.9**	**-0.5**
ABMS	**Boumerdes**	**0.62**	**142**	P	**Pg**	**18 11 14.9**	**-0.5**
EIBI	**Ibiza**	**2.22**	**324**	P	**Pn**	**18 11 41.7**	**+1.7**
	5.7nm,0.3s,SNR=7.9						
EIBI				S	**Sn**	**18 12 06.4**	**-0.9**
	23nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**2.53**	**357**	P	**Pn**	**18 11 46.1**	**+1.8**
	3.7nm,0.2s,SNR=11						
ETOS				S	**Sn**	**18 12 14.0**	**-1.1**
	7.1nm,0.8s,SNR=7.9						
ETOB	**Tobarra**	**3.86**	**293**	P	**Pn**	**18 12 04.0**	**+1.4**
	0.8nm,0.2s,SNR=7.9						
ETOB				S	**Sn**	**18 12 46.6**	**-1.4**
	3.0nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.14**	**320**	P	**Pn**	**18 12 08.4**	**+1.9**
	0.3nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**18 12 52.7**	**-2.2**
	1.8nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	**4.17**	**268**	S	**Sn**	**18 12 53.9**	**-1.6**
	5.7nm,0.4s,SNR=4.0						
SESP	**Santiago Espad**	**4.49**	**283**	P	**Pn**	**18 12 13.5**	**+2.2**
	0.7nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**4.54**	**355**	P	**Pn**	**18 12 13.8**	**+1.8**
	1.5nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**18 13 02.0**	**-2.8**
	2.7nm,0.4s,SNR=7.9						

*IDC **27** 18:12:38.9±1.5, 27°.87N×85°.33E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.4/52, mbtmp3.6/8, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/37, Error ellipse: s-maj=56.7km s-min=21.7km az=62.0*
ISC 27 18:12:41.6±1.6, 27°.9N±0°.2×85°.3E±0°.4, h18km, n9, σ1§04/8, mb3.7/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.05**	**354**	P	**P**	**18 17 02.8**	**-0.1**
	0.2nm,0.3s,baz=171,slow=11,SNR=9.4						
KURBB	**Kurchatov Arra**	**23.31**	**349**	P	**P**	**18 17 47.5**	**-0.9**
	0.7nm,0.3s,baz=172,slow=11,SNR=7.9						
GEYT	**Alibeck**	**24.84**	**301**	LR	LR	18 29 13.4	
	comp=Z,25nm,19.8s,baz=340,slow=40						
SONM	**Songino Array**	**25.86**	**34**	P	**P**	**18 18 13.0**	**+0.7**
	0.5nm,0.4s,baz=219,slow=10,SNR=2.7						
ZALV	**Zalesovo Beam**	**26.07**	**359**	P	**P**	**18 18 12.2**	**-1.8**
	0.5nm,0.5s,baz=187,slow=7.5,SNR=3.8						
FINES	**FINESS Array B**	**51.28**	**328**	P	**P**	**18 21 44.6**	**+0.4**
	0.6nm,0.5s,baz=101,slow=9.9,SNR=6.7						
ARCES	**ARCESS Array B**	**53.71**	**338**	P	**P**	**18 22 03.0**	**+0.8**
	1.1nm,0.6s,baz=106,slow=7.9,SNR=8.3						
WRA	**Warramunga Arr**	**67.16**	**130**	P	**P**	**18 23 34.8**	**0.0**
	0.3nm,0.7s,baz=320,slow=6.5,SNR=1.7						
ASAR	**Alice Springs**	**69.45**	**133**	P	**P**	**18 23 48.8**	**-0.3**
	0.8nm,1.1s,baz=330,slow=5.4,SNR=2.3						

IDC 27 18:13:41.5±3.7, 27°.89N×85°.11E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.2/54, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=104.3km s-min=31.3km az=72.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.80**	**124**	Pn	Pn	18 17 26.9	+1.5
	0.0nm,0.3s,baz=310,slow=9.9,SNR=2.7						
MKAR	**Makanchi Array**	**19.00**	**354**	P	P	18 18 05.0	+0.2
	0.1nm,0.3s,baz=172,slow=12,SNR=6.0						
SONM	**Songino Array**	**25.90**	**34**	P	P	18 19 15.4	0.0
	0.6nm,0.6s,baz=225,slow=11,SNR=2.1						
WRA	**Warramunga Arr**	**67.30**	**129**	P	P	18 24 38.1	-0.3
	0.2nm,0.4s,baz=322,slow=6.6,SNR=4.7						

*IDC **27** 18:51:05.7±1.2, 30°.19S×179°.54W, h345km±11km, mb3.5/7, mb1 3.6/9, mb1mx3.4/33, mbtmp4.3/9, Error ellipse: s-maj=23.1km s-min=17.3km az=144.0*
*NEIC **27** 18:51:05.1±1.8, 30°.40S±0°.10×179°.7W±0°.2, h338km±7km, mb4.2/19, Error ellipse: s-maj=20.9km s-min=13.6km az=99.0*
ISC 27 18:51:06.2±0.6, 30°.40S±0°.06×179°.7W±0°.1, h350km, n66, σ1§62/65, mb4.1/18, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.90**	**54**	P	**Pn**	**18 51 54.3**	**-2.6**
	266nm,0.3s,baz=60,slow=15,SNR=15						
RAO	**Raoul Island**	**1.90**	**54**		**Pn**	**18 51 54.5**	**-2.4**
WMGZ	**Waiomatatini S**	**7.57**	**192**	P	Pn	18 52 59.5	+4.4
HAZ	**Te Kaha**	**7.64**	**195**	P	**Pn**	**18 52 58.0**	**+2.1**
PUZ	**Puketiti**	**7.84**	**192**	P	**Pn**	**18 53 01.6**	**+3.2**
MWZ	**Matawai**	**8.25**	**196**	P	**P**	**18 53 06.1**	**0.0**
CNGZ	**Carnagh Statio**	**8.25**	**192**	P	**P**	**18 53 05.6**	**-0.4**
URZ	**Urewera**	**8.28**	**198**	P	**P**	**18 53 05.7**	**-0.7**
	2.9nm,0.3s,baz=123,slow=23,SNR=14						
URZ				S	**S**	**18 54 39.4**	**+0.1**
	8.4nm,0.3s,baz=51,slow=23,SNR=9.6						
URZ	**Urewera**	**8.28**	**198**	Pn	**Pn**	**18 53 02.5**	**-1.0**
URZ					**S**	**18 54 38.6**	**-0.6**
URZ	**Urewera**	**8.28**	**198**	P	**P**	**18 53 05.1**	**-1.2**
MUGZ	**Murupara**	**8.58**	**199**	P	**P**	**18 53 08.4**	**-1.3**
KNZ	**Kokohu**	**8.88**	**194**	P	**P**	**18 53 12.1**	**-0.8**
ARHZ	**Aropaoanui**	**9.26**	**196**	P	**P**	**18 53 16.0**	**-1.2**
HIZ	**Hauiti**	**9.27**	**208**		**Pn**	**18 53 15.2**	**-0.1**
BKZ	**Black Stump Fm**	**9.30**	**199**	Pn	**Pn**	**18 53 13.8**	**-1.8**
MCHZ	**McNeill Hill**	**9.50**	**197**	P	**P**	**18 53 19.7**	**-0.3**
BFZ	**Birch Farm**	**10.78**	**197**	P	**Pn**	**18 53 32.8**	**-0.5**
BFZ					**S**	**18 55 29.2**	**-5.1**
PLWZ	**Palliser**	**11.88**	**199**		**P**	**18 53 44.1**	**-2.2**
TUWZ	**Tuamarina**	**12.16**	**203**	Pn	P	18 53 43.7	-5.7
NNZ	**Nelson**	**12.17**	**206**	Pn	**P**	**18 53 44.9**	**-4.7**
QRZ	**Quartz Range**	**12.18**	**209**	P	**P**	**18 53 47.0**	**-2.7**
BSWZ	**Blackbirch Sta**	**12.44**	**203**	P	P	18 53 47.3	-5.2
MSVF	**Nonsavu**	**12.78**	**350**	P	**P**	**18 53 55.3**	**-1.4**
	0.9nm,0.3s,baz=79,slow=23,SNR=4.8						
THZ	**Tophouse**	**12.82**	**206**	P	**P**	**18 53 54.1**	**-2.8**
KHZ	**Kahutara**	**13.17**	**203**	P	**P**	**18 53 58.7**	**-1.9**
DZM	**Mont Dzumac**	**14.96**	**300**	P	**Pn**	**18 54 24.1**	**+1.3**
	0.5nm,0.3s,baz=152,slow=15,SNR=6.9						
FOZ	**Fox Glacier**	**15.55**	**210**	P	**P**	**18 54 24.2**	**-2.4**
CTAO	**Charters Tower**	**32.38**	**280**	P	**P**	**18 57 05.1**	**+0.6**
CTAO				IAmb	IAmb	18 57 09.3	
	comp=Z,25nm,1.6s						
STKA	**Stephens Creek**	**33.07**	**257**	P	**P**	**18 57 13.1**	**+2.7**
	comp=Z,4.0nm,0.8s,baz=105,slow=9.6,SNR=7.1						
STKA	**Stephens Creek**	**33.07**	**257**	P	**P**	**18 57 11.8**	**+1.4**
BBOO	**Buckleboo**	**37.58**	**255**	P	**P**	**18 57 47.9**	**-0.6**
BBOO				IAmb	IAmb	18 58 21.2	
	comp=Z,30nm,1.5s						
AS31	**Alice Springs**	**41.67**	**268**	P	**P**	**18 58 20.1**	**-1.9**
ASAR	**Alice Springs**	**41.67**	**268**	P	**P**	**18 58 22.3**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=103,slow=6.9,SNR=39						
ASAR				PcP	**PcP**	**19 00 10.6**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=114,slow=3.7,SNR=4.6						
ASAR	**Alice Springs**	**41.67**	**268**	P	**P**	**18 58 20.4**	**-1.6**
WR0	**Warramunga Arr**	**42.48**	**273**	P	**P**	**18 58 28.0**	**-0.4**
WR0				IAmb	IAmb	19 00 04.5	
	comp=Z,40nm,2.0s						
WB2	**Warramunga Arr**	**42.65**	**273**	P	**P**	**18 58 30.1**	**+0.3**
WB2				IAmb	IAmb	18 58 31.7	
	comp=Z,5.8nm,0.6s						
WRA	**Warramunga Arr**	**42.66**	**273**	P	**P**	**18 58 29.8**	**0.0**
	comp=Z,4.6nm,0.7s,baz=113,slow=7.0,SNR=32						
WRA	**Warramunga Arr**	**42.66**	**273**	P	**P**	**18 58 29.9**	**0.0**
WB0	**Warramunga Arr**	**42.68**	**273**	P	**P**	**18 58 30.0**	**-0.1**
WB0				IAmb	IAmb	18 58 32.2	
	comp=Z,8.0nm,1.0s						
FORT	**Forrest**	**44.65**	**256**	P	**P**	**18 58 46.3**	**+0.8**
FORT				IAmb	IAmb	18 59 44.9	
	comp=Z,20nm,1.1s						
KNRA	**Kununurra**	**49.27**	**275**	P	**P**	**18 59 21.6**	**+0.7**
KNRA				IAmb	IAmb	19 00 25.3	
	comp=Z,39nm,1.6s						
FITZ	**Fitzroy Crossi**	**50.92**	**271**	P	**P**	**18 59 33.2**	**0.0**
	comp=Z,3.8nm,0.8s,baz=106,slow=8.5,SNR=5.6						
CASY	**Casey**	**54.47**	**208**	P	**P**	**18 59 58.4**	**+0.2**
CASY				IAmb	IAmb	19 01 41.1	
	comp=Z,9.9nm,0.8s						

MORW	**Morawa**	**55.15**	**254**	P	**P**	**19 00 03.8**	**+0.2**
QSPA	**South Pole Qui**	**59.71**	**180**	P	**P**	**19 00 36.9**	**+2.2**
QSPA				IAmb	IAmb	19 00 41.3	
	comp=Z,5.5nm,1.0s						
BELA	**Belgrano 2**	**69.98**	**173**	P	**P**	**19 01 40.8**	**+0.8**
BELA				IAmb	IAmb	19 01 41.5	
	comp=Z,3.2nm,0.7s						
MAW	**Mawson**	**71.80**	**201**	P	**P**	**19 01 53.5**	**+2.6**
	comp=Z,1.7nm,0.8s,baz=40,slow=14,SNR=2.2						
JWT	**Wachi**	**77.82**	**324**	P	**P**	**19 02 25.5**	**-0.1**
SNAA	**Sanae**	**78.19**	**179**	P	**P**	**19 02 27.8**	**+0.5**
SNAA	**Sanae**	**78.19**	**179**	P	**P**	**19 02 27.5**	**+0.3**
SNAA				IAmb	IAmb	19 03 04.4	
	comp=Z,9.1nm,1.5s						
VNA3	**Neumayer Olymp**	**78.39**	**177**	P	**P**	**19 02 28.8**	**+0.5**
VNA2	**Neumayer--Watz**	**78.81**	**177**	P	**P**	**19 02 31.5**	**+0.9**
KSRS	**Korea Array**	**83.42**	**321**	P	**P**	**19 02 55.5**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=154,slow=5.3,SNR=6.0						
PETK	**Petropavlovsk-**	**85.46**	**347**	P	**P**	**19 03 04.6**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=170,slow=9.8,SNR=4.4						
O22K	**Cooper Landing**	**93.82**	**14**	P	**P**	**19 03 45.5**	**+1.9**
KURK	**Kurchatov**	**120.01**	**314**		**PKPdf**	**19 09 13.8**	**-1.4**
KURBB	**Kurchatov Arra**	**120.04**	**314**	PKP	**PKPdf**	**19 09 13.8**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=118,slow=2.0,SNR=4.4						
KBZ	**Khabaz**	**143.91**	**304**	PKP	**PKPdf**	**19 09 59.1**	**-0.9**
	comp=Z,2.6nm,0.9s,baz=192,slow=4.2,SNR=3.0						
FINES	**FINESS Array B**	**144.64**	**339**	PKP	PKPbc	19 09 59.4	-1.1
	comp=Z,9.1nm,0.5s,baz=52,slow=4.1,SNR=25						
FINES	**FINESS Array B**	**144.64**	**339**		PKPbc	19 09 59.5	-0.9
NOA	**NORSAR Array B**	**148.51**	**350**	PKPbc	**PKPbc**	**19 10 10.3**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=16,slow=4.2,SNR=10.0						
MMAI	**Mount Meron Ar**	**150.13**	**284**	PKPbc	**PKiKP**	**19 10 17.1**	**+0.1**
	comp=Z,4.4nm,0.6s,baz=72,slow=5.4,SNR=12						
AKASG	**Malin Array Be**	**150.41**	**322**	PKPbc	**PKPbc**	**19 10 15.7**	**-0.6**
	comp=Z,3.4nm,0.6s,baz=55,slow=2.4,SNR=9.9						
AKASG	**Malin Array Be**	**150.41**	**322**		**PKiKP**	**19 10 16.1**	**-0.7**
BRTR	**Keskin Array B**	**151.33**	**298**	PKPbc	**PKPbc**	**19 10 18.4**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=138,slow=5.2,SNR=6.0						
TORD	**Torodi Ar. Bea**	**162.78**	**184**	PKPab	**PKPab**	**19 11 18.3**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=166,slow=3.8,SNR=7.8						

*INMG **27** 18:52:51.1±2.2, 32°.27N×5°.72W, h0km, MD3.0, ML3.3, Error ellipse: s-maj=10.7km s-min=4.4km az=132.0*
*IDC **27** 18:52:52.1±3.0, 32°.58N×6°.10W, h0km, mb3.3/3, mb1 3.7/6, mb1mx3.3/54, mbtmp3.6/6, ML3.7/3, MS2.7/2, Ms1 2.7/2, ms1mx2.4/21, Error ellipse: s-maj=81.7km s-min=23.7km az=97.0*
*CNRM **27** 18:52:53.4, 32°.36N×5°.71W, h1km, ml4.2, Hypocentre not reviewed by the ISC*
*SFS **27** 18:52:54.0, 32°.43N×5°.85W, ML4.0, BENI MELLAL (MARRUECOS)*
*MDD **27** 18:52:54.0±1.2, 32°.42N×5°.85W, h0km, mb4.5/29, Error ellipse: s-maj=12.5km s-min=10.0km az=137.0, PRXIMO*
ISC 27 18:52:54.1±0.9, 32°.41N±0°.06×5°.89W±0°.04, h12km, n93, σ2§88/159, 2C, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZD	**Col de Zad**	**0.94**	**49**	P		18 53 09.5	
CZD				S		18 53 22.1	
MD31	**MD31**	**1.06**	**64**	P		18 53 10.9	
MD31				S		18 53 22.9	
MDT	**Midelt**	**1.15**	**69**	LR	LR	18 53 49.6	
	comp=Z,138nm,18.3s,baz=349,slow=45						
MDT	**Midelt**	**1.15**	**69**	P		18 53 11.8	
MDT				S		18 53 26.4	
ZHG	**ZHG**	**1.21**	**329**	P		18 53 18.5	
ZHG				S		18 53 35.9	
IFR	**Ifrane**	**1.27**	**30**	*e*P	**Pn**	**18 53 16.6**	**-1.2**
IFR				*i*S	**Sb**	**18 53 33.4**	**-1.1**
LCRM	**LCR**	**1.54**	**34**	P		18 53 21.0	
LCRM				S		18 53 41.8	
AVE	**Averroes**	**1.56**	**305**	*e*P	**Pg**	**18 53 26.1**	**+2.2**
AVE				*i*S	**Sg**	**18 53 48.6**	**+4.4**
TZRR	**Tazzarine**	**1.65**	**170**	P		18 53 23.8	
TZRR				S		18 53 45.6	
OUZM	**OUZ**	**1.67**	**207**	P		18 53 26.0	
OUZM				S		18 53 49.3	
SRHM	**Skhour des Reh**	**1.70**	**272**	P		18 53 28.0	
SRHM				S		18 53 54.0	
ARF	**Arif**	**1.72**	**124**	P		18 53 23.0	
ARF				S		18 53 43.2	
OUK	**Oukaimeden**	**2.07**	**235**	P		18 53 31.4	
OUK				S		18 54 02.6	
ZGR	**Zagora**	**2.30**	**174**	P		18 53 33.0	
ZGR				S		18 53 59.8	
RSA	**Sarsar**	**2.46**	**1**	P		18 53 42.0	
AKLM	**AKL**	**2.69**	**38**	P		18 53 37.4	
TTIG	**Tnine Tigouga,**	**2.87**	**230**	P		18 53 42.0	
PVLZ	**Peæn de**	**3.05**	**25**	P	**Pb**	**18 53 50.5**	**+2.1**
PVLZ				S	**Sg**	**18 54 32.9**	**+0.7**
PVLZ	**Peæn de**	**3.05**	**25**	*e*P	**Pb**	**18 53 50.5**	**+2.1**
PVLZ				*i*S	**Sg**	**18 54 32.9**	**+0.7**
EAH	**EAH**	**3.23**	**257**	P		18 53 48.0	
PALE	**Palemas**	**3.23**	**30**	P		18 53 45.2	
SMIR	**Smir Dam**	**3.29**	**7**	P		18 53 46.7	
TDRA	**Tendrara**	**3.31**	**78**	P		18 53 45.1	
JBK	**JBK**	**3.38**	**55**	P		18 53 45.1	
ECEU	**Ceuta**	**3.50**	**7**	P	**Pn**	**18 53 48.6**	**+0.2**
	6.2nm,0.1s,SNR=4.0						
ECEU				S	**Sn**	**18 54 29.4**	**-0.3**
	7.9nm,0.2s,SNR=7.9						
CEU	**Ceuta**	**3.50**	**7**	P	**Pn**	**18 53 49.5**	**+1.1**
CEU				S	**Sn**	**18 54 30.4**	**+0.6**
CEU	**Ceuta**	**3.50**	**7**	*e*P	**Pn**	**18 53 49.5**	**+1.1**
CEU				*i*S	**Sn**	**18 54 30.4**	**+0.6**
TAF	**Taforalt**	**3.76**	**49**	P		18 53 51.2	
MELI	**Melilla**	**3.78**	**40**	P	**Pb**	**18 54 02.9**	**+2.2**
MELI				S	**Sb**	**18 54 51.6**	**+5.1**
MELI	**Melilla**	**3.78**	**40**	*e*P	**Pb**	**18 54 02.9**	**+2.2**
MELI				*i*S	**Sb**	**18 54 51.6**	**+5.1**
EJIF	**Jimena Fronter**	**4.04**	**5**	P	**Pn**	**18 53 57.2**	**+1.4**
	SNR=7.9						
EJIF				S	**Sn**	**18 54 42.7**	**-0.4**
	SNR=7.9						
EMIJ	**Mijas**	**4.24**	**12**	P	**Pn**	**18 53 57.0**	**-1.5**
	2.9nm,0.1s,SNR=13						
EMIJ				S	**Sn**	**18 54 45.3**	**-2.7**
	4.2nm,0.4s,SNR=8.2						
ESPR	**Espera**	**4.45**	**0**	P	**Pn**	**18 54 00.9**	**-0.4**
	2.9nm,0.2s,SNR=4.7						
ESPR				S	**Sn**	**18 54 51.2**	**-1.8**
	11nm,0.5s,SNR=5.0						
ELGU	**Los Guajares,**	**4.82**	**22**	P	**Pn**	**18 54 05.2**	**-1.3**
	5.6nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**18 54 59.4**	**-3.0**
	18nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.91**	**17**	P	**Pn**	**18 54 07.7**	**-0.2**
	4.0nm,0.3s,SNR=7.9						
EGOR				S	**Sn**	**18 55 01.1**	**-3.5**
	1.3nm,0.4s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**5.10**	**341**	P	**Pn**	**18 54 10.7**	**+0.3**
PBDV				S	**Sn**	**18 55 06.3**	**-3.0**
	23nm,0.4s						
PBDV	**Barranco-do-Ve**	**5.10**	**341**	*e*Pn	**Pn**	**18 54 10.7**	**+0.3**
PBDV				*e*Sn	**Sn**	**18 55 06.3**	**-3.0**
PBDV				A	A	18 55 15.4	
	23nm,0.4s						
EBER	**Berja**	**5.11**	**28**	P	**Pn**	**18 54 10.6**	**0.0**
	2.7nm,0.2s,SNR=9.5						
EBER				S	**Sn**	**18 55 08.2**	**-1.4**
	10nm,0.7s,SNR=4.9						
EQUE	**Quentar**	**5.19**	**22**	P	**Pn**	**18 54 12.5**	**+0.9**
	4.2nm,0.4s,SNR=9.2						
EQUE				S	**Sn**	**18 55 10.5**	**-0.9**
	9.4nm,0.9s,SNR=4.9						
PVAQ	**Vaqueiros**	**5.20**	**344**	P	**Pn**	**18 54 11.9**	**+0.2**
PVAQ				S	**Sn**	**18 55 07.7**	**-3.9**
	26nm,0.4s						
PVAQ	**Vaqueiros**	**5.20**	**344**	⇑*e*Pn	**Pn**	**18 54 11.9**	**+0.2**
PVAQ				*e*Sn	**Sn**	**18 55 07.7**	**-3.9**
PVAQ				A	A	18 55 15.0	
	26nm,0.4s						
PVAQ	**Vaqueiros**	**5.20**	**344**	P		18 54 11.7	
EGRO	**El Granado**	**5.27**	**346**	P	**Pn**	**18 54 12.9**	**+0.2**
	9.1nm,0.1s,SNR=30						
EGRO				S	**Sn**	**18 55 10.3**	**-3.1**
	12nm,0.3s,SNR=11						
PFVI	**Vila Bisbo**	**5.29**	**334**	P	**Pn**	**18 54 13.1**	**+0.1**
	20nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**18 55 10.6**	**-3.3**
	34nm,0.1s,SNR=7.9						

PFVI	**Vila Bisbo**	**5.29**	**334**	*e*Pn	**Pn**	**18 54 13.4**	**+0.4**
PFVI				*e*Sn	**Sn**	**18 55 11.5**	**-2.4**
PFVI				A	A	18 55 19.0	
	26nm,0.3s						
PFVI	**Vila Bisbo**	**5.29**	**334**	P		18 54 13.3	
EMIN	**Mina Concepcio**	**5.38**	**353**	P	**Pn**	**18 54 13.7**	**-0.5**
	6.1nm,0.2s,SNR=62						
EMIN				S	**Sn**	**18 55 12.7**	**-3.4**
	5.1nm,0.5s,SNR=32						
HORN	**Hornachuelos**	**5.45**	**5**	P		18 54 14.4	
PCVE	**Castro Verde**	**5.50**	**342**	P	**Pn**	**18 54 16.5**	**+0.7**
PCVE				S	**Sn**	**18 55 16.5**	**-2.4**
	26nm,0.5s						
PCVE	**Castro Verde**	**5.50**	**342**	*e*Pn	**Pn**	**18 54 16.5**	**+0.7**
PCVE				*e*Sn	**Sn**	**18 55 16.5**	**-2.4**
PCVE				A	A	18 55 25.7	
	26nm,0.5s						
PTEO	**Sao Teotonio**	**5.62**	**336**	P	**Pn**	**18 54 18.4**	**+0.9**
PTEO				S	**Sn**	**18 55 19.8**	**-2.2**
	15nm,0.4s						
PTEO	**Sao Teotonio**	**5.62**	**336**	*e*Pn	**Pn**	**18 54 18.4**	**+0.9**
PTEO				*e*Sn	**Sn**	**18 55 19.8**	**-2.2**
PTEO				A	A	18 55 28.8	
	31nm,0.4s						
ECAB	**El Cabril**	**5.66**	**4**	P	**Pn**	**18 54 17.1**	**-1.0**
	3.5nm,0.1s,SNR=31						
ECAB				S	**Sn**	**18 55 19.6**	**-3.5**
	3.6nm,0.3s,SNR=6.1						
PBAR	**Barrancos**	**5.83**	**351**	P	**Pn**	**18 54 20.1**	**-0.2**
PBAR				S	**Sn**	**18 55 23.3**	**-3.7**
	22nm,0.2s						
PBAR	**Barrancos**	**5.83**	**351**	*e*Pn	**Pn**	**18 54 20.1**	**-0.2**
PBAR				*e*Sn	**Sn**	**18 55 23.3**	**-3.7**
PBAR				A	A	18 55 26.1	
	22nm,0.2s						
PBEJ	**Beja**	**5.83**	**344**	P	**Pn**	**18 54 20.9**	**+0.6**
PBEJ				S	**Sn**	**18 55 24.1**	**-3.0**
	7.1nm,0.5s						
PBEJ	**Beja**	**5.83**	**344**	*e*Pn	**Pn**	**18 54 20.9**	**+0.6**
PBEJ				*e*Sn	**Sn**	**18 55 24.1**	**-3.0**
PBEJ				A	A	18 55 28.4	
	14nm,0.5s						
EADA	**Adamuz**	**5.84**	**10**	P	**Pn**	**18 54 19.7**	**-0.8**
	3.4nm,0.2s,SNR=19						
EADA				S	**Sn**	**18 55 22.3**	**-5.2**
	6.0nm,0.1s,SNR=7.9						
EQES	**Quesada**	**5.85**	**22**	P	**Pn**	**18 54 20.9**	**+0.1**
	2.2nm,0.1s,SNR=15						
EQES				S	**Sn**	**18 55 25.6**	**-2.2**
	7.9nm,0.5s,SNR=9.6						
TANT	**Tantan**	**6.10**	**231**	P		18 54 26.4	
SESP	**Santiago Espad**	**6.32**	**25**	P	**Pn**	**18 54 27.4**	**+0.3**
	4.0nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**6.32**	**25**	P		18 54 27.9	
EVO	**Evora**	**6.35**	**345**	P	**Pn**	**18 54 27.9**	**+0.5**
EVO				S	**Sn**	**18 55 36.6**	**-3.2**
	12nm,0.1s						
EVO	**Evora**	**6.35**	**345**	*e*P	**Pn**	**18 54 27.9**	**+0.5**
EVO				*i*S	**Sn**	**18 55 36.9**	**-3.0**
EVO	**Evora**	**6.35**	**345**	*e*Pn	**Pn**	**18 54 27.9**	**+0.5**
EVO				*e*Sn	**Sn**	**18 55 36.6**	**-3.2**
EVO				A	A	18 55 41.3	
	12nm,0.1s						
PESTR	**Estremoz**	**6.59**	**348**	*e*Pn	**Pn**	**18 54 30.7**	**-0.1**
PESTR				*e*Sn	**Sn**	**18 55 42.2**	**-3.6**
PESTR				A	A	18 55 45.0	
	12nm,0.5s						
PESTR	**Estremoz**	**6.59**	**348**	P		18 54 30.8	
EMUR	**La Murta**	**6.62**	**34**	P	**Pn**	**18 54 31.8**	**+0.5**
	0.6nm,0.3s,SNR=7.9						
PMTG	**Montargil**	**6.91**	**345**	P	**Pn**	**18 54 35.4**	**+0.3**
PMTG				S	**Sn**	**18 55 49.5**	**-4.2**
	14nm,0.6s						
PMTG	**Montargil**	**6.91**	**345**	*e*Pn	**Pn**	**18 54 35.4**	**+0.3**
PMTG				*e*Sn	**Sn**	**18 55 49.5**	**-4.2**
PMTG				A	A	18 56 04.9	
	14nm,0.6s						
PMAFR	**Mafra**	**7.09**	**338**	P	**Pn**	**18 54 38.6**	**+1.0**
	15nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**18 55 55.6**	**-2.5**
	22nm,0.4s						
PMAFR	**Mafra**	**7.09**	**338**	*e*Pn	**Pn**	**18 54 38.6**	**+1.0**
PMAFR				*e*Sn	**Sn**	**18 55 56.5**	**-1.6**
PMAFR				A

POLO eSn Sn 18 56 41.0 -6.0
POLO A A 18 56 44.1
3.7nm,0.5s
PBRG Braganca 9.40 356 P Pn 18 55 09.4 0.0
PBRG S Sn 18 56 49.3 -5.7
2.2nm,0.5s
PBRG Braganca 9.40 356 eP Pn 18 55 09.4 0.0
PBRG eSn Sn 18 56 49.3 -5.7
PBRG A A 18 57 24.9
4.3nm,0.5s
PCAB Cabril 9.44 350 P Pn 18 55 09.9 +0.1
PCAB Cabril 9.44 350 eP Pn 18 55 09.9 +0.1
ECAL Calabor 9.54 356 P Pn 18 55 11.2 -0.1
3.6nm,0.2s,SNR=7.9
ECAL S Sn 18 56 51.7 -6.7
5.7nm,0.4s,SNR=5.5
PMOZ Porto Moniz, M 9.55 275 P Pn 18 55 13.5 +2.0
18nm,0.3s,SNR=7.9
PMOZ S Sn 18 57 00.2 +1.4
SNR=7.9
PMOZ Porto Moniz, M 9.55 275 P Pn 18 55 13.5 +2.0
PMOZ S Sn 18 57 00.2 +1.4
ELOB Lobios 9.60 350 P Pn 18 55 11.8 -0.3
1.8nm,0.3s,SNR=7.9
ELOB S Sn 18 56 53.9 -6.0
9.3nm,0.4s,SNR=5.8
EAGO Agolada(Pontev 10.52 351 P Pn 18 55 25.1 +0.4
2.4nm,0.4s,SNR=7.9
EAGO S Sn 18 57 14.8 -7.6
0.7nm,0.3s,SNR=7.9
EARI Arriondas 10.88 3 P Pn 18 55 29.8 +0.1
0.5nm,0.2s,SNR=7.9
EARI S Sn 18 57 24.4 -7.0
1.0nm,0.3s,SNR=7.9
EPON Pontenova 10.94 355 P Pn 18 55 30.3 -0.2
0.4nm,0.1s,SNR=7.9
ELAN Lanestosa 10.97 9 P Pn 18 55 30.9 0.0
0.9nm,0.2s,SNR=5.7
ELAN S Sn 18 57 26.5 -7.0
1.2nm,0.4s,SNR=7.9
KEST Kesra 13.06 71 Pn Pn 18 55 59.7 +0.2
0.2nm,0.3s,baz=275,slow=11,SNR=1.8
KOWA Kowa 17.92 174 P Pn 18 57 04.2 +1.0
0.3nm,0.3s,baz=357,slow=11,SNR=7.6
TORD Torodi Ar. Bea 20.40 158 P Pn 18 57 33.8 +0.8
2.1nm,0.6s,baz=340,slow=11,SNR=13
GERES GERESS Array B 22.05 36 P P 18 57 48.2 -0.5
0.4nm,0.7s,baz=229,slow=9.0,SNR=2.4
VRAC Vranov 23.82 38 LR LR 19 07 17.1
comp=Z,15nm,19.9s,baz=245,slow=36
DBIC Dimbokro 25.63 178 LR LR 19 08 39.0
comp=Z,23nm,19.5s,baz=118,slow=37
KURBB Kurchatov Arra 62.38 46 P P 19 03 16.2 -0.3
0.3nm,0.5s,baz=294,slow=7.4,SNR=3.6

DMN ***27*** *18:59:53.2±0.4,28.˚18N×84.˚95E,h2km,Ml5.1/6,Error ellipse: s-maj=9.7km s-min=3.3km az=15.0*
MOS ***27*** *18:59:54.4±1.1,28.˚08N×84.˚74E,h18km,mb4.9/32,Error ellipse: s-maj=7.0km s-min=3.4km az=113.2*
BJI ***27*** *18:59:55.2±0.0,28.˚23N×84.˚96E,h9km,mB4.6/32, mb4.5/50,Ms4.2/45,Ms7 4.0/42*
NDI ***27*** *18:59:56.1±4.7,27.˚82N×84.˚73E,h10km,ML4.4, mb4.8(NEIC)*
IDC ***27*** *18:59:56.9±3.1,28.˚01N×84.˚84E,h21km±19km,mb4.3/34, mb1 4.4/37,mb1mx4.3/56,mbtmp4.4/37,ML4.2/3,MS3.5/15, Ms1 3.6/15,ms1mx3.3/36,Error ellipse: s-maj=13.6km s-min=9.9km az=38.0*
NEIC ***27*** *18:59:57.0±1.5,28.˚01N±0.˚09×84.˚68E±0.˚02,h21km±4km, mb4.8/102,Error ellipse: s-maj=12.8km s-min=2.1km az=175.0*

ISC 27 18:59:55.2±0.8,27.˚99N±0.˚04×84.˚80E±0.˚02,h13km±4km, n394,σ1s57/424,mb4.7/118,MS3.6/18,27C-6D, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GKN	**Gorkha**	**0.15**	**277**	*e*Pg	**Pg**	**18 59 59.4**	**+0.4**
GKN				*e*Sg	**Sg**	**19 00 02.3**	**+0.7**
DMN	**Daman**	**0.46**	**144**	*e*Pg	**Pg**	**19 00 04.9**	**+0.5**
DMN				*e*Sg	**Sb**	**19 00 12.4**	**+0.2**
KKN	**Kakani**	**0.47**	**115**	*e*Pg	**Pg**	**19 00 01.2**	**-3.3**
KKN				*e*Sg	**Sg**	**19 00 10.5**	**-0.2**
PKIN	**Phulchoki**	**0.67**	**128**	*e*Pg	**Pg**	**19 00 08.1**	**-0.1**
PKI	**Pulchoki**	**0.68**	**127**	*e*Pg	**Pg**	**19 00 08.3**	**-0.2**
PKI				*e*Sg	**Sg**	**19 00 17.3**	**-0.2**
GUN	**Gumba**	**0.95**	**94**	*e*Sg	**Sg**	**19 00 23.7**	**-2.5**
	5μm,0.2s						
DANN	**Dangsing**	**0.99**	**292**	*e*Pg	**Pg**	**19 00 14.2**	**-0.2**
DANN				*e*Sg	**Sg**	**19 00 27.0**	**-0.3**
	2μm,0.2s						
KOLN	**Koldanda**	**1.09**	**259**	*e*Pg	**Pn**	**19 00 16.7**	**+0.3**
KOLN				*e*Sg	**Sn**	**19 00 32.9**	**+1.5**
	5μm,0.2s						
PYUN	**Piuthan**	**1.61**	**274**	*e*Pg	**Pg**	**19 00 25.7**	**-0.4**
PYUN				*e*Sg	**Sg**	**19 00 47.4**	**+0.4**
	8μm,0.4s						
RAMN	**Ramite**	**1.90**	**122**	*e*Pg	**Pb**	**19 00 29.4**	**-0.5**
ODAN	**Odare**	**2.56**	**115**	*e*Pg	**Pb**	**19 00 39.7**	**-1.4**
ODAN				*e*Sg	**Sb**	**19 01 12.5**	**-0.1**
	2μm,0.2s						
TAPN	**Taplejung**	**2.66**	**103**	*e*Pg	**Pb**	**19 00 41.0**	**-1.8**
TAPN				*e*Sg	**Sb**	**19 01 13.3**	**-2.2**
	783nm,0.3s						
GTK	**Tadong**	**3.43**	**100**	*e*P	**Pn**	**19 00 51.3**	**+2.7**
GTK				*e*S	**Sn**	**19 01 29.8**	**+0.5**
GTK				IAML		19 01 35.3	
	comp=E,3μm,0.2s						
GTK				IAML		19 01 35.5	
	comp=N,1μm,0.2s						
LSA	**Lhasa**	**5.82**	**71**	Pn	**Pn**	**19 01 23.8**	**+2.1**
LSA				LR	LR		
	comp=N,1μm,5.0s						
LSA				LR	LR		
	comp=N,1μm,4.6s						
LSA				LR	LR		
	comp=N,2μm,5.3s						
LSA	**Lhasa**	**5.82**	**71**	P	**Pn**	**19 01 22.5**	**+0.8**
LSA	**Lhasa**	**5.82**	**71**	Pn	**Pn**	**19 01 22.5**	**+0.8**
DDI	**Dehra Dun**	**6.34**	**293**	*e*P	**Pn**	**19 01 30.7**	**+2.2**
DDI				*e*S	**Sn**	**19 02 37.6**	**-3.3**
DDI				IAML		19 02 43.6	
	comp=E,511nm,0.4s						
GUWA	**GUWAHATI**	**6.39**	**105**	*e*P	**Pn**	**19 01 31.0**	**+1.9**
GUWA				*e*S	**Sn**	**19 02 41.8**	**-0.2**
GUWA				IAML		19 02 45.4	
	comp=E,308nm,0.4s						
SHL	**Shillong**	**6.77**	**109**	P	**Pn**	**19 01 34.8**	**+0.3**
SHL	**Shillong**	**6.77**	**109**	*e*P	**Pn**	**19 01 34.9**	**+0.3**
SHL				*e*S	**Sn**	**19 02 46.3**	**-5.3**
SHL				IAML		19 02 50.0	
	comp=E,401nm,0.3s						
SHL	**Shillong**	**6.77**	**109**	Pn	**Pn**	**19 01 34.8**	**+0.3**
SMLA	**Simla**	**7.35**	**297**	*e*P	**Pn**	**19 01 43.2**	**+0.9**
SMLA				*e*S	**Sn**	**19 03 03.2**	**-2.4**
SMLA				IAML		19 03 09.4	
	comp=N,252nm,0.4s						
SMLA				IAML		19 03 10.5	
	comp=E,272nm,0.5s						
BHPL	**Bhopal**	**8.16**	**236**	*e*P	**Pn**	**19 01 51.7**	**-1.8**
BHPL				*e*S	**Sn**	**19 03 19.9**	**-5.8**
DHRM	**DHARAMSHALA**	**8.50**	**302**	*e*P	**Pn**	**19 01 56.3**	**-2.0**
DHRM				*e*S	**Sn**	**19 03 29.0**	**-5.2**
DHRM				IAML		19 03 36.9	
	comp=N,314nm,0.8s						
DHRM				IAML		19 03 37.3	
	comp=E,463nm,0.8s						
AJM	**Ajmer**	**9.17**	**263**	*e*P	**Pn**	**19 02 06.0**	**-1.3**
AJM				*i* S	**Sn**	**19 03 43.0**	**-7.4**
CHCP	**Chirah Chowk**	**11.41**	**303**	P	**Pn**	**19 02 37.5**	**-0.5**
HYB	**Hyderabad**	**11.99**	**210**	*i* P	**Pn**	**19 02 44.0**	**-2.0**
THW	**Thamme Wali**	**12.25**	**296**	P	**Pn**	**19 02 47.2**	**-2.2**
CEP	**Cherat**	**12.50**	**301**	⇑P	**Pn**	**19 02 50.9**	**-2.1**
KSH	**Kashi**	**13.64**	**330**	P	**Pn**	**19 03 05.3**	**-3.1**
KSH				pP	P	19 03 10.0	-7.4
KSH				pmax	pmax		
	comp=E,42nm,0.9s						
KSH				pmax	pmax		
	comp=E,140nm,5.7s						
POO	**Poona**	**13.77**	**229**	*e*P	Pn	19 03 04.0	-6.3
KBL	**Kabul**	**14.97**	**300**	P	**Pn**	**19 03 23.4**	**-3.4**
KBL	**Kabul**	**14.97**	**300**	Pn	**Pn**	**19 03 23.4**	**-3.4**
PRZ	**Przheval'sk**	**15.37**	**342**	P	**Pn**	**19 03 31.5**	**-0.6**
PRZ				pmax	pmax		
	comp=Z,49nm,0.8s						
PRZ	**Przheval'sk**	**15.37**	**342**		**Pn**	**19 03 31.5**	**-0.6**
PRZ				IAmb	IAmb	19 03 39.8	
	comp=Z,48nm,0.8s						
KDJ	**Kajisay**	**15.42**	**338**	P	**Pn**	**19 03 32.9**	**+0.3**
KDJ				pmax	pmax		
	comp=Z,31nm,1.4s						
KDJ	**Kajisay**	**15.42**	**338**	Pn	**Pn**	**19 03 32.9**	**+0.3**
DRK	**Karamyk**	**15.74**	**320**		**Pn**	**19 03 33.0**	**-3.9**
SHLS	**Shalkode**	**15.74**	**345**	*e*P	**Pn**	**19 03 33.1**	**-3.7**
	baz=347						
SHLS	**Shalkode**	**15.74**	**345**	*e*P	**Pn**	**19 03 33.1**	**-3.7**
UZB	**Uzynbulak**	**15.84**	**344**	*e*P	**Pn**	**19 03 35.5**	**-2.6**
	baz=344						
UZB	**Uzynbulak**	**15.84**	**344**	*e*P	**Pn**	**19 03 35.4**	**-2.6**
CM33	**Chiang Mai Arr**	**15.86**	**122**	P	**Pn**	**19 03 39.0**	**+0.7**
CHTO	**Chiang Mai**	**15.86**	**122**	P	**Pn**	**19 03 37.8**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,26nm,1.0s						
CHTO	**Chiang Mai**	**15.86**	**122**	P	**Pn**	**19 03 37.8**	**-0.5**
CMMT	**Chiang Mai**	**15.86**	**122**	P	**P**	**19 03 41.0**	**-1.1**
	comp=Z,171nmcomp=Z,17nm,1.2s						
CM32	**Chiang Mai Arr**	**15.88**	**123**	P	**Pn**	**19 03 38.0**	**-0.6**
PDGK	**Podgornoye**	**15.90**	**346**	P	**Pn**	**19 03 36.9**	**-1.9**
SATY	**Saty**	**15.91**	**343**	*e*P	**Pn**	**19 03 36.1**	**-2.8**
	baz=343						
SATY	**Saty**	**15.91**	**343**	*e*P	**Pn**	**19 03 36.1**	**-2.8**
WMQ	**Urumqi**	**15.97**	**8**	*e*P	**P**	**19 03 44.5**	**+1.3**
WMQ				pP	sP	19 03 48.0	-0.9
WMQ				pmax	pmax		
	comp=Z,72nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.9s						
WMQ				LR	LR		
	comp=N,630nm,12.3s						
WMQ				LR	LR		
	comp=E,500nm,11.3s						
WMQ				LR	LR		
	comp=Z,640nm,21.9s						
CM15	**Chiang Mai Arr**	**16.07**	**123**	P	**Pn**	**19 03 40.5**	**-0.5**
	comp=Z,138nmcomp=Z,19nm,0.9s						
CM13	**Chiang Mai Arr**	**16.07**	**123**	P	**Pn**	**19 03 40.5**	**-0.5**
	comp=Z,120nmcomp=Z,16nm,1.2s						
CM31	**Chiang Mai Arr**	**16.07**	**123**	P	**P**	**19 03 43.0**	**-1.4**
	comp=Z,4μmcomp=Z,519nm,1.0s						
CM31	**Chiang Mai Arr**	**16.07**	**123**		**Pn**	**19 03 41.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**16.07**	**123**	Pn	**Pn**	**19 03 39.6**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=299,slow=13,SNR=26						
CMAR				LR	LR	19 11 45.6	
	comp=Z,64nm,19.9s,baz=275,slow=44						
CMAR	**Chiang Mai Arr**	**16.07**	**123**	P	**P**	**19 03 43.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**16.07**	**123**	P	**P**	**19 03 43.4**	**-1.1**
CM02	**Chiang Mai Arr**	**16.09**	**123**	P	**P**	**19 03 43.8**	**-0.8**
	comp=Z,154nmcomp=Z,25nm,0.8s						
CM35	**Chiang Mai Arr**	**16.10**	**122**	P	**Pn**	**19 03 41.0**	**-0.4**
CM01	**Chiang Mai Arr**	**16.11**	**123**	P	**Pn**	**19 03 41.0**	**-0.5**
	comp=Z,144nmcomp=Z,19nm,0.7s						
CM05	**Chiang Mai Arr**	**16.11**	**123**	P	**P**	**19 03 44.0**	**-0.9**
	comp=Z,142nmcomp=Z,21nm,0.9s						
CM09	**Chiang Mai Arr**	**16.12**	**123**	P	**P**	**19 03 44.2**	**-0.7**
	comp=Z,152nmcomp=Z,24nm,0.9s						
CM04	**Chiang Mai Arr**	**16.14**	**123**	P	**P**	**19 03 44.9**	**-0.3**
	comp=Z,130nmcomp=Z,18nm,0.8s						
CM36	**Chiang Mai Arr**	**16.15**	**123**	P	**Pn**	**19 03 43.0**	**+0.9**
BOOM	**Boomskoye usch**	**16.17**	**336**	P	**Pn**	**19 03 40.5**	**-1.8**
BOOM				pmax	pmax		
	comp=Z,70nm,1.4s						
BOOM	**Boomskoye usch**	**16.17**	**336**	Pn	**Pn**	**19 03 40.5**	**-1.8**
BOOM				IAmb	IAmb	19 04 39.1	
	comp=Z,70nm,1.4s						
CRAI	**Chiangrai**	**16.17**	**115**	P	**P**	**19 03 46.0**	**+0.5**
	comp=Z,18nm,0.8s						
KPKS	**Kokpek**	**16.22**	**344**	*e*P	**Pn**	**19 03 40.1**	**-2.8**
	baz=344						
KPKS	**Kokpek**	**16.22**	**344**	*e*P	**Pn**	**19 03 40.0**	**-2.8**
KMI	**Kunming**	**16.30**	**96**	⇑P	**Pn**	**19 03 45.3**	**+1.1**
KMI				pP	pP	19 03 51.0	0.0
KMI				sP	sP	19 03 53.0	+0.2
KMI				PP	**PnPn**	**19 03 59.5**	**+6.4**
KMI				S	**Sn**	**19 06 44.5**	**-0.6**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KMI				LR	LR		
	comp=Z,220nm,10.2s						
KMI				LR	LR		
	comp=Z,140nm,10.2s						
KMI				LR	LR		
	comp=Z,190nm,12.9s						
GAR	**Garm**	**16.31**	**316**	Pn	**Pn**	**19 03 39.0**	**-5.0**
GAR				IAmb	IAmb	19 03 48.7	
	comp=Z,128nm,1.2s						
MDOK	**Medeo**	**16.39**	**340**	*e*P	**Pn**	**19 03 42.8**	**-2.3**
	baz=340						
MDOK	**Medeo**	**16.39**	**340**	*e*P	**Pn**	**19 03 42.8**	**-2.3**
ARSB	**Arslanbob**	**16.46**	**327**	P	**Pn**	**19 03 42.9**	**-3.1**
ARSB				pmax	pmax		
	comp=Z,20nm,0.7s						
ARSB	**Arslanbob**	**16.46**	**327**	Pn	**Pn**	**19 03 42.9**	**-3.1**
UCH	**Uchtor**	**16.50**	**332**	P	**Pn**	**19 03 45.0**	**-1.7**
	SNR=40						
TKM2	**Tokmak 2**	**16.66**	**336**	P	**Pn**	**19 03 45.3**	**-3.4**
KBK	**Karagaybulak**	**16.68**	**334**	P	**P**	**19 03 53.2**	**+2.0**
	SNR=7.8						
AML	**Almayashu**	**16.77**	**330**	P	**Pn**	**19 03 48.2**	**-1.9**
	SNR=24						
CD2	**Chengdu**	**16.77**	**75**	*e*P	**P**	**19 03 52.0**	**-0.1**
CD2				S	**Sn**	**19 06 56.5**	**+0.4**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				LR	LR		
	comp=Z,490nm,9.6s						
CD2				LR	LR		
	comp=Z,620nm,10.2s						
CD2				LR	LR		
	comp=Z,700nm,11.0s						
AAK	**Ala-Archa**	**16.84**	**333**	Pn	**Pn**	**19 03 49.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=168,slow=8.0,SNR=19						
AAK				LR	LR	19 10 18.0	
	comp=Z,60nm,19.7s,baz=142,slow=37						
AAK	**Ala-Archa**	**16.84**	**333**	P	**Pn**	**19 03 50.3**	**-0.6**
	SNR=11						
AAK	**Ala-Archa**	**16.84**	**333**	P	**Pn**	**19 03 49.9**	**-1.0**
AAK				pmax	pmax		
	comp=Z,22nm,1.1s						
AAK	**Ala-Archa**	**16.84**	**333**	P	**Pn**	**19 03 49.9**	**-1.0**
GTA	**Gaotai**	**16.88**	**44**	P	**Pn**	**19 03 50.0**	**-1.4**
GTA				pP	P	19 03 54.0	+0.6
GTA				sP	pP	19 03 57.0	-0.3
GTA				pmax	pmax		
	comp=Z,80nm,4.6s						
GTA				LR	LR		
	comp=Z,190nm,9.5s						
GTA				LR	LR		
	comp=Z,370nm,10.9s						
GTA				LR	LR		
	comp=Z,380nm,11.3s						
FRU1	**Bishkek**	**16.94**	**334**	P	**Pn**	**19 03 52.0**	**0.0**
FRU1				pmax	pmax		
	comp=Z,32nm,1.1s						
FRU1	**Bishkek**	**16.94**	**334**		**Pn**	**19 03 52.0**	**0.0**
CHMS	**Chumysh**	**17.05**	**334**	P	**Pn**	**19 03 52.2**	**-1.1**
	SNR=10						
NANT	**Nan**	**17.20**	**119**	P	**Pn**	**19 03 51.9**	**-3.6**
	comp=Z,8μm,0.5s						
USP	**Ospenovka**	**17.37**	**334**	P	**Pn**	**19 03 56.1**	**-1.3**
	SNR=5.7						
SGDS	**Sogindy**	**17.48**	**335**	*e*P	**Pn**	**19 03 56.5**	**-2.3**
	baz=335						
SGDS	**Sogindy**	**17.48**	**335**	*e*P	**Pn**	**19 03 56.5**	**-2.3**
UMPA	**Umpang Tak**	**17.50**	**129**	P	**P**	**19 04 04.0**	**+3.7**
	comp=Z,770nmcomp=Z,32nm,0.8s						
UTTA	**Uttaradit**	**17.72**	**122**	P	**P**	**19 04 05.1**	**+2.5**
	comp=Z,229nmcomp=Z,27nm,0.9s						
TDK	**Taldyqorghan**	**17.73**	**345**	*e*P	**Pn**	**19 03 59.4**	**-2.4**
	baz=345						
TDK	**Taldyqorghan**	**17.73**	**345**	*e*P	**Pn**	**19 03 59.4**	**-2.4**
PBA	**Port Blair**	**17.87**	**154**	Pn	Pn	19 04 01.9	-1.7
PBA				IAmb	IAmb	19 04 22.1	
	comp=Z,51nm,0.6s						
PHIT	**Phitsanulok**	**17.96**	**123**	P	**P**	**19 04 10.0**	**+4.7**
	comp=Z,62nm,0.9s						
LZH	**Lanzhou**	**18.03**	**59**	⇑P	**P**	**19 04 07.5**	**+1.3**
LZH				pP	pP	19 04 10.8	+0.7
LZH				sP	sP	19 04 15.0	+2.9
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH				pmax	pmax		
	comp=Z,240nm,5.1s						
LZH				LR	LR		
	comp=Z,220nm,13.6s						
LZH				LR	LR		
	comp=Z,390nm,13.6s						
LZH				LR	LR		
	comp=Z,340nm,13.0s						
UTHA	**Uthaitani**	**18.36**	**129**	P	**P**	**19 04 11.6**	**+1.9**
	comp=Z,229nmcomp=Z,24nm,0.8s						
DZA	**Taraz**	**18.45**	**327**	*e*P	**P**	**19 04 08.1**	**-2.5**
	baz=327						
DZA	**Taraz**	**18.45**	**327**	*e*P	**P**	**19 04 08.1**	**-2.5**
SLVN	**Son La**	**18.57**	**107**		**P**	**19 04 11.5**	**-0.6**
MKAR	**Makanchi Array**	**18.88**	**355**	P	**P**	**19 04 15.1**	**-0.2**
	comp=Z,2.4nm,0.3s,baz=174,slow=12,SNR=128						
MKAR				LR	LR	19 12 45.9	
	comp=Z,329nm,18.0s,baz=178,slow=41						
MKAR	**Makanchi Array**	**18.88**	**355**	*i* P	**P**	**19 04 15.1**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,16nm,0.7s						
MKAR	**Makanchi Array**	**18.88**	**355**	P	**P**	**19 04 14.8**	**-0.4**
MK31	**Makanchi Array**	**18.88**	**355**	P	**P**	**19 04 15.3**	**0.0**
MK31				pmax	pmax		
	comp=Z,15nm,0.8s						
MK31	**Makanchi Array**	**18.88**	**355**		**P**	**19 04 15.3**	**0.0**
CHM	**Chimkent**	**18.90**	**323**	*e*P	**P**	**19 04 14.5**	**-1.1**
	baz=323						
CHM	**Chimkent**	**18.90**	**323**	*e*P	**P**	**19 04 14.4**	**-1.1**
MAKZ	**Makanchi**	**18.92**	**354**	P	**P**	**19 04 16.0**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,17nm,0.8s						
MAKZ	**Makanchi**	**18.92**	**354**	P	**P**	**19 04 16.0**	**+0.3**
KK31	**Karatay Array**	**19.00**	**326**	*i* P	**P**	**19 04 15.1**	**-1.6**
KK31	**Karatay Array**	**19.00**	**326**	P	**P**	**19 04 14.5**	**-2.2**
KKAR	**Karatay Array**	**19.00**	**326**	P	**P**	**19 04 14.5**	**-2.2**
KKAR				pmax	pmax		
	comp=Z,36nm,1.4s						
KKAR	**Karatay Array**	**19.00**	**326**	P	**P**	**19 04 14.6**	**-2.0**
KKAR	**Karatay Array**	**19.00**	**326**	P	**P**	**19 04 14.5**	**-2.2**
BTLS	**Baital**	**19.06**	**336**	*e*P	**P**	**19 04 15.9**	**-1.4**
	baz=336						
BTLS	**Baital**	**19.06**	**336**	*e*P	**P**	**19 04 15.8**	**-1.4**
GYA	**Guiyang**	**19.50**	**89**	⇑P	**Pn**	**19 04 24.0**	**+0.4**
GYA				pP	sP	19 04 31.8	+3.8
GYA				S	**Sn**	**19 08 00.3**	**-2.1**
NONG	**Nongkai**	**19.54**	**116**	P	**Pn**	**19 04 24.3**	**+0.4**
	comp=Z,8μmcomp=Z,28nm,1.0s						
CHAI	**Chaiyaphum**	**19.94**	**124**	P	**Pn**	**19 04 30.1**	**+1.4**
	comp=Z,520nmcomp=Z,68nm,0.8s						
HRA	**Herat**	**20.31**	**294**	P	**P**	**19 04 31.0**	**-0.2**
PHET	**Kaeng Krachan**	**20.41**	**134**	P	Pn	19 04 37.0	+2.7
	comp=Z,25nm,1.0s						
PALK	**Pallekele**	**20.96**	**191**	P	Pn	19 04 39.6	-1.1
	comp=Z,15nm,0.6s,baz=108,slow=11,SNR=35						
PALK				LR	LR	19 13 38.2	
	comp=Z,193nm,18.8s,baz=122,slow=39						
PALK	**Pallekele**	**20.96**	**191**	P	**P**	**19 04 38.9**	**+0.7**
PALK				pmax	pmax		
	comp=Z,35nm,0.6s						
PALK	**Pallekele**	**20.96**	**191**	P	**P**	**19 04 38.9**	**+0.7**
PALK				IAmb	IAmb	19 04 48.9	
	comp=Z,34nm,0.6s						
PATY	**Pattaya**	**21.20**	**132**	P	**P**	**19 04 45.6**	**+4.9**
	comp=Z,58nm,0.6s						
SRAK	**Srakaew**	**21.23**	**127**	P	**P**	**19 04 47.5**	**+6.5**
	comp=Z,2μmcomp=Z,193nm,0.8s						
XAN	**Xi'an**	**21.51**	**68**	P	**P**	**19 04 43.3**	**-0.7**
XAN				pP	pP	19 04 48.8	+0.8
XAN				S	**S**	**19 08 41.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,25nm,0.9s						
XAN				pmax	pmax		
	comp=Z,75nm,3.5s						
XAN				LR	LR		
	comp=Z,370nm,14.4s						
XAN				LR	LR		
	comp=Z,230nm,11.1s						
XAN				LR	LR		
	comp=Z,270nm,9.8s						
ENH	**Enshi**	**21.67**	**78**	P	**P**	**19 04 45.1**	**-0.7**
ENH				IAmb	IAmb	19 04 54.7	
	comp=Z,24nm,1.0s						
DGZ	**Jazzator, Alta**	**21.78**	**5**	*c i*P	**P**	**19 04 47.8**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,14nm,1.0s						
SEM	**Semipalatinsk**	**22.66**	**352**	*e*P	**P**	**19 04 54.5**	**-1.9**
	baz=353						
SEM	**Semipalatinsk**	**22.66**	**352**	*e*P	**P**	**19 04 54.4**	**-1.9**
SURT	**Suratani**	**23.07**	**142**	P	P	19 05 14.4	+14
	comp=Z,1.4nm,1.1s						
KURBB	**Kurchatov Arra**	**23.10**	**350**	P	**P**	**19 05 00.7**	**0.0**
	comp=Z,19nm,0.8s,baz=172,slow=10,SNR=96						
KURBB				ScP	**ScP**	**19 12 25.8**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=177,slow=2.7,SNR=4.2						
KURBB	**Kurchatov Arra**	**23.10**	**350**	P	**P**	**19 05 01.2**	**+0.5**
KURK	**Kurchatov**	**23.18**	**350**	P	**P**	**19 05 00.7**	**-0.8**
BRZS	**Berezniki**	**23.84**	**340**	*e*P	**P**	**19 05 06.1**	**-2.0**
	baz=340						
BRZS	**Berezniki**	**23.84**	**340**	*e*P	**P**	**19 05 06.0**	**-2.0**
KRAB	**Krabi**	**23.90**	**143**	P	P	19 05 17.0	+8.1
GEYT	**Alibeck**	**24.42**	**301**	P	**P**	**19 05 14.9**	**+1.4**
	comp=Z,17nm,1.2s,baz=123,slow=7.3,SNR=14						
GEYT	**Alibeck**	**24.42**	**301**	P	**P**	**19 05 14.4**	**+0.8**
GYA0B	**ALIBECK ARRAY**	**24.42**	**301**	P	**P**	**19 05 13.1**	**-0.5**
QIZ	**Qiongzhong**	**24.59**	**106**	P	**P**	**19 05 18.3**	**+3.0**
QIZ				S	**S**	**19 09 37.5**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,9.0nm,2.3s						
QIZ				LR	LR		
	comp=Z,110nm,16.2s						
QIZ				LR	LR		
	comp=Z,100nm,16.7s						
LHMI	**Lhok Sumawe**	**25.41**	**151**	P	**P**	**19 05 25.0**	**+2.4**
HHC	**Hu-ho-hao-te**	**25.42**	**53**	*e*P	**P**	**19 05 24.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,93nm,6.6s						
HHC				LR	LR		
	comp=Z,220nm,10.0s						
HHC				LR	LR		
	comp=Z,320nm,13.3s						
HHC				LR	LR		
	comp=Z,370nm,12.7s						
WHN	**Wuhan**	**25.87**	**77**	⇓P	P	19 05 37.3	+11
ZAA0	**Zalesovo Array**	**25.94**	**0**	P	**P**	**19 05 27.6**	**+0.6**
ZAA0				IAmb	IAmb	19 05 28.9	
	comp=Z,24nm,1.1s						
ZALV	**Zalesovo Beam**	**25.94**	**0

comp=Z,150nm,19.1s,baz=187,slow=39
PSI Prapat 28.44 149 LR LR 19 18 47.3
comp=Z,123nm,19.2s,baz=70,slow=40
AB31 Akbulak array 28.55 325 P **P** **19 05 49.8 -0.8**
ABKAR Akbulak array 28.55 325 P **P** **19 05 51.4 +0.7**
ABKAR Akbulak array 28.55 325 P **P** **19 05 51.1 +0.4**
GSI Gunungsitoli 29.21 153 P **P** **19 05 58.0 +1.2**
NJ2 Nanjing 29.69 74 *e*P **P** **19 06 01.3 +0.4**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
AKT Akhty 33.05 304 *e*P **P** **19 06 29.4 -1.2**
AKT *e* 19 07 38.3
AKT pmax pmax
comp=Z,24nm,1.2s
SVE Sverdlovsk 33.54 336 *e*P **P** **19 06 35.8 +1.3**
SVE pmax pmax
comp=Z,18nm,0.8s
ARU Arti 34.02 334 P **P** **19 06 39.5 +0.8**
comp=Z,4.4nm,0.5s,baz=144,slow=4.6,SNR=26
ARU Arti 34.02 334*d* *i*P **P** **19 06 38.3 -0.4**
ARU 19 07 45.2
ARU S **S** **19 12 03.5 -0.1**
ARU SS **SnSn** **19 14 07.0 -3.4**
ARU pmax pmax
comp=Z,13nm,0.7s
ARU Arti 34.02 334 P **P** **19 06 39.2 +0.5**
HIA Hailar 34.15 42 *i*P **P** **19 06 40.9 +1.0**
HIA pmax pmax
comp=Z,8.0nm,1.1s
HIA Hailar 34.15 42 P **P** **19 06 40.4 +0.5**
GNI Garni 35.05 301 *i*P **P** **19 06 48.3 +0.2**
GNI pmax pmax
comp=Z,11nm,1.6s
RAYN Ar Rayn 35.57 272 P **P** **19 06 51.7 -0.8**
RAYN pmax pmax
comp=Z,2.0nm,0.8s
RAYN Ar Rayn 35.57 272 P **P** **19 06 51.7 -0.8**
ZEI Tsey 36.10 305 *e*P **P** **19 06 58.3 +1.2**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
BOD Bodaibo 36.15 26 *e*P **P** **19 06 57.4 +0.4**
BOD pmax pmax
comp=Z,76nm,0.9s
NCK Nalchik 36.45 306 *i*P **P** **19 07 00.3 +0.4**
NCK pmax pmax
comp=Z,14nm,0.7s
BELG Belogornoye 36.80 322 *i*P **P** **19 07 02.4 -0.2**
BELG pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 37.00 306 P **P** **19 07 04.4 0.0**
comp=Z,2.7nm,0.8s,baz=131,slow=7.8,SNR=10
KBZ Khabaz 37.00 306 *i*P **P** **19 07 04.6 +0.2**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
SHA1 Shidzhatmaz 37.17 306 *i*P **P** **19 07 04.8 -1.4**
KS19 Wonju Array Si 37.17 64 P **P** **19 07 05.7 -0.3**
KS19 IAmb IAmb 19 07 58.6
comp=Z,21nm,1.5s
KSAR Wonju Array Be 37.18 64 P **P** **19 07 05.6 -0.5**
KSAR Wonju Array Be 37.18 64 P **P** **19 07 05.5 -0.5**
KIV Kislovodsk 37.19 307 *e*P **P** **19 07 03.8 -2.4**
KIV pmax pmax
comp=Z,13nm,1.0s
KSRS Korea Array 37.21 64 P **P** **19 07 05.8 -0.6**
comp=Z,2.9nm,0.6s,baz=263,slow=8.2,SNR=20
KSRS LR LR 19 23 40.9
comp=Z,60nm,20.9s,baz=238,slow=38
VRH Novokhopyorsk 39.72 318 *e*P **P** **19 07 26.1 -1.1**
VRH pmax pmax
comp=Z,20nm,0.8s
GAZ Gaziantep 40.78 295 P **P** **19 07 37.5 +1.2**
GAZ IAmb IAmb 19 07 39.0
comp=Z,16nm,1.2s
USRK Ussuriysk Ar. 40.83 54 P **P** **19 07 37.0 +0.4**
comp=Z,3.0nm,0.7s,baz=260,slow=8.3,SNR=7.7
USRK Ussuriysk Ar. 40.83 54 P **P** **19 07 37.0 +0.4**
USRK Ussuriysk Ar. 40.83 54 P **P** **19 07 36.3 -0.3**
VORD Divnogorie 41.10 317 *e*P **P** **19 07 37.7 -1.0**
VORD pmax pmax
comp=Z,20nm,0.5s
VSR Storozhevoye 41.25 317 *e*P **P** **19 07 38.3 -1.6**
VSR pmax pmax
comp=Z,20nm,1.3s
NRIK Noril'sk 41.42 1 P **P** **19 07 42.2 +1.2**
comp=Z,8.5nm,0.6s,baz=178,slow=6.6,SNR=16
NRIK Noril'sk 41.42 1*c* *i*P **P** **19 07 41.7 +0.7**
NRIK pmax pmax
comp=Z,11nm,0.7s
NRIK Noril'sk 41.42 1 P **P** **19 07 41.8 +0.7**
KLR Kul'dur 41.56 46 *i*P **P** **19 07 42.1 -0.4**
KLR pmax pmax
comp=Z,13nm,2.8s
LPSR Galich'ya Gora 41.80 319 *e*P **P** **19 07 44.0 -0.4**
LPSR pmax pmax
comp=Z,20nm,0.8s
JMN Monobe 42.20 70 P **P** **19 07 49.5 +1.5**
JMN IAmb IAmb 19 08 11.3
comp=Z,20nm,1.1s
JWT Wachi 43.31 67 P **P** **19 07 58.0 +1.1**
JWT IAmb IAmb 19 07 58.6
comp=Z,19nm,1.5s
SIM Simferopol' 43.40 307 *e*P **P** **19 07 57.0 -0.6**
SIM pmax pmax
comp=Z,13nm,1.0s
BR131 Keskin Array S 43.54 299 P **P** **19 08 00.5 +1.6**
BR131 pmax pmax
comp=Z,9.0nm,1.1s
BR131 Keskin Array S 43.54 299 P **P** **19 08 00.5 +1.6**
BRTR Keskin Array B 43.54 299 P **P** **19 08 00.5 +1.5**
comp=Z,1.9nm,0.9s,baz=89,slow=8.8,SNR=10
BRTR Keskin Array B 43.54 299 P **P** **19 07 59.0 0.0**
TOLI2 Tolitoli 43.57 122 P **P** **19 08 00.9 +1.7**
TOLI2 IAmb IAmb 19 08 07.0
comp=Z,11nm,1.1s
OBN Obninsk 43.90 322⇑ *e*P **P** **19 08 00.9 -0.5**
OBN *e* 19 09 43.8
OBN *e* 19 09 47.7
OBN *e*S **S** **19 14 31.4 -0.9**
OBN pmax pmax
comp=Z,23nm,0.9s
OBN MLR MLR
comp=Z,88nm,15.0s
OBN Obninsk 43.90 322 P **P** **19 08 01.7 +0.3**
OBN IAmb IAmb 19 08 02.6
comp=Z,23nm,1.0s
KLMR Klimovskoe 44.63 330 *e*P **P** **19 08 04.8 -2.3**
KLMR *e* 19 09 48.3
KLMR pmax pmax
comp=Z,10.0nm,0.8s
KLMR Klimovskoe 44.63 330 *e*P **P** **19 08 04.8 -2.3**
KLMR AMP 19 08 07.9
comp=Z,10.0nm,0.8s
KLMR *e*PP **PcP** **19 09 48.4 -1.3**
YAK Yakutsk 45.00 28*c* *i*P **P** **19 08 10.1 +0.1**
YAK pmax pmax
comp=Z,13nm,0.8s
YAK Yakutsk 45.00 28 P **P** **19 08 10.5 +0.4**
MAT Matsushiro 45.47 65 P **P** **19 08 14.2 0.0**
MJAR Matsushiro Arr 45.47 65 P **P** **19 08 14.2 0.0**
comp=Z,3.9nm,0.8s,baz=278,slow=9.2,SNR=7.7
MJAR LR LR 19 29 15.6
comp=Z,36nm,20.9s,baz=175,slow=39
MJAR Matsushiro Arr 45.47 65 P **P** **19 08 13.0 -1.2**
MJAR pmax pmax
comp=Z,2.0nm,1.1s
MJAR Matsushiro Arr 45.47 65 P **P** **19 08 13.0 -1.2**
ELL Elmali 46.64 295 P **P** **19 08 24.0 +0.4**
ELL pmax pmax
comp=Z,88nm,0.8s
ELL Elmali 46.64 295 P **P** **19 08 24.0 +0.4**
JYT Yasato 47.09 65 P **P** **19 08 26.0 -0.9**
AKASG Malin Array Be 47.30 314 P **P** **19 08 28.1 -0.3**
comp=Z,1.9nm,0.6s,baz=76,slow=6.5,SNR=19
AKASG Malin Array Be 47.30 314 *i*P **P** **19 08 28.1 -0.3**
AKASG pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 47.30 314 P **P** **19 08 27.7 -0.7**
AKBB pmax pmax
comp=Z,7.0nm,0.9s
AKBB Malin Array Si 47.30 314 P **P** **19 08 27.6 -0.7**
AKBB IAmb IAmb 19 08 34.0
comp=Z,6.7nm,0.8s
TPGR Topolog 47.44 306⇑ P **P** **19 08 29.8 +0.2**
SORM Soroca 47.63 311⇑ P **P** **19 08 31.2 +0.3**
CFR Carcaliu 47.65 307⇓ P **P** **19 08 31.3 +0.2**

MNK Minsk 48.65 319 *i*P **P** **19 08 39.6 +0.9**
comp=E,3.0nm,0.9s
MNK *i*P **P** **19 08 39.6 +0.9**
comp=N,15nm,0.9s
MNK *i*P **P** **19 08 39.6 +0.9**
comp=Z,15nm,0.9s
MNK *i*PcP **PcP** **19 10 04.5 +0.5**
MNK *i*PP **PP** **19 10 32.8 +1.3**
MNK *i*PPP PPP 19 11 23.0
MNK *i*ScP ScP 19 13 35.5 -23
MNK *i*PcS **PcS** **19 14 00.7 +0.9**
MNK *i*S **S** **19 15 42.7 +2.3**
MNK *i*ScS **ScS** **19 18 29.4 -1.6**
MNK *i*SS **SS** **19 19 12.2 +1.9**
MNK *i*SS **SS** **19 19 12.2 +1.9**
MNK *i*SSS SSS 19 20 26.4
MNK *i*LQ LQ 19 25 44.6
MNK *i*LR LR 19 28 38.5
MNK *i*LRM MLR 19 32 12.4
comp=N,37nm,18.1s
MNK *i*LRM MLR 19 32 19.7
comp=Z,116nm,18.1s
MNK *i*LRM MLR 19 32 21.0
comp=E,9.0nm,18.1s
VRI Vrincioaia 48.65 308⇑ P **P** **19 08 40.2 +1.3**
BISRR Bisoca 48.66 307⇓ P **P** **19 08 40.0 +1.0**
PLOR Plostina 48.70 308⇑ P **P** **19 08 40.6 +1.3**
TESR Tescani 48.71 309⇑ P **P** **19 08 39.3 0.0**
NEHR Nehoiu 48.95 307⇑ P **P** **19 08 42.3 +1.1**
BIZ Bicaz 49.09 309⇑ P **P** **19 08 42.3 -0.1**
MLR Muntele Rosu 49.19 307 P **P** **19 08 44.8 +1.5**
comp=E,16nm,0.8s,baz=49,slow=2.1,SNR=42
MLR Muntele Rosu 49.19 307 P **P** **19 08 44.3 +1.0**
MLR pmax pmax
comp=Z,19nm,0.8s
MLR Muntele Rosu 49.19 307 P **P** **19 08 44.3 +1.0**
OZUR 49.30 308⇑ P **P** **19 08 44.7 +0.7**
NACGM Naroch 49.34 320 *i*P **P** **19 08 44.0 0.0**
NACGM *i*P **P** **19 08 44.0 0.0**
NACGM *i*P **P** **19 08 44.0 0.0**
NACGM *i*PP **PP** **19 10 44.5 +6.7**
NACGM *i*S S 19 16 04.9 +15
NACGM *i*SS SS 19 19 50.7 +29
NACGM *i*SSS SSS 19 21 34.4
NACGM *i*LR LR 19 31 03.4
DOPR Dopca 49.58 308⇑ P **P** **19 08 46.9 +0.8**
BURAR Bucovina Array 49.71 310⇑ P **P** **19 08 48.0 +0.8**
BURAR Bucovina Array 49.71 310 P **P** **19 08 47.6 +0.4**
BUR08 Bucovina Ar. S 49.72 310 P **P** **19 08 47.6 +0.4**
IIGN Ignalina 49.72 320 *e*P **P** **19 08 47.1 +0.2**
ISAL Salakas 49.81 321 *e*P **P** **19 08 47.8 +0.2**
VOIR 49.83 307⇑ P **P** **19 08 49.0 +1.0**
TIXI Tiksi 49.91 17 P **P** **19 08 48.3 +0.2**
TIXI pmax pmax
comp=Z,20nm,0.8s
TIXI Tiksi 49.91 17 P **P** **19 08 48.3 +0.2**
VSU Vasula 49.99 324 *e*P **P** **19 08 49.2 +0.4**
ARR Arges 50.12 307⇑ P **P** **19 08 50.5 +0.2**
SANT Santorini 50.24 295⇓ P **P** **19 08 50.3 -1.0**
SANT Santorini 50.24 295 P **P** **19 08 50.7 -0.6**
SANT IAmb IAmb 19 08 51.3
comp=Z,12nm,0.7s
LVV L'vov 50.55 313 *e*P **P** **19 08 53.4 0.0**
IDI Anoyia 50.87 294 P **P** **19 08 55.8 -0.2**
comp=Z,2.1nm,0.6s,baz=49,slow=9.1,SNR=6.4
IDI Anoyia 50.87 294⇑ P **P** **19 08 54.3 -1.7**
IDI Anoyia 50.87 294 IAmb IAmb 19 09 07.2
comp=Z,7.9nm,1.0s
FIA1 FINESS Array S 50.95 328 P **P** **19 08 56.0 -0.1**
FIA1 IAmb IAmb 19 10 00.3
comp=Z,15nm,0.9s
FINES FINESS Array B 50.95 328 P **P** **19 08 56.4 +0.2**
comp=Z,5.7nm,0.7s,baz=105,slow=7.5,SNR=28
PABE Paberze 51.02 320 *e*P **P** **19 08 57.0 +0.3**
PABE Paberze 51.02 320 P **P** **19 08 56.7 0.0**
VTS Vitosha 51.27 304⇑ P **P** **19 08 58.9 -0.1**
VTS Vitosha 51.27 304 P **P** **19 08 59.4 +0.4**
VTS pmax pmax
comp=Z,7.0nm,0.9s
VTS Vitosha 51.27 304 P **P** **19 08 59.4 +0.4**
VTS IAmb IAmb 19 09 01.0
comp=Z,6.8nm,0.9s
SUW Suwalki 51.33 318 P **P** **19 08 57.8 -1.3**
SUW pmax pmax
comp=Z,15nm,0.9s
SUW Suwalki 51.33 318 P **P** **19 08 57.8 -1.3**
SUW IAmb IAmb 19 10 19.4
comp=Z,15nm,0.9s
KWP Kalwaria Pacla 51.41 313 P **P** **19 09 00.1 +0.3**
KWP pmax pmax
comp=Z,38nm,1.4s
KWP Kalwaria Pacla 51.41 313 P **P** **19 09 00.1 +0.3**
GZR Gura Zlata 51.43 307⇑ P **P** **19 09 00.3 +0.2**
TRPA Tarpa 51.52 311⇑ P **P** **19 09 01.0 +0.4**
MTSE Matsula 51.54 324 *e*P **P** **19 08 59.0 -1.5**
UZH Uzhgorod 51.68 311 *e*P **P** **19 09 01.8 0.0**
UZH *e* 19 09 08.8
CRVS Cervenica-Dubn 52.23 312 *e*P **P** **19 09 07.2 +1.3**
CRVS Cervenica-Dubn 52.23 312 *e*P **P** **19 09 07.2 +1.3**
AGG Agios Georgios 52.33 299 P **P** **19 09 05.8 -1.1**
AGG pmax pmax
comp=Z,10.0nm,1.0s
AGG Agios Georgios 52.33 299 P **P** **19 09 05.8 -1.1**
AGG IAmb IAmb 19 09 18.6
comp=Z,10nm,1.0s
LODK Lodwar 53.01 252 P **P** **19 09 12.3 +0.1**
LODK IAmb IAmb 19 09 29.9
comp=Z,14nm,2.0s
ARA0 ARCESS Array S 53.43 338 *e*P **P** **19 09 14.9 +0.4**
ARCES ARCESS Array B 53.43 338 P **P** **19 09 14.3 -0.2**
comp=Z,9.3nm,0.6s,baz=87,slow=7.4,SNR=38
KTK1 Kautokeino 54.04 337 *e*P **P** **19 09 19.3 +0.3**
MA2 Magadan 54.19 35 *i*P **P** **19 09 20.0 -0.2**
MA2 pmax pmax
comp=Z,13nm,0.8s
MA2 Magadan 54.19 35 P **P** **19 09 20.4 +0.3**
PDG Podgorica 54.21 304⇑ P **P** **19 09 20.2 -0.4**
PDG Podgorica 54.21 304 P **P** **19 09 19.8 -0.8**
MORH Mrgy, Hungar 54.26 309⇑ P **P** **19 09 21.3 +0.4**
HAMF Hammerfest 54.37 339 *e*P **P** **19 09 22.2 +0.8**
MORC Moravsky Berou 54.76 313 *e*P **P** **19 09 29.2 +4.7**
UPP Uppsala 54.82 325 *e*P **P** **19 09 24.2 -0.5**
MODS Modra-Piesok 55.02 311 *e*P **P** **19 09 28.8 +2.4**
MODS Modra-Piesok 55.02 311 *e*P **P** **19 09 28.8 +2.4**
JETT Jettan, Norway 55.16 337 *e*P **P** **19 09 27.6 +0.5**
SEY Seymchan 55.29 31 *i*P **P** **19 09 28.0 -0.1**
VRAC Vranov 55.40 312 P **P** **19 09 29.6 +0.4**
comp=Z,2.1nm,0.5s,baz=119,slow=8.9,SNR=3.3
VRAC Vranov 55.40 312 *e*P **P** **19 09 30.3 +1.1**
KRUC Moravsky 55.55 312 *e*P **P** **19 09 30.9 +0.7**
TRO Tromso 55.68 337 *e*P **P** **19 09 31.1 +0.3**
CONA Conrad Observa 56.00 311 *e*P **P** **19 09 33.3 -0.2**
comp=Z,5.3nm,0.9s
N2ST Straumen 56.50 334 *e*P **P** **19 09 37.0 +0.3**
FAUS Fauske 56.62 334 *e*P **P** **19 09 38.0 +0.5**
SOKA Soboth 56.70 309 *e*P **P** **19 09 38.8 +0.2**
comp=Z,4.6nm,0.9s
STEI Steigen 56.71 335 *e*P **P** **19 09 38.5 +0.4**
MOR8 Moi Rana 56.82 333 *e*P **P** **19 09 38.2 -0.8**
NBB28 Valnes 56.92 334 *e*P **P** **19 09 39.5 -0.1**
GERES GERESS Array B 57.34 312 P **P** **19 09 42.4 -0.7**
comp=Z,0.6nm,0.6s,baz=96,slow=9.5,SNR=5.5
LOF Lofoten 57.37 335 *e*P **P** **19 09 43.2 +0.4**
KONS Konsvik 57.38 333 *e*P **P** **19 09 43.1 +0.1**
CLL Collm 57.54 315 *e*P **P** **19 09 41.0 -3.3**
NSS Namsos 57.74 331 *e*P **P** **19 09 46.1 +0.6**
NC602 NORSAR Array S 57.88 326 *e*P **P** **19 09 46.7 +0.1**
NB2 NORSAR Subarra 58.04 327 P **P** **19 09 46.8 -0.9**
baz=89,slow=7.4
NOA NORSAR Array B 58.04 327 P **P** **19 09 47.1 -0.6**
comp=Z,1.8nm,0.7s,baz=89,slow=7.1,SNR=7.9
NOA LR LR 19 36 21.4
comp=Z,83nm,18.2s,baz=95,slow=38
PETK Petropavlovsk- 58.05 43 P **P** **19 09 47.4 -0.5**
comp=Z,1.8nm,0.7s,baz=311,slow=11,SNR=4.6
PETK LR LR 19 39 36.5
comp=Z,35nm,18.2s,baz=224,slow=41
KONO Kongsberg 58.88 325 *e*P **P** **19 09 53.3 -0.3**
WATA Walderalm 58.95 311 *e*P **P** **19 09 53.9 -0.5**
comp=Z,3.6nm,0.8s
MURB Monte Urbino 58.97 306 P **P** **19 09 55.4 +0.8**
DOMB Dombas 59.04 328 *e*P **P** **19 09 55.1 +0.3**
MOL Molde 59.73 328 *e*P **P** **19 09 59.9 +0.5**

FITZ Fitzroy Crossi 60.51 134 P **P** **19 10 05.5 +0.2**
comp=Z,4.7nm,0.7s,baz=297,slow=14,SNR=3.6
BILL Bilibino 61.19 25*de*P **P** **19 10 10.6 +1.3**
BILL *e* 19 10 14.7
BILL *e* 19 12 24.6
BILL pmax pmax
comp=Z,9.0nm,1.1s
BILL MLR MLR
comp=Z,96nm,18.0s
BILL Bilibino 61.19 25 P **P** **19 10 09.9 +0.6**
BILL IAmb IAmb 19 10 11.8
comp=Z,8.3nm,0.8s
SENIN Lac Senin/Sane 62.01 310 P **P** **19 10 15.2 -0.3**
KEST Kesra 63.12 298 P **P** **19 10 23.4 +0.5**
comp=Z,8.2nm,1.0s,baz=272,slow=0.6,SNR=4.1
NOR Nord 64.16 351 *i*P **P** **19 10 29.1 +0.2**
NOR IAmb IAmb 19 10 29.9
comp=Z,5.4nm,1.0s
NOR Nord 64.16 351 *i*P **P** **19 10 29.1 +0.2**
NOR pmax pmax
comp=Z,5.0nm,1.0s
DAG Danmarks Havn 65.99 346 *i*P **P** **19 10 40.8 0.0**
DAG IAmb IAmb 19 10 42.1
comp=Z,4.7nm,0.9s
DAG Danmarks Havn 65.99 346 *i*P **P** **19 10 40.8 0.0**
DAG pmax pmax
comp=Z,5.0nm,0.9s
WB0 Warramunga Arr 67.48 129 P **P** **19 10 51.9 +0.7**
WB0 IAmb IAmb 19 11 10.3
comp=Z,13nm,1.2s
WRA Warramunga Arr 67.56 129 P **P** **19 10 52.1 +0.4**
comp=Z,3.1nm,0.6s,baz=321,slow=6.4,SNR=41
WRA Warramunga Arr 67.56 129 *i*P **P** **19 10 52.0 +0.4**
WRA pmax pmax
comp=Z,4.0nm,0.6s
WRA Warramunga Arr 67.56 129 P **P** **19 10 51.6 -0.1**
WB2 Warramunga Arr 67.57 129 P **P** **19 10 52.6 +0.8**
WR0 Warramunga Arr 67.71 129 P **P** **19 10 54.2 +1.5**
WR0 IAmb IAmb 19 10 59.1
comp=Z,5.5nm,0.7s
AS31 Alice Springs 69.84 132 P **P** **19 11 06.3 +0.4**
ASAR Alice Springs 69.84 132 P **P** **19 11 06.5 +0.6**
comp=Z,6.5nm,0.7s,baz=315,slow=6.4,SNR=32
ASAR Alice Springs 69.84 132 P **P** **19 11 05.8 -0.1**
NEEM North Greenlan 71.54 351 *i*P **P** **19 11 16.1 +0.3**
NEEM IAmb IAmb 19 11 16.8
comp=Z,12nm,0.8s
ESDC Sonseca Array 71.85 306 P **P** **19 11 18.6 +0.5**
comp=Z,1.5nm,1.1s,baz=62,slow=5.0,SNR=5.4
ESDC Sonseca Array 71.85 306 P **P** **19 11 17.6 -0.5**
EUNU Eureka 72.08 358 P **P** **19 11 19.6 +0.9**
EUNU IAmb IAmb 19 11 30.6
comp=Z,18nm,1.4s
A21K Barrow 72.20 17 P **P** **19 11 20.3 +0.8**
SUMG Summit 72.60 345 *i*P **P** **19 11 22.2 -0.2**
SUMG IAmb IAmb 19 11 24.8
comp=Z,8.5nm,0.9s
SUMG Summit 72.60 345 *i*P **P** **19 11 22.1 -0.2**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 72.60 345 P **P** **19 11 22.1 -0.2**
SUMG IAmb IAmb 19 11 24.0
comp=Z,12nm,1.1s
ICESG Greenland Ices 75.16 342 *i*P **P** **19 11 37.8 +0.5**
ICESG IAmb IAmb 19 11 39.0
comp=Z,8.4nm,0.8s
TOLK Toolik Lake Re 75.78 18 P **P** **19 11 41.5 +0.9**
TOLK Toolik Lake Re 75.78 18 P 19 11 41.9
baz=312,SNR=18
CTA Charters Tower 76.24 122 P **P** **19 11 44.7 +0.9**
comp=Z,5.6nm,0.9s,baz=285,slow=7.3,SNR=4.2
COLD Coldfoot 76.55 19 P **P** **19 11 44.2 -0.7**
COLD IAmb IAmb 19 11 47.3
comp=Z,11nm,1.1s
COLD Coldfoot 76.56 19 P 19 11 46.3
baz=312,SNR=12
TTA Tatalina 77.42 24 P **P** **19 11 50.9 +1.0**
TTA pmax pmax
comp=Z,8.0nm,1.3s
TTA Tatalina 77.42 24 P **P** **19 11 50.9 +1.0**
TTA IAmb IAmb 19 11 56.4
comp=Z,8.3nm,1.3s
TTA Tatalina 77.42 24 P 19 11 51.8
baz=308
MLY Manley 77.86 21 P **P** **19 11 52.7 +0.4**
MLY IAmb IAmb 19 11 54.6
comp=Z,11nm,1.0s
MLY Manley 77.86 21 P 19 11 53.7
baz=312,SNR=14
TORD Torodi Ar. Bea 77.94 279 P **P** **19 11 53.6 0.0**
comp=Z,1.9nm,0.7s,baz=49,slow=4.5,SNR=10
TORD Torodi Ar. Bea 77.94 279 P **P** **19 11 51.6 -2.0**
I23K Minto, Yukon-K 78.21 20 P **P** **19 11 55.6 +1.4**
I23K IAmb IAmb 19 11 56.1
comp=Z,6.8nm,0.9s
I23K Minto, Yukon-K 78.22 20 P 19 11 55.8
baz=313,SNR=6.7
BPAW Bear Paw Mtn. 78.40 22 P **P** **19 11 56.4 +1.0**
BPAW IAmb IAmb 19 11 57.3
comp=Z,11nm,1.1s
BPAW Bear Paw Mtn. 78.41 22 P 19 11 56.3
baz=312,SNR=6.5
FYU Fort Yukon 78.42 18 P **P** **19 11 56.5 +1.1**
FYU IAmb IAmb 19 11 58.3
comp=Z,16nm,1.0s
NEA2 Nenana 78.69 21 P **P** **19 11 56.5 -0.3**
NEA2 IAmb IAmb 19 11 58.7
comp=Z,14nm,0.8s
NEA2 Nenana 78.69 21 P 19 11 58.0
baz=313,SNR=10
MDM Murphy Dome 78.69 20 P **P** **19 11 57.7 +0.7**
MDM IAmb IAmb 19 11 59.6
comp=Z,15nm,1.1s
PPLA Purkeypile 78.80 23 P 19 11 59.2
baz=311
POKR Poker Plat Res 78.82 20 P **P** **19 11 58.7 +1.1**
POKR Poker Plat Res 78.83 20 P 19 11 59.0
baz=315,SNR=6.7
BWN Browne 78.85 21 P **P** **19 11 59.1 +1.4**
TCOL CIGO, UAF Yank 78.86 20 P **P** **19 11 57.7 -0.1**
TCOL IAmb IAmb 19 11 59.2
comp=Z,8.6nm,0.8s
COLA College 78.87 20*c* *i*P **P** **19 11 58.4 +0.6**
COLA pmax pmax
comp=Z,8.0nm,1.0s
COLA College 78.87 20 P **P** **19 11 57.8 0.0**
COLA IAmb IAmb 19 11 59.6
comp=Z,9.4nm,0.8s
WRH Wood River Hil 79.08 21 P **P** **19 11 59.0 0.0**
WRH IAmb IAmb 19 14 09.8
comp=Z,24nm,1.9s
PRP Porcupine Dome 79.10 19 P **P** **19 12 00.5 +1.2**
PRP IAmb IAmb 19 12 06.1
comp=Z,13nm,1.1s
PRP Porcupine Dome 79.10 19 P 19 12 01.1
baz=316
IL31 79.23 20 P **P** **19 12 00.1 +0.3**
IL31 IAmb IAmb 19 12 00.9
comp=Z,4.5nm,0.7s
ILAR Eielson Array 79.23 20 P **P** **19 11 59.6 -0.2**
comp=Z,4.0nm,0.7s,baz=303,slow=4.7,SNR=52
ILAR LR LR 19 50 23.8
comp=Z,53nm,19.6s,baz=243,slow=38
ILAR Eielson Array 79.23 20 P **P** **19 11 59.2 -0.6**
MCK McKinley 79.32 21 P 19 12 01.0
baz=314
HDA Harding Lake 79.47 20 P 19 12 00.8
baz=315
HDA P 19 12 00.8
baz=315
RND Reindeer 79.57 22 P **P** **19 12 01.9 +0.1**
RND pmax pmax
comp=Z,6.0nm,0.8s
RND Reindeer 79.57 22 P **P** **19 12 01.9 +0.1**
RND IAmb IAmb 19 12 02.9
comp=Z,6.0nm,0.8s
SKT Skwentna 79.63 24 P **P** **19 12 02.6 +0.5**
SKT Skwentna 79.63 24 P 19 12 02.9
baz=312,SNR=9.0
INK Inuvik 79.90 14 P **P** **19 12 03.7 +0.3**
INK pmax pmax
comp=Z,8.0nm,1.1s
INK Inuvik 79.90 14 P **P** **19 12 03.6 +0.3**
INK IAmb IAmb 19 12 05.2
comp=Z,8.0nm,1.1s
INK Inuvik 79.90 14 P 19 12 04.1

baz=326
BOSA Boshof 80.11 230 P **P** **19 12 05.5 +0.2**
comp=Z,1.3nm,0.7s,baz=63,slow=14,SNR=1.6
SUA Susitna One 80.26 24 P **P** **19 12 06.5 +0.9**
SUA IAmb IAmb 19 12 07.3
comp=Z,10nm,0.7s
SUA Susitna One 80.26 24 P 19 12 06.5
baz=312,SNR=5.7
STKA Stephens Creek 80.40 134 P **P** **19 12 06.4 -0.2**
comp=Z,2.9nm,0.9s,baz=349,slow=3.4,SNR=5.1
STKA Stephens Creek 80.40 134 P **P** **19 12 06.4 -0.2**
STKA pmax pmax
comp=Z,4.0nm,1.7s
WAT6 Susitna Watana 80.52 22 P 19 12 07.5
baz=315
SCRK Sand Creek 80.68 20 P **P** **19 12 08.6 +0.7**
SCRK IAmb IAmb 19 12 09.6
comp=Z,11nm,0.8s
SCRK Sand Creek 80.68 20 P 19 12 08.8
baz=318
C36M Paulatuk 80.69 10 P **P** **19 12 07.5 -0.1**
C36M IAmb IAmb 19 12 08.7
comp=Z,12nm,1.1s
C36M Paulatuk 80.70 10 P 19 12 08.2
baz=334
PMR Palmer 80.74 23 P 19 12 09.0
baz=314
EPYK Eagle Plains 80.78 16 P **P** **19 12 08.2 0.0**
EPYK IAmb IAmb 19 12 09.5
comp=Z,10.0nm,0.8s
EPYK Eagle Plains 80.78 16 P 19 12 08.8
baz=324
SML Sawmill 80.86 23 P 19 12 10.1
baz=314,SNR=5.3
RC01 Rabbit Creek A 80.87 24 P 19 12 10.1
baz=313
EGAK Eagle 80.89 18 P **P** **19 12 09.6 +0.8**
EGAK IAmb IAmb 19 12 10.5
comp=Z,6.8nm,0.8s
EGAK Eagle 80.89 18 P 19 12 09.9
baz=320
DOT Dot Lake 80.90 20 P **P** **19 12 09.4 +0.4**
DOT IAmb IAmb 19 12 10.2
comp=Z,6.5nm,0.8s
PAX Paxson 80.97 21 P 19 12 10.1
baz=317
KNK Knik Glacier 81.09 23 P 19 12 11.2
baz=314
K27K Chicken 81.20 19 P 19 12 12.1
baz=319
M24K Tolsona, Glenn 81.37 22 P 19 12 13.3
baz=316
HARP HAARP 81.48 21 P 19 12 14.1
baz=317
HNR Honiara 81.50 105 LR LR 19 52 22.3
comp=Z,37nm,18.5s,baz=132,slow=39
DAWY Dawson 81.93 18 P **P** **19 12 14.9 +0.6**
L27K Beaver Creek, 82.01 20 P **P** **19 12 16.1 +1.2**
L27K IAmb IAmb 19 12 17.3
comp=Z,6.2nm,0.9s
L27K Beaver Creek, 82.01 20 P 19 12 16.3
baz=320
N25K Chitina, Valde 82.25 21 P **P** **19 12 17.6 +1.4**
N25K IAmb IAmb 19 12 18.8
comp=Z,17nm,1.1s
N25K Chitina, Valde 82.25 21 P 19 12 17.8
baz=317
KOWA Kowa 82.31 282 P **P** **19 12 17.3 +0.1**
KOWA IAmb IAmb 19 12 21.4
comp=Z,5.9nm,0.8s
MCARA McCarthy VSAT 82.92 21 P **P** **19 12 21.2 +1.7**
MCARA McCarthy VSAT 82.92 21 P 19 12 21.5
baz=319
HYT Haines Junctio 85.04 19 P **P** **19 12 31.3 +0.8**
DBIC Dimbokro 86.61 276 P **P** **19 12 39.0 +0.1**
comp=Z,4.5nm,0.9s,baz=26,slow=5.7,SNR=5.2
YKA Yellowknife Ar 88.50 9 P **P** **19 12 46.4 -0.8**
comp=Z,1.0nm,0.8s,baz=340,slow=4.8,SNR=16
YKA LR LR 19 55 01.6
comp=Z,34nm,20.5s,baz=0.0,slow=37
CPUP Villa Florida 146.35 264 PKPbc **PKPab** **19 19 37.4 +0.3**
comp=Z,0.9nm,0.3s,baz=88,slow=2.3,SNR=5.5

*SOME **27** 19:30:22.8, 39°.18N×68°.53E, h0km*
*NNC **27** 19:30:28.1±2.9, 39°.81N×67°.83E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=27.1km s-min=14.7km az=2.0*
ISC 27 19:30:19.7±2.5, 39°.1N±0°.1×67°.52E±0°.09, h10km, n12, σ2§40/20, 6C-4D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHM	**Chimkent**	**3.59**	**25**	***e*P**	**Pb**	**19 31 23.3**	**-0.1**
	65nm,0.3s						
CHM				*e*S	**Sb**	**19 32 07.8**	**+0.7**
	170nm,0.3s						
IUG	**Iuzhnay**	**3.60**	**31**	***e*P**	**Pb**	**19 31 23.0**	**-0.5**
	168nm,0.6s						
IUG				*e*S	**Sb**	**19 32 07.5**	**+0.1**
	101nm,0.5s						
KK31	**Karatay Array**	**4.60**	**28**	Pn	**Pn**	**19 31 29.0**	**-0.3**
	0.3nm,0.2s,baz=170,slow=6.9,SNR=21						
KK31				⇓Pg	**Pb**	**19 31 40.8**	**+0.3**
	2.5nm,0.3s,baz=215,slow=15,SNR=30						
KK31				⇑Lg	Lg	19 32 31.8	
	7.4nm,0.4s,baz=218,slow=30,SNR=6.8						
DZA	**Taraz**	**4.77**	**36**	***e*P**	**Pb**	**19 31 43.0**	**-0.4**
	33nm,0.1s						
DZA				*e*S	**Sb**	**19 32 41.3**	**+0.4**
	100nm,0.6s						
MRKS	**Merke**	**5.66**	**48**	***e*P**	**Pb**	**19 31 56.7**	**-1.9**
	1.9nm,0.2s						
MRKS				*e*S	**Sb**	**19 33 05.6**	**-0.9**
	18nm,0.5s						
MRKS	**Merke**	**5.66**	**48**	Pg	**Pb**	**19 31 56.7**	**-1.9**
	1.9nm,0.2s						
MRKS				Lg	Lg	19 33 05.6	
	18nm,0.5s						
AAK	**Ala-Archa**	**6.37**	**54**	⇑Pn	**Pn**	**19 31 56.2**	**+2.5**
	1.1nm,0.5s						
AAK				⇓Pg	Pb	19 32 15.2	+4.5
	2.7nm,0.6s						
AAK				⇑Sn	**Sn**	**19 33 01.8**	**-4.7**
	2.1nm,0.4s						
AAK				⇓Lg	Lg	19 33 33.5	
	6.0nm,0.5s						
SGDS	**Sogindy**	**6.91**	**49**	Pg	**Pb**	**19 32 19.2**	**-0.6**
	1.0nm,0.3s						
SGDS				Lg	Lg	19 33 43.9	
	8.1nm,0.7s						
TKM2	**Tokmak 2**	**7.21**	**55**	⇑Pn	**Pn**	**19 32 06.8**	**+1.4**
	6.6nm,1.4s						
TKM2				⇓Lg	Lg	19 33 59.9	
	12nm,1.1s						
BTLS	**Baital**	**7.68**	**37**	***e*P**	**Pb**	**19 32 34.9**	**+2.0**
	0.8nm,0.2s						
BTLS				*e*S	**Sb**	**19 34 10.6**	**+6.3**
	7.2nm,0.7s						
BTLS	**Baital**	**7.68**	**37**	Pg	**Pb**	**19 32 34.9**	**+2.0**
	0.8nm,0.2s						
BTLS				Lg	Lg	19 34 10.6	
	7.2nm,0.7s						
AB31	**Akbulak array**	**11.52**	**334**	⇑Pn	**Pn**	**19 33 04.9**	**+0.8**
	0.4nm,0.3s,baz=343,slow=16,SNR=20						
AB31				⇑Sn	**Sn**	**19 35 09.7**	**-3.0**
	0.4nm,0.4s,baz=159,slow=22,SNR=2.6						

IDC 27 19:30:30.7±2.3, 27°.62N×85°.90E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/32, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=73.2km s-min=30.9km az=66.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.35**	**353**	P	P	19 34 58.2	+0.5
	0.1nm,0.3s,baz=169,slow=12,SNR=5.6						
SONM	**Songino Array**	**25.74**	**33**	P	P	19 36 03.5	+0.4
	0.6nm,0.8s,baz=224,slow=8.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.32**	**359**	P	P	19 36 06.6	-1.3
	0.5nm,0.3s,baz=198,slow=9.1,SNR=1.7						
ARCES	**ARCESS Array B**	**54.13**	**338**	P	P	19 39 57.7	+0.5
	3.6nm,1.1s,baz=122,slow=8.6,SNR=1.6						
WRA	**Warramunga Arr**	**66.58**	**130**	P	P	19 41 23.0	-0.1
	0.5nm,1.1s,baz=318,slow=6.6,SNR=1.5						

IDC 27 19:46:35.5±25.0, 28°.52N×86°.42E, h0km, mb3.3/2, mb1 3.2/3, mb1mx3.1/36, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=425.0km s-min=82.5km az=25.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.53**	**351**	P	P	19 50 53.2	-0.4
	0.1nm,0.3s,baz=178,slow=11,SNR=4.2						
SONM	**Songino Array**	**24.74**	**33**	P	P	19 51 58.7	-0.1
	0.3nm,0.6s,baz=210,slow=8.3,SNR=3.7						
ZALV	**Zalesovo Beam**	**25.44**	**358**	P	P	19 52 05.0	+0.2
	0.2nm,0.3s,baz=168,slow=7.4,SNR=2.2						

*IDC **27** 20:01:30.9±2.2, 43°.26N×105°.20W, h0km, mb2.4/1, mb1 3.6/3, mb1mx3.3/44, mbtmp3.3/3, ML3.6/2, Error ellipse: s-maj=43.0km s-min=8.9km az=155.0*
*NEIC **27** 20:01:34.4±1.2, 43°.67N±0°.05×105°.27W±0°.07, h0km±2km, ML3.2/56, Error ellipse: s-maj=9.1km s-min=7.0km az=126.0*
ISC 27 20:01:33.9±1.1, 43°.70N±0°.05×105°.25W±0°.06, h0km, n47, σ0§72/47, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.97**	**64**		**Pb**	**20 01 53.0**	**-0.8**
K22A	**Casper**	**1.40**	**222**		**Pn**	**20 01 58.6**	**-2.3**
K22A				IAML		20 02 20.5	
	comp=E,669nm,0.3s						
PHWY	**Pilot Hill**	**2.40**	**184**		**Pn**	**20 02 14.9**	**+0.2**
RWWY	**Rawlins**	**2.48**	**216**		**Pn**	**20 02 15.4**	**-0.3**
RWWY				IAML		20 02 49.7	
	comp=E,175nm,0.6s						
RWWY				IAML		20 02 50.6	
	comp=E,163nm,0.9s						
LAO	**LASA Array**	**3.07**	**347**		**Pn**	**20 02 23.9**	**+0.2**
LAO				IAML		20 03 10.7	
	comp=E,108nm,0.3s						
RLMT	**Red Lodge**	**3.21**	**298**		**Pn**	**20 02 25.8**	**0.0**
RLMT				IAML		20 03 17.7	
	comp=E,49nm,0.3s						
RLMT				IAML		20 03 27.9	
	comp=E,46nm,0.3s						
BW06	**Boulder Array**	**3.28**	**255**		**Pn**	**20 02 26.5**	**-0.3**
BW06				IAML		20 03 15.2	
	comp=E,76nm,0.3s						
BW06				IAML		20 03 15.8	
	comp=E,39nm,0.3s						
PD31	**Pinedale Array**	**3.28**	**255**		**Pn**	**20 02 26.5**	**-0.3**
PDAR	**Pinedale Array**	**3.28**	**255**	Pn	**Pn**	**20 02 26.9**	**+0.2**
	comp=E,4.9nm,0.3s,baz=83,slow=18,SNR=68						
PDAR				Lg	Lg	20 03 10.7	
	comp=E,24nm,0.3s,baz=85,slow=34,SNR=19						
PDAR	**Pinedale Array**	**3.28**	**255**	Pn	**Pn**	**20 02 26.6**	**-0.1**
OGNE	**Ogallala**	**3.64**	**138**	Pn	**Pn**	**20 02 31.9**	**+0.4**
YMP	**Mirror Lake PI**	**3.68**	**288**		**Pn**	**20 02 31.8**	**-0.4**
YMP				IAML		20 03 28.9	
	comp=N,64nm,0.3s						
GCMT	**Greycliff**	**3.78**	**305**		**Pn**	**20 02 33.4**	**-0.1**
LOHW	**Long Hollow**	**3.89**	**271**		**Pn**	**20 02 35.7**	**+0.6**
LOHW				IAML		20 03 38.1	
	comp=N,18nm,0.4s						
H17A	**Grant Village**	**3.90**	**282**		**Pn**	**20 02 35.6**	**+0.3**
H17A				IAML		20 03 38.2	
	comp=N,33nm,0.3s						
H17A				IAML		20 03 38.8	
	comp=E,23nm,0.4s						
ISCO	**Idaho Springs**	**3.91**	**184**	Pn	**Pn**	**20 02 35.8**	**+0.4**
FLWY	**Flagg Ranch**	**3.96**	**277**		**Pn**	**20 02 36.1**	**+0.1**
FLWY				IAML		20 03 42.7	
	comp=E,47nm,1.4s						
FLWY				IAML		20 03 47.2	
	comp=E,33nm,1.1s						
MOOW	**Moose Ponds**	**3.98**	**273**		**Pn**	**20 02 37.0**	**+0.6**
YPP	**Pitchstone Pla**	**4.05**	**280**		**Pn**	**20 02 37.6**	**+0.2**
REDW	**Red Top Meadow**	**4.09**	**267**		**Pn**	**20 02 37.9**	**+0.1**
REDW				IAML		20 03 44.4	
	comp=E,31nm,0.7s						
REDW				IAML		20 03 45.3	
	comp=E,32nm,0.7s						
YHH	**Holmes Hill**	**4.17**	**287**		**Pn**	**20 02 38.9**	**-0.1**
O20A	**White River Ci**	**4.20**	**213**		**Pn**	**20 02 39.7**	**+0.3**
O20A				IAML		20 03 49.3	
	comp=E,28nm,0.3s						
O20A				IAML		20 04 01.4	
	comp=N,29nm,1.6s						
E28A	**Huff**	**4.32**	**47**		**Pn**	**20 02 42.0**	**+1.2**
AHID	**Auburn Hatcher**	**4.38**	**260**		**Pn**	**20 02 41.8**	**0.0**
YHB	**Horse Butte**	**4.40**	**286**		**Pn**	**20 02 42.0**	**-0.1**
YHL	**Hebgen Lake**	**4.41**	**287**		**Pn**	**20 02 41.9**	**-0.5**
YHL				IAML		20 04 04.0	
	comp=E,21nm,0.7s						
YHL				IAML		20 04 09.7	
	comp=N,19nm,1.5s						
RDMU	**Red Mountain**	**4.48**	**227**		**Pn**	**20 02 43.5**	**+0.3**
RDMU				IAML		20 03 57.4	
	comp=N,16nm,0.7s						
RDMU				IAML		20 03 58.8	
	comp=E,20nm,1.0s						
DGMT	**Dagmar**	**4.83**	**8**		**Pn**	**20 02 49.1**	**+1.3**
BOZ	**Bozeman (W)**	**4.93**	**295**		**Pn**	**20 02 48.8**	**-0.6**
BOZ				IAML		20 04 11.8	
	comp=E,10nm,0.7s						
BOZ				IAML		20 04 16.1	
	comp=E,9.1nm,0.7s						
HWUT	**Hardware Ranch**	**5.11**	**248**		**Pn**	**20 02 51.7**	**0.0**
HWUT				IAML		20 04 35.5	
	comp=E,18nm,1.0s						
HWUT				IAML		20 04 44.5	
	comp=E,14nm,1.2s						
TCUT	**Toone Canyon**	**5.24**	**243**		**Pn**	**20 02 53.6**	**0.0**
EGMT	**Eagleton**	**5.35**	**326**		**Pn**	**20 02 55.0**	**0.0**
HRY	**Holter Researc**	**5.54**	**305**		**Pn**	**20 02 57.7**	**+0.1**
PV22	**Blue Mesa, Par**	**5.81**	**209**	Pn	**Pn**	**20 03 02.2**	**+0.8**
PV07	**Paradox Valley**	**5.85**	**207**		**Pn**	**20 03 02.9**	**+0.9**
PV04	**Paradox Valley**	**5.98**	**209**		**Pn**	**20 03 04.4**	**+0.7**
PV14	**Lion Creek, Pa**	**6.04**	**209**		**Pn**	**20 03 04.6**	**0.0**
PV20	**West Nyswonger**	**6.05**	**209**		**Pn**	**20 03 04.8**	**+0.1**
PV11	**David Mesa, Pa**	**6.05**	**208**		**Pn**	**20 03 05.1**	**+0.4**
PV16	**Nyswonger Mesa**	**6.05**	**208**		**Pn**	**20 03 05.4**	**+0.5**
SRU	**San Rafael Swe**	**6.06**	**223**		**Pn**	**20 03 04.1**	**-0.8**
PV18	**Skein Mesa, Pa**	**6.11**	**208**		**Pn**	**20 03 05.6**	**0.0**
PV13	**Radium Mtn., P**	**6.16**	**207**		**Pn**	**20 03 06.6**	**+0.3**
PV05	**Paradox Valley**	**6.33**	**209**		**Pn**	**20 03 07.2**	**-1.4**
Q16A	**Castle Valley**	**6.53**	**225**	Pn	**Pn**	**20 03 11.6**	**+0.2**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**20 03 45.5**	**-1.7**
	comp=E,1.8nm,0.3s,baz=226,slow=13,SNR=14						
ULM				Lg	Lg	20 06 23.4	
	comp=E,0.4nm,0.3s,baz=140,slow=18,SNR=3.6						
YKA	**Yellowknife Ar**	**19.61**	**347**	P	**Pn**	**20 06 06.5**	**+1.8**
	comp=E,0.1nm,0.6s,baz=167,slow=8.7,SNR=8.4						

*IDC **27** 20:20:36.8±6.3, 35°.57S×71°.17W, h94km±58km, mb3.6/4, mb1 3.9/5, mb1mx3.5/23, mbtmp3.9/5, ML4.4/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/22, Error ellipse: s-maj=100.9km s-min=25.8km az=55.0*
*NEIC **27** 20:20:36.8±1.4, 35°.61S±0°.06×71°.5W±0°.2, h101km±8km, Error ellipse: s-maj=19.6km s-min=8.0km az=93.0*
*GUC **27** 20:20:38.4±0.7, 35°.47S×71°.40W, h109km±4km, ML4.0*
ISC 27 20:20:36.9±0.9, 35°.59S±0°.04×71°.49W±0°.09, h96km±8km, n49, σ1§03/62, mb4.0/6, 10C-1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BO02	**Sierra Bellavi**	**0.98**	**36**	⇑*i*P	**Pn**	**20 20 57.6**	**+0.6**
BO02				*i* S	**Sn**	**20 21 12.8**	**+0.9**
BO02				IAML		20 21 14.9	
	comp=N,13µm,0.2s						
BO02	**Sierra Bellavi**	**0.98**	**36**	Pn	**Pn**	**20 20 57.5**	**+0.6**
BI02	**San Fabin de**	**1.09**	**171**	⇓*i*P	**Pn**	**20 20 58.4**	**+0.4**
BI02				*i* S	**Sn**	**20 21 14.4**	**+0.3**
BI02				IAML		20 21 16.1	
	comp=N,1µm,0.3s						
BI02	**San Fabin de**	**1.09**	**171**		**Pn**	**20 20 58.5**	**+0.4**
BO03	**Pichilemu**	**1.15**	**340**	⇑*i*P	**Pn**	**20 21 00.1**	**+1.3**
BO03				*i* S	**Sn**	**20 21 16.8**	**+1.5**
BO03				IAML		20 21 18.4	
	comp=N,2µm,0.3s						
BO01	**Tunca**	**1.24**	**16**	⇑*i*P	**Pn**	**20 21 00.3**	**+0.5**
BO01				*i* S	**Sn**	**20 21 16.9**	**0.0**
BO01				IAML		20 21 18.6	
	comp=E,3µm,0.2s						
BO01	**Tunca**	**1.24**	**16**	Pn	**Pn**	**20 21 00.2**	**+0.5**
MT01	**Popeta**	**1.73**	**7**	⇑*i*P	**Pn**	**20 21 06.3**	**+0.5**
MT01				*i* S	**Sn**	**20 21 27.8**	**0.0**
MT01				IAML		20 21 30.4	
	comp=E,2µm,0.1s						
MT01	**Popeta**	**1.73**	**7**	Pn	**Pn**	**20 21 06.3**	**+0.5**
MT09	**Talagante**	**1.85**	**13**	⇑*i*P	**Pn**	**20 21 07.9**	**+0.4**
MT09				*i* S	**Sn**	**20 21 30.1**	**-0.8**
MT09				IAML		20 21 32.5	
	comp=N,3µm,0.1s						
MT09	**Talagante**	**1.85**	**13**	Pn	**Pn**	**20 21 07.8**	**+0.4**
VA05	**Santo Domingo**	**1.93**	**357**	⇑*i*P	**Pn**	**20 21 08.7**	**+0.3**
VA05				*i* S	**Sn**	**20 21 31.5**	**-0.8**
VA05				IAML		20 21 36.2	
	comp=E,2µm,0.4s						
VA05	**Santo Domingo**	**1.93**	**357**	Pn	**Pn**	**20 21 08.7**	**+0.3**
LMEL	**Las Melosas**	**2.03**	**32**	⇑*i*P	**Pn**	**20 21 11.0**	**+1.1**
LMEL				*i* S	**Sn**	**20 21 36.5**	**+1.5**
LMEL				IAML		20 21 38.2	
	comp=E,2µm,0.3s						
MT03	**Universidad Ad**	**2.24**	**21**	***e*P**	**Pn**	**20 21 12.7**	**+0.2**
MT03				*i* S	**Sn**	**20 21 40.2**	**+0.5**
MT03				IAML		20 21 44.6	
	comp=N,2µm,0.4s						
MT03	**Universidad Ad**	**2.24**	**21**	Pn	**Pn**	**20 21 12.7**	**+0.2**
MT05	**Renca**	**2.27**	**16**	⇑*i*P	**Pn**	**20 21 13.5**	**+0.5**
MT05				*i* S	**Sn**	**20 21 40.1**	**-0.4**
MT05				IAML		20 21 44.5	
	comp=E,2µm,0.2s						
MT05	**Renca**	**2.27**	**16**	Pn	**Pn**	**20 21 13.4**	**+0.5**
MT02	**Curacav**	**2.34**	**7**	⇑*i*P	**Pn**	**20 21 14.2**	**+0.5**
MT02				*i* S	**Sn**	**20 21 40.9**	**-1.1**
MT02				IAML		20 21 46.3	
	comp=N,572nm,0.5s						
MT02	**Curacav**	**2.34**	**7**		**Pn**	**20 21 14.3**	**+0.5**
PEL	**Peldehue**	**2.52**	**15**	***e*P**	**Pn**	**20 21 16.4**	**+0.2**
PEL				*i* S	**Sn**	**20 21 45.2**	**-1.2**
PEL				IAML		20 21 48.9	
	comp=N,993nm,0.2s						
PEL	**Peldehue**	**2.52**	**15**		**Pn**	**20 21 16.7**	**+0.5**
VA01	**Torpederas**	**2.56**	**357**	***e*P**	**Pn**	**20 21 16.9**	**+0.3**
VA01	**Torpederas**	**2.56**	**357**	Pn	**Pn**	**20 21 16.9**	**+0.3**
ROCH	**El Roble**	**2.64**	**9**	***e*P**	**Pn**	**20 21 18.3**	**+0.4**
ROCH				*i* S	**Sn**	**20 21 48.1**	**-1.2**
ROCH				IAML		20 21 55.0	
	comp=N,813nm,0.4s						
VA03	**San Esteban**	**2.92**	**16**	⇑*i*P	**Pn**	**20 21 21.6**	**+0.1**
VA03				*i* S	**Sn**	**20 21 54.8**	**-1.2**
VA03				IAML		20 22 01.4	
	comp=E,1µm,0.2s						
VA03	**San Esteban**	**2.92**	**16**	Pn	**Pn**	**20 21 21.6**	**+0.1**
CO02	**Combarbal**	**4.39**	**5**	Pn	**Pn**	**20 21 40.8**	**-0.6**
ZON	**Zonda**	**4.66**	**31**	Pn	**Pn**	**20 21 44.3**	**-0.7**
CO03	**El Pedregal**	**4.78**	**8**		**Pn**	**20 21 46.5**	**-0.2**
PLCA	**Paso Flores**	**5.19**	**172**	P	**Pn**	**20 21 51.8**	**-0.3**
	comp=E,3.4nm,0.3s,baz=336,slow=11,SNR=115						
PLCA				LR	LR	20 24 03.8	
	comp=E,63nm,21.0s,baz=158,slow=40						
PLCA	**Paso Flores**	**5.19**	**172**		**Pn**	**20 21 52.5**	**+0.3**
LL04	**Puerto Octay**	**5.37**	**187**	Pn	**Pn**	**20 21 53.1**	**-1.4**
GO04	**Tololo Observa**	**5.43**	**6**		**Pn**	**20 21 54.6**	**-1.0**
LL01	**San Ignacio de**	**6.82**	**186**	Pn	**Pn**	**20 22 12.6**	**-1.6**
AC04	**Llanos de Chal**	**7.37**	**3**	Pn	**Pn**	**20 22 20.9**	**-0.9**
LL07	**Hotel Espejo d**	**7.40**	**191**	Pn	**Pn**	**20 22 18.6**	**-3.5**
GO07	**Milladeo Hill,**	**7.71**	**192**	Pn	**Pn**	**20 22 22.8**	**-3.4**
AC02	**Maricunga**	**8.95**	**14**	Pn	**Pn**	**20 22 42.0**	**-1.8**
VNA3	**Neumayer Olymp**	**47.72**	**157**	P	**P**	**20 29 03.7**	**+0.2**
VNA2	**Neumayer--Watz**	**48.38**	**157**	P	**P**	**20 29 08.6**	**+0.1**
	baz=285,slow=8.1						
SNAA	**Sanae**	**49.95**	**157**	P	**P**	**20 29 20.6**	**0.0**
SNAA	**Sanae**	**49.95**	**157**	P	**P**	**20 29 20.2**	**-0.4**
	comp=E,0.6nm,0.3s,baz=287,slow=5.2,SNR=16						
TXAR	**Lajitas Array**	**71.33**	**331**	P	**P**	**20 31 46.8**	**+0.6**
	comp=E,0.8nm,0.7s,baz=152,slow=8.4,SNR=5.3						
TX31	**Lajitas Ar. Si**	**71.34**	**331**	P	**P**	**20 31 47.7**	**+1.5**
TX31				IAmb	IAmb	20 32 05.0	
	comp=Z,10nm,1.4s						
BOSA	**Boshof**	**78.94**	**117**	P	**P**	**20 32 28.9**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=224,slow=5.7,SNR=5.6						
BOSA	**Boshof**	**78.94**	**117**	IAmb	IAmb	20 32 47.2	
	comp=Z,14nm,1.5s						
X16A	**Lo Mia Camp, P**	**79.01**	**327**	P	**P**	**20 32 30.1**	**-0.2**
X16A				IAmb	IAmb	20 32 43.7	
	comp=Z,2.1nm,1.1s						
NVAR	**Mina Array Bea**	**85.44**	**325**	P	**P**	**20 33 05.5**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=168,slow=5.4,SNR=3.5						

*IDC **27** 20:21:54.6±0.7, 31°.84N×83°.84E, h0km, mb4.0/18, mb1 4.0/21, mb1mx3.8/50, mbtmp3.9/21, ML3.1/3, MS3.1/5, Ms1 3.2/5, ms1mx2.8/47, Error ellipse: s-maj=21.4km s-min=13.4km az=43.0*
*BJI **27** 20:21:55.5±0.0, 31°.74N×83°.61E, h15km, mB4.5/17, mb4.1/27, Ms3.7/12, Ms7 3.6/8*
*NEIC **27** 20:21:55.2±1.6, 31°.8N±0°.1×83°.52E±0°.09, h10km±1km, mb4.2/40, Error ellipse: s-maj=19.3km s-min=10.0km az=210.0*
*NDI **27** 20:21:58.3±4.1, 31°.64N×83°.88E, h10km±284km, ML3.3, mb4.2(NEIC)*
ISC 27 20:21:56.6±0.4, 31°.90N±0°.06×83°.73E±0°.05, h10km, n111, σ1§57/109, mb4.3/35, MS3.0/5, 2C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**5.12**	**254**	***e*P**	**Pn**	**20 23 15.7**	**+2.3**
DDI				IAML		20 27 24.9	
	comp=N,81nm,0.3s						
SMLA	**Simla**	**5.66**	**264**	⇑*e*P	**Pn**	**20 23 22.0**	**+1.2**
SMLA				*e*S	**Sn**	**20 24 28.4**	**+2.5**
SMLA				IAML		20 24 30.7	
	comp=E,25nm,0.8s						
DHRM	**DHARAMSHALA**	**6.32**	**275**	***e*P**	**Pn**	**20 23 33.6**	**+3.5**
DHRM				IAML		20 24 50.8	
	comp=E,30nm,0.7s						
LSA	**Lhasa**	**6.75**	**107**	Pn	**Pn**	**20 23 37.6**	**+1.5**
KSH	**Kashi**	**9.87**	**322**	P	**Pn**	**20 24 22.0**	**+3.3**
KSH				sP		20 24 26.0	
KSH				pmax	pmax		
	comp=E,3.0nm,0.8s						
KSH				pmax	pmax		
	comp=E,100nm,5.7s						
BHPL	**Bhopal**	**10.28**	**215**	***e*P**	**Pn**	**20 24 26.0**	**+1.7**
BHPL				*e*S	Sn	20 26 07.8	-12
WMQ	**Urumqi**	**12.30**	**14**	***e*P**	**Pn**	**20 24 54.5**	**+2.6**
KBL	**Kabul**	**12.58**	**286**	Pn	**Pn**	**20 24 52.3**	**-3.6**
GAR	**Garm**	**13.02**	**307**	Pn	**Pn**	**20 25 00.9**	**-1.0**
MK31	**Makanchi Array**	**14.91**	**356**		**P**	**20 25 32.4**	**-0.9**
MKAR	**Makanchi Array**	**14.91**	**356**	Pn	**Pn**	**20 25 27.9**	**+0.4**
	comp=E,0.0nm,0.3s,baz=183,slow=16,SNR=3.6						
MKAR	**Makanchi Array**	**14.91**	**356**	Pn	**Pn**	**20 25 27.3**	**-0.2**
MAKZ	**Makanchi**	**14.95**	**355**	Pn	**Pn**	**20 25 28.7**	**+0.7**
MAKZ				IAmb	IAmb	20 25 39.4	
	comp=Z,5.3nm,1.3s						
GTA	**Gaotai**	**15.05**	**56**	***e*P**	**P**	**20 25 36.5**	**+1.6**
GTA				pP	sP	20 25 40.8	-0.3
GTA				sP	pP	20 25 43.8	+4.7
GTA				pmax	pmax		
	comp=Z,2.0nm,

CMMT	**Chiang Mai**	**18.91**	**130**	P		**Pn**	**20**	**26 19.3 +1.1**
	comp=Z,3.0nm,0.8s							
CM32	**Chiang Mai Arr**	**18.96**	**130**	P		**Pn**	**20**	**26 20.0 +1.2**
CM34	**Chiang Mai Arr**	**19.02**	**129**	P		**P**	**20**	**26 18.0 -0.8**
KURBB	**Kurchatov Arra**	**19.10**	**350**	P		**P**	**20**	**26 19.3 -0.1**
	comp=Z,0.0nm,0.3s,baz=168,slow=9.2,SNR=8.4							
CM35	**Chiang Mai Arr**	**19.15**	**130**	P		**P**	**20**	**26 19.0 -1.1**
CM15	**Chiang Mai Arr**	**19.16**	**131**	P		**Pn**	**20**	**26 21.0 -0.2**
	comp=Z,4.6nm,1.0s							
CM31	**Chiang Mai Arr**	**19.17**	**131**	P		**Pn**	**20**	**26 25.1 +3.8**
	comp=Z,142nm,0.9s							
CM31	**Chiang Mai Arr**	**19.17**	**131**			**P**	**20**	**26 19.4 -1.0**
CM31					IAmb	IAmb	20	26 27.6
	comp=Z,8.3nm,1.1s							
CMAR	**Chiang Mai Arr**	**19.17**	**131**	P		**P**	**20**	**26 19.2 -1.1**
	comp=Z,0.1nm,0.3s,baz=315,slow=9.9,SNR=19							
CMAR					LR	LR	20	34 53.6
	comp=Z,53nm,18.7s,baz=2.0,slow=41							
CMAR	**Chiang Mai Arr**	**19.17**	**131**	P		**P**	**20**	**26 18.7 -1.7**
CM13	**Chiang Mai Arr**	**19.17**	**131**	P		**Pn**	**20**	**26 25.8 +4.5**
	comp=Z,32nmcomp=Z,3.7nm,1.0s							
KURK	**Kurchatov**	**19.18**	**350**	P		**P**	**20**	**26 19.3 -0.9**
CM02	**Chiang Mai Arr**	**19.19**	**131**	P		**Pn**	**20**	**26 21.0 -0.5**
	comp=Z,53nmcomp=Z,7.4nm,1.0s							
CM01	**Chiang Mai Arr**	**19.21**	**131**	P		**Pn**	**20**	**26 21.5 -0.2**
	comp=Z,4.0nm,1.0s							
CM09	**Chiang Mai Arr**	**19.21**	**131**	P		**P**	**20**	**26 21.0 +0.1**
	comp=Z,4.7nm,1.0s							
CM05	**Chiang Mai Arr**	**19.21**	**131**	P		**P**	**20**	**26 21.0 +0.1**
	comp=Z,38nmcomp=Z,4.8nm,0.9s							
CM36	**Chiang Mai Arr**	**19.22**	**130**	P		**Pn**	**20**	**26 22.0 +0.1**
CM04	**Chiang Mai Arr**	**19.23**	**131**	P		**Pn**	**20**	**26 21.6 -0.5**
	comp=Z,46nmcomp=Z,5.3nm,1.0s							
GYA	**Guiyang**	**20.73**	**99**	P		Pn	20	26 41.5 +1.7
UTTA	**Uttaradit**	**20.74**	**129**	P		**P**	**20**	**26 38.3 +0.9**
	comp=Z,10.0nm,1.0s							
SLVN	**Son La**	**20.84**	**115**	P		**P**	**20**	**26 39.0 +0.3**
SLVN					IAmb	IAmb	20	26 40.6
	comp=Z,3.8nm,0.8s							
XAN	**Xi'an**	**21.23**	**77**	P		**P**	**20**	**26 43.0 +0.2**
XAN				pP		pP	20	26 46.3 -0.7
XAN				pmax		pmax		
	comp=Z,12nm,0.9s							
XAN				LR		LR		
	comp=Z,100nm,11.7s							
XAN				LR		LR		
	comp=Z,160nm,12.5s							
XAN				LR		LR		
	comp=Z,170nm,14.6s							
UTHA	**Uthaitani**	**21.67**	**135**	P		**P**	**20**	**26 48.0 +0.5**
	comp=Z,166nmcomp=Z,18nm,0.8s							
GEYT	**Alibeck**	**21.82**	**293**	P		**P**	**20**	**26 49.8 +0.7**
	comp=Z,1.9nm,0.8s,baz=115,slow=10.0,SNR=4.2							
GEYT				LR		LR	20	36 26.9
	comp=Z,49nm,20.5s,baz=35,slow=40							
GEYT	**Alibeck**	**21.82**	**293**		IAmb	IAmb	20	26 55.7
	comp=Z,3.9nm,1.2s							
ZAA0	**Zalesovo Array**	**22.05**	**2**	P		**P**	**20**	**26 50.2 -1.1**
ZALV	**Zalesovo Beam**	**22.05**	**2**	P		**P**	**20**	**26 50.6 -0.7**
	comp=Z,1.9nm,0.7s,baz=173,slow=13,SNR=9.7							
ZALV	**Zalesovo Beam**	**22.05**	**2**	P		**P**	**20**	**26 51.3 -0.1**
ENH	**Enshi**	**22.10**	**87**	P		**P**	**20**	**26 50.1 -2.1**
ENH					IAmb	IAmb	20	27 10.9
	comp=Z,7.3nm,1.0s							
NONG	**Nongkai**	**22.30**	**124**	P		**P**	**20**	**26 55.0 +0.7**
	comp=Z,14nm,0.9s							
CHAI	**Chaiyaphum**	**23.01**	**130**	P		**P**	**20**	**27 03.2 +1.3**
BVAR	**Borovoye Array**	**23.22**	**339**	P		**P**	**20**	**27 02.6 -1.1**
	comp=Z,0.3nm,0.6s,baz=113,slow=11,SNR=1.9							
BRVK	**Borovoye**	**23.28**	**339**	P		**P**	**20**	**27 02.9 -1.4**
SONM	**Songino Array**	**23.45**	**41**	P		**P**	**20**	**27 04.5 -1.7**
	comp=Z,1.3nm,0.7s,baz=226,slow=10,SNR=9.6							
SONM	**Songino Array**	**23.45**	**41**	P		**P**	**20**	**27 07.0 +0.8**
ULN	**Ulaanbaatar**	**23.83**	**41**	P		**P**	**20**	**27 10.6 +0.6**
ULN					IAmb	IAmb	20	27 12.4
	comp=Z,4.1nm,1.0s							
HHC	**Hu-ho-hao-te**	**24.04**	**60**	*e*P		**P**	**20**	**27 12.0 0.0**
HHC				pmax		pmax		
	comp=Z,11nm,0.8s							
HHC				pmax		pmax		
	comp=Z,77nm,7.6s							
ABKAR	**Akbulak array**	**24.88**	**321**	P		**P**	**20**	**27 18.4 -1.0**
ABKAR	**Akbulak array**	**24.88**	**321**	P		**P**	**20**	**27 18.8 -0.6**
ABKAR					IAmb	IAmb	20	27 27.0
	comp=Z,2.5nm,1.0s							
AKTO	**Aktyubinsk**	**26.57**	**322**	P		**P**	**20**	**27 36.5 +1.7**
	comp=Z,1.1nm,0.5s,baz=96,slow=6.0,SNR=4.0							
AKTO					LR	LR	20	39 33.8
	comp=Z,43nm,18.4s,baz=137,slow=40							
ARU	**Arti**	**30.13**	**332**	P		**P**	**20**	**28 07.3 +1.0**
	comp=Z,0.5nm,0.5s,baz=210,slow=3.0,SNR=5.0							
ARU	**Arti**	**30.13**	**332**		IAmb	IAmb	20	28 13.1
	comp=Z,4.3nm,1.2s							
PSI	**Prapat**	**32.28**	**151**	LR		LR	20	42 57.0
	comp=Z,31nm,20.0s,baz=91,slow=39							
KSAR	**Wonju Array Be**	**36.48**	**69**	P		**P**	**20**	**29 02.0 +0.1**
KSRS	**Korea Array**	**36.51**	**69**	P		**P**	**20**	**29 01.3 -0.8**
	comp=Z,1.0nm,0.6s,baz=272,slow=9.7,SNR=8.0							
NRIK	**Noril'sk**	**37.55**	**2**	P		**P**	**20**	**29 11.4 +0.8**
	comp=Z,1.8nm,0.4s,baz=156,slow=8.4,SNR=4.4							
NRIK	**Noril'sk**	**37.55**	**2**	P		**P**	**20**	**29 11.4 +0.8**
NRIK					IAmb	IAmb	20	29 12.2
	comp=Z,4.8nm,1.0s							
USRK	**Ussuriysk Ar.**	**39.40**	**58**	P		**P**	**20**	**29 27.2 +0.7**
DGAR	**Diego Garcia**	**40.55**	**197**	P		**P**	**20**	**29 34.3 -1.9**
AKASG	**Malin Array Be**	**43.96**	**312**	P		**P**	**20**	**30 05.1 +1.4**
	comp=Z,3.5nm,0.6s,baz=79,slow=7.6,SNR=20							
AKASG	**Malin Array Be**	**43.96**	**312**	P		**P**	**20**	**30 01.3 -2.4**
AKBB	**Malin Array Si**	**43.96**	**312**	P		**P**	**20**	**30 03.3 -0.5**
AKBB					IAmb	IAmb	20	30 06.0
	comp=Z,4.3nm,0.7s							
ELL	**Elmali**	**44.23**	**292**	P		**P**	**20**	**30 07.9 +1.6**
NACGM	**Naroch**	**45.80**	**318**	*i* P		**P**	**20**	**30 20.4 +2.1**
NACGM				*i* P		**P**	**20**	**30 20.4 +2.1**
NACGM				*i* P		**P**	**20**	**30 20.4 +2.1**
NACGM				*i* PP		PP	20	32 17.4 +12
NACGM				*i* S		S	20	37 19.1 +17
NACGM				*i* PS		PKiKP	20	38 22.6 -30
NACGM				*i* SS		SS	20	40 40.9 +15
NACGM				*i* SSS		SSS	20	42 06.7
NACGM				*i* LR		LR	20	50 59.2
MLR	**Muntele Rosu**	**46.16**	**304**	P		**P**	**20**	**30 21.4 -0.1**
MLR					IAmb	IAmb	20	30 25.1
	comp=Z,5.6nm,0.8s							
TOLI2	**Tolitoli**	**46.46**	**124**	P		**P**	**20**	**30 24.1 0.0**
TOLI2					IAmb	IAmb	20	30 25.5
	comp=Z,8.0nm,0.9s							
BURAR	**Bucovina Array**	**46.55**	**307**	P		**P**	**20**	**30 25.6 +1.1**
BURAR					IAmb	IAmb	20	30 27.1
	comp=Z,1.2nm,0.8s							
BUR08	**Bucovina Ar. S**	**46.55**	**307**	P		**P**	**20**	**30 25.6 +1.1**
BUR08					IAmb	IAmb	20	30 27.3
	comp=Z,3.7nm,1.4s							
KARP	**Karpathos**	**46.65**	**291**	P		**P**	**20**	**30 25.1 -0.3**
FINES	**FINESS Array B**	**47.17**	**326**	P		**P**	**20**	**30 28.6 -0.4**
	comp=Z,4.0nm,0.8s,baz=111,slow=11,SNR=12							
PABE	**Paberze**	**47.46**	**318**	*e*P		**P**	**20**	**30 31.9 +0.5**
PABE	**Paberze**	**47.46**	**318**	P		**P**	**20**	**30 29.5 -1.8**
MTSE	**Matsula**	**47.85**	**322**	*e*P		**P**	**20**	**30 33.5 -0.8**
ARCES	**ARCESS Array B**	**49.47**	**337**	P		**P**	**20**	**30 48.7 +2.0**
	comp=Z,2.9nm,0.9s,baz=77,slow=5.5,SNR=4.0							
JCJ	**Chichijima**	**50.58**	**80**	P		**P**	**20**	**30 56.4 +0.7**
VYHS	**Vyhne**	**50.75**	**309**	*e*P		**P**	**20**	**30 58.2 +1.5**
UPP	**Uppsala**	**51.11**	**324**	*e*P		**P**	**20**	**30 59.7 +0.5**
VRAC	**Vranov**	**52.13**	**310**	LR		LR	20	56 16.0
	comp=Z,28nm,21.6s,baz=112,slow=40							
NC405	**NORSAR Array S**	**54.04**	**325**	P		**P**	**20**	**31 20.2 -0.7**
GEC2	**GERESS Array S**	**54.08**	**310**	P		**P**	**20**	**31 19.7 -1.8**
GEC2					IAmb	IAmb	20	31 24.4
	comp=Z,2.6nm,0.9s							
GERES	**GERESS Array B**	**54.08**	**310**	P		**P**	**20**	**31 20.8 -0.7**
	comp=Z,1.3nm,0.8s,baz=75,slow=7.1,SNR=6.3							
GERES	**GERESS Array B**	**54.08**	**310**	P		**P**	**20**	**31 19.7 -1.8**
NC303	**NORSAR Array S**	**54.20**	**325**	P		**P**	**20**	**31 23.1 +1.0**
NB201	**NORSAR Array S**	**54.25**	**325**	P		**P**	**20**	**31 19.4 -3.0**
NOA	**NORSAR Array B**	**54.28**	**325**	P		**P**	**20**	**31 21.5 -1.3**
	comp=Z,5.2nm,0.7s,baz=87,slow=7.1,SNR=22							
NAO01	**NORSAR Array S**	**54.45**	**325**	P		**P**	**20**	**31 22.2 -1.7**
NC204	**NORSAR Array S**	**54.49**	**325**	P		**P**	**20**	**31 23.5 -0.8**
BFO	**Black Forest**	**57.68**	**310**	P		**P**	**20**	**31 45.1 -2.1**
BFO					IAmb	IAmb	20	31 59.5
	comp=Z,6.6nm,1.1s							
SUMG	**Summit**	**68.59**	**344**	P		**P**	**20**	**32 58.6 -1.1**
SUMG					IAmb	IAmb	20	33 03.9
	comp=Z,5.8nm,0.9s							
WRA	**Warramunga Arr**	**70.76**	**130**	P		**P**	**20**	**33 12.2 -1.2**
	comp=Z,2.6nm,0.7s,baz=322,slow=6.1,SNR=16							
WRA	**Warramunga Arr**	**70.76**	**130**	P		**P**	**20**	**33 12.5 -0.8**
WB2	**Warramunga Arr**	**70.77**	**130**	P		**P**	**20**	**33 12.0 -1.4**
WB2					IAmb	IAmb	20	33 13.5
	comp=Z,4.2nm,0.9s							
WR0	**Warramunga Arr**	**70.90**	**130**	P		**P**	**20**	**33 13.1 -1.1**
WR0					IAmb	IAmb	20	33 32.2
	comp=Z,5.4nm,1.2s							
AS31	**Alice Springs**	**73.17**	**133**	P		**P**	**20**	**33 26.1 -1.6**
ASAR	**Alice Springs**	**73.17**	**133**	P		**P**	**20**	**33 26.6 -1.2**
	comp=Z,1.0nm,0.7s,baz=320,slow=5.7,SNR=12							
ASAR	**Alice Springs**	**73.17**	**133**	P		**P**	**20**	**33 26.4 -1.3**
TOA0	**Torodi Ar. Sit**	**76.49**	**277**	P		**P**	**20**	**33 43.6 -3.6**
TOA0					IAmb	IAmb	20	33 48.1
	comp=Z,2.8nm,0.9s							
TORD	**Torodi Ar. Bea**	**76.49**	**277**	P		**P**	**20**	**33 47.5 +0.3**
	comp=Z,2.1nm,0.9s,baz=46,slow=4.4,SNR=11							
TORD	**Torodi Ar. Bea**	**76.49**	**277**	P		**P**	**20**	**33 43.9 -3.4**
TORD					IAmb	IAmb	20	33 48.2
	comp=Z,1.4nm,0.8s							
YKA	**Yellowknife Ar**	**84.78**	**8**	P		**P**	**20**	**34 30.6 -0.2**
	comp=Z,0.4nm,0.8s,baz=348,slow=4.5,SNR=5.1							
DBIC	**Dimbokro**	**85.33**	**275**	P		**P**	**20**	**34 34.1 -0.4**
	comp=Z,1.1nm,0.5s,baz=87,slow=5.8,SNR=3.2							

IDC 27 21:10:49.9±23.0, 27.47N×84.70E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.1/70, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=386.8km s-min=72.0km az=22.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.39**	**355**	P	P	21 15 17.2	-0.1
	0.2nm,0.3s,baz=172,slow=11,SNR=20						
KURBB	**Kurchatov Arra**	**23.60**	**350**	P	P	21 16 03.1	+0.9
	0.1nm,0.5s,baz=179,slow=9.3,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.45**	**0**	P	P	21 16 27.6	-0.8
	0.5nm,0.6s,baz=187,slow=11,SNR=2.0						
SONM	**Songino Array**	**26.46**	**34**	P	P	21 16 28.9	+0.2
	0.8nm,0.7s,baz=235,slow=7.3,SNR=4.6						

IDC 27 21:12:16.4±1.6, 30.09S×177.58W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/35, mbtmp3.9/3, Error ellipse: s-maj=40.2km s-min=20.8km az=91.0
NEIC 27 21:12:26.0±0.5, 29.6S±0.1×177.8W±0.2, h64km±11km, mb4.3/7, Error ellipse: s-maj=25.3km s-min=16.5km az=68.0

ISC 27 21:12:20.5±1.3, 29.9S±0.1×177.2W±0.2, h35km, n18, σ1s53/18, mb4.2/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.91**	**319**	Pn	**Pn**	**21 12 37.0**	**+0.2**
	427nm,0.3s,baz=345,slow=24,SNR=23						
RAO				Sn	**Sn**	**21 12 49.5**	**+0.8**
	1um,0.3s,baz=100,slow=23,SNR=18						
RAO	**Raoul Island**	**0.91**	**319**		**Pn**	**21 12 37.0**	**+0.2**
OUZ	**Omahuta**	**9.36**	**233**	Pn	**Pn**	**21 14 34.9**	**+2.0**
STKA	**Stephens Creek**	**35.23**	**256**	P	**P**	**21 19 10.8**	**-1.0**
	1.3nm,0.4s,baz=103,slow=12,SNR=6.5						
STKA	**Stephens Creek**	**35.23**	**256**	P	**P**	**21 19 10.9**	**-0.9**
STKA					IAmb	IAmb	21 19 15.2
	comp=Z,0.7nm,0.8s						
BBOO	**Buckleboo**	**39.74**	**254**	P	**P**	**21 19 48.4**	**-1.5**
ASAR	**Alice Springs**	**43.80**	**266**	P	**P**	**21 20 21.5**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=104,slow=7.6,SNR=5.7						
WR0	**Warramunga Arr**	**44.57**	**271**	P	**P**	**21 20 28.6**	**-0.8**
WR0					IAmb	IAmb	21 20 48.1
	comp=Z,9.5nm,1.3s						
WB2	**Warramunga Arr**	**44.74**	**271**	P	**P**	**21 20 29.3**	**-1.5**
WB2					IAmb	IAmb	21 20 30.2
	comp=Z,2.9nm,0.8s						
WRA	**Warramunga Arr**	**44.75**	**271**	P	**P**	**21 20 28.5**	**-2.3**
	comp=Z,0.8nm,0.3s,baz=110,slow=8.0,SNR=13						
WRA	**Warramunga Arr**	**44.75**	**271**	P	**P**	**21 20 29.3**	**-1.6**
WB0	**Warramunga Arr**	**44.77**	**272**	P	**P**	**21 20 29.4**	**-1.6**
WB0					IAmb	IAmb	21 20 33.7
	comp=Z,14nm,1.3s						
QSPA	**South Pole Qui**	**60.17**	**180**		P	21 22 32.7	+8.1
QSPA					IAmb	IAmb	21 22 45.0
	comp=Z,4.7nm,1.3s						
KURBB	**Kurchatov Arra**	**121.25**	**314**	PKP	**PKiKP**	**21 31 12.7**	**+3.1**
	comp=Z,0.1nm,0.5s,baz=94,slow=1.9,SNR=4.5						
FINES	**FINESS Array B**	**144.93**	**341**	PKP	**PKPdf**	**21 31 52.8**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=36,slow=4.3,SNR=17						
FINES	**FINESS Array B**	**144.93**	**341**		**PKPab**	**21 31 52.3**	**-0.2**
AKASG	**Malin Array Be**	**151.33**	**324**	PKPbc	**PKiKP**	**21 32 10.2**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=53,slow=3.0,SNR=2.0						
MMAI	**Mount Meron Ar**	**152.06**	**285**	PKPbc	**PKiKP**	**21 32 13.0**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=82,slow=7.9,SNR=5.2						

IDC 27 21:14:56.0±0.9, 27.73N×85.32E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.5/76, mbtmp3.8/11, ML4.0/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/49, Error ellipse: s-maj=38.9km s-min=16.6km az=61.0
NEIC 27 21:14:58.0±1.3, 27.8N±0.0, 85.4E±0.1, h10km±2km, mb3.7/9, Error ellipse: s-maj=17.5km s-min=13.3km az=228.0

ISC 27 21:14:58.8±0.7, 27.8N±0.1×85.4E±0.1, h18km, n30, σ0s74/29, mb4.0/10, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.39**	**68**	Pn	**Pn**	**21 16 19.0**	**+0.2**
SHL	**Shillong**	**6.20**	**109**	Pn	**Pn**	**21 16 29.6**	**0.0**
CMAR	**Chiang Mai Arr**	**15.52**	**124**	Pn	**Pn**	**21 18 34.9**	**-2.0**
	0.3nm,0.3s,baz=338,slow=29,SNR=4.5						
CMAR	**Chiang Mai Arr**	**15.52**	**124**		**Pn**	**21 18 35.2**	**-1.6**
KBL	**Kabul**	**15.54**	**300**	P	**P**	**21 18 41.4**	**-0.1**
KBL					IAmb	IAmb	21 18 49.3
	comp=Z,3.0nm,0.9s						
GAR	**Garm**	**16.83**	**316**	P	**P**	**21 18 56.0**	**+0.3**
GAR					IAmb	IAmb	21 19 01.2
	comp=Z,14nm,1.4s						
MK31	**Makanchi Array**	**19.14**	**353**	P	**Pn**	**21 19 21.4**	**-0.4**
MKAR	**Makanchi Array**	**19.14**	**353**	P	**P**	**21 19 20.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=177,slow=11,SNR=15						
MKAR	**Makanchi Array**	**19.14**	**353**	P	**P**	**21 19 20.8**	**-0.2**
MAKZ	**Makanchi**	**19.18**	**353**	P	**Pn**	**21 19 22.1**	**-0.3**
KKAR	**Karatay Array**	**19.47**	**326**	P	**Pn**	**21 19 25.5**	**-0.4**
KURBB	**Kurchatov Arra**	**23.40**	**349**	P	**P**	**21 20 07.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=168,slow=10,SNR=6.2						
KURK	**Kurchatov**	**23.48**	**349**	P	**P**	**21 20 07.1**	**-0.2**
SONM	**Songino Array**	**25.84**	**34**	P	**P**	**21 20 29.9**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=205,slow=13,SNR=3.5						
SONM	**Songino Array**	**25.84**	**34**	P	**P**	**21 20 29.4**	**+0.1**
SONM					IAmb	IAmb	21 20 33.2
	comp=Z,0.6nm,0.8s						
ZALV	**Zalesovo Beam**	**26.14**	**359**	P	**P**	**21 20 32.9**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=185,slow=9.7,SNR=5.1						
ZALV	**Zalesovo Beam**	**26.14**	**359**	P	**P**	**21 20 31.5**	**-0.3**
BRTR	**Keskin Array B**	**44.11**	**299**	LR	LR	21 45 00.1	
	comp=Z,50nm,20.4s,baz=239,slow=41						
FINES	**FINESS Array B**	**51.41**	**328**	P	**P**	**21 24 01.9**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=115,slow=9.3,SNR=1.9						
ARCES	**ARCESS Array B**	**53.82**	**338**	P	**P**	**21 24 20.6**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=101,slow=7.8,SNR=9.0						
ARCES	**ARCESS Array B**	**53.82**	**338**	P	**P**	**21 24 20.4**	**+0.3**
MBWA	**Marble Bar**	**58.90**	**142**	P	**P**	**21 24 57.6**	**+0.7**
WB0	**Warramunga Arr**	**66.94**	**129**	P	**P**	**21 25 50.8**	**+0.3**
WRA	**Warramunga Arr**	**67.02**	**130**	P	**P**	**21 25 51.3**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=322,slow=6.4,SNR=11						
WB2	**Warramunga Arr**	**67.03**	**130**	P	**P**	**21 25 51.8**	**+0.7**
WB2					IAmb	IAmb	21 25 52.2
	comp=Z,4.9nm,0.9s						
WR0	**Warramunga Arr**	**67.17**	**129**	P	**P**	**21 25 52.7**	**+0.7**
ASAR	**Alice Springs**	**69.31**	**133**	P	**P**	**21 26 06.0**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=315,slow=6.3,SNR=14						
ASAR	**Alice Springs**	**69.31**	**133**	P	**P**	**21 26 06.7**	**+1.3**
TORD	**Torodi Ar. Bea**	**78.50**	**279**	P	**P**	**21 26 59.0**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=69,slow=3.8,SNR=2.3						
STKA	**Stephens Creek**	**79.88**	**134**	P	**P**	**21 27 07.0**	**+0.5**
	comp=Z,2.4nm,1.0s,baz=76,slow=7.4,SNR=2.5						

BJI 27 21:17:53.5±0.0, 31.48N×88.02E, h9km, mB4.4/2, mb4.1/17, Ms3.7/11, Ms7 3.5/12
IDC 27 21:17:54.1±0.7, 31.41N×88.13E, h0km, mb4.0/26, mb1 4.0/29, mb1mx3.9/74, mbtmp3.9/29, ML3.3/3, MS3.1/5, Ms1 3.1/5, ms1mx2.8/45, Error ellipse: s-maj=19.6km s-min=13.8km az=32.0

ISC 27 21:17:56.1±0.5, 31.50N±0.08×88.03E±0.07, h10km, n80, σ1s27/76, mb4.3/38, MS3.2/3, 11C-3D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.24**	**123**	Pg	**Pb**	**21 18 51.0**	**-2.9**
LSA				Sg	**Sb**	**21 19 36.0**	**+2.4**
WMQ	**Urumqi**	**12.30**	**359**	*e*P	**Pn**	**21 20 51.8**	**+0.5**
GTA	**Gaotai**	**12.42**	**47**	*e*P	**Pn**	**21 20 53.3**	**+0.2**
GTA				pP		21 20 57.5	
GTA				sP		21 21 00.3	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				LR	LR		
	comp=N,170nm,14.9s						
GTA				LR	LR		
	comp=E,170nm,14.5s						
GTA				LR	LR		
	comp=Z,81nm,12.7s						
LZH	**Lanzhou**	**13.92**	**67**	*e*P	**Pn**	**21 21 14.3**	**+0.7**
LZH				pP	P	21 21 17.0	-4.8
LZH				sP		21 21 19.5	
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				LR	LR		
	comp=N,340nm,10.8s						
LZH				LR	LR		
	comp=E,150nm,11.9s						
LZH				LR	LR		
	comp=Z,180nm,11.4s						
KMI	**Kunming**	**14.43**	**112**	⇑P	**Pn**	**21 21 20.5**	**-0.1**
KMI				pP	P	21 21 28.8	+1.2
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				LR	LR		
	comp=N,160nm,9.2s						
KMI				LR	LR		
	comp=E,90nm,7.3s						
KMI				LR	LR		
	comp=Z,120nm,9.2s						
AAK	**Ala-Archa**	**15.47**	**320**	Pn	**Pn**	**21 21 34.1**	**-0.5**
	0.1nm,0.3s,baz=54,slow=6.2,SNR=1.5						
AAK				LR	LR	21 27 49.7	
	comp=Z,38nm,20.0s,baz=136,slow=38						
CRAI	**Chiangrai**	**15.78**	**132**	P	**P**	**21 21 43.6**	**+1.2**
MKAR	**Makanchi Array**	**15.90**	**345**	Pn	**Pn**	**21 21 38.9**	**-0.9**
	0.1nm,0.3s,baz=153,slow=14,SNR=9.0						
CM33	**Chiang Mai Arr**	**16.02**	**139**	P	**Pn**	**21 21 43.7**	**+2.1**
CMMT	**Chiang Mai**	**16.03**	**139**	P	**Pn**	**21 21 42.9**	**+1.2**
CM32	**Chiang Mai Arr**	**16.10**	**140**	P	**Pn**	**21 21 44.0**	**+1.4**
CM34	**Chiang Mai Arr**	**16.11**	**139**	P	**P**	**21 21 51.0**	**+5.0**
CM35	**Chiang Mai Arr**	**16.25**	**139**	P	**Pn**	**21 21 46.0**	**+1.5**
CM15	**Chiang Mai Arr**	**16.31**	**140**	P	**Pn**	**21 21 45.9**	**+0.6**
CM31	**Chiang Mai Arr**	**16.31**	**140**	P	**P**	**21 21 49.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**16.31**	**140**	Pn	**Pn**	**21 21 42.5**	**-2.8**
	0.1nm,0.3s,baz=321,slow=13,SNR=13						
CMAR				LR	LR	21 27 47.3	
	comp=Z,18nm,20.4s,baz=181,slow=37						
CM13	**Chiang Mai Arr**	**16.32**	**140**	P	**Pn**	**21 21 45.0**	**-0.5**
CM02	**Chiang Mai Arr**	**16.33**	**140**	P	**Pn**	**21 21 46.1**	**+0.6**
CM36	**Chiang Mai Arr**	**16.35**	**140**	P	**Pn**	**21 21 47.0**	**+1.2**
CM09	**Chiang Mai Arr**	**16.35**	**140**	P	**P**	**21 21 47.8**	**-1.0**
CM01	**Chiang Mai Arr**	**16.35**	**140**	P	**P**	**21 21 49.0**	**+0.3**
CM05	**Chiang Mai Arr**	**16.36**	**140**	P	**Pn**	**21 21 46.1**	**+0.2**
CM04	**Chiang Mai Arr**	**16.38**	**140**	P	**Pn**	**21 21 46.0**	**-0.2**
GYA	**Guiyang**	**17.06**	**102**	⇑P	**P**	**21 21 57.0**	**+0.3**
GYA				pmax	pmax		
	comp=Z,2.

0.7nm,0.9s,baz=304,slow=4.6,SNR=4.4
TORD Torodi Ar. Bea 80.17 279 P P 21 30 05.8 -1.2
0.7nm,0.9s,baz=56,slow=6.6,SNR=3.2
YKA Yellowknife Ar 84.58 10 P P 21 30 27.7 -1.6
0.5nm,0.8s,baz=350,slow=4.2,SNR=8.9

*TRN **27** 21:21:53.4, 13°.04N×59°.47W, h50km, MD4.1*
TRN Felt MMI III, Barbados.
*NEIC **27** 21:21:54.2±1.7, 13°.03N±0°.04×59°.3W±0°.1, h41km±6km, mb3.8/1, Md3.9(TRN), Error ellipse: s-maj=14.7km s-min=6.4km az=90.0*
ISC 27 21:21:54.4±1.4, 13°.04N±0°.04×59°.42W±0°.08, h51km±7km, n61, σ0§88/83, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BBSP	**Saint Philip**	**0.07**	**331**	⇓*i*	P		**Pn**	**21 22 01.8**	**-0.5**
BBGH	**Gun Hill**	**0.17**	**307**	*e*	P		**Pn**	**21 22 02.0**	**-0.7**
BBGH				*i*	S		**Sn**	**21 22 08.8**	**+0.2**
BBGH	**Gun Hill**	**0.17**	**307**				**Pn**	**21 22 02.0**	**-0.7**
BBGH					Sn		**Sn**	**21 22 08.4**	**-0.2**
BCHC	**Barbados, Cave**	**0.22**	**294**	*e*	P		**Pn**	**21 22 02.8**	**-0.3**
BCHC				*e*	S		**Sn**	**21 22 09.6**	**+0.5**
MCLT	**Moule a Chique**	**1.62**	**294**	*e*	P		**Pn**	**21 22 20.0**	**-0.6**
MCLT				*e*	S		**Sn**	**21 22 38.8**	**-1.5**
MCLT	**Moule a Chique**	**1.62**	**294**				**Pn**	**21 22 19.0**	**-1.6**
SVOC	**Richmond Hill,**	**1.75**	**274**	*e*	P		**Pn**	**21 22 23.0**	**+0.5**
SVOC				*e*	S		**Sn**	**21 22 44.0**	**+0.3**
SLB	**Belfond**	**1.76**	**297**	*e*	S		**Sn**	**21 22 43.9**	**+0.1**
SVV	**Soufriere Volc**	**1.77**	**279**	*e*	S		**Sn**	**21 22 43.9**	**-0.1**
SLBI	**Saint Lucia, B**	**1.80**	**303**	*e*	P		**Pn**	**21 22 22.5**	**-0.5**
SLBI				*e*	S		**Sn**	**21 22 44.8**	**+0.2**
SVB	**Belmont**	**1.80**	**278**	*e*	P		**Pn**	**21 22 23.0**	**-0.1**
SVB				*e*	S		**Sn**	**21 22 44.5**	**-0.2**
SVB	**Belmont**	**1.80**	**278**				**Pn**	**21 22 22.8**	**-0.3**
SLCP	**Castries, St.**	**1.80**	**302**	*e*	S		**Sn**	**21 22 44.8**	**0.0**
MPOM	**Morne Pois Mar**	**1.97**	**315**	*e*	P		**Pn**	**21 22 25.1**	**-0.4**
MPOM				*e*	S		**Sn**	**21 22 48.0**	**-0.9**
MPOM	**Morne Pois Mar**	**1.97**	**315**		Pn		**Pn**	**21 22 24.9**	**-0.5**
GCMP	**Grenada, Carri**	**2.03**	**254**	*e*	P		**Pn**	**21 22 25.8**	**-0.4**
GCMP				*e*	S		**Sn**	**21 22 49.7**	**-0.7**
TOSP	**Speyside**	**2.05**	**212**	*e*	P		**Pn**	**21 22 27.3**	**+0.9**
TOSP				*e*	S		**Sn**	**21 22 50.9**	**+0.1**
TOSP	**Speyside**	**2.05**	**212**		Pn		**Pn**	**21 22 26.7**	**+0.2**
MVM	**Montagne Vaucl**	**2.08**	**317**	*e*	P		**Pn**	**21 22 26.7**	**-0.2**
LPMF	**Morne Lapointe**	**2.14**	**316**	*e*	P		**Pn**	**21 22 27.7**	**0.0**
TRMF	**Trois Ilets**	**2.17**	**313**	*e*	P		**Pn**	**21 22 28.5**	**+0.3**
BIM	**Bigot**	**2.17**	**313**	*e*	P		**Pn**	**21 22 28.3**	**+0.1**
BIM				*e*	S		**Sn**	**21 22 54.0**	**+0.1**
BIM	**Bigot**	**2.17**	**313**		Pn		**Pn**	**21 22 28.2**	**0.0**
ZAM	**Aeronautique**	**2.18**	**314**	*e*	P		**Pn**	**21 22 28.5**	**+0.3**
ILAM	**Ilet Lapin Mar**	**2.23**	**321**	*e*	P		**Pn**	**21 22 29.2**	**+0.3**
ILAM				*e*	S		**Sn**	**21 22 54.7**	**-0.4**
ILAM	**Ilet Lapin Mar**	**2.23**	**321**		Pn		**Pn**	**21 22 28.1**	**-0.8**
GRGR	**Grenville**	**2.36**	**248**	*e*	P		**Pn**	**21 22 30.4**	**-0.2**
GRGR				*e*	S		**Sn**	**21 22 57.7**	**-0.8**
GRGR	**Grenville**	**2.36**	**248**		Pn		**Pn**	**21 22 30.5**	**-0.2**
FDF	**Fort de France**	**2.38**	**315**	*e*	P		**Pn**	**21 22 30.8**	**-0.2**
FDF				*e*	S		**Sn**	**21 22 58.2**	**-0.8**
FDF	**Fort de France**	**2.38**	**315**		Pn		**Pn**	**21 22 30.9**	**-0.1**
GBMF	**Grand Be**	**2.43**	**316**	*e*	P		**Pn**	**21 22 32.3**	**+0.5**
PML	**Morne Lenard**	**2.43**	**316**	*e*	P		**Pn**	**21 22 32.5**	**+0.7**
BAMF	**Morne Balai**	**2.43**	**317**	*e*	P		**Pn**	**21 22 32.5**	**+0.7**
SVN	**Savane Anatole**	**2.46**	**317**	*e*	P		**Pn**	**21 22 32.8**	**+0.6**
PCM	**Pelee Case Pet**	**2.47**	**316**	*e*	P		**Pn**	**21 22 32.3**	**0.0**
PCM	**Pelee Case Pet**	**2.47**	**316**	*e*	P		**Pn**	**21 22 32.9**	**+0.6**
DLPL	**La Plaine**	**2.88**	**322**	*e*	P		**Pn**	**21 22 37.4**	**-0.6**
DLPL				*e*	S		**Sn**	**21 23 10.0**	**-1.4**
DLPL	**La Plaine**	**2.88**	**322**		Pn		**Pn**	**21 22 38.6**	**+0.7**
TRN	**Trinidad (W)**	**3.07**	**219**	*e*	P		**Pn**	**21 22 40.5**	**0.0**
TRN				*e*	S		**Sn**	**21 23 13.9**	**-2.1**
DSLB	**Salisbury**	**3.07**	**321**	*e*	P		**Pn**	**21 22 41.3**	**+0.8**
DSLB				*e*	S		**Sn**	**21 23 16.1**	**+0.1**
MAGL	**Barre de l'ile**	**3.41**	**328**	*e*	P		**Pn**	**21 22 44.9**	**-0.2**
MAGL				*e*	S		**Sn**	**21 23 22.3**	**-1.9**
TDBA	**Terre de Bas,**	**3.52**	**323**	*e*	P		**Pn**	**21 22 47.4**	**+0.8**
TDBA				*e*	S		**Sn**	**21 23 27.1**	**+0.1**
TBG	**Guadaloupe-3**	**3.53**	**323**	*e*	P		**Pn**	**21 22 47.1**	**+0.4**
TBG				*e*	S		**Sn**	**21 23 26.8**	**-0.4**
CBE	**Ff, Capester**	**3.68**	**325**	*e*	P		**Pn**	**21 22 49.6**	**+0.7**
CBE				*e*	S		**Sn**	**21 23 29.7**	**-1.3**
ABD	**La Joyeuse, An**	**3.95**	**330**	*e*	P		**Pn**	**21 22 53.4**	**+0.8**
ABD				*e*	S		**Sn**	**21 23 37.2**	**-0.5**
ANBD	**Bethesda, Anti**	**4.58**	**331**	*e*	P		**Pn**	**21 23 00.9**	**-0.3**
ANBD	**Bethesda, Anti**	**4.58**	**331**	*e*	S		**Sn**	**21 23 51.1**	**-2.1**
BPA	**Boggy Peak**	**4.62**	**330**	*e*	P		**Pn**	**21 23 01.6**	**-0.2**
BPA	**Boggy Peak**	**4.62**	**330**	*e*	S		**Sn**	**21 23 52.5**	**-1.7**
ANWB	**Willy Bob**	**5.13**	**334**	*e*	P		**Pn**	**21 23 09.9**	**+1.2**
ANWB	**Willy Bob**	**5.13**	**334**	*e*	S		**Sn**	**21 24 04.4**	**-2.3**
ANWB	**Willy Bob**	**5.13**	**334**				**Pn**	**21 23 09.2**	**+0.4**
SKI	**Saint Kitts**	**5.33**	**324**		Pn		**Pn**	**21 23 12.7**	**+1.1**
CDVI	**St. Croix**	**6.96**	**313**		Pn		**Pn**	**21 23 32.4**	**-1.4**
MTP	**Monte Pirata**	**7.75**	**311**		Pn		**Pn**	**21 23 46.0**	**+1.2**
HUMP	**Col San Antoni**	**8.00**	**310**		Pn		**Pn**	**21 23 48.2**	**+0.1**
PDPR	**Patillas Dam,**	**8.06**	**309**		Pn		**Pn**	**21 23 49.5**	**+0.7**
EMPR	**Esperanza - Ma**	**8.72**	**309**				**Pn**	**21 24 00.7**	**+2.7**
AOPR	**Arecibo Observ**	**8.81**	**308**		Pn		**Pn**	**21 24 00.6**	**+1.4**
GRTK	**Grand Turk**	**13.99**	**309**		Pn		**Pn**	**21 25 11.1**	**+1.1**
SAML	**Samuel**	**22.16**	**190**		P		**P**	**21 26 47.0**	**+0.8**
SAML					IAmb		IAmb	21 26 47.9	
	comp=Z,4.3nm,1.1s								

*ISK **27** 21:26:12.7, 40°.89N×22°.25E, h8km, ML3.0/11*
*SKO **27** 21:26:12.5, 40°.95N×22°.24E, h15km*
*THE **27** 21:26:13.4, 40°.94N×22°.23E, h2km±1km, ML2.6/9, Error ellipse: s-maj=1.4km s-min=0.4km az=134.0*
*ATH **27** 21:26:13.4, 40°.90N×22°.25E, h10km±2km, ML2.6/18, Error ellipse: s-maj=2.3km s-min=0.9km az=343.0*
*BEO **27** 21:26:14.0±0.7, 40°.96N×22°.25E, h11km±2km, ML2.5/7*
*SOF **27** 21:26:14.6, 41°.02N×22°.29E, h15km, MD2.8*
ISC 27 21:26:13.3±0.8, 40°.93N±0°.02×22°.25E±0°.02, h11km±5km, n97, σ0§74/129, 4C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.12**	**78**	P		P	**Pg**	**21 26 16.2**	**-0.1**
GRG				S		S	**Sg**	**21 26 18.6**	**+0.1**
GRG				AML		AML	21 26 19.1		
	comp=E,17209μm,0.2s								
GRG				AML		AML	21 26 19.1		
	comp=N,22979μm,0.3s								
GRG	**Griva**	**0.12**	**78**	P		P	**Pg**	**21 26 16.2**	**-0.1**
GRG				S		S	**Sg**	**21 26 18.6**	**+0.1**
	comp=N,10μm,0.2s								
GRG	**Griva**	**0.12**	**78**	PG		P	**Pg**	**21 26 16.1**	**-0.1**
GRG				SG		S	**Sg**	**21 26 18.5**	**+0.1**
GRG	**Griva**	**0.12**	**78**	*i*	Pg	P	**Pg**	**21 26 16.2**	**-0.1**
GRG				*i*	Sg	S	**Sg**	**21 26 18.6**	**+0.1**
VAY	**Valandovo**	**0.46**	**32**	*e*	Pg	P	**Pg**	**21 26 22.2**	**0.0**
VAY				*e*	Sg	S	**Sg**	**21 26 29.3**	**-0.9**
VAY	**Valandovo**	**0.46**	**32**	*i*	Pg	P	**Pg**	**21 26 22.3**	**0.0**
VAY				*i*	Sg	S	**Sg**	**21 26 29.4**	**-0.9**
VAY				*e*	Lg	Lg	21 26 30.7		
	comp=E,702nm,0.5s								
KNT	**Kendrikon**	**0.54**	**65**	P		P	**Pg**	**21 26 24.1**	**+0.3**
KNT				S		S	**Sb**	**21 26 32.1**	**-0.5**
KNT				AML		AML	21 26 33.0		
	comp=E,1753μm,0.2s								
KNT				AML		AML	21 26 34.3		
	comp=N,1783μm,0.3s								
KNT	**Kendrikon**	**0.54**	**65**	P		P	**Pg**	**21 26 24.1**	**+0.3**
KNT				S		S	**Sb**	**21 26 32.1**	**-0.5**
	comp=N,895nm,0.2s								
KNT	**Kendrikon**	**0.54**	**65**	PG		P	**Pg**	**21 26 24.1**	**+0.3**
KNT				SG		S	**Sb**	**21 26 32.3**	**-0.3**
KNT	**Kendrikon**	**0.54**	**65**	*i*	Pg	P	**Pg**	**21 26 24.1**	**+0.3**
KNT				*i*	Sg	S	**Sb**	**21 26 32.5**	**-0.1**
THE	**Thessaloniki**	**0.62**	**119**	P		P	**Pg**	**21 26 24.8**	**-0.5**
THE				S		S	**Sg**	**21 26 33.1**	**-0.5**
THE				AML		AML	21 26 37.8		
	comp=E,548μm,0.4s								
THE				AML		AML	21 26 40.4		
	comp=N,1310μm,0.7s								
THE	**Thessaloniki**	**0.62**	**119**	P		P	**Pg**	**21 26 24.9**	**-0.5**
THE				S		S	**Sg**	**21 26 34.5**	**+1.0**
	comp=N,370nm,0.5s								
THE	**Thessaloniki**	**0.62**	**119**	*i*	Pg	P	**Pg**	**21 26 25.1**	**-0.2**
THE				*i*	Sg	S	**Sb**	**21 26 34.6**	**-0.2**
FNA	**Florina**	**0.68**	**258**	P		P	**Pg**	**21 26 25.7**	**-0.6**
FNA				S		S	**Sg**	**21 26 34.5**	**-0.8**
FNA				AML		AML	21 26 44.8		
	comp=N,1186μm,0.3s								
FNA				AML		AML	21 26 45.1		
	comp=E,1068μm,0.4s								
FNA	**Florina**	**0.68**	**258**	P		P	**Pg**	**21 26 25.8**	**-0.6**
FNA				S		S	**Sg**	**21 26 35.2**	**-0.1**
	comp=E,568nm,0.4s								
FNA	**Florina**	**0.68**	**258**	PG		P	**Pg**	**21 26 25.8**	**-0.6**
FNA	**Florina**	**0.68**	**258**	*i*	Pg	P	**Pg**	**21 26 25.9**	**-0.6**
FNA				*i*	Sg	S	**Sb**	**21 26 36.3**	**-0.2**
KZN	**Kozani**	**0.72**	**210**	P		P	**Pg**	**21 26 27.0**	**-0.3**
KZN				S		S	**Sg**	**21 26 35.6**	**-1.1**
KZN				AML		AML	21 26 43.0		
	comp=E,1855μm,0.6s								
KZN				AML		AML	21 26 45.3		
	comp=N,929μm,0.7s								
KZN	**Kozani**	**0.72**	**210**	P		P	**Pg**	**21 26 27.0**	**-0.3**
KZN				S		S	**Sg**	**21 26 37.4**	**+0.7**
	comp=N,718nm,0.6s								
HORT	**Hortiatis**	**0.73**	**117**	P		P	**Pg**	**21 26 26.6**	**-0.8**
HORT				AML		AML	21 26 43.4		
	comp=N,972μm,0.5s								
HORT				AML		AML	21 26 43.5		
	comp=E,838μm,0.5s								
HORT	**Hortiatis**	**0.73**	**117**	P		P	**Pg**	**21 26 26.6**	**-0.8**
HORT	**Hortiatis**	**0.73**	**117**	PG		P	**Pg**	**21 26 26.6**	**-0.8**
STIP	**Stip**	**0.76**	**357**	*i*	Pg	P	**Pb**	**21 26 28.7**	**+0.2**
STIP				*i*	Sg	S	**Sn**	**21 26 40.5**	**-1.0**
STIP				*e*	Lg	Lg	21 26 42.7		
	comp=N,54nm,0.3s								
SOH	**Sokhos**	**0.85**	**97**	P		P	**Pg**	**21 26 29.4**	**-0.2**
SOH				AML		AML	21 26 46.5		
	comp=E,1519μm,0.4s								
SOH				AML		AML	21 26 48.2		
	comp=N,1525μm,0.4s								
SOH	**Sokhos**	**0.85**	**97**	P		P	**Pg**	**21 26 29.4**	**-0.2**
SOH				S		S	**Sb**	**21 26 42.2**	**+0.8**
	comp=N,598nm,0.4s								
SOH	**Sokhos**	**0.85**	**97**	*i*	Pg	P	**Pg**	**21 26 29.5**	**-0.2**
SOH				*i*	Sg	S	**Sb**	**21 26 41.9**	**+0.5**
LIT	**Litokhoron**	**0.85**	**167**	P		P	**Pg**	**21 26 29.1**	**-0.6**
LIT				AML		AML	21 26 48.1		
	comp=E,544μm,0.4s								
LIT				AML		AML	21 26 50.2		
	comp=N,380μm,0.6s								
LIT	**Litokhoron**	**0.85**	**167**	P		P	**Pg**	**21 26 29.1**	**-0.6**
LIT				S		S	**Sb**	**21 26 42.1**	**+0.6**
	comp=N,230nm,0.5s								
SRS	**Serrai**	**1.03**	**79**	P		P	**Pg**	**21 26 32.6**	**-0.6**
SRS				AML		AML	21 26 52.5		
	comp=N,435μm,0.6s								
SRS				AML		AML	21 26 55.3		
	comp=E,338μm,0.6s								
SRS	**Serrai**	**1.03**	**79**	P		P	**Pg**	**21 26 32.6**	**-0.6**
SRS				S		S	**Sn**	**21 26 47.9**	**-0.3**
	comp=E,205nm,0.6s								
SRS	**Serrai**	**1.03**	**79**	*i*	Pg	P	**Pg**	**21 26 32.5**	**-0.7**
SRS				*i*	Sg	S	**Sn**	**21 26 47.9**	**-0.3**
NEST	**Nestorio**	**1.05**	**241**	P		P	**Pg**	**21 26 32.7**	**-0.8**
NEST				AML		AML	21 26 52.6		
	comp=E,545μm,0.8s								
NEST				AML		AML	21 26 54.9		
	comp=N,525μm,0.8s								
NEST	**Nestorio**	**1.05**	**241**	P		P	**Pg**	**21 26 32.7**	**-0.8**
PLG	**Polygyros**	**1.07**	**121**	P		P	**Pb**	**21 26 33.1**	**-0.7**
PLG				AML		AML	21 26 54.9		
	comp=N,1026μm,0.6s								
PLG				AML		AML	21 26 56.5		
	comp=E,726μm,0.5s								
PLG	**Polygyros**	**1.07**	**121**	P		P	**Pb**	**21 26 33.1**	**-0.7**
OHR	**Ohrid**	**1.11**	**280**	*i*	Pg	P	**Pb**	**21 26 33.9**	**-0.6**
OHR				*i*	Sg	S	**Sg**	**21 26 49.6**	**+0.6**
OHR				*e*	Lg	Lg	21 26 49.9		
	comp=N,168nm,0.7s								
KKB	**Krupnik**	**1.12**	**34**	*i*	P	P	**Pb**	**21 26 34.4**	**-0.4**
KPRO	**Kipourio**	**1.19**	**215**	P		P	**Pn**	**21 26 35.5**	**-0.4**
KPRO				AML		AML	21 27 02.7		
	comp=E,789μm,0.5s								
KPRO				AML		AML	21 27 05.8		
	comp=N,579μm,0.7s								
KPRO	**Kipourio**	**1.19**	**215**	P		P	**Pn**	**21 26 35.5**	**-0.4**
KPRO				S		S	**Sn**	**21 26 53.1**	**+1.1**
	comp=N,335nm,0.5s								
SKO	**Skopje**	**1.20**	**330**	*i*	Pg	P	**Pg**	**21 26 36.5**	**+0.1**
SKO				*i*	Sg	S	**Sg**	**21 26 51.8**	**-0.2**
SKO				*e*	Lg	Lg	21 26 52.9		
	comp=E,8.2nm,0.3s								
NVR	**Nevrokopi**	**1.29**	**71**	P		P	**Pn**	**21 26 37.3**	**0.0**
NVR				AML		AML	21 27 06.1		
	comp=E,179μm,0.6s								
NVR				AML		AML	21 27 06.6		
	comp=N,246μm,1.0s								
NVR	**Nevrokopi**	**1.29**	**71**	P		P	**Pn**	**21 26 37.3**	**0.0**
MMB	**Musomiste**	**1.29**	**59**	*i*	P	P	**Pb**	**21 26 37.6**	**-0.1**
THL	**Klokotos Trika**	**1.38**	**188**	P		P	**Pn**	**21 26 38.9**	**+0.5**
THL				AML		AML	21 27 06.6		
	comp=E,350μm,0.6s								
THL				AML		AML	21 27 10.6		
	comp=N,309μm,0.7s								
THL	**Klokotos Trika**	**1.38**	**188**	P		P	**Pn**	**21 26 38.9**	**+0.5**
OUR	**Ouranopolis**	**1.45**	**114**	P		P	**Pb**	**21 26 40.5**	**+0.2**
OUR				AML		AML	21 27 05.4		
	comp=N,1150μm,0.6s								
OUR				AML		AML	21 27 08.5		
	comp=E,914μm,0.6s								
OUR	**Ouranopolis**	**1.45**	**114**	P		P	**Pb**	**21 26 40.5**	**+0.2**
OUR	**Ouranopolis**	**1.45**	**114**	PN		P	**Pn**	**21 26 40.0**	**+0.6**
PAIG	**Paliouri**	**1.48**	**132**	P		P	**Pn**	**21 26 40.3**	**+0.4**
PAIG				AML		AML	21 27 09.2		
	comp=N,951μm,0.7s								
PAIG				AML		AML	21 27 09.3		
	comp=E,585μm,0.6s								
PAIG	**Paliouri**	**1.48**	**132**	P		P	**Pn**	**21 26 40.3**	**+0.4**
BOSS	**Bosilegrad**	**1.57**	**6**	*e*	Pg	P	**Pb**	**21 26 42.3**	**-0.1**
BOSS				*e*	Sg	S	**Sb**	**21 27 02.5**	**+0.2**
PRVS	**Prvonek**	**1.58**	**355**	*e*	Pg	P	**Pb**	**21 26 42.3**	**-0.2**
PRVS				*e*	Sg	S	**Sg**	**21 27 03.9**	**-0.2**
KAVA	**Kavala**	**1.72**	**87**	P		P	**Pn**	**21 26 43.7**	**+0.7**
KAVA	**Kavala**	**1.72**	**87**	P		P	**Pn**	**21 26 43.8**	**+0.7**
XOR	**Xorichti**	**1.72**	**155**	P		P	**Pn**	**21 26 42.9**	**-0.3**
XOR	**Xorichti**	**1.72**	**155**	P		P	**Pn**	**21 26 42.9**	**-0.3**
NEO	**Neokhori**	**1.79**	**155**	P		P	**Pn**	**21 26 44.2**	**+0.1**
NEO				AML		AML	21 27 26.7		
	comp=E,172μm,0.6s								
NEO				AML		AML	21 27 29.9		
	comp=N,249μm,0.8s								
NEO	**Neokhori**	**1.79**	**155**	P		P	**Pn**	**21 26 44.2**	**+0.1**
VTS	**Vitosha**	**1.84**	**23**	*e*	Pg	P	**Pb**	**21 26 45.9**	**-1.1**
VTS				*e*	Sg	S	**Sb**	**21 27 10.5**	**+0.4**
VTS	**Vitosha**	**1.84**	**23**	⇑	P	P	**Pb**	**21 26 46.0**	**-1.1**
VTS	**Vitosha**	**1.84**	**23**	*i*	P	P	**Pb**	**21 26 46.1**	**-0.9**
VTS	**Vitosha**	**1.84**	**23**	*i*	Pn	P	**Pn**	**21 26 45.0**	**+0.1**
TIR	**Tirane**	**1.85**	**284**	⇓	P	P	**Pg**	**21 26 51.6**	**+2.9**
THAS	**Thassos island**	**1.91**	**99**	P		P	**Pn**	**21 26 46.2**	**+0.5**
THAS				AML		AML	21 27 20.0		
	comp=N,254μm,0.6s								
THAS				AML		AML	21 27 25.1		
	comp=E,222μm,0.5s								
THAS	**Thassos island**	**1.91**	**99**	P		P	**Pn**	**21 26 46.2**	**+0.5**
AGG	**Agios Georgios**	**1.91**	**178**	P		P	**Pn**	**21 26 46.6**	**+0.8**
AGG	**Agios Georgios**	**1.91**	**178**	P		P	**Pn**	**21 26 46.6**	**+0.8**
AGG	**Agios Georgios**	**1.91**	**178**	PN		P	**Pn**	**21 26 46.0**	**+0.2**
BARS	**Barje**	**1.91**	**350**	*e*	Pn	P	**Pn**	**21 26 44.9**	**-0.9**
BARS				*e*	Sn	S	**Sn**	**21 27 09.1**	**-0.7**
BARS	**Barje**	**1.91**	**350**	*i*	Pn	P	**Pn**	**21 26 44.9**	**-0.9**
RZN	**Rozhen**	**2.01**	**67**	*i*	P	P	**Pb**	**21 26 49.3**	**-0.6**
IGT	**Igoumenitsa**	**2.03**	**227**	*i*	Pn	P	**Pb**	**21 26 50.5**	**+0.4**
EVR	**Evrytania**	**2.04**	**190**	P		P	**Pb**	**21 26 50.2**	**-0.2**
PLD	**Plovdiv**	**2.18**	**57**	PN		P	**Pn**	**21 26 50.6**	**+1.1**
PLD	**Plovdiv**	**2.18**	**57**	*e*	P	P	**Pg**	**21 26 54.6**	**-0.5**
PLD	**Plovdiv**	**2.18**	**57**	*i*	Pn	P	**Pb**	**21 26 52.7**	**-0.1**
ZAPS	**Zavoj**	**2.36**	**7**	*e*	Pn	P	**Pn**	**21 26 53.6**	**+1.7**
ZAPS				*e*	Sn	S	**Sn**	**21 27 21.2**	**+0.3**
SELS	**Selova**	**2.44**	**340**	*e*	Pn	P	**Pn**	**21 26 53.5**	**+0.5**
ULC	**Ulcinj**	**2.48**	**296**	*i*	Pn	P	**Pn**	**21 26 58.4**	**+0.5**
KDZ	**Kurdzhali**	**2.49**	**72**	PN		P	**Pn**	**21 26 54.3**	**+0.5**
KDZ	**Kurdzhali**	**2.49**	**72**	*i*	P	P	**Pb**	**21 26 58.3**	**+0.2**
RDO	**Rodhopi**	**2.50**	**84**	PN		P	**Pn**	**21 26 55.1**	**+1.3**
BOVS	**Bovan**	**2.73**	**352**	*e*	Pn	P	**Pn**	**21 26 57.4**	**+0.4**
BOVS	**Bovan**	**2.73**	**352**	⇑	P	P	**Pn**	**21 26 57.2**	**+0.2**
SJES	**Sjenica**	**2.88**	**325**	*e*	Pn	P	**Pn**	**21 26 59.7**	**+0.5**
ALN	**Alexandroupoli**	**2.88**	**89**	PN		P	**Pn**	**21 27 00.1**	**+1.1**
GADA	**Gvkgeada**	**2.88**	**104**	PN		P	**Pn**	**21 26 59.9**	**+0.8**
ENEZ	**Enez**	**2.97**	**93**	PN		P	**Pn**	**21 27 01.4**	**+1.1**
BOZC	**Bozcaada**	**3.10**	**109**	PN		P	**Pn**	**21 27 03.2**	**+1.0**
ERIK	**Erikli-Kesan**	**3.25**	**93**	PN		P	**Pn**	**21 27 04.9**	**+0.8**
SIGR	**SIGRI**	**3.26**	**121**	PN		P	**Pn**	**21 27 05.1**	**+0.8**
GELI	**Tayfur-Gelibol**	**3.26**	**98**	PN		P	**Pn**	**21 27 05.6**	**+1.3**
LPK	**Lapseki**	**3.48**	**98**	PN		P	**Pn**	**21 27 08.6**	**+1.3**
EDRB	**Edirne**	**3.50**	**73**	PN		P	**Pn**	**21 27 08.9**	**+1.2**
DIVS	**Divibare**	**3.58**	**333**	*e*	Pn	P	**Pn**	**21 27 09.2**	**+0.5**
MDVR	**Moldovita**	**3.87**	**354**	⇑	P	P	**Pn**	**21 27 14.4**	**+1.7**
HERR	**Herculane**	**3.95**	**2**	⇑	P	P	**Pn**	**21 27 10.5**	**-3.3**

*BJI **27** 21:27:34.8±0.0, 27°.38N×85°.36E, h12km, mB4.5/9, mb4.4/25, Ms3.7/4, Ms7 3.5/4*
*IDC **27** 21:27:39.4±0.9, 27°.77N×85°.69E, h0km, mb3.9/14, mb1 4.0/17, mb1mx3.7/51, mbtmp3.8/17, ML3.7/3, Error ellipse: s-maj=30.0km s-min=15.7km az=57.0*
*NEIC **27** 21:27:41.8±1.4, 27°.84N±0°.10×85°.79E±0°.05, h10km±1km, mb4.2/34, Error ellipse: s-maj=16.5km s-min=7.1km az=178.0*
*NDI **27** 21:27:42.8±3.8, 27°.74N×85°.64E, h10km, ML4.0, mb4.2(NEIC)*
ISC 27 21:27:40.6±0.5, 27°.71N±0°.06×85°.67E±0°.04, h10km, n80, σ1§30/84, mb4.1/26, 1D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.63**	**98**	*e*	P		**Pb**	**21 28 26.4**	**-1.6**
GTK				*e*	S		**Sb**	**21 29 00.4**	**0.0**
GTK				IAML				21 29 04.0	
	comp=E,939nm,0.3s								
LSA	**Lhasa**	**5.21**	**66**	Pn			**Pn**	**21 29 00.8**	**+1.8**
GUWA	**GUWAHATI**	**5.58**	**104**	*e*	P		**Pn**	**21 29 06.2**	**+2.4**
SHL	**Shillong**	**5.96**	**110**	*e*	P		**Pn**	**21 29 10.7**	**+1.6**
SHL				*e*	S		**Sn**	**21 30 16.5**	**-1.0**
SHL				IAML				21 30 17.9	
	comp=E,411nm,0.3s								
SHL	**Shillong**	**5.96**	**110**	Pn			**Pn**	**21 29 10.2**	**+1.1**
TEZP	**TEZPUR**	**6.44**	**98**	*e*	P		**Pn**	**21 29 16.1**	**+0.5**
ZIRO	**ZIRO**	**7.26**	**90**	*e*	P		**Pn**	**21 29 27.4**	**+0.5**
KOHI	**KOHIMA**	**7.80**	**103**	*e*	P		**Pn**	**21 29 34.5**	**+0.2**
KOHI				*e*	S		**Sn**	**21 31 01.8**	**-1.1**
SMLA	**Simla**	**8.16**	**297**	*e*	P		**Pn**	**21 29 40.4**	**+1.3**
BHPL	**Bhopal**	**8.68**	**241**	*e*	P		**Pn**	**21 29 45.5**	**-0.8**
BHPL				*e*	S		**Sn**	**21 31 20.6**	**-3.6**
BHPL				IAML				21 31 27.9	
	comp=E,340nm,0.3s								
LKP	**Lekhapani**	**9.04**	**90**	*e*	P		**Pn**	**21 29 51.0**	**-0.2**
LKP				*e*	S		**Sn**	**21 31 29.2**	**-3.9**
LKP				IA

VYHS	**Vyhne**	**54.73**	**311**	*e*P		**P**		**21 37 13.8**	**+3.6**
NOA	**NORSAR Array B**	**58.69**	**327**	P		**P**		**21 37 37.4**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=82,slow=5.8,SNR=2.2								
WB0	**Warramunga Arr**	**66.71**	**130**	P		**P**		**21 38 33.2**	**+1.0**
WRA	**Warramunga Arr**	**66.80**	**130**	P		**P**		**21 38 33.5**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=324,slow=6.6,SNR=11								
WB2	**Warramunga Arr**	**66.81**	**130**	P		**P**		**21 38 34.1**	**+1.4**
WR0	**Warramunga Arr**	**66.95**	**130**	P		**P**		**21 38 34.8**	**+1.2**
ASAR	**Alice Springs**	**69.09**	**133**	P		**P**		**21 38 48.0**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=316,slow=6.6,SNR=8.5								
ASAR	**Alice Springs**	**69.09**	**133**	P		**P**		**21 38 46.8**	**-0.3**
EUNU	**Eureka**	**72.37**	**359**	P		**P**		**21 39 07.3**	**+1.0**
EUNU				IAmb	IAmb			21 39 09.1	
	comp=Z,3.5nm,1.1s								
TOLK	**Toolik Lake Re**	**75.81**	**18**	P		**P**		**21 39 27.1**	**+0.6**
COLD	**Coldfoot**	**76.56**	**19**	P		**P**		**21 39 31.9**	**+1.1**
COLD				IAmb	IAmb			21 39 41.9	
	comp=Z,2.7nm,1.4s								
MLY	**Manley**	**77.84**	**21**	P		**P**		**21 39 38.9**	**+0.8**
MLY				IAmb	IAmb			21 39 42.5	
	comp=Z,2.0nm,1.3s								
TORD	**Torodi Ar. Bea**	**78.74**	**279**	P		**P**		**21 39 44.4**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=57,slow=5.3,SNR=2.2								
PPLA	**Purkeypile**	**78.75**	**23**	P		**P**		**21 39 43.9**	**+0.6**
PPLA				IAmb	IAmb			21 39 48.9	
	comp=Z,5.7nm,1.2s								
ILAR	**Eielson Array**	**79.23**	**20**	P		**P**		**21 39 44.5**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=309,slow=4.1,SNR=4.5								
ILAR	**Eielson Array**	**79.23**	**20**	P		**P**		**21 39 45.3**	**-0.3**
SKT	**Skwentna**	**79.58**	**24**	P		**P**		**21 39 47.9**	**+0.3**
SCRK	**Sand Creek**	**80.68**	**20**	P		**P**		**21 39 53.6**	**-0.1**
SCRK				IAmb	IAmb			21 39 53.8	
	comp=Z,2.7nm,1.1s								
PWL	**Port Wells**	**81.47**	**24**	P		**P**		**21 39 59.6**	**+1.8**
YKA	**Yellowknife Ar**	**88.65**	**9**	P		**P**		**21 40 33.1**	**-0.6**
	comp=Z,0.1nm,0.6s,baz=338,slow=4.8,SNR=5.0								

IDC ***27*** *21:31:47.0±1.8, 28.°00N×85.°01E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.3/48, mbtmp3.5/8, ML3.6/1, Error ellipse: s-maj=61.6km s-min=21.1km az=64.0*

ISC 27 21:31:49.0±1.7**, 28.°0N**±0.°2×**85.°0E**±0.°3**, h12**km**, n8,** σ0°**78**/8**, mb3.6**/6**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.98**	**124**	Pn	**Pn**	**21 35 34.6**	**+0.8**
	baz=319,slow=11,SNR=1.1						
MKAR	**Makanchi Array**	**18.85**	**354**	P	**P**	**21 36 08.7**	**-0.2**
	0.2nm,0.3s,baz=175,slow=12,SNR=15						
KURBB	**Kurchatov Arra**	**23.09**	**350**	P	**P**	**21 36 55.1**	**+0.7**
	0.5nm,0.9s,baz=160,slow=11,SNR=3.9						
SONM	**Songino Array**	**25.86**	**34**	P	**P**	**21 37 19.9**	**-0.6**
	0.4nm,0.6s,baz=212,slow=11,SNR=3.0						
ZALV	**Zalesovo Beam**	**25.89**	**360**	P	**P**	**21 37 21.1**	**+0.5**
	1.4nm,0.5s,baz=190,slow=9.8,SNR=7.1						
FINES	**FINESS Array B**	**50.99**	**328**	P	**P**	**21 40 50.5**	**+0.1**
	1.1nm,0.9s,baz=123,slow=7.0,SNR=3.4						
WRA	**Warramunga Arr**	**67.48**	**129**	P	**P**	**21 42 45.2**	**+0.1**
	0.7nm,1.0s,baz=325,slow=6.4,SNR=2.9						
ASAR	**Alice Springs**	**69.77**	**133**	P	**P**	**21 42 58.3**	**-1.1**
	0.2nm,0.7s,baz=322,slow=5.9,SNR=1.8						

IDC ***27*** *22:11:12.9±0.8, 56.°15S×26.°86W, h97km±6km, mb4.1/10, mb1 4.2/12, mb1mx4.1/23, mbtmp4.5/12, MS3.1/2, Ms1 3.1/2, ms1mx2.7/17, Error ellipse: s-maj=18.7km s-min=13.3km az=66.0*

NEIC ***27*** *22:11:13.4±1.4, 56.°2S±0.°1×27.°1W±0.°2, h103km±5km, mb4.6/30, Error ellipse: s-maj=17.5km s-min=14.2km az=209.0*

ISC 27 22:11:12.7±0.4**, 56.°36S**±0.°06×**26.°96W**±0.°08**, h100**km**, n84,** σ1°**52**/83**, mb4.6**/22**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.82**	**287**		**Pn**	**22 12 35.4**	**-1.0**
VNA1	**Neumayer--Stat**	**16.46**	**158**	P	**P**	**22 15 00.2**	**+2.1**
VNA3	**Neumayer Olymp**	**16.66**	**160**	P	**P**	**22 15 01.8**	**+1.4**
VNA3				S	**Sn**	**22 17 59.5**	**-4.6**
VNA2	**Neumayer--Watz**	**16.86**	**158**	P	**P**	**22 15 04.2**	**+1.7**
	baz=318,slow=14						
VNA2				S	**Sn**	**22 18 00.9**	**-8.0**
SNAA	**Sanae**	**18.41**	**156**	P	**Pn**	**22 15 21.2**	**+0.3**
SNAA				S	**S**	**22 18 40.1**	**-4.3**
SNAA	**Sanae**	**18.41**	**156**	P	**Pn**	**22 15 20.8**	**0.0**
	1.9nm,0.3s,baz=304,slow=9.3,SNR=161						
SNAA				S	**S**	**22 18 43.0**	**-1.3**
	0.3nm,0.3s,baz=345,slow=22,SNR=2.8						
SNAA				ScP	**ScP**	**22 23 11.4**	**-0.3**
	0.1nm,0.3s,baz=287,slow=2.9,SNR=4.7						
SNAA	**Sanae**	**18.41**	**156**	P	**P**	**22 15 20.3**	**+0.7**
PMSA	**Palmer Station**	**19.79**	**230**	P	**Pn**	**22 15 37.7**	**+0.6**
	0.8nm,0.3s,baz=51,slow=5.7,SNR=2.1						
PMSA	**Palmer Station**	**19.79**	**230**	P	**Pn**	**22 15 37.0**	**-0.1**
BELA	**Belgrano 2**	**21.78**	**184**	P	**P**	**22 15 56.5**	**+0.7**
BELA				IAmb	IAmb	22 15 59.0	
	comp=Z,26nm,0.7s						
PLCA	**Paso Flores**	**32.18**	**280**	LR	LR	22 30 52.8	
	comp=Z,36nm,18.2s,baz=152,slow=37						
QSPA	**South Pole Qui**	**33.89**	**180**	P	**P**	**22 17 47.2**	**+1.6**
QSPA				IAmb	IAmb	22 17 48.3	
	comp=Z,9.1nm,0.9s						
CPUP	**Villa Florida**	**37.11**	**311**	P	**P**	**22 18 12.1**	**-1.2**
	comp=Z,3.6nm,0.8s,baz=155,slow=7.9,SNR=9.4						
CPUP	**Villa Florida**	**37.11**	**311**	P	**P**	**22 18 12.6**	**-0.7**
MT09	**Talagante**	**37.53**	**288**	P	**P**	**22 18 17.1**	**+0.1**
MT09				IAmb	IAmb	22 18 22.4	
	comp=Z,12nm,1.4s						
MT02	**Curacav**	**38.01**	**289**	P	**P**	**22 18 18.9**	**-1.9**
MAW	**Mawson**	**39.82**	**143**	P	**P**	**22 18 36.5**	**+1.0**
	comp=Z,5.1nm,0.6s,baz=228,slow=8.1,SNR=21						
MAW	**Mawson**	**39.82**	**143**	P	**P**	**22 18 37.0**	**+1.5**
SUR	**Sutherland**	**40.60**	**74**	P	**P**	**22 18 44.1**	**+1.5**
SUR				IAmb	IAmb	22 18 48.5	
	comp=Z,20nm,1.4s						
AC02	**Maricunga**	**42.13**	**297**	P	**P**	**22 18 56.1**	**+0.6**
AC01	**Pan de Azucar**	**43.43**	**296**	P	**P**	**22 19 05.7**	**+0.2**
BDFB	**Brasilia**	**43.70**	**330**	P	**P**	**22 19 07.1**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=112,slow=18,SNR=3.1						
BDFB	**Brasilia**	**43.70**	**330**	P	**P**	**22 19 07.2**	**-0.6**
GO02	**Mina Guanaco**	**43.75**	**297**	P	**P**	**22 19 08.3**	**-0.1**
LVC	**Limon Verde**	**45.57**	**300**	P	**P**	**22 19 22.9**	**0.0**
LVC				IAmb	IAmb	22 19 25.0	
	comp=Z,6.8nm,0.7s						
SBA	**Scott Base**	**45.78**	**184**	P	**P**	**22 19 27.0**	**+3.6**
SBA				IAmb	IAmb	22 19 32.4	
	comp=Z,11nm,1.4s						
BOSA	**Boshof**	**45.92**	**75**	P	**P**	**22 19 24.6**	**-0.7**
	comp=Z,5.1nm,1.0s,baz=225,slow=7.4,SNR=5.5						
BOSA	**Boshof**	**45.92**	**75**	P	**P**	**22 19 25.2**	**-0.1**
BOSA				IAmb	IAmb	22 19 28.4	
	comp=Z,12nm,1.3s						
VNDA	**Vanda**	**46.27**	**183**	P	**P**	**22 19 29.1**	**+1.9**
	comp=Z,4.4nm,0.6s,baz=191,slow=7.6,SNR=42						
VNDA				ScP	**ScP**	**22 24 46.1**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=183,slow=3.9,SNR=3.6						
VNDA	**Vanda**	**46.27**	**183**	P	**P**	**22 19 29.4**	**+2.1**
VNDA				IAmb	IAmb	22 19 31.0	
	comp=Z,5.2nm,0.6s						
PB09	**IPOC Station P**	**46.42**	**300**	P	**P**	**22 19 29.9**	**+0.5**
PB07	**IPOC Station P**	**46.79**	**300**	P	**P**	**22 19 31.7**	**-0.5**
PB07				IAmb	IAmb	22 19 32.4	
	comp=Z,13nm,0.8s						
PB01	**IPOC Station P**	**47.18**	**301**	P	**P**	**22 19 35.1**	**-0.1**
PB01				IAmb	IAmb	22 19 35.7	
	comp=Z,13nm,0.8s						
PB08	**IPOC Station P**	**47.79**	**302**	P	**P**	**22 19 40.3**	**+0.1**
PB08				IAmb	IAmb	22 19 40.9	
	comp=Z,5.0nm,0.6s						
SIV	**San Ignacio**	**47.88**	**313**	LR	LR	22 39 29.2	
	comp=Z,17nm,21.4s,baz=349,slow=36						
H10S2	**ASCENSION HYDR**	**48.26**	**16**	T	T	23 12 41.1	
	baz=189,slow=74,SNR=76						
H10S3	**ASCENSION HYDR**	**48.27**	**16**	T	T	23 12 42.0	
	baz=31,slow=74,SNR=243						
PSGCX	**Pisagua**	**48.72**	**301**	P	**P**	**22 19 46.3**	**-0.8**
PSGCX				IAmb	IAmb	22 19 55.5	
	comp=Z,15nm,1.2s						
MNMC	**Minye Minye**	**48.87**	**302**	P	**P**	**22 19 48.5**	**+0.1**
LBTB	**Lobatse**	**48.98**	**73**	P	**P**	**22 19 49.1**	**+0.1**
LBTB				IAmb	IAmb	22 19 49.7	
	comp=Z,8.7nm,0.7s						
H10N1	**ASCENSION HYDR**	**49.38**	**16**	T	T	23 14 05.2	
	baz=188,slow=75,SNR=78						
H10N3	**ASCENSION HYDR**	**49.38**	**16**	T	T	23 14 06.1	
	baz=188,slow=75,SNR=167						
H10N2	**ASCENSION HYDR**	**49.40**	**16**	T	T	23 14 07.3	
	baz=188,slow=75,SNR=124						
TSUM	**Tsumeb**	**49.72**	**60**	P	**P**	**22 19 55.3**	**+0.6**
TSUM				IAmb	IAmb	22 19 55.6	
	comp=Z,7.9nm,0.8s						
LPAZ	**La Paz**	**50.66**	**305**	P	**P**	**22 20 02.3**	**0.0**
	comp=Z,3.8nm,0.5s,baz=136,slow=5.9,SNR=17						
LPAZ				pP	**pP**	**22 20 25.7**	**-0.3**
	comp=Z,2.0nm,0.4s,baz=129,slow=4.2,SNR=2.9						
LPAZ	**La Paz**	**50.66**	**305**	P	**P**	**22 20 02.4**	**0.0**
LPAZ				IAmb	IAmb	22 20 03.1	
	comp=Z,6.3nm,1.0s						
SAML	**Samuel**	**55.11**	**315**	P	**P**	**22 20 33.6**	**-0.7**
DBIC	**Dimbokro**	**65.40**	**24**	P	**P**	**22 21 43.5**	**-0.9**
	comp=Z,3.6nm,0.7s,baz=197,slow=8.4,SNR=5.1						
DBIC	**Dimbokro**	**65.40**	**24**	P	**P**	**22 21 44.0**	**-0.4**
DBIC				IAmb	IAmb	22 21 45.1	
	comp=Z,8.5nm,1.1s						
KOWA	**Kowa**	**73.16**	**23**	P	**P**	**22 22 32.1**	**-0.1**
TOA0	**Torodi Ar. Sit**	**73.26**	**29**	P	**P**	**22 22 32.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**73.26**	**29**	P	**P**	**22 22 32.5**	**-0.3**
	comp=Z,5.7nm,0.9s,baz=199,slow=6.3,SNR=30						
TORD				pP	**pP**	**22 22 57.0**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=202,slow=6.1,SNR=2.5						
STKA	**Stephens Creek**	**91.57**	**170**	P	**P**	**22 24 11.4**	**+3.4**
	comp=Z,1.3nm,0.6s,baz=77,slow=4.7,SNR=4.0						
STKA				pP	**pP**	**22 24 35.4**	**+1.4**
	comp=Z,2.5nm,0.7s,baz=153,slow=7.8,SNR=3.4						
ASAR	**Alice Springs**	**98.65**	**162**	P	Pdif	22 24 43.2	+2.7
	comp=Z,0.6nm,0.7s,baz=179,slow=4.2,SNR=6.1						
ASAR				pP	pP	22 25 06.9	+0.6
	comp=Z,1.4nm,1.0s,baz=176,slow=2.8,SNR=5.4						
ASAR	**Alice Springs**	**98.65**	**162**	P	**P**	**22 24 40.5**	**-0.1**
R11A	**Troy Canyon, C**	**120.19**	**295**	PKPdf	**PKPdf**	**22 29 49.9**	**-1.4**
FRB	**Frobisher Bay**	**123.99**	**339**	PKP	**PKPdf**	**22 29 56.6**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=174,slow=6.4,SNR=3.4						
FINES	**FINESS Array B**	**124.60**	**28**	PKP	**PKPdf**	**22 29 58.0**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=288,slow=0.6,SNR=7.8						
GAR	**Garm**	**125.15**	**71**	PKPpre	PKPpre	22 29 56.4	
ABKAR	**Akbulak array**	**127.44**	**55**	PKPdf	**PKPdf**	**22 30 04.4**	**-0.2**
ARSB	**Arslanbob**	**128.24**	**71**	PKPpre	PKPpre	22 30 00.9	
EPYK	**Eagle Plains**	**146.74**	**316**		**PKPbc**	**22 30 41.0**	**-0.4**
DAWY	**Dawson**	**147.09**	**312**	PKPdf	**PKPbc**	**22 30 42.2**	**-0.3**
L27K	**Beaver Creek,**	**147.80**	**309**	PKPdf	**PKPbc**	**22 30 43.7**	**-0.7**
DOT	**Dot Lake**	**148.94**	**310**		**PKPbc**	**22 30 47.2**	**-0.1**
SCRK	**Sand Creek**	**149.00**	**310**		**PKPbc**	**22 30 47.4**	**-0.2**
NRIK	**Noril'sk**	**149.17**	**39**	PKPbc	**PKiKP**	**22 30 48.8**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=225,slow=1.7,SNR=3.6						
NRIK	**Noril'sk**	**149.17**	**39**		**PKiKP**	**22 30 48.1**	**-0.7**
SCM	**Sheep Creek Mo**	**149.86**	**305**	PKPbc	**PKPbc**	**22 30 48.1**	**-1.6**
PRP	**Porcupine Dome**	**150.01**	**313**		**PKPbc**	**22 30 50.0**	**0.0**
IL31		**150.42**	**311**		**PKiKP**	**22 30 51.0**	**-0.5**
ILAR	**Eielson Array**	**150.42**	**311**	PKPbc	**PKPbc**	**22 30 50.2**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=128,slow=2.2,SNR=22						
SONM	**Songino Array**	**150.62**	**87**	PKPbc	**PKPbc**	**22 30 51.8**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=241,slow=2.2,SNR=11						
SONM	**Songino Array**	**150.62**	**87**		**PKPbc**	**22 30 51.5**	**-0.5**
WRH	**Wood River Hil**	**150.86**	**310**		**PKPbc**	**22 30 51.6**	**-0.3**
RND	**Reindeer**	**150.96**	**308**		**PKiKP**	**22 30 52.5**	**-0.3**
MCK	**McKinley**	**151.06**	**309**		**PKiKP**	**22 30 52.6**	**-0.4**
SUA	**Susitna One**	**151.33**	**304**	PKPbc	**PKPbc**	**22 30 51.9**	**-1.3**
TRF	**Thorofare Moun**	**151.60**	**308**	PKPbc	**PKPbc**	**22 30 53.4**	**-0.5**
SKT	**Skwentna**	**151.82**	**305**	PKPbc	**PKPbc**	**22 30 54.0**	**-0.2**
TOLK	**Toolik Lake Re**	**152.00**	**319**		**PKiKP**	**22 30 54.5**	**-0.2**
BPAW	**Bear Paw Mtn.**	**152.03**	**309**		**PKPbc**	**22 30 54.3**	**-0.3**
PPLA	**Purkeypile**	**152.32**	**306**	PKPbc	**PKPbc**	**22 30 54.6**	**-0.9**

NEIC ***27*** *22:22:17.5±2.1, 35.°97N±0.°04×97.°33W±0.°05, h5km±6km, Error ellipse: s-maj=5.7km s-min=5.1km az=130.0*

IDC ***27*** *22:22:17.4±1.2, 35.°96N×97.°35W, h0km, mb3.9/4, mb1 4.2/8, mb1mx3.8/47, mbtmp3.9/8, ML3.6/2, MS3.5/9, Ms1 3.5/9, ms1mx3.2/31, Error ellipse: s-maj=21.0km s-min=10.9km az=112.0*

NEIC ***27*** *22:22:17.9, 35.°94N×97.°36W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=0.32; Mθθ 1.42; Mϕϕ -1.10; Mrθ -0.43; Mrϕ 1.02; Mθϕ 0.48; Fault plane solution: M0 1.76000×10^15 NP1:ϕs 207.62000°, δ 68.66000°, λ -167.97000°. NP2:ϕs 113.18000°, δ 78.80000°, λ -21.77000°. Principal axes: T 1.8101, Plg 7.0000°, Azm 162.0000°; N -0.0943, Plg 66.0000°, Azm 267.0000°; P -1.7158, Plg 23.0000°, Azm 69.0000°;*

ANF ***27*** *22:22:17.8±0.3, 35.°96N×97.°32W, h5km, ML5.2/24 Error ellipse: s-maj=3.5km s-min=2.9km az=120.0*

TUL ***27*** *22:22:17.9±2.5, 35.°92N±0.°04×97.°33W±0.°06, h5km±5km, ML4.1, mb4.1/28(NEIC), mb_Lg4.4/147(NEIC), Mwr4.1/71(NEIC), Error ellipse: s-maj=7.0km s-min=5.6km az=53.0*

ISC 27 22:22:17.6±1.0**, 35.°95N**±0.°02×**97.°33W**±0.°02**, h7**km**±7**km**, n295,** σ1°**22**/286**, mb3.8**/5**, MS3.7**/6**, Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.18**	**213**		**Pg**	**22 22 21.5**	**+0.2**
OK029				Sg	**Sg**	**22 22 23.9**	**+0.1**
OK005	**Luther M Schoo**	**0.32**	**159**	Pg	**Pg**	**22 22 25.0**	**+1.1**
OK005				Sg	**Sg**	**22 22 29.2**	**+1.2**
OK025	**Westminster Rd**	**0.37**	**181**		**Pg**	**22 22 24.9**	**+0.1**
BCOK	**Bluff Creek, N**	**0.37**	**218**		**Pg**	**22 22 25.0**	**+0.1**
BCOK				Sg	**Sg**	**22 22 30.1**	**+0.4**
OK009	**Oakdale Elemen**	**0.38**	**191**		**Pg**	**22 22 25.1**	**+0.1**
OK001	**Jones High Sch**	**0.39**	**175**	Pg	**Pg**	**22 22 25.3**	**+0.1**
OK031	**S. Brethren Rd**	**0.40**	**90**		**Pg**	**22 22 26.1**	**+0.7**
OK031				Sg	**Sg**	**22 22 31.6**	**+0.9**
OK030	**Cody Creek RV**	**0.45**	**93**		**Pg**	**22 22 26.9**	**+0.7**
OK030				Sg	**Sg**	**22 22 32.9**	**+0.8**
OKCFA	**Oklahoma City**	**0.54**	**190**		**Pg**	**22 22 28.1**	**0.0**
OKCFA	**Oklahoma City**	**0.54**	**190**	P	**Pg**	**22 22 28.1**	**0.0**
	baz=12,SNR=159						
OKCFA				S	**Sg**	**22 22 35.5**	**+0.3**
	baz=12						
OKCFA	**Oklahoma City**	**0.54**	**190**	P		22 22 28.1	
	baz=12,SNR=159						
OKCFA				S		22 22 35.5	
	baz=12						
QUOK	**Quay**	**0.55**	**66**		**Pg**	**22 22 29.0**	**+0.8**
QUOK				IAmb_Lg		22 22 36.1	
	comp=Z,4μm,0.8s						
QUOK				Sg	**Sg**	**22 22 36.3**	**+0.9**
OKCSW	**OKLAHOMA CITY**	**0.55**	**189**		**Pg**	**22 22 28.2**	**0.0**
FNO	**Franklin**	**0.69**	**185**	Pg	**Pg**	**22 22 31.4**	**+0.4**
CROK	**Carrier**	**0.76**	**316**	Pg	**Pg**	**22 22 32.6**	**+0.3**
CROK				IAmb_Lg		22 22 42.9	
	comp=Z,3μm,0.9s						
GC02	**Grant County #**	**0.99**	**335**	Pg	**Pb**	**22 22 37.2**	**0.0**
KAN13	**South Haven SW**	**1.07**	**354**		**Pb**	**22 22 38.5**	**+0.1**
OK032	**Salt Plains WL**	**1.11**	**320**	Pg	**Pg**	**22 22 39.0**	**+0.1**
KAN14	**Manchester OK**	**1.12**	**333**	Pg	**Pb**	**22 22 39.5**	**0.0**
T35A	**Sooner Cattle**	**1.17**	**34**		**Pg**	**22 22 40.1**	**+0.1**
T35B	**Sooner Cattle**	**1.17**	**34**	P	**Pg**	**22 22 40.1**	**0.0**
	baz=214,SNR=1000						
T35B				S	**Sb**	**22 22 55.9**	**+0.4**
	baz=214						
T35B	**Sooner Cattle**	**1.17**	**34**	P		22 22 40.1	
	baz=214,SNR=1000						
T35B				S		22 22 55.9	
	baz=214						
KAN09	**Caldwell North**	**1.21**	**349**		**Pb**	**22 22 41.0**	**+0.2**
KAN05	**Bluff City Nor**	**1.23**	**339**		**Pb**	**22 22 41.5**	**+0.2**
KAN01	**Argonia South**	**1.25**	**344**		**Pg**	**22 22 41.5**	**0.0**
KAN01				IAmb_Lg		22 23 00.2	
	comp=Z,2μm,1.3s						
TUL1	**Leonard**	**1.25**	**91**	P	**Pg**	**22 22 40.5**	**-1.1**
	baz=271,SNR=414						
TUL1				S	**Sg**	**22 22 57.5**	**-0.3**
	baz=271						
TUL1	**Leonard**	**1.25**	**91**	P		22 22 40.5	
	baz=271,SNR=510						
TUL1				S		22 22 57.8	
	baz=271						
TUL1	**Leonard**	**1.25**	**91**	P		22 22 40.5	
	baz=271,SNR=414						
TUL1				S		22 22 57.5	
	baz=271						
KS20	**Mayfield South**	**1.29**	**352**		**Pb**	**22 22 42.5**	**+0.3**
KAN10	**Anthony SW Sta**	**1.32**	**332**		**Pn**	**22 22 42.6**	**+0.1**
KS21	**Milan North St**	**1.36**	**349**		**Pb**	**22 22 43.5**	**+0.1**
KAN08	**Anthony NE Sta**	**1.37**	**338**		**Pb**	**22 22 43.8**	**+0.1**
KAN16	**Harper SW Stat**	**1.40**	**335**	Pn	**Pn**	**22 22 44.1**	**+0.4**
U32A	**Winter Ranch,**	**1.42**	**288**		**Pn**	**22 22 43.9**	**0.0**
U32A	**Winter Ranch,**	**1.42**	**288**	P	**Pn**	**22 22 44.0**	**0.0**
	baz=108						
U32A				S	**Sg**	**22 23 03.8**	**+0.6**
	baz=108						
U32A	**Winter Ranch,**	**1.42**	**288**	P		22 22 44.0	
	baz=108						
U32A				S		22 23 03.8	
	baz=108						
KAN12	**Harper NE Stat**	**1.45**	**338**		**Pb**	**22 22 45.0**	**+0.1**
WMOK	**Wichita Mounta**	**1.69**	**225**		**Pn**	**22 22 48.1**	**+0.3**
WMOK				IAmb_Lg		22 23 13.2	
	comp=Z,3μm,0.9s						
WMOK	**Wichita Mounta**	**1.69**	**225**	P	**Pn**	**22 22 48.0**	**+0.3**
	baz=45,SNR=548						
WMOK				S	**Sn**	**22 23 10.3**	**+0.6**
	baz=45						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		22 22 47.9	
	baz=45,SNR=1000						
WMOK				S		22 23 10.5	
	baz=45						
WMOK	**Wichita Mounta**	**1.69**	**225**	P		22 22 48.0	
	baz=45,SNR=548						
WMOK				S		22 23 10.3	
	baz=45						
X37A	**Clayton**	**2.10**	**130**		**Pn**	**22 22 54.0**	**+0.7**
X37A				IAmb_Lg		22 23 27.7	
	comp=Z,3μm,0.8s						
X37A	**Clayton**	**2.10**	**130**	P	**Pn**	**22 22 53.9**	**+0.7**
	baz=310,SNR=1000						
X37A				Sb	**Sg**	**22 23 24.3**	**-0.9**
	baz=310						
X37A	**Clayton**	**2.10**	**130**	P		22 22 53.9	
	baz=310,SNR=1000						
X37A				Sb		22 23 24.3	
	baz=310						
U38A	**Gravette**	**2.43**	**78**		**Pn**	**22 22 58.4**	**+0.6**
U38A	**Gravette**	**2.43**	**78**	P	**Pn**	**22 22 58.6**	**+0.8**
	baz=258,SNR=271						
U38A	**Gravette**	**2.43**	**78**	P		22 22 58.6	
	baz=258,SNR=271						
Z35A	**Perchaven, San**	**2.62**	**179**		**Pn**	**22 23 00.5**	**+0.2**
Z35A				IAmb_Lg		22 23 39.6	
	comp=Z,1μm,0.9s						
Z35A	**Perchaven, San**	**2.62**	**179**	P	**Pn**	**22 23 00.8**	**+0.5**
	baz=359,SNR=84						
Z35A				S	**Sb**	**22 23 36.9**	**-0.3**
	baz=359						
Z35A	**Perchaven, San**	**2.62**	**179**	P		22 23 00.8	
	baz=359,SNR=84						
Z35A				S		22 23 36.9	
	baz=359						
R32A	**Long Quarter,**	**2.70**	**336**		**Pn**	**22 23 02.8**	**+1.2**
R32A				IAmb_Lg		22 23 47.2	
	comp=Z,754nm,0.9s						
R32A	**Long Quarter,**	**2.70**	**336**	P	**Pn**	**22 23 02.7**	**+1.2**
	baz=156,SNR=124						
R32A	**Long Quarter,**	**2.70**	**336**	P		22 23 02.7	
	baz=156,SNR=124						
HHAR	**Hobbs**	**2.77**	**82**		**Pn**	**22 23 02.8**	**+0.4**
HHAR	**Hobbs**	**2.77**	**82**	P	**Pn**	**22 23 03.0**	**+0.6**
	baz=263,SNR=65						
HHAR	**Hobbs**	**2.77**	**82**	P		22 23 03.0	
	baz=263,SNR=65						
W39A	**Magazine**	**2.99**	**104**		**Pn**	**22 23 06.0**	**+0.6**
W39A				IAmb_Lg		22 23 59.5	
	comp=Z,2μm,0.9s						
W39A	**Magazine**	**2.99**	**104**	P	**Pn**	**22 23 05.9**	**+0.5**
	baz=285,SNR=56						
W39A				S	**Sn**	**22 23 43.1**	**+1.5**
	baz=285						
W39A	**Magazine**	**2.99**	**104**	P		22 23 06.0	
	baz=285,SNR=67						
W39A				S		22 23 43.4	
	baz=285						
W39A	**Magazine**	**2.99**	**104**	P		22 23 05.9	
	baz=285,SNR=56						
W39A				S		22 23 43.1	
	baz=285						
KSU1	**Kansas State U**	**3.20**	**10**	Pn	**Pn**	**22 23 09.6**	**+1.3**
KSU1				IAmb_L

237A	Washetta, Mont	4.14	162	P		Pn	22 23 20.9	-0.4		
	baz=343,SNR=16									
237A				S		Sn	22 24 11.4	+1.5		
	baz=343									
237A	Washetta, Mont	4.14	162	P			22 23 20.9			
	baz=343,SNR=16									
237A				S			22 24 11.4			
	baz=343									
WHAR	Wooly Hollow	4.16	98			Pn	22 23 21.7	+0.2		
WHAR				IAmb_Lg			22 24 35.3			
	comp=Z,1µm,1.0s									
W41B	Gary Mavity, V	4.22	99	P		Pn	22 23 22.7	+0.3		
	baz=282,SNR=166									
W41B	Gary Mavity, V	4.22	99	P			22 23 22.6			
	baz=282,SNR=38									
W41B				S			22 24 13.6			
	baz=282									
W41B				Sb			22 24 28.8			
	baz=282									
W41B	Gary Mavity, V	4.22	99	P			22 23 22.7			
	baz=282,SNR=166									
FCAR	Ozark Folk Cen	4.23	89			Pn	22 23 22.1	-0.4		
FCAR				IAmb_Lg			22 24 37.6			
	comp=Z,745nm,0.8s									
MGMO	Mountain Grove	4.25	72			Pn	22 23 23.4	+0.6		
MGMO				IAmb_Lg			22 24 33.1			
	comp=Z,972nm,0.9s									
Z41A	Richland Creek	4.60	124	P		Pn	22 23 27.2	-0.4		
	baz=307,SNR=10									
Z41A	Richland Creek	4.60	124	P			22 23 27.6			
	baz=307									
Z41A				S			22 24 20.9			
	baz=307									
Z41A	Richland Creek	4.60	124	P			22 23 27.2			
	baz=307,SNR=10									
Z41A				P			22 23 27.2			
	baz=307,SNR=10									
R40A	Maddies Statio	4.67	59			Pn	22 23 29.2	+0.6		
R40A				IAmb_Lg			22 24 46.9			
	comp=Z,713nm,0.8s									
R40A	Maddies Statio	4.67	59	P		Pn	22 23 29.0	+0.4		
	baz=241,SNR=88									
R40A	Maddies Statio	4.67	59	P			22 23 29.0			
	baz=241,SNR=88									
NATX	Nacogdoches	4.73	151	Pn		Pn	22 23 29.5	+0.1		
NATX	Nacogdoches	4.73	151	P			22 23 30.3			
	baz=333									
NATX				S			22 24 25.2			
	baz=333									
P38A	Dawn	4.74	38	Pn		Pn	22 23 30.6	+1.0		
P38A				IAmb_Lg			22 24 53.8			
	comp=Z,1µm,1.0s									
P38A	Dawn	4.74	38	P		Pn	22 23 30.0	+0.5		
	baz=220									
P38A	Dawn	4.74	38	P			22 23 30.0			
	baz=220									
N33A	J Bar K, Exete	4.78	359			Pn	22 23 30.7	+0.6		
MSTX	Muleshoe	4.89	248	Pn		Pn	22 23 32.0	+0.3		
MSTX	Muleshoe	4.89	248	P			22 23 32.1			
	baz=65,SNR=7.9									
MSTX				S			22 24 29.2			
	baz=65									
CCAR	Cane Creek	5.00	112	Pn		Pn	22 23 33.3	+0.2		
CCAR				IAmb_Lg			22 25 00.5			
	comp=Z,938nm,0.9s									
CCAR	Cane Creek	5.00	112	P		Pn	22 23 33.2	+0.2		
	baz=295,SNR=8.9									
CCAR	Cane Creek	5.00	112	P			22 23 33.2			
	baz=295,SNR=8.9									
LCAR	Lake Charles	5.01	87			Pn	22 23 33.0	-0.2		
LCAR				IAmb_Lg			22 24 57.5			
	comp=Z,736nm,0.8s									
LCAR	Lake Charles	5.01	87	P		Pn	22 23 32.9	-0.3		
	baz=270,SNR=13									
LCAR	Lake Charles	5.01	87	P			22 23 32.9			
	baz=270,SNR=13									
N35A	Tabor	5.08	15	Pn		Pn	22 23 34.7	+0.5		
N35A	Tabor	5.08	15	P		Pn	22 23 34.8	+0.6		
	baz=196									
N35A	Tabor	5.08	15	P			22 23 34.8			
	baz=196									
T42A	Van Buren	5.14	76	P		Pn	22 23 35.0	0.0		
	baz=259,SNR=49									
T42A	Van Buren	5.14	76	P			22 23 35.0			
	baz=259,SNR=49									
435B	Jarrell	5.16	182	P			22 23 35.5			
	baz=2.4									
435B				Sb			22 24 55.9			
	baz=2.4									
435B	Jarrell	5.16	182	P			22 23 35.2			
	baz=2.4									
435B	Jarrell	5.16	182	Pn		Pn	22 23 35.7	+0.4		
435B				IAmb_Lg			22 25 04.8			
	comp=Z,889nm,0.8s									
435B	Jarrell	5.16	182	P		Pn	22 23 35.2	-0.1		
	baz=2.4									
KSCO	Kaye Shedlock'	5.20	308	Pn		Pn	22 23 37.7	+1.7		
KSCO				IAmb_Lg			22 25 11.2			
	comp=Z,715nm,0.8s									
KSCO	Kaye Shedlock'	5.20	308	P			22 23 37.8			
	baz=125,SNR=18									
KSCO				S			22 24 38.7			
	baz=125									
CCM	Cathedral Cave	5.30	65			Pn	22 23 37.2	-0.1		
CCM				IAmb_Lg			22 25 06.5			
	comp=Z,676nm,1.0s									
CCM	Cathedral Cave	5.30	65	P		Pn	22 23 37.5	+0.2		
	baz=248,SNR=28									
CCM	Cathedral Cave	5.30	65	Sb			22 25 02.7			
	baz=248									
CCM	Cathedral Cave	5.30	65	P			22 23 37.5			
	baz=248,SNR=28									
HBAR	Harrisburg	5.44	92	Pn		Pn	22 23 39.3	+0.2		
X43A	Marvell	5.47	103	P			22 23 40.2			
	baz=287									
X43A				Sb			22 25 07.3			
	baz=287									
BGNE	Belgrade	5.49	354			Pn	22 23 40.3	+0.5		
BGNE	Belgrade	5.49	354	P		Pn	22 23 40.1	+0.3		
	baz=173,SNR=20									
BGNE	Belgrade	5.49	354	P			22 23 40.3			
	baz=173,SNR=6.0									
BGNE	Belgrade	5.49	354	P			22 23 40.1			
	baz=173,SNR=20									
P40A	Paris	5.50	48			Pn	22 23 40.5	+0.5		
P40A	Paris	5.50	48	P		Pn	22 23 40.5	+0.5		
	baz=231,SNR=15									
P40A	Paris	5.50	48	P			22 23 40.5			
	baz=231,SNR=15									
LPAR	Lepanto	5.73	91	IAmb_Lg			22 25 28.3			
	comp=Z,1µm,0.7s									
N38A	Joes South For	5.81	32			Pn	22 23 44.8	+0.7		
N38A	Joes South For	5.81	32	P		Pn	22 23 44.1	0.0		
	baz=215,SNR=16									
N38A	Joes South For	5.81	32	P			22 23 44.1			
	baz=215,SNR=16									
T25A	Trinidad	5.82	284	Pn		Pn	22 23 45.0	+0.3		
T25A				IAmb_Lg			22 25 25.8			
	comp=Z,612nm,0.9s									
T25A	Trinidad	5.82	284	P			22 23 44.9			
	baz=100,SNR=22									
JCT	Junction City	5.84	201	Pn		Pn	22 23 44.5	-0.2		
JCT	Junction City	5.84	201	P			22 23 45.2			
	baz=20,SNR=7.8									
143A	Socs Landing,	5.88	122	Pn		Pn	22 23 45.4	+0.2		
143A				IAmb_Lg			22 25 34.2			
	comp=Z,656nm,0.8s									
FVM	French Village	5.89	68			Pn	22 23 45.4	+0.1		
FVM				IAmb_Lg			22 25 32.1			
	comp=Z,317nm,0.8s									
FVM	French Village	5.89	68	P		Pn	22 23 46.2	+0.8		
	baz=252,SNR=14									
FVM	French Village	5.89	68	P			22 23 46.2			
	baz=252,SNR=14									
L34A	Svendsen Farm,	6.05	7	Pn		Pn	22 23 47.4	-0.2		
L34A	Svendsen Farm,	6.05	7	P		Pn	22 23 47.9	+0.3		
	baz=187,SNR=10.0									
L34A	Svendsen Farm,	6.05	7	P			22 23 47.9			
	baz=187,SNR=10.0									
MET	Memphis--Engin	6.09	96	IAmb_Lg			22 25 47.7			
	comp=Z,958nm,0.9s									
342A	Flagon Creek P	6.18	136	Pn		Pn	22 23 49.7	+0.4		
PVMO	Portageville	6.19	83	IAmb_Lg			22 25 49.4			
	comp=Z,976nm,0.7s									
OGNE	Ogallala	6.20	325	Pn		Pn	22 23 50.9	+1.2		
OGNE				IAmb_Lg			22 25 40.2			
	comp=Z,538nm,0.8s									
OGNE	Ogallala	6.20	325	P			22 23 51.0			
	baz=142,SNR=18									
SLM	Saint Louis	6.26	63	IAmb_Lg			22 25 40.8			
	comp=Z,731nm,1.0s									
LNXT	Lenox	6.36	86	Pn		Pn	22 23 51.6	-0.1		
HENM	Henderson Moun	6.39	81	Pn		Pn	22 23 53.1	+0.9		
HICK	Hickman	6.57	82	Pn		Pn	22 23 54.9	+0.2		
OXF	Oxford	6.64	100			Pn	22 23 54.4	-1.3		
OXF				IAmb_Lg			22 25 57.2			
	comp=Z,890nm,1.1s									
OXF	Oxford	6.64	100	P		Pn	22 23 54.6	-1.0		
	baz=284,SNR=11									
OXF	Oxford	6.64	100	P			22 23 54.7			
	baz=284,SNR=5.8									
OXF				S			22 25 11.9			
	baz=284									
OXF	Oxford	6.64	100	P			22 23 54.6			
	baz=284,SNR=11									
W45A	Hickory Valley	6.69	94	IAmb_Lg			22 25 51.7			
	comp=Z,156nm,0.8s									
S44A	Carbondale	6.71	73	Pn		Pn	22 23 55.6	-0.9		
S44A	Carbondale	6.71	73	P		Pn	22 23 56.5	-0.1		
	baz=257,SNR=12									
S44A	Carbondale	6.71	73	P			22 23 56.5			
	baz=257,SNR=12									
Y45A	Yeager Farm, C	6.73	106			Pn	22 23 56.8	-0.1		
Y45A				IAmb_Lg			22 26 04.8			
	comp=Z,498nm,0.7s									
Y45A	Yeager Farm, C	6.73	106	P		Pn	22 23 56.8	-0.1		
	baz=290,SNR=8.4									
Y45A	Yeager Farm, C	6.73	106	P			22 23 56.8			
	baz=290,SNR=8.4									
SIUC	Southern Illin	6.74	72	Pn		Pn	22 23 56.4	-0.7		
K31A	O'Neill	6.75	351	Pn		Pn	22 23 59.1	+1.9		
K31A	O'Neill	6.75	351	P		Pn	22 23 58.6	+1.4		
	baz=170,SNR=9.8									
K31A	O'Neill	6.75	351	P			22 23 58.6			
	baz=170,SNR=9.8									
SCIA	State Center	6.76	27	P			22 23 58.9			
	baz=209									
SDCO	Great Sand Dun	6.79	288			Pn	22 23 59.3	+1.3		
SDCO				IAmb_Lg			22 25 56.6			
	comp=Z,544nm,1.1s									
SDCO	Great Sand Dun	6.79	288	P		Pn	22 23 59.5	+1.5		
	baz=103,SNR=29									
SDCO	Great Sand Dun	6.79	288	P			22 23 59.4			
	baz=103,SNR=74									
SDCO	Great Sand Dun	6.79	288	P			22 23 59.5			
	baz=103,SNR=29									
Q24A	Divide	6.91	298	P			22 23 59.8			
	baz=114,SNR=17									
N41A	Harden Midland	6.96	45	Pn		Pn	22 24 00.2	+0.2		
735A	Kenedy	7.09	183	IAmb_Lg			22 26 14.3			
	comp=Z,579nm,1.1s									
344A	Westbrook Farm	7.10	127	IAmb_Lg			22 25 56.6			
	comp=Z,247nm,1.1s									
P43A	Skaggs, Pawnee	7.20	57	Pn		Pn	22 24 03.6	+0.3		
Q44A	Meyer Farm, Va	7.24	64	Pn		Pn	22 24 04.3	+0.4		
K38A	Parkersburg	7.56	26	Pn		Pn	22 24 08.7	+0.4		
ISCO	Idaho Springs	7.59	303	Pn		Pn	22 24 09.1	+0.1		
ISCO				IAmb_Lg			22 26 25.7			
	comp=Z,228nm,1.0s									
ISCO	Idaho Springs	7.59	303	P		Pn	22 24 09.5	+0.5		
	baz=118,SNR=36									
ISCO	Idaho Springs	7.59	303	P			22 24 09.5			
	baz=118,SNR=72									
ISCO	Idaho Springs	7.59	303	P			22 24 09.5			
	baz=118,SNR=36									
PLAL	Pickwick Lake	7.61	95	Pn		Pn	22 24 07.6	-1.4		
PLAL				IAmb_Lg			22 26 25.0			
	comp=Z,430nm,1.0s									
WVT	Waverly	7.70	86	Pn		Pn	22 24 09.1	-1.0		
WVT				IAmb_Lg			22 26 21.3			
	comp=Z,248nm,0.8s									
L40A	Anamosa	7.74	36			Pn	22 24 10.8	+0.1		
L40A				IAmb_Lg			22 26 38.7			
	comp=Z,496nm,0.8s									
ECSD	EROS Data Cent	7.79	4	Pn		Pn	22 24 10.9	-0.5		
ECSD				IAmb_Lg			22 26 31.7			
	comp=Z,291nm,0.8s									
ECSD	EROS Data Cent	7.79	4	P			22 24 11.0			
	baz=184,SNR=32									
833A	Chaparral WMA,	7.80	194	P			22 24 12.5			
	baz=12									
HDIL	Hopedale	7.81	52			Pn	22 24 11.4	-0.4		
HDIL	Hopedale	7.81	52	P			22 24 11.2			
	baz=236									
BNM	Barren Site	7.83	259	Pn		Pn	22 24 12.2	0.0		
MNTX	Cornudas Mount	7.93	240	Pn		Pn	22 24 14.5	+1.1		
MNTX				IAmb_Lg			22 26 40.3			
	comp=Z,231nm,0.9s									
MNTX	Cornudas Mount	7.93	240	P			22 24 14.7			
	baz=56,SNR=15									
USIN	University of	7.99	73	Pn		Pn	22 24 15.1	+0.9		
Y22D	IRIS PASSCAL I	8.09	259	IAmb_Lg			22 26 44.5			
	comp=Z,401nm,0.8s									
Z47A	Carrollton	8.12	107	IAmb_Lg			22 26 58.1			
	comp=Z,212nm,0.8s									
PHWY	Pilot Hill	8.30	312			Pn	22 24 18.8	+0.1		
PHWY				IAmb_Lg			22 26 57.7			
	comp=Z,296nm,1.0s									
T47A	Sharon Grove	8.30	80			Pn	22 24 17.8	-0.6		
T47A				IAmb_Lg			22 26 42.9			
	comp=Z,534nm,0.9s									
T47A	Sharon Grove	8.30	80	P		Pn	22 24 18.0	-0.5		
	baz=266,SNR=9.7									
T47A	Sharon Grove	8.30	80	P			22 24 18.0			
	baz=266,SNR=9.7									
N23A	Red Feather La	8.37	309	P			22 24 20.7			
	baz=124,SNR=131									
TX31	Lajitas Ar. Si	8.49	221	Pn		Pn	22 24 20.2	-0.9		
TX31	Lajitas Ar. Si	8.49	221	P		Pn	22 24 20.0	-1.1		
	baz=37,SNR=24									
TX31	Lajitas Ar. Si	8.49	221	P			22 24 20.0			
	baz=37,SNR=24									
TX32	Lajitas Array	8.49	221	Pn		Pn	22 24 20.2	-0.9		
TXAR	Lajitas Array	8.49	221	Pn		Pn	22 24 20.2	-0.9		
	comp=Z,1.2nm,0.3s,baz=43,slow=12,SNR=44									
TXAR					Pg		Pb	22 24 51.3	+6.3	
	comp=Z,5.1nm,0.3s,baz=33,slow=15,SNR=8.4									
TXAR					Lg		Lg	22 26 42.4		
	comp=Z,7.9nm,0.3s,baz=46,slow=25,SNR=12									
TXAR	Lajitas Array	8.49	221			Pn	22 24 20.5	-0.6		
L42A	Oliver, Polo	8.49	42	Pn		Pn	22 24 20.8	-0.2		
L42A				IAmb_Lg			22 26 55.2			
	comp=Z,577nm,0.9s									
V48A	Smith Brothers	8.54	88	IAmb_Lg			22 26 51.0			
	comp=Z,257nm,0.8s									
X48A	Hartselle	8.55	97	IAmb_Lg			22 26 52.6			
	comp=Z,224nm,0.7s									
SUSD	Miller	8.57	352	Pn		Pn	22 24 23.4	+1.3		
SUSD				IAmb_Lg			22 27 00.7			
	comp=Z,358nm,0.9s									
I37A	Lemond, Waseca	8.60	19	IAmb_Lg			22 27 12.3			
	comp=Z,612nm,0.9s									
P46A	Rosedale	8.81	62			Pn	22 24 26.1	+0.7		
JFWS	Jewell Farm	8.85	36			Pn	22 24 25.9	0.0		
JFWS				IAmb_Lg			22 27 11.2			
	comp=Z,618nm,0.7s									
JFWS	Jewell Farm	8.85	36	P			22 24 26.5			
	baz=220,SNR=14									
LRAL	Lakeview Retre	9.01	106			Pn	22 24 28.0	-0.1		
M44A	Midewin, Midew	9.06	50	Pn		Pn	22 24 29.1	+0.2		
WCI	Wyandotte Cave	9.11	72	Pn		Pn	22 24 30.2	+0.7		
WCI				IAmb_Lg			22 27 11.0			
	comp=Z,292nm,0.8s									
WCI	Wyandotte Cave	9.11	72	P		Pn	22 24 29.3	-0.2		
	baz=259,SNR=8.8									
WCI	Wyandotte Cave	9.11	72	P			22 24 30.3			
	baz=259									
WCI				S			22 26 12.9			
	baz=259									
WCI	Wyandotte Cave	9.11	72	P			22 24 29.3			
	baz=259,SNR=8.8									
BLO	Bloomington	9.16	66	IAmb_Lg			22 27 16.5			
	comp=Z,528nm,0.7s									
SFIN	Lafayette	9.19	58	Pn		Pn	22 24 31.0	+0.4		
Y49A	Blount Mountai	9.21	100	Pn		Pn	22 24 29.9	-1.0		
Y49A				IAmb_Lg			22 27 15.7			
	comp=Z,296nm,1.0s									
PV01	Paradox Valley	9.25	287	Pn		Pn	22 24 32.0	+0.4		
PV01				IAmb_Lg			22 27 16.3			
	comp=Z,168nm,1.2s									
SWET	Sewanee	9.31	91	IAmb_Lg			22 27 09.1			
	comp=Z,392nm,1.0s									
U49A	Red Boiling Sp	9.35	83	Pn		Pn	22 24 32.9	+0.1		
PV02	Paradox Valley	9.39	287	Pn		Pn	22 24 34.2	+0.6		
PV02				IAmb_Lg			22 27 25.9			
	comp=Z,279nm,1.3s									
PV13	Radium Mtn., P	9.45	287	IAmb_Lg			22 27 32.0			
	comp=Z,223nm,1.1s									
I40A	Norwalk	9.46	31	Pn		Pn	22 24 33.6	-0.7		
PV12	Saucer Basin,	9.46	288	IAmb_Lg			22 27 25.2			
	comp=Z,323nm,1.2s									
PV22	Blue Mesa, Par	9.49	289	Pn		Pn	22 24 36.6	+1.6		
PV11	David Mesa, Pa	9.51	288	IAmb_Lg			22 27 31.0			
	comp=Z,325nm,1.2s									
PV18	Skein Mesa, Pa	9.53	287	Pn		Pn	22 24 37.1	+1.6		
PV16	Nyswonger Mesa	9.55	288	Pn		Pn	22 24 37.8	+2.0		
PV04	Paradox Valley	9.55	288	Pn		Pn	22 24 37.8	+2.0		
PV04				IAmb_Lg			22 27 39.8			
	comp=Z,329nm,1.3s									
PV17	East Wray Mesa	9.57	287	Pn		Pn	22 24 37.2	+1.1		
RWWY	Rawlins	9.60	310			Pn	22 24 37.7	+1.2		
RWWY				IAmb_Lg			22 27 49.5			
	comp=Z,244nm,1.1s									
L44A	Lake County Fo	9.60	47			Pn	22 24 36.5	+0.3		
L44A	Lake County Fo	9.60	47	P			22 24 35.9			
	baz=232									
RSSD	Black Hills	9.64	330	Pn		Pn	22 24 37.3	+0.3		
RSSD				IAmb_Lg			22 27 52.3			
	comp=Z,198nm,1.1s									
RSSD	Black Hills	9.64	330	P			22 24 38.0			
	baz=146									
RSSD				S			22 26 24.2			
	baz=146									
PV10	Paradox Valley	9.65	288	IAmb_Lg			22 27 35.9			
	comp=Z,247nm,1.2s									
FPAL	Fort Paine	9.69	95	IAmb_Lg			22 27 32.3			
	comp=Z,280nm,1.0s									
K43A	Burlington	9.69	43			Pn	22 24 37.3	-0.2		
K43A	Burlington	9.69	43	P		Pn	22 24 37.3	-0.2		
	baz=229,SNR=7.6									
K43A	Burlington	9.69	43	P			22 24 37.3			
	baz=229,SNR=7.6									
K22A	Casper	9.77	316			Pn	22 24 39.0	+0.3		
K22A	Casper	9.77	316	P			22 24 39.1			
	baz=130									
W50A	Signal Mountai	9.82	91	Pn		Pn	22 24 39.6	+0.3		
W50A				IAmb_Lg			22 27 38.5			
	comp=Z,310nm,0.8s									
SPMN	Marine on St.	9.88	19			Pn	22 24 39.6	-0.4		
SPMN				IAmb_Lg			22 27 35.2			
	comp=Z,237nm,0.9s									
SPMN	Marine on St.	9.88	19	P			22 24 40.3			
	baz=202,SNR=6.9									
SPMN				S			22 26 29.7			
	baz=202									
F33A	5 Mile Ranch,	9.91	4	IAmb_Lg			22 27 34.4			
	comp=Z,374nm,1.1s									
R49A	Shelbyville	9.99	73	Pn		Pn	22 24 40.5	-1.1		
R49A				IAmb_Lg			22 27 37.7			
	comp=Z,162nm,0.8s									
250A	Grady	10.01	110	Pn		Pn	22 24 40.4	-1.4		
P48A	Milroy	10.06	66			Pn	22 24 43.7	+1.1		
T50A	Nancy	10.12	80			Pn	22 24 42.4	-0.9		
I42A	Draeger Farm,	10.22	37			Pn	22 24 45.5	+0.7		
F36A	Milaca	10.31	15	Pn		Pn	22 24 44.5	-1.5		
N47A	Urbana	10.37	58			Pn	22 24 45.5	-1.3		
CPCT	Cooper Cave	10.43	89	Pn		Pn	22 24 47.0	-0.6		
V51A	Loudon	10.54	87	Pn		Pn	22 24 48.7	-0.4		
P49A	Miami Univ. Ec	10.61	67	Pn		Pn	22 24 48.7	-1.4		
P49A	Miami Univ. Ec	10.61	67	P		Pn	22 24 48.9	-1.1		
	baz=254,SNR=5.1									
P49A	Miami Univ. Ec	10.61	67	P			22 24 48.9			
	baz=254									
P49A	Miami Univ. Ec	10.61	67	P			22 24 48.9			
	baz=254,SNR=5.1									
R50A	Paris	10.64	74	Pn		Pn	22 24 50.2	-0.3		
G40A	Rib Lake	10.76	28	Pn		Pn	22 24 51.7	-0.4		
TKL	Tuckaleechee C	11.02	88	Pn		Pn	22 24 56.1	+0.5		
Q49A	Covington	11.08	64	Pn		Pn	22 24 54.7	-1.8		
V52A	Sevierville	11.14	87	Pn		Pn	22 24 56.3	-1.1		
S51A	Beattyville	11.14	77			Pn	22 24 57.4	0.0		
S51A	Beattyville	11.14	77	P		Pn	22 24 57.4	0.0		
	baz=265,SNR=6.7									
S51A	Beattyville	11.14	77	P			22 24 57.4			
	baz=265,SNR=6.7									
S51A				P			22 24 57.4			
	baz=265,SNR=6.7									
H43A	Windswept, Lux	11.21	38	Pn		Pn	22 24 56.9	-1.3		
N49A	Columbus Grove	11.44	60	Pn		Pn	22 24 58.6	-2.8		
Q51A	Peebles	11.53	70	Pn		Pn	22 25 02.1	-0.6		
BW06	Boulder Array	11.65	309			Pn	22 25 04.0	-0.5		
BW06	Boulder Array	11.65	309	P			22 25 04.2			
	baz=122									
PD31	Pinedale Array	11.65	309			Pn	22 25 04.5	-0.1		
PDAR	Pinedale Array	11.65	309	Pn		Pn	22 25 04.0	-0.6		
	comp=Z,2.3nm,0.3s,baz=126,slow=14,SNR=56									
PDAR					Lg	Lg		22 28 23.0		
	comp=Z,0.8nm,0.3s,baz=170,slow=28,SNR=2.1									
PDAR					LR	LR		22 30 17.8		
	comp=Z,97nm,21.7s,baz=126,slow=41									
PDAR	Pinedale Array	11.65	309	Pn		Pn	22 25 03.9	-0.6		
GOGA	Godfrey	11.69	99	Pn		Pn	22 25 04.3	-0.6		
I45A	Fountain	11.72	43	Pn		Pn	22 25 03.9	-1.3		
V53A	Saluda	11.79	87	Pn		Pn	22 25 06.6	+0.3		
P51A	Williamsport	11.84	68			Pn	22 25 06.0	-0.8		
COWI	Conover	11.87

baz=93,slow=19,SNR=4.4
ULM LR LR 22 31 33.0
comp=Z,142nm,19.8s,baz=198,slow=39
ULM Lac du Bonnet 14.33 4 Pn **Pn 22 25 37.1 -3.8**
N54A Moraine State 14.47 65 Pn **Pn 22 25 39.8 -3.1**
N54A Moraine State 14.47 65 P 22 25 39.6
baz=255
R56A Bull Pasture M 14.50 75 P 22 25 41.3
baz=266
T57A Hurt 14.59 81 Pn **Pn 22 25 43.2 -1.3**
Q56A Snyder Ridge, 14.73 73 Pn **Pn 22 25 43.9 -2.5**
M54A Oil Creek Stat 14.86 63 Pn **Pn 22 25 44.2 -3.9**
EGMT Eagleton 15.17 326 Pn **Pn 22 25 51.7 -0.6**
EGMT IAmb IAmb 22 26 08.2
comp=Z,12nm,1.0s
O56A Blue Knob Stat 15.38 68 Pn **Pn 22 25 52.7 -2.5**
WVNY West Valley, N 15.87 60 Pn **Pn 22 25 58.2 -3.3**
WVNY IAmb IAmb 22 26 17.8
comp=Z,8.6nm,0.8s
M56A Emporium 15.92 64 Pn **Pn 22 26 00.5 -1.7**
M56A IAmb IAmb 22 26 07.5
comp=Z,10nm,0.8s
T59A Double "B" Far 15.95 80 Pn **Pn 22 26 00.4 -2.1**
T59A IAmb IAmb 22 26 04.1
comp=Z,23nm,1.5s
SSPA Standing Stone 15.96 67 Pn **Pn 22 25 59.5 -3.1**
SSPA IAmb IAmb 22 26 08.3
comp=Z,25nm,1.4s
O57A Amberson 16.08 69 P 22 26 01.9
baz=261
N57A Milroy 16.23 67 P 22 26 03.1
baz=259
L56A Greenwood 16.54 62 Pn **Pn 22 26 06.8 -3.3**
L56A Greenwood 16.54 62 P 22 26 07.5
baz=254
M57A Sunshine Farm, 16.66 65 Pn **Pn 22 26 08.7 -2.9**
PLID Pearl Lake 16.84 309 P **Pn 22 26 15.4 +1.3**
N58A Sunbury 16.87 67 **Pn 22 26 12.2 -2.0**
N58A IAmb IAmb 22 26 18.3
comp=Z,16nm,1.1s
NVAR Mina Array Bea 16.89 285 Pn **P 22 26 16.7 -0.1**
baz=86,slow=14,SNR=1.8
NVAR LR LR 22 33 08.3
comp=Z,66nm,18.6s,baz=82,slow=39
MVL Millersville 17.02 70 **Pn 22 26 14.3 -1.8**
N59A State Game Lan 17.59 67 P **Pn 22 26 22.7 -0.6**
N59A IAmb IAmb 22 26 25.3
comp=Z,10.0nm,0.9s
BINY Binghamton 17.69 63 P **Pn 22 26 23.5 -1.0**
BINY IAmb IAmb 22 26 28.0
comp=Z,11nm,0.7s
L58A Harry Jones Me 17.75 63 P 22 26 24.5
baz=257
PLVO Plevna 17.84 53 **Pn 22 26 23.6 -2.7**
PLVO IAmb IAmb 22 26 28.9
comp=Z,14nm,1.4s
K58A Earlville 18.07 61 P **Pn 22 26 28.6 -0.6**
K58A IAmb IAmb 22 26 32.6
comp=Z,26nm,1.4s
L59A Walton 18.37 63 P **Pn 22 26 32.3 -0.6**
L59A IAmb IAmb 22 26 36.1
comp=Z,14nm,0.7s
BRNJ Basking Ridge 18.46 68 P **Pn 22 26 34.6 +0.7**
ODNJ Ogdensburg 18.49 67 P **P 22 26 34.3 +0.1**
ODNJ IAmb IAmb 22 26 37.9
comp=Z,22nm,1.5s
K59A Cooperstown 18.64 62 P 22 26 33.8
baz=256
I58A Old Forge 18.80 59 P 22 26 35.8
baz=253
FFC Flin Flon 19.05 352 P **P 22 26 39.9 -0.3**
VLDQ Val d'Or 19.06 44 **P 22 26 37.2 -3.1**
J59A Piesco 19.06 60 P **P 22 26 40.1 -0.4**
LONY Lake Ozonia 19.35 56 P **P 22 26 44.2 +0.5**
NCB Newcomb 19.40 59 P **P 22 26 43.9 -0.3**
KSCT Kent School, K 19.42 66 P **Pn 22 26 46.0 +0.5**
H58A Gabriels 19.56 57 P 22 26 44.7
baz=252
MATQ Matagami 19.89 40 P 22 26 51.0
baz=233
FRNY Flat Rock 20.09 57 P **P 22 26 51.1 -0.5**
FRNY IAmb IAmb 22 27 07.4
comp=Z,13nm,1.4s
KRMB Red Mountain 21.42 293 P **P 22 27 05.0 -1.3**
KRMB IAmb IAmb 22 27 11.7
comp=Z,16nm,1.4s
FCC Fort Churchill 22.92 4 P **P 22 27 24.1 +2.1**
LMN Caledonia Moun 26.34 58 P **P 22 27 55.5 +1.4**
YKA Yellowknife Ar 28.67 343 P **P 22 28 15.9 +1.1**
comp=Z,0.7nm,0.6s,baz=142,slow=8.8,SNR=13
YKA LR LR 22 40 10.7
comp=Z,165nm,18.2s,baz=0.0,slow=38
FRB Frobisher Bay 32.88 23 P **P 22 28 52.8 +0.8**
comp=Z,0.7nm,0.5s,baz=216,slow=11,SNR=4.6
ILAR Eielson Array 41.09 330 P **P 22 30 02.1 +0.4**
comp=Z,1.7nm,0.8s,baz=108,slow=6.9,SNR=17
ILAR Eielson Array 41.09 330 P **P 22 30 03.2 +1.5**
NOA NORSAR Array B 67.36 30 LR LR 23 00 55.1
comp=Z,25nm,21.2s,baz=350,slow=34
ESDC Sonseca Array 70.43 55 LR LR 23 03 13.8
comp=Z,40nm,18.1s,baz=130,slow=35
FINES FINESS Array B 72.67 25 P **P 22 33 45.8 +0.1**
comp=Z,0.3nm,0.5s,baz=302,slow=6.1,SNR=5.7
GERES GERESS Array B 75.73 40 LR LR 23 07 02.4
comp=Z,28nm,18.1s,baz=310,slow=36
DBIC Dimbokro 88.13 83 LR LR 23 12 16.0
comp=Z,27nm,18.2s,baz=190,slow=34
TORD Torodi Ar. Bea 89.53 74 LR LR 23 14 36.0
comp=Z,29nm,18.1s,baz=175,slow=35

*IDC **27** 22:26:07.2±1.1,28°.18N×85°.12E, h0km, mb3.7/7, mb1 3.8/10,mb1mx3.5/40,mbtmp3.6/10,ML3.5/2,MS3.4/1, Ms1 3.4/1,ms1mx2.3/34,Error ellipse: s-maj=48.4km s-min=17.9km az=69.0*
*DMN **27** 22:26:08.0±0.1,28°.10N×84°.65E, h10km,Ml4.5/4,Error ellipse: s-maj=4.3km s-min=1.6km az=17.0*
*NDI **27** 22:26:08.3±4.4,27°.90N×84°.53E, h10km,ML4.0*
ISC 27 22:26:08.1±0.8,**28°.04N**±0°.06×**84°.63E**±0°.03,**h17**km±5km, **n32**,σ1**s86**/**47**,**mb3.6**/6,**1C**,**Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.04**	**165**	*e*Pg		**Pg**	**22 26 11.3**	**-0.1**
GKN				*e*Sg		**Sg**	**22 26 13.3**	**-0.3**
	48μm,0.2s							
DMN	**Daman**	**0.60**	**135**	*e*Pg		**Pg**	**22 26 20.4**	**+0.3**
DMN				*e*Sg		**Sg**	**22 26 28.4**	**+0.2**
	1μm,0.2s							
KKN	**Kakani**	**0.63**	**113**	*e*Pg		**Pg**	**22 26 20.3**	**-0.3**
KKN				*e*Sg		**Sg**	**22 26 28.4**	**-0.6**
	3μm,0.3s							
DANN	**Dangsing**	**0.82**	**292**	*e*Pg		**Pg**	**22 26 23.7**	**-0.6**
DANN				*e*Sg		**Sg**	**22 26 35.2**	**0.0**
	1μm,0.2s							
PKI	**Pulchoki**	**0.84**	**124**	*e*Pg		**Pg**	**22 26 24.1**	**-0.4**
PKI				*e*Sg		**Sg**	**22 26 36.2**	**+0.6**
	940nm,0.4s							
KOLN	**Koldanda**	**0.95**	**254**	*e*Pg		**Pg**	**22 26 26.7**	**+0.2**
KOLN				*e*Sg		**Sg**	**22 26 37.9**	**-1.1**
	3μm,0.2s							
GUN	**Gumba**	**1.12**	**96**	*e*Pg		**Pg**	**22 26 29.3**	**-0.5**
GUN				*e*Sg		**Sb**	**22 26 43.9**	**+0.4**
	802nm,0.3s							
PYUN	**Piuthan**	**1.45**	**273**	*e*Pg		**Pb**	**22 26 35.3**	**+0.6**
PYUN				*e*Sg		**Sn**	**22 26 53.9**	**+1.6**
	2μm,0.4s							
GTK	**Tadong**	**3.60**	**101**	*e*P		**Pn**	**22 27 05.5**	**+2.4**
GTK				*e*S		**Sn**	**22 27 47.8**	**+2.5**
GTK				IAML			22 28 02.0	
	comp=N,221nm,0.3s							
DDI	**Dehra Dun**	**6.18**	**293**	*e*P		**Pn**	**22 27 37.6**	**-0.9**
GUWA	**GUWAHATI**	**6.56**	**105**	*e*P		**Pn**	**22 27 42.2**	**-1.5**
GUWA				*e*S		**Sn**	**22 28 58.4**	**+0.3**
GUWA				IAML			22 29 00.4	
	comp=N,744nm,0.4s							
GUWA				IAML			22 29 02.7	
	comp=E,796nm,0.2s							
SHL	**Shillong**	**6.94**	**109**	*e*P		**Pn**	**22 27 47.2**	**-1.9**
SHL				*e*S		**Sn**	**22 29 04.7**	**-3.0**
SHL				IAML			22 29 06.5	
	comp=N,436nm,0.2s							
SMLA	**Simla**	**7.19**	**297**	*e*P		**Pn**	**22 27 54.2**	**+1.9**
SMLA				*e*S		**Sn**	**22 29 11.8**	**-1.8**
SMLA				IAML			22 29 16.7	
	comp=E,51nm,0.6s							
TEZP	**TEZPUR**	**7.41**	**99**	*e*P		**Pn**	**22 27 53.7**	**-1.7**
TEZP				*e*S		**Sn**	**22 29 16.0**	**-3.0**
BHPL	**Bhopal**	**8.06**	**235**	*e*P		**Pn**	**22 28 01.9**	**-2.5**
BHPL				*e*S		Sn	22 29 28.6	-6.7
BHPL				IAML			22 29 32.8	
	comp=N,95nm,0.2s							
DHRM	**DHARAMSHALA**	**8.34**	**302**↑	*e*P		**Pn**	**22 28 09.4**	**+1.0**
DHRM				*e*S		**Sn**	**22 29 37.1**	**-5.2**
DHRM				IAML			22 29 48.0	
	comp=E,53nm,0.5s							
KOHI	**KOHIMA**	**8.78**	**103**	*e*P		**Pn**	**22 28 14.3**	**0.0**
KOHI				*e*S		**Sn**	**22 29 51.5**	**-1.5**
KOHI				IAML			22 29 57.0	
	comp=N,19nm,0.5s							
AJM	**Ajmer**	**9.02**	**262**	*e*P		**Pn**	**22 28 14.0**	**-3.6**
AJM				*i* S		Sn	22 29 51.0	-7.8
CHCP	**Chirah Chowk**	**11.25**	**303**	P		**Pn**	**22 28 48.5**	**+0.4**
THW	**Thamme Wali**	**12.09**	**296**	P		**Pn**	**22 28 58.7**	**-0.8**
CEP	**Cherat**	**12.34**	**301**	P		**Pn**	**22 29 00.3**	**-2.8**
WMQ	**Urumqi**	**15.94**	**8**	*e*P		**P**	**22 29 54.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**16.24**	**123**	Pn		**Pn**	**22 29 54.0**	**-1.4**
	baz=320,slow=8.3,SNR=1.1							
AAK	**Ala-Archa**	**16.73**	**333**	Pn		**P**	**22 30 04.2**	**+0.3**
	comp=N,0.2nm,0.3s,baz=213,slow=12,SNR=2.1							
MKAR	**Makanchi Array**	**18.81**	**355**	P		**Pn**	**22 30 28.6**	**+1.3**
	comp=N,0.2nm,0.3s,baz=169,slow=10,SNR=10.0							
PALK	**Pallekele**	**20.99**	**191**	P		**P**	**22 30 55.5**	**+4.9**
	comp=N,1.4nm,0.3s,baz=107,slow=12,SNR=4.3							
KURBB	**Kurchatov Arra**	**23.02**	**350**	P		**P**	**22 31 14.6**	**+2.4**
	comp=N,0.5nm,0.7s,baz=178,slow=9.3,SNR=10.0							
ZALV	**Zalesovo Beam**	**25.89**	**0**	P		**P**	**22 31 38.5**	**-0.3**
	comp=N,0.4nm,0.3s,baz=182,slow=8.3,SNR=5.3							
FINES	**FINESS Array B**	**50.82**	**328**	P		**P**	**22 35 09.5**	**+2.2**
	comp=N,1.2nm,0.7s,baz=106,slow=7.4,SNR=4.3							
ARCES	**ARCESS Array B**	**53.32**	**338**	P		**P**	**22 35 26.4**	**+0.5**
	comp=N,4.5nm,1.1s,baz=104,slow=7.5,SNR=1.7							
ARCES						LR	22 59 43.6	
	comp=N,34nm,19.4s,baz=275,slow=38							
WRA	**Warramunga Arr**	**67.72**	**129**	P		**P**	**22 37 05.1**	**+0.3**
	comp=N,0.4nm,0.8s,baz=324,slow=6.3,SNR=2.1							
ASAR	**Alice Springs**	**70.00**	**132**	P		**P**	**22 37 19.4**	**+0.4**
	comp=N,0.3nm,0.7s,baz=322,slow=7.1,SNR=1.9							

*IDC **27** 22:27:59.0±0.7,6°.79N×72°.98W,h159km±8km,mb3.5/8, mb1 3.8/11,mb1mx3.5/32,mbtmp4.1/11,Error ellipse: s-maj=23.1km s-min=7.8km az=133.0*
*RSNC **27** 22:28:00.5±0.9,6°.81N×73°.16W,h150km±3km,ML4.2, Mw4.3,Fault plane solution: NP1:ϕs125.00000°, δ78.00000°,λ-164.00000°.*
*NEIC **27** 22:28:00.3±1.7,6°.73N±0°.08×72°.90W±0°.09,h171km±3km, mb4.3/38,Error ellipse: s-maj=13.9km s-min=10.5km az=126.0*
ISC 27 22:27:59.6±0.6,**6°.86N**±0°.03×**73°.14W**±0°.03,**h153**km±5km, **n113**,σ1**s58**/**148**,**mb4.3**/**27**,**7C-7D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**189**↓	*i*P		**Pn**	**22 28 20.6**		**-0.1**
BARC				*e*S		**Sn**	**22 28 35.8**		**-0.9**
BARC				*i*			22 28 38.6		
	comp=Z,3μm,0.4s								
BRRC	**Barranca, Sant**	**0.62**	**294**↑	*i*P		**Pn**	**22 28 22.4**		**+0.5**
BRRC				*e*S		**Sn**	**22 28 39.1**		**+0.2**
BRRC				*i*			22 28 43.4		
	comp=Z,2μm,0.3s								
PAMC	**Pamplona, Colo**	**0.65**	**42**↑	*i*P		**Pn**	**22 28 23.4**		**+0.8**
PAMC				*e*S		**Sn**	**22 28 40.7**		**+0.5**
PAMC				*i*			22 28 43.7		
	comp=Z,3μm,0.4s								
RUSC	**La Rusia**	**0.96**	**177**↓	*i*P		**Pn**	**22 28 24.5**		**-0.4**
RUSC				*e*S		**Sn**	**22 28 43.3**		**-0.8**
RUSC				*i*			22 28 44.7		
	comp=Z,2μm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	*e*P		**Pn**	**22 28 26.9**		**-0.9**
PTBC				*e*S		**Sn**	**22 28 48.2**		**-1.2**
PTBC				*i*			22 28 53.6		
	comp=Z,1μm,0.4s								
OCAC	**Ocana**	**1.39**	**353**	*e*P		**Pn**	**22 28 28.6**		**+0.2**
OCAC				*e*S		**Sn**	**22 28 50.9**		**+0.4**
OCAC				*i*			22 28 59.3		
	comp=Z,3μm,0.5s								
TAMC	**Tame, Arauca**	**1.40**	**107**↑	*i*P		**Pn**	**22 28 29.1**		**+0.6**
TAMC				*i*			22 28 50.0		
	comp=Z,1μm,0.4s								
TAMC				*e*S		**Sn**	**22 28 50.9**		**+0.4**
SPBC	**San Pablo de B**	**1.51**	**218**	*e*P		**Pn**	**22 28 29.3**		**-0.3**
SPBC				*e*S		**Sn**	**22 28 51.4**		**-1.2**
SPBC				*i*			22 28 58.6		
	comp=Z,2μm,0.3s								
ZARC	**Zaragoza, Cauc**	**1.82**	**290**	*e*P		**Pn**	**22 28 32.5**		**-0.3**
ZARC				*e*S		**Sn**	**22 28 58.4**		**0.0**
ZARC				*i*			22 29 04.0		
	comp=Z,2μm,0.7s								
SMLC	**San Martn de**	**2.14**	**335**↓	*e*P		**Pn**	**22 28 36.6**		**0.0**
SMLC				*e*S		**Sn**	**22 29 05.1**		**0.0**
SMLC				*i*			22 29 09.1		
	comp=Z,1μm,0.5s								
NORC	**Norcasia**	**2.15**	**233**↑	*e*P		**Pn**	**22 28 36.3**		**-0.4**
NORC				*e*S		**Sn**	**22 29 04.2**		**-0.9**
NORC				*i*			22 29 10.2		
	comp=Z,930nm,0.2s								
CHIC	**Chingaza**	**2.29**	**195**↓	*e*P		**Pn**	**22 28 38.4**		**-0.3**
CHIC				*e*S		**Sn**	**22 29 08.2**		**-0.6**
CHIC				*i*			22 29 13.3		
	comp=Z,1μm,0.4s								
ROSC	**El Rosal**	**2.32**	**210**	P		**Pn**	**22 28 40.5**		**+1.4**
	comp=Z,328nm,0.3s,baz=3.2,slow=0.5,SNR=365								
ROSC						**Sn**	**22 29 10.1**		**+0.6**
	comp=Z,378nm,0.3s,baz=60,slow=22,SNR=6.9								
ROSC	**El Rosal**	**2.32**	**210**			**Pn**	**22 28 40.0**		**+0.9**
ROSC	**El Rosal**	**2.32**	**210**↓	*i*P		**Pn**	**22 28 40.1**		**+1.0**
ROSC				*e*S		**Sn**	**22 29 10.4**		**+0.9**
ROSC				*i*			22 29 15.2		
	comp=Z,3μm,0.4s								
HELC	**Santa Helena**	**2.46**	**255**	*e*P		**Pn**	**22 28 40.1**		**-0.7**
HELC				*e*S		**Sn**	**22 29 12.6**		**+0.1**
HELC				*i*			22 29 19.2		
	comp=Z,880nm,0.3s								
UREC	**San Jos de Ur**	**2.54**	**291**	*e*P		**Pn**	**22 28 40.1**		**-1.2**
UREC				*e*S		**Sn**	**22 29 11.1**		**-2.4**
UREC				*i*			22 29 22.9		
	comp=Z,700nm,0.3s								
LL2C	**La Loma 2 Cana**	**2.70**	**354**	*e*P		**Pn**	**22 28 44.0**		**+0.7**
LL2C				*e*S		**Sn**	**22 29 18.7**		**+1.5**
LL2C				*i*			22 29 27.9		
	comp=Z,1μm,0.6s								
GUY2C	**Guyana, Caldas**	**2.74**	**234**↑	*e*P		**Pn**	**22 28 44.3**		**-0.1**
GUY2C				*e*S		**Sn**	**22 29 18.9**		**+0.1**
GUY2C				*i*			22 29 27.0		
	comp=Z,1μm,0.6s								
VILC	**Villavicencio,**	**2.78**	**191**↓	*e*P		**Pn**	**22 28 43.9**		**-0.6**
VILC				*e*S		**Sn**	**22 29 18.5**		**-0.7**
VILC				*i*			22 29 28.1		
	comp=Z,1μm,0.4s								
PTGC	**Puerto Gaitan,**	**2.82**	**159**↓	*i*P		**Pn**	**22 28 43.8**		**-1.1**
PTGC				*e*S		**Sn**	**22 29 17.2**		**-2.7**
PTGC				*i*			22 29 22.1		
	comp=Z,716nm,0.3s								
LL3C	**La Loma 3 Cana**	**2.87**	**355**	*e*P		**Pn**	**22 28 46.0**		**+0.6**
LL3C				*e*S		**Sn**	**22 29 22.3**		**+1.4**
LL3C				*i*			22 29 28.8		
	comp=Z,826nm,0.5s								
CBOC	**Ciudad Bolivar**	**3.02**	**251**↑	*e*P		**Pn**	**22 28 47.7**		**+0.2**
CBOC				*e*S		**Sn**	**22 29 25.8**		**+1.3**
CBOC				*i*			22 29 33.5		
	comp=Z,265nm,0.5s								
TOLC	**Tolima**	**3.13**	**224**	*e*P		**Pn**	**22 28 48.9**		**-0.2**
TOLC				*e*S		**Sn**	**22 29 28.1**		**+0.8**
TOLC				*i*			22 29 35.2		
	comp=Z,838nm,0.4s								
MOTC	**Monteria, Cord**	**3.15**	**308**	*e*P		**Pn**	**22 28 47.7**		**-1.2**
MOTC				*e*S		**Sn**	**22 29 26.2**		**-1.0**
MOTC				*i*			22 29 28.4		
	comp=Z,422nm,0.3s								
ARGC	**Ariguani, Magd**	**3.18**	**340**	*e*P		**Pn**	**22 28 50.7**		**+1.3**
ARGC				*e*S		**Sn**	**22 29 29.4**		**+1.4**
ARGC				*i*			22 29 36.5		
	comp=Z,365nm,0.7s								
SDV	**Santo Domingo**	**3.20**	**51**	P		**Pn**	**22 28 50.1**		**+0.3**
	comp=Z,213nm,0.3s,baz=229,slow=9.4,SNR=255								
SDV						S		**Sn**	**22 29 26.7**	**-2.0**
	comp=Z,45nm,0.3s,baz=242,slow=23,SNR=15								
ANIL	**Santa Ana**	**3.25**	**224**	*e*P		**Pn**	**22 28 50.7**		**+0.1**
ANIL				*e*S		**Sn**	**22 29 31.6**		**+1.5**
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P		**Pn**	**22 28 54.6**		**-0.2**
ORTC				*e*S		**Sn**	**22 29 38.2**		**+0.5**
ORTC				*i*			22 29 44.5		
	comp=Z,548nm,0.4s								
SJCC	**San Jacinto, C**	**3.63**	**326**	*e*P		**Pn**	**22 28 54.2**		**-1.1**
SJCC				*e*S		**Sn**	**22 29 35.5**		**-2.9**
SJCC				*i*			22 29 50.4		
	comp=Z,267nm,0.7s								
LCBC	**Los crdobas,**	**3.77**	**302**	*e*S		**Sn**	**22 29 42.2**		**+0.8**
LCBC				*i*			22 29 48.0		
	comp=Z,244nm,0.6s								
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	*e*P		**Pn**	**22 29 00.8**		**-1.1**
CRJC				*e*S		**Sn**	**22 29 48.0**		**-2.5**
CRJC				*i*			22 29 59.3		
	comp=Z,292nm,0.3s								
YOTC	**Yotoco, Valle**	**4.28**	**228**↑	*e*P		**Pn**	**22 29 02.8**		**-1.0**
YOTC				*e*S		**Sn**	**22 29 53.8**		**+0.2**
GUVC	**San Jose del G**	**4.31**	**173**	*e*P		**Pn**	**22 29 02.4**		**-1.7**
GUVC				*e*S		**Sn**	**22 29 51.7**		**-2.6**
GUVC				*i*			22 29 57.8		
	comp=Z,423nm,0.4s								
SMRC	**Santa Marta, M**	**4.41**	**346**	*e*P		**Pn**	**22 29 05.6**		**+0.2**
SMRC				*e*S		**Sn**	**22 29 53.8**		**-2.8**
SMRC				*i*			22 29 58.1		
	comp=Z,167nm,0.3s								
CAPC	**Capurgana**	**4.53**	**293**	*e*P		**Pn**	**22 29 05.5**		**-1.4**
CAPC				*e*S		**Sn**	**22 29 51.6**		**-7.8**
CAPC				*i*			22 30 00.0		
	comp=Z,175nm,0.8s								
PTAC	**Punta Ardita,**	**4.64**	**274**	*e*P		**Pn**	**22 29 07.5**		**-0.9**
PTAC				*e*S		**Sn**	**22 30 00.4**		**-1.6**
PTAC				*i*			22 30 14.2		
	comp=Z,206nm,0.3s								
MACC	**Macarena, Meta**	**4.73**	**189**	*e*P		**Pn**	**22 29 07.3**		**-2.3**
MACC				*e*S		Sn	22 29 58.3		-5.9
MACC				*i*			22 30 05.0		
	comp=Z,216nm,0.8s								
BETC	**Betania**	**4.74**	**209**	*e*P		**Pn**	**22 29 08.5**		**-1.2**
BETC				*e*S		**Sn**	**22 30 01.9**		**-2.4**
MARP	**Paez Belalcaza**	**4.87**	**215**	*e*P		**Pn**	**22 29 11.8**		**+0.1**
MARP				*e*S		**Sn**	**22 30 04.3**		**-3.6**
URIC	**Uribia, Colomb**	**4.95**	**13**	*e*P		**Pn**	**22 29 11.1**		**-1.3**
URIC				*e*S		**Sn**	**22 30 05.4**		**-3.8**
URIC				*i*			22 30 13.6		
	comp=Z,82nm,0.5s								
MALC	**Bahia Malaga**	**5.04**	**236**	*e*P		**Pn**	**22 29 14.7**		**+1.0**
MALC				*e*S		**Sn**	**22 30 10.3**		**-1.1**
MALC				*i*			22 30 26.0		
	comp=Z,78nm,0.7s								
GARC	**Garzon, Huila**	**5.20**	**207**	*e*P		**Pn**	**22 29 14.7**		**-1.2**
GARC				*e*S		**Sn**	**22 30 10.7**		**-4.8**
GARC				*i*			22 30 14.8		
	comp=Z,210nm,0.4s								
PCON	**Cinco Dias**	**5.55**	**216**	*e*P		**Pn**	**22 29 21.3**		**+0.4**
SOTA	**Rioblanco**	**5.83**	**217**	*e*P		**Pn**	**22 29 25.4**		**+0.8**
BCIP	**Isla Barro Col**	**7.02**	**290**	Pn		**Pn**	**22 29 38.2**		**-1.7**
OTAV	**Otavalo**	**8.44**	**219**	Pn		**Pn**	**22 29 59.9**		**+0.5**
PCRV	**Puerto La Cruz**	**9.03**	**68**	P		**Pn**	**22 30 06.8**		**-0.1**
	comp=Z,3.7nm,0.3s,baz=299,slow=5.4,SNR=13								
PLCV	**Puerto La Cruz**	**9.07**	**68**			**Pn**	**22 30 06.8**		**-0.5**
MTDJ	**Mount Denham**	**12.09**	**340**	Pn		**P**	**22 30 50.0**		**-3.4**
SDDR	**Presa de Saban**	**12.19**	**8**	Pn		**P**	**22 30 51.9**		**-2.6**
GRGR	**Grenville**	**12.48**	**64**	P		**Pn**	**22 30 52.6**		**+0.5**
GTBY	**Guantanamo Bay**	**13.13**	**352**	P		**P**	**22 31 03.9**		**-1.1**
CBCY	**The Bluff, Cay**	**14.33**	**334**	P		**P**	**22 31 18.9**		**+0.7**
GRTK	**Grand Turk**	**14.70**	**7**	P		**Pn**	**22 31 19.4**		**-0.7**
SAML	**Samuel**	**18.57**	**148**	P		**P**	**22 32 03.7**		**-1.4**
PAYG	**Puerto Ayora**	**18.67**	**247**	P		**P**	**22 32 07.7**		**+1.5**
TEIG	**Tepich**	**19.80**	**314**	P		**Pn**	**22 32 23.0**		**+1.5**
TEIG				IAmb	IAmb		22 32 23.5		
	comp=Z,11nm,0.6s								
LPAZ	**La Paz**	**23.52**	**168**	pP	pP		22 33 26.4		-0.1
	comp=Z,2.9nm,0.7s,baz=339,slow=14,SNR=9.6								
SIV	**San Ignacio**	**25.65**	**152**	pP	pP		22 33 47.3		-1.0
	comp=Z,0.6nm,0.4s,baz=319,slow=12,SNR=4.2								
MNMC	**Minye Minye**	**26.06**	**172**	P		**P**	**22 33 15.6**		**-3.7**
MNMC				IAmb	IAmb		22 33 19.9		
	comp=Z,7.6nm,1.2s								
PSGCX	**Pisagua**	**26.45**	**174**	P		P	22 33 18.7		-3.9
PSGCX				IAmb	IAmb		22 33 23.4		
	comp=Z,14nm,1.4s								
V48A	**Smith Brothers**	**31.37**	**338**	P		**P**	**22 34 07.9**		**+1.9**
WVT	**Waverly**	**32.09**	**337**	P		**P**	**22 34 13.4**		**+1.2**
WVT				IAmb	IAmb		22 34 13.6		
	comp=Z,9.0nm,0.7s								
WHAR	**Wooly Hollow**	**33.33**	**331**	P		**P**	**22 34 24.1**		**+1.0**
FCAR	**Ozark Folk Cen**	**33.73**	**332**	P		**P**	**22 34 27.1**		**+0.5**
FCAR				IAmb	IAmb		22 34 28.5		
	comp=Z,18nm,1.2s								
SIUC	**Southern Illin**	**34.02**	**337**	P		**P**	**22 34 30.2**		**+1.3**
P46A	**Rosedale**	**34.99**	**341**	P		**P**	**22 34 39.1**		**+1.8**
CCM	**Cathedral Cave**	**35.13**	**335**	P		**P**	**22 34 39.3**		**+0.8**
CCM				IAmb	IAmb		22 34 39.8		
	comp=Z,11nm,0.7s								
WVNY	**West Valley, N**	**35.73**	**353**	P		**P**	**22 34 45.1**		**+1.5**
MMNY	**Mt. Morris Dam**	**35.98**	**354**	P		**P**	**22 34 46.8**		**+1.2**
TX31	**Lajitas Ar. Si**	**36.43**	**312**	P		**P**	**22 34 50.5**		**+0.6**
TXAR	**Lajitas Array**	**36.43**	**312**	P		**P**	**22 34 50.7**		**+0.9**
E46A	**Sault Ste Mari**	**40.53**	**348**	P		**P**	**22 35 24.7**		**+1.1**
E46A				IAmb	IAmb		22 35 25.9		
	comp=Z,12nm,0.9s								
ECSD	**EROS Data Cent**	**42.11**	**334**	P		**P**	**22 35 36.5**		**-0.2**
ECSD				IAmb	IAmb		22 35 51.2		
	comp=Z,10nm,1.3s								
EYMN	**Ely**	**43.83

comp=Z,0.5nm,0.8s,baz=109,slow=4.9,SNR=3.8
RND Reindeer 77.52 333 P P 22 39 38.8 +0.5
SUA Susitna One 78.09 331 P P 22 39 42.1 +0.5
SUA IAmb IAmb 22 39 57.4
comp=Z,5.9nm,1.2s
BPAW Bear Paw Mtn. 78.56 334 P P 22 39 43.3 -0.7
PPLA Purkeypile 78.94 333 P P 22 39 46.1 -0.1
PPLA IAmb IAmb 22 39 56.2
comp=Z,9.1nm,1.2s
TTA Tatalina 80.69 333 P P 22 39 55.3 -0.2
NOA NORSAR Array B 81.31 29 P P 22 39 58.5 -0.3
comp=Z,0.3nm,0.7s,baz=270,slow=6.2,SNR=1.1
MKAR Makanchi Array 122.30 20 PKP PKPdf 22 46 35.4 -1.4
comp=Z,0.1nm,0.3s,baz=292,slow=2.4,SNR=8.1
ASAR Alice Springs 149.12 234 PKPbc PKPdf 22 47 29.7 +3.2
comp=Z,0.4nm,0.4s,baz=120,slow=3.5,SNR=4.6
WRA Warramunga Arr 150.34 241 PKPbc PKPdf 22 47 32.7 +4.2
comp=Z,0.8nm,0.6s,baz=110,slow=2.6,SNR=6.2
WRA Warramunga Arr 150.34 241 PKPdf 22 47 33.0 +4.5

IDC 27 22:33:42.8±2.2, 27°21N×85°95E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.2/35, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=131.4km s-min=32.1km az=57.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.76**	**353**	P	P	22 38 14.4	+0.2
	0.1nm,0.3s,baz=178,slow=12,SNR=6.0						
FINES	**FINESS Array B**	**52.14**	**328**	P	P	22 42 54.5	-0.1
	1.2nm,0.9s,baz=116,slow=9.4,SNR=6.3						
WRA	**Warramunga Arr**	**66.29**	**130**	P	P	22 44 33.2	0.0
	0.6nm,0.9s,baz=322,slow=6.6,SNR=1.5						

IDC 27 22:36:57.9±22.0, 27°45N×85°83E, h0km, mb3.8/3, mb1 3.7/4, mb1mx3.3/35, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=369.4km s-min=68.7km az=19.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.50**	**353**	P	P	22 41 26.5	-0.1
	0.3nm,0.3s,baz=175,slow=11,SNR=15						
KURBB	**Kurchatov Arra**	**23.80**	**348**	P	P	22 42 12.3	+0.2
	0.6nm,0.4s,baz=165,slow=9.6,SNR=1.9						
SONM	**Songino Array**	**25.91**	**33**	P	P	22 42 31.7	0.0
	1.5nm,0.7s,baz=214,slow=10,SNR=6.1						
ZALV	**Zalesovo Beam**	**26.48**	**359**	P	P	22 42 36.5	0.0
	1.0nm,0.5s,baz=189,slow=11,SNR=7.0						

IDC 27 22:46:40.4±3.5, 27°55N×85°64E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/29, mbtmp3.4/4, ML3.3/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/34, Error ellipse: s-maj=110.9km s-min=32.3km az=71.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.39**	**353**	P	P	22 51 07.4	-0.5
	0.1nm,0.3s,baz=179,slow=11,SNR=5.1						
SONM	**Songino Array**	**25.93**	**33**	P	P	22 52 14.6	+0.2
	0.7nm,0.6s,baz=224,slow=8.1,SNR=2.8						
ZALV	**Zalesovo Beam**	**26.38**	**359**	P	P	22 52 18.6	+0.3
	0.2nm,0.3s,baz=161,slow=9.2,SNR=1.9						
JHJ	**Hachijo jima 2**	**46.64**	**69**	LR	LR	23 17 01.1	
	comp=Z,29nm,20.5s,baz=161,slow=39						
JCJ	**Chichijima**	**49.85**	**77**	LR	LR	23 18 29.3	
	comp=Z,79nm,18.1s,baz=164,slow=38						
FINES	**FINESS Array B**	**51.71**	**328**	LR	LR	23 20 10.6	
	comp=Z,40nm,18.2s,baz=178,slow=39						
WRA	**Warramunga Arr**	**66.71**	**130**	P	P	22 57 33.5	-0.1
	0.5nm,0.9s,baz=326,slow=6.5,SNR=2.3						

IDC 27 22:58:09.4±31.0, 27°20N×85°65E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.2/29, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=525.9km s-min=87.1km az=23.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.74**	**353**	P	P	23 02 40.8	0.0
	0.1nm,0.3s,baz=174,slow=11,SNR=5.4						
SONM	**Songino Array**	**26.22**	**33**	P	P	23 03 46.1	0.0
	0.7nm,0.6s,baz=239,slow=8.2,SNR=3.1						
ZALV	**Zalesovo Beam**	**26.73**	**359**	P	P	23 03 50.5	0.0
	0.4nm,0.6s,baz=171,slow=11,SNR=1.9						

*IDC **27** 23:06:08.1±2.1, 43°60N×105°40W, h0km, mb1 3.1/3, mb1mx3.1/39, mbtmp2.9/3, ML2.3/2, Error ellipse: s-maj=46.6km s-min=9.5km az=151.0*
*NEIC **27** 23:06:09.4±1.2, 43°69N±0°05×105°23W±0°05, h0km±2km, ML3.2/66, Error ellipse: s-maj=8.9km s-min=6.3km az=157.0*

ISC 27 23:06:08.6±1.0, 43°67N±0°05×105°28W±0°05, h0km, n73, σ1§22/73, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.00**	**63**	Pg	**Pg**	**23 06 28.2**	**+0.4**
K22A	**Casper**	**1.37**	**222**		**Pg**	**23 06 34.3**	**-0.5**
K22A				IAML		23 06 57.0	
	comp=E,370nm,0.8s						
K22A				IAML		23 06 58.1	
	comp=N,282nm,0.3s						
PHWY	**Pilot Hill**	**2.37**	**183**		**Pn**	**23 06 50.4**	**+1.4**
RWWY	**Rawlins**	**2.44**	**216**		**Pn**	**23 06 51.1**	**+1.1**
RWWY				IAML		23 07 28.4	
	comp=N,107nm,0.9s						
LAO	**LASA Array**	**3.09**	**348**		**Pn**	**23 07 00.1**	**+1.4**
LAO				IAML		23 07 52.2	
	comp=N,63nm,0.6s						
LAO				IAML		23 07 55.0	
	comp=N,84nm,0.9s						
RLMT	**Red Lodge**	**3.21**	**298**	Pn	**Pn**	**23 07 01.1**	**+0.7**
RLMT				IAML		23 07 53.8	
	comp=N,30nm,0.8s						
PD31	**Pinedale Array**	**3.26**	**255**		**Pn**	**23 07 02.1**	**+1.0**
PDAR	**Pinedale Array**	**3.26**	**255**	Pn	**Pn**	**23 07 02.0**	**+0.9**
	comp=N,3.4nm,0.3s,baz=77,slow=16,SNR=24						
PDAR				Lg	Lg	23 07 47.1	
	comp=N,6.7nm,0.3s,baz=75,slow=31,SNR=13						
BW06	**Boulder Array**	**3.26**	**255**		**Pn**	**23 07 01.8**	**+0.7**
BW06				IAML		23 07 49.6	
	comp=N,51nm,0.6s						
BW06				IAML		23 07 53.4	
	comp=N,28nm,0.8s						
OGNE	**Ogallala**	**3.63**	**137**	Pn	**Pn**	**23 07 07.2**	**+1.0**
YNE	**Yellowstone No**	**3.65**	**293**		**Pn**	**23 07 07.1**	**+0.6**
YNE				IAML		23 08 11.8	
	comp=N,33nm,0.9s						
YNE				IAML		23 08 16.3	
	comp=E,35nm,0.8s						
YMP	**Mirror Lake Pl**	**3.67**	**289**		**Pn**	**23 07 06.7**	**-0.1**
YMP				IAML		23 08 09.0	
	comp=N,41nm,0.9s						
YMP				IAML		23 08 09.9	
	comp=E,54nm,0.9s						
GCMT	**Greycliff**	**3.78**	**306**		**Pn**	**23 07 09.1**	**+0.9**
LKWY	**Lake**	**3.80**	**285**		**Pn**	**23 07 09.9**	**+1.3**
LKWY				IAML		23 07 34.7	
	comp=E,27nm,1.1s						
LKWY				IAML		23 09 02.1	
	comp=E,23nm,1.2s						
ISCO	**Idaho Springs**	**3.88**	**184**	Pn	**Pn**	**23 07 10.6**	**+0.9**
H17A	**Grant Village**	**3.89**	**283**		**Pn**	**23 07 11.8**	**+1.9**
H17A				IAML		23 08 15.2	
	comp=N,21nm,1.2s						
FLWY	**Flagg Ranch**	**3.94**	**278**		**Pn**	**23 07 11.2**	**+0.7**
FLWY				IAML		23 08 19.9	
	comp=N,33nm,1.1s						
FLWY				IAML		23 08 26.8	
	comp=N,24nm,1.8s						
MOOW	**Moose Ponds**	**3.97**	**273**	Pn	**Pn**	**23 07 12.0**	**+1.1**
SNOW	**Snow King Moun**	**3.99**	**269**		**Pn**	**23 07 13.4**	**+2.2**
SNOW				IAML		23 08 04.7	
	comp=N,46nm,0.3s						
SNOW				IAML		23 08 40.3	
	comp=N,38nm,1.1s						
YPP	**Pitchstone Pla**	**4.04**	**280**		**Pn**	**23 07 12.4**	**+0.5**
YPP				IAML		23 08 27.5	
	comp=E,15nm,1.2s						
REDW	**Red Top Meadow**	**4.07**	**268**	Pn	**Pn**	**23 07 14.6**	**+2.4**
REDW				IAML		23 08 19.6	
	comp=E,33nm,1.5s						
REDW				IAML		23 08 28.6	
	comp=E,30nm,0.8s						
YHH	**Holmes Hill**	**4.16**	**288**	Pn	**Pn**	**23 07 14.5**	**+0.9**
O20A	**White River Ci**	**4.17**	**213**		**Pn**	**23 07 15.0**	**+1.4**
O20A				IAML		23 08 32.5	
	comp=E,34nm,1.4s						
O20A				IAML		23 08 43.6	
	comp=N,30nm,1.1s						
YMR	**Madison River**	**4.21**	**286**		**Pn**	**23 07 15.8**	**+1.5**
YMR				IAML		23 08 30.0	
	comp=E,33nm,0.9s						
AHID	**Auburn Hatcher**	**4.35**	**260**		**Pn**	**23 07 18.3**	**+2.1**
E28A	**Huff**	**4.35**	**47**		**Pn**	**23 07 15.6**	**-0.4**
YHB	**Horse Butte**	**4.39**	**286**		**Pn**	**23 07 18.3**	**+1.6**
YHL	**Hebgen Lake**	**4.40**	**288**		**Pn**	**23 07 19.2**	**+2.3**
YHL				IAML		23 08 37.5	
	comp=N,21nm,1.0s						
YHL				IAML		23 08 39.5	
	comp=E,30nm,1.1s						
RDMU	**Red Mountain**	**4.45**	**227**		**Pn**	**23 07 18.9**	**+1.4**
RDMU				IAML		23 08 31.0	
	comp=N,25nm,1.1s						
RDMU				IAML		23 08 35.2	
	comp=E,22nm,0.8s						
ECR	**Eagle Creek**	**4.49**	**264**		**Pn**	**23 07 19.4**	**+1.4**
QLMT	**Earthquake Lak**	**4.57**	**287**	Pn	**Pn**	**23 07 20.0**	**+0.8**
SMCO	**Snowmass**	**4.67**	**196**		**Pn**	**23 07 21.9**	**+1.2**
SMCO				IAML		23 08 44.6	
	comp=E,15nm,0.9s						
SMCO				IAML		23 08 54.2	
	comp=E,20nm,1.2s						
DGMT	**Dagmar**	**4.86**	**9**		**Pn**	**23 07 23.3**	**+0.4**
BOZ	**Bozeman (W)**	**4.93**	**295**	Pn	**Pn**	**23 07 24.3**	**+0.3**
BOZ				IAML		23 08 45.7	
	comp=E,10nm,1.0s						
KSCO	**Kaye Shedlock'**	**5.07**	**156**	Pn	**Pn**	**23 07 27.0**	**+1.1**
HWUT	**Hardware Ranch**	**5.08**	**248**	Pn	**Pn**	**23 07 27.4**	**+1.3**
HWUT				IAML		23 08 47.6	
	comp=E,17nm,1.0s						
HWUT				IAML		23 09 05.7	
	comp=E,22nm,0.8s						
TCUT	**Toone Canyon**	**5.21**	**243**	Pn	**Pn**	**23 07 30.2**	**+2.3**
EGMT	**Eagleton**	**5.36**	**326**	Pn	**Pn**	**23 07 30.7**	**+0.8**
JLU	**Jordanelle**	**5.52**	**238**	Pn	**Pn**	**23 07 33.3**	**+1.0**
HRY	**Holter Researc**	**5.54**	**306**	Pn	**Pn**	**23 07 34.0**	**+1.6**
LRM	**Limekiln Ridge**	**5.54**	**295**	Pn	**Pn**	**23 07 33.0**	**+0.5**
MCMT	**McKenzie Canyo**	**5.56**	**285**	Pn	**Pn**	**23 07 33.5**	**+0.7**
MDND	**Maddock**	**5.76**	**42**	Pn	**Pn**	**23 07 35.3**	**0.0**
PV22	**Blue Mesa, Par**	**5.78**	**209**	Pn	**Pn**	**23 07 37.2**	**+1.5**
PV07	**Paradox Valley**	**5.81**	**207**		**Pn**	**23 07 36.9**	**+0.6**
PV15	**Paradox Valley**	**5.85**	**206**	Pn	**Pn**	**23 07 38.2**	**+1.5**
P17A	**Butcher Ranch,**	**5.86**	**226**		**Pn**	**23 07 38.1**	**+1.3**
SDCO	**Great Sand Dun**	**5.92**	**182**	Pn	**Pn**	**23 07 37.7**	**-0.1**
PV04	**Paradox Valley**	**5.94**	**209**	Pn	**Pn**	**23 07 39.8**	**+1.8**
MPU	**Maple Canyon**	**5.99**	**235**	Pn	**Pn**	**23 07 40.0**	**+1.4**
PV14	**Lion Creek, Pa**	**6.00**	**209**	Pn	**Pn**	**23 07 40.4**	**+1.5**
PV10	**Paradox Valley**	**6.01**	**210**	Pn	**Pn**	**23 07 40.8**	**+1.9**
PV20	**West Nyswonger**	**6.01**	**209**	Pn	**Pn**	**23 07 40.1**	**+1.1**
PV11	**David Mesa, Pa**	**6.02**	**208**		**Pn**	**23 07 40.2**	**+1.1**
PV16	**Nyswonger Mesa**	**6.02**	**208**		**Pn**	**23 07 40.5**	**+1.4**
SRU	**San Rafael Swe**	**6.03**	**223**	Pn	**Pn**	**23 07 39.9**	**+0.7**
PV19	**Morning Glory**	**6.04**	**209**	Pn	**Pn**	**23 07 40.2**	**+0.8**
PV03	**Paradox Valley**	**6.05**	**208**	Pn	**Pn**	**23 07 40.6**	**+1.1**
PV02	**Paradox Valley**	**6.05**	**207**	Pn	**Pn**	**23 07 40.9**	**+1.3**
PV17	**East Wray Mesa**	**6.06**	**209**	Pn	**Pn**	**23 07 41.0**	**+1.4**
PV01	**Paradox Valley**	**6.07**	**205**	Pn	**Pn**	**23 07 40.3**	**+0.5**
PV18	**Skein Mesa, Pa**	**6.08**	**208**		**Pn**	**23 07 41.4**	**+1.5**
PV13	**Radium Mtn., P**	**6.12**	**207**	Pn	**Pn**	**23 07 41.6**	**+1.1**
TMUT	**Trail Mountain**	**6.24**	**228**		**Pn**	**23 07 42.4**	**+0.2**
ECSD	**EROS Data Cent**	**6.28**	**86**	Pn	**Pn**	**23 07 43.3**	**+0.8**
NLU	**North Lily Min**	**6.29**	**236**	Pn	**Pn**	**23 07 43.5**	**+0.7**
PV05	**Paradox Valley**	**6.29**	**209**	Pn	**Pn**	**23 07 42.9**	**0.0**
Q16A	**Castle Valley**	**6.50**	**225**	Pn	**Pn**	**23 07 46.6**	**+1.0**
DUG	**Dugway, Tooele**	**6.61**	**241**	Pn	**Pn**	**23 07 47.8**	**+0.7**
MSO	**Missoula**	**6.88**	**300**	Pn	**Pn**	**23 07 52.1**	**+1.3**
TCRU	**Three Creeks R**	**7.41**	**229**	Pn	**Pn**	**23 07 56.8**	**-1.3**
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**23 08 21.4**	**-1.0**
	comp=E,0.2nm,0.3s,baz=230,slow=16,SNR=5.1						
ULM				Lg	Lg	23 10 56.7	
	comp=E,0.1nm,0.3s,baz=323,slow=20,SNR=1.3						
YKA	**Yellowknife Ar**	**19.63**	**347**	P	**P**	**23 10 38.0**	**-0.4**
	comp=E,0.0nm,0.3s,baz=162,slow=13,SNR=3.2						

*JMA **27** 23:15:44.7±0.3, 30°41N×142°50E, h5km±3km, M4.3*
*IDC **27** 23:15:45.1±0.8, 30°42N×142°95E, h0km, mb3.8/13, mb1 3.9/17, mb1mx3.8/50, mbtmp3.8/17, ML3.4/4, MS2.8/3, Ms1 2.8/3, ms1mx2.3/50, Error ellipse: s-maj=26.4km s-min=15.4km az=74.0*

ISC 27 23:15:49.0±0.7, 30°38N±0°05×142°5E±0°1, h24km, n29, σ1§49/32, mb3.8/12, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**3.14**	**312**	P	**Pn**	**23 16 35.7**	**-1.4**
JAOM				*e*S	**Sn**	**23 17 13.3**	**-0.5**
CBIJ	**Chichi jima**	**3.29**	**185**	P	**Pn**	**23 16 38.7**	**-0.3**
JCJ	**Chichijima**	**3.29**	**185**	Pn	**Pn**	**23 16 38.9**	**-0.1**
	10nm,0.3s,baz=353,slow=22,SNR=17						
JCJ				Sn	**Sn**	**23 17 15.3**	**-2.1**
	41nm,0.3s,baz=304,slow=21,SNR=11						
JHCJ	**Hachijojimakas**	**3.55**	**320**	P	**Pn**	**23 16 41.7**	**-0.9**
JHJ	**Hachijo jima 2**	**3.59**	**320**	Pn	**Pn**	**23 16 43.3**	**+0.1**
	4.3nm,0.3s,baz=240,slow=20,SNR=1.3						
JHJ				Sn	**Sn**	**23 17 21.7**	**-3.2**
	40nm,0.3s,baz=66,slow=22,SNR=7.8						
JHH2	**Haha-jima-NKT2**	**3.75**	**185**	S	**Sn**	**23 17 29.7**	**+1.0**
BSO1	**Boso 1**	**4.46**	**343**	P	**Pn**	**23 16 54.4**	**-0.2**
BSO1				*e*S	**Sn**	**23 17 46.8**	**+1.4**
BSO3	**Boso 3**	**4.72**	**339**	P	**Pn**	**23 16 57.6**	**-0.9**
BSO3				*e*S	**Sn**	**23 17 52.8**	**+0.4**
JHU	**Hanno**	**6.10**	**334**	*e*S	**Sn**	**23 18 26.8**	**+0.2**
JRY	**Ryogami san**	**6.39**	**333**	P	**Pn**	**23 17 21.6**	**-0.1**
JRY				*e*S	**Sn**	**23 18 33.9**	**0.0**
JAG	**Ashikaga**	**6.55**	**338**	P	**Pn**	**23 17 23.2**	**-0.7**
MJAR	**Matsushiro Arr**	**7.12**	**331**	Pn	**Pn**	**23 17 30.9**	**-0.8**
	0.2nm,0.3s,baz=149,slow=11,SNR=11						
JOW	**Kunigami**	**13.00**	**258**	LR	LR	23 23 27.7	
	comp=Z,45nm,19.7s,baz=2.0,slow=35						
KSRS	**Korea Array**	**14.02**	**304**	Pn	**P**	**23 19 10.8**	**-2.9**
	0.3nm,0.3s,baz=115,slow=13,SNR=2.9						
KSRS				LR	LR	23 24 36.1	
	comp=Z,14nm,18.6s,baz=90,slow=37						
KLR	**Kul'dur**	**20.53**	**340**	P	Pn	23 20 27.5	-0.3
	1.1nm,0.6s,baz=212,slow=3.3,SNR=5.0						
SONM	**Songino Array**	**32.63**	**313**	P	**P**	**23 22 22.7**	**+3.6**
	0.8nm,0.5s,baz=101,slow=7.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**47.25**	**317**	P	**P**	**23 24 21.1**	**+1.1**
	0.9nm,0.7s,baz=90,slow=8.2,SNR=3.6						
MKAR	**Makanchi Array**	**48.67**	**307**	P	**P**	**23 24 33.1**	**+1.9**
	0.4nm,0.5s,baz=90,slow=9.3,SNR=7.2						
WRA	**Warramunga Arr**	**50.65**	**190**	P	**P**	**23 24 47.0**	**+0.6**
	1.2nm,0.3s,baz=7.2,slow=7.7,SNR=16						
KURBB	**Kurchatov Arra**	**51.00**	**313**	P	**P**	**23 24 50.2**	**+1.4**
	0.4nm,0.4s,baz=91,slow=9.4,SNR=9.3						
KDAK	**Kodiak Island**	**51.59**	**38**	LR	LR	23 51 20.1	
	comp=Z,25nm,18.2s,baz=171,slow=42						
ASAR	**Alice Springs**	**54.37**	**190**	P	**P**	**23 25 14.1**	**+0.1**
	1.3nm,0.3s,baz=6.2,slow=6.3,SNR=21						
BVAR	**Borovoye Array**	**55.86**	**316**	P	**P**	**23 25 25.1**	**+0.6**
	0.6nm,0.6s,baz=108,slow=12,SNR=4.7						
YKA	**Yellowknife Ar**	**69.13**	**29**	P	**P**	**23 26 51.5**	**-1.5**
	0.4nm,0.8s,baz=295,slow=5.8,SNR=6.4						
FINES	**FINESS Array B**	**75.14**	**334**	P	**P**	**23 27 29.6**	**+0.7**
	1.8nm,1.0s,baz=2.7,slow=4.0,SNR=3.6						
KBZ	**Khabaz**	**76.00**	**313**	P	**P**	**23 27 36.2**	**+2.0**
	1.0nm,0.7s,baz=140,slow=3.2,SNR=4.2						
NVAR	**Mina Array Bea**	**78.27**	**52**	P	**P**	**23 27 45.3**	**-2.1**
	0.3nm,0.6s,baz=294,slow=5.2,SNR=3.9						
NOA	**NORSAR Array B**	**80.68**	**338**	P	**P**	**23 27 58.8**	**-1.0**
	0.5nm,0.7s,baz=42,slow=5.3,SNR=2.1						
LPAZ	**La Paz**	**148.68**	**70**	PKPbc	**PKPbc**	**23 35 35.5**	**-0.1**
	1.3nm,0.8s,baz=0.8,slow=3.0,SNR=4.4						

*MOS **27** 23:20:26.8±1.0, 27°94N×85°28E, h14km, mb4.6/5, Error ellipse: s-maj=9.0km s-min=5.4km az=114.2*
*BJI **27** 23:20:27.8±0.0, 28°02N×85°39E, h7km, mB4.5/20, mb4.4/32, Ms3.8/16, Ms7 3.7/17*
*IDC **27** 23:20:27.2±0.5, 27°98N×85°35E, h0km, mb4.3/28, mb1 4.4/31, mb1mx4.3/52, mbtmp4.3/31, ML4.1/2, MS3.0/3, Ms1 3.1/3, ms1mx2.6/47, Error ellipse: s-maj=13.5km s-min=12.3km az=42.0*

*NEIC **27** 23:20:28.5±2.0, 27°96N±0°03×85°28E±0°08, h10km±1km, mb4.2/40, Error ellipse: s-maj=11.7km s-min=5.7km az=88.0*
*DMN **27** 23:20:28.6±0.2, 28°10N×85°49E, h10km, Ml5.1/5, Error ellipse: s-maj=5.8km s-min=2.5km az=13.0*
*NDI **27** 23:20:30.4±2.8, 27°91N×85°37E, h10km, ML4.3*

ISC 27 23:20:28.8±1.0, 27°97N±0°04×85°38E±0°02, h13km±6km, n181, σ1§54/195, mb4.3/45, 6C-1D, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKN	**Kakani**	**0.20**	**206**	*e*Pg	**Pb**	**23 20 35.8**	**+1.3**
KKN				*e*Sg	**Sb**	**23 20 40.2**	**+1.9**
	26μm,0.2s						
PKIN	**Phulchoki**	**0.39**	**178**	*e*Pg	**Pb**	**23 20 39.0**	**+1.2**
PKI	**Pulchoki**	**0.40**	**176**	*e*Pg	**Pb**	**23 20 39.1**	**+1.1**
PKI				*e*Sg	**Sn**	**23 20 46.4**	**-1.8**
	37μm,0.5s						
DMN	**Daman**	**0.44**	**214**	*e*Pg	**Pn**	**23 20 40.4**	**-0.6**
DMN				*e*Sg	**Sn**	**23 20 48.5**	**-0.4**
	8μm,0.3s						
GUN	**Gumba**	**0.45**	**98**	*e*Pg	**Pg**	**23 20 37.6**	**-0.2**
GUN				*e*Sg	**Sg**	**23 20 42.6**	**-1.2**
	28μm,0.3s						
GKN	**Gorkha**	**0.66**	**273**	*e*Pg	**Pn**	**23 20 43.9**	**-0.1**
GKN				*e*Sg	**Sn**	**23 20 53.4**	**-0.9**
	37μm,0.4s						
DANN	**Dangsing**	**1.48**	**285**	*e*Pg	**Pg**	**23 20 58.4**	**+1.1**
DANN				*e*Sg	**Sg**	**23 21 17.7**	**+1.1**
	3μm,0.3s						
RAMN	**Ramite**	**1.49**	**133**	*e*Pg	**Pb**	**23 20 56.8**	**+0.3**
KOLN	**Koldanda**	**1.59**	**263**	*e*Pg	**Pg**	**23 21 00.8**	**+1.4**
KOLN				*e*Sg	**Sg**	**23 21 23.4**	**+3.3**
	6μm,0.3s						
ODAN	**Odare**	**2.10**	**121**	*e*Pg	**Pb**	**23 21 07.1**	**+0.2**
ODAN				*e*Sg	**Sb**	**23 21 34.8**	**+1.8**
	3μm,0.4s						
PYUN	**Piuthan**	**2.12**	**274**	*e*Pg	**Pb**	**23 21 08.6**	**+1.4**
PYUN				*e*Sg	**Sg**	**23 21 36.1**	**-0.9**
	2μm,0.4s						
TAPN	**Taplejung**	**2.16**	**106**	*e*Pg	**Pb**	**23 21 07.8**	**-0.1**
TAPN				*e*Sg	**Sb**	**23 21 35.5**	**+0.8**
	1μm,0.3s						
LSA	**Lhasa**	**5.35**	**70**	P	**Pn**	**23 21 50.0**	**+1.2**
LSA	**Lhasa**	**5.35**	**70**		**Pn**	**23 21 50.0**	**+1.2**
GUWA	**GUWAHATI**	**5.90**	**106**	⇑*e*P	**Pn**	**23 21 57.4**	**+1.5**
GUWA				*e*S	**Sn**	**23 23 02.9**	**-0.4**
GUWA				IAML		23 23 05.7	
	comp=N,240nm,0.3s						
GUWA				IAML		23 23 07.5	
	comp=E,337nm,0.4s						
SHL	**Shillong**	**6.29**	**111**	P	**Pn**	**23 22 02.1**	**+0.7**
SHL	**Shillong**	**6.29**	**111**	*e*P	**Pn**	**23 22 02.4**	**+1.0**
SHL				*e*S	**Sn**	**23 23 09.2**	**-4.0**
SHL				IAML		23 23 14.7	
	comp=N,232nm,0.4s						
SHL				IAML		23 23 19.3	
	comp=E,187nm,0.4s						
SHL	**Shillong**	**6.29**	**111**	Pn	**Pn**	**23 22 02.1**	**+0.7**
TEZP	**TEZPUR**	**6.74**	**100**	*e*P	**Pn**	**23 22 08.0**	**+0.6**
DDI	**Dehra Dun**	**6.82**	**292**	*e*P	**Pn**	**23 22 11.7**	**+3.0**
DDI				*e*S	**Sn**	**23 23 25.9**	**-0.3**
DDI				IAML		23 23 29.7	
	comp=N,579nm,0.3s						
DDI				IAML		23 23 31.4	
	comp=E,826nm,0.3s						
SMLA	**Simla**	**7.81**	**296**	⇑*e*P	**Pn**	**23 22 23.5**	**+1.3**
SMLA				*e*S	**Sn**	**23 23 46.3**	**-4.2**
SMLA				IAML		23 23 54.7	
	comp=E,227nm,0.4s						
KOHI	**KOHIMA**	**8.11**	**104**	⇑*e*P	**Pn**	**23 22 26.4**	**0.0**
KOHI				*e*S	**Sn**	**23 23 54.8**	**-3.3**
KOHI				IAML		23 24 02.5	
	comp=E,189nm,0.4s						
KOHI				IAML		23 24 03.0	
	comp=N,182nm,0.5s						
BHPL	**Bhopal**	**8.59**	**239**	*e*P	**Pn**	**23 22 32.2**	**-0.7**
BHPL				*e*S	**Sn**	**23 24 04.2**	**-5.5**
BHPL				IAML		23 24 09.4	
	comp=N,485nm,0.3s						
BHPL				IAML		23 24 11.4	
	comp=E,298nm,0.5s						
DHRM	**DHARAMSHALA**	**8.95**	**301**	⇑*e*P	**Pn**	**23 22 38.1**	**+0.1**
DHRM				*e*S	**Sn**	**23 24 13.3**	**-5.4**
DHRM				IAML		23 24 24.6	
	comp=E,125nm,0.4s						
DHRM				IAML		23 24 27.6	
	comp=N,105nm,0.5s						
CHCP	**Chirah Chowk**	**11.85**	**302**	P	**Pn**	**23 23 17.0**	**-0.6**
HYB	**Hyderabad**	**12.24**	**212**	*i* P	**Pn**	**23 23 20.0**	**-3.0**
THW	**Thamme Wali**	**12.71**	**296**	P	**Pn**	**23 23 27.1**	**-2.3**
CEP	**Cherat**	**12.95**	**300**	P	**Pn**	**23 23 30.3**	**-2.4**
CHTO	**Chiang Mai**	**15.42**	**123**	P	**Pn**	**23 24 06.0**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHTO	**Chiang Mai**	**15.42**	**123**

comp=Z,13nm,0.8s
GTA pmax pmax
comp=Z,37nm,4.1s
GTA LR LR
comp=Z,47nm,14.2s
GTA LR LR
comp=Z,140nm,13.8s
GTA LR LR
comp=Z,140nm,12.4s
GAR Garm 16.68 315 Pn 23 24 20.1 -2.2
GAR IAmb IAmb 23 24 32.2
comp=Z,32nm,1.2s
ARSB Arslanbob 16.75 326 P **Pn 23 24 21.5 -1.8**
ARSB pmax pmax
comp=Z,9.0nm,0.6s
ARSB Arslanbob 16.75 326 Pn 23 24 21.5 -1.8
ARSB IAmb IAmb 23 24 27.3
comp=Z,8.6nm,0.6s
SUKH Sukhothai 16.77 125 P **P 23 24 26.8 +1.2**
comp=Z,11nm,0.9s
AAK Ala-Archa 17.09 332 P **Pn 23 24 27.8 +0.2**
comp=Z,0.3nm,0.3s,baz=155,slow=7.5,SNR=14
AAK Ala-Archa 17.09 332 Pn 23 24 27.0 -0.6
FRU1 Bishkek 17.18 332 P **Pn 23 24 27.6 -1.0**
FRU1 pmax pmax
comp=Z,5.0nm,0.8s
FRU1 Bishkek 17.18 332 Pn **Pn 23 24 27.6 -1.0**
LZH Lanzhou 17.60 58 *eP* **P 23 24 37.0 +2.0**
LZH pP pP 23 24 41.8 +1.9
LZH sP sP 23 24 44.5 +3.2
LZH pmax pmax
comp=Z,14nm,1.1s
LZH LR LR
comp=Z,160nm,13.0s
LZH LR LR
comp=Z,230nm,13.0s
LZH LR LR
comp=Z,190nm,14.6s
UTHA Uthaitani 17.96 131 P **P 23 24 39.8 +1.0**
comp=Z,9.5nm,1.0s
SLVN Son La 18.08 107 Pn 23 24 40.0 +0.2
MK31 Makanchi Array 18.95 353 P **P 23 24 49.3 -0.3**
MK31 pmax pmax
comp=Z,6.0nm,0.6s
MK31 Makanchi Array 18.95 353 P **P 23 24 49.3 -0.3**
MK31 IAmb IAmb 23 24 51.5
comp=Z,6.1nm,0.6s
MKAR Makanchi Array 18.95 353 P **Pn 23 24 50.5 +0.3**
comp=Z,1.6nm,0.3s,baz=173,slow=12,SNR=79
MKAR PcP **PcP 23 29 15.0 -0.1**
comp=Z,0.1nm,0.3s,baz=192,slow=2.5,SNR=4.2
MKAR LR LR 23 33 16.8
comp=Z,63nm,19.4s,baz=144,slow=41
MKAR Makanchi Array 18.95 353 P **P 23 24 49.1 -0.4**
MAKZ Makanchi 18.99 353 P **Pn 23 24 50.5 -0.3**
MAKZ pmax pmax
comp=Z,6.0nm,0.7s
MAKZ Makanchi 18.99 353 P **Pn 23 24 50.5 -0.3**
MAKZ IAmb IAmb 23 24 52.1
comp=Z,6.3nm,0.7s
NONG Nongkai 19.07 117 P Pn 23 25 04.5 +13
KKAR Karatay Array 19.30 325 P **P 23 24 52.3 -1.2**
KKAR Karatay Array 19.30 325 P **P 23 24 52.3 -1.2**
CHAI Chaiyaphum 19.50 125 P Pn 23 25 04.8 +7.6
HRA Herat 20.78 294 P **P 23 25 07.8 -2.1**
SRAK Srakaew 20.82 128 P Pn 23 25 17.9 +5.3
XAN Xi'an 21.04 67 P **P 23 25 12.8 +0.3**
XAN pP pP 23 25 19.0 +1.5
XAN pmax pmax
comp=Z,6.0nm,0.7s
PALK Pallekele 21.06 193 P **P 23 25 14.4 +1.6**
comp=Z,0.8nm,0.3s,baz=108,slow=14,SNR=1.1
PALK Pallekele 21.06 193 P **P 23 25 10.9 -1.9**
PALK pmax pmax
comp=Z,17nm,1.5s
PALK Pallekele 21.06 193 P **P 23 25 10.9 -1.9**
PALK IAmb IAmb 23 25 29.6
comp=Z,17nm,1.5s
ENH Enshi 21.18 78 P **P 23 25 15.3 +1.4**
KURBB Kurchatov Arra 23.21 349 P **P 23 25 35.3 -0.1**
comp=Z,4.5nm,0.6s,baz=170,slow=10.0,SNR=36
KURK Kurchatov 23.29 349 P **P 23 25 35.3 -0.8**
KURK Kurchatov 23.29 349 P **P 23 25 35.3 -0.8**
HHC Hu-ho-hao-te 25.02 52 *eP* **P 23 25 54.5 +1.8**
HHC pmax pmax
comp=Z,14nm,0.8s
HHC pmax pmax
comp=Z,52nm,7.6s
WHN Wuhan 25.38 77 ⇑P P 23 26 09.0 +13
SONM Songino Array 25.70 34 P **P 23 26 00.2 +1.4**
comp=Z,4.0nm,0.5s,baz=216,slow=10,SNR=20
SONM Songino Array 25.70 34 P **P 23 26 00.2 +1.4**
SONM pmax pmax
comp=Z,5.0nm,0.9s
SONM Songino Array 25.70 34 P **P 23 26 00.1 +1.4**
SONM IAmb IAmb 23 26 13.1
comp=Z,5.0nm,0.9s
ZAA0 Zalesovo Array 25.95 359 P 23 26 01.4 +0.6
ZALV Zalesovo Beam 25.95 359 P **P 23 26 01.6 +0.8**
comp=Z,13nm,0.5s,baz=182,slow=9.0,SNR=75
ZALV Zalesovo Beam 25.95 359 P **P 23 26 01.2 +0.4**
ZALV Zalesovo Beam 25.95 359 P **P 23 26 01.1 +0.4**
ULN Ulaanbaatar 26.05 34 P **P 23 26 02.5 +0.6**
ULN pmax pmax
comp=Z,7.0nm,0.8s
ULN Ulaanbaatar 26.05 34 P **P 23 26 02.5 +0.6**
ULN IAmb IAmb 23 26 12.7
comp=Z,7.4nm,0.8s
ZAK Zakamensk 26.20 26 *eP* **P 23 26 04.2 +1.0**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
KULM Kulim 26.82 144 P **P 23 26 08.0 -1.0**
KULM IAmb IAmb 23 26 14.2
comp=Z,5.6nm,0.7s
BVAR Borovoye Array 27.39 340 P **P 23 26 14.4 +0.7**
comp=Z,0.5nm,0.5s,baz=173,slow=11,SNR=5.1
BVAR PcP **PcP 23 29 33.3 +0.8**
comp=Z,0.8nm,0.5s,baz=132,slow=6.2,SNR=6.1
ABKAR Akbulak array 28.86 324 P **P 23 26 27.1 +0.2**
ABKAR Akbulak array 28.86 324 P **P 23 26 27.0 +0.1**
ABKAR IAmb IAmb 23 26 28.6
comp=Z,2.9nm,0.5s
SVE Sverdlovsk 33.76 336 *eP* **P 23 27 10.7 +0.7**
ARU Arti 34.26 334 *d iP* **P 23 27 13.5 -0.8**
ARU S **S 23 32 43.5 +2.7**
ARU SS **SnSn 23 34 53.5 +3.8**
ARU pmax pmax
comp=Z,6.0nm,1.4s
ZEI Tsey 36.52 305 *eP* **P 23 27 35.4 +1.1**
ZEI pmax pmax
comp=Z,7.0nm,1.4s
KSRS Korea Array 36.76 64 P **P 23 27 35.6 -0.4**
comp=Z,2.3nm,0.6s,baz=266,slow=8.1,SNR=7.9
KSRS LR LR 23 43 51.2
comp=Z,45nm,18.5s,baz=243,slow=38
KIV Kislovodsk 37.61 307 *eP* **P 23 27 41.2 -2.1**
KIV pmax pmax
comp=Z,9.0nm,1.0s
USRK Ussuriysk Ar. 40.43 54 P **P 23 28 07.0 +0.2**
comp=Z,2.5nm,0.5s,baz=263,slow=7.5,SNR=8.9
USRK Ussuriysk Ar. 40.43 54 P **P 23 28 07.0 +0.2**
KLR Kul'dur 41.20 46 P **P 23 28 13.6 +0.5**
comp=Z,3.3nm,0.4s,baz=260,slow=8.4,SNR=15
GAZ Gaziantep 41.24 295 P **P 23 28 12.4 -1.4**
NRIK Noril'sk 41.42 1 P **P 23 28 15.7 +1.1**
comp=Z,4.0nm,0.6s,baz=187,slow=7.5,SNR=9.4
NRIK Noril'sk 41.42 1 P **P 23 28 15.1 +0.5**
NRIK pmax pmax
comp=Z,5.0nm,0.8s
NRIK Noril'sk 41.42 1 P **P 23 28 15.1 +0.5**
NRIK IAmb IAmb 23 28 21.5
comp=Z,5.1nm,0.8s
CISI Cisompet, Garu 41.45 145 P **P 23 28 14.8 -0.7**
BRTR Keskin Array B 44.00 299 P **P 23 28 36.4 +0.3**
comp=Z,0.8nm,0.8s,baz=68,slow=13,SNR=2.9
KLMR Klimovskoe 44.90 330 *eP* **P 23 28 41.5 -1.3**
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 44.90 330 *eP* **P 23 28 41.5 -1.3**
KLMR AMP 23 28 43.8
comp=Z,15nm,1.4s
MAT Matsushiro 45.01 65 P **P 23 28 44.3 +0.2**
MJAR Matsushiro Arr 45.01 65 P **P 23 28 44.9 +0.7**
comp=Z,1.3nm,0.6s,baz=280,slow=9.8,SNR=4.8
MJAR Matsushiro Arr 45.01 65 IAmb IAmb 23 28 46.3
comp=Z,1.1nm,0.7s
ELL Elmali 47.11 295 P **P 23 28 59.0 -1.8**
ELL pmax pmax
comp=Z,32nm,0.8s
ELL Elmali 47.11 295 P **P 23 28 59.0 -1.8**
AKASG Malin Array Be 47.67 314 P **P 23 29 04.7 -0.1**
comp=Z,0.4nm,0.4s,baz=67,slow=7.3,SNR=4.1
AKASG Malin Array Be 47.67 314 P **P 23 29 04.7 -0.1**
AKASG pmax pmax
comp=Z,1.0nm,1.1s
MLR Muntele Rosu 49.61 307 P **P 23 29 18.4 -1.6**
MLR pmax pmax
comp=Z,6.0nm,0.9s
MLR Muntele Rosu 49.61 307 P **P 23 29 18.4 -1.6**
TIXI Tiksi 49.77 17 P **P 23 29 20.7 +0.1**
TIXI pmax pmax
comp=Z,4.0nm,0.6s
TIXI Tiksi 49.77 17 P **P 23 29 20.7 +0.1**
TIXI IAmb IAmb 23 29 30.4
comp=Z,3.8nm,0.6s
BURAR Bucovina Array 50.11 310 P **P 23 29 22.9 -0.8**
BUR08 Bucovina Ar. S 50.12 310 P **P 23 29 23.8 0.0**
BUR08 IAmb IAmb 23 29 26.2
comp=Z,2.9nm,1.4s
FINES FINESS Array B 51.23 328 P **P 23 29 32.1 +0.3**
comp=Z,3.8nm,0.5s,baz=106,slow=7.8,SNR=38
FINES FINESS Array B 51.23 328 P **P 23 29 29.0 -2.9**
SOEI Soe 53.12 129 P **P 23 29 45.3 -1.3**
ARA0 ARCESS Array S 53.64 338 *eP* **P 23 29 50.1 +0.5**
ARCES ARCESS Array B 53.64 338 P **P 23 29 50.2 +0.6**
comp=Z,6.3nm,0.7s,baz=86,slow=6.8,SNR=23
PSZ Piszkesteto 53.69 311 P **P 23 29 49.1 -1.3**
PSZ pmax pmax
comp=Z,4.0nm,1.2s
PSZ Piszkesteto 53.69 311 P **P 23 29 49.1 -1.3**
PSZ IAmb IAmb 23 30 01.0
comp=Z,4.3nm,1.2s
MA2 Magadan 53.91 35 P **P 23 29 52.1 +0.4**
comp=Z,3.0nm,0.3s,baz=222,slow=6.4,SNR=3.8
MA2 Magadan 53.91 35 P **P 23 29 52.1 +0.4**
MA2 pmax pmax
comp=Z,5.0nm,0.9s
MA2 Magadan 53.91 35 IAmb IAmb 23 29 52.8
comp=Z,4.7nm,0.9s
KTK1 Kautokeino 54.26 337 *eP* **P 23 29 54.5 +0.4**
KMBO Kilima Mbogo 54.47 246 P **P 23 29 58.2 +1.5**
comp=Z,0.9nm,0.4s,baz=42,slow=7.9,SNR=4.4
HAMF Hammerfest 54.57 339 *eP* **P 23 29 57.1 +0.8**
JETT Jettan, Norway 55.37 337 *eP* **P 23 30 02.8 +0.6**
TRO Tromso 55.89 337 *eP* **P 23 30 06.0 +0.2**
NBB29 Rokland skole 56.80 334 *eP* **P 23 30 11.5 -0.8**
FAUS Fauske 56.85 334 *eP* **P 23 30 11.8 -0.9**
STEI Steigen 56.94 335 *eP* **P 23 30 13.3 0.0**
N2TV TWrnvik 56.94 334 *eP* **P 23 30 12.4 -0.9**
MOR8 Moi Rana 57.06 333 *eP* **P 23 30 13.1 -1.2**
LOF Lofoten 57.60 335 *eP* **P 23 30 17.5 -0.5**
KONS Konsvik 57.62 333 *eP* **P 23 30 18.3 +0.1**
STOK Stokkvaagen 57.65 333 *eP* **P 23 30 18.0 -0.4**
GERES GERESS Array B 57.73 312 P **P 23 30 19.6 +0.3**
comp=Z,0.3nm,0.4s,baz=77,slow=7.1,SNR=6.0
NSS Namsos 58.00 331 *eP* **P 23 30 20.6 -0.3**
NB2 NORSAR Subarra 58.33 327 P **P 23 30 22.4 -0.9**
baz=87,slow=6.9
NOA NORSAR Array B 58.33 327 P **P 23 30 22.5 -0.9**
comp=Z,1.6nm,0.8s,baz=88,slow=6.9,SNR=5.5
KONO Kongsberg 59.19 325 *eP* **P 23 30 28.6 -0.6**
SKAR Skarslia 59.77 326 *eP* **P 23 30 32.4 -0.9**
SALO Salr 60.36 309 P **P 23 30 36.2 -1.4**
BILL Bilibino 60.99 25 P **P 23 30 42.0 +0.5**
BILL pmax pmax
comp=Z,3.0nm,0.6s
BILL Bilibino 60.99 25 P **P 23 30 42.0 +0.5**
KEST Kesra 63.58 298 P **P 23 30 59.6 +0.1**
comp=Z,6.2nm,0.8s,baz=80,slow=0.9,SNR=7.9
WRA Warramunga Arr 67.16 130 P **P 23 31 23.7 +1.0**
comp=Z,3.6nm,0.4s,baz=323,slow=6.5,SNR=30
WRA Warramunga Arr 67.16 130 IAmb IAmb 23 31 24.1
comp=Z,0.2nm,0.8s
ASAR Alice Springs 69.46 133 P **P 23 31 38.0 +0.9**
comp=Z,3.4nm,0.7s,baz=316,slow=6.2,SNR=38
ASAR Alice Springs 69.46 133 P **P 23 31 34.6 -2.4**
NEEM North Greenlan 71.64 351 *i* P **P 23 31 50.4 +0.4**
NEEM IAmb IAmb 23 31 50.9
comp=Z,4.6nm,0.7s
ESDC Sonseca Array 72.27 306 P **P 23 31 53.5 -0.6**
comp=Z,1.9nm,1.1s,baz=59,slow=7.2,SNR=7.3
ESDC Sonseca Array 72.27 306 IAmb IAmb 23 31 54.8
comp=Z,1.0nm,1.0s
SUMG Summit 72.75 345 *i* P **P 23 31 56.2 -0.6**
SUMG IAmb IAmb 23 31 58.7
comp=Z,3.7nm,0.9s
SUMG Summit 72.75 345 *i* P **P 23 31 56.2 -0.6**
SUMG pmax pmax
comp=Z,4.0nm,0.9s
TORD Torodi Ar. Bea 78.45 279 P **P 23 32 29.9 0.0**
comp=Z,2.7nm,0.6s,baz=64,slow=4.6,SNR=34
TORD Torodi Ar. Bea 78.45 279 P **P 23 32 29.8 -0.1**
TORD IAmb IAmb 23 32 30.7
comp=Z,2.0nm,0.7s
ILAR Eielson Array 79.07 20 P **P 23 32 32.0 -0.5**
comp=Z,1.1nm,0.6s,baz=317,slow=4.4,SNR=9.8
STKA Stephens Creek 80.02 134 P **P 23 32 38.8 +0.7**
comp=Z,2.4nm,0.3s,baz=330,slow=7.6,SNR=4.4
BOSA Boshof 80.50 231 P **P 23 32 40.8 -0.1**
comp=Z,1.3nm,0.4s,baz=18,slow=3.1,SNR=10
DBIC Dimbokro 87.12 276 P **P 23 33 15.5 +0.5**
comp=Z,2.4nm,0.5s,baz=30,slow=6.2,SNR=4.9
DBIC Dimbokro 87.12 276 P **P 23 33 15.5 +0.5**
DBIC pmax pmax
comp=Z,9.0nm,1.2s
YKA Yellowknife Ar 88.44 9 P **P 23 33 20.4 0.0**
comp=Z,1.4nm,0.7s,baz=336,slow=4.7,SNR=21

*NEIC **27** 23:22:01.9±0.9, 3°.1N±0°.1×123°.1E±0°.1, h497km±9km, mb4.0/17, Error ellipse: s-maj=22.8km s-min=12.9km az=58.0*
*IDC **27** 23:22:02.2±4.8, 3°.11N×123°.22E, h506km±65km, mb3.2/6, mb1 3.5/8, mb1mx2.9/42, mbtmp4.3/8, Error ellipse: s-maj=82.8km s-min=14.5km az=61.0*
ISC 27 23:22:01.3±0.7, 3°.17N±0°.09×123°.2E±0°.1, h489km, n33, σ0s7.7/32, mb4.0/13, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**3.16**	**230**	P	**P**	**23 23 12.6**	**-0.1**
LUWI	**Luwuk**	**4.21**	**186**	P	**P**	**23 23 20.8**	**+0.1**
KKM	**Kota Kinabalu**	**7.52**	**293**	P	**P**	**23 23 52.7**	**0.0**
KAPI	**Kappang**	**8.83**	**203**	P	**P**	**23 24 07.0**	**+0.8**
	2.5nm,0.3s,baz=12,slow=8.1,SNR=10.0						
KAPI	**Kappang**	**8.83**	**203**		**P**	**23 24 07.7**	**+1.5**
FAKI	**Fak Fak**	**10.89**	**124**	P	**P**	**23 24 29.4**	**+1.2**
SBUM	**Sibu**	**10.98**	**267**	P	**P**	**23 24 29.9**	**+0.8**
BATI	**Baumata**	**13.30**	**178**	P	**P**	**23 24 54.4**	**+0.5**
	9.6nm,0.3s,baz=350,slow=1.7,SNR=4.0						
KNRA	**Kununurra**	**19.52**	**164**	P	**P**	**23 25 56.1**	**-0.2**
KNRA				IAmb	IAmb	23 26 15.1	
	comp=Z,9.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.27**	**174**	P	**P**	**23 26 11.1**	**-1.1**
	comp=Z,6.6nm,1.1s,baz=356,slow=8.1,SNR=12						
FITZ	**Fitzroy Crossi**	**21.27**	**174**	P	**P**	**23 26 11.6**	**-0.6**
WB0	**Warramunga Arr**	**25.31**	**155**	P	**P**	**23 26 47.4**	**-1.0**
WB0				IAmb	IAmb	23 26 47.4	
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**25.45**	**155**	P	**P**	**23 26 48.1**	**-1.4**
	comp=Z,1.5nm,0.3s,baz=335,slow=9.7,SNR=20						
WRA	**Warramunga Arr**	**25.45**	**155**	P	**P**	**23 26 47.7**	**-1.8**
WB2	**Warramunga Arr**	**25.45**	**155**	P	**P**	**23 26 48.5**	**-1.1**
WB2				IAmb	IAmb	23 27 07.1	
	comp=Z,5.5nm,1.0s						
WR0	**Warramunga Arr**	**25.55**	**155**	P	**P**	**23 26 49.3**	**-1.1**
WR0				IAmb	IAmb	23 26 50.2	
	comp=Z,3.7nm,0.9s						
ASAR	**Alice Springs**	**28.64**	**159**	P	**P**	**23 27 17.4**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=336,slow=6.9,SNR=16						
ASAR	**Alice Springs**	**28.64**	**159**	P	**P**	**23 27 17.6**	**-0.1**
MORW	**Morawa**	**32.78**	**192**	P	**P**	**23 27 52.2**	**-1.0**
MORW				IAmb	IAmb	23 28 11.5	
	comp=Z,3.3nm,0.8s						
FORT	**Forrest**	**34.08**	**173**	P	**P**	**23 28 04.0**	**-0.2**
NWAO	**Narrogin (SRO)**	**36.34**	**188**	P	**P**	**23 28 22.6**	**-0.5**
NWAO	**Narrogin (SRO)**	**36.34**	**188**	P	**P**	**23 28 22.8**	**-0.3**
NWAO				IAmb	IAmb	23 28 39.3	
	comp=Z,15nm,1.0s						
BBOO Buckleboo 37.81 162 P **P 23 28 35.1 -0.1**
BBOO IAmb IAmb 23 28 53.1
comp=Z,7.0nm,1.1s
STKA Stephens Creek 39.00 155 P **P 23 28 44.7 -0.2**
comp=Z,1.8nm,0.3s,baz=315,slow=11,SNR=4.5
STKA Stephens Creek 39.00 155 IAmb IAmb 23 28 46.0
comp=Z,0.3nm,0.7s
JTM Tenmabayashi 40.77 21 P **P 23 28 59.0 0.0**
SONM Songino Array 46.79 345 P **P 23 29 45.9 -0.1**
comp=Z,0.6nm,0.7s,baz=140,slow=7.2,SNR=2.5
MK31 Makanchi Array 56.05 327 P **P 23 30 53.3 +0.2**
MK31 IAmb IAmb 23 30 53.5
comp=Z,1.5nm,0.4s
MKAR Makanchi Array 56.05 327 P **P 23 30 53.2 0.0**
comp=Z,1.8nm,0.3s,baz=124,slow=8.0,SNR=37
MAKZ Makanchi 56.23 327 P **P 23 30 54.3 -0.1**
KDJ Kajisay 56.46 320 P **P 23 30 56.5 +0.2**
GAR Garm 59.73 314 P **P 23 31 18.3 -0.2**
GAR IAmb IAmb 23 31 18.8
comp=Z,6.9nm,1.0s
KKAR Karatay Array 61.26 318 P **P 23 31 28.2 -0.2**

*DJA **27** 23:48:12.1±0.3, 11°.5S±3°.5×12°.0E±°, h10km, M3.9/8, mb4.3/5, MLv3.7/8*
*IDC **27** 23:48:14.4±3.3, 10°.68S×120°.32E, h42km±34km, mb3.9/3, mb1 3.9/8, mb1mx3.6/35, mbtmp4.0/8, ML3.6/5, MS3.1/2, Ms1 3.2/2, ms1mx2.5/30, Error ellipse: s-maj=26.6km s-min=22.6km az=49.0*
*NEIC **27** 23:48:14.7±1.9, 10°.76S±0°.05×120°.34E±0°.05, h51km±10km, mb4.1/5, Error ellipse: s-maj=8.9km s-min=4.6km az=137.0*
ISC 27 23:48:12.6±0.6, 10°.73S±0°.05×120°.38E±0°.05, h31km, n28, σ2s16/34, mb4.3/3, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.55**	**21**	P	**Pb**	**23 48 22.0**	**-1.8**
BASI				S	**Sb**	**23 48 29.7**	**-1.8**
WBSI	**Waikabubak, Su**	**1.46**	**318**	P	**Pn**	**23 48 37.2**	**+0.3**
WBSI				S	**Sb**	**23 48 56.6**	**-0.8**
MMRI	**Maumere**	**2.77**	**41**	Pn	**Pn**	**23 48 55.0**	**+0.1**
PLAI	**Plampang**	**3.19**	**306**	P	**Pn**	**23 49 01.4**	**+0.8**
BATI	**Baumata**	**3.27**	**81**	P	**Pn**	**23 49 04.5**	**+2.8**
	22nm,0.3s,baz=317,slow=2.2,SNR=14						
BATI				S	**Sn**	**23 49 42.6**	**+3.0**
	8.9nm,0.3s,baz=13,slow=21,SNR=9.9						
BATI	**Baumata**	**3.27**	**81**	P	**Pn**	**23 49 04.6**	**+2.8**
SOEI	**Soe**	**3.94**	**76**		**Pn**	**23 49 14.0**	**+2.9**
SOEI	**Soe**	**3.94**	**76**	P	**Pn**	**23 49 14.0**	**+2.9**
TWSI	**Taliwang, Sumb**	**3.98**	**300**	P	**Pn**	**23 49 12.2**	**+0.7**
KAPI	**Kappang**	**5.72**	**354**	P	**Pn**	**23 49 36.3**	**+0.9**
	1.4nm,0.3s,baz=225,slow=11,SNR=3.2						
KAPI				LR	LR	23 52 07.7	
	comp=Z,163nm,18.3s,baz=212,slow=41						
JAGI	**Jajag, Banyuwa**	**6.54**	**290**	Pn	**Pn**	**23 49 47.4**	**+0.7**
JAGI				Sn	**Sn**	**23 50 59.0**	**-1.3**
JAGI	**Jajag, Banyuwa**	**6.54**	**290**	P	**Pn**	**23 49 47.3**	**+0.5**
	0.2nm32nm,1.0s						
FITZ	**Fitzroy Crossi**	**8.92**	**146**	P	**Pn**	**23 50 21.4**	**+2.0**
	0.3nm,0.3s,baz=352,slow=12,SNR=12						
FITZ				S	**Sn**	**23 51 57.1**	**-1.7**
	2.1nm,0.3s,baz=200,slow=22,SNR=15						
KNRA	**Kununurra**	**9.52**	**122**	Pn	**Pn**	**23 50 29.9**	**+2.2**
GIRL	**Giralia**	**13.22**	**206**	Pn	**Pn**	**23 51 18.5**	**+0.2**
WB0	**Warramunga Arr**	**16.22**	**125**	Pn	**Pn**	**23 51 58.5**	**+0.2**
WB0				IAmb	IAmb	23 52 11.2	
	comp=Z,6.8nm,1.1s						
WRA	**Warramunga Arr**	**16.27**	**126**	P	**Pn**	**23 52 00.1**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=308,slow=14,SNR=4.8						
WRA				S	**Sn**	**23 54 53.2**	**-5.4**
	comp=Z,0.1nm,0.3s,baz=295,slow=22,SNR=5.8						
WB2	**Warramunga Arr**	**16.28**	**126**	Pn	**Pn**	**23 51 58.8**	**-0.3**
WR0	**Warramunga Arr**	**16.44**	**126**	Pn	**Pn**	**23 52 00.6**	**-0.6**
WR0				IAmb	IAmb	23 52 48.4	
	comp=Z,34nm,1.9s						
ASAR	**Alice Springs**	**18.21**	**137**	P	**P**	**23 52 24.4**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=315,slow=12,SNR=18						
ASAR				S	**Sn**	**23 55 39.1**	**-6.6**
	comp=Z,0.1nm,0.3s,baz=313,slow=23,SNR=5.8						
MORW	**Morawa**	**18.69**	**192**	P	**P**	**23 52 29.1**	**+0.8**
MORW				IAmb	IAmb	23 52 30.0	
	comp=Z,38nm,1.6s						
COEN	**Coen**	**22.49**	**101**	P	**P**	**23 53 11.1**	**+1.4**
CMAR	**Chiang Mai Arr**	**35.90**	**324**	LR	LR	00 11 40.8	
	comp=Z,23nm,18.1s,baz=220,slow=39						
SONM	**Songino Array**	**59.62**	**349**	P	**P**	**23 58 13.3**	**-0.4**
	comp=Z,2.1nm,0.6s,baz=164,slow=7.9,SNR=9.5						
SONM	**Songino Array**	**59.62**	**349**	P	**P**	**23 58 13.9**	**+0.3**
MKAR	**Makanchi Array**	**66.61**	**332**	P	**P**	**23 59 00.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=140,slow=8.3,SNR=9.9						
ZALV	**Zalesovo Beam**	**71.14**	**339**	P	**P**	**23 59 27.4**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=152,slow=6.2,SNR=7.0						
TORD	**Torodi Ar. Bea**	**120.09**	**279**	PKP	**PKiKP**	**00 07 02.8**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=83,slow=1.5,SNR=2.2						

*IDC **28** 00:05:45.3±2.4, 10°.59S×120°.09E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.3/35, mbtmp3.4/4, ML3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx2.2/18, Error ellipse: s-maj=201.1km s-min=27.5km az=53.0*
*DJA **28** 00:05:51.2±1.1, 11°.5S±10°.×12°.0E±°, h15km±10km, M3.5/5, mb4.0/2, MLv3.2/5*
ISC 28 00:05:51.0±0.9, 10°.60S±0°.08×120°.54E±0°.09, h31km, n9, σ2s14/11, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.38**	**5**	P	**Pn**	**00 06 01.1**	**+0.7**
BASI				S	**Sn**	**00 06 06.3**	**-0.3**
WBSI	**Waikabubak, Su**	**1.48**	**310**	P	**Pn**	**00 06 16.1**	**+0.5**
WBSI				S	**Sb**	**00 06 35.8**	**-0.6**
PLAI	**Plampang**	**3.25**	**303**	P	**Pn**	**00 06 41.0**	**+1.2**
TWSI	**Taliwang, Sumb**	**4.06**	**297**	P	**Pn**	**00 06 51.9**	**+0.9**
KAPI	**Kappang**	**5.60**	**352**	LR	LR	00 09 22.5	
	comp=Z,40nm,19.0s,baz=243,slow=39						
FITZ	**Fitzroy Crossi**	**8.94**	**147**	Pn	**Pn**	**00 08 00.1**	**+2.0**
	0.3nm,0.3s,baz=325,slow=7.3,SNR=17						
FITZ				Sn	**Sn**	**00 09 33.7**	**-4.1**
	0.3nm,0.3s,baz=166,slow=21,SNR=9.1						
WRA	**Warramunga Arr**	**16.22**	**127**	Pn	**Pn**	**00 09 39.2**	**+2.5**
	0.1nm,0.3s,baz=298,slow=13,SNR=1.5						
ASAR	**Alice Springs**	**18.20**	**137**	P	**P**	**00 10 02.6**	**+1.1**
	0.1nm,0.3s,baz=314,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	**66.57**	**332**	P	**P**	**00 16 36.0**	**-2.2**
	0.3nm,0.6s,baz=137,slow=6.3,SNR=3.6						

*IDC **28** 00:16:22.9±0.9, 27°.66N×85°.66E, h0km, mb3.9/11, mb1 3.9/13, mb1mx3.6/43, mbtmp3.8/13, ML3.7/2, Error ellipse: s-maj=29.2km s-min=18.4km az=61.0*
ISC 28 00:16:24.6±1.0, 27°.7N±0°.2×85°.7E±0°.2, h10km, n13, σ0s46/13, mb3.9/11, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**17.46**	**332**	P	**P**	**00 20 29.1**	**-0.5**
	0.2nm,0.3s,baz=275,slow=8.1,SNR=3.7						
MKAR	**Makanchi Array**	**19.26**	**353**	P	**P**	**00 20 49.2**	**0.0**
	0.4nm,0.3s,baz=174,slow=11,SNR=23						
KURBB	**Kurchatov Arra**	**23.54**	**349**	P	**P**	**00 21 34.9**	**0.0**
	0.8nm,0.5s,baz=168,slow=10.0,SNR=14						
SONM	**Songino Array**	**25.80**	**33**	P	**P**	**00 21 56.0**	**0.0**
	2.2nm,0.6s,baz=220,slow=9.6,SNR=11						
ZALV	**Zalesovo Beam**	**26.25**	**359**	P	**P**	**00 21 59.9**	**+0.2**
	1.8nm,0.7s,baz=183,slow=12,SNR=8.7						
NRIK	**Noril'sk**	**41.70**	**1**	P	**P**	**00 24 13.7**	**+0.5**

2.4nm,0.7s,baz=151,slow=5.2,SNR=7.4
FINES FINESS Array B 51.61 328 P **P 00 25 30.6 -0.3**
1.0nm,0.7s,baz=117,slow=11,SNR=4.6
ARCES ARCESS Array B 53.99 338 P **P 00 25 47.5 -0.9**
2.1nm,0.8s,baz=101,slow=7.7,SNR=7.7
KEST Kesra 63.93 298 P **P 00 26 58.8 +0.7**
3.7nm,0.9s,baz=319,slow=4.1,SNR=4.7
WRA Warramunga Arr 66.79 130 P **P 00 27 16.7 0.0**
0.6nm,0.4s,baz=322,slow=6.2,SNR=5.1
ASAR Alice Springs 69.09 133 P **P 00 27 30.8 -0.3**
0.5nm,0.6s,baz=321,slow=6.3,SNR=6.4
ESDC Sonseca Array 72.64 306 P **P 00 27 52.7 +0.1**
0.3nm,0.7s,baz=52,slow=4.9,SNR=2.4
TORD Torodi Ar. Bea 78.74 279 P **P 00 28 27.6 -0.2**
0.2nm,0.7s,baz=49,slow=4.9,SNR=2.0

*UCR **28** 00:32:08.2±1.9, 9°.26N×85°.55W, h22km±5km, MW3.8*
*INET **28** 00:32:09.6, 9°.33N×85°.45W, h15km, MW3.0*
*UPA **28** 00:32:10.1±2.1, 9°.33N×85°.38W, h10km±40km, MW4.3*
ISC 28 00:32:07.3±1.9,**9°.24N**±0°.07×**85°.54W**±0°.09,**h17**km±13km,
n58,σ1°**02/75,10C-2D,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
INDI	**Punta indio, G**	**0.62**	**4**	*eP*		**Pb**		**00 32 20.1**	**+0.4**
INDI				*eS*		**Sb**		**00 32 29.0**	**+1.0**
GRZA	**Playa Garza**	**0.67**	**352**	*eP*		**Pg**		**00 32 20.7**	**+0.2**
GRZA				*eS*		**Sb**		**00 32 30.1**	**+0.5**
SAJU	**San Juanillo,**	**0.83**	**349**	*eP*		**Pb**		**00 32 22.9**	**-0.4**
LAFE	**Finca La Fe, P**	**0.84**	**48**	*eP*		**Pb**		**00 32 23.2**	**-0.1**
GUAI	**GUAI**	**1.02**	**2**	⇑*iP*		**Pb**		**00 32 26.0**	**-0.5**
GUAI				*i* S		**Sb**		**00 32 39.1**	**-0.5**
PLVR	**Palo Verde**	**1.11**	**10**	*eP*		**Pb**		**00 32 26.6**	**-1.6**
JTS	**Las Juntas de**	**1.19**	**29**	*i* P		**Pn**		**00 32 28.9**	**-0.3**
JTS				*i* S		**Sb**		**00 32 44.0**	**-0.6**
JTS	**Las Juntas de**	**1.19**	**29**	*eP*		**Pn**		**00 32 28.6**	**-0.6**
COLC	**Colonia**	**1.45**	**13**	*i* P		**Pn**		**00 32 32.8**	**0.0**
COLC				*i* S		**Sn**		**00 32 51.8**	**+0.4**
CUI	**Cuipilapa**	**1.45**	**15**	*eP*		**Pn**		**00 32 33.0**	**+0.2**
CUI				*eS*		**Sn**		**00 32 51.4**	**-0.1**
ARE1	**Arenal 1**	**1.46**	**34**	*eP*		**Pn**		**00 32 33.6**	**+0.8**
ACAL	**Aguas Claras**	**1.47**	**20**	*i* P		**Pn**		**00 32 33.4**	**+0.3**
LIM1	**Limonal**	**1.47**	**11**	⇑*iP*		**Pn**		**00 32 33.1**	**+0.1**
CEDE	**Laguna Cedeo**	**1.49**	**34**	⇑*iP*		**Pn**		**00 32 34.1**	**+0.8**
GUAB	**Guayabo de Bag**	**1.49**	**12**	*i* P		**Pn**		**00 32 33.2**	**0.0**
FORC	**Fortuna**	**1.49**	**35**	*i* P		**Pn**		**00 32 33.8**	**+0.6**
HORNC	**Hornillas**	**1.50**	**14**	⇑*iP*		**Pn**		**00 32 33.5**	**0.0**
GPS2	**Hotel Rincn d**	**1.51**	**7**	⇑*iP*		**Pn**		**00 32 33.7**	**+0.1**
LAPC	**Finca la Perla**	**1.52**	**4**	⇑*iP*		**Pn**		**00 32 33.6**	**-0.1**
GBS3	**Finca Las Img**	**1.53**	**3**	⇑*iP*		**Pn**		**00 32 33.8**	**-0.1**
BUEV	**Buena Vista**	**1.55**	**5**	⇑*iP*		**Pn**		**00 32 34.2**	**0.0**
PTEN	**Parque Tenorio**	**1.56**	**20**	*i* P		**Pn**		**00 32 34.7**	**+0.5**
GB1A	**Borinquen Arri**	**1.57**	**5**	⇑*iP*		**Pn**		**00 32 34.5**	**+0.1**
HDC	**Heredia**	**1.60**	**62**	*eP*		**Pn**		**00 32 35.1**	**+0.2**
LCR2	**La Lucha 2**	**1.60**	**72**	*eP*		**Pn**		**00 32 34.7**	**-0.2**
BUAI	**Buenos Aires**	**1.64**	**7**	⇑*iP*		**Pn**		**00 32 35.5**	**+0.2**
EDDO	**Dominical**	**1.66**	**90**	*eP*		**Pn**		**00 32 35.8**	**+0.3**
EDDO				*eS*		**Sn**		**00 32 56.3**	**-0.1**
RIMA	**Rio Macho**	**1.74**	**72**	*eP*		**Pn**		**00 32 36.9**	**+0.1**
CDM	**Cerro de Muert**	**1.78**	**80**	*eP*		**Pn**		**00 32 37.9**	**+0.2**
PEZE	**Perez Zeledon,**	**1.85**	**86**	*eP*		**Pn**		**00 32 38.4**	**+0.1**
COVE	**Coope Vega, Sa**	**1.85**	**37**	*eP*		**Pn**		**00 32 38.8**	**+0.7**
RIOS	**Rincon, Osa**	**2.08**	**105**	*eP*		**Pn**		**00 32 41.5**	**+0.2**
EDPN	**Palmar Norte**	**2.08**	**98**	*eP*		**Pn**		**00 32 41.9**	**+0.6**
MRVA	**Moravia de Chi**	**2.15**	**74**	*eP*		**Pn**		**00 32 43.1**	**+0.7**
EDBA	**Buenos Aires**	**2.24**	**92**	*eP*		**Pn**		**00 32 44.1**	**+0.5**
EDBA				*eS*		**Sn**		**00 33 10.7**	**-0.2**
DRK0	**Durika**	**2.27**	**89**	⇓*iP*		**Pn**		**00 32 44.8**	**+0.7**
DRK0				*i* S		**Sn**		**00 33 11.4**	**-0.3**
DRK0	**Durika**	**2.27**	**89**	*eP*		**Pn**		**00 32 44.8**	**+0.7**
PIRO	**Carate, Puerto**	**2.33**	**111**	*i* P		**Pn**		**00 32 45.4**	**+0.5**
PIRO				*i* S		**Sn**		**00 33 11.8**	**-1.3**
PIRO	**Carate, Puerto**	**2.33**	**111**	*eP*		**Pn**		**00 32 45.2**	**+0.3**
POTG	**Potrero Grande**	**2.40**	**94**	*eP*		**Pn**		**00 32 46.7**	**+0.9**
LPLA	**Las Palmas La**	**2.51**	**95**	⇓*iP*		**Pn**		**00 32 48.4**	**+0.9**
LPLA				*eS*		**Sn**		**00 33 17.7**	**-0.1**
CDITO	**Canoas**	**2.72**	**104**	*i* P		**Pn**		**00 32 51.5**	**+1.3**
CDITO				*eS*		**Sn**		**00 33 23.3**	**+0.6**
BRU2	**Volcan**	**2.85**	**99**	*i* P		**Pn**		**00 32 54.0**	**+1.9**
BRU2				*i* S		**Sn**		**00 33 26.5**	**+0.3**
BRU2	**Volcan**	**2.85**	**99**	*eP*		**Pn**		**00 32 53.0**	**+0.9**
BC3P	**Paso Ancho**	**2.93**	**98**	*eP*		**Pn**		**00 32 55.3**	**+2.1**
BC3P				*eS*		**Sn**		**00 32 58.5**	**+0.4**
BCO2	**Palmira**	**3.02**	**100**	*i* P		**Pn**		**00 32 56.2**	**+1.7**
BCO2				*i* S		**Sn**		**00 33 30.7**	**+0.3**
CNI2	**El Empalme, Bo**	**3.04**	**86**	*eP*		**Pn**		**00 32 56.8**	**+2.3**
LNBQ3	**Los Naranjos,**	**3.10**	**98**	*eP*		**Pn**		**00 32 58.0**	**+2.5**
DVD	**David**	**3.16**	**104**	*eP*		**Pn**		**00 32 58.9**	**+2.6**
LOCO3	**Loma Colorada,**	**3.20**	**105**	*i* P		**Pn**		**00 32 56.3**	**-0.4**
PEDE3	**Pedregal, Chir**	**3.20**	**105**	*eP*		**Pb**		**00 33 01.9**	**-1.7**
PEDE3				*i* S		**Sn**		**00 33 31.2**	**-3.4**
LOMA3	**Las Lomas, Chi**	**3.22**	**104**	*eP*		**Pn**		**00 32 56.2**	**-0.8**
PSOM3	**Paja de Sombre**	**3.23**	**100**	*eP*		**Pn**		**00 32 57.9**	**+0.7**
GUAL3	**Gualaca, Chiri**	**3.28**	**102**	*i* P		**Pn**		**00 32 58.1**	**+0.2**
CHIR3	**Chiriqui UPA,**	**3.29**	**105**	*eP*		**Pn**		**00 32 57.6**	**-0.3**
CHGR2	**Aguacate**	**3.37**	**95**	*i* P		**Pn**		**00 33 01.1**	**+2.0**
CHGR2				*eS*		**Sn**		**00 33 39.0**	**+0.3**
GMAL	**Guarumal, Vera**	**4.51**	**109**	*eP*		**Pn**		**00 33 16.1**	**+1.3**
CACAO	**El Cacao, Vera**	**5.00**	**112**	*eP*		**Pn**		**00 33 23.9**	**+2.4**

*IDC **28** 00:33:20.9±1.8, 27°.85N×85°.95E, h0km, mb3.8/6,*
mb1 3.9/9, mb1mx3.5/41, mbtmp3.8/9, ML3.8/3, MS2.8/4,
Ms1 2.8/4, ms1mx2.5/49, Error ellipse: s-maj=51.3km
s-min=23.6km az=55.0
ISC 28 00:33:24.1±1.6,**27°.9N**±0°.2×**85°.9E**±0°.3,**h19**km,**n12,**
σ0°57/9,mb3.8/6,MS2.8/3,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.19**	**125**	Pn		**Pn**		**00 36 58.6**	**+0.8**
	0.4nm,0.3s,baz=312,slow=12,SNR=1.1								
CMAR				LR		LR		00 44 33.0	
	comp=Z,11nm,18.2s,baz=320,slow=44								
AAK	**Ala-Archa**	**17.40**	**331**	P		**P**		**00 37 27.8**	**+0.6**
	0.1nm,0.3s,baz=215,slow=6.3,SNR=4.0								
MKAR	**Makanchi Array**	**19.09**	**352**	P		**P**		**00 37 45.5**	**-0.1**
	0.2nm,0.3s,baz=173,slow=12,SNR=16								
PALK	**Pallekele**	**21.10**	**195**	LR		LR		00 46 11.0	
	comp=Z,33nm,19.0s,baz=20,slow=37								
KURBB	**Kurchatov Arra**	**23.39**	**348**	P		**P**		**00 38 31.1**	**-0.5**
	1.0nm,0.2s,baz=167,slow=9.4,SNR=5.3								
SONM	**Songino Array**	**25.50**	**33**	P		**P**		**00 38 51.2**	**-0.1**
	1.9nm,0.7s,baz=222,slow=10,SNR=11								
ZALV	**Zalesovo Beam**	**26.05**	**358**	P		**P**		**00 38 56.3**	**+0.3**
	1.1nm,0.5s,baz=185,slow=10,SNR=6.7								
KSRS	**Korea Array**	**36.36**	**64**	LR		LR		00 56 50.7	
	comp=Z,17nm,19.8s,baz=155,slow=39								
KAPI	**Kappang**	**46.19**	**130**	LR		LR		01 05 25.1	
	comp=Z,14nm,18.5s,baz=286,slow=42								
FINES	**FINESS Array B**	**51.56**	**328**	P		**P**		**00 42 28.6**	**-0.1**
	0.8nm,0.8s,baz=116,slow=8.7,SNR=4.9								
ARCES	**ARCESS Array B**	**53.90**	**338**	P		**P**		**00 42 45.9**	**0.0**
	1.5nm,0.6s,baz=104,slow=7.5,SNR=7.9								
WRA	**Warramunga Arr**	**66.73**	**130**	P		**P**		**00 44 13.5**	**-0.7**
	0.3nm,0.6s,baz=324,slow=6.6,SNR=2.3								

*NEIC **28** 00:53:03.4±2.5, 39°.29N±0°.02×122°.72W±0°.02, h9km±6km,*
Error ellipse: s-maj=3.1km s-min=1.3km az=151.0
NCEDC 28 00:53:03.4±2.4,**39°.27N**±0°.02×**122°.76W**±0°.04,**h13**km±6km,
ML3.2/39,**ML3.2**/82(NEIC),**Error ellipse: s-maj=4.5km**
s-min=2.2km az=73.0,Northern California

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPS	**Hopland Field**	**0.37**	**222**				Pg	00 53 11.0	+0.2
HOPS					Sg		Sb	00 53 17.4	-0.1
HOPS					IAML			00 53 18.0	
	comp=N,3μm,0.5s								
HOPS					IAML			00 53 18.4	
	comp=E,3μm,0.6s								
GASB	**Alder Springs**	**0.39**	**5**				Pg	00 53 11.4	+0.2
GSGM	**Seigler Mounta**	**0.41**	**175**				Pg	00 53 11.7	+0.3
GPMM	**Pine Mountain**	**0.45**	**199**				Pb	00 53 12.7	-0.4
MNRC	**McLaughlin Min**	**0.46**	**148**				Pg	00 53 12.9	+0.4
GDXM	**Geysers**	**0.46**	**184**				Pg	00 53 12.5	-0.1
GDXM					Sg		Sb	00 53 21.6	+1.3
GCRM	**Castle Rock Sp**	**0.50**	**176**				Pg	00 53 13.4	+0.2
GNAM	**Navarro Ridge**	**0.68**	**264**				Pg	00 53 16.9	+0.2
SUTB	**Sutter Butte**	**0.75**	**93**				Pg	00 53 17.0	-1.0
KCPM	**Cahto Peak**	**0.76**	**303**				Pb	00 53 18.4	-0.2
FTR	**Fort Ross**	**0.81**	**203**				Pg	00 53 19.0	-0.1
KBSM	**Bell Springs**	**0.92**	**315**				Pg	00 53 20.8	-0.3
CVS	**Carmenet Viney**	**0.95**	**166**				Pb	00 53 20.2	-1.5
ORV	**Oroville**	**1.01**	**73**				Pb	00 53 20.7	-2.1
ORV							Sb	00 53 32.6	-3.4
LTCM	**Tuscan Springs**	**1.06**	**27**				Pb	00 53 22.0	-1.5
MCCM	**Marconi Confer**	**1.13**	**185**	Pn			Pg	00 53 25.6	+0.5
KMRM	**Mail Ridge**	**1.20**	**323**	Pn			Pn	00 53 25.2	-0.8
KMRM					IAML			00 53 58.4	
	comp=E,786nm,1.6s								
LCMM	**Colby Mountain**	**1.29**	**47**				Pn	00 53 25.9	-1.4
WDC	**Whiskeytown Da**	**1.32**	**7**				Pn	00 53 26.3	-1.2
WDC	**Whiskeytown Da**	**1.32**	**7**				Pn	00 53 26.7	-0.9
WDC							Sg	00 53 45.8	-0.1
WDC					IAML			00 53 49.5	
	comp=N,240nm,1.4s								
WDC					IAML			00 53 51.3	
	comp=E,230nm,0.9s								
KCRM	**Chalk Rock**	**1.42**	**325**				Pn	00 53 28.3	-0.6
AFDM	**Forest Hills D**	**1.43**	**102**				Pn	00 53 27.1	-1.9
AFDM					Sn		Sn	00 53 45.7	-2.0
KSMM	**Slide Mountain**	**1.43**	**310**				Pn	00 53 27.4	-1.7
BKS	**Berkeley--Byer**	**1.45**	**164**				Pn	00 53 27.6	-1.7
BDM	**Black Diamond**	**1.49**	**152**				Pn	00 53 28.2	-1.6
LMEM	**Manzanita Entr**	**1.56**	**35**				Pn	00 53 29.9	-1.1
FARB	**Farallon Islan**	**1.58**	**187**				Pn	00 53 29.7	-1.4
KHMM	**Horse Mountain**	**1.77**	**335**				Pn	00 53 33.5	-0.4
KHMM					IAML			00 54 14.5	
	comp=N,234nm,1.3s								
KHMM					IAML			00 54 21.5	
	comp=E,240nm,1.2s								
JCC	**Jacoby Creek,**	**1.83**	**328**				Pb	00 53 35.9	-0.8
JCC					IAML			00 54 20.5	
	comp=N,196nm,1.4s								
JCC					IAML			00 54 26.3	
	comp=E,167nm,1.2s								
JRSC	**Jasper Ridge**	**1.91**	**168**				Pn	00 53 34.0	-1.6
BEKR	**Beckworth**	**1.94**	**71**				Pn	00 53 36.4	+0.1
BEKR					IAML			00 54 03.0	
	comp=N,296nm,0.6s								
BEKR					IAML			00 54 03.6	
	comp=E,310nm,0.6s								
RUBR	**Rubicon Trail**	**2.03**	**95**				Pn	00 53 37.8	+0.3
KOMM	**Orleans Mounta**	**2.08**	**345**				Pg	00 53 42.1	-1.1
MHC	**Mount Hamilton**	**2.12**	**155**				Pn	00 53 37.7	-0.9
LGBM	**Gray Butte**	**2.12**	**12**				Pn	00 53 39.0	+0.2
CMB	**Columbia Colle**	**2.23**	**123**	Pn			Pn	00 53 39.6	-0.5
CMB					IAML			00 54 08.8	
	comp=E,116nm,1.1s								
CMB					IAML			00 54 09.2	
	comp=N,128nm,0.8s								
GHS	**Gilroy Hot Spr**	**2.40**	**154**				Pn	00 53 41.3	-1.2
VCNR	**Virginia City**	**2.41**	**88**				Pn	00 53 42.9	+0.2
VCNR					IAML			00 54 20.0	
	comp=N,164nm,0.9s								
KRMB	**Red Mountain**	**2.42**	**339**				Pb	00 53 46.3	-0.5
YBH	**Yreka Blue Hor**	**2.46**	**1**				Pn	00 53 44.5	+1.1
YBH	**Yreka Blue Hor**	**2.46**	**1**				Pn	00 53 44.8	+1.5
YBH					IAML			00 54 31.2	
	comp=N,52nm,0.8s								
YBH					IAML			00 54 37.8	
	comp=E,69nm,1.4s								
PNTR	**Pine Nut**	**2.46**	**93**				Pn	00 53 44.2	+0.8
PAHR	**Pah Rah Range**	**2.65**	**79**				Pn	00 53 46.3	+0.4
PAHR					IAML			00 54 41.3	
	comp=N,157nm,1.4s								
PAHR					IAML			00 54 41.7	
	comp=E,88nm,0.9s								
WAKR	**Walker**	**2.70**	**105**				Pn	00 53 48.2	+1.4
WAKR					IAML			00 54 46.9	
	comp=N,103nm,1.4s								
SAO	**San Andreas Ge**	**2.71**	**157**				Pn	00 53 44.5	-2.1
YERR	**Yerington**	**2.75**	**95**				Pn	00 53 47.0	-0.4
KBO	**Bosley Butte**	**3.14**	**340**				Pn	00 53 53.1	+0.4
KBO					IAML			00 55 05.1	
	comp=E,63nm,1.5s								
KBO					IAML			00 55 05.3	
	comp=N,68nm,2.3s								
MOD	**Modoc Plateau**	**3.23**	**35**				Pn	00 53 54.7	+0.8
MOD					IAML			00 55 07.8	
	comp=E,41nm,0.8s								
MDPB	**Devils Postpil**	**3.32**	**118**				Pn	00 53 56.1	+0.9
MDPB					IAML			00 55 02.6	
	comp=N,76nm,0.8s								
HUMO	**Hull Mountain**	**3.34**	**357**				Pn	00 53 57.2	+1.9
RYN	**Ryan**	**3.36**	**100**				Pn	00 53 55.5	-0.3
RYN					IAML			00 55 00.8	
	comp=N,40nm,1.4s								
RYN					IAML			00 55 01.9	
	comp=E,45nm,0.7s								
PMPB	**Monarch Peak**	**3.42**	**152**	Pn		Pn		00 53 57.0	+0.6
PMPB					IAML			00 54 43.0	
	comp=E,44nm,2.0s								
PMPB					IAML			00 55 32.4	
	comp=N,49nm,2.2s								
LHV	**Little Huntoon**	**3.48**	**106**				Pn	00 53 58.6	+1.5
LHV					IAML			00 55 04.2	
	comp=E,78nm,1.8s								
NVAR	**Mina Array Bea**	**3.58**	**102**				Pn	00 53 59.0	+0.2
KVN	**Kaiserville**	**3.63**	**92**		IAML			00 54 46.1	
	comp=N,50nm,0.1s								
KVN					IAML			00 54 58.9	
	comp=E,29nm,0.6s								
NV11	**Mina Array Sit**	**3.69**	**102**		IAML			00 55 00.6	
	comp=E,33nm,1.1s								
NV11					IAML			00 55 17.4	
	comp=N,43nm,1.3s								
K05A	**Summer Lake**	**3.73**	**22**				Pn	00 54 03.5	+2.6
K05A					IAML			00 55 13.9	
	comp=N,29nm,1.5s								
K05A					IAML			00 55 17.5	
	comp=E,26nm,1.6s								
KEBM	**Edson Butte**	**3.79**	**342**				Pb	00 54 06.9	-3.3
PAGB	**Antelope Grade**	**4.06**	**150**	Pn		Pn		00 54 04.8	-0.4
PAGB					IAML			00 55 46.0	
	comp=E,24nm,2.0s								
PAGB					IAML			00 56 16.5	
	comp=N,22nm,1.8s								
WVOR	**Wild Horse Val**	**4.44**	**43**				Pn	00 54 10.0	-0.6
TPH	**Tonopah**	**4.49**	**104**				Pn	00 54 13.3	+1.9
TPH	**Tonopah**	**4.49**	**104**		IAML			00 55 36.8	
	comp=E,16nm,1.8s								
TPH					IAML			00 55 39.1	
	comp=N,17nm,1.8s								
PINE	**Pine Mountain**	**4.72**	**16**				Pn	00 54 16.5	+2.0
PINE					IAML			00 55 38.5	
	comp=E,17nm,4.5s								
PINE					IAML			00 56 48.4	
	comp=N,13nm,4.0s								
ISA	**Isabella, Lake**	**4.96**	**135**	Pn		Pn		00 54 18.8	+1.2
ISA					IAML			00 55 35.6	
	comp=E,17nm,1.6s								
ISA					IAML			00 55 36.6	
	comp=N,12nm,1.5s								
J08A	**Circle Bar Ran**	**5.20**	**37**				Pn	00 54 23.6	+2.6
J08A					IAML			00 56 11.5	
	comp=N,11nm,1.4s								
I07A	**Izee**	**5.39**	**26**	Pn		Pn		00 54 26.2	+2.6
I07A					IAML			00 55 44.7	
	comp=E,9.0nm,4.7s								
I07A					IAML			00 56 26.0	
	comp=N,7.5nm,4.7s								
H04A	**Detroit Lake**	**5.43**	**4**				Pn	00 54 24.9	+0.8
TPNV	**Topopah Spring**	**5.63**	**112**				Pn	00 54 29.9	+2.9
R11A	**Troy Canyon, C**	**5.68**	**97**				Pn	00 54 27.6	0.0

*SOME **28** 01:12:52.0, 39°.45N×75°.55E, h15km*
*KRNET **28** 01:12:54.1±0.1, 39°.13N×75°.06E, mb4.1*
*IDC **28** 01:12:55.8±0.8, 39°.32N×75°.27E, h0km, mb3.9/14,*
mb1 3.9/18, mb1mx3.7/46, mbtmp3.9/18, ML3.1/5, MS2.4/2,
Ms1 2.4/2, ms1mx2.1/50, Error ellipse: s-maj=16.7km
s-min=13.7km az=91.0
*NEIC **28** 01:13:03.5±1.0, 39°.43N±0°.05×75°.00E±0°.08, h59km±8km,*
mb4.2/7, Error ellipse: s-maj=11.3km s-min=4.4km
az=125.0
*NNC **28** 01:13:03.3±2.9, 39°.89N×75°.12E, h0km, mb4.3, mpv4.0,*
Error ellipse: s-maj=23.0km s-min=15.5km az=165.0
ISC 28 01:12:56.5±0.6,**39°.08N**±0°.04×**75°.03E**±0°.04,**h10**km,**n107,**
σ1°53/139,**mb4.0**/16,**40C-13D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.85**	**59**		Pg		Pg	01 13 05.5	-7.4
KSH					Sg		Sg	01 13 13.0	-11
KSH					smax		smax		
	comp=N,1μm,0.5s								
KSH					smax		smax		
	comp=E,1μm,0.4s								
SFK	**Sufi-Kurgan**	**1.51**	**309**	⇑*iP*			**Pn**	**01 13 22.5**	**-1.3**
	baz=7.0								
SFK				⇑*iS*			**Sn**	**01 13 42.5**	**-1.1**
	baz=7.0								
OHH	**Osh**	**2.25**	**310**	⇑*iP*			**Pn**	**01 13 34.7**	**+0.8**
	baz=9.0								
OHH				⇑*iS*			**Sb**	**01 14 03.4**	**-1.9**
	baz=9.0								
DRK	**Karamyk**	**2.54**	**280**	⇓*iP*			**Pn**	**01 13 38.7**	**+0.6**
	baz=79								
DRK				⇓*iS*			**Sb**	**01 14 12.0**	**-1.8**
	baz=79								
ARSB	**Arslanbob**	**2.74**	**326**	⇑*eP*			**Pn**	**01 13 40.9**	**+0.3**
	baz=25								
ARSB				⇑*eS*			**Sn**	**01 14 15.2**	**+1.4**
	baz=25								
ARSB	**Arslanbob**	**2.74**	**326**				**Pn**	**01 13 40.8**	**+0.2**
ARSB					Sn		**Sn**	**01 14 10.8**	**-3.0**
ARLS	**Aral**	**2.83**	**349**	⇑*iP*			**Pn**	**01 13 41.4**	**-0.5**
	baz=49								
ARLS				⇑*eS*			**Sn**	**01 14 17.0**	**+0.8**
	baz=49								
UCH	**Uchtor**	**3.17**	**353**	⇑*eP*			**Pn**	**01 13 46.9**	**+0.1**
	baz=52								
UCH				⇑*iS*			**Sn**	**01 14 25.6**	**+0.7**
	baz=52								
UCH	**Uchtor**	**3.17**	**353**	P			**Pn**	**01 13 46.5**	**-0.3**
	SNR=57								
AML	**Almayashu**	**3.21**	**342**	P			**Pn**	**01 13 47.0**	**-0.4**
	SNR=35								
ULHL	**Ulahol**	**3.29**	**16**	⇑*iP*			**Pn**	**01 13 48.1**	**-0.2**
	baz=16								
ULHL				⇑*iS*			**Sn**	**01 14 27.4**	**-0.2**
	baz=16								
ULHL	**Ulahol**	**3.29**	**16**	P			**Pn**	**01 13 47.5**	**-0.8**
	SNR=15								
BTK	**Batken**	**3.40**	**288**	⇓*iP*			**Pn**	**01 13 50.8**	**+1.1**
	baz=87								
BTK				⇓*iS*			**Sn**	**01 14 31.3**	**+1.2**
	baz=87								
KDJ	**Kajisay**	**3.46**	**28**				**Pn**	**01 13 51.1**	**+0.6**
KDJ					Sn		**Sn**	**01 14 28.9**	**-2.7**
BOOM	**Boomskoye usch**	**3.48**	**11**	⇑*eP*			**Pn**	**01 13 50.9**	**+0.1**
	baz=11								
BOOM				⇑*iS*			**Sn**	**01 14 32.1**	**0.0**
	baz=11								
BOOM	**Boomskoye usch**	**3.48**	**11**				**Pn**	**01 13 50.5**	**-0.3**
BOOM					Sn		**Sn**	**01 14 26.7**	**-5.3**
KBK	**Karagaybulak**	**3.57**	**359**	⇑*iP*			**Pn**	**01 13 52.5**	**+0.4**
	baz=59								
KBK				⇑*iS*			**Sn**	**01 14 34.8**	**+0.3**
	baz=59								
KBK	**Karagaybulak**	**3.57**	**359**	P			**Pn**	**01 13 51.8**	**-0.3**
	SNR=113								
AAK	**Ala-Archa**	**3.58**	**354**	Pn			**Pn**	**01 13 52.2**	**0.0**
	comp=E,18nm,0.3s,baz=167,slow=8.5,SNR=160								
AAK					Sn		**Sn**	**01 14 35.6**	**+1.0**
	comp=E,3.2nm,0.3s,baz=8.4,slow=14,SNR=5.0								
AAK					LR		LR	01 14 45.9	
	comp=E,22nm,21.2s,baz=160,slow=33								
AAK	**Ala-Archa**	**3.58**	**354**	⇓*iP*			**Pn**	**01 13 52.2**	**0.0**
	baz=53								
AAK				⇓*iS*			**Sn**	**01 14 35.1**	**+0.5**
	baz=53								
AAK	**Ala-Archa**	**3.58**	**354**	P			**Pn**	**01 13 51.9**	**-0.2**
	SNR=110								
AAK	**Ala-Archa**	**3.58**	**354**	⇑Pn			**Pn**	**01 13 52.0**	**-0.2**
	comp=E

MDOK					Pg		**Pb**	**01 14 08.9 -4.2**
	comp=E,34nm,0.8s							
MDOK					Lg		Lg	01 15 02.5
	comp=E,84nm,0.8s							
MDOK	**Medeo**	**4.35**	**20**		Pg		**Pn**	**01 14 04.6 +1.8**
	comp=E,7.9nm,0.7s							
MDOK					Lg		Lg	01 14 56.9
	comp=E,84nm,0.7s							
SGDS	**Sogindy**	**4.38**	**356**		Pg		**Pn**	**01 14 04.6 +1.5**
	comp=E,26nm,0.6s							
SGDS					Lg		Lg	01 14 56.7
	comp=E,16nm,1.2s							
KNDC	**Almaty**	**4.38**	**19**	⇑	Pg		**Pb**	**01 14 10.3 -3.3**
	comp=E,58nm,0.5s							
KNDC				⇑	Lg		Lg	01 15 04.2
	comp=E,252nm,1.0s							
KOTS	**Kotyrbulak**	**4.44**	**20**		*e*P		**Pn**	**01 14 06.0 +2.1**
	comp=E,58nm,0.7s							
KOTS					*e*S		**Sn**	**01 14 59.6 +3.9**
	comp=E,54nm,0.5s							
KOTS	**Kotyrbulak**	**4.44**	**20**		Pg		**Pn**	**01 14 06.1 +2.1**
	comp=E,58nm,0.7s							
KOTS					Lg		Lg	01 14 59.6
	comp=E,54nm,0.5s							
KRBS	**Karabastau**	**4.64**	**6**		*e*P		**Pn**	**01 14 08.5 +1.8**
	comp=E,9.5nm,0.7s							
KRBS					*e*S		**Sn**	**01 15 03.5 +2.9**
	comp=E,13nm,0.6s							
KRBS	**Karabastau**	**4.64**	**6**		Pg		**Pn**	**01 14 08.5 +1.8**
	comp=E,9.5nm,0.7s							
KRBS					Lg		Lg	01 15 03.5
	comp=E,13nm,0.6s							
IUG	**Iuzhnay**	**4.89**	**310**		*e*P		**Pb**	**01 14 20.1 -2.2**
	comp=E,8.3nm,0.6s							
IUG					*e*S		**Sb**	**01 15 23.5 +2.5**
	comp=E,117nm,0.8s							
IUG	**Iuzhnay**	**4.89**	**310**		Pg		**Pb**	**01 14 20.1 -2.2**
	comp=E,8.3nm,0.6s							
IUG					Lg		Lg	01 15 23.5
	comp=E,117nm,0.8s							
KK31	**Karatay Array**	**5.28**	**321**	⇑	Pn		**Pn**	**01 14 15.4 +0.1**
	comp=E,2.5nm,0.3s,baz=136,slow=15,SNR=76							
KK31					Pg		**Pb**	**01 14 30.6 +1.8**
	comp=E,17nm,0.7s,baz=129,slow=15,SNR=15							
KK31				⇑	Sn		**Sn**	**01 15 15.7 -0.5**
	comp=E,2.2nm,0.4s,baz=133,slow=25							
KK31				⇓	Lg		Lg	01 15 36.5
	comp=E,31nm,0.7s,baz=137,slow=27							
KK31	**Karatay Array**	**5.28**	**321**				**Pn**	**01 14 15.5 +0.1**
KKAR	**Karatay Array**	**5.28**	**321**				**Pn**	**01 14 15.4 0.0**
KKAR	**Karatay Array**	**5.28**	**321**				**Pn**	**01 14 15.3 0.0**
PDGK	**Podgornoye**	**5.41**	**37**	⇑	Pn		**Pn**	**01 14 16.5 -0.8**
	comp=E,4.1nm,0.7s							
PDGK				⇑	Pg		**Pb**	**01 14 32.0 +0.8**
	comp=E,19nm,0.7s							
PDGK				⇑	Lg		Lg	01 15 37.0
	comp=E,82nm,0.9s							
CHCP	**Chirah Chowk**	**5.60**	**195**		P		**Pb**	**01 14 32.0 -2.3**
CEP	**Cherat**	**5.82**	**207**		P		Pb	01 14 33.7 -4.4
CEP					S		**Sb**	**01 15 46.0 -2.0**
THW	**Thamme Wali**	**6.82**	**204**		P		Pb	01 14 46.6 -8.5
MAKZ	**Makanchi**	**9.25**	**31**	⇑	Pn		**Pn**	**01 15 10.7 +0.8**
	comp=E,1.7nm,0.9s							
MAKZ				⇑	Lg		Lg	01 17 38.0
	comp=E,11nm,1.4s							
MK31	**Makanchi Array**	**9.36**	**32**	⇓	Pn		**Pn**	**01 15 12.0 +0.6**
	comp=E,1.3nm,0.6s,baz=205,slow=14,SNR=7.5							
MK31				⇑	Lg		Lg	01 17 41.8
	comp=E,9.0nm,1.2s							
MK31	**Makanchi Array**	**9.36**	**32**		Pn		**Pn**	**01 15 12.0 +0.6**
MKAR	**Makanchi Array**	**9.36**	**32**		Pn		**Pn**	**01 15 10.0 -1.5**
	comp=E,0.1nm,0.3s,baz=209,slow=13,SNR=7.5							
MKAR					Lg		Lg	01 17 41.5
	comp=E,0.1nm,0.3s,baz=220,slow=26,SNR=2.8							
WMQ	**Urumqi**	**10.62**	**59**		*e*P		**Pn**	**01 15 29.0 +0.3**
WMQ					smax		smax	
	comp=N,36nm,0.9s							
WMQ					smax		smax	
	comp=E,30nm,0.9s							
KURBB	**Kurchatov Arra**	**11.80**	**11**		Pn		**Pn**	**01 15 41.6 -3.2**
	comp=E,0.0nm,0.3s,baz=198,slow=12,SNR=4.5							
KURBB					Lg		Lg	01 19 00.5
	comp=E,0.1nm,0.3s,baz=200,slow=27,SNR=7.2							
KURBB	**Kurchatov Arra**	**11.80**	**11**	⇓	Pn		**Pn**	**01 15 44.1 -0.7**
	comp=E,1.5nm,0.8s							
KURBB				⇓	Lg		Lg	01 18 58.1
	comp=E,14nm,0.8s							
BRVK	**Borovoye**	**14.36**	**348**	⇑	Pn		**Pn**	**01 16 19.8 +0.1**
	comp=E,6.2nm,0.7s							
BRVK				⇑	Lg		Lg	01 20 19.3
	comp=E,10nm,1.3s							
AB31	**Akbulak array**	**14.83**	**318**		Pn		**Pn**	**01 16 27.4 +1.3**
	comp=E,4.4nm,0.7s,baz=122,slow=12,SNR=31							
ABKAR	**Akbulak array**	**14.83**	**318**		Pn		**Pn**	**01 16 24.8 -1.3**
ABKAR	**Akbulak array**	**14.83**	**318**		Pn		**Pn**	**01 16 24.4 -1.8**
ZALV	**Zalesovo Beam**	**16.30**	**21**		Pn		**Pn**	**01 16 41.9 -3.4**
	comp=E,0.2nm,0.3s,baz=211,slow=8.3,SNR=3.9							
ZALV					LR		LR	01 23 05.3
	comp=E,28nm,18.5s,baz=83,slow=38							
AKTO	**Aktyubinsk**	**16.54**	**319**		Pn		**Pn**	**01 16 47.4 -1.0**
	comp=E,0.2nm,0.3s,baz=120,slow=13,SNR=9.3							
AKTO	**Aktyubinsk**	**16.54**	**319**	⇓	Pn		**Pn**	**01 16 47.8 -0.6**
	comp=E,5.5nm,0.9s							
ARU	**Arti**	**20.50**	**333**		P		**P**	**01 17 34.3 -0.1**
	comp=E,1.5nm,0.7s,baz=124,slow=5.2,SNR=7.1							
ARU	**Arti**	**20.50**	**333**		P		**P**	**01 17 33.3 -1.1**
ARU					IAmb		IAmb	01 17 37.0
	comp=Z,4.3nm,0.8s							
GNI	**Garni**	**23.31**	**282**		P		**P**	**01 18 08.8 +4.1**
	comp=Z,3.1nm,0.8s,baz=126,slow=8.1,SNR=6.0							
GNI	**Garni**	**23.31**	**282**		P		**P**	**01 18 05.7 +0.9**
GNI					IAmb		IAmb	01 18 14.7
	comp=Z,5.2nm,1.0s							
KIRV	**Kirov**	**25.52**	**328**		P		**P**	**01 18 25.1 +0.3**
	comp=Z,8.1nm,0.6s,baz=114,slow=3.1,SNR=4.3							
CHTO	**Chiang Mai**	**28.93**	**127**		P		**P**	**01 18 59.1 +3.2**
BRTR	**Keskin Array B**	**31.79**	**285**		P		**P**	**01 19 23.6 +2.4**
	comp=Z,1.5nm,0.7s,baz=70,slow=11,SNR=7.2							
BRTR	**Keskin Array B**	**31.79**	**285**		P		**P**	**01 19 21.6 +0.4**
AKASG	**Malin Array Be**	**33.95**	**305**		P		**P**	**01 19 40.5 +0.8**
	comp=Z,0.2nm,0.3s,baz=80,slow=7.2,SNR=4.1							
FINES	**FINESS Array B**	**37.23**	**323**		P		**P**	**01 20 07.3 -0.4**
	comp=Z,0.9nm,0.5s,baz=106,slow=9.1,SNR=12							
FINES	**FINESS Array B**	**37.23**	**323**		P		**P**	**01 20 06.8 -1.0**
KARP	**Karpathos**	**37.89**	**280**		P		**P**	**01 20 15.8 +2.0**
KARP					IAmb		IAmb	01 20 32.2
	comp=Z,5.4nm,0.9s							
ATD	**Arta Tunnel**	**39.62**	**235**		P		**P**	**01 20 31.0 +2.5**
ARCES	**ARCESS Array B**	**40.06**	**335**		P		**P**	**01 20 31.4 -0.1**
	comp=Z,2.8nm,0.9s,baz=102,slow=4.1,SNR=4.7							
ARCES	**ARCESS Array B**	**40.06**	**335**		P		**P**	**01 20 30.1 -1.3**
NC405	**NORSAR Array S**	**44.06**	**321**		P		**P**	**01 21 02.8 -1.5**
NC405					IAmb		IAmb	01 21 15.3
	comp=Z,11nm,1.1s							
NC602	**NORSAR Array S**	**44.15**	**321**		P		**P**	**01 21 03.9 -1.0**
NOA	**NORSAR Array B**	**44.31**	**321**		P		**P**	**01 21 05.4 -0.8**
	comp=Z,2.4nm,0.7s,baz=90,slow=8.0,SNR=15							
NC204	**NORSAR Array S**	**44.52**	**322**		P		**P**	**01 21 07.7 -0.3**
ECH	**Echery**	**48.48**	**304**		P		**P**	**01 21 36.8 -2.4**
ECH					IAmb		IAmb	01 21 42.2
	comp=Z,3.1nm,1.0s							
ESDC	**Sonseca Array**	**59.08**	**298**		P		**P**	**01 22 57.3 +0.4**
	comp=Z,0.5nm,0.7s,baz=65,slow=7.0,SNR=5.0							
TORD	**Torodi Ar. Bea**	**68.94**	**270**		P		**P**	**01 24 03.3 +1.2**
	comp=Z,0.4nm,0.4s,baz=39,slow=6.2,SNR=4.0							
INK	**Inuvik**	**70.81**	**11**		P		**P**	**01 24 12.2 -0.4**
	comp=Z,0.5nm,0.6s,baz=305,slow=5.1,SNR=1.4							
YKA	**Yellowknife Ar**	**78.47**	**5**		P		**P**	**01 24 55.9 -1.4**
	comp=Z,0.4nm,0.7s,baz=350,slow=5.1,SNR=11							
WRA	**Warramunga Arr**	**80.74**	**125**		P		**P**	**01 25 11.1 +0.9**
	comp=Z,1.0nm,0.6s,baz=322,slow=5.0,SNR=8.0							
ASAR	**Alice Springs**	**83.20**	**128**		P		**P**	**01 25 24.6 +1.6**
	comp=Z,1.0nm,0.7s,baz=312,slow=5.0,SNR=8.7							

*IDC **28** 01:37:35.2±2.2,27.99N×85.70E,h0km,mb3.8/6, mb1 3.8/7,mb1mx3.4/53,mbtmp3.7/7,ML3.6/1,MS3.3/2, Ms1 3.3/2,ms1mx2.4/56,Error ellipse: s-maj=67.1km s-min=28.2km az=63.0*

ISC 28 01:37:38.1±2.0,28.0N±0.3×85.7E±0.4,h18km,n9,σ0s68/7, mb3.7/6,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.93**	**353**	P		**P**	**01 41 58.5**	**+0.6**
	0.2nm,0.3s,baz=173,slow=11,SNR=12							
KURBB	**Kurchatov Arra**	**23.22**	**348**	P		**P**		**01 42 44.5 +0.5**
	0.4nm,0.5s,baz=170,slow=10,SNR=5.5							
SONM	**Songino Array**	**25.53**	**34**	P		**P**	**01 43 05.2**	**-0.5**
	1.0nm,0.6s,baz=225,slow=9.1,SNR=6.2							
ZALV	**Zalesovo Beam**	**25.92**	**359**	P		**P**	**01 43 09.8**	**+0.9**
	0.4nm,0.3s,baz=171,slow=9.8,SNR=2.8							
KLR	**Kul'dur**	**40.99**	**46**	LR		LR	02 04 19.6	
	comp=Z,18nm,19.9s,baz=61,slow=39							
NRIK	**Noril'sk**	**41.37**	**1**	P		**P**	**01 45 22.6**	**-0.1**
	2.0nm,0.5s,baz=163,slow=4.7,SNR=3.9							
ARCES	**ARCESS Array B**	**53.70**	**338**	P		**P**	**01 46 58.0**	**-0.5**
	2.7nm,1.0s,baz=108,slow=8.1,SNR=5.0							
OPO	**Ambohidratompo**	**59.43**	**223**	LR		LR	02 10 46.6	
	comp=Z,48nm,18.7s,baz=248,slow=34							
WRA	**Warramunga Arr**	**66.99**	**130**	P		**P**	**01 48 30.2**	**+0.2**
	0.4nm,0.7s,baz=321,slow=6.7,SNR=2.0							

IDC 28 01:42:23.4±2.6,7.91S×119.43E,h0km,mb3.4/3, mb1 3.5/4,mb1mx3.3/47,mbtmp3.4/4,ML3.3/1,Error ellipse: s-maj=285.0km s-min=24.9km az=53.0,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.75**	**131**	P		P	01 46 43.2	-0.8
	0.1nm,0.3s,baz=306,slow=15,SNR=2.4							
ASAR	**Alice Springs**	**20.93**	**140**	P		P	01 47 08.3	+0.5
	0.9nm,0.8s,baz=313,slow=13,SNR=7.6							
MKAR	**Makanchi Array**	**63.70**	**332**	P		P	01 52 55.5	-1.2
	0.5nm,0.7s,baz=145,slow=5.3,SNR=6.4							
KURBB	**Kurchatov Arra**	**68.19**	**333**	P		P	01 53 27.1	+1.5
	0.2nm,0.5s,baz=134,slow=5.3,SNR=4.1							

*IDC **28** 01:43:42.0±1.4,27.88N×84.53E,h0km,mb3.7/7, mb1 3.9/8,mb1mx3.5/49,mbtmp3.7/8,ML3.8/1,MS3.3/4, Ms1 3.3/4,ms1mx2.6/54,Error ellipse: s-maj=51.6km s-min=20.7km az=62.0*

ISC 28 01:43:43.5±1.6,27.9N±0.2×84.5E±0.4,h10km,n11, σ0s66/8,mb3.7/7,MS3.1/4,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.95**	**355**	P		**P**	**01 48 04.0**	**-0.7**
	0.3nm,0.3s,baz=175,slow=12,SNR=23							
KURBB	**Kurchatov Arra**	**23.15**	**350**	P		**P**	**01 48 49.0**	**-0.9**
	0.6nm,0.6s,baz=174,slow=9.7,SNR=6.4							
ZALV	**Zalesovo Beam**	**26.03**	**0**	P		**P**	**01 49 16.7**	**0.0**
	0.5nm,0.4s,baz=192,slow=11,SNR=4.2							
SONM	**Songino Array**	**26.20**	**35**	P		**P**	**01 49 19.1**	**+0.6**
	1.0nm,0.6s,baz=217,slow=10,SNR=6.5							
SONM				LR		LR	02 00 25.8	
	comp=Z,22nm,21.0s,baz=138,slow=38							
ASF	**Jabal al Asfar**	**41.19**	**288**	LR		LR	02 11 11.1	
	comp=Z,12nm,20.1s,baz=270,slow=40							
FINES	**FINESS Array B**	**50.90**	**328**	P		**P**	**01 52 45.1**	**+0.6**
	1.0nm,0.5s,baz=110,slow=8.7,SNR=10							
ARCES	**ARCESS Array B**	**53.42**	**338**	P		**P**	**01 53 03.3**	**+0.1**
	3.3nm,1.0s,baz=67,slow=6.1,SNR=6.3							
HFS	**Hagfors**	**56.74**	**326**	LR		LR	02 18 02.7	
	comp=Z,243nm,20.2s,baz=4.5,slow=36							
MBAR	**Mbarara**	**58.79**	**251**	LR		LR	02 17 52.9	
	comp=Z,28nm,18.7s,baz=148,slow=35							
WRA	**Warramunga Arr**	**67.70**	**129**	P		**P**	**01 54 41.1**	**-0.2**
	0.4nm,0.6s,baz=323,slow=6.6,SNR=5.6							
ASAR	**Alice Springs**	**69.97**	**132**	P		**P**	**01 54 55.2**	**-0.2**
	0.3nm,0.6s,baz=311,slow=6.4,SNR=1.9							

*GCG **28** 01:59:05.0±0.6,13.43N×90.90W,h64km±20km,MD4.0 SNET **28** 01:59:08.7±1.0,13.64N×90.62W,h34km±64km,ML3.3*

ISC 28 01:59:04.9±2.6,13.4N±0.1×90.79W±0.06,h26km±18km, n20,σ1s16/29,1C-2D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCG	**Pacaya**	**0.98**	**10**	*e*P		**Pn**	**01 59 24.3**	**+1.1**
PCG				*e*S		**Sn**	**01 59 39.0**	**+2.6**
FUG	**Fuego 3**	**1.02**	**357**	*e*P		**Pn**	**01 59 24.6**	**+0.8**
FUG				*e*S		**Sn**	**01 59 38.8**	**+1.5**
SBLS	**San Blas**	**1.21**	**70**	*e*P		**Pn**	**01 59 26.4**	**0.0**
SBLS				*e*S		**Sn**	**01 59 40.7**	**-1.2**
RTR	**El Retiro**	**1.21**	**67**	⇓*e*P		**Pn**	**01 59 26.6**	**+0.3**
RTR				*e*S		**Sn**	**01 59 41.2**	**-0.6**
SNJE	**San Jose**	**1.23**	**69**	*e*P		**Pn**	**01 59 26.8**	**+0.1**
NBG	**Las Nubes**	**1.23**	**20**	*e*P		**Pb**	**01 59 28.0**	**+0.2**
ERG	**Entre ros, C**	**1.27**	**323**	*e*P		**Pn**	**01 59 25.6**	**-1.4**
ERG				*e*S		**Sn**	**01 59 42.3**	**-0.8**
UNIC	**Universidad Ca**	**1.33**	**65**	*e*P		**Pn**	**01 59 27.9**	**+0.1**
UNIC				*e*S		**Sn**	**01 59 43.0**	**-1.6**
UNIC				IAML			01 59 44.0	
	comp=Z,529nm,0.2s							
BOQS	**Boqueron**	**1.50**	**78**	*e*P		**Pn**	**01 59 31.0**	**+0.7**
QUEZ	**Alcaldia de Qu**	**1.53**	**74**	*e*P		**Pn**	**01 59 31.3**	**+0.8**
SNET	**Serv Nac Est T**	**1.54**	**80**	*e*P		**Pn**	**01 59 31.2**	**+0.5**
SNET				*e*S		**Sn**	**01 59 48.8**	**-1.0**
SNET				IAML			01 59 51.5	
	comp=Z,2μm,0.2s							
LFRS	**El Faro**	**1.69**	**83**	*e*P		**Pn**	**01 59 34.0**	**+1.1**
MTO3	**Montecristo**	**1.69**	**55**	⇓*i*P		**Pn**	**01 59 32.5**	**-0.5**
MTO3				*e*S		**Sn**	**01 59 52.0**	**-1.9**
LBRS	**Las Brisas**	**1.72**	**79**	*e*P		**Pn**	**01 59 34.3**	**+1.0**
ESQI	**Esquipulas**	**1.80**	**51**	*e*P		**Pn**	**01 59 34.2**	**-0.2**
ESQI				IAML			01 59 59.8	
	comp=Z,212nm,0.4s							
PAVA	**Las Pavas**	**1.82**	**81**	*e*P		**Pn**	**01 59 35.4**	**+0.7**
COEG	**Centro de Oper**	**1.86**	**84**	*e*P		**Pn**	**01 59 36.5**	**+1.2**
MRL	**Marmol**	**1.97**	**33**	⇑*i*P		**Pn**	**01 59 36.6**	**-0.2**
MRL	**Marmol**	**1.97**	**33**	*e*P		**Pn**	**01 59 37.5**	**+0.8**
MRL				*e*S		**Sb**	**02 00 03.6**	**-0.8**
PACA	**Pacayal**	**2.40**	**89**	*e*P		**Pn**	**01 59 44.5**	**+1.9**

*IDC **28** 02:00:50.9±0.8,27.62N×85.90E,h0km,mb3.8/16, mb1 3.9/17,mb1mx3.6/66,mbtmp3.8/17,ML4.0/1,MS3.1/3, Ms1 3.1/3,ms1mx2.5/48,Error ellipse: s-maj=28.0km s-min=15.8km az=58.0*

ISC 28 02:00:53.9±1.0,27.6N±0.1×85.9E±0.2,h19km,n21, σ0s52/18,mb3.8/16,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.08**	**124**	LR		LR	02 12 34.3	
	comp=Z,29nm,19.0s,baz=294,slow=47							
WMQ	**Urumqi**	**16.24**	**5**	*e*P		**Pn**	**02 04 42.0**	**+1.0**
MKAR	**Makanchi Array**	**19.35**	**353**	P		**P**	**02 05 18.1**	**-0.2**
	0.4nm,0.3s,baz=176,slow=10,SNR=13							
KURBB	**Kurchatov Arra**	**23.65**	**348**	P		**P**	**02 06 04.1**	**+0.2**
	0.5nm,0.5s,baz=168,slow=9.4,SNR=7.3							
SONM	**Songino Array**	**25.75**	**33**	P		**P**	**02 06 23.0**	**-0.5**
	1.0nm,0.6s,baz=222,slow=8.9,SNR=6.2							
ZALV	**Zalesovo Beam**	**26.32**	**359**	P		**P**	**02 06 28.1**	**-0.2**
	1.4nm,0.6s,baz=177,slow=8.9,SNR=6.2							
BVAR	**Borovoye Array**	**27.87**	**340**	P		**P**	**02 06 42.9**	**+0.6**
	1.3nm,0.4s,baz=134,slow=24,SNR=6.0							
AKTO	**Aktyubinsk**	**31.11**	**325**	P		**P**	**02 07 11.6**	**+0.5**
	0.4nm,0.3s,baz=152,slow=11,SNR=4.1							
ARU	**Arti**	**34.78**	**333**	P		**P**	**02 07 43.6**	**+0.6**
	0.3nm,0.3s,baz=154,slow=6.6,SNR=3.9							
BRTR	**Keskin Array B**	**44.55**	**300**	LR		LR	02 32 35.7	
	comp=Z,25nm,20.0s,baz=257,slow=43							
AKASG	**Malin Array Be**	**48.24**	**315**	P		**P**	**02 09 33.5**	**+0.2**
	0.3nm,0.5s,baz=89,slow=6.2,SNR=4.8							
FINES	**FINESS Array B**	**51.77**	**328**	P		**P**	**02 09 59.4**	**-0.6**
	0.7nm,0.5s,baz=102,slow=8.4,SNR=5.0							
ARCES	**ARCESS Array B**	**54.13**	**338**	P		**P**	**02 10 17.2**	**-0.1**
	2.4nm,0.8s,baz=104,slow=8.5,SNR=5.4							
HFS	**Hagfors**	**57.65**	**326**	P		**P**	**02 10 42.6**	**-0.1**
	0.7nm,0.3s,baz=110,slow=8.1,SNR=9.2							
GERES	**GERESS Array B**	**58.29**	**312**	P		**P**	**02 10 46.7**	**-0.9**
	0.3nm,0.5s,baz=41,slow=6.5,SNR=2.6							
NOA	**NORSAR Array B**	**58.87**	**327**	P		**P**	**02 10 50.6**	**-0.6**
	0.3nm,0.5s,baz=67,slow=7.0,SNR=4.0							
WRA	**Warramunga Arr**	**66.59**	**130**	P		**P**	**02 11 43.3**	**0.0**
	1.7nm,0.5s,baz=322,slow=6.5,SNR=17							
ASAR	**Alice Springs**	**68.89**	**133**	P		**P**	**02 11 57.9**	**+0.1**
	0.6nm,0.6s,baz=317,slow=7.1,SNR=6.5							
LSZ	**Lusaka**	**70.31**	**240**	P		**P**	**02 12 07.2**	**+0.5**
	1.2nm,0.5s,baz=76,slow=8.9,SNR=3.9							
BORG	**Borgarnes**	**72.31**	**335**	LR		LR	02 42 34.8	
	comp=Z,22nm,20.3s,baz=319,slow=35							
ESDC	**Sonseca Array**	**72.84**	**306**	P		**P**	**02 12 21.6**	**-0.1**
	0.9nm,0.8s,baz=64,slow=6.8,SNR=5.4							

IDC 28 02:07:02.4±2.9,28.15N×85.65E,h0km,mb3.4/4, mb1 3.5/5,mb1mx3.2/55,mbtmp3.3/5,ML3.2/1,Error ellipse: s-maj=95.8km s-min=27.4km az=68.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.79**	**353**	P		P	02 11 22.7	-0.7
	0.1nm,0.3s,baz=173,slow=12,SNR=2.8							
KURBB	**Kurchatov Arra**	**23.08**	**348**	P		P	02 12 08.4	-1.2
	0.2nm,0.6s,baz=169,slow=11,SNR=3.4							
SONM	**Songino Array**	**25.42**	**34**	P		P	02 12 31.7	-0.1
	0.3nm,0.4s,baz=212,slow=7.8,SNR=1.7							
ZALV	**Zalesovo Beam**	**25.78**	**359**	P		P	02 12 36.4	+1.6
	0.4nm,0.4s,baz=165,slow=6.0,SNR=1.7							
WRA	**Warramunga Arr**	**67.09**	**130**	P		P	02 17 57.9	-0.1
	0.7nm,0.7s,baz=324,slow=6.7,SNR=5.0							

*IDC **28** 02:14:19.4±0.7,33.06N×139.37E,h172km±6km,mb3.2/11, mb1 3.3/15,mb1mx3.2/38,mbtmp3.7/15,MS2.9/1, Ms1 2.9/1,ms1mx2.2/14,Error ellipse: s-maj=22.3km s-min=15.3km az=52.0*

*JMA **28** 02:14:20.0±0.2,33.23N×139.53E,h182km±2km,M3.4*

ISC 28 02:14:20.0±0.7,33.14N±0.05×139.46E±0.06,h177km±6km, n33,σ1s44/44,mb3.3/11,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.27**	**95**	P		**Pn**	**02 14 43.5**	**-0.1**
	47nm,0.3s,baz=78,slow=22,SNR=11							
JHJ				S		**Sn**	**02 14 59.9**	**-1.8**
	65nm,0.3s,baz=35,slow=23,SNR=9.4							
JHCJ	**Hachijojimakas**	**0.29**	**104**	P		**Pn**	**02 14 44.3**	**+0.6**
JHJ2	**Mitsune**	**0.30**	**96**	P		**Pn**	**02 14 44.2**	**+0.5**
JHJ2				*e*S		**Sn**	**02 15 03.1**	**+1.3**
JAOM	**Aogashimamukai**	**0.72**	**159**	P		**Pn**	**02 14 46.8**	**+1.3**
JAOM				*e*S		**Sn**	**02 15 06.7**	**+1.5**
TK02	**Tokai 2**	**1.64**	**300**	P		**Pn**	**02 14 53.3**	**+0.6**
TK02				*e*S		**Sn**	**02 15 19.8**	**+1.7**
JIZS	**Izushimoda**	**1.65**	**343**	P		**Pn**	**02 14 53.2**	**+0.2**
TK04	**Tokai 4**	**1.81**	**314**	P		**Pn**	**02 14 55.2**	**+0.6**
TK04				*e*S		**Sn**	**02 15 22.8**	**+1.2**
BSO3	**Boso 3**	**1.87**	**27**	P		**Pn**	**02 14 55.1**	**0.0**
BSO1	**Boso 1**	**1.96**	**39**	P		**Pn**	**02 14 55.6**	**-0.2**
BSO1				S		**Sn**	**02 15 23.8**	**+0.1**
JOD2	**Odawara 2**	**2.14**	**352**	P		**Pn**	**02 14 58.7**	**+0.4**
SHZ3	**Shizuoka 3**	**2.18**	**332**	P		**Pn**	**02 14 59.2**	**+0.4**
SHZ3				*e*S		**Sn**	**02 15 28.8**	**-0.3**
TTO1	**TONANKAI O.B.S**	**2.29**	**283**	P		**Pn**	**02 15 00.2**	**+0.5**
JYN	**Shimob**	**2.47**	**342**	P		**Pn**	**02 15 02.6**	**+0.5**
JIE	**Ise**	**2.61**	**299**	P		**Pn**	**02 15 03.6**	**-0.1**
JIE				*e*S		**Sn**	**02 15 37.5**	**-0.3**
JRY	**Ryogami san**	**2.90**	**351**	P		**Pn**	**02 15 07.5**	**+0.2**
JRY				*e*S		**Sn**	**02 15 43.3**	**-1.0**
JAG	**Ashikaga**	**3.27**	**360**	P		**Pn**	**02 15 10.4**	**-1.4**
MJAR	**Matsushiro Arr**	**3.54**	**343**	P		**Pn**	**02 15 14.3**	**-0.8**
	0.3nm,0.3s,baz=171,slow=8.5,SNR=6.1							
MJAR				S		**Sn**	**02 15 56.0**	**-2.4**
	0.3nm,0.3s,baz=164,slow=4.3,SNR=4.2							
MAT	**Matsushiro**	**3.55**	**343**	P		**Pn**	**02 15 14.9**	**-0.3**
MAT				*e*S		**Sn**	**02 15 56.7**	**-1.7**
JCJ	**Chichijima**	**6.47**	**158**	P

PSZ	**Piszkesteto**	**2.36**	**156**	⇑P	**Pn**	**02 21 42.4**	**-1.4**
PSZ				⇑S	**Sn**	**02 22 11.1**	**-2.4**
PRU	**Pruhonice**	**2.53**	**270**	*e*PG	**Pb**	**02 21 49.7**	**-0.3**
PRU				*e*SG	**Sb**	**02 22 22.4**	**+0.8**
PVCC	**Panska Ves**	**2.53**	**282**	*e*PG	**Pg**	**02 21 51.6**	**-0.8**
CONA	**Conrad Observa**	**2.75**	**219**	*e*Pn	**Pn**	**02 21 50.0**	**+0.8**
	0.4nm,0.2s						
CONA				*e*Sn	**Sn**	**02 22 22.0**	**-1.1**
	4.1nm,0.3s						
CKRC	**Cesky Krumlov**	**2.98**	**247**	*e*PN	**Pn**	**02 21 52.9**	**+0.5**
CKRC				*e*PG	**Pb**	**02 21 57.6**	**-0.3**
CKRC				*e*SG	**Sg**	**02 22 38.3**	**-1.4**
	comp=Z,9.4nm,0.4s						
BRG	**Berggiesshubel**	**2.99**	**287**	Pg	**Pb**	**02 21 59.2**	**+1.2**
BRG				Sg	**Sg**	**02 22 38.5**	**-1.4**
BRG				Amp		02 22 49.9	
	comp=Z,12nm,0.5s						
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PN	**Pn**	**02 21 56.6**	**-0.3**
KHC				*e*PG	**Pb**	**02 22 04.8**	**+1.4**
KHC				*e*SG	**Sg**	**02 22 48.8**	**-1.4**
	comp=Z,12nm,0.5s						
TRPA	**Tarpa**	**3.31**	**124**	⇑P	**Pn**	**02 21 56.9**	**0.0**
ARSA	**Arzberg**	**3.43**	**216**	*i* Pn	**Pn**	**02 22 00.1**	**+1.6**
	comp=Z,0.5nm,0.2s						
MOA	**Molln**	**3.55**	**233**	*e*Sn	**Sn**	**02 22 46.0**	**+3.2**
	comp=Z,0.2nm,0.1s						
CLL	**Collm**	**3.68**	**292**	*e*Pg	**Pg**	**02 22 14.0**	**-0.3**
CLL				*e*Sg	**Sg**	**02 23 02.0**	**0.0**
	comp=Z,20nm,1.3s						
DRGR		**4.34**	**138**	⇓P	**Pn**	**02 22 11.4**	**+0.4**
DRGR				⇓S	**Sn**	**02 23 00.4**	**-1.9**
BURAR	**Bucovina Array**	**5.10**	**116**	⇑P	**Pn**	**02 22 21.7**	**+0.2**

*IDC **28** 02:34:47.6±3.0,25°.84S×132°.31E, h0km, mb1 3.6/4, mb1mx3.4/26, mbtmp3.5/4, ML3.4/4, Error ellipse: s-maj=23.6km s-min=20.6km az=55.0*
*AUST **28** 02:34:48.6±3.0,25°.93S×132°.17E, h16km±21km, Error ellipse: s-maj=9.6km s-min=8.0km az=111.0*

ISC 28 02:34:46.0±0.7,25°.86S±0°.05×132°.21E±0°.04, h10km, n17, σ2s28/30, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASPA	**Alice Springs**	**2.68**	**36**	P	**Pb**	**02 35 32.8**	**-1.2**
	baz=2.8						
ASPA				S	**Sb**	**02 36 06.2**	**-0.7**
	baz=2.8						
ASAR	**Alice Springs**	**2.68**	**36**	Pn	**Pb**	**02 35 32.1**	**-1.9**
	1.0nm,0.3s,baz=212,slow=12,SNR=64						
ASAR				Sn	**Sb**	**02 36 05.7**	**-1.3**
	7.3nm,0.3s,baz=215,slow=26,SNR=3.1						
ASAR				Lg	Lg	02 36 10.8	
	25nm,0.3s,baz=213,slow=25,SNR=46						
WRKA	**Warakurna**	**3.63**	**282**	P	**Pb**	**02 35 47.4**	**-2.9**
	baz=3.6,SNR=9.0						
WRKA				S	**Sb**	**02 36 32.8**	**-1.6**
	baz=3.6						
OOD	**Oodnadatta**	**3.66**	**122**	P	**Pn**	**02 35 44.4**	**+1.8**
	baz=3.6,SNR=7.7						
OOD				S	**Sn**	**02 36 28.0**	**+2.2**
	baz=3.6						
MULG	**Mulgathing**	**4.70**	**160**	P	**Pn**	**02 35 58.5**	**+1.5**
	baz=4.7,SNR=7.2						
MULG				S	**Sn**	**02 36 53.1**	**+1.6**
	baz=4.7						
FORT	**Forrest**	**6.11**	**216**	P	**Pn**	**02 36 17.5**	**+1.1**
	baz=6.0						
FORT				S	**Sn**	**02 37 27.1**	**+0.7**
	baz=6.0						
WRA	**Warramunga Arr**	**6.21**	**19**	Pn	**Pn**	**02 36 20.7**	**+2.9**
	0.7nm,0.3s,baz=196,slow=14,SNR=31						
WRA				Sn	**Sn**	**02 37 29.7**	**+0.7**
	1.8nm,0.3s,baz=198,slow=23,SNR=5.1						
WRA				Lg	Lg	02 37 59.9	
	1.8nm,0.3s,baz=196,slow=30,SNR=5.5						
WB2	**Warramunga Arr**	**6.22**	**19**	P	**Pn**	**02 36 21.0**	**+3.1**
	baz=6.3						
WB2				S	**Sn**	**02 37 30.0**	**+1.0**
	baz=6.3						
BBOO	**Buckleboo**	**7.70**	**155**	P	**Pn**	**02 36 40.3**	**+2.1**
	baz=7.7,SNR=14						
BBOO				S	**Sn**	**02 38 01.7**	**-3.6**
	baz=7.7						
QIS	**Mount Isa**	**8.61**	**54**	P	**Pn**	**02 36 52.8**	**+2.0**
	baz=8.7						
QIS				S	**Sn**	**02 38 24.2**	**-3.9**
	baz=8.7						
HTT	**Hallett**	**9.54**	**144**	P	**Pn**	**02 37 03.4**	**-0.1**
	baz=9.5						
FITZ	**Fitzroy Crossi**	**9.84**	**320**	Pn	**Pn**	**02 37 10.4**	**+2.9**
	0.4nm,0.3s,baz=156,slow=14,SNR=12						
FITZ				Sn	**Sn**	**02 38 57.0**	**-1.2**
	0.4nm,0.3s,baz=324,slow=20,SNR=2.5						
FITZ	**Fitzroy Crossi**	**9.84**	**320**	P	**Pn**	**02 37 11.2**	**+3.6**
	baz=9.9						
FITZ				S	**Sn**	**02 38 57.8**	**-0.3**
	baz=9.9						
STKA	**Stephens Creek**	**10.18**	**128**	Pn	**Pn**	**02 37 13.1**	**+1.0**
	0.6nm,0.3s,baz=303,slow=14,SNR=5.8						
STKA				Sn	**Sn**	**02 39 01.7**	**-4.7**
	1.1nm,0.3s,baz=8.0,slow=19,SNR=6.4						
KMBL	**Kambalda**	**10.60**	**236**	P	**Pn**	**02 37 19.4**	**+1.5**
	baz=10						
MEEK	**Meekatharra**	**12.22**	**263**	P	**Pn**	**02 37 40.5**	**+0.3**
	baz=12						
KLBR	**Kellerberrin**	**13.90**	**242**	P	**Pn**	**02 38 01.9**	**-1.2**
	baz=14						

*IDC **28** 02:55:25.5±1.4,27°.59N×85°.52E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.5/45, mbtmp3.8/9, ML3.9/1, Error ellipse: s-maj=53.0km s-min=18.9km az=64.0*

ISC 28 02:55:27.1±1.6,27°.6N±0°.2×85°.5E±0°.4, h10km, n9, σ0s36/9, mb3.9/8, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.33**	**353**	P	**P**	**02 59 52.5**	**+0.1**
	0.4nm,0.3s,baz=177,slow=12,SNR=18						
KURBB	**Kurchatov Arra**	**23.60**	**349**	P	**P**	**03 00 38.3**	**+0.3**
	0.7nm,0.6s,baz=168,slow=10,SNR=7.7						
SONM	**Songino Array**	**25.95**	**33**	P	**P**	**03 00 59.3**	**-0.5**
	1.5nm,0.6s,baz=224,slow=9.6,SNR=8.6						
ZALV	**Zalesovo Beam**	**26.33**	**359**	P	**P**	**03 01 03.4**	**+0.4**
	0.7nm,0.3s,baz=185,slow=15,SNR=4.5						
NRIK	**Noril'sk**	**41.79**	**1**	P	**P**	**03 03 16.6**	**+0.2**
	2.4nm,0.4s,baz=173,slow=5.1,SNR=3.3						
FINES	**FINESS Array B**	**51.61**	**328**	P	**P**	**03 04 33.0**	**-0.4**
	0.8nm,0.8s,baz=126,slow=3.3,SNR=4.6						
ARCES	**ARCESS Array B**	**54.02**	**130**	P	**P**	**03 04 51.0**	**-0.2**
	1.9nm,0.7s,baz=35,slow=4.4,SNR=4.4						
WRA	**Warramunga Arr**	**66.84**	**130**	P	**P**	**03 06 19.5**	**+0.1**
	0.9nm,0.6s,baz=322,slow=6.5,SNR=8.8						
ASAR	**Alice Springs**	**69.13**	**133**	P	**P**	**03 06 33.9**	**+0.1**
	0.4nm,0.6s,baz=319,slow=6.2,SNR=5.3						

KRSC 28 03:02:11.2±2.3,49°.27N×157°.17E, h7km±43km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.22**	**354**	*e*P	Pn	03 02 49.8	+1.4
PAU				*e*S	Sb	03 03 17.9	-1.3
RUS	**Russkaya**	**3.28**	**14**	*e*P	Pn	03 03 05.9	+2.9
RUS				*e*S	Sb	03 03 46.5	-3.4
MTVR	**Mutnovka**	**3.28**	**11**	*e*P	Pb	03 03 06.6	-3.3
MTVR				*e*S	Sb	03 03 47.9	-2.2
GRL	**Gorelyy**	**3.34**	**9**	*e*P	Pb	03 03 07.5	-3.3
GRL				*e*S	Sb	03 03 48.9	-2.8
KRMR	**Karymshinskiy**	**3.62**	**9**	*e*P	Pn	03 03 10.8	+3.1
DALK	**Dalny**	**3.90**	**14**	*e*P	Pn	03 03 15.0	+3.5
UGLR	**Uglovaya**	**4.08**	**14**	*e*P	Pn	03 03 18.3	+4.2
AVH	**Avacha**	**4.12**	**13**	*e*P	Pb	03 03 19.4	-4.7
SMAR	**Somma**	**4.13**	**14**	*e*P	Pn	03 03 19.3	+4.4
KOK	**Koryaka**	**4.13**	**12**	*e*P	Pb	03 03 19.6	-4.7
SDLR	**Sedlovina**	**4.16**	**14**	*e*P	Pn	03 03 18.8	+3.6
KRER	**Koryakskii**	**4.16**	**13**	*e*P	Pn	03 03 19.7	+4.4
KRX	**Arik**	**4.20**	**12**	*e*P	Pn	03 03 20.4	+4.6
SPN	**Mys Shipunski**	**4.24**	**24**	*e*P	Pn	03 03 20.2	+4.1
SPN				*e*S	Sn	03 04 10.6	+4.8
GNL	**Ganaly**	**4.46**	**6**	*e*P	Pn	03 03 23.2	+3.9
MKZ	**Mys Kozlova**	**6.00**	**26**	*e*P	Pn	03 03 43.7	+3.4
KZV	**Kizimen**	**6.16**	**17**	*e*P	Pn	03 03 47.0	+4.3

IDC 28 03:54:06.2±2.1,18°.11S×174°.36E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/37, mbtmp3.9/4, ML5.0/1, Error ellipse: s-maj=141.8km s-min=28.6km az=170.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.54**	**85**	Pn	Pn	03 55 02.5	+0.1
	5.5nm,0.3s,baz=252,slow=20,SNR=25						
STKA	**Stephens Creek**	**32.57**	**239**	P	P	04 00 40.3	+1.0
	0.7nm,0.3s,baz=69,slow=6.8,SNR=4.7						
WRA	**Warramunga Arr**	**37.82**	**261**	P	P	04 01 24.2	-0.5
	0.2nm,0.3s,baz=96,slow=7.7,SNR=5.4						
ASAR	**Alice Springs**	**38.11**	**255**	P	P	04 01 26.7	-0.5
	2.1nm,0.5s,baz=92,slow=7.7,SNR=27						

*NOU **28** 03:57:28.5, 42°.14S×172°.95E, h26km, MLv4.2, South Island, New Zealand*

WEL 28 03:57:28.0,42°.S±1°.×17°.3E±°, h54km±4km, M3.7/14, ML3.9/14, MLv3.7/14, Error ellipse: s-maj=0.0km s-min=0.0km az=76.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.33**	**339**	P	Pn	03 57 38.3	+0.5
THZ				S	Sn	03 57 45.6	+0.7
KHZ	**Kahutara**	**0.49**	**135**	P	Pn	03 57 40.0	+0.6
KHZ				S	Sn	03 57 48.8	+1.2
BSWZ	**Blackbirch Sta**	**0.70**	**60**	P	Pn	03 57 42.9	+1.0
BSWZ				S	Sn	03 57 53.7	+1.7
NNZ	**Nelson**	**0.89**	**15**	P	Pn	03 57 45.5	+1.2
NNZ				S	Sn	03 57 58.3	+2.0
GVZ	**Greta Valley S**	**0.89**	**182**	P	Pn	03 57 45.0	+0.6
CMWZ	**Cape Campbell**	**0.92**	**70**	P	Pn	03 57 46.4	+1.7
TUWZ	**Tuamarina**	**0.92**	**46**	P	Pn	03 57 45.8	+1.1
TUWZ				S	Sn	03 57 59.1	+2.1
LTZ	**Lake Taylor**	**0.92**	**220**	P	Pn	03 57 45.8	+1.0
LTZ				S	Sn	03 57 58.6	+1.4
DSZ	**Denniston Nort**	**1.00**	**289**	P	Pn	03 57 47.2	+1.4
AMCZ	**Amberley**	**1.14**	**195**	P	Pn	03 57 48.2	+0.5
TCW	**Tory Channel**	**1.25**	**47**	P	Pn	03 57 50.0	+0.9
QRZ	**Quartz Range**	**1.31**	**342**	P	Pn	03 57 51.6	+1.7
INZ	**Inchbonnie**	**1.37**	**241**	P	Pn	03 57 52.0	+1.3
DUWZ	**D'Urville Isla**	**1.42**	**27**	P	Pn	03 57 53.0	+1.4
OXZ	**Oxford**	**1.46**	**211**	P	Pn	03 57 52.0	-0.1
WEL	**Wellington**	**1.50**	**59**	P	Pn	03 57 53.1	+0.6
BHW	**Baring Head**	**1.50**	**64**	P	Pn	03 57 52.7	+0.2
OKCZ	**Okains Bay**	**1.65**	**180**	P	Pn	03 57 54.5	-0.1
MQZ	**McQueen's Vall**	**1.66**	**190**	P	Pn	03 57 53.6	-1.0
PLWZ	**Palliser**	**1.71**	**74**	P	Pn	03 57 55.0	-0.5
MSWZ	**Moikau Station**	**1.76**	**69**	P	Pn	03 57 55.7	-0.3
CAW	**Cannon Point**	**1.78**	**58**	P	Pn	03 57 56.7	+0.3
RACZ	**Rakaia**	**1.79**	**202**	P	Pn	03 57 55.8	-0.6
AKCZ	**Akaroa Harbour**	**1.80**	**184**	P	Pn	03 57 56.1	-0.6
KIW	**Kapiti Island**	**1.84**	**49**	P	Pn	03 57 58.0	+0.8
PAWZ	**Paruwai Farm**	**1.90**	**69**	P	Pn	03 57 57.5	-0.4
WVZ	**Waitaha Valley**	**1.99**	**239**	P	Pn	03 58 00.3	+1.1
OGWZ	**Otaki Gorge**	**2.02**	**52**	P	Pn	03 57 59.9	+0.4
MTW	**Mount Morrison**	**2.04**	**64**	P	Pn	03 57 59.2	-0.7
WACZ	**Wakanui South**	**2.07**	**205**	P	Pn	03 57 59.7	-0.6
HOWZ	**Holdsworth Sta**	**2.18**	**58**	P	Pn	03 58 01.3	-0.5
RPZ	**Rata Peaks**	**2.21**	**221**	P	Pn	03 58 02.4	+0.2
TMWZ	**Te Maipa**	**2.33**	**66**	P	Pn	03 58 02.9	-0.9
ARCZ	**Arundel**	**2.33**	**216**	P	Pn	03 58 03.1	-0.8
MRZ	**Mangatainoka R**	**2.36**	**54**	P	Pn	03 58 04.0	-0.2
GCSZ	**Gaunt Creek Bo**	**2.37**	**238**	P	Pn	03 58 06.3	+1.9
TIWZ	**Tintock**	**2.48**	**59**	P	Pn	03 58 05.8	-0.2
POWZ	**Post Office Ro**	**2.64**	**51**	P	Pn	03 58 08.1	+0.1
PRWZ	**Pori Road**	**2.66**	**56**	P	Pn	03 58 07.2	-1.2
NMEZ	**Namu Road**	**2.73**	**13**	P	Pn	03 58 13.1	+3.9
WAZ	**Wanganui**	**2.73**	**33**	P	Pn	03 58 11.7	+2.3
TMZ	**Timaru**	**2.76**	**212**	P	Pn	03 58 08.9	-0.8
LREZ	**Lake Rotokare**	**2.80**	**22**	P	Pn	03 58 15.7	+5.4
FOZ	**Fox Glacier**	**2.80**	**238**	P	Pn	03 58 11.0	+0.7
PREZ	**Palmer Road**	**2.85**	**17**	P	Pn	03 58 14.9	+3.9
KHEZ	**Kahui Hut**	**2.87**	**15**	P	Pn	03 58 14.7	+3.4
NEZ	**North Egmont**	**2.91**	**16**	P	Pn	03 58 16.4	+4.5
DVHZ	**Dannevirke**	**2.94**	**54**	P	Pn	03 58 11.1	-1.0
PKE	**Pukeiti**	**2.96**	**14**	P	Pn	03 58 16.0	+3.5
TSZ	**Takapari Road**	**2.97**	**48**	P	Pn	03 58 12.2	-0.4
DREZ	**Durham Road**	**3.01**	**17**	P	Pn	03 58 16.8	+3.6
LBZ	**Lake Benmore**	**3.13**	**221**	P	Pn	03 58 14.8	0.0
PNHZ	**Pukenui**	**3.21**	**49**	P	Pn	03 58 15.1	-0.8
VRZ	**Vera Road**	**3.21**	**24**	P	Pn	03 58 18.7	+2.8
PKVZ	**Pokaka**	**3.28**	**33**	P	Pn	03 58 18.6	+1.8
WNVZ	**Wahianoa**	**3.35**	**36**	P	Pn	03 58 19.3	+1.3
MOVZ	**Moawhango**	**3.35**	**38**	P	Pn	03 58 18.2	+0.3
FWVZ	**Far West T-bar**	**3.39**	**35**	P	Pn	03 58 19.1	+0.5
BHHZ	**Black Hill Sta**	**3.44**	**42**	P	Pn	03 58 19.3	+0.2
ODZ	**Otahua Downs**	**3.45**	**210**	P	Pn	03 58 18.2	-1.0
NGZ	**Ngauruhoe**	**3.48**	**34**	P	Pn	03 58 21.0	+1.2
KRHZ	**Kereru**	**3.49**	**47**	P	Pn	03 58 18.6	-1.1
TWVZ	**Taurewa**	**3.50**	**32**	P	Pn	03 58 21.8	+1.8
WTVZ	**West Tongariro**	**3.52**	**34**	P	Pn	03 58 21.8	+1.5
KRVZ	**Karewarewa**	**3.56**	**34**	P	Pn	03 58 22.9	+2.1
TMVZ	**Te Maari**	**3.57**	**35**	P	Pn	03 58 22.1	+1.1
JCZ	**Jackson Bay**	**3.72**	**236**	P	Pn	03 58 22.6	-0.3
HIZ	**Hauiti**	**3.81**	**22**	P	Pn	03 58 26.2	+2.1
WKZ	**Wanaka**	**4.03**	**226**	P	Pn	03 58 26.2	-1.0
EAZ	**Earnscleugh**	**4.17**	**220**	P	Pn	03 58 28.0	-0.6
TUZ	**Tuapeka**	**4.60**	**211**	P	Pn	03 58 34.5	-0.4
TOZ	**Tahuroa Road**	**4.72**	**24**	P	Pn	03 58 39.4	+2.8
AWAZ	**Awhitu Peninsu**	**5.15**	**14**	P	Pn	03 58 45.4	+2.9
SYZ	**Scrubby Hill**	**5.28**	**211**	P	Pn	03 58 44.1	-0.1
WIAZ	**Waiheke Island**	**5.51**	**18**	P	Pn	03 58 50.2	+2.8

*IDC **28** 04:03:43.2±1.8,6°.19S×129°.80E, h0km, mb3.2/1, mb1 4.0/6, mb1mx3.6/50, mbtmp3.9/6, ML3.8/5, MS2.7/1, Ms1 2.7/1, ms1mx2.3/15, Error ellipse: s-maj=43.9km s-min=25.1km az=85.0*

ISC 28 04:03:43.7±1.0,6°.28S±0°.08×129°.8E±0°.1, h10km, n7, σ2s20/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.57**	**15**	Pn	**Pn**	**04 05 04.7**	**-2.0**
	4.4nm,0.3s,baz=131,slow=22,SNR=13						
KAPI	**Kappang**	**10.08**	**277**	Pn	**Pn**	**04 06 09.0**	**+0.3**
	1.6nm,0.3s,baz=108,slow=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**12.43**	**199**	Pn	**Pn**	**04 06 41.0**	**+0.2**
	0.4nm,0.3s,baz=27,slow=11,SNR=22						
FITZ				Sn	**Sn**	**04 08 56.5**	**-3.0**
	0.1nm,0.3s,baz=318,slow=18,SNR=1.6						
WRA	**Warramunga Arr**	**14.28**	**162**	Pn	**Pn**	**04 07 06.8**	**+0.6**
	0.2nm,0.3s,baz=344,slow=13,SNR=7.3						
WRA				Sn	**Sn**	**04 09 43.3**	**-1.5**
	0.2nm,0.3s,baz=339,slow=18,SNR=4.8						
ASAR	**Alice Springs**	**17.73**	**168**	P	**P**	**04 07 54.4**	**+2.5**
	0.4nm,0.3s,baz=345,slow=9.7,SNR=29						
KSRS	**Korea Array**	**43.54**	**358**	LR	LR	04 32 08.2	
	comp=Z,9.4nm,18.3s,baz=56,slow=39						
MKAR	**Makanchi Array**	**67.52**	**327**	P	**P**	**04 14 41.6**	**+1.4**
	0.2nm,0.7s,baz=125,slow=7.2,SNR=1.9						

IDC 28 04:11:21.0±938.0,47°.04N×37°.91E, h0km, Error ellipse: s-maj=360.8km s-min=72.3km az=163.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**9.71**	**358**	*i*		05 12 50.0	
	baz=172,slow=326,SNR=1.0						
I26DE	**FREYUNG INFRAS**	**16.30**	**285**	*i*		05 55 10.0	
	baz=85,slow=328,SNR=0.2						
I37NO	**I37NO**	**24.12**	**343**	*i*		06 38 20.0	
	baz=147,slow=333,SNR=1.5						

*INET **28** 04:26:23.8, 11°.37N×87°.00W, h5km, MW3.7*

UCR 28 04:26:16.8±1.3,11°.17N×87°.53W, h5km, MW3.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**1.55**	**32**	*e*P	Pn	04 26 45.2	0.0
SAJU	**San Juanillo,**	**2.10**	**121**	*e*P	Pn	04 26 52.6	0.0
BUEV	**Buena Vista**	**2.12**	**100**	*e*P	Pn	04 26 52.2	-0.8
BUEV				*i* S	Sb	04 27 21.3	-1.1
GUAI	**GUAI**	**2.18**	**114**	*e*P	Pn	04 26 53.3	-0.4
GUAI				*i* S	Sb	04 27 23.0	-1.1
BUAI	**Buenos Aires**	**2.18**	**97**	*i* P	Pn	04 26 52.9	-0.9
GRZA	**Playa Garza**	**2.24**	**124**	*e*P	Pn	04 26 55.1	+0.5
LIM1	**Limonal**	**2.29**	**102**	*e*P	Pn	04 26 54.4	-0.9
PLVR	**Palo Verde**	**2.29**	**111**	*e*P	Pn	04 26 56.8	+1.3
CUI	**Cuipilapa**	**2.38**	**102**	*e*P	Pn	04 26 56.0	-0.5
CUI				*e*S	Sn	04 27 22.2	-4.0
ACAL	**Aguas Claras**	**2.51**	**102**	*i* P	Pn	04 26 57.9	-0.5
JTS	**Las Juntas de**	**2.68**	**109**	*e*P	Pn	04 27 00.8	+0.1

*JMA **28** 05:00:55.4±0.1,23°.44N×121°.84E, h41km±4km, M2.4*
*TAP **28** 05:00:56.0,23°.41N×121°.87E, h27km, ML3.2, C*

ISC 28 05:00:54.1±1.1,23°.41N±0°.02×121°.89E±0°.03, h14km±8km, n81, σ0s75/129, 4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.44**	**281**	P	**Pb**	**05 01 04.4**	**+0.7**
	baz=272						
HGSD				S	**Sb**	**05 01 10.6**	**+0.5**
	baz=272						
EGFH	**Guangfu**	**0.50**	**301**	P	**Pb**	**05 01 05.6**	**+0.9**
	baz=312						
EGFH				*e*S	**Sb**	**05 01 13.8**	**+1.9**
	baz=312						
EYUL	**Yuli**	**0.53**	**264**	P	**Pb**	**05 01 06.1**	**+0.9**
	baz=257						
EYUL				S	**Sb**	**05 01 13.8**	**+1.1**
	baz=257						
YULB	**Yu-li**	**0.55**	**268**	P	**Pb**	**05 01 06.3**	**+0.8**
	baz=262						
YULB				*e*S	**Sb**	**05 01 14.7**	**+1.4**
	baz=262						
TWF1	**Yuli**	**0.55**	**264**	⇓P	**Pb**	**05 01 06.3**	**+0.7**
	baz=257						
TWF1				*e*S	**Sb**	**05 01 14.4**	**+1.0**
	baz=257						
CHKT	**Chengkung**	**0.57**	**238**	P	**Pb**	**05 01 06.3**	**+0.4**
	baz=227						
CHKT				*e*S	**Sb**	**05 01 14.0**	**0.0**
	baz=227						
ESL	**Shilin**	**0.58**	**314**	⇓P	**Pb**	**05 01 06.5**	**+0.3**
	baz=315						
ESL				*e*S	**Sg**	**05 01 14.2**	**+0.9**
	baz=315						
FULB	**Fuli**	**0.59**	**249**	P	**Pb**	**05 01 06.7**	**+0.5**
	baz=238						
FULB				*e*S	**Sb**	**05 01 14.8**	**+0.3**
	baz=238						
HWA	**Hwalien**	**0.62**	**335**	P	**Pb**	**05 01 07.5**	**+0.7**
	baz=337						
HWA				S	**Sb**	**05 01 16.2**	**+0.7**
	baz=337						
EDH	**Donghe**	**0.69**	**231**	*e*P	**Pb**	**05 01 08.0**	**0.0**
	baz=223						
EDH				S	**Sb**	**05 01 16.8**	**-0.7**
	baz=223						
TWD	**Chiawan**	**0.72**	**338**	*e*P	**Pg**	**05 01 08.7**	**+0.6**
	baz=340						
TWD				*e*S	**Sg**	**05 01 18.0**	**+0.4**
	baz=340						
VWDT	**VWDT**	**0.77**	**297**	⇓P	**Pb**	**05 01 09.9**	**+0.6**
	baz=297						
VWDT				*e*S	**Sg**	**05 01 20.0**	**+0.8**
	baz=297						
NACB	**Ninganchiao**	**0.81**	**340**	⇓*e*P	**Pg**	**05 01 09.8**	**0.0**
	baz=341						
NACB				*e*S	**Sg**	**05 01 20.3**	**-0.1**
	baz=341						
LDUT	**Ludao**	**0.83**	**208**	*e*P	**Pb**	**05 01 10.5**	**+0.2**
	baz=206						
LDUT				*e*S	**Sb**	**05 01 20.7**	**-0.7**
	baz=206						
ELDTW	**Lidau**	**0.83**	**255**	*e*P	**Pb**	**05 01 10.4**	**0.0**
	baz=254						
OWD	**Renai**	**0.85**	**310**	*e*S	**Sg**	**05 01 20.9**	**-1.0**
	baz=310						
LONT	**Longtian**	**0.86**	**235**	*e*S	**Sb**	**05 01 22.8**	**+0.4**
	baz=245						
ETLH	**Xiulin Townshi**	**0.88**	**335**	*e*P	**Pg**	**05 01 11.3**	**+0.1**
	baz=336						
ETLH				*e*S	**Sg**	**05 01 22.4**	**-0.3**
	baz=336						
CHGB	**Renai**	**0.93**	**315**	P	**Pg**	**05 01 12.3**	**+0.2**
	baz=315						
CHGB				*e*S	**Sg**	**05 01 23.6**	**-0.5**
	baz=315						
WHF	**Hehuan Shan**	**0.93**	**322**	*e*S	**Sg**	**05 01 24.4**	**-0.1**
	baz=323						
SSLB	**Suanglung**	**0.94**	**294**	*e*P	**Pg**	**05 01 12.2**	**-0.1**
	baz=294						
TWGBT	**Beinan**	**0.95**	**232**	*e*P	**Pb**	**05 01 12.0**	**-0.4**
	baz=243						
TWG	**Pinlang**	**0.96**	**232**	*e*P	**Pb**	**05 01 12.2**	**-0.3**
	baz=243						
ALS	**Alishan**	**1.00**	**276**	*e*P	**Pb**	**05 01 13.9**	**+0.4**
	baz=276						
ALS				S	**Sg**	**05 01 27.0**	**+0.3**
	baz=276						
FUSS	**Fushou**	**1.03**	**325**	P	**Pg**	**05 01 13.8**	**-0.1**

WHP	**Taichung City**	**1.23**	**315**	*e*P		**Pn**	**05 01 17.2**	**+0.2**
	baz=315								
WHP				*e*S		**Sb**	**05 01 32.5**	**-0.4**
	baz=315								
NDS	**Dongshan**	**1.23**	**352**	*e*P		**Pn**	**05 01 16.8**	**-0.1**
	baz=353								
NDS				*e*S		**Sb**	**05 01 32.4**	**-0.6**
	baz=353								
NDT	**Datong Townshi**	**1.24**	**344**	*e*P		**Pn**	**05 01 17.1**	**0.0**
	baz=344								
NDT				*e*S		**Sb**	**05 01 32.6**	**-0.6**
	baz=344								
ENTT	**Nioudou**	**1.26**	**346**	*e*P		**Pn**	**05 01 17.5**	**+0.1**
	baz=347								
ENTT				*e*S		**Sb**	**05 01 33.2**	**-0.7**
	baz=347								
CHN1	**Nanshi**	**1.27**	**260**	*e*P		**Pg**	**05 01 18.9**	**+0.3**
	baz=260								
CHN1				*e*S		**Sn**	**05 01 35.2**	**+0.7**
	baz=260								
WDLH	**Douliu**	**1.27**	**283**	*e*P		**Pg**	**05 01 18.6**	**0.0**
	baz=283								
WDLH				*e*S		**Sg**	**05 01 35.2**	**0.0**
	baz=283								
TWE	**Neicheng**	**1.32**	**351**	*e*S		**Sb**	**05 01 34.6**	**-0.9**
	baz=352								
SSD	**Sandimen**	**1.34**	**241**	*e*P		**Pn**	**05 01 18.5**	**+0.1**
	baz=233								
YHNB	**Yeheng**	**1.34**	**339**	*e*P		**Pn**	**05 01 18.7**	**+0.1**
	baz=340								
YHNB				*e*S		**Sb**	**05 01 34.9**	**-1.3**
	baz=340								
TSMG	**Majia**	**1.35**	**239**	*e*P		**Pn**	**05 01 18.8**	**+0.3**
	baz=231								
TWQ1	**Liyutan**	**1.39**	**313**	*e*P		**Pb**	**05 01 20.6**	**+0.8**
	baz=313								
TWQ1				*e*S		**Sn**	**05 01 38.1**	**+0.8**
	baz=313								
WCHH	**Zhanghua**	**1.39**	**299**	*e*P		**Pb**	**05 01 20.3**	**+0.4**
	baz=299								
EAST	**Anshuo**	**1.40**	**224**	*e*P		**Pb**	**05 01 19.7**	**-0.4**
	baz=222								
MASBT	**Mashibuluo**	**1.41**	**236**	*e*P		**Pn**	**05 01 19.5**	**+0.2**
	baz=228								
NWLT	**Wulai**	**1.41**	**345**	*e*P		**Pn**	**05 01 19.8**	**+0.4**
	baz=346								
NWLT				*e*S		**Sn**	**05 01 36.5**	**-1.3**
	baz=346								
NTC	**Toucheng**	**1.44**	**358**	*e*S		**Sn**	**05 01 37.8**	**-0.8**
	baz=358								
YOJ	**Yonaguni jima**	**1.46**	**44**	P		**Pn**	**05 01 20.7**	**+0.6**
YOJ				*e*S		**Sn**	**05 01 39.6**	**+0.5**
YOJ	**Yonaguni jima**	**1.46**	**44**	*e*P		**Pn**	**05 01 20.5**	**+0.4**
	baz=44								
NSTT	**Nanjuang**	**1.47**	**326**	*e*S		**Sn**	**05 01 38.5**	**-0.7**
	baz=337								
TIPB	**Shuangxi**	**1.56**	**358**	*e*P		**Pn**	**05 01 22.4**	**+0.9**
	baz=8.0								
TIPB				*e*S		**Sn**	**05 01 40.8**	**-0.7**
	baz=8.0								
TATO	**Taipei**	**1.60**	**347**	*e*S		**Sn**	**05 01 41.7**	**-0.9**
	baz=347								
WFSB	**Wu-fen Shan**	**1.66**	**356**	*e*S		**Sn**	**05 01 44.1**	**+0.1**
	baz=357								
YM01	**YM01**	**1.75**	**350**	*e*S		**Sn**	**05 01 45.7**	**-0.8**
	baz=351								
HATJ	**Hateruma jima**	**1.87**	**69**	P		**Pn**	**05 01 26.3**	**+0.6**
HATJ				*e*S		**Sn**	**05 01 48.5**	**-0.6**
IRIF	**Iriomote-Funau**	**1.92**	**61**	P		**Pn**	**05 01 27.4**	**+1.0**
IRIF				*e*S		**Sn**	**05 01 50.8**	**+0.5**
WDGT	**Dungji**	**2.06**	**266**	*e*P		**Pn**	**05 01 28.7**	**+0.4**
	baz=267								
WDGT				*e*S		**Sn**	**05 01 52.8**	**-1.0**
	baz=267								
JKRS	**Kuro-shima**	**2.11**	**66**	P		**Pn**	**05 01 30.2**	**+1.2**
JKRS				S		**Sn**	**05 01 55.4**	**+0.4**
PNG	**Penghu**	**2.15**	**275**	*e*P		**Pn**	**05 01 30.0**	**+0.4**
	baz=275								
PNG				*e*S		**Sn**	**05 01 54.9**	**-1.3**
	baz=275								
JIJ	**Ishigaki jima**	**2.27**	**65**	P		**Pn**	**05 01 31.8**	**+0.6**
JIJ				S		**Sn**	**05 01 59.0**	**0.0**
VCHM	**Qimei**	**2.27**	**265**	*e*P		**Pn**	**05 01 31.9**	**+0.6**
	baz=265								
VWUC	**VWUC**	**2.73**	**306**	*e*P		**Pn**	**05 01 37.9**	**+0.3**
	baz=307								
VWUC				*e*S		**Sn**	**05 02 08.1**	**-2.4**
	baz=307								
JTJ	**Tarama**	**2.85**	**64**	*e*S		**Sn**	**05 02 13.4**	**+0.2**
PTMZ	**Houxiangcun**	**3.01**	**303**	*e*P		**Pn**	**05 01 42.3**	**+0.9**
	baz=305								
PTMZ				*e*S		**Sn**	**05 02 15.1**	**-2.1**
	baz=305								
MATB	**Ma-tsu**	**3.25**	**327**	*e*P		**Pn**	**05 01 45.8**	**+1.0**
	baz=326								
MHZQ	**Yeshan**	**3.74**	**316**	*e*P		**Pn**	**05 01 52.2**	**+0.8**
	baz=315								

NNC ***28*** *05:03:21.6±5.7, 37°.56N×71°.33E, h0km, mb5.7, mpv5.5, Error ellipse: s-maj=54.4km s-min=36.4km az=157.0*

SOME ***28*** *05:03:23.4, 37°.30N×71°.98E, h10km*

MOS ***28*** *05:03:24.0±0.9, 37°.29N×72°.08E, h165km, mb4.6/55, Error ellipse: s-maj=5.3km s-min=3.5km az=85.4*

BJI ***28*** *05:03:25.7±0.0, 37°.44N×72°.16E, h164km, mB4.7/33, mb4.7/48*

NEIC ***28*** *05:03:25.4±1.6, 37°.34N±0°.06×71°.94E±0°.09, h167km±5km, mb4.6/89, Error ellipse: s-maj=10.3km s-min=8.4km az=117.0*

IDC ***28*** *05:03:26.7±0.4, 37°.23N×72°.00E, h176km±3km, mb4.1/39, mb1 4.1/43, mb1mx4.0/77, mbtmp4.6/43, MS3.5/8, Ms1 3.5/8, ms1mx3.0/45, Error ellipse: s-maj=8.0km s-min=6.7km az=13.0*

GCMT ***28*** *05:03:27.4±0.3, 37°.26N±0°.02×71°.95E±0°.03, h179km±3km, MW4.8/102, Moment Tensor Solution. s17,c17; s102,c128; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.10±.08; Mθθ-2.19±.10; Mϕϕ0.09±.09; Mrθ-1.06±.08; Mθϕ0.20±.12; Mϕr0.00±.07; Best double couple: Ms2.40100×10¹⁶ NP1:ϕs97.00000°, δ32.00000°, λ94.00000°. NP2:ϕs273.00000°, δ58.00000°, λ88.00000°. Principal axes: T 2.3480, Plg77.0000°, Azm175.0000°; N 0.1040, Plg2.0000°, Azm274.0000°; P -2.4530, Plg13.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 05:03:25.2±0.3, 37°.26N±0°.03×71°.92E±0°.03, h164km±2km, h164km:pP-P,n467,σ1979/526, mb4.5/147, 62C-57D, Fault plane solution: NP1:ϕs98.72693°, δ47.46508°, λ71.76646°. **NP2:**ϕs304.70676°, δ45.58368°, λ108.83158°.
Principal axes: T Plg76.6338°, Azm295.5778°; N Plg13.3300°, Azm111.2823°; P Plg0.9654°, Azm201.5111°; **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.15**	**324**	Pn	**Pn**	**05 04 03.3**	**+0.3**
DRK	**Karamyk**	**2.22**	**358**		**Pn**	**05 04 04.0**	**0.0**
CEP	**Cherat**	**3.43**	**180**	P	**Pn**	**05 04 19.5**	**+0.8**
CEP				S	**Sn**	**05 05 02.0**	**+1.7**
KBL	**Kabul**	**3.58**	**222**	PN	**Pn**	**05 04 22.2**	**+1.5**
KBL	**Kabul**	**3.58**	**222**	Pn	**Pn**	**05 04 22.2**	**+1.5**
KBL	**Kabul**	**3.58**	**222**	P	**Pn**	**05 04 22.1**	**+1.5**
	SNR=203						
CHCP	**Chirah Chowk**	**3.76**	**163**	P	**Pn**	**05 04 24.2**	**+1.4**
KSH	**Kashi**	**3.90**	**53**	P	Pn	05 04 19.5	-5.1
KSH				S	Sn	05 04 59.0	-12
KSH				smax	smax		
	comp=N,9μm,0.6s						
KSH				smax	smax		
	comp=E,7μm,0.4s						
ARSB	**Arslanbob**	**4.14**	**11**	PN	**Pn**	**05 04 26.7**	**-1.0**
ARSB	**Arslanbob**	**4.14**	**11**	Pn	**Pn**	**05 04 26.7**	**-1.0**
THW	**Thamme Wali**	**4.46**	**182**	P	**Pn**	**05 04 32.2**	**+0.3**
TAS	**Tashkent**	**4.54**	**334**	PN	**Pn**	**05 04 32.7**	**-0.1**
TAS	**Tashkent**	**4.54**	**334**	Pn	**Pn**	**05 04 32.7**	**-0.1**
AML	**Almayashu**	**5.05**	**15**	P	**Pn**	**05 04 38.9**	**-1.0**
IUG	**luzhnay**	**5.09**	**344**	*e*P	**Pn**	**05 04 40.0**	**-0.2**
	428nm,0.6s						
IUG				*e*S	**Sn**	**05 05 34.3**	**-4.5**
	4μm,0.3s						
IUG	**luzhnay**	**5.09**	**344**	⇓*i*P	**Pn**	**05 04 39.9**	**-0.2**
	baz=342						
IUG				*i* S	**Sn**	**05 05 37.9**	**-0.9**
	baz=342						
IUG	**luzhnay**	**5.09**	**344**	*d* iPN	**Pn**	**05 04 39.9**	**-0.2**
UCH	**Uchtor**	**5.35**	**21**	P	**Pn**	**05 04 43.0**	**-0.8**
	SNR=2158						
CHM	**Chimkent**	**5.36**	**341**	*e*P	**Pn**	**05 04 44.0**	**+0.4**
	731nm,0.7s						
CHM				*e*S	**Sn**	**05 05 41.1**	**-3.8**
	4μm,0.5s						
CHM	**Chimkent**	**5.36**	**341**	⇓*i*P	**Pn**	**05 04 43.6**	**0.0**
	baz=340						
CHM	**Chimkent**	**5.36**	**341**	*d* iPN	**Pn**	**05 04 43.5**	**0.0**
SARP	**Sargodha**	**5.36**	**173**	P	**Pn**	**05 04 43.2**	**-0.5**
EKS2	**Erkin-Say**	**5.58**	**14**	P	**Pn**	**05 04 45.8**	**-0.7**
	SNR=315						
AAK	**Ala-Archa**	**5.72**	**19**	P	**Pn**	**05 04 48.4**	**-0.1**
	108nm,0.3s,baz=197,slow=8.9,SNR=800						
AAK				S	**Sn**	**05 05 45.6**	**-8.1**
	36nm,0.3s,baz=191,slow=12,SNR=3.6						
AAK				LR	LR	05 07 01.2	
	comp=Z,358nm,18.8s,baz=136,slow=37						
AAK	**Ala-Archa**	**5.72**	**19**	P	**Pn**	**05 04 47.9**	**-0.5**
	SNR=253						
AAK	**Ala-Archa**	**5.72**	**19**	*i* P	**Pn**	**05 04 47.9**	**-0.5**
	SNR=318						
AAK	**Ala-Archa**	**5.72**	**19**	⇑P	**Pn**	**05 04 47.7**	**-0.8**
	254nm,0.5s						
AAK				⇑S	**Sn**	**05 05 49.4**	**-4.3**
	1μm,0.9s						
AAK	**Ala-Archa**	**5.72**	**19**	PN	**Pn**	**05 04 47.6**	**-0.8**
AAK	**Ala-Archa**	**5.72**	**19**	Pn	**Pn**	**05 04 47.5**	**-0.9**
AAK	**Ala-Archa**	**5.72**	**19**	P	**Pn**	**05 04 47.9**	**-0.5**
AAK				P	**Pn**	**05 04 47.9**	**-0.5**
AAK				S	**Sn**	**05 05 49.6**	**-4.1**
AAK				S	**Sn**	**05 05 49.6**	**-4.1**
THN	**Thein Dam**	**5.74**	**146**	*e*P	**Pn**	**05 04 49.5**	**+0.9**
THN				*e*S	**Sn**	**05 05 50.0**	**-3.9**
KBK	**Karagaybulak**	**5.87**	**22**	P	**Pn**	**05 04 49.8**	**-0.6**
	SNR=133						
FRU1	**Bishkek**	**5.92**	**20**	PN	**Pn**	**05 04 50.4**	**-0.5**
FRU1	**Bishkek**	**5.92**	**20**		**Pn**	**05 04 50.4**	**-0.5**
KK31	**Karatay Array**	**5.94**	**350**	⇓P	**Pn**	**05 04 50.3**	**-0.8**
	284nm,0.6s,baz=180,slow=14,SNR=3787						
KK31				⇓S	**Sn**	**05 05 53.6**	**-4.9**
	698nm,0.5s,baz=189,slow=24,SNR=15						
KK31	**Karatay Array**	**5.94**	**350**	PN	**Pn**	**05 04 50.3**	**-0.8**
KK31	**Karatay Array**	**5.94**	**350**	Pn	**Pn**	**05 04 50.5**	**-0.6**
KKAR	**Karatay Array**	**5.94**	**350**	PN	**Pn**	**05 04 50.5**	**-0.6**
KKAR	**Karatay Array**	**5.94**	**350**	Pn	**Pn**	**05 04 50.5**	**-0.6**
KKAR	**Karatay Array**	**5.94**	**350**		**Pn**	**05 04 50.2**	**-0.9**
ULHL	**Ulahol**	**5.99**	**32**	P	**Pn**	**05 04 50.6**	**-1.4**
	SNR=141						
BOOM	**Boomskoye usch**	**6.07**	**29**	PN	**Pn**	**05 04 51.6**	**-1.4**
BOOM	**Boomskoye usch**	**6.07**	**29**	Pn	**Pn**	**05 04 51.5**	**-1.4**
CHMS	**Chumysh**	**6.13**	**20**	P	**Pn**	**05 04 52.8**	**-0.9**
	SNR=215						
DHRM	**DHARAMSHALA**	**6.16**	**143**	*e*P	**Pn**	**05 04 53.1**	**-1.4**
DHRM				*e*S	**Sn**	**05 05 59.5**	**-4.9**
USP	**Ospenovka**	**6.31**	**17**	P	**Pn**	**05 04 54.6**	**-1.5**
	SNR=110						
TKM2	**Tokmak 2**	**6.31**	**25**	P	**Pn**	**05 04 55.1**	**-1.2**
	SNR=218						
TKM2	**Tokmak 2**	**6.31**	**25**	⇓P	**Pn**	**05 04 54.9**	**-1.4**
	299nm,0.9s						
TKM2				⇓S	**Sn**	**05 06 10.8**	**+3.0**
	168nm,0.9s						
TKM2	**Tokmak 2**	**6.31**	**25**	PN	**Pn**	**05 04 54.9**	**-1.4**
KDJ	**Kajisay**	**6.33**	**38**	PN	**Pn**	**05 04 55.2**	**-1.3**
KDJ	**Kajisay**	**6.33**	**38**	Pn	**Pn**	**05 04 55.2**	**-1.3**
SGDS	**Sogindy**	**6.52**	**18**	*e*P	**Pn**	**05 04 57.3**	**-1.7**
	30nm,0.5s,baz=17						
SGDS	**Sogindy**	**6.52**	**18**	*e*PN	**Pn**	**05 04 57.2**	**-1.7**
SGDS				pmax	pmax		
	comp=Z,30nm,0.5s						
TNSS	**Tian-Shan**	**6.93**	**32**	⇓*i*P	**Pn**	**05 05 03.1**	**-1.6**
	baz=32						
TNSS	**Tian-Shan**	**6.93**	**32**	⇓*i*PN	**Pn**	**05 05 03.1**	**-1.6**
AAA	**Alma-Ata**	**7.06**	**31**	*e*P	**Pn**	**05 05 05.4**	**-0.7**
	baz=31						
AAA	**Alma-Ata**	**7.06**	**31**	*e*PN	**Pn**	**05 05 05.3**	**-0.7**
MDOK	**Medeo**	**7.08**	**32**	*i* P	**Pn**	**05 05 05.2**	**-1.2**
	baz=32						
MDOK	**Medeo**	**7.08**	**32**	⇑P	**Pn**	**05 05 04.9**	**-1.5**
	comp=Z,174nm,0.8s						
MDOK				⇑S	**Sn**	**05 06 28.6**	**+2.6**
	comp=Z,402nm,1.3s						
MDOK	**Medeo**	**7.08**	**32**	*i* PN	**Pn**	**05 05 05.2**	**-1.2**
KNDC	**Almaty**	**7.09**	**31**	⇓P	**Pn**	**05 05 05.9**	**-0.5**
	comp=Z,688nm,1.1s						
KNDC				⇑S	Sn	05 06 43.9	+18
	comp=Z,1μm,1.4s						
PRZ	**Przheval'sk**	**7.21**	**42**	PN	**Pn**	**05 05 07.1**	**-1.1**
PRZ	**Przheval'sk**	**7.21**	**42**	Pn	**Pn**	**05 05 07.1**	**-1.1**
SMLA	**Simla**	**7.50**	**143**	⇑*e*P	**Pn**	**05 05 10.4**	**-1.5**
SMLA				*e*S	**Sn**	**05 06 29.9**	**-6.1**
SATY	**Saty**	**7.62**	**39**	⇓*i*P	**Pn**	**05 05 11.9**	**-1.7**
	baz=39						
SATY	**Saty**	**7.62**	**39**	*d* iPN	**Pn**	**05 05 11.9**	**-1.7**
BTLS	**Baital**	**7.94**	**11**	⇓*i*P	**Pn**	**05 05 15.8**	**-1.8**
	comp=Z,6.6nm,0.2s,baz=10						
BTLS	**Baital**	**7.94**	**11**	*d* iPN	**Pn**	**05 05 15.8**	**-1.8**
BTLS				pmax	pmax		
	comp=Z,7.0nm,0.2s						
UZB	**Uzunbulak**	**8.00**	**41**	*e*P	**Pn**	**05 05 16.9**	**-1.7**
	baz=41						
UZB				*i* S	**Sn**	**05 06 44.8**	**-3.3**
	baz=41						
UZB	**Uzunbulak**	**8.00**	**41**	*e*PN	**Pn**	**05 05 16.9**	**-1.7**
KPKS	**Kokpek**	**8.06**	**38**	⇓*i*P	**Pn**	**05 05 18.0**	**-1.5**
	baz=38						
KPKS	**Kokpek**	**8.06**	**38**	*d* iPN	**Pn**	**05 05 17.9**	**-1.5**
SHLS	**Shalkode**	**8.24**	**42**	⇓*i*P	**Pn**	**05 05 22.9**	**+1.1**
	baz=44						
SHLS	**Shalkode**	**8.24**	**42**	*d* iPN	**Pn**	**05 05 22.8**	**+1.1**
HRA	**Herat**	**8.37**	**253**	Pn	**Pn**	**05 05 24.6**	**+0.9**
PDGK	**Podgornoye**	**8.37**	**41**	⇑P	**Pn**	**05 05 25.4**	**+1.8**
	comp=Z,145nm,0.7s						
PDGK				⇑S	**Sn**	**05 07 02.5**	**+5.5**
	comp=Z,102nm,0.9s						
PDGK	**Podgornoye**	**8.37**	**41**	PN	**Pn**	**05 05 20.3**	**-3.2**
PDGK				S	**Sn**	**05 06 55.5**	**-1.4**
DDI	**Dehra Dun**	**8.60**	**142**	*e*P	**Pn**	**05 05 24.3**	**-2.3**
TDK	**Taldyqorghan**	**9.15**	**30**	*e*P	**Pn**	**05 05 31.4**	**-2.2**
	baz=30						
TDK	**Taldyqorghan**	**9.15**	**30**	*e*P	**Pn**	**05 05 31.4**	**-2.2**
GEYT	**Alibeck**	**10.98**	**278**	P	**Pn**	**05 05 55.7**	**-2.1**
	comp=Z,4.4nm,0.3s,baz=116,slow=10,SNR=23						
GEYT				S	**Sn**	**05 07 54.6**	**-4.9**
	comp=Z,15nm,0.3s,baz=104,slow=16,SNR=7.4						
GEYT	**Alibeck**	**10.98**	**278**	Pn	**Pn**	**05 05 55.0**	**-2.8**
GYA0	**ALIBECK ARRAY**	**10.98**	**278**	P	**Pn**	**05 05 55.7**	**-2.1**
GYA0				S	**Sn**	**05 07 54.1**	**-5.3**
GYA0B	**ALIBECK ARRAY**	**10.98**	**278**	⇑P	**Pn**	**05 05 55.7**	**-2.1**
GYA0B				⇑S	**Sn**	**05 07 54.1**	**-5.3**
GYA0B	**ALIBECK ARRAY**	**10.98**	**278**	Pn	**Pn**	**05 05 55.6**	**-2.1**
AJM	**Ajmer**	**10.99**	**167**	⇓*i*P	**Pn**	**05 05 56.0**	**-2.1**
AJM				*i* S	**Sn**	**05 07 52.0**	**-8.0**
MAKZ	**Makanchi**	**12.11**	**35**	⇑P	**Pn**	**05 06 14.6**	**+2.3**
	comp=Z,104nm,1.1s						
MAKZ	**Makanchi**	**12.11**	**35**	P	**Pn**	**05 06 09.7**	**-2.7**
MAKZ	**Makanchi**	**12.11**	**35**	Pn	**Pn**	**05 06 10.9**	**-1.4**
MK31	**Makanchi Array**	**12.24**	**36**	⇓P	**Pn**	**05 06 16.2**	**+2.1**
	comp=Z,58nm,1.1s,baz=209,slow=10,SNR=329						
MK31				⇓S	S	05 09 20.8	+39
	comp=Z,25nm,0.9s						
MK31	**Makanchi Array**	**12.24**	**36**	*i* P	**Pn**	**05 06 11.5**	**-2.6**
MK31	**Makanchi Array**	**12.24**	**36**	Pn	**Pn**	**05 06 11.7**	**-2.4**
MKAR	**Makanchi Array**	**12.24**	**36**	P	**Pn**	**05 06 11.7**	**-2.4**
	comp=Z,1.9nm,0.3s,baz=220,slow=17,SNR=116						
MKAR				LR	LR	05 10 58.6	
	comp=Z,189nm,18.7s,baz=226,slow=37						
MKAR	**Makanchi Array**	**12.24**	**36**	*i* P	**Pn**	**05 06 11.6**	**-2.5**
MKAR				pmax	pmax		
	comp=Z,37nm,0.9s						
MKAR	**Makanchi Array**	**12.24**	**36**		**Pn**	**05 06 10.8**	**-3.3**
PYUN	**Piuthan**	**13.04**	**131**	*e*Pn	**Pn**	**05 06 22.0**	**-2.7**
PYUN				*e*Sn	Sn	05 08 36.5	-13
	comp=Z,870nm,0.5s						
DANN	**Dangsing**	**13.33**	**128**	*e*Pn	**Pn**	**05 06 25.8**	**-2.7**
DANN				*e*Sn	Sn	05 08 42.7	-14
	comp=Z,278nm,0.6s						
KOLN	**Koldanda**	**13.65**	**131**	*e*Pn	**Pn**	**05 06 29.9**	**-2.5**
KOLN				*e*Sn	Sn	05 08 52.2	-12
	comp=Z,442nm,0.6s						
WMQ	**Urumqi**	**13.66**	**56**	*e*P	**Pn**	**05 06 30.5**	**-1.7**
WMQ				S	**Sn**	**05 09 01.3**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,41nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,340nm,4.3s						
WMQ				LR	LR		
	comp=Z,520nm,5.9s						
WMQ				LR	LR		
	comp=Z,540nm,5.1s						
WMQ				LR	LR		
	comp=Z,120nm,17.1s						
BHUJ	**Bhuj**	**14.10**	**189**	⇑*e*P	**Pn**	**05 06 36.9**	**-0.9**
BHUJ				IAmb	IAmb	05 06 38.3	
	comp=Z,175nm,0.6s						
GKN	**Gorkha**	**14.13**	**127**	*e*Pn	**Pn**	**05 06 36.2**	**-2.1**
GKN				*e*Sn	Sn	05 09 03.4	-12
	comp=Z,327nm,0.6s						
KURBB	**Kurchatov Arra**	**14.17**	**17**	P	**Pn**	**05 06 34.4**	**-4.1**
	comp=Z,0.9nm,0.3s,baz=208,slow=12,SNR=68						
KURBB				S	**S**	**05 09 21.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=207,slow=24,SNR=4.8						
KURBB	**Kurchatov Arra**	**14.17**	**17**	⇑P	**P**	**05 06 40.3**	**-0.8**
	comp=Z,176nm,1.2s						
KURBB	**Kurchatov Arra**	**14.17**	**17**	P	**P**	**05 06 40.2**	**-0.8**
KURK	**Kurchatov**	**14.28**	**17**	P	Pn	05 06 34.4	-5.4
KURK	**Kurchatov**	**14.28**	**17**		Pn	05 06 34.4	-5.4
DMN	**Daman**	**14.70**	**127**	*e*Pn	**Pn**	**05 06 44.4**	**-1.2**
BHPL	**Bhopal**	**14.76**	**160**	*e*P	**Pn**	**05 06 42.9**	**-3.2**
BHPL				IAmb	IAmb	05 06 46.1	
	comp=Z,61nm,0.8s						
AB31	**Akbulak array**	**14.80**	**328**	P	**Pn**	**05 06 43.9**	**-2.5**
	comp=Z,26nm,0.4s,baz=139,slow=12,SNR=1101						
AB31				⇑S	Sn	05 09 18.5	-12
	comp=Z,81nm,0.7s,baz=321,slow=27,SNR=9.1						
AB31	**Akbulak array**	**14.80**	**328**	*i* P	**Pn**	**05 06 43.9**	**-2.5**
AB31				S	Sn	05 09 18.9	-12
ABKAR	**Akbulak array**	**14.80**	**328**		**Pn**	**05 06 44.1**	**-2.3**
PKIN	**Phulchoki**	**14.91**	**126**	*e*Pn	**Pn**	**05 06 47.3**	**-0.8**
PKI	**Pulchoki**	**14.92**	**126**	*e*Pn	**Pn**	**05 06 46.1**	**-2.3**
BVAR	**Borovoye Array**	**15.80**	**357**	P	**Pn**	**05 06 55.9**	**-2.7**
	comp=Z,5.4nm,0.3s,baz=102,slow=14,SNR=137						
BRVK	**Borovoye**	**15.84**	**356**	⇑P	**P**	**05 07 01.7**	**+2.2**
	comp=Z,144nm,1.0s						
BRVK	**Borovoye**	**15.84**	**356**	P	**Pn**	**05 06 56.9**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,152nm,1.0s						
BRVK	**Borovoye**	**15.84**	**356**		**Pn**	**05 06 56.9**	**-2.1**
BRVK	**Borovoye**	**15.84**	**356**	P	**Pn**	**05 06 57.4**	**-1.7**
RAMN	**Ramite**	**16.11**	**125**	*e*Pn	**Pn**	**05 07 01.6**	**-1.3**
AKTO	**Aktyubinsk**	**16.52**	**327**	P	**P**	**05 07 06.7**	**-0.3**
	comp=Z,6.3nm,0.3s,baz=128,slow=11,SNR=65						
AKTO				S	**S**	**05 10 05.1**	**-4.9**
	comp=Z,5.7nm,0.3s,baz=46,slow=20,SNR=6.8						
AKTO				LR	LR	05 13 58.9	
	comp=Z,117nm,18.6s,baz=168,slow=38						
AKTO	**Aktyubinsk**	**16.52**	**327**	⇓P	**P**	**05 07 06.6**	**-0.3**
	comp=Z,91nm,1.1s						
AKTO				⇑S	**S**	**05 10 01.0**	**-9.0**
	comp=Z,141nm,1.3s						
AKTO	**Aktyubinsk**	**16.52**	**327**	P	**P**	**05 07 06.6**	**-0.4**
TAPN	**Taplejung**	**16.59**	**122**	*e*Pn	**P**	**05 07 07.7**	**-0.6**
ODAN	**Odare**	**16.69**	**124**	*e*Pn	**P**	**05 07 09.5**	**+0.1**
DGZ	**Jazzator, Alta**	**16.73**	**37**	*d* iP	**P**	**05 07 07.9**	**-1.6**
GTK	**Tadong**	**17.21**	**120**	*e*P	**Pn**	**05 07 15.7**	**-0.4**
GTK				IAmb	IAmb	05 07 28.6	
	comp=Z,35nm,0.7s						
BANOM	**Banah**	**17.44**	**234**	P	**P**	**05 07 17.3**	**-0.1**
BANOM	**Banah**	**17.44**	**234**	P	**P**	**05 07 17.1**	**-0.2**
SHME	**Shamm**	**17.45**	**235**	P	**P**	**05 07 17.7**	**+0.2**
LSA	**Lhasa**	**17.70**	**110**	P	**Pn**	**05 07 23.8**	**+1.6**
LSA				LR	LR		
	comp=Z,120nm,6.4s						
LSA				LR	LR		
	comp=Z,280nm,6.8s						
LSA				LR	LR		
	comp=Z,310nm,7.8s						
LSA	**Lhasa**	**17.70**	**110**	P	**P**	**05 07 19.3**	**-1.5**
LSA				pmax	pmax		
	comp=Z,71nm,0.8s						
LSA	**Lhasa**	**17.70**	**110**	P	**P**	**05 07 19.3**	**-1.5**
MDH	**Madha**	**17.88**	**233**	P	**P**	**05 07 21.7**	**-0.4**
MSFE	**Esma-Masafi**	**17.92**	**233**	*i* P	**Pn**	**05 07 25.0**	**+0.6**
	SNR=6.0						
WSAR	**Wadi Sarin**	**18.06**	**223**	P	**P**	**05 07 24.4**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=78,slow=11,SNR=20						
UOSS	**Minazif**	**18.19**	**232**	*i* P	**P**	**05 07 26.4**	**+0.8**
	SNR=9.2						
UOSS	**Minazif**	**18.19**

comp=Z,3.7nm,0.2s,baz=158,slow=7.2,SNR=52
ARU Arti 21.17 339 *c i* P **P 05 07 57.5 +0.2**
ARU *P P **05 08 24.3 -2.4**
ARU 05 08 35.2
ARU S S **05 11 45.4 +2.5**
ARU pmax pmax
comp=Z,123nm,1.6s
ARU Arti 21.17 339 P **P 05 07 57.5 +0.2**
GNI Garni 21.38 286 P **P 05 08 01.7 +1.8**
comp=Z,13nm,0.5s,baz=150,slow=4.1,SNR=15
GNI Garni 21.38 286 *ce* P **P 05 08 02.9 +3.0**
GNI pmax pmax
comp=Z,57nm,1.3s
GNI Garni 21.38 286 P **P 05 08 00.5 +0.6**
UMR Umm Al-Rimmam 21.58 256 *e* P 05 08 02.0
GUDG Gudauri 21.65 292 P **P 05 08 06.8 +3.9**
GTA Gaotai 21.95 76 P **P 05 08 07.0 +1.1**
GTA pP pP 05 08 39.3 +3.2
GTA sP sP 05 08 59.8 +2.6
GTA S S **05 11 55.5 -1.3**
GTA pmax pmax
comp=Z,48nm,1.2s
GTA pmax pmax
comp=Z,100nm,4.4s
RDF Al-Radifah 22.00 255 *e* P 05 08 06.5
MOKO MOKOCHONG 22.03 113 *e* P **P 05 08 06.9 +0.1**
MOKO IAmb IAmb 05 08 08.7
comp=Z,94nm,0.9s
MOKO *e* S S **05 11 58.7 +0.4**
KOHI KOHIMA 22.09 115 *e* P **P 05 08 08.2 +0.9**
KOHI IAmb IAmb 05 08 09.2
comp=Z,136nm,0.7s
ZEI Tsey 22.10 293 *e* P **P 05 08 08.6 +1.2**
ZEI pmax pmax
comp=Z,20nm,1.1s
RST Umm Al-Ruwaisa 22.17 257 *e* P 05 08 07.5
NCK Nalchik 22.40 295 *i* P **P 05 08 10.1 +0.1**
NCK pmax pmax
comp=Z,37nm,1.0s
IMP Imphal 22.51 117 *e* P **P 05 08 13.0 +1.7**
IMP IAmb IAmb 05 08 13.3
comp=Z,54nm,0.7s
BELG Belogornoye 22.78 319 P **P 05 08 15.5 +2.2**
comp=Z,19nm,0.8s,baz=50,slow=1.7,SNR=10
BELG Belogornoye 22.78 319 *i* P **P 05 08 15.1 +1.7**
BELG pmax pmax
comp=Z,6.0nm,0.8s
KBZ Khabaz 22.93 295 P **P 05 08 16.6 +1.7**
comp=Z,3.8nm,0.7s,baz=111,slow=9.0,SNR=9.4
KBZ LR LR 05 19 22.8
comp=Z,103nm,19.1s,baz=78,slow=42
KBZ Khabaz 22.93 295 *ce* P **P 05 08 15.9 +1.1**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
NEY Neytrino 23.01 294 *i* P **P 05 08 17.9 +2.1**
NEY pmax pmax
comp=Z,4.0nm,0.9s
SHA1 Shidzhatmaz 23.10 295 *c i* P **P 05 08 18.2 +1.4**
KIV Kislovodsk 23.11 296 *e* P **P 05 08 18.5 +1.9**
KIV *e* *SP **sP 05 09 09.0 +0.8**
KIV *e* S **S 05 12 18.5 +3.2**
KIV pmax pmax
comp=Z,42nm,1.0s
KIV MLR MLR
comp=Z,134nm,14.0s
KIV Kislovodsk 23.11 296 P **P 05 08 17.1 +0.5**
KIV IAmb IAmb 05 08 40.6
comp=Z,18nm,0.8s
SHAO Shalim 23.93 221 *i* P **P 05 08 24.9 +0.7**
SNR=10
DOK Doka 24.26 225 P **P 05 08 28.5 +1.3**
SNR=5.6
WHFO Wadi Hawf 25.02 225 P **P 05 08 34.9 +0.8**
SNR=6.7
MOY Mondy 25.05 46 *e* P **P 05 08 36.0 +1.8**
MOY *e* 05 09 11.9
MOY pmax pmax
comp=Z,25nm,2.3s
RBK Rabkut 25.12 223 P **P 05 08 35.8 +0.8**
SNR=5.7
SOC Sochi 25.21 295 *e* P **P 05 08 35.5 -0.2**
SOC *e* S **S 05 12 50.4 +1.7**
SOC pmax pmax
comp=Z,7.0nm,0.6s
VRH Novokhopyorsk 25.52 313 *e* P **P 05 08 37.7 -0.6**
VRH *e* *PP **pP 05 09 09.1 -4.1**
VRH pmax pmax
comp=Z,7.0nm,0.6s
LZH Lanzhou 25.57 83 ⇓P **P 05 08 41.0 +1.8**
LZH pP pP 05 09 17.5 +3.1
LZH sP sP 05 09 37.0 +3.1
LZH sS sS 05 13 55.0 -1.8
LZH pmax pmax
comp=Z,23nm,1.2s
LZH pmax pmax
comp=Z,78nm,8.7s
ABTO Aybut 25.74 225 P **P 05 08 41.3 +0.6**
SNR=9.9
KIRV Kirov 25.89 333 P **P 05 08 42.9 +1.3**
comp=Z,10nm,0.5s,baz=146,slow=9.6,SNR=6.6
KIRV Kirov 25.89 333 *ce* P **P 05 08 42.2 +0.7**
ZAK Zakamensk 25.93 50 *e* P **P 05 08 42.8 +0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.3s
RAYN Ar Rayn 26.48 246 *i* P **P 05 08 48.0 +0.7**
SNR=9.0
RAYN Ar Rayn 26.48 246 P **P 05 08 47.6 +0.3**
RAYN pmax pmax
comp=Z,23nm,1.2s
RAYN Ar Rayn 26.48 246 P **P 05 08 47.5 +0.3**
RAYN IAmb IAmb 05 08 49.5
comp=Z,23nm,1.1s
VSR Storozhevoye 27.04 312 *e* P **P 05 08 52.0 +0.1**
VSR *e* *PP **pP 05 09 23.9 -3.0**
VSR pmax pmax
comp=Z,9.0nm,0.7s
SONM Songino Array 27.30 56 P **P 05 08 55.2 +0.7**
comp=Z,7.1nm,0.8s,baz=257,slow=10.0,SNR=34
SONM pP **pP 05 09 31.8 +1.9**
comp=Z,6.7nm,0.9s,baz=261,slow=9.7,SNR=7.4
SONM Songino Array 27.30 56 P **P 05 08 54.4 -0.1**
SONM pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 27.30 56 P **P 05 08 54.4 -0.1**
LPSR Galich'ya Gora 27.64 314 *e* P **P 05 08 57.9 +0.7**
LPSR *e* *PP **pP 05 09 29.8 -2.6**
LPSR pmax pmax
comp=Z,6.0nm,0.6s
ULN Ulaanbaatar 27.74 56 *ce* P **P 05 08 59.0 +0.6**
ULN pmax pmax
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 27.74 56 P **P 05 08 57.6 -0.8**
KMI Kunming 28.88 106 ⇑P **P 05 09 13.0 +4.2**
KMI pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 29.86 318 *e* P **P 05 09 17.2 +0.4**
OBN *e* *PP **pP 05 09 50.5 -1.8**
OBN *e* *SP **sP 05 10 08.7 -3.0**
OBN *e* 05 10 16.0
OBN pmax pmax
comp=Z,6.0nm,0.4s
BR131 Keskin Array S 29.92 287 P **P 05 09 18.5 +0.7**
BR131 pmax pmax
comp=Z,22nm,1.4s
BR131 Keskin Array S 29.92 287 P **P 05 09 18.5 +0.7**
BR131 IAmb IAmb 05 09 20.6
comp=Z,22nm,1.4s
BRTR Keskin Array B 29.92 287 P **P 05 09 19.9 +2.0**
comp=Z,3.4nm,0.5s,baz=102,slow=9.2,SNR=18
BRTR Keskin Array B 29.92 287 *ce* P **P 05 09 19.8 +2.0**
BRTR pmax pmax
comp=Z,4.0nm,0.5s
BRTR Keskin Array B 29.92 287 P **P 05 09 18.9 +1.1**
CRAI Chiangrai 30.01 117 P **P 05 09 19.7 +1.1**
comp=Z,4μmcomp=Z,9.4nm,1.1s
XAN Xi'an 30.11 85 P **P 05 09 19.8 +0.3**
XAN pP pP 05 09 56.5 +1.4
XAN sP sP 05 10 14.0 -0.4
XAN pmax pmax
comp=Z,18nm,0.9s
XAN pmax pmax
comp=Z,75nm,4.6s
CM13 Chiang Mai Arr 30.19 121 P **P 05 09 23.9 +3.6**
comp=Z,78nmcomp=Z,4.3nm,0.9s
CMAR Chiang Mai Arr 30.19 121 P **P 05 09 20.4 +0.2**
comp=Z,2.5nm,0.6s,baz=307,slow=8.6,SNR=14
CMAR Chiang Mai Arr 30.19 121 *ce* P **P 05 09 21.8 +1.6**
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CM02 Chiang Mai Arr 30.21 121 P **P 05 09 24.1 +3.7**
comp=Z,83nmcomp=Z,7.4nm,0.8s
CM01 Chiang Mai Arr 30.23 121 P **P 05 09 24.7 +4.2**
comp=Z,90nmcomp=Z,4.8nm,0.7s
CM05 Chiang Mai Arr 30.23 121 P **P 05 09 24.2 +3.6**
comp=Z,63nmcomp=Z,3.3nm,1.0s
CM04 Chiang Mai Arr 30.25 121 P **P 05 09 24.0 +3.2**
comp=Z,90nmcomp=Z,5.4nm,0.8s
HHC Hu-ho-hao-te 30.81 71 *e* P **P 05 09 27.8 +2.2**
HHC pmax pmax
comp=Z,15nm,0.9s
HHC pmax pmax
comp=Z,57nm,7.7s
PALK Pallekele 30.90 163 P **P 05 09 27.1 +0.6**
comp=Z,8.1nm,0.8s,baz=90,slow=11,SNR=8.2
PALK Pallekele 30.90 163 P **P 05 09 26.8 +0.3**
PALK pmax pmax
comp=Z,10.0nm,0.9s
PALK Pallekele 30.90 163 P **P 05 09 26.8 +0.3**
PALK IAmb IAmb 05 09 28.1
comp=Z,10nm,0.9s
KLMR Klimovskoe 31.19 330 *e* P **P 05 09 27.7 -0.8**
KLMR pmax pmax
comp=Z,9.0nm,0.9s
KLMR Klimovskoe 31.19 330 *e* P **P 05 09 27.7 -0.8**
KLMR AMP 05 09 38.6
comp=Z,9.0nm,0.9s
GYA Guiyang 31.25 100 ⇓P **P 05 09 30.8 +1.2**
GYA pmax pmax
comp=Z,8.0nm,0.8s
SUKH Sukhothai 31.34 121 P **P 05 09 32.1 +1.8**
comp=Z,291nmcomp=Z,13nm,0.9s
LEF Lefka 31.43 278 ⇑P **P 05 09 32.7 +1.8**
PBA Port Blair 31.62 138 P P 05 09 33.6 +0.9
ENH Enshi 31.84 91 P **P 05 09 34.5 -0.2**
ENH IAmb IAmb 05 09 36.5
comp=Z,22nm,1.2s
UTHA Uthaitani 32.58 124 P **P 05 09 42.0 +0.9**
comp=Z,312nmcomp=Z,29nm,0.9s
AKASG Malin Array Be 33.06 308 P **P 05 09 45.8 +0.9**
comp=Z,6.8nm,0.7s,baz=83,slow=6.7,SNR=26
AKASG pP **pP 05 10 22.9 +2.5**
comp=Z,2.1nm,0.5s,baz=80,slow=6.8,SNR=3.0
AKASG LR LR 05 25 39.8
comp=Z,34nm,20.2s,baz=40,slow=40
AKASG Malin Array Be 33.06 308 P **P 05 09 44.8 -0.1**
AKBB Malin Array Si 33.06 308 P **P 05 09 45.4 +0.5**
AKBB pmax pmax
comp=Z,7.0nm,0.8s
AKBB Malin Array Si 33.06 308 P **P 05 09 45.4 +0.5**
NRIK Noril'sk 33.25 10 P **P 05 09 47.3 +1.0**
comp=Z,6.7nm,0.5s,baz=197,slow=4.3,SNR=12
NRIK LR LR 05 25 18.1
comp=Z,131nm,18.3s,baz=34,slow=39
NRIK Noril'sk 33.25 10 *ce* P **P 05 09 46.5 +0.2**
NRIK pmax pmax
comp=Z,10.0nm,1.0s
NRIK Noril'sk 33.25 10 P **P 05 09 46.6 +0.3**
NRIK IAmb IAmb 05 09 48.2
comp=Z,28nm,1.4s
SRDT SRDT 33.26 126 P **P 05 09 48.2 +1.2**
comp=Z,10μmcomp=Z,20nm,1.1s
TPGR Topolog 33.34 297 ⇑P **P 05 09 48.9 +1.3**
ELL Elmali 33.36 282 P **P 05 09 47.9 0.0**
ELL pmax pmax
comp=Z,57nm,0.8s
ELL Elmali 33.36 282 P **P 05 09 47.9 0.0**
NONG Nongkai 33.40 116 P **P 05 09 49.3 +1.1**
comp=Z,15nm,1.0s
SORM Soroca 33.40 303 ⇑P **P 05 09 48.6 +0.7**
CFR Carcaliu 33.53 298 ⇑P **P 05 09 50.9 +1.8**
AKAS Kas 33.72 281 P **P 05 09 50.4 -0.6**
CHAI Chaiyaphum 34.05 121 P **P 05 09 55.7 +1.9**
comp=Z,16nm,1.2s
BOD Bodaibo 34.29 40 *e* P **P 05 09 55.2 -0.3**
BOD pmax pmax
comp=Z,7.0nm,1.0s
VRI Vrincioaia 34.50 299 ⇑P **P 05 09 59.6 +2.1**
PLOR Plostina 34.55 299 ⇑P **P 05 10 00.3 +2.3**
PHET Kaeng Krachan 34.66 127 P **P 05 10 01.0 +1.9**
comp=Z,75nm,0.8s
BIZ Bicaz 34.91 301 ⇓P **P 05 10 02.9 +1.9**
MLR Muntele Rosu 35.06 298 P **P 05 10 03.9 +1.4**
comp=Z,10nm,0.8s,baz=118,slow=0.7,SNR=21
MLR Muntele Rosu 35.06 298 ⇑P **P 05 10 05.2 +2.7**
MLR Muntele Rosu 35.06 298 P **P 05 10 03.2 +0.7**
MLR pmax pmax
comp=Z,21nm,0.9s
MLR Muntele Rosu 35.06 298 P **P 05 10 03.2 +0.7**
MLR IAmb IAmb 05 10 10.8
comp=Z,21nm,0.9s
NACGM Naroch 35.20 315 *i* P **P 05 10 04.7 +1.4**
NACGM *i* P **P 05 10 04.7 +1.4**
NACGM *i* P **P 05 10 04.7 +1.4**
NACGM *i* sP sP 05 11 10.8 +12
NACGM *i* PP PnPn 05 11 55.1 +28
NACGM *i* S **S 05 15 29.3 +5.2**
NACGM *i* sS **sS 05 16 30.0 +2.6**
NACGM *i* SS SnSn 05 18 21.8 +20
NACGM *i* SSS SSS 05 18 55.5
SRAK Srakaew 35.42 123 P P 05 10 11.3 +5.6
comp=Z,154nm,1.0s
DOPR Dopca 35.43 299 ⇑P **P 05 10 07.3 +1.8**
BURAR Bucovina Array 35.50 302 ⇑P **P 05 10 07.7 +1.6**
BURAR Bucovina Array 35.50 302 P **P 05 10 06.7 +0.5**
BUR08 Bucovina Ar. S 35.51 302 P **P 05 10 06.6 +0.3**
WHN Wuhan 35.62 88 ⇑P **P 05 10 08.0 +0.8**
WHN pP **pP 05 10 46.5 +3.0**
VOIR 35.70 298 ⇑P **P 05 10 09.3 +1.4**
KARP Karpathos 35.82 281 P **P 05 10 09.9 +1.0**
ARR Arges 35.99 298 ⇑P **P 05 10 12.2 +1.9**
ATD Arta Tunnel 36.57 233 P **P 05 10 15.3 -0.1**
APE Apeiranthos 36.68 284 ⇑P **P 05 10 17.7 +1.5**
KWP Kalwaria Pacla 37.17 305 P **P 05 10 20.4 +0.3**
KWP pmax pmax
comp=Z,17nm,1.3s
KWP Kalwaria Pacla 37.17 305 P **P 05 10 20.4 +0.3**
KWP IAmb IAmb 05 10 38.2
comp=Z,17nm,1.3s
SURT Suratani 37.21 132 P P 05 10 26.0 +5.2
FINES FINESS Array B 37.27 325 P **P 05 10 20.9 +0.1**
comp=Z,2.8nm,0.6s,baz=116,slow=9.4,SNR=16
FINES pP **pP 05 10 58.8 +1.7**
comp=Z,3.6nm,0.5s,baz=110,slow=11,SNR=3.6
FINES LR LR 05 26 32.8
comp=Z,100nm,18.2s,baz=132,slow=37
FINES FINESS Array B 37.27 325 *i* P **P 05 10 21.7 +0.9**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 37.27 325 P **P 05 10 21.4 +0.5**
VTS Vitosha 37.30 294 ⇑P **P 05 10 23.6 +2.1**
BOVS Bovan 38.26 296 ⇑P **P 05 10 31.1 +1.7**
NJ2 Nanjing 38.64 83 *e* P **P 05 10 31.8 -0.9**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
NIE Niedzica 38.74 305 *e* P **P 05 10 35.6 +2.3**
FRGS Fruska Gora 39.40 298 ⇑P **P 05 10 41.3 +2.5**
MLSI Meulaboh, Aceh 39.76 140 P **P 05 10 43.3 +1.2**
comp=Z,74nm,0.9s
MORH Mrgy, Hungar 40.09 300 ⇑P **P 05 10 45.1 +0.7**
JAVC Velka Javorina 40.49 304 *e* P **P 05 10 50.0 +2.2**
MORC Moravsky Berou 40.51 306 *e* P **P 05 10 49.4 +1.4**
CN2 Changchun 40.60 63 *e* P **P 05 10 48.0 -0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
KRLC Kraliky 40.99 306 *e* P **P 05 10 53.5 +1.6**
KRLC Kraliky 40.99 306 *e* P **P 05 10 53.5 +1.6**
ZEA Zeya 41.01 48 *e* P **P 05 10 53.0 +1.1**
ZEA pmax pmax
comp=Z,20nm,1.0s
TPTI 41.02 140 P **P 05 10 53.3 +0.9**
comp=Z,21nm,1.3s
VRAC Vranov 41.16 305 P **P 05 10 54.9 +1.7**
comp=Z,6.0nm,0.7s,baz=103,slow=11,SNR=5.9
VRAC Vranov 41.16 305 *e* P **P 05 10 54.5 +1.2**
VRAC *e* pP **pP 05 11 29.5 -0.5**
VRAC *e* 05 11 51.3
DPC Dobruska-Polom 41.27 307 *e* P **P 05 10 56.1 +2.0**
DPC Dobruska-Polom 41.27 307 *e* P **P 05 10 56.1 +2.0**
DPC *ex* x 05 11 01.5
KRUC Moravsky 41.31 305 *e* P **P 05 10 55.7 +1.2**
KRUC *e* 05 11 52.5
CHVC Chvalec 41.42 307 *e* P **P 05 10 56.0 +0.6**
CONA Conrad Observa 41.78 303 *e* P **P 05 11 00.2 +1.8**
comp=Z,9.9nm,0.9s
PSI Prapat 42.33 138 P **P 05 11 03.0 -0.2**
comp=Z,9.5nm,0.7s,baz=360,slow=8.6,SNR=13
RPSI Rantau Prapat 42.42 138 IAmb IAmb 05 11 03.7
comp=Z,13nm,0.8s
PRU Pruhonice 42.43 306 *e* P **P 05 11 05.8 +2.3**
PRU Pruhonice 42.43 306 *e* P **P 05 11 05.8 +2.3**
SOKA Soboth 42.50 301 *e* P **P 05 11 06.3 +2.1**
comp=Z,8.1nm,1.0s
BRG Berggiesshubel 42.74 308 *i* P **P 05 11 07.8 +1.8**
BRG Amp 05 11 08.5
comp=Z,12nm,1.2s
BRG pP **sP 05 12 04.1 +2.0**
BRG Amp 05 12 06.3
comp=Z,12nm,1.0s
MOA Molln 42.85 303 *e* P **P 05 11 08.7 +1.7**
comp=Z,8.2nm,1.1s
GSI Gunungsitoli 42.89 141 P **P 05 11 08.6 +1.0**
YAK Yakutsk 42.92 36 P **P 05 11 06.5 -0.7**
comp=Z,7.1nm,0.3s,baz=224,slow=0.9,SNR=4.3
YAK Yakutsk 42.92 36 *e* P **P 05 11 06.9 -0.3**
YAK pmax pmax
comp=Z,18nm,0.8s
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK Yakutsk 42.92 36 IAmb IAmb 05 11 08.0
comp=Z,30nm,0.9s
HFS Hagfors 42.93 321 P **P 05 11 07.6 +0.2**
comp=Z,7.3nm,0.5s,baz=103,slow=11,SNR=33
GERES GERESS Array B 43.10 305 P **P 05 11 09.9 +0.9**
comp=Z,0.4nm,0.3s,baz=109,slow=16,SNR=4.1
KHC Kasperske Hory 43.15 305 *e* P **P 05 11 11.3 +1.9**
KHC *e* 05 12 05.0
KHC Kasperske Hory 43.15 305 *e* P **P 05 11 11.3 +1.9**
KHC *ex* x 05 11 16.0
KHC *es* P **sP 05 12 05.0 -0.5**
CLL Collm 43.30 308 *e* P **P 05 11 11.0 +0.6**
comp=Z,6.0nm,0.9s
CLL *es* P **sP 05 12 08.0 +1.5**
CLL Collm 43.30 308 *e* P **P 05 11 11.0 +0.6**
CLL pmax pmax
comp=Z,6.0nm,0.9s
KSAR Wonju Array Be 43.91 72 P **P 05 11 14.8 -0.8**
KSAR Wonju Array Be 43.91 72 P **P 05 11 14.8 -0.8**
KSRS Korea Array 43.94 72 P **P 05 11 16.1 +0.3**
comp=Z,7.1nm,1.1s,baz=279,slow=6.2,SNR=9.0
KSRS pP **pP 05 11 54.4 +1.2**
comp=Z,2.3nm,0.6s,baz=281,slow=7.7,SNR=3.8
KSRS PcP **PcP 05 12 58.1 -0.5**
comp=Z,0.5nm,0.3s,baz=286,slow=4.5,SNR=4.1
KLR Kul'dur 44.10 55 P **P 05 11 17.4 +0.5**
comp=Z,2.8nm,0.7s,baz=272,slow=9.8,SNR=8.7
KLR Kul'dur 44.10 55 *ce* P **P 05 11 17.2 +0.3**
KLR pmax pmax
comp=Z,6.0nm,1.1s
NC303 NORSAR Array S 44.16 323 P **P 05 11 17.5 +0.3**
NOA NORSAR Array B 44.22 323 P **P 05 11 18.2 +0.4**
comp=Z,2.3nm,0.6s,baz=94,slow=7.6,SNR=15
NOA LR LR 05 31 07.8
comp=Z,37nm,18.1s,baz=100,slow=38
MNSI Mandailing Nat 44.36 138 P **P 05 11 20.0 +0.7**
comp=Z,3μmcomp=Z,31nm,0.9s
WTTA Wattenberg 44.70 303 *e* P **P 05 11 23.2 +1.3**
comp=Z,14nm,1.2s
WATA Walderalm 44.73 303 *e* P **P 05 11 22.4 +0.3**
comp=Z,5.2nm,0.9s
TIXI Tiksi 44.79 22 P **P 05 11 21.5 -0.6**
TIXI pmax pmax
comp=Z,12nm,0.8s
TIXI Tiksi 44.79 22 P **P 05 11 21.5 -0.6**
TIXI IAmb IAmb 05 11 22.7
comp=Z,12nm,0.8s
MURB Monte Urbino 44.90 297 P **P 05 11 24.1 +0.7**
MOTA Moosalm 45.05 303 *e* P **P 05 11 25.2 +0.6**
comp=Z,8.8nm,1.1s
FETA Feichten 45.36 303 *e* P **P 05 11 27.7 +0.6**
comp=Z,12nm,1.5s
BKNI Bangkinang 45.54 137 P **P 05 11 28.5 -0.1**
BKNI Bangkinang 45.54 137 P **P 05 11 29.3 +0.7**
comp=Z,131nm,0.9s
DAVA Damuels 45.88 303 *e* P **P 05 11 32.3 +1.1**
comp=Z,12nm,0.5s
SPITS Spitsbergen Ar 46.92 347 P **P 05 11 39.5 +0.8**
comp=Z,1.7nm,0.6s,baz=150,slow=10,SNR=6.5
LODK Lodwar 47.51 234 P **P 05 11 45.2 +1.1**
LODK IAmb IAmb 05 11 46.6
comp=Z,17nm,1.0s
LODK Lodwar 47.51 234 P **P 05 11 45.8 +1.7**
SNR=8.7
JNU Nakatsue 47.69 76 P **P 05 11 46.1 +0.8**
comp=Z,20nm,0.9s,baz=34,slow=16,SNR=7.4
JNU pP **pP 05 12 25.1 +1.9**
comp=Z,19nm,0.9s,baz=237,slow=5.6,SNR=4.6
JNU Nakatsue 47.69 76 P **P 05 11 46.0 +0.8**
JNU IAmb IAmb 05 11 46.9
comp=Z,17nm,0.8s
BTNL Ternell 47.70 308 *dP* **P 05 11 46.5 +1.4**
SENIN Lac Senin/Sane 47.80 302 P **P 05 11 45.1 -1.0**
DSRI Dabo 48.19 134 P **P 05 11 50.3 +1.1**
comp=Z,2μmcomp=Z,45nm,1.1s
BMRD Maredsous 48.61 308 *dP* **P 05 11 52.1 +0.1**
DOU Dourbes 48.76 308 *dP* **P 05 11 55.1 +1.9**
KEST Kesra 49.50 288 P **P 05 12 01.2 +2.1**
comp=Z,4.4nm,0.5s,baz=70,slow=1.7,SNR=9.7
KMBO Kilima Mbogo 49.89 228 P **P 05 12 03.9 +1.5**
comp=Z,9.3nm,0.9s,baz=27,slow=11,SNR=18
JWT Wachi 50.35 72 P **P 05 12 05.8 +0.4**
LHSI Lahat 50.35 137 P **P 05 12 05.1 -0.5**
comp=Z,2μmcomp=Z,39nm,1.0s
KIBK Kibwezi 50.40 226 P **P 05 12 06.3 +0.2**
KIBK IAmb IAmb 05 12 08.3
comp=Z,21nm,1.0s
KIBK Kibwezi 50.40 226 P **P 05 12 07.5 +1.4**
SNR=5.8
PPBI Pangkal Pinang 50.45 133 P **P 05 12 06.8 +0.4**
SBUM Sibu 50.69 123 P **P 05 12 08.9 +0.8**
SBUM IAmb IAmb 05 12 10.7
comp=Z,15nm,1.0s
MDSI Maura Dua 51.26 137 P **P 05 12 09.8 -2.5**
YSS Yuzh-Sakhalins 51.78 55 *ce* P **P 05 12 16.4 +0.5**
YSS pmax pmax
comp=Z,18nm,1.3s
MAJO Matsushiro 51.99 69 *i* P **P 05 12 17.0 -0.6**
MAJO pmax pmax
comp=Z,15nm,1.0s
MAJO Matsushiro 51.99 69 P **P 05 12 16.7 -1.0**
MAJO IAmb IAmb 05 12 18.1
comp=Z,16nm,1.1s
MAT Matsushiro 51.99 69 P **P 05 12 17.1 -0.5**
MJAR Matsushiro Arr 51.99 69 P **P 05 12 17.6 0.0**
comp=Z,8.9nm,0.9s,baz=293,slow=9.1,SNR=17
MJAR pP **pP 05 12 57.1 +1.0**
comp=Z,4.2nm,0.7s,baz=295,slow=8.2,SNR=3.9
EKA Eskdalemuir Ar 52.26 316 P **P 05 12 19.6 +0.3**
comp=Z,1.1nm,0.5s,baz=78,slow=7.1,SNR=5.5
KASI Kota Agung 52.29 137 P **P 05 12 19.3 -0.7**
comp=Z,47nm,1.0s
ASAJ Asahikawa 52.53 59 LR LR 05 35 01.3
comp=Z,655nm,21.0s,baz=68,slow=36
MA2 Magadan 53.31 39 *i* P **P 05 12 26.7 -0.2**
MA2 pmax pmax
comp=Z,7.0nm,1.5s
JMM Marumori 53.41 67 P **P 05 12 27.5 -0.5**
MBAR Mbarara 53.55 235 P **P 05 12 29.2 -0.3**
comp=Z,3.9nm,0.2s,baz=20,slow=8.5,SNR=7.1
MBAR Mbarara 53.55 235 P **P 05 12 29.6 +0.1**
MBAR pmax pmax
comp=Z,7.0nm,0.7s
MBAR Mbarara 53.55 235 P **P 05 12 29.6 +0.1**
MBAR IAmb IAmb 05 12 30.6
comp=Z,6.6nm,0.7s
DAG Danmarks Havn 54.21 344 *e* P **P 05 12 34.0 +0.7**
DAG IAmb IAmb 05 12 34.6
comp=Z,5.0nm,0.8s
DAG *i* 05 13 16.6
DAG Danmarks Havn 54.21 344 *e* P **P 05 12 33.9 +0.7**
DAG *i* 05 13 16.6
DAG pmax pmax
comp=Z,5.0nm,0.8s
BBKI Banjar Baru 56.83 126 P **P 05 12 53.9 +1.1**

comp=Z,3µmcomp=Z,88nm,0.9s
BILL Bilibino 57.60 26 *de* P **P** **05 12 57.4 0.0**
BILL *e**PP **pP** **05 13 36.2 -0.5**
BILL *e* 05 13 49.5
BILL *e**SP **sP** **05 13 54.8 -0.4**
BILL *e* 05 15 03.1
BILL pmax pmax
comp=Z,6.0nm,0.9s
ESDC Sonseca Array 57.76 298 P **P** **05 12 59.8 +0.7**
comp=Z,4.0nm,0.7s,baz=58,slow=6.8,SNR=27
ESDC pP **pP** **05 13 39.1 +1.1**
comp=Z,3.6nm,0.9s,baz=56,slow=7.1,SNR=4.4
ESDC Sonseca Array 57.76 298 P **P** **05 12 58.6 -0.4**
MRSI Marisa 58.83 116 P **P** **05 13 07.9 +1.2**
comp=Z,103nm,1.0s
APSI Ampana 59.59 118 P **P** **05 13 13.2 +1.3**
comp=Z,578nmcomp=Z,36nm,1.1s
PGAV Gavieira, Arco 59.80 302 *eP* **P** **05 13 14.5 +1.3**
TTSI Tana Toraja 59.84 121 P **P** **05 13 14.0 +0.4**
comp=Z,1µmcomp=Z,51nm,1.0s
MTE Manteigas 59.96 300 *eP* **P** **05 13 15.8 +1.5**
PCBR Castelo Branco 60.15 299 *eP* **P** **05 13 18.4 +2.9**
OPO Ambohidratompo 60.23 207 P **P** **05 13 16.7 +0.4**
comp=Z,5.1nm,0.9s,baz=41,slow=7.2,SNR=5.4
NEEM North Greenlan 60.45 348 *i* P **P** **05 13 18.1 +0.9**
NEEM IAmb IAmb 05 13 19.2
comp=Z,4.9nm,0.9s
NEEM *i* 05 14 01.4
PBAR Barrancos 60.56 297 *eP* **P** **05 13 19.4 +1.1**
comp=Z,37nm,1.5s
SUMG Summit 60.58 341 *i* P **P** **05 13 19.4 +1.1**
SUMG IAmb IAmb 05 13 20.8
comp=Z,9.8nm,0.9s
SUMG *i* 05 14 03.2
SUMG Summit 60.58 341 P **P** **05 13 19.2 +0.8**
SUMG pmax pmax
comp=Z,10.0nm,0.9s
SUMG Summit 60.58 341 P **P** **05 13 19.1 +0.8**
SUMG IAmb IAmb 05 13 20.6
comp=Z,9.5nm,0.9s
ABPO Ambohimpanom 60.63 207 P **P** **05 13 18.6 -0.4**
ABPO pmax pmax
comp=Z,11nm,0.9s
ABPO Ambohimpanom 60.63 207 P **P** **05 13 18.6 -0.4**
ABPO IAmb IAmb 05 13 20.5
comp=Z,11nm,0.9s
PMTG Montargil 61.01 299 *eP* **P** **05 13 23.6 +2.3**
BNSI Bone 61.02 122 P **P** **05 13 22.2 +0.6**
comp=Z,22nm,1.0s
KAPI Kappang 61.23 123 P **P** **05 13 22.0 -1.0**
comp=Z,12nm,0.8s,baz=300,slow=5.1,SNR=8.2
KAPI Kappang 61.23 123 P **P** **05 13 22.1 -1.0**
KAPI pmax pmax
comp=Z,29nm,1.3s
KAPI Kappang 61.23 123 P **P** **05 13 22.1 -1.0**
PVAQ Vaqueiros 61.39 297 *eP* **P** **05 13 25.1 +1.2**
comp=Z,44nm,1.6s
PCVE Castro Verde 61.51 297 *eP* **P** **05 13 24.8 +0.1**
PMAFR Mafra 61.80 299 *eP* **P** **05 13 24.5 -2.1**
PFVI Vila Bisbo 62.30 297 *eP* **P** **05 13 31.6 +1.7**
ICESG Greenland Ices 62.78 338 *i* P **P** **05 13 33.3 +0.3**
ICESG IAmb IAmb 05 13 35.4
comp=Z,7.4nm,0.9s
ICESG *i* 05 14 15.9
PLAI Plampang 62.79 127 P **P** **05 13 31.2 -2.2**
VOI Vohitsoka 63.44 206 P **P** **05 13 37.5 -0.2**
TULEG Thule 63.81 350 *i* P **P** **05 13 35.9 -3.4**
TULEG IAmb IAmb 05 13 38.0
comp=Z,5.9nm,0.8s
WBSI Waikabubak, Su 64.44 126 P **P** **05 13 42.7 -1.5**
A21K Barrow 66.39 15 P **P** **05 13 55.4 -0.5**
A21K IAmb IAmb 05 13 56.8
comp=Z,6.5nm,0.8s
TOA0 Torodi Ar. Sit 66.47 269 P **P** **05 13 56.2 -1.2**
TORD Torodi Ar. Bea 66.47 269 P **P** **05 13 56.6 -0.8**
comp=Z,6.2nm,0.8s,baz=42,slow=5.7,SNR=20
TORD pP **pP** **05 14 38.7 +1.4**
comp=Z,2.7nm,0.6s,baz=42,slow=5.8,SNR=2.6
TORD Torodi Ar. Bea 66.47 269 P **P** **05 13 56.2 -1.2**
RES Resolute Bay 67.99 356 P **P** **05 14 06.7 +0.7**
comp=Z,0.6nm,0.5s,baz=20,slow=6.9,SNR=4.8
ANM Nome 69.05 23 P **P** **05 14 13.4 +0.7**
ANM pmax pmax
comp=Z,7.0nm,1.0s
ANM Nome 69.05 23 P **P** **05 14 13.4 +0.7**
ANM IAmb IAmb 05 14 14.7
comp=Z,7.5nm,1.0s
NRS Narsarsuaq 69.54 333 P **P** **05 14 16.7 +1.0**
NRS pmax pmax
comp=Z,13nm,1.0s
NRS Narsarsuaq 69.54 333 P **P** **05 14 16.7 +1.0**
NRS IAmb IAmb 05 14 45.2
comp=Z,13nm,1.0s
TOLK Toolik Lake Re 70.00 15 P **P** **05 14 18.5 0.0**
TOLK IAmb IAmb 05 14 19.9
comp=Z,9.2nm,0.9s
KOWA Kowa 70.26 273 P **P** **05 14 20.1 -0.8**
KOWA IAmb IAmb 05 14 21.7
comp=Z,15nm,1.1s
COLD Coldfoot 71.04 16 IAmb IAmb 05 14 26.2
comp=Z,10nm,1.1s
IMAR Indian Mountai 71.22 18 P **P** **05 14 25.4 -0.5**
BMAR Burnt Mountain 72.03 14 P **P** **05 14 31.4 +0.6**
FYU Fort Yukon 72.65 15 P **P** **05 14 34.3 0.0**
FYU IAmb IAmb 05 14 36.6
comp=Z,24nm,1.5s
MLY Manley 72.73 18 P **P** **05 14 34.3 -0.6**
MLY IAmb IAmb 05 14 36.2
comp=Z,14nm,1.4s
I23K Minto, Yukon-K 72.96 17 P **P** **05 14 35.9 -0.3**
I23K IAmb IAmb 05 14 38.4
comp=Z,16nm,1.4s
INK Inuvik 73.03 10 P **P** **05 14 36.5 0.0**
comp=Z,4.5nm,0.4s,baz=342,slow=6.0,SNR=59
INK pP **pP** **05 15 19.1 +1.6**
comp=Z,7.0nm,0.9s,baz=2.7,slow=13,SNR=4.5
INK Inuvik 73.03 10 P **P** **05 14 36.3 -0.3**
INK pmax pmax
comp=Z,27nm,1.4s
INK Inuvik 73.03 10 P **P** **05 14 36.3 -0.3**
INK IAmb IAmb 05 14 38.2
comp=Z,27nm,1.4s
C36M Paulatuk 73.05 6 P **P** **05 14 35.8 -0.9**
TTA Tatalina 73.05 21 P **P** **05 14 37.1 +0.2**
TTA pmax pmax
comp=Z,3.0nm,0.8s
TTA Tatalina 73.05 21 P **P** **05 14 37.1 +0.2**
MDM Murphy Dome 73.38 17 P **P** **05 14 38.8 0.0**
MDM IAmb IAmb 05 14 40.0
comp=Z,15nm,1.3s
BPAW Bear Paw Mtn. 73.44 18 P **P** **05 14 38.9 -0.2**
NEA2 Nenana 73.50 17 P **P** **05 14 38.8 -0.6**
NEA2 IAmb IAmb 05 14 40.3
comp=Z,17nm,1.1s
TCOL CIGO, UAF Yank 73.54 17 P **P** **05 14 39.7 +0.1**
TCOL IAmb IAmb 05 14 40.8
comp=Z,13nm,0.8s
COLA College 73.54 17 *i* P **P** **05 14 39.2 -0.4**
COLA pmax pmax
comp=Z,11nm,0.9s
COLA College 73.54 17 P **P** **05 14 39.3 -0.4**
COLA IAmb IAmb 05 14 40.8
comp=Z,12nm,0.8s
WRH Wood River Hil 73.83 17 P **P** **05 14 40.8 -0.5**
IL31 73.84 16 P **P** **05 14 40.6 -0.7**
ILAR Eielson Array 73.84 16 P **P** **05 14 40.8 -0.6**
comp=Z,3.4nm,0.9s,baz=320,slow=4.6,SNR=24
ILAR pP **pP** **05 15 24.1 +1.4**
comp=Z,2.8nm,0.9s,baz=320,slow=4.3,SNR=4.8
PSA00 Pilbara Seismi 73.90 134 P **P** **05 14 44.3 +2.0**
PSA00 IAmb IAmb 05 14 44.7
comp=Z,8.5nm,0.6s
KTH Kantishna Hill 73.91 18 P **P** **05 14 41.2 -0.7**
KTH IAmb IAmb 05 14 43.4
comp=Z,25nm,1.4s
PPLA Purkeypile 74.12 19 P **P** **05 14 42.2 -1.0**
PPLA IAmb IAmb 05 14 43.6
comp=Z,6.8nm,0.6s
EPYK Eagle Plains 74.37 12 P **P** **05 14 44.3 -0.2**
RND Reindeer 74.55 18 P **P** **05 14 44.9 -0.7**
RND pmax pmax
comp=Z,4.0nm,0.6s
RND Reindeer 74.55 18 P **P** **05 14 44.9 -0.7**
FRB Frobisher Bay 74.56 343 P **P** **05 14 45.4 -0.1**
comp=Z,3.7nm,0.9s,baz=63,slow=7.3,SNR=11
FRB pP **pP** **05 15 29.0 +2.4**
comp=Z,2.6nm,0.7s,baz=22,slow=9.3,SNR=3.9
SKT Skwentna 75.05 20 P **P** **05 14 47.8 -0.6**
SKT IAmb IAmb 05 14 49.4
comp=Z,22nm,1.1s
SCRK Sand Creek 75.17 16 P **P** **05 14 49.2 0.0**
SCRK IAmb IAmb 05 14 50.5
comp=Z,17nm,1.5s
PAX Paxson 75.72 17 P **P** **05 14 51.6 -0.7**
PAX pmax pmax
comp=Z,13nm,1.3s
PAX Paxson 75.72 17 P **P** **05 14 51.6 -0.7**
PAX IAmb IAmb 05 14 53.8
comp=Z,13nm,1.3s
LBTB Lobatse 75.74 223 P **P** **05 14 52.3 -0.6**
LBTB pmax pmax
comp=Z,11nm,0.9s
LBTB Lobatse 75.74 223 P **P** **05 14 52.2 -0.6**
LBTB IAmb IAmb 05 14 53.2
comp=Z,11nm,0.9s
DAWY Dawson 76.01 14 P **P** **05 14 53.9 0.0**
DAWY IAmb IAmb 05 14 55.8
comp=Z,12nm,1.2s
M24K Tolsona, Glenn 76.30 17 P **P** **05 14 55.4 -0.2**
L27K Beaver Creek, 76.43 15 P **P** **05 14 55.2 -1.1**
BCAR Beaver Creek A 76.44 15 P **P** **05 14 56.4 0.0**
BOSA Boshof 78.81 221 P **P** **05 15 08.5 -1.4**
comp=Z,5.1nm,0.8s,baz=45,slow=8.1,SNR=7.9
BOSA Boshof 78.81 221 IAmb IAmb 05 15 09.5
comp=Z,12nm,1.2s
YKA Yellowknife Ar 80.45 3 P **P** **05 15 18.3 +0.1**
comp=Z,4.6nm,0.6s,baz=354,slow=5.2,SNR=84
YKA pP **pP** **05 16 01.4 +1.5**
comp=Z,6.7nm,0.7s,baz=351,slow=5.1,SNR=10
WRA Warramunga Arr 81.77 123 PKKPbc PKKPbc 05 33 56.4 +0.7
comp=Z,1.1nm,1.0s,baz=122,slow=2.3,SNR=6.7
FCC Fort Churchill 83.62 353 P **P** **05 15 34.0 -0.8**
FCC pmax pmax
comp=Z,7.0nm,1.2s
FCC Fort Churchill 83.62 353 P **P** **05 15 34.0 -0.8**
FFC Flin Flon 88.23 356 P **P** **05 15 57.2 -0.3**
FFC Flin Flon 88.23 356 P **P** **05 15 57.2 -0.3**
FFC IAmb IAmb 05 15 58.8
comp=Z,7.2nm,1.1s
ULM Lac du Bonnet 92.20 352 P **P** **05 16 15.8 -0.2**
comp=Z,2.4nm,0.9s,baz=357,slow=3.7,SNR=5.2
ULM Lac du Bonnet 92.20 352 P **P** **05 16 15.9 -0.2**
ULM pmax pmax
comp=Z,7.0nm,1.3s
ULM Lac du Bonnet 92.20 352 P **P** **05 16 15.9 -0.1**
ULM IAmb IAmb 05 16 17.1
comp=Z,6.9nm,1.2s
AGMN Agassiz Nation 94.12 352 P **P** **05 16 24.3 -0.7**
AGMN IAmb IAmb 05 16 25.8
comp=Z,3.2nm,0.9s
CPUP Villa Florida 135.97 269 PKP **PKPdf** **05 22 26.2 -0.6**
comp=Z,1.0nm,0.7s,baz=174,slow=5.5,SNR=4.2
CPUP pPKP **pPKPdf** **05 23 12.3 +1.3**
comp=Z,1.5nm,0.7s,baz=75,slow=7.1,SNR=3.8
LPAZ La Paz 139.07 290 PKP **PKPdf** **05 22 33.1 -0.4**
comp=Z,2.3nm,1.0s,baz=66,slow=8.6,SNR=5.0
PLCA Paso Flores 150.78 251 PKPbc **PKPbc** **05 22 57.2 -0.7**
comp=Z,6.7nm,0.9s,baz=85,slow=2.8,SNR=10
PLCA pPKPbc **pPKPbc** **05 23 42.9 +0.6**
comp=Z,1.4nm,0.7s,baz=223,slow=3.0,SNR=1.6

DJA ***28*** *05:10:57.2±0.3,5°S±3°×133°5E±°, h60km±16km, M4.9/13, mB5.3/12, mb5.2/13, MLv5.1/10, Mw(mB)4.8/12*
IDC ***28*** *05:11:00.9±0.6, 4°.90S×133°.69E, h0km, mb4.3/13, mb1 4.6/20, mb1mx4.4/42, mbtmp4.5/20, ML4.8/7, MS3.5/11, Ms1 3.5/11, ms1mx3.2/34, Error ellipse: s-maj=24.3km s-min=12.5km az=74.0*
BJI ***28*** *05:11:02.3±0.0, 4°.64S×133°.98E, h9km, mB4.8/23, mb4.6/32, Ms4.5/5, Ms7 4.2/4*
NEIC ***28*** *05:11:02.2±1.9, 4°.91S±0°.06×133°.77E±0°.10, h16km±4km, mb4.5/14, Error ellipse: s-maj=14.0km s-min=9.0km az=78.0*

ISC 28 05:11:04.6±0.4, 5°.03S±0°.04×133°.77E±0°.05, h28km, n101, σ2s 19/95, mb4.5/25, MS3.5/7, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.59**	**324**	Pn	**Pn**	**05 11 42.3**	**-2.4**
FAKI	**Fak Fak**	**2.59**	**324**	P	**Pn**	**05 11 42.3**	**-2.4**
RKPI	**Ransiki, Papua**	**3.52**	**7**	P	Pn	05 11 46.2	-11
SAUI	**Saumlaki**	**3.83**	**220**	Pn	**Pn**	**05 12 02.7**	**+1.1**
SAUI	**Saumlaki**	**3.83**	**220**	P	**Pn**	**05 12 04.5**	**+2.8**
BNDI	**Bandanaira**	**3.89**	**277**	P	**Pn**	**05 12 04.7**	**+2.2**
SIJI	**Sorong**	**4.83**	**329**	Pn	**Pn**	**05 12 13.0**	**-2.5**
	34nm,0.3s,baz=152,slow=18,SNR=26						
SIJI				Sn	**Sn**	**05 13 05.1**	**-5.6**
	30nm,0.3s,baz=279,slow=23,SNR=8.8						
SIJI				LR	LR	05 14 13.9	
	comp=Z,400nm,21.5s,baz=320,slow=41						
SWI	**Sorong**	**4.84**	**329**	P	**Pn**	**05 12 12.2**	**-3.4**
	1.5nm5µm197nm,0.6s						
GENI	**Geyem**	**6.82**	**69**	P	Pn	05 12 48.0	+5.1
NLAI	**Namlea**	**6.89**	**285**	P	**Pn**	**05 12 44.9**	**+1.1**
	0.8nm3µm115nm,0.5s						
JAY	**Jayapura**	**7.35**	**70**	Pn	**Pn**	**05 12 49.2**	**-1.0**
	5.5nm,0.3s,baz=242,slow=12,SNR=21						
JAY				Sn	**Sn**	**05 14 13.0**	**+0.2**
	2.1nm,0.3s,baz=237,slow=20,SNR=5.0						
JAY				LR	LR	05 16 39.0	
	comp=Z,712nm,20.6s,baz=35,slow=46						
LBMI	**Labuha**	**7.63**	**305**	P	**Pn**	**05 12 52.4**	**-1.6**
	2µm148nm,0.9s						
KDU	**Kakadu**	**7.72**	**189**	P	**Pn**	**05 12 57.6**	**+2.5**
	baz=8.0,SNR=362						
MTN	**Manton Dam**	**8.19**	**198**	P	**Pn**	**05 13 03.7**	**+2.1**
	baz=8.4,SNR=80						
MTN	**Manton Dam**	**8.19**	**198**	Pn	**Pn**	**05 13 02.6**	**+0.9**
SANI	**Sanana**	**8.31**	**291**	P	**Pn**	**05 13 01.9**	**-1.5**
	936nm81nm,0.8s						
SOEI	**Soe**	**10.53**	**243**	Pn	**Pn**	**05 13 34.9**	**+1.1**
SOEI	**Soe**	**10.53**	**243**	P	**Pn**	**05 13 36.3**	**+2.4**
	2µm191nm,0.7s						
BATI	**Baumata**	**11.26**	**242**	Pn	**Pn**	**05 13 43.2**	**-0.6**
	33nm,0.3s,baz=24,slow=1.9,SNR=8.7						
BATI				Sn	**Sn**	**05 15 47.2**	**-1.7**
	6.3nm,0.3s,baz=110,slow=20,SNR=2.0						
BATI	**Baumata**	**11.26**	**242**	P	Pn	05 13 48.8	+5.0
	1µm76nm,0.5s						
KNRA	**Kununurra**	**11.67**	**205**	P	**Pn**	**05 13 50.0**	**+0.7**
	baz=12						
KNRA	**Kununurra**	**11.67**	**205**	Pn	**Pn**	**05 13 50.2**	**+0.9**
LUWI	**Luwuk**	**11.68**	**289**	P	Pn	05 14 11.9	+22
GTOI	**Gorontalo**	**12.13**	**297**	P	**Pn**	**05 13 58.7**	**+3.0**
	35nm,0.9s						
APSI	**Ampana**	**12.78**	**288**	P	**Pn**	**05 14 07.8**	**+3.3**
	618nm63nm,0.9s						
COEN	**Coen**	**12.83**	**134**		**Pn**	**05 14 03.9**	**-1.3**
BKSI	**Bulukumba**	**13.60**	**268**	P	P	05 14 30.0	+5.6
BNSI	**Bone**	**13.63**	**272**	P	P	05 14 30.7	+5.9
KAPI	**Kappang**	**13.97**	**269**	LR	LR	05 20 22.6	
	comp=Z,150nm,21.9s,baz=102,slow=40						
SPSI	**Sidrap Palu**	**14.00**	**274**	P	**Pn**	**05 14 32.4**	**+3.5**
DAV	**Davao City (W)**	**14.54**	**326**	LR	LR	05 21 18.2	
	comp=Z,110nm,18.8s,baz=212,slow=43						
WB0	**Warramunga Arr**	**14.66**	**178**	Pn	**Pn**	**05 14 29.7**	**-0.5**
WRAB	**Tennant Creek**	**14.82**	**178**		**Pn**	**05 14 32.3**	**-0.2**
WRA	**Warramunga Arr**	**14.83**	**178**	Pn	**Pn**	**05 14 31.9**	**-0.7**
	2.9nm,0.3s,baz=358,slow=13,SNR=65						
WRA				Sn	**Sn**	**05 17 08.7**	**-7.4**
	5.3nm,0.3s,baz=358,slow=24,SNR=11						
WRA	**Warramunga Arr**	**14.83**	**178**		**Pn**	**05 14 31.3**	**-1.2**
WB2	**Warramunga Arr**	**14.83**	**178**	Pn	**Pn**	**05 14 31.5**	**-1.1**
WC3	**Warramunga Arr**	**14.85**	**178**	P	**Pn**	**05 14 31.4**	**-1.4**
	baz=15						
WR0	**Warramunga Arr**	**14.86**	**177**		**Pn**	**05 14 31.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**15.23**	**211**	Pn	**Pn**	**05 14 36.7**	**-1.1**
	7.0nm,0.3s,baz=32,slow=9.8,SNR=68						
FITZ				Sn	**Sn**	**05 17 17.9**	**-7.8**
	9.0nm,0.3s,baz=166,slow=12,SNR=15						
FITZ	**Fitzroy Crossi**	**15.23**	**211**	P	**Pn**	**05 14 35.4**	**-2.5**
	baz=16,SNR=36						
FITZ	**Fitzroy Crossi**	**15.23**	**211**	Pn	**Pn**	**05 14 36.5**	**-1.4**
PLAI	**Plampang**	**16.32**	**256**	P	**P**	**05 14 53.8**	**-0.9**
QIS	**Mount Isa**	**16.44**	**160**	P	**Pn**	**05 14 52.2**	**-1.3**
	baz=17,SNR=8.3						
MTSU	**Mount Surprise**	**16.61**	**142**	P	**Pn**	**05 14 53.4**	**-2.2**
	baz=17,SNR=14						
AS31	**Alice Springs**	**18.53**	**180**		**P**	**05 15 19.3**	**+0.3**
ASAR	**Alice Springs**	**18.53**	**180**	P	**Pn**	**05 15 19.6**	**+0.3**
	2.1nm,0.3s,baz=10,slow=9.1,SNR=52						
ASAR				Sn	**Sn**	**05 18 39.0**	**-6.8**
	1.2nm,0.3s,baz=2.3,slow=29,SNR=7.9						
ASAR				LR	LR	05 23 44.1	
	comp=Z,231nm,18.9s,baz=358,slow=41						
ASAR	**Alice Springs**	**18.53**	**180**	P	**P**	**05 15 19.4**	**+0.3**
ASPA	**Alice Springs**	**18.53**	**180**	P	**Pn**	**05 15 19.9**	**+0.6**
	baz=19						
CTA	**Charters Tower**	**19.27**	**142**	P	**Pn**	**05 15 28.7**	**+0.3**
	0.9nm,0.3s,baz=324,slow=12,SNR=12						
CTAO	**Charters Tower**	**19.27**	**142**		**P**	**05 15 26.1**	**-1.2**
CTAO				IAmb	IAmb	05 15 44.7	
	comp=Z,17nm,0.9s						
ABJI	**Asem Bagus**	**19.61**	**261**	P	Pn	05 15 47.4	+15
KMMI	**Kalianget**	**19.80**	**263**	P	**Pn**	**05 15 39.0**	**+4.3**
WRKA	**Warakurna**	**20.58**	**194**	P	Pn	05 15 43.8	0.0
	baz=21,SNR=25						
PSA00	**Pilbara Seismi**	**21.28**	**218**	P	**P**	**05 15 49.5**	**+0.5**
PSA00				IAmb	IAmb	05 15 55.6	
	comp=Z,25nm,0.8s						
PSA00	**Pilbara Seismi**	**21.28**	**218**	P	**P**	**05 15 49.2**	**+0.3**
PSA00				IAmb	IAmb	05 15 52.0	
	comp=Z,17nm,1.1s						
GUMO	**Guam**	**21.53**	**31**	LR	LR	05 25 28.3	
	comp=Z,52nm,18.1s,baz=246,slow=40						
SBUM	**Sibu**	**22.78**	**289**	P	**P**	**05 16 04.9**	**-0.3**
SBUM				IAmb	IAmb	05 16 25.2	
	comp=Z,25nm,1.0s						
QLP	**Quilpie**	**23.65**	**156**	P	**P**	**05 16 16.4**	**+2.7**
	baz=24,SNR=3.5						
GIRL	**Giralia**	**25.75**	**225**	P	**P**	**05 16 36.1**	**+3.1**
	baz=26,SNR=4.5						
FORT	**Forrest**	**26.17**	**191**	P	**P**	**05 16 39.2**	**+2.5**
	baz=26,SNR=9.8						
FORT	**Forrest**	**26.17**	**191**	P	**P**	**05 16 37.4**	**+0.6**
STKA	**Stephens Creek**	**27.70**	**166**	P	**P**	**05 16 51.5**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=16,slow=13,SNR=4.2						
STKA				LR	LR	05 30 16.9	
	comp=Z,137nm,18.5s,baz=346,slow=42						
STKA	**Stephens Creek**	**27.70**	**166**	P	**P**	**05 16 52.8**	**+2.3**
	baz=28,SNR=4.7						
STKA	**Stephens Creek**	**27.70**	**166**	P	**P**	**05 16 50.2**	**-0.3**
HTT	**Hallett**	**28.66**	**171**	P	**P**	**05 17 02.0**	**+2.9**
	baz=29,SNR=4.9						
BLDU	**Ballidu**	**30.10**	**210**	P	**P**	**05 17 14.2**	**+2.4**
	baz=30,SNR=7.4						
JNU	**Nakatsue**	**38.04**	**356**	P	**P**	**05 18 19.4**	**-1.3**
	comp=Z,6.4nm,0.7s,baz=129,slow=13,SNR=3.0						
NJ2	**Nanjing**	**39.52**	**340**	*eP*	**P**	**05 18 33.3**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WHN	**Wuhan**	**39.96**	**333**	P	**P**	**05 18 37.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**41.52**	**305**	P	**P**	**05 18 49.0**	**-0.7**
	comp=Z,2.2nm,0.3s,baz=126,slow=7.4,SNR=7.0						
KSRS	**Korea Array**	**42.62**	**353**	P	**P**	**05 18 57.5**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=168,slow=8.0,SNR=4.2						
KSRS				LR	LR	05 36 46.0	
	comp=Z,46nm,20.2s,baz=172,slow=36						
XAN	**Xi'an**	**45.40**	**331**	P	**P**	**05 19 19.8**	**-1.2**
XAN				pP	pP	05 19 25.0	-3.6
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,70nm,4.6s						
BJI	**Beijing**	**47.69**	**342**	P	**P**	**05 19 38.5**	**-0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**49.03**	**358**	P	**P**	**05 19 48.6**	**-0.3**
	comp=Z,5.6nm,0.7s,baz=199,slow=7.7,SNR=13						
USRK	**Ussuriysk Ar.**	**49.03**	**358**	P	**P**	**05 19 48.1**	**-0.8**
LZH	**Lanzhou**	**49.59**	**328**	*eP*	**P**	**05 19 54.3**	**+0.7**
LZH				pP	pP	05 20 00.3	-1.0
LZH				sP	pwP	05 20 04.5	-0.5
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC	**Hu-ho-hao-te**	**49.99**	**338**	*eP*	**P**	**05 19 56.0**	**-0.5**
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,75nm,7.9s						
KLR	**Kul'dur**	**54.06**	**358**	P	**P**	**05 20 26.6**	**0.0**
	comp=Z,1.4nm,0.7s,baz=242,slow=6.0,SNR=6.4						
KLR				LR	LR	05 41 37.8	
	comp=Z,26nm,18.7s,baz=134,slow=34						
GTA	**Gaotai**	**54.19**	**328**	P	**P**	**05 20 28.5**	**+0.6**
GTA				pP	pP	05 20 32.3	-3.3
GTA				sP	sP	05 20 34.5	-4.2
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,82nm,5.9s						
GTA				LR	LR		
	comp=Z,49nm,16.0s						
GTA				LR	LR		
	comp=Z,150nm,15.6s						
SONM	**Songino Array**	**57.88**	**339**	P	**P**	**05 20 54.4**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=145,slow=5.3,SNR=2.3						
WMQ	**Urumqi**	**63.89**	**325**	*eP*	**P**	**05 21 35.5**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,25nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,81nm,5.1s						
MK31	**Makanchi Array**	**68.72**	**325**	P	**P**	**05 22 04.5**	**-1.3**
MK31				IAmb	IAmb	05 22 07.2	
	comp=Z,3.9nm,0.8s						
MKAR	**Makanchi Array**	**68.72**	**325**	P	**P**	**05 22 06.2**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=115,slow=8.0,SNR=39						
MKAR	**Makanchi Array**	**68.72**	**325**	P	**P**	**05 22 06.0**	**+0.1**
MAKZ	**Makanchi**	**68.91**	**325**	P	**P**	**05 22 05.9**	**-1.1**
ZALV	**Zalesovo Beam**	**71.55**	**332**	P	**P**	**05 22 22.2**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=98,slow=6.3,SNR=5.2						
KURK	**Kurchatov**	**72.86**	**327**	P	**P**	**05 22 30.0**	**-0.9**
KURBB	**Kurchatov Arra**	**72.87**	**327**	P	**P**	**05 22 30.0**	**-0.9**
	comp=Z,2.4nm,0.6s,baz=124,slow=5.2,SNR=10						
VNDA	**Vanda**	**73.97**	**174**	P	**P**	**05 22 39.0**	**+2.1**
	comp=Z,1.2nm,0.8s,baz=319,slow=5.7,SNR=7.1						
KKAR	**Karatay Array**	**74.40**	**317**	P	**P**	**05 22 39.0**	**-1.1**
BVAR	**Borovoye Array**	**78.45**	**327**	P	**P**	**05 23 02.7**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=123,slow=13,SNR=10						
NRIK	**Noril'sk**	**80.61**	**345**	LR	LR	06 02 13.1	
	comp=Z,41nm,18.9s,baz=71,slow=38						
GEYT	**Alibeck**	**81.85**	**309**	LR	LR	06 03 23.7	
	comp=Z,18nm,19.4s,baz=225,slow=38						
ABKAR	**Akbulak array**	**83.34**	**321**	P	**P**	**05 23 27.5**	**-1.5**
ABKAR				IAmb	IAmb	05 23 41.6	
	comp=Z,2.4nm,0.9s						
ABKAR	**Akbulak array**	**83.34**	**321**	P	**P**	**05 23 27.9**	**-1.2**
QSPA	**South Pole Qui**	**84.93**	**180**	P	**P**	**05 23 39.0**	**+2.0**
	comp=Z,2.9nm,0.8s,baz=42,slow=2.8,SNR=2.3						
MLY	**Manley**	**88.45**	**24**	P	**P**	**05 23 52.0**	**-2.0**
ILAR	**Eielson Array**	**89.98**	**25**	P	**P**	**05 24 00.1**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=270,slow=3.4,SNR=4.6						
CPUP	**Villa Florida**	**147.02**	**161**	PKPbc	**PKiKP**	**05 30 47.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=135,slow=2.5,SNR=5.9						
LPAZ	**La Paz**	**149.70**	**135**	PKPbc	**PKiKP**	**05 30 54.9**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=187,slow=5.0,SNR=3.8						
LPAZ				PKPab	**pPKPbc**	**05 31 01.4**	**-0.4**
	comp=Z,3.1nm,0.9s,baz=90,slow=0.9,SNR=9.3						
ROSC	**El Rosal**	**152.01**	**89**	PKPab	**PKPab**	**05 31 12.8**	**+4.6**
	comp=Z,6.1nm,0.6s,baz=42,slow=7.3,SNR=6.1						

IDC 28 05:22:40.8±5.1, 12°.82S×167°.47E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.7/25, mbtmp3.9/3, Error ellipse: s-maj=213.1km s-min=88.8km az=157.0, Santa Cruz Islands

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

MK31	**Makanchi Array**	**2.30**	**352**	Pg	Pb	05 38 27.3	-0.7
	0.2nm,0.2s,baz=171,slow=17,SNR=43						
MK31				Lg	Lg	05 38 59.5	
	0.6nm,0.2s,baz=171,slow=28,SNR=10.0						
MAKZ	**Makanchi**	**2.35**	**347**	⇑Pg	Pb	05 38 27.7	-1.3
	0.9nm,0.5s						
MAKZ				⇑Lg	Lg	05 39 02.1	
	1.0nm,0.6s						
PDGK	**Podgornoye**	**2.64**	**244**	⇑Pn	Pn	05 38 30.5	+1.0
	0.4nm,0.2s						
PDGK				⇑Lg	Lg	05 39 06.9	
	3.0nm,0.4s						

IDC ***28*** *05:40:08.4±1.9,27.85N×85.26E,h0km,mb3.8/6, mb1 3.9/7,mb1mx3.5/45,mbtmp3.7/7,ML3.9/1,MS3.1/1, Ms1 3.1/1,ms1mx2.4/43,Error ellipse: s-maj=54.2km s-min=28.2km az=59.0*

ISC 28 05:40:11.4±1.8,27.9N±0.2×85.3E±0.4,h18km,n8,σ1§15/7, mb3.8/6,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.01**	**354**	P	**P**	**05 44 31.6**	**-0.6**
	0.3nm,0.3s,baz=180,slow=11,SNR=9.6						
KURBB	**Kurchatov Arra**	**23.27**	**349**	P	**P**	**05 45 18.5**	**+0.6**
	0.4nm,0.5s,baz=173,slow=11,SNR=3.8						
SONM	**Songino Array**	**25.82**	**34**	P	**P**	**05 45 41.1**	**-0.6**
	1.0nm,0.4s,baz=214,slow=10.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**26.03**	**359**	P	**P**	**05 45 45.4**	**+2.0**
	0.8nm,0.4s,baz=172,slow=11,SNR=2.0						
ATD	**Arta Tunnel**	**42.88**	**256**	LR	LR	06 04 52.1	
	comp=Z,24nm,19.4s,baz=40,slow=35						
FINES	**FINESS Array B**	**51.24**	**328**	P	**P**	**05 49 13.4**	**-0.3**
	3.3nm,1.1s,baz=104,slow=8.0,SNR=4.5						
ARCES	**ARCESS Array B**	**53.67**	**338**	P	**P**	**05 49 31.3**	**-0.3**
	1.2nm,0.6s,baz=96,slow=7.5,SNR=7.6						
WRA	**Warramunga Arr**	**67.19**	**130**	P	**P**	**05 51 04.7**	**0.0**
	0.4nm,0.8s,baz=324,slow=7.5,SNR=2.1						

IDC ***28*** *05:41:37.6±2.1,39.96N×77.00E,h0km,mb3.6/2, mb1 3.5/8,mb1mx3.3/47,mbtmp3.4/8,ML2.9/6,Error ellipse: s-maj=26.2km s-min=23.3km az=33.0*
KRNET ***28*** *05:41:39.5±0.1,40.00N×76.77E,mb3.8*
SOME ***28*** *05:41:40.9,40.25N×76.78E,h0km*
NNC ***28*** *05:41:45.5±2.6,40.24N×76.78E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=19.7km s-min=16.6km az=121.0*

ISC 28 05:41:38.7±1.7,40.07N±0.05×76.67E±0.03,h2km±11km, n80,σ1§42/113,33C-17D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.77**	**224**	⇓*i*P	Pn	05 42 04.3	+7.6
KSH				Sg	Sn	05 42 22.3	+13
KSH				smax	smax		
	comp=N,230nm,0.3s						
KSH				smax	smax		
	comp=E,710nm,0.5s						
KDJ	**Kajisay**	**2.09**	**10**	⇑*i*P	**Pg**	**05 42 18.6**	**-0.2**
	baz=9.0						
KDJ				⇑*i*S	**Sg**	**05 42 47.8**	**+1.8**
	baz=9.0						
ULHL	**Ulahol**	**2.20**	**352**	⇓*i*P	**Pg**	**05 42 20.8**	**0.0**
	baz=50						
ULHL				⇓*i*S	**Sg**	**05 42 50.5**	**+1.2**
	baz=50						
ULHL	**Ulahol**	**2.20**	**352**	P	**Pg**	**05 42 20.5**	**-0.3**
	SNR=126						
SFK	**Sufi-Kurgan**	**2.43**	**270**	⇑*i*P	**Pb**	**05 42 24.1**	**+0.8**
	baz=71						
SFK				⇑*i*S	**Sg**	**05 42 56.4**	**-0.4**
	baz=71						
BOOM	**Boomskoye usch**	**2.48**	**347**	⇑*i*P	**Pb**	**05 42 24.4**	**+0.3**
	baz=46						
BOOM				⇑*i*S	**Sg**	**05 42 57.2**	**-1.1**
	baz=46						
ARLS	**Aral**	**2.52**	**316**	⇓*i*P	**Pb**	**05 42 25.3**	**+0.5**
	baz=16						
ARLS				⇓*i*S	**Sg**	**05 42 58.8**	**-0.9**
	baz=16						
UCH	**Uchtor**	**2.70**	**324**	⇑*i*P	**Pb**	**05 42 27.7**	**-0.3**
	baz=23						
UCH				⇑*i*S	**Sb**	**05 43 03.5**	**+1.7**
	baz=23						
UCH	**Uchtor**	**2.70**	**324**	P	**Pb**	**05 42 28.8**	**+0.8**
	SNR=15						
PRZ	**Przheval'sk**	**2.74**	**28**	⇑*e*P	**Pb**	**05 42 27.8**	**-0.7**
	baz=26						
PRZ				⇑*i*S	**Sb**	**05 43 02.7**	**0.0**
	baz=26						
ANVS	**Anan'yevo**	**2.81**	**15**	⇑*i*P	**Pb**	**05 42 28.7**	**-1.1**
	baz=13						
ANVS				⇑*i*S	**Sb**	**05 43 04.6**	**-0.1**
	baz=13						
KBK	**Karagaybulak**	**2.89**	**334**	⇓*i*P	**Pb**	**05 42 30.3**	**-0.8**
	baz=33						
KBK				⇓*i*S	**Sb**	**05 43 07.7**	**+0.7**
	baz=33						
KBK	**Karagaybulak**	**2.89**	**334**	P	**Pb**	**05 42 31.6**	**+0.5**
	SNR=22						
TKM2	**Tokmak 2**	**2.96**	**345**	⇑*e*P	**Pb**	**05 42 31.3**	**-1.0**
	baz=44						
TKM2				⇑*i*S	**Sb**	**05 43 09.2**	**+0.2**
	baz=44						
TKM2	**Tokmak 2**	**2.96**	**345**	P	**Pb**	**05 42 32.0**	**-0.3**
	SNR=27						
TKM2	**Tokmak 2**	**2.96**	**345**	⇑Pn	**Pb**	**05 42 31.8**	**-0.5**
	comp=E,23nm,0.8s						
TKM2				⇑Lg	Lg	05 43 14.8	
	comp=E,67nm,0.6s						
IZV	**Izvestkoviy**	**2.96**	**359**	*e*P	**Pg**	**05 42 35.9**	**+0.4**
	comp=E,17nm,0.5s						
IZV				*e*S	**Sg**	**05 43 14.8**	**+0.9**
	comp=E,109nm,0.5s						
IZV	**Izvestkoviy**	**2.96**	**359**	Pg	**Pg**	**05 42 35.9**	**+0.4**
	comp=E,17nm,0.5s						
IZV				Lg	Lg	05 43 14.8	
	comp=E,109nm,0.5s						
TNSS	**Tian-Shan**	**2.97**	**4**	*e*P	**Pg**	**05 42 34.4**	**-1.2**
	comp=E,37nm,0.6s						
TNSS				*e*S	**Sg**	**05 43 12.5**	**-1.7**
	comp=E,66nm,0.8s						
TNSS	**Tian-Shan**	**2.97**	**4**	Pg	**Pg**	**05 42 34.4**	**-1.2**
	comp=E,37nm,0.6s						
TNSS				Lg	Lg	05 43 12.5	
	comp=E,66nm,0.8s						
KST	**Kastek**	**3.02**	**350**	*e*P	**Pg**	**05 42 37.2**	**+0.7**
	comp=E,23nm,0.4s						
KST				*e*S	**Sg**	**05 43 17.4**	**+1.8**
	comp=E,119nm,0.9s						
KST	**Kastek**	**3.02**	**350**	Pg	**Pg**	**05 42 37.2**	**+0.7**
	comp=E,23nm,0.4s						
KST				Lg	Lg	05 43 17.4	
	comp=E,119nm,0.9s						
AAK	**Ala-Archa**	**3.04**	**328**	Pn	**Pb**	**05 42 33.1**	**-0.6**
	comp=E,3.3nm,0.3s,baz=169,slow=15,SNR=33						
AAK				Lg	Lg	05 43 19.1	
	comp=E,14nm,0.3s,baz=304,slow=19,SNR=17						
AAK	**Ala-Archa**	**3.04**	**328**	⇓*i*P	**Pb**	**05 42 32.6**	**-1.1**
	baz=28						
AAK				⇓*i*S	**Sb**	**05 43 11.3**	**0.0**
	baz=28						
AAK	**Ala-Archa**	**3.04**	**328**	P	**Pb**	**05 42 34.6**	**+0.9**
	SNR=10						
AAK	**Ala-Archa**	**3.04**	**328**	⇑Pn	**Pg**	**05 42 37.4**	**+0.4**
	comp=E,19nm,0.5s						
AAK				Lg	Lg	05 43 17.5	
	comp=E,167nm,0.9s						
AML	**Almayashu**	**3.05**	**313**	⇑*e*P	**Pb**	**05 42 32.7**	**-1.2**
	baz=13						
AML				⇑*i*S	**Sb**	**05 43 11.6**	**-0.1**
	baz=13						
AML	**Almayashu**	**3.05**	**313**	P	**Pb**	**05 42 33.6**	**-0.3**
	SNR=57						
MTBS	**Maitube**	**3.06**	**357**	*e*P	**Pg**	**05 42 37.6**	**+0.3**
	comp=E,12nm,0.5s						
MTBS				*e*S	**Sg**	**05 43 18.0**	**+0.9**
	comp=E,44nm,0.3s						
MTBS	**Maitube**	**3.06**	**357**	Pg	**Pg**	**05 42 37.6**	**+0.3**
	comp=E,12nm,0.5s						
MTBS				Lg	Lg	05 43 18.0	
	comp=E,44nm,0.3s						
ARSB	**Arslanbob**	**3.07**	**295**	⇑*i*P	**Pb**	**05 42 32.9**	**-1.2**
	baz=96						
ARSB				⇑*i*S	**Sb**	**05 43 11.8**	**-0.3**
	baz=96						
MDOK	**Medeo**	**3.10**	**5**	*e*P	**Pg**	**05 42 37.4**	**-0.8**
	comp=E,37nm,0.6s						
MDOK				*e*S	**Sg**	**05 43 17.6**	**-0.7**
	comp=E,82nm,0.5s						
MDOK	**Medeo**	**3.10**	**5**	⇓Pn	**Pb**	**05 42 36.0**	**+1.4**
	comp=E,30nm,0.6s						
MDOK				⇓Lg	Lg	05 43 18.6	
	comp=E,153nm,0.8s						
MDOK	**Medeo**	**3.10**	**5**	Pg	**Pg**	**05 42 37.4**	**-0.8**
	comp=E,37nm,0.6s						
MDOK				Lg	Lg	05 43 17.6	
	comp=E,82nm,0.5s						
FRU1	**Bishkek**	**3.14**	**331**	⇑*i*P	**Pb**	**05 42 34.0**	**-1.2**
	baz=31						
FRU1				⇑*i*S	**Sb**	**05 43 13.8**	**-0.2**
	baz=31						
AAA	**Alma-Ata**	**3.14**	**3**	*e*P	**Pg**	**05 42 39.5**	**+0.7**
	comp=E,22nm,0.1s						
AAA				*e*S	**Sg**	**05 43 21.2**	**+1.6**
	comp=E,50nm,0.2s						
AAA	**Alma-Ata**	**3.14**	**3**	Pg	**Pg**	**05 42 39.6**	**+0.7**
	comp=E,22nm,0.1s						
AAA				Lg	Lg	05 43 21.2	
	comp=E,50nm,0.2s						
KNDC	**Almaty**	**3.15**	**4**	⇑Pn	**Pg**	**05 42 37.6**	**-1.5**
	comp=E,87nm,0.6s						
KNDC				⇑Lg	Lg	05 43 20.9	
	comp=E,485nm,1.0s						
KOTS	**Kotyrbulak**	**3.18**	**6**	*e*P	**Pg**	**05 42 39.6**	**+0.1**
	comp=E,47nm,0.6s						
KOTS				*e*S	**Sg**	**05 43 21.4**	**+0.6**
KOTS	**Kotyrbulak**	**3.18**	**6**	Pg	**Pg**	**05 42 39.7**	**+0.1**
	comp=E,47nm,0.6s						
KOTS				Lg	Lg	05 43 21.4	
DGS	**Degeres**	**3.24**	**348**	*e*P	**Pg**	**05 42 41.7**	**+0.9**
	comp=E,27nm,0.7s						
DGS				*e*S	**Sg**	**05 43 24.8**	**+2.0**
	comp=E,80nm,0.7s						
DGS	**Degeres**	**3.24**	**348**	Pg	**Pg**	**05 42 41.7**	**+0.9**
	comp=E,27nm,0.7s						
DGS				Lg	Lg	05 43 24.8	
	comp=E,80nm,0.7s						
SATY	**Saty**	**3.26**	**23**	*e*P	**Pg**	**05 42 40.1**	**-1.0**
	comp=E,18nm,0.7s						
SATY				*e*S	**Sg**	**05 43 22.3**	**-1.0**
	comp=E,103nm,0.5s						
SATY	**Saty**	**3.26**	**23**	Pg	**Pg**	**05 42 40.1**	**-1.0**
	comp=E,18nm,0.7s						
SATY				Lg	Lg	05 43 22.3	
	comp=E,103nm,0.5s						
CHMS	**Chumysh**	**3.26**	**334**	⇑*i*P	**Pb**	**05 42 35.5**	**-1.8**
	baz=34						
CHMS				⇑*i*S	**Sb**	**05 43 16.3**	**-1.2**
	baz=34						
CHMS	**Chumysh**	**3.26**	**334**	P	**Pb**	**05 42 36.3**	**-1.0**
	SNR=14						
EKS2	**Erkin-Say**	**3.38**	**321**	⇑*i*P	**Pb**	**05 42 37.1**	**-2.3**
	baz=21						
EKS2				⇑*i*S	**Sb**	**05 43 19.6**	**-1.5**
	baz=21						
EKS2	**Erkin-Say**	**3.38**	**321**	P	**Pb**	**05 42 38.8**	**-0.7**
	SNR=5.0						
UZB	**Uzynbulak**	**3.54**	**29**	*e*P	**Pb**	**05 42 44.0**	**+1.8**
	comp=E,5.2nm,0.3s						
UZB				*e*S	**Sb**	**05 43 28.7**	**+2.9**
	comp=E,37nm,0.7s						
UZB	**Uzynbulak**	**3.54**	**29**	Pg	**Pb**	**05 42 44.0**	**+1.8**
	comp=E,5.2nm,0.3s						
UZB				Lg	Lg	05 43 28.7	
	comp=E,37nm,0.7s						
USP	**Ospenovka**	**3.58**	**334**	⇓*e*P	**Pb**	**05 42 39.8**	**-3.0**
	baz=33						
USP				⇓*i*S	**Sb**	**05 43 24.2**	**-2.6**
	baz=33						
USP	**Ospenovka**	**3.58**	**334**	P	**Pb**	**05 42 40.8**	**-2.0**
	SNR=5.7						
KTBS	**Karatobe**	**3.64**	**0**	*e*P	**Pg**	**05 42 48.1**	**-0.3**
	comp=E,14nm,0.5s						
KTBS				*e*S	**Sg**	**05 43 35.8**	**+0.2**
	comp=E,33nm,0.6s						
KTBS	**Karatobe**	**3.64**	**0**	Pg	**Pg**	**05 42 48.1**	**-0.3**
	comp=E,14nm,0.5s						
KTBS				Lg	Lg	05 43 35.8	
	comp=E,33nm,0.6s						
KRBS	**Karabastau**	**3.70**	**349**	*e*P	**Pg**	**05 42 49.2**	**-0.4**
	comp=E,16nm,0.7s						
KRBS				*e*S	**Sg**	**05 43 37.9**	**+0.4**
	comp=E,22nm,0.5s						
KRBS	**Karabastau**	**3.70**	**349**	Pg	**Pg**	**05 42 49.2**	**-0.4**
	comp=E,16nm,0.7s						
KRBS				Lg	Lg	05 43 37.9	
	comp=E,22nm,0.5s						
SGDS	**Sogindy**	**3.71**	**336**	Pg	**Pg**	**05 42 49.8**	**+0.1**
	comp=E,17nm,0.5s						
SGDS				Lg	Lg	05 43 38.7	
	comp=E,47nm,0.8s						
KPKS	**Kokpek**	**3.71**	**23**	*e*P	**Pg**	**05 42 48.0**	**-1.8**
	comp=E,34nm,0.6s						
KPKS				*e*S	**Sg**	**05 43 35.9**	**-2.1**
	comp=E,93nm,1.1s						
SHLS	**Shalkode**	**3.73**	**33**	*e*P	**Pg**	**05 42 51.0**	**+1.0**
	comp=E,30nm,0.8s						
SHLS				*e*S	**Sg**	**05 43 41.2**	**+2.8**
	comp=E,60nm,0.8s						
SHLS	**Shalkode**	**3.73**	**33**	Pg	**Pg**	**05 42 51.1**	**+1.0**
	comp=E,30nm,0.8s						
SHLS				Lg	Lg	05 43 41.2	
	comp=E,60nm,0.8s						
PDGK	**Podgornoye**	**3.88**	**32**	Pg	**Pg**	**05 42 51.0**	**-2.0**
	comp=E,10nm,0.5s						
PDGK				Lg	Lg	05 43 40.8	
	comp=E,50nm,0.9s						
PDGK	**Podgornoye**	**3.88**	**32**	⇑Pg	**Pg**	**05 42 54.6**	**+1.5**
	comp=E,17nm,0.6s						
PDGK				⇓Lg	Lg	05 43 44.7	
	comp=E,136nm,0.8s						
MNAS	**Manas**	**3.96**	**309**	⇓*i*P	**Pb**	**05 42 45.2**	**-4.1**
	baz=9.0						
MNAS				⇓*i*S	**Sb**	**05 43 33.2**	**-4.5**
	baz=9.0						
ARXS	**Arharly**	**4.23**	**11**	*e*P	**Pg**	**05 42 58.0**	**-1.7**
	comp=E,38nm,0.6s						
ARXS				*e*S	**Sg**	**05 43 52.8**	**-1.7**
	comp=E,74nm,0.7s						
ARXS	**Arharly**	**4.23**	**11**	Pg	**Pg**	**05 42 58.0**	**-1.7**
	comp=E,38nm,0.6s						
ARXS				Lg	Lg	05 43 52.8	
	comp=E,74nm,0.7s						
KTMS	**Ketmen**	**4.35**	**38**	*e*P	**Pg**	**05 42 59.3**	**-2.8**
	comp=E,2.1nm,0.3s						
KTMS				*e*S	**Sg**	**05 43 55.2**	**-3.3**
	comp=E,38nm,0.8s						
KTMS	**Ketmen**	**4.35**	**38**	Pg	**Pg**	**05 42 59.3**	**-2.8**
	comp=E,2.1nm,0.3s						
KTMS				Lg	Lg	05 43 55.2	
	comp=E,38nm,0.8s						
IUG	**Iuzhnay**	**5.43**	**295**	*e*P	**Pg**	**05 43 22.9**	**+0.3**
	comp=E,6.0nm,0.8s						
IUG				*e*S	**Sg**	**05 44 35.7**	**+2.8**
	comp=E,65nm,0.9s						
IUG	**Iuzhnay**	**5.43**	**295**	Pg	**Pg**	**05 43 22.9**	**+0.3**
	comp=E,6.0nm,0.8s						
IUG				Lg	Lg	05 44 35.7	
	comp=E,65nm,0.9s						
KK31	**Karatay Array**	**5.52**	**305**	Pg	**Pg**	**05 43 24.9**	**+0.4**
	comp=E,3.0nm,0.6s,baz=128,slow=17,SNR=9.9						
KK31				⇑Lg	Lg	05 44 37.5	
	comp=E,15nm,0.7s,baz=127,slow=30						
MK31	**Makanchi Array**	**7.87**	**29**	⇓Pg	**Pn**	**05 43 35.2**	**+1.2**
	comp=E,1.0nm,0.8s,baz=203,slow=12,SNR=4.8						
MK31				⇑Lg	Lg	05 45 42.1	
	comp=E,1.4nm,0.6s,baz=213,slow=28,SNR=3.6						
MKAR	**Makanchi Array**	**7.87**	**29**	Pn	**Pn**	**05 43 34.2**	**+0.1**
	comp=E,0.1nm,0.3s,baz=206,slow=13,SNR=2.3						
MKAR				Lg	Lg	05 45 44.4	
	comp=E,0.1nm,0.3s,baz=214,slow=26,SNR=3.3						
WMQ	**Urumqi**	**9.03**	**62**	*e*P	**Pn**	**05 43 52.0**	**+1.9**
WMQ				smax	smax		
	comp=N,26nm,0.9s						
WMQ				smax	smax		
	comp=E,22nm,0.7s						
KURBB	**Kurchatov Arra**	**10.63**	**6**	Pn	**Pn**	**05 44 13.3**	**+1.3**
	comp=E,0.0nm,0.3s,baz=196,slow=9.6,SNR=3.0						
KURBB				Lg	Lg	05 47 15.8	
	comp=E,0.0nm,0.3s,baz=194,slow=27,SNR=5.8						
KURBB	**Kurchatov Arra**	**10.63**	**6**	⇑Lg	Lg	05 47 07.9	
	comp=E,22nm,1.2s						
BVAR	**Borovoye Array**	**13.65**	**344**	Pn	**Pn**	**05 44 53.5**	**+0.2**
	comp=E,0.2nm,0.3s,baz=121,slow=17,SNR=5.8						
BVAR				Lg	Lg	05 48 54.8	
	comp=E,0.1nm,0.3s,baz=171,slow=21,SNR=5.5						
ZALV	**Zalesovo Beam**	**14.94**	**19**	Pn	**Pn**	**05 45 11.6**	**+0.9**
	comp=E,0.2nm,0.3s,baz=194,slow=10,SNR=1.4						
AKTO	**Aktyubinsk**	**16.68**	**315**	Pn	**Pn**	**05 45 34.5**	**+1.0**
	comp=E,0.1nm,0.3s,baz=124,slow=14,SNR=4.6						
FINES	**FINESS Array B**	**37.21**	**322**	P	**P**	**05 48 51.8**	**+0.7**
	comp=E,1.0nm,0.9s,baz=89,slow=15,SNR=1.6						
YKA	**Yellowknife Ar**	**77.38**	**5**	P	**P**	**05 53 32.9**	**-1.8**
	comp=E,0.4nm,0.8s,baz=346,slow=5.0,SNR=7.9						

NEIC ***28*** *05:58:54.7±1.9,9.02S±0.07×118.99E±0.06,h117km±7km, mb4.2/14,Error ellipse: s-maj=10.8km s-min=8.3km az=165.0*
IDC ***28*** *05:58:55.5±2.2,9.05S×118.97E,h120km±20km,mb3.9/8, mb1 4.0/12,mb1mx3.7/38,mbtmp4.3/12,MS2.9/2, Ms1 2.9/2,ms1mx2.3/41,Error ellipse: s-maj=40.8km s-min=12.6km az=55.0*
DJA ***28*** *05:58:56.6±0.3,9°S±4°×11°E±°,h112km±4km,M4.5/14, mb4.6/4,mB5.0/1,MLv4.4/14,Mw(mB)4.3/1*

ISC 28 05:58:53.8±0.5,8.98S±0.05×119.14E±0.04,h102km,n58, σ2§58/62,mb4.1/11,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.70**	**159**	P	**Pn**	**05 59 15.2**	**+3.8**
WBSI				S	**Sn**	**05 59 29.1**	**+4.4**
PLAI	**Plampang**	**1.36**	**276**	P	**Pn**	**05 59 22.4**	**+4.0**
PLAI				S	**Sn**	**05 59 40.8**	**+3.7**
BASI	**Baing, Sumba**	**1.87**	**131**	P	**Pn**	**05 59 28.4**	**+3.6**
BASI				S	**Sn**	**05 59 52.8**	**+4.3**
TWSI	**Taliwang, Sumb**	**2.25**	**276**	P	**Pn**	**05 59 33.3**	**+3.7**
TWSI				S	**Sn**	**06 00 00.4**	**+3.3**
MMRI	**Maumere**	**3.08**	**84**		**Pn**	**05 59 44.3**	**+3.6**
MMRI	**Maumere**	**3.08**	**84**	P	**Pn**	**05 59 44.5**	**+3.9**
BSSI	**Bau Bau, Buton**	**3.12**	**25**	P	**Pn**	**05 59 45.2**	**+3.9**
BKSI	**Bulukumba**	**3.77**	**15**	P	**Pn**	**05 59 53.6**	**+3.7**
DNP	**Denpasar**	**3.90**	**274**	P	**Pn**	**05 59 54.2**	**+2.6**
SRBI	**Singaraja**	**3.99**	**283**	P	**Pn**	**05 59 55.4**	**+2.6**
KAPI	**Kappang**	**3.99**	**9**	P	**Pn**	**05 59 56.7**	**+3.8**
	2.8nm,0.3s,baz=201,slow=9.6,SNR=12						
KAPI				S	**Sn**	**06 00 40.9**	**+2.2**
	3.8nm,0.3s,baz=203,slow=23,SNR=7.5						
KAPI	**Kappang**	**3.99**	**9**		**Pn**	**05 59 56.2**	**+3.3**
BATI	**Baumata**	**4.62**	**106**	P	**Pn**	**06 00 04.6**	**+3.2**
	22nm,0.3s,baz=287,slow=1.5,SNR=22						
BATI				S	**Sn**	**06 00 54.0**	**0.0**
	41nm,0.3s,baz=54,slow=17,SNR=6.3						
BATI	**Baumata**	**4.62**	**106**	P	**Pn**	**06 00 04.9**	**+3.5**
BNSI	**Bone**	**4.65**	**12**	P	**Pn**	**06 00 05.5**	**+3.6**
JAGI	**Jajag, Banyuwa**	**4.96**	**276**		**Pn**	**06 00 06.5**	**+0.5**
JAGI	**Jajag, Banyuwa**	**4.96**	**276**	P	**Pn**	**06 00 06.8**	**+0.8**
SOEI	**Soe**	**5.12**	**99**		**Pn**	**06 00 11.1**	**+2.9**
SOEI	**Soe**	**5.12**	**99**	P	**Pn**	**06 00 11.4**	**+3.2**
	0.8nm2µm104nm,0.7s						
KMMI	**Kalianget**	**5.47**	**290**	P	**Pn**	**06 00 16.5**	**+3.5**
	0.2nm45nm,1.3s						
UGM	**Wanagama**	**8.59**	**276**	Pn	**Pn**	**06 00 57.4**	**+2.0**
FITZ	**Fitzroy Crossi**	**11.04**	**146**	P	**Pn**	**06 01 30.0**	**+1.3**
	0.8nm,0.3s,baz=328,slow=8.2,SNR=27						
FITZ				S	**Sn**	**06 03 26.8**	**-3.4**
	2.9nm,0.3s,baz=190,slow=23,SNR=10						
FITZ				LR	LR	06 06 27.1	
	comp=Z,44nm,18.6s,baz=262,slow=41						
FITZ	**Fitzroy Crossi**	**11.04**	**146**		**Pn**	**06 01 29.6**	**+0.9**
CISI	**Cisompet, Garu**	**11.30**	**276**		**Sn**	**06 03 33.2**	**-3.4**
KNRA	**Kununurra**	**11.51**	**126**		**Pn**	**06 01 35.0**	**0.0**
MTN	**Manton Dam**	**12.38**	**109**	Pn	**Pn**	**06 01 46.4**	**-0.1**
PSA00	**Pilbara Seismi**	**12.54**	**177**	Pn	**Pn**	**06 01 49.6**	**+1.1**
FAKI	**Fak Fak**	**14.36**	**66**		**Pn**	**06 02 12.1**	**-0.2**
GIRL	**Giralia**	**14.38**	**199**	P	**P**	**06 02 16.3**	**-0.2**
WB0	**Warramunga Arr**	**18.23**	**128**		**Pn**	**06 02 59.8**	**-0.5**
WB0				IAmb	IAmb	06 03 03.6	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**18.29**	**128**	P	**Pn**	**06 03 00.7**	**-0.3**
	comp=Z,2.1nm,0.3s,baz=303,slow=13,SNR=92						
WRA				S	**S**	**06 06 17.1**	**-6.8**
	comp=Z,0.7nm,0.3s,baz=304,slow=25,SNR=8.6						
WRA	**Warramunga Arr**	**18.29**	**128**	P	**Pn**	**06 03 00.7**	**-0.3**
WRAB	**Tennant Creek**	**18.29**	**128**	P	**P**	**06 02 58.9**	**-0.9**
WB2	**Warramunga Arr**	**18.30**	**128**	P	**Pn**	**06 03 00.7**	**-0.5**
WB2				IAmb	IAmb	06 03 03.5	
	comp=Z,11nm,0.5s						
WR0	**Warramunga Arr**	**18.46**	**128**		**Pn**	**06 03 03.0**	**0.0**
AS31	**Alice Springs**	**20.31**	**138**		**P**	**06 03 21.7**	**-0.1**
ASAR	**Alice Springs**	**20.31**	**138**	P	Pn	06 03 23.8	-0.9
	comp=Z,6.6nm,0.6s,baz=333,slow=14,SNR=38						
ASAR				S	**S**	**06 07 05.8**	**+1.7**
	comp=Z,4.6nm,0.9s,baz=316,slow=26,SNR=13						
ASAR				ScP	**ScP**	**06 10 56.2**	**-2.5**
	comp=Z,0.8nm,0.7s,baz=319,slow=1.6,SNR=4.7						
ASAR	**Alice Springs**	**20.31**	**138**	P	Pn	06 03 23.1	-1.7
RPSI	**Rantau Prapat**	**23.25**	**299**	P	**P**	**06 03 51.5**	**-1.0**
PSI	**Prapat**	**23.31**	**299**	P	**P**	**06 03 51.5**	**-1.7**
	comp=Z,2.9nm,0.4s,baz=180,slow=20,SNR=6.4						
COEN	**Coen**	**24.06**	**104**	P	**P**	**06 03 58.8**	**-0.9**
COEN				IAmb	IAmb	06 04 02.8	
	comp=Z,12nm,0.9s						
BBOO	**Buckleboo**	**28.41**	**149**	P	**P**	**06 04 40.3**	**+1.5**
STKA	**Stephens Creek**	**30.88**	**141**	P	**P**	**06 05 01.5**	**+0.9**
	comp=Z,2.8nm,0.4s,baz=318,slow=9.8,SNR=10.0						
STKA	**Stephens Creek**	**30.88**	**141**	IAmb	IAmb	06 05 02.9	
	comp=Z,0.9nm,0.6s	

MWZ	**Matawai**	**14.57**	**188**	P	**P**	**06 22 21.9**	**+2.3**
MWZ				S	**S**	**06 24 53.5**	**+1.0**
CNGZ	**Carnagh Statio**	**14.64**	**186**	P	**P**	**06 22 22.8**	**+2.4**
MUGZ	**Murupara**	**14.82**	**190**	P	**P**	**06 22 23.6**	**+1.4**
BKZ	**Black Stump Fm**	**15.53**	**190**	P	**P**	**06 22 28.6**	**-1.2**
VRZ	**Vera Road**	**15.84**	**195**	P	**P**	**06 22 35.9**	**+3.0**
BFZ	**Birch Farm**	**17.05**	**190**	P	**P**	**06 22 43.3**	**-1.6**
MRZ	**Mangatainoka R**	**17.15**	**192**	P	**P**	**06 22 41.8**	**-4.0**
MRZ				S	**S**	**06 25 36.5**	**-2.0**
DUWZ	**D'Urville Isla**	**17.64**	**195**	P	**P**	**06 22 50.9**	**+0.6**
CAW	**Cannon Point**	**17.68**	**192**	P	**P**	**06 22 48.0**	**-2.7**
CAW				S	**S**	**06 25 45.3**	**-1.9**
TCW	**Tory Channel**	**17.94**	**194**	P	**P**	**06 22 52.9**	**-0.2**
QRZ	**Quartz Range**	**18.03**	**199**	P	**P**	**06 22 55.4**	**+1.4**
NNZ	**Nelson**	**18.16**	**196**	P	**P**	**06 22 55.9**	**+0.8**
NNZ	**Nelson**	**18.16**	**196**	P	**P**	**06 22 55.6**	**+0.5**
TUWZ	**Tuamarina**	**18.23**	**195**	P	**P**	**06 22 55.5**	**-0.2**
TUWZ	**Tuamarina**	**18.23**	**195**	P	**P**	**06 22 55.7**	**0.0**
TUWZ				S	**S**	**06 25 53.8**	**-2.2**
THZ	**Tophouse**	**18.80**	**197**	P	**P**	**06 23 01.3**	**+0.3**
THZ	**Tophouse**	**18.80**	**197**	P	**P**	**06 23 01.7**	**+0.8**
THZ				S	**S**	**06 26 00.7**	**-4.7**
KHZ	**Kahutara**	**19.26**	**195**	P	**P**	**06 23 04.6**	**-0.4**
LTZ	**Lake Taylor**	**19.92**	**197**	P	**P**	**06 23 10.8**	**-0.3**
LTZ				IAmb	IAmb	06 23 16.0	
	comp=Z,26nm,1.1s						
MLZ	**Mavora Lakes**	**23.52**	**201**	P	**P**	**06 23 42.4**	**-1.1**
WHZ	**Wether Hill Ro**	**24.04**	**201**	P	**P**	**06 23 48.1**	**+0.1**
WHZ				IAmb	IAmb	06 24 12.6	
	comp=Z,28nm,1.2s						
CTA	**Charters Tower**	**31.49**	**270**	P	**P**	**06 24 54.8**	**+1.1**
	comp=Z,22nm,0.4s,baz=93,slow=11,SNR=40						
CTAO	**Charters Tower**	**31.49**	**270**	P	**P**	**06 24 54.7**	**+1.1**
TOO	**Toolangi**	**32.47**	**237**	P	**P**	**06 25 03.3**	**+1.5**
TOO				IAmb	IAmb	06 25 04.2	
	comp=Z,9.0nm,0.8s						
PMG	**Port Moresby**	**34.50**	**289**	P	**P**	**06 25 19.4**	**+0.3**
	comp=Z,8.3nm,0.3s,baz=85,slow=11,SNR=3.6						
PMG	**Port Moresby**	**34.50**	**289**	IAmb	IAmb	06 25 20.1	
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**34.74**	**248**	P	**P**	**06 25 19.9**	**-1.2**
	comp=Z,2.8nm,0.3s,baz=94,slow=16,SNR=4.0						
STKA	**Stephens Creek**	**34.74**	**248**	IAmb	IAmb	06 25 23.2	
	comp=Z,1.8nm,1.1s						
COEN	**Coen**	**36.12**	**279**	P	**P**	**06 25 33.0**	**+0.3**
COEN				IAmb	IAmb	06 25 56.4	
	comp=Z,7.4nm,1.1s						
BBOO	**Buckleboo**	**39.47**	**247**	P	**P**	**06 25 59.2**	**-0.6**
BBOO				IAmb	IAmb	06 26 00.5	
	comp=Z,6.1nm,0.6s						
AS31	**Alice Springs**	**42.05**	**261**	P	**P**	**06 26 20.7**	**+0.1**
AS31				IAmb	IAmb	06 26 22.1	
	comp=Z,4.4nm,0.3s						
ASAR	**Alice Springs**	**42.05**	**261**	P	**P**	**06 26 21.1**	**+0.4**
	comp=Z,5.3nm,0.4s,baz=92,slow=8.1,SNR=18						
ASAR				ScP	**ScP**	**06 31 07.0**	**+2.3**
	comp=Z,2.8nm,0.8s,baz=109,slow=4.5,SNR=16						
ASAR	**Alice Springs**	**42.05**	**261**	P	**P**	**06 26 20.4**	**-0.2**
WR0	**Warramunga Arr**	**42.23**	**266**	P	**P**	**06 26 22.0**	**0.0**
WR0				IAmb	IAmb	06 26 22.1	
	comp=Z,6.6nm,0.6s						
WB2	**Warramunga Arr**	**42.41**	**266**	P	**P**	**06 26 22.8**	**-0.7**
WB2				IAmb	IAmb	06 26 23.6	
	comp=Z,12nm,0.5s						
WRAB	**Tennant Creek**	**42.41**	**266**	P	**P**	**06 26 20.7**	**-2.8**
WRAB				IAmb	IAmb	06 26 23.5	
	comp=Z,13nm,0.5s						
WB0	**Warramunga Arr**	**42.41**	**266**	P	**P**	**06 26 23.2**	**-0.3**
WB0				IAmb	IAmb	06 26 23.9	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**42.42**	**266**	P	**P**	**06 26 23.3**	**-0.2**
	comp=Z,9.0nm,0.4s,baz=102,slow=8.2,SNR=11						
WRA				ScP	**ScP**	**06 31 09.1**	**+2.9**
	comp=Z,2.1nm,0.8s,baz=99,slow=4.2,SNR=7.8						
WRA	**Warramunga Arr**	**42.42**	**266**	P	**P**	**06 26 22.7**	**-0.8**
FORT	**Forrest**	**46.33**	**250**	P	**P**	**06 26 52.9**	**-0.7**
KNRA	**Kununurra**	**48.70**	**270**	P	**P**	**06 27 12.0**	**+0.5**
KNRA				IAmb	IAmb	06 27 12.5	
	comp=Z,31nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.84**	**266**	P	**P**	**06 27 27.9**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=267,slow=17,SNR=3.5						
FITZ	**Fitzroy Crossi**	**50.84**	**266**	IAmb	IAmb	06 27 29.1	
	comp=Z,4.8nm,0.7s						
VNDA	**Vanda**	**54.40**	**185**	P	**P**	**06 27 50.2**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=103,slow=5.6,SNR=8.1						
PETK	**Petropavlovsk-**	**79.08**	**347**	P	**P**	**06 30 24.5**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=183,slow=5.8,SNR=2.2						
NVAR	**Mina Array Bea**	**84.73**	**44**	P	**P**	**06 30 54.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=225,slow=7.5,SNR=8.4						
NVAR	**Mina Array Bea**	**84.73**	**44**	P	**P**	**06 30 53.7**	**-0.2**
I07A	**Izee**	**87.36**	**39**	P	**P**	**06 31 07.2**	**+1.0**
J08A	**Circle Bar Ran**	**87.53**	**40**	P	**P**	**06 31 07.6**	**+0.6**
J08A				IAmb	IAmb	06 31 08.3	
	comp=Z,6.6nm,1.3s						
U15A	**North Rim**	**87.58**	**48**	P	**P**	**06 31 07.8**	**+0.2**
G08A	**Pilot Rock**	**88.40**	**38**	P	**P**	**06 31 12.1**	**+1.1**
G08A				IAmb	IAmb	06 31 12.4	
	comp=Z,3.5nm,0.9s						
TMUT	**Trail Mountain**	**89.81**	**46**	P	**P**	**06 31 18.8**	**+0.8**
TMUT				IAmb	IAmb	06 31 19.7	
	comp=Z,4.3nm,0.7s						
HVU	**Hansel Valley**	**90.11**	**44**	IAmb	IAmb	06 31 20.2	
	comp=Z,3.3nm,0.7s						
SRU	**San Rafael Swe**	**90.17**	**47**	P	**P**	**06 31 19.9**	**+0.4**
SRU				IAmb	IAmb	06 31 20.6	
	comp=Z,4.0nm,0.8s						
TX31	**Lajitas Ar. Si**	**90.41**	**58**	P	**P**	**06 31 20.7**	**0.0**
TX31				IAmb	IAmb	06 31 22.4	
	comp=Z,8.9nm,0.9s						
TX32	**Lajitas Array**	**90.41**	**58**	IAmb	IAmb	06 31 22.4	
	comp=Z,3.0nm,0.9s						
TXAR	**Lajitas Array**	**90.41**	**58**	P	**P**	**06 31 21.7**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=215,slow=6.6,SNR=17						
TXAR	**Lajitas Array**	**90.41**	**58**	P	**P**	**06 31 21.3**	**+0.6**
ILAR	**Eielson Array**	**92.00**	**14**	P	**P**	**06 31 25.6**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=224,slow=5.6,SNR=4.3						
PDAR	**Pinedale Array**	**92.66**	**44**	P	**P**	**06 31 30.8**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=191,slow=1.5,SNR=6.2						
KURBB	**Kurchatov Arra**	**115.24**	**316**	PKP	**PKPdf**	**06 36 54.9**	**-1.6**
	comp=Z,0.4nm,0.7s,baz=110,slow=1.9,SNR=4.6						
ARCES	**ARCESS Array B**	**131.87**	**348**	PKP	**PKPdf**	**06 37 27.3**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=48,slow=1.8,SNR=6.9						
FINES	**FINESS Array B**	**138.43**	**341**	PKP	**PKPdf**	**06 37 40.7**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=85,slow=3.2,SNR=4.4						
NOA	**NORSAR Array B**	**142.06**	**351**	PKhKP	PKPpre	06 37 42.3	
	comp=Z,0.6nm,0.7s,baz=7.6,slow=2.3,SNR=3.7						
AKASG	**Malin Array Be**	**144.96**	**327**	PKPbc	**PKPdf**	**06 37 51.6**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=42,slow=4.2,SNR=6.5						
CLL	**Collm**	**150.84**	**343**	*i* PKPbc	**PKPbc**	**06 38 07.7**	**-0.2**
CLL				*e*PKPab	**PKPab**	**06 38 17.0**	**-0.4**

*IDC **28** 06:20:46.2±3.0,25.86S×132.30E,h0km,mb1 3.7/4, mb1mx3.4/35,mbtmp3.6/4,ML3.5/4,Error ellipse: s-maj=25.5km s-min=22.6km az=89.0*
*AUST **28** 06:20:46.6±2.7,25.95S×132.15E,h15km±20km,Error ellipse: s-maj=7.9km s-min=7.3km az=106.0*
ISC 28 06:20:44.8±0.7,25.91S±0.05×132.19E±0.04,h10km,n20, σ2s33/34,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASPA	**Alice Springs**	**2.73**	**35**	P	**Pn**	**06 21 31.4**	**+2.7**
	baz=2.8						
ASPA				S	**Sn**	**06 22 04.7**	**+2.9**
	baz=2.8						
ASAR	**Alice Springs**	**2.73**	**35**	Pn	**Pn**	**06 21 31.3**	**+2.5**
	1.5nm,0.3s,baz=212,slow=12,SNR=95						
ASAR				Sn	**Sn**	**06 22 04.2**	**+2.3**
	9.1nm,0.3s,baz=206,slow=23,SNR=13						
ASAR				Lg	Lg	06 22 09.8	
	36nm,0.3s,baz=215,slow=26,SNR=64						
WRKA	**Warakurna**	**3.62**	**283**	P	**Pn**	**06 21 45.8**	**+4.7**
	baz=3.6,SNR=23						
WRKA				S	**Sb**	**06 22 31.8**	**-1.3**
	baz=3.6,SNR=6.3						
OOD	**Oodnadatta**	**3.65**	**122**	P	**Pn**	**06 21 43.4**	**+2.1**
	baz=3.7,SNR=9.9						
OOD				S	**Sn**	**06 22 27.0**	**+2.5**
	baz=3.7						
MULG	**Mulgathing**	**4.66**	**160**	P	**Pn**	**06 21 56.9**	**+1.7**
	baz=4.6,SNR=9.2						
MULG				S	**Sn**	**06 22 51.0**	**+1.6**
	baz=4.6						
FORT	**Forrest**	**6.06**	**216**	P	**Pn**	**06 22 16.0**	**+1.5**
	baz=6.0,SNR=11						
FORT				S	**Sn**	**06 23 24.5**	**+0.6**
	baz=6.0						
WRA	**Warramunga Arr**	**6.26**	**19**	Pn	**Pn**	**06 22 19.4**	**+2.1**
	1.0nm,0.3s,baz=198,slow=12,SNR=92						
WRA				Sn	Sn	06 23 22.8	-6.3
	1.0nm,0.3s,baz=198,slow=23,SNR=4.9						
WRA				Lg	Lg	06 23 59.2	
	2.6nm,0.3s,baz=196,slow=30,SNR=6.6						
WB2	**Warramunga Arr**	**6.27**	**19**	P	**Pn**	**06 22 19.2**	**+1.8**
	baz=6.3						
WB2				S	**Sn**	**06 23 27.9**	**-1.3**
	baz=6.3						
LCRK	**Leigh Creek**	**6.98**	**132**	P	**Pn**	**06 22 28.5**	**+1.4**
	baz=7.0,SNR=4.1						
LCRK				S	**Sn**	**06 23 45.8**	**-0.8**
	baz=7.0						
BBOO	**Buckleboo**	**7.66**	**155**	P	**Pn**	**06 22 37.3**	**+0.9**
	baz=7.7,SNR=17						
BBOO				S	**Sn**	**06 24 00.2**	**-3.1**
	baz=7.7						
QIS	**Mount Isa**	**8.66**	**54**	P	**Pn**	**06 22 51.1**	**+0.9**
	baz=8.7						
QIS				S	**Sn**	**06 24 23.0**	**-5.0**
	baz=8.7						
HTT	**Hallett**	**9.51**	**144**	P	**Pn**	**06 23 01.9**	**0.0**
	baz=9.5						
FITZ	**Fitzroy Crossi**	**9.86**	**321**	Pn	**Pn**	**06 23 09.4**	**+2.7**
	0.5nm,0.3s,baz=146,slow=11,SNR=17						
FITZ				Sn	**Sn**	**06 24 55.2**	**-2.3**
	0.4nm,0.3s,baz=48,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**9.86**	**321**	P	**Pn**	**06 23 10.0**	**+3.2**
	baz=9.9						
FITZ				S	**Sn**	**06 24 55.3**	**-2.3**
	baz=9.9						
STKA	**Stephens Creek**	**10.16**	**128**	Pn	**Pn**	**06 23 11.5**	**+0.7**
	0.6nm,0.3s,baz=298,slow=13,SNR=8.8						
STKA				Sn	**Sn**	**06 25 01.4**	**-3.4**
	1.5nm,0.3s,baz=49,slow=11,SNR=7.3						
STKA	**Stephens Creek**	**10.16**	**128**	P	**Pn**	**06 23 11.6**	**+0.7**
	baz=10,SNR=7.0						
KMBL	**Kambalda**	**10.55**	**237**	P	**Pn**	**06 23 17.6**	**+1.4**
	baz=10						
KNRA	**Kununurra**	**10.67**	**342**	P	**Pn**	**06 23 19.7**	**+1.9**
	baz=11						
MEEK	**Meekatharra**	**12.20**	**264**	P	**Pn**	**06 23 38.8**	**0.0**
	baz=12,SNR=3.5						
MEEK				S	**Sn**	**06 25 53.4**	**-1.5**
	baz=12						
KLBR	**Kellerberrin**	**13.86**	**243**	P	**Pn**	**06 24 00.4**	**-1.0**
	baz=14						

*IDC **28** 06:23:51.2±2.2,28.05N×85.04E,h0km,mb3.5/6, mb1 3.8/8,mb1mx3.5/47,mbtmp3.6/8,ML3.7/1,MS2.7/2, Ms1 2.7/2,ms1mx2.3/46,Error ellipse: s-maj=75.3km s-min=21.9km az=68.0*
ISC 28 06:23:52.9±2.2,28.1N±0.2×85.0E±0.4,h12km,n9,σ0s69/8, mb3.6/6,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.00**	**124**	Pn	**Pn**	**06 27 38.5**	**+0.6**
	baz=309,slow=10,SNR=0.9						
MKAR	**Makanchi Array**	**18.83**	**354**	P	**Pn**	**06 28 13.8**	**+0.7**
	0.2nm,0.3s,baz=173,slow=12,SNR=16						
MKAR				LR	LR	06 36 59.7	
	comp=Z,15nm,18.0s,baz=248,slow=42						
PALK	**Pallekele**	**21.05**	**192**	LR	LR	06 36 11.3	
	comp=Z,26nm,19.3s,baz=215,slow=35						
KURBB	**Kurchatov Arra**	**23.07**	**350**	P	**P**	**06 28 58.5**	**+0.3**
	0.3nm,0.5s,baz=167,slow=8.4,SNR=1.7						
SONM	**Songino Array**	**25.85**	**34**	P	**P**	**06 29 23.8**	**-0.6**
	1.5nm,0.7s,baz=218,slow=9.4,SNR=8.9						
ZALV	**Zalesovo Beam**	**25.88**	**360**	P	**P**	**06 29 24.8**	**+0.4**
	1.6nm,0.6s,baz=177,slow=9.6,SNR=7.5						
WRA	**Warramunga Arr**	**67.50**	**129**	P	**P**	**06 34 48.6**	**-0.5**
	0.4nm,0.8s,baz=322,slow=6.8,SNR=2.2						
ASAR	**Alice Springs**	**69.79**	**133**	P	**P**	**06 35 03.8**	**+0.4**
	0.4nm,0.9s,baz=312,slow=6.1,SNR=2.6						
YKA	**Yellowknife Ar**	**88.42**	**9**	P	**P**	**06 36 43.9**	**-0.7**
	0.2nm,0.7s,baz=331,slow=4.1,SNR=4.2						

*NEIC **28** 06:28:51.5±1.6,15.02S±0.08×175.3W±0.1,h308km±4km, mb4.3/22,Error ellipse: s-maj=14.8km s-min=12.0km az=90.0*
*IDC **28** 06:28:54.5±2.9,15.03S×175.41W,h332km±27km, mb3.5/12,mb1 3.7/14,mb1mx3.5/41,mbtmp4.1/14,Error ellipse: s-maj=25.3km s-min=15.4km az=138.0*
*NOU **28** 06:29:39.0,13.40S×172.10W,h73km,MLv2.9,Samoa Islands*
ISC 28 06:28:51.2±0.5,15.03S±0.09×175.31W±0.09,h300km, n56,σ1s05/52,mb4.2/25,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.60**	**72**	Pn	**Pn**	**06 29 54.2**	**+1.0**
AFI	**Afiamalu**	**3.60**	**72**	P	**Pn**	**06 29 54.2**	**+1.0**
NIUE	**Niue**	**6.54**	**129**	Pn	**Pn**	**06 30 27.4**	**+0.5**
MSVF	**Nonsavu**	**6.92**	**246**	P	**Pn**	**06 30 34.9**	**+3.3**
	1.8nm,0.3s,baz=86,slow=13,SNR=12						
MSVF	**Nonsavu**	**6.92**	**246**		**Pn**	**06 30 32.7**	**+1.1**
FUNA	**Funafuti**	**8.40**	**320**		**Pn**	**06 30 49.8**	**0.0**
DZM	**Mont Dzumac**	**18.65**	**245**	P	**P**	**06 32 49.4**	**+1.4**
	0.3nm,0.3s,baz=293,slow=22,SNR=1.6						
LTZ	**Lake Taylor**	**29.64**	**199**	P	**P**	**06 34 29.1**	**-0.4**
WHZ	**Wether Hill Ro**	**33.83**	**201**	P	**P**	**06 35 04.8**	**-1.0**
CTA	**Charters Tower**	**36.93**	**257**	P	**P**	**06 35 31.3**	**-1.1**
	4.4nm,0.5s,baz=94,slow=12,SNR=5.4						
CTAO	**Charters Tower**	**36.93**	**257**	P	**P**	**06 35 31.8**	**-0.5**
CTAO				IAmb	IAmb	06 35 47.9	
	comp=Z,24nm,1.4s						
STKA	**Stephens Creek**	**42.63**	**239**	P	**P**	**06 36 19.1**	**+0.2**
	comp=Z,5.2nm,0.5s,baz=88,slow=9.4,SNR=15						
STKA	**Stephens Creek**	**42.63**	**239**	P	**P**	**06 36 18.4**	**-0.4**
BBOO	**Buckleboo**	**47.41**	**239**	P	**P**	**06 36 55.3**	**-0.9**
WR0	**Warramunga Arr**	**47.94**	**257**	P	**P**	**06 37 00.3**	**-0.2**
WR0				IAmb	IAmb	06 37 15.7	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**48.09**	**257**	P	**P**	**06 37 00.6**	**-1.0**
WB0				IAmb	IAmb	06 37 02.2	
	comp=Z,18nm,1.5s						
WB2	**Warramunga Arr**	**48.12**	**257**	P	**P**	**06 37 01.1**	**-0.8**
WRAB	**Tennant Creek**	**48.12**	**257**	P	**P**	**06 37 01.3**	**-0.5**
WRAB				IAmb	IAmb	06 37 08.1	
	comp=Z,8.8nm,0.5s						
WRA	**Warramunga Arr**	**48.13**	**257**	P	**P**	**06 37 00.4**	**-1.5**
	comp=Z,3.1nm,0.9s,baz=84,slow=7.7,SNR=37						
WRA	**Warramunga Arr**	**48.13**	**257**	P	**P**	**06 37 00.5**	**-1.5**
AS31	**Alice Springs**	**48.47**	**252**	P	**P**	**06 37 00.9**	**-3.6**
AS31				IAmb	IAmb	06 37 11.1	
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**48.47**	**252**	P	**P**	**06 37 03.9**	**-0.6**
	comp=Z,27nm,0.6s,baz=81,slow=8.1,SNR=125						
FORT	**Forrest**	**53.94**	**243**	P	**P**	**06 37 43.8**	**-1.0**
SIJI	**Sorong**	**54.58**	**280**	P	**P**	**06 37 50.2**	**+0.6**
	comp=Z,29nm,0.6s,baz=90,slow=5.4,SNR=6.0						
FITZ	**Fitzroy Crossi**	**56.48**	**258**	P	**P**	**06 38 03.1**	**+0.2**
PSA00	**Pilbara Seismi**	**61.54**	**253**	P	**P**	**06 38 36.4**	**-1.0**
PSA00				IAmb	IAmb	06 38 36.7	
	comp=Z,11nm,0.9s						
VNDA	**Vanda**	**63.56**	**185**	P	**P**	**06 38 50.5**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=0.5,slow=7.2,SNR=5.5						
PEA0B	**Petropavlovsk-**	**71.73**	**343**	P	**P**	**06 39 39.8**	**-1.0**
KSRS	**Korea Array**	**74.61**	**316**	P	**P**	**06 39 58.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=132,slow=4.7,SNR=4.4						
NVAR	**Mina Array Bea**	**75.30**	**43**	P	**P**	**06 40 02.5**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=230,slow=9.8,SNR=7.1						
TTA	**Tatalina**	**79.16**	**9**	P	**P**	**06 40 23.4**	**+0.7**
TTA				IAmb	IAmb	06 40 24.6	
	comp=Z,4.1nm,1.0s						
MCK	**McKinley**	**81.12**	**12**	P	**P**	**06 40 33.1**	**+0.1**
MCK				IAmb	IAmb	06 40 34.2	
	comp=Z,4.8nm,0.9s						
WRH	**Wood River Hil**	**81.95**	**12**	P	**P**	**06 40 37.1**	**-0.2**
WRH				IAmb	IAmb	06 40 38.0	
	comp=Z,6.7nm,1.1s						
MLY	**Manley**	**81.97**	**10**	P	**P**	**06 40 36.8**	**-0.7**
DOT	**Dot Lake**	**82.07**	**14**	P	**P**	**06 40 38.4**	**+0.4**
DOT				IAmb	IAmb	06 40 38.9	
	comp=Z,3.6nm,0.8s						
IMAR	**Indian Mountai**	**82.38**	**9**	P	**P**	**06 40 39.9**	**+0.4**
ILAR	**Eielson Array**	**82.45**	**12**	P	**P**	**06 40 39.8**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=220,slow=5.3,SNR=21						
ILAR	**Eielson Array**	**82.45**	**12**	P	**P**	**06 40 38.5**	**-1.4**
PDAR	**Pinedale Array**	**83.23**	**43**	P	**P**	**06 40 45.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=204,slow=4.6,SNR=3.8						
EGAK	**Eagle**	**83.70**	**14**	IAmb	IAmb	06 40 47.4	
	comp=Z,4.3nm,0.9s						
COLD	**Coldfoot**	**84.08**	**10**	IAmb	IAmb	06 40 50.5	
	comp=Z,5.7nm,1.2s						
BMAR	**Burnt Mountain**	**85.25**	**11**	P	**P**	**06 40 55.0**	**+1.1**
MAW	**Mawson**	**87.55**	**199**	P	**P**	**06 41 05.1**	**0.0**
	comp=Z,1.4nm,0.5s,baz=188,slow=7.1,SNR=2.1						
YKA	**Yellowknife Ar**	**90.50**	**24**	P	**P**	**06 41 18.9**	**0.0**
	comp=Z,0.5nm,0.9s,baz=235,slow=4.7,SNR=8.3						
CMAR	**Chiang Mai Arr**	**90.75**	**289**	P	**P**	**06 41 22.4**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=102,slow=3.8,SNR=7.1						
SONM	**Songino Array**	**93.34**	**319**	P	**P**	**06 41 32.3**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=157,slow=4.1,SNR=2.0						
MKAR	**Makanchi Array**	**109.25**	**315**	PKiKP	**PKiKP**	**06 46 44.5**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=66,slow=3.5,SNR=3.1						
ARCES	**ARCESS Array B**	**123.98**	**351**	PKP	**PKPdf**	**06 47 12.7**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=335,slow=5.4,SNR=5.1						
KMBO	**Kilima Mbogo**	**144.01**	**246**	PKP	**PKPab**	**06 47 50.8**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=37,slow=3.1,SNR=6.6						
BR131	**Keskin Array S**	**144.69**	**320**		**PKPdf**	**06 47 52.8**	**0.0**
BRTR	**Keskin Array B**	**144.69**	**320**	PKP	**PKPdf**	**06 47 52.5**	**-0.2**
	comp=Z,5.6nm,0.8s,baz=72,slow=4.0,SNR=24						
BRTR	**Keskin Array B**	**144.69**	**320**		PKPbc	06 47 51.3	-1.1
MLR	**Muntele Rosu**	**144.74**	**334**		PKPbc	06 47 51.6	-0.7
GERES	**GERESS Array B**	**145.47**	**349**	PKPbc	**PKPdf**	**06 47 52.7**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=0.0,slow=1.6,SNR=6.2						
GERES	**GERESS Array B**	**145.47**	**349**		**PKPbc**	**06 47 54.1**	**-0.3**
BFO	**Black Forest**	**146.66**	**356**		**PKPbc**	**06 47 57.0**	**-0.8**

*IDC **28** 06:36:15.7±2.9,25.86S×132.36E,h0km,mb1 3.9/4, mb1mx3.6/37,mbtmp3.7/4,ML3.7/4,Error ellipse: s-maj=23.4km s-min=20.0km az=45.0*
*AUST **28** 06:36:17.2±2.9,25.97S×132.19E,h26km±28km,Error ellipse: s-maj=8.6km s-min=7.8km az=109.0*
ISC 28 06:36:14.5±0.7,25.92S±0.05×132.26E±0.05,h10km,n21, σ2s64/34,Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASPA	**Alice Springs**	**2.69**	**34**	P	**Pn**	**06 37 00.6**	**+2.7**
	baz=2.8						
ASPA				S	**Sn**	**06 37 33.9**	**+3.4**
	baz=2.8						
ASAR	**Alice Springs**	**2.69**	**34**	Pn	**Pn**	**06 37 00.5**	**+2.6**
	3.3nm,0.3s,baz=213,slow=12,SNR=288						
ASAR				Sn	**Sn**	**06 37 33.4**	**+2.8**
	14nm,0.3s,baz=212,slow=22,SNR=6.4						
ASAR				Lg	Lg	06 37 38.7	
	49nm,0.3s,baz=213,slow=26,SNR=49						
OOD	**Oodnadatta**	**3.59**	**122**	P	**Pn**	**06 37 12.6**	**+2.5**
	baz=3.6,SNR=21						
OOD				S	**Sn**	**06 37 57.6**	**+5.0**
	baz=3.6						
WRKA	**Warakurna**	**3.69**	**283**	P	**Pn**	**06 37 15.2**	**+3.6**
	baz=3.6						
WRKA				S	**Sn**	**06 38 01.6**	**+6.3**
	baz=3.6						
MULG	**Mulgathing**	**4.63**	**160**	P	**Pn**	**06 37 26.5**	**+2.0**
	baz=4.6,SNR=3.6						
MULG				S	**Sn**	**06 38 19.9**	**+1.6**
	baz=4.6						
FORT	**Forrest**	**6.10**	**216**	P	**Pn**	**06 37 43.2**	**-1.5**
	baz=6.0						
FORT				S	**Sn**	**06 38 53.0**	**-1.5**
	baz=6.0						
WRA	**Warramunga Arr**	**6.25**	**18**	Pn	**Pn**	**06 37 48.7**	**+1.9**
	1.5nm,0.3s,baz=196,slow=14,SNR=45						
WRA				Sn	**Sn**	**06 38 56.8**	**-1.5**
	3.1nm,0.3s,baz=198,slow=23,SNR=5.0						
WRA				Lg	Lg	06 39 27.5	
	3.5nm,0.3s,baz=193,slow=30,SNR=7.3						
WB2	**Warramunga Arr**	**6.25**	**18**	P	**Pn**	**06 37 49.0**	**+2.2**
	baz=6.3						
WB2				S	**Sn**	**06 38 58.1**	**-0.2**
	baz=6.3	

comp=Z,32nm,18.2s,baz=332,slow=38
KURBB **Kurchatov Arra 23.37 346** P P **07 10 47.7 +0.2**
1.1nm,0.2s,baz=164,slow=9.4,SNR=4.9
SONM **Songino Array 24.81 32** P P **07 11 01.5 +0.3**
0.7nm,0.4s,baz=218,slow=12,SNR=1.6
ZALV **Zalesovo Beam 25.85 357** P P **07 11 11.2 +0.9**
1.8nm,0.6s,baz=183,slow=9.7,SNR=6.8
AKTO **Aktyubinsk 31.27 323** LR LR 07 25 59.1
comp=Z,10.0nm,21.6s,baz=328,slow=39
BRTR **Keskin Array B 45.15 299** LR LR 07 36 01.0
comp=Z,27nm,18.3s,baz=258,slow=40
WRA **Warramunga Arr 66.19 131** P P **07 16 27.0 +0.1**
0.3nm,0.4s,baz=324,slow=6.6,SNR=9.7
ASAR **Alice Springs 68.54 134** P P **07 16 42.3 +0.5**
0.2nm,0.3s,baz=319,slow=5.7,SNR=5.4
ILAR **Eielson Array 78.44 21** P P **07 17 38.4 -1.1**
0.3nm,0.6s,baz=312,slow=4.3,SNR=4.2
YKA **Yellowknife Ar 88.06 10** P P **07 18 28.7 -0.3**
0.2nm,0.8s,baz=338,slow=4.4,SNR=4.2

IDC 28 07:15:24.6±12.0, 38.55S×77.00E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/42, mbtmp3.8/4, MS3.9/17, Ms1 3.9/17, ms1mx3.6/40, Error ellipse: s-maj=325.5km s-min=36.4km az=131.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**29.85**	**95**	T	T	07 51 41.2	
	baz=250,slow=74,SNR=80						
H01W3	**Cape Leeuwin H**	**29.86**	**95**	T	T	07 51 41.8	
	baz=250,slow=74,SNR=119						
H01W1	**Cape Leeuwin H**	**29.87**	**95**	T	T	07 51 42.5	
	baz=250,slow=74,SNR=91						
MAW	**Mawson**	**30.16**	**191**	LR	LR	07 31 15.4	
	comp=Z,191nm,18.6s,baz=350,slow=32						
NWAO	**Narogin (SRO)**	**32.05**	**93**	LR	LR	07 31 54.0	
	comp=Z,256nm,20.6s,baz=280,slow=30						
BOSA	**Boshof**	**43.74**	**267**	LR	LR	07 38 18.5	
	comp=Z,140nm,19.4s,baz=178,slow=31						
ASAR	**Alice Springs**	**50.18**	**90**	P	P	07 24 22.0	-0.3
	0.4nm,0.8s,baz=251,slow=5.8,SNR=4.3						
ASAR				LR	LR	07 43 06.8	
	comp=Z,185nm,18.3s,baz=212,slow=33						
VNDA	**Vanda**	**51.61**	**164**	P	P	07 24 31.8	-0.4
	1.1nm,0.8s,baz=271,slow=6.7,SNR=6.0						
VNDA				LR	LR	07 43 36.1	
	comp=Z,93nm,19.4s,baz=239,slow=33						
QSPA	**South Pole Qui**	**51.62**	**180**	P	P	07 24 32.8	+0.2
	1.4nm,0.9s,baz=297,slow=4.5,SNR=3.5						
STKA	**Stephens Creek**	**52.24**	**104**	LR	LR	07 41 56.3	
	comp=Z,88nm,21.9s,baz=207,slow=30						
WRA	**Warramunga Arr**	**52.52**	**86**	P	P	07 24 40.0	+0.2
	2.2nm,1.1s,baz=238,slow=7.5,SNR=5.3						
WRA				LR	LR	07 43 41.6	
	comp=Z,170nm,21.6s,baz=205,slow=32						
CMAR	**Chiang Mai Arr**	**60.32**	**24**	LR	LR	07 47 26.5	
	comp=Z,53nm,21.7s,baz=214,slow=32						
PMG	**Port Moresby**	**68.69**	**85**	LR	LR	07 51 59.7	
	comp=Z,60nm,20.0s,baz=230,slow=32						
JOW	**Kunigami**	**80.81**	**45**	LR	LR	08 03 21.1	
	comp=Z,35nm,18.0s,baz=262,slow=36						
MKAR	**Makanchi Array**	**85.09**	**4**	LR	LR	08 04 13.1	
	comp=Z,44nm,20.1s,baz=192,slow=34						
TORD	**Torodi Ar. Bea**	**86.94**	**289**	LR	LR	08 05 21.2	
	comp=Z,37nm,18.8s,baz=165,slow=34						
BRTR	**Keskin Array B**	**87.44**	**328**	LR	LR	08 03 15.8	
	comp=Z,333nm,19.9s,baz=238,slow=33						
DBIC	**Dimbokro**	**87.78**	**280**	LR	LR	08 04 19.3	
	comp=Z,40nm,18.7s,baz=117,slow=33						
SONM	**Songino Array**	**89.90**	**19**	LR	LR	08 08 29.1	
	comp=Z,25nm,18.1s,baz=100,slow=35						
KOWA	**Kowa**	**92.05**	**287**	LR	LR	08 08 43.7	
	comp=Z,66nm,19.3s,baz=138,slow=35						
PLCA	**Paso Flores**	**95.71**	**204**	LR	LR	08 04 06.4	
	comp=Z,54nm,22.0s,baz=180,slow=30						

*NEIC **28** 07:21:01.3±0.8, 23.4S×177.93W, h253km±8km, mb4.3/22, Error ellipse: s-maj=19.2km s-min=7.7km az=144.0*
*IDC **28** 07:21:10.5±3.5, 23.07S×178.34W, h326km±33km, mb3.2/9, mb1 3.5/10, mb1mx3.3/30, mbtmp3.9/10, Error ellipse: s-maj=33.9km s-min=17.3km az=141.0*

ISC 28 07:21:06.6±0.7, 23.48S±0.1×178.1W±0.1, h300km, n45, σ1$08/41, mb4.0/19, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.76**	**327**	P	Pn	**07 22 44.3**	**-1.0**
	7.3nm,0.3s,baz=154,slow=5.9,SNR=29						
MSVF	**Nonsavu**	**6.76**	**327**		Pn	07 22 40.5	-4.8
NIUE	**Niue**	**8.79**	**62**	Pn	Pn	07 23 03.6	-6.4
AFI	**Afiamalu**	**11.24**	**33**	Pn	Pn	07 23 31.7	-8.5
URZ	**Urewera**	**15.29**	**194**	P	P	**07 24 25.1**	**-1.7**
BKZ	**Black Stump Fm**	**16.30**	**195**		P	**07 24 36.3**	**-1.6**
BKZ				IAmb	IAmb	07 24 40.4	
	comp=Z,25nm,1.4s						
QRZ	**Quartz Range**	**19.01**	**202**	P	P	**07 25 04.9**	**-2.1**
TUWZ	**Tuamarina**	**19.10**	**199**	P	P	**07 25 05.1**	**-2.8**
KHZ	**Kahutara**	**20.13**	**198**	P	P	**07 25 17.0**	**-1.6**
LTZ	**Lake Taylor**	**20.84**	**200**	P	P	**07 25 25.9**	**-0.1**
OXZ	**Oxford**	**21.41**	**200**	P	P	**07 25 29.5**	**-1.6**
RPZ	**Rata Peaks**	**22.07**	**201**	P	P	**07 25 36.2**	**-1.0**
LBZ	**Lake Benmore**	**22.96**	**202**	P	P	**07 25 44.1**	**-1.1**
WHZ	**Wether Hill Ro**	**25.06**	**203**	P	P	**07 26 03.6**	**-0.6**
CTAO	**Charters Tower**	**33.22**	**269**	P	P	**07 27 16.2**	**-0.1**
CTAO				IAmb	IAmb	07 27 35.1	
	comp=Z,4.8nm,0.9s						
STKA	**Stephens Creek**	**36.50**	**248**	P	P	**07 27 45.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=85,slow=11,SNR=3.9						
BBOO	**Buckleboo**	**41.21**	**246**	P	P	**07 28 23.3**	**+0.4**
BBOO				IAmb	IAmb	07 28 34.3	
	comp=Z,15nm,1.4s						
AS31	**Alice Springs**	**43.82**	**260**	P	P	**07 28 44.1**	**+0.2**
ASAR	**Alice Springs**	**43.83**	**260**	P	P	**07 28 44.5**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=100,slow=6.8,SNR=12						
ASAR	**Alice Springs**	**43.83**	**260**	P	P	**07 28 44.1**	**+0.2**
WR0	**Warramunga Arr**	**43.99**	**265**	P	P	**07 28 45.5**	**+0.2**
WB2	**Warramunga Arr**	**44.17**	**265**	P	P	**07 28 46.2**	**-0.4**
WB0	**Warramunga Arr**	**44.17**	**265**	P	P	**07 28 46.5**	**-0.2**
WB0				IAmb	IAmb	07 28 52.0	
	comp=Z,16nm,1.5s						
WRA	**Warramunga Arr**	**44.18**	**265**	P	P	**07 28 46.3**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=90,slow=5.9,SNR=21						
WRA	**Warramunga Arr**	**44.18**	**265**	P	P	**07 28 47.0**	**+0.2**
FORT	**Forrest**	**48.09**	**249**	P	P	**07 29 17.4**	**+0.5**
FORT				IAmb	IAmb	07 29 18.0	
	comp=Z,33nm,1.4s						
MTN	**Manton Dam**	**49.17**	**273**	P	P	**07 29 26.1**	**+0.9**
MTN				IAmb	IAmb	07 29 43.4	
	comp=Z,14nm,1.1s						
KNRA	**Kununurra**	**50.44**	**269**	P	P	**07 29 35.0**	**+0.3**
KNRA				IAmb	IAmb	07 29 41.4	
	comp=Z,31nm,1.4s						
VNDA	**Vanda**	**54.95**	**185**	P	P	**07 30 09.6**	**+3.0**
	comp=Z,0.6nm,0.9s,baz=15,slow=5.2,SNR=2.1						
VNDA	**Vanda**	**54.95**	**185**	P	P	**07 30 06.3**	**-0.3**
QSPA	**South Pole Qui**	**66.60**	**180**	P	P	**07 31 24.6**	**-0.4**
MAW	**Mawson**	**78.75**	**200**	P	P	07 32 40.6	+4.8
	comp=Z,1.8nm,0.6s,baz=119,slow=8.8,SNR=2.6						
MAW	**Mawson**	**78.75**	**200**	P	P	**07 32 35.9**	**+0.1**
NVAR	**Mina Array Bea**	**83.25**	**43**	P	P	**07 33 00.6**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=226,slow=8.9,SNR=6.8						
NVAR	**Mina Array Bea**	**83.25**	**43**	P	P	**07 33 00.0**	**-0.1**
EYAK	**Cordova Ski Ar**	**87.77**	**15**	P	P	**07 33 20.6**	**-0.8**
GHO	**Glory Hole Cre**	**88.13**	**13**	P	P	**07 33 22.1**	**-1.1**
GHO				IAmb	IAmb	07 33 24.2	
	comp=Z,9.2nm,0.8s						
TXAR	**Lajitas Array**	**88.73**	**57**	P	P	**07 33 27.4**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=202,slow=6.2,SNR=3.5						
N25K	**Chitina, Valde**	**88.97**	**15**	P	P	**07 33 26.9**	**-0.3**
N25K				IAmb	IAmb	07 33 42.3	
	comp=Z,2.4nm,0.9s						
GLB	**Gilahina Butte**	**89.02**	**16**	P	P	**07 33 27.4**	**0.0**
GLB				IAmb	IAmb	07 33 29.0	
	comp=Z,7.3nm,1.4s						
WRH	**Wood River Hil**	**90.72**	**13**	P	P	**07 33 33.6**	**-1.5**
WRH				IAmb	IAmb	07 33 35.3	
	comp=Z,2.1nm,0.8s						
IMAR	**Indian Mountai**	**91.09**	**10**	P	P	**07 33 36.3**	**-0.6**
PDAR	**Pinedale Array**	**91.18**	**43**	P	P	**07 33 38.6**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=188,slow=3.0,SNR=5.3						
ILAR	**Eielson Array**	**91.22**	**13**	P	P	**07 33 36.8**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=223,slow=5.7,SNR=6.9						
CLL	**Collm**	**150.92**	**346**	*i* PKPbc	**PKPbc**	**07 40 23.9**	**+0.3**
	comp=Z,6.0nm,0.8s						

*JMA **28** 07:27:52.8±0.2, 24.04N×122.62E, h24km±5km, M2.2*
*TAP **28** 07:27:52.9, 24.05N×122.73E, h44km±1km, ML2.8, D*

ISC 28 07:27:53.2±1.0, 24.06N±0.05×122.67E±0.02, h32km±12km, n40, σ0$68/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.51**	**38**	P	Pn	**07 28 03.8**	**-0.5**
YOJ				S	Sb	**07 28 11.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.51**	**38**	*i* P	Pn	**07 28 03.8**	**-0.5**
	baz=31						
YOJ				S	Sn	**07 28 11.8**	**-0.2**
	baz=31						
EWUT	**Wuta**	**0.90**	**296**	*e*P	Pn	**07 28 09.5**	**-0.1**
	baz=294						
EWUT				*e*S	Sb	**07 28 22.3**	**+0.4**
	baz=294						
TWC	**Suao**	**0.93**	**306**	P	Pn	**07 28 09.8**	**-0.2**
	baz=305						
TWC				*e*S	Sb	**07 28 23.6**	**+0.9**
	baz=305						
NACB	**Ninganchiao**	**0.99**	**277**	*e*P	Pn	**07 28 10.3**	**-0.6**
	baz=264						
NACB				*e*S	Sb	**07 28 24.5**	**0.0**
	baz=264						
IRIF	**Iriomote-Funau**	**1.01**	**74**	P	Pb	**07 28 12.0**	**-0.1**
IRIF				S	Sb	**07 28 26.0**	**+0.9**
NDS	**Dongshan**	**1.04**	**304**	P	Pb	**07 28 12.6**	**-0.1**
	baz=302						
NDS				*e*S	Sb	**07 28 27.9**	**+1.9**
	baz=302						
HATJ	**Hateruma jima**	**1.04**	**90**	P	Pb	**07 28 12.8**	**+0.1**
HATJ				*e*S	Sb	**07 28 27.0**	**+1.0**
ETLH	**Xiulin Townshi**	**1.09**	**278**	*e*P	Pn	**07 28 11.8**	**-0.6**
	baz=277						
ETLH				*e*S	Sn	**07 28 26.5**	**0.0**
	baz=277						
NTC	**Toucheng**	**1.10**	**316**	*e*P	Pb	**07 28 13.0**	**-0.7**
	baz=326						
NTC				*e*S	Sb	**07 28 28.5**	**+0.8**
	baz=326						
TWE	**Neicheng**	**1.12**	**306**	*e*P	Pb	**07 28 14.1**	**0.0**
	baz=304						
ENTT	**Nioudou**	**1.16**	**300**	*e*P	Pb	**07 28 13.9**	**-0.8**
	baz=298						
NDT	**Datong Townshi**	**1.18**	**297**	*e*P	Pb	**07 28 14.8**	**-0.3**
	baz=285						
NDT				*e*S	Sb	**07 28 30.8**	**+0.7**
	baz=285						
TIPB	**Shuangxi**	**1.19**	**320**	*e*P	Pn	**07 28 14.2**	**+0.5**
	baz=329						
TIPB				*e*S	Sb	**07 28 31.2**	**+1.0**
	baz=329						
EGFH	**Guangfu**	**1.20**	**251**	*e*S	Sn	**07 28 29.2**	**+0.2**
	baz=251						
NNSB	**Datong**	**1.23**	**288**	P	Pn	**07 28 14.7**	**+0.3**
	baz=287						
NNSH	**Datong**	**1.23**	**288**	*e*P	Pn	**07 28 14.6**	**+0.3**
	baz=287						
JKRS	**Kuro-shima**	**1.24**	**81**	P	Pb	**07 28 15.6**	**-0.4**
JKRS				S	Sb	**07 28 32.9**	**+1.3**
NNS	**Nan Shan**	**1.24**	**288**	*e*P	Pn	**07 28 15.0**	**+0.5**
	baz=287						
HGSD	**Ruisui**	**1.27**	**244**	*e*P	Pn	**07 28 14.5**	**-0.2**
	baz=244						
NWLT	**Wulai**	**1.28**	**304**	*e*P	Pb	**07 28 16.1**	**-0.6**
	baz=314						
NWLT				*e*S	Sb	**07 28 33.1**	**+0.2**
	baz=314						
WHF	**Hehuan Shan**	**1.28**	**274**	*e*P	Pn	**07 28 15.0**	**-0.3**
	baz=273						
WFSB	**Wu-fen Shan**	**1.29**	**321**	*e*P	Pb	**07 28 16.1**	**-0.8**
	baz=319						
FUSS	**Fushou**	**1.31**	**278**	*e*P	Pn	**07 28 15.8**	**+0.2**
	baz=278						
YHNB	**Yeheng**	**1.32**	**298**	*e*P	Pb	**07 28 16.3**	**-1.2**
	baz=283						
YHNB				*e*S	Sb	**07 28 34.4**	**+0.2**
	baz=283						
CHGB	**Renai**	**1.36**	**270**	*e*P	Pn	**07 28 16.1**	**-0.2**
	baz=270						
OWD	**Renai**	**1.37**	**266**	*e*P	Pn	**07 28 16.4**	**+0.2**
	baz=265						
JIJ	**Ishigaki jima**	**1.38**	**77**	P	Pb	**07 28 17.2**	**-1.2**
JIJ				*e*S	Sb	**07 28 35.6**	**-0.1**
TDCB	**Techi**	**1.39**	**278**	*e*P	Pn	**07 28 17.2**	**+0.7**
	baz=268						
YULB	**Yu-li**	**1.42**	**242**	*e*P	Pn	**07 28 16.6**	**-0.3**
	baz=235						
VWDT	**VWDT**	**1.43**	**258**	*e*P	Pn	**07 28 16.9**	**0.0**
	baz=258						
VWDT				*e*S	Sn	**07 28 34.7**	**+0.1**
	baz=258						
TWF1	**Yuli**	**1.44**	**241**	*e*P	Pn	**07 28 17.3**	**+0.2**
	baz=232						
TWF1				*e*S	Sn	**07 28 35.4**	**+0.4**
	baz=232						
YM01	**YM01**	**1.47**	**318**	*e*P	Pb	**07 28 19.1**	**-0.9**
	baz=315						
JISG	**Ishigakijimahi**	**1.59**	**70**	P	Pn	**07 28 19.7**	**+0.6**
JISG				S	Sb	**07 28 40.5**	**-1.1**
SMLT	**Sun Moon Lake**	**1.63**	**264**	*e*P	Pn	**07 28 20.6**	**+0.8**
	baz=264						
EDH	**Donghe**	**1.65**	**229**	*e*P	Pn	**07 28 20.2**	**+0.1**
	baz=223						
TYC	**Yuchr**	**1.66**	**265**	*e*P	Pb	**07 28 21.4**	**-1.8**
	baz=264						
YUS	**Yu-Shan**	**1.67**	**250**	*e*P	Pn	**07 28 21.0**	**+0.3**
	baz=250						
ELDTW	**Lidau**	**1.74**	**241**	*e*P	Pn	**07 28 21.4**	**0.0**
	baz=240						
ALS	**Alishan**	**1.79**	**253**	*e*P	Pn	**07 28 23.0**	**+0.8**
	baz=252						
ALS				*e*S	Sn	**07 28 44.4**	**+0.3**
	baz=252						

*IDC **28** 07:33:22.6±0.4, 10.33N×84.75W, h72km±3km, mb3.9/17, mb1 4.2/23, mb1mx4.2/36, mbtmp4.3/23, MS3.4/12, Ms1 3.4/12, ms1mx3.2/29, Error ellipse: s-maj=11.6km s-min=10.0km az=28.0*
*UCR **28** 07:33:23.9±1.7, 10.19N×84.71W, h74km±3km, MW5.2*
*NEIC **28** 07:33:23.3±1.8, 10.26N±0.04×84.68W±0.03, h79km±4km, Error ellipse: s-maj=6.9km s-min=3.5km az=161.0*
*INET **28** 07:33:24.3, 10.27N×84.62W, h15km, MW4.0*
*GCG **28** 07:34:49.0±0.4, 15.50N×89.77W, h50km, MD3.6*

ISC 28 07:33:23.0±0.4, 10.26N±0.04×84.73W±0.04, h78km±3km, n408, σ1$11/424, mb4.5/121, 30C-54D, Fault plane solution: NP1: ϕs108.32991°, δ43.49378°, λ-78.90036°. **NP2:** ϕs273.19721°, δ47.51471°, λ-100.35103°. **Principal axes:** T Plg2.0281°, Azm10.5011°; N Plg7.6143°, Azm280.2298°; P Plg82.1171°, Azm115.3196°; **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE1	**Arenal 1**	**0.20**	**2**	*e*P	Pn	**07 33 35.6**	**+1.0**
CEDE	**Laguna Cedeo**	**0.22**	**6**	||*i*P	Pn	**07 33 35.7**	**+0.9**
CEDE				*i* S	Sn	**07 33 44.9**	**+1.5**
JTS	**Las Juntas de**	**0.22**	**277**	P	Pn	**07 33 35.3**	**+0.6**
	2||m,0.3s,baz=134,slow=7.8						
JTS				S	Sn	**07 33 43.4**	**0.0**
	6||m,0.3s,baz=35,slow=22,SNR=52						
JTS	**Las Juntas de**	**0.22**	**277**	*e*P	Pn	**07 33 35.1**	**+0.4**
JTS	**Las Juntas de**	**0.22**	**277**		Pn	**07 33 34.9**	**+0.2**
JTS	**Las Juntas de**	**0.22**	**277**	||*i*P	Pn	**07 33 35.0**	**+0.2**
JTS				*e*S	Sn	**07 33 43.2**	**-0.1**
PACM	**Arenal**	**0.22**	**350**	||*i*P	Pn	07 33 40.9	+6.1
SRA1	**San Ramn**	**0.30**	**126**	*e*P	Pn	**07 33 35.2**	**0.0**
SRA1				*e*S	Sn	**07 33 43.8**	**-0.5**
ACAL	**Aguas Claras**	**0.48**	**321**	||*i*P	Pn	**07 33 37.7**	**+1.2**
LAFE	**Finca La Fe, P**	**0.49**	**202**	*e*P	Pn	**07 33 36.6**	**+0.1**
PTEN	**Parque Tenorio**	**0.52**	**330**	||*i*P	Pn	**07 33 38.1**	**+1.3**
COVE	**Coope Vega, Sa**	**0.56**	**35**	*e*P	Pn	**07 33 37.5**	**+0.4**
COVE	**Coope Vega, Sa**	**0.56**	**35**		Pn	**07 33 37.1**	**0.0**
CUI	**Cuipilapa**	**0.58**	**312**	||*i*P	Pn	**07 33 38.6**	**+1.1**
COLC	**Colonia**	**0.62**	**310**	||*i*P	Pn	**07 33 38.9**	**+1.1**
PLVR	**Palo Verde**	**0.62**	**278**	*e*P	Pn	**07 33 38.0**	**+0.1**
HORNC	**Hornillas**	**0.63**	**315**	||*i*P	Pn	**07 33 39.0**	**+1.1**
MICM	**Guayabo**	**0.64**	**313**	*i* P	Pn	**07 33 39.1**	**+1.1**
HDC	**Heredia**	**0.66**	**113**	*e*P	Pn	**07 33 38.3**	**+0.1**
HDC				*e*S	Sn	**07 33 49.5**	**0.0**
HDC	**Heredia**	**0.66**	**113**		Pn	**07 33 38.6**	**+0.4**
HDC3	**Heredia 3**	**0.66**	**113**	*e*P	Pn	**07 33 38.6**	**+0.3**
GUAB	**Guayabo de Bag**	**0.66**	**312**	||*i*P	Pn	**07 33 39.3**	**+1.0**
LIM1	**Limonal**	**0.67**	**310**	||*i*P	Pn	**07 33 39.5**	**+1.1**
CAO2	**Cobano, Puntar**	**0.68**	**213**		Pn	**07 33 37.9**	**-0.5**
ORTG	**Ortega, Santa**	**0.73**	**278**	*e*P	Pn	**07 33 40.3**	**+1.3**
ORTG	**Ortega, Santa**	**0.73**	**278**		Pn	**07 33 40.2**	**+1.3**
SJS	**Escuela Geolog**	**0.74**	**116**	*e*P	Pn	**07 33 39.4**	**+0.3**
GUAI	**GUAI**	**0.77**	**271**	||*i*P	Pn	**07 33 40.8**	**+1.5**
DUNO	**Dulce Nombre,**	**0.78**	**256**	*e*P	Pn	**07 33 40.4**	**+1.0**
GPS2	**Hotel Rincn d**	**0.78**	**308**	||*i*P	Pn	**07 33 40.8**	**+1.3**
RIFO	**Rio Frio, Sara**	**0.79**	**86**	*e*P	Pn	**07 33 39.7**	**+0.1**
GPS3	**Bodega del ICE**	**0.80**	**308**	||*i*P	Pn	**07 33 40.8**	**+1.2**
BUAI	**Buenos Aires**	**0.85**	**316**	||*i*P	Pn	**07 33 41.6**	**+1.4**
BUEV	**Buena Vista**	**0.85**	**309**	||*i*P	Pn	**07 33 41.6**	**+1.3**
LAPC	**Finca la Perla**	**0.86**	**306**	||*i*P	Pn	**07 33 41.4**	**+1.1**
INDI	**Punta indio, G**	**0.86**	**243**	*e*P	Pn	**07 33 40.7**	**+0.3**
GB1A	**Borinquen Arri**	**0.86**	**310**	||*i*P	Pn	**07 33 41.8**	**+1.3**
GBS3	**Finca Las Img**	**0.88**	**306**	||*i*P	Pn	**07 33 41.8**	**+1.2**
LCR2	**La Lucha 2**	**0.88**	**126**	*e*P	Pn	**07 33 40.9**	**0.0**
RAFA	**San Farael, Vo**	**0.95**	**108**	*e*P	Pn	**07 33 42.1**	**+0.3**
GRZA	**Playa Garza**	**0.96**	**249**	*e*P	Pn	**07 33 41.8**	**+0.3**
HZTE	**Horizontes, Gu**	**0.96**	**298**	*e*P	Pn	**07 33 43.2**	**+1.6**
VTUC	**Crater, Volcan**	**0.98**	**104**	*e*P	Pn	**07 33 42.4**	**+0.2**
CVTR	**Volcan Turrial**	**0.98**	**104**	*e*P	Pn	**07 33 42.4**	**+0.2**
CVTR	**Volcan Turrial**	**0.98**	**104**	Pn	Pn	**07 33 42.2**	**0.0**
RIMA	**Rio Macho**	**0.98**	**120**	*e*P	Pn	**07 33 42.2**	**+0.2**
VTCV	**VTCV, Calle Va**	**1.02**	**106**	*e*P	Pn	**07 33 43.0**	**+0.5**
CDM	**Cerro de Muert**	**1.18**	**127**	*e*P	Pn	**07 33 44.6**	**-0.1**
EDDO	**Dominical**	**1.32**	**140**	||*e*P	Pn	**07 33 45.7**	**-0.2**
EDDO				*e*S	Sn	**07 34 03.1**	**-0.1**
MRVA	**Moravia de Chi**	**1.34**	**109**	*e*P	Pn	**07 33 46.9**	**+0.5**
BATAN	**Batan**	**1.34**	**97**	*e*P	Pn	**07 33 46.7**	**+0.5**
BATAN	**Batan**	**1.34**	**97**		Pn	**07 33 46.3**	**+0.1**
PEZE	**Perez Zeledon,**	**1.35**	**130**	*e*P	Pn	**07 33 46.6**	**+0.1**
PEZE	**Perez Zeledon,**	**1.35**	**130**		Pn	**07 33 46.3**	**-0.2**
EDLM	**Las Mercedes**	**1.49**	**131**	||*e*P	Pn	**07 33 48.5**	**+0.3**
EDLM				*e*S	Sn	**07 34 07.4**	**+0.1**
ACON	**Acoyapa**	**1.75**	**346**	*e*P	Pn	**07 33 53.1**	**+1.5**
ACON	**Acoyapa**	**1.75**	**346**	Pn	Pn	**07 33 53.2**	**+1.6**
DRK0	**Durika**	**1.77**	**124**	*e*P	Pn	**07 33 52.1**	**+0.2**
DRK0	**Durika**	**1.77**	**124**	Pn	Pn	**07 33 52.7**	**+0.7**
EDPN	**Palmar Norte**	**1.80**	**136**	||*e*P	Pn	**07 33 52.5**	**+0.2**
EDBA	**Buenos Aires**	**1.80**	**127**	||*e*P	Pn	**07 33 52.1**	**-0.2**
EDBA				*e*S	Sn	**07 34 14.1**	**-0.4**
RIOS	**Rincon, Osa**	**1.96**	**142**	*e*P	Pn	**07 33 53.5**	**-0.9**
RIOS	**Rincon, Osa**	**1.96**	**142**	Pn	Pn	**07 33 54.1**	**-0.2**
ESPN	**Las Esperanzas**	**1.96**	**12**	*e*P	Pn	**07 33 56.0**	**+1.6**
ESPN	**Las Esperanzas**	**1.96**	**12**		Pn	**07 33 55.0**	**+0.6**
POTG	**Potrero Grande**	**1.99**	**127**	*e*P	Pn	**07 33 55.0**	**+0.2**
LPLA	**Las Palmas La**	**2.09**	**126**	||*e*P	Pn	**07 33 56.4**	**+0.1**
LPLA				*e*S	Sn	**07 34 21.3**	**-0.3**
RGM0	**Gandoca**	**2.19**	**108**	*e*P	Pn	**07 33 58.6**	**+1.2**
RGM0	**Gandoca**	**2.19**	**108**	Pn	Pn	**07 33 57.0**	**-0.5**
PTJ1	**Puerto Jimnez**	**2.22**	**141**	*e*P	Pn	**07 33 58.9**	**+1.0**
EDSV	**San Vito**	**2.25**	**129**	||*e*P	Pn	**07 33 58.8**	**+0.5**
PIRO	**Carate, Puerto**	**2.30**	**143**	*e*P	Pn	**07 34 00.3**	**+1.4**
BOAB	**BOACO BROADBAN**	**2.36**	**337**	Pn	Pn	**07 34 00.6**	**+0.9**
BRU2	**Volcan**	**2.48**	**126**	*e*P	Pn	**07 34 01.9**	**+0.3**
CDITO	**Canoas**	**2.48**	**132**	*e*P	Pn	**07 34 01.0**	**-0.4**
MATN	**Matagalpa**	**2.90**	**336**		Pn	**07 34 08.0**	**+0.9**
CRIN	**San Cristobal**	**3.32**	**317**	Pn	Pn	**07 34 14.8**	**+1.9**
GMAL	**Guarumal, Vera**	**4.25**	**125**	*e*P	Pn	**07 34 25.4**	**0.0**
PRVC	**Isla de Provid**	**4.52**	**46**	*e*P	Pn	**07 34 30.0**	**+0.9**
TGUH	**Tegucigalpa,Un**	**4.52**	**327**	Pn	Pn	**07 34 31.8**	**+1.8**
TGUH	**Tegucigalpa,Un**	**4.52**	**327**	*e*P	Pn	**07 34 31.8**	**+2.6**
PNME	**Peonone**	**4.69**	**112**	*e*P	Pn	**07 34 32.0**	**+0.6**
BCIP	**Isla Barro Col**	**4.94**	**102**	*e*P	Pn	**07 34 34.7**	**-0.2**
BCIP	**Isla Barro Col**	**4.94**	**102**	Pn	Pn	**07 34 35.0**	**+0.2**
BCIP	**Isla Barro Col**	**4.94**	**102**	||*i*P	Pn	**07 34 35.1**	**+0.3**
BCIP				*e*S	Sn	**07 35 26.7**	**-4.0**
ZANG	**Zanguenga, Cho**	**4.97**	**105**	*e*P	Pn	**07 34 35.5**	**+0.3**
AZU	**Azuero**	**5.04**	**119**	*e*P	Pn	**07 34 37.3**	**+1.1**
AZU				*e*S	Sn	07 35 43.6	+11
UPA	**Univ. de Panam**	**5.28**	**104**	*e*P	Pn	**07 34 40.2**	**+0.8**
SNET	**Serv Nac Est T**	**5.57**	**308**		Pn	**07 34 43.4**	**0.0**
MTO3	**Montecristo**	**6.11**	**313**		Pn	**07 34 52.1**	**+1.0**
ESQI	**Esquipulas**	**6.21**	**314**		Pn	**07 34 51.4**	**-0.8**
NBG	**Las Nubes**	**6.97**	**309**	*e*P	Pn	07 35 08.3	+5.5
NBG				*e*S	Sn	07 35 23.8	-57
FUG	**Fuego 3**	**7.28**	**305**	*e*P	Pn	07 35 11.8	+4.9
APG	**El Apazote**	**7.32**	**311**	P	Pn	**07 35 08.2**	**+0.7**
	2.9nm,0.3s,baz=117,slow=7.2,SNR=67						

146A IAmb IAmb 07 38 20.5
comp=Z,22nm,0.7s
833A Chaparral WMA, 22.64 325 P 07 38 18.6
baz=140
LRAL Lakeview Retre 22.76 355 P **P** **07 38 19.9 +1.0**
LRAL Lakeview Retre 22.76 355 P 07 38 20.8
baz=174,SNR=29
Z51A Franklin 22.95 359 P **P** **07 38 22.3 +1.4**
Z51A IAmb IAmb 07 38 43.0
comp=Z,41nm,1.3s
Z47A Carrollton 23.03 353 P **P** **07 38 23.0 +1.3**
GOGA Godfrey 23.07 3 P 07 38 23.3
baz=183,SNR=12
GOGA Godfrey 23.07 3 P **P** **07 38 22.5 +0.5**
GOGA IAmb IAmb 07 38 24.3
comp=Z,23nm,0.8s
143A Socs Landing, 23.17 346 P **P** **07 38 23.7 +0.7**
143A IAmb IAmb 07 38 26.2
comp=Z,20nm,0.8s
Y52A Lilburn 23.50 1 P **P** **07 38 26.9 +0.9**
Y52A IAmb IAmb 07 38 29.3
comp=Z,48nm,1.5s
Y49A Blount Mountai 23.54 356 P **P** **07 38 26.8 +0.4**
Y49A IAmb IAmb 07 38 30.9
comp=Z,20nm,0.7s
435B Jarrell 23.66 331 P **P** **07 38 28.6 +1.0**
435B Jarrell 23.66 331 P 07 38 29.3
baz=147,SNR=16
HODGE Hodges 23.96 5 P **P** **07 38 31.2 +1.0**
HODGE IAmb IAmb 07 38 32.3
comp=Z,19nm,0.8s
JSC Jenkinsville 24.12 7 P **P** **07 38 32.7 +1.2**
X48A Hartselle 24.17 355 P **P** **07 38 32.5 +0.5**
X48A IAmb IAmb 07 38 35.7
comp=Z,21nm,0.8s
FPAL Fort Paine 24.18 358 P **P** **07 38 33.4 +1.2**
FPAL IAmb IAmb 07 38 55.3
comp=Z,20nm,1.0s
X51A Calhoun 24.19 360 P **P** **07 38 33.0 +0.7**
X51A IAmb IAmb 07 38 36.2
comp=Z,19nm,1.0s
Y59A Loris 24.22 12 P **P** **07 38 33.4 +0.9**
OXF Oxford 24.51 351 P **P** **07 38 35.9 +0.8**
OXF Oxford 24.51 351 P 07 38 36.3
baz=169,SNR=6.1
JCT Junction City 24.53 327 P **P** **07 38 36.3 +0.8**
JCT IAmb IAmb 07 38 38.9
comp=Z,19nm,1.0s
JCT Junction City 24.53 327 P 07 38 36.5
baz=142,SNR=11
BIRD Birdtown, Kers 24.58 8 P **P** **07 38 37.2 +1.4**
BIRD IAmb IAmb 07 38 39.9
comp=Z,15nm,1.0s
PAULI Pauline 24.59 6 P **P** **07 38 35.8 -0.1**
PAULI IAmb IAmb 07 38 41.6
comp=Z,16nm,0.9s
WHTX Lake Whitney, 24.62 333 P 07 38 39.0
baz=149
WHTX Lake Whitney, 24.62 333 P **P** **07 38 36.6 +0.4**
WHTX IAmb IAmb 07 38 39.9
comp=Z,30nm,0.8s
BG3 Lake Jocassee 24.67 4 P **P** **07 38 38.0 +1.4**
BG3 IAmb IAmb 07 38 59.7
comp=Z,17nm,0.9s
W52A Murphy 24.73 2 P **P** **07 38 38.3 +1.1**
W52A IAmb IAmb 07 38 39.9
comp=Z,18nm,0.8s
PLAL Pickwick Lake 24.80 353 P **P** **07 38 38.6 +0.9**
PLAL IAmb IAmb 07 38 40.8
comp=Z,17nm,1.1s
W50A Signal Mountai 24.83 359 P **P** **07 38 39.1 +1.0**
W50A IAmb IAmb 07 38 42.3
comp=Z,31nm,0.9s
SWET Sewanee 24.86 358 P **P** **07 38 39.2 +0.8**
SWET IAmb IAmb 07 38 59.7
comp=Z,21nm,0.9s
CPCT Cooper Cave 25.07 0 P **P** **07 38 40.7 +0.4**
CPCT IAmb IAmb 07 38 44.5
comp=Z,15nm,0.9s
TKL Tuckaleechee C 25.30 2 P **P** **07 38 43.4 +1.1**
comp=Z,6.3nm,0.9s,baz=176,slow=11,SNR=6.0
TKL Tuckaleechee C 25.30 2 P **P** **07 38 43.2 +0.9**
V53A Saluda 25.35 4 P **P** **07 38 44.1 +1.3**
V53A IAmb IAmb 07 39 06.2
comp=Z,11nm,0.8s
V51A Loudon 25.43 1 P **P** **07 38 42.7 -0.8**
V51A IAmb IAmb 07 39 06.0
comp=Z,23nm,1.0s
V48A Smith Brothers 25.43 356 P **P** **07 38 44.7 +1.2**
V48A IAmb IAmb 07 39 04.9
comp=Z,16nm,0.8s
MIAR Mount Ida 25.49 343 P **P** **07 38 43.8 -0.3**
MIAR IAmb IAmb 07 38 47.3
comp=Z,18nm,0.8s
MIAR Mount Ida 25.49 343 P 07 38 45.0
baz=160,SNR=19
W41B Gary Mavity, V 25.73 346 P 07 38 46.4
baz=163,SNR=7.5
CLTN Cedars of Leba 25.75 357 P **P** **07 38 46.9 +0.4**
HPIG 25.79 313 P **P** **07 38 49.0 +1.8**
WHAR Wooly Hollow 25.85 346 P **P** **07 38 47.7 +0.4**
WHAR IAmb IAmb 07 38 48.2
comp=Z,15nm,0.8s
WVT Waverly 25.90 354 P **P** **07 38 48.4 +0.5**
WVT Waverly 25.90 354 P 07 38 47.8
baz=173
V58A Windy Hill, Pi 25.92 10 P **P** **07 38 48.2 +0.2**
V58A IAmb IAmb 07 38 49.3
comp=Z,12nm,0.7s
TXAR Lajitas Array 25.95 320 P **P** **07 38 49.3 +0.8**
comp=Z,3.3nm,0.6s,baz=146,slow=9.0,SNR=22
TXAR PcP **PcP** **07 42 16.4 +1.0**
comp=Z,0.9nm,0.8s,baz=140,slow=4.4,SNR=4.5
TXAR ScP **ScP** **07 45 50.2 +2.0**
comp=Z,0.6nm,0.9s,baz=139,slow=8.2,SNR=4.6
TXAR LR LR 07 50 49.1
comp=Z,44nm,18.6s,baz=0.0,slow=40
TX31 Lajitas Ar. Si 25.95 320 P **P** **07 38 49.2 +0.8**
TX31 IAmb IAmb 07 38 53.2
comp=Z,11nm,0.6s
TX32 Lajitas Array 25.95 320 P **P** **07 38 49.9 +1.4**
X37A Clayton 26.10 340 P **P** **07 38 50.1 +0.6**
U49A Red Boiling Sp 26.15 358 P **P** **07 38 50.4 +0.3**
U49A IAmb IAmb 07 39 11.4
comp=Z,11nm,0.8s
W39A Magazine 26.16 343 P 07 38 50.7
baz=160,SNR=5.8
W39A Magazine 26.16 343 P **P** **07 38 50.3 +0.2**
W39A IAmb IAmb 07 38 51.7
comp=Z,9.7nm,0.7s
ABTX Abilene, Hawle 26.16 330 P **P** **07 38 50.4 +0.1**
ABTX IAmb IAmb 07 38 55.7
comp=Z,15nm,1.0s
ABTX Abilene, Hawle 26.16 330 P 07 38 54.3
baz=145
LCAR Lake Charles 26.34 348 P **P** **07 38 51.5 -0.2**
LCAR IAmb IAmb 07 38 53.0
comp=Z,22nm,0.8s
FCAR Ozark Folk Cen 26.38 346 P **P** **07 38 51.9 -0.2**
PARMO Parma 26.67 351 P **P** **07 38 55.5 +0.8**
T47A Sharon Grove 26.69 356 P **P** **07 38 55.7 +0.8**
T47A IAmb IAmb 07 39 15.7
comp=Z,18nm,1.2s
T45A Paducah 26.87 353 P **P** **07 38 56.6 +0.1**
U40A Yellville 27.00 345 P **P** **07 38 58.0 +0.3**
U40A Yellville 27.00 345 P 07 38 58.4
baz=162,SNR=8.1
T57A Hurt 27.07 10 P **P** **07 38 58.0 -0.4**
ETMB Extrema 27.15 137 eP **P** **07 39 00.1 +0.9**
HHAR Hobbs 27.22 344 P **P** **07 39 00.5 +0.8**
T42A Van Buren 27.26 349 P **P** **07 39 00.3 +0.3**
T42A IAmb IAmb 07 39 01.0
comp=Z,16nm,0.7s
S51A Beattyville 27.28 2 P **P** **07 39 00.7 +0.5**
S51A IAmb IAmb 07 39 21.7
comp=Z,18nm,1.0s
MACA Manacapuru-AM 27.41 118 eP **P** **07 39 03.1 +1.5**
U38A Gravette 27.49 343 P **P** **07 39 01.6 -0.5**
SLBS Sierra La Lagu 27.50 302 P **P** **07 39 03.2 +0.8**
SLBS IAmb IAmb 07 39 08.2
comp=Z,14nm,0.9s
S44A Carbondale 27.61 352 P **P** **07 39 03.2 0.0**
S44A IAmb IAmb 07 39 04.7
comp=Z,14nm,1.1s
MGMO Mountain Grove 27.62 347 P **P** **07 39 03.5 +0.2**
MGMO IAmb IAmb 07 39 04.7
comp=Z,13nm,0.8s
SIUC Southern Illin 27.63 352 P **P** **07 39 03.4 +0.1**
SIUC IAmb IAmb 07 39 04.8
comp=Z,15nm,1.0s
OK031 S. Brethren Rd 27.84 339 P **P** **07 39 04.4 -0.8**
OK031 IAmb IAmb 07 39 06.5
comp=Z,6.2nm,0.6s
WCI Wyandotte Cave 27.88 357 P **P** **07 39 05.7 +0.2**
WCI IAmb IAmb 07 39 27.0
comp=Z,20nm,0.9s
WCI Wyandotte Cave 27.88 357 P 07 39 06.1
baz=177
R50A Paris 27.90 1 P **P** **07 39 06.5 +0.7**
R50A IAmb IAmb 07 39 27.2
comp=Z,19nm,1.1s
R49A Shelbyville 27.91 359 P **P** **07 39 06.1 +0.3**
R49A IAmb IAmb 07 39 26.9
comp=Z,18nm,0.8s
R53A Hurricane 28.06 5 P **P** **07 39 07.8 +0.6**
R53A IAmb IAmb 07 39 11.5
comp=Z,12nm,0.7s
R55A Marlinton 28.20 8 P **P** **07 39 08.7 +0.2**
R55A IAmb IAmb 07 39 19.3
comp=Z,12nm,1.1s
CCM Cathedral Cave 28.29 349 P **P** **07 39 08.4 -0.7**
CCM IAmb IAmb 07 39 09.6
comp=Z,12nm,0.8s
CCM Cathedral Cave 28.29 349 P 07 39 08.9
baz=166
S39A Bolivar 28.38 346 P **P** **07 39 09.5 -0.5**
Q53A Leroy 28.62 5 P 07 39 13.3
baz=186
MNTX Cornudas Mount 28.65 321 P **P** **07 39 12.4 -0.1**
MNTX Cornudas Mount 28.65 321 P 07 39 13.1
baz=134
Q52A Bidwell 28.66 4 P **P** **07 39 13.3 +0.8**
Q51A Peebles 28.67 2 P **P** **07 39 13.1 +0.6**
SAML Samuel 28.71 131 P **P** **07 39 12.8 -0.3**
R40A Maddies Statio 28.72 348 P **P** **07 39 13.3 +0.3**
R40A IAmb IAmb 07 39 19.2
comp=Z,8.1nm,0.8s
Q44A Meyer Farm, Va 28.78 353 P **P** **07 39 12.5 -1.0**
Q44A IAmb IAmb 07 39 16.0
comp=Z,12nm,0.8s
MSTX Muleshoe 28.82 328 P **P** **07 39 14.6 +0.5**
MSTX IAmb IAmb 07 39 16.2
comp=Z,6.4nm,0.7s
MSTX Muleshoe 28.82 328 P 07 39 15.0
baz=141
P48A Milroy 29.08 359 P **P** **07 39 15.6 -0.6**
P48A IAmb IAmb 07 39 36.8
comp=Z,22nm,0.9s
P49A Miami Univ. Ec 29.15 0 P **P** **07 39 15.9 -0.9**
P49A IAmb IAmb 07 39 37.4
comp=Z,14nm,0.9s
P49A Miami Univ. Ec 29.15 0 P 07 39 16.5
baz=180
P53A Whipple 29.25 5 P **P** **07 39 18.9 +1.2**
P53A IAmb IAmb 07 39 22.5
comp=Z,16nm,0.7s
P46A Rosedale 29.32 356 P **P** **07 39 18.3 +0.1**
P46A IAmb IAmb 07 39 38.7
comp=Z,15nm,0.8s
P52A Corning 29.34 4 P 07 39 19.2
baz=185
P52A Corning 29.34 4 P **P** **07 39 18.9 +0.4**
P52A IAmb IAmb 07 39 22.7
comp=Z,15nm,0.8s
P43A Skaggs, Pawnee 29.57 352 P **P** **07 39 20.4 -0.1**
P43A IAmb IAmb 07 39 21.3
comp=Z,9.3nm,0.9s
O52A Adamsville 29.84 4 P **P** **07 39 22.2 -0.7**
P40A Paris 29.87 349 P **P** **07 39 22.4 -0.7**
P40A IAmb IAmb 07 39 23.4
comp=Z,9.7nm,0.9s
ACSO Alum Creek Sta 29.89 3 P **P** **07 39 23.4 +0.1**
ACSO Alum Creek Sta 29.89 3 P 07 39 23.9
baz=183,SNR=5.9
O53A New Philadelph 30.03 5 P **P** **07 39 24.1 -0.5**
O53A New Philadelph 30.03 5 P 07 39 25.4
baz=187
SFIN Lafayette 30.07 356 P 07 39 24.4
baz=175,SNR=5.3
SFIN Lafayette 30.07 356 P **P** **07 39 24.3 -0.6**
P38A Dawn 30.27 346 P **P** **07 39 26.0 -0.7**
P38A IAmb IAmb 07 39 28.0
comp=Z,8.6nm,0.9s
HDIL Hopedale 30.44 353 P **P** **07 39 27.5 -0.7**
HDIL Hopedale 30.44 353 P 07 39 27.6
baz=171,SNR=5.6
KSU1 Kansas State U 30.62 342 P **P** **07 39 29.3 -0.5**
KSU1 IAmb IAmb 07 39 31.3
comp=Z,6.9nm,0.7s
KSU1 Kansas State U 30.62 342 P 07 39 29.4
baz=157
319A Douglas 30.97 316 P **P** **07 39 33.2 0.0**
319A IAmb IAmb 07 39 37.3
comp=Z,17nm,0.9s
N56A West Decatur 31.06 9 P 07 39 36.8
baz=192
LPAZ La Paz 31.08 148 P **P** **07 39 36.1 +1.4**
comp=Z,1.7nm,0.8s,baz=339,slow=10,SNR=5.4
LPAZ LR LR 07 52 43.8
comp=Z,124nm,21.0s,baz=322,slow=37
LPAZ La Paz 31.08 148 P **P** **07 39 34.4 -0.4**
M53A WI Miller and 31.26 6 P 07 39 36.2
baz=188
LENM Lemitar 31.32 323 P **P** **07 39 37.6 +1.3**
N59A State Game Lan 31.54 13 P 07 39 39.1
baz=197
ANMO Albuquerque 31.57 324 P **P** **07 39 39.5 +1.0**
ANMO Albuquerque 31.57 324 P 07 39 39.2
baz=136
M56A Emporium 31.63 9 P 07 39 39.2
baz=192
M57A Sunshine Farm, 31.67 11 P 07 39 40.2
baz=194
L53A Girard 31.81 6 P 07 39 40.8
baz=188
L42A Oliver, Polo 31.91 353 P **P** **07 39 40.1 -1.0**
N35A Tabor 31.97 344 P **P** **07 39 41.0 -0.7**
T25A Trinidad 32.12 330 P 07 39 44.9
baz=142
L40A Anamosa 32.19 351 P **P** **07 39 42.5 -1.1**
L57A Andrews Acres 32.36 11 P 07 39 46.0
baz=194
SCIA State Center 32.39 348 P **P** **07 39 44.9 -0.5**
WVNY West Valley, N 32.47 8 P **P** **07 39 45.5 -0.5**
WVNY IAmb IAmb 07 40 06.9
comp=Z,11nm,0.9s
TUC Tucson 32.56 316 P **P** **07 39 48.4 +1.4**
TUC Tucson 32.56 316 P 07 39 49.0
baz=127
L58A Harry Jones Me 32.60 12 P 07 39 47.8
baz=196
BINY Binghamton 32.72 12 P 07 39 48.6
baz=196
MNMC Minye Minye 32.80 153 P **P** **07 39 49.6 +0.1**
JFWS Jewell Farm 32.88 353 P 07 39 48.7
baz=170,SNR=6.5
JFWS Jewell Farm 32.88 353 P **P** **07 39 48.6 -1.0**
K38A Parkersburg 33.02 349 P **P** **07 39 49.9 -0.9**
SDCO Great Sand Dun 33.13 329 P 07 39 53.9
baz=140,SNR=6.6
SDCO Great Sand Dun 33.13 329 P **P** **07 39 53.1 +0.9**
L34A Svendsen Farm, 33.20 344 P **P** **07 39 52.0 -0.4**
L34A IAmb IAmb 07 40 18.2
comp=Z,8.0nm,0.7s
K58A Earlville 33.33 12 P 07 39 56.6
baz=196
X18A Snowflake 33.39 320 P **P** **07 39 55.8 +1.4**
X18A IAmb IAmb 07 39 57.6
comp=Z,7.4nm,0.8s
VILB Vilhena 33.54 133 eP **P** **07 39 56.9 +1.1**
W18A Petrified Fore 33.64 321 P **P** **07 39 58.5 +1.9**
W18A Petrified Fore 33.64 321 P 07 39 58.4
baz=131
I42A Draeger Farm, 33.70 355 P **P** **07 39 56.0 -0.7**
214A Organ Pipe Nat 33.76 314 P **P** **07 39 58.9 +1.4**
214A IAmb IAmb 07 40 01.0
comp=Z,5.7nm,0.8s
214A Organ Pipe Nat 33.76 314 P 07 39 58.9
baz=124
S22A 4UR Ranch, Cre 33.82 328 P 07 39 59.7
baz=138
NPGB Novo Progresso 33.93 119 eP **P** **07 39 59.4 +0.3**
H43A Windswept, Lux 34.18 356 P **P** **07 39 59.6 -1.3**
X16A Lo Mia Camp, P 34.27 319 P **P** **07 40 03.6 +1.5**
X16A IAmb IAmb 07 40 06.9
comp=Z,7.8nm,0.8s
MVCO Mesa Verde 34.34 325 P **P** **07 40 03.4 +0.7**
MVCO IAmb IAmb 07 40 04.9
comp=Z,5.2nm,1.0s
MVCO Mesa Verde 34.34 325 P 07 40 04.2
baz=135
I37A Lemond, Waseca 34.46 349 P **P** **07 40 02.8 -0.5**
H53A Bobcaygeon 34.59 8 P 07 40 04.6
baz=191
SADO Sadowa 34.72 7 P **P** **07 40 04.7 -0.8**
ISCO Idaho Springs 34.79 331 P **P** **07 40 08.2 +1.6**
ISCO Idaho Springs 34.79 331 P 07 40 08.3
baz=142
113A Mohawk Valley, 34.88 314 P **P** **07 40 08.6 +1.5**
113A IAmb IAmb 07 40 10.5
comp=Z,4.3nm,0.7s
113A PcP **07 42 38.8 +0.2**
ECSD EROS Data Cent 34.91 345 P 07 40 05.9
baz=159,SNR=7.7
ECSD EROS Data Cent 34.91 345 P **P** **07 40 05.5 -1.7**
ECSD IAmb IAmb 07 40 07.0
comp=Z,4.8nm,0.7s
WUAZ Wupatki 34.91 320 P 07 40 10.1
baz=130,SNR=12
WUAZ Wupatki 34.91 320 P **P** **07 40 08.0 +0.4**
WUAZ IAmb IAmb 07 40 11.4
comp=Z,10nm,0.9s
SMCO Snowmass 34.97 329 P **P** **07 40 09.8 +1.5**
Y14A Wickenburg 35.02 317 P **P** **07 40 09.9 +1.6**
Y14A IAmb IAmb 07 40 11.4
comp=Z,7.0nm,0.7s
G40A Rib Lake 35.20 353 P **P** **07 40 08.7 -0.9**
G40A IAmb IAmb 07 40 30.5
comp=Z,9.3nm,0.9s
PV13 Radium Mtn., P 35.20 326 P **P** **07 40 10.0 0.0**
PV13 IAmb IAmb 07 40 14.9
comp=Z,4.5nm,0.7s
SPX San Pedro Mart 35.22 310 P **P** **07 40 11.1 +0.7**
PV05 Paradox Valley 35.29 326 P **P** **07 40 10.1 -0.8**
PV05 IAmb IAmb 07 40 12.7
comp=Z,4.3nm,0.7s
LONY Lake Ozonia 35.33 13 P 07 40 10.8
baz=197
SPMN Marine on St. 35.52 350 P **P** **07 40 10.7 -1.7**
SPMN Marine on St. 35.52 350 P 07 40 11.1
baz=166,SNR=9.9
CLDB Colider 35.62 125 eP **P** **07 40 17.1 +3.5**
GLA Glamis 35.78 314 P **P** **07 40 15.9 +1.0**
GLA Glamis 35.78 314 P 07 40 17.8
baz=123,SNR=5.6
COWI Conover 35.91 355 P **P** **07 40 14.6 -1.2**
COWI IAmb IAmb 07 40 15.7
comp=Z,7.4nm,0.7s
PTLB Pontes e Lacer 35.99 135 eP **P** **07 40 17.2 +0.5**
PDMCI Parker Dam,Lak 36.00 316 P 07 40 19.6
baz=125,SNR=9.2
ALGO Algonquin Park 36.02 8 P 07 40 16.0
baz=191
E43A Lone Tree Farm 36.04 357 P **P** **07 40 15.4 -1.4**
U15A North Rim 36.07 321 P **P** **07 40 18.7 +1.1**
LVC Limon Verde 36.16 155 P **P** **07 40 17.8 -0.8**
LVC IAmb IAmb 07 40 22.7
comp=Z,13nm,1.1s
LVC Limon Verde 36.16 155 eP **P** **07 40 19.9 +1.4**
F36A Milaca 36.26 350 P **P** **07 40 16.8 -2.0**
W13A Hualapai Mount 36.28 318 P **P** **07 40 21.0 +1.6**
W13A IAmb IAmb 07 40 23.4
comp=Z,5.6nm,0.8s
O20A White River Ci 36.34 329 P 07 40 22.6
baz=139
O20A White River Ci 36.34 329 P **P** **07 40 20.0 +0.3**
O20A IAmb IAmb 07 40 25.9
comp=Z,5.3nm,0.9s
SWSC Sam W. Stewart 36.42 313 P 07 40 22.8
baz=121
IKP In-Ko-Pah, Jac 36.50 312 P 07 40 23.9
baz=121
BC3 Big Chuckawall 36.55 314 P 07 40 24.4
baz=122
IRM Iron Mountain 36.61 315 P 07 40 24.8
baz=124
E38A The Farm, Brul 36.68 352 P **P** **07 40 21.0 -1.3**
KNB Kanab 36.77 321 P **P** **07 40 23.4 0.0**
KNB IAmb IAmb 07 40 27.6
comp=Z,5.4nm,0.8s
F33A 5 Mile Ranch, 36.81 346 P **P** **07 40 22.0 -1.4**
SRU San Rafael Swe 36.81 326 P **P** **07 40 24.1 +0.3**
SRU IAmb IAmb 07 40 26.2
comp=Z,5.4nm,0.8s
D41A Chassel 36.82 356 P **P** **07 40 22.5 -0.9**
MONP2 Monument Peak 36.85 313 P 07 40 27.0
baz=121
TRQ Mont Tremblant 36.87 12 P **P** **07 40 24.3 +0.3**
LCMT Little Creek M 37.03 321 P **P** **07 40 26.1 +0.6**
Q16A Castle Valley 37.04 325 P **P** **07 40 26.9 +1.2**
BELC Belle Mtn. Jos 37.12 314 P 07 40 29.2
baz=122
PFO Pinyon Flats O 37.24 314 P **P** **07 40 27.5 +0.1**
PFO IAmb IAmb 07 40 31.0
comp=Z,6.6nm,0.8s
PFO Pinyon Flats O 37.24 314 P 07 40 30.3
baz=121
SZCU Shurtz Canyon 37.30 321 P **P** **07 40 29.6 +1.6**
GMRC Granite Mounta 37.31 316 P 07 40 31.0
baz=124
PKME Peaks-Kenny Pk 37.31 18 P **P** **07 40 28.2 +0.5**
CCUT Cedar City 37.44 321 P **P** **07 40 29.9 +0.7**
D55A Sainte-Anne-du 37.46 10 P 07 40 28.6
baz=195
D56A ZEC Mazanza, M 37.62 11 P 07 40 29.9
baz=196
MURC Murrieta 37.76 313 P 07 40 34.1
baz=120
HEC Hector,Ludlow 37.80 315 P 07 40 34.6
baz=123
EYMN Ely 37.99 353 P 07 40 31.5
baz=169
EYMN Ely 37.99 353 P **P** **07 40 31.9 -1.4**
EYMN IAmb IAmb 07 40 32.3
comp=Z,4.4nm,0.7s
D58A Chemin du LacG 38.06 13 P 07 40 35.8
baz=199
SHOC Shoshone, Teco 38.34 317 P 07 40 39.2
baz=124
LATQ La Tuque 38.35 13 P 07 40 38.4
baz=195
PSUT Pine Spring 38.36 322 P **P** **07 40 37.7 +0.8**
PSUT IAmb IAmb 07 40 41.4
comp=Z,3.6nm,0.8s
E63A Oxbow 38.62 18 P 07 40 39.6
baz=206
B35A Bob, Littlefor 38.72 350 P **P** **07 40 38.3 -1.1**
B35A IAmb IAmb 07 40 39.5
comp=Z,5.8nm,1.0s
TPNV Topopah Spring 38.92 318 P **P** **07 40 42.9 +1.3**
TPNV IAmb IAmb 07 40 45.6
comp=Z,4.6nm,0.9s
TPNV Topopah Spring 38.92 318 P 07 40 44.2
baz=125,SNR=5.0
SPR3 Spring Creek 3 38.95 322 P **P** **07 40 43.5 +1.6**
PDAR Pinedale Array 38.97 331 P **P** **07 40 41.6 -0.3**
comp=Z,0.4nm,0.5s,baz=132,slow=9.3,SNR=6.6
PDAR ScP **ScP** **07 46 32.0 -0.6**
comp=Z,0.2nm,0.5s,baz=145,slow=5.4,SNR=3.5
PDAR Pinedale Array 38.97 331 P **P** **07 40 42.3 +0.4**
EDW2 Edwards Air Fo 38.98 314 P 07 40 44.3
baz=121
AGMN Agassiz Nation 39.05 348 P **P** **07 40 41.3 -0.9**
AGMN IAmb IAmb 07 40 42.1
comp=Z,11nm,0.9s
AGMN Agassiz Nation 39.05 348 P 07 40 41.1
baz=162,SNR=9.8
FURC Furnace Creek, 39.05 317 P 07 40 44.6
baz=124,SNR=7.1
LRMC Laurel Mtn Rad 39.08 315 P 07 40 45.5
baz=122,SNR=6.3
HWUT Hardware Ranch 39.13 328 P **P** **07 40 42.7 -0.6**
LSQQ Lebel-sur-Quev 39.21 8 P 07 40 42.7
baz=192
R11A Troy Canyon, C 39.31 320 P **P** **07 40 44.3 -0.5**
R11A Troy Canyon, C 39.31 320 P 07 40 46.3
baz=127

LMN	Caledonia Moun	39.35	22	P		P	07 40 45.0	+0.2
MDND	Maddock	39.51	344	P			07 40 47.1	
	baz=157							
ISA	Isabella, Lake	39.72	315	P		P	07 40 49.0	+0.8
ISA	Isabella, Lake	39.72	315	P			07 40 50.0	
	baz=121							
MATQ	Matagami	39.81	7	P			07 40 47.5	
	baz=191							
CWC	Cottonwood Cre	39.86	316	P			07 40 51.7	
	baz=122							
REDW	Red Top Meadow	40.04	330	P		P	07 40 51.3	+0.4
SNOW	Snow King Moun	40.07	330	P		P	07 40 51.6	+0.5
SNOW				IAmb		IAmb	07 40 54.8	
	comp=Z,6.0nm,1.1s							
BATG	Bathurst New B	40.13	20	P		P	07 40 50.5	-0.8
TPH	Tonopah	40.20	319	P		P	07 40 53.2	+1.0
VES	Vestal, Richgr	40.24	315	P			07 40 54.2	
	baz=121							
MOOW	Moose Ponds	40.27	331	P		P	07 40 53.6	+0.8
ELK	Elko	40.59	324	P		P	07 40 56.1	+0.7
RLMT	Red Lodge	40.63	333	P		P	07 40 55.5	-0.2
RLMT	Red Lodge	40.63	333	P			07 40 54.9	
	baz=141							
LAO	LASA Array	40.64	337	P			07 40 55.7	
	baz=146							
ULM	Lac du Bonnet	40.92	349	P		P	07 40 55.9	-1.7
	comp=Z,8.2nm,0.8s,baz=164,slow=8.1,SNR=18							
ULM				LR		LR	07 58 48.6	
	comp=Z,38nm,19.3s,baz=150,slow=37							
ULM	Lac du Bonnet	40.92	349	P		P	07 40 55.5	-2.1
ULM				IAmb		IAmb	07 40 57.5	
	comp=Z,9.8nm,0.8s							
NV11	Mina Array Sit	41.00	319	P		P	07 41 00.4	+1.7
NV11				IAmb		IAmb	07 41 03.0	
	comp=Z,6.6nm,0.8s							
NVAR	Mina Array Bea	41.10	319	P		P	07 41 00.2	+0.6
	comp=Z,5.7nm,0.7s,baz=132,slow=8.3,SNR=48							
NVAR				PcP		PcP	07 42 59.6	+1.6
	comp=Z,2.3nm,0.7s,baz=135,slow=4.5,SNR=11							
NVAR				ScP		ScP	07 46 42.5	+1.5
	comp=Z,0.5nm,0.9s,baz=159,slow=4.1,SNR=4.1							
NVAR				LR		LR	07 59 38.3	
	comp=Z,40nm,19.3s,baz=112,slow=38							
NVAR	Mina Array Bea	41.10	319	P		P	07 41 00.9	+1.3
LHV	Little Huntoon	41.13	318	P		P	07 41 01.4	+1.9
LHV				IAmb		IAmb	07 41 04.2	
	comp=Z,7.0nm,0.7s							
MDPB	Devils Postpil	41.17	317	P		P	07 41 01.4	+1.1
RYN	Ryan	41.35	319	P		P	07 41 03.3	+1.6
DGMT	Dagmar	41.44	340	P		P	07 41 02.4	+0.4
DGMT				IAmb		IAmb	07 41 03.5	
	comp=Z,7.5nm,0.7s							
DGMT	Dagmar	41.44	340	P			07 41 02.9	
	baz=150							
ARAG	Araguaiana, MT	41.57	128	*e*P		P	07 41 03.9	+0.4
AQDB	Aquidauana	41.81	137	*e*P		P	07 41 06.2	+0.8
WAKR	Walker	41.88	318	P		P	07 41 07.8	+1.8
WAKR				IAmb		IAmb	07 41 09.8	
	comp=Z,5.1nm,0.8s							
HLID	Hailey	42.00	327	P		P	07 41 06.8	-0.1
HLID	Hailey	42.00	327	P			07 41 06.9	
	baz=133							
YERR	Yerington	42.02	319	P		P	07 41 08.7	+1.6
YERR				IAmb		IAmb	07 41 10.9	
	comp=Z,3.7nm,0.6s							
BOZ	Bozeman (W)	42.07	332	P		P	07 41 08.1	+0.7
BOZ	Bozeman (W)	42.07	332	P			07 41 07.3	
	baz=138							
PNTR	Pine Nut	42.31	319	P		P	07 41 10.4	+0.9
PNTR				IAmb		IAmb	07 41 15.5	
	comp=Z,5.1nm,0.7s							
PEXB	Peixe	42.47	121	*e*P		P	07 41 11.0	+0.2
WVOR	Wild Horse Val	43.64	323	P		P	07 41 19.9	-0.1
WVOR				IAmb		IAmb	07 41 21.3	
	comp=Z,8.9nm,1.3s							
ZON	Zonda	44.33	160	P		P	07 41 26.2	+0.7
ZON				IAmb		IAmb	07 41 28.9	
	comp=Z,17nm,1.3s							
BDFB	Brasilia	44.55	125	P		P	07 41 28.7	+1.1
	comp=Z,3.0nm,0.6s,baz=281,slow=9.7,SNR=5.6							
BDFB				LR		LR	08 01 57.3	
	comp=Z,80nm,20.9s,baz=159,slow=38							
BDFB	Brasilia	44.55	125	P		P	07 41 27.6	0.0
BDFB				IAmb		IAmb	07 41 29.4	
	comp=Z,14nm,1.3s							
CPUP	Villa Florida	45.08	144	P		P	07 41 31.8	+0.2
	comp=Z,2.2nm,0.9s,baz=317,slow=8.1,SNR=6.4							
KRMB	Red Mountain	46.39	319	P		P	07 41 42.5	+0.6
KBO	Bosley Butte	46.95	320	P		P	07 41 46.0	-0.2
H04A	Detroit Lake	47.05	324	P		P	07 41 47.2	+0.3
H04A				IAmb		IAmb	07 41 48.1	
	comp=Z,14nm,1.5s							
NBPB	Pedra_Branca-C	47.62	107	*e*P		P	07 41 52.1	+0.3
FRTB	Fartura	47.95	135	*e*P		P	07 41 53.8	-0.4
ITAB	Concordia	48.88	140	*e*P		P	07 41 59.5	-1.6
FCC	Fort Churchill	48.92	354	P		P	07 42 00.1	-0.9
FCC				IAmb		IAmb	07 42 22.0	
	comp=Z,5.3nm,0.9s							
NBMA	Muriti-CE	49.00	109	*e*P		P	07 42 02.6	+0.2
VAO	Valinhos	49.60	132	*e*P		P	07 42 07.0	+0.2
CPSB	Cacapava Do Su	50.40	144	*e*P		P	07 42 13.8	+1.2
PLTB	Pedras Altas	51.32	146	*e*P		P	07 42 20.7	+1.1
NBIT	Itapeh - BA	51.39	118	*e*P		P	07 42 21.4	+1.0
CMC01	Camacan, BA	51.51	119	*e*P		P	07 42 21.4	+0.1
SJMB	Sao Joao De Ma	51.70	124	*e*P		P	07 42 23.2	+0.6
PLCA	Paso Flores	52.41	166	P		P	07 42 28.7	+1.2
	comp=Z,9.1nm,0.7s,baz=338,slow=7.9,SNR=30							
PLCA	Paso Flores	52.41	166	P		P	07 42 28.4	+0.8
PLCA	Paso Flores	52.41	166	*e*P		P	07 42 26.4	-1.2
RIB01	Linhares ES	52.65	124	*e*P		P	07 42 30.0	+0.3
LL02	Futaleuf	54.48	168	P		P	07 42 43.6	+0.9
YKA	Yellowknife Ar	56.43	344	P		P	07 42 54.6	-1.7
	comp=Z,1.3nm,0.7s,baz=137,slow=7.4,SNR=23							
YKA				pP		pP	07 43 16.0	-0.2
	comp=Z,1.8nm,0.7s,baz=137,slow=7.7,SNR=8.8							
YKA				PcP		PcP	07 43 52.0	-0.4
	comp=Z,0.7nm,0.8s,baz=143,slow=5.2,SNR=6.3							
YKA				LR		LR	08 08 22.7	
	comp=Z,24nm,18.2s,baz=0.0,slow=37							
DLBC	Dease Lake	59.02	334	P		P	07 43 15.7	+0.9
DLBC				IAmb		IAmb	07 43 16.8	
	comp=Z,3.6nm,0.9s							
RES	Resolute Bay	64.65	357	P		P	07 43 51.2	-0.9
INK	Inuvik	66.09	342	P		P	07 44 00.7	-0.8
INK				IAmb		IAmb	07 44 04.2	
	comp=Z,5.1nm,1.1s							
INK	Inuvik	66.09	342	P			07 44 00.6	
	baz=126							
BCAR	Beaver Creek A	66.34	335	P		P	07 44 03.0	-0.3
EGAK	Eagle	66.85	337	P		P	07 44 06.5	0.0
EGAK				IAmb		IAmb	07 44 21.8	
	comp=Z,8.6nm,1.4s							
DOT	Dot Lake	67.52	335	P		P	07 44 10.1	-0.7
SUMG	Summit	68.05	14	P		P	07 44 13.2	-1.2
SUMG				IAmb		IAmb	07 44 14.7	
	comp=Z,5.4nm,0.8s							
IL31		69.09	336	P		P	07 44 20.3	-0.1
ILAR	Eielson Array	69.09	336	P		P	07 44 19.7	-0.8
	comp=Z,1.2nm,0.6s,baz=122,slow=4.3,SNR=16							
ILAR				LR		LR	08 19 01.2	
	comp=Z,20nm,19.2s,baz=106,slow=40							
ILAR	Eielson Array	69.09	336	P		P	07 44 20.5	0.0
BMAR	Burnt Mountain	69.26	339	P		P	07 44 17.9	-3.7
RND	Reindeer	69.43	334	P		P	07 44 22.4	-0.3
RND				IAmb		IAmb	07 44 23.9	
	comp=Z,6.3nm,1.1s							
MDM	Murphy Dome	69.69	336	P		P	07 44 24.0	-0.2
MDM				IAmb		IAmb	07 44 50.0	
	comp=Z,7.1nm,1.4s							
EUNU	Eureka	69.80	360	P		P	07 44 24.8	+0.1
SKT	Skwentna	70.18	333	P			07 44 25.8	
	baz=106							
I23K	Minto, Yukon-K	70.21	336	P		P	07 44 27.6	+0.3
I23K	Minto, Yukon-K	70.21	336	P			07 44 26.6	
	baz=109							
BPAW	Bear Paw Mtn.	70.55	335	P		P	07 44 29.3	-0.2
BPAW				IAmb		IAmb	07 44 32.1	
	comp=Z,3.7nm,0.8s							
BPAW	Bear Paw Mtn.	70.55	335	P			07 44 28.4	
	baz=107							
MLY	Manley	70.72	336	P		P	07 44 29.5	-1.0
MLY	Manley	70.72	336	P			07 44 29.2	
	baz=108							
COLD	Coldfoot	71.21	338	P		P	07 44 33.9	+0.5
SVW2	Sparrevohn	71.85	331	P		P	07 44 37.5	+0.1
SVW2				IAmb		IAmb	07 45 01.0	
	comp=Z,6.9nm,1.4s							
IMAR	Indian Mountai	72.20	336	P		P	07 44 39.2	-0.2
TTA	Tatalina	72.43	333	P		P	07 44 40.6	-0.3
A21K	Barrow	74.56	341	P		P	07 44 52.4	-0.8
A21K	Barrow	74.56	341	P			07 44 52.3	
	baz=104							
FALS	False Pass	75.17	324	P		P	07 44 57.1	+0.2
FALS	False Pass	75.17	324	P			07 44 57.9	
	baz=93							
MDT	Midelt	76.25	59	LR		LR	08 12 28.4	
	comp=Z,33nm,21.3s,baz=175,slow=31							
ESDC	Sonseca Array	76.44	52	P		P	07 45 03.7	-0.9
	comp=Z,3.8nm,1.0s,baz=275,slow=5.8,SNR=13							
ESDC				pP		pP	07 45 25.1	-0.3
	comp=Z,1.8nm,1.0s,baz=285,slow=5.9,SNR=3.2							
ESDC				LR		LR	08 16 02.5	
	comp=Z,28nm,19.3s,baz=130,slow=34							
KOWA	Kowa	78.58	77	P		P	07 45 16.5	-0.4
KOWA				IAmb		IAmb	07 45 18.2	
	comp=Z,6.4nm,0.7s							
ATKA	Atka Island	81.65	322	P		P	07 45 32.4	-0.3
DOU	Dourbes	81.78	41	*d*P		P	07 45 32.3	-1.2
ADK	Adak	83.22	321	P		P	07 45 41.9	+1.1
NOA	NORSAR Array B	83.97	29	P		P	07 45 43.4	-1.2
	comp=Z,1.1nm,0.8s,baz=280,slow=4.9,SNR=3.9							
NOA				pP		pP	07 46 04.2	-1.6
	comp=Z,1.3nm,0.9s,baz=284,slow=5.3,SNR=3.6							
TOA0	Torodi Ar. Sit	84.27	78	P		P	07 45 44.5	-2.4
TORD	Torodi Ar. Bea	84.27	78	P		P	07 45 45.9	-1.1
	comp=Z,2.1nm,0.7s,baz=289,slow=4.8,SNR=8.8							
TORD				pP		pP	07 46 06.1	-2.3
	comp=Z,0.9nm,0.8s,baz=302,slow=5.3,SNR=2.9							
TORD	Torodi Ar. Bea	84.27	78	P		P	07 45 46.3	-0.7
AMKA	Amchitka	85.77	321	P		P	07 45 54.0	+0.3
CLL	Collm	86.86	39	*e*P		P	07 45 58.0	-1.1
CLL				LmH			08 09 00.0	
	comp=N,100nm,19.9s							
CLL				LmH			08 09 00.0	
	comp=E,200nm,21.2s							
CLL				LmV			08 12 00.0	
	comp=Z,100nm,19.0s							
ARCES	ARCESS Array B	87.36	19	P		P	07 45 59.4	-1.9
	comp=Z,1.5nm,0.8s,baz=3.9,slow=5.3,SNR=4.7							
GERES	GERESS Array B	87.85	41	P		P	07 46 02.5	-1.5
	comp=Z,1.8nm,1.0s,baz=242,slow=2.6,SNR=6.8							
GERES				pP		pP	07 46 24.6	-0.6
	comp=Z,0.2nm,0.4s,baz=262,slow=9.3,SNR=2.2							
FINES	FINESS Array B	90.73	27	P		P	07 46 15.3	-1.8
	comp=Z,0.9nm,0.6s,baz=318,slow=2.6,SNR=3.5							
AKASG	Malin Array Be	96.75	36	LR		LR	08 28 48.2	
	comp=Z,14nm,20.0s,baz=200,slow=34							
KSRS	Korea Array	123.52	329	PKP		PKPdf	07 52 11.8	-0.1
	comp=Z,0.6nm,0.4s,baz=344,slow=1.8,SNR=2.0							
ASAR	Alice Springs	140.86	245	PKhKP		PKPpre	07 52 39.1	
	comp=Z,0.7nm,0.5s,baz=120,slow=3.3,SNR=8.8							
ASAR				PKP		PKPdf	07 52 45.4	+0.5
	comp=Z,2.6nm,0.7s,baz=94,slow=2.0,SNR=16							
ASAR	Alice Springs	140.86	245			PKPdf	07 52 45.8	+0.9
WRA	Warramunga Arr	141.16	251	PKhKP		PKPpre	07 52 40.9	
	comp=Z,2.6nm,0.6s,baz=95,slow=2.5,SNR=15							
WRA				PKP		PKPdf	07 52 46.0	+0.4
	comp=Z,2.6nm,0.6s,baz=95,slow=2.5,SNR=12							
WRA	Warramunga Arr	141.16	251			PKPdf	07 52 46.1	+0.6
CMAR	Chiang Mai Arr	151.23	353	PKP		PKPdf	07 53 01.9	-0.7
	comp=Z,1.0nm,0.3s,baz=294,slow=3.0,SNR=4.4							
CMAR				PKPbc		PKPbc	07 53 08.0	-0.5
	comp=Z,1.4nm,0.5s,baz=345,slow=2.8,SNR=8.8							
CMAR	Chiang Mai Arr	151.23	353			PKPdf	07 53 02.0	-0.6
CMAR				PKPbc		PKPbc	07 53 07.3	-1.2

GUC ***28*** *07:35:01.2±0.5, 19.˚46S×69.˚39W, h99km±2km, ML3.3*
ISC 28 07:35:01.7±1.9, 19.49S±0.06×69.47W±0.09, h95km±12km, n12, σ0.46/18, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB11	IPOC Station P	0.32	213	⇑*i*P		Pn	07 35 15.7	-0.4
PB11				*i* S		Sn	07 35 27.1	+0.4
PB11				IAML			07 35 27.5	
	comp=N,2μm,0.2s							
MNMC	Minye Minye	0.38	342	⇓*i*P		Pn	07 35 16.2	-0.4
MNMC				*i* S		Sn	07 35 28.0	+0.4
PSGC	Pisagua	0.62	260	⇓*i*P		Pn	07 35 17.8	-0.3
PSGC				*i* S		Sn	07 35 30.7	+0.3
PB08	IPOC Station P	0.71	155	⇑*i*P		Pn	07 35 18.9	-0.4
PB08				*i* S		Sn	07 35 32.6	+0.2
TA02	Huaiquique	0.99	219	*e*P		Pn	07 35 21.4	-0.3
TA02				*i* S		Sn	07 35 37.5	+0.8
TA02				IAML			07 35 42.0	
	comp=N,986nm,0.2s							
TA01	Diego Aracena	1.26	212	*e*P		Pn	07 35 24.2	-0.6
TA01				*i* S		Sn	07 35 42.3	+0.2
TA01				IAML			07 35 43.4	
	comp=N,198nm,0.7s							
PATCX	Punta Patache	1.47	206	*e*P		Pn	07 35 26.9	-0.5
PATCX				IAML			07 35 51.0	
	comp=E,102nm,0.3s							
PB01	IPOC Station P	1.54	181	⇑*i*P		Pn	07 35 27.9	-0.4
PB01				*i* S		Sn	07 35 49.0	+0.5
PB01				IAML			07 35 52.3	
	comp=N,283nm,0.3s							
PB07	IPOC Station P	2.25	190	*e*P		Pn	07 35 37.7	+0.1
PB07				IAML			07 36 12.4	
	comp=E,136nm,0.4s							
PB03	IPOC Station P	2.56	186	IAML			07 36 18.5	
	comp=N,48nm,0.4s							
PB04	IPOC Station P	2.90	192	*e*P		Pn	07 35 46.0	-0.2
LPAZ	La Paz	3.44	22	*e*P		Pn	07 35 53.7	-0.2

KRNET ***28*** *07:48:14.0±0.1, 42.˚77N×80.˚45E, mb3.5*
SOME ***28*** *07:48:16.1, 42.˚55N×80.˚15E, h0km*
NNC ***28*** *07:48:18.1±1.0, 42.˚71N×80.˚17E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=5.9km s-min=4.9km az=131.0*
ISC 28 07:48:19.2±1.5, 42.75N±0.06×80.18E±0.05, h10km, n43, σ1.28/67, 18C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.67	308	⇓*e*P		Pg	07 48 29.0	-3.1
	189nm,0.1s							
SHLS				*e*S		Sg	07 48 38.8	-2.1
	2μm,0.3s							
SHLS	Shalkode	0.67	308	P		Pg	07 48 29.0	-3.1
	189nm,0.1s							
SHLS				S		Sg	07 48 38.8	-2.1
	2μm,0.3s							
KTMS	Ketmen	0.71	10	⇓*e*P		Pg	07 48 32.1	-0.8
	189nm,0.2s							
KTMS				*e*S		Sb	07 48 43.9	+0.2
	172nm,0.2s							
KTMS	Ketmen	0.71	10	P		Pg	07 48 32.2	-0.8
	189nm,0.2s							
KTMS				S		Sb	07 48 43.9	+0.2
	172nm,0.2s							
PDGK	Podgornoye	0.77	319	P		Pg	07 48 33.8	-0.3
	4.3nm,0.1s							
PDGK				S		Sb	07 48 46.6	+1.2
	58nm,0.4s							
PDGK	Podgornoye	0.77	319	⇓P		Pg	07 48 33.8	-0.3
	15nm,0.3s							
PDGK				⇓S		Sg	07 48 44.1	0.0
	74nm,0.6s							
UZB	Uzynbulak	0.94	296	⇑*e*P		Pg	07 48 36.3	-0.9
	16nm,0.1s							
UZB				*e*S		Sb	07 48 50.9	+0.7
	72nm,0.3s							
UZB	Uzynbulak	0.94	296	P		Pg	07 48 36.3	-0.9
	16nm,0.1s							
UZB				S		Sb	07 48 50.9	+0.7
	72nm,0.3s							
KPKS	Kokpek	1.31	304	*e*P		Pn	07 48 43.0	-0.6
	207nm,0.3s							
KPKS				*e*S		Sg	07 49 02.4	+1.1
	181nm,0.3s							
PRZ	Przheval'sk	1.34	259	⇑*i*P		Pn	07 48 42.6	-1.5
	baz=61							
PRZ				⇑*i*S		Sg	07 49 03.2	+1.0
	baz=61							
SATY	Saty	1.34	284	*e*P		Pn	07 48 43.5	-0.6
	88nm,0.3s							
SATY				*e*S		Sg	07 49 03.7	+1.4
	173nm,0.2s							
SATY	Saty	1.34	284	P		Pn	07 48 43.5	-0.6
	88nm,0.3s							
SATY				S		Sg	07 49 03.7	+1.4
	173nm,0.2s							
DJR	Jarkent	1.61	350	*e*P		Pb	07 48 48.4	-0.7
	18nm,0.3s							
DJR				*e*S		Sg	07 49 12.1	+1.1
	176nm,0.3s							
DJR	Jarkent	1.61	350	P		Pb	07 48 48.4	-0.7
	18nm,0.3s							
DJR				S		Sg	07 49 12.1	+1.1
	176nm,0.3s							
ANVS	Anan'yevo	1.85	272	⇓*i*P		Pn	07 48 50.9	-0.2
	baz=71							
ANVS				⇓*i*S		Sg	07 49 18.2	-0.4
	baz=71							
ARXS	Arharly	2.25	311	*e*P		Pb	07 48 59.8	-0.2
	31nm,0.4s							
ARXS				*e*S		Sg	07 49 31.3	-0.3
	162nm,0.8s							
ARXS	Arharly	2.25	311	Pg		Pb	07 48 59.8	-0.2
	31nm,0.4s							
ARXS				Lg		Lg	07 49 31.3	
	162nm,0.8s							
KDJ	Kajisay	2.30	256	⇑*e*P		Pn	07 48 57.2	-0.1
	baz=56							
KDJ				⇑*i*S		Sb	07 49 28.8	-0.7
	baz=56							
KOTS	Kotyrbulak	2.30	283	*e*P		Pb	07 49 00.7	-0.1
	124nm,0.3s							
KOTS				*e*S		Sg	07 49 33.0	-0.1
	74nm,0.3s							
KOTS	Kotyrbulak	2.30	283	Pg		Pb	07 49 00.7	-0.1
	124nm,0.3s							
KOTS				Lg		Lg	07 49 33.0	
	74nm,0.3s							
MDOK	Medeo	2.33	281	*e*P		Pb	07 49 00.2	-1.2
	46nm,0.4s							
MDOK				*e*S		Sb	07 49 32.1	+1.8
	89nm,0.5s							
MDOK	Medeo	2.33	281	⇓Pn		Pn	07 48 58.9	+1.2
	32nm,0.5s							
MDOK				⇓Lg		Lg	07 49 32.3	
	32nm,0.6s							
MDOK	Medeo	2.33	281	Pg		Pb	07 49 00.2	-1.2
	46nm,0.4s							
MDOK				Lg		Lg	07 49 32.1	
	89nm,0.5s							
TNSS	Tian-Shan	2.39	278	*e*P		Pb	07 49 01.6	-0.9
	30nm,0.3s							
TNSS				*e*S		Sg	07 49 34.8	-1.2
	34nm,0.3s							
TNSS	Tian-Shan	2.39	278	Pg		Pb	07 49 01.6	-0.9
	30nm,0.3s							
TNSS				Lg		Lg	07 49 34.8	
	34nm,0.3s							
KNDC	Almaty	2.40	282	⇑Pg		Pb	07 49 00.9	-1.7
	60nm,0.5s							
KNDC				⇑Lg		Lg	07 49 35.4	
	138nm,0.7s							
KTBS	Karatobe	2.73	292	*e*P		Pb	07 49 08.1	0.0
	27nm,0.4s							
KTBS				*e*S		Sg	07 49 45.6	-1.3
	86nm,0.5s							
KTBS	Karatobe	2.73	292	Pg		Pb	07 49 08.1	0.0
	27nm,0.4s							
KTBS				Lg		Lg	07 49 45.6	
	86nm,0.5s							
MTBS	Maitube	2.78	279	*e*P		Pb	07 49 08.5	-0.4
	16nm,0.3s							
MTBS				*e*S		Sg	07 49 46.4	-2.0
	55nm,0.4s							
MTBS	Maitube	2.78	279	Pg		Pb	07 49 08.5	-0.4
	16nm,0.3s							
MTBS				Lg		Lg	07 49 46.4	
	55nm,0.4s							
KST	Kastek	3.11	277	*e*P		Pb	07 49 14.0	-0.6
	25nm,0.3s							
KST				*e*S		Sb	07 49 55.8	+3.1
	39nm,0.5s							
KST	Kastek	3.11	277	Pg		Pb	07 49 14.0	-0.6
	25nm,0.3s							
KST				Lg		Lg	07 49 55.8	
	39nm,0.5s							
BOOM	Boomskoye usch	3.14	267	⇑*i*P		Pn	07 49 09.2	+0.4
	baz=67							
BOOM				⇑*i*S		Sn	07 49 49.5	+3.1
	baz=67							
DGS	Degeres	3.27	280	*e*P		Pb	07 49 16.5	-0.9
	15nm,0.3s							
DGS				*e*S		Sb	07 50 00.1	+2.9
	54nm,0.6s							
DGS	Degeres	3.27	280	Pg		Pb	07 49 16.5	-0.9
	15nm,0.3s							
DGS				Lg		Lg	07 50 00.1	
	54nm,0.6s							
TKM2	Tokmak 2	3.37	275	⇑Pg		Pb	07 49 19.0	-0.1
	6.7nm,0.5s							
TKM2				⇑Lg		Lg	07 50 04.0	
	14nm,0.6s							
KRBS	Karabastau	3.42	288	*e*P		Pb	07 49 20.3	+0.3
	13nm,0.3s							
KRBS				*e*S		Sg	07 50 06.6	-2.6
	12nm,0.2s							
KRBS	Karabastau	3.42	288	Pg		Pb	07 49 20.3	+0.3
	13nm,0.3s							
KRBS				Lg		Lg	07 50 06.6	
	12nm,0.2s							
AAK	Ala-Archa	4.19	270	⇑Pg		Pb	07 49 34.3	+1.3
	7.7nm,0.8s							
AAK				⇑Lg		Lg	07 50 28.4	
	17nm,0.8s							
MAKZ	Makanchi	4.26	17	⇑Pn		Pn	07 49 24.3	+0.2
	1.6nm,0.3s							
MAKZ				⇑Lg		Lg	07 50 32.1	
	6.6nm,0.6s							
MK31	Makanchi Array	4.32	20	⇑Pn		Pn	07 49 24.7	-0.2
	1.5nm,0.3s,baz=196,slow=13,SNR=78							
MK31				⇑Lg		Lg	07 50 34.7	
	15nm,0.8s,baz=202,slow=30,SNR=15							
KK31	Karatay Array	7.10	276	⇑Pg		Pg	07 50 30.0	-5.1
	1.4nm,0.7s,baz=97,slow=16,SNR=6.5							
KK31				⇓Lg		Lg	07 52 01.2	
	1.4nm,0.5s,ba

FETY	**Fethiye**	**0.61**	**133**	⇓	*i* P		**Pg**	**07 59 39.3**	**-1.1**
FETY					*i* S		**Sg**	**07 59 47.8**	**-0.8**
FETY	**Fethiye**	**0.61**	**133**		PG		**Pg**	**07 59 39.7**	**-0.8**
FETY					SG		**Sb**	**07 59 49.5**	**-0.2**
CAEL	**Denizli, Camel**	**0.63**	**84**	⇓	*i* P		**Pg**	**07 59 40.5**	**-0.5**
CAEL					*i* S		**Sn**	**07 59 52.8**	**-0.7**
CAEL					IAML			08 00 05.0	
	comp=E,5μm,0.7s								
CAEL					IAML			08 00 14.0	
	comp=N,4μm,1.4s								
AYDN	**Tasoluk**	**0.80**	**319**	⇓	*i* P		**Pg**	**07 59 43.8**	**-0.4**
AYDN					*i* S		**Sg**	**07 59 54.4**	**-0.3**
GOLH	**Golhisar**	**0.84**	**77**	⇑	*i* P		**Pb**	**07 59 44.7**	**-0.5**
GOLH					*i* S		**Sn**	**08 00 01.3**	**+2.6**
BDRM	**Kayabasi**	**0.87**	**271**	⇓	*i* P		**Pg**	**07 59 45.4**	**-0.2**
BDRM					*i* S		**Sb**	**07 59 57.7**	**+0.4**
BDRM					IAML			08 00 01.0	
	comp=N,12μm,0.4s								
BDRM					IAML			08 00 03.0	
	comp=E,8μm,0.4s								
ARG	**Arkhangelos**	**0.90**	**202**		P		**Pb**	**07 59 46.1**	**-0.1**
ARG					S		**Sn**	**07 59 59.7**	**-0.2**
	comp=E,7μm,0.4s								
ARG	**Arkhangelos**	**0.90**	**202**		PG		**Pb**	**07 59 45.9**	**-0.3**
ARG	**Arkhangelos**	**0.90**	**202**	⇑	P		**Pg**	**07 59 46.3**	**+0.3**
ARG					S		**Sn**	**08 00 02.1**	**+2.1**
BODT	**Bodrum**	**0.98**	**271**		P		**Pb**	**07 59 46.9**	**-0.6**
BODT					S		**Sn**	**08 00 01.3**	**-0.7**
BODT	**Bodrum**	**0.98**	**271**		PG		**Pg**	**07 59 47.8**	**+0.2**
YKAV	**Yalikavak-Bodr**	**1.01**	**274**		PG		**Pg**	**07 59 48.2**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**330**		PG		**Pn**	**07 59 48.5**	**-0.5**
DDIM	**Aydin, Didim**	**1.11**	**292**	⇓	*i* P		**Pb**	**07 59 49.5**	**-0.3**
DDIM					*i* S		**Sn**	**08 00 07.6**	**+2.5**
DDIM					IAML			08 00 09.0	
	comp=N,6μm,0.6s								
DDIM					IAML			08 00 16.0	
	comp=E,6μm,0.7s								
ELL	**Elmali**	**1.14**	**105**		PN		**Pg**	**07 59 50.9**	**+0.2**
ELL	**Elmali**	**1.14**	**105**		P		**Pg**	**07 59 50.4**	**-0.3**
NIS1	**Nisyros Isl.**	**1.18**	**248**		P		**Pn**	**07 59 50.5**	**-0.4**
NIS1					S		**Sn**	**08 00 06.9**	**0.0**
	comp=E,53μm,0.7s								
NIS1	**Nisyros Isl.**	**1.18**	**248**		PN		**Pg**	**07 59 51.7**	**+0.3**
AKAS	**Kas**	**1.19**	**133**	⇑	*i* P		**Pn**	**07 59 50.9**	**-0.3**
AKAS					*i* S		**Sn**	**08 00 12.2**	**+4.9**
AKAS	**Kas**	**1.19**	**133**		PN		**Pg**	**07 59 51.6**	**0.0**
GCAM	**G?zelcaml?**	**1.22**	**302**	⇓	*i* P		**Pn**	**07 59 51.0**	**-0.5**
GCAM					*i* S		**Sg**	**08 00 07.8**	**-0.2**
GCAM					IAML			08 00 11.0	
	comp=N,4μm,0.6s								
GCAM					IAML			08 00 15.0	
	comp=E,5μm,0.7s								
GCAM	**G?zelcaml?**	**1.22**	**302**		PN		**Pg**	**07 59 52.3**	**+0.2**
KSL	**Kastellorizon**	**1.24**	**137**		P		**Pn**	**07 59 51.2**	**-0.5**
KSL					S		**Sb**	**08 00 07.4**	**-0.3**
	comp=E,4μm,0.9s								
KSL	**Kastellorizon**	**1.24**	**137**	⇑	P		**Pg**	**07 59 52.5**	**0.0**
KSL					S		**Sg**	**08 00 11.4**	**+2.9**
KOSK	**Kos Island**	**1.28**	**257**		P		**Pn**	**07 59 51.9**	**-0.4**
KOSK					S		**Sb**	**08 00 08.5**	**-0.6**
	comp=E,14μm,0.6s								
KOSK	**Kos Island**	**1.28**	**257**		PN		**Pg**	**07 59 53.8**	**+0.5**
BRDR	**BURDUR-Merkez**	**1.37**	**62**	⇑	P		**Pb**	**07 59 53.6**	**-0.7**
BRDR					*i* S		**Sg**	**08 00 13.5**	**+0.6**
MANT	**Manisa**	**1.43**	**1**	⇑	*i* P		**Pn**	**07 59 53.8**	**-0.9**
MANT					*i* S		**Sb**	**08 00 13.6**	**-0.1**
KORT	**Korkueli**	**1.45**	**92**	⇑	*i* P		**Pg**	**07 59 57.0**	**+0.4**
KORT					*i* S		**Sg**	**08 00 16.6**	**+1.1**
KORT	**Korkueli**	**1.45**	**92**		PN		**Pg**	**07 59 55.8**	**-0.8**
KULA	**Kula-Manisa**	**1.46**	**4**		P		**Pn**	**07 59 54.5**	**-0.4**
KULA	**Kula-Manisa**	**1.46**	**4**		PN		**Pb**	**07 59 55.5**	**-0.3**
BASM	**Basmaki-Afyon**	**1.48**	**54**		PN		**Pb**	**07 59 55.7**	**-0.4**
SMG	**Samos**	**1.50**	**296**		P		**Pn**	**07 59 54.9**	**-0.5**
SMG					S		**Sn**	**08 00 13.5**	**-1.4**
	comp=E,5μm,0.4s								
AKUM	**Antalya-Kumluc**	**1.63**	**116**	⇓	*i* P		**Pg**	**07 59 59.4**	**-0.5**
AKUM					*i* S		**Sg**	**08 00 23.5**	**+2.6**
BUCA	**Burdur, Bucak-**	**1.64**	**80**	⇑	*i* P		**Pg**	**07 59 59.2**	**-0.9**
BUCA					*i* S		**Sg**	**08 00 22.0**	**+0.6**
GMLD	**Gumuldur**	**1.64**	**309**		PN		**Pb**	**07 59 58.7**	**-0.1**
DGB	**zmir**	**1.65**	**308**	⇓	*i* P		**Pn**	**07 59 56.7**	**-0.7**
DGB					*i* S		**Sg**	**08 00 22.7**	**+1.0**
DGB					IAML			08 00 25.0	
	comp=N,1μm,0.8s								
DGB					IAML			08 00 29.0	
	comp=E,1μm,1.1s								
BCK	**Bucak**	**1.69**	**75**		PN		**Pb**	**07 59 58.7**	**-1.0**
USAK	**Uak-Merkez**	**1.70**	**13**		*i* P		**Pn**	**07 59 57.4**	**-0.7**
ANTB	**Antalya**	**1.70**	**95**		PN		**Pb**	**07 59 59.1**	**-0.8**
GOMA	**Golmarmara-Man**	**1.72**	**344**		PN		**Pb**	**07 59 59.7**	**-0.5**
KZIL	**AFYON_Kizioren**	**1.75**	**46**		*i* P		**Pn**	**07 59 58.7**	**-0.2**
KZIL					*i* S		**Sg**	**08 00 27.8**	**+2.8**
ISP	**Isparta**	**1.76**	**64**		PN		**Pb**	**08 00 00.1**	**-0.8**
KARP	**Karpathos**	**1.87**	**217**		PN		**Pb**	**08 00 01.9**	**-0.8**
KARP	**Karpathos**	**1.87**	**217**	⇑	P		**Pn**	**08 00 01.4**	**+1.0**
KARP					S		**Sb**	**08 00 26.6**	**+0.5**
KARP					AML	AML		08 00 29.4	
	comp=E,7.2nm,0.6s								
KARP					AML	AML		08 00 29.4	
	comp=E,7.2nm,0.6s								
KARP					AML	AML		08 00 30.5	
	comp=E,7.7nm,0.5s								
KARP					AML	AML		08 00 30.5	
	comp=E,7.7nm,0.5s								
ZEYE	**Izmir, Urla-Ze**	**2.00**	**307**		*i* P		**Pn**	**08 00 01.2**	**-0.9**
ZEYE					IAML			08 00 43.0	
	comp=N,2μm,0.7s								
URLA	**Izmir**	**2.02**	**311**		*i* P		**Pn**	**08 00 00.9**	**-1.5**
URLA					*i* S		**Sg**	**08 00 33.8**	**+0.3**
URLA	**Izmir**	**2.02**	**311**		PN		**Pb**	**08 00 03.7**	**-1.5**
SHAP	**Saphane-Kutahy**	**2.04**	**15**		PN		**Pb**	**08 00 04.2**	**-1.4**
GEDZ	**Gediz**	**2.10**	**19**		PN		**Pb**	**08 00 04.8**	**-1.9**
FOCM	**Foa**	**2.19**	**320**		PN		**Pb**	**08 00 06.2**	**-1.9**
ZEDA	**zmir-Bergama**	**2.23**	**329**		*i* P		**Pn**	**08 00 04.5**	**-0.9**
ZEDA					IAML			08 00 46.0	
	comp=E,991nm,1.4s								
ZEDA					IAML			08 00 48.0	
	comp=N,1μm,1.3s								
CHOS	**Chios island**	**2.37**	**305**		P		**Pn**	**08 00 07.2**	**-0.2**
CHOS	**Chios island**	**2.37**	**305**		PN		**Pn**	**08 00 08.7**	**+1.3**
DKL	**Dikili**	**2.39**	**328**		PN		**Pn**	**08 00 08.9**	**+1.4**
APE	**Apeiranthos**	**2.40**	**271**		PN		**Pn**	**08 00 09.4**	**+1.6**
APE	**Apeiranthos**	**2.40**	**271**		P		**Pn**	**08 00 07.8**	**0.0**
KEPZ	**Antalya-Kepez**	**2.46**	**93**		*i* P		**Pb**	**08 00 11.2**	**-1.6**
KEPZ					*i* S		**Sb**	**08 00 44.5**	**+1.4**
DURS	**Dursunbey**	**2.54**	**359**		*i* P		**Pn**	**08 00 08.9**	**-0.8**
SEDI	**Konya, Seydise**	**2.60**	**80**		*i* P		**Pn**	**08 00 11.8**	**+1.3**
ZKR	**Zakros**	**2.70**	**225**		P		**Pn**	**08 00 13.2**	**+1.4**
ZKR					S		**Sn**	**08 00 46.7**	**+2.4**
BUHA	**Balikesir, Bur**	**2.70**	**335**		*eP*		**Pn**	**08 00 10.4**	**-1.4**
DOGA	**KONYA_Doganhis**	**2.70**	**66**		*i* P		**Pn**	**08 00 13.1**	**+1.1**
KOCA	**Canakkale, Ayv**	**3.09**	**323**		*i* P		**Pn**	**08 00 16.7**	**-0.5**
KOCA					IAML			08 01 19.0	
	comp=N,517nm,1.1s								
KOCA					IAML			08 01 23.0	
	comp=E,480nm,1.5s								
ULDT	**Uludag**	**3.12**	**8**		*i* P		**Pn**	**08 00 17.5**	**-0.2**
ULDT					*i* S		**Sg**	**08 01 09.0**	**+0.1**
GAZI	**Gazipasa**	**3.15**	**104**		*i* P		**Pn**	**08 00 18.4**	**+0.4**
GAZI					*i* S		**Sn**	**08 00 57.7**	**+2.2**
KONT	**Konya--Tatoy**	**3.17**	**73**		*i* P		**Pn**	**08 00 19.3**	**+0.9**
BORA	**Eskisehir**	**3.20**	**28**		*i* P		**Pn**	**08 00 19.4**	**+0.7**
BORA					*i* S		**Sg**	**08 01 12.8**	**+1.4**
IGD	**Bursa**	**3.25**	**9**		*i* P		**Pb**	**08 00 28.1**	**+1.9**
BILE	**Bilecik/Merkez**	**3.27**	**18**		*i* P		**Pb**	**08 00 24.9**	**-1.8**
BILE					*i* S		**Sg**	**08 01 14.3**	**+0.5**
BILE					IAML			08 01 31.0	
	comp=N,218nm,1.9s								
IDI	**Anoyia**	**3.44**	**240**		Pn		**Pn**	**08 00 24.2**	**+2.1**
	comp=N,14nm,0.3s,baz=56,slow=15,SNR=40								
IDI					Sn		**Sn**	**08 01 04.8**	**+2.1**
	comp=N,52nm,0.3s,baz=258,slow=18,SNR=13								
ECEA	**Canakkale, Ece**	**3.51**	**329**		*i* P		**Pg**	**08 00 36.1**	**+0.1**
ECEA					IAML			08 01 28.0	
	comp=N,447nm,1.2s								
ECEA					IAML			08 01 42.0	
	comp=E,443nm,1.0s								
KKBE	**Karaman, Kazim**	**3.52**	**86**		*i* P		**Pb**	**08 00 27.5**	**-3.5**
ERMK	**Ermenek**	**3.54**	**95**		*i* P		**Pb**	**08 00 27.4**	**-3.8**
ERMK					*i* S		**Sn**	**08 01 07.5**	**+2.2**
ERMK					IAML			08 01 22.0	
	comp=N,211nm,0.6s								

AKMS	**Akamas**	**3.69**	**122**		P		**Pn**	**08 00 26.7**	**+1.2**
AKMS					AML	AML		08 01 11.7	
	comp=N,1.0nm,0.8s								
AKMS					AML	AML		08 01 14.8	
	comp=N,0.8nm,0.9s								
GEYV	**SAKARYA_Geyve**	**3.69**	**21**		*i* P		**Pg**	**08 00 36.8**	**-2.6**
GEYV					*i* S		**Sg**	**08 01 28.7**	**+1.6**
GEYV					IAML			08 01 52.0	
	comp=N,194nm,1.2s								
ALFC	**Alefka**	**3.80**	**119**	⇑	P		**Pn**	**08 00 27.7**	**+0.8**
ALFC					AML	AML		08 01 17.3	
	comp=N,0.4nm,0.4s								
ALFC					AML	AML		08 01 18.3	
	comp=N,0.3nm,0.3s								
NATA	**Nata**	**3.98**	**124**		P		**Pn**	**08 00 30.6**	**+1.1**
BTAS	**Taskesti**	**4.00**	**28**		*i* P		**Pb**	**08 00 41.1**	**+2.0**
BTAS					*i* S		**Sg**	**08 01 41.4**	**+4.2**
KKUL	**Konya-Kulu**	**4.05**	**57**		*i* P		**Pn**	**08 00 33.5**	**+3.0**
KKUL					*i* S		**Sg**	**08 01 33.9**	**-4.8**
GULN	**MERSIN_Gulnar**	**4.12**	**101**		*i* P		**Pn**	**08 00 35.1**	**+3.7**
GULN					*i* S		**Sn**	**08 01 22.5**	**+3.0**
KAYN	**Sakarya, Kayna**	**4.15**	**19**		*i* P		**Pg**	**08 00 44.8**	**-3.3**
KAYN					*i* S		**Sb**	**08 01 36.0**	**+4.4**
KAYN					IAML			08 01 55.0	
	comp=N,98nm,1.5s								
SZAC	**Souni**	**4.21**	**122**	⇑	P		**Pn**	**08 00 33.7**	**+1.1**
KAND	**Kocaeli-Kandir**	**4.23**	**17**		*i* P		**Pg**	**08 00 47.9**	**-1.8**
KIBS	**BOLU**	**4.24**	**37**		*i* P		**Pn**	**08 00 33.9**	**+0.7**
CSS	**Mathiatis**	**4.41**	**117**	⇑	P		**Pn**	**08 00 36.8**	**+1.4**
VIZE	**Kirklareli, Vi**	**4.55**	**353**		*i* P		**Pn**	**08 00 36.1**	**-1.1**
MVOU	**Mavrovouni**	**4.60**	**115**	⇑	P		**Pn**	**08 00 39.5**	**+1.5**
KIRS	**Kırehir-Merke**	**4.72**	**62**		*i* P		**Pb**	**08 00 48.6**	**-2.8**
BRTR	**Keskin Array B**	**4.81**	**55**		Pn		**Pn**	**08 00 42.4**	**+1.3**
	comp=N,4.0nm,0.3s,baz=241,slow=16,SNR=38								
DELI	**KIRIKKALE**	**5.14**	**54**		*i* P		**Pn**	**08 00 46.7**	**+1.2**
CDAG	**Cicekdag**	**5.26**	**59**		*i* P		**Pn**	**08 00 44.6**	**-2.4**
SLUM	**Salum**	**6.19**	**207**		P		**Pn**	**08 00 59.1**	**-0.7**
	baz=207								
SLUM					S		**Sn**	**08 02 06.3**	**-4.2**
	baz=207								
MMAI	**Mount Meron Ar**	**6.92**	**124**		Pn		**Pn**	**08 01 09.5**	**-0.5**
	comp=N,4.4nm,0.3s,baz=310,slow=14,SNR=10								
MMAI					Sn		**Sn**	**08 02 27.3**	**-1.4**
	comp=N,5.6nm,0.3s,baz=298,slow=30,SNR=6.4								
HNAT	**Natroun**	**7.60**	**166**		P		**Pn**	**08 01 18.9**	**-0.4**
	baz=166								
KOT	**Kottamia**	**7.62**	**158**		P		**Pn**	**08 01 18.6**	**-0.9**
	baz=158								
HHAG	**Hagoal**	**7.68**	**156**		P		**Pn**	**08 01 18.7**	**-1.7**
	baz=156								
HHAG					S		**Sn**	**08 02 43.3**	**-4.0**
	baz=156								
HSAF	**As Saff**	**7.83**	**160**		P		**Pn**	**08 01 21.6**	**-0.9**
	baz=160								
GLL	**Jalalah**	**7.92**	**160**		P		**Pn**	**08 01 23.1**	**-0.5**
	baz=160								
SUZ	**Suez**	**8.04**	**152**		P		**Pn**	**08 01 25.1**	**-0.2**
	baz=153								
RYAN	**Fayoum**	**8.08**	**169**		P		**Pn**	**08 01 25.4**	**-0.4**
	baz=169								
RYAN					AMP			08 02 00.0	
	baz=169								
SWA2		**8.21**	**199**		P		**Pn**	**08 01 27.7**	**+0.2**
	baz=199								
ZAF	**Zafarana**	**8.45**	**155**		P		**Pn**	**08 01 30.0**	**-0.8**
	baz=156								
MLR	**Muntele Rosu**	**8.65**	**348**		Pn		**Pn**	**08 01 35.4**	**+1.8**
	comp=N,0.2nm,0.3s,baz=212,slow=5.9,SNR=5.5								
NBNS	**Bani Suef**	**8.72**	**164**		P		**Pn**	**08 01 33.7**	**-0.9**
	baz=164								
EIL	**Elat**	**9.11**	**142**		Pn		**Pn**	**08 01 38.5**	**-1.4**
	comp=N,1.7nm,0.3s,baz=314,slow=1.9,SNR=8.3								
EIL					Sn		**Sn**	**08 03 21.4**	**-0.9**
	comp=N,2.4nm,0.3s,baz=136,slow=23,SNR=5.9								
HBST	**Basata**	**9.38**	**145**		P		**Pn**	**08 01 42.8**	**-0.9**
	baz=145								
GRB	**Gharib**	**9.46**	**157**		P		**Pn**	**08 01 44.4**	**-0.4**
	baz=157								
TAMRE	**El Minia**	**9.56**	**167**		P		**Pn**	**08 01 45.1**	**-1.0**
	baz=167								
TR2	**Tor 2**	**9.68**	**152**		P		**Pn**	**08 01 46.8**	**-1.0**
	baz=152								
HDHB	**Dhahab**	**9.75**	**147**		P		**Pn**	**08 01 48.4**	**-0.3**
	baz=147								
HFRF	**Wahat Farafira**	**9.88**	**181**		P		**Pn**	**08 01 49.9**	**-0.6**
	baz=182								
TR1	**Tor 1**	**10.11**	**152**		P		**Pn**	**08 01 52.9**	**-0.7**
	baz=152								
HHRG	**Al Ghardaqah**	**10.69**	**155**		P		**Pn**	**08 02 03.5**	**+1.9**
	baz=155								
KBZ	**Khabaz**	**12.81**	**54**		LR		LR	08 09 07.6	
	comp=N,112nm,18.4s,baz=237,slow=45								
GNI	**Garni**	**13.05**	**71**		LR		LR	08 08 48.3	
	comp=N,120nm,21.3s,baz=287,slow=43								
VRAC	**Vranov**	**15.00**	**328**		LR		LR	08 08 36.5	
	comp=N,63nm,19.4s,baz=128,slow=36								
KEST	**Kesra**	**15.51**	**271**		Pn		**P**	**08 03 10.3**	**-1.3**
	comp=N,0.1nm,0.3s,baz=320,slow=5.2,SNR=3.6								
GERES	**GERESS Array B**	**15.99**	**322**		Pn		**P**	**08 03 17.8**	**+0.9**
	comp=N,0.2nm,0.3s,baz=137,slow=14,SNR=7.0								
FINES	**FINESS Array B**	**24.46**	**357**		P		**P**	**08 04 47.8**	**+0.7**
	comp=N,2.3nm,0.7s,baz=148,slow=11,SNR=6.2								
ESDC	**Sonseca Array**	**25.54**	**286**		P		**P**	**08 04 57.6**	**+0.4**
	comp=N,1.6nm,0.8s,baz=76,slow=10,SNR=6.6								
ARCES	**ARCESS Array B**	**32.58**	**358**		LR		LR	08 19 18.2	
	comp=N,74nm,19.1s,baz=195,slow=36								
TORD	**Torodi Ar. Bea**	**33.80**	**232**		P		**P**	**08 06 10.2**	**-0.4**
	comp=N,1.5nm,0.4s,baz=34,slow=8.9,SNR=10								
MKAR	**Makanchi Array**	**40.45**	**59**		P		**P**	**08 07 07.2**	**+0.3**
	comp=N,0.3nm,0.4s,baz=264,slow=7.1,SNR=1.3								
BOSA	**Boshof**	**65.39**	**183**		LR		LR	08 42 23.6	
	comp=N,43nm,20.4s,baz=178,slow=39								
KSRS	**Korea Array**	**74.96**	**54**		LR		LR	08 47 48.0	
	comp=N,19nm,19.0s,baz=85,slow=39								
PDAR	**Pinedale Array**	**91.86**	**331**		LR		LR	08 55 36.9	
	comp=N,31nm,18.6s,baz=130,slow=37								

*NOU **28** 08:26:15.1, 38˙.95S×173˙.75E, h0km, MLv3.9, Off W. Coast of N. Island, N.Z.*
WEL 28 08:26:16.9±0.6, 39˚.3S±4˚×17˚.4E±˚, h9km±3km, M4.1/28, ML4.4/28, MLv4.1/28, Error ellipse: s-maj=0.0km s-min=0.0km az=139.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKE	**Pukeiti**	**0.18**	**191**	P	Pg	08 26 21.7	+1.0
PKE				S	Sg	08 26 24.8	+1.5
DREZ	**Durham Road**	**0.21**	**142**	P	Pg	08 26 22.3	+1.0
DREZ				S	Sg	08 26 26.2	+1.9
MHEZ	**Mangahewa**	**0.23**	**104**	P	Pg	08 26 22.9	+1.2
MHEZ				S	Sg	08 26 27.0	+2.1
NEZ	**North Egmont**	**0.25**	**169**	P	Pb	08 26 23.0	-0.8
NEZ				S	Sg	08 26 27.0	+1.4
KHEZ	**Kahui Hut**	**0.27**	**183**	P	Pg	08 26 23.2	+0.7
KHEZ				S	Sg	08 26 27.5	+1.3
NBEZ	**Newall Road No**	**0.28**	**207**	P	Pb	08 26 23.6	-0.5
NBEZ				S	Sb	08 26 28.4	-0.5
PREZ	**Palmer Road**	**0.34**	**163**	P	Pb	08 26 24.6	-0.5
PREZ				S	Sb	08 26 30.1	-0.6
NMEZ	**Namu Road**	**0.41**	**197**	P	Pb	08 26 25.7	-0.6
NMEZ				S	Sb	08 26 32.1	-0.6
LREZ	**Lake Rotokare**	**0.53**	**147**	P	Pb	08 26 27.9	-0.5
VRZ	**Vera Road**	**0.57**	**101**	P	Pg	08 26 28.5	+0.5
HIZ	**Hauiti**	**0.82**	**52**	P	Pg	08 26 32.9	+0.2
HIZ				S	Sb	08 26 44.6	+0.1
WAZ	**Wanganui**	**1.04**	**135**	P	Pg	08 26 36.6	-0.3
WAZ				S	Sn	08 26 52.2	-0.2
PKVZ	**Pokaka**	**1.06**	**105**	P	Pg	08 26 36.5	-0.7
PKVZ				S	Sg	08 26 50.6	-0.4
TWVZ	**Taurewa**	**1.10**	**93**	P	Pg	08 26 37.1	-0.9
MTVZ	**Mangateitei**	**1.18**	**108**	P	Pb	08 26 38.3	-1.1
FWVZ	**Far West T-bar**	**1.21**	**102**	P	Pb	08 26 39.0	-1.1
TRVZ	**Turoa**	**1.21**	**104**	P	Pb	08 26 39.1	-1.1
WTVZ	**West Tongariro**	**1.22**	**95**	P	Pb	08 26 39.2	-1.0
DRZ	**Dome Shelter**	**1.22**	**103**	P	Pb	08 26 39.7	-0.6
NGZ	**Ngauruhoe**	**1.23**	**98**	P	Pb	08 26 39.5	-0.9
NNVZ	**North Ngauruho**	**1.24**	**96**	P	Pn	08 26 39.6	-0.9
WHVZ	**Whangaehu Hut**	**1.24**	**103**	P	Pb	08 26 39.7	-0.9
KRVZ	**Karewarewa**	**1.25**	**94**	P	Pn	08 26 39.9	-0.9
WNVZ	**Wahianoa**	**1.25**	**105**	P	Pn	08 26 39.8	-1.0
SNVZ	**South Ngauruho**	**1.26**	**98**	P	Pn	08 26 40.2	-0.7
OTVZ	**Oturere**	**1.28**	**97**	P	Pn	08 26 40.5	-0.6
NTVZ	**North Tongarir**	**1.28**	**94**	P	Pn	08 26 40.4	-0.8
TUVZ	**Tukino**	**1.28**	**102**	P	Pn	08 26 40.7	-0.5

KATZ	**Kakaramea**	**1.30**	**89**		P		**Pn**	**08 26 40.7**	**-0.6**
TMVZ	**Te Maari**	**1.30**	**95**		P		**Pn**	**08 26 40.8**	**-0.7**
ETVZ	**East Tongariro**	**1.31**	**96**		P		**Pn**	**08 26 41.0**	**-0.5**
WATZ	**Wairara**	**1.36**	**77**		P		**Pn**	**08 26 42.0**	**-0.2**
RATZ	**Rangitukua**	**1.37**	**84**		P		**Pn**	**08 26 41.7**	**-0.5**
TLZ	**Tolley Road**	**1.37**	**60**		P		**Pn**	**08 26 41.3**	**-0.9**
MOVZ	**Moawhango**	**1.39**	**107**		P		**Pn**	**08 26 41.8**	**-0.8**
RITZ	**Rihia Road**	**1.42**	**89**		P		**Pn**	**08 26 43.0**	**0.0**
KUTZ	**Kaahu Road**	**1.50**	**70**		P		**Pn**	**08 26 43.8**	**-0.2**
OHWZ	**Ohakea**	**1.54**	**140**		P		**Pb**	**08 26 45.2**	**-0.5**
WHTZ	**Whakaora**	**1.54**	**77**		P		**Pb**	**08 26 45.4**	**-0.3**
HATZ	**Hinemaiaia**	**1.61**	**86**		P		**Pb**	**08 26 46.4**	**-0.5**
BHHZ	**Black Hill Sta**	**1.65**	**107**		P		**Pb**	**08 26 45.3**	**-0.8**
TOZ	**Tahuroa Road**	**1.73**	**42**		P		**Pn**	**08 26 46.3**	**-0.8**
GRRZ	**Galatos Road**	**1.76**	**68**		P		**Pn**	**08 26 47.2**	**-0.4**
DUWZ	**D'Urville Isla**	**1.78**	**183**		P		**Pn**	**08 26 46.9**	**-1.0**
TSZ	**Takapari Road**	**1.82**	**125**		P		**Pn**	**08 26 49.0**	**+0.6**
ALRZ	**Allen Road**	**1.86**	**76**		P		**Pb**	**08 26 50.3**	**-0.9**
MRHZ	**Matea Rd**	**1.87**	**85**		P		**Pn**	**08 26 48.6**	**-0.5**
HRRZ	**Handcock Road**	**1.87**	**71**		P		**Pg**	**08 26 52.2**	**-0.7**
HSRZ	**Hossack Road**	**1.87**	**68**		P		**Pb**	**08 26 52.0**	**+0.8**
UTU	**Utuhina**	**1.89**	**64**		P		**Pn**	**08 26 48.8**	**-0.6**
KWHZ	**Kaweka Forest**	**1.90**	**103**		P		**Pn**	**08 26 49.4**	**-0.2**
PNHZ	**Pukenui**	**1.90**	**119**		P		**Pn**	**08 26 49.7**	**+0.1**
KMRZ	**Kaimai**	**1.90**	**53**		P		**Pn**	**08 26 50.5**	**+0.9**
POWZ	**Post Office Ro**	**1.92**	**136**		P		**Pn**	**08 26 50.6**	**+0.9**
KRHZ	**Kereru**	**1.92**	**110**		P		**Pn**	**08 26 50.1**	**+0.3**
BKZ	**Black Stump Fm**	**1.92**	**95**		P		**Pn**	**08 26 49.8**	**0.0**
NGRZ	**Ngongotaha**	**1.92**	**62**		P		**Pn**	**08 26 49.3**	**-0.5**
KIW	**Kapiti Island**	**1.96**	**160**		P		**Pn**	**08 26 50.1**	**-0.2**
HLRZ	**Highlands Stat**	**1.97**	**68**		P		**Pb**	**08 26 53.9**	**+0.8**
OGWZ	**Otaki Gorge**	**2.00**	**154**		P		**Pn**	**08 26 51.8**	**+0.9**
KARZ	**Kaharoa**	**2.00**	**61**		P		**Pn**	**08 26 51.4**	**+0.5**
AWAZ	**Awhitu Peninsu**	**2.01**	**14**		P		**Pn**	**08 26 50.7**	**-0.3**
MRZ	**Mangatainoka R**	**2.02**	**144**		P		**Pn**	**08 26 52.1**	**+0.8**
OMRZ	**Omania**	**2.

ERK	**Elk Rock**	**0.72**	**24**		Pb	08 31 03.0	-0.3	
JRO	**Jston Ridge Ob**	**0.73**	**31**		Pb	08 31 03.5	0.0	
SOSW	**Source of Smit**	**0.74**	**36**		Pb	08 31 03.6	+0.1	
B202	**Windy Ridge, M**	**0.74**	**36**		Pb	08 31 03.3	-0.2	
B201	**Coldwater, Mou**	**0.74**	**28**		Pb	08 31 03.3	-0.3	
TDH	**Tom, Dick, Har**	**0.77**	**117**		Pb	08 31 04.0	-0.1	
TDL	**Tradedollar La**	**0.80**	**28**		Pb	08 31 04.4	-0.2	
B022	**Seaside**	**0.87**	**291**		Pb	08 31 05.3	-0.4	
B022					Sb	08 31 17.3	+0.4	
BMW	**Boistfort Moun**	**0.89**	**339**		Pb	08 31 05.8	-0.3	
E04D	**Cinebar**	**0.92**	**8**		Pb	08 31 06.5	0.0	
E04D	**Cinebar** baz=188,SNR=17	**0.92**	**8**	P		08 31 06.4		
E04D				S		08 31 19.8		
	baz=188							
F05D	**White Salmon**	**0.94**	**75**		Pn	08 31 07.4	+0.1	
F05D	**White Salmon** baz=256	**0.94**	**75**	S		08 31 20.3		
ASR	**Mount Adams--S**	**0.96**	**58**		Pb	08 31 07.1	-0.2	
LCW	**Lucas Creek**	**1.02**	**2**		Pb	08 31 08.0	-0.3	
H04A	**Detroit Lake**	**1.05**	**157**		Pn	08 31 07.9	-0.8	
H04A				Sg	Sb	08 31 21.6	-0.5	
E03A	**Lebam**	**1.06**	**328**		Pn	08 31 08.4	-0.4	
E03A	**Lebam**	**1.06**	**328**	Sn	Sn	08 31 22.7	-0.1	
E03A	comp=E,46nm,0.5s			IAML		08 31 23.4		
G05D	**Wamic, OR**	**1.10**	**111**		Pb	08 31 10.4	+0.8	
G05D	**Wamic, OR** baz=292,SNR=25	**1.10**	**111**	P		08 31 10.2		
G05D				S		08 31 24.8		
	baz=292							
H04D	**Lebanon**	**1.13**	**179**		Pn	08 31 09.6	-0.1	
H04D	**Lebanon** baz=359,SNR=7.4	**1.13**	**179**	P		08 31 09.5		
H04D				S		08 31 24.7		
	baz=359							
COR	**Corvallis**	**1.13**	**200**		Pb	08 31 10.9	+0.9	
COR	comp=E,29nm,3.3s			IAML		08 31 24.2		
GLK	**Glacier Lake**	**1.22**	**41**		Pb	08 31 11.7	0.0	
LON	**Longmire**	**1.28**	**31**		Pn	08 31 12.4	+0.4	
LON	**Longmire**	**1.28**	**31**		Pb	08 31 12.6	-0.2	
WPW	**White Pass**	**1.35**	**38**		Pb	08 31 13.7	-0.2	
B941	**Kapowsin**	**1.39**	**16**		Pb	08 31 14.0	-0.5	
D05A	**Enumclaw**	**1.63**	**19**	Pn	Pb	08 31 18.0	-0.7	
D05A	comp=E,23nm,4.7s			IAML		08 31 54.1		
D05A	comp=N,20nm,4.6s			IAML		08 32 03.3		
I05D	**Terrebonne, OR** baz=323	**1.65**	**142**	Pb		08 31 18.6		
I05D				Sb		08 31 40.6		
	baz=323							
I02D	**Swisshome** baz=26,SNR=14	**1.73**	**207**	Pb		08 31 19.5		
I02D				Sb		08 31 42.4		
	baz=26							
D03D	**Eldon** baz=173	**1.90**	**353**	P		08 31 22.2		
NLWA	**Neilton Lookou**	**1.90**	**337**	Pn	Pn	08 31 21.3	+0.8	
NLWA	comp=N,13nm,4.4s			IAML		08 31 39.5		
NLWA	comp=N,16nm,4.8s			IAML		08 32 07.4		
I03D	**Drain, OR** baz=12	**2.00**	**192**	P		08 31 23.5		
I03D				Sb		08 31 50.4		
	baz=12							
LTY	**Liberty**	**2.16**	**41**	Pn	Pn	08 31 25.9	+1.8	
LTY	comp=E,11nm,4.5s			IAML		08 31 41.9		
I07A	**Izee**	**2.80**	**123**	Pn	Pn	08 31 34.1	+1.3	
I07A	comp=N,7.0nm,5.0s			IAML		08 32 16.8		

*IDC **28** 08:33:28.3±1.7,0°.93N×125°.08E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/41,mbtmp3.7/4,Error ellipse: s-maj=177.1km s-min=24.2km az=63.0*
*DJA **28** 08:33:48.4±0.4,1°.N±4°×12°.5E±°,h10km,M3.8/7,mb4.2/1, MLv3.6/7*
ISC 28 08:33:28.2±1.5,1°.7N±0°.1×126°.5E±0°.2,h10km,n9,σ0°89/9, mb3.8/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**2.75**	**246**	P	**Pn**	**08 34 11.7**	**-0.7**
GTOI	**Gorontalo**	**3.64**	**253**	P	**Pn**	**08 34 24.5**	**-0.1**
LUWI	**Luwuk**	**4.62**	**234**	P	**Pn**	**08 34 38.9**	**+0.8**
NLAI	**Namlea**	**4.96**	**173**	P	**Pg**	**08 35 04.0**	**+0.7**
APSI	**Ampana**	**5.50**	**242**	P	**Pn**	**08 34 49.6**	**-0.6**
WRA	**Warramunga Arr** 1.2nm,0.4s,baz=334,slow=11,SNR=24	**22.86**	**161**	P	**P**	**08 38 30.8**	**-1.1**
ASAR	**Alice Springs** 0.4nm,0.5s,baz=343,slow=7.5,SNR=8.2	**26.24**	**164**	P	**P**	**08 39 03.0**	**-0.7**
STKA	**Stephens Creek** 1.0nm,0.6s,baz=335,slow=8.7,SNR=3.7	**36.35**	**158**	P	**P**	**08 40 32.2**	**-0.3**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=119,slow=7.5,SNR=5.6	**59.07**	**326**	P	**P**	**08 43 29.5**	**+0.8**

*TAP **28** 08:56:11.3,24°.75N×122°.84E,h11km,ML3.0,C*
*JMA **28** 08:56:11.5±0.1,24°.74N×122°.83E,h16km±2km,M2.2*
ISC 28 08:56:11.7±1.0,24°.72N±0°.04×122°.83E±0°.02,h16km±8km, n47,σ0°61/69,1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.28**	**159**	P	**Pg**	**08 56 17.9**	**+0.1**
JYNG				S	**Sg**	**08 56 22.4**	**+0.5**
YOJ	**Yonaguni jima**	**0.30**	**148**	P	**Pg**	**08 56 18.1**	**+0.1**
YOJ				*eS*	**Sg**	**08 56 22.8**	**+0.4**
YOJ	**Yonaguni jima** baz=151	**0.30**	**148**	*iP*	**Pg**	**08 56 18.2**	**+0.1**
YOJ				*i* S	**Sg**	**08 56 22.8**	**+0.4**
	baz=151						
TWB1	**Santiao Chiao** baz=289	**0.82**	**291**	P	**Pg**	**08 56 27.2**	**-0.4**
IRIF	**Iriomote-Funau**	**0.90**	**115**	P	**Pg**	**08 56 28.7**	**-0.5**
IRIF				S	**Sg**	**08 56 40.8**	**-0.2**
TWC	**Suao** baz=260	**0.90**	**263**	P	**Pg**	**08 56 28.6**	**-0.6**
TWC				*eS*	**Sg**	**08 56 40.5**	**-0.6**
	baz=260						
NTC	**Toucheng** baz=276	**0.92**	**279**	*eS*	**Sb**	**08 56 42.2**	**+0.8**
TIPB	**Shuangxi** baz=284	**0.95**	**286**	*eP*	**Pb**	**08 56 29.6**	**-0.3**
EWUT	**Wuta** baz=251	**1.00**	**254**	*eP*	**Pb**	**08 56 30.1**	**-0.5**
EWUT				*eS*	**Sb**	**08 56 42.9**	**-0.7**
	baz=251						
NWF	**Wu-fen Shan** baz=289	**1.02**	**290**	*eP*	**Pn**	**08 56 31.6**	**+0.2**
WFSB	**Wu-fen Shan** baz=289	**1.02**	**290**	*eP*	**Pn**	**08 56 31.7**	**+0.3**
NDS	**Dongshan** baz=264	**1.02**	**266**	*eP*	**Pb**	**08 56 30.9**	**-0.1**
TWE	**Neicheng** baz=267	**1.06**	**270**	*eP*	**Pg**	**08 56 31.8**	**-0.4**
TWE				*i* S	**Sb**	**08 56 45.5**	**+0.1**
	baz=267						
HATJ	**Hateruma jima**	**1.10**	**126**	P	**Pb**	**08 56 32.1**	**-0.3**
HATJ				*eS*	**Sb**	**08 56 47.0**	**+0.4**
ENTT	**Nioudou** baz=263	**1.16**	**266**	*eP*	**Pb**	**08 56 33.3**	**0.0**
ENTT				*eS*	**Sg**	**08 56 48.6**	**-0.6**
	baz=263						
JKRS	**Kuro-shima**	**1.17**	**114**	P	**Pn**	**08 56 33.1**	**-0.4**
JKRS				S	**Sb**	**08 56 49.1**	**+0.5**
NDT	**Datong Townshi** baz=261	**1.21**	**265**	P	**Pb**	**08 56 34.4**	**+0.2**
NDT				S	**Sb**	**08 56 49.6**	**0.0**
	baz=261						
NWLT	**Wulai** baz=270	**1.21**	**273**	*eP*	**Pg**	**08 56 35.0**	**-0.1**
NWLT				S	**Sb**	**08 56 50.0**	**+0.2**
	baz=270						
YM08	**YM08** baz=291	**1.22**	**293**	*eP*	**Pg**	**08 56 35.5**	**+0.2**
YM01	**YM01** baz=289	**1.22**	**291**	*eP*	**Pg**	**08 56 35.3**	**-0.1**
JIJ	**Ishigaki jima**	**1.24**	**106**	P	**Pn**	**08 56 33.7**	**-0.8**
JIJ				*eS*	**Sb**	**08 56 50.3**	**-0.3**
TATO	**Taipei**	**1.25**	**282**	*eP*	**Pg**	**08 56 35.7**	**-0.1**
	baz=278						
TATO				*i* S	**Sb**	**08 56 50.8**	**0.0**
	baz=278						
NACB	**Ninganchiao** baz=242	**1.25**	**245**	*eP*	**Pn**	**08 56 34.7**	**+0.1**
NACB				*eS*	**Sb**	**08 56 51.0**	**+0.2**
	baz=242						
TWD	**Chiawan** baz=250	**1.29**	**241**	*eP*	**Pg**	**08 56 36.2**	**-0.5**
YHNB	**Yeheng** baz=267	**1.33**	**268**	P	**Pn**	**08 56 35.7**	**0.0**
ETLH	**Xiulin Townshi** baz=246	**1.33**	**248**	*eP*	**Pb**	**08 56 36.3**	**-0.1**
JISG	**Ishigakijimahi**	**1.35**	**95**	P	**Pb**	**08 56 36.9**	**+0.3**
JISG				*eS*	**Sn**	**08 56 53.4**	**-0.1**
NNSB	**Datong** baz=255	**1.35**	**258**	P	**Pb**	**08 56 36.5**	**-0.3**
NNSB				*eS*	**Sn**	**08 56 54.2**	**+0.4**
	baz=255						
NNSH	**Datong** baz=255	**1.35**	**258**	*eP*	**Pn**	**08 56 36.3**	**+0.3**
NNSH				*eS*	**Sb**	**08 56 53.7**	**-0.2**
	baz=255						
NNS	**Nan Shan** baz=255	**1.36**	**259**	P	**Pb**	**08 56 36.8**	**-0.1**
NNS				*eS*	**Sb**	**08 56 54.6**	**+0.5**
	baz=255						
FUSS	**Fushou** baz=250	**1.52**	**252**	*eP*	**Pb**	**08 56 40.1**	**+0.4**
FUSS				*eS*	**Sb**	**08 56 59.1**	**+0.2**
	baz=250						
WHF	**Hehuan Shan** baz=256	**1.54**	**249**	*eP*	**Pb**	**08 56 40.4**	**+0.3**
WHF				*eS*	**Sb**	**08 57 00.3**	**+0.8**
	baz=256						
TDCB	**Techi** baz=252	**1.59**	**254**	*eP*	**Pb**	**08 56 41.0**	**+0.1**
CHGB	**Renai** baz=247	**1.65**	**247**	*eP*	**Pb**	**08 56 41.9**	**0.0**
LIOB	**Emei** baz=268	**1.66**	**268**	*eP*	**Pb**	**08 56 42.2**	**+0.4**
OWD	**Renai** baz=244	**1.69**	**244**	*eP*	**Pb**	**08 56 41.9**	**-0.7**
HGSD	**Ruisui** baz=226	**1.77**	**227**	*eP*	**Pb**	**08 56 43.8**	**-0.1**
WHP	**Taichung City** baz=241	**1.77**	**256**	*eP*	**Pg**	**08 56 44.9**	**-0.9**
VWDT	**VWDT** baz=238	**1.82**	**239**	*eP*	**Pb**	**08 56 43.9**	**-0.8**
YULB	**Yu-li** baz=214	**1.93**	**227**	*eP*	**Pb**	**08 56 45.4**	**-1.1**
SSLB	**Suanglung** baz=242	**1.95**	**242**	*eP*	**Pb**	**08 56 46.7**	**-0.2**
FULB	**Fuli** baz=207	**2.07**	**223**	*eP*	**Pn**	**08 56 46.2**	**+0.4**
FULB				*eS*	**Sn**	**08 57 13.3**	**+2.0**
	baz=207						
YUS	**Yu-Shan** baz=236	**2.11**	**235**	*eP*	**Pn**	**08 56 48.1**	**+1.3**
ALS	**Alishan** baz=238	**2.21**	**237**	*eP*	**Pb**	**08 56 50.0**	**-1.5**
EDH	**Donghe** baz=219	**2.23**	**219**	*eP*	**Pn**	**08 56 47.9**	**-0.2**
CHN5	**Tsauling** baz=242	**2.26**	**241**	*eP*	**Pb**	**08 56 50.7**	**-1.6**
CHN4	**Tsaushan** baz=238	**2.46**	**237**	*eP*	**Pb**	**08 56 53.7**	**-1.9**

*IDC **28** 09:16:52.6±13.0,12°.27S×166°.84E,h236km±127km, mb3.2/5,mb1 3.5/5,mb1mx3.1/31,mbtmp3.7/5,Error ellipse: s-maj=121.3km s-min=44.5km az=144.0*
ISC 28 09:16:50.7±1.7,12°.3S±0°.7×166°.9E±0°.4,h220km,n7, σ0°58/7,mb3.6/6,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 4.4nm,0.8s,baz=79,slow=12,SNR=3.1	**21.29**	**246**	P	**P**	**09 21 21.2**	**+0.7**
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=81,slow=9.1,SNR=7.4	**32.16**	**252**	P	**P**	**09 22 57.7**	**-0.4**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=70,slow=9.6,SNR=6.2	**33.29**	**245**	P	**P**	**09 23 07.5**	**-0.5**
ILAR	**Eielson Array** 14nm,0.4s,baz=238,slow=4.9,SNR=15	**84.30**	**18**	P	**P**	**09 28 57.9**	**+0.4**
TXAR	**Lajitas Array** 0.3nm,0.7s,baz=245,slow=3.9,SNR=2.7	**95.41**	**61**	P	**P**	**09 29 50.9**	**+0.1**
YKA	**Yellowknife Ar** 0.2nm,0.5s,baz=258,slow=4.1,SNR=7.5	**95.52**	**27**	P	**P**	**09 29 49.8**	**-0.5**
ARCES	**ARCESS Array B** 0.5nm,0.3s,baz=66,slow=1.9,SNR=12	**117.78**	**346**	PKP	**PKPdf**	**09 35 10.5**	**+0.2**

IDC 28 09:25:23.0±3.5,27°.50N×85°.81E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.3/52,mbtmp3.5/4,ML3.5/1,MS3.1/1, Ms1 3.1/1,ms1mx2.1/58,Error ellipse: s-maj=117.5km s-min=30.1km az=77.0,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=170,slow=12,SNR=6.0	**19.46**	**353**	P	P	09 29 51.0	-0.2
SONM	**Songino Array** 0.6nm,0.4s,baz=219,slow=11,SNR=2.1	**25.88**	**33**	P	P	09 30 56.9	+0.3
FINES	**FINESS Array B** comp=Z,20nm,21.6s,baz=202,slow=37	**51.84**	**328**	LR	LR	09 57 16.2	
WRA	**Warramunga Arr** 0.9nm,1.0s,baz=322,slow=6.6,SNR=2.8	**66.56**	**130**	P	P	09 36 13.3	-2.0
ASAR	**Alice Springs** 0.3nm,0.7s,baz=312,slow=6.1,SNR=4.4	**68.86**	**133**	P	P	09 36 31.3	+1.6

IDC 28 09:32:08.6±2.8,53°.62N×88°.03E,h0km,mb1 3.6/2, mb1mx3.2/62,mbtmp3.6/2,ML3.0/2,Error ellipse: s-maj=25.6km s-min=16.1km az=63.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA** baz=96,slow=319,SNR=1.6	**1.93**	**281**	*i*		09 44 26.3	
ZALV	**Zalesovo Beam** 3.7nm,0.3s,baz=101,slow=13,SNR=44	**1.93**	**281**	Pn	Pn	09 32 42.9	+0.2
ZALV	11nm,0.3s,baz=102,slow=29,SNR=8.2			Lg	Lg	09 33 09.2	
ZALV	1.5nm,0.3s,baz=82,slow=39,SNR=9.8			*i*		09 44 35.3	
KURBB	**Kurchatov Arra** 0.2nm,0.3s,baz=62,slow=14,SNR=10.0	**6.57**	**247**	Pn	Pn	09 33 47.0	+0.6
KURBB	0.2nm,0.3s,baz=63,slow=31,SNR=8.1			Lg	Lg	09 35 37.5	
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=26,slow=13,SNR=13	**7.76**	**211**	Pn	Pn	09 34 03.7	+0.9
MKAR	0.2nm,0.3s,baz=35,slow=18,SNR=2.5			Sn	Sn	09 35 32.0	+0.7
MKAR	0.1nm,0.3s,baz=32,slow=28,SNR=5.7			Lg	Lg	09 36 12.8	

*IDC **28** 09:38:28.4±1.6,0°.69S×127°.47E,h0km,mb3.5/3, mb1 3.8/4,mb1mx3.5/47,mbtmp3.6/4,ML3.3/1,MS2.4/1, Ms1 2.6/1,ms1mx2.1/32,Error ellipse: s-maj=48.0km s-min=26.6km az=60.0*
*DJA **28** 09:38:31.1±0.2,1°.S±2°×12°.8E±°,h10km,M4.1/13,mb4.5/3, mB4.7/3,MLv3.9/13,Mw(mB)3.9/3*
ISC 28 09:38:30.0±0.8,0°.56S±0°.05×127°.92E±0°.05,h10km,n16, σ1°08/19,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**337**	P	**Pn**	**09 38 55.6**	**-0.5**
TNTI				S	**Sg**	**09 39 17.3**	**+1.2**
SANI	**Sanana**	**2.43**	**232**	P	**Pn**	**09 39 08.4**	**-1.4**
SANI				S	**Sn**	**09 39 40.0**	**+0.4**
NLAI	**Namlea**	**2.78**	**197**	P	**Pn**	**09 39 15.2**	**+0.5**
NLAI				S	**Sn**	**09 39 49.5**	**+1.1**
MSAI	**Masohi**	**2.95**	**160**	P	**Pn**	**09 39 16.3**	**-0.6**
SWI	**Sorong**	**3.36**	**95**	P	**Pn**	**09 39 24.6**	**+2.1**
SIJI	**Sorong** 2.1nm,0.3s,baz=216,slow=23,SNR=7.4	**3.36**	**95**	Pn	**Pb**	**09 39 28.7**	**-1.1**
SIJI	0.7nm,0.3s,baz=200,slow=22,SNR=1.4			Sn	**Sb**	**09 40 11.1**	**+0.3**
KMSI	**Cibinong**	**4.09**	**286**	P	**Pn**	**09 39 33.2**	**+0.5**
BNDI	**Bandanaira**	**4.41**	**153**	P	**Pn**	**09 39 38.3**	**+1.3**
FAKI	**Fak Fak**	**4.92**	**118**	P	**Pn**	**09 39 46.2**	**+2.1**
LUWI	**Luwuk**	**5.17**	**265**	P	**Pg**	**09 40 09.1**	**+0.1**
MRSI	**Marisa**	**6.06**	**280**	P	**Pn**	**09 40 00.2**	**+0.4**
APSI	**Ampana**	**6.28**	**267**	P	**Pn**	**09 40 03.2**	**+0.5**
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=341,slow=11,SNR=2.8	**20.27**	**162**	P	**P**	**09 43 05.5**	**-0.3**
ASAR	**Alice Springs** 1.9nm,0.7s,baz=346,slow=10,SNR=18	**23.69**	**166**	P	**P**	**09 43 42.0**	**-0.1**
CMAR	**Chiang Mai Arr** comp=Z,6.2nm,21.3s,baz=135,slow=37	**34.18**	**305**	LR	LR	09 59 25.5	
MKAR	**Makanchi Array** 0.7nm,0.7s,baz=116,slow=8.1,SNR=4.8	**61.74**	**326**	P	**P**	**09 48 47.8**	**-1.0**

*RSNC **28** 09:46:34.0±1.3,8°.99N×77°.89W,h80km±9km,ML3.5, Mw3.6,Fault plane solution: NP1:ϕs38.00000°, δ40.00000°,λ-40.00000°.*
ISC 28 09:46:33.0±1.1,9°.03N±0°.04×77°.89W±0°.04,h86km±13km, n25,σ1°54/46,6C-1D,Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPC	**Capurgana**	**0.65**	**126**	*eP*	**Pn**	**09 46 48.0**	**-0.7**
CAPC				*eS*	**Sn**	**09 47 00.2**	**-0.2**
CAPC	comp=Z,2μm,0.1s			*i*		09 47 01.1	
LCBC	**Los crdobas,**	**1.51**	**96**	*eP*	**Pn**	**09 47 00.1**	**+1.4**
LCBC				*eS*	**Sn**	**09 47 18.2**	**+0.1**
LCBC	comp=Z,390nm,0.6s			*i*		09 47 27.7	
PTAC	**Punta Ardita,**	**1.87**	**178**	*eP*	**Pn**	**09 47 03.5**	**+0.1**
PTAC				*eS*	**Sn**	**09 47 26.0**	**-0.5**
PTAC	comp=Z,976nm,0.3s			*i*		09 47 27.2	
BCIP	**Isla Barro Col**	**1.93**	**274**	*eP*	**Pn**	**09 47 04.3**	**+0.1**
BCIP				*eS*	**Sn**	**09 47 27.3**	**-0.7**
MOTC	**Monteria, Cord**	**2.21**	**96**	*eP*	**Pn**	**09 47 08.2**	**+0.4**
MOTC				*eS*	**Sn**	**09 47 33.9**	**-0.6**
MOTC	comp=Z,88nm,0.6s			*i*		09 47 42.3	
UREC	**San Jos de Ur**	**2.65**	**118**	*eP*	**Pn**	**09 47 14.0**	**+0.2**
UREC				*eS*	**Sn**	**09 47 44.0**	**-1.1**
SOLC	**Bahia Solano**	**2.82**	**170**	*eP*	**Pn**	**09 47 16.0**	**-0.1**
SOLC				*eS*	**Sn**	**09 47 47.2**	**-2.0**
ZARC	**Zaragoza, Cauc**	**3.36**	**117**	*eP*	**Pn**	**09 47 23.8**	**+0.4**
ZARC				*eS*	**Sn**	**09 48 01.5**	**-0.8**
ZARC	comp=Z,105nm,0.4s			*i*		09 48 03.5	
CBOC	**Ciudad Bolivar**	**3.65**	**149**	*eP*	**Pn**	**09 47 28.8**	**+1.3**
CBOC				*eS*	**Sn**	**09 48 08.2**	**-1.3**
CBOC	comp=Z,37nm,0.4s			*i*		09 48 14.9	
HELC	**Santa Helena**	**3.66**	**140**	*eP*	**Pn**	**09 47 28.5**	**+0.8**
HELC				*eS*	**Sn**	**09 48 10.2**	**+0.2**
HELC	comp=Z,12nm,0.7s			*i*		09 48 13.8	
ARGC	**Ariguani, Magd**	**3.68**	**77**	*eP*	**Pn**	**09 47 29.2**	**+1.4**
ARGC				*eS*	**Sn**	**09 48 10.8**	**+0.7**
ARGC	comp=Z,139nm,0.3s			*i*		09 48 11.3	
SMLC	**San Martn de**	**3.77**	**93**	*eP*	**Pn**	**09 47 28.6**	**-0.4**
SMLC				*eS*	**Sn**	**09 48 09.3**	**-3.0**
PTBC	**PUERTO BERRIO,**	**4.20**	**126**	*eP*	**Pn**	**09 47 34.7**	**0.0**
PTBC				*eS*	**Sn**	**09 48 21.0**	**-1.7**
PTBC	comp=Z,41nm,0.3s			*i*		09 48 23.5	
LL3C	**La Loma 3 Cana**	**4.47**	**81**	*eP*	**Pn**	**09 47 39.2**	**+0.8**
LL3C				*eS*	**Sn**	**09 48 29.6**	**+0.4**
LL3C	comp=Z,86nm,0.5s			*i*		09 48 35.0	
BRRC	**Barranca, Sant**	**4.55**	**114**	*eP*	**Pn**	**09 47 40.4**	**+0.9**
BRRC				*i*		09 47 43.5	
BRRC	comp=Z,143nm,0.4s			*eS*	**Sn**	**09 48 31.6**	**+0.4**
NORC	**Norcasia**	**4.56**	**139**	*eP*	**Pn**	**09 47 42.4**	**+2.7**
NORC				*i*		09 48 44.1	
	comp=Z,10nm,0.4s						
OCAC	**Ocana**	**4.58**	**99**	*eP*	**Pn**	**09 47 40.0**	**-0.1**
OCAC				*eS*	**Sn**	**09 48 30.9**	**-1.4**
OCAC	comp=Z,180nm,0.5s			*i*		09 48 35.1	
YOTC	**Yotoco, Valle**	**5.24**	**163**	*i* P	**Pn**	**09 47 48.6**	**-0.4**
YOTC				*eP*		09 47 48.8	
YOTC				*eS*	**Sn**	**09 48 46.3**	**-1.9**
CRJC	**Cerrejon, Guaj**	**5.31**	**68**	*eP*	**Pn**	**09 47 50.0**	**+0.1**
CRJC				*eS*	**Sn**	**09 48 45.3**	**-4.6**
CRJC	comp=Z,99nm,0.3s			*i*		09 48 51.2	
PAMC	**Pamplona, Colo**	**5.40**	**108**	*eP*	**Pn**	**09 47 52.1**	**+0.6**
PAMC				*eS*	**Sn**	**09 48 52.0**	**-0.6**
PAMC	comp=Z,47nm,0.8s			*i*		09 49 09.3	
RUSC	**La Rusia**	**5.69**	**123**	*eP*	**Pn**	**09 47 56.0**	**+0.5**
RUSC				*eS*	**Sn**	**09 48 58.2**	**-1.5**
HOJ	**Hope**	**8.99**	**7**	*i* P	**Pn**	**09 48 42.5**	**+2.4**
STH	**Stony Hill**	**9.06**	**7**	*i* P	**Pn**	**09 48 43.0**	**+2.0**
GWJ	**Greenwich**	**9.06**	**7**	*i* P	**Pn**	**09 48 43.1**	**+1.9**
BBJ	**Bamboo Saint A**	**9.32**	**4**	*i* P	**Pn**	**09 48 47.0**	**+2.4**
BBJ				*i* S	**Sn**	**09 50 24.3**	**-3.6**

IDC 28 10:06:19.8±9.1,18°.34S×178°.90E,h519km±58km,mb3.0/3, mb1 3.2/3,mb1mx2.7/42,mbtmp4.0/3,Error ellipse: s-maj=235.1km s-min=98.1km az=98.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu** 1.5nm,0.3s,baz=128,slow=17,SNR=9.2	**1.01**	**307**	P	P	10 07 23.2	0.0
STKA	**Stephens Creek** 0.7nm,0.4s,baz=106,slow=17,SNR=3.4	**36.18**	**241**	P	P	10 12 39.4	+1.0
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=100,slow=8.0,SNR=11	**42.03**	**260**	P	P	10 13 25.0	-0.9
ASAR	**Alice Springs** 3.9nm,0.5s,baz=88,slow=8.2,SNR=89	**42.21**	**255**	P	P	10 13 27.2	0.0

*UPP **28** 10:08:16.0±2.8,64°.39N×31°.66E,h0km,ML1.8,Suspected explosion*
*HEL **28** 10:08:21.9±0.2,64°.77N×30°.68E,h0km,ML2.0,Explosion*
*KOLA **28** 10:08:21.1,64°.66N×30°.46E,h0km,ML2.5,Kostomuksha, Karelia*
*BER **28** 10:08:23.4±3.9,64°.76N×30°.70E,h0km,ML2.3(NAO), Suspected explosion*
*NAO **28** 10:08:23.0±1.6,64°.79N×30°.73E,ML2.3*
*IDC **28** 10:08:24.1±2.4,64°.81N×30°.44E,h0km,mb1 2.8/3, mb1mx2.7/55,mbtmp2.7/3,ML2.1/3,Error ellipse: s-maj=34.9km s-min=8.3km az=99.0*
ISC 28 10:08:22.2±0.9,64°.85N±0°.03×30°.38E±0°.04,h0km,n45, σ1°64/69,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki** baz=169	**1.20**	**350**	PG	**Pg**	**10 08 45.3**	**+0.1**
KU6				MSG		10 09 01.3	
KU6	comp=Z,7.7nm,0.2s			SN	**Sn**	**10 09 03.2**	**-0.1**
MSF	**Maaselka** baz=153	**1.21**	**333**	PG	**Pb**	**10 08 45.9**	**0.0**
OLKF	**Oulanka, Finla**	**1.54**	**345**	PG	**Pb**	**10 08 51.5**	**-0.1**
OUL	**Oulu**	**1.92**	**279**	Pn	**Pg**	**10 08 59.1**	**0.0**
OUL				Sn	**Sg**	**10 09 25.2**	**+1.2**
OUL	**Oulu** baz=87	**1.92**	**279**	Pn	**Pg**	**10 08 59.0**	**-0.1**
OUL				SG	**Sg**	**10 09 24.9**	**+1.0**
JOF	**Joensuu** baz=351	**1.98**	**168**	PG	**Pn**	**10 08 55.6**	**-1.4**
OUF	**Merijarvi** baz=80	**2.48**	**261**	PB	**Pb**	**10 09 06.9**	**-0.8**
OUF				MSG		10 09 38.6	
OUF	comp=Z,12nm,0.2s			SG	**Sg**	**10 09 41.7**	**-0.2**
RNF	**Rovaniemi**	**2.53**	**316**	PB	**Pb**	**10 09 08.0**	**-0.4**
RNF				SB	**Sg**	**10 09 42.2**	**-1.1**
OBF0	**Syolatti, Pyha**	**2.67**	**265**	PG	**Pb**	**10 09 10.6**	**-0.2**
TOF	**Tornio**	**2.82**	**299**	PG	**Pg**	**10 09 14.9**	**-1.2**

	comp=Z,4.7nm,0.2s							
SUF				SG	**Sb**	**10 09 49.6**	**+0.5**
VRF	**Varrio**	**2.93**	**354**	PB	**Pn**	**10 09 12.6**	**+2.6**
	baz=163							
VRF				MSG		10 09 50.8		
	comp=Z,2.6nm,0.2s							
APA0	**Apatity Array**	**2.96**	**20**	Pn	**Pn**	**10 09 10.7**	**+0.2**
	baz=193,slow=12							
APA0				Sn	**Sn**	**10 09 47.9**	**+1.1**
	baz=198,slow=28							
APA0				Lg	Lg	10 09 56.0		
	baz=208,slow=37							
APA0	**Apatity Array**	**2.96**	**20**	Pn	**Pn**	**10 09 10.7**	**+0.2**
	baz=193,slow=12							
APA0				Sn	**Sn**	**10 09 47.9**	**+1.1**
	baz=198,slow=28							
APA0				Sg	**Sg**	**10 09 56.0**	**-1.4**
	baz=208,slow=37							
APA0	**Apatity Array**	**2.96**	**20**	P	**Pn**	**10 09 11.1**	**+0.6**
APA0				S	**Sn**	**10 09 48.5**	**+1.8**
APA	**Apatity**	**3.00**	**23**	P	**Pn**	**10 09 11.4**	**+0.5**
APA				S	**Sn**	**10 09 49.1**	**+1.7**
SGF	**Sodankyl**	**3.04**	**331**	SG	**Sg**	**10 09 58.4**	**-1.4**
KALU	**Kalix**	**3.12**	**292**	P	**Pn**	**10 09 15.2**	**+2.6**
KALU				S	**Sg**	**10 10 00.7**	**-1.5**
KAF	**Kangasniemi**	**3.30**	**216**	PG	**Pb**	**10 09 21.3**	**-0.2**
	baz=39							
KEF	**Keuruu**	**3.65**	**225**	PB	**Pn**	**10 09 22.5**	**+2.6**
PAJU	**Pajala**	**3.69**	**310**	P	**Pn**	**10 09 22.7**	**+2.2**
PAJU	**Pajala**	**3.69**	**310**	PG	**Pg**	**10 09 32.2**	**-0.7**
PAJU				SG	**Sg**	**10 10 19.4**	**-1.3**
BURU	**Burvik**	**3.87**	**270**	P	**Pn**	**10 09 24.5**	**+1.5**
BURU				S	**Sb**	**10 10 14.5**	**-4.2**
BURU	**Burvik**	**3.87**	**270**	PN	**Pn**	**10 09 25.1**	**+2.1**
FIA0	**FINESS Array S**	**3.94**	**212**	Pn	**Pn**	**10 09 24.3**	**+0.5**
	baz=38,slow=14							
FIA0				Pg	**Pb**	**10 09 31.2**	**-1.2**
	baz=32,slow=14							
FIA0				Sn	**Sn**	**10 10 13.1**	**+2.5**
	baz=28,slow=22							
FIA0				Lg	Lg	10 10 25.7		
	baz=29,slow=37							
FIA0	**FINESS Array S**	**3.94**	**212**	Pn	**Pn**	**10 09 24.3**	**+0.5**
	baz=38,slow=14							
FIA0				Pg	**Pb**	**10 09 31.2**	**-1.2**
	baz=32,slow=14							
FIA0				Sg	**Sg**	**10 10 25.7**	**-2.9**
	baz=29,slow=37							
FIA0	**FINESS Array S**	**3.94**	**212**	PN	**Pn**	**10 09 24.4**	**+0.6**
FINES	**FINESS Array B**	**3.94**	**212**	Pn	**Pn**	**10 09 24.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=1.5							
FINES				Sn	**Sn**	**10 10 12.7**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=32,slow=22,SNR=2.3							
FINES				Lg	Lg	10 10 25.1		
	comp=Z,1.0nm,0.3s,baz=31,slow=32,SNR=9.9							
HARU	**Harads**	**4.13**	**293**	P	**Pn**	**10 09 29.3**	**+2.8**
ODEU	**Stanfors**	**4.18**	**268**	P	**Pn**	**10 09 27.8**	**+0.6**
MASU	**Masugnsbyn**	**4.29**	**311**	P	**Pn**	**10 09 32.6**	**+3.8**
UMAU	**Umeaa**	**4.33**	**261**	P	**Pn**	**10 09 29.0**	**-0.1**
VJF	**Virojoki**	**4.52**	**198**	SG	**Sb**	**10 10 38.1**	**+0.9**
DUNU	**Dundret**	**4.61**	**304**	P	**Pn**	**10 09 37.1**	**+4.0**
LANU	**Lannavaara**	**4.65**	**317**	P	**Pn**	**10 09 35.1**	**+1.4**
ARA0	**ARCESS Array S**	**5.08**	**340**	Pn	**Pn**	**10 09 40.3**	**+0.8**
	baz=153,slow=14							
ARA0				Sn	**Sn**	**10 10 38.8**	**+0.1**
	baz=163,slow=22							
ARA0				Lg	Lg	10 11 01.4		
	baz=150,slow=37							
ARA0	**ARCESS Array S**	**5.08**	**340**	Pn	**Pn**	**10 09 40.3**	**+0.8**
	baz=153,slow=14							
ARA0				Sn	**Sn**	**10 10 38.8**	**+0.1**
	baz=163,slow=22							
ARA0				Sg	**Sg**	**10 11 01.4**	**-3.7**
	baz=150,slow=37							
ARCES	**ARCESS Array B**	**5.08**	**340**	Pn	**Pn**	**10 09 40.1**	**+0.6**
	baz=154,slow=13,SNR=29							
ARCES				Sn	**Sn**	**10 10 38.2**	**-0.5**
	baz=160,slow=24,SNR=1.5							
ARCES				Lg	Lg	10 11 01.4		
	baz=153,slow=30,SNR=10							
I37NO	**I37NO**	**6.27**	**318**	*i*		10 45 30.0		
	baz=129,slow=330,SNR=3.1							
HFS	**Hagfors**	**9.04**	**246**	Pn	**Pn**	**10 10 33.3**	**-0.5**
	baz=59,slow=12							
HFS	**Hagfors**	**9.04**	**246**	Pn	**Pn**	**10 10 33.3**	**-0.5**
	baz=59,slow=12							
NB2	**NORSAR Subarra**	**9.52**	**255**	Pn	**Pn**	**10 10 42.3**	**+1.9**
NB2	**NORSAR Subarra**	**9.52**	**255**	Pn	**Pn**	**10 10 42.3**	**+1.9**
NOA	**NORSAR Array B**	**9.52**	**255**	Pn	**Pn**	**10 10 40.1**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=52,slow=12,SNR=1.8							
NOA				Lg	Lg	10 13 17.5		
	comp=Z,0.0nm,0.3s,baz=44,slow=25,SNR=1.5							

*IDC **28** 10:13:35.1±1.2,0.°68S×127.°47E,h0km,mb3.5/4, mb1 3.7/5,mb1mx3.5/45,mbtmp3.6/5,ML3.1/1,MS3.1/3, Ms1 3.1/3,ms1mx2.4/41,Error ellipse: s-maj=49.4km s-min=21.7km az=61.0*

*DJA **28** 10:13:38.2±0.3,1.°5S×2.°2×12.°8E±.°,h10km,M3.8/7,mb4.2/3, mB4.5/2,MLv3.6/7,Mw(mB)3.6/2*

ISC 28 10:13:41.0±1.0,0.°60S±0.°05×127.°72E±0.°06,h41km,n14, σ1s26/15,mb3.8/3,MS3.1/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**345**	P	**Pn**	**10 14 02.6**	**-1.6**
TNTI				S	**Sn**	**10 14 23.6**	**+2.0**
SANI	**Sanana**	**2.25**	**230**	P	**Pn**	**10 14 14.9**	**-0.9**
SANI				S	**Sn**	**10 14 43.2**	**+0.9**
NLAI	**Namlea**	**2.69**	**193**	P	**Pn**	**10 14 21.4**	**-0.4**
NLAI				S	**Sn**	**10 14 54.5**	**+1.3**
SIJI	**Sorong**	**3.55**	**94**	Pn	**Pn**	**10 14 34.9**	**+1.2**
	1.6nm,0.3s,baz=259,slow=22,SNR=2.6							
SIJI				Sn	**Sn**	**10 15 16.0**	**+1.5**
	1.2nm,0.3s,baz=223,slow=23,SNR=2.0							
GTOI	**Gorontalo**	**4.87**	**285**	P	**Pn**	**10 14 53.5**	**+1.7**
	0.1nm382nm29nm,1.1s							
FAKI	**Fak Fak**	**5.08**	**117**	P	**Pn**	**10 14 54.7**	**+0.1**
	0.1nm8.7nm,0.6s							
APSI	**Ampana**	**6.08**	**267**	P	**Pn**	**10 15 07.7**	**-0.7**
WRA	**Warramunga Arr**	**20.28**	**162**	P	**P**	**10 18 12.2**	**-1.1**
	0.4nm,0.4s,baz=340,slow=11,SNR=8.9							
ASAR	**Alice Springs**	**23.70**	**166**	P	**P**	**10 18 48.9**	**-0.4**
	2.1nm,0.9s,baz=341,slow=11,SNR=20							
CMAR	**Chiang Mai Arr**	**34.04**	**305**	LR	LR	10 34 29.5		
	comp=Z,12nm,21.3s,baz=225,slow=37							
MKAR	**Makanchi Array**	**61.67**	**326**	P	**P**	**10 23 54.7**	**-0.2**
	0.3nm,0.3s,baz=112,slow=7.6,SNR=5.4							
KURBB	**Kurchatov Arra**	**65.91**	**328**	P	**P**	**10 24 22.1**	**-0.6**
	0.8nm,0.8s,baz=126,slow=6.1,SNR=5.4							
AKTO	**Aktyubinsk**	**77.66**	**322**	LR	LR	11 01 05.1		
	comp=Z,10nm,20.8s,baz=57,slow=37							
GNI	**Garni**	**85.01**	**310**	LR	LR	11 08 32.5		
	comp=Z,29nm,21.3s,baz=202,slow=39							

*DJA **28** 10:28:58.7±0.5,9.°5S±7.°×11.°5E±.°,h84km±5km,M3.4/10, MLv3.4/10*

*IDC **28** 10:29:02.0±12.0,9.°31S×115.°31E,h111km±98km,mb3.3/3, mb1 3.4/4,mb1mx3.1/43,mbtmp3.7/4,ML3.0/1,Error ellipse: s-maj=124.2km s-min=79.8km az=48.0*

ISC 28 10:28:56.3±0.9,8.°9S±0.°1×115.°03E±0.°06,h102km±10km, n13,σ2s11/18,mb3.4/3,Bali region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNP	**Denpasar**	**0.32**	**34**	P	**Pn**	**10 29 12.3**	**+1.2**
DNP				S	**Sn**	**10 29 23.0**	**+0.8**
SRBI	**Singaraja**	**0.87**	**12**	P	**Pn**	**10 29 15.6**	**+0.1**
SRBI				S	**Sn**	**10 29 28.5**	**-1.4**
JAGI	**Jajag, Banyuwa**	**0.99**	**298**	P	**Pn**	**10 29 17.1**	**+0.4**
JAGI				S	**Sn**	**10 29 31.7**	**-0.4**
ABJI	**Asem Bagus**	**1.38**	**325**	P	**Pn**	**10 29 21.1**	**-0.1**
ABJI				S	**Sn**	**10 29 38.4**	**-1.7**
TWSI	**Taliwang, Sumb**	**1.84**	**84**	P	**Pn**	**10 29 29.3**	**+2.5**
KMMI	**Kalianget**	**2.15**	**331**	P	**Pn**	**10 29 30.8**	**-0.1**
PLAI	**Plampang**	**2.71**	**88**	P	**Pn**	**10 29 40.8**	**+2.5**
WBSI	**Waikabubak, Su**	**4.36**	**100**	P	**Pn**	**10 29 57.7**	**-2.7**
UGM	**Wanagama**	**4.58**	**283**	P	**Pn**	**10 30 04.5**	**+1.2**
FITZ	**Fitzroy Crossi**	**13.75**	**133**	P	**Pn**	**10 32 08.3**	**+1.3**
	0.1nm,0.3s,baz=309,slow=14,SNR=1.2							
FITZ				S	**Sn**	**10 34 32.9**	**-5.5**
	0.1nm,0.3s,baz=226,slow=12,SNR=2.6							
WRA	**Warramunga Arr**	**21.63**	**122**	P	**P**	**10 33 38.6**	**+0.1**
	0.4nm,0.5s,baz=297,slow=12,SNR=9.6							
ASAR	**Alice Springs**	**23.25**	**131**	P	**P**	**10 33 55.5**	**+0.6**
	0.7nm,0.3s,baz=306,slow=9.5,SNR=26							
STKA	**Stephens Creek**	**33.59**	**137**	P	**P**	**10 35 28.1**	**+1.2**
	0.9nm,0.4s,baz=308,slow=9.3,SNR=5.5							

*IDC **28** 10:57:23.7±3.4,6.°07S×149.°92E,h33km±25km,mb3.9/13, mb1 4.0/14,mb1mx3.8/43,mbtmp4.1/14,ML3.5/2,MS3.5/12, Ms1 3.5/12,ms1mx3.2/44,Error ellipse: s-maj=23.6km s-min=13.6km az=99.0*

*NEIC **28** 10:57:24.8±2.1,6.°09S±0.°05×149.°87E±0.°09,h35km±1km, mb4.7/21,Error ellipse: s-maj=14.5km s-min=8.6km az=280.0*

*DJA **28** 10:57:27.7±0.4,6.°5S±4.°×15.°0E±.°,h66km±7km,M5.0/13, mB4.8/2,mb4.6/13,MLv5.2/2,Mw(mB)4.0/2*

ISC 28 10:57:26.1±0.5,6.°15S±0.°07×149.°94E±0.°08,h52km,n55, σ1s28/52,mb4.2/22,MS3.5/11,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.95**	**49**		**Pn**	**10 58 11.2**	**+0.8**
RABL	**Rabaul**	**2.95**	**49**	P	**Pn**	**10 58 11.9**	**+1.4**
PMG	**Port Moresby**	**4.25**	**220**	Pn	**Pn**	**10 58 28.5**	**+0.2**
	100nm,0.3s,baz=36,slow=5.4,SNR=132							
PMG				Sn	**Sn**	**10 59 15.5**	**-1.1**
	51nm,0.3s,baz=300,slow=20,SNR=1.8							
PMG	**Port Moresby**	**4.25**	**220**		**Pn**	**10 58 28.7**	**+0.5**
PMG				Sn	**Sn**	**10 59 17.6**	**+1.0**
PMG	**Port Moresby**	**4.25**	**220**	P	**Pn**	**10 58 28.8**	**+0.5**
JAY	**Jayapura**	**9.89**	**291**	LR	LR	11 04 02.8		
	comp=Z,118nm,19.2s,baz=134,slow=40							
JAY	**Jayapura**	**9.89**	**291**	P	**Pn**	**10 59 49.0**	**+3.3**
	6.7nm,1.3s							
COEN	**Coen**	**10.22**	**220**	Pn	**Pn**	**10 59 49.0**	**-1.2**
GENI	**Genyem**	**10.36**	**290**	P	**Pn**	**10 59 55.0**	**+2.9**
	29nm,1.0s							
CTA	**Charters Tower**	**14.31**	**194**	Pn	**Pn**	**11 00 46.0**	**0.0**
	0.3nm,0.3s,baz=32,slow=14,SNR=4.2							
CTAO	**Charters Tower**	**14.31**	**194**	Pn	**Pn**	**11 00 46.3**	**+0.4**
BAKI	**Biak**	**14.65**	**289**	P	**P**	**11 00 53.3**	**-2.2**
GUMO	**Guam**	**20.25**	**346**	LR	LR	11 09 08.0		
	comp=Z,55nm,19.9s,baz=128,slow=35							
WB0	**Warramunga Arr**	**20.29**	**227**		**P**	**11 01 57.5**	**-0.1**
WR0	**Warramunga Arr**	**20.30**	**226**		**P**	**11 01 57.9**	**0.0**
WR0				IAmb	IAmb	11 01 58.7		
	comp=Z,49nm,0.9s							
WRAB	**Tennant Creek**	**20.42**	**226**	P	**P**	**11 01 59.0**	**-0.1**
WRAB				IAmb	IAmb	11 01 59.8		
	comp=Z,53nm,0.7s							
WB2	**Warramunga Arr**	**20.43**	**226**		**P**	**11 01 59.2**	**0.0**
WRA	**Warramunga Arr**	**20.44**	**226**	P	**P**	**11 01 59.0**	**-0.3**
	comp=Z,50nm,0.6s,baz=52,slow=11,SNR=378							
WRA				LR	LR	11 10 48.3		
	comp=Z,145nm,20.9s,baz=75,slow=39							
WRA	**Warramunga Arr**	**20.44**	**226**	P	**P**	**11 01 58.1**	**-1.2**
DZM	**Mont Dzumac**	**22.47**	**136**	P	**P**	**11 02 21.8**	**+0.6**
	comp=Z,5.2nm,0.6s,baz=281,slow=5.2,SNR=7.9							
DZM				LR	LR	11 10 05.0		
	comp=Z,170nm,19.1s,baz=217,slow=34							
KNRA	**Kununurra**	**22.82**	**244**	P	**P**	**11 02 24.6**	**-0.3**
KNRA				IAmb	IAmb	11 02 37.6		
	comp=Z,40nm,0.7s							
AS31	**Alice Springs**	**23.26**	**220**	P	**P**	**11 02 28.3**	**-1.0**
AS31				IAmb	IAmb	11 02 48.1		
	comp=Z,5.3nm,0.6s							
ASAR	**Alice Springs**	**23.27**	**220**	P	**P**	**11 02 28.4**	**-0.9**
	comp=Z,5.7nm,0.5s,baz=52,slow=8.9,SNR=67							
ASAR				ScP	**ScP**	**11 09 52.7**	**+3.2**
	comp=Z,0.9nm,0.7s,baz=51,slow=3.4,SNR=7.5							
ASAR				LR	LR	11 11 54.4		
	comp=Z,143nm,19.8s,baz=0.0,slow=37							
ASAR	**Alice Springs**	**23.27**	**220**	P	**P**	**11 02 28.1**	**-1.1**
BATI	**Baumata**	**26.31**	**259**	LR	LR	11 15 37.7		
	comp=Z,133nm,19.8s,baz=97,slow=42							
FITZ	**Fitzroy Crossi**	**26.52**	**241**	P	**P**	**11 02 58.2**	**-0.8**
	comp=Z,6.1nm,0.3s,baz=53,slow=8.3,SNR=47							
FITZ				LR	LR	11 15 19.2		
	comp=Z,73nm,18.3s,baz=40,slow=40							
FITZ	**Fitzroy Crossi**	**26.52**	**241**	P	**P**	**11 02 58.2**	**-0.8**
STKA	**Stephens Creek**	**26.76**	**196**	P	**P**	**11 03 01.6**	**+0.6**
	comp=Z,7.6nm,0.7s,baz=0.5,slow=9.3,SNR=18							
STKA				LR	LR	11 13 50.1		
	comp=Z,151nm,19.2s,baz=23,slow=37							
STKA	**Stephens Creek**	**26.76**	**196**	P	**P**	**11 03 01.9**	**+0.8**
TOO	**Toolangi**	**31.54**	**187**	P	**P**	**11 03 44.8**	**+1.3**
TOO				IAmb	IAmb	11 04 11.4		
	comp=Z,6.5nm,1.1s							
FORT	**Forrest**	**31.97**	**217**	P	**P**	**11 03 47.0**	**-0.3**
PSA00	**Pilbara Seismi**	**32.90**	**239**	P	**P**	**11 03 59.0**	**+3.5**
PSA00				IAmb	IAmb	11 04 08.9		
	comp=Z,25nm,1.2s							
JCJ	**Chichijima**	**33.89**	**348**	LR	LR	11 16 05.1		
	comp=Z,93nm,21.2s,baz=110,slow=33							
MORW	**Morawa**	**39.29**	**230**	P	**P**	**11 04 49.3**	**-0.8**
MORW				IAmb	IAmb	11 04 58.5		
	comp=Z,13nm,1.2s							
MJAR	**Matsushiro Arr**	**43.87**	**346**	P	**P**	**11 05 26.1**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=172,slow=7.2,SNR=3.1							
MAJO	**Matsushiro**	**43.87**	**346**	P	**P**	**11 05 27.0**	**-0.4**
JMM	**Marumori**	**44.61**	**350**	P	**P**	**11 05 33.3**	**0.0**
JMM				IAmb	IAmb	11 05 57.8		
	comp=Z,15nm,1.2s							
JSD	**Sado**	**45.28**	**347**	P	**P**	**11 05 38.6**	**0.0**
JSD				IAmb	IAmb	11 06 04.7		
	comp=Z,13nm,1.3s							
KSRS	**Korea Array**	**48.00**	**336**	P	**P**	**11 05 59.4**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=162,slow=7.7,SNR=4.1							
JKA	**Kamikawa-asahi**	**50.47**	**353**	P	**P**	**11 06 18.4**	**-0.2**
JKA				IAmb	IAmb	11 06 33.3		
	comp=Z,9.5nm,1.1s							
KLR	**Kul'dur**	**57.39**	**346**	P	**P**	**11 07 09.4**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=173,slow=9.5,SNR=2.0							
PEA0B	**Petropavlovsk-**	**59.40**	**5**	P	**P**	**11 07 23.9**	**+0.9**
PETK	**Petropavlovsk-**	**59.40**	**5**	P	**P**	**11 07 22.8**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=161,slow=9.2,SNR=11							
PETK				LR	LR	11 28 40.4		
	comp=Z,50nm,21.2s,baz=187,slow=32							
SONM	**Songino Array**	**65.99**	**329**	P	**P**	**11 08 07.9**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=126,slow=4.8,SNR=4.4							
SONM	**Songino Array**	**65.99**	**329**	IAmb	IAmb	11 08 10.8		
	comp=Z,0.9nm,0.7s							
VNDA	**Vanda**	**71.61**	**177**	P	**P**	**11 08 41.8**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=326,slow=6.8,SNR=7.7							
VNDA	**Vanda**	**71.61**	**177**	P	**P**	**11 08 42.4**	**+0.8**
VNDA				IAmb	IAmb	11 08 52.1		
	comp=Z,3.6nm,1.2s							
ZALV	**Zalesovo Beam**	**80.71**	**327**	P	**P**	**11 09 31.8**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=104,slow=6.1,SNR=2.4							
ZALV				LR	LR	11 45 53.3		
	comp=Z,23nm,19.4s,baz=84,slow=36							
KURBB	**Kurchatov Arra**	**83.11**	**323**	P	**P**	**11 09 44.8**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=113,slow=3.8,SNR=2.6							
ILAR	**Eielson Array**	**84.48**	**23**	P	**P**	**11 09 51.6**	**-1.4**
	comp=Z,0.7nm,0.6s,baz=252,slow=5.2,SNR=10							
AKTO	**Aktyubinsk**	**95.92**	**320**	LR	LR	11 52 26.3		
	comp=Z,29nm,19.9s,baz=90,slow=34							
YKA	**Yellowknife Ar**	**97.94**	**28**	P	**P**	**11 10 54.7**	**-1.5**
	comp=Z,0.1nm,0.6s,baz=267,slow=4.7,SNR=2.5							
TORD	**Torodi Ar. Bea**	**147.96**	**285**	PKPbc	**PKPbc**	**11 17 05.7**	**-1.1**
	comp=Z,2.3nm,0.5s,baz=57,slow=2.4,SNR=14							
BDFB	**Brasilia**	**151.98**	**141**	PKPbc	**PKPbc**	**11 17 16.0**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=153,slow=2.3,SNR=3.7							
BDFB	**Brasilia**	**151.98**	**141**	PKPab	**PKPab**	**11 17 24.5**	**-1.4**

IDC 28 10:59:25.4±3.8,27.°48N×84.°86E,h0km,mb3.4/3, mb1 3.5/4,mb1mx3.2/66,mbtmp3.4/4,ML3.1/1,MS3.4/4, Ms1 3.4/4,ms1mx2.7/43,Error ellipse: s-maj=125.6km s-min=31.6km az=78.0,Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.39**	**355**	P	P	11 03 52.8	-0.1
	0.1nm,0.3s,baz=174,slow=12,SNR=3.7							
SONM	**Songino Array**	**26.37**	**34**	P	P	11 05 03.6	+0.2
	0.5nm,0.5s,baz=239,slow=11,SNR=2.9							
TLY	**Talaya**	**28.01**	**25**	LR	LR	11 18 05.0		
	comp=Z,177nm,22.0s,baz=212,slow=40							
GNI	**Garni**	**35.36**	**301**	LR	LR	11 21 53.8		
	comp=Z,22nm,20.8s,baz=212,slow=38							
KSRS	**Korea Array**	**37.40**	**63**	LR	LR	11 23 51.0		
	comp=Z,42nm,19.2s,baz=149,slow=39							
USRK	**Ussuriysk Ar.**	**41.10**	**53**	LR	LR	11 26 46.8		
	comp=Z,64nm,21.3s,baz=188,slow=40							
WRA	**Warramunga Arr**	**67.21**	**129**	P	P	11 10 21.9	+0.2
	0.5nm,0.9s,baz=327,slow=6.4,SNR=1.4							
ASAR	**Alice Springs**	**69.47**	**132**	P	P	11 10 35.6	-0.3
	0.1nm,0.4s,baz=317,slow=5.8,SNR=1.1							

IDC 28 11:03:13.3±2.6,28.°08N×85.°25E,h0km,mb3.3/4, mb1 3.5/5,mb1mx3.2/75,mbtmp3.3/5,ML3.4/1,Error ellipse: s-maj=90.5km s-min=26.0km az=72.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.83**	**354**	P	P	11 07 34.7	+0.1
	0.1nm,0.3s,baz=171,slow=10,SNR=5.9							
KURBB	**Kurchatov Arra**	**23.09**	**349**	P	P	11 08 20.2	-0.3
	0.3nm,0.8s,baz=178,slow=9.5,SNR=2.9							
SONM	**Songino Array**	**25.68**	**34**	P	P	11 08 45.2	+0.2
	0.7nm,0.8s,baz=219,slow=8.6,SNR=4.9							
WRA	**Warramunga Arr**	**67.31**	**130**	P	P	11 14 11.0	+0.8
	0.3nm,0.7s,baz=325,slow=7.0,SNR=1.5							
ASAR	**Alice Springs**	**69.61**	**133**	P	P	11 14 23.9	-0.7
	0.2nm,0.6s,baz=323,slow=7.3,SNR=1.7							

*IDC **28** 11:09:28.1±1.5,54.°53N×10.°06E,h0km,mb1 3.1/6, mb1mx3.0/70,mbtmp3.0/6,ML2.9/6,Error ellipse: s-maj=29.8km s-min=13.7km az=92.0*

*DNK **28** 11:09:30.3±2.3,54.°73N×10.°55E,h0km±67km,ML2.6, Suspected explosion*

ISC 28 11:09:27.7±1.2,54.°62N±0.°06×10.°07E±0.°07,h10km,n12, σ1s95/16,Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKMB	**Sankelmark Bun**	**0.38**	**285**	*e*P	**Pn**	**11 09 41.2**	**+1.9**
BSEG	**Bad Segeberg**	**0.70**	**168**	*i* P	**Pn**	**11 09 44.9**	**+1.3**
MUD	**Monsted U'grnd**	**1.91**	**345**	*e*	**Pn**	**11 10 00.8**	**+0.6**
	baz=146,slow=10							
MUD				*i* P	**Pb**	**11 10 03.2**	**+0.7**
MUD				*i* S	**Sb**	**11 10 29.1**	**+2.7**
MUD				IAML		11 10 38.6		
	comp=Z,22nm,0.4s							
DEL	**Delary**	**2.85**	**48**	*i* P	**Pn**	**11 10 13.0**	**-0.1**
DEL				*i* P	Pb	11 10 13.8	-4.7
ONAU	**Onsala**	**2.97**	**20**	*i* P	**Pn**	**11 10 16.0**	**+1.2**
BLEU	**Blekinge**	**3.68**	**60**	*i* P	**Pn**	**11 10 25.4**	**+0.9**
HFS	**Hagfors**	**5.87**	**18**	Pn	**Pn**	**11 10 54.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=198,slow=14,SNR=6.8							
HFS				Sn	**Sn**	**11 12 02.1**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=195,slow=25,SNR=1.9							
HFS				Lg	Lg	11 12 32.5		
	comp=Z,0.7nm,0.3s,baz=203,slow=30,SNR=2.3							
GERES	**GERESS Array B**	**6.21**	**157**	Pn	**Pn**	**11 11 00.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=343,slow=13,SNR=3.3							
NOA	**NORSAR Array B**	**6.47**	**5**	Pn	**Pn**	**11 11 02.7**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=183,slow=13,SNR=1.7							
NOA				Sn	Sn	11 12 07.9	-8.8
	comp=Z,0.0nm,0.3s,baz=229,slow=22,SNR=1.3							
EKA	**Eskdalemuir Ar**	**7.65**	**281**	Pn	**Pn**	**11 11 20.9**	**+1.8**
	baz=97,slow=14,SNR=5.4							
EKA				Sn	**Sn**	**11 12 42.2**	**-3.5**
	baz=88,slow=24,SNR=1.9							
FINES	**FINESS Array B**	**10.88**	**45**	Pn	**Pn**	**11 12 02.8**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=235,slow=12,SNR=2.0							
ARCES	**ARCESS Array B**	**16.53**	**19**	Pn	**Pn**	**11 13 15.2**	**-4.1**
	baz=207,slow=14,SNR=1.0							

*IDC **28** 11:18:03.7±1.3,27.°78N×85.°85E,h0km,mb3.8/8, mb1 3.9/9,mb1mx3.5/48,mbtmp3.8/9,ML4.0/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/37,Error ellipse: s-maj=46.1km s-min=18.0km az=64.0*

ISC 28 11:18:06.7±1.6,27.°81N±0.°2×85.°8E±0.°3,h19km,n10, σ0s16/9,mb3.9/8,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.17**	**353**	P	**P**	**11 22 29.1**	**+0.1**
	0.5nm,0.3s,baz=173,slow=12,SNR=16							
KURBB	**Kurchatov Arra**	**23.47**	**348**	P	**P**	**11 23 14.9**	**0.0**
	0.6nm,0.5s,baz=170,slow=9.9,SNR=7

TAMH S Sn 11 20 30.0 +2.6
ACH2 Ecuador-Machal 1.12 184 P Pn 11 20 11.0 0.0
ACH2 S Sn 11 20 27.0 +0.3
ARIO Riobamba 1.14 65 P Pn 11 20 13.0 +1.4
ARIO S Sn 11 20 30.0 +2.4
PORT Chimborazo Vol 1.17 55 P Pn 11 20 14.0 +1.8
PORT S Sn 11 20 31.0 +2.4
PPLP Puerto Lpez 1.19 299 P Pn 11 20 11.0 -0.9
PPLP S Sn 11 20 28.0 -0.3
SALI Salinas 1.26 268 P Pn 11 20 12.0 -0.6
SALI S Sn 11 20 29.0 -0.6
IGUA Igualata 1.27 60 P Pn 11 20 15.0 +1.6
SANGA Volcan Sangay 1.36 87 P Pn 11 20 16.0 +1.6
SANGA S Sn 11 20 35.0 +2.3
PECV Mancha de Ca P 1.39 347 P Pn 11 20 16.0 +1.7
BMAS Trigal station 1.40 63 P Pn 11 20 17.0 +2.2
BIL2 Estacion Bilba 1.41 61 P Pn 11 20 17.0 +2.2
BBIL Ulba Tungurahu 1.42 61 P Pn 11 20 17.0 +2.0
BBIL S Sn 11 20 37.0 +3.2
ARRY Arrayan 1.42 64 P Pn 11 20 17.0 +1.9
PAT1 Patacocha 1.44 64 P Pn 11 20 17.0 +1.6
ARNL Arenillas 1.44 193 P Pn 11 20 14.0 -1.0
ARNL S Sn 11 20 33.0 -0.7
BPAT Tungurahua Vol 1.44 64 P Pn 11 20 19.0 +3.5
SAGO Sagoatoa 1.45 48 P Pn 11 20 19.0 +3.4
JUI6 Juive 1.45 61 P Pn 11 20 17.0 +1.6
RETU Refugio 1.46 62 P Pn 11 20 18.0 +2.3
POND Pondoa 1.47 61 P Pn 11 20 18.0 +2.4
POND S Sn 11 20 38.0 +3.2
RUN5 Runtun 1.49 61 P Pn 11 20 18.0 +2.1
BULB Ulba Tungurahu 1.50 62 P Pn 11 20 18.0 +2.0
BULB S Sn 11 20 39.0 +3.5
BRUN Tungurahua Vol 1.50 62 P Pn 11 20 18.0 +1.9
BRUN S Sn 11 20 39.0 +3.4
ISPT Isla de la Pla 1.59 303 P Pn 11 20 16.0 -1.0
BOSC San Juan Bosco 1.60 129 P Pn 11 20 20.0 +2.9
ALAT Latacunga 1.64 43 P Pn 11 20 21.0 +3.1
PIS1 Pisayambo 1.72 52 P Pn 11 20 21.0 +1.9
ILLI Illinizas Sur 1.73 35 P Pn 11 20 21.0 +1.8
FLF1 Flavio Alfaro- 1.77 356 P Pn 11 20 20.0 +0.7
PAST Pastocalle 1.80 37 P Pn 11 20 29.0 +8.9
PUYO Puyo, Santa Ro 1.82 70 P Pn 11 20 22.0 +2.0
PIAT Ana Tenorio 1.86 52 P Pn 11 20 23.0 +2.3
APUY Puyo 1.86 69 P Pn 11 20 23.0 +2.5
CAB1 Cabo Pasado-Ma 1.87 338 P Pn 11 20 21.0 +0.4
CABP Cabo Pasado 1.87 338 P Pn 11 20 21.0 +0.4
BMOR Cotopaxi Volca 1.89 42 P Pn 11 20 23.0 +1.7
CAMI Rancho Maria 1.90 40 P Pn 11 20 24.0 +2.6
BNAS Cotopaxi Volca 1.92 41 P Pn 11 20 24.0 +2.3
JAMA Jama 1.92 346 P Pn 11 20 21.0 -0.3
BREF Cotopaxi Volca 1.95 42 P Pn 11 20 25.0 +2.9
NAS2 Nasa 1.95 41 P Pn 11 20 25.0 +3.0
ASDO Santo Domingo 1.96 18 P Pn 11 20 21.0 -0.8
BTAM Cotopaxi Volca 1.97 43 P Pn 11 20 25.0 +2.6
VC1 Cotopaxi 1 1.99 42 P Pn 11 20 25.0 +2.3
MAG1 Magdalena 2.05 359 P Pn 11 20 24.0 +1.1
GONZ Gonzanam 2.12 171 P Pn 11 20 25.0 +0.8
ANTM Antisana-La Mi 2.19 44 P Pn 11 20 27.0 +1.7
ANTG Antisana-Guama 2.19 42 P Pn 11 20 27.0 +1.7
GGPT Toaza - Volcan 2.20 30 P Pn 11 20 27.0 +1.7
GGPC Guagua Pichinc 2.25 30 P Pn 11 20 28.0 +1.9
TERV Terraza Guagua 2.25 30 P Pn 11 20 28.0 +1.9
ANTS Antisana-Sarah 2.26 44 P Pn 11 20 28.0 +1.8
PINO Pino 2.26 30 P Pn 11 20 28.0 +1.7
EPNL EPN Laboratori 2.28 33 P Pn 11 20 29.0 +2.7
LOJ1 Universidad t 2.30 143 P Pn 11 20 25.0 -1.4
ANTI Antisana 2.30 43 P Pn 11 20 30.0 +1.3
YANA Yana 2.32 30 P Pn 11 20 29.0 +2.1
APR2 Miler 2.33 19 P Pn 11 20 27.0 +0.3
BV15 Puerto Quito-O 2.34 13 P Pn 11 20 26.0 -0.7
PULU Pululahua 2.47 30 P Pn 11 20 31.0 +2.1
PAC1 Pacto, Paraso 2.56 22 P Pn 11 20 30.0 +0.1
OTAV Otavalo 2.68 29 P Pn 11 20 33.8 +2.0
OTAV Otavalo 2.68 29 Pn Pn 11 20 33.8 +2.0
OTAV Otavalo 2.68 29⇑ *eP* Pn 11 20 33.7 +2.0
OTAV *eS* Sn 11 21 03.8 +0.1
OTAV *i* 11 21 12.2
comp=Z,6µm,0.8s
OTAV Otavalo 2.68 29 P Pn 11 20 33.0 +1.2
CAYR Refugio Cayamb 2.75 39 P Pn 11 20 35.0 +2.2
CUSE Cuicocha Este 2.77 29 P Pn 11 20 35.0 +2.1
ANGU Angureal 2.77 39 P Pn 11 20 36.0 +2.9
CUSW Cuicocha Oeste 2.77 30 P Pn 11 20 35.0 +2.0
CUIC Cuicocha-Domo 2.79 30 P Pn 11 20 35.0 +1.9
ACOT Cotacachi (Cas 2.82 31 P Pn 11 20 37.0 +3.5
COTA Cotacachi 2.82 30 P Pn 11 20 36.0 +2.3
IMBA Imbabura, San 2.84 33 P Pn 11 20 37.0 +3.0
PTGL Punta Galera 2.91 354 P Pn 11 20 36.0 +1.5
REVS Reventador Sur 2.92 46 P Pn 11 20 37.0 +2.2
LAV4 Lava4-Reventad 2.92 46 P Pn 11 20 37.0 +2.1
REVN San Rafael 2.94 46 P Pn 11 20 38.0 +2.9
AIB1 Ecuador-Imbabu 2.94 33 P Pn 11 20 37.0 +1.9
URCU Urcuqui 2.95 30 P Pn 11 20 38.0 +2.6
YAHU Yahuarcocha 2.99 34 P Pn 11 20 38.0 +2.1
RVRD Rio Verde 3.20 6 P Pn 11 20 39.0 +0.6
CASC Dorado de Casc 3.29 47 P Pn 11 20 42.0 +2.3
LNGL El Angel-Carch 3.34 31 P Pn 11 20 42.0 +1.3
CHL1 Volc¡n Chiles 3.41 32 P Pn 11 20 43.0 +1.3
CHMA Chilma 3.42 29 P Pn 11 20 43.0 +1.5
ECEN Cerro Negro 3.43 31 P Pn 11 20 43.0 +1.1
CHL2 Volc¡n Chiles 3.44 32 P Pn 11 20 44.0 +2.0
TULM Tulcn-Chalpat 3.44 35 P Pn 11 20 44.0 +2.0
ATUL Tulcn 3.52 35 P Pn 11 20 45.0 +2.1
CMBC Cumbal 3.60 32 *eP* Pn 11 20 47.5 +3.3
CMBC Cumbal 3.60 32 P Pn 11 20 47.0 +2.8
CTUM2 Tumaco 4.06 14 *eP* Pn 11 20 52.0 +1.9
TUMC Tumaco 4.06 14⇑ *iP* Pn 11 20 51.1 +1.1
TUMC *eS* Sn 11 21 32.1 -4.3
TUMC *i* 11 21 54.0
comp=Z,3µm,0.6s
TUMC Tumaco 4.06 14 P Pn 11 20 50.0 0.0
CCUFI Cufio, Nario 4.11 36 *eP* Pn 11 20 53.9 +2.8
GCUF Volcan Galeras 4.11 36⇑ *iP* Pn 11 20 53.6 +2.5
GCUF *i* 11 21 43.4
comp=Z,537nm,0.6s
CRUC La Cruz 4.61 37 *eP* Pn 11 20 59.9 +2.1
ATAH Atahualpa 5.14 165 P Pn 11 21 07.1 +1.9
comp=Z,32nm,0.3s,baz=10,slow=9.4,SNR=162
ATAH S Sn 11 22 03.7 +0.3
comp=Z,121nm,0.3s,baz=249,slow=14,SNR=7.1
ATAH LR LR 11 22 59.8
comp=Z,3µm,20.6s,baz=337,slow=36
SOTA Rioblanco 5.27 36 *eP* Pn 11 21 08.7 +1.8
PTLC Puerto Leguiza 5.44 65⇑ *iP* Pn 11 21 07.4 -1.5
PTLC *eS* Sn 11 22 22.5 +12
PTLC *i* 11 22 44.3
comp=Z,485nm,0.5s
PCON Cinco Dias 5.55 37 *eP* Pn 11 21 13.3 +2.5
GARC Garzon, Huila 6.04 45 *eP* Pn 11 21 17.9 +0.8
MARP Paez Belalcaza 6.22 37 *eP* Pn 11 21 20.6 +0.9
BETC Betania 6.43 42 *eP* Pn 11 21 24.4 +2.1
MALC Bahia Malaga 6.56 21 *eP* Pn 11 21 26.3 +2.2
MALC Bahia Malaga 6.56 21 *eP* Pn 11 21 24.9 +0.8
MALC Bahia Malaga 6.56 21 P Pn 11 21 23.0 -1.1
YOTC Yotoco, Valle 6.96 29 *eP* Pn 11 21 28.2 -1.4
YOTC *eS* Sn 11 22 40.2 -7.2
YOTC *i* 11 23 01.0
comp=Z,112nm,0.6s
MACC Macarena, Meta 7.26 54 *eP* Pn 11 21 35.1 +1.5
MACC Macarena, Meta 7.26 54 *eP* Pn 11 21 34.0 +0.3
PIZC Pizarro, Choco 7.44 19 *eP* Pn 11 21 46.2 +10
ORTC Ortega, Tolima 7.50 37 *eP* Pn 11 21 41.0 +4.1
ANIL Santa Ana 7.88 33 *eP* Pn 11 21 39.6 -2.7
TOLC Tolima 8.00 33 *eP* Pn 11 21 41.5 -2.5
GUVC San Jose del G 8.49 57 *eP* Pn 11 21 52.1 +1.6
GUY2C Guyana, Caldas 8.51 31 *eP* Pn 11 21 47.5 -3.7
SOLC Bahia Solano 8.62 16 *eP* Pn 11 21 55.5 +3.2
VILC Villavicencio, 8.66 44 *eP* Pn 11 21 54.3 +1.4
CBOC Ciudad Bolivar 8.77 25 *eP* Pn 11 21 52.9 -1.5
ROSC El Rosal 8.79 38 P Pn 11 21 54.6 -0.3
comp=Z,16nm,0.3s,baz=63,slow=8.3,SNR=12
ROSC LR LR 11 25 46.8
comp=Z,8µm,18.3s,baz=223,slow=41
ROSC El Rosal 8.79 38 P Pn 11 21 53.3 -1.6
ROSC El Rosal 8.79 38 Pn Pn 11 21 53.2 -1.6
ROSC El Rosal 8.79 38 *eP* Pn 11 21 54.1 -0.8
CHIC Chingaza 9.01 42 *eP* Pn 11 21 59.4 +1.5
NORC Norcasia 9.06 32 *eP* Pn 11 21 55.0 -3.2
HELC Santa Helena 9.28 27 *eP* Pn 11 22 01.6 +0.1
HELC *eS* Sn 11 23 42.8 -1.6
HELC Santa Helena 9.28 27 *eP* Pn 11 22 03.9 +2.4
PTAC Punta Ardita, 9.42 12 *eP* Pn 11 22 05.2 +2.1
CACAO El Cacao, Vera 9.48 353 *eP* Pn 11 22 07.9 +3.9
CACAO *eS* Sn 11 23 56.7 +7.7
SPBC San Pablo de B 9.58 36 *eP* Pn 11 22 11.5 +6.0
PTGC Puerto Gaitan, 9.86 50 *eP* Pn 11 22 10.5 +1.4
AZU Azuero 9.88 357 *eP* Pn 11 22 13.4 +4.1
AZU *eS* Sn 11 24 03.4 +4.9
AZU Azuero 9.88 357 *eP* Pn 11 22 11.4 +2.1
GMAL Guarumal, Vera 9.95 351 *eP* Pn 11 22 15.0 +4.7
GMAL *eS* Sn 11 24 09.5 +9.3
PTBC PUERTO BERRIO, 10.10 31 *eP* Pn 11 22 09.7 -2.7
NNA Nana 10.20 164 P Pn 11 22 13.2 -0.6
comp=Z,40nm,0.3s,baz=331,slow=13,SNR=46
NNA S Sn 11 24 02.8 -3.6
comp=Z,149nm,0.3s,baz=216,slow=19,SNR=21
NNA Nana 10.20 164 *i* P Pn 11 22 13.8 0.0
NNA Nana 10.20 164 Pn Pn 11 22 12.4 -1.4
NNA Nana 10.20 164 P Pn 11 22 13.0 -0.8
RUSC La Rusia 10.38 40 *eP* Pn 11 22 21.5 +4.9
PNME Penonome 10.57 357 *eP* Pn 11 22 24.3 +5.5
PNME *eS* Sn 11 24 23.4 +8.0
PAYG Puerto Ayora 10.65 278 P Pn 11 22 21.2 +1.3
PAYG Puerto Ayora 10.65 278 *eP* Pn 11 22 23.9 +4.0
UREC San Jos de Ur 10.68 23 *eP* Pn 11 22 22.5 +2.2
ZARC Zaragoza, Cauc 10.73 27 *eP* Pn 11 22 24.8 +3.8
BARC Barichara 10.86 37 *eP* Pn 11 22 23.1 +0.1
CAPC Capurgana 10.96 12 *eP* Pn 11 22 24.9 +0.7
BRRC Barranca, Sant 10.97 33 *eP* Pn 11 22 25.8 +1.4
UPA Univ. de Panam 11.04 1 *eP* Pn 11 22 29.2 +3.9
UPA *eS* Sn 11 24 32.1 +5.1
UPA Univ. de Panam 11.04 1 *eP* Pn 11 22 28.3 +3.0
PIRO Carate, Puerto 11.07 341 *eP* Pn 11 22 32.5 +7.0
CDITO Canoas 11.09 344 *eP* Pn 11 22 32.2 +6.3
BCIP Isla Barro Col 11.23 359 *eP* Pn 11 22 32.2 +4.4
BCIP *eS* Sn 11 24 33.2 +1.8
BCIP Isla Barro Col 11.23 359 P Pn 11 22 28.7 +0.9
BCIP Isla Barro Col 11.23 359 Pn 11 22 28.7 +0.9
BCIP Isla Barro Col 11.23 359 *eP* Pn 11 22 28.3 +0.6
BRU2 Volcan 11.25 345 *eP* Pn 11 22 33.8 +5.6
CHGR2 Aguacate 11.26 348 *eP* Pn 11 22 34.0 +5.8
RIOS Rincon, Osa 11.40 341 Pn 11 22 33.4 +3.2
MONA Monteria 11.57 20 *eP* Pn 11 22 35.5 +3.1
MOTC Monteria, Cord 11.58 20 *eP* Pn 11 22 34.6 +2.1
TAMC Tame, Arauca 11.63 43 *eP* Pn 11 22 35.2 +1.9
PAMC Pamplona, Colo 11.74 37 *eP* Pn 11 22 42.7 +7.5
DRK0 Durika 11.85 343 *eP* Pn 11 22 43.5 +7.2
DRK0 *eS* Sn 11 24 55.3 +8.4
DRK0 Durika 11.85 343 Pn Pn 11 22 40.1 +3.8
RGM0 Gandoca 11.99 346 Pn Pn 11 22 40.8 +2.7
PEZE Perez Zeledon, 12.10 341 Pn Pn 11 22 44.2 +4.6
OCAC Ocana 12.13 32 *eP* Pn 11 22 42.6 +2.5
SMLC San Martn de 12.24 27 *eP* Pn 11 22 38.1 -3.4
CVTR Volcan Turrial 12.72 342 Pn Pn 11 22 49.0 +0.6
SJCC San Jacinto, C 12.79 21 *eP* Pn 11 22 51.1 +2.3
SJCC San Jacinto, C 12.79 21 *eP* Pn 11 22 47.2 -1.6
HDC Heredia 12.82 340 *eP* P 11 22 59.7 +2.7
HDC Heredia 12.82 340 Pn Pn 11 22 50.0 +0.6
CAO2 Cobano, Puntar 12.91 336 Pn Pn 11 22 52.6 +2.2
ARGC Ariguani, Magd 13.11 25 *eP* Pn 11 22 52.1 -1.0
LL3C La Loma 3 Cana 13.36 28 *eP* Pn 11 22 55.7 -0.7
JTS Las Juntas de 13.39 337 *eP* P 11 23 06.2 +3.0
JTS *eS* S 11 25 45.1 +2.6
JTS Las Juntas de 13.39 337 P Pn 11 22 58.8 +1.9
JTS Las Juntas de 13.39 337 Pn Pn 11 22 58.8 +1.9
JTS Las Juntas de 13.39 337 *eP* P 11 23 01.0 -2.2
COVE Coope Vega, Sa 13.59 340 Pn Pn 11 23 00.6 +1.2
ORTG Ortega, Santa 13.66 335 Pn 11 23 02.2 +1.7
ELOV Elorza 13.68 48 *eP* Pn 11 23 00.5 0.0
SDV Santo Domingo 14.22 40 P Pn 11 23 03.8 -4.0
comp=Z,1.4nm,0.3s,baz=229,slow=15,SNR=9.4
SDV LR LR 11 29 51.5
comp=Z,875nm,19.1s,baz=218,slow=43
SDV Santo Domingo 14.22 40 Pn Pn 11 23 04.0 -3.8
SDV Santo Domingo 14.22 40 *eP* Pn 11 23 08.2 +0.4
SDV Santo Domingo 14.22 40 *eP* Pn 11 23 05.9 -1.9
SMRC Santa Marta, M 14.30 22 *eP* Pn 11 23 01.1 -7.6
CRJC Cerrejon, Guaj 14.74 27 *eP* Pn 11 23 12.2 -2.2
ESPN Las Esperanzas 14.94 342 Pn 11 23 18.4 +1.5
ACON Acoyapa 15.02 339 P 11 23 20.1 -1.2
ETMB Extrema 15.45 120 *eP* Pn 11 23 18.6 -4.9
BOAB BOACO BROADBAN 15.64 338 P 11 23 28.2 0.0
BOAB IAmb IAmb 11 23 50.3
comp=Z,605nm,1.8s
URIC Uribia, Colomb 15.76 29 *eP* Pn 11 23 26.6 -0.7
DABV Dabajuro 15.82 35 *eP* P 11 23 30.2 0.0
MATN Matagalpa 16.18 338 P 11 23 34.2 -0.1
MATN IAmb IAmb 11 23 55.5
comp=Z,517nm,2.0s
CRIN San Cristobal 16.43 334 P 11 23 38.7 +1.6
CRIN IAmb IAmb 11 24 14.1
comp=Z,192nm,1.0s
TGUH Tegucigalpa,Un 17.74 335 *eP* Pn 11 23 56.2 +4.3
SAML Samuel 17.80 113 P P 11 23 49.2 -2.9
SAML pmax pmax
comp=Z,243nm,0.9s
SAML Samuel 17.80 113 P P 11 23 49.2 -2.9
SAML IAmb IAmb 11 23 53.8
comp=Z,243nm,0.8s
LPAZ La Paz 18.12 142 P Pn 11 23 56.8 -0.1
comp=Z,2.1nm,0.3s,baz=354,slow=3.7,SNR=33
LPAZ S Sn 11 27 20.3 +1.0
comp=Z,0.4nm,0.3s,baz=59,slow=19,SNR=1.4
LPAZ La Paz 18.12 142 P Pn 11 23 56.7 -0.2
LPAZ pmax pmax
comp=Z,31nm,0.9s
LPAZ La Paz 18.12 142 P Pn 11 23 56.6 -0.2
LPAZ La Paz 18.12 142 *eP* Pn 11 24 00.9 +4.0
LPAZ La Paz 18.12 142 *eP* P 11 23 54.3 -2.0
AP01 Chacalluta 18.58 151 P P 11 24 00.2 -0.3
MTO3 Montecristo 19.00 330 P Pn 11 24 08.3 +1.3
MACA Manacapuru-AM 19.06 93 *eP* P 11 24 05.0 -0.9
ESQI Esquipulas 19.12 330 P P 11 24 05.0 -1.7
ESQI IAmb IAmb 11 24 33.6
comp=Z,375nm,1.4s
PCRV Puerto La Cruz 19.38 51 P Pn 11 24 11.1 -0.3
comp=Z,11nm,0.3s,baz=201,slow=4.0,SNR=90
PCRV LR LR 11 33 03.0
comp=Z,1µm,20.2s,slow=41
MNMC Minye Minye 19.59 150 P Pn 11 24 12.9 -1.2
BOAV Boa Vista 19.73 77 *eP* P 11 24 12.0 -1.2
PSGCX Pisagua 19.74 152 P Pn 11 24 15.1 -0.5
PTGA Pitinga 19.81 86 LR LR 11 32 25.5
comp=Z,2µm,20.3s,baz=282,slow=38
MCJ Malvern 20.04 6 *iP* Pn 11 24 21.7 +2.7
APG El Apazote 20.07 328 P Pn 11 24 20.1 +0.5
comp=Z,9.3nm,0.9s,baz=137,slow=11,SNR=12
APG LR LR 11 30 50.5
comp=Z,745nm,19.2s,baz=154,slow=33
STH Stony Hill 20.29 8 *iP* Pn 11 24 22.3 +0.3
TA02 Huaiquique 20.32 153 P Pn 11 24 20.8 -1.5
MTDJ Mount Denham 20.35 6 P P 11 24 20.4 +0.4
MTDJ IAmb IAmb 11 24 43.9
comp=Z,151nm,1.0s
MTDJ Mount Denham 20.35 6 *eP* Pn 11 24 22.3 -0.4
BBJ Bamboo Saint A 20.53 7 *iP* Pn 11 24 24.8 -0.1
TA01 Diego Aracena 20.55 154 P Pn 11 24 24.0 -1.0
PB08 IPOC Station P 20.67 151 P P 11 24 24.6 +1.0
PATCX Punta Patache 20.79 154 P Pn 11 24 26.5 -1.4
PB01 IPOC Station P 21.28 153 P P 11 24 31.6 +1.6
PETF Flores 21.41 333 P P 11 24 31.6 +0.3
LCCY Blossom Villag 21.67 359 P P 11 24 35.2 +1.2
LGNH Logne 21.68 19 P P 11 24 33.9 -0.2
PB07 IPOC Station P 21.70 155 P P 11 24 36.4 +1.9
CBCY The Bluff, Cay 21.74 360 P P 11 24 36.2 +1.5
CCIG Comitan 22.02 327 P P 11 24 36.3 -1.7
PB09 IPOC Station P 22.05 153 P P 11 24 40.5 +2.3
PB04 IPOC Station P 22.13 156 P P 11 24 39.9 +0.8
TRN Trinidad (W) 22.23 55 *eP* P 11 24 39.1 -0.9
GTBY Guantanamo Bay 22.39 11 P P 11 24 43.8 +2.1
GTBY IAmb IAmb 11 25 30.5
comp=Z,128nm,0.9s
GTBY Guantanamo Bay 22.39 11 *eP* P 11 24 43.2 +1.5
SDDR Presa de Saban 22.57 21 P P 11 24 43.3 -0.4
SDDR IAmb IAmb 11 25 09.6
comp=Z,122nm,1.1s
PB06 IPOC Station P 22.70 155 P P 11 24 46.5 +1.3
GRGR Grenville 22.88 51 *eP* P 11 24 45.0 -1.9
LVC Limon Verde 22.91 154 P P 11 24 48.4 +0.9
comp=Z,38nm,0.7s,baz=314,slow=7.1,SNR=39
LVC Limon Verde 22.91 154 P P 11 24 49.4 +1.9
LVC pmax pmax
comp=Z,129nm,0.7s
LVC Limon Verde 22.91 154 P P 11 24 49.4 +1.9
LVC IAmb IAmb 11 25 41.6
comp=Z,129nm,0.7s
LVC Limon Verde 22.91 154 *eP* P 11 24 48.2 +0.7
SIV San Ignacio 22.97 128 P P 11 24 47.5 -0.3
comp=Z,15nm,0.7s,baz=308,slow=9.3,SNR=36
PB10 IPOC Station P 23.04 158 P P 11 24 48.8 +0.5
PB10 IAmb IAmb 11 24 51.0
comp=Z,378nm,1.9s
PB15 IPOC Station P 23.19 155 P P 11 24 51.4 +1.4
GCMP Grenada, Carri 23.27 51 *eP* P 11 24 45.0 -5.6
TOSP Speyside 23.30 55 *eP* P 11 24 48.5 -2.3
TOSP Speyside 23.30 55 P P 11 24 50.5 -0.3
PCDR Punta Cana, DR 23.36 28 P P 11 24 52.7 +1.3
MLPR Magueyes Islan 23.57 32 P P 11 24 52.7 -0.6
MLPR IAmb IAmb 11 25 03.0
comp=Z,95nm,0.8s
MPR Mayaguez 23.72 31 P P 11 24 55.3 +0.7
TEIG Tepich 23.75 340 P P 11 24 55.7 +0.9
comp=Z,11nm,0.6s,baz=62,slow=2.5,SNR=12
TEIG LR LR 11 33 21.3
comp=Z,749nm,21.6s,baz=153,slow=34
TEIG Tepich 23.75 340 P P 11 24 55.3 +0.5
TEIG IAmb IAmb 11 25 34.5
comp=Z,132nm,1.4s
ICMP Isla Caja de M 23.77 33 P P 11 24 55.3 +0.2
ICMP IAmb IAmb 11 25 17.5
comp=Z,136nm,0.8s
OBIP Obispado Ponce 23.86 32 P P 11 24 55.8 0.0
OBIP IAmb IAmb 11 25 08.0
comp=Z,144nm,0.9s
SVB Belmont 23.89 50 *eP* P 11 24 56.0 -0.2
AGPR Aguadilla, PR 23.95 31 P P 11 24 55.4 -1.2
AOPR Arecibo Observ 24.03 32 P P 11 24 58.6 +1.2
ITTB Itaituba 24.06 96 *eP* P 11 24 57.3 -0.4
ITTB *eS* S 11 29 13.4 +4.1
PB14 IPOC Station P 24.11 159 P P 11 24 57.9 -0.5
PDPR Patillas Dam, 24.16 33 P P 11 24 58.5 0.0
PDPR IAmb IAmb 11 25 03.8
comp=Z,178nm,0.9s
SJG San Juan 24.16 33 P P 11 24 59.4 +0.8
comp=Z,150nm,0.8s,baz=208,slow=5.1,SNR=34
SJG LR LR 11 35 31.6
comp=Z,628nm,19.3s,baz=206,slow=39
SJG San Juan 24.16 33 P P 11 24 59.0 +0.4
SJG pmax pmax
comp=Z,166nm,0.8s
SJG San Juan 24.16 33 P P 11 24 59.0 +0.4
SJG San Juan 24.16 33 *eP* P 11 24 57.9 -0.7
PTLB Pontes e Lacer 24.24 124 *eP* P 11 25 00.7 +1.4
PTLB *eS* S 11 29 14.2 +2.2
CMIG Matias Romero 24.26 323 P P 11 25 00.8 +1.3
comp=Z,20nm,0.9s,baz=132,slow=6.9,SNR=16
CMIG PcP PcP 11 28 38.5 +0.7
comp=Z,2.9nm,0.8s,baz=59,slow=5.6,SNR=2.8
EMPR Esperanza - Ma 24.26 32 P P 11 24 58.8 -0.7
HUMP Col San Antoni 24.35 34 P P 11 25 00.3 0.0
HUMP IAmb IAmb 11 25 02.7
comp=Z,139nm,0.9s
GCPR Guaynabo City 24.36 33 P P 11 25 00.5 +0.2
MCLT Moule a Chique 24.40 49 *eP* P 11 25 05.2 +4.4
CBYP Canovanas 24.45 33 P P 11 25 01.6 +0.4
MTP Monte Pirata 24.48 34 P P 11 25 01.8 +0.3
MTP IAmb IAmb 11 25 04.5
comp=Z,141nm,0.9s
SLBI Saint Lucia, B 24.57 49 *eP* P 11 24 58.5 -3.8
CDVI St. Croix 24.66 36 P P 11 25 03.2 +0.1
NPGB Novo Progresso 24.77 102 *eP* P 11 25 03.6 -0.7
CUPR Culebra, Puert 24.80 34 P P 11 25 04.5 +0.1
BIM Bigot 24.81 48 *eP* P 11 25 03.0 -1.6
BIM Bigot 24.81 48 P P 11 25 03.6 -0.9
BIM IAmb IAmb 11 25 06.5
comp=Z,203nm,1.3s
FDF Fort de France 24.89 47 *eP* P 11 24 53.8 -12
FDF Fort de France 24.89 47 P P 11 25 04.9 -0.4
FDF pmax pmax
comp=Z,482nm,1.4s
FDF Fort de France 24.89 47 P P 11 25 04.9 -0.4
GO02 Mina Guanaco 24.90 158 P P 11 25 06.5 +0.9
MPOM Morne Pois Mar 24.92 48 *eP* P 11 25 01.7 -3.9
MPOM Morne Pois Mar 24.92 48 P P 11 25 05.5 -0.1
GRTK Grand Turk 24.96 19 P P 11 25 05.8 0.0
GRTK IAmb IAmb 11 25 09.4
comp=Z,101nm,0.9s
STVI Saint Thomas 25.02 35 P P 11 25 04.7 -1.7
STVI IAmb IAmb 11 25 50.7
comp=Z,94nm,1.1s
ILAM Ilet Lapin Mar 25.12 47 *eP* P 11 25 05.6 -1.7
ILAM Ilet Lapin Mar 25.12 47 P P 11 25 07.0 -0.4
ILAM IAmb IAmb 11 25 12.9
comp=Z,130nm,1.0s
BBGH Gun Hill 25.13 52 *eP* P 11 25 10.0 +2.6
DSLB Salisbury 25.16 45 *eP* P 11 25 04.8 -2.9
DLPL La Plaine 25.22 46 *eP* P 11 25 05.2 -2.4
DLPL La Plaine 25.22 46 P P 11 25 07.8 -0.5
TBG Guadaloupe-3 25.28 44 *eP* P 11 25 08.8 0.0
TDBA Terre de Bas, 25.29 44 *eP* P 11 25 06.8 -2.0
CLDB Colider 25.30 111 *eP* P 11 25 10.0 +1.0
AC01 Pan de Azucar 25.44 161 P P 11 25 08.0 -2.1
MALB Monte Alegre 25.46 90 *eP* P 11 25 10.4 0.0
MALB *eS* S 11 29 34.4 +2.8
CBE Ff, Capester 25.46 44 *eP* P 11 25 06.2 -4.3
CBE Ff, Capester 25.46 44 *eP* P 11 25 12.2 +1.7
SEUS St. Eustatius 25.56 40 *eP* P 11 25 05.8 -5.5
SEUS St. Eustatius 25.56 40 P P 11 25 09.2 -2.1
SKI Saint Kitts 25.60 40 *eP* P 11 25 08.2 -3.5
SKI Saint Kitts 25.60 40 P P 11 25 09.1 -2.6
SKI pmax pmax
comp=Z,189nm,1.0s
SKI Saint Kitts 25.60 40 P P 11 25 09.1 -2.6
MAGL Barre d'ile 25.61 45 *eP* P 11 24 59.5 -12
ABVI Anegada Island 25.68 36 P P 11 25 11.3 -1.1
ABD La Joyeuse, An 25.82 44 *eP* P 11 25 14.2 +0.5
BPA Boggy Peak 25.97 42 *eP* P 11 25 13.4 -1.7
ANBD Bethesda, Anti 26.03 42 *eP* P 11 25 15.2 -0.3
ANWB Willy Bob 26.46 41 *eP* P 11 25 16.1 -3.4
ANWB Willy Bob 26.46 41 P P 11 25 18.5 -0.9
AC02 Maricunga 26.58 158 P P 11 25 21.2 +0.2
MCPB Macapa, AP 27.73 87 *eP* P 11 25 31.2 +0.3
MDP Montagnes des 28.00 75 P P 11 25 32.3 -1.1
comp=Z,22nm,0.5s,baz=255,slow=7.1,SNR=19
MDP LR LR 11 37 06.1
comp=Z,3µm,18.7s,baz=257,slow=37
PP1B Ponte de Pedra 28.84 124 *eP* P 11 25 41.7 +0.9
AQDB Aquidauana 29.71 130 *eP* P 11 25 49.1 +0.7
CO03 El Pedregal 29.80 164 P P 11 25 50.1 +0.8
SNDB Serra Nova Dou 29.83 110 *eP* P 11 25 49.4 -0.2
PRPB Parauapebas 30.10 99 *eP* P 11 25 51.9 -0.1
ARAG Araguaiana, MT 30.64 118 *eP* P 11 25 56.0 -0.7
TMAB Tom-Au,PA,Br 31.61 91 *eP* P 11 26 05.6 +0.3
VA03 San Esteban 31.67 165 P P 11 26 06.6 +1.0
PEL Peldehue 31.99 166 P P 11 26 09.9 +1.5
PEL pmax pmax
comp=Z,99nm,1.5s
PEL Peldehue 31.99 166 P P 11 26 09.9 +1.5
PEL IAmb IAmb 11 26 11.2
comp=Z,99nm,1.5s
MT02 Curacav 31.99 166 P P 11 26 09.5 +1.1
MT02 IAmb IAmb 11 26 11.3
comp=Z,139nm,1.9s
MT05 Renca 32.22 166 P P 11 26 11.8 +1.4
MT05 IAmb IAmb 11 26 13.1
comp=Z,38nm,0.7s
CPUP Villa Florida 32.28 140 P P 11 26 10.3 -0.7
comp=Z,3.3nm,0.6s,baz=327,slow=7.7,SNR=6.3
CPUP LR LR 11 41 49.3
comp=Z,530nm,19.0s,baz=331,slow=41
CPUP Villa Florida 32.28 140 P P 11 26 10.7 -0.3
CPUP pmax pmax
comp=Z,58nm,1.8s
CPUP Villa Florida 32.28 140 P P 11 26 10.7 -0.3
CPUP Villa Florida 32.28 140 *eP* P 11 26 10.3 -0.7
MT09 Talagante 32.52 166 P P 11 26 14.5 +1.4
MT09 IAmb IAmb 11 26 15.7
comp=Z,71nm,1.4s
SMTB Santa Maria do 32.67 103 *eP* P 11 26 14.7 +0.1
PEXB Peixe 32.69 109 *eP* P 11 26 16.5 +1.8
BO01 Tunca 33.09 167 P P 11 26 18.8 +0.9
ZAIG Zacatecas 33.30 319 P P 11 26 20.4 +0.1
BO02 Sierra Bellavi 33.55 167 P P 11 26 23.1 +1.1
BO02 IAmb IAmb 11 26 55.7
comp=Z,89nm,1.6s

ITRB Iturama 33.61 123 eP P 11 26 24.2 +1.5
PCMB Pacaembu 33.80 127 eP P 11 26 23.5 -0.8
BDFB Brasilia 34.02 115 P P 11 26 26.5 +0.1
comp=Z,3.4nm,0.6s,baz=299,slow=11,SNR=2.9
BDFB LR LR 11 41 36.4
comp=Z,1µm,19.7s,baz=307,slow=38
BDFB Brasilia 34.02 115 P P 11 26 26.5 +0.1
BDFB lAmb lAmb 11 26 49.2
comp=Z,63nm,1.5s
250A Grady 34.49 350 P P 11 26 28.0 -2.1
346A Big Creek Wild 34.60 345 P P 11 26 29.8 -1.2
154A Montrose 34.71 355 P P 11 26 30.0 -2.0
PTGB Pitanga 34.89 132 eP P 11 26 33.4 -0.3
152A Waverly Hall 34.94 353 P P 11 26 32.4 -1.6
152A lAmb lAmb 11 26 55.1
comp=Z,48nm,0.9s
344A Westbrook Farm 35.00 343 P P 11 26 33.5 -1.0
ITQB Itaqui 35.10 144 eP P 11 26 35.8 +0.4
BI02 San Fabin de 35.24 168 P P 11 26 37.5 +0.9
BI02 lAmb lAmb 11 26 39.1
comp=Z,106nm,1.9s
GOGA Godfrey 35.53 355 P 11 26 42.5
baz=174
GOGA Godfrey 35.53 355 P P 11 26 38.4 -0.6
GOGA pmax pmax
comp=Z,24nm,0.8s
GOGA Godfrey 35.53 355 P P 11 26 38.4 -0.6
GOGA lAmb lAmb 11 27 00.2
comp=Z,24nm,0.8s
Z51A Franklin 35.63 352 P P 11 26 39.0 -0.9
Z51A lAmb lAmb 11 27 01.2
comp=Z,49nm,0.8s
LRAL Lakeview Retre 35.65 350 P 11 26 40.8
baz=167
LRAL Lakeview Retre 35.65 350 P P 11 26 40.3 +0.2
BB19B Bebedouro 35.76 124 eP P 11 26 40.5 -0.7
Y59A Loris 35.94 1 P P 11 26 41.7 -0.8
SDBA SAO DESIDERIO 35.98 108 eP P 11 26 42.5 -0.8
Y60A Bolivia 35.98 2 P P 11 26 42.2 -0.6
Z47A Carrollton 36.02 348 P P 11 26 39.6 -3.5
FRTB Fartura 36.04 128 eP P 11 26 43.4 -0.2
Y52A Lilburn 36.04 354 P P 11 26 41.7 -1.7
HODGE Hodges 36.25 356 P P 11 26 44.3 -0.9
HODGE lAmb lAmb 11 27 06.5
comp=Z,36nm,0.9s
JSC Jenkinsville 36.25 358 P P 11 26 43.3 -1.9
JSC pmax pmax
comp=Z,20nm,0.9s
JSC Jenkinsville 36.25 358 P P 11 26 43.3 -1.9
Y49A Blount Mountai 36.35 351 P P 11 26 45.5 -0.5
Y49A lAmb lAmb 11 27 07.4
comp=Z,38nm,0.9s
ITAB Concordia 36.36 136 eP P 11 26 46.3 +0.1
NATX Nacogdoches 36.57 338 P P 11 26 46.6 -1.3
NATX lAmb lAmb 11 27 10.8
comp=Z,56nm,1.1s
BIRD Birdtown, Kers 36.59 359 P P 11 26 47.2 -0.9
BIRD lAmb lAmb 11 27 10.1
comp=Z,93nm,1.7s
PAULI Pauline 36.81 357 P P 11 26 51.1 +1.2
PAULI lAmb lAmb 11 27 11.5
comp=Z,37nm,0.8s
435B Jarrell 36.89 334 P P 11 26 50.4 -0.3
435B lAmb lAmb 11 27 14.2
comp=Z,29nm,0.9s
435B PcP PcP 11 29 11.9 +1.1
FPAL Fort Paine 36.90 352 P P 11 26 50.0 -0.7
FPAL lAmb lAmb 11 27 12.1
comp=Z,51nm,0.9s
X48A Hartselle 37.04 350 P P 11 26 51.9 +0.1
X48A lAmb lAmb 11 27 12.7
comp=Z,44nm,0.8s
BG3 Lake Jocassee 37.05 356 P P 11 26 52.8 +0.7
BG3 lAmb lAmb 11 27 13.6
comp=Z,31nm,0.8s
W57A Gilead 37.09 360 P P 11 26 52.2 -0.1
KMSC Kings Mountain 37.11 358 P 11 26 54.9
baz=177
KMSC Kings Mountain 37.11 358 P P 11 26 50.4 -2.1
KMSC lAmb lAmb 11 27 14.0
comp=Z,42nm,0.9s
237A Washetta, Mont 37.22 337 P P 11 26 52.5 -0.9
JANB Januaria 37.22 112 eP P 11 26 52.9 -0.9
W52A Murphy 37.24 354 P P 11 26 52.6 -1.1
W52A lAmb lAmb 11 27 14.9
comp=Z,24nm,0.8s
W50A Signal Mountai 37.51 352 P P 11 26 56.3 +0.4
W50A lAmb lAmb 11 27 27.2
comp=Z,28nm,0.9s
CPSB Cacapava Do Su 37.56 141 eP P 11 26 56.1 -0.3
OXF Oxford 37.57 347 P P 11 26 55.2 -1.1
OXF pmax pmax
comp=Z,59nm,1.1s
OXF Oxford 37.57 347 P P 11 26 55.2 -1.1
OXF lAmb lAmb 11 27 18.1
comp=Z,59nm,1.1s
SWET Sewanee 37.61 352 P P 11 26 56.0 -0.7
SWET lAmb lAmb 11 27 18.0
comp=Z,38nm,0.9s
CPCT Cooper Cave 37.66 354 P P 11 26 58.0 +0.9
CPCT lAmb lAmb 11 27 18.5
comp=Z,50nm,0.9s
JCT Junction City 37.66 331 P 11 26 59.6
baz=146,SNR=12
JCT Junction City 37.66 331 P P 11 26 58.8 +1.5
JCT pmax pmax
comp=Z,110nm,1.3s
JCT Junction City 37.66 331 P P 11 26 58.8 +1.5
V53A Saluda 37.72 356 lAmb lAmb 11 27 18.9
comp=Z,23nm,0.8s
V58A Windy Hill, Pi 37.74 1 lAmb lAmb 11 27 21.7
comp=Z,24nm,0.9s
SPB Sao Paulo 37.85 127 eP P 11 26 58.5 -0.4
WHTX Lake Whitney, 37.88 335 P P 11 26 59.2 +0.2
WHTX lAmb lAmb 11 27 22.3
comp=Z,68nm,1.2s
WHTX Lake Whitney, 37.88 335 P 11 27 01.1
baz=150
V52A Sevierville 37.95 355 P P 11 26 58.8 -0.8
V52A lAmb lAmb 11 27 20.8
comp=Z,37nm,0.9s
V51A Loudon 37.99 354 P P 11 26 59.3 -0.6
V51A lAmb lAmb 11 27 21.1
comp=Z,40nm,1.0s
Z38A Mt. Pleasant 38.04 339 P P 11 27 01.5 +1.1
HPIG 38.22 321 P P 11 27 03.0 +0.8
V48A Smith Brothers 38.26 351 P P 11 27 01.7 -0.4
NBPS Pedro II - PI 38.29 94 eP P 11 27 03.2 +0.4
PLTB Pedras Altas 38.41 143 eP P 11 27 03.9 +0.3
X40A Basin Creek Fa 38.45 342 P P 11 27 03.8 0.0
X40A pP pP 11 27 24.2 +0.3
U54A Nelsons Funny 38.51 357 P P 11 27 02.2 -2.1
U54A pP pP 11 27 23.7 -0.7
U54A sP sP 11 27 34.4 +0.1
U54A lAmb lAmb 11 27 35.5
comp=Z,72nm,1.4s
CLTN Cedars of Leba 38.52 351 P P 11 27 04.2 -0.2
CLTN pP 11 27 23.9 -0.6
CLTN lAmb lAmb 11 27 25.3
comp=Z,30nm,1.0s
CLTN sP sP 11 27 33.6 -0.7
CNLB Canela 38.53 137 eP P 11 27 05.1 +0.5
MIAR Mount Ida 38.74 342 P P 11 27 06.6 +0.4
MIAR *PP pP 11 27 27.3 +1.0
MIAR pmax pmax
comp=Z,39nm,1.3s
MIAR Mount Ida 38.74 342 P P 11 27 06.6 +0.4
MIAR pP pP 11 27 27.2 +1.0
MIAR lAmb lAmb 11 27 42.0
comp=Z,39nm,1.2s
MIAR Mount Ida 38.74 342 P 11 27 07.4
baz=158
TX31 Lajitas Ar. Si 38.78 326 P P 11 27 07.4 +0.6
TX32 Lajitas Array 38.78 326 P P 11 27 07.5 +0.8
TXAR Lajitas Array 38.78 326 P P 11 27 07.8 +1.0
comp=Z,4.6nm,0.8s,baz=150,slow=9.4,SNR=45
TXAR PcP PcP 11 29 17.9 +1.1
comp=Z,12nm,0.8s,baz=141,slow=5.8,SNR=19
TXAR LR LR 11 41 59.8
comp=Z,211nm,21.3s,baz=0.0,slow=34
TXAR Lajitas Array 38.78 326 P P 11 27 07.2 +0.4
WVT Waverly 38.81 350 P 11 27 06.0
baz=167
WVT Waverly 38.81 350 P P 11 27 06.3 -0.5
WVT pmax pmax
comp=Z,26nm,0.7s
WVT Waverly 38.81 350 P P 11 27 06.3 -0.5
WVT lAmb lAmb 11 27 26.7
comp=Z,26nm,0.7s
U49A Red Boiling Sp 38.86 352 P P 11 27 06.3 -0.9
U49A pP 11 27 26.3 -1.0
U49A sP sP 11 27 36.5 -0.6
BSCB Bom Sucesso 38.88 121 eP P 11 27 08.6 +0.9
W41B Gary Mavity, V 38.92 344 P 11 27 08.4
baz=160
T57A Hurt 38.94 1 P P 11 27 06.8 -1.0
T57A pP 11 27 27.1 -0.8
T57A lAmb lAmb 11 27 29.2
comp=Z,25nm,0.8s
T57A sP sP 11 27 36.2 -1.6
T59A Double "B" Far 38.96 3 P P 11 27 04.9 -3.1
T59A pP 11 27 28.7 +0.5
T59A lAmb lAmb 11 27 30.5
comp=Z,60nm,1.5s
Z35A Perchaven, San 38.96 336 P P 11 27 09.5 +1.4
Z35A pP pP 11 27 29.3 +1.1
SLBS Sierra La Lagu 39.02 313 P P 11 27 08.3 -0.6
SLBS lAmb lAmb 11 27 12.7
comp=Z,60nm,0.9s
WHAR Wooly Hollow 39.04 344 P P 11 27 09.2 +0.4
WHAR pP pP 11 27 28.2 -0.7
WHAR lAmb lAmb 11 27 30.6
comp=Z,50nm,1.0s
LL04 Puerto Octay 39.16 171 P P 11 27 09.4 -0.3
PARB Paraibuna 39.19 125 eP P 11 27 10.2 -0.1
PEBM Pemiscott Bayo 39.21 347 P P 11 27 10.5 +0.4
PEBM pP pP 11 27 30.5 +0.2
GLAT Glass 39.23 348 P P 11 27 10.6 +0.3
GLAT pP pP 11 27 29.4 -1.0
GLAT sP sP 11 27 39.0 -1.3
T50A Nancy 39.24 354 P P 11 27 10.3 0.0
T50A pP pP 11 27 29.6 -0.9
PLCA Paso Flores 39.31 169 P P 11 27 11.6 +0.6
comp=Z,9.3nm,0.4s,baz=341,slow=9.8,SNR=63
PLCA PcP PcP 11 29 19.1 +0.9
comp=Z,10nm,0.8s,baz=27,slow=4.0,SNR=5.2
PLCA Paso Flores 39.31 169 P P 11 27 11.0 0.0
PLCA pmax pmax
comp=Z,87nm,1.6s
PLCA Paso Flores 39.31 169 P P 11 27 11.0 0.0
PLCA lAmb lAmb 11 27 13.4
comp=Z,87nm,1.6s
PLCA Paso Flores 39.31 169 eP P 11 27 12.8 +1.8
ABTX Abilene, Hawle 39.37 333 lAmb lAmb 11 27 38.0
comp=Z,68nm,1.1s
ABTX Abilene, Hawle 39.37 333 P 11 27 13.3
baz=148,SNR=8.6
X37A Clayton 39.37 339 P P 11 27 11.8 +0.3
X37A lAmb lAmb 11 27 43.4
comp=Z,78nm,1.5s
LL03 Petrohue 39.39 171 lAmb lAmb 11 27 27.7
comp=Z,53nm,1.0s
W39A Magazine 39.40 342 P P 11 27 12.9 +1.2
W39A lAmb lAmb 11 27 43.0
comp=Z,40nm,0.8s
W39A Magazine 39.40 342 P 11 27 13.2
baz=158,SNR=6.0
LCAR Lake Charles 39.48 345 P P 11 27 12.1 -0.2
LL05 Los Muermos 39.50 173 P P 11 27 12.4 0.0
T47A Sharon Grove 39.52 351 P P 11 27 10.2 -2.5
T47A pP pP 11 27 31.7 -1.2
T47A lAmb lAmb 11 27 33.1
comp=Z,32nm,0.8s
T47A PcP PcP 11 29 19.0 +0.2
FCAR Ozark Folk Cen 39.56 344 P P 11 27 13.0 0.0
FCAR lAmb lAmb 11 27 34.5
comp=Z,38nm,0.9s
NBMO Morrinhos-CE 39.66 93 eP P 11 27 15.4 +1.2
U40A Yellville 40.20 344 P 11 27 19.3
baz=159,SNR=10.0
R53A Hurricane 40.32 357 P P 11 27 16.7 -2.5
R53A pP 11 27 38.8 -0.8
R53A lAmb lAmb 11 27 40.3
comp=Z,37nm,0.9s
R53A sP sP 11 27 48.3 -1.0
T42A Van Buren 40.37 346 lAmb lAmb 11 27 40.8
comp=Z,68nm,1.0s
R50A Paris 40.44 354 lAmb lAmb 11 27 41.1
comp=Z,32nm,0.8s
HHAR Hobbs 40.45 342 lAmb lAmb 11 27 42.5
comp=Z,34nm,0.9s
R49A Shelbyville 40.54 353 lAmb lAmb 11 27 41.6
comp=Z,38nm,0.8s
LL01 San Ignacio de 40.60 172 P P 11 27 21.1 -0.4
LL01 lAmb lAmb 11 27 23.1
comp=Z,41nm,0.7s
LL01 PcP 11 29 22.6 +0.5
S44A Carbondale 40.60 348 lAmb lAmb 11 27 42.8
comp=Z,62nm,0.9s
WCI Wyandotte Cave 40.62 352 P 11 27 22.0
baz=170
WCI Wyandotte Cave 40.62 352 P P 11 27 20.8 -1.0
WCI *PP pP 11 27 41.1 -0.9
WCI pmax pmax
comp=Z,47nm,0.8s
WCI Wyandotte Cave 40.62 352 P P 11 27 20.8 -1.0
WCI pP pP 11 27 41.1 -0.9
WCI lAmb lAmb 11 27 42.6
comp=Z,47nm,0.8s
TUL1 Leonard 40.71 340 P 11 27 22.8
baz=155
U38A Gravette 40.73 342 P P 11 27 23.0 +0.3
U38A lAmb lAmb 11 27 44.9
comp=Z,32nm,0.9s
MGMO Mountain Grove 40.79 345 lAmb lAmb 11 27 45.0
comp=Z,66nm,0.9s
WMOK Wichita Mounta 40.80 336 P 11 27 24.7
baz=150,SNR=12
WMOK Wichita Mounta 40.80 336 lAmb lAmb 11 27 46.4
comp=Z,38nm,0.9s
Q53A Leroy 40.83 358 P 11 27 29.1
baz=177,SNR=6.0
Q58A Fox Den Farm, 40.92 2 P 11 27 30.3
baz=183
Q52A Bidwell 40.96 357 P P 11 27 21.9 -2.7
Q52A pP 11 27 43.9 -1.0
Q52A lAmb lAmb 11 27 46.2
comp=Z,61nm,1.1s
Q52A sP sP 11 27 54.1 -0.5
OK025 Westminster Rd 40.98 338 P P 11 27 24.1 -0.7
OK025 pP 11 27 45.3 +0.2
OK025 lAmb lAmb 11 27 47.1
comp=Z,50nm,1.0s
Q56A Snyder Ridge, 40.98 1 P 11 27 30.9
baz=181
Q51A Peebles 41.09 356 lAmb lAmb 11 27 47.2
comp=Z,56nm,1.1s
NBMA Muriti-CE 41.14 99 eP P 11 27 26.4 0.0
QUOK Quay 41.27 339 P P 11 27 27.2 +0.1
QUOK pP pP 11 27 47.5 0.0
GDU01 Guandu, BA 41.33 108 eP P 11 29 29.7 +1.8
DUB01 Friburgo-RJ 41.36 122 eP P 11 27 28.9 +0.7
CCM Cathedral Cave 41.38 346 P 11 27 31.5
baz=162
CCM Cathedral Cave 41.38 346 P P 11 27 27.7 -0.3
CCM pP pP 11 27 48.0 -0.3
CCM lAmb lAmb 11 27 49.3
comp=Z,45nm,1.1s
P56A Dayton Farm, R 41.44 1 P 11 27 34.3
baz=181
LL02 Futaleuf 41.48 171 P P 11 27 28.6 -0.1
LL02 lAmb lAmb 11 27 30.6
comp=Z,38nm,0.9s
BSFB Barra de Sao F 41.53 116 eP P 11 27 31.0 +1.4
MNTX Cornudas Mount 41.54 326 P 11 27 30.8
baz=139,SNR=35
MNTX Cornudas Mount 41.54 326 P P 11 27 30.1 +0.7
BLO Bloomington 41.58 352 P P 11 27 28.9 -0.7
BLO pP pP 11 27 48.2 -1.7
BLO sP sP 11 27 59.0 -0.7
S39A Bolivar 41.58 344 P P 11 27 29.8 +0.2
S39A pP pP 11 27 49.9 -0.1
P52A Corning 41.62 357 P P 11 27 27.8 -2.2
P52A pP 11 27 49.4 -1.0
P52A lAmb lAmb 11 27 51.4
comp=Z,46nm,0.9s
P52A sP sP 11 28 00.3 +0.2
P52A Corning 41.62 357 P 11 27 34.8
baz=176
P49A Miami Univ. Ec 41.72 354 P 11 27 34.8
baz=172
P49A Miami Univ. Ec 41.72 354 P P 11 27 29.6 -1.1
P49A pP pP 11 27 49.7 -1.4
P49A lAmb lAmb 11 27 50.7
comp=Z,34nm,0.8s
P49A sP sP 11 27 59.8 -1.0
P48A Milroy 41.72 353 P P 11 27 30.1 -0.7
P48A pP 11 27 49.5 -1.6
P48A lAmb lAmb 11 27 50.7
comp=Z,37nm,0.8s
P48A sP sP 11 27 59.1 -1.8
Q44A Meyer Farm, Va 41.72 349 P P 11 27 29.3 -1.5
Q44A pP 11 27 49.5 -1.6
NAN01 Guarapari, ES 41.88 115 eP P 11 27 32.9 +0.5
MSTX Muleshoe 41.95 331 P 11 27 34.4
baz=144,SNR=28
MSTX Muleshoe 41.95 331 lAmb lAmb 11 27 35.6
comp=Z,82nm,1.1s
NBTA Tacaratu-PE 42.02 101 eP P 11 27 34.9 +1.3
CROK Carrier 42.03 338 P P 11 27 34.2 +0.9
CROK pP pP 11 27 54.3 +0.6
CROK sP sP 11 28 03.8 +0.3
O52A Adamsville 42.09 358 P P 11 27 32.8 -1.0
O52A pP 11 27 52.6 -1.5
O52A lAmb lAmb 11 27 54.7
comp=Z,30nm,0.9s
O52A sP sP 11 28 03.5 -0.4
RIB01 Linhares ES 42.09 117 eP P 11 27 36.2 +2.1
P46A Rosedale 42.11 351 P P 11 27 32.6 -1.3
P46A pP 11 27 53.0 -1.4
P46A lAmb lAmb 11 27 54.0
comp=Z,36nm,0.8s
P46A sP sP 11 28 02.9 -1.1
O57A Amberson 42.19 2 P 11 27 38.8
baz=183
O53A New Philadelph 42.20 358 P P 11 27 33.0 -1.7
O53A pP 11 27 54.5 -0.6
O53A sP sP 11 28 04.3 -0.5
O53A lAmb lAmb 11 28 06.1
comp=Z,52nm,1.1s
O56A Blue Knob Stat 42.21 1 P 11 27 40.5
baz=182
ACSO Alum Creek Sta 42.27 356 P P 11 27 35.1 -0.1
ACSO pP pP 11 27 54.5 -1.1
ACSO sP sP 11 28 05.1 -0.3
ACSO Alum Creek Sta 42.27 356 P 11 27 38.5
baz=175
GC02 Grant County # 42.30 338 P P 11 27 35.8 +0.3
GC02 pP 11 27 55.9 0.0
GC02 sP sP 11 28 06.6 +0.9
KAN13 South Haven SW 42.30 339 P P 11 27 36.8 +1.3
KAN13 pP pP 11 27 57.6 +1.7
O49A Covington 42.33 355 P P 11 27 37.3 +1.6
O49A pP pP 11 27 55.5 -0.6
O49A sP sP 11 28 05.1 -0.8
O59A Robesonia 42.37 4 P 11 27 42.5
baz=185
KAN14 Manchester OK 42.43 338 P P 11 27 37.0 +0.5
KAN14 pP pP 11 27 57.1 +0.2
KAN14 lAmb lAmb 11 27 59.3
comp=Z,53nm,0.9s
KAN09 Caldwell North 42.46 339 P P 11 27 38.4 +1.5
KAN09 pP pP 11 27 57.6 +0.4
P43A Skaggs, Pawnee 42.53 349 lAmb lAmb 11 27 57.9
comp=Z,49nm,0.9s
NBLA Lagarto - SE 42.54 104 eP P 11 27 37.8 0.0
NBPA Parau_RN 42.66 96 eP P 11 27 38.7 -0.1
KAN16 Harper SW Stat 42.70 338 lAmb lAmb 11 28 01.8
comp=Z,68nm,1.0s
KAN12 Harper NE Stat 42.74 338 P P 11 27 40.5 +1.4
KAN12 pP 11 28 00.2 +0.7
N53A Lisbon 42.75 359 P P 11 27 38.8 -0.3
N53A pP 11 27 58.4 -1.2
N53A sP sP 11 28 09.2 -0.1
O44A Mansfield 42.84 350 P P 11 27 38.3 -1.5
O44A pP pP 11 27 59.1 -1.1
O44A lAmb lAmb 11 28 00.4
comp=Z,123nm,1.6s
O44A PcP 11 29 30.0 +0.5
SFIN Lafayette 42.84 352 P 11 27 42.6
baz=169
SFIN Lafayette 42.84 352 P P 11 27 38.9 -0.9
SFIN pP pP 11 27 59.6 -0.7
SFIN PcP PcP 11 29 29.5 0.0
N58A Sunbury 42.86 3 P P 11 27 40.2 +0.2
N58A pP pP 11 28 00.1 -0.2
N58A Sunbury 42.86 3 P 11 27 44.2
baz=184
N54A Moraine State 42.89 360 P 11 27 44.4
baz=180
N54A Moraine State 42.89 360 P P 11 27 40.6 +0.4
N54A pP pP 11 27 59.4 -1.3
N54A lAmb lAmb 11 28 02.3
comp=Z,99nm,1.4s
N54A sP sP 11 28 10.7 +0.3
N51A Ashland 42.92 357 P P 11 27 39.3 -1.1
N51A pP 11 27 59.3 -1.6
N51A sP sP 11 28 10.1 -0.5
N51A lAmb lAmb 11 28 10.8
comp=Z,51nm,0.9s
NBLI Livramento-PB 42.93 98 eP P 11 27 41.6 +0.5
P40A Paris 42.98 346 P P 11 27 39.1 -1.9
P40A pP 11 27 59.9 -1.5
N59A State Game Lan 43.00 4 P P 11 27 40.5 -0.6
N59A pP 11 28 02.0 +0.4
N59A lAmb lAmb 11 28 04.3
comp=Z,36nm,0.9s
N60A Cedar Hill Far 43.01 5 P 11 27 45.8
baz=187
N49A Columbus Grove 43.05 355 P P 11 27 39.7 -1.8
N49A pP 11 28 00.5 -1.4
N47A Urbana 43.16 353 P P 11 27 41.0 -1.3
N47A pP 11 28 01.1 -1.7
N47A lAmb lAmb 11 28 02.2
comp=Z,42nm,0.9s
M57A Sunshine Farm, 43.33 3 P 11 27 48.1
baz=184
TRNY Table Rock, Ra 43.37 6 P P 11 27 44.3 +0.2
TRNY pP pP 11 28 03.8 -0.7
TRNY lAmb lAmb 11 28 06.8
comp=Z,38nm,0.8s
TRNY sP sP 11 28 15.3 +1.0
HDIL Hopedale 43.38 349 P 11 27 43.6
baz=166
HDIL Hopedale 43.38 349 P P 11 27 43.1 -1.1
HDIL pP pP 11 28 03.1 -1.6
HDIL sP sP 11 28 12.8 -1.6
M53A WI Miller and 43.38 359 P P 11 27 43.2 -1.0
M53A pP 11 28 05.0 +0.4
M53A sP sP 11 28 14.3 0.0
M53A lAmb lAmb 11 28 15.0
comp=Z,41nm,1.2s
M56A Emporium 43.44 2 P 11 27 47.7
baz=182
M56A Emporium 43.44 2 lAmb lAmb 11 28 15.9
comp=Z,40nm,0.9s
M54A Oil Creek Stat 43.44 0 P 11 27 47.4
baz=180
121A Cookes Peak, D 43.52 325 lAmb lAmb 11 27 49.6
comp=Z,41nm,0.9s
121A Cookes Peak, D 43.52 325 P 11 27 48.4
baz=137,SNR=20
319A Douglas 43.58 322 lAmb lAmb 11 27 49.6
comp=Z,49nm,0.7s
NBAN Anadia - AL 43.83 102 eP P 11 27 48.0 -0.3
RCBR Riachuelo 43.87 96 P P 11 27 48.3 -0.3
comp=Z,11nm,0.8s,baz=273,slow=8.3,SNR=2.7
RCBR Riachuelo 43.87 96 eP P 11 27 50.5 +1.9
KSU1 Kansas State U 43.88 341 P P 11 27 48.4 +0.2
KSU1 pP pP 11 28 08.3 -0.4
KSU1 sP sP 11 28 18.5 +0.1
KSU1 Kansas State U 43.88 341 P 11 27 49.2
baz=155,SNR=9.8
L53A Girard 43.89 359 P 11 27 53.3
baz=179
M63A Gales Ferry 43.90 8 P 11 27 50.1
baz=191
L57A Andrews Acres 44.01 3 P 11 27 53.6
baz=184,SNR=6.8
L56A Greenwood 44.11 2 P 11 27 52.8
baz=183
L56A Greenwood 44.11 2 pP 11 28 10.8 +0.2

L58A	**Harry Jones Me**	**44.12**	**4**	P			11 27 54.4	
	baz=186							
L60A	**Shokan**	**44.20**	**6**	P			11 27 54.7	
	baz=188							
BINY	**Binghamton**	**44.26**	**4**	P			11 27 56.2	
	baz=185							
BINY	**Binghamton**	**44.26**	**4**	P	**P**		**11 27 50.1**	**-1.2**
BINY					**pP**		**11 28 11.8**	**0.0**
BINY				IAmb	IAmb		11 28 14.1	
	comp=Z,66nm,0.9s							
BINY				sP	**sP**		**11 28 22.6**	**+1.1**
WVNY	**West Valley, N**	**44.35**	**1**	P	**P**		**11 27 49.7**	**-2.2**
WVNY				pP	**pP**		**11 28 11.8**	**-0.6**
WVNY				sP	**sP**		**11 28 21.4**	**-0.8**
N38A	**Joes South For**	**44.47**	**345**	IAmb	IAmb		11 28 14.3	
	comp=Z,72nm,1.0s							
L61A	**Hillsdale 1, H**	**44.48**	**7**	P			11 27 54.1	
	baz=189							
ANMO	**Albuquerque**	**44.59**	**328**	P			11 27 56.3	
	baz=140							
ANMO	**Albuquerque**	**44.59**	**328**	LR	LR		11 47 51.1	
	comp=Z,168nm,18.6s,baz=133,slow=38							
ANMO	**Albuquerque**	**44.59**	**328**	*d i* P	**P**		**11 27 56.2**	**+2.0**
ANMO				pmax	pmax			
	comp=Z,73nm,0.9s							
ANMO	**Albuquerque**	**44.59**	**328**	P	**P**		**11 27 55.7**	**+1.5**
ANMO				IAmb	IAmb		11 27 57.5	
	comp=Z,60nm,0.8s							
MMNY	**Mt. Morris Dam**	**44.69**	**2**	P	**P**		**11 27 52.4**	**-2.2**
MMNY					**pP**		**11 28 14.0**	**-1.2**
MMNY				IAmb	IAmb		11 28 16.7	
	comp=Z,88nm,1.4s							
CBKS	**Cedar Bluff**	**44.72**	**338**	P			11 27 57.0	
	baz=151,SNR=8.0							
K57A	**Scipio Center**	**44.76**	**3**	P			11 28 00.9	
	baz=184,SNR=5.9							
K50A	**Casco**	**44.78**	**357**	P	**P**		**11 27 54.5**	**-0.8**
K50A					**pP**		**11 28 13.8**	**-2.1**
K50A				IAmb	IAmb		11 28 16.5	
	comp=Z,87nm,1.1s							
K50A				sP	**sP**		**11 28 24.2**	**-1.4**
K58A	**Earlville**	**44.84**	**4**	P			11 28 01.9	
	baz=186							
L42A	**Oliver, Polo**	**44.85**	**349**	IAmb	IAmb		11 28 16.6	
	comp=Z,54nm,1.0s							
NBRF	**Rio Formoso -**	**44.85**	**100**	*e* P	**P**		**11 27 56.3**	**-0.1**
K59A	**Cooperstown**	**44.92**	**5**	P			11 28 02.3	
	baz=187							
TUC	**Tucson**	**45.15**	**322**	P			11 28 00.6	
	baz=133							
TUC	**Tucson**	**45.15**	**322**	P	**P**		**11 27 59.4**	**+0.8**
TUC				pmax	pmax			
	comp=Z,25nm,1.0s							
TUC	**Tucson**	**45.15**	**322**	P	**P**		**11 27 59.4**	**+0.8**
N35A	**Tabor**	**45.19**	**343**	P	**P**		**11 27 56.5**	**-2.1**
N35A				pP	**pP**		**11 28 18.1**	**-1.1**
N35A				IAmb	IAmb		11 28 20.5	
	comp=Z,50nm,1.1s							
L40A	**Anamosa**	**45.21**	**348**	P	**P**		**11 27 57.2**	**-1.6**
L40A				pP	**pP**		**11 28 17.8**	**-1.5**
L40A				IAmb	IAmb		11 28 19.8	
	comp=Z,78nm,1.1s							
J56A	**Wolcott**	**45.28**	**3**	P			11 28 05.1	
	baz=184							
T25A	**Trinidad**	**45.30**	**332**	P			11 28 02.2	
	baz=144,SNR=15							
T25A	**Trinidad**	**45.30**	**332**	P	**P**		**11 28 00.9**	**+1.0**
J47A	**Sunmer**	**45.40**	**355**	P	**P**		**11 27 58.6**	**-1.6**
J47A					**pP**		**11 28 19.8**	**-1.0**
J57A	**Williamstown**	**45.46**	**4**	P			11 28 04.2	
	baz=185							
J59A	**Piesco**	**45.64**	**5**	P			11 28 06.5	
	baz=187							
J59A	**Piesco**	**45.64**	**5**	IAmb	IAmb		11 28 24.7	
	comp=Z,44nm,1.1s							
I58A	**Old Forge**	**45.82**	**5**	P			11 28 09.3	
	baz=186							
JFWS	**Jewell Farm**	**45.84**	**349**	P			11 28 03.3	
	baz=165,SNR=7.9							
I59A	**Olmsteadville**	**46.03**	**6**	P			11 28 06.0	
	baz=188							
KSCO	**Kaye Shedlock'**	**46.05**	**335**	P			11 28 07.2	
	baz=147,SNR=10							
KSCO	**Kaye Shedlock'**	**46.05**	**335**	IAmb	IAmb		11 28 30.3	
	comp=Z,47nm,1.1s							
I60A	**Shoreham**	**46.14**	**6**	P			11 28 07.3	
	baz=189							
214A	**Organ Pipe Nat**	**46.19**	**320**	P			11 28 08.8	
	baz=131,SNR=19							
214A	**Organ Pipe Nat**	**46.19**	**320**	IAmb	IAmb		11 28 10.2	
	comp=Z,51nm,1.1s							
X18A	**Snowflake**	**46.21**	**325**	IAmb	IAmb		11 28 10.4	
	comp=Z,30nm,0.9s							
SDCO	**Great Sand Dun**	**46.30**	**332**	P			11 28 09.7	
	baz=143,SNR=38							
L34A	**Svendsen Farm,**	**46.42**	**343**	P	**P**		**11 28 06.7**	**-1.6**
L34A					**pP**		**11 28 28.4**	**-0.6**
L34A				IAmb	IAmb		11 28 30.0	
	comp=Z,54nm,0.9s							
BGNE	**Belgrade**	**46.46**	**341**	P			11 28 09.8	
	baz=154							
W18A	**Petrified Fore**	**46.51**	**326**	P			11 28 11.7	
	baz=136,SNR=37							
H53A	**Bobcaygeon**	**46.51**	**1**	P			11 28 13.3	
	baz=182							
H57A	**Richville**	**46.55**	**4**	P			11 28 13.6	
	baz=186							
SADO	**Sadowa**	**46.70**	**1**	P	**P**		**11 28 09.8**	**-0.6**
SADO				pP	**pP**		**11 28 30.4**	**-0.7**
SADO				IAmb	IAmb		11 28 31.6	
	comp=Z,53nm,1.1s							
SADO				sP	**sP**		**11 28 40.0**	**-0.8**
LONY	**Lake Ozonia**	**46.77**	**5**	P			11 28 17.2	
	baz=187							
LONY	**Lake Ozonia**	**46.78**	**5**	P	**P**		**11 28 10.9**	**-0.2**
LONY					**pP**		**11 28 31.4**	**-0.4**
LONY				IAmb	IAmb		11 28 34.2	
	comp=Z,50nm,1.1s							
I40A	**Norwalk**	**46.85**	**349**	P	**P**		**11 28 11.4**	**-0.2**
I40A				pP	**pP**		**11 28 30.4**	**-1.9**
I40A				IAmb	IAmb		11 28 32.6	
	comp=Z,62nm,1.1s							
H59A	**Cadyville**	**46.89**	**6**	P			11 28 17.3	
	baz=188							
S22A	**4UR Ranch, Cre**	**46.95**	**330**	P			11 28 14.8	
	baz=142,SNR=14							
SFX	**San Felipe**	**46.95**	**317**	IAmb	IAmb		11 28 15.9	
	comp=Z,35nm,1.1s							
H43A	**Windswept, Lux**	**46.95**	**352**	P	**P**		**11 28 11.4**	**-1.0**
H43A				pP	**pP**		**11 28 31.9**	**-1.2**
X16A	**Lo Mia Camp, P**	**47.00**	**324**	P	**P**		**11 28 14.0**	**+0.8**
X16A				IAmb	IAmb		11 28 16.6	
	comp=Z,38nm,0.8s							
PLVO	**Plevna**	**47.03**	**3**	P	**P**		**11 28 11.1**	**-1.9**
PLVO				pP	**pP**		**11 28 32.9**	**-0.8**
PLVO				IAmb	IAmb		11 28 34.7	
	comp=Z,52nm,1.1s							
PLVO				sP	**sP**		**11 28 43.3**	**0.0**
FRNY	**Flat Rock**	**47.09**	**6**	P	**P**		**11 28 14.5**	**+1.1**
Q24A	**Divide**	**47.12**	**333**	P			11 28 16.0	
	baz=144,SNR=5.8							
H62A	**Milan**	**47.13**	**8**	P			11 28 15.4	
	baz=192							
G57A	**Newington**	**47.22**	**5**	P			11 28 18.9	
	baz=186,SNR=6.0							
G45A	**Suttons Bay**	**47.27**	**354**	P	**P**		**11 28 13.4**	**-1.4**
G58A	**Ormstown**	**47.35**	**5**	P			11 28 19.9	
	baz=188							
G54A	**Lake Saint Pet**	**47.35**	**2**	P			11 28 19.9	
	baz=182,SNR=6.2							
MVCO	**Mesa Verde**	**47.38**	**329**	P			11 28 17.8	
	baz=139,SNR=12							
G60A	**Masonville**	**47.49**	**7**	P			11 28 23.7	
	baz=190							
WUAZ	**Wupatki**	**47.73**	**325**	P			11 28 21.3	
	baz=135,SNR=56							
WUAZ	**Wupatki**	**47.73**	**325**	P	**P**		**11 28 20.6**	**+1.7**
K31A	**O'Neill**	**47.75**	**341**	P	**P**		**11 28 19.4**	**+0.8**
K31A					**pP**		**11 28 40.2**	**+0.8**
K31A				sP	**sP**		**11 28 50.1**	**+0.9**
G61A	**St-Isidore-de-**	**47.77**	**8**	P			11 28 20.5	
	baz=191							
G62A	**West of Eustis**	**47.85**	**9**	P			11 28 21.3	
	baz=192							
G62A	**West of Eustis**	**47.85**	**9**	P	**P**		**11 28 19.6**	**+0.2**
G62A					**pP**		**11 28 40.5**	**+0.4**
ALGO	**Algonquin Park**	**47.91**	**2**	P			11 28 24.3	
	baz=182,SNR=6.0							
ISCO	**Idaho Springs**	**48.01**	**333**	P	**P**		**11 28 22.5**	**+1.4**
ISCO				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ISCO	**Idaho Springs**	**48.01**	**333**	P	**P**		**11 28 22.4**	**+1.4**
ISCO	**Idaho Springs**	**48.01**	**333**	P			11 28 22.8	
	baz=144,SNR=11							
G40A	**Rib Lake**	**48.11**	**350**	P	**P**		**11 28 20.8**	**-0.6**
G40A				IAmb	IAmb		11 28 42.8	
	comp=Z,66nm,1.6s							
ECSD	**EROS Data Cent**	**48.11**	**344**	P			11 28 21.4	
	baz=157,SNR=8.4							
ECSD	**EROS Data Cent**	**48.11**	**344**	P	**P**		**11 28 20.8**	**-0.6**
SMCO	**Snowmass**	**48.14**	**331**	P	**P**		**11 28 23.5**	**+1.2**
GLA	**Glamis**	**48.19**	**320**	P			11 28 24.4	
	baz=130,SNR=6.4							
PV15	**Paradox Valley**	**48.23**	**330**	P	**P**		**11 28 23.4**	**+0.6**
PV15				IAmb	IAmb		11 28 26.0	
	comp=Z,61nm,1.1s							
PV02	**Paradox Valley**	**48.26**	**329**	P	**P**		**11 28 23.5**	**+0.5**
PV02				IAmb	IAmb		11 28 25.9	
	comp=Z,50nm,0.8s							
PV05	**Paradox Valley**	**48.35**	**329**	IAmb	IAmb		11 28 26.2	
	comp=Z,40nm,0.8s							
PV03	**Paradox Valley**	**48.35**	**329**	IAmb	IAmb		11 28 26.4	
	comp=Z,39nm,0.8s							
PV18	**Skein Mesa, Pa**	**48.38**	**329**	IAmb	IAmb		11 28 26.6	
	comp=Z,45nm,0.8s							
PV07	**Paradox Valley**	**48.39**	**329**	IAmb	IAmb		11 28 27.0	
	comp=Z,32nm,1.0s							
PV11	**David Mesa, Pa**	**48.40**	**329**	IAmb	IAmb		11 28 26.8	
	comp=Z,32nm,0.8s							
PV17	**East Wray Mesa**	**48.43**	**329**	IAmb	IAmb		11 28 26.9	
	comp=Z,41nm,0.8s							
PV16	**Nyswonger Mesa**	**48.43**	**329**	IAmb	IAmb		11 28 27.0	
	comp=Z,32nm,1.0s							
E46A	**Sault Ste Mari**	**48.46**	**356**	P	**P**		**11 28 23.1**	**-0.9**
E46A					**pP**		**11 28 43.8**	**-1.1**
E46A				IAmb	IAmb		11 28 45.0	
	comp=Z,31nm,1.1s							
E46A				sP	**sP**		**11 28 52.9**	**-1.6**
PV19	**Morning Glory**	**48.47**	**329**	P	**P**		**11 28 23.7**	**-0.8**
PV19				IAmb	IAmb		11 28 27.2	
	comp=Z,34nm,1.1s							
PV22	**Blue Mesa, Par**	**48.54**	**329**	P	**P**		**11 28 25.3**	**+0.3**
PDMCI	**Parker Dam,Lak**	**48.57**	**321**	P			11 28 26.9	
	baz=131							
SPMN	**Marine on St.**	**48.57**	**348**	P			11 28 24.7	
	baz=162,SNR=5.2							
SPMN	**Marine on St.**	**48.57**	**348**	P	**P**		**11 28 23.9**	**-1.0**
SPMN					**pP**		**11 28 43.7**	**-2.0**
SPMN				IAmb	IAmb		11 28 45.9	
	comp=Z,44nm,1.1s							
SPMN				sP	**sP**		**11 28 54.0**	**-1.4**
E58A	**La Victoria**	**48.64**	**6**	P			11 28 29.6	
	baz=188							
E56A	**St. Veronique**	**48.65**	**4**	P			11 28 26.0	
	baz=186							
E43A	**Lone Tree Farm**	**48.73**	**353**	P	**P**		**11 28 25.3**	**-0.8**
E43A				pP	**pP**		**11 28 45.5**	**-1.4**
E43A				IAmb	IAmb		11 28 47.4	
	comp=Z,42nm,1.1s							
RMX	**La Rumorosa**	**48.73**	**318**	P	**P**		**11 28 25.5**	**-1.1**
RMX				IAmb	IAmb		11 28 29.5	
	comp=Z,42nm,1.2s							
COWI	**Conover**	**48.74**	**351**	P	**P**		**11 28 25.6**	**-0.6**
COWI				PcP	**PcP**		**11 29 50.2**	**+0.2**
COWI				IAmb	IAmb		11 30 13.9	
	comp=Z,53nm,1.1s							
SWSC	**Sam W. Stewart**	**48.76**	**319**	P			11 28 28.9	
	baz=129,SNR=7.8							
IKP	**In-Ko-Pah, Jac**	**48.78**	**318**	P			11 28 29.4	
	baz=128,SNR=11							
W13A	**Hualapai Mount**	**48.93**	**322**	P	**P**		**11 28 29.9**	**+1.7**
W13A				IAmb	IAmb		11 28 31.6	
	comp=Z,29nm,0.8s							
CBX	**Cerro Bola**	**48.95**	**318**	P	**P**		**11 28 28.6**	**+0.3**
BC3	**Big Chuckawall**	**48.98**	**320**	P			11 28 30.5	
	baz=129,SNR=20							
N23A	**Red Feather La**	**49.04**	**334**	P			11 28 30.6	
	baz=144,SNR=6.1							
IRM	**Iron Mountain**	**49.10**	**321**	P			11 28 31.2	
	baz=130,SNR=24							
MONP2	**Monument Peak**	**49.14**	**318**	P			11 28 31.5	
	baz=128,SNR=12							
PHWY	**Pilot Hill**	**49.16**	**334**	P	**P**		**11 28 29.5**	**-0.4**
D56A	**ZEC Mazanza, M**	**49.17**	**4**	P			11 28 31.8	
	baz=186							
BAR	**Barrett**	**49.18**	**318**	P	**P**		**11 28 31.7**	**+1.8**
F36A	**Milaca**	**49.33**	**347**	P	**P**		**11 28 30.1**	**-0.6**
F36A				IAmb	IAmb		11 28 51.8	
	comp=Z,32nm,1.0s							
GO09	**Cerro Castillo**	**49.36**	**174**	P	**P**		**11 28 30.8**	**0.0**
D58A	**Chemin du LacG**	**49.39**	**6**	P			11 28 35.0	
	baz=189							
D59A	**Saint-Raymond**	**49.43**	**7**	P			11 28 37.3	
	baz=190							
SUSD	**Miller**	**49.45**	**342**	P			11 28 32.7	
	baz=154							
SUSD	**Miller**	**49.45**	**342**	P	**P**		**11 28 31.8**	**+0.1**
SUSD					**pP**		**11 28 51.8**	**-0.8**
O20A	**White River Ci**	**49.50**	**331**	P			11 28 34.1	
	baz=141,SNR=6.5							
O20A	**White River Ci**	**49.50**	**331**	P	**P**		**11 28 33.6**	**+1.2**
BELC	**Belle Mtn. Jos**	**49.55**	**320**	P			11 28 34.7	
	baz=129,SNR=17							
109C	**Camp Elliot, M**	**49.59**	**318**	P			11 28 34.9	
	baz=127,SNR=6.0							
109C	**Camp Elliot, M**	**49.59**	**318**	P	**P**		**11 28 33.5**	**+0.5**
109C				IAmb	IAmb		11 28 36.0	
	comp=Z,42nm,1.1s							
D41A	**Chassel**	**49.60**	**352**	P	**P**		**11 28 32.7**	**0.0**
D41A				pP	**pP**		**11 28 52.8**	**-0.8**
PFO	**Pinyon Flats O**	**49.61**	**319**	LR	LR		11 48 17.6	
	comp=Z,151nm,20.6s,baz=155,slow=34							
PFO	**Pinyon Flats O**	**49.61**	**319**	*i* P	**P**		**11 28 35.2**	**+2.0**
PFO				pmax	pmax			
	comp=Z,43nm,0.9s							
PFO	**Pinyon Flats O**	**49.61**	**319**	P	**P**		**11 28 33.8**	**+0.6**
PFO				IAmb	IAmb		11 28 36.5	
	comp=Z,26nm,1.0s							
PFO	**Pinyon Flats O**	**49.61**	**319**	P			11 28 35.2	
	baz=128,SNR=17							
KNB	**Kanab**	**49.61**	**325**	P	**P**		**11 28 34.6**	**+1.4**
KNB				pmax	pmax			
	comp=Z,34nm,1.0s							
KNB	**Kanab**	**49.61**	**325**	P	**P**		**11 28 34.6**	**+1.4**
KNB				IAmb	IAmb		11 28 36.8	
	comp=Z,34nm,1.0s							
E38A	**The Farm, Brul**	**49.64**	**349**	IAmb	IAmb		11 28 53.8	
	comp=Z,25nm,0.9s							
LATQ	**La Tuque**	**49.69**	**6**	IAmb	IAmb		11 28 55.9	
	comp=Z,21nm,0.9s							
LATQ	**La Tuque**	**49.69**	**6**	P			11 28 37.1	
	baz=189							
GMRC	**Granite Mounta**	**49.83**	**321**	P			11 28 36.8	
	baz=130,SNR=18							
LCMT	**Little Creek M**	**49.85**	**325**	P	**P**		**11 28 36.5**	**+1.5**
LCMT				IAmb	IAmb		11 28 38.4	
	comp=Z,28nm,1.2s							
SRU	**San Rafael Swe**	**49.86**	**329**	IAmb	IAmb		11 28 37.8	
	comp=Z,40nm,1.2s							
F33A	**5 Mile Ranch,**	**49.97**	**345**	P	**P**		**11 28 34.9**	**-0.7**
F33A				IAmb	IAmb		11 28 57.2	
	comp=Z,38nm,1.1s							
MTPU	**Mount Pierson**	**49.98**	**326**	P	**P**		**11 28 37.0**	**+0.8**
MTPU				IAmb	IAmb		11 29 14.6	
	comp=Z,42nm,2.0s							
Q16A	**Castle Valley**	**50.06**	**328**	IAmb	IAmb		11 29 14.5	
	comp=Z,41nm,1.5s							
MURC	**Murrieta**	**50.08**	**319**	P			11 28 38.7	
	baz=128,SNR=8.6							
SZCU	**Shurtz Canyon**	**50.17**	**325**	IAmb	IAmb		11 28 40.8	
	comp=Z,27nm,0.9s							
P17A	**Butcher Ranch,**	**50.24**	**329**	IAmb	IAmb		11 28 40.7	
	comp=Z,28nm,0.9s							
RWWY	**Rawlins**	**50.24**	**333**	IAmb	IAmb		11 28 39.7	
	comp=Z,21nm,1.0s							
HEC	**Hector,Ludlow**	**50.29**	**320**	P			11 28 40.9	
	baz=129,SNR=8.1							
CCUT	**Cedar City**	**50.29**	**325**	IAmb	IAmb		11 28 42.8	
	comp=Z,37nm,1.0s							
MSU	**Marysvale**	**50.31**	**327**	P	**P**		**11 28 39.9**	**+1.3**
MSU	**Marysvale**	**50.31**	**327**	P	**P**		**11 28 39.9**	**+1.3**
BBRC	**Big Bear Solar**	**50.31**	**319**	P			11 28 41.3	
	baz=128,SNR=38							
TMUT	**Trail Mountain**	**50.36**	**328**	P	**P**		**11 28 40.7**	**+1.7**
TUQ	**Turquoise Mou**	**50.41**	**321**	P			11 28 41.7	
	baz=130							
RDMU	**Red Mountain**	**50.48**	**331**	IAmb	IAmb		11 28 42.2	
	comp=Z,23nm,1.0s							
TCRU	**Three Creeks R**	**50.52**	**327**	P	**P**		**11 28 42.3**	**+2.1**
TCRU				IAmb	IAmb		11 28 43.3	
	comp=Z,24nm,0.9s							
SCI2	**San Clemente I**	**50.62**	**317**	P			11 28 42.9	
	baz=126							
SHPR	**Sheep Range**	**50.64**	**323**	P	**P**		**11 28 42.8**	**+1.8**
SHPR				IAmb	IAmb		11 28 44.4	
	comp=Z,34nm,1.1s							
K22A	**Casper**	**50.72**	**335**	P			11 28 42.7	
	baz=144,SNR=6.3							
K22A	**Casper**	**50.72**	**335**	P	**P**		**11 28 41.0**	**-0.5**
K22A					**pP**		**11 29 03.4**	**+1.0**
RRX	**Edison Barstow**	**50.74**	**320**	P			11 28 44.2	
	baz=129							
BFSC	**Mount Baldy Ra**	**50.78**	**319**	P			11 28 43.8	
	baz=128,SNR=22							
CIS	**Catalina Islan**	**50.78**	**318**	P			11 28 43.2	
	baz=126,SNR=5.9							
FMP	**Fort Macarthur**	**50.88**	**318**	P			11 28 44.5	
	baz=127							
EYMN	**Ely**	**50.92**	**350**	P			11 28 42.2	
	baz=165,SNR=7.2							
EYMN	**Ely**	**50.92**	**350**	P	**P**		**11 28 42.0**	**-0.7**
EYMN				pP	**pP**		**11 29 02.4**	**-1.3**
RSSD	**Black Hills**	**50.93**	**338**	P			11 28 44.7	
	baz=148							
SHOC	**Shoshone, Teco**	**50.93**	**321**	P			11 28 45.2	
	baz=130,SNR=13							
RSSD	**Black Hills**	**50.93**	**338**	P	**P**		**11 28 42.9**	**-0.2**
RSSD				pmax	pmax			
	comp=Z,16nm,0.9s							
RSSD	**Black Hills**	**50.93**	**338**	P	**P**		**11 28 42.9**	**-0.2**
MWC	**Mount Wilson**	**51.03**	**319**	P	**P**		**11 28 44.9**	**+0.9**
MWC				pmax	pmax			
	comp=Z,29nm,0.9s							
MWC	**Mount Wilson**	**51.03**	**319**	P	**P**		**11 28 44.9**	**+0.9**
MWC				IAmb	IAmb		11 28 47.2	
	comp=Z,30nm,0.9s							
PASC	**Pasadena Art C**	**51.09**	**318**	P	**P**		**11 28 45.1**	**+0.9**
PASC				IAmb	IAmb		11 28 47.6	
	comp=Z,31nm,1.1s							
MPU	**Maple Canyon**	**51.11**	**329**	P	**P**		**11 28 45.5**	**+1.0**
PRN	**Pahroc Range**	**51.18**	**324**	P	**P**		**11 28 46.7**	**+1.7**
EDW2	**Edwards Air Fo**	**51.39**	**319**	P			11 28 48.3	
	baz=128,SNR=40							
JLU	**Jordanelle**	**51.45**	**329**	IAmb	IAmb		11 28 50.0	
	comp=Z,23nm,1.1s							
LRMC	**Laurel Mtn Rad**	**51.55**	**320**	P			11 28 50.1	
	baz=128,SNR=31							
TPNV	**Topopah Spring**	**51.59**	**323**	IAmb	IAmb		11 28 51.8	
	comp=Z,31nm,1.0s							
TPNV	**Topopah Spring**	**51.59**	**323**	P			11 28 50.6	
	baz=131,SNR=38							
FURC	**Furnace Creek,**	**51.66**	**322**	P			11 28 50.5	
	baz=130,SNR=41							
TCUT	**Toone Canyon**	**51.81**	**330**	IAmb	IAmb		11 29 23.7	
	comp=Z,54nm,1.4s							
SPR3	**Spring Creek 3**	**51.84**	**326**	P	**P**		**11 28 51.3**	**+1.1**
SPR3				IAmb	IAmb		11 28 52.9	
	comp=Z,39nm,1.2s							
DUG	**Dugway, Tooele**	**51.86**	**328**	P	**P**		**11 28 51.0**	**+0.9**
DUG				pmax	pmax			
	comp=Z,54nm,1.6s							
DUG	**Dugway, Tooele**	**51.86**	**328**	P	**P**		**11 28 51.0**	**+0.9**
DUG				IAmb	IAmb		11 28 53.2	
	comp=Z,54nm,1.6s							
DUG	**Dugway, Tooele**	**51.86**	**328**	P			11 28 51.4	
	baz=136,SNR=15							
E28A	**Huff**	**51.91**	**342**	P	**P**		**11 28 50.6**	**+0.5**
E28A				pP	**pP**		**11 29 11.7**	**+0.5**
E28A				sP	**sP**		**11 29 21.5**	**+0.8**
ARVC	**Arvin**	**52.08**	**319**	P			11 28 54.0	
	baz=127,SNR=6.3							
R11A	**Troy Canyon, C**	**52.12**	**324**	P			11 28 54.3	
	baz=132,SNR=48							
R11A	**Troy Canyon, C**	**52.12**	**324**	IAmb	IAmb		11 28 55.5	
	comp=Z,24nm,1.0s							
AGMN	**Agassiz Nation**	**52.16**	**346**	P			11 28 52.4	
	baz=159,SNR=15							
AGMN	**Agassiz Nation**	**52.16**	**346**	P	**P**		**11 28 51.7**	**-0.3**
AGMN				pP	**pP**		**11 29 11.9**	**-1.1**
AGMN				IAmb	IAmb		11 29 13.6	
	comp=Z,44nm,1.0s							
BW06	**Boulder Array**	**52.16**	**332**	P			11 28 53.0	
	baz=141,SNR=14							
PD31	**Pinedale Array**	**52.16**	**332**	P	**P**		**11 28 52.9**	**+0.5**
PDAR	**Pinedale Array**	**52.16**	**332**	P	**P**		**11 28 52.5**	**+0.2**
	comp=Z,11nm,1.0s,baz=127,slow=8.5,SNR=61							
PDAR				PcP	**PcP**		**11 30 01.8**	**-1.3**
	comp=Z,4.1nm,0.8s,baz=142,slow=4.6,SNR=4.8							
PDAR				LR	LR		11 51 23.0	
	comp=Z,282nm,21.5s,baz=144,slow=36							
PDAR	**Pinedale Array**	**52.16**	**332**	P	**P**		**11 28 52.1**	**-0.3**
BW06	**Boulder Array**	**52.17**	**332**	P	**P**		**11 28 52.6**	**+0.3**
ISA	**Isabella, Lake**	**52.17**	**320**	P			11 28 54.6	
	baz=128,SNR=22							
ISA	**Isabella, Lake**	**52.18**	**320**	P	**P**		**11 28 54.5**	**+2.1**
ISA				pmax	pmax			
	comp=Z,39nm,1.2s							
ISA	**Isabella, Lake**	**52.18**	**320**	P	**P**		**11 28 54.5**	**+2.1**
ISA				IAmb	IAmb		11 28 55.8	
	comp=Z,39nm,1.1s							
HWUT	**Hardware Ranch**	**52.25**	**330**	P	**P**		**11 28 53.6**	**+0.6**
HWUT				IAmb	IAmb		11 28 55.3	
	comp=Z,34nm,0.9s							
GRAC	**Grapevine Rang**	**52.31**	**322**	P			11 28 55.7	
	baz=130							
CWC	**Cottonwood Cre**	**52.40**	**321**	P			11 28 56.1	
	baz=129							
SPUT	**South Promonto**	**52.48**	**329**	IAmb	IAmb		11 28 57.2	
	comp=Z,22nm

comp=Z,16nm,0.9s,baz=154,slow=7.7,SNR=34
ULM pP **pP** **11 29 25.3 -1.2**
comp=Z,46nm,0.9s,baz=163,slow=6.9,SNR=19
ULM PKKP **PKKPdf** **11 51 04.3 +0.8**
comp=Z,1.0nm,0.6s,baz=346,slow=4.2,SNR=3.7
ULM Lac du Bonnet 53.99 347 *d* P **P** **11 29 04.8 -0.6**
ULM Lac du Bonnet 53.99 347 P **P** **11 29 04.5 -0.9**
ULM pP **pP** **11 29 25.4 -1.2**
YNE Yellowstone No 54.12 334 P **P** **11 29 07.2 +0.5**
YNR Norris Junctio 54.19 333 P **P** **11 29 06.7 -0.6**
YMR Madison River 54.28 333 P **P** **11 29 09.5 +1.7**
YMR lAmb lAmb 11 29 37.1
comp=Z,25nm,1.1s
YHH Holmes Hill 54.32 333 P **P** **11 29 09.6 +1.3**
YHB Horse Butte 54.45 333 lAmb lAmb 11 29 48.6
comp=Z,49nm,1.5s
YHL Hebgen Lake 54.52 333 lAmb lAmb 11 29 33.6
comp=Z,36nm,1.0s
WAKR Walker 54.53 322 lAmb lAmb 11 29 13.1
comp=Z,24nm,1.0s
DGMT Dagmar 54.71 340 P **P** **11 29 10.8 +0.1**
DGMT lAmb lAmb 11 29 34.7
comp=Z,42nm,1.2s
DGMT Dagmar 54.71 340 P 11 29 12.3
baz=150,SNR=8.2
YERR Yerington 54.71 323 P **P** **11 29 11.3 +0.3**
YERR lAmb lAmb 11 29 14.2
comp=Z,47nm,1.6s
PNTR Pine Nut 54.99 322 lAmb lAmb 11 29 16.4
comp=Z,66nm,1.9s
HLID Hailey 55.11 330 P 11 29 15.4
baz=136,SNR=26
VCNR Virginia City 55.15 323 lAmb lAmb 11 29 17.4
comp=Z,26nm,1.2s
PAHR Pah Rah Range 55.25 323 lAmb lAmb 11 29 18.1
comp=Z,73nm,1.9s
MCMT McKenzie Canyo 55.28 332 P **P** **11 29 15.8 +0.7**
BOZ Bozeman (W) 55.30 333 P 11 29 16.5
baz=140,SNR=31
BOZ Bozeman (W) 55.30 333 P **P** **11 29 16.4 +1.3**
BOZ pmax pmax
comp=Z,22nm,0.9s
BOZ Bozeman (W) 55.30 333 P **P** **11 29 16.4 +1.3**
BOZ lAmb lAmb 11 29 38.2
comp=Z,22nm,0.8s
RUBR Rubicon Trail 55.31 322 lAmb lAmb 11 29 21.7
comp=Z,25nm,1.0s
MFID Camas Ranch 55.73 329 lAmb lAmb 11 29 21.0
comp=Z,38nm,1.0s
LRM Limekiln Ridge 55.84 333 P **P** **11 29 19.4 +0.3**
BEKR Beckworth 55.94 323 lAmb lAmb 11 29 22.8
comp=Z,24nm,1.1s
HRY Holter Researc 56.24 334 P **P** **11 29 22.9 +1.2**
EGMT Eagleton 56.40 336 P 11 29 23.9
baz=143,SNR=13
EGMT Eagleton 56.40 336 P **P** **11 29 24.0 +1.2**
EGMT lAmb lAmb 11 29 55.9
comp=Z,18nm,0.7s
ORV Oroville 56.44 322 P **P** **11 29 24.6 +1.4**
ORV pmax pmax
comp=Z,70nm,1.2s
ORV Oroville 56.44 322 P **P** **11 29 24.6 +1.4**
WVOR Wild Horse Val 56.58 326 lAmb lAmb 11 29 26.6
comp=Z,38nm,0.9s
PLID Pearl Lake 57.00 330 lAmb lAmb 11 30 23.5
comp=Z,49nm,1.7s
O03E Paynes Creek 57.07 322 P 11 29 28.5
baz=127,SNR=12
J08A Circle Bar Ran 57.10 327 lAmb lAmb 11 29 59.9
comp=Z,62nm,1.7s
MSO Missoula 57.28 333 lAmb lAmb 11 29 52.2
comp=Z,20nm,1.0s
MSO Missoula 57.28 333 P 11 29 30.4
baz=138,SNR=17
RKT Rikitea 57.38 244 *e*P **P** **11 29 31.4 +1.3**
comp=Z,69nm,0.9s
RKT Rikitea 57.38 244 *e*LQ LQ 11 44 04.0
comp=Z,648nm,30.5s
RKT *e*LR LR 11 46 25.3
comp=Z,791nm,29.2s
BMO Blue Mountains 57.50 329 P **P** **11 29 31.3 +0.6**
BMO pmax pmax
comp=Z,8.0nm,1.1s
BMO Blue Mountains 57.50 329 P **P** **11 29 31.3 +0.6**
O02D Mt. Diablo Mer 57.61 322 P 11 29 31.8
baz=126,SNR=6.8
WDC Whiskeytown Da 57.70 322 P **P** **11 29 31.2 -0.8**
WDC pmax pmax
comp=Z,43nm,1.9s
WDC Whiskeytown Da 57.70 322 P **P** **11 29 31.2 -0.8**
WDC lAmb lAmb 11 29 32.6
comp=Z,43nm,1.9s
M04C Macdoel 58.00 324 P 11 29 35.4
baz=128
N02D Trinity Center 58.03 323 P 11 29 34.4
baz=127
K05A Summer Lake 58.04 325 lAmb lAmb 11 29 37.6
comp=Z,40nm,0.9s
I07A Izee 58.14 327 lAmb lAmb 11 29 38.6
comp=Z,20nm,1.0s
F10A Beach Ranch, E 58.24 330 P **P** **11 29 36.7 +0.9**
F10A lAmb lAmb 11 30 10.6
comp=Z,21nm,0.8s
M02C Callahan 58.37 323 P 11 29 37.3
baz=127
K04D Chiloquin, OR 58.47 325 P 11 29 39.2
baz=128,SNR=11
YBH Yreka Blue Hor 58.49 323 P **P** **11 29 37.0 -0.6**
YBH pmax pmax
comp=Z,14nm,0.9s
YBH Yreka Blue Hor 58.49 323 P **P** **11 29 37.0 -0.6**
L04D Klamath Falls 58.54 324 P 11 29 38.4
baz=128,SNR=18
J05D Fort Rock, OR 58.58 325 P 11 29 39.7
baz=129,SNR=32
KHMM Horse Mountain 58.60 322 P **P** **11 29 39.6 +1.1**
G08A Pilot Rock 58.65 328 P **P** **11 29 39.9 +1.1**
G08A lAmb lAmb 11 29 41.2
comp=Z,36nm,1.1s
PINE Pine Mountain 58.74 326 P **P** **11 29 40.6 +1.2**
J04D Umpqua Nationa 59.05 325 P 11 29 43.1
baz=128,SNR=24
E09A Wood Farm, Sta 59.07 330 lAmb lAmb 11 30 13.7
comp=Z,18nm,0.7s
KRMB Red Mountain 59.09 322 pP 11 30 08.0 +4.7
HUMO Hull Mountain 59.16 324 P **P** **11 29 42.1 -0.1**
L02E Cave Junction 59.27 323 P 11 29 44.1
baz=126,SNR=5.4
I05D Terrebonne, OR 59.31 326 P 11 29 45.2
baz=130,SNR=14
F07A Phinny Hill Vi 59.56 328 P **P** **11 29 44.7 -0.2**
F07A **pP** **11 30 04.1 -2.3**
F07A lAmb lAmb 11 30 49.5
comp=Z,39nm,1.5s
I04A Tendick Farm, 59.57 325 P 11 29 45.8
baz=128
FFC Flin Flon 59.58 345 P **P** **11 29 44.5 -0.3**
FFC *PP **pP** **11 30 06.0 -0.3**
FFC pmax pmax
comp=Z,44nm,1.3s
FFC Flin Flon 59.58 345 P **P** **11 29 44.5 -0.3**
FFC pP **pP** **11 30 06.0 -0.3**
FFC lAmb lAmb 11 30 07.3
comp=Z,44nm,1.3s
K02D Willamette Mer 59.63 324 P 11 29 46.9
baz=127,SNR=9.2
NEW Newport 59.80 332 P 11 29 47.6
baz=135,SNR=14
NEW Newport 59.80 332 lAmb lAmb 11 29 48.5
comp=Z,16nm,0.9s
G05D Wamic, OR 59.87 327 P 11 29 49.5
baz=130,SNR=9.1
E07A Sunnyside 59.97 329 P **P** **11 29 47.5 -0.2**
E07A pP **pP** **11 30 07.2 -2.0**
E07A sP **sP** **11 30 19.2 +0.6**
E07A lAmb lAmb 11 30 20.6
comp=Z,21nm,0.8s
H04A Detroit Lake 60.00 326 P **P** **11 29 48.8 +0.8**
H04A lAmb lAmb 11 30 20.1
comp=Z,22nm,1.0s
C09A Chrisman Ranch 60.02 331 P **P** **11 29 47.4 -0.6**
C09A lAmb lAmb 11 30 34.9
comp=Z,42nm,1.5s
I03D Drain, OR 60.05 325 P 11 29 49.8
baz=127
J01E Myrtle Point 60.06 324 P 11 29 50.2
baz=126
F05D White Salmon 60.36 328 P 11 29 52.3
baz=130
TAOE Nuku Hiva Isla 60.45 261 *e*LR LR 11 47 54.9
comp=Z,506nm,30.5s
I02D Swisshome 60.58 325 P 11 29 54.0
baz=127
LTY Liberty 60.85 329 lAmb lAmb 11 30 22.4
comp=Z,23nm,1.1s
B08A Colville Reser 60.92 331 P **P** **11 29 54.6 +0.5**
G03D McMinnville, O 60.92 326 P 11 29 56.5
baz=128
LON Longmire 61.11 328 P **P** **11 29 56.6 +1.1**
LON pmax pmax
comp=Z,13nm,0.9s
LON Longmire 61.11 328 P **P** **11 29 56.6 +1.1**
F04D Rainier, OR 61.33 327 P 11 29 58.7
baz=129
E04D Cinebar 61.38 328 P 11 29 59.5
baz=129
D05A Enumclaw 61.48 329 P **P** **11 29 59.0 +1.1**
D05A lAmb lAmb 11 30 00.2
comp=Z,34nm,0.9s
FCC Fort Churchill 61.77 352 P **P** **11 29 59.3 -0.3**
FCC pP **pP** **11 30 20.4 -0.8**
FCC lAmb lAmb 11 30 21.8
comp=Z,47nm,1.1s
E03A Lebam 61.91 327 lAmb lAmb 11 30 34.3
comp=Z,46nm,1.0s
B05A Bryant 62.23 329 P 11 30 03.7
baz=130
D03D Eldon 62.28 328 P 11 30 04.4
baz=129
A05A Maple Falls 62.71 330 lAmb lAmb 11 30 08.1
comp=Z,31nm,0.7s
A04D Lummi Island 62.84 330 P 11 30 08.6
baz=130
PMSA Palmer Station 63.53 173 P **P** **11 30 11.8 +0.7**
comp=Z,34nm,0.9s,baz=320,slow=7.9,SNR=1.9
VAH Vaihoa 68.12 255 *e*P **P** **11 30 42.4 +0.8**
comp=Z,80nm,1.1s
MEH Mehetia 68.73 252 *e*P **P** **11 30 46.0 +0.5**
comp=Z,17nm,1.2s
MEH *e*pP **PcP** **11 31 10.0 +0.3**
comp=Z,16nm,0.7s
YKA Yellowknife Ar 69.64 344 P **P** **11 30 49.5 -0.7**
comp=Z,13nm,0.8s,baz=137,slow=6.1,SNR=196
YKA pP **pP** **11 31 11.2 -1.0**
comp=Z,7.2nm,0.7s,baz=138,slow=7.0,SNR=8.1
YKA LR LR 12 03 35.5
comp=Z,118nm,18.5s,baz=0.0,slow=38
TIAR Tiarei 69.93 252 *e*P **P** **11 30 53.6 +0.8**
comp=Z,6.8nm,1.0s
PPT Papeete 70.15 252 LR LR 11 54 01.3
comp=Z,213nm,21.4s,baz=106,slow=29
PPT2 Papeete2 70.15 252 *e*S **S** **11 39 57.2 -2.2**
comp=Z,198nm,24.5s
PPT2 Papeete2 70.15 252 *e*LR LR 11 52 20.6
comp=Z,907nm,30.5s,baz=82
PAE Paea 70.16 252 *e*P **P** **11 30 55.0 +0.8**
comp=Z,21nm,1.1s
TBI Tubuai 70.56 246 *e*LR LR 11 52 32.7
comp=Z,585nm,31.5s
DLBC Dease Lake 72.28 335 P **P** **11 31 08.0 +1.6**
DY2G Dye2 72.50 13 *e*P **P** **11 31 07.4 -0.3**
SKAG Skagway 75.14 334 P 11 31 24.5
baz=122
DBIC Dimbokro 75.25 83 P **P** **11 31 23.9 -0.5**
comp=Z,11nm,0.9s,baz=254,slow=6.2,SNR=8.3
DBIC LR LR 12 02 41.0
comp=Z,238nm,18.9s,baz=240,slow=34
DBIC Dimbokro 75.25 83 P **P** **11 31 22.8 -1.7**
DBIC pmax pmax
comp=Z,22nm,0.9s
DBIC Dimbokro 75.25 83 P **P** **11 31 22.8 -1.7**
WHY Whitehorse 75.58 335 P 11 31 26.5
baz=122
ICESG Greenland Ices 76.12 14 *i* P **P** **11 31 28.5 -0.3**
PFVI Vila Bisbo 76.17 51 *e*pP **pP** **11 31 55.6 +3.9**
PFVI A A 11 32 04.4
comp=Z,84nm,1.4s
PTEO Sao Teotonio 76.35 51 *e*P **P** **11 31 29.9 -0.4**
comp=Z,58nm,1.7s
PTEO *e*pP **pP** **11 31 52.7 0.0**
KOWA Kowa 76.73 75 P **P** **11 31 31.1 -1.7**
PBDV Barranco-do-Ve 76.89 51 *e*P P 11 31 39.3 +5.9
comp=Z,38nm,1.1s
PBDV *e*pP pP 11 31 56.0 +0.2
PCVE Castro Verde 76.90 51 *e*P **P** **11 31 37.8 +4.4**
comp=Z,33nm,1.7s
PCVE *e*pP **pP** **11 31 56.2 +0.4**
PMTG Montargil 77.09 49 *e*P **P** **11 31 34.3 -0.1**
comp=Z,29nm,1.7s
PMTG *e*pP **pP** **11 31 56.6 -0.2**
PVAQ Vaqueiros 77.10 51 *e*P **P** **11 31 38.2 +3.7**
comp=Z,27nm,1.7s
PVAQ *e*pP **pP** **11 31 58.6 +1.7**
PCAS Casmilo, Conde 77.11 48 *e*P P 11 31 41.6 +7.0
comp=Z,71nm,1.4s
PCAS *e*pP pP 11 31 56.9 -0.1
COI Coimbra 77.22 48 *e*pP **pP** **11 31 58.2 +0.7**
COI A A 11 32 00.0
comp=Z,96nm,1.9s
RES Resolute Bay 77.25 356 P **P** **11 31 34.5 -0.1**
RES pmax pmax
comp=Z,25nm,1.2s
RES Resolute Bay 77.25 356 P **P** **11 31 34.5 -0.1**
C36M Paulatuk 77.35 345 P 11 31 35.0
baz=134
PESTR Estremoz 77.52 50 P **P** **11 31 36.4 -0.5**
PESTR pP **pP** **11 31 58.4 -0.9**
PVIS Viseu 77.72 48 *e*P **P** **11 31 38.7 +0.7**
comp=Z,39nm,1.3s
PVIS *e*pP **pP** **11 32 00.1 -0.3**
PGAV Gavieira, Arco 77.75 46 *e*pP **pP** **11 31 59.7 -0.9**
PGAV A A 11 32 11.8
comp=Z,52nm,1.5s
PBAR Barrancos 77.79 50 *e*P P 11 31 44.1 +5.7
comp=Z,19nm,1.5s
PBAR *e*pP pP 11 32 02.0 +1.2
PMRV Marv??o 77.80 49 *e*pP **pP** **11 32 00.1 -0.8**
PMRV A A 11 32 15.3
comp=Z,24nm,1.6s
PCBR Castelo Branco 77.83 49 *e*P **P** **11 31 37.6 -0.9**
comp=Z,29nm,1.7s
PCBR *e*pP **pP** **11 32 00.6 -0.4**
PCAB Cabril 77.86 47 *e*pP **pP** **11 32 02.0 +0.8**
PCAB A A 11 32 50.6
comp=Z,36nm,1.8s
MTE Manteigas 77.91 48 *e*P P 11 31 46.4 +7.3
comp=Z,37nm,1.8s
MTE *e*pP pP 11 32 00.7 -0.8
POLO Lamas de Olo 77.95 47 *e*P **P** **11 31 40.2 +0.9**
comp=Z,24nm,1.5s
POLO *e*pP **pP** **11 32 01.2 -0.6**
PVRL Vila Real 77.98 47 *e*pP **pP** **11 32 01.9 0.0**
PVRL A A 11 32 21.0
comp=Z,40nm,2.0s
MVO Moncorvo 78.46 47 *e*P **P** **11 31 43.1 +1.0**
comp=Z,42nm,1.2s
MVO *e*pP **pP** **11 32 04.4 -0.2**
CTGM Chitina Glacie 78.49 334 P **P** **11 31 43.0 +1.1**
CTGM lAmb lAmb 11 32 06.0
comp=Z,50nm,1.5s
CTG Chitna Glacier 78.49 334 P 11 31 43.6
baz=116
BARN Barnard Glacie 78.67 334 P **P** **11 31 44.3 +1.3**
PBRG Braganca 78.82 47 *e*P **P** **11 31 45.1 +1.1**
comp=Z,27nm,1.6s
PBRG *e*pP **pP** **11 32 06.1 -0.4**
TULEG Thule 78.82 3 *e*P **P** **11 31 42.1 -1.2**
TULEG *i* 11 32 05.3
SUMG Summit 78.99 12 *i* P **P** **11 31 45.6 +0.7**
SUMG lAmb lAmb 11 31 46.5
comp=Z,11nm,0.9s
SUMG *i* 11 32 07.5
SUMG Summit 78.99 12 *i* P **P** **11 31 45.5 +0.7**
SUMG *i* 11 32 07.5
SUMG Summit 78.99 12 P **P** **11 31 44.7 0.0**
SUMG pP **pP** **11 32 06.1 -1.2**
SUMG lAmb lAmb 11 32 08.1
comp=Z,41nm,1.0s
TGL Tana Glacier 79.06 334 P **P** **11 31 45.8 +0.8**
DAWY Dawson 79.12 337 P **P** **11 31 45.7 +0.5**
CRQE Cirque 79.17 333 P 11 31 46.9
baz=115
EPYK Eagle Plains 79.30 340 P 11 31 46.9
baz=122,SNR=13
EPYK Eagle Plains 79.30 340 P **P** **11 31 46.6 +0.4**
EPYK lAmb lAmb 11 32 09.7
comp=Z,113nm,1.8s
BELA Belgrano 2 79.32 171 lAmb lAmb 11 31 48.0
comp=Z,67nm,1.2s
INK Inuvik 79.33 342 P **P** **11 31 46.1 0.0**
comp=Z,37nm,1.0s,baz=105,slow=5.6,SNR=10
INK pP **pP** **11 32 08.3 -0.4**
comp=Z,50nm,1.1s,baz=122,slow=6.2,SNR=7.2
INK Inuvik 79.33 342 lAmb lAmb 11 32 09.8
comp=Z,86nm,1.2s
INK Inuvik 79.33 342 P 11 31 47.1
baz=125,SNR=46
MCARA McCarthy VSAT 79.41 334 lAmb lAmb 11 31 49.3
comp=Z,47nm,1.2s
MCARA McCarthy VSAT 79.41 334 P 11 31 47.9
baz=115,SNR=7.6
VRDI Verde Repeater 79.53 334 lAmb lAmb 11 31 49.7
comp=Z,46nm,1.2s
BCAR Beaver Creek A 79.61 336 P **P** **11 31 48.5 +0.6**
L27K Beaver Creek, 79.63 336 P **P** **11 31 49.1 +1.1**
L27K Beaver Creek, 79.63 336 P 11 31 49.3
baz=116,SNR=11
GLB Gilahina Butte 79.78 334 P **P** **11 31 49.5 +0.6**
BMRM Bremner River 79.94 333 P **P** **11 31 50.5 +0.8**
BMRM Bremner River 79.94 333 P 11 31 51.0
baz=113,SNR=9.1
PAB San Pablo 80.13 49 P **P** **11 31 50.9 -0.3**
PAB pP **pP** **11 32 13.5 -0.3**
EGAK Eagle 80.13 338 P 11 31 51.6
baz=117,SNR=24
EGAK Eagle 80.13 338 P **P** **11 31 50.8 +0.2**
EGAK lAmb lAmb 11 31 52.5
comp=Z,46nm,1.1s
EGAK pP **pP** **11 32 12.5 -0.6**
K27K Chicken 80.15 337 P **P** **11 31 51.9 +1.1**
K27K Chicken 80.15 337 P 11 31 52.6
baz=116
MENT Mentasta 80.35 335 P **P** **11 31 51.2 -0.7**
ESDC Sonseca Array 80.44 49 P **P** **11 31 53.0 +0.1**
comp=Z,2.3nm,0.9s,baz=262,slow=5.1,SNR=6.3
ESDC pP **pP** **11 32 15.1 -0.4**
comp=Z,9.6nm,1.0s,baz=267,slow=5.3,SNR=13
KLU Klutina 80.73 334 P **P** **11 31 54.2 +0.2**
KLU Klutina 80.73 334 P 11 31 54.6
baz=112,SNR=11
SCRK Sand Creek 80.89 336 P 11 31 55.7
baz=114,SNR=12
NEEM North Greenlan 81.04 6 *i* P **P** **11 31 56.0 +0.4**
NEEM lAmb lAmb 11 31 57.7
comp=Z,10.0nm,0.8s
M24K Tolsona, Glenn 81.07 334 lAmb lAmb 11 31 57.8
comp=Z,53nm,1.1s
M24K Tolsona, Glenn 81.07 334 P 11 31 56.9
baz=112,SNR=7.8
PAX Paxson 81.10 335 P 11 31 56.3
baz=113,SNR=16
SCM Sheep Creek Mo 81.48 334 P **P** **11 31 58.4 +0.5**
SCM pmax pmax
comp=Z,36nm,0.8s
SCM Sheep Creek Mo 81.48 334 P **P** **11 31 58.4 +0.5**
SCM lAmb lAmb 11 31 59.5
comp=Z,36nm,0.8s
VNA3 Neumayer Olymp 81.65 162 P **P** **11 31 58.9 +0.2**
SCO Scoresbysund 81.71 17 *i* P **P** **11 31 59.1 +0.2**
SCO lAmb lAmb 11 32 00.5
comp=Z,2.1nm,0.8s
SCO Scoresbysund 81.71 17 *i* P **P** **11 31 59.0 +0.2**
SCO pmax pmax
comp=Z,2.0nm,0.8s
KNK Knik Glacier 81.84 333 P 11 32 00.5
baz=110
SEW Seward 81.87 332 lAmb lAmb 11 32 13.4
comp=Z,41nm,1.3s
SEW Seward 81.87 332 P 11 31 59.8
baz=109
VNA1 Neumayer--Stat 81.91 161 P **P** **11 32 00.6 +0.6**
SML Sawmill 81.92 333 P 11 32 00.8
baz=110,SNR=11
WAT6 Susitna Watana 81.93 334 P 11 32 00.5
baz=111,SNR=24
PRP Porcupine Dome 82.12 337 P 11 32 01.4
baz=113
PRP Porcupine Dome 82.12 337 P **P** **11 32 01.2 -0.1**
PRP pP **pP** **11 32 23.6 -0.3**
TORD Torodi Ar. Bea 82.14 77 P **P** **11 32 01.2 -1.1**
comp=Z,6.2nm,1.1s,baz=282,slow=5.4,SNR=8.4
TORD PKKPbc **PKKPbc** **11 50 30.8 +0.3**
comp=Z,0.3nm,0.5s,baz=62,slow=3.2,SNR=3.7
TORD Torodi Ar. Bea 82.14 77 P **P** **11 32 01.5 -0.8**
TORD pP **pP** **11 32 22.4 -2.5**
GHO Glory Hole Cre 82.17 333 P **P** **11 32 01.2 -0.4**
GHO lAmb lAmb 11 32 02.9
comp=Z,32nm,0.8s
EUNU Eureka 82.18 359 P **P** **11 32 02.8 +1.5**
EUNU lAmb lAmb 11 32 25.2
comp=Z,43nm,1.3s
PMR Palmer 82.20 333 P 11 32 01.7
baz=109
HDA Harding Lake 82.26 336 P 11 32 01.8
baz=112,SNR=16
HDA P 11 32 01.8
baz=112,SNR=16
VNA2 Neumayer--Watz 82.26 162 P **P** **11 32 01.8 0.0**
baz=307,slow=6.1
RC01 Rabbit Creek A 82.31 333 P 11 32 02.7
baz=109,SNR=5.9
RC01 Rabbit Creek A 82.32 333 P **P** **11 32 01.1 -1.1**
IL31 82.37 337 P **P** **11 32 02.1 -0.3**
ILAR Eielson Array 82.37 337 P **P** **11 32 02.4 -0.1**
comp=Z,12nm,1.0s,baz=128,slow=3.5,SNR=64
ILAR pP **pP** **11 32 24.4 -0.6**
comp=Z,4.0nm,1.0s,baz=155,slow=7.1,SNR=3.7
ILAR PP **PP** **11 35 09.0 -3.3**
comp=Z,0.8nm,0.9s,baz=116,slow=6.1,SNR=2.7
BRSE Bradley Lake S 82.37 331 P 11 32 03.2
baz=108
WAT2 Susitna Watana 82.42 335 P 11 32 03.3
baz=110
FYU Fort Yukon 82.42 338 P **P** **11 32 03.4 +0.7**
FYU lAmb lAmb 11 32 04.7
comp=Z,50nm,1.2s
BRLK Bradley Lake 82.45 331 P **P** **11 32 02.6 -0.4**
BMAR Burnt Mountain 82.54 339 P **P** **11 32 03.4 0.0**
POKR Poker Plat Res 82.71 337 P **P** **11 32 04.0 -0.2**
POKR Poker Plat Res 82.71 337 P 11 32 05.1
baz=111
KDAK Kodiak Island 82.73 329 P **P** **11 32 04.3 -0.1**
comp=Z,4.0nm,0.7s,baz=121,slow=5.9,SNR=1.2
WRH Wood River Hil 82.74 336 P **P** **11 32 04.2 -0.2**
COLA College 82.79 336 *i* P **P** **11 32 04.6 0.0**
COLA pmax pmax
comp=Z,23nm,1.2s
COLA College 82.79 336 P **P** **11 32 04.8 +0.3**
COLA College 82.79 336 P 11 32 05.7
baz=111
TCOL CIGO, UAF Yank 82.79 336 P 11 32 05.6
baz=111
TCOL CIGO, UAF Yank 82.79 336 P **P** **11 32 05.0 +0.4**
MCK McKinley 82.83 335 P 11 32 05.5
baz=110,SNR=8.1
SUA Susitna One 82.90 333 P 11 32 06.0
baz=108,SNR=11
OHAK Old Harbor 82.94 328 P 11 32 06.3
baz=105
MDM Murphy Dome 82.97 336 lAmb lAmb 11 32 07.1
comp=Z,37nm,1.2s
CUT Chulitna 82.97 334 lAmb lAmb 11 32 07.0
comp=Z,52nm,0.9s
CUT Chulitna 82.97 334 P 11 32 06.2
baz=108
NEA2 Nenana 83.18 336 lAmb lAmb 11 32 08.0
comp=Z,50nm,1.2s
NEA2 Nenana 83.18 336 P 11 32 07.2
baz=110,SNR=24
TRF Thorofare Moun 83.31 335 lAmb lAmb 11 32 08.9
comp=Z,51nm,1.6s
TRF Thorofare Moun 83.31 335 P 11 32 07.9
baz=108,SNR=5.5
SKT Skwentna 83.41 333 P 11 32 08.3
baz=107,SNR=22
SKT Skwentna 83.41 333 P **P** **11 32 07.4 -0.5**
SKT lAmb lAmb 11 32 09.3
comp=Z,42nm,1.0s

I23K	**Minto, Yukon-K**	**83.48**	**336**		P		**P**	**11 32 08.3**	**+0.1**
I23K					IAmb		IAmb	11 32 09.8	
	comp=Z,41nm,0.9s								
I23K	**Minto, Yukon-K**	**83.48**	**336**		P			11 32 08.5	
	baz=109,SNR=35								
SPCR	**Spurr Chakacha**	**83.49**	**332**		P			11 32 09.0	
	baz=106								
KTH	**Kantishna Hill**	**83.62**	**335**		P		**P**	**11 32 08.8**	**-0.2**
KTH					IAmb		IAmb	11 32 10.2	
	comp=Z,28nm,1.0s								
BPAW	**Bear Paw Mtn.**	**83.81**	**335**		P			11 32 10.0	
	baz=108,SNR=37								
BPAW	**Bear Paw Mtn.**	**83.81**	**335**		P		**P**	**11 32 09.8**	**-0.1**
BPAW					IAmb		IAmb	11 32 11.2	
	comp=Z,41nm,0.9s								
SNAA	**Sanae**	**83.87**	**162**		P		**P**	**11 32 10.1**	**-0.1**
SNAA	**Sanae**	**83.87**	**162**	*ce*	P		**P**	**11 32 09.8**	**-0.4**
SNAA					pmax		pmax		
	comp=Z,70nm,1.7s								
SNAA	**Sanae**	**83.87**	**162**		IAmb		IAmb	11 32 11.8	
	comp=Z,64nm,1.3s								
PPLA	**Purkeypile**	**83.97**	**334**		IAmb		IAmb	11 32 12.1	
	comp=Z,42nm,1.0s								
PPLA	**Purkeypile**	**83.97**	**334**		P			11 32 11.1	
	baz=107,SNR=12								
MLY	**Manley**	**84.00**	**336**		IAmb		IAmb	11 32 12.7	
	comp=Z,31nm,1.0s								
MLY	**Manley**	**84.00**	**336**		P			11 32 11.1	
	baz=108,SNR=52								
DBG	**Daneborg**	**84.12**	**14**	*e*	P		**P**	**11 32 12.2**	**+1.0**
DBG				*i*				11 32 34.3	
CHUM	**Lake Minchumin**	**84.31**	**335**		P			11 32 12.5	
	baz=107,SNR=10								
COLD	**Coldfoot**	**84.49**	**338**		P			11 32 14.6	
	baz=109,SNR=22								
COLD	**Coldfoot**	**84.49**	**338**		P		**P**	**11 32 14.4**	**+1.1**
COLD					IAmb		IAmb	11 32 15.8	
	comp=Z,26nm,1.1s								
TOLK	**Toolik Lake Re**	**84.74**	**340**		P		**P**	**11 32 14.9**	**+0.3**
TOLK	**Toolik Lake Re**	**84.74**	**340**		P			11 32 15.4	
	baz=110,SNR=8.8								
IMAR	**Indian Mountai**	**85.48**	**337**		P		**P**	**11 32 18.2**	**-0.1**
TTA	**Tatalina**	**85.67**	**334**		P			11 32 19.2	
	baz=103,SNR=5.7								
DAG	**Danmarks Havn**	**85.68**	**12**	*i*	P		**P**	**11 32 19.5**	**+0.4**
DAG					IAmb		IAmb	11 32 20.1	
	comp=Z,4.6nm,0.9s								
DAG				*i*				11 32 41.1	
DAG	**Danmarks Havn**	**85.68**	**12**	*i*	P		**P**	**11 32 19.4**	**+0.4**
DAG				*i*				11 32 41.1	
DAG					pmax		pmax		
	comp=Z,5.0nm,0.9s								
SDPT	**Sand Point**	**86.48**	**326**		P			11 32 24.1	
	baz=99								
A21K	**Barrow**	**87.82**	**342**		P		**P**	**11 32 30.1**	**+0.6**
A21K	**Barrow**	**87.82**	**342**		P			11 32 30.4	
	baz=103,SNR=47								
QSPA	**South Pole Qui**	**87.93**	**180**		P		**P**	**11 32 31.2**	**+0.8**
DOU	**Dourbes**	**87.98**	**40**	*d*	P		**P**	**11 32 33.2**	**+2.4**
DOU				*d*	pP		**pP**	**11 32 54.4**	**+0.7**
FALS	**False Pass**	**88.09**	**325**		P		**P**	**11 32 31.9**	**+0.8**
FALS	**False Pass**	**88.09**	**325**		P			11 32 31.9	
	baz=96								
NOR	**Nord**	**88.28**	**8**	*i*	P		**P**	**11 32 32.4**	**+0.7**
NOR					IAmb		IAmb	11 32 33.5	
	comp=Z,2.3nm,1.0s								
NOR				*i*				11 32 54.1	
NOR	**Nord**	**88.28**	**8**	*i*	P		**P**	**11 32 32.3**	**+0.7**
NOR				*i*				11 32 54.1	
NOR					pmax		pmax		
	comp=Z,2.0nm,1.0s								
BGES	**Gesves**	**88.32**	**40**	*d*	pP		pP	11 32 55.7	+0.5
NVL	**N'lazarevskaya**	**88.52**	**161**	*e*	P		**P**	**11 32 28.9**	**-4.0**
NVL					pmax		pmax		
	comp=Z,33nm,1.0s								
RDOG	**Red Dog Mine**	**89.41**	**338**		P		**P**	**11 32 38.4**	**+1.3**
RDOG	**Red Dog Mine**	**89.41**	**338**		P			11 32 38.3	
	baz=97								
ECH	**Echery**	**89.50**	**42**		P		**P**	**11 32 38.0**	**0.0**
ECH					pmax		pmax		
	comp=Z,9.0nm,0.9s								
ECH	**Echery**	**89.50**	**42**		P		**P**	**11 32 38.0**	**0.0**
ANM	**Nome**	**90.03**	**334**		P		**P**	**11 32 40.7**	**+0.6**
ANM					pmax		pmax		
	comp=Z,19nm,1.0s								
ANM	**Nome**	**90.03**	**334**		P		**P**	**11 32 40.7**	**+0.6**
ANM					IAmb		IAmb	11 32 42.3	
	comp=Z,19nm,1.0s								
ANM	**Nome**	**90.03**	**334**		P			11 32 41.3	
	baz=95,SNR=8.3								
KEST	**Kesra**	**90.48**	**54**		LR		LR	12 10 37.5	
	comp=Z,92nm,21.6s,baz=192,slow=34								
SBA	**Scott Base**	**92.77**	**191**		P		**P**	**11 32 53.7**	**+1.2**
SBA					pmax		pmax		
	comp=Z,23nm,1.2s								
SBA	**Scott Base**	**92.77**	**191**		P		**P**	**11 32 53.7**	**+1.2**
SBA					IAmb		IAmb	11 32 55.4	
	comp=Z,23nm,1.2s								
CLL	**Collm**	**93.37**	**39**	*e*	(P)		**P**	**11 33 00.0**	**+4.2**
CLL				*i*	pP		**pP**	**11 33 21.3**	**+2.5**
CLL				*e*	sP		**sP**	**11 33 30.0**	**+2.1**
CLL				*e*	SKSac		**SKSac**	**11 43 25.0**	**+2.5**
CLL				*e*	S		**S**	**11 43 54.0**	**-2.5**
CLL				*e*	SP		**SP**	**11 45 05.0**	**-4.5**
CLL				*e*	pSP			11 45 39.0	
CLL				*e*				11 46 42.0	
CLL				*e*	SS		**SS**	**11 50 06.0**	**-8.5**
CLL	**Collm**	**93.37**	**39**	*e*	P		**P**	**11 33 00.0**	**+4.2**
CLL				*i*	*PP		**pP**	**11 33 21.3**	**+2.5**
CLL				*e*				11 43 25.0	
CLL				*e*	S		**S**	**11 43 54.0**	**-2.5**
VNDA	**Vanda**	**93.86**	**191**		P		**P**	**11 32 58.9**	**+1.3**
	comp=Z,4.1nm,1.0s,baz=122,slow=5.6,SNR=18								
VNDA					LR		LR	12 11 39.9	
	comp=Z,63nm,19.3s,baz=116,slow=33								
VNDA	**Vanda**	**93.86**	**191**		P		**P**	**11 32 58.1**	**+0.5**
VNDA					pmax		pmax		
	comp=Z,20nm,1.5s								
VNDA	**Vanda**	**93.86**	**191**		P		**P**	**11 32 58.1**	**+0.5**
VNDA					IAmb		IAmb	11 33 00.3	
	comp=Z,20nm,1.4s								
GERES	**GERESS Array B**	**93.86**	**41**		P		**P**	**11 32 58.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=249,slow=6.0,SNR=1.7								
BRG	**Berggiesshubel**	**93.97**	**39**	*e*	P		P	11 33 03.7	+5.1
BRG					Amp			11 33 08.4	
	comp=Z,13nm,1.3s								
KRUC	**Moravsky**	**95.63**	**41**	*e*	P		**P**	**11 33 10.1**	**+3.9**
KRUC				*e*				11 33 29.9	
VRAC	**Vranov**	**95.74**	**41**	*e*	P		**P**	**11 33 08.4**	**+1.6**
TSUM	**Tsumeb**	**96.21**	**109**		P		**P**	**11 33 09.4**	**-0.3**
TSUM					pP		**pP**	**11 33 32.1**	**-0.6**
ARCES	**ARCESS Array B**	**97.30**	**20**		PKKPbc		PKKPbc	11 49 51.6	-3.1
	comp=Z,3.6nm,1.0s,baz=130,slow=2.8,SNR=5.4								
ARCES					LR		LR	12 13 56.3	
	comp=Z,51nm,21.4s,baz=255,slow=33								
FINES	**FINESS Array B**	**99.40**	**28**		P		**Pdif**	**11 33 22.8**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=273,slow=2.4,SNR=2.0								
FINES					LR		LR	12 13 42.0	
	comp=Z,124nm,21.6s,baz=252,slow=33								
BILL	**Bilibino**	**100.79**	**340**	⇓	*i* P		**Pdif**	**11 33 29.0**	**0.0**
BILL					pmax		pmax		
	comp=Z,3.0nm,0.8s								
NACGM	**Naroch**	**101.20**	**34**	*i*	P		**Pdif**	**11 33 20.0**	**-11**
NACGM				*i*	P		**Pdif**	**11 33 20.0**	**-11**
NACGM				*i*	P		**Pdif**	**11 33 20.0**	**-11**
NACGM				*i*	pP		**pPdif**	**11 33 46.5**	**-7.6**
NACGM				*i*	sP		**sPdif**	**11 34 03.9**	**+0.7**
NACGM				*i*	PP		**PKiKP**	**11 37 48.4**	**-7.0**
NACGM				*i*	PPP		PPP	11 39 49.3	
NACGM				*i*	SKS			11 42 58.2	
NACGM				*i*	S		SKSac	11 43 50.2	-12
NACGM				*i*	SSS		SSS	11 55 43.2	
BOSA	**Boshof**	**102.10**	**120**		PKKPbc		PKKPbc	11 49 40.1	+0.3
	comp=Z,1.3nm,0.7s,baz=97,slow=4.4,SNR=4.3								
OBN	**Obninsk**	**106.54**	**32**	*i*	P		**Pdif**	**11 33 53.0**	**-1.8**
OBN					pmax		pmax		
	comp=Z,3.0nm,0.9s								
SEY	**Seymchan**	**108.28**	**338**		PKKPbc		PKKPbc	11 49 20.4	-1.7
	comp=Z,0.2nm,0.3s,baz=236,slow=8.5,SNR=3.7								
DZM	**Mont Dzumac**	**111.14**	**245**	*e*	PS		PS	11 48 24.3	-3.6
	comp=Z,80nm,23.4s								
DZM	**Mont Dzumac**	**111.14**	**245**	*e*	LR		LR	12 11 21.5	
	comp=Z,182nm,26.0s								
NRIK	**Noril'sk**	**112.37**	**5**		PKKPab		PKKPab	11 49 15.1	-0.4
	comp=Z,2.8nm,0.8s,baz=177,slow=4.6,SNR=4.9								

SOC	**Sochi**	**112.49**	**43**	*i*	PKIKP		**PKiKP**	**11 38 19.6**	**+2.8**
SOC				*e*	PPP		PPP	11 41 24.1	
SOC				*e*				11 45 14.2	
SOC				*e*	PS		**PS**	**11 48 37.0**	**-2.3**
SOC				*e*	SS		SS	11 54 54.1	+16
SOC				*e*	SSS		SSS	11 58 52.3	
SOC					MLR		MLR		
	comp=Z,35nm,17.0s								
KIV	**Kislovodsk**	**114.36**	**42**	*i*	PKIKP		PKPdf	11 38 18.2	-2.3
KIV					pmax		pmax		
	comp=Z,12nm,1.0s								
KBZ	**Khabaz**	**114.59**	**42**		PKP		PKPdf	11 38 21.3	+0.6
	comp=Z,2.9nm,0.8s,baz=266,slow=1.2,SNR=8.5								
KBZ					PKKPab		**PKKPab**	**11 49 07.1**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=123,slow=2.4,SNR=7.1								
KBZ	**Khabaz**	**114.59**	**42**	*c*	*i* PKIKP		**PKiKP**	**11 38 20.5**	**-0.3**
ARU	**Arti**	**116.44**	**24**	*i*	PKIKP		**PKPdf**	**11 38 21.1**	**-2.9**
ARU								11 39 27.6	
ARU								11 45 26.8	
ARU					SS		SS	11 55 28.6	-0.1
ABKAR	**Akbulak array**	**121.81**	**30**		PKPdf		**PKiKP**	**11 38 35.1**	**+0.5**
ABKAR	**Akbulak array**	**121.81**	**30**		PKPdf		**PKPdf**	**11 38 34.5**	**0.0**
RAYN	**Ar Rayn**	**122.95**	**63**		PKIKP		**PKiKP**	**11 38 37.9**	**+0.1**
RAYN	**Ar Rayn**	**122.95**	**63**		PKPdf		**PKiKP**	**11 38 37.9**	**+0.1**
BRVK	**Borovoye**	**123.50**	**21**	*c*	*i* PKIKP		**PKPdf**	**11 38 37.0**	**-0.7**
BRVK					pmax		pmax		
	comp=Z,3.0nm,1.7s								
BVAR	**Borovoye Array**	**123.57**	**21**		PKKPab		PKKPab	11 48 26.6	0.0
	comp=Z,0.4nm,0.5s,baz=158,slow=9.2,SNR=3.6								
JKA	**Kamikawa-asahi**	**123.90**	**324**				**PKPdf**	**11 38 38.7**	**0.0**
ASAJ	**Asahikawa**	**123.90**	**324**		PKP		**PKPdf**	**11 38 38.6**	**-0.1**
	comp=Z,6.9nm,0.9s,baz=315,slow=3.8,SNR=4.4								
KLR	**Kul'dur**	**125.92**	**335**		PKP		**PKPdf**	**11 38 41.9**	**-0.5**
	comp=Z,4.5nm,0.7s,baz=82,slow=2.2,SNR=10								
KLR					pPKP		**pPKPdf**	**11 39 05.3**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=64,slow=2.7,SNR=4.2								
ZAA0	**Zalesovo Array**	**126.81**	**11**		PKPdf		**PKPdf**	**11 38 43.9**	**0.0**
ZAA0					pPKPdf		**pPKPdf**	**11 39 06.6**	**-1.2**
ZALV	**Zalesovo Beam**	**126.81**	**11**		PKP		**PKPdf**	**11 38 43.9**	**0.0**
	comp=Z,11nm,0.6s,baz=285,slow=2.3,SNR=42								
ZALV					pPKP		**pPKPdf**	**11 39 06.6**	**-1.2**
	comp=Z,4.6nm,0.7s,baz=321,slow=1.9,SNR=5.1								
ZALV	**Zalesovo Beam**	**126.81**	**11**				**PKPdf**	**11 38 43.2**	**-0.7**
ZALV					pPKPdf		**pPKPdf**	**11 39 07.0**	**-0.8**
GEYT	**Alibeck**	**127.48**	**42**		PKP		**PKiKP**	**11 38 46.7**	**+0.4**
	comp=Z,7.7nm,0.7s,baz=289,slow=4.5,SNR=9.3								
GEYT	**Alibeck**	**127.48**	**42**				**PKiKP**	**11 38 46.4**	**+0.1**
STKA	**Stephens Creek**	**128.24**	**226**		PKP		**PKPdf**	**11 38 47.4**	**0.0**
	comp=Z,5.2nm,0.8s,baz=46,slow=0.5,SNR=12								
STKA	**Stephens Creek**	**128.24**	**226**				**PKPdf**	**11 38 47.1**	**-0.3**
USRK	**Ussuriysk Ar.**	**129.57**	**331**		PKP		**PKPdf**	**11 38 49.5**	**0.0**
	comp=Z,7.3nm,0.9s,baz=13,slow=1.2,SNR=9.4								
USRK	**Ussuriysk Ar.**	**129.57**	**331**				**PKPdf**	**11 38 49.3**	**-0.2**
JSD	**Sado**	**130.13**	**321**				**PKPdf**	**11 38 50.5**	**-0.3**
MAJO	**Matsushiro**	**131.04**	**319**		PKPdf		**PKPdf**	**11 38 51.9**	**-0.6**
MAJO					pPKPdf		**pPKPdf**	**11 39 15.4**	**-1.0**
MAT	**Matsushiro**	**131.04**	**319**		PKP		**PKPdf**	**11 38 52.2**	**-0.4**
MJAR	**Matsushiro Arr**	**131.04**	**319**		PKP		**PKPdf**	**11 38 52.5**	**-0.1**
	comp=Z,4.7nm,0.8s,baz=74,slow=0.8,SNR=15								
MJAR					pPKP		**pPKPdf**	**11 39 15.8**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=43,slow=1.4,SNR=2.1								
MJAR					SKPbc		**SKPbc**	**11 42 08.4**	**-1.3**
	comp=Z,4.1nm,1.1s,baz=45,slow=2.2,SNR=7.6								
MJAR	**Matsushiro Arr**	**131.04**	**319**				**PKPdf**	**11 38 52.3**	**-0.2**
KKAR	**Karatay Array**	**131.35**	**29**		PKIKP		**PKPdf**	**11 38 52.7**	**-0.3**
KKAR	**Karatay Array**	**131.35**	**29**				**PKPdf**	**11 38 52.7**	**-0.3**
DGZ	**Jazzator, Alta**	**131.36**	**11**	⇑	*i* PKIKP		**PKiKP**	**11 38 53.9**	**0.0**
ZAK	**Zakamensk**	**131.86**	**357**	*e*	PKIKP		**PKPdf**	**11 38 53.8**	**0.0**
ZAK					pmax		pmax		
	comp=Z,5.0nm,1.6s								
MAKZ	**Makanchi**	**132.74**	**17**		PKPdf		**PKPdf**	**11 38 55.2**	**-0.3**
MAKZ					pPKPdf		**pPKPdf**	**11 39 18.0**	**-1.4**
MK31	**Makanchi Array**	**132.84**	**17**		PKIKP		**PKPdf**	**11 38 55.5**	**-0.2**
MK31								11 39 18.3	
MK31	**Makanchi Array**	**132.84**	**17**		PKPdf		**PKPdf**	**11 38 55.5**	**-0.2**
MK31					pPKPdf		**pPKPdf**	**11 39 18.3**	**-1.2**
MKAR	**Makanchi Array**	**132.84**	**17**		PKP		**PKPdf**	**11 38 55.6**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=352,slow=2.5,SNR=26								
MKAR	**Makanchi Array**	**132.84**	**17**				**PKPdf**	**11 38 55.5**	**-0.2**
MKAR					pPKPdf		**pPKPdf**	**11 39 18.2**	**-1.4**
CN2	**Changchun**	**132.87**	**335**	*e*	PKP		**PKPdf**	**11 38 55.5**	**-0.3**
AAK	**Ala-Archa**	**133.56**	**26**		PKP		**PKiKP**	**11 38 58.0**	**-0.6**
	comp=Z,4.5nm,0.7s,baz=239,slow=2.3								
AAK	**Ala-Archa**	**133.56**	**26**	*c*	*i* PKIKP		**PKiKP**	**11 38 58.5**	**-0.1**
AAK					pmax		pmax		
	comp=Z,53nm,1.7s								
AAK	**Ala-Archa**	**133.56**	**26**				**PKPdf**	**11 38 57.4**	**0.0**
AAK					pPKPdf		**pPKPdf**	**11 39 21.9**	**+0.6**
ULN	**Ulaanbaatar**	**134.07**	**354**	*c*	*i* PKIKP		**PKiKP**	**11 38 58.9**	**-0.6**
ULN					pmax		pmax		
	comp=Z,17nm,2.5s								
SONM	**Songino Array**	**134.17**	**354**		PKP		**PKPdf**	**11 38 58.6**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=338,slow=1.3,SNR=12								
SONM					PP		**PP**	**11 41 26.6**	**-2.4**
	comp=Z,0.3nm,0.4s,baz=30,slow=5.6,SNR=2.6								
SONM	**Songino Array**	**134.17**	**354**		PKPdf		**PKPdf**	**11 38 58.0**	**-0.3**
SONM					pPKPdf		**pPKPdf**	**11 39 21.9**	**-0.2**
KDJ	**Kajisay**	**135.12**	**24**		PKIKP		**PKPdf**	**11 39 01.0**	**+0.7**
KDJ	**Kajisay**	**135.12**	**24**				**PKPdf**	**11 39 01.0**	**+0.7**
KBL	**Kabul**	**136.58**	**39**		PKIKP		**PKiKP**	**11 39 04.2**	**-0.9**
KBL	**Kabul**	**136.58**	**39**		PKPdf		**PKiKP**	**11 39 04.2**	**-0.9**
KS19	**Wonju Array Si**	**136.62**	**328**				**PKPdf**	**11 39 03.3**	**+0.3**
KSRS	**Korea Array**	**136.62**	**327**		PKhKP		PKPpre	11 38 50.2	
	comp=Z,1.1nm,0.7s,baz=45,slow=1.1,SNR=5.5								
KSRS					PKP		**PKPdf**	**11 39 03.2**	**+0.3**
	comp=Z,12nm,0.9s,baz=28,slow=1.0,SNR=31								
KSRS					pPKP		pPKPdf	11 39 25.9	-0.9
	comp=Z,4.4nm,0.9s,baz=66,slow=0.5,SNR=3.1								
KSAR	**Wonju Array Be**	**136.65**	**327**		PKIKP		**PKPdf**	**11 39 03.1**	**+0.1**
KSAR	**Wonju Array Be**	**136.65**	**327**				**PKPdf**	**11 39 03.1**	**+0.1**
KSH	**Kashi**	**136.72**	**28**		PKP		**PKiKP**	**11 39 06.5**	**+1.4**
WMQ	**Urumqi**	**137.01**	**13**	*e*	PKP		**PKPdf**	**11 39 03.0**	**-0.6**
WMQ					AMB		AMB		
	comp=Z,75nm,4.9s								
ASAR	**Alice Springs**	**138.42**	**230**		PKhKP		PKPpre	11 38 54.3	
	comp=Z,2.4nm,0.6s,baz=118,slow=3.5,SNR=13								
ASAR					PP		**PP**	**11 41 56.7**	**-0.2**
	comp=Z,1.1nm,1.1s,baz=123,slow=6.8,SNR=4.1								
ASAR	**Alice Springs**	**138.42**	**230**		PKIKP		**PKPdf**	**11 39 06.8**	**0.0**
ASAR	**Alice Springs**	**138.42**	**230**		PKPdf		**PKPdf**	**11 39 06.8**	**0.0**
BJI	**Beijing**	**139.60**	**341**		PKP		**PKPdf**	**11 39 09.0**	**+0.6**
WRAB	**Tennant Creek**	**140.01**	**235**	*c*	*i* PKIKP		**PKPdf**	**11 39 10.2**	**+0.5**
WRAB					pmax		pmax		
	comp=Z,10.0nm,0.8s								
WRA	**Warramunga Arr**	**140.01**	**235**		PKhKP		PKPpre	11 39 00.8	
	comp=Z,5.9nm,0.7s,baz=122,slow=2.4,SNR=44								
WRA					PP		**PP**	**11 42 05.8**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=118,slow=5.6,SNR=4.5								
WRA	**Warramunga Arr**	**140.01**	**235**		PKIKP		**PKPdf**	**11 39 08.6**	**-1.1**
WRA								11 42 05.8	
WRA	**Warramunga Arr**	**140.01**	**235**		PKPdf		**PKPdf**	**11 39 08.6**	**-1.1**
WB0	**Warramunga Arr**	**140.05**	**235**		PKPdf		**PKPdf**	**11 39 10.0**	**+0.2**
HHC	**Hu-ho-hao-te**	**140.13**	**347**	*e*	PKP		**PKPdf**	**11 39 09.5**	**0.0**
TIA	**Tai'an**	**142.68**	**337**		PKP		**PKPdf**	**11 39 11.0**	**-3.1**
GTA	**Gaotai**	**142.90**	**1**		PKP		**PKPdf**	**11 39 12.0**	**-2.5**
GTA					PKP		pPKPdf	11 39 39.3	+0.9
GTA					sPKP			11 39 51.5	
GTA					PP		**PP**	**11 42 23.3**	**+0.4**
GTA					AMB		AMB		
	comp=Z,52nm,4.8s								
GTA					LR		LR		
	comp=Z,92nm,22.2s								
GTA					LR		LR		
	comp=Z,100nm,18.9s								
GTA					LR		LR		
	comp=Z,130nm,24.8s								
NJ2	**Nanjing**	**145.47**	**331**	*e*	PKPbc		**PKPdf**	**11 39 18.8**	**-0.2**
MORW	**Morawa**	**145.49**	**205**				**PKPdf**	**11 39 19.1**	**-0.1**
MTN	**Manton Dam**	**145.94**	**243**		PKPbc		**PKPbc**	**11 39 20.8**	**-0.3**
LZH	**Lanzhou**	**146.06**	**355**	*e*	PKPbc		**PKPab**	**11 39 21.5**	**-0.2**
LZH					PKPab		**PKiKP**	**11 39 26.5**	**+2.1**
LZH					pPKP		pPKPbc	11 39 44.8	+0.2
LZH					sPKP			11 39 55.8	
LZH					LR		LR		
	comp=Z,200nm,19.5s								
LZH					LR		LR		
	comp=Z,110nm,20.1s								
KNRA	**Kununurra**	**146.72**	**237**		PKPbc		**PKPbc**	**11 39 23.4**	**0.0**
XAN	**Xi'an**	**147.25**	**347**		PKPbc		**PKPdf**	**11 39 22.8**	**+0.7**
XAN					pPKP		pPKPdf	11 39 47.0	+1.0
XAN					sPKP			11 39 56.0	
XAN					AMB		AMB		
	comp=Z,140nm,6.0s								
FAKI	**Fak Fak**	**147.64**	**261**				**PKPbc**	**11 39 25.9**	**-0.1**

FITZ	**Fitzroy Crossi**	**147.93**	**230**		PKPbc		**PKPbc**	**11 39 26.1**	**-0.4**
	comp=Z,41nm,0.9s,baz=182,slow=2.1,SNR=32								
FITZ	**Fitzroy Crossi**	**147.93**	**230**		PKPbc		**PKPbc**	**11 39 27.4**	**+0.8**
FITZ					PKPab		**PKPab**	**11 39 31.2**	**+1.9**
WHN	**Wuhan**	**148.75**	**336**	⇓	PKPbc		**PKPbc**	**11 39 28.0**	**-0.4**
WHN					PKPab		**PKPab**	**11 39 37.8**	**+5.5**
WHN					pPKP		**pPKPbc**	**11 39 51.0**	**-1.1**
WHN					sPKP			11 40 02.0	
SIJI	**Sorong**	**148.86**	**265**		PKPbc		**PKPbc**	**11 39 29.4**	**+0.2**
	comp=Z,28nm,0.6s,baz=79,slow=6.8,SNR=15								
POO	**Poona**	**149.41**	**56**	*eP*			**PKPdf**	**11 39 28.0**	**+2.0**
PSA00	**Pilbara Seismi**	**149.64**	**218**				**PKPbc**	**11 39 30.6**	**-0.3**
PSA00					PKPab		**PKPab**	**11 39 37.0**	**+0.8**
SSLB	**Suanglung**	**150.60**	**319**		PKPdf		**PKPdf**	**11 39 27.6**	**-0.1**
SSLB					PKPbc		**PKPbc**	**11 39 33.2**	**0.0**
ENH	**Enshi**	**150.68**	**344**				**PKPdf**	**11 39 27.0**	**-0.7**
ENH					PKPbc		**PKPbc**	**11 39 33.0**	**-0.2**
TPUB	**Ta-pu**	**151.15**	**318**				**PKPbc**	**11 39 32.9**	**-1.6**
CD2	**Chengdu**	**151.19**	**354**		PKPbc		**PKPdf**	**11 39 26.5**	**-2.0**
LSA	**Lhasa**	**151.25**	**17**		PKPbc		**PKPdf**	**11 39 30.5**	**+1.4**
SOEI	**Soe**	**153.34**	**243**		PKPbc		**PKPbc**	**11 39 39.6**	**-0.2**
SOEI					PKPab		**PKPab**	**11 39 53.4**	**+1.4**
BATI	**Baumata**	**153.68**	**242**		PKPab		**PKPab**	**11 39 53.6**	**+0.3**
	comp=Z,39nm,0.8s,baz=108,slow=3.2,SNR=4.9								
GYA	**Guiyang**	**155.05**	**346**		P		PKPdf	11 39 43.0	+8.7
GYA					pmax		pmax		
	comp=Z,2.0nm,1.1s								
KMI	**Kunming**	**157.02**	**354**	⇑	PKP		**PKPdf**	**11 39 37.5**	**+0.5**
KMI					pPKP		pPKPdf	11 40 04.3	+3.3
KMI					sPKP			11 40 15.0	
KMI					LR		LR		
	comp=Z,160nm,37.0s								
PALK	**Pallekele**	**159.85**	**75**		PKP		**PKPdf**	**11 39 40.6**	**+0.1**
	comp=Z,7.4nm,1.0s,baz=16,slow=5.7,SNR=5.4								
PALK	**Pallekele**	**159.85**	**75**				**PKPdf**	**11 39 40.5**	**0.0**
QIZ	**Qiongzhong**	**160.77**	**331**		PKP		**PKPdf**	**11 39 38.3**	**-3.0**
QIZ					PP		**PP**	**11 44 04.5**	**-0.7**
QIZ					SS		SS	12 04 14.3	+3.2
QIZ					LR		LR		
	comp=Z,100nm,22.6s								
QIZ					LR		LR		
	comp=Z,84nm,21.6s								
QIZ					LR		LR		
	comp=Z,110nm,27.5s				

KSM				IAmb	IAmb	11 56 01.6	
	comp=Z,8.5nm,1.1s						
TXAR	**Lajitas Array**	**86.72**	**57**	P	**P**	**11 57 10.1**	**+2.0**
	comp=Z,0.1nm,0.5s,baz=246,slow=5.8,SNR=2.1						
TXAR	**Lajitas Array**	**86.72**	**57**	P	**P**	**11 57 09.4**	**+1.3**
SNAA	**Sanae**	**88.10**	**178**	P	**P**	**11 57 14.1**	**+0.3**
ILAR	**Eielson Array**	**88.14**	**13**	P	**P**	**11 57 13.1**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=220,slow=6.0,SNR=4.6						
ILAR	**Eielson Array**	**88.14**	**13**	P	**P**	**11 57 14.1**	**+0.3**
VNA3	**Neumayer Olymp**	**88.22**	**176**	P	**P**	**11 57 15.0**	**+0.6**
VNA2	**Neumayer--Watz**	**88.66**	**177**	P	**P**	**11 57 17.2**	**+0.9**
	baz=194,slow=3.6						
VNA1	**Neumayer--Stat**	**88.89**	**176**	P	**P**	**11 57 18.2**	**+0.9**
CMAR	**Chiang Mai Arr**	**90.40**	**289**	P	**P**	**11 57 25.3**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=126,slow=3.0,SNR=14						
MKAR	**Makanchi Array**	**111.38**	**313**	PKiKP	**PKiKP**	**12 02 52.7**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=80,slow=0.7,SNR=7.6						
ARCES	**ARCESS Array B**	**128.89**	**350**	PKP	**PKPdf**	**12 03 26.9**	**0.0**
	comp=Z,3.1nm,1.1s,baz=48,slow=2.7,SNR=1.4						
ARCES	**ARCESS Array B**	**128.89**	**350**	PKPdf	**PKPdf**	**12 03 25.7**	**-1.3**
AKASG	**Malin Array Be**	**143.09**	**331**	PKhKP	PKPpre	12 03 50.5	
	comp=Z,2.4nm,0.4s,baz=41,slow=4.3,SNR=9.3						
MBAR	**Mbarara**	**145.25**	**236**	PKPbc	**PKPab**	**12 04 00.8**	**+0.1**
	comp=Z,3.1nm,0.2s,baz=115,slow=19,SNR=5.1						
BRTR	**Keskin Array B**	**147.02**	**313**	PKPbc	**PKPbc**	**12 04 03.7**	**-0.2**
	comp=Z,2.4nm,0.5s,baz=131,slow=4.2,SNR=8.3						
BUR08	**Bucovina Ar. S**	**147.13**	**331**		**PKPbc**	**12 04 04.5**	**+0.6**
BURAR	**Bucovina Array**	**147.14**	**331**		**PKPbc**	**12 04 04.2**	**+0.3**
CLL	**Collm**	**148.04**	**347**	*i* PKPbc	**PKPbc**	**12 04 06.2**	**+0.2**
	comp=Z,9.0nm,0.8s						
CLL				*e*PKPab	**PKPab**	**12 04 10.0**	**-0.5**
CLL	**Collm**	**148.04**	**347**		**PKPbc**	**12 04 06.4**	**+0.5**
GERES	**GERESS Array B**	**150.20**	**345**	PKPbc	**PKPbc**	**12 04 11.5**	**0.0**
	comp=Z,1.7nm,0.7s,baz=48,slow=2.0,SNR=8.3						
GERES	**GERESS Array B**	**150.20**	**345**		**PKPbc**	**12 04 11.1**	**-0.3**

KRSC 28 11:45:26.8±1.7, 52°.02N×170°.75E, h16km±38km, ML3.7, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**4.27**	**320**	*e*P	Pn	11 46 34.2	+3.1
BKI				*e*S	Sn	11 47 25.6	+5.0
MKZ	**Mys Kozlova**	**5.98**	**299**	*e*P	Pn	11 46 58.4	+3.9
MKZ				*e*S	Sn	11 48 07.1	+4.5
KBTR	**Krutoberegovo**	**6.27**	**315**	*e*P	Pn	11 47 01.8	+3.2
SPN	**Mys Shipunski**	**6.63**	**284**	*e*P	Pn	11 47 07.6	+4.1
SPN				*e*S	Sn	11 48 23.4	+4.7
TUMD	**Tumrok D**	**6.93**	**301**	*e*P	Pn	11 47 12.2	+4.5
KZV	**Kizimen**	**6.96**	**301**	*e*P	Pn	11 47 12.7	+4.6
KZV				*e*S	Sn	11 48 32.7	+5.8
TUMR	**Tumrok**	**7.10**	**302**	*e*P	Pn	11 47 14.8	+4.8
KMNR	**Kamenistaya**	**7.25**	**305**	*e*P	Pn	11 47 17.1	+5.0
SRKR	**Sorokina**	**7.27**	**313**	*e*P	Pn	11 47 18.4	+6.0
SDLR	**Sedlovina**	**7.33**	**285**	*e*P	Pn	11 47 18.1	+4.9
SMAR	**Somma**	**7.38**	**284**	*e*P	Pn	11 47 19.2	+5.2
DALK	**Dalny**	**7.39**	**283**	*e*P	Pn	11 47 18.7	+4.8
KRER	**Koryakskii**	**7.41**	**285**	*e*P	Pn	11 47 19.4	+5.0
AVH	**Avacha**	**7.42**	**284**	*e*P	Pn	11 47 19.4	+5.0
KOK	**Koryaka**	**7.48**	**285**	*e*P	Pn	11 47 20.4	+5.1
RUS	**Russkaya**	**7.53**	**278**	*e*P	Pn	11 47 20.3	+4.5
MTVR	**Mutnovka**	**7.73**	**278**	*e*P	Pn	11 47 23.5	+4.8
MTVR				*e*S	Sn	11 48 50.2	+4.2
KRMR	**Karymshinskiy**	**7.76**	**281**	*e*P	Pn	11 47 23.2	+4.2
GRL	**Gorelyy**	**7.80**	**279**	*e*P	Pn	11 47 25.5	+5.9
GNL	**Ganaly**	**7.94**	**287**	*e*P	Pn	11 47 27.0	+5.5
ALID	**Alaid**	**9.57**	**269**	*e*P	Pn	11 47 48.1	+4.2

IDC 28 11:54:55.0±1.8, 28°.03N×84°.64E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/33, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=96.5km s-min=23.9km az=61.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.82**	**355**	P	P	11 59 16.2	-0.1
	0.2nm,0.3s,baz=175,slow=12,SNR=8.9						
ZALV	**Zalesovo Beam**	**25.89**	**0**	P	P	12 00 28.5	0.0
	0.6nm,0.3s,baz=183,slow=8.7,SNR=2.3						
FINES	**FINESS Array B**	**50.84**	**328**	P	P	12 03 57.0	-0.2
	0.5nm,0.3s,baz=113,slow=11,SNR=4.1						
ARCES	**ARCESS Array B**	**53.34**	**338**	P	P	12 04 15.7	0.0
	1.9nm,0.9s,baz=96,slow=7.3,SNR=1.8						
WRA	**Warramunga Arr**	**67.70**	**129**	P	P	12 05 54.5	0.0
	0.3nm,0.7s,baz=324,slow=6.2,SNR=1.4						
ASAR	**Alice Springs**	**69.98**	**132**	P	P	12 06 08.7	0.0
	0.6nm,1.1s,baz=315,slow=6.1,SNR=2.3						

*FUNV **28** 12:21:31.7, 10°.56N×70°.64W, h6km, MW3.4*
ISC 28 12:21:30.3±1.3, 10°.58N±0°.03×70°.62W±0°.03, h6km±11km, n13, σ0°.92/25, 1C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DABV	**Dabajuro**	**0.34**	**358**	*e*P	**Pb**	**12 21 39.6**	**+0.8**
DABV				*e*S	**Sb**	**12 21 44.1**	**-0.3**
SIQV	**Siquisique**	**0.80**	**85**	*e*P	**Pb**	**12 21 46.5**	**+0.3**
SIQV				*e*S	**Sn**	**12 21 59.0**	**-1.6**
CURV	**Curarigua**	**0.86**	**131**	*e*P	**Pg**	**12 21 46.0**	**-0.9**
CURV				*e*S	**Sb**	**12 22 00.2**	**+0.7**
MONV	**Montecano**	**1.51**	**25**	*e*P	**Pg**	**12 21 59.1**	**-0.2**
MONV				*e*S	**Sg**	**12 22 18.9**	**0.0**
SANV	**Sanarito**	**1.52**	**135**	*e*P	**Pg**	**12 21 59.4**	**-0.1**
SANV				*e*S	**Sg**	**12 22 19.2**	**0.0**
TEPV	**Terepaima**	**1.54**	**113**	*e*P	**Pg**	**12 21 59.5**	**-0.3**
TEPV				*e*S	**Sg**	**12 22 20.0**	**+0.2**
SDV	**Santo Domingo**	**1.68**	**180**	*i* P	**Pg**	**12 22 02.7**	**0.0**
SDV				*e*S	**Sb**	**12 22 23.2**	**-0.2**
SDV				*i*		12 22 25.5	
	comp=Z,36nm,0.7s						
SDV	**Santo Domingo**	**1.68**	**180**	*e*P	**Pb**	**12 22 01.2**	**-0.6**
SDV				*e*S	**Sn**	**12 22 22.8**	**+0.3**
CRJC	**Cerrejon, Guaj**	**2.26**	**281**	*e*P	**Pb**	**12 22 10.9**	**-0.7**
CRJC				*e*S	**Sb**	**12 22 38.4**	**-1.5**
CRJC				*i*		12 22 45.0	
	comp=Z,41nm,0.5s						
TURV	**Turiamo**	**2.74**	**92**	*e*P	**Pn**	**12 22 15.6**	**+0.8**
BAUV	**El Baul**	**3.02**	**122**	*e*P	**Pn**	**12 22 19.5**	**+0.8**
BAUV				*e*S	**Sn**	**12 22 54.6**	**-0.6**
PAMC	**Pamplona, Colo**	**3.82**	**213**	*i* P	**Pn**	**12 22 31.8**	**+1.7**
PAMC				*e*S	**Sn**	**12 23 15.5**	**-0.1**
PAMC				*i*		12 23 20.3	
	comp=Z,8.1nm,0.3s						
SMLC	**San Martn de**	**3.83**	**243**	*e*P	**Pn**	**12 22 31.5**	**+1.7**
SMLC				*e*S	**Sn**	**12 23 13.7**	**-1.5**

*SEA **28** 12:30:07.1±1.1, 45°.64N±0°.02×122°.77W±0°.04, h19km±2km, Md1.7/13, ML1.9/12(NEIC), Error ellipse: s-maj=4.2km s-min=2.7km az=102.0*
NEIC 28 12:30:06.1±2.1, 45°.66N±0°.03×122°.76W±0°.05, h19km±5km, Error ellipse: s-maj=5.0km s-min=4.2km az=99.0, Washington-Oregon border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUBA	**Hudson Bay Hig**	**0.08**	**110**		Pg	12 30 13.1	+3.3
WPO	**West Portland**	**0.09**	**194**		Sg	12 30 10.3	+0.4
WPO					Sg	12 30 12.4	-0.1
KEEL	**Keeler**	**0.14**	**221**		Sg	12 30 14.0	+0.7
F04D	**Rainier, OR**	**0.46**	**338**		Pb	12 30 16.2	+0.6
LVP	**Lakeview Peak**	**0.48**	**31**		Pb	12 30 16.4	+0.3
RVW	**Rose Valley**	**0.49**	**1**		Pb	12 30 16.5	+0.3
RVW					Sb	12 30 23.8	+0.8
G04A	**Mulino**	**0.49**	**156**		Pg	12 30 16.1	0.0
G04A					Sb	12 30 23.4	+0.4
B023	**Clatskanie**	**0.51**	**334**		Pg	12 30 16.7	+0.3
B023					Sb	12 30 24.2	+1.0
KMOR	**Kings Mountain**	**0.51**	**268**		Pb	12 30 16.5	0.0
KMOR					Sb	12 30 23.9	+0.4
MTMW	**Mount Mitchell**	**0.53**	**46**		Pg	12 30 17.1	+0.2
G03D	**McMinnville, O**	**0.57**	**219**		Pb	12 30 17.4	0.0
B203	**Quarry, Mount**	**0.59**	**30**		Pg	12 30 18.3	+0.3
FL2	**Flat Top 2**	**0.61**	**28**		Pg	12 30 18.6	+0.3
SWF2	**Southwest Flan**	**0.64**	**36**		Pg	12 30 19.4	+0.4
JLK	**June Lake**	**0.65**	**41**		Pg	12 30 19.1	+0.1
SHW	**Mount Saint He**	**0.65**	**34**		Pg	12 30 19.6	+0.6
HSR	**South Ridge**	**0.65**	**38**		Pg	12 30 19.6	+0.5
CDFW	**Cedar Flats**	**0.68**	**47**		Pg	12 30 19.7	+0.2
VALT	**Mount Saint He**	**0.69**	**35**		Pg	12 30 20.2	+0.5
ESD	**East Dome**	**0.69**	**38**		Pn	12 30 20.6	-0.3
BOLM	**Sugar Bowl**	**0.69**	**36**		Pg	12 30 20.3	+0.5
STD	**Studebaker Rid**	**0.69**	**33**		Pg	12 30 20.1	+0.3
HIYU	**Hiyu Mountain**	**0.71**	**108**		Pg	12 30 20.2	+0.2
ERK	**Elk Rock**	**0.71**	**24**		Pb	12 30 20.1	+0.1
JRO	**Jston Ridge Ob**	**0.72**	**31**		Pg	12 30 20.5	+0.1
SOSW	**Source of Smit**	**0.73**	**36**		Pg	12 30 20.6	0.0
B202	**Windy Ridge, M**	**0.73**	**36**		Pb	12 30 20.4	+0.1
B201	**Coldwater, Mou**	**0.73**	**28**		Pb	12 30 20.4	+0.1
TDH	**Tom, Dick, Har**	**0.78**	**118**		Pb	12 30 21.1	0.0
TDL	**Tradedollar La**	**0.79**	**29**		Pb	12 30 21.4	+0.1
HOOD	**Mount Hood Mea**	**0.85**	**113**		Pb	12 30 22.5	+0.2
E04D	**Cinebar**	**0.91**	**8**		Pn	12 30 23.6	-0.2
ASR	**Mount Adams--S**	**0.95**	**58**		Pb	12 30 24.2	+0.1
LCW	**Lucas Creek**	**1.01**	**2**		Pb	12 30 25.1	0.0
E03A	**Lebam**	**1.05**	**328**		Pb	12 30 25.5	-0.1
E03A					Sg	12 30 40.3	0.0
E03A	**Lebam**	**1.05**	**328**	IAML		12 30 40.5	
	comp=N,34nm,0.6s						
E03A				IAML		12 30 40.5	
	comp=E,41nm,0.6s						
H04A	**Detroit Lake**	**1.06**	**157**		Pb	12 30 25.1	-0.7
G05D	**Wamic, OR**	**1.10**	**112**		Pg	12 30 27.4	0.0
H04D	**Lebanon**	**1.14**	**179**		Pn	12 30 26.6	-0.3
COR	**Corvallis**	**1.14**	**200**	Pn	Pg	12 30 29.0	+0.8
COR				IAML		12 30 52.2	
	comp=E,22nm,3.8s						
LON	**Longmire**	**1.28**	**31**		Pb	12 30 29.9	+0.4
LON	**Longmire**	**1.28**	**31**		Pn	12 30 29.2	+0.2
LON				IAML		12 30 59.2	
	comp=N,6.2nm,4.5s						
LON				IAML		12 31 11.6	
	comp=E,7.8nm,4.5s						
REMR	**Mount Rainier-**	**1.32**	**28**		Pg	12 30 31.6	-0.1
WPW	**White Pass**	**1.34**	**39**		Pb	12 30 30.8	+0.2
FMW	**Mount Fremont**	**1.48**	**30**		Pb	12 30 33.8	+0.6
RATT	**Rattlesnake La**	**1.89**	**20**		Pb	12 30 40.3	+0.3
LTY	**Liberty**	**2.16**	**41**	Pn	Pn	12 30 41.4	+0.4
LTY				IAML		12 31 08.7	
	comp=N,8.0nm,4.8s						
LTY				IAML		12 31 32.8	
	comp=E,7.7nm,4.4s						
HAWA	**Hanford**	**2.37**	**71**	Pn	Pn	12 30 45.0	+1.2
HAWA				IAML		12 31 40.5	
	comp=E,8.0nm,5.0s						
A04D	**Lummi Island**	**3.06**	**1**		Pg	12 31 02.6	-2.2

*PGC **28** 12:31:05.5±0.0, 62°.76N×133°.12W, h1km, ML3.4/10, 247km northeast of Whitehorse, Yt Southern Yukon Territory, Canada*
*IDC **28** 12:31:05.3±1.0, 63°.04N×133°.19W, h0km, mb3.3/3, mb1 3.8/5, mb1mx3.4/58, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=30.2km s-min=10.3km az=11.0*
ISC 28 12:31:05.0±0.7, 62°.90N±0°.04×133°.09W±0°.03, h10km, n36, σ2°.78/78, mb3.1/3, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHY	**Whitehorse**	**2.40**	**202**	Pn	**Pn**	**12 31 42.9**	**-1.6**
WHY				Pg	**Pb**	**12 31 46.6**	**-1.7**
WHY				Sg	**Sn**	**12 32 16.0**	**+2.1**
YUK5	**Granite Creek**	**2.86**	**234**	Pn	**Pn**	**12 31 50.7**	**-0.1**
YUK5				Sg	**Sb**	**12 32 31.3**	**0.0**
HYT	**Haines Junctio**	**2.95**	**227**	Pn	**Pn**	**12 31 51.7**	**-0.3**
HYT				Pg	**Pb**	**12 31 57.1**	**-0.5**
HYT				Sn	**Sn**	**12 32 25.0**	**-2.4**
HYT				Sg	**Sb**	**12 32 33.2**	**-0.5**
YUK4	**Talbot Arm**	**3.04**	**242**	Pn	**Pn**	**12 31 51.8**	**-1.5**
YUK4				Pg	**Pb**	**12 31 57.8**	**-1.4**
YUK4				Sn	**Sn**	**12 32 26.8**	**-3.0**
YUK4				Sg	**Sb**	**12 32 34.7**	**-1.8**
DAWY	**Dawson**	**3.06**	**295**	Pn	**Pn**	**12 31 53.6**	**+0.2**
DAWY				Sg	**Sg**	**12 32 41.8**	**-1.4**
YUK6	**Outpost Mounta**	**3.17**	**234**	Pn	**Pn**	**12 31 54.8**	**-0.3**
YUK6				Sg	**Sb**	**12 32 41.3**	**+1.0**
YUK7	**Dusty Glacier**	**3.38**	**228**	Pn	**Pn**	**12 31 57.8**	**-0.2**
YUK7				Sg	**Sb**	**12 32 46.5**	**+0.3**
YUK3	**Moose Creek**	**3.62**	**255**	Pn	**Pn**	**12 32 01.0**	**-0.3**
YUK3				Sg	**Sb**	**12 32 56.4**	**+3.3**
BVCY	**Beaver Creek**	**3.62**	**266**	Pn	**Pn**	**12 32 01.0**	**-0.1**
BVCY				Sg	**Sb**	**12 32 57.3**	**+4.4**
YUK2	**White River**	**3.78**	**256**	Pn	**Pn**	**12 32 03.2**	**-0.2**
YUK2				Pg	**Pb**	**12 32 15.6**	**+3.7**
YUK2				Sg	**Sb**	**12 33 01.0**	**+3.3**
PLBC	**Pleasant Camp**	**3.80**	**206**	Pn	**Pn**	**12 32 03.0**	**-0.5**
PLBC				Sg	**Sb**	**12 32 58.4**	**+0.4**
LOGN	**Logan Glacier**	**4.28**	**245**	Pn	**Pn**	**12 32 10.9**	**+0.5**
LOGN				Sn	**Sn**	**12 32 57.3**	**-3.1**
CTGM	**Chitina Glacie**	**4.35**	**247**	Pn	**Pn**	**12 32 11.3**	**+0.1**
CTGM				Sn	**Sn**	**12 32 59.3**	**-2.7**
CTGM				Sg	**Sb**	**12 33 19.4**	**+5.3**
BESE	**Bessie Mountai**	**4.42**	**192**	Pn	**Pn**	**12 32 11.1**	**-1.0**
BESE				Sn	**Sn**	**12 32 59.8**	**-3.8**
BESE				Sg	**Sb**	**12 33 17.7**	**+1.8**
PCA	**Pinnacle**	**4.43**	**234**	Pn	**Pn**	**12 32 11.9**	**-0.5**
PCA				Sg	**Sb**	**12 33 21.4**	**+4.9**
TABL	**Table Mountain**	**4.56**	**241**	Pn	**Pn**	**12 32 14.4**	**+0.3**
TABL				Sn	**Sn**	**12 33 04.9**	**-2.3**
TABL				Sg	**Sb**	**12 33 24.6**	**+4.5**
SAMH	**Samovar Hills**	**4.61**	**236**	Pn	**Pn**	**12 32 15.1**	**+0.3**
SAMH				Sn	**Sn**	**12 33 04.8**	**-3.6**
SAMH				Sg	**Sb**	**12 33 25.9**	**+4.5**
GRNC	**Granite Creek**	**4.65**	**246**	Pn	**Pn**	**12 32 15.9**	**+0.5**
GRNC				Sn	**Sn**	**12 33 06.5**	**-2.9**
DLBC	**Dease Lake**	**4.72**	**160**	Pn	**Pn**	**12 32 14.8**	**-1.5**
DLBC				Pg	**Pb**	**12 32 28.9**	**+1.1**
DLBC				Sg	**Sb**	**12 33 28.3**	**+3.5**
PTPK	**Patty Peak**	**4.73**	**253**	Pn	**Pn**	**12 32 16.2**	**+1.7**
PTPK				Sg	**Sb**	**12 33 30.5**	**+5.3**
BALM	**Baldy**	**4.75**	**251**	Pn	**Pn**	**12 32 17.5**	**+0.8**
BALM				Sg	**Sb**	**12 33 32.0**	**+6.5**
KIAG	**Kiagna River**	**4.81**	**250**	Pn	**Pn**	**12 32 18.6**	**+1.0**
KIAG				Sn	**Sn**	**12 33 11.4**	**-1.9**
KIAG				Sg	**Sb**	**12 33 33.6**	**+6.3**
DOT	**Dot Lake**	**5.01**	**284**	Pn	**Pn**	**12 32 20.1**	**-0.2**
DOT				Sg	**Sg**	**12 33 42.2**	**-3.5**
INK	**Inuvik**	**5.44**	**358**	Pn	**Pn**	**12 32 28.3**	**+2.3**
INK				Sn	**Sn**	**12 33 29.3**	**+0.7**
PAX	**Paxson**	**5.66**	**276**	Pn	**Pn**	**12 32 29.4**	**+0.3**
PAX				Sg	**Sg**	**12 34 02.1**	**-4.2**
NBC2	**NorthernBC 2**	**5.98**	**117**	Pn	**Pn**	**12 32 33.9**	**+0.4**
NBC2				Sg	**Sb**	**12 34 08.8**	**+8.0**
ILAR	**Eielson Array**	**6.38**	**293**	Pn	**Pn**	**12 32 39.5**	**+0.4**
	0.2nm,0.3s,baz=106,slow=12,SNR=11						
ILAR				Lg	Lg	12 34 22.3	
	1.2nm,0.3s,baz=97,slow=29,SNR=6.5						
DHRN	**Dharma Camp**	**7.09**	**48**	Pn	**Pn**	**12 32 49.3**	**+0.6**
DHRN				Sn	**Sn**	**12 34 07.1**	**-2.2**
C36M	**Paulatuk**	**7.43**	**25**	Pn	**Pn**	**12 32 54.1**	**+0.7**
C36M				Sn	**Sn**	**12 34 16.0**	**-1.5**
NBC5	**NorthernBC 5**	**7.47**	**131**	Sn	**Sn**	**12 34 13.3**	**-5.5**
NBC5				Sg	Sb	12 34 54.4	+11
COLD	**Coldfoot**	**8.42**	**309**	Pn	**Pn**	**12 33 08.3**	**+1.4**
YKA	**Yellowknife Ar**	**8.51**	**84**	Pn	**Pn**	**12 33 07.8**	**-0.3**
	0.5nm,0.3s,baz=288,slow=16,SNR=36						
YKA				Sn	**Sn**	**12 34 39.2**	**-4.7**
	0.3nm,0.3s,baz=276,slow=23,SNR=4.9						
YKA				Lg	Lg	12 35 25.8	
	0.2nm,0.3s,baz=278,slow=29,SNR=4.6						
KUKN	**Kugluktuk,NWT**	**8.97**	**49**	Pn	**Pn**	**12 33 14.9**	**+0.4**
KUKN				Sn	**Sn**	**12 34 51.4**	**-4.1**
PDAR	**Pinedale Array**	**24.40**	**135**	P	**P**	**12 36 26.1**	**+2.5**
	0.2nm,0.4s,baz=331,slow=8.3,SNR=2.4						
NVAR	**Mina Array Bea**	**26.09**	**153**	P	**P**	**12 36 42.1**	**+3.2**
	0.3nm,0.7s,baz=326,slow=7.9,SNR=2.6						
MKAR	**Makanchi Array**	**67.09**	**334**	P	**P**	**12 41 59.4**	**+1.2**
	0.4nm,0.5s,baz=22,slow=6.0,SNR=2.9						

DJA 28 12:35:37.8±0.3, 0°.N±2°.×12°.7E±°, h39km±11km, M4.0/9, mb4.3/3, mB4.9/3, MLv3.8/9, Mw(mB)4.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.61**	**48**	P	Pn	12 35 51.6	+1.5
TNTI				S	Sn	12 36 00.3	+1.5
SANI	**Sanana**	**2.56**	**201**	P	Pn	12 36 15.6	-1.3
KMSI	**Cibinong**	**2.94**	**274**	P	Pn	12 36 21.9	-0.1
KMSI				S	Sn	12 36 56.2	+0.2
NLAI	**Namlea**	**3.58**	**177**	P	Pn	12 36 31.5	+0.7
NLAI				S	Sn	12 37 11.1	-0.8
LUWI	**Luwuk**	**4.37**	**251**	P	Pn	12 36 42.5	+0.9
APSI	**Ampana**	**5.41**	**257**	P	Pn	12 36 55.9	-0.1
	0.1nm376nm11nm,0.8s						
TTSI	**Tana Toraja**	**7.85**	**244**	P	Pn	12 37 29.7	+0.1
	0.1nm2μm14nm,0.5s						
SPSI	**Sidrap Palu**	**8.33**	**239**	P	Pn	12 37 37.2	+1.1

*IDC **28** 12:41:37.5±0.8, 27°.47S×62°.90W, h601km±7km, mb4.0/16, mb1 4.1/21, mb1mx3.9/34, mbtmp5.0/21, Error ellipse: s-maj=12.4km s-min=9.0km az=64.0*
*NEIC **28** 12:41:37.2±1.4, 27°.54S±0°.09×63°.0W±0°.1, h603km±5km, mb4.5/155, Md4.6(SJA), Error ellipse: s-maj=13.8km s-min=12.3km az=83.0*
*VAO **28** 12:41:37.1±0.3, 27°.54S×62°.98W, h604km±5km, mb4.4*
ISC 28 12:41:36.9±0.3, 27°.50S±0°.04×63°.02W±0°.05, h600km, n356, σ0°.86/400, mb4.6/97, 1D, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**5.21**	**78**	P	**P**	**12 43 12.4**	**+0.9**
	12nm,0.3s,baz=255,slow=7.9,SNR=236						
CPUP				S	**S**	**12 44 28.0**	**-0.8**
	baz=261,slow=19,SNR=1.2						
CPUP	**Villa Florida**	**5.21**	**78**	P	**P**	**12 43 12.4**	**+0.9**
CPUP				S	**S**	**12 44 30.6**	**+1.8**
AC02	**Maricunga**	**5.48**	**275**	P	**P**	**12 43 16.3**	**+2.1**
AC02				S	**S**	**12 44 36.0**	**+2.3**
GO02	**Mina Guanaco**	**6.33**	**290**	P	**P**	**12 43 22.8**	**+1.5**
GO02				S	**S**	**12 44 47.7**	**+1.0**
ZON	**Zonda**	**6.37**	**229**	P	**P**	**12 43 21.9**	**+0.6**
ZON				S	**S**	**12 44 47.1**	**+0.4**
GO03	**Copiap**	**6.40**	**267**	P	**P**	**12 43 22.4**	**+0.7**
GO03				S	**S**	**12 44 47.5**	**+0.1**
AC01	**Pan de Azucar**	**6.90**	**279**	P	**P**	**12 43 26.9**	**+0.8**
AC01				S	**S**	**12 44 55.2**	**-0.2**
LCO	**Las Campanas**	**6.94**	**256**	P	**P**	**12 43 27.4**	**+0.7**
AC04	**Llanos de Chal**	**7.16**	**262**	P	**P**	**12 43 28.9**	**+0.5**
AC04				S	**S**	**12 44 59.3**	**-0.4**
LVC	**Limon Verde**	**7.22**	**311**	P	**P**	**12 43 30.2**	**+0.7**
	54nm,0.3s,baz=118,slow=6.3,SNR=281						
LVC				S	**S**	**12 44 58.6**	**-2.9**
	33nm,0.3s,baz=197,slow=19,SNR=23						
LVC	**Limon Verde**	**7.22**	**311**	P	**P**	**12 43 30.4**	**+0.9**
LVC				S	**S**	**12 44 59.1**	**-2.3**
LVC	**Limon Verde**	**7.22**	**311**	*e*P	**P**	**12 43 30.4**	**+0.9**
PB14	**IPOC Station P**	**7.22**	**292**	P	**P**	**12 43 29.8**	**+0.3**
PB14				S	**S**	**12 45 00.2**	**-1.2**
PB15	**IPOC Station P**	**7.23**	**305**	P	**P**	**12 43 30.4**	**+1.0**
PB15				S	**S**	**12 44 59.6**	**-1.7**
GO04	**Tololo Observa**	**7.32**	**247**	P	**P**	**12 43 30.5**	**+0.4**
CO03	**El Pedregal**	**7.48**	**242**	P	**P**	**12 43 31.8**	**+0.4**
CO03				S	**S**	**12 45 04.8**	**-0.5**
PB06	**IPOC Station P**	**7.61**	**307**	P	**P**	**12 43 33.9**	**+1.0**
PB06				S	**S**	**12 45 05.6**	**-2.1**
PB10	**IPOC Station P**	**7.87**	**299**	P	**P**	**12 43 35.7**	**+0.6**
CO02	**Combarbal**	**7.88**	**240**	P	**P**	**12 43 35.3**	**+0.1**
PB09	**IPOC Station P**	**8.01**	**314**	P	**P**	**12 43 37.9**	**+1.2**
PB04	**IPOC Station P**	**8.26**	**307**	P	**P**	**12 43 39.6**	**+0.5**
VA03	**San Esteban**	**8.37**	**229**	P	**P**	**12 43 40.6**	**+0.8**
PB07	**IPOC Station P**	**8.48**	**311**	P	**P**	**12 43 41.5**	**+0.4**
PEL	**Peldehue**	**8.69**	**228**	P	**P**	**12 43 42.9**	**+0.1**
PB01	**IPOC Station P**	**8.72**	**316**	P	**P**	**12 43 43.4**	**+0.1**
MT03	**Universidad Ad**	**8.80**	**225**	P	**P**	**12 43 45.1**	**+1.2**
MT05	**Renca**	**8.88**	**227**	P	**P**	**12 43 44.6**	**-0.1**
CPSB	**Cacapava Do Su**	**8.88**	**111**	*e*P	**P**	**12 43 44.5**	**-0.2**
MT02	**Curacav**	**9.06**	**229**	P

SJMB Sao Joao De Ma 21.89 71 eP P 12 45 47.7 0.0
BSFB Barra de Sao F 22.11 72 eP P 12 45 49.7 0.0
SDBA SAO DESIDERIO 22.66 52 eP P 12 45 54.7 0.0
NAN01 Guarapari, ES 23.18 70 eP P 12 45 59.1 -0.1
SMTB Santa Maria do 23.58 41 eP P 12 46 03.0 +0.2
ITTB Itaituba 24.03 18 eP P 12 46 07.0 +0.2
PRPB Parauapebas 24.64 33 eP P 12 46 11.8 -0.4
ATAH Atahualpa 24.95 321 P P 12 46 17.6 +2.2
comp=Z,3.3nm,0.6s,baz=174,slow=9.2,SNR=3.8
NBIT Itapeh - BA 25.24 65 eP P 12 46 18.0 +0.6
GDU01 Guandu, BA 25.81 63 eP P 12 46 22.4 -0.1
PTGA Pitinga 26.77 7 P P 12 46 31.0 +0.1
comp=Z,31nm,0.5s,baz=196,slow=14,SNR=69
PTGA S S 12 50 25.0 -1.2
comp=Z,3.5nm,0.5s,baz=319,slow=19,SNR=4.7
MALB Monte Alegre 26.84 20 eP P 12 46 31.6 +0.1
TMAB Tom-Au,PÁ,Br 28.78 32 eP P 12 46 48.9 +0.6
NBLA Lagarto - SE 28.84 60 eP P 12 46 48.3 -0.5
MCPB Macapa, AP 28.96 23 eP P 12 46 50.0 +0.1
NBTA Tacaratu-PE 29.82 57 eP P 12 46 56.8 -0.6
NBMA Muriti-CE 30.48 53 eP P 12 47 03.1 0.0
NBAN Anadia - AL 30.82 60 eP P 12 47 05.7 -0.2
NBPB Pedra_Branca-C 31.20 50 eP P 12 47 09.4 +0.3
NBLI Livramento-PB 31.80 56 eP P 12 47 14.3 0.0
NBRF Rio Formoso - 32.32 60 eP P 12 47 17.9 -0.7
NBPA Parau_RN 32.78 53 eP P 12 47 22.7 +0.2
NBCL Cascavel-CE 33.04 50 eP P 12 47 25.0 +0.3
RCBR Riachuelo 33.60 55 P P 12 47 30.0 +0.6
comp=Z,8.0nm,0.5s,baz=236,slow=13,SNR=7.0
RCBR PcP PcP 12 49 52.0 +0.4
comp=Z,7.6nm,0.9s,baz=148,slow=3.3,SNR=1.9
RCBR Riachuelo 33.60 55 P P 12 47 28.7 -0.7
RCBR IAmb IAmb 12 47 31.0
comp=Z,12nm,0.7s
MDP Montagnes des 33.92 19 P P 12 47 31.8 -0.2
comp=Z,15nm,0.5s,baz=194,slow=11,SNR=18
MDP PcP PcP 12 49 53.2 +0.7
comp=Z,5.8nm,0.6s,baz=167,slow=4.5,SNR=1.5
SDV Santo Domingo 36.91 347 P P 12 47 56.1 -0.8
SDV IAmb IAmb 12 47 56.6
comp=Z,21nm,1.1s
SDV Santo Domingo 36.91 347 eP P 12 47 55.9 -1.0
FDF Fort de France 42.02 3 P P 12 48 37.3 -0.2
ANWB Willy Bob 44.91 2 P P 12 48 58.1 -1.6
ESQI Esquipulas 48.98 325 P P 12 49 30.8 +0.3
ESQI IAmb IAmb 12 49 46.9
comp=Z,12nm,0.8s
ASCN Ascension 49.90 76 P P 12 49 37.1 0.0
BELA Belgrano 2 52.12 173 P P 12 49 52.2 0.0
VNA3 Neumayer Olymp 52.70 161 P P 12 49 56.9 +0.5
VNA3 Neumayer Olymp 52.70 161 PcP PcP 12 50 56.0 +0.1
VNA3 Neumayer Olymp 52.70 161 pP pP 12 51 47.8 +0.3
VNA1 Neumayer--Stat 52.86 160 P P 12 49 58.5 +1.0
VNA1 Neumayer--Stat 52.86 160 PcP PcP 12 50 56.9 +0.4
VNA2 Neumayer--Watz 53.23 160 P P 12 50 00.7 +0.6
baz=290,slow=7.9
VNA2 Neumayer--Watz 53.23 160 PcP PcP 12 50 58.1 +0.1
VNA2 Neumayer--Watz 53.23 160 pP pP 12 51 52.7 +1.0
SNAA Sanae 54.87 160 P P 12 50 12.0 +0.3
SNAA Sanae 54.87 160 PcP PcP 12 51 04.6 +0.2
SNAA Sanae 54.87 160 pP pP 12 52 03.7 -0.6
SNAA Sanae 54.87 160 P P 12 50 11.7 0.0
comp=Z,6.0nm,0.6s,baz=297,slow=7.2,SNR=63
SNAA PcP PcP 12 51 04.5 +0.1
comp=Z,3.5nm,0.6s,baz=284,slow=5.1,SNR=5.7
SNAA Sanae 54.87 160 P P 12 50 11.7 0.0
QSPA South Pole Qui 62.73 180 P P 12 51 05.1 +0.7
JSC Jenkinsville 63.82 343 P P 12 51 12.4 +0.9
JSC IAmb IAmb 12 51 12.8
comp=Z,7.0nm,0.6s
BIRD Birdtown, Kers 63.97 344 P P 12 51 13.3 +0.9
BIRD IAmb IAmb 12 51 13.7
comp=Z,17nm,0.5s
W57A Gilead 64.34 345 P P 12 51 15.6 +0.7
W57A IAmb IAmb 12 51 16.3
comp=Z,20nm,0.7s
LRAL Lakeview Retre 64.36 338 P P 12 51 14.9 -0.1
PAULI Pauline 64.48 343 P P 12 51 15.9 +0.2
PAULI IAmb IAmb 12 51 17.5
comp=Z,20nm,1.1s
KMSC Kings Mountain 64.66 343 P P 12 51 17.6 +0.7
KMSC IAmb IAmb 12 51 18.4
comp=Z,18nm,0.8s
Y49A Blount Mountai 64.92 339 P P 12 51 18.5 -0.1
Y49A IAmb IAmb 12 51 19.3
comp=Z,14nm,0.7s
BG3 Lake Jocassee 64.94 342 P P 12 51 19.2 +0.5
X51A Calhoun 65.09 340 P P 12 51 20.0 +0.4
X51A IAmb IAmb 12 51 20.6
comp=Z,24nm,0.8s
FPAL Fort Paine 65.30 340 P P 12 51 20.9 -0.1
FPAL IAmb IAmb 12 51 21.3
comp=Z,9.1nm,0.6s
V55A Taylorsville 65.30 344 P P 12 51 21.4 +0.5
W52A Murphy 65.31 341 P P 12 51 21.6 +0.6
W52A IAmb IAmb 12 51 21.7
comp=Z,10nm,0.7s
V53A Saluda 65.54 342 P P 12 51 22.9 +0.5
V53A IAmb IAmb 12 51 23.6
comp=Z,14nm,0.8s
U56A King 65.58 345 P P 12 51 23.4 +0.8
U56A IAmb IAmb 12 51 24.6
comp=Z,17nm,1.0s
DBIC Dimbokro 65.64 68 P P 12 51 22.9 -0.6
comp=Z,48nm,0.6s,baz=212,slow=7.3,SNR=98
DBIC Dimbokro 65.64 68 P P 12 51 23.0 -0.4
143A Socs Landing, 65.67 334 P P 12 51 23.8 +0.7
143A IAmb IAmb 12 51 25.0
comp=Z,35nm,1.2s
X48A Hartselle 65.68 338 P P 12 51 23.5 +0.3
X48A IAmb IAmb 12 51 24.3
comp=Z,13nm,0.8s
TKL Tuckaleechee C 65.80 342 P P 12 51 23.9 0.0
TKL IAmb IAmb 12 51 24.6
comp=Z,12nm,0.9s
CPCT Cooper Cave 65.82 341 P P 12 51 24.2 +0.1
CPCT IAmb IAmb 12 51 24.9
comp=Z,13nm,0.7s
W50A Signal Mountai 65.82 340 P P 12 51 23.9 -0.2
W50A IAmb IAmb 12 51 25.1
comp=Z,20nm,0.8s
V52A Sevierville 65.92 342 P P 12 51 24.4 -0.3
V52A IAmb IAmb 12 51 25.4
comp=Z,11nm,0.9s
SWET Sewanee 66.03 340 P P 12 51 24.8 -0.6
U54A Nelsons Funny 66.09 344 P P 12 51 26.3 +0.5
V51A Loudon 66.10 341 P P 12 51 25.1 -0.7
JSRW J. Sargeant Re 66.33 347 P P 12 51 28.5 +1.3
PLAL Pickwick Lake 66.50 338 P P 12 51 27.6 -0.8
V48A Smith Brothers 66.79 339 P P 12 51 29.5 -0.5
V48A IAmb IAmb 12 51 30.6
comp=Z,12nm,0.6s
CLTN Cedars of Leba 66.96 340 P P 12 51 30.9 -0.1
CLTN IAmb IAmb 12 51 31.6
comp=Z,14nm,0.6s
W45A Hickory Valley 67.04 337 P P 12 51 31.8 +0.1
S54A Dingess, Beckl 67.18 344 P P 12 51 33.1 +0.6
R55A Marlinton 67.36 345 P P 12 51 35.1 +1.5
R55A IAmb IAmb 12 51 36.0
comp=Z,16nm,0.7s
T50A Nancy 67.37 341 P P 12 51 33.0 -0.7
T50A IAmb IAmb 12 51 34.2
comp=Z,8.3nm,0.8s
WVT Waverly 67.47 338 P P 12 51 33.9 -0.3
WVT IAmb IAmb 12 51 34.5
comp=Z,15nm,0.6s
R53A Hurricane 67.84 344 P P 12 51 36.9 +0.5
R53A IAmb IAmb 12 51 37.3
comp=Z,11nm,0.8s
T47A Sharon Grove 68.02 339 P P 12 51 36.6 -0.9
T47A IAmb IAmb 12 51 37.7
comp=Z,15nm,0.7s
P57A Homestead Farm 68.08 348 P P 12 51 39.5 +1.6
P57A IAmb IAmb 12 51 40.2
comp=Z,21nm,0.8s
WUPA West Chester U 68.10 350 P P 12 51 38.9 +1.0
MIAR Mount Ida 68.15 333 P P 12 51 38.6 +0.3
MIAR IAmb IAmb 12 51 41.0
comp=Z,14nm,1.5s
WHAR Wooly Hollow 68.30 335 P P 12 51 39.7 +0.5
WHAR IAmb IAmb 12 51 40.9
comp=Z,12nm,1.1s
R50A Paris 68.41 342 P P 12 51 38.1 -1.7
R50A IAmb IAmb 12 51 40.6
comp=Z,11nm,0.6s
Q52A Bidwell 68.52 344 P P 12 51 40.4 0.0
Q52A IAmb IAmb 12 51 41.5
comp=Z,17nm,0.7s
LCAR Lake Charles 68.56 336 P P 12 51 40.7 -0.1
LCAR IAmb IAmb 12 51 41.7
comp=Z,13nm,1.1s
TX31 Lajitas Ar. Si 68.61 322 P P 12 51 41.6 +0.2
TX32 Lajitas Array 68.61 322 P P 12 51 41.8 +0.4
TXAR Lajitas Array 68.61 322 P P 12 51 42.0 +0.7
comp=Z,0.5nm,0.6s,baz=154,slow=8.1,SNR=6.6
TXAR PP PP 12 54 22.9 -1.3
comp=Z,0.2nm,0.5s,baz=158,slow=9.7,SNR=2.9
TXAR Lajitas Array 68.61 322 P P 12 51 41.8 +0.4
MCWV Mont Chateau 68.62 346 P P 12 51 42.2 +1.1
Z35A Perchaven, San 68.67 330 P P 12 51 41.1 -0.5
Z35A IAmb IAmb 12 51 43.1
comp=Z,11nm,0.8s
FCAR Ozark Folk Cen 68.76 335 P P 12 51 41.8 -0.2
FCAR IAmb IAmb 12 51 42.8
comp=Z,14nm,0.6s
W39A Magazine 68.80 333 P P 12 51 43.3 +1.0
W39A IAmb IAmb 12 51 44.2
comp=Z,9.0nm,0.7s
P53A Whipple 68.80 345 P P 12 51 42.9 +0.7
P53A IAmb IAmb 12 51 43.8
comp=Z,17nm,0.9s
X37A Clayton 68.92 332 P P 12 51 44.1 +1.1
O56A Blue Knob Stat 68.95 347 P P 12 51 44.1 +1.0
O56A IAmb IAmb 12 51 45.3
comp=Z,8.4nm,0.6s
SYO Syowa Base 68.99 158 eP P 12 51 43.4 +0.5
N59A State Game Lan 69.08 350 P P 12 51 44.2 +0.4
N59A IAmb IAmb 12 51 46.0
comp=Z,13nm,0.9s
P52A Corning 69.12 344 P P 12 51 44.3 +0.2
P52A IAmb IAmb 12 51 44.9
comp=Z,20nm,0.8s
S44A Carbondale 69.36 338 P P 12 51 44.6 -0.9
S44A IAmb IAmb 12 51 45.7
comp=Z,14nm,0.6s
U40A Yellville 69.45 335 P P 12 51 45.6 -0.6
P49A Miami Univ. Ec 69.69 342 P P 12 51 47.0 -0.5
P49A IAmb IAmb 12 51 47.8
comp=Z,19nm,1.1s
ACSO Alum Creek Sta 69.89 344 P P 12 51 48.6 0.0
ACSO IAmb IAmb 12 51 49.1
comp=Z,14nm,0.6s
N54A Moraine State 69.91 346 P P 12 51 50.1 +1.3
N54A IAmb IAmb 12 51 50.5
comp=Z,19nm,0.7s
MGMO Mountain Grove 69.94 335 P P 12 51 49.7 +0.7
MGMO IAmb IAmb 12 51 50.1
comp=Z,11nm,0.9s
U38A Gravette 70.12 333 P P 12 51 50.6 +0.5
M54A Oil Creek Stat 70.36 347 P P 12 51 52.0 +0.5
M54A IAmb IAmb 12 51 52.9
comp=Z,31nm,1.1s
CCM Cathedral Cave 70.37 337 P P 12 51 51.3 -0.2
CCM IAmb IAmb 12 51 52.1
comp=Z,11nm,0.6s
N51A Ashland 70.40 345 P P 12 51 52.0 +0.4
N51A IAmb IAmb 12 51 52.6
comp=Z,28nm,1.1s
M53A WI Miller and 70.51 346 P P 12 51 53.0 +0.7
M53A IAmb IAmb 12 51 53.8
comp=Z,12nm,0.8s
L56A Greenwood 70.57 349 P P 12 51 53.3 +0.6
L56A IAmb IAmb 12 51 54.4
comp=Z,17nm,0.7s
OK025 Westminster Rd 70.61 331 P P 12 51 52.8 -0.2
OK030 Cody Creek RV 70.66 331 P P 12 51 53.2 -0.1
OK030 IAmb IAmb 12 51 54.1
comp=Z,9.6nm,0.5s
S39A Bolivar 70.80 335 P P 12 51 54.2 +0.2
S39A IAmb IAmb 12 51 55.2
comp=Z,9.4nm,0.9s
KOWA Kowa 70.80 62 P P 12 51 54.0 -0.6
N49A Columbus Grove 70.85 343 P P 12 51 54.0 -0.3
K58A Earlville 70.87 350 P P 12 51 55.5 +1.1
K58A IAmb IAmb 12 51 56.2
comp=Z,13nm,0.6s
R40A Maddies Statio 70.94 336 P P 12 51 54.8 -0.1
R40A IAmb IAmb 12 51 55.3
comp=Z,11nm,0.6s
SUR Sutherland 71.01 117 P P 12 51 56.4 +0.6
comp=Z,20nm,0.6s,baz=231,slow=7.2,SNR=50
SUR Sutherland 71.01 117 P P 12 51 56.6 +0.7
ERPA Erie 71.02 347 P P 12 51 55.6 +0.4
SFIN Lafayette 71.14 341 P P 12 51 55.4 -0.6
N47A Urbana 71.21 342 P P 12 51 56.2 -0.2
N47A IAmb IAmb 12 51 56.7
comp=Z,25nm,1.0s
MMNY Mt. Morris Dam 71.21 348 P P 12 51 57.3 +1.0
P43A Skaggs, Pawnee 71.21 339 P P 12 51 56.1 -0.3
T35A Sooner Cattle 71.39 332 P P 12 51 58.1 +0.5
T35A IAmb IAmb 12 51 59.0
comp=Z,12nm,1.1s
J59A Piesco 71.39 351 P P 12 51 58.6 +1.2
J59A IAmb IAmb 12 51 59.5
comp=Z,21nm,0.8s
MSTX Muleshoe 71.81 326 P P 12 52 01.0 +0.8
MSTX IAmb IAmb 12 52 02.1
comp=Z,8.7nm,0.9s
VNDA Vanda 71.86 189 P P 12 52 01.2 +1.5
comp=Z,0.6nm,0.9s,baz=121,slow=6.7,SNR=5.9
KAN13 South Haven SW 71.88 332 P P 12 52 01.3 +1.0
P40A Paris 71.97 337 P P 12 52 00.3 -0.5
P40A IAmb IAmb 12 52 01.5
comp=Z,10nm,0.6s
HDIL Hopedale 71.97 339 P P 12 52 00.3 -0.5
P38A Dawn 72.58 336 P P 12 52 04.3 -0.1
FRNY Flat Rock 72.62 352 P P 12 52 05.9 +1.4
FRNY IAmb IAmb 12 52 06.4
comp=Z,13nm,0.6s
F64A Sherman 73.17 356 P P 12 52 09.0 +1.4
F64A IAmb IAmb 12 52 09.8
comp=Z,28nm,1.1s
TSUM Tsumeb 73.31 103 P P 12 52 09.0 -0.3
comp=Z,15nm,0.7s,baz=234,slow=6.7,SNR=24
TSUM Tsumeb 73.31 103 P P 12 52 09.2 -0.1
TSUM IAmb IAmb 12 52 10.2
comp=Z,17nm,0.8s
PLVO Plevna 73.32 350 P P 12 52 09.2 +0.8
PLVO IAmb IAmb 12 52 10.0
comp=Z,14nm,0.7s
I49A Point Hope 73.37 345 P P 12 52 08.6 -0.1
I49A IAmb IAmb 12 52 09.6
comp=Z,19nm,0.8s
SADO Sadowa 73.41 348 P P 12 52 09.2 +0.2
SADO IAmb IAmb 12 52 10.0
comp=Z,9.9nm,0.7s
L40A Anamosa 73.95 339 P P 12 52 12.1 +0.1
TRQ Mont Tremblant 74.11 352 P P 12 52 13.7 +0.7
CBKS Cedar Bluff 74.36 331 P P 12 52 15.9 +1.4
CBKS IAmb IAmb 12 52 16.5
comp=Z,21nm,0.9s
JFWS Jewell Farm 74.41 340 P P 12 52 14.9 +0.3
N35A Tabor 74.44 335 P P 12 52 15.1 +0.2
ANMO Albuquerque 74.45 324 P P 12 52 16.6 +1.3
TOA0 Torodi Ar. Sit 74.59 66 P P 12 52 15.8 -0.5
TORD Torodi Ar. Bea 74.59 66 P P 12 52 15.8 -0.5
comp=Z,39nm,0.6s,baz=269,slow=5.8,SNR=170
TORD pP pP 12 54 20.8 +1.2
comp=Z,2.8nm,0.9s,baz=266,slow=4.2,SNR=3.8
TORD Torodi Ar. Bea 74.59 66 P P 12 52 15.7 -0.5
I42A Draeger Farm, 74.90 341 P P 12 52 17.7 +0.3
T25A Trinidad 75.14 327 P P 12 52 20.3 +1.2
L34A Svendsen Farm, 75.67 335 P P 12 52 22.0 +0.3
BOSA Boshof 75.98 115 P P 12 52 23.7 -0.3
comp=Z,25nm,0.6s,baz=263,slow=3.9,SNR=78
BOSA Boshof 75.98 115 P P 12 52 23.3 -0.7
E43A Lone Tree Farm 76.67 343 P P 12 52 27.4 +0.3
COWI Conover 76.99 342 P P 12 52 28.9 +0.1
COWI IAmb IAmb 12 52 30.4
comp=Z,19nm,1.3s
MAW Mawson 77.02 161 P P 12 52 29.1 +0.4
comp=Z,7.3nm,0.7s,baz=214,slow=6.1,SNR=11
MAW pP pP 12 54 34.2 +1.1
comp=Z,2.3nm,0.8s,baz=228,slow=12,SNR=3.4
MAW Mawson 77.02 161 P P 12 52 28.8 +0.1
ECSD EROS Data Cent 77.29 336 P P 12 52 30.6 +0.1
D41A Chassel 77.71 342 P P 12 52 33.3 +0.6
LBTB Lobatse 77.73 112 P P 12 52 32.8 -0.8
ISCO Idaho Springs 77.82 328 P P 12 52 35.0 +1.2
SMCO Snowmass 77.99 327 P P 12 52 36.6 +1.7
F36A Milaca 78.09 339 P P 12 52 35.0 +0.3
PV07 Paradox Valley 78.25 325 P P 12 52 37.6 +1.6
PV22 Blue Mesa, Par 78.40 325 P P 12 52 38.3 +1.5
U15A North Rim 78.70 321 P P 12 52 40.3 +1.7
EYMN Ely 79.34 341 P P 12 52 41.2 -0.1
KNB Kanab 79.42 322 P P 12 52 42.0 -0.2
SRU San Rafael Swe 79.72 324 P P 12 52 44.4 +0.7
MTPU Mount Pierson 79.81 323 P P 12 52 46.0 +1.5
CCUT Cedar City 80.10 322 P P 12 52 47.9 +2.1
RDMU Red Mountain 80.34 326 P P 12 52 47.9 +0.9
RDMU IAmb IAmb 12 52 48.9
comp=Z,8.1nm,0.7s
B35A Bob, Littlefor 80.37 340 P P 12 52 46.8 +0.1
B35A IAmb IAmb 12 52 47.9
comp=Z,16nm,0.6s
AGMN Agassiz Nation 80.99 338 P P 12 52 49.8 -0.1
AGMN IAmb IAmb 12 52 50.8
comp=Z,8.7nm,0.6s
PSUT Pine Spring 81.08 322 P P 12 52 52.4 +1.6
E28A Huff 81.22 335 P P 12 52 52.1 +0.9
E28A IAmb IAmb 12 52 52.9
comp=Z,23nm,0.9s
MDND Maddock 81.89 336 P P 12 52 55.3 +0.9
PD31 Pinedale Array 81.99 327 P P 12 52 55.7 +0.3
PDAR Pinedale Array 81.99 327 P P 12 52 55.9 +0.5
comp=Z,2.1nm,0.7s,baz=131,slow=7.9,SNR=13
PDAR Pinedale Array 81.99 327 P P 12 52 55.3 -0.1
HWUT Hardware Ranch 82.11 325 P P 12 52 56.8 +0.9
PTEO Sao Teotonio 82.34 41 eP P 12 52 57.7 +0.8
PBDV Barranco-do-Ve 82.59 41 eP P 12 52 58.8 +0.5
ULM Lac du Bonnet 82.70 339 P P 12 52 58.9 +0.4
comp=Z,3.8nm,0.5s,baz=165,slow=6.9,SNR=13
ULM Lac du Bonnet 82.70 339 P P 12 52 58.9 +0.4
PCVE Castro Verde 82.79 41 eP P 12 52 59.9 +0.7
comp=Z,27nm,2.1s
PVAQ Vaqueiros 82.83 41 eP P 12 52 59.9 +0.5
PBEJ Beja 83.16 41 eP P 12 53 01.7 +0.6
ELK Elko 83.40 323 P P 12 53 03.5 +1.0
EVO Evora 83.42 40 eP P 12 53 02.7 +0.4
LAO LASA Array 83.53 332 P P 12 53 03.1 +0.3
LAO IAmb IAmb 12 53 04.0
comp=Z,12nm,1.2s
PSBE So Bento 83.65 39 eP P 12 53 04.1 +0.6
PMTG Montargil 83.66 40 eP P 12 53 04.1 +0.6
comp=Z,32nm,1.0s
PBAR Barrancos 83.74 41 eP P 12 53 04.1 +0.2
comp=Z,16nm,2.1s
PESTR Estremoz 83.89 40 eP P 12 53 04.8 +0.1
comp=Z,17nm,0.7s
YHH Holmes Hill 84.13 328 P P 12 53 07.4 +1.3
PCAS Casmilo, Conde 84.18 39 eP P 12 53 06.5 +0.4
PMRV Marv??o 84.38 40 eP P 12 53 06.8 -0.3
PCBR Castelo Branco 84.61 40 eP P 12 53 08.1 -0.1
MTE Manteigas 84.95 39 eP P 12 53 10.1 +0.2
comp=Z,24nm,1.4s
MTE Manteigas 84.95 39 P P 12 53 10.1 +0.2
PVIS Viseu 84.97 39 eP P 12 53 10.1 +0.1
HLID Hailey 84.97 325 P P 12 53 11.6 +1.6
HLID IAmb IAmb 12 53 12.4
comp=Z,5.4nm,0.8s
MCMT McKenzie Canyo 85.12 327 P P 12 53 12.2 +1.4
POLO Lamas de Olo 85.48 38 eP P 12 53 12.3 -0.1
PCAB Cabril 85.58 38 eP P 12 53 13.2 +0.4
comp=Z,30nm,1.7s
PGAV Gavieira, Arco 85.62 38 eP P 12 53 13.5 +0.4
MVO Moncorvo 85.76 39 eP P 12 53 13.9 +0.2
comp=Z,24nm,1.7s
PBRG Braganca 86.35 39 eP P 12 53 16.4 -0.1
comp=Z,20nm,1.9s
ESDC Sonseca Array 86.53 42 P P 12 53 17.6 +0.1
comp=Z,2.7nm,0.5s,baz=246,slow=4.8,SNR=25
ESDC Sonseca Array 86.53 42 P P 12 53 17.6 +0.1
PLID Pearl Lake 86.86 325 P P 12 53 19.9 +0.8
PLID IAmb IAmb 12 53 20.3
comp=Z,4.1nm,0.7s
J08A Circle Bar Ran 86.95 323 P P 12 53 20.7 +1.4
FCC Fort Churchill 89.74 344 P P 12 53 31.9 +0.2
FCC IAmb IAmb 12 53 32.8
comp=Z,7.5nm,0.7s
YKA Yellowknife Ar 98.65 338 P Pdif 12 54 12.1 0.0
comp=Z,0.9nm,0.6s,baz=128,slow=4.9,SNR=30
ILAR Eielson Array 111.98 333 PKiKP PKiKP 12 59 04.0 -0.2
comp=Z,0.2nm,0.3s,baz=93,slow=0.9,SNR=1.8
FINES FINESS Array B 113.33 32 PKiKP PKiKP 12 59 06.5 -0.3
comp=Z,0.7nm,0.6s,baz=222,slow=1.9,SNR=2.3
ARCES ARCESS Array B 114.95 23 PKP PKPdf 12 59 09.1 -0.6
comp=Z,1.9nm,0.8s,baz=242,slow=3.9,SNR=7.5
KBZ Khabaz 119.54 53 PKP PKPdf 12 59 19.3 +0.1
comp=Z,0.8nm,0.4s,baz=261,slow=2.4,SNR=5.4
KLMR Klimovskoe 119.66 33 ePKPdf PKPdf 12 59 17.3 -1.7
KLMR AMP 12 59 19.4
comp=Z,5.0nm,0.5s
BELG Belogornoye 123.70 44 PKP PKPdf 12 59 26.8 -0.2
comp=Z,20nm,0.7s,baz=219,slow=0.6,SNR=3.6
ASAR Alice Springs 126.58 199 PKP PKPdf 12 59 33.1 -0.4
comp=Z,3.4nm,0.6s,baz=139,slow=1.7,SNR=48
ASAR SKPbc SKiKP 13 01 52.5 -21
comp=Z,0.9nm,0.6s,baz=149,slow=3.5,SNR=5.7
ASAR SKP 13 02 12.6
comp=Z,0.9nm,0.6s,baz=138,slow=1.5,SNR=6.2
ASAR PKKPbc PKKPbc 13 09 06.3 -0.9
comp=Z,0.5nm,0.6s,baz=338,slow=3.7,SNR=9.3
ASAR Alice Springs 126.58 199 PKPdf 12 59 32.1 -1.5
ARU Arti 129.82 38 PKP PKPdf 12 59 38.5 -0.1
comp=Z,2.1nm,0.4s,baz=230,slow=1.8,SNR=7.7
ARU SKPbc SKPbc 13 02 06.2 +0.3
comp=Z,2.2nm,0.6s,baz=309,slow=6.5,SNR=10.0
WRA Warramunga Arr 129.93 201 PKP PKPdf 12 59 39.9 -0.2
comp=Z,1.9nm,0.4s,baz=164,slow=1.8,SNR=19
WRA SKPbc SKPbc 13 02 05.7 -1.9
comp=Z,7.6nm,0.5s,baz=156,slow=3.7,SNR=49
WRA PKKPbc PKKPdf 13 08 54.3 -47
comp=Z,0.5nm,0.6s,baz=348,slow=4.4,SNR=4.9
WRA Warramunga Arr 129.93 201 PKPdf 12 59 39.6 -0.5
AKTO Aktyubinsk 130.24 46 PKP PKPdf 12 59 40.1 +0.5
comp=Z,2.0nm,0.7s,baz=316,slow=2.6,SNR=8.2
AKTO SKPbc SKPbc 13 02 06.3 -1.3
comp=Z,4.2nm,0.9s,baz=293,slow=4.2,SNR=10
ABKAR Akbulak array 131.58 47 PKPdf PKPdf 12 59 42.2 0.0
ABKAR Akbulak array 131.58 47 PKPdf 12 59 42.1 0.0
FITZ Fitzroy Crossi 133.31 191 PKP PKiKP 12 59 48.6 -0.3
comp=Z,5.2nm,0.9s,baz=220,slow=1.8,SNR=7.0
FITZ SKPbc SKPbc 13 02 20.4 -0.8
comp=Z,3.2nm,0.6s,baz=257,slow=2.2,SNR=9.6
TIXI Tiksi 135.31 355 PKPdf 12 59 47.9 -0.6
BRVK Borovoye 137.22 40 PKPdf PKPdf 12 59 53.4 +0.8
BVAR Borovoye Array 137.29 40 PKP PKPdf 12 59 53.5 +0.8
comp=Z,2.1nm,0.5s,baz=226,slow=4.2,SNR=3.6
BVAR SKP 13 02 31.2
comp=Z,0.8nm,0.5s,baz=208,slow=6.4,SNR=4.9
SEY Seymchan 137.70 337 PKP PKPdf 12 59 53.6 +0.5
comp=Z,4.3nm,0.8s,baz=88,slow=4.1,SNR=8.5
SEY SKPbc SKPbc 13 02 31.8 +0.6
comp=Z,3.1nm,0.9s,baz=84,slow=4.1,SNR=11
PETK Petropavlovsk- 140.56 322 PKhKP PKPpre 12 59 55.2
comp=Z,2.3nm,0.9s,baz=106,slow=4.7,SNR=2.2
PETK SKPbc SKPbc 13 02 39.8 +0.5
comp=Z,3.8nm,0.9s,baz=83,slow=4.0,SNR=6.9
JAY Jayapura 142.41 221 SKPbc SKPbc 13 02 45.7 +0.4
comp=Z,7.6nm,0.8s,baz=203,slow=3.6,SNR=3.8
AAK Ala-Archa 142.50 55 PKP PKPdf 13 00 00.4 -2.2
comp=Z,11nm,0.4s,baz=199,slow=2.2,SNR=45
AAK SKPbc SKPbc 13 02 45.4 +0.7
comp=Z,3.0nm,0.6s,baz=198,slow=2.2,SNR=6.0
AAK Ala-Archa 142.50 55 PKPdf 13 00 00.7 -2.0
KURBB Kurchatov Arra 142.86 41 PKP PKPdf 13 00 01.1 -1.7
comp=Z,29nm,0.7s,baz=294,slow=3.9,SNR=227
KURBB SKPbc SKPbc 13 02 45.2 +0.2
comp=Z,2.0nm,0.6s,baz=290,slow=3.0,SNR=7.0
BOOM Boomskoye usch 143.58 55 PKPbc 13 00 03.7 +0.1
KSH Kashi 144.06 60 PKP PKPbc 13 00 04.5 -0.6
KSH PP pPKPdf 13 02 28.5 +4.2
KSH AMB AMB
comp=Z,120nm,4.7s
YAK Yakutsk 144.44 350 PKP PKPbc 13 00 05.7 +0.4
comp=Z,18nm,0.6s,baz=163,slow=0.4,SNR=11
YAK Yakutsk 144.44 350 PKPab 13 00 06.0 +0.1
KDJ Kajisay 144.55 55 PKPbc 13 00 07.0 +0.4
ZAA0 Zalesovo Array 144.58 33 PKPdf 13 00 06.1 +0.5
ZALV Zalesovo Beam 144.58 33 PKP PKPdf 13 00 06.1 +0.5
comp=Z,32nm,0.5s,baz=300,slow=4.2,SNR=140
ZALV SKPbc SKPbc 13 02 49.4 +0.4
comp=Z,5.4nm,0.6s,baz=310,slow=3.1,SNR=12

LEM	**Lembang**	**144.70**	**164**	PKP	**PKPab**	**13 00 08.9**	**+0.4**
	comp=Z,78nm,0.7s,baz=293,slow=4.4,SNR=15							
PRZ	**Przheval'sk**	**145.36**	**54**		**PKPbc**	**13 00 09.4**	**+0.4**
MAKZ	**Makanchi**	**146.47**	**45**	PKPbc	**PKPbc**	**13 00 11.8**	**+0.1**
MK31	**Makanchi Array**	**146.67**	**45**	PKPbc	**PKPbc**	**13 00 12.1**	**-0.2**
MKAR	**Makanchi Array**	**146.67**	**45**	PKP	**PKPdf**	**13 00 10.2**	**+0.7**
	comp=Z,26nm,0.6s,baz=291,slow=1.6,SNR=135							
MKAR				PKPbc	**PKPbc**	**13 00 12.3**	**0.0**
	comp=Z,26nm,0.6s,baz=280,slow=3.9,SNR=143							
MKAR				SKPbc	**SKPbc**	**13 02 53.9**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=307,slow=1.4,SNR=5.6							
MKAR				SKKPbc	**SKKPab**	**13 10 40.5**	**-3.4**
	comp=Z,0.9nm,0.8s,baz=80,slow=4.4,SNR=8.3							
SIJI	**Sorong**	**148.63**	**208**	PKPbc	**PKPbc**	**13 00 18.7**	**+0.5**
	comp=Z,4.8nm,0.6s,baz=178,slow=12,SNR=4.9							
RPSI	**Rantau Prapat**	**149.90**	**142**		**PKPbc**	**13 00 20.9**	**-0.3**
PSI	**Prapat**	**149.98**	**142**	PKPbc	**PKPbc**	**13 00 20.9**	**-0.7**
	comp=Z,5.7nm,0.5s,baz=182,slow=2.2,SNR=6.5							
YSS	**Yuzh-Sakhalins**	**151.95**	**321**		**PKiKP**	**13 00 25.5**	**+0.4**
IPM	**Ipoh**	**152.52**	**144**	PKPdf	**PKPdf**	**13 00 15.6**	**-4.0**
IPM					**PKPbc**	**13 00 26.7**	**-0.5**
IPM				PKPab	**PKPab**	**13 00 36.4**	**-4.1**
SONM	**Songino Array**	**158.08**	**19**	PKP	**PKPdf**	**13 00 26.5**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=241,slow=1.0,SNR=9.7							
SONM				PKPab	**PKPab**	**13 01 04.0**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=302,slow=4.4,SNR=6.2							
ULN	**Ulaanbaatar**	**158.24**	**18**	PKPdf	**PKPdf**	**13 00 25.9**	**-0.4**
ULN					**PKPab**	**13 01 05.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**161.13**	**115**	PKP	**PKPdf**	**13 00 30.5**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=243,slow=3.0,SNR=5.7							
CMAR				PKPab	**PKPab**	**13 01 17.3**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=258,slow=5.8,SNR=4.8							
CMAR				PP	**PP**	**13 05 03.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=246,slow=6.3,SNR=5.8							
CMAR	**Chiang Mai Arr**	**161.13**	**115**	PKPdf	**PKPdf**	**13 00 29.2**	**-1.0**
CMAR					**PKPab**	**13 01 17.1**	**-0.7**

IDC ***28*** *12:54:14.2±0.8,2.2′29N×126.°63E,h0km,mb3.9/10, mb1 4.0/11,mb1mx3.8/48,mbtmp3.9/11,ML3.5/1,MS3.0/1, Ms1 3.0/1,ms1mx2.3/46,Error ellipse: s-maj=42.5km s-min=14.0km az=66.0*

DJA ***28*** *12:54:18.6±1.0,2.′N±3.°×12.°7E±.°,h13km±10km,M4.1/9, mb4.6/5,mB4.7/2,MLv3.9/9,Mw(mB)4.0/2*

NEIC ***28*** *12:54:19.2±2.5,2.°37N±0.°08×126.°82E±0.°08,h35km±2km, mb4.3/18,Error ellipse: s-maj=16.5km s-min=10.7km az=220.0*

ISC 28 12:54:19.5±0.6,2.°39N±0.°06×126.°84E±0.°08,h35km,n44, σ1§45/46,mb4.1/20,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.69**	**162**			**Pn**	**12 54 46.9**	**+0.4**
TNTI	**Ternate**	**1.69**	**162**	P		**Pn**	**12 54 46.9**	**+0.4**
TNTI				S		**Sn**	**12 55 09.2**	**+2.3**
SGSI	**Sangihe**	**1.84**	**315**	P		**Pn**	**12 54 49.5**	**+1.0**
SGSI				S		**Sn**	**12 55 13.6**	**+3.0**
GTOI	**Gorontalo**	**4.20**	**246**	P		**Pn**	**12 55 22.1**	**+1.0**
SANI	**Sanana**	**4.49**	**191**	P		**Pn**	**12 55 24.7**	**-0.3**
MRSI	**Marisa**	**5.25**	**249**	P		**Pn**	**12 55 37.0**	**+1.5**
	0.4nm1μm90nm,0.5s							
LUWI	**Luwuk**	**5.30**	**230**			**Pn**	**12 55 38.6**	**+2.4**
LUWI	**Luwuk**	**5.30**	**230**	P		**Pn**	**12 55 37.8**	**+1.6**
	0.2nm67nm,0.7s							
SIJI	**Sorong**	**5.48**	**126**	Pn		**Pn**	**12 55 40.3**	**+1.6**
	1.5nm,0.3s,baz=331,slow=19,SNR=6.4							
SIJI				LR		LR	12 58 03.9	
	comp=Z,138nm,19.5s,baz=326,slow=41							
APSI	**Ampana**	**6.14**	**238**	P		**Pn**	**12 55 50.0**	**+2.3**
	0.1nm366nm37nm,0.6s							
TOLI2	**Tolitoli**	**6.18**	**258**			**Pn**	**12 55 48.5**	**+0.1**
FAKI	**Fak Fak**	**7.55**	**134**	Pn		**Pn**	**12 56 09.2**	**+2.1**
MYLDM	**Lahad Datu**	**8.77**	**289**			**Pn**	**12 56 27.1**	**+3.2**
FITZ	**Fitzroy Crossi**	**20.39**	**183**	P		**P**	**12 58 52.5**	**-0.9**
	2.0nm,0.8s,baz=13,slow=11,SNR=6.7							
CISI	**Cisompet, Garu**	**21.40**	**242**	P		**P**	**12 59 03.2**	**-1.2**
YULB	**Yu-li**	**21.56**	**346**	P		**P**	**12 59 03.9**	**-2.2**
YULB				IAmb	IAmb		12 59 09.6	
	comp=Z,49nm,1.5s							
TPUB	**Ta-pu**	**21.64**	**344**	P		**P**	**12 59 06.3**	**-0.6**
TPUB				IAmb	IAmb		12 59 33.0	
	comp=Z,18nm,1.0s							
ANA2	**Anatahan**	**23.18**	**52**	P		**P**	**12 59 23.5**	**+0.3**
WB0	**Warramunga Arr**	**23.23**	**162**	P		**P**	**12 59 23.1**	**-0.7**
WB0				IAmb	IAmb		12 59 36.8	
	comp=Z,5.5nm,1.0s							
WRAB	**Tennant Creek**	**23.38**	**162**	P		**P**	**12 59 23.8**	**-1.3**
WRAB				IAmb	IAmb		12 59 27.2	
	comp=Z,14nm,1.2s							
WRA	**Warramunga Arr**	**23.38**	**162**	P		**P**	**12 59 22.9**	**-2.3**
	comp=Z,1.2nm,0.3s,baz=341,slow=11,SNR=28							
WRA	**Warramunga Arr**	**23.38**	**162**	P		**P**	**12 59 23.9**	**-1.3**
WB2	**Warramunga Arr**	**23.39**	**162**	P		**P**	**12 59 23.2**	**-2.0**
WB2				IAmb	IAmb		12 59 28.3	
	comp=Z,5.4nm,0.9s							
WR0	**Warramunga Arr**	**23.46**	**162**	P		**P**	**12 59 24.5**	**-1.5**
WR0				IAmb	IAmb		12 59 40.4	
	comp=Z,4.1nm,0.8s							
ASAR	**Alice Springs**	**26.80**	**166**	P		**P**	**12 59 57.6**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=354,slow=7.5,SNR=11							
ASAR				PcP		**PcP**	**13 03 18.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=335,slow=1.5,SNR=2.1							
RPSI	**Rantau Prapat**	**27.89**	**271**	P		**P**	**13 00 04.8**	**-1.5**
RPSI				IAmb	IAmb		13 00 21.8	
	comp=Z,20nm,1.1s							
GSI	**Gunungsitoli**	**29.27**	**268**	P		**P**	**13 00 17.3**	**-1.3**
NJ2	**Nanjing**	**30.45**	**347**	*e*P		P	13 00 39.3	+10
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.6s							
CM31	**Chiang Mai Arr**	**31.66**	**302**	P		**P**	**13 00 39.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**31.66**	**302**	P		**P**	**13 00 40.0**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=117,slow=7.3,SNR=7.9							
CHTO	**Chiang Mai**	**31.82**	**303**	P		**P**	**13 00 40.4**	**-0.7**
CHTO				IAmb	IAmb		13 00 42.2	
	comp=Z,2.7nm,0.8s							
JWT	**Wachi**	**33.68**	**13**	P		**P**	**13 00 58.4**	**+1.2**
KSRS	**Korea Array**	**34.91**	**2**	P		**P**	**13 01 09.3**	**+1.5**
	comp=Z,1.1nm,0.5s,baz=179,slow=10,SNR=12							
STKA	**Stephens Creek**	**36.84**	**159**	P		**P**	**13 01 23.9**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=342,slow=9.3,SNR=7.7							
STKA	**Stephens Creek**	**36.84**	**159**	P		**P**	**13 01 24.5**	**0.0**
MK31	**Makanchi Array**	**58.72**	**326**	P		**P**	**13 04 12.3**	**-1.4**
MKAR	**Makanchi Array**	**58.72**	**326**	P		**P**	**13 04 12.8**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=118,slow=7.0,SNR=6.4							
KURBB	**Kurchatov Arra**	**62.92**	**328**	P		**P**	**13 04 41.4**	**-0.9**
	comp=Z,0.9nm,0.5s,baz=130,slow=6.3,SNR=10							
KURK	**Kurchatov**	**62.92**	**328**	P		**P**	**13 04 41.4**	**-0.9**
KK31	**Karatay Array**	**64.28**	**317**	P		**P**	**13 04 51.2**	**-0.2**
KK31				IAmb	IAmb		13 04 52.8	
	comp=Z,3.8nm,1.4s							
KKAR	**Karatay Array**	**64.28**	**317**	P		**P**	**13 04 51.4**	**-0.1**
BRVK	**Borovoye**	**68.57**	**327**	P		**P**	**13 05 17.6**	**-1.1**
BRVK				IAmb	IAmb		13 05 29.6	
	comp=Z,1.4nm,0.8s							
AKTO	**Aktyubinsk**	**74.77**	**322**	P		**P**	**13 05 55.9**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=112,slow=11,SNR=3.3							
VNDA	**Vanda**	**82.09**	**173**	P		**P**	**13 06 34.9**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=308,slow=7.0,SNR=1.9							

IDC ***28*** *13:03:10.9±1.4,17.°61S×168.°22E,h0km,mb3.9/8, mb1 4.2/9,mb1mx3.8/35,mbtmp3.9/9,ML3.7/1,MS3.2/2, Ms1 3.2/2,ms1mx2.6/40,Error ellipse: s-maj=47.9km s-min=22.4km az=139.0*

NEIC ***28*** *13:03:18.5±1.6,17.°8S±0.°2×168.°2E±0.°3,h61km±11km, mb4.1/6,Error ellipse: s-maj=50.2km s-min=18.0km az=129.0*

ISC 28 13:03:14.9±1.0,17.°75S±0.°10×168.°2E±0.°2,h27km,n20, σ0§99/20,mb4.0/11,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**4.62**	**201**	*e*Pn		**Pn**	**13 04 24.6**	**+1.6**
	48nm,0.3s							
DZM				*e*Sn		**Sn**	**13 05 14.6**	**-1.2**
	95nm,0.4s							
DZM				*e*LR		LR	13 05 28.5	
	comp=Z,315nm,23.6s							
DZM	**Mont Dzumac**	**4.62**	**201**	Pn		**Pn**	**13 04 24.6**	**+1.6**
	3.1nm,0.3s,baz=56,slow=11,SNR=55							
DZM				Sn		**Sn**	**13 05 14.1**	**-1.7**
	15nm,0.3s,baz=158,slow=22,SNR=10.0							
DZM	**Mont Dzumac**	**4.62**	**201**	Pn		**Pn**	**13 04 24.4**	**+1.4**
MSVF	**Nonsavu**	**9.36**	**91**	LR		LR	13 08 37.6	
	comp=Z,188nm,19.6s,baz=297,slow=35							
HNR	**Honiara**	**11.53**	**315**	LR		LR	13 10 01.8	
	comp=Z,89nm,19.7s,baz=150,slow=36							
WB0	**Warramunga Arr**	**32.07**	**261**	P		**P**	**13 09 39.4**	**-0.4**
WB0				IAmb		IAmb	13 10 00.5	
	comp=Z,4.6nm,1.2s							
WB2	**Warramunga Arr**	**32.10**	**261**	P		**P**	**13 09 39.3**	**-0.8**
WB2				IAmb		IAmb	13 09 44.6	
	comp=Z,4.6nm,1.0s							
WRA	**Warramunga Arr**	**32.11**	**261**	P		**P**	**13 09 39.6**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=84,slow=8.5,SNR=16							
WRA	**Warramunga Arr**	**32.11**	**261**	P		**P**	**13 09 39.2**	**-1.0**
AS31	**Alice Springs**	**32.58**	**254**	P		**P**	**13 09 43.9**	**-0.5**
AS31				IAmb		IAmb	13 10 02.1	
	comp=Z,1.1nm,1.0s							
ASAR	**Alice Springs**	**32.59**	**254**	P		**P**	**13 09 44.1**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=80,slow=9.0,SNR=44							
FITZ	**Fitzroy Crossi**	**40.45**	**263**	P		**P**	**13 10 51.8**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=108,slow=11							
KSM	**Kuching**	**60.11**	**282**	P		**P**	**13 13 20.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**77.02**	**294**	P		**P**	**13 15 06.5**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=120,slow=4.2,SNR=7.0							
CMAR	**Chiang Mai Arr**	**77.02**	**294**	P		**P**	**13 15 06.2**	**+0.3**
SEY	**Seymchan**	**81.37**	**353**	P		**P**	**13 15 28.6**	**0.0**
	comp=Z,0.8nm,0.5s,baz=157,slow=5.4,SNR=7.9							
SONM	**Songino Array**	**85.45**	**323**	P		**P**	**13 15 50.6**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=143,slow=4.8,SNR=7.1							
SONM	**Songino Array**	**85.45**	**323**	P		**P**	**13 15 50.5**	**+0.3**
SONM				IAmb		IAmb	13 15 51.9	
	comp=Z,1.9nm,1.0s							
NVAR	**Mina Array Bea**	**88.54**	**49**	P		**P**	**13 16 05.8**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=240,slow=7.2,SNR=3.9							
ILAR	**Eielson Array**	**89.10**	**18**	P		**P**	**13 16 05.9**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=237,slow=4.7,SNR=6.6							

IDC 28 13:13:21.9±2.7,27.°69N×85.°75E,h0km,mb3.5/4, mb1 3.5/5,mb1mx3.3/45,mbtmp3.4/5,ML3.4/1,Error ellipse: s-maj=94.3km s-min=25.6km az=69.0,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKAR	**Makanchi Array**	**19.27**	**353**	P		P	13 17 47.8	-0.2
	0.1nm,0.3s,baz=172,slow=9.4,SNR=3.7							
KURBB	**Kurchatov Arra**	**23.56**	**348**	P		P	13 18 33.6	-0.2
	0.2nm,0.3s,baz=175,slow=10,SNR=1.6							
SONM	**Songino Array**	**25.75**	**33**	P		P	13 18 54.6	+0.2
	0.4nm,0.3s,baz=223,slow=9.6,SNR=2.2							
ZALV	**Zalesovo Beam**	**26.24**	**359**	P		P	13 18 58.8	+0.3
	0.4nm,0.3s,baz=179,slow=7.2,SNR=2.6							
WRA	**Warramunga Arr**	**66.72**	**130**	P		P	13 24 15.1	-0.1
	0.2nm,0.3s,baz=322,slow=6.4,SNR=9.1							

BJI ***28*** *13:32:35.5±0.0,6.°01N×152.°44E,h10km,mB4.9/38, mb4.9/57,Ms4.5/35,Ms7 4.2/29*

IDC ***28*** *13:32:37.6±0.4,6.°00N×152.°05E,h0km,mb4.7/28, mb1 4.8/31,mb1mx4.7/48,mbtmp4.8/31,ML4.5/3,MS3.5/13, Ms1 3.6/13,ms1mx3.2/36,Error ellipse: s-maj=16.2km s-min=10.5km az=96.0*

MOS ***28*** *13:32:39.7±0.8,6.°02N×151.°95E,h24km,mb5.1/54,Error ellipse: s-maj=8.9km s-min=5.7km az=97.8*

NEIC ***28*** *13:32:40.1±1.4,6.°04N±0.°09×152.°0E±0.°1,h15km±3km, mb5.1/155,Error ellipse: s-maj=15.6km s-min=13.3km az=84.0*

DJA ***28*** *13:32:41.4±0.6,6.°N±5.°×15.°2E±.°,h30km±4km,M5.3/41, mB5.6/12,mb5.1/41,MLv5.9/1,Mw(mB)5.1/12*

GCMT ***28*** *13:32:42.1±0.3,5.°87N±0.°04×152.°07E±0.°03,h22km±1km, MW4.8/79,Moment Tensor Solution. s12,c12; s79,c103; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.43±.19; Mθθ-0.51±.10; Mϕϕ-1.92±.13; Mrθ0.43±.19; Mθϕ0.56±.06; Mϕr0.02±.18; Best double couple: M₀2.30600×10^16 NP1:ϕs349.00000°,δ44.00000°,λ102.00000°. NP2: ϕs152.00000°,δ47.00000°,λ79.00000°. Principal axes: T 2.4930, Plg82.0000°, Azm351.0000°; N -0.3710, Plg8.0000°, Azm160.0000°; P -2.1180, Plg2.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 13:32:38.9±0.3,6.°03N±0.°04×152.°13E±0.°05,h10km,n385, σ1§21/389,mb5.0/170,MS3.9/25,12C-1D,Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PATS	**Pohnpei**	**6.19**	**82**	P		**Pn**	**13 34 08.2**	**-2.3**
	baz=6.2,SNR=9.5							
PATS				S		Sn	13 35 13.4	-8.0
	baz=6.2							
PATS	**Pohnpei**	**6.19**	**82**	Pn		**Pn**	**13 34 07.4**	**-3.1**
GUMO	**Guam**	**10.37**	**317**	Pn		**Pn**	**13 35 07.1**	**-0.8**
	3.7nm,0.3s,baz=176,slow=12,SNR=1.2							
GUMO				Sn		**Sn**	**13 36 56.8**	**-7.5**
	4.5nm,0.3s,baz=181,slow=20,SNR=1.1							
GUMO				LR		LR	13 39 21.9	
	comp=Z,74nm,18.1s,baz=124,slow=39							
GUMO	**Guam**	**10.37**	**317**	P		**Pn**	**13 35 03.7**	**-4.2**
GUMO	**Guam**	**10.37**	**317**	Pn		**Pn**	**13 35 03.7**	**-4.2**
JAY	**Jayapura**	**14.22**	**234**	Pn		**Pn**	**13 35 59.6**	**-1.0**
	0.8nm,0.3s,baz=34,slow=7.4,SNR=4.9							
JAY				Sn		Sn	13 38 26.0	-13
	0.3nm,0.3s,baz=324,slow=2.4,SNR=1.6							
JAY				LR		LR	13 40 16.2	
	comp=Z,413nm,18.9s,baz=24,slow=32							
JAY	**Jayapura**	**14.22**	**234**	P		**Pn**	**13 36 01.3**	**+0.6**
	23nm,1.6s							
GENI	**Genyem**	**14.70**	**235**	P		**Pn**	**13 36 08.8**	**+1.6**
	73nm,0.7s							
GENI				pP		P	13 36 18.6	+5.2
	73nm,0.7s							
PMG	**Port Moresby**	**16.12**	**198**	Pn		**P**	**13 36 29.3**	**+0.2**
	9.5nm,0.3s,baz=28,slow=5.5,SNR=35							
PMG	**Port Moresby**	**16.12**	**198**	P		**P**	**13 36 29.7**	**+0.6**
PMG				pmax		pmax		
	comp=Z,113nm,0.7s							
PMG	**Port Moresby**	**16.12**	**198**	P		**P**	**13 36 29.7**	**+0.6**
PMG				IAmb		IAmb	13 36 31.4	
	comp=Z,113nm,0.7s							
HNR	**Honiara**	**17.22**	**153**	P		**Pn**	**13 36 40.1**	**+0.3**
	comp=Z,4.9nm,0.3s,baz=257,slow=5.6,SNR=3.2							
HNR				S		**Sn**	**13 39 46.8**	**-4.8**
	comp=Z,4.6nm,0.3s,baz=55,slow=20,SNR=1.9							
HNR	**Honiara**	**17.22**	**153**	P		**Pn**	**13 36 36.1**	**-3.7**
HNR				pmax		pmax		
	comp=Z,120nm,1.0s							
HNR	**Honiara**	**17.22**	**153**			**Pn**	**13 36 36.1**	**-3.7**
HNR				IAmb		IAmb	13 36 53.8	
	comp=Z,120nm,1.0s							
BAKI	**Biak**	**17.54**	**246**	P		**P**	**13 36 45.4**	**+0.5**
SRPI	**Serui, Papua**	**17.70**	**244**	P		**P**	**13 36 47.6**	**+0.9**
	comp=Z,5μmcomp=Z,115nm,0.7s							
H11S3	**WAKE ISLAND Hy**	**18.84**	**48**	T		T	13 56 35.6	
	baz=230,slow=75,SNR=469							
H11S2	**WAKE ISLAND Hy**	**18.85**	**48**	T		T	13 56 36.4	
	baz=230,slow=75,SNR=234							
H11S1	**WAKE ISLAND Hy**	**18.86**	**48**	T		T	13 56 37.3	
	baz=230,slow=75,SNR=238							
H11N1	**WAKE ISLAND Hy**	**19.77**	**45**	T		T	13 57 43.9	
	baz=227,slow=76,SNR=355							
H11N2	**WAKE ISLAND Hy**	**19.79**	**45**	T		T	13 57 44.9	
	baz=227,slow=76,SNR=240							
H11N3	**WAKE ISLAND Hy**	**19.79**	**45**	T		T	13 57 45.1	
	baz=227,slow=76,SNR=124							
FAKI	**Fak Fak**	**21.76**	**246**	P		**P**	**13 37 30.9**	**-0.1**
FAKI	**Fak Fak**	**21.76**	**246**	P		**P**	**13 37 31.1**	**+0.1**
	comp=Z,2μmcomp=Z,186nm,1.1s							
FAKI				pP		**pwP**	**13 37 39.1**	**+0.8**
	comp=Z,2μmcomp=Z,186nm,1.1s							
SIJI	**Sorong**	**21.93**	**252**	P		**P**	**13 37 32.2**	**-0.6**
	comp=Z,30nm,0.8s,baz=68,slow=9.9,SNR=23							
SIJI				LR		LR	13 44 16.3	
	comp=Z,232nm,18.6s,baz=45,slow=32							
SWI	**Sorong**	**21.94**	**252**	P		**P**	**13 37 33.5**	**+0.6**
	comp=Z,1μmcomp=Z,63nm,1.1s							
JCJ	**Chichijima**	**22.99**	**337**	P		**P**	**13 37 44.0**	**0.0**
	comp=Z,148nm,0.7s,baz=306,slow=22,SNR=7.4							
JCJ	**Chichijima**	**22.99**	**337**	P		**P**	**13 37 44.0**	**0.0**
MTSU	**Mount Surprise**	**25.22**	**198**	P		**P**	**13 38 05.0**	**-0.2**
	baz=25,SNR=34							
CTA	**Charters Tower**	**26.59**	**192**	P		**P**	**13 38 17.8**	**+0.2**
	comp=Z,8.5nm,0.7s,baz=19,slow=10,SNR=9.2							
CTAO	**Charters Tower**	**26.59**	**192**	P		**P**	**13 38 17.9**	**+0.3**
CTAO				pmax		pmax		
	comp=Z,39nm,1.4s							
CTAO	**Charters Tower**	**26.59**	**192**	P		**P**	**13 38 17.9**	**+0.3**
CTAO				IAmb		IAmb	13 38 19.2	
	comp=Z,39nm,1.4s							
SGSI	**Sangihe**	**26.61**	**266**	P		**P**	**13 38 18.0**	**+0.1**
NLAI	**Namlea**	**26.64**	**250**	P		**P**	**13 38 18.4**	**+0.3**
	comp=Z,2μmcomp=Z,26nm,1.0s							
KDU	**Kakadu**	**26.97**	**226**	P		**P**	**13 38 19.8**	**-1.3**
	baz=27,SNR=27							
MTN	**Manton Dam**	**28.05**	**228**	P		**P**	**13 38 29.7**	**-1.1**
	baz=28,SNR=11							
KMSI	**Cibinong**	**28.61**	**260**	P		**P**	**13 38 37.1**	**+1.3**
	comp=Z,74nm,0.5s							
QIS	**Mount Isa**	**29.15**	**205**	P		**P**	**13 38 40.3**	**-0.2**
	baz=29,SNR=7.0							
JHJ	**Hachijo jima 2**	**29.30**	**338**	P		**P**	**13 38 42.1**	**+0.5**
	comp=Z,34nm,0.8s,baz=129,slow=6.6,SNR=2.2							
GTOI	**Gorontalo**	**29.55**	**261**	P		**P**	**13 38 44.9**	**+0.7**
	comp=Z,15nm,1.0s							
LUWI	**Luwuk**	**30.14**	**257**	P		**P**	**13 38 49.0**	**-0.4**
	comp=Z,2μmcomp=Z,51nm,1.0s							
JOW	**Kunigami**	**30.73**	**315**	LR		LR	13 50 30.3	
	comp=Z,83nm,18.6s,baz=200,slow=35							
JOW	**Kunigami**	**30.73**	**315**	P		**P**	**13 38 54.2**	**-0.3**
JOW				IAmb		IAmb	13 39 04.1	
	comp=Z,43nm,1.4s							
WB0	**Warramunga Arr**	**31.02**	**214**	P		**P**	**13 38 56.0**	**-1.1**
WB0				IAmb		IAmb	13 38 56.6	
	comp=Z,14nm,0.6s							
WR0	**Warramunga Arr**	**31.09**	**213**	P		**P**	**13 38 56.6**	**-1.1**
WRAB	**Tennant Creek**	**31.17**	**214**	*ce*P		**P**	**13 38 57.5**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,23nm,1.3s							
WRAB	**Tennant Creek**	**31.17**	**214**	P		**P**	**13 38 57.3**	**-1.2**
WRAB				IAmb		IAmb	13 38 58.4	
	comp=Z,15nm,0.8s							
WB2	**Warramunga Arr**	**31.18**	**214**	P		**P**	**13 38 57.5**	**-1.0**
WB2				IAmb		IAmb	13 38 58.1	
	comp=Z,14nm,0.6s							
WRA	**Warramunga Arr**	**31.19**	**214**	P		**P**	**13 38 57.7**	**-0.8**
	comp=Z,14nm,0.6s,baz=39,slow=9.3,SNR=154							
WRA				PcP		**PcP**	**13 41 53.7**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=29,slow=2.6,SNR=5.0							
WRA				LR		LR	13 51 27.1	
	comp=Z,151nm,21.4s,baz=190,slow=36							
WRA	**Warramunga Arr**	**31.19**	**214**	P		**P**	**13 38 56.7**	**-1.9**
WRA							13 41 53.7	
WRA	**Warramunga Arr**	**31.19**	**214**	P		**P**	**13 38 56.7**	**-1.9**
APSI	**Ampana**	**31.21**	**258**	P		**P**	**13 38 57.9**	**-0.9**
	comp=Z,15nm,1.2s							
DZM	**Mont Dzumac**	**31.25**	**154**	P		**P**	**13 39 01.1**	**+1.9**
DZM				IAmb		IAmb	13 39 02.5	
	comp=Z,36nm,1.2s							
TOLI2	**Tolitoli**	**31.66**	**262**	P		**P**	**13 39 01.5**	**-1.3**
SOEI	**Soe**	**31.89**	**241**	P		**P**	**13 39 04.9**	**0.0**
SOEI	**Soe**	**31.89**	**241**	P		**P**	**13 39 04.7**	**-0.2**
	comp=Z,104nm,0.8s							
JGF	**Kuroka**	**32.42**	**337**	P		**P**	**13 39 07.9**	**-1.3**
BATI	**Baumata**	**32.62**	**241**	P		**P**	**13 39 11.2**	**-0.1**
	comp=Z,44nm,0.9s							
MJAR	**Matsushiro Arr**	**32.94**	**339**	P		**P**	**13 39 12.1**	**-1.6**
	comp=Z,4.7nm,0.9s,baz=168,slow=10,SNR=12							
MJAR	**Matsushiro Arr**	**32.94**	**339**	P		**P**	**13 39 11.1**	**-2.6**
MJAR				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MJAR	**Matsushiro Arr**	**32.94**	**339**	P		**P**	**13 39 11.1**	**-2.6**
MAJO	**Matsushiro**	**32.94**	**339**	P		**P**	**13 39 13.0**	**-0.8**
MAJO				pmax		pmax		
	comp=Z,10.0nm,1.3s							
MAJO	**Matsushiro**	**32.94**	**339**	P		**P**	**13 39 13.0**	**-0.8**
MAT	**Matsushiro**	**

HTT Hallett 41.20 197 P **P** **13 40 23.8 -0.2**
baz=41,SNR=28
CAN Canberra 41.24 184 P **P** **13 40 24.8 +0.5**
CAN pmax pmax
comp=Z,33nm,1.4s
CAN Canberra 41.24 184 P **P** **13 40 24.8 +0.5**
BBOO Buckleboo 41.54 201 P **P** **13 40 26.4 -0.4**
baz=42,SNR=34
YSS Yuzh-Sakhalins 41.56 350 *ce*P **P** **13 40 27.5 +0.8**
YSS pmax pmax
comp=Z,6.0nm,0.6s
YSS Yuzh-Sakhalins 41.56 350 P **P** **13 40 27.8 +1.0**
USRK Ussuriysk Ar. 41.92 338 P **P** **13 40 29.2 -0.6**
comp=Z,8.8nm,0.9s,baz=162,slow=10.0,SNR=9.6
USRK Ussuriysk Ar. 41.92 338 P **P** **13 40 29.7 0.0**
USA0B Ussuriysk Arra 41.92 338 P **P** **13 40 29.2 -0.6**
USA0B pmax pmax
comp=Z,16nm,1.1s
USA0B Ussuriysk Arra 41.92 338 P **P** **13 40 29.1 -0.6**
KSM Kuching 41.97 266 P **P** **13 40 29.7 -0.8**
KSM IAmb IAmb 13 40 31.4
comp=Z,22nm,0.9s
KSM Kuching 41.97 266 P **P** **13 40 31.0 +0.4**
DL2 Dalian 42.79 324 P **P** **13 40 37.8 +0.9**
DL2 S **S** **13 47 03.8 +2.8**
DL2 pmax pmax
comp=Z,18nm,0.6s
DL2 pmax pmax
comp=Z,110nm,4.9s
DL2 LR LR
comp=Z,130nm,15.9s
DL2 LR LR
comp=Z,220nm,13.9s
DL2 LR LR
comp=Z,180nm,13.6s
WHN Wuhan 43.04 309 ⇑P **P** **13 40 43.3 +4.2**
QIZ Qiongzhong 43.13 291 P **P** **13 40 40.8 +0.8**
QIZ S **S** **13 47 08.8 +2.2**
QIZ SS **SS** **13 50 20.5 +1.2**
QIZ pmax pmax
comp=Z,83nm,6.9s
QIZ LR LR
comp=Z,120nm,13.2s
QIZ LR LR
comp=Z,120nm,20.1s
MDJ Mudanjiang 43.19 336 P **P** **13 40 41.0 +0.9**
MDJ pmax pmax
comp=Z,14nm,0.7s
MDJ pmax pmax
comp=Z,130nm,3.9s
MDJ Mudanjiang 43.19 336 P **P** **13 40 40.3 +0.2**
FORT Forrest 43.25 211 P **P** **13 40 39.9 -0.8**
baz=43,SNR=10
TOO Toolangi 43.82 188 P **P** **13 40 45.4 +0.1**
baz=44,SNR=8.5
CN2 Changchun 44.32 332 *e*P **P** **13 40 49.5 +0.3**
CN2 sP pwP 13 40 56.0 -0.8
CN2 S **S** **13 47 23.8 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
TPI Tanjungpandan 45.27 260 P **P** **13 40 57.3 +0.1**
comp=Z,23nm,1.0s
TYV Tymovskoe 45.38 352 *e*P **P** **13 40 59.0 +1.5**
TYV *e* 13 47 39.6
TYV pmax pmax
comp=Z,18nm,1.2s
TYV pmax pmax
comp=Z,100nm,2.2s
TYV MLR MLR
comp=Z,800nm,21.0s
MEEK Meekatharra 45.93 223 P **P** **13 41 02.3 +0.1**
baz=46,SNR=10
KLR Kul'dur 46.37 342 *ce*P **P** **13 41 04.8 -0.6**
KLR pmax pmax
comp=Z,4.0nm,0.7s
GRNR Gornyy 46.48 346 ⇑*i*P **P** **13 41 07.6 +1.4**
GRNR pmax pmax
comp=N,5.0nm,1.0s
GRNR pmax pmax
comp=E,2.0nm,1.0s
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR MLR MLR
comp=E,30nm,11.0s
GRNR MLR MLR
comp=N,30nm,13.0s
GRNR MLR MLR
comp=Z,80nm,14.0s
UBPT Khong Chiam 46.68 285 P **P** **13 41 10.0 +1.7**
UBPT Khong Chiam 46.68 285 P **P** **13 41 09.4 +1.1**
BJI Beijing 46.77 322 P **P** **13 41 08.5 -0.1**
BJI pmax pmax
comp=Z,9.0nm,0.9s
KMBL Kambalda 47.09 216 P **P** **13 41 10.8 -0.5**
baz=47,SNR=9.3
PEA0B Petropavlovsk- 47.15 5 P **P** **13 41 13.3 +1.9**
PEA0B pmax pmax
comp=Z,45nm,1.2s
PEA0B Petropavlovsk- 47.15 5 P **P** **13 41 13.3 +1.9**
PETK Petropavlovsk- 47.15 5 P **P** **13 41 12.4 +1.0**
comp=Z,7.5nm,0.7s,baz=162,slow=6.4,SNR=45
PETK PcP **PcP** **13 42 43.5 +0.5**
comp=Z,2.2nm,0.6s,baz=139,slow=2.9,SNR=2.6
PETK LR LR 13 56 47.6
comp=Z,19nm,21.0s,baz=127,slow=31
PETK Petropavlovsk- 47.15 5 P **P** **13 41 11.5 0.0**
GYA Guiyang 47.82 300 ⇑P **P** **13 41 18.3 +1.1**
GYA sP pwP 13 41 29.3 +4.5
GYA S **S** **13 48 16.0 +1.6**
GYA pmax pmax
comp=Z,3.0nm,1.0s
GYA pmax pmax
comp=Z,13nm,3.5s
GYA LR LR
comp=Z,30nm,9.2s
GYA LR LR
comp=Z,40nm,15.9s
MYKOM **Kota Tinggi 48.34 267** P **P** **13 41 21.2 -0.1**
MYKOM IAmb IAmb 13 41 22.7
comp=Z,22nm,1.1s
MYKOM **Kota Tinggi 48.34 267** P **P** **13 41 22.0 +0.7**
XAN Xi'an 48.70 311 P **P** **13 41 24.0 +0.2**
XAN pmax pmax
comp=Z,15nm,0.9s
XAN pmax pmax
comp=Z,160nm,4.7s
TAU Tasmania Unive 48.91 185 P **P** **13 41 26.2 +1.1**
TAU pmax pmax
comp=Z,71nm,1.3s
TAU Tasmania Unive 48.91 185 P **P** **13 41 26.2 +1.1**
MDSI Maura Dua 49.01 259 P **P** **13 41 25.7 -0.7**
comp=Z,14nm,1.2s
MORW Morawa 49.23 223 P **P** **13 41 27.5 -0.3**
baz=49,SNR=9.4
NONG Nongkai 49.23 289 P **P** **13 41 29.2 +1.1**
comp=Z,904nmcomp=Z,19nm,1.1s
LHSI Lahat 49.52 260 P **P** **13 41 30.3 0.0**
comp=Z,32nm,1.6s
BLDU Ballidu 49.77 221 P **P** **13 41 31.7 -0.3**
baz=50,SNR=19
URZ Urewera 49.81 154 P **P** **13 41 33.7 +1.6**
SRAK Srakaew 49.88 283 P **P** **13 41 30.9 -2.1**
comp=Z,1µmcomp=Z,109nm,1.2s
CHAI Chaiyaphum 50.08 286 P **P** **13 41 35.5 +0.9**
comp=Z,374nmcomp=Z,51nm,0.9s
HHC Hu-ho-hao-te 50.12 320 *e*P **P** **13 41 36.5 +1.8**
HHC pmax pmax
comp=Z,17nm,1.2s
HHC pmax pmax
comp=Z,45nm,8.4s
HHC LR LR
comp=Z,160nm,10.6s
HHC LR LR
comp=Z,120nm,12.1s
HHC LR LR
comp=Z,120nm,14.5s
QRZ Quartz Range 50.25 160 P **P** **13 41 37.7 +2.3**
BKZ Black Stump Fm 50.31 155 P **P** **13 41 37.2 +1.2**

KMI Kunming 50.89 298 ⇑P **P** **13 41 42.3 +1.5**
KMI pP sP 13 41 45.5 +2.2
KMI sP pwP 13 41 47.5 -1.0
KMI PcP **PcP** **13 42 59.8 +2.3**
KMI S **S** **13 48 54.0 -3.7**
KMI sS sS 13 49 05.0 +4.3
KMI pmax pmax
comp=Z,16nm,0.9s
KMI pmax pmax
comp=Z,120nm,5.9s
KMI LR LR
comp=Z,270nm,15.0s
KMI LR LR
comp=Z,65nm,14.4s
KMI LR LR
comp=Z,260nm,11.5s
IPM Ipoh 50.90 271 P **P** **13 41 41.0 +0.1**
THZ Tophouse 51.21 160 P **P** **13 41 43.5 +0.7**
KULM Kulim 51.22 272 P **P** **13 41 43.1 -0.2**
TUWZ Tuamarina 51.28 159 P **P** **13 41 43.8 +0.6**
SNZO South Karori 51.45 158 P **P** **13 41 44.2 -0.2**
BFZ Birch Farm 51.50 157 P **P** **13 41 45.1 +0.3**
BSWZ Blackbirch Sta 51.51 159 P **P** **13 41 45.6 +0.8**
CD2 Chengdu 51.60 305 P **P** **13 41 46.0 +0.1**
CD2 S **S** **13 49 06.5 -0.6**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,310nm,13.2s
CD2 LR LR
comp=Z,310nm,7.3s
UTTA Uttaradit 51.64 288 P **P** **13 41 48.0 +1.7**
comp=Z,14nm,0.8s
ZEA Zeya 51.69 341 *e*P **P** **13 41 46.5 +0.4**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
FOZ Fox Glacier 51.87 164 P **P** **13 41 47.8 +0.3**
PLWZ Palliser 51.88 158 P **P** **13 41 48.4 +0.7**
LTZ Lake Taylor 51.92 161 P **P** **13 41 49.8 +1.8**
KHZ Kahutara 52.01 160 P **P** **13 41 48.3 -0.3**
CRAI Chiangrai 52.12 291 P **P** **13 41 51.2 +1.2**
PHET Kaeng Krachan 52.16 282 P **P** **13 41 52.4 +2.2**
comp=Z,291nmcomp=Z,22nm,0.9s
OXZ Oxford 52.34 162 P **P** **13 41 51.0 0.0**
RPZ Rata Peaks 52.39 163 P **P** **13 41 51.9 +0.4**
SUKH Sukhothai 52.48 287 P **P** **13 41 54.1 +1.5**
comp=Z,187nmcomp=Z,22nm,0.9s
UTHA Uthaitani 52.49 285 P **P** **13 41 54.5 +1.8**
comp=Z,19nm,1.0s
POHA Pohakuloa 52.59 70 P **P** **13 41 53.8 +0.1**
MNSI Mandailing Nat 52.69 266 P **P** **13 41 53.0 -1.2**
comp=Z,32nm,0.8s
LBZ Lake Benmore 52.76 164 P **P** **13 41 54.8 +0.7**
MQZ McQueen's Vall 52.87 161 P **P** **13 41 56.2 +1.3**
DCZ Deep Cove 53.00 167 P **P** **13 41 55.6 -0.3**
DCZ IAmb IAmb 13 42 09.4
comp=Z,28nm,1.1s
UMPA Umpang Tak 53.10 286 P **P** **13 41 59.3 +2.0**
comp=Z,874nmcomp=Z,17nm,1.0s
CM31 Chiang Mai Arr 53.24 288 P **P** **13 41 57.7 -0.5**
CM31 IAmb IAmb 13 42 00.4
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 53.24 288 P **P** **13 41 58.5 +0.3**
comp=Z,8.0nm,0.8s,baz=90,slow=5.6,SNR=16
CMAR Chiang Mai Arr 53.24 288 P **P** **13 41 55.3 -2.9**
KHLT Khaolaem Dam 53.27 284 P **P** **13 41 59.0 +0.6**
comp=Z,11nm,0.9s
CMMT Chiang Mai 53.27 289 P **P** **13 41 58.0 -0.5**
comp=Z,2.8nm,1.2s
CM33 Chiang Mai Arr 53.28 289 P **P** **13 41 59.0 +0.5**
CHTO Chiang Mai 53.28 289 P **P** **13 41 58.2 -0.3**
CHTO pmax pmax
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 53.28 289 P **P** **13 41 58.1 -0.3**
LZH Lanzhou 53.33 311 *e*P **P** **13 42 03.0 +4.2**
LZH pP pwP 13 42 07.3 +0.9
LZH sP sP 13 42 12.3 +11
LZH pmax pmax
comp=Z,11nm,1.2s
LZH LR LR
comp=Z,170nm,18.4s
LZH LR LR
comp=Z,220nm,19.0s
LZH LR LR
comp=Z,160nm,17.9s
CM32 Chiang Mai Arr 53.35 289 P **P** **13 42 00.0 +1.0**
GSI Gunungsitoli 54.62 267 P **P** **13 42 06.4 -2.0**
ULN Ulaanbaatar 56.63 325 *ce*P **P** **13 42 22.5 +0.1**
ULN pmax pmax
comp=Z,9.0nm,0.8s
ULN Ulaanbaatar 56.63 325 P **P** **13 42 22.6 +0.1**
SEY Seymchan 56.78 0 P **P** **13 42 23.6 +0.6**
comp=Z,6.5nm,0.8s,baz=168,slow=5.8,SNR=38
SONM Songino Array 56.99 325 P **P** **13 42 25.7 +0.7**
comp=Z,11nm,0.7s,baz=134,slow=6.9,SNR=57
SONM Songino Array 56.99 325 P **P** **13 42 25.3 +0.3**
SONM IAmb IAmb 13 42 26.7
comp=Z,11nm,0.8s
GTA Gaotai 57.52 313 P **P** **13 42 29.5 +0.6**
GTA pP sP 13 42 33.8 +2.4
GTA sP pwP 13 42 36.5 -0.1
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,33nm,5.0s
GTA LR LR
comp=Z,71nm,16.7s
GTA LR LR
comp=Z,70nm,19.6s
GTA LR LR
comp=Z,93nm,19.6s
COCO West Island 57.88 252 *i* P **P** **13 42 31.7 +0.1**
YAK Yakutsk 58.30 348 *e*P **P** **13 42 34.6 +0.8**
YAK *e* 13 42 43.2
YAK pmax pmax
comp=Z,36nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=N,10.0nm,0.9s
YAK Yakutsk 58.30 348 P **P** **13 42 34.4 +0.6**
BOD Bodaibo 59.55 337 *e*P **P** **13 42 42.6 +0.1**
BOD pmax pmax
comp=Z,16nm,1.3s
ZAK Zakamensk 60.06 326 *e*P **P** **13 42 45.7 -0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.2s
SDPT Sand Point 61.95 28 P **P** **13 42 58.3 -0.6**
BILL Bilibino 62.65 6 *e*P **P** **13 43 04.3 +0.9**
BILL *e* 13 43 42.1
BILL *e* 13 45 22.0
BILL *e*PPP PPP 13 46 50.0
BILL pmax pmax
comp=Z,19nm,1.7s
BILL Bilibino 62.65 6 P **P** **13 43 02.5 -0.9**
ANM Nome 65.74 19 P **P** **13 43 23.7 -0.1**
ANM pmax pmax
comp=Z,13nm,1.0s
ANM Nome 65.74 19 P **P** **13 43 23.7 -0.1**
ANM IAmb IAmb 13 43 35.1
comp=Z,12nm,1.0s
ANM Nome 65.74 19 P 13 43 26.0
baz=228
OHAK Old Harbor 66.35 29 P **P** **13 43 28.2 +0.4**
KDAK Kodiak Island 66.95 29 P **P** **13 43 31.9 +0.3**
KDAK pmax pmax
comp=Z,23nm,1.3s
KDAK Kodiak Island 66.95 29 P **P** **13 43 31.9 +0.3**
KDAK IAmb IAmb 13 43 44.7
comp=Z,23nm,1.2s
WMQ Urumqi 67.50 315 *e*P **P** **13 43 37.3 +1.8**
WMQ pP sP 13 43 40.5 +2.5
WMQ sP pwP 13 43 45.0 +1.8
WMQ pmax pmax
comp=Z,34nm,0.7s
WMQ pmax pmax
comp=Z,99nm,4.7s
TTA Tatalina 68.05 23 P **P** **13 43 40.0 +1.4**
TTA pmax pmax
comp=Z,6.0nm,1.0s
TTA Tatalina 68.05 23 P **P** **13 43 40.0 +1.4**
TTA Tatalina 68.05 23 P 13 43 40.2
baz=238
CNPM China Poot 68.37 27 P **P** **13 43 41.5 +0.9**
BRLK Bradley Lake 68.64 27 P **P** **13 43 42.9 +0.6**
BRLK IAmb IAmb 13 43 58.8
comp=Z,20nm,1.1s
RDOG Red Dog Mine 68.82 17 P **P** **13 43 44.3 +1.1**
RDOG IAmb IAmb 13 43 46.2
comp=Z,15nm,0.8s
RDOG Red Dog Mine 68.82 17 P 13 43 45.6
baz=229
CAPN Captain Cook N 68.97 26 P **P** **13 43 44.6 +0.4**
DGZ Jazzator, Alta 69.19 321 ⇑*i*P **P** **13 43 47.0 +1.0**
DGZ pmax pmax
comp=Z,14nm,0.7s
SUA Susitna One 69.46 26 P 13 43 48.2
baz=243
SUA Susitna One 69.46 26 P **P** **13 43 47.7 +0.2**
PPLA Purkeypile 69.53 24 P **P** **13 43 48.5 +0.5**
PPLA IAmb IAmb 13 44 01.5
comp=Z,13nm,1.2s
RC01 Rabbit Creek A 69.73 26 P **P** **13 43 50.1 +1.1**
RC01 Rabbit Creek A 69.73 26 P 13 43 50.4
baz=244,SNR=5.0
CHUM Lake Minchumin 69.97 23 P 13 43 52.6
baz=241,SNR=16
PMR Palmer 70.21 26 P 13 43 53.1
baz=245
PMR Palmer 70.22 26 P **P** **13 43 52.5 +0.6**
PMR pmax pmax
comp=Z,10.0nm,1.0s
PMR Palmer 70.22 26 P **P** **13 43 52.5 +0.6**
PMR IAmb IAmb 13 44 02.3
comp=Z,10nm,1.0s
PWL Port Wells 70.25 27 P **P** **13 43 53.4 +1.2**
PWL IAmb IAmb 13 44 03.2
comp=Z,25nm,1.1s
ZSN Zaisan 70.28 318 *e*P **P** **13 43 52.8 +0.1**
baz=318
ZSN Zaisan 70.28 318 *e*P **P** **13 43 52.7 +0.1**
KTH Kantishna Hill 70.35 23 P **P** **13 43 53.5 +0.6**
KTH IAmb IAmb 13 44 03.1
comp=Z,15nm,1.0s
GHO Glory Hole Cre 70.38 26 P **P** **13 43 53.9 +0.8**
GHO IAmb IAmb 13 44 03.6
comp=Z,14nm,1.1s
KNK Knik Glacier 70.43 26 P 13 43 55.1
baz=245
IMAR Indian Mountai 70.50 21 P **P** **13 43 54.4 +0.8**
TRF Thorofare Moun 70.56 24 P **P** **13 43 54.0 -0.2**
TRF IAmb IAmb 13 44 06.0
comp=Z,14nm,1.2s
TRF Thorofare Moun 70.56 24 P 13 43 54.6
baz=243
BPAW Bear Paw Mtn. 70.58 23 P 13 43 55.5
baz=242,SNR=5.5
BPAW Bear Paw Mtn. 70.58 23 P **P** **13 43 54.9 +0.7**
SML Sawmill 70.65 26 P 13 43 56.4
baz=245
GLI Glacier Island 70.82 27 P **P** **13 43 56.6 +1.0**
GLI Glacier Island 70.82 27 P 13 43 57.3
baz=247
PALK Pallekele 70.89 276 P **P** **13 43 57.1 +0.1**
PALK pmax pmax
comp=Z,12nm,1.0s
PALK Pallekele 70.89 276 P **P** **13 43 57.1 +0.1**
PALK IAmb IAmb 13 43 58.8
comp=Z,12nm,0.9s
WAT2 Susitna Watana 71.03 25 P 13 43 57.9
baz=245
FID Port Fidalgo 71.05 27 P **P** **13 43 57.5 +0.5**
SCM Sheep Creek Mo 71.10 26 P **P** **13 43 58.5 +1.1**
SCM pmax pmax
comp=Z,30nm,1.1s
SCM Sheep Creek Mo 71.10 26 P **P** **13 43 58.5 +1.1**
MLY Manley 71.12 22 P **P** **13 43 58.7 +1.3**
MLY IAmb IAmb 13 44 08.7
comp=Z,11nm,1.0s
MLY Manley 71.12 22 P 13 43 59.3
baz=242,SNR=11
MCK McKinley 71.22 24 P **P** **13 43 58.5 +0.4**
MCK pmax pmax
comp=Z,25nm,1.2s
MCK McKinley 71.22 24 P **P** **13 43 58.5 +0.4**
MCK IAmb IAmb 13 44 08.8
comp=Z,25nm,1.2s
MCK McKinley 71.22 24 P 13 43 59.6
baz=244,SNR=7.7
WAT6 Susitna Watana 71.23 25 P 13 43 59.6
baz=246,SNR=8.0
NEA2 Nenana 71.55 23 P **P** **13 44 00.3 +0.3**
NEA2 IAmb IAmb 13 44 10.1
comp=Z,10nm,0.9s
NEA2 Nenana 71.55 23 P 13 44 01.2
baz=244
KLU Klutina 71.58 27 P **P** **13 44 00.8 +0.5**
KLU IAmb IAmb 13 44 12.3
comp=Z,15nm,0.9s
KLU Klutina 71.58 27 P 13 44 02.3
baz=248
I23K Minto, Yukon-K 71.69 22 P 13 44 02.5
baz=243
M24K Tolsona, Glenn 71.70 26 P **P** **13 44 02.9 +1.8**
M24K Tolsona, Glenn 71.70 26 P 13 44 03.5
baz=247
MK31 Makanchi Array 71.86 317 P **P** **13 44 01.0 -1.3**
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MK31 Makanchi Array 71.86 317 P **P** **13 44 01.0 -1.3**
MKAR Makanchi Array 71.86 317 P **P** **13 44 02.8 +0.5**
comp=Z,6.4nm,0.6s,baz=90,slow=7.8,SNR=71
MKAR Makanchi Array 71.86 317 P **P** **13 44 01.7 -0.6**
WRH Wood River Hil 71.88 23 P **P** **13 44 02.1 +0.1**
WRH IAmb IAmb 13 44 12.0
comp=Z,17nm,0.9s
ZAA0 Zalesovo Array 71.89 325 P **P** **13 44 00.3 -1.9**
ZALV Zalesovo Beam 71.89 325 P **P** **13 44 02.1 -0.1**
comp=Z,3.0nm,0.7s,baz=105,slow=7.3,SNR=15
ZALV Zalesovo Beam 71.89 325 *i* P **P** **13 44 02.0 -0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 71.89 325 P **P** **13 44 01.0 -1.2**
MDM Murphy Dome 72.04 23 P **P** **13 44 03.3 +0.4**
MAKZ Makanchi 72.08 317 P **P** **13 44 03.2 -0.4**
MAKZ pmax pmax
comp=Z,9.0nm,0.8s
MAKZ Makanchi 72.08 317 P **P** **13 44 03.2 -0.4**
MAKZ IAmb IAmb 13 44 04.6
comp=Z,8.6nm,0.8s
TCOL CIGO_UAF Yank 72.14 23 P 13 44 04.4
baz=245
TCOL CIGO_UAF Yank 72.14 23 P **P** **13 44 03.9 +0.3**
TCOL IAmb IAmb 13 44 14.1
comp=Z,21nm,0.9s
COLA College 72.15 23 *i* P **P** **13 44 04.4 +0.9**
COLA pmax pmax
comp=Z,18nm,1.0s
COLA College 72.15 23 P **P** **13 44 03.4 -0.2**
COLA IAmb IAmb 13 44 14.1
comp=Z,19nm,0.8s
COLA College 72.15 23 P 13 44 04.4
baz=245
N25K Chitina, Valde 72.21 27 P 13 44 06.4
baz=249
HDA Harding Lake 72.30 23 P 13 44 05.2
baz=246,SNR=8.1
HDA P 13 44 05.2
baz=246,SNR=8.1
PAX Paxson 72.34 25 P **P** **13 44 05.6 +0.7**
PAX pmax pmax
comp=Z,12nm,0.9s
PAX Paxson 72.34 25 P **P** **13 44 05.6 +0.7**
PAX IAmb IAmb 13 44 15.6
comp=Z,12nm,0.9s
PAX Paxson 72.34 25 P 13 44 06.5
baz=248,SNR=5.1
COLD Coldfoot 72.35 20 P **P** **13 44 05.6 +0.8**
COLD IAmb IAmb 13 44 17.0
comp=Z,22nm,1.0s
COLD Coldfoot 72.35 20 P 13 44 07.3
baz=242,SNR=23
IL31 72.48 23 P **P** **13 44 05.7 +0.2**
IL31 IAmb IAmb 13 44 15.1
comp=Z,11nm,0.8s
ILAR Eielson Array 72.48 23 P **P** **13 44 05.7 +0.1**
comp=Z,28nm,0.6s,baz=249,slow=5.6,SNR=59
ILAR LR LR 14 20 12.9
comp=Z,15nm,18.0s,baz=230,slow=39
GLB Gilahina Butte 72.51 27 P **P** **13 44 06.2 +0.3**
GLB IAmb IAmb 13 44 17.0

	comp=Z,19nm,1.0s							
CRQM	**Cirque**	**72.58**	**28**	P	**P**	**13 44 07.3**	**+0.8**	
A21K	**Barrow**	**72.58**	**15**	P	**P**	**13 44 06.5**	**+0.5**	
A21K				IAmb	IAmb	13 44 17.2		
	comp=Z,26nm,1.1s							
A21K	**Barrow**	**72.58**	**15**	P		13 44 07.8		
	baz=234,SNR=6.8							
VRDI	**Verde Repeater**	**72.59**	**27**	P	**P**	**13 44 07.7**	**+1.1**	
VRDI				IAmb	IAmb	13 44 17.6		
	comp=Z,21nm,1.1s							
CRQE	**Cirque**	**72.60**	**28**	P		13 44 08.2		
	baz=251							
MCARA	**McCarthy VSAT**	**72.84**	**27**	P		13 44 10.1		
	baz=250							
MENT	**Mentasta**	**73.07**	**25**	P	**P**	**13 44 10.6**	**+1.4**	
MENT				IAmb	IAmb	13 44 20.3		
	comp=Z,16nm,1.3s							
DOT	**Dot Lake**	**73.18**	**25**	P	**P**	**13 44 11.0**	**+1.2**	
DOT				IAmb	IAmb	13 44 21.2		
	comp=Z,14nm,1.0s							
TOLK	**Toolik Lake Re**	**73.23**	**19**	P	**P**	**13 44 11.9**	**+1.9**	
TOLK				IAmb	IAmb	13 44 21.6		
	comp=Z,12nm,0.9s							
TOLK	**Toolik Lake Re**	**73.23**	**19**	P		13 44 12.4		
	baz=242,SNR=10							
SHLS	**Shalkode**	**73.27**	**313**	*e*P	**P**	**13 44 08.9**	**-2.0**	
	baz=313							
SHLS	**Shalkode**	**73.27**	**313**	*e*P	**P**	**13 44 08.9**	**-2.0**	
SCRK	**Sand Creek**	**73.33**	**24**	P	**P**	**13 44 11.7**	**+0.9**	
SCRK				IAmb	IAmb	13 44 21.6		
	comp=Z,17nm,1.1s							
SCRK	**Sand Creek**	**73.33**	**24**	P		13 44 12.1		
	baz=249,SNR=11							
CTG	**Chitna Glacier**	**73.48**	**28**	P		13 44 14.1		
	baz=252							
UZB	**Uzynbulak**	**73.58**	**313**	*e*P	**P**	**13 44 12.4**	**-0.4**	
	baz=313							
UZB	**Uzynbulak**	**73.58**	**313**	*e*P	**P**	**13 44 12.4**	**-0.4**	
FYU	**Fort Yukon**	**73.83**	**22**	P	**P**	**13 44 15.1**	**+1.6**	
FYU				IAmb	IAmb	13 44 16.5		
	comp=Z,32nm,1.2s							
SEM	**Semipalatinsk**	**73.85**	**321**	*e*P	**P**	**13 44 12.9**	**-1.4**	
	baz=321							
SEM	**Semipalatinsk**	**73.85**	**321**	*e*P	**P**	**13 44 12.8**	**-1.5**	
KPKS	**Kokpek**	**73.87**	**313**	*e*P	**P**	**13 44 14.1**	**-0.2**	
	baz=313							
KPKS	**Kokpek**	**73.87**	**313**	*e*P	**P**	**13 44 14.1**	**-0.2**	
L27K	**Beaver Creek,**	**73.93**	**26**	P	**P**	**13 44 15.7**	**+1.5**	
L27K				IAmb	IAmb	13 44 25.9		
	comp=Z,11nm,0.9s							
L27K	**Beaver Creek,**	**73.93**	**26**	P		13 44 16.1		
	baz=251,SNR=8.5							
SATY	**Saty**	**74.02**	**313**	*e*P	**P**	**13 44 15.4**	**0.0**	
	baz=313							
SATY	**Saty**	**74.02**	**313**	*e*P	**P**	**13 44 15.3**	**0.0**	
K27K	**Chicken**	**74.14**	**25**	P		13 44 17.9		
	baz=251							
TDK	**Taldyqorghan**	**74.26**	**315**	*e*P	**P**	**13 44 16.6**	**+0.1**	
	comp=Z,17nm,1.1s,baz=315							
TDK	**Taldyqorghan**	**74.26**	**315**	*e*P	**P**	**13 44 16.6**	**+0.1**	
TDK				pmax	pmax			
	comp=Z,17nm,1.1s							
EGAK	**Eagle**	**74.76**	**24**	P	**P**	**13 44 20.6**	**+1.6**	
EGAK	**Eagle**	**74.76**	**24**	P		13 44 21.2		
	baz=251,SNR=28							
KDJ	**Kajisay**	**74.82**	**312**	P	**P**	**13 44 20.4**	**+0.4**	
KDJ				pmax	pmax			
	comp=Z,18nm,1.3s							
KDJ	**Kajisay**	**74.82**	**312**	P	**P**	**13 44 20.4**	**+0.4**	
KDJ				IAmb	IAmb	13 44 21.9		
	comp=Z,18nm,1.3s							
MDOK	**Medeo**	**75.02**	**313**	*e*P	**P**	**13 44 21.3**	**+0.2**	
	baz=313							
MDOK	**Medeo**	**75.02**	**313**	*e*P	**P**	**13 44 21.3**	**+0.2**	
HYT	**Haines Junctio**	**75.24**	**29**	P	**P**	**13 44 23.3**	**+1.3**	
DAWY	**Dawson**	**75.27**	**25**	P	**P**	**13 44 23.9**	**+1.8**	
DAWY				IAmb	IAmb	13 44 33.6		
	comp=Z,14nm,1.0s							
KSH	**Kashi**	**75.51**	**309**	P	**P**	**13 44 26.8**	**+2.8**	
KSH				S	**S**	**13 54 07.0**	**+2.1**	
KSH				pmax	pmax			
	comp=Z,8.0nm,1.2s							
KSH				pmax	pmax			
	comp=Z,94nm,3.0s							
KSH				LR	LR			
	comp=Z,410nm,12.3s							
KSH				LR	LR			
	comp=Z,320nm,15.2s							
NRIK	**Noril'sk**	**75.58**	**341**	P	**P**	**13 44 23.6**	**0.0**	
	comp=Z,8.5nm,0.7s,baz=113,slow=6.2,SNR=14							
NRIK	**Noril'sk**	**75.58**	**341**	*ce*P	**P**	**13 44 23.3**	**-0.3**	
NRIK				pmax	pmax			
	comp=Z,8.0nm,0.7s							
NRIK	**Noril'sk**	**75.58**	**341**	P	**P**	**13 44 23.2**	**-0.3**	
NRIK				IAmb	IAmb	13 44 24.9		
	comp=Z,10nm,0.8s							
BOOM	**Boomskoye usch**	**75.77**	**312**	P	**P**	**13 44 25.4**	**-0.1**	
BOOM				pmax	pmax			
	comp=Z,12nm,1.4s							
BOOM	**Boomskoye usch**	**75.77**	**312**	P	**P**	**13 44 25.4**	**-0.1**	
WHY	**Whitehorse**	**76.46**	**29**	P	**P**	**13 44 29.9**	**+1.0**	
WHY				IAmb	IAmb	13 44 40.5		
	comp=Z,29nm,1.3s							
WHY	**Whitehorse**	**76.46**	**29**	P		13 44 31.1		
	baz=258							
SGDS	**Sogindy**	**76.81**	**313**	*e*P	**P**	**13 44 30.9**	**-0.4**	
	baz=313							
SGDS	**Sogindy**	**76.81**	**313**	*e*P	**P**	**13 44 30.8**	**-0.4**	
AAK	**Ala-Archa**	**76.85**	**312**	*ce*P	**P**	**13 44 31.4**	**-0.2**	
AAK				pmax	pmax			
	comp=Z,24nm,1.7s							
AAK	**Ala-Archa**	**76.85**	**312**	P	**P**	**13 44 31.6**	**0.0**	
EPYK	**Eagle Plains**	**76.99**	**23**	P	**P**	**13 44 33.2**	**+1.5**	
EPYK	**Eagle Plains**	**76.99**	**23**	P		13 44 33.6		
	baz=255							
BTLS	**Baital**	**77.34**	**315**	*e*P	**P**	**13 44 34.0**	**-0.1**	
	comp=Z,12nm,1.2s,baz=315							
BTLS	**Baital**	**77.34**	**315**	*e*P	**P**	**13 44 34.0**	**-0.1**	
BTLS				pmax	pmax			
	comp=Z,12nm,1.2s							
ARSB	**Arslanbob**	**77.90**	**311**	P	**P**	**13 44 36.9**	**-0.6**	
ARSB				pmax	pmax			
	comp=Z,11nm,1.1s							
ARSB	**Arslanbob**	**77.90**	**311**	P	**P**	**13 44 36.9**	**-0.6**	
CASY	**Casey**	**78.14**	**196**	P	**P**	**13 44 38.1**	**+0.1**	
CASY				IAmb	IAmb	13 44 39.0		
	comp=Z,12nm,0.7s							
DLBC	**Dease Lake**	**78.52**	**32**	P	**P**	**13 44 41.5**	**+1.1**	
	comp=Z,7.4nm,0.9s,baz=276,slow=5.0,SNR=10							
DLBC	**Dease Lake**	**78.52**	**32**	P	**P**	**13 44 42.4**	**+1.9**	
DLBC				IAmb	IAmb	13 44 52.0		
	comp=Z,22nm,1.1s							
INK	**Inuvik**	**78.66**	**21**	P	**P**	**13 44 41.9**	**+1.1**	
	comp=Z,11nm,0.9s,baz=248,slow=5.1,SNR=31							
INK	**Inuvik**	**78.66**	**21**	P	**P**	**13 44 42.0**	**+1.1**	
INK				pmax	pmax			
	comp=Z,17nm,1.0s							
INK	**Inuvik**	**78.66**	**21**	P	**P**	**13 44 42.0**	**+1.1**	
INK				IAmb	IAmb	13 44 51.9		
	comp=Z,17nm,0.9s							
INK	**Inuvik**	**78.66**	**21**	P		13 44 42.2		
	baz=258							
KK31	**Karatay Array**	**79.79**	**313**	P	**P**	**13 44 47.7**	**0.0**	
KK31				pmax	pmax			
	comp=Z,23nm,1.4s							
KK31	**Karatay Array**	**79.79**	**313**	P	**P**	**13 44 47.7**	**0.0**	
KK31				IAmb	IAmb	13 44 49.2		
	comp=Z,22nm,1.4s							
KKAR	**Karatay Array**	**79.79**	**313**	P	**P**	**13 44 47.7**	**0.0**	
KKAR				pmax	pmax			
	comp=Z,23nm,1.4s							
KKAR	**Karatay Array**	**79.79**	**313**	P	**P**	**13 44 47.7**	**0.0**	
KKAR				IAmb	IAmb	13 44 49.2		
	comp=Z,22nm,1.4s							
KKAR	**Karatay Array**	**79.79**	**313**	P	**P**	**13 44 47.6**	**-0.1**	
IUG	**Iuzhnay**	**80.13**	**312**	*e*P	**P**	**13 44 49.7**	**0.0**	
	baz=312							
IUG	**Iuzhnay**	**80.13**	**312**	*e*P	**P**	**13 44 49.6**	**0.0**	
BRVK	**Borovoye**	**80.31**	**323**	*ce*P	**P**	**13 44 50.1**	**-0.1**	
BRVK				pmax	pmax			
	comp=Z,11nm,1.0s							
BRVK	**Borovoye**	**80.31**	**323**	P	**P**	**13 44 50.3**	**0.0**	
C36M	**Paulatuk**	**82.20**	**21**	P	**P**	**13 45 00.6**	**+0.6**	
C36M				IAmb	IAmb	13 45 10.2		
	comp=Z,19nm,0.8s							
C36M	**Paulatuk**	**82.20**	**21**	P		13 45 00.7		

	baz=266							
O02D	**Mt. Diablo Mer**	**82.39**	**50**	P		13 45 04.4		
	baz=272							
E04D	**Cinebar**	**82.43**	**44**	P		13 45 04.2		
	baz=271							
L04D	**Klamath Falls**	**82.70**	**48**	P		13 45 05.5		
	baz=272							
M04C	**Macdoel**	**83.06**	**49**	P		13 45 08.0		
	baz=272							
O03E	**Paynes Creek**	**83.14**	**50**	P		13 45 08.0		
	baz=272							
J05D	**Fort Rock, OR**	**83.46**	**47**	P		13 45 09.7		
	baz=272							
VNDA	**Vanda**	**83.61**	**178**	P	**P**	**13 45 07.1**	**+0.1**	
	comp=Z,4.7nm,0.8s,baz=327,slow=5.8,SNR=30							
VNDA	**Vanda**	**83.61**	**178**	P	**P**	**13 45 07.4**	**+0.3**	
VNDA				pmax	pmax			
	comp=Z,8.0nm,1.0s							
VNDA	**Vanda**	**83.61**	**178**	P	**P**	**13 45 07.3**	**+0.3**	
VNDA				IAmb	IAmb	13 45 08.8		
	comp=Z,8.2nm,1.0s							
PINE	**Pine Mountain**	**83.65**	**47**	P	**P**	**13 45 08.7**	**+0.4**	
AFDM	**Forest Hills D**	**83.84**	**52**	P	**P**	**13 45 09.0**	**-0.1**	
AFDM				IAmb	IAmb	13 45 20.5		
	comp=Z,10.0nm,1.1s							
SBA	**Scott Base**	**84.16**	**177**	P	**P**	**13 45 10.9**	**+1.1**	
SBA				pmax	pmax			
	comp=Z,14nm,1.2s							
SBA	**Scott Base**	**84.16**	**177**	P	**P**	**13 45 10.9**	**+1.1**	
SBA				IAmb	IAmb	13 45 12.8		
	comp=Z,14nm,1.2s							
MOD	**Modoc Plateau**	**84.20**	**49**	P	**P**	**13 45 11.0**	**-0.1**	
MOD				IAmb	IAmb	13 45 23.0		
	comp=Z,20nm,1.1s							
PNT	**Penticton**	**84.33**	**41**	P	**P**	**13 45 13.4**	**+2.0**	
PNT				pmax	pmax			
	comp=Z,14nm,1.1s							
PNTR	**Pine Nut**	**84.90**	**51**	P	**P**	**13 45 13.4**	**-1.4**	
PNTR				IAmb	IAmb	13 45 26.3		
	comp=Z,14nm,1.1s							
MDPB	**Devils Postpil**	**85.40**	**53**	P	**P**	**13 45 17.6**	**+0.2**	
J08A	**Circle Bar Ran**	**85.46**	**47**	P	**P**	**13 45 17.2**	**-0.1**	
J08A				IAmb	IAmb	13 45 28.5		
	comp=Z,11nm,1.0s							
SVE	**Sverdlovsk**	**85.82**	**327**	*e*P	**P**	**13 45 19.1**	**+0.4**	
SVE				pmax	pmax			
	comp=Z,17nm,1.1s							
NVAR	**Mina Array Bea**	**85.95**	**52**	P	**P**	**13 45 19.9**	**-0.2**	
	comp=Z,0.6nm,0.3s,baz=283,slow=19,SNR=26							
NVAR				LR	LR	14 19 08.9		
	comp=Z,60nm,18.4s,baz=316,slow=32							
NVAR	**Mina Array Bea**	**85.95**	**52**	P	**P**	**13 45 19.2**	**-0.8**	
NEW	**Newport**	**86.04**	**42**	P	**P**	**13 45 21.2**	**+1.1**	
	comp=Z,3.1nm,1.0s,baz=183,slow=5.7,SNR=3.4							
NEW	**Newport**	**86.04**	**42**	P		13 45 21.7		
	baz=275							
BMO	**Blue Mountains**	**86.19**	**45**	P	**P**	**13 45 20.2**	**-0.7**	
BMO				pmax	pmax			
	comp=Z,11nm,1.1s							
BMO	**Blue Mountains**	**86.19**	**45**	P	**P**	**13 45 20.2**	**-0.7**	
BMO				IAmb	IAmb	13 45 31.9		
	comp=Z,11nm,1.1s							
YKA	**Yellowknife Ar**	**86.21**	**28**	P	**P**	**13 45 21.4**	**+1.0**	
	comp=Z,6.5nm,0.8s,baz=272,slow=4.6,SNR=94							
CIS	**Catalina Islan**	**86.27**	**57**	P		13 45 22.8		
	baz=275							
CWC	**Cottonwood Cre**	**86.29**	**54**	P		13 45 23.5		
	baz=275							
EDW2	**Edwards Air Fo**	**86.49**	**55**	P		13 45 24.7		
	baz=275							
LRMC	**Laurel Mtn Rad**	**86.69**	**55**	P		13 45 25.5		
	baz=275							
ABKAR	**Akbulak array**	**86.91**	**319**	P	**P**	**13 45 22.8**	**-1.4**	
ARU	**Arti**	**87.00**	**326**	*d i*P	**P**	**13 45 23.4**	**-1.1**	
ARU				S	**SKSac**	**13 55 46.7**	**-5.0**	
ARU				pmax	pmax			
	comp=Z,15nm,1.5s							
ARU	**Arti**	**87.00**	**326**	P	**P**	**13 45 23.9**	**-0.6**	
ARU				IAmb	IAmb	13 45 26.2		
	comp=Z,17nm,1.4s							
PLID	**Pearl Lake**	**87.09**	**45**	P	**P**	**13 45 25.2**	**-0.3**	
FURC	**Furnace Creek,**	**87.27**	**54**	P		13 45 28.1		
	baz=276							
MFID	**Camas Ranch**	**87.38**	**47**	P	**P**	**13 45 26.6**	**-0.2**	
MFID				IAmb	IAmb	13 45 37.9		
	comp=Z,10nm,1.2s							
TPNV	**Topopah Spring**	**87.71**	**53**	P		13 45 30.2		
	baz=276							
SHOC	**Shoshone, Teco**	**87.79**	**54**	P		13 45 30.6		
	baz=276							
HEC	**Hector Ludlow**	**87.85**	**55**	P		13 45 30.7		
	baz=276							
PFO	**Pinyon Flats O**	**87.87**	**57**	P	**P**	**13 45 30.3**	**+0.9**	
	comp=Z,0.5nm,0.4s,baz=179,slow=1.3,SNR=1.3							
MONP2	**Monument Peak**	**87.98**	**57**	P		13 45 31.1		
	baz=276							
R11A	**Troy Canyon, C**	**88.09**	**52**	P		13 45 32.5		
	baz=276							
ELK	**Elko**	**88.10**	**49**	P	**P**	**13 45 30.1**	**-0.3**	
	comp=Z,1.9nm,1.1s,baz=216,slow=18,SNR=3.6							
ELK	**Elko**	**88.10**	**49**	P	**P**	**13 45 29.8**	**-0.7**	
ELK				pmax	pmax			
	comp=Z,3.0nm,1.1s							
ELK	**Elko**	**88.10**	**49**	P	**P**	**13 45 29.8**	**-0.7**	
BELC	**Belle Mtn. Jos**	**88.22**	**56**	P		13 45 32.4		
	baz=276							
HLID	**Hailey**	**88.39**	**47**	P	**P**	**13 45 32.2**	**+0.5**	
HLID				IAmb	IAmb	13 45 42.9		
	comp=Z,8.1nm,1.0s							
HLID	**Hailey**	**88.39**	**47**	P		13 45 33.7		
	baz=277							
GMRC	**Granite Mounta**	**88.41**	**55**	P		13 45 33.3		
	baz=276							
IRM	**Iron Mountain**	**88.90**	**56**	P		13 45 35.7		
	baz=277							
SPR3	**Spring Creek 3**	**88.99**	**51**	P	**P**	**13 45 35.6**	**+0.8**	
SPR3				IAmb	IAmb	13 45 46.1		
	comp=Z,10.0nm,1.1s							
MCMT	**McKenzie Canyo**	**89.34**	**45**	P	**P**	**13 45 36.7**	**+0.4**	
LRM	**Limekiln Ridge**	**89.49**	**44**	P	**P**	**13 45 36.1**	**-0.8**	
BOZ	**Bozeman (W)**	**90.09**	**44**	P		13 45 41.6		
	baz=279							
RES	**Resolute Bay**	**90.14**	**14**	P	**P**	**13 45 39.6**	**+0.6**	
RES				pmax	pmax			
	comp=Z,5.0nm,0.9s							
RES	**Resolute Bay**	**90.14**	**14**	P	**P**	**13 45 39.6**	**+0.6**	
KNB	**Kanab**	**90.43**	**53**	P	**P**	**13 45 40.8**	**-0.6**	
KNB				pmax	pmax			
	comp=Z,8.0nm,1.4s							
KNB	**Kanab**	**90.43**	**53**	P	**P**	**13 45 40.8**	**-0.6**	
YHL	**Hebgen Lake**	**90.51**	**45**	P	**P**	**13 45 40.9**	**-0.9**	
YHL				IAmb	IAmb	13 45 53.7		
	comp=Z,12nm,1.1s							
EGMT	**Eagleton**	**90.97**	**42**	P		13 45 44.5		
	baz=280							
RLMT	**Red Lodge**	**91.81**	**44**	P		13 45 50.1		
	baz=280							
BW06	**Boulder Array**	**92.02**	**47**	P		13 45 49.8		
	baz=280							
PDAR	**Pinedale Array**	**92.02**	**47**	P	**P**	**13 45 49.5**	**+0.8**	
	comp=Z,1.1nm,0.7s,baz=232,slow=2.5,SNR=12							
PDAR				LR	LR	14 22 39.6		
	comp=Z,39nm,18.5s,baz=304,slow=33							
W18A	**Petrified Fore**	**93.18**	**54**	P	**P**	**13 45 54.4**	**+0.1**	
W18A				IAmb	IAmb	13 45 59.6		
	comp=Z,6.9nm,1.2s							
W18A	**Petrified Fore**	**93.19**	**54**	P		13 45 56.2		
	baz=280							
LAO	**LASA Array**	**93.58**	**42**	P		13 45 57.3		
	baz=283							
FFC	**Flin Flon**	**94.18**	**34**	P	**P**	**13 45 57.6**	**-0.5**	
FFC				pmax	pmax			
	comp=Z,10.0nm,1.1s							
FFC	**Flin Flon**	**94.18**	**34**	P	**P**	**13 45 57.6**	**-0.5**	
FFC				IAmb	IAmb	13 46 09.0		
	comp=Z,10nm,1.1s							
MAW	**Mawson**	**95.25**	**203**	P	**P**	**13 46 02.2**	**-0.4**	
	comp=Z,4.8nm,0.7s,baz=86,slow=5.7,SNR=8.5							
MAW	**Mawson**	**95.25**	**203**	IAmb	IAmb	13 46 04.2		
	comp=Z,1.0nm,0.7s							
FCC	**Fort Churchill**	**96.89**	**29**	P	**P**	**13 46 10.0**	**-0.3**	
FCC				pmax	pmax			
	comp=Z,5.0nm,1.0s							
FCC	**Fort Churchill**	**96.89**	**29**	P	**P**	**13 46 10.0**	**-0.3**	
FCC				IAmb	IAmb	13 46 20.6		
	comp=Z,5.4nm,1.0s							

OBN	**Obninsk**	**99.27**	**328**	*e*P	**Pdif**	**13 46 19.8**	**-1.3**	
OBN				*e*		13 50 25.0		
OBN				*e*PPP	PPP	13 52 29.0		
OBN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
TXAR	**Lajitas Array**	**99.33**	**59**	LR	LR	14 23 25.9		
	comp=Z,40nm,20.9s,baz=0.0,slow=31							
FINES	**FINESS Array B**	**100.94**	**337**	P	**Pdif**	**13 46 27.1**	**-1.3**	
	comp=Z,0.8nm,0.6s,baz=69,slow=6.3,SNR=5.2							
FINES	**FINESS Array B**	**100.94**	**337**	*i* P	**Pdif**	**13 46 28.3**	**-0.1**	
FINES				pmax	pmax			
	comp=Z,1.0nm,0.8s							
GERES	**GERESS Array B**	**114.40**	**331**	PKiKP	PKPdf	13 51 20.0	+0.5	
	comp=Z,0.9nm,0.6s,baz=95,slow=3.3,SNR=5.0							
GERES	**GERESS Array B**	**114.40**	**331**	*i* PKiKP	PKPdf	13 51 20.0	+0.5	
DAVOX	**Davos/Dischmat**	**117.69**	**332**	PKP	**PKiKP**	**13 51 26.7**	**+0.7**	
	comp=Z,1.9nm,0.5s,baz=19,slow=6.8,SNR=2.3							
PLCA	**Paso Flores**	**128.57**	**139**	PKP	**PKPdf**	**13 51 47.6**	**+0.8**	
	comp=Z,1.6nm,0.8s,baz=272,slow=3.7,SNR=5.0							
SDV	**Santo Domingo**	**134.87**	**71**	PKP	**PKPdf**	**13 51 59.2**	**-0.4**	
	comp=Z,3.7nm,0.5s,baz=7.2,slow=19,SNR=4.8							
TOA0	**Torodi Ar. Sit**	**144.99**	**303**		**PKPab**	**13 52 16.3**	**-0.6**	
TORD	**Torodi Ar. Bea**	**144.99**	**303**	PKP	**PKPab**	**13 52 16.9**	**0.0**	
	comp=Z,5.2nm,0.6s,baz=53,slow=2.2,SNR=18							
TORD	**Torodi Ar. Bea**	**144.99**	**303**		**PKPab**	**13 52 16.4**	**-0.5**	
CPUP	**Villa Florida**	**145.40**	**129**	PKPbc	**PKPab**	**13 52 18.9**	**+0.8**	
	comp=Z,11nm,0.8s,baz=251,slow=3.3,SNR=31							
KOWA	**Kowa**	**148.76**	**311**		**PKPbc**	**13 52 28.0**	**+0.2**	
DBIC	**Dimbokro**	**153.80**	**298**	PKPbc	**PKPbc**	**13 52 39.6**	**0.0**	
	comp=Z,6.3nm,0.9s,baz=134,slow=4.4,SNR=6.4							

IDC ***28*** *13:41:27.0±0.7,51°51N×174°.91W,h0km,mb3.7/14, mb1 3.9/16,mb1mx3.7/73,mbtmp3.7/16,ML3.3/3,MS2.9/2, Ms1 2.9/2,ms1mx2.5/41,Error ellipse: s-maj=25.6km s-min=13.6km az=170.0*

NEIC ***28*** *13:41:32.6±2.4,51°.6N±0°.5×175°.0W±0°.1,h25km±30km, mb3.9/35,ML3.7(AEIC),Error ellipse: s-maj=68.2km s-min=9.5km az=174.0*

AEIC ***28*** *13:41:33±2.7,51°.6N±0°.2×175°.1W±0°.1,h26km±9km,Error ellipse: s-maj=31.0km s-min=9.7km az=171.0*

ISC 28 13:41:32.6±0.7,51°.5N±0°.1×174°.92W±0°.06,h40km,n73,
σ1§47/63,mb3.9/18,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.85**	**32**		**Pn**	**13 41 48.3**	**+0.3**
GSTR	**Great Sitkin T**	**0.93**	**311**		**Pn**	**13 41 48.9**	**-0.3**
ADK	**Adak**	**1.17**	**291**	P	**Pn**	**13 41 51.7**	**-0.7**
ADK	**Adak**	**1.17**	**291**		**Pn**	**13 41 51.7**	**-0.7**
AMKA	**Amchitka**	**3.62**	**271**	Pn	**Pn**	**13 42 27.4**	**+1.3**
NIKH	**Nikolski High**	**4.02**	**66**	Pn	**Pn**	**13 42 33.1**	**+1.6**
SPIA	**Saint Paul Isl**	**6.32**	**24**	Pn	**Pn**	**13 43 06.9**	**+3.8**
SDPT	**Sand Point**	**9.45**	**60**	Pn	**Pn**	**13 43 48.0**	**+2.0**
OHAK	**Old Harbor**	**13.83**	**57**	Pn	**Pn**	**13 44 45.3**	**-0.5**
KDAK	**Kodiak Island**	**14.35**	**55**	Pn	**Pn**	**13 44 52.6**	**-0.2**
	0.4nm,0.3s,baz=311,slow=5.6,SNR=9.3						
KDAK				Sn	**S**	**13 47 43.1**	**-6.2**
	0.2nm,0.3s,baz=174,slow=19,SNR=1.3						
KDAK	**Kodiak Island**	**14.35**	**55**	Pn	**Pn**	**13 44 53.7**	**+0.9**
TTA	**Tatalina**	**15.30**	**34**	Pn	**P**	**13 45 07.8**	**-1.9**
CNPM	**China Poot**	**15.57**	**50**	Pn	**Pn**	**13 45 09.5**	**+0.5**
BRLK	**Bradley Lake**	**15.83**	**49**	Pn	**Pn**	**13 45 12.2**	**-0.1**
SKT	**Skwentna**	**16.48**	**41**		**P**	**13 45 24.0**	**+1.2**
SUA	**Susitna One**	**16.57**	**44**		**P**	**13 45 24.6**	**+0.7**
PETK	**Petropavlovsk-**	**16.79**	**286**	Pn	**Pn**	**13 45 25.4**	**+0.9**
	0.1nm,0.3s,baz=86,slow=15,SNR=1.6						
GHO	**Glory Hole Cre**	**17.49**	**44**	Pn	**P**	**13 45 34.0**	**-0.1**
GHO				IAmb	IAmb	13 45 44.2	
	comp=Z,11nm,1.4s						
KTH	**Kantishna Hill**	**17.53**	**37**		**P**	**13 45 36.1**	**+1.6**
KTH				IAmb	IAmb	13 45 42.8	
	comp=Z,17nm,1.0s						
TRF	**Thorofare Moun**	**17.71**	**38**		**P**	**13 45 38.5**	**+2.0**
BPAW	**Bear Paw Mtn.**	**17.80**	**36**		**P**	**13 45 39.9**	**+2.5**
BPAW				IAmb	IAmb	13 45 45.9	
	comp=Z,5.0nm,0.7s						
IMAR	**Indian Mountai**	**18.07**	**28**		**P**	**13 45 43.0**	**+2.7**
SCM	**Sheep Creek Mo**	**18.21**	**45**		**Pn**	**13 45 42.4**	**+0.3**
SCM				IAmb	IAmb	13 45 58.4	
	comp=Z,17nm,1.3s						
FID	**Port Fidalgo**	**18.23**	**48**	Pn	**P**	**13 45 39.9**	**-2.1**
MCK	**McKinley**	**18.38**	**38**		**Pn**	**13 45 44.4**	**+0.3**
MCK				IAmb	IAmb	13 45 56.7	
	comp=Z,13nm,1.4s						
MLY	**Manley**	**18.43**	**33**		**Pn**	**13 45 46.1**	**+1.5**
M24K	**Tolsona, Glenn**	**18.82**	**45**	P	**Pn**	**13 45 50.3**	**+0.9**
BILL	**Bilibino**	**18.96**	**338**	P	**Pn**	**13 45 51.2**	**+0.2**
BILL				IAmb	IAmb	13 45 56.1	
	comp=Z,15nm,1.4s						
I23K	**Minto, Yukon-K**	**18.97**	**34**	P	**Pn**	**13 45 52.7**	**+1.5**
I23K				IAmb	IAmb	13 45 56.7	
	comp=Z,7.1nm,0.7s						
WRH	**Wood River Hil**	**19.07**	**

HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,60nm,8.0s						
TXAR	**Lajitas Array**	**56.23**	**84**	P	**P**	**13 51 07.9**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=302,slow=5.2,SNR=1.7						
MKAR	**Makanchi Array**	**61.84**	**311**	P	**P**	**13 51 47.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=43,slow=3.1,SNR=5.0						
BVAR	**Borovoye Array**	**62.34**	**322**	P	**P**	**13 51 50.7**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=215,slow=1.8,SNR=4.1						
AKTO	**Aktyubinsk**	**68.96**	**327**	P	**P**	**13 52 34.0**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=28,slow=3.8,SNR=3.2						
SIJI	**Sorong**	**69.06**	**240**	P	**P**	**13 52 34.8**	**+0.5**
	comp=Z,8.0nm,0.7s,baz=2.9,slow=19,SNR=5.1						
CMAR	**Chiang Mai Arr**	**73.41**	**279**	P	**P**	**13 53 01.4**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=25,slow=7.3,SNR=6.1						
WRA	**Warramunga Arr**	**83.82**	**227**	P	**P**	**13 53 58.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=34,slow=6.0,SNR=5.5						
ASAR	**Alice Springs**	**87.25**	**226**	P	**P**	**13 54 15.4**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=21,slow=6.3,SNR=10						
H03N2	**Juan Fernandez**	**118.86**	**108**	T	T	16 10 28.2	
	baz=317,slow=77,SNR=7.2						
H03N1	**Juan Fernandez**	**118.87**	**108**	T	T	16 10 29.4	
	baz=317,slow=77,SNR=7.3						
H03N3	**Juan Fernandez**	**118.87**	**108**	T	T	16 10 27.1	
	baz=317,slow=77,SNR=7.0						

*IDC **28** 13:44:02.7±0.9, 16°.85N×94°.16W, h107km±7km, mb3.5/4, mb1 3.8/8, mb1mx3.4/52, mbtmp4.0/8, MS2.9/2, Ms1 2.9/2, ms1mx2.3/3, Error ellipse: s-maj=24.0km s-min=9.2km az=25.0*

*NEIC **28** 13:44:02.7±1.6, 16°.71N±0°.05×94°.36W±0°.05, h123km±2km, mb4.0/8, Md4.4/35(MEX), Error ellipse: s-maj=7.7km s-min=5.7km az=213.0*

*MEX **28** 13:44:04.2±0.7, 16°.79N×94°.34W, h127km±5km, MD4.2*

ISC 28 13:44:02.6±0.7, 16°.72N±0°.06×94°.34W±0°.03, h122km±7km, n41, σ1°.33/53, mb3.8/4, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.64**	**305**	P		**Pn**	**13 44 22.4**	**+0.7**
	28nm,0.3s,baz=131,slow=6.8,SNR=230							
CMIG				S		**Sn**	**13 44 36.0**	**-0.2**
	228nm,0.3s,baz=31,slow=23,SNR=20							
CMIG	**Matias Romero**	**0.64**	**305**	*i* P		**Pn**	**13 44 22.4**	**+0.7**
CMIG				*i* S		**Sn**	**13 44 36.2**	**+0.1**
TGIG		**1.17**	**87**	*i* P		**Pn**	**13 44 27.2**	**+0.7**
TGIG				*i* S		**Sn**	**13 44 45.2**	**+0.5**
TGIG		**1.17**	**87**			**Pn**	**13 44 27.2**	**+0.7**
TGIG						**Sn**	**13 44 44.0**	**-0.7**
PCIG		**1.47**	**133**	*i* P		**Pn**	**13 44 31.0**	**+1.2**
PCIG				*i* S		**Sn**	**13 44 52.3**	**+1.8**
PCIG		**1.47**	**133**			**Pn**	**13 44 31.0**	**+1.2**
PCIG						**Sn**	**13 44 51.1**	**+0.6**
HUIG	**Huatulco**	**1.94**	**241**	*i* P		**Pn**	**13 44 34.5**	**-1.0**
HUIG				*i* S		**Sn**	**13 45 01.1**	**+0.5**
HUIG	**Huatulco**	**1.94**	**241**			**Pn**	**13 44 34.5**	**-1.0**
HUIG						**Sn**	**13 45 00.1**	**-0.4**
CCIG	**Comitan**	**2.15**	**101**	*i* P		**Pn**	**13 44 39.5**	**+1.3**
CCIG				*i* S		**Sn**	**13 45 05.7**	**+0.2**
CCIG	**Comitan**	**2.15**	**101**			**Pn**	**13 44 39.5**	**+1.3**
CCIG						**Sn**	**13 45 05.7**	**+0.2**
PEIG	**Puerto Escondi**	**2.79**	**256**	*i* P		**Pn**	**13 44 45.3**	**-0.9**
PEIG				*i* S		**Sn**	**13 45 19.0**	**-0.8**
TOIG	**Toxpalan**	**2.94**	**298**	*i* P		**Pn**	**13 44 49.4**	**+1.1**
TOIG				*i* S		**Sn**	**13 45 22.8**	**-0.7**
HUEH	**Huehuetenango**	**3.06**	**117**	Pn		**Pn**	**13 44 50.5**	**+0.6**
YOIG	**Yosondua**	**3.08**	**273**	*i* P		**Pn**	**13 44 51.6**	**+1.5**
YOIG				*i* S		**Sn**	**13 45 26.4**	**-0.5**
RTAL	**Retalhuleu**	**3.35**	**130**	Pn		**Pn**	**13 44 53.7**	**+0.1**
PNIG	**Pinotepa**	**3.65**	**265**	*i* P		**Pn**	**13 44 57.4**	**-0.1**
PNIG				*i* S		**Sn**	**13 45 40.1**	**0.0**
PNIG	**Pinotepa**	**3.65**	**265**			**Pn**	**13 44 57.4**	**-0.1**
PNIG						**Sn**	**13 45 37.1**	**-3.0**
APG	**El Apazote**	**4.10**	**114**	P		**Pn**	**13 45 04.1**	**+0.4**
	4.1nm,0.3s,baz=310,slow=19,SNR=7.2							
APG				S		**Sn**	**13 45 48.0**	**-3.1**
	21nm,0.3s,baz=70,slow=13,SNR=16							
MTO3	**Montecristo**	**5.32**	**115**			**Pn**	**13 45 19.3**	**-0.8**
TEIG	**Tepich**	**6.73**	**58**	P		**Pn**	**13 45 36.7**	**-2.1**
	4.7nm,0.3s,baz=279,slow=1.8,SNR=23							
TEIG				S		**Sn**	**13 46 49.2**	**-4.9**
	3.9nm,0.3s,baz=4.6,slow=20,SNR=8.5							
TEIG	**Tepich**	**6.73**	**58**			**Pn**	**13 45 37.1**	**-1.7**
CRIN	**San Cristobal**	**8.10**	**119**	Pn		**Pn**	**13 45 57.7**	**+0.2**
ORTG	**Ortega, Santa**	**10.69**	**125**	Pn		**Pn**	**13 46 33.6**	**+1.1**
JTS	**Las Juntas de**	**11.14**	**124**	P		**Pn**	**13 46 38.1**	**-0.3**
	1.7nm,0.3s,baz=290,slow=16,SNR=5.3							
TXAR	**Lajitas Array**	**15.20**	**327**	P		**P**	**13 47 32.0**	**-1.1**
	0.1nm,0.3s,baz=148,slow=14,SNR=10							
TX31	**Lajitas Ar. Si**	**15.20**	**327**	P		**P**	**13 47 33.1**	**0.0**
TX31				IAmb		IAmb	13 47 34.5	
	comp=Z,6.6nm,0.9s							
TX32	**Lajitas Array**	**15.20**	**327**	P		**P**	**13 47 33.1**	**0.0**
MIAR	**Mount Ida**	**17.77**	**2**	P		**P**	**13 48 00.4**	**-0.9**
MIAR				IAmb		IAmb	13 48 17.4	
	comp=Z,13nm,1.4s							
X37A	**Clayton**	**17.82**	**357**			**Pn**	**13 48 03.1**	**+0.3**
TKL	**Tuckaleechee C**	**21.08**	**25**	P		**P**	**13 48 36.6**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=145,slow=17,SNR=1.9							
TKL	**Tuckaleechee C**	**21.08**	**25**	IAmb		IAmb	13 48 37.9	
	comp=Z,11nm,1.4s							
S51A	**Beattyville**	**22.89**	**22**			**S**	**13 52 58.6**	**+2.4**
SDV	**Santo Domingo**	**24.37**	**106**	LR		LR	14 00 48.6	
	comp=Z,28nm,18.2s,baz=218,slow=42							
SJG	**San Juan**	**26.92**	**83**	LR		LR	13 59 28.2	
	comp=Z,23nm,21.6s,baz=142,slow=35							
FFC	**Flin Flon**	**38.39**	**353**	P		**P**	**13 51 12.0**	**+0.2**
YKA	**Yellowknife Ar**	**47.89**	**347**	P		**P**	**13 52 28.4**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=151,slow=7.7,SNR=11							
INK	**Inuvik**	**57.21**	**344**	P		**P**	**13 53 37.9**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=116,slow=8.6,SNR=3.5							
INK	**Inuvik**	**57.21**	**344**	IAmb		IAmb	13 54 05.6	
	comp=Z,1.9nm,1.2s							
RES	**Resolute Bay**	**57.98**	**360**	P		**P**	**13 53 40.1**	**-1.8**
ARCES	**ARCESS Array B**	**84.27**	**18**	P		**P**	**13 56 21.3**	**+1.0**
	comp=Z,4.2nm,1.1s,baz=308,slow=4.5,SNR=7.2							
ARCES	**ARCESS Array B**	**84.27**	**18**	IAmb		IAmb	13 56 22.4	
	comp=Z,12nm,1.4s							

*IDC **28** 13:47:22.2±0.8, 25°.03N×123°.17E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.6/58, mbtmp3.8/12, ML3.2/2, MS3.3/2, Ms1 3.4/2, ms1mx2.7/35, Error ellipse: s-maj=24.4km s-min=16.2km az=82.0*

*NEIC **28** 13:47:23.2±1.4, 25°.02N±0°.04×123°.33E±0°.05, h10km±1km, mb4.4/12, Error ellipse: s-maj=7.4km s-min=5.5km az=121.0*

*JMA **28** 13:47:25.1±0.2, 24°.91N×123°.36E, h26km, M3.7*

*NIED **28** 13:47:25.1, 24°.91N×123°.36E, h26km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.55; $M_{\theta\theta}$0.53; $M_{\phi\phi}$0.02; $M_{r\theta}$-0.51; $M_{\theta\phi}$0.77; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.03000×10^{15} NP1:ϕ_s83.00000°, δ68.00000°, λ-52.00000°. NP2:ϕ_s198.00000°, δ43.00000°, λ-147.00000°.*

ISC 28 13:47:23.4±1.4, 24°.96N±0°.05×123°.36E±0°.03, h11km±9km, n46, σ0°.99/54, mb4.1/14, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.59**	**212**	P		**Pb**	**13 47 35.9**	**+0.1**
YOJ				S		**Sg**	**13 47 43.1**	**+0.4**
YOJ	**Yonaguni jima**	**0.59**	**212**			**Pb**	**13 47 35.8**	**0.0**
YOJ						**Sg**	**13 47 42.3**	**-0.4**
JYNG	**Yonagunijimaku**	**0.63**	**216**	P		**Pb**	**13 47 36.6**	**+0.1**
JYNG				S		**Sg**	**13 47 44.4**	**+0.4**
IRIF	**Iriomote-Funau**	**0.71**	**152**	P		**Pb**	**13 47 37.8**	**0.0**
IRIF				S		**Sg**	**13 47 46.8**	**+0.3**
JIJ	**Ishigaki jima**	**0.93**	**130**	P		**Pg**	**13 47 41.1**	**-0.2**
JIJ				S		**Sg**	**13 47 52.4**	**-1.1**
JKRS	**Kuro-shima**	**0.94**	**141**	P		**Pg**	**13 47 41.6**	**+0.2**
JKRS				S		**Sg**	**13 47 53.5**	**-0.1**
JISG	**Ishigakijimahi**	**0.94**	**113**	P		**Pg**	**13 47 41.6**	**0.0**
JISG				S		**Sg**	**13 47 53.4**	**-0.5**
HATJ	**Hateruma jima**	**0.99**	**156**	P		**Pg**	**13 47 42.4**	**-0.1**
HATJ				*e*S		**Sg**	**13 47 54.6**	**-0.8**
JTJ	**Tarama**	**1.26**	**104**	P		**Pg**	**13 47 47.7**	**0.0**
JTJ				*e*S		**Sb**	**13 48 03.1**	**-0.4**
JIRB	**Irabujima**	**1.65**	**94**	P		**Pb**	**13 47 53.6**	**-0.3**
TATO	**Taipei**	**1.70**	**271**			**Pn**	**13 47 52.2**	**-0.8**
JIKM	**Ikemajima**	**1.72**	**91**	P		**Pn**	**13 47 54.1**	**+0.9**
JIKM				*e*S		**Sn**	**13 48 15.6**	**+0.4**
NACB	**Ninganchiao**	**1.79**	**244**			**Pn**	**13 47 53.6**	**-0.6**
JMJ2	**Miyako jima3**	**1.80**	**97**	P		**Pb**	**13 47 56.0**	**-0.4**
JMJ2				*e*S		**Sn**	**13 48 17.4**	**+0.1**
YHNB	**Yeheng**	**1.82**	**261**			**Pn**	**13 47 55.5**	**+0.7**
YULB	**Yu-li**	**2.45**	**231**			**Pn**	**13 48 03.4**	**+0.1**
SSLB	**Suanglung**	**2.48**	**242**			**Pn**	**13 48 04.8**	**+0.9**
TWG	**Pinlang**	**2.99**	**225**			**Pn**	**13 48 11.2**	**+0.5**
TPUB	**Ta-pu**	**2.99**	**237**			**Pn**	**13 48 12.0**	**+1.2**
JOW	**Kunigami**	**4.80**	**66**	Pn		**Pn**	**13 48 38.1**	**+2.4**
	1.8nm,0.3s,baz=236,slow=12,SNR=7.2							
KSRS	**Korea Array**	**13.05**	**16**	Pn		**Pn**	**13 50 28.7**	**0.0**
	0.1nm,0.3s,baz=195,slow=12,SNR=1.3							
XAN	**Xi'an**	**15.47**	**309**	P		**P**	**13 51 09.8**	**+3.6**
XAN				pmax		pmax		
	comp=Z,7.0nm,1.0s							
XAN				LR		LR		
	comp=N,170nm,8.7s							
XAN				LR		LR		
	comp=E,160nm,11.7s							
XAN				LR		LR		
	comp=Z,290nm,11.7s							
KKM	**Kota Kinabalu**	**20.02**	**201**	Pn		Pn	13 51 58.4	+0.1
KKM				lAmb		lAmb	13 52 08.2	
	comp=Z,75nm,1.5s							
MYLDM	**Lahad Datu**	**20.22**	**194**	P		**P**	**13 51 58.3**	**-0.2**
MYLDM				lAmb		lAmb	13 52 08.6	
	comp=Z,8.7nm,1.1s							
CMAR	**Chiang Mai Arr**	**23.57**	**259**	P		**P**	**13 52 34.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=65,slow=6.5,SNR=1.2							
ASAJ	**Asahikawa**	**24.71**	**35**	P		**P**	**13 52 44.7**	**+0.1**
	comp=Z,3.0nm,0.7s,baz=267,slow=7,SNR=2.6							
KLR	**Kul'dur**	**25.10**	**13**	P		**P**	**13 52 48.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=212,slow=6.2,SNR=4.5							
SONM	**Songino Array**	**26.48**	**334**	P		**P**	**13 52 59.6**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=151,slow=8.7,SNR=2.7							
SONM	**Songino Array**	**26.48**	**334**	lAmb		lAmb	13 53 04.5	
	comp=Z,1.1nm,0.8s							
MKAR	**Makanchi Array**	**39.18**	**314**	P		**P**	**13 54 49.7**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=113,slow=9.7,SNR=4.8							
MKAR				LR		LR	14 12 17.3	
	comp=Z,36nm,18.8s,baz=46,slow=38							
WAKE	**Wake Island**	**40.38**	**89**	P		**P**	**13 54 59.9**	**-1.7**
ZALV	**Zalesovo Beam**	**40.69**	**326**	P		**P**	**13 55 02.8**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=108,slow=7.9,SNR=4.0							
WB0	**Warramunga Arr**	**45.74**	**165**	P		**P**	**13 55 45.5**	**+0.6**
WB0				lAmb		lAmb	13 56 00.3	
	comp=Z,3.6nm,0.9s							
WRAB	**Tennant Creek**	**45.89**	**166**	P		**P**	**13 55 46.2**	**+0.1**
WRA	**Warramunga Arr**	**45.90**	**166**	P		**P**	**13 55 47.1**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=347,slow=8.6,SNR=24							
WRA	**Warramunga Arr**	**45.90**	**166**	P		**P**	**13 55 46.1**	**-0.1**
WB2	**Warramunga Arr**	**45.90**	**166**	P		**P**	**13 55 46.7**	**+0.5**
WB2				lAmb		lAmb	13 55 59.2	
	comp=Z,12nm,1.4s							
WR0	**Warramunga Arr**	**45.96**	**165**	P		**P**	**13 55 47.4**	**+0.8**
WR0				lAmb		lAmb	13 55 48.6	
	comp=Z,2.9nm,0.7s							
TIXI	**Tiksi**	**46.82**	**2**	P		**P**	**13 55 52.2**	**-0.6**
TIXI				lAmb		lAmb	13 55 55.8	
	comp=Z,3.3nm,0.8s							
AS31	**Alice Springs**	**49.41**	**167**	P		**P**	**13 56 14.4**	**+0.9**
ASAR	**Alice Springs**	**49.41**	**167**	P		**P**	**13 56 15.1**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=350,slow=7.4,SNR=52							
ASAR	**Alice Springs**	**49.41**	**167**	P		**P**	**13 56 14.5**	**+1.1**
STKA	**Stephens Creek**	**59.15**	**162**	P		**P**	**13 57 24.9**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=355,slow=11,SNR=3.6							
PCA	**Pinnacle**	**71.78**	**32**	P		**P**	**13 58 43.7**	**-2.1**
NOA	**NORSAR Array B**	**78.45**	**333**	LR		LR	14 37 48.5	
	comp=Z,20nm,18.8s,baz=145,slow=39							
YKA	**Yellowknife Ar**	**81.48**	**23**	P		**P**	**13 59 41.7**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=310,slow=4.5,SNR=12							

IDC 28 13:47:53.0±3.4, 27°.61N×85°.87E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/47, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=108.6km s-min=32.0km az=71.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**16.24**	**5**	*e*P		P	13 51 44.8	-1.0
MKAR	**Makanchi Array**	**19.35**	**353**	P		P	13 52 19.3	-0.8
	0.1nm,0.3s,baz=175,slow=12,SNR=7.0							
SONM	**Songino Array**	**25.76**	**33**	P		P	13 53 25.6	+0.2
	0.4nm,0.4s,baz=216,slow=9.0,SNR=2.5							
ZALV	**Zalesovo Beam**	**26.32**	**359**	P		P	13 53 30.9	+0.6
	0.6nm,0.4s,baz=178,slow=8.4,SNR=2.4							
WRA	**Warramunga Arr**	**66.59**	**130**	P		P	13 58 45.3	-0.1
	0.4nm,1.0s,baz=323,slow=6.5,SNR=1.6							

*NOU **28** 14:00:07.7, 38°.17S×176°.21E, h219km, MLv3.8, North Island, New Zealand*

WEL 28 14:00:13.3, 38°.5S±2°.×17°.6E±°, h175km±4km, M2.6/41, MLv2.6/41, Error ellipse: s-maj=0.0km s-min=0.0km az=110.1, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HSRZ	**Hossack Road**	**0.10**	**98**	P		Pn	14 00 36.8	+0.3
WPRZ	**Whakapapataran**	**0.22**	**172**	P		Pn	14 00 36.8	+0.1
KARZ	**Kaharoa**	**0.29**	**19**	P		Pn	14 00 36.9	0.0
PRRZ	**Plateau Road**	**0.29**	**133**	P		Pn	14 00 36.9	0.0
KUTZ	**Kaahu Road**	**0.30**	**231**	P		Pn	14 00 37.1	+0.2
RRRZ	**Republican Roa**	**0.31**	**98**	P		Pn	14 00 36.8	-0.1
ALRZ	**Allen Road**	**0.32**	**147**	P		Pn	14 00 37.1	+0.1
ALRZ				S		Sn	14 00 54.4	-0.8
TLZ	**Tolley Road**	**0.46**	**266**	P		Pn	14 00 37.8	+0.3
TLZ				S		Sn	14 00 56.3	+0.4
KMRZ	**Kaimai**	**0.47**	**342**	P		Pn	14 00 37.6	+0.1
MUGZ	**Murupara**	**0.54**	**110**	P		Pn	14 00 37.5	-0.2
MUGZ				S		Sn	14 00 55.4	-1.1
OPRZ	**Ohinepanea**	**0.57**	**37**	P		Pn	14 00 37.6	-0.3
TGRZ	**Tauranga**	**0.58**	**11**	P		Pn	14 00 37.8	-0.1
MRHZ	**Matea Rd**	**0.58**	**157**	P		Pn	14 00 37.8	-0.1
MRHZ				S		Sn	14 00 55.7	-1.4
RATZ	**Rangitukua**	**0.63**	**206**	P		Pn	14 00 38.2	0.0
RITZ	**Rihia Road**	**0.71**	**197**	P		Pn	14 00 39.1	+0.5
RTZ	**Ruatahuna**	**0.74**	**115**	P		Pn	14 00 38.8	-0.1
RTZ				S		Sn	14 00 58.0	-0.6
TOZ	**Tahuroa Road**	**0.75**	**319**	P		Pn	14 00 39.0	+0.2
TOZ				S		Sn	14 00 58.5	+0.1
URZ	**Urewera**	**0.78**	**88**	P		Pn	14 00 38.5	-0.5
URZ				S		Sn	14 00 57.1	-1.6
MTHZ	**Maungataniwha**	**0.79**	**135**	P		Pn	14 00 39.2	+0.1
MTHZ				S		Sn	14 00 58.3	-0.7
NTVZ	**North Tongarir**	**0.87**	**203**	P		Pn	14 00 40.2	+0.4
KRVZ	**Karewarewa**	**0.88**	**205**	P		Pn	14 00 39.8	0.0
TMVZ	**Te Maari**	**0.88**	**202**	P		Pn	14 00 39.9	+0.1
ETVZ	**East Tongariro**	**0.90**	**201**	P		Pn	14 00 40.0	+0.1
BKZ	**Black Stump Fm**	**0.91**	**162**	P		Pn	14 00 39.9	0.0
BKZ				S		Sn	14 00 59.4	-1.2
WTVZ	**West Tongariro**	**0.92**	**207**	P		Pn	14 00 40.1	+0.1
NNVZ	**North Ngauruho**	**0.92**	**205**	P		Pn	14 00 40.6	+0.4
OTVZ	**Oturere**	**0.94**	**202**	P		Pn	14 00 40.5	+0.3
TWVZ	**Taurewa**	**0.94**	**215**	P		Pn	14 00 40.2	0.0
NMHZ	**Naumai**	**0.96**	**146**	P		Pn	14 00 41.2	+0.9
NMHZ				S		Sn	14 01 01.8	+0.6
SNVZ	**South Ngauruho**	**0.96**	**203**	P		Pn	14 00 40.6	+0.1
NGZ	**Ngauruhoe**	**0.97**	**205**	P		Pn	14 00 40.6	+0.1
RAHZ	**Arahi**	**0.98**	**130**	P		Pn	14 00 40.9	+0.5
RAHZ				S		Sn	14 01 01.4	+0.1
HIZ	**Hauiti**	**1.02**	**257**	P		Pn	14 00 40.8	+0.2
TUVZ	**Tukino**	**1.03**	**201**	P		Pn	14 00 41.1	+0.1
RAGZ	**Rawiri**	**1.04**	**101**	P		Pn	14 00 41.1	+0.2
RAGZ				S		Sn	14 01 01.4	-0.8
FWVZ	**Far West T-bar**	**1.05**	**205**	P		Pn	14 00 41.2	0.0
WHVZ	**Whangaehu Hut**	**1.07**	**203**	P		Pn	14 00 41.4	+0.1
TRVZ	**Turoa**	**1.10**	**204**	P		Pn	14 00 41.4	-0.1
WNVZ	**Wahianoa**	**1.11**	**202**	P		Pn	14 00 41.5	-0.1
MWZ	**Matawai**	**1.11**	**92**	P		Pn	14 00 41.2	-0.2
MWZ				S		Sn	14 01 01.4	-1.7
MOVZ	**Moawhango**	**1.14**	**194**	P		Pn	14 00 41.3	-0.4
KWHZ	**Kaweka Forest**	**1.15**	**168**	P		Pn	14 00 42.2	+0.5
PKVZ	**Pokaka**	**1.16**	**211**	P		Pn	14 00 41.7	-0.1
WHHZ	**Waihua**	**1.17**	**132**	P		Pn	14 00 42.4	+0.5
ARHZ	**Aropaoanui**	**1.18**	**145**	P		Pn	14 00 42.6	+0.7
BHHZ	**Black Hill Sta**	**1.19**	**182**	P		Pn	14 00 41.9	-0.2
MTVZ	**Mangateitei**	**1.20**	**205**	P		Pn	14 00 42.1	-0.1
MCHZ	**McNeill Hill**	**1.23**	**159**	P		Pn	14 00 43.2	+0.8
RUGZ	**Raukumara Rang**	**1.27**	**75**	P		Pn	14 00 41.7	-1.2
VRZ	**Vera Road**	**1.35**	**232**	P		Pn	14 00 43.5	+0.1
RIGZ	**Rimuhau**	**1.35**	**108**	P		Pn	14 00 43.8	+0.3
KRHZ	**Kereru**	**1.36**	**172**	P		Pn	14 00 43.6	+0.1
TKGZ	**Te Karaka**	**1.36**	**96**	P		Pn	14 00 43.8	+0.3
KNZ	**Kokohu**	**1.41**	**121**	P		Pn	14 00 44.2	+0.2
HAZ	**Te Kaha**	**1.42**	**68**	P		Pn	14 00 43.1	-0.9
TWGZ	**Tauwhareparae**	**1.47**	**86**	P		Pn	14 00 44.8	+0.2
PRGZ	**Paritu Road**	**1.52**	**115**	P		Pn	14 00 45.3	+0.3
CKHZ	**Cape Kidnapper**	**1.55**	**152**	P		Pn	14 00 45.9	+0.6
KUZ	**Kuaotunu**	**1.58**	**348**	P		Pn	14 00 45.5	-0.2
PKGZ	**Pakihiroa**	**1.60**	**76**	P		Pn	14 00 45.8	-0.1
KAHZ	**Kahuranaki**	**1.61**	**159**	P		Pn	14 00 46.4	+0.4
PNHZ	**Pukenui**	**1.61**	**178**	P		Pn	14 00 45.7	-0.3
MHGZ	**Mahia Peninsul**	**1.64**	**122**	P		Pn	14 00 46.7	+0.5
ETAZ	**East Tamaki Re**	**1.64**	**324**	P		Pn	14 00 46.2	-0.1
CNGZ	**Carnagh Statio**	**1.65**	**97**	P		Pn	14 00 46.9	+0.6
WIAZ	**Waiheke Island**	**1.69**	**332**	P		Pn	14 00 46.9	+0.1
PUZ	**Puketiti**	**1.70**	**83**	P		Pn	14 00 46.4	-0.4
AWAZ	**Awhitu Peninsu**	**1.70**	**316**	P		Pn	14 00 46.6	-0.3
WAZ	**Wanganui**	**1.70**	**211**	P		Pn	14 00 46.6	-0.3
TSZ	**Takapari Road**	**1.76**	**184**	P		Pn	14 00 47.2	-0.4
LREZ	**Lake Rotokare**	**1.77**	**229**	P		Pn	14 00 47.9	+0.3
WPHZ	**Waipukurau**	**1.78**	**172**	P		Pn	14 00 47.5	-0.2
MBAZ	**Motutapu North**	**1.81**	**327**	P		Pn	14 00 48.0	0.0
PXZ	**Pawanui**	**1.82**	**162**	P		Pn	14 00 48.0	-0.1
NEZ	**North Egmont**	**1.86**	**238**	P		Pn	14 00 49.1	+0.5
WMGZ	**Waiomatatini S**	**1.87**	**76**	P		Pn	14 00 48.3	-0.3
MXZ	**Matakaoa Point**	**1.88**	**68**	P		Pn	14 00 48.9	+0.2
KHEZ	**Kahui Hut**	**1.92**	**238**	P		Pn	14 00 49.5	+0.2
DVHZ	**Dannevirke**	**2.00**	**179**	P		Pn	14 00 49.3	-0.7
PRHZ	**Porangahau**	**2.01**	**169**	P		Pn	14 00 49.8	-0.3
POWZ	**Post Office Ro**	**2.11**	**187**	P		Pn	14 00 50.4	-0.9
ANWZ	**Angora Road**	**2.18**	**173**	P		Pn	14 00 51.6	-0.3
PRWZ	**Pori Road**	**2.26**	**183**	P		Pn	14 00 52.1	-0.8
BFZ	**Birch Farm**	**2.38**	**178**	P		Pn	14 00 53.2	-1.1
MRZ	**Mangatainoka R**	**2.40**	**190**	P		Pn	14 00 53.2	-1.3
TIWZ	**Tintock**	**2.48**	**184**	P		Pn	14 00 54.3	-1.2
OGWZ	**Otaki Gorge**	**2.62**	**196**	P		Pn	14 00 55.7	-1.4
HOWZ	**Holdsworth Sta**	**2.64**	**190**	P		Pn	14 00 55.7	-1.7
KIW	**Kapiti Island**	**2.73**	**200**	P		Pn	14 00 56.6	-1.8
TMWZ	**Te Maipa**	**2.81**	**184**	P		Pn	14 00 57.7	-1.8
MTW	**Mount Morrison**	**2.90**	**189**	P		Pn	14 00 58.3	-2.1
CAW	**Cannon Point**	**2.92**	**196**	P		Pn	14 00 58.9	-1.8
DUWZ	**D'Urville Isla**	**3.02**	**214**	P		Pn	14 01 00.1	-1.9
TRWZ	**Traveller**	**3.12**	**186**	P		Pn

GNI	**Garni**	**1.55**	**36**	PN		**Pb**	**14 01 31.4**	**-1.5**
SRTM	**Siirt_Merkez**	**1.57**	**236**	⇑*i*P		**Pb**	**14 01 31.7**	**-1.6**
SRTM				*i* S		**Sg**	**14 01 54.5**	**+0.2**
SRTM	**Siirt_Merkez**	**1.57**	**236**	*e*Pg		**Pg**	**14 01 32.4**	**-1.4**
MUSM	**Mu-Merkez**	**1.61**	**265**	⇑*i*P		**Pn**	**14 01 30.9**	**-1.9**
MUSM				*i* S		**Sg**	**14 01 57.5**	**+1.9**
CUKT	**Cukurca**	**1.64**	**179**	⇓*i*P		**Pn**	**14 01 32.1**	**-1.1**
CUKT				*i* S		**Sg**	**14 01 58.0**	**+1.5**
CUKT	**Cukurca**	**1.64**	**179**	PN		**Pn**	**14 01 32.2**	**-1.1**
CUKT	**Cukurca**	**1.64**	**179**	*e*Pn		**Pb**	**14 01 33.3**	**-1.2**
SIRT	**Sirnak**	**1.65**	**213**	PN		**Pb**	**14 01 33.3**	**-1.2**
SIRT	**Sirnak**	**1.65**	**213**	*e*Pn		**Pb**	**14 01 33.7**	**-0.8**
SIRN	**Sirnak**	**1.67**	**213**	*i* P		**Pb**	**14 01 34.1**	**-0.7**
SIRN				*i* S		**Sg**	**14 01 59.9**	**+2.7**
SIRN	**Sirnak**	**1.67**	**213**	*e*Pn		**Pb**	**14 01 34.1**	**-0.7**
VRTB	**Varto-Mus**	**1.67**	**280**	⇑*i*P		**Pb**	**14 01 33.0**	**-1.8**
VRTB				*i* S		**Sg**	**14 02 03.4**	**+6.2**
VRTB	**Varto-Mus**	**1.67**	**280**	PN		**Pb**	**14 01 33.2**	**-1.7**
VRTB	**Varto-Mus**	**1.67**	**280**	*e*Pn		**Pb**	**14 01 33.0**	**-1.8**
KAPZ	**Kaputan**	**1.67**	**31**	*i* P		**Pg**	**14 01 34.3**	**-1.4**
KAPZ				*i* S		**Sg**	**14 01 58.8**	**+1.4**
IMRD	**Marand**	**1.68**	**96**	*e*Pg		**Pb**	**14 01 34.3**	**-0.8**
IMRD				*e*			14 02 12.0	
	comp=Z,17μm,0.8s							
KOPR	**Koprukoy-ERZUR**	**1.72**	**310**	PN		**Pb**	**14 01 34.4**	**-1.4**
EAK	**Akyaka**	**1.79**	**1**	⇓*i*P		**Pg**	**14 01 36.6**	**-1.3**
EAK				*i* S		**Sg**	**14 02 03.2**	**+2.0**
SENK	**Senkaya-Erzuru**	**1.91**	**331**	PN		**Pb**	**14 01 36.5**	**-2.6**
SLHN	**Bingol, Solhan**	**1.98**	**273**	*i* P		**Pb**	**14 01 37.8**	**-2.5**
SLHN				*i* S		**Sg**	**14 02 14.0**	**+6.5**
SVAN	**Silvan-Diyarba**	**2.00**	**249**	*i* P		**Pb**	**14 01 38.9**	**-1.6**
SVAN				*i* S		**Sg**	**14 02 07.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**2.00**	**249**	PN		**Pb**	**14 01 38.2**	**-2.3**
KARO	**Karliova-Bingo**	**2.00**	**283**	PN		**Pn**	**14 01 37.4**	**-0.8**
BTMN	**Batman**	**2.06**	**242**	*i* P		**Pb**	**14 01 40.7**	**-0.9**
BTMN				*i* S		**Sg**	**14 02 09.7**	**-0.3**
ITBZ	**Tabriz**	**2.13**	**107**	*e*Pn		**Pn**	**14 01 40.2**	**+0.3**
ECAT	**Cat-ERZURUM**	**2.13**	**290**	*i* P		**Pb**	**14 01 41.4**	**-1.5**
ECAT				*i* S		**Sg**	**14 02 14.7**	**+2.5**
BNGB	**Bingl**	**2.25**	**273**	PN		**Pn**	**14 01 41.6**	**0.0**
MIDY	**Mardin/Midyat-**	**2.27**	**230**	*i* P		**Pb**	**14 01 43.2**	**-1.9**
MIDY				*i* S		**Sg**	**14 02 15.7**	**-0.7**
YEDI	**Yedisu-Bingol**	**2.41**	**284**	PN		**Pn**	**14 01 43.6**	**-0.2**
KRIK	**Erzurum-spir**	**2.50**	**306**	*i* P		**Pg**	**14 01 49.7**	**-1.8**
KRIK				*i* S		**Sg**	**14 02 27.4**	**+3.5**
AKH	**Akhalkalaki**	**2.51**	**359**	PN		**Pn**	**14 01 44.9**	**-0.4**
HANI	**Diyarbakir_Han**	**2.53**	**260**	*i* P		**Pn**	**14 01 44.6**	**-0.7**
HANI				*i* S		**Sg**	**14 02 23.5**	**-1.3**
DBAD	**Bademkaya**	**2.56**	**326**	*i* P		**Pb**	**14 01 49.5**	**-0.7**
DBAD				*i* S		Sg	14 02 35.4	+9.4
KOPT	**Kop Dagi**	**2.63**	**296**	*i* P		**Pb**	**14 01 50.8**	**-0.5**
KOPT				*i* S		**Sg**	**14 02 29.4**	**+1.3**
EPOS	**Posof**	**2.68**	**346**	*i* P		**Pb**	**14 01 51.4**	**-0.9**
EPOS				*i* S		**Sg**	**14 02 30.3**	**+0.4**
MARD	**Mardin**	**2.71**	**235**	*i* P		**Pn**	**14 01 48.6**	**+0.8**
MARD				*i* S		**Sg**	**14 02 28.0**	**-2.6**
MAHB	**Mahabad**	**2.72**	**141**	*e*Pn		**Pb**	**14 01 50.1**	**-2.7**
MAHB				*e*			14 02 13.1	
	comp=Z,2μm,0.6s							
IHRS	**Heris**	**2.78**	**101**	*e*Pn		**Pb**	**14 01 50.9**	**-3.0**
IHRS				*e*			14 01 59.1	
	comp=Z,3μm,0.5s							
DYBB	**Diyarbakir**	**2.85**	**252**	PN		**Pn**	**14 01 49.9**	**+0.1**
CHOM	**Cayeli-Rize**	**3.08**	**316**	PN		**Pn**	**14 01 53.1**	**+0.2**
ISRB	**Sarab**	**3.40**	**107**	*e*Pn		**Pn**	**14 01 59.2**	**+1.8**
ISRB				*e*			14 02 15.9	
	comp=Z,2μm,0.5s							
IDHR	**Dehrash**	**4.76**	**151**	*e*Pn		**Pn**	**14 02 18.1**	**+2.0**
ILIN	**Lien**	**4.81**	**145**	*e*Pn		**Pn**	**14 02 18.9**	**+2.0**
KBZ	**Khabaz**	**4.86**	**354**	Pn		**Pn**	**14 02 20.2**	**+3.0**
	comp=Z,0.0nm,0.3s,baz=203,slow=13,SNR=2.2							
KBZ				Lg		Lg	14 03 43.4	
	comp=Z,0.0nm,0.3s,baz=233,slow=9.5,SNR=1.1							
KVAR	**Kislovodsk Arr**	**5.10**	**353**	Pn		**Pn**	**14 02 22.9**	**+2.2**
	baz=111,slow=18,SNR=1.6							
KVAR				Lg		Lg	14 03 41.2	
	baz=277,slow=18,SNR=1.8							
IGHG	**Ghaleghazi**	**5.16**	**151**	*e*Pn		**Pn**	**14 02 24.2**	**+2.6**
QABG	**Abgarm-Qazvin**	**5.75**	**122**	*e*Pn		**Pn**	**14 02 30.3**	**+0.5**
IKFM	**Kafar-mosalman**	**6.38**	**146**	*e*Pn		**Pn**	**14 02 40.3**	**+2.1**
BRTR	**Keskin Array B**	**7.74**	**279**	Pn		Pn	14 03 01.0	+3.9
	baz=100,slow=16,SNR=1.8							
BRTR				Lg		Lg	14 05 15.9	
	baz=86,slow=23,SNR=1.2							
BRTR				LR		LR	14 05 57.1	
	comp=Z,62nm,21.0s,baz=128,slow=38							
MMAI	**Mount Meron Ar**	**8.84**	**231**	Pn		**Pn**	**14 03 12.9**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=49,slow=18,SNR=2.1							
MMAI				Lg		Lg	14 05 39.1	
	comp=Z,2.7nm,0.3s,baz=32,slow=17,SNR=5.4							
MMAI				LR		LR	14 06 53.0	
	comp=Z,203nm,18.4s,baz=30,slow=39							
GEYT	**Alibeck**	**11.46**	**90**	Pn		**Pn**	**14 03 47.5**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=260,slow=16,SNR=2.0							
GEYT				LR		LR	14 09 18.7	
	comp=Z,19nm,18.4s,baz=20,slow=44							
EIL	**Elat**	**11.63**	**220**	LR		LR	14 09 08.9	
	comp=Z,152nm,18.2s,baz=36,slow=42							
AKTO	**Aktyubinsk**	**15.42**	**37**	Pn		**Pn**	**14 04 39.2**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=236,slow=14,SNR=2.1							
AKASG	**Malin Array Be**	**15.55**	**324**	Pn		**Pn**	**14 04 43.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=131,slow=11,SNR=5.5							
CRVS	**Cervenica-Dubn**	**18.75**	**309**	*e*P		**Pn**	**14 05 28.2**	**+4.6**
KIRV	**Kirov**	**20.07**	**9**	LR		LR	14 14 15.0	
	comp=Z,37nm,18.3s,baz=249,slow=40							
ARU	**Arti**	**20.16**	**25**	P		Pn	14 05 38.9	-1.5
	comp=Z,0.7nm,0.5s,baz=290,slow=22,SNR=1.7							
ARU				LR		LR	14 15 53.5	
	comp=Z,51nm,19.3s,baz=99,slow=44							
GERES	**GERESS Array B**	**23.58**	**305**	P		**P**	**14 06 15.8**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=101,slow=10,SNR=4.5							
FINES	**FINESS Array B**	**25.04**	**340**	P		**P**	**14 06 29.3**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=128,slow=9.0,SNR=2.5							
KURBB	**Kurchatov Arra**	**27.20**	**53**	P		**P**	**14 06 47.8**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=263,slow=8.9,SNR=3.2							
HFS	**Hagfors**	**28.35**	**328**	P		**P**	**14 06 59.5**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=125,slow=12,SNR=3.7							
HFS				LR		LR	14 20 15.4	
	comp=Z,32nm,18.0s,baz=145,slow=41							
MKAR	**Makanchi Array**	**29.23**	**62**	P		**P**	**14 07 05.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=150,slow=45,SNR=2.9							
NOA	**NORSAR Array B**	**29.88**	**328**	LR		LR	14 19 20.5	
	comp=Z,26nm,19.9s,baz=135,slow=37							
ESDC	**Sonseca Array**	**36.46**	**287**	P		**P**	**14 08 11.5**	**+2.1**
	comp=Z,1.7nm,0.8s,baz=69,slow=8.3,SNR=6.9							
ESDC				LR		LR	14 24 13.9	
	comp=Z,14nm,18.5s,baz=125,slow=38							
TORD	**Torodi Ar. Bea**	**44.98**	**247**	P		**P**	**14 09 17.6**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=298,slow=7.1,SNR=5.9							
CMAR	**Chiang Mai Arr**	**51.85**	**97**	P		**P**	**14 10 13.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=298,slow=7.1,SNR=5.9							
KSRS	**Korea Array**	**63.91**	**62**	P		**P**	**14 11 37.9**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=279,slow=6.9,SNR=1.9							
PETK	**Petropavlovsk-**	**72.15**	**35**	LR		LR	14 48 03.8	
	comp=Z,21nm,18.1s,baz=142,slow=39							
YKA	**Yellowknife Ar**	**77.44**	**350**	P		**P**	**14 12 58.8**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=22,slow=6.2,SNR=3.1							
BATI	**Baumata**	**88.74**	**104**	LR		LR	14 59 19.3	
	comp=Z,23nm,18.9s,baz=124,slow=39							

TAP 28 14:03:13.5,24°.05N×121°.44E,h59km,ML1.9,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWD	**Chiawan**	**0.15**	**80**	*e*P		Pn	14 03 22.7	+0.1
	baz=80							
ETLH	**Xiulin Townshi**	**0.16**	**15**	*i* P		Pn	14 03 22.8	0.0
	baz=14							
ETLH				*i* S		Sn	14 03 29.7	+0.3
	baz=14							
WHF	**Hehuan Shan**	**0.18**	**300**	P		Pn	14 03 23.2	-0.1
	baz=300							
WHF				*e*S		Sn	14 03 30.7	+0.4
	baz=300							
NACB	**Ninganchiao**	**0.19**	**50**	*i* P		Pn	14 03 23.1	+0.3
	baz=50							
ESL	**Shilin**	**0.24**	**181**	*i* P		Pn	14 03 23.4	+0.3
	baz=179							
CHGB	**Renai**	**0.24**	**272**	P		Pn	14 03 23.3	-0.1
	baz=271							
CHGB				*i* S		Sn	14 03 30.6	+0.2
	baz=271							
OWD	**Renai**	**0.26**	**248**	P		Pn	14 03 23.4	0.0
	baz=247							
OWD				S		Sn	14 03 30.8	+0.3
	baz=247							
FUSS	**Fushou**	**0.26**	**317**	*i* P		Pn	14 03 23.6	0.0
	baz=317							
FUSS				S		Sn	14 03 31.0	+0.3
	baz=317							
TDCB	**Techi**	**0.32**	**308**	*e*P		Pn	14 03 23.6	-0.3
	baz=307							
TDCB				*e*S		Sn	14 03 32.1	+0.7
	baz=307							
NNSB	**Datong**	**0.38**	**352**	P		Pn	14 03 24.7	+0.3
	baz=352							
NNSB				*e*S		Sn	14 03 32.3	+0.2
	baz=352							
NNSH	**Datong**	**0.38**	**352**	P		Pn	14 03 24.7	+0.3
	baz=352							
NNSH				*i* S		Sn	14 03 32.6	+0.4
	baz=352							
EGFH	**Guangfu**	**0.38**	**181**	*i* P		Pn	14 03 24.6	+0.4
	baz=181							
EGFH				*e*S		Sn	14 03 31.1	-0.9
	baz=181							
NNS	**Nan Shan**	**0.39**	**351**	P		Pn	14 03 24.8	+0.4
	baz=352							
NNS				S		Sn	14 03 32.7	+0.3
	baz=352							
VWDT	**VWDT**	**0.40**	**222**	*e*P		Pn	14 03 25.1	+0.7
	baz=222							
VWDT				*e*S		Sn	14 03 33.8	+1.6
	baz=222							
WPL	**Puli Township**	**0.44**	**265**	*e*P		Pn	14 03 24.4	-0.4
	baz=264							
DPDB	**Guoxing**	**0.47**	**268**	*e*P		Pn	14 03 24.8	-0.3
	baz=267							
DPDB				*e*S		Sn	14 03 33.6	0.0
	baz=267							
WHP	**Taichung City**	**0.50**	**296**	*e*P		Pn	14 03 24.6	-0.9
	baz=296							
WHP				*e*S		Sn	14 03 33.3	-0.9
	baz=296							
SSLB	**Suanglung**	**0.52**	**239**	*e*P		Pn	14 03 25.5	-0.1
	baz=239							
SSLB				*e*S		Sn	14 03 34.8	+0.4
	baz=239							
SMLT	**Sun Moon Lake**	**0.52**	**251**	*e*P		Pn	14 03 26.0	+0.2
	baz=250							
SMLT				*i* S		Sn	14 03 35.2	+0.6
	baz=250							
NDT	**Datong Townshi**	**0.55**	**7**	*e*P		Pn	14 03 26.3	+0.3
	baz=7.0							
NDT				*e*S		Sn	14 03 35.5	+0.4
	baz=7.0							
TYC	**Yuchr**	**0.55**	**254**	*e*P		Pn	14 03 25.7	-0.2
	baz=254							
TYC				S		Sn	14 03 35.6	+0.6
	baz=254							
ENTT	**Nioudou**	**0.59**	**11**	*e*P		Pn	14 03 27.3	+0.8
	baz=12							
ENTT				*e*S		Sn	14 03 37.4	+1.4
	baz=12							
YHNB	**Yeheng**	**0.62**	**355**	*e*P		Pn	14 03 26.8	0.0
	baz=354							
YHNB				*e*S		Sn	14 03 36.9	+0.5
	baz=354							
WHYT	**Xinyi Township**	**0.64**	**236**	*e*P		Pn	14 03 27.8	+0.7
	baz=236							
WHYT				*e*S		Sn	14 03 38.0	+1.1
	baz=236							
YULB	**Yu-li**	**0.67**	**191**	*e*P		Pn	14 03 28.0	+0.6
	baz=191							
WJS	**Zhushan**	**0.69**	**251**	*e*P		Pn	14 03 27.5	0.0
	baz=250							
WJS				*e*S		Sn	14 03 38.9	+1.1
	baz=250							
TWE	**Neicheng**	**0.70**	**17**	*e*P		Pn	14 03 28.4	+0.7
	baz=18							
TWF1	**Yuli**	**0.71**	**191**	*e*P		Pn	14 03 28.9	+1.1
	baz=189							
WNT	**Mingjian**	**0.71**	**256**	*e*S		Sn	14 03 39.5	+1.2
	baz=255							
NWLT	**Wulai**	**0.72**	**5**	*e*P		Pn	14 03 28.8	+0.7
	baz=4.0							
NWLT				*e*S		Sn	14 03 39.6	+1.0
	baz=4.0							
ALS	**Alishan**	**0.79**	**227**	*e*P		Pn	14 03 29.4	+0.3
	baz=226							
ALS				*e*S		Sn	14 03 41.3	+0.7
	baz=226							
CHN5	**Tsauling**	**0.83**	**237**	*e*P		Pn	14 03 30.4	+0.9
	baz=236							
CHN5				*e*S		Sn	14 03 41.2	+0.1
	baz=236							
ELDTW	**Lidau**	**0.94**	**204**	*e*P		Pn	14 03 32.3	+1.4
	baz=203							

JMA 28 14:03:35.2±0.2,24°.92N×123°.37E,h29km,M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.56**	**216**	P		Pb	14 03 46.2	-0.4
YOJ				*e*S		Sb	14 03 53.6	-0.7
JYNG	**Yonagunijimaku**	**0.61**	**220**	P		Pb	14 03 46.9	-0.4
JYNG				*e*S		Sb	14 03 54.5	-1.1
IRIF	**Iriomote-Funau**	**0.67**	**151**	P		Pb	14 03 47.9	-0.5
IRIF				*e*S		Sb	14 03 56.9	-0.4
JIJ	**Ishigaki jima**	**0.90**	**128**	P		Pn	14 03 51.2	-0.6
JIJ				S		Sb	14 04 02.2	-1.6
JKRS	**Kuro-shima**	**0.90**	**139**	P		Pn	14 03 51.6	-0.2
JKRS				S		Sb	14 04 03.0	-0.7
JISG	**Ishigakijimahi**	**0.92**	**111**	P		Pn	14 03 51.7	-0.4
JISG				*e*S		Sn	14 04 03.6	-0.8
HATJ	**Hateruma jima**	**0.95**	**155**	P		Pn	14 03 52.5	0.0
HATJ				*e*S		Sn	14 04 04.8	-0.3
JTJ	**Tarama**	**1.24**	**103**	*e*S		Sn	14 04 11.6	-0.8

TAP 28 14:07:11.1,24°.85N×122°.02E,h5km±1km,ML1.4,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.17**	**351**	*e*P		Pg	14 07 14.3	-0.1
	baz=354							
TWB1				*e*S		Sg	14 07 16.7	+0.1
	baz=354							
NTC	**Toucheng**	**0.17**	**273**	*e*P		Pg	14 07 14.4	0.0
	baz=273							
NTC				*e*S		Sg	14 07 16.9	+0.2
	baz=273							
TIPB	**Shuangxi**	**0.21**	**306**	P		Pg	14 07 15.3	0.0
	baz=306							
TIPB				*e*S		Sg	14 07 18.3	+0.2
	baz=306							
TWE	**Neicheng**	**0.34**	**249**	*e*P		Pg	14 07 17.5	-0.2
	baz=247							
ENTT	**Nioudou**	**0.46**	**244**	*e*P		Pg	14 07 19.7	-0.2
	baz=242							

JMA 28 14:07:14.2±0.1,24°.94N×123°.37E,h25km±5km,M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.58**	**215**	P		Pb	14 07 25.5	-0.2
YOJ				S		Sb	14 07 33.3	-0.2
IRIF	**Iriomote-Funau**	**0.69**	**151**	P		Pb	14 07 27.3	-0.2
IRIF				*e*S		Sb	14 07 36.3	-0.3
JIJ	**Ishigaki jima**	**0.91**	**129**	P		Pb	14 07 30.7	-0.6
JIJ				S		Sb	14 07 41.8	-1.2
JKRS	**Kuro-shima**	**0.91**	**140**	P		Pb	14 07 31.1	-0.2
JKRS				S		Sb	14 07 42.6	-0.4
JISG	**Ishigakijimahi**	**0.93**	**112**	P		Pb	14 07 31.1	-0.5
JISG				*e*S		Sb	14 07 42.9	-0.5
HATJ	**Hateruma jima**	**0.96**	**156**	P		Pn	14 07 31.9	-0.2

JMA 28 14:20:46.4±0.2,24°.93N×123°.37E,h25km±5km,M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.57**	**215**	P		Pb	14 20 57.5	-0.3
IRIF	**Iriomote-Funau**	**0.68**	**151**	P		Pb	14 20 59.4	-0.2
IRIF				S		Sb	14 21 08.4	-0.2
JIJ	**Ishigaki jima**	**0.90**	**129**	P		Pb	14 21 02.8	-0.6
JIJ				S		Sb	14 21 13.9	-1.1
JKRS	**Kuro-shima**	**0.90**	**140**	P		Pb	14 21 03.1	-0.3
JKRS				*e*S		Sb	14 21 15.0	0.0
JISG	**Ishigakijimahi**	**0.92**	**112**	P		Pb	14 21 03.5	-0.2
JISG				*e*S		Sb	14 21 15.1	-0.4
HATJ	**Hateruma jima**	**0.96**	**155**	P		Pn	14 21 04.0	-0.2

TAP 28 14:20:49.2,24°.86N×121°.99E,h10km±1km,ML1.4,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NTC	**Toucheng**	**0.15**	**269**	*e*P		Pg	14 20 53.0	+0.5
	baz=268							
TWB1	**Santiao Chiao**	**0.15**	**359**	*i* P		Pb	14 20 53.4	-0.6
	baz=2.0							
TWB1				*i* S		Sg	14 20 56.0	+1.0
	baz=2.0							
TIPB	**Shuangxi**	**0.19**	**308**	*i* P		Pb	14 20 54.3	-0.4
	baz=307							
TIPB				*i* S		Sg	14 20 57.4	+1.4
	baz=307							
ILA	**Ilan**	**0.24**	**248**	P		Pb	14 20 55.4	-0.1
	baz=246							
ILA				*e*S		Sg	14 20 59.2	+1.9
	baz=246							
TWC	**Suao**	**0.28**	**207**	P		Pb	14 20 55.7	-0.6
	baz=205							
TWC				S		Sb	14 21 00.1	-0.9
	baz=205							
WFSB	**Wu-fen Shan**	**0.28**	**318**	*e*P		Pb	14 20 56.2	-0.2
	baz=318							
WFSB				*e*S		Sb	14 21 00.6	-0.6
	baz=318							
TWE	**Neicheng**	**0.32**	**245**	P		Pb	14 20 56.8	-0.2
	baz=243							
TWE				S		Sb	14 21 01.5	-0.8
	baz=243							
NDS	**Dongshan**	**0.33**	**228**	*e*P		Pb	14 20 57.1	-0.1
	baz=228							
NDS				*e*S		Sb	14 21 02.7	+0.1
	baz=228							
TNOU	**National Taiwa**	**0.35**	**326**	*e*S		Sb	14 21 02.9	-0.2
	baz=325							
TWA	**Mucha**	**0.39**	**288**	*e*P		Pb	14 20 58.1	0.0
	baz=288							
TWA				*e*S		Sb	14 21 04.1	-0.1
	baz=288							
ENTT	**Nioudou**	**0.44**	**241**	*e*P		Pg	14 20 58.2	+0.4
	baz=240							
ENTT				*e*S		Sb	14 21 05.4	-0.3
	baz=240							
EWUT	**Wuta**	**0.45**	**205**	*e*P		Pb	14 20 58.7	-0.5
	baz=205							
EWUT				*e*S		Sb	14 21 05.4	-0.6
	baz=205							

*TRN **28** 14:29:25.4, 18°.06N×64°.34W, h13km, M3.2(RSPR)*
*NEIC **28** 14:29:29.5±1.3, 18°.11N±0°.04×64°.36W±0°.04, h23km±9km, Error ellipse: s-maj=7.7km s-min=2.4km az=214.0*
*RSPR **28** 14:29:29.7, 18°.33N×64°.25W, h40km±7km, MD3.2/10*

ISC 28 14:29:27.9±1.1, 18°.02N±0°.04×64°.34W±0°.03, h12km±9km, n47, σ0°.57/60, 13C-7D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VGBI	**Virgin Gorda,**	**0.48**	**353**	⇑*e*P		**Pg**	**14 29 37.3**	**0.0**
VGBI	**Virgin Gorda,**	**0.48**	**353**			**Pg**	**14 29 37.3**	**0.0**
TBVI	**Tortola**	**0.48**	**326**	⇓*e*P		**Pg**	**14 29 37.6**	**+0.2**
TBVI	**Tortola**	**0.48**	**326**	⇓*e*P		**Pg**	**14 29 37.6**	**+0.2**
TBVI				*e*S		**Sg**	**14 29 43.9**	**+0.2**
TBVI	**Tortola**	**0.48**	**326**			**Pg**	**14 29 37.6**	**+0.2**
TBVI						**Sg**	**14 29 43.9**	**+0.2**
CDVI	**St. Croix**	**0.48**	**237**	⇑*e*P		**Pg**	**14 29 37.3**	**-0.1**
CDVI	**St. Croix**	**0.48**	**237**	⇑*e*P		**Pg**	**14 29 37.3**	**-0.1**
STVI	**Saint Thomas**	**0.68**	**300**	⇑*e*P		**Pg**	**14 29 40.9**	**-0.1**
STVI	**Saint Thomas**	**0.68**	**300**	⇑*e*P		**Pg**	**14 29 40.9**	**-0.1**
STVI				*e*S		**Sb**	**14 29 51.0**	**+0.1**
STVI	**Saint Thomas**	**0.68**	**300**			**Pg**	**14 29 40.9**	**-0.1**
STVI						**Sb**	**14 29 51.0**	**+0.1**
STVI	**Saint Thomas**	**0.68**	**300**	IAML			14 29 52.8	
	comp=E,1μm,0.3s							
STVI				IAML			14 29 53.7	
	comp=N,2μm,0.2s							
ABVI	**Anegada Island**	**0.71**	**0**			**Pg**	**14 29 41.6**	**-0.1**
ABVI				IAML			14 29 55.7	
	comp=E,557nm,0.5s							
CUPR	**Culebra, Puert**	**0.94**	**288**	⇑*e*P		**Pg**	**14 29 45.5**	**-0.6**
CUPR	**Culebra, Puert**	**0.94**	**288**	*e*S		**Sg**	**14 29 58.8**	**+0.3**
CUPR	**Culebra, Puert**	**0.94**	**288**			**Pg**	**14 29 45.5**	**-0.6**
CUPR						**Sg**	**14 29 58.8**	**+0.3**
MTP	**Monte Pirata**	**1.16**	**274**	⇑*e*P		**Pb**	**14 29 49.5**	**-0.3**
MTP	**Monte Pirata**	**1.16**	**274**	⇑*e*P		**Pb**	**14 29 49.5**	**-0.3**
MTP				*e*S		**Sg**	**14 30 05.7**	**+0.4**
MTP	**Monte Pirata**	**1.16**	**274**			**Pb**	**14 29 49.5**	**-0.3**
MTP						**Sg**	**14 30 05.7**	**+0.4**
**

JCH				*e*S	**S**	14 40 46.8	-4.3
JNBK	**Urakawa-nobuka**	**5.60**	**207**	P	**P**	**14 39 46.1**	**-0.3**
JNBK				*e*S	**S**	**14 40 54.6**	**-5.3**
JKB	**Kayabe**	**6.56**	**216**	P	**P**	**14 39 56.2**	**-0.1**
JKB				*e*S	**S**	**14 41 13.5**	**-4.5**
PETK	**Petropavlovsk-**	**9.37**	**48**	P	**P**	**14 40 25.7**	**-0.6**
	0.1nm,0.3s,baz=224,slow=7.4,SNR=1.5						
KLR	**Kul'dur**	**9.83**	**287**	P	**P**	**14 40 30.5**	**-0.8**
	0.5nm,0.3s,baz=74,slow=10,SNR=9.3						
USRK	**Uesuriysk Ar.**	**10.41**	**258**	P	**P**	**14 40 38.3**	**+0.6**
	baz=65,slow=12,SNR=8.6						
MJAR	**Matsushiro Arr**	**12.29**	**212**	P	**P**	**14 41 01.8**	**+3.4**
	0.1nm,0.3s,baz=26,slow=10,SNR=1.7						
JHJ	**Hachijo jima 2**	**14.99**	**201**	P	**P**	**14 41 30.7**	**+3.3**
	8.2nm,0.3s,baz=167,slow=12,SNR=4.5						
SEY	**Seymchan**	**16.04**	**10**	P	**P**	**14 41 35.3**	**-2.8**
	0.3nm,0.3s,baz=267,slow=23,SNR=11						
KSRS	**Korea Array**	**16.68**	**240**	P	**P**	**14 41 48.0**	**+2.9**
	0.3nm,0.3s,baz=44,slow=10,SNR=9.3						
ILAR	**Eielson Array**	**39.06**	**39**	P	**P**	**14 45 01.6**	**-1.0**
	15nm,0.4s,baz=270,slow=7.6,SNR=9.8						
MKAR	**Makanchi Array**	**42.44**	**294**	P	**P**	**14 45 30.0**	**0.0**
	0.3nm,0.6s,baz=78,slow=5.6,SNR=3.6						
INK	**Inuvik**	**43.70**	**32**	P	**P**	**14 45 38.7**	**-0.8**
	0.5nm,0.4s,baz=289,slow=7.5,SNR=7.2						
YKA	**Yellowknife Ar**	**53.23**	**35**	P	**P**	**14 46 50.2**	**-0.7**
	0.4nm,0.6s,baz=304,slow=6.9,SNR=7.1						
ARCES	**ARCESS Array B**	**55.68**	**339**	P	**P**	**14 47 06.7**	**-1.6**
	4.0nm,0.9s,baz=52,slow=6.8,SNR=5.2						
FINES	**FINESS Array B**	**61.41**	**332**	P	**P**	**14 47 46.5**	**-0.6**
	1.0nm,0.5s,baz=64,slow=8.7,SNR=7.7						
NOA	**NORSAR Array B**	**66.05**	**338**	P	**P**	**14 48 16.6**	**-0.4**
	0.2nm,0.4s,baz=31,slow=4.6,SNR=1.9						
NVAR	**Mina Array Bea**	**66.27**	**59**	P	**P**	**14 48 20.2**	**+1.2**
	0.6nm,0.8s,baz=289,slow=5.6,SNR=4.8						
WRA	**Warramunga Arr**	**67.79**	**192**	P	**P**	**14 48 31.2**	**+2.9**
	0.2nm,0.8s,baz=4.4,slow=6.7,SNR=1.7						
PDAR	**Pinedale Array**	**68.13**	**50**	P	**P**	**14 48 31.7**	**+1.2**
	0.7nm,0.6s,baz=346,slow=0.5,SNR=13						
ASAR	**Alice Springs**	**71.51**	**192**	P	**P**	**14 48 54.3**	**+3.7**
	0.1nm,0.5s,baz=4.7,slow=5.2,SNR=7.1						
TXAR	**Lajitas Array**	**81.22**	**56**	P	**P**	**14 49 45.6**	**+1.1**
	0.6nm,0.5s,baz=298,slow=4.2,SNR=9.2						

TAP ***28*** *14:45:26.9,24.˚84N×121.˚99E,h7km,ML2.9,C*
JMA ***28*** *14:45:27.6±0.1,24.˚83N×121.˚94E,h25km,M2.2*

ISC 28 14:45:26.9±0.8,24.˚86N±0.˚02×122.˚01E±0.˚02,h12km±6km, n90,σ95/168,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.15**	**353**	P		**Pg**	**14 45 30.6**	**+0.2**
	baz=3.0							
TWB1				S		**Sg**	**14 45 33.0**	**+0.1**
	baz=3.0							
NTC	**Toucheng**	**0.16**	**269**	*i* P		**Pg**	**14 45 30.6**	**0.0**
	baz=284							
NTC				*i* S		**Sg**	**14 45 33.2**	**-0.1**
	baz=284							
TIPB	**Shuangxi**	**0.20**	**304**	*i* P		**Pg**	**14 45 31.6**	**+0.3**
	baz=310							
TIPB				*i* S		**Sg**	**14 45 34.7**	**+0.3**
	baz=310							
ILA	**Ilan**	**0.26**	**249**	*i* P		**Pg**	**14 45 32.3**	**+0.1**
	baz=250							
ILA				*i* S		**Sg**	**14 45 36.5**	**+0.7**
	baz=250							
TWC	**Suao**	**0.29**	**211**	*i* P		**Pg**	**14 45 32.6**	**-0.2**
	baz=208							
TWC				*i* S		**Sg**	**14 45 36.0**	**-0.8**
	baz=208							
NWF	**Wu-fen Shan**	**0.30**	**316**	*i* P		**Pb**	**14 45 33.7**	**-0.6**
	baz=311							
NWF				*i* S		**Sb**	**14 45 38.3**	**-0.9**
	baz=311							
WFSB	**Wu-fen Shan**	**0.30**	**316**	P		**Pb**	**14 45 33.6**	**-0.6**
	baz=320							
WFSB				S		**Sb**	**14 45 38.2**	**-0.9**
	baz=320							
TWE	**Neicheng**	**0.34**	**246**	*i* P		**Pg**	**14 45 33.7**	**0.0**
	baz=246							
TWE				*i* S		**Sg**	**14 45 38.4**	**+0.1**
	baz=246							
NDS	**Dongshan**	**0.35**	**230**	*i* P		**Pg**	**14 45 33.8**	**-0.1**
	baz=231							
NDS				*i* S		**Sg**	**14 45 38.2**	**-0.4**
	baz=231							
TNOU	**National Taiwa**	**0.36**	**324**	P		**Pg**	**14 45 34.8**	**+0.6**
	baz=315							
TNOU				S		**Sg**	**14 45 39.8**	**+0.8**
	baz=315							
TWA	**Mucha**	**0.41**	**288**	*i* P		**Pb**	**14 45 35.5**	**-0.6**
	baz=290							
TWA				*i* S		**Sg**	**14 45 40.9**	**+0.5**
	baz=290							
NHDH	**Xindian Distri**	**0.45**	**284**	P		**Pg**	**14 45 36.0**	**+0.1**
	baz=276							
NHDH				S		**Sb**	**14 45 42.7**	**-0.9**
	baz=276							
ENTT	**Nioudou**	**0.46**	**242**	*i* P		**Pg**	**14 45 35.9**	**0.0**
	baz=242							
EWUT	**Wuta**	**0.46**	**207**	P		**Pg**	**14 45 35.9**	**-0.1**
	baz=213							
EWUT				*e*S		**Sb**	**14 45 43.2**	**-0.6**
	baz=213							
NWLT	**Wulai**	**0.47**	**260**	P		**Pg**	**14 45 36.1**	**0.0**
	baz=262							
NWLT				S		**Sg**	**14 45 41.9**	**-0.5**
	baz=262							
TATO	**Taipei**	**0.49**	**284**	P		**Pb**	**14 45 37.0**	**-0.5**
	baz=277							
TATO				S		**Sg**	**14 45 43.2**	**+0.2**
	baz=277							
TAP	**Taipei**	**0.49**	**292**	P		**Pb**	**14 45 37.7**	**+0.1**
	baz=294							
TAP				S		**Sb**	**14 45 44.3**	**-0.4**
	baz=294							
YM01	**YM01**	**0.49**	**306**	*i* P		**Pb**	**14 45 37.6**	**0.0**
	baz=307							
YM01				S		**Sb**	**14 45 44.5**	**-0.3**
	baz=307							
YM08	**YM08**	**0.50**	**311**	P		**Pb**	**14 45 37.6**	**-0.2**
	baz=301							
YM08				*e*S		**Sb**	**14 45 46.7**	**+1.6**
	baz=301							
NDT	**Datong Townshi**	**0.52**	**241**	P		**Pg**	**14 45 37.0**	**-0.1**
	baz=242							
NDT				S		**Sg**	**14 45 43.4**	**-0.6**
	baz=242							
BACT	**New Taipei Cit**	**0.53**	**285**	S		**Sb**	**14 45 46.1**	**+0.2**
	baz=274							
ANP	**Anpu**	**0.55**	**307**	*i* P		**Pb**	**14 45 38.5**	**-0.2**
	baz=309							
TWY	**Chenhua**	**0.56**	**318**	*i* P		**Pb**	**14 45 39.0**	**+0.3**
	baz=320							
TWS1	**Kuangyinshan**	**0.59**	**294**	*i* P		**Pb**	**14 45 39.8**	**+0.5**
	baz=296							
TWS1				*e*S		**Sn**	**14 45 50.7**	**-0.1**
	baz=296							
YHNB	**Yeheng**	**0.61**	**252**	P		**Pg**	**14 45 38.5**	**-0.3**
	baz=253							
YHNB				S		**Sg**	**14 45 45.4**	**-1.4**
	baz=253							
NSK	**Sanguang**	**0.62**	**253**	*i* P		**Pg**	**14 45 38.7**	**-0.3**
	baz=254							
NSK				S		**Sg**	**14 45 45.7**	**-1.5**
	baz=254							
NNS	**Nan Shan**	**0.71**	**234**	*i* P		**Pg**	**14 45 40.4**	**-0.4**
	baz=234							
NNS				*e*S		**Sb**	**14 45 51.3**	**+0.1**
	baz=234							
NNSB	**Datong**	**0.71**	**233**	P		**Pg**	**14 45 40.5**	**-0.2**
	baz=240							
NNSH	**Datong**	**0.71**	**233**	*i* P		**Pb**	**14 45 40.8**	**-0.6**
	baz=234							
NCU	**National Centr**	**0.76**	**279**	P		**Pn**	**14 45 43.2**	**-0.3**
	baz=279							
NCU				S		**Sn**	**14 45 55.1**	**+0.2**
	baz=279							
NCUH	**Zhongli**	**0.76**	**279**	P		**Pn**	**14 45 43.2**	**-0.3**
	baz=279							
NCUH				S		**Sn**	**14 45 54.7**	**-0.2**
	baz=279							
PCYT	**Pengchaiyu**	**0.77**	**4**	P		**Pb**	**14 45 43.1**	**+0.7**
	baz=5.0							
PCYT				S		**Sn**	**14 45 55.6**	**+0.4**
	baz=5.0							
NACB	**Ninganchiao**	**0.78**	**209**	P		**Pg**	**14 45 41.9**	**-0.2**
	baz=210							
NACB				S		**Sg**	**14 45 51.8**	**-0.4**
	baz=210							
ETLH	**Xiulin Townshi**	**0.81**	**217**	P		**Pg**	**14 45 42.4**	**-0.2**
	baz=217							
ETLH				S		**Sg**	**14 45 52.9**	**-0.3**
	baz=217							
NJD	**Zhudong**	**0.85**	**262**	P		**Pn**	**14 45 44.5**	**-0.3**
	baz=255							
NJD				*e*S		**Sn**	**14 45 56.5**	**-0.6**
	baz=255							
HSN1	**Hsinchu**	**0.90**	**265**	P		**Pn**	**14 45 46.0**	**+0.5**
	baz=257							
HSN1				*e*S		**Sn**	**14 45 59.7**	**+1.2**
	baz=257							
FUSS	**Fushou**	**0.93**	**229**	*i* P		**Pb**	**14 45 44.6**	**-0.5**
	baz=229							
FUSS				*e*S		**Sb**	**14 45 58.2**	**+0.7**
	baz=229							
LIOB	**Emei**	**0.93**	**257**	P		**Pn**	**14 45 46.1**	**+0.3**
	baz=249							
LIOB				*e*S		**Sn**	**14 45 60.0**	**+0.8**
	baz=249							
SBCB	**Hsinchu**	**0.93**	**266**	*e*P		**Pn**	**14 45 47.5**	**+1.6**
	baz=267							
SBCB				S		**Sn**	**14 45 59.3**	**0.0**
	baz=267							
JYNG	**Yonagunijimaku**	**0.94**	**115**	P		**Pg**	**14 45 45.3**	**+0.2**
JYNG				S		**Sg**	**14 45 57.6**	**+0.2**
NSTT	**Nanjuang**	**0.94**	**256**	P		**Pn**	**14 45 46.4**	**+0.3**
	baz=257							
NSTT				*e*S		**Sn**	**14 45 60.0**	**+0.4**
	baz=257							
TDCB	**Techi**	**0.98**	**232**	P		**Pn**	**14 45 46.4**	**-0.3**
	baz=228							
TDCB				S		**Sg**	**14 45 57.9**	**-0.8**
	baz=228							
WHF	**Hehuan Shan**	**0.98**	**224**	P		**Pg**	**14 45 45.0**	**-0.9**
	baz=224							
WHF				S		**Sb**	**14 45 58.7**	**-0.5**
	baz=224							
YOJ	**Yonaguni jima**	**0.99**	**113**	P		**Pg**	**14 45 46.3**	**+0.2**
YOJ				*e*S		**Sg**	**14 45 59.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.99**	**113**	P		**Pg**	**14 45 46.1**	**+0.1**
	baz=113							
YOJ				S		**Sg**	**14 45 59.6**	**+0.5**
	baz=113							
CHGB	**Renai**	**1.10**	**224**	P		**Pg**	**14 45 47.4**	**-0.8**
	baz=225							
CHGB				*e*S		**Sn**	**14 46 03.3**	**-0.4**
	baz=225							
WHP	**Taichung City**	**1.13**	**239**	P		**Pn**	**14 45 49.2**	**+0.5**
	baz=240							
WHP				*e*S		**Sn**	**14 46 03.9**	**-0.2**
	baz=240							
NMLH	**Miaoli**	**1.15**	**254**	P		**Pn**	**14 45 50.5**	**+1.5**
	baz=255							
NMLH				*e*S		**Sn**	**14 46 07.0**	**+2.3**
	baz=255							
ESL	**Shilin**	**1.17**	**207**	P		**Pg**	**14 45 48.6**	**-0.7**
	baz=208							
ESL				S		**Sg**	**14 46 03.5**	**-1.0**
	baz=208							
OWD	**Renai**	**1.18**	**220**	P		**Pb**	**14 45 49.2**	**-0.1**
	baz=226							
OWD				S		**Sb**	**14 46 04.9**	**+0.2**
	baz=226							
NSY	**Sanyi**	**1.22**	**249**	*i* P		**Pn**	**14 45 51.6**	**+1.7**
	baz=249							
NSY				*e*S		**Sn**	**14 46 07.9**	**+1.6**
	baz=249							
WPL	**Puli Township**	**1.28**	**229**	P		**Pg**	**14 45 51.5**	**0.0**
	baz=238							
WPL				*e*S		**Sn**	**14 46 08.2**	**+0.4**
	baz=238							
DPDB	**Guoxing**	**1.28**	**230**	P		**Pg**	**14 45 51.9**	**+0.2**
	baz=240							
DPDB				*e*S		**Sn**	**14 46 10.2**	**+2.2**
	baz=240							
EGFH	**Guangfu**	**1.30**	**204**	*e*P		**Pg**	**14 45 53.4**	**+1.5**
	baz=213							
EGFH				S		**Sn**	**14 46 08.2**	**0.0**
	baz=213							
WDJ	**Dajia District**	**1.35**	**248**	*e*S		**Sn**	**14 46 13.1**	**+3.7**
	baz=249							
VWDT	**VWDT**	**1.35**	**216**	P		**Pg**	**14 45 52.6**	**-0.4**
	baz=218							
VWDT				*e*S		**Sb**	**14 46 09.1**	**-0.5**
	baz=218							
TYC	**Yuchr**	**1.42**	**228**	*e*P		**Pg**	**14 45 54.2**	**+0.1**
	baz=221							
TYC				*e*S		**Sg**	**14 46 12.5**	**0.0**
	baz=221							
SSLB	**Suanglung**	**1.44**	**222**	P		**Pb**	**14 45 53.7**	**0.0**
	baz=214							
SSLB				*e*S		**Sb**	**14 46 09.5**	**-2.5**
	baz=214							
HGSD	**Ruisui**	**1.46**	**202**	*e*P		**Pg**	**14 45 55.4**	**+0.4**
	baz=216							
HGSD				S		**Sg**	**14 46 14.7**	**+0.7**
	baz=216							
WNT	**Mingjian**	**1.55**	**231**	*e*P		**Pg**	**14 45 58.6**	**+1.8**
	baz=220							
WNT				*e*S		**Sg**	**14 46 19.0**	**+2.0**
	baz=220							
WJS	**Zhushan**	**1.56**	**229**	*e*P		**Pg**	**14 45 59.7**	**+2.8**
	baz=220							
WJS				S		**Sg**	**14 46 19.3**	**+2.1**
	baz=220							
YULB	**Yu-li**	**1.60**	**204**	*e*P		**Pb**	**14 45 55.9**	**-0.5**
	baz=216							
YULB				*e*S		**Sg**	**14 46 18.6**	**+0.2**
	baz=216							
EYUL	**Yuli**	**1.63**	**203**	*e*P		**Pg**	**14 45 57.4**	**-0.8**
	baz=216							
EYUL				*e*S		**Sg**	**14 46 20.0**	**+0.6**
	baz=216							
TWF1	**Yuli**	**1.63**	**204**	*e*P		**Pg**	**14 45 57.5**	**-0.9**
	baz=215							
TWF1				*e*S		**Sb**	**14 46 18.0**	**+0.3**
	baz=215							
IRIF	**Iriomote-Funau**	**1.65**	**108**	P		**Pn**	**14 45 54.6**	**-1.2**
ALS	**Alishan**	**1.73**	**220**	*e*P		**Pg**	**14 46 00.5**	**+0.3**
	baz=208							
ALS				*e*S		**Sg**	**14 46 25.3**	**+2.5**
	baz=208							
CHN5	**Tsauling**	**1.75**	**224**	P		**Pg**	**14 46 00.7**	**+0.2**
	baz=226							
CHN5				S		**Sg**	**14 46 23.6**	**+0.4**
	baz=226							
ELDTW	**Lidau**	**1.89**	**209**	*e*P		**Pb**	**14 46 02.1**	**+0.5**
	baz=213							
ELDTW				*e*S		**Sg**	**14 46 26.9**	**-0.9**
	baz=213							
JKRS	**Kuro-shima**	**1.92**	**108**	P		**Pn**	**14 45 59.4**	**-0.1**
JKRS				S		**Sn**	**14 46 23.4**	**-0.3**
TPUB	**Ta-pu**	**2.00**	**219**	*e*P		**Pg**	**14 46 05.6**	**+0.3**
	baz=209							
TPUB				*e*S		**Sg**	**14 46 32.5**	**+1.3**
	baz=209							
JIJ	**Ishigaki jima**	**2.00**	**104**	P		**Pn**	**14 46 00.0**	**-0.6**
STYH	**Taoyuan**	**2.02**	**214**	*e*P		**Pb**	**14 46 04.2**	**+0.5**
	baz=207							
STYH				*e*S		**Sg**	**14 46 31.6**	**-0.4**
	baz=207							
STYT	**Tauyuan**	**2.04**	**214**	*e*P		**Pg**	**14 46 04.9**	**-1.2**
	baz=207							
STYT				*e*S		**Sg**	**14 46 31.0**	**-1.5**
	baz=207							
WTP	**Ta-pu**	**2.05**	**219**	*e*P		**Pg**	**14 46 06.4**	**+0.1**
	baz=210							
WTP				*e*S		**Sg**	**14 46 33.0**	**+0.1**
	baz=210							
TWK	**Hsinying**	**2.11**	**222**	*e*P		**Pg**	**14 46 06.5**	**-0.8**
	baz=223							
TWK				*e*S		**Sg**	**14 46 35.6**	**+0.9**
	baz=223							
JISG	**Ishigakijimahi**	**2.11**	**97**	P		**Pn**	**14 46 03.6**	**+1.5**
CHN1	**Nanshi**	**2.15**	**219**	*e*P		**Pg**	**14 46 07.9**	**-0.2**
	baz=211							
CHN1				*e*S		**Sg**	**14 46 35.0**	**-0.9**
	baz=211							
SLGT	**Liugui**	**2.24**	**214**	*e*P		**Pb**	**14 46 07.8**	**+0.5**
	baz=220							
SLGT				*e*S		**Sg**	**14 46 37.7**	**-1.1**
	baz=220							
MATB	**Ma-tsu**	**2.27**	**305**	*e*P		**Pn**	**14 46 04.0**	**-0.2**
	baz=302							
MATB				*e*S		**Sn**	**14 46 31.0**	**-1.2**
	baz=302							
MSUT	**Lienchiang**	**2.29**	**305**	*e*P		**Pb**	**14 46 08.2**	**-0.1**
	baz=302							
MSUT				*e*S		**Sn**	**14 46 31.6**	**-1.3**
	baz=302							
VWUC	**VWUC**	**2.33**	**274**	*e*P		**Pn**	**14 46 05.0**	**-0.1**
	baz=271							
VWUC				*e*S		**Sn**	**14 46 33.0**	**-0.7**
	baz=271							
ECL	**Taimali**	**2.45**	**203**	*e*P		**Pb**	**14 46 09.6**	**-1.3**
	baz=195							
SSD	**Sandimen**	**2.45**	**211**	*e*P		**Pg**	**14 46 12.3**	**-1.7**
	baz=216							
SSD				*e*S		**Sb**	**14 46 39.7**	**-1.5**
	baz=216							
TSMG	**Majia**	**2.48**	**211**	*e*P		**Pb**	**14 46 12.0**	**+0.5**
	baz=217							
TSMG				*e*S		**Sb**	**14 46 42.0**	**0.0**
	baz=217							
MASBT	**Mashibuluo**	**2.57**	**210**	P		**Pb**	**14 46 12.4**	**-0.5**
	baz=217							
MASBT				*e*S		**Sn**	**14 46 41.6**	**+2.0**
	baz=217							
PTMZ	**Houxiangcun**	**2.63**	**275**	P		**Pn**	**14 46 10.6**	**+1.4**
	baz=271							
PTMZ				*e*S		**Sn**	**14 46 40.0**	**-1.2**
	baz=271							
LYJJ	**Jianjiangzhen**	**2.64**	**310**	*e*P		**Pn**	**14 46 08.5**	**-0.9**
	baz=310							
LYJJ				*e*S		**Sn**	**14 46 40.6**	**-0.7**
	baz=310							
WDGT	**Dungji**	**2.67**	**234**	P		**Pn**	**14 46 12.0**	**+2.1**
	baz=247							
WDGT				*e*S		**Sn**	**14 46 42.8**	**+0.6**
	baz=247							
EAST	**Anshuo**	**2.68**	**204**	*e*S		**Sn**	**14 46 44.1**	**+1.5**
	baz=198							
MHZQ	**Yeshan**	**2.96**	**295**	*e*P		**Pb**	**14 46 17.2**	**-2.6**
	baz=291							
MHZQ				*e*S		**Sn**	**14 46 50.2**	**+0.8**
	baz=291							

ROM 28 14:50:26.8±0.1,43.˚447N±0.˚006×13.˚00E±0.˚01,h8km, ML1.4/4,2C-5D,Error ellipse: s-maj=1.2km s-min=0.3km az=239.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARVD	**Arcevia**	**0.07**	**319**	⇑P		Pg	14 50 28.7	0.0
ARVD				S		Sg	14 50 30.3	+0.3
ARVD				AML		AML		
	comp=E,572μm,0.7s							
ARVD				AML		AML		
	comp=N,544μm,1.1s							
EL6	**Elcito**	**0.14**	**149**	P		Pg	14 50 29.6	-0.1
EL6				S		Sg	14 50 33.3	+1.5
CING	**Cingoli**	**0.16**	**117**	⇓P		Pg	14 50 30.7	+0.6
SNTG	**Esanatoglia**	**0.20**	**194**	⇓P		Pg	14 50 31.0	+0.2
SNTG				S		Sg	14 50 34.6	+1.2
SNTG				AML		AML		
	comp=E,114μm,1.0s							
SNTG				AML		AML		
	comp=N,145μm,0.8s							
FRON	**Frontone**	**0.21**	**289**	⇓P		Pg	14 50 31.8	+0.7
FRON				S		Sg	14 50 35.8	+1.8
FRON				AML		AML		
	comp=E,95μm,1.4s							
FRON				AML		AML		
	comp=N,149μm,1.6s							
FRON				AML		AML		
	comp=E,155μm,0.1s							
FRON				AML		AML		
	comp=N,150μm,1.6s							
MPAG	**Monte Paganucc**	**0.26**	**316**	⇓P		Pg	14 50 32.5	+0.6
MPAG				S		Sb	14 50 36.8	-1.5
FSSB	**Fossombrone**	**0.30**	**326**	⇑P		Pg	14 50 33.2	+0.6
FSSB				S		Sb	14 50 38.9	-0.5
FSSB				AML		AML		
	comp=E,127μm,1.3s							
FSSB				AML		AML		
	comp=N,152μm,1.6s							
FSSB				AML		AML		
	comp=E,127μm,1.3s							
CSP1	**Cessapalombo**	**0.38**	**157**	⇓P		Pg	14 50 35.0	+0.7
CSP1				S		Sb	14 50 41.5	-0.6

BUC 28 14:52:59.0±0.5,46.˚34N×25.˚19E,h11km±3km,ml1.6/5, 16C-12D,Error ellipse: s-maj=3.7km s-min=2.2km az=89.0,Romania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DOPR	**Dopca**	**0.40**	**160**	⇓P		Pg	14 53 06.4	-0.5
DOPR				⇓S		Sb	14 53 13.5	-0.6
DOPR	**Dopca**	**0.40**	**160**	⇓P		Pg	14 53 06.4	-0.5
DOPR				⇓S		Sb	14 53 13.5	-0.6
BIZ	**Bicaz**	**0.87**	**46**	⇑P		Pg	14 53 14.8	-1.1
BIZ				⇓S		Sb	14 53 28.8	+1.0
BIZ	**Bicaz**	**0.87**	**46**	⇑P		Pg	14 53 14.8	-1.1
BIZ				⇓S		Sb	14 53 28.8	+1.0
VOIR		**0.91**	**186**	⇑P		Pg	14 53 16.0	-0.5
VOIR				⇓S		Sn	14 53 29.9	-1.0
VOIR		**0.91**	**186**	⇑P		Pg	14 53 16.0	-0.5
VOIR				⇓S		Sn	14 53 29.9	-1.0
MLR	**Muntele Rosu**	**1.00**	**148**	⇑P		Pg	14 53 18.2	0.0
MLR				⇓S		Sn	14 53 32.5	-0.7
MLR	**Muntele Rosu**	**1.00**	**148**	⇑P		Pg	14 53 18.2	0.0
MLR				⇓S		Sn	14 53 32.5	-0.7
PLOR	**Plostina**	**1.12**	**115**	⇓P		Pb	14 53 20.5	-0.1
PLOR				⇑S		Sg	14 53 35.6	+0.3
PLOR	**Plostina**	**1.12**	**115**	⇓P		Pb	14 53 20.5	-0.1
PLOR				⇑S		Sg	14 53 35.6	+0.3
VRI	**Vrincioaia**	**1.17**	**113**	⇑P		Pb	14 53 20.7	-0.5
VRI				⇑S		Sn	14 53 37.9	+0.7
VRI	**Vrincioaia**	**1.17**	**113**	⇑P		Pb	14 53 20.7	-0.5
VRI				⇑S		Sn	14 53 37.9	+0.7
BURAR	**Bucovina Array**	**1.28**	**1**	⇑P		Pb	14 53 23.2	+0.1
BURAR				⇓S		Sg	14 53 42.4	+2.2
BURAR	**Bucovina Array**	**1.28**	**1**	⇑P		Pb	14 53 23.2	+0.1
BURAR				⇓S		Sg	14 53 42.4	+2.2

KRNET ***28*** *15:05:24.1±0.1,40.˚60N×77.˚22E,mb2.1*
SOME ***28*** *15:05:26.1,40.˚67N×76.˚90E,h10km*
NNC ***28*** *15:05:32.3±3.8,40.˚76N×77.˚41E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=25.9km s-min=21.6km az=23.0*

ISC 28 15:05:26.9±2.5,40.˚61N±0.˚10×77.˚26E±0.˚05,h1km±12km, n25,σ1.919/40,13C-3D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.52**	**358**	⇑*i*P		**Pn**	**15 05 52.9**	**-2.5**
	baz=59							
KDJ				⇑*i*S		**Sg**	**15 06 14.3**	**-1.5**
	baz=59							
ULHL	**Ulahol**	**1.81**	**335**	⇑*i*P		**Pn**	**15 05 58.0**	**-1.3**
	baz=36							
ULHL				⇑*i*S		**Sn**	**15 06 22.6**	**-0.4**
	baz=36							
BOOM	**Boomskoye usch**	**2.13**	**333**	⇑*i*P	

	1.3nm,0.2s						
IZV				Lg	Lg	15 06 45.6	
	4.8nm,0.1s						
ARLS	**Aral**	**2.54**	**300**	⇑*i*P	**Pn**	**15 06 08.7**	**-0.7**
	baz=1.0						
ARLS				⇑*i*S	**Sn**	**15 06 41.2**	**+0.1**
	baz=1.0						
MDOK	**Medeo**	**2.56**	**357**	Pn	**Pn**	**15 06 10.8**	**+1.2**
	1.5nm,0.7s						
MDOK				Sn	**Sg**	**15 06 47.3**	**-1.8**
	7.2nm,0.6s						
SATY	**Saty**	**2.59**	**19**	*e*P	**Pb**	**15 06 14.2**	**-0.1**
	0.9nm,0.3s						
SATY				*e*S	**Sb**	**15 06 47.2**	**+0.5**
	6.2nm,0.3s						
SATY	**Saty**	**2.59**	**19**	Pg	**Pg**	**15 06 17.3**	**+0.7**
	1.4nm,0.4s						
SATY				Lg	Lg	15 06 47.2	
	6.2nm,0.3s						
MTBS	**Maitube**	**2.60**	**346**	*e*P	**Pb**	**15 06 15.4**	**+1.1**
	0.8nm,0.2s						
MTBS				*e*S	**Sg**	**15 06 48.7**	**-1.6**
	5.3nm,0.3s						
MTBS	**Maitube**	**2.60**	**346**	Pg	**Pg**	**15 06 18.1**	**+1.5**
	0.9nm,0.1s						
MTBS				Lg	Lg	15 06 48.7	
	5.3nm,0.3s						
KST	**Kastek**	**2.62**	**339**	*e*P	**Pb**	**15 06 13.7**	**-0.9**
	0.9nm,0.3s						
KST				*e*S	**Sb**	**15 06 48.3**	**+0.9**
	3.3nm,0.3s						
KST	**Kastek**	**2.62**	**339**	Pg	**Pg**	**15 06 18.6**	**+1.6**
	1.5nm,0.2s						
KST				Lg	Lg	15 06 49.6	
	3.3nm,0.3s						
TKM2	**Tokmak 2**	**2.62**	**332**	⇑*i*P	**Pn**	**15 06 10.0**	**-0.6**
	baz=33						
TKM2				⇑*i*S	**Sn**	**15 06 43.5**	**+0.3**
	baz=33						
KOTS	**Kotyrbulak**	**2.63**	**358**	*e*P	**Pb**	**15 06 16.0**	**+1.2**
	2.8nm,0.3s						
KOTS				*e*S	**Sg**	**15 06 50.0**	**-1.2**
	4.8nm,0.3s						
KOTS	**Kotyrbulak**	**2.63**	**358**	Pg	**Pg**	**15 06 18.9**	**+1.7**
	2.5nm,0.3s						
KOTS				Lg	Lg	15 06 50.0	
	4.8nm,0.3s						
DGS	**Degeres**	**2.86**	**338**	*e*P	**Pb**	**15 06 18.4**	**-0.3**
	0.7nm,0.4s						
DGS				*e*S	**Sb**	**15 06 55.3**	**+1.1**
	2.8nm,0.5s						
DGS	**Degeres**	**2.86**	**338**	Pg	**Pg**	**15 06 22.0**	**+0.4**
	1.9nm,0.5s						
DGS				Lg	Lg	15 06 55.7	
	2.8nm,0.5s						
UZB	**Uzynbulak**	**2.86**	**27**	Pg	**Pg**	**15 06 22.2**	**+0.6**
	3.0nm,0.2s						
UZB				Lg	Lg	15 06 56.0	
	1.7nm,0.4s						
AML	**Almayashu**	**3.09**	**301**	⇑*e*P	**Pn**	**15 06 16.3**	**-0.8**
	baz=1.0						
AML				⇑*i*S	**Sn**	**15 06 54.5**	**-0.3**
	baz=1.0						
PDGK	**Podgornoye**	**3.19**	**31**	Pg	**Pg**	**15 06 27.6**	**-0.4**
	0.5nm,0.6s						
PDGK				Lg	Lg	15 07 04.8	
	1.2nm,0.8s						
PDGK	**Podgornoye**	**3.19**	**31**	⇓Pg	**Pb**	**15 06 25.5**	**+1.2**
	1.1nm,0.5s						
PDGK				⇑Lg	Lg	15 07 04.7	
	2.0nm,0.6s						

*TRN **28** 15:07:34.6,9.°95N×62.°43W, h3km, MD3.8*
*FUNV **28** 15:07:39.2, 10.°07N×62.°33W, h9km, MW3.4*

ISC 28 15:07:36.2±1.4, 10.°03N±0.°04×62.°37W±0.°03, h4km±12km, n20, σ1§23/30, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPP	**Pointe-a-Pierr**	**0.94**	**72**	*e*P	**Pg**	**15 07 54.5**	**+0.2**
CRUV	**Carupano**	**1.07**	**307**	*e*P	**Pb**	**15 07 57.7**	**+0.5**
CRUV				*e*S	**Sg**	**15 08 11.3**	**+0.5**
TRN	**Trinidad (W)**	**1.13**	**57**	*e*P	**Pg**	**15 07 58.2**	**+0.4**
TRN				*e*S	**Sn**	**15 08 16.1**	**+1.4**
TPR	**Prospect**	**1.94**	**53**	*e*P	**Pn**	**15 08 10.4**	**+0.5**
RIOV	**Rio Grande**	**2.02**	**164**	*e*P	**Pb**	**15 08 13.2**	**-0.2**
RIOV				*e*S	**Sb**	**15 08 38.3**	**-0.6**
TOSP	**Speyside**	**2.20**	**55**	*e*P	**Pn**	**15 08 13.6**	**+0.2**
GRGR	**Grenville**	**2.21**	**18**	*e*P	**Pn**	**15 08 13.5**	**-0.1**
GRGR				*e*S	**Sn**	**15 08 42.4**	**+1.1**
GRGR	**Grenville**	**2.21**	**18**	*e*P	**Pn**	**15 08 14.7**	**+1.1**
GRGR				*e*S	**Sn**	**15 08 41.0**	**-0.4**
PCRV	**Puerto La Cruz**	**2.24**	**274**	*e*P	**Pb**	**15 08 16.1**	**-1.1**
PCRV				*e*S	**Sn**	**15 08 42.0**	**-0.2**
PRGV	**PARIAGUAN**	**2.58**	**241**	*e*P	**Pb**	**15 08 21.2**	**-1.7**
PRGV				*e*S	**Sn**	**15 08 52.2**	**+1.7**
GCMP	**Grenada, Carri**	**2.61**	**21**	*e*P	**Pn**	**15 08 19.4**	**+0.2**
GCMP				*e*S	**Sn**	**15 08 52.5**	**+1.1**
SVOC	**Richmond Hill,**	**3.31**	**20**	*e*P	**Pn**	**15 08 29.9**	**+1.3**
SVB	**Belmont**	**3.41**	**19**	*e*P	**Pn**	**15 08 29.9**	**-0.1**
SVV	**Soufriere Volc**	**3.46**	**19**	*e*	**Pb**	**15 08 35.9**	**-2.2**
BIRV	**Birongo**	**3.87**	**277**	*e*P	**Pn**	**15 08 38.5**	**+2.0**
BIRV				*e*S	**Sn**	**15 09 21.6**	**-0.8**
MCLT	**Moule a Chique**	**3.92**	**21**	*e*P	**Pn**	**15 08 37.9**	**+0.7**
SLBI	**Saint Lucia, B**	**4.20**	**19**	*e*	**Pn**	**15 08 38.6**	**-2.4**
SLBI	**Saint Lucia, B**	**4.20**	**19**	*e*S	**Sn**	**15 09 30.9**	**+0.4**
BIM	**Bigot**	**4.64**	**16**	*e*P	**Pn**	**15 08 48.3**	**+1.2**
BAUV	**El Baul**	**5.70**	**260**	*e*P	**Pn**	**15 09 02.5**	**+0.8**
BAUV				*e*S	**Sn**	**15 10 05.3**	**-2.3**

DJA 28 15:19:35.0±0.3, 2.°S±3.°×12.°1E±.°, h10km, M3.5/11, mb3.4/1, MLv3.6/11, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.22**	**228**	P	Pn	15 19 55.8	-2.3
TTSI				S	Sb	15 20 12.7	-1.3
APSI	**Ampana**	**1.60**	**35**	P	Pn	15 20 02.4	-1.0
APSI				S	Sb	15 20 25.0	0.0
SPSI	**Sidrap Palu**	**1.97**	**209**	P	Pn	15 20 08.6	+0.1
SPSI				S	Sb	15 20 34.9	-0.8
BNSI	**Bone**	**2.24**	**196**	P	Pn	15 20 11.5	-0.7
LUWI	**Luwuk**	**2.36**	**60**	P	Pn	15 20 12.6	-1.2
MRSI	**Marisa**	**2.95**	**24**	P	Pn	15 20 21.9	0.0
GTOI	**Gorontalo**	**3.65**	**39**	P	Pn	15 20 31.7	+0.2

*IDC **28** 15:34:13.8±1.1, 6.°12S×127.°84E, h408km±13km, mb3.6/15, mb1 3.6/22, mb1mx3.4/43, mbtmp4.4/22, Error ellipse: s-maj=15.2km s-min=8.4km az=76.0*
*DJA **28** 15:34:13.9±0.3, 6.°S±3.°×12.°8E±.°, h397km±4km, M4.3/16, mB4.7/8, mb4.5/16, MLv4.6/12, Mw(mB)4.0/8*
*NEIC **28** 15:34:13.6±1.5, 6.°08S±0.°08×127.°77E±0.°09, h408km±7km, mb4.2/41, Error ellipse: s-maj=12.7km s-min=11.8km az=106.0*

ISC 28 15:34:13.0±0.4, 6.°12S±0.°05×127.°78E±0.°06, h400km, n108, σ1§06/115, mb4.2/37, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.65**	**53**	P	**Pn**	**15 35 14.3**	**+0.9**
BNDI				S	**S**	**15 36 03.4**	**+1.2**
NLAI	**Namlea**	**2.94**	**347**	P	**Pn**	**15 35 17.1**	**+1.3**
NLAI				S	**S**	**15 36 06.9**	**+0.4**
SAUI	**Saumlaki**	**3.95**	**118**		**Pn**	**15 35 26.0**	**+1.4**
SAUI	**Saumlaki**	**3.95**	**118**	P	**Pn**	**15 35 26.3**	**+1.7**
SANI	**Sanana**	**4.42**	**336**	P	**Pn**	**15 35 28.8**	**-0.4**
SOEI	**Soe**	**5.01**	**224**	Pn	**Pn**	**15 35 36.2**	**+0.9**
SOEI	**Soe**	**5.01**	**224**	P	**Pn**	**15 35 37.0**	**+1.7**
	1.0nm1μm67nm,0.4s						
FAKI	**Fak Fak**	**5.47**	**55**	Pn	**Pn**	**15 35 39.8**	**-0.2**
FAKI	**Fak Fak**	**5.47**	**55**	P	**Pn**	**15 35 40.1**	**+0.1**
	2.3nm11μm474nm,0.8s						
BATI	**Baumata**	**5.75**	**225**	P	**Pn**	**15 35 44.3**	**+1.3**
	31nm,0.3s,baz=51,slow=2.3,SNR=41						
BATI				S	**S**	**15 36 53.5**	**-2.8**
	29nm,0.3s,baz=273,slow=18,SNR=17						
BATI	**Baumata**	**5.75**	**225**	P	**Pn**	**15 35 44.5**	**+1.5**
	0.5nm868nm36nm,0.6s						
MMRI	**Maumere**	**6.04**	**245**	Pn	**Pn**	**15 35 46.5**	**+0.4**
MMRI	**Maumere**	**6.04**	**245**	P	**Pn**	**15 35 47.9**	**+1.8**
	0.2nm873nm42nm,0.6s						

SIJI	**Sorong**	**6.27**	**34**	P	**Pn**	**15 35 48.6**	**-0.1**
	36nm,0.3s,baz=227,slow=23,SNR=204						
SIJI				S	**S**	**15 37 02.6**	**-4.0**
	18nm,0.3s,baz=211,slow=23,SNR=7.7						
SWI	**Sorong**	**6.27**	**34**	P	**Pn**	**15 35 48.7**	**+0.1**
	0.8nm5μm210nm,0.7s						
KMSI	**Cibinong**	**7.66**	**330**	P	**Pn**	**15 36 04.3**	**+0.2**
	0.2nm1μm59nm,0.8s						
BNSI	**Bone**	**7.83**	**282**	P	**P**	**15 36 08.5**	**+2.0**
	0.1nm24nm,0.7s						
KAPI	**Kappang**	**8.07**	**277**	P	**P**	**15 36 10.3**	**+1.2**
	1.4nm,0.3s,baz=105,slow=7.1,SNR=4.2						
KAPI	**Kappang**	**8.07**	**277**	P	**P**	**15 36 10.6**	**+1.5**
BASI	**Baing, Sumba**	**8.21**	**240**	P	**Pn**	**15 36 09.8**	**-0.6**
	50nm,1.0s						
SPSI	**Sidrap Palu**	**8.26**	**285**	P	**P**	**15 36 12.6**	**+1.2**
	24nm,0.6s						
WBSI	**Waikabubak, Su**	**9.02**	**247**	P	**Pn**	**15 36 18.9**	**-0.8**
	60nm,0.8s						
SRPI	**Serui, Papua**	**9.44**	**64**	P	**Pn**	**15 36 25.8**	**+1.2**
	87nm,0.7s						
BAKI	**Biak**	**9.64**	**60**	P	**Pn**	**15 36 29.4**	**+2.4**
	158nm,1.2s						
TOLI2	**Tolitoli**	**10.02**	**316**		**Pn**	**15 36 31.8**	**+0.4**
PLAI	**Plampang**	**10.28**	**254**	P	**P**	**15 36 31.9**	**-1.8**
	35nm,0.5s						
TWSI	**Taliwang, Sumb**	**11.12**	**256**	P	**P**	**15 36 41.2**	**-1.8**
FITZ	**Fitzroy Crossi**	**12.09**	**190**	P	**P**	**15 36 54.4**	**+0.8**
	0.6nm,0.3s,baz=5.2,slow=8.8,SNR=18						
JAY	**Jayapura**	**13.37**	**75**	P	**Pn**	**15 37 09.4**	**-0.9**
	0.5nm,0.3s,baz=26,slow=22,SNR=2.0						
JAGI	**Jajag, Banyuwa**	**13.72**	**259**	P	**P**	**15 37 10.8**	**-0.9**
JAGI	**Jajag, Banyuwa**	**13.72**	**259**	P	**P**	**15 37 11.3**	**-0.3**
MYLDM	**Lahad Datu**	**14.56**	**320**	P	**P**	**15 37 22.9**	**+2.1**
WB0	**Warramunga Arr**	**15.01**	**155**	P	**P**	**15 37 26.5**	**+0.8**
WRAB	**Tennant Creek**	**15.14**	**156**	P	**P**	**15 37 27.7**	**+0.6**
WRAB				IAmb	IAmb	15 37 32.7	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**15.14**	**156**	P	**P**	**15 37 27.6**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=334,slow=11,SNR=96						
WRA				S	**S**	**15 40 07.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=333,slow=21,SNR=5.5						
WRA	**Warramunga Arr**	**15.14**	**156**	P	**P**	**15 37 26.7**	**-0.4**
WB2	**Warramunga Arr**	**15.15**	**156**	P	**P**	**15 37 27.8**	**+0.6**
WB2				IAmb	IAmb	15 37 32.3	
	comp=Z,5.5nm,0.8s						
WR0	**Warramunga Arr**	**15.24**	**155**	P	**P**	**15 37 29.0**	**+0.8**
WR0				IAmb	IAmb	15 37 32.1	
	comp=Z,7.6nm,0.5s						
KKM	**Kota Kinabalu**	**16.71**	**316**	P	**P**	**15 37 44.4**	**+0.3**
AS31	**Alice Springs**	**18.41**	**162**	P	**P**	**15 38 02.2**	**+0.2**
ASAR	**Alice Springs**	**18.41**	**162**	P	**P**	**15 38 02.7**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=344,slow=11,SNR=248						
ASAR				S	**S**	**15 41 10.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=332,slow=16,SNR=8.6						
ASAR	**Alice Springs**	**18.41**	**162**	P	**P**	**15 38 01.9**	**0.0**
CISI	**Cisompet, Garu**	**19.88**	**265**	P	**P**	**15 38 17.5**	**+1.0**
NWAO	**Narrogin (SRO)**	**28.42**	**199**	P	**P**	**15 39 33.6**	**+0.8**
STKA	**Stephens Creek**	**28.70**	**155**	P	**P**	**15 39 35.9**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=325,slow=6.7,SNR=7.2						
STKA	**Stephens Creek**	**28.70**	**155**	P	**P**	**15 39 36.0**	**+0.6**
KULM	**Kulim**	**29.36**	**292**	P	**P**	**15 39 41.1**	**-0.3**
KULM				IAmb	IAmb	15 40 02.6	
	comp=Z,8.8nm,1.1s						
TPUB	**Ta-pu**	**30.07**	**347**	P	**P**	**15 39 45.5**	**-1.9**
TPUB				IAmb	IAmb	15 39 52.3	
	comp=Z,17nm,1.2s						
RPSI	**Rantau Prapat**	**30.12**	**286**	P	**P**	**15 39 49.2**	**+1.2**
PSI	**Prapat**	**30.15**	**286**	P	**P**	**15 39 49.2**	**+0.8**
	comp=Z,3.4nm,0.4s,baz=11,slow=1.2,SNR=5.9						
QIZ	**Qiongzhong**	**30.61**	**325**	P	**P**	**15 39 52.3**	**+0.1**
QIZ				IAmb	IAmb	15 40 14.6	
	comp=Z,13nm,1.2s						
GSI	**Gunungsitoli**	**31.05**	**283**	P	**P**	**15 39 56.4**	**+0.3**
GSI				IAmb	IAmb	15 40 10.6	
	comp=Z,14nm,1.0s						
CMAR	**Chiang Mai Arr**	**37.49**	**311**	P	**P**	**15 40 50.9**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=143,slow=7.0,SNR=8.5						
CMAR				ScP	**ScP**	**15 46 07.6**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=177,slow=3.8,SNR=6.0						
CHTO	**Chiang Mai**	**37.71**	**312**	P	**P**	**15 40 52.5**	**0.0**
JMN	**Monobe**	**40.05**	**8**	P	**P**	**15 41 11.4**	**-0.1**
JMN				IAmb	IAmb	15 41 14.1	
	comp=Z,16nm,0.9s						
JHS	**Saijyo**	**41.21**	**7**	P	**P**	**15 41 21.1**	**+0.3**
JHS				IAmb	IAmb	15 41 22.1	
	comp=Z,21nm,1.3s						
JWT	**Wachi**	**41.80**	**9**	P	**P**	**15 41 25.6**	**+0.1**
JWT				IAmb	IAmb	15 41 26.5	
	comp=Z,7.7nm,0.7s						
KSAR	**Wonju Array Be**	**43.34**	**0**	P	**P**	**15 41 36.1**	**-1.5**
KSRS	**Korea Array**	**43.35**	**0**	P	**P**	**15 41 37.6**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=182,slow=9.3,SNR=14						
KS19	**Wonju Array Si**	**43.40**	**0**	P	**P**	**15 41 37.2**	**-0.9**
KS19				IAmb	IAmb	15 41 50.1	
	comp=Z,24nm,1.5s						
MAJO	**Matsushiro**	**43.55**	**12**	P	**P**	**15 41 37.3**	**-2.0**
MAT	**Matsushiro**	**43.55**	**12**	P	**P**	**15 41 38.2**	**-1.1**
MJAR	**Matsushiro Arr**	**43.55**	**12**	P	**P**	**15 41 38.1**	**-1.2**
	comp=Z,4.5nm,0.7s,baz=187,slow=9.4,SNR=12						
MJAR	**Matsushiro Arr**	**43.55**	**12**	P	**P**	**15 41 37.1**	**-2.2**
JYT	**Yasato**	**43.71**	**15**	P	**P**	**15 41 38.9**	**-1.6**
JYT				IAmb	IAmb	15 41 54.0	
	comp=Z,14nm,1.2s						
XAN	**Xi'an**	**43.75**	**337**	P	**P**	**15 41 40.0**	**-1.0**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,41nm,3.8s						
JSD	**Sado**	**45.00**	**12**	P	**P**	**15 41 49.7**	**-0.9**
JSD				IAmb	IAmb	15 41 50.9	
	comp=Z,6.8nm,0.5s						
JMM	**Marumori**	**45.41**	**14**	P	**P**	**15 41 53.2**	**-0.6**
LZH	**Lanzhou**	**47.62**	**334**	*e*P	**P**	**15 42 12.0**	**+1.0**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
JTM	**Tenmabayashi**	**48.25**	**14**	P	**P**	**15 42 14.4**	**-1.0**
HHC	**Hu-ho-hao-te**	**49.06**	**344**	*e*P	**P**	**15 42 21.8**	**+0.2**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,67nm,8.2s						
USA0B	**Ussuriysk Arra**	**50.23**	**4**	P	**P**	**15 42 28.5**	**-1.7**
USA0B				IAmb	IAmb	15 42 30.6	
	comp=Z,6.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**50.23**	**4**	P	**P**	**15 42 28.5**	**-1.7**
ASAJ	**Asahikawa**	**51.76**	**14**	P	**P**	**15 42 41.4**	**0.0**
	comp=Z,2.8nm,0.4s,baz=266,slow=10.0,SNR=8.5						
JKA	**Kamikawa-asahi**	**51.77**	**14**	P	**P**	**15 42 41.4**	**0.0**
JKA	**Kamikawa-asahi**	**51.77**	**14**	IAmb	IAmb	15 42 54.6	
	comp=Z,22nm,1.4s						
GTA	**Gaotai**	**52.16**	**333**	P	**P**	**15 42 45.0**	**+0.4**
GTA				pP	pP	15 44 10.5	+4.1
GTA				sP	sP	15 44 52.0	+2.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**54.49**	**13**	P	**P**	**15 43 01.0**	**+0.1**
YSS				IAmb	IAmb	15 43 20.1	
	comp=Z,11nm,1.3s						
ULN	**Ulaanbaatar**	**56.78**	**343**	P	**P**	**15 43 17.3**	**+0.1**
SONM	**Songino Array**	**56.94**	**343**	P	**P**	**15 43 18.9**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=165,slow=7.4,SNR=18						
SONM	**Songino Array**	**56.94**	**343**	P	**P**	**15 43 18.5**	**+0.1**
CASY	**Casey**	**61.24**	**188**	P	**P**	**15 43 47.9**	**+0.9**
WMQ	**Urumqi**	**61.47**	**328**	*e*P	**P**	**15 43 49.8**	**+0.8**
PEA0B	**Petropavlovsk-**	**64.21**	**20**	P	**P**	**15 44 06.7**	**+0.1**
PETK	**Petropavlovsk-**	**64.21**	**20**	P	**P**	**15 44 07.4**	**+0.9**
	comp=Z,4.6nm,0.6s,baz=171,slow=3.2,SNR=32						
MK31	**Makanchi Array**	**66.30**	**328**	P	**P**	**15 44 20.0**	**0.0**
MK31				IAmb	IAmb	15 44 20.8	
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**66.30**	**328**	P	**P**	**15 44 20.4**	**+0.4**
	comp=Z,5.1nm,0.4s,baz=116,slow=8.4,SNR=112						
MKAR				PcP	**PcP**	**15 44 46.4**	**0.0**
	comp=Z,1.1nm,0.6s,baz=119,slow=4.5,SNR=6.6						
MKAR	**Makanchi Array**	**66.30**	**328**	P	**P**	**15 44 19.7**	**-0.3**
MKAR				PcP	**PcP**	**15 44 46.1**	**-0.3**
MAKZ	**Makanchi**	**66.47**	**328**	P	**P**	**15 44 20.9**	**-0.2**
MAKZ				IAmb	IAmb	15 44 22.0	
	comp=Z,3.0nm,0.6s						
KDJ	**Kajisay**	**66.50**	**321**	P	**P**	**15 44 22.1**	**+0.6**
YAK	**Yakutsk**	**67.97**	**1**	P	**P**	**15 44 29.2**	**-0.7**
	comp=Z,7.7nm,0.4s,baz=354,slow=0.7,SNR=9.2						
YAK	**Yakutsk**	**67.97**		P	**P**	**15 44 29.5**	**-0.4**
MA2	**Magadan**	**68.00**	**12**	P	**P**	**15 44 30.6**	**+0.4**
MA2				IAmb	IAmb	15 44 31.6	
	comp=Z,3.2nm,0.8s						
GAR	**Garm**	**69.49**	**315**	P	**P**	**15 44 39.6**	**-0.3**
GAR				IAmb	IAmb	15 44 41.4	
	comp=Z,5.2nm,1.0s						
ZAA0	**Zalesovo Array**	**69.84**	**335**	P	**P**	**15 44 40.5**	**-1.0**
ZAA0				IAmb	IAmb	15 44 41.8	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**69.84**	**335**	P	**P**	**15 44 41.0**	**-0.5**
	comp=Z,5.2nm,0.6s,baz=129,slow=5.4,SNR=20						
ZALV	**Zalesovo Beam**	**69.84**	**335**	P	**P**	**15 44 40.6**	**-0.9**
KURBB	**Kurchatov Arra**	**70.62**	**329**	P	**P**	**15 44 46.5**	**+0.3**
	comp=Z,5.8nm,0.6s,baz=128,slow=5.1,SNR=69						
KURK	**Kurchatov**	**70.63**	**329**	P	**P**	**15 44 46.5**	**+0.2**
VNDA	**Vanda**	**73.58**	**173**	P	**P**	**15 45 03.5**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=303,slow=2.7,SNR=3.1						
VNDA	**Vanda**	**73.58**	**173**	IAmb	IAmb	15 45 05.1	
	comp=Z,4.8nm,1.5s						
BVAR	**Borovoye Array**	**76.16**	**328**	P	**P**	**15 45 18.3**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=198,slow=9.3,SNR=7.2						
NRIK	**Noril'sk**	**80.19**	**347**	P	**P**	**15 45 40.0**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=138,slow=3.3,SNR=2.8						
ABKAR	**Akbulak array**	**80.46**	**322**	P	**P**	**15 45 40.7**	**-0.8**
BELA	**Belgrano 2**	**95.56**	**184**	P	**P**	**15 46 52.2**	**-1.0**
ARCES	**ARCESS Array B**	**99.99**	**340**	P	**Pdif**	**15 47 11.8**	**-1.3**
	comp=Z,3.3nm,1.1s,baz=91,slow=7.2,SNR=4.0						
TXAR	**Lajitas Array**	**126.35**	**58**	PKP	**PKPdf**	**15 52 28.8**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=342,slow=1.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**126.47**	**282**	PKP	**PKPdf**	**15 52 29.2**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=64,slow=3.4,SNR=1.5						

*JMA **28** 15:37:19.8,28.°22N×130.°77E, h68km±1km, M3.6*
*IDC **28** 15:37:34.3±4.4, 29.°14N×131.°21E, h107km±44km, mb3.3/5, mb1 3.3/7, mb1mx3.0/44, mbtmp3.5/7, Error ellipse: s-maj=52.5km s-min=26.5km az=69.0*

ISC 28 15:37:20.5±1.1, 28.°20N±0.°03×130.°77E±0.°05, h59km±18km, n25, σ0§59/39, mb3.6/5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.72**	**280**	P	**Pn**	**15 37 34.8**	**-0.1**
JZK				*e*S	**Sn**	**15 37 45.7**	**+0.3**
JAM	**Amami Oshima**	**1.05**	**282**	P	**Pn**	**15 37 39.0**	**-0.2**
JAM				*e*S	**Sn**	**15 37 52.7**	**-0.3**
JAMN	**Amaminishikomi**	**1.41**	**272**	P	**Pn**	**15 37 43.7**	**-0.3**
JAMN				*e*S	**Sn**	**15 38 01.9**	**+0.3**
JTK	**Tokunoshima**	**1.66**	**256**	P	**Pn**	**15 37 47.9**	**+0.5**
JTK				*e*S	**Sn**	**15 38 07.9**	**+0.2**
JTAJ	**Takarajima**	**1.68**	**305**	P	**Pn**	**15 37 47.3**	**-0.3**
JTAJ				*e*S	**Sn**	**15 38 07.3**	**-0.7**
JNN	**Nakanoshima**	**1.82**	**335**	P	**Pn**	**15 37 49.3**	**-0.2**
JNN				*e*S	**Sn**	**15 38 11.0**	**-0.5**
JYAK	**Yakushimahirau**	**2.05**	**354**	P	**Pn**	**15 37 52.6**	**0.0**
JYAK				*e*S	**Sn**	**15 38 16.4**	**-0.7**
JOKE	**Okinoerabujima**	**2.12**	**247**	P	**Pn**	**15 37 53.9**	**+0.3**
JOKE				*e*S	**Sn**	**15 38 19.0**	**+0.1**
JMTN	**Minamitane**	**2.20**	**3**	P	**Pn**	**15 37 54.5**	**-0.2**
JMTN				*e*S	**Sn**	**15 38 19.9**	**-0.8**
JKDJ	**Kitadaitoujima**	**2.29**	**168**	P	**Pn**	**15 37 56.0**	**+0.1**
JKDJ				*e*S	**Sn**	**15 38 22.1**	**-0.5**
JKC	**Kuchinoerabu**	**2.31**	**348**	P	**Pn**	**15 37 56.3**	**0.0**
JKC				*e*S	**Sn**	**15 38 23.5**	**-0.1**
JYRO	**Yoronjima**	**2.37**	**241**	P	**Pn**	**15 37 57.1**	**+0.1**
JYRO				*e*S	**Sn**	**15 38 23.8**	**-1.1**
JMZ	**Minamidaito 2**	**2.40**	**170**	P	**Pn**	**15 37 57.5**	**+0.1**
JMZ				*e*S	**Sn**	**15 38 25.0**	**-0.7**
JTN	**Tanegashima 3**	**2.46**	**4**	P	**Pn**	**15 37 58.1**	**-0.1**
JTN				*e*S	**Sn**	**15 38 26.9**	**-0.2**
JOW	**Kunigami**	**2.60**	**239**	P	**Pn**	**15 38 00.3**	**+0.1**
JOW				*e*S	**Sn**	**15 38 31.6**	**+1.0**
JIH	**Iheya**	**2.75**	**246**	P	**Pn**	**15 38 02.3**	**+0.2**
JIH				*e*S	**Sn**	**15 38 33.3**	**-0.8**
JNTH	**Nagotoyohara**	**2.96**	**236**	P	**Pn**	**15 38 05.1**	**0.0**
JNTH				*e*S

comp=Z,105nm,20.3s,baz=22,slow=34
DZM Mont Dzumac 10.68 178 Pn **Pn 15 51 53.5 +2.1**
MSVF Nonsavu 13.23 120 LR LR 15 56 38.1
comp=Z,143nm,19.5s,baz=325,slow=33
PMG Port Moresby 18.69 274 LR LR 16 00 17.0
comp=Z,92nm,19.9s,baz=113,slow=35
CTA Charters Tower 20.94 243 P **P 15 54 01.5 +1.0**
3.0nm,0.9s,baz=183,slow=19,SNR=1.5
JAY Jayapura 26.63 287 LR LR 16 05 15.0
comp=Z,52nm,21.0s,baz=358,slow=36
BKZ Black Stump Fm 29.23 163 P **P 15 55 18.6 -0.6**
STKA Stephens Creek 30.45 224 LR LR 16 06 30.9
comp=Z,42nm,20.8s,baz=24,slow=34
WR0 Warramunga Arr 31.50 250 P **P 15 55 39.0 -0.4**
WR0 IAmb IAmb 15 56 01.9
comp=Z,4.8nm,1.1s
WB0 Warramunga Arr 31.59 251 P **P 15 55 42.0 +1.7**
WB0 IAmb IAmb 15 55 54.0
comp=Z,7.2nm,1.2s
WRA Warramunga Arr 31.68 250 P **P 15 55 41.7 +0.7**
comp=Z,1.6nm,0.9s,baz=81,slow=8.8,SNR=6.6
WRA Warramunga Arr 31.68 250 IAmb IAmb 15 55 43.4
comp=Z,0.2nm,1.0s
GUMO Guam 32.48 319 LR LR 16 08 41.1
comp=Z,20nm,19.9s,baz=94,slow=36
AS31 Alice Springs 32.94 244 P **P 15 55 53.3 +1.2**
AS31 IAmb IAmb 15 56 08.0
comp=Z,1.2nm,1.1s
ASAR Alice Springs 32.94 244 P **P 15 55 52.7 +0.6**
comp=Z,1.7nm,0.7s,baz=69,slow=9.7,SNR=28
ASAR PcP **PcP 15 58 35.8 -0.1**
comp=Z,0.9nm,0.9s,baz=78,slow=2.3,SNR=4.6
SIJI Sorong 36.08 284 LR LR 16 11 32.6
comp=Z,30nm,19.4s,baz=58,slow=37
FITZ Fitzroy Crossi 39.61 255 LR LR 16 12 14.9
comp=Z,39nm,18.1s,baz=126,slow=35
BATI Baumata 41.64 267 LR LR 16 15 38.3
comp=Z,37nm,18.1s,baz=169,slow=38
NWAO Narrogin (SRO) 49.56 236 LR LR 16 19 18.6
comp=Z,57nm,18.2s,baz=270,slow=36
CMAR Chiang Mai Arr 72.51 294 P **P 16 00 45.0 +0.7**
comp=Z,1.3nm,0.3s,baz=130,slow=5.1,SNR=1.8
QSPA South Pole Qui 78.67 180 P **P 16 01 18.6 -0.4**
QSPA IAmb IAmb 16 01 19.4
comp=Z,4.0nm,1.0s
ILAR Eielson Array 83.69 18 P **P 16 01 45.1 -0.2**
comp=Z,0.5nm,0.6s,baz=236,slow=4.8,SNR=7.1
ILAR Eielson Array 83.69 18 P **P 16 01 44.6 -0.7**
NVAR Mina Array Bea 85.97 50 P **P 16 01 58.5 +0.8**
comp=Z,0.3nm,0.6s,baz=235,slow=8.7,SNR=3.0
NVAR Mina Array Bea 85.97 50 P **P 16 01 57.1 -0.5**
MKAR Makanchi Array 93.94 317 P **P 16 02 34.0 -0.8**
comp=Z,1.0nm,0.7s,baz=96,slow=7.0,SNR=12
MKAR Makanchi Array 93.94 317 P **P 16 02 35.0 +0.2**
ZALV Zalesovo Beam 93.97 324 P **P 16 02 34.9 +0.3**
comp=Z,0.6nm,0.6s,baz=111,slow=6.5,SNR=2.1

*JMA **28** 15:52:51.0±0.1,24°.35N×121°.93E,h47^{km}×2^{km},M2.3*
*TAP **28** 15:52:51.4,24°.42N×121°.94E,h30^{km},ML2.9,B*
ISC 28 15:52:51.1±1.0,24°.39N±0°.02×121°.99E±0°.02,h16^{km}±8^{km}, n110,σ0^{s}.67/214,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.20**	**287**	*i*	P		**Pb**	**15 52 57.3**	**+1.0**
	baz=280								
EWUT				*i*	S		**Sb**	**15 53 00.8**	**+1.0**
	baz=280								
TWC	**Suao**	**0.25**	**331**	*i*	P		**Pb**	**15 52 58.0**	**+0.7**
	baz=339								
TWC				*i*	S		**Sb**	**15 53 02.3**	**+0.8**
	baz=339								
NDS	**Dongshan**	**0.35**	**315**	*i*	P		**Pb**	**15 52 59.3**	**+0.4**
	baz=316								
NDS				*i*	S		**Sb**	**15 53 04.4**	**+0.3**
	baz=316								
NACB	**Ninganchiao**	**0.42**	**239**	*i*	P		**Pb**	**15 53 00.3**	**+0.2**
	baz=236								
NACB				*i*	S		**Sb**	**15 53 07.5**	**+1.4**
	baz=236								
ILA	**Ilan**	**0.43**	**330**		P		**Pb**	**15 52 59.9**	**-0.5**
	baz=330								
ILA					S		**Sb**	**15 53 07.2**	**+0.5**
	baz=330								
TWE	**Neicheng**	**0.44**	**319**	*i*	P		**Pb**	**15 53 00.6**	**+0.1**
	baz=321								
TWE				*i*	S		**Sb**	**15 53 07.0**	**+0.1**
	baz=321								
ENTT	**Nioudou**	**0.46**	**303**	*i*	P		**Pb**	**15 53 00.8**	**+0.1**
	baz=303								
ENTT					S		**Sb**	**15 53 07.2**	**-0.1**
	baz=303								
TWD	**Chiawan**	**0.47**	**229**		P		**Pb**	**15 53 01.1**	**+0.2**
	baz=231								
TWD					S		**Sb**	**15 53 09.3**	**+1.7**
	baz=231								
NDT	**Datong Townshi**	**0.48**	**297**	*i*	P		**Pb**	**15 53 01.4**	**+0.2**
	baz=295								
NDT				*i*	S		**Sb**	**15 53 08.4**	**+0.3**
	baz=295								
NTC	**Toucheng**	**0.49**	**343**		P		**Pb**	**15 53 01.5**	**+0.2**
	baz=346								
NTC					S		**Sb**	**15 53 08.9**	**+0.7**
	baz=346								
ETLH	**Xiulin Townshi**	**0.49**	**249**	*i*	P		**Pb**	**15 53 01.6**	**+0.2**
	baz=243								
ETLH					S		**Sb**	**15 53 09.5**	**+1.0**
	baz=243								
HWA	**Hwalien**	**0.54**	**221**		P		**Pb**	**15 53 02.8**	**+0.7**
	baz=214								
HWA					*e*S		**Sn**	**15 53 12.2**	**-0.5**
	baz=214								
NNSH	**Datong**	**0.55**	**274**	*i*	P		**Pb**	**15 53 02.3**	**-0.1**
	baz=274								
NNSH				*i*	S		**Sb**	**15 53 10.2**	**+0.1**
	baz=274								
NNSB	**Datong**	**0.55**	**274**	*i*	P		**Pb**	**15 53 02.3**	**-0.1**
	baz=274								
NNSB				*i*	S		**Sb**	**15 53 09.8**	**-0.4**
	baz=274								
NNS	**Nan Shan**	**0.56**	**276**	*i*	P		**Pb**	**15 53 02.5**	**-0.1**
	baz=275								
NNS					S		**Sb**	**15 53 10.0**	**-0.5**
	baz=275								
NWLT	**Wulai**	**0.59**	**312**	*i*	P		**Pb**	**15 53 02.8**	**-0.2**
	baz=312								
NWLT				*i*	S		**Sb**	**15 53 10.5**	**-0.6**
	baz=312								
TIPB	**Shuangxi**	**0.60**	**346**		P		**Pb**	**15 53 03.2**	**-0.1**
	baz=351								
TIPB					S		**Sb**	**15 53 11.1**	**-0.4**
	baz=351								
TWB1	**Santiao Chiao**	**0.62**	**0**	*i*	P		**Pb**	**15 53 03.3**	**-0.2**
	baz=4.0								
TWB1				*i*	S		**Sb**	**15 53 12.5**	**+0.5**
	baz=4.0								
YHNB	**Yeheng**	**0.62**	**297**	*i*	P		**Pb**	**15 53 03.5**	**-0.1**
	baz=301								
YHNB				*i*	S		**Sb**	**15 53 12.0**	**-0.2**
	baz=301								
FUSS	**Fushou**	**0.69**	**259**	*i*	P		**Pb**	**15 53 04.9**	**0.0**
	baz=255								
FUSS				*i*	S		**Sb**	**15 53 14.5**	**+0.2**
	baz=255								
TWA	**Mucha**	**0.69**	**328**		P		**Pb**	**15 53 05.0**	**+0.1**
	baz=323								
TWA				*i*	S		**Sb**	**15 53 14.6**	**+0.4**
	baz=323								
WHF	**Hehuan Shan**	**0.70**	**250**	*i*	P		**Pg**	**15 53 05.1**	**+0.2**
	baz=246								
WHF				*i*	S		**Sb**	**15 53 15.5**	**+0.7**
	baz=246								
NWF	**Wu-fen Shan**	**0.71**	**345**	*e*	P		**Pb**	**15 53 05.1**	**0.0**
	baz=340								
NWF					S		**Sb**	**15 53 15.0**	**+0.4**
	baz=340								
WFSB	**Wu-fen Shan**	**0.71**	**345**		P		**Pb**	**15 53 04.9**	**-0.1**
	baz=340								
WFSB					S		**Sb**	**15 53 14.9**	**+0.4**
	baz=340								
NHDH	**Xindian Distri**	**0.71**	**324**		P		**Pb**	**15 53 05.3**	**+0.2**
	baz=320								
NHDH				*i*	S		**Sb**	**15 53 14.7**	**+0.1**
	baz=320								
TATO	**Taipei**	**0.74**	**322**	*i*	P		**Pb**	**15 53 05.7**	**+0.1**
	baz=319								
TATO				*i*	S		**Sb**	**15 53 15.3**	**-0.2**
	baz=319								
ESL	**Shilin**	**0.76**	**222**		P		**Pg**	**15 53 05.3**	**-0.7**
	baz=231								
ESL					S		**Sg**	**15 53 16.2**	**+0.2**
	baz=231								
TDCB	**Techi**	**0.77**	**260**	*i*	P		**Pb**	**15 53 06.1**	**0.0**
	baz=257								
TDCB				*i*	S		**Sb**	**15 53 16.1**	**-0.3**
	baz=257								
TNOU	**National Taiwa**	**0.78**	**346**	*e*	P		**Pb**	**15 53 06.7**	**+0.3**
	baz=347								
TNOU				*e*	S		**Sb**	**15 53 17.0**	**+0.3**
	baz=347								
CHGB	**Renai**	**0.81**	**246**		P		**Pg**	**15 53 06.8**	**-0.1**
	baz=243								
CHGB					S		**Sb**	**15 53 18.6**	**+1.0**
	baz=243								
YM01	**YM01**	**0.84**	**334**		P		**Pb**	**15 53 07.6**	**+0.2**
	baz=344								
YM01					S		**Sb**	**15 53 18.8**	**+0.2**
	baz=344								
OWD	**Renai**	**0.86**	**240**		P		**Pg**	**15 53 07.3**	**-0.5**
	baz=228								
OWD					S		**Sb**	**15 53 19.6**	**+0.7**
	baz=228								
NTY	**Taoyuan**	**0.87**	**314**		P		**Pb**	**15 53 07.5**	**-0.4**
	baz=316								
NTY				*e*	S		**Sn**	**15 53 19.9**	**-1.2**
	baz=316								
YM08	**YM08**	**0.88**	**336**		P		**Pb**	**15 53 07.2**	**-0.7**
	baz=346								
YM08				*e*	S		**Sb**	**15 53 19.3**	**-0.1**
	baz=346								
JYNG	**Yonagunijimaku**	**0.88**	**86**		P		**Pb**	**15 53 07.9**	**0.0**
JYNG					S		**Sb**	**15 53 20.4**	**+1.0**
EGFH	**Guangfu**	**0.88**	**216**		P		**Pb**	**15 53 07.7**	**-0.3**
	baz=226								
EGFH				*e*	S		**Sg**	**15 53 20.3**	**+0.6**
	baz=226								
TWS1	**Kuangyinshan**	**0.88**	**324**		P		**Pn**	**15 53 08.3**	**-0.5**
	baz=335								
TWS1					S		**Sn**	**15 53 20.8**	**-0.5**
	baz=335								
NJD	**Zhudong**	**0.89**	**293**		P		**Pn**	**15 53 08.8**	**-0.2**
	baz=282								
NJD				*e*	S		**Sn**	**15 53 20.8**	**-0.7**
	baz=282								
ANP	**Anpu**	**0.90**	**332**	*e*	P		**Pb**	**15 53 07.7**	**-0.7**
	baz=343								
ANP				*e*	S		**Sb**	**15 53 19.4**	**-0.8**
	baz=343								
LIOB	**Emei**	**0.92**	**286**		P		**Pn**	**15 53 09.2**	**-0.2**
	baz=285								
LIOB					S		**Sn**	**15 53 21.6**	**-0.7**
	baz=285								
NCU	**National Centr**	**0.93**	**309**	*e*	P		**Pg**	**15 53 09.0**	**-0.1**
	baz=308								
NCU					S		**Sn**	**15 53 22.1**	**-0.4**
	baz=308								
NCUH	**Zhongli**	**0.93**	**309**	*e*	P		**Pb**	**15 53 08.2**	**-0.6**
	baz=308								
NCUH				*e*	S		**Sn**	**15 53 22.1**	**-0.4**
	baz=308								
NSTT	**Nanjuang**	**0.93**	**285**		P		**Pg**	**15 53 08.9**	**-0.2**
	baz=284								
NSTT					S		**Sn**	**15 53 21.6**	**-0.9**
	baz=284								
YOJ	**Yonaguni jima**	**0.94**	**85**		P		**Pb**	**15 53 08.9**	**0.0**
YOJ					S		**Sb**	**15 53 22.0**	**+0.9**
YOJ	**Yonaguni jima**	**0.94**	**85**		P		**Pb**	**15 53 09.3**	**+0.3**
	baz=82								
YOJ					S		**Sg**	**15 53 22.8**	**+1.2**
	baz=82								
TWY	**Chenhua**	**0.95**	**338**		P		**Pn**	**15 53 10.1**	**+0.3**
	baz=339								
TWY					S		**Sn**	**15 53 22.5**	**-0.6**
	baz=339								
WHP	**Taichung City**	**0.95**	**264**		P		**Pg**	**15 53 09.5**	**-0.1**
	baz=261								
WHP					S		**Sg**	**15 53 22.1**	**-0.1**
	baz=261								
HSN1	**Hsinchu**	**0.96**	**294**	*e*	P		**Pn**	**15 53 09.7**	**-0.3**
	baz=285								
HSN1				*e*	S		**Sn**	**15 53 23.8**	**+0.5**
	baz=285								
SBCB	**Hsinchu**	**1.00**	**294**	*e*	P		**Pb**	**15 53 09.5**	**-0.5**
	baz=293								
SBCB				*e*	S		**Sn**	**15 53 24.3**	**+0.1**
	baz=293								
VWDT	**VWDT**	**1.00**	**231**		P		**Pb**	**15 53 09.5**	**-0.5**
	baz=228								
VWDT					S		**Sb**	**15 53 22.8**	**-0.1**
	baz=228								
WPL	**Puli Township**	**1.01**	**249**	*e*	P		**Pb**	**15 53 10.1**	**-0.1**
	baz=246								
WPL				*e*	S		**Sg**	**15 53 23.7**	**-0.2**
	baz=246								
HGSD	**Ruisui**	**1.03**	**210**	*e*	P		**Pb**	**15 53 09.8**	**-0.7**
	baz=222								
HGSD				*e*	S		**Sn**	**15 53 26.4**	**+1.5**
	baz=222								
DPDB	**Guoxing**	**1.03**	**250**	*e*	P		**Pb**	**15 53 10.5**	**-0.1**
	baz=248								
DPDB				*e*	S		**Sg**	**15 53 24.5**	**0.0**
	baz=248								
NMLH	**Miaoli**	**1.10**	**278**	*e*	P		**Pn**	**15 53 11.9**	**+0.1**
	baz=276								
NMLH				*e*	S		**Sn**	**15 53 27.3**	**+0.6**
	baz=276								
TWQ1	**Liyutan**	**1.11**	**268**	*e*	P		**Pg**	**15 53 12.7**	**+0.2**
	baz=266								
TWQ1				*e*	S		**Sn**	**15 53 27.7**	**+0.9**
	baz=266								
SMLT	**Sun Moon Lake**	**1.11**	**243**		P		**Pb**	**15 53 11.8**	**-0.2**
	baz=234								
SMLT				*e*	S		**Sg**	**15 53 27.0**	**-0.2**
	baz=234								
SSLB	**Suanglung**	**1.12**	**238**		P		**Pb**	**15 53 11.4**	**-0.6**
	baz=229								
SSLB					S		**Sb**	**15 53 26.8**	**+0.4**
	baz=229								
NSY	**Sanyi**	**1.12**	**272**	*e*	P		**Pg**	**15 53 12.5**	**-0.2**
	baz=270								
NSY				*e*	S		**Sn**	**15 53 27.2**	**0.0**
	baz=270								
TYC	**Yuchr**	**1.14**	**245**		P		**Pb**	**15 53 12.0**	**-0.3**
	baz=243								
TYC				*e*	S		**Sn**	**15 53 27.5**	**-0.1**
	baz=243								
YULB	**Yu-li**	**1.17**	**213**		P		**Pn**	**15 53 11.1**	**-1.7**
	baz=211								
YULB					S		**Sb**	**15 53 27.2**	**-0.8**
	baz=211								
EYUL	**Yuli**	**1.20**	**211**	*e*	P		**Pn**	**15 53 12.4**	**-0.8**
	baz=223								
EYUL				*e*	S		**Sb**	**15 53 29.3**	**+0.5**
	baz=223								
TWF1	**Yuli**	**1.21**	**212**	*e*	P		**Pn**	**15 53 11.8**	**-1.5**
	baz=222								
TWF1				*e*	S		**Sb**	**15 53 28.3**	**-0.6**
	baz=222								
TCU	**Taichung**	**1.22**	**259**		P		**Pb**	**15 53 13.9**	**+0.2**
	baz=256								
TCU				*e*	S		**Sg**	**15 53 30.4**	**-0.1**
	baz=256								
WWF	**Wufeng**	**1.23**	**254**	*e*	P		**Pb**	**15 53 14.2**	**+0.3**
	baz=268								
WWF				*e*	S		**Sg**	**15 53 31.8**	**+1.1**
	baz=268								
WDJ	**Dajia District**	**1.23**	**268**	*e*	P		**Pn**	**15 53 13.7**	**+0.1**
	baz=266								
WDJ				*e*	S		**Sg**	**15 53 30.4**	**-0.4**
	baz=266								
WHYT	**Xinyi Township**	**1.24**	**237**	*e*	P		**Pn**	**15 53 13.8**	**-0.1**
	baz=230								
WHYT				*e*	S		**Sg**	**15 53 31.1**	**-0.2**
	baz=230								
WJS	**Zhushan**	**1.28**	**244**		P		**Pb**	**15 53 15.3**	**+0.5**
	baz=242								
WJS					S		**Sg**	**15 53 33.3**	**+0.9**
	baz=242								
WNT	**Mingjian**	**1.29**	**247**		P		**Pg**	**15 53 15.6**	**-0.4**
	baz=245								
WNT					S		**Sg**	**15 53 33.7**	**+0.8**
	baz=245								
YUS	**Yu-Shan**	**1.30**	**227**	*e*	S		**Sb**	**15 53 32.2**	**+0.1**
	baz=213								
FULB	**Fuli**	**1.34**	**208**	*e*	P		**Pn**	**15 53 15.2**	**0.0**
	baz=220								
FULB				*e*	S		**Sn**	**15 53 33.4**	**+0.7**
	baz=220								
ALS	**Alishan**	**1.39**	**231**		P		**Pn**	**15 53 16.5**	**+0.4**
	baz=220								
ALS				*e*	S		**Sb**	**15 53 34.8**	**+0.4**
	baz=220								
CHKT	**Chengkung**	**1.40**	**204**	*e*	P		**Pn**	**15 53 15.4**	**-0.6**
	baz=187								
CHKT				*e*	S		**Sn**	**15 53 33.8**	**-0.4**
	baz=187								
CHN5	**Tsauling**	**1.43**	**237**		P		**Pb**	**15 53 17.4**	**-0.1**
	baz=235								
CHN5					S		**Sg**	**15 53 36.9**	**-0.4**
	baz=235								
WGK	**Gukeng**	**1.48**	**242**	*e*	P		**Pb**	**15 53 18.2**	**0.0**
	baz=240								
WGK				*e*	S		**Sg**	**15 53 38.2**	**-0.5**
	baz=240								
ELDTW	**Lidau**	**1.49**	**217**	*e*	P		**Pn**	**15 53 16.2**	**-1.1**
	baz=215								
ELDTW				*e*	S		**Sn**	**15 53 34.7**	**-1.7**
	baz=215								
WDLH	**Douliu**	**1.50**	**243**	*e*	P		**Pn**	**15 53 17.8**	**+0.5**
	baz=241								
WDLH				*e*	S		**Sb**	**15 53 37.8**	**+0.6**
	baz=241								
EDH	**Donghe**	**1.54**	**204**	*e*	P		**Pn**	**15 53 17.2**	**-0.7**
	baz=192								
EDH				*e*	S		**Sn**	**15 53 36.8**	**-0.8**
	baz=192								
IRIF	**Iriomote-Funau**	**1.59**	**92**		P		**Pn**	**15 53 18.2**	**-0.4**
IRIF					S		**Sn**	**15 53 37.9**	**-0.9**
WTK	**Tuku**	**1.62**	**245**	*e*	P		**Pn**	**15 53 19.9**	**+1.0**
	baz=243								
WTK				*e*	S		**Sb**	**15 53 41.0**	**+0.3**
	baz=243								
CHN4	**Tsaushan**	**1.64**	**231**		P		**Pb**	**15 53 20.6**	**-0.4**
	baz=230								
CHN4					S		**Sg**	**15 53 43.1**	**-0.9**
	baz=230								
STYH	**Taoyuan**	**1.64**	**223**		P		**Pn**	**15 53 19.5**	**+0.3**
	baz=213								
STYH					S		**Sn**	**15 53 40.7**	**+0.7**
	baz=213								
WTCT	**Ta-ch'eng**	**1.64**	**252**	*e*	P		**Pn**	**15 53 19.5**	**+0.2**
	baz=250								
WTCT				*e*	S		**Sb**	**15 53 41.0**	**-0.4**
	baz=250								
TPUB	**Ta-pu**	**1.65**	**229**		P		**Pn**	**15 53 20.0**	**+0.7**
	baz=215								
TPUB				*e*	S		**Sb**	**15 53 42.0**	**+0.3**
	baz=215								
STYT	**Tauyuan**	**1.66**	**223**	*e*	P		**Pn**	**15 53 20.0**	**+0.4**
	baz=214								
STYT				*e*	S		**Sn**	**15 53 41.6**	**+1.0**
	baz=214								
CHY	**Chiayi**	**1.68**	**239**	*e*	P		**Pb**	**15 53 21.5**	**-0.1**
	baz=237								
CHY				*e*	S		**Sb**	**15 53 43.6**	**+1.0**
	baz=237								
WTP	**Ta-pu**	**1.69**	**228**		P		**Pn**	**15 53 21.2**	**+1.2**
	baz=226								
WTP				*e*	S		**Sb**	**15 53 44.0**	**+1.0**
	baz=226								
TWK	**Hsinying**	**1.77**	**231**		P		**Pn**	**15 53 21.9**	**+0.8**
	baz=229								
TWK				*e*	S		**Sb**	**15 53 46.0**	**+0.9**
	baz=229								
LDUT	**Ludao**	**1.77**	**196**	*e*	P		**Pn**	**15 53 20.2**	**-0.8**
	baz=184								
LDUT				*e*	S		**Sn**	**15 53 41.2**	**-2.0**
	baz=184								
WSF	**Szhu**	**1.78**	**246**	*e*	S		**Sb**	**15 53 45.3**	**0.0**
	baz=244								
CHN1	**Nanshi**	**1.79**	**228**	*e*	P		**Pb**	**15 53 23.2**	**-0.3**
	baz=227								
CHN1				*e*	S		**Sb**	**15 53 46.6**	**+0.8**
	baz=227								
SGST	**Jiashian**	**1.83**	**225**	*e*	P		**Pn**	**15 53 23.0**	**+1.2**
	baz=212								
SGST				*e*	S		**Sb**	**15 53 46.9**	**+0.1**
	baz=212								
JKRS	**Kuro-shima**	**1.85**	**94**		P		**Pn**	**15 53 21.4**	**-0.7**
JKRS					S		**Sn**	**15 53 45.2**	**0.0**
SLGT	**Liugui**	**1.85**	**222**	*e*	P		**Pn**	**15 53 23.6**	**+1.4**
	baz=221								
SLGT				*e*	S		**Sb**	**15 53 47.4**	**-0.1**
	baz=221								
JIJ	**Ishigaki jima**	**1.97**	**90**		P		**Pn**	**15 53 23.7**	**0.0**
JIJ					S		**Sn**	**15 53 47.3**	**-0.8**
ECL	**Taimali**	**2.02**	**208**	*e*	P		**Pn**	**15 53 23.5**	**-0.9**
	baz=197								
SCST	**Cishan**	**2.03**	**223**	*e*	P		**Pb**	**15 53 26.8**	**-0.8**
	baz=221								
SSD	**Sandimen**	**2.05**	**218**	*e*	P		**Pn**	**15 53 26.1**	**+1.2**
	baz=217								
SSD				*e*	S		**Sb**	**15 53 52.7**	**-0.6**
	baz=217								
TSMG	**Majia**	**2.08**	**217**	*e*	P		**Pn**	**15 53 26.6**	**+1.3**
	baz=216								
TSMG				*e*	S		**Sb**	**15 53 53.5**	**-0.4**
	baz=216								
JISG	**Ishigakijimahi**	**2.13**	**84**		P		**Pn**	**15 53 25.3**	**-0.6**
JISG					S		**Sn**	**15 53 51.8**	**-0.2**
MASBT	**Mashibuluo**	**2.16**	**215**	*e*	P		**Pn**	**15 53 28.3**	**+1.9**
	baz=215								
MASBT				*e*	S		**Sn**	**15 53 55.1**	**+2.3**
	baz=215								
EAST	**Anshuo**	**2.25**	**208**	*e*	P		**Pn**	**15 53 27.2**	**-0.6**
	baz=200								
EAST				*e*	S		**Sn**	**15 53 54.1**	**-1.1**
	baz=200								
PNG	**Penghu**	**2.37**	**250**	*e*	P		**Pn**	**15 53 29.1**	**-0.2**
	baz=248								
PNG				*e*	S		**Sn**	**15 53 57.9**	**-0.1**
	baz=248								
VWUC	**VWUC**	**2.38**	**285**	*e*	P		**Pn**	**15 53 29.5**	**0.0**
	baz=283								
VWUC				*e*	S		**Sn**	**15 53 58.2**	**-0.2**
	baz=283								
WDGT	**Dungji**	**2.41**	**243**	*e*	P		**Pn**	**15 53 30.1**	**+0.3**
	baz=240								
WDGT				*e*	S		**Sn**	**15 53 59.6**	**+0.6**
	baz=240								
SLIU	**Shizi**	**2.42**	**207**	*e*	P		**Pn**	**15 53 31.3**	**+1.3**
	baz=198								
JTJ	**Tarama**	**2.49**	**84**		P		**Pn**	**15 53 31.5**	**+0.6**
JTJ					*e*S		**Sn**	**15 54 02.3**	**+1.4**
MATB	**Ma-tsu**	**2.55**	**314**	*e*	P		**Pn**	**15 53 32.0**	**+0.3**
	baz=312								
MATB				*e*	S		**Sn**	**15 54 02.4**	**-0.1**
	baz=312								
VCHM	**Qimei**	**2.62**	**244**	*e*	P		**Pn**	**15 53 32.9**	**+0.2**
	baz=242								
VCHM				*e*	S		**Sn**	**15 54 04.6**	**+0.4**
	baz=242								
TWKBT	**Hengchun**	**2.66**	**204**	*e*	P		**Pn**	**15 53 32.1**	**-1.2**
	baz=192								
PTMZ	**Houxiangcun**	**2.69**	**285**	*e*	P		**Pn**	**15 53 33.9**	**+0.2**
	baz=283								
PTMZ				*e*	S		**Sn**	**15 54 05.8**	**0.0**
	baz=283								

*IDC **28** 15:56:11.9±1.2,37°.49N×8°.27E,h0^{km},mb3.6/3,mb1 3.7/4, mb1mx3.2/47,mbtmp3.6/4,ML4.0/1,Error ellipse: s-maj=33.3km s-min=21.1km az=70.0*
*LDG **28** 15:56:11.0±0.2,37°.35N×8°.02E,h10^{km},Ml3.4/18,Error ellipse: s-maj=7.5km s-min=4.1km az=61.0*
*TUN **28** 15:56:14.6,37°.30N×8°.49E,h27^{km}±2^{km},MD3.4, Hypocentre not reviewed by the ISC*
*CRAAG **28** 15:56:26.2,37°.02N×7°.31E,Ml3.3*
ISC 28 15:56:13.1±0.9,37°.65N±0°.06×8°.09E±0°.07,h10^{km},n32, σ2^{s}.91/46,mb3.6/3,Western Mediterranean Sea

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

PGF	**Pioggiola**	**4.94**	**8**	*e*Pn	**Pn**	**15 57 28.0**	**+0.6**
PGF	**Pioggiola**	**4.94**	**8**	*e*P	**Pn**	**15 57 31.8**	**+4.3**
PGF				*e*Sn	**Sn**	**15 58 25.0**	**+0.3**
	6.3nm,0.3s						
LMR	**La Mourre**	**5.80**	**349**	*e*Pn	**Pn**	**15 57 39.1**	**-0.1**
LMR				*e*Sn	**Sn**	**15 58 44.1**	**-1.7**
	15nm,0.2s						
FRF	**La Foret Royal**	**6.00**	**350**	*e*Pn	**Pn**	**15 57 42.0**	**0.0**
FRF				*e*Sn	**Sn**	**15 58 47.8**	**-3.0**
	4.3nm,0.2s						
SBF	**Sospel**	**6.23**	**356**	*e*Pn	**Pn**	**15 57 45.4**	**+0.3**
SBF				*e*Sn	**Sn**	**15 58 52.3**	**-4.0**
	17nm,0.2s						
SMRF	**Simiane la Rot**	**6.60**	**344**	*e*Pn	**Pn**	**15 57 49.9**	**-0.3**
SMRF				*e*Sn	**Sn**	**15 59 04.7**	**-0.8**
	5.1nm,0.3s						
MBDF	**Montbardon**	**7.14**	**352**	*e*P	**Pn**	**15 58 01.9**	**+4.2**
MBDF				*e*Sn	**Sn**	**15 59 17.6**	**-1.3**
	4.9nm,0.3s						
LASF	**Ste Croix**	**7.17**	**335**	*e*P	**Pn**	**15 58 01.0**	**+3.0**
LASF				*e*Sn	**Sn**	**15 59 17.6**	**-2.0**
	2.1nm,0.2s						
MTLF	**Montolieu**	**7.23**	**324**	*e*P	**Pn**	**15 58 01.5**	**+2.7**
MTLF				*e*Sn	**Sn**	**15 59 18.0**	**-3.0**
	5.5nm,0.3s						
ORIF	**Oris-en-Rattie**	**7.45**	**348**	*e*P	**Pn**	**15 58 05.5**	**+3.6**
ORIF				*e*Sn	**Sn**	**15 59 24.9**	**-1.5**
	3.2nm,0.5s						
VIVF	**Saint-Julien-l**	**7.64**	**341**	*e*Pn	**Pn**	**15 58 04.6**	**+0.1**
VIVF				*e*Sn	**Sn**	**15 59 29.2**	**-2.0**
	1.1nm,0.2s						
LPG	**La Plagne**	**7.90**	**353**	*e*P	**Pn**	**15 58 13.0**	**+4.7**
LPL	**La Plagne**	**7.92**	**353**	*e*Pn	**Pn**	**15 58 08.4**	**-0.1**
LPL	**La Plagne**	**7.92**	**353**	*e*P	Pn	15 58 13.7	+5.2
LPL				*e*Sn	**Sn**	**15 59 35.9**	**-2.4**
	1.2nm,0.3s						
EPF	**Esparros**	**7.99**	**315**	*e*P	**Pn**	**15 58 12.5**	**+3.2**
EPF				*e*Sn	**Sn**	**15 59 34.9**	**-4.9**
	2.3nm,0.3s						
ETSF	**Etsaut**	**8.44**	**311**	*e*P	**Pn**	**15 58 19.0**	**+3.6**
ETSF				*e*Sn	**Sn**	**15 59 45.7**	**-5.0**
	1.3nm,0.3s						
CAF	**Calviac**	**8.56**	**330**	*e*Pn	**Pn**	**15 58 16.0**	**-1.1**
CAF	**Calviac**	**8.56**	**330**	*e*P	**Pn**	**15 58 21.2**	**+4.1**
CAF				*e*Sn	**Sn**	**15 59 50.6**	**-3.2**
	1.8nm,0.3s						
SJPF	**Ste Jean**	**8.96**	**310**	*e*P	**Pn**	**15 58 25.8**	**+3.3**
SJPF				*e*Sn	**Sn**	**15 59 57.6**	**-5.8**
	2.4nm,0.4s						
CABF	**La Chapelle**	**9.08**	**351**	*e*Pn	**Pn**	**15 58 24.8**	**+0.6**
ESDC	**Sonseca Array**	**9.64**	**286**	Pn	**Pn**	**15 58 35.0**	**+3.1**
	0.4nm,0.3s,baz=93,slow=14,SNR=6.9						
TCF	**Toulx Ste Croi**	**9.67**	**335**	*e*P	Pn	15 58 37.6	+5.3
BGF	**Bois d'Agland**	**9.71**	**338**	*e*Pn	**Pn**	**15 58 30.4**	**-2.4**
AVF	**Avril sur Loir**	**9.78**	**340**	*e*P	**Pn**	**15 58 38.4**	**+4.6**
TORD	**Torodi Ar. Bea**	**25.06**	**195**	P	**P**	**16 01 36.5**	**-1.2**
	1.0nm,0.4s,baz=10,slow=9.7,SNR=4.5						
MKAR	**Makanchi Array**	**53.81**	**55**	P	**P**	**16 05 36.0**	**+0.2**
	0.3nm,0.4s,baz=290,slow=6.3,SNR=6.3						
YKA	**Yellowknife Ar**	**70.14**	**335**	P	**P**	**16 07 27.1**	**+1.8**
	0.2nm,0.6s,baz=48,slow=6.3,SNR=5.7						

*IDC **28** 15:56:43.7±0.8, 3°.26N×126°.63E, h0km, mb3.8/10, mb1 3.9/11,mb1mx3.7/53,mbtmp3.8/11, ML4.0/1, MS3.6/2, Ms1 3.6/2, ms1mx2.5/41, Error ellipse: s-maj=41.6km s-min=14.2km az=76.0*

*NEIC **28** 15:56:51.7±1.6, 3°.18N±0°.10×126°.77E±0°.10, h62km±9km, mb4.0/15, Error ellipse: s-maj=14.3km s-min=14.0km az=155.0*

ISC 28 15:56:50.3±0.6, 3°.24N±0°.07×126°.81E±0°.09, h50km, n32, σ1s49/31, mb4.0/16, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**2.52**	**167**	Pn		**Pn**	**15 57 27.4**	**-1.4**
LUWI	**Luwuk**	**5.87**	**224**	Pn		**Pn**	**15 58 16.4**	**+1.6**
SIJI	**Sorong**	**6.04**	**132**	Pn		**Pn**	**15 58 17.0**	**-0.2**
	3.5nm,0.3s,baz=339,slow=22,SNR=22							
SIJI				Sn		**Sn**	**15 59 26.6**	**+1.4**
	1.0nm,0.3s,baz=237,slow=23,SNR=5.6							
TOLI2	**Tolitoli**	**6.39**	**251**	Pn		**Pn**	**15 58 25.1**	**+3.1**
FAKI	**Fak Fak**	**8.19**	**138**	Pn		**Pn**	**15 58 49.0**	**+2.4**
JAGI	**Jajag, Banyuwa**	**17.17**	**227**	Pn		**Pn**	**16 00 41.8**	**-5.1**
JAGI				IAmb		IAmb	16 01 02.2	
	comp=Z,27nm,1.2s							
YULB	**Yu-li**	**20.73**	**346**	P		**P**	**16 01 25.2**	**-1.6**
TPUB	**Ta-pu**	**20.82**	**344**	P		**P**	**16 01 25.7**	**-2.1**
TPUB				IAmb		IAmb	16 01 50.6	
	comp=Z,19nm,1.1s							
SSLB	**Suanglung**	**21.20**	**345**	P		**P**	**16 01 30.6**	**-1.3**
SSLB				IAmb		IAmb	16 01 34.5	
	comp=Z,6.4nm,0.9s							
FITZ	**Fitzroy Crossi**	**21.24**	**183**	P		**P**	**16 01 31.7**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=5.5,slow=13,SNR=1.9							
WB0	**Warramunga Arr**	**24.05**	**162**	P		**P**	**16 02 01.2**	**+0.2**
WB0				IAmb		IAmb	16 02 02.3	
	comp=Z,4.9nm,0.7s							
WRAB	**Tennant Creek**	**24.19**	**162**	P		**P**	**16 02 03.0**	**+0.6**
WRAB				IAmb		IAmb	16 02 04.1	
	comp=Z,4.6nm,0.8s							
WRA	**Warramunga Arr**	**24.20**	**163**	P		**P**	**16 02 03.0**	**+0.6**
	comp=Z,1.9nm,0.4s,baz=337,slow=11,SNR=36							
WB2	**Warramunga Arr**	**24.20**	**162**	P		**P**	**16 02 03.0**	**+0.5**
WB2				IAmb		IAmb	16 02 12.3	
	comp=Z,5.1nm,1.1s							
WR0	**Warramunga Arr**	**24.27**	**162**	P		**P**	**16 02 03.6**	**+0.5**
WR0				IAmb		IAmb	16 02 14.7	
	comp=Z,4.5nm,1.1s							
AS31	**Alice Springs**	**27.62**	**166**	P		**P**	**16 02 33.5**	**+0.1**
ASAR	**Alice Springs**	**27.62**	**166**	P		**P**	**16 02 34.0**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=348,slow=7.6,SNR=14							
ASAR				PcP		**PcP**	**16 05 49.5**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=343,slow=2.9,SNR=1.8							
ASAR	**Alice Springs**	**27.62**	**166**	P		**P**	**16 02 33.1**	**-0.2**
KSRS	**Korea Array**	**34.06**	**2**	P		**P**	**16 03 29.6**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=181,slow=9.3,SNR=1.7							
STKA	**Stephens Creek**	**37.65**	**159**	P		**P**	**16 04 00.6**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=340,slow=6.8,SNR=5.1							
STKA	**Stephens Creek**	**37.65**	**159**	IAmb		IAmb	16 04 09.7	
	comp=Z,2.0nm,1.4s							
USRK	**Ussuriysk Ar.**	**41.04**	**6**	LR		LR	16 24 09.9	
	comp=Z,13nm,19.0s,baz=103,slow=40							
ASAJ	**Asahikawa**	**43.03**	**17**	P		**P**	**16 04 44.9**	**-0.2**
	comp=Z,2.3nm,0.8s,baz=197,slow=11,SNR=1.4							
SONM	**Songino Array**	**47.78**	**341**	P		**P**	**16 05 23.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=140,slow=7.0,SNR=2.2							
PEA0B	**Petropavlovsk-**	**55.85**	**22**	P		**P**	**16 06 23.2**	**+0.6**
PETK	**Petropavlovsk-**	**55.85**	**22**	P		**P**	**16 06 23.2**	**+0.6**
	comp=Z,3.3nm,0.9s,baz=183,slow=2.8,SNR=10							
MKAR	**Makanchi Array**	**58.00**	**325**	P		**P**	**16 06 37.7**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=118,slow=7.9,SNR=16							
ZALV	**Zalesovo Beam**	**61.06**	**333**	P		**P**	**16 06 57.9**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=128,slow=9.5,SNR=2.4							
TIXI	**Tiksi**	**68.33**	**1**	P		**P**	**16 07 46.2**	**+0.2**
TIXI				IAmb		IAmb	16 08 00.4	
	comp=Z,3.0nm,1.4s							
SOCY	**Socotra**	**72.54**	**282**	P		**P**	**16 08 12.1**	**-0.8**
ABKAR	**Akbulak array**	**72.58**	**321**	P		**P**	**16 08 12.5**	**+0.2**
IDI	**Anoyia**	**97.84**	**306**	LR		LR	16 59 38.1	
	comp=Z,158nm,21.6s,baz=341,slow=39							

JMA 28 16:08:57.0±0.2, 35°.75N×140°.64E, h50km±2km, M2.1, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.18**	**105**	P		Pn	16 09 05.1	-0.1
JSMT	**Sammumatsuo**	**0.19**	**236**	P		Pn	16 09 05.6	+0.3
JSMT				S		Sn	16 09 12.3	+1.2
JIHU	**Itakohorinouch**	**0.23**	**337**	P		Pn	16 09 06.1	+0.5
JIHU				S		Sn	16 09 13.0	+1.3
JCN	**Nagara**	**0.49**	**227**	P		Pn	16 09 08.7	+0.6
JCN				S		Sn	16 09 17.8	+1.8
JYT	**Yasato**	**0.60**	**323**	P		Pn	16 09 09.6	+0.2
JYT				S		Sn	16 09 18.3	-0.1
JYT	**Yasato**	**0.60**	**323**			Sn	16 09 09.5	-8.9
BSO4	**Boso 4**	**0.80**	**198**	P		Pn	16 09 12.2	+0.3
JHO	**Hitachi**	**0.86**	**356**	P		Pn	16 09 13.3	+0.4
BSO3	**Boso 3**	**0.95**	**186**	P		Pn	16 09 14.3	+0.5
BSO1	**Boso 1**	**1.13**	**166**	P		Pn	16 09 16.4	+0.5
JMM	**Marumori**	**2.12**	**3**			Pn	16 09 31.9	+2.0

2015 APR

*KRSZO **28** 16:16:49.2±0.7, 44°.53N×17°.57E, h8km±4km, ML4.2/34, Error ellipse: s-maj=2.4km s-min=1.9km az=59.0*

*PDG **28** 16:16:49.1±0.5, 44°.56N×17°.60E, h10km±1km, MD3.7/2, ML3.9/14, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

*NEIC **28** 16:16:49.8±1.7, 44°.52N±0°.04×17°.60E±0°.05, h9km±4km, mb4.0/12, ML4.0(VIE), ML3.9/2(BUC), Error ellipse: s-maj=6.1km s-min=5.7km az=183.0*

*LDG **28** 16:16:49.4±0.1, 44°.63N×17°.64E, h10km, Ml3.8/19, Error ellipse: s-maj=2.7km s-min=1.6km az=35.0*

*BEO **28** 16:16:49.0±0.3, 44°.55N×17°.52E, h0km, ML3.8/13*

*RHSSO **28** 16:16:49.7±0.2, 44°.52N×17°.56E, h3km±1km, MD4.0/17*

*PRU **28** 16:16:51.8±0.0, 44°.49N×17°.52E, h24km, M4.0*

*IDC **28** 16:16:53.1±2.5, 44°.56N×17°.40E, h25km±17km, mb3.6/12, mb1 3.8/26, mb1mx3.7/53, mbtmp3.8/26, ML4.0/12, MS2.9/10, Ms1 2.9/10, ms1mx2.7/62, Error ellipse: s-maj=11.8km s-min=8.5km az=43.0*

*BGR **28** 16:16:53.0±0.5, 44°.53N×17°.54E, h10km, ML4.2, Error ellipse: s-maj=12.2km s-min=8.9km az=55.0*

ISC 28 16:16:48.9±1.0, 44°.54N±0°.01×17°.60E±0°.02, h1km±7km, n383, σ1s81/594, mb3.9/15, MS2.9/4, 30C-21D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
BLY	**Banja Luka**	**0.36**	**305**	*e*Pg		**Pg**	**16 16 56.4**	**+0.6**
BLY				*e*Sg		**Sg**	**16 17 00.5**	**0.0**
BLY	**Banja Luka**	**0.36**	**305**	⇑*i*Pg		**Pg**	**16 16 56.4**	**+0.6**
BLY				*e*Sg		**Sg**	**16 17 01.5**	**+1.0**
BLY	**Banja Luka**	**0.36**	**305**	Pg		**Pg**	**16 16 56.4**	**+0.6**
BLY				Pb		**Pb**	**16 16 56.7**	**-1.4**
	comp=Z,88nm,SNR=1000							
BLY				Lg		Lg	16 17 00.5	
BLY				Sb		**Sg**	**16 17 01.3**	**+0.8**
BLY				Sg		**Sg**	**16 17 01.5**	**+1.0**
MGRS	**Mrkonjic Grad**	**0.39**	**251**	⇑*i*Pg		**Pg**	**16 16 55.8**	**-0.5**
MGRS				*e*Sg		**Sg**	**16 17 01.4**	**0.0**
MRAK	**Mrakovica**	**0.69**	**314**	*e*Pg		**Pg**	**16 17 02.8**	**+0.8**
MRAK				*e*Sg		**Sg**	**16 17 11.7**	**+0.8**
PRIJ	**Prijedor**	**0.76**	**305**	⇑*i*Pg		**Pg**	**16 17 03.4**	**-0.1**
PRIJ				*e*Sg		**Sg**	**16 17 13.3**	**-0.1**
HAPS	**Han Pijesak,Bl**	**1.07**	**115**	*e*Pg		**Pg**	**16 17 08.9**	**-0.5**
HAPS				*e*Sg		**Sb**	**16 17 24.6**	**-0.2**
HAPS	**Han Pijesak,Bl**	**1.07**	**115**	*e*Pg		**Pg**	**16 17 08.6**	**-0.8**
HAPS				*e*Sg		**Sb**	**16 17 24.6**	**-0.2**
RICI	**Ricice**	**1.10**	**198**	*i* Pg		**Pg**	**16 17 09.9**	**0.0**
RICI				Sg		**Sg**	**16 17 24.2**	**0.0**
MOSL	**Moslavina**	**1.23**	**331**	*e*Pg		**Pn**	**16 17 13.3**	**+0.1**
MOSL				Sg		**Sb**	**16 17 29.2**	**0.0**
UDBI	**Udbina**	**1.31**	**270**	*i* Pg		**Pg**	**16 17 12.2**	**-1.8**
UDBI				Sg		**Sg**	**16 17 30.7**	**-0.3**
MAKA	**Makarska**	**1.32**	**199**	*i* Pg		**Pg**	**16 17 13.1**	**-1.1**
MAKA				Sg		**Sg**	**16 17 31.0**	**-0.4**
TEKS	**Tekeris**	**1.38**	**89**	*e*Pg		**Pb**	**16 17 15.6**	**+0.1**
TEKS				*e*Sg		**Sn**	**16 17 35.2**	**+1.0**
TEKS	**Tekeris**	**1.38**	**89**	*e*Pg		**Pn**	**16 17 15.4**	**+0.1**
TEKS				*e*Sg		**Sn**	**16 17 34.5**	**+0.3**
BBLS	**Lazi?i**	**1.47**	**117**	*e*Pg		**Pn**	**16 17 16.7**	**+0.2**
BBLS				*e*Sn		**Sn**	**16 17 38.7**	**+2.4**
BBLS	**Lazi?i**	**1.47**	**117**	⇓*i*Pg		**Pn**	**16 17 16.5**	**0.0**
BBLS				*e*Sg		**Sn**	**16 17 36.3**	**0.0**
BBLS	**Lazi?i**	**1.47**	**117**	Pn		**Pn**	**16 17 16.5**	**0.0**
BBLS				Pg		**Pn**	**16 17 16.7**	**+0.2**
BBLS				Pb		**Pg**	**16 17 16.9**	**0.0**
	comp=Z,29nm,SNR=193							
BBLS				Sn		**Sn**	**16 17 36.3**	**0.0**
BBLS				Sg		**Sb**	**16 17 38.1**	**+2.1**
BBLS				Lg		Lg	16 17 38.7	
MORI	**Morici**	**1.52**	**244**	*i* Pn		**Pn**	**16 17 16.6**	**-0.6**
MORI				Sn		**Sn**	**16 17 37.1**	**-0.5**
RUDO	**Rudo**	**1.58**	**125**	*e*Pn		**Pn**	**16 17 18.3**	**+0.3**
RUDO				*e*Sn		**Sg**	**16 17 40.0**	**+0.5**
KOVH	**Kovagototos**	**1.58**	**13**	Pn		**Pn**	**16 17 17.9**	**-0.2**
	comp=Z,4.9nm,SNR=222							
KOVH				Sn		**Sn**	**16 17 36.7**	**-2.5**
HVAR	**Hvar**	**1.60**	**212**	*i* Pg		**Pg**	**16 17 19.4**	**-0.1**
HVAR				Sg		**Sn**	**16 17 39.2**	**-0.3**
UPM	**Unac-Piva**	**1.64**	**144**	*e*Pn		**Pn**	**16 17 19.4**	**+0.4**
UPM				*e*Sn		**Sg**	**16 17 41.8**	**+0.3**
UPM	**Unac-Piva**	**1.64**	**144**	⇑*i*Pn		**Pn**	**16 17 19.3**	**+0.3**
UPM				*i* Sn		**Sg**	**16 17 43.1**	**+1.6**
ZIRJ	**Zirje**	**1.67**	**238**	*i* Pn		**Pn**	**16 17 19.4**	**+0.3**
ZIRJ				Sg		**Sg**	**16 17 42.3**	**-0.1**
STON	**Ston**	**1.67**	**177**	*e*Pg		**Pn**	**16 17 17.9**	**-1.3**
STON				*e*Sg		**Sb**	**16 17 41.8**	**-0.2**
STON	**Ston**	**1.67**	**177**	*e*Pg		**Pg**	**16 17 21.0**	**+0.1**
STON				Sg		**Sg**	**16 17 43.1**	**+0.5**
STON	**Ston**	**1.67**	**177**	*e*Pn		**Pn**	**16 17 18.6**	**-0.6**
STON				*e*Sn		**Sn**	**16 17 40.8**	**-0.5**
FRGS	**Fruska Gora**	**1.69**	**68**	*e*Pn		**Pn**	**16 17 19.2**	**-0.3**
FRGS				*e*Sn		**Sg**	**16 17 43.9**	**+0.8**
FRGS	**Fruska Gora**	**1.69**	**68**	⇑P		**Pn**	**16 17 19.0**	**-0.5**
FRGS				⇓S		**Sb**	**16 17 42.6**	**+0.1**
FRGS	**Fruska Gora**	**1.69**	**68**	*e*Pn		**Pn**	**16 17 19.7**	**+0.2**
FRGS				*e*Sn		**Sb**	**16 17 42.8**	**+0.3**
FRGS	**Fruska Gora**	**1.69**	**68**			**Pn**	**16 17 19.1**	**-0.5**
FRGS						**Sb**	**16 17 42.6**	**+0.1**
ZAG	**Zagreb**	**1.72**	**319**	*e*Pn		**Pn**	**16 17 20.1**	**+0.3**
ZAG				Sn		**Sg**	**16 17 45.1**	**+1.1**
PLE	**Pljevlja**	**1.77**	**133**	⇓*i*Pn		**Pn**	**16 17 21.1**	**+0.3**
PLE				*i* Sn		**Sg**	**16 17 46.2**	**+0.4**
DIVS	**Divibare**	**1.77**	**104**	*e*Pn		**Pn**	**16 17 20.5**	**-0.3**
DIVS				*e*Sn		**Sg**	**16 17 45.8**	**0.0**
DIVS	**Divibare**	**1.77**	**104**	⇓*i*Pn		**Pn**	**16 17 20.4**	**-0.3**
DIVS				*e*Sn		**Sn**	**16 17 44.2**	**+0.2**
DIVS	**Divibare**	**1.77**	**104**	Pn		**Pn**	**16 17 20.4**	**-0.3**
DIVS	**Divibare**	**1.77**	**104**	Pg		**Pn**	**16 17 20.4**	**-0.3**
	comp=Z,2.7nm,SNR=78							
DIVS				Pn		**Pn**	**16 17 20.5**	**-0.3**
DIVS				Sg		**Sn**	**16 17 43.6**	**-0.4**
DIVS				Sn		**Sn**	**16 17 44.2**	**+0.2**
DIVS				Lg		Lg	16 17 45.8	
BRY	**Bratogost**	**1.78**	**157**	⇓*i*Pn		**Pn**	**16 17 20.8**	**0.0**
BRY				*e*Sn		**Sn**	**16 17 44.3**	**+0.2**
BRY	**Bratogost**	**1.78**	**157**	⇓*i*Pn		**Pn**	**16 17 21.2**	**+0.4**
BRY				*i* Sn		**Sg**	**16 17 46.5**	**+0.6**
KALN	**Kalnik**	**1.78**	**333**	*e*Pg		**Pg**	**16 17 23.4**	**+0.4**
KALN				Sn		**Sg**	**16 17 46.1**	**0.0**
PTJ	**Puntijarka**	**1.79**	**320**	Pg		**Pb**	**16 17 22.6**	**+0.1**
PTJ				Sn		**Sg**	**16 17 45.9**	**-0.3**
MORH	**Mrgy, Hungar**	**1.83**	**23**	⇑Pn		**Pn**	**16 17 21.0**	**-0.3**
MORH				⇑S		**Sn**	**16 17 44.6**	**-0.5**
MORH	**Mrgy, Hungar**	**1.83**	**23**	*e*Pn		**Pb**	**16 17 22.7**	**-0.4**
MORH				*e*Sn		**Sb**	**16 17 46.9**	**+0.5**
MORH	**Mrgy, Hungar**	**1.83**	**23**			**Pn**	**16 17 21.0**	**-0.3**
MORH						**Sn**	**16 17 44.6**	**-0.5**
MORH	**Mrgy, Hungar**	**1.83**	**23**	Pb		**Pn**	**16 17 20.8**	**-0.5**
	comp=Z,1.9nm,SNR=108							
MORH				Pn		**Pn**	**16 17 21.0**	**-0.3**
MORH				Pg		**Pb**	**16 17 22.7**	**-0.4**
MORH				Sn		**Sn**	**16 17 44.6**	**-0.5**
MORH				Sg		**Sb**	**16 17 45.5**	**-0.9**
MORH				Lg		Lg	16 17 46.9	
TREB	**Trebinje**	**1.91**	**163**	*e*Pn		**Pb**	**16 17 23.6**	**-0.8**
TREB				*e*Sn		**Sb**	**16 17 49.2**	**+0.5**
TREB	**Trebinje**	**1.91**	**163**	*e*Pn		**Pn**	**16 17 23.3**	**+0.8**
TREB				*e*Sn		**Sn**	**16 17 47.2**	**+0.1**
DUGI	**Dugi Otok**	**1.91**	**254**	*i* Pg		**Pb**	**16 17 23.6**	**-0.8**
DUGI				Sn		**Sn**	**16 17 47.6**	**+0.5**
BOJS	**Bojanci**	**1.92**	**301**	*i* Pn		**Pn**	**16 17 22.6**	**-0.1**
GCIS	**Gornji Cirnik**	**1.92**	**314**	*e*Pn		**Pn**	**16 17 22.2**	**-0.5**
GCIS				*e*Sn		**Sg**	**16 17 50.1**	**-0.5**
GCIS				IAML			16 17 56.6	
	comp=Z,198nm,0.2s							
CRES	**Cresnjev**	**1.98**	**311**	⇑*i*Pn		**Pn**	**16 17 23.2**	**-0.4**
CRES				*e*Sn		**Sn**	**16 17 49.4**	**+0.3**
CRES	**Cresnjev**	**1.98**	**311**	Pg		**Pn**	**16 17 23.2**	**-0.4**
CRES				Sn		**Sn**	**16 17 49.4**	**+0.3**
NKY	**Niksic**	**2.00**	**149**	⇓*i*Pn		**Pn**	**16 17 24.4**	**+0.5**
NKY				*i* Sn		**Sb**	**16 17 51.9**	**+0.3**
BEHE	**Becsehely**	**2.01**	**344**	*e*Pn		**Pn**	**16 17 24.8**	**+0.8**
BEHE				*e*Sn		**Sn**	**16 17 50.7**	**+0.9**
BEHE	**Becsehely**	**2.01**	**344**	Pn		**Pn**	**16 17 24.8**	**+0.8**
BEHE				Pg		**Pb**	**16 17 26.8**	**+0.5**
BEHE				Sn		**Sn**	**16 17 50.7**	**+0.9**
BEHE				Lg		Lg	16 17 55.2	
NKME	**Niksic**	**2.03**	**151**	⇑*i*Pn		**Pn**	**16 17 24.7**	**+0.5**
NKME				*i* Sn		**Sb**	**16 17 52.6**	**+0.3**
TRUS	**Trudelj**	**2.04**	**98**	*e*Pn		**Pn**	**16 17 24.2**	**-0.1**
TRUS				*e*Sn		**Sb**	**16 17 52.1**	**-0.4**
BEO	**Beograd**	**2.07**	**82**	Pn		**Pn**	**16 17 23.6**	**-1.1**
	comp=Z,1.9nm,SNR=18							
CESS	**Cesta pri Krsk**	**2.08**	**314**	*i* Pn		**Pn**	**16 17 24.6**	**-0.3**
IVAS	**Ivanjica**	**2.08**	**117**	*e*Pn		**Pn**	**16 17 24.6**	**-0.3**
IVAS				*e*Sn		**Sb**	**16 17 53.0**	**-0.8**
SJES	**Sjenica**	**2.14**	**126**	*e*Pn		**Pn**	**16 17 26.1**	**+0.3**
SJES				*e*Sn		**Sb**	**16 17 54.8**	**-0.8**
KOME	**Kolasin**	**2.19**	**140**	⇓*i*Pn		**Pn**	**16 17 26.9**	**+0.4**
KOME				*i* Sn		**Sb**	**16 17 56.4**	**-0.6**
HCY	**Herceg Novi**	**2.19**	**162**	⇓*i*Pn		**Pn**	**16 17 27.5**	**+1.0**
HCY	**Herceg Novi**	**2.19**	**162**	⇑*i*Pn		**Pn**	**16 17 27.0**	**+0.5**
HCY				*i* Sn		**Sb**	**16 17 56.6**	**-0.4**
DOBS	**Dobrina**	**2.20**	**318**	*i* Pn		**Pn**	**16 17 26.1**	**-0.4**
KAL	**Kalocsa**	**2.21**	**26**	*e*Pn		**Pn**	**16 17 22.9**	**-3.7**
CEME	**Cevo**	**2.21**	**154**	⇑*i*Pn		**Pn**	**16 17 27.3**	**+0.5**
CEME				*i* Sn		**Sb**	**16 17 57.0**	**-0.6**
GRUS	**Gruza**	**2.33**	**105**	*e*Pn		**Pn**	**16 17 28.5**	**+0.1**
GRUS				*e*Sn		**Sb**	**16 18 00.1**	**-0.9**
RIY	**Rijeka**	**2.35**	**291**	*i* Pn		**Pn**	**16 17 29.6**	**+1.0**
RIY				Sn		**Sn**	**16 17 59.2**	**+1.2**
IVA	**Berane**	**2.36**	**134**	⇓*i*Pn		**Pn**	**16 17 29.2**	**+0.4**
IVA				*i* Sn		**Sb**	**16 18 00.3**	**-1.5**
TIH	**Tihany**	**2.37**	**5**	Pn		**Pn**	**16 17 28.7**	**-0.1**
	comp=Z,11nm,SNR=45							
TIH				Sn		**Sn**	**16 17 59.3**	**+0.9**
BUM	**Brajici-Budva**	**2.43**	**157**	⇓*i*Pn		**Pn**	**16 17 30.3**	**+0.5**
BUM				*i* Sn		**Sb**	**16 18 02.2**	**-1.7**
PDG	**Podgorica**	**2.43**	**150**	*e*Pn		**Pn**	**16 17 31.1**	**+1.4**
PDG				*e*Sn		**Sb**	**16 18 03.1**	**-0.7**
PDG	**Podgorica**	**2.43**	**150**	⇑P		**Pn**	**16 17 31.3**	**+1.6**
PDG				⇑S		**Sn**	**16 18 01.9**	**+1.8**
PDG	**Podgorica**	**2.43**	**150**	*e*Pn		**Pn**	**16 17 30.4**	**+0.7**
PDG				*e*Sn		**Sn**	**16 18 01.0**	**+0.9**
PDG	**Podgorica**	**2.43**	**150**			**Pn**	**16 17 29.1**	**-0.6**
TTG	**Podgorica**	**2.43**	**150**	⇓*i*Pn		**Pn**	**16 17 30.3**	**+0.6**
TTG				*i* Sn		**Sb**	**16 18 02.2**	**-1.6**
CEY	**Cerknica**	**2.54**	**299**	⇑*i*Pn		**Pn**	**16 17 31.0**	**-0.3**
CEY				*e*Sn		**Sn**	**16 18 03.6**	**+0.7**
PVY	**Plav**	**2.59**	**138**	⇓*i*Pn		**Pn**	**16 17 32.5**	**+0.4**
PVY				*i* Sn		**Sn**	**16 18 06.0**	**+1.7**
SVIS	**Svilajnac**	**2.61**	**95**	*e*Pn		**Pb**	**16 17 34.7**	**-1.7**
DRME	**Dracev

comp=Z,47nm,0.4s
MYKA Terra Mystica 3.48 308 Pn 16 17 45.0 +0.9
MYKA Sb 16 18 36.9 +2.9
BARS Barje 3.51 118 *e*Pn **Pn 16 17 42.4 -2.2**
CONA Conrad Observa 3.59 341 *i* Pn **Pn 16 17 46.1 +0.3**
comp=Z,63nm,0.3s,SNR=60
CONA *e*Sn **Sn 16 18 28.0 -0.8**
comp=Z,35nm,0.3s
CONA Conrad Observa 3.59 341 Pn 16 17 46.1 +0.3
CONA Sn 16 18 28.1 -0.8
TIR Tirane 3.60 152 Pn 16 17 46.4 +0.6
TIR Tirane 3.60 152 Pg **Pb 16 17 53.1 -0.2**
RMGR Halanga-Turnu 3.64 86 ⇑P **Pn 16 17 46.8 +0.5**
RMGR Halanga-Turnu 3.64 86 Pn 16 17 46.8 +0.5
ZST Bratislava 3.67 355 *e*PN **Pn 16 17 47.0 +0.3**
ZST *e*SN **Sn 16 18 27.4 -3.2**
ZST Bratislava 3.67 355 Pn **Pn 16 17 46.7 0.0**
comp=Z,6.3nm,SNR=15
ZST Pg **Pn 16 17 47.0 +0.3**
ZST Sn **Sn 16 18 26.9 -3.7**
ZST Lg Lg 16 18 27.4
NRCA Norcia 3.67 244 Pn 16 17 47.1 +0.3
INTR Introdacqua 3.70 228 Pn **Pn 16 17 47.4 +0.2**
PSZ Piszkesteto 3.73 24 ⇑P **Pn 16 17 47.1 -0.5**
PSZ Piszkesteto 3.73 24 Pn **Pn 16 17 47.2 -0.5**
PSZ Piszkesteto 3.73 24 Pn 16 17 47.1 -0.5
PSZ Piszkesteto 3.73 24 Pn **Pn 16 17 46.9 -0.8**
comp=Z,0.6nm,SNR=23
PSZ Pg **Pn 16 17 47.1 -0.5**
PSZ Pb **Pn 16 17 47.2 -0.5**
PSZ Sn **Sn 16 18 29.1 -3.2**
AQU L'Aquila 3.76 236 *e*Pn **Pn 16 17 48.0 0.0**
AQU *e*Sn **Sn 16 18 31.5 -1.4**
AQU L'Aquila 3.76 236 Pn **Pn 16 17 47.0 -1.0**
AQU L'Aquila 3.76 236 Pn **Pn 16 17 47.0 -1.0**
AQU Pg Pb 16 17 48.0 -8.0
AQU Pb Pg 16 17 49.0 -12
comp=Z,1.4nm,SNR=13
AQU Sn **Sn 16 18 31.5 -1.4**
GZR Gura Zlata 3.77 75 ⇑P **Pn 16 17 48.1 -0.1**
GZR Gura Zlata 3.77 75 Pn 16 17 48.1 -0.1
GZR Gura Zlata 3.77 75 Pn **Pn 16 17 48.1 -0.1**
comp=Z,0.4nm,SNR=31
ZOU Zoufplan 3.82 303 Pn 16 17 49.6 +0.6
MODS Modra-Piesok 3.84 357 *e*PN **Pn 16 17 48.1 -1.0**
MODS *e*SN **Sn 16 18 30.8 -4.0**
MODS *e*LG Lg 16 18 35.5
STAL STALIGIAL 3.85 298 Pn **Pn 16 17 49.0 -0.2**
ZAPS Zavoj 3.85 107 *e*Pn **Pn 16 17 50.2 +0.9**
MURB Monte Urbino 3.88 253 Pn 16 17 50.0 +0.2
KBA Koelnbreinsper 3.91 312 *i* Pn **Pn 16 17 50.7 +0.5**
comp=Z,2.3nm,0.2s,SNR=12
KBA *e*Sn **Sn 16 18 34.9 -1.9**
comp=Z,40nm,0.4s
KBA Koelnbreinsper 3.91 312 Pn 16 17 50.7 +0.5
KBA Sn **Sn 16 18 34.9 -1.9**
KBA Koelnbreinsper 3.91 312 *e*Pn **Pn 16 17 50.7 +0.5**
KBA *e*Pg **Pg 16 18 02.3 -1.5**
KBA *e*Sn **Sn 16 18 34.8 -1.9**
KBA Koelnbreinsper 3.91 312 *e*Pn **Pn 16 17 50.7 +0.5**
KBA *e*Pg **Pg 16 18 02.3 -1.5**
KBA *e*Sn **Sn 16 18 34.8 -1.9**
MATE Matera 3.95 190 ⇓P **Pn 16 17 50.4 -0.1**
MATE Matera 3.95 190 Pn 16 17 50.5 -0.1
SMOL Smolenice 3.97 358 *e*PN **Pn 16 17 51.1 +0.2**
SMOL *e*SN **Sn 16 18 35.1 -3.0**
SMOL *e*LG Lg 16 18 40.0
DEV Deva 3.98 68 Pg **Pg 16 18 03.9 -1.3**
DEV Sn **Sn 16 18 37.5 -0.8**
SRE Strehaia 4.01 86 ⇓P **Pn 16 17 51.5 +0.2**
SRE Strehaia 4.01 86 Pn 16 17 51.5 +0.2
MOA Molln 4.04 326 *i* Pn **Pn 16 17 52.8 +1.0**
comp=Z,40nm,0.2s,SNR=64
MOA *e*Sn **Sn 16 18 38.9 -0.8**
comp=Z,90nm,0.5s
MOA Molln 4.04 326 Pn 16 17 52.8 +1.0
MOA Sn **Sn 16 18 38.9 -0.8**
MOA Molln 4.04 326 *e*Pn **Pn 16 17 52.7 +1.0**
MOA *e*Sn **Sn 16 18 39.5 -0.2**
MOA Molln 4.04 326 *e*Pn **Pn 16 17 52.7 +1.0**
MOA *e*Sn **Sn 16 18 39.5 -0.2**
VYHS Vyhne 4.04 12 *e*PN **Pn 16 17 52.3 +0.4**
VYHS *e*SN **Sn 16 18 38.0 -1.9**
VYHS *e*LG Lg 16 19 02.6
VYHS Vyhne 4.04 12 Pn **Pn 16 17 52.0 +0.1**
comp=Z,0.1nm,SNR=8.4
VYHS Pg **Pn 16 17 52.3 +0.4**
VYHS Sn **Sn 16 18 37.8 -2.0**
VYHS Lg Lg 16 18 38.0
VYHS Sg **Sg 16 19 02.6 +3.9**
BOSS Bosilegrad 4.10 118 *e*Pn **Pn 16 17 52.6 0.0**
PAOL Paolisi 4.16 213 Pn 16 17 53.9 +0.4
DRGR 4.23 56 ⇓P **Pn 16 17 54.4 -0.1**
DRGR 4.23 56 Pn 16 17 54.4 -0.1
DRGR 4.23 56 Pn **Pn 16 17 54.4 -0.1**
DRGR Pg **Pn 16 17 55.8 +1.2**
comp=Z,0.2nm,SNR=7.9
DRGR Sn **Sn 16 18 42.0 -2.6**
TEOL Teolo 4.29 283 Pn 16 17 54.8 -0.5
JAVC Velka Javorina 4.32 1 *e*PN **Pn 16 17 56.0 +0.3**
KECS Kecovo 4.42 26 *e*PN **Pn 16 17 58.5 +1.5**
KECS *e*SN **Sn 16 18 47.3 -1.7**
KECS Kecovo 4.42 26 Pn **Pn 16 17 56.4 -0.6**
comp=Z,1.2nm,SNR=9.9
KECS Pg Pb 16 17 58.5 -8.7
KECS Sn **Sn 16 18 47.3 -1.7**
CTI Castel Tesino 4.46 292 Pn 16 17 57.2 -0.5
SCTE Santa Cesarea 4.51 172 Pn 16 17 57.4 -0.9
VTS Vitosha 4.52 113 ⇑P **Pn 16 17 59.0 +0.4**
VTS Vitosha 4.52 113 Pn 16 17 58.5 -0.1
VTS Vitosha 4.52 113 Pn **Pn 16 17 58.9 +0.2**
comp=Z,0.2nm,SNR=14
VTS Pg **Pn 16 17 59.0 +0.4**
KRUC Moravsky 4.59 350 *e*PN **Pn 16 17 59.2 -0.3**
KRUC *e*SN **Sn 16 18 50.1 -3.3**
RJOB Jochberg 4.62 315 *e*Pn **Pn 16 18 01.3 +1.5**
RJOB *e*Sn **Sn 16 18 53.5 -0.6**
RJOB Jochberg 4.62 315 *e*Pn **Pn 16 18 01.3 +1.5**
RJOB *e*Sn **Sn 16 18 53.5 -0.6**
LATE Laterza 4.63 247 Pn 16 17 59.7 -0.3
FNA Florina 4.68 142 Pn **Pn 16 17 59.1 -1.6**
OSSC Osservatorio P 4.69 260 Pn 16 17 60.0 -0.8
ZCCA Zocca 4.75 270 Pn 16 18 02.2 +0.7
LANS Liptovska Anna 4.78 15 *e*PN **Pn 16 18 03.2 +1.1**
LANS *e*SN **Sn 16 18 57.7 -0.5**
LANS Liptovska Anna 4.78 15 Pg **Pn 16 18 03.2 +1.1**
LANS Lg Lg 16 18 57.7
VRAC Vranov 4.82 352 Pn **Pn 16 18 02.5 0.0**
comp=Z,9.0nm,0.3s,baz=189,slow=14,SNR=31
VRAC Sn **Sn 16 18 56.2 -2.7**
comp=Z,17nm,0.3s,baz=109,slow=13,SNR=8.8
VRAC LR LR 16 20 17.2
comp=Z,162nm,20.9s,baz=128,slow=43
VRAC Vranov 4.82 352 ⇑P **Pn 16 18 02.0 -0.5**
VRAC Vranov 4.82 352 *e*PN **Pn 16 18 02.3 -0.2**
VRAC *e*SN **Sn 16 18 55.6 -3.3**
VRAC Vranov 4.82 352 Pn 16 18 02.0 -0.5
CKRC Cesky Krumlov 4.84 333 *e*PN **Pn 16 18 03.4 +0.6**
CKRC AMS AMS 16 19 50.0
comp=Z,600nm,6.3s
WTTA Wattenberg 4.97 305 *i* Pn **Pn 16 18 06.4 +1.6**
comp=Z,13nm,0.4s,SNR=9.4
WTTA *e*Sn **Sn 16 19 03.4 +0.4**
comp=Z,29nm,0.4s
WTTA Wattenberg 4.97 305 Pn 16 18 06.4 +1.6
WTTA Sn **Sn 16 19 03.4 +0.4**
WTTA Wattenberg 4.97 305 *e*Pn **Pn 16 18 06.4 +1.6**
WTTA Wattenberg 4.97 305 *e*Pn **Pn 16 18 06.4 +1.6**
WATA Walderalm 5.04 306 *i* Pn **Pn 16 18 07.4 +1.6**
comp=Z,11nm,0.3s,SNR=12
WATA *e*Sn **Sn 16 19 05.2 +0.5**
comp=Z,53nm,0.5s
WATA Walderalm 5.04 306 Pn 16 18 07.4 +1.6
WATA Sn **Sn 16 19 05.2 +0.5**
ARR Arges 5.06 78 ⇑P **Pn 16 18 05.9 0.0**
ARR Arges 5.06 78 Pn 16 18 05.9 0.0
GEC2 GERESS Array S 5.07 329 Pn **Pn 16 18 06.5 +0.5**
GEC2 GERESS Array S 5.07 329 *e*Pn **Pn 16 18 06.5 +0.5**
GEC2 GERESS Array S 5.07 329 *e*Pn **Pn 16 18 06.5 +0.5**
GERES GERESS Array B 5.07 329 Pn **Pn 16 18 06.5 +0.5**
comp=Z,11nm,0.3s,baz=150,slow=14,SNR=273
GERES Sn **Sn 16 19 04.3 -1.0**
comp=Z,7.7nm,0.3s,baz=144,slow=25,SNR=5.4
GERES Lg Lg 16 19 30.6
comp=Z,5.1nm,0.3s,baz=138,slow=28,SNR=6.3
GERES LR LR 16 20 25.0
comp=Z,142nm,21.1s,baz=124,slow=42
CRVS Cervenica-Dubn 5.11 30 *e*PN **Pn 16 18 07.4 +0.9**
CRVS *e*PG Pg 16 18 33.5 +6.8
CRVS Cervenica-Dubn 5.11 30 Pb **Pn 16 18 07.2 +0.8**
comp=Z,6.4nm,0.9s,SNR=5.1
CRVS Pn **Pn 16 18 07.4 +0.9**
CRVS x x 16 18 07.6
comp=Z,6.4nm,0.9s
CRVS Pg Pg 16 18 33.5 +6.8
CRVS Pb
SALO Salr 5.12 285 Pn **Pn 16 18 06.2 -0.6**
CASP Castiglione de 5.19 253 Pn **Pn 16 18 07.0 -0.7**
PLVB Pleven 5.20 100 ⇑P **Pn 16 18 08.7 +1.0**
PLVB Pleven 5.20 100 Pn 16 18 08.7 +1.0
SQTA Sankt Quirin 5.20 303 *i* Pn **Pn 16 18 10.2 +2.3**
comp=Z,34nm,0.5s,SNR=21
SQTA *e*Sn **Sn 16 19 08.9 +0.3**
comp=Z,33nm,0.4s
SQTA Sankt Quirin 5.20 303 Pn 16 18 10.2 +2.3
SQTA Sn **Sn 16 19 08.9 +0.3**
NIE Niedzica 5.21 20 *e*P **Pn 16 18 10.1 +2.1**
NIE *e*S **Sn 16 19 07.6 -1.1**
NIE Niedzica 5.21 20 Pg **Pn 16 18 09.2 +1.2**
comp=Z,8.6nm,1.0s,SNR=3.1
NIE x x 16 18 10.0
comp=Z,8.4nm,0.9s
NIE Pn Pb 16 18 10.1 -11
NIE Lg Lg 16 19 07.3
NIE Sn **Sn 16 19 07.6 -1.1**
NIE Pg
MORC Moravsky Berou 5.24 360 ⇓P **Pn 16 18 08.9 +0.6**
MORC Moravsky Berou 5.24 360 *e*PN **Pn 16 18 08.8 +0.6**
MORC *e*SN **Sn 16 19 07.1 -2.2**
MORC Moravsky Berou 5.24 360 Pn 16 18 08.0 -0.3
MORC Moravsky Berou 5.24 360 Pn 16 18 08.9 +0.6
MORC Moravsky Berou 5.24 360 *e*Pn **Pn 16 18 09.0 +0.7**
MORC *e*Sn **Sn 16 19 06.4 -2.9**
MORC Moravsky Berou 5.24 360 *e*Pn **Pn 16 18 09.0 +0.7**
MORC *e*Sn **Sn 16 19 06.4 -2.9**
OKC Ostrava-Krasne 5.31 4 *e*PN **Pn 16 18 10.5 +1.2**
OKC *e*SN **Sn 16 19 09.5 -1.5**
MOTA Moosalm 5.33 304 *i* Pn **Pn 16 18 11.1 +1.5**
comp=Z,31nm,0.4s,SNR=24
MOTA *e*Sn **Sn 16 19 10.6 -1.1**
comp=Z,11nm,0.4s
MOTA Moosalm 5.33 304 Pn 16 18 11.2 +1.5
MOTA Sn **Sn 16 19 10.6 -1.1**
KHC Kasperske Hory 5.35 330 *e*PN **Pn 16 18 10.5 +0.6**
KHC *e*PG **Pb 16 18 26.5 +3.3**
KHC *e*SN **Sn 16 19 09.1 -3.1**
KHC *e*SG **Sb 16 19 34.0 +6.1**
KHC AMS AMS 16 20 10.0
comp=Z,400nm,9.3s
VOIR 5.36 78 ⇑P **Pn 16 18 10.5 +0.5**
VOIR 5.36 78 Pn 16 18 10.5 +0.5
TIP Timpagrande 5.40 187 ⇑P **Pn 16 18 10.6 +0.1**
TIP Timpagrande 5.40 187 Pn 16 18 10.7 +0.1
FETA Feichten 5.41 300 *i* Pn **Pn 16 18 12.5 +1.8**
comp=Z,9.5nm,0.3s,SNR=8.1
FETA *e*Sn **Sn 16 19 16.8 +3.1**
comp=Z,27nm,1.0s
FETA Feichten 5.41 300 Pn 16 18 12.5 +1.8
FETA Sn **Sn 16 19 16.8 +3.1**
KRLC Kraliky 5.56 355 *e*PN **Pn 16 18 13.6 +0.8**
KRLC *e*SN **Sn 16 19 15.2 -2.1**
RETA Reutte 5.60 304 *i* Pn **Pn 16 18 14.5 +1.2**
comp=Z,2.9nm,0.2s,SNR=6.5
RETA *e*Sn **Sn 16 19 19.4 +1.1**
comp=Z,14nm,0.4s
RETA Reutte 5.60 304 Pn 16 18 14.5 +1.2
RETA Sn **Sn 16 19 19.4 +1.1**
WET Wettzell 5.63 327 *e*Pn **Pn 16 18 14.4 +0.7**
WET *e*Sn **Sn 16 19 14.6 -4.3**
WET Wettzell 5.63 327 *e*Pn **Pn 16 18 14.4 +0.7**
WET *e*Sn **Sn 16 19 14.6 -4.3**
PBCC Pribram 5.70 336 *e*PN **Pn 16 18 15.2 +0.5**
LIT Litokhoron 5.73 139 Pn **Pn 16 18 15.6 +0.5**
MSSA Maissana 5.79 271 Pn **Pn 16 18 16.0 0.0**
PRU Pruhonice 5.83 340 *e*PN **Pn 16 18 16.9 +0.5**
PRU AMS AMS 16 20 30.0
comp=Z,300nm,11.5s
DAVOX Davos/Dischmat 5.86 295 Pn **Pn 16 18 18.7 +1.8**
comp=Z,3.5nm,0.3s,baz=124,slow=20,SNR=28
DAVOX Sn **Sn 16 19 27.0 +2.3**
comp=Z,2.8nm,0.3s,baz=314,slow=20,SNR=5.6
DAVOX Lg Lg 16 19 57.1
comp=Z,2.6nm,0.3s,baz=308,slow=12,SNR=3.6
DAVOX LR LR 16 20 58.3
comp=Z,136nm,21.2s,baz=84,slow=43
DPC Dobruska-Polom 5.87 352 *e*PN **Pn 16 18 17.5 +0.4**
DPC *e*SN **Sn 16 19 22.8 -2.2**
DPC AMS AMS 16 21 10.0
comp=Z,400nm,8.0s
MLR Muntele Rosu 5.99 78 Pn **Pn 16 18 22.8 +4.1**
comp=Z,0.8nm,0.3s,baz=299,slow=9.7,SNR=4.4
MLR Lg Lg 16 20 08.6
comp=Z,0.4nm,0.3s,baz=149,slow=19,SNR=3.1
MLR Muntele Rosu 5.99 78 ⇑P **Pn 16 18 18.5 -0.3**
MLR Muntele Rosu 5.99 78 Pn 16 18 18.5 -0.3
DAVA Damuels 6.04 300 *e*Pn **Pn 16 18 21.4 +1.9**
comp=Z,2.2nm,0.2s
DAVA *e*Sn **Sn 16 19 29.6 +0.3**
comp=Z,26nm,0.5s
DAVA Damuels 6.04 300 Pn 16 18 21.4 +1.9
DAVA Sn **Sn 16 19 29.6 +0.3**
DAVA Damuels 6.04 300 *e*Pn **Pn 16 18 20.7 +1.2**
DAVA *e*Pg **Pg 16 18 47.9 +3.3**
DAVA *e*Sg **Sg 16 20 00.5 -2.4**
DAVA Damuels 6.04 300 *e*Pn **Pn 16 18 20.7 +1.2**
DAVA *e*Pg **Pg 16 18 47.9 +3.3**
DAVA *e*Sg **Sg 16 20 00.5 -2.4**
UBR Ueberruh 6.08 304 *e*Pn **Pn 16 18 21.0 +1.1**
UBR Ueberruh 6.08 304 *e*Pn **Pn 16 18 21.0 +1.1**
OSTC Ostas 6.09 352 *e*PN **Pn 16 18 20.6 +0.6**
TUE Stuetta 6.11 291 Pn 16 18 20.5 0.0
BUR08 Bucovina Ar. S 6.13 57 Pn **Pn 16 18 20.3 -0.3**
CHVC Chvalec 6.14 351 *e*PN **Pn 16 18 21.2 +0.5**
PLONS Plons/SG 6.27 296 *e*Pn **Pn 16 18 24.3 +1.8**
PLONS Plons/SG 6.27 296 *e*Pn **Pn 16 18 24.3 +1.8**
PVCC Panska Ves 6.33 342 *e*PN **Pn 16 18 24.3 +1.1**
KSP Ksiaz 6.37 353 Pn **Pn 16 18 23.5 -0.2**
comp=Z,15nm,0.9s,SNR=3.6
KSP x x 16 18 24.2
comp=Z,16nm,0.9s
KSP Pn
ROTZ Rotzenmuhle 6.39 327 *e*Pn **Pn 16 18 24.2 +0.1**
ROTZ *e*Sn **Sn 16 19 32.8 -4.8**
ROTZ Rotzenmuhle 6.39 327 *e*Pn **Pn 16 18 24.2 +0.1**
ROTZ *e*Sn **Sn 16 19 32.8 -4.8**
CEL Celeste 6.41 192 Pn **Pn 16 18 24.6 +0.2**
AGG Agios Georgios 6.55 146 Pn **Pn 16 18 26.1 -0.3**
PGF Pioggiola 6.56 255 *e*Pn **Pn 16 18 24.8 -1.7**
PGF *e*Sn **Sn 16 19 36.1 -5.9**
comp=Z,8.2nm,0.5s
MANZ Manzenberg 6.60 328 *e*Pn **Pn 16 18 27.7 +0.7**
MANZ Manzenberg 6.60 328 *e*Pn **Pn 16 18 27.7 +0.7**
NKC Novy Kostel 6.68 330 *e*PN **Pn 16 18 28.1 0.0**
WILA Wila 6.70 298 *e*Pn **Pn 16 18 29.4 +0.9**
WILA Wila 6.70 298 *e*Pn **Pn 16 18 29.4 +0.9**
GRA1 Grafenberg Arr 6.74 322 Pn 16 18 28.1 -0.8
GRF Grafenberg Arr 6.74 322 *e*Pn **Pn 16 18 29.0 +0.1**
GRF *e*Pg **Pg 16 18 59.6 +1.6**
GRF *e*Sn **Sn 16 19 41.2 -5.1**
GRF Grafenberg Arr 6.74 322 *e*Pn **Pn 16 18 29.0 +0.1**
GRF *e*Pg **Pg 16 18 59.6 +1.6**
GRF *e*Sn **Sn 16 19 41.2 -5.1**
GRFO Grafenberg 6.74 322 Pn **Pn 16 18 28.3 -0.6**
BRG Berggiesshubel 6.80 340 Pn **Pn 16 18 30.6 +1.0**
BRG Amp 16 18 37.9
comp=Z,7.8nm,0.7s
BRG *ex* x 16 19 35.2
BRG *ex* x 16 20 08.5
BRG Amp 16 20 26.5
comp=Z,17nm,0.7s
BRG Berggiesshubel 6.80 340 *e*Pn **Pn 16 18 28.9 -0.8**
BRG Berggiesshubel 6.80 340 *e*Pn **Pn 16 18 28.9 -0.8**
SLE Schleitheim 7.10 300 *e*Pn **Pn 16 18 34.0 +0.2**
SLE Schleitheim 7.10 300 *e*Pn **Pn 16 18 34.0 +0.2**
STU Stuttgart 7.16 309 Pn 16 18 34.9 +0.2
STU Stuttgart 7.16 309 Pn **Pn 16 18 36.5 +1.8**
comp=Z,0.2nm,SNR=3.1
STU Pn
comp=Z,54nm,0.8s
ALN Alexandroupoli 7.21 117 Pn **Pn 16 18 35.1 -0.2**
SULZ Cheisacher 7.25 298 *e*Pn **Pn 16 18 36.2 +0.3**
SULZ Cheisacher 7.25 298 *e*Pn **Pn 16 18 36.2 +0.3**
MOX Moxa 7.32 329 *e*Pn **Pn 16 18 37.6 +0.8**
MOX *e*Sn **Sn 16 19 54.6 -6.0**
MOX Moxa 7.32 329 *e*Pn **Pn 16 18 37.6 +0.8**
MOX *e*Sn **Sn 16 19 54.6 -6.0**
SBF Sospel 7.34 268 *e*Pn **Pn 16 18 35.1 -2.1**
CLL Collm 7.44 337 *e*Pn **Pn 16 18 40.0 +1.6**
CLL *e*Sn Sn 16 19 48.0 -15
CLL *e*Sb **Sb 16 20 24.0 -3.8**
CLL *e*Sg **Sg 16 20 48.0 +0.4**
comp=Z,41nm,0.8s
CLL Collm 7.44 337 Pn **Pn 16 18 38.1 -0.4**
CLL Collm 7.44 337 *e*Pn **Pn 16 18 38.5 +0.1**
CLL *e*Sn **Sn 16 19 57.3 -6.1**
CLL Collm 7.44 337 *e*Pn **Pn 16 18 38.5 +0.1**
CLL *e*Sn **Sn 16 19 57.3 -6.1**
BFO Black Forest 7.44 304 Pn **Pn 16 18 37.3 -1.3**
BFO Black Forest 7.44 304 *e*Pn **Pn 16 18 38.3 -0.2**
BFO Black Forest 7.44 304 *e*Pn **Pn 16 18 38.3 -0.2**
BALST Balsthal 7.45 296 *e*Pn **Pn 16 18 38.9 +0.2**
BALST Balsthal 7.45 296 *e*Pn **Pn 16 18 38.9 +0.2**
SENIN Lac Senin/Sane 7.47 288 Pn **Pn 16 18 38.9 -0.2**
RAFF Raffo Rosso 7.71 200 Pn **Pn 16 18 43.1 +0.8**
MBDF Montbardon 7.73 275 *e*Pn **Pn 16 18 40.1 -2.5**
MBDF *e*Sn Sn 16 20 01.3 -9.5
comp=Z,26nm,0.6s
MILB Miltenberg 7.74 316 *e*Pn **Pn 16 18 42.7 +0.1**
MILB *e*Sn **Sn 16 20 05.8 -5.0**
MILB Miltenberg 7.74 316 *e*Pn **Pn 16 18 42.7 +0.1**
MILB *e*Sn **Sn 16 20 05.8 -5.0**
LPG La Plagne 7.75 281 *e*Pn **Pn 16 18 41.7 -1.3**
LPG *e*Sn **Sn 16 20 03.9 -7.6**
comp=Z,31nm,0.6s
LPL La Plagne 7.76 281 *e*Pn **Pn 16 18 40.9 -2.2**
LPL *e*Sn **Sn 16 20 03.4 -8.3**
comp=Z,30nm,0.5s
BNI Bardonecchia 7.79 278 Pn **Pn 16 18 41.4 -2.0**
VSL Villasalto 7.93 233 Pn **Pn 16 18 45.6 +0.4**
LMR La Mourre 8.10 265 *e*Pn **Pn 16 18 45.4 -2.1**
LMR *e*Sn **Sn 16 20 10.7 -8.9**
comp=Z,6.6nm,0.5s
ECH Echery 8.10 301 Pn **Pn 16 18 46.4 -1.2**
UBBA Unterbreizbach 8.10 323 *e*Pn **Pn 16 18 46.3 -1.2**
UBBA *e*Sg **Sg 16 21 06.9 -1.9**
UBBA Unterbreizbach 8.10 323 *e*Pn **Pn 16 18 46.3 -1.2**
UBBA *e*Sg **Sg 16 21 06.9 -1.9**
CDF Champ du Feu 8.11 302 *e*Pn **Pn 16 18 45.0 -2.7**
CDF *e*Sn Sn 16 20 08.8 -11
comp=Z,39nm,1.0s
HINF Hinteralfeld 8.14 297 *e*Pn **Pn 16 18 45.6 -2.6**
HINF *e*Sn Sn 16 20 11.8 -9.1
comp=Z,20nm,0.6s
CABF La Chapelle 8.34 288 *e*Pn **Pn 16 18 48.2 -2.7**
ORIF Oris-en-Rattie 8.35 277 *e*Pn **Pn 16 18 49.0 -2.1**
ORIF *e*Sn **Sn 16 20 18.1 -8.0**
comp=Z,50nm,0.9s
CHRS Christianenhau 8.40 330 *e*Pn **Pn 16 18 52.4 +0.8**
CHRS Christianenhau 8.40 330 *e*Pn **Pn 16 18 52.4 +0.8**
TNS Taunus Mts 8.41 316 *e*Pn **Pn 16 18 52.0 +0.1**
TNS *e*Sn **Sn 16 20 20.1 -7.3**
TNS Taunus Mts 8.41 316 *e*Pn **Pn 16 18 52.0 +0.1**
TNS *e*Sn **Sn 16 20 20.1 -7.3**
HAU Haudompre 8.53 298 *e*Pn **Pn 16 18 50.7 -2.7**
HAU *e*Sn **Sn 16 20 21.3 -9.0**
comp=Z,25nm,0.7s
SMRF Simiane la Rot 8.65 270 *e*Pn **Pn 16 18 52.5 -2.7**
SMRF *e*Sn **Sn 16 20 25.6 -7.7**
comp=Z,4.5nm,0.5s
KASTN Kahler Asten 9.08 320 *e*Pn **Pn 16 19 01.9 +1.0**
KASTN *e*Sn **Sn 16 20 36.9 -6.8**
KASTN Kahler Asten 9.08 320 *e*Pn **Pn 16 19 01.9 +1.0**
KASTN *e*Sn **Sn 16 20 36.9 -6.8**
VIVF Saint-Julien-l 9.21 276 *e*Pn **Pn 16 19 00.2 -2.7**
VIVF *e*Sn Sn 16 20 36.6 -11
comp=Z,2.4nm,0.4s
SSB Saint Sauveur 9.30 279 Pn 16 19 03.0 -1.1
LASF Ste Croix 9.87 272 *e*Pn **Pn 16 19 09.3 -2.5**
SMF Signal de Mont 9.87 287 *e*Pn **Pn 16 19 09.4 -2.5**
SMF *e*Sn Sn 16 20 54.2 -9.1
comp=Z,15nm,0.7s
LOR Lormes 9.96 291 *e*Pn **Pn 16 19 10.6 -2.5**
baz=110
LOR *e*Sn Sn 16 20 55.8 -10
comp=Z,10nm,0.6s
AKASG Malin Array Be 9.97 48 Pn **Pn 16 19 16.6 +3.4**
comp=Z,1.1nm,0.3s,baz=144,slow=10,SNR=1.9
SSF Saint Saulge 10.16 289 *e*Pn **Pn 16 19 13.4 -2.4**
AVF Avril sur Loir 10.22 288 *e*Pn **Pn 16 19 14.7 -2.0**
AVF *e*Sn Sn 16 21 02.1 -10
comp=Z,3.2nm,0.4s
BGF Bois d'Agland 10.54 286 *e*Pn **Pn 16 19 18.7 -2.4**
IDI Anoyia 10.80 146 Pn **Pn 16 19 25.4 +0.7**
comp=Z,0.6nm,0.3s,baz=356,slow=16,SNR=1.7
KEST Kesra 10.83 218 Pn **Pn 16 19 25.6 +0.6**
comp=Z,0.2nm,0.3s,baz=38,slow=17,SNR=1.7
TCF Toulx Ste Croi 10.96 285 *e*Pn **Pn 16 19 24.0 -2.8**
TCF *e*Sn Sn 16 21 19.5 -10
comp=Z,2.2nm,0.3s
CAF Calviac 11.06 277 *e*Pn **Pn 16 19 25.8 -2.4**
MTLF Montolieu 11.16 269 *e*Pn **Pn 16 19 27.1 -2.4**
PABE Paberze 11.71 18 Pn **Pn 16 19 36.9 +0.1**
GRR Gorron 13.29 293 *e*Pn **Pn 16 19 54.7 -3.8**
HFS Hagfors 15.79 353 Pn **Pn 16 20 32.1 -0.1**
comp=Z,0.2nm,0.3s,baz=280,slow=41,SNR=3.2
HFS LR LR 16 26 22.4
comp=Z,39nm,20.0s,baz=171,slow=36
ESBB Sonseca Array 16.71 261 P **P 16 20 46.1 -0.5**
ESDC Sonseca Array 16.71 261 Pn **Pn 16 20 44.6 +0.4**
comp=Z,0.3nm,0.3s,baz=66,slow=12,SNR=23
ESDC Sonseca Array 16.71 261 P **P 16 20 45.6 -1.0**
NOA NORSAR Array B 16.95 349 Pn **Pn 16 20 47.1 0.0**
comp=Z,0.0nm,0.3s,baz=108,slow=19,SNR=1.9
NOA LR LR 16 27 30.0
comp=Z,45nm,21.2s,baz=165,slow=38
PAB San Pablo 17.03 261 P **P 16 20 50.1 -0.2**
PAB IAmb IAmb 16 21 11.8
comp=Z,15nm,1.5s
EKA Eskdalemuir Ar 17.11 316 P **P 16 20 50.1 -0.8**
baz=140,slow=6.6,SNR=2.6
FINES FINESS Array B 17.66 14 P **Pn 16 20 55.6 -0.2**
comp=Z,0.5nm,0.3s,baz=193,slow=11,SNR=21
FINES LR LR 16 28 15.6
comp=Z,24nm,20.7s,baz=158,slow=39
FINES FINESS Array B 17.66 14 Pn **Pn 16 20 55.3 -0.5**
FIA1 FINESS Array S 17.66 14 Pn 16 20 55.6 -0.2
FIA1 IAmb IAmb 16 20 58.5
comp=Z,11nm,1.2s
MMAI Mount Meron Ar 17.99 124 P **P 16 21 02.1 +1.2**
comp=Z,0.3nm,0.3s,baz=348,slow=34,SNR=3.1
KBZ Khabaz 18.16 84 P **P 16 21 05.6 +3.1**
comp=Z,0.1nm,0.3s,baz=307,slow=14,SNR=4.2
PVAQ Vaqueiros 20.35 258 P **P 16 21 26.4 -0.2**
MDT Midelt 20.85 243 P **P 16 21 32.9 +0.8**
comp=Z,1.8nm,0.8s,baz=301,slow=1.6,SNR=3.7
BELG Belogornoye 21.28 58 LR LR 16 31 25.2
comp=Z,28nm,19.4s,baz=175,slow=41
ARCES ARCESS Array B 25.38 6 P **P 16 22 19.3 +2.1**
comp=Z,5.0nm,1.1s,baz=178,slow=4.6,SNR=3.8
ARCES LR LR 16 33 05.0
comp=Z,54nm,20.5s,baz=220,slow=38
ARCES ARCESS Array B 25.38 6 IAmb IAmb 16 22 19.9
comp=Z,10nm,1.3s
ARU Arti 28.21 50 LR LR 16 34 38.5
comp=Z,32nm,19.5s,baz=286,slow=38
BORG Borgarnes 29.53 327 LR LR 16 36 39.8
comp=Z,20nm,18.1s,baz=325,slow=40
GEYT Alibeck 30.93 88 P **P 16 23 10.4 +3.1**
comp=Z,1.5nm,0.4s,baz=313,slow=14,SNR=2.3
TOA0 Torodi Ar. Sit 34.12 208 P **P 16 23 33.9 -1.3**
TOA0 IAmb IAmb 16 23 46.4
comp=Z,3.7nm,1.2s
TORD Torodi Ar. Bea 34.12 208 P **P 16 23 34.1 -1.1**
comp=Z,0.8nm,0.4s,baz=11,slow=9.7,SNR=6.1
KKAR Karatay Array 37.65 73 P **P 16 24 05.1 -0.2**
ZALV Zalesovo Beam 43.32 53 P **P 16 24 54.6 +2.6**
comp=Z,0.4nm,0.3s,baz=78,slow=26,SNR=2.0
MK31 Makanchi Array 44.11 63 P **P 16 24 57.3 -1.3**
MKAR Makanchi Array 44.11 63 P **P 16 24 59.2 +0.6**

comp=Z,0.8nm,0.6s,baz=280,slow=7.5,SNR=13
MKAR PcP **PcP** **16 26 45.8 +2.1**
comp=Z,0.2nm,0.5s,baz=296,slow=3.9,SNR=2.5
MKAR Makanchi Array 44.11 63 P **P** **16 24 57.4 -1.2**
WMQ Urumqi 48.81 65 *eP* **P** **16 25 37.0 +1.4**
RES Resolute Bay 53.05 342 P **P** **16 26 04.7 -2.2**
RES IAmb IAmb 16 26 05.8
comp=Z,1.7nm,0.8s
SONM Songino Array 58.22 52 P **P** **16 26 45.6 +1.0**
comp=Z,0.2nm,0.3s,baz=287,slow=7.3,SNR=5.7
SONM Songino Array 58.22 52 IAmb IAmb 16 26 47.7
comp=Z,0.7nm,0.7s
HHC Hu-ho-hao-te 65.29 56 *eP* **P** **16 27 33.5 +1.1**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,76nm,7.1s
YKA Yellowknife Ar 66.67 338 P **P** **16 27 40.2 -0.5**
comp=Z,0.5nm,0.7s,baz=36,slow=5.9,SNR=11
ILAR Eielson Array 70.35 353 P **P** **16 28 03.5 -0.2**
comp=Z,0.5nm,0.7s,baz=4.6,slow=7.4,SNR=5.7
CMAR Chiang Mai Arr 71.21 82 P **P** **16 28 11.2 +1.5**
comp=Z,0.8nm,0.7s,baz=306,slow=7.3,SNR=8.9
L27K Beaver Creek, 71.49 350 P **P** **16 28 11.4 +0.6**
L27K IAmb IAmb 16 28 12.8
comp=Z,1.7nm,1.1s
PDAR Pinedale Array 81.09 324 P **P** **16 29 06.2 +0.3**
comp=Z,0.2nm,0.3s,baz=89,slow=21,SNR=2.8
TXAR Lajitas Array 89.05 312 P **P** **16 29 47.0 +1.1**
comp=Z,0.2nm,0.6s,baz=57,slow=4.6,SNR=2.6
WRA Warramunga Arr 122.66 86 PKP **PKPdf** **16 35 45.4 -1.1**
comp=Z,0.7nm,1.1s,baz=317,slow=1.5,SNR=1.8
ASAR Alice Springs 124.72 90 PKP **PKPdf** **16 35 49.6 -0.8**
comp=Z,0.3nm,0.7s,baz=318,slow=1.6,SNR=6.1

MOS ***28*** *16:39:37.0±0.8,20.84S×178.72W,h562km,mb5.9/26, Error ellipse: s-maj=6.9km s-min=6.0km az=85.8*

NEIC ***28*** *16:39:38.9,20.88S×178.64W,h581km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.31; Mθθ=1.18; Mφφ=0.13; Mrθ=-1.25; Mθφ=-0.05; Mφr=-1.19; Fault plane solution: M₀2.13000×10¹⁸ NP1:φ₁58.52000°, δ73.26000°, λ-106.00000°. NP2:φ₂283.40000°, δ23.00000°, λ-47.49000°. Principal axes: T 1.8203, Plg27.0000°, Azm161.0000°; N 0.5269, Plg15.0000°, Azm63.0000°; P -2.3472, Plg59.0000°, Azm306.0000°;*

BJI ***28*** *16:39:38.6±0.0,20.85S×178.55W,h580km,mB6.0/71, mb5.9/84*

NEIC ***28*** *16:39:39.2±1.7,20.89S±0.08×178.63W±0.09, h581km±1km,mb5.9/483,Mwb6.2/73,Mwc6.1/50,Mww6.1, Mwc6.1(GCMT),Error ellipse: s-maj=13.8km s-min=13.2km az=129.0*

NOU ***28*** *16:39:39.8,20.83S×178.54W,h515km,mb5.9,Fiji Islands Region*

IDC ***28*** *16:39:40.4±0.4,20.83S×178.71W,h584km±3km,mb5.2/32, mb1 5.3/35,mb1mx5.2/37,mbtmp6.1/35,Error ellipse: s-maj=8.0km s-min=5.8km az=3.0*

GCMT ***28*** *16:39:42.2±0.1,20.79S±0.01×178.71W±0.01, h591km,MW6.1/156,Moment Tensor Solution. s156,c366; s136,c178; Duration: 2e7 Moment tensor: Scale 10¹⁸Nm; Mrr=0.96±.01; Mθθ=0.85±.01; Mφφ=0.11±.01; Mrθ=-1.05±.01; Mθφ=-0.14±.01; Mφr=-1.00±.01; Best double couple: M₀1.66600×10¹⁸ NP1:φ₁287.00000°,δ21.00000°, λ-43.00000°. NP2:φ₂58.00000°,δ76.00000°, λ-106.00000°. Principal axes: T 1.4210, Plg29.0000°, Azm161.0000°; N 0.4910, Plg15.0000°, Azm62.0000°; P -1.9110, Plg57.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***28*** *16:39:42.20.72S×178.66W,h590km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.88; Mθθ=0.83; Mφφ=0.05; Mrθ=-0.94; Mθφ=-0.16; Mφr=-1.07; Fault plane solution: M₀1.67000×10¹⁸ NP1:φ₁289.00000°, δ22.00000°,λ-37.00000°. NP2:φ₂55.00000°,δ77.00000°, λ-107.00000°. Principal axes: T 1.3402, Plg29.0000°, Azm160.0000°; N 0.5303, Plg17.0000°, Azm59.0000°; P -1.8705, Plg55.0000°, Azm303.0000°;*

NEIC ***28*** *16:39:42,20.89S×178.58W,h596km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.00; Mθθ=0.93; Mφφ=0.07; Mrθ=-1.12; Mθφ=-0.09; Mφr=-1.05; Fault plane solution: M₀1.82000×10¹⁸ NP1:φ₁286.00000°, δ21.00000°,λ-43.00000°. NP2:φ₂58.00000°,δ76.00000°, λ-106.00000°. Principal axes: T 1.5533, Plg29.0000°, Azm160.0000°; N 0.4440, Plg15.0000°, Azm62.0000°; P -1.9973, Plg57.0000°, Azm307.0000°;*

BGR ***28*** *16:39:44.8±0.0,20.76S×177.71W,h630km±8km*

NEIC ***28*** *16:39:52.5,21.00S×178.59W,h591km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.13; Mθθ=0.90; Mφφ=0.23; Mrθ=-0.91; Mθφ=0.05; Mφr=-1.08; Fault plane solution: M₀1.70000×10¹⁸ NP1:φ₁269.15000°, δ21.06000°,λ-53.48000°. NP2:φ₂50.72000°,δ73.21000°, λ-102.91000°. Principal axes: T 1.4628, Plg27.0000°, Azm151.0000°; N 0.4836, Plg12.0000°, Azm55.0000°; P -1.9464, Plg60.0000°, Azm302.0000°;*

ISC 28 16:39:39.5±0.2,20.88S±0.03×178.58W±0.03, h584km±1km,h585km:pP-P,n2107,σ1s52/2560,mb5.9/408, 165C-388D,Fault plane solution: NP1:φ₂219.00926°, δ27.00790°,λ-108.83862°. **NP2:φ₂**59.96322°,δ64.54594°, λ-80.65383°. **Principal axes:** T Plg19.0314°, Azm142.9861°; N Plg8.4320°, Azm235.9171°; P Plg69.0508°, Azm348.6973°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MSVF	**Nonsavu**	**4.46**	**314**	P	**P**	**16 41 08.4**	**+1.0**
	517nm,0.3s,baz=167,slow=2.2,SNR=1266						
MSVF				S	**S**	**16 42 18.7**	**-0.2**
	baz=78,slow=16,SNR=0.7						
MSVF				ScS	**ScS**	**16 53 19.5**	**+5.6**
	0.1nm,0.3s,baz=293,slow=22,SNR=8.6						
MSVF	**Nonsavu**	**4.46**	**314**	*c iP*	**P**	**16 41 08.6**	**+1.2**
MSVF	**Nonsavu**	**4.46**	**314**	P	**P**	**16 41 08.2**	**+0.9**
MSVF	**Nonsavu**	**4.46**	**314**	↑P	**P**	**16 41 08.3**	**+1.0**
RIZ	**Raoul Island**	**8.35**	**176**	P	**P**	**16 41 39.4**	**-2.1**
RIZ				S	**S**	**16 43 21.4**	**-0.3**
RAO	**Raoul Island**	**8.36**	**176**	P	**P**	**16 41 40.8**	**-0.8**
	260nm,0.3s,baz=125,slow=4.3,SNR=13						
RAO				S	**S**	**16 43 18.2**	**-3.6**
	470nm,0.3s,baz=80,slow=23,SNR=8.9						
RAO				ScS	**ScS**	**16 53 26.1**	**+8.2**
	34nm,0.3s,baz=304,slow=21,SNR=4.4						
RAO	**Raoul Island**	**8.36**	**176**	P	**P**	**16 41 40.1**	**-1.5**
RAO	**Raoul Island**	**8.36**	**176**	P	**P**	**16 41 40.1**	**-1.5**
RAO	**Raoul Island**	**8.36**	**176**	↑P	**P**	**16 41 40.4**	**-1.2**
RAO	**Raoul Island**	**8.36**	**176**	P	**P**	**16 41 40.5**	**-1.2**
	1μm,0.7s						
GLKZ	**Green Lake**	**8.37**	**176**	P	**P**	**16 41 39.9**	**-1.8**
GLKZ				S	**S**	**16 43 21.4**	**-0.6**
AFI	**Afiamalu**	**9.49**	**44**	P	**P**	**16 41 50.6**	**-2.5**
AFI	**Afiamalu**	**9.49**	**44**	P	**P**	**16 41 50.6**	**-2.5**
AFI	**Afiamalu**	**9.49**	**44**	↑P	**P**	**16 41 50.8**	**-2.3**
AFI				↓S	**S**	**16 43 38.4**	**-4.3**
AFI	**Afiamalu**	**9.49**	**44**	P	**P**	**16 41 51.2**	**-1.9**
	3μm,1.1s						
FUNA	**Funafuti**	**12.46**	**350**	P	**P**	**16 42 21.1**	**-1.9**
MARNC	**Mare, Loyalty**	**12.51**	**265**	↑P	**P**	**16 42 22.8**	**-0.6**
MARNC				↓S	**S**	**16 44 41.7**	**+3.6**
PINNC	**Pines Island,**	**13.10**	**260**	P	**P**	**16 42 30.5**	**+1.1**
	378nm,0.7s						
YATNC	**Mamie plateau,**	**13.58**	**262**	P	**P**	**16 42 35.3**	**+0.9**
	218nm,0.6s						
DZM	**Mont Dzumac**	**13.99**	**262**	*eP*	**P**	**16 42 37.4**	**-1.3**
	495nm,0.8s						
DZM	**Mont Dzumac**	**13.99**	**262**	P	**P**	**16 42 36.9**	**-1.7**
	33nm,0.3s,baz=83,slow=15,SNR=57						
DZM				S	**S**	**16 45 05.4**	**-0.1**
	baz=22,slow=23,SNR=1.7						
DZM				ScS	**ScS**	**16 53 36.8**	**+7.0**
	0.2nm,0.3s,baz=337,slow=22,SNR=15						
DZM	**Mont Dzumac**	**13.99**	**262**	P	**P**	**16 42 36.0**	**-2.7**
DZM	**Mont Dzumac**	**13.99**	**262**	↑P	**P**	**16 42 38.0**	**-0.6**
NFK	**Norfolk Island**	**14.67**	**234**	P	**P**	**16 42 46.2**	**+1.2**
	baz=15,SNR=4.8						
OUZ	**Omahuta**	**15.86**	**204**	P	**P**	**16 42 57.5**	**+1.4**
OUZ	**Omahuta**	**15.86**	**204**	↑P	**P**	**16 42 57.5**	**+1.4**
OUZ				↑S	**ScP**	**16 49 58.7**	**+3.6**
KOUNC	**Koumac, New Ca**	**16.04**	**268**	↑P	**P**	**16 42 59.5**	**+1.5**
GRZ	**Great Barrier**	**16.18**	**198**	P	**P**	**16 42 59.2**	**+0.1**
WCZ	**Waipu Caves**	**16.24**	**201**	P	**P**	**16 43 02.2**	**+2.6**
KUZ	**Kuaotunu**	**16.57**	**196**	P	**P**	**16 43 03.5**	**+0.8**
WIAZ	**Waiheke Island**	**16.78**	**198**	P	**P**	**16 43 06.9**	**+2.4**
MXZ	**Matakaoa Point**	**16.85**	**189**	P	**P**	**16 43 03.1**	**-2.0**
MXZ	**Matakaoa Point**	**16.85**	**189**	P	**P**	**16 43 03.8**	**-1.3**
MXZ				S	**S**	**16 45 48.4**	**-4.1**
MYRZ	**Mayor Island**	**16.95**	**194**	P	**P**	**16 43 08.3**	**+2.2**
WMGZ	**Waiomatatini S**	**17.08**	**188**	P	**P**	**16 43 06.1**	**-1.1**
WMGZ				S	**S**	**16 45 53.3**	**-3.1**
HAZ	**Te Kaha**	**17.11**	**190**	P	**P**	**16 43 05.8**	**-1.7**
HAZ				S	**S**	**16 45 52.6**	**-4.2**
PKGZ	**Pakihiroa**	**17.20**	**189**	P	**P**	**16 43 06.8**	**-1.6**
PKGZ				S	**S**	**16 45 52.7**	**-5.7**
RUGZ	**Raukumara Rang**	**17.34**	**190**	P	**P**	**16 43 07.7**	**-1.9**
RUGZ				S	**S**	**16 46 00.5**	**-0.2**
PUZ	**Puketiti**	**17.35**	**188**	P	**P**	**16 43 08.4**	**-1.4**
PUZ				S	**S**	**16 45 57.2**	**-3.6**
WHRZ	**Whale Island**	**17.35**	**192**	P	**P**	**16 43 10.9**	**+1.2**
TGRZ	**Tauranga**	**17.38**	**194**	P	**P**	**16 43 11.3**	**+1.3**
OPRZ	**Ohinepanea**	**17.43**	**193**	P	**P**	**16 43 11.1**	**+0.7**
MARZ	**Manawahe**	**17.54**	**193**	P	**P**	**16 43 11.7**	**+0.3**
RAR	**Rarotonga**	**17.56**	**94**	P	**P**	**16 43 12.6**	**+0.8**
	6.1nm,0.3s,baz=247,slow=6.9,SNR=32						
RAR	**Rarotonga**	**17.56**	**94**	P	**P**	**16 43 11.4**	**-0.4**
RAR				pmax	pmax		
	comp=Z,511nm,1.2s						
RAR	**Rarotonga**	**17.56**	**94**	P	**P**	**16 43 11.4**	**-0.4**
RAR				IAmb	IAmb	16 43 13.4	
	comp=Z,511nm,1.2s						
RAR	**Rarotonga**	**17.56**	**94**	↑P	**P**	**16 43 12.5**	**+0.6**
TOZ	**Tahuroa Road**	**17.56**	**196**	P	**P**	**16 43 12.9**	**+1.3**
KMRZ	**Kaimai**	**17.56**	**195**	P	**P**	**16 43 13.1**	**+1.5**
EDRZ	**Edgecumbe**	**17.64**	**192**	P	**P**	**16 43 11.3**	**-1.1**
KARZ	**Kaharoa**	**17.66**	**194**	P	**P**	**16 43 12.3**	**-0.2**
OMRZ	**Omania**	**17.72**	**193**	P	**P**	**16 43 13.2**	**+0.1**
MWZ	**Matawai**	**17.72**	**190**	P	**P**	**16 43 10.7**	**-2.4**
MWZ				S	**S**	**16 46 02.2**	**-4.6**
URZ	**Urewera**	**17.72**	**191**	P	**P**	**16 43 09.9**	**-3.1**
URZ	**Urewera**	**17.72**	**191**	P	**P**	**16 43 10.0**	**-3.1**
URZ				S	**S**	**16 45 57.2**	**-10**
URZ	**Urewera**	**17.72**	**191**	↑P	**P**	**16 43 09.8**	**-3.3**
CNGZ	**Carnagh Statio**	**17.77**	**188**	P	**P**	**16 43 12.4**	**-1.0**
CNGZ				S	**S**	**16 46 03.8**	**-3.6**
TKGZ	**Te Karaka**	**17.77**	**189**	P	**P**	**16 43 11.1**	**-2.4**
TKGZ				S	**S**	**16 46 01.7**	**-5.8**
TARZ	**Mount Tarawera**	**17.81**	**193**	P	**P**	**16 43 14.1**	**+0.1**
UTU	**Utuhina**	**17.82**	**194**	P	**P**	**16 43 15.6**	**+1.6**
HLRZ	**Highlands Stat**	**17.86**	**193**	P	**P**	**16 43 14.8**	**+0.4**
RAGZ	**Rawiri**	**17.90**	**190**	P	**P**	**16 43 12.7**	**-2.0**
RAGZ				S	**S**	**16 46 05.0**	**-4.7**
RRRZ	**Republican Roa**	**17.91**	**193**	P	**P**	**16 43 14.5**	**-0.4**
HSRZ	**Hossack Road**	**17.94**	**193**	P	**P**	**16 43 15.3**	**+0.2**
MUGZ	**Murupara**	**17.99**	**192**	P	**P**	**16 43 12.9**	**-2.6**
MUGZ				S	**S**	**16 46 05.2**	**-5.9**
GRRZ	**Galatos Road**	**18.01**	**194**	P	**P**	**16 43 16.3**	**+0.6**
HRRZ	**Handcock Road**	**18.01**	**193**	P	**P**	**16 43 15.2**	**-0.5**
RIGZ	**Rimuhau**	**18.05**	**189**	P	**P**	**16 43 16.0**	**-0.1**
RIGZ				S	**S**	**16 46 11.2**	**-0.8**
RTZ	**Ruatahuna**	**18.09**	**191**	P	**P**	**16 43 14.6**	**-1.9**
RTZ				S	**S**	**16 46 09.1**	**-3.8**
PRRZ	**Plateau Road**	**18.09**	**193**	P	**P**	**16 43 14.6**	**-1.9**
TLZ	**Tolley Road**	**18.12**	**195**	P	**P**	**16 43 17.6**	**+0.8**
WPRZ	**Whakapapatarin**	**18.16**	**193**	P	**P**	**16 43 16.9**	**-0.2**
ALRZ	**Allen Road**	**18.16**	**193**	P	**P**	**16 43 16.1**	**-1.0**
SNGZ	**Shannon Statio**	**18.19**	**190**	P	**P**	**16 43 15.2**	**-2.1**
SNGZ				S	**S**	**16 46 10.9**	**-3.4**
KUTZ	**Kaahu Road**	**18.21**	**194**	P	**P**	**16 43 17.9**	**+0.4**
PRGZ	**Paritu Road**	**18.24**	**189**	P	**P**	**16 43 16.9**	**-0.9**
PRGZ				S	**S**	**16 46 11.4**	**-3.8**
MTHZ	**Maungataniwha**	**18.34**	**191**	P	**P**	**16 43 18.3**	**-0.5**
MTHZ				S	**S**	**16 46 16.5**	**-0.4**
WHTZ	**Whakaora**	**18.34**	**194**	P	**P**	**16 43 18.9**	**+0.1**
RAHZ	**Arahi**	**18.36**	**191**	P	**P**	**16 43 16.5**	**-2.5**
RAHZ				S	**S**	**16 46 11.3**	**-5.8**
KNZ	**Kokohu**	**18.37**	**189**	P	**P**	**16 43 17.6**	**-1.3**
KNZ				S	**S**	**16 46 12.9**	**-4.2**
MRHZ	**Matea Rd**	**18.41**	**192**	P	**P**	**16 43 17.8**	**-1.5**
WATZ	**Wairara**	**18.43**	**194**	P	**P**	**16 43 19.6**	**0.0**
MHGZ	**Mahia Peninsul**	**18.46**	**189**	P	**P**	**16 43 19.7**	**-0.2**
HATZ	**Hinemaiaia**	**18.53**	**193**	P	**P**	**16 43 19.8**	**-0.7**
RATZ	**Rangitukua**	**18.58**	**194**	P	**P**	**16 43 20.3**	**-0.6**
NMHZ	**Naumai**	**18.59**	**191**	P	**P**	**16 43 19.1**	**-1.9**
BKZ	**Black Stump Fm**	**18.71**	**192**	P	**P**	**16 43 18.7**	**-3.4**
BKZ				IAmb	IAmb	16 43 23.5	
	comp=Z,506nm,1.1s						
BKZ	**Black Stump Fm**	**18.71**	**192**	P	**P**	**16 43 18.9**	**-3.3**
BFZ	**Birch Farm**	**20.23**	**191**	P	**P**	**16 43 33.6**	**-2.2**
BFZ				IAmb	IAmb	16 43 40.8	
	comp=Z,413nm,0.9s						
MSWZ	**Moikau Station**	**21.13**	**193**	P	**P**	**16 43 41.6**	**-2.3**
SNZO	**South Karori**	**21.15**	**194**	P	**P**	**16 43 42.1**	**-1.9**
SNZO	**South Karori**	**21.15**	**194**	↑P	**P**	**16 43 42.2**	**-1.9**
BHW	**Baring Head**	**21.21**	**194**	P	**P**	**16 43 42.4**	**-2.1**
QRZ	**Quartz Range**	**21.28**	**199**	P	**P**	**16 43 44.6**	**-0.6**
PLWZ	**Palliser**	**21.28**	**193**	P	**P**	**16 43 43.2**	**-2.0**
NNZ	**Nelson**	**21.39**	**197**	P	**P**	**16 43 44.8**	**-1.5**
TUWZ	**Tuamarina**	**21.45**	**196**	P	**P**	**16 43 44.5**	**-2.2**
CMWZ	**Cape Campbell**	**21.68**	**195**	P	**P**	**16 43 47.1**	**-1.7**
BSWZ	**Blackbirch Sta**	**21.73**	**195**	P	**P**	**16 43 47.7**	**-1.6**
THZ	**Tophouse**	**22.03**	**197**	P	**P**	**16 43 50.0**	**-2.0**
KHZ	**Kahutara**	**22.48**	**195**	P	**P**	**16 43 54.0**	**-1.9**
KHZ	**Kahutara**	**22.48**	**195**	↑P	**P**	**16 43 54.0**	**-1.9**
LHI	**Lord Howe Isla**	**22.64**	**238**	P	**P**	**16 43 59.3**	**+1.7**
	baz=23,SNR=6.8						
LTZ	**Lake Taylor**	**23.15**	**197**	P	**P**	**16 43 59.6**	**-2.4**
HNR	**Honiara**	**23.61**	**296**	P	**P**	**16 44 05.2**	**-1.1**
	comp=Z,264nm,0.6s,baz=209,slow=4.9,SNR=25						
HNR				S	**S**	**16 47 40.0**	**-0.8**
	comp=Z,65nm,0.9s,baz=44,slow=18,SNR=1.6						
HNR	**Honiara**	**23.61**	**296**	P	**P**	**16 44 04.2**	**-2.2**
HNR				pmax	pmax		
	comp=Z,473nm,0.7s						
HNR	**Honiara**	**23.61**	**296**	P	**P**	**16 44 04.2**	**-2.2**
OXZ	**Oxford**	**23.72**	**197**	P	**P**	**16 44 04.8**	**-2.2**
MQZ	**McQueen's Vall**	**23.91**	**196**	P	**P**	**16 44 06.3**	**-2.2**
MQZ				IAmb	IAmb	16 44 08.4	
	comp=Z,450nm,1.2s						
RPZ	**Rata Peaks**	**24.36**	**198**	P	**P**	**16 44 10.6**	**-2.0**
RPZ				IAmb	IAmb	16 44 25.5	
	comp=Z,258nm,1.0s						
FOZ	**Fox Glacier**	**24.58**	**201**	P	**P**	**16 44 12.3**	**-2.2**
LBZ	**Lake Benmore**	**25.23**	**199**	P	**P**	**16 44 18.3**	**-2.0**
LBZ				IAmb	IAmb	16 44 23.4	
	comp=Z,365nm,1.1s						
ODZ	**Otahua Downs**	**25.69**	**198**	P	**P**	**16 44 22.7**	**-1.6**
ODZ	**Otahua Downs**	**25.69**	**198**	↓P	**P**	**16 44 23.0**	**-1.3**
WKZ	**Wanaka**	**26.00**	**200**	P	**P**	**16 44 25.2**	**-1.8**
WKZ				IAmb	IAmb	16 44 47.2	
	comp=Z,267nm,1.1s						
MLZ	**Mavora Lakes**	**26.77**	**201**	P	**P**	**16 44 32.9**	**-0.9**
MLZ				IAmb	IAmb	16 44 36.1	
	comp=Z,486nm,0.9s						
TBI	**Tubuai**	**27.07**	**101**	*eP*	**P**	**16 44 38.2**	**+1.5**
	comp=Z,768nm,1.2s						
TBI				*epP*	**pP**	**16 46 06.0**	**-1.5**
	comp=Z,868nm,1.2s						
TBI				*eScP*	**ScP**	**16 50 25.0**	**+1.3**
	comp=Z,581nm,1.3s						
DCZ	**Deep Cove**	**27.19**	**202**	P	**P**	**16 44 36.4**	**-1.1**
WHZ	**Wether Hill Ro**	**27.29**	**201**	P	**P**	**16 44 37.5**	**-0.9**
PAE	**Paea**	**27.55**	**88**	*eP*	**P**	**16 44 41.7**	**+0.8**
	comp=Z,73nm,1.2s						
PAE				*epP*	**pP**	**16 46 10.0**	**-2.0**
	comp=Z,144nm,1.5s						
PAE				*eScP*	**ScP**	**16 50 26.8**	**+1.6**
	comp=Z,41nm,1.1s						
PPT2	**Papeete2**	**27.56**	**88**	*eP*	**P**	**16 44 42.4**	**+1.2**
	comp=Z,441nm,1.3s						
PPT2				*epP*	**pP**	**16 46 10.6**	**-1.6**
	comp=Z,541nm,1.4s						
PPT2				*eScP*	**ScP**	**16 50 27.2**	**+1.8**
	comp=Z,229nm,1.2s						
PPT	**Papeete**	**27.57**	**88**	P	**P**	**16 44 42.3**	**+1.2**
	comp=Z,275nm,1.0s,baz=272,slow=4.5,SNR=22						
PPT				ScP	**ScP**	**16 50 27.8**	**+2.5**
	comp=Z,176nm,1.0s,baz=299,slow=2.7,SNR=12						
PPTF	**Pamatai, Papee**	**27.57**	**88**	P	**P**	**16 44 41.1**	**-0.2**
PPTF				IAmb	IAmb	16 44 43.7	
	comp=Z,738nm,1.3s						
PPTF					**pP**	**16 46 10.2**	**-2.2**
PPTF	**Pamatai, Papee**	**27.57**	**88**	↑P	**P**	**16 44 42.2**	**+0.9**
PPTF				↓S	**ScP**	**16 50 28.0**	**+2.6**
TIAR	**Tiarei**	**27.78**	**88**	*eP*	**P**	**16 44 44.1**	**+1.0**
	comp=Z,84nm,1.3s						
TIAR				*epP*	**pP**	**16 46 12.4**	**-1.8**
	comp=Z,94nm,1.4s						
TIAR				*eScP*	**ScP**	**16 50 27.6**	**+1.6**
	comp=Z,20nm,1.0s						
PYZ	**Puysegur Point**	**27.96**	**202**	P	**P**	**16 44 43.3**	**-0.9**
PYZ				IAmb	IAmb	16 44 49.5	
	comp=Z,314nm,0.9s						
ARMA	**Armidale**	**28.41**	**244**	P	**P**	**16 44 49.5**	**+0.9**
	baz=28,SNR=118						
MEH	**Mehetia**	**28.92**	**89**	*eP*	**P**	**16 44 53.6**	**+0.7**
	comp=Z,113nm,1.0s						
MEH				*epP*	**pP**	**16 46 21.3**	**-3.4**
	comp=Z,114nm,1.4s						
MEH				*eScP*	**ScP**	**16 50 30.8**	**+1.2**
	comp=Z,68nm,1.3s						
MGCD	**Mangrove Creek**	**29.55**	**239**	P	**P**	**16 44 59.3**	**+1.1**
	baz=30,SNR=20						
RIV	**Riverview**	**29.70**	**238**	P	**P**	**16 45 00.6**	**+1.2**
	baz=30,SNR=6.9						
VAH	**Vaihoa**	**29.93**	**84**	*eP*	**P**	**16 45 02.1**	**+0.5**
	comp=Z,498nm,1.2s						
VAH				*eScP*	**ScP**	**16 50 34.7**	**+1.8**
	comp=Z,176nm,1.2s						
RMQ	**Roma**	**30.38**	**253**	P	**P**	**16 45 06.2**	**+0.8**
	baz=30,SNR=174						
XMAS	**Kiritimati**	**30.78**	**45**	P	**P**	**16 45 09.2**	**+0.3**
XMAS				IAmb	IAmb	16 45 11.1	
	comp=Z,228nm,0.8s						
XMAS	**Kiritimati**	**30.78**	**45**	↑P	**P**	**16 45 09.7**	**+0.8**
CNB	**Canberra Magne**	**31.57**	**236**	P	**P**	**16 45 16.4**	**+0.9**
	baz=32,SNR=90						
CAN	**Canberra**	**31.85**	**236**	P	**P**	**16 45 17.0**	**-0.9**
CAN				pmax	pmax		
	comp=Z,227nm,1.0s						
CAN	**Canberra**	**31.85**	**236**	P	**P**	**16 45 17.0**	**-0.9**
CAN				IAmb	IAmb	16 45 20.0	
	comp=Z,227nm,1.0s						
CAN	**Canberra**	**31.85**	**236**	↓P	**P**	**16 45 18.3**	**+0.4**
YNG	**Young**	**32.02**	**238**	P	**P**	**16 45 20.6**	**+1.3**
	baz=32,SNR=14						
KWAJ	**Kwajalein Atol**	**32.47**	**334**	P	**P**	**16 45 23.0**	**-0.2**
KWAJ				pmax	pmax		
	comp=Z,3μm,1.2s						
KWAJ	**Kwajalein Atol**	**32.47**	**334**	P	**P**	**16 45 23.0**	**-0.2**
KWAJ	**Kwajalein Atol**	**32.47**	**334**	↓P	**P**	**16 45 23.7**	**+0.5**
CTA	**Charters Tower**	**32.91**	**265**	P	**P**	**16 45 27.2**	**+0.2**
	comp=Z,252nm,0.5s,baz=88,slow=10,SNR=547						
CTA				PcP	**PcP**	**16 47 55.0**	**+1.3**
	comp=Z,114nm,1.0s,baz=85,slow=7.5,SNR=5.6						
CTA				S	**S**	**16 50 03.4**	**-1.3**
	comp=Z,12nm,0.8s,baz=328,slow=20,SNR=2.4						
CTA				ScS	**ScS**	**16 54 49.0**	**+3.7**
	comp=Z,3.5nm,0.8s,baz=345,slow=23,SNR=11						
CTAO	**Charters Tower**	**32.91**	**265**	P	**P**	**16 45 26.8**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,1μm,1.3s						
CTAO	**Charters Tower**	**32.91**	**265**	P	**P**	**16 45 26.8**	**-0.2**
CTAO	**Charters Tower**	**32.91**	**265**	↓P	**P**	**16 45 27.1**	**+0.1**
CMSA	**Cobar Meteorol**	**33.63**	**244**	P	**P**	**16 45 33.1**	**+0.2**
	baz=34,SNR=294						
QLP	**Quilpie**	**34.43**	**253**	P	**P**	**16 45 39.6**	**0.0**
	baz=34,SNR=201						
PMG	**Port Moresby**	**34.90**	**284**	P	**P**	**16 45 43.8**	**+0.2**
	comp=Z,1μm,0.8s,baz=76,slow=5.6,SNR=182						
PMG				PcP	**PcP**	**16 48 01.0**	**+1.4**
	comp=Z,176nm,1.1s,baz=80,slow=2.8,SNR=3.8						
PMG				S	**S**	**16 50 33.0**	**-1.8**
	comp=Z,11nm,0.9s,baz=330,slow=20,SNR=6.1						
PMG	**Port Moresby**	**34.90**	**284**	P	**P**	**16 45 43.5**	**-0.2**
PMG				pmax	pmax		
	comp=Z,2μm,0.9s						
PMG	**Port Moresby**	**34.90**	**284**	P	**P**	**16 45 43.5**	**-0.2**
PMG	**Port Moresby**	**34.90**	**284**	↓P	**P**	**16 45 43.7**	**0.0**
MTSU	**Mount Surprise**	**35.03**	**268**	P	**P**	**16 45 44.9**	**+0.2**
	baz=35,SNR=262						
TOO	**Toolangi**	**35.24**	**234**	P	**P**	**16 45 46.6**	**+0.4**
	baz=35,SNR=52						
PATS	**Pohnpei**	**35.69**	**318**	P	**P**	**16 45 51.3**	**+1.1**
	baz=36,SNR=29						
PATS	**Pohnpei**	**35.69**	**318**	P	**P**	**16 45 50.2**	**+0.1**
TAU	**Tasmania Unive**	**35.98**	**225**	P	**P**	**16 45 51.8**	**-0.4**
TAU				pmax	pmax		
	comp=Z,29nm,0.8s						
TAU	**Tasmania Unive**	**35.98**	**225**	P	**P**	**16 45 51.8**	**-0.4**
STKA	**Stephens Creek**	**37.14**	**244**	P	**P**	**16 46 02.3**	**+0.5**
	comp=Z,

ASAR 16 48 28.1
ASAR 16 55 51.8
ASAR Alice Springs 43.91 257 P **P** **16 46 54.4 -1.4**
ASAR PcP **PcP** **16 48 28.1 -0.6**
WB0 Warramunga Arr 43.99 263 P **P** **16 46 55.5 -0.9**
WB2 Warramunga Arr 44.00 263 P **P** **16 46 55.5 -1.0**
WRAB Tennant Creek 44.00 263*d* iP **P** **16 46 55.7 -0.9**
WRAB pmax pmax
comp=Z,1µm,1.1s
WRAB Tennant Creek 44.00 263 P **P** **16 46 55.0 -1.5**
WRAB PcP **PcP** **16 48 29.3 +0.2**
WRAB Tennant Creek 44.00 263 ⇓P **P** **16 46 55.6 -0.9**
WRA Warramunga Arr 44.01 263 P **P** **16 46 55.6 -1.0**
comp=Z,756nm,1.1s,baz=96,slow=7.5,SNR=914
WRA PcP **PcP** **16 48 30.3 +1.1**
comp=Z,148nm,1.0s,baz=98,slow=4.0,SNR=12
WRA ScP **ScP** **16 51 26.7 +0.8**
comp=Z,11nm,0.9s,baz=87,slow=4.6,SNR=4.7
WRA S **S** **16 52 44.1 -3.2**
comp=Z,50nm,0.8s,baz=99,slow=12,SNR=10
WRA PKiKP **PKiKP** **16 55 27.3 -0.7**
comp=Z,8.0nm,0.8s,baz=59,slow=0.3,SNR=4.9
WRA ScS **ScS** **16 55 51.2 +0.4**
comp=Z,43nm,1.3s,baz=91,slow=9.1,SNR=8.3
WRA PKP2bc 17 18 54.7
comp=Z,4.8nm,1.1s,baz=297,slow=3.5,SNR=8.4
WRA P4KPbc 17 24 42.0
comp=Z,2.3nm,1.1s,baz=154,slow=8.5,SNR=5.7
WRA Warramunga Arr 44.01 263 P **P** **16 46 54.9 -1.7**
GENI Genyem 44.09 289 ⇓P **P** **16 46 57.5 +0.2**
GENI Genyem 44.09 289 P **P** **16 46 57.6 +0.4**
comp=Z,14µmcomp=Z,33µmcomp=Z,2µm,1.2s
KHU Kahuku 45.78 31 P **P** **16 47 10.4 +0.1**
KHU pmax pmax
comp=Z,327nm,1.3s
KHU Kahuku 45.78 31 P **P** **16 47 10.4 +0.1**
KHU IAmb IAmb 16 47 12.1
comp=Z,327nm,1.3s
KHLU Kahalu`u 45.94 30 P **P** **16 47 11.9 +0.5**
KHLU IAmb IAmb 16 47 13.4
comp=Z,343nm,0.8s
AIN Ainahou 45.96 31 P **P** **16 47 12.3 +0.8**
AIN IAmb IAmb 16 47 14.7
comp=Z,507nm,1.4s
HLP Hilina Pali 45.97 31 P **P** **16 47 13.1 +1.6**
HLP IAmb IAmb 16 47 41.5
comp=Z,310nm,1.1s
MWH Moku'aweowe 45.99 31 P **P** **16 47 11.3 -0.9**
MWH IAmb IAmb 16 47 21.4
comp=Z,464nm,1.4s
MLOA Mauna Loa Obse 46.05 31 P **P** **16 47 12.7 +0.2**
MLOA IAmb IAmb 16 47 14.4
comp=Z,396nm,1.3s
HUH Hualalai 46.05 30 P **P** **16 47 13.0 +0.7**
HUH IAmb IAmb 16 47 14.5
comp=Z,254nm,0.8s
PUH Pauahi 46.08 31 P **P** **16 47 12.8 +0.3**
PUH IAmb IAmb 16 47 14.4
comp=Z,758nm,1.4s
MLH Mauna Loa 46.10 31 P **P** **16 47 12.1 -0.6**
MLH IAmb IAmb 16 47 15.4
comp=Z,797nm,1.4s
HMH Humu'ula Sheep 46.15 31 P **P** **16 47 14.0 +0.9**
POHA Pohakuloa 46.26 31 P **P** **16 47 14.1 +0.2**
POHA Pohakuloa 46.26 31 ⇑P **P** **16 47 14.8 +0.9**
HON Honolulu 46.51 27 P **P** **16 47 16.1 +0.6**
HON pmax pmax
comp=Z,1µm,1.3s
HON Honolulu 46.51 27 P **P** **16 47 16.1 +0.6**
KIP Kipapa 46.60 27*ce*P **P** **16 47 17.9 +1.8**
KIP pmax pmax
comp=Z,693nm,1.7s
KIP Kipapa 46.60 27 P **P** **16 47 16.0 -0.2**
KIP IAmb IAmb 16 47 18.3
comp=Z,889nm,1.4s
HLK Haleakala 46.79 29 P **P** **16 47 17.8 -0.1**
HLK IAmb IAmb 16 47 20.4
comp=Z,474nm,1.0s
KHLH Kahului Airpor 46.83 29 P **P** **16 47 17.7 -0.1**
KHLH IAmb IAmb 16 47 20.3
comp=Z,892nm,1.3s
KDU Kakadu 47.42 272 P **P** **16 47 21.9 -0.6**
baz=47,SNR=365
SRPI Serui, Papua 47.91 287 P **P** **16 47 26.5 +0.3**
comp=Z,7µmcomp=Z,15µmcomp=Z,1µm,1.5s
BAKI Biak 48.33 288 P **P** **16 47 29.9 +0.6**
comp=Z,2µm,1.4s
MTN Manton Dam 48.62 271 P **P** **16 47 30.5 -1.0**
baz=49,SNR=297
FORT Forrest 48.65 247 P **P** **16 47 30.8 -0.6**
baz=49,SNR=235
MIDW Midway 48.82 1 P **P** **16 47 32.4 -0.1**
MIDW IAmb IAmb 16 47 33.9
comp=Z,1µm,1.5s
WRKA Warakurna 48.84 255 P **P** **16 47 32.7 -0.3**
baz=49,SNR=1000
GUMO Guam 49.63 311 P **P** **16 47 38.6 -0.1**
GUMO pmax pmax
comp=Z,3µm,1.3s
GUMO Guam 49.63 311 P **P** **16 47 38.6 -0.1**
GUMO Guam 49.63 311 ⇓P **P** **16 47 39.0 +0.3**
SAUI Saumlaki 50.00 277 P **P** **16 47 42.1 +0.5**
SAUI Saumlaki 50.00 277 P **P** **16 47 41.8 +0.2**
comp=Z,12µmcomp=Z,31µmcomp=Z,2µm,1.4s
ANA2 Anatahan 50.95 314 P **P** **16 47 47.1 -1.3**
ANA2 IAmb IAmb 16 47 49.0
comp=Z,395nm,0.8s
FAKI Fak Fak 51.06 284 P **P** **16 47 48.0 -1.2**
FAKI Fak Fak 51.06 284 ⇓P **P** **16 47 48.6 -0.7**
FAKI Fak Fak 51.06 284 P **P** **16 47 48.8 -0.5**
comp=Z,9µmcomp=Z,13µmcomp=Z,875nm,1.4s
FITZ Fitzroy Crossi 52.44 263 P **P** **16 47 59.0 0.0**
comp=Z,193nm,0.5s,baz=99,slow=5.3,SNR=564
FITZ S **S** **16 54 41.6 -1.0**
comp=Z,27nm,1.0s,baz=286,slow=20,SNR=16
FITZ Fitzroy Crossi 52.44 263 P **P** **16 47 59.1 0.0**
baz=52,SNR=485
BNDI Bandanaira 52.56 281 ⇓P **P** **16 47 59.7 -0.4**
BNDI Bandanaira 52.56 281 P **P** **16 47 59.4 -0.6**
comp=Z,12µmcomp=Z,34µmcomp=Z,2µm,1.2s
SIJI Sorong 52.81 285 S **S** **16 54 47.2 -0.5**
comp=Z,2.8nm,0.9s,baz=249,slow=19,SNR=8.5
SWI Sorong 52.82 286 P **P** **16 48 01.8 -0.1**
comp=Z,8µmcomp=Z,24µmcomp=Z,3µm,1.1s
KMBL Kambalda 53.91 246 P **P** **16 48 08.9 -0.5**
baz=54,SNR=60
NLAI Namlea 55.64 281 P **P** **16 48 21.4 -0.2**
comp=Z,13µmcomp=Z,830nm,1.5s
SOEI Soe 55.97 272 P **P** **16 48 25.1 +1.0**
SOEI Soe 55.97 272 ⇓P **P** **16 48 25.3 +1.2**
SOEI Soe 55.97 272 ⇓P **P** **16 48 25.3 +1.2**
SOEI Soe 55.97 272 P **P** **16 48 25.3 +1.2**
comp=Z,9µmcomp=Z,26µmcomp=Z,3µm,0.9s
BATI Baumata 56.39 271 P **P** **16 48 28.1 +1.2**
comp=Z,634nm,0.6s,baz=154,slow=2.1,SNR=170
BATI S **S** **16 55 37.7 +3.3**
comp=Z,8.8nm,0.6s,baz=236,slow=23,SNR=9.1
BATI Baumata 56.39 271 P **P** **16 48 28.1 +1.2**
comp=Z,5µmcomp=Z,7µmcomp=Z,492nm,0.8s
TNTI Ternate 57.03 285 P **P** **16 48 30.9 -0.3**
TNTI IAmb IAmb 16 48 32.8
comp=Z,1µm,1.1s
TNTI Ternate 57.03 285 ⇓P **P** **16 48 31.1 -0.1**
TNTI Ternate 57.03 285 P **P** **16 48 31.1 -0.1**
comp=Z,6µmcomp=Z,15µmcomp=Z,1µm,1.1s
SANI Sanana 57.12 282 ⇓P **P** **16 48 31.0 -0.9**
SANI Sanana 57.12 282 P **P** **16 48 31.2 -0.6**
comp=Z,8µmcomp=Z,11µmcomp=Z,921nm,1.2s
MBWA Marble Bar 57.24 258 ⇓P **P** **16 48 32.0 -0.6**
KLBR Kellerberrin 57.41 245 P **P** **16 48 33.1 -0.4**
baz=57,SNR=314
SBA Scott Base 57.46 184 P **P** **16 48 35.6 +2.5**
SBA pmax pmax
comp=Z,757nm,1.1s
SBA Scott Base 57.46 184 P **P** **16 48 35.5 +2.5**
SBA IAmb IAmb 16 48 37.5
comp=Z,757nm,1.1s
VNDA Vanda 57.49 185 P **P** **16 48 35.1 +1.9**
comp=Z,94nm,0.7s,baz=4.5,slow=7.2,SNR=566
VNDA ScP **ScP** **16 52 25.5 +2.7**
comp=Z,118nm,1.0s,baz=358,slow=5.1,SNR=14
VNDA S **S** **16 55 50.0 +3.6**
comp=Z,1.7nm,0.9s,baz=248,slow=20,SNR=6.1
VNDA PKPPKP **P'P'df** **17 18 12.1 +1.9**
comp=Z,1.5nm,1.0s,baz=295,slow=5.9,SNR=4.1
VNDA PKP2bc 17 18 22.2
comp=Z,7.7nm,1.3s,baz=240,slow=4.4,SNR=11
VNDA P4KPbc 17 25 38.8
comp=Z,0.6nm,0.8s,baz=351,slow=4.8,SNR=4.1
VNDA Vanda 57.49 185 P **P** **16 48 35.0 +1.8**
NWAO Narrogin (SRO) 57.72 244 P **P** **16 48 35.4 -0.1**
comp=Z,396nm,1.0s,baz=114,slow=5.9,SNR=75
NWAO Narrogin (SRO) 57.72 244 P **P** **16 48 35.5 -0.1**
baz=58,SNR=72
NWAO Narrogin (SRO) 57.72 244 P **P** **16 48 35.3 -0.3**
NWAO pmax pmax
comp=Z,458nm,1.0s
NWAO Narrogin (SRO) 57.72 244 P **P** **16 48 35.3 -0.3**
NWAO IAmb IAmb 16 48 37.1
comp=Z,458nm,0.9s
MMRI Maumere 58.23 273 P **P** **16 48 38.6 -0.7**
MMRI IAmb IAmb 16 48 40.3
comp=Z,835nm,1.0s
MMRI Maumere 58.23 273 ⇑P **P** **16 48 38.7 -0.6**
MMRI Maumere 58.23 273 ⇑P **P** **16 48 38.7 -0.6**
MMRI Maumere 58.23 273 P **P** **16 48 38.6 -0.7**
comp=Z,7µmcomp=Z,12µmcomp=Z,970nm,1.4s
BLDU Ballidu 58.41 246 P **P** **16 48 39.8 -0.5**
baz=58,SNR=196
MUN Mundaring 58.67 245 P **P** **16 48 42.0 -0.1**
baz=59,SNR=166
MORW Morawa 59.18 248 P **P** **16 48 45.1 -0.4**
baz=59,SNR=158
BASI Baing, Sumba 59.27 270 P **P** **16 48 47.4 +1.1**
comp=Z,3µmcomp=Z,15µmcomp=Z,1µm,1.4s
KDI Kendari 59.50 278 P **P** **16 48 47.3 -0.5**
WSI Waingapu 59.71 271 P **P** **16 48 49.3 +0.1**
SGSI Sangihe 59.95 287 P **P** **16 48 50.6 -0.2**
comp=Z,6µmcomp=Z,303nm,0.7s
KMSI Cibinong 60.02 283 P **P** **16 48 51.1 -0.1**
comp=Z,527nmcomp=Z,5µmcomp=Z,546nm,1.3s
H01W1 Cape Leeuwin H 60.08 241 P **P** **16 48 53.3 +2.3**
baz=112,slow=7.5,SNR=44
H01W2 Cape Leeuwin H 60.09 241 P **P** **16 48 53.5 +2.3**
baz=112,slow=7.5,SNR=27
H01W3 Cape Leeuwin H 60.09 241 P **P** **16 48 53.5 +2.3**
baz=112,slow=7.5,SNR=42
LUWI Luwuk 60.47 281 P **P** **16 48 54.2 0.0**
LUWI Luwuk 60.47 281 ⇓P **P** **16 48 54.5 +0.2**
LUWI Luwuk 60.47 281 P **P** **16 48 54.2 0.0**
comp=Z,7µmcomp=Z,21µmcomp=Z,2µm,1.3s
WBSI Waikabubak, Su 60.56 271 P **P** **16 48 54.6 -0.3**
comp=Z,11µmcomp=Z,785nm,1.4s
GTOI Gorontalo 60.93 283 P **P** **16 48 58.0 +0.8**
comp=Z,5µmcomp=Z,476nm,1.2s
JCJ Chichijima 60.97 320 P **P** **16 48 56.7 -0.5**
JCJ IAmb IAmb 16 48 58.6
comp=Z,734nm,1.3s
DAV Davao City (W) 61.46 291 P **P** **16 49 00.3 -0.3**
APSI Ampana 61.55 281 P **P** **16 49 02.0 +0.7**
comp=Z,4µmcomp=Z,8µmcomp=Z,657nm,1.7s
BNSI Bone 61.67 276 P **P** **16 49 01.8 -0.3**
comp=Z,10µmcomp=Z,735nm,1.3s
KAPI Kappang 61.78 276 P **P** **16 49 01.8 -1.0**
KAPI pmax pmax
comp=Z,501nm,1.5s
KAPI Kappang 61.78 276 P **P** **16 49 01.8 -1.0**
KAPI Kappang 61.78 276 ⇓P **P** **16 49 02.5 -0.3**
MRSI Marisa 61.84 282 P **P** **16 49 02.2 -1.0**
comp=Z,2µmcomp=Z,183nm,0.7s
GIRL Giralia 61.93 255 P **P** **16 49 04.5 +0.8**
baz=62,SNR=87
SPSI Sidrap Palu 62.14 277 P **P** **16 49 03.7 -1.4**
comp=Z,4µmcomp=Z,4µmcomp=Z,331nm,1.0s
PLAI Plampang 62.33 271 P **P** **16 49 05.9 -0.5**
comp=Z,6µmcomp=Z,16µmcomp=Z,2µm,1.1s
TTSI Tana Toraja 62.43 278 P **P** **16 49 06.5 -0.5**
comp=Z,4µmcomp=Z,4µmcomp=Z,183nm,1.2s
RPN Rapa Nui 62.87 111 P **P** **16 49 11.3 +1.6**
comp=Z,79nm,0.5s,baz=260,slow=6.1,SNR=4.1
RPN Rapa Nui 62.87 111 IAmb IAmb 16 49 13.5
comp=Z,363nm,1.1s
TOLI2 Tolitoli 63.15 282 P **P** **16 49 10.7 -0.9**
TOLI2 IAmb IAmb 16 49 12.9
comp=Z,624nm,1.1s
TWSI Taliwang, Sumb 63.20 271 P **P** **16 49 11.6 -0.3**
comp=Z,3µmcomp=Z,8µmcomp=Z,827nm,1.4s
CASY Casey 63.39 205 P **P** **16 49 12.1 -0.2**
DNP Denpasar 64.78 270 P **P** **16 49 21.7 -0.3**
comp=Z,18µmcomp=Z,1µm,1.3s
SRBI Singaraja 64.97 271 P **P** **16 49 22.5 -0.7**
comp=Z,11µmcomp=Z,784nm,1.3s
BKB Balikpapan 65.80 278 P **P** **16 49 29.9 +1.6**
BKB IAmb IAmb 16 49 31.9
comp=Z,406nm,1.0s
BKB Balikpapan 65.80 278 P **P** **16 49 30.2 +1.8**
comp=Z,9µmcomp=Z,10µmcomp=Z,568nm,1.7s
JAGI Jajag, Banyuwa 65.84 270 P **P** **16 49 27.0 -1.6**
JAGI IAmb IAmb 16 49 28.8
comp=Z,728nm,1.0s
JAGI Jajag, Banyuwa 65.84 270 ⇓P **P** **16 49 27.0 -1.6**
JAGI Jajag, Banyuwa 65.84 270 P **P** **16 49 27.3 -1.3**
comp=Z,5µmcomp=Z,7µmcomp=Z,844nm,1.1s
ABJI Asem Bagus 65.98 271 P **P** **16 49 29.1 -0.4**
comp=Z,9µmcomp=Z,660nm,1.5s
KMMI Kalianget 66.48 271 P **P** **16 49 32.3 -0.2**
comp=Z,7µmcomp=Z,9µmcomp=Z,676nm,1.6s
JHJ2 Mitsune 66.78 323 P **P** **16 49 33.7 -0.2**
JHJ2 Mitsune 66.78 323 ⇓P **P** **16 49 34.3 +0.4**
BBKI Banjar Baru 66.90 275 P **P** **16 49 35.7 +0.5**
comp=Z,7µmcomp=Z,420nm,1.7s
MYLDM Lahad Datu 66.91 285 P **P** **16 49 36.5 +1.3**
MYLDM IAmb IAmb 16 49 59.4
comp=Z,332nm,0.9s
MYLDM Lahad Datu 66.91 285 ⇓P **P** **16 49 37.1 +1.9**
JMZ Minamidaito 2 67.29 311 P **P** **16 49 36.0 -1.2**
JMZ IAmb IAmb 16 49 48.7
comp=Z,500nm,1.3s
JMZ Minamidaito 2 67.29 311 ⇓P **P** **16 49 36.9 -0.3**
MTKI Muara Teweh, K 67.77 278 P **P** **16 49 40.7 +0.2**
comp=Z,3µmcomp=Z,4µmcomp=Z,233nm,1.3s
SPMM Sapulut 68.55 284 P **P** **16 49 47.0 +1.8**
TGY Tagaytay City 68.82 295 P **P** **16 49 47.4 +0.6**
comp=Z,952nm,1.0s,baz=310,slow=1.6,SNR=3.0
JSG Sagara 68.84 323 P **P** **16 49 46.1 -0.4**
JSG Sagara 68.84 323 ⇓P **P** **16 49 47.4 +0.9**
JYT Yasato 68.89 325 P **P** **16 49 46.1 -0.5**
JYT IAmb IAmb 16 49 48.7
comp=Z,422nm,1.0s
JYT Yasato 68.89 325 ⇓P **P** **16 49 47.1 +0.5**
QSPA South Pole Qui 69.19 180 P **P** **16 49 49.5 +1.2**
comp=Z,481nm,1.0s,baz=28,slow=1.4,SNR=775
QSPA pP **pP** **16 51 49.0 +3.0**
comp=Z,126nm,1.1s,baz=36,slow=3.2,SNR=4.9
QSPA S **S** **16 58 10.0 +1.6**
comp=Z,22nm,1.0s,baz=73,slow=23,SNR=34
QSPA PKPPKP **P'P'df** **17 17 51.1 -0.6**
comp=Z,33nm,1.1s,baz=211,slow=3.1,SNR=10
QSPA PKP2ab 17 17 54.8
comp=Z,18nm,1.1s,baz=260,slow=13,SNR=9.2
QSPA South Pole Qui 69.19 180 P **P** **16 49 49.4 +1.2**
QSPA IAmb IAmb 16 49 51.0
comp=Z,658nm,1.0s
KKM Kota Kinabalu 69.33 285 P **P** **16 49 49.2 -0.7**
KKM IAmb IAmb 16 49 52.0
comp=Z,701nm,1.0s
KKM Kota Kinabalu 69.33 285 ⇓P **P** **16 49 50.2 +0.2**
UGM Wanagama 69.41 269 P **P** **16 49 49.6 -0.8**
UGM IAmb IAmb 16 49 51.6
comp=Z,556nm,0.8s
UGM Wanagama 69.41 269 P **P** **16 49 50.5 +0.1**
comp=Z,5µmcomp=Z,8µmcomp=Z,766nm,1.4s
SMRI Semarang 69.78 270 P **P** **16 49 51.8 -0.7**
SMRI IAmb IAmb 16 49 54.4
comp=Z,522nm,0.9s
SMRI Semarang 69.78 270 P **P** **16 49 52.7 +0.2**
comp=Z,7µmcomp=Z,11µmcomp=Z,789nm,1.6s
JMM Marumori 69.81 327 P **P** **16 49 52.0 -0.1**
JMM IAmb IAmb 16 49 54.0
comp=Z,704nm,1.4s
JMM Marumori 69.81 327 ⇓P **P** **16 49 52.2 +0.1**
JGF Kuroka 69.98 323 P **P** **16 49 52.9 -0.4**
JGF Kuroka 69.98 323 ⇓P **P** **16 49 53.2 -0.1**
JOW Kunigami 69.99 310 P **P** **16 49 53.3 -0.2**
JOW IAmb IAmb 16 49 55.9
comp=Z,619nm,1.2s
JOW Kunigami 69.99 310 ⇓P **P** **16 49 54.4 +0.8**
JOW Kunigami 69.99 310 ⇓P **P** **16 49 54.4 +0.8**
PBKI Pangkalan Bun 70.13 275 P **P** **16 49 55.3 +0.7**
comp=Z,14µmcomp=Z,1µm,1.2s
MJAR Matsushiro Arr 70.19 324 P **P** **16 49 54.3 -0.2**
comp=Z,71nm,0.6s,baz=158,slow=6.2,SNR=221
MJAR pP **pP** **16 51 55.5 +2.2**
comp=Z,22nm,1.0s,baz=157,slow=3.9,SNR=5.9
MJAR PKP2ab 17 17 51.8
comp=Z,1.0nm,0.7s,baz=293,slow=4.2,SNR=4.9
MJAR Matsushiro Arr 70.19 324 P **P** **16 49 53.2 -1.3**
MJAR pmax pmax
comp=Z,226nm,1.5s
MJAR Matsushiro Arr 70.19 324 P **P** **16 49 53.2 -1.3**
MAJO Matsushiro 70.19 324*d* iP **P** **16 49 54.4 -0.1**
MAJO pmax pmax
comp=Z,434nm,1.5s
MAJO Matsushiro 70.19 324 P **P** **16 49 54.1 -0.4**
MAJO Matsushiro 70.19 324 ⇓P **P** **16 49 54.5 -0.1**
MAT Matsushiro 70.19 324 P **P** **16 49 54.4 -0.1**
MAT S **S** **16 58 20.8 +0.4**
MJB9 Matsu-Tunnel 70.20 324 P **P** **16 49 54.5 0.0**
MJB9 IAmb IAmb 16 49 56.1
comp=Z,680nm,1.5s
JMN Monobe 70.71 319 P **P** **16 49 58.1 +0.5**
JMN IAmb IAmb 16 50 00.2
comp=Z,762nm,1.3s
JMN Monobe 70.71 319 ⇓P **P** **16 49 58.5 +0.9**
JWT Wachi 70.88 321 P **P** **16 49 58.7 +0.2**
JWT IAmb IAmb 16 50 00.6
comp=Z,744nm,1.5s
JWT Wachi 70.88 321 ⇓P **P** **16 49 58.9 +0.4**
SZP Santa 70.92 298 P **P** **16 49 57.5 -1.6**
SZP IAmb IAmb 16 50 10.8
comp=Z,532nm,1.5s
JSD Sado 71.26 325 P **P** **16 49 59.8 -0.9**
JSD IAmb IAmb 16 50 02.9
comp=Z,520nm,1.1s
STKI Sintang 71.32 277 P **P** **16 50 02.4 +0.8**
comp=Z,7µmcomp=Z,463nm,1.0s
JSU Suzuyama 71.41 316 P **P** **16 50 01.5 -0.2**
JSU IAmb IAmb 16 50 03.8
comp=Z,418nm,1.0s
JSU Suzuyama 71.41 316 ⇓P **P** **16 50 02.1 +0.4**
SBUM Sibu 71.53 280 P **P** **16 50 03.1 +0.3**
SBUM IAmb IAmb 16 50 05.3
comp=Z,364nm,1.1s
SBUM Sibu 71.53 280 P **P** **16 50 04.0 +1.2**
SBUM Sibu 71.53 280 ⇑P **P** **16 50 03.5 +0.6**
ERM Erimo 71.89 331*d* iP **P** **16 50 05.2 +1.0**
ERM pmax pmax
comp=Z,240nm,1.3s
ERM Erimo 71.89 331 P **P** **16 50 05.2 +1.0**
ERM Erimo 71.89 331 ⇓P **P** **16 50 05.5 +1.3**
JTM Tenmabayashi 71.91 329 P **P** **16 50 04.6 +0.2**
JTM IAmb IAmb 16 50 06.6
comp=Z,979nm,1.5s
JTM Tenmabayashi 71.91 329 ⇓P **P** **16 50 04.9 +0.5**
AMKA Amchitka 71.96 359 P **P** **16 50 04.1 -0.3**
JCJI Jatiwangi 71.99 270 P **P** **16 50 05.5 0.0**
comp=Z,18µmcomp=Z,1µm,1.1s
JHS Saijyo 72.04 320 P **P** **16 50 05.6 +0.3**
JHS Saijyo 72.04 320 ⇓P **P** **16 50 06.0 +0.7**
CISI Cisompet, Garu 72.06 269 P **P** **16 50 04.5 -1.4**
CISI Cisompet, Garu 72.06 269 ⇑P **P** **16 50 04.9 -1.1**
CISI Cisompet, Garu 72.06 269 P **P** **16 50 04.9 -1.1**
comp=Z,10µmcomp=Z,824nm,1.6s
JNU Nakatsue 72.18 317 pP **pP** **16 52 07.8 +2.5**
comp=Z,92nm,1.3s,baz=102,slow=4.3,SNR=5.0
JNU PP **PP** **16 52 57.7 0.0**
comp=Z,67nm,1.2s,baz=128,slow=3.3,SNR=3.6
JNU Nakatsue 72.18 317 P **P** **16 50 05.8 -0.4**
JNU Nakatsue 72.18 317 ⇓P **P** **16 50 06.2 0.0**
YUK Yuzh-Kuril'sk 72.34 334*d* iP **P** **16 50 06.9 +0.1**
YUK *i* 16 50 19.8
YUK *i* 16 52 59.6
YUK *i* S **S** **16 58 44.7 +0.7**
YUK *i* 16 59 17.5
YUK *i* SS **SS** **17 03 40.5 +1.3**
YUK pmax pmax
comp=Z,846nm,1.4s
YUK pmax pmax
comp=N,84nm,0.7s
YUK pmax pmax
comp=E,209nm,1.4s
ADK Adak 72.47 1 P **P** **16 50 06.7 -0.6**
ADK pmax pmax
comp=Z,3µm,1.5s
ADK Adak 72.47 1 P **P** **16 50 06.7 -0.6**
ADK Adak 72.47 1 ⇓P **P** **16 50 07.2 -0.1**
LEM Lembang 72.49 269 S **S** **16 58 46.6 -0.7**
comp=Z,5.9nm,0.4s,baz=311,slow=23,SNR=7.6
LEM Lembang 72.49 269 P **P** **16 50 08.8 +0.2**
comp=Z,4µmcomp=Z,9µmcomp=Z,812nm,1.1s
YOJ Yonaguni jima 72.51 306 P **P** **16 50 07.9 -0.3**
YOJ pmax pmax
comp=Z,1µm,1.3s
YOJ Yonaguni jima 72.51 306 P **P** **16 50 07.9 -0.3**
YOJ Yonaguni jima 72.51 306 ⇓P **P** **16 50 08.1 -0.1**
KUR Kuril'sk 72.54 336*d* iP **P** **16 50 08.5 +0.6**
KUR *e* 16 50 21.4
KUR *e* 16 53 00.0
KUR *e*S **S** **16 58 47.1 +0.9**
KUR *e* 16 59 20.9
KUR SS **SS** **17 03 38.8 -3.4**
KUR pmax pmax
comp=Z,2µm,1.4s
KUR pmax pmax
comp=N,238nm,1.5s
KUR pmax pmax
comp=E,328nm,1.3s
KUR pmax pmax
comp=Z,5µm,2.6s
KUR MLR MLR
comp=Z,394nm,13.0s
KUR MLR MLR
comp=N,271nm,15.0s
KUR MLR MLR
comp=E,405nm,18.0s
GSTR Great Sitkin T 72.69 2 P **P** **16 50 08.4 -0.2**
ATKA Atka Island 72.87 3 P **P** **16 50 08.6 -1.0**
ATKA Atka Island 72.87 3 ⇓P **P** **16 50 09.3 -0.3**
KSM Kuching 72.93 278 P **P** **16 50 11.1 +0.2**
KSM Kuching 72.93 278 P **P** **16 50 12.0 +1.1**
KSM Kuching 72.93 278 ⇓P **P** **16 50 11.4 +0.5**
TWG Pinlang 73.13 303 P **P** **16 50 09.7 -2.1**
TWG IAmb IAmb 16 50 12.0
comp=Z,279nm,0.6s
YULB Yu-li 73.25 304 P **P** **16 50 09.8 -2.7**
JEW Eniwo 73.31 330 P **P** **16 50 12.7 +0.3**
JEW Eniwo 73.31 330 ⇓P **P** **16 50 13.7 +1.2**
CBJI Citeko 73.34 269 P **P** **16 50 12.1 -1.2**
comp=Z,6µmcomp=Z,14µmcomp=Z,735nm,1.1s
DBJI Dramaga 73.39 269 P **P** **16 50 13.3 -0.3**
comp=Z,7µmcomp=Z,565nm,1.5s
NACB Ninganchiao 73.44 305 P **P** **16 50 12.8 -0.8**
SMY Shemya 73.57 355 P **P** **16 50 13.1 -0.5**
SMY pmax pmax
comp=Z,1µm,1.3s
SMY Shemya 73.57 355 P **P** **16 50 13.1 -0.5**
SMY Shemya 73.57 355 ⇑P **P** **16 50 13.4 -0.1**
TNG Tangerang 73.62 270 P **P** **16 50 14.6 -0.2**
comp=Z,708nm,0.4s
TPUB Ta-pu 73.73 303 P **P** **16 50 13.8 -1.4**
SSLB Suanglung 73.73 304 P **P** **16 50 13.8 -1.5**
SSLB IAmb IAmb 16 50 15.5
comp=Z,920nm,1.4s
JKA Kamikawa-asahi 73.80 332 P **P** **16 50 14.1 -1.0**
ASAJ Asahikawa 73.80 332 P **P** **16 50 14.1 -1.0**
ASAJ pmax pmax
comp=Z,1µm,1.4s
TPI Tanjungpandan 73.86 273 P **P** **16 50 16.5 +0.3**
comp=Z,6µmcomp=Z,364nm,1.4s
YHNB Yeheng 73.87 305 P **P** **16 50 15.3 -0.8**
TATO Taipei 73.95 305 P **P** **16 50 14.8 -1.6**
NIKH Nikolski High 74.02 6 P 16 50 16.0
baz=190
NIKH Nikolski High 74.02 6 P **P** **16 50 15.7 -0.4**
JTU Tsushima 74.02 317 P **P** **16 50 16.1 -0.4**
JTU Tsushima 74.02 317 ⇓P **P** **16 50 16.4 -0.2**
SKR Severo-Kuril's 74.66 344 *e*P **P** **16 50 19.3 -0.5**
SKR *e* 16 50 32.6
SKR *e**PP **pP** **16 52 21.2 +1.2**
SKR *e* 16 53 23.8
SKR *e*S **S** **16 59 08.4 -0.7**
SKR pmax pmax
comp=Z,2µm,5.1s
SKR pmax pmax
comp=Z,350nm,0.9s
SKR pmax pmax

comp=Z,900nm,9.7s
SKR MLR MLR
comp=Z,300nm,18.0s
BLSI Bandar Lampung 75.20 270 P P 16 50 23.0 -0.7
comp=Z,9μmcomp=Z,742nm,1.4s
PPBI Pangkal Pinang 75.48 273 P P 16 50 25.7 +0.4
comp=Z,11μmcomp=Z,701nm,1.6s
AKUT Akutan 75.51 8 P P 16 50 23.4 -1.0
AKUT IAmb IAmb 16 50 25.4
comp=Z,484nm,1.0s
AKUT Akutan 75.51 8 ⇑P P 16 50 23.9 -0.5
KASI Kota Agung 75.85 269 P P 16 50 26.2 -1.1
comp=Z,4μmcomp=Z,10μmcomp=Z,1μm,1.1s
YSS Yuzh-Sakhalins 75.99 334 *d* iP **P 16 50 28.4 +1.2**
YSS pmax pmax
comp=Z,776nm,1.3s
YSS Yuzh-Sakhalins 75.99 334 P P 16 50 28.0 +0.7
YSS IAmb IAmb 16 50 30.2
comp=Z,674nm,1.2s
YSS Yuzh-Sakhalins 75.99 334 ⇓P P 16 50 28.5 +1.2
KNMB Chin-men Tao 76.08 303 P P 16 50 28.1 -0.1
KNMB IAmb IAmb 16 50 30.4
comp=Z,393nm,1.0s
QZH Quanzhou 76.17 304 ⇓ *i* P **P 16 50 29.5 +0.8**
QZH PP **PP 16 53 31.8 +0.8**
QZH S **S 16 59 27.8 +1.4**
QZH SKS **SKKSac 16 59 46.0 +0.3**
QZH SS **SS 17 04 37.5 +0.2**
QZH pmax pmax
comp=Z,400nm,1.3s
QZH pmax pmax
comp=Z,2μm,4.8s
PET Petropavlovsk 76.20 346 *k i* P **P 16 50 28.2 0.0**
PET *e* *s* PP **pP 16 52 26.2 -3.1**
PET *e* *s* SP **sP 16 53 27.0 -1.8**
PET *e* S **S 16 59 25.7 +0.2**
PET *e* SP **SKSac 16 59 43.7 0.0**
PET pmax pmax
comp=Z,3μm,5.4s
PET pmax pmax
comp=Z,406nm,1.6s
PET pmax pmax
comp=Z,2μm,14.5s
PET Petropavlovsk 76.20 346 P **P 16 50 26.5 -1.7**
PET IAmb IAmb 16 50 28.9
comp=Z,571nm,1.5s
PET Petropavlovsk 76.20 346 ⇓P **P 16 50 27.9 -0.3**
LWLI Liwa 76.43 270 P P 16 50 29.8 -0.8
comp=Z,10μmcomp=Z,767nm,1.0s
TJN Taejon 76.48 318 *d* iP **P 16 50 30.4 +0.2**
PMBI Palembang 76.49 272 P P 16 50 30.9 +0.1
PMBI Palembang 76.49 272 P P 16 50 31.2 +0.4
comp=Z,5μmcomp=Z,16μmcomp=Z,1μm,1.2s
PEA0B Petropavlovsk- 76.50 346 *ce* P **P 16 50 30.2 +0.2**
PEA0B Petropavlovsk- 76.50 346 P P 16 50 30.1 +0.2
PETK Petropavlovsk- 76.50 346 P P 16 50 30.2 +0.2
comp=Z,189nm,0.6s,baz=144,slow=4.9,SNR=505
PETK PKiKP **PKiKP 16 56 07.8 +0.5**
comp=Z,5.2nm,0.7s,baz=77,slow=4.1,SNR=7.3
PETK Petropavlovsk- 76.50 346 P P 16 50 29.5 -0.4
MDSI Maura Dua 76.50 270 P P 16 50 29.5 -1.4
comp=Z,4μmcomp=Z,5μmcomp=Z,471nm,1.0s
FALS False Pass 76.53 9 P
baz=195
FALS **False Pass 76.53 9** P **P 16 50 30.0 -0.1**
FALS IAmb IAmb 16 50 33.6
comp=Z,300nm,0.7s
KSRS Korea Array 76.81 319 P P 16 50 33.0 +1.0
comp=Z,151nm,1.1s,baz=141,slow=6.1,SNR=183
KSRS PP **PP 16 53 34.9 -1.1**
comp=Z,31nm,1.3s,baz=139,slow=8.1,SNR=4.9
KSRS PKiKP **PKiKP 16 56 09.2 +0.9**
comp=Z,1.3nm,0.7s,baz=166,slow=0.3,SNR=4.6
KSRS Korea Array 76.81 319 P P 16 50 33.0 +1.0
KSAR Wonju Array Be 76.83 319 P P 16 50 32.0 -0.1
KSAR Wonju Array Be 76.83 319 P P 16 50 32.0 -0.1
KS19 Wonju Array Si 76.88 319 P P 16 50 30.7 -1.7
KS19 IAmb IAmb 16 50 34.8
comp=Z,518nm,1.4s
TEY Ternei 77.26 329 ⇓ *i* P **P 16 50 34.9 +0.7**
TEY *e* 16 50 48.5
TEY *e* 16 52 37.8
TEY *e* 16 53 42.5
TEY pmax pmax
comp=N,30nm,1.7s
TEY pmax pmax
comp=E,40nm,1.7s
TEY pmax pmax
comp=Z,110nm,1.7s
TEY pmax pmax
comp=N,300nm,4.9s
TEY pmax pmax
comp=E,200nm,4.9s
TEY pmax pmax
comp=Z,700nm,4.9s
LHSI Lahat 77.34 271 P **P 16 50 34.4 -1.0**
comp=Z,9μmcomp=Z,620nm,1.2s
SDPT Sand Point 77.47 10 P
baz=197
16 50 35.0
SDPT Sand Point 77.47 10 P **P 16 50 34.8 -0.3**
SSE Sheshan 77.51 310 P **P 16 50 36.0 +0.1**
SSE PP **PP 16 53 39.3 -2.7**
SSE S **S 16 59 44.3 +3.9**
SSE pmax pmax
comp=Z,65nm,1.2s
SSE pmax pmax
comp=Z,930nm,3.4s
INCN Inchon 77.63 318 P **P 16 50 36.4 -0.1**
INCN pmax pmax
comp=Z,726nm,1.4s
INCN Inchon 77.63 318 P **P 16 50 36.4 -0.1**
INCN IAmb IAmb 16 50 39.0
comp=Z,726nm,1.4s
INCN Inchon 77.63 318 ⇓P **P 16 50 37.3 +0.9**
INCN Inchon 77.63 318 ⇓P **P 16 50 37.3 +0.9**
SNCC San Nicolas Is 77.90 47 P **P 16 50 39.2 +1.2**
SNCC San Nicolas Is 77.90 47 P 16 50 40.4
baz=235,SNR=6.3
JMBI JAMBI 78.00 273 P **P 16 50 40.6 +1.6**
comp=Z,20μmcomp=Z,2μm,1.2s
SPIA Saint Paul Isl 78.06 5 P
baz=188,SNR=12
16 50 38.8
SPIA Saint Paul Isl 78.06 5 P **P 16 50 38.6 +0.3**
SCZ2 Santa Cruz Isl 78.25 47 P
baz=235,SNR=17
16 50 42.2
SCZ2 S 16 59 56.3
baz=235
KSI Kapahiang 78.27 271 P **P 16 50 39.6 -0.9**
VLA Vladivostok 78.28 325 *d* iP **P 16 50 40.6 +0.8**
VLA pmax pmax
comp=Z,534nm,1.3s
MSHR Mys Shultsa 78.31 325 *ce* P **P 16 50 41.3 +1.4**
MSHR pmax pmax
comp=Z,795nm,1.3s
HKC Hong Kong Obse 78.39 299 ⇑P P 16 50 42.0 +1.2
SCI2 San Clemente I 78.42 48 P
baz=236,SNR=14
16 50 42.8
SBC Santa Barbara 78.45 46 S
baz=235
16 59 57.9
MCCM Marconi Confer 78.60 42 P **P 16 50 42.9 +1.3**
MCCM Marconi Confer 78.60 42 ⇓P **P 16 50 43.4 +1.8**
PKM Mcpherson Peak 78.64 46 P
baz=235,SNR=22
16 50 44.4
PKM S 16 59 59.8
baz=235
SAO San Andreas Ge 78.67 43 P **P 16 50 43.6 +1.5**
SAO pmax pmax
comp=Z,321nm,1.2s
SAO San Andreas Ge 78.67 43 P **P 16 50 43.6 +1.5**
SAO San Andreas Ge 78.67 43 ⇓P **P 16 50 44.0 +2.0**
SAO ⇓P **PcP 16 50 44.2 -4.2**
DLV T Lat 78.71 287 P **P 16 50 43.4 +0.5**
DLV IAmb IAmb 16 50 45.7
comp=Z,557nm,1.1s
CIS Catalina Islan 78.75 48 P
baz=236,SNR=14
16 50 44.2
CIS S 17 00 00.5
baz=236
PMPB Monarch Peak 78.77 44 P **P 16 50 43.1 +0.5**
PMPB IAmb IAmb 16 50 46.3
comp=Z,408nm,1.3s
SMMC Simmler 78.77 45 P
baz=234,SNR=19
16 50 44.9
SMMC S 17 00 01.0
baz=234
PAGB Antelope Grade 78.84 45 P **P 16 50 44.5 +1.5**
USA0B Ussuriysk Arra 78.97 326 P **P 16 50 44.0 +0.6**
USA0B pmax pmax
comp=Z,1μm,1.4s
USA0B Ussuriysk Arra 78.97 326 P **P 16 50 44.0 +0.6**
USA0B IAmb IAmb 16 50 46.3
comp=Z,1μm,1.4s
USRK Ussuriysk Ar. 78.97 326 P **P 16 50 44.5 +1.1**
comp=Z,252nm,1.0s,baz=135,slow=3.1,SNR=286
USRK pP **pwP 16 52 47.5 -0.9**
comp=Z,20nm,1.2s,baz=99,slow=4.7,SNR=2.4
USRK Ussuriysk Ar. 78.97 326 P **P 16 50 43.7 +0.3**
HOPS Hopland Field 79.01 41 P **P 16 50 45.1 +1.3**
HOPS IAmb IAmb 16 50 47.2
comp=Z,385nm,1.0s
MYKOM Kota Tinggi 79.04 276 P **P 16 50 44.4 -0.1**
MYKOM IAmb IAmb 16 50 46.8
comp=Z,713nm,1.0s
MYKOM Kota Tinggi 79.04 276 P **P 16 50 46.0 +1.5**
MYKOM Kota Tinggi 79.04 276 ⇓P **P 16 50 45.2 +0.7**
MYKOM ⇑P **PcP 16 50 45.7 -4.9**
GDXM Geysers 79.06 41 P **P 16 50 45.2 +1.1**
KCPM Cahto Peak 79.13 40 P **P 16 50 45.8 +1.3**
KCPM IAmb IAmb 16 50 48.2
comp=Z,468nm,1.1s
CCX Cicese 79.14 50 P **P 16 50 45.3 +0.7**
TYV Tymovskoe 79.16 336 *e* P **P 16 50 45.3 +1.0**
TYV pmax pmax
comp=Z,3μm,2.9s
TYV pmax pmax
comp=Z,633nm,1.1s
OSI Osito Audit: C 79.22 47 P **P 16 50 46.2 +1.1**
OSI Osito Audit: C 79.22 47 P
baz=235
16 50 47.4
OSI S 17 00 05.2
baz=235
BELA Belgrano 2 79.26 173 P **P 16 50 44.5 -0.1**
BELA pP **pP 16 52 46.4 0.0**
DECC Green Verdugo 79.28 47 P
baz=236
16 50 47.3
PASC Pasadena Art C 79.34 47 P **P 16 50 46.5 +0.9**
109C Camp Elliot, M 79.38 49 P
baz=237
16 50 47.9
109C S 17 00 06.9
baz=237
CBX Cerro Bola 79.38 49 P **P 16 50 47.4 +1.3**
109C Camp Elliot, M 79.38 49 P **P 16 50 46.9 +1.1**
KMRM Mail Ridge 79.39 40 P **P 16 50 47.3 +1.4**
GZH Guangzhou 79.43 300 ⇓ *i* P **P 16 50 47.8 +1.5**
GZH pP **pP 16 52 50.3 +2.3**
GZH sP **sP 16 53 48.5 +1.5**
GZH S **S 17 00 03.0 +2.4**
GZH ScS **ScS 17 00 18.5 +1.4**
GZH sS **sS 17 03 41.8 +2.8**
GZH SS **SS 17 05 28.5 +2.7**
GZH pmax pmax
comp=Z,2μm,4.5s
ARVC Arvin 79.44 46 P
baz=235,SNR=12
16 50 48.3
ARVC S 17 00 07.1
baz=235
MWC Mount Wilson 79.46 47 P **P 16 50 46.9 +0.4**
MWC pmax pmax
comp=Z,162nm,1.0s
MWC Mount Wilson 79.46 47 P **P 16 50 46.9 +0.4**
TKX Tecate 79.56 49 P **P 16 50 47.8 +0.9**
SPX San Pedro Mart 79.56 51 P **P 16 50 48.7 +1.4**
BAR Barrett 79.57 49 P **P 16 50 47.6 +0.7**
JCC Jacoby Creek, 79.57 39 P **P 16 50 48.7 +2.0**
JCC IAmb IAmb 16 50 50.4
comp=Z,466nm,1.2s
RGRI Rengat 79.68 274 P **P 16 50 49.4 +1.5**
comp=Z,46μmcomp=Z,759nm,1.2s
VES Vestal, Richgr 79.68 45 P
baz=235,SNR=39
16 50 49.1
VES S 17 00 09.0
baz=235
NJ2 Nanjing 79.70 310 ⇓ *i* P **P 16 50 48.5 +0.9**
NJ2 PcP **PcP 16 50 54.5 +1.5**
NJ2 pP **pwP 16 52 53.5 +0.1**
NJ2 sP **sP 16 53 51.5 +2.8**
NJ2 PP **PP 16 53 57.3 -2.6**
NJ2 S **S 17 00 09.3 +6.3**
NJ2 SS **SS 17 05 27.5 -2.0**
NJ2 pmax pmax
comp=Z,370nm,1.1s
NJ2 pmax pmax
comp=Z,3μm,3.9s
MURC Murrieta 79.71 48 P
baz=236
16 50 49.3
MURC S 17 00 10.2
baz=236
BFSC Mount Baldy Ra 79.74 47 P
baz=236,SNR=38
16 50 49.5
BFSC S 17 00 09.7
baz=236
KHMM Horse Mountain 79.79 39 P **P 16 50 49.9 +1.8**
KHMM IAmb IAmb 16 50 51.9
comp=Z,316nm,1.0s
SII Sitkinak Islan 79.83 13 P
baz=203
16 50 48.6
SII Sitkinak Islan 79.83 13 P **P 16 50 48.5 +0.8**
MONP2 Monument Peak 79.86 49 P
baz=237,SNR=112
16 50 50.7
MONP2 S 17 00 12.3
baz=237
EDW2 Edwards Air Fo 79.87 47 P
baz=236,SNR=152
16 50 50.2
EDW2 S 17 00 11.5
baz=236
O02D Mt. Diablo Mer 79.91 40 P
baz=232,SNR=230
16 50 51.2
O02D S 17 00 11.3
baz=232
RMX La Rumorosa 79.95 49 P **P 16 50 50.6 +1.6**
IKP In-Ko-Pah, Jac 79.95 49 P
baz=237,SNR=65
16 50 51.1
IKP S 17 00 13.4
baz=237
ISA Isabella, Lake 79.98 46 P **P 16 50 50.7 +1.6**
ISA pmax pmax
comp=Z,377nm,1.3s
ISA Isabella, Lake 79.98 46 P **P 16 50 50.7 +1.6**
ISA Isabella, Lake 79.98 46 P
baz=235,SNR=151
16 50 51.0
ISA S 17 00 12.1
baz=235
LPIG La Paz 80.07 60 P **P 16 50 51.4 +1.8**
comp=Z,34nm,0.5s,baz=116,slow=1.5,SNR=10
KRMB Red Mountain 80.09 38 P **P 16 50 51.7 +2.1**
KRMB IAmb IAmb 16 50 53.5
comp=Z,461nm,1.2s
CMB Columbia Colle 80.11 43 P **P 16 50 50.7 +1.1**
CMB pmax pmax
comp=Z,290nm,1.2s
CMB Columbia Colle 80.11 43 P **P 16 50 50.7 +1.1**
SLBS Sierra La Lagu 80.17 60 P **P 16 50 51.6 +1.3**
SLBS pP **pP 16 52 52.0 -0.5**
SLBS Sierra La Lagu 80.17 60 ⇓P **P 16 50 52.3 +2.0**
PFO Pinyon Flats O 80.23 48 P **P 16 50 52.2 +1.8**
comp=Z,63nm,1.0s,baz=247,slow=4.0,SNR=81
PFO Pinyon Flats O 80.23 48 *d* iP **P 16 50 51.9 +1.4**
PFO pmax pmax
comp=Z,259nm,1.3s
PFO Pinyon Flats O 80.23 48 P **P 16 50 51.8 +1.3**
PFO Pinyon Flats O 80.23 48 P
baz=237,SNR=57
16 50 52.2
PFO S 17 00 16.3
baz=237
BBRC Big Bear Solar 80.26 48 S
baz=237
17 00 16.2
AFDM Forest Hills D 80.28 42 P **P 16 50 51.8 +1.3**
WDC Whiskeytown Da 80.31 40 P **P 16 50 52.2 +1.7**
WDC pmax pmax
comp=Z,512nm,1.2s
WDC Whiskeytown Da 80.31 40 P **P 16 50 52.2 +1.7**
WDC IAmb IAmb 16 50 54.1
comp=Z,512nm,1.2s
WDC Whiskeytown Da 80.31 40 ⇑P **P 16 50 50.9 +0.4**
ORV Oroville 80.32 41 P **P 16 50 52.0 +1.4**
ORV pmax pmax
comp=Z,329nm,1.2s
ORV Oroville 80.32 41 P **P 16 50 52.0 +1.4**
SWSC Sam W. Stewart 80.33 49 P
baz=237,SNR=54
16 50 52.8
SWSC S 17 00 16.8
baz=237
KBO Bosley Butte 80.34 38 P **P 16 50 52.3 +1.5**
KBO IAmb IAmb 16 50 54.8
comp=Z,635nm,1.4s
CPBX Cerro Prieto 80.41 50 P **P 16 50 53.0 +1.7**
LRMC Laurel Mtn Rad 80.42 46 P
baz=236,SNR=94
16 50 53.1
LRMC S 17 00 17.8
baz=236
N02D Trinity Center 80.45 39 P
baz=232,SNR=197
16 50 53.9
N02D S 17 00 16.1
baz=232
MDJ Mudanjiang 80.52 325 P **P 16 50 53.3 +1.8**
MDJ pP pwP 16 52 55.8 -1.1
MDJ sP sP 16 53 55.3 +2.5
MDJ PP **PP 16 54 08.3 +2.0**
MDJ S **S 17 00 15.0 +4.2**
MDJ sS sS 17 03 55.5 +5.1
MDJ SS **SS 17 05 47.5 +6.4**
MDJ pmax pmax
comp=Z,510nm,1.2s
MDJ pmax pmax
comp=Z,5μm,3.5s
MDJ Mudanjiang 80.52 325 P **P 16 50 52.4 +0.8**
MDJ IAmb IAmb 16 50 54.4
comp=Z,804nm,1.3s
QIZ Qiongzhong 80.52 294 P **P 16 50 53.0 +0.9**
QIZ pP **pP 16 52 54.5 +0.1**
QIZ sP **sP 16 53 54.3 +1.2**
QIZ S **S 17 00 13.5 +1.7**
QIZ sS **sS 17 03 46.8 -4.4**
QIZ SS **SS 17 05 43.8 +1.9**
QIZ pmax pmax
comp=Z,110nm,1.8s
QIZ pmax pmax
comp=Z,1μm,11.0s
QIZ Qiongzhong 80.52 294 P **P 16 50 52.4 +0.3**
RRX Edison Barstow 80.55 47 S
baz=236
17 00 17.9
O03E Paynes Creek 80.58 40 P
baz=232,SNR=245
16 50 53.7
O03E S 17 00 16.5
baz=232
M02C Callahan 80.62 39 P
baz=232,SNR=312
16 50 54.8
M02C S 17 00 18.8
baz=232
OHAK Old Harbor 80.64 14 P
baz=204,SNR=38
16 50 52.6
OHAK Old Harbor 80.64 14 P **P 16 50 52.2 +0.4**
OHAK IAmb IAmb 16 50 54.0
comp=Z,696nm,1.3s
L02E Cave Junction 80.67 38 P
baz=231,SNR=54
16 50 54.7
L02E S 17 00 19.0
baz=231
CWC Cottonwood Cre 80.69 45 P
baz=236
16 50 54.8
CWC S 17 00 19.6
baz=236
KEBM Edson Butte 80.70 37 P **P 16 50 54.0 +1.4**
KEBM IAmb IAmb 16 50 56.3
comp=Z,428nm,1.2s
MDPB Devils Postpil 80.71 44 P **P 16 50 54.4 +1.3**
MDPB IAmb IAmb 16 50 56.2
comp=Z,278nm,1.1s
COCO West Island 80.76 260 P **P 16 50 53.9 +0.4**
COCO pmax pmax
comp=Z,2μm,1.5s
COCO West Island 80.76 260 P **P 16 50 53.9 +0.4**
BELC Belle Mtn. Jos 80.76 48 P
baz=237,SNR=126
16 50 55.1
BELC S 17 00 20.8
baz=237
RUBR Rubicon Trail 80.85 42 P **P 16 50 54.8 +1.1**
RUBR IAmb IAmb 16 50 57.0
comp=Z,589nm,1.3s
MLAC Mammoth, Mammc 80.87 44 P
baz=235,SNR=7.4
16 50 56.3
MLAC S 17 00 22.9
baz=235
YBH Yreka Blue Hor 80.92 39 P **P 16 50 55.7 +1.9**
YBH pmax pmax
comp=Z,342nm,1.0s
YBH Yreka Blue Hor 80.92 39 P **P 16 50 55.7 +1.9**
YBH IAmb IAmb 16 50 57.5
comp=Z,342nm,0.9s
TIN Tinemaha, Big 80.94 45 P
baz=235,SNR=13
16 50 56.5
TIN S 17 00 23.2
baz=235
BC3 Big Chuckawall 80.96 49 P
baz=238,SNR=93
16 50 56.3
BC3 S 17 00 25.0
baz=238
K02D Willamette Mer 80.97 38 P
baz=231,SNR=62
16 50 56.1
K02D S 17 00 21.4
baz=231
HEC Hector,Ludlow 80.98 47 P
baz=237,SNR=36
16 50 56.0
HEC S 17 00 22.2
baz=237
WAKR Walker 80.99 43 P **P 16 50 56.0 +1.7**
WAKR IAmb IAmb 16 50 57.9
comp=Z,516nm,1.2s
MAW Mawson 81.03 200 P **P 16 50 54.7 +0.9**
comp=Z,42nm,0.9s,baz=126,slow=6.3,SNR=55
MAW pP **pwP 16 52 58.8 -0.4**
comp=Z,38nm,1.0s,baz=117,slow=5.1,SNR=6.7
MAW S **S 17 00 14.9 -0.4**
comp=Z,20nm,1.3s,baz=248,slow=21,SNR=7.0
MAW PKKP **PKKPdf 17 09 14.9 -0.3**
comp=Z,3.0nm,0.3s,baz=181,slow=4.9,SNR=24
MAW PKPPKP 17 17 29.5
comp=Z,5.4nm,1.1s,baz=54,slow=2.4,SNR=3.7
MAW Mawson 81.03 200 P **P 16 50 54.6 +0.7**
baz=81,SNR=61
MAW Mawson 81.03 200 P **P 16 50 54.3 +0.5**
MAW 17 09 14.9
MAW pmax pmax
comp=Z,8.0nm,0.8s
MAW Mawson 81.03 200 P **P 16 50 54.3 +0.5**
GLA Glamis 81.08 50 P
baz=238,SNR=67
16 50 57.2
GLA S 17 00 25.9
baz=238
GLA Glamis 81.08 50 P **P 16 50 56.9 +2.1**
GLA pmax pmax
comp=Z,384nm,1.1s
GLA Glamis 81.08 50 P **P 16 50 56.9 +2.1**
GLA IAmb IAmb 16 50 58.6
comp=Z,384nm,1.1s
J01E Myrtle Point 81.11 37 P
baz=230,SNR=32
16 50 56.7
J01E S 17 00 22.8
baz=230
BKNI Bangkinang 81.13 274 P **P 16 50 55.1 -0.3**
BKNI Bangkinang 81.13 274 P **P 16 50 55.4 0.0**
comp=Z,6μmcomp=Z,11μmcomp=Z,770nm,1.5s
PMSA Palmer Station 81.16 157 P **P 16 50 55.7 +1.1**
PMSA IAmb IAmb 16 50 57.3
comp=Z,308nm,1.1s
PMSA Palmer Station 81.16 157 *e* P **P 16 50 56.3 +1.8**
BEKR Beckworth 81.21 41 P **P 16 50 56.7 +1.3**
BEKR IAmb IAmb 16 50 58.6
comp=Z,484nm,1.3s
PNTR Pine Nut 81.22 42 P **P 16 50 57.2 +1.6**
PNTR IAmb IAmb 16 50 58.9
comp=Z,669nm,1.1s
KDAK Kodiak Island 81.31 14 P
baz=204
16 50 55.9
KDAK S 17 00 20.1
baz=204
KDAK Kodiak Island 81.31 14 S **S 17 00 20.0 +1.9**
comp=Z,12nm,1.0s,baz=346,slow=19,SNR=7.5
KDAK Kodiak Island 81.31 14 *d* iP **P 16 50 56.0 +0.7**
KDAK pmax pmax
comp=Z,786nm,1.3s
KDAK Kodiak Island 81.31 14 P **P 16 50 56.0 +0.7**
KDAK IAmb IAmb 16 50 57.5
comp=Z,502nm,1.3s
VCNR Virginia City 81.31 42 P **P 16 50 57.4 +1.4**
VCNR IAmb IAmb 16 50 59.3

comp=Z,337nm,1.2s
HUMO Hull Mountain 81.32 38 P P 16 50 57.9 +2.1
HUMO IAmb IAmb 16 50 59.6
comp=Z,553nm,1.1s
HUMO Hull Mountain 81.32 38 ⇓P P 16 50 58.0 +2.3
YERR Yerington 81.39 43 P P 16 50 57.9 +1.4
YERR IAmb IAmb 16 50 59.5
comp=Z,430nm,1.2s
GMRC Granite Mounta 81.42 48 P 16 50 58.3
baz=237,SNR=109
GMRC S 17 00 27.1
baz=237
LHV Little Huntoon 81.44 44 P P 16 50 58.2 +1.9
LHV IAmb IAmb 16 50 60.0
comp=Z,325nm,1.0s
IRM Iron Mountain 81.44 49 P 16 50 58.6
baz=238,SNR=180
IRM S 17 00 27.7
baz=238
L04D Klamath Falls 81.46 39 P 16 50 58.6
baz=232,SNR=198
L04D S 17 00 25.7
baz=232
M04C Macdoel 81.47 39 P 16 50 58.7
baz=232,SNR=182
M04C S 17 00 26.9
baz=232
GRAC Grapevine Rang 81.47 45 P 16 50 58.7
baz=236,SNR=138
GRAC S 17 00 27.1
baz=236
FURC Furnace Creek, 81.52 46 P 16 50 58.6
baz=236,SNR=42
FURC S 17 00 27.3
baz=236
TUQ Turquoise Moun 81.59 47 P 16 50 59.2
baz=237,SNR=91
TUQ S 17 00 29.4
baz=237
GRNR Gornyy 81.59 333 ⇓*i*P P 16 50 58.3 +1.4
GRNR pmax pmax
comp=N,70nm,1.2s
GRNR pmax pmax
comp=E,60nm,1.2s
GRNR pmax pmax
comp=Z,280nm,1.2s
GRNR MLR MLR
comp=E,50nm,14.0s
GRNR MLR MLR
comp=N,120nm,19.0s
GRNR MLR MLR
comp=Z,110nm,17.0s
SHOC Shoshone, Teco 81.60 47 P 16 50 59.0
baz=237,SNR=40
SHOC S 17 00 28.6
baz=237
DL2 Dalian 81.63 317 ⇓*i*P P 16 50 58.0 +0.6
DL2 pP **pP 16 52 57.0 -3.3**
DL2 sP **sP 16 54 01.3 +2.5**
DL2 SKS **S 17 00 19.5 -2.7**
DL2 S **SKKSac 17 00 25.8 -0.6**
DL2 pmax pmax
comp=Z,300nm,1.4s
DL2 pmax pmax
comp=Z,3μm,3.6s
RYN Ryan 81.64 43 P P 16 50 59.0 +1.3
RYN IAmb IAmb 16 51 00.8
comp=Z,495nm,1.5s
NVAR Mina Array Bea 81.67 44 P P 16 50 59.5 +1.6
comp=Z,644nm,1.2s,baz=224,slow=8.3,SNR=438
NVAR pP **pwP 16 53 04.8 +0.6**
comp=Z,17nm,1.0s,baz=224,slow=8.4,SNR=4.8
NVAR PKiKP **PKiKP 16 56 17.0 +0.9**
comp=Z,1.4nm,0.6s,baz=212,slow=3.2,SNR=3.6
NVAR PKKPbc **PKKPbc 17 09 27.6 +1.3**
comp=Z,4.8nm,0.7s,baz=79,slow=3.4,SNR=21
NVAR PKPPKP 17 17 25.9
comp=Z,1.2nm,0.8s,baz=103,slow=2.6,SNR=5.6
113A Mohawk Valley, 81.69 50 P P 16 50 59.6 +1.7
113A IAmb IAmb 16 51 01.4
comp=Z,290nm,1.1s
PAHR Pah Rah Range 81.72 42 P P 16 50 59.4 +1.3
PAHR IAmb IAmb 16 51 01.1
comp=Z,356nm,1.1s
I02D Swisshome 81.76 36 P 16 51 00.1
baz=230,SNR=14
I02D S 17 00 29.3
baz=230
NV11 Mina Array Sit 81.77 44 P P 16 50 59.6 +1.3
NV11 IAmb IAmb 16 51 01.4
comp=Z,253nm,0.9s
I03D Drain, OR 81.78 37 P 16 51 00.0
baz=231,SNR=48
I03D S 17 00 28.8
baz=231
214A Organ Pipe Nat 81.97 52 P P 16 51 01.1 +1.7
214A Organ Pipe Nat 81.97 52 P 16 51 01.5
baz=239,SNR=101
214A S 17 00 33.3
baz=239
K04D Chiloquin, OR 82.03 39 P 16 51 01.4
baz=232,SNR=42
K04D S 17 00 31.8
baz=232
NEE2 Needles Airpor 82.13 48 P 16 51 02.1
baz=238,SNR=16
NEE2 S 17 00 35.3
baz=238
SNY Shenyang 82.15 320 ⇓P P 16 51 00.5 +0.6
SNY S **S 17 00 23.0 -4.2**
SNY pmax pmax
comp=Z,220nm,1.9s
SNY pmax pmax
comp=Z,3μm,3.2s
KVN Kaiserville 82.16 43 P P 16 51 01.6 +1.3
KVN pmax pmax
comp=Z,218nm,0.8s
KVN Kaiserville 82.16 43 P P 16 51 01.6 +1.3
KVN IAmb IAmb 16 51 03.2
comp=Z,218nm,0.8s
TPH Tonopah 82.17 44 P P 16 51 01.6 +1.2
TPH pmax pmax
comp=Z,2μm,1.0s
TPH Tonopah 82.17 44 P P 16 51 01.6 +1.2
TPNV Topopah Spring 82.19 46 P 16 51 02.2
baz=237,SNR=192
TPNV Topopah Spring 82.19 46 P P 16 51 01.9 +1.5
TPNV pP **pP 16 53 03.5 -0.2**
TPNV Topopah Spring 82.19 46 ⇓P P 16 51 02.0 +1.5
J04D Umpqua Nationa 82.20 38 P 16 51 02.5
baz=232,SNR=173
J04D S 17 00 32.9
baz=232
PDMCI Parker Dam,Lak 82.22 49 P 16 51 02.6
baz=238,SNR=82
PDMCI S 17 00 35.5
baz=238
WHN Wuhan 82.23 307 ⇓*i*P P 16 51 01.5 +0.9
WHN sP **sP 16 54 03.8 +1.3**
WHN PP **PP 16 54 18.8 -1.6**
WHN S **S 17 00 25.5 -3.1**
WHN pmax pmax
comp=Z,1μm,1.3s
WHN pmax pmax
comp=Z,6μm,4.0s
CN2 Changchun 82.27 323 ⇓*i*P P 16 51 01.0 +0.5
CN2 S **S 17 00 32.5 +4.1**
CN2 pmax pmax
comp=Z,400nm,1.3s
CN2 pmax pmax
comp=Z,2μm,4.0s
COR Corvallis 82.37 36 P P 16 51 02.7 +1.7
COR pmax pmax
comp=Z,459nm,1.2s
COR Corvallis 82.37 36 P P 16 51 02.6 +1.7
COR IAmb IAmb 16 51 04.6
comp=Z,459nm,1.2s
COR Corvallis 82.37 36 ⇓P P 16 51 03.1 +2.2
I04A Tendick Farm, 82.37 37 P 16 51 02.7
baz=232,SNR=71
MOD Modoc Plateau 82.45 40 P P 16 51 03.2 +1.5
MOD IAmb IAmb 16 51 04.9
comp=Z,307nm,0.9s
KLR Kul'dur 82.58 330 PP PP 16 54 21.4 -1.4
comp=Z,39nm,1.3s,baz=122,slow=3.0,SNR=4.2
KLR S **S 17 00 27.9 -3.3**
comp=Z,0.4nm,0.4s,baz=30,slow=20,SNR=9.0

KLR Kul'dur 82.58 330 *ce*P P 16 51 02.8 +0.9
KLR pmax pmax
comp=Z,210nm,1.2s
K05A Summer Lake 82.60 39 P P 16 51 04.2 +1.8
K05A IAmb IAmb 16 51 06.0
comp=Z,704nm,1.0s
IPM Ipoh 82.64 278 P P 16 51 03.6 +0.5
IPM Ipoh 82.64 278 P P 16 51 04.0 +0.9
H04D Lebanon 82.64 37 P 16 51 04.4
baz=231,SNR=54
H04D S 17 00 36.3
baz=231
MNSI Mandailing Nat 82.66 274 P P 16 51 02.3 -0.9
comp=Z,4μmcomp=Z,6μmcomp=Z,504nm,0.8s
SHPR Sheep Range 82.69 47 P P 16 51 04.4 +1.4
J05D Fort Rock, OR 82.73 38 P 16 51 05.3
baz=232,SNR=194
J05D S 17 00 39.1
baz=232
UBPT Khong Chiam 82.74 289 P P 16 51 04.0 +0.5
UBPT IAmb IAmb 16 51 06.1
comp=Z,314nm,1.1s
UBPT Khong Chiam 82.74 289 ⇓P P 16 51 04.4 +1.0
UBPT ⇓P **P 16 51 04.5 +1.0**
G03D McMinnville, O 82.79 36 P 16 51 05.1
baz=231,SNR=16
G03D S 17 00 38.5
baz=231
W13A Hualapai Mount 82.82 48 P P 16 51 05.2 +1.5
Y14A Wickenburg 82.84 50 P P 16 51 05.1 +1.4
H04A Detroit Lake 83.05 37 P P 16 51 05.5 +1.1
H04A IAmb IAmb 16 51 07.3
comp=Z,393nm,1.0s
TIA Tai'an 83.13 313 P P 16 51 05.8 +0.8
TIA S **S 17 00 31.3 -6.0**
TIA pmax pmax
comp=Z,320nm,1.3s
TIA pmax pmax
comp=Z,3μm,6.9s
CNPM China Poot 83.19 14 P P 16 51 05.0 +0.2
PINE Pine Mountain 83.21 38 P P 16 51 07.4 +1.9
HOM Homer 83.22 13 P 16 51 05.6
baz=205,SNR=30
HOM S 17 00 38.2
baz=205
HOM Homer 83.22 13 P P 16 51 05.2 +0.3
PRN Pahroc Range 83.25 46 P P 16 51 07.4 +1.7
PRN IAmb IAmb 16 51 09.2
comp=Z,406nm,1.2s
PRN Pahroc Range 83.25 46 ⇓P P 16 51 07.5 +1.8
KULM Kulim 83.29 278 P P 16 51 06.8 +0.5
KULM IAmb IAmb 16 51 08.8
comp=Z,602nm,1.1s
KULM Kulim 83.29 278 P P 16 51 08.0 +1.7
I05D Terrebonne, OR 83.32 37 P 16 51 07.7
baz=232,SNR=86
I05D S 17 00 43.5
baz=232
MG04 Isla Riesco 83.35 144 P P 16 51 07.5 +1.7
MG04 IAmb IAmb 16 51 09.6
comp=Z,342nm,1.3s
R11A Troy Canyon, C 83.40 45 P 16 51 07.7
baz=237,SNR=84
R11A S 17 00 44.6
baz=237
R11A Troy Canyon, C 83.40 45 P P 16 51 07.5 +0.9
E03A Lebam 83.47 35 P P 16 51 07.8 +1.4
E03A IAmb IAmb 16 51 09.8
comp=Z,587nm,1.0s
F04D Rainier, OR 83.47 35 P 16 51 08.8
baz=231,SNR=16
F04D S 17 00 46.3
baz=231
BRLK Bradley Lake 83.48 14 P P 16 51 06.3 +0.1
BRSE Bradley Lake S 83.49 14 P 16 51 06.9
baz=206
GO10 Punta Arenas 83.50 145 P P 16 51 08.1 +1.4
GO10 IAmb IAmb 16 51 10.5
comp=Z,458nm,1.2s
GO09 Cerro Castillo 83.61 143 P P 16 51 08.7 +1.5
TUC Tucson 83.64 52 P 16 51 10.2
baz=240
TUC S 17 00 51.5
baz=240
TUC Tucson 83.64 52 P P 16 51 09.8 +2.1
TUC pmax pmax
comp=Z,249nm,1.1s
TUC Tucson 83.64 52 P P 16 51 09.8 +2.1
TUC IAmb IAmb 16 51 11.7
comp=Z,249nm,1.1s
TUC Tucson 83.64 52 ⇓P P 16 51 10.1 +2.3
RSO Redoubt South 83.72 13 P P 16 51 06.2 -1.4
WVOR Wild Horse Val 83.77 40 P 16 51 09.5 +1.3
WVOR pmax pmax
comp=Z,419nm,1.3s
WVOR Wild Horse Val 83.77 40 P P 16 51 09.5 +1.3
WVOR IAmb IAmb 16 51 11.4
comp=Z,419nm,1.2s
WVOR Wild Horse Val 83.77 40 ⇓P P 16 51 09.7 +1.6
NLWA Neilton Lookou 83.85 34 P P 16 51 09.8 +1.4
NLWA IAmb IAmb 16 51 11.7
comp=Z,383nm,1.1s
NLWA Neilton Lookou 83.85 34 ⇓P P 16 51 10.2 +1.9
DIB Dawson Inlet, 83.86 26 P P 16 51 09.6 +1.4
G05D Wamic, OR 83.88 37 P 16 51 10.3
baz=232,SNR=28
G05D S 17 00 49.5
baz=232
RPSI Rantau Prapat 83.95 275 P P 16 51 09.0 -0.6
RPSI Rantau Prapat 83.95 275 P P 16 51 09.2 -0.4
PSI Prapat 83.98 275 P P 16 51 09.2 -0.7
comp=Z,360nm,1.0s,baz=180,slow=4.3,SNR=263
PSI PP **PP 16 54 30.9 -3.9**
comp=Z,57nm,1.1s,baz=180,slow=4.9,SNR=7.7
PSI PKiKP **PKiKP 16 56 21.0 +0.6**
comp=Z,1.9nm,0.3s,baz=117,slow=0.0,SNR=1.5
PSI Prapat 83.98 275 P **P 16 51 09.0 -0.9**
PSI pmax pmax
comp=Z,784nm,1.2s
MA2 Magadan 84.00 345 *ce*P P 16 51 08.4 -0.3
MA2 pmax pmax
comp=Z,544nm,1.4s
MA2 Magadan 84.00 345 P P 16 51 08.2 -0.6
MA2 IAmb IAmb 16 51 10.2
comp=Z,614nm,1.3s
MA2 Magadan 84.00 345 ⇓P P 16 51 08.5 -0.2
E04D Cinebar 84.01 35 P 16 51 11.2
baz=231,SNR=59
E04D S 17 00 50.1
baz=231
SEW Seward 84.11 14 P 16 51 09.3
baz=207,SNR=23
SEW S 17 00 45.8
baz=207
SEW Seward 84.11 14 P P 16 51 08.9 -0.3
SEW IAmb IAmb 16 51 10.8
comp=Z,481nm,1.2s
F05D White Salmon 84.20 36 P 16 51 11.7
baz=232,SNR=24
F05D S 17 00 51.9
baz=232
X16A Lo Mia Camp, P 84.20 50 P P 16 51 12.1 +1.5
I07A Izee 84.22 38 P P 16 51 12.0 +1.7
I07A IAmb IAmb 16 51 13.7
comp=Z,310nm,1.0s
LCMT Little Creek M 84.26 47 P P 16 51 11.4 +0.6
Q23K Middleton Isla 84.27 16 P 16 51 10.7
baz=210
Q23K Middleton Isla 84.27 16 P P 16 51 10.8 +0.8
Q23K IAmb IAmb 16 51 12.2
comp=Z,490nm,1.1s
MID Middleton Isla 84.27 16 P P 16 51 09.9 -0.1
MID pmax pmax
comp=Z,480nm,1.1s
MID Middleton Isla 84.27 16 P P 16 51 09.9 -0.1
MID IAmb IAmb 16 51 12.2
comp=Z,480nm,1.1s
D04E Lakebay 84.29 35 P 16 51 12.9
baz=231,SNR=16
319A Douglas 84.31 54 P P 16 51 13.1 +2.0
319A IAmb IAmb 16 51 15.0
comp=Z,340nm,0.9s
CAPN Captain Cook N 84.33 13 P 16 51 11.7
baz=206,SNR=6.8
CAPN Captain Cook N 84.33 13 P P 16 51 11.0 +0.7

D03D Eldon 84.35 34 P 16 51 12.6
baz=231,SNR=38
D03D S 17 00 53.8
baz=231
O22K Cooper Landing 84.39 14 P 16 51 10.8
baz=207,SNR=25
O22K S 17 00 48.6
baz=207
O22K Cooper Landing 84.39 14 P P 16 51 10.4 -0.1
J08A Circle Bar Ran 84.40 39 P P 16 51 12.3 +1.0
J08A IAmb IAmb 16 51 14.4
comp=Z,427nm,1.2s
CCUT Cedar City 84.46 46 P P 16 51 13.3 +1.5
SPCR Spurr Chakacha 84.50 12 P 16 51 10.8
baz=205,SNR=73
SPCR S 17 00 49.1
baz=205
LON Longmire 84.54 35 P P 16 51 12.3 +0.5
LON pmax pmax
comp=Z,203nm,1.5s
LON Longmire 84.54 35 P P 16 51 12.3 +0.5
GAMB Gambell 84.54 3 P 16 51 12.4
baz=186,SNR=33
GAMB S 17 00 52.8
baz=186
GAMB Gambell 84.54 3 P P 16 51 12.0 +0.7
GAMB IAmb IAmb 16 51 13.8
comp=Z,411nm,1.2s
KNB Kanab 84.55 47 P P 16 51 13.8 +1.6
KNB pmax pmax
comp=Z,406nm,1.5s
KNB Kanab 84.55 47 P P 16 51 13.8 +1.6
KNB IAmb IAmb 16 51 15.6
comp=Z,406nm,1.5s
TSI Tuntungan 84.57 276 P P 16 51 12.8 +0.2
comp=Z,5μmcomp=Z,7μmcomp=Z,479nm,1.0s
SPR3 Spring Creek 3 84.58 45 P P 16 51 13.0 +0.5
U15A North Rim 84.62 48 P P 16 51 14.4 +1.7
U15A IAmb IAmb 16 51 16.1
comp=Z,205nm,0.8s
PSUT Pine Spring 84.64 45 P P 16 51 13.7 +1.0
MG02 Cerro Sombrero 84.66 145 P P 16 51 13.4 +1.1
SZCU Shurtz Canyon 84.67 47 P P 16 51 14.2 +1.3
GSI Gunungsitoli 84.71 273 P P 16 51 14.0 +0.7
GSI Gunungsitoli 84.71 273 ⇓P P 16 51 14.3 +1.0
GSI Gunungsitoli 84.71 273 P P 16 51 14.7 +1.4
comp=Z,7μmcomp=Z,16μmcomp=Z,2μm,1.4s
D05A Enumclaw 84.72 35 P P 16 51 14.2 +1.7
WUAZ Wupatki 84.80 49 P 16 51 15.3
baz=240,SNR=71
WUAZ S 17 01 04.3
baz=240
WUAZ Wupatki 84.80 49 P P 16 51 15.1 +1.6
WUAZ Wupatki 84.80 49 ⇓P P 16 51 15.0 +1.6
FIS Fire Island 84.87 13 P P 16 51 13.5 +0.6
PGC Sidney 84.87 33 P P 16 51 14.2 +1.0
PGC IAmb IAmb 16 51 16.2
comp=Z,313nm,1.1s
ELK Elko 84.92 43 P P 16 51 15.0 +1.0
ELK pmax pmax
comp=Z,52nm,0.9s
ELK Elko 84.92 43 P P 16 51 15.0 +1.0
RC01 Rabbit Creek A 84.93 14 P 16 51 13.5
baz=207,SNR=131
RC01 S 17 00 54.1
baz=207
RC01 Rabbit Creek A 84.93 14 P P 16 51 13.2 -0.1
BBB Bella Bella 84.99 28 P P 16 51 14.6 +0.9
BBB IAmb IAmb 16 51 16.7
comp=Z,431nm,1.4s
PWL Port Wells 85.04 14 P P 16 51 13.6 -0.2
SUA Susitna One 85.05 13 P 16 51 13.8
baz=206,SNR=113
SUA S 17 00 54.6
baz=206
SUA Susitna One 85.05 13 P P 16 51 13.8 -0.2
SUA IAmb IAmb 16 51 15.5
comp=Z,797nm,1.4s
F07A Phinny Hill Vi 85.06 37 P P 16 51 15.1 +0.9
F07A IAmb IAmb 16 51 17.4
comp=Z,361nm,1.3s
HPIG 85.09 59 P P 16 51 15.9 +0.9
TRTT Trang 85.11 280 P P 16 51 15.6 +0.4
comp=Z,13μmcomp=Z,1μm,1.4s
PKCU Pink Cliffs 85.12 47 P P 16 51 17.1 +1.9
PKCU IAmb IAmb 16 51 19.1
comp=Z,329nm,1.0s
KAIM Kayak Island 85.20 16 P 16 51 15.7
baz=212
KAIM Kayak Island 85.20 16 P P 16 51 15.9 +1.4
G08A Pilot Rock 85.25 38 P P 16 51 16.7 +1.3
G08A IAmb IAmb 16 51 18.4
comp=Z,389nm,1.0s
CRAG Craig 85.28 24 P 16 51 16.8
baz=222,SNR=8.6
CRAG Craig 85.28 24 P P 16 51 16.3 +1.3
CRAG IAmb IAmb 16 51 18.3
comp=Z,303nm,1.2s
CRAG Craig 85.28 24 ⇑P P 16 51 17.2 +2.2
SRAK Srakaew 85.29 287 P P 16 51 14.9 -1.2
comp=Z,32μmcomp=Z,3μm,1.3s
A04D Lummi Island 85.30 33 P 16 51 17.1
baz=231,SNR=28
B05A Bryant 85.33 34 P 16 51 17.1
baz=231,SNR=55
X18A Snowflake 85.33 50 P P 16 51 16.4 +0.3
GLI Glacier Island 85.35 15 P 16 51 15.4
baz=209,SNR=93
GLI S 17 00 57.8
baz=209
GLI Glacier Island 85.35 15 P P 16 51 15.2 -0.1
SKT Skwentna 85.35 12 P 16 51 14.1
baz=205,SNR=85
SKT S 17 00 54.6
baz=205
SKT Skwentna 85.35 12 P P 16 51 13.5 -1.8
SKT IAmb IAmb 16 51 16.8
comp=Z,336nm,1.5s
FID Port Fidalgo 85.39 15 P P 16 51 15.1 -0.4
EYAK Cordova Ski Ar 85.39 16 P 16 51 15.8
baz=211
EYAK S 17 00 58.0
baz=211
EYAK Cordova Ski Ar 85.39 16 P P 16 51 15.3 -0.1
EYAK IAmb IAmb 16 51 17.4
comp=Z,433nm,1.2s
TTA Tatalina 85.41 10 P 16 51 16.2
baz=201,SNR=303
TTA S 17 01 00.7
baz=201
TTA Tatalina 85.41 10 P P 16 51 15.6 0.0
TTA pmax pmax
comp=Z,554nm,1.3s
TTA Tatalina 85.41 10 P P 16 51 15.6 0.0
TTA IAmb IAmb 16 51 17.9
comp=Z,554nm,1.3s
LTY Liberty 85.47 35 P P 16 51 15.9 -0.4
LTY IAmb IAmb 16 51 19.0
comp=Z,365nm,1.3s
E07A Sunnyside 85.49 36 P P 16 51 17.7 +1.4
E07A IAmb IAmb 16 51 19.6
comp=Z,480nm,1.1s
KHON Khomkaen 85.50 289 P P 16 51 18.0 +1.0
KNK Knik Glacier 85.50 14 P 16 51 16.3
baz=208
KNK S 17 00 59.4
baz=208
PMR Palmer 85.51 14 P 16 51 16.2
baz=208,SNR=76
PMR S 17 00 58.3
baz=208
PMR Palmer 85.51 14 P P 16 51 15.9 -0.1
PMR pmax pmax
comp=Z,596nm,1.2s
PMR Palmer 85.51 14 P P 16 51 15.9 -0.1
MTPU Mount Pierson 85.51 47 P P 16 51 18.9 +1.9
RAGM Ragged Mountai 85.53 16 P P 16 51 16.1 -0.1
HAWA Hanford 85.57 37 P P 16 51 18.0 +1.3
HAWA Hanford 85.57 37 ⇓P P 16 51 18.2 +1.5
HMT Hamilton 85.59 16 P P 16 51 16.7 +0.2
HMT IAmb IAmb 16 51 18.6
comp=Z,408nm,1.2s
BGLC Bering Glacier 85.67 17 P 16 51 18.2
baz=213
SIT Sitka 85.67 22 P 16 51 18.2
baz=220,SNR=9.7

SIT	**Sitka**	**85.67**	**22**	P	**P**		**16 51 17.8**	**+0.9**
SIT				pmax	pmax			
	comp=Z,299nm,1.4s							
SIT	**Sitka**	**85.67**	**22**	P	**P**		**16 51 17.8**	**+0.9**
SIT				IAmb	IAmb		16 51 19.0	
	comp=Z,299nm,1.4s							
KRAB	**Krabi**	**85.70**	**280**	P	**P**		**16 51 19.9**	**+1.8**
	comp=Z,54µmcomp=Z,6µm,1.0s							
GHO	**Glory Hole Cre**	**85.72**	**14**	P	**P**		**16 51 17.1**	**0.0**
C06D	**Leavenworth**	**85.75**	**35**	P			16 51 18.8	
	baz=232,SNR=10							
MSU	**Marysvale**	**85.76**	**46**	P	**P**		**16 51 19.5**	**+1.4**
MSU	**Marysvale**	**85.76**	**46**	P	**P**		**16 51 19.5**	**+1.4**
W18A	**Petrified Fore**	**85.77**	**50**	P	**P**		**16 51 19.4**	**+1.2**
W18A	**Petrified Fore**	**85.77**	**50**	P			16 51 19.7	
	baz=241							
W18A				S			17 01 12.4	
	baz=241							
BJT	**Baijiatuau**	**85.77**	**316**	P	**P**		**16 51 18.0**	**+0.2**
BJT				pmax	pmax			
	comp=Z,114nm,1.1s							
BJT	**Baijiatuau**	**85.77**	**316**	P	**P**		**16 51 18.0**	**+0.2**
TPTI		**85.77**	**275**	P	**P**		**16 51 18.2**	**-0.2**
	comp=Z,3µmcomp=Z,211nm,1.4s							
ANM	**Nome**	**85.78**	**6**	P			16 51 17.8	
	baz=192,SNR=42							
ANM				S			17 01 05.4	
	baz=192							
ANM	**Nome**	**85.78**	**6**	P	**P**		**16 51 17.0**	**-0.2**
ANM				pmax	pmax			
	comp=Z,68nm,1.0s							
ANM	**Nome**	**85.78**	**6**	P	**P**		**16 51 17.0**	**-0.2**
BJI	**Beijing**	**85.78**	**316**	P	**P**		**16 51 18.5**	**+0.7**
BJI				SKS	**SKSac**		**17 00 46.8**	**-1.3**
BJI				S	**ScS**		**17 01 06.0**	**-2.7**
BJI				SS	**SS**		**17 07 02.8**	**+4.7**
BJI				pmax	pmax			
	comp=Z,250nm,1.7s							
A05A	**Maple Falls**	**85.79**	**33**	P	**P**		**16 51 18.5**	**+0.8**
A05A				IAmb	IAmb		16 51 20.3	
	comp=Z,355nm,1.4s							
ENH	**Enshi**	**85.80**	**304**	P	**P**		**16 51 18.7**	**+0.5**
B06A	**Marblemount**	**85.81**	**34**	P	**P**		**16 51 18.4**	**+0.7**
B06A				IAmb	IAmb		16 51 20.2	
	comp=Z,249nm,1.1s							
ZAIG	**Zacatecas**	**85.85**	**64**	P	**P**		**16 51 19.1**	**+0.1**
SML	**Sawmill**	**85.88**	**14**	P			16 51 18.0	
	baz=208,SNR=44							
SML				S			17 01 03.3	
	baz=208							
NONG	**Nongkai**	**85.89**	**291**	P	**P**		**16 51 19.6**	**+0.8**
E08A	**Dider Farm, El**	**85.89**	**37**	P	**P**		**16 51 19.3**	**+1.1**
E08A				IAmb	IAmb		16 51 21.3	
	comp=Z,456nm,1.2s							
PATY	**Pattaya**	**85.93**	**285**	P	**P**		**16 51 21.1**	**+2.0**
	comp=Z,602nm,1.1s							
BMO	**Blue Mountains**	**85.95**	**39**	P	**P**		**16 51 19.6**	**+0.9**
BMO				pmax	pmax			
	comp=Z,221nm,1.1s							
BMO	**Blue Mountains**	**85.95**	**39**	P	**P**		**16 51 19.6**	**+0.9**
BMO				IAmb	IAmb		16 51 21.5	
	comp=Z,221nm,1.1s							
121A	**Cookes Peak, D**	**85.97**	**53**	P	**P**		**16 51 20.4**	**+1.3**
121A				IAmb	IAmb		16 51 22.9	
	comp=Z,271nm,1.4s							
121A	**Cookes Peak, D**	**85.97**	**53**	P			16 51 21.3	
	baz=242							
121A				S			17 01 14.7	
	baz=242							
CUT	**Chulitna**	**85.99**	**13**	P			16 51 18.4	
	baz=206,SNR=44							
CUT				S			17 01 02.9	
	baz=206							
CUT	**Chulitna**	**85.99**	**13**	P	**P**		**16 51 18.1**	**-0.2**
MFID	**Camas Ranch**	**86.02**	**40**	P	**P**		**16 51 20.2**	**+1.2**
MFID				IAmb	IAmb		16 51 22.1	
	comp=Z,320nm,1.2s							
BMRM	**Bremner River**	**86.04**	**16**	P			16 51 19.2	
	baz=212,SNR=116							
BMRM				S			17 01 05.5	
	baz=212							
BMRM	**Bremner River**	**86.04**	**16**	P	**P**		**16 51 18.3**	**-0.3**
PPLA	**Purkeypile**	**86.06**	**12**	P			16 51 17.5	
	baz=205,SNR=45							
PPLA				S			17 01 01.7	
	baz=205							
PPLA	**Purkeypile**	**86.06**	**12**	P	**P**		**16 51 17.1**	**-1.7**
PPLA				IAmb	IAmb		16 51 19.1	
	comp=Z,300nm,1.4s							
CHAI	**Chaiyaphum**	**86.07**	**289**	P	**P**		**16 51 20.5**	**+0.8**
SCM	**Sheep Creek Mo**	**86.13**	**14**	P	**P**		**16 51 18.6**	**-0.5**
SCM				pmax	pmax			
	comp=Z,1µm,1.4s							
SCM	**Sheep Creek Mo**	**86.13**	**14**	P	**P**		**16 51 18.6**	**-0.5**
KLU	**Klutina**	**86.16**	**15**	P			16 51 19.7	
	baz=210,SNR=103							
KLU				S			17 01 06.1	
	baz=210							
KLU	**Klutina**	**86.17**	**15**	P	**P**		**16 51 19.3**	**+0.1**
KLU				IAmb	IAmb		16 51 21.2	
	comp=Z,529nm,1.3s							
DUG	**Dugway, Tooele**	**86.20**	**44**	P			16 51 21.2	
	baz=239,SNR=19							
DUG				S			17 01 13.3	
	baz=239							
DUG	**Dugway, Tooele**	**86.20**	**44**	P	**P**		**16 51 20.3**	**+0.3**
DUG				pmax	pmax			
	comp=Z,81nm,1.5s							
DUG	**Dugway, Tooele**	**86.20**	**44**	P	**P**		**16 51 20.3**	**+0.3**
SYO	**Syowa Base**	**86.24**	**193**	⇑*i*P	**P**		**16 51 19.0**	**-0.5**
SYO	**Syowa Base**	**86.24**	**193**	⇓*e*PcP	**PcP**		**16 51 20.6**	**-0.6**
SYO	**Syowa Base**	**86.24**	**193**	⇓*i*pP	pP		16 53 25.2	+0.7
CRQM	**Cirque**	**86.25**	**17**	P	**P**		**16 51 20.1**	**+0.3**
CRQE	**Cirque**	**86.25**	**17**	P			16 51 20.4	
	baz=213							
CRQE				S			17 01 07.4	
	baz=213							
WRAK	**Wrangell Islan**	**86.28**	**24**	P			16 51 21.4	
	baz=223,SNR=13							
WRAK	**Wrangell Islan**	**86.28**	**24**	P	**P**		**16 51 20.8**	**+1.1**
WRAK				IAmb	IAmb		16 51 22.8	
	comp=Z,383nm,1.1s							
YAH	**Yahtse**	**86.30**	**17**	P	**P**		**16 51 20.6**	**+0.5**
D08A	**Wollman Farm,**	**86.31**	**36**	P	**P**		**16 51 21.4**	**+1.3**
D08A				IAmb	IAmb		16 51 23.3	
	comp=Z,461nm,1.1s							
TGL	**Tana Glacier**	**86.33**	**17**	P	**P**		**16 51 20.4**	**+0.3**
SURT	**Suratani**	**86.34**	**281**	P	**P**		**16 51 23.9**	**+2.9**
	comp=Z,146nmcomp=Z,20nm,1.1s							
GYA	**Guiyang**	**86.36**	**300**	⇓P	**P**		**16 51 21.8**	**+0.7**
GYA				pP	pP		16 53 24.8	-0.7
GYA				sP	sP		16 54 22.3	-1.9
GYA				PP	**PP**		**16 54 53.3**	**-0.4**
GYA				SKS	**SKSac**		**17 00 52.5**	**-0.1**
GYA				S	**S**		**17 01 10.0**	**+1.0**
GYA				sS	sS		17 04 52.0	+0.7
GYA				pmax	pmax			
	comp=Z,40nm,1.3s							
GYA				pmax	pmax			
	comp=Z,420nm,3.6s							
PKDT	**Phuket**	**86.38**	**280**	P	**P**		**16 51 22.0**	**+0.8**
	comp=Z,7µmcomp=Z,463nm,1.5s							
E09A	**Wood Farm, Sta**	**86.42**	**37**	P	**P**		**16 51 21.7**	**+1.0**
E09A				IAmb	IAmb		16 51 23.5	
	comp=Z,520nm,1.2s							
BGU	**Big Grassy Mou**	**86.44**	**44**	P	**P**		**16 51 21.3**	**+0.1**
PCA	**Pinnacle**	**86.50**	**18**	P	**P**		**16 51 21.2**	**+0.4**
PCA				IAmb	IAmb		16 51 23.1	
	comp=Z,501nm,1.2s							
PINM	**Pinnacle**	**86.50**	**18**	P			16 51 21.6	
	baz=216,SNR=30							
LL07	**Hotel Espejo d**	**86.52**	**135**	P	**P**		**16 51 22.4**	**+1.0**
LL07				IAmb	IAmb		16 51 24.8	
	comp=Z,398nm,1.4s							
TABL	**Table Mountain**	**86.53**	**18**	P	**P**		**16 51 21.4**	**+0.2**
SLVN	**Son La**	**86.54**	**294**	P	**P**		**16 51 22.4**	**+0.5**
SLVN				IAmb	IAmb		16 51 26.4	
	comp=Z,264nm,1.3s							
TNA	**Tin City**	**86.55**	**4**	P			16 51 21.3	
	baz=190,SNR=15							
TNA				S			17 01 11.9	
	baz=190							
TNA	**Tin City**	**86.55**	**4**	P	**P**		**16 51 20.6**	**-0.2**
CAST	**Castle Rocks**	**86.55**	**12**	P			16 51 20.7	
	baz=205							
CAST	**Castle Rocks**	**86.55**	**12**	P	**P**		**16 51 20.5**	**-0.5**
VRDI	**Verde Repeater**	**86.56**	**16**	P	**P**		**16 51 21.1**	**-0.2**
VRDI				IAmb	IAmb		16 51 23.4	
	comp=Z,527nm,1.2s							
NLU	**North Lily Min**	**86.56**	**45**	P	**P**		**16 51 21.8**	**0.0**
BCPM	**Bancas Point**	**86.57**	**18**	P	**P**		**16 51 20.4**	**-0.7**
N25K	**Chitina, Valde**	**86.59**	**16**	P			16 51 22.0	
	baz=212,SNR=154							
N25K				S			17 01 10.1	
	baz=212							
N25K	**Chitina, Valde**	**86.59**	**16**	P	**P**		**16 51 21.6**	**+0.4**
N25K				IAmb	IAmb		16 51 23.4	
	comp=Z,309nm,0.8s							
GRNC	**Granite Creek**	**86.60**	**17**	P	**P**		**16 51 21.9**	**+0.4**
GRNC				IAmb	IAmb		16 51 23.8	
	comp=Z,464nm,1.1s							
SEY	**Seymchan**	**86.62**	**347**	*d i*P	**P**		**16 51 21.8**	**+0.6**
F10A	**Beach Ranch, E**	**86.63**	**38**	P	**P**		**16 51 22.2**	**+0.4**
M24K	**Tolsona, Glenn**	**86.64**	**15**	P			16 51 22.4	
	baz=210,SNR=77							
M24K				S			17 01 11.5	
	baz=210							
M24K	**Tolsona, Glenn**	**86.64**	**15**	P	**P**		**16 51 21.3**	**-0.2**
Q16A	**Castle Valley**	**86.64**	**46**	P	**P**		**16 51 22.8**	**+0.6**
GLB	**Gilahina Butte**	**86.65**	**16**	P	**P**		**16 51 21.7**	**+0.2**
GLB				IAmb	IAmb		16 51 23.6	
	comp=Z,270nm,0.8s							
WAT6	**Susitna Watana**	**86.69**	**14**	P			16 51 22.0	
	baz=209,SNR=233							
WAT6				S			17 01 10.0	
	baz=209							
LHMI	**Lhok Sumawe**	**86.70**	**277**	P	**P**		**16 51 23.1**	**+0.3**
LHMI	**Lhok Sumawe**	**86.70**	**277**	⇓P	**P**		**16 51 23.7**	**+1.0**
LHMI	**Lhok Sumawe**	**86.70**	**277**	P	**P**		**16 51 23.7**	**+1.0**
	comp=Z,5µmcomp=Z,11µmcomp=Z,1µm,1.2s							
MCARA	**McCarthy VSAT**	**86.80**	**16**	P			16 51 22.9	
	baz=213,SNR=99							
MCARA				S			17 01 12.9	
	baz=213							
MCARA	**McCarthy VSAT**	**86.80**	**16**	P	**P**		**16 51 22.6**	**+0.5**
TMUT	**Trail Mountain**	**86.81**	**46**	P	**P**		**16 51 24.4**	**+1.3**
TMUT				IAmb	IAmb		16 51 26.6	
	comp=Z,232nm,1.1s							
PLID	**Pearl Lake**	**86.85**	**39**	P	**P**		**16 51 23.8**	**+0.7**
PLID				IAmb	IAmb		16 51 25.8	
	comp=Z,524nm,1.2s							
WAT2	**Susitna Watana**	**86.85**	**13**	P			16 51 22.5	
	baz=208							
WAT2				S			17 01 10.7	
	baz=208							
B08A	**Colville Reser**	**86.85**	**35**	P	**P**		**16 51 23.6**	**+0.8**
B08A				IAmb	IAmb		16 51 25.1	
	comp=Z,241nm,0.8s							
MPU	**Maple Canyon**	**86.89**	**45**	P	**P**		**16 51 24.2**	**+0.9**
LOGN	**Logan Glacier**	**86.89**	**17**	P	**P**		**16 51 22.8**	**+0.1**
LOGN				IAmb	IAmb		16 51 25.1	
	comp=Z,376nm,0.9s							
KTH	**Kantishna Hill**	**86.90**	**12**	P	**P**		**16 51 21.5**	**-1.1**
KTH				IAmb	IAmb		16 51 23.3	
	comp=Z,461nm,1.2s							
BARN	**Barnard Glacie**	**86.90**	**17**	P	**P**		**16 51 23.3**	**+0.4**
CTG	**Chitna Glacier**	**86.91**	**17**	P			16 51 23.6	
	baz=214							
CTG				S			17 01 14.8	
	baz=214							
CTGM	**Chitina Glacie**	**86.91**	**17**	P	**P**		**16 51 23.2**	**+0.3**
TRF	**Thorofare Moun**	**86.93**	**12**	P			16 51 22.6	
	baz=206,SNR=181							
TRF				S			17 01 11.4	
	baz=206							
TRF	**Thorofare Moun**	**86.93**	**12**	P	**P**		**16 51 22.6**	**-0.3**
CHUM	**Lake Minchumin**	**86.93**	**11**	P			16 51 22.3	
	baz=204,SNR=118							
CHUM				S			17 01 10.5	
	baz=204							
JIS	**Juneau Island**	**86.94**	**22**	P	**P**		**16 51 23.8**	**+1.0**
JIS				IAmb	IAmb		16 51 25.6	
	comp=Z,256nm,1.2s							
HLID	**Hailey**	**86.96**	**41**	P			16 51 25.4	
	baz=237,SNR=265							
HLID				S			17 01 21.3	
	baz=237							
HLID	**Hailey**	**86.97**	**41**	P	**P**		**16 51 25.0**	**+1.5**
HLID				IAmb	IAmb		16 51 26.9	
	comp=Z,238nm,1.1s							
BESE	**Bessie Mountai**	**87.00**	**21**	P	**P**		**16 51 23.8**	**+0.6**
BESE				IAmb	IAmb		16 51 26.2	
	comp=Z,456nm,1.2s							
SPUT	**South Promonto**	**87.01**	**44**	P	**P**		**16 51 24.6**	**+0.7**
PHET	**Kaeng Krachan**	**87.04**	**285**	P	**P**		**16 51 26.4**	**+2.1**
	comp=Z,8µmcomp=Z,980nm,1.1s							
HVU	**Hansel Valley**	**87.05**	**43**	P	**P**		**16 51 24.9**	**+0.9**
HVU				pmax	pmax			
	comp=Z,276nm,1.4s							
HVU	**Hansel Valley**	**87.05**	**43**	P	**P**		**16 51 24.9**	**+0.9**
HVU				IAmb	IAmb		16 51 27.8	
	comp=Z,276nm,1.4s							
C09A	**Chrisman Ranch**	**87.10**	**36**	P	**P**		**16 51 24.8**	**+1.0**
C09A				IAmb	IAmb		16 51 26.6	
	comp=Z,302nm,0.9s							
TIY	**Taiyuan**	**87.13**	**312**	*e*P	**P**		**16 51 25.3**	**+1.0**
TIY				sP	**sP**		**16 54 30.8**	**+3.2**
TIY				pmax	pmax			
	comp=Z,790nm,1.5s							
TIY				pmax	pmax			
	comp=Z,2µm,3.6s							
HARP	**HAARP**	**87.13**	**15**	P			16 51 24.4	
	baz=211							
CTU	**Camp Tracy**	**87.15**	**44**	P	**P**		**16 51 25.3**	**+0.8**
SRU	**San Rafael Swe**	**87.17**	**46**	P	**P**		**16 51 25.8**	**+1.1**
SRU				pmax	pmax			
	comp=Z,257nm,1.1s							
SRU	**San Rafael Swe**	**87.17**	**46**	P	**P**		**16 51 25.8**	**+1.1**
SRU				IAmb	IAmb		16 51 27.6	
	comp=Z,257nm,1.1s							
P17A	**Butcher Ranch,**	**87.21**	**46**	P	**P**		**16 51 25.8**	**+0.9**
P17A				IAmb	IAmb		16 51 28.1	
	comp=Z,354nm,1.4s							
TLIG	**Tlapa**	**87.22**	**70**	P	**P**		**16 51 26.9**	**+1.6**
JLU	**Jordanelle**	**87.30**	**45**	P	**P**		**16 51 26.1**	**+0.8**
LENM	**Lemitar**	**87.33**	**52**	P	**P**		**16 51 26.2**	**+0.7**
BPAW	**Bear Paw Mtn.**	**87.38**	**12**	P			16 51 23.8	
	baz=206,SNR=71							
BPAW				S			17 01 14.7	
	baz=206							
BPAW	**Bear Paw Mtn.**	**87.38**	**12**	P	**P**		**16 51 23.5**	**-1.3**
BPAW				IAmb	IAmb		16 51 26.4	
	comp=Z,256nm,1.4s							
MNTX	**Cornudas Mount**	**87.41**	**55**	P			16 51 27.5	
	baz=244							
MNTX				S			17 01 27.0	
	baz=244							
MNTX	**Cornudas Mount**	**87.41**	**55**	P	**P**		**16 51 27.1**	**+1.4**
MNTX				IAmb	IAmb		16 51 29.1	
	comp=Z,239nm,1.1s							
LL01	**San Ignacio de**	**87.42**	**135**	P	**P**		**16 51 25.5**	**-0.1**
LL02	**Futaleuf**	**87.44**	**135**	P	**P**		**16 51 25.3**	**-0.4**
LL02				IAmb	IAmb		16 51 29.0	
	comp=Z,228nm,1.2s							
LL02				pP	**pP**		**16 53 29.6**	**-1.4**
MCK	**McKinley**	**87.46**	**13**	P			16 51 25.2	
	baz=208,SNR=290							
MCK				S			17 01 16.2	
	baz=208							
MCK	**McKinley**	**87.46**	**13**	P	**P**		**16 51 24.8**	**-0.4**
MCK				pmax	pmax			
	comp=Z,550nm,1.1s							
MCK	**McKinley**	**87.46**	**13**	P	**P**		**16 51 24.8**	**-0.4**
SKAG	**Skagway**	**87.52**	**21**	P			16 51 27.4	
	baz=220,SNR=34							
SKAG				S			17 01 22.3	
	baz=220							
SKAG	**Skagway**	**87.52**	**21**	P	**P**		**16 51 26.3**	**+0.8**
SKAG				IAmb	IAmb		16 51 28.9	
	comp=Z,521nm,1.5s							
PAX	**Paxson**	**87.55**	**14**	P			16 51 25.7	
	baz=211,SNR=61							
PAX	**Paxson**	**87.55**	**14**	P	**P**		**16 51 24.7**	**-1.1**
PAX				pmax	pmax			
	comp=Z,251nm,1.2s							
PAX	**Paxson**	**87.55**	**14**	P	**P**		**16 51 24.7**	**-1.1**
PAX				IAmb	IAmb		16 51 27.2	
	comp=Z,251nm,1.2s							
BNM	**Barren Site**	**87.58**	**52**	P	**P**		**16 51 27.7**	**+0.9**
TCUT	**Toone Canyon**	**87.59**	**44**	P	**P**		**16 51 27.7**	**+1.1**
TCUT				IAmb	IAmb		16 51 29.7	
	comp=Z,456nm,1.2s							
PV05	**Paradox Valley**	**87.64**	**48**	P	**P**		**16 51 28.0**	**+1.0**
PV05				IAmb	IAmb		16 51 30.1	
	comp=Z,177nm,1.1s							
MVCO	**Mesa Verde**	**87.65**	**49**	P			16 51 27.9	
	baz=242							
MVCO				S			17 01 27.6	
	baz=242							
SNAA	**Sanae**	**87.65**	**179**	P	**P**		**16 51 26.1**	**-0.2**
SNAA	**Sanae**	**87.65**	**179**	PKKP			17 09 09.7	
SNAA				SKS	**SKSac**		**17 00 57.9**	**-0.8**
SNAA	**Sanae**	**87.65**	**179**	pP	pP		16 53 32.6	+0.7
SNAA	**Sanae**	**87.65**	**179**	PKiKP	**PKiKP**		**16 56 27.6**	**+2.8**
	comp=Z,3.9nm,1.0s,baz=204,slow=11,SNR=1.6							
SNAA				PKKPbc	**PKKPbc**		**17 09 10.4**	**-2.6**
	comp=Z,2.6nm,0.6s,baz=251,slow=2.5,SNR=17							
SNAA	**Sanae**	**87.65**	**179**	*ce*P	**P**		**16 51 25.9**	**-0.3**
SNAA				pmax	pmax			
	comp=E,65nm,1.7s							
SNAA	**Sanae**	**87.65**	**179**	P	**P**		**16 51 25.4**	**-0.8**
SNAA	**Sanae**	**87.65**	**179**	⇑P	**P**		**16 51 25.7**	**-0.6**
ZEA	**Zeya**	**87.69**	**331**	*de*P	**P**		**16 51 27.4**	**+0.9**
ZEA				*e**PP	**pwP**		**16 53 34.6**	**-0.3**
ZEA				*e*			16 54 58.4	
ZEA				*e*S	**SKSac**		**17 01 00.2**	**+1.2**
ZEA				*e*			17 01 25.2	
ZEA				pmax	pmax			
	comp=E,20nm,1.0s							
ZEA				pmax	pmax			
	comp=N,90nm,1.2s							
ZEA				pmax	pmax			
	comp=Z,180nm,1.2s							
ZEA				pmax	pmax			
	comp=E,200nm,2.0s							
ZEA				pmax	pmax			
	comp=N,300nm,4.1s							
ZEA				pmax	pmax			
	comp=Z,400nm,4.5s							
ZEA				pmax	pmax			
	comp=E,100nm,10.7s							
ZEA				pmax	pmax			
	comp=N,100nm,6.3s							
ZEA				pmax	pmax			
	comp=Z,300nm,11.8s							
ZEA				smax	smax			
	comp=E,200nm,10.7s							
ZEA				smax	smax			
	comp=N,300nm,12.1s							
TX31	**Lajitas Ar. Si**	**87.72**	**58**	P	**P**		**16 51 29.0**	**+1.7**
TX32	**Lajitas Aray**	**87.72**	**58**	P	**P**		**16 51 29.0**	**+1.7**
TX32				IAmb	IAmb		16 51 30.9	
	comp=Z,243nm,1.1s							
TXAR	**Lajitas Aray**	**87.72**	**58**	P	**P**		**16 51 29.3**	**+2.0**
	comp=Z,122nm,0.9s,baz=220,slow=5.2,SNR=477							
TXAR				pP	**pwP**		**16 53 35.3**	**-0.1**
	comp=Z,12nm,1.1s,baz=205,slow=5.5,SNR=5.2							
TXAR				PKKPbc	**PKKPbc**		**17 09 13.0**	**+1.5**
	comp=Z,8.8nm,0.8s,baz=108,slow=2.4,SNR=30							
TXAR				PKPPKP	**P'P'df**		**17 17 18.1**	**-0.5**
	comp=Z,1.8nm,1.0s,baz=101,slow=1.3,SNR=5.7							
TXAR	**Lajitas Aray**	**87.72**	**58**	P	**P**		**16 51 28.6**	**+1.2**
HWUT	**Hardware Ranch**	**87.74**	**44**	P	**P**		**16 51 27.8**	**+0.5**
BWN	**Browne**	**87.74**	**12**	P	**P**		**16 51 26.1**	**-0.3**
AIS	**Amsterdam Isla**	**87.77**	**230**	P	**P**		**16 51 27.8**	**+0.4**
AIS				IAmb	IAmb		16 51 28.9	
	comp=Z,297nm,1.1s							
AIS	**Amsterdam Isla**	**87.77**	**230**	⇓P	**P**		**16 51 28.4**	**+1.0**
VNA3	**Neumayer Olymp**	**87.80**	**176**	P	**P**		**16 51 27.0**	**+0.1**
VNA3	**Neumayer Olymp**	**87.80**	**176**	PKKP			17 09 09.3	
VNA3	**Neumayer Olymp**	**87.80**	**176**	pP	pP		16 53 33.0	+0.8
PV10	**Paradox Valley**	**87.83**	**47**	P	**P**		**16 51 27.5**	**-0.3**
PV19	**Morning Glory**	**87.84**	**48**	P	**P**		**16 51 28.1**	**+0.3**
PV19				IAmb	IAmb		16 51 30.5	
	comp=Z,185nm,1.3s							
PV17	**East Wray Mesa**	**87.84**	**48**	P	**P**		**16 51 28.4**	**+0.5**
PV17				IAmb	IAmb		16 51 30.5	
	comp=Z,200nm,1.3s							
PV14	**Lion Creek, Pa**	**87.84**	**47**	P	**P**		**16 51 28.5**	**+0.6**
PV14				IAmb	IAmb		16 51 30.5	
	comp=Z,167nm,1.1s							
PV18	**Skein Mesa, Pa**	**87.86**	**48**	P	**P**		**16 51 27.9**	**0.0**
PV20	**West Nyswonger**	**87.86**	**48**	P	**P**		**16 51 28.0**	**+0.1**
PV20				IAmb	IAmb		16 51 30.5	
	comp=Z,154nm,1.2s							
PV13	**Radium Mtn., P**	**87.88**	**48**	P	**P**		**16 51 28.3**	**+0.2**
PV13				IAmb	IAmb		16 51 30.6	
	comp=Z,167nm,1.3s							
PV16	**Nyswonger Mesa**	**87.88**	**48**	P	**P**		**16 51 28.3**	**+0.3**
PV03	**Paradox Valley**	**87.90**	**48**	P	**P**		**16 51 28.8**	**+0.6**
PV03				IAmb	IAmb		16 51 30.8	
	comp=Z,184nm,1.4s							
HYT	**Haines Junctio**	**87.90**	**19**	P	**P**		**16 51 28.0**	**+0.6**
HYT				IAmb	IAmb		16 51 30.1	
	comp=Z,306nm,1.2s							
PV11	**David Mesa, Pa**	**87.91**	**48**	P	**P**		**16 51 28.4**	**+0.2**
PV11				IAmb	IAmb		16 51 30.9	
	comp=Z,283nm,1.5s							
XAN	**Xi'an**	**87.93**	**308**	P	**P**		**16 51 29.0**	**+0.9**
XAN				pP	pP		16 53 29.8	-3.7
XAN				sP	sP		16 54 34.0	+2.3
XAN				pmax	pmax			
	comp=Z,610nm,1.5s							
XAN				pmax	pmax			
	comp=Z,3µm,6.2s							
PV04	**Paradox Valley**	**87.93**	**48**	P	**P**		**16 51 28.8**	**+0.6**
MENT	**Mentasta**	**87.94**	**15**	P	**P**		**16 51 27.9**	**+0.5**
MENT				IAmb	IAmb		16 51 29.7	
	comp=Z,423nm,1.3s							
PHIT	**Phitsanulok**	**87.95**	**289**	P	**P**		**16 51 30.3**	**+1.8**
	comp=Z,12µmcomp=Z,2µm,1.1s							
PV02	**Paradox Valley**	**87.96**	**48**	P	**P**		**16 51 28.8**	**+0.4**
PV12	**Saucer Basin,**	**87.96**	**48**	P	**P**		**16 51 28.9**	**+0.4**
PV12				IAmb	IAmb		16 51 31.2	
	comp=Z,260nm,1.3s							
LL03	**Petrohue**	**87.97**	**133**	P	**P**		**16 51 28.8**	**+0.5**
BCYI	**Bear Canyon**	**87.98**	**41**	P	**P**		**16 51 29.3**	**+0.9**
NEW	**Newport**	**87.99**	**36**	P			16 51 28.9	
	baz=235,SNR=66							
NEW				S			17 01 26.5	
	baz=235							
NEW	**New

MLY	**Manley**	**88.27**	**11**	P			16 51 28.5		
	baz=206,SNR=298								
MLY				S			17 01 22.3		
	baz=206								
MLY	**Manley**	**88.27**	**11**	P		**P**	**16 51 28.1**	**-0.9**	
MLY				IAmb		IAmb	16 51 30.4		
	comp=Z,393nm,1.2s								
WRH	**Wood River Hil**	**88.29**	**13**	P		**P**	**16 51 28.7**	**-0.3**	
NVL	**N'lazarevskaya**	**88.31**	**183**	*e*P		**P**	**16 51 28.4**	**-0.8**	
NVL				pmax		pmax			
	comp=Z,129nm,0.9s								
NANT	**Nan**	**88.32**	**291**	P		**P**	**16 51 33.8**	**+3.6**	
GDL2	**Guadalupe Moun**	**88.41**	**55**	P		**P**	**16 51 31.0**	**+0.5**	
VNA1	**Neumayer--Stat**	**88.47**	**177**	P		**P**	**16 51 30.5**	**+0.5**	
VNA1	**Neumayer--Stat**	**88.47**	**177**	SKS		**SKSac**	**17 01 06.6**	**+3.3**	
VNA1				PKKP		**PKKPbc**	**17 09 08.2**	**-2.7**	
VNA1	**Neumayer--Stat**	**88.47**	**177**	pP		pP	16 53 36.4	+0.7	
HDA	**Harding Lake**	**88.47**	**13**	P			16 51 29.9		
	baz=209,SNR=219								
HDA				P			16 51 29.9		
	baz=209,SNR=219								
HDA				S			17 01 24.4		
	baz=209								
HDA				S			17 01 24.4		
	baz=209								
CCB	**Clear Creek Bu**	**88.50**	**13**	P		**P**	**16 51 29.2**	**-0.8**	
CCB				IAmb		IAmb	16 51 31.1		
	comp=Z,274nm,1.4s								
L27K	**Beaver Creek,**	**88.52**	**16**	P			16 51 30.9		
	baz=214,SNR=207								
L27K				S			17 01 29.0		
	baz=214								
L27K	**Beaver Creek,**	**88.52**	**16**	P		**P**	**16 51 30.4**	**+0.2**	
L27K				IAmb		IAmb	16 51 32.4		
	comp=Z,300nm,1.2s								
RDMU	**Red Mountain**	**88.53**	**45**	P		**P**	**16 51 31.2**	**+0.2**	
RDMU				IAmb		IAmb	16 51 33.7		
	comp=Z,178nm,1.1s								
WHY	**Whitehorse**	**88.59**	**20**	P			16 51 31.9		
	baz=220,SNR=64								
WHY				S			17 01 31.7		
	baz=220								
WHY	**Whitehorse**	**88.59**	**20**	P		**P**	**16 51 31.5**	**+0.9**	
WHY				IAmb		IAmb	16 51 33.3		
	comp=Z,321nm,1.2s								
MCMT	**McKenzie Canyo**	**88.59**	**40**	P		**P**	**16 51 32.5**	**+1.3**	
ECR	**Eagle Creek**	**88.59**	**43**	P		**P**	**16 51 32.0**	**+0.7**	
DLBC	**Dease Lake**	**88.61**	**23**	pP		pP	16 53 39.2	+2.6	
	comp=Z,39nm,1.2s,baz=154,slow=2.5,SNR=2.6								
DLBC	**Dease Lake**	**88.61**	**23**	P		**P**	**16 51 31.7**	**+1.0**	
DLBC				IAmb		IAmb	16 51 33.7		
	comp=Z,232nm,1.1s								
AHID	**Auburn Hatcher**	**88.62**	**43**	P		**P**	**16 51 32.2**	**+0.9**	
AHID				IAmb		IAmb	16 51 34.3		
	comp=Z,413nm,1.4s								
I23K	**Minto, Yukon-K**	**88.63**	**12**	P			16 51 30.2		
	baz=207,SNR=152								
I23K				S			17 01 25.7		
	baz=207								
I23K	**Minto, Yukon-K**	**88.64**	**12**	P		**P**	**16 51 29.8**	**-0.7**	
KHLT	**Khaolaem Dam**	**88.68**	**286**	P		**P**	**16 51 32.7**	**+0.7**	
	comp=Z,2µmcomp=Z,162nm,1.2s								
HIA	**Hailar**	**88.69**	**325**	P		**P**	**16 51 31.2**	**-0.1**	
HIA				pmax		pmax			
	comp=Z,132nm,1.0s								
HIA	**Hailar**	**88.69**	**325**	P		**P**	**16 51 31.2**	**-0.1**	
HIA				IAmb		IAmb	16 51 33.1		
	comp=Z,132nm,1.0s								
TCOL	**CIGO, UAF Yank**	**88.69**	**13**	P			16 51 30.7		
	baz=209,SNR=61								
TCOL				S			17 01 26.3		
	baz=209								
TCOL	**CIGO, UAF Yank**	**88.69**	**13**	P		**P**	**16 51 30.2**	**-0.7**	
MDM	**Murphy Dome**	**88.69**	**12**	P		**P**	**16 51 30.4**	**-0.6**	
COLA	**College**	**88.69**	**13**	P			16 51 30.6		
	baz=209								
COLA				S			17 01 26.6		
	baz=209								
COLA	**College**	**88.69**	**13**	*d i*P		**P**	**16 51 30.6**	**-0.2**	
COLA				pmax		pmax			
	comp=Z,796nm,1.3s								
COLA	**College**	**88.69**	**13**	P		**P**	**16 51 30.0**	**-0.8**	
COLA	**College**	**88.69**	**13**	⇓P		**P**	**16 51 30.5**	**-0.4**	
COLA				⇓P		**P**	**16 51 30.6**	**-0.2**	
SUKH	**Sukhothai**	**88.76**	**289**	P		**P**	**16 51 33.0**	**+0.7**	
	comp=Z,4µmcomp=Z,536nm,1.2s								
SCRK	**Sand Creek**	**88.76**	**15**	P			16 51 31.9		
	baz=212,SNR=218								
SCRK				S			17 01 30.1		
	baz=212								
SCRK	**Sand Creek**	**88.76**	**15**	P		**P**	**16 51 31.3**	**-0.1**	
SCRK				IAmb		IAmb	16 51 33.4		
	comp=Z,195nm,1.1s								
ILAR	**Eielson Array**	**88.80**	**13**	P		**P**	**16 51 31.1**	**-0.4**	
	comp=Z,184nm,0.9s,baz=222,slow=5.2,SNR=527								
ILAR				pP		**pwP**	**16 53 39.8**	**+0.1**	
	comp=Z,16nm,1.1s,baz=223,slow=4.9,SNR=5.1								
ILAR				PKiKP		**PKiKP**	**16 56 26.3**	**-0.4**	
	comp=Z,2.5nm,0.5s,baz=271,slow=3.0,SNR=15								
ILAR				PKKP		**PKKPdf**	**17 09 06.5**	**+1.2**	
	comp=Z,1.5nm,0.5s,baz=1.7,slow=2.4,SNR=14								
ILAR				PKPPKP		**P'P'df**	**17 17 12.8**	**-0.8**	
	comp=Z,1.3nm,1.0s,baz=344,slow=3.3,SNR=5.9								
ILAR	**Eielson Array**	**88.80**	**13**	P		**P**	**16 51 30.9**	**-0.5**	
UMPA	**Umpang Tak**	**88.96**	**288**	P		**P**	**16 51 34.0**	**+0.7**	
	comp=Z,3µmcomp=Z,350nm,1.1s								
POKR	**Poker Plat Res**	**88.99**	**13**	P			16 51 31.9		
	baz=209,SNR=48								
POKR				S			17 01 29.1		
	baz=209								
POKR	**Poker Plat Res**	**88.99**	**13**	P		**P**	**16 51 31.5**	**-0.8**	
POKR				IAmb		IAmb	16 51 33.3		
	comp=Z,360nm,1.2s								
MSO	**Missoula**	**89.00**	**38**	P			16 51 33.4		
	baz=238,SNR=34								
MSO				S			17 01 36.7		
	baz=238								
MSO	**Missoula**	**89.00**	**38**	P		**P**	**16 51 32.6**	**-0.3**	
DLMT	**Dillon**	**89.02**	**40**	P		**P**	**16 51 34.0**	**+0.9**	
DLMT				IAmb		IAmb	16 51 36.2		
	comp=Z,220nm,1.1s								
KMI	**Kunming**	**89.04**	**297**	⇓P		**P**	**16 51 35.5**	**+1.8**	
KMI				pP		pP	16 53 41.0	+1.6	
KMI				sP		sP	16 54 37.5	+0.2	
KMI				PP		**PP**	**16 55 14.0**	**-0.9**	
KMI				SKS		**SKSac**	**17 01 08.8**	**+0.2**	
KMI				S		**S**	**17 01 31.8**	**-2.2**	
KMI				sS		sS	17 05 12.3	-6.1	
KMI				SS		**SS**	**17 07 44.5**	**-1.4**	
KMI				pmax		pmax			
	comp=Z,380nm,1.3s								
KMI				pmax		pmax			
	comp=Z,2µm,3.5s								
S22A	**4UR Ranch, Cre**	**89.07**	**49**	P			16 51 35.3		
	baz=243								
S22A				S			17 01 41.5		
	baz=243								
REDW	**Red Top Meadow**	**89.08**	**42**	P		**P**	**16 51 34.6**	**+1.1**	
CRAI	**Chiangrai**	**89.15**	**292**	P		**P**	**16 51 35.0**	**+0.9**	
	comp=Z,263nm,1.6s								
SNOW	**Snow King Moun**	**89.19**	**42**	P		**P**	**16 51 35.2**	**+1.1**	
O20A	**White River Ci**	**89.21**	**46**	P			16 51 35.3		
	baz=242								
O20A				S			17 01 41.0		
	baz=242								
O20A	**White River Ci**	**89.21**	**46**	P		**P**	**16 51 34.9**	**+0.7**	
O20A				IAmb		IAmb	16 51 36.9		
	comp=Z,242nm,1.1s								
HHC	**Hu-ho-hao-te**	**89.23**	**315**	*e*P		**P**	**16 51 32.5**	**-1.6**	
HHC				PP		**PP**	**16 55 16.8**	**+0.9**	
HHC				S		**S**	**17 01 28.5**	**-6.3**	
HHC				pmax		pmax			
	comp=Z,2µm,8.9s								
K27K	**Chicken**	**89.26**	**15**	P			16 51 34.6		
	baz=214								
K27K				S			17 01 35.4		
	baz=214								
K27K	**Chicken**	**89.26**	**15**	P		**P**	**16 51 34.3**	**+0.8**	
JTMT	**Jette**	**89.30**	**37**	P		**P**	**16 51 34.0**	**-0.2**	
MOOW	**Moose Ponds**	**89.34**	**42**	P		**P**	**16 51 35.6**	**+0.9**	
LRM	**Limekiln Ridge**	**89.35**	**40**	P		**P**	**16 51 35.8**	**+1.0**	
BILL	**Bilibino**	**89.35**	**354**	*c i*P		**P**	**16 51 34.1**	**+0.2**	
BILL				*i* *PP		**pP**	**16 53 41.8**	**+1.5**	
BILL				*e*			16 55 14.8		
BILL				*e*S		**SKSac**	**17 01 06.0**	**-2.1**	
BILL				*i*			17 01 29.7		
BILL				pmax		pmax			
	comp=Z,241nm,1.2s								
BILL	**Bilibino**	**89.35**	**354**	P		**P**	**16 51 33.9**	**0.0**	
BILL				IAmb		IAmb	16 51 35.9		
	comp=Z,197nm,1.1s								
LOHW	**Long Hollow**	**89.36**	**42**	P		**P**	**16 51 36.0**	**+1.2**	
LOHW				IAmb		IAmb	16 51 37.7		
	comp=Z,109nm,0.8s								
PLCA	**Paso Flores**	**89.41**	**134**	P		**P**	**16 51 36.4**	**+1.3**	
	comp=Z,31nm,1.1s,baz=243,slow=4.8,SNR=31								
PLCA				pP		**pwP**	**16 53 43.0**	**-1.0**	
	comp=Z,32nm,1.1s,baz=239,slow=5.3,SNR=13								
PLCA				PKKPbc		**PKKPbc**	**17 09 07.7**	**0.0**	
	comp=Z,15nm,1.1s,baz=76,slow=4.3,SNR=14								
PLCA				PKP2bc			17 16 45.4		
	comp=Z,2.1nm,1.0s,baz=220,slow=6.5,SNR=2.9								
PLCA				PKPPKP		**P'P'df**	**17 17 12.2**	**-4.3**	
	comp=Z,8.7nm,1.1s,baz=44,slow=2.2,SNR=6.5								
PLCA	**Paso Flores**	**89.41**	**134**	P		**P**	**16 51 36.4**	**+1.3**	
PLCA	**Paso Flores**	**89.41**	**134**	*e*P		**P**	**16 51 36.5**	**+1.4**	
RDOG	**Red Dog Mine**	**89.42**	**6**	P			16 51 34.7		
	baz=195								
RDOG	**Red Dog Mine**	**89.42**	**6**	P		**P**	**16 51 34.6**	**+0.4**	
RDOG				IAmb		IAmb	16 51 36.3		
	comp=Z,339nm,1.3s								
QLMT	**Earthquake Lak**	**89.46**	**41**	P		**P**	**16 51 36.8**	**+1.5**	
FLWY	**Flagg Ranch**	**89.53**	**42**	P		**P**	**16 51 37.2**	**+1.7**	
YPP	**Pitchstone Pla**	**89.56**	**42**	P		**P**	**16 51 37.0**	**+1.2**	
BW06	**Boulder Array**	**89.61**	**43**	P			16 51 37.0		
	baz=241								
PD31	**Pinedale Array**	**89.61**	**43**	P		**P**	**16 51 36.5**	**+0.5**	
PD31				IAmb		IAmb	16 51 38.3		
	comp=Z,191nm,1.1s								
PDAR	**Pinedale Array**	**89.61**	**43**	P		**P**	**16 51 36.8**	**+0.8**	
	comp=Z,87nm,0.7s,baz=204,slow=3.3,SNR=362								
PDAR				PKKPbc		**PKKPbc**	**17 09 06.0**	**-1.6**	
	comp=Z,7.0nm,0.9s,baz=88,slow=4.4,SNR=23								
PDAR				PKPPKP		**P'P'df**	**17 17 15.8**	**+1.5**	
	comp=Z,3.5nm,1.0s,baz=104,slow=3.1,SNR=9.4								
PDAR	**Pinedale Array**	**89.61**	**43**	P		**P**	**16 51 35.9**	**-0.1**	
YHL	**Hebgen Lake**	**89.62**	**41**	P		**P**	**16 51 37.7**	**+1.7**	
YHL				IAmb		IAmb	16 51 39.7		
	comp=Z,321nm,1.2s								
CM35	**Chiang Mai Arr**	**89.63**	**290**	P		**P**	**16 51 37.0**	**+0.7**	
SMCO	**Snowmass**	**89.63**	**48**	P		**P**	**16 51 37.0**	**+0.6**	
SMCO				IAmb		IAmb	16 51 39.1		
	comp=Z,125nm,1.1s								
SMCO	**Snowmass**	**89.63**	**48**	⇓P		**P**	**16 51 37.5**	**+1.2**	
SMCO				⇓P		**P**	**16 51 37.6**	**+1.2**	
YMR	**Madison River**	**89.66**	**41**	P		**P**	**16 51 37.6**	**+1.5**	
YMR				IAmb		IAmb	16 51 39.8		
	comp=Z,274nm,1.2s								
CM01	**Chiang Mai Arr**	**89.70**	**290**	P		**P**	**16 51 38.4**	**+1.7**	
	comp=Z,4µmcomp=Z,463nm,1.1s								
BOZ	**Bozeman (W)**	**89.72**	**40**	P			16 51 37.8		
	baz=239,SNR=135								
BOZ				S			17 01 44.7		
	baz=239								
BOZ	**Bozeman (W)**	**89.73**	**40**	P		**P**	**16 51 37.3**	**+0.9**	
BOZ				pmax		pmax			
	comp=Z,220nm,1.2s								
BOZ	**Bozeman (W)**	**89.73**	**40**	P		**P**	**16 51 37.3**	**+0.9**	
BOZ				IAmb		IAmb	16 51 39.4		
	comp=Z,220nm,1.2s								
CM31	**Chiang Mai Arr**	**89.73**	**290**	P		**P**	**16 51 38.0**	**+1.2**	
CM31	**Chiang Mai Arr**	**89.73**	**290**	P		**P**	**16 51 38.6**	**+1.9**	
	SNR=343								
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P		**P**	**16 51 38.5**	**+1.7**	
	comp=Z,260nm,1.0s,baz=120,slow=2.9,SNR=597								
CMAR				pP		**pwP**	**16 53 44.8**	**-2.0**	
	comp=Z,1.8nm,0.8s,baz=48,slow=35,SNR=1.4								
CMAR				PP		**PP**	**16 55 20.7**	**+0.6**	
	comp=Z,24nm,1.1s,baz=129,slow=6.0,SNR=5.5								
CMAR				PKiKP		**PKiKP**	**16 56 30.4**	**+0.8**	
	comp=Z,2.1nm,0.7s,baz=233,slow=0.9,SNR=1.9								
CMAR				PKKP		**PKKPdf**	**17 09 02.4**	**+0.8**	
	comp=Z,0.7nm,0.6s,baz=292,slow=4.3,SNR=4.7								
CMAR				PKKPbc		**PKKPbc**	**17 09 07.5**	**+1.4**	
	comp=Z,4.8nm,0.7s,baz=285,slow=4.3,SNR=20								
CMAR				SKKPbc		SKKPbc	17 11 50.5	+0.2	
	comp=Z,1.4nm,0.9s,baz=287,slow=4.4,SNR=5.6								
CMAR				PKPPKP		**P'P'df**	**17 17 14.8**	**-0.8**	
	comp=Z,1.6nm,0.9s,baz=283,slow=4.4,SNR=9.2								
PRP	**Porcupine Dome**	**89.74**	**13**	P			16 51 35.8		
	baz=211								
PRP				S			17 01 37.0		
	baz=211								
PRP	**Porcupine Dome**	**89.74**	**13**	P		**P**	**16 51 35.6**	**-0.3**	
PRP				IAmb		IAmb	16 51 38.0		
	comp=Z,354nm,1.3s								
H17A	**Grant Village**	**89.77**	**42**	P			16 51 39.2		
	baz=240,SNR=120								
H17A				S			17 01 48.9		
	baz=240								
H17A	**Grant Village**	**89.77**	**42**	P		**P**	**16 51 38.2**	**+1.5**	
H17A				IAmb		IAmb	16 51 40.8		
	comp=Z,161nm,1.1s								
YHH	**Holmes Hill**	**89.79**	**41**	P		**P**	**16 51 38.4**	**+1.5**	
YHH				IAmb		IAmb	16 51 41.4		
	comp=Z,260nm,1.5s								
YNM	**Yellowstone No**	**89.85**	**41**	P		**P**	**16 51 38.4**	**+1.3**	
YNM				IAmb		IAmb	16 51 41.8		
	comp=Z,236nm,1.2s								
CMMT	**Chiang Mai**	**89.86**	**290**	P		**P**	**16 51 37.4**	**0.0**	
	comp=Z,2µmcomp=Z,215nm,1.5s								
CM33	**Chiang Mai Arr**	**89.86**	**290**	P		**P**	**16 51 38.0**	**+0.6**	
CHTO	**Chiang Mai**	**89.86**	**290**	⇓P		**P**	**16 51 38.7**	**+1.4**	
CHTO				⇓P		**P**	**16 51 38.8**	**+1.4**	
YNR	**Norris Junctio**	**89.86**	**41**	P		**P**	**16 51 38.8**	**+1.7**	
YNR				IAmb		IAmb	16 51 42.0		
	comp=Z,188nm,1.4s								
CM32	**Chiang Mai Arr**	**89.89**	**290**	P		**P**	**16 51 38.0**	**+0.5**	
LKWY	**Lake**	**89.96**	**42**	P		**P**	**16 51 39.2**	**+1.6**	
LKWY				pmax		pmax			
	comp=Z,167nm,1.2s								
LKWY	**Lake**	**89.96**	**42**	P		**P**	**16 51 39.2**	**+1.6**	
LKWY				IAmb		IAmb	16 51 41.9		
	comp=Z,167nm,1.1s								
DAWY	**Dawson**	**89.97**	**16**	P		**P**	**16 51 37.4**	**+0.5**	
DAWY				IAmb		IAmb	16 51 39.1		
	comp=Z,260nm,1.0s								
SDCO	**Great Sand Dun**	**90.01**	**49**	P		**P**	**16 51 38.6**	**+0.5**	
SDCO				IAmb		IAmb	16 51 40.6		
	comp=Z,121nm,1.2s								
SDCO	**Great Sand Dun**	**90.01**	**49**	P			16 51 39.1		
	baz=243								
SDCO				S			17 01 49.4		
	baz=243								
EGAK	**Eagle**	**90.11**	**15**	P			16 51 38.1		
	baz=215,SNR=179								
EGAK	**Eagle**	**90.11**	**15**	P		**P**	**16 51 37.8**	**+0.3**	
BTO	**Baotou**	**90.15**	**314**	*e*P		**P**	**16 51 39.5**	**+1.1**	
BTO				pmax		pmax			
	comp=Z,570nm,1.5s								
HRY	**Holter Researc**	**90.17**	**39**	P		**P**	**16 51 38.9**	**+0.5**	
COLD	**Coldfoot**	**90.34**	**11**	P			16 51 39.4		
	baz=206,SNR=223								
COLD				S			17 01 44.4		
	baz=206								
COLD	**Coldfoot**	**90.35**	**11**	P		**P**	**16 51 39.1**	**+0.6**	
MSTX	**Muleshoe**	**90.37**	**54**	P			16 51 40.5		
	baz=245								
MSTX				S			17 01 52.7		
	baz=245								
MSTX	**Muleshoe**	**90.37**	**54**	P		**P**	**16 51 39.7**	**+0.1**	
MSTX				IAmb		IAmb	16 51 41.9		
	comp=Z,116nm,0.9s								
T25A	**Trinidad**	**90.52**	**50**	P			16 51 41.3		
	baz=244								
T25A				S			17 01 53.2		
	baz=244								
T25A	**Trinidad**	**90.52**	**50**	P		**P**	**16 51 40.8**	**+0.5**	
T25A				IAmb		IAmb	16 51 42.7		
	comp=Z,106nm,1.1s								
CD2	**Chengdu**	**90.53**	**303**	P		**P**	**16 51 41.5**	**+1.2**	
CD2				pP		pP	16 53 47.3	+1.2	
CD2				sP		sP	16 54 45.3	+1.3	
CD2				SKS		**SKSac**	**17 01 15.5**	**-1.1**	
CD2				S		**ScS**	**17 01 52.0**	**+3.2**	
CD2				SS		**SS**	**17 08 10.8**	**+4.0**	
CD2				pmax		pmax			
	comp=Z,140nm,0.9s								
CD2				pmax		pmax			
	comp=Z,2µm,4.3s								
RWWY	**Rawlins**	**90.63**	**45**	P		**P**	**16 51 40.4**	**-0.4**	
RWWY				IAmb		IAmb	16 51 42.1		
	comp=Z,253nm,1.1s								
FYU	**Fort Yukon**	**90.70**	**13**	P		**P**	**16 51 39.9**	**-0.3**	
833A	**Chaparral WMA,**	**90.72**	**60**	P			16 51 42.4		
	baz=247								
833A				S			17 01 53.9		
	baz=247								
BI02	**San Fabin de**	**90.75**	**130**	P		**P**	**16 51 41.4**	**0.0**	
Q24A	**Divide**	**90.80**	**48**	P			16 51 42.9		
	baz=244								
Q24A				S			17 01 56.2		
	baz=244								
ISCO	**Idaho Springs**	**90.85**	**47**	P			16 51 43.1		
	baz=243								
ISCO				S			17 01 54.7		
	baz=243								
ISCO	**Idaho Springs**	**90.85**	**47**	P		**P**	**16 51 42.6**	**+0.7**	
ISCO				pmax		pmax			
	comp=Z,43nm,1.0s								
ISCO	**Idaho Springs**	**90.85**	**47**	P		**P**	**16 51 42.6**	**+0.7**	
RLMT	**Red Lodge**	**90.93**	**41**	P			16 51 43.6		
	baz=241								
RLMT				S			17 01 55.8		
	baz=241								
RLMT	**Red Lodge**	**90.94**	**41**	P		**P**	**16 51 43.0**	**+1.0**	
RLMT				IAmb		IAmb	16 51 45.1		
	comp=Z,108nm,1.2s								
GCMT	**Greycliff**	**91.01**	**41**	P		**P**	**16 51 42.8**	**+0.5**	
EFI	**East Falkland**	**91.06**	**148**	*c*P		**P**	**16 51 43.7**	**+1.4**	
EFI				pmax		pmax			
	comp=Z,225nm,2.5s								
EFI	**East Falkland**	**91.06**	**148**	P		**P**	**16 51 43.1**	**+0.8**	
EFI				IAmb		IAmb	16 51 44.6		
	comp=Z,248nm,1.4s								
N23A	**Red Feather La**	**91.11**	**46**	P			16 51 44.5		
	baz=243								
N23A				S			17 01 58.6		
	baz=243								
JCT	**Junction City**	**91.24**	**58**	P			16 51 44.4		
	baz=246								
JCT				S			17 01 58.7		
	baz=246								
JCT	**Junction City**	**91.24**	**58**	P		**P**	**16 51 44.0**	**+0.4**	
JCT				pmax		pmax			
	comp=Z,53nm,0.9s								
JCT	**Junction City**	**91.24**	**58**	P		**P**	**16 51 44.0**	**+0.4**	
JCT	**Junction City**	**91.24**	**58**	⇓P		**P**	**16 51 44.0**	**+0.4**	
JCT				⇑P		**PcP**	**16 51 44.8**	**+0.7**	
K22A	**Casper**	**91.52**	**45**	P		**P**	**16 51 45.3**	**+0.5**	
K22A				IAmb		IAmb	16 51 47.2		
	comp=Z,145nm,1.1s								
K22A	**Casper**	**91.52**	**45**	P			16 51 45.8		
	baz=243								
K22A				S			17 02 01.1		
	baz=243								
PHWY	**Pilot Hill**	**91.63**	**46**	P		**P**	**16 51 46.0**	**+0.6**	
TOLK	**Toolik Lake Re**	**91.72**	**10**	P			16 51 45.4		
	baz=207,SNR=104								
TOLK				S			17 01 55.6		
	baz=207								
TOLK	**Toolik Lake Re**	**91.72**	**10**	P		**P**	**16 51 45.1**	**+0.2**	
TOLK				IAmb		IAmb	16 51 46.9		
	comp=Z,278nm,1.4s								
BO01	**Tunca**	**91.91**	**128**	P		**P**	**16 51 46.8**	**+0.2**	
BO02	**Sierra Bellavi**	**91.95**	**128**	P		**P**	**16 51 47.1**	**+0.2**	
MT01	**Popeta**	**92.02**	**127**	P		**P**	**16 51 47.3**	**+0.1**	
MT01				IAmb		IAmb	16 51 49.3		
	comp=Z,172nm,1.4s								
EGMT	**Eagleton**	**92.05**	**39**	P			16 51 47.9		
	baz=241								
EGMT				S			17 02 04.4		
	baz=241								
EGMT	**Eagleton**	**92.05**	**39**	P		**P**	**16 51 47.4**	**+0.5**	
EGMT				IAmb		IAmb	16 51 49.4		
	comp=Z,95nm,1.1s								
ABTX	**Abilene, Hawle**	**92.22**	**56**	P			16 51 48.9		
	baz=247								
ABTX				S			17 02 07.0		
	baz=247								
ABTX	**Abilene, Hawle**	**92.22**	**56**	P		**P**	**16 51 48.5**	**+0.5**	
ABTX				IAmb		IAmb	16 51 50.3		
	comp=Z,142nm,1.1s								
MT09	**Talagante**	**92.26**	**127**	P		**P**	**16 51 47.8**	**-0.6**	
YAK	**Yakutsk**	**92.26**	**338**	*d i*P		**P**	**16 51 46.9**	**-0.5**	
YAK				*e**PP		**pwP**	**16 53 55.1**	**-1.1**	
YAK				*e*S		**SKSac**	**17 01 21.5**	**-3.0**	
YAK				*e*			17 01 59.0		
YAK				*e*SS		**SS**	**17 08 26.1**	**-3.7**	
YAK				pmax		pmax			
	comp=Z,338nm,1.0s								
YAK				pmax		pmax			
	comp=N,45nm,1.1s								
YAK				pmax		pmax			
	comp=E,74nm,1.2s								
YAK				pmax		pmax			
	comp=Z,207nm,1.5s								
YAK				pmax		pmax			
	comp=E,128nm,1.5s								
YAK				pmax		pmax			
	comp=N,157nm,1.6s								
YAK				smax		smax			
	comp=E,137nm,1.8s								
YAK				smax		smax			
	comp=N,345nm,2.0s								
YAK	**Yakutsk**	**92.26**	**338**	P		**P**	**16 51 46.6**	**-0.7**	
EPYK	**Eagle Plains**	**92.49**	**16**	P			16 51 48.9		
	baz=219,SNR=90								
EPYK	**Eagle Plains**	**92.49**	**16**	P		**P**	**16 51 48.2**	**-0.3**	
LZH	**Lanzhou**	**92.57**	**308**	⇓P		**P**	**16 51 51.0**	**+1.3**	
LZH				pP		pP	16 53 54.5	-1.3	
LZH				sP		sP	16 54 56.5	+3.0	
LZH				PP		**PP**	**16 55 39.0**	**-3.0**	
LZH				SKS		**SKSac**	**17 01 24.8

WMOK Wichita Mounta 93.70 54 P **P** **16 51 54.5 -0.3**
WMOK pmax pmax
comp=Z,23nm,1.3s
WMOK Wichita Mounta 93.70 54 P **P** **16 51 54.5 -0.3**
RSSD Black Hills 93.80 44 P **P** **16 51 55.3 +0.1**
RSSD pmax pmax
comp=Z,60nm,1.0s
RSSD Black Hills 93.80 44 P **P** **16 51 55.3 +0.1**
RSSD IAmb IAmb 16 51 57.1
comp=Z,60nm,1.0s
RSSD Black Hills 93.80 44 P 16 51 55.8
baz=245
RSSD S 17 02 19.9
baz=245
OGNE Ogallala 93.81 48 P 16 51 56.0
baz=246
OGNE Ogallala 93.81 48 P **P** **16 51 55.2 +0.1**
OGNE IAmb IAmb 16 51 57.4
comp=Z,62nm,0.9s
U32A Winter Ranch, 94.17 53 P **P** **16 51 56.9 +0.1**
MTO3 Montecristo 94.31 76 P **P** **16 51 58.6 +0.4**
Z35A Perchaven, San 94.34 56 P **P** **16 51 56.1 -1.5**
CBKS Cedar Bluff 94.58 50 P 16 51 59.5
baz=247
CBKS S 17 02 26.8
baz=247
CBKS Cedar Bluff 94.58 50 P **P** **16 51 59.2 +0.6**
CBKS pmax pmax
comp=Z,188nm,1.4s
CBKS Cedar Bluff 94.58 50 P **P** **16 51 59.2 +0.6**
CBKS IAmb IAmb 16 52 01.7
comp=Z,188nm,1.4s
INK Inuvik 94.78 15 P 16 51 58.6
baz=222
INK Inuvik 94.78 15 PP **PP** **16 55 55.3 -2.7**
comp=Z,111nm,1.0s,baz=211,slow=5.3,SNR=3.3
INK PKiKP **PKiKP** **16 56 37.2 +0.4**
comp=Z,7.8nm,1.0s,baz=295,slow=2.1,SNR=1.6
INK PKKP **PKKPdf** **17 08 52.6 -1.9**
comp=Z,2.7nm,0.7s,baz=358,slow=5.6,SNR=8.1
INK Inuvik 94.78 15 P **P** **16 51 58.2 -0.5**
INK IAmb IAmb 16 52 00.1
comp=Z,131nm,1.1s
OK032 Salt Plains WL 94.92 53 P **P** **16 52 00.1 -0.1**
CROK Carrier 94.98 53 P **P** **16 52 00.1 -0.4**
ZON Zonda 95.01 126 P **P** **16 52 01.2 +0.3**
ZON pmax pmax
comp=Z,62nm,1.5s
ZON Zonda 95.01 126 P **P** **16 52 01.2 +0.3**
R32A Long Quarter, 95.17 51 P **P** **16 52 01.6 +0.3**
ULN Ulaanbaatar 95.29 319*d* iP **P** **16 52 01.4 -0.4**
ULN pmax pmax
comp=Z,39nm,1.2s
ULN Ulaanbaatar 95.29 319 P **P** **16 52 01.1 -0.7**
ULN IAmb IAmb 16 52 03.2
comp=Z,95nm,1.4s
KAN09 Caldwell North 95.48 52 P **P** **16 52 02.9 +0.2**
KAN13 South Haven SW 95.54 53 P **P** **16 52 03.6 +0.6**
DGMT Dagmar 95.56 40 P 16 52 04.2
baz=245
DGMT S 17 02 37.4
baz=245
DGMT Dagmar 95.56 40 P **P** **16 52 03.7 +0.9**
DGMT IAmb IAmb 16 52 05.5
comp=Z,124nm,1.0s
LKP Lekhapani 95.60 297 *e*P **P** **16 52 03.6 +0.2**
LKP IAmb IAmb 16 52 05.3
comp=Z,154nm,1.1s
OK030 Cody Creek RV 95.66 54 P **P** **16 52 03.5 0.0**
SONM Songino Array 95.68 319 P **P** **16 52 03.0 -0.5**
comp=Z,12nm,1.0s,baz=128,slow=3.1,SNR=74
SONM pP **pwP** **16 54 13.5 +0.4**
comp=Z,5.1nm,1.0s,baz=144,slow=2.9,SNR=3.7
SONM PP **PP** **16 56 01.3 -4.2**
comp=Z,15nm,1.1s,baz=154,slow=0.5,SNR=7.6
SONM PKiKP **PKiKP** **16 56 39.4 +0.2**
comp=Z,2.1nm,0.5s,baz=116,slow=2.1,SNR=6.6
SONM PKKPbc **PKKPbc** **17 08 50.9 -1.2**
comp=Z,1.8nm,0.6s,baz=255,slow=2.4,SNR=6.4
SONM SKKP 17 11 32.7
comp=Z,4.6nm,1.2s,baz=298,slow=3.2,SNR=5.3
SONM PKPPKP 17 17 05.9
comp=Z,1.6nm,1.1s,baz=209,slow=2.7,SNR=3.8
BOD Bodaibo 96.15 330⇑ *i*P **P** **16 52 04.1 -1.1**
BOD pmax pmax
comp=Z,74nm,0.7s
T35A Sooner Cattle 96.23 53 P **P** **16 52 05.6 -0.5**
X37A Clayton 96.26 56 P **P** **16 52 06.4 +0.2**
MOKO MOKOCHONG 96.37 296 *e*P **P** **16 52 06.9 -0.2**
MOKO IAmb IAmb 16 52 09.0
comp=Z,284nm,1.4s
TUL1 Leonard 96.41 54 S 17 02 43.4
baz=249
DIBR DIBRUGARH 96.43 297 *e*P **P** **16 52 08.2 +1.0**
DIBR IAmb IAmb 16 52 09.6
comp=Z,196nm,0.5s
KOHI KOHIMA 96.51 295 *e*P **P** **16 52 07.0 -0.8**
BGNE Belgrade 96.69 48 P 16 52 10.2
baz=248
BGNE Belgrade 96.69 48 P **P** **16 52 09.3 +1.3**
K31A O'Neill 96.72 47 P **P** **16 52 08.5 +0.3**
K31A IAmb IAmb 16 52 10.5
comp=Z,67nm,0.8s
JORH JORHAT 96.73 296 *e*P **P** **16 52 08.7 +0.1**
GTA Gaotai 96.79 309⇓ P **P** **16 52 09.0 +0.3**
GTA pP pwP 16 54 18.3 -1.0
GTA sP sP 16 55 15.8 +3.0
GTA PP **PP** **16 56 11.5 -2.7**
GTA SKS **SKSac** **17 01 48.5 -1.4**
GTA pmax pmax
comp=Z,68nm,1.6s
GTA pmax pmax
comp=Z,580nm,7.4s
ATAH Atahualpa 96.92 100 pP pP 16 54 20.6 +3.8
comp=Z,4.1nm,0.8s,baz=204,slow=3.1,SNR=2.5
KSU1 Kansas State U 96.94 51 P 16 52 11.5
baz=249
E28A Huff 96.96 43 P **P** **16 52 09.3 +0.1**
YKA Yellowknife Ar 97.08 25 P **P** **16 52 09.4 +0.2**
comp=Z,19nm,1.0s,baz=236,slow=4.2,SNR=124
YKA pP **pwP** **16 54 19.9 +0.6**
comp=Z,3.2nm,0.9s,baz=235,slow=4.3,SNR=4.9
YKA PP **PP** **16 56 12.2 -3.4**
comp=Z,9.2nm,1.2s,baz=244,slow=7.8,SNR=6.2
YKA PKiKP **PKiKP** **16 56 41.3 +0.4**
comp=Z,2.7nm,0.8s,baz=248,slow=1.1,SNR=10
YKA PKKPbc **PKKPbc** **17 08 47.0 -1.6**
comp=Z,1.0nm,0.4s,baz=354,slow=4.7,SNR=16
YKA SKKP 17 11 31.2
comp=Z,3.3nm,1.1s,baz=63,slow=4.9,SNR=7.0
YKA PKPPKP 17 16 54.1
comp=Z,1.1nm,1.0s,baz=66,slow=2.5,SNR=5.3
SILR SILCHAR 97.31 294 *e*P **P** **16 52 11.7 +0.6**
ZIRO ZIRO 97.33 297 *e*P **P** **16 52 11.8 +0.4**
U38A Gravette 97.66 54 Pdif **P** **16 52 13.2 +0.7**
W39A Magazine 97.69 55 P 16 52 13.8
baz=250
W39A Magazine 97.69 55 Pdif **P** **16 52 13.2 +0.5**
TEZP TEZPUR 97.92 295 *e*P Pdif 16 52 13.8 -0.1
C36M Paulatuk 97.97 17 P 16 52 13.1
baz=230
BELO BELONIA 97.97 292 *e*P **P** **16 52 14.5 +0.4**
MDND Maddock 98.13 42 P 16 52 15.2
baz=248
AGT Agartala 98.35 292 *e*P **P** **16 52 16.1 +0.3**
SHL Shillong 98.35 294⇑ *e*P Pdif 16 52 15.9 -0.2
SHL Shillong 98.35 294 P **P** **16 52 17.1 +1.1**
SNR=19
ZAK Zakamensk 98.58 321 *e*P Pdif 16 52 15.4 -0.9
ZAK pmax pmax
comp=Z,24nm,1.3s
ZAK pmax pmax
comp=Z,34nm,2.0s
ECSD EROS Data Cent 98.59 47 P 16 52 17.1
baz=249
ECSD EROS Data Cent 98.59 47 Pdif **P** **16 52 16.7 +0.2**
ECSD IAmb IAmb 16 52 18.3
comp=Z,43nm,1.2s
GUWA GUWAHATI 98.72 295 *e*P **P** **16 52 17.6 +0.2**
U40A Yellville 98.79 55 P 16 52 18.5
baz=251
TLY Talaya 98.86 322*d* iP Pdif 16 52 16.6 -0.8
TLY pmax pmax
comp=Z,20nm,1.1s
W41B Gary Mavity, V 98.87 56 P 16 52 19.9
baz=251

S39A Bolivar 98.88 53 Pdif Pdif 16 52 17.1 -0.8
LVC Limon Verde 98.94 118 P **P** **16 52 19.2 +0.1**
comp=Z,4.6nm,1.0s,baz=280,slow=12,SNR=2.7
LVC pP **pwP** **16 54 28.6 -0.4**
comp=Z,1.7nm,0.5s,baz=243,slow=7.3,SNR=2.7
LVC Limon Verde 98.94 118 P Pdif 16 52 18.0 -1.0
LVC pmax pmax
comp=Z,13nm,1.3s
LVC Limon Verde 98.94 118 Pdif Pdif 16 52 17.9 -1.1
LVC Limon Verde 98.94 118 *e*P **P** **16 52 19.9 +0.8**
FFC Flin Flon 99.37 35 P **Pdif** **16 52 18.6 -1.0**
FFC pmax pmax
comp=Z,15nm,1.4s
FFC Flin Flon 99.37 35 Pdif **Pdif** **16 52 18.6 -1.0**
F33A 5 Mile Ranch, 99.53 45 Pdif **Pdif** **16 52 20.0 -0.5**
R40A Maddies Statio 99.86 53 Pdif **Pdif** **16 52 22.2 0.0**
LSA Lhasa 100.28 298 P **Pdif** **16 52 24.8 -0.1**
LSA Lhasa 100.28 298 Pdiff **Pdif** **16 52 25.7 +0.8**
MOY Mondy 100.39 321 *e*P **Pdif** **16 52 24.0 -0.4**
CCM Cathedral Cave 100.55 53 P 16 52 25.7
baz=252
AGMN Agassiz Nation 100.64 42 P 16 52 25.6
baz=251
AGMN Agassiz Nation 100.64 42 Pdif **Pdif** **16 52 25.2 -0.2**
ULM Lac du Bonnet 101.27 40 P **Pdif** **16 52 28.6 +0.5**
comp=Z,6.5nm,1.0s,baz=236,slow=7.0,SNR=5.5
ULM pP pwP 16 54 36.9 -1.5
comp=Z,2.5nm,0.9s,baz=246,slow=3.9,SNR=3.0
ULM PKiKP **PKiKP** **16 56 48.8 0.0**
comp=Z,7.5nm,0.8s,baz=267,slow=3.9,SNR=7.2
ULM PKKPbc **PKKPbc** **17 08 34.7 -1.9**
comp=Z,2.2nm,0.4s,baz=64,slow=5.2,SNR=7.5
ULM Lac du Bonnet 101.27 40 Pdif **Pdif** **16 52 27.1 -1.1**
F36A Milaca 101.37 45 Pdif **Pdif** **16 52 29.1 +0.4**
SPMN Marine on St. 101.65 46 P 16 52 31.5
baz=252
GTK Tadong 101.69 295 *e*P **Pdif** **16 52 31.7 +0.9**
GTK IAmb IAmb 16 52 33.8
comp=Z,24nm,1.1s
LPAZ La Paz 102.42 113 P **Pdif** **16 52 37.0 +2.1**
comp=Z,2.7nm,0.7s,baz=283,slow=4.3,SNR=11
LPAZ pP **pPdif** **16 54 46.1 +4.3**
comp=Z,5.7nm,1.2s,baz=259,slow=3.1,SNR=5.5
LPAZ PKiKP **PKiKP** **16 56 53.7 +0.9**
comp=Z,21nm,1.3s,baz=252,slow=5.4,SNR=6.7
LPAZ S **SKSac** **17 02 19.3 +0.1**
comp=Z,3.2nm,1.0s,baz=154,slow=24,SNR=6.5
LPAZ PKKPbc **PKKPbc** **17 08 32.6 -0.5**
comp=Z,7.2nm,0.9s,baz=31,slow=3.9,SNR=12
LPAZ PKPPKP P'P'df 17 16 45.2 -8.1
comp=Z,1.1nm,0.8s,baz=51,slow=3.6,SNR=4.1
PALK Pallekele 102.54 273 P **Pdif** **16 52 35.6 +0.9**
comp=Z,7.7nm,0.9s,baz=287,slow=2.2,SNR=7.0
PALK PKiKP **PKiKP** **16 56 53.0 +0.6**
comp=Z,22nm,1.0s,baz=204,slow=4.4,SNR=8.4
EYMN Ely 103.31 44 P 16 52 37.1
baz=254
TOLC Tolima 104.00 90 *e*P **PKiKP** **16 56 55.3 -0.1**
GUY2C Guyana, Caldas 104.18 90 *e*P **PKiKP** **16 56 53.8 -2.1**
ROSC El Rosal 105.02 91 PKKPbc PKKPbc 17 08 25.7 +0.7
comp=Z,12nm,0.4s,baz=336,slow=18,SNR=3.1
ZARC Zaragoza, Cauc 105.42 88 *e*P **PKiKP** **16 56 54.7 -2.9**
SPBC San Pablo de B 105.53 90 *e*P **PKiKP** **16 56 57.7 -0.2**
TKL Tuckaleechee C 105.63 57 PKKPab PKKPab 17 08 38.0 -3.4
comp=Z,1.0nm,0.4s,baz=117,slow=13,SNR=1.8
CPUP Villa Florida 106.21 127 PKiKP **PKiKP** **16 56 58.9 +0.1**
comp=Z,1.1nm,0.7s,baz=325,slow=5.5,SNR=1.9
CPUP PP **PP** **16 57 23.6 +0.5**
comp=Z,9.1nm,1.1s,baz=250,slow=7.7,SNR=7.6
CPUP PKKPbc **PKKPbc** **17 08 21.0 -0.6**
comp=Z,9.7nm,1.1s,baz=43,slow=0.7,SNR=5.6
CPUP PKKP **PKKPdf** **17 08 34.1 +3.0**
comp=Z,3.5nm,0.8s,baz=323,slow=1.8,SNR=4.0
CPUP PKPPKP 17 16 43.7
comp=Z,2.6nm,1.0s,baz=70,slow=4.7,SNR=2.9
RUSC La Rusia 106.54 90 *e*P **PKiKP** **16 56 56.1 -4.2**
SMLC San Martn de 106.58 87 *e*P **PKiKP** **16 56 57.5 -2.3**
WMQ Urumqi 106.76 311 Pdif **Pdif** **16 52 53.3 +0.4**
WMQ SS SS 17 11 50.8 +0.6
WMQ AMB AMB
comp=Z,1μm,5.1s
ACSO Alum Creek Sta 107.32 53 P 16 57 00.3
baz=257
P52A Corning 107.83 54 P 16 57 01.1
baz=257
Q53A Leroy 108.12 55 P 16 57 01.6
baz=258
RES Resolute Bay 108.31 16 PKiKP **PKiKP** **16 57 00.9 -0.3**
comp=Z,14nm,0.8s,baz=261,slow=3.2,SNR=32
RES PKKPbc **PKKPbc** **17 08 15.4 -0.6**
comp=Z,2.2nm,0.9s,baz=269,slow=4.1,SNR=4.9
RES PKKPab **PKKPab** **17 08 26.9 -1.7**
comp=Z,2.1nm,0.6s,baz=163,slow=6.9,SNR=12
SIV San Ignacio 108.57 116 PKiKP **PKiKP** **16 57 03.6 +0.1**
comp=Z,2.9nm,0.7s,baz=250,slow=0.9,SNR=5.6
SIV PP **PP** **16 57 41.8 +1.3**
comp=Z,12nm,1.1s,baz=248,slow=8.9,SNR=18
O53A New Philadelph 108.65 53 P 16 57 02.9
baz=258
R55A Marlinton 109.08 55 P 16 57 04.0
baz=258
M53A Wi Miller and 109.28 52 P 16 57 04.1
baz=259
ZSN Zaisan 109.43 314 *e*Pdif **Pdif** **16 53 03.3 -1.3**
baz=314
ZSN *e*PKiKP **PKiKP** **16 57 02.9 -1.3**
comp=Z,16nm,1.3s,baz=314
ZSN Zaisan 109.43 314 *e*P **Pdif** **16 53 03.3 -1.3**
ZSN pmax pmax
comp=Z,16nm,1.3s
I51A Listowel 109.47 50 P 16 57 04.5
baz=260
R56A Bull Pasture M 109.65 55 P 16 57 05.2
baz=259
L53A Girard 109.69 52 P 16 57 05.0
baz=259
SDV Santo Domingo 109.82 88 PKiKP **PKiKP** **16 57 06.0 -0.1**
comp=Z,15nm,0.8s,baz=205,slow=2.8,SNR=12
SDV Sdiff **SKSac** **17 02 50.6 -0.1**
comp=Z,2.2nm,0.2s,baz=4.1,slow=22,SNR=19
SDV Santo Domingo 109.82 88 *e*P **PKiKP** **16 57 04.8 -1.3**
Q56A Snyder Ridge, 109.94 55 P 16 57 05.7
baz=259
M54A Oil Creek Stat 110.04 52 P 16 57 05.5
baz=260
P56A Dayton Farm, R 110.30 54 P 16 57 05.9
baz=259
ZALV Zalesovo Beam 110.44 321 Pdiff **Pdif** **16 53 08.7 -0.1**
comp=Z,2.5nm,1.0s,baz=90,slow=3.0,SNR=9.5
ZALV PKiKP **PKiKP** **16 57 04.6 -1.1**
comp=Z,31nm,0.6s,baz=120,slow=0.8,SNR=98
ZALV PP **PP** **16 57 51.9 -1.5**
comp=Z,10nm,1.0s,baz=83,slow=4.6,SNR=3.9
ZALV Sdiff **SKSac** **17 02 49.2 -1.9**
comp=Z,3.7nm,0.9s,baz=303,slow=33,SNR=6.3
ZALV PKKPbc **PKKPbc** **17 08 07.4 -1.4**
comp=Z,0.8nm,0.6s,baz=329,slow=1.7,SNR=3.5
ZALV SKKPbc **SKKPbc** **17 10 56.0 -2.9**
comp=Z,1.5nm,0.6s,baz=270,slow=3.0,SNR=3.9
O56A Blue Knob Stat 110.64 54 P 16 57 06.6
baz=260
NRIK Noril'sk 110.71 338 Pdiff **Pdif** **16 53 09.9 +0.2**
comp=Z,0.7nm,0.3s,baz=104,slow=3.7,SNR=11
NRIK PKiKP **PKiKP** **16 57 05.5 -0.4**
comp=Z,12nm,0.6s,baz=95,slow=2.2,SNR=26
NRIK PP **PP** **16 57 51.8 -3.1**
comp=Z,42nm,1.2s,baz=101,slow=6.3,SNR=17
P57A Homestead Farm 110.92 55 P 16 57 07.1
SADO Sadowa 110.97 49 PKiKP **PKiKP** **16 57 07.2 +0.1**
comp=Z,15nm,1.0s,baz=254,slow=8.8,SNR=4.3
SADO PP **PP** **16 57 55.0 -2.4**
comp=Z,16nm,1.1s,baz=275,slow=5.4,SNR=4.6
SADO PKKPab **PKKPab** **17 08 18.9 +1.5**
comp=Z,16nm,0.8s,baz=89,slow=4.5,SNR=8.4
MK31 Makanchi Array 111.06 313 *i* PKiKP **PKiKP** **16 57 05.9 -1.3**
MKAR Makanchi Array 111.06 313 Pdiff **Pdif** **16 53 11.5 -0.4**
comp=Z,3.9nm,0.6s,baz=100,slow=4.1,SNR=22
MKAR PKiKP **PKiKP** **16 57 06.5 -0.7**
comp=Z,35nm,0.8s,baz=102,slow=0.8,SNR=76
MKAR PP **PP** **16 57 57.5 -0.6**
comp=Z,16nm,1.1s,baz=100,slow=6.7,SNR=3.7
MKAR Sdiff **SKSac** **17 02 52.3 -1.7**
comp=Z,2.6nm,1.0s,baz=180,slow=1.2,SNR=2.6
MKAR PKKPbc **PKKPbc** **17 08 05.8 -0.9**
comp=Z,4.9nm,0.6s,baz=260,slow=3.7,SNR=23
MKAR PKKPab **PKKPab** **17 08 17.5 +0.5**
comp=Z,3.8nm,1.0s,baz=276,slow=5.6,SNR=4.8
MKAR SKKPbc **SKKPbc** **17 10 53.5 -3.2**
comp=Z,4.5nm,1.1s,baz=270,slow=3.6,SNR=5.3
M56A Emporium 111.14 52 P 16 57 07.8
baz=260
MAKZ Makanchi 111.28 313 PKiKP **PKiKP** **16 57 05.4 -2.2**
O57A Amberson 111.33 54 P 16 57 08.1
baz=260
H53A Bobcaygeon 111.33 49 P 16 57 07.9
baz=261
N57A Milroy 111.49 53 P 16 57 08.2
baz=261
L56A Greenwood 111.70 52 P 16 57 08.6
baz=261
G54A Lake Saint Pet 111.80 48 P 16 57 08.6
baz=262
O58A Lewisberry 111.86 54 P 16 57 08.9
baz=261
M57A Sunshine Farm, 111.89 53 P 16 57 09.5
baz=261
ALGO Algonquin Park 111.90 48 P 16 57 08.7
baz=262
K56A Middlesex 111.96 51 P 16 57 09.2
baz=262
N58A Sunbury 112.13 53 P 16 57 09.7
baz=261
L57A Andrews Acres 112.20 52 P 16 57 09.8
baz=262
J56A Wolcott 112.38 51 P 16 57 09.6
baz=262
O59A Robesonia 112.44 54 P 16 57 10.3
baz=261
SHLS Shalkode 112.53 309 *e*PKiKP **PKiKP** **16 57 08.5 -1.9**
comp=Z,21nm,1.3s,baz=309
SHLS Shalkode 112.53 309 *i* PKiKP **PKiKP** **16 57 08.4 -1.9**
SHLS pmax pmax
comp=Z,21nm,1.3s
PDGK Podgornoye 112.54 309 PKiKP **PKiKP** **16 57 09.0 -1.3**
K57A Scipio Center 112.55 51 P 16 57 10.3
baz=262
MATQ Matagami 112.63 44 P 16 57 09.4
baz=264
P60A Greenville 112.78 55 P 16 57 10.9
baz=261
SEM Semipalatinsk 112.84 317 *e*Pdif **Pdif** **16 53 18.1 -1.9**
baz=317
SEM *e*PKiKP **PKiKP** **16 57 08.6 -2.2**
comp=Z,30nm,1.2s,baz=317
SEM Semipalatinsk 112.84 317 *e*P **Pdif** **16 53 18.0 -1.9**
SEM *i* 16 57 08.6
SEM pmax pmax
comp=Z,30nm,1.2s
N59A State Game Lan 112.85 53 P 16 57 11.4
baz=262
UZB Uzynbulak 112.85 309 *e*Pdif **Pdif** **16 53 18.2 -1.9**
baz=309
UZB *e*PKiKP **PKiKP** **16 57 09.5 -1.5**
comp=Z,72nm,2.0s,baz=309
UZB Uzynbulak 112.85 309 *e*P **Pdif** **16 53 18.2 -1.9**
UZB *i* 16 57 09.4
UZB pmax pmax
comp=Z,71nm,2.0s
BINY Binghamton 112.87 52 P 16 57 11.2
baz=262
L58A Harry Jones Me 112.95 52 P 16 57 11.7
baz=262
LSQQ Lebel-sur-Quev 112.99 44 P 16 57 10.6
baz=264
J57A Williamstown 113.02 51 P 16 57 11.3
baz=263
O60A Telford 113.03 54 P 16 57 11.5
baz=262
KPKS Kokpek 113.14 309 *e*PKiKP **PKiKP** **16 57 10.0 -1.4**
baz=310
KPKS Kokpek 113.14 309 *i* PKiKP **PKiKP** **16 57 10.0 -1.4**
M59A Waymart 113.19 53 P 16 57 12.1
baz=262
K58A Earlville 113.19 51 P 16 57 11.7
baz=263
SATY Saty 113.29 309 *e*Pdif **Pdif** **16 53 20.5 -1.5**
baz=309
SATY *e*PKiKP **PKiKP** **16 57 10.3 -1.5**
comp=Z,41nm,1.7s,baz=309
SATY Saty 113.29 309 *e*P **Pdif** **16 53 20.5 -1.5**
SATY *i* 16 57 10.2
SATY pmax pmax
comp=Z,41nm,1.7s
I57A Carthage 113.33 50 P 16 57 11.9
baz=263
E55A Montcerf-Lytto 113.34 47 P 16 57 11.5
baz=264
N60A Cedar Hill Far 113.34 53 P 16 57 12.1
baz=262
TDK Taldyqorghan 113.52 311 *e*PKiKP **PKiKP** **16 57 10.5 -1.5**
baz=311
TDK Taldyqorghan 113.52 311 *i* PKiKP **PKiKP** **16 57 10.4 -1.5**
H57A Richville 113.58 50 P 16 57 11.9
baz=264
M60A Port Jervis 113.76 53 P 16 57 12.3
baz=263
K59A Cooperstown 113.77 51 P 16 57 12.3
baz=263
I58A Old Forge 113.79 50 P 16 57 12.4
baz=263
D55A Sainte-Anne-du 113.79 47 P 16 57 12.4
baz=264
KURK Kurchatov 113.90 317 *i* PKiKP **PKiKP** **16 57 11.5 -1.0**
KURK Kurchatov 113.90 317 **Pdif** **16 53 23.9 -0.4**
KURK **PKiKP** **16 57 11.5 -1.0**
KURK **SKiKP** **16 59 53.5 +0.4**
N61A South Mountain 113.93 54 P 16 57 13.3
baz=262
G57A Newington 113.94 49 P 16 57 12.6
baz=264
KURBB Kurchatov Arra 113.95 317 Pdiff **Pdif** **16 53 23.9 -0.7**
comp=Z,0.2nm,0.5s,baz=103,slow=3.6,SNR=4.4
KURBB PKiKP **PKiKP** **16 57 11.5 -1.1**
comp=Z,42nm,0.7s,baz=94,slow=1.9,SNR=147
KURBB PP **PP** **16 58 17.4 -0.7**
comp=Z,13nm,1.1s,baz=95,slow=1.6,SNR=5.5
KURBB SKP **SKPdf** **16 59 53.5 +0.3**
comp=Z,12nm,1.0s,baz=92,slow=2.1,SNR=5.1
KURBB PKKPbc **PKKPbc** **17 07 56.9 -0.3**
comp=Z,3.6nm,0.8s,baz=276,slow=4.2,SNR=9.9
KURBB PKKPab **PKKPab** **17 08 04.9 +0.9**
comp=Z,1.9nm,0.6s,baz=273,slow=3.6,SNR=4.2
KURBB SKKPbc **SKKPbc** **17 10 45.4 -2.9**
comp=Z,5.1nm,0.8s,baz=267,slow=3.7,SNR=14
KURBB Kurchatov Arra 113.95 317 PKiKP **PKiKP** **16 57 11.3 -1.3**
E56A St. Veronique 114.05 47 P 16 57 12.3
baz=265
J59A Piesco 114.11 51 P 16 57 13.3
baz=264
L60A Shokan 114.14 52 P 16 57 13.4
baz=263
LONY Lake Ozonia 114.17 49 P 16 57 13.2
baz=264
PAL Palisades 114.26 53 P 16 57 14.0
baz=263
D56A ZEC Mazanza, M 114.28 47 P 16 57 13.0
baz=265
MDOK Medeo 114.29 309 *e*PKP PKPdf 16 57 11.2 -2.6
baz=309
MDOK Medeo 114.29 309 *e*PKiKP PKPdf 16 57 11.1 -2.6
TNSS Tian-Shan 114.35 309 *e*PKP PKPdf 16 57 13.1 -1.0
baz=309
TNSS Tian-Shan 114.35 309 *e*PKiKP PKPdf 16 57 13.1 -1.0
NCB Newcomb 114.36 50 PKiKP PKPdf 16 57 13.4 -0.3
AAA Alma-Ata 114.39 309 *e*PKP PKPdf 16 57 13.1 -0.6
baz=309
AAA Alma-Ata 114.39 309 *e*PKiKP PKPdf 16 57 13.1 -0.7
M61A Granite Spring 114.40 53 P 16 57 14.1
baz=263
H58A Gabriels 114.44 50 P 16 57 13.5
baz=264
I59A Olmsteadville 114.60 50 P 16 57 13.8
baz=264
G58A Ormstown 114.60 49 P 16 57 13.6
baz=265
TRY Troy 114.64 52 PKPdf 16 57 13.8 -0.4
KSH Kashi 114.66 305 PKP **PKiKP** **16 57 14.5 0.0**
KSH PP **PP** **16 58 25.8 +2.3**
KSH SKKS 17 04 21.0
KSH SS **SS** **17 13 40.3 +5.9**
KSH AMB AMB
comp=Z,520nm,4.7s
KSCT Kent School, K 114.66 53 PKPdf 16 57 13.8 -0.5

L61A	Hillsdale 1, H	114.66	52	P			16 57 14.4			
	baz=264									
TULEG	Thule	114.74	14	⇓*i*P		PKPdf	16 57 12.6	-0.8		
TULEG				IAmb		IAmb	16 57 14.0			
	comp=Z,49nm,0.8s									
TULEG	Thule	114.74	14			PKPdf	16 57 12.8	-0.6		
CHGQ	Chibougamau	114.75	44	P			16 57 13.1			
	baz=267									
ULHL	Ulahoi	114.78	308	P		PKiKP	16 57 15.1	+0.4		
	SNR=34									
J60A	Lant Hill Farm	114.87	51	P			16 57 14.9			
	baz=264									
K61A	Williamstown	114.92	52	P			16 57 15.2			
	baz=264									
I60A	Shoreham	115.02	50	P			16 57 15.3			
	baz=265									
M62A	Hamden	115.07	53	P			16 57 15.3			
	baz=264									
E58A	La Victoria	115.25	48	P			16 57 15.1			
	baz=266									
TKM2	Tokmak 2	115.32	309	P		PKPdf	16 57 15.5	-0.3		
	SNR=38									
TKM2	Tokmak 2	115.32	309	PKIKP		PKPdf	16 57 14.4	-1.4		
L61B	Northampton	115.33	52	P			16 57 16.1			
	baz=264									
H60A	Morristown	115.51	50	P			16 57 16.0			
	baz=265									
J61A	Chester	115.51	51	P			16 57 16.6			
	baz=265									
F59A	Saint Guilaume	115.55	48	P			16 57 16.2			
	baz=266									
D58A	Chemin du LacG	115.57	47	P			16 57 15.8			
	baz=266									
UCCT	U. Connecticut	115.60	53			PKPdf	16 57 15.7	-0.4		
LATQ	La Tuque	115.65	47	P			16 57 15.8			
	baz=267									
LATQ	La Tuque	115.65	46			PKPdf	16 57 15.0	-0.9		
KBK	Karagaybulak	115.77	308	P		PKiKP	16 57 16.6	0.0		
	SNR=28									
I61A	Oroboro, Fairl	115.81	50	P			16 57 17.2			
	baz=265									
G60A	Masonville	115.81	49	P			16 57 16.3			
	baz=266									
CHMS	Chumysh	115.95	309	P		PKPdf	16 57 16.1	-0.6		
	SNR=25									
FRU1	Bishkek	116.02	308	PKIKP		PKPdf	16 57 16.4	-0.6		
FRU1	Bishkek	116.02	308			PKPdf	16 57 16.4	-0.6		
LBNH	Lisbon	116.04	50	PKIKP		PKiKP	16 57 17.2	+0.4		
LBNH	Lisbon	116.04	50			PKiKP	16 57 17.2	+0.4		
LBNH	Lisbon	116.04	50	P			16 57 17.6			
	baz=266									
J62A	Henniker	116.04	51	P			16 57 17.1			
	baz=265									
UCH	Uchtor	116.05	308	P		PKiKP	16 57 18.0	+0.4		
	SNR=46									
H61A	Lyndonville	116.06	50	P			16 57 17.3			
	baz=266									
SGDS	Sogindy	116.07	309	*e*PKP		PKPdf	16 57 15.5	-1.6		
	comp=Z,11nm,0.8s,baz=309									
SGDS	Sogindy	116.07	309	*e*PKIKP		PKPdf	16 57 15.4	-1.6		
SGDS				pmax		pmax				
	comp=Z,11nm,0.8s									
AAK	Ala-Archa	116.10	308	P		PKPdf	16 57 16.8	-0.5		
	SNR=22									
AAK	Ala-Archa	116.10	308	*i* PKPdf		PKPdf	16 57 16.2	-1.0		
	SNR=27									
AAK	Ala-Archa	116.10	308	PKIKP		PKPdf	16 57 16.7	-0.5		
AAK	Ala-Archa	116.10	308			PKPdf	16 57 16.7	-0.5		
BRYW	Bryant College	116.12	53			PKPdf	16 57 16.4	-0.6		
F60A	Warwick	116.14	48	P			16 57 16.7			
	baz=266									
USP	Ospenovka	116.15	309	P		PKPdf	16 57 17.0	-0.1		
	SNR=28									
K63A	Dunstable	116.20	52	P			16 57 17.7			
	baz=265									
OBIP	Obispado Ponce	116.23	80			PKPdf	16 57 16.9	-1.0		
D59A	Saint-Raymond	116.28	47	P			16 57 17.6			
	baz=267									
PTGA	Pitinga	116.32	102	PKP		PKiKP	16 57 18.4	+0.1		
	comp=Z,12nm,0.7s,baz=222,slow=2.6,SNR=18									
PTGA				PP		PP	16 58 35.1	0.0		
	comp=Z,4.5nm,0.9s,baz=230,slow=5.4,SNR=6.0									
PTGA				SKP		SKiKP	16 59 59.8	+0.7		
	comp=Z,7.3nm,0.9s,baz=344,slow=4.6,SNR=4.5									
PTGA				PKKPbc		PKKPbc	17 07 50.0	+1.5		
	comp=Z,14nm,0.8s,baz=36,slow=4.0,SNR=18									
PTGA				PKKPab		PKKPab	17 07 56.5	+0.9		
	comp=Z,20nm,1.0s,baz=59,slow=5.8,SNR=12									
M64A	Tiverton	116.34	53	P			16 57 18.1			
	baz=265									
G61A	St-Isidore-de-	116.39	49	P			16 57 17.5			
	baz=266									
I62A	Tamworth	116.43	50	P			16 57 18.2			
	baz=266									
E60A	Ste Agathe de	116.51	48	P			16 57 17.8			
	baz=267									
J63A	Strafford	116.58	51	P			16 57 18.1			
	baz=266									
BTLS	Baital	116.60	311	*e*PKP		PKPdf	16 57 16.2	-1.7		
	comp=Z,46nm,1.0s,baz=311									
BTLS	Baital	116.60	311	*e*PKIKP		PKPdf	16 57 16.2	-1.7		
BTLS				pmax		pmax				
	comp=Z,46nm,1.0s									
H62A	Milan	116.61	50	P			16 57 18.8			
	baz=266									
EKS2	Erkin-Say	116.63	308	P		PKPdf	16 57 17.4	-0.8		
	SNR=41									
AML	Almayashu	116.65	308	P		PKPdf	16 57 18.4	-0.2		
	SNR=61									
SJG	San Juan	116.67	80	PKIKP		PKPdf	16 57 17.8	-0.9		
SJG	San Juan	116.67	80			PKPdf	16 57 17.8	-0.9		
F61A	St Evariste	116.81	48	P			16 57 18.8			
	baz=267									
D60A	Saint Jean D'O	116.89	47	P			16 57 18.2			
	baz=268									
I63A	Otisfield	116.99	50			PKiKP	16 57 18.8	+0.1		
I63A	Otisfield	116.99	50	P			16 57 19.4			
	baz=266									
G62A	West of Eustis	117.09	49			PKPdf	16 57 18.5	-0.3		
G62A	West of Eustis	117.09	49	P			16 57 19.4			
	baz=267									
E61A	Lac Etchemin	117.17	48	P			16 57 19.8			
	baz=268									
FRB	Frobisher Bay	117.37	28	PKP		PKPdf	16 57 18.5	-0.2		
	comp=Z,43nm,0.8s,baz=290,slow=2.2,SNR=15									
FRB				PKKPab		PKKPab	17 07 48.6	0.0		
	comp=Z,4.5nm,0.5s,baz=78,slow=6.2,SNR=6.9									
D61A	St Aubert, Com	117.41	47	P			16 57 19.5			
	baz=268									
I64A	Boothbay	117.66	51	P			16 57 20.2			
	baz=267									
G63A	Kingsbury	117.73	49	P			16 57 20.5			
	baz=268									
DRK	Karamyk	117.86	304			PKPdf	16 57 20.5	-0.4		
PKME	Peaks-Kenny Pk	117.97	49	P			16 57 21.3			
	baz=268									
PKME	Peaks-Kenny Pk	117.97	49			PKiKP	16 57 20.6	+0.1		
H64A	Troy	117.99	50	P			16 57 21.0			
	baz=268									
NEEM	North Greenlan	118.05	11	*i* P		PKPdf	16 57 19.9	-0.3		
NEEM				IAmb		IAmb	16 57 21.0			
	comp=Z,95nm,0.6s									
F63A	Nahmakanta, Br	118.11	49	P			16 57 21.3			
	baz=268									
F63A	Nahmakanta, Br	118.11	49			PKiKP	16 57 20.8	0.0		
G64A	Maxfield	118.34	49	P			16 57 22.0			
	baz=268									
DZA	Taraz	118.44	308	*e*PKP		PKPdf	16 57 18.9	-2.7		
	baz=308									
DZA	Taraz	118.44	308	*e*PKIKP		PKPdf	16 57 18.8	-2.7		
VOI	Vohitsoka	118.60	229			PKiKP	16 57 22.7	0.0		
VOI	Vohitsoka	118.60	229	P		PKPdf	16 57 22.0	-0.6		
	SNR=6.4									
E63A	Oxbow	118.60	48			PKPdf	16 57 21.3	-0.4		
E63A	Oxbow	118.60	48	P			16 57 21.8			
	baz=269									
F64A	Sherman	118.64	48			PKPdf	16 57 21.7	-0.1		
F64A	Sherman	118.64	48	P			16 57 21.8			
	baz=269									
NOR	Nord	118.76	3	⇓*i*P		PKPdf	16 57 20.4	-0.7		
NOR	Nord	118.76	3	IAmb		IAmb	17 07 43.9			
	comp=Z,2.7nm,1.1s									
NOR				*i* P		PKKPbc	17 07 42.5	+1.4		
NOR	Nord	118.76	3	⇓*i*PKIKP		PKPdf	16 57 20.4	-0.7		
D63A	Stockholm	118.83	47	P			16 57 21.7			
	baz=270									
PQI	Presque Isle	118.89	47			PKPdf	16 57 21.3	-0.9		
E64A	Bridgewater	119.01	48	P			16 57 22.4			
	baz=270									
BVAR	Borovoye Array	119.02	320	PKP		PKPdf	16 57 21.0	-1.3		
	comp=Z,78nm,0.6s,baz=172,slow=4.5,SNR=283									
BVAR				SKP		SKiKP	17 00 03.6	+0.4		
	comp=Z,14nm,1.0s,baz=96,slow=7.6,SNR=3.9									
BVAR				PKKPbc		PKKPbc	17 07 39.5	-0.3		
	comp=Z,0.9nm,0.6s,baz=165,slow=6.2,SNR=3.9									
KK31	Karatay Array	119.05	308	*i* PKIKP		PKPdf	16 57 21.6	-1.1		
KK31	Karatay Array	119.05	308			PKPdf	16 57 21.6	-1.1		
KKAR	Karatay Array	119.05	308	PKIKP		PKPdf	16 57 21.7	-1.0		
KKAR	Karatay Array	119.05	308			PKPdf	16 57 21.7	-1.0		
KKAR	Karatay Array	119.05	308			PKPdf	16 57 21.8	-1.0		
BRVK	Borovoye	119.08	320	PKIKP		PKPdf	16 57 21.2	-1.2		
BRVK	Borovoye	119.08	320			PKPdf	16 57 21.5	-0.9		
UPNV	Upernavik	119.18	17	⇓*i*P		PKPdf	16 57 21.6	-0.4		
UPNV				IAmb		IAmb	16 57 22.7			
	comp=Z,114nm,0.8s									
UPNV				*i*			16 58 49.7			
G65A	Princeton	119.19	49			PKPdf	16 57 22.7	-0.1		
G65A	Princeton	119.19	49	P			16 57 23.2			
	baz=269									
H66A	Whiting	119.36	50	P			16 57 23.4			
	baz=269									
IUG	luzhnay	119.37	307	*e*PKP		PKPdf	16 57 21.3	-2.2		
	comp=Z,1μm,1.2s,baz=307									
IUG	luzhnay	119.37	307	*e*PKIKP		PKPdf	16 57 21.3	-2.2		
IUG				pmax		pmax				
	comp=Z,1μm,1.2s									
BDFB	Brasilia	119.41	123	PKP		PKiKP	16 57 24.4	0.0		
	comp=Z,15nm,0.8s,baz=307,slow=2.8,SNR=16									
BDFB				PKKPbc		PKKPbc	17 07 39.5	+1.2		
	comp=Z,38nm,1.1s,baz=81,slow=4.0,SNR=15									
BDFB	Brasilia	119.41	123	PKIKP		PKPdf	16 57 24.0	-0.3		
BDFB	Brasilia	119.41	123			PKPdf	16 57 24.0	-0.3		
KBL	Kabul	119.59	299	PKIKP		PKPdf	16 57 23.9	-0.3		
KBL	Kabul	119.59	299			PKPdf	16 57 23.9	-0.3		
KBL	Kabul	119.59	299	P		PKiKP	16 57 24.3	0.0		
	SNR=77									
CHM	Chimkent	119.70	308	*e*PKP		PKPdf	16 57 23.1	-0.9		
	baz=308									
CHM	Chimkent	119.70	308	*e*PKIKP		PKPdf	16 57 23.0	-0.9		
GGN	Saint George	119.70	49			PKPdf	16 57 23.6	-0.2		
ABPO	Ambohimpanom	120.13	232	PKIKP		PKiKP	16 57 25.9	+0.1		
ABPO	Ambohimpanom	120.13	232			PKiKP	16 57 25.9	+0.1		
BATG	Bathurst New B	120.22	47			PKPdf	16 57 24.1	-0.7		
CAM01	Campos-RJ	120.25	133	*e*P		PKiKP	16 57 26.2	+0.4		
FDF	Fort de France	120.42	85	PKIKP		PKPdf	16 57 25.3	-0.8		
FDF	Fort de France	120.42	85			PKPdf	16 57 25.3	-0.8		
MALB	Monte Alegre	121.03	106	*e*P		PKiKP	16 57 28.9	+1.4		
DIAM	Diamantina, MG	121.11	128	*e*P		PKPdf	16 57 27.6	0.0		
LMN	Caledonia Moun	121.12	48			PKPdf	16 57 26.1	-0.5		
PEXB	Peixe	121.16	119	*e*P		PKiKP	16 57 28.7	+0.9		
SBV	Sambava	121.39	239	P		PKPdf	16 57 27.8	-0.2		
	SNR=7.9									
KBS	Kingsbay	121.69	358	⇓*i*P		PKiKP	16 57 26.9	-0.1		
KBS				IAmb		IAmb	16 57 28.0			
	comp=Z,287nm,0.9s									
KBS	Kingsbay	121.69	358	PKIKP		PKiKP	16 57 27.1	+0.2		
KBS	Kingsbay	121.69	358			PKiKP	16 57 27.1	+0.2		
KBS	Kingsbay	121.69	358	*e*PKPdf		PKiKP	16 57 27.4	+0.4		
KBS				*e*PP		PP	16 59 11.0	+1.2		
KBS				*e*SS		SS	17 15 05.3	+3.8		
ALF01	Guarapari-ES	121.70	132	*e*P		PKiKP	16 57 28.8	+0.2		
JANB	Januaria	122.63	125	*e*P		PKiKP	16 57 30.8	+0.2		
SJMB	Sao Joao De Ma	122.65	130	*e*P		PKiKP	16 57 30.6	0.0		
RIB01	Linhares ES	122.80	131	*e*P		PKiKP	16 57 31.5	+0.6		
BSFB	Barra de Sao F	122.81	131	*e*P		PKiKP	16 57 31.5	+0.6		
PRPB	Parauapebas	122.98	112	*e*P		PKiKP	16 57 31.9	+0.5		
HOPEN	Hopen	123.06	354	*e*PKPdf		PKiKP	16 57 29.9	+0.2		
HOPEN				*e*PP		PP	16 59 17.6	-1.4		
HOPEN				*e*SS		SS	17 15 22.1	+3.6		
DAG	Danmarks Havn	123.16	5	⇓*i*P		PKPdf	16 57 28.4	-1.3		
DAG				IAmb		IAmb	16 57 29.6			
	comp=Z,74nm,0.7s									
DAG	Danmarks Havn	123.16	5	IAmb		IAmb	17 07 25.7			
	comp=Z,3.3nm,0.9s									
DAG				*e*P		PKKPbc	17 07 23.7	-1.2		
DAG	Danmarks Havn	123.16	5	⇓*i*PKIKP		PKPdf	16 57 28.3	-1.3		
DAG				pmax		pmax				
	comp=Z,74nm,0.7s									
HSPB	Hornsund (broa	123.39	356	*e*PKP		PKPdf	16 57 29.7	-0.3		
HSPB	Hornsund (broa	123.39	356	*e*PKPdf		PKiKP	16 57 30.4	+0.1		
SFJD	Kangerlussuaq	123.49	22	⇓*i*P		PKPdf	16 57 29.5	-0.9		
SFJD				IAmb		IAmb	16 57 30.8			
	comp=Z,81nm,0.9s									
SFJD	Kangerlussuaq	123.49	22	⇓*i*PKIKP		PKPdf	16 57 29.5	-0.9		
SFJD				pmax		pmax				
	comp=Z,81nm,0.9s									
SFJD	Kangerlussuaq	123.49	22			PKPdf	16 57 29.6	-0.8		
SMTB	Santa Maria do	123.50	117	*e*P		PKiKP	16 57 32.7	+0.3		
SUMG	Summit	123.64	13	⇓*i*P		PKPdf	16 57 31.0	-0.1		
SUMG				IAmb		IAmb	16 57 32.5			
	comp=Z,334nm,1.3s									
SUMG	Summit	123.64	13	IAmb		IAmb	17 07 23.3			
	comp=Z,6.6nm,0.8s									
SUMG				*i* P		PKKPbc	17 07 22.0	-1.6		
SUMG	Summit	123.64	13	⇓*i*PKIKP		PKPdf	16 57 31.0	-0.1		
SUMG				pmax		pmax				
	comp=Z,330nm,1.3s									
SUMG	Summit	123.64	13			PKPdf	16 57 30.7	-0.4		
MCPB	Macapa, AP	123.66	105	*e*P		PKiKP	16 57 33.6	+0.9		
SDBA	SAO DESIDERIO	123.73	122	*e*P		PKPdf	16 57 32.7	+0.1		
SUR	Sutherland	123.89	200	PKP		PKiKP	16 57 33.5	+0.5		
	comp=Z,131nm,0.9s,baz=190,slow=2.3,SNR=107									
SUR				PKKPbc		PKKPbc	17 07 21.6	-0.9		
	comp=Z,5.2nm,0.7s,baz=192,slow=11,SNR=8.5									
SUR	Sutherland	123.89	200			PKPdf	16 57 31.9	-0.8		
SUR						PKKPbc	17 07 20.9	-1.7		
NAN01	Guarapari, ES	123.97	130	*e*P		PKPdf	16 57 32.9	0.0		
SVE	Sverdlovsk	123.99	325	*c i* PKIKP		PKPdf	16 57 31.4	-0.3		
SVE				pmax		pmax				
	comp=Z,299nm,1.2s									
NUUK	Nuuk	124.34	25	⇓*i*P		PKPdf	16 57 32.0	-0.1		
NUUK				IAmb		IAmb	16 57 33.2			
	comp=Z,192nm,1.0s									
HRA	Herat	125.18	298	PKPdf		PKPdf	16 57 34.1	-0.9		
ARU	Arti	125.20	325	*i* PKIKP		PKPdf	16 57 33.4	-0.6		
ARU							16 59 29.6			
ARU				PPP		PPP	17 02 17.2			
ARU							17 03 43.6			
ARU				SS		SS	17 15 52.4	+6.1		
ARU	Arti	125.20	325			PKPdf	16 57 33.4	-0.6		
DY2G	Dye2	125.25	21	⇓*i*P		PKPdf	16 57 33.8	-0.4		
DY2G				IAmb		IAmb	16 57 34.8			
	comp=Z,523nm,1.2s									
DY2G				*i*			16 59 29.6			
DBG	Daneborg	125.27	7	⇓*i*P		PKPdf	16 57 33.2	-0.4		
DBG				IAmb		IAmb	16 57 34.3			
	comp=Z,106nm,1.0s									
MDP	Montagnes des	125.31	99	PKP		PKiKP	16 57 36.2	+0.2		
	comp=Z,44nm,1.1s,baz=228,slow=4.0,SNR=6.1									
BJO1	Bjornoya	125.52	354	*e*PKPdf		PKPdf	16 57 33.5	-0.6		
BJO1				*e*PP		PP	16 59 35.1	0.0		
BJO1				*e*SS		SS	17 15 50.2	+1.3		
BOSA	Boshof	125.68	206	PKP		PKiKP	16 57 36.4	-0.2		
	comp=Z,61nm,1.0s,baz=149,slow=2.3,SNR=74									
BOSA				PKKPbc		PKKPbc	17 07 14.4	-0.9		
	comp=Z,3.5nm,0.5s,baz=328,slow=4.2,SNR=16									
BOSA				PKKP		PKKPdf	17 07 54.3	-0.3		
	comp=Z,2.1nm,0.7s,baz=327,slow=4.6,SNR=4.6									
BOSA				SKKPbc		SKKPbc	17 10 06.9	-0.9		
	comp=Z,5.4nm,1.1s,baz=78,slow=4.7,SNR=3.7									
BOSA				SKKP		SKKPdf	17 10 36.3	+1.5		
	comp=Z,8.2nm,1.1s,baz=5.9,slow=3.9,SNR=5.3									
BOSA	Boshof	125.68	206			PKPdf	16 57 35.4	-0.7		
BOSA				PKKPab		PKKPbc	17 07 14.1	-1.2		
ICESG	Greenland Ices	125.72	17	⇓*i*P		PKPdf	16 57 34.4	-0.7		
ICESG				IAmb		IAmb	16 57 35.6			
	comp=Z,300nm,1.1s									
DRLN	Deer Lake	125.72	44			PKPdf	16 57 34.6	-0.6		
AB31	Akbulak array	125.98	316	*i* PKIKP		PKPdf	16 57 35.4	-0.3		
TMAB	Tom-Au,PA,Br	126.30	109	*e*P		PKiKP	16 57 39.2	+1.2		
NBIT	Itapeh - BA	126.37	128	*e*P		PKiKP	16 57 38.9	+0.8		
WBK	Wadi Bani Khal	126.80	283	P		PKPdf	16 57 37.6	-0.6		
	SNR=16									
AKTO	Aktyubinsk	126.98	318	PKP		PKPdf	16 57 37.2	-0.4		
	comp=Z,102nm,0.9s,baz=79,slow=2.7,SNR=114									
AKTO				SKKPbc		SKKPbc	17 10 02.2	-4.0		
	comp=Z,3.1nm,0.8s,baz=148,slow=1.1,SNR=6.3									
GDU01	Guandu, BA	127.05	127	*e*P		PKiKP	16 57 39.2	-0.2		
WSAR	Wadi Sarin	127.22	284	PKP		PKPdf	16 57 38.6	-0.3		
	comp=Z,91nm,1.2s,baz=181,slow=2.6,SNR=51									
WSAR				PKKP		PKKPdf	17 07 52.2	0.0		
	comp=Z,4.5nm,0.8s,baz=167,slow=7.9,SNR=4.0									
WSAR	Wadi Sarin	127.22	284	P		PKPdf	16 57 38.4	-0.5		
	SNR=32									
MHTO	MHTO	127.43	281	P		PKPdf	16 57 39.3	-0.1		
	SNR=30									
JMDO	Jabal Madar	127.55	283	P		PKPdf	16 57 38.9	-0.7		
	SNR=27									
DQM	DQM	127.63	280	P		PKiKP	16 57 40.2	-0.2		
	SNR=18									
SMDO	Samad	127.72	284	P		PKPdf	16 57 40.0	0.0		
	SNR=43									
BIDO	Bidbid	127.72	284	P		PKPdf	16 57 40.0	+0.1		
	SNR=35									
ISOG	Isortoq, Green	128.21	20	*i* P		PKPdf	16 57 38.3	-1.2		
ISOG				IAmb		IAmb	16 57 41.0			
	comp=Z,98nm,0.9s									
NRS	Narsarsuaq	128.32	27	⇓*i*P		PKPdf	16 57 38.9	-0.9		
NRS				IAmb		IAmb	16 57 40.7			
	comp=Z,194nm,1.0s									
NRS	Narsarsuaq	128.32	27	⇓*i*PKIKP		PKPdf	16 57 38.8	-0.9		
NRS				pmax		pmax				
	comp=Z,190nm,1.0s									
NRS	Narsarsuaq	128.32	27			PKPdf	16 57 38.9	-0.9		
BSY	Bisya	128.44	283	P		PKPdf	16 57 41.6	+0.3		
	SNR=28									
HOQ	Hoqain	128.47	284	P		PKPdf	16 57 40.7	-0.6		
	SNR=34									
SCO	Scoresbysund	128.47	10	⇓*i*P		PKiKP	16 57 40.3	-0.4		
SCO				IAmb		IAmb	16 57 41.5			
	comp=Z,247nm,1.3s									
SCO	Scoresbysund	128.47	10	⇓*i*PKIKP		PKiKP	16 57 40.2	-0.4		
SCO				pmax		pmax				
	comp=Z,250nm,1.3s									
SCO	Scoresbysund	128.47	10			PKPdf	16 57 39.8	-0.1		
HAMF	Hammerfest	128.50	351	*e*PKPdf		PKPdf	16 57 39.7	-0.2		
HAMF				*e*PP		pPKPdf	16 59 55.0	+0.1		
HAMF				*e*SS		SS	17 16 26.9	+1.2		
GEYT	Alibeck	128.53	302	PKP		PKPdf	16 57 41.1	0.0		
	comp=Z,99nm,1.0s,baz=240,slow=2.9,SNR=59									
GEYT				PP		PP	16 59 54.8	-1.3		
	comp=Z,44nm,1.2s,baz=126,slow=3.8,SNR=8.8									
GEYT	Alibeck	128.53	302			PKPpre	16 57 28.1			
GEYT						PKPdf	16 57 40.4	-0.7		
GYA0B	ALIBECK ARRAY	128.53	302			PKPdf	16 57 40.7	-0.4		
ANGG	Ammassalik, Gr	128.59	20	⇓*i*P		PKPdf	16 57 39.0	-1.2		
ANGG				IAmb		IAmb	16 57 41.0			
	comp=Z,72nm,1.0s									
ANGG	Ammassalik, Gr	128.59	20			PKPdf	16 57 39.2	-1.0		
LVZ	Lovozero	128.60	345	PKIKP		PKPdf	16 57 39.9	-0.3		
LVZ	Lovozero	128.60	345			PKPdf	16 57 39.9	-0.3		
LBTB	Lobatse	128.69	208	PKP		PKPdf	16 57 42.0	+0.1		
	comp=Z,24nm,0.7s,baz=167,slow=3.4,SNR=34									
LBTB				PKKPbc		PKKPbc	17 07 04.4			
	comp=Z,3.3nm,0.7s,baz=291,slow=5.0,SNR=4.3									
LBTB	Lobatse	128.69	208	PKIKP		PKPdf	16 57 42.0	+0.1		
LBTB	Lobatse	128.69	208			PKPdf	16 57 41.2	-0.7		
KEV	Kevo	128.73	349	PKIKP		PKPdf	16 57 40.4	0.0		
KEV	Kevo	128.73	349			PKPdf	16 57 40.4	0.0		
SHAO	Shalim	129.00	277	*i* PKiKP		PKPdf	16 57 41.9	-0.5		
	SNR=13									
SOCY	Socotra	129.06	269			PKPdf	16 57 40.8	-1.9		
SOCY	Socotra	129.06	269	P		PKPdf	16 57 42.5	-0.2		
	SNR=23									
ARQ	Araqi	129.15	284	P		PKPdf	16 57 41.7	-0.9		
	SNR=26									
APA	Apatity	129.16	345

N2IH	**Innhavet**	**132.04 353**	*e*PKPdf	**PKPdf**	**16 57 47.2**	**+0.5**
NBAN	**Anadia - AL**	**132.10 126**	*e*P	**PKiKP**	**16 57 49.6**	**0.0**
LOF	**Lofoten**	**132.15 354**	*e*PKPdf	**PKPdf**	**16 57 46.9**	**0.0**
STEI	**Steigen**	**132.16 353**	*e*PKPdf	**PKiKP**	**16 57 47.6**	**-0.5**
STEI			*e*PP	**PP**	**17 00 17.4**	**-0.3**
N2NF	**Nordfold**	**132.32 353**	*e*PKPdf	**PKPdf**	**16 57 47.6**	**+0.4**
N2TV	**Tvrnvik**	**132.52 353**	*e*	PKPpre	16 57 34.6	
N2TV			*e*PKPdf	**PKPdf**	**16 57 48.0**	**+0.4**
BELG	**Belogornoye**	**132.58 323**	PKP	**PKPdf**	**16 57 47.8**	**-0.3**
	comp=Z,677nm,0.9s,baz=66,slow=0.4,SNR=40					
BELG			SKPbc	**SKPbc**	**17 00 22.4**	**+1.1**
	comp=Z,490nm,1.1s,baz=236,slow=1.1,SNR=26					
FAUS	**Fauske**	**132.68 353**	*e*PKPdf	**PKiKP**	**16 57 48.9**	**-0.2**
FAUS			*e*PKSdf	**PKSdf**	**17 01 17.1**	**-6.7**
FAUS			*e*SS	SS	17 17 18.4	+2.6
N2VA	**Vr_y**	**132.68 354**	*e*	PKPdf	16 57 38.9	-9.0
N2VA			*e*PKPdf	**PKiKP**	**16 57 48.4**	**-0.8**
NBMO	**Morrinhos-CE**	**132.79 116**	*e*P	**PKiKP**	**16 57 50.4**	**-0.6**
N2RO	**R_st**	**132.88 354**	*e*PKPdf	**PKPdf**	**16 57 48.5**	**+0.3**
NBB28	**Valnes**	**132.96 353**	*e*PKPdf	**PKPdf**	**16 57 48.8**	**+0.4**
NBLI	**Livramento-PB**	**133.01 123**	*e*P	**PKiKP**	**16 57 51.6**	**+0.1**
NBB05	**Inndyr**	**133.15 353**	*e*PKPdf	**PKPdf**	**16 57 49.0**	**+0.3**
NBB30	**Finnes**	**133.25 353**	*e*PKPdf	**PKPdf**	**16 57 49.2**	**+0.2**
NBB17	**Glomfjord Bvr**	**133.37 353**	*e*PKPdf	**PKPdf**	**16 57 49.7**	**+0.5**
NBB15	**Halsa Church**	**133.48 353**	*e*PKPdf	**PKPdf**	**16 57 49.7**	**+0.3**
NBRF	**Rio Formoso -**	**133.60 126**	*e*P	**PKiKP**	**16 57 52.5**	**-0.1**
NBCL	**Cascavel-CE**	**133.75 118**	*e*P	**PKPdf**	**16 57 52.0**	**+0.4**
NBB40	**Tonnes**	**133.77 354**	*e*PKPdf	**PKPdf**	**16 57 50.6**	**+0.6**
NBPA	**Parau_RN**	**133.84 121**	*e*P	**PKiKP**	**16 57 53.4**	**+0.2**
MOR8	**Moi Rana**	**133.94 353**	*e*PKPdf	**PKPdf**	**16 57 50.0**	**-0.3**
MOR8			*e*PP	**PP**	**17 00 26.3**	**-2.6**
MOR8			*e*PKSdf	**PKSdf**	**17 01 22.9**	**-3.4**
MOR8			*e*SS	SS	17 17 33.1	+2.2
STOK	**Stokkvaagen**	**133.94 354**	*e*PKPdf	**PKPdf**	**16 57 50.9**	**+0.6**
RCBR	**Riachuelo**	**134.76 122**	PKP	**PKiKP**	**16 57 54.5**	**-0.6**
	comp=Z,15nm,0.8s,baz=191,slow=4.1,SNR=4.9					
RCBR			SKPbc	**SKPbc**	**17 00 29.5**	**-0.2**
	comp=Z,39nm,1.0s,baz=196,slow=4.6,SNR=7.5					
RCBR			SKP	**SKPab**	**17 00 35.0**	**+0.6**
	comp=Z,112nm,1.1s,baz=199,slow=4.5,SNR=8.7					
RCBR	**Riachuelo**	**134.76 122**	*e*P	**PKiKP**	**16 57 55.1**	**0.0**
NBPV	**Pedro Velho**	**134.89 123**	*e*P	**PKPdf**	**16 57 54.5**	**+0.8**
LSZ	**Lusaka**	**135.48 218**	PKhKP	PKPpre	16 57 43.4	
	comp=Z,4.8nm,0.6s,baz=148,slow=2.0,SNR=13					
LSZ			PKP	**PKiKP**	**16 57 56.0**	**-0.6**
	comp=Z,49nm,0.7s,baz=163,slow=2.0,SNR=29					
LSZ			SKPbc	**SKPbc**	**17 00 33.2**	**+1.3**
	comp=Z,12nm,0.6s,baz=146,slow=4.2,SNR=5.5					
LSZ			PP	**PP**	**17 00 40.1**	**+0.9**
	comp=Z,94nm,1.1s,baz=143,slow=4.1,SNR=18					
LSZ	**Lusaka**	**135.48 218**	PKIKP	**PKiKP**	**16 57 56.0**	**-0.6**
MAK	**Makhachkala**	**135.78 311**	*i* P	**Pdif**	**16 54 58.8**	**-3.0**
MAK			*i*		16 57 55.4	
MAK			*e*		17 00 38.5	
MAK			*e*PPP	PPP	17 03 47.8	
MAK			pmax	pmax		
	comp=Z,260nm,0.9s					
NSS	**Namsos**	**135.80 353**	*e*PKPdf	PKPpre	16 57 43.1	
MOS	**Moscow**	**135.97 331**	*e*PKHKP	PKPpre	16 57 45.3	
MOS			*i*		16 57 52.8	
MOS			*e*		17 10 13.4	
MOS			pmax	pmax		
	comp=Z,237nm,1.1s					
FIA1	**FINESS Array S**	**135.98 343**	PKPdf	**PKPdf**	**16 57 54.0**	**-0.2**
FINES	**FINESS Array B**	**135.98 343**	PKhKP	PKPpre	16 57 41.2	
	comp=Z,4.3nm,0.4s,baz=58,slow=3.8,SNR=35					
FINES			PKP	**PKPdf**	**16 57 54.0**	**-0.2**
	comp=Z,103nm,1.0s,baz=56,slow=2.9,SNR=26					
FINES			SKPbc	**SKPbc**	**17 00 33.1**	**+1.3**
	comp=Z,80nm,0.7s,baz=56,slow=4.8,SNR=28					
FINES			SKKPbc	**SKKPbc**	**17 09 31.0**	**-3.6**
	comp=Z,1.8nm,0.6s,baz=156,slow=1.9,SNR=4.0					
FINES	**FINESS Array B**	**135.98 343**		PKPpre	16 57 40.6	
FINES				**SKPbc**	**17 00 32.5**	**+0.7**
AKT	**Akhty**	**135.98 309**	*e*PKHKP	PKPpre	16 57 43.3	
AKT			*e*		16 57 55.8	
AKT			*e*		17 00 45.7	
AKT			pmax	pmax		
	comp=Z,178nm,1.0s					
VRH	**Novokhopyorsk**	**136.39 324**	*e*PKIKP	**PKPdf**	**16 57 54.5**	**-0.8**
VRH			pmax	pmax		
	comp=Z,200nm,0.6s					
OBN	**Obninsk**	**136.82 331**	*e*PKHKP	PKPpre	16 57 43.3	
OBN			*i*		16 57 56.1	
OBN			*e*		17 03 59.1	
OBN			pmax	pmax		
	comp=Z,30nm,0.9s					
OBN			pmax	pmax		
	comp=Z,259nm,1.1s					
OBN	**Obninsk**	**136.82 331**	PKPdf	**PKPdf**	**16 57 55.8**	**-0.2**
GROC	**Groznyy**	**136.92 312**	*e*PKHKP	PKPpre	16 57 45.7	
GROC			*e*		17 04 01.4	
TSUM	**Tsumeb**	**137.14 203**	PKhKP	PKPpre	16 57 47.9	
	comp=Z,1.7nm,0.3s,baz=137,slow=4.7,SNR=5.9					
TSUM			PKP	**PKPdf**	**16 57 58.1**	**+0.2**
	comp=Z,52nm,0.9s,baz=119,slow=3.3,SNR=26					
TSUM			SKPbc	**SKPbc**	**17 00 37.8**	**+0.9**
	comp=Z,88nm,1.1s,baz=162,slow=3.0,SNR=23					
TSUM			PKKP	**PKKPdf**	**17 07 32.8**	**+0.1**
	comp=Z,7.4nm,1.0s,baz=319,slow=1.7,SNR=5.0					
TSUM	**Tsumeb**	**137.14 203**	PKPdf	**PKPdf**	**16 57 56.9**	**-1.0**
TSUM				**SKPbc**	**17 00 35.6**	**-1.2**
LPSR	**Galich'ya Gora**	**137.16 327**	*e*PKIKP	**PKPdf**	**16 57 56.9**	**+0.2**
LPSR			pmax	pmax		
	comp=Z,280nm,1.2s					
TBLU	**Trondheim**	**137.23 354**	*e*PKPdf	**PKPdf**	**16 57 55.9**	**-0.6**
QRN	**Al-Qurain**	**137.29 290**	*e*P		16 57 45.4	
KIBK	**Kibwezi**	**137.35 242**		PKPpre	16 57 47.8	
UMR	**Umm Al-Rimmam**	**137.46 291**	*e*P		16 57 46.1	
VORR	**Voronezh**	**137.51 326**	*e*PKIKP	**PKPdf**	**16 57 56.0**	**-1.4**
VORR			pmax	pmax		
	comp=Z,500nm,1.2s					
RDF	**Al-Radifah**	**137.61 290**	*e*P		16 57 46.2	
VSR	**Storozhevoye**	**137.77 325**	*e*PKIKP	**PKPdf**	**16 57 56.7**	**-1.2**
VSR			pmax	pmax		
	comp=Z,320nm,1.2s					
VORD	**Divnogorie**	**137.84 325**	*e*PKIKP	**PKPdf**	**16 57 57.5**	**-0.5**
VORD			pmax	pmax		
	comp=Z,280nm,1.4s					
RST	**Umm Al-Ruwaisa**	**138.09 291**	*e*P		16 57 46.5	
MOL	**Molde**	**138.12 356**	*e*PKPdf	PKPpre	16 57 49.3	
MOL			IVmB_BB		16 58 00.1	
	comp=Z,1μm,2.1s					
GOF	**Gofitskoye**	**138.19 315**↑↑	*e*PKHKP	PKPpre	16 57 49.3	
GOF			pmax	pmax		
	comp=Z,59nm,0.9s					
VSU	**Vasula**	**138.22 340**	*e*P	PKPpre	16 57 49.8	
ZEI	**Tsey**	**138.37 312**	*i* PKHKP	PKPpre	16 57 50.7	
ZEI			pmax	pmax		
	comp=Z,52nm,1.0s					
GNI	**Garni**	**138.50 307**	PKhKP	PKPpre	16 57 51.1	
	comp=Z,19nm,1.0s,baz=180,slow=3.0,SNR=14					
GNI			PKP	**PKPdf**	**16 58 00.1**	**+0.3**
	comp=Z,103nm,1.0s,baz=164,slow=2.8,SNR=42					
GNI			SKPbc	**SKPbc**	**17 00 40.8**	**+0.7**
	comp=Z,42nm,1.1s,baz=253,slow=1.0,SNR=6.1					
GNI			SKKPbc	**SKKPbc**	**17 09 27.5**	**+3.4**
	comp=Z,14nm,0.9s,baz=242,slow=1.8,SNR=11					
GNI	**Garni**	**138.50 307**	PKPdf	PKPpre	16 57 53.7	
GNI	**Garni**	**138.50 307**	PKPpre	PKPpre	16 57 50.3	
GNI				**PKPdf**	**16 57 59.5**	**-0.3**
DOMB	**Dombas**	**138.53 355**	*e*PKPdf	PKPpre	16 57 51.0	
AKN	**Aaknes**	**138.55 356**	*e*PKPdf	**PKPdf**	**16 57 54.0**	**-5.0**
AAL	**Aland**	**138.58 346**	*e*P	PKPdf	16 57 50.2	-8.8
KMBO	**Kilima Mbogo**	**138.69 242**	PKhKP	PKPpre	16 57 53.3	
	comp=Z,14nm,0.8s,baz=65,slow=5.9,SNR=26					
KMBO			PKP	**PKPdf**	**16 58 01.8**	**+0.8**
	comp=Z,55nm,1.0s,baz=49,slow=2.1,SNR=22					
KMBO			SKPbc	**SKPbc**	**17 00 42.8**	**+1.3**
	comp=Z,52nm,1.1s,baz=64,slow=2.6,SNR=14					
KBZ	**Khabaz**	**138.76 313**	PKhKP	PKPpre	16 57 52.1	
	comp=Z,10nm,1.0s,baz=50,slow=1.2,SNR=15					
KBZ			PKP	**PKPdf**	**16 58 00.9**	**+1.0**
	comp=Z,20nm,0.8s,baz=108,slow=3.7,SNR=15					
KBZ			SKPbc	**SKPbc**	**17 00 40.4**	**+0.1**
	comp=Z,8.5nm,1.0s,baz=88,slow=8.8,SNR=5.8					
KBZ			SKPab	**SKPab**	**17 00 51.0**	**-0.1**
	comp=Z,18nm,1.0s,baz=55,slow=6.1,SNR=6.4					
KBZ			SKKPbc	**SKKPbc**	**17 09 22.3**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=261,slow=6.1,SNR=9.0					
KVAR	**Kislovodsk Arr**	**138.82 314**	PKhKP	PKPpre	16 57 53.2	
	comp=Z,5.5nm,0.7s,baz=85,slow=23,SNR=4.0					
KVAR			PKP	**PKPdf**	**16 58 01.1**	**+1.0**
	comp=Z,17nm,0.9s,baz=264,slow=22,SNR=6.8					

KIV	**Kislovodsk**	**138.82 314**	⇓P	**PKPdf**	**16 57 53.0**	**-7.2**
KIV	**Kislovodsk**	**138.82 314**	*i* PKPdf	**PKPdf**	**16 57 53.0**	**-7.2**
	SNR=5.9						
KIV	**Kislovodsk**	**138.82 314**	*i* PKIKP	**PKPdf**	**16 58 01.1**	**+0.9**
KIV			*e*		17 00 58.6		
KIV			*e*SSS	SSS	17 23 50.7		
KIV	**Kislovodsk**	**138.82 314**		PKPpre	16 57 50.9		
KIV			PKPdf	**PKPdf**	**16 58 00.2**	**0.0**	
MTSE	**Matsula**	**138.89 342**	*e*P	**PKPdf**	**16 57 52.6**	**-7.0**	
AKH	**Akhalkalaki**	**139.08 310**	⇓P	**PKPdf**	**16 57 54.0**	**-6.8**	
NC303	**NORSAR Array S**	**139.09 353**		PKPpre	16 57 51.0		
NC204	**NORSAR Array S**	**139.11 353**		PKPpre	16 57 51.2		
NC405	**NORSAR Array S**	**139.15 352**		PKPpre	16 57 51.3		
RAYN	**Ar Rayn**	**139.22 282**	*i* PKPdf	**PKPdf**	**16 57 53.8**	**-7.6**	
	SNR=15						
RAYN	**Ar Rayn**	**139.22 282**	PKIKP	**PKPdf**	**16 58 00.8**	**-0.6**	
RAYN					17 57 52.6		
RAYN	**Ar Rayn**	**139.22 282**		PKPpre	16 57 52.6		
RAYN			PKPdf	**PKPdf**	**16 58 00.8**	**-0.6**	
FOO	**Floro**	**139.23 357**	*e*PKPdf	**PKPdf**	**16 57 54.0**	**-6.1**	
FOO			*e*SS	SS	17 18 36.6	+3.8	
ATD	**Arta Tunnel**	**139.25 263**	PKhKP	PKPpre	16 57 55.5		
	comp=Z,47nm,1.1s,baz=67,slow=4.0,SNR=9.9						
ATD			PKP	**PKiKP**	**16 58 03.0**	**-1.2**	
	comp=Z,57nm,1.0s,baz=318,slow=2.6,SNR=11						
ATD			SKPbc	**SKiKP**	**17 00 45.2**	**-0.3**	
	comp=Z,60nm,1.0s,baz=204,slow=0.2,SNR=12						
ATD	**Arta Tunnel**	**139.25 263**	P	**PKiKP**	**16 58 03.4**	**-0.8**	
	SNR=7.5						
NB201	**NORSAR Array S**	**139.27 353**		PKPpre	16 57 51.6		
NB2	**NORSAR Subarra**	**139.29 353**	PKP	PKPdf	16 57 51.9	-8.5	
	baz=10,slow=3.2						
NOA	**NORSAR Array B**	**139.29 353**	PKhKP	PKPpre	16 57 52.2		
	comp=Z,51nm,0.9s,baz=14,slow=2.3,SNR=74						
NOA			PKP	**PKPdf**	**16 58 01.4**	**+1.0**	
	comp=Z,8.0nm,0.7s,baz=68,slow=1.2,SNR=14						
NOA			SKPbc	**SKiKP**	**17 00 42.8**	**-1.3**	
	comp=Z,71nm,1.1s,baz=16,slow=4.3,SNR=13						
NOA			SKKPbc	**SKKPbc**	**17 09 21.5**	**-0.6**	
	comp=Z,17nm,1.1s,baz=192,slow=4.3,SNR=7.4						
NBO00	**NORSAR Array S**	**139.35 353**		PKPpre	16 57 51.9		
UPP	**Uppsala**	**139.38 348**	*e*P	PKPdf	16 57 52.6	-7.9	
NAO01	**NORSAR Array S**	**139.51 353**		PKPpre	16 57 51.8		
NC602	**NORSAR Array S**	**139.54 352**		PKPpre	16 57 52.0		
NC602	**NORSAR Array S**	**139.54 352**	*e*PKPdf	**PKPdf**	**16 57 54.3**	**-6.5**	
NC602			*e*SKPdf	**SKPbc**	**17 00 43.2**	**+1.3**	
NC602			*e*SS	**SS**	**17 18 37.3**	**+1.3**	
HYA	**Hoyanger**	**139.61 356**	*e*PKPdf	**PKPdf**	**16 57 54.7**	**-6.2**	
CHVG	**Ch'k'valeri**	**139.66 312**	⇑P	**PKPdf**	**16 57 55.8**	**-5.8**	
CHVG	**Ch'k'valeri**	**139.66 312**	⇑PKHKP	PKPpre	16 57 55.8		
SUE	**Sulen**	**139.79 357**	*e*PKPdf	**PKPdf**	**16 57 56.6**	**-4.6**	
SUE			*e*SKSdf	**SKSdf**	**17 04 06.4**	**-10**	
SKAR	**Skarslia**	**139.94 355**	*e*PKPdf	**PKPdf**	**16 57 55.9**	**-5.7**	
SKAR			*e*SKSdf	**SKSdf**	**17 04 16.1**	**-0.8**	
SKAR			*e*SS	**SS**	**17 18 45.5**	**+4.3**	
SLIT	**Slitere, Latvi**	**140.24 343**	*e*P	**PKPdf**	**16 57 55.8**	**-6.3**	
ASK	**Askoy**	**140.34 357**	*e*PKPdf	**PKPdf**	**16 57 57.0**	**-5.2**	
OSL	**Oslo**	**140.42 353**	*e*	**PKPdf**	**16 57 56.0**	**-6.4**	
OSL			*e*PKPdf	**PKiKP**	**16 58 02.7**	**-2.4**	
BER	**Bergen**	**140.43 357**	*e*PKPdf	**PKPdf**	**16 57 56.8**	**-5.6**	
IDID	**Didziasalis**	**140.71 337**	*e*P	**PKPdf**	**16 57 58.8**	**-4.3**	
ISAL	**Salakas**	**140.72 338**	*e*P	**PKPdf**	**16 57 58.2**	**-4.9**	
ISAL			*e*SKKPbc	SKKPbc	17 09 16.7	+0.5	
ODD1	**Odda**	**140.83 356**	*e*PKPdf	**PKPdf**	**16 57 57.5**	**-5.7**	
KONO	**Kongsberg**	**140.83 353**	PKHKP	PKPpre	16 57 56.8		
KONO	**Kongsberg**	**140.83 353**		PKPpre	16 57 56.8		
KONO	**Kongsberg**	**140.83 353**	*e*PKPdf	**PKPdf**	**16 57 57.9**	**-5.3**	
KONO			*e*SKSdf	**SKSdf**	**17 04 16.6**	**-1.5**	
KONO			*e*SS	**SS**	**17 18 55.0**	**+3.6**	
IIGN	**Ignalina**	**140.86 338**	*e*P	**PKPdf**	**16 57 58.6**	**-4.8**	
IIGN			*e*SKKPbc	SKKPbc	17 09 15.9	+0.3	
MNK	**Minsk**	**140.90 336**	*e*PKHKP	PKPpre	16 57 59.0		
MNK			*e*		17 01 09.0		
MNK			pmax	pmax			
	comp=Z,830nm,1.0s						
MNK	**Minsk**	**140.90 336**	*i* PKP	**PKPdf**	**16 57 58.6**	**-4.8**	
	comp=E,12nm,1.1s						
MNK			*i* PKP	**PKPdf**	**16 57 58.6**	**-4.8**	
	comp=N,132nm,1.2s						
MNK			*i* PKP	**PKPdf**	**16 57 58.6**	**-4.8**	
	comp=Z,268nm,1.2s						
MNK			*i* pPKP	**pPKPdf**	**17 00 17.3**	**-1.2**	
MNK			*i* PP	PP	17 00 53.4	-18	
MNK			*i* PPP	PPP	17 03 31.9		
MNK			*i* SKS	**SKSdf**	**17 04 24.4**	**+5.9**	
MNK			*i* PKKP	**PKKPdf**	**17 07 29.9**	**+3.7**	
MNK			*i* PKKS		17 10 39.7		
MNK			*i* SKKS	SKKSdf	17 14 05.0	+20	
MNK			*i* SS	**SS**	**17 18 58.8**	**+6.0**	
MNK			*i* SSS	SSS	17 22 56.2		
MNK			*i* LR	LR	17 52 15.8		
MNK			*i* LRM	MLR	17 59 34.7		
	comp=E,26nm,20.0s						
MNK			*i* LRM	MLR	17 59 34.7		
	comp=N,211nm,22.3s						
MNK			*i* LRM	MLR	17 59 34.7		
	comp=Z,171nm,22.7s						
SOC	**Sochi**	**140.96 314**	*e*P	**Pdif**	**16 55 30.6**	**+5.8**	
SOC			*e*		16 57 56.5		
SOC			*i*		16 58 03.1		
SOC			pmax	pmax			
	comp=Z,121nm,1.3s						
NACGM	**Naroch**	**141.01 337**	*i* PKP	**PKPdf**	**16 57 58.8**	**-4.8**	
NACGM			*i* PKP	**PKPdf**	**16 57 58.8**	**-4.8**	
NACGM			*i* PKP	**PKPdf**	**16 57 58.8**	**-4.8**	
NACGM			*i* PP	PP	17 00 50.5	-22	
NACGM			*i* PPP	PPP	17 04 12.5		
NACGM			*i* SKS	SKSdf	17 04 32.4	+14	
NACGM			*i* SKKS	SKKSac	17 06 39.3	-28	
NACGM			*i* SP		17 10 18.1		
NACGM			*i* PS		17 11 14.7		
NACGM			*i* SPP	SPP	17 12 22.8		
NACGM			*i* PPS	PPS	17 13 13.3		
NACGM			*i* SS	SS	17 18 02.4	-52	
NACGM			*i* SSS	SSS	17 24 03.5		
BLS5	**Blasjo**	**141.32 356**	*e*PKPdf	**PKPdf**	**16 57 59.7**	**-4.4**	
PABE	**Paberze**	**141.51 339**	*e*P	**PKPdf**	**16 58 01.2**	**-3.3**	
PABE			*e*SKKPab	SKKPab	17 09 12.2	-0.3	
PABE	**Paberze**	**141.51 339**		PKPpre	16 57 59.1		
KMY	**Karmoy**	**141.61 357**	*e*PKPdf	**PKPdf**	**16 58 00.6**	**-3.9**	
PBUR	**Paburge**	**141.71 341**	*e*P	**PKPdf**	**16 58 01.6**	**-3.3**	
PBUR			*e*SKKPab	SKKPab	17 09 11.8	+0.1	
KTUT	**Trabzon**	**141.88 310**	⇓P	**PKPdf**	**16 58 01.8**	**-3.8**	
ANN	**Anapa**	**141.94 317**	*i* PKHKP	PKPpre	16 57 58.7		
ANN			*e*		17 01 14.5		
ANN			*e*		17 04 23.2		
ANN			pmax	pmax			
	comp=Z,388nm,1.2s						
ANN			pmax	pmax			
	comp=Z,2μm,4.0s						
FURI	**Furi**	**142.18 257**		**PKPdf**	**16 58 06.3**	**-1.0**	
HOMB	**Homborsund**	**142.30 354**	*i* P	**PKPdf**	**16 58 02.2**	**-3.5**	
HOMB	**Homborsund**	**142.30 354**	*e*PKPdf	**PKPdf**	**16 58 03.8**	**-2.0**	
HOMB			*e*SKPdf	**SKPbc**	**17 00 47.9**	**-1.1**	
HOMB			*e*SS	**SS**	**17 19 11.2**	**+3.2**	
SNART	**Snartemo**	**142.35 355**	*i* P	**PKPdf**	**16 58 03.1**	**-2.7**	
SNART	**Snartemo**	**142.35 355**	*e*PKPdf	**PKPdf**	**16 58 03.2**	**-2.7**	
BORU	**Boraas**	**142.36 350**	*i* P	**PKPdf**	**16 58 01.9**	**-4.0**	
LODK	**Lodwar**	**142.70 247**		**PKPdf**	**16 58 05.7**	**-2.3**	
LODK	**Lodwar**	**142.70 247**	P	**PKPdf**	**16 58 06.2**	**-1.8**	
	SNR=201						
ONAU	**Onsala**	**142.72 351**	*i* P	**PKPdf**	**16 58 03.1**	**-3.4**	
SHEL	**Horse Pasture**	**142.72 169**	PKIKP	**PKPdf**	**16 58 06.6**	**-1.3**	
SHEL	**Horse Pasture**	**142.72 169**		**PKPdf**	**16 58 06.6**	**-1.3**	
FABU	**Falkenberg**	**142.97 350**	*i* P	**PKPdf**	**16 58 04.3**	**-2.7**	
SUW	**Suwalki**	**142.99 339**	*e*PKP	**PKPdf**	**16 58 04.7**	**-2.5**	
SUW	**Suwalki**	**142.99 339**	*e*P	**PKPdf**	**16 58 05.6**	**-1.5**	
SUW			*e*SKKPab	SKKPab	17 09 06.2	+0.3	
SUW	**Suwalki**	**142.99 339**	PKIKP	**PKPdf**	**16 58 04.7**	**-2.5**	
SUW	**Suwalki**	**142.99 339**	PKPpre	PKPpre	16 58 04.7		
BLEU	**Blekinge**	**143.03 347**	*i* P	PKPab	16 58 04.1	-0.8	
AKASG	**Malin Array Be**	**143.07 330**	PKhKP	PKPpre	16 58 04.8		
	comp=Z,394nm,0.5s,baz=40,slow=4.3,SNR=957						
AKASG			SKPbc	**SKiKP**	**17 00 52.7**	**+0.6**	
	comp=Z,143nm,1.2s,baz=40,slow=2.7,SNR=12						
AKASG			SKKPbc	**SKKPab**	**17 09 04.0**	**-1.5**	
	comp=Z,3.2nm,0.6s,baz=241,slow=3.8,SNR=9.6						
AKBB	**Malin Array Si**	**143.07 330**	PKIKP	PKPab	16 58 04.6	-0.6	
AKBB	**Malin Array Si**	**143.07 330**	PKPpre	PKPpre	16 58 04.6		
KAC	**Achnashellach**	**143.09 6**	*e*P	PKPab	16 58 05.3	+0.2	
MCD	**Coleburn Disti**	**143.18 4**	*e*P	PKPab	16 58 04.9	-0.5	
MDO	**Dochfour**	**143.24 5**	*e*P	PKPab	16 58 05.2	-0.5	

DEL	**Delary**	**143.27 348**	*i* P	PKPab	16 58 05.6	-0.2	
GOET	**G??ttrup**	**143.43 353**	⇓*i*P	PKPbc	16 58 07.0	+0.4	
GOET			IAmb	IAmb	16 58 08.9		
	comp=Z,759nm,0.8s						
BJUU	**Bjuv**	**143.80 349**	*i* P	PKPbc	16 58 07.3	-0.5	
GID	**Gilleleje**	**143.90 350**	*i* P	**PKPdf**	**16 58 08.6**	**0.0**	
SIM	**Simferopol'**	**143.93 319**	*d* PKIKP	PKPbc	16 58 08.0	-0.5	
SIM			pmax	pmax			
	comp=Z,2μm,0.9s						
MUD	**Monsted U'grnd**	**144.01 353**	*i* P	**PKPab**	**16 58 08.5**	**-0.1**	
MUD			⇓*i*P	**PKPab**	**16 58 08.5**	**-0.1**	
MUD			IAmb	IAmb	16 58 09.7		
	comp=Z,2μm,1.1s						
MUD	**Monsted U'grnd**	**144.01 353**	*i* PKIKP	**PKPab**	**16 58 08.5**	**-0.1**	
MUD			pmax	pmax			
	comp=Z,2μm,1.1s						
LUNU	**Lund**	**144.14 348**	*i* P	PKPbc	16 58 08.5	-0.2	
EDU	**Dundee**	**144.23 4**	*e*P	PKPbc	16 58 08.3	-0.8	
MBAR	**Mbarara**	**144.25 237**	PKP	**PKPab**	**16 58 11.3**	**+0.3**	
	comp=Z,234nm,0.7s,baz=96,slow=4.2,SNR=372						
INVG	**Invergeldie, C**	**144.27 5**	*e*P	PKPbc	16 58 08.4	-0.8	
COP	**Copenhagen**	**144.27 349**	⇓*i*P	PKPbc	16 58 09.1	-0.1	
COP			IAmb	IAmb	16 58 10.4		
	comp=Z,2μm,1.3s						
COP			*i* P	sPKPdf	17 00 55.6	-25	
LAWE	**Loch Awe, Argy**	**144.30 7**	*e*P	PKPbc	16 58 08.1	-1.1	
BSD	**Bornholm Skovb**	**144.33 347**	*e*P	PKPbc	16 58 09.1	-0.3	
BSD	**Bornholm Skovb**	**144.33 347**	⇓*i*P	PKPbc	16 58 09.1	-0.2	
BSD			IAmb	IAmb	16 58 10.4		
	comp=Z,2μm,1.3s						
BSD			*i* P	sPKPdf	17 00 55.1	-25	
DIKM	**Dikmen**	**144.75 314**	⇑P	PKPbc	16 58 11.3	+0.1	
EDI	**Edinburgh**	**144.84 5**	*e*P	**PKPdf**	**16 58 09.8**	**-0.4**	
PGBU	**Glenifferbraes**	**144.84 6**	*e*P	**PKPdf**	**16 58 09.8**	**-0.4**	
ESY	**Stoneypath**	**144.88 4**	*e*P	**PKPdf**	**16 58 10.5**	**+0.2**	
GAZ	**Gaziantep**	**144.99 305**		**PKPdf**	**16 58 10.7**	**-0.6**	
EBL	**Broad Law**	**144.99 4**	*e*P	**PKPdf**	**16 58 10.8**	**+0.2**	
RGN	**Rugen**	**145.19 348**		**PKPbc**	**16 58 11.6**	**-0.4**	
RGN	**Rugen**	**145.19 348**	*e*PKPdf	**PKPbc**	**16 58 11.6**	**-0.4**	
	baz=17,slow=2.4						
RGN			*e*PKPbc	**PKPab**	**16 58 12.7**	**-0.5**	
	baz=17,slow=2.4						
SORM	**Soroca**	**145.24 328**	⇓P	**PKPdf**	**16 58 11.4**	**+0.2**	
SORM	**Soroca**	**145.24 328**	⇓PKIKP	**PKPdf**	**16 58 11.4**	**+0.2**	
EKA	**Eskdalemuir Ar**	**145.42 5**	SKKPbc	SKKPbc	17 08 55.7	-1.5	
	comp=Z,20nm,0.9s,baz=142,slow=4.2,SNR=18						
ESK	**Eskdalemuir**	**145.44 5**	PKIKP	PKPbc	**16 58 12.3**	**-

EFOR	EFORIE	147.67	322	⇓P		PKPdf	16 58 16.8	+1.4
HARR	Harsova	147.69	323	⇑P		PKPdf	16 58 16.7	+1.3
HARR	Harsova	147.69	323	⇑PKIKP		PKPdf	16 58 16.7	+1.3
FLTG	Flechtingen	147.69	349	*e*PKPdf		PKPdf	16 58 15.2	0.0
	baz=17,slow=2.4							
FLTG				*e*PKPbc		PKPbc	16 58 19.2	+0.3
	baz=17,slow=2.4							
FLTG				*e*PKPab		PKPab	16 58 23.6	+0.3
	baz=17,slow=2.4							
TLBR	Topalu	147.72	323	⇑P		PKPdf	16 58 16.8	+1.3
STNC	Stoke	147.72	4	*e*P		PKPdf	16 58 16.0	+0.8
MFTR	Murfatlar	147.73	322	⇑P		PKPdf	16 58 16.1	+0.6
NRDL	Niedersach Rie	147.73	350	*e*PKPdf		PKPdf	16 58 15.4	+0.2
	baz=17,slow=2.4							
NRDL				*e*PKPbc		PKPbc	16 58 19.4	+0.5
	baz=17,slow=2.4							
NRDL				*e*PKPab		PKPab	16 58 23.8	+0.5
	baz=17,slow=2.4							
NRDL				*ep*PKPbc		pPKPab	17 00 42.3	+10
GHAJ	Ghor Haditha	147.74	296			PKPdf	16 58 15.4	-0.5
GHAJ				PKPbc		PKPbc	16 58 19.8	+0.2
CRVS	Cervenica-Dubn	147.77	335	*e*PKIKP		PKPdf	16 58 15.8	+0.3
CRVS				*e*			16 58 20.4	
CRVS	Cervenica-Dubn	147.77	335	*e*PKP		PKPdf	16 58 15.8	+0.3
CRVS				*e*			16 58 20.4	
GRER		147.77	325	⇑P		PKiKP	16 58 21.2	+0.4
NIE	Niedzica	147.79	337	*e*PKP		PKPdf	16 58 16.4	+0.9
BISRR	Bisoca	147.80	326	⇑P		PKiKP	16 58 20.6	-0.3
LLW	Llanuwchllyn	147.84	6	*e*P		PKPdf	16 58 15.1	-0.3
FOEL	Foel Wylfa	147.84	5	*e*P		PKPdf	16 58 14.4	-1.1
CVDA	Cernavoda	147.85	323	⇑P		PKiKP	16 58 21.0	+0.1
TSMN	Mangalia Port-	147.86	322	⇑P		PKiKP	16 58 20.8	-0.1
BMR	Baia Mare	147.86	331	⇓P		PKPbc	16 58 19.1	-0.4
BMR	Baia Mare	147.86	331	⇓PKP2		PKPbc	16 58 19.1	-0.4
KSP	Ksiaz	147.88	342	*e*PKP		PKPdf	16 58 16.1	+0.5
ARCR	ARCALIA	147.91	330	⇑P		PKiKP	16 58 20.7	-0.3
OZUR		147.91	327	⇓P		PKiKP	16 58 20.5	-0.5
TRPA	Tarpa	147.93	333	⇓P		PKPdf	16 58 16.1	+0.4
ASSE	Asse, Remlinge	147.99	349	*e*PKPdf		PKPdf	16 58 15.7	+0.2
	baz=17,slow=2.4							
ASSE				*e*PKPbc		PKPbc	16 58 20.2	+0.6
	baz=17,slow=2.4							
ASSE				*e*PKPab		PKPab	16 58 25.1	+0.7
	baz=17,slow=2.4							
MDUB	Mudurnu	148.02	314			PKPdf	16 58 14.4	-1.8
MDUB				PKPbc		PKPbc	16 58 19.1	-1.2
AMRR	Amara	148.07	324	⇓P		PKiKP	16 58 21.1	-0.3
AMRR	Amara	148.07	324	⇓PKP2		PKiKP	16 58 21.1	-0.3
PGOR	Pogoanele	148.07	325	⇓P		PKiKP	16 58 21.1	-0.2
NEHR	Nehoiu	148.10	326	⇓P		PKPdf	16 58 16.5	+0.3
CWF	Charnwood Fore	148.13	3	*e*P		PKPdf	16 58 14.9	-1.0
OSTC	Ostas	148.16	342	⇑*e*PKP		PKiKP	16 58 21.0	-0.4
ISR	Istrita	148.17	325	⇑P		PKiKP	16 58 21.3	-0.4
ISR	Istrita	148.17	325	⇑PKP2		PKiKP	16 58 21.3	-0.4
CHVC	Chvalec	148.18	342	*e*PKPDF		PKPdf	16 58 16.6	+0.5
CHVC				⇑*e*PKP		PKPbc	16 58 20.8	+0.6
CHVC				*ex*		x	17 01 33.3	
OKC	Ostrava-Krasne	148.20	339	*e*PKP2		PKiKP	16 58 21.1	-0.4
OKC	Ostrava-Krasne	148.20	339	⇑*e*PKP		PKiKP	16 58 21.1	-0.4
OKC				*e*PKPAB		PKPab	16 58 26.5	+1.0
OKC				*es*PKP			17 01 30.1	
DOPR	Dopca	148.20	327	⇓P		PKPdf	16 58 17.7	+1.4
WACR	West Acre	148.20	1	*e*P		PKPdf	16 58 16.8	+0.9
MLR	Muntele Rosu	148.24	326	PKP		PKPdf	16 58 16.5	0.0
	comp=Z,215nm,1.1s,baz=15,slow=3.0,SNR=48							
MLR				PKPbc		PKPbc	16 58 21.0	+0.3
	comp=Z,286nm,0.7s,baz=23,slow=2.9,SNR=113							
MLR				SKKPbc			17 08 43.2	
	comp=Z,18nm,1.0s,baz=233,slow=2.9,SNR=7.5							
MLR	Muntele Rosu	148.24	326	⇓P		PKPdf	16 58 16.8	+0.3
MLR	Muntele Rosu	148.24	326	⇓PKHKP		PKPpre	16 58 16.8	
MLR	Muntele Rosu	148.24	326			PKPdf	16 58 15.6	-0.9
MLR				PKPbc		PKPbc	16 58 20.6	-0.1
IBBN	Ibbenburen	148.24	353	*e*PKPdf		PKPdf	16 58 16.1	0.0
	baz=17,slow=2.4							
IBBN				*e*PKPbc		PKPbc	16 58 20.7	+0.4
	baz=17,slow=2.4							
IBBN				*e*PKPab		PKPab	16 58 26.0	+0.4
	baz=17,slow=2.4							
UPC	Upice	148.27	342	*e*PKHKP		PKPpre	16 58 17.0	
UPC				*e*			16 58 26.9	
UPC	Upice	148.27	342	*e*PKPDF		PKPdf	16 58 17.0	+0.8
UPC				⇑*e*PKP		PKPbc	16 58 20.9	+0.5
UPC				*e*PKPAB		PKPab	16 58 26.9	+1.1
UPC				*es*PKP			17 01 35.4	
CLL	Collm	148.30	346	*e*PKPdf		PKPdf	16 58 16.0	-0.2
	comp=Z,206nm,1.4s							
CLL				*e*PKPlp			16 58 18.0	
	comp=Z,800nm,21.0s							
CLL				⇓*i*PKPbc		PKPbc	16 58 21.0	+0.5
	comp=Z,1μm,1.1s							
CLL				⇑*i*PKPab		PKPab	16 58 26.0	+0.1
	comp=Z,877nm,1.4s							
CLL				*ep*PKPab		pPKPbc	17 00 34.0	+0.1
CLL				*e*SKPdf		SKPdf	17 00 55.0	-0.3
CLL				*es*PKPab		sPKPab	17 01 33.0	+0.5
CLL				*e*PKSdf		PKSdf	17 01 52.0	+1.0
CLL				*es*PP			17 04 51.0	
CLL				*e*PKKPdf		PKKPdf	17 07 14.0	+2.2
CLL				*e*SKKSac		SKKSac	17 07 50.0	+1.8
CLL				*e*			17 08 49.0	
CLL				*e*PcPPKPre			17 09 33.0	
CLL				*e*			17 09 37.0	
CLL				*e*SKKPdf		SKKPdf	17 09 54.0	+1.4
CLL				*e*SKSP			17 11 15.0	
CLL				*es*SKKSac			17 11 44.0	
CLL				*e*			17 12 27.0	
CLL				*ep*PPPrev			17 14 24.0	
CLL				*e*PPS	PPS		17 14 51.0	
CLL				*ep*PPS			17 16 24.0	
CLL				*es*PPPPrev			17 18 54.0	
CLL				*e*SS	SS		17 20 19.0	+3.4
CLL				*es*SS			17 23 24.0	
CLL				*e*SSS	SSS		17 25 42.0	
CLL				*e*SSSS			17 29 42.0	
CLL				*es*SSSS			17 33 12.0	
CLL				*e*			17 49 07.0	
CLL	Collm	148.30	346	*i* (PKPab)			17 08 41.6	
	comp=Z,36nm,1.5s							
CLL	Collm	148.30	346	⇓*e*PKHKP		PKPpre	16 58 16.0	
CLL				*i*			16 58 26.0	
CLL				pmax	pmax			
	comp=Z,206nm,1.4s							
CLL				pmax	pmax			
	comp=Z,1μm,1.1s							
CLL				pmax	pmax			
	comp=Z,877nm,1.4s							
CLL	Collm	148.30	346			PKPdf	16 58 16.1	-0.2
CLL				PKPbc		PKPbc	16 58 20.7	+0.3
CLL	Collm	148.30	346	*e*PKPdf		PKPdf	16 58 16.1	-0.1
	baz=17,slow=2.4							
CLL				*e*PKPbc		PKPbc	16 58 21.0	+0.5
	baz=17,slow=2.4							
CLL				*e*PKPab		PKPab	16 58 26.1	+0.3
	baz=17,slow=2.4							
CLL				*ep*PKPbc		pPKPab	17 00 45.4	+10
CEI	Carei	148.31	332	⇓P		PKiKP	16 58 21.5	-0.2
CEI	Carei	148.31	332	⇓PKP2		PKiKP	16 58 21.5	-0.2
CLZ	Clausthal	148.31	349	*e*PKPdf		PKPdf	16 58 16.5	+0.2
	baz=17,slow=2.4							
CLZ				*e*PKPbc		PKiKP	16 58 21.4	-0.3
	baz=17,slow=2.4							
DPC	Dobruska-Polom	148.32	342	*e*PKPDF		PKPdf	16 58 17.1	+0.7
DPC				⇑*e*PKP		PKiKP	16 58 21.5	-0.3
LANS	Liptovska Anna	148.32	337	*e*PKHKP		PKPpre	16 58 17.5	
LANS				*e*			16 58 22.4	
LANS	Liptovska Anna	148.32	337	*e*PKP		PKPdf	16 58 17.5	+1.1
LANS				*e*			16 58 22.4	
LANS				*e*			16 58 28.3	
KRLC	Kraliky	148.42	341	*e*PKPDF		PKPdf	16 58 16.9	+0.4
KRLC				⇑*e*PKP		PKPbc	16 58 21.4	+0.5
KRLC				*es*PKP			17 01 32.5	
RASA	Rasa	148.43	323	⇓P		PKiKP	16 58 22.4	+0.3
LEHL	Lehliu	148.44	324	⇑P		PKiKP	16 58 22.0	-0.1
MORC	Moravsky Berou	148.44	340	⇑P		PKPdf	16 58 17.0	+0.4
MORC	Moravsky Berou	148.44	340	*e*PKP		PKPdf	16 58 16.5	-0.1
MORC				*e*			16 58 22.0	
MORC				*e*			17 08 41.3	
MORC	Moravsky Berou	148.44	340	PKP2		PKPbc	16 58 21.4	+0.4
MORC	Moravsky Berou	148.44	340			PKPdf	16 58 16.1	-0.4
MORC				PKPbc		PKPbc	16 58 21.4	+0.4
BRG	Berggiesshubel	148.48	345	*e*PKPdf		PKPdf	16 58 16.6	+0.1
	baz=17,slow=2.4							
BRG				*e*PKPbc		PKPbc	16 58 21.5	+0.5
	baz=17,slow=2.4							
BRG				*e*PKPab		PKPab	16 58 27.3	+0.7
	baz=17,slow=2.4							
BRG	Berggiesshubel	148.48	345	⇓*i*PKPf			16 58 16.8	
BRG	Berggiesshubel	148.48	345	Amp			16 58 19.2	
	comp=Z,280nm,1.5s							
BRG	Berggiesshubel	148.48	345	⇑*i*PKP		PKiKP	16 58 21.6	-0.4
BRG	Berggiesshubel	148.48	345	Amp			16 58 23.1	
	comp=Z,2μm,1.6s							
BRG	Berggiesshubel	148.48	345	*i* PKPab		PKPab	16 58 27.9	+1.3
BRG	Berggiesshubel	148.48	345	Amp			16 58 28.8	
	comp=Z,502nm,1.6s							
BRG	Berggiesshubel	148.48	345	pPKP		pPKPdf	17 00 39.4	+7.5
BRG	Berggiesshubel	148.48	345	Amp			17 00 47.2	
	comp=Z,273nm,1.8s							
KECS	Kecovo	148.49	335	*e*PKP2		PKiKP	16 58 21.6	-0.5
KECS	Kecovo	148.49	335	*e*PKP		PKiKP	16 58 21.6	-0.5
KECS				*e*			16 58 27.9	
EIL	Elat	148.53	293	PKP		PKPdf	16 58 16.9	-0.3
	comp=Z,41nm,1.0s,baz=62,slow=0.4,SNR=50							
EIL				PKPbc		PKPbc	16 58 22.1	+0.3
	comp=Z,352nm,0.9s,baz=13,slow=1.2,SNR=93							
EIL				SKKPbc			17 08 43.7	
	comp=Z,7.3nm,1.1s,baz=146,slow=1.3,SNR=4.1							
CJR	Cluj-Napoca	148.53	330	⇑P		PKPbc	16 58 21.8	+0.5
CJR	Cluj-Napoca	148.53	330	⇑PKP2		PKPbc	16 58 21.8	+0.5
MDB	Medias	148.57	329	⇓P		PKiKP	16 58 22.6	+0.2
MDB	Medias	148.57	329	⇓PKP2		PKiKP	16 58 22.6	+0.2
FBE	Freiberg	148.58	345	*e*PKPdf		PKPdf	16 58 17.0	+0.3
	baz=17,slow=2.4							
FBE				*e*PKPbc		PKiKP	16 58 22.2	0.0
	baz=17,slow=2.4							
FBE				*e*PKPab		PKPab	16 58 28.0	+1.0
	baz=17,slow=2.4							
PLAR	PLOIESTI	148.58	325	⇑P		PKiKP	16 58 22.2	-0.2
RSBS	Rosebush, Pemb	148.61	7	*e*P		PKPdf	16 58 16.7	0.0
SULR		148.62	325	⇓P		PKPbc	16 58 21.5	+0.1
PCED	Cedros	148.63	49	*e*PKP		PKPdf	16 58 17.0	-0.1
PVCC	Panska Ves	148.64	344	*e*PKP2		PKiKP	16 58 21.9	-0.5
PVCC	Panska Ves	148.64	344	⇑*e*PKP		PKiKP	16 58 21.9	-0.5
PVCC				*ex*		x	17 01 33.1	
CALA	Caldeira	148.65	49	*e*PKP		PKPdf	16 58 17.3	0.0
NEUB	Neuenburg	148.66	347	*e*PKPdf		PKPdf	16 58 16.9	+0.1
	baz=17,slow=2.4							
NEUB				*e*PKPbc		PKiKP	16 58 21.9	-0.5
	baz=17,slow=2.4							
NEUB				*e*PKPab		PKPab	16 58 27.9	+0.6
	baz=17,slow=2.4							
CSS	Mathiatis	148.66	303			PKPdf	16 58 16.4	-0.9
CSS				PKPbc		PKPbc	16 58 21.5	-0.5
GTTG	Gottingen	148.67	350	*e*PKPdf		PKPdf	16 58 17.0	+0.2
	baz=17,slow=2.4							
GTTG				*e*PKPbc		PKiKP	16 58 22.1	-0.2
	baz=17,slow=2.4							
GTTG				*e*PKPab		PKPab	16 58 28.0	+0.6
	baz=17,slow=2.4							
GTTG				*ep*PKPbc		pPKPab	17 00 46.4	+10
VOIR		148.74	327	⇓P		PKPdf	16 58 18.6	+1.3
MCH1	Michaelchurch	148.75	5	*e*P		PKPdf	16 58 16.7	-0.2
LTVH	Ltavrtes, Hu	148.78	333	⇓P		PKPdf	16 58 18.5	+1.4
PCAN	Candelaria	148.85	49	*e*PKP		PKPdf	16 58 17.3	-0.2
MTUR	Matau	148.88	327	⇑P		PKiKP	16 58 23.3	+0.1
MTUR	Matau	148.88	327	⇑PKP2		PKiKP	16 58 23.3	+0.1
PICO	Pico	148.88	49	*e*PKP		PKPdf	16 58 17.3	-0.4
DRGR		148.88	331	⇑P		PKPdf	16 58 17.3	+0.4
SRBC	Serra Branca	148.91	48	*e*PKP		PKPdf	16 58 17.6	0.0
ROSA	Rosais	148.91	49	*e*PKP		PKPdf	16 58 17.1	-0.5
ROSA	Rosais	148.91	49			PKPdf	16 58 17.8	+0.2
ROSA				PKPbc		PKiKP	16 58 23.0	-0.3
MONM	Monmouth	148.92	5	*e*P		PKPdf	16 58 17.2	+0.1
LEF	Lefka	148.95	304	⇓P		PKPdf	16 58 18.1	+0.4
PGRA	Graciosa	148.95	48	*e*PKP		PKPdf	16 58 17.7	0.0
BUC1	Bucharest	148.96	325	⇑P		PKiKP	16 58 22.9	-0.3
BUC1	Bucharest	148.96	325	⇑PKP2		PKiKP	16 58 22.9	-0.3
ARR	Arges	149.00	327	⇑P		PKiKP	16 58 24.3	+1.0
STRD	Stroud	149.03	4	*e*P		PKPdf	16 58 17.0	-0.4
PMAN	Manadas	149.06	49	*e*PKP		PKPdf	16 58 17.2	-0.6
SGRR	Singureni	149.07	324	⇑P		PKPbc	16 58 22.7	+0.1
PRA	Prague	149.10	344	*e*PKP2		PKiKP	16 58 23.2	-0.1
PRA	Prague	149.10	344	⇑*e*PKP		PKiKP	16 58 23.2	-0.1
PRA				*es*PKP			17 01 35.9	
VYHS	Vyhne	149.10	337	*e*PKP		PKPdf	16 58 17.7	+0.1
VYHS				*e*			16 58 23.5	
VYHS				*e*			16 58 30.5	
PID	Ribeirinha	149.12	49	*e*PKP		PKPdf	16 58 17.6	-0.4
ISK	Istanbul-Kandi	149.12	317	P		PKPdf	16 58 16.2	-1.6
PRU	Pruhonice	149.14	343	*e*PKPDF		PKPdf	16 58 17.8	+0.2
PRU				⇑*e*PKP		PKiKP	16 58 23.2	-0.2
PRU				*e*PKPAB		PKPab	16 58 30.5	+1.1
PRU				*es*PKP			17 01 35.3	
BUG	Bochum--Univer	149.15	353	*e*PKPdf		PKPdf	16 58 17.5	-0.1
	baz=17,slow=2.4							
BUG				*e*PKPbc		PKPbc	16 58 22.6	+0.1
	baz=17,slow=2.4							
BUG				*e*PKPab		PKPab	16 58 29.7	+0.4
	baz=17,slow=2.4							
VRAC	Vranov	149.16	340	⇑P		PKPdf	16 58 18.3	+0.6
VRAC	Vranov	149.16	340	*e*PKP		PKPdf	16 58 17.6	-0.1
VRAC				*e*			16 58 23.4	
VRAC				*e*			17 08 37.7	
STFAR	Stefanesti-Arg	149.18	326	⇓P		PKiKP	16 58 24.0	+0.3
PSZ	Piszkesteto	149.18	335	⇑P		PKPdf	16 58 18.0	+0.1
PSZ	Piszkesteto	149.18	335			PKPdf	16 58 17.3	-0.5
JAVC	Velka Javorina	149.20	339	*e*PKP		PKPdf	16 58 18.7	+0.9
JAVC				*e*			16 58 24.9	
MOX	Moxa	149.22	347	*e*PKPdf		PKPdf	16 58 17.7	0.0
	baz=17,slow=2.4							
MOX				*e*PKPbc		PKiKP	16 58 23.2	-0.3
	baz=17,slow=2.4							
MOX				*e*PKPab		PKPab	16 58 30.1	+0.4
	baz=17,slow=2.4							
KASTN	Kahler Asten	149.24	351	*e*PKPdf		PKPdf	16 58 17.7	-0.1
	baz=17,slow=2.4							
KASTN				*e*PKPbc		PKiKP	16 58 23.3	-0.3
	baz=17,slow=2.4							
TANN	Tannenbergstha	149.26	346	*e*PKPdf		PKPdf	16 58 17.8	-0.1
	baz=17,slow=2.4							
TANN				*e*PKPbc		PKiKP	16 58 23.4	-0.3
	baz=17,slow=2.4							
TANN				*e*PKPab		PKPab	16 58 30.4	+0.5
	baz=17,slow=2.4							
PLN	Plauen	149.26	347	*e*PKPdf		PKPdf	16 58 17.9	+0.1
	baz=17,slow=2.4							
PLN				*e*PKPbc		PKiKP	16 58 23.3	-0.4
	baz=17,slow=2.4							
PLN				*e*PKPab		PKPab	16 58 30.4	+0.6
	baz=17,slow=2.4							
WERD	Werda	149.26	346	*e*PKPdf		PKPdf	16 58 17.9	+0.1
	baz=17,slow=2.4							
WERD				*e*PKPbc		PKiKP	16 58 23.4	-0.3
	baz=17,slow=2.4							
WERD				*e*PKPab		PKPab	16 58 30.5	+0.6
	baz=17,slow=2.4							
GUNZ	Gunzen	149.34	346	*e*PKPdf		PKPdf	16 58 18.2	+0.3
	baz=17,slow=2.4							
GUNZ				*e*PKPbc		PKiKP	16 58 23.6	-0.3
	baz=17,slow=2.4							
GUNZ				*e*PKPab		PKPab	16 58 30.9	+0.7
	baz=17,slow=2.4							
UBBA	Unterbreizbach	149.36	349	*e*PKPdf		PKPdf	16 58 17.8	0.0
	baz=17,slow=2.4							
UBBA				*e*PKPbc		PKPbc	16 58 23.3	+0.4
	baz=17,slow=2.4							
LOT	Lotru	149.37	328	⇑P		PKPdf	16 58 18.3	0.0
WERN	Wernitzgruen	149.40	346	*e*PKPdf		PKPdf	16 58 18.4	+0.4
	baz=17,slow=2.4							
WERN				*e*PKPbc		PKiKP	16 58 23.7	-0.3
	baz=17,slow=2.4							
WERN				*e*PKPab		PKPab	16 58 31.5	+1.0
	baz=17,slow=2.4							
RMVG	GOVORA	149.40	327	⇓P		PKiKP	16 58 25.8	+1.7
NKC	Novy Kostel	149.43	346	*e*PKPDF		PKPdf	16 58 18.6	+0.5
NKC				⇑*e*PKP		PKiKP	16 58 24.0	-0.1
NKC				*ex*		x	17 05 04.1	
KRUC	Moravsky	149.44	340	*e*PKP		PKPdf	16 58 17.9	-0.2
KRUC				*e*			16 58 23.8	
DEV	Deva	149.47	330	⇑P		PKPdf	16 58 19.0	+0.7
BSZH	Besenyszg	149.53	334	⇑P		PKiKP	16 58 25.3	+1.0
PBCC	Pribram	149.56	344	⇑*e*PKP		PKiKP	16 58 24.1	-0.2
PBCC				*e*PKPAB		PKPab	16 58 31.7	+0.5
SMOL	Smolenice	149.58	339	*e*PKP2		PKiKP	16 58 25.1	+0.7
SMOL	Smolenice	149.58	339	*e*PKP		PKiKP	16 58 25.1	+0.7
SMOL				*e*			16 58 32.8	
PAGU	Agualva, Azore	149.63	48	*e*PKP		PKPdf	16 58 18.3	-0.4
ADH	Angra Heroismo	149.64	48	*e*PKP		PKPdf	16 58 18.9	+0.2
ISP	Isparta	149.70	310	PKIKP		PKPdf	16 58 17.6	-1.4
ISP	Isparta	149.70	310			PKPdf	16 58 17.6	-1.4
ISP				PKPbc		PKPbc	16 58 23.1	-1.4
PSCM	Serra do Cume	149.70	48	*e*PKP		PKPdf	16 58 18.1	-0.8
MANZ	Manzenberg	149.74	346	*e*PKPdf		PKPdf	16 58 18.6	0.0
	baz=17,slow=2.4							
MANZ				*e*PKPbc		PKiKP	16 58 24.6	-0.1
	baz=17,slow=2.4							
MANZ				*e*PKPab		PKPab	16 58 32.4	+0.5
	baz=17,slow=2.4							
MODS	Modra-Piesok	149.75	339	*e*PKIKP		PKPdf	16 58 18.2	-0.4
MODS				*e*			16 58 32.7	
MODS	Modra-Piesok	149.75	339	*e*PKP		PKPdf	16 58 18.2	-0.4
MODS				*e*			16 58 24.5	
MODS				*e*			16 58 32.7	
SIRR	Siria	149.75	332	⇑P		PKPdf	16 58 19.0	+0.3
SRO	Srobarova	149.86	337	*e*PKIKP		PKPdf	16 58 18.6	-0.2
SRO				*e*			16 58 33.6	
SRO	Srobarova	149.86	337	*e*PKP		PKPdf	16 58 18.6	-0.2
SRO				*e*			16 58 25.7	
SRO				*e*			16 58 33.6	
SRO2	Moca	149.87	337	*e*PKP		PKiKP	16 58 24.8	-0.2
GZR	Gura Zlata	149.89	329	⇑P		PKPdf	16 58 19.1	+0.1
GZR	Gura Zlata	149.89	329	⇑PKIKP		PKPdf	16 58 19.1	+0.1
ROTZ	Rotzenmuhle	149.92	346	*e*PKPdf		PKPdf	16 58 18.8	0.0
	baz=17,slow=2.4							
ROTZ				*e*PKPbc		PKiKP	16 58 24.9	-0.2
	baz=17,slow=2.4							
ROTZ				*e*PKPab		PKPab	16 58 33.4	+0.7
	baz=17,slow=2.4							
BEBN	Eben Emael	149.95	355	*d*PKPdf		PKPdf	16 58 18.9	+0.1
BEBN				*d*PKP		PKPbc	16 58 24.5	+0.1
BEBN				*d*PKPab		PKPab	16 58 31.7	-0.9
ZST	Bratislava	149.96	339	*e*PKP		PKPdf	16 58 19.3	+0.4
ZST				*e*			16 58 25.4	
ZST				*e*			16 58 33.7	
UCC	Uccle	150.05	356	*d*PKPdf		PKPdf	16 58 19.3	+0.3
UCC				*d*PKP		PKPbc	16 58 24.8	+0.1
UCC				*d*PKiKP		PKiKP	16 58 25.7	+0.5
UCC				*d*PKPab		PKPab	16 58 33.2	+0.1
UCC	Uccle	150.05	356	PKIKP		PKPbc	16 58 24.6	0.0
UCC	Uccle	150.05	356			PKPdf	16 58 18.9	-0.1
UCC				PKPbc		PKPbc	16 58 24.6	0.0
VLAD	Vladila	150.06	326	⇑P		PKiKP	16 58 25.9	+0.4
AHRW	Bad Neuenahr-A	150.06	353	*e*PKPdf		PKPdf	16 58 19.2	+0.1
	baz=17,slow=2.4							
AHRW				*e*PKPbc		PKiKP	16 58 25.0	-0.3
	baz=17,slow=2.4							
AHRW				*e*PKPab		PKPab	16 58 33.9	+0.8
	baz=17,slow=2.4							
AMBH	Ambrzfalva	150.09	333	⇑P		PKiKP	16 58 26.2	+0.7
MEM	Membach	150.11	354	*d*PKPdf		PKPdf	16 58 19.0	-0.1
MEM				*d*PKP		PKiKP	16 58 25.2	-0.2
MEM				*d*PKiKP		PKPbc	16 58 25.9	+1.1
MEM				*d*PKPab		PKPab	16 58 33.5	+0.2
EDRB	Edirne	150.11	320	P		PKPdf	16 58 18.2	-1.2
BTNL	Ternell	150.12	354	*d*PKPdf		PKPdf	16 58 19.1	-0.1
BTNL				*d*PKP		PKiKP	16 58 25.3	-0.2
BTNL				*d*PKiKP		PKPbc	16 58 26.1	+1.2
BTNL				*d*PKPab		PKPab	16 58 34.2	+0.7
BSTI	Sart Tilman	150.17	355	*d*PKPdf		PKPdf	16 58 19.3	+0.1
BSTI				*d*PKP		PKiKP	16 58 25.3	-0.2
BSTI

CONA *e*P **PKiKP** 16 58 27.2 +0.6
comp=Z,773nm,1.3s
CONA *e*P **PKPab** 16 58 36.6 +0.9
comp=Z,490nm,1.5s
CONA *e*P **pPKPab** 17 00 43.9 -0.2
comp=Z,171nm,1.3s
PUNG Punghina 150.62 328 ⇑P **PKiKP** 16 58 26.5 -0.1
RCHB Rochefort 150.63 355 *d*PKPdf **PKPdf** 16 58 19.7 -0.2
RCHB *d*PKP **PKPbc** 16 58 26.2 +0.2
RCHB *d*PKiKP **PKiKP** 16 58 27.1 +0.7
RCHB *d*PKPab **PKPab** 16 58 34.9 -0.6
BANR Banloc 150.66 331 ⇑P **PKiKP** 16 58 27.5 +0.9
DOU Dourbes 150.73 356 *d*PKPdf **PKPdf** 16 58 19.8 -0.2
DOU *d*PKP **PKiKP** 16 58 26.6 -0.1
DOU *d*x x 16 58 33.6
DOU *d*x x 16 58 36.3
MDVR Moldovita 150.85 330 ⇑P **PKPdf** 16 58 20.5 0.0
WLF Walferdange 151.03 354 *d*PKPdf **PKPdf** 16 58 21.1 +0.5
WLF *d*PKP **PKiKP** 16 58 27.7 +0.3
WLF *d*PKPab **PKPab** 16 58 36.8 -0.5
WLF Walferdange 151.03 354 PKiKP **PKPdf** 16 58 20.7 +0.2
WLF Walferdange 151.03 354 **PKPdf** 16 58 20.7 +0.2
WLF PKPbc **PKiKP** 16 58 27.6 +0.3
WLF Walferdange 151.03 354 *e*PKPdf **PKPdf** 16 58 21.2 +0.7
baz=17,slow=2.4
WLF *e*PKPbc **PKiKP** 16 58 27.8 +0.5
baz=17,slow=2.4
WLF *e*PKPab **PKPab** 16 58 38.1 +0.8
baz=17,slow=2.4
MORH Mrgy, Hungar 151.06 335 ⇑P **PKPdf** 16 58 20.7 0.0
MORH Mrgy, Hungar 151.06 335 ⇑*i*P **PKPdf** 16 58 20.2 -0.5
KSL Kastellorizon 151.08 308 P **PKPdf** 16 58 19.7 -1.3
PSET Sete Cidades 151.08 48 *e*PKP **PKPdf** 16 58 20.5 -0.5
ALN Alexandroupoli 151.10 319 P **PKPdf** 16 58 17.9 -3.0
ALN Alexandroupoli 151.10 319 PKiKP **PKPbc** 16 58 26.9 -0.5
ALN Alexandroupoli 151.10 319 **PKPdf** 16 58 19.8 -1.1
ALN PKPbc **PKPbc** 16 58 26.9 -0.5
ENEZ Enez 151.13 319 P **PKPdf** 16 58 15.3 -5.7
MOA Molln 151.16 342 *i* P **PKPdf** 16 58 20.1 -0.8
comp=Z,54nm,1.6s,SNR=20
MOA *e*P **PKiKP** 16 58 27.8 +0.1
comp=Z,201nm,1.2s
MOA *e*P **PKPab** 16 58 39.5 +1.6
comp=Z,366nm,1.6s
MOA *e*P **pPKPab** 17 00 44.9 -1.6
comp=Z,43nm,1.4s
GRON Grota Negra 151.24 48 *e*PKP **PKPdf** 16 58 20.6 -0.7
FETY Fethiye 151.25 309 P **PKPdf** 16 58 19.5 -1.8
CMLA Cha da Macela 151.25 48 *e*PKP **PKPdf** 16 58 20.8 -0.5
RDO Rodhopi 151.26 320 P **PKPdf** 16 58 19.5 -1.6
ARSA Arzberg 151.31 340 *i* P **PKPdf** 16 58 21.1 0.0
comp=Z,49nm,1.6s,SNR=14
ARSA *e*P **PKiKP** 16 58 28.0 0.0
comp=Z,213nm,1.4s
ARSA *e*P **PKPab** 16 58 39.4 +0.8
comp=Z,269nm,1.4s
ARSA *e*P **pPKPab** 17 00 44.9 -2.1
comp=Z,31nm,1.2s
FRGS Fruska Gora 151.43 332 ⇑P **PKPdf** 16 58 21.3 0.0
FRGS Fruska Gora 151.43 332 ⇑*i*P **PKPdf** 16 58 21.1 -0.2
STU Stuttgart 151.48 349 PKiKP **PKPbc** 16 58 27.8 -0.2
STU Stuttgart 151.48 349 **PKPdf** 16 58 21.2 0.0
STU PKPbc **PKPbc** 16 58 27.8 -0.2
STU Stuttgart 151.48 349 *e*PKPdf **PKPdf** 16 58 21.2 0.0
baz=17,slow=2.4
STU *e*PKPbc **PKiKP** 16 58 28.5 +0.2
baz=17,slow=2.4
STU *e*PKPab **PKPab** 16 58 39.7 +0.5
baz=17,slow=2.4
BART Pico Bartolome 151.49 48 *e*PKP **PKPdf** 16 58 21.2 -0.5
EZN Ezine 151.54 317 P **PKPdf** 16 58 19.9 -1.7
BEHE Becsehely 151.56 337 ⇑*i*P **PKPdf** 16 58 23.2 +1.8
JVM Valle D.L. Mar 151.57 5 *e*P **PKPdf** 16 58 20.9 -0.4
YER Yerkesik 151.60 311 P **PKiKP** 16 58 29.2 +0.2
YER Yerkesik 151.60 311 P **PKPdf** 16 58 20.6 -1.3
GADA Gvkgeada 151.60 318 P **PKPbc** 16 58 28.1 -0.5
JSA Saint Aubin 151.61 5 *e*P **PKPdf** 16 58 20.6 -0.8
VTS Vitosha 151.62 325 ⇓P **PKiKP** 16 58 29.3 +0.3
VTS Vitosha 151.62 325 PKiKP **PKPdf** 16 58 21.0 -0.9
VTS 16 58 28.6
VTS Vitosha 151.62 325 **PKPdf** 16 58 21.0 -0.9
VTS PKPbc **PKPbc** 16 58 28.6 -0.1
RJOB Jochberg 151.67 344 *e*PKPdf **PKPdf** 16 58 21.0 -0.7
baz=17,slow=2.4
RJOB *e*PKPbc **PKPbc** 16 58 28.7 +0.1
baz=17,slow=2.4
RJOB *e*PKPab **PKPab** 16 58 41.5 +1.4
baz=17,slow=2.4
SMTH Samothraki Isl 151.67 319 P **PKPbc** 16 58 27.3 -1.4
SMTH Samothraki Isl 151.67 319 P **PKPdf** 16 58 20.2 -1.6
BOVS Bovan 151.70 328 ⇑P **PKPdf** 16 58 21.3 -0.4
KOGS Kog 151.76 338 *i* PKPdf **PKPdf** 16 58 20.9 -0.8
KOGS *i* PKPbc **PKPbc** 16 58 28.4 -0.3
KOGS *i* PKPab **PKPab** 16 58 40.5 0.0
PSMA Santa Maria 151.89 49 *e*PKP **PKPdf** 16 58 21.8 -0.4
PRK Paraskevi 151.90 316 P **PKiKP** 16 58 30.2 +0.8
PRK Paraskevi 151.90 316 P **PKPdf** 16 58 22.1 -0.1
PSMN Pico do Norte, 151.93 49 *e*PKP **PKPdf** 16 58 21.8 -0.5
KAVA Kavala 151.96 321 P **PKPbc** 16 58 29.0 -0.3
KAVA Kavala 151.96 321 P **PKPdf** 16 58 20.7 -1.5
SOKA Soboth 151.97 340 *i* P **PKPdf** 16 58 21.5 -0.6
comp=Z,76nm,1.4s,SNR=28
SOKA *e*P **PKiKP** 16 58 29.6 +0.1
comp=Z,343nm,1.3s
SOKA *e*P **PKPab** 16 58 41.4 -0.1
comp=Z,288nm,1.4s
SOKA *e*P **pPKPbc** 17 00 40.7 -3.0
comp=Z,22nm,1.4s
TEKS Tekeris 152.03 332 ⇑*i*P **PKPdf** 16 58 22.1 -0.1
BFO Black Forest 152.05 350 PKiKP **PKPdf** 16 58 21.5 -0.6
BFO 16 58 29.2
BFO Black Forest 152.05 350 **PKPdf** 16 58 21.5 -0.6
BFO PKPbc **PKPbc** 16 58 29.2 -0.1
BFO Black Forest 152.05 350 *e*PKPdf **PKPdf** 16 58 21.9 -0.2
baz=17,slow=2.4
BFO *e*PKPbc **PKiKP** 16 58 29.5 0.0
baz=17,slow=2.4
BFO *e*PKPab **PKPab** 16 58 41.9 +0.2
baz=17,slow=2.4
THAS Thassos island 152.08 320 P **PKPbc** 16 58 27.8 -1.8
THAS Thassos island 152.08 320 P **PKPdf** 16 58 20.9 -1.5
NVR Nevrokopi 152.12 322 P **PKPdf** 16 58 21.0 -1.5
KBA Koelnbreinsper 152.12 342 *i* P **PKPdf** 16 58 21.8 -0.7
comp=Z,69nm,1.3s,SNR=22
KBA *e*P **PKPbc** 16 58 29.6 -0.2
comp=Z,166nm,1.0s
KBA *e*P **PKPab** 16 58 43.8 +1.6
comp=Z,193nm,1.2s
KBA *e*P **pPKPdf** 17 00 36.8 -1.3
comp=Z,34nm,1.1s
ARG Arkhangelos 152.12 309 P **PKPbc** 16 58 29.9 0.0
ARG Arkhangelos 152.12 309 P **PKPdf** 16 58 21.8 -0.8
DIVS Divibare 152.17 331 ⇑*i*P **PKPdf** 16 58 22.3 -0.2
DIVS Divibare 152.17 331 **PKPdf** 16 58 21.9 -0.7
DIVS PKPbc **PKPbc** 16 58 29.6 -0.2
SIGR SIGRI 152.19 316 P **PKPbc** 16 58 29.0 -0.9
SIGR SIGRI 152.19 316 P **PKPdf** 16 58 21.1 -1.5
LIA Limnos Island 152.22 318 P **PKPbc** 16 58 29.0 -0.9
OBKA Obir 152.28 340 *i* P **PKPdf** 16 58 22.0 -0.6
comp=Z,35nm,1.5s,SNR=9.1
OBKA *e*P **PKiKP** 16 58 30.1 0.0
comp=Z,146nm,1.6s
OBKA *e*P **PKPab** 16 58 41.9 -0.9
comp=Z,83nm,1.0s
OBKA *e*P **pPKPdf** 17 00 40.0 +1.9
comp=Z,30nm,1.4s
BODT Bodrum 152.32 311 P **PKPbc** 16 58 28.8 -1.5
BODT Bodrum 152.32 311 P **PKPdf** 16 58 19.7 -3.2
SMG Samos 152.33 313 P **PKPbc** 16 58 30.1 -0.2
ECH Echery 152.34 352 PKP2 **PKPab** 16 58 42.4 -0.5
ECH 17 58 21.7
ECH 17 58 29.7
ECH Echery 152.34 352 **PKPdf** 16 58 21.7 -0.9
ECH PKPbc **PKPbc** 16 58 29.7 -0.3
ECH PKPab **PKPab** 16 58 42.4 -0.5
WATA Walderalm 152.35 345 *i* P **PKPdf** 16 58 22.2 -0.6
comp=Z,64nm,1.1s,SNR=26
WATA *e*P **PKiKP** 16 58 30.4 +0.1
comp=Z,391nm,1.2s
WATA *e*P **PKPab** 16 58 43.8 +0.7
comp=Z,308nm,1.0s
WATA *e*P **pPKPdf** 17 00 35.4 -2.9
comp=Z,32nm,1.3s
UBR Ueberruh 152.35 347 *e*PKPdf **PKPdf** 16 58 22.2 -0.5
baz=17,slow=2.4
UBR *e*PKPbc **PKiKP** 16 58 30.2 0.0
baz=17,slow=2.4
RETA Reutte 152.39 346 *i* P **PKPdf** 16 58 22.2 -0.6
comp=Z,87nm,2.0s,SNR=18
RETA *e*P **PKiKP** 16 58 30.5 +0.2
comp=Z,225nm,1.6s
RETA *e*P **PKPab** 16 58 43.9 +0.7
comp=Z,424nm,1.3s
RETA *e*P **pPKPbc** 17 00 45.5 +0.9
comp=Z,60nm,2.0s
WTTA Wattenberg 152.40 345 *i* P **PKPdf** 16 58 22.5 -0.4
comp=Z,94nm,1.2s,SNR=35
WTTA *e*P **PKiKP** 16 58 30.8 +0.3
comp=Z,166nm,0.6s
WTTA *e*P **PKPab** 16 58 44.3 +0.9
comp=Z,658nm,1.5s
WTTA *e*P **pPKPbc** 17 00 46.9 +2.1
comp=Z,35nm,1.3s
SRS Serrai 152.42 322 P **PKPbc** 16 58 29.0 -1.4
SRS Serrai 152.42 322 P **PKPdf** 16 58 20.4 -2.5
MYKA Terra Mystica 152.44 342 *i* P **PKPdf** 16 58 22.2 -0.6
comp=Z,69nm,1.6s,SNR=17
MYKA *e*P **PKPbc** 16 58 29.9 -0.4
comp=Z,6.0nm,0.3s
MYKA *e*P **PKPab** 16 58 43.4 0.0
comp=Z,134nm,0.8s
MYKA *e*P **pPKPbc** 17 00 44.5 -0.3
comp=Z,35nm,1.3s
MOTA Moosalm 152.45 346 *i* P **PKPdf** 16 58 22.2 -0.7
comp=Z,87nm,1.2s,SNR=53
MOTA *e*P **PKiKP** 16 58 30.6 +0.1
comp=Z,318nm,1.0s
MOTA *e*P **PKPab** 16 58 43.9 +0.3
comp=Z,272nm,0.9s
MOTA *e*P **pPKPdf** 17 00 34.5 -3.9
comp=Z,19nm,1.2s
CHOS Chios island 152.51 315 P **PKPbc** 16 58 30.1 -0.6
CHOS Chios island 152.51 315 P **PKPdf** 16 58 24.2 +1.0
SQTA Sankt Quirin 152.54 345 *i* P **PKPdf** 16 58 22.6 -0.4
comp=Z,86nm,1.2s,SNR=37
SQTA *e*P **PKiKP** 16 58 30.9 +0.2
comp=Z,284nm,1.0s
SQTA *e*P **PKPab** 16 58 44.6 +0.7
comp=Z,295nm,1.2s
SQTA *e*P **pPKPdf** 17 00 38.9 +0.3
comp=Z,37nm,1.1s
CRES Cresnjev 152.58 338 ⇑*i*P **PKPdf** 16 58 22.9 -0.1
BBLS Lazići 152.62 331 ⇑*i*P **PKPdf** 16 58 23.2 0.0
HAPS Han Pijesak,Bl 152.65 332 *e*P **PKPbc** 16 58 30.3 -0.6
OUR Ouranopolis 152.69 320 P **PKPbc** 16 58 29.9 -1.0
OUR Ouranopolis 152.69 320 P **PKPdf** 16 58 21.1 -2.2
LJU Ljubljana 152.69 340 *i* PKPdf **PKPdf** 16 58 22.9 -0.3
LJU *i* PKPbc **PKPbc** 16 58 30.8 0.0
LJU *e*PKPab **PKPab** 16 58 44.6 +0.1
LJU *e* 17 00 38.4
LJU *e* 17 02 21.4
ZOU Zoufplan 152.70 342 **PKPdf** 16 58 21.7 -1.7
ZOU PKPab **PKPab** 16 58 43.9 -0.9
MRAK Mrakovica 152.74 336 *e*P **PKPdf** 16 58 23.0 -0.3
SOH Sokhos 152.75 322 P **PKPbc** 16 58 29.7 -1.4
SOH Sokhos 152.75 322 P **PKPdf** 16 58 20.8 -2.6
DAVA Damuels 152.77 347 *i* P **PKPdf** 16 58 22.9 -0.5
comp=Z,92nm,1.7s,SNR=20
DAVA *e*P **PKiKP** 16 58 31.5 +0.3
comp=Z,131nm,1.2s
DAVA *e*P **PKPab** 16 58 45.4 +0.4
comp=Z,255nm,1.9s
DAVA *e*P **pPKPdf** 17 00 39.7 +0.7
comp=Z,72nm,1.5s
KNT Kendrikon 152.79 323 P **PKPbc** 16 58 30.4 -0.8
KNT Kendrikon 152.79 323 P **PKPdf** 16 58 21.1 -2.3
STIP Stip 152.82 324 *e*PKP **PKPdf** 16 58 21.8 -1.7
STIP *i* PKP **PKPbc** 16 58 30.6 -0.6
STIP *i* PKP **PKPab** 16 58 44.9 -0.3
RUDO Rudo 152.83 331 *e*P **PKPbc** 16 58 29.7 -1.5
FETA Feichten 152.84 346 *i* P **PKPdf** 16 58 23.4 -0.1
comp=Z,131nm,1.0s,SNR=45
FETA *e*P **PKiKP** 16 58 31.6 +0.2
comp=Z,282nm,1.0s
FETA *e*P **PKPab** 16 58 46.4 +1.1
comp=Z,199nm,1.2s
FETA *e*P **pPKPdf** 17 00 41.0 +1.9
comp=Z,33nm,0.9s
BLY Banja Luka 152.85 335 ⇑*i*P **PKPdf** 16 58 23.4 0.0
VAY Valandovo 152.87 323 ⇓*i*PKP **PKPdf** 16 58 21.7 -1.8
VAY ⇓*i*PKP **PKPbc** 16 58 30.5 -0.8
VAY *i* PKP **PKPab** 16 58 45.6 +0.2
PLG Polygyros 152.98 321 P **PKPbc** 16 58 30.8 -0.8
PLG Polygyros 152.98 321 P **PKPdf** 16 58 21.5 -2.3
CEY Cerknica 153.00 340 ⇑*i*P **PKPdf** 16 58 23.5 -0.1
SKO Skopje 153.03 326 ⇓*i*PKP **PKPdf** 16 58 22.9 -0.8
SKO ⇓*i*PKP **PKPbc** 16 58 31.6 0.0
SKO *i* PKP **PKPab** 16 58 46.6 +0.5
PLE Pljevlja 153.04 330 ⇓*i*PKP **PKPdf** 16 58 23.9 0.0
HORT Hortiatis 153.04 322 P **PKPbc** 16 58 30.4 -1.4
HORT Hortiatis 153.04 322 P **PKPdf** 16 58 22.0 -1.9
STAL STALIGIAL 153.05 343 **PKPdf** 16 58 22.3 -1.4
STAL PKPbc **PKPbc** 16 58 30.9 -0.6
STAL PKPab **PKPab** 16 58 45.0 -1.0
KARP Karpathos 153.12 308 P **PKiKP** 16 58 32.5 +0.3
KARP Karpathos 153.12 308 P **PKPdf** 16 58 22.7 -1.4
KARP Karpathos 153.12 308 **PKPdf** 16 58 23.3 -0.9
KARP PKPbc **PKPbc** 16 58 31.8 -0.3
PAIG Paliouri 153.12 320 P **PKPbc** 16 58 31.3 -0.6
PAIG Paliouri 153.12 320 P **PKPdf** 16 58 21.1 -2.8
IVA Berane 153.15 329 ⇓*i*PKP **PKPdf** 16 58 23.5 -0.5
MGRS Mrkonjic Grad 153.17 335 ⇑*i*P **PKiKP** 16 58 32.1 +0.1
TRI Trieste 153.24 341 PKP2 **PKPab** 16 58 46.2 -0.6
TRI 17 58 23.0
TRI 17 58 31.9
TRI Trieste 153.24 341 **PKPdf** 16 58 23.0 -0.9
TRI PKPbc **PKPbc** 16 58 31.9 -0.1
TRI PKPab **PKPab** 16 58 46.1 -0.6
KOME Kolasin 153.35 329 ⇓*i*PKP **PKPdf** 16 58 23.6 -0.7
UPM Unac-Piva 153.36 331 *e*P **PKPbc** 16 58 31.0 -1.6
UPM Unac-Piva 153.36 331 ⇓*i*PKP **PKPdf** 16 58 23.3 -1.1
CTI Castel Tesino 153.53 344 PKP2 **PKPab** 16 58 47.6 -0.6
CTI 17 58 23.2
CTI Castel Tesino 153.53 344 **PKPdf** 16 58 23.2 -1.2
CTI PKPbc **PKPbc** 16 58 32.2 -0.6
CTI PKPab **PKPab** 16 58 47.6 -0.6
APE Apeiranthos 153.55 313 ⇑P **PKPbc** 16 58 32.2 -0.8
APE Apeiranthos 153.55 313 ⇑PKiKP **PKPbc** 16 58 32.2 -0.8
NKY Niksic 153.62 330 ⇑*i*PKP **PKPdf** 16 58 23.7 -1.0
KYMI Kymi, Euboea I 153.64 317 P **PKPdf** 16 58 22.1 -2.6
TUE Stuetta 153.66 348 **PKPdf** 16 58 24.0 -0.8
TUE PKPbc **PKiKP** 16 58 33.2 +0.1
TUE PKPab **PKPab** 16 58 49.4 +0.5
NKME Niksic 153.68 330 ⇑*i*PKP **PKPdf** 16 58 24.1 -0.6
LIT Litokhoron 153.72 321 P **PKPbc** 16 58 32.3 -1.0
LIT Litokhoron 153.72 321 P **PKPdf** 16 58 22.5 -2.3
LIT Litokhoron 153.72 321 PKiKP **PKPbc** 16 58 32.2 -1.0
LIT 16 58 49.0
LIT Litokhoron 153.72 321 **PKPdf** 16 58 23.7 -1.1
LIT PKPbc **PKPbc** 16 58 32.1 -1.1
LIT PKPab **PKPab** 16 58 49.0 -0.1
PHP Peshkopia 153.76 326 P **PKPdf** 16 58 23.1 -1.7
BRY Bratogost 153.77 331 ⇑*i*PKP **PKPdf** 16 58 24.0 -0.9
XOR Xorichti 153.77 319 P **PKPdf** 16 58 22.1 -2.8
NEO Neokhori 153.78 319 P **PKPbc** 16 58 32.8 -0.6
NEO Neokhori 153.78 319 P **PKPdf** 16 58 22.7 -2.2
PDG Podgorica 153.79 329 ⇓P **PKPdf** 16 58 24.1 -0.7
PDG Podgorica 153.79 329 ⇑*i*P **PKPdf** 16 58 24.1 -0.7
PDG Podgorica 153.79 329 **PKPdf** 16 58 23.7 -1.1
PDG PKPbc **PKPbc** 16 58 32.6 -0.6
PDG PKPab **PKPab** 16 58 47.5 -1.8
TTG Podgorica 153.79 329 ⇓*i*PKP **PKPdf** 16 58 24.5 -0.3
CEME Cevo 153.87 330 ⇓*i*PKP **PKPdf** 16 58 24.2 -0.8
EREA Eretria 153.87 317 P **PKPdf** 16 58 23.1 -2.0
FNA Florina 153.89 324 P **PKPbc** 16 58 33.2 -0.4
FNA Florina 153.89 324 P **PKPdf** 16 58 22.7 -2.4
FNA Florina 153.89 324 PKiKP **PKPbc** 16 58 33.1 -0.5
FNA Florina 153.89 324 **PKPdf** 16 58 23.6 -1.5
FNA PKPbc **PKPbc** 16 58 33.1 -0.5
THR8 Santorini-Mono 153.92 312 P PKPdf 16 58 15.2 -10
SANT Santorini 153.96 312 ⇓P **PKPbc** 16 58 32.8 -1.0
SANT Santorini 153.96 312 **PKPbc** 16 58 32.6 -1.2
SANT **PKPab** 16 58 48.4 -1.9
OHR Ohrid 153.98 325 ⇓*i*PKP **PKPdf** 16 58 24.1 -1.1
OHR ⇓*i*PKP **PKPbc** 16 58 33.3 -0.4
OHR *i* PKP **PKPab** 16 58 50.1 -0.1
THR3 Thira Island, 153.98 312 P **PKPbc** 16 58 32.8 -1.0
SNT5 Nea Kammeni, S 153.98 312 P **PKPbc** 16 58 32.8 -1.0
KZN Kozani 154.00 323 P **PKPbc** 16 58 32.8 -1.1
KZN Kozani 154.00 323 P **PKPdf** 16 58 23.4 -1.9
TREB Trebinje 154.00 331 *e*P **PKPbc** 16 58 32.5 -1.2
ZKR Zakros 154.00 308 P **PKPdf** 16 58 24.1 -1.2
THR6 Thira Island, 154.01 312 P **PKPbc** 16 58 33.4 -0.5
DRME Dracevica, Mon 154.01 329 ⇑*i*P **PKPdf** 16 58 24.9 -0.2
DRME Dracevica, Mon 154.01 329 ⇓*i*PKP **PKPdf** 16 58 23.6 -1.5
SMIA Simia 154.06 319 P **PKPbc** 16 58 32.8 -1.2
SMIA Simia 154.06 319 P **PKPdf** 16 58 23.8 -1.5
BUM Brajici-Budva 154.06 329 ⇓*i*PKP **PKPdf** 16 58 23.1 -2.2
DION Dionisos Attik 154.07 316 P **PKPbc** 16 58 33.0 -1.0
SENIN Lac Senin/Sane 154.13 351 **PKPdf** 16 58 24.9 -0.5
SENIN PKPab **PKPab** 16 58 51.0 +0.1
PTL Penteli 154.13 316 P **PKPbc** 16 58 33.5 -0.7
PTL Penteli 154.13 316 P **PKPdf** 16 58 22.9 -2.5
HCY Herceg Novi 154.14 330 *e*P **PKPbc** 16 58 32.3 -1.7
HCY Herceg Novi 154.14 330 ⇓*i*PKP **PKPdf** 16 58 23.7 -1.6
ULC Ulcinj 154.15 328 ⇑*i*PKP **PKPdf** 16 58 23.1 -2.2
TEOL Teolo 154.16 343 **PKPdf** 16 58 24.5 -0.7
TEOL PKPbc **PKiKP** 16 58 34.0 0.0
TEOL PKPab **PKPab** 16 58 51.2 +0.5
STON Ston 154.17 332 ⇑*i*P **PKPdf** 16 58 23.6 -1.6
SALO Salr 154.21 345 **PKPdf** 16 58 24.2 -1.1
SALO PKPbc **PKiKP** 16 58 33.7 -0.4
SALO **PKPab** 16 58 50.5 -0.4
ATHU Athens Univers 154.23 316 P **PKiKP** 16 58 33.0 -1.3
ATHU Athens Univers 154.23 316 P **PKPbc** 16 58 24.1 -1.5
ATAL Atalanti 154.28 318 P **PKiKP** 16 58 32.8 -1.6
ATAL Atalanti 154.28 318 P **PKPbc** 16 58 23.9 -1.7
VLY Voula,Athens 154.29 316 P **PKiKP** 16 58 32.7 -1.7
VLY Voula,Athens 154.29 316 P **PKPdf** 16 58 24.1 -1.5
TIR Tirane 154.30 327 ⇑P **PKPbc** 16 58 35.2 +0.9
TIR Tirane 154.30 327 PKiKP **PKPbc** 16 58 34.5 +0.2
TIR 16 58 51.8
TIR Tirane 154.30 327 PKPbc **PKPbc** 16 58 34.5 +0.2
TIR PKPab **PKPab** 16 58 51.8 +0.3
LKR Lokris 154.32 318 P **PKiKP** 16 58 32.8 -1.7
LKR Lokris 154.32 318 P **PKPdf** 16 58 23.7 -1.9
KBN Korca 154.33 324 P **PKiKP** 16 58 34.2 -0.3
KBN Korca 154.33 324 P **PKPdf** 16 58 24.0 -1.7
NEST Nestorio 154.33 324 P **PKiKP** 16 58 33.9 -0.7
NEST Nestorio 154.33 324 P **PKPdf** 16 58 24.5 -1.2
THL Klokotos Trika 154.35 321 P **PKiKP** 16 58 32.5 -2.0
THL Klokotos Trika 154.35 321 P **PKPdf** 16 58 19.8 -5.8
NPS Neapolis 154.38 309 P **PKPdf** 16 58 24.4 -1.5
VILL Vilia 154.42 317 P **PKiKP** 16 58 33.0 -1.8
KPRO Kipourio 154.46 323 P **PKiKP** 16 58 33.9 -0.9
KPRO Kipourio 154.46 323 P **PKPdf** 16 58 24.4 -1.5
AGG Agios Georgios 154.50 320 P **PKiKP** 16 58 34.0 -0.9
AGG Agios Georgios 154.50 320 P **PKPdf** 16 58 22.4 -3.5
AGG Agios Georgios 154.50 320 PKiKP **PKiKP** 16 58 34.3 -0.6
AGG Agios Georgios 154.50 320 **PKPdf** 16 58 24.4 -1.5
AGG PKPbc **PKiKP** 16 58 34.3 -0.6
LAST Lasithi 154.52 309 P **PKPbc** 16 58 35.3 +0.2
LAST Lasithi 154.52 309 P **PKPdf** 16 58 24.0 -2.1
MAKR Makrakomi, Fth 154.63 320 P **PKPdf** 16 58 25.0 -1.1
EVR Evrytania 154.88 320 P **PKiKP** 16 58 34.9 -0.9
EVR Evrytania 154.88 320 P **PKPdf** 16 58 23.2 -3.3
IDI Anoyia 154.89 310 PKP **PKPdf** 16 58 27.0 +0.4
comp=Z,80nm,1.0s,baz=101,slow=3.6,SNR=16
IDI Anoyia 154.89 310 P **PKPdf** 16 58 25.0 -1.6
IDI Anoyia 154.89 310 ⇓P **PKPdf** 16 58 25.9 -0.7
JAN Janina 154.96 323 P **PKPbc** 16 58 36.1 +0.2
JAN Janina 154.96 323 P **PKPdf** 16 58 25.6 -0.9
ANX Ano Chora 155.02 319 P **PKPdf** 16 58 25.9 -0.8
PRMA PARMA 155.07 345 **PKPdf** 16 58 25.8 -0.6
PRMA **PKPab** 16 58 54.6 0.0
SIVA Sivas 155.07 309 P PKPdf 16 58 36.0 +9.2
TRIZ Trizonia 155.07 319 P PKPdf 16 58 36.1 +9.5
LAKA Lakka 155.21 319 P **PKPdf** 16 58 24.3 -2.6
LAKA Lakka 155.21 319 P **PKPdf** 16 58 24.1 -2.8
KLV Kalavryta, Ach 155.22 318 P PKPdf 16 58 35.4 +8.4
KLV Kalavryta, Ach 155.22 318 P **PKPdf** 16 58 26.3 -0.7
PVO Paravola 155.25 320 P **PKPdf** 16 58 19.5 -7.4
SRN Sarande 155.28 324 P **PKPdf** 16 58 24.5 -2.4
ZCCA Zocca 155.28 343 **PKPdf** 16 58 26.5 -0.4
ZCCA PKPab **PKPab** 16 58 56.9 +1.3
VAM Vamos 155.32 311 P PKPdf 16 58 36.6 +10
IGT Igoumenitsa 155.33 323 P PKPdf 16 58 35.6 +8.6
IGT Igoumenitsa 155.33 323 P **PKPdf** 16 58 24.6 -2.4
IMMV Ieria Moni Meta 155.45 311 P PKPdf 16 58 36.3 +9.0
VLX Vlachokerasia 155.48 317 P **PKPdf** 16 58 24.7 -2.7
BNI Bardonecchia 155.50 351 PKiKP **PKPdf** 16 58 27.4 +0.2
BNI 16 58 57.4
BNI Bardonecchia 155.50 351 **PKPdf** 16 58 27.4 +0.2
BNI PKPab **PKPab** 16 58 57.4 +0.7
KEK Kerkira 155.50 324 P PKPdf 16 58 36.3 +9.1
KEK Kerkira 155.50 324 P **PKPdf** 16 58 25.9 -1.3
SSB Saint Sauveur 155.53 355 PKP2 **PKPab** 16 58 56.5 -0.2
SSB 17 58 27.2
SSB Saint Sauveur 155.53 355 **PKPdf** 16 58 27.1 0.0
SSB PKPdif PKPab 16 58 37.0 -20
SSB PKPab 16 58 56.5 -0.2
DRO Drossia 155.55 319 P **PKPdf** 16 58 24.5 -2.9
VLC Villacollemand 155.61 344 PKPdf **PKPdf** 16 58 26.0 -1.2
VLC **PKPab** 16 58 56.9 -0.2
TSLK Tsoukalades, L 155.63 321 P PKPdf 16 58 37.5 +10
RLS Riolos of Patr 155.64 319 P PKPdf 16 58 38.0 +11
RLS Riolos of Patr 155.64 319 P **PKPdf** 16 58 26.9 -0.5
LKD2 Lefkada island 155.65 321 P PKPdf 16 58 36.6 +9.1
LKD2 Lefkada island 155.65 321 P **PKPdf** 16 58 24.6 -2.9
KTHA Kythira Island 155.67 314 P PKPdf 16 58 36.1 +8.6
GVDS Gavdos 155.68 310 P **PKPdf** 16 58 26.1 -1.5
NYDR Nydri-Lefkada 155.68 321 P PKPdf 16 58 37.5 +10
MSSA Maissana 155.68 346 **PKPdf** 16 58 25.8 -1.6
MSSA **PKPab** 16 58 56.6 -0.8
GVD Gavdhos 155.68 310 P **PKPdf** 16 58 26.1 -1.5
EVGI Lefkada island 155.76 321 P PKPdf 16 58 36.6 +9.0
EVGI Lefkada island 155.76 321 P **PKPdf** 16 58 26.3 -1.3
AMT Artemida-Makis 155.81 318 P **PKPdf** 16 58 28.8 +1.1
MURB Monte Urbino 155.82 340 **PKPdf** 16 58 26.6 -1.0
ITM Ithomi 155.89 317 P PKPdf 16 58 37.7 +10
ITM Ithomi 155.89 317 **PKPdf** 16 58 26.9 -1.0
ITM PKPab **PKPab** 16 58 58.1 -0.5
SGRT San Giovanni R 155.92 333 **PKPdf** 16 58 26.9 -0.9
SGRT **PKPab** 16 58 58.1 -0.4
FSK Fiskardo 155.92 321 P PKPdf 16 58 36.3 +8.5
SCTE Santa Cesarea 155.96 326 **PKPab** 16 58 58.3 -0.4
OSSC Osservatorio P 155.97 342 **PKPdf** 16 58 26.0 -1.7
OSSC PKPab **PKPab** 16 58 57.9 -0.7
VLS Valsamata 156.09 320 P PKPdf 16 58 38.5 +10
KEF5 Kardakata, Kep 156.10 321 P PKPdf 16 58 38.5 +10
KEF4 Livadi, Kephal 156.14 321 P PKPdf 16 58 38.7 +11
PYL PYLOS 156.18 316 P PKPdf 16 58 38.0 +10
KEF3 Kipouria, Keph 156.22 321 P PKPdf 16 58 38.4 +10
AQU L'Aquila 156.33 337 PKiKP **PKPdf** 16 58 27.3 -1.0
AQU 16 59 00.7
AQU L'Aquila 156.33 337 ⇑*i*P **PKPab** 16 59 00.4 +0.1
AQU L'Aquila 156.33 337 **PKPdf** 16 58 27.3 -1.0
AQU PKPab **PKPab** 16 59 00.7 +0.4
LATE Laterza 156.63 340 **PKPdf** 16 58 27.6 -1.0
LATE **PKPab** 16 59 01.3 -0.2
CASP Castiglione de 156.75 342 PKPdf **PKPbc** 16 58 27.6 -0.9
CASP **PKPab** 16 59 01.7 -0.4
PGAV Gavieira, Arco 157.44 19 *e*PKPdf **PKPdf** 16 58 29.9 +0.2
PGAV Gavieira, Arco 157.44 19 *e*PKPab **PKPab** 16 59 05.6 +0.5
PGAV *i* LQ LQ 17 00 48.9
TIP Timpagrande 157.50 328 ⇑P **PKPdf** 16 58 30.0 +0.2
TIP Timpagrande 157.50 328 **PKPdf** 16 58 28.3 -1.6
TIP PKPab **PKPab** 16 59 05.5 0.0
PCAB Cabril 157.75 19 *e*PKPdf **PKPdf** 16 58 30.2 +0.2
PCAB Cabril 157.75 19 *e*PKPab **PKPab** 16 59 07.1 +0.7
PCAB *i* LQ LQ 17 00 43.2
PBRG Braganca 158.02 16 *e*PKPdf **PKPdf** 16 58 30.8 +0.4
PBRG Braganca 158.02 16 *e*PKPab **PKPab** 16 59 07.1 -0.5
POLO Lamas de Olo 158.12 19 *e*PKPdf **PKPdf** 16

PVIS	**Viseu**	**158.69**	**20**	*e*PKPdf	**PKPdf**	**16 58 31.8**	**+0.6**
PVIS	**Viseu**	**158.69**	**20**	*e*PKPab	**PKPab**	**16 59 11.4**	**+0.8**
PVIS				*i* LQ	LQ	17 00 51.2	
PVIS	**Viseu**	**158.69**	**20**	*e*PP	PP	17 02 53.7	+0.9
COI	**Coimbra**	**158.98**	**21**	PKIKP	**PKPdf**	**16 58 30.7**	**-0.8**
COI						16 59 11.7	
COI	**Coimbra**	**158.98**	**21**	*e*PKPab	**PKPab**	**16 59 13.1**	**+1.4**
COI	**Coimbra**	**158.98**	**21**		**PKPdf**	**16 58 30.7**	**-0.8**
COI					**PKPab**	**16 59 11.7**	**-0.1**
PCAS	**Casmilo, Conde**	**159.09**	**22**	*e*PKPdf	**PKPdf**	**16 58 31.1**	**-0.5**
PCAS	**Casmilo, Conde**	**159.09**	**22**	*e*PKPab	**PKPab**	**16 59 12.0**	**-0.3**
PCAS				*i* LQ	LQ	17 00 48.9	
PCAS	**Casmilo, Conde**	**159.09**	**22**	*e*PP	PP	17 02 55.6	+0.7
MTE	**Manteigas**	**159.09**	**19**	*e*PKPdf	**PKPdf**	**16 58 32.2**	**+0.5**
MTE	**Manteigas**	**159.09**	**19**	*e*PKPab	**PKPab**	**16 59 12.5**	**+0.2**
MTE				*i* LQ	LQ	17 00 49.8	
MTE	**Manteigas**	**159.09**	**19**	*e*PP	PP	17 02 58.2	+3.3
MTE	**Manteigas**	**159.09**	**19**		**PKPdf**	**16 58 31.4**	**-0.3**
MTE				PKPab	**PKPab**	**16 59 11.6**	**-0.7**
PSBE	**So Bento**	**159.46**	**23**	*e*PKPdf	**PKPdf**	**16 58 32.4**	**+0.3**
PSBE	**So Bento**	**159.46**	**23**	*e*PKPab	**PKPab**	**16 59 14.5**	**+0.6**
PSBE				*i* LQ	LQ	17 00 51.0	
PSBE	**So Bento**	**159.46**	**23**	*e*PP	PP	17 02 55.6	-1.3
PMOZ	**Porto Moniz, M**	**159.60**	**50**	*e*PKPdf	**PKPdf**	**16 58 33.6**	**+1.0**
PMOZ	**Porto Moniz, M**	**159.60**	**50**	*e*PKPab	**PKPab**	**16 59 16.1**	**+1.1**
PMOZ				*i* LQ	LQ	17 00 49.6	
PCBR	**Castelo Branco**	**159.62**	**20**	*e*PKPdf	**PKPdf**	**16 58 32.6**	**+0.4**
PCBR	**Castelo Branco**	**159.62**	**20**	*e*PKPab	**PKPab**	**16 59 13.7**	**-0.9**
PCBR	**Castelo Branco**	**159.62**	**20**	*e*PP	PP	17 02 58.7	+1.1
PMAFR	**Mafra**	**159.76**	**25**	*e*PKPdf	**PKPdf**	**16 58 33.1**	**+0.7**
PMAFR	**Mafra**	**159.76**	**25**	*e*PKPab	**PKPab**	**16 59 15.9**	**+0.6**
PMAFR	**Mafra**	**159.76**	**25**	*e*PP	PP	17 02 58.9	+0.4
PMAR	**Madeira**	**159.86**	**50**	*e*PKPdf	**PKPdf**	**16 58 33.9**	**+0.9**
PMAR	**Madeira**	**159.86**	**50**	*e*PKPab	**PKPab**	**16 59 15.7**	**-0.5**
PMST	**Lisbon--Monsan**	**159.99**	**25**	*e*PKPdf	**PKPdf**	**16 58 33.5**	**+0.8**
PMST	**Lisbon--Monsan**	**159.99**	**25**	*e*PKPab	**PKPab**	**16 59 16.9**	**+0.7**
PMST	**Lisbon--Monsan**	**159.99**	**25**	*e*PP	PP	17 02 58.6	-1.1
LIS	**Lisbon**	**160.02**	**25**	*e*PKPdf	**PKPdf**	**16 58 32.0**	**-0.7**
LIS	**Lisbon**	**160.02**	**25**	*e*PKP	**PKPdf**	**16 58 33.0**	**+0.3**
PMRV	**Marv??o**	**160.02**	**20**	*e*PKPdf	**PKPdf**	**16 58 33.3**	**+0.6**
PMRV	**Marv??o**	**160.02**	**20**	*e*PKPab	**PKPab**	**16 59 16.5**	**+0.1**
PMRV				*i* LQ	LQ	17 00 49.3	
PMTG	**Montargil**	**160.06**	**22**	*e*PKPdf	**PKPdf**	**16 58 32.5**	**-0.2**
PMTG	**Montargil**	**160.06**	**22**	*e*PKPab	**PKPab**	**16 59 16.4**	**-0.1**
PMTG	**Montargil**	**160.06**	**22**	*e*PP	PP	17 02 58.4	-1.6
PMPST	**Porto Santo, M**	**160.08**	**49**	*e*PKPdf	**PKPdf**	**16 58 34.0**	**+1.0**
PMPST	**Porto Santo, M**	**160.08**	**49**	*e*PKPab	**PKPab**	**16 59 17.8**	**+0.9**
PMPST				*i* LQ	LQ	17 00 50.1	
PMPS	**Porto Santo**	**160.10**	**49**	*e*PKPdf	**PKPdf**	**16 58 32.4**	**+0.5**
CORL	**Corleone**	**160.16**	**331**		**PKPdf**	**16 58 32.5**	**-0.5**
RAFF	**Raffo Rosso**	**160.20**	**328**		**PKPdf**	**16 58 32.9**	**0.0**
RAFF				PKPab	**PKPab**	**16 59 16.9**	**-0.4**
VSL	**Villasalto**	**160.22**	**342**		**PKPdf**	**16 58 33.2**	**+0.3**
VSL					**PKPab**	**16 59 17.1**	**-0.1**
UCM	**Universidad Co**	**160.23**	**11**	PKP	**PKPdf**	**16 58 32.8**	**-0.2**
UCM	**Universidad Co**	**160.23**	**11**	PP	PP	17 03 01.1	+0.4
CLTB	**Caltabellotta**	**160.46**	**331**		**PKPdf**	**16 58 33.0**	**-0.4**
PESTR	**Estremoz**	**160.46**	**21**	*e*PKPdf	**PKPdf**	**16 58 33.5**	**+0.3**
PESTR	**Estremoz**	**160.46**	**21**	*e*PKPab	**PKPab**	**16 59 18.0**	**-0.3**
PESTR				*i* LQ	LQ	17 00 51.4	
PESTR	**Estremoz**	**160.46**	**21**	*e*PP	PP	17 03 00.2	-2.0
PESTR	**Estremoz**	**160.46**	**21**		**PKPdf**	**16 58 33.1**	**-0.1**
PESTR					**PKPab**	**16 59 18.1**	**-0.3**
EVO	**Evora**	**160.61**	**23**	PKP	**PKPdf**	**16 58 34.1**	**+0.7**
EVO	**Evora**	**160.61**	**23**	PP	PP	17 03 08.7	+5.7
EVO	**Evora**	**160.61**	**23**	*e*PKPdf	**PKPdf**	**16 58 33.9**	**+0.6**
EVO	**Evora**	**160.61**	**23**	*e*PKPab	**PKPab**	**16 59 18.9**	**-0.1**
EVO				*i* LQ	LQ	17 00 52.8	
EVO	**Evora**	**160.61**	**23**	*e*PP	PP	17 03 02.6	-0.4
ESBB	**Sonseca Array**	**160.70**	**13**		**PKPdf**	**16 58 33.2**	**-0.3**
ESBB				PKPab	**PKPab**	**16 59 19.6**	**+0.2**
ESDC	**Sonseca Array**	**160.70**	**13**	PKP	**PKPdf**	**16 58 33.8**	**+0.3**
	comp=Z,19nm,1.1s,baz=348,slow=3.1,SNR=74						
ESDC				PKPab	**PKPab**	**16 59 19.9**	**+0.5**
	comp=Z,122nm,1.1s,baz=341,slow=4.2,SNR=55						
ESDC				PP	**PP**	**17 03 03.1**	**-0.2**
	comp=Z,29nm,1.2s,baz=342,slow=5.1,SNR=10						
PAB	**San Pablo**	**160.75**	**14**	PKP2	**PKPab**	**16 59 20.0**	**+0.4**
PAB						17 58 33.6	
PAB	**San Pablo**	**160.75**	**14**		**PKPdf**	**16 58 33.6**	**0.0**
PAB				PKPab	**PKPab**	**16 59 19.9**	**+0.4**
PBEJ	**Beja**	**161.11**	**23**	*e*PKPdf	**PKPdf**	**16 58 34.8**	**+0.9**
PBEJ	**Beja**	**161.11**	**23**	*e*PKPab	**PKPab**	**16 59 21.7**	**+0.5**
PBEJ				*i* LQ	LQ	17 00 53.9	
PTEO	**Sao Teotonio**	**161.20**	**26**	*e*PKPdf	**PKPdf**	**16 58 35.1**	**+1.1**
PTEO	**Sao Teotonio**	**161.20**	**26**	*e*PKPab	**PKPab**	**16 59 22.1**	**+0.5**
PTEO				*i* LQ	LQ	17 00 51.0	
PTEO	**Sao Teotonio**	**161.20**	**26**	*e*PP	PP	17 03 07.3	+1.2
PBAR	**Barrancos**	**161.27**	**21**	*e*PKPdf	**PKPdf**	**16 58 34.4**	**+0.4**
PBAR	**Barrancos**	**161.27**	**21**	*e*PKPab	**PKPab**	**16 59 21.8**	**0.0**
PBAR				*i* LQ	LQ	17 00 52.1	
PBAR	**Barrancos**	**161.27**	**21**	*e*PP	PP	17 03 05.8	-0.6
PCVE	**Castro Verde**	**161.40**	**24**	*e*PKPdf	**PKPdf**	**16 58 35.2**	**+1.0**
PCVE	**Castro Verde**	**161.40**	**24**	*e*PKPab	**PKPab**	**16 59 23.1**	**+0.7**
PCVE				*i* LQ	LQ	17 00 52.1	
PCVE	**Castro Verde**	**161.40**	**24**	*e*PP	PP	17 03 06.2	-0.9
MORF	**Marmelete**	**161.44**	**26**	*e*PKPdf	**PKPdf**	**16 58 33.5**	**-0.9**
MORF	**Marmelete**	**161.44**	**26**	*e*PKPdf	**PKPdf**	**16 58 35.5**	**+1.2**
MORF	**Marmelete**	**161.44**	**26**	*e*PKPab	**PKPab**	**16 59 22.5**	**-0.2**
MORF				*i* LQ	LQ	17 00 53.5	
MORF	**Marmelete**	**161.44**	**26**	*e*PP	PP	17 03 06.2	-1.3
PFVI	**Vila Bisbo**	**161.51**	**27**	*e*PKPdf	**PKPdf**	**16 58 35.5**	**+1.2**
PFVI	**Vila Bisbo**	**161.51**	**27**	*e*PKPab	**PKPab**	**16 59 23.0**	**0.0**
PFVI				*i* LQ	LQ	17 00 53.3	
PFVI	**Vila Bisbo**	**161.51**	**27**	*e*PP	PP	17 03 07.4	-0.4
PFVI	**Vila Bisbo**	**161.51**	**27**		**PKPdf**	**16 58 34.4**	**0.0**
PFVI					**PKPab**	**16 59 22.9**	**0.0**
PVAQ	**Vaqueiros**	**161.72**	**24**	*e*PKPdf	**PKPdf**	**16 58 34.8**	**+0.3**
PVAQ	**Vaqueiros**	**161.72**	**24**	*e*PKPab	**PKPab**	**16 59 24.1**	**+0.3**
PVAQ				*i* LQ	LQ	17 00 51.1	
PVAQ	**Vaqueiros**	**161.72**	**24**	*e*PP	PP	17 03 08.7	-0.1
PVAQ	**Vaqueiros**	**161.72**	**24**		**PKPdf**	**16 58 35.3**	**+0.8**
PVAQ					**PKPab**	**16 59 24.3**	**+0.4**
PBDV	**Barranco-do-Ve**	**161.78**	**24**	*e*PKPdf	**PKPdf**	**16 58 35.1**	**+0.4**
PBDV	**Barranco-do-Ve**	**161.78**	**24**	*e*PKPab	**PKPab**	**16 59 24.5**	**+0.4**
PBDV				*i* LQ	LQ	17 00 53.4	
PBDV	**Barranco-do-Ve**	**161.78**	**24**	*e*PP	PP	17 03 09.8	+0.6
LIJA	**Lijar**	**162.96**	**19**	PKP	**PKPdf**	**16 58 36.0**	**+0.1**
CART	**Cartagena**	**163.22**	**7**		**PKPab**	**16 59 29.2**	**-1.2**
EMAL	**Malaga-Limoner**	**163.37**	**17**	PKP	**PKPdf**	**16 58 31.9**	**-4.2**
EMAL	**Malaga-Limoner**	**163.37**	**17**	PP	PP	17 03 16.5	-0.7
CMAH	**Djebel Manchou**	**163.46**	**343**	P	**PKPab**	**16 59 31.2**	**-0.4**
KEST	**Kesra**	**163.65**	**337**	PKP	**PKPdf**	**16 58 36.5**	**0.0**
	comp=Z,29nm,1.1s,baz=156,slow=1.6,SNR=10						
KEST				PKPab	**PKPab**	**16 59 32.8**	**+0.3**
	comp=Z,162nm,1.2s,baz=318,slow=2.6,SNR=20						
KEST				PP	**PP**	**17 03 21.5**	**+2.6**
	comp=Z,18nm,1.2s,baz=278,slow=5.5,SNR=4.6						
CKFL	**Kef-Lekhel**	**163.85**	**344**	P	**PKPab**	**16 59 32.8**	**-0.6**
CEU	**Ceuta**	**163.89**	**20**	PKP	**PKPdf**	**16 58 34.1**	**-2.5**
CEU	**Ceuta**	**163.89**	**20**	PP	PP	17 03 20.4	+0.4
DFRA	**Djebel Bou Aff**	**163.91**	**347**	P	**PKPab**	**16 59 33.8**	**+0.2**
CASM	**Ain Smara**	**164.04**	**345**	P	**PKPab**	**16 59 33.4**	**-0.7**
SET	**Setif**	**164.34**	**348**	P	**PKPab**	**16 59 39.0**	**+3.5**
DBIC	**Dimbokro**	**164.62**	**156**	PKP	**PKPdf**	**16 58 37.5**	**-0.4**
	comp=Z,100nm,1.0s,baz=153,slow=1.2,SNR=76						
DBIC				PKPab	**PKPab**	**16 59 38.4**	**+1.3**
	comp=Z,44nm,1.0s,baz=180,slow=4.1,SNR=11						
DBIC				pPKP	**pPKPdf**	**17 00 56.0**	**+1.8**
	comp=Z,18nm,1.1s,baz=130,slow=2.6,SNR=3.6						
DBIC				pPKPab	**pPKPab**	**17 01 45.1**	**+0.9**
	comp=Z,26nm,1.2s,baz=206,slow=4.8,SNR=5.1						
DBIC	**Dimbokro**	**164.62**	**156**		**PKPdf**	**16 58 37.4**	**-0.5**
DBIC				PKPab	**PKPab**	**16 59 37.2**	**0.0**
EBNR	**Beni Rached**	**164.64**	**360**	P	**PKPab**	**16 59 37.9**	**+1.2**
ECHA	**Ech Chlef**	**164.78**	**0**	P	**PKPab**	**16 59 38.5**	**+1.2**
PVLZ	**Peæn de**	**164.89**	**18**	PKP	**PKPdf**	**16 58 34.6**	**-2.9**
PVLZ	**Peæn de**	**164.89**	**18**	PP	PP	17 03 24.6	-0.5
EANR	**'Ain N'Sour**	**164.98**	**1**	P	**PKPab**	**16 59 39.4**	**+1.1**
MELI	**Melilla**	**165.13**	**14**	PKP	**PKPdf**	**16 58 36.6**	**-1.1**
MELI	**Melilla**	**165.13**	**14**	PP	PP	17 03 24.5	-1.7
AVE	**Averroes**	**165.35**	**31**	PKP	**PKPdf**	**16 58 35.5**	**-2.5**
AVE	**Averroes**	**165.35**	**31**	PP	PP	17 03 23.5	-4.3
ETRT	**Tiaret**	**165.54**	**0**	P	**PKPab**	**16 59 41.0**	**+0.2**
IFR	**Ifrane**	**166.13**	**23**	PKP	**PKPdf**	**16 58 39.1**	**+0.2**
IFR	**Ifrane**	**166.13**	**23**	PP	PP	17 03 33.1	+1.3
MDT	**Midelt**	**166.96**	**23**	PKP	**PKPdf**	**16 58 40.5**	**+1.2**
	comp=Z,82nm,1.1s,baz=6.7,slow=0.9,SNR=85						
MDT				PKPab	**PKPab**	**16 59 48.7**	**+1.5**
	comp=Z,26nm,0.8s,baz=309,slow=2.6,SNR=19						
MDT				PP	**PP**	**17 03 37.2**	**+1.3**
	comp=Z,35nm,1.3s,baz=346,slow=4.3,SNR=7.9						
KOWA	**Kowa**	**171.81**	**140**	PKP	**PKPdf**	**16 58 41.9**	**-0.7**
	comp=Z,66nm,0.9s,baz=211,slow=0.4,SNR=120						
KOWA				PKPab	**PKPab**	**17 00 09.9**	**+0.8**
	comp=Z,48nm,1.1s,baz=204,slow=2.9,SNR=14						
KOWA				pPKP	**pPKPdf**	**17 01 01.8**	**+2.6**
	comp=Z,21nm,1.2s,baz=274,slow=0.3,SNR=2.7						
KOWA				pPKPab	**pPKPab**	**17 02 17.1**	**+1.1**
	comp=Z,26nm,1.1s,baz=197,slow=2.5,SNR=5.8						
KOWA	**Kowa**	**171.81**	**140**		**PKPdf**	**16 58 40.8**	**-1.8**
KOWA					**PKPab**	**17 00 09.0**	**0.0**
TOA0	**Torodi Ar. Sit**	**172.31**	**182**		**PKPdf**	**16 58 41.5**	**-1.4**
TOA0				PKPab	**PKPab**	**17 00 10.5**	**-0.5**
TOA0	**Torodi Ar. Sit**	**172.31**	**182**	PKPdf	**PKPdf**	**16 58 42.4**	**-0.5**
SNR=32							
TORD	**Torodi Ar. Bea**	**172.31**	**182**	PKP	**PKPdf**	**16 58 42.2**	**-0.6**
	comp=Z,77nm,1.0s,baz=329,slow=1.2,SNR=197						
TORD				PKPab	**PKPab**	**17 00 11.4**	**+0.3**
	comp=Z,14nm,0.9s,baz=157,slow=3.2,SNR=7.3						
TORD				pPKP	**pPKPdf**	**17 00 60.0**	**+0.2**
	comp=Z,17nm,1.1s,baz=22,slow=1.5,SNR=2.3						
TORD				pPKPab	**pPKPab**	**17 02 20.3**	**+1.9**
	comp=Z,26nm,1.1s,baz=162,slow=3.3,SNR=8.8						
TORD				PP	**PP**	**17 04 05.5**	**+3.8**
	comp=Z,16nm,1.0s,baz=193,slow=3.4,SNR=7.1						

JMA 28 16:48:49.6, 28.65N×128.86E, h16km±1km, M2.1, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAMN	**Amaminishikomi**	**0.49**	**146**	P	Pg	16 48 59.2	-0.2
JAMN				S	Sg	16 49 06.0	0.0
JTAJ	**Takarajima**	**0.58**	**31**	P	Pg	16 49 00.9	-0.3
JTAJ				S	Sg	16 49 08.9	-0.1
JAM	**Amami Oshima**	**0.70**	**110**	P	Pg	16 49 02.8	-0.5
JAM				S	Sg	16 49 12.2	-0.3
JTK	**Tokunoshima**	**0.86**	**175**	P	Pb	16 49 05.8	-0.4
JTK				S	Sb	16 49 17.1	-0.5
JOKE	**Okinoerabujima**	**1.31**	**191**	P	Pn	16 49 13.0	-0.2
JYRO	**Yoronjima**	**1.66**	**193**	P	Pn	16 49 18.4	+0.4
JYRO				S	Sn	16 49 39.7	+0.7
JOW	**Kunigami**	**1.88**	**196**	P	Pn	16 49 21.3	+0.2

TAP 28 16:49:25.6, 23.53N×120.66E, h18km, ML1.1, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHN5	**Tsauling**	**0.07**	**18**	P	Pg	16 49 29.1	0.0
CHN5	baz=17			S	Sg	16 49 31.3	-0.1
ALS	**Alishan**	**0.14**	**100**	P	Pg	16 49 30.6	+0.7
ALS	baz=99			S	Sg	16 49 33.9	+1.0
WGK	**Gukeng**	**0.17**	**330**	P	Pg	16 49 30.6	+0.5
WGK	baz=332			S	Sg	16 49 34.4	+1.1
WDLH	**Douliu**	**0.19**	**325**	*e*P	Pg	16 49 30.7	+0.4
WDLH	baz=324			*e*S	Sg	16 49 34.9	+1.3
CHY	**Chiayi**	**0.22**	**260**	*e*P	Pb	16 49 31.0	+0.3
CHY	baz=259			*e*S	Sg	16 49 35.5	+1.3
TPUB	**Ta-pu**	**0.23**	**186**	P	Pb	16 49 31.9	+0.8
TPUB	baz=186			S	Sb	16 49 35.7	+0.9
WHYT	**Xinyi Township**	**0.24**	**48**	*e*P	Pb	16 49 32.0	+0.6
WHYT	baz=48			*e*S	Sb	16 49 36.4	+1.3
YUS	**Yu-Shan**	**0.28**	**99**	*e*P	Pb	16 49 32.1	0.0
YUS	baz=100			*e*S	Sg	16 49 37.6	+1.1
WTK	**Tuku**	**0.29**	**302**	*e*P	Pb	16 49 32.5	+0.3
WTK	baz=301			*e*S	Sb	16 49 37.7	+1.1
WTP	**Ta-pu**	**0.29**	**188**	*e*P	Pb	16 49 32.5	+0.2
WTP	baz=186			*e*S	Sb	16 49 37.9	+1.2
WJS	**Zhushan**	**0.29**	**13**	*e*P	Pb	16 49 32.6	+0.3
WJS	baz=12			*e*S	Sb	16 49 37.6	+0.8
TWK	**Hsinying**	**0.31**	**210**	*e*P	Pb	16 49 32.7	+0.1
TWK	baz=208			S	Sb	16 49 38.2	+0.9
WNT	**Mingjian**	**0.34**	**4**	*e*P	Pb	16 49 33.5	+0.3
WNT	baz=5.0			*e*S	Sb	16 49 39.4	+1.1
CHN1	**Nanshi**	**0.37**	**199**	*e*P	Pb	16 49 34.1	+0.5
CHN1	baz=198			*e*S	Sb	16 49 40.0	+0.9
SSLB	**Suanglung**	**0.37**	**47**	P	Pb	16 49 34.1	+0.4
SSLB	baz=47			S	Sb	16 49 39.9	+0.6
STYH	**Taoyuan**	**0.38**	**163**	*e*P	Pb	16 49 33.8	+0.1
STYH	baz=163			*e*S	Sb	16 49 40.1	+0.8
STYT	**Tauyuan**	**0.38**	**166**	*e*P	Pb	16 49 34.3	+0.4
STYT	baz=164			*e*S	Sb	16 49 40.5	+1.0
WSF	**Szhu**	**0.41**	**285**	*e*P	Pg	16 49 34.1	+0.1
WSF	baz=284			*e*S	Sb	16 49 40.3	0.0
TYC	**Yuchr**	**0.41**	**27**	*e*P	Pb	16 49 34.9	+0.5
TYC	baz=27			*e*S	Sb	16 49 41.6	+1.3
SMLT	**Sun Moon Lake**	**0.41**	**33**	*e*P	Pb	16 49 34.6	+0.2
SMLT	baz=33			*e*S	Sb	16 49 41.3	+0.8
SGST	**Jiashian**	**0.46**	**188**	*e*P	Pb	16 49 35.5	+0.4
SGST	baz=187			*e*S	Sb	16 49 42.7	+1.2
ELDTW	**Lidau**	**0.48**	**136**	*e*P	Pb	16 49 35.7	+0.2
ELDTW	baz=135			*e*S	Sb	16 49 42.8	+0.5
VWDT	**VWDT**	**0.50**	**64**	*e*P	Pb	16 49 36.0	+0.3
VWDT	baz=63			*e*S	Sb	16 49 44.0	+1.4
SLGT	**Liugui**	**0.54**	**181**	*e*P	Pb	16 49 37.1	+0.7
SLGT	baz=180			*e*S	Sb	16 49 44.8	+0.9
YULB	**Yu-li**	**0.61**	**103**	P	Pb	16 49 37.9	+0.3
YULB	baz=103			*e*S	Sb	16 49 46.6	+0.8
TCU	**Taichung**	**0.61**	**2**	*e*P	Pg	16 49 37.9	+0.2
TCU	baz=2.0			*e*S	Sn	16 49 47.5	-1.2
TWF1	**Yuli**	**0.62**	**107**	*e*P	Pn	16 49 39.1	-0.3
TWF1	baz=106			*e*S	Sn	16 49 47.5	-1.3
OWD	**Renai**	**0.63**	**49**	*e*P	Pg	16 49 38.5	+0.3
OWD	baz=48			*e*S	Sb	16 49 47.6	+0.9
HGSD	**Ruisui**	**0.71**	**93**	*e*P	Pg	16 49 39.8	+0.4
HGSD	baz=93			*e*S	Sn	16 49 50.6	-0.4

NEIC ***28*** *16:58:16.6±1.8, 18.55N±0.06×147.1E±0.2, h35km±2km, mb4.4/17, Error ellipse: s-maj=25.0km s-min=10.2km az=98.0*

IDC ***28*** *16:58:18.8±3.3, 18.50N×147.04E, h58km±28km, mb3.6/14, mb1 3.8/18, mb1mx3.5/72, mbtmp4.0/18, ML3.9/4, MS4.2/1, Ms1 4.2/1, ms1mx3.3/38, Error ellipse: s-maj=33.4km s-min=12.7km az=88.0*

ISC 28 16:58:17.9±0.7, 18.56N±0.06×147.1E±0.1, h52km, n37, σ1§40/35, mb4.0/18, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANA2	**Anatahan**	**2.56**	**211**		**Pn**	**16 58 57.5**	**+0.5**
GUMO	**Guam**	**5.38**	**203**	P	**Pn**	**16 59 36.9**	**+1.2**
GUMO	19nm,0.3s,baz=18,slow=13,SNR=11			S	**Sn**	**17 00 36.2**	**-0.1**
JCJ	**Chichijima**	**9.61**	**333**	P	**Pn**	**17 00 33.7**	**0.0**
JCJ	13nm,0.3s,baz=344,slow=23,SNR=1.8 2.4nm,0.3s,baz=256,slow=19,SNR=2.3			S	**Sn**	**17 02 16.6**	**-3.6**
JHJ2	**Mitsune**	**15.88**	**337**	Pn	**Pn**	**17 01 56.1**	**-2.0**
PATS	**Pohnpei**	**15.99**	**135**	Pn	**Pn**	**17 01 55.8**	**-3.8**
JMZ	**Minamidaito 2**	**16.35**	**299**	Pn	**Pn**	**17 02 01.9**	**-2.1**
JSG	**Sagara**	**17.89**	**336**		**Pn**	**17 02 23.3**	**+0.3**
JGF	**Kuroka**	**19.03**	**335**		**P**	**17 02 36.7**	**+1.0**
JGF	comp=Z,6.1nm,0.6s			IAmb	IAmb	17 02 40.2	
JOW	**Kunigami**	**19.18**	**299**	P	**Pn**	**17 02 38.8**	**+0.1**
JOW	comp=Z,0.6nm,0.3s,baz=62,slow=5.9,SNR=3.8 **Kunigami** comp=Z,42nm,1.1s	**19.18**	**299**	IAmb	IAmb	17 02 42.1	
MJAR	**Matsushiro Arr**	**19.54**	**338**	P	**P**	**17 02 41.7**	**+0.5**
MAJO	comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=5.9 **Matsushiro**	**19.54**	**338**	P	**P**	**17 02 38.2**	**-3.0**
JWT	**Wachi**	**19.61**	**330**		**P**	**17 02 43.4**	**+1.4**
JMM	**Marumori**	**20.00**	**345**	Pn	Pn	17 02 48.1	-0.2
JMM	comp=Z,14nm,1.2s			IAmb	IAmb	17 02 53.8	
JHS	**Saijyo**	**20.53**	**326**	P	**P**	**17 02 52.0**	**-0.1**
JHS	comp=Z,14nm,1.2s			IAmb	IAmb	17 03 16.2	
JTU	**Tsushima**	**22.36**	**319**	P	**P**	**17 03 10.3**	**-1.3**
JTU	comp=Z,42nm,1.3s			IAmb	IAmb	17 03 17.7	
SIJI	**Sorong**	**24.78**	**221**	P	**P**	**17 03 34.8**	**-0.4**
KSRS	comp=Z,2.9nm,0.6s,baz=14,slow=15,SNR=4.2 **Korea Array**	**25.21**	**322**	P	**P**	**17 03 38.5**	**-0.2**
KSRS	comp=Z,0.7nm,0.5s,baz=146,slow=8.9,SNR=5.9			LR	LR	17 12 18.7	
USRK	comp=Z,545nm,20.3s,baz=32,slow=33 **Ussuriysk Ar.**	**28.52**	**337**	P	**P**	**17 04 09.3**	**+0.8**
WR0	comp=Z,0.8nm,0.6s,baz=129,slow=10,SNR=4.2 **Warramunga Arr**	**40.21**	**198**	P	**P**	**17 05 49.0**	**-0.6**
WR0	comp=Z,17nm,1.4s			IAmb	IAmb	17 06 00.8	
WB2	**Warramunga Arr**	**40.25**	**199**	P	**P**	**17 05 49.5**	**-0.4**
WB2	comp=Z,0.5nm,0.5s,baz=31,slow=8.0,SNR=12			IAmb	IAmb	17 05 56.4	
WRA	comp=Z,7.9nm,1.3s **Warramunga Arr**	**40.25**	**199**	P	**P**	**17 05 49.4**	**-0.5**
MA2	comp=Z,0.5nm,0.5s,baz=31,slow=8.0,SNR=12 **Magadan**	**41.05**	**3**	P	**P**	**17 05 57.0**	**+1.0**
MA2	comp=Z,5.1nm,0.9s			IAmb	IAmb	17 05 58.5	
AS31	**Alice Springs**	**43.89**	**198**	P	**P**	**17 06 19.7**	**+0.1**
ASAR	**Alice Springs**	**43.89**	**198**	P	**P**	**17 06 18.3**	**-1.4**
SONM	comp=Z,0.3nm,0.4s,baz=18,slow=13,SNR=12 **Songino Array**	**44.06**	**321**	P	**P**	**17 06 21.5**	**+0.6**
ZALV	comp=Z,0.8nm,0.8s,baz=149,slow=7.8,SNR=2.5 **Zalesovo Beam**	**58.91**	**322**	P	**P**	**17 08 11.7**	**+0.1**
NRIK	comp=Z,0.7nm,0.5s,baz=104,slow=6.1,SNR=2.9 **Noril'sk**	**62.18**	**340**	P	**P**	**17 08 34.1**	**+0.5**
KURK	comp=Z,2.1nm,0.7s,baz=128,slow=10.0,SNR=4.0 **Kurchatov**	**62.24**	**318**	P	**P**	**17 08 35.7**	**+1.4**
KURBB	**Kurchatov Arra** comp=Z,0.9nm,0.2s,baz=91,slow=7.6,SNR=5.9	**62.29**	**318**	P	**P**	**17 08 35.7**	**+1.1**
BVAR	**Borovoye Array**	**67.41**	**320**	P	**P**	**17 09 08.1**	**+0.2**
YKA	comp=Z,1.0nm,0.6s,baz=145,slow=5.4,SNR=5.6 **Yellowknife Ar**	**77.50**	**28**	P	**P**	**17 10 08.8**	**+1.0**
NVAR	comp=Z,0.6nm,0.7s,baz=288,slow=5.0,SNR=4.3 **Mina Array Bea**	**82.20**	**52**	P	**P**	**17 10 34.4**	**+0.4**
FINES	comp=Z,0.3nm,0.5s,baz=263,slow=5.4,SNR=1.8 **FINESS Array B**	**87.55**	**336**	P	**P**	**17 10 60.0**	**-0.1**
AKASG	comp=Z,0.4nm,0.3s,baz=48,slow=2.8,SNR=3.8 **Malin Array Be**	**92.15**	**326**	P	**P**	**17 11 23.3**	**+1.4**
AKASG	comp=Z,0.2nm,0.3s,baz=79,slow=6.3,SNR=1.8 **Malin Array Be** comp=Z,2.7nm,1.4s	**92.15**	**326**	IA

GLVR Golovnino 0.62 331⇑ *i*PN **Pn** **17 50 02.3 -0.2**
GLVR *i*S **Sn** **17 50 11.7 0.0**
GLVR pmax pmax
comp=Z,29µm,0.4s
GLVR pmax pmax
comp=E,809nm,0.2s
GLVR pmax pmax
comp=N,5µm,0.4s
GLVR smax smax
comp=E,58µm,0.4s
GLVR smax smax
comp=N,92µm,0.3s
GLVR Golovnino 0.62 331 *i*P **Pn** **17 50 02.3 -0.2**
GLVR AMB AMB 17 50 02.6
comp=N,15µm,0.4s
GLVR *i*S **Sn** **17 50 11.0 -0.7**
GLVR A A 17 50 12.1
comp=N,92µm,0.4s
GLVR A A 17 50 12.1
comp=N,58µm,0.4s
GRPR Tuman 0.80 352⇑ *i*PN **Pn** **17 50 04.2 -0.7**
GRPR *i*S **Sn** **17 50 14.3 -1.6**
GRPR pmax pmax
comp=Z,7µm,0.3s
GRPR pmax pmax
comp=N,1µm,0.1s
GRPR pmax pmax
comp=E,1µm,0.4s
GRPR smax smax
comp=N,32µm,0.3s
GRPR smax smax
comp=E,36µm,0.3s
GRPR Tuman 0.80 352 *i*P **Pn** **17 50 04.2 -0.7**
GRPR AMB AMB 17 50 04.5
comp=E,7µm,0.3s
GRPR *i*S **Sn** **17 50 14.3 -1.6**
GRPR A A 17 50 16.0
comp=E,32µm,0.3s
GRPR A A 17 50 16.0
comp=E,36µm,0.3s
AKK Akkeshi 0.81 258 *e*P **Pn** **17 50 04.4 -0.6**
AKK *e*S **Sn** **17 50 14.8 -1.3**
YUK Yuzh-Kuril'sk 0.84 357*c* *i*PN **Pn** **17 50 04.3 -1.0**
YUK *i*S **Sn** **17 50 15.0 -1.7**
YUK pmax pmax
comp=E,1µm,0.2s
YUK pmax pmax
comp=Z,13µm,0.2s
YUK pmax pmax
comp=N,1µm,0.1s
YUK smax smax
comp=E,11µm,0.3s
YUK smax smax
comp=N,21µm,0.4s
YUK Yuzh-Kuril'sk 0.84 357 *i*P **Pn** **17 50 04.4 -0.9**
YUK AMB AMB 17 50 05.3
comp=N,13µm,0.4s
YUK *i*S **Sn** **17 50 15.0 -1.7**
YUK A A 17 50 17.0
comp=N,21µm,0.4s
YUK A A 17 50 17.0
comp=N,14µm,0.4s
JNSB Nemuroshibetsu 0.89 311 P **Pn** **17 50 05.3 -0.6**
JNSB *e*S **Sn** **17 50 17.0 -0.8**
JAK Akkeshi 0.92 258 P **Pn** **17 50 05.8 -0.6**
JAK *e*S **Sn** **17 50 17.5 -1.2**
JRA Rausu 0.94 322 P **Pn** **17 50 06.5 -0.2**
JRA *e*S **Sn** **17 50 18.7 -0.5**
JNK Nakash 0.96 294 P **Pn** **17 50 06.1 -0.9**
JNK *e*S **Sn** **17 50 18.0 -1.7**
RUSJ Misakicho 1.03 332⇑ *i*PN **Pn** **17 50 08.1 +0.2**
RUSJ *i*S **Sn** **17 50 21.7 +0.4**
JOB Onbets 1.56 260 P **Pn** **17 50 14.7 -0.3**
JOB *e*S **Sn** **17 50 33.4 -0.7**
JAR Ashorobuto 1.58 274 P **Pn** **17 50 15.1 -0.2**
JAR *e*S **Sn** **17 50 34.0 -0.6**
JTKR Abashiri--Toko 1.66 298 P **Pn** **17 50 16.8 +0.4**
JTKR *e*S **Sn** **17 50 36.6 +0.1**
ERM Erimo 2.36 241 *i*PN **Pn** **17 50 28.0 +2.0**
ERM Erimo 2.36 241 **Pn** **17 50 28.3 +2.3**
JEM Erimo 2.36 241 **Pn** **17 50 28.6 +2.6**
KUR Kuril'sk 2.47 34*c* *i*PN **Pn** **17 50 28.2 +0.8**
KUR *i*S **Sn** **17 50 57.5 +1.2**
KUR pmax pmax
comp=E,147nm,0.6s
KUR pmax pmax
comp=Z,237nm,0.6s
KUR pmax pmax
comp=N,67nm,0.2s
KUR smax smax
comp=N,746nm,0.5s
KUR smax smax
comp=E,279nm,0.5s
KUR Kuril'sk 2.47 34 *i*P **Pn** **17 50 28.3 +0.8**
KUR AMB AMB 17 50 29.3
comp=E,150nm,0.3s
KUR *i*S **Sn** **17 50 56.0 -0.3**
KUR A A 17 51 01.0
comp=E,650nm,0.4s
KUR A A 17 51 01.0
comp=E,890nm,0.4s
JKA Kamikawa-asahi 2.58 292 **Pn** **17 50 30.5 +1.4**
JKA Kamikawa-asahi 2.58 292 **Sn** **17 51 03.7 +4.5**
JKA Kamikawa-asahi 2.58 292 *e*P **Pn** **17 50 30.8 +1.8**
ASAJ Asahikawa 2.58 292 P **Pn** **17 50 30.8 +1.7**
comp=E,25nm,0.3s,baz=118,slow=9.7,SNR=145
ASAJ S **Sn** **17 51 03.7 +4.5**
comp=E,49nm,0.3s,baz=3.6,slow=33,SNR=6.2
ASAJ LR LR 17 51 39.8
comp=E,411nm,20.3s,baz=81,slow=42
JEW Eniwo 3.30 265 **Pn** **17 50 39.3 +0.4**
JTM Tenmabayashi 4.35 238 **Pn** **17 50 54.2 +1.0**
YSS Yuzh-Sakhalins 4.38 330*d* *i*PN **Pn** **17 50 54.7 +1.2**
YSS Yuzh-Sakhalins 4.38 330 Pn **Pn** **17 50 54.8 +1.2**
YSS Yuzh-Sakhalins 4.38 330 *e*P **Pn** **17 50 54.0 +0.4**
YSS AMB AMB 17 50 55.0
comp=E,30nm,0.6s
YSS *e*S **Sn** **17 51 42.0 -1.3**
YSS A A 17 51 43.0
comp=E,40nm,0.6s
JMM Marumori 6.61 218 Pn **Pn** **17 51 22.4 -1.8**
TEY Ternei 6.96 289⇑ *e*PN Pn 17 51 33.7 +4.7
TEY pmax pmax
comp=Z,20nm,0.7s
TEY pmax pmax
comp=N,10.0nm,0.7s
TEY pmax pmax
comp=E,20nm,0.7s
TEY Ternei 6.96 289 *e*P **Pn** **17 51 31.1 +2.1**
TEY AMB AMB 17 51 34.3
comp=E,20nm,0.7s
JSD Sado 7.78 231 Pn **Pn** **17 51 40.2 -0.1**
JYT Yasato 8.24 214 Pn **Pn** **17 51 44.6 -2.0**
MJA0 Matsu Arr-Jizo 8.89 224 *e*PN **Pn** **17 51 55.1 -0.4**
MJA0 pmax pmax
comp=Z,3.0nm,0.5s
MAJO Matsushiro 8.91 224 PN **Pn** **17 51 55.4 -0.3**
MAJO Matsushiro 8.91 224 Pn **Pn** **17 51 55.4 -0.3**
MJAR Matsushiro Arr 8.91 224 P **Pn** **17 51 55.1 -0.6**
comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=5.7
GRNR Gornyy 9.97 323⇑ *i*PN **Pn** **17 52 13.3 +3.1**
GRNR pmax pmax
comp=N,3.0nm,0.9s
GRNR pmax pmax
comp=Z,3.0nm,0.6s
GRNR MLR MLR
comp=N,220nm,19.0s
GRNR MLR MLR
comp=E,340nm,19.0s
GRNR MLR MLR
comp=Z,90nm,20.0s
GRNR Gornyy 9.97 323 *e*P **Pn** **17 52 13.3 +3.1**
GRNR AMB AMB 17 52 14.4
comp=Z,30nm,0.6s
JGF Kuroka 10.07 224 Pn **Pn** **17 52 11.7 +0.1**
USRK Ussuriysk Ar. 10.15 280 P **Pn** **17 52 15.9 +3.2**
baz=93,slow=15,SNR=1.6
JHJ Hachijo jima 2 11.16 208 LR LR 17 56 22.2
comp=Z,79nm,20.9s,baz=66,slow=35
JWT Wachi 11.35 229 Pn **Pn** **17 52 29.1 0.0**
KLR Kul'dur 11.52 306 P **Pn** **17 52 35.4 +4.1**
comp=Z,0.2nm,0.3s,baz=109,slow=15,SNR=11
KLR LR LR 17 57 12.3
comp=Z,129nm,21.2s,baz=66,slow=38
KLR Kul'dur 11.52 306 *i*PN **Pn** **17 52 34.5 +3.1**
KLR Kul'dur 11.52 306 *e*P **Pn** **17 52 34.0 +2.6**
PEA0B Petropavlovsk- 12.64 34 PN **Pn** **17 52 50.5 +3.9**
PEA0B Petropavlovsk- 12.64 34 Pn **Pn** **17 52 50.5 +3.9**
PETK Petropavlovsk- 12.64 34 P **Pn** **17 52 48.4 +1.8**
comp=Z,0.2nm,0.3s,baz=176,slow=9.5,SNR=6.4
EKMR Ekimchan 13.12 323 *e*P **Pn** **17 52 52.6 -0.6**
JNU Nakatsue 15.51 235 Pn **Pn** **17 53 22.6 -2.5**
ZEA Zeya 16.21 317 *e*P **Pn** **17 53 34.7 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA Zeya 16.21 317 *e*P **Pn** **17 53 33.4 -0.5**
MA2 Magadan 16.67 9 P **P** **17 53 41.9 +0.7**
comp=Z,0.6nm,0.3s,baz=191,slow=8.8,SNR=6.7
MA2 Magadan 16.67 9 P **P** **17 53 40.9 -0.3**
MA2 pmax pmax
comp=Z,12nm,1.5s
MA2 Magadan 16.67 9 **P** **17 53 40.9 -0.3**
JSU Suzuyama 16.92 232 **Pn** **17 53 42.1 -0.8**
JSU IAmb IAmb 17 54 07.1
comp=Z,49nm,1.2s
SEY Seymchan 20.13 9 P **P** **17 54 19.4 +0.4**
comp=Z,1.6nm,0.5s,baz=185,slow=9.8,SNR=18
YAK Yakutsk 21.17 339 P **P** **17 54 30.8 +0.4**
comp=Z,4.4nm,0.5s,baz=116,slow=2.9,SNR=2.4
YAK Yakutsk 21.17 339 P **P** **17 54 30.8 +0.4**
YAK IAmb IAmb 17 54 35.4
comp=Z,11nm,0.6s
JOW Kunigami 21.73 227 P **P** **17 54 36.1 -0.6**
comp=Z,16nm,0.8s,baz=313,slow=7.1,SNR=3.7
JOW Kunigami 21.73 227 P **P** **17 54 37.3 +0.6**
JOW IAmb IAmb 17 54 44.2
comp=Z,44nm,1.3s
NJ2 Nanjing 24.05 251 *e*P **P** **17 54 59.3 -0.7**
NJ2 pmax pmax
comp=Z,12nm,0.5s
HHC Hu-ho-hao-te 25.53 277 *e*P **P** **17 55 13.0 -0.5**
HHC pmax pmax
comp=Z,9.0nm,1.2s
HHC pmax pmax
comp=Z,100nm,7.9s
BILL Bilibino 27.14 17 *i*P **P** **17 55 25.5 -2.1**
BILL pmax pmax
comp=Z,1.0nm,1.5s
BILL Bilibino 27.14 17 *e*P **P** **17 55 32.1 +4.5**
SONM Songino Array 27.87 293 P **P** **17 55 34.2 -0.3**
comp=Z,2.5nm,0.6s,baz=95,slow=8.9,SNR=19
YULB Yu-li 28.35 234 P P 17 55 33.0 -5.8
YULB IAmb IAmb 17 55 49.0
comp=Z,20nm,1.2s
H11N2 WAKE ISLAND Hy 29.29 136 T T 18 26 38.6
baz=328,slow=75,SNR=1937
H11N1 WAKE ISLAND Hy 29.30 136 T T 18 26 41.6
baz=328,slow=75,SNR=1355
H11N3 WAKE ISLAND Hy 29.31 136 T T 18 26 42.1
baz=328,slow=75,SNR=1447
H11S1 WAKE ISLAND Hy 30.23 138 T T 18 27 52.1
baz=329,slow=76,SNR=5431
H11S3 WAKE ISLAND Hy 30.23 138 T T 18 27 53.9
baz=329,slow=76,SNR=4518
H11S2 WAKE ISLAND Hy 30.25 138 T T 18 27 50.1
baz=329,slow=76,SNR=4507
LZH Lanzhou 32.90 272 *e*P **P** **17 56 17.5 -1.6**
LZH pP pP 17 56 35.8 +3.5
LZH sP sP 17 56 41.8 +3.4
LZH pmax pmax
comp=Z,15nm,1.1s
KMI Kunming 39.53 257 ⇑P **P** **17 57 16.0 +0.2**
KMI sP sP 17 57 39.0 +3.7
KMI pmax pmax
comp=Z,6.0nm,0.9s
PPLA Purkeypile 40.17 39 P **P** **17 57 22.2 +1.6**
KDAK Kodiak Island 40.28 47 P **P** **17 57 21.6 +0.2**
comp=Z,16nm,1.1s,baz=321,slow=15,SNR=2.2
ZALV Zalesovo Beam 40.62 307 P **P** **17 57 24.4 +0.1**
comp=Z,0.4nm,0.4s,baz=90,slow=9.2,SNR=1.8
ZALV PcP **PcP** **17 59 25.4 +0.1**
comp=Z,0.8nm,0.6s,baz=82,slow=3.1,SNR=3.9
ZALV LR LR 18 17 11.1
comp=Z,78nm,18.5s,baz=235,slow=40
BPAW Bear Paw Mtn. 40.70 37 P **P** **17 57 25.0 +0.2**
KTH Kantishna Hill 40.73 38 P **P** **17 57 25.8 +0.6**
KTH IAmb IAmb 17 57 41.5
comp=Z,7.5nm,1.2s
CNPM China Poot 40.80 44 P **P** **17 57 26.4 +0.6**
BRLK Bradley Lake 40.96 44 P **P** **17 57 27.6 +0.5**
TOLK Toolik Lake Re 41.41 30 P **P** **17 57 31.7 +1.0**
WMQ Urumqi 41.47 292 *e*P **P** **17 57 32.0 +0.5**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,70nm,4.5s
WRH Wood River Hil 41.95 36 P **P** **17 57 36.0 +0.9**
WRH IAmb IAmb 17 58 14.1
comp=Z,8.5nm,1.4s
ILAR Eielson Array 42.46 36 P **P** **17 57 39.2 0.0**
comp=Z,0.8nm,0.6s,baz=266,slow=7.5,SNR=6.0
ILAR Eielson Array 42.46 36 *e*P **P** **17 57 42.6 +3.4**
ILAR pmax pmax
comp=Z,1.0nm,0.6s
SCM Sheep Creek Mo 42.49 40 P **P** **17 57 40.6 +1.0**
SCM Sheep Creek Mo 42.49 40 P **P** **17 57 40.6 +1.0**
KLU Klutina 43.20 41 P **P** **17 57 45.1 -0.2**
KLU IAmb IAmb 17 58 10.7
comp=Z,20nm,1.6s
SCRK Sand Creek 43.78 37 P **P** **17 57 49.5 -0.5**
MK31 Makanchi Array 44.05 298 P **P** **17 57 50.7 -1.6**
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MK31 Makanchi Array 44.05 298 P **P** **17 57 50.7 -1.6**
MKAR Makanchi Array 44.05 298 P **P** **17 57 51.8 -0.6**
comp=Z,1.3nm,0.5s,baz=82,slow=10,SNR=20
MKAR Makanchi Array 44.05 298 P **P** **17 57 50.9 -1.5**
MAKZ Makanchi 44.25 298 P **P** **17 57 53.1 -0.8**
MAKZ pmax pmax
comp=Z,1.0nm,0.6s
MAKZ Makanchi 44.25 298 P **P** **17 57 53.1 -0.8**
K27K Chicken 44.61 37 P **P** **17 57 57.5 +0.9**
TGL Tana Glacier 44.80 41 P **P** **17 57 59.6 +1.5**
TGL IAmb IAmb 17 58 10.4
comp=Z,14nm,1.2s
L27K Beaver Creek, 44.87 38 P **P** **17 57 59.8 +1.2**
L27K IAmb IAmb 17 58 06.0
comp=Z,12nm,1.5s
EGAK Eagle 44.90 35 P **P** **17 57 59.0 +0.2**
EGAK IAmb IAmb 17 58 35.7
comp=Z,14nm,1.6s
GRNC Granite Creek 45.32 41 P **P** **17 58 03.1 +0.7**
CTGM Chitina Glacie 45.47 41 P **P** **17 58 03.8 +0.2**
EPYK Eagle Plains 46.47 33 P **P** **17 58 11.4 +0.2**
INK Inuvik 47.33 30 P **P** **17 58 18.4 +0.6**
comp=Z,1.2nm,0.5s,baz=273,slow=6.6,SNR=6.5
INK Inuvik 47.33 30 P **P** **17 58 18.0 +0.2**
INK pmax pmax
comp=Z,9.0nm,1.7s
INK Inuvik 47.33 30 P **P** **17 58 18.0 +0.2**
INK IAmb IAmb 17 58 26.9
comp=Z,9.5nm,1.6s
HYT Haines Junctio 47.33 40 P **P** **17 58 20.0 +1.9**
HYT IAmb IAmb 17 58 21.4
comp=Z,8.7nm,1.0s
FAKI Fak Fak 47.53 199 P **P** **17 58 19.4 -0.5**
BRVK Borovoye 49.21 309 P **P** **17 58 34.1 +1.6**
BRVK pmax pmax
comp=Z,6.0nm,1.7s
BRVK Borovoye 49.21 309 P **P** **17 58 34.1 +1.6**
BRVK IAmb IAmb 17 58 42.0
comp=Z,5.9nm,1.6s
BRVK Borovoye 49.21 309 *e*P **P** **17 58 34.1 +1.6**
KDJ Kajisay 49.23 294 P **P** **17 58 32.9 -0.2**
KDJ pmax pmax
comp=Z,4.0nm,1.3s
KDJ Kajisay 49.23 294 P **P** **17 58 32.9 -0.2**
KDJ IAmb IAmb 17 58 34.5
comp=Z,4.1nm,1.3s
ARSB Arslanbob 52.40 295 P **P** **17 58 57.2 +0.3**
ARSB pmax pmax
comp=Z,6.0nm,1.1s
ARSB Arslanbob 52.40 295 P **P** **17 58 57.2 +0.3**
ARSB IAmb IAmb 17 59 12.6
comp=Z,5.9nm,1.1s
KKAR Karatay Array 53.18 298 P **P** **17 59 01.5 -1.0**
KKAR Karatay Array 53.18 298 P **P** **17 59 01.5 -1.0**
EUNU Eureka 53.56 10 P **P** **17 59 02.1 -2.7**
RES Resolute Bay 55.75 16 P **P** **17 59 19.6 -0.9**
comp=Z,2.5nm,0.5s,baz=311,slow=7.7,SNR=19
RES Resolute Bay 55.75 16 P **P** **17 59 19.3 -1.3**
RES pmax pmax
comp=Z,3.0nm,0.6s
RES Resolute Bay 55.75 16 P **P** **17 59 19.3 -1.3**
RES IAmb IAmb 17 59 23.4
comp=Z,3.3nm,0.6s
ABKAR Akbulak array 56.71 309 P **P** **17 59 26.8 -1.0**
ABKAR Akbulak array 56.71 309 P **P** **17 59 26.8 -1.0**
ABKAR IAmb IAmb 17 59 47.9
comp=Z,2.3nm,1.1s
YKA Yellowknife Ar 56.75 33 P **P** **17 59 28.1 +0.2**
comp=Z,0.8nm,0.8s,baz=300,slow=6.4,SNR=7.4
KEV Kevo 58.91 339 P P 17 59 37.7 -5.2
KEV Kevo 58.91 339 P **P** 17 59 37.7 -5.3
ARCES ARCESS Array B 59.45 339 P **P** **17 59 45.3 -1.4**
comp=Z,3.4nm,1.0s,baz=32,slow=8.7,SNR=1.5
WB0 Warramunga Arr 63.54 192 P **P** **18 00 14.0 -0.8**
WB0 IAmb IAmb 18 00 33.2
comp=Z,11nm,1.4s
WR0 Warramunga Arr 63.71 192 P **P** **18 00 15.8 -0.1**
WR0 IAmb IAmb 18 00 56.5
comp=Z,7.2nm,1.4s
WB2 Warramunga Arr 63.72 192 P **P** **18 00 15.6 -0.3**
WB2 IAmb IAmb 18 00 34.5
comp=Z,9.8nm,1.2s
WRA Warramunga Arr 63.72 192 P **P** **18 00 15.2 -0.8**
comp=Z,1.6nm,1.0s,baz=8.4,slow=7.2,SNR=9.1
WRA Warramunga Arr 63.72 192 *e*P **P** **18 00 16.5 +0.5**
WRA pmax pmax
comp=Z,1.0nm,0.6s
FITZ Fitzroy Crossi 63.78 202 P **P** **18 00 16.6 +0.3**
comp=Z,2.0nm,0.8s,baz=8,1,slow=7.1,SNR=2.0
GEYT Alibeck 63.92 298 P **P** **18 00 16.0 -1.3**
comp=Z,1.1nm,0.4s,baz=84,slow=4.5,SNR=2.3
FIA1 FINESS Array S 64.96 333 P **P** **18 00 22.3 -1.3**
FIA1 IAmb IAmb 18 00 43.0
comp=Z,9.1nm,1.5s
FINES FINESS Array B 64.96 333 P **P** **18 00 22.8 -0.8**
comp=Z,1.1nm,0.4s,baz=50,slow=7.3,SNR=16
FINES FINESS Array B 64.96 333 *e*P **P** **18 00 25.3 +1.7**
FINES pmax pmax
comp=Z,1.0nm,0.4s
OBN Obninsk 65.23 323 *e*P **P** **18 00 23.4 -2.0**
OBN *e* 18 00 56.2
OBN *e* 18 02 47.3
OBN pmax pmax
comp=Z,3.0nm,0.9s
FCC Fort Churchill 66.94 29 P **P** **18 00 36.0 -0.4**
FCC pmax pmax
comp=Z,3.0nm,0.7s
FCC Fort Churchill 66.94 29 P **P** **18 00 36.0 -0.4**
FCC IAmb IAmb 18 00 42.1
comp=Z,2.5nm,0.7s
AS31 Alice Springs 67.44 192 P **P** **18 00 38.7 -1.2**
ASAR Alice Springs 67.45 192 P **P** **18 00 40.1 +0.1**
comp=Z,1.3nm,0.6s,baz=8.8,slow=5.2,SNR=34
ASAR Alice Springs 67.45 192 P **P** **18 00 40.6 +0.6**
ASAR Alice Springs 67.45 192 P **P** **18 00 40.6 +0.6**
NVAR Mina Array Bea 68.63 57 P **P** **18 00 48.4 +0.7**
comp=Z,0.6nm,0.6s,baz=290,slow=6.4,SNR=5.4
KIV Kislovodsk 69.46 311 *e*P **P** **18 00 53.2 +0.6**
KIV pmax pmax
comp=Z,18nm,1.0s
KIV Kislovodsk 69.46 311 P **P** **18 00 53.2 +0.6**
KIV IAmb IAmb 18 00 57.9
comp=Z,4.8nm,0.6s
KIV Kislovodsk 69.46 311 *e*P **P** **18 00 53.2 +0.6**
KBZ Khabaz 69.50 311 P **P** **18 00 53.0 +0.4**
comp=Z,2.2nm,0.7s,baz=41,slow=4.8,SNR=9.0
KBZ Khabaz 69.50 311 *e*P **P** **18 00 54.3 +1.7**
KBZ pmax pmax
comp=Z,2.0nm,0.7s
KBZ Khabaz 69.50 311 *e*P **P** **18 00 54.3 +1.7**
NC303 NORSAR Array S 69.60 338 P **P** **18 00 52.8 -0.2**
NC405 NORSAR Array S 69.60 338 P **P** **18 00 51.8 -1.2**
NC204 NORSAR Array S 69.72 339 P **P** **18 00 52.8 -1.0**
NC204 IAmb IAmb 18 01 32.6
comp=Z,13nm,1.2s
NB201 NORSAR Array S 69.76 338 P **P** **18 00 52.7 -1.4**
NOA NORSAR Array B 69.79 338 P **P** **18 00 53.7 -0.6**
comp=Z,0.4nm,0.7s,baz=213,slow=6.4,SNR=5.7
PDAR Pinedale Array 70.94 49 P **P** **18 01 02.0 +0.1**
comp=Z,0.6nm,0.7s,baz=333,slow=1.7,SNR=5.7
PDAR Pinedale Array 70.94 49 P **P** **18 01 02.2 +0.3**
AKASG Malin Array Be 71.49 323 P **P** **18 01 03.7 -1.0**
comp=Z,1.5nm,0.5s,baz=40,slow=6.3,SNR=10
AKASC Malin Array Be 71.49 323 IAmb IAmb 18 01 05.1
comp=Z,0.9nm,1.1s
BUR08 Bucovina Ar. S 75.53 323 P **P** **18 01 28.0 -0.7**
BUR08 IAmb IAmb 18 01 43.5
comp=Z,6.5nm,1.4s
CRVS Cervenica-Dubn 76.15 326 *e*P **P** **18 01 29.3 -2.7**
CRVS Cervenica-Dubn 76.15 326 *e*P **P** **18 01 29.3 -2.7**
CLL Collm 77.39 332 *e*(P) **P** **18 01 42.0 +3.1**
VYHS Vyhne 77.53 327 *e*P **P** **18 01 40.0 +0.2**
VYHS Vyhne 77.53 327 *e*P **P** **18 01 40.0 +0.2**
EKA Eskdalemuir Ar 78.39 343 P **P** **18 01 44.2 -0.2**
comp=Z,1.2nm,0.5s,baz=26,slow=5.2,SNR=10
KHC Kasperske Hory 79.01 330 *e*P **P** **18 01 46.3 -1.7**
KHC *e* 18 01 51.5
KHC Kasperske Hory 79.01 330 *e*P **P** **18 01 46.3 -1.7**
KHC *ex* x 18 01 51.5
GERES GERESS Array B 79.20 330 P **P** **18 01 48.4 -0.7**
comp=Z,0.6nm,0.6s,baz=350,slow=6.8,SNR=5.1
GERES GERESS Array B 79.20 330 *e*P **P** **18 01 52.3 +3.2**
GERES pmax pmax
comp=Z,1.0nm,0.7s
TXAR Lajitas Array 83.70 55 P **P** **18 02 13.6 +0.3**
comp=Z,0.7nm,0.8s,baz=313,slow=4.8,SNR=7.1
SNAA Sanae 147.66 198 PKPbc **PKPbc** **18 09 27.8 +0.5**
SNAA Sanae 147.66 198 PKPbc **PKPbc** **18 09 27.5 +0.3**
comp=Z,2.1nm,0.9s,baz=173,slow=6.8,SNR=9.7
VNA2 Neumayer--Watz 149.20 197 PKPbc **PKiKP** **18 09 31.9 -0.4**
VNA3 Neumayer Olymp 149.41 195 PKPbc **PKiKP** **18 09 32.3 -0.5**
PMSA Palmer Station 152.59 152 PKPbc **PKiKP** **18 09 39.1 -0.3**
comp=Z,23nm,0.5s,baz=207,slow=4.5,SNR=9.6

*IDC **28** 17:59:44.6±2.0, 11.˝28S×111.˝20E, h0km, mb3.4/5, mb1 3.8/7, mb1mx3.5/33, mbtmp3.6/7, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/28, Error ellipse: s-maj=79.8km s-min=20.0km az=43.0*
*DJA **28** 17:59:49.6±0.5, 11˚S±8˚×11˚1E±˚, h129km±23km, M4.2/9, mB5.7/1, mb4.2/6, MLv4.2/9, Mw(mB)5.2/1*
ISC 28 17:59:49.4±1.1, 11.˝1S±0.˝1×111.˝40E±0.˝08, h35km, n19, σ1s60/21, mb3.4/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**3.29**	**345**	P	**Pn**	**18 00 37.1**	**-1.5**
UGM				S	**Sn**	**18 01 16.9**	**+0.3**
JAGI	**Jajag, Banyuwa**	**3.78**	**46**	P	**Pn**	**18 00 45.8**	**+0.5**
JAGI				S	**Sn**	**18 01 26.0**	**-2.5**
ABJI	**Asem Bagus**	**4.33**	**41**	P	**Pn**	**18 00 55.0**	**+2.2**
ABJI				S	**Sn**	**18 01 41.6**	**-0.4**
KMMI	**Kalianget**	**4.77**	**32**	P	**Pn**	**18 00 59.8**	**+0.9**
SRBI	**Singaraja**	**4.82**	**52**	P	**Pn**	**18 01 01.3**	**+1.8**
CISI	**Cisompet, Garu**	**5.00**	**315**	P	**Pn**	**18 01 01.3**	**-0.8**
TWSI	**Taliwang, Sumb** 0.1nm13nm,0.8s	**5.90**	**67**	P	**Pn**	**18 01 14.6**	**+0.2**
PLAI	**Plampang** 0.1nm20nm,1.1s	**6.68**	**71**	P	**Pn**	**18 01 25.0**	**-0.2**
WBSI	**Waikabubak, Su** 16nm,0.9s	**8.00**	**80**	P	**Pn**	**18 01 41.4**	**-1.9**
KASI	**Kota Agung** 17nm,1.0s	**8.80**	**309**	P	**Pn**	**18 01 52.7**	**-1.5**
LWLI	**Liwa** 5µm26nm,0.5s	**9.46**	**309**	P	**Pn**	**18 02 00.1**	**-3.3**
BATI	**Baumata** 1.1nm,0.3s,baz=275,slow=12,SNR=1.4	**12.09**	**87**	Pn	**Pn**	**18 02 39.2**	**-0.1**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=301,slow=11,SNR=2.0	**15.43**	**118**	Pn	**Pn**	**18 03 23.0**	**-1.6**
FITZ				Sn	Sn	18 06 01.3	-13
	0.1nm,0.3s,baz=268,slow=13,SNR=1.4						
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=284,slow=12,SNR=1.8	**23.76**	**114**	P	**P**	**18 05 00.6**	**+1.7**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=294,slow=8.7,SNR=16	**24.80**	**123**	P	**P**	**18 05 09.7**	**+1.3**
CMAR	**Chiang Mai Arr** 0.4nm,0.8s,baz=169,slow=7.3,SNR=2.7	**31.85**	**337**	P	**P**	**18 06 12.7**	**+1.4**
MJAR	**Matsushiro Arr** comp=Z,33nm,19.8s,baz=130,slow=36	**53.71**	**27**	LR	LR	18 32 08.7	
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=139,slow=7.4,SNR=4.8	**63.25**	**338**	P	**P**	**18 10 15.5**	**+1.0**

ZALV	**Zalesovo Beam**	**68.63**	**344**	P		**P**	**18 10 49.7**	**+0.8**
	0.9nm,0.6s,baz=177,slow=2.9,SNR=4.5							

*IDC **28** 18:05:12.0±1.4, 60.72S×56.42W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.8/24, mbtmp4.0/5, MS3.3/1, Ms1 3.3/1, ms1mx2.8/22, Error ellipse: s-maj=53.6km s-min=34.4km az=92.0*

*NEIC **28** 18:05:15.9±1.8, 60.78S±0.09×56.16W±0.08, h17km±4km, mb4.2/7, Error ellipse: s-maj=12.7km s-min=5.6km az=179.0*

ISC 28 18:05:14.4±0.7, **60.78S**±0.09×**56.1W**±0.1, **h10km, n27, σ1.990/18, mb4.0/5, South Shetland Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PMSA	**Palmer Station**	**5.41**	**219**	Pn			**Pn**	**18 06 35.4**	**+0.5**
EFI	**East Falkland**	**9.19**	**352**	Pn			**Pn**	**18 07 28.0**	**+1.2**
MG02	**Cerro Sombrero**	**10.74**	**312**	Pn			**Pn**	**18 07 48.1**	**0.0**
HOPE	**Hope Point**	**12.36**	**67**	Pn			**Pn**	**18 08 10.6**	**+0.3**
BELA	**Belgrano 2**	**18.53**	**166**				**Pn**	**18 09 32.2**	**+1.5**
BELA				IAmb			IAmb	18 09 45.0	
	comp=Z,5.5nm,0.9s								
VNA3	**Neumayer Olymp**	**20.96**	**139**	pPKP			**P**	**18 10 00.1**	**+3.0**
VNA2	**Neumayer--Watz**	**21.67**	**138**	pPKP			**P**	**18 09 59.7**	**-5.0**
SNAA	**Sanae**	**23.16**	**140**	P			**P**	**18 10 21.5**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=303,slow=1.0,SNR=12								
SNAA	**Sanae**	**23.16**	**140**	IAmb			IAmb	18 10 34.0	
	comp=Z,13nm,1.6s								
QSPA	**South Pole Qui**	**29.45**	**180**	P			**P**	**18 11 18.7**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=3.1,slow=1.5,SNR=13								
QSPA				LR			LR	18 23 29.0	
	comp=Z,62nm,21.9s,baz=131,slow=37								
QSPA	**South Pole Qui**	**29.45**	**180**	P			**P**	**18 11 19.2**	**+1.1**
QSPA				IAmb			IAmb	18 11 19.9	
	comp=Z,9.5nm,1.2s								
CASY	**Casey**	**52.86**	**173**	P			**P**	**18 14 30.0**	**+0.5**
CASY				IAmb			IAmb	18 14 36.9	
	comp=Z,4.0nm,1.1s								
H10S3	**ASCENSION HYDR**	**60.13**	**49**	T			T	19 20 44.8	
	baz=202,slow=74,SNR=227								
H10S2	**ASCENSION HYDR**	**60.13**	**49**	T			T	19 20 45.3	
	baz=18,slow=74,SNR=92								
H10N3	**ASCENSION HYDR**	**61.22**	**49**	T			T	19 22 06.1	
	baz=202,slow=75,SNR=447								
H10N1	**ASCENSION HYDR**	**61.22**	**49**	T			T	19 22 07.1	
	baz=202,slow=75,SNR=342								
H10N2	**ASCENSION HYDR**	**61.23**	**49**	T			T	19 22 07.8	
	baz=202,slow=75,SNR=423								
LBTB	**Lobatse**	**64.50**	**96**	P			**P**	**18 15 51.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**86.70**	**56**	P			**P**	**18 17 58.6**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=193,slow=5.4,SNR=2.6								
TORD	**Torodi Ar. Bea**	**86.70**	**56**	IAmb			IAmb	18 18 09.4	
	comp=Z,1.0nm,0.8s								
ASAR	**Alice Springs**	**95.46**	**189**	P			**P**	**18 18 38.0**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=167,slow=4.4,SNR=10								
WRA	**Warramunga Arr**	**99.12**	**190**	P			**Pdif**	**18 18 53.6**	**-2.1**
	comp=Z,0.5nm,0.8s,baz=178,slow=3.9,SNR=6.6								
YKA	**Yellowknife Ar**	**130.74**	**329**	PKP			**PKiKP**	**18 24 24.2**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=145,slow=2.5,SNR=3.2								
ARCES	**ARCESS Array B**	**142.24**	**35**	PKhKP			PKPpre	18 24 39.6	
	comp=Z,1.8nm,1.0s,baz=191,slow=2.4,SNR=6.1								
ARCES	**ARCESS Array B**	**142.24**	**35**				PKPpre	18 24 40.4	
MKAR	**Makanchi Array**	**152.29**	**101**	PKPbc			**PKPbc**	**18 25 08.2**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=232,slow=1.9,SNR=5.0								
SONM	**Songino Array**	**163.58**	**134**	PKPab			**PKPab**	**18 26 06.0**	**-2.2**
	comp=Z,0.4nm,0.8s,baz=203,slow=3.0,SNR=2.6								

IDC 28 18:07:15.4±7.0, **27.80N**×**84.50E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/46, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=130.0km s-min=57.0km az=173.0, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MKAR	**Makanchi Array**	**19.04**	**355**	P			P	18 11 39.2	+0.1
	0.2nm,0.3s,baz=175,slow=11,SNR=11								
SONM	**Songino Array**	**26.29**	**35**	P			P	18 12 52.7	0.0
	0.2nm,0.4s,baz=233,slow=10.0,SNR=3.6								
FINES	**FINESS Array B**	**50.97**	**328**	P			P	18 16 18.7	+0.1
	0.6nm,0.7s,baz=90,slow=11,SNR=1.5								
ARCES	**ARCESS Array B**	**53.51**	**338**	P			P	18 16 36.9	-0.4
	5.3nm,1.1s,baz=101,slow=7.8,SNR=3.7								

AUST 28 18:16:49.8±1.1, **18.38S**×**124.70E, h10km, Error ellipse: s-maj=20.1km s-min=8.0km az=144.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
FITZ	**Fitzroy Crossi**	**0.94**	**73**	P			Pn	18 17 10.2	+1.2
FITZ	baz=0.9,SNR=464			S			Sg	18 17 19.7	-0.3
	baz=0.9								
KNRA	**Kununurra**	**4.73**	**56**	P			Pn	18 18 01.4	+0.3
KNRA	baz=4.7			S			Sn	18 18 50.0	-6.1
	baz=4.7								
WRKA	**Warakurna**	**7.42**	**154**	P			Pn	18 18 42.6	+4.4
WRKA	baz=7.4,SNR=28			S			Sn	18 20 03.1	+0.6
	baz=7.4								
MTN	**Manton Dam**	**8.29**	**49**	P			Pn	18 18 49.0	-1.1
MTN	baz=8.3,SNR=8.9			S			Sn	18 20 14.6	-9.3
	baz=8.3								
WB2	**Warramunga Arr**	**9.25**	**101**	P			Pn	18 19 03.2	-0.2
WB2	baz=9.2			S			Sn	18 20 38.4	-9.2
	baz=9.2								
KDU	**Kakadu**	**9.39**	**54**	P			Pn	18 19 04.5	-0.7
KDU	baz=9.4,SNR=5.5			S			Sn	18 20 39.3	-12
	baz=9.4								
FORT	**Forrest**	**12.72**	**167**	P			Pn	18 19 51.7	+1.0
FORT	baz=13			S			Sn	18 22 05.3	-7.1
	baz=13								
KMBL	**Kambalda**	**13.18**	**191**	P			Pn	18 19 57.0	-0.1
KMBL	baz=13			S			Sn	18 22 13.0	-11
	baz=13								
MORW	**Morawa**	**13.26**	**215**	P			Pn	18 19 58.2	0.0
MORW	baz=13			S			Sn	18 22 11.5	-14
	baz=13								
OOD	**Oodnadatta**	**13.78**	**135**	P			Pn	18 20 06.4	+1.2
OOD	baz=14,SNR=5.8			S			Sn	18 22 31.5	-6.9
	baz=14								
BLDU	**Ballidu**	**14.18**	**209**	P			Pn	18 20 10.0	-0.7
BLDU	baz=14			S			Sn	18 22 31.2	-17
	baz=14								
QIS	**Mount Isa**	**14.22**	**101**	P			Pn	18 20 11.0	-0.5
QIS	baz=14,SNR=3.6			S			Sn	18 22 38.4	-11
	baz=14								
KLBR	**Kellerberrin**	**14.58**	**204**	P			Pn	18 20 15.4	-0.7
KLBR	baz=15			S			Sn	18 22 44.1	-14
	baz=15								
STKA	**Stephens Creek**	**20.32**	**135**	P			P	18 21 26.1	-0.1
	baz=20,SNR=4.7								
CTA	**Charters Tower**	**20.42**	**98**	P			P	18 21 24.8	-2.5
	baz=20								

JMA 28 18:22:51.0±0.2, **24.90N**×**123.37E, h30km, M1.1, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JYNG	**Yonagunijimaku**	**0.59**	**221**	P			Pb	18 23 02.6	-0.3
JYNG				*e*S			Sb	18 23 09.8	-1.2
IRIF	**Iriomote-Funau**	**0.65**	**150**	P			Pb	18 23 03.5	-0.4
IRIF				S			Sb	18 23 12.6	-0.1
JKRS	**Kuro-shima**	**0.88**	**138**	P			Pn	18 23 07.2	-0.1
JKRS				*e*S			Sn	18 23 18.7	-0.4
JIJ	**Ishigaki jima**	**0.88**	**127**	P			Pn	18 23 06.9	-0.5
JIJ				S			Sn	18 23 17.8	-1.4
JISG	**Ishigakijimahi**	**0.91**	**110**	P			Pn	18 23 07.7	0.0
JISG				S			Sn	18 23 19.1	-0.7
HATJ	**Hateruma jima**	**0.93**	**155**	P			Pn	18 23 08.2	+0.2
HATJ				*e*S			Sn	18 23 19.7	-0.6

TAP 28 18:23:34.0, 23.99N×**121.56E, h31km, ML1.1, A, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
HWA	**Hwalien**	**0.04**	**114**	*e*P			Pb	18 23 39.8	+0.7
HWA	baz=112			*e*S			Sb	18 23 43.5	+0.9
	baz=112								
TWD	**Chiawan**	**0.09**	**19**	P			Pb	18 23 39.3	0.0
TWD	baz=23			*i* S			Sb	18 23 43.7	+0.8
	baz=23								
NACB	**Ninganchiao**	**0.18**	**9**	P			Pn	18 23 40.5	-0.2
NACB	baz=9.0			S			Sn	18 23 44.9	+0.1
	baz=9.0								
ESL	**Shilin**	**0.22**	**214**	*e*P			Pn	18 23 40.9	-0.3
ESL	baz=211			*e*S			Sn	18 23 45.8	+0.2
	baz=211								
ETLH	**Xiulin Townshi**	**0.23**	**340**	P			Pn	18 23 41.2	-0.1
ETLH	baz=340			S			Sn	18 23 45.9	-0.1
	baz=340								
WHF	**Hehuan Shan**	**0.31**	**299**	P			Pb	18 23 42.4	+0.4
WHF	baz=299			S			Sb	18 23 47.8	+0.3
	baz=299								
EGFH	**Guangfu**	**0.35**	**201**	*e*P			Pn	18 23 43.1	+0.2
EGFH	baz=201			*e*S			Sn	18 23 49.3	+0.4
	baz=201								
OWD	**Renai**	**0.36**	**264**	*e*P			Pb	18 23 42.7	+0.3
OWD	baz=263			*e*S			Sn	18 23 49.1	-0.2
	baz=263								
CHGB	**Renai**	**0.36**	**281**	P			Pb	18 23 42.8	+0.2
CHGB	baz=280			S			Sn	18 23 49.3	-0.3
	baz=280								
FUSS	**Fushou**	**0.39**	**311**	P			Pb	18 23 43.0	+0.1
FUSS	baz=310			S			Sn	18 23 50.1	-0.1
	baz=310								
TDCB	**Techi**	**0.45**	**305**	*e*P			Pn	18 23 44.8	+0.3
TDCB	baz=304			*e*S			Sn	18 23 51.6	-0.1
	baz=304								
VWDT	**VWDT**	**0.46**	**238**	P			Pn	18 23 44.1	-0.3
VWDT	baz=238			*e*S			Sn	18 23 51.2	-0.3
	baz=238								
NNSB	**Datong**	**0.46**	**339**	*e*P			Pn	18 23 44.7	0.0
NNSB	baz=339			*e*S			Sn	18 23 52.2	+0.3
	baz=339								
NNSH	**Datong**	**0.46**	**339**	*e*P			Pn	18 23 44.5	-0.1
NNSH	baz=339			*e*S			Sn	18 23 52.0	+0.1
	baz=339								
NNS	**Nan Shan**	**0.48**	**339**	P			Pn	18 23 44.8	-0.1
NNS	baz=339			S			Sn	18 23 52.4	+0.2
	baz=339								
EWUT	**Wuta**	**0.49**	**23**	*e*S			Sn	18 23 52.4	0.0
	baz=23								
HGSD	**Ruisui**	**0.52**	**194**	*e*P			Pn	18 23 45.4	+0.1
HGSD	baz=194			S			Sn	18 23 53.0	0.0
	baz=194								
WPL	**Puli Township**	**0.56**	**272**	*e*P			Pn	18 23 46.7	+0.9
WPL	baz=271			*e*S			Sn	18 23 55.1	+1.1
	baz=271								
DPDB	**Guoxing**	**0.58**	**274**	*e*P			Pn	18 23 47.2	+1.0
	baz=279								
SSLB	**Sunglung**	**0.59**	**250**	*e*P			Pn	18 23 46.5	+0.1
	baz=249								
WHP	**Taichung City**	**0.63**	**297**	*e*P			Pb	18 23 46.4	-0.2
WHP	baz=296			*e*S			Sn	18 23 56.0	0.0
	baz=296								
ENTT	**Nioudou**	**0.64**	**0**	*e*P			Pb	18 23 46.9	+0.1
ENTT				*e*S			Sn	18 23 55.9	-0.3
YULB	**Yu-li**	**0.65**	**202**	*e*P			Pn	18 23 47.2	+0.1
	baz=202								
NDS	**Dongshan**	**0.65**	**12**	*e*P			Pn	18 23 47.4	+0.2
	baz=12								
NDS				*e*S			Sn	18 23 57.1	+0.7
	baz=12								
TWC	**Suao**	**0.67**	**23**	*e*P			Pn	18 23 47.7	+0.4
	baz=23								
TWC				*e*S			Sn	18 23 56.6	-0.1
	baz=23								
YHNB	**Yeheng**	**0.69**	**346**	*e*P			Pb	18 23 47.3	-0.4
	baz=345								
YHNB				*e*S			Sn	18 23 57.7	+0.1
	baz=345								

*CRAAG **28** 18:27:36.9, 36.82N×3.19E, Ml3.7*

*LDG **28** 18:27:39.3±0.2, 37.00N×3.15E, h10km, Ml3.2/10, Error ellipse: s-maj=5.2km s-min=2.7km az=154.0*

*MDD **28** 18:27:39.4±0.4, 36.92N×3.29E, h13km±7km, mb3.9/21, Error ellipse: s-maj=2.4km s-min=2.0km az=144.0, PRIMO*

MDD EMS: SENTIDO EN ARGELIA.

ISC 28 18:27:34.7±0.8, **37.04N**±0.04×**3.19E**±0.03, **h12km, n113, σ2.554/138, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ABA	**Alger-Bouzarea**	**0.27**	**208**	P			**Pg**	**18 27 40.3**	**-0.1**
ABA	**Alger-Bouzarea**	**0.27**	**208**	P			**Pg**	**18 27 40.3**	**-0.1**
ABMS	**Boumerdes**	**0.37**	**142**	P			**Pb**	**18 27 42.6**	**-0.7**
ABMS	**Boumerdes**	**0.37**	**142**	P			**Pb**	**18 27 42.6**	**-0.7**
ADJB	**Djebel Djouab**	**0.91**	**167**	P			**Pg**	**18 27 51.1**	**-1.2**
ADJB	**Djebel Djouab**	**0.91**	**167**	P			**Pg**	**18 27 51.1**	**-1.2**
AKET	**Djebel Ketaf**	**1.14**	**151**	P			**Pb**	**18 27 55.7**	**-0.8**
AKET	**Djebel Ketaf**	**1.14**	**151**	P			**Pb**	**18 27 55.7**	**-0.8**
ATAF	**Djebel Tarf**	**1.46**	**143**	P			**Pn**	**18 28 00.0**	**-1.0**
ATAF	**Djebel Tarf**	**1.46**	**143**	P			**Pn**	**18 28 00.0**	**-1.0**
EBNR	**Beni Rached**	**1.54**	**241**	P			**Pg**	**18 28 04.5**	**+0.3**
ECHA	**Ech Chlef**	**1.72**	**239**	P			**Pb**	**18 28 07.0**	**+0.7**
ECHF	**Ech Chlef**	**1.73**	**240**	P			**Pb**	**18 28 07.0**	**+0.5**
SET	**Setif**	**1.96**	**115**	P			**Pg**	**18 28 15.0**	**+2.6**
SET	**Setif**	**1.96**	**115**	P			**Pg**	**18 28 15.0**	**+2.6**
EANR	**'Ain N'Sour**	**2.01**	**238**	P			**Pg**	**18 28 12.6**	**-0.7**
EANR	**'Ain N'Sour**	**2.01**	**238**	P			**Pg**	**18 28 12.6**	**-0.7**
DFRA	**Djebel Bou Aff**	**2.21**	**102**	P			**Pn**	**18 28 12.3**	**+0.9**
DFRA	**Djebel Bou Aff**	**2.21**	**102**	P			**Pn**	**18 28 12.3**	**+0.9**
ETRT	**Tiaret**	**2.25**	**223**	P			**Pb**	**18 28 15.3**	**-0.1**
ETRT	**Tiaret**	**2.25**	**223**	P			**Pb**	**18 28 15.3**	**-0.1**
OKGL	**Djebel Kef Gue**	**2.29**	**245**	P			**Pg**	**18 28 19.2**	**+0.7**
	15nm,0.2s,SNR=7.9								
OKGL				S			**Sg**	**18 28 49.6**	**+1.3**
	81nm,0.3s,SNR=7.9								
EIBI	**Ibiza**	**2.46**	**324**	P			**Pb**	**18 28 17.5**	**-1.4**
	3.7nm,0.1s,SNR=11								
EIBI				S			**Sn**	**18 28 45.6**	**+1.0**
	26nm,0.4s,SNR=6.6								
ETOS	**Mallorca**	**2.74**	**354**	P			**Pn**	**18 28 21.4**	**+2.9**
	5.2nm,0.1s,SNR=29								
ETOS				S			**Sn**	**18 28 51.9**	**+0.4**
	8.9nm,0.2s,SNR=6.1								
EBEN2	**Beniarda presa**	**3.13**	**302**	P			**Pn**	**18 28 26.0**	**+2.0**
	1.2nm,0.1s,SNR=4.0								
EBEN2				S			**Sn**	**18 28 59.5**	**-1.9**
	5.2nm,0.1s,SNR=7.9								
CMAH	**Djebel Manchou**	**3.42**	**96**	P			**Pn**	**18 28 28.3**	**+0.4**
CMAH	**Djebel Manchou**	**3.42**	**96**	P			**Pn**	**18 28 28.3**	**+0.4**
EMUR	**La Murta**	**3.62**	**284**	S			**Sn**	**18 29 13.9**	**+0.6**
	3.1nm,0.3s,SNR=7.9								
ETOB	**Tobarra**	**4.08**	**294**	P			**Pn**	**18 28 40.1**	**+3.1**
	3.2nm,0.2s,SNR=18								
ETOB				S			**Sn**	**18 29 25.9**	**+1.2**
	1.7nm,0.2s,SNR=7.9								
ECHE	**Chera**	**4.14**	**309**	P			**Pn**	**18 28 41.4**	**+3.6**
	1.2nm,0.1s,SNR=7.9								
ECHE				S			**Sn**	**18 29 26.5**	**+0.2**
	1.1nm,0.3s,SNR=7.9								
EMOS	**Mosqueruela**	**4.38**	**320**	P			**Pn**	**18 28 44.2**	**+2.9**
	1.0nm,0.1s,SNR=16								
EMOS				S			**Sn**	**18 29 31.0**	**-1.3**
	2.9nm,0.4s,SNR=7.9								
ERTA	**Horta de San J**	**4.50**	**331**	P			Pb	18 28 49.1	-4.6
	0.3nm,0.1s,SNR=7.9								
ERTA				S			**Sn**	**18 29 33.7**	**-1.2**
	6.1nm,0.3s,SNR=7.9								
EPOB	**Poblet**	**4.61**	**340**	P			**Pn**	**18 28 46.9**	**+2.7**
	0.5nm,0.1s,SNR=7.9								
EPOB				S			**Sn**	**18 29 36.6**	**-1.0**
	1.1nm,0.2s,SNR=7.9								
SESP	**Santiago Espad**	**4.68**	**285**	P			**Pn**	**18 28 46.7**	**+1.3**
	0.7nm,0.1s,SNR=7.9								
SESP				S			**Sn**	**18 29 38.9**	**-0.8**
	7.8nm,0.4s,SNR=7.9								
CFON	**Fontmartina**	**4.75**	**353**	P			**Pn**	**18 28 49.1**	**+2.9**
	3.3nm,0.1s,SNR=11								
CFON				S			**Sn**	**18 29 39.2**	**-2.0**
	7.2nm,0.2s,SNR=8.8								
EBER	**Berja**	**4.87**	**270**	P			**Pn**	**18 28 48.6**	**+0.6**
	0.3nm,0.1s,SNR=4.0								
EMIR	**Miracle**	**5.03**	**346**	P			Pn	18 28 55.1	+5.0
	10nm,0.2s,SNR=7.9								
EQES	**Quesada**	**5.04**	**281**	P			**Pn**	**18 28 52.8**	**+2.5**
	0.7nm,0.2s,SNR=7.9								
EQES				S			**Sn**	**18 29 48.3**	**-0.2**
	3.3nm,0.3s,SNR=7.9								
EJON	**La Jonquera**	**5.40**	**358**	P			**Pn**	**18 28 58.9**	**+3.8**
	2.4nm,0.2s,SNR=10								
EJON				S			**Sn**	**18 29 56.1**	**-1.2**
	1.8nm,0.2s,SNR=7.9								
SJAF	**Saint Jean de**	**5.44**	**358**	P			**Pn**	**18 28 59.3**	**+3.6**
	0.6nm,0.1s,SNR=7.9								
SJAF				S			**Sn**	**18 29 57.8**	**-0.4**
	1.5nm,0.3s,SNR=7.9								
CLLI	**Llivia**	**5.51**	**351**	P			**Pn**	**18 29 00.8**	**+4.1**
	0.8nm,0.1s,SNR=7.9								
CLLI				S			**Sn**	**18 30 00.3**	**+0.3**
	1.0nm,0.3s,SNR=7.9								
CSOR	**Sort**	**5.56**	**344**	P			**Pn**	**18 29 01.4**	**+4.1**
	0.5nm,0.1s,SNR=6.7								
CSOR				S			**Sn**	**18 30 00.8**	**-0.4**
	4.1nm,0.4s,SNR=5.7								
ETOR	**Torete**	**5.56**	**314**	P			Pn	18 29 04.6	+7.2
	2.2nm,0.2s,SNR=4.0								
ESDC	**Sonseca Array**	**6.21**	**297**	P			**Pn**	**18 29 09.1**	**+2.9**
	0.1nm,0.1s,baz=109,slow=14,SNR=4.4								
ESDC				S			**Sn**	**18 30 16.5**	**-0.6**
	0.3nm,0.2s,baz=115,slow=23,SNR=7.9								
MTLF	**Montolieu**	**6.33**	**354**	Pn			**Pn**	**18 29 11.0**	**+3.1**
MTLF	**Montolieu**	**6.33**	**354**	*e*Pn			**Pn**	**18 29 11.0**	**+3.1**
MTLF	**Montolieu**	**6.33**	**354**	*e*P			Pn	18 29 16.3	+8.4
EPF	**Esparros**	**6.37**	**341**	Pn			**Pn**	**18 29 11.5**	**+3.1**
EPF							Sn	**18 30 20.6**	**-0.5**
	1.3nm,0.4s								
EPF	**Esparros**	**6.37**	**341**	*e*Pn			**Pn**	**18 29 11.5**	**+3.1**
EPF	**Esparros**	**6.37**	**341**	*e*P			Pb	18 29 18.0	-7.5
EPF							*e*Sn	**18 30 20.6**	**-0.5**
	2.6nm,0.4s								
PAB	**San Pablo**	**6.44**	**295**	P			**Pn**	**18 29 11.2**	**+1.8**
	0.2nm,0.1s,SNR=7.9								
ETSF	**Etsaut**	**6.52**	**335**	P			Pn	18 29 18.0	+7.5
ETSF							Sn	**18 30 22.7**	**-2.1**
	0.0nm,0.3s								
ETSF	**Etsaut**	**6.52**	**335**	*e*P			Pn	18 29 18.0	+7.5
ETSF							*e*Sn	**18 30 22.7**	**-2.1**
	1.0nm,0.3s								
ATE	**Arette**	**6.73**	**335**	P			**Pn**	**18 29 11.5**	**-1.9**
	0.7nm,0.2s,SNR=7.9								
ATE				S			**Sn**	**18 30 29.6**	**-0.4**
	1.0nm,0.1s,SNR=7.9								
LMR	**La Mourre**	**6.78**	**21**	Pn			**Pn**	**18 29 16.4**	**+2.5**
LMR							Sn	**18 30 30.0**	**-1.0**
	1.4nm,0.2s								
LMR	**La Mourre**	**6.78**	**21**	*e*Pn			**Pn**	**18 29 16.4**	**+2.5**
LMR							*e*Sn	**18 30 30.0**	**-1.0**
	2.8nm,0.2s								
SJPF	**Ste Jean**	**6.94**	**332**	Pn			**Pn**	**18 29 19.2**	**+2.9**
SJPF							Sn	**18 30 33.8**	**-1.4**
	0.0nm,0.2s								
SJPF	**Ste Jean**	**6.94**	**332**	*e*Pn			**Pn**	**18 29 19.2**	**+2.9**
SJPF	**Ste Jean**	**6.94**	**332**	*e*P			Pn	18 29 23.7	+7.4
SJPF							*e*Sn	**18 30 33.8**	**-1.4**
	1.0nm,0.2s								
FRF	**La Foret Royal**	**7.02**	**21**	Pn			**Pn**	**18 29 19.9**	**+2.5**
FRF							Sn	**18 30 36.1**	**-1.0**
	2.4nm,0.3s								
FRF	**La Foret Royal**	**7.02**	**21**	*e*Pn			**Pn**	**18 29 19.9**	**+2.5**
FRF							*e*Sn	**18 30 36.1**	**-1.0**
	4.8nm,0.3s								
LASF	**Ste Croix**	**7.04**	**4**	Pn			**Pn**	**18 29 20.9**	**+3.2**
LASF							Sn	**18 30 31.2**	**-6.4**
	1.1nm,0.4s								
LASF	**Ste Croix**	**7.04**	**4**	*e*Pn			**Pn**	**18 29 20.9**	**+3.2**
LASF							*e*Sn	**18 30 31.2**	**-6.4**
	2.1nm,0.4s								
PGF	**Pioggiola**	**7.08**	**37**	Pn			**Pn**	**18 29 21.1**	**+2.8**
PGF							Sn	**18 30 36.3**	**-2.5**
	1.4nm,0.3s								
PGF	**Pioggiola**	**7.08**	**37**	*e*Pn			**Pn**	**18 29 21.1**	**+2.8**
PGF	**Pioggiola**	**7.08**	**37**	*e*P			Pn	18 29 26.8	+8.5
PGF							*e*Sn	**18 30 36.3**	**-2.5**
	2.7nm,0.3s								
SMRF	**Simiane la Rot**	**7.16**	**14**	Pn			**Pn**	**18 29 22.7**	**+3.5**
SMRF							Sn	**18 30 40.1**	**-0.4**
	4.7nm,0.3s								
SMRF	**Simiane la Rot**	**7.16**	**14**	*e*Pn			**Pn**	**18 29 22.7**	**+3.5**
SMRF							*e*Sn	**18 30 40.1**	**-0.4**
	4.7nm,0.3s								
SBF	**Sospel**	**7.54**	**24**	Pn			**Pn**	**18 29 26.8**	**+2.3**
SBF							Sn	**18 30 48.5**	**-1.4**
	1.4nm,0.2s								
SBF	**Sospel**	**7.54**	**24**	*e*Pn			**Pn**	**18 29 26.8**	**+2.3**
SBF							*e*Sn	**18 30 48.5**	**-1.4**
	2.8nm,0.2s								
VIVF	**

KRSC 28 18:33:53.7±1.9, 48°56N×154°27E, h190km±23km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.44**	**29**	*eP*	**Pn**	18 34 38.5	**+2.3**
SKR				*eS*	Sn	18 35 11.2	+1.7
ALID	**Alaid**	**2.46**	**19**	*eP*	**Pn**	18 34 36.4	-0.2
PAU	**Pauzhetka**	**3.34**	**28**	*eP*	**Pn**	18 34 48.4	+1.6
PAU				*eS*	Sn	18 35 29.1	+0.6
MIPR	**Malaya Ipel'ka**	**4.05**	**22**	*eP*	**Pn**	18 34 57.1	+1.5
MTVR	**Mutnovka**	**4.66**	**31**	*eP*	**Pn**	18 35 05.9	+2.5
MTVR				*eS*	Sn	18 35 59.3	+0.9
GRL	**Gorelyy**	**4.68**	**30**	*eP*	**Pn**	18 35 06.5	+2.8
GRL				*eS*	Sn	18 36 00.4	+1.6
RUS	**Russkaya**	**4.73**	**33**	*eP*	**Pn**	18 35 05.5	+1.3
RUS				*eS*	Sn	18 35 58.7	-1.1
KRMR	**Karymshinskiy**	**4.93**	**28**	*eP*	**Pn**	18 35 08.9	+2.1
DALK	**Dalny**	**5.30**	**31**	*eP*	**Pn**	18 35 13.4	+1.8
DALK				*eS*	Sn	18 36 12.8	-0.3
UGLR	**Uglovaya**	**5.48**	**30**	*eP*	**Pn**	18 35 16.9	+2.9
KOK	**Koryaka**	**5.49**	**29**	*eP*	**Pn**	18 35 17.4	+3.3
AVH	**Avacha**	**5.50**	**29**	*eP*	**Pn**	18 35 17.6	+3.4
SMAR	**Somma**	**5.51**	**30**	*eP*	**Pn**	18 35 18.1	+3.5
KRER	**Koryakskii**	**5.53**	**29**	*eP*	**Pn**	18 35 17.6	+2.8
KRX	**Arik**	**5.55**	**28**	*eP*	**Pn**	18 35 18.2	+3.3
SDLR	**Sedlovina**	**5.55**	**30**	*eP*	**Pn**	18 35 17.0	+2.0
NLC	**Nalytchevo**	**5.63**	**33**	*eS*	Sn	18 36 17.9	-2.7
SPN	**Mys Shipunski**	**5.83**	**37**	*eP*	**Pn**	18 35 19.7	+1.3
SPN				*eS*	Sn	18 36 22.0	-3.3
MKZ	**Mys Kozlova**	**7.59**	**35**	*eP*	**Pn**	18 35 42.4	+1.0
KBTR	**Krutoberegovo**	**9.27**	**31**	*eP*	**Pn**	18 36 04.3	+1.0

*UCR **28** 18:56:51.3±2.6, 15°.62N×95°.64W, h6km±34km, ML4.7, mb5.5(NEIC)*

*MOS **28** 18:56:52.4±0.9, 17°.18N×94°.91W, h111km, mb5.4/17, Error ellipse: s-maj=7.2km s-min=4.3km az=104.6*

*BJI **28** 18:56:53.0±0.0, 17°.10N×95°.00W, h100km, mB5.2/8*

*NEIC **28** 18:56:53.3±2.5, 17°.11N±0°.06×95°.04W±0°.06, h111km±1km, mb5.6/640, Mwb5.5/10, Mwr5.5/11, Mww5.5, Md5.6/33(MEX), Mwc5.5(GCMT), Error ellipse: s-maj=10.0km s-min=8.4km az=39.0*

*NEIC **28** 18:56:53.9, 17°.14N×94°.97W, h106km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=1.30; $M_{\theta\theta}$=0.05; $M_{\phi\phi}$ 1.35; $M_{r\theta}$ 1.04; $M_{r\phi}$ -0.83; $M_{\theta\phi}$-0.37; Fault plane solution: $M_0$1.91000×10^{17} NP1:ϕ_s309.43000°, δ64.36000°, λ-118.92000°. NP2:ϕ_s181.35000°, δ37.89000°, λ-44.79000°. Principal axes: T 1.9334, Plg15.0000°, Azm60.0000°; N -0.0419, Plg26.0000°, Azm323.0000°; P -1.8915, Plg60.0000°, Azm177.0000°;*

*IDC **28** 18:56:53.5±0.2, 17°.12N×94°.90W, h110km±1km, mb4.9/40, mb1 5.0/44, mb1mx4.9/47, mbtmp5.2/44, MS4.1/27, Ms1 4.1/27, ms1mx4.1/37 Error ellipse: s-maj=9.5km s-min=5.1km az=54.0*

*NEIC **28** 18:56:54.4, 17°.13N×95°.01W, h113km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=1.23; $M_{\theta\theta}$=0.81; $M_{\phi\phi}$2.04; $M_{r\theta}$0.68; $M_{\theta\phi}$-0.87; $M_{r\phi}$0.20; Fault plane solution: $M_0$2.10000×10^{17} NP1:ϕ_s310.80000°, δ57.81000°, λ-141.46000°. NP2:ϕ_s197.81000°, δ58.18000°, λ-38.82000°. Principal axes: T 2.2867, Plg0.0000°, Azm254.0000°; N -0.4318, Plg41.0000°, Azm345.0000°; P -1.8549, Plg49.0000°, Azm164.0000°;*

*NEIC **28** 18:56:54, 17°.25N×94°.97W, h90km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=1.02; $M_{\theta\theta}$=0.92; $M_{\phi\phi}$ 1.94; $M_{r\theta}$0.45; $M_{\theta\phi}$-1.34; $M_{r\phi}$0.37; Fault plane solution: $M_0$2.23000×10^{17} NP1:ϕ_s298.00000°, δ64.00000°, λ-156.00000°. NP2:ϕ_s197.00000°, δ69.00000°, λ-27.00000°. Principal axes: T 2.4774, Plg3.0000°, Azm249.0000°; N -0.6475, Plg55.0000°, Azm343.0000°; P -1.8299, Plg34.0000°, Azm157.0000°;*

*MEX **28** 18:56:54.0±1.5, 17°.02N×95°.19W, h113km±10km, MD5.6*

*NEIC **28** 18:56:54, 17°.22N×95°.01W, h112km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=1.35; $M_{\theta\theta}$=0.74; $M_{\phi\phi}$2.09; $M_{r\theta}$1.18; $M_{\theta\phi}$-1.38; $M_{r\phi}$0.14; Fault plane solution: $M_0$2.59000×10^{17} NP1:ϕ_s193.00000°, δ55.00000°, λ-33.00000°. NP2:ϕ_s303.00000°, δ64.00000°, λ-141.00000°. Principal axes: T 2.6800, Plg5.0000°, Azm66.0000°; N -0.1994, Plg44.0000°, Azm332.0000°; P -2.4806, Plg46.0000°, Azm162.0000°;*

*GCMT **28** 18:56:55.3±0.2, 17°.22N±0°.01×95°.07W±0°.01, h117km±1km, MW5.5/149, Moment Tensor Solution. s135,c205; s149,c277; Duration: 1ꝛ4 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.32±.03; $M_{\theta\theta}$-0.72±.04; $M_{\phi\phi}$2.04±.03; $M_{r\theta}$1.15±.02; $M_{\theta\phi}$-1.34±.04; $M_{r\phi}$-0.01±.03; Best double couple: $M_0$2.50600×10^{17} NP1:ϕ_s193.00000°, δ54.00000°, λ-32.00000°. NP2:ϕ_s304.00000°, δ65.00000°, λ-139.00000°. Principal axes: T 2.6360, Plg7.0000°, Azm66.0000°; N -0.2640, Plg43.0000°, Azm330.0000°; P -2.3760, Plg46.0000°, Azm163.0000°; sta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*SNET **28** 18:56:56.8±1.1, 17°.52N×94°.45W, h34km±685km, ML5.4*

*BGR **28** 18:57:14.6±0.0, 18°.38N×89°.81W, h102km±5km, mb5.3*

*INET **28** 18:57:15.0, 15°.97N×93°.75W, h158km, MW5.4*

*GCG **28** 18:57:33.2±0.3, 15°.72N×92°.40W, h85km±239km, MD5.2*

ISC 28 18:56:53.1±0.2, 17°.06N±0°.03×95°.04W±0°.03, h113km±1km, h113km:pP-P,n1306,σ1ꝛ66/1336,mb5.6/419,271C-171D, Fault plane solution: NP1:ϕ_s147.61046°, δ25.79955°, λ-71.16491°. **NP2:**ϕ_s306.85992°, δ65.67459°, λ-98.87039°. **Principal axes:** T Plg20.2034°, Azm43.5319°; N Plg8.0774°, Azm310.5382°; P Plg68.1089°, Azm199.8556°; **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero** baz=275,slow=4.1	**0.15**	**78**	P	**Pn**	**18 57 08.9**	**+0.2**
CMIG				S	**Sn**	**18 57 20.5**	**0.0**
	68μm,0.3s,baz=77,slow=22,SNR=48						
CMIG	**Matias Romero**	**0.15**	**78**	*i* S	**Sn**	**18 57 20.5**	**0.0**
TUIG	**Tuzandepetl**	**1.13**	**31**	*eP*	**Pn**	**18 57 17.1**	**+1.2**
TUIG				*i* S	**Sn**	**18 57 35.1**	**+1.9**
TUIG	**Tuzandepetl**	**1.13**	**31**		**Pn**	**18 57 17.1**	**+1.2**
TUIG					**Sn**	**18 57 35.1**	**+1.9**
HUIG	**Huatulco**	**1.65**	**219**	*eP*	**Pn**	**18 57 19.1**	**-2.7**
HUIG	**Huatulco**	**1.65**	**219**		**Pn**	**18 57 19.1**	**-2.7**
TGIG		**1.85**	**98**	*eP*	**Pn**	**18 57 25.7**	**+1.3**
TGIG		**1.85**	**98**		**Pn**	**18 57 25.7**	**+1.3**
TOIG	**Toxpalan**	**2.19**	**298**	*i* P	**Pn**	**18 57 28.6**	**-0.1**
TOIG				*eS*	**Sn**	**18 57 54.5**	**-1.6**
PCIG		**2.20**	**127**	*i* P	**Pn**	**18 57 30.1**	**+1.3**
PCIG				*eS*	**Sn**	**18 57 57.7**	**+1.5**
PCIG		**2.20**	**127**		**Pn**	**18 57 30.1**	**+1.3**
PCIG					**Sn**	**18 57 59.0**	**+2.9**
PEIG	**Puerto Escondi**	**2.28**	**243**	*eP*	**Pn**	**18 57 26.5**	**-3.4**
PEIG				*i* S	**Sn**	**18 57 53.6**	**-4.4**
YOIG	**Yosondua**	**2.41**	**266**	*i* P	**Pn**	**18 57 30.4**	**-1.3**
YOIG				*i* S	**Sn**	**18 57 56.7**	**-4.6**
TPIG	**Tehuac#an**	**2.60**	**302**	*i* P	**Pn**	**18 57 34.3**	**+0.3**
TPIG				*eS*	**Sn**	**18 58 03.2**	**-2.2**
TXIG	**Tlaxiaco**	**2.62**	**275**	*eP*	**Pn**	**18 57 33.6**	**-0.8**
TXIG				*i* S	**Sn**	**18 58 04.0**	**-2.2**
HLIG	**Huajuapan de L**	**2.75**	**287**	*eP*	**Pn**	**18 57 35.8**	**-0.3**
HLIG				*eS*	**Sn**	**18 58 04.8**	**-4.3**
CCIG	**Comitan**	**2.88**	**105**	*eP*	**Pn**	**18 57 39.7**	**+1.8**
CCIG				*eS*	**Sn**	**18 58 07.3**	**-4.9**
CCIG	**Comitan**	**2.88**	**105**		**Sn**	**18 58 07.3**	**-4.9**
CCIG	**Comitan**	**2.88**	**105**			**18 57 39.3**	**+1.4**
PNIG	**Pinotepa**	**3.04**	**258**	*eP*	**Pn**	**18 57 36.6**	**-3.0**
PNIG				*i* S	Sn	18 58 06.0	-10
PNIG	**Pinotepa**	**3.04**	**258**		**Pn**	**18 57 36.6**	**-3.0**
PNIG					Sn	18 58 06.0	-10
TLIG	**Tlapa**	**3.41**	**279**	*eP*	**Pn**	**18 57 44.3**	**-0.4**
TLIG				*i* S	**Sn**	**18 58 20.6**	**-4.0**
TLIG	**Tlapa**	**3.41**	**279**		**Pn**	**18 57 44.0**	**-0.8**
TLIG				Sn	Sn	18 58 15.5	-9.2
THIG		**3.42**	**128**	*eP*	**Pn**	**18 57 46.6**	**+1.9**
THIG				*i* S	**Sn**	**18 58 29.0**	**+4.4**
THIG		**3.42**	**128**		**Pn**	**18 57 46.6**	**+1.9**
THIG					**Sn**	**18 58 29.0**	**+4.4**
HUEH	**Huehuetenango**	**3.81**	**117**		**Pn**	**18 57 51.0**	**+0.8**
CRIG	**Cruz Grande**	**3.93**	**266**	*eP*	**Pn**	**18 57 49.1**	**-2.5**
CRIG				*i* S	**Sn**	**18 58 32.4**	**-4.6**
PPM	**Popocatepetl**	**3.96**	**301**	*eP*	**Pn**	**18 57 56.0**	**+3.6**
PPM				*eS*	**Sn**	**18 58 30.0**	**-8.2**
RTAL	**Retalhuleu**	**4.09**	**128**	*eP*	**Pn**	**18 57 55.6**	**+1.9**
RTAL				*eS*	**Sn**	**18 58 41.6**	**+1.0**
RTAL	**Retalhuleu**	**4.09**	**128**		**Pn**	**18 57 55.3**	**+1.6**
ERG	**Entre ros, C**	**4.24**	**127**	*eP*	**Pn**	**18 57 59.0**	**+3.3**
YAIG	**Yautepec**	**4.24**	**296**	*eP*	**Pn**	**18 57 56.8**	**+1.0**
YAIG				*eS*	**Sn**	**18 58 38.8**	**-5.6**
MEIG	**Mezcala**	**4.46**	**282**	*i* S	**Sn**	**18 58 48.2**	**-1.5**
PLIG	**Platanillo**	**4.46**	**288**	*eP*	**Pn**	**18 57 59.2**	**+0.5**
PLIG				*i* S	**Sn**	**18 58 45.2**	**-4.5**
UNM	**Universidad Na**	**4.54**	**300**	P	**Pn**	**18 58 00.9**	**+0.9**
UNM	**Universidad Na**	**4.54**	**300**	*i* S	**Sn**	**18 58 47.8**	**-4.1**
UNM	**Universidad Na**	**4.54**	**300**	Pn	**Pn**	**18 58 01.9**	**+0.9**
FUG	**Fuego 3**	**4.80**	**122**	*eP*	**Pn**	**18 58 05.7**	**+2.2**
APG	**El Apazote** 226nm,0.3s,baz=313,slow=12,SNR=482	**4.85**	**114**	P	**Pn**	**18 58 04.0**	**-0.1**
APG				S	**Sn**	**18 58 57.9**	**-1.5**
	2μm,0.3s,baz=190,slow=23,SNR=15						
PETF	**Flores**	**4.95**	**91**		**Pn**	**18 58 05.8**	**+0.5**
CAIG	**El Cayaco**	**5.00**	**271**	*eP*	**Pn**	**18 58 03.8**	**-2.2**
CAIG				*eS*	**Sn**	**18 58 56.2**	**-6.5**
PCG	**Pacaya**	**5.02**	**121**	*eP*	**Pn**	**18 58 08.8**	**+2.3**
NBG	**Las Nubes**	**5.14**	**118**	*eP*	**Pn**	**18 58 10.3**	**+2.2**
ARIG	**Puente Sto Nin**	**5.21**	**284**	*eP*	**Pn**	**18 58 09.3**	**+0.5**
ARIG				*i* S	**Sn**	**18 59 07.2**	**-0.5**
ESQI	**Esquipulas**	**6.02**	**114**		**Pn**	**18 58 19.8**	**-0.1**
MTO3	**Montecristo**	**6.07**	**115**	*eP*	**Pn**	**18 58 20.2**	**-0.5**
MTO3	**Montecristo**	**6.07**	**115**	*eP*	**Pn**	**18 58 20.2**	**-0.5**
MTO3				*eS*	**Sn**	**18 59 28.5**	**-0.5**
MTO3	**Montecristo**	**6.07**	**115**		**Pn**	**18 58 20.1**	**-0.5**
SNJE	**San Jose**	**6.12**	**120**	*eP*	**Pn**	**18 58 23.3**	**+2.0**
SNJE	**San Jose**	**6.12**	**120**	*eP*	**Pn**	**18 58 23.3**	**+2.0**
SBLS	**San Blas**	**6.12**	**121**	*eP*	**Pn**	**18 58 24.0**	**+2.6**
SBLS	**San Blas**	**6.12**	**121**	*eP*	**Pn**	**18 58 24.0**	**+2.6**
CEVE	**Cerro Verde**	**6.13**	**121**	*eP*	**Pn**	**18 58 23.9**	**+2.5**
CEVE				*eS*	**Sn**	**18 59 31.9**	**+1.5**
CEVE	**Cerro Verde**	**6.13**	**121**	*eP*	**Pn**	**18 58 23.9**	**+2.5**
CEVE				*eS*	**Sn**	**18 59 31.9**	**+1.5**
ZIIG	**Zihuatanejo**	**6.16**	**276**	*i* P	**Pn**	**18 58 21.0**	**-0.6**
ZIIG				*eS*	**Sn**	**18 59 28.8**	**-2.1**
JRQG	**Juriquilla Cam**	**6.28**	**306**	*i* P	**Pn**	**18 58 25.9**	**+2.5**
JRQG				*i* S	**Sn**	**18 59 28.0**	**-5.8**
MOIG	**Morelia**	**6.40**	**295**	*i* P	**Pn**	**18 58 27.1**	**+2.0**
MOIG				*i* S	**Sn**	**18 59 40.6**	**+3.7**
MOIG	**Morelia**	**6.40**	**295**		**Pn**	**18 58 27.1**	**+2.0**
PMON	**Piamonte**	**6.44**	**120**	*eP*	**Pn**	**18 58 27.6**	**+2.0**
PMON	**Piamonte**	**6.44**	**120**	*eP*	**Pn**	**18 58 27.6**	**+2.0**
BOQS	**Boqueron**	**6.46**	**120**	*eP*	**Pn**	**18 58 27.9**	**+2.0**
BOQS	**Boqueron**	**6.46**	**120**	*eP*	**Pn**	**18 58 27.9**	**+2.0**
SNET	**Serv Nac Est T**	**6.53**	**120**	*eP*	**Pn**	**18 58 28.5**	**+1.8**
SNET	**Serv Nac Est T**	**6.53**	**120**	*eP*	**Pn**	**18 58 28.5**	**+1.8**
SNET	**Serv Nac Est T**	**6.53**	**120**		**Pn**	**18 58 28.8**	**+2.1**
LLGN	**La Laguna**	**6.54**	**115**	*eP*	**Pn**	**18 58 27.6**	**+0.8**
LLGN	**La Laguna**	**6.54**	**115**	*eP*	**Pn**	**18 58 27.6**	**+0.8**
LLGN				*eS*	**Sn**	**18 59 37.9**	**-2.2**
LBRS	**Las Brisas**	**6.66**	**119**	*eP*	**Pn**	**18 58 30.6**	**+2.1**
LBRS	**Las Brisas**	**6.66**	**119**	*eP*	**Pn**	**18 58 30.6**	**+2.1**
LFRS	**El Faro**	**6.70**	**120**	*eP*	**Pn**	**18 58 31.0**	**+1.9**
LFRS	**El Faro**	**6.70**	**120**	*eP*	**Pn**	**18 58 31.0**	**+1.9**
PAVA	**Las Pavas**	**6.76**	**119**	*eP*	**Pn**	**18 58 31.7**	**+1.8**
PAVA	comp=Z,926nm,0.6s			IAML		18 59 26.5	
PAVA	**Las Pavas**	**6.76**	**119**	*eP*	**Pn**	**18 58 31.7**	**+1.8**
PAVA	comp=Z,926nm,0.6s			IAML		18 59 26.5	
COEG	**Centro de Oper**	**6.85**	**119**	*eP*	**Pn**	**18 58 33.2**	**+2.1**
COEG	comp=Z,2μm,0.4s			IAML		18 59 12.1	
COEG	**Centro de Oper**	**6.85**	**119**	*eP*	**Pn**	**18 58 33.2**	**+2.1**
COEG	comp=Z,2μm,0.4s			IAML		18 59 12.1	
IGIG	**Irapuato, Guan**	**7.00**	**303**	*eP*	**Pn**	**18 58 35.2**	**+2.1**
IGIG				*i* S	Sn	18 59 39.0	-12
GTIG	**Gomez Farias**	**7.13**	**328**	*eP*	**Pn**	**18 58 33.4**	**-1.4**
GTIG				*i* S	**Sn**	**18 59 49.7**	**-4.5**
TEIG	**Tepich** comp=Z,434nm,0.3s,baz=261,slow=13,SNR=1651	**7.14**	**63**	P	**Pn**	**18 58 34.2**	**-0.7**
TEIG	comp=Z,2μm,0.3s,baz=136,slow=22,SNR=15			S	**Sn**	**18 59 50.2**	**-4.3**
TEIG	comp=Z,4μm,20.8s,baz=247,slow=40			LR	LR	19 01 34.5	
TEIG	**Tepich**	**7.14**	**63**	*i* S	**Sn**	**18 59 52.2**	**-2.3**
TEIG	**Tepich**	**7.14**	**63**	Pn	**Pn**	**18 58 33.8**	**-1.1**
TEIG	**Tepich**	**7.14**	**63**		**Pn**	**18 58 33.8**	**-1.1**
COEB	**Comit de Eme**	**7.21**	**119**	*eP*	**Pn**	**18 58 38.1**	**+2.2**
COEB	comp=Z,619nm,0.5s			IAML		18 59 36.0	
COEB	**Comit de Eme**	**7.21**	**119**	*eP*	**Pn**	**18 58 38.1**	**+2.2**
COEB	comp=Z,619nm,0.5s			IAML		18 59 36.0	
TECA	**Tecapa**	**7.23**	**118**	*eP*	**Pn**	**18 58 38.3**	**+2.0**
TECA	**Tecapa**	**7.23**	**118**	*eP*	**Pn**	**18 58 38.3**	**+2.0**
LCY	**Lacayo**	**7.44**	**118**	*eP*	**Pn**	**18 58 41.5**	**+2.4**
LCY	**Lacayo**	**7.44**	**118**	*eP*	**Pn**	**18 58 41.5**	**+2.4**
FAGO	**Alcalda de S**	**7.47**	**116**	*eP*	**Pn**	**18 58 40.1**	**+0.7**
FAGO	**Alcalda de S**	**7.47**	**116**	*eP*	**Pn**	**18 58 40.1**	**+0.7**
JUCU	**Jucuar¡n**	**7.57**	**119**	*eP*	**Pn**	**18 58 42.8**	**+2.0**
JUCU	**Jucuar¡n**	**7.57**	**119**	*eP*	**Pn**	**18 58 42.8**	**+2.0**
LCND	**La Caada**	**7.84**	**117**	*eP*	**Pn**	**18 58 45.8**	**+1.3**
LCND	**La Caada**	**7.84**	**117**	*eP*	**Pn**	**18 58 45.8**	**+1.3**
CNCH	**Conchagua**	**7.91**	**117**	*eP*	**Pn**	**18 58 47.2**	**+1.8**
CNCH	**Conchagua**	**7.91**	**117**	*eP*	**Pn**	**18 58 47.2**	**+1.8**
CNCH				*eP*		18 58 48.1	
MMIG	**Aquila**	**8.02**	**280**	*eP*	**Pn**	**18 58 46.6**	**-0.2**
MMIG				*i* S	**Sn**	**19 00 11.6**	**-4.2**
TGUH	**Tegucigalpa,Un**	**8.05**	**111**	Pn	**Pn**	**18 58 48.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**8.05**	**111**	*eP*	**Pn**	**18 58 45.9**	**-1.6**
AAIG	**Aguscalientes**	**8.47**	**306**	*eP*	**Pn**	**18 58 55.2**	**+2.0**
AAIG				*eS*	**Sn**	**19 00 31.5**	**+4.2**
EZ5V		**8.49**	**288**	*i* P	**Pn**	**18 58 55.6**	**+2.2**
EZ5V				*eS*	**Sn**	**19 00 29.9**	**+2.3**
COIG	**Colima**	**8.49**	**286**	*i* P	**Pn**	**18 58 55.1**	**+1.7**
COIG				*eS*	**Sn**	**19 00 29.1**	**+1.4**
R15V		**8.76**	**285**	*i* P	**Pn**	**18 58 58.5**	**+1.5**
R15V				*eS*	**Sn**	**19 00 36.7**	**+2.6**
LNIG	**Linares**	**8.83**	**333**	*i* P	**Pn**	**18 58 59.3**	**+1.5**
LNIG				*eS*	**Sn**	**19 00 37.5**	**+2.0**
LNIG				*eS*		19 00 41.3	
CRIN	**San Cristobal**	**8.85**	**118**		**Pn**	**18 59 00.7**	**+2.5**
ZAIG	**Zacatecas**	**9.08**	**310**	*eP*	**Pn**	**18 59 03.0**	**+1.5**
ZAIG				*i* S	**Sn**	**19 00 47.8**	**+5.8**
ZAIG	**Zacatecas**	**9.08**	**310**	Pn	**Pn**	**18 59 02.6**	**+1.1**
MATN	**Matagalpa**	**9.71**	**114**		Pn	18 59 14.8	+4.9
ANIG	**Ahuacatlan**	**9.81**	**295**	*i* P	**Pn**	**18 59 13.4**	**+2.2**
ANIG				*i* S	**Sn**	**19 01 00.5**	**+0.9**
BOAB	**BOACO BROADBAN**	**10.15**	**116**		**Pn**	**18 59 16.1**	**+0.3**
KVTX	**Kingsville**	**10.77**	**346**		**Pn**	**18 59 26.0**	**+2.1**
ACON	**Acoyapa**	**10.81**	**117**	*eP*	**Pn**	**18 59 26.0**	**+1.4**
ACON	**Acoyapa**	**10.81**	**117**		**Pn**	**18 59 26.5**	**+1.8**
GBS3	**Finca Las Img**	**11.20**	**123**	*eP*	**Pn**	**18 59 31.1**	**+1.2**
GB1A	**Boringuen Arri**	**11.22**	**122**	*eP*	**Pn**	**18 59 32.0**	**+1.6**
LAPC	**Finca la Perla**	**11.22**	**123**	*eP*	**Pn**	**18 59 31.1**	**+0.8**
BUEV	**Buena Vista**	**11.23**	**122**	*eP*	**Pn**	**18 59 32.0**	**+1.7**
BUAI	**Buenos Aires**	**11.24**	**122**	*eP*	**Pn**	**18 59 31.7**	**+1.2**
VRLE	**La Escondida,**	**11.27**	**122**	*eP*	**Pn**	**18 59 32.9**	**+2.0**
GPS2	**Hotel Rincn d**	**11.30**	**122**	*eP*	**Pn**	**18 59 33.0**	**+1.7**
LIM1	**Limonal**	**11.41**	**122**	*eP*	**Pn**	**18 59 34.8**	**+2.0**
SAJU	**San Juanillo,**	**11.42**	**126**	*eP*	**Pn**	**18 59 33.7**	**+0.8**
ORTG	**Ortega, Santa**	**11.44**	**124**	*eP*	**Pn**	**18 59 34.3**	**+1.2**
ORTG	**Ortega, Santa**	**11.44**	**124**		**Pn**	**18 59 34.5**	**+1.3**
GUAI	**GUAI**	**11.45**	**125**	*eP*	**Pn**	**18 59 35.1**	**+1.8**
ESPN	**Las Esperanzas**	**11.46**	**114**		**Pn**	**18 59 34.3**	**+1.0**
HORNC	**Hornillas**	**11.46**	**122**	*eP*	**Pn**	**18 59 34.8**	**+1.4**
COLC	**Colonia**	**11.47**	**122**	*eP*	**Pn**	**18 59 35.4**	**+1.9**
CUI	**Cuipilapa**	**11.50**	**122**	*eP*	**Pn**	**18 59 35.3**	**+1.3**
PLVR	**Palo Verde**	**11.53**	**124**	*eP*	**Pn**	**18 59 35.1**	**+0.6**
GRZA	**Playa Garza**	**11.57**	**127**	*eP*	**Pn**	**18 59 36.2**	**+1.3**
DUNO	**Dulce Nombre,**	**11.58**	**126**	*eP*	**Pn**	**18 59 36.7**	**+1.7**
PTEN	**Parque Tenorio**	**11.61**	**122**	*eP*	**Pn**	**18 59 37.1**	**+1.6**
ACAL	**Aguas Claras**	**11.62**	**122**	*eP*	**Pn**	**18 59 37.0**	**+1.5**
INDI	**Punta indio, G**	**11.71**	**126**	*eP*	**Pn**	**18 59 38.0**	**+1.4**
JTS	**Las Juntas de** comp=Z,43nm,0.3s,baz=5.7,slow=12,SNR=90	**11.88**	**123**	P	**Pn**	**18 59 40.0**	**+1.0**
JTS	comp=Z,8.9nm,0.3s,baz=358,slow=19,SNR=1.1			S	**Sn**	**19 01 49.8**	**-0.1**
JTS	**Las Juntas de**	**11.88**	**123**	*eP*	**Pn**	**18 59 39.9**	**+0.9**
JTS	**Las Juntas de**	**11.88**	**123**	Pn	**Pn**	**18 59 39.9**	**+0.9**
JTS	**Las Juntas de**	**11.88**	**123**	*eP*	**Pn**	**18 59 37.7**	**-1.3**
833A	**Chaparral WMA,**	**11.91**	**341**	P		18 59 40.0	
	baz=159,SNR=98						
CEDE	**Laguna Cedeo**	**11.97**	**122**	*eP*	**Pn**	**18 59 41.8**	**+1.5**
ARE1	**Arenal 1**	**11.97**	**122**	*eP*	**Pn**	**18 59 42.1**	**+1.9**
FORC	**Fortuna**	**12.01**	**122**	*eP*	**Pn**	**18 59 42.3**	**+1.6**
735A	**Kenedy**	**12.01**	**348**		**Pn**	**18 59 42.1**	**+1.5**
COVE	**Coope Vega, Sa**	**12.09**	**120**	*eP*	**Pn**	**18 59 42.1**	**+0.4**
COVE	**Coope Vega, Sa**	**12.09**	**120**		**Pn**	**18 59 42.9**	**+1.2**
CAO2	**Cobano, Puntar**	**12.12**	**126**		**Pn**	**18 59 43.0**	**+0.9**
LAFE	**Finca La Fe, P**	**12.20**	**125**	*eP*	**Pn**	**18 59 43.6**	**+0.4**
MAIG	**Mazatlaan**	**12.31**	**302**	*i* P	**Pn**	**18 59 46.0**	**+1.5**
MAIG				*i* S	**Sn**	**19 01 54.4**	**-5.5**
SRA1	**San Ramn**	**12.38**	**123**	*eP*	**Pn**	**18 59 47.4**	**+1.8**
PDIG	**Papasquiaro**	**12.51**	**311**	*i* P	**P**	**18 59 51.5**	**-3.0**
PDIG				*i* S	**Sn**	**19 01 60.0**	**-5.2**
SOR	**Soroa**	**12.66**	**61**	P	**Pn**	**18 59 46.6**	**-2.6**
SOR	**Soroa**	**12.66**	**61**	Pn	**Pn**	**18 59 46.6**	**-2.6**
RIFO	**Rio Frio, Sara**	**12.71**	**120**	*eP*	**Pn**	**18 59 50.5**	**+0.7**
HDC	**Heredia**	**12.72**	**122**	*eP*	**Pn**	**18 59 51.1**	**+1.0**
HDC	**Heredia**	**12.72**	**122**		**Pn**	**18 59 51.0**	**+0.8**
HDC3	**Heredia 3**	**12.72**	**122**	*eP*	**Pn**	**18 59 51.8**	**+1.6**
LCR2	**La Lucha 2**	**12.96**	**123**	*eP*	**Pn**	**18 59 54.8**	**+1.5**
VTUC	**Crater, Volcan**	**13.00**	**121**	*eP*	**Pn**	**18 59 55.3**	**+1.3**
CVTR	**Volcan Turrial**	**13.00**	**121**	*eP*	**Pn**	**18 59 54.5**	**+0.5**
CVTR	**Volcan Turrial**	**13.00**	**121**	Pn	**Pn**	**18 59 54.5**	**+0.5**
RIMA	**Rio Macho**	**13.06**	**122**	*eP*	**Pn**	**18 59 55.2**	**+0.6**
CDM	**Cerro de Muert**	**13.26**	**123**	*eP*	**Pn**	**18 59 57.6**	**+0.1**
BATAN	**Batan**	**13.28**	**120**	P	**Pn**	**18 59 58.5**	**+1.3**
EDDO	**Dominical**	**13.36**	**124**	*eP*	**Pn**	**18 59 59.8**	**+1.6**
PEZE	**Perez Zeledon,**	**13.43**	**123**	*eP*	**Pn**	**19 00 00.5**	**+1.2**
PEZE	**Perez Zeledon,**	**13.43**	**123**		**Pn**	**18 59 59.8**	**+0.5**
EDLM	**Las Mercedes**	**13.56**	**123**	*eP*	**Pn**	**19 00 03.0**	**+2.0**
545A	**Edgard**	**13.58**	**17**	Pn	**Pn**	**19 00 02.2**	**+1.2**
PRVC	**Isla de Provid**	**13.69**	**104**	*eP*	**Pn**	**19 00 03.6**	**+1.0**
441A	**DeRidder**	**13.73**	**7**		**Pn**	**19 00 02.8**	**-0.3**
SRBA	**San Rafael, Bu**	**13.77**	**123**	*eP*	**Pn**	**19 00 03.7**	**-0.1**
DRK0	**Durika**	**13.85**	**123**	*eP*	**Pn**	**19 00 04.5**	**-0.3**

baz=187,SNR=86
X40A Basin Creek Fa 17.47 6 P **P** **19 00 48.7 -0.4**
LRAL Lakeview Retre 17.48 23 P **P** **19 00 48.9 -0.4**
LRAL IAmb IAmb 19 00 56.6
comp=Z,314nm,0.6s
LRAL Lakeview Retre 17.48 23 P 19 00 49.2
baz=206,SNR=40
LRAL S 19 03 51.4
baz=206
TIGA Tifton 17.70 34 P **P** **19 00 51.4 -0.3**
TIGA Tifton 17.70 34 P 19 00 51.9
baz=218,SNR=16
X43A Marvell 17.78 11 P 19 00 53.8
baz=193,SNR=22
CPRX Cap Rock 17.79 335 P **Pn** **19 00 53.6 0.0**
WMOK Wichita Mounta 17.92 350 P 19 00 55.3
baz=168,SNR=75
WMOK Wichita Mounta 17.92 350 P **P** **19 00 54.4 +0.2**
WMOK pmax pmax
comp=Z,248nm,0.8s
WMOK Wichita Mounta 17.92 350 P **P** **19 00 54.4 +0.2**
WMOK IAmb IAmb 19 01 38.9
comp=Z,248nm,0.8s
456A Hilliard 18.05 39 P **P** **19 00 55.4 -0.2**
456A IAmb IAmb 19 01 22.1
comp=Z,295nm,0.8s
OXF Oxford 18.10 15 P 19 00 55.7
baz=197
OXF S 19 04 07.8
baz=197
W39A Magazine 18.10 3 P **Pn** **19 00 57.0 -0.1**
W39A IAmb IAmb 19 01 24.9
comp=Z,575nm,0.9s
W39A Magazine 18.10 3 P 19 00 57.3
baz=184,SNR=294
W39A S 19 04 07.3
baz=184
152A Waverly Hall 18.12 29 P **P** **19 00 56.3 0.0**
152A IAmb IAmb 19 01 05.3
comp=Z,398nm,0.8s
W41B Gary Mavity, V 18.21 7 P 19 00 58.3
baz=188,SNR=208
W41B S 19 04 08.8
baz=188
MSTX Muleshoe 18.22 339 P **Pn** **19 00 58.2 -0.5**
MSTX IAmb IAmb 19 01 34.6
comp=Z,262nm,0.9s
MSTX Muleshoe 18.22 339 P 19 00 58.8
baz=156,SNR=72
PAYG Puerto Ayora 18.23 165 P **Pn** **19 00 59.7 +0.8**
PAYG IAmb IAmb 19 01 04.7
comp=Z,378nm,1.1s
PAYG Puerto Ayora 18.23 165 *e*P **P** **19 00 56.3 -1.4**
FNO Franklin 18.25 354 P **Pn** **19 00 58.8 -0.2**
FNO IAmb IAmb 19 01 34.0
comp=Z,446nm,0.7s
WHAR Wooly Hollow 18.32 7 P **Pn** **19 00 59.4 -0.4**
WHAR IAmb IAmb 19 01 01.2
comp=Z,460nm,0.9s
OKCSW OKLAHOMA CITY 18.40 354 P **Pn** **19 01 00.4 -0.3**
OKCFA Oklahoma City 18.41 354 P **Pn** **19 01 00.5 -0.4**
Y49A Blount Mountai 18.43 23 P **P** **19 00 59.6 -0.2**
Y49A IAmb IAmb 19 01 23.0
comp=Z,258nm,0.9s
Z51A Franklin 18.46 27 P **P** **19 00 60.0 -0.1**
MET Memphis--Engin 18.56 13 P **P** **19 01 01.5 +0.5**
MET IAmb IAmb 19 01 21.7
comp=Z,432nm,0.7s
OK025 Westminster Rd 18.56 354 P **Pn** **19 01 02.0 -0.7**
BCOK Bluff Creek, N 18.66 353 P **Pn** **19 01 03.5 -0.3**
255A Hazlehurst 18.68 35 P **P** **19 01 01.4 -0.9**
X48A Hartselle 18.74 21 P **P** **19 01 02.1 -1.0**
X48A IAmb IAmb 19 01 31.5
comp=Z,329nm,1.1s
W45A Hickory Valley 18.77 15 P **P** **19 01 02.7 -0.6**
W45A IAmb IAmb 19 01 43.5
comp=Z,376nm,0.8s
OK029 Liberty Lake 18.79 354 P **P** **19 01 03.9 +0.3**
OK029 IAmb IAmb 19 01 46.2
comp=Z,379nm,0.8s
TUL1 Leonard 18.79 358 P 19 01 04.2
baz=178,SNR=90
HBAR Harrisburg 18.83 11 P **P** **19 01 04.6 +0.6**
OK030 Cody Creek RV 18.86 356 P **P** **19 01 05.0 +0.6**
154A Montrose 18.87 33 P **P** **19 01 03.5 -0.9**
OK031 S. Brethren Rd 18.89 355 P **Pn** **19 01 05.5 -1.0**
PLAL Pickwick Lake 18.90 18 P **P** **19 01 03.9 -0.9**
PLAL IAmb IAmb 19 01 13.6
comp=Z,314nm,0.8s
LPAR Lepanto 18.94 12 P **P** **19 01 04.8 -0.5**
QUOK Quay 19.09 356 P **P** **19 01 07.4 +0.5**
GTBY Guantanamo Bay 19.11 78 IAmb IAmb 19 01 36.9
comp=Z,398nm,0.8s
GTBY Guantanamo Bay 19.11 78 *e*P **Pn** **19 01 09.9 +0.6**
CAPC Capurgana 19.15 114 *e*P **P** **19 01 06.4 -1.3**
HHAR Hobbs 19.17 3 IAmb IAmb 19 01 35.6
comp=Z,452nm,1.0s
121A Cookes Peak, D 19.24 326 IAmb IAmb 19 02 06.8
comp=Z,213nm,0.9s
121A Cookes Peak, D 19.24 326 P 19 01 11.1
baz=140,SNR=115
319A Douglas 19.25 320 P **Pn** **19 01 11.1 +0.1**
U38A Gravette 19.31 2 P **P** **19 01 09.8 +0.5**
U40A Yellville 19.32 5 P **P** **19 01 10.2 +0.9**
U40A Yellville 19.32 5 P 19 01 10.3
baz=186,SNR=928
GOGA Godfrey 19.33 30 IAmb IAmb 19 01 22.1
comp=Z,363nm,0.8s
GOGA Godfrey 19.33 30 P 19 01 09.0
baz=215,SNR=31
FPAL Fort Paine 19.35 24 IAmb IAmb 19 01 38.2
comp=Z,254nm,0.9s
Y52A Lilburn 19.42 28 P **P** **19 01 10.5 0.0**
CROK Carrier 19.54 353 P **P** **19 01 12.0 +0.2**
LNXT Lenox 19.59 13 P **P** **19 01 12.8 +0.5**
X51A Calhoun 19.67 26 IAmb IAmb 19 01 29.3
comp=Z,521nm,0.9s
SWET Sewanee 19.82 22 P **P** **19 01 14.2 -0.6**
SWET IAmb IAmb 19 01 15.2
comp=Z,278nm,0.7s
OK032 Salt Plains WL 19.87 352 IAmb IAmb 19 01 47.1
comp=Z,542nm,0.9s
GC02 Grant County # 19.87 353 P **P** **19 01 15.2 -0.2**
KAN14 Manchester OK 19.99 353 IAmb IAmb 19 01 57.6
comp=Z,238nm,0.8s
V48A Smith Brothers 19.99 20 P **P** **19 01 15.6 -1.0**
V48A IAmb IAmb 19 01 56.9
comp=Z,242nm,0.9s
Y22D IRIS PASSCAL I 20.02 330 IAmb IAmb 19 02 10.8
comp=Z,368nm,0.9s
Y22D IRIS PASSCAL I 20.02 330 P 19 01 19.8
baz=145
W50A Signal Mountai 20.04 24 P **P** **19 01 16.6 -0.7**
W50A IAmb IAmb 19 01 17.5
comp=Z,347nm,0.8s
WVT Waverly 20.04 17 P 19 01 16.0
baz=200
WVT S 19 04 52.1
baz=200
WVT Waverly 20.04 17 P **P** **19 01 16.1 -1.1**
WVT pmax pmax
comp=Z,442nm,1.3s
WVT Waverly 20.04 17 P **P** **19 01 16.1 -1.1**
WVT IAmb IAmb 19 01 45.7
comp=Z,442nm,1.3s
KAN05 Bluff City Nor 20.13 353 IAmb IAmb 19 01 48.1
comp=Z,332nm,0.8s
KAN09 Caldwell North 20.13 354 P **P** **19 01 18.0 -0.1**
KAN09 IAmb IAmb 19 01 46.9
comp=Z,611nm,1.1s
KAN01 Argonia South 20.16 354 P **P** **19 01 18.4 -0.1**
KAN10 Anthony SW Sta 20.17 353 IAmb IAmb 19 01 59.0
comp=Z,167nm,0.6s
HENM Henderson Moun 20.19 13 P **P** **19 01 19.0 +0.3**
KAN08 Anthony NE Sta 20.26 353 P **P** **19 01 19.8 +0.3**
KAN16 Harper SW Stat 20.27 353 IAmb IAmb 19 01 55.2
comp=Z,186nm,1.0s
KAN12 Harper NE Stat 20.33 353 P **P** **19 01 20.0 -0.2**
CLTN Cedars of Leba 20.47 21 IAmb IAmb 19 01 22.0
comp=Z,177nm,0.8s
ANMO Albuquerque 20.53 332 P Pn 19 01 24.5 -1.4
comp=Z,62nm,0.9s,baz=149,slow=12,SNR=81
ANMO Albuquerque 20.53 332 *ce*P **P** **19 01 24.1 +1.4**
ANMO pmax pmax
comp=Z,65nm,0.8s
ANMO Albuquerque 20.53 332 P **P** **19 01 23.9 +1.2**
ANMO Albuquerque 20.53 332 P 19 01 24.4
baz=147
SJCC San Jacinto, C 20.57 108 *e*P **P** **19 01 24.8 +1.6**
CPCT Cooper Cave 20.57 25 IAmb IAmb 19 01 38.7
comp=Z,248nm,0.7s
HODGE Hodges 20.58 31 P **P** **19 01 21.9 -1.1**
HODGE IAmb IAmb 19 01 38.0
comp=Z,227nm,0.9s
S39A Bolivar 20.61 4 P **P** **19 01 23.2 -0.1**
T45A Paducah 20.67 15 P **P** **19 01 23.8 -0.1**
T45A **S** **19 05 07.3 -1.3**
RGRS Roger Stewart 20.70 38 P **P** **19 01 23.6 -0.6**
TUC Tucson 20.82 320 P **P** **19 01 26.3 +0.6**
TUC pmax pmax
comp=Z,161nm,1.0s
TUC Tucson 20.82 320 P **P** **19 01 26.3 +0.6**
TUC Tucson 20.82 320 P 19 01 28.0
baz=133
NHSC New Hope 20.85 37 P 19 01 25.4
baz=224
NHSC S 19 05 15.3
baz=224
BG3 Lake Jocassee 20.88 29 P **P** **19 01 25.5 -0.7**
V51A Loudon 20.95 25 IAmb IAmb 19 01 43.5
comp=Z,278nm,0.8s
SMRC Santa Marta, M 21.01 103 *e*P **P** **19 01 24.8 -3.0**
T47A Sharon Grove 21.05 18 P **P** **19 01 27.0 -1.0**
TKL Tuckaleechee C 21.06 26 P **P** **19 01 27.3 -0.8**
comp=Z,157nm,0.8s,baz=192,slow=12,SNR=72
TKL **S** **19 05 15.4 -0.9**
comp=Z,37nm,0.8s,baz=341,slow=20,SNR=1.3
TKL Tuckaleechee C 21.06 26 P **P** **19 01 26.8 -1.4**
TKL pmax pmax
comp=Z,470nm,0.9s
TKL Tuckaleechee C 21.06 26 P **P** **19 01 26.8 -1.4**
TKL IAmb IAmb 19 01 45.7
comp=Z,470nm,0.9s
JSC Jenkinsville 21.13 33 IAmb IAmb 19 01 56.7
comp=Z,207nm,1.1s
UREC San Jos de Ur 21.16 114 *e*P **P** **19 01 29.1 -0.3**
S44A Carbondale 21.18 13 P **P** **19 01 28.9 -0.4**
S44A IAmb IAmb 19 01 33.2
comp=Z,271nm,0.7s
CCM Cathedral Cave 21.18 8 P 19 01 28.9
baz=190
CCM S 19 05 17.5
baz=190
CCM Cathedral Cave 21.18 8 P **P** **19 01 28.9 -0.5**
CCM pmax pmax
comp=Z,389nm,0.7s
CCM Cathedral Cave 21.18 8 P **P** **19 01 28.9 -0.5**
CCM IAmb IAmb 19 01 31.0
comp=Z,389nm,0.7s
FVM French Village 21.24 10 P **P** **19 01 29.0 -1.0**
FVM pmax pmax
comp=Z,831nm,1.8s
FVM French Village 21.24 10 P **P** **19 01 29.0 -1.0**
FVM IAmb IAmb 19 02 00.3
comp=Z,831nm,1.8s
PAULI Pauline 21.27 31 IAmb IAmb 19 01 58.8
comp=Z,302nm,0.9s
V52A Sevierville 21.29 26 P **P** **19 01 29.4 -1.2**
V52A IAmb IAmb 19 01 48.2
comp=Z,327nm,0.7s
Y57A Sumter 21.40 35 P **P** **19 01 30.6 -1.1**
Y57A IAmb IAmb 19 01 59.5
comp=Z,231nm,0.8s
LGNH Logne 21.41 83 P **P** **19 01 31.9 -0.1**
LGNH IAmb IAmb 19 02 17.7
comp=Z,197nm,0.9s
ARGC Ariguani, Magd 21.44 107 *e*P **P** **19 01 33.2 +0.8**
JAKH Jacmel 21.49 83 P **P** **19 01 33.6 +0.7**
JAKH IAmb IAmb 19 02 17.7
comp=Z,706nm,1.6s
R32A Long Quarter, 21.53 352 P **P** **19 01 33.3 +0.2**
T25A Trinidad 21.65 339 P **P** **19 01 35.4 +0.8**
T25A IAmb IAmb 19 02 05.2
comp=Z,296nm,1.0s
T25A Trinidad 21.65 339 P 19 01 37.0
baz=155,SNR=85
MALC Bahia Malaga 21.67 125 *e*P **P** **19 01 36.1 +1.3**
MALC Bahia Malaga 21.67 125 *e*P **P** **19 01 32.5 -2.3**
CBOC Ciudad Bolivar 21.69 119 *e*P **P** **19 01 34.6 -0.5**
Y58A Scranton 21.72 37 P **P** **19 01 34.9 -0.3**
KMSC Kings Mountain 21.77 32 IAmb IAmb 19 01 36.9
comp=Z,320nm,0.7s
KMSC Kings Mountain 21.77 32 P 19 01 34.7
baz=218,SNR=128
KMSC S 19 05 28.1
baz=218
USIN University of 21.81 16 P **P** **19 01 34.8 -1.3**
USIN IAmb IAmb 19 02 04.9
comp=Z,237nm,0.8s
T50A Nancy 21.83 22 P **P** **19 01 34.2 -2.2**
T50A IAmb IAmb 19 01 54.9
comp=Z,195nm,0.8s
ZARC Zaragoza, Cauc 21.87 113 *e*P **P** **19 01 39.4 +2.5**
214A Organ Pipe Nat 21.89 316 P **P** **19 01 38.5 +1.4**
214A Organ Pipe Nat 21.89 316 P 19 01 39.3
baz=128,SNR=61
SLM Saint Louis 21.90 10 P **P** **19 01 36.7 -0.4**
SLM pmax pmax
comp=Z,658nm,1.1s
SLM Saint Louis 21.90 10 P **P** **19 01 36.7 -0.4**
HELC Santa Helena 21.92 117 *e*P **P** **19 01 40.3 +2.4**
X18A Snowflake 21.93 325 P **P** **19 01 39.6 +2.0**
KSU1 Kansas State U 22.00 357 P 19 01 37.6
baz=176,SNR=48
KSU1 S 19 05 32.6
baz=176
SMLC San Martn de 22.00 109 *e*P **P** **19 01 35.1 -3.2**
TUMC Tumaco 22.06 132 *e*P **P** **19 01 40.3 +1.4**
CTUM2 Tumaco 22.06 132 *e*P **P** **19 01 43.6 +4.7**
CBKS Cedar Bluff 22.06 350 P **P** **19 01 38.8 0.0**
CBKS pmax pmax
comp=Z,590nm,1.0s
CBKS Cedar Bluff 22.06 350 P **P** **19 01 38.8 0.0**
CBKS Cedar Bluff 22.06 350 P 19 01 39.2
baz=168,SNR=22
CBKS S 19 05 38.0
baz=168
Y59A Loris 22.24 38 P **P** **19 01 39.6 -1.0**
Y59A IAmb IAmb 19 02 22.9
comp=Z,232nm,0.8s
LL3C La Loma 3 Cana 22.25 106 *e*P **P** **19 01 40.3 -0.6**
W18A Petrified Fore 22.26 327 P 19 01 42.8
baz=140,SNR=43
LL2C La Loma 2 Cana 22.29 107 *e*P **P** **19 01 41.1 -0.1**
CRJC Cerrejon, Guaj 22.30 103 *e*P **P** **19 01 41.6 0.0**
X58A Rowland 22.38 36 P **P** **19 01 41.3 -0.7**
X58A IAmb IAmb 19 02 24.3
comp=Z,288nm,1.1s
WCI Wyandotte Cave 22.44 18 P **P** **19 01 41.3 -1.3**
WCI pmax pmax
comp=Z,535nm,0.7s
WCI Wyandotte Cave 22.44 18 P **P** **19 01 41.3 -1.3**
WCI Wyandotte Cave 22.44 18 P 19 01 41.6
baz=202
WCI S 19 05 40.4
baz=202
W57A Gilead 22.47 34 IAmb IAmb 19 02 21.4
comp=Z,636nm,1.2s
YOTC Yotoco, Valle 22.47 123 *e*P **P** **19 01 45.1 +1.7**
YOTC Yotoco, Valle 22.47 123 *e*P **P** **19 01 43.7 +0.4**
P38A Dawn 22.52 3 P **P** **19 01 42.2 -1.3**
P38A IAmb IAmb 19 02 25.9
comp=Z,242nm,0.9s
P40A Paris 22.54 6 P **P** **19 01 42.3 -1.3**
P40A IAmb IAmb 19 01 45.3
comp=Z,431nm,1.1s
GUY2C Guyana, Caldas 22.57 119 *e*P **P** **19 01 47.2 +2.5**
SDCO Great Sand Dun 22.57 338 P 19 01 46.2
baz=153,SNR=30
SDCO S 19 05 52.2
baz=153
SDDR Presa de Saban 22.66 82 P **P** **19 01 45.0 -0.1**
SDDR IAmb IAmb 19 02 26.6
comp=Z,273nm,0.8s
SDDR Presa de Saban 22.66 82 *e*P P 19 02 02.7 +18
PTBC PUERTO BERRIO, 22.67 115 *e*P **P** **19 01 42.0 -3.2**
NORC Norcasia 22.81 118 *e*P **P** **19 01 48.1 +1.5**
S51A Beattyville 22.84 24 P **P** **19 01 45.0 -1.6**
S51A IAmb IAmb 19 02 10.0
comp=Z,392nm,0.7s
KSCO Kaye Shedlock' 22.85 345 P 19 01 48.4
baz=161,SNR=12
KSCO Kaye Shedlock' 22.86 345 P **P** **19 01 47.7 +0.8**
KSCO IAmb IAmb 19 02 15.7
comp=Z,214nm,0.8s
R49A Shelbyville 22.86 20 IAmb IAmb 19 01 47.5
comp=Z,358nm,0.7s
OCAC Ocana 22.91 110 *e*P **P** **19 01 50.6 +3.0**
URIC Uribia, Colomb 22.94 100 *e*P **P** **19 01 46.0 -1.7**
URIC Uribia, Colomb 22.94 100 *e*P **P** **19 01 44.6 -3.2**
ANIL Santa Ana 22.94 121 *e*P **P** **19 01 48.5 +0.4**
TOLC Tolima 22.96 120 *e*P **P** **19 01 49.8 +1.4**
GRTK Grand Turk 22.98 75 P **P** **19 01 47.9 -0.3**
113A Mohawk Valley, 23.03 316 P **P** **19 01 49.6 +1.1**
S22A 4UR Ranch, Cre 23.07 336 P 19 01 51.1
baz=150,SNR=26
R50A Paris 23.14 22 P **P** **19 01 47.7 -1.7**
R50A IAmb IAmb 19 01 49.2
comp=Z,293nm,0.6s
SPIG San Pedro Mart 23.22 311 *i*P **P** **19 01 52.1 +1.4**
BLO Bloomington 23.25 17 P **P** **19 01 49.6 -0.9**
BLO pmax pmax
comp=Z,575nm,1.0s
BLO Bloomington 23.25 17 P **P** **19 01 49.6 -0.9**
CMBC Cumbal 23.31 132 *e*P **P** **19 01 55.5 +3.7**
MVCO Mesa Verde 23.32 332 P **P** **19 01 52.3 +0.8**
MVCO IAmb IAmb 19 02 24.0
comp=Z,468nm,1.6s
MVCO Mesa Verde 23.32 332 P 19 01 53.4
baz=146,SNR=38
OTAV Otavalo 23.37 134 P **P** **19 01 54.6 +2.3**
OTAV pmax pmax
comp=Z,382nm,1.8s
OTAV Otavalo 23.37 134 P **P** **19 01 54.6 +2.3**
OTAV IAmb IAmb 19 01 56.1
comp=Z,382nm,1.8s
OTAV Otavalo 23.37 134 *e*P **P** **19 01 53.2 +0.9**
ORTC Ortega, Tolima 23.40 122 *e*P **P** **19 01 52.4 +0.2**
SOTA Rioblanco 23.41 127 *e*P **P** **19 01 53.2 +0.5**
SPBC San Pablo de B 23.44 116 *e*P **P** **19 01 53.2 +0.7**
WUAZ Wupatki 23.44 325 P 19 01 54.2
baz=137,SNR=74
PCON Cinco Dias 23.45 127 *e*P **P** **19 01 55.0 +1.8**
CCUFI Cufio, Nario 23.46 130 *e*P **P** **19 01 55.5 +2.2**
GCUF Volcan Galeras 23.46 130 *e*P **P** **19 01 57.5 +4.2**
MARP Paez Belalcaza 23.47 125 *e*P **P** **19 01 55.8 +2.8**
CRUC La Cruz 23.53 129 *e*P **P** **19 01 58.0 +4.3**
Q24A Divide 23.55 340 P 19 01 55.7
baz=155,SNR=16
Q24A S 19 06 09.6
baz=155
ROSC El Rosal 23.65 119 P **P** **19 01 55.8 +0.9**
comp=Z,54nm,0.8s,baz=299,slow=10,SNR=11
ROSC LR LR 19 12 02.0
comp=Z,474nm,19.2s,baz=300,slow=39
ROSC El Rosal 23.65 119 *e*P **P** **19 01 52.4 -2.4**
N33A J Bar K, Exete 23.69 355 P **P** **19 01 54.9 +0.4**
N33A **pP** **19 02 18.3 +0.6**
N38A Joes South For 23.70 3 P **P** **19 01 54.4 -0.2**
N38A pP **pP** **19 02 19.6 +1.7**
BARC Barichara 23.76 113 *e*P **P** **19 01 55.0 -0.6**
P48A Milroy 23.84 19 P **P** **19 01 54.1 -1.7**
P48A pP **pP** **19 02 20.6 +1.4**
N41A Harden Midland 23.84 8 P **P** **19 01 55.1 -0.7**
N41A pP **pP** **19 02 20.0 +0.6**
PAMC Pamplona, Colo 23.85 111 *e*P **P** **19 01 53.2 -3.4**
BLA Blacksburg 23.86 30 IAmb IAmb 19 02 38.6
comp=Z,369nm,0.9s
BLA Blacksburg 23.86 30 P 19 01 55.0
baz=216,SNR=37
GLA Glamis 23.91 315 IAmb IAmb 19 02 57.6
comp=Z,153nm,1.1s
GLA Glamis 23.91 315 P 19 01 58.6
baz=127,SNR=26
HDIL Hopedale 23.93 11 P 19 01 56.4
baz=194,SNR=32
BETC Betania 23.97 124 *e*P **P** **19 01 59.4 +2.1**
P49A Miami Univ. Ec 24.13 20 P 19 01 57.1
baz=205,SNR=151
P49A S 19 06 06.0
baz=205
Q51A Peebles 24.15 23 P **P** **19 01 57.5 -1.1**
Q51A pP **pP** **19 02 23.6 +1.1**
RUSC La Rusia 24.18 115 *e*P **P** **19 01 57.6 -2.1**
SFIN Lafayette 24.23 15 P 19 01 58.7
baz=199,SNR=99
SFIN S 19 06 09.1
baz=199
GARC Garzon, Huila 24.24 125 *e*P **P** **19 02 01.9 +2.0**
PDMCI Parker Dam,Lak 24.24 319 P 19 02 01.4
baz=130,SNR=23
PV13 Radium Mtn., P 24.25 333 IAmb IAmb 19 02 41.8
comp=Z,248nm,1.3s
PV02 Paradox Valley 24.26 333 P **P** **19 02 01.2 +1.3**
PV02 IAmb IAmb 19 02 33.6
comp=Z,352nm,1.4s
CHIC Chingaza 24.26 118 *e*P **P** **19 02 02.4 +2.1**
PV15 Paradox Valley 24.26 334 IAmb IAmb 19 02 46.2
comp=Z,172nm,1.1s
T57A Hurt 24.27 32 P **P** **19 01 58.3 -1.4**
T57A IAmb IAmb 19 02 28.2
comp=Z,614nm,1.4s
PV03 Paradox Valley 24.34 333 IAmb IAmb 19 02 57.4
comp=Z,169nm,1.1s
PV18 Skein Mesa, Pa 24.36 333 P **P** **19 02 02.4 +1.6**
PV18 IAmb IAmb 19 02 34.4
comp=Z,189nm,1.1s
SMCO Snowmass 24.38 337 IAmb IAmb 19 02 39.9
comp=Z,207nm,1.2s
PV12 Saucer Basin, 24.38 333 P **P** **19 02 02.7 +1.7**
PV12 IAmb IAmb 19 02 44.0
comp=Z,291nm,1.1s
PV11 David Mesa, Pa 24.39 333 IAmb IAmb 19 02 34.0
comp=Z,693nm,1.7s
PV07 Paradox Valley 24.41 333 P **P** **19 02 02.9 +1.6**
PV07 IAmb IAmb 19 02 33.5
comp=Z,175nm,1.0s
BGNE Belgrade 24.41 354 P 19 02 01.8
baz=173,SNR=14
PV17 East Wray Mesa 24.41 333 IAmb IAmb 19 02 34.8
comp=Z,204nm,1.1s
PV16 Nyswonger Mesa 24.42 333 P **P** **19 02 03.1 +1.7**
PV16 IAmb IAmb 19 02 35.0
comp=Z,310nm,1.3s
DABV Dabajuro 24.44 101 *e*P **P** **19 02 01.4 0.0**
PV19 Morning Glory 24.45 333 IAmb IAmb 19 02 35.1
comp=Z,179nm,1.1s
ISCO Idaho Springs 24.45 340 P 19 02 03.8
baz=155,SNR=54
ISCO S 19 06 22.4
baz=155
PV20 West Nyswonger 24.47 333 P **P** **19 02 03.1 +1.4**
PV20 IAmb IAmb 19 02 35.2
comp=Z,210nm,1.2s
PV04 Paradox Valley 24.48 333 IAmb IAmb 19 02 35.7
comp=Z,618nm,1.6s
Q52A Bidwell 24.51 25 P **P** **19 02 00.9 -1.0**
Q52A pP **pP** **19 02 26.4 +0.3**
SWSC Sam W. Stewart 24.51 314 P 19 02 03.8
baz=125,SNR=18
PV14 Lion Creek, Pa 24.52 333 P **P** **19 02 04.0 +1.7**
PV14 IAmb IAmb 19 02 35.8
comp=Z,391nm,1.5s
PV10 Paradox Valley 24.53 333 IAmb IAmb 19 02 59.7
comp=Z,175nm,1.0s
PV22 Blue Mesa, Par 24.55 333 P **P** **19 02 04.4 +1.9**
PV22 IAmb IAmb 19 02 34.6
comp=Z,348nm,1.5s
U59A Littleton 24.55 35 IAmb IAmb 19 02 42.5
comp=Z,272nm,1.0s
IKP In-Ko-Pah, Jac 24.56 313 P 19 02 04.8
baz=124,SNR=39
OGNE Ogallala 24.56 347 P 19 02 04.5
baz=164,SNR=37
S56A Natural Bridge 24.64 31 P 19 02 02.1
baz=218,SNR=14
P51A Williamsport 24.66 23 P **P** **19 02 01.8 -1.4**
P51A pP **pP** **19 02 27.9 +0.4**
BC3 Big Chuckawall 24.69 316 P 19 02 05.9
baz=127,SNR=105
Q53A Leroy 24.72 26 P 19 02 03.1
baz=212,SNR=42
CBX Cerro Bola 24.76 312 P **P** **19 02 06.4 +2.0**
IRM Iron Mountain 24.80 317 P 19 02 06.7
baz=128,SNR=31

SCIA	**State Center**	**24.81**	**3**	P		**P**		**19 02 04.5**	**-0.1**
SCIA				pP		**pP**		**19 02 30.0**	**+0.9**
SCIA	**State Center**	**24.81**	**3**	P				19 02 04.9	
	baz=184,SNR=82								
L34A	**Svendsen Farm,**	**24.85**	**358**	P		**P**		**19 02 04.6**	**-0.4**
L34A				pP		**pP**		**19 02 30.9**	**+1.5**
R55A	**Marlinton**	**24.86**	**29**	P				19 02 04.3	
	baz=216,SNR=77								
R55A	**Marlinton**	**24.86**	**29**	IAmb		IAmb		19 02 46.7	
	comp=Z,300nm,0.8s								
MONP2	**Monument Peak**	**24.91**	**313**	P				19 02 07.9	
	baz=124,SNR=41								
M44A	**Midewin, Midew**	**24.98**	**13**	P		**P**		**19 02 05.4**	**-0.7**
TAMC	**Tame, Arauca**	**25.05**	**112**	*e*P		**P**		**19 02 05.4**	**-1.8**
TAMC	**Tame, Arauca**	**25.05**	**112**	*e*P		**P**		**19 02 06.2**	**-1.0**
N47A	**Urbana**	**25.07**	**17**	P		**P**		**19 02 05.4**	**-1.6**
N47A				IAmb		IAmb		19 02 07.8	
	comp=Z,298nm,0.8s								
N47A				pP		**pP**		**19 02 31.8**	**+0.3**
SDV	**Santo Domingo**	**25.11**	**106**	P		**P**		**19 02 07.8**	**0.0**
	comp=Z,158nm,0.9s,baz=308,slow=7.6,SNR=76								
SDV				PcP		**PcP**		**19 05 39.8**	**+0.4**
	comp=Z,25nm,0.8s,baz=175,slow=1.2,SNR=3.0								
SDV				S		**S**		**19 06 24.8**	**+0.3**
	comp=Z,11nm,0.8s,baz=347,slow=16,SNR=2.0								
SDV				LR		LR		19 12 23.3	
	comp=Z,469nm,21.5s,baz=298,slow=37								
SDV	**Santo Domingo**	**25.11**	**106**	P		**P**		**19 02 07.0**	**-0.7**
SDV				IAmb		IAmb		19 02 59.7	
	comp=Z,264nm,0.8s								
SDV	**Santo Domingo**	**25.11**	**106**	*e*P		**P**		**19 02 03.6**	**-4.2**
SDV	**Santo Domingo**	**25.11**	**106**	*e*P		**P**		**19 02 07.1**	**-0.7**
Q54A	**Coxs Mills**	**25.12**	**27**	IAmb		IAmb		19 02 51.2	
	comp=Z,167nm,0.8s								
SOCV	**Socops**	**25.13**	**107**	*e*P		**P**		**19 02 07.0**	**-0.7**
L40A	**Anamosa**	**25.13**	**7**	P		**P**		**19 02 06.8**	**-0.7**
T59A	**Double "B" Far**	**25.14**	**34**	IAmb		IAmb		19 02 48.2	
	comp=Z,163nm,0.8s								
P52A	**Corning**	**25.14**	**24**	P				19 02 06.5	
	baz=210,SNR=76								
BELC	**Belle Mtn. Jos**	**25.26**	**316**	P				19 02 10.9	
	baz=127,SNR=30								
L42A	**Oliver, Polo**	**25.28**	**9**	P		**P**		**19 02 08.2**	**-0.7**
R56A	**Bull Pasture M**	**25.30**	**30**	P				19 02 08.4	
	baz=217,SNR=16								
KNB	**Kanab**	**25.34**	**325**	P		**P**		**19 02 11.2**	**+1.6**
KNB				pmax		pmax			
	comp=Z,123nm,1.0s								
KNB	**Kanab**	**25.34**	**325**	P		**P**		**19 02 11.2**	**+1.6**
PFO	**Pinyon Flats O**	**25.34**	**315**	P		**P**		**19 02 11.7**	**+2.1**
	comp=Z,30nm,1.0s,baz=119,slow=7.4,SNR=31								
PFO				PcP		**PcP**		**19 05 40.2**	**+0.6**
	comp=Z,8.5nm,0.9s,baz=6.9,slow=2.7,SNR=3.1								
PFO				LR		LR		19 13 30.5	
	comp=Z,447nm,19.2s,baz=126,slow=39								
PFO	**Pinyon Flats O**	**25.34**	**315**	*d i* P		**P**		**19 02 11.8**	**+2.1**
PFO				pmax		pmax			
	comp=Z,92nm,1.2s								
PFO	**Pinyon Flats O**	**25.34**	**315**	P		**P**		**19 02 10.9**	**+1.2**
PFO	**Pinyon Flats O**	**25.34**	**315**	P				19 02 11.8	
	baz=125,SNR=23								
ACSO	**Alum Creek Sta**	**25.34**	**22**	P				19 02 08.2	
	baz=208,SNR=34								
109C	**Camp Elliot, M**	**25.39**	**312**	P		**P**		**19 02 11.9**	**+2.0**
JSRW	**J. Sargeant Re**	**25.50**	**33**	P		**P**		**19 02 09.5**	**-1.4**
GMRC	**Granite Mounta**	**25.52**	**318**	P				19 02 13.4	
	baz=128,SNR=39								
N23A	**Red Feather La**	**25.55**	**341**	P				19 02 14.1	
	baz=155,SNR=29								
N49A	**Columbus Grove**	**25.56**	**19**	P		**P**		**19 02 09.9**	**-1.5**
N49A				IAmb		IAmb		19 02 13.6	
	comp=Z,176nm,0.7s								
O52A	**Adamsville**	**25.67**	**24**	P		**P**		**19 02 11.2**	**-1.2**
O52A				IAmb		IAmb		19 02 47.1	
	comp=Z,308nm,0.8s								
O20A	**White River Ci**	**25.69**	**336**	P		**P**		**19 02 14.4**	**+1.5**
O20A	**White River Ci**	**25.69**	**336**	P				19 02 14.6	
	baz=150,SNR=8.1								
MTPU	**Mount Pierson**	**25.76**	**328**	IAmb		IAmb		19 02 57.5	
	comp=Z,151nm,1.0s								
L44A	**Lake County Fo**	**25.77**	**12**	P		**P**		**19 02 13.0**	**-0.2**
L44A	**Lake County Fo**	**25.77**	**12**	P				19 02 13.3	
	baz=196,SNR=13								
SRU	**San Rafael Swe**	**25.80**	**331**	P		**P**		**19 02 15.0**	**+1.2**
SRU				pmax		pmax			
	comp=Z,52nm,1.0s								
SRU	**San Rafael Swe**	**25.80**	**331**	P		**P**		**19 02 15.0**	**+1.2**
MURC	**Murrieta**	**25.84**	**314**	P				19 02 16.6	
	baz=124,SNR=11								
Q56A	**Snyder Ridge,**	**25.91**	**29**	P		**P**		**19 02 13.9**	**-0.6**
Q56A				IAmb		IAmb		19 02 57.4	
	comp=Z,264nm,1.1s								
Q56A	**Snyder Ridge,**	**25.91**	**29**	P				19 02 14.1	
	baz=217,SNR=22								
Q16A	**Castle Valley**	**25.94**	**330**	IAmb		IAmb		19 02 47.8	
	comp=Z,190nm,1.4s								
L46A	**Eue Claire**	**25.97**	**15**	P		**P**		**19 02 13.8**	**-1.3**
L46A				IAmb		IAmb		19 02 43.9	
	comp=Z,266nm,0.9s								
HEC	**Hector,Ludlow**	**25.98**	**317**	P				19 02 17.8	
	baz=128,SNR=28								
O53A	**New Philadelph**	**26.03**	**25**	P		**P**		**19 02 14.6**	**-1.0**
O53A	**New Philadelph**	**26.03**	**25**	P				19 02 14.8	
	baz=211,SNR=44								
O53A				S				19 06 35.7	
	baz=211								
PTLC	**Puerto Leguiza**	**26.06**	**128**	*e*P		**P**		**19 02 19.1**	**+3.0**
JFWS	**Jewell Farm**	**26.09**	**8**	P				19 02 16.2	
	baz=190,SNR=139								
JFWS				S				19 06 37.7	
	baz=190								
JFWS	**Jewell Farm**	**26.09**	**8**	P		**P**		**19 02 16.1**	**-0.1**
JFWS				pmax		pmax			
	comp=Z,659nm,0.6s								
JFWS	**Jewell Farm**	**26.09**	**8**	P		**P**		**19 02 16.1**	**-0.1**
TUQ	**Turquoise Moun**	**26.09**	**319**	P				19 02 18.6	
	baz=129,SNR=27								
MCWV	**Mont Chateau**	**26.11**	**27**	IAmb		IAmb		19 03 01.4	
	comp=Z,279nm,1.6s								
MCWV	**Mont Chateau**	**26.11**	**27**	P				19 02 15.7	
	baz=215								
CBN	**Corbin Frederi**	**26.15**	**33**	P				19 02 15.8	
	baz=221								
N51A	**Ashland**	**26.17**	**22**	P		**P**		**19 02 14.9**	**-2.0**
N51A				IAmb		IAmb		19 03 13.6	
	comp=Z,230nm,0.8s								
K43A	**Burlington**	**26.19**	**11**	P		**P**		**19 02 16.6**	**-0.5**
Q57A	**Strasburg**	**26.27**	**30**	P				19 02 17.2	
	baz=218,SNR=10								
M50A	**Fremont**	**26.37**	**21**	P		**P**		**19 02 17.4**	**-1.3**
M50A				IAmb		IAmb		19 02 56.2	
	comp=Z,346nm,1.0s								
L48A	**N Adams**	**26.42**	**18**	P		**P**		**19 02 17.5**	**-1.6**
L48A				IAmb		IAmb		19 02 19.0	
	comp=Z,235nm,0.8s								
P56A	**Dayton Farm, R**	**26.44**	**29**	P				19 02 18.8	
	baz=217,SNR=8.7								
BFSC	**Mount Baldy Ra**	**26.52**	**314**	P				19 02 22.5	
	baz=124,SNR=13								
Q58A	**Fox Den Farm,**	**26.55**	**31**	P				19 02 19.2	
	baz=220,SNR=7.3								
CIS	**Catalina Islan**	**26.59**	**312**	P				19 02 22.5	
	baz=122,SNR=6.7								
M51A	**Elyria**	**26.60**	**22**	P				19 02 19.3	
	baz=208,SNR=12								
SHOC	**Shoshone, Teco**	**26.61**	**319**	P				19 02 23.5	
	baz=129								
ECSD	**EROS Data Cent**	**26.62**	**357**	P		**P**		**19 02 20.5**	**-0.5**
ECSD				IAmb		IAmb		19 03 13.1	
	comp=Z,138nm,0.8s								
ECSD	**EROS Data Cent**	**26.62**	**357**	P				19 02 21.1	
	baz=176,SNR=56								
ECSD				S				19 06 46.4	
	baz=176								
N53A	**Lisbon**	**26.65**	**25**	P		**P**		**19 02 20.2**	**-1.0**
N53A				pP		**pP**		**19 02 47.2**	**+1.4**
RWWY	**Rawlins**	**26.68**	**339**	IAmb		IAmb		19 02 51.0	
	comp=Z,234nm,1.2s								
P57A	**Homestead Farm**	**26.81**	**30**	P		**P**		**19 02 21.9**	**-0.8**
P57A				IAmb		IAmb		19 03 04.3	
	comp=Z,143nm,0.9s								
P57A	**Homestead Farm**	**26.81**	**30**	P				19 02 22.2	
	baz=218,SNR=12								
ELOV	**Elorza**	**26.88**	**109**	*e*P		**P**		**19 02 24.2**	**+0.6**
I37A	**Lemond, Waseca**	**26.91**	**3**	P		**P**		**19 02 22.9**	**-0.6**
I37A				IAmb		IAmb		19 03 22.1	
	comp=Z,245nm,0.9s								
AAM	**Ann Arbor**	**26.98**	**19**	P				19 02 23.1	
	baz=204,SNR=5.9								
AAM	**Ann Arbor**	**26.98**	**19**	P		**P**		**19 02 22.8**	**-1.3**
AAM				pmax		pmax			
	comp=Z,123nm,0.8s								
AAM	**Ann Arbor**	**26.98**	**19**	P		**P**		**19 02 22.8**	**-1.3**
AAM				IAmb		IAmb		19 03 14.1	
	comp=Z,123nm,0.8s								
I40A	**Norwalk**	**27.01**	**7**	IAmb		IAmb		19 02 25.3	
	comp=Z,154nm,0.8s								
M52A	**Chesterland**	**27.09**	**23**	P		**P**		**19 02 23.4**	**-1.7**
M52A				IAmb		IAmb		19 03 05.2	
	comp=Z,241nm,0.8s								
EDW2	**Edwards Air Fo**	**27.11**	**315**	P				19 02 27.0	
	baz=125,SNR=11								
OBIP	**Obispado Ponce**	**27.11**	**84**	P		**P**		**19 02 25.1**	**-0.6**
N54A	**Moraine State**	**27.13**	**26**	P				19 02 24.7	
	baz=213,SNR=15								
N54A	**Moraine State**	**27.13**	**26**	P		**P**		**19 02 24.1**	**-1.5**
O56A	**Blue Knob Stat**	**27.18**	**28**	IAmb		IAmb		19 03 08.3	
	comp=Z,193nm,0.8s								
O56A	**Blue Knob Stat**	**27.18**	**28**	P				19 02 24.7	
	baz=216,SNR=9.2								
NLU	**North Lily Min**	**27.19**	**330**	P		**P**		**19 02 25.8**	**-0.5**
I42A	**Draeger Farm,**	**27.24**	**10**	IAmb		IAmb		19 02 28.5	
	comp=Z,166nm,1.0s								
LRMC	**Laurel Mtn Rad**	**27.25**	**317**	P				19 02 28.8	
	baz=126,SNR=14								
M53A	**WI Miller and**	**27.26**	**24**	P				19 02 25.8	
	baz=211,SNR=33								
M53A				S				19 06 53.6	
	baz=211								
M53A	**WI Miller and**	**27.26**	**24**	P		**P**		**19 02 25.4**	**-1.3**
M53A				pP		**pP**		**19 02 52.2**	**+0.9**
M53A				IAmb		IAmb		19 03 17.5	
	comp=Z,331nm,1.0s								
TPNV	**Topopah Spring**	**27.27**	**321**	P				19 02 29.4	
	baz=131,SNR=20								
TPNV	**Topopah Spring**	**27.27**	**321**	P		**P**		**19 02 27.3**	**+0.3**
TPNV				pmax		pmax			
	comp=Z,83nm,1.1s								
TPNV	**Topopah Spring**	**27.27**	**321**	P		**P**		**19 02 27.3**	**+0.3**
K22A	**Casper**	**27.33**	**341**	P				19 02 29.2	
	baz=155,SNR=12								
K22A	**Casper**	**27.33**	**341**	IAmb		IAmb		19 02 57.8	
	comp=Z,434nm,1.7s								
SDMD	**Soldier's Deli**	**27.33**	**32**			pP		19 02 52.3	+0.3
FURC	**Furnace Creek,**	**27.33**	**319**	P				19 02 30.1	
	baz=129,SNR=7.2								
JLU	**Jordanelle**	**27.42**	**332**	P		**P**		**19 02 29.4**	**+1.0**
SUSD	**Miller**	**27.50**	**354**	P				19 02 29.4	
	baz=172,SNR=14								
J47A	**Sunmer**	**27.50**	**16**	IAmb		IAmb		19 03 20.9	
	comp=Z,141nm,0.8s								
SJG	**San Juan**	**27.55**	**83**	P		**P**		**19 02 28.4**	**-1.0**
	comp=Z,19nm,0.5s,baz=256,slow=8.8,SNR=7.8								
SJG				S		**S**		**19 06 57.4**	**-5.2**
	comp=Z,4.9nm,0.3s,baz=53,slow=21,SNR=0.9								
O57A	**Amberson**	**27.56**	**30**	P				19 02 28.2	
	baz=218,SNR=7.6								
CTU	**Camp Tracy**	**27.63**	**332**	P		**P**		**19 02 31.2**	**+1.0**
ALLY	**Alegheny Colle**	**27.64**	**25**	P		**P**		**19 02 28.9**	**-1.2**
P59A	**Jarrettsville**	**27.69**	**32**	P				19 02 29.6	
	baz=221,SNR=11								
M54A	**Oil Creek Stat**	**27.72**	**25**	P				19 02 29.9	
	baz=213,SNR=14								
M54A				S				19 07 03.2	
	baz=213								
DUG	**Dugway, Tooele**	**27.73**	**330**	P				19 02 33.1	
	baz=141,SNR=5.9								
K50A	**Casco**	**27.73**	**20**	P		**P**		**19 02 29.0**	**-1.8**
K50A				IAmb		IAmb		19 03 23.4	
	comp=Z,310nm,1.1s								
ARVC	**Arvin**	**27.82**	**315**	P				19 02 33.8	
	baz=124								
N56A	**West Decatur**	**27.82**	**28**	P				19 02 30.6	
	baz=216								
TCUT	**Toone Canyon**	**27.82**	**333**	P		**P**		**19 02 33.5**	**+1.6**
TCUT				IAmb		IAmb		19 03 31.1	
	comp=Z,140nm,1.1s								
R11A	**Troy Canyon, C**	**27.82**	**324**	P				19 02 34.1	
	baz=134,SNR=15								
O58A	**Lewisberry**	**27.84**	**31**	P				19 02 31.0	
	baz=220,SNR=6.0								
L53A	**Girard**	**27.86**	**24**	P				19 02 31.1	
	baz=211,SNR=47								
L53A				S				19 07 04.4	
	baz=211								
ISA	**Isabella, Lake**	**27.88**	**316**	P		**P**		**19 02 33.8**	**+1.4**
ISA				pmax		pmax			
	comp=Z,28nm,1.1s								
ISA	**Isabella, Lake**	**27.88**	**316**	P		**P**		**19 02 33.8**	**+1.4**
ISA	**Isabella, Lake**	**27.88**	**316**	P				19 02 34.2	
	baz=126,SNR=11								
I45A	**Fountain**	**27.90**	**14**	P		**P**		**19 02 31.4**	**-1.0**
GRAC	**Grapevine Rang**	**27.98**	**320**	P				19 02 36.0	
	baz=129,SNR=6.3								
H43A	**Windswept, Lux**	**28.00**	**11**	P		**P**		**19 02 32.6**	**-0.7**
H43A				IAmb		IAmb		19 02 33.9	
	comp=Z,188nm,0.7s								
PAGS	**Pennsylvania G**	**28.02**	**31**	IAmb		IAmb		19 03 23.5	
	comp=Z,113nm,1.1s								
MVL	**Millersville**	**28.02**	**32**	P		**P**		**19 02 32.4**	**-1.1**
RSSD	**Black Hills**	**28.03**	**346**	P		**P**		**19 02 35.8**	**+2.0**
RSSD				pmax		pmax			
	comp=Z,33nm,0.9s								
RSSD	**Black Hills**	**28.03**	**346**	P		**P**		**19 02 35.8**	**+2.0**
N57A	**Milroy**	**28.03**	**29**	P				19 02 32.5	
	baz=218								
CWC	**Cottonwood Cre**	**28.09**	**318**	P				19 02 36.3	
	baz=127								
ERPA	**Erie**	**28.10**	**24**	P				19 02 33.1	
	baz=212,SNR=19								
ERPA				S				19 07 08.7	
	baz=212								
ERPA	**Erie**	**28.10**	**24**	IAmb		IAmb		19 02 34.2	
	comp=Z,160nm,0.8s								
SPMN	**Marine on St.**	**28.14**	**3**	P				19 02 34.5	
	baz=184,SNR=64								
SPMN	**Marine on St.**	**28.14**	**3**	P		**P**		**19 02 34.3**	**-0.2**
P60A	**Greenville**	**28.25**	**33**	P		**P**		**19 02 33.5**	**-1.9**
P60A						**pP**		**19 03 00.2**	**-0.1**
P60A	**Greenville**	**28.25**	**33**	P				19 02 34.2	
	baz=222,SNR=6.2								
M56A	**Emporium**	**28.33**	**27**	P				19 02 35.0	
	baz=216,SNR=24								
M56A	**Emporium**	**28.33**	**27**	P		**P**		**19 02 33.9**	**-2.3**
M56A				IAmb		IAmb		19 03 22.1	
	comp=Z,196nm,0.9s								
O59A	**Robesonia**	**28.34**	**31**	P				19 02 35.2	
	baz=220								
PKM	**Mcpherson Peak**	**28.36**	**314**	P				19 02 39.1	
	baz=122,SNR=8.9								
VES	**Vestal, Richgr**	**28.39**	**316**	P				19 02 39.4	
	baz=125,SNR=20								
G40A	**Rib Lake**	**28.41**	**7**	P		**P**		**19 02 36.0**	**-0.9**
G40A				IAmb		IAmb		19 02 37.6	
	comp=Z,78nm,0.8s								
BW06	**Boulder Array**	**28.46**	**337**	P		**P**		**19 02 38.4**	**+0.7**
BW06	**Boulder Array**	**28.46**	**337**	P				19 02 38.8	
	baz=150								
PDAR	**Pinedale Array**	**28.46**	**337**	P		**P**		**19 02 38.8**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=150,slow=8.8,SNR=23								
PDAR				PcP		**PcP**		**19 05 46.7**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=137,slow=4.5,SNR=2.2								
PDAR	**Pinedale Array**	**28.46**	**337**	P		**P**		**19 02 38.1**	**+0.5**
N58A	**Sunbury**	**28.49**	**30**	P		**P**		**19 02 35.4**	**-2.2**
N58A	**Sunbury**	**28.49**	**30**	P				19 02 35.9	
	baz=219,SNR=5.9								
TIN	**Tinemaha, Big**	**28.56**	**319**	P				19 02 41.3	
	baz=128,SNR=8.7								
TPH	**Tonopah**	**28.59**	**321**	P		**P**		**19 02 38.4**	**-0.4**
TPH				pmax		pmax			
	comp=Z,143nm,1.2s								
TPH	**Tonopah**	**28.59**	**321**	P		**P**		**19 02 38.4**	**-0.4**
TPH				IAmb		IAmb		19 03 23.1	
	comp=Z,143nm,1.2s								
STVI	**Saint Thomas**	**28.67**	**83**	P		**P**		**19 02 38.2**	**-1.3**
STVI				IAmb		IAmb		19 03 33.4	
	comp=Z,137nm,1.1s								
M57A	**Sunshine Farm,**	**28.69**	**29**	IAmb		IAmb		19 03 31.4	
	comp=Z,158nm,1.0s								
M57A	**Sunshine Farm,**	**28.69**	**29**	P				19 02 38.3	
	baz=218,SNR=5.0								
SMMC	**Simmler**	**28.72**	**314**	P				19 02 42.9	
	baz=123								
I49A	**Point Hope**	**28.72**	**19**	IAmb		IAmb		19 03 29.8	
	comp=Z,110nm,0.8s								
O60A	**Telford**	**28.74**	**32**	P				19 02 39.0	
	baz=222,SNR=7.4								
F36A	**Milaca**	**28.75**	**2**	P		**P**		**19 02 39.2**	**-0.6**
F36A				IAmb		IAmb		19 02 40.5	
	comp=Z,92nm,0.8s								
HVU	**Hansel Valley**	**28.96**	**332**	P		**P**		**19 02 43.3**	**+1.3**
HVU				pmax		pmax			
	comp=Z,35nm,0.8s								
HVU	**Hansel Valley**	**28.96**	**332**	P		**P**		**19 02 43.3**	**+1.3**
LUPA	**Lehigh Univers**	**28.97**	**32**	P		**P**		**19 02 40.9**	**-1.0**
LUPA				pP		**pP**		**19 03 06.0**	**-0.7**
G45A	**Suttons Bay**	**28.99**	**14**	IAmb		IAmb		19 03 21.9	
	comp=Z,125nm,0.9s								
N59A	**State Game Lan**	**29.01**	**31**	P				19 02 41.2	
	baz=220,SNR=13								
GLMI	**Grayling**	**29.03**	**15**	P				19 02 42.0	
	baz=201,SNR=7.1								
AHID	**Auburn Hatcher**	**29.05**	**335**	P		**P**		**19 02 42.6**	**-0.3**
L56A	**Greenwood**	**29.13**	**27**	IAmb		IAmb		19 03 33.0	
	comp=Z,206nm,0.9s								
L56A	**Greenwood**	**29.13**	**27**	P				19 02 42.0	
	baz=216,SNR=8.5								
ATAH	**Atahualpa**	**29.13**	**144**	P		**P**		**19 02 46.4**	**+2.4**
	comp=Z,156nm,0.8s,baz=332,slow=7.1,SNR=105								
ATAH				PcP		**PcP**		**19 05 50.2**	**+0.9**
	comp=Z,17nm,0.9s,baz=333,slow=2.3,SNR=3.4								
I51A	**Listowel**	**29.18**	**21**	P				19 02 42.2	
	baz=208,SNR=54								
F42A	**Maple Grove Fa**	**29.19**	**10**	IAmb		IAmb		19 02 44.0	
	comp=Z,106nm,0.7s								
N60A	**Cedar Hill Far**	**29.31**	**32**	P				19 02 43.8	
	baz=222,SNR=9.2								
L57A	**Andrews Acres**	**29.34**	**28**	P				19 02 44.1	
	baz=217,SNR=9.0								
ELK	**Elko**	**29.35**	**328**	P		**P**		**19 02 47.8**	**+2.2**
	comp=Z,15nm,0.8s,baz=139,slow=6.3,SNR=61								
ELK				PcP		**PcP**		**19 05 49.4**	**+0.2**
	comp=Z,16nm,0.8s,baz=12,slow=0.6,SNR=5.1								
ELK				ScP		**ScP**		**19 09 20.9**	**+0.1**
	comp=Z,4.2nm,1.0s,baz=98,slow=1.5,SNR=3.6								
ELK				LR		LR		19 14 30.3	
	comp=Z,281nm,20.0s,baz=138,slow=36								
COWI	**Conover**	**29.37**	**8**	P		**P**		**19 02 44.7**	**-0.7**
COWI				IAmb		IAmb		19 02 46.0	
	comp=Z,149nm,0.8s								
BRNJ	**Basking Ridge**	**29.44**	**33**	P		**P**		**19 02 44.8**	**-1.2**
BRNJ				IAmb		IAmb		19 03 12.7	
	comp=Z,88nm,0.8s								
MDPB	**Devils Postpil**	**29.45**	**319**	P		**P**		**19 02 48.6**	**+2.1**
REDW	**Red Top Meadow**	**29.46**	**336**	IAmb		IAmb		19 03 31.6	
	comp=Z,107nm,0.9s								
MMNY	**Mt. Morris Dam**	**29.46**	**26**	IAmb		IAmb		19 03 38.6	
	comp=Z,410nm,1.5s								
NVAR	**Mina Array Bea**	**29.46**	**321**	P		**P**		**19 02 49.4**	**+2.8**
	comp=Z,45nm,0.8s,baz=138,slow=9.3,SNR=22								
NVAR				PcP		**PcP**		**19 05 50.5**	**+0.9**
	comp=Z,2.1nm,0.4s,baz=139,slow=4.3,SNR=2.5								
NVAR				LR		LR		19 15 32.7	
	comp=Z,314nm,21.3s,baz=142,slow=38								
NVAR				P3KPbc				19 34 50.1	
	comp=Z,0.5nm,0.7s,baz=302,slow=5.2,SNR=5.0								
NVAR	**Mina Array Bea**	**29.46**	**321**	P		**P**		**19 02 49.0**	**+2.4**
KSPA	**Keystone Colle**	**29.50**	**30**	P		**P**		**19 02 44.9**	**-1.6**
SNOW	**Snow King Moun**	**29.51**	**336**	IAmb		IAmb		19 03 32.7	
	comp=Z,149nm,0.9s								
LOHW	**Long Hollow**	**29.58**	**337**	IAmb		IAmb		19 03 17.5	
	comp=Z,107nm,1.2s								
MEDO	**Medina**	**29.60**	**25**	P		**P**		**19 02 46.1**	**-1.3**
MEDO						**pP**		**19 03 09.9**	**-2.3**
MEDO				IAmb		IAmb		19 03 39.6	
	comp=Z,142nm,1.0s								
E38A	**The Farm, Brul**	**29.60**	**5**	P		**P**		**19 02 46.5**	**-0.9**
J54A	**Appleton**	**29.61**	**25**	IAmb		IAmb		19 03 38.7	
	comp=Z,151nm,1.1s								
N61A	**South Mountain**	**29.63**	**33**	P				19 02 46.4	
	baz=223								
M59A	**Waymart**	**29.65**	**31**	P				19 02 46.7	
	baz=220,SNR=5.7								
K56A	**Middlesex**	**29.69**	**27**	P				19 02 47.1	
	baz=216,SNR=22								
ODNJ	**Ogdensburg**	**29.72**	**32**	P		**P**		**19 02 47.2**	**-1.2**
KVN	**Kaiserville**	**29.75**	**322**	P		**P**		**19 02 49.8**	**+0.8**
KVN				pmax		pmax			
	comp=Z,56nm,1.1s								
KVN	**Kaiserville**	**29.75**	**322**	P		**P**		**19 02 49.8**	**+0.8**
PMPB	**Monarch Peak**	**29.75**	**315**	P		**P**		**19 02 50.9**	**+1.9**
PMPB				IAmb		IAmb		19 02 52.1	
	comp=Z,93nm,1.0s								
L58A	**Harry Jones Me**	**29.84**	**29**	P				19 02 48.4	
	baz=219,SNR=9.7								

YHL Hebgen Lake 30.85 337 IAmb IAmb 19 03 30.5
comp=Z,246nm,2.0s
M62A Hamden 30.87 34 P 19 02 57.0
baz=225,SNR=5.2
K59A Cooperstown 30.87 30 P 19 02 57.4
baz=220,SNR=6.7
QLMT Earthquake Lak 30.93 337 P **P** **19 03 01.5 +2.1**
MDND Maddock 30.93 354 P 19 02 59.8
baz=171,SNR=22
EYMN Ely 30.94 5 P 19 02 58.7
baz=186,SNR=59
EYMN Ely 30.94 5 P **P** **19 02 58.5 -0.8**
EYMN IAmb IAmb 19 02 59.5
comp=Z,82nm,0.7s
EYMN pP **pP** **19 03 24.4 +0.2**
LAO LASA Array 30.97 345 P **P** **19 03 00.1 +0.6**
LAO **pP** **19 03 26.3 +1.9**
LAO IAmb IAmb 19 03 27.7
comp=Z,102nm,1.2s
RUBR Rubicon Trail 30.98 320 IAmb IAmb 19 03 04.0
comp=Z,85nm,1.0s
DELO Deloro Mine 31.06 25 P **P** **19 02 58.8 -1.4**
DELO IAmb IAmb 19 03 00.0
comp=Z,124nm,0.8s
L61A Hillsdale 1, H 31.07 32 P 19 02 59.0
baz=223
HLID Hailey 31.11 332 P 19 03 02.7
baz=142,SNR=37
HLID Hailey 31.11 332 P **P** **19 03 02.0 +1.0**
AGMN Agassiz Nation 31.16 359 P 19 03 01.3
baz=178,SNR=28
AGMN Agassiz Nation 31.16 359 P **P** **19 03 01.0 -0.1**
K60A Five Rivers En 31.21 31 P 19 03 00.5
baz=222,SNR=5.5
B35A Bob, Littlefor 31.24 2 P **P** **19 03 01.2 -0.6**
B35A IAmb IAmb 19 03 02.3
comp=Z,102nm,0.8s
M63A Gales Ferry 31.29 34 P **P** **19 03 01.3 -1.1**
M63A **pP** **19 03 27.6 +0.3**
M63A IAmb IAmb 19 03 30.3
comp=Z,103nm,0.9s
M63A Gales Ferry 31.29 34 P 19 03 01.2
baz=226,SNR=6.1
I57A Carthage 31.41 27 P 19 03 01.9
baz=217,SNR=9.1
L62A Suffield 31.41 33 P 19 03 02.4
baz=224
TRY Troy 31.41 31 IAmb IAmb 19 04 05.2
comp=Z,85nm,1.0s
AFDM Forest Hills D 31.43 319 P **P** **19 03 04.9 +1.3**
UCCT U. Connecticut 31.47 34 P **P** **19 03 02.4 -1.5**
UCCT **pP** **19 03 29.2 +0.3**
UCCT IAmb IAmb 19 03 30.4
comp=Z,89nm,0.8s
I58A Old Forge 31.52 28 P 19 03 03.2
baz=219,SNR=28
J59A Piesco 31.56 29 P **P** **19 03 03.2 -1.5**
J59A IAmb IAmb 19 04 02.8
comp=Z,310nm,2.0s
J59A Piesco 31.56 29 P 19 03 03.4
baz=220,SNR=11
K61A Williamstown 31.56 32 P 19 03 04.2
baz=223,SNR=14
BEKR Beckworth 31.61 321 P **P** **19 03 06.8 +1.4**
G54A Lake Saint Pet 31.61 23 P 19 03 03.8
baz=212,SNR=45
BOZ Bozeman (W) 31.65 338 P 19 03 07.4
baz=149
L61B Northampton 31.70 32 P 19 03 04.4
baz=224,SNR=11
PLVO Plevna 31.71 25 P **P** **19 03 04.4 -1.6**
PLVO IAmb IAmb 19 03 05.6
comp=Z,61nm,0.8s
DLMT Dillon 31.82 336 IAmb IAmb 19 03 53.0
comp=Z,92nm,1.0s
M64A Tiverton 31.85 35 P 19 03 05.7
baz=227
J60A Lant Hill Farm 31.91 31 P 19 03 06.7
baz=222,SNR=6.3
H57A Richville 31.94 27 P 19 03 06.9
baz=217,SNR=16
K62A Royalston 32.08 33 P 19 03 08.7
baz=224
ALGO Algonquin Park 32.10 23 P 19 03 07.9
baz=212,SNR=45
I59A Olmsteadville 32.11 29 P 19 03 07.9
baz=220,SNR=10.0
ORV Oroville 32.12 320 P **P** **19 03 11.6 +1.9**
ORV pmax pmax
comp=Z,44nm,1.4s
ORV Oroville 32.12 320 P **P** **19 03 11.6 +1.9**
DGMT Dagmar 32.21 349 IAmb IAmb 19 03 39.2
comp=Z,127nm,0.9s
DGMT Dagmar 32.21 349 P 19 03 12.3
baz=163
L64A Middleborough 32.31 35 P 19 03 10.1
baz=227
L64A Middleborough 32.31 35 P **P** **19 03 10.2 -1.1**
L64A IAmb IAmb 19 03 39.4
comp=Z,111nm,0.9s
J61A Chester 32.41 31 P 19 03 11.4
baz=223,SNR=7.1
LONY Lake Ozonia 32.42 28 P 19 03 11.0
baz=218,SNR=21
LONY Lake Ozonia 32.42 28 P **P** **19 03 10.9 -1.3**
LONY IAmb IAmb 19 03 38.6
comp=Z,86nm,0.8s
I60A Shoreham 32.42 30 P 19 03 11.2
baz=221,SNR=15
H58A Gabriels 32.44 28 P 19 03 11.2
baz=219,SNR=18
G57A Newington 32.62 27 P 19 03 12.7
baz=217
J62A Henniker 32.70 32 P 19 03 13.5
baz=224
O03E Paynes Creek 32.75 320 P 19 03 16.8
baz=127,SNR=11
HNH Hanover 32.81 31 P **P** **19 03 14.6 -1.1**
H59A Cadyville 32.84 29 P 19 03 14.6
baz=220,SNR=9.5
J08A Circle Bar Ran 32.90 328 P **P** **19 03 17.5 +0.9**
J08A IAmb IAmb 19 04 03.1
comp=Z,144nm,1.2s
I61A Oroboro, Fairl 33.01 31 P 19 03 16.5
baz=223
PLID Pearl Lake 33.01 332 IAmb IAmb 19 03 50.6
comp=Z,53nm,0.8s
G58A Ormstown 33.07 28 P 19 03 16.6
baz=219,SNR=11
ULM Lac du Bonnet 33.12 359 P **P** **19 03 17.6 -0.6**
comp=Z,44nm,0.7s,baz=178,slow=9.7,SNR=94
ULM Lac du Bonnet 33.12 359 i P **P** **19 03 17.3 -0.9**
ULM Lac du Bonnet 33.12 359 P **P** **19 03 17.6 -0.6**
ULM IAmb IAmb 19 03 45.4
comp=Z,93nm,0.9s
EGMT Eagleton 33.16 342 P 19 03 20.4
baz=154,SNR=13
H60A Morristown 33.24 30 P 19 03 18.1
baz=221
E55A Monteerf-Lytto 33.28 24 P 19 03 18.5
baz=214,SNR=7.6
O02D Mt. Diablo Mer 33.28 319 P 19 03 20.0
baz=126
F57A Harrington 33.31 26 P 19 03 19.2
baz=217
LBNH Lisbon 33.38 31 P 19 03 19.9
baz=223,SNR=7.0
LBNH Lisbon 33.38 31 P **P** **19 03 19.2 -1.4**
LBNH pmax pmax
comp=Z,36nm,0.7s
LBNH Lisbon 33.38 31 P **P** **19 03 19.2 -1.4**
I62A Tamworth 33.41 32 IAmb IAmb 19 04 02.1
comp=Z,69nm,1.1s
I62A Tamworth 33.41 32 P 19 03 19.9
baz=224,SNR=7.2
BMO Blue Mountains 33.43 331 P **P** **19 03 21.3 +0.2**
BMO pmax pmax
comp=Z,30nm,1.2s
BMO Blue Mountains 33.43 331 P **P** **19 03 21.3 +0.2**
MSO Missoula 33.56 336 P **P** **19 03 22.8 +0.5**
MSO Missoula 33.56 336 P 19 03 23.3
baz=146,SNR=8.9
H61A Lyndonville 33.59 30 P 19 03 21.7
baz=223,SNR=7.4
M04C Macdoel 33.69 323 P 19 03 25.2
baz=129,SNR=9.8
E56A St. Veronique 33.76 25 P 19 03 22.9
baz=216,SNR=44
G60A Masonville 33.81 29 P 19 03 23.5
baz=222,SNR=10.0
KMRM Mail Ridge 33.89 319 P **P** **19 03 27.1 +2.0**
I63A Otisfield 33.91 32 P 19 03 24.1
baz=225,SNR=7.5
I63A Otisfield 33.91 32 P **P** **19 03 23.9 -1.3**
I63A IAmb IAmb 19 03 24.8
comp=Z,53nm,0.6s
I63A pP **pP** **19 03 50.9 +0.6**
D55A Sainte-Anne-du 33.97 24 P 19 03 24.6
baz=215
H62A Milan 34.00 31 P 19 03 24.9
baz=224
H62A Milan 34.00 31 P **P** **19 03 24.9 -1.1**
NNA Nana 34.00 147 P **P** **19 03 26.8 +0.5**
comp=Z,89nm,1.1s,baz=324,slow=8.3,SNR=13
NNA PcP **PcP** **19 06 00.6 -1.4**
comp=Z,9.7nm,0.4s,baz=316,slow=2.3,SNR=2.1
NNA LR LR 19 15 11.3
comp=Z,178nm,18.1s,baz=312,slow=32
NNA Nana 34.00 147 *ce* P **P** **19 03 27.7 +1.4**
NNA pmax pmax
comp=Z,95nm,0.9s
NNA Nana 34.00 147 P **P** **19 03 27.4 +1.1**
NNA IAmb IAmb 19 03 29.2
comp=Z,240nm,1.4s
MOQ Mont Orford 34.01 29 P **P** **19 03 25.0 -1.1**
MOQ **pP** **19 03 51.5 +0.2**
MOQ **PnPn** **19 04 35.6 -7.9**
M02C Callahan 34.05 321 P 19 03 26.5
baz=127
VLDQ Val d'Or 34.16 21 IAmb IAmb 19 03 26.8
comp=Z,99nm,1.0s
YBH Yreka Blue Hor 34.17 322 P **P** **19 03 27.3 -0.2**
comp=Z,6.4nm,0.8s,baz=109,slow=5.6,SNR=20
YBH PcP **PcP** **19 06 01.5 -0.6**
comp=Z,7.1nm,0.8s,baz=100,slow=5.4,SNR=4.5
YBH Yreka Blue Hor 34.17 322 P **P** **19 03 27.3 -0.2**
F59A Saint Guilaume 34.18 28 P 19 03 26.4
baz=220
L04D Klamath Falls 34.23 323 P 19 03 29.5
baz=129,SNR=8.8
F10A Beach Ranch, E 34.24 332 IAmb IAmb 19 04 15.3
comp=Z,85nm,0.8s
KHMM Horse Mountain 34.27 320 P **P** **19 03 29.6 +1.1**
D56A ZEC Mazanza, M 34.28 25 P 19 03 27.2
baz=216,SNR=44
J05D Fort Rock, OR 34.31 325 P 19 03 30.5
baz=131
G61A St-Isidore-de- 34.33 30 P 19 03 28.1
baz=222,SNR=7.1
E58A La Victoria 34.36 27 P 19 03 27.9
baz=219,SNR=24
JCC Jacoby Creek, 34.43 319 P **P** **19 03 30.8 +1.1**
JCC IAmb IAmb 19 03 33.0
comp=Z,59nm,0.9s
JTMT Jette 34.45 337 IAmb IAmb 19 03 59.6
comp=Z,54nm,0.9s
H63A New Sharon 34.62 32 P 19 03 30.8
baz=225
F60A Warwick 34.65 29 P 19 03 30.5
baz=221,SNR=18
KRMB Red Mountain 34.76 321 P **P** **19 03 33.8 +1.1**
J04D Umpqua Nationa 34.77 324 P 19 03 35.6
baz=130,SNR=11
G62A West of Eustis 34.77 31 P **P** **19 03 31.6 -1.1**
G62A IAmb IAmb 19 04 12.5
comp=Z,93nm,0.8s
G62A West of Eustis 34.77 31 P 19 03 32.1
baz=224,SNR=15
H64A Troy 35.03 33 P 19 03 33.8
baz=226
I05D Terrebonne, OR 35.08 326 P 19 03 36.8
baz=132,SNR=5.9
D58A Chemin du LacG 35.09 27 P 19 03 34.5
baz=219,SNR=27
F61A St Evariste 35.10 30 P 19 03 34.5
baz=223
LSQQ Lebel-sur-Quev 35.13 21 P 19 03 34.6
baz=211
G63A Kingsbury 35.15 32 P 19 03 34.9
baz=225
E60A Ste Agathe de 35.18 29 P 19 03 35.2
baz=222,SNR=17
I04A Tendick Farm, 35.29 325 P 19 03 38.1
baz=130
K02D Willamette Mer 35.32 322 P 19 03 38.5
baz=128
KBO Bosley Butte 35.36 321 IAmb IAmb 19 03 41.1
comp=Z,123nm,1.1s
LATQ La Tuque 35.36 26 P 19 03 36.6
baz=219,SNR=19
PKME Peaks-Kenny Pk 35.42 32 P 19 03 37.2
baz=226
PKME Peaks-Kenny Pk 35.42 32 P **P** **19 03 37.1 -1.0**
PKME IAmb IAmb 19 04 20.0
comp=Z,173nm,1.9s
D59A Saint-Raymond 35.48 28 P 19 03 38.1
baz=220
MATQ Matagami 35.52 19 P 19 03 37.8
baz=209,SNR=156
H65A Eastbrook 35.57 34 P 19 03 38.2
baz=228,SNR=6.1
HAWA Hanford 35.62 330 P **P** **19 03 39.9 +0.1**
E61A Lac Etchemin 35.67 30 P 19 03 39.8
baz=223,SNR=6.5
G64A Maxfield 35.69 32 P 19 03 39.1
baz=226
I03D Drain, OR 35.76 324 P 19 03 42.7
baz=129,SNR=9.2
J01E Myrtle Point 35.76 323 P 19 03 42.8
baz=128
H04A Detroit Lake 35.76 326 P **P** **19 03 42.1 +1.0**
H04A IAmb IAmb 19 03 43.4
comp=Z,92nm,1.3s
KEBM Edson Butte 35.81 322 P **P** **19 03 43.5 +1.8**
KEBM IAmb IAmb 19 03 45.6
comp=Z,176nm,1.0s
F63A Nahmakanta, Br 35.82 32 P 19 03 40.2
baz=226
D60A Saint Jean D'O 35.83 29 P 19 03 40.6
baz=222,SNR=18
H04D Lebanon 35.95 325 P 19 03 43.7
baz=131,SNR=6.9
NEW Newport 35.98 335 P 19 03 43.8
baz=142,SNR=9.1
EMMW East Machias 36.00 34 P **P** **19 03 41.5 -1.6**
EMMW IAmb IAmb 19 04 11.0
comp=Z,68nm,1.1s
H66A Whiting 36.13 34 P 19 03 43.0
baz=229
F05D White Salmon 36.20 328 P 19 03 47.0
baz=134,SNR=7.0
G65A Princeton 36.27 33 P **P** **19 03 44.0 -1.4**
G65A **pP** **19 04 11.1 +0.4**
G65A IAmb IAmb 19 04 12.9
comp=Z,82nm,0.9s
G65A Princeton 36.27 33 P 19 03 44.2
baz=228,SNR=8.8
F64A Sherman 36.31 32 IAmb IAmb 19 04 14.0
comp=Z,126nm,1.8s
F64A Sherman 36.31 32 P 19 03 44.5
baz=226
D61A St Aubert, Com 36.38 29 P 19 03 45.7
baz=223,SNR=22
GGN Saint George 36.60 34 P **P** **19 03 46.5 -1.7**
GGN pP **pP** **19 04 13.5 -0.1**
GGN IAmb IAmb 19 04 15.6
comp=Z,47nm,0.8s
E63A Oxbow 36.66 31 P **P** **19 03 47.6 -1.1**
E63A pP **pP** **19 04 14.3 +0.2**
E63A IAmb IAmb 19 04 15.7
comp=Z,69nm,0.8s
E63A Oxbow 36.66 31 P 19 03 47.7
baz=226,SNR=10
G03D McMinnville, O 36.68 326 P 19 03 50.5
baz=131
CHGQ Chibougamau 36.77 22 P 19 03 48.3
baz=214,SNR=50
LTY Liberty 36.78 331 IAmb IAmb 19 04 20.3
comp=Z,75nm,1.3s
BOAV Boa Vista 36.91 109 *eP* **P** **19 03 48.6 -2.6**
E64A Bridgewater 36.96 32 P 19 03 49.7
baz=227
B08A Colville Reser 36.99 333 P **P** **19 03 52.2 +0.7**
PQI Presque Isle 37.04 31 IAmb IAmb 19 04 20.0
comp=Z,161nm,1.7s
E04D Cinebar 37.22 328 P 19 03 55.2
baz=133
D63A Stockholm 37.25 31 P 19 03 52.9
baz=226,SNR=18
D05A Enumclaw 37.37 329 IAmb IAmb 19 04 58.7
comp=Z,112nm,1.3s
FFC Flin Flon 37.97 353 P **P** **19 04 00.0 +0.3**
FFC *PP **pP** **19 04 26.3 +1.1**
FFC pmax pmax
comp=Z,176nm,1.1s
FFC Flin Flon 37.97 353 P **P** **19 03 60.0 +0.3**
FFC pP **pP** **19 04 26.3 +1.1**
FFC IAmb IAmb 19 04 28.6
comp=Z,176nm,1.1s
D03D Eldon 38.15 329 P 19 04 02.1
baz=133
LMN Caledonia Moun 38.17 35 IAmb IAmb 19 04 28.8
comp=Z,48nm,0.9s
BATG Bathurst New B 38.43 32 P **P** **19 04 02.4 -1.3**
BATG **pP** **19 04 29.4 +0.2**
BATG IAmb IAmb 19 04 31.7
comp=Z,65nm,0.8s
BATG **sP** **19 04 41.7 -0.5**
NLWA Neilton Lookou 38.44 328 P **P** **19 04 05.0 +1.3**
NLWA **pP** **19 04 28.1 -1.2**
A04D Lummi Island 38.79 331 P 19 04 07.9
baz=135
PTGA Pitinga 38.82 114 P **P** **19 04 06.5 -0.8**
comp=Z,27nm,0.7s,baz=302,slow=9.8,SNR=38
ETMB Extrema 39.05 131 *eP* **P** **19 04 09.4 +0.2**
MACA Manacapuru-AM 39.42 117 *eP* **P** **19 04 12.3 +0.1**
FCC Fort Churchill 41.65 1 IAmb IAmb 19 04 57.7
comp=Z,84nm,1.0s
LPAZ La Paz 42.45 140 P **P** **19 04 38.6 +0.9**
comp=Z,79nm,0.7s,baz=331,slow=6.6,SNR=226
LPAZ S **S** **19 10 52.6 +0.9**
comp=Z,0.4nm,0.5s,baz=320,slow=1.5,SNR=0.8
LPAZ LR LR 19 21 12.9
comp=Z,203nm,20.8s,baz=324,slow=34
LPAZ La Paz 42.45 140 P **P** **19 04 38.1 +0.4**
LPAZ pmax pmax
comp=Z,84nm,0.8s
LPAZ La Paz 42.45 140 P **P** **19 04 38.1 +0.4**
LPAZ IAmb IAmb 19 04 39.6
comp=Z,84nm,0.8s
LPAZ La Paz 42.45 140 *eP* **P** **19 04 38.7 +1.0**
MDP Montagnes des 43.16 101 P **P** **19 04 41.6 -1.3**
comp=Z,27nm,1.1s,baz=270,slow=6.1,SNR=4.2
MDP PcP **PcP** **19 06 30.7 0.0**
comp=Z,18nm,0.8s,baz=322,slow=3.1,SNR=2.7
PB16 IPOC Station P 43.22 143 IAmb IAmb 19 04 47.1
comp=Z,164nm,0.9s
MNMC Minye Minye 43.81 144 P **P** **19 04 49.9 +1.7**
PSGCX Pisagua 43.89 145 P **P** **19 04 49.4 +0.7**
PSGCX IAmb IAmb 19 04 51.1
comp=Z,122nm,1.1s
DRLN Deer Lake 44.17 35 P **P** **19 04 49.3 -1.2**
DRLN IAmb IAmb 19 04 50.2
comp=Z,116nm,1.4s
ITTB Itaituba 44.27 115 *eP* **P** **19 04 50.9 -0.9**
MALB Monte Alegre 44.38 111 *eP* **P** **19 04 52.4 -0.2**
TA02 Huaiquique 44.43 146 IAmb IAmb 19 04 55.4
comp=Z,162nm,1.0s
TA01 Diego Aracena 44.65 146 P **P** **19 04 55.7 +1.1**
TA01 IAmb IAmb 19 04 57.2
comp=Z,197nm,1.0s
PB08 IPOC Station P 44.86 144 IAmb IAmb 19 04 59.8
comp=Z,120nm,1.0s
PATCX Punta Patache 44.87 146 IAmb IAmb 19 04 59.1
comp=Z,254nm,1.2s
PB01 IPOC Station P 45.41 146 IAmb IAmb 19 05 03.3
comp=Z,139nm,1.3s
VILB Vilhena 45.54 129 *eP* **P** **19 05 01.8 0.0**
MCPB Macapa, AP 45.73 108 *eP* **P** **19 05 02.0 -1.4**
PB07 IPOC Station P 45.75 147 P **P** **19 05 04.0 +0.5**
PB07 IAmb IAmb 19 05 06.1
comp=Z,138nm,0.9s
NPGB Novo Progresso 45.96 118 *eP* **P** **19 05 03.3 -1.8**
PB04 IPOC Station P 46.11 147 P **P** **19 05 06.9 +0.5**
PB09 IPOC Station P 46.15 146 IAmb IAmb 19 05 09.7
comp=Z,172nm,1.0s
PB06 IPOC Station P 46.72 147 IAmb IAmb 19 05 13.7
comp=Z,222nm,1.1s
PB10 IPOC Station P 46.89 149 IAmb IAmb 19 05 14.9
comp=Z,194nm,1.5s
LVC Limon Verde 46.99 146 P **P** **19 05 15.3 +1.8**
comp=Z,59nm,0.7s,baz=324,slow=5.5,SNR=69
LVC Limon Verde 46.99 146 P **P** **19 05 14.8 +1.4**
LVC pmax pmax
comp=Z,76nm,0.8s
LVC Limon Verde 46.99 146 P **P** **19 05 14.8 +1.4**
LVC IAmb IAmb 19 05 16.4
comp=Z,76nm,0.8s
LVC Limon Verde 46.99 146 *eP* **P** **19 05 15.5 +2.1**
PB15 IPOC Station P 47.18 147 P **P** **19 05 15.5 +0.7**
PB15 IAmb IAmb 19 05 17.6
comp=Z,399nm,2.0s
YKA Yellowknife Ar 47.41 348 P **P** **19 05 15.8 +0.1**
comp=Z,14nm,0.8s,baz=151,slow=7.6,SNR=121
YKA pP **pP** **19 05 41.6 -0.6**
comp=Z,47nm,0.9s,baz=152,slow=7.7,SNR=10
YKA P4KPbc 19 42 55.7
comp=Z,0.2nm,0.9s,baz=146,slow=4.4,SNR=5.0
CLDB Colider 47.70 123 *eP* **P** **19 05 17.8 -0.9**
PB14 IPOC Station P 47.89 149 IAmb IAmb 19 05 22.8
comp=Z,191nm,1.1s
PTLB Pontes e Lacer 47.93 130 *eP* **P** **19 05 20.5 +0.1**
DLBC Dease Lake 48.69 336 IAmb IAmb 19 05 59.1
comp=Z,180nm,1.1s
GO02 Mina Guanaco 48.74 149 P **P** **19 05 27.7 +0.8**
AC01 Pan de Azucar 49.08 151 IAmb IAmb 19 05 31.4
comp=Z,160nm,1.4s
TMAB Tom-Au,PA,Br 50.17 108 *eP* **P** **19 05 37.7 +0.1**
PRPB Parauapebas 50.30 113 *eP* **P** **19 05 38.0 -0.6**
AC02 Maricunga 50.37 150 P **P** **19 05 40.5 +1.1**
GO03 Copiap 50.48 151 IAmb IAmb 19 05 41.5
comp=Z,80nm,1.2s
AC04 Llanos de Chal 50.63 152 IAmb IAmb 19 05 42.3
comp=Z,52nm,0.8s
LCO Las Campanas 51.48 153 P **P** **19 05 48.5 +1.1**
LCO pmax pmax
comp=Z,230nm,1.2s
LCO Las Campanas 51.48 153 P **P** **19 05 48.5 +1.1**
TAOE Nuku Hiva Isla 51.50 243 *e*S **S** **19 12 57.8 -1.9**
comp=Z,386nm,23.5s
TAOE *e*LR LR 19 20 42.4
comp=Z,1µm,31.6s
TAOE Nuku Hiva Isla 51.50 243 *e*T T 19 59 22.6
comp=Z,21nm,0.2s
SNDB Serra Nova Dou 51.97 121 *eP* **P** **19 05 51.4 +0.4**
WHY Whitehorse 52.01 336 P **P** **19 05 52.4 +1.6**
WHY IAmb IAmb 19 06 23.7
comp=Z,100nm,1.6s
WHY Whitehorse 52.01 336 P 19 05 52.5
baz=129
PP1B Ponte de Pedra 52.44 129 *eP* **P** **19 05 54.6 +0.2**
CO03 El Pedregal 53.07 154 P **P** **19 05 59.4 +0.5**
HYT Haines Junctio 53.14 336 IAmb IAmb 19 06 33.1
comp=Z,86nm,1.3s
SMTB Santa Maria do 53.51 115 *eP* **P** **19 06 02.9 +0.5**
ARAG Araguaiana, MT 53.64 125 *eP* **P** **19 06 03.4 +0.2**
AQDB Aquidauana 53.68 132 *eP* **P** **19 06 03.2 -0.3**
PEXB Peixe 54.52 119 *eP* **P** **19 06 10.4 +0.7**
ZON Zonda 54.55 152 P **P** **19 06 10.7 +1.0**
ZON pmax pmax
comp=Z,158nm,1.1s
ZON Zonda 54.55 152 P **P** **19 06 10.7 +1.0**
VA01 Torpederas 54.59 156 P **P** **19 06 10.9 +1.2**
CTGM Chitina Glacie 54.77 334 P **P** **19 06 12.6 +1.6**
CTGM IAmb IAmb 19 06 45.1
comp=Z,159nm,1.6s
CTG Chitna Glacier 54.77 334 P 19 06 13.6
baz=122
GRNC Granite Creek 54.82 334 IAmb IAmb 19 06 45.3
comp=Z,76nm,1.0s
BARN Barnard Glacie 54.95 334 IAmb IAmb 19 07 44.8
comp=Z,58nm,1.1s
MT02 Curacav 55.00 156 P **P** **19 06 13.9 +1.1**
PEL Peldehue 55.08 155 P **P** **19 06 14.2 +0.8**
PEL Peldehue 55.08 155 P **P** **19 06 14.2 +0.8**
VA05 Santo Domingo 55.16 156 IAmb IAmb 19 06 15.1
comp=Z,57nm,0.8s
MT05 Renca 55.27 155 P **P** **19 06 15.7 +0.9**
TGL Tana Glacier 55.28 334 IAmb IAmb 19 06 47.8

comp=Z,100nm,1.2s
CRQE Cirque 55.39 334 P 19 06 17.8
baz=120
CRQM Cirque 55.41 334 IAmb IAmb 19 06 48.7
comp=Z,84nm,1.1s
MT03 Universidad Ad 55.45 155 P **P** **19 06 17.0 +0.8**
NUUK Nuuk 55.46 21 *i* P **P** **19 06 16.3 +0.7**
MT01 Popeta 55.49 156 IAmb IAmb 19 06 17.4
comp=Z,48nm,0.8s
MCARA McCarthy VSAT 55.68 334 IAmb IAmb 19 06 59.9
comp=Z,86nm,1.0s
MCARA McCarthy VSAT 55.68 334 P 19 06 20.1
baz=121,SNR=10
DAWY Dawson 55.76 338 P **P** **19 06 18.2 +0.2**
VRDI Verde Repeater 55.78 334 IAmb IAmb 19 06 52.2
comp=Z,133nm,1.6s
RKT Rikitea 55.85 226 *e* T T 20 04 27.2
comp=Z,11nm,0.3s
BO01 Tunca 56.02 156 IAmb IAmb 19 06 22.3
comp=Z,95nm,0.8s
GLB Gilahina Butte 56.04 334 P **P** **19 06 21.6 +1.6**
GLB IAmb IAmb 19 06 53.9
comp=Z,68nm,1.1s
L27K Beaver Creek, 56.09 336 P **P** **19 06 21.5 +1.2**
L27K Beaver Creek, 56.09 336 P 19 06 22.1
baz=123,SNR=15
BMRM Bremner River 56.14 333 P **P** **19 06 22.2 +1.5**
BMRM IAmb IAmb 19 07 03.1
comp=Z,47nm,1.0s
BMRM Bremner River 56.14 333 P 19 06 23.0
baz=119,SNR=5.3
NRS Narsarsuaq 56.26 26 *e* **P** **19 06 19.5 -1.9**
baz=221,slow=7.4
NRS *i* P **P** **19 06 21.0 -0.4**
NRS *i* S **sP** **19 07 02.0 +0.9**
NRS IAML 19 07 06.4
comp=Z,18nm,0.3s
NRS Narsarsuaq 56.26 26 *i* P **P** **19 06 20.5 -0.9**
NRS IAmb IAmb 19 06 21.8
comp=Z,176nm,0.7s
NRS Narsarsuaq 56.26 26 *i* P **P** **19 06 20.5 -0.9**
NRS pmax pmax
comp=Z,180nm,0.7s
EPYK Eagle Plains 56.30 341 IAmb IAmb 19 07 48.6
comp=Z,55nm,1.1s
EPYK Eagle Plains 56.30 341 P 19 06 22.8
baz=130,SNR=5.5
EYAK Cordova Ski Ar 56.44 333 P 19 06 25.0
baz=117
N25K Chitina, Valde 56.45 334 P **P** **19 06 25.0 +2.1**
N25K IAmb IAmb 19 07 05.4
comp=Z,67nm,1.1s
N25K Chitina, Valde 56.45 334 P 19 06 25.3
baz=119,SNR=10.0
BO02 Sierra Bellavi 56.49 156 IAmb IAmb 19 06 25.7
comp=Z,73nm,0.8s
CPUP Villa Florida 56.60 139 P **P** **19 06 23.7 -0.6**
comp=Z,54nm,1.1s,baz=326,slow=7.7,SNR=61
CPUP LR LR 19 30 59.8
comp=Z,149nm,18.2s,baz=324,slow=36
CPUP Villa Florida 56.60 139 IAmb IAmb 19 06 25.0
comp=Z,170nm,1.4s
CPUP Villa Florida 56.60 139 *e*P **P** **19 06 23.8 -0.5**
BDFB Brasilia 56.62 122 P **P** **19 06 25.6 +0.8**
comp=Z,35nm,0.8s,baz=291,slow=8.7,SNR=45
BDFB LR LR 19 33 33.4
comp=Z,154nm,18.8s,baz=307,slow=39
BDFB Brasilia 56.62 122 P **P** **19 06 24.9 +0.1**
BDFB pmax pmax
comp=Z,46nm,0.9s
BDFB Brasilia 56.62 122 P **P** **19 06 24.9 +0.1**
BDFB IAmb IAmb 19 06 26.3
comp=Z,46nm,0.9s
INK Inuvik 56.70 344 P **P** **19 06 24.8 +0.4**
INK *PP **pP** **19 06 51.2 -0.4**
INK *SP **sP** **19 07 04.2 0.0**
INK pmax pmax
comp=Z,110nm,0.9s
INK Inuvik 56.70 344 P **P** **19 06 24.8 +0.4**
INK pP **pP** **19 06 51.2 -0.4**
INK sP **sP** **19 07 04.2 0.0**
INK IAmb IAmb 19 07 05.9
comp=Z,110nm,0.9s
INK Inuvik 56.70 344 P 19 06 25.3
baz=134,SNR=25
K27K Chicken 56.72 337 IAmb IAmb 19 07 06.7
comp=Z,51nm,0.9s
K27K Chicken 56.72 337 P 19 06 26.4
baz=123,SNR=14
MENT Mentasta 56.76 336 P **P** **19 06 26.0 +0.9**
MENT pP **pP** **19 06 53.3 +1.0**
MENT sP **sP** **19 07 05.4 +0.6**
EGAK Eagle 56.80 338 P 19 06 26.0
baz=124,SNR=12
FID Port Fidalgo 56.85 333 P **P** **19 06 27.2 +1.6**
FID IAmb IAmb 19 06 59.9
comp=Z,160nm,1.2s
KLU Klutina 56.95 334 P **P** **19 06 27.4 +0.9**
KLU IAmb IAmb 19 07 09.5
comp=Z,51nm,0.9s
KLU Klutina 56.95 334 P 19 06 28.5
baz=118,SNR=12
PUH Pauahi 56.96 282 P **P** **19 06 27.4 +0.1**
KKO Keanakako`i 57.00 282 P **P** **19 06 28.2 +0.7**
NBPS Pedro II - PI 57.05 107 *e*P **P** **19 06 27.8 -0.1**
HARP HAARP 57.07 335 P 19 06 29.9
baz=119
ITRB Iturama 57.10 128 *e*P **P** **19 06 28.4 +0.3**
AIN Ainahou 57.19 282 P **P** **19 06 30.3 +1.4**
DOT Dot Lake 57.26 336 P **P** **19 06 29.8 +1.2**
DOT IAmb IAmb 19 07 02.2
comp=Z,98nm,1.4s
M24K Tolsona, Glenn 57.35 334 IAmb IAmb 19 07 54.7
comp=Z,120nm,1.2s
M24K Tolsona, Glenn 57.35 334 P 19 06 31.1
baz=118
SCRK Sand Creek 57.40 337 P 19 06 31.3
baz=121,SNR=16
PAX Paxson 57.47 335 IAmb IAmb 19 07 03.5
comp=Z,56nm,1.1s
PAX Paxson 57.47 335 P 19 06 31.4
baz=119,SNR=14
SDBA SAO IDESIDERIO 57.54 117 *e*P **P** **19 06 31.9 +0.7**
SFJD Kangerlussuaq 57.55 19 P **P** **19 06 29.9 -0.4**
comp=Z,22nm,0.6s,baz=228,slow=3.7,SNR=30
SFJD Kangerlussuaq 57.55 19 *i* P **P** **19 06 28.8 -1.6**
SFJD IAmb IAmb 19 06 31.4
comp=Z,18nm,0.8s
SFJD Kangerlussuaq 57.55 19 P **P** **19 06 29.7 -0.7**
SFJD pmax pmax
comp=Z,45nm,1.1s
SFJD Kangerlussuaq 57.55 19 P **P** **19 06 29.6 -0.7**
SFJD IAmb IAmb 19 06 30.9
comp=Z,45nm,1.1s
PCMB Pacaembu 57.59 130 *e*P **P** **19 06 31.4 0.0**
RES Resolute Bay 57.64 0 P **P** **19 06 30.8 -0.1**
comp=Z,11nm,0.7s,baz=189,slow=10,SNR=39
RES pP **pP** **19 06 57.5 -0.8**
comp=Z,29nm,0.8s,baz=193,slow=9.8,SNR=11
RES Resolute Bay 57.64 0 P **P** **19 06 30.7 -0.2**
RES pP **pP** **19 06 58.0 -0.3**
RES IAmb IAmb 19 06 59.5
comp=Z,34nm,0.8s
NBMO Morrinhos-CE 57.92 105 *e*P **P** **19 06 34.6 +0.7**
BI02 San Fabin de 57.95 158 P **P** **19 06 34.1 +0.4**
BI02 IAmb IAmb 19 06 35.9
comp=Z,114nm,1.1s
KNK Knik Glacier 58.01 333 P 19 06 35.7
baz=115
SML Sawmill 58.12 333 P 19 06 36.1
baz=115,SNR=10
WAT6 Susitna Watana 58.21 334 P 19 06 36.4
baz=116,SNR=24
GHO Glory Hole Cre 58.36 333 P **P** **19 06 37.2 +0.9**
GHO IAmb IAmb 19 07 18.0
comp=Z,57nm,0.9s
BRSE Bradley Lake S 58.38 331 P 19 06 37.5
baz=112
PMR Palmer 58.38 333 IAmb IAmb 19 07 17.9
comp=Z,35nm,0.9s
PMR Palmer 58.38 333 P 19 06 37.7
baz=114
RC01 Rabbit Creek A 58.44 332 P **P** **19 06 37.5 +0.7**
RC01 Rabbit Creek A 58.44 332 P 19 06 38.1
baz=114,SNR=8.9
BRLK Bradley Lake 58.45 331 IAmb IAmb 19 06 39.5

comp=Z,85nm,1.0s
CNPM China Poot 58.53 330 P **P** **19 06 38.8 +1.4**
CNPM IAmb IAmb 19 06 40.1
comp=Z,74nm,1.2s
KDAK Kodiak Island 58.59 328 P **P** **19 06 39.4 +1.5**
KDAK pmax pmax
comp=Z,56nm,1.2s
KDAK Kodiak Island 58.59 328 P **P** **19 06 39.4 +1.5**
KDAK IAmb IAmb 19 07 24.0
comp=Z,56nm,1.2s
KDAK Kodiak Island 58.59 328 P 19 06 39.4
baz=109
DY2G Dye2 58.66 21 *i* P **P** **19 06 37.9 -0.6**
DY2G IAmb IAmb 19 06 41.1
comp=Z,29nm,0.6s
FIS Fire Island 58.67 332 P **P** **19 06 40.5 +2.1**
WAT2 Susitna Watana 58.73 335 P 19 06 40.2
baz=116
HDA Harding Lake 58.74 336 P 19 06 39.6
baz=118,SNR=15
HDA P 19 06 39.6
baz=118,SNR=15
PRP Porcupine Dome 58.76 338 P **P** **19 06 39.8 +0.7**
PRP IAmb IAmb 19 07 59.4
comp=Z,43nm,0.9s
PRP Porcupine Dome 58.76 338 P 19 06 40.1
baz=120
OHAK Old Harbor 58.77 327 IAmb IAmb 19 07 29.8
comp=Z,96nm,1.4s
OHAK Old Harbor 58.77 327 P 19 06 40.8
baz=108
IL31 58.89 337 P **P** **19 06 40.1 +0.3**
IL31 IAmb IAmb 19 07 09.8
comp=Z,30nm,0.9s
ILAR Eielson Array 58.89 337 P **P** **19 06 40.5 +0.6**
comp=Z,12nm,1.0s,baz=125,slow=5.4,SNR=68
ILAR pP **pP** **19 07 07.7 +0.4**
comp=Z,17nm,0.8s,baz=114,slow=6.3,SNR=9.8
ILAR PKP2bc 19 36 19.9
comp=Z,1.3nm,1.0s,baz=303,slow=3.8,SNR=6.4
ILAR LR LR 19 36 46.2
comp=Z,141nm,18.3s,baz=128,slow=41
ILAR Eielson Array 58.89 337 P **P** **19 06 39.6 -0.2**
CAPN Captain Cook N 58.95 332 P 19 06 43.2
baz=112
PTGB Pitanga 58.98 134 *e*P **P** **19 06 40.3 -0.8**
SUA Susitna One 59.03 332 IAmb IAmb 19 07 14.8
comp=Z,113nm,1.2s
SUA Susitna One 59.03 332 P 19 06 42.6
baz=113,SNR=25
SII Sitkinak Islan 59.04 326 IAmb IAmb 19 06 43.6
comp=Z,90nm,1.0s
SII Sitkinak Islan 59.04 326 P 19 06 42.9
baz=107
FYU Fort Yukon 59.19 339 P **P** **19 06 42.6 +0.7**
FYU IAmb IAmb 19 07 15.9
comp=Z,123nm,1.6s
MCK McKinley 59.21 335 IAmb IAmb 19 07 23.5
comp=Z,77nm,1.2s
WRH Wood River Hil 59.21 336 IAmb IAmb 19 08 00.1
comp=Z,40nm,1.0s
MCK McKinley 59.21 335 P 19 06 43.1
baz=116,SNR=13
POKR Poker Plat Res 59.26 337 IAmb IAmb 19 08 00.5
comp=Z,66nm,1.1s
POKR Poker Plat Res 59.26 337 P 19 06 43.3
baz=118
BB19B Bebedouro 59.29 128 *e*P **P** **19 06 43.6 +0.3**
COLA College 59.30 337 *i* P **P** **19 06 42.9 +0.3**
COLA pmax pmax
comp=Z,26nm,0.9s
COLA College 59.30 337 P **P** **19 06 42.7 +0.1**
COLA pP **pP** **19 07 09.6 -0.5**
COLA sP **sP** **19 07 21.7 -0.8**
COLA IAmb IAmb 19 08 01.0
comp=Z,70nm,0.9s
COLA College 59.30 337 P 19 06 44.0
baz=118
TCOL CIGO, UAF Yank 59.31 337 P **P** **19 06 42.8 +0.2**
TCOL IAmb IAmb 19 08 01.0
comp=Z,66nm,0.9s
TCOL CIGO, UAF Yank 59.31 337 P 19 06 43.8
baz=118
JANB Januaria 59.35 120 *e*P **P** **19 06 44.3 +0.5**
MDM Murphy Dome 59.49 337 IAmb IAmb 19 08 02.0
comp=Z,66nm,1.4s
SKT Skwentna 59.58 333 P **P** **19 06 45.2 +0.5**
SKT IAmb IAmb 19 06 46.8
comp=Z,74nm,1.2s
SKT Skwentna 59.58 333 P 19 06 45.9
baz=112,SNR=27
SPCR Spurr Chakacha 59.59 332 P 19 06 46.0
baz=111,SNR=14
TRF Thorofare Moun 59.64 335 P **P** **19 06 46.0 +0.7**
TRF Thorofare Moun 59.64 335 P 19 06 46.4
baz=114,SNR=46
NEA2 Nenana 59.64 336 P 19 06 45.5
baz=116,SNR=10
NBCL Cascavel-CE 59.88 105 *e*P **P** **19 06 48.5 +1.0**
FRTB Faura 59.89 131 *e*P **P** **19 06 47.2 -0.2**
KTH Kantishna Hill 59.94 335 IAmb IAmb 19 07 20.4
comp=Z,85nm,1.0s
UPNV Upernavik 60.00 12⇑ *i* P **P** **19 06 47.6 +0.3**
UPNV IAmb IAmb 19 06 50.9
comp=Z,20nm,0.7s
UPNV *i* 19 07 14.8
I23K Minto, Yukon-K 60.00 337 P **P** **19 06 48.0 +0.6**
I23K IAmb IAmb 19 07 29.0
comp=Z,69nm,0.8s
I23K Minto, Yukon-K 60.00 337 P 19 06 48.7
baz=116,SNR=26
BPAW Bear Paw Mtn. 60.19 335 P **P** **19 06 49.0 +0.2**
BPAW IAmb IAmb 19 07 29.9
comp=Z,54nm,0.8s
BPAW Bear Paw Mtn. 60.19 335 P 19 06 49.6
baz=114,SNR=27
PPLA Purkeypile 60.21 334 IAmb IAmb 19 08 05.1
comp=Z,96nm,1.0s
PPLA Purkeypile 60.21 334 P 19 06 49.8
baz=112,SNR=7.0
MLY Manley 60.48 336 IAmb IAmb 19 07 32.1
comp=Z,72nm,1.0s
MLY Manley 60.48 336 P 19 06 51.7
baz=115,SNR=51
ITAB Concordia 60.59 136 *e*P **P** **19 06 52.0 +0.1**
CHUM Lake Minchumin 60.64 335 P 19 06 52.3
baz=112,SNR=7.9
NBMA Muriti-CE 60.68 109 *e*P **P** **19 06 53.8 +0.8**
ISOG Isortoq, Green 60.83 23 *i* **P** **19 06 53.0 0.0**
RCLB Rio Claro- Sao 60.83 129 *e*P **P** **19 06 54.4 +0.6**
VAH Vaihoa 61.00 241 *e*P **P** **19 06 56.5 +1.5**
comp=Z,105nm,1.2s
VAH *e*pP **pP** **19 07 28.5 +5.6**
comp=Z,61nm,1.3s
TULEG Thule 61.02 7 *i* P **P** **19 06 54.5 +0.3**
TULEG *i* P **pP** **19 07 21.0 -0.8**
TULEG *i* 19 07 22.2
TULEG Thule 61.02 7 IAmb IAmb 19 07 23.5
comp=Z,66nm,0.9s
COLD Coldfoot 61.23 339 P **P** **19 06 56.9 +1.1**
COLD pP **pP** **19 07 24.9 +1.5**
COLD sP **sP** **19 07 36.3 +0.5**
COLD Coldfoot 61.23 339 P 19 06 57.4
baz=116,SNR=12
ANGG Ammassalik, Gr 61.37 23 *i* P **P** **19 06 55.6 -1.0**
ANGG IAmb IAmb 19 06 57.3
comp=Z,49nm,0.7s
LL04 Puerto Octay 61.38 161 P **P** **19 06 56.7 -0.3**
TIJ01 Guaruva-PR 61.51 132 *e*P **P** **19 07 01.0 +2.6**
NBPA Parau_RN 61.55 106 *e*P **P** **19 06 59.9 +1.1**
LL03 Petrohue 61.59 161 IAmb IAmb 19 07 09.4
comp=Z,90nm,0.9s
VAO Valinhos 61.60 129 *e*P **P** **19 06 59.3 +0.3**
SPB Sao Paulo 61.60 130 P **P** **19 06 58.7 -0.2**
SPB IAmb IAmb 19 07 27.2
comp=Z,107nm,0.9s
SPB Sao Paulo 61.60 130 *e*P **P** **19 06 59.1 +0.3**
TOLK Toolik Lake Re 61.67 340 P **P** **19 06 59.3 +0.5**
TOLK IAmb IAmb 19 07 40.4
comp=Z,48nm,1.0s
TOLK Toolik Lake Re 61.67 340 P 19 07 00.0
baz=118,SNR=17
PLCA Paso Flores 61.84 159 P **P** **19 07 01.1 +0.9**
comp=Z,152nm,0.9s,baz=332,slow=8.0,SNR=233
PLCA LR LR 19 27 39.0
comp=Z,150nm,20.9s,baz=349,slow=30

PLCA Paso Flores 61.84 159 P **P** **19 07 01.0 +0.8**
PLCA pmax pmax
comp=Z,207nm,1.0s
PLCA Paso Flores 61.84 159 P **P** **19 07 01.0 +0.8**
PLCA Paso Flores 61.84 159 *e*P **P** **19 07 01.2 +0.9**
TTA Tatalina 61.86 333 P **P** **19 06 59.8 -0.4**
TTA pmax pmax
comp=Z,37nm,1.0s
TTA Tatalina 61.86 333 P **P** **19 06 59.8 -0.4**
TTA Tatalina 61.86 333 P 19 07 00.5
baz=108,SNR=29
CPSB Cacapava Do Su 61.89 139 *e*P **P** **19 07 00.5 -0.2**
NBTA Tacaratu-PE 62.04 110 *e*P **P** **19 07 02.9 +0.9**
BSCB Bom Sucesso 62.13 126 *e*P **P** **19 07 03.5 +0.9**
PET01 Itanhaem-SP 62.13 130 *e*P **P** **19 07 02.8 +0.4**
ICESG Greenland Ices 62.15 20 *i* P **P** **19 07 01.9 -0.4**
ICESG IAmb IAmb 19 07 02.6
comp=Z,49nm,0.8s
SDPT Sand Point 62.20 324 IAmb IAmb 19 07 04.1
comp=Z,72nm,0.9s
SDPT Sand Point 62.20 324 P 19 07 03.5
baz=100
NBLI Livramento-PB 62.33 108 *e*P **P** **19 07 05.3 +1.2**
PAGU Agualva, Azore 62.37 55 *e*P **P** **19 07 03.1 -0.8**
comp=Z,176nm,0.9s
MEH Mehetia 62.69 239 *e*P **P** **19 07 07.5 +1.2**
comp=Z,34nm,1.1s
RCBR Riachuelo 62.69 106 P **P** **19 07 07.0 +0.5**
RCBR pmax pmax
comp=Z,141nm,1.0s
RCBR Riachuelo 62.69 106 P **P** **19 07 07.0 +0.5**
RCBR IAmb IAmb 19 07 09.0
comp=Z,141nm,1.0s
RCBR Riachuelo 62.69 106 *e*P **P** **19 07 07.8 +1.4**
GDU01 Guandu, BA 62.72 116 *e*P **P** **19 07 07.4 +0.9**
PLTB Pedras Altas 62.73 141 *e*P **P** **19 07 06.4 +0.1**
PARB Paraibuna 62.80 128 *e*P **P** **19 07 07.7 +0.7**
CNLB Canela 62.80 137 *e*P **P** **19 07 06.6 -0.3**
LL07 Hotel Espejo d 62.81 162 P **P** **19 07 07.8 +1.2**
NBLA Lagarto - SE 63.07 112 *e*P **P** **19 07 09.4 +0.5**
EUNU Eureka 63.16 2 P **P** **19 07 08.9 +0.4**
EUNU IAmb IAmb 19 07 38.3
comp=Z,125nm,1.1s
NBIT Itapeh - BA 63.40 117 *e*P **P** **19 07 12.1 +1.1**
TER01 Tubaro-SC 63.44 135 *e*P **P** **19 07 11.7 +0.6**
NBPV Pedro Velho 63.48 106 *e*P **P** **19 07 11.4 -0.2**
ESAR Angra dos Reis 63.51 127 *e*P **P** **19 07 13.1 +1.5**
CMC01 Camacan, BA 63.53 117 *e*P **P** **19 07 12.3 +0.5**
TIAR Tiarei 63.58 240 *e*P **P** **19 07 13.0 +0.8**
comp=Z,15nm,0.9s
LL02 Futaleuf 63.63 161 P **P** **19 07 12.7 +0.8**
LL02 IAmb IAmb 19 07 14.1
comp=Z,174nm,1.1s
CMLA Cha da Macela 63.70 56 *e*P **P** **19 07 13.7 +1.0**
comp=Z,237nm,1.0s
CMLA Cha da Macela 63.70 56 P **P** **19 07 13.8 +1.0**
CMLA pmax pmax
comp=Z,177nm,0.9s
CMLA Cha da Macela 63.70 56 P **P** **19 07 13.8 +1.1**
CMLA Cha da Macela 63.70 56 P 19 07 14.7
PPT Papeete 63.77 240 LR LR 19 28 03.7
comp=Z,131nm,21.3s,baz=53,slow=29
SJMB Sao Joao De Ma 63.78 121 *e*P **P** **19 07 14.3 +0.9**
MAN01 Angra dos Reis 63.79 127 *e*P **P** **19 07 14.7 +1.2**
PPT2 Papeete2 63.79 240 *e*S **S** **19 15 38.0 -2.1**
comp=Z,370nm,25.2s
PPT2 Papeete2 63.79 240 *e*LR LR 19 26 22.2
comp=Z,1µm,32.0s
FALS False Pass 63.79 323 P 19 07 13.6
baz=98
PAE Paea 63.83 240 *e*P **P** **19 07 14.9 +1.1**
comp=Z,19nm,1.1s
VAS01 Vassouras-RJ 63.87 126 *e*P **P** **19 07 14.8 +0.8**
NBAN Anadia - AL 63.87 110 *e*P **P** **19 07 15.2 +1.1**
BART Pico Bartolome 63.98 56 *e*P **P** **19 07 14.8 +0.1**
comp=Z,379nm,1.0s
PSMA Santa Maria 64.04 57 *e*P **P** **19 07 14.7 -0.2**
comp=Z,166nm,1.5s
PSMN Pico do Norte, 64.09 57 *e*P **P** **19 07 14.5 -0.8**
comp=Z,103nm,1.3s
SUMG Summit 64.10 16 *i* P **P** **19 07 15.6 +0.3**
SUMG Summit 64.10 16 P **P** **19 07 14.9 -0.3**
SUMG pmax pmax
comp=Z,50nm,0.8s
SUMG Summit 64.10 16 P **P** **19 07 14.9 -0.3**
SUMG IAmb IAmb 19 07 44.6
comp=Z,50nm,0.8s
BSFB Barra de Sao F 64.12 121 *e*P **P** **19 07 16.8 +1.1**
NEEM North Greenlan 64.21 10⇑ *i* P **P** **19 07 16.2 +0.5**
NEEM IAmb IAmb 19 07 17.0
comp=Z,78nm,1.0s
NEEM *i* 19 07 44.3
NAN01 Guarapari, ES 64.22 120 *e*P **P** **19 07 17.4 +1.0**
NBRF Rio Formoso - 64.50 109 *e*P **P** **19 07 19.6 +1.3**
RIB01 Linhares ES 64.73 122 *e*P **P** **19 07 20.4 +0.7**
A21K Barrow 65.00 342 IAmb IAmb 19 08 08.1
comp=Z,63nm,0.9s
A21K Barrow 65.00 342 P 19 07 21.7
baz=112
CAM01 Campos-RJ 65.01 125 *e*P **P** **19 07 22.6 +1.1**
ALF01 Guarapari-ES 65.12 123 *e*P **P** **19 07 23.1 +1.0**
RDOG Red Dog Mine 66.07 338 P **P** **19 07 28.2 +0.6**
RDOG Red Dog Mine 66.07 338 P 19 07 28.3
baz=104
ANM Nome 66.30 334 IAmb IAmb 19 08 03.6
comp=Z,103nm,1.8s
ANM Nome 66.30 334 P 19 07 30.3
baz=100,SNR=9.8
TBI Tubuai 66.64 235 *e*S **S** **19 16 13.5 -1.1**
comp=Z,300nm,28.5s
TBI Tubuai 66.64 235 *e*LR LR 19 27 42.3
comp=Z,660nm,31.5s
TNA Tin City 67.53 335 P 19 07 37.9
baz=98
SCO Scoresbysund 68.40 20 *i* P **P** **19 07 42.6 +0.5**
SCO IAmb IAmb 19 07 45.7
comp=Z,12nm,0.8s
SCO Scoresbysund 68.40 20 P **P** **19 07 42.0 -0.2**
SCO pmax pmax
comp=Z,15nm,0.6s
SCO Scoresbysund 68.40 20 P **P** **19 07 42.0 -0.2**
DBG Daneborg 69.59 16 *i* P **P** **19 07 47.8 -1.6**
DBG IAmb IAmb 19 07 50.5
comp=Z,9.2nm,1.0s
DBG *i* 19 08 17.9
DAG Danmarks Havn 70.39 14 *i* P **P** **19 07 53.9 -0.5**
DAG IAmb IAmb 19 07 54.9
comp=Z,24nm,0.8s
DAG *i* 19 08 23.4
DAG Danmarks Havn 70.39 14 *i* P **P** **19 07 53.8 -0.5**
DAG *i* 19 08 23.3
DAG pmax pmax
comp=Z,24nm,0.8s
GO09 Cerro Castillo 70.88 165 P **P** **19 07 58.9 +1.3**
GO09 IAmb IAmb 19 08 00.5
comp=Z,113nm,1.2s
PMOZ Porto Moniz, M 70.92 61 *e*P **P** **19 08 00.5 +2.0**
comp=Z,116nm,1.5s
PMOZ *e*S S 19 17 14.6 +9.3
PMOZ Porto Moniz, M 70.92 61 P **P** **19 07 59.4 +0.9**
PMAR Madeira 71.17 61 *e*P **P** **19 08 02.2 +2.1**
comp=Z,117nm,1.3s
NOR Nord 71.53 9⇑ *i* P **P** **19 08 01.6 +0.4**
NOR IAmb IAmb 19 08 04.6
comp=Z,16nm,0.8s
NOR *i* 19 08 30.9
NOR Nord 71.53 9⇑ *i* P **P** **19 08 01.6 +0.4**
NOR *i* 19 08 30.8
NOR pmax pmax
comp=Z,16nm,0.8s
ADK Adak 71.64 320 P **P** **19 08 02.4 0.0**
ADK pmax pmax
comp=Z,105nm,0.9s
ADK Adak 71.64 320 P **P** **19 08 02.4 0.0**
ADK IAmb IAmb 19 08 03.4
comp=Z,105nm,0.8s
GO10 Punta Arenas 72.93 165 IAmb IAmb 19 08 12.8
comp=Z,135nm,1.0s
RAR Rarotonga 73.98 241 P **P** **19 08 16.7 +0.1**
comp=Z,32nm,0.8s,baz=198,slow=5.8,SNR=8.5
RAR Rarotonga 73.98 241 P **P** **19 08 17.9 +1.3**
RAR pmax pmax
comp=Z,135nm,1.6s
RAR Rarotonga 73.98 241 P **P** **19 08 17.9 +1.3**
RAR IAmb IAmb 19 08 19.2

comp=Z,135nm,1.6s
EFI East Falkland 75.66 157 *ce* P **P** **19 08 26.1 +0.5**
EFI pmax pmax
comp=Z,40nm,0.7s
EFI East Falkland 75.66 157 P **P** **19 08 26.5 +0.9**
LAWE Loch Awe, Argy 75.80 35 *eP* **P** **19 08 26.4 -0.2**
LAWE IAmb IAmb 19 08 27.5
comp=Z,54nm,1.0s
GMM Mts of Mourne 75.82 37 *eP* **P** **19 08 26.6 0.0**
MDO Dochfour 76.16 34 *eP* **P** **19 08 28.9 +0.3**
PMAFR Mafra 76.24 53 *eP* **P** **19 08 30.5 +1.1**
comp=Z,210nm,1.1s
PMAFR *eS* **S** **19 18 04.7 -0.2**
PMST Lisbon--Monsan 76.36 53 *eP* **P** **19 08 31.0 +0.9**
comp=Z,287nm,1.2s
PGBU Glenifferbraes 76.38 36 *eP* **P** **19 08 29.4 -0.5**
PGBU IAmb IAmb 19 08 30.8
comp=Z,142nm,1.2s
LIS Lisbon 76.39 53 *eP* **P** **19 08 30.4 +0.2**
LIS IAmb IAmb 19 08 32.6
comp=Z,265nm,1.1s
LIS Lisbon 76.39 53 *eP* **P** **19 08 30.4 +0.2**
EAB Aberfoyle 76.39 35 *eP* **P** **19 08 30.0 +0.1**
PGAV Gavieira, Arco 76.44 50 *eP* **P** **19 08 31.0 +0.4**
comp=Z,95nm,1.4s
PGAV *eS* **S** **19 18 10.1 +3.0**
PSBE So Bento 76.51 53 *eP* **P** **19 08 32.0 +1.0**
comp=Z,141nm,1.9s
PSBE *eS* **S** **19 18 10.7 +2.9**
INVG Invergeldie, C 76.51 35 *eP* **P** **19 08 30.4 -0.2**
INVG IAmb IAmb 19 08 33.9
comp=Z,30nm,0.6s
KBS Kingsbay 76.58 11 P **P** **19 08 31.9 +1.3**
KBS **pP** **19 09 01.7 +2.4**
KBS IAmb IAmb 19 09 03.3
comp=Z,124nm,0.8s
PCAS Casmilo, Conde 76.63 52 *eP* **P** **19 08 32.7 +1.1**
comp=Z,418nm,1.1s
PCAS *eS* **S** **19 18 08.2 -0.9**
NEWG New Galloway 76.65 36 *eP* **P** **19 08 32.2 +0.9**
NEWG IAmb IAmb 19 08 32.5
comp=Z,85nm,1.2s
PCAB Cabril 76.67 50 *eP* **P** **19 08 32.3 +0.5**
comp=Z,117nm,1.0s
COI Coimbra 76.67 52 *eP* **P** **19 08 32.8 +1.0**
comp=Z,264nm,1.8s
COI *eS* **S** **19 18 08.2 -1.2**
COI Coimbra 76.67 52 IAmb IAmb 19 08 33.8
comp=Z,196nm,1.0s
MCD Coleburn Disti 76.72 34 *eP* **P** **19 08 32.3 +0.6**
POLO Lamas de Olo 76.90 51 *eP* **P** **19 08 33.8 +0.6**
comp=Z,76nm,1.2s
POLO *eS* **S** **19 18 12.6 +0.4**
RSBS Rosebush, Pemb 76.94 39 *eP* **P** **19 08 32.5 -0.6**
RSBS IAmb IAmb 19 08 34.0
comp=Z,75nm,0.9s
PTEO Sao Teotonio 76.95 55 *eP* **P** **19 08 34.4 +1.0**
comp=Z,312nm,1.4s
PFVI Vila Bisbo 76.95 55 *eP* **P** **19 08 34.7 +1.3**
comp=Z,267nm,1.2s
PFVI Vila Bisbo 76.95 55 P 19 08 35.4
PVIS Viseu 76.95 51 *eP* **P** **19 08 34.4 +0.9**
comp=Z,187nm,0.8s
PVRL Vila Real 76.98 51 *eP* **P** **19 08 34.3 +0.7**
comp=Z,128nm,1.3s
PMTG Montargil 77.03 53 *eP* **P** **19 08 34.5 +0.7**
comp=Z,213nm,0.8s
PMTG *eS* **S** **19 18 13.8 +0.4**
MORF Marmelete 77.05 55 *eP* **P** **19 08 34.3 +0.2**
MORF IAmb IAmb 19 08 36.0
comp=Z,104nm,0.9s
MORF *eS* **S** **19 18 14.0 +0.1**
MORF Marmelete 77.05 55 *eP* **P** **19 08 34.3 +0.2**
MORF *eS* **S** **19 18 14.0 +0.1**
MORF Marmelete 77.05 55 *eP* **P** **19 08 34.7 +0.6**
comp=Z,143nm,1.1s
MORF *eS* **S** **19 18 15.8 +1.9**
ESK Eskdalemuir 77.19 36 P **P** **19 08 34.3 -0.1**
ESK pmax pmax
comp=Z,51nm,0.8s
ESK Eskdalemuir 77.19 36 P **P** **19 08 34.3 -0.1**
ESK IAmb IAmb 19 08 36.1
comp=Z,51nm,0.8s
DRUM Mains of Drumt 77.26 34 *eP* **P** **19 08 34.9 +0.1**
DRUM IAmb IAmb 19 08 36.4
comp=Z,70nm,0.6s
MTE Manteigas 77.28 51 *eP* **P** **19 08 36.0 +0.7**
comp=Z,256nm,0.8s
HTL Hartland 77.28 40 *eP* **P** **19 08 35.2 +0.2**
HTL IAmb IAmb 19 08 36.7
comp=Z,60nm,0.9s
EVO Evora 77.30 53 *eP* **P** **19 08 36.2 +0.8**
comp=Z,157nm,1.4s
ESY Stoneypath 77.39 35 *eP* **P** **19 08 36.2 +0.6**
PCBR Castelo Branco 77.44 52 *eP* **P** **19 08 36.5 +0.4**
comp=Z,253nm,1.2s
PCVE Castro Verde 77.46 54 *eP* **P** **19 08 37.2 +0.9**
comp=Z,145nm,1.5s
MVO Moncorvo 77.51 51 *eP* **P** **19 08 37.1 +0.5**
comp=Z,200nm,1.2s
MVO *eS* **S** **19 18 21.4 +2.7**
PBEJ Beja 77.52 54 *eP* **P** **19 08 37.6 +1.0**
comp=Z,47nm,0.9s
BILL Bilibino 77.54 338 *c iP* **P** **19 08 37.2 +1.1**
BILL *e* 19 08 44.8
BILL *e**PP **pP** **19 09 05.4 +0.5**
BILL *e**SP **sP** **19 09 17.4 +0.4**
BILL *e* 19 11 32.6
BILL pmax pmax
comp=Z,32nm,0.8s
BILL Bilibino 77.54 338 P **P** **19 08 36.7 +0.5**
PESTR Estremoz 77.56 53 *eP* **P** **19 08 37.4 +0.6**
comp=Z,142nm,1.0s
PESTR *eS* **S** **19 18 18.5 -0.7**
PESTR Estremoz 77.56 53 IAmb IAmb 19 08 38.5
comp=Z,54nm,0.8s
PESTR Estremoz 77.56 53 P 19 08 38.4
PBRG Braganca 77.59 50 *eP* **P** **19 08 37.6 +0.6**
comp=Z,131nm,1.8s
PMRV Marv??o 77.59 52 *eP* **P** **19 08 36.9 -0.1**
comp=Z,210nm,1.0s
PMRV *eS* **S** **19 18 18.8 -0.7**
PBDV Barranco-do-Ve 77.63 55 *eP* **P** **19 08 38.6 +1.3**
comp=Z,169nm,1.4s
PBDV *eS* **S** **19 18 22.5 +2.5**
PVAQ Vaqueiros 77.76 54 *eP* **P** **19 08 38.8 +0.8**
comp=Z,166nm,1.5s
PVAQ *eS* **S** **19 18 22.4 +1.0**
PVAQ Vaqueiros 77.76 54 IAmb IAmb 19 08 40.2
comp=Z,110nm,0.9s
PVAQ Vaqueiros 77.76 54 P 19 08 39.3
EDMD Edmundbyers 77.99 36 *eP* **P** **19 08 39.2 +0.4**
EDMD IAmb IAmb 19 08 40.8
comp=Z,84nm,0.8s
MCH1 Michaelchurch 77.99 39 *eP* **P** **19 08 38.8 -0.1**
MCH1 IAmb IAmb 19 08 39.9
comp=Z,29nm,0.8s
PBAR Barrancos 78.12 54 *eP* **P** **19 08 40.8 +0.9**
comp=Z,130nm,1.6s
MONM Monmouth 78.14 39 *eP* **P** **19 08 39.8 +0.1**
MONM IAmb IAmb 19 08 41.0
comp=Z,84nm,1.0s
STRD Stroud 78.54 39 *eP* **P** **19 08 42.5 +0.6**
STRD IAmb IAmb 19 08 43.3
comp=Z,101nm,0.9s
OUK Oukaimeden 79.00 61 P 19 08 47.0
ZHG ZHG 79.49 58 P 19 08 49.0
HORN Hornachuelos 79.57 54 P 19 08 49.2
RSA Sarsar 79.82 57 P 19 08 51.0
FOO Floro 79.86 29 *eP* **P** **19 08 49.8 +0.9**
PAB San Pablo 79.86 52 P **P** **19 08 50.0 +0.5**
PAB pmax pmax
comp=Z,116nm,0.8s
PAB San Pablo 79.86 52 P **P** **19 08 50.0 +0.5**
PAB IAmb IAmb 19 08 51.8
comp=Z,116nm,0.8s
PAB San Pablo 79.86 52 P 19 08 51.2
SUE Sulen 79.89 29 *eP* **P** **19 08 50.1 +1.1**
SMIR Smir Dam 79.98 56 P 19 08 52.0
OUZM OUZ 79.99 61 P 19 08 52.0
ESDC Sonseca Array 80.12 52 P **P** **19 08 51.9 +1.0**
comp=Z,82nm,1.0s,baz=292,slow=5.6,SNR=359
ESDC PKKPbc **PKKPbc** **19 27 35.3 +0.7**
comp=Z,0.4nm,0.7s,baz=53,slow=1.0,SNR=5.3
ESDC LR LR 19 42 50.1
comp=Z,202nm,18.2s,baz=270,slow=34
ESDC Sonseca Array 80.12 52 P **P** **19 08 51.5 +0.6**
ESDC IAmb IAmb 19 08 53.2
comp=Z,68nm,0.9s
ESBB Sonseca Array 80.12 52 IAmb IAmb 19 08 53.1
comp=Z,91nm,0.9s
CHEFC Chefchaouen 80.15 56 P 19 08 54.0
BER Bergen 80.36 30 *eP* **P** **19 08 53.7 +2.1**
HYA Hoyanger 80.52 29 *eP* **P** **19 08 53.6 +1.2**
AKN Aaknes 80.56 28 *eP* **P** **19 08 53.9 +1.1**
KMY Karmoy 80.67 31 *eP* **P** **19 08 54.8 +1.5**
LCRM LCR 80.88 58 P 19 08 57.0
CZD Col de Zad 80.89 58 P 19 08 58.0
N2VA Vr_y 80.90 22 *eP* **P** **19 08 54.2 -0.1**
LOF Lofoten 81.02 21 *eP* **P** **19 08 56.2 +1.2**
TZRR Tazzarine 81.02 61 P 19 08 58.0
ODD1 Odda 81.12 30 *eP* **P** **19 08 56.9 +1.2**
ZGR Zagora 81.14 61 P 19 08 59.0
BLS5 Blasjo 81.19 30 *eP* **P** **19 08 57.7 +1.6**
PALE Palemas 81.23 56 P 19 08 59.0
MDT Midelt 81.30 58 P 19 08 59.0
DOMB Dombas 81.53 28 *eP* **P** **19 08 59.6 +1.8**
SESP Santiago Espad 81.58 53 P 19 09 00.5
NBB15 Halsa Church 81.58 22 *eP* **P** **19 08 56.7 -1.3**
TBLU Trondheim 81.61 26 *eP* **P** **19 08 59.1 +0.9**
SKAR Skarslia 81.65 29 *eP* **P** **19 08 59.8 +1.3**
STEI Steigen 81.68 21 *eP* **P** **19 09 00.0 +1.5**
NSS Namsos 81.84 25 *eP* **P** **19 09 00.8 +1.4**
SNART Snartemo 81.91 31 *eP* **P** **19 09 01.4 +1.5**
ARF Arif 81.97 60 P 19 09 03.0
GOG Mont Gurugu 81.98 56 P 19 09 02.1
TRO Tromso 82.12 19 *eP* **P** **19 09 02.3 +1.5**
MOR8 Moi Rana 82.14 23 *eP* **P** **19 09 02.6 +1.7**
TAF Taforalt 82.55 56 P 19 09 06.1
JBK JBK 82.55 56 P 19 09 05.1
NC204 NORSAR Array S 82.56 28 P **P** **19 09 03.5 +0.2**
HOMB Homborsund 82.58 31 *eP* **P** **19 09 05.1 +1.7**
JETT Jettan, Norway 82.61 19 *eP* **P** **19 09 05.2 +1.7**
NBO00 NORSAR Array S 82.66 28 IAmb IAmb 19 09 34.0
comp=Z,71nm,0.9s
NAO01 NORSAR Array S 82.78 28 IAmb IAmb 19 09 35.7
comp=Z,70nm,1.1s
SNF Seneffe 82.79 39 *dP* **P** **19 09 03.4 -1.2**
NB2 NORSAR Subarra 82.85 28 P **P** **19 09 06.1 +1.3**
baz=293,slow=5.3
NOA NORSAR Array B 82.85 28 P **P** **19 09 06.2 +1.4**
comp=Z,8.3nm,0.7s,baz=292,slow=5.2,SNR=40
NOA pP **pP** **19 09 34.1 +0.2**
comp=Z,22nm,0.8s,baz=292,slow=5.2,SNR=12
NOA LR LR 19 45 18.4
comp=Z,83nm,21.1s,baz=295,slow=35
NB201 NORSAR Array S 82.88 28 P **P** **19 09 05.3 +0.3**
NB201 **pP** **19 09 33.9 -0.1**
NB201 IAmb IAmb 19 09 35.7
comp=Z,60nm,0.9s
HAMF Hammerfest 83.02 17 *eP* **P** **19 09 07.5 +2.1**
OSL Oslo 83.04 29 *eP* **P** **19 09 06.9 +1.2**
NC405 NORSAR Array S 83.05 28 P **P** **19 09 07.1 +1.3**
NC405 pP **pP** **19 09 34.5 -0.3**
NC405 IAmb IAmb 19 09 36.4
comp=Z,74nm,0.9s
DOU Dourbes 83.11 40 *dP* **P** **19 09 06.9 +0.6**
DOU *dpP* **pP** **19 09 34.8 -0.5**
NC602 NORSAR Array S 83.12 28 IAmb IAmb 19 09 37.0
comp=Z,66nm,0.9s
NC602 NORSAR Array S 83.12 28 *eP* **P** **19 09 07.5 +1.4**
BMRD Maredsous 83.15 40 *dP* **P** **19 09 06.3 -0.2**
BMRD *dpP* **pP** **19 09 35.0 -0.6**
BGES Gesves 83.32 39 *dP* **P** **19 09 08.2 +0.8**
BGES *dPcP* **PcP** **19 09 11.1 -0.5**
BGES *dpP* **pP** **19 09 36.0 -0.5**
BGES *dx* x 19 09 40.3
TDRA Tendrara 83.33 58 P 19 09 10.0
BCLA Clavier 83.44 39 *dP* **P** **19 09 08.6 +0.6**
BCLA *dpP* **pP** **19 09 36.3 -0.8**
RCHB Rochefort 83.48 40 *dPcP* **PcP** **19 09 11.6 -0.7**
RCHB *dx* x 19 09 40.3
BSTI Sart Tilman 83.54 39 *dP* **P** **19 09 09.8 +1.2**
KTK1 Kautokeino 83.76 19 *eP* **P** **19 09 10.7 +1.4**
MEM Membach 83.80 39 *dPcP* **PcP** **19 09 12.8 -0.9**
MEM *dx* x 19 09 42.9
BTNL Ternell 83.88 39 *dx* x 19 09 41.5
BHOU Houvegnez 83.88 39 *dP* **P** **19 09 11.8 +1.5**
ARA0 ARCESS Array S 84.15 18 *eP* **P** **19 09 12.5 +1.3**
ARCES ARCESS Array B 84.15 18 P **P** **19 09 12.4 +1.2**
comp=Z,14nm,0.8s,baz=301,slow=4.7,SNR=58
ARCES pP **pP** **19 09 40.3 -0.1**
comp=Z,24nm,0.8s,baz=300,slow=5.1,SNR=8.2
ARCES PKKP **PKKPdf** **19 27 18.8 +2.0**
comp=Z,2.5nm,0.9s,baz=132,slow=1.3,SNR=5.6
ARCES LR LR 19 48 25.4
comp=Z,171nm,19.5s,baz=265,slow=37
ARCES ARCESS Array B 84.15 18 P **P** **19 09 12.7 +1.5**
WLF Walferdange 84.20 40 *dP* **P** **19 09 13.3 +1.5**
WLF Walferdange 84.20 40 P **P** **19 09 13.0 +1.1**
WLF pmax pmax
comp=Z,25nm,0.8s
WLF Walferdange 84.20 40 P **P** **19 09 13.0 +1.1**
WLF Walferdange 84.20 40 *eP* **P** **19 09 13.1 +1.2**
comp=Z,32nm,0.9s,baz=290,slow=5.2
IBBN Ibbenburen 84.26 37 *eP* **P** **19 09 13.2 +1.1**
comp=Z,34nm,1.0s,baz=290,slow=5.2
BUG Bochum--Univer 84.27 38 *eP* **P** **19 09 13.4 +1.2**
comp=Z,54nm,1.5s,baz=290,slow=5.2
AHRW Bad Neuenahr-A 84.47 39 *eP* **P** **19 09 14.7 +1.6**
comp=Z,52nm,1.1s,baz=290,slow=5.2
SSB Saint Sauveur 84.60 44 P **P** **19 09 14.8 +0.7**
SSB pmax pmax
comp=Z,21nm,0.8s
SSB Saint Sauveur 84.60 44 P **P** **19 09 14.8 +0.7**
SEY Seymchan 84.77 335 P **P** **19 09 14.9 +0.5**
comp=Z,11nm,1.0s,baz=90,slow=5.5
SEY pP **pP** **19 09 44.6 +1.0**
comp=Z,19nm,0.8s,baz=88,slow=4.9,SNR=4.8
EANR 'Ain N'Sour 84.98 54 P **P** **19 09 18.9 +2.7**
KASTN Kahler Asten 85.03 38 *eP* **P** **19 09 17.1 +1.0**
comp=Z,27nm,1.1s,baz=290,slow=5.2
BSEG Bad Segeberg 85.10 35 *eP* **P** **19 09 18.0 +1.8**
comp=Z,28nm,1.3s,baz=290,slow=5.2
BSEG *epP* **pP** **19 09 45.1 -0.3**
ECHA Ech Chlef 85.13 54 P **P** **19 09 18.2 +1.4**
EBNR Beni Rached 85.21 54 P **P** **19 09 14.3 -3.0**
ETRT Tiaret 85.31 55 P **P** **19 09 20.3 +2.4**
TNS Taunus Mts 85.40 39 *eP* **P** **19 09 19.3 +1.4**
comp=Z,59nm,1.0s,baz=290,slow=5.2
NRDL Niedersach Rie 85.53 36 *epP* pP 19 09 48.0 +0.4
GTTG Gottingen 85.81 37 *eP* **P** **19 09 21.2 +1.3**
comp=Z,32nm,1.0s,baz=290,slow=5.2
GTTG *epP* **pP** **19 09 48.9 -0.2**
CLZ Clausthal 85.93 37 *eP* **P** **19 09 22.6 +2.1**
comp=Z,18nm,1.0s,baz=290,slow=5.2
CLZ *epP* **pP** **19 09 49.6 -0.1**
PET Petropavlovsk 85.98 324 *ceP* **P** **19 09 21.5 +0.8**
PET pmax pmax
comp=Z,26nm,1.3s
ASSE Asse, Remlinge 85.99 37 *eP* **P** **19 09 22.0 +1.4**
comp=Z,11nm,0.9s,baz=290,slow=5.2
BFO Black Forest 86.01 41 P **P** **19 09 20.9 -0.1**
BFO pmax pmax
comp=Z,27nm,1.1s
BFO Black Forest 86.01 41 P **P** **19 09 20.9 -0.1**
BFO Black Forest 86.01 41 *eP* **P** **19 09 21.5 +0.5**
comp=Z,30nm,1.1s,baz=290,slow=5.2
MILB Miltenberg 86.05 39 *eP* **P** **19 09 22.9 +1.8**
comp=Z,68nm,1.0s,baz=290,slow=5.2
BNI Bardonecchia 86.10 44 P **P** **19 09 22.9 +1.3**
BNI pmax pmax
comp=Z,83nm,1.6s
BNI Bardonecchia 86.10 44 P **P** **19 09 22.9 +1.3**
BNI IAmb IAmb 19 10 16.2
comp=Z,82nm,1.6s
UBBA Unterbreizbach 86.10 38 *eP* **P** **19 09 23.7 +2.5**
comp=Z,24nm,1.5s,baz=290,slow=5.2
FLTG Flechtingen 86.23 36 *eP* **P** **19 09 24.5 +2.6**
comp=Z,16nm,0.7s,baz=290,slow=5.2
STU Stuttgart 86.38 40 IAmb IAmb 19 09 27.7
comp=Z,32nm,0.8s
STU Stuttgart 86.38 40 *eP* **P** **19 09 23.3 +0.5**
comp=Z,43nm,1.0s,baz=290,slow=5.2
PEA0B Petropavlovsk- 86.48 325 *ceP* **P** **19 09 23.8 +0.7**
PEA0B Petropavlovsk- 86.48 325 IAmb IAmb 19 10 09.2
comp=Z,60nm,1.1s
PETK Petropavlovsk- 86.48 325 P **P** **19 09 24.2 +1.1**
comp=Z,12nm,1.0s,baz=78,slow=7.5,SNR=13
PETK pP **pP** **19 09 53.1 +0.7**
comp=Z,20nm,0.9s,baz=75,slow=9.3,SNR=9.6
PETK LR LR 19 48 53.1
comp=Z,51nm,19.4s,baz=75,slow=36
PETK Petropavlovsk- 86.48 325 P **P** **19 09 24.4 +1.3**
PETK *PP **pP** **19 09 53.9 +1.5**
PETK Petropavlovsk- 86.48 325 P **P** **19 09 24.4 +1.3**
PETK **pP** **19 09 53.9 +1.5**
HOPE Hope Point 86.76 150 P **P** **19 09 25.3 +1.1**
HOPE pmax pmax
comp=Z,197nm,1.1s
HOPE Hope Point 86.76 150 P **P** **19 09 25.3 +1.1**
NEUB Neuenburg 86.98 37 *eP* **P** **19 09 27.3 +1.6**
comp=Z,18nm,1.1s,baz=290,slow=5.2
MA2 Magadan 87.05 332 P **P** **19 09 27.1 +1.3**
baz=55,slow=2.8
MA2 pP **pP** **19 09 56.3 +1.2**
comp=Z,54nm,0.9s,baz=54,slow=5.2,SNR=6.2
MA2 Magadan 87.05 332 *ceP* **P** **19 09 26.6 +0.8**
MA2 pmax pmax
comp=Z,67nm,1.3s
MA2 Magadan 87.05 332 P **P** **19 09 26.1 +0.3**
MA2 IAmb IAmb 19 09 57.1
comp=Z,81nm,1.0s
MOX Moxa 87.11 38 *eP* **P** **19 09 28.2 +1.9**
comp=Z,13nm,0.9s,baz=290,slow=5.2
MOX *epP* **pP** **19 09 54.9 -0.7**
GRF Grafenberg Arr 87.26 39 *eP* **P** **19 09 29.4 +2.4**
comp=Z,42nm,1.4s,baz=290,slow=5.2
TUE Stuetta 87.33 42 P **P** **19 09 27.4 -0.3**
TUE IAmb IAmb 19 09 32.5
comp=Z,49nm,1.1s
UBR Ueberruh 87.36 41 *eP* **P** **19 09 29.5 +1.8**
comp=Z,36nm,1.1s,baz=290,slow=5.2
DAVA Damuels 87.37 41 *i P* **P** **19 09 30.3 +2.5**
comp=Z,35nm,0.9s,SNR=12
PLN Plauen 87.50 38 *eP* **P** **19 09 31.2 +3.1**
comp=Z,15nm,1.0s,baz=290,slow=5.2
CLL Collm 87.65 37 *i P* **P** **19 09 32.3 +3.5**
comp=Z,14nm,1.0s
CLL *epP* **pP** **19 09 57.0 -1.1**
CLL *e* 19 10 02.0
CLL *esP* **sP** **19 10 08.0 -2.2**
CLL *ePP* **PP** **19 12 56.0 +0.9**
CLL *epPP* 19 13 18.0
CLL *eSKSac* **SKSac** **19 19 46.0 -0.4**
CLL *eS* **ScS** **19 20 08.0 +0.4**
CLL *eSP* **SPn** **19 21 00.0 -1.3**
CLL *ePPS* PPS 19 21 42.0
CLL *eSS* SS 19 25 36.0 -13
CLL *esSS* 19 26 30.0
CLL *eSSSS* 19 32 36.0
CLL Collm 87.65 37 *i P* **P** **19 09 32.3 +3.5**
CLL *e*PP* **pP** **19 09 57.0 -1.1**
CLL *e* 19 19 46.0
CLL pmax pmax
comp=Z,14nm,1.0s
CLL Collm 87.65 37 *eP* **P** **19 09 32.6 +3.8**
comp=Z,14nm,1.0s,baz=290,slow=5.2
GUNZ Gunzen 87.65 38 *eP* **P** **19 09 32.4 +3.5**
comp=Z,22nm,1.1s,baz=290,slow=5.2
GUNZ *epP* **pP** **19 09 57.6 -0.6**
APA Apatity 87.65 18 *i P* **P** **19 09 26.6 -1.9**
APA pmax pmax
comp=Z,4.0nm,0.8s
APA MLR MLR
comp=Z,600nm,17.0s
MANZ Manzenberg 87.67 38 *eP* **P** **19 09 32.6 +3.6**
comp=Z,12nm,1.1s,baz=290,slow=5.2
TANN Tannenbergstha 87.70 38 *eP* **P** **19 09 32.3 +3.1**
comp=Z,19nm,1.0s,baz=290,slow=5.2
TANN *epP* **pP** **19 09 58.1 -0.5**
WERN Wernitzgruen 87.70 38 *eP* **P** **19 09 32.8 +3.7**
comp=Z,24nm,1.1s,baz=290,slow=5.2
WERN *epP* **pP** **19 09 58.2 -0.3**
NKC Novy Kostel 87.77 38 *eP* **P** **19 09 30.9 +1.4**
NKC *e* 19 09 58.4
NKC Novy Kostel 87.77 38 *eP* **P** **19 09 30.9 +1.4**
NKC *epP* **pP** **19 09 58.4 -0.4**
ROTZ Rotzenmuhle 87.82 38 *eP* **P** **19 09 32.1 +2.5**
comp=Z,7.5nm,0.9s,baz=290,slow=5.2
RETA Reutte 87.84 41 *i P* **P** **19 09 31.7 +1.8**
comp=Z,28nm,1.1s,SNR=8.8
FETA Feichten 88.00 41 *i P* **P** **19 09 32.4 +1.5**
comp=Z,19nm,1.1s,SNR=6.3
FBE Freiberg 88.01 37 *eP* **P** **19 09 33.7 +3.1**
comp=Z,23nm,1.1s,baz=290,slow=5.2
MOTA Moosalm 88.11 41 *i P* **P** **19 09 32.5 +1.2**
comp=Z,19nm,0.8s,SNR=11
SQTA Sankt Quirin 88.23 41 *i P* **P** **19 09 33.3 +1.5**
comp=Z,24nm,1.5s,SNR=7.3
DBIC Dimbokro 88.24 84 P **P** **19 09 32.6 +0.2**
comp=Z,97nm,0.8s,baz=269,slow=4.9,SNR=111
DBIC PKKPbc **PKKPbc** **19 27 15.9 +0.9**
comp=Z,3.5nm,1.1s,baz=166,slow=5.0,SNR=5.1
DBIC LR LR 19 46 53.2
comp=Z,95nm,19.7s,baz=262,slow=34
DBIC Dimbokro 88.24 84 IAmb IAmb 19 09 35.1
comp=Z,88nm,0.8s
BRG Berggiesshubel 88.37 37 *eP* **P** **19 09 35.3 +3.0**
BRG Amp 19 09 37.8
comp=Z,13nm,1.3s
BRG Berggiesshubel 88.37 37 SKS S 19 19 53.0 -15
BRG Berggiesshubel 88.37 37 *eP* **P** **19 09 34.4 +2.2**
comp=Z,13nm,1.3s,baz=290,slow=5.2
WATA Walderalm 88.41 41 *i P* **P** **19 09 36.0 +3.3**
comp=Z,22nm,1.5s,SNR=7.4
SALO Salr 88.42 43 IAmb IAmb 19 09 36.0
comp=Z,77nm,0.9s
WET Wettzell 88.47 39 *eP* **P** **19 09 34.0 +1.2**
comp=Z,19nm,1.1s,baz=290,slow=5.2
WTTA Wattenberg 88.48 41 *eP* **P** **19 09 36.4 +3.3**
comp=Z,12nm,0.9s
KHC Kasperske Hory 88.89 39 *eP* **P** **19 09 37.7 +2.9**
KHC *e* 19 10 03.9
KHC *e* 19 19 55.0
KHC MLR MLR
comp=Z,300nm,17.1s
KHC Kasperske Hory 88.89 39 *eP* **P** **19 09 37.7 +2.9**
KHC *epP* **pP** **19 10 03.9 -0.3**
KHC *eSKS* **SKSac** **19 19 55.0 +0.9**
KHC AMS AMS 19 49 10.0
comp=Z,300nm,17.1s
FINES FINESS Array B 88.96 24 P **P** **19 09 35.0 +0.3**
comp=Z,4.5nm,0.8s,baz=4.1,slow=2.7,SNR=13
FINES PKKPbc **PKKPbc** **19 27 13.1 -1.6**
comp=Z,0.9nm,0.6s,baz=95,slow=2.1,SNR=5.3
FINES LR LR 19 53 16.0
comp=Z,84nm,18.1s,baz=310,slow=38
CTI Castel Tesino 88.97 42 P **P** **19 09 35.4 +0.1**
CTI pmax pmax
comp=Z,17nm,1.1s
CTI Castel Tesino 88.97 42 P **P** **19 09 35.4 +0.1**
RJOB Jochberg 89.00 40 *eP* **P** **19 09 37.0 +1.7**
comp=Z,61nm,1.2s,baz=290,slow=5.2
GEC2 GERESS Array S 89.09 39 *eP* **P** **19 09 35.6 -0.2**
comp=Z,16nm,1.6s,baz=290,slow=5.2
GERES GERESS Array B 89.09 39 P **P** **19 09 36.4 +0.6**
comp=Z,1.8nm,0.6s,baz=316,slow=3.7,SNR=14
GERES LR LR 19 50 18.5
comp=Z,283nm,18.7s,baz=286,slow=36
GERES GERESS Array B 89.09 39 P **P** **19 09 36.5 +0.7**
GERES GERESS Array B 89.09 39 P **P** **19 09 36.5 +0.7**
PRU Pruhonice 89.09 37 *eP* **P** **19 09 36.3 +0.6**
PRU *e* 19 19 56.9
PRU MLR MLR
comp=Z,300nm,21.3s
PRU Pruhonice 89.09 37 *eP* **P** **19 09 36.3 +0.6**
PRU *eSKS* **SKSac** **19 19 56.9 +1.8**
PRU AMS AMS 19 51 00.0
comp=Z,300nm,21.3s
ZCCA Zocca 89.21 44 P **P** **19 09 37.4 +1.0**
ZCCA IAmb IAmb 19 09 42.1
comp=Z,62nm,0.7s
CKRC Cesky Krumlov 89.46 39 *eSKS* **SKSac** **19 19 57.0 -0.4**
CKRC AMS AMS 19 50 00.0
comp=Z,300nm,19.6s
KBA Koelnbreinsper 89.62 40 *eP* **P** **19 09 41.9 +3.5**
comp=Z,9.6nm,0.9s
CHVC Chvalec 89.70 36 *eP* **P** **19 09 42.2 +3.7**
OSSC Osservatorio P 89.71 44 P **P** **19 09 38.9 +0.2**
MOA Molln 89.85 39 *eP* **P** **19 09 42.6 +3.3**
comp=Z,4.7nm,0.8s
TREC Trest 89.95 38 AMS AMS 19 49 10.0
comp=Z,300nm,17.8s

DPC	**Dobruska-Polom**	**89.96**	**37**	*e*P		**P**	**19 09 40.6**	**+0.8**		
DPC				*e*			19 10 08.5			
DPC	**Dobruska-Polom**	**89.96**	**37**	*e*P		**P**	**19 09 40.6**	**+0.8**		
DPC				*e*pP		**pP**	**19 10 08.5**	**-0.7**		
MYKA	**Terra Mystica** comp=Z,2.1nm,0.4s	**89.99**	**41**	*e*P		**P**	**19 09 40.9**	**+0.9**		
KRUC	**Moravsky**	**90.59**	**38**	*e*P		**P**	**19 09 45.2**	**+2.5**		
VRAC	**Vranov**	**90.59**	**37**	*e*P		**P**	**19 09 44.7**	**+2.0**		
OBKA	**Obir** comp=Z,6.1nm,0.7s	**90.61**	**41**	*e*P		**P**	**19 09 44.2**	**+1.3**		
CONA	**Conrad Observa** comp=Z,2.1nm,0.6s	**90.78**	**39**	*e*P		**P**	**19 09 44.9**	**+1.2**		
SOKA	**Soboth** comp=Z,2.0nm,0.5s	**90.83**	**40**	*e*P		**P**	**19 09 44.2**	**+0.3**		
ARSA	**Arzberg** comp=Z,2.8nm,0.6s	**90.88**	**40**	*e*P		**P**	**19 09 44.7**	**+0.6**		
MORC	**Moravsky Berou**	**90.92**	**37**	⇑P		**P**	**19 09 45.0**	**+0.7**		
MORC	**Moravsky Berou**	**90.92**	**37**	*e*P		**P**	**19 09 47.6**	**+3.3**		
MORC	**Moravsky Berou**	**90.92**	**37**	⇑P		**P**	**19 09 45.0**	**+0.7**		
KEST	**Kesra** comp=Z,4.4nm,0.5s,baz=245,slow=6.0,SNR=9.4	**91.36**	**52**	P		**P**	**19 09 47.6**	**+0.9**		
KEST				LR		LR	19 48 18.1			
	comp=Z,179nm,19.8s,baz=278,slow=34									
KEST	**Kesra**	**91.36**	**52**	P		**P**	**19 09 47.3**	**+0.7**		
MODS	**Modra-Piesok**	**91.42**	**38**	*e*P		**P**	**19 09 50.4**	**+3.8**		
MODS	**Modra-Piesok**	**91.42**	**38**	*e*P		**P**	**19 09 50.4**	**+3.8**		
MSVF	**Nonsavu** comp=Z,118nm,21.9s,baz=127,slow=29	**92.25**	**252**	LR		LR	19 42 09.1			
MSVF	**Nonsavu**	**92.25**	**252**	P		**P**	**19 09 53.0**	**+2.1**		
MSVF				pmax		pmax				
	comp=Z,48nm,1.0s									
MSVF	**Nonsavu**	**92.25**	**252**	P		**P**	**19 09 53.0**	**+2.1**		
MSVF				IAmb		IAmb	19 09 55.5			
	comp=Z,48nm,1.0s									
VYHS	**Vyhne**	**92.28**	**38**	*e*P		**P**	**19 09 52.8**	**+2.3**		
VYHS	**Vyhne**	**92.28**	**38**	*e*P		**P**	**19 09 52.8**	**+2.3**		
LANS	**Liptovska Anna**	**92.33**	**37**	*e*P		**P**	**19 09 55.3**	**+4.5**		
LANS				pmax		pmax				
	comp=Z,4.0nm,0.9s									
LANS	**Liptovska Anna**	**92.33**	**37**	*e*P		**P**	**19 09 55.3**	**+4.5**		
TOA0	**Torodi Ar. Sit**	**92.48**	**76**	P		**P**	**19 09 53.5**	**+1.4**		
TORD	**Torodi Ar. Bea**	**92.48**	**76**	P		**P**	**19 09 51.8**	**-0.3**		
	comp=Z,5.3nm,0.6s,baz=292,slow=4.3,SNR=20									
TORD				PKKPbc		**PKKPbc**	**19 27 05.3**	**+0.8**		
	comp=Z,3.4nm,0.9s,baz=88,slow=2.2,SNR=8.7									
TORD				LR		LR	19 49 29.6			
	comp=Z,146nm,19.3s,baz=310,slow=34									
TORD	**Torodi Ar. Bea**	**92.48**	**76**	P		**P**	**19 09 51.2**	**-0.9**		
NACGM	**Naroch**	**93.05**	**29**	*i* P		**P**	**19 09 55.9**	**+2.0**		
NACGM				*i* P		**P**	**19 09 55.9**	**+2.0**		
NACGM				*i* P		**P**	**19 09 55.9**	**+2.0**		
NACGM				*i* PP		PP	19 13 22.6	-15		
NACGM				*i* PPP		PPP	19 15 44.6			
NACGM				*i* SKS		S	19 20 19.3	-31		
NACGM				*i* PS		PS	19 21 49.4	-28		
NACGM				*i* SS		SS	19 26 51.0	-16		
NACGM				*i* SSS		SSS	19 31 21.3			
NACGM				*i* LQ		LQ	19 41 25.8			
NACGM				*i* LR		LR	19 48 26.6			
MORH	**Mrgy, Hungar**	**93.26**	**40**	⇑P		**P**	**19 09 55.2**	**+0.1**		
CRVS	**Cervenica-Dubn**	**93.58**	**36**	*e*P		**P**	**19 09 58.9**	**+2.4**		
CRVS				pmax		pmax				
	comp=Z,18nm,1.1s									
CRVS	**Cervenica-Dubn**	**93.58**	**36**	*e*P		**P**	**19 09 58.9**	**+2.4**		
YAK	**Yakutsk**	**93.63**	**341**	P		**P**	**19 09 56.6**	**+0.2**		
	comp=Z,11nm,0.8s,baz=70,slow=2.3,SNR=17									
YAK				pP		**pP**	**19 10 26.5**	**+0.6**		
	comp=Z,34nm,0.9s,baz=214,slow=2.8,SNR=11									
YAK	**Yakutsk**	**93.63**	**341**	*d* /P		**P**	**19 09 56.6**	**+0.2**		
YAK				*e**PP		**pP**	**19 10 25.7**	**-0.2**		
YAK				*e*S		**SKSac**	**19 20 20.2**	**-0.1**		
YAK				*e*			19 20 59.0			
YAK				pmax		pmax				
	comp=N,4.0nm,1.0s									
YAK				pmax		pmax				
	comp=Z,27nm,1.0s									
YAK				pmax		pmax				
	comp=E,6.0nm,1.3s									
YAK				pmax		pmax				
	comp=Z,74nm,2.3s									
YAK				pmax		pmax				
	comp=E,7.0nm,1.0s									
YAK				pmax		pmax				
	comp=N,17nm,1.7s									
YAK				smax		smax				
	comp=N,59nm,2.6s									
YAK				smax		smax				
	comp=E,59nm,2.5s									
YAK	**Yakutsk**	**93.63**	**341**	P		**P**	**19 09 56.5**	**+0.2**		
MNK	**Minsk** comp=E,1.0nm,0.8s	**93.81**	**29**	*i* P		**P**	**19 09 59.9**	**+2.6**		
MNK				*i* P		**P**	**19 09 59.9**	**+2.6**		
	comp=N,5.0nm,0.6s									
MNK				*i* P		**P**	**19 09 59.9**	**+2.6**		
	comp=Z,19nm,1.1s									
MNK				*i* pP		**pP**	**19 10 28.7**	**+1.8**		
MNK				*i* PP		PP	19 13 53.4	+10		
MNK				*i* PPP		PPP	19 15 43.4			
MNK				*i* S		**SKSac**	**19 20 24.5**	**+2.9**		
MNK				*i* SS		**SS**	**19 27 22.1**	**+4.8**		
MNK				*i* SSS		SSS	19 31 30.1			
MNK				*i* LR		LR	19 50 03.9			
MNK				*i* LRM		MLR	19 53 44.9			
	comp=E,11nm,19.2s									
MNK				*i* LRM		MLR	19 53 44.9			
	comp=N,111nm,19.3s									
MNK				*i* LRM		MLR	19 53 44.9			
	comp=Z,118nm,18.7s									
NRIK	**Noril'sk**	**93.82**	**359**	P		**P**	**19 09 57.2**	**+0.1**		
	comp=Z,1.0nm,0.4s,baz=44,slow=4.7,SNR=3.7									
NRIK				pP		**pP**	**19 10 26.8**	**+0.1**		
	comp=Z,20nm,1.0s,baz=36,slow=2.8,SNR=9.0									
NRIK				PKKP		**PKKPdf**	**19 26 59.7**	**-0.3**		
	comp=Z,1.7nm,0.5s,baz=178,slow=3.5,SNR=3.8									
NRIK				LR		LR	19 58 47.4			
	comp=Z,131nm,18.3s,baz=5.5,slow=40									
NRIK	**Noril'sk**	**93.82**	**359**	*ce*P		**P**	**19 09 57.1**	**0.0**		
NRIK				pmax		pmax				
	comp=Z,2.0nm,0.9s									
UZH	**Uzhgorod**	**94.20**	**36**	*e*P		**P**	**19 10 01.2**	**+1.9**		
UZH				*i*			19 10 27.2			
KLMR	**Klimovskoe**	**94.26**	**20**	*e*P		**P**	**19 09 57.8**	**-1.5**		
KLMR				*e**PP		**pP**	**19 10 27.9**	**-0.9**		
KLMR				*e*			19 13 42.5			
KLMR				pmax		pmax				
	comp=Z,12nm,1.2s									
KLMR	**Klimovskoe**	**94.26**	**20**	*e*P		**P**	**19 09 57.8**	**-1.5**		
KLMR				AMP			19 10 02.4			
	comp=Z,12nm,1.2s									
KLMR				*e*pP		**pP**	**19 10 28.0**	**-0.9**		
KLMR				*e*PP		**PP**	**19 13 42.5**	**-4.4**		
LVV	**L'vov**	**94.52**	**35**	*e*P		**P**	**19 10 03.4**	**+2.6**		
TRPA	**Tarpa**	**94.60**	**37**	⇓P		**P**	**19 10 02.1**	**+0.9**		
SIRR	**Siria**	**95.06**	**38**	⇓P		**P**	**19 10 07.1**	**+3.8**		
BANR	**Banloc**	**95.19**	**39**	⇓P		**P**	**19 10 01.1**	**-2.8**		
BZS	**Buzias**	**95.36**	**39**	⇑P		**P**	**19 10 05.6**	**+0.9**		
BZS	**Buzias**	**95.36**	**39**	⇑P		**P**	**19 10 05.6**	**+0.9**		
GZR	**Gura Zlata**	**96.18**	**39**	⇑P		**P**	**19 10 09.1**	**+0.6**		
GZR	**Gura Zlata**	**96.18**	**39**	⇑P		**P**	**19 10 09.1**	**+0.6**		
AKASG	**Malin Array Be**	**96.74**	**32**	P		**P**	**19 10 10.1**	**-0.7**		
	comp=Z,0.5nm,0.4s,baz=308,slow=3.8,SNR=6.9									
AKASG				PP		**PP**	**19 14 00.3**	**-6.1**		
	comp=Z,2.5nm,0.7s,baz=308,slow=6.4,SNR=4.1									
AKASG				PKKPbc		**PKKPbc**	**19 26 52.1**	**-2.2**		
	comp=Z,1.4nm,0.6s,baz=95,slow=2.3,SNR=8.9									
AKASG				LR		LR	19 55 34.1			
	comp=Z,80nm,19.0s,baz=305,slow=36									
OBN	**Obninsk**	**97.25**	**26**	LR		LR	19 56 13.9			
	comp=Z,35nm,18.4s,baz=357,slow=37									
OBN	**Obninsk**	**97.25**	**26**	⇓*e*P		Pdif	19 10 14.6	+1.5		
OBN				*e**PP		pP	19 10 44.7	+2.1		
OBN				*e**SP		sP	19 10 58.1	+3.6		
OBN				*e*			19 14 09.7			
OBN				*e*PPP		PPP	19 16 14.3			
OBN				pmax		pmax				
	comp=Z,9.0nm,0.4s									
VOIR		**97.50**	**38**	⇓P		Pdif	19 10 17.3	+2.8		
VOIR		**97.50**	**38**	⇓P		Pdif	19 10 17.3	+2.7		
SORM	**Soroca**	**97.82**	**34**	⇓P		Pdif	19 10 19.4	+3.6		
SORM	**Soroca**	**97.82**	**34**	⇓P		Pdif	19 10 19.4	+3.6		
YSS	**Yuzh-Sakhalins**	**97.87**	**324**	*ce*P		**P**	**19 10 15.8**	**-0.2**		
YSS				pmax		pmax				
	comp=Z,20nm,2.5s									
YSS	**Yuzh-Sakhalins**	**97.87**	**324**	P		**P**	**19 10 15.3**	**-0.7**		
YSS				lAmb		lAmb	19 10 50.1			
	comp=Z,12nm,0.9s									
MLR	**Muntele Rosu**	**98.00**	**38**	⇑P		Pdif	19 10 21.1	+4.2		
MLR	**Muntele Rosu**	**98.00**	**38**	⇑P		Pdif	19 10 21.1	+4.3		
HARR	**Harsova**	**99.61**	**37**	⇑P		**Pdif**	**19 10 26.5**	**+2.7**		
HARR	**Harsova**	**99.61**	**37**	⇑P		**Pdif**	**19 10 26.5**	**+2.7**		
LPSR	**Galich'ya Gora**	**100.02**	**26**	*e*P		**Pdif**	**19 10 25.1**	**-0.4**		
LPSR				pmax		pmax				
	comp=Z,10.0nm,0.8s									
VSR	**Storozhevoye**	**101.11**	**27**	*e*P		**Pdif**	**19 10 24.8**	**-5.6**		
VSR				pmax		pmax				
	comp=Z,5.0nm,0.5s									
KLR	**Kul'dur**	**102.07**	**331**	PKKPbc		PKKPbc	19 26 37.3	-2.1		
	comp=Z,1.0nm,0.6s,baz=271,slow=8.0,SNR=3.9									
VRH	**Novokhopyorsk**	**102.22**	**26**	*e*P		**Pdif**	**19 10 35.4**	**+0.1**		
VRH				pmax		pmax				
	comp=Z,10.0nm,1.5s									
ARU	**Arti**	**103.51**	**15**	PKKPbc		PKKPbc	19 26 32.8	-2.6		
	comp=Z,0.8nm,0.5s,baz=182,slow=7.8,SNR=6.3									
DZM	**Mont Dzumac**	**103.91**	**251**	*e*LR		LR	19 44 59.6			
	comp=Z,458nm,31.6s									
BRTR	**Keskin Array B**	**105.99**	**39**	PKKPbc		PKKPbc	19 26 26.9	-0.8		
	comp=Z,2.3nm,0.8s,baz=141,slow=4.1,SNR=5.8									
KBZ	**Khabaz**	**108.30**	**31**	PKKPbc		PKKPbc	19 26 19.4	-1.0		
	comp=Z,2.5nm,0.8s,baz=160,slow=1.9,SNR=10									
KBZ				PKKP		**PKKPdf**	**19 26 33.6**	**+0.1**		
	comp=Z,5.6nm,0.9s,baz=108,slow=2.5,SNR=11									
BVAR	**Borovoye Array**	**109.08**	**9**	PKKPbc		PKKPbc	19 26 16.0	-2.3		
	comp=Z,1.0nm,0.8s,baz=142,slow=15,SNR=5.1									
ZALV	**Zalesovo Beam**	**109.28**	**0**	PP		**PP**	**19 15 36.0**	**-3.5**		
	comp=Z,2.1nm,0.8s,baz=355,slow=6.7,SNR=3.5									
ZALV				PKKPbc		**PKKPbc**	**19 26 14.2**	**-3.5**		
	comp=Z,1.2nm,0.7s,baz=188,slow=4.5,SNR=6.5									
ZALV				PKKP		**PKKPab**	**19 26 26.9**	**-4.4**		
	comp=Z,1.1nm,0.7s,baz=169,slow=3.0,SNR=5.3									
VNDA	**Vanda**	**109.38**	**193**	PKiKP		**PKiKP**	**19 15 09.8**	**+0.6**		
	comp=Z,0.9nm,0.8s,baz=335,slow=1.2,SNR=6.7									
MAK	**Makhachkala**	**111.06**	**29**	*i* P		**Pdif**	**19 11 13.1**	**-1.7**		
MAK				*i*			19 15 13.4			
MAK				*e*			19 15 41.3			
MAK				*e*			19 15 53.9			
MAK				*e*PPP		PPP	19 18 12.9			
MAK				*e*			19 21 42.8			
MAK				*e*SS		SS	19 31 17.9	+2.6		
MAK				pmax		pmax				
	comp=Z,76nm,1.0s									
KURK	**Kurchatov**	**112.29**	**4**	*i* PKiKP		**PKiKP**	**19 15 15.3**	**-0.3**		
KSRS	**Korea Array**	**112.37**	**324**	PKiKP		**PKiKP**	**19 15 16.1**	**0.0**		
	comp=Z,2.6nm,0.6s,baz=11,slow=1.3,SNR=14									
KSRS				PKKPab		**PKKPab**	**19 26 15.8**	**-1.4**		
	comp=Z,1.4nm,0.9s,baz=231,slow=3.4,SNR=6.1									
KURBB	**Kurchatov Arra**	**112.38**	**4**	PKiKP		**PKiKP**	**19 15 15.2**	**-0.5**		
	comp=Z,1.5nm,0.6s,baz=352,slow=1.5,SNR=11									
KURBB				PP		**PP**	**19 16 02.5**	**+0.8**		
	comp=Z,2.2nm,1.0s,baz=350,slow=6.0,SNR=5.4									
KURBB				PKKPbc		**PKKPbc**	**19 26 05.2**	**-2.3**		
	comp=Z,5.5nm,0.9s,baz=189,slow=3.0,SNR=44									
KURBB				PKKPab		**PKKPab**	**19 26 14.7**	**-2.8**		
	comp=Z,2.6nm,0.9s,baz=197,slow=3.6,SNR=6.3									
ULN	**Ulaanbaatar**	**112.41**	**344**	*c* /PKiKP		**PKiKP**	**19 15 17.0**	**+0.9**		
ULN				pmax		pmax				
	comp=Z,1.0nm,0.7s									
SONM	**Songino Array**	**112.61**	**345**	PKiKP		**PKiKP**	**19 15 16.2**	**-0.2**		
	comp=Z,1.6nm,0.7s,baz=353,slow=1.0,SNR=11									
SONM				PKKPbc		**PKKPbc**	**19 26 03.6**	**-3.3**		
	comp=Z,3.0nm,0.7s,baz=189,slow=3.4,SNR=20									
ZSN	**Zaisan** baz=0.2	**115.79**	**0**	*e*PKP		**PKiKP**	**19 15 21.6**	**-0.9**		
ZSN				*i* PP		**PP**	**19 16 25.6**	**-0.3**		
	baz=0.2									
ZSN	**Zaisan**	**115.79**	**0**	*e*PKIKP		**PKiKP**	**19 15 21.5**	**-0.9**		
ZSN				*i*			19 16 25.5			
MAKZ	**Makanchi**	**116.38**	**2**	PKIKP		**PKPdf**	**19 15 22.3**	**-1.3**		
MAKZ	**Makanchi**	**116.38**	**2**			**PKPdf**	**19 15 22.3**	**-1.3**		
MKAR	**Makanchi Array**	**116.40**	**2**	PKP		**PKPdf**	**19 15 22.6**	**-1.0**		
	comp=Z,1.4nm,0.6s,baz=297,slow=3.0,SNR=15									
MKAR				PP		**PP**	**19 16 31.8**	**+1.6**		
	comp=Z,1.4nm,0.7s,baz=14,slow=6.5,SNR=3.9									
MKAR				PKKPbc		**PKKPbc**	**19 25 49.5**	**-4.3**		
	comp=Z,2.6nm,0.9s,baz=157,slow=3.4,SNR=14									
MKAR				PKKPab		**PKKPab**	**19 25 56.2**	**-3.4**		
	comp=Z,2.5nm,0.9s,baz=140,slow=6.4,SNR=13									
MKAR	**Makanchi Array**	**116.40**	**2**			**PKPdf**	**19 15 22.4**	**-1.3**		
HHC	**Hu-ho-hao-te**	**117.31**	**338**	*e*PKP		**PKiKP**	**19 15 27.0**	**+1.3**		
TDK	**Taldyqorghan** baz=5.4	**117.95**	**5**	*e*PKP		**PKPdf**	**19 15 25.8**	**-0.9**		
TDK	**Taldyqorghan**	**117.95**	**5**	*e*PKIKP		**PKPdf**	**19 15 25.7**	**-0.9**		
DZA	**Taraz** baz=12	**119.04**	**11**	*e*PKP		**PKPdf**	**19 15 28.3**	**-0.5**		
DZA	**Taraz**	**119.04**	**11**	*e*PKIKP		**PKPdf**	**19 15 28.3**	**-0.5**		
SGDS	**Sogindy** baz=8.7	**119.05**	**9**	*e*PKP		**PKPdf**	**19 15 27.9**	**-1.0**		
SGDS	**Sogindy**	**119.05**	**9**	*e*PKIKP		**PKPdf**	**19 15 27.9**	**-1.0**		
USP	**Osgenovka** SNR=8.3	**119.21**	**9**	P		**PKiKP**	**19 15 29.9**	**+0.6**		
WMQ	**Urumqi**	**119.37**	**358**	*e*PKP		**PKiKP**	**19 15 30.0**	**+0.4**		
WMQ				LR		LR				
	comp=Z,330nm,18.5s									
WMQ				LR		LR				
	comp=Z,420nm,28.9s									
WMQ				LR		LR				
	comp=Z,280nm,29.7s									
IUG	**luzhnay** baz=13	**119.50**	**13**	*i* PKP		**PKPdf**	**19 15 28.8**	**-1.1**		
IUG	**luzhnay**	**119.50**	**13**	*i* PKIKP		**PKPdf**	**19 15 28.7**	**-1.1**		
KPKS	**Kokpek** baz=5.3	**119.50**	**5**	*e*PKP		**PKPdf**	**19 15 28.8**	**-1.0**		
KPKS	**Kokpek**	**119.50**	**5**	*e*PKIKP		**PKPdf**	**19 15 28.8**	**-1.0**		
AAA	**Alma-Ata** baz=6.9	**119.58**	**7**	*e*PKP		**PKPdf**	**19 15 29.0**	**-0.9**		
AAA	**Alma-Ata**	**119.58**	**7**	*e*PKIKP		**PKPdf**	**19 15 29.0**	**-0.9**		
MDOK	**Medeo** baz=6.7	**119.64**	**7**	*e*PKP		**PKPdf**	**19 15 29.0**	**-1.1**		
MDOK	**Medeo**	**119.64**	**7**	*e*PKIKP		**PKPdf**	**19 15 29.0**	**-1.1**		
EKS2	**Erkin-Say** SNR=6.8	**119.69**	**9**	P		**PKiKP**	**19 15 30.9**	**+0.6**		
TKM2	**Tokmak 2** SNR=6.5	**119.70**	**8**	P		**PKiKP**	**19 15 30.4**	**0.0**		
GEYT	**Alibeck**	**119.76**	**24**	PKP		**PKiKP**	**19 15 30.7**	**+0.3**		
	comp=Z,2.8nm,0.6s,baz=329,slow=5.5,SNR=6.9									
GEYT				pPKP		**pPKPdf**	**19 15 59.5**	**-1.7**		
	comp=Z,2.5nm,0.7s,baz=307,slow=5.4,SNR=3.1									
GEYT				PKKPbc		**PKKPbc**	**19 25 42.2**	**+0.7**		
	comp=Z,2.3nm,0.7s,baz=202,slow=11,SNR=4.6									
GEYT	**Alibeck**	**119.76**	**24**	PKPdf		**PKPdf**	**19 15 30.2**	**-0.2**		
UZB	**Uzynbulak** baz=5.1	**119.84**	**5**	*e*PKP		**PKPdf**	**19 15 29.6**	**-1.0**		
UZB	**Uzynbulak**	**119.84**	**5**	*e*PKIKP		**PKPdf**	**19 15 29.5**	**-1.0**		
SATY	**Saty** baz=5.6	**119.88**	**6**	*e*PKP		**PKPdf**	**19 15 29.5**	**-1.1**		
SATY	**Saty**	**119.88**	**6**	*e*PKIKP		**PKPdf**	**19 15 29.5**	**-1.1**		
AML	**Almayashu** SNR=6.3	**120.19**	**10**	P		**PKiKP**	**19 15 32.3**	**+0.6**		
ULHL	**Ulaho** SNR=7.6	**120.45**	**8**	P		**PKiKP**	**19 15 32.4**	**+0.4**		
SUR	**Sutherland**	**120.55**	**118**	P		**PKiKP**	**19 15 32.4**	**+0.1**		
KDJ	**Kajisay**	**120.67**	**7**	PKPdf		**PKPdf**	**19 15 32.1**	**-0.1**		
KDJ						**pPKPdf**	**19 16 01.3**	**-1.7**		
SYO	**Syowa Base**	**120.94**	**163**	⇓*e*Pdiff		**Pdif**	**19 11 59.2**	**+1.2**		
NJ2	**Nanjing**	**121.35**	**326**	*e*PKP		**PKPdf**	**19 15 32.5**	**-1.0**		
GTA	**Gaotai**	**122.14**	**346**	PKP		**PKPdf**	**19 15 34.8**	**-0.2**		
GTA				sPKP			19 16 18.3			
GTA				PP		**PP**	**19 17 17.5**	**+7.7**		
GTA				AMB		AMB				
	comp=Z,72nm,6.1s									
GTA				LR		LR				
	comp=Z,84nm,18.2s									
GTA				LR		LR				
	comp=Z,61nm,18.9s									
GTA				LR		LR				
	comp=Z,100nm,17.1s									
KSH	**Kashi**	**123.10**	**8**	PKP		**PKiKP**	**19 15 38.0**	**+0.9**		
KSH				LR		LR				
	comp=Z,160nm,7.1s									
KSH				LR		LR				
	comp=Z,140nm,5.5s									
KSH				LR		LR				
	comp=Z,190nm,6.2s									
LZH	**Lanzhou**	**124.20**	**342**	*e*PKP		**PKiKP**	**19 15 39.8**	**+0.4**		
RAYN	**Ar Rayn**	**124.20**	**45**	PKIKP		**PKPdf**	**19 15 38.4**	**-0.9**		
RAYN							19 16 08.2			
RAYN	**Ar Rayn**	**124.20**	**45**	PKPdf		**PKPdf**	**19 15 38.4**	**-0.9**		
RAYN						**pPKPdf**	**19 16 08.2**	**-1.9**		
BOSA	**Boshof**	**124.27**	**113**	PKP		**PKPdf**	**19 15 39.3**	**0.0**		
	comp=Z,23nm,0.8s,baz=288,slow=2.6,SNR=47									
BOSA				pPKP		**pPKPdf**	**19 16 09.0**	**-1.1**		
	comp=Z,12nm,0.9s,baz=290,slow=1.0,SNR=5.4									
XAN	**Xi'an**	**124.29**	**336**	PKP		**PKPdf**	**19 15 39.3**	**+0.1**		
LBTB	**Lobatse**	**124.39**	**109**	PKIKP		**PKPdf**	**19 15 39.0**	**-0.6**		
LBTB	**Lobatse**	**124.39**	**109**	PKPdf		**PKPdf**	**19 15 39.0**	**-0.6**		
SAKB	**Bahrain**	**125.67**	**39**	P		**PKPdf**	**19 15 41.8**	**-0.2**		
SSLB	**Suanglung**	**126.30**	**318**	PKPdf		**PKPdf**	**19 15 41.8**	**-1.5**		
SSLB				pPKPdf		**pPKPdf**	**19 16 13.3**	**-0.8**		
STKA	**Stephens Creek**	**126.93**	**243**	PKP		**PKPdf**	**19 15 44.4**	**+0.2**		
	comp=Z,38nm,0.8s,baz=91,slow=2.0,SNR=66									
STKA				pPKP		**pPKPdf**	**19 16 14.6**	**-0.4**		
	comp=Z,20nm,0.9s,baz=83,slow=2.4,SNR=6.7									
LODK	**Lodwar**	**126.98**	**72**	P		**PKiKP**	**19 15 46.0**	**+0.6**		
ENH	**Enshi**	**127.35**	**333**			**PKPdf**	**19 15 44.2**	**-0.9**		
ENH						**pPKPdf**	**19 16 14.4**	**-1.5**		
MAW	**Mawson**	**127.51**	**170**	PKP		**PKiKP**	**19 15 44.7**	**0.0**		
	comp=Z,28nm,0.9s,baz=207,slow=2.6,SNR=37									
CASY	**Casey**	**128.00**	**193**	PKPdf		**PKPdf**	**19 15 45.3**	**+0.2**		
SHME	**Shamm**	**128.79**	**34**	P		**PKPdf**	**19 15 47.4**	**-0.5**		
BANOM	**Banah**	**128.98**	**34**	P		**PKPdf**	**19 15 48.2**	**-0.2**		
CD2	**Chengdu**	**129.00**	**339**	PKP		**PKPdf**	**19 15 46.5**	**-1.8**		
MASF	**Masafi** SNR=6.2	**129.35**	**34**	P		**PKPdf**	**19 15 49.2**	**+0.1**		
ASUD	**Al Ashush, Dub**	**129.48**	**36**	P		**PKiKP**	**19 15 49.7**	**-0.3**		
FAQ	**Al Faqa, Dubai**	**129.54**	**35**	P		**PKPdf**	**19 15 49.3**	**-0.1**		
UOSS	**Minazif**	**129.71**	**35**			**PKPdf**	**19 15 48.1**	**-1.6**		
UOSS	**Minazif**	**129.71**	**35**	P		**PKPdf**	**19 15 49.1**	**-0.6**		
HATD	**Hatta, Dubai**	**129.77**	**35**	P		**PKPdf**	**19 15 49.7**	**-0.2**		
ALNE	**Al Ain**	**130.17**	**36**	P		**PKPdf**	**19 15 50.6**	**0.0**		
KMBO	**Kilima Mbogo**	**130.48**	**77**	PKP		**PKiKP**	**19 15 52.7**	**+0.1**		
	comp=Z,0.7nm,0.3s,baz=304,slow=3.7,SNR=5.8									
SOHO	**SOHO**	**130.54**	**35**	P		**PKPdf**	**19 15 50.7**	**-0.6**		
UMZA	**Um Al Zommool**	**130.88**	**37**	P		**PKPdf**	**19 15 52.3**	**+0.3**		
ARQ	**Araqi**	**131.17**	**36**	P		**PKPdf**	**19 15 52.3**	**-0.3**		
HOQ	**Hoqain**	**131.40**	**35**	P		**PKPdf**	**19 15 52.0**	**-1.0**		
KIBK	**Kibwezi** SNR=5.1	**131.66**	**78**	P		**PKiKP**	**19 15 55.5**	**+0.7**		
GYA	**Guiyang**	**131.88**	**334**	PKP		**PKPdf**	**19 15 54.3**	**+0.4**		
BIDO	**Bidbid**	**131.89**	**34**	P		**PKPdf**	**19 15 53.9**	**0.0**		
BSY	**Bisya**	**132.01**	**35**	P		**PKPdf**	**19 15 53.3**	**-0.8**		
SMDO	**Samad**	**132.22**	**34**	P		**PKiKP**	**19 15 55.6**	**-0.2**		
WSAR	**Wadi Sarin**	**

PSI	**Prapat**	**155.93**	**324**	PKP2	**PKPab**	**19 17 02.2**	**-0.2**
PSI						20 16 34.1	
RPSI	**Rantau Prapat**	**156.02**	**324**	PKPdf	**PKPdf**	**19 16 34.1**	**-0.9**
RPSI					**PKPab**	**19 17 02.2**	**-0.4**
RPSI					**pPKPab**	**19 17 31.4**	**-0.9**

*IDC **28** 19:34:55.7±1.2,27.°61N×85.°70E,h0km,mb3.9/10, mb1 4.0/13,mb1mx3.6/47,mbtmp3.9/13,ML3.6/3 Error ellipse: s-maj=37.0km s-min=16.8km az=56.0*
*NDI **28** 19:34:59.9±3.8,27.°56N×85.°80E,h10km,ML4.0*
ISC 28 19:34:57.4±0.6,27.°52N±0.°07×85.°70E±0.°05,h10km,n24, σ2§11/32,mb4.0/10,1C,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**2.59**	**94**	*eP*	**Pn**	**19 35 40.4**	**+0.9**
GTK				*eS*	**Sn**	**19 36 10.7**	**-0.5**
GTK				IAML		19 36 13.5	
	comp=N,901nm,0.4s						
GTK				IAML		19 36 14.0	
	comp=E,775nm,0.2s						
LSA	**Lhasa**	**5.26**	**64**	P	**Pn**	**19 36 17.5**	**+0.9**
LSA				S	**Sb**	**19 37 32.5**	**-0.7**
LSA				LR	LR		
	comp=N,170nm,5.3s						
LSA				LR	LR		
	comp=E,240nm,8.2s						
LSA				LR	LR		
	comp=Z,560nm,5.3s						
GUWA	**GUWAHATI**	**5.52**	**103**	*eP*	**Pn**	**19 36 20.6**	**+0.9**
GUWA				*eS*	**Sn**	**19 37 22.8**	**-0.4**
GUWA				IAML		19 37 26.9	
	comp=E,59nm,0.3s						
SHL	**Shillong**	**5.88**	**108**	*eP*	**Pn**	**19 36 24.4**	**-0.4**
SHL				*eS*	**Sn**	**19 37 28.0**	**-4.3**
SHL				IAML		19 38 00.4	
	comp=E,83nm,0.6s						
SHL				IAML		19 38 02.4	
	comp=N,136nm,0.7s						
KOHI	**KOHIMA**	**7.74**	**102**	*eP*	**Pn**	**19 36 49.2**	**-1.2**
KOHI				*eS*	**Sn**	**19 38 14.6**	**-3.6**
KOHI				IAML		19 38 18.0	
	comp=E,51nm,0.5s						
KOHI				IAML		19 38 18.3	
	comp=N,38nm,0.3s						
SMLA	**Simla**	**8.26**	**298**	*eP*	**Pn**	**19 36 59.8**	**+2.5**
SMLA				*eS*	**Sn**	**19 38 30.7**	**-0.1**
SMLA				IAML		19 38 35.7	
	comp=E,142nm,0.5s						
SMLA				IAML		19 38 36.4	
	comp=N,102nm,0.4s						
BHPL	**Bhopal**	**8.61**	**242**	*eP*	**Pn**	**19 37 03.5**	**+1.4**
BHPL				*eS*	**Sn**	**19 38 38.3**	**-1.0**
BHPL				IAML		19 38 45.5	
	comp=E,313nm,0.6s						
BHPL				IAML		19 38 46.4	
	comp=N,465nm,0.4s						
DHRM	**DHARAMSHALA**	**9.41**	**302**	*eP*	**Pn**	**19 37 13.5**	**+0.1**
DHRM				*eS*	**Sn**	**19 38 55.8**	**-3.6**
DHRM				IAML		19 39 01.2	
	comp=N,91nm,0.6s						
DHRM				IAML		19 39 01.4	
	comp=E,96nm,0.7s						
CMAR	**Chiang Mai Arr**	**15.16**	**124**	Pn	**Pn**	**19 38 30.4**	**-1.3**
	comp=E,0.0nm,0.3s,baz=300,slow=13,SNR=1.8						
KMI	**Kunming**	**15.47**	**95**	⇑P	**P**	**19 38 46.5**	**+6.0**
KMI				pP	sP	19 38 57.3	+12
KMI				sP	pP	19 39 05.0	+21
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ	**Urumqi**	**16.34**	**5**	*eP*	**P**	**19 38 54.5**	**+4.6**
GTA	**Gaotai**	**16.69**	**41**	P	**Pn**	**19 38 51.0**	**-0.5**
GTA				pP	P	19 38 54.5	+0.7
GTA				sP	sP	19 38 58.3	-0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,41nm,4.4s						
GTA				LR	LR		
	comp=N,96nm,14.9s						
GTA				LR	LR		
	comp=E,100nm,16.0s						
GTA				LR	LR		
	comp=Z,55nm,15.3s						
AAK	**Ala-Archa**	**17.62**	**332**	P	**Pn**	**19 39 02.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=184,slow=10,SNR=12						
MKAR	**Makanchi Array**	**19.42**	**353**	P	**P**	**19 39 22.5**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=173,slow=11,SNR=64						
KURBB	**Kurchatov Arra**	**23.70**	**349**	P	**P**	**19 40 08.1**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=167,slow=9.5,SNR=21						
SONM	**Songino Array**	**25.92**	**33**	P	**P**	**19 40 28.7**	**-1.1**
	comp=Z,4.5nm,0.7s,baz=219,slow=9.7,SNR=17						
ZALV	**Zalesovo Beam**	**26.41**	**359**	P	**P**	**19 40 33.0**	**-1.0**
	comp=Z,3.3nm,0.6s,baz=183,slow=9.2,SNR=18						
KSRS	**Korea Array**	**36.71**	**63**	P	**P**	**19 42 04.4**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=259,slow=8.3,SNR=4.5						
NRIK	**Noril'sk**	**41.86**	**1**	P	**P**	**19 42 46.5**	**-0.7**
	comp=Z,4.2nm,0.6s,baz=172,slow=5.3,SNR=8.5						
FINES	**FINESS Array B**	**51.76**	**328**	P	**P**	**19 44 05.0**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=101,slow=8.0,SNR=7.0						
ARCES	**ARCESS Array B**	**54.16**	**338**	P	**P**	**19 44 21.8**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=91,slow=7.6,SNR=8.6						
NOA	**NORSAR Array B**	**58.85**	**327**	P	**P**	**19 44 54.2**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=85,slow=5.0,SNR=1.9						
WRA	**Warramunga Arr**	**66.66**	**130**	P	**P**	**19 45 48.1**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=323,slow=6.5,SNR=5.0						
ASAR	**Alice Springs**	**68.95**	**133**	P	**P**	**19 46 04.0**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=315,slow=6.2,SNR=7.2						

*NEIC **28** 19:41:36.0±0.2,19.°4S±0.°2×177.°4W±0.°2,h556km±13km, mb4.0/10,Error ellipse: s-maj=33.3km s-min=25.8km az=156.0*
*IDC **28** 19:41:40.2±5.9,19.°50S×177.°98W,h553km±34km,mb3.2/3, mb1 3.4/5,mb1mx2.9/26,mbtmp4.2/5,Error ellipse: s-maj=124.5km s-min=71.7km az=139.0*
ISC 28 19:41:35.2±1.4,19.°5S±0.°2×177.°3W±0.°2,h550km,n17, σ1§49/18,mb4.0/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.70**	**291**	P	**P**	**19 43 03.3**	**+0.7**
	5.4nm,0.3s,baz=84,slow=21,SNR=24						
MSVF	**Nonsavu**	**4.70**	**291**	P	**P**	**19 43 03.1**	**+0.5**
DZM	**Mont Dzumac**	**15.39**	**257**	P	**P**	**19 44 49.4**	**+0.6**
	0.5nm,0.3s,baz=60,slow=17,SNR=1.7						
DZM	**Mont Dzumac**	**15.39**	**257**	P	**P**	**19 44 48.8**	**0.0**
DZM				IAmb	IAmb	19 45 06.3	
	comp=Z,21nm,1.1s						
CTAO	**Charters Tower**	**34.23**	**263**	P	**P**	**19 47 35.8**	**+0.1**
STKA	**Stephens Creek**	**38.81**	**243**	P	**P**	**19 48 12.9**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=80,slow=9.6,SNR=4.8						
STKA	**Stephens Creek**	**38.81**	**243**	IAmb	IAmb	19 48 23.0	
	comp=Z,2.9nm,1.6s						
WR0	**Warramunga Arr**	**45.18**	**261**	P	**P**	**19 49 03.4**	**-0.1**
WR0				IAmb	IAmb	19 49 19.8	
	comp=Z,9.1nm,1.4s						
WR0				PcP	**PcP**	**19 50 27.1**	**-5.1**
WB0	**Warramunga Arr**	**45.34**	**261**	P	**P**	**19 49 04.6**	**-0.2**
WB0				IAmb	IAmb	19 49 21.3	
	comp=Z,6.2nm,1.1s						
WB2	**Warramunga Arr**	**45.36**	**261**	P	**P**	**19 49 04.8**	**-0.1**
WB2				IAmb	IAmb	19 49 19.7	
	comp=Z,7.7nm,1.2s						
AS31	**Alice Springs**	**45.37**	**256**	P	**P**	**19 49 05.2**	**+0.2**
WRA	**Warramunga Arr**	**45.37**	**261**	P	**P**	**19 49 05.1**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=96,slow=7.6,SNR=37						
WRA	**Warramunga Arr**	**45.37**	**261**	P	**P**	**19 49 04.8**	**-0.2**
ASAR	**Alice Springs**	**45.37**	**256**	P	**P**	**19 49 05.0**	**0.0**
	comp=Z,4.8nm,0.7s,baz=98,slow=7.7,SNR=67						
ASAR				PcP	**PcP**	**19 50 35.3**	**+2.5**
	comp=Z,0.2nm,0.6s,baz=93,slow=5.6,SNR=1.5						
ASAR	**Alice Springs**	**45.37**	**256**	P	**P**	**19 49 04.8**	**-0.2**
QSPA	**South Pole Qui**	**70.61**	**180**	P	**P**	**19 51 55.8**	**+0.6**
QSPA				IAmb	IAmb	19 52 11.4	
	comp=Z,3.8nm,1.4s						
GAMB	**Gambell**	**83.08**	**3**	P	**P**	**19 53 02.9**	**+0.2**

IDC 28 19:43:21.4±19.0,28.°97N×86.°57E,h0km,mb3.2/2, mb1 3.1/3,mb1mx2.9/44,mbtmp3.1/3,ML3.1/1,Error ellipse: s-maj=325.2km s-min=82.4km az=24.0,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.11**	**351**	P	**Pn**	**19 47 34.0**	**-0.3**
	0.1nm,0.3s,baz=182,slow=12,SNR=4.2						
SONM	**Songino Array**	**24.30**	**34**	P	**P**	**19 48 40.4**	**-0.2**
	0.1nm,0.3s,baz=228,slow=10,SNR=3.6						
ZALV	**Zalesovo Beam**	**24.99**	**358**	P	**P**	**19 48 46.9**	**+0.3**
	0.2nm,0.4s,baz=187,slow=10,SNR=1.9						

KRSC 28 19:49:57.1±1.9,54.°81N×165.°75E,h41km±14km,ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.41**	**18**	*eP*	**Pn**	**19 50 06.6**	**-0.1**
BKI				*eS*	Sn	19 50 11.4	-2.0
KBTR	**Krutoberegovo**	**2.18**	**311**	*eS*	Sn	19 51 00.0	+3.6
KBG	**Krutoberegovo**	**2.25**	**311**	*eS*	Sn	19 51 02.9	+4.5
MKZ	**Mys Kozlova**	**2.35**	**265**	*eP*	Pn	19 50 37.0	+3.9
MKZ				*eS*	Sn	19 51 04.1	+3.4
SMKR	**Semkarok**	**3.00**	**308**	*eS*	Sn	19 51 21.9	+5.0
ZLN	**Zelenaya**	**3.07**	**295**	*eS*	Sn	19 51 24.3	+5.7
BDR	**Baidarnaya**	**3.12**	**306**	*eS*	Sn	19 51 24.4	+4.7
KZV	**Kizimen**	**3.16**	**278**	*eP*	Pn	19 50 48.4	+4.0
KZV				*eS*	Sn	19 51 25.6	+4.7
SRKR	**Sorokina**	**3.18**	**307**	*eS*	Sn	19 51 25.7	+4.4
KMNR	**Kamenistaya**	**3.29**	**289**	*eP*	Pn	19 50 51.7	+5.5
KMNR				*eS*	Sn	19 51 29.6	+5.5
SRDR	**Sredinnyy**	**3.74**	**296**	*eS*	Sn	19 51 42.0	+6.9
SPN	**Mys Shipunski**	**3.79**	**245**	*eP*	Pn	19 50 56.9	+3.9
SPN				*eS*	Sn	19 51 38.8	+2.5
NLC	**Nalytchevo**	**4.12**	**249**	*eP*	Pn	19 51 01.6	+4.1
NLC				*eS*	Sn	19 51 47.3	+2.9
ESO	**Esso**	**4.17**	**288**	*eP*	Pn	19 51 03.4	+5.2
SDLR	**Sedlovina**	**4.33**	**252**	*eP*	Pn	19 51 05.6	+5.2
SDLR				*eS*	Sn	19 51 53.6	+3.9
SMAR	**Somma**	**4.38**	**252**	*eP*	Pn	19 51 06.1	+4.9
SMAR				*eS*	Sn	19 51 54.6	+3.5
UGLR	**Uglovaya**	**4.39**	**251**	*eP*	Pn	19 51 06.5	+5.2
UGLR				*eS*	Sn	19 51 56.2	+5.0
KRER	**Koryakskii**	**4.39**	**253**	*eP*	Pn	19 51 06.7	+5.3
AVH	**Avacha**	**4.42**	**252**	*eP*	Pn	19 51 07.0	+5.4
AVH				*eS*	Sn	19 51 55.3	+3.6
KRX	**Arik**	**4.43**	**254**	*eP*	Pn	19 51 06.7	+4.9
KRX				*eS*	Sn	19 51 55.9	+3.8
KOK	**Koryaka**	**4.46**	**253**	*eP*	Pn	19 51 07.5	+5.3
DALK	**Dalny**	**4.50**	**250**	*eP*	Pn	19 51 07.4	+4.7
DALK				*eS*	Sn	19 51 56.2	+2.4
PET	**Petropavlovsk**	**4.56**	**250**	*eP*	Pn	19 51 08.2	+4.7
PET				*eS*	Sn	19 51 58.3	+3.1
OSSR	**Ossora**	**4.69**	**343**	*eP*	Pn	19 51 08.4	+3.3
OSSR				*eS*	Sn	19 52 02.5	+4.3
GNL	**Ganaly**	**4.71**	**259**	*eP*	Pn	19 51 11.5	+5.8
GNL				*eS*	Sn	19 52 04.1	+5.0
RUS	**Russkaya**	**4.92**	**244**	*eP*	Pn	19 51 13.1	+4.6
RUS				*eS*	Sn	19 52 06.7	+2.6
KRMR	**Karymshinskiy**	**4.93**	**249**	*eP*	Pn	19 51 14.4	+5.8
KRMR				*eS*	Sn	19 52 08.8	+4.5
MTVR	**Mutnovka**	**5.07**	**246**	*eP*	Pn	19 51 15.5	+4.9
MTVR				*eS*	Sn	19 52 10.7	+2.7
GRL	**Gorelyy**	**5.09**	**247**	*eP*	Pn	19 51 16.3	+5.4
GRL				*eS*	Sn	19 52 12.4	+3.9
PALN	**Palana**	**5.33**	**326**	*eP*	Pn	19 51 18.7	+4.7
APC	**Apacha**	**5.42**	**253**	*eP*	Pn	19 51 21.2	+5.9
APC				*eS*	Sn	19 52 20.7	+4.3
MIPR	**Malaya Ipel'ka**	**5.93**	**248**	*eP*	Pn	19 51 28.8	+6.5
SKR	**Severo-Kuril's**	**7.16**	**239**	*eP*	Pn	19 51 44.5	+5.4
ALID	**Alaid**	**7.33**	**242**	*eP*	Pn	19 51 47.2	+5.6

*NNC **28** 19:51:01.1±6.0,37.°59N×71.°42E,h0km,mb3.8,mpv3.5, Error ellipse: s-maj=46.9km s-min=36.5km az=172.0*
ISC 28 19:51:00.1±3.5,37.°3N±0.°2×71.°2E±0.°1,h100km,n11, σ1§69/15,2C-4D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.18**	**21**	P	**Pn**	**19 52 16.5**	**+1.0**
	SNR=18						
UCH	**Uchtor**	**5.53**	**27**	P	**Pn**	**19 52 21.2**	**+0.8**
	SNR=6.6						
EKS2	**Erkin-Say**	**5.69**	**20**	P	**Pn**	**19 52 24.4**	**+2.1**
	SNR=6.3						
KK31	**Karatay Array**	**5.79**	**355**	⇑P	**Pn**	**19 52 25.5**	**+2.0**
	2.5nm,0.3s,baz=180,slow=14,SNR=40						
KK31				⇓S	**Sn**	**19 53 30.7**	**+2.1**
	1.7nm,0.5s,baz=171,slow=24,SNR=6.2						
AAK	**Ala-Archa**	**5.88**	**25**	P	**Pn**	**19 52 23.0**	**-1.9**
	SNR=5.4						
AAK	**Ala-Archa**	**5.88**	**25**	P	**Pn**	**19 52 25.7**	**+0.8**
	2.1nm,0.5s						
AAK				S	**Sn**	**19 53 31.9**	**+0.9**
	3.9nm,0.5s						
CHMS	**Chumysh**	**6.29**	**25**	P	**Pn**	**19 52 31.0**	**+0.7**
	SNR=6.3						
USP	**Ospenovka**	**6.45**	**22**	P	**Pn**	**19 52 32.9**	**+0.4**
	SNR=5.5						
TKM2	**Tokmak 2**	**6.53**	**30**	P	**Pn**	**19 52 33.9**	**+0.1**
	SNR=7.1						
TKM2	**Tokmak 2**	**6.53**	**30**	⇑P	**Pn**	**19 52 33.6**	**-0.2**
	1.9nm,0.5s						
TKM2				⇓S	**Sn**	**19 53 46.1**	**-0.8**
	2.4nm,1.0s						
AB31	**Akbulak array**	**14.44**	**329**	⇓P	**Pn**	**19 54 19.5**	**-0.1**
	0.3nm,0.4s,baz=143,slow=13,SNR=13						
AB31				⇓S	**Sn**	**19 56 54.9**	**-3.7**
	0.7nm,0.7s						

*IDC **28** 19:55:24.2±1.9,38.°19S×178.°61E,h0km,mb4.1/5, mb1 4.3/5,mb1mx3.9/25,mbtmp4.1/5,Error ellipse: s-maj=63.8km s-min=34.8km az=155.0*
*NOU **28** 19:55:37.2,37.°28S×178.°36E,h186km,MLv4.6,Off E. Coast of N. Island, N.Z.*
*NEIC **28** 19:55:43.2±2.4,37.°3S±0.°1×177.°9E±0.°1,h117km±3km, mb4.2/9,Error ellipse: s-maj=16.3km s-min=9.5km az=149.0*
*WEL **28** 19:55:44.2±0.9,37.°S±6.°×17.°8E±.°,h91km±8km,M3.9/29, ML4.3/9,MLv3.9/29,Error ellipse: s-maj=0.0km s-min=0.0km az=50.9*
ISC 28 19:55:43.4±0.7,37.°25S±0.°05×177.°91E±0.°05,h126km±5km, n160,σ1§42/167,mb4.1/9,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.45**	**135**		**Pn**	**19 56 01.2**	**-0.5**
MXZ					Sn	**19 56 14.3**	**-1.2**
MXZ	**Matakaoa Point**	**0.45**	**135**	P	**Pn**	**19 56 01.2**	**-0.5**
MXZ				S	**Sn**	**19 56 14.9**	**-0.6**
HAZ	**Te Kaha**	**0.52**	**191**	P	**Pn**	**19 56 01.4**	**-0.6**
HAZ				S	**Sn**	**19 56 14.6**	**-1.6**
WIZ	**White Island**	**0.64**	**244**	P	**Pn**	**19 56 01.7**	**-1.1**
WIZ				S	**Sn**	**19 56 15.6**	**-1.9**
WSRZ	**White Island S**	**0.64**	**245**	P	**Pn**	**19 56 02.6**	**-0.3**
PKGZ	**Pakihiroa**	**0.65**	**168**	P	**Pn**	**19 56 03.2**	**+0.1**
WMGZ	**Waiomatatini S**	**0.70**	**145**	P	**Pn**	**19 56 02.9**	**-0.4**
WMGZ				S	**Sn**	**19 56 16.6**	**-1.8**
RUGZ	**Raukumara Rang**	**0.74**	**194**	P	**Pn**	**19 56 02.9**	**-0.9**
RUGZ				S	**Sn**	**19 56 17.5**	**-1.7**
PUZ	**Puketiti**	**0.87**	**161**	P	**Pn**	**19 56 04.9**	**+0.1**
PUZ				S	**Sn**	**19 56 20.6**	**-0.3**
TWGZ	**Tauwhareparae**	**0.93**	**176**	P	**Pn**	**19 56 06.3**	**+0.9**
TWGZ				S	**Sn**	**19 56 23.1**	**+1.2**
WHRZ	**Whale Island**	**0.96**	**230**	P	**Pn**	**19 56 05.1**	**-0.5**
MWZ	**Matawai**	**1.12**	**195**	P	**Pn**	**19 56 07.2**	**0.0**
MWZ				S	**Sn**	**19 56 25.7**	**+0.4**
TKGZ	**Te Karaka**	**1.19**	**182**	P	**Pn**	**19 56 08.4**	**+0.6**
TKGZ				S	**Sn**	**19 56 27.3**	**+0.9**
URZ	**Urewera**	**1.19**	**212**		**Pn**	**19 56 07.4**	**-0.4**
URZ					Sn	**19 56 25.8**	**-0.6**
URZ	**Urewera**	**1.19**	**212**	P	**Pn**	**19 56 07.5**	**-0.4**
URZ				S	**Sn**	**19 56 25.7**	**-0.7**
MARZ	**Manawahe**	**1.22**	**233**	P	**Pn**	**19 56 07.8**	**-0.4**
OPRZ	**Ohinepanea**	**1.23**	**241**	P	**Pn**	**19 56 07.6**	**-0.6**
CNGZ	**Carnagh Statio**	**1.26**	**169**	P	**Pn**	**19 56 09.6**	**+1.1**
CNGZ				S	**Sn**	**19 56 28.5**	**+0.9**
EDRZ	**Edgecumbe**	**1.26**	**227**	P	**Pn**	**19 56 08.3**	**-0.3**
RAGZ	**Rawiri**	**1.30**	**197**	P	**Pn**	**19 56 09.8**	**+0.7**
RAGZ				S	**Sn**	**19 56 30.3**	**+1.6**
MYRZ	**Mayor Island**	**1.33**	**268**	P	**Pn**	**19 56 08.7**	**-0.6**

TGRZ	**Tauranga**	**1.40**	**249**	P	**Pn**	**19 56 09.3**	**-0.7**
LIRZ	**Lichensteins R**	**1.43**	**238**	P	**Pn**	**19 56 10.5**	**+0.2**
MKRZ	**Makatiti**	**1.45**	**232**	P	**Pn**	**19 56 11.4**	**+0.7**
RIGZ	**Rimuhau**	**1.46**	**184**	P	**Pn**	**19 56 11.2**	**+0.5**
TARZ	**Mount Tarawera**	**1.48**	**228**	P	**Pn**	**19 56 11.4**	**+0.3**
OMRZ	**Omania**	**1.49**	**234**	P	**Pn**	**19 56 11.1**	**-0.1**
MUGZ	**Murupara**	**1.52**	**216**	P	**Pn**	**19 56 11.3**	**-0.1**
KARZ	**Kaharoa**	**1.53**	**239**	P	**Pn**	**19 56 11.3**	**-0.2**
RTZ	**Ruatahuna**	**1.55**	**208**	P	**Pn**	**19 56 11.7**	**-0.2**
RRRZ	**Republican Roa**	**1.55**	**225**	P	**Pn**	**19 56 11.9**	**+0.1**
HLRZ	**Highlands Stat**	**1.59**	**230**	P	**Pn**	**19 56 12.5**	**+0.2**
SNGZ	**Shannon Statio**	**1.59**	**196**	P	**Pn**	**19 56 12.8**	**+0.5**
NGRZ	**Ngongotaha**	**1.61**	**238**	P	**Pn**	**19 56 12.7**	**+0.2**
UTU	**Utuhina**	**1.65**	**235**	P	**Pn**	**19 56 14.4**	**+1.5**
PRGZ	**Paritu Road**	**1.67**	**181**	P	**Pn**	**19 56 13.5**	**+0.3**
KMRZ	**Kaimai**	**1.67**	**249**	P	**Pn**	**19 56 13.0**	**-0.2**
HSRZ	**Hossack Road**	**1.69**	**231**	P	**Pn**	**19 56 14.2**	**+0.8**
HRRZ	**Handcock Road**	**1.72**	**228**	P	**Pn**	**19 56 14.2**	**+0.4**
PRRZ	**Plateau Road**	**1.73**	**223**	P	**Pn**	**19 56 14.0**	**+0.1**
KNZ	**Kokohu**	**1.78**	**186**	P	**Pn**	**19 56 14.5**	**0.0**
RAHZ	**Arahi**	**1.79**	**201**	P	**Pn**	**19 56 15.0**	**+0.4**
GRRZ	**Galatos Road**	**1.80**	**232**	P	**Pn**	**19 56 15.3**	**+0.6**
ALRZ	**Allen Road**	**1.80**	**223**	P	**Pn**	**19 56 15.0**	**+0.2**
MTHZ	**Maungataniwha**	**1.81**	**207**	P	**Pn**	**19 56 14.7**	**-0.2**
KUZ	**Kuaotunu**	**1.82**	**285**	P	**Pn**	**19 56 13.7**	**-1.3**
WPRZ	**Whakapapatarin**	**1.88**	**227**	P	**Pn**	**19 56 16.2**	**+0.6**
MHGZ	**Mahia Peninsul**	**1.90**	**180**	P	**Pn**	**19 56 16.4**	**+0.5**
WHHZ	**Waihua**	**1.90**	**196**	P	**Pn**	**19 56 16.3**	**+0.4**
MRHZ	**Matea Rd**	**1.97**	**216**	P	**Pn**	**19 56 16.8**	**0.0**
TOZ	**Tahuroa Road**	**1.97**	**255**	P	**Pn**	**19 56 16.7**	**-0.1**
NMHZ	**Naumai**	**2.04**	**205**	P	**Pn**	**19 56 18.4**	**+0.7**
KUHZ	**Kaahu Road**	**2.06**	**227**	P	**Pn**	**19 56 18.5**	**+0.6**
WHTZ	**Whakaora**	**2.09**	**227**	P	**Pn**	**19 56 19.5**	**+1.2**
ARHZ	**Aropaoanui**	**2.13**	**199**	P	**Pn**	**19 56 19.1**	**+0.3**
TLZ	**Tolley Road**	**2.17**	**239**	P	**Pn**	**19 56 19.5**	**+0.3**
HATZ	**Hinemaiaia**	**2.18**	**221**	P	**Pn**	**19 56 19.5**	**+0.1**
GRZ	**Great Barrier**	**2.21**	**296**	P	**Pn**	**19 56 18.5**	**-1.1**
BKZ	**Black Stump Fm**	**2.21**	**210**		**Pn**	**19 56 19.4**	**-0.4**
BKZ					Sn	**Sn**	**19 56 49.2**	**+1.4**
BKZ	**Black Stump Fm**	**2.21**	**210**	P	**Pn**	**19 56 19.5**	**-0.4**
WATZ	**Wairara**	**2.25**	**229**	P	**Pn**	**19 56 20.9**	**+0.6**
WIAZ	**Waiheke Island**	**2.27**	**281**	P	**Pn**	**19 56 19.8**	**-0.6**
RATZ	**Rangitukua**	**2.33**	**226**	P	**Pn**	**19 56 21.8**	**+0.5**
RITZ	**Rihia Road**	**2.36**	**222**	P	**Pn**	**19 56 22.3**	**+0.6**
MCHZ	**McNeill Hill**	**2.39**	**203**	P	**Pn**	**19 56 22.0**	**0.0**
ETAZ	**East Tamaki Re**	**2.40**	**276**	P	**Pn**	**19 56 22.1**	**-0.1**
KATZ	**Kakaramea**	**2.45**	**225**	P	**Pn**	**19 56 23.9**	**+1.0**
MBAZ	**Motutapu North**	**2.46**	**280**	P	**Pn**	**19 56 22.6**	**-0.2**
KWHZ	**Kaweka Forest**	**2.47**	**208**	P	**Pn**	**19 56 22.7**	**-0.3**
CKHZ	**Cape Kidnapper**	**2.49**	**195**	P	**Pn**	**19 56 22.8**	**-0.5**
TMTZ	**Te Maari**	**2.55**	**222**	P	**Pn**	**19 56 24.3**	**+0.2**
ABAZ	**Army Bay**	**2.55**	**284**	P	**Pn**	**19 56 23.8**	**-0.2**
NTVZ	**North Tongarir**	**2.55**	**223**	P	**Pn**	**19 56 24.6**	**+0.4**
ETVZ	**East Tongariro**	**2.56**	**222**	P	**Pn**	**19 56 24.3**	**0.0**
KRVZ	**Karewarewa**	**2.57**	**223**	P	**Pn**	**19 56 24.6**	**+0.3**
OTVZ	**Oturere**	**2.60**	**222**	P	**Pn**	**19 56 25.3**	**+0.4**
NNVZ	**North Ngauruho**	**2.61**	**223**	P	**Pn**	**19 56 25.3**	**+0.4**
WTVZ	**West Tongariro**	**2.61**	**224**	P	**Pn**	**19 56 25.1**	**+0.2**
AWAZ	**Awhitu Peninsu**	**2.61**	**273**	P	**Pn**	**19 56 25.3**	**+0.4**
SNVZ	**South Ngauruho**	**2.63**	**222**	P	**Pn**	**19 56 25.6**	**+0.3**
NGZ	**Ngauruhoe**	**2.65**	**223**	P	**Pn**	**19 56 25.7**	**+0.3**
TWVZ	**Taurewa**	**2.66**	**226**	P	**Pn**	**19 56 25.9**	**+0.3**
BHHZ	**Black Hill Sta**	**2.67**	**212**	P	**Pn**	**19 56 25.0**	**-0.6**
KAHZ	**Kahuranaki**	**2.67**	**197**	P	**Pn**	**19 56 25.1**	**-0.5**
KRHZ	**Kereru**	**2.68**	**206**	P	**Pn**	**19 56 24.8**	**-1.0**
WTAZ	**Waiatarua**	**2.68**	**276**	P	**Pn**	**19 56 26.1**	**+0.3**
TUVZ	**Tukino**	**2.69**	**221**	P	**Pn**	**19 56 25.7**	**-0.3**
HIZ	**Hauiti**	**2.73**	**241**		**Pn**	**19 56 27.3**	**+1.1**
HIZ	**Hauiti**	**2.73**	**241**	P	**Pn**	**19 56 27.3**	**+1.1**
FWVZ	**Far West T-bar**	**2.73**	**222**	P	**Pn**	**19 56 26.6**

FINES FINESS Array B 150.06 333 PKPbc **PKPbc 20 15 17.8 -0.5**
comp=Z,0.5nm,0.4s,baz=12,slow=3.6,SNR=8.8

*IDC **28** 20:06:41.9±0.6,9.45N×78.83W, h58km±5km, mb3.7/12, mb1 4.0/18, mb1mx3.8/31, mbtmp4.0/18, MS3.0/6, Ms1 3.1/6, ms1mx2.8/27, Error ellipse: s-maj=18.3km s-min=11.1km az=30.0*
*NEIC **28** 20:06:42.7±2.4,9.48N±0.08×78.86W±0.06, h60km±8km, mb4.3/17, Error ellipse: s-maj=11.1km s-min=8.6km az=186.2*
*UPA **28** 20:06:43.0±1.1,9.25N×78.88W, h52km±3km, MW4.7*
*UCR **28** 20:06:49.3±1.6,9.85N×79.56W, h0km±46km, mb4.3(NEIC)*
ISC 28 20:06:41.7±0.5,9.42N±0.04×78.85W±0.03, h57km±5km, n186, σ1§54/218, mb4.2/21, MS3.3/4, 15C-35D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNTA3	**Canitas, Panam**	**0.20**	**192**	⇑*iP*	**Pn**	**20 06 50.9**	**+0.2**
CNTA3				*eS*	**Sn**	**20 06 57.1**	**+0.2**
CHPO	**Chepo, Panama**	**0.36**	**227**	⇓*iP*	**Pn**	**20 06 51.7**	**-0.3**
CHPO				*eS*	**Sn**	**20 06 58.6**	**-0.8**
CHPO				*i* S		20 06 58.9	
MIRA3	**Miramar, Colon**	**0.50**	**288**	⇓*iP*	**Pn**	**20 06 54.4**	**+1.0**
MIRA3				*eS*	**Sn**	**20 07 03.1**	**+1.2**
MAD3	**Madden Dam**	**0.79**	**255**	⇑*iP*	**Pn**	**20 06 57.5**	**+0.7**
MAD3				*i* S	**Sn**	**20 07 07.5**	**-0.4**
MAD3				*eS*		20 07 08.7	
UPA	**Univ. de Panam**	**0.80**	**237**	⇓*iP*	**Pn**	**20 06 56.3**	**-0.8**
UPA				*eS*	**Sn**	**20 07 07.1**	**-1.3**
UPA				*i* S		20 07 07.2	
UPA	**Univ. de Panam**	**0.80**	**237**	⇓*iP*	**Pn**	**20 06 56.3**	**-0.8**
FLAM	**Flamenco Islan**	**0.84**	**234**	⇑*iP*	**Pn**	**20 06 56.9**	**-0.7**
FLAM				*i* S	**Sn**	**20 07 07.4**	**-1.8**
FLAM				*eS*		20 07 07.7	
MFS3	**Miraflores**	**0.84**	**241**	⇑*eP*	**Pn**	**20 06 57.1**	**-0.4**
MFS3				*eS*	**Sn**	**20 07 08.1**	**-1.2**
PML3	**Paraiso**	**0.85**	**242**	⇓*eP*	**Pn**	**20 06 57.3**	**-0.4**
PML3				*eS*	**Sn**	**20 07 08.2**	**-1.3**
FRIJ	**El Hiral**	**0.89**	**257**	⇓*iP*	**Pn**	**20 06 58.4**	**+0.3**
FRIJ				*i* S	**Sn**	**20 07 09.6**	**-0.7**
GAMB1	**Gamboa**	**0.90**	**251**	*eP*	**Pn**	**20 06 58.5**	**+0.2**
GAMB1				*eS*	**Sn**	**20 07 10.3**	**-0.3**
ARRA3	**Arraijan, Pana**	**0.92**	**241**	⇓*eP*	**Pn**	**20 06 58.0**	**-0.5**
ARRA3				*i* S	**Sn**	**20 07 09.9**	**-1.0**
TABO3	**Taboga, Panama**	**0.93**	**228**	⇓*iP*	**Pn**	**20 06 57.8**	**-1.0**
TABO3				*i* S	**Sn**	**20 07 08.8**	**-2.5**
SABA3	**Sabanitas, Col**	**0.94**	**266**	⇓*iP*	**Pn**	**20 06 59.3**	**+0.5**
SABA3				*i* S	**Sn**	**20 07 11.9**	**+0.4**
BCIP	**Isla Barro Col**	**1.01**	**256**	⇓*iP*	**Pn**	**20 07 00.0**	**+0.3**
BCIP				*eS*	**Sn**	**20 07 13.2**	**+0.2**
BCIP	**Isla Barro Col**	**1.01**	**256**		**Pn**	**20 06 59.9**	**+0.2**
BCIP				Sn	**Sn**	**20 07 13.0**	**-0.1**
BCIP	**Isla Barro Col**	**1.01**	**256**	⇓*iP*	**Pn**	**20 07 00.0**	**+0.3**
MLIR	**Monte Lirio**	**1.01**	**260**	⇓*iP*	**Pn**	**20 07 00.7**	**+0.5**
MLIR				*eS*	**Sn**	**20 07 12.4**	**+0.6**
CHOR3	**La Chorrera**	**1.04**	**240**	⇓*eP*	**Pn**	**20 06 59.8**	**-0.4**
CHOR3				*i* S	**Sn**	**20 07 12.7**	**-1.2**
CHOR3				*eS*		20 07 13.0	
ZANG	**Zanguenga, Cho**	**1.11**	**246**	⇓*iP*	**Pn**	**20 07 00.7**	**-0.3**
ZANG				*eS*	**Sn**	**20 07 14.9**	**-0.5**
ZANG				*i* S		20 07 15.2	
UPD2	**Meteti**	**1.19**	**136**	⇓*iP*	**Pn**	**20 07 02.3**	**0.0**
UPD2				*eS*	**Sn**	**20 07 16.0**	**-1.5**
UPD2	**Meteti**	**1.19**	**136**	⇓*eP*	**Pn**	**20 07 02.2**	**0.0**
VTON	**El Valle, Cocl**	**1.48**	**237**	⇓*iP*	**Pn**	**20 07 05.6**	**-0.5**
VTON				*eS*	**Sn**	**20 07 23.1**	**-1.5**
VTON				*i* S		20 07 23.1	
CAP2	**Capurgana**	**1.66**	**117**	⇓*eP*	**Pn**	**20 07 08.5**	**0.0**
CAP2				*eS*	**Sn**	**20 07 28.6**	**-0.1**
CAPC	**Capurgana**	**1.67**	**118**	*eP*	**Pn**	**20 07 08.5**	**-0.2**
PNME	**Penonome**	**1.73**	**238**	⇓*eP*	**Pn**	**20 07 09.1**	**-0.4**
PNME				*eS*	**Sn**	**20 07 29.1**	**-1.3**
PNME	**Penonome**	**1.73**	**238**	*eP*	**Pn**	**20 07 09.3**	**-0.2**
AZU	**Azuero**	**2.15**	**221**	⇓*iP*	**Pn**	**20 07 13.9**	**-1.1**
AZU				*eS*	**Sn**	**20 07 37.5**	**-3.1**
AZU	**Azuero**	**2.15**	**221**	⇓*eP*	**Pn**	**20 07 13.9**	**-1.1**
PCRI3	**Pocri, Los San**	**2.15**	**216**	⇓*iP*	**Pn**	**20 07 14.2**	**-1.0**
CALO3	**Calobre, Verag**	**2.25**	**241**	⇓*iP*	**Pn**	**20 07 16.2**	**-0.3**
SAFE3	**Santa Fe, Vera**	**2.38**	**248**	⇓*iP*	**Pn**	**20 07 18.1**	**-0.2**
ACHO3	**Achotines, Los**	**2.38**	**213**	⇓*iP*	**Pn**	**20 07 17.8**	**-0.6**
ACHO3				*i* S	**Sn**	**20 07 43.5**	**-2.9**
SFRA3	**San Francisco,**	**2.40**	**241**	⇓*iP*	**Pn**	**20 07 18.2**	**-0.4**
OCU3	**Ocu, Herrera**	**2.40**	**233**	*eP*	**Pn**	**20 07 17.8**	**-0.9**
STIA3	**Santiago, Vera**	**2.48**	**238**	⇓*eP*	**Pn**	**20 07 19.0**	**-0.7**
PTAC	**Punta Ardita,**	**2.48**	**155**	⇓*eP*	**Pn**	**20 07 17.9**	**-1.8**
LCBC	**Los crdobas,**	**2.51**	**103**	*eP*	**Pn**	**20 07 22.8**	**+2.7**
CNAZ3	**Canazas, Verag**	**2.56**	**246**	⇓*eP*	**Pn**	**20 07 19.2**	**-1.6**
MESA3	**La Mesa, Verag**	**2.63**	**242**	⇑*eP*	**Pn**	**20 07 23.4**	**+1.6**
MARI3	**Mariato, Verag**	**2.75**	**230**	*eP*	**Pn**	**20 07 23.4**	**0.0**
CACA0	**El Cacao, Vera**	**2.87**	**224**	*eP*	**Pn**	**20 07 24.5**	**-0.4**
GMAL	**Guarumal, Vera**	**2.88**	**235**	⇑*eP*	**Pn**	**20 07 24.7**	**-0.3**
CHGR2	**Aguacate,**	**3.29**	**262**	*eP*	**Pn**	**20 07 30.8**	**+0.1**
SOLC	**Bahia Solano**	**3.48**	**156**	*eP*	**Pn**	**20 07 31.5**	**-1.9**
PSOM3	**Paja de Sombre**	**3.51**	**258**	⇑*eP*	**Pn**	**20 07 33.6**	**-0.2**
GUAL3	**Gualaca, Chiri**	**3.52**	**256**	⇑*eP*	**Pn**	**20 07 35.0**	**+1.1**
LNBQ3	**Los Naranjos,**	**3.60**	**260**	⇓*eP*	**Pn**	**20 07 35.6**	**+0.4**
LOMA3	**Las Lomas, Chi**	**3.63**	**255**	*eP*	**Pn**	**20 07 35.5**	**0.0**
SJCC	**San Jacinto, C**	**3.65**	**82**	⇓*iP*	**Pn**	**20 07 37.4**	**+1.6**
SJCC	**San Jacinto, C**	**3.65**	**82**	*eP*	**Pn**	**20 07 37.3**	**+1.6**
UREC	**San Jos de Ur**	**3.67**	**117**	*eP*	**Pn**	**20 07 36.9**	**+0.8**
PTAR3	**Potrerillos Ar**	**3.67**	**259**	⇓*eP*	**Pn**	**20 07 37.2**	**+1.1**
BCO2	**Palmira**	**3.70**	**259**	⇑*eP*	**Pn**	**20 07 37.3**	**+0.7**
BAGA3	**Bagala, Chiriq**	**3.76**	**256**	⇑*eP*	**Pn**	**20 07 38.9**	**+1.8**
BC3P	**Paso Ancho**	**3.76**	**261**	⇓*iP*	**Pn**	**20 07 37.9**	**+0.5**
BRU2	**Volcan**	**3.85**	**261**	⇑*iP*	**Pn**	**20 07 39.1**	**+0.6**
BRU2				*eS*	**Sn**	**20 08 22.4**	**-0.2**
LIMO3	**Limones**	**4.18**	**252**	⇓*eP*	**Pn**	**20 07 46.1**	**+3.2**
DRK0	**Durika**	**4.34**	**268**	⇑*iP*	**Pn**	**20 07 46.2**	**+0.8**
DRK0				*eS*	**Sn**	**20 08 32.2**	**-2.6**
DRK0	**Durika**	**4.34**	**268**	Pn	**Pn**	**20 07 46.0**	**+0.7**
DRK0				Sn	**Sn**	**20 08 31.7**	**-3.1**
ZARC	**Zaragoza, Cauc**	**4.39**	**116**	*eP*	**Pn**	**20 07 46.6**	**+0.8**
CBOC	**Ciudad Bolivar**	**4.51**	**141**	*eP*	**Pn**	**20 07 46.7**	**-1.0**
BATAN	**Batan**	**4.51**	**279**	Pn	**Pn**	**20 07 47.1**	**-0.5**
PIRO	**Carate, Puerto**	**4.55**	**258**	*eP*	**Pn**	**20 07 50.0**	**+2.0**
PIRO	**Carate, Puerto**	**4.55**	**258**	*eP*	**Pn**	**20 07 50.4**	**+2.4**
PIRO				*eS*	**Sn**	**20 08 42.4**	**+2.7**
MRVA	**Moravia de Chi**	**4.55**	**275**	*eP*	**Pn**	**20 07 49.4**	**+1.2**
ARGC	**Ariguani, Magd**	**4.56**	**84**	*eP*	**Pn**	**20 07 51.2**	**+3.0**
HELC	**Santa Helena**	**4.59**	**134**	⇑*iP*	**Pn**	**20 07 50.0**	**+1.0**
HELC	**Santa Helena**	**4.59**	**134**	*eP*	**Pn**	**20 07 49.6**	**+0.7**
PRVC	**Isla de Provid**	**4.64**	**328**	*eP*	**Pn**	**20 07 47.6**	**-1.7**
RIOS	**Rincon, Osa**	**4.66**	**262**	Pn	**Pn**	**20 07 50.8**	**+1.2**
SMLC	**San Martn de**	**4.76**	**97**	*eP*	**Pn**	**20 07 52.8**	**-0.1**
PEZE	**Perez Zeledon,**	**4.77**	**270**	*eP*	**Pn**	**20 07 52.9**	**+1.9**
PEZE	**Perez Zeledon,**	**4.77**	**270**	Pn	**Pn**	**20 07 52.3**	**+1.2**
CDM	**Cerro de Muert**	**4.85**	**272**	*eP*	**Pn**	**20 07 53.6**	**+1.1**
SMRC	**Santa Marta, M**	**4.87**	**69**	*eP*	**Pn**	**20 07 53.5**	**+1.1**
CVTR	**Volcan Turrial**	**4.88**	**277**	*eP*	**Pn**	**20 07 55.0**	**+2.1**
CVTR	**Volcan Turrial**	**4.88**	**277**	Pn	**Pn**	**20 07 54.8**	**+1.9**
VTUC	**Crater, Volcan**	**4.88**	**277**	*eP*	**Pn**	**20 07 55.6**	**+2.6**
EDDO	**Dominical**	**4.95**	**269**	*eP*	**Pn**	**20 07 56.0**	**+2.4**
RIMA	**Rio Macho**	**4.96**	**274**	*eP*	**Pn**	**20 07 55.3**	**+1.5**
OCM	**Ochomogo**	**5.06**	**276**	*eP*	**Pn**	**20 07 57.1**	**+1.8**
LCR2	**La Lucha 2**	**5.09**	**274**	*eP*	**Pn**	**20 07 57.4**	**+1.7**
PTBC	**PUERTO BERRIO,**	**5.21**	**123**	*eP*	**Pn**	**20 07 57.6**	**+0.6**
HDC	**Heredia**	**5.22**	**277**	*eP*	**Pn**	**20 07 59.9**	**+2.5**
HDC	**Heredia**	**5.22**	**277**	Pn	**Pn**	**20 07 59.5**	**+2.1**
LL2C	**La Loma 2 Cana**	**5.34**	**88**	*eP*	**Pn**	**20 08 00.7**	**+1.8**
GUY2C	**Guyana, Caldas**	**5.41**	**140**	*eP*	**Pn**	**20 08 01.4**	**+1.1**
NORC	**Norcasia**	**5.50**	**134**	*eP*	**Pn**	**20 08 02.9**	**+1.8**
BRRC	**Barranca, Sant**	**5.58**	**114**	*eP*	**Pn**	**20 08 03.7**	**+1.5**
OCAC	**Ocana**	**5.59**	**102**	*eP*	**Pn**	**20 08 03.6**	**+1.2**
COVE	**Coope Vega, Sa**	**5.62**	**284**	*eP*	**Pn**	**20 08 04.2**	**+1.4**
COVE	**Coope Vega, Sa**	**5.62**	**284**	Pn	**Pn**	**20 08 03.6**	**+0.9**
CEDE	**Laguna Cedeo**	**5.87**	**281**	*eP*	**Pn**	**20 08 08.3**	**+2.2**
ARE1	**Arenal 1**	**5.88**	**281**	*eP*	**Pn**	**20 08 08.4**	**+2.1**
TOLC	**Tolima**	**5.94**	**144**	*eP*	**Pn**	**20 08 08.4**	**+0.9**
YOTC	**Yotoco, Valle**	**5.94**	**155**	*eP*	**Pn**	**20 08 07.1**	**-0.2**
ESPN	**Las Esperanzas**	**6.03**	**298**	*eP*	**Pn**	**20 08 09.1**	**+0.8**
ESPN	**Las Esperanzas**	**6.03**	**298**	Pn	**Pn**	**20 08 07.6**	**-0.7**
JTS	**Las Juntas de**	**6.08**	**279**	P	**Pn**	**20 08 11.0**	**+2.0**
	5.3nm,0.3s,baz=126,slow=12,SNR=16						
JTS				S	**Sn**	**20 09 20.1**	**+2.8**
	4.0nm,0.3s,baz=54,slow=22,SNR=1.8						
JTS				LR	LR	20 11 05.0	
	comp=Z,28nm,18.5s,baz=290,slow=43						
JTS	**Las Juntas de**	**6.08**	**279**	⇓*eP*	**Pn**	**20 08 10.8**	**+1.8**
JTS	**Las Juntas de**	**6.08**	**279**	Pn	**Pn**	**20 08 10.8**	**+1.8**
CRJC	**Cerrejon, Guaj**	**6.08**	**74**	*eP*	**Pn**	**20 08 09.1**	**-0.1**
BARC	**Barichara**	**6.27**	**116**	*eP*	**Pn**	**20 08 12.6**	**+0.7**
CUI	**Cuipilapa**	**6.34**	**282**	*eP*	**Pn**	**20 08 14.2**	**+1.6**
ROSC	**El Rosal**	**6.39**	**135**	P	**Pn**	**20 08 15.4**	**+1.7**
	4.2nm,0.3s,baz=83,slow=4.6,SNR=5.3						
ROSC	**El Rosal**	**6.39**	**135**	Pn	**Pn**	**20 08 16.2**	**+2.6**
PAMC	**Pamplona, Colo**	**6.42**	**108**	*eP*	**Pn**	**20 08 14.6**	**+0.4**
PLVR	**Palo Verde**	**6.47**	**279**	*eP*	**Pn**	**20 08 16.4**	**+1.8**
ORTC	**Ortega, Tolima**	**6.54**	**147**	*eP*	**Pn**	**20 08 17.0**	**+1.7**
ORTG	**Ortega, Santa**	**6.58**	**279**	*eP*	Pn	20 08 20.8	+4.8
ORTG	**Ortega, Santa**	**6.58**	**279**	Pn	**Pn**	**20 08 16.5**	**+0.5**
ACON	**Acoyapa**	**6.71**	**293**	*eP*	**Pn**	**20 08 19.2**	**+1.5**
ACON	**Acoyapa**	**6.71**	**293**	Pn	**Pn**	**20 08 18.7**	**+1.0**
CHIC	**Chingaza**	**6.96**	**133**	*eP*	**Pn**	**20 08 22.7**	**+1.3**
URIC	**Uribia, Colomb**	**7.11**	**71**	*eP*	**Pn**	**20 08 24.2**	**+1.0**
MARP	**Paez Belalcaza**	**7.14**	**156**	*eP*	**Pn**	**20 08 25.7**	**+1.9**
BOAB	**BOACO BROADBAN**	**7.34**	**295**		**Pn**	**20 08 26.3**	**0.0**
PCON	**Cinco Dias**	**7.45**	**161**	*eP*	**Pn**	**20 08 31.4**	**+3.1**
SOTA	**Rioblanco**	**7.57**	**163**	*eP*	**Pn**	**20 08 32.1**	**+2.1**
MATN	**Matagalpa**	**7.77**	**297**		Pn	20 08 37.2	+4.9
GARC	**Garzon, Huila**	**7.92**	**155**	*eP*	**Pn**	**20 08 35.4**	**+0.9**
CRUC	**La Cruz**	**8.02**	**166**	*eP*	**Pn**	**20 08 37.9**	**+1.9**
SDV	**Santo Domingo**	**8.13**	**93**	P	**Pn**	**20 08 37.8**	**+0.6**
	1.8nm,0.3s,baz=315,slow=5.0,SNR=9.6						
SDV				S	**Sn**	**20 10 04.8**	**-3.1**
	24nm,0.3s,baz=8.0,slow=18,SNR=17						
SDV				LR	LR	20 12 53.1	
	comp=Z,61nm,20.3s,baz=186,slow=46						
SDV	**Santo Domingo**	**8.13**	**93**	Pn	**Pn**	**20 08 38.2**	**+0.9**
SDV	**Santo Domingo**	**8.13**	**93**	*eP*	**Pn**	**20 08 37.9**	**+0.6**
GCUF	**Volcan Galeras**	**8.27**	**170**	*eP*	**Pn**	**20 08 41.7**	**+2.1**
HOJ	**Hope**	**8.78**	**13**	*i P*	**Pn**	**20 08 48.6**	**+2.7**
STH	**Stony Hill**	**8.83**	**13**	⇓*iP*	**Pn**	**20 08 49.2**	**+2.5**
STH				*i* S	**Sn**	**20 10 17.4**	**-7.5**
GWJ	**Greenwich**	**8.85**	**13**	*i P*	**Pn**	**20 08 49.9**	**+2.8**
MTDJ	**Mount Denham**	**8.85**	**8**	Pn	**Pn**	**20 08 47.7**	**+0.7**
CMJ	**Castle Mountai**	**8.99**	**15**	*i P*	**Pn**	**20 08 48.8**	**-0.2**
BBJ	**Bamboo Saint A**	**9.04**	**10**	*i P*	**Pn**	**20 08 51.2**	**+1.5**
OTAV	**Otavalo**	**9.13**	**177**	Pn	**Pn**	**20 08 53.0**	**+1.8**
OTAV	**Otavalo**	**9.13**	**177**	*eP*	**Pn**	**20 08 53.0**	**+1.8**
LCCY	**Blossom Villag**	**10.26**	**353**	Pn	**Pn**	**20 09 06.2**	**0.0**
CBCY	**The Bluff, Cay**	**10.30**	**355**	Pn	**Pn**	**20 09 05.9**	**-0.8**
JAKH	**Jacmel**	**10.71**	**34**	Pn	**Pn**	**20 09 13.0**	**+0.7**
LGNH	**Logne**	**10.88**	**33**	Pn	**Pn**	**20 09 15.2**	**+0.5**
GTBY	**Guantanamo Bay**	**11.05**	**19**	Pn	**Pn**	**20 09 19.6**	**+2.5**
SDDR	**Presa de Saban**	**12.00**	**37**	Pn	**Pn**	**20 09 31.3**	**+1.2**
PCRV	**Puerto La Cruz**	**14.03**	**86**	P	**Pn**	**20 09 57.4**	**-0.3**
	1.2nm,0.3s,baz=58,slow=15,SNR=2.3						
PCRV				S	**Sn**	**20 12 26.9**	**-5.0**
	0.7nm,0.3s,baz=139,slow=14,SNR=2.1						
PLCV	**Puerto La Cruz**	**14.07**	**86**		**Pn**	**20 09 57.4**	**-0.9**
TEIG	**Tepich**	**14.08**	**321**	P	**Pn**	**20 09 57.9**	**-0.4**
	0.5nm,0.3s,baz=284,slow=14,SNR=1.8						
TEIG				S	**Sn**	**20 12 28.1**	**-5.1**
	0.4nm,0.3s,baz=120,slow=7.7,SNR=2.6						
GRTK	**Grand Turk**	**14.13**	**31**	Pn	**Pn**	**20 09 59.6**	**+0.6**
PDPR	**Patillas Dam,**	**15.10**	**54**	Pn	**Pn**	**20 10 12.4**	**+0.7**
GCPR	**Guaynabo City**	**15.21**	**53**	Pn	**Pn**	**20 10 13.0**	**-0.1**
CMIG	**Matias Romero**	**17.36**	**298**	P	**Pn**	**20 10 38.6**	**-1.6**
	0.3nm,0.3s,baz=90,slow=5.1,SNR=2.4						
PTGA	**Pitinga**	**21.34**	**117**	P	**P**	**20 11 24.7**	**+0.4**
	1.6nm,0.3s,baz=318,slow=20,SNR=1.8						
GOGA	**Godfrey**	**24.25**	**351**	P	**P**	**20 11 55.7**	**+2.2**
GOGA				IAmb	IAmb	20 11 56.2	
	comp=Z,6.2nm,0.8s						
Y49A	**Blount Mountai**	**25.30**	**345**	P	**P**	**20 12 04.3**	**+1.3**
Y49A				IAmb	IAmb	20 12 05.3	
	comp=Z,6.1nm,0.6s						
MDP	**Montagnes des**	**26.34**	**98**	P	**P**	**20 12 12.4**	**-0.3**
	comp=Z,9.0nm,0.9s,baz=137,slow=2.8,SNR=4.5						
LPAZ	**La Paz**	**27.66**	**157**	P	**P**	**20 12 26.1**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=9.4,slow=6.1,SNR=2.6						
LPAZ				LR	LR	20 26 36.9	
	comp=Z,39nm,19.9s,baz=242,slow=43						
PB16	**IPOC Station P**	**29.08**	**162**	P	**P**	**20 12 40.8**	**+3.1**
Q56A	**Snyder Ridge,**	**29.50**	**359**	P	**P**	**20 12 41.5**	**+0.9**
PB11	**IPOC Station P**	**30.38**	**163**	P	**P**	**20 12 49.9**	**+1.3**
PB11				IAmb	IAmb	20 12 50.3	
	comp=Z,13nm,0.9s						
TXAR	**Lajitas Array**	**30.55**	**314**	P	**P**	**20 12 50.6**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=140,slow=9.9,SNR=5.8						
TXAR	**Lajitas Array**	**30.55**	**314**	P	**P**	**20 12 51.6**	**+1.5**
CCM	**Cathedral Cave**	**30.62**	**341**	P	**P**	**20 12 51.0**	**+0.5**
CCM				IAmb	IAmb	20 12 51.4	
	comp=Z,4.9nm,0.7s						
JFWS	**Jewell Farm**	**34.83**	**345**	P	**P**	**20 13 26.8**	**-0.4**
SADO	**Sadowa**	**35.22**	**360**	P	**P**	**20 13 32.1**	**+1.5**
H43A	**Windswept, Lux**	**35.77**	**349**	P	**P**	**20 13 35.3**	**+0.1**
AC02	**Maricunga**	**37.25**	**166**	P	**P**	**20 13 50.8**	**+2.2**
AC02				IAmb	IAmb	20 13 51.5	
	comp=Z,6.1nm,0.9s						
E43A	**Lone Tree Farm**	**37.48**	**351**	P	**P**	**20 13 50.1**	**+0.3**
E43A				IAmb	IAmb	20 14 05.8	
	comp=Z,3.8nm,0.7s						
EYMN	**Ely**	**39.86**	**347**	P	**P**	**20 14 08.9**	**-0.8**
PDAR	**Pinedale Array**	**42.72**	**326**	P	**P**	**20 14 34.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=126,slow=10.0,SNR=4.1						
PDAR				pP	**pP**	**20 14 48.8**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=131,slow=10,SNR=13						
PDAR	**Pinedale Array**	**42.72**	**326**	P	**P**	**20 14 34.4**	**+0.8**
ULM	**Lac du Bonnet**	**43.09**	**344**	P	**P**	**20 14 35.2**	**-0.9**
	comp=Z,3.0nm,0.6s,baz=150,slow=8.5,SNR=6.2						
ULM	**Lac du Bonnet**	**43.09**	**344**	P	**P**	**20 14 35.2**	**-0.9**
ULM				IAmb	IAmb	20 14 51.3	
	comp=Z,5.0nm,1.1s						
MOOW	**Moose Ponds**	**44.02**	**327**	P	**P**	**20 14 44.6**	**+0.6**
MOOW				IAmb	IAmb	20 15 01.1	
	comp=Z,3.6nm,0.8s						
NVAR	**Mina Array Bea**	**45.66**	**316**	pP	pP	20 15 12.6	+0.8
	comp=Z,0.5nm,0.3s,baz=125,slow=8.0,SNR=4.0						
PLCA	**Paso Flores**	**50.48**	**172**	P	**P**	**20 15 34.2**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=312,slow=8.2,SNR=3.9						
FCC	**Fort Churchill**	**50.59**	**350**	P	**P**	**20 15 33.8**	**-0.7**
FCC				IAmb	IAmb	20 15 45.3	
	comp=Z,3.2nm,1.5s						
YKA	**Yellowknife Ar**	**58.95**	**342**	P	**P**	**20 16 34.4**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=130,slow=7.7,SNR=36						
YKA				pP	**pP**	**20 16 49.9**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=130,slow=7.8,SNR=6.2						
INK	**Inuvik**	**68.72**	**341**	P	**P**	**20 17 39.1**	**0.0**
ILAR	**Eielson Array**	**72.24**	**335**	P	**P**	**20 18 00.8**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=116,slow=6.3,SNR=1.8						
ESDC	**Sonseca Array**	**72.42**	**51**	P	**P**	**20 18 03.4**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=272,slow=6.1,SNR=17						
ESDC				LR	LR	20 44 43.5	
	comp=Z,10nm,21.1s,baz=130,slow=32						
TORD	**Torodi Ar. Bea**	**76.77**	**79**	P	**P**	**20 18 37.8**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=294,slow=7.2,SNR=2.3						
TORD				pP	**pP**	**20 18 55.0**	**0.0**
	comp=Z,0.6nm,0.6s,baz=302,slow=7.2,SNR=2.5						
DAVOX	**Davos/Dischmat**	**82.35**	**44**	LR	LR	20 49 47.4	
	comp=Z,22nm,20.7s,baz=260,slow=31						
ARCES	**ARCESS Array B**	**86.21**	**20**	P	**P**	**20 19 16.6**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=317,slow=8.2,SNR=4.0						
VRAC	**Vranov**	**86.46**	**41**	LR	LR	20 52 19.6	
	comp=Z,20nm,19.9s,baz=350,slow=32						
ASAR	**Alice Springs**	**145.66**	**242**	PKPbc	**PKPdf**	**20 26 13.3**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=115,slow=2.6,SNR=9.3						
ASAR				pPKPbc	**pPKPdf**	**20 26 30.5**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=121,slow=3.6,SNR=7.3						
ASAR	**Alice Springs**	**145.66**	**242**		**PKPdf**	**20 26 12.9**	**-1.8**
WRA	**Warramunga Arr**	**146.30**	**248**	PKPbc	**PKPdf**	**20 26 14.8**	**-0.9**
	comp=Z,1.3nm,0.9s,baz=95,slow=3.4,SNR=4.8						
WRA				pPKPbc	**pPKPdf**	**20 26 34.0**	**+1.3**
	comp=Z,0.6nm,0.4s,baz=105,slow=3.3,SNR=2.8						
CMAR	**Chiang Mai Arr**	**152.22**	**5**	pPKPbc	pPKPbc	20 26 47.3	-1.5
	comp=Z,0.3nm,0.5s,baz=329,slow=3.4,SNR=3.2						

*NEIC **28** 20:08:56.3±2.5,7.8S±0.1×123.1E±0.1, h284km±10km, mb4.0/6, Error ellipse: s-maj=23.1km s-min=11.7km az=208.0*
*IDC **28** 20:08:57.8±4.7,7.82S×123.12E, h294km±51km, mb3.1/2, mb1 3.2/5, mb1mx2.9/28, mbtmp3.8/5, Error ellipse: s-maj=61.8km s-min=16.1km az=62.0*
ISC 28 20:08:56.6±0.8,7.9S±0.1×123.09E±0.09, h300km, n16, σ2§03/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.14**	**227**		**Pn**	**20 09 35.7**	**-1.9**
SOEI	**Soe**	**2.21**	**148**		**Pn**	**20 09 43.1**	**-2.2**
SOEI					S	**S**	**20 10 19.4**	**-4.6**
JAGI	**Jajag, Banyuwa**	**8.87**	**265**		Pn	**Pn**	**20 10 58.6**	**-2.2**
FAKI	**Fak Fak**	**10.35**	**62**		Pn	**Pn**	**20 11 18.6**	**-0.5**
SIJI	**Sorong**	**10.70**	**50**	P	**Pn**	**20 11 22.3**	**-1.1**
	0.4nm,0.3s,baz=250,slow=9.3,SNR=1.8						
UGM	**Wanagama**	**12.45**	**269**		**P**	**20 11 46.0**	**+0.4**
CISI	**Cisompet, Garu**	**15.14**	**270**	P	**Pn**	**20 12 17.1**	**+0.2**
WB0	**Warramunga Arr**	**16.13**	**138**	P	**P**	**20 12 27.8**	**+1.7**
WB0				IAmb	IAmb	20 12 36.9	
	comp=Z,6.0nm,1.0s						
WRA	**Warramunga Arr**	**16.22**	**139**	P	**Pn**	**20 12 29.0**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=314,slow=13,SNR=23						
WRA				S	**S**	**20 15 21.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=303,slow=23,SNR=2.2						
WRA	**Warramunga Arr**	**16.22**	**139**	P	**P**	**20 12 28.0**	**+0.9**
**

GC02 Sg **Sg** **21 00 08.3 +0.7**
BCOK Bluff Creek, N 0.63 187 **Pg** **20 59 59.5 0.0**
BCOK IAmb_Lg 21 00 08.6
comp=Z,457nm,0.7s
OK031 S. Brethren Rd 0.64 121 **Pg** **20 59 59.6 0.0**
OK031 Sg **Sg** **21 00 08.5 +0.5**
QUOK Quay 0.67 100 **Pg** **21 00 00.1 0.0**
QUOK Sg **Sg** **21 00 09.4 +0.6**
OK030 Cody Creek RV 0.69 121 **Pg** **21 00 00.4 -0.2**
OK030 Sg **Sg** **21 00 10.2 +0.6**
OK025 Westminster Rd 0.72 168 **Pg** **21 00 01.1 0.0**
OK025 Sg **Sg** **21 00 10.7 +0.3**
KAN13 South Haven SW 0.73 3 **Pg** **21 00 01.4 +0.1**
KAN14 Manchester OK 0.76 332 **Pg** **21 00 01.9 0.0**
KAN14 Sg **Sg** **21 00 12.3 +0.5**
OK032 Salt Plains WL 0.76 313 **Pg** **21 00 02.0 +0.1**
OK032 Sg **Sg** **21 00 12.5 +0.7**
KAN09 Caldwell North 0.85 355 **Pg** **21 00 03.7 0.0**
KAN05 Bluff City Nor 0.87 341 **Pg** **21 00 04.0 0.0**
KAN05 Sg **Sg** **21 00 16.0 +0.7**
OKCFA Oklahoma City 0.87 176 **Pg** **21 00 03.8 -0.2**
OKCFA IAmb_Lg 21 00 15.2
comp=Z,202nm,0.9s
OKCFA Sg **Sg** **21 00 15.8 +0.6**
OKCFA Oklahoma City 0.87 176 P **Pg** **21 00 03.7 -0.3**
baz=357,SNR=17
OKCFA S **Sg** **21 00 15.7 +0.5**
baz=357
OKCFA Oklahoma City 0.87 176 P 21 00 03.7
baz=357,SNR=17
OKCFA S 21 00 15.7
baz=357
OKCSW OKLAHOMA CITY 0.88 176 **Pg** **21 00 04.0 -0.1**
OKCSW Sg **Sg** **21 00 16.2 +0.6**
KAN01 Argonia South 0.89 348 **Pg** **21 00 04.2 -0.1**
KAN01 Sg **Sg** **21 00 16.2 +0.3**
KS20 Mayfield South 0.94 358 **Pg** **21 00 05.2 -0.2**
KS20 Sg **Sg** **21 00 18.4 +0.7**
KAN10 Anthony SW Sta 0.96 331 **Pg** **21 00 05.4 -0.3**
KAN10 Sg **Sg** **21 00 18.5 +0.4**
KAN08 Anthony NE Sta 1.01 339 **Pg** **21 00 06.5 -0.2**
KAN08 Sg **Sg** **21 00 20.2 +0.5**
T35B Sooner Cattle 1.03 52 P **Pg** **21 00 06.6 -0.4**
baz=232
T35B S **Sg** **21 00 20.2 -0.2**
baz=232
T35B Sooner Cattle 1.03 52 P 21 00 06.6
baz=232
T35B S 21 00 20.2
baz=232
FNO Franklin 1.03 175 **Pb** **21 00 07.4 -0.3**
FNO Sg **Sb** **21 00 21.4 -0.1**
KAN16 Harper SW Stat 1.04 335 Pg **Pg** **21 00 07.0 -0.2**
KAN16 Sg **Sg** **21 00 21.0 +0.4**
KAN12 Harper NE Stat 1.08 339 **Pg** **21 00 07.9 -0.2**
KAN12 Sg **Sb** **21 00 22.8 -0.3**
U32A Winter Ranch, 1.20 275 P **Pg** **21 00 09.5 -0.9**
baz=94,SNR=73
U32A S **Sb** **21 00 26.3 -0.1**
baz=94
U32A Winter Ranch, 1.20 275 P 21 00 09.5
baz=94,SNR=73
U32A S 21 00 26.3
baz=94
TUL1 Leonard 1.45 104 S **Sb** **21 00 33.0 -0.6**
baz=286
TUL1 Leonard 1.45 104 S 21 00 33.0
baz=286
WMOK Wichita Mounta 1.85 214 Pn **Pn** **21 00 20.2 +0.3**
WMOK **Sb** **21 00 45.3 0.0**
R32A Long Quarter, 2.33 336 P **Pn** **21 00 27.7 +1.2**
baz=156,SNR=9.9
R32A S **Sn** **21 00 56.9 +1.2**
baz=156
R32A Long Quarter, 2.33 336 P 21 00 27.7
baz=156,SNR=9.9
R32A S 21 00 56.9
baz=156
X37A Clayton 2.44 133 P **Pn** **21 00 28.5 +0.7**
baz=315
X37A Clayton 2.44 133 P 21 00 28.5
baz=315
HHAR Hobbs 2.89 89 **Pn** **21 00 34.6 +0.5**
KSU1 Kansas State U 2.90 14 Pn **Pn** **21 00 34.6 +0.4**
Z35A Perchaven, San 2.96 176 P **Pn** **21 00 35.6 +0.7**
baz=356
Z35A S **Sn** **21 01 12.4 +1.5**
baz=356
Z35A Perchaven, San 2.96 176 P 21 00 35.6
baz=356
Z35A S 21 01 12.4
baz=356
CBKS Cedar Bluff 3.08 326 **Pn** **21 00 37.3 +0.6**
W39A Magazine 3.23 109 IAmb_Lg 21 01 34.6
comp=Z,151nm,0.9s
W39A Magazine 3.23 109 P **Pn** **21 00 39.6 +1.0**
baz=291,SNR=15
W39A S **Sn** **21 01 18.7 +1.1**
baz=291
W39A Magazine 3.23 109 P 21 00 39.6
baz=291,SNR=15
W39A S 21 01 18.7
baz=291
MIAR Mount Ida 3.66 117 Pn **Pn** **21 00 45.5 +0.9**
MIAR IAmb_Lg 21 01 53.0
comp=Z,43nm,0.9s
U40A Yellville 3.77 88 IAmb_Lg 21 01 50.1
comp=Z,82nm,0.8s
U40A Yellville 3.77 88 P **Pn** **21 00 46.6 +0.4**
baz=270,SNR=12
U40A Yellville 3.77 88 P 21 00 46.6
baz=270,SNR=12
U40A P 21 00 46.6
baz=270,SNR=12
ABTX Abilene, Hawle 4.05 206 **Pn** **21 00 51.1 +1.1**
ABTX IAmb_Lg 21 01 57.7
comp=Z,101nm,1.1s
X40A Basin Creek Fa 4.23 114 IAmb_Lg 21 02 03.1
comp=Z,58nm,0.8s
WHTX Lake Whitney, 4.28 179 **Pn** **21 00 52.2 -1.0**
WHTX Lake Whitney, 4.28 179 P **Pn** **21 00 53.8 +0.5**
baz=359
WHTX Lake Whitney, 4.28 179 P 21 00 53.8
baz=359
MGMO Mountain Grove 4.31 77 Pn **Pn** **21 00 54.1 +0.5**
MGMO IAmb_Lg 21 02 13.2
comp=Z,43nm,0.7s
WHAR Wooly Hollow 4.37 102 **Pn** **21 00 54.3 -0.1**
FCAR Ozark Folk Cen 4.39 94 **Pn** **21 00 54.8 +0.1**
FCAR IAmb_Lg 21 02 03.8
comp=Z,39nm,0.9s
R40A Maddies Statio 4.64 63 P **Pn** **21 00 58.4 +0.3**
baz=246
R40A Maddies Statio 4.64 63 P 21 00 58.4
baz=246
N35A Tabor 4.80 17 P **Pn** **21 01 00.6 +0.3**
baz=198
N35A Tabor 4.80 17 P 21 01 00.6
baz=198
KSCO Kaye Shedlock' 4.88 305 **Pn** **21 01 02.4 +0.9**
KSCO IAmb_Lg 21 02 35.6
comp=Z,69nm,0.8s
MSTX Muleshoe 4.88 243 **Pn** **21 01 00.9 -0.7**
BGNE Belgrade 5.14 355 **Pn** **21 01 04.6 -0.4**
BGNE IAmb_Lg 21 02 39.0
comp=Z,59nm,0.7s
CCM Cathedral Cave 5.31 69 **Pn** **21 01 08.1 +0.7**
CCM IAmb_Lg 21 02 37.9
comp=Z,41nm,0.8s
CCM Cathedral Cave 5.31 69 P **Pn** **21 01 08.5 +1.1**
baz=252,SNR=8.8
CCM Cathedral Cave 5.31 69 P 21 01 08.5
baz=252,SNR=8.8
T25A Trinidad 5.60 281 IAmb_Lg 21 02 56.8
comp=Z,36nm,0.8s
OGNE Ogallala 5.84 324 Pn **Pn** **21 01 13.5 -1.2**
FVM French Village 5.92 71 **Pn** **21 01 16.0 +0.3**
FVM IAmb_Lg 21 03 04.2
comp=Z,38nm,0.8s
FVM French Village 5.92 71 P **Pn** **21 01 16.0 +0.3**
baz=255,SNR=9.2
FVM French Village 5.92 71 P 21 01 16.0
baz=255,SNR=9.2
JCT Junction City 6.10 199 **Pn** **21 01 17.6 -0.6**
SCIA State Center 6.54 29 **Pn** **21 01 23.5 -0.7**
SCIA IAmb_Lg 21 03 25.8
comp=Z,69nm,0.7s
SDCO Great Sand Dun 6.55 285 **Pn** **21 01 25.1 +0.5**
SIUC Southern Illin 6.79 75 Pn **Pn** **21 01 26.1 -1.6**
SIUC IAmb_Lg 21 03 27.3
comp=Z,43nm,0.8s
ISCO Idaho Springs 7.29 301 IAmb_Lg 21 03 40.0
comp=Z,21nm,0.8s
ANMO Albuquerque 7.40 262 Pn **Pn** **21 01 36.0 -0.2**
ECSD EROS Data Cent 7.47 5 Pn **Pn** **21 01 36.1 -0.9**
BNM Barren Site 7.75 257 **Pn** **21 01 39.8 -1.3**
PLAL Pickwick Lake 7.80 97 IAmb_Lg 21 04 02.7
comp=Z,32nm,1.1s
WVT Waverly 7.83 88 Pn **Pn** **21 01 42.4 +0.4**
PHWY Pilot Hill 7.97 311 IAmb_Lg 21 04 11.7
comp=Z,31nm,0.8s
MNTX Cornudas Mount 7.97 237 Pn **Pn** **21 01 44.0 0.0**
SMCO Snowmass 8.03 294 Pn **Pn** **21 01 41.5 -3.5**
SUSD Miller 8.22 353 IAmb_Lg 21 04 24.7
comp=Z,22nm,0.8s
TX31 Lajitas Ar. Si 8.65 218 Pn **Pn** **21 01 53.4 +0.1**
TX32 Lajitas Array 8.65 218 Pn **Pn** **21 01 53.5 +0.3**
TXAR Lajitas Array 8.65 218 Pn **Pn** **21 01 53.2 -0.1**
JFWS Jewell Farm 8.68 38 Pn **Pn** **21 01 52.2 -1.3**
JFWS IAmb_Lg 21 04 22.4
comp=Z,33nm,0.7s
MVCO Mesa Verde 8.86 279 IAmb_Lg 21 04 49.0
comp=Z,14nm,1.1s
CLTN Cedars of Leba 9.05 88 IAmb_Lg 21 04 30.5
comp=Z,14nm,1.0s
SFIN Lafayette 9.15 60 IAmb_Lg 21 04 44.3
comp=Z,35nm,0.7s
WCI Wyandotte Cave 9.16 74 Pn **Pn** **21 02 00.9 +0.7**
PV13 Radium Mtn., P 9.21 285 IAmb_Lg 21 04 51.5
comp=Z,18nm,1.2s
RWWY Rawlins 9.27 309 IAmb_Lg 21 04 48.0
comp=Z,18nm,0.9s
SPMN Marine on St. 9.62 20 IAmb_Lg 21 05 17.2
comp=Z,12nm,0.8s

*IDC **28** 21:07:39.7±2.0, 41°.18N×116°.44W, h0km, mb1 2.6/2, mb1mx2.6/59, mbtmp2.2/2, ML2.7/1, Error ellipse: s-maj=16.6km s-min=8.4km az=164.0*
*NEIC **28** 21:07:42.8±2.0, 40°.89N±0°.05×116°.40W±0°.04, h0km±2km, ML2.3/48, Error ellipse: s-maj=8.6km s-min=4.1km az=18.0*
ISC 28 21:07:42.9±1.3, 40°.91N±0°.05×116°.39W±0°.04, h0km, n29, σ0s96/28, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELK	**Elko**	**0.89**	**100**	Pg	**Pg**	**21 08 00.1**	**+0.2**
	3.9nm,0.3s,baz=298,slow=17,SNR=46						
ELK				Lg	Lg	21 08 11.7	
	3.9nm,0.3s,baz=289,slow=14,SNR=8.6						
ELK	**Elko**	**0.89**	**100**	Pg	**Pg**	**21 08 00.1**	**+0.2**
WVOR	**Wild Horse Val**	**2.27**	**313**		**Pn**	**21 08 22.4**	**+0.6**
KVN	**Kaiserville**	**2.27**	**216**	Pn	**Pn**	**21 08 20.9**	**-1.0**
SPR3	**Spring Creek 3**	**2.48**	**140**		**Pn**	**21 08 24.0**	**-0.8**
MFID	**Camas Ranch**	**2.54**	**9**		**Pn**	**21 08 24.6**	**-0.9**
MFID				IAML		21 09 09.8	
	13nm,1.3s						
MFID				IAML		21 09 17.2	
	11nm,1.2s						
BGU	**Big Grassy Mou**	**2.54**	**89**	Pn	**Pn**	**21 08 25.2**	**-0.5**
BGU				IAML		21 09 06.9	
	comp=E,11nm,0.7s						
R11A	**Troy Canyon, C**	**2.63**	**166**		**Pn**	**21 08 26.2**	**-0.6**
RYN	**Ryan**	**2.81**	**217**		**Pn**	**21 08 28.5**	**-0.7**
RYN				IAML		21 09 25.7	
	comp=N,8.9nm,0.7s						
RYN				IAML		21 09 33.1	
	comp=E,7.7nm,0.7s						
DUG	**Dugway, Tooele**	**2.81**	**103**		**Pn**	**21 08 29.8**	**+0.5**
DUG				IAML		21 09 17.7	
	comp=E,10nm,1.3s						
DUG				IAML		21 09 41.3	
	comp=E,7.5nm,4.2s						
NV11	**Mina Array Sit**	**2.82**	**209**	Pn	**Pn**	**21 08 29.0**	**-0.4**
NV11				IAML		21 09 35.2	
	comp=E,8.6nm,4.4s						
HVU	**Hansel Valley**	**2.86**	**71**		**Pn**	**21 08 29.3**	**-0.6**
HVU				IAML		21 09 15.8	
	comp=N,15nm,0.6s						
HVU				IAML		21 09 17.3	
	comp=E,14nm,0.5s						
NVAR	**Mina Array Bea**	**2.88**	**211**	Pn	**Pn**	**21 08 30.4**	**+0.1**
	baz=29,slow=14,SNR=2.4						
NVAR				Lg	Lg	21 09 16.6	
	comp=E,0.5nm,0.3s,baz=29,slow=25,SNR=1.7						
NVAR	**Mina Array Bea**	**2.88**	**211**		**Pn**	**21 08 30.6**	**+0.3**
YERR	**Yerington**	**2.92**	**230**	Pn	**Pn**	**21 08 29.7**	**-1.1**
YERR				IAML		21 09 32.5	
	comp=E,11nm,4.1s						
YERR				IAML		21 09 50.1	
	comp=N,6.9nm,4.0s						
SPUT	**South Promonto**	**3.00**	**81**		**Pn**	**21 08 31.9**	**-0.1**
SPUT				IAML		21 09 37.3	
	comp=N,6.9nm,3.8s						
SPUT				IAML		21 10 24.2	
	comp=E,8.5nm,4.1s						
HLID	**Hailey**	**3.03**	**28**		**Pn**	**21 08 32.0**	**-0.3**
HLID				IAML		21 09 17.2	
	comp=E,5.9nm,4.2s						
HLID				IAML		21 10 18.2	
	comp=E,7.6nm,4.7s						
PNTR	**Pine Nut**	**3.06**	**235**	Pn	**Pn**	**21 08 32.3**	**-0.5**
PNTR				IAML		21 09 33.8	
	comp=N,11nm,1.5s						
PNTR				IAML		21 09 46.2	
	comp=E,9.6nm,2.2s						
PSUT	**Pine Spring**	**3.07**	**140**		**Pn**	**21 08 34.1**	**+1.2**
LHV	**Little Huntoon**	**3.12**	**212**	Pn	**Pn**	**21 08 33.5**	**+0.2**
LHV				IAML		21 09 40.0	
	comp=N,9.1nm,1.0s						
PRN	**Pahroc Range**	**3.65**	**163**		**Pn**	**21 08 42.2**	**+1.5**
PRN				IAML		21 09 53.9	
	comp=E,9.9nm,1.4s						
MDPB	**Devils Postpil**	**3.88**	**213**	Pn	**Pn**	**21 08 44.8**	**+0.7**
I07A	**Izee**	**3.92**	**325**	Pn	**Pn**	**21 08 45.4**	**+0.9**
TPNV	**Topopah Spring**	**3.95**	**178**	Pn	**Pn**	**21 08 43.2**	**-1.8**
TPNV				IAML		21 10 06.4	
	comp=E,7.5nm,0.6s						
MSU	**Marysvale**	**4.03**	**125**	Pn	**Pn**	**21 08 46.6**	**+0.4**
MTPU	**Mount Pierson**	**4.33**	**130**	Pn	**Pn**	**21 08 51.3**	**+1.0**
MTPU				IAML		21 10 16.5	
	comp=N,5.0nm,3.1s						
REDW	**Red Top Meadow**	**4.79**	**57**	Pn	**Pn**	**21 08 57.7**	**+1.1**
PDAR	**Pinedale Array**	**5.43**	**68**	Pn	**Pn**	**21 09 02.9**	**-2.5**
	comp=N,0.0nm,0.3s,baz=242,slow=11,SNR=1.3						
I56US	**NEWPORT INFRAS**	**7.38**	**356**	*i*		21 50 41.3	
	baz=178,slow=315,SNR=3.8						

*NIED **28** 21:09:40.9, 24°.73N×125°.41E, h45km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr=1.18; Mθθ=2.79; Mφφ=-1.61; Mrθ=5.30; Mrφ=0.55; Mθφ=2.44; Fault plane solution: M0=6.33000×10^14 NP1: φs=245.00000°, δ=83.00000°, λ=-109.00000°. NP2: φs=137.00000°, δ=20.00000°, λ=-20.00000°.*
*JMA **28** 21:09:40.8±0.1, 24°.73N×125°.41E, h45km±1km, M3.5*
JMA Felt I J1.
*IDC **28** 21:09:58.2±13.0, 25°.52N×125°.03E, h157km±125km, mb3.3/9, mb1 3.5/9, mb1mx3.2/50, mbtmp3.8/9, Error ellipse: s-maj=49.6km s-min=22.2km az=60.0*
ISC 28 21:09:41.2±1.0, 24°.8N±0°.1×125°.41E±0°.08, h43km±6km, n19, σ0s71/26, mb3.7/9, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.04**	**184**	P	**Pn**	**21 09 47.7**	**-0.2**
JOGS				S	**Sn**	**21 09 52.9**	**+0.3**
JMJ2	**Miyako jima3**	**0.10**	**229**	P	**Pn**	**21 09 47.8**	**-0.3**
JMJ2				S	**Sn**	**21 09 52.9**	**0.0**
JIKM	**Ikemajima**	**0.19**	**309**	P	**Pn**	**21 09 48.9**	**+0.3**
JIKM				S	**Sn**	**21 09 54.8**	**+1.0**
JIRB	**Irabujima**	**0.22**	**276**	P	**Pn**	**21 09 48.7**	**-0.1**
JIRB				S	**Sn**	**21 09 54.2**	**0.0**
JTJ	**Tarama**	**0.66**	**256**	P	**Pn**	**21 09 53.8**	**-0.4**
JTJ				S	**Sn**	**21 10 03.1**	**-0.4**
JISG	**Ishigakijimahi**	**1.02**	**258**	P	**Pn**	**21 09 58.7**	**-0.3**
JISG				*eS*	**Sn**	**21 10 12.2**	**0.0**
JIJ	**Ishigaki jima**	**1.23**	**249**	P	**Pn**	**21 10 01.8**	**-0.1**
JIJ				*eS*	**Sn**	**21 10 17.5**	**+0.1**
JKRS	**Kuro-shima**	**1.40**	**246**	P	**Pn**	**21 10 04.6**	**+0.5**
IRIF	**Iriomote-Funau**	**1.60**	**253**	P	**Pn**	**21 10 06.9**	**0.0**
IRIF				*eS*	**Sn**	**21 10 28.3**	**+1.9**
HATJ	**Hateruma jima**	**1.64**	**243**	P	**Pn**	**21 10 07.9**	**+0.4**
MKAR	**Makanchi Array**	**40.63**	**314**	P	**P**	**21 17 16.8**	**-0.2**
	0.6nm,0.5s,baz=100,slow=9.8,SNR=14						
ZALV	**Zalesovo Beam**	**41.89**	**325**	P	**P**	**21 17 25.8**	**-1.4**
	0.5nm,0.5s,baz=116,slow=9.8,SNR=2.9						
KURBB	**Kurchatov Arra**	**44.17**	**318**	P	**P**	**21 17 45.1**	**-0.5**
	0.1nm,0.3s,baz=113,slow=7.6,SNR=4.3						
WRA	**Warramunga Arr**	**45.32**	**168**	P	P	21 18 06.5	+11
	1.9nm,0.8s,baz=351,slow=8.6,SNR=4.4						
ILAR	**Eielson Array**	**66.89**	**28**	P	**P**	**21 20 30.1**	**+1.5**
	0.2nm,0.5s,baz=285,slow=4.5,SNR=2.0						
KBZ	**Khabaz**	**68.08**	**309**	P	**P**	**21 20 36.5**	**0.0**
	1.4nm,0.8s,baz=90,slow=5.1,SNR=5.4						
FINES	**FINESS Array B**	**72.84**	**330**	P	**P**	**21 21 05.5**	**+0.2**
	1.4nm,0.9s,baz=61,slow=5.5,SNR=5.6						
AKASG	**Malin Array Be**	**74.95**	**319**	P	**P**	**21 21 17.0**	**-0.8**
	0.4nm,0.3s,baz=70,slow=5.4,SNR=3.0						
NOA	**NORSAR Array B**	**79.44**	**333**	P	**P**	**21 21 42.5**	**-0.4**
	0.9nm,1.0s,baz=49,slow=6.0,SNR=1.9						

*NEIC **28** 21:09:58.7±1.5, 5°.53S±0°.09×147°.1E±0°.1, h196km±8km, mb4.2/29, Error ellipse: s-maj=20.0km s-min=12.6km az=75.0*
*IDC **28** 21:10:00.0±1.5, 5°.56S×147°.14E, h207km±13km, mb3.4/14, mb1 3.6/19, mb1mx3.5/43, mbtmp4.1/19, Error ellipse: s-maj=17.9km s-min=8.4km az=104.0*
ISC 28 21:09:58.9±0.6, 5°.57S±0°.06×147°.05E±0°.09, h195km, n64, σ1s11/68, mb3.8/29, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.81**	**178**	P	**Pn**	**21 10 58.0**	**-0.2**
	19nm,0.3s,baz=6.5,slow=9.8,SNR=53						
PMG				S	**Sn**	**21 11 42.0**	**-2.8**
	12nm,0.3s,baz=228,slow=22,SNR=7.4						
PMG	**Port Moresby**	**3.81**	**178**	Pn	**Pn**	**21 10 57.8**	**-0.4**
JAY	**Jayapura**	**7.02**	**295**	P	**Pn**	**21 11 40.6**	**+1.2**
	1.3nm,0.3s,baz=170,slow=4.3,SNR=15						
JAY				S	**Sn**	**21 12 55.6**	**-3.5**
	0.5nm,0.3s,baz=316,slow=5.0,SNR=2.5						
CTA	**Charters Tower**	**14.45**	**183**	P	**P**	**21 13 16.2**	**+0.1**
	0.3nm,0.3s,baz=2.0,slow=15,SNR=5.1						
CTAO	**Charters Tower**	**14.45**	**183**		**P**	**21 13 16.3**	**+0.1**
FAKI	**Fak Fak**	**14.99**	**280**	Pn	**Pn**	**21 13 20.6**	**-0.8**
FAKI				IAmb	IAmb	21 13 36.4	
	comp=Z,8.9nm,0.8s						
SIJI	**Sorong**	**16.43**	**286**	P	**Pn**	**21 13 39.6**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=111,slow=8.5,SNR=11						
WB0	**Warramunga Arr**	**18.73**	**220**		**P**	**21 14 04.5**	**+1.4**
WB0				IAmb	IAmb	21 14 06.1	
	comp=Z,8.7nm,1.0s						
WR0	**Warramunga Arr**	**18.78**	**219**		**P**	**21 14 05.2**	**+1.6**
WR0				IAmb	IAmb	21 14 06.0	
	comp=Z,20nm,1.0s						
WB2	**Warramunga Arr**	**18.89**	**220**		**P**	**21 14 06.4**	**+1.6**
WB2				IAmb	IAmb	21 14 07.3	
	comp=Z,19nm,1.0s						
WRA	**Warramunga Arr**	**18.89**	**220**	P	**P**	**21 14 06.5**	**+1.6**
	comp=Z,2.6nm,0.3s,baz=39,slow=11,SNR=111						
WRA				S	**S**	**21 17 28.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=42,slow=21,SNR=7.4						
WRA	**Warramunga Arr**	**18.89**	**220**	P	**P**	**21 14 05.8**	**+0.9**
AS31	**Alice Springs**	**22.00**	**214**	P	**P**	**21 14 39.2**	**+1.6**
AS31				IAmb	IAmb	21 14 44.4	
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**22.00**	**214**	P	**P**	**21 14 39.2**	**+1.6**
	comp=Z,5.2nm,0.5s,baz=49,slow=8.1,SNR=103						
ASAR				S	**S**	**21 18 27.2**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=30,slow=18,SNR=8.2						
ASAR	**Alice Springs**	**22.00**	**214**	P	**P**	**21 14 39.0**	**+1.3**
SOEI	**Soe**	**22.95**	**258**	P	**P**	**21 14 47.7**	**+1.1**
BATI	**Baumata**	**23.61**	**257**	P	**P**	**21 14 54.9**	**+2.4**
	comp=Z,73nm,0.7s,baz=162,slow=2.0,SNR=16						
FITZ	**Fitzroy Crossi**	**24.34**	**237**	P	**P**	**21 15 00.1**	**+1.1**
	comp=Z,27nm,0.4s,baz=53,slow=10,SNR=122						
MMRI	**Maumere**	**24.80**	**262**	P	**P**	**21 15 03.1**	**-0.2**
JAGI	**Jajag, Banyuwa**	**32.77**	**263**	P	**P**	**21 16 11.4**	**-2.4**
JAGI				IAmb	IAmb	21 16 13.2	
	comp=Z,19nm,0.9s						
JOW	**Kunigami**	**36.99**	**331**	P	**P**	**21 16 49.2**	**-0.5**
YOJ	**Yonaguni jima**	**37.94**	**323**	P	**P**	**21 16 57.4**	**-0.3**
SSLB	**Suanglung**	**38.72**	**320**	P	**P**	**21 17 04.0**	**-0.4**
SSLB				IAmb	IAmb	21 17 07.7	
	comp=Z,5.9nm,0.7s						
NWAO	**Narrogin (SRO)**	**38.88**	**222**	P	**P**	**21 17 06.6**	**+1.0**
CISI	**Cisompet, Garu**	**39.02**	**265**	P	**P**	**21 17 06.3**	**-0.7**
YHNB	**Yeheng**	**39.09**	**321**	P	**P**	**21 17 07.2**	**-0.3**
MJAR	**Matsushiro Arr**	**42.70**	**349**	P	**P**	**21 17 36.5**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=184,slow=4.9,SNR=3.3						
MJAR	**Matsushiro Arr**	**42.70**	**349**	P	**P**	**21 17 36.2**	**-0.5**
MAJO	**Matsushiro**	**42.70**	**349**	P	**P**	**21 17 36.4**	**-0.3**
MAJO				IAmb	IAmb	21 17 37.5	
	comp=Z,14nm,1.4s						
MAT	**Matsushiro**	**42.70**	**349**	P	**P**	**21 17 36.3**	**-0.4**
NJ2	**Nanjing**	**46.05**	**326**	*eP*	**P**	**21 18 04.3**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSRS	**Korea Array**	**46.37**	**339**	P	**P**	**21 18 06.2**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=158,slow=9.5,SNR=8.9						
USRK	**Ussuriysk Ar.**	**51.37**	**346**	P	**P**	**21 18 43.9**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=158,slow=8.0,SNR=4.9						
CMAR	**Chiang Mai Arr**	**53.09**	**298**	P	**P**	**21 18 56.3**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=112,slow=5.1,SNR=3.4						
KLR	**Kul'dur**	**56.18**	**348**	P	**P**	**21 19 19.1**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=129,slow=7.7,SNR=2.6						
HHC	**Hu-ho-hao-te**	**56.49**	**328**	*eP*	**P**	**21 19 22.3**	**+1.4**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,67nm,9.2s						
GTA	**Gaotai**	**62.44**	**320**	*eP*	**P**	**21 20 03.0**	**+1.4**
GTA				pP	pP	21 20 44.5	-1.7
GTA				sP	sP	21 21 03.0	-4.1
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ULN	**Ulaanbaatar**	**63.76**	**331**	P	**P**	**21 20 10.3**	**+0.1**
ULN				IAmb	IAmb	21 20 11.8	
	comp=Z,2.6nm,0.8s						
SONM	**Songino Array**	**64.05**	**331**	P	**P**	**21 20 12.5**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=126,slow=4.3,SNR=5.5						
SONM	**Songino Array**	**64.05**	**331**	P	**P**	**21 20 12.1**	**+0.1**
SONM				IAmb	IAmb	21 20 14.9	
	comp=Z,2.5nm,1.2s						
CASY	**Casey**	**65.68**	**195**	P	**P**	**21 20 21.9**	**-0.2**
CASY				IAmb	IAmb	21 20 38.4	
	comp=Z,11nm,1.4s						
VNDA	**Vanda**	**72.34**	**177**	P	**P**	**21 21 03.4**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=332,slow=6.8,SNR=15						
VNDA	**Vanda**	**72.34**	**177**	P	**P**	**21 21 03.4**	**+0.5**
WMQ	**Urumqi**	**72.50**	**319**	*eP*	**P**	**21 21 06.5**	**+2.0**
MK31	**Makanchi Array**	**77.20**	**320**	P	**P**	**21 21 30.7**	**-0.6**
MKAR	**Makanchi Array**	**77.20**	**320**	P	**P**	**21 21 31.1**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=97,slow=7.5,SNR=14						
MKAR	**Makanchi Array**	**77.20**	**320**	P	**P**	**21 21 30.8**	**-0.5**
MAKZ	**Makanchi**	**77.40**	**320**	P	**P**	**21 21 32.1**	**-0.4**
MAKZ				IAmb	IAmb	21 21 33.8	
	comp=Z,1.7nm,1.1s						
TIXI	**Tiksi**	**77.99**	**354**	P	**P**	**21 21 34.3**	**-0.8**
TIXI				IAmb	IAmb	21 21 35.7	
	comp=Z,2.7nm,1.4s						
ZALV	**Zalesovo Beam**	**78.67**	**328**	P	**P**	**21 21 38.0**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=108,slow=6.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**78.67**	**328**	P	**P**	**21 21 37.9**	**-1.4**
KURK	**Kurchatov**	**80.90**	**323**	P	**P**	**21 21 51.2**	**0.0**
KURBB	**Kurchatov Arra**	**80.92**	**323**	P	**P**	**21 21 51.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=99,slow=6.6,SNR=4.5						
AAK	**Ala-Archa**	**81.08**	**315**	P	**P**	**21 21 51.8**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=132,slow=3.3,SNR=4.4						
MAW	**Mawson**	**82.66**	**203**	P	**P**	**21 21 59.6**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=113,slow=8.9,SNR=2.0						
MAW	**Mawson**	**82.66**	**203**	P

EPYK	**Eagle Plains**	**89.58**	**23**	P	**P**	**21 22 34.1**	**+0.1**
EPYK				IAmb	IAmb	21 22 49.0	
	comp=Z,8.0nm,1.4s						
GERES	**GERESS Array B**	**121.58**	**326**	PKP	**PKPdf**	**21 28 29.1**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=90,slow=1.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**145.03**	**285**	PKPbc	**PKPbc**	**21 29 12.7**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=69,slow=3.5,SNR=9.3						

*IDC **28** 21:14:55.8±2.0, 16°.07S×73°.05W, h92km±18km, mb3.4/2, mb1 3.9/7, mb1mx3.6/26, mbtmp4.2/7, Error ellipse: s-maj=39.6km s-min=15.2km az=37.0*

ISC 28 21:14:54.3±0.9, 16°.23S±0°.10×73°.1W±0°.1, h82km, n13, σ1§66/16, mb3.7/3, 1D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**3.39**	**129**	*i* S	**Sn**	**21 16 24.5**	**+0.2**
PB16	**IPOC Station P**	**4.03**	**122**	*e*P	**Pn**	**21 15 56.2**	**+2.0**
PB16				*i* S	**Sn**	**21 16 40.6**	**+0.1**
PSGC	**Pisagua**	**4.39**	**140**	*i*P	**Pn**	**21 15 59.8**	**+1.0**
PSGC				*i* S	**Sn**	**21 16 46.6**	**-2.1**
MNMC	**Minye Minye**	**4.42**	**131**	*e*P	**Pn**	**21 16 00.7**	**+1.4**
MNMC				*i* S	**Sn**	**21 16 48.6**	**-1.1**
MNMC				IAML		21 16 58.7	
	comp=N,1μm,0.3s						
LPAZ	**La Paz**	**4.78**	**91**	P	**Pn**	**21 16 07.3**	**+2.8**
	comp=N,5.7nm,0.3s,baz=273,slow=8.6,SNR=76						
NNA	**Nana**	**5.56**	**319**	P	**Pn**	**21 16 15.2**	**+0.5**
	comp=N,15nm,0.3s,baz=160,slow=7.3,SNR=15						
NNA				S	**Sn**	**21 17 17.5**	**+0.3**
	comp=N,13nm,0.3s,baz=40,slow=16,SNR=4.1						
LVC	**Limon Verde**	**7.48**	**149**	P	**Pn**	**21 16 43.2**	**+2.1**
	comp=N,19nm,0.3s,baz=342,slow=10,SNR=188						
LVC				S	**Sn**	**21 18 02.9**	**-1.7**
	comp=N,6.4nm,0.3s,baz=102,slow=22,SNR=4.6						
ATAH	**Atahualpa**	**10.41**	**330**	P	Pn	21 17 26.2	+5.0
	comp=N,0.6nm,0.3s,baz=169,slow=13,SNR=4.9						
SIV	**San Ignacio**	**11.57**	**90**	P	**Pn**	**21 17 35.7**	**-0.9**
	comp=N,1.1nm,0.3s,baz=279,slow=11,SNR=9.5						
PTGA	**Pitinga**	**20.13**	**41**	P	**P**	**21 19 19.5**	**-2.4**
	comp=N,0.5nm,0.3s,baz=244,slow=10,SNR=4.9						
TORD	**Torodi Ar. Bea**	**79.49**	**73**	pP	pP	21 27 17.0	+2.0
	comp=N,1.1nm,0.8s,baz=250,slow=4.2,SNR=3.1						
YKA	**Yellowknife Ar**	**84.95**	**342**	P	**P**	**21 27 19.1**	**-0.9**
	comp=N,0.4nm,0.7s,baz=132,slow=5.2,SNR=9.0						
ESDC	**Sonseca Array**	**85.00**	**46**	P	**P**	**21 27 21.5**	**+0.6**
	comp=N,0.8nm,0.9s,baz=261,slow=4.4,SNR=6.3						

*IDC **28** 21:18:04.3±2.7, 30°.49N×142°.69E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.4/41, mbtmp3.7/7, ML3.1/3, Error ellipse: s-maj=105.4km s-min=19.8km az=74.0*

ISC 28 21:18:07.5±1.9, 30°.4N±0°.2×142°.0E±0°.5, h10km, n7, σ1§36/9, mb3.7/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**3.25**	**178**	Pn	**Pn**	**21 18 58.2**	**-0.4**
	4.8nm,0.3s,baz=85,slow=23,SNR=5.3						
JCJ				Sn	**Sn**	**21 19 36.0**	**-1.2**
	6.0nm,0.3s,baz=286,slow=20,SNR=1.9						
JHJ	**Hachijo jima 2**	**3.36**	**326**	Pn	**Pn**	**21 18 59.2**	**-0.9**
	2.2nm,0.3s,baz=7.7,slow=23,SNR=7.1						
JHJ				Sn	**Sn**	**21 19 39.0**	**-1.1**
	5.1nm,0.3s,baz=236,slow=21,SNR=1.6						
MJAR	**Matsushiro Arr**	**6.95**	**334**	Pn	**Pn**	**21 19 49.7**	**+0.3**
	0.2nm,0.3s,baz=149,slow=11,SNR=11						
MKAR	**Makanchi Array**	**48.36**	**307**	P	**P**	**21 26 51.8**	**+2.4**
	0.1nm,0.4s,baz=81,slow=9.3,SNR=3.6						
WRA	**Warramunga Arr**	**50.55**	**189**	P	**P**	**21 27 06.2**	**0.0**
	1.0nm,0.3s,baz=8.4,slow=7.8,SNR=27						
ASAR	**Alice Springs**	**54.28**	**189**	P	**P**	**21 27 33.9**	**0.0**
	0.2nm,0.4s,baz=3.6,slow=6.7,SNR=4.1						
FINES	**FINESS Array B**	**74.98**	**333**	P	**P**	**21 29 47.5**	**-1.2**
	1.3nm,1.1s,baz=55,slow=7.5,SNR=1.5						

*IDC **28** 21:44:22.5±1.8, 27°.80N×85°.70E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/44, mbtmp3.7/7, ML3.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/38, Error ellipse: s-maj=57.3km s-min=27.8km az=59.0*

*NEIC **28** 21:44:24.0±1.4, 27°.96N±0°.08×85°.88E±0°.06, h10km±1km, mb4.1/11, Error ellipse: s-maj=14.9km s-min=7.8km az=204.0*

*NDI **28** 21:44:26.0±2.8, 27°.63N×85°.68E, h10km, ML3.7, mb4.1(NEIC)*

ISC 28 21:44:24.0±0.6, 27°.75N±0°.08×85°.70E±0°.05, h18km, n29, σ1§64/33, mb3.8/9, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**2.61**	**99**	*e*P	**Pb**	**21 45 08.9**	**-1.5**
GTK				*e*S	**Sb**	**21 45 41.1**	**-1.2**
GTK				IAML		21 45 44.2	
	comp=N,457nm,0.6s						
GTK				IAML		21 45 45.3	
	comp=E,269nm,0.3s						
LSA	**Lhasa**	**5.17**	**67**	Pn	**Pn**	**21 45 37.1**	**-3.7**
SHL	**Shillong**	**5.95**	**110**	*e*P	**Pn**	**21 45 52.7**	**+1.3**
SHL				*e*S	**Sn**	**21 46 56.5**	**-2.6**
SHL	**Shillong**	**5.95**	**110**	Pn	**Pn**	**21 45 52.3**	**+0.9**
ZIRO	**ZIRO**	**7.24**	**90**	*e*P	**Pn**	**21 46 12.6**	**+3.6**
SMLA	**Simla**	**8.16**	**296**	*e*P	**Pn**	**21 46 23.2**	**+1.7**
SMLA				*e*S	**Sn**	**21 47 52.5**	**-0.9**
SMLA				IAML		21 47 55.5	
	comp=E,30nm,0.5s						
SMLA				IAML		21 47 56.7	
	comp=N,24nm,0.5s						
BHPL	**Bhopal**	**8.72**	**241**	*e*P	**Pn**	**21 46 28.9**	**-0.3**
BHPL				*e*S	**Sn**	**21 48 03.1**	**-4.0**
BHPL				IAML		21 48 09.2	
	comp=N,236nm,0.3s						
DHRM	**DHARAMSHALA**	**9.30**	**301**	*e*P	**Pn**	**21 46 38.1**	**+0.8**
DHRM				*e*S	**Sn**	**21 48 19.2**	**-2.5**
DHRM				IAML		21 48 31.8	
	comp=E,20nm,0.4s						
GAR	**Garm**	**17.03**	**315**	Pn	**Pn**	**21 48 20.2**	**-1.1**
GAR				IAmb	IAmb	21 48 29.3	
	comp=Z,7.7nm,1.4s						
MK31	**Makanchi Array**	**19.20**	**353**	P	**P**	**21 48 47.1**	**+0.3**
MKAR	**Makanchi Array**	**19.20**	**353**	P	**Pn**	**21 48 47.6**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=175,slow=11,SNR=24						
MKAR	**Makanchi Array**	**19.20**	**353**	P	**P**	**21 48 46.0**	**-0.8**
MAKZ	**Makanchi**	**19.25**	**352**	P	**P**	**21 48 47.9**	**+0.5**
KURBB	**Kurchatov Arra**	**23.48**	**348**	P	**P**	**21 49 33.6**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=168,slow=10,SNR=9.7						
KURK	**Kurchatov**	**23.56**	**349**	P	**P**	**21 49 33.6**	**+0.3**
SONM	**Songino Array**	**25.73**	**33**	P	**P**	**21 49 54.3**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=232,slow=8.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.18**	**359**	P	**P**	**21 49 57.6**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=180,slow=8.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**26.18**	**359**	P	**P**	**21 49 56.7**	**-0.6**
ABKAR	**Akbulak array**	**29.20**	**324**	P	**P**	**21 50 25.1**	**+0.7**
YAK	**Yakutsk**	**44.84**	**28**	LR	LR	22 11 02.5	
	comp=Z,15nm,19.6s,baz=94,slow=36						
TIXI	**Tiksi**	**49.90**	**16**	P	**P**	**21 53 16.0**	**-0.1**
TIXI				IAmb	IAmb	21 53 17.3	
	comp=Z,1.6nm,0.5s						
MLR	**Muntele Rosu**	**49.97**	**307**	P	**P**	**21 53 18.6**	**+1.5**
MLR				IAmb	IAmb	21 53 36.7	
	comp=Z,5.9nm,1.3s						
FINES	**FINESS Array B**	**51.57**	**328**	P	**P**	**21 53 29.5**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=116,slow=7.1,SNR=8.6						
FINES	**FINESS Array B**	**51.57**	**328**	P	**P**	**21 53 29.1**	**+0.3**
PABE	**Paberze**	**51.70**	**320**	P	**P**	**21 53 30.3**	**+0.5**
ARCES	**ARCESS Array B**	**53.95**	**338**	P	**P**	**21 53 47.3**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=87,slow=6.5,SNR=5.6						
ARCES	**ARCESS Array B**	**53.95**	**338**	P	**P**	**21 53 46.9**	**+0.6**
WB0	**Warramunga Arr**	**66.72**	**130**	P	**P**	**21 55 15.6**	**+1.3**
WB0				IAmb	IAmb	21 55 31.8	
	comp=Z,5.6nm,1.2s						
WRA	**Warramunga Arr**	**66.80**	**130**	P	**P**	**21 55 16.6**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=321,slow=6.8,SNR=1.8						

*IDC **28** 21:57:46.8±2.0, 27°.57N×85°.75E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.3/44, mbtmp3.5/6, ML3.7/1, Error ellipse: s-maj=95.4km s-min=25.9km az=62.0*

*NDI **28** 21:57:49.6±2.3, 27°.44N×85°.84E, h10km, ML3.3*

ISC 28 21:57:49.0±1.1, 27°.5N±0°.2×85°.8E±0°.1, h19km, n12, σ1§92/16, mb3.6/5, 2C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**2.49**	**94**	*e*P	**Pn**	**21 58 29.9**	**+1.3**
GTK				*e*S	**Sn**	**21 58 59.2**	**+0.7**
GTK				IAML		21 59 03.4	
	comp=N,154nm,0.3s						
GTK				IAML		21 59 03.7	
	comp=E,152nm,0.3s						
SHL	**Shillong**	**5.78**	**108**	*e*P	**Pn**	**21 59 13.7**	**-0.2**
SHL				*e*S	**Sn**	**22 00 16.7**	**-3.1**
SHL				IAML		22 00 18.1	
	comp=E,14nm,0.6s						
SHL				IAML		22 00 22.9	
	comp=N,17nm,0.3s						
KOHI	**KOHIMA**	**7.64**	**102**	*e*P	**Pn**	**21 59 39.1**	**-0.3**
KOHI				*e*S	**Sn**	**22 01 02.8**	**-2.8**
KOHI				IAML		22 01 07.7	
	comp=E,16nm,0.5s						
KOHI				IAML		22 01 07.8	
	comp=N,15nm,0.4s						
SMLA	**Simla**	**8.35**	**297**	*e*P	**Pn**	**21 59 51.1**	**+2.1**
SMLA				*e*S	**Sn**	**22 01 21.4**	**-1.4**
SMLA				IAML		22 01 24.7	
	comp=E,29nm,0.3s						
BHPL	**Bhopal**	**8.71**	**242**	IAML		22 02 40.2	
	comp=N,222nm,0.2s						
DHRM	**DHARAMSHALA**	**9.50**	**302**	*e*P	**Pn**	**22 00 05.4**	**+0.4**
DHRM				*e*S	**Sn**	**22 01 47.0**	**-4.4**
DHRM				IAML		22 01 49.2	
	comp=E,19nm,0.6s						
MKAR	**Makanchi Array**	**19.42**	**353**	P	**P**	**22 02 13.9**	**-0.2**
	comp=E,0.2nm,0.3s,baz=178,slow=9.9,SNR=12						
KURBB	**Kurchatov Arra**	**23.71**	**348**	P	**P**	**22 03 00.2**	**+0.6**
	comp=E,0.4nm,0.5s,baz=166,slow=9.2,SNR=7.4						
ZALV	**Zalesovo Beam**	**26.39**	**359**	P	**P**	**22 03 24.8**	**+0.8**
	comp=E,1.0nm,0.5s,baz=184,slow=10,SNR=6.3						
FINES	**FINESS Array B**	**51.80**	**328**	P	**P**	**22 06 55.5**	**+0.2**
	comp=E,0.5nm,0.8s,baz=88,slow=3.2,SNR=3.8						
ARCES	**ARCESS Array B**	**54.18**	**338**	P	**P**	**22 07 13.2**	**+0.5**
	comp=E,0.9nm,0.7s,baz=107,slow=7.6,SNR=1.2						
WRA	**Warramunga Arr**	**66.59**	**130**	P	**P**	**22 08 39.5**	**+1.3**
	comp=E,0.3nm,0.6s,baz=324,slow=6.3,SNR=4.8						

*ISK **28** 22:01:01.7, 34°.58N×32°.61E, h7km, ML2.1/7*

*NIC **28** 22:01:02.9±0.0, 34°.57N±32°.65E, h25km±1km, Ml2.6/6*

ISC 28 22:01:04.6±1.4, 34°.64N±0°.08×32°.69E±0°.04, h23km±8km, n15, σ0§91/21, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NATA	**Nata**	**0.17**	**325**	P	**Pb**	**22 01 09.0**	**-0.6**
NATA				S	**Sb**	**22 01 13.0**	**-0.1**
NATA				AML	AML	22 01 13.2	
	4.9nm,0.3s						
NATA				AML	AML	22 01 13.2	
	4.9nm,0.3s						
NATA				AML	AML	22 01 14.2	
	4.1nm,0.2s						
NATA				AML	AML	22 01 14.2	
	4.1nm,0.2s						
SZAC	**Souni**	**0.20**	**55**	P	**Pb**	**22 01 09.8**	**-0.3**
SZAC				S	**Sb**	**22 01 14.3**	**+0.5**
SZAC				AML	AML	22 01 14.6	
	5.4nm,0.3s						
SZAC				AML	AML	22 01 14.6	
	5.4nm,0.3s						
SZAC				AML	AML	22 01 16.3	
	3.2nm,0.2s						
SZAC				AML	AML	22 01 16.3	
	3.2nm,0.2s						
AKMS	**Akamas**	**0.47**	**323**	P	**Pb**	**22 01 13.5**	**-0.8**
AKMS				S	**Sb**	**22 01 21.8**	**+0.9**
ASGA	**Asgata**	**0.49**	**73**	P	**Pb**	**22 01 14.0**	**-0.5**
ASGA				S	**Sb**	**22 01 20.8**	**-0.5**
ASGA				AML	AML	22 01 25.4	
	0.6nm,0.4s						
ASGA				AML	AML	22 01 25.4	
	0.6nm,0.4s						
LEF	**Lefka**	**0.51**	**19**	PG	**Pb**	**22 01 13.5**	**-1.4**
CSS	**Mathiatis**	**0.62**	**59**	PG	**Pb**	**22 01 15.6**	**-1.2**
CSS				SG	**Sb**	**22 01 26.3**	**+1.2**
CSS	**Mathiatis**	**0.62**	**59**	P	**Pb**	**22 01 15.5**	**-1.4**
CSS				S	**Sn**	**22 01 26.7**	**-0.6**
CSS				AML	AML	22 01 27.1	
	0.1nm,0.7s						
CSS				AML	AML	22 01 27.1	
	0.1nm,0.7s						
CSS				AML	AML	22 01 28.0	
	0.1nm,0.5s						
CSS				AML	AML	22 01 28.0	
	0.1nm,0.5s						
MVOU	**Mavrovouni**	**0.86**	**64**	P	**Pb**	**22 01 19.7**	**-1.2**
MVOU				AML	AML	22 01 36.6	
	0.2nm,0.8s						
MVOU				AML	AML	22 01 44.1	
	0.2nm,0.7s						
LFK	**Lefkose**	**0.94**	**47**	PG	**Pb**	**22 01 22.1**	**-0.2**
EREN	**Erenkoy**	**1.51**	**54**	PN	**Pb**	**22 01 31.4**	**-0.5**
GAZI	**Gazipasa**	**1.62**	**349**	PN	**Pn**	**22 01 32.2**	**+0.4**
TEVE	**Tevekalti-Mers**	**1.90**	**19**	PN	**Pn**	**22 01 36.4**	**+0.8**
KIZK	**Mersin**	**2.19**	**33**	PN	**Pn**	**22 01 40.7**	**+1.2**
MMLI	**Mount Malkishu**	**3.17**	**133**	PN	**Pn**	**22 01 53.7**	**+0.6**
FETY	**Fethiye**	**3.54**	**305**	PN	**Pn**	**22 01 58.6**	**+0.4**

IDC 28 22:14:09.6±3.0, 4°.96N×93°.84E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/37, mbtmp3.5/4, MS2.9/2, Ms1 2.9/2, ms1mx2.3/31, Error ellipse: s-maj=110.8km s-min=27.3km az=62.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**13.27**	**281**	Sn	Sn	22 19 47.4	-0.4
	0.2nm,0.3s,baz=328,slow=15,SNR=1.9						
CMAR	**Chiang Mai Arr**	**14.31**	**20**	Pn	Pn	22 17 34.6	+0.8
	baz=209,slow=13,SNR=1.6						
H08S2	**Diego Garcia H**	**24.70**	**240**	T	T	22 45 46.1	
	baz=59,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**24.70**	**240**	T	T	22 45 35.9	
	baz=59,slow=76,SNR=9.9						
H08S1	**Diego Carcia H**	**24.72**	**240**	T	T	22 45 43.9	
	baz=59,slow=76,SNR=10						
AAK	**Ala-Archa**	**41.27**	**338**	LR	LR	22 39 42.9	
	comp=Z,13nm,20.8s,baz=8.0,slow=37						
MKAR	**Makanchi Array**	**42.86**	**348**	P	P	22 22 09.3	-0.3
	0.6nm,0.7s,baz=170,slow=8.4,SNR=9.9						
MKAR				LR	LR	22 42 04.7	
	comp=Z,20nm,18.6s,baz=191,slow=39						
WRA	**Warramunga Arr**	**46.87**	**123**	P	P	22 22 41.0	-1.0
	0.4nm,0.5s,baz=301,slow=9.8,SNR=4.7						
ASAR	**Alice Springs**	**48.33**	**128**	P	P	22 22 54.4	+1.0
	0.2nm,0.5s,baz=309,slow=8.6,SNR=1.9						

*IDC **28** 22:18:53.8±0.6, 37°.11N×97°.99W, h0km, mb4.0/9, mb1 4.2/18, mb1mx4.0/54, mbtmp4.1/18, ML4.4/6, MS2.6/4, Ms1 2.6/4, ms1mx2.4/46, Error ellipse: s-maj=10.0km s-min=8.1km az=164.0*

*ANF **28** 22:18:53.8±0.4, 37°.02N×97°.95W, h3km±3km, ML5.0/26, Error ellipse: s-maj=2.0km s-min=1.7km az=42.0*

*IASPEI **28** 22:18:54.1±1.0, 37°.02N±0°.03×97°.94W±0°.03, h10km±6km, mb4.0/9, Error ellipse: s-maj=4.7km s-min=3.6km az=125.3, GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*NEIC **28** 22:18:54.5±1.6, 37°.02N±0°.04×97°.90W±0°.05, h8km±3km, mb3.8/8, mb_Lg4.0/141, Mwr3.6/30, Error ellipse: s-maj=6.2km s-min=5.6km az=122.0*

*NEIC **28** 22:18:54.5, 37°.00N×97°.94W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.07; $M_{\theta\theta}$=2.89; $M_{\phi\phi}$=-0.82; $M_{r\theta}$=-0.86; $M_{\theta\phi}$=0.03; $M_{\phi r}$=2.21; Fault plane solution: M_o=3.50000×10^{14} NP1:φ=298.85000°, δ=44.32000°, λ=-36.60000°. NP2:φ=56.83000°, δ=65.38000°, λ=-128.10000°. Principal axes: T 3.0783, Plg12.0000°, Azm173.0000°; N 0.7358, Plg34.0000°, Azm75.0000°; P -3.8141, Plg53.0000°, Azm280.0000°;*

ISC 28 22:18:54.2±0.7, 37°.02N±0°.02×97°.92W±0°.02, h9km±4km, n246, σ1§10/242, mb4.0/9, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.07**	**209**		**Pg**	**22 18 56.2**	**-0.2**
KAN14				Sg	**Sg**	**22 18 57.6**	**-0.4**
KAN05	**Bluff City Nor**	**0.09**	**23**		**Pg**	**22 18 56.8**	**0.0**
KAN05				Sg	**Sg**	**22 18 58.6**	**+0.1**
KAN10	**Anthony SW Sta**	**0.17**	**306**		**Pg**	**22 18 57.9**	**-0.1**
KAN10				Sg	**Sg**	**22 19 00.3**	**-0.3**
GC02	**Grant County #**	**0.18**	**165**		**Pg**	**22 18 58.3**	**+0.3**
GC02				Sg	**Sg**	**22 19 01.1**	**+0.6**
KAN01	**Argonia South**	**0.18**	**44**		**Pg**	**22 18 58.5**	**+0.4**
KAN01				Sg	**Sg**	**22 19 01.4**	**+0.6**
KAN08	**Anthony NE Sta**	**0.21**	**348**		**Pg**	**22 18 58.7**	**+0.1**
KAN16	**Harper SW Stat**	**0.23**	**330**	Pg	**Pg**	**22 18 59.0**	**0.0**
KAN09	**Caldwell North**	**0.27**	**64**		**Pg**	**22 19 00.0**	**+0.4**
KAN12	**Harper NE Stat**	**0.28**	**347**		**Pg**	**22 19 00.0**	**+0.1**
OK032	**Salt Plains WL**	**0.32**	**227**		**Pg**	**22 19 00.6**	**0.0**
KS21	**Milan North St**	**0.33**	**38**		**Pg**	**22 19 01.2**	**+0.3**
KAN13	**South Haven SW**	**0.35**	**91**		**Pg**	**22 19 01.7**	**+0.5**
KS20	**Mayfield South**	**0.36**	**54**		**Pg**	**22 19 01.7**	**+0.4**
CROK	**Carrier**	**0.52**	**186**		**Pg**	**22 19 04.5**	**+0.1**
U32A	**Winter Ranch,**	**1.08**	**234**		**Pg**	**22 19 14.4**	**-0.7**
U32A	**Winter Ranch,**	**1.08**	**234**	P	**Pg**	**22 19 14.3**	**-0.7**
	baz=54,SNR=218						
U32A				S	**Sb**	**22 19 29.0**	**-0.3**
	baz=54						
U32A	**Winter Ranch,**	**1.08**	**234**	P		22 19 14.3	
	baz=54,SNR=218						
U32A				S		22 19 29.0	
	baz=54						
T35A	**Sooner Cattle**	**1.13**	**95**		**Pg**	**22 19 15.9**	**-0.1**
T35B	**Sooner Cattle**	**1.13**	**95**	P	**Pg**	**22 19 16.0**	**0.0**
	baz=276						
T35B				S	**Sg**	**22 19 30.8**	**+0.2**
	baz=276						
T35B	**Sooner Cattle**	**1.13**	**95**	P		22 19 16.0	
	baz=276						
T35B				S		22 19 30.8	
	baz=276						
OK029	**Liberty Lake**	**1.28**	**163**		**Pg**	**22 19 18.3**	**-0.5**
QUOK	**Quay**	**1.29**	**131**		**Pg**	**22 19 18.6**	**-0.4**
OK031	**S. Brethren Rd**	**1.38**	**140**		**Pn**	**22 19 19.9**	**+0.3**
BCOK	**Bluff Creek, N**	**1.39**	**170**		**Pn**	**22 19 19.7**	**0.0**
OK030	**Cody Creek RV**	**1.42**	**140**		**Pn**	**22 19 20.6**	**+0.4**
OK009	**Oakdale Elemen**	**1.49**	**164**		**Pb**	**22 19 22.1**	**0.0**
OK025	**Westminster Rd**	**1.51**	**162**		**Pn**	**22 19 22.2**	**+0.7**
R32A	**Long Quarter,**	**1.53**	**336**		**Pb**	**22 19 22.4**	**-0.4**
R32A	**Long Quarter,**	**1.53**	**336**	P	**Pb**	**22 19 22.4**	**-0.4**
	baz=155,SNR=698						
R32A				S	**Sn**	**22 19 42.4**	**+0.6**
	baz=155						
R32A	**Long Quarter,**	**1.53**	**336**	P		22 19 22.4	
	baz=155,SNR=698						
R32A				S		22 19 42.4	
	baz=155						
OKCFA	**Oklahoma City**	**1.65**	**167**		**Pn**	**22 19 24.2**	**+0.8**
OKCFA				IAmb_Lg		22 19 48.9	
	comp=Z,1μm,0.8s						
OKCFA	**Oklahoma City**	**1.65**	**167**	P	**Pn**	**22 19 24.2**	**+0.8**
	baz=348,SNR=65						
OKCFA				S	**Sg**	**22 19 47.0**	**-0.2**
	baz=348						
OKCFA	**Oklahoma City**	**1.65**	**167**	P		22 19 24.2	
	baz=348,SNR=65						
OKCFA				S		22 19 47.0	
	baz=348						
OKCSW	**OKLAHOMA CITY**	**1.66**	**166**		**Pn**	**22 19 24.3**	**+0.8**
FNO	**Franklin**	**1.81**	**166**	Pn	**Pb**	**22 19 26.9**	**-0.6**
TUL1	**Leonard**	**2.04**	**122**	P	**Pn**	**22 19 29.9**	**+1.1**
	baz=304,SNR=291						
TUL1				Sb	**Sb**	**22 19 58.6**	**+1.6**
	baz=304						
TUL1	**Leonard**	**2.04**	**122**	P		22 19 29.7	
	baz=304,SNR=240						
TUL1				Sb		22 19 58.8	
	baz=304						
TUL1	**Leonard**	**2.04**	**122**	P		22 19 29.9	
	baz=304,SNR=291						
TUL1				Sb		22 19 58.6	
	baz=304						
CBKS	**Cedar Bluff**	**2.30**	**322**	Pn	**Pn**	**22 19 33.2**	**+1.0**
CBKS				IAmb_Lg		22 20 09.9	
	comp=Z,526nm,0.8s						
CBKS	**Cedar Bluff**	**2.30**	**322**	P	**Pn**	**22 19 33.3**	**+1.0**
	baz=140						
CBKS				S	**Sn**	**22 20 02.5**	**+1.8**
	baz=140						
CBKS	**Cedar Bluff**	**2.30**	**322**	P		22 19 33.3	
	baz=140,SNR=82						
CBKS				S		22 20 02.6	
	baz=140						
CBKS	**Cedar Bluff**	**2.30**	**322**	P		22 19 33.3	
	baz=140						
CBKS				S		22 20 02.5	
	baz=140						
KSU1	**Kansas State U**	**2.32**	**26**	Pn	**Pn**	**22 19 33.9**	**+1.4**
KSU1				IAmb_Lg		22 20 07.6	
	comp=Z,877nm,1.0s						
KSU1	**Kansas State U**	**2.32**	**26**	P	**Pn**	**22 19 34.0**	**+1.4**
	baz=206,SNR=44						
KSU1				S	**Sn**	**22 20 02.8**	**+1.7**
	baz=206						
KSU1	**Kansas State U**	**2.32**	**26**	P		22 19 34.0	
	baz=206,SNR=78						
KSU1				S		22 20 02.9	
	baz=206						
KSU1	**Kansas State U**	**2.32**	**26**	P		22 19 34.0	
	baz=206,SNR=44						
KSU1				S		22 20 02.8	
	baz=206						
WMOK	**Wichita Mounta**	**2.38**	**197**	P		22 19 33.9	
	baz=17,SNR=100						
WMOK				S		22 20 05.1	
	baz=17						
WMOK	**Wichita Mounta**	**2.38**	**197**	P		22 19 34.1	
	baz=17,SNR=26						
WMOK	**Wichita Mounta**	**2.38**	**197**	Pn	**Pn**	**22 19 34.2**	**+0.7**
WMOK	**Wich

baz=300,SNR=27
W39A Pb 22 20 02.6
baz=300
W39A S 22 20 39.9
baz=300
W39A Magazine 3.81 117 P 22 19 53.5
baz=300,SNR=25
U40A Yellville 4.12 98 Pn Pn 22 19 58.1 +0.7
U40A Yellville 4.12 98 P **Pn 22 19 58.3 +0.9**
baz=281,SNR=126
U40A Yellville 4.12 98 P 22 19 58.3
baz=281,SNR=61
U40A S 22 20 47.3
baz=281
U40A Yellville 4.12 98 P 22 19 58.3
baz=281,SNR=126
U40A P 22 19 58.3
baz=281,SNR=126
KSCO Kaye Shedlock' 4.22 300 Pn 22 19 59.4 +0.6
KSCO IAmb_Lg 22 21 11.6
comp=Z,384nm,0.8s
KSCO Kaye Shedlock' 4.22 300 P **Pn 22 19 59.6 +0.8**
baz=117
KSCO Kaye Shedlock' 4.22 300 P 22 19 59.4
baz=117
KSCO Sb 22 21 06.0
baz=117
KSCO Kaye Shedlock' 4.22 300 P 22 19 59.6
baz=117
N35A Tabor 4.22 24 Pn **Pn 22 19 59.3 +0.5**
N35A Tabor 4.22 24 P **Pn 22 19 59.6 +0.8**
baz=205
N35A Tabor 4.22 24 P 22 19 59.6
baz=205
MIAR Mount Ida 4.31 124 Pn **Pn 22 20 00.5 +0.6**
MIAR IAmb_Lg 22 21 18.5
comp=Z,340nm,0.7s
MIAR Mount Ida 4.31 124 P **Pn 22 20 01.0 +1.1**
baz=306,SNR=84
MIAR Mount Ida 4.31 124 P 22 20 00.8
baz=306,SNR=42
MIAR S 22 20 52.5
baz=306
MIAR Mount Ida 4.31 124 P 22 20 01.0
baz=306,SNR=84
P38A Dawn 4.32 52 Pn 22 20 01.1 +1.0
P38A IAmb_Lg 22 21 13.4
comp=Z,254nm,0.8s
P38A Dawn 4.32 52 P **Pn 22 20 01.0 +1.0**
baz=234,SNR=45
P38A Dawn 4.32 52 P 22 20 01.0
baz=234,SNR=45
BGNE Belgrade 4.38 358 Pn **Pn 22 20 01.2 +0.2**
BGNE Belgrade 4.38 358 P **Pn 22 20 01.3 +0.3**
baz=177,SNR=50
BGNE Belgrade 4.38 358 P 22 20 01.3
baz=177,SNR=5.9
BGNE Sb 22 21 10.0
baz=177
BGNE Belgrade 4.38 358 P 22 20 01.3
baz=177,SNR=50
Z38A Mt. Pleasant 4.46 147 Pn **Pn 22 20 02.6 +0.7**
Z38A Mt. Pleasant 4.46 147 P **Pn 22 20 02.7 +0.7**
baz=328,SNR=15
Z38A Mt. Pleasant 4.46 147 P 22 20 02.7
baz=328,SNR=15
MGMO Mountain Grove 4.52 87 Pn **Pn 22 20 04.2 +1.3**
MGMO IAmb_Lg 22 21 22.0
comp=Z,214nm,0.8s
ABTX Abilene, Hawle 4.61 198 Pn **Pn 22 20 03.9 -0.2**
ABTX Abilene, Hawle 4.61 198 Pn 22 20 05.1
baz=18
ABTX Pb 22 20 16.5
baz=18
R40A Maddies Statio 4.66 73 IAmb_Lg 22 21 26.1
comp=Z,213nm,0.8s
FCAR Ozark Folk Cen 4.80 102 Pn **Pn 22 20 07.3 +0.6**
FCAR IAmb_Lg 22 21 25.6
comp=Z,215nm,0.9s
X40A Basin Creek Fa 4.85 120 Pn 22 20 07.8 +0.4
X40A Basin Creek Fa 4.85 120 P **Pn 22 20 08.1 +0.8**
baz=303,SNR=59
X40A Basin Creek Fa 4.85 120 P 22 20 08.1
baz=303,SNR=23
X40A Basin Creek Fa 4.85 120 P 22 20 08.1
baz=303,SNR=59
X40A P 22 20 08.1
baz=303,SNR=59
WHAR Wooly Hollow 4.87 109 Pn 22 20 08.1 +0.5
W41B Gary Mavity, V 4.95 110 P **Pn 22 20 09.2 +0.5**
baz=294,SNR=69
W41B Gary Mavity, V 4.95 110 P 22 20 09.5
baz=294,SNR=22
W41B Sb 22 21 27.4
baz=294
W41B Gary Mavity, V 4.95 110 P 22 20 09.2
baz=294,SNR=69
MSTX Muleshoe 5.00 234 Pn **Pn 22 20 10.9 +1.4**
MSTX IAmb_Lg 22 21 35.6
comp=Z,173nm,1.2s
MSTX Muleshoe 5.00 234 P 22 20 10.9
baz=51,SNR=9.0
MSTX Sb 22 21 28.3
baz=51
WHTX Lake Whitney, 5.03 176 Pn **Pn 22 20 10.4 +0.5**
WHTX Lake Whitney, 5.03 176 P **Pn 22 20 09.9 0.0**
baz=356,SNR=45
WHTX Lake Whitney, 5.03 176 P 22 20 10.3
baz=356,SNR=14
WHTX Lake Whitney, 5.03 176 P 22 20 09.9
baz=356,SNR=45
OGNE Ogallala 5.06 322 Pn **Pn 22 20 11.9 +1.5**
OGNE Ogallala 5.06 322 P **Pn 22 20 11.4 +1.1**
baz=139
OGNE Ogallala 5.06 322 P 22 20 12.1
baz=139,SNR=30
OGNE Sb 22 21 30.6
baz=139
OGNE Ogallala 5.06 322 P 22 20 11.4
baz=139
L34A Svendsen Farm, 5.08 13 Pn **Pn 22 20 10.5 0.0**
T25A Trinidad 5.19 273 Pn 22 20 12.8 +0.5
T25A IAmb_Lg 22 21 49.2
comp=Z,225nm,0.7s
T25A Trinidad 5.19 273 P 22 20 12.6
baz=89,SNR=31
T25A Sb 22 21 34.2
baz=89
N38A Joes South For 5.25 43 Pn 22 20 13.5 +0.7
N38A IAmb_Lg 22 21 48.5
comp=Z,236nm,0.7s
N38A Joes South For 5.25 43 P **Pn 22 20 13.4 +0.7**
baz=225,SNR=24
N38A Joes South For 5.25 43 P 22 20 13.4
baz=225,SNR=24
P40A Paris 5.25 60 Pn 22 20 14.2 +1.3
P40A IAmb_Lg 22 21 40.9
comp=Z,206nm,0.7s
237A Washetta, Mont 5.30 160 Pn 22 20 13.2 -0.4
237A IAmb_Lg 22 21 50.0
comp=Z,187nm,0.9s
237A Washetta, Mont 5.30 160 P **Pn 22 20 13.4 -0.2**
baz=342,SNR=15
237A Washetta, Mont 5.30 160 P 22 20 13.4
baz=342,SNR=15
CCM Cathedral Cave 5.40 77 Pn **Pn 22 20 15.1 +0.2**
CCM IAmb_Lg 22 21 52.0
comp=Z,188nm,0.7s
CCM Cathedral Cave 5.40 77 P **Pn 22 20 15.9 +1.0**
baz=261,SNR=17
CCM Cathedral Cave 5.40 77 P 22 20 16.4
baz=261
CCM Cathedral Cave 5.40 77 P 22 20 15.9
baz=261,SNR=17
T42A Van Buren 5.46 88 Pn 22 20 17.0 +1.2
T42A Van Buren 5.46 88 P **Pn 22 20 16.6 +0.9**
baz=272,SNR=18
T42A Van Buren 5.46 88 P 22 20 16.6
baz=272,SNR=18
Z41A Richland Creek 5.63 130 P **Pn 22 20 18.2 +0.2**
baz=314
Z41A Richland Creek 5.63 130 P 22 20 18.2
baz=314
Z41A Richland Creek 5.63 130 P 22 20 18.2
baz=314
Z41A P 22 20 18.2
baz=314

K31A O'Neill 5.63 354 Pn **Pn 22 20 18.4 +0.3**
K31A O'Neill 5.63 354 P **Pn 22 20 18.6 +0.4**
baz=173,SNR=9.2
K31A O'Neill 5.63 354 P 22 20 18.6
baz=173,SNR=9.2
CCAR Cane Creek 5.89 120 Pn **Pn 22 20 22.9 +1.2**
CCAR IAmb_Lg 22 22 10.1
comp=Z,313nm,1.0s
NATX Nacogdoches 5.90 152 Pn **Pn 22 20 21.7 -0.1**
NATX Nacogdoches 5.90 152 P 22 20 21.9
baz=334,SNR=6.1
NATX S 22 21 27.9
baz=334
Q24A Divide 6.03 291 P 22 20 23.9
baz=106,SNR=21
FVM French Village 6.03 79 Pn 22 20 23.7 +0.1
FVM IAmb_Lg 22 22 03.6
comp=Z,210nm,0.8s
SDCO Great Sand Dun 6.08 279 Pn 22 20 24.9 +0.3
SDCO Great Sand Dun 6.08 279 P 22 20 25.8
baz=94,SNR=18
435B Jarrell 6.23 177 Pn **Pn 22 20 25.5 -0.8**
435B IAmb_Lg 22 22 25.6
comp=Z,215nm,0.8s
X43A Marvell 6.24 112 P **Pn 22 20 27.4 +1.0**
baz=296,SNR=7.9
X43A Marvell 6.24 112 P 22 20 27.7
baz=296
X43A Marvell 6.24 112 P 22 20 27.4
baz=296,SNR=7.9
N41A Harden Midland 6.63 54 Pn 22 20 31.7 -0.1
N41A IAmb_Lg 22 22 26.3
comp=Z,244nm,0.8s
N41A Harden Midland 6.63 54 P **Pn 22 20 32.9 +1.1**
baz=238,SNR=7.6
N41A Harden Midland 6.63 54 P 22 20 32.9
baz=238,SNR=7.6
ISCO Idaho Springs 6.65 297 Pn **Pn 22 20 32.6 +0.2**
ISCO IAmb_Lg 22 22 29.5
comp=Z,123nm,0.8s
ISCO Idaho Springs 6.65 297 P 22 20 32.9
baz=112,SNR=19
JCT Junction City 6.71 194 Pn **Pn 22 20 33.0 0.0**
JCT IAmb_Lg 22 22 29.3
comp=Z,164nm,0.9s
JCT Junction City 6.71 194 P **Pn 22 20 32.5 -0.5**
baz=13
JCT Junction City 6.71 194 P 22 20 32.5
baz=13,SNR=5.9
JCT Junction City 6.71 194 P 22 20 32.5
baz=13
ECSD EROS Data Cent 6.78 8 Pn **Pn 22 20 33.5 -0.3**
ECSD EROS Data Cent 6.78 8 P **Pn 22 20 33.2 -0.6**
baz=189,SNR=34
ECSD EROS Data Cent 6.78 8 P 22 20 33.5
baz=189,SNR=14
ECSD S 22 21 49.4
baz=189
ECSD EROS Data Cent 6.78 8 P 22 20 33.2
baz=189,SNR=34
143A Socs Landing, 6.87 127 Pn **Pn 22 20 36.1 +1.0**
143A IAmb_Lg 22 22 46.3
comp=Z,182nm,0.9s
K38A Parkersburg 6.87 34 IAmb_Lg 22 22 33.6
comp=Z,241nm,0.8s
S44A Carbondale 6.93 82 Pn 22 20 36.1 +0.1
S44A IAmb_Lg 22 22 44.0
comp=Z,203nm,0.8s
S44A Carbondale 6.93 82 P **Pn 22 20 36.7 +0.8**
baz=267,SNR=11
S44A Carbondale 6.93 82 P 22 20 36.7
baz=267,SNR=11
SIUC Southern Illin 6.96 82 Pn 22 20 37.1 +0.8
SIUC IAmb_Lg 22 22 48.9
comp=Z,208nm,0.8s
P43A Skaggs, Pawnee 7.10 66 Pn **Pn 22 20 40.4 +2.2**
P43A Skaggs, Pawnee 7.10 66 P **Pn 22 20 38.4 +0.2**
baz=251
P43A Skaggs, Pawnee 7.10 66 P 22 20 38.4
baz=251
L40A Anamosa 7.22 44 Pn 22 20 40.8 +0.9
L40A IAmb_Lg 22 22 52.1
comp=Z,213nm,0.8s
L40A Anamosa 7.22 44 P **Pn 22 20 40.4 +0.5**
baz=228,SNR=21
L40A Anamosa 7.22 44 P 22 20 40.4
baz=228,SNR=21
ANMO Albuquerque 7.23 256 Pn **Pn 22 20 40.7 +0.5**
comp=Z,0.2nm,0.3s,baz=70,slow=16,SNR=3.1
ANMO Sn **Sn 22 22 05.0 +2.6**
comp=Z,1.9nm,0.3s,baz=294,slow=17,SNR=1.6
ANMO Lg Lg 22 22 42.4
comp=Z,8.4nm,0.3s,baz=140,slow=23,SNR=6.5
ANMO LR LR 22 22 54.9
comp=Z,11nm,21.2s,baz=89,slow=34
ANMO Albuquerque 7.23 256 Pn 22 20 42.0 +1.8
PHWY Pilot Hill 7.25 308 Pn 22 20 40.6 0.0
PHWY IAmb_Lg 22 22 46.0
comp=Z,153nm,1.0s
342A Flagon Creek P 7.29 139 Pn **Pn 22 20 41.3 +0.4**
N23A Red Feather La 7.35 304 P 22 20 43.2
baz=119,SNR=9.5
OXF Oxford 7.36 107 Pn 22 20 42.4 +0.6
OXF IAmb_Lg 22 23 07.4
comp=Z,185nm,0.8s
OXF Oxford 7.36 107 P 22 20 43.0
baz=292
SUSD Miller 7.46 354 Pn 22 20 43.2 +0.1
SUSD IAmb_Lg 22 23 00.2
comp=Z,185nm,0.9s
SUSD Miller 7.46 354 P 22 20 43.0
baz=174
SMCO Snowmass 7.46 290 Pn 22 20 44.3 +0.7
Y45A Yeager Farm, C 7.53 112 Pn **Pn 22 20 44.6 +0.5**
Y45A IAmb_Lg 22 23 02.1
comp=Z,168nm,0.8s
HDIL Hopedale 7.60 60 Pn 22 20 45.4 +0.3
HDIL Hopedale 7.60 60 P 22 20 46.3
baz=245
HDIL S 22 22 09.6
baz=245
BNM Barren Site 7.65 251 Pn 22 20 47.3 +1.2
I37A Lemond, Waseca 7.79 25 IAmb_Lg 22 23 22.8
comp=Z,148nm,0.8s
Y22D IRIS PASSCAL I 7.91 251 IAmb_Lg 22 23 26.7
comp=Z,169nm,0.8s
O44A Mansfield 8.03 64 IAmb_Lg 22 23 09.2
comp=Z,200nm,0.7s
L42A Oliver, Polo 8.09 50 Pn **Pn 22 20 51.1 -0.7**
L42A IAmb_Lg 22 23 25.5
comp=Z,165nm,0.9s
344A Westbrook Farm 8.14 131 Pn **Pn 22 20 53.0 +0.4**
MNTX Cornudas Mount 8.14 231 Pn **Pn 22 20 54.2 +1.7**
MNTX IAmb_Lg 22 23 23.6
comp=Z,96nm,1.1s
735A Kenedy 8.14 179 IAmb_Lg 22 23 35.7
comp=Z,89nm,0.7s
WVT Waverly 8.16 93 Pn **Pn 22 20 52.5 -0.4**
WVT IAmb_Lg 22 23 13.8
comp=Z,85nm,0.9s
WVT Waverly 8.17 93 P 22 20 53.5
baz=279
USIN University of 8.20 80 IAmb_Lg 22 23 21.2
comp=Z,181nm,0.9s
PLAL Pickwick Lake 8.23 101 Pn 22 20 53.9 +0.1
PLAL IAmb_Lg 22 23 26.8
comp=Z,82nm,0.9s
JFWS Jewell Farm 8.32 43 Pn **Pn 22 20 55.0 0.0**
JFWS IAmb_Lg 22 23 21.0
comp=Z,143nm,0.9s
JFWS Jewell Farm 8.32 43 P 22 20 55.9
baz=227
RSSD Black Hills 8.48 329 Pn **Pn 22 20 58.3 +0.9**
RSSD IAmb_Lg 22 23 34.8
comp=Z,89nm,0.8s
RSSD Black Hills 8.48 329 P 22 20 58.8
baz=145
146A Union 8.50 118 IAmb_Lg 22 23 45.2
comp=Z,115nm,0.7s
RWWY Rawlins 8.57 306 Pn 22 20 59.2 +0.5
RWWY IAmb_Lg 22 23 41.8
comp=Z,112nm,0.8s
T47A Sharon Grove 8.65 87 IAmb_Lg 22 23 34.9
comp=Z,150nm,1.0s
O20A White River Ci 8.66 294 Pn 22 21 00.7 +0.8
K22A Casper 8.68 313 Pn 22 21 00.0 -0.1

K22A IAmb_Lg 22 23 53.2
comp=Z,143nm,0.8s
K22A Casper 8.68 313 P 22 20 59.9
baz=128,SNR=36
PV11 David Mesa, Pa 8.78 282 IAmb_Lg 22 23 48.8
comp=Z,88nm,1.1s
PV18 Skein Mesa, Pa 8.81 281 Pn **Pn 22 21 02.5 +0.6**
P46A Rosedale 8.81 70 Pn **Pn 22 21 03.0 +1.3**
M44A Midewin, Midew 8.82 57 Pn **Pn 22 21 02.7 +0.9**
M44A IAmb_Lg 22 23 37.6
comp=Z,146nm,0.9s
I40A Norwalk 8.83 37 Pn 22 21 01.7 -0.3
I40A IAmb_Lg 22 23 46.0
comp=Z,74nm,0.7s
F33A 5 Mile Ranch, 8.89 7 IAmb_Lg 22 23 43.4
comp=Z,88nm,0.9s
Z47A Carrollton 8.92 112 Pn **Pn 22 21 03.9 +0.7**
Z47A IAmb_Lg 22 23 44.5
comp=Z,120nm,1.2s
V48A Smith Brothers 9.04 95 IAmb_Lg 22 23 41.7
comp=Z,116nm,0.9s
TX31 Lajitas Ar. Si 9.05 214 P **Pn 22 21 04.6 -0.5**
baz=31,SNR=22
TX31 Lajitas Ar. Si 9.05 214 P 22 21 04.6
baz=31,SNR=22
TX32 Lajitas Array 9.05 214 Pn **Pn 22 21 05.0 -0.2**
TXAR Lajitas Array 9.05 214 Pn **Pn 22 21 04.5 -0.7**
comp=Z,1.6nm,0.3s,baz=35,slow=11,SNR=77
TXAR Lg Lg 22 23 35.3
comp=Z,3.1nm,0.3s,baz=29,slow=24,SNR=4.4
TXAR LR LR 22 24 32.3
comp=Z,36nm,20.0s,baz=0.0,slow=37
TXAR Lajitas Array 9.05 214 Pn **Pn 22 21 04.4 -0.8**
SPMN Marine on St. 9.05 24 Pn **Pn 22 21 03.9 -1.1**
SPMN IAmb_Lg 22 23 42.8
comp=Z,80nm,0.8s
SFIN Lafayette 9.10 65 Pn 22 21 06.4 +0.8
SFIN IAmb_Lg 22 23 41.9
comp=Z,167nm,0.8s
SFIN Lafayette 9.10 65 P 22 21 07.2
baz=252
HQIL Hanson Quary C 9.13 55 IAmb_Lg 22 23 51.1
comp=Z,159nm,1.2s
X48A Hartselle 9.20 103 IAmb_Lg 22 23 46.5
comp=Z,78nm,0.7s
BLO Bloomington 9.24 73 Pn 22 21 08.6 +1.0
BLO IAmb_Lg 22 23 58.2
comp=Z,162nm,0.9s
121A Cookes Peak, D 9.27 244 IAmb_Lg 22 24 06.6
comp=Z,89nm,1.3s
L44A Lake County Fo 9.28 53 Pn **Pn 22 21 08.4 +0.3**
K43A Burlington 9.30 49 Pn 22 21 08.0 -0.4
K43A IAmb_Lg 22 23 53.3
comp=Z,128nm,0.8s
WCI Wyandotte Cave 9.30 79 Pn **Pn 22 21 08.9 +0.4**
WCI IAmb_Lg 22 23 48.2
comp=Z,105nm,0.9s
WCI Wyandotte Cave 9.30 79 P 22 21 09.7
baz=266
CLTN Cedars of Leba 9.37 92 IAmb_Lg 22 23 58.4
comp=Z,103nm,1.1s
F36A Milaca 9.43 19 Pn **Pn 22 21 08.1 -2.1**
I42A Draeger Farm, 9.70 42 Pn **Pn 22 21 13.0 -0.9**
I42A IAmb_Lg 22 24 06.4
comp=Z,126nm,1.2s
U49A Red Boiling Sp 9.75 89 Pn 22 21 15.9 +1.3
U49A IAmb_Lg 22 24 00.8
comp=Z,79nm,0.9s
RDMU Red Mountain 9.76 295 IAmb_Lg 22 24 23.2
comp=Z,63nm,1.2s
E28A Huff 9.77 349 IAmb_Lg 22 24 21.7
comp=Z,128nm,1.0s
LRAL Lakeview Retre 9.80 111 Pn 22 21 15.7 +0.4
LRAL Lakeview Retre 9.80 111 P **Pn 22 21 15.6 +0.4**
baz=297,SNR=5.8
LRAL Lakeview Retre 9.80 111 P 22 21 15.6
baz=297
LRAL Lakeview Retre 9.80 111 P 22 21 15.6
baz=297,SNR=5.8
SWET Sewanee 9.86 97 Pn 22 21 17.1 +0.9
SWET IAmb_Lg 22 24 12.8
comp=Z,62nm,0.8s
Y49A Blount Mountai 9.90 105 Pn **Pn 22 21 17.2 +0.5**
Y49A IAmb_Lg 22 24 10.0
comp=Z,72nm,0.7s
G40A Rib Lake 10.08 33 Pn 22 21 19.5 +0.4
P48A Milroy 10.12 72 Pn 22 21 20.6 +0.8
R49A Shelbyville 10.19 79 Pn **Pn 22 21 21.4 +0.8**
N47A Urbana 10.27 64 Pn **Pn 22 21 21.6 -0.1**
FPAL Fort Paine 10.30 100 Pn 22 21 22.8 +0.6
T50A Nancy 10.46 86 Pn 22 21 24.9 +0.5
PD31 Pinedale Array 10.62 306 Pn **Pn 22 21 26.2 -0.5**
PDAR Pinedale Array 10.62 306 Pn **Pn 22 21 26.0 -0.7**
comp=Z,1.0nm,0.3s,baz=116,slow=14,SNR=27
PDAR Lg Lg 22 24 22.3
comp=Z,1.8nm,0.3s,baz=111,slow=36,SNR=3.0
PDAR Pinedale Array 10.62 306 Pn 22 21 25.9 -0.9
E38A The Farm, Brul 10.68 24 Pn 22 21 26.3 -1.0
250A Grady 10.85 114 Pn **Pn 22 21 29.2 -0.4**
CPCT Cooper Cave 10.93 94 Pn 22 21 31.3 +0.5
V51A Loudon 11.00 92 Pn 22 21 32.8 +1.0
O49A Covington 11.09 69 Pn 22 21 32.6 -0.3
COWI Conover 11.20 33 Pn 22 21 33.0 -1.4
AGMN Agassiz Nation 11.37 7 Pn 22 21 34.8 -2.0
N49A Columbus Grove 11.38 66 Pn **Pn 22 21 36.1 -0.8**
S51A Beattyville 11.42 83 Pn 22 21 38.2 +0.7
LAO LASA Array 11.46 330 Pn **Pn 22 21 37.0 -1.1**
LAO LASA Array 11.46 330 P **Pn 22 21 37.2 -0.9**
baz=144
LAO LASA Array 11.46 330 P 22 21 37.3
baz=144,SNR=10
LAO LASA Array 11.46 330 P 22 21 37.2
baz=144
TKL Tuckaleechee C 11.49 93 Pn **Pn 22 21 39.1 +0.6**
comp=Z,2.3nm,0.3s,baz=237,slow=10.0,SNR=22
TKL Sn **Sn 22 23 46.4 -0.5**
comp=Z,0.6nm,0.3s,baz=277,slow=16,SNR=1.9
TKL Lg Lg 22 24 50.5
comp=Z,3.1nm,0.3s,baz=5.8,slow=14,SNR=8.8
TKL Tuckaleechee C 11.49 93 Pn 22 21 38.9 +0.5
HWUT Hardware Ranch 11.52 298 Pn **Pn 22 21 40.3 +1.3**
U15A North Rim 11.55 271 Pn **Pn 22 21 41.1 +1.5**
V52A Sevierville 11.60 92 Pn 22 21 40.0 0.0
Q51A Peebles 11.67 76 Pn 22 21 39.9 -1.0
LOHW Long Hollow 11.70 308 Pn 22 21 41.3 -0.3
RLMT Red Lodge 11.77 317 Pn **Pn 22 21 41.8 -0.7**
RLMT Red Lodge 11.77 317 P 22 21 41.7
baz=130,SNR=12
MOOW Moose Ponds 11.86 308 Pn **Pn 22 21 43.7 0.0**
EYMN Ely 11.90 21 P 22 21 40.7
baz=206,SNR=5.9
EYMN S 22 23 48.5
baz=206
SPUT South Promonto 12.06 295 Pn **Pn 22 21 47.8 +1.4**
ACSO Alum Creek Sta 12.11 70 Pn 22 21 46.3 -0.6
AAM Ann Arbor 12.19 60 Pn **Pn 22 21 47.3 -0.6**
D41A Chassel 12.19 32 Pn **Pn 22 21 45.6 -2.4**
DGMT Dagmar 12.33 340 Pn 22 21 48.9 -1.0
DGMT Dagmar 12.33 340 P **Pn 22 21 49.2 -0.7**
baz=156,SNR=7.4
DGMT Dagmar 12.33 340 P 22 21 49.2
baz=156
DGMT Dagmar 12.33 340 P 22 21 49.2
baz=156,SNR=7.4
M50A Fremont 12.34 65 Pn 22 21 49.6 -0.4
GCMT Greycliff 12.42 319 Pn 22 21 49.9 -1.3
N51A Ashland 12.71 67 Pn 22 21 54.2 -0.9
ULM Lac du Bonnet 13.30 6 Pn Pn 22 21 58.4 -4.8
comp=Z,1.1nm,0.3s,baz=183,slow=12,SNR=11
ULM Sn Sn 22 24 18.6 -12
comp=Z,1.2nm,0.3s,baz=83,slow=18,SNR=3.6
ULM Lg Lg 22 25 42.4
comp=Z,0.8nm,0.3s,baz=123,slow=9.0,SNR=3.6
ULM LR LR 22 27 26.5
comp=Z,40nm,18.7s,baz=262,slow=39
V55A Taylorsville 13.50 90 Pn Pn 22 22 05.2 -0.7
M52A Chesterland 13.60 66 Pn Pn 22 22 04.5 -2.7
Q54A Coxs Mills 13.62 77 Pn Pn 22 22 07.5 0.0
MCMT McKenzie Canyo 13.71 309 Pn Pn 22 22 09.2 +0.3
E46A Sault Ste Mari 13.79 43 Pn Pn 22 22 07.0 -2.8
N53A Lisbon 13.82 69 Pn Pn 22 22 07.9 -2.4
EGMT Eagleton 14.02 325 Pn 22 22 11.9 -1.1
EGMT Eagleton 14.02 325 P 22 22 11.5
baz=137,SNR=10
HRY Holter Researc 14.16 317 Pn **Pn 22 22 13.5 -1.5**

BIRD	**Birdtown, Kers**	**14.36**	**94**	Pn	**Pn**	**22 22 16.1**	**-1.5**
N54A	**Moraine State**	**14.49**	**69**	Pn	**Pn**	**22 22 18.3**	**-1.1**
T57A	**Hurt**	**14.92**	**84**		**Pn**	**22 22 23.3**	**-1.9**
PFO	**Pinyon Flats O**	**15.51**	**263**	LR	LR	22 29 33.5	
	comp=Z,54nm,21.2s,baz=40,slow=41						
M56A	**Emporium**	**15.92**	**68**	Pn	**Pn**	**22 22 38.2**	**-0.2**
M56A				IAmb	IAmb	22 22 49.2	
	comp=Z,12nm,1.2s						
JTMT	**Jette**	**16.12**	**317**	Pn	**Pn**	**22 22 40.9**	**-0.2**
SADO	**Sadowa**	**16.15**	**56**	Pn	**Pn**	**22 22 38.0**	**-3.2**
	comp=Z,0.4nm,0.3s,baz=301,slow=11,SNR=1.8						
SADO				Sn	**Sn**	**22 25 30.9**	**-9.5**
	comp=Z,0.5nm,0.3s,baz=230,slow=7.9,SNR=1.9						
SADO				Lg	Lg	22 27 12.4	
	comp=Z,0.7nm,0.3s,baz=18,slow=20,SNR=1.3						
NVAR	**Mina Array Bea**	**16.19**	**281**	Pn	**Pn**	**22 22 43.7**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=90,slow=11,SNR=7.2						
T59A	**Double "B" Far**	**16.27**	**84**	Pn	**Pn**	**22 22 41.5**	**-1.5**
T59A				IAmb	IAmb	22 22 52.6	
	comp=Z,12nm,1.4s						
L56A	**Greenwood**	**16.50**	**66**	Pn	**Pn**	**22 22 45.7**	**-0.1**
L56A				IAmb	IAmb	22 22 52.9	
	comp=Z,4.4nm,0.8s						
M57A	**Sunshine Farm,**	**16.68**	**69**	Pn	**Pn**	**22 22 46.9**	**-1.2**
FFC	**Flin Flon**	**17.92**	**352**		**Pn**	**22 23 02.8**	**-0.8**
K58A	**Earlville**	**18.00**	**65**		**Pn**	**22 23 04.5**	**-0.2**
K58A				IAmb	IAmb	22 23 16.4	
	comp=Z,12nm,1.3s						
TEIG	**Tepich**	**18.73**	**151**	P	**Pn**	**22 23 14.8**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=339,slow=14,SNR=1.7						
YBH	**Yreka Blue Hor**	**19.71**	**291**	P	**Pn**	**22 23 25.8**	**+0.4**
	comp=Z,2.2nm,0.3s,baz=116,slow=5.7,SNR=7.3						
FCC	**Fort Churchill**	**21.90**	**5**	P	**P**	**22 23 46.9**	**-0.4**
YKA	**Yellowknife Ar**	**27.51**	**343**	P	**P**	**22 24 40.7**	**0.0**
	comp=Z,2.0nm,0.6s,baz=144,slow=9.2,SNR=33						
YKA				PcP	**PcP**	**22 27 59.3**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=145,slow=2.7,SNR=4.8						
FRB	**Frobisher Bay**	**32.09**	**24**	P	**P**	**22 25 20.8**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=220,slow=8.7,SNR=7.6						
INK	**Inuvik**	**37.01**	**339**	P	**P**	**22 26 03.8**	**0.0**
	comp=Z,0.9nm,0.4s,baz=122,slow=7.6,SNR=8.0						
RES	**Resolute Bay**	**37.78**	**1**	P	**P**	**22 26 10.8**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=166,slow=11,SNR=4.4						
ILAR	**Eielson Array**	**39.93**	**330**	P	**P**	**22 26 29.2**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=108,slow=7.2,SNR=19						
ARCES	**ARCESS Array B**	**66.03**	**19**	P	**P**	**22 29 40.8**	**0.0**
	comp=Z,2.5nm,0.7s,baz=315,slow=5.1,SNR=9.3						
ESDC	**Sonseca Array**	**70.21**	**55**	P	**P**	**22 30 08.1**	**+0.6**
	comp=Z,1.3nm,1.2s,baz=308,slow=6.7,SNR=3.7						
FINES	**FINESS Array B**	**71.89**	**25**	P	**P**	**22 30 17.7**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=294,slow=6.1,SNR=3.6						
BVAR	**Borovoye Array**	**89.75**	**7**	P	**P**	**22 31 53.7**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=328,slow=5.3,SNR=4.5						
RAO	**Raoul Island**	**99.79**	**241**	LR	LR	23 11 21.7	
	comp=Z,196nm,18.2s,baz=304,slow=32						

*IDC **28** 22:28:08.0±6.5, 7.°01S×117.°00E, h531km±91km, mb3.0/9, mb1 3.1/10, mb1mx2.9/37, mbtmp3.9/10, Error ellipse: s-maj=43.7km s-min=25.6km az=77.0*

ISC 28 22:28:09.1±1.3, 7.°1S±0.°2×117.°1E±0.°4, h550km, n10, σ0s72/10, mb3.6/9, Bali Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.76**	**144**	P	**P**	**22 31 05.1**	**-0.8**
	0.1nm,0.3s,baz=319,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**21.05**	**129**	P	**P**	**22 32 15.8**	**+1.0**
	1.7nm,0.8s,baz=309,slow=9.3,SNR=7.1						
ASAR	**Alice Springs**	**23.08**	**138**	P	**P**	**22 32 33.9**	**+0.9**
	0.7nm,0.6s,baz=313,slow=8.8,SNR=8.0						
KSRS	**Korea Array**	**45.42**	**12**	P	**P**	**22 35 39.5**	**+0.5**
	1.5nm,0.6s,baz=187,slow=8.0,SNR=6.4						
MJAR	**Matsushiro Arr**	**47.67**	**23**	P	**P**	**22 35 55.5**	**-0.6**
	2.5nm,0.8s,baz=190,slow=8.1,SNR=7.6						
SONM	**Songino Array**	**55.47**	**351**	P	**P**	**22 36 52.4**	**+0.2**
	1.4nm,0.5s,baz=176,slow=8.1,SNR=3.1						
MKAR	**Makanchi Array**	**61.89**	**334**	P	**P**	**22 37 35.4**	**+0.1**
	1.3nm,0.6s,baz=145,slow=7.5,SNR=16						
KURBB	**Kurchatov Arra**	**66.42**	**334**	P	**P**	**22 38 03.7**	**-0.2**
	0.7nm,0.5s,baz=141,slow=5.6,SNR=9.2						
ZALV	**Zalesovo Beam**	**66.58**	**340**	P	**P**	**22 38 04.1**	**-0.7**
	1.8nm,0.5s,baz=146,slow=5.4,SNR=9.3						
BVAR	**Borovoye Array**	**71.72**	**332**	P	**P**	**22 38 35.4**	**-0.3**
	0.4nm,0.6s,baz=165,slow=6.0,SNR=4.4						

*IDC **28** 22:29:00.5±1.4, 27.°77N×85.°13E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.6/43, mbtmp3.7/10, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.3/38, Error ellipse: s-maj=48.3km s-min=19.9km az=59.0*

ISC 28 22:29:02.6±1.4, 27.°8N±0.°2×85.°1E±0.°3, h12km, n12, σ0s64/11, mb3.9/8, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.73**	**123**	Pn	**Pn**	**22 32 45.0**	**+0.7**
	baz=312,slow=12,SNR=4.0						
AAK	**Ala-Archa**	**17.13**	**332**	Pn	**P**	**22 33 04.5**	**+0.8**
	0.1nm,0.3s,baz=135,slow=5.7,SNR=4.7						
MKAR	**Makanchi Array**	**19.07**	**354**	P	**Pn**	**22 33 25.1**	**-0.6**
	0.3nm,0.3s,baz=172,slow=11,SNR=25						
KURBB	**Kurchatov Arra**	**23.32**	**349**	P	**P**	**22 34 10.7**	**+0.3**
	0.9nm,0.8s,baz=170,slow=10.0,SNR=9.1						
SONM	**Songino Array**	**25.95**	**34**	P	**P**	**22 34 34.8**	**-0.2**
	2.9nm,0.7s,baz=229,slow=9.3,SNR=4.8						
ZALV	**Zalesovo Beam**	**26.11**	**360**	P	**P**	**22 34 36.5**	**+0.3**
	1.2nm,0.5s,baz=188,slow=9.0,SNR=7.8						
BRTR	**Keskin Array B**	**43.89**	**299**	LR	LR	22 59 00.6	
	comp=Z,38nm,18.6s,baz=247,slow=41						
FINES	**FINESS Array B**	**51.25**	**328**	P	**P**	**22 38 06.2**	**+0.3**
	0.7nm,0.5s,baz=104,slow=7.8,SNR=9.2						
ARCES	**ARCESS Array B**	**53.70**	**338**	P	**P**	**22 38 24.5**	**+0.5**
	1.6nm,0.7s,baz=97,slow=7.4,SNR=2.4						
NOA	**NORSAR Array B**	**58.34**	**327**	P	**P**	**22 38 56.5**	**-0.9**
	0.4nm,0.8s,baz=106,slow=5.1,SNR=1.5						
WRA	**Warramunga Arr**	**67.23**	**129**	P	**P**	**22 39 56.5**	**-0.6**
	0.7nm,0.6s,baz=325,slow=6.3,SNR=2.0						
ASAR	**Alice Springs**	**69.51**	**133**	P	**P**	**22 40 11.1**	**-0.3**
	0.6nm,0.6s,baz=317,slow=6.4,SNR=2.3						

IDC 28 23:04:10.3±1.9, 27.°99N×85.°18E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.4/46, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=91.0km s-min=29.3km az=60.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.91**	**354**	P	Pn	23 08 32.9	-0.2
	0.2nm,0.3s,baz=173,slow=11,SNR=16						
ZALV	**Zalesovo Beam**	**25.94**	**360**	P	P	23 09 44.0	-0.2
	0.5nm,0.3s,baz=183,slow=10.0,SNR=4.0						
FINES	**FINESS Array B**	**51.13**	**328**	P	P	23 13 14.5	-0.1
	0.5nm,0.4s,baz=109,slow=7.5,SNR=6.7						
ARCES	**ARCESS Array B**	**53.56**	**338**	P	P	23 13 32.5	-0.1
	1.6nm,0.7s,baz=105,slow=8.0,SNR=9.1						
WRA	**Warramunga Arr**	**67.31**	**130**	P	P	23 15 07.3	0.0
	0.5nm,0.8s,baz=323,slow=6.5,SNR=1.9						

*NEIC **28** 23:14:32.4±1.6, 18.°6S±0.°2×174.°4W±0.°1, h191km±12km, mb4.2/9, Error ellipse: s-maj=26.6km s-min=11.8km az=143.0*

*IDC **28** 23:14:44.4±6.5, 18.°29S×175.°30W, h252km±43km, mb3.7/8, mb1 3.9/10, mb1mx3.5/46, mbtmp4.3/10, Error ellipse: s-maj=82.6km s-min=24.3km az=131.0*

ISC 28 23:14:37.0±1.3, 18.°7S±0.°2×174.°8W±0.°2, h205km, n28, σ0s87/26, mb4.0/12, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.54**	**32**	Pn	Pn	23 15 51.1	-7.4
MSVF	**Nonsavu**	**6.87**	**277**	P	**Pn**	**23 16 17.1**	**+1.4**
	baz=102,slow=16,SNR=4.3						
MSVF	**Nonsavu**	**6.87**	**277**		**Pn**	**23 16 16.4**	**+0.6**
FUNA	**Funafuti**	**11.65**	**329**		**Pn**	**23 17 17.4**	**0.0**
RAR	**Rarotonga**	**14.34**	**103**		Pn	23 17 46.5	-4.5
DZM	**Mont Dzumac**	**17.92**	**256**	P	**Pn**	**23 18 33.8**	**-0.2**
	0.5nm,0.3s,baz=77,slow=18,SNR=5.4						
DZM	**Mont Dzumac**	**17.92**	**256**	P	**Pn**	**23 18 34.2**	**+0.2**
DZM				IAmb	IAmb	23 18 37.6	
	comp=Z,12nm,0.8s						
CTA	**Charters Tower**	**36.73**	**261**	P	**P**	**23 21 24.2**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=89,slow=9.0,SNR=2.2						
CTAO	**Charters Tower**	**36.73**	**261**	P	**P**	**23 21 24.2**	**-0.6**
STKA	**Stephens Creek**	**41.31**	**243**	P	**P**	**23 22 03.4**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=90,slow=12,SNR=3.3						
STKA	**Stephens Creek**	**41.31**	**243**	P	**P**	**23 22 03.0**	**+0.3**
WR0	**Warramunga Arr**	**47.69**	**260**	P	**P**	**23 22 52.5**	**-0.8**
WR0				IAmb	IAmb	23 23 06.6	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**47.85**	**260**	P	**P**	**23 22 54.2**	**-0.4**
WB0				IAmb	IAmb	23 22 54.6	
	comp=Z,3.7nm,0.7s						
WB2	**Warramunga Arr**	**47.87**	**260**	P	**P**	**23 22 53.9**	**-0.8**
WB2				IAmb	IAmb	23 23 02.4	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**47.88**	**260**	P	**P**	**23 22 53.7**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=96,slow=6.1,SNR=24						
WRA	**Warramunga Arr**	**47.88**	**260**	P	**P**	**23 22 53.6**	**-1.1**
AS31	**Alice Springs**	**47.90**	**255**	P	**P**	**23 22 54.5**	**-0.4**
AS31				IAmb	IAmb	23 22 55.2	
	comp=Z,4.5nm,0.7s						
ASAR	**Alice Springs**	**47.91**	**255**	P	**P**	**23 22 54.6**	**-0.3**
	comp=Z,17nm,0.6s,baz=91,slow=8.5,SNR=172						
ASAR	**Alice Springs**	**47.91**	**255**	P	**P**	**23 22 54.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**56.30**	**260**	P	**P**	**23 23 56.6**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=108,slow=4.6,SNR=14						
JAGI	**Jajag, Banyuwa**	**69.46**	**268**	P	**P**	**23 25 22.5**	**-1.1**
MJAR	**Matsushiro Arr**	**70.61**	**321**	P	**P**	**23 25 28.6**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=151,slow=6.2,SNR=5.3						
ILAR	**Eielson Array**	**85.89**	**12**	P	**P**	**23 26 53.0**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=227,slow=6.4,SNR=4.9						
CMAR	**Chiang Mai Arr**	**92.39**	**289**	P	**P**	**23 27 25.9**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=123,slow=3.3,SNR=5.7						
CLL	**Collm**	**146.85**	**351**	↑P	**PKPbc**	**23 33 56.0**	**+1.1**
	comp=Z,6.0nm,0.9s						
BRTR	**Keskin Array B**	**147.73**	**317**	PKPbc	**PKPbc**	**23 33 58.6**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=133,slow=2.2,SNR=4.9						
BRTR	**Keskin Array B**	**147.73**	**317**		**PKPbc**	**23 33 59.2**	**+1.4**
GERES	**GERESS Array B**	**149.12**	**349**	PKPbc	**PKPbc**	**23 34 01.6**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=0.0,slow=1.6,SNR=5.0						

*IDC **28** 23:27:12.7±12.0, 15.°55N×93.°23W, h98km±34km, mb3.2/2, mb1 3.6/5, mb1mx3.2/40, mbtmp3.7/5, Error ellipse: s-maj=189.4km s-min=35.1km az=178.0*

*NEIC **28** 23:27:14.8±2.7, 15.°81N±0.°03×93.°45W±0.°05, h111km±5km, Error ellipse: s-maj=6.5km s-min=5.0km az=94.0*

*MEX **28** 23:27:16.3±0.9, 15.°84N×93.°40W, h112km±6km, MD4.3*

ISC 28 23:27:15.8±0.8, 15.°84N±0.°05×93.°42W±0.°04, h108km±7km, n28, σ1s52/41, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.24**	**124**	*e*P	**Pn**	**23 27 30.5**	**-0.6**
PCIG				*i* S	**Sn**	**23 27 41.8**	**-0.7**
PCIG		**0.24**	**124**		**Pn**	**23 27 30.7**	**-0.4**
PCIG					**Sn**	**23 27 41.6**	**-0.9**
TGIG		**0.98**	**17**	*i* P	**Pn**	**23 27 36.3**	**-0.4**
TGIG				*i* S	**Sn**	**23 27 51.0**	**-1.4**
TGIG		**0.98**	**17**		**Pn**	**23 27 36.3**	**-0.4**
TGIG					**Sn**	**23 27 51.0**	**-1.4**
CCIG	**Comitan**	**1.31**	**70**	*i* P	**Pn**	**23 27 40.4**	**0.0**
CCIG				*e*S	**Sn**	**23 27 58.8**	**-0.3**
CCIG	**Comitan**	**1.31**	**70**		**Pn**	**23 27 40.5**	**0.0**
CCIG					**Sn**	**23 27 58.8**	**-0.4**
THIG		**1.45**	**130**	*i* P	**Pn**	**23 27 42.0**	**+0.1**
THIG				*i* S	**Sn**	**23 28 00.4**	**-1.3**
THIG		**1.45**	**130**		**Pn**	**23 27 42.0**	**+0.1**
THIG					**Sn**	**23 28 00.4**	**-1.3**
CMIG	**Matias Romero**	**1.87**	**312**	P	**Pn**	**23 27 47.5**	**+0.4**
	15nm,0.3s,baz=123,slow=13,SNR=126						
CMIG				S	**Sn**	**23 28 10.7**	**-0.3**
	82nm,0.3s,baz=336,slow=20,SNR=12						
CMIG	**Matias Romero**	**1.87**	**312**	*e*P	**Pn**	**23 27 47.5**	**+0.4**
CMIG				*e*S	**Sn**	**23 28 10.5**	**-0.5**
HUEH	**Huehuetenango**	**1.92**	**105**	Pn	**Pn**	**23 27 48.0**	**0.0**
RTAL	**Retalhuleu**	**2.12**	**128**	Pn	**Pn**	**23 27 50.6**	**+0.3**
HUIG	**Huatulco**	**2.59**	**269**	*i* P	**Pn**	**23 27 54.7**	**-1.6**
HUIG				*i* S	**Sn**	**23 28 25.2**	**-2.1**
HUIG	**Huatulco**	**2.59**	**269**		**Pn**	**23 27 54.7**	**-1.6**
HUIG					**Sn**	**23 28 23.5**	**-3.9**
PETF	**Flores**	**3.58**	**72**	Pn	**Pn**	**23 28 09.0**	**-0.4**
ESQI	**Esquipulas**	**4.14**	**107**	Pn	**Pn**	**23 28 16.3**	**-0.8**
MTO3	**Montecristo**	**4.18**	**110**		**Pn**	**23 28 16.6**	**-1.2**
TLIG	**Tlapa**	**5.22**	**290**	Pn	**Pn**	**23 28 32.9**	**+1.2**
TEIG	**Tepich**	**6.56**	**48**	P	**Pn**	**23 28 47.9**	**-1.7**
	15nm,0.3s,baz=229,slow=8.5,SNR=50						
TEIG				S	**Sn**	**23 29 59.3**	**-3.7**
	40nm,0.3s,baz=53,slow=22,SNR=19						
TEIG	**Tepich**	**6.56**	**48**		**Pn**	**23 28 47.2**	**-2.4**
ORTG	**Ortega, Santa**	**9.48**	**124**	Pn	**Pn**	**23 29 29.9**	**+0.5**
CVTR	**Volcan Turrial**	**11.05**	**120**	Pn	**Pn**	**23 29 51.0**	**-0.1**
SOR	**Soroa**	**12.02**	**53**	Pn	**Pn**	**23 30 00.3**	**-3.2**
LCCY	**Blossom Villag**	**13.27**	**71**	P	**Pn**	**23 30 21.5**	**+1.6**
TXAR	**Lajitas Array**	**16.41**	**327**	P	**P**	**23 31 03.4**	**+2.7**
	0.0nm,0.3s,baz=145,slow=13,SNR=4.3						
GOGA	**Godfrey**	**19.68**	**25**	P	**Pn**	**23 31 37.3**	**-1.4**
GOGA				IAmb	IAmb	23 31 40.7	
	comp=Z,12nm,1.2s						
YKA	**Yellowknife Ar**	**48.93**	**347**	P	**P**	**23 35 50.1**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=152,slow=7.6,SNR=8.1						
ILAR	**Eielson Array**	**60.62**	**337**	P	**P**	**23 37 16.0**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=125,slow=7.8,SNR=2.5						

*IDC **28** 23:27:26.8±1.0, 26.°06S×179.°76E, h484km±15km, mb3.5/8, mb1 3.7/10, mb1mx3.4/29, mbtmp4.4/10, Error ellipse: s-maj=24.7km s-min=14.3km az=160.0*

*NEIC **28** 23:27:27.3±1.7, 26.°1S±0.°1×179.°7E±0.°2, h490km±8km, mb4.4/13, Error ellipse: s-maj=21.3km s-min=17.4km az=80.0*

ISC 28 23:27:27.8±0.6, 26.°12S±0.°09×179.°82E±0.°09, h500km, n37, σ1s08/37, mb4.2/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.71**	**148**	P	**P**	**23 28 44.0**	**+0.2**
	572nm,0.3s,baz=88,slow=7.7,SNR=68						
RAO				S	**S**	**23 29 42.7**	**-3.2**
	69nm,0.3s,baz=75,slow=20,SNR=1.5						
RAO	**Raoul Island**	**3.71**	**148**	P	**P**	**23 28 43.9**	**+0.1**
MSVF	**Nonsavu**	**8.50**	**349**	P	**P**	**23 29 27.2**	**-2.4**
	1.6nm,0.3s,baz=262,slow=17,SNR=6.6						
MSVF	**Nonsavu**	**8.50**	**349**	P	**P**	**23 29 27.1**	**-2.6**
URZ	**Urewera**	**12.32**	**190**	P	**P**	**23 30 08.7**	**-0.8**
DZM	**Mont Dzumac**	**12.86**	**285**	P	**P**	**23 30 15.9**	**+0.3**
	2.0nm,0.3s,baz=114,slow=18,SNR=17						
DZM	**Mont Dzumac**	**12.86**	**285**	P	**P**	**23 30 16.3**	**+0.7**
QRZ	**Quartz Range**	**15.87**	**201**	P	**P**	**23 30 46.2**	**-0.6**
LTZ	**Lake Taylor**	**17.74**	**199**	P	**P**	**23 31 04.7**	**-0.9**
FOZ	**Fox Glacier**	**19.19**	**203**	P	**P**	**23 31 18.5**	**-0.2**
CTAO	**Charters Tower**	**31.39**	**274**	P	**P**	**23 33 07.8**	**+0.5**
CTAO				IAmb	IAmb	23 33 08.2	
	comp=Z,20nm,0.6s						
STKA	**Stephens Creek**	**33.80**	**251**	P	**P**	**23 33 27.8**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=96,slow=12,SNR=7.5						
STKA	**Stephens Creek**	**33.80**	**251**	P	**P**	**23 33 27.5**	**-0.1**
AS31	**Alice Springs**	**41.56**	**263**	P	**P**	**23 34 31.3**	**0.0**
ASAR	**Alice Springs**	**41.56**	**263**	P	**P**	**23 34 31.1**	**-0.2**
	comp=Z,12nm,0.9s,baz=105,slow=8.3,SNR=62						
ASAR				S	**S**	**23 40 11.4**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=101,slow=15,SNR=8.1						
WR0	**Warramunga Arr**	**41.95**	**269**	P	**P**	**23 34 33.7**	**-0.7**
WR0				IAmb	IAmb	23 34 34.7	
	comp=Z,6.7nm,0.8s						
WB2	**Warramunga Arr**	**42.13**	**269**	P	**P**	**23 34 35.1**	**-0.8**
WB2				IAmb	IAmb	23 34 36.0	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**42.14**	**269**	P	**P**	**23 34 35.3**	**-0.6**
	comp=Z,7.6nm,0.7s,baz=102,slow=7.8,SNR=29						
WRA	**Warramunga Arr**	**42.14**	**269**	P	**P**	**23 34 35.0**	**-0.9**
WB0	**Warramunga Arr**	**42.14**	**269**	P	**P**	**23 34 35.3**	**-0.7**
WB0				IAmb	IAmb	23 34 36.1	
	comp=Z,9.5nm,0.7s						
QSPA	**South Pole Qui**	**63.98**	**180**	P	**P**	**23 37 12.6**	**+1.4**
QSPA				IAmb	IAmb	23 39 05.8	
	comp=Z,24nm,1.9s						
MJAR	**Matsushiro Arr**	**73.63**	**326**	P	**P**	**23 38 09.0**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=140,slow=6.0,SNR=5.6						
MJAR	**Matsushiro Arr**	**73.63**	**326**	P	**P**	**23 38 09.3**	**-0.5**
JWT	**Wachi**	**74.12**	**323**	P	**P**	**23 38 12.5**	**0.0**
JWT				IAmb	IAmb	23 39 29.5	
	comp=Z,17nm,1.5s						
KSRS	**Korea Array**	**79.84**	**320**	P	**P**	**23 38 43.7**	**0.0**
	comp=Z,1.4nm,0.6s,baz=135,slow=6.0,SNR=5.9						
PETK	**Petropavlovsk-**	**81.21**	**347**	P	**P**	**23 38 50.7**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=109,slow=7.8,SNR=3.3						
PETK	**Petropavlovsk-**	**81.21**	**347**	P	**P**	**23 38 51.3**	**+0.7**
SNAA	**Sanae**	**82.46**	**179**	P	**P**	**23 38 56.9**	**0.0**
SNAA				IAmb	IAmb	23 42 03.2	
	comp=Z,9.5nm,1.5s						
NVAR	**Mina Array Bea**	**86.46**	**44**	P	**P**	**23 39 18.1**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=216,slow=9.0,SNR=7.8						
NVAR	**Mina Array Bea**	**86.46**	**44**	P	**P**	**23 39 18.5**	**+1.3**
TXAR	**Lajitas Array**	**91.74**	**58**	P	**P**	**23 39 43.1**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=201,slow=6.7,SNR=6.1						
TXAR	**Lajitas Array**	**91.74**	**58**	P	**P**	**23 39 43.8**	**+2.0**
FINES	**FINESS Array B**	**140.48**	**340**	PKhKP	PKPpre	23 45 52.5	
	comp=Z,0.8nm,0.6s,baz=47,slow=5.3,SNR=5.7						
FINES	**FINESS Array B**	**140.48**	**340**		PKPpre	23 45 52.3	
NOA	**NORSAR Array B**	**144.23**	**351**	PKP	PKPbc	23 46 05.0	-0.3
	comp=Z,1.5nm,0.7s,baz=20,slow=2.5,SNR=11						
AKASG	**Malin Array Be**	**146.72**	**325**	PKPbc	**PKPbc**	**23 46 12.7**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=46,slow=4.0,SNR=4.6						
CSS	**Mathiatis**	**149.93**	**295**	PKPdf	**PKPdf**	**23 46 16.4**	**+0.4**
CSS					**PKiKP**	**23 46 22.4**	**+0.2**

*JMA **28** 23:35:02.9±0.2, 24.°02N×121.°65E, h0km, M2.8*

*TAP **28** 23:35:04.1, 24.°02N×121.°62E, h7km, ML3.4, B*

ISC 28 23:35:04.0±0.8, 24.°01N±0.°02×121.°66E±0.°02, h8km±5km, n105, σ0s57/137, 3C-18D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.06**	**233**	↑*i*P	**Pg**	**23 35 06.2**	**+0.4**
HWA	baz=182			*e*S	**Sg**	**23 35 07.9**	**+0.7**
	baz=182						
TWD	**Chiawan**	**0.09**	**322**	*i* P	**Pg**	**23 35 06.2**	**-0.1**
TWD	baz=351			*i* S	**Sg**	**23 35 07.5**	**-0.4**
	baz=351						
NACB	**Ninganchiao**	**0.17**	**341**	↓*i*P	**Pg**	**23 35 07.4**	**-0.3**
	baz=1.0						
ETLH	**Xiulin Townshi**	**0.25**	**321**	P	**Pg**	**23 35 08.9**	**-0.2**
	baz=327						
ESL	**Shilin**	**0.28**	**226**	↓*i*P	**Pg**	**23 35 09.5**	**-0.1**
ESL	baz=227			S	**Sg**	**23 35 13.3**	**-0.1**
	baz=227						
WHF	**Hehuan Shan**	**0.38**	**290**	↓*i*P	**Pg**	**23 35 11.4**	**-0.3**
	baz=291						
WHF				*i* S	**Sg**	**23 35 16.4**	**-0.3**
	baz=291						
EGFH	**Guangfu**	**0.40**	**211**	P	**Pg**	**23 35 12.3**	**+0.4**
	baz=212						
CHGB	**Renai**	**0.44**	**276**	↓*i*P	**Pg**	**23 35 12.8**	**+0.1**
	baz=276						
CHGB				S	**Sg**	**23 35 18.4**	**-0.2**
	baz=276						
OWD	**Renai**	**0.44**	**263**	P	**Pg**	**23 35 12.8**	**+0.1**
	baz=271						
OWD				S	**Sg**	**23 35 18.8**	**+0.3**
	baz=271						
FUSS	**Fushou**	**0.44**	**302**	*i* P	**Pg**	**23 35 12.8**	**+0.1**
	baz=304						
FUSS				S	**Sg**	**23 35 18.9**	**+0.2**
	baz=304						
EWUT	**Wuta**	**0.45**	**15**	*e*P	**Pg**	**23 35 12.7**	**0.0**
	baz=21						
NNSB	**Datong**	**0.48**	**329**	↓P	**Pg**	**23 35 13.5**	**0.0**
	baz=333						
NNSB				S	**Sg**	**23 35 19.7**	**-0.1**
	baz=333						
NNSH	**Datong**	**0.48

NMLH	Miaoli baz=304	0.95	304	eP	Pn	23 35 23.4	-0.1
NHDH	Xindian Distri baz=356	0.95	353	eP	Pg	23 35 20.5	-1.9
TWA	Mucha baz=348	0.97	356	P	Pb	23 35 23.1	0.0
TWA				eS	Sb	23 35 36.0	0.0
TIPB	Shuangxi baz=3.0	0.97	9	eP	Pb	23 35 22.8	-0.3
TIPB				eS	Sb	23 35 36.1	0.0
TATO	Taipei baz=354	0.97	351	eP	Pb	23 35 23.0	-0.1
WDJ	Dajia District baz=290	0.98	290	eP	Pn	23 35 23.9	-0.2
CHN5	Tsauling baz=233	0.99	245	P	Pg	23 35 24.1	-0.1
CHN5				eS	Sn	23 35 39.0	+0.6
SBCB	Hsinchu baz=324	0.99	322	eP	Pg	23 35 22.9	-0.1
HSN	Hsinchu baz=326	1.00	322	eP	Pn	23 35 24.3	-0.1
WCHH	Zhanghua baz=273	1.00	274	eP	Pn	23 35 24.5	+0.1
ELDTW	Lidau baz=200	1.01	216	eP	Pg	23 35 23.3	-0.1
TWB1	Santiao Chiao baz=13	1.04	17	eP	Pg	23 35 23.9	-0.1
NCUH	Zhongli baz=338	1.04	336	eP	Pn	23 35 24.8	-0.2
NCU	National Centr baz=338	1.04	336	eP	Pn	23 35 25.9	+0.9
WFSB	Wu-fen Shan baz=9.0	1.06	6	eP	Pn	23 35 24.8	-0.3
WDLH	Douliu baz=252	1.07	253	eP	Pn	23 35 25.6	+0.3
EDH	Donghe baz=214	1.08	197	eP	Pg	23 35 24.6	-0.3
YM01	YM01 baz=10.0	1.13	356	⇑P	Pn	23 35 26.5	+0.3
STYH	Taoyuan baz=224	1.16	224	eP	Pn	23 35 26.3	-0.2
YM08	YM08 baz=358	1.17	357	eP	Pn	23 35 26.8	0.0
CHN4	Tsaushan baz=236	1.18	236	⇓*i*P	Pn	23 35 27.4	+0.6
TPUB	Ta-pu baz=233	1.18	233	eP	Pb	23 35 26.4	-0.2
LONT	Longtian baz=204	1.20	204	eP	Pg	23 35 27.3	+0.2
WTK	Tuku baz=254	1.20	255	eP	Pg	23 35 27.8	+0.6
WTP	Ta-pu baz=231	1.22	232	P	Pg	23 35 27.7	+0.2
CHY	Chiayi baz=259	1.24	246	eP	Pg	23 35 28.2	+0.4
CHY				eS	Sn	23 35 45.0	+0.5
TWY	Chenhua baz=346	1.26	358	eP	Pg	23 35 29.8	+1.6
TWG	Pinlang baz=204	1.30	204	eP	Pn	23 35 28.1	-0.3
TWGBT	Beinan baz=204	1.30	204	eP	Pn	23 35 28.0	-0.5
TWK	Hsinying baz=222	1.30	236	eP	Pg	23 35 29.4	+0.3
TWK				eS	Sg	23 35 47.9	+2.0
YOJ	Yonaguni jima baz=70	1.32	70	P	Pn	23 35 28.3	-0.4
YOJ				eS	Sn	23 35 46.2	-0.2
YOJ	Yonaguni jima baz=70	1.32	70	P	Pn	23 35 28.5	-0.2
YOJ				eS	Sg	23 35 47.1	+0.7
CHN1	Nanshi baz=220	1.32	232	eP	Pg	23 35 29.7	+0.3
CHN1				eS	Sg	23 35 48.5	+1.9
LDUT	Ludao baz=171	1.34	187	eP	Pn	23 35 27.2	-1.8
SGST	Jiashian baz=228	1.35	227	eP	Pb	23 35 29.3	-0.3
SLGT	Liugui baz=224	1.37	223	eP	Pg	23 35 30.5	+0.1
SSD	Sandimen baz=206	1.57	217	eP	Pb	23 35 33.1	-0.2
TSMG	Majia baz=205	1.60	216	eP	Pg	23 35 34.3	-0.4
PCYT	Pengchaiyu baz=13	1.66	13	eP	Pb	23 35 34.1	-0.6
MASBT	Mashibuluo baz=204	1.68	214	eP	Pn	23 35 33.6	-0.1
EAST	Anshuo baz=193	1.78	205	eP	Pb	23 35 36.1	-0.8
SSPT	Xinbi baz=205	1.82	214	eP	Pg	23 35 38.8	-0.2
SCZT	Fangliau baz=213	1.89	210	eP	Pb	23 35 38.0	-0.7
IRIF	Iriomote-Funau	1.92	80	P	Pn	23 35 36.5	-0.5
SLIU	Shizi baz=192	1.95	204	eP	Pn	23 35 38.2	+0.7
WDGT	Dungji baz=250	1.98	248	eP	Pn	23 35 38.4	+0.7
JKRS	Kuro-shima	2.16	84	P	Pn	23 35 40.9	+0.6
VCHM	Qimei baz=235	2.19	249	eP	Pn	23 35 40.1	-0.6
VWUC	VWUC baz=296	2.23	296	eP	Pn	23 35 40.6	-0.7
JIJ	Ishigaki jima baz=285	2.30	81	P	Pn	23 35 42.6	+0.4
JIJ				eS	Sn	23 36 12.2	+1.6
JISG	Ishigakijimahi	2.49	76	P	Pn	23 35 44.8	0.0
JISG				eS	Sn	23 36 14.4	-0.9
PTMZ	Houxiangcun baz=294	2.53	294	eP	Pn	23 35 45.4	+0.1
MATB	Ma-tsu baz=323	2.63	324	eP	Pn	23 35 47.5	+0.7
KNMB	Chin-men Tao baz=279	3.02	279	eP	Pn	23 35 51.0	-1.0
LYJJ	Jianjiangzhen baz=325	3.06	326	eP	Pn	23 35 53.7	+1.1
AXDP	Jialang baz=285	3.47	286	eP	Pn	23 35 57.9	-0.4
ZPLA	Ao Xicun baz=269	3.57	269	eP	Pn	23 36 01.3	+1.6

TAP 28 23:35:06.8,24.02N×121.57E,h6km,ML3.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien baz=139	0.06	144	P	Pg	23 35 08.9	+0.7
HWA				S	Sg	23 35 10.7	+1.3
TWD	Chiawan baz=32	0.06	25	P	Pg	23 35 08.8	+0.5
TWD				*i* S	Sg	23 35 10.3	+0.8
NACB	Ninganchiao baz=19	0.15	9	eP	Pg	23 35 09.8	-0.1
NACB				S	Sg	23 35 12.5	+0.6
ETLH	Xiulin Townshi baz=337	0.20	337	P	Pg	23 35 11.7	+1.0
ETLH				S	Sg	23 35 15.0	+1.6
ESL	Shilin baz=205	0.24	211	eP	Pg	23 35 12.7	+1.1
WHF	Hehuan Shan baz=291	0.30	294	eP	Pb	23 35 14.3	-0.6
CHGB	Renai baz=274	0.36	276	eP	Pb	23 35 15.2	-0.6
FUSS	Fushou baz=304	0.37	307	eP	Pg	23 35 14.9	+0.9
EGFH	Guangfu baz=205	0.38	200	eP	Pg	23 35 14.9	+0.8
TWT	Tachien baz=298	0.42	303	eP	Pb	23 35 16.4	-0.5
NNSB	Datong baz=346	0.44	337	eP	Pg	23 35 16.1	+0.8
NNSH	Datong baz=345	0.44	337	eP	Pb	23 35 16.3	-0.7
TDCB	Techi baz=298	0.44	301	eP	Pg	23 35 16.1	+0.8
NNS	Nan Shan baz=346	0.45	337	P	Pb	23 35 16.6	-0.7
VWDT	VWDT baz=226	0.47	236	eP	Pb	23 35 17.4	-0.2
RUISU	Ruisui baz=200	0.55	194	eP	Pb	23 35 19.0	+0.2
NDT	Datong Townshi baz=341	0.58	355	P	Pb	23 35 18.7	-0.6
DPDB	Guoxing baz=269	0.59	271	eP	Pb	23 35 19.8	+0.3
SSLB	Suanglung baz=246	0.61	247	P	Pb	23 35 19.8	-0.1
ENTT	Nioudou baz=360	0.61	360	P	Pg	23 35 19.2	+0.6
NDS	Dongshan baz=15	0.62	13	P	Pg	23 35 18.8	+0.1
WHP	Taichung City baz=291	0.62	294	eP	Pb	23 35 20.5	+0.3
SMLT	Sun Moon Lake baz=256	0.63	257	eP	Pb	23 35 20.5	+0.3
TWC	Suao baz=29	0.64	24	eP	Pg	23 35 18.8	-0.2
YHNB	Yeheng baz=353	0.67	345	eP	Pg	23 35 19.9	+0.3
YULB	Yu-li baz=198	0.68	202	eP	Pb	23 35 21.0	0.0
NSK	Sanguang baz=350	0.68	344	eP	Pb	23 35 21.0	-0.1
TWE	Neicheng baz=357	0.70	7	P	Pg	23 35 20.6	+0.4
TWF1	Yuli baz=205	0.71	200	eP	Pb	23 35 21.3	-0.3
NWLT	Wulai baz=339	0.75	355	eP	Pb	23 35 21.9	-0.5
YUS	Yu-Shan baz=239	0.78	227	eP	Pb	23 35 23.4	+0.4
NSTT	Nanjuang baz=316	0.80	320	eP	Pb	23 35 23.2	+0.2
WJS	Zhushan baz=247	0.80	256	eP	Pn	23 35 24.4	-0.2
WWF	Wufeng baz=269	0.80	272	eP	Pn	23 35 25.1	+0.5
LIOB	Emei baz=317	0.80	321	eP	Pb	23 35 23.6	+0.4
WNT1	Nantou City baz=260	0.82	262	eP	Pn	23 35 25.4	+0.5
WNT	Mingjian baz=249	0.82	260	eP	Pn	23 35 25.4	+0.5
NJD	Zhudong baz=324	0.83	328	eP	Pg	23 35 22.8	0.0
FULB	Fuli baz=206	0.86	197	eP	Pb	23 35 24.5	+0.4
ALS	Alishan baz=233	0.87	234	eP	Pb	23 35 24.2	-0.3
NMLH	Miaoli baz=302	0.87	306	eP	Pn	23 35 26.6	+0.9
HSN1	Hsinchu baz=322	0.90	326	eP	Pn	23 35 27.3	+1.2
WDJ	Dajia District baz=288	0.91	291	eP	Pn	23 35 27.1	+1.0
CHN5	Tsauling baz=242	0.92	243	eP	Pn	23 35 27.0	+0.6
WCHH	Zhanghua baz=271	0.93	274	eP	Pn	23 35 27.7	+1.4
NHDH	Xindian Distri baz=354	0.94	358	eP	Pb	23 35 25.3	-0.1
CHKT	Chengkung baz=189	0.94	191	eP	Pg	23 35 25.1	+0.3
TATO	Taipei baz=352	0.95	356	eP	Pb	23 35 25.9	+0.2
TWA	Mucha baz=351	0.95	1	eP	Pb	23 35 25.8	+0.1
TWA				eS	Sg	23 35 38.0	+0.6
TIPB	Shuangxi baz=18	0.97	14	eP	Pg	23 35 25.6	+0.1
ELDTW	Lidau baz=194	0.97	211	eP	Pb	23 35 26.3	+0.2
NTY	Taoyuan baz=343	1.00	346	eP	Pn	23 35 28.3	+0.9
NCU	National Centr baz=343	1.00	340	eP	Pn	23 35 27.8	+0.4
TWB1	Santiao Chiao baz=16	1.05	21	eP	Pg	23 35 26.7	-0.3
WFSB	Wu-fen Shan baz=12	1.06	10	eP	Pg	23 35 27.0	-0.1
EDH	Donghe baz=191	1.07	193	eP	Pg	23 35 27.0	-0.4
CHN4	Tsaushan baz=232	1.12	233	eP	Pn	23 35 29.8	+0.8
YM01	YM01 baz=356	1.12	0	eP	Pn	23 35 29.1	+0.1
STYH	Taoyuan baz=220	1.12	221	eP	Pn	23 35 29.5	+0.5
TPUB	Ta-pu baz=229	1.12	230	eP	Pn	23 35 29.7	+0.6
TNOU	National Taiwa baz=28	1.14	9	eP	Pn	23 35 30.0	+0.8
YM08	YM08 baz=13	1.16	1	eP	Pn	23 35 29.5	-0.1
WTP	Ta-pu baz=227	1.17	229	eP	Pn	23 35 30.7	+0.9
LONT	Longtian baz=198	1.18	200	eP	Pn	23 35 30.1	+0.2
TWG	Pinlang baz=185	1.28	201	eP	Pg	23 35 32.1	+0.8
SGST	Jiashian baz=223	1.30	224	eP	Pg	23 35 32.3	+0.5
LDUT	Ludao baz=168	1.35	184	eP	Pn	23 35 31.2	-0.9
YOJ	Yonaguni jima baz=74	1.39	71	eP	Pn	23 35 31.4	-1.3
PCYT	Pengchaiyu baz=19	1.66	16	eP	Pb	23 35 37.4	-0.4

*HEL **28** 23:45:23.0, 67.77N×20.01E, h0km, ML1.3, Explosion*

UPP 28 23:45:24.2±0.1, 67.84N×20.18E, h0km, ML2.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	29	P	Pg	23 45 26.9	+0.2
KUA				S	Sg	23 45 28.8	+0.6
KUA	Kurravaara	0.13	29	*i* P	Pg	23 45 26.9	+0.2
KUA				*i* S	Sg	23 45 28.8	+0.6
RATU	Laukkuluspa	0.22	265	P	Pg	23 45 28.6	+0.2
RATU				S	Sg	23 45 32.0	+0.7
RATU	Laukkuluspa	0.22	265	*i* P	Pg	23 45 28.6	+0.2
RATU				*i* S	Sg	23 45 32.0	+0.7
KOVU	Salmi	0.38	359	P	Pg	23 45 31.6	+0.1
KOVU	Salmi	0.38	359	*i* P	Pg	23 45 31.6	+0.1
NIKU	Nikkaluokta	0.43	274	P	Pg	23 45 32.6	+0.1
NIKU	Nikkaluokta	0.43	274	*i* P	Pg	23 45 32.6	+0.1
LANU	Lannavaara	0.71	72	P	Pg	23 45 37.8	-0.1
LANU	Lannavaara	0.71	72	eS	Sg	23 45 46.8	-0.3
KIF	Kilpisjarvi comp=Z,2.8nm,0.2s	1.19	11	MSG		23 46 02.7	
KIF				eSB	Sb	23 46 03.2	-0.3
PAJU	Pajala baz=298	1.40	125	eP	Pn	23 45 49.5	-1.4
HEF	Hetta baz=237	1.42	65	ePG	Pn	23 45 50.3	-1.0
HEF	comp=Z,1.9nm,0.2s			MSG		23 46 08.4	
HEF				eSN	Sn	23 46 13.2	+2.5
TOF	Tornio comp=Z,1.0nm,0.2s	2.41	135	MSG		23 46 34.0	
TOF				eSG	Sb	23 46 38.5	+0.1
RNF	Rovaniemi	2.59	116	eSG	Sb	23 46 43.2	-0.5

UPP 28 23:46:02.4±0.1, 67.86N×20.15E, h0km, ML2.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	35	P	Pg	23 46 04.9	+0.2
KUA				S	Sg	23 46 06.7	+0.5
RATU	Laukkuluspa	0.22	262	P	Pg	23 46 06.7	+0.2
RATU				S	Sg	23 46 10.0	+0.7
KOVU	Salmi	0.37	0	P	Pg	23 46 09.6	+0.2
NIKU	Nikkaluokta	0.42	272	P	Pg	23 46 10.8	+0.2
LANU	Lannavaara	0.72	73	P	Pg	23 46 16.1	0.0

*IDC **28** 23:50:12.7±1.2, 5.00S×129.77E, h186km±12km, mb3.7/13, mb1 4.1/17, mb1mx3.7/46, mbtmp4.5/17, MS2.6/1, Ms1 2.6/1, ms1mx2.2/30, Error ellipse: s-maj=18.9km s-min=8.4km az=101.0*

*NEIC **28** 23:50:14.3±2.1, 5.06S±0.07×129.77E±0.10, h203km±7km, mb4.5/24, Error ellipse: s-maj=14.4km s-min=9.5km az=99.0*

*DJA **28** 23:50:14.7±0.3, 5°S±3°×13°0E±°, h190km±4km, M4.6/14, mb4.5/7, mB4.9/6, MLv5.0/14, Mw(mB)4.2/6, MwMwp5.0/2, Mwp5.3/2*

ISC 28 23:50:13.9±0.4, 5.10S±0.04×129.78E±0.06, h200km, n81, σ1°68/84, mb4.1/25, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.58	12	P	Pn	23 50 42.3	+0.9
BNDI				S	Sn	23 51 03.8	+1.0
MSAI	Masohi	1.93	334	P	Pn	23 50 50.4	-1.4
MSAI				S	Sn	23 51 17.5	-3.8
SAUI	Saumlaki	3.24	152	Pn	Pn	23 51 08.9	+2.4
SAUI	Saumlaki	3.24	152	P	Pn	23 51 06.7	+0.2
NLAI	Namlea	3.25	305	P	Pn	23 51 06.4	-0.1
FAKI	Fak Fak	3.28	49	Pn	Pn	23 51 07.0	+0.1
FAKI	Fak Fak	3.28	49	P	Pn	23 51 07.0	+0.1
SIJI	Sorong 166nm,0.3s,baz=216,slow=8.2,SNR=575	4.46	20	P	Pn	23 51 20.6	-0.9
SIJI	73nm,0.3s,baz=269,slow=24,SNR=12			S	Sn	23 52 09.6	-5.1
SIJI	comp=Z,64nm,19.1s,baz=201,slow=46			LR	LR	23 53 34.6	
SWI	Sorong	4.46	19	P	Pn	23 51 20.6	-0.9
SANI	Sanana	4.84	309	P	Pn	23 51 24.8	-1.6
SOEI	Soe	7.16	229	Pn	Pn	23 51 57.4	+1.0
SOEI	Soe 0.3nm1μm87nm,0.8s	7.16	229	P	Pn	23 51 58.1	+1.7
MTN	Manton Dam	7.81	170	Pn	Pn	23 52 04.3	-0.5
BATI	Baumata 44nm,0.3s,baz=96,slow=9.2,SNR=28	7.90	230	P	Pn	23 52 06.9	+0.9
BATI	5.3nm,0.3s,baz=161,slow=16,SNR=4.0			S	Sn	23 53 35.6	+0.3
BATI	Baumata 0.5nm1μm114nm,0.6s	7.90	230	P	Pn	23 52 08.0	+2.0
LUWI	Luwuk 0.4nm2μm5μm68nm,0.5s	8.07	300	P	Pn	23 52 09.0	+0.8
KMSI	Cibinong	8.08	314	P	Pn	23 52 08.3	0.0
GTOI	Gorontalo 256nm8.6nm,0.7s	8.84	310	P	Pn	23 52 20.3	+2.1
APSI	Ampana 505nm16nm,1.0s	9.12	297	P	Pn	23 52 22.4	+0.6
KNRA	Kununurra	10.56	185	Pn	Pn	23 52 39.3	-1.2
TOLI2	Tolitoli	10.90	304		Pn	23 52 46.9	+2.0
WBSI	Waikabubak, Su 33nm,0.8s	11.24	246	P	Pn	23 52 48.9	-0.4
PLAI	Plampang	12.47	252	P	Pn	23 53 05.0	+0.1
FITZ	Fitzroy Crossi 9.5nm,0.3s,baz=23,slow=13,SNR=56	13.54	197	P	Pn	23 53 17.8	-0.5
FITZ	2.1nm,0.3s,baz=246,slow=18,SNR=3.3			S	S	23 55 42.2	-7.0
FITZ	Fitzroy Crossi	13.54	197	Pn	Pn	23 53 16.8	-1.5
WB0	Warramunga Arr	15.26	163		Pn	23 53 38.8	-0.6
WB0	comp=Z,25nm,0.8s			IAmb	IAmb	23 53 42.6	
WRA	Warramunga Arr comp=Z,6.9nm,0.3s,baz=342,slow=13,SNR=69	15.41	164	P	Pn	23 53 40.6	-0.6
WRA				S	S	23 56 26.6	-5.8
WRA	comp=Z,4.5nm,0.3s,baz=338,slow=22,SNR=7.0	15.41	164	P	Pn	23 53 39.5	-1.7
WB2	Warramunga Arr	15.41	164	P	Pn	23 53 40.6	-0.7
WR0	Warramunga Arr	15.48	163	P	Pn	23 53 41.6	-0.5
WR0	comp=Z,14nm,1.0s			IAmb	IAmb	23 53 45.3	
COEN	Coen	15.87	125	P	Pn	23 53 48.9	+2.1
COEN	comp=Z,12nm,1.1s			IAmb	IAmb	23 53 55.0	
AS31	Alice Springs	18.89	168	P	P	23 54 21.3	+1.9
ASAR	Alice Springs comp=Z,14nm,0.3s,baz=349,slow=11,SNR=964	18.89	168	P	P	23 54 21.1	+1.6
ASAR	comp=Z,0.4nm,0.3s,baz=347,slow=19,SNR=14			S	S	23 57 42.3	-1.2
ASAR	Alice Springs	18.89	168	P	P	23 54 21.2	+1.7
PSA00	Pilbara Seismi	19.00	210	P	P	23 54 20.7	0.0
GIRL	Giralia	23.02	219	P	P	23 55 02.2	+0.7
FORT	Forrest	25.60	183	P	P	23 55 25.4	+0.6
MORW	Morawa	27.16	207	P	P	23 55 38.4	-0.5
MORW	comp=Z,22nm,1.4s			IAmb	IAmb	23 55 38.5	
BBOO	Buckleboo	28.19	169	P	P	23 55 48.7	+0.7
BBOO	comp=Z,8.8nm,0.7s			IAmb	IAmb	23 55 49.5	
STKA	Stephens Creek comp=Z,1.8nm,0.4s,baz=344,slow=9.0,SNR=10	28.85	159	P	P	23 55 54.7	+0.9
STKA	Stephens Creek	28.85	159	P	P	23 55 54.8	+0.9
NWAO	Narrogin (SRO) comp=Z,5.7nm,0.4s,baz=40,slow=7.9,SNR=12	30.06	201	P	P	23 56 04.7	+0.2
NWAO	Narrogin (SRO)	30.06	201	P	P	23 56 04.8	+0.3
CAN	Canberra	34.92	152	P	P	23 56 49.9	+3.2
CAN	comp=Z,34nm,1.5s			IAmb	IAmb	23 56 56.9	
CMAR	Chiang Mai Arr comp=Z,0.5nm,0.3s,baz=129,slow=7.1,SNR=1.1	38.37	308	P	P	23 57 14.9	-1.1
NJ2	Nanjing	38.38	345	eP	P	23 57 18.3	+2.4
NJ2	comp=Z,8.0nm,0.5s			pmax	pmax		
JHS	Saijyo	40.01	4	P	P	23 57 29.6	+0.2
JHS	comp=Z,22nm,1.5s			IAmb	IAmb	23 57 31.9	
JWT	Wachi	40.51	7	P	P	23 57 33.8	+0.3
JWT	comp=Z,9.1nm,0.7s			IAmb	IAmb	23 57 34.3	
MJAR	Matsushiro Arr comp=Z,4.7nm,0.7s,baz=184,slow=9.4,SNR=11	42.17	10	P	P	23 57 45.7	-1.2
MJAR	Matsushiro Arr	42.17	10	P	P	23 57 44.6	-2.3
MAT	Matsushiro	42.17	10	P	P	23 57 45.4	-1.5
KSRS	Korea Array comp=Z,1.2nm,0.7s,baz=161,slow=7.7,SNR=4.8	42.37	358	P	P	23 57 48.5	0.0
JSD	Sado	43.63	10	P	P	23 57 58.8	+0.2
JSD	comp=Z,7.2nm,0.8s			IAmb	IAmb	23 57 59.3	
JMM	Marumori	43.95	13	P	P	23 58 01.9	+0.7
JMM	comp=Z,17nm,0.9s			IAmb	IAmb	23 58 04.4	
HHC	Hu-ho-hao-te	48.68	342	eP	P	23 58 39.5	+1.4
HHC	comp=Z,8.0nm,1.3s			pmax	pmax		
HHC				pmax	pmax		
USRK	comp=Z,69nm,8.4s Ussuriysk Ar. comp=Z,3.3nm,0.6s,baz=201,slow=7.9,SNR=7.7	49.11	2	P	P	23 58 41.0	-0.1
USRK	Ussuriysk Ar.	49.11	2	P	P	23 58 40.9	-0.2
GTA	Gaotai	52.21	331	eP	P	23 59 10.3	+5.7
GTA	Gaotai	52.21	331	pP	pP	23 59 54.5	+6.4
GTA	comp=Z,3.0nm,0.9s			pmax	pmax		
KLR	Kul'dur comp=Z,1.4nm,0.7s,baz=194,slow=3.7,SNR=5.4	54.13	2	P	P	23 59 18.1	-0.2
WMQ	Urumqi	61.69	327	eP	P	00 00 13.5	+2.5
PEA0B	Petropavlovsk-	62.60	19	P	P	00 00 17.3	+0.6
PEA0B	comp=Z,10nm,0.9s			IAmb	IAmb	00 00 17.6	
PETK	Petropavlovsk- comp=Z,4.3nm,0.6s,baz=181,slow=5.8,SNR=8.5	62.60	19	P	P	00 00 17.3	+0.6
PETK	Petropavlovsk-	62.60	19	P	P	00 00 17.5	+0.8
MK31	Makanchi Array	66.53	326	P	P	00 00 42.2	-0.2
MKAR	Makanchi Array comp=Z,0.9nm,0.4s,baz=112,slow=8.2,SNR=20	66.53	326	P	P	00 00 42.2	-0.1
MKAR	Makanchi Array	66.53	326	P	P	00 00 41.6	-0.7
MAKZ	Makanchi	66.71	326	P	P	00 00 43.0	-0.4
MAKZ	comp=Z,3.6nm,1.3s			IAmb	IAmb	00 00 43.9	
KDJ	Kajisay	66.98	320	P	P	00 00 45.7	+0.2
ZALV	Zalesovo Beam comp=Z,1.2nm,0.6s,baz=123,slow=5.7,SNR=4.7	69.79	334	P	P	00 01 01.7	-0.7
ZALV	Zalesovo Beam	69.79	334	P	P	00 01 00.7	-1.6
KURBB	Kurchatov Arra comp=Z,1.7nm,0.7s,baz=129,slow=5.3,SNR=20	70.78	328	P	P	00 01 08.2	-0.3
KURK	Kurchatov	70.79	328	P	P	00 01 08.2	-0.3
MAW	Mawson comp=Z,1.5nm,0.5s,baz=75,slow=4.9,SNR=2.1	76.63	201	P	P	00 01 42.6	+0.5
MAW	Mawson	76.63	201	P	P	00 01 42.3	+0.1
ILAR	Eielson Array comp=Z,0.2nm,0.5s,baz=261,slow=4.7,SNR=4.2	91.73	25	P	P	00 02 57.2	-1.3
ILAR	Eielson Array	91.73	25	P	P	00 02 56.4	-2.0
BMAR	Burnt Mountain	92.99	23	P	P	00 03 04.6	+0.3
AC02	Maricunga	143.36	151	PKPdf	PKPbc	00 09 24.3	+0.8
GO02	Mina Guanaco	144.51	149		PKPdf	00 09 27.8	+0.1
PB14	IPOC Station P	144.52	147		PKPbc	00 09 27.5	+0.7

IDC ***28*** *23:54:22.3±1.8, 27.°96N×85.°26E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.5/46, mbtmp3.8/8, ML3.7/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/49, Error ellipse: s-maj=86.1km s-min=21.4km az=64.0*

ISC 28 23:54:25.3±1.8, 28.°0N±0.°3×85.°3E±0.°5, h18km, n8, σ0.31/8, mb3.7/7, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.89**	**354**	P		**Pn**	**23 58 45.3**	**-0.1**
	0.3nm,0.3s,baz=174,slow=11,SNR=18							
MKAR				LR		LR	00 07 49.5	
	comp=Z,20nm,20.1s,baz=218,slow=43							
KURBB	**Kurchatov Arra**	**23.16**	**349**	P		**P**	**23 59 31.1**	**+0.6**
	0.7nm,0.5s,baz=167,slow=10,SNR=13							
ZALV	**Zalesovo Beam**	**25.91**	**359**	P		**P**	**23 59 56.2**	**+0.2**
	0.8nm,0.4s,baz=186,slow=9.7,SNR=6.6							
NRIK	**Noril'sk**	**41.37**	**1**	P		**P**	**00 02 09.7**	**-0.3**
	1.6nm,0.5s,baz=162,slow=9.9,SNR=4.0							
FINES	**FINESS Array B**	**51.16**	**328**	P		**P**	**00 03 26.9**	**-0.1**
	1.4nm,0.8s,baz=131,slow=8.6,SNR=3.4							
ARCES	**ARCESS Array B**	**53.57**	**338**	P		**P**	**00 03 44.7**	**-0.1**
	2.4nm,0.9s,baz=104,slow=8.3,SNR=5.6							
WRA	**Warramunga Arr**	**67.23**	**130**	P		**P**	**00 05 18.9**	**+0.1**
	0.3nm,0.5s,baz=322,slow=6.5,SNR=1.7							
ASAR	**Alice Springs**	**69.53**	**133**	P		**P**	**00 05 33.2**	**0.0**
	0.3nm,0.6s,baz=306,slow=6.4,SNR=2.6							

BJI ***29*** *00:26:47.1±0.0, 25.°89N×128.°61E, h10km, mB4.9/59, mb4.8/71, Ms5.2/83, Ms7 5.1/75*

IDC ***29*** *00:26:49.6±0.5, 26.°03N×128.°35E, h0km, mb4.5/28, mb1 4.6/31, mb1mx4.5/43, mbtmp4.5/31, ML3.8/3, MS4.1/12, Ms1 4.1/12, ms1mx3.9/29, Error ellipse: s-maj=16.2km s-min=11.2km az=93.0*

MOS ***29*** *00:26:50.4±0.9, 26.°01N×128.°37E, h17km, mb5.1/62, MS4.8/15, Error ellipse: s-maj=7.0km s-min=4.3km az=113.9*

NEIC ***29*** *00:26:51.5±1.6, 25.°98N±0.°05×128.°40E±0.°09, h14km±4km, mb5.0/106, Error ellipse: s-maj=11.4km s-min=7.2km az=96.0*

NIED ***29*** *00:26:52.3, 26.°02N×128.°55E, h42km, MW5.0, Moment Tensor Solution. s2 Moment tensor: Scale 10^16^Nm; Mrr3.15; Mθθ-1.54; Mφφ-1.62; Mrθ1.44; Mθφ-2.30; Mφr0.87; Fault plane solution: M0 3.90000×10^16^ NP1:φs52.00000°, δ58.00000°, λ.99.00000°. NP2:φs215.00000°, δ33.00000°, λ.76.00000°.*

JMA ***29*** *00:26:52.3±0.3, 26.°01N×128.°55E, h42km±5km, M5.1 JMA Felt I J1.*

GCMT ***29*** *00:26:54.5±0.2, 25.°90N±0.°02×128.°54E±0.°02, h22km, MW5.0/120, Moment Tensor Solution. s64,c91; s120,c174; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr4.08±.15; Mθθ-2.30±.10; Mφφ-1.79±.10; Mrθ1.41±.16; Mθφ-1.48±.06; Mφr1.06±.16; Best double couple: M0 4.20100×10^16^ NP1:φs229.00000°, δ33.00000°, λ.88.00000°. NP2:φs51.00000°, δ57.00000°, λ.91.00000°. Principal axes: T 4.4690, Plg78.0000°, Azm325.0000°; N -0.5450, Plg1.0000°, Azm230.0000°; P -3.9340, Plg12.0000°, Azm140.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 00:26:52.4±0.6, 26.°03N±0.°03×128.°50E±0.°03, h20km±3km, n479, σ1.9/90/516, mb4.9/179, MS5.0/49, 33C-14D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.65**	**318**	P		**Pb**	**00 27 05.3**	**+0.2**
JNTH				S		**Sn**	**00 27 15.4**	**-0.8**
JJT3	**Tamagusuku3**	**0.66**	**280**	P		**Pn**	**00 27 06.1**	**-0.5**
JJT3				S		**Sb**	**00 27 15.0**	**+1.0**
JOW	**Kunigami**	**0.82**	**346**	Pn		**Pb**	**00 27 08.2**	**0.0**
	1μm,0.3s,baz=138,slow=21,SNR=5841							
JOW				Sn		**Sb**	**00 27 19.2**	**+0.4**
	3μm,0.3s,baz=138,slow=23,SNR=10							
JOW	**Kunigami**	**0.82**	**346**	P		**Pb**	**00 27 08.1**	**0.0**
JYRO	**Yoronjima**	**0.99**	**357**	P		**Pb**	**00 27 10.2**	**-0.7**
JYRO				S		**Sb**	**00 27 23.3**	**-0.3**
JIH	**Iheya**	**1.11**	**334**	P		**Pn**	**00 27 12.5**	**-0.4**
JIH				S		**Sn**	**00 27 28.4**	**+0.8**
JAGN	**Aguni-jima**	**1.26**	**296**	P		**Pn**	**00 27 14.8**	**-0.1**
JAGN				S		**Sb**	**00 27 32.4**	**+1.0**
JOKE	**Okinoerabujima**	**1.32**	**3**	P		**Pn**	**00 27 15.2**	**-0.7**
JOKE				*e*S		**Sn**	**00 27 32.0**	**-0.9**
JKE	**Kume jima 2**	**1.57**	**281**	P		**Pn**	**00 27 18.4**	**-0.8**
JKE				S		**Sn**	**00 27 37.2**	**-1.8**
JTK	**Tokunoshima**	**1.79**	**13**	P		**Pn**	**00 27 21.5**	**-0.8**
JTK				S		**Sn**	**00 27 43.1**	**-1.3**
JAMN	**Amaminishikomi**	**2.28**	**15**	P		**Pn**	**00 27 28.2**	**-0.8**
JMZ	**Minamidaito 2**	**2.46**	**94**	P		**Pn**	**00 27 28.6**	**-2.8**
JMZ				S		**Sn**	**00 27 55.9**	**-4.9**
JMZ	**Minamidaito 2**	**2.46**	**94**	Pn		**Pn**	**00 27 28.5**	**-2.8**
JKDJ	**Kitadaitoujima**	**2.52**	**91**	P		**Pn**	**00 27 29.6**	**-2.6**
JKDJ				S		**Sn**	**00 27 57.2**	**-5.1**
JAM	**Amami Oshima**	**2.56**	**22**	P		**Pn**	**00 27 31.9**	**-1.0**
JMJ2	**Miyako jima3**	**3.15**	**247**	P		**Pn**	**00 27 40.2**	**-0.7**
JTJ	**Tarama**	**3.71**	**249**	P		**Pn**	**00 27 47.2**	**-1.4**
YOJ	**Yonaguni jima**	**5.21**	**254**	P		**Pn**	**00 28 07.4**	**-1.9**
YOJ	**Yonaguni jima**	**5.21**	**254**			**Pn**	**00 28 07.4**	**-1.9**
JSU	**Suzuyama**	**5.72**	**17**	Pn		**Pn**	**00 28 15.3**	**-1.0**
NACB	**Ninganchiao**	**6.53**	**255**	Pn		**Pn**	**00 28 24.6**	**-2.8**
YHNB	**Yeheng**	**6.59**	**260**	Pn		**Pn**	**00 28 28.1**	**-0.2**
YULB	**Yu-li**	**7.06**	**250**	Pn		**Pn**	**00 28 30.7**	**-4.0**
SSLB	**Suanglung**	**7.21**	**254**	Pn		**Pn**	**00 28 34.1**	**-2.7**
JNU	**Nakatsue**	**7.36**	**16**	Pn		**Pn**	**00 28 39.5**	**+0.7**
	3.8nm,0.3s,baz=203,slow=10,SNR=28							
JNU				Sn		**Sn**	**00 29 59.9**	**-1.9**
	3.5nm,0.3s,baz=5.6,slow=11,SNR=1.0							
JNU				LR		LR	00 31 57.9	
	comp=Z,3μm,19.7s,baz=194,slow=42							
TWG	**Pinlang**		**7.49**	**246**	Pn	**Pn**	**00 28 36.1**	**-4.5**
TPUB	**Ta-pu**		**7.66**	**251**	Pn	**Pn**	**00 28 41.2**	**-1.7**
SSE	**Sheshan**		**8.17**	**310**	P	**Pn**	**00 28 49.8**	**-0.2**
SSE					pmax	pmax		
	comp=Z,18nm,0.8s							
SSE					pmax	pmax		
	comp=Z,220nm,11.9s							
SSE					LR	LR		
	comp=N,4μm,11.8s							
SSE					LR	LR		
	comp=E,5μm,11.7s							
JMN	**Monobe**		**8.97**	**30**	Pn	**Pn**	**00 29 00.6**	**-0.4**
QZH	**Quanzhou**		**9.02**	**265**	⇑*i*P	**Pn**	**00 29 00.0**	**-1.6**
QZH					S	**Sn**	**00 30 39.5**	**-3.1**
QZH					LR	LR		
	comp=N,4μm,15.1s							
QZH					LR	LR		
	comp=E,3μm,13.3s							
QZH					LR	LR		
	comp=Z,4μm,11.3s							
KNMB	**Chin-men Tao**		**9.29**	**263**	Pn	**Pn**	**00 29 02.4**	**-2.9**
JHS	**Saijyo**		**9.78**	**23**	Pn	**Pn**	**00 29 12.1**	**+0.1**
NJ2	**Nanjing**		**10.36**	**308**	*e*P	**Pn**	**00 29 18.8**	**-1.1**
NJ2					S	**Sn**	**00 31 15.3**	**0.0**
NJ2					pmax	pmax		
	comp=Z,410nm,6.2s							
NJ2					LR	LR		
	comp=N,8μm,13.3s							
NJ2					LR	LR		
	comp=E,11μm,12.8s							
NJ2					LR	LR		
	comp=Z,15μm,11.4s							
JWT	**Wachi**		**10.96**	**31**	Pn	**Pn**	**00 29 29.1**	**+0.9**
KSAR	**Wonju Array Be**		**11.39**	**358**	P	**Pn**	**00 29 36.6**	**+2.6**
KSAR	**Wonju Array Be**		**11.39**	**358**		**Pn**	**00 29 36.5**	**+2.6**
KSRS	**Korea Array**		**11.40**	**358**	Pn	**Pn**	**00 29 35.1**	**+1.0**
	0.3nm,0.3s,baz=176,slow=14,SNR=14							
KSRS					LR	LR	00 34 10.4	
	comp=Z,2μm,19.9s,baz=177,slow=39							
JHJ	**Hachijo jima 2**		**12.09**	**52**	LR	LR	00 32 55.7	
	comp=Z,386nm,20.7s,baz=272,slow=30							
JGF	**Kuroka**		**12.19**	**36**	Pn	**Pn**	**00 29 49.1**	**+4.1**
JCJ	**Chichijima**		**12.29**	**82**	LR	LR	00 33 48.4	
	comp=Z,518nm,20.8s,baz=124,slow=34							
WHN	**Wuhan**		**13.26**	**293**	⇓P	**Pn**	**00 30 01.0**	**+1.5**
WHN					pmax	pmax		
	comp=Z,710nm,11.0s							
WHN					LR	LR		
	comp=N,8μm,17.1s							
WHN					LR	LR		
	comp=E,15μm,13.7s							
WHN					LR	LR		
	comp=Z,17μm,14.3s							
MAJO	**Matsushiro**		**13.36**	**36**	*i*P	**Pn**	**00 30 02.2**	**+1.3**
MAT	**Matsushiro**		**13.36**	**36**	P	**Pn**	**00 30 02.9**	**+2.0**
MAT					S	**Sn**	**00 32 33.6**	**+4.8**
MJAR	**Matsushiro Arr**		**13.36**	**36**	Pn	**Pn**	**00 30 04.2**	**+3.3**
	0.1nm,0.3s,baz=244,slow=13,SNR=2.2							
TIA	**Tai'an**		**14.06**	**319**	P	**P**	**00 30 15.8**	**-2.4**
TIA					S	**S**	**00 33 03.0**	**-4.1**
TIA					pmax	pmax		
	comp=Z,6.0nm,0.9s							
TIA					pmax	pmax		
	comp=Z,450nm,7.9s							
TIA					LR	LR		
	comp=N,4μm,11.4s							
TIA					LR	LR		
	comp=E,4μm,12.1s							
TIA					LR	LR		
	comp=Z,7μm,14.2s							
DL2	**Dalian**		**14.08**	**337**	⇑P	**Pn**	**00 30 12.0**	**+1.2**
DL2					S	**Sn**	**00 32 50.0**	**+3.6**
DL2					pmax	pmax		
	comp=Z,35nm,0.9s							
DL2					pmax	pmax		
	comp=Z,640nm,7.2s							
DL2					LR	LR		
	comp=Z,4μm,12.8s							
DL2					LR	LR		
	comp=Z,1μm,11.0s							
DL2					LR	LR		
	comp=Z,4μm,13.3s							
SNY	**Shenyang**		**16.27**	**347**	⇓P	**Pn**	**00 30 38.8**	**-1.0**
SNY					S	**S**	**00 33 48.8**	**-3.4**
SNY					pmax	pmax		
	comp=Z,6.0nm,0.4s							
SNY					pmax	pmax		
	comp=Z,540nm,11.8s							
SNY					LR	LR		
	comp=Z,3μm,14.1s							
SNY					LR	LR		
	comp=Z,2μm,12.0s							
SNY					LR	LR		
	comp=Z,5μm,13.9s							
BJT	**Baijiatuau**		**17.34**	**327**	P	**P**	**00 30 55.7**	**+1.1**
BJT					pmax	pmax		
	comp=Z,18nm,0.8s							
BJT	**Baijiatuau**		**17.34**	**327**		**P**	**00 30 55.7**	**+1.1**
BJI	**Beijing**		**17.35**	**327**	P	**P**	**00 30 55.8**	**+1.1**
BJI					S	**S**	**00 34 14.5**	**+0.2**
BJI					pmax	pmax		
	comp=Z,23nm,0.7s							
BJI					pmax	pmax		
	comp=Z,790nm,11.5s							
BJI					LR	LR		
	comp=Z,7μm,13.1s							
BJI					LR	LR		
	comp=Z,3μm,12.2s							
BJI					LR	LR		
	comp=Z,2μm,13.9s							
CN2	**Changchun**		**17.90**	**353**	*e*P	**Pn**	**00 31 00.3**	**+0.1**
CN2					S	**Sn**	**00 34 15.0**	**-4.2**
CN2					sS	sS	00 34 30.3	-3.2
CN2					pmax	pmax		
	comp=Z,10.0nm,0.7s							
CN2					pmax	pmax		
	comp=Z,400nm,11.7s							
CN2					LR	LR		
	comp=Z,5μm,17.0s							
CN2					LR	LR		
	comp=Z,3μm,17.0s							
CN2					LR	LR		
	comp=Z,6μm,13.0s							
TIY	**Taiyuan**		**17.91**	**314**	*e*P	**P**	**00 31 01.3**	**+0.3**
TIY					S	**S**	**00 34 24.5**	**-1.4**
TIY					pmax	pmax		
	comp=Z,490nm,4.4s							
TIY					LR	LR		
	comp=Z,5μm,11.4s							
TIY					LR	LR		
	comp=Z,2μm,11.3s							
TIY					LR	LR		
	comp=Z,5μm,12.9s							
USA0B	**Ussuriysk Arra**		**18.35**	**8**	P	**Pn**	**00 31 06.7**	**+1.1**
USA0B					pmax	pmax		
	comp=Z,23nm,1.3s							
USA0B	**Ussuriysk Arra**		**18.35**	**8**	P	**Pn**	**00 31 06.7**	**+1.1**
USRK	**Ussuriysk Ar.**		**18.35**	**8**	P	**Pn**	**00 31 07.2**	**+1.6**
	baz=187,slow=9.9,SNR=20							
USRK	**Ussuriysk Ar.**		**18.35**	**8**	P	**Pn**	**00 31 06.9**	**+1.3**
USRK	**Ussuriysk Ar.**		**18.35**	**8**	P	**Pn**	**00 31 06.9**	**+1.3**
QIZ	**Qiongzhong**		**18.58**	**252**	P	**Pn**	**00 31 09.0**	**+0.3**
QIZ					S	**S**	**00 34 38.3**	**-1.3**
QIZ					pmax	pmax		
	comp=Z,19nm,1.9s							
QIZ					pmax	pmax		
	comp=Z,470nm,7.7s							
QIZ					LR	LR		
	comp=Z,3μm,20.1s							
QIZ					LR	LR		
	comp=Z,1μm,21.6s							
QIZ					LR	LR		
	comp=Z,2μm,19.8s							
XAN	**Xi'an**		**18.72**	**300**	P	**P**	**00 31 09.0**	**-0.9**
XAN					pP	pP	00 31 12.8	-2.2
XAN					sP	sP	00 31 15.5	-1.6
XAN					S	**Sn**	**00 34 39.5**	**+0.3**
XAN					sS	S	00 34 45.8	+3.5
XAN					SS	**SnSn**	**00 35 05.0**	**+12**
XAN					pmax	pmax		
	comp=Z,30nm,0.7s							
XAN					pmax	pmax		
	comp=Z,550nm,7.9s							
XAN					LR	LR		
	comp=Z,4μm,12.2s							
XAN					LR	LR		
	comp=Z,6μm,13.3s							
XAN					LR	LR		
	comp=Z,6μm,14.4s							
GYA	**Guiyang**		**19.60**	**276**	⇑P	**P**	**00 31 19.5**	**-0.1**
GYA					pP	sP	00 31 26.5	-0.6
GYA					S	**Sn**	**00 35 00.5**	**-0.1**
GYA					pmax	pmax		
	comp=Z,61nm,7.4s							
GYA					LR	LR		
	comp=Z,380nm,16.3s							
GYA					LR	LR		
	comp=Z,400nm,10.4s							
GYA					LR	LR		
	comp=Z,620nm,12.6s							
GUMO	**Guam**		**19.73**	**126**	LR	LR	00 39 41.7	
	comp=Z,499nm,18.0s,baz=289,slow=39							
ERM	**Erimo**		**19.99**	**33**	P	**Pn**	**00 31 26.0**	**+0.6**
ERM					pmax	pmax		
	comp=Z,24nm,0.8s							
ERM	**Erimo**		**19.99**	**33**	P	**Pn**	**00 31 26.0**	**+0.6**
HHC	**Hu-ho-hao-te**		**20.40**	**321**	*e*P	**P**	**00 31 28.0**	**-0.2**
HHC					pP	pwP	00 31 36.8	+1.1
HHC					PP	**PnPn**	**00 31 48.0**	**+2.5**
HHC					S	Sn	00 35 21.5	+1.8
HHC					pmax	pmax		
	comp=Z,21nm,1.0s							
HHC					pmax	pmax		
	comp=Z,510nm,6.3s							
HHC					LR	LR		
	comp=Z,5μm,9.4s							
HHC					LR	LR		
	comp=Z,4μm,10.6s							
HHC					LR	LR		
	comp=Z,6μm,9.4s							
BTO	**Baotou**		**21.15**	**318**	*e*P	**P**	**00 31 36.3**	**0.0**
BTO					LR	LR		
	comp=Z,16μm,12.7s							
BTO					LR	LR		
	comp=Z,10μm,14.1s							
ASAJ	**Asahikawa**		**21.36**	**29**	P	**P**	**00 31 38.5**	**+0.1**
	comp=Z,6.3nm,0.6s,baz=310,slow=29,SNR=2.7							
CD2	**Chengdu**		**22.27**	**288**	P	**P**	**00 31 46.5**	**-1.9**
CD2					pP	pP	00 31 50.3	-3.2
CD2					S	**S**	**00 35 50.0**	**-2.7**
CD2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CD2					pmax	pmax		
	comp=Z,310nm,6.3s							
CD2					LR	LR		
	comp=Z,4μm,12.7s							
CD2					LR	LR		
	comp=Z,9μm,16.7s							
CD2					LR	LR		
	comp=Z,9μm,15.7s							
YUK	**Yuzh-Kuril'sk**		**22.82**	**34**	*e*P	P	00 31 46.9	-7.2
YUK					*e*S	**S**	**00 35 58.1**	**-4.2**
YUK					MLR	MLR		
	comp=Z,535nm,19.0s							
YUK					MLR	MLR		
	comp=E,212nm,9.0s							
YUK					MLR	MLR		
	comp=N,621nm,16.0s							
KMI	**Kunming**		**23.25**	**273**	⇑P	**P**	**00 31 58.8**	**-0.1**
KMI					pP	pP	00 32 01.5	-2.6
KMI					sP	sP	00 32 03.3	-3.0
KMI					S	**S**	**00 36 07.5**	**-2.9**
KMI					sS	pS	00 36 11.8	-4.5
KMI					pmax	pmax		
	comp=N,24nm,0.7s							
KMI					pmax	pmax		
	comp=N,300nm,6.9s							
KMI					LR	LR		
	comp=N,2μm,13.4s							
KMI					LR	LR		
	comp=N,2μm,14.7s							
KMI					LR	LR		
	comp=N,2μm,17.7s							
KLR	**Kul'dur**		**23.30**	**5**	P	**P**	**00 31 57.7**	**-1.2**
	comp=N,3.4nm,0.6s,baz=207,slow=5.6,SNR=16							
KLR	**Kul'dur**		**23.30**	**5**	*ce*P	**P**	**00 31 57.5**	**-1.4**
KLR					pmax	pmax		
	comp=Z,3.0nm,0.6s							
LZH	**Lanzhou**		**23.32**	**301**	*e*P	**P**	**00 31 58.3**	**-1.2**
LZH					pP	pP	00 32 01.5	-3.3
LZH					sP	sP	00 32 04.8	-2.1
LZH					S	**S**	**00 36 09.3**	**-2.0**
LZH					sS	pS	00 36 15.0	-2.3
LZH					pmax	pmax		
	comp=Z,30nm,1.3s							
LZH					pmax	pmax		
	comp=Z,230nm,6.2s							
LZH					LR	LR		
	comp=Z,2μm,14.1s							
LZH					LR	LR		
	comp=Z,3μm,13.0s							
LZH					LR	LR		
	comp=Z,2μm,13.6s							
YSS	**Yuzh-Sakhalins**		**23.74**	**25**	*ce*P	**P**	**00 32 02.5**	**-0.8**
YSS					*e*'SP	**pP**	**00 32 08.3**	**-0.2**
YSS					*e*PPP	PPP	00 32 37.1	
YSS					*e*S	**S**	**00 36 14.0**	**-3.5**
YSS					pmax	pmax		
	comp=Z,600nm,3.0s							
YSS					pmax	pmax		
	comp=N,300nm,3.2s							
YSS					pmax	pmax		
	comp=E,300nm,3.7s							
YSS					pmax	pmax		
	comp=Z,80nm,0.8s							
YSS					MLR	MLR		
	comp=Z,900nm,17.0s							
YSS					MLR	MLR		
	comp=N,700nm,20.0s							
YSS	**Yuzh-Sakhalins**		**23.74**	**25**	P	**P**	**00 32 03.8**	**+0.5**
UBPT	**Khong Chiam**		**24.02**	**248**	P	**P**	**00 32 07.2**	**+1.0**
UBPT					IAmb	IAmb	00 32 09.3	
	comp=Z,87nm,1.9s							
KUR	**Kuril'sk**		**24.68**	**34**	*e*P	**P**	**00 32 14.2**	**+2.2**
KUR					pmax	pmax		
	comp=Z,127nm,1.4s							
KUR					pmax	pmax		
	comp=Z,413nm,2.3s							
KUR					MLR	MLR		
	comp=Z,389nm,15.0s							
KUR					MLR	MLR		
	comp=E,206nm,11.0s							
TNTI	**Ternate**		**25.14**	**183**	P	**P**	**00 32 19.4**	**+3.1**
GRNR	**Gornyy**		**25.44**	**12**	⇑*i*P	**P**	**00 32 19.6**	**+0.8**
GRNR					*e*S	**S**	**00 36 50.3**	**+5.7**
GRNR					pmax	pmax		
	comp=N,6.0nm,0.8s							
GRNR					pmax	pmax		
	comp=Z,10.0nm,0.6s							
GRNR					smax	smax		
	comp=N,3.0nm,0.9s							
GRNR					MLR	MLR		
	comp=E,400nm,18.0s							
GRNR					MLR	MLR		
	comp=N,930nm,16.0s							
GRNR					MLR	MLR		
	comp=Z,1μm,16.0s							
CRAI	**Chiangrai**		**26.48**	**263**	P	**P**	**00 32 31.1**	**+2.5**
LBMI	**Labuha**		**26.53**	**182**	P	**P**	**00 32 28.9**	**-0.1**
	comp=Z,2μmcomp=Z,27nm,0.8s							
SIJI	**Sorong**		**26.88**	**174**	LR	LR	00 44 48.9	
	comp=Z,258nm,18.1s,baz=44,slow=40							
GTA	**Gaotai**		**27.45**	**306**	⇑P	**P**	**00 32 35.8**	**-1.4**
GTA					pP	pP	00 32 41.0	-1.6
GTA					sP	sP	00 32 43.8	-1.0
GTA					PP	**PnPn**	**00 33 28.5**	**+6.6**
GTA					S	**S**	**00 37 15.3**	**-1.5**
GTA					sS	pS	00 37 21.8	-1.2
GTA					pmax	pmax		
	comp=Z,35nm,1.0s							
GTA					pmax	pmax		
	comp=Z,150nm,6.4s							
GTA					LR	LR		
	comp=Z,2μm,12.0s							
GTA					LR	LR		
	comp=Z,2μm,13.1s							
GTA					LR	LR		
	comp=Z,3μm,13.1s							
ULN	**Ulaanbaatar**		**27.55**	**328**	*ce*P	**P**	**00 32 36.3**	**-1.8**
ULN					pmax	pmax		
	comp=Z,18nm,1.0s							
ULN	**Ulaanbaatar**		**27.55**	**328**	P	**P**	**00 32 38.1**	**0.0**
ULN					IAmb	IAmb	00 32 42.5	
	comp=Z,79nm,1.9s							
ZEA	**Zeya**		**27.69**	**358**	*e*P	**P**	**00 32 36.8**	**-2.2**
ZEA					*e*		00 33 38.6	
ZEA					*e*S	**S**	**00 37 11.9**	**-8.2**
ZEA					*e*SS	**SS**	**00 39 03.9**	**-13**
ZEA					pmax	pmax		
	comp=Z,10.0nm,0.4s							
ZEA					pmax	pmax		
	comp=Z,100nm,10.7s							
ZEA					smax	smax		
	comp=N,400nm,16.7s							
ZEA					MLR	MLR		
	comp=E,600nm,11.0s							
ZEA					MLR	MLR		
	comp=N,1μm,12.0s							
ZEA					MLR	MLR		
	comp=Z,900nm,13.0s							
SONM	**Songino Array**		**27.85**	**327**	P	**P**	**00 32 40.4**	**-0.3**
	comp=Z,13nm,0.8s,baz=140,slow=11,SNR=18							
SONM					LR	LR	00 45 02.2	
	comp=Z,1μm,20.0s,baz=132,slow=39							
SONM	**Songino Array**		**27.85**	**327**	P	**P**	**00 32 41.1**	**+0.3**
SONM					pmax	pmax		
	comp=Z,9.0nm,0.9s							
SONM	**Songino Array**		**27.85**	**327**	P	**P**	**00 32 41.1**	**+0.3**
CM34	**Chiang Mai Arr**		**28.01**	**261**	P	**P**	**00 32 43.0**	**+0.7**
SANI	**Sanana**		**28.02**	**185**	P	**P**	**00 32 43.4**	**+1.1**
	comp=Z,21nm,0.8s							
CM35	**Chiang Mai Arr**		**28.07**	**261**	P	**P**	**00 32 44.0**	**+1.2**
CM36	**Chiang Mai Arr**		**28.18**	**261**	P	**P**	**00 32 45.0**	**+1.2**
CM33	**Chiang Mai Arr**		**28.21**	**261**	P	**P**	**00 32 44.0**	**-0.1**
CMMT	**Chiang Mai**		**28.21**	**261**	P	**P**	**00 32 44.2**	**+0.2**
	comp=Z,0.0nmcomp=Z,199nmcomp=Z,8.0nm,0.8s							
CHTO	**Chiang Mai**		**28.21**	**261**	P	**P**	**00 32 43.9**	**-0.2**
CHTO					pmax	pmax		
	comp=Z,11nm,0.8s							
CHTO	**Chiang Mai**		**28.21**	**261**	P	**P**	**00 32 43.9**	**-0.2**
CM09	**Chiang Mai Arr**		**28.30**	**261**	P	**P**	**00 32 47.9**	**+3.0**
	comp=Z,0.0nmcomp=Z,69nmcomp=Z,9.5nm,0.7s							
CM04	**Chiang Mai Arr**		**28.32**	**260**	P	**P**	**00 32 48.0**	**+2.9**
	comp=Z,0.0nmcomp=Z,70nmcomp=Z,7.0nm,0.9s							
CM01	**Chiang Mai Arr**		**28.33**	**261**	P	P	00 32 56.0	+11
CMAR	**Chiang Mai Arr**		**28.34**	**261**	P	**P**	**00 32 44.8**	**-0.4**
	comp=Z,5.2nm,0.8s,baz=58,slow=7.7,SNR=17							
CMAR	**Chi

CM32 Chiang Mai Arr 28.35 261 P **P** **00 32 48.0 +2.7**
CM05 Chiang Mai Arr 28.35 261 P **P** **00 32 49.0 +3.6**
comp=Z,0.0nmcomp=Z,54nmcomp=Z,5.4nm,0.8s
CM13 Chiang Mai Arr 28.38 261 P **P** **00 32 49.2 +3.6**
comp=Z,0.0nmcomp=Z,66nmcomp=Z,6.7nm,0.8s
FAKI Fak Fak 29.01 172 P **P** **00 32 53.9 +2.8**
comp=Z,21nm,1.1s
JAY Jayapura 30.74 156 LR LR 00 43 36.7
comp=Z,504nm,20.3s,baz=330,slow=33
TLY Talaya 31.81 330 *i* P **P** **00 33 14.7 -0.9**
SKR Severo-Kuril's 32.44 33 *e*P P 00 33 09.3 -12
SKR *e*S **S** **00 38 31.4 -3.2**
SKR *e*SSS SSS 00 40 55.3
SKR pmax pmax
comp=Z,100nm,2.7s
SKR pmax pmax
comp=Z,29nm,1.3s
SKR pmax pmax
comp=Z,100nm,3.1s
SKR MLR MLR
comp=Z,200nm,14.0s
SKR MLR MLR
comp=Z,300nm,15.0s
SHL Shillong 32.91 277 P **P** **00 33 25.0 -0.7**
SHL pmax pmax
comp=Z,26nm,1.1s
SHL Shillong 32.91 277 P **P** **00 33 25.0 -0.7**
SHL IAmb IAmb 00 33 27.2
comp=Z,26nm,1.1s
PEA0B Petropavlovsk- 34.74 31 P **P** **00 33 42.3 +1.2**
PEA0B pmax pmax
comp=Z,21nm,1.1s
PEA0B Petropavlovsk- 34.74 31 P **P** **00 33 42.3 +1.2**
PEA0B IAmb IAmb 00 34 08.9
comp=Z,21nm,1.1s
PETK Petropavlovsk- 34.74 31 P **P** **00 33 43.6 +2.5**
comp=Z,1.6nm,0.5s,baz=221,slow=8.9,SNR=6.0
PETK LR LR 00 48 56.7
comp=Z,285nm,18.6s,baz=229,slow=38
PETK Petropavlovsk- 34.74 31 P **P** **00 33 42.1 +1.0**
PETK Petropavlovsk- 34.74 31 P **P** **00 33 42.1 +1.0**
PET Petropavlovsk 35.13 32 *e*P **P** **00 33 45.5 +1.0**
PET *e* 00 35 04.1
PET *e*S **S** **00 39 16.0 -0.2**
PET pmax pmax
comp=Z,100nm,13.8s
PET pmax pmax
comp=Z,38nm,1.3s
PET MLR MLR
comp=Z,600nm,16.0s
H11N1 WAKE ISLAND Hy 35.83 92 T T 01 12 13.7
baz=299
H11N2 WAKE ISLAND Hy 35.83 92 T T 01 12 30.3
baz=299
H11N3 WAKE ISLAND Hy 35.85 92 T T 01 12 20.8
baz=299
YAK Yakutsk 36.00 1 *e*P **P** **00 33 51.6 -0.2**
YAK *e**PP **sP** **00 33 58.5 -0.8**
YAK *e*S **S** **00 39 29.7 +0.4**
YAK *e**SS **sS** **00 39 39.1 +1.0**
YAK *e*SS **SnSn** **00 41 53.6 -0.4**
YAK *e*SSS SSS 00 42 13.7
YAK pmax pmax
comp=Z,15nm,0.8s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=Z,47nm,1.0s
YAK pmax pmax
comp=N,30nm,1.2s
YAK smax smax
comp=E,73nm,3.0s
YAK smax smax
comp=N,55nm,3.2s
YAK MLR MLR
comp=Z,718nm,17.0s
YAK MLR MLR
comp=N,422nm,17.0s
YAK Yakutsk 36.00 1 P **P** **00 33 51.3 -0.5**
H11S3 WAKE ISLAND Hy 36.02 94 T T 01 12 39.1
baz=295
H11S1 WAKE ISLAND Hy 36.03 94 T T 01 12 33.1
baz=295
H11S2 WAKE ISLAND Hy 36.04 94 T T 01 12 36.1
baz=295
MA2 Magadan 36.92 19 P **P** **00 34 00.8 +1.1**
comp=N,4.4nm,0.4s,baz=200,slow=13,SNR=6.0
MA2 Magadan 36.92 19*ce*P **P** **00 34 01.9 +2.2**
MA2 pmax pmax
comp=Z,8.0nm,1.0s
MA2 Magadan 36.92 19 P **P** **00 34 00.6 +0.9**
WMQ Urumqi 37.43 309 *e*P **P** **00 34 05.0 +0.6**
WMQ pP pP 00 34 08.3 -1.5
WMQ sP pwP 00 34 12.5 -0.3
WMQ pmax pmax
comp=Z,34nm,0.9s
WMQ pmax pmax
comp=Z,220nm,6.1s
WMQ LR LR
comp=Z,2μm,12.5s
WMQ LR LR
comp=Z,3μm,13.9s
WMQ LR LR
comp=Z,2μm,13.9s
LEM Lembang 38.45 215 LR LR 00 51 33.5
comp=Z,155nm,20.7s,baz=30,slow=39
MTN Manton Dam 38.73 176 P **P** **00 34 15.1 -0.2**
MTN IAmb IAmb 00 34 19.9
comp=Z,18nm,0.9s
DGZ Jazzator, Alta 39.43 318 *i* P **P** **00 34 21.5 +0.3**
DGZ pmax pmax
comp=Z,2.0nm,0.6s
PMG Port Moresby 39.62 150 LR LR 00 48 56.4
comp=Z,432nm,20.7s,baz=304,slow=33
SEY Seymchan 40.14 17 P **P** **00 34 27.4 +0.7**
comp=Z,3.6nm,0.5s,baz=187,slow=3.8,SNR=14
SEY Seymchan 40.14 17 *i* P **P** **00 34 27.2 +0.5**
ZSN Zaisan 40.32 314 *e*P **P** **00 34 27.7 -0.8**
baz=314
ZSN Zaisan 40.32 314 *e*P **P** **00 34 27.6 -0.8**
KNRA Kununurra 41.46 180 P **P** **00 34 37.6 -0.4**
KNRA IAmb IAmb 00 34 52.1
comp=Z,19nm,0.7s
MK31 Makanchi Array 41.85 312 *i* P **P** **00 34 40.5 -0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MK31 Makanchi Array 41.85 312 P **P** **00 34 40.3 -0.7**
MKAR Makanchi Array 41.85 312 P **P** **00 34 40.3 -0.8**
comp=Z,3.9nm,0.5s,baz=98,slow=9.9,SNR=37
MKAR Makanchi Array 41.85 312 P **P** **00 34 39.8 -1.3**
MAKZ Makanchi 42.06 312 P **P** **00 34 42.2 -0.6**
MAKZ pmax pmax
comp=Z,28nm,1.3s
MAKZ Makanchi 42.06 312 P **P** **00 34 42.1 -0.6**
MAKZ IAmb IAmb 00 34 44.8
comp=Z,28nm,1.3s
ZAA0 Zalesovo Array 42.55 323 P **P** **00 34 45.8 -0.9**
ZALV Zalesovo Beam 42.55 323 P **P** **00 34 45.7 -0.9**
comp=Z,3.4nm,0.5s,baz=114,slow=8.7,SNR=19
ZALV Zalesovo Beam 42.55 323 P **P** **00 34 44.9 -1.8**
ZALV Zalesovo Beam 42.55 323 P **P** **00 34 44.9 -1.8**
SHLS Shalkode 43.19 306 *e*P **P** **00 34 48.6 -3.6**
baz=306
SHLS Shalkode 43.19 306 *e*P **P** **00 34 48.5 -3.6**
PDGK Podgornoye 43.19 306 P **P** **00 34 51.0 -1.2**
UZB Uzynbulak 43.51 306 *e*P **P** **00 34 53.5 -1.3**
comp=Z,14nm,1.1s,baz=306
UZB Uzynbulak 43.51 306 *e*P **P** **00 34 53.5 -1.3**
UZB pmax pmax
comp=Z,14nm,1.1s
KPKS Kokpek 43.79 307 *e*P **P** **00 34 55.8 -1.2**
comp=Z,6.3nm,0.7s,baz=306
KPKS Kokpek 43.79 307 *e*P **P** **00 34 55.8 -1.2**
KPKS pmax pmax
comp=Z,6.0nm,0.7s
PRZ Przheval'sk 43.90 305 P **P** **00 34 57.9 0.0**
PRZ pmax pmax
comp=Z,58nm,1.6s
PRZ Przheval'sk 43.90 305 P **P** **00 34 57.9 0.0**
PRZ IAmb IAmb 00 35 09.9
comp=Z,58nm,1.6s
SATY Saty 43.95 306 *e*P **P** **00 34 57.0 -1.4**
comp=Z,14nm,1.1s,baz=306
SATY Saty 43.95 306 *e*P **P** **00 34 56.9 -1.4**
SATY pmax pmax
comp=Z,14nm,1.1s

FITZ Fitzroy Crossi 43.95 184 P **P** **00 34 58.4 +0.1**
comp=Z,6.1nm,0.9s,baz=29,slow=6.5,SNR=5.6
FITZ Fitzroy Crossi 43.95 184 P **P** **00 34 58.6 +0.3**
SEM Semipalatinsk 44.05 317 *e*P **P** **00 34 58.0 -1.1**
comp=Z,9.9nm,1.1s,baz=317
SEM LR LR 00 53 54.4
comp=Z,1μm,13.4s,baz=317
SEM Semipalatinsk 44.05 317 *e*P **P** **00 34 58.0 -1.1**
SEM pmax pmax
comp=Z,10.0nm,1.1s
SEM MLR MLR
comp=Z,1μm,13.0s
TDK Taldyqorghan 44.19 309 *e*P **P** **00 34 59.4 -0.7**
comp=Z,9.6nm,0.7s,baz=309
TDK LR LR 00 54 17.0
comp=Z,639nm,13.3s,baz=309
TDK Taldyqorghan 44.19 309 *e*P **P** **00 34 59.3 -0.7**
TDK pmax pmax
comp=Z,10.0nm,0.7s
TDK MLR MLR
comp=Z,639nm,13.0s
KDJ Kajisay 44.77 304 P **P** **00 35 04.8 -0.1**
KDJ pmax pmax
comp=Z,15nm,0.9s
KDJ Kajisay 44.77 304 P **P** **00 35 04.8 -0.1**
KDJ IAmb IAmb 00 35 07.7
comp=Z,15nm,0.9s
MDOK Medeo 44.95 306 *e*P **P** **00 35 05.4 -1.0**
baz=306
MDOK LR LR 00 55 02.2
comp=Z,657nm,14.2s,baz=306
MDOK Medeo 44.95 306 *e*P **P** **00 35 05.3 -1.0**
MDOK MLR MLR
comp=Z,657nm,14.0s
TNSS Tian-Shan 45.01 306 *e*P **P** **00 35 06.3 -0.8**
baz=306
TNSS Tian-Shan 45.01 306 *e*P **P** **00 35 06.3 -0.8**
AAA Alma-Ata 45.05 306 *e*P **P** **00 35 06.9 -0.2**
baz=306
AAA Alma-Ata 45.05 306 *e*P **P** **00 35 06.8 -0.2**
KURK Kurchatov 45.13 317 P **P** **00 35 07.2 -0.2**
KURK Kurchatov 45.13 317 P **P** **00 35 07.2 -0.2**
KURBB Kurchatov Arra 45.16 317 P **P** **00 35 07.2 -0.5**
comp=Z,4.9nm,0.5s,baz=103,slow=8.3,SNR=39
KURBB Kurchatov Arra 45.16 317 P **P** **00 35 07.0 -0.7**
KSH Kashi 45.57 301 P **P** **00 35 14.3 +3.0**
KSH sP pwP 00 35 23.5 +3.5
KSH S **S** **00 41 56.3 +3.6**
KSH SS **SS** **00 45 12.5 -4.0**
KSH pmax pmax
comp=Z,8.0nm,1.1s
KSH pmax pmax
comp=Z,220nm,4.5s
KSH LR LR
comp=Z,1μm,10.2s
KSH LR LR
comp=Z,1μm,9.7s
KSH LR LR
comp=Z,1μm,9.4s
WB0 Warramunga Arr 45.88 172 P **P** **00 35 12.6 -1.1**
WB0 IAmb IAmb 00 35 18.7
comp=Z,9.6nm,0.8s
TKM2 Tokmak 2 45.99 305 P **P** **00 35 13.7 -0.9**
WRAB Tennant Creek 46.04 172 *i* P **P** **00 35 13.9 -1.0**
WRAB pmax pmax
comp=Z,29nm,2.1s
WRA Warramunga Arr 46.05 172 P **P** **00 35 15.0 +0.1**
comp=Z,7.0nm,0.7s,baz=353,slow=8.4,SNR=43
WRA Warramunga Arr 46.05 172 P **P** **00 35 13.6 -1.4**
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 46.05 172 P **P** **00 35 13.6 -1.4**
WB2 Warramunga Arr 46.05 172 P **P** **00 35 14.3 -0.7**
WB2 IAmb IAmb 00 35 20.1
comp=Z,12nm,0.8s
WR0 Warramunga Arr 46.09 172 P **P** **00 35 14.0 -1.3**
FRU1 Bishkek 46.69 305 P **P** **00 35 20.7 +0.7**
FRU1 pmax pmax
comp=Z,12nm,0.6s
FRU1 Bishkek 46.69 305 P **P** **00 35 20.7 +0.7**
FRU1 IAmb IAmb 00 35 22.2
comp=Z,12nm,0.6s
SGDS Sogindy 46.73 306 *e*P **P** **00 35 19.8 -0.5**
baz=306
SGDS Sogindy 46.73 306 *e*P **P** **00 35 19.8 -0.5**
AAK Ala-Archa 46.79 305 *i* P **P** **00 35 21.0 +0.2**
AAK pmax pmax
comp=Z,5.0nm,0.4s
AAK Ala-Archa 46.79 305 P **P** **00 35 20.7 -0.2**
BTLS Baital 47.26 308 *e*P **P** **00 35 23.6 -0.7**
baz=308
BTLS Baital 47.26 308 *e*P **P** **00 35 23.6 -0.7**
BILL Bilibino 47.78 18 *i* P **P** **00 35 29.0 +1.0**
BILL *i* *PP **pwP** **00 35 41.1 +4.4**
BILL *i* 00 36 56.1
BILL *i* S **S** **00 42 25.4 +2.1**
BILL pmax pmax
comp=Z,11nm,0.9s
BILL MLR MLR
comp=Z,475nm,16.0s
BILL Bilibino 47.78 18 P **P** **00 35 28.5 +0.5**
BILL IAmb IAmb 00 35 54.4
comp=Z,17nm,1.1s
ARSB Arslanbob 47.88 303 P **P** **00 35 29.3 0.0**
ARSB pmax pmax
comp=Z,8.0nm,1.0s
ARSB Arslanbob 47.88 303 P **P** **00 35 29.3 0.0**
CTAO Charters Tower 48.98 158 P **P** **00 35 39.0 +1.3**
CTAO pmax pmax
comp=Z,50nm,1.9s
CTAO Charters Tower 48.98 158 P **P** **00 35 39.0 +1.3**
NRIK Noril'sk 49.52 342 P **P** **00 35 41.1 -0.2**
comp=Z,3.4nm,0.8s,baz=105,slow=7.5,SNR=8.1
NRIK Noril'sk 49.52 342*ce*P **P** **00 35 39.7 -1.6**
NRIK pmax pmax
comp=Z,4.0nm,1.0s
NRIK Noril'sk 49.52 342 P **P** **00 35 40.5 -0.8**
AS31 Alice Springs 49.68 174 P **P** **00 35 43.8 +0.7**
ASAR Alice Springs 49.68 174 P **P** **00 35 43.6 +0.5**
comp=Z,4.2nm,0.7s,baz=2,slow=9.3,SNR=37
KK31 Karatay Array 49.73 306 P **P** **00 35 43.9 +0.6**
KK31 pmax pmax
comp=Z,69nm,2.0s
KK31 Karatay Array 49.73 306 P **P** **00 35 43.9 +0.6**
KKAR Karatay Array 49.73 306 P **P** **00 35 43.8 +0.5**
KKAR Karatay Array 49.73 306 P **P** **00 35 43.8 +0.5**
GAR Garm 49.97 300 P **P** **00 35 45.0 -0.4**
GAR IAmb IAmb 00 35 55.8
comp=Z,26nm,1.0s
IUG Iuzhnay 50.08 304 *e*P **P** **00 35 45.8 -0.4**
baz=304
IUG Iuzhnay 50.08 304 *e*P **P** **00 35 45.8 -0.4**
CHM Chimkent 50.40 304 *e*P **P** **00 35 48.0 -0.4**
baz=304
CHM Chimkent 50.40 304 *e*P **P** **00 35 48.0 -0.4**
BRVK Borovoye 50.65 318 *i* P **P** **00 35 49.5 -0.7**
BRVK pmax pmax
comp=Z,21nm,1.1s
BRVK Borovoye 50.65 318 P **P** **00 35 49.8 -0.4**
BRVK IAmb IAmb 00 36 00.1
comp=Z,23nm,0.8s
KBL Kabul 51.41 295 P **P** **00 35 56.2 -0.3**
KBL pmax pmax
comp=Z,31nm,0.8s
KBL Kabul 51.41 295 P **P** **00 35 56.2 -0.3**
ANM Nome 56.57 28 P **P** **00 36 34.2 +0.9**
ANM pmax pmax
comp=Z,11nm,0.8s
ANM Nome 56.57 28 P **P** **00 36 34.2 +0.9**
ANM IAmb IAmb 00 36 41.4
comp=Z,11nm,0.8s
ANM Nome 56.57 28 P 00 36 33.9
baz=260
SVE Sverdlovsk 56.57 322 *e*P **P** **00 36 34.3 +0.8**
SVE pmax pmax
comp=Z,22nm,1.5s
SVE MLR MLR
comp=Z,2μm,13.0s
AB31 Akbulak array 56.96 313 *i* P **P** **00 36 36.2 -0.2**
ABKAR Akbulak array 56.96 313 P **P** **00 36 35.9 -0.5**
HRA Herat 56.98 295 P **P** **00 36 37.2 +0.2**
HRA IAmb IAmb 00 38 15.5
comp=Z,28nm,1.9s
ARU Arti 57.70 322*c* *i*P **P** **00 36 40.7 -0.8**
ARU S **S** **00 44 41.5 +2.5**
ARU pmax pmax
comp=Z,8.0nm,0.8s
ARU MLR MLR
comp=Z,2μm,17.0s
ARU Arti 57.70 322 P **P** **00 36 40.9 -0.6**
ARU IAmb IAmb 00 36 51.3
comp=Z,26nm,1.4s
RDOG Red Dog Mine 58.13 24 P 00 36 44.7
baz=261
STKA Stephens Creek 58.92 167 P **P** **00 36 50.5 +0.3**
comp=Z,2.3nm,0.7s,baz=338,slow=9.9,SNR=3.7
STKA Stephens Creek 58.92 167 P **P** **00 36 50.9 +0.7**
STKA pmax pmax
comp=Z,6.0nm,2.0s
STKA Stephens Creek 58.92 167 P **P** **00 36 50.9 +0.7**
GEYT Alibeck 59.60 300 P **P** **00 36 54.6 -0.5**
comp=Z,5.5nm,0.7s,baz=76,slow=1.8,SNR=13
GEYT Alibeck 59.60 300 P **P** **00 36 55.1 0.0**
GYA0B ALIBECK ARRAY 59.60 300 P **P** **00 36 55.2 +0.1**
GYA0B IAmb IAmb 00 38 37.2
comp=Z,9.9nm,0.9s
DZM Mont Dzumac 60.32 139 *e*S **S** **00 45 18.8 +4.9**
comp=Z,263nm,24.4s
DZM *e*LR LR 00 54 49.9
comp=Z,380nm,26.8s
TTA Tatalina 60.57 31 P 00 37 02.2
baz=270
A21K Barrow 60.74 21 P **P** **00 37 03.4 +1.2**
A21K Barrow 60.74 21 P 00 37 03.2
baz=265
RSO Redoubt South 62.21 33 P **P** **00 37 12.6 0.0**
CHUM Lake Minchumin 62.22 29 P 00 37 13.7
baz=273
PPLA Purkeypile 62.32 31 P 00 37 14.2
baz=273
SPCR Spurr Chakacha 62.43 32 P 00 37 15.5
baz=274
KIRV Kirov 62.55 325*ce*P **P** **00 37 14.0 -0.6**
SKT Skwentna 62.69 32 P 00 37 16.1
baz=274
BPAW Bear Paw Mtn. 62.79 29 P **P** **00 37 16.6 +0.4**
BPAW IAmb IAmb 00 37 33.0
comp=Z,7.0nm,0.9s
BPAW Bear Paw Mtn. 62.79 29 P 00 37 17.2
baz=274
MLY Manley 62.83 28 P **P** **00 37 17.3 +0.7**
MLY IAmb IAmb 00 38 52.4
comp=Z,5.7nm,0.8s
MLY Manley 62.84 28 P 00 37 17.6
baz=274
CAPN Captain Cook N 62.98 33 P 00 37 18.4
baz=275
TOLK Toolik Lake Re 63.10 24 P **P** **00 37 20.1 +1.8**
TOLK IAmb IAmb 00 37 37.1
comp=Z,16nm,1.4s
TOLK Toolik Lake Re 63.10 24 P 00 37 20.3
baz=273
SUA Susitna One 63.11 32 P **P** **00 37 19.9 +1.4**
SUA IAmb IAmb 00 37 30.3
comp=Z,9.2nm,0.8s
SUA Susitna One 63.11 32 P 00 37 19.1
baz=275
TRF Thorofare Moun 63.15 30 P 00 37 18.6
baz=275
BRSE Bradley Lake S 63.28 34 P 00 37 20.2
baz=276
I23K Minto, Yukon-K 63.41 28 P 00 37 21.3
baz=275
NEA2 Nenana 63.58 29 P **P** **00 37 21.5 0.0**
NEA2 IAmb IAmb 00 37 38.4
comp=Z,15nm,1.0s
NEA2 Nenana 63.58 29 P 00 37 22.2
baz=275
RC01 Rabbit Creek A 63.63 32 P 00 37 21.8
baz=276
MCK McKinley 63.72 29 P **P** **00 37 22.7 +0.3**
MCK pmax pmax
comp=Z,8.0nm,0.8s
MCK McKinley 63.72 29 P **P** **00 37 22.7 +0.3**
MCK IAmb IAmb 00 37 35.5
comp=Z,8.0nm,0.8s
MCK McKinley 63.72 29 P 00 37 22.9
baz=276
MDM Murphy Dome 63.90 28 P **P** **00 37 24.4 +0.8**
WAT2 Susitna Watana 63.96 30 P 00 37 23.8
baz=276
WRH Wood River Hil 64.01 29 P **P** **00 37 25.6 +1.3**
TCOL CIGO, UAF Yank 64.07 28 P **P** **00 37 26.1 +1.4**
TCOL IAmb IAmb 00 37 42.9
comp=Z,16nm,1.1s
KNK Knik Glacier 64.21 32 P 00 37 26.0
baz=277
POKR Poker Plat Res 64.22 28 P **P** **00 37 27.4 +1.7**
POKR IAmb IAmb 00 39 33.9
comp=Z,8.3nm,0.8s
POKR Poker Plat Res 64.22 28 P 00 37 26.5
baz=276
WAT6 Susitna Watana 64.39 31 P 00 37 27.3
baz=277
IL31 64.49 28 P **P** **00 37 27.7 +0.3**
IL31 IAmb IAmb 00 39 08.8
comp=Z,22nm,1.9s
ILAR Eielson Array 64.49 28 P **P** **00 37 28.1 +0.6**
comp=Z,0.8nm,0.7s,baz=264,slow=6.8,SNR=12
ILAR Eielson Array 64.49 28 P **P** **00 37 27.7 +0.3**
ILAR Eielson Array 64.49 28 P **P** **00 37 27.7 +0.3**
HDA Harding Lake 64.51 29 P 00 37 27.5
baz=277
HDA P 00 37 27.5
baz=277
MSVF Nonsavu 64.90 127 LR LR 01 04 47.7
comp=Z,121nm,18.4s,baz=200,slow=35
PRP Porcupine Dome 64.97 27 P 00 37 31.0
baz=278
BMAR Burnt Mountain 65.08 25 P **P** **00 37 33.1 +1.8**
M24K Tolsona, Glenn 65.18 31 P 00 37 33.0
baz=279
KLU Klutina 65.40 32 P 00 37 34.2
baz=280
HARP HAARP 65.61 31 P 00 37 35.4
baz=280
SCRK Sand Creek 65.86 29 P **P** **00 37 36.6 +0.1**
SCRK IAmb IAmb 00 37 52.2
comp=Z,6.7nm,0.9s
SCRK Sand Creek 65.86 29 P 00 37 36.5
baz=280
BMRM Bremner River 66.12 32 P **P** **00 37 38.5 +0.3**
BMRM IAmb IAmb 00 37 54.6
comp=Z,18nm,1.1s
BMRM Bremner River 66.12 32 P 00 37 38.7
baz=281
MENT Mentasta 66.16 30 P **P** **00 37 39.4 +1.1**
MENT IAmb IAmb 00 37 55.6
comp=Z,12nm,0.9s
MAK Makhachkala 66.44 308 *e*P P 00 37 32.3 -8.1
MAK *e* 00 40 02.3
MAK *e*S S 00 46 20.1 -10
MAK *e*SS **SS** **00 50 42.1 -4.0**
MAK pmax pmax
comp=Z,43nm,1.0s
AKT Akhty 66.65 306 *e*P **P** **00 37 41.8 -0.1**
AKT *e* 00 38 09.6
AKT pmax pmax
comp=Z,8.0nm,0.6s
K27K Chicken 66.68 29 P **P** **00 37 43.6 +2.1**
K27K IAmb IAmb 00 37 57.1
comp=Z,6.1nm,0.8s
K27K Chicken 66.68 29 P 00 37 42.9
baz=282
CRQE Cirque 66.89 32 P 00 37 43.5
baz=282
EGAK Eagle 66.91 28 P **P** **00 37 43.9 +0.9**
EGAK IAmb IAmb 00 37 58.6
comp=Z,6.9nm,0.9s
L27K Beaver Creek, 66.98 30 P **P** **00 37 43.7 +0.1**
L27K Beaver Creek, 66.99 30 P 00 37 44.0
baz=282
KLMR Klimovskoe 67.14 328 *e*P **P** **00 37 43.9 -0.6**
KLMR pmax pmax
comp=Z,16nm,1.3s
KLMR Klimovskoe 67.14 328 *e*P **P** **00 37 44.0 -0.6**
KLMR AMP 00 38 02.3
comp=Z,16nm,1.3s
KLMR LQ LQ 01 02 26.8
KLMR LQ LQ 01 02 26.8
KLMR LR LR 01 09 26.9

GROC Groznyy 67.59 308 *e*P P 00 37 47.6 -0.1
GROC *e* 00 38 13.8
GROC pmax pmax
comp=Z,13nm,1.0s
CTG Chitna Glacier 67.68 32 P 00 37 48.9
baz=284
VRH Novokhopyorsk 68.22 317 *e*P P 00 37 51.1 -0.4
VRH pmax pmax
comp=Z,9.0nm,0.6s
VRH MLR MLR
comp=Z,740nm,14.0s
EPYK Eagle Plains 68.33 26 P P 00 37 52.5 +0.5
EPYK IAmb IAmb 00 38 02.3
comp=Z,14nm,1.1s
EPYK Eagle Plains 68.33 26 P 00 37 52.5
baz=285
INK Inuvik 68.97 23 P P 00 37 56.4 +0.5
comp=Z,2.7nm,0.8s,baz=294,slow=6.9,SNR=18
INK Inuvik 68.97 23 P 00 37 56.6
baz=287
GOF Gofitskoye 69.00 311⇑ *e*P P 00 37 56.2 -0.3
ZEI Tsey 69.04 308 *e*P P 00 37 55.8 -1.3
ZEI pmax pmax
comp=Z,16nm,1.0s
GNI Garni 69.19 305 P P 00 37 58.9 +0.9
GNI pmax pmax
comp=Z,12nm,1.0s
GNI Garni 69.19 305 P P 00 37 58.9 +0.9
GNI IAmb IAmb 00 38 14.5
comp=Z,12nm,1.0s
KBZ Khabaz 69.47 309 P P 00 37 60.0 +0.5
comp=Z,10nm,0.8s,baz=93,slow=3.9,SNR=38
KBZ Khabaz 69.47 309*ce*P P 00 37 59.6 +0.1
KBZ pmax pmax
comp=Z,9.0nm,0.8s
LPSR Galich'ya Gora 69.52 319 *e*P P 00 37 58.5 -1.0
LPSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR MLR MLR
comp=Z,810nm,13.0s
KIV Kislovodsk 69.56 310 *e*P P 00 38 00.1 0.0
KIV *e*S S 00 47 08.8 +1.6
KIV pmax pmax
comp=Z,55nm,1.1s
KIV pmax pmax
comp=Z,56nm,3.3s
KIV MLR MLR
comp=Z,948nm,17.0s
KIV Kislovodsk 69.56 310 P P 00 38 00.2 +0.1
VORD Divnogorie 69.76 318 *e*P P 00 38 00.3 -0.8
VORD pmax pmax
comp=Z,8.0nm,1.3s
VSR Storozhevoye 69.76 318 *e*P P 00 37 59.9 -1.2
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR MLR MLR
comp=Z,650nm,13.0s
ARCES ARCESS Array B 70.28 339 P P 00 38 04.3 +0.3
comp=Z,7.7nm,1.0s,baz=64,slow=5.5,SNR=6.3
WHY Whitehorse 70.80 31 P 00 38 08.2
baz=289
SOCY Socotra 70.95 275 P P 00 38 06.8 -2.3
SOCY IAmb IAmb 00 38 20.4
comp=Z,16nm,0.9s
GEVA Gevas 70.99 304 P P 00 38 09.5 +0.4
GEVA IAmb IAmb 00 38 19.6
comp=Z,7.2nm,0.8s
NOR Nord 71.15 355 *i* P P 00 38 09.4 +0.2
NOR IAmb IAmb 00 38 11.3
comp=Z,2.1nm,0.9s
NOR Nord 71.15 355 *i* P P 00 38 09.3 +0.2
NOR pmax pmax
comp=Z,2.0nm,0.9s
SOC Sochi 71.72 310 *e*P P 00 38 11.4 -1.8
SOC *e*PPP PPP 00 42 32.8
SOC *e*S S 00 47 32.9 +0.8
SOC *e*SS SS 00 52 04.5 -3.0
SOC pmax pmax
comp=Z,10.0nm,0.6s
SOC MLR MLR
comp=Z,372nm,21.0s
C36M Paulatuk 71.79 21 P P 00 38 15.0 +1.9
C36M IAmb IAmb 00 39 47.7
comp=Z,14nm,0.7s
C36M Paulatuk 71.79 21 P 00 38 13.4
baz=295
KOPT Kop Dagi 72.33 306 P P 00 38 18.0 +0.7
KOPT IAmb IAmb 00 39 49.5
comp=Z,15nm,1.1s
EUNU Eureka 72.45 6 P P 00 38 16.9 -0.2
EUNU IAmb IAmb 00 38 22.1
comp=Z,7.1nm,0.7s
ANN Anapa 72.87 312 *e*P P 00 38 15.7 -4.3
ANN *e*PP pP 00 38 20.1 -5.7
ANN *e*S S 00 47 41.1 -4.2
ANN pmax pmax
comp=Z,22nm,1.0s
MARD Mardin 73.03 304 P P 00 38 21.3 0.0
MARD IAmb IAmb 00 38 25.8
comp=Z,15nm,0.7s
FIA1 FINESS Array S 73.15 331 P P 00 38 21.2 -0.2
FIA1 IAmb IAmb 00 38 32.1
comp=Z,15nm,0.8s
FINES FINESS Array B 73.16 331 P P 00 38 21.3 -0.1
comp=Z,8.4nm,0.7s,baz=68,slow=5.5,SNR=34
VSU Vasula 74.05 328 *e*P P 00 38 27.1 +0.5
VSU Vasula 74.05 328 *i* P P 00 38 26.5 -0.2
VSU pmax pmax
comp=Z,45nm,0.8s
RAYN Ar Rayn 74.11 289 P P 00 38 27.5 -0.3
RAYN pmax pmax
comp=Z,11nm,1.1s
RAYN Ar Rayn 74.11 289 P P 00 38 27.5 -0.3
MNK Minsk 75.06 324 *i* P P 00 38 33.6 +1.0
comp=E,2.0nm,1.1s
MNK *i* P P 00 38 33.6 +1.0
comp=N,13nm,1.3s
MNK *i* P P 00 38 33.6 +1.0
comp=Z,20nm,1.0s
MNK *i* PP PP 00 41 22.4 +2.2
MNK *i* PPP PPP 00 43 08.4
MNK *i* S S 00 48 15.0 +5.5
MNK *i* SS SS 00 52 57.7 -0.1
MNK *i* SSS SSS 00 56 28.6
MNK *i* LQ LQ 01 06 46.9
MNK *i* LR LR 01 12 31.7
MNK *i* LRM MLR 01 14 03.0
comp=E,75nm,14.7s
MNK *i* LRM MLR 01 14 03.0
comp=N,324nm,21.7s
MNK *i* LRM MLR 01 14 03.0
comp=Z,755nm,18.4s
TOKA Tokat 75.11 308 P P 00 38 33.7 +0.4
MTSE Matsula 75.33 329 *e*P P 00 38 31.8 -2.3
IDID Didziasalis 75.33 325 *e*P P 00 38 34.8 +0.6
NACGM Naroch 75.48 324 *i* P P 00 38 34.4 -0.6
NACGM *i* P P 00 38 34.4 -0.6
NACGM *i* P P 00 38 34.4 -0.6
NACGM *i* PP PP 00 40 58.7 -25
NACGM *i* PPP PPP 00 43 48.8
NACGM *i* S S 00 48 17.6 +3.4
NACGM *i* SS SS 00 53 04.7 +0.5
NACGM *i* SSS SSS 00 56 58.7
NACGM *i* LQ LQ 01 06 11.7
NACGM *i* LR LR 01 12 04.8
DAG Danmarks Havn 75.48 353 *i* P P 00 38 34.3 -0.4
DAG IAmb IAmb 00 38 36.1
comp=Z,4.9nm,0.9s
DAG Danmarks Havn 75.48 353 *i* P P 00 38 34.3 -0.4
DAG pmax pmax
comp=Z,5.0nm,0.9s
ISAL Salakas 75.54 325 *e*P P 00 38 36.0 +0.7
IIGN Ignalina 75.58 325 *e*P P 00 38 36.2 +0.6
RES Resolute Bay 75.69 11 P P 00 38 36.5 +0.6
RES pmax pmax
comp=Z,14nm,0.6s
RES Resolute Bay 75.69 11 P P 00 38 36.5 +0.6
GAZ Gaziantep 75.74 305 P P 00 38 37.5 +0.5
GAZ IAmb IAmb 00 38 39.6
comp=Z,18nm,0.9s
AKASG Malin Array Be 75.84 320 P P 00 38 36.8 -0.4
comp=Z,9.4nm,0.5s,baz=58,slow=6.5,SNR=42
AKASG Malin Array Be 75.84 320 P P 00 38 36.8 -0.4
AKASG pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 75.84 320 P P 00 38 36.8 -0.4
AKBB Malin Array Si 75.84 320*ce*P P 00 38 36.8 -0.4
AKBB Malin Array Si 75.84 320 P P 00 38 36.5 -0.7
PABE Paberze 76.67 326 *e*P P 00 38 41.8 0.0
PABE Paberze 76.67 326 P P 00 38 41.6 -0.2
NEEM North Greenlan 76.76 360 *i* P P 00 38 43.0 +0.7
NEEM IAmb IAmb 00 38 47.6
comp=Z,7.4nm,0.6s
TULEG Thule 77.11 4 *i* P P 00 38 44.1 +0.2
TULEG IAmb IAmb 00 38 45.3
comp=Z,4.7nm,0.9s
TULEG *e* 00 40 12.6
TULEG Thule 77.11 4 P P 00 38 42.8 -1.1
TULEG IAmb IAmb 00 38 49.5
comp=Z,12nm,0.8s
BR131 Keskin Array S 77.35 308 P P 00 38 46.0 -0.2
BR131 pmax pmax
comp=Z,20nm,1.0s
BR131 Keskin Array S 77.35 308 P P 00 38 46.0 -0.2
BR131 IAmb IAmb 00 40 15.4
comp=Z,20nm,0.9s
BRTR Keskin Array B 77.35 308 P P 00 38 46.5 +0.4
comp=Z,10nm,0.8s,baz=95,slow=5.1,SNR=30
BRTR Keskin Array B 77.35 308 P P 00 38 46.9 +0.7
SORM Soroca 77.42 317 ⇑P P 00 38 45.9 -0.3
UPP Uppsala 77.58 331 *e*P P 00 38 46.2 -0.7
KIS Kishinev 77.61 316 *e*P P 00 38 44.0 -3.3
KIS *e*LR LR 01 16 36.0
comp=Z,300nm,13.0s
SUW Suwalki 77.76 324 *e*P P 00 38 47.8 -0.1
SUW Suwalki 77.76 324 P P 00 38 48.2 +0.3
SUW pmax pmax
comp=Z,41nm,0.9s
SUW Suwalki 77.76 324 P P 00 38 48.2 +0.3
DBG Daneborg 77.83 352 *i* P P 00 38 48.0 -0.1
DBG IAmb IAmb 00 38 49.5
comp=Z,7.9nm,1.2s
ANTO Ankara 77.89 308 P P 00 38 48.6 -0.5
ANTO pmax pmax
comp=Z,14nm,1.1s
ANTO Ankara 77.89 308 P P 00 38 48.6 -0.5
ANTO IAmb IAmb 00 39 01.1
comp=Z,14nm,1.1s
TLCR 78.37 315 ⇓P P 00 38 52.8 +1.3
YKA Yellowknife Ar 78.60 25 P P 00 38 53.0 +0.5
comp=Z,2.7nm,1.0s,baz=298,slow=5.2,SNR=16
MDUB Mudurnu 78.76 310 P P 00 38 53.2 -0.8
TPGR Topolog 78.77 314 ⇑P P 00 38 54.5 +0.7
CFR Carcaliu 78.81 315 ⇑P P 00 38 54.3 +0.4
PRAR RASCA 79.04 317 ⇑P P 00 38 56.1 +0.8
TLBR Topalu 79.14 314 ⇑P P 00 38 57.1 +1.3
PETR Petresti 79.15 316 ⇑P P 00 38 55.9 +0.1
HARR Harsova 79.15 314 ⇓P P 00 38 57.3 +1.4
TESR Tescani 79.16 317 ⇓P P 00 38 56.5 +0.6
ODBI Odobesti 79.24 316 ⇑P P 00 38 58.0 +1.7
BIZ Bicaz 79.31 317 ⇑P P 00 38 57.1 +0.4
NC405 NORSAR Array S 79.36 334 P P 00 38 55.1 -1.6
VRI Vrincioaia 79.40 316 ⇑P P 00 38 57.7 +0.5
NC303 NORSAR Array S 79.43 334 P P 00 38 56.5 -0.6
PLOR Plostina 79.46 316 ⇓P P 00 38 59.0 +1.5
CSS Mathiatis 79.49 304 P P 00 38 57.3 -0.7
CSS IAmb IAmb 00 38 59.9
comp=Z,15nm,0.7s
BUR08 Bucovina Ar. S 79.54 318 P P 00 38 58.0 -0.1
BURAR Bucovina Array 79.54 318 ⇓P P 00 38 58.8 +0.7
BURAR Bucovina Array 79.54 318 P P 00 38 58.4 +0.3
BURAR IAmb IAmb 00 39 00.2
comp=Z,8.3nm,0.8s
BISRR Bisoca 79.55 316 ⇑P P 00 38 59.2 +1.1
NB201 NORSAR Array S 79.56 334 P P 00 38 57.7 -0.1
NB2 NORSAR Subarra 79.60 334 P P 00 38 57.4 -0.6
baz=53,slow=5.9
NOA NORSAR Array B 79.60 334 P P 00 38 57.4 -0.6
comp=Z,5.2nm,0.8s,baz=52,slow=5.5,SNR=27
NC204 NORSAR Array S 79.64 334 P P 00 38 57.5 -0.8
NC602 NORSAR Array S 79.65 334 P P 00 38 58.0 -0.2
PGOR Pogoanele 79.66 315 ⇑P P 00 38 59.5 +0.9
NEHR Nehoiu 79.87 316 ⇓P P 00 39 01.4 +1.6
OZUR 79.88 316 ⇓P P 00 39 01.2 +1.4
MLR Muntele Rosu 80.06 316 ⇑P P 00 39 01.6 +0.6
MLR Muntele Rosu 80.06 316 P P 00 39 00.8 -0.2
MLR pmax pmax
comp=Z,14nm,1.1s
MLR Muntele Rosu 80.06 316 P P 00 39 00.8 -0.2
MLR IAmb IAmb 00 39 03.5
comp=Z,14nm,1.1s
KWP Kalwaria Pacla 80.07 321 P P 00 39 01.4 +0.6
KWP pmax pmax
comp=Z,29nm,1.1s
KWP Kalwaria Pacla 80.07 321 P P 00 39 01.4 +0.6
KWP IAmb IAmb 00 39 19.9
comp=Z,29nm,1.1s
SECR 80.19 315 ⇓P P 00 39 02.5 +1.0
DOPR Dopca 80.19 316 ⇑P P 00 39 02.3 +0.8
BLEU Blekinge 80.27 329 *e*P P 00 39 04.8 +3.1
UZH Uzhgorod 80.79 320 *e*P P 00 39 06.0 +1.4
UZH *e* 00 39 11.0
UZH *i* 00 39 16.1
ARR Arges 80.94 316 ⇑P P 00 39 06.6 +1.0
DEL Delary 81.08 329 *i* P P 00 39 09.0 +3.0
DEL *i* P P 00 39 08.1 +3.0
HUMR Humele 81.11 315 ⇓P P 00 39 06.6 +0.2
CRVS Cervenica-Dubn 81.14 320 *e*P P 00 39 08.6 +2.1
CRVS *e* 00 39 16.7
CRVS Cervenica-Dubn 81.14 320 *e*P P 00 39 08.6 +2.1
CRVS *e* 00 39 16.7
SUMG Summit 81.25 356 *i* P P 00 39 09.0 +1.9
SUMG IAmb IAmb 00 39 13.1
comp=Z,26nm,0.7s
SUMG *i* 00 40 38.4
SUMG Summit 81.25 356 P P 00 39 07.2 +0.1
SUMG pmax pmax
comp=Z,26nm,0.7s
SUMG Summit 81.25 356 P P 00 39 07.2 +0.1
ELL Elmali 81.26 307 P P 00 39 07.1 -0.4
ELL pmax pmax
comp=Z,46nm,0.8s
ELL Elmali 81.26 307 P P 00 39 07.1 -0.4
DRGR 81.44 318 ⇓P P 00 39 08.7 +0.4
SCO Scoresbysund 81.49 350 *i* P P 00 39 08.0 +0.2
SCO Scoresbysund 81.49 350 P P 00 39 08.1 +0.2
SCO pmax pmax
comp=Z,28nm,1.6s
SCO Scoresbysund 81.49 350 P P 00 39 08.1 +0.2
SCO IAmb IAmb 00 39 22.5
comp=Z,28nm,1.6s
BJUU Bjuv 81.70 329 *e*P P 00 39 10.5 +1.3
AKAS Kas 81.70 306 P P 00 39 08.2 -1.7
GZR Gura Zlata 82.07 317 ⇑P P 00 39 13.7 +2.1
OKC Ostrava-Krasne 82.53 322 AMS AMS 01 18 30.0
comp=Z,900nm,17.3s
HERR Herculane 82.55 316 ⇓P P 00 39 14.7 +0.7
VYHS Vyhne 82.85 321 *e*P P 00 39 17.3 +1.8
VYHS Vyhne 82.85 321 *e*P P 00 39 17.3 +1.8
MORC Moravsky Berou 82.89 322 *e*P P 00 39 17.1 +1.3
MORC Moravsky Berou 82.89 322 P P 00 39 15.6 -0.2
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 82.89 322 P P 00 39 15.6 -0.2
KOLL Kolacno 83.05 321 *e*P P 00 39 18.2 +1.7
VTS Vitosha 83.13 314 ⇑P P 00 39 18.4 +1.1
VTS Vitosha 83.13 314 P P 00 39 18.2 +0.9
VTS pmax pmax
comp=Z,42nm,1.7s
VTS Vitosha 83.13 314 P P 00 39 18.2 +0.9
KRLC Kraliky 83.15 323 *e*P P 00 39 17.9 +0.8
KRLC MLR MLR
comp=Z,1μm,13.4s
KRLC Kraliky 83.15 323 *e*P P 00 39 17.9 +0.8
KRLC AMS AMS 01 20 20.0
comp=Z,1μm,13.4s
OSTC Ostas 83.19 324 *e*P P 00 39 20.0 +2.7
OSTC AMS AMS 01 20 20.0
comp=Z,2μm,13.8s
DPC Dobruska-Polom 83.25 323 *e*P P 00 39 18.6 +1.0
DPC *e* 00 39 29.8
DPC MLR MLR
comp=Z,1μm,12.9s
DPC Dobruska-Polom 83.25 323 *e*P P 00 39 18.6 +1.0
DPC *ex* x 00 39 29.8
DPC AMS AMS 01 20 30.0
comp=Z,1μm,12.9s
CHVC Chvalec 83.26 324 AMS AMS 01 20 30.0
comp=Z,2μm,14.7s
JAVC Velka Javorina 83.31 322 *e*P P 00 39 20.4 +2.4
UPC Upice 83.33 324 AMS AMS 01 20 30.0
comp=Z,2μm,13.5s
BOVS Bovan 83.61 316 ⇑P P 00 39 19.9 +0.4
VRAC Vranov 83.67 322 *e*P P 00 39 20.1 +0.4
MODS Modra-Piesok 83.79 321 *e*P P 00 39 29.4 +9.0
MODS Modra-Piesok 83.79 321 *e* P 00 39 29.4 +9.0
KRUC Moravsky 83.91 322 *e*P P 00 39 21.5 +0.5
PVCC Panska Ves 84.08 324 *e*P P 00 39 27.3 +5.5
PVCC MLR MLR
comp=Z,1μm,12.5s
PVCC Panska Ves 84.08 324 *e*P P 00 39 27.3 +5.5
PVCC AMS AMS 01 21 00.0
comp=Z,1μm,12.5s
BRG Berggiesshubel 84.22 325 *e*P P 00 39 23.9 +1.4
BRG Amp 00 39 35.6
comp=Z,13nm,1.4s
BRG *ex* x 00 40 50.8
BRG Amp 00 40 55.5
comp=Z,9.6nm,1.4s
BRG *ex* x 00 40 59.8
BRG Amp 00 41 02.1
comp=Z,48nm,2.2s
BRG Berggiesshubel 84.22 325 S S 00 49 51.0 +4.4
BRG Berggiesshubel 84.22 325 *e*P P 00 39 23.2 +0.7
comp=Z,2.6nm,0.9s,baz=55,slow=6.0
BSEG Bad Segeberg 84.22 328 *e*P P 00 39 23.6 +1.3
comp=Z,8.7nm,0.9s,baz=55,slow=6.0
TREC Trest 84.28 323 *e*P P 00 39 28.0 +5.1
TREC MLR MLR
comp=Z,800nm,16.1s
TREC Trest 84.28 323 *e*P P 00 39 28.0 +5.1
TREC AMS AMS 01 19 40.0
comp=Z,800nm,16.1s
PRU Pruhonice 84.40 324 *e*P P 00 39 25.2 +1.8
PRU *e* 00 39 35.5
PRU MLR MLR
comp=Z,1μm,12.3s
PRU Pruhonice 84.40 324 *e*P P 00 39 25.2 +1.8
PRU *ex* x 00 39 35.5
PRU AMS AMS 01 21 10.0
comp=Z,1μm,12.3s
PRA Prague 84.42 324 AMS AMS 01 21 10.0
comp=Z,1μm,12.3s
DIVS Divibare 84.44 317 P P 00 39 23.6 -0.3
CLL Collm 84.45 325 *i* P P 00 39 23.7 +0.1
comp=Z,8.0nm,0.8s
CLL *e* 00 39 33.0
CLL *e*PP PP 00 42 36.0 -2.3
CLL *e*S S 00 49 51.0 +2.1
CLL *e*PS PnS 00 50 43.0 -0.6
CLL *e*SS SS 00 55 12.0 -6.4
CLL *e* 00 59 54.0
CLL LmH 01 14 00.0
comp=N,2μm,19.7s
CLL LmH 01 14 00.0
comp=E,1μm,21.4s
CLL Collm 84.45 325 *i* P P 00 39 23.7 +0.1
CLL *e* 00 39 33.0
CLL *e*S S 00 49 51.0 +2.1
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 84.45 325 *e*P P 00 39 24.1 +0.5
comp=Z,6.4nm,0.8s,baz=55,slow=6.0
FBE Freiberg 84.50 325 *e*P P 00 39 25.1 +1.2
comp=Z,6.3nm,0.8s,baz=55,slow=6.0
FLTG Flechtingen 84.74 327 *e*P P 00 39 25.5 +0.5
comp=Z,5.3nm,0.7s,baz=55,slow=6.0
CONA Conrad Observa 84.83 321 *e*P P 00 39 24.7 -1.0
comp=Z,4.6nm,0.9s
NEUB Neuenburg 85.14 326 *e*P P 00 39 28.4 +1.3
comp=Z,6.9nm,0.8s,baz=55,slow=6.0
CKRC Cesky Krumlov 85.19 323 *e*P P 00 39 28.4 +0.9
CKRC *ex* x 00 39 37.9
NRDL Niedersach Rie 85.19 327 *e*P P 00 39 29.0 +1.8
comp=Z,3.4nm,0.8s,baz=55,slow=6.0
TANN Tannenbergstha 85.25 325 *e*P P 00 39 28.7 +0.9
comp=Z,1.7nm,0.8s,baz=55,slow=6.0
GUNZ Gunzen 85.35 325 *e*P P 00 39 29.6 +1.4
comp=Z,3.2nm,0.8s,baz=55,slow=6.0
NKC Novy Kostel 85.37 325 AMS AMS 01 20 40.0
comp=Z,900nm,14.7s
WERN Wernitzgruen 85.37 325 *e*P P 00 39 29.4 +1.0
comp=Z,2.2nm,0.8s,baz=55,slow=6.0
ARSA Arzberg 85.40 321 *e*P P 00 39 28.1 -0.5
comp=Z,6.7nm,1.5s
KHC Kasperske Hory 85.41 323 *e*P P 00 39 29.8 +1.2
KHC *e* 00 39 40.4
KHC MLR MLR
comp=Z,2μm,13.4s
KHC Kasperske Hory 85.41 323 *e*P P 00 39 29.8 +1.2
KHC *ex* x 00 39 40.4
KHC AMS AMS 01 21 50.0
comp=Z,2μm,13.4s
CLZ Clausthal 85.46 327 *e*P P 00 39 30.5 +1.7
comp=Z,7.8nm,0.7s,baz=55,slow=6.0
GEC2 GERESS Array S 85.50 323 P P 00 39 30.0 +0.8
GEC2 GERESS Array S 85.50 323 *e*P P 00 39 30.5 +1.3
comp=Z,3.2nm,0.8s,baz=55,slow=6.0
GERES GERESS Array B 85.50 323 P P 00 39 29.8 +0.6
comp=Z,2.3nm,0.7s,baz=57,slow=4.9,SNR=16
MOX Moxa 85.55 325 *e*P P 00 39 30.7 +1.4
comp=Z,1.7nm,0.8s,baz=55,slow=6.0
MANZ Manzenberg 85.69 325 *e*P P 00 39 31.7 +1.7
comp=Z,2.0nm,0.8s,baz=55,slow=6.0
MOA Molln 85.77 322 *e*P P 00 39 29.5 -0.9
comp=Z,2.4nm,0.6s
PDG Podgorica 85.77 316 ⇓P P 00 39 32.2 +1.8
ROTZ Rotzenmuhle 85.77 324 *e*P P 00 39 31.6 +1.3
comp=Z,3.0nm,0.8s,baz=55,slow=6.0
SOKA Soboth 86.00 321 *e*P P 00 39 30.6 -1.0
comp=Z,1.4nm,0.7s
UBBA Unterbreizbach 86.27 326 *e*P P 00 39 36.7 +4.1
comp=Z,2.3nm,0.7s,baz=55,slow=6.0
GRF Grafenberg Arr 86.33 325 *e*P P 00 39 37.1 +4.0
comp=Z,8.5nm,0.8s,baz=55,slow=6.0
OBKA Obir 86.37 321 *e*P P 00 39 33.5 +0.1
comp=Z,9.9nm,1.4s
IBBN Ibbenburen 86.44 328 *e*P P 00 39 37.0 +3.5
comp=Z,14nm,0.8s,baz=55,slow=6.0
RJOB Jochberg 86.64 322 *e*P P 00 39 36.3 +1.5
comp=Z,28nm,0.8s,baz=55,slow=6.0
ITM Ithomi 86.70 310 P P 00 39 35.1 0.0
KBA Koelnbreinsper 86.72 322 *e*P P 00 39 38.8 +3.6
comp=Z,3.3nm,0.5s
MYKA Terra Mystica 86.81 321 *e*P P 00 39 39.0 +3.4
comp=Z,1.5nm,0.5s
KASTN Kahler Asten 86.82 327 *e*P P 00 39 39.2 +3.7
comp=Z,4.1nm,0.7s,baz=55,slow=6.0
SFJD Kangerlussuaq 87.26 360 *e*P P 00 39 37.3 +0.1
SFJD IAmb IAmb 00 39 38.0
comp=Z,4.7nm,0.9s
SFJD Kangerlussuaq 87.26 360 *e*P P 00 39 37.3 +0.1
SFJD pmax pmax
comp=Z,5.0nm,0.9s
WATA Walderalm 87.54 323 *e*P P 00 39 42.9 +3.7
comp=Z,4.8nm,0.6s
WTTA Wattenberg 87.55 323 *e*P P 00 39 43.0 +3.6
comp=Z,6.0nm,0.8s
MOTA Moosalm 87.80 323 *e*P P 00 39 44.0 +3.5
comp=Z,3.2nm,0.6s
SQTA Sankt Quirin 87.81 323 *e*P P 00 39 44.3 +3.8
comp=Z,2.6nm,0.6s
RETA Reutte 87.90 323 *e*P P 00 39 45.3 +4.5
comp=Z,2.4nm,0.6s
UBR Ueberruh 88.13 324 *e*P P 00 39 46.6 +4.7
comp=Z,5.3nm,0.8s,baz=55,slow=6.0
FETA Feichten 88.19 323 *e*P P 00 39 45.0 +2.7
comp=Z,1.9nm,0.6s
DAVA Damuels 88.49 323 *e*P P 00 39 48.1 +4.3
comp=Z,6.5nm,0.5s
FFC Flin Flon 88.66 27 P P 00 39 44.9 +0.8
FFC pmax pmax
comp=Z,7.0nm,0.9s
FFC Flin Flon 88.66 27 P P 00 39 44.9 +0.8
FFC IAmb IAmb 00 39 59.2
comp=Z,7.3nm,0.8s
BFO Black Forest 88.67 325 *e*P P 00 39 49.2 +4.8
comp=Z,3.1nm,0.8s,baz=55,slow=6.0
WLF Walferdange 88.91 327 *e*P P 00 39 50.5 +5.1
comp=Z,3.8nm,0.7s,baz=55,slow=6.0
NVAR Mina Array Bea 90.46 46 P P 00 39 55.0 +1.8
comp=Z,0.2nm,0.5s,baz=316,slow=5.0,SNR=2.3
PPT2 Papeete2 90.60 109 *e*LR LR 01 08 50.4
comp=Z,356nm,21.8s

TPNV	**Topopah Spring**	**92.65**	**46**	P	**P**	**00 40 04.2**	**+0.9**
TPNV				pmax	pmax			
	comp=Z,4.0nm,1.0s							
TPNV	**Topopah Spring**	**92.65**	**46**	P	**P**	**00 40 04.2**	**+0.9**
TPNV				IAmb	IAmb	00 40 16.9		
	comp=Z,3.9nm,0.9s							
PDAR	**Pinedale Array**	**93.16**	**39**	P	**P**	**00 40 06.3**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=45,slow=0.4,SNR=3.8							
PDAR	**Pinedale Array**	**93.16**	**39**	P	**P**	**00 40 06.0**	**+0.3**
ESDC	**Sonseca Array**	**101.03**	**325**	P	**Pdif**	**00 40 40.5**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=35,slow=4.7,SNR=3.2							
JAKH	**Jacmel**	**131.48**	**27**	PKPdf	**PKPdf**	**00 46 02.5**	**-1.8**

BJI ***29*** *00:28:16.0±0.0,26.0′00N×128.0′50E,h10km,mB4.6/1, mb4.9/8,Ms4.6/1,Ms7 4.4/1*
IDC ***29*** *00:28:16.8±0.6,26.0′04N×128.0′51E,h0km,mb4.4/23, mb1 4.6/24,mb1mx4.4/42,mbtmp4.4/24,ML3.4/1,MS4.4/2, Ms1 4.4/2,ms1mx3.6/28,Error ellipse: s-maj=21.6km s-min=13.1km az=80.0*
NEIC ***29*** *00:28:19.0±1.5,25.99N±0.05×128.46E±0.06,h10km±1km, mb4.9/52,Error ellipse: s-maj=9.4km s-min=8.5km az=249.0*
NIED ***29*** *00:28:20.1,26.01N×128.58E,h35km,MW4.7,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁶Nm; Mrr1.09; Mθθ-0.34; Mφφ-0.76; Mrθ0.24; Mθφ-0.55; Mφr0.08; Fault plane solution: M₀1.14000×10¹⁶ NP1:φs42.00000°, δ51.00000°,λ.100.00000°. NP2:φs207.00000°,δ40.00000°, λ78.00000°.*
JMA ***29*** *00:28:20.0±0.4,26.01N×128.58E,h35km,M4.5*

ISC 29 00:28:18.0±2.3,26.00N±0.05×128.61E±0.04,h5km±14km, n126,σ1$38/134,mb4.7/58,2C,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.74**	**314**	P	**Pb**	**00 28 33.2**	**-0.1**
JJT3	**Tamagusuku3**	**0.76**	**281**	P	**Pb**	**00 28 34.1**	**+0.5**
JJT3				S	**Sb**	**00 28 44.3**	**+0.1**
JOW	**Kunigami**	**0.88**	**340**	Pn	**Pb**	**00 28 36.1**	**+0.3**
	433nm,0.3s,baz=143,slow=20,SNR=1.3						
JOW				Sn	**Sg**	**00 28 46.7**	**+0.3**
	1μm,0.3s,baz=127,slow=24,SNR=2.6						
JOW	**Kunigami**	**0.88**	**340**	P	**Pb**	**00 28 35.9**	**+0.1**
JOW				S	**Sb**	**00 28 47.7**	**-0.1**
JOW	**Kunigami**	**0.88**	**340**		**Pb**	**00 28 35.8**	**0.0**
JYRO	**Yoronjima**	**1.03**	**352**	P	**Pb**	**00 28 38.4**	**+0.1**
JYRO				*e*S	**Sb**	**00 28 52.0**	**-0.1**
JIH	**Iheya**	**1.18**	**331**	P	**Pn**	**00 28 41.0**	**-0.1**
JIH				*e*S	**Sg**	**00 28 55.5**	**-0.5**
JOKE	**Okinoerabujima**	**1.36**	**359**	P	**Pn**	**00 28 43.4**	**-0.1**
JAGN	**Aguni-jima**	**1.36**	**296**	P	**Pn**	**00 28 42.8**	**-0.8**
JAGN				*e*S	**Sb**	**00 29 00.1**	**-1.5**
JKE	**Kume jima 2**	**1.67**	**282**	P	**Pn**	**00 28 46.4**	**-1.5**
JTK	**Tokunoshima**	**1.80**	**10**	P	**Pn**	**00 28 49.7**	**0.0**
JTK				S	**Sn**	**00 29 12.1**	**-0.9**
JMZ	**Minamidaito 2**	**2.36**	**94**	P	**Pn**	**00 28 56.2**	**-1.1**
JMZ				S	**Sn**	**00 29 22.8**	**-3.8**
JMZ	**Minamidaito 2**	**2.36**	**94**	Pn	**Pn**	**00 28 56.0**	**-1.3**
JKDJ	**Kitadaitoujima**	**2.42**	**91**	P	**Pn**	**00 28 57.5**	**-0.6**
JKDJ				*e*S	**Sn**	**00 29 24.6**	**-3.5**
NACB	**Ninganchiao**	**6.62**	**256**	Pn	**Pn**	**00 29 52.4**	**-3.5**
TPUB	**Ta-pu**	**7.74**	**251**	Pn	**Pn**	**00 30 09.4**	**-2.0**
JHS	**Saijyo**	**9.77**	**22**	Pn	**Pn**	**00 30 41.1**	**+1.9**
KSRS	**Korea Array**	**11.43**	**357**	Pn	**Pn**	**00 31 02.1**	**+0.3**
	0.3nm,0.3s,baz=176,slow=13,SNR=2.0						
USA0B	**Ussuriysk Arra**	**18.36**	**8**		**Pb**	**00 32 35.4**	**+2.0**
USRK	**Ussuriysk Ar.**	**18.36**	**8**	P	**P**	**00 32 34.8**	**+1.4**
	baz=183,slow=8.4,SNR=6.1						
USRK				LR	LR	00 38 54.0	
	comp=Z,1μm,18.1s,baz=176,slow=35						
USRK	**Ussuriysk Ar.**	**18.36**	**8**		**Pn**	**00 32 33.1**	**-0.2**
KLR	**Kul'dur**	**23.32**	**5**	P	**P**	**00 33 26.1**	**-0.7**
	5.3nm,0.9s,baz=196,slow=8.3,SNR=5.2						
KMI	**Kunming**	**23.35**	**274**	⇑P	**P**	**00 33 26.5**	**-1.0**
KMI				pP	pP	00 33 28.3	-0.1
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
YSS	**Yuzh-Sakhalins**	**23.73**	**25**	P	**P**	**00 33 32.2**	**+1.3**
UBPT	**Khong Chiam**	**24.10**	**248**	P	**P**	**00 33 37.0**	**+2.3**
	9.2nm,1.2s						
UBPT	**Khong Chiam**	**24.10**	**248**	P	**P**	**00 33 35.5**	**+0.9**
UBPT				IAmb	IAmb	00 33 36.5	
	comp=Z,31nm,1.4s						
GTA	**Gaotai**	**27.54**	**306**	⇑P	**P**	**00 34 03.5**	**-2.3**
GTA				pP	sP	00 34 08.5	+1.6
GTA				sP	pwP	00 34 12.0	+1.5
GTA				pmax	pmax		
	comp=Z,56nm,1.0s						
ULN	**Ulaanbaatar**	**27.63**	**328**	P	**P**	**00 34 07.3**	**+0.8**
ULN				IAmb	IAmb	00 34 08.6	
	comp=Z,14nm,0.8s						
SONM	**Songino Array**	**27.93**	**327**	P	**P**	**00 34 06.4**	**-2.8**
	comp=Z,3.4nm,0.7s,baz=154,slow=11,SNR=1.4						
SONM	**Songino Array**	**27.93**	**327**	P	**P**	**00 34 06.5**	**-2.7**
SONM				IAmb	IAmb	00 34 11.5	
	comp=Z,24nm,1.5s						
CHTO	**Chiang Mai**	**28.30**	**261**	P	**P**	**00 34 11.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**28.42**	**261**	P	**P**	**00 34 13.0**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=50,slow=8.0,SNR=4.5						
KSM	**Kuching**	**30.09**	**219**	P	**P**	**00 34 29.8**	**+1.3**
KAPI	**Kappang**	**32.01**	**197**	P	**P**	**00 34 48.2**	**+2.9**
	comp=Z,10.0nm,0.5s,baz=60,slow=16,SNR=4.4						
KAPI	**Kappang**	**32.01**	**197**	P	**P**	**00 34 46.7**	**+1.4**
KAPI				IAmb	IAmb	00 34 49.9	
	comp=Z,10nm,0.5s						
SURT	**Suratani**	**32.98**	**244**	P	**P**	**00 34 58.2**	**+4.2**
SHL	**Shillong**	**33.01**	**277**	P	**P**	**00 34 53.0**	**-1.4**
PETK	**Petropavlovsk-**	**34.72**	**31**	P	**P**	**00 35 08.5**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=220,slow=5.6,SNR=1.1						
YAK	**Yakutsk**	**36.03**	**1**	P	**P**	**00 35 19.0**	**-0.9**
YAK	**Yakutsk**	**36.03**	**1**	*e*	**P**	**00 35 18.9**	**-0.9**
PSI	**Prapat**	**36.67**	**236**	LR	LR	00 50 23.7	
	comp=Z,493nm,20.2s,baz=13,slow=36						
SEY	**Seymchan**	**40.14**	**17**	P	**P**	**00 35 54.4**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=201,slow=19,SNR=1.8						
KNRA	**Kununurra**	**41.43**	**180**	P	**P**	**00 36 05.8**	**+0.2**
KNRA				IAmb	IAmb	00 36 06.3	
	comp=Z,17nm,0.8s						
MK31	**Makanchi Array**	**41.94**	**312**	P	**P**	**00 36 08.2**	**-1.4**
MKAR	**Makanchi Array**	**41.94**	**312**	P	**P**	**00 36 08.0**	**-1.6**
	comp=Z,4.6nm,0.6s,baz=98,slow=10,SNR=6.6						
MAKZ	**Makanchi**	**42.15**	**312**	P	**P**	**00 36 09.9**	**-1.4**
ZAA0	**Zalesovo Array**	**42.63**	**323**	P	**P**	**00 36 13.5**	**-1.6**
ZALV	**Zalesovo Beam**	**42.63**	**323**	P	**P**	**00 36 13.3**	**-1.8**
	comp=Z,2.4nm,0.5s,baz=112,slow=8.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**42.63**	**323**	P	**P**	**00 36 12.8**	**-2.3**
FITZ	**Fitzroy Crossi**	**43.93**	**184**	P	**P**	**00 36 25.6**	**-0.3**
	comp=Z,6.3nm,1.0s,baz=27,slow=15,SNR=1.1						
FITZ	**Fitzroy Crossi**	**43.93**	**184**	P	**P**	**00 36 26.0**	**+0.1**
KURK	**Kurchatov**	**45.22**	**317**	P	**P**	**00 36 34.5**	**-1.5**
KURBB	**Kurchatov Arra**	**45.25**	**317**	P	**P**	**00 36 34.5**	**-1.8**
	comp=Z,5.1nm,0.8s,baz=105,slow=7.8,SNR=7.4						
WB0	**Warramunga Arr**	**45.84**	**172**	P	**P**	**00 36 40.9**	**-0.2**
WB0				IAmb	IAmb	00 36 41.8	
	comp=Z,9.0nm,0.8s						
WRA	**Warramunga Arr**	**46.01**	**172**	P	**P**	**00 36 42.3**	**-0.1**
	comp=Z,6.6nm,0.6s,baz=354,slow=8.4,SNR=6.9						
WRA	**Warramunga Arr**	**46.01**	**172**	P	**P**	**00 36 42.3**	**-0.1**
WB2	**Warramunga Arr**	**46.01**	**172**	P	**P**	**00 36 42.3**	**-0.1**
WB2				IAmb	IAmb	00 36 43.2	
	comp=Z,9.6nm,0.7s						
WR0	**Warramunga Arr**	**46.05**	**172**	P	**P**	**00 36 42.7**	**0.0**
WR0				IAmb	IAmb	00 36 47.9	
	comp=Z,9.7nm,0.9s						
CTA	**Charters Tower**	**48.91**	**158**	P	**P**	**00 37 05.6**	**+0.5**
	comp=Z,3.3nm,0.6s,baz=321,slow=7.8,SNR=5.4						
CTAO	**Charters Tower**	**48.91**	**158**	P	**P**	**00 37 06.1**	**+1.0**
CTAO				IAmb	IAmb	00 37 06.6	
	comp=Z,6.5nm,0.8s						
NRIK	**Noril'sk**	**49.57**	**342**	P	**P**	**00 37 08.9**	**-0.6**
	comp=Z,5.5nm,0.6s,baz=87,slow=4.6,SNR=6.9						
NRIK	**Noril'sk**	**49.57**	**342**	P	**P**	**00 37 09.6**	**+0.1**
NRIK				IAmb	IAmb	00 37 10.9	
	comp=Z,5.5nm,0.7s						
ASAR	**Alice Springs**	**49.64**	**174**	P	**P**	**00 37 10.2**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=0.9,slow=8.6,SNR=6.7						
ASAR	**Alice Springs**	**49.64**	**174**	P	**P**	**00 37 11.0**	**+0.4**
KK31	**Karatay Array**	**49.82**	**306**	P	**P**	**00 37 12.5**	**+0.6**
KK31				IAmb	IAmb	00 37 20.9	
	comp=Z,8.9nm,0.9s						
KKAR	**Karatay Array**	**49.82**	**306**	P	**P**	**00 37 11.6**	**-0.3**
BRVK	**Borovoye**	**50.74**	**318**	P	**P**	**00 37 19.2**	**+0.6**
KBL	**Kabul**	**51.51**	**295**	P	**P**	**00 37 24.3**	**-0.7**
ABKAR	**Akbulak array**	**57.05**	**313**	P	**P**	**00 38 04.3**	**-0.5**
ABKAR				IAmb	IAmb	00 38 13.7	
	comp=Z,15nm,0.8s						
GEYT	**Alibeck**	**59.70**	**300**	P	**P**	**00 38 23.6**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=64,slow=3.4,SNR=4.6						
GEYT	**Alibeck**	**59.70**	**300**	P	**P**	**00 38 23.6**	**-0.1**
SUA	**Susitna One**	**63.08**	**32**	P	**P**	**00 38 47.4**	**+1.1**
SUA				IAmb	IAmb	00 39 06.1	
	comp=Z,6.2nm,0.8s						
BRLK	**Bradley Lake**	**63.18**	**34**	P	**P**	**00 38 47.9**	**+1.1**
MDM	**Murphy Dome**	**63.89**	**28**	P	**P**	**00 38 53.0**	**+1.6**
ILAR	**Eielson Array**	**64.48**	**28**	P	**P**	**00 38 54.4**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=262,slow=6.3,SNR=1.6						
SCRK	**Sand Creek**	**65.84**	**29**	P	**P**	**00 39 04.6**	**+0.4**
SCRK				IAmb	IAmb	00 39 12.5	
	comp=Z,13nm,1.5s						
DOT	**Dot Lake**	**65.86**	**29**	P	**P**	**00 39 04.6**	**+0.3**
DOT				IAmb	IAmb	00 39 22.1	
	comp=Z,11nm,1.2s						
VRDI	**Verde Repeater**	**66.59**	**32**	P	**P**	**00 39 09.9**	**+0.7**
VRDI				IAmb	IAmb	00 39 20.2	
	comp=Z,12nm,1.0s						
BCAR	**Beaver Creek A**	**66.98**	**30**	P	**P**	**00 39 12.5**	**+1.0**
INK	**Inuvik**	**68.96**	**23**	P	**P**	**00 39 24.0**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=310,slow=7.3,SNR=3.6						
INK	**Inuvik**	**68.96**	**23**	P	**P**	**00 39 24.2**	**+0.5**
INK				IAmb	IAmb	00 39 30.8	
	comp=Z,11nm,1.3s						
KBZ	**Khabaz**	**69.57**	**310**	P	**P**	**00 39 28.2**	**+0.3**
	comp=Z,6.2nm,0.7s,baz=102,slow=4.4,SNR=4.3						
KIV	**Kislovodsk**	**69.65**	**310**	P	**P**	**00 39 28.8**	**+0.2**
WHY	**Whitehorse**	**70.78**	**31**	P	**P**	**00 39 36.8**	**+1.6**
GEVA	**Gevas**	**71.09**	**304**		**P**	**00 39 38.4**	**+0.8**
GEVA				IAmb	IAmb	00 39 40.5	
	comp=Z,6.6nm,0.7s						
FIA1	**FINESS Array S**	**73.23**	**331**	P	**P**	**00 39 49.3**	**-0.4**
FIA1				IAmb	IAmb	00 39 59.2	
	comp=Z,7.5nm,0.8s						
FINES	**FINESS Array B**	**73.23**	**331**	P	**P**	**00 39 48.9**	**-0.8**
	comp=Z,4.6nm,0.6s,baz=72,slow=6.2,SNR=5.2						
FINES	**FINESS Array B**	**73.23**	**331**	P	**P**	**00 39 49.1**	**-0.6**
RAYN	**Ar Rayn**	**74.21**	**289**	P	**P**	**00 39 56.3**	**0.0**
AKASG	**Malin Array Be**	**75.93**	**320**	P	**P**	**00 40 04.6**	**-1.0**
	comp=Z,8.2nm,0.6s,baz=54,slow=5.9,SNR=10						
AKASG	**Malin Array Be**	**75.93**	**320**	P	**P**	**00 40 05.1**	**-0.5**
AKBB	**Malin Array Si**	**75.93**	**320**	P	**P**	**00 40 04.9**	**-0.7**
AKBB				IAmb	IAmb	00 40 05.1	
	comp=Z,12nm,0.7s						
PABE	**Paberze**	**76.75**	**326**	P	**P**	**00 40 10.3**	**+0.1**
BR131	**Keskin Array S**	**77.44**	**308**	P	**P**	**00 40 14.6**	**0.0**
BRTR	**Keskin Array B**	**77.44**	**308**	P	**P**	**00 40 14.3**	**-0.3**
	comp=Z,9.2nm,0.9s,baz=90,slow=5.1,SNR=9.5						
BRTR	**Keskin Array B**	**77.44**	**308**	P	**P**	**00 40 14.6**	**0.0**
YKA	**Yellowknife Ar**	**78.59**	**25**	P	**P**	**00 40 19.9**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=302,slow=5.1,SNR=3.4						
NC405	**NORSAR Array S**	**79.43**	**334**	P	**P**	**00 40 24.4**	**-0.6**
NC405				IAmb	IAmb	00 40 24.5	
	comp=Z,15nm,0.8s						
CSS	**Mathiatis**	**79.59**	**304**	P	**P**	**00 40 26.0**	**-0.4**
CSS				IAmb	IAmb	00 40 26.9	
	comp=Z,12nm,0.6s						
BUR08	**Bucovina Ar. S**	**79.63**	**318**	P	**P**	**00 40 26.8**	**+0.3**
BURAR	**Bucovina Array**	**79.63**	**318**	P	**P**	**00 40 26.5**	**+0.1**
NB201	**NORSAR Array S**	**79.63**	**334**	P	**P**	**00 40 25.8**	**-0.4**
NOA	**NORSAR Array S**	**79.67**	**334**	P	**P**	**00 40 25.2**	**-1.2**
	comp=Z,4.0nm,0.7s,baz=52,slow=5.5,SNR=6.0						
NC204	**NORSAR Array S**	**79.71**	**334**	P	**P**	**00 40 26.0**	**-0.6**
MLR	**Muntele Rosu**	**80.15**	**316**	P	**P**	**00 40 29.6**	**+0.2**
MLR				IAmb	IAmb	00 40 30.9	
	comp=Z,9.8nm,1.0s						
SUMG	**Summit**	**81.29**	**356**	P	**P**	**00 40 37.5**	**+2.3**
SCO	**Scoresbysund**	**81.53**	**350**	P	**P**	**00 40 36.2**	**+0.2**
SCO				IAmb	IAmb	00 40 37.5	
	comp=Z,21nm,1.5s						
MORC	**Moravsky Berou**	**82.98**	**322**	*e*P	**P**	**00 40 43.7**	**-0.5**
VTS	**Vitosha**	**83.22**	**314**	P	**P**	**00 40 45.3**	**-0.4**
VTS				IAmb	IAmb	00 40 47.3	
	comp=Z,12nm,1.1s						
VRAC	**Vranov**	**83.75**	**322**	*e*P	**P**	**00 40 47.7**	**-0.4**
KRUC	**Moravsky**	**84.00**	**322**	*e*P	**P**	**00 40 49.4**	**+0.1**
CLL	**Collm**	**84.53**	**325**	*e*P	**P**	**00 40 52.0**	**0.0**
	comp=Z,8.0nm,0.8s						
CLL				*i*		00 41 02.4	
CLL	**Collm**	**84.53**	**325**	*e*pP	**P**	**00 40 51.8**	**-0.2**
CONA	**Conrad Observa**	**84.92**	**321**	*e*P	**P**	**00 40 53.6**	**-0.5**
	comp=Z,8.5nm,1.4s						
ARSA	**Arzberg**	**85.48**	**321**	*e*P	**P**	**00 40 57.9**	**+1.0**
	comp=Z,3.5nm,1.0s						
GERES	**GERESS Array B**	**85.59**	**323**	P	**P**	**00 40 57.1**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=28,slow=6.0,SNR=3.9						
MOA	**Molln**	**85.85**	**322**	*e*P	**P**	**00 40 59.7**	**+1.0**
	comp=Z,1.9nm,0.7s						
KBA	**Koelnbreinsper**	**86.80**	**322**	*e*P	**P**	**00 41 06.0**	**+2.4**
	comp=Z,2.1nm,0.5s						
KASTN	**Kahler Asten**	**86.89**	**327**	*e*pP	**P**	**00 41 07.4**	**+3.6**
WATA	**Walderalm**	**87.63**	**323**	*e*P	**P**	**00 41 11.2**	**+3.6**
	comp=Z,1.2nm,0.5s						
WTTA	**Wattenberg**	**87.64**	**323**	*e*P	**P**	**00 41 10.1**	**+2.4**
	comp=Z,4.0nm,0.7s						
MOTA	**Moosalm**	**87.88**	**323**	*e*P	**P**	**00 41 10.9**	**+2.1**
	comp=Z,4.3nm,1.0s						
SQTA	**Sankt Quirin**	**87.90**	**323**	*e*P	**P**	**00 41 08.5**	**-0.3**
	comp=Z,0.2nm,0.3s						
RETA	**Reutte**	**87.98**	**323**	*e*P	**P**	**00 41 12.5**	**+3.3**
	comp=Z,0.7nm,0.5s						
FETA	**Feichten**	**88.28**	**323**	*e*P	**P**	**00 41 13.4**	**+2.7**
	comp=Z,4.7nm,1.1s						
DAVA	**Damuels**	**88.58**	**323**	*e*P	**P**	**00 41 15.1**	**+2.9**
	comp=Z,5.1nm,0.7s						

TAP ***29*** *00:30:10.7,24.08N×122.68E,h36km,ML3.6,C*
JMA ***29*** *00:30:10.5±0.2,24.03N×122.61E,h20km±3km,M2.8*

ISC 29 00:30:08.5±1.2,24.02N±0.02×122.62E±0.02,h5km±10km, n93,σ0$71/131,3C-7D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.52**	**35**	P	**Pb**	**00 30 20.7**	**+0.6**
JYNG				S	**Sb**	**00 30 27.8**	**-0.2**
YOJ	**Yonaguni jima**	**0.57**	**40**	P	**Pb**	**00 30 21.3**	**+0.4**
YOJ				S	**Sb**	**00 30 29.0**	**-0.2**
YOJ	**Yonaguni jima**	**0.57**	**40**	⇓P	**Pb**	**00 30 21.3**	**+0.4**
	baz=43						
YOJ				S	**Sb**	**00 30 28.9**	**-0.4**
	baz=43						
EWUT	**Wuta**	**0.87**	**299**	P	**Pn**	**00 30 27.1**	**-0.3**
	baz=294						
EWUT				S	**Sn**	**00 30 39.9**	**-0.5**
	baz=294						
TWC	**Suao**	**0.91**	**310**	⇓*i*P	**Pn**	**00 30 27.4**	**-0.5**
	baz=305						
TWC				S	**Sb**	**00 30 40.0**	**+0.9**
	baz=305						
HWA	**Hwalien**	**0.93**	**267**	*e*P	**Pn**	**00 30 27.8**	**-0.3**
	baz=251						
TWD	**Chiawan**	**0.93**	**274**	P	**Pn**	**00 30 28.2**	**0.0**
	baz=270						
TWD				*e*S	**Sb**	**00 30 40.7**	**+0.9**
	baz=270						
NACB	**Ninganchiao**	**0.94**	**279**	⇑P	**Pn**	**00 30 28.0**	**-0.4**
	baz=262						
NACB				S	**Sb**	**00 30 41.2**	**+1.1**
	baz=262						
NDS	**Dongshan**	**1.02**	**307**	⇓P	**Pn**	**00 30 29.7**	**+0.2**
	baz=302						
NDS				*e*S	**Sn**	**00 30 43.5**	**-0.7**
	baz=302						
ETLH	**Xiulin Townshi**	**1.05**	**280**	P	**Pn**	**00 30 29.8**	**-0.2**
	baz=277						
ETLH				*e*S	**Sn**	**00 30 44.5**	**-0.5**
	baz=277						
IRIF	**Iriomote-Funau**	**1.06**	**73**	P	**Pn**	**00 30 30.3**	**+0.3**
IRIF				*e*S	**Sb**	**00 30 44.0**	**+0.4**
HATJ	**Hateruma jima**	**1.09**	**88**	P	**Pn**	**00 30 30.5**	**+0.1**
HATJ				*e*S	**Sn**	**00 30 45.4**	**-0.4**
NTC	**Toucheng**	**1.09**	**319**	⇓P	**Pb**	**00 30 30.1**	**+0.2**
	baz=328						
NTC				*e*S	**Sn**	**00 30 45.7**	**-0.3**
	baz=328						
TWE	**Neicheng**	**1.11**	**309**	*i* P	**Pn**	**00 30 31.0**	**+0.4**
	baz=305						
TWE				*i* S	**Sb**	**00 30 45.5**	**+0.6**
	baz=305						
TWB1	**Santiao Chiao**	**1.13**	**330**	⇓*i*P	**Pg**	**00 30 30.1**	**-0.2**
	baz=335						
TWB1				S	**Sg**	**00 30 45.2**	**+0.2**
	baz=335						
ENTT	**Nioudou**	**1.14**	**303**	⇑P	**Pn**	**00 30 31.4**	**+0.4**
	baz=299						
ENTT				S	**Sb**	**00 30 46.4**	**+0.7**
	baz=299						
EGFH	**Guangfu**	**1.14**	**252**	*e*P	**Pn**	**00 30 31.3**	**+0.2**
	baz=250						
EGFH				*e*S	**Sb**	**00 30 46.4**	**+0.5**
	baz=250						
NDT	**Datong Townshi**	**1.16**	**300**	*e*P	**Pn**	**00 30 32.0**	**+0.6**
	baz=284						
NDT				*e*S	**Sb**	**00 30 47.1**	**+0.7**
	baz=284						
TIPB	**Shuangxi**	**1.19**	**323**	⇑P	**Pg**	**00 30 31.3**	**0.0**
	baz=331						
TIPB				S	**Sb**	**00 30 47.0**	**-0.1**
	baz=331						
NNSB	**Datong**	**1.20**	**290**	P	**Pn**	**00 30 32.0**	**+0.1**
	baz=286						
NNSH	**Datong**	**1.20**	**290**	⇓P	**Pn**	**00 30 32.2**	**+0.3**
	baz=286						
NNSH				*e*S	**Sb**	**00 30 47.6**	**+0.2**
	baz=286						
NNS	**Nan Shan**	**1.21**	**290**	*e*P	**Pn**	**00 30 32.5**	**+0.3**
	baz=286						
HGSD	**Ruisui**	**1.21**	**244**	P	**Pg**	**00 30 31.8**	**+0.1**
	baz=243						
HGSD				*e*S	**Sg**	**00 30 46.7**	**-0.8**
	baz=243						
WHF	**Hehuan Shan**	**1.24**	**276**	P	**Pb**	**00 30 32.7**	**+0.1**
	baz=273						
WHF				*e*S	**Sb**	**00 30 49.3**	**+0.3**
	baz=273						
NWLT	**Wulai**	**1.26**	**307**	*e*P	**Pn**	**00 30 33.3**	**+0.6**
	baz=315						
FUSS	**Fushou**	**1.27**	**280**	*e*P	**Pb**	**00 30 33.2**	**+0.2**
	baz=265						
FUSS				*e*S	**Sb**	**00 30 50.5**	**+0.7**
	baz=265						
WFSB	**Wu-fen Shan**	**1.29**	**324**	⇓P	**Pg**	**00 30 32.7**	**-0.5**
	baz=320						
WFSB				S	**Sg**	**00 30 49.7**	**-0.3**
	baz=320						
JKRS	**Kuro-shima**	**1.29**	**80**	P	**Pb**	**00 30 33.9**	**+0.7**
YHNB	**Yeheng**	**1.30**	**300**	*e*P	**Pb**	**00 30 33.6**	**+0.2**
	baz=283						
NSK	**Sanguang**	**1.32**	**300**	*e*P	**Pb**	**00 30 33.9**	**+0.2**
	baz=296						
NSK				*e*S	**Sg**	**00 30 50.9**	**0.0**
	baz=296						
CHGB	**Renai**	**1.32**	**272**	*e*P	**Pg**	**00 30 33.8**	**0.0**
	baz=259						
OWD	**Renai**	**1.32**	**267**	*e*P	**Pn**	**00 30 33.8**	**+0.2**
	baz=264						
TWT	**Tachien**	**1.33**	**280**	*e*P	**Pb**	**00 30 35.1**	**+1.0**
	baz=266						
TWA	**Mucha**	**1.34**	**316**	*e*P	**Pg**	**00 30 34.3**	**+0.2**
	baz=311						
TDCB	**Techi**	**1.35**	**280**	*e*P	**Pb**	**00 30 34.6**	**+0.3**
	baz=266						
TNOU	**National Taiwa**	**1.36**	**326**	*e*P	**Pn**	**00 30 33.7**	**-0.4**
	baz=322						
TNOU				*e*S	**Sg**	**00 30 51.3**	**-0.9**
	baz=322						
YULB	**Yu-li**	**1.36**	**243**	*e*P	**Pn**	**00 30 34.2**	**+0.1**
	baz=241						
NHDH	**Xindian Distri**	**1.36**	**314**	*e*P	**Pg**	**00 30 34.7**	**0.0**
	baz=322						
EYUL	**Yuli**	**1.37**	**241**	*e*P	**Pg**	**00 30 34.9**	**+0.2**
	baz=230						
VWDT	**VWDT**	**1.38**	**259**	*e*P	**Pb**	**00 30 34.9**	**+0.2**
	baz=257						
VWDT				*e*S	**Sb**	**00 30 52.3**	**-0.2**
	baz=257						
TWF1	**Yuli**	**1.38**	**241**	*e*P	**Pn**	**00 30 34.7**	**+0.3**
	baz=230						
TATO	**Taipei**	**1.40**	**313**	*e*P	**Pg**	**00 30 35.3**	**0.0**
	baz=308						
JIJ	**Ishigaki jima**	**1.44**	**76**	P	**Pb**	**00 30 35.5**	**-0.2**
JIJ				*e*S	**Sg**	**00 30 54.8**	**+0.1**
FULB	**Fuli**	**1.46**	**236**	*e*S	**Sb**	**00 30 53.4**	**-1.7**
	baz=225						
YM01	**YM01**	**1.47**	**320**	*e*P	**P

TWK	**Hsinying**	**2.09**	**249**	*eP*	**Pb**	**00 30 46.7**	**-0.3**
	baz=247						
TWK				*eS*	**Sb**	**00 31 12.5**	**-0.7**
	baz=247						
SSD	**Sandimen**	**2.22**	**235**	*eP*	**Pn**	**00 30 47.7**	**+1.8**
	baz=228						
TSMG	**Majia**	**2.24**	**234**	*eP*	**Pb**	**00 30 48.8**	**-0.6**
	baz=227						
MASBT	**Mashibuluo**	**2.30**	**233**	*eP*	**Pn**	**00 30 48.9**	**+1.8**
	baz=226						
EAST	**Anshuo**	**2.30**	**225**	*eP*	**Pn**	**00 30 48.2**	**+1.0**
	baz=224						
SLIU	**Shizi**	**2.46**	**223**	*eP*	**Pn**	**00 30 50.4**	**+1.2**
	baz=213						
TSEB	**Hengchuen, Pin**	**2.64**	**217**	*eS*	**Sn**	**00 31 25.2**	**+1.1**
	baz=224						
TWKBT	**Hengchun**	**2.66**	**219**	*eP*	**Pn**	**00 30 53.4**	**+1.5**
	baz=217						
TWKBT				*eS*	**Sn**	**00 31 24.7**	**+0.2**
	baz=217						
TWK1	**Hengchun**	**2.66**	**219**	*eP*	**Pn**	**00 30 53.7**	**+1.7**
	baz=217						
TWK1				*eS*	**Sn**	**00 31 24.9**	**+0.4**
	baz=217						
WDGT	**Dungji**	**2.81**	**255**	P	**Pn**	**00 30 55.6**	**+1.5**
	baz=253						
WDGT				*eS*	**Sn**	**00 31 28.3**	**-0.1**
	baz=253						
PNG	**Penghu**	**2.84**	**261**	*eS*	**Sn**	**00 31 29.1**	**+0.1**
	baz=275						
VWUC	**VWUC**	**3.04**	**289**	*eP*	**Pn**	**00 30 57.0**	**-0.2**
	baz=286						
PTMZ	**Houxiangcun**	**3.34**	**288**	*eP*	**Pn**	**00 31 01.5**	**+0.2**
	baz=286						

*IDC **29** 00:48:15.7±4.7, 27°.44N×93°.46E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/54, mbtmp3.3/4, Error ellipse: s-maj=448.6km s-min=23.9km az=60.0*
*NDI **29** 00:48:15.9±1.8, 26°.85N×92°.47E, h6km±6km, ML3.6*
ISC 29 00:48:15.4±1.7, **26°.88N**±0°.07×**92°.40E**±0°.05, **h9**km±11km, **n11**, σ0**°87**/17, **mb3.4**/4, **2C**, **Northeastern India**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time (h m s)	Res ISC
TEZP	**TEZPUR**	**0.44**	**126**	*eP*	**Pg**	**00 48 23.2**	**-0.8**
TEZP				*eS*	**Sg**	**00 48 28.6**	**-1.1**
TEZP				IAML		00 48 29.1	
	comp=N,3μm,0.1s						
GUWA	**GUWAHATI**	**0.93**	**223**	*eP*	**Pn**	**00 48 34.4**	**-0.4**
GUWA				*eS*	**Sn**	**00 48 47.6**	**-0.6**
GUWA				IAML		00 48 52.6	
	comp=E,1μm,0.2s						
GUWA				IAML		00 48 52.7	
	comp=N,2μm,0.2s						
ITAN	**ITANAGAR**	**1.21**	**77**	*eP*	**Pg**	**00 48 39.6**	**+1.0**
ITAN				*eS*	**Sb**	**00 48 53.8**	**-0.4**
ITAN				IAML		00 48 57.9	
	comp=N,2μm,0.3s						
ITAN				IAML		00 48 58.0	
	comp=E,3μm,0.2s						
SHL	**Shillong**	**1.39**	**200↑**	*eP*	**Pg**	**00 48 42.3**	**+0.3**
SHL				*eS*	**Sg**	**00 49 01.3**	**+1.3**
SHL				IAML		00 49 03.8	
	comp=N,752nm,0.2s						
SHL				IAML		00 49 04.1	
	comp=E,777nm,0.2s						
ZIRO	**ZIRO**	**1.44**	**63**	*eP*	**Pg**	**00 48 43.1**	**-0.1**
ZIRO				*eS*	**Sn**	**00 49 00.3**	**-0.8**
ZIRO				IAML		00 49 08.2	
	comp=Z,1μm,0.3s						
KOHI	**KOHIMA**	**1.92**	**127↑**	*eP*	**Pn**	**00 48 49.3**	**+0.8**
MOKO	**MOKOCHONG**	**1.97**	**106**	*eP*	**Pn**	**00 48 49.8**	**+0.6**
MOKO				*eS*	**Sn**	**00 49 14.7**	**+0.6**
MOKO				IAML		00 49 18.6	
	comp=E,519nm,0.3s						
MOKO				IAML		00 49 18.7	
	comp=N,415nm,0.2s						
MKAR	**Makanchi Array**	**21.43**	**341**	P	**P**	**00 53 04.6**	**+0.8**
	comp=N,0.6nm,0.7s,baz=159,slow=12,SNR=5.4						
KURBB	**Kurchatov Arra**	**25.98**	**340**	P	**P**	**00 53 47.0**	**-1.3**
	comp=N,0.2nm,0.7s,baz=151,slow=9.1,SNR=2.6						
WRA	**Warramunga Arr**	**51.80**	**134**	P	**P**	**00 58 34.8**	**-0.2**
	comp=N,0.2nm,0.4s,baz=326,slow=6.8,SNR=4.6						
ASAR	**Alice Springs**	**64.29**	**138**	P	**P**	**00 58 51.8**	**+0.3**
	comp=N,0.7nm,0.8s,baz=326,slow=6.6,SNR=6.3						

*IDC **29** 00:51:14.4±1.6, 33°.18S×178°.90W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.6/37, mbtmp3.9/2, Error ellipse: s-maj=67.0km s-min=40.8km az=177.0*
*NEIC **29** 00:51:19.7±0.8, 33°.25S±0°.09×178°.99W±0°.04, h35km±2km, mb4.3/6, Error ellipse: s-maj=15.1km s-min=5.7km az=167.0*
ISC 29 00:51:20.2±0.9, **33°.2S**±0°.1×**178°.9W**±0°.2, **h45**km, **n25**, σ1**°46**/19, **mb4.2**/6, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time (h m s)	Res ISC
RAO	**Raoul Island**	**4.07**	**13**	Pn	**Pn**	**00 52 18.0**	**-1.8**
MXZ	**Matakaoa Point**	**4.87**	**207**	Pn	**Pn**	**00 52 27.4**	**-3.5**
URZ	**Urewera**	**5.95**	**212**	Pn	**Pn**	**00 52 44.6**	**-1.1**
OUZ	**Omahuta**	**6.50**	**250**	Pn	**Pn**	**00 52 52.4**	**-0.8**
BKZ	**Black Stump Fm**	**6.98**	**211**	Pn	**Pn**	**00 52 57.6**	**-2.2**
WKZ	**Wanaka**	**14.87**	**215**	P	**P**	**00 54 52.3**	**0.0**
ASAR	**Alice Springs**	**42.25**	**270**	P	**P**	**00 59 09.6**	**+0.3**
	1.1nm,0.7s,baz=107,slow=7.3,SNR=14						
WR0	**Warramunga Arr**	**43.32**	**276**	P	**P**	**00 59 18.9**	**+1.0**
WR0				IAmb	IAmb	00 59 23.2	
	comp=Z,10nm,1.4s						
WB2	**Warramunga Arr**	**43.49**	**276**	P	**P**	**00 59 19.1**	**-0.2**
WB2				IAmb	IAmb	00 59 26.2	
	comp=Z,8.9nm,1.3s						
WRA	**Warramunga Arr**	**43.50**	**276**	P	**P**	**00 59 19.8**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=115,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**43.50**	**276**	P	**P**	**00 59 19.6**	**+0.2**
WB0	**Warramunga Arr**	**43.53**	**276**	P	**P**	**00 59 19.6**	**-0.1**
WB0				IAmb	IAmb	00 59 33.7	
	comp=Z,4.5nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.63**	**273**	P	**P**	**01 00 22.5**	**0.0**
QSPA	**South Pole Qui**	**56.88**	**180**	P	**P**	**01 01 03.1**	**+2.9**
QSPA				IAmb	IAmb	01 01 19.2	
	comp=Z,5.4nm,1.4s						
H03S2	**Juan Fernandez**	**79.56**	**124**	T	T	02 31 38.8	
	baz=234,slow=74,SNR=6.8						
H03S1	**Juan Fernandez**	**79.57**	**124**	T	T	02 31 41.5	
	baz=234,slow=74,SNR=5.5						
H03S3	**Juan Fernandez**	**79.58**	**124**	T	T	02 31 38.9	
	baz=234,slow=74,SNR=5.3						
H03N3	**Juan Fernandez**	**79.77**	**123**	T	T	02 31 45.3	
	baz=240,slow=72,SNR=25						
H03N2	**Juan Fernandez**	**79.77**	**123**	T	T	02 31 56.4	
	baz=240,slow=72,SNR=20						
H03N1	**Juan Fernandez**	**79.79**	**123**	T	T	02 31 56.7	
	baz=240,slow=72,SNR=31						
FINES	**FINESS Array B**	**147.50**	**338**	PKPbc	**PKPbc**	**01 10 59.1**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=55,slow=3.2,SNR=18						
FINES	**FINESS Array B**	**147.50**	**338**		**PKPbc**	**01 10 59.3**	**+0.8**
NOA	**NORSAR Array B**	**151.41**	**350**	PKPbc	**PKiKP**	**01 11 09.1**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=14,slow=4.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**159.99**	**182**	PKPab	**PKPab**	**01 11 54.9**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=190,slow=4.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**159.99**	**182**		**PKPab**	**01 11 55.5**	**+1.0**

*IDC **29** 01:22:21.1±1.0, 27°.48N×85°.90E, h0km, mb3.8/10, mb1 3.9/12, mb1mx3.6/49, mbtmp3.8/12, ML4.0/2, Error ellipse: s-maj=36.4km s-min=17.7km az=55.0*
ISC 29 01:22:23.9±1.0, **27°.5N**±0°.2×**86°.0E**±0°.2, **h19**km, **n12**, σ0**°74**/12, **mb3.8**/10, **Nepal**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time (h m s)	Res ISC
CMAR	**Chiang Mai Arr**	**14.93**	**124**	Pn	**Pn**	**01 25 53.1**	**-0.9**
	0.3nm,0.3s,baz=298,slow=14,SNR=4.3						
MKAR	**Makanchi Array**	**19.47**	**352**	P	**Pn**	**01 26 50.1**	**-0.8**
	0.3nm,0.3s,baz=174,slow=10,SNR=13						
KURBB	**Kurchatov Arra**	**23.78**	**348**	P	**P**	**01 27 35.4**	**+0.3**
	1.5nm,0.2s,baz=169,slow=9.3,SNR=5.9						
SONM	**Songino Array**	**25.79**	**33**	P	**P**	**01 27 54.5**	**+0.8**
	1.2nm,0.5s,baz=214,slow=11,SNR=2.6						
ZALV	**Zalesovo Beam**	**26.43**	**358**	P	**P**	**01 27 59.5**	**+0.3**
	0.6nm,0.4s,baz=155,slow=8.2,SNR=4.9						
BVAR	**Borovoye Array**	**28.01**	**340**	P	**P**	**01 28 13.9**	**+0.3**
	0.3nm,0.5s,baz=171,slow=9.8,SNR=2.8						
FINES	**FINESS Array B**	**51.92**	**328**	P	**P**	**01 31 31.0**	**-0.1**
	0.7nm,0.5s,baz=118,slow=7.6,SNR=4.7						
NOA	**NORSAR Array B**	**59.02**	**327**	P	**P**	**01 32 21.5**	**-0.8**
	0.3nm,0.7s,baz=92,slow=6.5,SNR=1.7						
KEST	**Kesra**	**64.29**	**299**	P	**P**	**01 32 58.9**	**+0.6**
	3.1nm,0.8s,baz=347,slow=19,SNR=4.5						
WRA	**Warramunga Arr**	**66.44**	**130**	P	**P**	**01 33 13.0**	**+0.8**
	0.6nm,0.5s,baz=323,slow=6.5,SNR=13						
ASAR	**Alice Springs**	**68.74**	**133**	P	**P**	**01 33 27.5**	**+0.8**
	0.4nm,0.6s,baz=316,slow=6.5,SNR=3.0						
ESDC	**Sonseca Array**	**72.99**	**306**	P	**P**	**01 33 51.8**	**-0.7**
	0.3nm,0.9s,baz=40,slow=6.0,SNR=4.5						

*UCR **29** 01:25:20.2±1.7, 13°.27N×89°.61W, h62km±10km, ML4.0*
*SNET **29** 01:25:20.1±1.5, 13°.25N×89°.61W, h61km±9km, ML4.0*
*INET **29** 01:25:20.8, 13°.27N×89°.57W, h56km, MW4.0*
*NEIC **29** 01:25:23.0±1.9, 13°.42N±0°.04×89°.36W±0°.09, h69km±6km, mb4.4/10, Md4.0(SNET), Error ellipse: s-maj=14.3km s-min=2.6km az=66.0*
*GCG **29** 01:25:22.2±0.3, 13°.84N×89°.83W, h151km±32km, MD4.0*
*IDC **29** 01:25:24.0±1.6, 13°.59N×89°.44W, h81km±13km, mb3.1/4, mb1 3.7/7, mb1mx3.3/38, mbtmp3.7/7, Error ellipse: s-maj=40.7km s-min=10.0km az=43.0*
ISC 29 01:25:21.4±0.9, **13°.34N**±0°.06×**89°.54W**±0°.04, **h69**km±6km, **n88**, σ1**°18**/124, **mb4.1**/7, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time (h m s)	Res ISC
PMON	**Piamonte**	**0.43**	**30**	*eP*		**Pn**	**01 25 32.6**	**-1.0**
PMON	**Piamonte**	**0.43**	**30**	*eP*		**Pn**	**01 25 32.6**	**-1.0**
SNET	**Serv Nac Est T**	**0.46**	**40**	*eP*		**Pn**	**01 25 32.9**	**-1.0**
SNET				*eS*		**Sn**	**01 25 43.0**	**0.0**
SNET				IAML			01 25 50.2	
	comp=Z,4μm,0.3s							
SNET	**Serv Nac Est T**	**0.46**	**40**	*eP*		**Pn**	**01 25 32.9**	**-1.0**
SNET				*eS*		**Sn**	**01 25 43.0**	**0.0**
SNET				IAML			01 25 50.2	
	comp=Z,4μm,0.3s							
SNET	**Serv Nac Est T**	**0.46**	**40**			**Pn**	**01 25 32.9**	**-1.0**
SNET					Sn	**Sn**	**01 25 42.7**	**-0.2**
BOQS	**Boqueron**	**0.47**	**32**	*i P*		**Pn**	**01 25 33.4**	**-0.8**
BOQS	**Boqueron**	**0.47**	**32**	*i P*		**Pn**	**01 25 33.4**	**-0.8**
CEVE	**Cerro Verde**	**0.49**	**350**	*eP*		**Pn**	**01 25 33.4**	**-1.1**
CEVE				*eS*		**Sn**	**01 25 44.3**	**+0.4**
CEVE				IAML			01 25 49.4	
	comp=Z,10μm,0.3s							
CEVE	**Cerro Verde**	**0.49**	**350**	*eP*		**Pn**	**01 25 33.4**	**-1.1**
CEVE				*eS*		**Sn**	**01 25 44.3**	**+0.4**
CEVE				IAML			01 25 49.4	
	comp=Z,10μm,0.3s							
UESS	**Universidad de**	**0.50**	**41**	*eP*		**Pn**	**01 25 33.7**	**-0.5**
UESS				*eS*		**Sn**	**01 25 44.3**	**+0.7**
UESS				IAML			01 25 46.1	
	comp=Z,7μm,0.1s							
UESS	**Universidad de**	**0.50**	**41**	*eP*		**Pn**	**01 25 33.7**	**-0.5**
UESS				*eS*		**Sn**	**01 25 44.3**	**+0.7**
UESS				IAML			01 25 46.1	
	comp=Z,7μm,0.1s							
SBLS	**San Blas**	**0.51**	**351**	*eP*		**Pn**	**01 25 33.6**	**-0.9**
SBLS	**San Blas**	**0.51**	**351**	*eP*		**Pn**	**01 25 33.6**	**-0.9**
UDBS	**Universidad Do**	**0.53**	**45**	*eP*		**Pn**	**01 25 34.0**	**-0.5**
UDBS				*eS*		**Sn**	**01 25 44.7**	**+0.6**
UDBS	**Universidad Do**	**0.53**	**45**	*eP*		**Pn**	**01 25 34.0**	**-0.5**
UDBS				*eS*		**Sn**	**01 25 44.7**	**+0.6**
SNJE	**San Jose**	**0.53**	**353**	*eP*		**Pn**	**01 25 34.0**	**-0.8**
SNJE	**San Jose**	**0.53**	**353**	*eP*		**Pn**	**01 25 34.0**	**-0.8**
AEIL	**Aeropuerto Ilo**	**0.54**	**49**	*eP*		**Pn**	**01 25 34.4**	**-0.2**
AEIL				*eS*		**Sn**	**01 25 45.9**	**+1.5**
AEIL				IAML			01 25 50.8	
	comp=Z,7μm,0.4s							
AEIL	**Aeropuerto Ilo**	**0.54**	**49**	*eP*		**Pn**	**01 25 34.4**	**-0.2**
AEIL				*eS*		**Sn**	**01 25 45.9**	**+1.5**
AEIL				IAML			01 25 50.8	
	comp=Z,7μm,0.4s							
RTR	**El Retiro**	**0.57**	**349**	*eP*		**Pn**	**01 25 34.3**	**-0.7**
RTR	**El Retiro**	**0.57**	**349**	*eP*		**Pn**	**01 25 34.3**	**-0.7**
LFU	**La Fuente**	**0.58**	**45**	*i P*		**Pn**	**01 25 34.8**	**-0.2**
LFU	**La Fuente**	**0.58**	**45**	*i P*		**Pn**	**01 25 34.8**	**-0.2**
LBRS	**Las Brisas**	**0.62**	**50**	*eP*		**Pn**	**01 25 35.3**	**-0.2**
LBRS	**Las Brisas**	**0.62**	**50**	*eP*		**Pn**	**01 25 35.3**	**-0.2**
PAVA	**Las Pavas**	**0.69**	**57**	*eP*		**Pn**	**01 25 36.2**	**-0.1**
PAVA				*eS*		**Sn**	**01 25 48.7**	**+1.5**
PAVA				IAML			01 25 49.8	
	comp=Z,8μm,0.4s							
PAVA	**Las Pavas**	**0.69**	**57**	*eP*		**Pn**	**01 25 36.2**	**-0.1**
PAVA				*eS*		**Sn**	**01 25 48.7**	**+1.5**
PAVA				IAML			01 25 49.8	
	comp=Z,8μm,0.4s							
COEG	**Centro de Oper**	**0.70**	**66**	*eP*		**Pn**	**01 25 35.6**	**-0.7**
COEG				*eS*		**Sn**	**01 25 47.9**	**+0.6**
COEG				IAML			01 25 51.0	
	comp=Z,5μm,0.6s							
COEG	**Centro de Oper**	**0.70**	**66**	*eP*		**Pn**	**01 25 35.6**	**-0.7**
COEG				*eS*		**Sn**	**01 25 47.9**	**+0.6**
COEG				IAML			01 25 51.0	
	comp=Z,5μm,0.6s							
TECO	**Alcaldia de Te**	**0.76**	**75**	*eP*		**Pn**	**01 25 37.6**	**+0.6**
TECO				*eS*		**Sn**	**01 25 49.8**	**+1.3**
UESV	**Universidad de**	**0.79**	**68**	*eP*		**Pn**	**01 25 37.2**	**-0.1**
UESV				*eS*		**Sn**	**01 25 50.2**	**+1.2**
UESV	**Universidad de**	**0.79**	**68**	*eP*		**Pn**	**01 25 37.2**	**-0.1**
UESV				*eS*		**Sn**	**01 25 50.2**	**+1.2**
COEB	**Comit de Eme**	**0.99**	**81**	*eP*		**Pn**	**01 25 39.2**	**-0.7**
COEB				*eS*		**Sn**	**01 25 53.6**	**0.0**
COEB	**Comit de Eme**	**0.99**	**81**	*eP*		**Pn**	**01 25 39.2**	**-0.7**
COEB				*eS*		**Sn**	**01 25 53.6**	**0.0**
LLGN	**La Laguna**	**1.00**	**35**	*eP*		**Pn**	**01 25 40.0**	**0.0**
LLGN				*eS*		**Sn**	**01 25 55.1**	**+1.3**
LLGN				IAML			01 25 57.6	
	comp=Z,2μm,0.6s							
LLGN	**La Laguna**	**1.00**	**35**	*eP*		**Pn**	**01 25 40.0**	**0.0**
LLGN				*eS*		**Sn**	**01 25 55.1**	**+1.3**
LLGN				IAML			01 25 57.6	
	comp=Z,2μm,0.6s							
TECA	**Tecapa**	**1.02**	**81**	*eP*		**Pn**	**01 25 39.7**	**-0.5**
TECA	**Tecapa**	**1.02**	**81**	*eP*		**Pn**	**01 25 39.7**	**-0.5**
MTO3	**Montecristo**	**1.07**	**9**	*eP*		**Pn**	**01 25 40.9**	**-0.1**
MTO3				*eS*		**Sn**	**01 25 56.4**	**+0.9**
MTO3	**Montecristo**	**1.07**	**9**	*eP*		**Pn**	**01 25 40.9**	**-0.1**
MTO3				*eS*		**Sn**	**01 25 56.4**	**+0.9**
MTO3	**Montecristo**	**1.07**	**9**	Pn		**Pn**	**01 25 41.1**	**+0.1**
MTO3					Sn	**Sn**	**01 25 55.8**	**+0.3**
PACA	**Pacayal**	**1.19**	**84**	*eP*		**Pn**	**01 25 42.9**	**+0.5**
PACA				*eS*		**Sn**	**01 26 00.2**	**+2.1**
PACA	**Pacayal**	**1.19**	**84**	*eP*		**Pn**	**01 25 42.9**	**+0.5**
PACA				*eS*		**Sn**	**01 26 00.2**	**+2.1**
LCY	**Lacayo**	**1.21**	**86**	*eP*		**Pn**	**01 25 43.3**	**+0.6**
LCY	**Lacayo**	**1.21**	**86**	*eP*		**Pn**	**01 25 43.3**	**+0.6**
ESQI	**Esquipulas**	**1.23**	**9**	*eP*		**Pn**	**01 25 43.4**	**+0.4**
ESQI				*eS*		**Sn**	**01 26 01.5**	**+2.5**
ESQI	**Esquipulas**	**1.23**	**9**	Pn		**Pn**	**01 25 43.3**	**+0.3**
ESQI					Sn	**Sn**	**01 25 59.9**	**+0.9**
JUCU	**Jucuarįn**	**1.26**	**94**	*eP*		**Pn**	**01 25 42.4**	**-0.8**
JUCU				*eS*		**Sn**	**01 25 59.1**	**-0.4**
JUCU	**Jucuarįn**	**1.26**	**94**	*eP*		**Pn**	**01 25 42.4**	**-0.8**
JUCU				*eS*		**Sn**	**01 25 59.1**	**-0.4**
FAGO	**Alcalda de S**	**1.44**	**75**	*eP*		**Pn**	**01 25 45.0**	**-0.6**
FAGO				*eS*		**Sn**	**01 26 03.7**	**0.0**
FAGO	**Alcalda de S**	**1.44**	**75**	*eP*		**Pn**	**01 25 45.0**	**-0.6**
FAGO				*eS*		**Sn**	**01 26 03.7**	**0.0**
NBG	**Las Nubes**	**1.47**	**328**	*eP*		**Pn**	**01 25 47.4**	**+1.2**
PCG	**Pacaya**	**1.48**	**315**	*eP*		**Pn**	**01 25 47.7**	**+1.4**
LCND	**La Caada**	**1.60**	**91**	*eP*		**Pn**	**01 25 47.6**	**-0.2**
LCND				*eS*		**Sn**	**01 26 08.8**	**+1.2**
LCND				IAML			01 26 10.7	
	comp=Z,1μm,0.5s							
LCND	**La Caada**	**1.60**	**91**	*eP*		**Pn**	**01 25 47.6**	**-0.2**
LCND				*eS*		**Sn**	**01 26 08.8**	**+1.2**
LCND				IAML			01 26 10.7	
	comp=Z,1μm,0.5s							
FUG	**Fuego 3**	**1.68**	**311**	*eP*		**Pn**	**01 25 49.3**	**+0.3**
FUG				*eS*		**Sn**	**01 26 10.4**	**+0.6**
APG	**El Apazote**	**1.89**	**332**	P		**Pn**	**01 25 51.9**	**+0.2**
	comp=Z,7.8nm,0.3s,baz=176,slow=3.6,SNR=30							
APG					S	**Sn**	**01 26 14.4**	**-0.4**
	comp=Z,12nm,0.3s,baz=199,slow=20,SNR=7.2							
TGUH	**Tegucigalpa,Un**	**2.31**	**72**	Pn		**Pn**	**01 25 56.8**	**-0.7**
CRIN	**San Cristobal**	**2.50**	**104**	Pn		**Pn**	**01 25 59.3**	**-0.6**
PETF	**Flores**	**3.57**	**355**	Pn		**Pn**	**01 26 15.8**	**+1.4**
CCIG	**Comitan**	**3.86**	**320**			**Pn**	**01 26 20.8**	**+2.2**
BOAB	**BOACO BROADBAN**	**3.88**	**103**	Pn		**Pn**	**01 26 15.6**	**-3.0**
ORTG	**Ortega, Santa**	**4.97**	**126**	Pn		**Pn**	**01 26 34.0**	**+0.4**
JTS	**Las Juntas de**	**5.41**	**124**	P		**Pn**	**01 26 43.2**	**+3.6**
	comp=Z,3.9nm,0.3s,baz=4.4,slow=8.5,SNR=20							
JTS				S		**Sn**	**01 27 45.8**	**+5.1**
	comp=Z,0.7nm,0.3s,baz=210,slow=21,SNR=1.2							
JTS	**Las Juntas de**	**5.41**	**124**	Pn		**Pn**	**01 26 40.0**	**+0.4**
CAO2	**Cobano, Puntar**	**5.66**	**129**	Pn		**Pn**	**01 26 43.2**	**+0.2**
CMIG	**Matias Romero**	**6.37**	**307**	P		**Pn**	**01 26 53.5**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=147,slow=9.8,SNR=7.0							
CMIG				S		**Sn**	**01 28 04.6**	**+0.6**
	comp=Z,1.7nm,0.3s,baz=258,slow=22,SNR=7.3							
TEIG	**Tepich**	**6.96**	**10**	P		**Pn**	**01 27 02.5**	**+1.8**
	comp=Z,12nm,0.3s,baz=205,slow=1.2,SNR=11							
TEIG	**Tepich**	**6.96**	**10**	Pn		**Pn**	**01 27 02.9**	**+2.2**
PEZE	**Perez Zeledon,**	**6.96**	**124**	Pn		**Pn**	**01 27 02.6**	**+1.7**
DRK0	**Durika**	**7.38**	**123**	Pn		**Pn**	**01 27 08.4**	**+1.7**
RIOS	**Rincon, Osa**	**7.50**	**127**	Pn		**Pn**	**01 27 09.0**	**+0.9**
SDV	**Santo Domingo**	**19.07**	**101**	P		**P**	**01 29 39.9**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=285,slow=11,SNR=3.7							
TXAR	**Lajitas Array**	**20.62**	**323**	P		**P**	**01 29 56.6**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=140,slow=10,SNR=7.3							
TXAR	**Lajitas Array**	**20.62**	**323**	P		Pn	01 29 57.2	-1.0
TX31	**Lajitas Ar. Si**	**20.62**	**323**	P		Pn	01 29 57.4	-0.9
TX31				IAmb		IAmb	01 30 09.1	
	comp=Z,43nm,2.0s							
TX32	**Lajitas Array**	**20.62**	**323**	P		Pn	01 29 57.3	-0.9
Y49A	**Blount Mountai**	**20.63**	**7**	P		**P**	**01 29 56.5**	**+1.2**
Y49A				IAmb		IAmb	01 30 08.7	
	comp=Z,40nm,1.8s							
GOGA	**Godfrey**	**20.74**	**14**	P		Pn	01 29 58.8	-0.7
TKL	**Tuckaleechee C**	**22.82**	**12**	P		**P**	**01 30 18.0**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=192,slow=14,SNR=2.5							
S44A	**Carbondale**	**24.26**	**1**	P		**P**	**01 30 32.8**	**+0.8**
S44A				IAmb		IAmb	01 30 49.9	
	comp=Z,8.9nm,0.8s							
S39A	**Bolivar**	**24.49**	**353**	P		**P**	**01 30 33.5**	**-0.6**
S39A				IAmb		IAmb	01 31 05.4	
	comp=Z,13nm,1.6s							
COWI	**Conover**	**32.66**	**1**	P		**P**	**01 31 45.2**	**-1.7**
COWI				IAmb		IAmb	01 31 45.6	
	comp=Z,3.0nm,0.5s							
EYMN	**Ely**	**34.54**	**358**	P		**P**	**01 32 00.7**	**-2.6**
REDW	**Red Top Meadow**	**35.10**	**333**	P		**P**	**01 32 08.4**	**+0.1**
REDW				IAmb		IAmb	01 32 28.4	
	comp=Z,8.4nm,1.6s							
NVAR	**Mina Array Bea**	**35.71**	**320**	P		**P**	**01 32 15.7**	**+2.1**
	comp=Z,0.1nm,0.4s,baz=122,slow=8.6,SNR=1.6							
NVAR				pP		**pP**	**01 32 32.3**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=126,slow=9.1,SNR=4.8							
FCC	**Fort Churchill**	**45.47**	**357**	P		**P**	**01 33 31.5**	**-1.9**
YKA	**Yellowknife Ar**	**52.24**	**346**	P		**P**	**01 34 23.4**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=142,slow=7.9,SNR=12							

*IDC **29** 01:29:44.7±0.8, 13°.89N×93°.12E, h0km, mb4.0/12, mb1 4.1/13, mb1mx3.9/44, mbtmp4.0/13, ML4.4/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/33, Error ellipse: s-maj=34.4km s-min=15.0km az=55.0*
*NEIC **29** 01:29:53.0±1.4, 13°.83N±0°.09×93°.1E±0°.1, h65km±9km, mb4.2/17, Error ellipse: s-maj=19.4km s-min=12.3km az=98.0*
ISC 29 01:29:50.3±0.6, **14°.03N**±0°.06×**93°.19E**±0°.08, **h32**km, **n54**, σ0**°96**/42, **mb4.1**/20, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time (h m s)	Res ISC
DGPR	**DIGLIPUR**	**0.89**	**197**	*eP*		**Pb**	**01 30 07.3**	**0.0**
DGPR				*eS*		**Sb**	**01 30 19.7**	**+0.9**
DGPR				IAML			01 30 22.0	
	comp=E,3μm,0.3s							
DGPR				IAML			01 30 22.6	
	comp=N,5μm,0.5s							
PBA	**Port Blair**	**2.40**	**191**	*eP*		Pn	01

GERES	**GERESS Array B**	**72.67**	**317**	P		**P**	**01 41 14.6**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=96,slow=5.9,SNR=9.6							
GERES	**GERESS Array B**	**72.67**	**317**	P		**P**	**01 41 15.0**	**-0.1**
NOA	**NORSAR Array B**	**73.95**	**330**	P		**P**	**01 41 21.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=90,slow=5.7,SNR=4.6							
ESDC	**Sonseca Array**	**86.56**	**310**	P		**P**	**01 42 30.1**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=55,slow=3.7,SNR=5.5							

KRSC 29 01:43:37.3±2.3, 49.07N×156.55E, h39km±26km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
SKR	**Severo-Kuril's**	**1.64**	**350**	*e*P			Pn	01 44 04.2	+0.6
SKR				*e*S			Sn	01 44 24.3	+0.8
ALID	**Alaid**	**1.92**	**341**	*e*P			Pn	01 44 07.8	+0.3
ALID				*e*S			Sn	01 44 30.6	+0.1
PAU	**Pauzhetka**	**2.41**	**4**	*e*P			Pn	01 44 16.9	+2.8
PAU				*e*S			Sn	01 44 46.7	+4.3
MIPR	**Malaya Ipel'ka**	**3.22**	**2**	*e*P			Pn	01 44 29.3	+4.0
MTVR	**Mutnovka**	**3.58**	**16**	*e*P			Pn	01 44 35.0	+4.7
MTVR				*e*S			Sn	01 45 17.0	+5.7
RUS	**Russkaya**	**3.59**	**20**	*e*P			Pn	01 44 34.5	+4.1
RUS				*e*S			Sn	01 45 16.4	+4.8
GRL	**Gorelyy**	**3.62**	**15**	*e*P			Pn	01 44 36.2	+5.3
GRL				*e*S			Sn	01 45 18.7	+6.3
KRMR	**Karymshinskiy**	**3.90**	**14**	*e*P			Pn	01 44 37.9	+3.3
DALK	**Dalny**	**4.21**	**18**	*e*P			Pn	01 44 43.2	+4.4
UGLR	**Uglovaya**	**4.39**	**18**	*e*P			Pn	01 44 46.2	+4.8
AVH	**Avacha**	**4.42**	**17**	*e*P			Pn	01 44 47.7	+5.8
KOK	**Koryaka**	**4.43**	**16**	*e*P			Pn	01 44 47.8	+5.8
SMAR	**Somma**	**4.43**	**18**	*e*P			Pn	01 44 45.9	+3.7
KRER	**Koryakskii**	**4.46**	**17**	*e*P			Pn	01 44 47.7	+5.2
SDLR	**Sedlovina**	**4.47**	**18**	*e*P			Pn	01 44 47.3	+4.8
KRX	**Arik**	**4.50**	**16**	*e*P			Pn	01 44 48.3	+5.3
SPN	**Mys Shipunski**	**4.59**	**27**	*e*P			Pn	01 44 48.7	+4.6
SPN				*e*S			Sn	01 45 41.9	+5.8
GNL	**Ganaly**	**4.72**	**10**	*e*P			Pn	01 44 50.7	+4.8
MKZ	**Mys Kozlova**	**6.37**	**28**	*e*P			Pn	01 45 11.6	+3.2
KZV	**Kizimen**	**6.48**	**19**	*e*P			Pn	01 45 15.7	+5.5
KBTR	**Krutoberegovo**	**8.10**	**26**	*e*P			Pn	01 45 35.6	+3.3

*ATH **29** 01:53:21.0, 41.09N×19.94E, h64km±4km, ML2.5/8, Error ellipse: s-maj=4.8km s-min=1.7km az=350.0*
*PDG **29** 01:53:21.8±0.1, 40.90N×19.93E, h6km, ML2.7/13, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*TIR **29** 01:53:23.6, 40.98N×20.11E, h0km±1km, Md2.8*
*THE **29** 01:53:24.9, 40.97N×20.07E, h9km±2km, ML2.4/9, Error ellipse: s-maj=2.8km s-min=1.4km az=12.0*
*BEO **29** 01:53:24.2±0.6, 40.94N×20.08E, h13km±2km, ML2.3/12*
*SKO **29** 01:53:24.9, 40.97N×20.04E, h12km*
ISC 29 01:53:24.2±1.0, 40.96N±0.02×20.04E±0.02, h14km±8km, n67, σ0.88/116, 5C-8D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TIR	**Tirane**	**0.41**	**341**	P			**Pg**	**01 53 32.1**	**-0.3**
TIR				S			**Sb**	**01 53 40.1**	**+0.8**
TIR				AML			AML	01 53 46.0	
	comp=N,1975μm,0.3s								
TIR				AML			AML	01 53 49.5	
	comp=E,1536μm,0.4s								
TIR	**Tirane**	**0.41**	**341**	P			**Pg**	**01 53 32.3**	**-0.1**
TIR				S			**Sb**	**01 53 39.4**	**+0.1**
	comp=E,365nm,0.5s								
TIR	**Tirane**	**0.41**	**341**	*e*Pg			**Pg**	**01 53 32.3**	**-0.1**
TIR				*e*Sg			**Sb**	**01 53 39.8**	**+0.5**
TIR	**Tirane**	**0.41**	**341**	P			**Pg**	**01 53 32.3**	**-0.1**
	baz=334								
TIR				S			**Sb**	**01 53 39.8**	**+0.5**
	baz=334								
TIR	**Tirane**	**0.41**	**341**	*i* Pg			**Pg**	**01 53 32.3**	**-0.1**
OHR	**Ohrid**	**0.59**	**75**	*i* Pg			**Pb**	**01 53 35.8**	**-0.6**
OHR				*i* Sg			**Sb**	**01 53 44.7**	**0.0**
OHR				*e*Lg			Lg	01 53 45.5	
	comp=E,157nm,0.5s								
OHR				*e*Lg			Lg	01 53 45.8	
	comp=N,102nm,0.4s								
VLO	**Vlora**	**0.64**	**220**	P			**Pg**	**01 53 37.3**	**+0.5**
VLO				S			**Sn**	**01 53 48.5**	**-0.4**
	comp=N,2μm,0.6s								
KBN	**Korca**	**0.66**	**121**	P			**Pg**	**01 53 36.3**	**-0.8**
KBN				S			**Sb**	**01 53 47.2**	**+0.6**
	comp=N,375nm,0.6s								
KBN	**Korca**	**0.66**	**121**	P			**Pg**	**01 53 36.6**	**-0.5**
	baz=124								
KBN				S			**Sb**	**01 53 47.0**	**+0.4**
	baz=124								
PHP	**Peshkopia**	**0.78**	**23**	P			**Pn**	**01 53 42.5**	**+1.6**
	baz=19								
NEST	**Nestorio**	**0.94**	**125**	P			**Pg**	**01 53 41.8**	**-0.6**
NEST				AML			AML	01 54 02.4	
	comp=E,207μm,0.4s								
NEST				AML			AML	01 54 02.9	
	comp=N,180μm,0.5s								
NEST	**Nestorio**	**0.94**	**125**	P			**Pg**	**01 53 41.9**	**-0.6**
NEST				S			**Sn**	**01 53 56.6**	**+0.2**
	comp=N,78nm,0.5s								
FNA	**Florina**	**1.03**	**100**	P			**Pg**	**01 53 43.1**	**-0.9**
FNA				S			**Sn**	**01 53 58.4**	**-0.1**
FNA				AML			AML	01 54 03.7	
	comp=N,673μm,0.4s								
FNA				AML			AML	01 54 04.0	
	comp=E,510μm,0.6s								
FNA	**Florina**	**1.03**	**100**	P			**Pg**	**01 53 43.1**	**-0.9**
FNA				S			**Sn**	**01 53 58.3**	**-0.2**
	comp=E,310nm,0.5s								
FNA	**Florina**	**1.03**	**100**	P			**Pg**	**01 53 43.1**	**-0.9**
	baz=100								
FNA				S			**Sn**	**01 53 58.2**	**-0.2**
	baz=100								
FNA	**Florina**	**1.03**	**100**	*e*Pg			**Pg**	**01 53 43.1**	**-0.9**
FNA				*e*Sg			**Sn**	**01 53 58.6**	**+0.1**
SRN	**Sarande**	**1.08**	**182**	P			**Pb**	**01 53 44.5**	**-0.2**
SRN				S			**Sn**	**01 54 01.7**	**+2.0**
	comp=E,212nm,0.5s								
SRN	**Sarande**	**1.08**	**182**	P			**Pn**	**01 53 45.9**	**+1.0**
	baz=185								
SRN				S			**Sn**	**01 54 02.4**	**+2.8**
	baz=185								
PUK	**Puka**	**1.09**	**354**	P			**Pg**	**01 53 45.0**	**-0.2**
	baz=352								
PUK				S			**Sn**	**01 54 01.7**	**+1.7**
	baz=352								
PENT	**Pentalofos**	**1.13**	**132**	P			**Pn**	**01 53 46.1**	**+0.3**
PENT				AML			AML	01 54 08.3	
	comp=E,163μm,0.6s								
PENT				AML			AML	01 54 08.4	
	comp=N,177μm,0.3s								
ULC	**Ulcinj**	**1.17**	**329**	*e*Pg			**Pb**	**01 53 46.1**	**-0.1**
ULC	**Ulcinj**	**1.17**	**329**	⇑*i*Pg			**Pb**	**01 53 43.7**	**-2.5**
ULC				*i* Sg			**Sn**	**01 54 02.5**	**+0.6**
KASA	**Kassiopi**	**1.22**	**184**	P			**Pn**	**01 53 46.8**	**0.0**
KEK	**Kerkira**	**1.26**	**189**	P			**Pn**	**01 53 46.6**	**-0.8**
KEK				S			**Sg**	**01 54 05.9**	**+1.0**
KEK				AML			AML	01 54 11.0	
	comp=E,272μm,0.4s								
KEK				AML			AML	01 54 11.3	
	comp=N,292μm,0.6s								
KEK	**Kerkira**	**1.26**	**189**	P			**Pn**	**01 53 47.5**	**+0.1**
KEK				S			**Sg**	**01 54 05.1**	**+0.2**
	comp=N,155nm,0.8s								
DRME	**Dracevica, Mon**	**1.38**	**333**	⇑*i*Pg			**Pn**	**01 53 47.7**	**-1.4**
DRME				*i* Sg			**Sg**	**01 54 09.8**	**+1.0**
BCI	**Bajram Curri**	**1.40**	**1**	P			**Pg**	**01 53 51.1**	**-0.1**
	baz=359								
BCI				S			**Sg**	**01 54 12.0**	**+2.5**
	baz=359								
KPRO	**Kipourio**	**1.43**	**134**	P			**Pb**	**01 53 50.4**	**-0.2**
JAN	**Janina**	**1.44**	**154**	P			**Pn**	**01 53 49.4**	**-0.5**
JAN				AML			AML	01 54 15.3	
	comp=E,331μm,0.4s								
JAN				AML			AML	01 54 17.5	
	comp=N,237μm,0.6s								
JAN	**Janina**	**1.44**	**154**	P			**Pn**	**01 53 48.8**	**-1.2**
IGT	**Igoumenitsa**	**1.45**	**171**	P			**Pn**	**01 53 50.4**	**+0.5**
IGT				AML			AML	01 54 13.3	
	comp=N,449μm,0.7s								
IGT				AML			AML	01 54 14.5	
	comp=E,352μm,0.6s								
IGT	**Igoumenitsa**	**1.45**	**171**	P			**Pn**	**01 53 50.4**	**+0.5**
IGT				S			**Sg**	**01 54 10.3**	**-0.4**
	comp=E,200nm,0.7s								
SKO	**Skopje**	**1.46**	**46**	*e*Pg			**Pb**	**01 53 51.3**	**+0.2**
SKO				*i* Sg			**Sg**	**01 54 11.3**	**+0.1**
KZN	**Kozani**	**1.47**	**116**	P			**Pb**	**01 53 51.0**	**-0.4**
KZN				AML			AML	01 54 13.9	
	comp=E,180μm,0.5s								
KZN				AML			AML	01 54 15.1	
	comp=N,144μm,0.4s								
KZN	**Kozani**	**1.47**	**116**	P			**Pb**	**01 53 51.7**	**+0.3**
KZN				S			**Sg**	**01 54 13.1**	**+1.5**
	comp=N,78nm,0.4s								
SCTE	**Santa Cesarea**	**1.49**	**234**	P			**Pn**	**01 53 49.3**	**-1.3**
PDG	**Podgorica**	**1.58**	**338**	*e*Pg			**Pb**	**01 53 52.9**	**-0.3**
PDG				*e*Sg			**Sg**	**01 54 14.6**	**-0.5**
TTG	**Podgorica**	**1.58**	**338**	⇑*i*Pn			**Pn**	**01 53 51.4**	**-0.4**
TTG				*i* Sn			**Sg**	**01 54 15.6**	**+0.5**
BUM	**Brajici-Budva**	**1.59**	**328**	⇓*i*Pn			**Pn**	**01 53 51.3**	**-0.7**
BUM				*i* Sn			**Sg**	**01 54 15.4**	**0.0**
PVY	**Plav**	**1.63**	**358**	⇓*i*Pn			**Pn**	**01 53 52.9**	**+0.2**
PVY				*i* Sn			**Sg**	**01 54 17.6**	**+0.8**
STIP	**Stip**	**1.77**	**65**	*i* Pn			**Pg**	**01 53 57.7**	**-0.6**
GRG	**Griva**	**1.79**	**89**	P			**Pn**	**01 53 55.0**	**+0.3**
GRG	**Griva**	**1.79**	**89**	P			**Pn**	**01 53 55.1**	**+0.4**
CEME	**Cevo**	**1.79**	**332**	⇓*i*Pn			**Pn**	**01 53 54.7**	**-0.1**
CEME				*i* Sn			**Sb**	**01 54 20.5**	**+1.3**
HCY	**Herceg Novi**	**1.88**	**323**	⇓*i*Pn			**Pn**	**01 53 55.7**	**-0.3**
HCY				*i* Sn			**Sb**	**01 54 22.2**	**+0.4**
IVA	**Berane**	**1.91**	**357**	⇑*i*Pn			**Pn**	**01 53 56.9**	**+0.4**
IVA				*i* Sn			**Sg**	**01 54 24.3**	**-1.4**
KOME	**Kolasin**	**1.93**	**348**	⇓*i*Pn			**Pn**	**01 53 57.0**	**+0.3**
KOME				*i* Sn			**Sb**	**01 54 24.5**	**+1.3**
VAY	**Valandovo**	**1.94**	**79**	*e*Pn			**Pn**	**01 53 55.9**	**-0.9**
VAY				*e*Sn			**Sn**	**01 54 20.0**	**-1.0**
VAY	**Valandovo**	**1.94**	**79**	*e*Pn			**Pn**	**01 53 57.7**	**+0.9**
VAY				*e*Sg			**Sb**	**01 54 23.8**	**+0.3**
VAY				*e*Lg			Lg	01 54 27.4	
	comp=N,15nm,0.6s								
VAY				*e*Lg			Lg	01 54 27.9	
	comp=E,14nm,0.6s								
NKME	**Niksic**	**1.98**	**336**	*e*Pn			**Pn**	**01 53 57.4**	**+0.1**
NKME				*i* Sn			**Sb**	**01 54 25.1**	**+0.5**
NKY	**Niksic**	**2.01**	**337**	⇑*i*Pn			**Pn**	**01 53 57.8**	**0.0**
NKY				*i* Sn			**Sb**	**01 54 25.9**	**+0.4**
THL	**Klokotos Trika**	**2.06**	**132**	P			**Pb**	**01 54 00.2**	**-1.1**
KNT	**Kendrikon**	**2.17**	**84**	P			**Pn**	**01 54 00.7**	**+0.8**
BRY	**Bratogost**	**2.24**	**330**	⇓*i*Pn			**Pn**	**01 54 00.8**	**-0.2**
BRY				*i* Sn			**Sb**	**01 54 31.2**	**-1.0**
NOCI	**Noci**	**2.26**	**267**	P			**Pn**	**01 53 59.5**	**-1.7**
BARS	**Barje**	**2.28**	**35**	*e*Pn			**Pn**	**01 54 00.4**	**-1.0**
BARS				*e*Sn			**Sn**	**01 54 29.2**	**-0.1**
SJES	**Sjenica**	**2.30**	**359**	*e*Pn			**Pn**	**01 54 03.6**	**+1.8**
SJES				*e*Sn			**Sn**	**01 54 30.7**	**+0.7**
BOSS	**Bosilegrad**	**2.38**	**49**	*e*Pn			**Pn**	**01 54 03.6**	**+0.7**
BOSS				*e*Sn			**Sn**	**01 54 31.5**	**-0.4**
UPM	**Unac-Piva**	**2.39**	**340**	⇓*i*Pn			**Pn**	**01 54 03.2**	**0.0**
UPM				*i* Sn			**Sb**	**01 54 35.3**	**-1.2**
SELS	**Selova**	**2.40**	**19**	*e*Pn			**Pn**	**01 54 03.2**	**+0.2**
SELS				*e*Sn			**Sn**	**01 54 33.6**	**+1.4**
PLE	**Pljevlja**	**2.42**	**349**	⇓*i*Pn			**Pn**	**01 54 03.7**	**+0.3**
PLE				*i* Sn			**Sb**	**01 54 36.2**	**-1.0**
IVAS	**Ivanjica**	**2.62**	**2**	*e*Pn			**Pn**	**01 54 06.2**	**+0.1**
IVAS				*e*Sn			**Sn**	**01 54 37.7**	**0.0**
VTS	**Vitosha**	**2.91**	**54**	*e*Pn			**Pn**	**01 54 09.3**	**-0.9**
VTS				*e*Sn			**Sn**	**01 54 43.4**	**-1.6**
BOVS	**Bovan**	**2.94**	**24**	*e*Pn			**Pn**	**01 54 10.8**	**+0.3**
BOVS				*e*Sn			**Sn**	**01 54 46.1**	**+0.4**
ZAPS	**Zavoj**	**3.01**	**39**	*e*Pn			**Pn**	**01 54 12.7**	**+1.2**
ZAPS				*e*Sn			**Sn**	**01 54 46.7**	**-0.7**
DIVS	**Divibare**	**3.13**	**359**	*e*Pn			**Pn**	**01 54 14.8**	**+1.5**
DIVS				*e*Sn			**Sn**	**01 54 50.3**	**-0.3**
ZAGS	**Zajecar**	**3.28**	**29**	*e*Pn			**Pn**	**01 54 14.7**	**-0.5**
ZAGS				*e*Sn			**Sn**	**01 54 54.8**	**+0.8**

*PDG **29** 01:58:13.4±0.1, 40.85N×19.81E, h14km, ML2.5/12, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*TIR **29** 01:58:14.4, 40.96N×20.12E, h0km±3km, Md2.7*
*ATH **29** 01:58:15.8, 41.01N×20.10E, h9km±4km, ML2.0/2, Error ellipse: s-maj=5.3km s-min=0.9km az=20.0*
*SKO **29** 01:58:15.8, 41.01N×20.05E, h17km*
*BEO **29** 01:58:17.1±0.8, 41.04N×20.11E, h9km±2km, ML1.9/8*
ISC 29 01:58:15.2±1.1, 40.96N±0.03×20.01E±0.03, h12km±9km, n41, σ0.91/67, 4C-6D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TIR	**Tirane**	**0.40**	**344**	P			**Pg**	**01 58 23.2**	**0.0**
TIR				S			**Sg**	**01 58 28.6**	**+0.1**
TIR				AML			AML	01 58 32.4	
	comp=N,510μm,0.3s								
TIR				AML			AML	01 58 32.6	
	comp=E,514μm,0.2s								
TIR	**Tirane**	**0.40**	**344**	*e*Pg			**Pg**	**01 58 23.1**	**0.0**
TIR				*e*Sg			**Sb**	**01 58 30.3**	**-0.1**
TIR	**Tirane**	**0.40**	**344**	P			**Pg**	**01 58 23.1**	**0.0**
	baz=334								
TIR				S			**Sb**	**01 58 30.6**	**+0.3**
	baz=334								
TIR	**Tirane**	**0.40**	**344**	*e*Pg			**Pg**	**01 58 23.1**	**0.0**
OHR	**Ohrid**	**0.61**	**76**	*e*Pg			**Pg**	**01 58 27.0**	**-0.1**
OHR				*i* Sg			**Sg**	**01 58 35.8**	**+0.6**
OHR				*e*Lg			Lg	01 58 37.2	
	comp=N,28nm,0.5s								
OHR				*e*Lg			Lg	01 58 38.5	
	comp=E,70nm,0.5s								
NEST	**Nestorio**	**0.96**	**124**	P			**Pg**	**01 58 33.5**	**-0.2**
FNA	**Florina**	**1.05**	**99**	P			**Pb**	**01 58 34.5**	**-0.9**
FNA				S			**Sb**	**01 58 48.2**	**-0.9**
FNA				AML			AML	01 58 52.9	
	comp=N,180μm,0.6s								
FNA				AML			AML	01 58 53.8	
	comp=E,168μm,0.3s								
FNA	**Florina**	**1.05**	**99**	P			**Pb**	**01 58 34.2**	**-1.2**
	baz=100								
FNA				S			**Sb**	**01 58 49.2**	**+0.1**
	baz=100								
FNA	**Florina**	**1.05**	**99**	*e*Pg			**Pb**	**01 58 33.9**	**-1.4**
FNA				*i* Sg			**Sb**	**01 58 49.3**	**+0.2**
SRN	**Sarande**	**1.08**	**180**	P			**Pn**	**01 58 36.7**	**+0.5**
	baz=185								
PUK	**Puka**	**1.08**	**355**	P			**Pn**	**01 58 36.5**	**+0.2**
	baz=352								
PUK				S			**Sn**	**01 58 54.4**	**+3.1**
	baz=352								
PENT	**Pentalofos**	**1.15**	**131**	P			**Pn**	**01 58 37.2**	**-0.1**
ULC	**Ulcinj**	**1.15**	**330**	⇓*i*Pg			**Pb**	**01 58 35.5**	**-1.6**
ULC				*i* Sg			**Sn**	**01 58 54.2**	**+1.2**
KASA	**Kassiopi**	**1.22**	**183**	P			**Pg**	**01 58 39.2**	**+0.7**
KEK	**Kerkira**	**1.26**	**187**	P			**Pg**	**01 58 39.7**	**+0.3**
DRME	**Dracevica, Mon**	**1.37**	**333**	⇓*i*Pg			**Pn**	**01 58 39.5**	**-0.7**
DRME				*i* Sg			**Sg**	**01 59 00.8**	**+1.5**
BCI	**Bajram Curri**	**1.40**	**2**	P			**Pb**	**01 58 41.5**	**+0.1**
	baz=359								
KPRO	**Kipourio**	**1.44**	**134**	P			**Pb**	**01 58 41.8**	**-0.3**
IGT	**Igoumenitsa**	**1.45**	**170**	P			**Pg**	**01 58 42.7**	**-0.3**
JAN	**Janina**	**1.45**	**154**	P			**Pb**	**01 58 42.6**	**+0.4**
KZN	**Kozani**	**1.49**	**115**	P			**Pn**	**01 58 42.4**	**+0.5**
PDG	**Podgorica**	**1.57**	**339**	*e*Pg			**Pb**	**01 58 44.4**	**+0.2**
PDG				*e*Sg			**Sg**	**01 59 05.7**	**-0.1**
TTG	**Podgorica**	**1.57**	**339**	⇑*i*Pn			**Pn**	**01 58 42.9**	**0.0**
TTG				*i* Sn			**Sg**	**01 59 06.0**	**+0.2**
BUM	**Brajici-Budva**	**1.58**	**328**	⇓*i*Pn			**Pn**	**01 58 42.4**	**-0.7**
BUM				*i* Sn			**Sg**	**01 59 05.3**	**-0.7**
PVY	**Plav**	**1.63**	**359**	⇑*i*Pn			**Pn**	**01 58 44.4**	**+0.5**
PVY				*i* Sn			**Sg**	**01 59 08.8**	**+1.1**
CEME	**Cevo**	**1.78**	**333**	⇓*i*Pn			**Pn**	**01 58 45.5**	**-0.4**
CEME				*i* Sn			**Sb**	**01 59 10.4**	**+0.2**
STIP	**Stip**	**1.79**	**65**	*e*Pn			**Pb**	**01 58 48.0**	**-0.1**
GRG	**Griva**	**1.81**	**89**	P			**Pb**	**01 58 47.3**	**-1.0**
HCY	**Herceg Novi**	**1.87**	**323**	*e*Pn			**Pn**	**01 58 46.2**	**-0.8**
HCY				*i* Sn			**Sb**	**01 59 11.8**	**-0.8**
IVA	**Berane**	**1.91**	**357**	⇓*i*Pn			**Pn**	**01 58 48.2**	**+0.5**
IVA				*i* Sn			**Sg**	**01 59 15.4**	**-1.2**
KOME	**Kolasin**	**1.92**	**349**	⇑*i*Pn			**Pn**	**01 58 48.1**	**+0.2**
KOME				*i* Sn			**Sb**	**01 59 15.2**	**+0.9**
NKME	**Niksic**	**1.97**	**337**	⇑*i*Pn			**Pn**	**01 58 48.2**	**-0.3**
NKME				*i* Sn			**Sb**	**01 59 15.3**	**-0.3**
BRY	**Bratogost**	**2.23**	**331**	⇓*i*Pn			**Pn**	**01 58 51.5**	**-0.6**
BRY				*i* Sn			**Sb**	**01 59 21.1**	**-2.0**
SJES	**Sjenica**	**2.30**	**359**	*e*Pn			**Pn**	**01 58 54.4**	**+1.4**
SJES				*e*Sn			**Sn**	**01 59 22.1**	**+0.8**
BOSS	**Bosilegrad**	**2.40**	**50**	*e*Pn			**Pn**	**01 58 54.7**	**+0.3**
BOSS				*e*Sn			**Sn**	**01 59 23.0**	**-0.7**
SELS	**Selova**	**2.40**	**20**	*e*Pn			**Pn**	**01 58 56.0**	**+1.6**
PLE	**Pljevlja**	**2.41**	**349**	*e*Pn			**Pn**	**01 58 54.7**	**+0.1**
PLE				*i* Sn			**Sb**	**01 59 26.8**	**-1.5**
IVAS	**Ivanjica**	**2.61**	**2**	*e*Pn			**Pn**	**01 58 59.0**	**+1.7**
VTS	**Vitosha**	**2.92**	**54**	*e*Pn			**Pn**	**01 59 02.1**	**+0.4**
VTS				*e*Sn			**Sn**	**01 59 35.3**	**-1.5**
BOVS	**Bovan**	**2.95**	**25**	*e*Pn			**Pn**	**01 59 02.7**	**+0.8**
BOVS				*e*Sn			**Sn**	**01 59 36.8**	**-0.5**
ZAPS	**Zavoj**	**3.02**	**39**	*e*Pn			**Pn**	**01 59 04.4**	**+1.5**
ZAPS				*e*Sn			**Sn**	**01 59 38.7**	**-0.4**

*NIC **29** 02:04:42.7±0.0, 35.73N×28.83E, h18km±2km, Ml2.7/3*
*ISK **29** 02:04:43.8, 35.97N×28.85E, h22km, ML1.8/9*
*DDA **29** 02:04:45.4, 35.99N×28.87E, h16km±4km, ML1.7*
ISC 29 02:04:42.7±1.6, 35.92N±0.06×28.84E±0.03, h19km±4km, n26, σ0.70/39, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KSL	**Kastellorizon**	**0.65**	**69**	P			**Pn**	**02 04 57.7**	**+0.9**
KSL				S			**Sn**	**02 05 08.2**	**+1.7**
ARG	**Arkhangelos**	**0.65**	**298**	PG			**Pn**	**02 04 57.2**	**+0.3**
ARG				SG			**Sn**	**02 05 06.5**	**-0.1**
ARG	**Arkhangelos**	**0.65**	**298**	P			**Pn**	**02 04 57.1**	**+0.3**
ARG				S			**Sn**	**02 05 07.2**	**+0.6**
AKAS	**Kas**	**0.70**	**63**	*i* P			**Pn**	**02 04 57.4**	**-0.3**
AKAS				*i* S			**Sg**	**02 05 05.4**	**-0.6**
AKAS	**Kas**	**0.70**	**63**	PG			**Pn**	**02 04 57.5**	**-0.2**
FETY	**Fethiye**	**0.74**	**15**	PG			**Pb**	**02 04 57.4**	**+0.3**
FETY				SG			**Sn**	**02 05 08.5**	**-0.5**
DALY	**Dalyan (Mula)**	**0.91**	**351**	*i* P			**Pn**	**02 05 00.8**	**+0.3**
DALY	**Dalyan (Mula)**	**0.91**	**351**	PG			**Pn**	**02 05 00.8**	**+0.3**
TURN	**Turunc**	**0.98**	**331**	*i* P			**Pn**	**02 05 02.0**	**+0.6**
TURN				*i* S			**Sb**	**02 05 12.5**	**-1.1**
TURN				IAML				02 05 17.0	
	comp=E,15nm,1.0s								
TURN	**Turunc**	**0.98**	**331**	PG			**Pn**	**02 05 02.0**	**+0.6**
ELL	**Elmali**	**1.20**	**46**	PN			**Pn**	**02 05 04.9**	**+0.4**
ELL	**Elmali**	**1.20**	**46**	P			**Pg**	**02 05 06.4**	**+0.4**
CAEL	**Denizli, Camel**	**1.27**	**18**	*i* P			**Pg**	**02 05 06.8**	**-0.4**
CAEL				*i* S			**Sb**	**02 05 21.7**	**-0.3**
CAEL				IAML				02 05 25.0	
	comp=E,30nm,0.9s								
CAEL				IAML				02 05 27.0	
	comp=N,15nm,0.4s								
AKUM	**Antalya-Kumluc**	**1.28**	**71**	*i* P			**Pb**	**02 05 06.3**	**+0.1**
AKUM				*i* S			**Sb**	**02 05 22.1**	**-0.3**
AKUM				IAML				02 05 25.0	
	comp=E,20nm,0.2s								
YER	**Yerkesik**	**1.29**	**340**	PN			**Pb**	**02 05 06.9**	**+0.4**
MULA	**Mugla, Merkez-**	**1.40**	**343**	*i* P			**Pb**	**02 05 08.9**	**+0.6**
MULA				*i* S			**Sn**	**02 05 23.8**	**-1.4**
MULA				IAML				02 05 30.0	
	comp=E,10nm,0.8s								
GOLH	**Golhisar**	**1.44**	**24**	*i* P			**Pb**	**02 05 09.5**	**+0.5**
GOLH				*i* S			**Sb**	**02 05 27.6**	**+0.7**
GOLH				IAML				02 05 29.0	
	comp=E,16nm,0.9s								
GOLH				IAML				02 05 30.0	
	comp=N,26nm,0.5s								
TAVA	**DENIZLI_Tavas**	**1.55**	**2**	*i* P			**Pb**	**02 05 10.4**	**-0.4**
TAVA				*i* S			**

ϕ_E104.00000°, δ63.00000°, λ87.00000°. Principal axes: T 2.5740, Plg72.0000°, Azm8.0000°; N 0.0530, Plg2.0000°, Azm105.0000°; P -2.6250, Plg18.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

THR **29** *02:37:45.2±0.6, 27°.31N×53°.40E, h15km, ML4.8*

TEH **29** *02:37:46.6, 27°.42N×53°.44E, h17km, ML4.9*

NEIC **29** *02:37:46.2±2.4, 27°.433N±0°.006×53°.44E±0°.04, h10km±1km, mb4.9/144, mb_Lg4.9(TEH), Error ellipse: s-maj=6.3km s-min=2.8km az=264.0*

MOS **29** *02:37:46.3±1.0, 27°.42N×53°.40E, h24km, mb5.0/57, MS4.2/9, Error ellipse: s-maj=5.3km s-min=3.6km az=88.7*

OMAN **29** *02:37:48.9, 27°.20N×53°.26E, h19km, mb6.3/18, ml5.3/15, ms4.7/1, Mwp4.9/9*

IDC **29** *02:37:48.0±2.3, 27°.44N×53°.48E, h22km±14km, mb4.6/43, mb1 4.6/50, mb1mx4.6/56, mbtmp4.7/50, ML4.0/7, MS4.1/36, Ms1 4.1/36, ms1mx4.0/47, Error ellipse: s-maj=10.8km s-min=9.1km az=174.0*

BGR **29** *02:38:03.7±0.0, 28°.31N×51°.16E, h10km, mb4.4*

ISC 29 02:37:46.2±0.6, **27°.42N**±0°.03×**53°.44E**±0°.02, **h12**km±3km, **n747**, σ1**s60**/808, **mb4.9**/236, **MS4.2**/48, **42C-18D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**0.26**	**252**	Pg	**Pb**	**02 37 52.4**	**-0.4**
LMD1				Sg	**Sb**	**02 37 56.6**	**-0.6**
LMD1	**Lamerd**	**0.26**	**252**	*e*Pg	**Pb**	**02 37 52.4**	**-0.4**
LMD1				*e*Sg	**Sb**	**02 37 56.7**	**-0.5**
LAR1	**LAR**	**0.87**	**73**	Pg	**Pb**	**02 38 03.1**	**-0.1**
LAR1	**LAR**	**0.87**	**73**	*e*Pg	**Pb**	**02 38 03.1**	**-0.1**
JHRM	**Jahrom**	**1.09**	**6**	*e*		02 38 27.8	
	comp=Z,93μm,0.6s						
JHRM				*e*Pg	**Pn**	**02 38 07.3**	**-0.1**
QIR1	**Qir**	**1.11**	**342**	*e*		02 38 30.4	
	comp=Z,74μm,0.8s						
QIR1				*e*Pg	**Pn**	**02 38 08.1**	**+0.5**
SHI	**Shiraz**	**2.36**	**340**	*e*Pn	**Pn**	**02 38 26.4**	**+1.5**
SHI				*e*		02 39 24.1	
	comp=Z,36μm,0.8s						
AHBU	**AHRAM**	**2.38**	**308**	*e*Pn	**Pn**	**02 38 26.3**	**+1.3**
BNDS	**Bandar-Abbas**	**2.43**	**90**	*e*Pn	**Pn**	**02 38 27.0**	**+1.1**
BNDS				IAML		02 39 14.6	
	comp=N,4μm,0.3s						
BNDS				IAML		02 39 16.9	
	comp=E,4μm,0.4s						
BNDS	**Bandar-Abbas**	**2.43**	**90**	*e*Pn	**Pn**	**02 38 27.0**	**+1.1**
GENO	**Geno**	**2.43**	**90**	Pn	**Pn**	**02 38 26.9**	**+1.0**
GENO	**Geno**	**2.43**	**90**	*e*Pn	**Pn**	**02 38 26.9**	**+1.0**
GENO				*e*		02 39 13.6	
	comp=Z,88μm,0.9s						
KAZ1	**Kazerun**	**2.71**	**325**	Pn	**Pn**	**02 38 31.0**	**+1.4**
KAZ1	**Kazerun**	**2.71**	**325**	*e*Pn	**Pn**	**02 38 31.0**	**+1.4**
KAZ1				*e*		02 39 31.0	
	comp=Z,28μm,1.0s						
IBND	**Bandar-abas**	**2.75**	**89**	*e*Pn	**Pn**	**02 38 31.6**	**+1.4**
SHME	**Shamm**	**2.77**	**119**	P	**Pn**	**02 38 31.0**	**+0.5**
SHME	**Shamm**	**2.77**	**119**	Pn	**Pn**	**02 38 32.1**	**+1.6**
SHME	**Shamm**	**2.77**	**119**	*e*Pn	**Pn**	**02 38 32.1**	**+1.6**
SHME	**Shamm**	**2.77**	**119**	P	**Pn**	**02 38 32.8**	**+2.3**
SHME				S	**Sb**	**02 39 07.1**	**-2.6**
BANOM	**Banah**	**2.96**	**120**	P	**Pn**	**02 38 34.0**	**+0.9**
BANOM				S	**Sb**	**02 39 16.8**	**+1.6**
BANOM	**Banah**	**2.96**	**120**	P	**Pn**	**02 38 35.7**	**+2.6**
	SNR=26						
SAKB	**Bahrain**	**2.97**	**242**	P	**Pn**	**02 38 36.0**	**+2.8**
NAZ	**Nazwa, Dubai**	**3.14**	**140**	*i* P	**Pn**	**02 38 38.6**	**+3.1**
	SNR=103						
NAZ	**Nazwa, Dubai**	**3.14**	**140**	*e*Pn	**Pn**	**02 38 38.6**	**+3.1**
NAZ	**Nazwa, Dubai**	**3.14**	**140**	P	**Pn**	**02 38 38.5**	**+3.0**
	SNR=21						
NAZ				S	**Sn**	**02 39 14.2**	**+1.3**
AJN	**Ajban**	**3.17**	**154**	*i* P	**Pn**	**02 38 38.6**	**+2.7**
	SNR=21						
AJN	**Ajban**	**3.17**	**154**	*e*Pn	**Pb**	**02 38 39.6**	**-2.8**
AJN	**Ajban**	**3.17**	**154**	P	**Pb**	**02 38 39.4**	**-3.0**
AJN				S	**Sn**	**02 39 13.2**	**-0.4**
MASF	**Masafi**	**3.18**	**129**	P	**Pn**	**02 38 37.9**	**+1.8**
MSFE	**Esma-Masafi**	**3.19**	**129**	*i* P	**Pn**	**02 38 37.6**	**+1.4**
	SNR=31						
MSFE				S	**Sb**	**02 39 19.2**	**-2.4**
MSFE	**Esma-Masafi**	**3.19**	**129**	Pn	**Pn**	**02 38 38.4**	**+2.2**
MSFE	**Esma-Masafi**	**3.19**	**129**	*e*Pn	**Pn**	**02 38 38.5**	**+2.2**
ASUD	**Al Ashush, Dub**	**3.26**	**148**	*i* P	**Pn**	**02 38 40.4**	**+3.3**
	SNR=25						
ASUD	**Al Ashush, Dub**	**3.26**	**148**	P	**Pn**	**02 38 40.5**	**+3.3**
	SNR=28						
FAQ	**Al Faqa, Dubai**	**3.29**	**144**	*i* P	**Pn**	**02 38 40.4**	**+2.8**
	SNR=15						
FAQ	**Al Faqa, Dubai**	**3.29**	**144**	*e*Pn	**Pn**	**02 38 40.5**	**+2.8**
FAQ	**Al Faqa, Dubai**	**3.29**	**144**	P	**Pn**	**02 38 40.4**	**+2.8**
	SNR=15						
FAQ				P	**Pn**	**02 38 40.4**	**+2.8**
	SNR=15						
FAQ				S	**Sn**	**02 39 19.0**	**+2.3**
FAQ				S	**Sn**	**02 39 19.0**	**+2.3**
MDH	**Madha**	**3.32**	**129**	P	**Pn**	**02 38 39.7**	**+1.7**
MDH	**Madha**	**3.32**	**129**	P	**Pn**	**02 38 39.9**	**+1.8**
	SNR=40						
MDH				P	**Pn**	**02 38 39.9**	**+1.8**
	SNR=40						
UOSS	**Minazif**	**3.50**	**134**	*i* P	**Pn**	**02 38 42.0**	**+1.6**
	SNR=37						
UOSS	**Minazif**	**3.50**	**134**	Pn	**Pn**	**02 38 42.0**	**+1.6**
UOSS	**Minazif**	**3.50**	**134**	*e*Pn	**Pn**	**02 38 42.4**	**+1.9**
UOSS	**Minazif**	**3.50**	**134**	P	**Pn**	**02 38 42.3**	**+1.8**
HATD	**Hatta, Dubai**	**3.54**	**136**	*i* P	**Pn**	**02 38 43.2**	**+2.2**
	SNR=76						
HATD	**Hatta, Dubai**	**3.54**	**136**	Pn	**Pn**	**02 38 43.2**	**+2.2**
HATD	**Hatta, Dubai**	**3.54**	**136**	*e*Pn	**Pn**	**02 38 43.2**	**+2.2**
HATD	**Hatta, Dubai**	**3.54**	**136**	P	**Pn**	**02 38 43.6**	**+2.6**
	SNR=17						
HATD				P	**Pn**	**02 38 43.6**	**+2.6**
	SNR=17						
NGRK	**Negar Kerman**	**3.65**	**52**	Pn	**Pn**	**02 38 43.7**	**+0.9**
NGRK	**Negar Kerman**	**3.65**	**52**	*e*Pn	**Pn**	**02 38 43.7**	**+0.9**
NGRK				*e*		02 39 57.1	
	comp=Z,17μm,1.0s						
MZWR	**Madinat Zayed**	**3.67**	**174**	P	**Pn**	**02 38 44.9**	**+2.1**
MZWR				P	**Pn**	**02 38 44.9**	**+2.1**
SLWR	**Sila**	**3.69**	**206**	*e*Pn	**Pn**	**02 38 45.0**	**+2.0**
SLWR	**Sila**	**3.69**	**206**	P	**Pn**	**02 38 45.1**	**+2.0**
SLWR				P	**Pn**	**02 38 45.1**	**+2.0**
KHNJ	**Kahnooj**	**3.82**	**81**	Pn	**Pn**	**02 38 45.4**	**+0.6**
KHNJ	**Kahnooj**	**3.82**	**81**	*e*Pn	**Pn**	**02 38 45.5**	**+0.6**
KRBR	**Kerman**	**3.88**	**48**	*e*Pn	**Pn**	**02 38 48.3**	**+2.4**
KRBR				IAML		02 39 59.9	
	comp=N,1μm,0.8s						
KRBR	**Kerman**	**3.88**	**48**	*e*Pn	**Pn**	**02 38 48.3**	**+2.4**
TVBK	**TV Kerman**	**3.88**	**48**	Pn	**Pn**	**02 38 48.2**	**+2.3**
TVBK	**TV Kerman**	**3.88**	**48**	*e*Pn	**Pn**	**02 38 48.3**	**+2.3**
TVBK				*e*		02 39 52.4	
	comp=Z,18μm,0.6s						
KLNJ	**Kolanjah**	**3.92**	**336**	Pn	**Pn**	**02 38 46.5**	**0.0**
KLNJ	**Kolanjah**	**3.92**	**336**	*e*Pn	**Pn**	**02 38 46.6**	**0.0**
ALNE	**Al Ain**	**3.94**	**148**	*i* P	**Pn**	**02 38 49.2**	**+2.6**
	SNR=28						
ALNE	**Al Ain**	**3.94**	**148**	Pn	**Pn**	**02 38 49.6**	**+3.0**
ALNE	**Al Ain**	**3.94**	**148**	*e*Pn	**Pn**	**02 38 49.7**	**+3.1**
ALNE	**Al Ain**	**3.94**	**148**	P	**Pn**	**02 38 49.3**	**+2.7**
	SNR=11						
ALNE				S	**Sn**	**02 39 33.8**	**+0.9**
KHGB	**Koh Gabri**	**3.97**	**41**	Pn	**Pn**	**02 38 48.9**	**+1.8**
KHGB	**Koh Gabri**	**3.97**	**41**	*e*Pn	**Pn**	**02 38 49.0**	**+1.8**
KHGB				*e*		02 39 48.4	
	comp=Z,10μm,1.0s						
IMEH	**Mehriz**	**4.09**	**14**	Pn	**Pn**	**02 38 51.8**	**+3.1**
IMEH	**Mehriz**	**4.09**	**14**	*e*Pn	**Pn**	**02 38 51.9**	**+3.2**
SOHO	**SOHO**	**4.30**	**139**	P	**Pn**	**02 38 53.0**	**+1.6**
SOHO	**SOHO**	**4.30**	**139**	P	**Pn**	**02 38 53.2**	**+1.7**
SOHO				P	**Pn**	**02 38 53.2**	**+1.7**
SOHO				S	**Sn**	**02 39 43.5**	**+1.9**
SOHO				S	**Sn**	**02 39 43.5**	**+1.9**
CHMN	**Cheshme madani**	**4.35**	**55**	Pn	**Pn**	**02 38 54.9**	**+2.5**
CHMN	**Cheshme madani**	**4.35**	**55**	*e*Pn	**Pn**	**02 38 54.9**	**+2.5**
CHMN				*e*		02 39 56.2	
	comp=Z,9μm,0.9s						
IRAM	**Ramesheh**	**4.47**	**348**	Pn	**Pn**	**02 38 56.0**	**+2.1**
IRAM	**Ramesheh**	**4.47**	**348**	*e*Pn	**Pn**	**02 38 56.1**	**+2.1**
ISAD	**Sadrabad**	**4.48**	**3**	Pn	**Pn**	**02 38 57.0**	**+2.8**
ISAD	**Sadrabad**	**4.48**	**3**	*e*Pn	**Pn**	**02 38 57.0**	**+2.8**
IBAF	**Bafgh**	**4.55**	**24**	Pn	**Pn**	**02 38 57.3**	**+2.3**
IBAF	**Bafgh**	**4.55**	**24**	*e*Pn	**Pn**	**02 38 57.4**	**+2.4**
KBAM	**BAM**	**4.74**	**68**	*e*Pn	**Pn**	**02 38 59.2**	**+1.6**
KBAM				*e*		02 40 02.9	
	comp=Z,8μm,1.0s						
ICHK	**Chekchek**	**4.88**	**10**	Pn	**Pn**	**02 39 02.3**	**+2.7**
ICHK	**Chekchek**	**4.88**	**10**	*e*Pn	**Pn**	**02 39 02.3**	**+2.7**
ARQ	**Araqi**	**4.93**	**145**	P	**Pn**	**02 39 02.7**	**+2.6**
	SNR=38						
YZKH	**Yazd**	**5.05**	**11**	*e*Pn	**Pn**	**02 39 04.6**	**+2.7**
YZKH	**Yazd**	**5.05**	**11**	*e*Pn	**Pn**	**02 39 04.6**	**+2.7**
IGAR	**Gharneh**	**5.11**	**347**	Pn	**Pn**	**02 39 03.8**	**+1.0**
IGAR	**Gharneh**	**5.11**	**347**	*e*Pn	**Pn**	**02 39 03.8**	**+1.0**
HOQ	**Hoqain**	**5.18**	**137**	P	**Pn**	**02 39 05.4**	**+1.8**
	SNR=30						
HOQ				S	**Sn**	**02 40 02.4**	**-1.0**
SHK1	**Shahrekord**	**5.37**	**336**	*e*Pn	**Pg**	**02 39 28.2**	**-0.9**
NASN	**Na'in**	**5.39**	**354**	*e*Pn	**Pn**	**02 39 08.2**	**+1.5**
NASN	**Na'in**	**5.39**	**354**	*e*Pn	**Pn**	**02 39 08.2**	**+1.5**
IZEF	**Zefreh**	**5.54**	**350**	Pn	**Pn**	**02 39 09.6**	**+0.8**
IZEF	**Zefreh**	**5.54**	**350**	*e*Pn	**Pn**	**02 39 09.7**	**+0.9**
IPIR	**Pirpir**	**5.69**	**338**	Pn	**Pn**	**02 39 11.2**	**+0.4**
IPIR	**Pirpir**	**5.69**	**338**	*e*Pn	**Pn**	**02 39 11.3**	**+0.4**
BIDO	**Bidbid**	**5.75**	**131**	P	**Pn**	**02 39 12.5**	**+1.2**
	SNR=16						
BIDO				S	**Sn**	**02 40 16.8**	**-0.4**
ANAR	**Anarak**	**5.76**	**2**	Pn	**Pn**	**02 39 13.3**	**+1.7**
ANAR	**Anarak**	**5.76**	**2**	*e*Pn	**Pn**	**02 39 13.3**	**+1.7**
BSY	**Bisya**	**5.77**	**143**	P	**Pn**	**02 39 13.8**	**+2.1**
	SNR=104						
BSY				S	**Sn**	**02 40 16.9**	**-1.0**
SMDO	**Samad**	**6.02**	**135**	P	**Pn**	**02 39 16.7**	**+1.5**
	SNR=179						
SMDO				S	**Sn**	**02 40 24.7**	**+0.5**
TPRV	**Parvadeh(Tabas**	**6.25**	**26**	Pn	**Pn**	**02 39 19.9**	**+1.5**
TPRV	**Parvadeh(Tabas**	**6.25**	**26**	*e*Pn	**Pn**	**02 39 19.9**	**+1.5**
WSAR	**Wadi Sarin**	**6.28**	**130**	Pn	**Pn**	**02 39 19.6**	**+1.0**
	comp=Z,7.8nm,0.3s,baz=324,slow=10.0,SNR=39						
WSAR				Sn	**Sn**	**02 40 29.4**	**-0.9**
	comp=Z,27nm,0.3s,baz=192,slow=21,SNR=8.5						
WSAR				LR	LR	02 42 31.4	
	comp=Z,1μm,19.4s,baz=334,slow=45						
WSAR	**Wadi Sarin**	**6.28**	**130**	P	**Pn**	**02 39 20.0**	**+1.4**
WSAR				S	**Sn**	**02 40 29.3**	**-1.0**
QAM	**Ghamsar**	**6.55**	**345**	*e*Pn	**Pn**	**02 39 23.7**	**+1.1**
CHBR	**Chabahar**	**6.57**	**104**	*e*Pn	**Pn**	**02 39 23.3**	**+0.7**
CHBR	**Chabahar**	**6.57**	**104**	*e*Pn	**Pn**	**02 39 23.3**	**+0.7**
JMDO	**Jabal Madar**	**6.57**	**139**	P	**Pn**	**02 39 24.1**	**+1.4**
	SNR=19						
KRSH	**Karshahi**	**6.62**	**351**	Pn	**Pn**	**02 39 23.8**	**+0.3**
KRSH	**Karshahi**	**6.62**	**351**	*e*Pn	**Pn**	**02 39 23.8**	**+0.3**
ZHDN	**Zahedan**	**6.78**	**71**	Pn	**Pn**	**02 39 27.3**	**+1.6**
ZHDN	**Zahedan**	**6.78**	**71**	*e*Pn	**Pn**	**02 39 27.3**	**+1.6**
ZHSF	**Zahedan**	**6.81**	**70**	*e*Pn	**Pn**	**02 39 28.6**	**+2.4**
ZHSF	**Zahedan**	**6.81**	**70**	*e*Pn	**Pn**	**02 39 28.6**	**+2.4**
WBK	**Wadi Bani Khal**	**6.94**	**132**	P	**Pn**	**02 39 28.6**	**+0.9**
	SNR=60						
WBK				S	**Sn**	**02 40 46.1**	**-0.5**
IKOO	**Kooshah**	**6.94**	**43**	Pn	**Pn**	**02 39 28.6**	**+0.6**
IKOO	**Kooshah**	**6.94**	**43**	*e*Pn	**Pn**	**02 39 28.6**	**+0.6**
TKDS	**Koohdasht(Taba**	**6.94**	**26**	Pn	**Pn**	**02 39 28.9**	**+1.0**
TKDS	**Koohdasht(Taba**	**6.94**	**26**	*e*Pn	**Pn**	**02 39 28.9**	**+1.0**
ISFB	**Sefidab**	**6.99**	**352**	Pn	**Pn**	**02 39 28.7**	**+0.3**
ISFB	**Sefidab**	**6.99**	**352**	*e*Pn	**Pn**	**02 39 28.8**	**+0.3**
NHDN	**Nehbandan**	**6.99**	**54**	Pn	**Pn**	**02 39 28.1**	**-0.5**
NHDN	**Nehbandan**	**6.99**	**54**	*e*Pn	**Pn**	**02 39 28.1**	**-0.5**
TNSJ	**Nastanj**	**7.07**	**22**	Pn	**Pn**	**02 39 30.6**	**+1.0**
TNSJ	**Nastanj**	**7.07**	**22**	*e*Pn	**Pn**	**02 39 30.6**	**+1.0**
ITEG	**Tejag**	**7.13**	**39**	Pn	**Pn**	**02 39 32.3**	**+1.7**
ITEG	**Tejag**	**7.13**	**39**	*e*Pn	**Pn**	**02 39 32.3**	**+1.7**
MHTO	**MHTO**	**7.62**	**146**	P	**Pn**	**02 39 38.6**	**+1.5**
	SNR=22						
AFRZ	**Afriz**	**7.68**	**37**	Pn	**Pn**	**02 39 40.0**	**+2.0**
AFRZ	**Afriz**	**7.68**	**37**	*e*Pn	**Pn**	**02 39 40.0**	**+2.0**
IKFM	**Kafar-mosalman**	**7.76**	**323**	Pn	**Pn**	**02 39 38.9**	**-0.1**
IKFM	**Kafar-mosalman**	**7.76**	**323**	*e*Pn	**Pn**	**02 39 39.0**	**-0.1**
IDOB	**Doab**	**7.80**	**326**	Pn	**Pn**	**02 39 38.0**	**-1.7**
IDOB	**Doab**	**7.80**	**326**	*e*Pn	**Pn**	**02 39 38.1**	**-1.7**
IMON	**Monand**	**7.88**	**42**	Pn	**Pn**	**02 39 43.8**	**+3.0**
IMON	**Monand**	**7.88**	**42**	*e*Pn	**Pn**	**02 39 43.8**	**+3.0**
HSAM	**Samen**	**7.94**	**330**	Pn	**Pn**	**02 39 40.9**	**-0.9**
HSAM	**Samen**	**7.94**	**330**	*e*Pn	**Pn**	**02 39 40.9**	**-0.9**
ILAS	**Lasjerd**	**7.95**	**357**	Pn	**Pn**	**02 39 42.8**	**+1.0**
ILAS	**Lasjerd**	**7.95**	**357**	*e*Pn	**Pn**	**02 39 42.8**	**+1.0**
SRVN	**Saravan**	**7.96**	**88**	Pn	**Pn**	**02 39 42.9**	**+1.0**
SRVN	**Saravan**	**7.96**	**88**	*e*Pn	**Pn**	**02 39 42.9**	**+1.0**
IANJ	**Anjilo**	**8.03**	**3**	Pn	**Pn**	**02 39 44.3**	**+1.4**
IANJ	**Anjilo**	**8.03**	**3**	*e*Pn	**Pn**	**02 39 44.3**	**+1.4**
RAYN	**Ar Rayn**	**8.15**	**243**	*i* P	**Pn**	**02 39 44.9**	**+0.4**
	SNR=90						
RAYN	**Ar Rayn**	**8.15**	**243**	P	**Pn**	**02 39 44.2**	**-0.3**
RAYN	**Ar Rayn**	**8.15**	**243**	Pn	**Pn**	**02 39 44.2**	**-0.3**
IHSB	**Hasanabad**	**8.20**	**348**	Pn	**Pn**	**02 39 45.0**	**-0.2**
IHSB	**Hasanabad**	**8.20**	**348**	*e*Pn	**Pn**	**02 39 45.0**	**-0.2**
HAGD	**Aghdareh**	**8.25**	**335**	Pn	**Pn**	**02 39 46.6**	**+0.7**
HAGD	**Aghdareh**	**8.25**	**335**	*e*Pn	**Pn**	**02 39 46.6**	**+0.7**
DQM	**DQM**	**8.35**	**152**	P	**Pn**	**02 39 49.3**	**+2.2**
DQM				P	**Pn**	**02 39 49.3**	**+2.2**
ISHM	**Shahmirzad**	**8.36**	**359**	Pn	**Pn**	**02 39 48.5**	**+1.0**
ISHM	**Shahmirzad**	**8.36**	**359**	*e*Pn	**Pn**	**02 39 48.6**	**+1.0**
IBZA	**Bozab**	**8.50**	**327**	Pn	**Pn**	**02 39 48.3**	**-1.1**
IBZA	**Bozab**	**8.50**	**327**	*e*Pn	**Pn**	**02 39 48.3**	**-1.1**
IRAZ	**Razeghan**	**8.51**	**340**	Pn	**Pn**	**02 39 49.0**	**-0.4**
IRAZ	**Razeghan**	**8.51**	**340**	*e*Pn	**Pn**	**02 39 49.1**	**-0.4**
SHRT	**Shahrakht**	**8.57**	**42**	*e*Pn	**Pn**	**02 39 52.5**	**+2.5**
SHRT	**Shahrakht**	**8.57**	**42**	*e*Pn	**Pn**	**02 39 52.6**	**+2.5**
IALM	**Almabolaq**	**8.68**	**330**	*e*Pn	**Pn**	**02 39 50.8**	**-1.1**
KCHF	**Cheshme Sefid,**	**8.77**	**323**	Pn	**Pn**	**02 39 51.5**	**-1.5**
KCHF	**Cheshme Sefid,**	**8.77**	**323**	*e*Pn	**Pn**	**02 39 51.5**	**-1.5**
DOK	**Doka**	**8.78**	**176**	P	**Pn**	**02 39 53.0**	**-0.1**
	SNR=23						
KER	**Kermanshah**	**8.80**	**324**	*e*Pn	**Pn**	**02 39 54.3**	**+0.9**
IPRN	**Peran**	**8.85**	**354**	Pn	**Pn**	**02 39 57.4**	**+3.5**
IPRN	**Peran**	**8.85**	**354**	*e*Pn	**Pn**	**02 39 57.5**	**+3.5**
QABG	**Abgarm-Qazvin**	**8.89**	**339**	Pn	**Pn**	**02 39 53.2**	**-1.5**
QABG	**Abgarm-Qazvin**	**8.89**	**339**	*e*Pn	**Pn**	**02 39 53.3**	**-1.5**
IGLO	**Ghaloghah**	**9.06**	**2**	Pn	**Pn**	**02 39 59.9**	**+2.9**
IGLO	**Ghaloghah**	**9.06**	**2**	*e*Pn	**Pn**	**02 39 59.9**	**+2.9**
IGHG	**Ghaleghazi**	**9.07**	**321**	Pn	**Pn**	**02 39 56.5**	**-0.6**
IGHG	**Ghaleghazi**	**9.07**	**321**	*e*Pn	**Pn**	**02 39 56.6**	**-0.6**
QALM	**Alamut, Qazvin**	**9.29**	**346**	Pn	**Pn**	**02 39 59.0**	**-1.2**
QALM	**Alamut, Qazvin**	**9.29**	**346**	*e*Pn	**Pn**	**02 39 59.0**	**-1.2**
ILIN	**Lien**	**9.31**	**325**	Pn	**Pn**	**02 39 58.6**	**-1.8**
ILIN	**Lien**	**9.31**	**325**	*e*Pn	**Pn**	**02 39 58.6**	**-1.8**
IDHR	**Dehrash**	**9.44**	**322**	Pn	**Pn**	**02 40 00.5**	**-1.8**
IDHR	**Dehrash**	**9.44**	**322**	*e*Pn	**Pn**	**02 40 00.5**	**-1.8**
WHFO	**Wadi Hawf**	**9.46**	**178**	P	**Pn**	**02 40 01.7**	**-0.8**
	SNR=56						
SHAO	**Shalim**	**9.57**	**167**	P	**Pn**	**02 40 04.4**	**+0.6**
	SNR=20						
SBZV	**Sabzevar**	**9.62**	**21**	Pn	**Pn**	**02 40 05.3**	**+0.7**
SBZV	**Sabzevar**	**9.62**	**21**	*e*Pn	**Pn**	**02 40 05.3**	**+0.7**
DMTO	**DMTO**	**9.76**	**171**	P	**Pn**	**02 40 06.0**	**-0.5**
	SNR=11						
RBK	**Rabkut**	**9.89**	**176**	P	**Pn**	**02 40 07.9**	**-0.5**
IMND	**Minoodasht**	**9.95**	**9**	Pn	**Pn**	**02 40 11.3**	**+2.3**
IMND	**Minoodasht**	**9.95**	**9**	*e*Pn	**Pn**	**02 40 11.4**	**+2.4**
IMOG	**Moghan**	**10.01**	**29**	Pn	**Pn**	**02 40 11.4**	**+1.3**
IMOG	**Moghan**	**10.01**	**29**	*e*Pn	**Pn**	**02 40 11.4**	**+1.3**
ABTO	**Aybut**	**10.02**	**181**	P	**Pn**	**02 40 09.3**	**-0.8**
IAKL	**Akhelmad**	**10.20**	**25**	Pn	**Pn**	**02 40 13.5**	**+0.8**
IAKL	**Akhelmad**	**10.20**	**25**	*e*Pn	**Pn**	**02 40 13.6**	**+0.8**
HRA	**Herat**	**10.26**	**45**	Pn	**Pn**	**02 40 13.7**	**+0.2**
ISFR	**Sfrayin**	**10.35**	**21**	Pn	**Pn**	**02 40 14.6**	**-0.1**
ISFR	**Sfrayin**	**10.35**	**21**	*e*Pn	**Pn**	**02 40 14.7**	**-0.1**
IMYA	**Miami**	**10.54**	**31**	Pn	**Pn**	**02 40 19.6**	**+2.3**
IMYA	**Miami**	**10.54**	**31**	*e*Pn	**Pn**	**02 40 19.6**	**+2.3**
IKRD	**Kardeh**	**10.65**	**27**	*e*Pn	**Pn**	**02 40 20.1**	**+1.2**
GEYT	**Alibeck**	**11.19**	**19**	Pn	**Pn**	**02 40 27.4**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=206,slow=16,SNR=38						
GEYT				Lg	Lg	02 43 49.8	
	comp=Z,0.4nm,0.3s,baz=106,slow=14,SNR=1.9						
GEYT				LR	LR	02 45 35.2	
	comp=Z,2μm,19.2s,baz=205,slow=42						
GYA0	**ALIBECK ARRAY**	**11.19**	**19**	P	**Pn**	**02 40 29.6**	**+3.5**
GYA0B	**ALIBECK ARRAY**	**11.19**	**19**		**Pn**	**02 40 25.5**	**-0.6**
MAHB	**Mahabad**	**11.39**	**327**	Pn	**Pn**	**02 40 27.1**	**-1.7**
MAHB	**Mahabad**	**11.39**	**327**	*e*Pn	**Pn**	**02 40 27.2**	**-1.6**
SIRT	**Sirnak**	**13.67**	**320**		**Pn**	**02 40 56.7**	**-3.3**
GEVA	**Gevas**	**13.92**	**324**	Pn	**Pn**	**02 40 59.6**	**-3.8**
MARD	**Mardin**	**14.54**	**316**	Pn	**Pn**	**02 41 07.6**	**-4.3**
GNI	**Garni**	**14.60**	**333**	Pn	**Pn**	**02 41 11.9**	**-0.9**
	comp=Z,29nm,0.3s,baz=293,slow=6.5,SNR=60						
GNI	**Garni**	**14.60**	**333**	*ce*P	**Pn**	**02 41 11.8**	**-0.9**
GNI				pmax	pmax		
	comp=Z,84nm,0.6s						
GNI	**Garni**	**14.60**	**333**	Pn	**Pn**	**02 41 10.5**	**-2.2**
AKT	**Akhty**	**14.79**	**343**	*e*P	**Pn**	**02 41 13.0**	**-2.3**
AKT				*e*S	**Sn**	**02 43 57.4**	**-1.7**
AKT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBL	**Kabul**	**15.14**	**58**	P	**Pn**	**02 41 21.6**	**+1.5**
KBL				pmax	pmax		
	comp=Z,122nm,1.2s						
KBL	**Kabul**	**15.14**	**58**	Pn	**Pn**	**02 41 21.6**	**+1.5**
KBL	**Kabul**	**15.14**	**58**	P	**P**	**02 41 23.8**	**-1.5**
	SNR=20						
KBL				P	**P**	**02 41 23.8**	**-1.5**
	SNR=20						
SOCY	**Socotra**	**15.16**	**178**	Pn	**Pn**	**02 41 15.4**	**-5.0**
SOCY	**Socotra**	**15.16**	**178**	P	**Pn**	**02 41 16.3**	**-4.1**
GHAJ	**Ghor Haditha**	**16.05**	**288**		**Pn**	**02 41 29.8**	**-2.0**
MAK	**Makhachkala**	**16.24**	**344**	*e*P	**Pn**	**02 41 30.1**	**-4.0**
MAK				*e*S	**Sn**	**02 44 27.9**	**-6.2**
MAK				pmax	pmax		
	comp=Z,212nm,1.2s						
MAK				MLR	MLR		
	comp=Z,343nm,14.0s						
EIL	**Elat**	**16.40**	**282**	Pn	**P**	**02 41 37.9**	**-1.2**
	comp=Z,0.7nm,0.3s,baz=48,slow=3.7,SNR=14						
EIL				LR	LR	02 48 28.4	
	comp=Z,181nm,21.9s,baz=98,slow=39						
QRWL	**Qaraoun**	**16.47**	**296**	*e*P	**Pn**	**02 41 37.5**	**+0.3**
HWQ	**Hawqa**	**16.49**	**299**	*e*P	**Pn**	**02 41 38.2**	**+0.6**
KOPT	**Kop Dagi**	**16.52**	**323**		**Pn**	**02 41 37.1**	**-0.9**

ISP IAmb IAmb 02 42 48.4
comp=Z,47nm,0.7s
KSL Kastellorizon 22.03 299 P **P** **02 42 41.0 +0.5**
AKAS Kas 22.03 299 IAmb IAmb 02 42 44.2
comp=Z,37nm,0.8s
AML Almayashu 22.11 43 P **P** **02 42 42.4 +0.6**
SNR=44
KSH Kashi 22.27 51 P **P** **02 42 37.8 -5.5**
KSH pP pP 02 42 41.8 -5.1
KSH S **S** **02 46 37.5 -11**
KSH sS pS 02 46 43.3 -10
KSH pmax pmax
comp=Z,32nm,0.9s
KSH LR LR
comp=Z,1μm,8.3s
KSH LR LR
comp=Z,1μm,8.3s
KSH LR LR
comp=Z,990nm,5.7s
AB31 Akbulak array 22.37 11 *i* P **P** **02 42 44.5 +0.4**
ABKAR Akbulak array 22.37 11 P **P** **02 42 43.6 -0.5**
EKS2 Erkin-Say 22.46 42 P **P** **02 42 47.4 +2.0**
SNR=33
FETY Fethiye 22.55 300 P **P** **02 42 45.4 -0.8**
UCH Uchtor 22.66 44 P **P** **02 42 48.4 +0.5**
SNR=37
AAK Ala-Archa 22.88 43 P **P** **02 42 51.5 +1.7**
comp=Z,12nm,0.7s,baz=243,slow=8.2,SNR=28
AAK S Sn 02 47 07.1 -7.5
comp=Z,0.9nm,0.5s,baz=220,slow=17,SNR=1.1
AAK LR LR 02 53 31.7
comp=Z,844nm,19.1s,baz=252,slow=41
AAK Ala-Archa 22.88 43 P **P** **02 42 51.6 +1.8**
SNR=22
AAK Ala-Archa 22.88 43 P **P** **02 42 50.7 +0.9**
AAK pmax pmax
comp=Z,25nm,0.9s
AAK Ala-Archa 22.88 43 P **P** **02 42 50.7 +0.9**
AAK IAmb IAmb 02 43 01.1
comp=Z,25nm,0.8s
AAK Ala-Archa 22.88 43 P **P** **02 42 51.1 +1.3**
FURI Furi 23.11 220 P **P** **02 42 53.9 +1.4**
FURI IAmb IAmb 02 43 17.3
comp=Z,24nm,0.8s
KBK Karagaybulak 23.17 43 P **P** **02 42 54.8 +2.0**
SNR=15
AKTO Aktyubinsk 23.25 7 P **P** **02 42 53.7 +0.4**
comp=Z,20nm,0.7s,baz=217,slow=14,SNR=56
AKTO S **S** **02 47 08.6 +3.5**
comp=Z,1.6nm,0.7s,baz=84,slow=21,SNR=2.0
AKTO LR LR 02 53 58.1
comp=Z,824nm,18.1s,baz=185,slow=42
AKTO Aktyubinsk 23.25 7 P **P** **02 42 53.8 +0.5**
USP Ospenovka 23.25 42 P **P** **02 42 55.5 +2.0**
SNR=12
YER Yerkesik 23.31 301 P **P** **02 42 56.0 +1.8**
SIM Simferopol' 23.34 324*d i* P **P** **02 42 54.9 +0.6**
SIM *e*S **S** **02 47 10.0 +3.3**
SIM pmax pmax
comp=Z,73nm,0.8s
SGDS Sogindy 23.44 41 *e*P **P** **02 42 56.0 +0.6**
baz=42
SGDS Sogindy 23.44 41 *e*P **P** **02 42 56.0 +0.6**
TKM2 Tokmak 2 23.71 44 P **P** **02 42 59.1 +0.8**
SNR=16
TKM2 Tokmak 2 23.71 44 P **P** **02 42 58.7 +0.5**
ULHL Ulahol 23.75 46 P **P** **02 43 00.4 +1.7**
SNR=15
BTLS Baital 24.08 38⇑ *i* P **P** **02 43 02.2 +0.7**
comp=Z,17nm,0.8s,baz=38
BTLS *e*S **S** **02 47 20.9 +2.2**
baz=38
BTLS Baital 24.08 38*c i* P **P** **02 43 02.2 +0.7**
BTLS *e*S **S** **02 47 20.9 +2.2**
BTLS pmax pmax
comp=Z,17nm,0.8s
KDJ Kajisay 24.30 47 IAmb IAmb 02 43 07.3
comp=Z,29nm,0.9s
ZKR Zakros 24.45 295 P **P** **02 43 07.5 +2.5**
STIA Sitia Lasithi 24.57 295 P **P** **02 43 06.8 +0.8**
TNSS Tian-Shan 24.61 45 *e*P **P** **02 43 07.5 +0.6**
baz=45
TNSS Tian-Shan 24.61 45 *e*P **P** **02 43 07.4 +0.6**
AAA Alma-Ata 24.68 44 *e*P **P** **02 43 08.4 +1.3**
baz=44
AAA Alma-Ata 24.68 44 *e*P **P** **02 43 08.4 +1.3**
MDOK Medeo 24.74 44 *e*P **P** **02 43 08.8 +1.0**
baz=44
MDOK Medeo 24.74 44 *e*P **P** **02 43 08.7 +1.0**
NPS Neapolis 24.96 295 P **P** **02 43 11.3 +1.7**
LAST Lasithi 25.05 295 P **P** **02 43 12.3 +1.8**
HYB Hyderabad 25.21 108 *i* P **P** **02 43 13.0 +1.0**
PRZ Przheval'sk 25.26 47 P **P** **02 43 12.6 +0.2**
PRZ pmax pmax
comp=Z,46nm,1.1s
PRZ Przheval'sk 25.26 47 P **P** **02 43 12.6 +0.2**
PRZ IAmb IAmb 02 43 21.1
comp=Z,46nm,1.1s
SANT Santorini 25.31 298 P **P** **02 43 13.5 +0.7**
BELG Belogornoye 25.32 352 P **P** **02 43 12.9 +0.2**
comp=Z,158nm,0.8s,baz=126,slow=0.7,SNR=38
BELG LR LR 02 56 11.1
comp=Z,292nm,18.6s,baz=129,slow=44
BELG Belogornoye 25.32 352*c i* P **P** **02 43 12.8 +0.2**
BELG pmax pmax
comp=Z,29nm,0.9s
VRH Novokhopyorsk 25.36 343 *e*P **P** **02 43 13.0 +0.1**
VRH *e*S **S** **02 47 42.1 +3.1**
VRH pmax pmax
comp=Z,140nm,0.8s
VRH smax smax
comp=N,330nm,2.8s
CHOS Chios island 25.37 302 P **P** **02 43 18.0 +4.7**
KSTL Kastelli Herak 25.41 295 P **P** **02 43 16.2 +2.6**
SATY Saty 25.54 46 *e*P **P** **02 43 15.8 +0.8**
baz=46
SATY *e*S **S** **02 47 44.4 +1.9**
baz=46
SATY Saty 25.54 46 *e*P **P** **02 43 15.7 +0.8**
SATY *e*S **S** **02 47 44.3 +1.9**
IDI Anoyia 25.55 295 P **P** **02 43 16.6 +1.7**
comp=N,72nm,0.7s,baz=89,slow=9.0,SNR=27
IDI Anoyia 25.55 295 P **P** **02 43 16.6 +1.7**
IDI Anoyia 25.55 295⇑ P **P** **02 43 16.7 +1.7**
VORD Divnogorie 25.85 339 *e*P **P** **02 43 17.2 -0.3**
VORD pmax pmax
comp=Z,190nm,0.7s
KPKS Kokpek 25.92 45⇑ *i* P **P** **02 43 19.2 +0.9**
comp=Z,17nm,0.5s,baz=45
KPKS Kokpek 25.92 45*c i* P **P** **02 43 19.2 +0.9**
KPKS pmax pmax
comp=Z,17nm,0.5s
UZB Uzynbulak 25.98 46⇑ *i* P **P** **02 43 20.2 +1.2**
comp=Z,22nm,1.0s,baz=46
UZB Uzynbulak 25.98 46*c i* P **P** **02 43 20.1 +1.2**
UZB pmax pmax
comp=Z,22nm,1.0s
VSR Storozhevoye 26.11 339 *e*P **P** **02 43 19.6 -0.2**
VSR *e*S **S** **02 47 50.3 -0.6**
VSR pmax pmax
comp=Z,80nm,0.7s
VSR smax smax
comp=N,120nm,2.1s
ALN Alexandroupoli 26.23 308 P **P** **02 43 24.1 +3.1**
SHLS Shalkode 26.27 47⇑ *i* P **P** **02 43 25.3 +3.7**
comp=N,26nm,0.9s,baz=47
SHLS Shalkode 26.27 47*c i* P **P** **02 43 25.2 +3.7**
SHLS pmax pmax
comp=Z,26nm,0.9s
PDGK Podgornoye 26.37 46 P **P** **02 43 22.7 +0.3**
VORR Voronezh 26.49 340 *e*P **P** **02 43 24.0 +0.7**
VORR pmax pmax
comp=Z,250nm,1.0s
TPGR Topolog 26.50 318⇓ P **P** **02 43 23.9 +0.4**
MNCI Minicoy 26.59 132 P **P** **02 43 25.6 +1.2**
MNCI IAmb IAmb 02 43 34.4
comp=Z,60nm,1.3s
RDO Rodhopi 26.68 308 P **P** **02 43 25.9 +0.8**
CFR Carcaliu 26.85 318⇓ P **P** **02 43 27.0 +0.5**
ANKY Antikythira Is 26.92 296 P **P** **02 43 29.2 +1.9**
LPSR Galich'ya Gora 27.39 341 *e*P **P** **02 43 30.9 -0.4**
LPSR pmax pmax
comp=Z,30nm,0.9s
VRI Vrincioaia 28.05 318⇑ P **P** **02 43 38.5 +1.2**
NEHR Nehoiu 28.08 317⇑ P **P** **02 43 38.1 +0.4**

PLOR Plostina 28.09 318⇓ P **P** **02 43 36.6 -1.1**
ITM Ithomi 28.25 298 IAmb IAmb 02 44 07.0
comp=Z,36nm,1.1s
MLR Muntele Rosu 28.33 317 P **P** **02 43 41.6 +1.6**
comp=Z,7.6nm,0.7s,baz=149,slow=6.2,SNR=12
MLR LR LR 02 57 17.1
comp=Z,352nm,20.3s,baz=121,slow=41
MLR Muntele Rosu 28.33 317⇓ P **P** **02 43 41.8 +1.8**
MLR Muntele Rosu 28.33 317 IAmb IAmb 02 43 58.2
comp=Z,18nm,0.8s
SORM Soroca 28.43 323⇑ P **P** **02 43 40.1 -0.6**
TESR Tescani 28.44 319⇓ P **P** **02 43 41.9 +1.1**
BRVK Borovoye 28.51 21 P **P** **02 43 41.3 0.0**
BRVK pmax pmax
comp=Z,16nm,0.8s
BRVK Borovoye 28.51 21 P **P** **02 43 41.2 0.0**
BRVK IAmb IAmb 02 43 48.6
comp=Z,16nm,0.8s
BVAR Borovoye Array 28.52 22 P **P** **02 43 41.8 +0.4**
comp=Z,18nm,0.9s,baz=153,slow=10.0,SNR=63
BVAR PcP **PcP** **02 46 53.2 +0.4**
comp=Z,3.1nm,0.7s,baz=249,slow=11,SNR=4.0
BVAR ScP **ScP** **02 50 32.0 -1.9**
comp=Z,1.1nm,0.7s,baz=91,slow=7.4,SNR=4.1
VOIR 28.85 316⇓ P **P** **02 43 46.1 +1.6**
DOPR Dopca 28.90 317⇓ P **P** **02 43 46.0 +1.1**
BIZ Bicaz 28.99 320⇑ P **P** **02 43 46.7 +1.0**
ARR Arges 29.07 316⇑ P **P** **02 43 47.7 +1.1**
ARU Arti 29.22 6 P **P** **02 43 48.3 +0.7**
comp=Z,0.6nm,0.3s,baz=186,slow=13,SNR=5.7
ARU LR LR 02 58 10.3
comp=Z,537nm,18.5s,baz=192,slow=42
ARU Arti 29.22 6*c i* P **P** **02 43 48.6 +1.0**
ARU 02 44 40.6
ARU PPP PPP 02 44 51.2
ARU S **S** **02 48 43.7 +3.9**
ARU SS **SnSn** **02 50 09.7 +4.8**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU MLR MLR
comp=Z,462nm,18.0s
ARU Arti 29.22 6 P **P** **02 43 48.0 +0.4**
LODK Lodwar 29.46 219 P **P** **02 43 51.0 +0.8**
LODK Lodwar 29.46 219 P **P** **02 43 53.0 +2.8**
SNR=5.9
MAKZ Makanchi 29.62 42 P **P** **02 43 51.2 -0.1**
MAKZ pmax pmax
comp=Z,17nm,1.0s
MAKZ Makanchi 29.62 42 P **P** **02 43 51.2 -0.1**
MAKZ IAmb IAmb 02 43 52.8
comp=Z,17nm,0.9s
AKASG Malin Array Be 29.65 328 P **P** **02 43 51.1 -0.4**
comp=Z,9.5nm,0.6s,baz=134,slow=8.0,SNR=31
AKASG PcP **PcP** **02 46 54.9 -0.8**
comp=Z,1.4nm,0.6s,baz=108,slow=2.0,SNR=4.2
AKASG ScP **ScP** **02 50 35.7 -1.8**
comp=Z,0.3nm,0.4s,baz=104,slow=2.1,SNR=4.3
AKASG Malin Array Be 29.65 328 *i* P **P** **02 43 51.0 -0.4**
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG Malin Array Be 29.65 328 P **P** **02 43 50.1 -1.4**
AKBB Malin Array Si 29.65 328 P **P** **02 43 50.4 -1.1**
AKBB pmax pmax
comp=Z,17nm,0.8s
AKBB Malin Array Si 29.65 328 P **P** **02 43 50.4 -1.1**
AKBB IAmb IAmb 02 43 54.4
comp=Z,17nm,0.8s
MK31 Makanchi Array 29.80 42 P **P** **02 43 52.9 0.0**
MK31 pmax pmax
comp=Z,9.0nm,1.1s
MK31 Makanchi Array 29.80 42 P **P** **02 43 52.9 0.0**
MKAR Makanchi Array 29.80 42 P **P** **02 43 53.6 +0.7**
comp=Z,4.2nm,0.8s,baz=225,slow=9.0,SNR=48
MKAR PcP **PcP** **02 46 56.0 -0.3**
comp=Z,1.8nm,0.8s,baz=219,slow=2.9,SNR=2.9
MKAR LR LR 02 57 16.0
comp=Z,285nm,21.1s,baz=250,slow=39
MKAR Makanchi Array 29.80 42 P **P** **02 43 52.5 -0.4**
SVE Sverdlovsk 29.83 8 *e*P **P** **02 43 54.0 +1.0**
SVE pmax pmax
comp=Z,16nm,1.3s
SVE MLR MLR
comp=Z,463nm,11.0s
BURAR Bucovina Array 29.86 320⇑ P **P** **02 43 54.8 +1.3**
BURAR Bucovina Array 29.86 320 P **P** **02 43 53.7 +0.2**
BUR08 Bucovina Ar. S 29.89 320 P **P** **02 43 53.9 +0.2**
KURBB Kurchatov Arra 30.01 33 P **P** **02 43 55.6 +0.9**
comp=Z,6.7nm,0.8s,baz=233,slow=8.9,SNR=83
KURBB PcP **PcP** **02 46 56.1 -0.6**
comp=Z,2.1nm,0.8s,baz=223,slow=3.8,SNR=5.5
KURBB Kurchatov Arra 30.01 33 P **P** **02 43 54.6 -0.1**
KURK Kurchatov 30.12 33 P **P** **02 43 55.6 0.0**
KURK 02 46 56.1
BOVS Bovan 30.24 311⇑ P **P** **02 43 57.1 +0.3**
GZR Gura Zlata 30.25 314⇓ P **P** **02 43 57.8 +0.8**
HERR Herculane 30.26 313⇓ P **P** **02 43 58.1 +1.1**
OBN Obninsk 30.27 341 P **P** **02 43 57.1 +0.2**
comp=Z,2.6nm,0.4s,baz=125,slow=5.3,SNR=8.4
OBN Obninsk 30.27 341 P **P** **02 43 56.8 0.0**
OBN IAmb IAmb 02 43 58.2
comp=Z,26nm,0.9s
MOS Moscow 30.52 342 *e*P **P** **02 43 59.1 0.0**
MOS *e* 02 45 03.0
MOS pmax pmax
comp=Z,44nm,0.7s
SEM Semipalatinsk 30.72 34 *e*P **P** **02 44 02.0 +0.8**
baz=34
SEM Semipalatinsk 30.72 34 *e*P **P** **02 44 02.0 +0.8**
DRGR 30.93 317⇓ P **P** **02 44 04.0 +1.0**
BZS Buzias 31.09 314⇑ P **P** **02 44 05.1 +0.9**
KIRV Kirov 31.28 356 P **P** **02 44 06.7 +0.9**
comp=Z,37nm,0.8s,baz=174,slow=1.9,SNR=14
KIRV LR LR 03 00 12.0
comp=Z,573nm,18.4s,baz=162,slow=43
KIRV Kirov 31.28 356*ce*P **P** **02 44 06.2 +0.5**
ZSN Zaisan 31.66 42 *e*S **S** **02 49 17.6 -0.7**
baz=42
WMQ Urumqi 32.02 50 *e*P **P** **02 44 14.0 +1.4**
WMQ sP sP 02 44 20.8 +2.8
WMQ pmax pmax
comp=Z,34nm,1.1s
WMQ pmax pmax
comp=Z,240nm,4.1s
WMQ LR LR
comp=Z,1μm,25.3s
WMQ LR LR
comp=Z,620nm,13.5s
WMQ LR LR
comp=Z,1μm,22.9s
UZH Uzhgorod 32.06 320 *e*P **P** **02 44 12.0 -0.8**
UZH *e* 02 44 16.7
UZH *e* 02 44 26.2
UZH *i* S **S** **02 49 21.4 -3.1**
KMBO Kilima Mbogo 32.38 211 P **P** **02 44 17.6 +1.5**
comp=Z,3.8nm,0.9s,baz=35,slow=11,SNR=5.9
TIP Timpagrande 32.62 301⇑ P **P** **02 44 17.3 -0.5**
CRVS Cervenica-Dubn 32.68 320 *e*P **P** **02 44 19.2 +1.0**
CRVS pmax pmax
comp=Z,29nm,0.9s
CRVS Cervenica-Dubn 32.68 320 *e*P **P** **02 44 19.2 +1.0**
PALK Pallekele 32.70 123 P **P** **02 44 19.5 +0.7**
PALK pmax pmax
comp=Z,6.0nm,0.7s
PALK Pallekele 32.70 123 P **P** **02 44 19.5 +0.7**
MNK Minsk 32.88 332 *i* P **P** **02 44 18.2 -1.6**
comp=E,3.0nm,1.2s
MNK *i* P **P** **02 44 18.2 -1.6**
comp=N,19nm,0.8s
MNK *i* P **P** **02 44 18.2 -1.6**
comp=Z,22nm,0.8s
MNK *i* PP **PnPn** **02 45 26.3 -2.2**
MNK *i* PcP **PcP** **02 47 03.4 -0.9**
MNK *i* S **S** **02 49 35.3 -1.8**
MNK *i* SS **SnSn** **02 51 32.3 -1.5**
MNK *i* LQ LQ 02 55 05.1
MNK *i* LR LR 02 57 34.6
MNK *i* LRM MLR 02 58 53.9
comp=E,15nm,15.5s
MNK *i* LRM MLR 02 58 53.9
comp=N,298nm,19.8s
MNK *i* LRM MLR 02 58 53.9
comp=Z,414nm,22.6s
KECS Kecovo 33.05 318 *e*P **P** **02 44 22.8 +1.4**
KECS pmax pmax
comp=Z,13nm,0.9s

KECS Kecovo 33.05 318 *e*P **P** **02 44 22.8 +1.4**
MORH Mrgy, Hungar 33.23 314⇑ P **P** **02 44 23.7 +0.7**
NACGM Naroch 33.62 332 *i* P **P** **02 44 26.6 +0.3**
NACGM *i* P **P** **02 44 26.6 +0.3**
NACGM *i* P **P** **02 44 26.6 +0.3**
NACGM *i* PP sP 02 44 56.9 +25
NACGM *i* PPP PPP 02 46 04.5
NACGM *i* S **S** **02 49 48.2 -0.3**
NACGM *i* SS SnSn 02 51 25.8 -26
NACGM *i* SSS SSS 02 52 25.0
NACGM *i* LQ LQ 02 56 31.2
NACGM *i* LR LR 02 58 08.6
IDID Didziasalis 33.92 333 *e*P **P** **02 44 29.8 +0.9**
VYHS Vyhne 34.03 318 *e*P **P** **02 44 31.1 +1.1**
VYHS pmax pmax
comp=Z,7.0nm,0.9s
VYHS Vyhne 34.03 318 *e*P **P** **02 44 31.1 +1.1**
IIGN Ignalina 34.16 332 *e*P **P** **02 44 31.9 +0.9**
DGZ Jazzator, Alta 34.22 40*c i* P **P** **02 44 32.8 +1.0**
DGZ pmax pmax
comp=Z,29nm,1.5s
KOLL Kolacno 34.33 317 *e*P **P** **02 44 33.3 +0.7**
ISAL Salakas 34.35 332 *e*P **P** **02 44 33.7 +1.0**
SHL Shillong 34.37 84 P **P** **02 44 32.0 -1.4**
SHL pmax pmax
comp=Z,9.0nm,1.0s
SHL Shillong 34.37 84 P **P** **02 44 31.9 -1.4**
SUW Suwalki 34.62 328 *e*P **P** **02 44 35.1 +0.1**
KLMR Klimovskoe 34.73 348 *e*P **P** **02 44 34.7 -1.2**
KLMR pmax pmax
comp=Z,36nm,0.9s
KLMR Klimovskoe 34.73 348 *e*P **P** **02 44 34.7 -1.2**
KLMR AMP 02 44 36.5
comp=Z,36nm,0.9s
KLMR LQ LQ 02 56 18.4
KLMR LQ LQ 02 56 18.4
KLMR LR LR 02 58 53.8
KOGS Kog 34.86 313 *i* P **P** **02 44 37.7 +0.5**
comp=Z,51nm,1.1s
JAVC Velka Javorina 34.89 318 *e*P **P** **02 44 38.5 +1.0**
SMOL Smolenice 34.89 317 *e*P **P** **02 44 38.6 +1.1**
SMOL pmax pmax
comp=Z,8.0nm,1.2s
SMOL Smolenice 34.89 317 *e*P **P** **02 44 38.6 +1.1**
MODS Modra-Piesok 34.92 317 *e*P **P** **02 44 40.1 +2.3**
MODS pmax pmax
comp=Z,11nm,1.2s
MODS Modra-Piesok 34.92 317 *e*P **P** **02 44 40.1 +2.3**
ZST Bratislava 34.96 316 *e*P **P** **02 44 41.6 +3.5**
ZST Bratislava 34.96 316 *e*P **P** **02 44 41.6 +3.5**
OKC Ostrava-Krasne 35.03 319 *e*P **P** **02 44 38.9 +0.3**
OKC Ostrava-Krasne 35.03 319 *e*P **P** **02 44 38.9 +0.3**
ZAA0 Zalesovo Array 35.11 32 IAmb IAmb 02 44 40.5
comp=Z,27nm,1.0s
ZALV Zalesovo Beam 35.11 32 P **P** **02 44 39.5 +0.3**
comp=Z,21nm,0.7s,baz=241,slow=9.0,SNR=84
ZALV LR LR 03 00 35.1
comp=Z,389nm,18.3s,baz=228,slow=39
ZALV Zalesovo Beam 35.11 32 P **P** **02 44 39.1 -0.1**
ZALV Zalesovo Beam 35.11 32 P **P** **02 44 39.1 -0.1**
PABE Paberze 35.22 331 *e*P **P** **02 44 40.5 +0.4**
MORC Moravsky Berou 35.35 319⇓ P **P** **02 44 41.8 +0.3**
MORC Moravsky Berou 35.35 319 *e*P **P** **02 44 41.6 +0.1**
MORC Moravsky Berou 35.35 319 IAmb IAmb 02 44 42.8
comp=Z,16nm,1.1s
MBAR Mbarara 35.39 222 P **P** **02 44 43.2 +0.9**
MBAR pmax pmax
comp=Z,7.0nm,0.9s
MBAR Mbarara 35.39 222 P **P** **02 44 43.2 +0.9**
ARSA Arzberg 35.60 314 *e*P **P** **02 44 44.1 +0.4**
comp=Z,8.2nm,1.0s
CONA Conrad Observa 35.63 315 *e*P **P** **02 44 43.9 0.0**
comp=Z,8.4nm,1.2s
VRAC Vranov 35.72 318 P **P** **02 44 45.3 +0.7**
comp=Z,5.8nm,0.7s,baz=130,slow=7.8,SNR=10
VRAC Vranov 35.72 318 *e*P **P** **02 44 44.9 +0.3**
SOKA Soboth 35.73 313 *e*P **P** **02 44 45.3 +0.5**
comp=Z,9.5nm,1.2s
SOKA *e*P **PcP** **02 47 13.4 +0.7**
comp=Z,2.3nm,0.7s
KRUC Moravsky 35.74 317 *e*P **P** **02 44 45.0 +0.3**
LJU Ljubljana 35.86 312 *i* P **P** **02 44 46.9 +1.1**
KRLC Kraliky 35.93 319 *e*P **P** **02 44 46.0 -0.4**
KRLC Kraliky 35.93 319 *e*P **P** **02 44 46.0 -0.4**
OBKA Obir 35.99 312 *e*P **P** **02 44 48.5 +1.4**
comp=Z,12nm,1.2s
NRCA Norcia 36.02 306 P **P** **02 44 47.8 +0.5**
NRCA IAmb IAmb 02 44 52.0
comp=Z,22nm,0.8s
CRNS Crni Vrh 36.05 312 *i* P **P** **02 44 48.2 +0.7**
comp=Z,62nm,1.0s
VSU Vasula 36.19 336 *e*P **P** **02 44 48.6 +0.1**
DPC Dobruska-Polom 36.31 319 *e*P **P** **02 44 49.7 0.0**
DPC Dobruska-Polom 36.31 319 *e*P **P** **02 44 49.7 0.0**
OSTC Ostas 36.46 320 *e*P **P** **02 44 50.6 -0.3**
MURB Monte Urbino 36.53 307 IAmb IAmb 02 44 54.5
comp=Z,29nm,1.0s
KSP Ksiaz 36.54 320 *e*P **P** **02 44 51.8 +0.3**
UPC Upice 36.56 319 *e*P **P** **02 44 52.0 +0.3**
UPC Upice 36.56 319 *e*P **P** **02 44 52.0 +0.3**
CHVC Chvalec 36.57 319 *e*P **P** **02 44 51.7 -0.1**
MOA Molln 36.61 314 *i* P **P** **02 44 52.7 +0.4**
comp=Z,12nm,0.9s,SNR=6.9
MYKA Terra Mystica 36.62 312 *e*P **P** **02 44 53.0 +0.6**
comp=Z,9.7nm,1.2s
CKRC Cesky Krumlov 36.92 316 *e*P **P** **02 44 54.3 -0.6**
KBA Koelnbreinsper 36.95 313 *i* P **P** **02 44 55.7 +0.3**
comp=Z,16nm,0.9s,SNR=8.9
STAL STALIGIAL 37.13 311 IAmb IAmb 02 45 01.0
comp=Z,7nm,1.2s
PRU Pruhonice 37.21 318 *e*P **P** **02 44 56.9 -0.4**
PRU Pruhonice 37.21 318 *e*P **P** **02 44 56.9 -0.4**
GEC2 GERESS Array S 37.30 316 *e*P **P** **02 44 58.3 +0.1**
comp=Z,2.3nm,0.8s,baz=110,slow=8.5
GERES GERESS Array B 37.30 316 P **P** **02 44 57.9 -0.4**
comp=Z,1.7nm,0.7s,baz=116,slow=9.1,SNR=14
GERES PcP **PcP** **02 47 18.0 +0.6**
comp=Z,1.6nm,0.7s,baz=125,slow=3.9,SNR=5.8
GERES ScP **ScP** **02 51 05.2 +0.7**
comp=Z,0.1nm,0.3s,baz=259,slow=1.0,SNR=1.6
GERES LR LR 03 03 20.9
comp=Z,117nm,20.4s,baz=108,slow=41
GERES GERESS Array B 37.30 316 P **P** **02 44 57.1 -1.1**
PVCC Panska Ves 37.41 319 *e*P **P** **02 44 58.4 -0.5**
PVCC Panska Ves 37.41 319 *e*P **P** **02 44 58.4 -0.5**
MTSE Matsula 37.44 335 *e*P **P** **02 44 59.6 +0.5**
KHC Kasperske Hory 37.48 316 *e*P **P** **02 44 58.8 -0.8**
KHC Kasperske Hory 37.48 316 *e*P **P** **02 44 58.8 -0.8**
RJOB Jochberg 37.51 314 *e*P **P** **02 45 00.3 +0.4**
comp=Z,40nm,0.7s,baz=110,slow=8.5
CTI Castel Tesino 37.79 311 IAmb IAmb 02 45 03.6
comp=Z,17nm,0.9s
BRG Berggiesshubel 37.91 319 *e*P **P** **02 45 03.1 -0.1**
BRG Amp 02 45 03.8
comp=Z,8.1nm,1.0s
BRG *ex* x 03 04 08.0
BRG Amp 03 04 09.6
comp=Z,4.3nm,1.2s
BRG Berggiesshubel 37.91 319 *e*P **P** **02 45 03.4 +0.2**
comp=Z,5.1nm,0.7s,baz=110,slow=8.5
WET Wettzell 37.91 316 *e*P **P** **02 45 03.0 -0.4**
comp=Z,4.8nm,0.9s,baz=110,slow=8.5
WTTA Wattenberg 38.12 313 *i* P **P** **02 45 05.3 0.0**
comp=Z,29nm,0.9s,SNR=13
WTTA *e*P **PcP** **02 47 21.0 +0.9**
comp=Z,4.8nm,0.7s
WATA Walderalm 38.18 313 *i* P **P** **02 45 05.5 -0.2**
comp=Z,33nm,1.0s,SNR=17
WATA *e*P **PcP** **02 47 21.3 +1.0**
comp=Z,1.6nm,0.5s
KEST Kesra 38.21 294 P **P** **02 45 07.3 +1.3**
comp=Z,17nm,1.0s,baz=299,slow=0.7,SNR=7.6
KEST Kesra 38.21 294 IAmb IAmb 02 45 12.4
comp=Z,22nm,1.1s
SQTA Sankt Quirin 38.39 312 *i* P **P** **02 45 07.2 -0.2**
comp=Z,26nm,1.0s,SNR=8.7
SQTA *e*P **PcP** **02 47 21.4 +0.6**
comp=Z,2.3nm,0.4s
MOTA Moosalm 38.49 313 *i* P **P** **02 45 07.8 -0.5**
comp=Z,34nm,1.0s,SNR=14
MOTA *e*P **PcP** **02 47 21.4 +0.2**
comp=Z,4.9nm,0.8s
ROTZ Rotzenmuhle 38.54 317 *e*P **P** **02 45 08.7 +0.1**
comp=Z,6.9nm,0.8s,baz=110,slow=8.5

NKC	**Novy Kostel**	**38.55**	**317**	*e*P	**P**	**02 45 08.8**	**+0.1**
NKC	**Novy Kostel**	**38.55**	**317**	*e*P	**P**	**02 45 08.8**	**+0.1**
WERN	**Wernitzgruen**	**38.62**	**318**	*e*P	**P**	**02 45 09.3**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=110,slow=8.5						
CLL	**Collm**	**38.62**	**319**	*i* P	**P**	**02 45 08.7**	**-0.5**
	comp=Z,16nm,1.1s						
CLL				*i* pP	**pP**	**02 45 12.2**	**-0.9**
CLL				*e*PP	**PP**	**02 46 36.0**	**-1.5**
CLL				*e*S	**S**	**02 51 09.0**	**+3.8**
CLL	**Collm**	**38.62**	**319**	*i* P	**P**	**02 45 08.7**	**-0.5**
CLL				*i*		02 45 12.2	
CLL				*e*S	**S**	**02 51 01.0**	**-4.2**
CLL				pmax	pmax		
	comp=Z,16nm,1.1s						
CLL	**Collm**	**38.62**	**319**	*e*P	**P**	**02 45 09.5**	**+0.3**
	comp=Z,8.6nm,0.9s,baz=110,slow=8.5						
FIA1	**FINESS Array S**	**38.64**	**339**	IAmb	IAmb	02 45 10.0	
	comp=Z,23nm,1.0s						
FINES	**FINESS Array B**	**38.64**	**339**	P	**P**	**02 45 09.0**	**-0.2**
	comp=Z,13nm,0.7s,baz=141,slow=9.2,SNR=56						
FINES				LR	LR	03 03 10.1	
	comp=Z,276nm,18.7s,baz=148,slow=39						
FINES	**FINESS Array B**	**38.64**	**339**	P	**P**	**02 45 08.7**	**-0.5**
FETA	**Feichten**	**38.65**	**312**	*i* P	**P**	**02 45 09.4**	**-0.3**
	comp=Z,27nm,0.9s,SNR=14						
FETA				*e*P	**PcP**	**02 47 22.6**	**+0.8**
	comp=Z,4.4nm,0.9s						
GUNZ	**Gunzen**	**38.67**	**318**	*e*P	**P**	**02 45 10.0**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=110,slow=8.5						
MANZ	**Manzenberg**	**38.67**	**317**	*e*P	**P**	**02 45 10.0**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=110,slow=8.5						
RETA	**Reute**	**38.75**	**313**	*i* P	**P**	**02 45 10.0**	**-0.5**
	comp=Z,7.3nm,0.7s,SNR=6.4						
RETA				*e*P	**PcP**	**02 47 22.3**	**+0.4**
	comp=Z,2.2nm,0.5s						
GRA1	**Grafenberg Arr**	**39.12**	**316**	IAmb	IAmb	02 45 17.2	
	comp=Z,18nm,0.8s						
GRF	**Grafenberg Arr**	**39.12**	**316**	*e*P	**P**	**02 45 13.8**	**+0.4**
	comp=Z,14nm,0.8s,baz=110,slow=8.5						
GRFO	**Grafenberg**	**39.12**	**316**	P	**P**	**02 45 13.2**	**-0.2**
GRFO				pmax	pmax		
	comp=Z,17nm,0.8s						
GRFO	**Grafenberg**	**39.12**	**316**	P	**P**	**02 45 13.2**	**-0.2**
GRFO				IAmb	IAmb	02 45 17.2	
	comp=Z,17nm,0.8s						
DAVOX	**Davos/Dischmat**	**39.15**	**311**	P	**P**	**02 45 13.9**	**0.0**
	comp=Z,9.0nm,0.7s,baz=121,slow=13,SNR=16						
MOX	**Moxa**	**39.20**	**318**	*e*P	**P**	**02 45 14.0**	**0.0**
	comp=Z,2.3nm,0.8s,baz=110,slow=8.5						
UBR	**Ueberruh**	**39.23**	**313**	*e*P	**P**	**02 45 14.2**	**-0.3**
	comp=Z,21nm,0.9s,baz=110,slow=8.5						
BSD	**Bornholm Skovb**	**39.24**	**326**	*e*P	**P**	**02 45 12.9**	**-1.3**
BSD	**Bornholm Skovb**	**39.24**	**326**	*i* P	**P**	**02 45 13.0**	**-1.3**
BSD				IAmb	IAmb	02 45 17.0	
	comp=Z,38nm,0.7s						
BSD	**Bornholm Skovb**	**39.24**	**326**	*i* P	**P**	**02 45 13.0**	**-1.3**
BSD				pmax	pmax		
	comp=Z,38nm,0.7s						
DAVA	**Damuels**	**39.28**	**312**	*i* P	**P**	**02 45 14.3**	**-0.6**
	comp=Z,50nm,0.9s,SNR=22						
NEUB	**Neuenburg**	**39.30**	**319**	*e*P	**P**	**02 45 15.4**	**+0.5**
	comp=Z,7.6nm,0.7s,baz=110,slow=8.5						
BLEU	**Blekinge**	**39.40**	**328**	*i* P	**P**	**02 45 15.3**	**-0.2**
AAL	**Aland**	**39.87**	**335**	*e*P	**P**	**02 45 19.0**	**-0.5**
FLTG	**Flechtingen**	**40.02**	**320**	*e*P	**P**	**02 45 21.6**	**+0.7**
	comp=Z,9.0nm,0.8s,baz=110,slow=8.5						
GTA	**Gaotai**	**40.11**	**61**	⇑P	**P**	**02 45 23.3**	**+1.3**
GTA				pP	pP	02 45 26.5	+0.6
GTA				sP	sP	02 45 29.8	+2.4
GTA				S	**S**	**02 51 33.8**	**+5.6**
GTA				pmax	pmax		
	comp=Z,76nm,0.9s						
GTA				pmax	pmax		
	comp=Z,190nm,5.1s						
GTA				LR	LR		
	comp=Z,250nm,14.9s						
GTA				LR	LR		
	comp=Z,210nm,14.5s						
GTA				LR	LR		
	comp=Z,250nm,14.9s						
UBBA	**Unterbreizbach**	**40.22**	**318**	*e*P	**P**	**02 45 22.4**	**0.0**
	comp=Z,3.0nm,0.8s,baz=110,slow=8.5						
LUNU	**Lund**	**40.23**	**326**	*i* P	**P**	**02 45 23.4**	**+0.9**
ASSE	**Asse, Remlinge**	**40.27**	**320**	*e*P	**P**	**02 45 23.3**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=110,slow=8.5						
CLZ	**Clausthal**	**40.35**	**319**	*e*P	**P**	**02 45 24.3**	**+0.7**
	comp=Z,18nm,0.7s,baz=110,slow=8.5						
MILB	**Miltenberg**	**40.35**	**316**	*e*P	**P**	**02 45 23.4**	**-0.2**
	comp=Z,7.9nm,0.7s,baz=110,slow=8.5						
DEL	**Delary**	**40.42**	**327**	*i* P	**P**	**02 45 24.3**	**+0.3**
GTTG	**Gottingen**	**40.48**	**319**	*e*P	**P**	**02 45 24.1**	**-0.6**
	comp=Z,6.2nm,0.9s,baz=110,slow=8.5						
BFO	**Black Forest**	**40.55**	**313**	*e*P	**P**	**02 45 25.7**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=110,slow=8.5						
UPP	**Uppsala**	**40.60**	**333**	*e*P	**P**	**02 45 25.0**	**-0.5**
BJUU	**Bjuv**	**40.64**	**326**	*i* P	**P**	**02 45 26.2**	**+0.2**
NRDL	**Niedersach Rie**	**40.73**	**320**	*e*P	**P**	**02 45 28.3**	**+1.6**
	comp=Z,24nm,0.9s,baz=110,slow=8.5						
COP	**Copenhagen**	**40.76**	**325**	*i* P	**P**	**02 45 27.4**	**+0.5**
COP	**Copenhagen**	**40.76**	**325**	*i* P	**P**	**02 45 27.4**	**+0.5**
SENIN	**Lac Senin/Sane**	**40.80**	**310**	P	**P**	**02 45 27.5**	**-0.1**
TNS	**Taunus Mts**	**40.98**	**316**	*e*P	**P**	**02 45 29.1**	**+0.2**
	comp=Z,5.7nm,0.9s,baz=110,slow=8.5						
BNI	**Bardonecchia**	**41.00**	**308**	P	**P**	**02 45 28.4**	**-0.8**
BNI				pmax	pmax		
	comp=Z,14nm,0.8s						
BNI	**Bardonecchia**	**41.00**	**308**	P	**P**	**02 45 28.4**	**-0.8**
BNI				IAmb	IAmb	02 45 32.4	
	comp=Z,14nm,0.8s						
BSEG	**Bad Segeberg**	**41.14**	**322**	*e*P	**P**	**02 45 31.1**	**+1.0**
	comp=Z,8.6nm,0.9s,baz=110,slow=8.5						
ECH	**Echery**	**41.29**	**313**	IAmb	IAmb	02 45 31.9	
	comp=Z,19nm,1.0s						
KASTN	**Kahler Asten**	**41.29**	**318**	*e*P	**P**	**02 45 32.6**	**+1.1**
	comp=Z,8.3nm,0.9s,baz=110,slow=8.5						
BORU	**Boraas**	**41.51**	**328**	*i* P	**P**	**02 45 32.8**	**-0.2**
AHRW	**Bad Neuenahr-A**	**41.92**	**316**	*e*P	**P**	**02 45 38.2**	**+1.7**
	comp=Z,7.5nm,0.9s,baz=110,slow=8.5						
BUG	**Bochum--Univer**	**42.05**	**318**	*e*P	**P**	**02 45 38.7**	**+1.1**
	comp=Z,10.0nm,0.9s,baz=110,slow=8.5						
WLF	**Walferdange**	**42.27**	**315**	*d*P	**P**	**02 45 39.4**	**0.0**
WLF	**Walferdange**	**42.27**	**315**	P	**P**	**02 45 39.2**	**-0.2**
WLF				pmax	pmax		
	comp=Z,15nm,0.9s						
WLF	**Walferdange**	**42.27**	**315**	P	**P**	**02 45 39.2**	**-0.2**
WLF	**Walferdange**	**42.27**	**315**	*e*P	**P**	**02 45 39.6**	**+0.3**
	comp=Z,10nm,0.9s,baz=110,slow=8.5						
HFS	**Hagfors**	**42.38**	**332**	P	**P**	**02 45 39.8**	**-0.4**
	comp=Z,10nm,0.7s,baz=116,slow=10,SNR=18						
HFS				PP	**PP**	**02 47 20.7**	**+2.5**
	comp=Z,7.1nm,0.8s,baz=116,slow=13,SNR=4.3						
CM32	**Chiang Mai Arr**	**42.50**	**92**	P	**P**	**02 45 45.0**	**+3.4**
CHTO	**Chiang Mai**	**42.53**	**92**	P	**P**	**02 45 42.1**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	**Chiang Mai**	**42.53**	**92**	P	**P**	**02 45 42.1**	**+0.2**
CHTO				IAmb	IAmb	02 45 46.7	
	comp=Z,14nm,0.8s						
CM33	**Chiang Mai Arr**	**42.53**	**92**	P	**P**	**02 45 42.0**	**+0.1**
CMMT	**Chiang Mai**	**42.53**	**92**	P	**P**	**02 45 42.2**	**+0.3**
	comp=Z,11nm,1.1s						
CM13	**Chiang Mai Arr**	**42.63**	**92**	P	**P**	**02 45 46.0**	**+3.3**
	comp=Z,7.5nm,0.8s						
CM15	**Chiang Mai Arr**	**42.63**	**92**	P	**P**	**02 45 46.3**	**+3.5**
CMAR	**Chiang Mai Arr**	**42.65**	**92**	P	**P**	**02 45 43.5**	**+0.7**
	comp=Z,5.0nm,0.7s,baz=284,slow=9.4,SNR=18						
CMAR				LR	LR	03 06 47.5	
	comp=Z,79nm,19.0s,baz=322,slow=41						
CMAR	**Chiang Mai Arr**	**42.65**	**92**	P	**P**	**02 45 43.2**	**+0.3**
CM02	**Chiang Mai Arr**	**42.66**	**92**	P	**P**	**02 45 44.9**	**+1.9**
	comp=Z,95nmcomp=Z,11nm,0.8s						
CM05	**Chiang Mai Arr**	**42.67**	**92**	P	**P**	**02 45 44.6**	**+1.6**
	comp=Z,65nmcomp=Z,6.5nm,0.8s						
CM01	**Chiang Mai Arr**	**42.68**	**92**	P	**P**	**02 45 45.8**	**+2.7**
	comp=Z,102nmcomp=Z,12nm,0.8s						
CM09	**Chiang Mai Arr**	**42.70**	**92**	P	**P**	**02 45 46.0**	**+2.7**
	comp=Z,225nmcomp=Z,8.8nm,1.0s						
CM34	**Chiang Mai Arr**	**42.70**	**91**	P	**P**	**02 45 44.0**	**+0.7**
CM04	**Chiang Mai Arr**	**42.70**	**92**	P	**P**	**02 45 44.8**	**+1.5**
	comp=Z,95nmcomp=Z,10nm,1.0s						
MUD	**Monsted U'grnd**	**42.74**	**325**	*i* P	**P**	**02 45 43.9**	**+0.7**
MUD				IAmb	IAmb	02 45 47.8	
	comp=Z,18nm,0.6s						
MUD	**Monsted U'grnd**	**42.74**	**325**	*i* P	**P**	**02 45 43.8**	**+0.7**
MUD				pmax	pmax		
	comp=Z,18nm,0.6s						
MOY	**Mondy**	**42.94**	**42**	*e*P	**P**	**02 45 46.5**	**+1.5**
MOY				pmax	pmax		
	comp=Z,10.0nm,1.7s						
BMRD	**Maredsous**	**43.29**	**315**	κP	**P**	**02 45 48.5**	**+0.9**
LZH	**Lanzhou**	**43.32**	**65**	*e*P	**P**	**02 45 49.3**	**+1.0**
LZH				pP	pP	02 45 52.5	+0.3
LZH				sP	sP	02 45 56.0	+2.2
LZH				pmax	pmax		
	comp=Z,48nm,1.1s						
LZH				pmax	pmax		
	comp=Z,310nm,4.3s						
LZH				LR	LR		
	comp=Z,320nm,16.3s						
LZH				LR	LR		
	comp=Z,440nm,15.7s						
LZH				LR	LR		
	comp=Z,180nm,17.9s						
CRAI	**Chiangrai**	**43.33**	**89**	P	**P**	**02 45 49.6**	**+1.2**
	comp=Z,39nm,1.3s						
DOU	**Dourbes**	**43.35**	**315**	*d*P	**P**	**02 45 48.6**	**+0.5**
	comp=Z,11nm,1.0s						
UMPA	**Umpang Tak**	**43.41**	**95**	P	**P**	**02 45 51.3**	**+2.2**
	comp=Z,55nm,1.4s						
SUKH	**Sukhothai**	**43.61**	**93**	P	**P**	**02 45 52.3**	**+1.6**
	comp=Z,22nm,0.8s						
SNF	**Seneffe**	**43.64**	**316**	*d*P	**P**	**02 45 51.2**	**+0.8**
UCC	**Uccle**	**43.66**	**316**	IAmb	IAmb	02 45 52.3	
	comp=Z,21nm,0.9s						
KHLT	**Khaolaem Dam**	**43.73**	**97**	P	**P**	**02 45 55.0**	**+3.4**
	comp=Z,15nm,0.7s						
NC405	**NORSAR Array S**	**43.73**	**332**	P	**P**	**02 45 50.2**	**-0.8**
CD2	**Chengdu**	**43.78**	**73**	*e*P	**P**	**02 45 51.5**	**-0.5**
CD2				S	**S**	**02 52 22.3**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,700nm,18.1s						
CD2				LR	LR		
	comp=Z,350nm,12.9s						
NB201	**NORSAR Array S**	**43.87**	**332**	P	**P**	**02 45 51.4**	**-0.9**
NB201				IAmb	IAmb	02 45 52.1	
	comp=Z,29nm,1.0s						
NB2	**NORSAR Subarra**	**43.90**	**332**	P	**P**	**02 45 51.2**	**-1.3**
	baz=120,slow=8.6						
NOA	**NORSAR Array B**	**43.90**	**332**	P	**P**	**02 45 51.6**	**-0.9**
	comp=Z,4.8nm,0.7s,baz=120,slow=8.1,SNR=27						
NOA				PP	**PP**	**02 47 27.9**	**-6.7**
	comp=Z,2.1nm,0.8s,baz=129,slow=11,SNR=4.8						
NOA				LR	LR	03 05 48.4	
	comp=Z,179nm,18.9s,baz=135,slow=38						
ZAK	**Zakamensk**	**44.03**	**45**	*e*P	**P**	**02 45 54.2**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,12nm,1.6s						
KMI	**Kunming**	**44.04**	**81**	⇑P	**P**	**02 45 54.5**	**+0.2**
KMI				pP	sP	02 45 59.0	-0.8
KMI				sP	pP	02 46 01.0	+2.8
KMI				S	**S**	**02 52 26.0**	**-0.8**
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
KMI				pmax	pmax		
	comp=Z,100nm,4.8s						
KMI				LR	LR		
	comp=Z,220nm,18.8s						
KMI				LR	LR		
	comp=Z,140nm,19.5s						
KMI				LR	LR		
	comp=Z,150nm,17.7s						
NBO00	**NORSAR Array S**	**44.08**	**332**	IAmb	IAmb	02 46 08.5	
	comp=Z,13nm,0.9s						
UTHA	**Uthaitani**	**44.18**	**96**	P	**P**	**02 45 57.0**	**+1.8**
	comp=Z,603nmcomp=Z,20nm,0.9s						
UTTA	**Uttaradit**	**44.33**	**92**	P	**P**	**02 45 58.1**	**+1.6**
	comp=Z,416nmcomp=Z,23nm,0.9s						
SRDT	**SRDT**	**44.38**	**97**	P	**P**	**02 46 00.6**	**+3.7**
	comp=Z,16nm,0.8s						
PHIT	**Phitsanulok**	**44.41**	**93**	P	**P**	**02 46 00.7**	**+3.6**
	comp=Z,76nm,0.8s						
TLY	**Talaya**	**44.55**	**43**	*e*P	**P**	**02 45 59.2**	**+1.4**
TLY				*e*S	**S**	**02 52 32.0**	**-1.1**
TLY				*i* SS	**SS**	**02 55 53.3**	**+0.7**
TLY				pmax	pmax		
	comp=Z,46nm,1.9s						
TLY				MLR	MLR		
	comp=Z,3μm,15.0s						
TLY	**Talaya**	**44.55**	**43**	P	**P**	**02 45 58.6**	**+0.8**
ARCES	**ARCESS Array B**	**45.17**	**347**	P	**P**	**02 46 02.1**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=132,slow=2.1,SNR=13						
ARCES				PcP	**PcP**	**02 47 44.9**	**+2.3**
	comp=Z,4.2nm,0.8s,baz=115,slow=4.6,SNR=3.8						
ARCES				LR	LR	03 08 46.0	
	comp=Z,122nm,18.1s,baz=155,slow=41						
ARCES	**ARCESS Array B**	**45.17**	**347**	P	**P**	**02 46 02.4**	**0.0**
ARCES				pmax	pmax		
	comp=Z,11nm,1.1s						
ARCES	**ARCESS Array B**	**45.17**	**347**	P	**P**	**02 46 02.4**	**0.0**
ARCES				IAmb	IAmb	02 46 03.2	
	comp=Z,11nm,1.1s						
PHET	**Kaeng Krachan**	**45.44**	**99**	P	**P**	02 46 10.5	+5.2
	comp=Z,39nm,0.8s						
SONM	**Songino Array**	**45.63**	**49**	P	**P**	**02 46 07.5**	**+0.9**
	comp=Z,5.7nm,0.9s,baz=259,slow=9.0,SNR=26						
SONM				LR	LR	03 07 39.0	
	comp=Z,452nm,18.3s,baz=261,slow=39						
SONM	**Songino Array**	**45.63**	**49**	P	**P**	**02 46 07.1**	**+0.5**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**45.63**	**49**	P	**P**	**02 46 07.1**	**+0.5**
ULN	**Ulaanbaatar**	**46.07**	**49**	*ce*P	**P**	**02 46 10.6**	**+0.5**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ULN	**Ulaanbaatar**	**46.07**	**49**	P	**P**	**02 46 10.5**	**+0.3**
ULN				IAmb	IAmb	02 46 18.5	
	comp=Z,10nm,0.8s						
NRIK	**Noril'sk**	**46.41**	**16**	P	**P**	**02 46 13.3**	**+1.1**
	comp=Z,11nm,0.9s,baz=222,slow=6.0,SNR=16						
NRIK				LR	LR	03 09 53.5	
	comp=Z,229nm,21.0s,baz=219,slow=42						
NRIK	**Noril'sk**	**46.41**	**16**	*ce*P	**P**	**02 46 13.1**	**+0.8**
NRIK				pmax	pmax		
	comp=Z,19nm,1.0s						
NRIK	**Noril'sk**	**46.41**	**16**	P	**P**	**02 46 13.0**	**+0.8**
NRIK				IAmb	IAmb	02 46 17.3	
	comp=Z,15nm,0.9s						
SRAK	**Srakaew**	**47.10**	**96**	P	P	02 46 23.5	+5.2
	comp=Z,5μmcomp=Z,696nm,0.8s						
XAN	**Xi'an**	**47.66**	**68**	P	**P**	**02 46 22.3**	**-0.3**
XAN				pP	pP	02 46 26.5	-0.1
XAN				sP	sP	02 46 29.3	+1.2
XAN				PP	**PP**	**02 48 12.0**	**-2.2**
XAN				S	**S**	**02 53 18.5**	**+0.1**
XAN				sS	sS	02 53 26.8	+2.0
XAN				ScS	**ScS**	**02 56 10.5**	**-6.0**
XAN				SS	**SS**	**02 56 42.5**	**-3.9**
XAN				pmax	pmax		
	comp=Z,22nm,0.9s						
XAN				pmax	pmax		
	comp=Z,170nm,4.6s						
XAN				LR	LR		
	comp=Z,370nm,15.5s						
XAN				LR	LR		
	comp=Z,290nm,14.4s						
XAN				LR	LR		
	comp=Z,400nm,14.9s						
BTO	**Baotou**	**47.95**	**59**	*e*P	**P**	**02 46 24.5**	**-0.4**
BTO				pmax	pmax		
	comp=Z,93nm,0.8s						
BTO				LR	LR		
	comp=Z,1μm,18.6s						
BTO				LR	LR		
	comp=Z,520nm,14.7s						
ESBB	**Sonseca Array**	**48.63**	**300**	IAmb	IAmb	02 46 31.4	
	comp=Z,14nm,1.1s						
ESDC	**Sonseca Array**	**48.63**	**300**	P	**P**	**02 46 30.2**	**+0.1**
	comp=Z,6.7nm,0.9s,baz=73,slow=7.3,SNR=39						
ESDC				PcP	**PcP**	**02 47 55.4**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=44,slow=3.5,SNR=4.4						
ESDC	**Sonseca Array**	**48.63**	**300**	P	**P**	**02 46 29.9**	**-0.2**
EKA	**Eskdalemuir Ar**	**49.04**	**321**	P	**P**	**02 46 32.0**	**-0.9**
	comp=Z,5.0nm,0.8s,baz=108,slow=7.9,SNR=10.0						
EKA	**Eskdalemuir Ar**	**49.04**	**321**	P	**P**	**02 46 32.0**	**-0.9**
HHC	**Hu-ho-hao-te**	**49.11**	**58**	*e*P	**P**	**02 46 35.0**	**+1.2**
HHC				S	**S**	**02 53 41.0**	**+2.1**
HHC				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,5.1s						
HHC				LR	LR		
	comp=Z,210nm,14.5s						
HHC				LR	LR		
	comp=Z,260nm,13.6s						
HHC				LR	LR		
	comp=Z,300nm,15.3s						
VOI	**Vohitsoka**	**49.46**	**188**	P	**P**	**02 46 38.7**	**+2.2**
VOI				IAmb	IAmb	02 46 41.7	
	comp=Z,16nm,0.9s						
UBPT	**Khong Chiam**	**49.63**	**93**	P	**P**	**02 46 38.0**	**+0.1**
UBPT	**Khong Chiam**	**49.63**	**93**	P	**P**	**02 46 36.8**	**-1.1**
PSI	**Prapat**	**49.85**	**111**	LR	LR	03 12 43.4	
	comp=Z,59nm,18.2s,baz=4.5,slow=42						
RPSI	**Rantau Prapat**	**49.91**	**111**	IAmb	IAmb	02 46 52.1	
	comp=Z,8.0nm,0.7s						
MDT	**Midelt**	**49.97**	**291**	P	**P**	**02 46 41.5**	**+1.0**
	comp=Z,9.1nm,0.8s,baz=88,slow=8.9,SNR=16						
TIY	**Taiyuan**	**50.05**	**62**	*e*P	**P**	**02 46 41.0**	**+0.1**
TIY				pmax	pmax		
	comp=Z,140nm,3.7s						
TOA0	**Torodi Ar. Sit**	**50.23**	**264**	P	**P**	**02 46 42.1**	**-0.4**
	SNR=5.2						
TOA0				P	**P**	**02 46 42.1**	**-0.4**
	SNR=5.2						
TORD	**Torodi Ar. Bea**	**50.23**	**264**	P	**P**	**02 46 42.4**	**-0.1**
	comp=Z,22nm,0.6s,baz=58,slow=7.6,SNR=83						
TORD				LR	LR	03 10 21.6	
	comp=Z,454nm,18.3s,baz=70,slow=39						
TORD	**Torodi Ar. Bea**	**50.23**	**264**	P	**P**	**02 46 42.0**	**-0.5**
PBRG	**Braganca**	**50.60**	**303**	*e*P	**P**	**02 46 45.4**	**+0.4**
	comp=Z,25nm,1.3s						
MVO	**Moncorvo**	**50.86**	**302**	*e*P	**P**	**02 46 47.6**	**+0.6**
	comp=Z,26nm,0.8s						
PBAR	**Barrancos**	**51.16**	**298**	*e*P	**P**	**02 46 49.4**	**+0.2**
	comp=Z,27nm,1.3s						
PMRV	**Marv??o**	**51.30**	**300**	*e*P	**P**	**02 46 50.4**	**+0.1**
MTE	**Manteigas**	**51.32**	**301**	*e*P	**P**	**02 46 50.8**	**+0.3**
	comp=Z,23nm,1.5s						
MTE	**Manteigas**	**51.32**	**301**	IAmb	IAmb	02 46 56.1	
	comp=Z,12nm,0.8s						
PCBR	**Castelo Branco**	**51.32**	**300**	*e*P	**P**	**02 46 50.5**	**+0.1**
	comp=Z,20nm,1.1s						
PVRL	**Vila Real**	**51.37**	**302**	*e*P	**P**	**02 46 51.7**	**+0.9**
	comp=Z,27nm,1.1s						
POLO	**Lamas de Olo**	**51.42**	**302**	*e*P	**P**	**02 46 52.1**	**+0.8**
	comp=Z,13nm,1.1s						
PESTR	**Estremoz**	**51.51**	**299**	*e*P	**P**	**02 46 51.8**	**-0.1**
PVIS	**Viseu**	**51.55**	**302**	*e*P	**P**	**02 46 53.2**	**+1.0**
	comp=Z,36nm,2.1s						
PCAB	**Cabril**	**51.57**	**303**	*e*P	**P**	**02 46 53.0**	**+0.7**
BOD	**Bodaibo**	**51.63**	**36**	*e*P	**P**	**02 46 52.2**	**-0.2**
BOD				*e*		02 54 17.1	
BOD				pmax	pmax		
	comp=Z,69nm,1.7s						
PGAV	**Gavieira, Arco**	**51.73**	**303**	*e*P	**P**	**02 46 54.5**	**+0.9**
	comp=Z,26nm,1.2s						
EVO	**Evora**	**51.88**	**299**	*e*P	**P**	**02 46 55.0**	**+0.4**
PMTG	**Montargil**	**51.98**	**300**	*e*P	**P**	**02 46 56.4**	**+1.1**
COI	**Coimbra**	**52.00**	**301**	*e*P	**P**	**02 46 56.5**	**+1.1**
	comp=Z,34nm,0.8s						
PCVE	**Castro Verde**	**52.01**	**298**	*e*P	**P**	**02 46 55.6**	**0.0**
PCAS	**Casmilo, Conde**	**52.08**	**301**	*e*P	**P**	**02 46 56.9**	**+0.8**
QIZ	**Qiongzhong**	**52.14**	**86**	P	**P**	**02 46 57.0**	**+0.2**
QIZ				pP	**pP**	**02 46 59.5**	**-1.2**
QIZ				PcP	**PcP**	**02 48 06.0**	**-2.6**
QIZ				S	**S**	**02 54 25.0**	**+3.9**
QIZ				sS	**sS**	**02 54 28.8**	**+1.2**
QIZ				pmax	pmax		
	comp=Z,14nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,120nm,4.5s						
QIZ				LR	LR		
	comp=Z,100nm,28.9s						
QIZ				LR	LR		
	comp=Z,99nm,18.6s						
QIZ				LR	LR		
	comp=Z,130nm,18.6s						
QIZ	**Qiongzhong**	**52.14**	**86**	IAmb	IAmb	02 47 01.1	
	comp=Z,23nm,1.1s						
PTEO	**Sao Teotonio**	**52.56**	**298**	*e*P	**P**	**02 46 56.2**	**-3.5**
WHN	**Wuhan**	**52.81**	**71**	⇑P	**P**	**02 47 01.8**	**+0.2**
WHN				pmax	pmax		
	comp=Z,42nm,0.6s						
SPITS	**Spitsbergen Ar**	**53.52**	**351**	P	**P**	**02 47 06.0**	**-0.2**
	comp=Z,4.5nm,0.6s,baz=127,slow=12,SNR=6.6						
TIA	**Tai'an**	**53.98**	**64**	P	**P**	**02 47 10.5**	**+0.4**
TIA				pmax	pmax		
	comp=Z,27nm,0.6s						
TIA				pmax	pmax		
	comp=Z,110nm,3.7s						
TIA				LR	LR		
	comp=Z,200nm,11.4s						
TIA				LR	LR		
	comp=Z,130nm,16.4s						
TIA				LR	LR		
	comp=Z,140nm,13.5s						
KOWA	**Kowa**	**54.75**	**269**	P	**P**	**02 47 15.9**	**-0.2**
NJ2	**Nanjing**	**56.22**	**68**	*e*P	**P**	**02 47 25.3**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DSRI	**Dabo**	**56.36**	**111**	P	**P**	**02 47 27.1**	**-0.5**
MDSI	**Maura Dua**	**58.31**	**115**	P	**P**	**02 47 39.8**	**-1.6**
	comp=Z,1μmcomp=Z,12nm,1.1s						
LBTB	**Lobatse**	**58.63**	**210**	P	**P**	**02 47 43.9**	**+0.4**
LBTB				pmax	pmax		
	comp=Z,26nm,0.8s						
LBTB	**Lobatse**	**58.63**	**210**	P	**P**	**02 47 43.9**	**+0.4**
DBIC	**Dimbokro**	**58.88**	**261**	P	**P**	**02 47 45.5**	**+0.1**
	comp=Z,39nm,0.7s,baz=40,slow=7.3,SNR=30						
DBIC				LR	LR	03 13 44.8	
	comp=Z,144nm,18.4s,baz=42,slow=37						
DBIC	**Dimbokro**	**58.88**	**261**	P	**P**	**02

BOSA					LR	LR	03 16 12.8	
	comp=Z,164nm,18.3s,baz=54,slow=37							
BOSA	**Boshof**	**61.92**	**208**		P	**P**	**02 48 07.0**	**+1.0**
BOSA					pmax	pmax		
	comp=Z,17nm,0.9s							
BOSA	**Boshof**	**61.92**	**208**		P	**P**	**02 48 07.0**	**+1.0**
SZP	**Santa**	**62.07**	**84**		P	**P**	**02 48 09.3**	**+2.2**
KSAR	**Wonju Array Be**	**62.16**	**60**		P	**P**	**02 48 06.3**	**-1.1**
KSAR	**Wonju Array Be**	**62.16**	**60**		P	**P**	**02 48 06.3**	**-1.1**
KSRS	**Korea Array**	**62.18**	**60**		P	**P**	**02 48 06.8**	**-0.8**
	comp=Z,5.3nm,0.6s,baz=279,slow=6.9,SNR=20							
KSRS					LR	LR	03 17 16.7	
	comp=Z,106nm,18.1s,baz=292,slow=38							
KLR	**Kul'dur**	**62.35**	**46**		LR	LR	03 18 31.7	
	comp=Z,292nm,20.7s,baz=288,slow=39							
KLR	**Kul'dur**	**62.35**	**46**	*ce*	P	**P**	**02 48 08.0**	**-0.6**
KLR					pmax	pmax		
	comp=Z,6.0nm,0.8s							
LEM	**Lembang**	**62.45**	**115**		LR	LR	03 15 29.3	
	comp=Z,64nm,19.0s,baz=200,slow=36							
CISI	**Cisompet, Garu**	**63.03**	**115**		P	**P**	**02 48 14.7**	**+1.0**
CISI	**Cisompet, Garu**	**63.03**	**115**		P	**P**	**02 48 12.4**	**-1.2**
	comp=Z,3µmcomp=Z,49nm,1.2s							
USA0B	**Ussuriysk Arra**	**63.56**	**52**		P	**P**	**02 48 16.1**	**-0.6**
USA0B					pmax	pmax		
	comp=Z,6.0nm,0.8s							
USA0B	**Ussuriysk Arra**	**63.56**	**52**		P	**P**	**02 48 16.1**	**-0.6**
USA0B					IAmb	IAmb	02 48 16.3	
	comp=Z,5.9nm,0.8s							
USRK	**Ussuriysk Ar.**	**63.56**	**52**		P	**P**	**02 48 15.8**	**-0.9**
	comp=Z,5.5nm,0.8s,baz=278,slow=5.6,SNR=12							
USRK					LR	LR	03 18 51.6	
	comp=Z,280nm,19.1s,baz=282,slow=39							
SUMG	**Summit**	**64.66**	**341**	*i*	P	**P**	**02 48 24.5**	**+0.6**
SUMG					IAmb	IAmb	02 48 25.8	
	comp=Z,12nm,0.9s							
SUMG	**Summit**	**64.66**	**341**		P	**P**	**02 48 24.1**	**+0.2**
SUMG					pmax	pmax		
	comp=Z,18nm,0.9s							
SUMG	**Summit**	**64.66**	**341**		P	**P**	**02 48 24.1**	**+0.2**
JNU	**Nakatse**	**65.71**	**64**		LR	LR	03 20 45.9	
	comp=Z,651nm,19.3s,baz=270,slow=39							
ICESG	**Greenland Ices**	**65.77**	**337**	*e*	P	**P**	**02 48 30.9**	**-0.2**
NEEM	**North Greenlan**	**66.53**	**347**	*i*	P	**P**	**02 48 35.8**	**0.0**
NEEM					IAmb	IAmb	02 48 40.2	
	comp=Z,17nm,0.7s							
JWT	**Wachi**	**68.59**	**60**		IAmb	IAmb	02 48 49.5	
	comp=Z,16nm,1.1s							
TYV	**Tymovskoe**	**68.77**	**43**	*e*	P	**P**	**02 48 48.2**	**-1.8**
TYV					pmax	pmax		
	comp=Z,11nm,1.4s							
TYV					pmax	pmax		
	comp=Z,100nm,2.2s							
DY2G	**Dye2**	**68.94**	**335**	*i*	P	**P**	**02 48 51.4**	**+0.3**
DY2G					IAmb	IAmb	02 48 55.2	
	comp=Z,20nm,0.7s							
DY2G				*e*			02 49 26.1	
SEY	**Seymchan**	**69.87**	**29**		P	**P**	**02 48 56.7**	**+0.1**
	comp=Z,8.4nm,0.9s,baz=265,slow=11,SNR=2.3							
SEY	**Seymchan**	**69.87**	**29**	*i*	P	**P**	**02 48 57.3**	**+0.7**
YSS	**Yuzh-Sakhalins**	**70.06**	**47**	*e*	P	**P**	**02 48 57.3**	**-0.8**
YSS				*e*	SP	**pP**	**02 49 02.8**	**+0.7**
YSS				*e*			02 49 15.1	
YSS				*e*	PPP	PPP	02 53 19.7	
YSS				*e*	S	**S**	**02 58 07.0**	**-1.6**
YSS				*e*	PPS	PPS	02 58 46.2	
YSS					pmax	pmax		
	comp=Z,200nm,5.4s							
YSS					pmax	pmax		
	comp=Z,30nm,0.9s							
YSS					MLR	MLR		
	comp=Z,600nm,17.0s							
YSS					MLR	MLR		
	comp=E,500nm,18.0s							
YSS	**Yuzh-Sakhalins**	**70.06**	**47**		P	**P**	**02 48 57.8**	**-0.3**
MAJO	**Matsushiro**	**70.31**	**58**		P	**P**	**02 48 59.7**	**-0.2**
MAJO					pmax	pmax		
	comp=Z,7.0nm,0.8s							
MAJO	**Matsushiro**	**70.31**	**58**		P	**P**	**02 48 59.7**	**-0.2**
MAJO					IAmb	IAmb	02 49 02.7	
	comp=Z,6.7nm,0.8s							
MAT	**Matsushiro**	**70.31**	**58**		P	**P**	**02 48 58.9**	**-1.0**
MJAR	**Matsushiro Arr**	**70.32**	**58**		P	**P**	**02 48 59.3**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=289,slow=5.4,SNR=9.3							
MJAR					LR	LR	03 23 45.0	
	comp=Z,118nm,19.6s,baz=300,slow=39							
MA2	**Magadan**	**70.33**	**32**	*ce*	P	**P**	**02 48 59.4**	**-0.1**
MA2					pmax	pmax		
	comp=Z,16nm,1.7s							
MA2	**Magadan**	**70.33**	**32**		P	**P**	**02 48 59.3**	**-0.1**
MA2					IAmb	IAmb	02 49 02.9	
	comp=Z,8.5nm,1.0s							
TULEG	**Thule**	**70.48**	**348**	*i*	P	**P**	**02 48 60.0**	**-0.2**
TULEG					IAmb	IAmb	02 49 00.9	
	comp=Z,7.3nm,0.9s							
TULEG	**Thule**	**70.48**	**348**		P	**P**	**02 48 58.9**	**-1.2**
TULEG					IAmb	IAmb	02 49 01.0	
	comp=Z,12nm,1.0s							
EUNU	**Eureka**	**70.55**	**353**		P	**P**	**02 49 01.2**	**+0.6**
EUNU					IAmb	IAmb	02 49 02.0	
	comp=Z,9.4nm,1.1s							
TTSI	**Tana Toraja**	**70.64**	**104**		P	**P**	**02 49 01.2**	**-0.9**
	comp=Z,2µmcomp=Z,18nm,0.5s							
KAPI	**Kappang**	**71.58**	**106**		P	**P**	**02 49 07.6**	**-0.2**
KAPI					pmax	pmax		
	comp=Z,43nm,1.5s							
KAPI	**Kappang**	**71.58**	**106**		P	**P**	**02 49 07.6**	**-0.2**
GTOI	**Gorontalo**	**71.62**	**99**		P	**P**	**02 49 06.4**	**-1.7**
	comp=Z,558nmcomp=Z,12nm,1.0s							
BILL	**Bilibino**	**72.86**	**21**	*di*	P	**P**	**02 49 15.2**	**+0.7**
BILL				*i*			02 49 31.2	
BILL					pmax	pmax		
	comp=Z,6.0nm,0.8s							
BILL					MLR	MLR		
	comp=Z,190nm,15.0s							
BILL	**Bilibino**	**72.86**	**21**		P	**P**	**02 49 15.3**	**+0.7**
BILL					IAmb	IAmb	02 49 19.1	
	comp=Z,9.8nm,1.0s							
TNTI	**Ternate**	**75.39**	**97**		P	**P**	**02 49 30.3**	**0.0**
	comp=Z,53nm,1.1s							
SANI	**Sanana**	**75.51**	**100**		P	**P**	**02 49 30.6**	**-0.4**
	comp=Z,15nm,1.5s							
PETK	**Petropavlovsk-**	**76.50**	**37**		P	**P**	**02 49 34.6**	**-1.3**
	comp=Z,3.8nm,1.0s,baz=198,slow=9.1,SNR=4.2							
PETK					LR	LR	03 26 30.5	
	comp=Z,312nm,19.0s,baz=294,slow=38							
SWI	**Sorong**	**79.59**	**96**		P	**P**	**02 49 53.5**	**-0.3**
	comp=Z,22nm,1.1s							
PSA00	**Pilbara Seismi**	**80.58**	**120**		P	**P**	**02 49 57.8**	**-1.1**
TOLK	**Toolik Lake Re**	**82.73**	**8**		P	**P**	**02 50 09.1**	**-0.5**
TOLK					IAmb	IAmb	02 50 14.6	
	comp=Z,13nm,0.8s							
ANM	**Nome**	**83.45**	**16**		IAmb	IAmb	02 50 18.3	
	comp=Z,14nm,1.0s							
COLD	**Coldfoot**	**83.98**	**9**		P	**P**	**02 50 16.3**	**+0.3**
COLD					IAmb	IAmb	02 50 20.9	
	comp=Z,8.6nm,0.9s							
INK	**Inuvik**	**84.42**	**3**		P	**P**	**02 50 18.4**	**+0.2**
	comp=Z,5.5nm,1.0s,baz=23,slow=10,SNR=8.8							
INK	**Inuvik**	**84.42**	**3**		IAmb	IAmb	02 50 23.6	
	comp=Z,5.8nm,0.9s							
BMAR	**Burnt Mountain**	**84.48**	**7**		P	**P**	**02 50 19.1**	**+0.5**
IMAR	**Indian Mountai**	**84.59**	**11**		P	**P**	**02 50 18.9**	**-0.2**
MLY	**Manley**	**85.95**	**10**		IAmb	IAmb	02 50 30.1	
	comp=Z,14nm,1.0s							
I23K	**Minto, Yukon-K**	**86.05**	**9**		IAmb	IAmb	02 50 28.4	
	comp=Z,20nm,1.4s							
PRP	**Porcupine Dome**	**86.21**	**8**		IAmb	IAmb	02 50 32.8	
	comp=Z,12nm,0.9s							
ILAR	**Eielson Array**	**86.75**	**9**		P	**P**	**02 50 29.3**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=323,slow=3.8,SNR=21							
ILAR					PP	**PP**	**02 53 49.6**	**-1.8**
	comp=Z,0.9nm,1.1s,baz=316,slow=6.3,SNR=2.9							
ILAR					PKKPbc	**PKKPbc**	**03 08 26.8**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=191,slow=2.6,SNR=14							
ILAR					LR	LR	03 35 33.9	
	comp=Z,39nm,18.2s,baz=352,slow=40							
ILAR	**Eielson Array**	**86.75**	**9**		P	**P**	**02 50 28.9**	**-1.0**
ILAR	**Eielson Array**	**86.75**	**9**		P	**P**	**02 50 28.9**	**-1.0**
BPAW	**Bear Paw Mtn.**	**86.78**	**10**		P	**P**	**02 50 30.2**	**+0.1**
TTA	**Tatalina**	**86.95**	**13**		IAmb	IAmb	02 50 35.1	
	comp=Z,9.7nm,1.1s							
KTH	**Kantishna Hill**	**87.31**	**11**		IAmb	IAmb	02 50 37.5	
	comp=Z,14nm,1.2s							
TRF	**Thorofare Moun**	**87.50**	**10**		IAmb	IAmb	02 50 44.0	
	comp=Z,5.4nm,1.0s							
SCRK	**Sand Creek**	**87.88**	**8**		P	**P**	**02 50 35.9**	**+0.3**
SCRK					IAmb	IAmb	02 50 37.4	
	comp=Z,11nm,1.0s							
DOT	**Dot Lake**	**88.19**	**8**		IAmb	IAmb	02 50 38.3	
	comp=Z,10nm,1.2s							
DAWY	**Dawson**	**88.26**	**6**		IAmb	IAmb	02 50 38.7	
	comp=Z,8.5nm,1.1s							
SKT	**Skwentna**	**88.67**	**12**		IAmb	IAmb	02 50 43.2	
	comp=Z,7.7nm,1.1s							
L27K	**Beaver Creek,**	**89.01**	**7**		IAmb	IAmb	02 50 45.1	
	comp=Z,9.4nm,1.3s							
BCAR	**Beaver Creek A**	**89.01**	**7**		P	**P**	**02 50 41.0**	**+0.2**
SUA	**Susitna One**	**89.29**	**11**		IAmb	IAmb	02 50 42.7	
	comp=Z,11nm,1.0s							
YKA	**Yellowknife Ar**	**89.89**	**354**		P	**P**	**02 50 45.2**	**+0.4**
	comp=Z,7.3nm,0.7s,baz=7.2,slow=4.6,SNR=114							
YKA					PKKPbc	**PKKPbc**	**03 08 19.1**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=191,slow=3.8,SNR=5.6							
YKA					LR	LR	03 37 41.9	
	comp=Z,54nm,20.0s,baz=0.0,slow=40							
FCC	**Fort Churchill**	**89.99**	**344**		IAmb	IAmb	02 50 46.9	
	comp=Z,6.2nm,1.1s							
WRA	**Warramunga Arr**	**91.32**	**112**		P	**P**	**02 50 51.3**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=315,slow=4.0,SNR=14							
WRA					PKKPbc	**PKKPbc**	**03 08 14.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=111,slow=2.7,SNR=3.4							
WRA	**Warramunga Arr**	**91.32**	**112**	*i*	P	**P**	**02 50 54.2**	**+2.0**
WRA					pmax	pmax		
	comp=Z,3.0nm,0.7s							
WRA	**Warramunga Arr**	**91.32**	**112**		P	**P**	**02 50 51.2**	**-1.0**
WB2	**Warramunga Arr**	**91.33**	**112**		P	**P**	**02 50 51.2**	**-1.1**
ASAR	**Alice Springs**	**92.74**	**115**		P	**P**	**02 50 58.1**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=305,slow=4.6,SNR=13							
ASAR					PKKPbc	**PKKPdf**	**03 08 09.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=130,slow=3.1,SNR=2.5							
ASAR	**Alice Springs**	**92.74**	**115**		P	**P**	**02 50 57.9**	**-0.9**
AS31	**Alice Springs**	**92.74**	**115**		P	**P**	**02 50 58.2**	**-0.5**
FFC	**Flin Flon**	**95.50**	**346**		P	**P**	**02 51 10.6**	**-0.3**
FFC					pmax	pmax		
	comp=Z,4.0nm,1.1s							
FFC	**Flin Flon**	**95.50**	**346**		P	**P**	**02 51 10.6**	**-0.3**
FFC					IAmb	IAmb	02 51 11.4	
	comp=Z,3.8nm,1.1s							
ULM	**Lac du Bonnet**	**98.02**	**341**		P	**P**	**02 51 22.1**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=87,slow=2.8,SNR=4.3							
ULM	**Lac du Bonnet**	**98.02**	**341**		IAmb	IAmb	02 51 23.5	
	comp=Z,3.2nm,1.1s							
PDAR	**Pinedale Array**	**108.42**	**347**		PKKP	**PKKPdf**	**03 07 40.1**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=178,slow=4.3,SNR=5.8							
NVAR	**Mina Array Bea**	**114.04**	**353**		PKP	PKPdf	02 56 26.0	+0.1
	comp=Z,0.5nm,0.6s,baz=241,slow=0.9,SNR=5.1							
NVAR	**Mina Array Bea**	**114.04**	**353**			**PKiKP**	**02 56 24.8**	**-1.0**
TXAR	**Lajitas Array**	**119.46**	**337**		PKP	**PKPdf**	**02 56 35.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=110,slow=2.0,SNR=7.0							
LPAZ	**La Paz**	**125.07**	**269**		PKP	**PKiKP**	**02 56 48.2**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=48,slow=3.6,SNR=8.6							
PLCA	**Paso Flores**	**132.49**	**239**		PKP	**PKiKP**	**02 57 01.9**	**+0.1**
	comp=Z,2.6nm,1.1s,baz=125,slow=7.6,SNR=3.4							

IDC 29 02:47:38.8±11.0, 27°38N×83°64E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.2/52, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=398.6km s-min=78.2km az=63.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.41**	**357**	P	P		02 52 06.8	+0.3
	0.1nm,0.3s,baz=183,slow=12,SNR=5.0							
KURBB	**Kurchatov Arra**	**23.54**	**352**	P	P		02 52 50.9	+0.3
	0.5nm,0.8s,baz=176,slow=9.9,SNR=4.1							
ZALV	**Zalesovo Beam**	**26.56**	**2**	P	P		02 53 17.6	-0.6
	0.7nm,0.4s,baz=172,slow=12,SNR=2.0							
ILAR	**Eielson Array**	**80.16**	**20**	P	P		02 59 50.6	+0.1
	0.1nm,0.6s,baz=313,slow=5.2,SNR=4.2							

*IDC **29** 02:50:59.7±7.7, 51°73N×173°84W, h0km, mb3.3/2, mb1 3.8/4, mb1mx3.3/62, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=142.1km s-min=56.4km az=97.0*
*NEIC **29** 02:51:06.9±2.0, 51°90N±0°09×174°29W±0°09, h47km±7km, mb3.7/12, ML3.4(AEIC), Error ellipse: s-maj=14.4km s-min=5.8km az=153.0*
*AEIC **29** 02:51:06±2.1, 51°82N±0°08×174°38W±0°07, h20km±5km, Error ellipse: s-maj=11.7km s-min=6.1km az=168.0*

ISC 29 02:51:06.0±1.1, 51°9N±0°1×174°29W±0°06, h53km±9km, n48, σ1s60/45, mb3.6/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.27**	**13**			**Pn**	**02 51 15.0**	**-0.2**
ATKA	**Atka Island**	**0.27**	**13**			**Sn**	**02 51 22.7**	**+0.9**
KOFP	**Korovin Flat P**	**0.36**	**19**			**Pn**	**02 51 16.4**	**+0.3**
KOKL	**Mount Kliuchef**	**0.39**	**8**			**Pn**	**02 51 17.1**	**+0.7**
KOKL						**Sn**	**02 51 25.0**	**+1.2**
KOWE	**Korovin West**	**0.43**	**3**			**Pn**	**02 51 17.6**	**+0.9**
KOKV	**Korovin Volcan**	**0.43**	**10**			**Pn**	**02 51 17.7**	**+0.9**
GSMY	**Great Sitkin M**	**1.10**	**276**			**Pn**	**02 51 25.3**	**+0.2**
GSTR	**Great Sitkin T**	**1.10**	**279**			**Pn**	**02 51 26.1**	**+0.9**
GSTR						**Sn**	**02 51 42.5**	**+3.0**
GSTD	**Great Sitkin T**	**1.15**	**277**			**Pn**	**02 51 26.3**	**+0.4**
GSTD						**Sn**	**02 51 42.1**	**+1.4**
GSSP	**Great Sitkin S**	**1.18**	**278**			**Sn**	**02 51 43.2**	**+2.0**
ADAG	**Mount Adagdak**	**1.43**	**273**			**Pn**	**02 51 30.5**	**+0.9**
ADK	**Adak**	**1.48**	**269**			**Pn**	**02 51 30.6**	**+0.3**
ADK						**Sn**	**02 51 49.3**	**+0.7**
KINC	**Kanaga Island**	**1.76**	**271**			**Pn**	**02 51 35.1**	**+1.0**
KIKV	**Kanaga Island**	**1.79**	**269**			**Pn**	**02 51 35.5**	**+1.1**
KIMD	**Kanaga Island**	**1.83**	**266**			**Pn**	**02 51 35.7**	**+0.6**
KIMD						**Sn**	**02 51 58.8**	**+1.6**
TAFP	**Tanaga Falls P**	**2.29**	**270**			**Pn**	**02 51 42.8**	**+1.5**
TASE	**Tanaga Southea**	**2.32**	**269**			**Pn**	**02 51 43.1**	**+1.3**
GAEA	**Gareloi East**	**2.77**	**269**			**Pn**	**02 51 49.0**	**+1.2**
NIKH	**Nikolski High**	**3.48**	**71**		Pn	**Pn**	**02 52 01.5**	**+3.9**
AMKA	**Amchitka**	**4.03**	**265**		Pn	**Pn**	**02 52 06.6**	**+1.5**
SPIA	**Saint Paul Isl**	**5.75**	**23**		Pn	**Pn**	**02 52 31.1**	**+2.5**
ANM	**Nome**	**13.48**	**17**		Pn	**P**	**02 54 18.0**	**-4.0**
KDAK	**Kodiak Island**	**13.77**	**56**		Pn	**Pn**	**02 54 16.4**	**-1.8**
	0.1nm,0.3s,baz=241,slow=10,SNR=1.1							
KDAK	**Kodiak Island**	**13.77**	**56**		Pn	**P**	**02 54 22.1**	**-3.1**
TTA	**Tatalina**	**14.70**	**34**		Pn	**P**	**02 54 34.4**	**-1.2**
CNPM	**China Poot**	**14.98**	**51**		Pn	**Pn**	**02 54 35.3**	**+1.1**
BRLK	**Bradley Lake**	**15.23**	**50**		Pn	**P**	**02 54 39.9**	**-1.6**
SEW	**Seward**	**16.03**	**50**		Pn	**Pn**	**02 54 48.1**	**+0.5**
SEW					IAmb	IAmb	02 54 56.1	
	comp=Z,5.4nm,0.9s							
SCM	**Sheep Creek Mo**	**17.61**	**45**			**P**	**02 55 08.4**	**+0.6**
I23K	**Minto, Yukon-K**	**18.38**	**34**	P		**Pn**	**02 55 17.3**	**+0.7**
IL31		**19.07**	**37**	P		**Pn**	**02 55 24.3**	**-0.7**
IL31				IAmb	IAmb		02 55 25.5	
	comp=Z,7.1nm,1.4s							
ILAR	**Eielson Array**	**19.07**	**37**	P		**Pn**	**02 55 24.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=227,slow=8.7,SNR=20							
ILAR	**Eielson Array**	**19.07**	**37**	P		**Pn**	**02 55 23.7**	**-1.3**
DOT	**Dot Lake**	**19.70**	**42**	P		**P**	**02 55 29.9**	**-0.7**
DOT				IAmb	IAmb		02 55 41.6	
	comp=Z,5.1nm,1.4s							
SCRK	**Sand Creek**	**19.85**	**41**	P		**P**	**02 55 30.9**	**-1.5**
SCRK				IAmb	IAmb		02 55 35.0	
	comp=Z,2.8nm,0.6s							
L27K	**Beaver Creek,**	**20.44**	**44**	P		Pn	02 55 41.7	+0.5
TOLK	**Toolik Lake Re**	**20.49**	**26**	P		Pn	02 55 43.7	+2.0
TOLK				IAmb	IAmb		02 55 47.2	
	comp=Z,6.0nm,1.4s							
EGAK	**Eagle**	**21.30**	**40**	P		**P**	**02 55 48.4**	**+0.6**
EGAK				IAmb	IAmb		02 55 50.3	
	comp=Z,3.2nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**35.36**	**212**	T		T	03 35 29.0	
	baz=20,slow=76,SNR=13							
H11N3	**WAKE ISLAND Hy**	**35.36**	**212**	T		T	03 35 32.8	
	baz=20,slow=76,SNR=11							
H11N1	**WAKE ISLAND Hy**	**35.37**	**212**	T		T	03 35 32.8	
	baz=20,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**36.56**	**211**	T		T	03 37 00.7	
	baz=20,slow=76,SNR=36							
H11S2	**WAKE ISLAND Hy**	**36.58**	**211**	T		T	03 37 03.1	
	baz=20,slow=76,SNR=34							
H11S3	**WAKE ISLAND Hy**	**36.58**	**211**	T		T	03 37 06.0	
	baz=20,slow=76,SNR=24							
DLMT	**Dillon**	**40.19**	**74**	P		**P**	**02 58 38.5**	**+1.5**
NVAR	**Mina Array Bea**	**40.70**	**87**	P		**P**	**02 58 41.4**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=306,slow=7.7,SNR=2.5							
TXAR	**Lajitas Array**	**55.80**	**85**	P		**P**	**03 00 35.4**	**-2.3**
	comp=Z,0.5nm,0.7s,baz=299,slow=5.0,SNR=5.0							
TXAR	**Lajitas Array**	**55.80**	**85**	P		**P**	**03 00 36.6**	**-1.1**

IDC 29 03:08:08.6±3.1, 28°05N×86°31E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.2/49, mbtmp3.5/4, ML3.3/1, MS3.9/2, Ms1 3.9/2, ms1mx2.7/42, Error ellipse: s-maj=185.4km s-min=27.1km az=62.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.98**	**351**	P	P	Pn	03 12 32.5	+0.3
	0.1nm,0.3s,baz=174,slow=12,SNR=4.5							
KURBB	**Kurchatov Arra**	**23.31**	**347**	P	P	P	03 13 18.7	+0.6
	0.3nm,0.7s,baz=164,slow=9.9,SNR=3.3							
KLR	**Kul'dur**	**40.56**	**46**	LR	LR	LR	03 34 41.5	
	comp=Z,94nm,20.6s,baz=163,slow=39							
JCJ	**Chichijima**	**49.16**	**77**	LR	LR	LR	03 40 23.6	
	comp=Z,214nm,19.8s,baz=114,slow=39							
ARCES	**ARCESS Array B**	**53.88**	**338**	P		P	03 17 32.2	-1.0
	4.6nm,1.2s,baz=108,slow=7.8,SNR=3.8							
WRA	**Warramunga Arr**	**66.58**	**130**	P		P	03 19 01.0	+0.1
	0.3nm,0.6s,baz=326,slow=6.7,SNR=5.7							

IDC 29 03:17:08.1±3.1, 53°63N×88°05E, h0km, mb1 2.6/2, mb1mx2.6/40, mbtmp2.6/2, ML2.4/2, Error ellipse: s-maj=27.7km s-min=18.2km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.94**	**281**	*i*			03 29 32.3	
	baz=96,slow=330,SNR=2.6							
ZALV	**Zalesovo Beam**	**1.94**	**281**		Pn	Pn	03 17 42.4	+0.1
	1.6nm,0.3s,baz=100,slow=16,SNR=13							
ZALV					Lg	Lg	03 18 09.5	
	3.5nm,0.3s,baz=96,slow=25,SNR=18							
KURBB	**Kurchatov Arra**	**6.59**	**247**		Pn	Pn	03 18 46.9	+0.8
	0.0nm,0.3s,baz=62,slow=14,SNR=4.4							
KURBB					Lg	Lg	03 20 36.5	
	0.0nm,0.3s,baz=64,slow=30,SNR=7.0							
MKAR	**Makanchi Array**	**7.78**	**211**		Pn	Pn	03 19 03.5	+1.1
	0.1nm,0.3s,baz=23,slow=13,SNR=4.4							
MKAR					Lg	Lg	03 21 13.9	
	0.1nm,0.3s,baz=29,slow=26,SNR=5.2							

*IDC **29** 03:26:01.9±0.6, 25°95S×71°11E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.0/51, mbtmp4.1/17, MS3.6/21, Ms1 3.6/21, ms1mx3.5/39, Error ellipse: s-maj=18.2km s-min=16.5km az=179.0*
*NEIC **29** 03:26:03.3±0.8, 25°9S±0°1×71°14E±0°09, h10km±1km, mb4.5/13, Error ellipse: s-maj=23.6km s-min=9.4km az=152.0*

ISC 29 03:26:03.7±0.6, 25°9S±0°1×71°1E±0°1, h11km, n70, σ0s94/52, mb4.3/21, MS3.6/21, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.24**	**4**	T	T	T	03 49 04.1	
	baz=185,slow=76,SNR=342							
H08S2	**Diego Garcia H**	**18.24**	**4**	T	T	T	03 49 05.2	
	baz=185,slow=76,SNR=186							
H08S3	**Diego Garcia H**	**18.26**	**4**	T	T	T	03 49 05.3	
	baz=185,slow=76,SNR=317							
OPO	**Ambohidratompo**	**23.28**	**283**	P	P	**P**	**03 31 13.4**	**+1.7**
	2.5nm,0.7s,baz=182,slow=1.8,SNR=3.4							
PALK	**Pallekele**	**34.31**	**17**	LR	LR	LR	03 43 20.5	
	comp=Z,258nm,20.9s,baz=254,slow=30							
H01W2	**Cape Leeuwin H**	**37.94**	**114**	T	T	T	04 13 16.6	
	baz=272,slow=75,SNR=45							
H01W3	**Cape Leeuwin H**	**37.95**	**114**	T	T	T	04 13 17.3	
	baz=272,slow=75,SNR=45							
H01W1	**Cape Leeuwin H**	**37.96**	**114**	T	T	T	04 13 20.9	
	baz=272,slow=75,SNR=30							
MATP	**Matopo**	**39.40**	**269**	P	P	**P**	**03 33 34.0**	**+0.1**
	1.7nm,0.7s,baz=96,slow=8.5,SNR=3.8							
BOSA	**Boshof**	**40.63**	**256**	P	P	**P**	**03 33 43.6**	**-0.5**
	3.7nm,1.0s,baz=

TORD	**Torodi Ar. Bea**	**77.85**	**291**	P	**P**	**03 38 01.1**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=139,slow=5.6,SNR=4.6						
TORD				LR	LR	04 12 00.7	
	comp=Z,36nm,18.2s,baz=140,slow=35						
TORD	**Torodi Ar. Bea**	**77.85**	**291**	P	**P**	**03 38 01.3**	**-0.5**
SONM	**Songino Array**	**80.00**	**23**	P	**P**	**03 38 12.7**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=202,slow=7.7,SNR=5.2						
SONM				LR	LR	04 14 41.4	
	comp=Z,27nm,19.6s,baz=258,slow=36						
SONM	**Songino Array**	**80.00**	**23**	P	**P**	**03 38 12.5**	**-0.5**
DBIC	**Dimbokro**	**80.38**	**282**	LR	LR	04 11 39.0	
	comp=Z,42nm,19.1s,baz=119,slow=34						
ZALV	**Zalesovo Beam**	**80.44**	**8**	P	**P**	**03 38 14.6**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=199,slow=4.1,SNR=7.3						
ZALV				LR	LR	04 14 02.1	
	comp=Z,21nm,18.7s,baz=70,slow=36						
TLY	**Talaya**	**82.41**	**20**	LR	LR	04 12 20.5	
	comp=Z,29nm,21.9s,baz=159,slow=34						
KSRS	**Korea Array**	**82.61**	**42**	P	**P**	**03 38 28.3**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=216,slow=3.9,SNR=2.1						
KSRS				LR	LR	04 13 33.1	
	comp=Z,51nm,19.5s,baz=172,slow=34						
AKASG	**Malin Array Be**	**84.80**	**335**	P	**P**	**03 38 36.1**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=151,slow=4.1,SNR=4.0						
MJAR	**Matsushiro Arr**	**88.62**	**48**	LR	LR	04 17 38.9	
	comp=Z,17nm,19.7s,baz=245,slow=35						
ESDC	**Sonseca Array**	**95.59**	**311**	LR	LR	04 23 19.8	
	comp=Z,14nm,18.0s,baz=185,slow=36						
NRIK	**Noril'sk**	**95.75**	**6**	LR	LR	04 23 25.3	
	comp=Z,62nm,19.8s,baz=204,slow=36						
YKA	**Yellowknife Ar**	**143.25**	**4**	PKP	**PKPdf**	**03 45 37.1**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=332,slow=2.3,SNR=4.0						

*IDC **29** 03:33:02.2±3.3, 39.°66N×29.°57W, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.4/51, mbtmp3.6/5, ML3.5/1, MS2.9/1, Ms1 3.0/1, ms1mx2.4/40, Error ellipse: s-maj=134.8km s-min=29.5km az=172.0*

ISC 29 03:33:01.1±1.1, 38.°80N±0.°05×29.°02W±0.°06, h10km, n32, σ2$25/45, mb3.7/4, 2D, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	**Cedros**	**0.30**	**124**	*eP*	**Pg**	**03 33 08.8**	**+1.7**
PCED				*eS*	**Sg**	**03 33 14.6**	**+3.5**
PCED				A	A	03 33 15.8	
	7μm,0.2s						
CALA	**Caldeira**	**0.33**	**131**	*eP*	**Pg**	**03 33 08.9**	**+1.2**
CALA				*eS*	**Sg**	**03 33 14.8**	**+2.7**
PFCBR	**Castelo Branco**	**0.36**	**139**	*eP*	**Pg**	**03 33 09.0**	**+0.7**
PFCBR				*eS*	**Sg**	**03 33 14.9**	**+1.8**
PFCBR				A	A	03 33 15.8	
	2μm,0.1s						
HOR	**Horta**	**0.41**	**132**	*eP*	**Pg**	**03 33 09.9**	**+0.8**
HOR				*eS*	**Sg**	**03 33 16.6**	**+2.1**
HOR				A	A	03 33 18.2	
	10μm,0.2s						
PCAN	**Candelaria**	**0.53**	**128**	*eP*	**Pg**	**03 33 12.0**	**+0.5**
PCAN				*eS*	**Sg**	**03 33 20.2**	**+1.7**
PCAN				A	A	03 33 21.3	
	3μm,0.1s						
PICO	**Pico**	**0.55**	**122**	*eP*	**Pg**	**03 33 12.6**	**+0.8**
PICO				*eS*	**Sg**	**03 33 21.1**	**+2.0**
PICO				A	A	03 33 22.9	
	11μm,0.2s						
ROSA	**Rosais**	**0.61**	**97**	*eP*	**Pg**	**03 33 14.0**	**+1.0**
ROSA				*eS*	**Sg**	**03 33 23.6**	**+2.6**
ROSA				A	A	03 33 24.4	
	1μm,0.1s						
PMAN	**Manadas**	**0.74**	**102**	*eP*	**Pg**	**03 33 15.9**	**+0.4**
PMAN				*eS*	**Sg**	**03 33 26.6**	**+1.4**
PMAN				A	A	03 33 28.6	
	506nm,0.2s						
PID	**Ribeirinha**	**0.79**	**116**	*eP*	**Pg**	**03 33 16.2**	**-0.1**
PID				*eS*	**Sg**	**03 33 27.2**	**+0.6**
PID				A	A	03 33 28.8	
	739nm,0.2s						
SRBC	**Serra Branca**	**0.80**	**72**	*eS*	**Sg**	**03 33 28.9**	**+1.9**
SRBC				A	A	03 33 30.1	
	286nm,0.2s						
PGRA	**Graciosa**	**0.84**	**74**	*eS*	**Sg**	**03 33 27.7**	**-0.6**
PGRA				A	A	03 33 30.1	
	252nm,0.3s						
ADH	**Angra Heroismo**	**1.40**	**95**	*eP*	**Pn**	**03 33 25.5**	**-1.2**
ADH				*eS*	**Sn**	**03 33 43.1**	**-2.2**
ADH				A	A	03 33 44.3	
	235nm,0.2s						
PAGU	**Agualva, Azore**	**1.43**	**91**	*eP*	**Pn**	**03 33 25.9**	**-1.3**
PAGU				*eS*	**Sn**	**03 33 43.6**	**-2.5**
PAGU				A	A	03 33 44.8	
	158nm,0.1s						
PSCM	**Serra do Cume**	**1.49**	**93**	*eP*	**Pn**	**03 33 26.8**	**-1.2**
PSCM				*eS*	**Sn**	**03 33 45.2**	**-2.3**
PSCM				A	A	03 33 46.4	
	79nm,0.1s						
PSET	**Sete Cidades**	**2.77**	**110**	*eP*	**Pn**	**03 33 44.1**	**-1.5**
PSET				*eS*	**Sn**	**03 34 15.6**	**-3.5**
PSET				A	A	03 34 17.1	
	20nm,0.1s						
PDA	**Ponta Delgada**	**2.84**	**111**	*eP*	**Pn**	**03 33 44.9**	**-1.6**
PDA				*eS*	**Sn**	**03 34 17.2**	**-3.6**
PDA				A	A	03 34 19.6	
	44nm,0.2s						
GRON	**Grota Negra**	**2.93**	**109**	*eP*	**Pn**	**03 33 47.6**	**-0.2**
GRON				*eS*	**Sn**	**03 34 22.1**	**-0.9**
GRON				A	A	03 34 22.9	
	29nm,0.1s						
CMLA	**Cha da Macela**	**2.94**	**109**	*eP*	**Pn**	**03 33 46.1**	**-1.8**
CMLA				*eS*	**Sn**	**03 34 19.7**	**-3.5**
CMLA				A	A	03 34 22.3	
	62nm,0.3s						
BART	**Pico Bartolome**	**3.19**	**107**	*eP*	**Pn**	**03 33 49.9**	**-1.6**
BART				*eS*	**Sn**	**03 34 26.1**	**-3.6**
BART				A	A	03 34 28.4	
	20nm,0.2s						
PSMA	**Santa Maria**	**3.56**	**119**	*i*P	**Pn**	**03 33 54.4**	**-2.1**
PSMA				*eS*	**Sn**	**03 34 33.9**	**-4.7**
PSMA				A	A	03 34 34.7	
	49nm,0.2s						
PSMN	**Pico do Norte,**	**3.60**	**119**	*i*P	**Pn**	**03 33 54.8**	**-2.2**
PSMN				*eS*	**Sn**	**03 34 35.2**	**-4.4**
PSMN				A	A	03 34 36.5	
	17nm,0.2s						
ESDC	**Sonseca Array**	**19.41**	**79**	P	**Pn**	**03 37 33.3**	**+4.6**
	0.0nm,0.3s,baz=279,slow=7.2,SNR=4.6						
NOA	**NORSAR Array B**	**33.34**	**35**	LR	LR	03 51 46.6	
	comp=Z,20nm,18.7s,baz=250,slow=34						
H10N2	**ASCENSION HYDR**	**48.31**	**161**	T	T	04 32 50.5	
	baz=345,slow=75,SNR=22						
H10N3	**ASCENSION HYDR**	**48.32**	**161**	T	T	04 32 50.8	
	baz=345,slow=75,SNR=21						
H10N1	**ASCENSION HYDR**	**48.33**	**161**	T	T	04 32 42.6	
	baz=345,slow=75,SNR=26						
H10S3	**ASCENSION HYDR**	**49.35**	**161**	T	T	04 34 05.9	
	baz=233,SNR=5.6						
H10S2	**ASCENSION HYDR**	**49.36**	**161**	T	T	04 34 08.8	
	baz=347						
AKTO	**Aktyubinsk**	**59.63**	**48**	P	**P**	**03 43 06.6**	**+1.5**
	0.5nm,0.5s,baz=303,slow=7.5,SNR=3.7						
TXAR	**Lajitas Array**	**61.00**	**286**	P	**P**	**03 43 13.4**	**-1.6**
	0.6nm,0.9s,baz=80,slow=5.7,SNR=5.8						
KURBB	**Kurchatov Arra**	**70.67**	**40**	P	**P**	**03 44 17.4**	**+0.5**
	0.4nm,0.6s,baz=304,slow=6.3,SNR=5.1						
MKAR	**Makanchi Array**	**75.03**	**41**	P	**P**	**03 44 42.8**	**-0.1**
	0.2nm,0.7s,baz=317,slow=5.0,SNR=5.4						

IDC 29 03:37:27.5±17.0, 28.°02N×85.°04E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/53, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=436.7km s-min=103.6km az=114.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.86**	**354**	Pn	P	03 41 49.2	0.0
	0.1nm,0.3s,baz=176,slow=12,SNR=5.2						
KURBB	**Kurchatov Arra**	**23.11**	**349**	P	P	03 42 34.5	-0.4
	0.2nm,0.3s,baz=174,slow=10.0,SNR=2.2						
FINES	**FINESS Array B**	**51.03**	**328**	P	P	03 46 31.0	0.0
	1.4nm,1.0s,baz=104,slow=8.0,SNR=5.0						
ARCES	**ARCESS Array B**	**53.48**	**338**	P	P	03 46 49.1	-0.1
	1.9nm,0.8s,baz=102,slow=7.7,SNR=9.3						

*IDC **29** 04:03:19.3±2.7, 26.°31N×129.°14E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.5/64, mbtmp3.8/8, MS3.6/1, Ms1 3.6/1, ms1mx2.5/58, Error ellipse: s-maj=165.6km s-min=21.3km az=67.0*

*JMA **29** 04:03:24.2-0.3, 26.°04N×128.°54E, h41km±5km, M3.3*

ISC 29 04:03:21.7±1.5, 26.°07N±0.°05×128.°65E±0.°04, h12km±9km, n21, σ1$14/29, mb3.7/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNTH	**Nagotoyohara**	**0.72**	**308**	P	**Pb**	**04 03 36.8**	**+0.6**
JNTH				*eS*	**Sb**	**04 03 47.1**	**+1.1**
JJT3	**Tamagusuku3**	**0.78**	**275**	P	**Pg**	**04 03 37.8**	**+0.9**
JJT3				S	**Sg**	**04 03 46.7**	**-0.5**
JOW	**Kunigami**	**0.83**	**336**	P	**Pn**	**04 03 39.5**	**+0.3**
JOW				S	**Sn**	**04 03 50.7**	**-0.7**
JYRO	**Yoronjima**	**0.97**	**349**	P	**Pn**	**04 03 41.9**	**+0.8**
JYRO				S	**Sn**	**04 03 54.8**	**0.0**
JIH	**Iheya**	**1.14**	**328**	P	**Pn**	**04 03 44.1**	**+0.6**
JIH				S	**Sn**	**04 03 58.4**	**-0.6**
JOKE	**Okinoerabujima**	**1.29**	**357**	P	**Pn**	**04 03 46.7**	**+1.2**
JAGN	**Aguni-jima**	**1.37**	**292**	P	**Pn**	**04 03 46.6**	**0.0**
JAGN				*eS*	**Sb**	**04 04 02.8**	**-1.8**
JKE	**Kume jima 2**	**1.70**	**279**	P	**Pn**	**04 03 50.2**	**-0.9**
JKE				*eS*	**Sn**	**04 04 10.0**	**-2.8**
JTK	**Tokunoshima**	**1.73**	**9**	P	**Pg**	**04 03 53.2**	**-1.7**
JMZ	**Minamidaito 2**	**2.33**	**96**	P	**Pn**	**04 04 00.2**	**+0.4**
JMZ				S	**Sn**	**04 04 26.1**	**-2.2**
JKDJ	**Kitadaitoujima**	**2.38**	**92**	P	**Pn**	**04 04 01.2**	**+0.6**
JKDJ				S	**Sn**	**04 04 28.8**	**-0.9**
GTA	**Gaotai**	**27.53**	**306**	*eP*	**P**	**04 09 07.8**	**-0.6**
GTA				pP	pwP	04 09 12.8	-2.1
GTA				sP	sP	04 09 15.8	+3.2
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SONM	**Songino Array**	**27.89**	**327**	P	**P**	**04 09 12.4**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=139,slow=9.0,SNR=2.2						
BATI	**Baumata**	**36.38**	**188**	LR	LR	04 27 51.5	
	comp=Z,89nm,18.1s,baz=153,slow=40						
MKAR	**Makanchi Array**	**41.92**	**312**	P	**P**	**04 11 12.2**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=103,slow=9.8,SNR=4.5						
KURBB	**Kurchatov Arra**	**45.23**	**316**	P	**P**	**04 11 38.8**	**+0.1**
	comp=Z,2.2nm,0.2s,baz=100,slow=9.0,SNR=2.2						
WRA	**Warramunga Arr**	**46.07**	**173**	P	**P**	**04 11 46.1**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=352,slow=8.3,SNR=2.9						
ASAR	**Alice Springs**	**49.71**	**174**	P	**P**	**04 12 15.0**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=7.8,slow=7.4,SNR=5.4						
BVAR	**Borovoye Array**	**50.64**	**318**	P	**P**	**04 12 21.7**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=74,slow=7.7,SNR=3.8						
FINES	**FINESS Array B**	**73.19**	**331**	P	**P**	**04 14 50.9**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=79,slow=7.4,SNR=1.8						
AKASG	**Malin Array Be**	**75.90**	**320**	P	**P**	**04 15 08.5**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=67,slow=6.2,SNR=2.3						

*IDC **29** 04:06:04.0±2.2, 27.°73N×85.°97E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.5/65, mbtmp3.9/6, ML4.0/1, MS3.9/1, Ms1 3.9/1, ms1mx2.4/56, Error ellipse: s-maj=69.9km s-min=28.3km az=63.0*

ISC 29 04:06:07.1±2.0, 27.°8N±0.°3×86.°0E±0.°4, h19km, n7, σ0$75/6, mb3.9/5, Nepal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.20**	**352**	P	**Pn**	**04 10 29.8**	**-0.9**
	0.5nm,0.3s,baz=172,slow=11,SNR=20						
KURBB	**Kurchatov Arra**	**23.50**	**348**	P	**P**	**04 11 16.5**	**+0.8**
	1.0nm,0.2s,baz=164,slow=10.0,SNR=4.8						
SONM	**Songino Array**	**25.57**	**33**	P	**P**	**04 11 35.2**	**+0.3**
	0.8nm,0.4s,baz=217,slow=8.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**26.16**	**358**	P	**P**	**04 11 40.2**	**+0.2**
	1.4nm,0.5s,baz=183,slow=9.2,SNR=6.5						
ARCES	**ARCESS Array B**	**54.01**	**338**	P	**P**	**04 15 29.7**	**+0.1**
	1.9nm,0.8s,baz=106,slow=8.5,SNR=6.2						
HFS	**Hagfors**	**57.56**	**326**	LR	LR	04 40 08.6	
	comp=Z,104nm,19.4s,baz=352,slow=36						
WRA	**Warramunga Arr**	**66.63**	**130**	P	**P**	**04 16 56.5**	**-0.1**
	0.5nm,0.8s,baz=324,slow=6.6,SNR=2.1						

IDC 29 04:07:13.5±1.4, 0.°52N×122.°00E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/45, mbtmp3.6/4, ML3.5/1, Error ellipse: s-maj=124.9km s-min=23.4km az=67.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.85**	**169**	P	Pn	04 11 36.4	+0.8
	0.1nm,0.3s,baz=9.7,slow=7.0,SNR=6.2						
WRA	**Warramunga Arr**	**23.66**	**150**	P	P	04 12 26.2	-0.6
	0.2nm,0.5s,baz=326,slow=11,SNR=6.1						
SONM	**Songino Array**	**49.04**	**346**	P	P	04 16 03.1	+0.8
	0.8nm,0.6s,baz=148,slow=8.5,SNR=1.3						
MKAR	**Makanchi Array**	**57.65**	**329**	P	P	04 17 05.0	-0.7
	0.4nm,0.4s,baz=128,slow=8.4,SNR=5.7						

*ECGS **29** 04:08:36.4, 1.°01S±0.°05×29.°28E±0.°09, h34km±7km, ML2.9, Error ellipse: s-maj=15.1km s-min=8.7km az=75.9, smi:local/40d45b4a-32ec-475c-839b-4cbfa4ba60ef Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 30.0579 Y 53.7154 Z 31.7701 CovXX 95.6338 XY 15.8118 XZ -21.5027 YY 36.8816 YZ -3.9345 ZZ 53.1416 EllAz1 343.83 Dip1 -6.18078 Len1 10.7505 Az2 238.716 Dip2 -67.4454 Len2 12.556 Len3 1.954847e+01*

ISC 29 04:08:34.8±1.1, 0.°97S±0.°06×29.°34E±0.°07, h10km, n9, σ0$46/11, Zaire

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTSH	**Kitshanga**	**0.40**	**228**	*i* S	**Sb**	**04 08 50.1**	**-0.1**
KTSH	**Kitshanga**	**0.40**	**228**	*i* P	**Pb**	**04 08 44.4**	**+0.3**
GOM	**Goma**	**0.71**	**189**	*i* S	**Sb**	**04 08 58.8**	**-0.6**
GOM	**Goma**	**0.71**	**189**	*i* P	**Pb**	**04 08 49.4**	**0.0**
BOBN	**Bobandana**	**0.80**	**204**	*i* P	**Pg**	**04 08 50.3**	**0.0**
BOBN	**Bobandana**	**0.80**	**204**	*i* S	**Sg**	**04 09 01.1**	**+0.3**
KIL	**Kilembe**	**1.34**	**30**	*eP*	**Pn**	**04 08 59.6**	**-0.2**
KIL				*eS*	**Sb**	**04 09 17.0**	**-0.5**
BUJA	**Bujumbura/Buru**	**2.41**	**179**	*i* S	**Sb**	**04 09 48.1**	**0.0**
TEBE	**Entebbe**	**3.29**	**72**	*eP*	**Pb**	**04 09 34.1**	**+0.7**
TEBE				*eS*	**Sb**	**04 10 13.0**	**-0.6**

IDC 29 04:14:27.1±1.9, 5.°97S×130.°36E, h0km, mb3.3/1, mb1 3.7/5, mb1mx3.5/32, mbtmp3.5/5, ML3.5/4, MS2.4/1, Ms1 2.6/1, ms1mx2.1/20, Error ellipse: s-maj=72.0km s-min=25.6km az=86.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.14**	**10**	Pn	Pn	04 15 45.7	+0.2
	2.4nm,0.3s,baz=210,slow=20,SNR=2.2						
SIJI				Sn	Sn	04 16 39.0	-6.6
	2.0nm,0.3s,baz=163,slow=19,SNR=1.8						
FITZ	**Fitzroy Crossi**	**12.91**	**201**	Pn	Pn	04 17 30.6	-1.3
	0.2nm,0.3s,baz=27,slow=14,SNR=8.9						
FITZ				Sn	Sn	04 19 52.2	-4.2
	0.2nm,0.3s,baz=120,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**14.42**	**165**	Pn	Pn	04 17 52.4	-0.3
	0.2nm,0.3s,baz=350,slow=13,SNR=7.9						
WRA				Sn	Sn	04 20 26.8	-6.7
	0.5nm,0.3s,baz=327,slow=21,SNR=8.7						
ASAR	**Alice Springs**	**17.93**	**169**	P	P	04 18 39.1	+0.4
	0.2nm,0.3s,baz=345,slow=9.9,SNR=13						
ASAR				S	Sn	04 21 51.6	-7.0
	0.1nm,0.3s,baz=358,slow=26,SNR=4.7						
CMAR	**Chiang Mai Arr**	**39.36**	**309**	LR	LR	04 39 55.6	
	comp=Z,5.7nm,19.9s,baz=150,slow=39						
MKAR	**Makanchi Array**	**67.57**	**326**	P	P	04 25 25.4	-0.1
	0.1nm,0.4s,baz=134,slow=6.2,SNR=2.8						

*IDC **29** 04:22:15.6±2.1, 10.°46S×120.°54E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.4/38, mbtmp3.6/5, ML3.5/3, Error ellipse: s-maj=181.3km s-min=24.5km az=54.0*

*DJA **29** 04:22:22.2±2.1, 10.°5S±34.°×12.°1E±.°, h35km±16km, M3.2/7, MLv3.2/7*

ISC 29 04:22:19.4±0.9, 10.°7S±0.°1×120.°58E±0.°08, h31km, n11, σ2$66/14, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.44**	**359**	P	**Pn**	**04 22 29.3**	**-0.3**
WBSI	**Waikabubak, Su**	**1.55**	**311**	P	**Pn**	**04 22 44.8**	**-0.1**
BATI	**Baumata**	**3.06**	**82**	P	**Pn**	**04 23 07.9**	**+2.2**
PLAI	**Plampang**	**3.31**	**303**	P	**Pn**	**04 23 09.4**	**+0.2**
SOEI	**Soe**	**3.74**	**76**	P	**Pn**	**04 23 16.8**	**+1.7**
TWSI	**Taliwang, Sumb**	**4.12**	**297**	P	**Pn**	**04 23 20.9**	**+0.7**
TWSI				S	**Sn**	**04 24 06.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**8.87**	**147**	Pn	Pn	**04 24 27.6**	**+2.1**
	0.6nm,0.3s,baz=329,slow=6.8,SNR=30						
FITZ				Sn	**Sn**	**04 26 01.6**	**-2.8**
	0.4nm,0.3s,baz=35,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**16.15**	**126**	Pn	**Pn**	**04 26 05.1**	**+0.8**
	0.1nm,0.3s,baz=297,slow=13,SNR=9.5						
WRA				Sn	**Sn**	**04 28 55.8**	**-6.8**
	0.1nm,0.3s,baz=297,slow=24,SNR=1.4						
ASAR	**Alice Springs**	**18.12**	**137**	P	**P**	**04 26 32.0**	**+2.9**
	0.2nm,0.3s,baz=319,slow=12,SNR=7.9						
MKAR	**Makanchi Array**	**66.64**	**332**	P	**P**	**04 33 07.2**	**+0.1**
	0.1nm,0.4s,baz=131,slow=8.2,SNR=2.6						
ZALV	**Zalesovo Beam**	**71.14**	**339**	P	**P**	**04 33 34.2**	**-0.6**
	0.6nm,0.4s,baz=132,slow=4.1,SNR=3.9						

*IDC **29** 04:28:42.0±1.4, 35.°43N×16.°28E, h0km, mb3.8/2, mb1 3.9/10, mb1mx3.6/47, mbtmp3.8/10, ML4.2/6, MS3.3/1, Ms1 3.3/1, ms1mx2.0/59, Error ellipse: s-maj=25.7km s-min=20.5km az=165.0*

ISC 29 04:28:42.7±0.9, 35.°48N±0.°10×16.°26E±0.°06, h10km, n47, σ1$54/49, 9C-1D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAE	**Valguarnera**	**2.49**	**324**	Pn	**Pn**	**04 29 25.1**	**+1.6**
	14nm,0.3s,baz=142,slow=7.0,SNR=6.5						
VAE				Sn	**Sn**	**04 29 55.8**	**+1.9**
	43nm,0.3s,baz=203,slow=4.2,SNR=8.0						
TIP	**Timpagrande**	**3.72**	**6**	⇓P	Pn	**04 29 38.1**	**-2.1**
ITM	**Ithomi**	**4.88**	**68**	*eP*	**Pn**	**04 29 56.4**	**+0.3**
MATE	**Matera**	**5.18**	**4**	⇑P	**Pn**	**04 29 58.0**	**-2.2**
KTHA	**Kythira Island**	**5.58**	**80**	*eP*	**Pn**	**04 30 06.3**	**+0.6**
KEST	**Kesra**	**5.64**	**275**	Pn	**Pn**	**04 30 06.5**	**-0.1**
	0.9nm,0.3s,baz=62,slow=11,SNR=8.9						
KEST				Sn	**Sn**	**04 31 08.1**	**-3.5**
	3.6nm,0.3s,baz=61,slow=22,SNR=12						
KNDR	**Palaiochora Ch**	**6.07**	**90**	*eP*	**Pn**	**04 30 13.8**	**+1.3**
IMMV	**Iera Moni Meta**	**6.30**	**88**	*eP*	**Pn**	**04 30 17.1**	**+1.5**
GVD	**Gavdhos**	**6.44**	**93**	*eP*	**Pn**	**04 30 19.8**	**+2.2**
GVDS	**Gavdos**	**6.44**	**93**	*eP*	**Pn**	**04 30 19.9**	**+2.3**
IDI	**Anoyia**	**7.05**	**89**	Pn	**Pn**	**04 30 26.6**	**+0.6**
	6.6nm,0.3s,baz=268,slow=7.7,SNR=30						
IDI				Sn	**Sn**	**04 31 42.8**	**-3.4**
	19nm,0.3s,baz=325,slow=15,SNR=13						
IDI	**Anoyia**	**7.05**	**89**	⇑P	**Pn**	**04 30 29.2**	**+3.2**
IDI	**Anoyia**	**7.05**	**89**	*eP*	**Pn**	**04 30 28.0**	**+2.0**
PDG	**Podgorica**	**7.32**	**18**	⇑P	**Pn**	**04 30 27.6**	**-2.0**
SANT	**Santorini**	**7.51**	**81**	*eP*	**Pn**	**04 30 33.3**	**+0.9**
APE	**Apeiranthos**	**7.65**	**75**	⇑P	**Pn**	**04 30 35.9**	**+1.6**
APE	**Apeiranthos**	**7.65**	**75**	*eP*	**Pn**	**04 30 34.5**	**+0.2**
OUR	**Ouranopolis**	**7.79**	**49**	*eP*	**Pn**	**04 30 36.1**	**0.0**
ZKR	**Zakros**	**8.15**	**90**	*eP*	**Pn**	**04 30 42.9**	**+1.9**
CHOS	**Chios island**	**8.36**	**67**	*eP*	**Pn**	**04 30 44.3**	**+0.3**
URLA	**Izmir**	**8.76**	**68**	*eP*	**Pn**	**04 30 49.4**	**0.0**
KARP	**Karpathos**	**8.89**	**86**	*eP*	**Pn**	**04 30 52.2**	**+1.0**
GADA	**Gvkgeada**	**8.96**	**55**	*eP*	**Pn**	**04 30 51.7**	**-0.4**
BODT	**Bodrum**	**9.06**	**77**	*eP*	**Pn**	**04 30 53.5**	**-0.1**
RDO	**Rodhopi**	**9.22**	**49**	*eP*	**Pn**	**04 30 55.1**	**-0.7**
ALN	**Alexandroupoli**	**9.41**	**52**	*eP*	**Pn**	**04 30 57.5**	**-0.8**
GELI	**Tayfur-Gelibol**	**9.44**	**56**	*eP*	**Pn**	**04 30 58.2**	**-0.5**
LPK	**Lapseki**	**9.62**	**56**	*eP*	**Pn**	**04 31 00.5**	**-0.7**
ARG	**Arkhangelos**	**9.66**	**82**	*eP*	**Pn**	**04 31 02.4**	**+0.7**
TURN	**Turunc**	**9.78**	**79**	*eP*	**Pn**	**04 31 03.7**	**+0.3**
YER	**Yerkesik**	**9.84**	**77**	*eP*	**Pn**	**04 31 04.6**	**+0.3**
DALY	**Dalyan (Mula)**	**10.11**	**79**	*eP*	**Pn**	**04 31 08.4**	**+0.5**
FETY	**Fethiye**	**10.45**	**80**	*eP*	**Pn**	**04 31 12.9**	**+0.4**
BZS	**Buzias**	**10.91**	**20**	⇑P	**Pn**	**04 31 17.6**	**-1.3**
VOIR		**11.98**	**31**	⇑P	**Pn**	**04 31 32.5**	**-1.0**
DRGR		**12.30**	**21**	⇑P	**Pn**	**04 31 35.8**	**-2.1**
MLR	**Muntele Rosu**	**12.41**	**33**	Pn	**Pn**	**04 31 42.0**	**+2.5**
	0.3nm,0.3s,baz=158,slow=11,SNR=2.1						
MLR	**Muntele Rosu**	**12.41**	**33**	⇑P	**Pn**	**04 31 38.8**	**-0.7**
GERES	**GERESS Array B**	**13.49**	**353**	Pn	**Pn**	**04 31 53.2**	**-1.0**
	0

TSMN Mangalia Port- 1.81 342 ⇑P Pb 04 41 24.4 -1.0
TSMN ⇓S Sb 04 41 46.9 -0.8
TSMN Mangalia Port- 1.81 342 Pb 04 41 24.4 -1.0
TSMN Sb 04 41 46.9 -0.8
IGD Bursa 1.82 184 *i* P **Pb 04 41 24.6 -1.0**
IGD *i* S **Sb 04 41 47.9 -0.3**
GULT Gulveren 1.87 152 PN **Pn 04 41 25.4 +1.3**
CAVI Cavuskoy 1.92 169 PN **Pb 04 41 26.2 -1.1**
YIGI Dzce 1.93 125 *i* P **Pn 04 41 26.1 +1.2**
ULDT Uludag 1.95 185 *i* P **Pn 04 41 26.0 +0.7**
BTAS Taskesti 1.96 140 *i* P **Pb 04 41 27.1 -0.8**
BILE Bilecik/Merkez 1.96 168 *i* P **Pn 04 41 26.8 +1.4**
BILE *i* S **Sb 04 41 51.4 -0.9**
EDRB Edirne 1.96 264 P **Pn 04 41 26.0 +0.7**
EDRB S **Sn 04 41 49.1 -0.5**
1um,0.6s
EDRB Edirne 1.96 264 PN **Pn 04 41 25.9 +0.7**
KCTX Karacabey (Bur 1.97 203 PN **Pn 04 41 25.9 +0.5**
MRMT Marmara Adasi 1.98 222 PN **Pn 04 41 25.9 +0.2**
MAR4 Marsite Statio 2.02 231 PN **Pn 04 41 26.6 +0.5**
GZKV Gazikoy-Tekird 2.03 229 PN **Pn 04 41 26.8 +0.6**
MAR3 Marsite Statio 2.05 230 PN **Pn 04 41 27.2 +0.7**
MAR2 Marsite Statio 2.06 229 PN **Pn 04 41 27.4 +0.8**
EFOR EFORIE 2.06 345 ⇑P Pb 04 41 28.5 -1.3
EFOR ⇓S **Sb 04 41 54.2 -1.0**
EFOR EFORIE 2.06 345 Pb 04 41 28.5 -1.3
EFOR **Sb 04 41 54.2 -1.0**
ORLT Orhaneli 2.06 190 PN **Pn 04 41 27.6 +0.8**
EDC Edincik 2.07 213 PN **Pn 04 41 27.5 +0.7**
MAR6 Marsite Statio 2.09 229 PN **Pn 04 41 27.5 +0.4**
JMB Yambol 2.09 281 PN **Pn 04 41 27.4 +0.3**
MDUB Mudurnu 2.13 139 PN **Pn 04 41 28.7 +1.0**
MDUB Mudurnu 2.13 139 Pn **Pn 04 41 28.8 +1.0**
MDUB Sn **Sn 04 41 53.4 -0.4**
TSCT Constanta Port 2.14 346 ⇑P Pb 04 41 29.8 -1.2
TSCT ⇑S **Sb 04 41 56.1 -1.3**
TSCT Constanta Port 2.14 346 Pb 04 41 29.8 -1.2
TSCT **Sb 04 41 56.1 -1.3**
SART Tekirdag 2.15 230 *i* P **Pn 04 41 28.1 +0.1**
RKY Sarkoy-Tekirda 2.15 230 PN **Pn 04 41 28.5 +0.5**
BTIN Bartın 2.21 101 *i* P **Pn 04 41 29.5 +0.8**
BTIN *i* S **Sn 04 41 51.7 -4.0**
AUBOZ BOZOYUK 2.23 166 *i* P **Pn 04 41 29.7 +0.7**
AUBOZ BOZOYUK 2.23 166 PN **Pn 04 41 29.8 +0.7**
SRCK Saricakaya, Es 2.25 154 PN **Pn 04 41 30.7 +1.3**
KNL Balıkesir 2.28 218 *i* P **Pn 04 41 30.5 +0.9**
KRBG Karabiga-Canak 2.29 223 PN **Pn 04 41 30.6 +0.8**
MASR Amasra-Bartin 2.35 97 PN **Pn 04 41 32.2 +1.6**
BORA Eskisehir 2.35 159 *i* P **Pn 04 41 31.4 +0.6**
BORA Eskisehir 2.35 159 PN **Pn 04 41 31.9 +1.1**
KESN Edirne-Kesan 2.37 239 *i* P **Pn 04 41 30.9 -0.4**
BCAM Yenicaga 2.40 121 *i* P **Pn 04 41 33.0 +1.6**
YUVA Yuva-Kibriscik 2.44 133 PN **Pn 04 41 33.5 +1.5**
CVDA Cernavoda 2.45 337 ⇓P Pn 04 41 33.6 +1.7
CVDA Cernavoda 2.45 337 Pn 04 41 33.6 +1.7
GRDE Gerede-Bolu 2.50 120 PN **Pn 04 41 34.4 +1.5**
KIBS BOLU 2.51 131 *i* P **Pn 04 41 35.0 +2.0**
DST Dursunbey 2.54 193 PN **Pn 04 41 34.2 +0.9**
KURC Kurucasile-Bar 2.54 94 PN **Pn 04 41 33.1 -0.1**
ERIK Erikli-Kesan 2.56 238 PN **Pn 04 41 34.1 +0.6**
DURS Dursunbey 2.57 195 *i* P **Pn 04 41 34.4 +0.7**
KBUK KARABUK-Merkez 2.59 108 *i* P **Pn 04 41 35.7 +1.7**
LPK Lapseki 2.60 230 PN **Pn 04 41 33.8 -0.3**
ANDZ Kutahya, Merke 2.60 171 *i* P **Pn 04 41 35.5 +1.2**
TVSB Tavsanli 2.63 178 PN **Pn 04 41 34.8 +0.3**
TLBR Topalu 2.64 339 ⇓P Pn 04 41 36.6 +2.0
TLBR Topalu 2.64 339 Pn 04 41 36.6 +2.0
BALB Balikesir 2.69 205 PN **Pn 04 41 36.2 +1.0**
BALB Balikesir 2.69 205 Pn 04 41 35.4 +0.1
BALY Balya 2.69 210 *i* P **Pn 04 41 35.2 -0.1**
CIDE Kastamonu/Cide 2.69 93 *i* P **Pn 04 41 37.3 +2.1**
CIDE *i* S **Sn 04 42 03.4 -4.1**
AUMIH MIHALICIK 2.74 143 *i* P **Pn 04 41 37.0 +0.9**
AUMIH MIHALICIK 2.74 143 PN **Pn 04 41 37.4 +1.3**
GELI Tayfur-Gelibol 2.75 233 PN **Pn 04 41 36.2 +0.1**
ALN Alexandroupoli 2.75 246 P **Pn 04 41 37.2 +1.0**
ALN S **Sn 04 42 07.9 -1.2**
300nm,0.7s
ALN Alexandroupoli 2.75 246 PN **Pn 04 41 36.8 +0.6**
ALN Alexandroupoli 2.75 246 Pn **Pn 04 41 36.7 +0.6**
ENNZ Enez 2.76 242 PN **Pn 04 41 37.3 +1.1**
CAVK Edirne/Enez-Ca 2.77 241 *i* P **Pn 04 41 35.7 -0.7**
CMDR Camlidere-ANKA 2.84 123 *i* P **Pn 04 41 40.2 +2.8**
TPGR Topolog 2.85 347 ⇑P Pn 04 41 39.4 +1.8
TPGR ⇓S **Sn 04 42 12.1 +0.4**
TPGR Topolog 2.85 347 Pn 04 41 39.4 +1.8
TPGR **Sn 04 42 12.1 +0.4**
AMRR Amara 2.92 330 ⇑P Pn 04 41 40.8 +2.3
AMRR ⇑S **Sn 04 42 14.6 +1.3**
AMRR Amara 2.92 330 Pn 04 41 40.8 +2.3
AMRR **Sn 04 42 14.6 +1.3**
KDZ Kurdzhali 2.97 263 PN **Pn 04 41 40.6 +1.4**
STEP BALIKESIR_Sava 2.98 205 *i* P **Pn 04 41 39.7 +0.4**
RDO Rodhopi 3.01 253 P **Pn 04 41 40.3 +0.5**
RDO S **Sn 04 42 13.6 -1.9**
760nm,0.4s
RDO Rodhopi 3.01 253 PN **Pn 04 41 40.2 +0.5**
CIFT Cifteler, Eski 3.01 154 PN **Pn 04 41 41.4 +1.5**
PELI Kastamonı-Ara 3.07 103 *i* P **Pn 04 41 41.9 +1.4**
PELI *i* S **Sn 04 42 15.0 -2.0**
BUHA Balikesir, Bur 3.10 215 *i* P **Pn 04 41 42.3 +1.3**
SVRH Sivrihisar-ESK 3.11 147 PN **Pn 04 41 42.4 +1.2**
AUSIV SIVRIHISAR 3.12 147 *i* P **Pn 04 41 39.1 -2.3**
AUSIV SIVRIHISAR 3.12 147 PN **Pn 04 41 42.5 +1.2**
TLCR 3.13 353 ⇑P Pn 04 41 43.3 +2.0
TLCR ⇓S **Sn 04 42 18.9 +0.6**
TLCR 3.13 353 Pn 04 41 43.3 +2.0
TLCR **Sn 04 42 18.9 +0.6**
BAYC CANAKKALE_Bayr 3.16 223 *i* P **Pn 04 41 42.3 +0.5**
CFR Carcaliu 3.22 344 ⇓P Pn 04 41 43.8 +1.2
CFR Carcaliu 3.22 344 Pn 04 41 43.8 +1.2
EZN Ezine 3.22 226 P **Pn 04 41 43.5 +1.0**
EZN S **Sn 04 42 19.9 -0.7**
130nm,0.7s
EZN Ezine 3.22 226 PN **Pn 04 41 43.3 +0.8**
GADA Gvkgeada 3.22 235 P **Pn 04 41 43.5 +0.8**
GADA Gvkgeada 3.22 235 PN **Pn 04 41 43.4 +0.8**
SMTH Samothraki Isl 3.30 242 P **Pn 04 41 44.3 +0.6**
SMTH S **Sn 04 42 21.5 -1.2**
190nm,0.6s
BUC1 Bucharest 3.32 314 ⇑P Pn 04 41 45.7 +1.7
BUC1 Bucharest 3.32 314 PN **Pn 04 41 44.9 +0.9**
BUC1 Bucharest 3.32 314 Pn 04 41 45.7 +1.7
BOZC Bozcaada 3.36 229 PN **Pn 04 41 45.4 +0.9**
USAK Uak-Merkez 3.38 184 *i* P **Pn 04 41 45.8 +1.0**
LOD Lodumlu 3.39 129 PN **Pn 04 41 46.9 +1.9**
AKHS Akhisar 3.41 201 *i* P **Pn 04 41 44.0 -1.3**
ANTO Ankara 3.42 129 PN **Pn 04 41 47.3 +1.9**
ANTO Ankara 3.42 129 Pn **Pn 04 41 46.0 +0.6**
BR231 Keskin MP Arra 3.42 130 Pn **Pn 04 41 46.3 +0.8**
BR231 Sn **Sn 04 42 25.4 -0.5**
ILGA Ilgaz 3.43 106 Pn 04 41 46.1 +0.4
SULR 3.44 320 ⇓P Pn 04 41 48.2 +2.5
SULR 3.44 320 Pn 04 41 48.1 +2.5
PLD Plovdiv 3.46 272 PN **Pn 04 41 46.4 +0.5**
BZK Bozkurt 3.47 90 ⇓P Pn 04 41 48.4 +2.5
BZK Bozkurt 3.47 90 PN **Pn 04 41 47.6 +1.6**
BZK Bozkurt 3.47 90 Pn 04 41 48.4 +2.5
GIUM Giurgiulesti 3.50 347 ⇑P Pn 04 41 48.5 +2.0
GIUM Giurgiulesti 3.50 347 Pn 04 41 48.5 +2.0
KOCA Canakkale, Ayv 3.55 224 *i* P **Pn 04 41 47.6 +0.4**
MANT Manisa 3.64 190 *i* P **Pn 04 41 48.8 +0.2**
MANT Manisa 3.64 190 Pn **Pn 04 41 49.5 +0.9**
PRK Paraskevi 3.68 221 P **Pn 04 41 50.9 +2.0**
PLVB Pleven 3.72 292 ⇑P Pn 04 41 50.6 +1.1
PLVB Pleven 3.72 292 Pn 04 41 50.6 +1.1
THAS Thassos island 3.79 249 P **Pn 04 41 51.0 +0.6**
THAS S **Sn 04 42 33.0 -1.6**
285nm,0.4s
KAVA Kavala 3.79 255 P **Pn 04 41 50.9 +0.4**
KAVA S **Sn 04 42 33.3 -1.5**
512nm,0.5s
LIA Limnos Island 3.84 237 P **Pn 04 41 51.8 +0.7**
LIA S **Sn 04 42 35.2 -0.7**
102nm,1.2s
SEV Sevastopol' 4.00 51 ⇓*i*P Pn 04 41 54.6 +1.4
SEV Pm 04 41 55.7
comp=Z,18nm,0.2s
SEV *e*S **Sn 04 42 37.1 -2.6**
SEV Sm 04 42 40.8
comp=N,141nm,0.3s
SEV Sm 04 42 40.8
comp=E,70nm,0.3s
NEHR Nehoiu 4.01 327 ⇑P Pn 04 41 55.9 +2.4
NEHR Nehoiu 4.01 327 Pn 04 41 55.9 +2.4
BR131 Keskin Array S 4.01 125 Pn **Pn 04 41 53.1 -0.6**
BRTR Keskin Array B 4.01 125 Pn **Pn 04 41 55.5 +1.8**
comp=E,1.2nm,0.3s,baz=299,slow=13,SNR=34
BRTR Sn **Sn 04 42 37.6 -2.9**
comp=E,2.4nm,0.3s,baz=56,slow=30,SNR=3.8
BRTR LR LR 04 43 46.0
comp=E,100nm,21.9s,baz=298,slow=44
BRTR Keskin Array B 4.01 125 Pn 04 41 53.5 -0.1
HUMR Humele 4.02 309 ⇑P Pn 04 41 55.4 +1.8
HUMR Humele 4.02 309 Pn 04 41 55.4 +1.8
ODBI Odobesti 4.04 336 ⇑P Pn 04 41 55.5 +1.7
ODBI Odobesti 4.04 336 Pn 04 41 55.5 +1.7
YVAC Isparta, Yalva 4.07 159 *i* P **Pn 04 41 56.2 +1.8**
VLAD Vladila 4.10 299 ⇑P Pn 04 41 55.6 +0.9
VLAD Vladila 4.10 299 Pn 04 41 55.6 +0.9
KDHN Kadinhani 4.14 148 *i* P **Pn 04 41 56.4 +1.0**
NVR Nevrokopi 4.18 262 P **Pn 04 41 56.9 +1.1**
NVR S **Sn 04 42 43.3 -1.0**
comp=E,140nm,0.4s
MLR Muntele Rosu 4.21 325 Pn **Pn 04 41 59.0 +2.8**
comp=E,4.3nm,0.3s,baz=194,slow=1.1,SNR=125
MLR Sn **Sn 04 42 46.3 +1.1**
comp=E,7.4nm,0.3s,baz=208,slow=18,SNR=7.2
MLR LR LR 04 44 06.0
comp=E,87nm,19.6s,baz=232,slow=46
MLR Muntele Rosu 4.21 325 ⇓P Pn 04 41 59.2 +2.9
MLR Muntele Rosu 4.21 325 Pn 04 41 57.5 +1.3
VRI Vrincioaia 4.23 334 ⇑P Pn 04 41 58.7 +2.2
VRI Vrincioaia 4.23 334 Pn 04 41 58.7 +2.2
BAGO Egridir - ISPA 4.23 164 *i* P **Pn 04 41 57.7 +1.1**
PLOR Plostina 4.24 334 ⇑P Pn 04 41 58.8 +2.1
PLOR Plostina 4.24 334 Pn 04 41 58.8 +2.1
YAL Yalta 4.25 54 ⇓*i*P Pn 04 41 57.2 +0.5
YAL *e*S **Sn 04 42 41.6 -4.4**
OUR Ouranopolis 4.41 248 P **Pn 04 41 59.4 +0.4**
BRDR BURDUR-Merkez 4.42 173 *i* P **Pn 04 41 59.0 -0.2**
MTUR Matau 4.42 317 ⇑P Pn 04 42 01.5 +2.3
MTUR Matau 4.42 317 Pn 04 42 01.5 +2.3
SRS Serrai 4.43 259 P **Pn 04 41 59.8 +0.6**
DIKM Dikmen 4.43 94 ⇑P Pn 04 42 02.1 +2.8
DIKM Dikmen 4.43 94 Pn 04 42 02.1 +2.8
CHOS Chios island 4.47 215 P **Pn 04 42 01.2 +1.3**
SIM Simferopol' 4.49 49 ⇓*i*P Pn 04 42 00.9 +0.8
SIM Pm 04 42 01.3
comp=Z,87nm,0.2s
SIM *e*S **Sn 04 42 48.1 -4.0**
SIM Sm 04 42 50.2
comp=N,62nm,0.2s
SIM Sm 04 42 50.3
comp=E,64nm,0.3s
ALU Alushta 4.50 53 ⇓*i*P Pn 04 42 01.0 +0.8
ALU Pm 04 42 03.1
comp=Z,62nm,0.2s
ALU *i* S **Sn 04 42 47.9 -4.4**
ALU Sm 04 42 53.3
comp=N,135nm,0.2s
ALU Sm 04 42 53.3
comp=E,76nm,0.3s
VTS Vitosha 4.57 279 ⇑P Pn 04 42 02.7 +1.5
VTS Vitosha 4.57 279 Pn 04 42 01.5 +0.2
VOIR 4.58 319 ⇑P Pn 04 42 03.8 +2.5
VOIR 4.58 319 Pn 04 42 03.8 +2.5
VASR Vaslui 4.69 347 ⇑P Pn 04 42 04.0 +1.2
VASR ⇓S **Sn 04 42 59.0 +2.0**
VASR Vaslui 4.69 347 Pn 04 42 04.0 +1.2
VASR **Sn 04 42 59.0 +2.0**
ARR Arges 4.74 315 ⇑P Pn 04 42 05.9 +2.3
ARR Arges 4.74 315 Pn 04 42 05.9 +2.3
OZUR 4.76 329 ⇓P Pn 04 42 05.9 +2.1
OZUR 4.76 329 Pn 04 42 05.9 +2.1
PLG Polygyros 4.77 251 P **Pn 04 42 04.6 +0.6**
DOPR Dopca 4.82 325 ⇑P Pn 04 42 06.8 +2.2
DOPR Dopca 4.82 325 Pn 04 42 06.8 +2.2
TESR Tescani 4.83 337 ⇑P Pn 04 42 06.4 +1.6
TESR Tescani 4.83 337 Pn 04 42 06.4 +1.6
KNT Kendrikon 4.93 261 P **Pn 04 42 07.3 +1.2**
KIS Kishinev 4.93 356 *e*P **Pn 04 42 07.6 +1.5**
KIS *e*S **Sn 04 42 57.3 -5.5**
comp=E,125nm,0.3s
SUDU Sudak 4.97 54 *e*P **Pn 04 42 08.0 +1.3**
SUDU ⇓*i*P Pb 04 42 08.2 -11
SUDU Pm 04 42 08.8
comp=Z,59nm,0.2s
SUDU *i* S **Sn 04 43 00.6 -3.3**
SUDU Sm 04 43 05.2
comp=N,36nm,0.4s
SUDU Sm 04 43 05.2
comp=E,282nm,0.3s
VAY Valandovo 5.13 264 *e*Pn **Pn 04 42 09.8 +0.9**
VAY *e*Sg **Sn 04 43 06.0 -1.8**
SRE Strehaia 5.17 302 ⇑P Pn 04 42 10.2 +0.8
SRE Strehaia 5.17 302 Pn 04 42 10.2 +0.8
LOT Lotru 5.26 312 ⇑P Pn 04 42 12.6 +1.9
LOT Lotru 5.26 312 Pn 04 42 12.6 +1.9
FEO Feodosiya 5.28 54 *e*P **Pn 04 42 12.2 +1.4**
FEO ⇓*i*P Pb 04 42 12.9 -12
FEO Pm 04 42 13.0
comp=Z,112nm,0.2s
FEO *e*S **Sn 04 43 08.4 -2.9**
FEO Sm 04 43 12.6
comp=N,123nm,0.3s
FEO Sm 04 43 12.6
comp=E,182nm,0.3s
ELL Elmali 5.35 175 Pn **Pn 04 42 11.7 -0.3**
STIP Stip 5.36 268 *e*Pn **Pn 04 42 10.5 -1.6**
STIP *e*Sg **Sn 04 43 07.0 -6.5**
BIZ Bicaz 5.38 336 ⇑P Pn 04 42 14.7 +2.4
BIZ Bicaz 5.38 336 Pn 04 42 14.7 +2.4
MDB Medias 5.41 320 ⇑P Pn 04 42 15.0 +2.3
MDB Medias 5.41 320 Pn 04 42 15.0 +2.3
FETY Fethiye 5.45 182 P **Pn 04 42 14.8 +1.6**
GZR Gura Zlata 5.80 307 ⇓P Pn 04 42 18.7 +0.6
GZR Gura Zlata 5.80 307 Pn 04 42 18.7 +0.6
BOVS Bovan 5.83 288 ⇓P Pn 04 42 19.6 +1.1
BOVS Bovan 5.83 288 Pn 04 42 19.6 +1.1
KERU Kerch 6.08 56 *e*P **Pn 04 42 22.0 +0.2**
KERU Pm 04 42 22.5
comp=Z,8.0nm,0.3s
SORM Soroca 6.09 354 ⇑P Pn 04 42 23.0 +0.9
SORM Soroca 6.09 354 Pn 04 42 23.0 +0.9
FNA Florina 6.13 260 Pn **Pn 04 42 20.9 -1.8**
AGG Agios Georgios 6.16 243 Pn **Pn 04 42 21.9 -1.1**
BURAR Bucovina Array 6.26 333 Pn **Pn 04 42 24.4 -0.1**
BUR08 Bucovina Ar. S 6.29 333 Pn **Pn 04 42 24.9 -0.1**
BZS Buzias 6.61 305 ⇑P Pn 04 42 29.3 +0.1
BZS Buzias 6.61 305 Pn 04 42 29.3 +0.1
DRGR 6.69 317 ⇑P Pn 04 42 31.1 +0.8
DRGR 6.69 317 Pn 04 42 31.1 +0.8
SIRR Siria 6.93 310 ⇓P Pn 04 42 34.9 +1.2
SIRR Siria 6.93 310 Pn 04 42 34.9 +1.2
BMR Baia Mare 6.97 325 ⇑P Pn 04 42 35.8 +1.7
BMR Baia Mare 6.97 325 Pn 04 42 35.8 +1.7
DIVS Divibare 7.14 290 Pn **Pn 04 42 36.5 -0.1**
AKASG Malin Array Be 8.62 359 Pn **Pn 04 42 56.1 -0.6**
comp=Z,4.6nm,0.3s,baz=186,slow=12,SNR=27
AKASG Sn **Sn 04 44 27.1 -6.4**
comp=Z,11nm,0.3s,baz=179,slow=22,SNR=8.0
AKASG Malin Array Be 8.62 359 Pn **Pn 04 42 55.3 -1.4**
AKBB Malin Array Si 8.62 355 Pn **Pn 04 42 56.5 -0.2**
VYHS Vyhne 9.79 314 *e*PN **Pn 04 43 14.9 +2.1**
KVAR Kislovodsk Arp 9.95 75 Pn **Pn 04 43 17.9 +2.8**
baz=258,slow=20,SNR=3.2
KVAR Sn **Sn 04 44 59.3 -7.2**
baz=282,slow=20,SNR=4.1
KBZ Khabaz 10.07 76 Pn **Pn 04 43 17.7 +1.1**
comp=Z,0.5nm,0.3s,baz=272,slow=11,SNR=8.0
KBZ Sn **Sn 04 45 02.6 -6.7**
comp=Z,0.3nm,0.3s,baz=140,slow=16,SNR=2.2
MMAI Mount Meron Ar 10.24 150 LR LR 04 47 52.4
comp=Z,36nm,18.2s,baz=0.0,slow=41
MODS Modra-Piesok 10.58 311 *e*PN **Pn 04 43 23.2 -0.4**
VRAC Vranov 11.47 313 LR LR 04 48 17.9
comp=Z,42nm,20.7s,baz=104,slow=39
GNI Garni 11.77 94 LR LR 04 48 19.5
comp=Z,18nm,19.3s,baz=12,slow=38
GERES GERESS Array B 12.89 307 Pn **Pn 04 43 56.9 +1.7**
comp=Z,0.1nm,0.3s,baz=123,slow=16,SNR=6.7
GERES LR LR 04 49 36.1
comp=Z,27nm,19.1s,baz=114,slow=41
NACGM Naroch 12.94 353 *i* P P 04 44 01.2 -5.2
NACGM *i* P P 04 44 01.2 -5.2
NACGM *i* P P 04 44 01.2 -5.2
NACGM *i* PP **PnPn 04 44 09.1 +5.5**
NACGM *i* PPP PPP 04 44 16.0
NACGM *i* S Sn 04 46 29.3 +10
NACGM *i* SS SnSn 04 46 47.6 +16
NACGM *i* SSS SSS 04 47 08.3
NACGM *i* LQ LQ 04 47 43.5
NACGM *i* LR LR 04 49 16.8
EIL Elat 13.19 158 LR LR 04 49 32.8
comp=Z,18nm,18.6s,baz=294,slow=40
IDID Didziasalis 13.35 354 *e*P **P 04 44 09.2 -1.8**
IIGN Ignalina 13.44 352 *e*P **P 04 44 10.7 -1.2**
ISAL Salakas 13.66 352 *e*P **P 04 44 11.0 -3.4**
GKP Gorka Klasztor 13.83 328 *e*P **Pn 04 44 07.5 -0.4**
PABE Paberze 13.89 347 *e*P **Pn 04 44 07.1 -1.6**
PABE Paberze 13.89 347 Pn **Pn 04 44 07.6 -1.0**
CLL Collm 14.50 315 *e*P **Pn 04 44 17.0 -0.1**
DAVOX Davos/Dischmat 14.68 295 Pn **Pn 04 44 21.9 +2.1**
comp=Z,0.3nm,0.3s,baz=255,slow=20,SNR=2.5
DAVOX LR LR 04 50 51.0
comp=Z,41nm,20.6s,baz=115,slow=41
BELG Belogornoye 16.09 44 Pn **P 04 44 40.4 -1.0**
comp=Z,1.0nm,0.3s,baz=47,slow=19,SNR=2.1
VSU Vasula 16.48 355 *e*P **P 04 44 40.1 -2.9**
FINES FINESS Array B 19.49 355 P **P 04 45 18.8 0.0**
comp=Z,0.3nm,0.3s,baz=173,slow=13,SNR=2.1
FINES Sn Sn 04 48 45.6 -13
comp=Z,0.4nm,0.3s,baz=178,slow=20,SNR=4.6
FINES LR LR 04 53 16.3
comp=Z,50nm,21.1s,baz=65,slow=38
FINES FINESS Array B 19.49 355 P **P 04 45 18.9 +0.1**
HFS Hagfors 20.48 337 P Pn 04 45 30.6 -1.1
comp=Z,1.4nm,0.7s,baz=143,slow=14,SNR=2.7
KIRV Kirov 20.76 30 LR LR 04 54 28.4
comp=Z,35nm,18.0s,baz=157,slow=39
AKTO Aktyubinsk 21.40 57 P **P 04 45 40.4 +0.8**
comp=Z,1.1nm,0.4s,baz=238,slow=11,SNR=4.4
NOA NORSAR Array B 21.94 336 P **P 04 45 45.4 +0.1**
comp=Z,0.6nm,0.6s,baz=147,slow=9.8,SNR=4.1
NOA LR LR 04 55 57.5
comp=Z,21nm,19.1s,baz=85,slow=41
ABKAR Akbulak array 22.44 61 P **P 04 45 49.8 -0.9**
ABKAR IAmb IAmb 04 46 00.1
comp=Z,2.4nm,1.1s
ARU Arti 23.63 43 P **P 04 46 02.9 +0.1**
comp=Z,1.8nm,0.2s,baz=244,slow=6.2,SNR=4.2
ARU LR LR 04 56 33.5
comp=Z,32nm,19.4s,baz=243,slow=40
EKA Eskdalemuir Ar 24.95 313 P **P 04 46 15.3 +0.2**
comp=Z,1.0nm,0.6s,baz=106,slow=10,SNR=2.7
AAK Ala-Archa 33.06 74 LR LR 05 04 45.6
comp=Z,11nm,18.4s,baz=194,slow=43
MK31 Makanchi Array 37.49 64 P **P 04 48 05.2 -0.4**
MK31 IAmb IAmb 04 48 08.6
comp=Z,0.6nm,0.6s
MKAR Makanchi Array 37.49 64 P **P 04 48 07.6 +2.1**
comp=Z,1.0nm,0.6s,baz=279,slow=7.7,SNR=16
MKAR Makanchi Array 37.49 64 P **P 04 48 05.2 -0.4**
TOA0 Torodi Ar. Sit 37.52 228 P **P 04 48 05.8 -0.2**
TORD Torodi Ar. Bea 37.52 228 P **P 04 48 06.7 +0.8**
comp=Z,0.4nm,0.4s,baz=34,slow=8.8,SNR=7.5
TORD Torodi Ar. Bea 37.52 228 P **P 04 48 05.0 -1.0**
TORD IAmb IAmb 04 48 08.3
comp=Z,0.7nm,0.8s
ZALV Zalesovo Beam 38.00 52 P **P 04 48 11.6 +1.9**
comp=Z,1.8nm,0.7s,baz=273,slow=9.8,SNR=8.6
ZALV Zalesovo Beam 38.00 52 P **P 04 48 09.6 -0.1**
KOWA Kowa 39.80 236 P **P 04 48 27.0 +1.8**
comp=Z,1.0nm,0.6s,baz=32,slow=5.9,SNR=4.8
KOWA Kowa 39.80 236 P **P 04 48 24.6 -0.7**
DBIC Dimbokro 46.48 230 P **P 04 49 19.7 +0.5**
comp=Z,3.6nm,0.8s,baz=32,slow=6.3,SNR=4.4
SONM Songino Array 52.71 56 P **P 04 50 09.2 +2.7**
comp=Z,0.7nm,0.5s,baz=282,slow=7.5,SNR=2.8
YKA Yellowknife Ar 71.83 343 P **P 04 52 16.1 +1.9**
comp=Z,0.3nm,0.8s,baz=26,slow=5.8,SNR=3.9
TXAR Lajitas Array 96.78 320 P **P 04 54 26.4 +3.5**
comp=Z,0.2nm,0.8s,baz=63,slow=4.2,SNR=1.9

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*IDC **29** 04:56:57.0±0.7, 1.05S×80.70E, h0km, mb4.2/12, mb1 4.3/13, mb1mx3.9/55, mbtmp4.2/13, ML4.9/1, MS3.4/18, Ms1 3.4/18, ms1mx3.1/57, Error ellipse: s-maj=26.5km s-min=16.2km az=61.0*
*NEIC **29** 04:56:58.3±1.4, 0.94S±0.09×80.7E±0.1, h10km±1km, mb4.5/20, Error ellipse: s-maj=19.0km s-min=14.8km az=98.0*

ISC 29 04:56:58.4±0.6, 0.84S±0.07×80.73E±0.10, h10km, n57, σ1ş43/49, mb4.4/20, MS3.5/16, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**8.06**	**360**	Pn	**Pn**	**Pn**	**04 58 57.0**	**+1.4**
	14nm,0.3s,baz=291,slow=12,SNR=56							
PALK				Sn	**Sn**	**Sn**	**05 00 21.7**	**-5.2**
	60nm,0.3s,baz=160,slow=22,SNR=14							
PALK				LR	LR	LR	05 02 01.7	
	comp=Z,267nm,19.6s,baz=291,slow=37							
PALK	**Pallekele**	**8.06**	**360**			**Pn**	**04 58 56.7**	**+1.1**
PALK				Sn		**Sn**	**05 00 23.4**	**-3.5**
DGAR	**Diego Garcia**	**10.52**	**231**	Pn		**Pn**	**04 59 28.9**	**-0.4**
MNCI	**Minicoy**	**11.85**	**320**			**Pn**	**04 59 47.4**	**-0.2**
PSI	**Prapat**	**18.55**	**79**	LR	LR	LR	05 08 24.2	
	comp=Z,92nm,18.6s,baz=172,slow=37							
LEM	**Lembang**	**27.47**	**103**	LR	LR	LR	05 12 02.2	
	comp=Z,97nm,20.2s,baz=244,slow=33							
BTK	**Batken**	**41.70**	**349**	P		**P**	**05 04 47.8**	**+0.3**
BTK				IAmb		IAmb	05 05 05.7	
	comp=Z,5.8nm,0.9s							
RAYN	**Ar Rayn**	**41.93**	**308**	P		**P**	**05 04 49.6**	**0.0**
ARSB	**Arslanbob**	**42.55**	**351**	P		**P**	**05 04 55.8**	**+1.2**
ARSB				IAmb		IAmb	05 04 58.9	
	comp=Z,8.4nm,0.8s							
BOOM	**Boomskoye usch**	**43.35**	**355**	P		**P**	**05 05 02.3**	**+1.3**
AAK	**Ala-Archa**	**43.64**	**353**	P		**P**	**05 05 06.1**	**+2.7**
	comp=Z,0.8nm,0.3s,baz=211,slow=9.1,SNR=4.6							
AAK	**Ala-Archa**	**43.64**	**353**	P		**P**	**05 05 04.7**	**+1.3**
GEYT	**Alibeck**	**43.86**	**334**	LR	LR	LR	05 24 10.7	
	comp=Z,53nm,19.4s,baz=55,slow=37							
KKAR	**Karatay Array**	**44.70**	**349**	P		**P**	**05 05 11.0**	**-0.6**
MK31	**Makanchi Array**	**47.46**	**1**	P		**P**	**05 05 34.5**	**+1.1**
MK31				IAmb		IAmb	05 05 51.7	
	comp=Z,3.1nm,0.8s							
MKAR	**Makanchi Array**	**47.46**	**1**	P		**P**	**05 05 35.5**	**+2.2**
	comp=Z,2.6nm,0.8s,baz=186,slow=8.5,SNR=23							
MKAR				LR	LR	LR	05 26 40.7	
	comp=Z,50nm,20.7s,baz=187,slow=37							
MKAR	**Makanchi Array**	**47.46**	**1**	P		**P**	**05 05 35.0**	**+1.6**
MAKZ	**Makanchi**	**47.46**	**1**	P		**P**	**05 05 34.5**	**+1.2**
GNI	**Garni**	**52.35**	**325**	LR	LR	LR	05 26 59.0	
	comp=Z,24nm,21.5s,baz=198,slow=34							
MARD	**Mardin**	**52.96**	**320**	P		**P**	**05 06 13.9**	**-1.4**
ABKAR	**Akbulak array**	**53.02**	**343**	P		**P**	**05 06 15.3**	**-0.2**
ABKAR				IAmb		IAmb	05 06 18.4	
	comp=Z,3.2nm,0.8s							
ABKAR	**Akbulak array**	**53.02**	**343**	P		**P**	**05 06 15.7**	**+0.2**
EIL	**Elat**	**53.14**	**309**	LR	LR	LR	05 27 52.2	
	comp=Z,43nm,18.4s,baz=104,slow=35							
SONM	**Songino Array**	**53.39**	**21**	P		**P**	**05 06 20.2**	**+1.9**
	comp=Z,0.7nm,0.4s,baz=207,slow=6.6,SNR=4.3							
SONM				LR	LR	LR	05 31 01.9	
	comp=Z,26nm,21.4s,baz=200,slow=38							
SONM	**Songino Array**	**53.39**	**21**	P		**P**	**05 06 19.7**	**+1.4**
SONM				IAmb		IAmb	05 06 37.4	
	comp=Z,5.8nm,1.4s							
LSZ	**Lusaka**	**53.79**	**252**	P		**P**	**05 06 21.8**	**0.0**
	comp=Z,1.5nm,0.5s,baz=73,slow=5.3,SNR=5.3							
FORT	**Forrest**	**53.80**	**128**	P		**P**	**05 06 20.5**	**-1.0**
MMAI	**Mount Meron Ar**	**54.35**	**313**	LR	LR	LR	05 28 35.2	
	comp

WRA	**Warramunga Arr**	**55.74**	**114**	P	**P**	**05 06 35.9 +0.1**
WRAB	**Tennant Creek**	**55.75**	**114**	P	**P**	**05 06 35.5 -0.3**
WB0	**Warramunga Arr**	**55.75**	**113**	P	**P**	**05 06 35.8 -0.1**
WB0				IAmb	IAmb	05 06 37.2
	comp=Z,7.7nm,0.8s					
WB2	**Warramunga Arr**	**55.75**	**114**	P	**P**	**05 06 35.0 -0.9**
WB2				IAmb	IAmb	05 06 37.3
	comp=Z,11nm,0.7s					
KBZ	**Khabaz**	**55.77**	**327**	P	**P**	**05 06 37.0 +1.5**
	comp=Z,0.8nm,0.6s,baz=77,slow=19,SNR=1.7					
WR0	**Warramunga Arr**	**55.93**	**114**	P	**P**	**05 06 36.5 -0.7**
ASAR	**Alice Springs**	**56.27**	**118**	P	**P**	**05 06 39.7 +0.1**
	comp=Z,3.3nm,0.7s,baz=293,slow=6.7,SNR=34					
ASAR	**Alice Springs**	**56.27**	**118**	P	**P**	**05 06 38.6 -1.0**
KSRS	**Korea Array**	**57.87**	**44**	LR	LR	05 31 49.0
	comp=Z,14nm,21.5s,baz=202,slow=36					
BRTR	**Keskin Array B**	**58.95**	**319**	P	**P**	**05 06 59.7 +1.4**
	comp=Z,0.9nm,0.8s,baz=93,slow=7.6,SNR=2.7					
BRTR				LR	LR	05 32 40.0
	comp=Z,32nm,20.8s,baz=208,slow=36					
BRTR	**Keskin Array B**	**58.95**	**319**	P	**P**	**05 06 59.0 +0.7**
BOSA	**Boshof**	**59.65**	**237**	LR	LR	05 28 41.6
	comp=Z,30nm,19.1s,baz=184,slow=32					
ARU	**Arti**	**59.85**	**346**	P	**P**	**05 07 05.3 +1.3**
ARU				IAmb	IAmb	05 07 06.3
	comp=Z,5.6nm,0.8s					
STKA	**Stephens Creek**	**65.06**	**125**	P	**P**	**05 07 38.0 -1.3**
	comp=Z,2.1nm,0.8s,baz=300,slow=7.8,SNR=4.6					
STKA				LR	LR	05 33 26.5
	comp=Z,17nm,21.4s,baz=173,slow=34					
CTAO	**Charters Tower**	**66.78**	**111**	P	**P**	**05 07 50.1 -0.6**
FINES	**FINESS Array B**	**74.62**	**336**	P	**P**	**05 08 38.4 +0.8**
	comp=Z,1.5nm,0.6s,baz=127,slow=8.8,SNR=7.1					
FINES				LR	LR	05 43 42.5
	comp=Z,36nm,20.3s,baz=6.5,slow=38					
FINES	**FINESS Array B**	**74.62**	**336**	P	**P**	**05 08 38.5 +0.9**
ARCES	**ARCESS Array B**	**79.22**	**343**	LR	LR	05 46 41.6
	comp=Z,22nm,18.9s,baz=210,slow=38					
NOA	**NORSAR Array B**	**80.93**	**333**	LR	LR	05 48 13.9
	comp=Z,16nm,18.6s,baz=265,slow=38					
QSPA	**South Pole Qui**	**89.13**	**180**	P	**P**	**05 09 53.2 -0.8**
	comp=Z,3.4nm,1.1s,baz=278,slow=0.9,SNR=11					
QSPA	**South Pole Qui**	**89.13**	**180**	P	**P**	**05 09 53.2 -0.8**
QSPA				IAmb	IAmb	05 09 56.2
	comp=Z,2.9nm,1.1s					
LPAZ	**La Paz**	**144.87**	**240**	PKP	**PKPab**	**05 16 36.2 -0.3**
	comp=Z,1.1nm,0.7s,baz=218,slow=3.6,SNR=6.0					
TXAR	**Lajitas Array**	**151.36**	**8**	PKPbc	**PKPbc**	**05 16 53.2 -0.1**
	comp=Z,0.8nm,0.8s,baz=330,slow=1.5,SNR=8.4					
TXAR				PKPab	**pPKPab**	**05 17 02.3 -0.7**
	comp=Z,0.7nm,0.8s,baz=321,slow=1.6,SNR=6.5					
TXAR	**Lajitas Array**	**151.36**	**8**	PKPdf	**PKPdf**	**05 16 47.2 0.0**

*NEIC **29** 05:15:25.9±1.8,25°.1S×0°.1×180°.0W±0°.2,h479km±8km, mb4.4/19,Error ellipse: s-maj=20.4km s-min=16.9km az=109.0*

*IDC **29** 05:15:26.2±1.6,25°.02S×179°.99E,h475km±14km, mb3.7/13,mb1 3.8/14,mb1mx3.6/31,mbtmp4.5/14,Error ellipse: s-maj=17.5km s-min=14.9km az=151.0*

ISC 29 05:15:27.8±0.5,25°.05S±0°.09×179°.97E±0°.08,h501km,n61, σ1§22/64,mb4.2/20,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.50**	**346**	P	**P**	**05 17 16.4**	**-2.9**
	0.2nm,0.3s,baz=131,slow=20,SNR=1.7						
MSVF	**Nonsavu**	**7.50**	**346**	P	**P**	**05 17 17.5**	**-1.8**
NIUE	**Niue**	**11.09**	**60**	P	**P**	**05 17 56.2**	**-0.7**
DZM	**Mont Dzumac**	**12.76**	**281**	P	**P**	**05 18 14.1**	**-0.4**
	0.4nm,0.3s,baz=70,slow=15,SNR=2.8						
DZM	**Mont Dzumac**	**12.76**	**281**	P	**P**	**05 18 14.7**	**+0.1**
URZ	**Urewera**	**13.39**	**190**	P	**P**	**05 18 19.4**	**-1.5**
AFI	**Afiamalu**	**13.53**	**37**	P	**P**	**05 18 21.7**	**-1.1**
BKZ	**Black Stump Fm**	**14.38**	**191**	P	**P**	**05 18 30.0**	**-1.4**
MSWZ	**Moikau Station**	**16.79**	**192**	P	**P**	**05 18 53.5**	**-3.0**
QRZ	**Quartz Range**	**16.92**	**200**	P	**P**	**05 18 56.8**	**-1.0**
PLWZ	**Palliser**	**16.94**	**192**	P	**P**	**05 18 55.3**	**-2.7**
NNZ	**Nelson**	**17.04**	**197**	P	**P**	**05 18 56.3**	**-2.6**
TUWZ	**Tuamarina**	**17.09**	**196**	P	**P**	**05 18 57.8**	**-1.6**
BSWZ	**Blackbirch Sta**	**17.38**	**195**	P	**P**	**05 19 00.2**	**-2.0**
THZ	**Taphouse**	**17.67**	**198**	P	**P**	**05 19 04.2**	**-0.9**
KHZ	**Kahutara**	**18.12**	**195**	P	**P**	**05 19 07.5**	**-1.5**
LTZ	**Lake Taylor**	**18.79**	**198**	P	**P**	**05 19 14.1**	**-1.1**
CTA	**Charters Tower**	**31.47**	**272**	P	**P**	**05 21 08.8**	**+0.8**
	12nm,0.3s,baz=93,slow=12,SNR=12						
CTA				S	**S**	**05 25 43.4**	**+3.0**
	2.9nm,0.7s,baz=72,slow=19,SNR=1.3						
CTAO	**Charters Tower**	**31.47**	**272**	P	**P**	**05 21 08.9**	**+0.8**
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**05 21 32.2**	**+0.4**
	2.4nm,0.5s,baz=97,slow=11,SNR=11						
COEN	**Coen**	**36.29**	**281**	P	**P**	**05 21 49.9**	**+1.3**
COEN				IAmb	IAmb	05 22 11.9	
	comp=Z,28nm,1.4s						
BBOO	**Buckleboo**	**38.98**	**248**	P	**P**	**05 22 10.0**	**-0.6**
BBOO				IAmb	IAmb	05 22 22.2	
	comp=Z,29nm,1.5s						
AS31	**Alice Springs**	**41.84**	**262**	P	**P**	**05 22 33.0**	**-0.5**
ASAR	**Alice Springs**	**41.84**	**262**	P	**P**	**05 22 33.3**	**-0.2**
	comp=Z,2.7nm,0.4s,baz=88,slow=7.3,SNR=46						
ASAR				PcP	**PcP**	**05 24 18.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=101,slow=4.9,SNR=3.1						
ASAR	**Alice Springs**	**41.84**	**262**	P	**P**	**05 22 32.7**	**-0.8**
WR0	**Warramunga Arr**	**42.13**	**267**	P	**P**	**05 22 35.2**	**-0.7**
WR0				IAmb	IAmb	05 22 35.8	
	comp=Z,6.2nm,0.7s						
WB2	**Warramunga Arr**	**42.31**	**267**	P	**P**	**05 22 36.8**	**-0.4**
WB2				IAmb	IAmb	05 22 37.6	
	comp=Z,11nm,0.7s						
WRAB	**Tennant Creek**	**42.31**	**267**	P	**P**	**05 22 36.9**	**-0.3**
WRAB				IAmb	IAmb	05 22 37.2	
	comp=Z,8.9nm,0.6s						
WB0	**Warramunga Arr**	**42.31**	**268**	P	**P**	**05 22 36.8**	**-0.6**
WB0				IAmb	IAmb	05 22 37.7	
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**05 22 36.9**	**-0.5**
	comp=Z,8.7nm,0.5s,baz=101,slow=8.5,SNR=104						
WRA				S	**S**	**05 28 18.4**	**-3.4**
	comp=Z,2.1nm,1.1s,baz=102,slow=13,SNR=5.5						
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**05 22 37.2**	**-0.2**
FORT	**Forrest**	**45.90**	**251**	P	**P**	**05 23 04.0**	**-0.9**
KNRA	**Kununurra**	**48.67**	**271**	P	**P**	**05 23 26.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**50.73**	**267**	P	**P**	**05 23 41.5**	**+0.3**
	comp=Z,9.8nm,0.8s,baz=109,slow=6.7,SNR=21						
FITZ	**Fitzroy Crossi**	**50.73**	**267**	IAmb	IAmb	05 23 42.8	
	comp=Z,8.2nm,0.8s						
SIJI	**Sorong**	**52.78**	**289**	P	**P**	**05 23 56.0**	**-0.1**
	comp=Z,25nm,0.7s,baz=358,slow=12,SNR=3.9						
MORW	**Morawa**	**56.47**	**251**	P	**P**	**05 24 21.8**	**0.0**
MORW				IAmb	IAmb	05 24 32.5	
	comp=Z,17nm,1.3s						
QSPA	**South Pole Qui**	**65.04**	**180**	P	**P**	**05 25 19.0**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=260,slow=1.2,SNR=6.2						
QSPA	**South Pole Qui**	**65.04**	**180**	P	**P**	**05 25 18.6**	**+0.6**
MJAR	**Matsushiro Arr**	**72.83**	**326**	P	**P**	**05 26 05.3**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=169,slow=5.4,SNR=7.4						
MAW	**Mawson**	**76.67**	**201**	P	**P**	**05 26 27.2**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=102,slow=9.3,SNR=2.0						
KSRS	**Korea Array**	**79.11**	**320**	P	**P**	**05 26 41.0**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=132,slow=6.6,SNR=6.2						
PETK	**Petropavlovsk-**	**80.20**	**347**	P	**P**	**05 26 46.4**	**+1.1**
	comp=Z,3.5nm,0.8s,baz=139,slow=7.0,SNR=4.7						
USRK	**Ussuriysk Ar.**	**81.71**	**327**	P	**P**	**05 26 54.4**	**+1.1**
	comp=Z,1.7nm,0.7s,baz=75,slow=9.5,SNR=4.7						
TXAR	**Lajitas Array**	**91.06**	**58**	P	**P**	**05 27 40.6**	**+1.9**
	comp=Z,0.5nm,0.9s,baz=218,slow=5.7,SNR=5.4						
KURK	**Kurchatov**	**116.01**	**316**		**PKPdf**	**05 33 12.9**	**-0.2**
KURBB	**Kurchatov Arra**	**116.05**	**316**	PKP	**PKPdf**	**05 33 12.9**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=113,slow=1.6,SNR=5.0						
BVAR	**Borovoye Array**	**121.28**	**318**	PKP	**PKiKP**	**05 33 23.4**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=90,slow=1.4,SNR=4.9						
SPITS	**Spitsbergen Ar**	**126.26**	**356**	PKP	**PKiKP**	**05 33 33.0**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=171,slow=6.7,SNR=4.5						
ARU	**Arti**	**127.78**	**323**	PKP	**PKiKP**	**05 33 35.9**	**-0.3**
	comp=Z,2.9nm,0.2s,baz=133,slow=9.2,SNR=3.5						
AKTO	**Aktyubinsk**	**129.10**	**316**	PKP	**PKiKP**	**05 33 38.6**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=29,slow=10,SNR=3.7						
ARCES	**ARCESS Array B**	**133.00**	**348**	PKP	**PKiKP**	**05 33 46.3**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=40,slow=1.5,SNR=7.4						
ARCES				SKPbc	**SKPab**	**05 36 28.0**	**-0.2**
	comp=Z,5.6nm,1.1s,baz=32,slow=3.5,SNR=12						
FINES	**FINESS Array B**	**139.52**	**341**	PKhKP	PKPpre	05 33 49.3	
	comp=Z,0.9nm,0.7s,baz=135,slow=1.1,SNR=3.7						
FINES				PKP	**PKiKP**	**05 33 59.5**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=103,slow=4.1,SNR=4.7						
FINES				SKPbc	**SKiKP**	**05 36 47.8**	**-0.3**
	comp=Z,3.7nm,0.8s,baz=29,slow=3.2,SNR=8.3						
NOA	**NORSAR Array B**	**143.21**	**351**	PKP	PKPbc	05 34 02.5	+0.3
	comp=Z,0.7nm,0.8s,baz=16,slow=4.7,SNR=6.8						
AKASG	**Malin Array Be**	**145.91**	**326**	PKPbc	**PKPbc**	**05 34 10.5**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=44,slow=4.4,SNR=16						
AKBB	**Malin Array Si**	**145.91**	**326**		**PKPbc**	**05 34 10.9**	**+0.2**
MMAI	**Mount Meron Ar**	**148.13**	**293**	PKPbc	**PKiKP**	**05 34 18.6**	**0.0**
	comp=Z,6.4nm,0.5s,baz=62,slow=4.1,SNR=12						
BRTR	**Keskin Array B**	**148.24**	**306**	PKPbc	**PKPbc**	**05 34 17.4**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=145,slow=4.5,SNR=5.7						
BURAR	**Bucovina Array**	**149.90**	**325**		**PKiKP**	**05 34 22.4**	**+0.6**
CLL	**Collm**	**151.94**	**342**	*i* PKPbc	**PKiKP**	**05 34 26.1**	**+0.4**
	comp=Z,5.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**168.05**	**188**	PKPab	**PKPab**	**05 35 48.4**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=183,slow=2.7,SNR=2.2						

IDC 29 05:24:14.2±17.0,6°.17S×130°.34E,h139km±177km, mb2.9/1,mb1 3.1/4,mb1mx2.9/45,mbtmp3.4/4,ML3.4/3, Error ellipse: s-maj=120.6km s-min=62.4km az=40.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.71**	**201**	P	Pn	05 27 09.4	-0.7
	0.1nm,0.3s,baz=0.0,slow=7.1,SNR=1.7						
FITZ				S	Sn	05 29 26.6	-3.9
	0.1nm,0.3s,baz=172,slow=7.5,SNR=1.5						
WRA	**Warramunga Arr**	**14.23**	**165**	P	Pn	05 27 31.1	+1.5
	0.2nm,0.3s,baz=349,slow=13,SNR=12						
WRA				S	Sn	05 29 56.9	-10
	0.1nm,0.3s,baz=336,slow=23,SNR=5.8						
ASAR	**Alice Springs**	**17.73**	**169**	P	P	05 28 10.8	-0.6
	0.2nm,0.3s,baz=348,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**67.72**	**326**	P	P	05 34 56.7	+0.1
	0.1nm,0.4s,baz=114,slow=6.5,SNR=2.0						

*ANF **29** 05:25:52.9±0.3,35°.78N×97°.41W,h5km,ML3.7/14,Error ellipse: s-maj=2.8km s-min=2.3km az=129.0*

*IASPEI **29** 05:25:53.1±0.9,35°.76N±0°.03×97°.39W±0°.03,h10km±7km, Error ellipse: s-maj=4.9km s-min=3.7km az=94.7,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*

*NEIC **29** 05:25:53.4±1.0,35°.774N±0°.008×97°.42W±0°.05,h5km±2km, Error ellipse: s-maj=7.3km s-min=3.0km az=84.0*

*TUL **29** 05:25:53.2±1.3,35°.74N±0°.04×97°.38W±0°.06,h6km±7km, ML3.2,mb_Lg3.1/92(NEIC),Error ellipse: s-maj=6.8km s-min=6.0km az=87.0*

ISC 29 05:25:53.4±0.8,35°.77N±0°.02×97°.40W±0°.02,h8km±6km, n100,σ0§66/84,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.05**	**301**		**Pg**	**05 25 55.3**	**+0.2**
OK029				Sg	**Sg**	**05 25 56.7**	**+0.4**
OK025	**Westminster Rd**	**0.20**	**165**		**Pg**	**05 25 57.0**	**-0.4**
OK025				Sg	**Sg**	**05 25 59.6**	**-0.5**
BCOK	**Bluff Creek, N**	**0.20**	**236**		**Pg**	**05 25 57.5**	**-0.1**
BCOK				Sg	**Sg**	**05 26 00.5**	**+0.1**
OKCFA	**Oklahoma City**	**0.36**	**187**		**Pg**	**05 26 00.0**	**-0.4**
OKCFA				Sg	**Sg**	**05 26 04.9**	**-0.2**
OKCFA	**Oklahoma City**	**0.36**	**187**	P	**Pg**	**05 25 60.0**	**-0.4**
	baz=4.5,SNR=57						
OKCFA				S	**Sg**	**05 26 04.9**	**-0.2**
	baz=4.5						
OKCFA	**Oklahoma City**	**0.36**	**187**	P		05 25 60.0	
	baz=4.5,SNR=57						
OKCFA				S		05 26 04.9	
	baz=4.5						
OKCSW	**OKLAHOMA CITY**	**0.36**	**185**		**Pg**	**05 26 00.1**	**-0.5**
OKCSW				Sg	**Sg**	**05 26 05.3**	**-0.1**
OK031	**S. Brethren Rd**	**0.49**	**68**		**Pg**	**05 26 02.9**	**0.0**
OK031				Sg	**Sg**	**05 26 09.4**	**0.0**
FNO	**Franklin**	**0.51**	**180**		**Pg**	**05 26 03.5**	**+0.1**
OK030	**Cody Creek RV**	**0.53**	**72**		**Pg**	**05 26 03.5**	**-0.1**
QUOK	**Quay**	**0.69**	**54**		**Pg**	**05 26 06.6**	**-0.2**
CROK	**Carrier**	**0.87**	**327**		**Pg**	**05 26 10.3**	**-0.6**
GC02	**Grant County #**	**1.14**	**341**		**Pg**	**05 26 15.0**	**-0.4**
X34A	**Smith Ranch, M**	**1.22**	**197**		**Pg**	**05 26 16.2**	**-0.7**
OK032	**Salt Plains WL**	**1.22**	**328**	Pn	**Pg**	**05 26 16.2**	**-0.7**
KAN13	**South Haven SW**	**1.24**	**357**	Pn	**Pg**	**05 26 16.9**	**-0.3**
KAN14	**Manchester OK**	**1.27**	**339**		**Pg**	**05 26 17.2**	**-0.6**
TUL1	**Leonard**	**1.31**	**83**	P	**Pn**	**05 26 16.7**	**-1.5**
	baz=264						
TUL1				S	**Sg**	**05 26 34.5**	**-1.2**
	baz=264						
TUL1	**Leonard**	**1.31**	**83**	P		05 26 16.7	
	baz=264						
TUL1				S		05 26 34.5	
	baz=264						
T35A	**Sooner Cattle**	**1.35**	**32**		**Pn**	**05 26 18.4**	**-0.3**
T35B	**Sooner Cattle**	**1.35**	**32**	P	**Pn**	**05 26 18.2**	**-0.5**
	baz=213						
T35B				S	**Sg**	**05 26 36.6**	**-0.2**
	baz=213						
T35B	**Sooner Cattle**	**1.35**	**32**	P		05 26 18.2	
	baz=213						
T35B				S		05 26 36.6	
	baz=213						
KAN09	**Caldwell North**	**1.37**	**353**		**Pn**	**05 26 19.1**	**+0.1**
KAN05	**Bluff City Nor**	**1.39**	**344**		**Pb**	**05 26 19.4**	**-0.3**
KAN01	**Argonia South**	**1.41**	**348**		**Pb**	**05 26 19.7**	**-0.3**
U32A	**Winter Ranch,**	**1.43**	**296**		**Pn**	**05 26 19.9**	**+0.1**
U32A	**Winter Ranch,**	**1.43**	**296**	P	**Pn**	**05 26 19.7**	**-0.2**
	baz=115,SNR=26						
U32A				S	**Sg**	**05 26 39.7**	**+0.2**
	baz=115						
U32A	**Winter Ranch,**	**1.43**	**296**	P		05 26 19.7	
	baz=115,SNR=26						
U32A				S		05 26 39.7	
	baz=115						
KAN10	**Anthony SW Sta**	**1.46**	**338**		**Pn**	**05 26 20.5**	**+0.3**
KS20	**Mayfield South**	**1.46**	**355**		**Pb**	**05 26 20.6**	**-0.3**
KS20				IAmb_Lg		05 26 42.1	
	comp=Z,96nm,0.8s						
KAN08	**Anthony NE Sta**	**1.52**	**343**		**Pb**	**05 26 21.6**	**-0.4**
KS21	**Milan North St**	**1.53**	**352**	IAmb_Lg		05 26 44.7	
	comp=Z,143nm,0.9s						
WMOK	**Wichita Mounta**	**1.53**	**228**		**Pn**	**05 26 20.7**	**-0.5**
WMOK	**Wichita Mounta**	**1.53**	**228**	P	**Pn**	**05 26 20.6**	**-0.5**
	baz=47,SNR=502						
WMOK				S	**Sn**	**05 26 41.3**	**0.0**
	baz=47						
WMOK	**Wichita Mounta**	**1.53**	**228**	P		05 26 20.6	
	baz=47,SNR=502						
WMOK				S		05 26 41.3	
	baz=47						
KAN16	**Harper SW Stat**	**1.55**	**340**		**Pb**	**05 26 22.0**	**-0.5**
KAN12	**Harper NE Stat**	**1.60**	**343**		**Pb**	**05 26 22.9**	**-0.4**
X37A	**Clayton**	**2.04**	**125**		**Pn**	**05 26 28.1**	**0.0**
X37A	**Clayton**	**2.04**	**125**	P	**Pn**	**05 26 28.1**	**0.0**
	baz=306,SNR=364						
X37A				S	**Sb**	**05 26 55.6**	**-0.7**
	baz=306						
X37A	**Clayton**	**2.04**	**125**	P		05 26 28.1	
	baz=306,SNR=364						
X37A				S		05 26 55.6	
	baz=306						
Z35A	**Perchaven, San**	**2.44**	**177**		**Pn**	**05 26 34.5**	**+0.9**
Z35A	**Perchaven, San**	**2.44**	**177**	P	**Pn**	**05 26 33.8**	**+0.2**
	baz=357						
Z35A				S	**Sn**	**05 27 05.4**	**+1.8**
	baz=357						
Z35A	**Perchaven, San**	**2.44**	**177**	P		05 26 33.8	
	baz=357						
Z35A				S		05 27 05.4	
	baz=357						
U38A	**Gravette**	**2.53**	**74**		**Pn**	**05 26 36.0**	**+1.1**
U38A	**Gravette**	**2.53**	**74**	P	**Pn**	**05 26 36.0**	**+1.1**
	baz=256,SNR=18						
U38A	**Gravette**	**2.53**	**74**	P		05 26 36.0	
	baz=256,SNR=18						
R32A	**Long Quarter,**	**2.85**	**339**		**Pn**	**05 26 41.3**	**+2.0**
HHAR	**Hobbs**	**2.85**	**79**		**Pn**	**05 26 40.2**	**+0.9**
HHAR	**Hobbs**	**2.85**	**79**	P	**Pn**	**05 26 39.8**	**+0.5**
	baz=261,SNR=32						
HHAR	**Hobbs**	**2.85**	**79**	P		05 26 39.8	
	baz=261,SNR=32						
W39A	**Magazine**	**3.01**	**100**		**Pn**	**05 26 42.9**	**+1.4**
W39A				IAmb_Lg		05 27 35.5	
	comp=Z,74nm,0.8s						
W39A	**Magazine**	**3.01**	**100**	P	**Pn**	**05 26 41.5**	**+0.1**
	baz=282,SNR=10						
W39A	**Magazine**	**3.01**	**100**	P		05 26 41.5	
	baz=282,SNR=10						
Z38A	**Mt. Pleasant**	**3.20**	**141**	Pn	**Pn**	**05 26 44.5**	**+0.4**
Z38A				IAmb_Lg		05 27 39.6	
	comp=Z,52nm,0.8s						
Z38A	**Mt. Pleasant**	**3.20**	**141**	S	**Sn**	**05 27 24.0**	**+1.5**
	baz=322						
Z38A	**Mt. Pleasant**	**3.20**	**141**	S		05 27 24.0	
	baz=322						
MIAR	**Mount Ida**	**3.36**	**110**	Pn	**Pn**	**05 26 47.0**	**+0.7**
MIAR				IAmb_Lg		05 27 47.0	
	comp=Z,50nm,0.9s						
MIAR	**Mount Ida**	**3.36**	**110**	P	**Pn**	**05 26 46.4**	**+0.1**
	baz=292,SNR=40						
MIAR				S	**Sn**	**05 27 27.7**	**+1.2**
	baz=292						
MIAR	**Mount Ida**	**3.36**	**110**	P		05 26 46.4	
	baz=292,SNR=40						
MIAR				S		05 27 27.7	
	baz=292						
KSU1	**Kansas State U**	**3.38**	**10**	Pn	**Pn**	**05 26 47.4**	**+0.8**
KSU1				IAmb_Lg		05 27 46.5	
	comp=Z,64nm,0.8s						
KSU1	**Kansas State U**	**3.38**	**10**	P	**Pn**	**05 26 47.2**	**+0.6**
	baz=191						
KSU1	**Kansas State U**	**3.38**	**10**	P		05 26 47.2	
	baz=191						
CBKS	**Cedar Bluff**	**3.56**	**329**	Pn	**Pn**	**05 26 50.1**	**+0.9**
CBKS				IAmb_Lg		05 27 52.9	
	comp=Z,69nm,0.9s						
ABTX	**Abilene, Hawle**	**3.65**	**211**	Pn	**Pn**	**05 26 49.7**	**-0.6**
ABTX				IAmb_Lg		05 27 51.1	
	comp=Z,47nm,1.1s						
U40A	**Yellville**	**3.73**	**80**		**Pn**	**05 26 51.7**	**+0.3**
U40A				IAmb_Lg		05 28 01.1	
	comp=Z,31nm,0.7s						
U40A	**Yellville**	**3.73**	**80**	P	**Pn**	**05 26 51.2**	**-0.2**
	baz=262,SNR=16						
U40A	**Yellville**	**3.73**	**80**	P		05 26 51.2	
	baz=262,SNR=16						
U40A				P		05 26 51.2	
	baz=262,SNR=16						
WHTX	**Lake Whitney,**	**3.77**	**181**	Pn	**Pn**	**05 26 52.6**	**+0.6**
S39A	**Bolivar**	**3.79**	**58**	Pn	**Pn**	**05 26 53.4**	**+1.1**
S39A				IAmb_Lg		05 27 52.4	
	comp=Z,35nm,0.8s						
S39A	**Bolivar**	**3.79**	**58**	P	**Pn**	**05 26 52.7**	**+0.4**
	baz=241,SNR=12						
S39A	**Bolivar**	**3.79**	**58**	P		05 26 52.7	
	baz=241,SNR=12						
X40A	**Basin Creek Fa**	**3.96**	**108**		**Pn**	**05 26 55.0**	**+0.6**
237A	**Washetta, Mont**	**3.99**	**160**	IAmb_Lg		05 28 09.0	
	comp=Z,48nm,0.8s						
WHAR	**Wooly Hollow**	**4.20**	**95**		**Pn**	**05 26 58.5**	**+0.7**
WHAR				IAmb_Lg		05 28 06.3	
	comp=Z,40nm,0.8s						
W41B	**Gary Mavity, V**	**4.25**	**97**	P	**Pn**	**05 26 58.3**	**-0.1**
	baz=280,SNR=26						
W41B	**Gary Mavity, V**	**4.25**	**97**	P		05 26 58.3	
	baz=280,SNR=26						
FCAR	**Ozark Folk Cen**	**4.29**	**87**		**Pn**	**05 26 59.2**	**+0.2**
FCAR				IAmb_Lg		05 28 08.3	
	comp=Z,33nm,0.7s						
MSTX	**Muleshoe**	**4.77**	**249**		**Pn**	**05 27 05.6**	**-0.2**
R40A	**Maddies Statio**	**4.81**	**57**	Pn	**Pn**	**05 27 07.0**	**+0.7**
R40A				IAmb_Lg		05 28 33.4	
	comp=Z,23nm,0.8s						
P38A	**Dawn**	**4.92**	**37**	Pn	**Pn**	**05 27 08.4**	**+0.7**
N33A	**J Bar K, Exete**	**4.96**	**360**	IAmb_Lg		05 28 33.7	
	comp=Z,50nm,0.8s						
T42A	**Van Buren**	**5.24**	**74**	IAmb_Lg		05 28 49.1	
	comp=Z,28nm,1.0s						
KSCO	**Kaye Shedlock'**	**5.27**	**309**	Pn	**Pn**	**05 27 13.3**	**+0.6**
KSCO				IAmb_Lg		05 28 53.2	
	comp=Z,27nm,0.8s						
CCM	**Cathedral Cave**	**5.43**	**63**	Pn	**Pn**	**05 27 15.2**	**+0.4**
CCM				IAmb_Lg		05 28 58.4	
	comp=Z,21nm,0.7s						
BGNE	**Belgrade**	**5.66**	**354**	Pn	**Pn**	**05 27 18.1**	**+0.2**
BGNE				IAmb_Lg		05 29

NCRB				Sn	**Sn**	05 32 56.3	+1.3		
BFSB	**Bamfield**	**2.42**	**89**	Pn	**Pn**	05 32 25.1	-1.1		
BFSB				Sn	**Sn**	05 32 54.3	-1.7		
CBB	**Campbell River**	**2.54**	**61**	Pn	**Pn**	05 32 28.1	+0.1		
CBB				Sn	**Sn**	05 33 00.0	+1.1		
MGB	**Mount Grey**	**2.72**	**85**	Pn	**Pn**	05 32 29.2	-1.3		
MGB				Sn	**Sn**	05 33 01.7	-1.7		
TXB	**Texada**	**2.98**	**72**	Pn	**Pn**	05 32 34.3	+0.2		
NLLB	**Nanaimo Lost L**	**3.19**	**81**	Pn	**Pn**	05 32 37.2	+0.3		
NLLB				Sn	**Sn**	05 33 16.3	+1.4		
BBB	**Bella Bella**	**3.38**	**7**	Pn	**Pn**	05 32 39.9	+0.5		
	41nm,0.3s,baz=206,slow=14,SNR=205								
BBB				Sn	**Sn**	05 33 18.0	-1.5		
	15nm,0.3s,baz=78,slow=19,SNR=8.5								
BBB	**Bella Bella**	**3.38**	**7**	Pn	**Pn**	05 32 39.2	-0.1		
BBB				Sn	**Sn**	05 33 18.6	-0.9		
PGC	**Sidney**	**3.55**	**91**	Pn	**Pn**	05 32 41.0	-0.8		
PGC				Sn	**Sn**	05 33 23.3	-0.4		
PA12	**PA12 Sannich**	**3.55**	**91**	Pn	**Pn**	05 32 41.0	-0.7		
VGZ	**Gonzales**	**3.66**	**95**	Sn	**Sn**	05 33 24.7	-1.7		
LLLB	**Lillooet**	**4.83**	**66**	Pn	**Pn**	05 33 00.5	+1.1		
NEW	**Newport**	**7.77**	**90**	Pn	**Pn**	05 33 39.6	-0.3		
	0.4nm,0.3s,baz=26,slow=10,SNR=4.9								
NEW				LR	LR	05 36 48.0			
	comp=Z,140nm,18.6s,baz=246,slow=39								
YBH	**Yreka Blue Hor**	**8.30**	**147**	Pn	**Pn**	05 33 49.7	+2.5		
	0.0nm,0.3s,baz=243,slow=7.4,SNR=3.9								
ELK	**Elko**	**12.57**	**125**	LR	LR	05 39 42.0			
	comp=Z,45nm,18.3s,baz=280,slow=38								
NVAR	**Mina Array Bea**	**12.88**	**140**	Pn	Pn	05 34 53.7	+3.8		
	0.1nm,0.3s,baz=316,slow=13,SNR=3.1								
PDAR	**Pinedale Array**	**14.72**	**107**	Pn	**Pn**	05 35 17.2	+2.2		
	0.1nm,0.3s,baz=328,slow=6.4,SNR=2.1								
PDAR				LR	LR	05 40 50.2			
	comp=Z,61nm,18.3s,baz=312,slow=37								
YKA	**Yellowknife Ar**	**15.79**	**25**	Pn	**Pn**	05 35 27.0	-1.9		
	0.0nm,0.3s,baz=206,slow=13,SNR=7.1								
ILAR	**Eielson Array**	**18.66**	**335**	P	**Pn**	05 36 05.2	+0.3		
	0.1nm,0.3s,baz=154,slow=10,SNR=13								
INK	**Inuvik**	**19.66**	**355**	P	**Pn**	05 36 16.6	-0.2		
	0.1nm,0.3s,baz=149,slow=7.8,SNR=4.6								
ULM	**Lac du Bonnet**	**21.32**	**74**	P	**P**	05 36 34.5	+1.0		
	2.9nm,0.7s,baz=264,slow=10,SNR=3.5								
ULM				LR	LR	05 45 04.5			
	comp=Z,56nm,21.4s,baz=174,slow=38								
LPIG	**La Paz**	**28.67**	**143**	LR	LR	05 48 17.1			
	comp=Z,33nm,20.7s,baz=220,slow=35								
H11N2	**WAKE ISLAND Hy**	**58.55**	**264**	T	T	06 45 00.9			
	baz=44,slow=75								
H11N3	**WAKE ISLAND Hy**	**58.55**	**264**	T	T	06 44 59.7			
	baz=44,slow=75								
H11N1	**WAKE ISLAND Hy**	**58.56**	**264**	T	T	06 45 02.7			
	baz=44,slow=75								
H11S1	**WAKE ISLAND Hy**	**59.55**	**263**	T	T	06 46 20.8			
	baz=53,slow=76								
H11S2	**WAKE ISLAND Hy**	**59.56**	**263**	T	T	06 46 21.0			
	baz=53,slow=76								
H11S3	**WAKE ISLAND Hy**	**59.57**	**263**	T	T	06 46 19.2			
	baz=53,slow=76								

NNC ***29*** *05:39:33.9±4.5,36°.20N×78°.74E,h137km±120km,mb3.4, mpv3.9,Error ellipse: s-maj=38.6km s-min=29.1km az=136.0*

ISC 29 05:39:34.2±2.6,36°.4N±0°.2×78°.5E±0°.1,h10km,n9, σ2s50/14,6C-3D,Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**3.68**	**327**	Pn	**Pn**	**05 40 28.8**	**-2.5**
KSH				Sn	**Sn**	**05 41 11.5**	**-3.3**
KSH				smax	smax		
	comp=N,59nm,0.2s						
KSH				smax	smax		
	comp=E,70nm,0.2s						
TKM2	**Tokmak 2**	**6.86**	**342**	⇑P	**Pn**	**05 41 16.0**	**+1.0**
	comp=E,1.2nm,0.4s						
TKM2				⇓S	**Sn**	**05 42 38.2**	**+4.9**
	comp=E,6.2nm,0.7s						
PDGK	**Podgornoye**	**6.92**	**6**	⇓P	**Pn**	**05 41 16.4**	**+0.6**
	comp=E,13nm,0.5s						
PDGK				⇑S	**Sn**	**05 42 36.6**	**+1.9**
	comp=E,21nm,0.5s						
AAK	**Ala-Archa**	**6.94**	**334**	⇑P	**Pn**	**05 41 15.3**	**-0.7**
	comp=E,1.9nm,0.3s						
AAK				⇓S	**Sn**	**05 42 36.8**	**+1.8**
	comp=E,5.2nm,0.7s						
WMQ	**Urumqi**	**10.17**	**41**	*e*P	**Pn**	**05 42 01.8**	**+1.5**
MAKZ	**Makanchi**	**10.68**	**13**	⇑P	**Pn**	**05 42 06.1**	**-1.0**
	comp=E,7.1nm,0.6s						
MAKZ				⇑S	**Sn**	**05 44 04.3**	**-2.4**
	comp=E,3.2nm,0.5s						
MK31	**Makanchi Array**	**10.72**	**14**	P	**Pn**	**05 42 07.0**	**-0.8**
	comp=E,0.5nm,0.2s,baz=197,slow=13,SNR=105						
MK31				⇑S	**Sn**	**05 44 04.9**	**-2.9**
	comp=E,4.0nm,0.5s,baz=194,slow=26,SNR=7.9						
GTA	**Gaotai**	**17.04**	**74**	*e*P	**P**	**05 43 35.0**	**+0.5**
GTA				pP	sP	05 43 40.5	0.0
GTA				sP	pP	05 43 43.5	+4.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	**Lanzhou**	**20.40**	**83**	*e*P	P	05 44 03.0	-8.4
LZH				pP	Pn	05 44 12.0	-1.5
LZH				sP	pP	05 44 16.8	+1.3
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						

SOME ***29*** *05:52:10.6,38°.25N×72°.05E,h10km*
BJI ***29*** *05:52:11.8±0.0,37°.22N×71°.78E,h114km,mB4.6/19, mb4.8/28*
MOS ***29*** *05:52:12.4±1.0,37°.20N×71°.83E,h125km,mb4.3/27,Error ellipse: s-maj=7.1km s-min=3.8km az=77.7*
IDC ***29*** *05:52:12.5±2.5,37°.05N×71°.77E,h118km±23km,mb3.9/29, mb1 4.0/35,mb1mx3.8/54,mbtmp4.3/35,MS2.9/2, Ms1 2.9/2,ms1mx2.3/47,Error ellipse: s-maj=12.4km s-min=9.1km az=170.0*
NEIC ***29*** *05:52:13.4±2.4,37°.18N±0°.04×71°.66E±0°.08,h127km±6km, mb4.3/39,Error ellipse: s-maj=9.8km s-min=5.1km az=83.0*
NNC ***29*** *05:52:14.7±5.0,37°.54N×71°.29E,h177km±69km,mb3.9, mpv5.1,Error ellipse: s-maj=47.1km s-min=27.5km az=170.0*

ISC 29 05:52:13.4±0.3,37°.21N±0°.04×71°.76E±0°.04,h127km,n230, σ1s96/246,mb4.2/59,20C-18D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.12**	**328**	Pn	**Pn**	**05 52 47.8**	**-0.9**
DRK	**Karamyk**	**2.27**	**1**		**Pn**	**05 52 51.5**	**+0.7**
BTK	**Batken**	**2.94**	**346**	PN	**Pn**	**05 53 00.0**	**+0.8**
BTK	**Batken**	**2.94**	**346**	Pn	**Pn**	**05 52 60.0**	**+0.8**
CEP	**Cherat**	**3.38**	**178**	P	**Pn**	**05 53 04.9**	**-0.1**
CEP				S	**Sn**	**05 53 43.0**	**-1.8**
KBL	**Kabul**	**3.45**	**220**	PN	**Pn**	**05 53 05.1**	**-0.9**
KBL	**Kabul**	**3.45**	**220**	Pn	**Pn**	**05 53 05.1**	**-0.9**
CHCP	**Chirah Chowk**	**3.75**	**160**	P	**Pn**	**05 53 10.1**	**+0.4**
KSH	**Kashi**	**4.04**	**54**	P	**Pn**	**05 53 09.8**	**-3.8**
KSH				S	**Sn**	**05 53 51.5**	**-8.9**
KSH				smax	smax		
	comp=N,4μm,0.6s						
KSH				smax	smax		
	comp=E,2μm,0.5s						
ARSB	**Arslanbob**	**4.22**	**13**	PN	**Pn**	**05 53 15.9**	**-0.2**
ARSB	**Arslanbob**	**4.22**	**13**		**Pn**	**05 53 15.9**	**-0.2**
THW	**Thamme Wali**	**4.40**	**180**	P	**Pn**	**05 53 17.3**	**-1.1**
IUG	**luzhnay**	**5.11**	**345**	*e*P	**Pn**	**05 53 27.7**	**-0.3**
	2μm,0.2s						
IUG				*e*S	**Sn**	**05 54 22.8**	**-3.3**
	1μm,0.4s						
IUG	**luzhnay**	**5.11**	**345**	*e*P	**Pn**	**05 53 28.1**	**+0.2**
	baz=343						
IUG	**luzhnay**	**5.11**	**345**	*e*PN	**Pn**	**05 53 28.1**	**+0.2**
AML	**Almayashu**	**5.14**	**16**	P	**Pn**	**05 53 28.8**	**+0.2**
	SNR=826						
JMU	**Jammu**	**5.17**	**149**	*e*P	**Pn**	**05 53 30.0**	**+1.4**
JMU				*e*S	Sn	05 54 05.0	-22
SARP	**Sargodha**	**5.32**	**172**	P	**Pn**	**05 53 29.5**	**-1.3**
CHM	**Chimkent**	**5.37**	**343**	*e*P	**Pn**	**05 53 31.1**	**-0.2**
	60nm,0.2s						
CHM				*e*S	**Sn**	**05 54 28.9**	**-3.2**
CHM	**Chimkent**	**5.37**	**343**	*e*P	**Pn**	**05 53 31.9**	**+0.6**
	baz=341						
CHM	**Chimkent**	**5.37**	**343**	*e*PN	**Pn**	**05 53 31.9**	**+0.6**
UCH	**Uchtor**	**5.45**	**22**	P	**Pn**	**05 53 33.0**	**+0.3**
	SNR=167						
MRKS	**Merke**	**5.65**	**11**	*e*P	**Pn**	**05 53 35.2**	**+0.1**
	358nm,0.4s						
MRKS				*e*S	**Sn**	**05 54 35.6**	**-3.3**
	446nm,0.6s						
EKS2	**Erkin-Say**	**5.67**	**15**	P	**Pn**	**05 53 36.0**	**+0.6**
	SNR=318						
DZA	**Taraz**	**5.69**	**357**	*e*P	**Pn**	**05 53 36.0**	**+0.4**
	756nm,0.3s						
DZA				*e*S	**Sn**	**05 54 37.0**	**-2.8**
	2μm,0.5s						
DZA	**Taraz**	**5.69**	**357**	*e*P	**Pn**	**05 53 35.7**	**0.0**
	baz=356						
DZA	**Taraz**	**5.69**	**357**	*e*PN	**Pn**	**05 53 35.6**	**0.0**
THN	**Thein Dam**	**5.77**	**144**	*e*P	**Pn**	**05 53 35.0**	**-1.7**
THN				*e*S	**Sn**	**05 54 36.5**	**-5.2**
AAK	**Ala-Archa**	**5.82**	**20**	P	**Pn**	**05 53 38.3**	**+0.8**
	93nm,0.3s,baz=193,slow=6.8,SNR=701						
AAK				S	**Sn**	**05 54 41.6**	**-1.5**
	29nm,0.3s,baz=353,slow=23,SNR=14						
AAK	**Ala-Archa**	**5.82**	**20**	P	**Pn**	**05 53 38.3**	**+0.8**
	SNR=150						
AAK	**Ala-Archa**	**5.82**	**20**	⇑P	**Pn**	**05 53 38.2**	**+0.6**
	191nm,0.5s						
AAK				⇓S	**Sn**	**05 54 43.0**	**-0.1**
	171nm,0.5s						
AAK	**Ala-Archa**	**5.82**	**20**	PN	**Pn**	**05 53 38.1**	**+0.6**
AAK				S	**Sn**	**05 54 43.0**	**-0.1**
KK31	**Karatay Array**	**5.97**	**351**	⇓P	**Pn**	**05 53 39.0**	**-0.4**
	54nm,0.2s,baz=174,slow=12,SNR=841						
KK31				⇑S	**Sn**	**05 54 42.0**	**-4.5**
	109nm,0.4s,baz=184,slow=23,SNR=11						
KK31	**Karatay Array**	**5.97**	**351**	PN	**Pn**	**05 53 38.9**	**-0.4**
KK31	**Karatay Array**	**5.97**	**351**	Pn	**Pn**	**05 53 39.0**	**-0.4**
KKAR	**Karatay Array**	**5.97**	**351**	PN	**Pn**	**05 53 39.1**	**-0.2**
KKAR	**Karatay Array**	**5.97**	**351**	Pn	**Pn**	**05 53 39.1**	**-0.2**
KBK	**Karagaybulak**	**5.97**	**23**	P	**Pn**	**05 53 40.4**	**+0.8**
	SNR=47						
FRU1	**Bishkek**	**6.02**	**21**	PN	**Pn**	**05 53 40.7**	**+0.7**
FRU1	**Bishkek**	**6.02**	**21**		**Pn**	**05 53 40.7**	**+0.7**
ULHL	**Ulahol**	**6.11**	**33**	P	**Pn**	**05 53 41.5**	**+0.1**
	SNR=22						
BOOM	**Boomskoye usch**	**6.18**	**30**	PN	**Pn**	**05 53 42.6**	**+0.2**
BOOM	**Boomskoye usch**	**6.18**	**30**	Pn	**Pn**	**05 53 42.6**	**+0.2**
DHRM	**DHARAMSHALA**	**6.20**	**142**	*e*P	**Pn**	**05 53 40.7**	**-2.1**
DHRM				*e*S	**Sn**	**05 54 45.4**	**-7.0**
CHMS	**Chumysh**	**6.22**	**21**	P	**Pn**	**05 53 43.3**	**+0.4**
	SNR=145						
USP	**Ospenovka**	**6.41**	**18**	P	**Pn**	**05 53 45.2**	**-0.1**
	SNR=66						
TKM2	**Tokmak 2**	**6.42**	**26**	P	**Pn**	**05 53 46.1**	**+0.4**
	SNR=311						
TKM2	**Tokmak 2**	**6.42**	**26**	⇓P	**Pn**	**05 53 45.9**	**+0.2**
	138nm,0.5s						
TKM2				⇑S	**Sn**	**05 54 56.7**	**-1.0**
	80nm,0.8s						
TKM2	**Tokmak 2**	**6.42**	**26**	PN	**Pn**	**05 53 45.9**	**+0.2**
KDJ	**Kajisay**	**6.46**	**39**	PN	**Pn**	**05 53 46.0**	**-0.1**
KDJ	**Kajisay**	**6.46**	**39**		**Pn**	**05 53 46.0**	**-0.1**
SGDS	**Sogindy**	**6.61**	**18**	⇓*i*P	**Pn**	**05 53 47.8**	**-0.3**
	17nm,0.3s,baz=18						
SGDS				*e*S	**Sn**	**05 54 59.9**	**-2.3**
	baz=18						
SGDS	**Sogindy**	**6.61**	**18**	*d i*PN	**Pn**	**05 53 47.8**	**-0.3**
SGDS				pmax	pmax		
	comp=Z,17nm,0.3s						
AAA	**Alma-Ata**	**7.18**	**32**	*e*P	**Pn**	**05 53 56.3**	**+0.6**
	baz=32						
AAA	**Alma-Ata**	**7.18**	**32**	*e*PN	**Pn**	**05 53 55.8**	**+0.1**
MDOK	**Medeo**	**7.20**	**33**	*e*P	**Pn**	**05 53 56.1**	**0.0**
	baz=33						
MDOK	**Medeo**	**7.20**	**33**	⇑P	**Pn**	**05 53 55.9**	**-0.1**
	comp=Z,31nm,0.5s						
MDOK	**Medeo**	**7.20**	**33**	*e*PN	**Pn**	**05 53 56.0**	**0.0**
PRZ	**Przheval'sk**	**7.34**	**42**	PN	**Pn**	**05 53 59.3**	**+1.3**
PRZ	**Przheval'sk**	**7.34**	**42**	Pn	**Pn**	**05 53 59.3**	**+1.3**
SMLA	**Simla**	**7.54**	**142**	*e*P	**Pn**	**05 54 00.5**	**0.0**
SATY	**Saty**	**7.75**	**39**	*e*P	**Pn**	**05 54 02.1**	**-1.4**
	comp=Z,8.8nm,0.7s,baz=39						
SATY	**Saty**	**7.75**	**39**	*e*PN	**Pn**	**05 54 02.9**	**-0.6**
SATY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BTLS	**Baital**	**8.02**	**12**	⇓*i*P	**Pn**	**05 54 06.1**	**-0.8**
	comp=Z,12nm,0.3s,baz=11						
BTLS	**Baital**	**8.02**	**12**	*d i*PN	**Pn**	**05 54 06.1**	**-0.8**
BTLS				pmax	pmax		
	comp=Z,12nm,0.3s						
UZB	**Uzynbulak**	**8.13**	**41**	⇓*i*P	**Pn**	**05 54 08.2**	**-0.5**
	comp=Z,9.7nm,0.6s,baz=41						
UZB	**Uzynbulak**	**8.13**	**41**	*d i*PN	**Pn**	**05 54 08.1**	**-0.5**
UZB				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KPKS	**Kokpek**	**8.19**	**38**	*e*P	**Pn**	**05 54 09.0**	**-0.3**
	comp=Z,30nm,0.7s,baz=38						
KPKS	**Kokpek**	**8.19**	**38**	*e*PN	**Pn**	**05 54 09.0**	**-0.3**
KPKS				pmax	pmax		
	comp=Z,29nm,0.7s						
HRA	**Herat**	**8.22**	**253**	Pn	**Pn**	**05 54 07.6**	**-2.4**
SHLS	**Shalkode**	**8.37**	**42**	⇓*i*P	**Pn**	**05 54 14.6**	**+2.7**
	comp=Z,20nm,0.7s,baz=44						
SHLS	**Shalkode**	**8.37**	**42**	*d i*PN	**Pn**	**05 54 14.5**	**+2.7**
SHLS				pmax	pmax		
	comp=Z,20nm,0.7s						
PDGK	**Podgornoye**	**8.50**	**42**	⇓P	**Pn**	**05 54 13.1**	**-0.6**
	comp=Z,51nm,0.8s						
PDGK				⇓S	**Sn**	**05 55 44.1**	**-3.9**
	comp=Z,51nm,0.8s						
PDGK	**Podgornoye**	**8.50**	**42**	PN	**Pn**	**05 54 13.0**	**-0.6**
TDK	**Taldyqorghan**	**9.26**	**31**	*e*P	**Pn**	**05 54 22.6**	**-1.1**
	baz=31						
TDK	**Taldyqorghan**	**9.26**	**31**	*e*P	**Pn**	**05 54 22.6**	**-1.1**
GEYT	**Alibeck**	**10.85**	**278**	P	Pn	05 54 40.8	-4.3
	comp=Z,2.3nm,0.3s,baz=129,slow=12,SNR=11						
GEYT				S	Sn	05 56 35.6	-9.1
	comp=Z,7.5nm,0.3s,baz=316,slow=28,SNR=8.8						
GYA0	**ALIBECK ARRAY**	**10.85**	**278**	P	Pn	05 54 39.9	-5.2
GYA0B	**ALIBECK ARRAY**	**10.85**	**278**	⇑P	Pn	05 54 40.0	-5.2
GYA0B				⇓S	Sn	05 56 32.8	-12
GYA0B	**ALIBECK ARRAY**	**10.85**	**278**	Pn	**Pn**	**05 54 41.3**	**-3.9**
AJM	**Ajmer**	**10.97**	**166**	*e*P	**Pn**	**05 54 43.0**	**-3.8**
AJM				*i* S	Sn	05 56 38.0	-10
MAKZ	**Makanchi**	**12.23**	**35**	⇓P	**Pn**	**05 55 01.1**	**-2.2**
	comp=Z,12nm,0.9s						
MAKZ	**Makanchi**	**12.23**	**35**	P	**Pn**	**05 55 01.7**	**-1.5**
MAKZ	**Makanchi**	**12.23**	**35**	Pn	**Pn**	**05 55 01.7**	**-1.5**
MK31	**Makanchi Array**	**12.37**	**36**	P	**Pn**	**05 55 04.3**	**-0.7**
MK31	**Makanchi Array**	**12.37**	**36**	Pn	**Pn**	**05 55 04.3**	**-0.7**
MKAR	**Makanchi Array**	**12.37**	**36**	P	**Pn**	**05 55 04.3**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=226,slow=13,SNR=61						
MKAR	**Makanchi Array**	**12.37**	**36**	*i* P	**Pn**	**05 55 03.7**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR	**Makanchi Array**	**12.37**	**36**		**Pn**	**05 55 03.2**	**-1.8**
KURBB	**Kurchatov Arra**	**14.26**	**18**	P	**Pn**	**05 55 26.3**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=214,slow=13,SNR=8.2						
KURBB	**Kurchatov Arra**	**14.26**	**18**	⇓P	**Pn**	**05 55 26.2**	**-3.2**
	comp=Z,9.9nm,0.5s						
KURBB	**Kurchatov Arra**	**14.26**	**18**	P	**Pn**	**05 55 26.1**	**-3.2**
KURK	**Kurchatov**	**14.37**	**18**	P	**Pn**	**05 55 26.3**	**-4.4**
KURK	**Kurchatov**	**14.37**	**18**	P	**Pn**	**05 55 26.3**	**-4.4**
BHPL	**Bhopal**	**14.75**	**159**	*e*P	**Pn**	**05 55 37.2**	**+1.5**
BHPL					IAmb	IAmb	05 55 38.1	
	comp=Z,44nm,0.6s						
AB31	**Akbulak array**	**14.78**	**328**	⇑P	**Pn**	**05 55 33.3**	**-2.7**
	comp=Z,3.0nm,0.4s,baz=135,slow=12,SNR=236						
AB31				⇑S	Sn	05 58 02.4	-17
	comp=Z,20nm,0.7s,baz=151,slow=23,SNR=13						
AB31	**Akbulak array**	**14.78**	**328**	*e*P	**Pn**	**05 55 33.2**	**-2.7**
ABKAR	**Akbulak array**	**14.78**	**328**		**Pn**	**05 55 33.4**	**-2.6**
ABKAR	**Akbulak array**	**14.78**	**328**		**Pn**	**05 55 33.2**	**-2.7**
BVAR	**Borovoye Array**	**15.85**	**357**	P	**Pn**	**05 55 48.9**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=198,slow=14,SNR=19						
BVAR				S	**Sn**	**05 58 36.3**	**-8.6**
	comp=Z,1.2nm,0.3s,baz=183,slow=26,SNR=6.7						
BRVK	**Borovoye**	**15.89**	**357**	⇑P	**Pn**	**05 55 46.4**	**-3.3**
	comp=Z,4.8nm,0.7s						
BRVK				⇓S	Sn	05 58 33.6	-12
	comp=Z,5.3nm,0.6s						
BRVK	**Borovoye**	**15.89**	**357**	*ce*P	**Pn**	**05 55 48.8**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	**Borovoye**	**15.89**	**357**		**Pn**	**05 55 47.7**	**-1.9**
BRVK					IAmb	IAmb	05 55 55.4	
	comp=Z,10nm,0.9s						
AKTO	**Aktyubinsk**	**16.49**	**328**	P	**Pn**	**05 55 56.7**	**-0.4**
	comp=Z,2.3nm,0.3s,baz=137,slow=14,SNR=28						
AKTO				S	Sn	05 58 48.9	-12
	comp=Z,0.8nm,0.3s,baz=342,slow=20,SNR=3.7						
AKTO	**Aktyubinsk**	**16.49**	**328**	⇑P	**Pn**	**05 55 55.3**	**-1.8**
	comp=Z,6.7nm,0.6s						
AKTO				⇓S	Sn	05 58 47.2	-13
	comp=Z,21nm,0.9s						
AKTO	**Aktyubinsk**	**16.49**	**328**	P	**Pn**	**05 55 56.8**	**-0.3**
AKTO				S	Sn	05 58 47.2	-13
DGZ	**Jazzator, Alta**	**16.85**	**37**	*c i*P	**Pn**	**05 56 00.7**	**-1.0**
GTK	**Tadong**	**17.30**	**120**	*e*P	**P**	**05 56 02.9**	**-3.9**
LSA	**Lhasa**	**17.81**	**109**	P	**P**	**05 56 13.0**	**+0.3**
LSA				pmax	pmax		
	comp=Z,76nm,0.7s						
LSA	**Lhasa**	**17.81**	**109**	P	**Pn**	**05 56 14.2**	**+0.5**
LSA				pmax	pmax		
	comp=Z,15nm,0.7s						
LSA	**Lhasa**	**17.81**	**109**	P	**Pn**	**05 56 14.2**	**+0.5**
LSA				IAmb	IAmb	05 56 17.1	
	comp=Z,15nm,0.7s						
WSAR	**Wadi Sarin**	**17.93**	**223**	P	**P**	**05 56 12.9**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=29,slow=4.3,SNR=4.7						
UOSS	**Minazif**	**18.05**	**232**	P	**P**	**05 56 14.3**	**-0.5**
ZAA0	**Zalesovo Array**	**19.02**	**24**	P	**P**	**05 56 25.8**	**+0.6**
ZALV	**Zalesovo Beam**	**19.02**	**24**	P	**P**	**05 56 25.8**	**+0.6**
	comp=Z,9.9nm,0.3s,baz=224,slow=11,SNR=63						
ZALV				S	**S**	**05 59 50.7**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=259,slow=38,SNR=2.2						
ZALV	**Zalesovo Beam**	**19.02**	**24**	*i* P	**P**	**05 56 25.7**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,21nm,0.3s						
ZALV	**Zalesovo Beam**	**19.02**	**24**	P	**P**	**05 56 25.4**	**+0.2**
AKT	**Akhty**	**19.05**	**290**	*e*P	**P**	**05 56 25.6**	**-0.1**
AKT				*e*S	**S**	**05 59 55.4**	**+0.3**
AKT				pmax	pmax		
	comp=Z,15nm,0.2s						
AKT				smax	smax		
	comp=E,11nm,0.3s						
AKT				smax	smax		
	comp=N,18nm,0.6s						
MAK	**Makhachkala**	**19.40**	**295**	*e*P	**Pn**	**05 56 33.2**	**+1.5**
MAK				*e*S	**Sn**	**06 00 07.3**	**-2.8**
MAK				pmax	pmax		
	comp=Z,45nm,0.5s						
GUWA	**GUWAHATI**	**20.16**	**117**	*e*P	**P**	**05 56 39.0**	**+1.3**
SHL	**Shillong**	**20.69**	**118**	P	**P**	**05 56 44.4**	**+0.8**
SHL				pmax	pmax		
	comp=Z,41nm,1.0s						
SHL	**Shillong**	**20.69**	**118**	⇑*e*P	**P**	**05 56 44.4**	**+0.8**
SHL	**Shillong**	**20.69**	**118**	P	**P**	**05 56 44.4**	**+0.8**
ARU	**Arti**	**21.18**	**339**	P	**P**	**05 56 49.9**	**+1.6**
	comp=Z,3.5nm,0.2s,baz=169,slow=10,SNR=1.5						
ARU				S	**S**	**06 00 35.3**	**-1.0**
	comp=Z,1.8nm,0.2s,baz=233,slow=20,SNR=1.2						
ARU				LR	LR	06 06 02.1	
	comp=Z,25nm,20.4s,baz=182,slow=39						
ARU	**Arti**	**21.18**	**339**	*c i*P	**P**	**05 56 49.4**	**+1.1**
ARU						05 57 21.0	
ARU				S	**S**	**06 00 39.5**	**+3.2**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARU	**Arti**	**21.18**	**339**	IAmb	IAmb	05 57 01.1	
	comp=Z,6.3nm,0.6s						
GNI	**Garni**	**21.27**	**286**	P	**P**	**05 56 49.8**	**+0.1**
	comp=Z,9.8nm,0.4s,baz=204,slow=6.1,SNR=4.9						
GNI	**Garni**	**21.27**	**286**	*ce*P	**P**	**05 56 52.3**	**+2.6**
GNI				pmax	pmax		
	comp=Z,20nm,1.3s						
ZEI	**Tsey**	**22.00**	**293**	*e*P	**P**	**05 56 59.7**	**+2.2**
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA	**Gaotai**	**22.09**	**76**	⇑P	**P**	**05 57 00.5**	**+2.1**
GTA				pP	pP	05 57 26.0	+2.8
GTA				sP	sP	05 57 38.0	-1.7
GTA				pmax	pmax		
	comp=Z,41nm,0.8s						
GTA				pmax	pmax		
	comp=Z,78nm,4.5s						
GTA				LR	LR		
	comp=Z,43nm,17.1s						
GTA				LR	LR		
	comp=Z,300nm,18.9s			

GYA					pmax		pmax	
	comp=Z,2.0nm,0.5s							
AKASG	**Malin Array Be**	**32.98**	**308**		P		**P**	**05 58 37.0 +1.1**
	comp=Z,1.5nm,0.5s,baz=81,slow=6.5,SNR=6.6							
AKASG	**Malin Array Be**	**32.98**	**308**	*i*	P		**P**	**05 58 40.7 +4.8**
AKASG					pmax		pmax	
	comp=Z,2.0nm,0.5s							
ELL	**Elmali**	**33.24**	**282**		P		**P**	**05 58 40.6 +2.1**
ELL					pmax		pmax	
	comp=Z,24nm,0.7s							
ELL	**Elmali**	**33.24**	**282**		P		**P**	**05 58 40.6 +2.1**
NRIK	**Noril'sk**	**33.33**	**10**		P		**P**	**05 58 39.5 +0.9**
	comp=Z,2.8nm,0.6s,baz=196,slow=8.3,SNR=3.7							
NRIK	**Noril'sk**	**33.33**	**10**	*ce*	P		**P**	**05 58 38.9 +0.3**
NRIK					pmax		pmax	
	comp=Z,3.0nm,0.6s							
NRIK	**Noril'sk**	**33.33**	**10**		P		**P**	**05 58 40.7 +2.0**
NRIK					IAmb		IAmb	05 58 45.4
	comp=Z,3.8nm,0.7s							
MLR	**Muntele Rosu**	**34.97**	**298**		P		**P**	**05 58 54.8 +1.5**
	comp=Z,4.7nm,0.8s,baz=149,slow=12,SNR=7.5							
MLR	**Muntele Rosu**	**34.97**	**298**		P		**P**	**05 58 53.5 +0.2**
MLR					pmax		pmax	
	comp=Z,5.0nm,0.8s							
MLR	**Muntele Rosu**	**34.97**	**298**		P		**P**	**05 58 53.5 +0.2**
MLR					IAmb		IAmb	05 59 00.1
	comp=Z,5.4nm,0.8s							
TIA	**Tai'an**	**36.12**	**78**		P		**P**	**05 59 05.3 +2.2**
TIA					pmax		pmax	
	comp=Z,11nm,0.7s							
ATD	**Arta Tunnel**	**36.43**	**233**		P		**P**	**05 59 05.3 -0.7**
	comp=Z,3.7nm,0.4s,baz=173,slow=23,SNR=3.7							
ATD	**Arta Tunnel**	**36.43**	**233**		IAmb		IAmb	05 59 08.8
	comp=Z,8.1nm,0.9s							
FINES	**FINESS Array B**	**37.24**	**325**		P		**P**	**05 59 13.4 +1.2**
	comp=Z,1.7nm,0.4s,baz=122,slow=8.7,SNR=21							
FINES	**FINESS Array B**	**37.24**	**325**	*i*	P		**P**	**05 59 13.3 +1.1**
FINES					pmax		pmax	
	comp=Z,2.0nm,0.4s							
VYHS	**Vyhne**	**39.67**	**304**	*e*	P		**P**	**05 59 29.7 -3.0**
VYHS	**Vyhne**	**39.67**	**304**	*e*	P		**P**	**05 59 29.7 -3.0**
ARCES	**ARCESS Array B**	**40.73**	**337**		P		**P**	**05 59 42.1 +1.0**
	comp=Z,2.2nm,0.6s,baz=113,slow=8.1,SNR=14							
ARCES	**ARCESS Array B**	**40.73**	**337**		P		**P**	**05 59 42.2 +1.0**
ARCES					pmax		pmax	
	comp=Z,19nm,1.5s							
ARCES	**ARCESS Array B**	**40.73**	**337**		IAmb		IAmb	05 59 48.4
	comp=Z,19nm,1.5s							
PSI	**Prapat**	**42.38**	**137**		P		**P**	**05 59 54.7 -0.6**
	comp=Z,2.4nm,0.4s,baz=359,slow=4.3,SNR=5.9							
PSI	**Prapat**	**42.38**	**137**		P		**P**	**05 59 54.5 -0.9**
PSI					pmax		pmax	
	comp=Z,6.0nm,0.9s							
RPSI	**Rantau Prapat**	**42.47**	**138**		P		**P**	**05 59 54.5 -1.4**
RPSI					IAmb		IAmb	05 59 55.6
	comp=Z,5.6nm,0.9s							
CLL	**Collm**	**43.23**	**308**	*i*	pP		pP	06 00 29.6 -1.8
KSRS	**Korea Array**	**44.08**	**72**		P		**P**	**06 00 08.8 +0.1**
	comp=Z,2.3nm,0.8s,baz=286,slow=7.5,SNR=7.2							
NOA	**NORSAR Array B**	**44.19**	**323**		P		**P**	**06 00 09.6 +0.3**
	comp=Z,1.7nm,0.6s,baz=94,slow=7.7,SNR=11							
KLR	**Kul'dur**	**44.24**	**54**		P		**P**	**06 00 10.3 +0.5**
	comp=Z,2.2nm,0.6s,baz=279,slow=8.8,SNR=8.8							
TIXI	**Tiksi**	**44.89**	**22**		P		**P**	**06 00 15.7 +1.1**
	comp=Z,4.9nm,0.3s,baz=264,slow=3.6,SNR=7.1							
TIXI	**Tiksi**	**44.89**	**22**		P		**P**	**06 00 14.3 -0.3**
TIXI					pmax		pmax	
	comp=Z,6.0nm,0.8s							
TIXI	**Tiksi**	**44.89**	**22**		P		**P**	**06 00 14.3 -0.3**
TIXI					IAmb		IAmb	06 00 17.6
	comp=Z,5.7nm,0.8s							
USRK	**Ussuriysk Ar.**	**45.30**	**61**		P		**P**	**06 00 19.0 +0.8**
	comp=Z,1.3nm,0.5s,baz=253,slow=8.3,SNR=3.8							
KMBO	**Kilima Mbogo**	**49.75**	**228**		P		**P**	**06 00 53.6 +0.4**
	comp=Z,1.3nm,0.3s,baz=41,slow=14,SNR=4.0							
KIBK	**Kibwezi**	**50.27**	**226**		P		**P**	**06 00 56.8 -0.2**
YSS	**Yuzh-Sakhalins**	**51.92**	**55**	*ce*	P		**P**	**06 01 09.2 +0.3**
YSS					pmax		pmax	
	comp=Z,23nm,2.5s							
MJAR	**Matsushiro Arr**	**52.13**	**69**		P		**P**	**06 01 11.4 +0.7**
	comp=Z,1.5nm,0.6s,baz=298,slow=9.3,SNR=6.8							
MBAR	**Mbarara**	**53.41**	**235**		P		**P**	**06 01 20.4 -0.1**
	comp=Z,9.2nm,0.6s,baz=32,slow=10,SNR=12							
MBAR	**Mbarara**	**53.41**	**235**		P		**P**	**06 01 20.3 -0.1**
MA2	**Magadan**	**53.44**	**38**		LR		LR	06 26 19.0
	comp=Z,17nm,21.6s,baz=162,slow=38							
COCO	**West Island**	**54.50**	**149**	*i*	P		**P**	**06 01 31.1 +3.1**
ESDC	**Sonseca Array**	**57.67**	**298**		P		**P**	**06 01 51.2 +0.7**
	comp=Z,0.9nm,0.7s,baz=64,slow=6.9,SNR=6.3							
ESDC	**Sonseca Array**	**57.67**	**298**		IAmb		IAmb	06 01 52.1
	comp=Z,0.8nm,1.0s							
TORD	**Torodi Ar. Bea**	**66.34**	**269**		P		**P**	**06 02 47.0 -1.6**
	comp=Z,1.6nm,0.6s,baz=49,slow=6.0,SNR=13							
TORD	**Torodi Ar. Bea**	**66.34**	**269**		P		**P**	**06 02 47.1 -1.6**
TOLK	**Toolik Lake Re**	**70.09**	**15**		P		**P**	**06 03 12.3 +1.1**
TOLK					IAmb		IAmb	06 03 13.3
	comp=Z,2.9nm,0.5s							
INK	**Inuvik**	**73.11**	**10**		P		**P**	**06 03 30.5 +1.2**
	comp=Z,2.2nm,0.5s,baz=330,slow=5.8,SNR=27							
INK	**Inuvik**	**73.11**	**10**		P		**P**	**06 03 30.4 +1.2**
INK					pmax		pmax	
	comp=Z,7.0nm,1.5s							
INK	**Inuvik**	**73.11**	**10**		P		**P**	**06 03 30.4 +1.2**
INK					IAmb		IAmb	06 03 32.1
	comp=Z,7.3nm,1.4s							
C36M	**Paulatuk**	**73.12**	**6**		P		**P**	**06 03 30.1 +0.8**
C36M					IAmb		IAmb	06 03 48.6
	comp=Z,9.6nm,1.1s							
TTA	**Tatalina**	**73.15**	**21**		P		**P**	**06 03 30.1 +0.4**
TTA					pmax		pmax	
	comp=Z,4.0nm,1.4s							
TTA	**Tatalina**	**73.15**	**21**		P		**P**	**06 03 30.1 +0.4**
MDM	**Murphy Dome**	**73.47**	**17**		P		**P**	**06 03 32.2 +0.7**
MDM					IAmb		IAmb	06 03 33.4
	comp=Z,3.7nm,1.0s							
BPAW	**Bear Paw Mtn.**	**73.54**	**18**		P		**P**	**06 03 31.5 -0.4**
ILAR	**Eielson Array**	**73.94**	**16**		P		**P**	**06 03 35.2 +1.1**
	comp=Z,0.3nm,0.7s,baz=333,slow=5.5,SNR=5.3							
KTH	**Kantishna Hill**	**74.01**	**18**		P		**P**	**06 03 35.2 +0.5**
KTH					IAmb		IAmb	06 03 43.9
	comp=Z,5.5nm,1.1s							
PPLA	**Purkeypile**	**74.22**	**19**		P		**P**	**06 03 37.0 +1.0**
PPLA					IAmb		IAmb	06 03 43.8
	comp=Z,13nm,1.4s							
TRF	**Thorofare Moun**	**74.25**	**18**		P		**P**	**06 03 38.0 +1.7**
MCK	**McKinley**	**74.35**	**18**		P		**P**	**06 03 37.2 +0.6**
MCK					pmax		pmax	
	comp=Z,7.0nm,1.4s							
MCK	**McKinley**	**74.35**	**18**		P		**P**	**06 03 37.2 +0.6**
MCK					IAmb		IAmb	06 03 55.3
	comp=Z,6.7nm,1.4s							
KNRA	**Kununurra**	**75.10**	**123**		P		**P**	**06 03 42.0 +0.4**
SKT	**Skwentna**	**75.15**	**20**		P		**P**	**06 03 40.9 -0.4**
SKT					IAmb		IAmb	06 03 41.6
	comp=Z,6.5nm,1.3s							
SCRK	**Sand Creek**	**75.26**	**15**		P		**P**	**06 03 42.8 +0.8**
K27K	**Chicken**	**75.61**	**15**		P		**P**	**06 03 44.1 +0.3**
DAWY	**Dawson**	**76.10**	**14**		P		**P**	**06 03 46.7 +0.1**
SCM	**Sheep Creek Mo**	**76.35**	**18**		P		**P**	**06 03 48.9 +0.7**
SCM					pmax		pmax	
	comp=Z,13nm,1.2s							
SCM	**Sheep Creek Mo**	**76.35**	**18**		P		**P**	**06 03 48.9 +0.7**
SCM					IAmb		IAmb	06 04 00.4
	comp=Z,13nm,1.2s							
M24K	**Tolsona, Glenn**	**76.40**	**17**		P		**P**	**06 03 49.4 +1.0**
KLU	**Klutina**	**76.99**	**18**		P		**P**	**06 03 53.8 +2.1**
KLU					IAmb		IAmb	06 03 58.0
	comp=Z,4.9nm,1.1s							
N25K	**Chitina, Valde**	**77.20**	**17**		P		**P**	**06 03 55.0 +2.1**
N25K					IAmb		IAmb	06 04 24.5
	comp=Z,3.5nm,1.1s							
YKA	**Yellowknife Ar**	**80.51**	**3**		P		**P**	**06 04 11.5 +0.7**
	comp=Z,1.1nm,0.6s,baz=353,slow=5.2,SNR=32							
WRA	**Warramunga Arr**	**81.85**	**122**		P		**P**	**06 04 17.4 -1.2**
	comp=Z,1.4nm,0.8s,baz=324,slow=4.8,SNR=10							
WRA	**Warramunga Arr**	**81.85**	**122**	*i*	P		**P**	**06 04 18.8 +0.2**
WRA					pmax		pmax	
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**81.85**	**122**		IAmb		IAmb	06 04 19.6
	comp=Z,0.3nm,1.2s							
ASAR	**Alice Springs**	**84.16**	**125**		P		**P**	**06 04 29.6 -0.9**
	comp=Z,1.0nm,0.6s,baz=311,slow=5.0,SNR=19							

KRSC 29 05:56:25.3±1.9, 48.35N×156.73E, h16km±35km, ML3.9,

East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ALID	**Alaid**	**2.63**	**344**	*eP*		Pn	05 57 07.7	+0.5
PAU	**Pauzhetka**	**3.12**	**1**	*eP*		Pn	05 57 15.8	+2.1
PAU				*eS*		Sb	05 57 54.5	-3.5
MTVR	**Mutnovka**	**4.24**	**12**	*eP*		Pn	05 57 33.3	+4.0
MTVR				*eS*		Sb	05 58 24.9	-5.5
RUS	**Russkaya**	**4.24**	**15**	*eP*		Pn	05 57 32.6	+3.5
RUS				*eS*		Sn	05 58 24.0	+5.8
GRL	**Gorelyy**	**4.29**	**11**	*eP*		Pn	05 57 34.4	+4.4
KRMR	**Karymshinskiy**	**4.57**	**11**	*eP*		Pn	05 57 38.5	+4.8
DALK	**Dalny**	**4.86**	**15**	*eP*		Pn	05 57 42.5	+4.9
UGLR	**Uglovaya**	**5.04**	**14**	*eP*		Pn	05 57 45.1	+4.9
AVH	**Avacha**	**5.08**	**14**	*eP*		Pn	05 57 46.2	+5.4
SMAR	**Somma**	**5.09**	**14**	*eP*		Pn	05 57 46.6	+5.6
KOK	**Koryaka**	**5.09**	**13**	*eP*		Pn	05 57 45.9	+5.0
SDLR	**Sedlovina**	**5.12**	**15**	*eP*		Pn	05 57 45.4	+4.1
KRX	**Arik**	**5.16**	**13**	*eP*		Pn	05 57 45.6	+3.7
SPN	**Mys Shipunski**	**5.19**	**23**	*eP*		Pn	05 57 46.8	+4.6
SPN				*eS*		Sn	05 58 47.4	+5.8
MKZ	**Mys Kozlova**	**6.95**	**25**	*eP*		Pn	05 58 10.6	+4.3
KBTR	**Krutoberegovo**	**8.71**	**23**	*eP*		Pn	05 58 35.6	+5.2

*IDC **29** 06:02:15.7±1.0, 28.34N×84.05E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/55, mbtmp3.6/11, ML3.0/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/41, Error ellipse: s-maj=33.8km s-min=20.9km az=66.0*

ISC 29 06:02:17.4±1.1, 28.4N±0.2×84.1E±0.2, h10km, n12, σ0.9s67/11, mb3.7/10, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.44**	**356**	P		**P**	**06 06 31.5**	**-1.5**
	0.0nm,0.3s,baz=164,slow=16,SNR=3.9							
KURBB	**Kurchatov Arra**	**22.61**	**351**	P		**P**	**06 07 18.1**	**0.0**
	1.8nm,0.9s,baz=174,slow=10,SNR=7.9							
ZALV	**Zalesovo Beam**	**25.56**	**1**	P		**P**	**06 07 47.0**	**+0.7**
	1.1nm,0.6s,baz=183,slow=10.0,SNR=4.6							
SONM	**Songino Array**	**26.05**	**36**	P		**P**	**06 07 51.1**	**+0.2**
	0.3nm,0.4s,baz=213,slow=12,SNR=2.5							
IDI	**Anoyia**	**50.10**	**294**	LR		LR	06 35 58.7	
	comp=Z,31nm,19.9s,baz=256,slow=40							
NOA	**NORSAR Array B**	**57.35**	**326**	P		**P**	**06 12 05.8**	**+0.3**
	0.4nm,0.7s,baz=109,slow=5.0,SNR=1.8							
PETK	**Petropavlovsk-**	**58.22**	**43**	P		**P**	**06 12 12.3**	**+0.6**
	2.6nm,0.9s,baz=289,slow=8.7,SNR=3.6							
WRA	**Warramunga Arr**	**68.32**	**129**	P		**P**	**06 13 18.9**	**-0.2**
	0.5nm,0.5s,baz=323,slow=6.6,SNR=11							
ASAR	**Alice Springs**	**70.60**	**132**	P		**P**	**06 13 32.7**	**-0.4**
	0.2nm,0.3s,baz=318,slow=6.2,SNR=2.0							
TORD	**Torodi Ar. Bea**	**77.23**	**278**	P		**P**	**06 14 12.3**	**+0.1**
	1.0nm,0.8s,baz=48,slow=5.2,SNR=4.4							
ILAR	**Eielson Array**	**79.10**	**20**	P		**P**	**06 14 21.6**	**-0.1**
	0.3nm,0.8s,baz=309,slow=5.7,SNR=2.9							
YKA	**Yellowknife Ar**	**88.22**	**9**	P		**P**	**06 15 08.2**	**-0.2**
	0.5nm,0.8s,baz=345,slow=4.3,SNR=8.5							

IDC 29 06:15:04.0±3.9, 30.16S×138.07E, h0km, mb1 3.1/3, mb1mx3.0/32, mbtmp2.8/3, ML2.8/2, Error ellipse: s-maj=90.0km s-min=22.4km az=47.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**3.48**	**120**	Pn		Pn	06 16 00.0	+0.6
	1.1nm,0.3s,baz=302,slow=16,SNR=3.2							
STKA				Sn		Sn	06 16 41.0	-0.3
	1.7nm,0.3s,baz=19,slow=19,SNR=4.0							
ASAR	**Alice Springs**	**7.46**	**329**	Pn		Pn	06 16 53.5	-0.8
	baz=147,slow=12,SNR=1.7							
ASAR				Sn		Sn	06 18 23.9	+4.2
	0.2nm,0.3s,baz=156,slow=22,SNR=6.1							
WRA	**Warramunga Arr**	**10.72**	**341**	Pn		Pn	06 17 39.4	+0.5
	0.0nm,0.3s,baz=162,slow=13,SNR=1.4							
WRA				Sn		Sn	06 19 38.2	-1.6
	0.0nm,0.3s,baz=161,slow=23,SNR=1.7							

*IDC **29** 06:15:08.9±0.8, 10.05N×123.43E, h0km, mb4.0/16, mb1 4.1/16, mb1mx3.9/52, mbtmp4.0/16, MS3.3/2, Ms1 3.3/2, ms1mx2.6/38, Error ellipse: s-maj=42.4km s-min=15.7km az=71.0*

*MAN **29** 06:15:09.9, 10.10N×123.24E, h3km, MS3.6*

MAN INTENSITY II - GUIHULNGAN.

*NEIC **29** 06:15:17.8±1.9, 9.9N±0.3×123.5E±0.2, h91km±21km, mb4.3/12, Error ellipse: s-maj=54.2km s-min=17.4km az=146.0*

ISC 29 06:15:11.5±0.5, 10.12N±0.05×123.30E±0.04, h17km, n44, σ1s40/47, mb4.1/19, 2C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.69**	**73**	*i*	P	**Pb**	**06 15 23.8**	**-1.2**
LLP				*i*	S	**Sb**	**06 15 33.9**	**-0.4**
CNOP	**Candoni, Negro**	**0.71**	**246**	*eP*		**Pg**	**06 15 22.9**	**-2.6**
RCP	**Roxas**	**1.53**	**339**	*eP*		**Pn**	**06 15 37.9**	**-0.2**
RCP				*eS*		**Sb**	**06 15 59.3**	**+0.7**
MSLP	**Maasin**	**1.54**	**89**	*eP*		**Pn**	**06 15 38.2**	**+0.1**
OCLP	**Ormoc**	**1.59**	**54**	*eP*		**Pn**	**06 15 39.0**	**+0.2**
OCLP				*eS*		**Sg**	**06 16 02.9**	**+0.2**
PAGZ	**Pagadian**	**2.26**	**178**	*eP*		**Pn**	**06 15 48.6**	**+0.4**
CUYO	**Cuyo Island**	**2.36**	**288**	*eP*		**Pn**	**06 15 48.7**	**-0.8**
JONP	**Jose Panganiba**	**4.19**	**352**	*eP*		**Pn**	**06 16 15.4**	**+0.8**
LQP	**Lukban**	**4.33**	**337**	*i*	P	**Pn**	**06 16 19.2**	**+2.5**
DDMP	**Don Marcelino,**	**4.65**	**149**	*eP*		**Pn**	**06 16 24.9**	**+3.8**
LUBP	**Lubang**	**4.67**	**321**	*eP*		**Pn**	**06 16 22.8**	**+1.5**
MYLDM	**Lahad Datu**	**6.83**	**224**	Pn		**Pn**	**06 16 53.4**	**+2.3**
SBUM	**Sibu**	**13.38**	**236**	Pn		**Pn**	**06 18 23.7**	**+2.9**
KSM	**Kuching**	**15.51**	**237**	Pn		**Pn**	**06 18 49.6**	**0.0**
KSM				IAmb		IAmb	06 19 01.1	
	comp=Z,18nm,0.8s							
UBPT	**Khong Chiam**	**18.13**	**288**	P		**P**	**06 19 24.3**	**+1.4**
UBPT				IAmb		IAmb	06 19 30.8	
	comp=Z,14nm,0.9s							
CHTO	**Chiang Mai**	**25.09**	**293**	P		**P**	**06 20 35.8**	**+0.3**
RPSI	**Rantau Prapat**	**25.30**	**255**	P		**P**	**06 20 36.0**	**-1.5**
RPSI				IAmb		IAmb	06 20 42.5	
	comp=Z,9.8nm,0.8s							
WRA	**Warramunga Arr**	**31.79**	**160**	P		**P**	**06 21 33.3**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=342,slow=9.1,SNR=1.8							
USRK	**Ussuriysk Ar.**	**34.78**	**11**	P		**P**	**06 22 02.8**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=183,slow=10,SNR=2.7							
ASAR	**Alice Springs**	**35.14**	**163**	P		**P**	**06 22 03.9**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=344,slow=7.0,SNR=10.0							
KLR	**Kul'dur**	**39.62**	**9**	P		**P**	**06 22 43.0**	**+0.8**
	comp=Z,4.4nm,1.0s,baz=207,slow=6.2,SNR=7.8							
ULN	**Ulaanbaatar**	**40.04**	**343**	P		**P**	**06 22 46.8**	**+0.9**
SONM	**Songino Array**	**40.21**	**342**	P		**P**	**06 22 48.1**	**+0.8**
	comp=Z,8.0nm,1.2s,baz=160,slow=8.8,SNR=9.8							
SONM	**Songino Array**	**40.21**	**342**	P		**P**	**06 22 46.6**	**-0.6**
TLY	**Talaya**	**44.45**	**343**	P		**P**	**06 23 22.7**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=200,slow=7.1,SNR=12							
TLY	**Talaya**	**44.45**	**343**	P		**P**	**06 23 20.7**	**-0.8**
STKA	**Stephens Creek**	**45.28**	**158**	P		**P**	**06 23 29.0**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=45,slow=8.6,SNR=1.6							
MK31	**Makanchi Array**	**50.41**	**324**	P		**P**	**06 24 07.8**	**-0.2**
MKAR	**Makanchi Array**	**50.41**	**324**	P		**P**	**06 24 08.5**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=128,slow=7.9,SNR=7.9							
MKAR				LR		LR	06 46 36.5	
	comp=Z,27nm,18.9s,baz=76,slow=37							
MAKZ	**Makanchi**	**50.59**	**324**	P		**P**	**06 24 10.2**	**+0.7**
MAKZ				IAmb		IAmb	06 24 11.6	
	comp=Z,2.3nm,0.6s							
ZALV	**Zalesovo Beam**	**53.39**	**333**	P		**P**	**06 24 30.7**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=118,slow=6.3,SNR=7.7							
KURBB	**Kurchatov Arra**	**54.56**	**327**	P		**P**	**06 24 39.3**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=125,slow=6.7,SNR=10							
KURK	**Kurchatov**	**54.56**	**327**	P		**P**	**06 24 39.3**	**+0.6**
KK31	**Karatay Array**	**56.29**	**315**	P		**P**	**06 24 50.1**	**-1.3**
KK31				IAmb		IAmb	06 24 55.9	
	comp=Z,3.4nm,1.2s							
KKAR	**Karatay Array**	**56.29**	**315**	P		**P**	**06 24 49.8**	**-1.6**
BVAR	**Borovoye Array**	**60.15**	**326**	P		**P**	**06 25 20.9**	**+2.7**
	comp=Z,1.3nm,0.8s,baz=99,slow=9.6,SNR=6.1							
NRIK	**Noril'sk**	**63.46**	**347**	P		**P**	**06 25 39.1**	**-1.0**
ABKAR	**Akbulak array**	**65.09**	**320**	P		**P**	**06 25 50.7**	**-0.5**
ABKAR	**Akbulak array**	**65.09**	**320**	P		**P**	**06 25 50.4**	**-0.8**
ABKAR				IAmb		IAmb	06 26 07.8	
	comp=Z,3.0nm,1.4s							
ILAR	**Eielson Array**	**80.85**	**26**	P		**P**	**06 27 22.8**	**-1.5**
	comp=Z,0.3nm,0.8s,baz=235,slow=4.3,SNR=2.7							
ARCES	**ARCESS Array B**	**83.31**	**339**	P		**P**	**06 27 37.1**	**-0.1**
	comp=Z,5.2nm,1.0s,baz=74,slow=6.7,SNR=4.1							
AKASG	**Malin Array Be**	**84.82**	**320**	P		**P**	**06 27 44.3**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=76,slow=3.9,SNR=1.9							
INK	**Inuvik**	**85.49**	**21**	P		**P**	**06 27 48.0**	**-0.2**
	comp=Z,2.2nm,1.0s,baz=263,slow=4.1,SNR=4.4							
NOA	**NORSAR Array B**	**91.59**	**333**	P		**P**	**06 28 19.3**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=50,slow=4.8,SNR=2.0							
NOA				LR		LR	07 11 56.4	
	comp=Z,14nm,19.1s,baz=340,slow=37							

*IDC **29** 06:17:04.8±0.6, 32.26N×137.88E, h362km±6km, mb3.3/15, mb1 3.4/23, mb1mx3.2/57, mbtmp4.0/23, Error ellipse: s-maj=11.9km s-min=9.1km az=85.0*

*NEIC **29** 06:17:04.9±1.7, 32.29N±0.09×137.9E±0.1, h361km±8km, mb4.0/55, Error ellipse: s-maj=12.9km s-min=12.4km az=63.0*

*JMA **29** 06:17:04.1±0.4, 32.29N×137.99E, h374km±5km, M3.8*

ISC 29 06:17:05.4±0.5, 32.25N±0.06×137.96E±0.07, h376km, n99, σ1s72/102, mb4.0/43, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TTO1	**TONANKAI O.B.S**	**1.69**	**324**	P		**Pn**	**06 17 56.1**	**-0.7**
TK02	**Tokai 2**	**1.70**	**354**	P		**Pn**	**06 17 56.1**	**-0.8**
JHJ	**Hachijo jima 2**	**1.77**	**60**	P		**Pn**	**06 17 56.5**	**-1.2**
	44nm,0.3s,baz=342,slow=20,SNR=18							
JHJ				S		**S**	**06 18 37.5**	**-2.2**
	42nm,0.3s,baz=252,slow=24,SNR=2.4							
JHJ2	**Mitsune**	**1.79**	**61**	P		**Pn**	**06 17 56.3**	**-1.4**
JHJ2	**Mitsune**	**1.79**	**61**	Pn		**Pn**	**06 17 56.1**	**-1.6**
JMKN	**Mikurajimanish**	**2.13**	**39**	P		**Pn**	**06 17 58.6**	**-1.4**
JIE	**Ise**	**2.38**	**334**	P		**Pn**	**06 18 00.6**	**-1.1**
JIE				S		**S**	**06 18 44.4**	**-2.7**
JKN2	**Miekihoku**	**2.43**	**325**	P		**Pn**	**06 18 00.6**	**-1.5**
JKN2				*eS*		**S**	**06 18 44.4**	**-3.5**
JTNC	**Tanabenakahech**	**2.52**	**309**	P		**Pn**	**06 18 01.3**	**-1.5**
HMMJ	**Hamamatsu 2**	**2.60**	**356**	P		**Pn**	**06 18 01.9**	**-1.5**
JOD2	**Odawara 2**	**3.15**	**17**	P		**Pn**	**06 18 05.2**	**-1.8**
JGF	**Kuroka**	**3.38**	**352**	Pn		**Pn**	**06 18 08.5**	**-1.6**
JWT	**Wachi**	**3.70**	**326**			**Pn**	**06 18 11.2**	**-1.8**
JMN	**Monobe**	**3.73**	**294**	Pn		**Pn**	**06 18 12.1**	**-1.4**
MJAR	**Matsushiro Arr**	**4.29**	**3**	P		**Pn**	**06 18 16.6**	**-2.2**
	0.5nm,0.3s,baz=183,slow=10,SNR=36							
MJAR				S		**S**	**06 19 16.4**	**-1.8**
	0.3nm,0.3s,baz=114,slow=21,SNR=5.9							
MJAR	**Matsushiro Arr**	**4.29**	**3**			**Pn**	**06 18 15.9**	**-2.9**
MAJO	**Matsushiro**	**4.29**	**3**			**Pn**	**06 18 16.7**	**-2.1**
MAT	**Matsushiro**	**4.29**	**3**	P		**Pn**	**06 18 16.7**	**-2.1**
MAT				S		**S**	**06 19 12.6**	**-5.6**
JYT	**Yasato**	**4.38**	**24**	Pn		**Pn**	**06 18 16.0**	**-3.7**
JHS	**Saijyo**	**4.88**	**305**			**Pn**	**06 18 23.3**	**-1.7**
JSD	**Sado**	**5.78**	**2**	Pn		**Pn**	**06 18 32.0**	**-2.5**
JNU	**Nakatsue**	**6.03**	**280**	P		**Pn**	**06 18 36.6**	**-0.9**
	1.3nm,0.3s,baz=87,slow=8.6,SNR=7.5							
JMM	**Marumori**	**6.06**	**22**	Pn		**Pn**	**06 18 34.5**	**-3.2**
JCJ	**Chichijima**

HYT	**Haines Junctio**	**59.84**	**34**	P	**P**	**06 26 34.6**	**+2.2**
HYT				IAmb	IAmb	06 26 35.9	
	comp=Z,11nm,1.5s						
INK	**Inuvik**	**59.92**	**25**	P	**P**	**06 26 33.7**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=291,slow=5.4,SNR=11						
INK	**Inuvik**	**59.92**	**25**	IAmb	IAmb	06 26 34.4	
	comp=Z,5.9nm,1.4s						
C36M	**Paulatuk**	**62.95**	**23**	P	**P**	**06 26 53.4**	**+0.7**
STKA	**Stephens Creek**	**63.88**	**177**	P	**P**	**06 27 00.4**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=323,slow=8.4,SNR=4.0						
BBOO	**Buckleboo**	**64.74**	**182**	P	**P**	**06 27 05.2**	**+0.5**
BBOO				IAmb	IAmb	06 27 06.8	
	comp=Z,3.9nm,0.9s						
EUNU	**Eureka**	**65.31**	**8**	P	**P**	**06 27 08.6**	**+0.7**
EUNU				IAmb	IAmb	06 27 09.0	
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**67.46**	**339**	P	**P**	**06 27 21.9**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=57,slow=8.8,SNR=7.8						
RES	**Resolute Bay**	**67.91**	**13**	P	**P**	**06 27 24.9**	**+0.9**
RES				IAmb	IAmb	06 27 25.8	
	comp=Z,4.8nm,1.3s						
YKA	**Yellowknife Ar**	**69.36**	**28**	P	**P**	**06 27 33.9**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=302,slow=6.1,SNR=18						
FINES	**FINESS Array B**	**71.70**	**332**	P	**P**	**06 27 47.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=45,slow=3.5,SNR=6.9						
KBZ	**Khabaz**	**71.84**	**311**	P	**P**	**06 27 48.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=63,slow=5.6,SNR=4.4						
AKASG	**Malin Array Be**	**76.30**	**322**	P	**P**	**06 28 13.9**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=46,slow=5.4,SNR=2.8						
J08A	**Circle Bar Ran**	**77.39**	**47**	P	**P**	**06 28 22.1**	**+2.0**
JTMT	**Jette**	**77.44**	**41**	P	**P**	**06 28 22.3**	**+2.0**
JTMT				IAmb	IAmb	06 28 22.6	
	comp=Z,5.0nm,1.3s						
NVAR	**Mina Array Bea**	**80.17**	**51**	P	**P**	**06 28 37.1**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=300,slow=5.1,SNR=6.8						
H17A	**Grant Village**	**81.49**	**42**	IAmb	IAmb	06 28 46.2	
	comp=Z,2.0nm,0.7s						
PDAR	**Pinedale Array**	**83.07**	**43**	P	**P**	**06 28 50.7**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=285,slow=5.8,SNR=4.1						
KNB	**Kanab**	**84.54**	**49**	P	**P**	**06 28 59.0**	**+1.4**
KNB				IAmb	IAmb	06 29 00.6	
	comp=Z,2.7nm,0.7s						
SRU	**San Rafael Swe**	**84.73**	**47**	P	**P**	**06 28 59.5**	**+1.0**
SRU				IAmb	IAmb	06 29 00.9	
	comp=Z,2.9nm,0.8s						
BFO	**Black Forest**	**88.00**	**329**	P	**P**	**06 29 14.2**	**+0.3**
TXAR	**Lajitas Array**	**95.32**	**50**	P	**P**	**06 29 50.0**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=303,slow=3.0,SNR=13						

NEIC ***29*** *06:27:52.7±1.6,20.16S±0.09×178.2W±0.2, h562km±9km, mb4.5/12, Error ellipse: s-maj=23.3km s-min=12.7km az=85.0*

IDC ***29*** *06:27:54.5±3.0,20.01S×178.35W, h570km±24km, mb3.1/6, mb1 3.4/8, mb1mx3.2/20, mbtmp4.1/8, Error ellipse: s-maj=66.0km s-min=19.0km az=145.0*

ISC 29 06:27:55.7±0.6, 20.1S±0.1×178.4W±0.1, h602km, n29, σ1ŝ75/30, mb4.0/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.09**	**305**	P	**P**	**06 29 18.5**	**-3.6**
	45nm,0.3s,baz=141,slow=4.9,SNR=186						
MSVF	**Nonsavu**	**4.09**	**305**	P	**P**	**06 29 18.4**	**-3.7**
DZM	**Mont Dzumac**	**14.24**	**260**	P	**P**	**06 30 57.4**	**+0.4**
	0.3nm,0.3s,baz=112,slow=4.0,SNR=1.6						
OUZ	**Omahuta**	**16.59**	**203**	P	**P**	**06 31 17.9**	**-0.4**
OUZ				IAmb	IAmb	06 31 28.4	
	comp=Z,26nm,1.1s						
KNTN	**Kanton**	**18.45**	**22**	P	**P**	**06 31 32.3**	**-3.2**
URZ	**Urewera**	**18.48**	**191**	P	**P**	**06 31 31.9**	**-3.5**
BKZ	**Black Stump Fm**	**19.47**	**192**	P	**P**	**06 31 41.6**	**-2.9**
BKZ				IAmb	IAmb	06 32 06.4	
	comp=Z,22nm,1.2s						
QRZ	**Quartz Range**	**22.02**	**199**	P	**P**	**06 32 06.4**	**-0.9**
TUWZ	**Tuamarina**	**22.20**	**195**	P	**P**	**06 32 08.7**	**-0.1**
ASAR	**Alice Springs**	**44.21**	**256**	P	**P**	**06 35 14.8**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=85,slow=8.3,SNR=8.4						
ASAR				PcP	**PcP**	**06 36 46.4**	**+2.1**
	comp=Z,0.8nm,0.6s,baz=101,slow=4.1,SNR=6.3						
WB0	**Warramunga Arr**	**44.22**	**262**	P	**P**	**06 35 14.6**	**+1.3**
WRA	**Warramunga Ar**	**44.25**	**262**	P	**P**	**06 35 14.8**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=97,slow=7.7,SNR=11						
QSPA	**South Pole Qui**	**69.94**	**180**	P	**P**	**06 38 08.2**	**+0.8**
QSPA				IAmb	IAmb	06 38 09.0	
	comp=Z,9.6nm,0.8s						
ADK	**Adak**	**71.72**	**1**	P	**P**	**06 38 18.3**	**+0.5**
PEA0B	**Petropavlovsk-**	**75.81**	**345**	P	**P**	**06 38 42.4**	**+1.5**
PEA0B				IAmb	IAmb	06 39 01.4	
	comp=Z,25nm,1.5s						
PETK	**Petropavlovsk-**	**75.81**	**345**	P	**P**	**06 38 42.2**	**+1.4**
	comp=Z,2.4nm,0.6s,baz=136,slow=6.2,SNR=6.9						
BELA	**Belgrano 2**	**79.98**	**173**	P	**P**	**06 39 02.6**	**-0.4**
NVAR	**Mina Array Bea**	**81.04**	**44**	P	**P**	**06 39 10.6**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=234,slow=8.8,SNR=6.6						
CCB	**Clear Creek Bu**	**87.75**	**13**	P	**P**	**06 39 41.5**	**+0.4**
CCB				IAmb	IAmb	06 39 41.8	
	comp=Z,4.9nm,0.6s						
MDM	**Murphy Dome**	**87.93**	**12**	P	**P**	**06 39 42.0**	**0.0**
MDM				IAmb	IAmb	06 39 43.5	
	comp=Z,3.6nm,0.9s						
MCMT	**McKenzie Canyo**	**87.94**	**40**	P	**P**	**06 39 45.3**	**+2.5**
ILAR	**Eielson Array**	**88.05**	**13**	P	**P**	**06 39 42.9**	**+0.3**
	comp=Z,5.2nm,1.2s,baz=213,slow=5.1,SNR=14						
ILAR	**Eielson Array**	**88.05**	**13**	P	**P**	**06 39 42.5**	**0.0**
SNAA	**Sanae**	**88.39**	**179**	P	**P**	**06 39 44.0**	**-0.3**
VNA3	**Neumayer Olymp**	**88.53**	**176**	P	**P**	**06 39 44.8**	**-0.2**
VNA2	**Neumayer--Watz**	**88.97**	**177**	P	**P**	**06 39 47.0**	**0.0**
	baz=196,slow=3.5						
PDAR	**Pinedale Array**	**88.97**	**43**	P	**P**	**06 39 48.4**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=232,slow=2.8,SNR=4.5						
VNA1	**Neumayer--Stat**	**89.20**	**177**	P	**P**	**06 39 47.5**	**-0.5**
CLL	**Collm**	**147.61**	**347**	*i* PKPbc	**PKiKP**	**06 46 35.1**	**+0.4**

IDC 29 06:49:00.1±2.3, 10.55S×120.47E, h0km, mb3.6/2, mb1 3.7/5, mb1mx3.5/37, mbtmp3.6/5, ML3.3/3, MS3.4/3, Ms1 3.4/3, ms1mx2.6/38, Error ellipse: s-maj=154.5km s-min=24.4km az=56.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.03**	**147**	Pn	Pn	06 51 11.8	0.0
	0.3nm,0.3s,baz=310,slow=16,SNR=9.8						
FITZ					Sn	06 52 44.5	-10
	0.2nm,0.3s,baz=163,slow=17,SNR=2.2						
WRA	**Warramunga Arr**	**16.31**	**127**	Pn	Pn	06 52 49.1	-1.6
	0.1nm,0.3s,baz=297,slow=13,SNR=7.1						
WRA					Sn	06 55 36.5	-16
	0.0nm,0.3s,baz=305,slow=25,SNR=2.2						
DAV	**Davao City (W)**	**18.23**	**16**	LR	LR	07 02 40.5	
	comp=Z,12nm,19.1s,baz=154,slow=45						
ASAR	**Alice Springs**	**18.29**	**137**	P	P	06 53 16.4	+0.7
	0.1nm,0.3s,baz=318,slow=13,SNR=12						
ASAR					Sn	06 56 25.5	-15
	0.0nm,0.3s,baz=305,slow=22,SNR=2.3						
JNU	**Nakatsue**	**44.55**	**12**	LR	LR	07 18 25.5	
	comp=Z,61nm,19.6s,baz=204,slow=40						
SONM	**Songino Array**	**59.45**	**349**	P	P	06 59 04.9	+0.1
	0.5nm,0.4s,baz=168,slow=7.4,SNR=2.6						
MKAR	**Makanchi Array**	**66.49**	**332**	P	P	06 59 51.5	-0.1
	0.3nm,0.6s,baz=140,slow=7.9,SNR=3.7						

IDC ***29*** *06:50:10.7±1.1,14.36S×166.65E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/36, mbtmp3.9/9, ML3.8/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/40, Error ellipse: s-maj=35.8km s-min=22.5km az=114.0*

ISC 29 06:50:15.1±1.0, 14.44S±0.09×166.6E±0.2, h28km, n11, σ0ŝ96/10, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.59**	**181**	P	**Pn**	**06 52 04.7**	**+0.6**
	1.3nm,0.3s,baz=15,slow=20,SNR=9.0						
DZM					**Sn**	**06 53 28.3**	**-0.9**
	1.7nm,0.3s,baz=142,slow=23,SNR=1.8						
DZM				LR	LR	06 54 28.2	
	comp=Z,142nm,20.2s,baz=56,slow=34						
HNR	**Honiara**	**8.17**	**307**	LR	LR	06 55 23.3	
	comp=Z,119nm,18.7s,baz=172,slow=38						
CTA	**Charters Tower**	**20.19**	**251**	P	Pn	06 54 50.1	+0.2
	4.0nm,0.8s,baz=63,slow=14,SNR=4.1						
STKA	**Stephens Creek**	**28.67**	**228**	P	**P**	**06 56 10.4**	**+0.6**
	0.4nm,0.4s,baz=16,slow=7.4,SNR=1.3						
WRA	**Warramunga Arr**	**31.24**	**255**	P	**P**	**06 56 32.4**	**-0.3**
	0.5nm,0.9s,baz=85,slow=9.0,SNR=2.1						
ASAR	**Alice Springs**	**32.15**	**248**	P	**P**	**06 56 39.4**	**-1.3**
	0.3nm,0.7s,baz=76,slow=9.6,SNR=1.9						
ASAR				PcP	**PcP**	**06 59 29.0**	**-0.4**
	0.5nm,0.8s,baz=92,slow=2.4,SNR=2.9						
VNDA	**Vanda**	**63.13**	**181**	P	**P**	**07 00 40.5**	**+0.6**
	1.5nm,0.9s,baz=340,slow=5.5,SNR=6.8						
PETK	**Petropavlovsk-**	**67.70**	**354**	P	**P**	**07 01 10.1**	**+0.4**
	1.5nm,0.8s,baz=160,slow=8.8,SNR=2.4						
TLY	**Talaya**	**85.38**	**326**	LR	LR	07 38 56.8	
	comp=Z,18nm,19.6s,baz=50,slow=34						
ILAR	**Eielson Array**	**86.46**	**18**	P	**P**	**07 02 53.5**	**-1.3**
	1.6nm,0.7s,baz=241,slow=5.4,SNR=17						
MKAR	**Makanchi Array**	**96.53**	**317**	P	**P**	**07 03 43.2**	**+0.9**
	0.3nm,0.6s,baz=108,slow=4.0,SNR=3.5						

BJI ***29*** *06:54:34.4±0.0, 31.72S×174.22W, h5km, mB5.7/7, mb5.4/11, Ms5.2/2, Ms7 5.0/1*

NOU ***29*** *06:54:45.6, 31.64S×175.64W, h0km, mb5.0, Kermadec Islands Region*

IDC ***29*** *06:54:52.7±0.5, 31.30S×176.78W, h0km, mb4.7/19, mb1 4.8/21, mb1mx4.7/34, mbtmp4.6/21, ML4.9/2, MS3.6/15, Ms1 3.6/15, ms1mx3.5/27, Error ellipse: s-maj=17.6km s-min=15.8km az=75.0*

MOS ***29*** *06:54:53.9±1.0, 31.27S×176.87W, h14km, mb5.2/15, Error ellipse: s-maj=12.8km s-min=10.1km az=111.7*

NEIC ***29*** *06:54:53.4±3.0, 31.42S±0.06×176.8W±0.1, h10km±1km, mb5.0/72, Error ellipse: s-maj=17.9km s-min=8.9km az=109.0*

GCMT ***29*** *06:54:56.4±0.3, 31.25S±0.02×176.53W±0.03, h20km, MW4.9/103, Moment Tensor Solution. s51,c57; s103,c120; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.59±.14; Mθθ=2.18±.11; Mφφ=1.41±.10; Mrθ=0.69±.23; Mrφ=0.22±.07; Mθφ=-0.65±.23; Best double couple: M₀3.02300×10¹⁶ NP1=φ=70.00000°, δ=40.00000°, λ=-103.00000°. NP2=φ=268.00000°, δ=51.00000°, λ=-79.00000°. Principal axes: T 2.2870, Plg6.0000°, Azm350.0000°; N 1.4720, Plg8.0000°, Azm81.0000°; P -3.7590, Plg80.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 06:54:57.4±0.3, 31.48S±0.02×177.00W±0.04, h35km, n340, σ2ŝ18/322, mb5.0/67, MS3.7/18, 7C-9D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.35**	**340**	P	**Pn**	**06 55 30.4**	**-3.1**
GLKZ				S	**Sn**	**06 55 56.2**	**-4.9**
RAO	**Raoul Island**	**2.36**	**340**	Pn	**Pn**	**06 55 30.8**	**-2.8**
	234nm,0.3s,baz=208,slow=12,SNR=11						
RAO				Sn	**Sn**	**06 55 56.2**	**-5.2**
	608nm,0.3s,baz=254,slow=20,SNR=7.8						
RIZ	**Raoul Island**	**2.37**	**340**	P	**Pn**	**06 55 30.3**	**-3.4**
RIZ				S	**Sn**	**06 55 57.4**	**-4.2**
MXZ	**Matakaoa Point**	**7.20**	**211**	Pn	**Pn**	**06 56 38.8**	**-1.4**
URZ	**Urewera**	**8.32**	**214**	Pn	**Pn**	**06 56 54.4**	**-1.1**
LIRZ	**Lichensteins R**	**8.49**	**218**	P	**Pn**	**06 56 57.0**	**-0.9**
LIRZ				S	**Sn**	**06 58 34.7**	**+2.3**
SNGZ	**Shannon Statio**	**8.64**	**211**	P	**Pn**	**06 56 58.4**	**-1.5**
SNGZ				S	**Sn**	**06 58 36.4**	**+0.3**
MUGZ	**Murupara**	**8.65**	**215**	P	**Pn**	**06 56 58.5**	**-1.7**
MUGZ				S	**Sn**	**06 58 35.9**	**-0.6**
RTZ	**Ruatahuna**	**8.66**	**213**	P	**Pn**	**06 56 60.0**	**-0.4**
RTZ				S	**Sn**	**06 58 36.5**	**-0.3**
RRRZ	**Republican Roa**	**8.67**	**216**	P	**Pn**	**06 57 02.3**	**+1.9**
RRRZ				S	**Sn**	**06 58 40.3**	**+3.3**
HSRZ	**Hossack Road**	**8.79**	**217**	P	**Pn**	**06 57 06.2**	**+4.2**
PRRZ	**Plateau Road**	**8.86**	**216**	P	**Pn**	**06 57 02.9**	**0.0**
PRRZ				S	**Sn**	**06 58 41.6**	**+0.1**
RAHZ	**Arahi**	**8.86**	**211**	P	**Pn**	**06 57 02.8**	**-0.2**
RAHZ				S	**Sn**	**06 58 41.1**	**-0.5**
MTHZ	**Maungataniwha**	**8.92**	**213**	P	**Pn**	**06 57 02.7**	**-1.1**
MTHZ				S	**Sn**	**06 58 44.8**	**+1.8**
WHHZ	**Waihua**	**8.93**	**210**	P	**Pn**	**06 57 02.6**	**-1.3**
WHHZ				S	**Sn**	**06 58 41.9**	**-1.3**
ALRZ	**Allen Road**	**8.93**	**216**	P	**Pn**	**06 57 04.0**	**+0.1**
ALRZ				S	**Sn**	**06 58 43.3**	**0.0**
NMHZ	**Naumai**	**9.13**	**212**	P	**Pn**	**06 57 06.7**	**-0.1**
NMHZ				S	**Sn**	**06 58 48.1**	**-0.2**
ARHZ	**Aropaoanui**	**9.19**	**211**	P	**Pn**	**06 57 05.0**	**-2.4**
ARHZ				S	**Sn**	**06 58 49.1**	**-0.4**
BKZ	**Black Stump Fm**	**9.33**	**213**	P	**Pn**	**06 57 07.2**	**-2.2**
BKZ	**Black Stump Fm**	**9.33**	**213**	P	**Pn**	**06 57 07.3**	**-2.2**
WATZ	**Wairara**	**9.35**	**218**	P	**Pn**	**06 57 09.4**	**-0.4**
CKHZ	**Cape Kidnapper**	**9.48**	**209**	P	**Pn**	**06 57 07.8**	**-3.6**
CKHZ				S	**Sn**	**06 58 52.2**	**-4.6**
TMVZ	**Te Maari**	**9.67**	**216**	P	**Pn**	**06 57 13.7**	**-0.5**
KAHZ	**Kahuranaki**	**9.68**	**209**	P	**Pn**	**06 57 11.0**	**-3.2**
KAHZ				S	**Sn**	**06 58 57.2**	**-4.4**
HIZ	**Hauiti**	**9.69**	**221**	Pn	**Pn**	**06 57 15.8**	**+1.5**
HIZ	**Hauiti**	**9.69**	**221**	P	**Pn**	**06 57 15.9**	**+1.6**
KRVZ	**Karewarewa**	**9.69**	**216**	P	**Pn**	**06 57 15.9**	**+1.4**
KRVZ				S	**Sn**	**06 58 56.0**	**-6.0**
WTVZ	**West Tongariro**	**9.73**	**216**	P	**Pn**	**06 57 15.9**	**+0.9**
NGZ	**Ngauruhoe**	**9.77**	**216**	P	**Pn**	**06 57 18.7**	**+3.1**
NGZ				S	**Sn**	**06 59 00.4**	**-3.8**
KRHZ	**Kereru**	**9.77**	**212**	P	**Pn**	**06 57 13.0**	**-2.5**
KRHZ				S	**Sn**	**06 58 59.4**	**-4.6**
FWVZ	**Far West T-bar**	**9.86**	**216**	P	**Pn**	**06 57 17.7**	**+0.9**
MOVZ	**Moawhango**	**9.87**	**215**	P	**Pn**	**06 57 15.2**	**-1.7**
WNVZ	**Wahianoa**	**9.89**	**216**	P	**Pn**	**06 57 18.2**	**+0.9**
PNHZ	**Pukenui**	**10.07**	**211**	P	**Pn**	**06 57 19.9**	**-2.7**
WPHZ	**Waipukurau**	**10.09**	**210**	P	**Pn**	**06 57 17.2**	**-2.6**
VRZ	**Vera Road**	**10.17**	**219**	P	Pn	06 57 26.9	+5.9
TSZ	**Takapari Road**	**10.29**	**212**	P	Pn	06 57 19.0	-3.7
DVHZ	**Dannevirke**	**10.40**	**210**	P	**Pn**	**06 57 20.7**	**-3.3**
ANWZ	**Angora Road**	**10.40**	**209**	P	**Pn**	**06 57 21.8**	**-2.3**
LREZ	**Lake Rotokare**	**10.61**	**219**	P	**Pn**	**06 57 29.8**	**+2.9**
POWZ	**Post Office Ro**	**10.65**	**211**	P	**Pn**	**06 57 25.9**	**-1.6**
BFZ	**Birch Farm**	**10.69**	**209**	Pn	Pn	06 57 23.8	-4.1
BFZ	**Birch Farm**	**10.69**	**209**	P	Pn	06 57 23.6	-4.4
PRWZ	**Pori Road**	**10.70**	**210**	P	**Pn**	**06 57 27.0**	**-1.1**
KHEZ	**Kahui Hut**	**10.70**	**221**	P	**Pn**	**06 57 32.7**	**+4.5**
MRZ	**Mangatainoka R**	**10.95**	**211**	P	Pn	06 57 27.7	-3.9
HOWZ	**Holdsworth Sta**	**11.17**	**211**	P	**Pn**	**06 57 35.1**	**+0.5**
TMWZ	**Te Maipa**	**11.19**	**209**	P	**Pn**	**06 57 31.4**	**-3.4**
OGWZ	**Otaki Gorge**	**11.26**	**212**	P	**Pn**	**06 57 35.3**	**-0.5**
MTW	**Mount Morrison**	**11.39**	**210**	P	Pn	06 57 33.4	-4.3
KIW	**Kapiti Island**	**11.42**	**213**	P	**Pn**	**06 57 34.9**	**-3.0**
TRWZ	**Traveller**	**11.52**	**209**	P	**Pn**	**06 57 36.6**	**-0.7**
CAW	**Cannon Point**	**11.54**	**211**	P	**Pn**	**06 57 36.8**	**-2.9**
PAWZ	**Paruwai Farm**	**11.61**	**210**	P	Pn	06 57 35.4	-5.2
MSWZ	**Moikau Station**	**11.71**	**210**	P	**Pn**	**06 57 38.4**	**-3.6**
PLWZ	**Palliser**	**11.84**	**210**	Pn	Pn	06 57 39.5	-4.3
PLWZ	**Palliser**	**11.84**	**210**	P	Pn	06 57 39.6	-4.2
DUWZ	**D'Urville Isla**	**11.84**	**216**	P	**Pn**	**06 57 41.9**	**-2.0**
SNZO	**South Karori**	**11.87**	**212**	Pn	**Pn**	**06 57 40.8**	**-3.3**
BHW	**Baring Head**	**11.87**	**211**	P	**Pn**	**06 57 41.0**	**-3.2**
TCW	**Tory Channel**	**11.99**	**213**	P	Pn	06 57 41.2	-4.5
TUWZ	**Tuamarina**	**12.31**	**214**	P	Pn	06 57 45.2	-5.0
NNZ	**Nelson**	**12.43**	**216**		Pn	06 57 47.7	-4.0
NNZ	**Nelson**	**12.43**	**216**	P	Pn	06 57 47.6	-4.1
CMWZ	**Cape Campbell**	**12.44**	**212**	Pn	**Pn**	**06 57 49.9**	**-2.1**
CMWZ	**Cape Campbell**	**12.44**	**212**	P	**Pn**	**06 57 53.7**	**+1.8**
BSWZ	**Blackbirch Sta**	**12.57**	**213**	Pn	**Pn**	**06 57 51.4**	**-2.3**
BSWZ	**Blackbirch Sta**	**12.57**	**213**	P	**Pn**	**06 57 50.8**	**-2.9**
QRZ	**Quartz Range**	**12.59**	**219**	Pn	**Pn**	**06 57 51.3**	**-2.7**
QRZ	**Quartz Range**	**12.59**	**219**	P	**Pn**	**06 57 51.1**	**-2.9**
THZ	**Tophouse**	**13.07**	**215**	Pn	**Pn**	**06 57 57.6**	**-3.0**
THZ	**Tophouse**	**13.07**	**215**	P	Pn	06 57 57.0	-3.6
KHZ	**Kahutara**	**13.27**	**212**	Pn	Pn	06 57 58.6	-4.7
KHZ	**Kahutara**	**13.27**	**212**	P	**Pn**	**06 57 59.9**	**-3.4**
DSZ	**Denniston Nort**	**13.62**	**218**	P	**Pn**	**06 58 07.1**	**-1.0**
GVZ	**Greta Valley S**	**13.94**	**212**	P	Pn	06 58 08.1	-4.3
LTZ	**Lake Taylor**	**14.15**	**214**		Pn	06 58 11.2	-4.1
LTZ	**Lake Taylor**	**14.15**	**214**	P	Pn	06 58 11.0	-4.3
AMCZ	**Amberley**	**14.28**	**212**	P	**Pn**	**06 58 14.5**	**-2.4**
MSVF	**Nonsavu**	**14.40**	**341**	Pn	**Pn**	**06 58 16.1**	**-2.8**
	0.2nm,0.3s,baz=108,slow=22,SNR=2.4						
MSVF					LR	LR	07 03 23.3
	comp=Z,386nm,18.8s,baz=166,slow=36						
INZ	**Inchbonnie**	**14.51**	**216**	P	Pn	06 58 15.9	-4.3
OKCZ	**Okains Bay**	**14.53**	**210**	P	**Pn**	**06 58 17.6**	**-2.9**
OXZ	**Oxford**	**14.67**	**213**	P	Pn	06 58 16.2	-6.2
MQZ	**McQueen's Vall**	**14.69**	**211**	Pn	Pn	06 58 18.4	-4.2
MQZ	**McQueen's Vall**	**14.69**	**211**	P	Pn	06 58 17.5	-5.1
RACZ	**Rakaia**	**14.94**	**212**	P	Pn	06 58 21.2	-4.7
WVZ	**Waitaha Valley**	**15.12**	**217**	P	**Pn**	**06 58 25.3**	**-3.0**
WACZ	**Wakanui South**	**15.24**	**212**	P	**Pn**	**06 58 27.1**	**-2.9**
RPZ	**Rata Peaks**	**15.44**	**214**	Pn	Pn	**06 58 30.0**	**-2.5**
RPZ	**Rata Peaks**	**15.44**	**214**	P	**Pn**	**06 58 28.5**	**-4.0**
GCSZ	**Gaunt Creek Bo**	**15.51**	**217**	P	**Pn**	**06 58 31.3**	**-2.1**
ARCZ	**Arundel**	**15.55**	**214**	P	**Pn**	**06 58 30.7**	**-3.3**
FOZ	**Fox Glacier**	**15.92**	**217**	Pn	**Pn**	**06 58 36.1**	**-2.6**
FOZ	**Fox Glacier**	**15.92**	**217**	P	**Pn**	**06 58 35.9**	**-2.8**
LBZ	**Lake Benmore**	**16.35**	**214**	Pn	**Pn**	**06 58 40.0**	**-4.3**
LBZ				IAmb	IAmb	06 58 43.2	
	comp=Z,237nm,1.8s						
LBZ	**Lake Benmore**	**16.35**	**214**	P	**Pn**	**06 58 41.0**	**-3.3**
ODZ	**Otahua Downs**	**16.64**	**212**	Pn	**Pn**	**06 58 45.6**	**-2.2**
ODZ				IAmb	IAmb	06 58 55.8	
	comp=Z,109nm,1.1s						
ODZ	**Otahua Downs**	**16.64**	**212**	P	**Pn**	**06 58 45.6**	**-2.2**
JCZ	**Jackson Bay**	**16.83**	**218**	P	**Pn**	**06 58 46.9**	**-3.5**
WKZ	**Wanaka**	**17.25**	**215**	Pn	**Pn**	**06 58 51.9**	**-3.6**
WKZ	**Wanaka**	**17.25**	**215**	P	**Pn**	**06 58 52.1**	**-3.4**
EAZ	**Earnscleugh**	**17.40**	**214**	P	**Pn**	**06 58 53.5**	**-3.8**
DZM	**Mont Dzumac**	**17.49**	**298**	*e*P	**P**	**06 59 02.9**	**+3.3**
	comp=Z,99nm,1.2s						
DZM				*e*LR	LR	07 03 14.2	
	comp=Z,633nm,31.4s						
DZM	**Mont Dzumac**	**17.49**	**298**	P	**P**	**06 59 03.0**	**+3.3**
	comp=Z,2.4nm,0.3s,baz=132,slow=13,SNR=17						
DZM	**Mont Dzumac**	**17.49**	**298**	P	**P**	**06 59 02.0**	**+2.4**
DZM	**Mont Dzumac**	**17.49**	**298**	P	**P**	**06 59 03.4**	**+3.8**
NOUC	**Port Laguerre**	**17.57**	**298**	P	**P**	**06 59 04.0**	**+3.5**
MSZ	**Milford Sound**	**17.69**	**218**	P	**Pn**	**06 58 58.2**	**-2.8**
TUZ	**Tuapeka**	**17.79**	**212**	P	**Pn**	**06 59 02.4**	**+0.3**
MLZ	**Mavora Lakes**	**18.08**	**216**		**Pn**	**06 59 04.2**	**-1.6**
MLZ				IAmb	IAmb	06 59 18.0	
	comp=Z,232nm,1.7s						
MLZ	**Mavora Lakes**	**18.08**	**216**	P	**Pn**	**06 59 03.8**	**-1.9**
SYZ	**Scrubby Hill**	**18.46**	**212**	P	**P**	**06 59 09.3**	**-0.7**
RAR	**Rarotonga**	**18.49**	**61**	P	P	06 59 02.9	-7.6
	comp=Z,1.7nm,0.3s,baz=253,slow=14,SNR=2.8						
RAR				S	Sn	07 02 03.5	-33
	comp=Z,1.2nm,0.3s,baz=146,slow=13,SNR=2.2						
RAR				LR	LR	07 05 15.2	
	comp=Z,254nm,18.7s,baz=267,slow=34						
WHZ	**Wether Hill Ro**	**18.54**	**215**	P	**P**	**06 59 07.6**	**-3.3**
WHZ				IAmb	IAmb	06 59 28.5	
	comp=Z,192nm,1.6s						
APZ	**The Paps**	**19.20**	**213**	P	**Pn**	**06 59 19.8**	**+0.4**
KOUNC	**Koumac, New Ca**	**20.00**	**298**	P	Pn	06 59 30.3	+1.3
TBI	**Tubuai**	**25.70**	**78**	*e*LR	LR	07 06 28.8	
	comp=Z,292nm,27.5s						
TBI	**Tubuai**	**25.70**	**78**	*e*T	T	07 26 12.2	
	comp=Z,7.7nm,0.3s						
ARMA

MMRI	**Maumere**	**60.65**	**278**	P		**P**	**07 05 05.9**	**+0.5**
	comp=Z,4µmcomp=Z,33nm,1.1s								
PLAI	**Plampang**	**64.34**	**275**	P		**P**	**07 05 30.5**	**+0.5**
	comp=Z,25nm,1.0s								
GTOI	**Gorontalo**	**65.07**	**287**	P		**P**	**07 05 36.3**	**+1.6**
	comp=Z,9.7nm,0.5s								
TWSI	**Taliwang, Sumb**	**65.15**	**275**	P		**P**	**07 05 35.8**	**+0.6**
	comp=Z,19nm,1.0s								
BELA	**Belgrano 2**	**68.60**	**172**	P		**P**	**07 05 56.3**	**0.0**
BELA				IAmb		IAmb	07 06 01.9		
	comp=Z,18nm,1.3s								
MAW	**Mawson**	**71.60**	**200**	P		**P**	**07 06 16.5**	**+1.8**
	comp=Z,18nm,1.2s,baz=96,slow=2.3,SNR=6.8								
KSM	**Kuching**	**76.07**	**280**	P		**P**	**07 06 41.2**	**-0.6**
KSM				IAmb		IAmb	07 06 43.9		
	comp=Z,12nm,0.9s								
SYO	**Syowa Base**	**76.26**	**193**	*e*P		**P**	**07 06 41.6**	**-0.4**
SNAA	**Sanae**	**77.06**	**178**	P		**P**	**07 06 47.6**	**+1.0**
SNAA	**Sanae**	**77.06**	**178**	*j*P		**P**	**07 06 47.3**	**+0.7**
VNA3	**Neumayer Olymp**	**77.17**	**176**	P		**P**	**07 06 48.0**	**+0.8**
VNA2	**Neumayer--Watz**	**77.62**	**177**	P		**P**	**07 06 50.9**	**+1.2**
	baz=172,slow=5.9								
VNA1	**Neumayer--Stat**	**77.84**	**176**	P		**P**	**07 06 52.1**	**+1.2**
MDSI	**Maura Dua**	**78.14**	**272**	P		**P**	**07 06 53.4**	**-0.1**
	comp=Z,26nm,0.7s								
H03S2	**Juan Fernandez**	**79.15**	**123**	T		T	08 33 44.7		
	baz=238,slow=74,SNR=3.7								
H03S1	**Juan Fernandez**	**79.17**	**123**	T		T	08 33 45.9		
	baz=238,slow=74,SNR=4.2								
H03S3	**Juan Fernandez**	**79.17**	**123**	T		T	08 33 53.3		
	baz=238,slow=74,SNR=5.0								
H03N3	**Juan Fernandez**	**79.35**	**123**	T		T	08 34 00.3		
	baz=237,SNR=4.6								
H03N2	**Juan Fernandez**	**79.35**	**123**	T		T	08 34 03.1		
	baz=237,SNR=6.2								
H03N1	**Juan Fernandez**	**79.36**	**123**	T		T	08 34 03.2		
	baz=237,SNR=6.7								
MJAR	**Matsushiro Arr**	**79.62**	**325**	P		**P**	**07 07 01.3**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=164,slow=5.9,SNR=6.6								
MJAR				LR		LR	07 42 45.0		
	comp=Z,15nm,18.0s,baz=25,slow=36								
PLCA	**Paso Flores**	**81.14**	**132**	P		**P**	**07 07 10.2**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=268,slow=9.2,SNR=3.9								
PLCA				LR		LR	07 35 24.2		
	comp=Z,62nm,18.7s,baz=188,slow=30								
JKA	**Kamikawa-asahi**	**83.79**	**332**	P		**P**	**07 07 21.2**	**-1.6**
ASAJ	**Asahikawa**	**83.79**	**332**	P		**P**	**07 07 21.2**	**-1.6**
ASAJ				pmax		pmax			
	comp=Z,30nm,1.1s								
MNSI	**Mandailing Nat**	**84.80**	**274**	P		**P**	**07 07 28.2**	**-0.5**
KSRS	**Korea Array**	**85.72**	**319**	P		**P**	**07 07 34.1**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=143,slow=5.5,SNR=11								
KSRS				LR		LR	07 46 19.0		
	comp=Z,13nm,18.5s,baz=141,slow=36								
KSAR	**Wonju Array Be**	**85.74**	**319**	P		**P**	**07 07 32.2**	**-0.6**
KSAR	**Wonju Array Be**	**85.74**	**319**	P		**P**	**07 07 32.2**	**-0.6**
YSS	**Yuzh-Sakhalins**	**86.09**	**334**	*e*P		**P**	**07 07 36.0**	**+1.7**
YSS				*e*S		**S**	**07 18 09.4**	**+3.5**
YSS				pmax		pmax			
	comp=Z,30nm,1.1s								
YSS				MLR		MLR			
	comp=Z,100nm,19.0s								
YSS	**Yuzh-Sakhalins**	**86.09**	**334**	P		**P**	**07 07 34.6**	**+0.4**
KULM	**Kulim**	**86.24**	**278**	P		**P**	**07 07 36.0**	**+0.2**
RPSI	**Rantau Prapat**	**86.34**	**275**	P		**P**	**07 07 35.5**	**-0.9**
PSI	**Prapat**	**86.40**	**275**	P		**P**	**07 07 35.5**	**-1.3**
PSI				pmax		pmax			
	comp=Z,29nm,1.2s								
ISA	**Isabella, Lake**	**86.46**	**44**	P		**P**	**07 07 36.1**	**-0.4**
ISA				pmax		pmax			
	comp=Z,31nm,1.8s								
ISA	**Isabella, Lake**	**86.46**	**44**	P		**P**	**07 07 36.1**	**-0.4**
ISA				IAmb		IAmb	07 07 38.0		
	comp=Z,31nm,1.8s								
GSI	**Gunungsitoli**	**86.77**	**273**	P		**P**	**07 07 37.5**	**-1.0**
GSI	**Gunungsitoli**	**86.77**	**273**	P		**P**	**07 07 39.3**	**+0.8**
	comp=Z,2µmcomp=Z,86nm,0.8s								
CMB	**Columbia Colle**	**86.99**	**41**	P		**P**	**07 07 37.9**	**-1.1**
CMB				pmax		pmax			
	comp=Z,7.0nm,1.1s								
CMB	**Columbia Colle**	**86.99**	**41**	P		**P**	**07 07 37.9**	**-1.1**
PEA0B	**Petropavlovsk-**	**87.07**	**345**	*de*P		**P**	**07 07 39.3**	**+0.4**
PETK	**Petropavlovsk-**	**87.07**	**345**	P		**P**	**07 07 39.9**	**+0.9**
	comp=Z,7.8nm,1.0s,baz=111,slow=8.1,SNR=8.7								
PETK				LR		LR	07 43 36.9		
	comp=Z,15nm,19.3s,baz=139,slow=34								
NJ2	**Nanjing**	**87.60**	**310**	*e*P		P	07 07 32.3	-10	
NJ2				pmax		pmax			
	comp=Z,9.0nm,0.5s								
UBPT	**Khong Chiam**	**87.60**	**289**	P		**P**	**07 07 43.4**	**+1.0**
WAKR	**Walker**	**87.85**	**42**	P		**P**	**07 07 43.4**	**+0.1**
TPTI		**88.12**	**275**	P		**P**	**07 07 45.8**	**+0.8**
PNTR	**Pine Nut**	**88.17**	**41**	P		**P**	**07 07 45.1**	**+0.2**
PNTR				IAmb		IAmb	07 07 46.0		
	comp=Z,7.4nm,0.9s								
YERR	**Yerington**	**88.30**	**41**	P		**P**	**07 07 44.9**	**-0.6**
YERR				IAmb		IAmb	07 07 45.8		
	comp=Z,8.6nm,1.3s								
NVAR	**Mina Array Bea**	**88.45**	**42**	P		**P**	**07 07 46.4**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=219,slow=8.2,SNR=19								
NVAR				LR		LR	07 40 05.7		
	comp=Z,54nm,18.7s,baz=294,slow=31								
NVAR	**Mina Array Bea**	**88.45**	**42**	P		**P**	**07 07 45.4**	**-0.8**
USA0B	**Ussuriysk Arra**	**88.53**	**326**	P		**P**	**07 07 47.2**	**+1.0**
USA0B				pmax		pmax			
	comp=Z,13nm,1.0s								
USA0B	**Ussuriysk Arra**	**88.53**	**326**	P		**P**	**07 07 47.2**	**+1.0**
USA0B				IAmb		IAmb	07 07 48.9		
	comp=Z,13nm,1.0s								
USRK	**Ussuriysk Ar.**	**88.53**	**326**	P		**P**	**07 07 47.8**	**+1.7**
	comp=Z,8.9nm,0.8s,baz=123,slow=4.1,SNR=14								
USRK	**Ussuriysk Ar.**	**88.53**	**326**	P		**P**	**07 07 47.6**	**+1.5**
NV11	**Mina Array Sit**	**88.54**	**42**	IAmb		IAmb	07 07 52.3		
	comp=Z,13nm,1.6s								
TPNV	**Topopah Spring**	**88.65**	**44**	P		**P**	**07 07 47.4**	**+0.2**
TPNV				pmax		pmax			
	comp=Z,12nm,1.3s								
TPNV	**Topopah Spring**	**88.65**	**44**	P		**P**	**07 07 47.4**	**+0.2**
TPNV				IAmb		IAmb	07 07 48.0		
	comp=Z,12nm,1.3s								
Y14A	**Wickenburg**	**88.70**	**48**	IAmb		IAmb	07 07 48.9		
	comp=Z,11nm,1.3s								
W13A	**Hualapai Mount**	**88.89**	**47**	P		**P**	**07 07 48.8**	**+0.5**
KVN	**Kaiserville**	**88.99**	**42**	P		**P**	**07 07 48.0**	**-0.7**
KVN				pmax		pmax			
	comp=Z,16nm,1.6s								
KVN	**Kaiserville**	**88.99**	**42**	P		**P**	**07 07 48.0**	**-0.7**
KVN				IAmb		IAmb	07 07 49.6		
	comp=Z,16nm,1.6s								
SHPR	**Sheep Range**	**89.02**	**45**	P		**P**	**07 07 48.6**	**-0.2**
SHPR				IAmb		IAmb	07 07 50.8		
	comp=Z,11nm,1.5s								
TUC	**Tucson**	**89.12**	**51**	P		**P**	**07 07 50.0**	**+0.7**
TUC				pmax		pmax			
	comp=Z,41nm,2.0s								
TUC	**Tucson**	**89.12**	**51**	P		**P**	**07 07 50.0**	**+0.7**
PRN	**Pahroc Range**	**89.67**	**45**	P		**P**	**07 07 52.5**	**+0.7**
PRN				IAmb		IAmb	07 07 53.9		
	comp=Z,13nm,1.1s								
MDJ	**Mudanjiang**	**90.00**	**325**	P		**P**	**07 07 54.5**	**+1.5**
MDJ				pmax		pmax			
	comp=Z,14nm,0.8s								
MDJ				pmax		pmax			
	comp=Z,88nm,2.7s								
MDJ	**Mudanjiang**	**90.00**	**325**	P		**P**	**07 07 53.6**	**+0.6**
X16A	**Lo Mia Camp, P**	**90.00**	**49**	P		**P**	**07 07 54.3**	**+0.8**
X16A				IAmb		IAmb	07 07 55.6		
	comp=Z,9.3nm,1.0s								
LCMT	**Little Creek M**	**90.52**	**46**	P		**P**	**07 07 55.2**	**-0.6**
LCMT				IAmb		IAmb	07 07 57.5		
	comp=Z,7.6nm,1.1s								
U15A	**North Rim**	**90.73**	**47**	IAmb		IAmb	07 07 59.0		
	comp=Z,13nm,1.0s								
WUAZ	**Wupatki**	**90.73**	**48**	IAmb		IAmb	07 07 58.7		
	comp=Z,12nm,1.1s								
KNB	**Kanab**	**90.78**	**46**	IAmb		IAmb	07 07 59.0		
	comp=Z,15nm,1.1s								
SZCU	**Shurtz Canyon**	**90.98**	**46**	P		**P**	**07 07 58.6**	**+0.5**
CN2	**Changchun**	**91.52**	**322**	*e*P		**P**	**07 08 01.0**	**+0.9**
CN2				pmax		pmax			
	comp=Z,20nm,1.0s								
J08A	**Circle Bar Ran**	**91.72**	**38**	P		**P**	**07 08 01.2**	**-0.1**
J08A				IAmb		IAmb	07 08 02.3		
	comp=Z,12nm,1.2s								
MTPU	**Mount Pierson**	**91.82**	**46**	P		**P**	**07 08 02.2**	**+0.1**
TXAR	**Lajitas Array**	**92.25**	**57**	P		**P**	**07 08 04.2**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=201,slow=6.7,SNR=4.1								
TXAR				LR		LR	07 44 09.5		
	comp=Z,52nm,18.1s,baz=0.0,slow=32								
TXAR	**Lajitas Array**	**92.25**	**57**	P		**P**	**07 08 02.8**	**-1.2**
KLR	**Kul'dur**	**92.40**	**329**	P		**P**	**07 08 05.4**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=104,slow=2.0,SNR=15								
G08A	**Pilot Rock**	**92.80**	**37**	P		**P**	**07 08 04.9**	**-1.3**
G08A				IAmb		IAmb	07 08 07.2		
	comp=Z,8.2nm,1.0s								
GYA	**Guiyang**	**92.83**	**299**	⇑P		**P**	**07 08 08.8**	**+2.0**
GYA				pmax		pmax			
	comp=Z,2.0nm,1.1s								
ENH	**Enshi**	**92.92**	**304**	P		**P**	**07 08 08.7**	**+1.7**
MFID	**Camas Ranch**	**93.19**	**40**	P		**P**	**07 08 07.5**	**-0.5**
BMO	**Blue Mountains**	**93.36**	**38**	P		**P**	**07 08 07.5**	**-1.2**
BMO				pmax		pmax			
	comp=Z,6.0nm,1.2s								
BMO	**Blue Mountains**	**93.36**	**38**	P		**P**	**07 08 07.5**	**-1.2**
BMO				IAmb		IAmb	07 08 22.5		
	comp=Z,6.1nm,1.2s								
SRU	**San Rafael Swe**	**93.50**	**46**	P		**P**	**07 08 08.9**	**-0.8**
SRU				pmax		pmax			
	comp=Z,3.0nm,0.9s								
SRU	**San Rafael Swe**	**93.50**	**46**	P		**P**	**07 08 08.9**	**-0.8**
ANMO	**Albuquerque**	**93.58**	**51**	⇑*e*P		**P**	**07 08 08.9**	**-1.2**
ANMO				pmax		pmax			
	comp=Z,4.0nm,1.3s								
PV05	**Paradox Valley**	**93.75**	**47**	P		**P**	**07 08 11.3**	**+0.4**
PV05				IAmb		IAmb	07 08 12.1		
	comp=Z,5.9nm,1.1s								
HVU	**Hansel Valley**	**93.84**	**42**	P		**P**	**07 08 10.0**	**-1.1**
HVU				pmax		pmax			
	comp=Z,4.0nm,1.0s								
HVU	**Hansel Valley**	**93.84**	**42**	P		**P**	**07 08 10.0**	**-1.1**
HLID	**Hailey**	**94.06**	**40**	P		**P**	**07 08 11.5**	**-0.6**
PLID	**Pearl Lake**	**94.20**	**38**	P		**P**	**07 08 12.2**	**-0.6**
PLID				IAmb		IAmb	07 08 13.3		
	comp=Z,6.6nm,0.9s								
CMAR	**Chiang Mai Arr**	**94.57**	**289**	P		**P**	**07 08 15.9**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=128,slow=5.8,SNR=7.8								
CMAR				LR		LR	07 50 29.6		
	comp=Z,7.7nm,21.0s,baz=170,slow=35								
CMAR	**Chiang Mai Arr**	**94.57**	**289**	P		**P**	**07 08 15.1**	**+0.3**
KMI	**Kunming**	**95.07**	**296**	⇑P		P	07 08 11.0	-6.3	
KMI				pmax		pmax			
	comp=Z,16nm,0.5s								
SMCO	**Snowmass**	**95.74**	**47**	P		**P**	**07 08 20.3**	**+0.1**
SMCO				IAmb		IAmb	07 08 22.0		
	comp=Z,8.3nm,1.6s								
PDAR	**Pinedale Array**	**96.32**	**43**	P		**P**	**07 08 21.6**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=220,slow=3.9,SNR=4.7								
PDAR				LR		LR	07 46 05.1		
	comp=Z,38nm,18.5s,baz=299,slow=32								
YHL	**Hebgen Lake**	**96.67**	**41**	P		**P**	**07 08 24.4**	**+0.2**
BOZ	**Bozeman (W)**	**96.89**	**40**	P		**P**	**07 08 24.6**	**-0.4**
BOZ				pmax		pmax			
	comp=Z,5.0nm,1.2s								
BOZ	**Bozeman (W)**	**96.89**	**40**	P		**P**	**07 08 24.6**	**-0.4**
BOZ				IAmb		IAmb	07 08 25.9		
	comp=Z,4.5nm,1.1s								
CD2	**Chengdu**	**97.39**	**302**	*e*P		P	07 08 20.0	-7.4	
HHC	**Hu-ho-hao-te**	**97.60**	**313**	*e*P		P	07 08 22.5	-5.7	
HHC				pmax		pmax			
	comp=Z,16nm,0.6s								
HHC				pmax		pmax			
	comp=Z,98nm,5.1s								
ILAR	**Eielson Array**	**98.78**	**13**	P		**P**	**07 08 32.3**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=220,slow=5.8,SNR=5.7								
ILAR				LR		LR	07 55 48.6		
	comp=Z,16nm,18.5s,baz=167,slow=37								
LZH	**Lanzhou**	**100.05**	**306**	*e*P		**Pdif**	**07 08 32.8**	**-6.6**
LZH				pP		pPdif	07 08 39.3	-8.4	
LZH				pmax		pmax			
	comp=Z,11nm,1.1s								
YKA	**Yellowknife Ar**	**106.04**	**25**	PKiKP		**PKiKP**	**07 13 16.0**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=248,slow=1.5,SNR=4.8								
WMQ	**Urumqi**	**114.57**	**308**	*e*PKP		PKPdf	07 13 21.0	-13	
WMQ				LR		LR			
	comp=Z,670nm,25.3s								
WMQ				LR		LR			
	comp=Z,630nm,26.5s								
WMQ				LR		LR			
	comp=Z,450nm,26.5s								
RES	**Resolute Bay**	**118.02**	**17**	PKiKP		**PKPdf**	**07 13 38.8**	**-0.6**
RES	**Resolute Bay**	**118.02**	**17**			**PKPdf**	**07 13 38.8**	**-0.6**
MKAR	**Makanchi Array**	**119.12**	**309**	PKP		**PKPdf**	**07 13 42.2**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=54,slow=2.1,SNR=6.8								
MKAR	**Makanchi Array**	**119.12**	**309**			**PKPdf**	**07 13 41.9**	**-0.5**
ZALV	**Zalesovo Beam**	**119.41**	**318**	PKP		**PKPdf**	**07 13 42.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=27,slow=0.3,SNR=2.2								
KURK	**Kurchatov**	**122.41**	**313**	PKiKP		**PKPdf**	**07 13 48.2**	**-0.3**
KURBB	**Kurchatov Arra**	**122.45**	**313**	PKP		**PKPdf**	**07 13 48.2**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=107,slow=1.8,SNR=22								
GAR	**Garm**	**125.62**	**298**	PKPdf		**PKPdf**	**07 13 54.9**	**-0.3**
KKAR	**Karatay Array**	**126.38**	**303**	PKiKP		**PKPdf**	**07 13 56.1**	**-0.3**
KKAR	**Karatay Array**	**126.38**	**303**			**PKPdf**	**07 13 56.1**	**-0.3**
BVAR	**Borovoye Array**	**127.78**	**315**	PKP		**PKPdf**	**07 13 59.0**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=136,slow=9.4,SNR=6.9								
BRVK	**Borovoye**	**127.84**	**315**	*c*PKiKP		**PKiKP**	**07 13 59.3**	**-0.1**
BRVK				pmax		pmax			
	comp=Z,4.0nm,1.3s								
BRVK	**Borovoye**	**127.84**	**315**			**PKPdf**	**07 13 59.1**	**+0.3**
SPITS	**Spitsbergen Ar**	**132.83**	**356**	PKP		**PKiKP**	**07 14 08.5**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=357,slow=2.9,SNR=2.0								
ARU	**Arti**	**134.47**	**320**	*i* PKiKP		**PKPdf**	**07 14 11.8**	**+0.6**
ARU							07 16 41.3		
AKTO	**Aktyubinsk**	**135.46**	**312**	PKP		**PKPdf**	**07 14 13.8**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=121,slow=5.0,SNR=3.9								
H10N3	**ASCENSION HYDR**	**137.47**	**154**	T		T	09 47 50.7		
	baz=204,slow=75,SNR=6.5								
H10N1	**ASCENSION HYDR**	**137.47**	**154**	T		T	09 47 51.2		
	baz=204,slow=75,SNR=5.5								
H10N2	**ASCENSION HYDR**	**137.49**	**154**	T		T	09 47 46.2		
	baz=204,slow=75,SNR=6.1								
ARCES	**ARCESS Array B**	**139.82**	**348**	PKhKP		PKPpre	07 14 15.8		
	comp=Z,2.7nm,1.0s,baz=30,slow=2.9,SNR=7.5								
ARCES				PKP		**PKiKP**	**07 14 22.7**	**-0.5**	
	comp=Z,2.5nm,0.5s,baz=349,slow=1.6,SNR=15								
GNI	**Garni**	**145.33**	**296**	*d* PKiKP		**PKPab**	**07 14 32.3**	**+0.6**
GNI				pmax		pmax			
	comp=Z,27nm,1.3s								
VRH	**Novokhopyorsk**	**145.42**	**316**	*e*PKP2		**PKPdf**	**07 14 29.7**	**-1.5**
VRH				pmax		pmax			
	comp=Z,20nm,0.5s								
MOS	**Moscow**	**145.71**	**325**	*i* PKiKP		**PKPdf**	**07 14 31.5**	**-0.1**
MOS				pmax		pmax			
	comp=Z,77nm,1.0s								
ZEI	**Tsey**	**145.80**	**301**	*e*PKP2		**PKPdf**	**07 14 32.9**	**+0.4**
ZEI				pmax		pmax			
	comp=Z,22nm,1.4s								
NCK	**Nalchik**	**145.95**	**302**	*j* PKP2		**PKPab**	**07 14 34.1**	**+0.3**
KBZ	**Khabaz**	**146.42**	**303**	PKPbc		**PKPab**	**07 14 35.8**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=101,slow=4.1,SNR=13								
KBZ	**Khabaz**	**146.42**	**303**	*i* PKP2		**PKiKP**	**07 14 37.1**	**-0.4**
FIA1	**FINESS Array S**	**146.45**	**340**	PKPdf		**PKPdf**	**07 14 33.4**	**+0.7**
FINES	**FINESS Array B**	**146.45**	**340**	PKPbc		**PKPbc**	**07 14 34.1**	**0.0**
	comp=Z,15nm,0.7s,baz=45,slow=3.2,SNR=52								
FINES	**FINESS Array B**	**146.45**	**340**			**PKPbc**	**07 14 33.5**	**-0.5**
LPSR	**Galich'ya Gora**	**146.49**	**320**	*e*PKiKP		**PKPdf**	**07 14 33.3**	**+0.3**
LPSR				pmax		pmax			
	comp=Z,8.0nm,0.8s								
KIV	**Kislovodsk**	**146.54**	**303**	*e*PKP2		**PKiKP**	**07 14 37.7**	**-0.2**
KIV				pmax		pmax			
	comp=Z,26nm,1.1s								
VSR	**Storozhevoye**	**146.91**	**317**	*e*PKP2		**PKPbc**	**07 14 35.6**	**-0.1**
VSR				pmax		pmax			
	comp=Z,40nm,1.4s								
VSU	**Vasula**	**148.56**	**336**	*e*P		**PKPbc**	**07 14 39.8**	**-0.1**
VSU	**Vasula**	**148.56**	**336**	*d* PKP2		**PKPbc**	**07 14 40.1**	**+0.2**
AAL	**Aland**	**149.14**	**343**	*e*P		**PKPbc**	**07 14 41.4**	**+0.1**
MTSE	**Matsula**	**149.32**	**339**	*e*P		**PKPbc**	**07 14 41.7**	**-0.1**
NC303	**NORSAR Array S**	**149.74**	**352**			**PKPbc**	**07 14 42.3**	**-0.5**
NOA	**NORSAR Array B**	**149.94**	**352**	PKPbc		**PKPbc**	**07 14 43.3**	**-0.1**
	comp=Z,6.6nm,0.9s,baz=14,slow=4.1,SNR=16								
MNK	**Minsk**	**150.95**	**330**	*e*PKiKP		**PKPbc**	**07 14 46.0**	**+0.1**
MNK	**Minsk**	**150.95**	**330**	*i* PKP		**PKPdf**	**07 14 42.8**	**+2.6**
	comp=E,5.0nm,0.8s								
MNK				*i* PKP		**PKPdf**	**07 14 42.8**	**+2.6**	
	comp=N,23nm,0.9s								
MNK				*i* PKP		**PKPdf**	**07 14 42.8**	**+2.6**	
	comp=Z,23nm,0.8s								
MNK				*i* PP		**PP**	**07 18 27.4**	**+3.8**	
MNK				*i* SKS		**SKSdf**	**07 21 50.6**	**+5.7**	
MNK				*i* PPP		PPP	07 21 53.0		
MNK				*i* SKKS		**SKKSdf**	**07 30 40.3**	**+4.2**	
MNK				*i* SS		**SS**	**07 37 50.2**	**+7.8**	
MNK				*i* SSS		SSS	07 43 33.1		
MNK				*i* LQ		LQ	08 14 53.3		
MNK				*i* LR		LR	08 26 23.1		
NACGM	**Naroch**	**151.13**	**331**	*i* PKP		**PKiKP**	**07 14 47.1**	**+0.2**	
NACGM				*i* PKP		**PKiKP**	**07 14 47.1**	**+0.2**	
NACGM				*i* PKP		**PKiKP**	**07 14 47.1**	**+0.2**	
NACGM				*i* PP		PP	07 18 54.2	+30	
NACGM				*i* SKS		**SKSdf**	**07 21 53.2**	**+8.1**	
NACGM				*i* PPP		PPP	07 22 27.5		
NACGM				*i* SKKS		**SKKSac**	**07 25 22.0**	**+10**	
NACGM				*i* SKKP			07 30 20.3		
NACGM				*i* SKKP			07 30 20.3		
NACGM				*i* SS		SS	07 37 18.0	-26	
NACGM				*i* SSS		SSS	07 43 55.0		
NACGM				*i* LQ		LQ	08 18 31.1		
NACGM				*i* LR		LR	08 28 11.6		
KONO	**Kongsberg**	**151.48**	**353**	*j* PKIKP		**PKPbc**	**07 14 47.1**	**+0.1**	
KONO				pmax		pmax			
	comp=Z,48nm,2.5s								
KONO	**Kongsberg**	**151.48**	**353**			**PKPbc**	**07 14 46.4**	**-0.6**	
PABE	**Paberze**	**151.79**	**334**	*e*P		**PKiKP**	**07 14 48.2**	**0.0**	
PABE	**Paberze**	**151.79**	**334**			**PKPbc**	**07 14 46.0**	**-1.8**	
AKASG	**Malin Array Be**	**152.68**	**322**	PKPbc		**PKiKP**	**07 14 50.4**	**+0.2**	
	comp=Z,3.3nm,0.7s,baz=50,slow=2.8,SNR=10								
AKASG	**Malin Array Be**	**152.68**	**322**	PKIKP		**PKPbc**	**07 14 49.2**	**-0.8**	
AKASG	**Malin Array Be**	**152.68**	**322**			**PKPbc**	**07 14 49.2**	**-0.8**	
AKBB	**Malin Array Si**	**152.68**	**322**	*j* PKIKP		**PKPbc**	**07 14 50.0**	**0.0**	
BRTR	**Keskin Array B**	**153.86**	**297**	PKPbc		**PKiKP**	**07 14 54.2**	**+0.9**	
	comp=Z,0.8nm,0.5s,baz=55,slow=1.8,SNR=2.6								
BRTR				PKPab		**PKPab**	**07 15 07.8**	**+1.4**	
	comp=Z,2.6nm,0.6s,baz=131,slow=4.7,SNR=6.5								
STHS	**Stebnicka Huta**	**157.44**	**328**	*e*PKP		**PKPab**	**07 15 20.6**	**-0.5**	
DPC	**Dobruska-Polom**	**158.69**	**336**	*e*PKP2		**PKPab**	**07 15 27.5**	**+1.0**	
DPC	**Dobruska-Polom**	**158.69**	**336**	*e*PKP		**PKPab**	**07 15 27.5**	**+1.0**	
CLL	**Collm**	**158.85**	**342**	*e*PKPab		**PKPab**	**07 15 27.0**	**-0.1**	
	comp=Z,6.0nm,0.8s								
CLL	**Collm**	**158.85**	**342**	*e*PKP2		**PKPab**	**07 15 27.0**	**-0.1**	
CLL				pmax		pmax			
	comp=Z,6.0nm,0.8s								
VYHS	**Vyhne**	**159.19**	**329**	*e*PKP2		**PKPab**	**07 15 28.1**	**-0.7**	
VYHS	**Vyhne**	**159.19**	**329**	*e*PKP		**PKPab**	**07 15 28.0**	**-0.7**	
MODS	**Modra-Piesok**	**159.94**	**331**	*e*PKP2		**PKPab**	**07 15 32.2**	**+0.2**	
MODS	**Modra-Piesok**	**159.94**	**331**	*e*PKP		**PKPab**	**07 15 32.2**	**+0.2**	
KHC	**Kasperske Hory**	**160.64**	**339**	*e*PKP2		**PKPab**	**07 15 35.8**	**+0.7**	
KHC	**Kasperske Hory**	**160.64**	**339**	*e*PKP		**PKPab**	**07 15 35.8**	**+0.7**	
GERES	**GERESS Array B**	**160.86**	**338**	PKPab		**PKPab**	**07 15 36.2**	**+0.2**	
	comp=Z,0.5nm,0.5s,baz=59,slow=3.8,SNR=6.8								
TORD	**Torodi Ar. Bea**	**161.72**	**176**	PKP		**PKPdf**	**07 14 55.8**	**+0.5**	
	comp=Z,1.6nm,1.1s,baz

comp=E,3.0nm,0.4s
ORIF Oris-en-Rattie 8.61 317 *e*P **P 07 05 17.7 -1.7**
IDI Anoyia 9.34 109 P **P 07 05 31.5 +3.8**
comp=E,1.7nm,0.3s,baz=288,slow=16,SNR=7.0
GERES GERESS Array B 9.99 359 P **P 07 05 32.7 -2.0**
comp=E,0.3nm,0.3s,baz=170,slow=8.1,SNR=5.1
KHC Kasperske Hory 10.28 358 *e*P **P 07 05 36.9 -0.9**
JAVC Velka Javorina 10.32 13 *e*P **P 07 05 39.5 +1.2**
KRUC Moravsky 10.33 8 *e*P **P 07 05 38.6 +0.2**
VRAC Vranov 10.60 9 P **P 07 05 41.2 -0.1**
comp=E,0.8nm,0.3s,baz=202,slow=11,SNR=7.4
VRAC Vranov 10.60 9 *e*P **P 07 05 41.9 +0.6**
PRU Pruhonice 11.13 2 *e*P **P 07 05 47.0 -0.2**
MORC Moravsky Berou 11.19 12 *e*P **P 07 05 48.8 +0.9**
DPC Dobruska-Polom 11.60 7 *e*P **P 07 05 51.7 -0.7**
UPC Upice 11.73 6 *e*P **P 07 05 53.6 -0.1**
ESDC Sonseca Array 14.01 279 P **P 07 06 18.6 -0.4**
comp=E,0.1nm,0.3s,baz=76,slow=11,SNR=6.4
BRTR Keskin Array B 15.17 81 P **P 07 06 34.0 +2.4**
comp=E,0.3nm,0.3s,baz=262,slow=9.6,SNR=6.9
AKASG Malin Array Be 15.95 37 P **P 07 06 39.1 -0.5**
comp=E,1.5nm,0.3s,baz=229,slow=8.6,SNR=1.9
MDT Midelt 16.30 254 P **P 07 06 44.1 +0.3**
comp=E,0.1nm,0.3s,baz=51,slow=6.5,SNR=2.2
EKA Eskdalemuir Ar 20.14 331 P **P 07 07 19.6 -2.7**
baz=143,slow=11,SNR=6.0
HFS Hagfors 21.30 359 P **P 07 07 31.5 -1.2**
comp=E,2.4nm,0.4s,baz=178,slow=10,SNR=15
NOA NORSAR Array B 22.28 356 P **P 07 07 41.8 0.0**
comp=E,0.8nm,0.5s,baz=172,slow=11,SNR=8.0
FINES FINESS Array B 23.80 14 P **P 07 07 54.3 -1.1**
comp=E,2.2nm,0.6s,baz=192,slow=10,SNR=9.2
ARCES ARCESS Array B 31.34 8 P **P 07 09 00.2 -1.5**
comp=E,0.7nm,0.4s,baz=182,slow=8.3,SNR=9.1
SPITS Spitsbergen Ar 39.44 1 P **P 07 10 09.4 -0.2**
comp=E,6.6nm,1.0s,baz=186,slow=13,SNR=8.6
MKAR Makanchi Array 49.22 57 P **P 07 11 26.9 +0.5**
comp=E,0.5nm,0.4s,baz=283,slow=6.7,SNR=12

IDC ***29*** *07:32:44.5±2.1, 53.63N×91.40E, h0km, mb3.4/2, mb1 3.6/6, mb1mx3.3/45, mbtmp3.6/6, ML3.2/4, MS3.1/3, Ms1 3.1/3, ms1mx2.5/29, Error ellipse: s-maj=23.0km s-min=19.9km az=103.0*

NNC ***29*** *07:32:51.8±7.0, 53.23N×90.91E, h0km, mb4.1, mpv4.0, Error ellipse: s-maj=54.7km s-min=33.0km az=64.0, Suspected Mining explosion.*

ISC 29 07:32:51.7±2.7, 53.7N±0.1×90.4E±0.1, h0km, n19, σ1s00/15, MS3.0/3, 3C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.32**	**277**	*i*				07 55 23.8	
	baz=90,slow=318,SNR=1.5								
ZAA0	**Zalesovo Array**	**3.32**	**277**	⇑P		**Pb**		**07 33 49.8**	**-1.6**
	7.7nm,0.8s								
ZAA0				⇓S		**Sg**		**07 34 37.9**	**-0.5**
	43nm,1.1s								
ZALV	**Zalesovo Beam**	**3.32**	**277**	Pn		**Pn**		**07 33 45.3**	**+0.4**
	3.1nm,0.3s,baz=95,slow=12,SNR=19								
ZALV				Lg		Lg		07 34 39.9	
	4.5nm,0.3s,baz=92,slow=27,SNR=14								
ZSN	**Zaisan**	**7.18**	**212**	Pg		Pb		07 35 00.8	+3.6
	8.6nm,0.2s								
ZSN				Lg		Lg		07 36 42.4	
	61nm,0.9s								
KURBB	**Kurchatov Arra**	**7.93**	**252**	Pn		**Pn**		**07 34 47.2**	**-0.9**
	0.3nm,0.3s,baz=65,slow=14,SNR=36								
KURBB				Sn		**Sn**		**07 36 19.0**	**+0.6**
	0.1nm,0.3s,baz=66,slow=26,SNR=7.9								
KURBB				Lg		Lg		07 37 09.6	
	0.2nm,0.3s,baz=69,slow=33,SNR=11								
KURBB	**Kurchatov Arra**	**7.93**	**252**	⇑Pn		**Pn**		**07 34 47.1**	**-0.9**
	11nm,0.6s								
KURBB				⇓Sn		**Sn**		**07 36 18.5**	**+0.1**
	72nm,0.8s								
KURBB				⇑Lg		Lg		07 37 08.4	
	100nm,0.8s								
TLY	**Talaya**	**8.29**	**99**	Lg		Lg		07 36 51.8	
	0.0nm,0.3s,baz=208,slow=23,SNR=9.0								
MK31	**Makanchi Array**	**8.64**	**220**	Pn		**Pn**		**07 34 57.1**	**-0.9**
	1.3nm,0.6s,baz=29,slow=14,SNR=24								
MK31				⇓Sn		**Sn**		**07 36 37.3**	**+1.2**
	6.9nm,0.8s,baz=28,slow=19,SNR=4.4								
MK31				⇓Lg		Lg		07 37 23.5	
	29nm,0.8s,baz=33,slow=26,SNR=4.2								
MKAR	**Makanchi Array**	**8.64**	**220**	Pn		**Pn**		**07 34 56.9**	**-1.1**
	0.5nm,0.3s,baz=42,slow=14,SNR=32								
MKAR				Sn		**Sn**		**07 36 36.9**	**+0.8**
	0.3nm,0.3s,baz=43,slow=22,SNR=7.2								
MKAR				Lg		Lg		07 37 26.2	
	0.4nm,0.3s,baz=39,slow=29,SNR=6.8								
BRZS	**Berezniki**	**11.58**	**258**	Pg		Pn		07 36 31.6	+54
	2.3nm,0.3s								
BRZS				Lg		Lg		07 39 17.1	
	13nm,0.9s								
DJR	**Jarkent**	**11.67**	**221**	Pg		Pn		07 36 23.0	+44
	0.7nm,0.1s								
DJR				Lg		Lg		07 39 02.6	
	8.8nm,1.1s								
SONM	**Songino Array**	**11.69**	**114**	Pg		Pn		07 36 07.3	+28
	0.2nm,0.3s,baz=296,slow=18,SNR=2.6								
SONM				Lg		Lg		07 38 43.1	
	0.6nm,0.3s,baz=299,slow=29,SNR=12								
BVAR	**Borovoye Array**	**11.98**	**275**	Pn		**Pn**		**07 35 43.7**	**+0.1**
	0.2nm,0.3s,baz=337,slow=29,SNR=2.0								
BVAR				Sn		**Sn**		**07 37 59.4**	**+1.7**
	0.2nm,0.3s,baz=48,slow=20,SNR=3.6								
AAK	**Ala-Archa**	**15.29**	**230**	Pn		**Pn**		**07 36 28.9**	**0.0**
	0.1nm,0.3s,baz=190,slow=8.6,SNR=3.7								
AAK				Lg		Lg		07 40 56.8	
	0.1nm,0.3s,baz=171,slow=19,SNR=3.8								
AKTO	**Aktyubinsk**	**20.08**	**274**	P		**P**		**07 37 27.1**	**+0.6**
	1.0nm,0.9s,baz=102,slow=9.3,SNR=1.7								
YAK	**Yakutsk**	**22.17**	**52**	LR		LR		07 46 15.0	
	comp=Z,54nm,19.7s,baz=1.0,slow=37								
BELG	**Belogornoye**	**25.47**	**285**	LR		LR		07 49 25.3	
	comp=Z,41nm,18.5s,baz=143,slow=38								
MJAR	**Matsushiro Arr**	**37.03**	**98**	LR		LR		07 56 47.9	
	comp=Z,17nm,18.4s,baz=30,slow=40								
TORD	**Torodi Ar. Bea**	**78.77**	**277**	P		P		07 44 51.2	-5.1
	0.6nm,0.7s,baz=46,slow=6.2,SNR=2.4								

IDC 29 07:52:10.5±6.0, 30.14S×178.22W, h82km±44km, mb3.2/2, mb1 3.5/2, mb1mx3.2/28, mbtmp3.5/2, Error ellipse: s-maj=113.6km s-min=52.4km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.92**	**17**	P		Pn		07 52 28.9	+0.2
	86nm,0.3s,baz=280,slow=21,SNR=2.6								
RAO				S		Sn		07 52 42.9	+0.6
	244nm,0.3s,baz=138,slow=20,SNR=6.7								
ASAR	**Alice Springs**	**42.93**	**267**	P		P		08 00 01.2	-0.2
	0.2nm,0.5s,baz=105,slow=7.7,SNR=4.2								
WRA	**Warramunga Arr**	**43.90**	**272**	P		P		08 00 09.1	-0.1
	0.5nm,0.5s,baz=111,slow=8.1,SNR=11								
FINES	**FINESS Array B**	**144.83**	**340**	PKP		PKPbc		08 11 36.5	+0.1
	1.9nm,0.7s,baz=57,slow=3.4,SNR=9.4								

TAP ***29*** *07:53:54.2, 23.97N×122.40E, h28km±1km, ML2.8, D*
JMA ***29*** *07:53:54.0±0.2, 23.89N×122.34E, h15km±4km, M2.2*

ISC 29 07:53:53.7±1.3, 23.90N±0.04×122.36E±0.02, h21km±5km, n49, σ0s69/67, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.75**	**291**	P		**Pb**		**07 54 08.1**	**0.0**
	baz=271								
NACB				S		**Sb**		**07 54 18.2**	**+0.3**
	baz=271								
EWUT	**Wuta**	**0.76**	**315**	P		**Pb**		**07 54 07.8**	**-0.4**
	baz=309								
EWUT				*e*S		**Sn**		**07 54 19.3**	**-0.6**
	baz=309								
JYNG	**Yonagunijimaku**	**0.76**	**44**	P		**Pn**		**07 54 08.7**	**-0.4**
JYNG				*e*S		**Sn**		**07 54 19.5**	**-0.5**
YOJ	**Yonaguni jima**	**0.81**	**47**	P		**Pn**		**07 54 09.7**	**-0.1**
YOJ				*e*S		**Sn**		**07 54 22.1**	**+0.9**
YOJ	**Yonaguni jima**	**0.81**	**47**	P		**Pb**		**07 54 08.5**	**-0.6**
	baz=54								
YOJ				S		**Sb**		**07 54 18.0**	**-1.6**
	baz=54								
TWC	**Suao**	**0.84**	**326**	P		**Pb**		**07 54 09.1**	**-0.5**
	baz=322								
TWC				S		**Sb**		**07 54 20.5**	**-0.1**
	baz=322								
ETLH	**Xiulin Townshi**	**0.86**	**291**	P		**Pb**		**07 54 09.8**	**-0.2**
	baz=274								
ETLH				S		**Sn**		**07 54 22.3**	**-0.3**
	baz=274								
EGFH	**Guangfu**	**0.89**	**255**	*e*P		**Pn**		**07 54 11.2**	**+0.3**
	baz=251								
NDS	**Dongshan**	**0.94**	**321**	P		**Pb**		**07 54 11.2**	**0.0**
	baz=316								
NDS				S		**Sn**		**07 54 24.5**	**+0.1**
	baz=316								
HGSD	**Ruisui**	**0.95**	**245**	*e*P		**Pn**		**07 54 12.7**	**+0.9**
	baz=242								
ENTT	**Nioudou**	**1.03**	**315**	P		**Pb**		**07 54 13.3**	**+0.5**
	baz=297								
TWE	**Neicheng**	**1.03**	**322**	*e*P		**Pn**		**07 54 12.4**	**-0.5**
	baz=318								
WHF	**Hehuan Shan**	**1.03**	**284**	P		**Pb**		**07 54 12.6**	**-0.6**
	baz=267								
WHF				S		**Sn**		**07 54 27.2**	**-0.1**
	baz=267								
EHY	**Hungye**	**1.03**	**248**	*e*P		**Pn**		**07 54 12.6**	**-0.3**
	baz=245								
NNSB	**Datong**	**1.04**	**300**	⇑P		**Pb**		**07 54 13.0**	**0.0**
	baz=283								
NNSB				S		**Sb**		**07 54 26.3**	**+0.1**
	baz=283								
NNSH	**Datong**	**1.04**	**300**	P		**Pn**		**07 54 13.3**	**+0.2**
	baz=296								
NDT	**Datong Townshi**	**1.04**	**312**	P		**Pn**		**07 54 13.0**	**0.0**
	baz=307								
NDT				S		**Sn**		**07 54 27.1**	**+0.1**
	baz=307								
NNS	**Nan Shan**	**1.05**	**301**	P		**Pb**		**07 54 13.4**	**+0.1**
	baz=285								
NTC	**Toucheng**	**1.06**	**333**	*e*P		**Pn**		**07 54 13.1**	**-0.2**
	baz=329								
FUSS	**Fushou**	**1.08**	**289**	*e*P		**Pn**		**07 54 13.3**	**-0.4**
	baz=285								
OWD	**Renai**	**1.09**	**273**	*e*P		**Pn**		**07 54 13.4**	**-0.4**
	baz=269								
CHGB	**Renai**	**1.10**	**278**	P		**Pn**		**07 54 14.0**	**0.0**
	baz=274								
CHGB				S		**Sn**		**07 54 29.1**	**+0.4**
	baz=274								
YULB	**Yu-li**	**1.10**	**243**	P		**Pn**		**07 54 13.8**	**-0.1**
	baz=240								
VWDT	**VWDT**	**1.13**	**263**	*e*P		**Pn**		**07 54 13.2**	**-1.0**
	baz=259								
VWDT				*e*S		**Sb**		**07 54 28.9**	**+0.2**
	baz=259								
TWB1	**Santiao Chiao**	**1.15**	**343**	*e*P		**Pb**		**07 54 15.4**	**+0.5**
	baz=340								
TDCB	**Techi**	**1.16**	**288**	*e*P		**Pn**		**07 54 13.8**	**-0.9**
	baz=274								
TIPB	**Shuangxi**	**1.17**	**335**	*e*P		**Pb**		**07 54 15.4**	**+0.2**
	baz=332								
TIPB				*e*S		**Sn**		**07 54 30.8**	**+0.6**
	baz=332								
NWLT	**Wulai**	**1.17**	**318**	*e*P		**Pb**		**07 54 15.3**	**+0.1**
	baz=301								
YHNB	**Yeheng**	**1.18**	**310**	P		**Pb**		**07 54 15.3**	**-0.1**
	baz=306								
NSK	**Sanguang**	**1.20**	**310**	P		**Pn**		**07 54 15.4**	**+0.2**
	baz=306								
FULB	**Fuli**	**1.21**	**235**	*e*P		**Pn**		**07 54 14.7**	**-0.6**
	baz=233								
TWA	**Mucha**	**1.29**	**327**	*e*P		**Pb**		**07 54 17.8**	**+0.6**
	baz=323								
IRIF	**Iriomote-Funau**	**1.32**	**71**	P		**Pb**		**07 54 18.6**	**+0.9**
IRIF				*e*S		**Sb**		**07 54 36.2**	**+2.0**
SMLT	**Sun Moon Lake**	**1.34**	**269**	*e*P		**Pb**		**07 54 19.2**	**+1.1**
	baz=256								
WHP	**Taichung City**	**1.35**	**286**	*e*P		**Pb**		**07 54 19.4**	**+1.1**
	baz=273								
TYC	**Yuchr**	**1.38**	**270**	*e*P		**Pn**		**07 54 18.2**	**+0.6**
	baz=267								
YM01	**YM01**	**1.43**	**330**	*e*P		**Pb**		**07 54 19.3**	**-0.4**
	baz=342								
LIOB	**Emei**	**1.44**	**301**	*e*P		**Pb**		**07 54 20.1**	**+0.4**
	baz=298								
LDUT	**Ludao**	**1.48**	**214**	*e*P		**Pn**		**07 54 17.5**	**-1.4**
	baz=213								
HSN1	**Hsinchu**	**1.50**	**306**	*e*P		**Pb**		**07 54 21.8**	**+0.9**
	baz=302								
JKRS	**Kuro-shima**	**1.54**	**77**	P		**Pb**		**07 54 22.1**	**+0.6**
JKRS				*e*S		**Sb**		**07 54 41.9**	**+1.3**
TWG	**Pinlang**	**1.60**	**228**	*e*P		**Pn**		**07 54 21.4**	**+0.7**
	baz=237								
JIJ	**Ishigaki jima**	**1.69**	**74**	P		**Pb**		**07 54 23.7**	**-0.3**
JIJ				*e*S		**Sb**		**07 54 44.8**	**0.0**
CHN4	**Tsaushan**	**1.71**	**252**	*e*P		**Pb**		**07 54 24.4**	**-0.1**
	baz=250								
PCYT	**Pengchaiyu**	**1.74**	**351**	*e*P		**Pn**		**07 54 22.6**	**0.0**
	baz=335								
JISG	**Ishigakijimahi**	**1.90**	**69**	P		**Pn**		**07 54 25.3**	**+0.5**
JISG				S		**Sb**		**07 54 50.3**	**-0.7**
MASBT	**Mashibuluo**	**2.05**	**231**	*e*P		**Pb**		**07 54 29.5**	**-0.6**
	baz=223								
JTJ	**Tarama**	**2.26**	**71**	*e*S		**Sb**		**07 54 59.1**	**-2.1**
VWUC	**VWUC**	**2.87**	**293**	*e*P		**Pn**		**07 54 37.5**	**-0.6**
	baz=291								

NNC ***29*** *07:55:51.5±5.8, 38.40N×71.04E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=55.2km s-min=33.2km az=158.0*

ISC 29 07:55:52.3±3.5, 38.2N±0.2×70.8E±0.1, h35km, n13, σ1s85/16, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.52**	**29**	P		**Pn**		**07 56 58.1**	**-0.5**
	SNR=7.1								
KK31	**Karatay Array**	**4.91**	**358**	⇓P		**Pn**		**07 57 03.1**	**-0.5**
	1.6nm,0.3s,baz=182,slow=11,SNR=19								
KK31				⇓S		**Sn**		**07 58 03.5**	**+4.4**
	5.6nm,0.5s,baz=179,slow=30,SNR=7.2								
UCH	**Uchtor**	**4.94**	**34**	P		**Pn**		**07 57 05.5**	**+1.0**
	SNR=18								
EKS2	**Erkin-Say**	**5.02**	**26**	P		**Pn**		**07 57 04.8**	**-0.4**
	SNR=5.2								
AAK	**Ala-Archa**	**5.27**	**31**	P		**Pn**		**07 57 10.1**	**+1.4**
	SNR=7.8								
AAK	**Ala-Archa**	**5.27**	**31**	⇑P		**Pn**		**07 57 08.4**	**-0.3**
	3.7nm,0.4s								
AAK				⇑S		**Sn**		**07 58 05.2**	**-3.0**
	2.7nm,0.5s								
KBK	**Karagaybulak**	**5.48**	**34**	P		**Pn**		**07 57 13.1**	**+1.5**
	SNR=8.4								
CHMS	**Chumysh**	**5.67**	**31**	P		**Pn**		**07 57 14.3**	**+0.2**
	SNR=6.1								
USP	**Ospenovka**	**5.80**	**28**	P		**Pn**		**07 57 14.6**	**-1.4**
	SNR=7.4								
ULHL	**Ulahol**	**5.82**	**44**	P		**Pn**		**07 57 18.7**	**+2.4**
	SNR=5.1								
TKM2	**Tokmak 2**	**5.98**	**36**	P		**Pn**		**07 57 19.4**	**+0.9**
	SNR=10								
TKM2	**Tokmak 2**	**5.98**	**36**	⇑P		**Pn**		**07 57 18.8**	**+0.3**
	3.7nm,0.5s								
TKM2				⇓S		**Sn**		**07 58 25.3**	**-0.5**
	2.6nm,0.7s								
AB31	**Akbulak array**	**13.53**	**328**	⇑P		**Pn**		**07 59 00.7**	**-1.0**
	0.2nm,0.3s,baz=158,slow=8.3,SNR=12								

IDC ***29*** *08:02:45.1±1.4, 48.77N×129.36W, h0km, mb3.7/4, mb1 3.8/11, mb1mx3.6/41, mbtmp3.7/11, ML3.0/6, MS3.0/5, Ms1 3.0/5, ms1mx2.6/60, Error ellipse: s-maj=28.1km s-min=14.4km az=59.0*

PGC ***29*** *08:02:46.4±0.1, 48.73N×128.92W, h10km, MLSn3.0/8, Mw3.6/8, 224km west of Tofino, Bc Vancouver Island, Canada Region*

ISC 29 08:02:48.6±1.1, 48.98N±0.06×128.68W±0.07, h10km, n32, σ1s55/34, mb3.7/4, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WOSB	**Woss**	**1.81**	**49**	Pn		**Pn**		**08 03 19.7**	**-0.2**
TOFB	**Tofino**	**1.83**	**84**	Pn		**Pn**		**08 03 18.4**	**-1.6**
TOFB				Sn		**Sn**		**08 03 42.0**	**-1.3**
PHC	**Port Hardy**	**1.91**	**25**	Pn		**Pn**		**08 03 20.4**	**-0.6**
PHC				Sn		**Sb**		**08 03 46.3**	**-0.9**
BTB	**Buttle Lake**	**2.13**	**76**	Pn		**Pn**		**08 03 23.4**	**-1.0**
BTB				Sn		**Sn**		**08 03 50.9**	**0.0**
NCRB	**Newcastle Ridg**	**2.22**	**49**	Pn		**Pn**		**08 03 25.9**	**+0.3**
NCRB				Sn		**Sb**		**08 03 56.1**	**-0.3**
BFSB	**Bamfield**	**2.34**	**92**	Sn		**Sn**		**08 03 54.3**	**-1.6**
CBB	**Campbell River**	**2.40**	**63**	Pn		**Pn**		**08 03 27.9**	**0.0**
CBB				Sn		**Sb**		**08 03 59.1**	**-2.4**
MGB	**Mount Grey**	**2.63**	**88**	Pn		**Pn**		**08 03 28.9**	**-2.3**
MGB				Sn		**Sn**		**08 04 01.5**	**-1.7**
TXB	**Texada**	**2.87**	**74**	Pn		**Pn**		**08 03 34.1**	**-0.2**
NLLB	**Nanaimo Lost L**	**3.09**	**84**	Pn		**Pn**		**08 03 37.1**	**-0.3**
NLLB				Sn		**Sn**		**08 04 16.2**	**+1.8**
SHB	**Sechelt**	**3.21**	**77**	Pn		**Pn**		**08 03 39.1**	**+0.1**
BBB	**Bella Bella**	**3.23**	**6**	Pn		**Pn**		**08 03 39.7**	**+0.5**
	41nm,0.3s,baz=206,slow=12,SNR=166								
BBB				Sn		**Sn**		**08 04 18.6**	**+1.0**
	12nm,0.3s,baz=155,slow=22,SNR=8.8								
BBB	**Bella Bella**	**3.23**	**6**	Pn		**Pn**		**08 03 39.0**	**-0.2**
BBB				Sn		**Sn**		**08 04 18.4**	**+0.8**
LLLB	**Lillooet**	**4.70**	**67**	Pn		**Pn**		**08 04 00.6**	**+1.1**
NEW	**Newport**	**7.70**	**91**	Pn		**Pn**		**08 04 44.8**	**+4.2**
	0.3nm,0.3s,baz=291,slow=8.6,SNR=2.9								
NEW				LR		LR		08 07 48.7	
	comp=Z,140nm,18.1s,baz=264,slow=37								
YBH	**Yreka Blue Hor**	**8.38**	**149**	Pn		**Pn**		**08 04 51.3**	**+1.2**
	0.0nm,0.3s,baz=12,slow=5.3,SNR=5.2								
ELK	**Elko**	**12.59**	**126**	LR		LR		08 10 21.9	
	comp=Z,66nm,18.1s,baz=278,slow=36								
NVAR	**Mina Array Bea**	**12.93**	**141**	Pn		**Pn**		**08 05 53.0**	**+0.4**
	0.1nm,0.3s,baz=335,slow=10,SNR=5.1								
PDAR	**Pinedale Array**	**14.68**	**108**	Pn		**Pn**		**08 06 18.8**	**+2.3**
	0.0nm,0.3s,baz=304,slow=9.6,SNR=3.2								
PDAR				LR		LR		08 12 14.8	
	comp=Z,69nm,20.2s,baz=289,slow=38								
YKA	**Yellowknife Ar**	**15.63**	**25**	Pn		**Pn**		**08 06 28.3**	**-0.4**
	0.0nm,0.3s,baz=215,slow=11,SNR=5.0								
YKA				LR		LR		08 12 04.7	
	comp=Z,420nm,18.0s,baz=0.0,slow=35								
ILAR	**Eielson Array**	**18.57**	**335**	P		**P**		**08 07 04.8**	**-0.6**
	0.1nm,0.3s,baz=153,slow=12,SNR=11								
INK	**Inuvik**	**19.53**	**355**	P		**Pn**		**08 07 16.8**	**-0.3**
	0.1nm,0.3s,baz=167,slow=9.3,SNR=5.9								
ULM	**Lac du Bonnet**	**21.20**	**74**	P		**P**		**08 07 37.3**	**+3.2**
	2.6nm,0.7s,baz=274,slow=8.8,SNR=4.1								
ANMO	**Albuquerque**	**21.57**	**122**	P		**P**		**08 07 39.9**	**+1.5**
	0.3nm,0.3s,baz=261,slow=13,SNR=4.3								
ANMO				LR		LR		08 16 46.1	
	comp=Z,19nm,20.9s,baz=255,slow=38								
H11N2	**WAKE ISLAND Hy**	**58.64**	**264**	T		T		09 16 00.2	
	baz=44,slow=75,SNR=27								
H11N3	**WAKE ISLAND Hy**	**58.64**	**264**	T		T		09 16 00.6	
	baz=44,slow=75,SNR=22								
H11N1	**WAKE ISLAND Hy**	**58.66**	**264**	T		T		09 16 01.4	
	baz=44,slow=75,SNR=20								
H11S1	**WAKE ISLAND Hy**	**59.65**	**263**	T		T		09 17 17.6	
	baz=44,slow=74,SNR=7.0								
H11S2	**WAKE ISLAND Hy**	**59.66**	**263**	T		T		09 17 13.7	
	baz=44,slow=74,SNR=12								
H11S3	**WAKE ISLAND Hy**	**59.66**	**263**	T		T		09 17 15.2	
	baz=44,slow=74,SNR=5.3								
ZALV	**Zalesovo Beam**	**73.61**	**340**	P		**P**		**08 14 19.8**	**-1.8**
	0.9nm,0.7s,baz=32,slow=5.8,SNR=3.6								
MKAR	**Makanchi Array**	**80.88**	**339**	P		**P**		**08 15 00.6**	**-2.0**
	0.6nm,0.7s,baz=32,slow=12,SNR=7.6								

IDC ***29*** *08:19:14.4±1.4, 23.82N×121.74E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/64, mbtmp3.6/6, ML3.6/1, MS3.1/6, Ms1 3.1/6, ms1mx2.6/51, Error ellipse: s-maj=40.4km s-min=27.9km az=54.0*

NIED ***29*** *08:19:16.6, 24.02N×121.65E, h0km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr4.06; Mθθ-3.51; Mφφ-0.55; Mrθ5.48; Mrφ-1.61; Mθφ2.16; Fault plane solution: M₀7.20000×10¹⁴ NP1:φ₀68.00000°, δ72.00000°, λ91.00000°. NP2:φ₀244.00000°, δ18.00000°, λ86.00000°.*

ASIES ***29*** *08:19:16.8, 24.03N×121.59E, h22km, MW3.6*
JMA ***29*** *08:19:16.5, 24.02N×121.65E, h0km, M3.5*
TAP ***29*** *08:19:17.3, 24.02N×121.61E, h7km, ML3.9, C*

ISC 29 08:19:16.9±0.8, 24.01N±0.01×121.68E±0.02, h9km±5km, n135, σ0s88/217, mb3.5/5, MS3.1/6, 4C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**244**	⇑*i*P		**Pg**		**08 19 19.4**	**+0.4**
	baz=179								
HWA				*i* S		**Sg**		**08 19 21.0**	**+0.6**
	baz=179								
TWD	**Chiawan**	**0.10**	**313**	⇓*i*P		**Pg**		**08 19 19.4**	**0.0**
	baz=353								
TWD				*i* S		**Sg**		**08 19 20.6**	**-0.5**
	baz=353								
NACB	**Ninganchiao**	**0.18**	**335**	⇓*i*P		**Pg**		**08 19 20.7**	**0.0**
	baz=2.0								
NACB				*i* S		**Sg**		**08 19 23.1**	**-0.1**
	baz=2.0								
ETLH	**Xiulin Townshi**	**0.27**	**318**	⇓*i*P		**Pg**		**08 19 22.2**	**-0.1**
	baz=327								
ETLH				*i* S		**Sg**		**08 19 25.7**	**-0.2**
	baz=327								
ESL	**Shilin**	**0.30**	**229**	P		**Pg**		**08 19 22.6**	**-0.2**
	baz=226								
ESL

TWC S Sg 08 19 37.4 +0.5
baz=11
NDS Dongshan 0.62 3 P Pg 08 19 29.3 +0.4
baz=9.0
NDS S Sg 08 19 37.6 +0.5
baz=9.0
ENTT Nioudou 0.64 351⇓*iP* Pg 08 19 29.7 +0.5
baz=357
ENTT *i*S Sg 08 19 38.4 +0.8
baz=357
WPL Puli Township 0.66 270 P Pg 08 19 29.8 +0.2
baz=269
WPL *e*S Sg 08 19 38.3 +0.1
baz=269
DPDB Guoxing 0.69 272 *e*P Pg 08 19 30.6 +0.4
baz=271
DPDB *e*S Sg 08 19 39.9 +0.7
baz=271
SSLB Suanglung 0.70 252 P Pg 08 19 30.2 -0.1
baz=261
SSLB S Sg 08 19 38.2 -1.3
baz=261
YULB Yu-li 0.71 210 P Pg 08 19 30.2 -0.3
baz=214
YULB *e*S Sb 08 19 42.1 +0.8
baz=214
TWE Neicheng 0.71 359⇓*iP* Pb 08 19 31.2 -0.3
baz=6.0
TWE *i*S Sg 08 19 40.1 +0.3
baz=6.0
YHNB Yeheng 0.71 337 *i*P Pg 08 19 31.2 +0.5
baz=342
YHNB S Sg 08 19 40.2 +0.2
baz=342
WHP Taichung City 0.72 292 P Pg 08 19 31.2 +0.4
baz=284
WHP S Sg 08 19 40.7 +0.5
baz=284
SMLT Sun Moon Lake 0.72 260⇑*iP* Pg 08 19 30.9 +0.1
baz=258
SMLT *i*S Sg 08 19 39.6 -0.7
baz=258
NSK Sanguang 0.72 336⇓*iP* Pg 08 19 31.3 +0.4
baz=342
NSK *i*S Sg 08 19 40.4 0.0
baz=342
EYUL Yuli 0.74 207 *e*P Pg 08 19 31.6 +0.6
baz=215
TWF1 Yuli 0.74 208 *e*P Pg 08 19 31.6 +0.4
baz=211
ILA Ilan 0.76 5 *e*P Pg 08 19 32.0 +0.5
baz=11
ILA *e*S Sb 08 19 42.9 +0.2
baz=11
NWLT Wulai 0.78 348 P Pg 08 19 32.4 +0.4
baz=353
NWLT S Sg 08 19 42.3 +0.1
baz=353
NTC Toucheng 0.85 9 *e*P Pg 08 19 33.7 +0.4
baz=3.0
NSTT Nanjuang 0.87 315 *e*P Pg 08 19 34.1 +0.4
baz=318
NSTT *e*S Sg 08 19 45.2 +0.1
baz=318
LIOB Emei 0.88 317 P Pb 08 19 34.5 +0.2
baz=319
LIOB *e*S Sb 08 19 45.8 -0.3
baz=319
FULB Fuli 0.88 204 *e*P Pg 08 19 34.5 +0.7
baz=215
WJS Zhushan 0.89 258 *e*P Pb 08 19 35.4 +0.8
baz=256
WJS *e*S Sb 08 19 47.7 +1.2
baz=256
WWF Wufeng 0.90 272 *e*P Pn 08 19 35.9 +0.2
baz=271
WNT1 Nantou City 0.92 264 *e*P Pb 08 19 35.9 +0.9
baz=262
WNT1 *e*S Sn 08 19 49.1 -0.3
baz=262
TCU Taichung 0.93 279 *e*P Pn 08 19 36.2 +0.1
baz=279
TCU *e*S Sn 08 19 49.4 -0.2
baz=279
NSY Sanyi 0.93 296 *e*P Pn 08 19 36.3 +0.1
baz=310
NSY *e*S Sn 08 19 49.8 +0.1
baz=310
ALS Alishan 0.94 238 P Pg 08 19 35.3 +0.3
baz=235
ALS *e*S Sn 08 19 50.4 0.0
baz=235
CHKT Chengkung 0.95 198 *i*P Pg 08 19 35.4 +0.2
baz=172
CHKT S Sb 08 19 50.1 +1.8
baz=172
NHDH Xindian Distri 0.96 352 *e*P Pb 08 19 36.1 +0.3
baz=356
NHDH *e*S Sg 08 19 47.8 0.0
baz=356
NMLH Miaoli 0.96 303 *e*P Pn 08 19 36.9 +0.2
baz=305
NMLH *e*S Sb 08 19 49.4 +0.7
baz=305
TIPB Shuangxi 0.97 8 P Pg 08 19 35.8 +0.2
baz=3.0
TIPB *e*S Sg 08 19 48.3 +0.2
baz=3.0
TWA Mucha 0.97 355⇓*iP* Pb 08 19 36.3 +0.3
baz=348
TWA S Sb 08 19 48.9 0.0
baz=348
HSN1 Hsinchu 0.97 322 *e*P Pb 08 19 36.3 +0.3
baz=324
TATO Taipei 0.98 350 P Pb 08 19 36.3 +0.3
baz=354
TATO S Sg 08 19 48.2 -0.2
baz=354
NJN Zhunan 1.00 313 *e*P Pn 08 19 38.0 +0.9
baz=323
CHN5 Tsauling 1.00 246⇓*iP* Pb 08 19 37.5 +0.9
baz=232
CHN5 *i*S Sn 08 19 51.7 0.0
baz=232
SBCB Hsinchu 1.00 321 *e*P Pn 08 19 37.2 -0.1
baz=324
SBCB *e*S Sn 08 19 51.2 -0.3
baz=324
WDJ Dajia District 1.00 290 *e*P Pn 08 19 37.6 +0.4
baz=291
WDJ *e*S Sn 08 19 51.8 +0.2
baz=291
ELDTW Lidau 1.02 217 *e*P Pg 08 19 36.0 -0.5
baz=205
ELDTW *e*S Sg 08 19 50.8 +1.1
baz=205
HSN Hsinchu 1.02 321 *e*P Pn 08 19 38.7 +1.3
baz=326
HSN *e*S Sn 08 19 52.5 +0.6
baz=326
WCHH Zhanghua 1.02 274 *e*P Pn 08 19 37.7 +0.2
baz=274
WCHH *e*S Sb 08 19 51.7 +1.3
baz=274
TWB1 Santiao Chiao 1.03 16 P Pg 08 19 37.0 +0.2
baz=12
TWB1 *e*S Sg 08 19 50.3 +0.1
baz=12
TAP Taipei 1.04 351 *e*S Sb 08 19 51.0 +0.2
baz=356
NCUH Zhongli 1.05 335 *e*P Pn 08 19 38.6 +0.6
baz=349
NCUH *e*S Sb 08 19 52.2 +0.9
baz=349
NCU National Centr 1.05 335 *e*P Pn 08 19 38.6 +0.7
baz=349
NCU *e*S Sn 08 19 54.2 +1.4
baz=349
NWF Wu-fen Shan 1.06 5 P Pb 08 19 38.0 +0.4
baz=8.0
WFSB Wu-fen Shan 1.06 5 *e*P Pb 08 19 38.0 +0.5
baz=9.0
WFSB *e*S Sg 08 19 50.9 -0.2
baz=9.0
EDH Donghe 1.09 198 *e*P Pg 08 19 36.7 -1.1
baz=196
EDH *e*S Sb 08 19 53.1 +0.9
baz=196

WDLH Douliu 1.09 253 *e*P Pb 08 19 38.5 +0.6
baz=252
WDLH *e*S Sb 08 19 53.5 +1.2
baz=252
TWS1 Kuangyinshan 1.11 348 P Pn 08 19 39.5 +0.8
baz=1.0
TWS1 S Sn 08 19 54.5 +0.4
baz=1.0
YM01 YM01 1.14 355 P Pn 08 19 39.5 +0.4
baz=359
YM01 S Sn 08 19 54.7 -0.1
baz=359
TNOU National Taiwa 1.14 4 *e*P Pb 08 19 39.0 +0.2
baz=6.0
STYH Taoyuan 1.18 225 *e*P Pg 08 19 38.5 -0.9
baz=223
STYH *e*S Sg 08 19 55.1 +0.4
baz=223
YM08 YM08 1.18 356 *e*P Pb 08 19 39.7 +0.2
baz=358
ANP Anpu 1.18 353 *e*P Pn 08 19 40.1 +0.4
baz=355
CHN4 Tsaushan 1.19 237⇓*iP* Pn 08 19 40.4 +0.6
baz=222
CHN4 *i*S Sn 08 19 58.2 +2.1
baz=222
TPUB Ta-pu 1.19 234 P Pg 08 19 40.2 +0.4
baz=219
TPUB S Sn 08 19 56.8 +0.6
baz=219
STYT Tauyuan 1.19 225 *e*P Pg 08 19 39.5 -0.3
baz=223
STYT *e*S Sn 08 19 56.7 +0.4
baz=223
LONT Longtian 1.21 205 *e*P Pb 08 19 39.3 -0.7
baz=204
WTK Tuku 1.22 255 *e*P Pb 08 19 40.6 +0.4
baz=254
WTK *e*S Sn 08 19 57.5 +0.6
baz=254
WTP Ta-pu 1.24 232⇓*iP* Pn 08 19 40.9 +0.4
baz=230
WTP S Sn 08 19 59.1 +1.7
baz=230
JYNG Yonaguni jima 1.24 69 P Pg 08 19 40.9 +0.2
JYNG S Sn 08 19 58.5 +1.2
CHY Chiayi 1.26 246 *e*P Pg 08 19 41.8 +0.8
baz=259
CHY *e*S Sg 08 19 58.2 +0.8
baz=259
TWY Chenhua 1.26 357 *e*P Pg 08 19 41.9 +0.8
baz=347
YOJ Yonaguni jima 1.30 69 P Pb 08 19 41.8 +0.3
YOJ *e*S Sn 08 20 00.2 +1.4
YOJ Yonaguni jima 1.30 69 *e*P Pn 08 19 41.5 +0.2
baz=71
YOJ *e*S Sn 08 19 59.4 +0.7
baz=71
TWG Pinlang 1.31 205 *e*P Pn 08 19 39.2 -2.2
baz=205
TWGBT Beinan 1.31 205 *e*P Pn 08 19 38.9 -2.5
baz=205
TWK Hsinying 1.32 236 P Pn 08 19 42.1 +0.5
baz=235
TWK S Sn 08 20 00.5 +1.2
baz=235
CHN1 Nanshi 1.34 232 P Pn 08 19 42.5 +0.7
baz=232
CHN1 S Sn 08 20 02.2 +2.5
baz=232
LDUT Ludao 1.34 188 *e*P Pn 08 19 39.8 -2.0
baz=171
LDUT *e*S Sb 08 19 59.0 -0.6
baz=171
SGST Jiashian 1.36 228 *e*P Pn 08 19 42.6 +0.4
baz=226
SGST *e*S Sg 08 20 02.3 +1.5
baz=226
WSF Szhu 1.38 255 *e*P Pb 08 19 43.6 +0.7
baz=254
WSF *e*S Sg 08 20 02.2 +0.8
baz=254
SLGT Liugui 1.39 223 *e*P Pg 08 19 44.2 +0.7
baz=222
SLGT *e*S Sg 08 20 03.6 +2.2
baz=222
ICHU Yijhu 1.44 244 *e*P Pb 08 19 44.5 +0.6
baz=244
ICHU *e*S Sg 08 20 04.3 +1.3
baz=244
CHN8 Yiju 1.50 244 *e*S Sg 08 20 06.3 +1.3
baz=245
ECL Taimali 1.56 205 *e*P Pn 08 19 42.6 -2.2
baz=193
SCST Cishan 1.56 224 *e*P Pb 08 19 46.3 +0.3
baz=225
SCST *e*S Sg 08 20 08.9 +1.8
baz=225
SSD Sandimen 1.58 218 *e*P Pn 08 19 46.3 +1.1
baz=217
SSD *e*S Sg 08 20 08.4 +0.6
baz=217
TSMG Majia 1.61 216 P Pn 08 19 46.5 +1.0
baz=216
TSMG S Sg 08 20 08.9 +0.3
baz=216
TWM1 Shoushan 1.65 225 *e*P Pb 08 19 48.6 +1.0
baz=225
PCYT Pengchaiyu 1.65 12 *e*P Pb 08 19 47.3 -0.3
baz=12
MASBT Mashibuluo 1.69 215 *e*P Pn 08 19 46.4 -0.3
baz=216
MASBT *e*S Sb 08 20 10.4 +0.8
baz=216
EAST Anshuo 1.79 205 *e*P Pn 08 19 46.4 -1.7
baz=194
SCZT Fangliau 1.90 211 *e*P Pn 08 19 51.3 +1.8
baz=213
IRIF Iriomote-Funau 1.90 80 P Pn 08 19 50.4 +0.8
IRIF *e*S Sb 08 20 15.2 -0.5
HATJ Hateruma jima 1.95 88 S Sb 08 20 17.8 +0.8
SLIU Shizi 1.96 205 *e*P Pb 08 19 52.3 -0.5
baz=198
PNG Penghu 1.99 258 *e*P Pn 08 19 51.5 +0.7
baz=258
PNG *e*S Sn 08 20 17.2 +1.3
baz=258
WDGT Dungji 2.00 248 *e*P Pn 08 19 51.6 +0.7
baz=250
WDGT *e*S Sn 08 20 16.4 +0.5
baz=250
JKRS Kuro-shima 2.14 83 P Pn 08 19 54.2 +1.3
JKRS S Sb 08 20 22.2 -0.4
TWKBT Hengchun 2.21 201 *e*P Pn 08 19 54.6 +0.9
baz=189
VCHM Qimei 2.21 249 *e*P Pn 08 19 53.7 -0.1
baz=235
VWUC VWUC 2.25 296 *e*P Pn 08 19 53.7 -0.7
baz=296
JIJ Ishigaki jima 2.28 81 P Pn 08 19 54.9 +0.1
JIJ *e*S Sn 08 20 23.6 +0.6
JISG Ishigakijimahi 2.47 76 P Pn 08 19 57.8 +0.4
JISG S Sn 08 20 27.8 +0.1
PTMZ Houxiangcun 2.54 294 *e*P Pn 08 19 57.7 -0.7
baz=294
MATB Ma-tsu 2.65 324 *e*P Pn 08 19 59.6 -0.2
baz=322
JTJ Tarama 2.83 77 P Pn 08 20 03.6 +1.3
JTJ *e*S Sn 08 20 38.2 +1.6
LYJJ Jianjiangzhen 3.07 326 *e*P Pn 08 20 04.9 -0.7
baz=324
MHZQ Yeshan 3.18 311 *e*P Pn 08 20 07.3 +0.2
baz=310
JOW Kunigami 6.59 63 Pn Pn 08 20 53.6 -0.5
2.6nm,0.3s,baz=138,slow=15,SNR=15
JOW Sn Sn 08 22 14.5 +5.0
0.4nm,0.3s,baz=113,slow=22,SNR=2.0
KSRS Korea Array 14.43 20 Pn P 08 22 46.2 -2.1
0.1nm,0.3s,baz=202,slow=13,SNR=3.6
KLR Kul'dur 26.39 15 LR LR 08 35 20.9
comp=Z,24nm,18.1s,baz=136,slow=36
SONM Songino Array 26.70 337 P P 08 24 58.4 +1.8
0.3nm,0.4s,baz=154,slow=7.9,SNR=2.3
SONM LR LR 08 36 39.3
comp=Z,32nm,18.8s,baz=84,slow=39
MKAR Makanchi Array 38.78 316 P P 08 26 41.9 +0.1
0.3nm,0.5s,baz=123,slow=7.7,SNR=1.5
ZALV Zalesovo Beam 40.64 327 P P 08 26 57.1 0.0
0.4nm,0.4s,baz=113,slow=11,SNR=3.6
H11S3 WAKE ISLAND Hy 42.17 89 T T 09 12 58.7
baz=275,slow=74,SNR=8.0
H11S1 WAKE ISLAND Hy 42.18 89 T T 09 12 59.5
baz=275,slow=74,SNR=6.4
H11S2 WAKE ISLAND Hy 42.19 89 T T 09 12 52.9
baz=275,slow=74,SNR=5.8
WRA Warramunga Arr 45.40 163 P P 08 27 33.6 -2.5
0.4nm,0.5s,baz=344,slow=8.6,SNR=2.2
ASF Jabal al Asfar 73.44 298 LR LR 09 05 58.2
comp=Z,5.6nm,18.5s,baz=204,slow=38
EIL Elat 75.83 296 LR LR 09 06 00.6
comp=Z,17nm,18.8s,baz=345,slow=37
HFS Hagfors 77.94 331 LR LR 09 08 57.7
comp=Z,23nm,19.7s,baz=300,slow=38
VRAC Vranov 81.36 320 LR LR 09 08 31.3
comp=Z,21nm,19.9s,baz=191,slow=36
YKA Yellowknife Ar 82.95 23 P P 08 31 41.3 -0.8
0.2nm,0.6s,baz=314,slow=4.7,SNR=10

*IDC **29** 08:21:34.2±1.4,27.°42N×85.°60E,h0km,mb3.7/8,*
mb1 3.9/9,mb1mx3.5/66,mbtmp3.7/9,ML3.9/1, Error
ellipse: s-maj=54.2km s-min=20.2km az=63.0
ISC 29 08:21:36.1±1.5,**27.°5N**±0.°2×**85.°7E**±0.°3,**h10**km,**n10,**
σ0.80/10,mb3.8/8,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AAK	**Ala-Archa**	**17.70**	**332**	P		**P**	**08 25 45.2**	**+1.5**
	0.2nm,0.3s,baz=139,slow=9.3,SNR=2.1							
MKAR	**Makanchi Array**	**19.50**	**353**	P		**P**	**08 26 03.0**	**-0.3**
	0.4nm,0.3s,baz=171,slow=12,SNR=12							
KURBB	**Kurchatov Arra**	**23.78**	**349**	P		**P**	**08 26 48.8**	**+0.1**
	1.1nm,0.8s,baz=167,slow=9.3,SNR=6.7							
SONM	**Songino Array**	**25.97**	**33**	P		**P**	**08 27 09.7**	**+0.8**
	1.4nm,0.6s,baz=214,slow=10,SNR=7.8							
ZALV	**Zalesovo Beam**	**26.48**	**359**	P		**P**	**08 27 12.7**	**-0.7**
	0.8nm,0.3s,baz=169,slow=8.5,SNR=4.7							
FINES	**FINESS Array B**	**51.84**	**328**	P		**P**	**08 30 43.5**	**-0.6**
	1.8nm,0.8s,baz=141,slow=9.0,SNR=3.9							
ARCES	**ARCESS Array B**	**54.23**	**338**	P		**P**	**08 31 01.7**	**0.0**
	1.9nm,0.8s,baz=100,slow=7.9,SNR=6.0							
WRA	**Warramunga Arr**	**66.60**	**130**	P		**P**	**08 32 27.1**	**+0.2**
	0.4nm,0.6s,baz=324,slow=6.6,SNR=7.8							
ASAR	**Alice Springs**	**68.88**	**133**	P		**P**	**08 32 41.5**	**+0.2**
	0.2nm,0.6s,baz=327,slow=7.8,SNR=2.1							
YKA	**Yellowknife Ar**	**88.90**	**9**	P		**P**	**08 34 29.7**	**-0.7**
	0.1nm,0.6s,baz=336,slow=4.7,SNR=3.5							

*SOME **29** 08:50:20.2,44.°77N×81.°83E,h5km*
*NNC **29** 08:50:22.7±1.3,44.°74N×81.°85E,h0km,mb3.6,mpv3.4,*
Error ellipse: s-maj=15.2km s-min=6.8km az=125.0
ISC 29 08:50:20.5±1.9,**44.72N**±0.°05×**81.98E**±0.°08,**h3**km±14km,
n19,σ1.45/32,2C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.62**	**257**	*e*P		**Pg**	**08 50 52.0**	**+0.5**
	10nm,0.2s							
DJR					*e*S	**Sg**	**08 51 15.1**	**+2.7**
	19nm,0.2s							
DJR	**Jarkent**	**1.62**	**257**	P		**Pg**	**08 50 52.0**	**+0.5**
	10nm,0.2s							
DJR					S	**Sg**	**08 51 15.1**	**+2.7**
	19nm,0.2s							
KTMS	**Ketmen**	**1.73**	**223**	*e*P		**Pb**	**08 50 53.3**	**+0.3**
	7.6nm,0.3s							
KTMS					*e*S	**Sg**	**08 51 17.2**	**+1.0**
	56nm,0.3s							
KTMS	**Ketmen**	**1.73**	**223**	P		**Pb**	**08 50 53.3**	**+0.3**
	7.6nm,0.3s							
KTMS					S	**Sg**	**08 51 17.2**	**+1.0**
	56nm,0.3s							
MK31	**Makanchi Array**	**2.08**	**6**	Pn		**Pb**	**08 50 58.7**	**-0.3**
	9.1nm,0.4s,baz=190,slow=15,SNR=283							
MK31					⇓Sn	**Sb**	**08 51 26.3**	**+1.0**
	12nm,0.5s,baz=190,slow=28,SNR=3.5							
MAKZ	**Makanchi**	**2.09**	**360**	⇑Pn		**Pb**	**08 50 58.8**	**-0.3**
	5.5nm,0.3s							
MAKZ					⇓Sn	**Sg**	**08 51 26.6**	**-0.9**
	13nm,0.6s							
PDGK	**Podgornoye**	**2.27**	**233**	Pg		**Pb**	**08 51 01.6**	**-0.6**
	5.3nm,0.3s							
PDGK					Lg	Lg	08 51 31.5	
	8.0nm,0.7s							
PDGK	**Podgornoye**	**2.27**	**233**	⇑Pn		**Pb**	**08 51 01.4**	**-0.9**
	5.7nm,0.5s							
PDGK					⇓Sn	**Sg**	**08 51 31.7**	**-1.8**
	14nm,0.7s							
SHLS	**Shalkode**	**2.40**	**230**	*e*P		**Pn**	**08 51 00.9**	**+0.1**
	19nm,0.1s							
SHLS					*e*S	**Sn**	**08 51 30.2**	**-0.6**
	46nm,0.4s							
SHLS	**Shalkode**	**2.40**	**230**	Pg		**Pn**	**08 51 00.9**	**+0.1**
	19nm,0.1s							
SHLS					Lg	Lg	08 51 30.2	
	46nm,0.4s							
UZB	**Uzynbulak**	**2.66**	**235**	*e*P		**Pb**	**08 51 07.7**	**-1.1**
	5.0nm,0.3s							
UZB					*e*S	**Sb**	**08 51 41.9**	**0.0**
	7.5nm,0.3s							
UZB	**Uzynbulak**	**2.66**	**235**	Pg		**Pb**	**08 51 07.7**	**-1.1**
	5.0nm,0.3s							
UZB					Lg	Lg	08 51 41.9	
	7.5nm,0.3s							
KPKS	**Kokpek**	**2.69**	**243**	*e*P		**Pb**	**08 51 09.2**	**-0.1**
	13nm,0.3s							
KPKS					*e*S	**Sg**	**08 51 44.4**	**-2.5**
	29nm,0.3s							
ARXS	**Arharly**	**3.02**	**262**	*e*P		**Pb**	**08 51 14.7**	**-0.3**
	8.9nm,0.3s							
ARXS					*e*S	**Sg**	**08 51 53.8**	**-3.7**
	14nm,0.4s							
ARXS	**Arharly**	**3.02**	**262**	Pg		**Pb**	**08 51 14.7**	**-0.3**
	8.9nm,0.3s							
ARXS					Lg	Lg	08 51 53.8	
	14nm,0.4s							
SATY	**Saty**	**3.07**	**239**	*e*P		**Pb**	**08 51 16.1**	**+0.2**
	2.3nm,0.1s							
SATY					*e*S	**Sg**	**08 51 56.3**	**-3.0**
	17nm,0.3s							
SATY	**Saty**	**3.07**	**239**	Pg		**Pb**	**08 51 16.1**	**+0.2**
	2.3nm,0.1s							
SATY					Lg	Lg	08 51 56.3	
	17nm,0.3s							
KTBS	**Karatobe**	**3.94**	**257**	*e*P		**Pb**	**08 51 30.3**	**-0.4**
	2.7nm,0.6s							
KTBS					*e*S	**Sb**	**08 52 20.5**	**+1.8**
	10.0nm,0.5s							
KTBS	**Karatobe**	**3.94**	**257**	Pg		**Pb**	**08 51 30.3**	**-0.4**
	2.7nm,0.6s							
KTBS					Lg	Lg	08 52 20.5	
	10.0nm,0.5s							

*KRNET **29** 08:54:30.4±0.1,42.°45N×78.°43E,h19km,mb3.4*
*NNC **29** 08:54:30.6±0.6,42.°48N×78.°43E,h0km,mb3.4,mpv3.7,*
Error ellipse: s-maj=4.5km s-min=1.8km az=166.0
*SOME **29** 08:54:30.6,42.°45N×78.°42E,h15km*
ISC 29 08:54:31.2±0.9,**42.°56N**±0.°03×**78.°39E**±0.°02,**h7**km±7km,
n66,σ1.49/124,15C-25D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.07**	**176**	⇑*iP*		**Pg**	**08 54 33.3**	**+0.1**
	baz=38							
PRZ				⇑*iS*		**Sg**	**08 54 35.6**	**+0.9**
	baz=38							
SATY	**Saty**	**0.50**	**1**	⇓*eP*		**Pb**	**08 54 42.1**	**-0.4**
	baz=58							
SATY					⇓*eS*	**Sb**	**08 54 50.6**	**+0.4**
	baz=58							
SATY	**Saty**	**0.50**	**1**	⇓*eP*		**Pb**	**08 54 42.1**	**-0.4**
	32nm,0.1s							
SATY					*e*S	**Sb**	**08 54 50.6**	**+0.4**
	123nm,0.1s							
SATY	**Saty**	**0.50**	**1**	P		**Pb**	**08 54 42.1**	**-0.4**
	32nm,0.1s							
SATY					S	**Sb**	**08 54 50.6**	**+0.4**
	123nm,0.1s							
ANVS	**Anan'yevo**	**0.58**	**293**	⇑*iP*		**Pb**	**08 54 43.1**	**-0.8**
	baz=1.0							
ANVS				⇑*iS*		**Sb**	**08 54 52.2**	**-0.2**
	baz=1.0							
UZB	**Uzynbulak**	**0.75**	**38**	⇓*eP*		**Pb**	**08 54 45.8**	**-1.0**

	baz=32								
UZB				⇓	*e*	S	**Sb**	**08 54 56.9**	**-0.4**
	baz=32								
UZB	**Uzynbulak**	**0.75**	**38**	⇓	*e*	P	**Pb**	**08 54 45.8**	**-1.0**
	12nm,0.1s								
UZB					*e*	S	**Sb**	**08 54 56.9**	**-0.4**
	144nm,0.1s								
UZB	**Uzynbulak**	**0.75**	**38**			P	**Pb**	**08 54 45.8**	**-1.0**
	12nm,0.1s								
UZB						S	**Sb**	**08 54 56.8**	**-0.5**
	144nm,0.1s								
KPKS	**Kokpek**	**0.93**	**13**	⇓	*e*	P	**Pn**	**08 54 49.6**	**-1.3**
	baz=10.0								
KPKS				⇓	*e*	S	**Sn**	**08 55 03.4**	**-1.2**
	baz=10.0								
KPKS	**Kokpek**	**0.93**	**13**	⇓	*e*	P	**Pn**	**08 54 49.6**	**-1.3**
	131nm,0.1s								
KPKS					*e*	S	**Sn**	**08 55 03.4**	**-1.2**
	101nm,0.2s								
SHLS	**Shalkode**	**0.99**	**52**		*e*	P	**Pn**	**08 54 54.5**	**+2.8**
	baz=56								
SHLS					*e*	S	**Sn**	**08 55 11.8**	**+5.8**
	baz=56								
SHLS	**Shalkode**	**0.99**	**52**		*e*	P	**Pn**	**08 54 54.5**	**+2.8**
	9.9nm,0.2s								
SHLS					*e*	S	**Sn**	**08 55 11.8**	**+5.8**
	68nm,0.3s								
SHLS	**Shalkode**	**0.99**	**52**			P	**Pn**	**08 54 54.5**	**+2.8**
	9.9nm,0.2s								
SHLS						S	**Sn**	**08 55 11.8**	**+5.8**
	68nm,0.3s								
KDJ	**Kajisay**	**0.99**	**245**	⇓	*i*	P	**Pg**	**08 54 48.6**	**-1.7**
	baz=51								
KDJ				⇓	*i*	S	**Sg**	**08 55 01.2**	**-2.1**
	baz=51								
PDGK	**Podgornoye**	**1.12**	**46**			P	**Pn**	**08 54 51.9**	**-1.5**
	2.9nm,0.1s								
PDGK						S	**Sn**	**08 55 07.4**	**-1.8**
	15nm,0.2s								
PDGK	**Podgornoye**	**1.12**	**46**	⇑		P	**Pn**	**08 54 52.5**	**-0.9**
	1.8nm,0.2s								
PDGK				⇓		S	**Sn**	**08 55 07.2**	**-1.9**
	7.8nm,0.2s								
KOTS	**Kotyrbulak**	**1.16**	**306**	⇓	*e*	P	**Pn**	**08 54 53.7**	**-0.4**
	baz=10.0								
KOTS				⇓	*e*	S	**Sn**	**08 55 10.4**	**+0.1**
	baz=10.0								
KOTS	**Kotyrbulak**	**1.16**	**306**	⇓	*e*	P	**Pn**	**08 54 53.7**	**-0.4**
	121nm,0.2s								
KOTS					*e*	S	**Sn**	**08 55 10.4**	**+0.1**
	88nm,0.4s								
KOTS	**Kotyrbulak**	**1.16**	**306**			P	**Pn**	**08 54 53.6**	**-0.5**
	121nm,0.2s								
KOTS						S	**Sn**	**08 55 10.2**	**-0.1**
	88nm,0.4s								
MDOK	**Medeo**	**1.16**	**302**		*e*	P	**Pb**	**08 54 53.5**	**-0.2**
	baz=6.0								
MDOK					*e*	S	**Sn**	**08 55 10.0**	**-0.3**
	baz=6.0								
MDOK	**Medeo**	**1.16**	**302**		*e*	P	**Pb**	**08 54 53.5**	**-0.2**
	31nm,0.2s								
MDOK					*e*	S	**Sn**	**08 55 10.0**	**-0.3**
	86nm,0.5s								
MDOK	**Medeo**	**1.16**	**302**			Pg	**Pb**	**08 54 53.5**	**-0.2**
	31nm,0.2s								
MDOK						Lg	Lg	08 55 10.0	
	86nm,0.5s								
TNSS	**Tian-Shan**	**1.17**	**295**		*e*	P	**Pg**	**08 54 53.5**	**-0.2**
	baz=99								
TNSS					*e*	S	**Sb**	**08 55 09.9**	**+0.4**
	baz=99								
TNSS	**Tian-Shan**	**1.17**	**295**		*e*	P	**Pg**	**08 54 53.5**	**-0.2**
	14nm,0.1s								
TNSS					*e*	S	**Sb**	**08 55 09.9**	**+0.4**
	32nm,0.2s								
TNSS	**Tian-Shan**	**1.17**	**295**			P	**Pg**	**08 54 53.5**	**-0.2**
	14nm,0.1s								
TNSS						S	**Sb**	**08 55 09.9**	**+0.4**
	32nm,0.2s								
AAA	**Alma-Ata**	**1.27**	**301**		*e*	P	**Pg**	**08 54 55.6**	**+0.1**
	baz=5.0								
AAA					*e*	S	**Sn**	**08 55 13.5**	**+0.7**
	baz=5.0								
AAA	**Alma-Ata**	**1.27**	**301**		*e*	P	**Pg**	**08 54 55.6**	**+0.1**
	48nm,0.2s								
AAA					*e*	S	**Sn**	**08 55 13.5**	**+0.7**
	111nm,0.2s								
AAA	**Alma-Ata**	**1.27**	**301**			P	**Pg**	**08 54 55.6**	**+0.1**
	48nm,0.2s								
AAA						S	**Sn**	**08 55 13.5**	**+0.7**
	111nm,0.2s								
IZV	**Izvestkoviy**	**1.40**	**291**		*e*	P	**Pg**	**08 54 57.7**	**-0.3**
	baz=94								
IZV					*e*	S	**Sg**	**08 55 17.1**	**+1.0**
	baz=94								
IZV	**Izvestkoviy**	**1.40**	**291**		*e*	P	**Pg**	**08 54 57.7**	**-0.3**
	9.1nm,0.2s								
IZV					*e*	S	**Sg**	**08 55 17.1**	**+1.0**
	143nm,0.2s								
IZV	**Izvestkoviy**	**1.40**	**291**			P	**Pg**	**08 54 57.7**	**-0.3**
	9.1nm,0.2s								
IZV						S	**Sg**	**08 55 17.1**	**+1.0**
	143nm,0.2s								
MTBS	**Maitube**	**1.55**	**292**		*e*	P	**Pb**	**08 55 00.1**	**-0.3**
	baz=96								
MTBS					*e*	S	**Sg**	**08 55 21.4**	**+0.2**
	baz=96								
MTBS	**Maitube**	**1.55**	**292**		*e*	P	**Pb**	**08 55 00.1**	**-0.3**
	11nm,0.1s								
MTBS					*e*	S	**Sg**	**08 55 21.4**	**+0.2**
	62nm,0.2s								
MTBS	**Maitube**	**1.55**	**292**			P	**Pb**	**08 55 00.1**	**-0.3**
	11nm,0.1s								
MTBS						S	**Sg**	**08 55 21.4**	**+0.2**
	62nm,0.2s								
ULHL	**Ulahol**	**1.62**	**260**	⇑	*i*	P	**Pn**	**08 55 00.0**	**-0.5**
	baz=64								
ULHL				⇑	*i*	S	**Sn**	**08 55 21.5**	**-0.3**
	baz=64								
KTMS	**Ketmen**	**1.69**	**58**		*e*	P	**Pg**	**08 55 01.8**	**-1.8**
	baz=54								
KTMS					*e*	S	**Sg**	**08 55 24.3**	**-1.3**
	baz=54								
KTMS	**Ketmen**	**1.69**	**58**		*e*	P	**Pg**	**08 55 01.8**	**-1.8**
	5.5nm,0.1s								
KTMS					*e*	S	**Sg**	**08 55 24.3**	**-1.3**
	31nm,0.3s								
KTMS	**Ketmen**	**1.69**	**58**			P	**Pg**	**08 55 01.8**	**-1.8**
	5.5nm,0.1s								
KTMS						S	**Sg**	**08 55 24.3**	**-1.3**
	31nm,0.3s								
KTBS	**Karatobe**	**1.70**	**313**		*e*	P	**Pg**	**08 55 03.7**	**-0.2**
	baz=15								
KTBS					*e*	S	**Sg**	**08 55 27.6**	**+1.6**
	baz=15								
KTBS	**Karatobe**	**1.70**	**313**		*e*	P	**Pg**	**08 55 03.7**	**-0.2**
	24nm,0.2s								
KTBS					*e*	S	**Sg**	**08 55 27.5**	**+1.6**
	54nm,0.2s								
KTBS	**Karatobe**	**1.70**	**313**			P	**Pg**	**08 55 03.7**	**-0.2**
	24nm,0.2s								
KTBS						S	**Sg**	**08 55 27.5**	**+1.6**
	54nm,0.2s								
ARXS	**Arharly**	**1.71**	**346**		*e*	P	**Pg**	**08 55 03.7**	**-0.3**
	59nm,0.2s								
ARXS					*e*	S	**Sg**	**08 55 27.9**	**+1.8**
	71nm,0.3s								
ARXS	**Arharly**	**1.71**	**346**			P	**Pg**	**08 55 03.7**	**-0.3**
	59nm,0.2s								
ARXS						S	**Sg**	**08 55 27.9**	**+1.8**
	71nm,0.3s								
BOOM	**Boomskoye usch**	**1.81**	**269**	⇓	*i*	P	**Pn**	**08 55 03.2**	**+0.1**
	baz=72								
BOOM				⇓	*i*	S	**Sb**	**08 55 27.4**	**-0.5**
	baz=72								
KST	**Kastek**	**1.85**	**286**		*e*	P	**Pb**	**08 55 05.2**	**-0.3**
	baz=89								
KST					*e*	S	**Sb**	**08 55 30.1**	**+1.1**
	baz=89								
KST	**Kastek**	**1.85**	**286**		*e*	P	**Pb**	**08 55 05.2**	**-0.3**
	24nm,0.2s								
KST					*e*	S	**Sb**	**08 55 30.1**	**+1.1**
	38nm,0.6s								
KST	**Kastek**	**1.85**	**286**			P	**Pb**	**08 55 05.2**	**-0.3**
	24nm,0.2s								
KST						S	**Sb**	**08 55 30.2**	**+1.1**
	38nm,0.6s								
DGS	**Degeres**	**2.04**	**290**		*e*	P	**Pb**	**08 55 09.0**	**+0.2**
	12nm,0.6s								
DGS					*e*	S	**Sg**	**08 55 36.2**	**-0.7**
	66nm,0.3s								
DGS	**Degeres**	**2.04**	**290**			Pg	**Pb**	**08 55 09.0**	**+0.2**
	12nm,0.6s								
DGS						Lg	Lg	08 55 36.2	
	66nm,0.3s								
DJR	**Jarkent**	**2.05**	**29**		*e*	P	**Pg**	**08 55 08.8**	**-1.7**
	16nm,0.2s								
DJR					*e*	S	**Sg**	**08 55 36.6**	**-0.4**
	60nm,0.3s								
DJR	**Jarkent**	**2.05**	**29**			Pg	**Pg**	**08 55 08.7**	**-1.7**
	16nm,0.2s								
DJR						Lg	Lg	08 55 36.8	
	60nm,0.3s								
TKM2	**Tokmak 2**	**2.09**	**281**	⇑	*i*	P	**Pn**	**08 55 07.4**	**+0.5**
	baz=84								
TKM2				⇑	*i*	S	**Sn**	**08 55 34.7**	**+1.3**
	baz=84								
TKM2	**Tokmak 2**	**2.09**	**281**	⇓		P	**Pb**	**08 55 09.2**	**-0.4**
	1.1nm,0.2s								
TKM2				⇑		S	**Sb**	**08 55 37.4**	**+1.5**
	39nm,0.4s								
KRBS	**Karabastau**	**2.29**	**301**		*e*	P	**Pb**	**08 55 13.1**	**+0.1**
	4.7nm,0.2s								
KRBS					*e*	S	**Sb**	**08 55 43.6**	**+2.1**
	97nm,0.3s								
KRBS	**Karabastau**	**2.29**	**301**			Pg	**Pb**	**08 55 13.1**	**+0.1**
	4.7nm,0.2s								
KRBS						Lg	Lg	08 55 43.6	
	97nm,0.3s								
KBK	**Karagaybulak**	**2.54**	**273**	⇑	*i*	P	**Pn**	**08 55 13.6**	**+0.5**
	baz=76								
KBK				⇑	*i*	S	**Sn**	**08 55 45.1**	**+0.6**
	baz=76								
CHMS	**Chumysh**	**2.72**	**281**	⇓	*i*	P	**Pn**	**08 55 16.0**	**+0.6**
	baz=83								
CHMS				⇓	*i*	S	**Sn**	**08 55 49.5**	**+1.0**
	baz=83								
AAK	**Ala-Archa**	**2.88**	**273**	⇓	*i*	P	**Pn**	**08 55 18.2**	**+0.5**
	baz=75								
AAK				⇓	*i*	S	**Sn**	**08 55 53.2**	**+0.5**
	baz=75								
UCH	**Uchtor**	**2.89**	**265**	⇑	*i*	P	**Pn**	**08 55 18.2**	**0.0**
	baz=67								
UCH				⇑	*i*	S	**Sn**	**08 55 53.2**	**-0.2**
	baz=67								
SGDS	**Sogindy**	**2.90**	**289**			Pg	**Pb**	**08 55 23.6**	**+0.2**
	4.1nm,0.1s								
SGDS						Lg	Lg	08 56 01.7	
	21nm,0.4s								
EKS2	**Erkin-Say**	**3.41**	**273**	⇓	*i*	P	**Pn**	**08 55 25.4**	**+0.4**
	baz=75								
EKS2				⇓	*i*	S	**Sn**	**08 56 05.6**	**-0.1**
	baz=75								
MRKS	**Merke**	**3.82**	**275**		*e*	P	**Pb**	**08 55 40.1**	**+1.2**
	1.7nm,0.2s								
MRKS					*e*	S	**Sg**	**08 56 30.0**	**-3.8**
	5.8nm,0.2s								
MRKS	**Merke**	**3.82**	**275**			Pg	**Pb**	**08 55 40.1**	**+1.2**
	1.7nm,0.2s								
MRKS						Lg	Lg	08 56 30.0	
	5.8nm,0.2s								
BTLS	**Baital**	**4.01**	**310**		*e*	P	**Pg**	**08 55 45.0**	**-3.0**
	1.2nm,0.3s								
BTLS					*e*	S	**Sg**	**08 56 38.2**	**-1.8**
	2.3nm,0.4s								
BTLS	**Baital**	**4.01**	**310**			Pg	**Pg**	**08 55 45.0**	**-3.0**
	1.2nm,0.3s								
BTLS						Lg	Lg	08 56 38.2	
	2.3nm,0.4s								
MK31	**Makanchi Array**	**5.07**	**32**	⇑		Pn	Pb	08 55 53.7	-6.5
	0.2nm,0.3s,baz=324,slow=10,SNR=4.9								
MK31						Sn	**Sn**	**08 56 50.4**	**+4.0**
	0.3nm,0.3s,baz=211,slow=26,SNR=4.3								
MK31				⇓		Lg	Lg	08 57 08.1	
	0.1nm,0.2s,baz=208,slow=28,SNR=4.5								

*IDC **29** 09:00:02.1±3.9,52°.17N×35°.92E,h0km,mb3.4/1, mb1 3.8/4,mb1mx3.2/43,mbtmp3.6/4,ML2.9/4,MS2.5/2, Ms1 2.5/2,ms1mx2.0/52,Error ellipse: s-maj=56.7km s-min=17.9km az=127.0*

ISC 29 09:00:06.3±2.0,52°.4N±0°.1×34°.6E±0°.1,h10km,n12, σ1°78/9,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBN	**Obninsk**	**3.02**	**23**	Sn	**Sn**	**09 01 31.6**	**+1.4**
	3.1nm,0.3s,baz=13,slow=22,SNR=13						
AKASG	**Malin Array Be**	**3.71**	**246**	Pn	**Pb**	**09 01 09.5**	**-2.4**
	1.1nm,0.3s,baz=54,slow=12,SNR=3.0						
AKASG				Pg	**Pg**	**09 01 19.4**	**+2.0**
	2.2nm,0.3s,baz=57,slow=15,SNR=6.1						
AKASG				Sn	**Sb**	**09 01 58.3**	**+1.4**
	3.7nm,0.3s,baz=284,slow=4.8,SNR=7.8						
AKASG				Lg	Lg	09 02 13.0	
	2.2nm,0.3s,baz=61,slow=22,SNR=4.1						
BELG	**Belogornoye**	**8.01**	**85**	Lg	Lg	09 03 53.3	
	0.4nm,0.3s,baz=226,slow=17,SNR=1.4						
KVAR	**Kislovodsk Arr**	**10.00**	**144**	Lg	Lg	09 05 05.7	
	baz=100,slow=21,SNR=1.8						
FINES	**FINESS Array B**	**10.22**	**336**	Pn	**Pn**	**09 02 32.3**	**-0.4**
	0.2nm,0.3s,baz=144,slow=16,SNR=4.8						
FINES				Sn	Sn	09 04 21.7	-5.5
	0.3nm,0.3s,baz=152,slow=22,SNR=1.6						
KBZ	**Khabaz**	**10.27**	**144**	Lg	Lg	09 05 11.9	
	0.1nm,0.3s,baz=185,slow=14,SNR=2.0						
KIRV	**Kirov**	**10.48**	**48**	Lg	Lg	09 05 14.6	
	3.2nm,0.3s,baz=334,slow=4.0,SNR=2.0						
KIRV				LR	LR	09 06 06.1	
	comp=Z,22nm,21.3s,baz=276,slow=36						
HFS	**Hagfors**	**13.92**	**312**	Sn	**Sn**	**09 05 58.2**	**+0.3**
	0.1nm,0.3s,baz=110,slow=25,SNR=2.9						
HFS				Lg	Lg	09 07 27.8	
	baz=128,slow=30,SNR=2.5						
NOA	**NORSAR Array B**	**15.41**	**313**	Pn	**Pn**	**09 03 41.4**	**-2.2**
	0.0nm,0.3s,baz=124,slow=9.3,SNR=3.3						
ARCES	**ARCESS Array B**	**17.76**	**350**	P	**Pn**	**09 04 12.9**	**-0.3**
	baz=158,slow=9.8,SNR=10						
MMAI	**Mount Meron Ar**	**19.33**	**178**	LR	LR	09 13 44.3	
	comp=Z,16nm,20.5s,baz=260,slow=43						
YKA	**Yellowknife Ar**	**62.94**	**344**	P	**P**	**09 10 32.5**	**+0.2**
	0.4nm,0.8s,baz=21,slow=6.9,SNR=4.4						

IDC 29 09:00:29.2±2.5,54°.31N×86°.14E,h0km,mb1 3.1/2, mb1mx2.9/57,mbtmp3.1/2,ML2.9/2,Error ellipse: s-maj=19.3km s-min=12.0km az=52.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.86**	**245**	*i*		09 06 10.0	
	baz=65,slow=331,SNR=1.8						
ZALV	**Zalesovo Beam**	**0.86**	**245**	Pg	Pg	09 00 43.9	-1.8
	1.4nm,0.3s,baz=60,slow=16,SNR=12						
ZALV				Lg	Lg	09 00 58.3	
	5.8nm,0.3s,baz=64,slow=28,SNR=18						
KURBB	**Kurchatov Arra**	**5.94**	**235**	Pn	Pn	09 01 59.7	+1.4
	0.1nm,0.3s,baz=52,slow=13,SNR=12						
KURBB				Lg	Lg	09 03 41.0	
	0.0nm,0.3s,baz=47,slow=31,SNR=4.9						
MKAR	**Makanchi Array**	**7.92**	**200**	Pn	Pn	09 02 26.3	+0.8
	0.3nm,0.3s,baz=24,slow=12,SNR=13						
MKAR				Sn	Sn	09 03 55.0	-0.7
	0.0nm,0.3s,baz=22,slow=23,SNR=2.4						
MKAR				Lg	Lg	09 04 39.6	
	0.1nm,0.3s,baz=31,slow=34,SNR=4.2						

TAP 29 09:07:14.4,24°.04N×121°.61E,h9km,ML1.3,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.04**	**344**	*i* P	Pg	09 07 16.6	+0.4
	baz=354						
TWD				*i* S	Sg	09 07 18.1	+0.7
	baz=354						
NACB	**Ninganchiao**	**0.14**	**354**	*i* P	Pg	09 07 18.1	+0.7
	baz=354						
NACB				*e* S	Sg	09 07 22.1	+2.6
	baz=354						
NACB	**Ninganchiao**	**0.14**	**354**	S	Sg	09 07 22.1	+2.6
	baz=13						
ETLH	**Xiulin Townshi**	**0.20**	**325**	P	Pg	09 07 19.4	+0.9
	baz=325						
ETLH				S	Sg	09 07 23.0	+1.5
	baz=325						
WHF	**Hehuan Shan**	**0.33**	**289**	*i* P	Pg	09 07 21.8	+0.6
	baz=288						
WHF				S	Sb	09 07 27.0	-1.3
	baz=288						
NNSB	**Datong**	**0.44**	**332**	P	Pg	09 07 23.6	+0.6
	baz=331						
NNSB				S	Sb	09 07 30.8	-0.4
	baz=331						
NNSH	**Datong**	**0.44**	**332**	*i* P	Pb	09 07 24.8	+0.4
	baz=331						
NNSH				S	Sb	09 07 31.9	+0.8
	baz=331						
NNSH	**Datong**	**0.44**	**332**	S	Sb	09 07 32.3	+1.1
	baz=333						
VWDT	**VWDT**	**0.51**	**237**	P	Pb	09 07 25.2	-0.4
	baz=236						
VWDT				*e* S	Sb	09 07 34.6	+1.5
	baz=236						
NDT	**Datong Townshi**	**0.57**	**351**	*e* P	Pn	09 07 28.3	-0.4
	baz=351						
NDT				S	Sb	09 07 35.1	+0.3
	baz=351						
ENTT	**Nioudou**	**0.60**	**356**	*e* P	Pn	09 07 28.8	-0.3
	baz=356						
ENTT				S	Sb	09 07 35.7	0.0
	baz=356						

TAP 29 09:07:17.2,24°.08N×121°.57E,h7km±1km,ML1.1,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.02**	**85**	P	Pg	09 07 19.8	+1.2
	baz=83						
TWD				*i* S	Sg	09 07 20.4	+0.8
	baz=83						
NACB	**Ninganchiao**	**0.10**	**13**	P	Pg	09 07 19.7	+0.2
	baz=13						
ETLH	**Xiulin Townshi**	**0.15**	**328**	*i* P	Pg	09 07 21.1	+0.7
	baz=327						
ETLH				S	Sg	09 07 24.5	+1.9
	baz=327						
WHF	**Hehuan Shan**	**0.29**	**284**	P	Pg	09 07 23.6	+0.6
	baz=283						
WHF				S	Sb	09 07 28.9	-1.1
	baz=283						
FUSS	**Fushou**	**0.34**	**300**	P	Pb	09 07 25.6	-0.1
	baz=299						
FUSS				S	Sg	09 07 29.8	+1.2
	baz=299						
CHGB	**Renai**	**0.36**	**267**	*e* P	Pg	09 07 23.4	-0.9
	baz=267						
CHGB				S	Sb	09 07 31.2	-0.8
	baz=267						
NNSB	**Datong**	**0.39**	**334**	P	Pb	09 07 27.0	+0.5
	baz=333						
NNSB				S	Sb	09 07 32.4	-0.3
	baz=333						
NNSH	**Datong**	**0.39**	**334**	P	Pb	09 07 25.7	-0.8
	baz=333						

IDC 29 09:26:33.7±3.0,53°.48N×87°.61E,h0km,mb1 3.3/2, mb1mx3.0/48,mbtmp3.3/2,ML2.8/2,Error ellipse: s-maj=28.1km s-min=15.6km az=56.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.73**	**287**	*i*		09 37 57.9	
	baz=102,slow=326,SNR=1.6						
ZALV	**Zalesovo Beam**	**1.73**	**287**	Pg	Pn	09 27 05.0	+0.1
	0.5nm,0.3s,baz=107,slow=9.8,SNR=6.7						
ZALV				Lg	Lg	09 27 28.2	
	1.5nm,0.3s,baz=107,slow=25,SNR=10						
ZALV				*i*		09 38 03.8	
	1.2nm,0.3s,baz=83,slow=35,SNR=9.0						
KURBB	**Kurchatov Arra**	**6.29**	**247**	Pn	Pn	09 28 08.7	+1.1
	0.2nm,0.3s,baz=67,slow=14,SNR=4.6						
KURBB				Lg	Lg	09 29 50.8	
	baz=43,slow=46,SNR=1.4						
MKAR	**Makanchi Array**	**7.51**	**209**	Pn	Pn	09 28 25.4	+0.9
	0.1nm,0.3s,baz=30,slow=12,SNR=8.0						
MKAR				Lg	Lg	09 30 32.7	
	0.1nm,0.3s,baz=25,slow=28,SNR=6.2						

*ANF **29** 09:36:56.6±0.2,37°.04N×118°.31W,h5km±1km,ML3.2/25, Error ellipse: s-maj=1.3km s-min=1.2km az=134.0, Hypocentre not reviewed by the ISC*

*NEIC **29** 09:36:57.4±1.1,37°.09N±0°.04×118°.25W±0°.02,h1km±10km, Error ellipse: s-maj=5.3km s-min=2.8km az=170.0*

NCEDC 29 09:36:56.7±1.9,37°.06N±0°.04×118°.27W±0°.05,h7km±7km, ML3.5/15,ML2.9/70(NEIC),Error ellipse: s-maj=6.0km s-min=4.9km az=70.0,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIN	**Tinemaha, Big**	**0.03**	**97**	P		09 36 58.0	
	baz=277,SNR=1000						
MTUM	**Tungsten Hills**	**0.38**	**321**		Pg	09 37 04.2	0.0
CWC	**Cottonwood Cre**	**0.64**	**166**	P		09 37 08.9	
	baz=346						
CWC				S		09 37 18.2	
	baz=346						
HELL	**Mitchell Peak,**	**0.71**	**238**		Pg	09 37 10.2	-0.2
GRAC	**Grapevine Rang**	**0.72**	**95**	P		09 37 10.9	
	baz=275,SNR=541						
GRAC				S		09 37 21.9	
	baz=275						
MLAC	**Mammoth, Mammo**	**0.73**	**322**	P		09 37 10.8	
	baz=142,SNR=64						
MLAC				S		09 37 21.0	
	baz=142						
MDRNC	**Doe Ridge**	**0.73**	**322**		Pg	09 37 11.0	+0.1
MDPB	**Devils Postpil**	**0.86**	**312**		Pg	09 37 12.9	-0.4
MDPB				IAML		09 37 24.8	
	comp=N,698nm,0.4s						
MDCM	**Deadman Creek**	**0.90**	**317**		Pg	09 37 13.6	-0.4
VOG	**Valley Oaks Go**	**1.16**	**231**	P		09 37 18.6	
	baz=50,SNR=9.3						
VOG				S		09 37 34.2	
	baz=50						
LHV	**Little Huntoon**	**1.21**	**351**		Pg	09 37 19.7	-0.2
LHV				IAML		09 37 38.5	
	comp=E,240nm,0.5s						
LHV				IAML		09 37 42.5	
	comp=N,207nm,0.7s						
FURC	**Furnace Creek,**	**1.27**	**117**	P		09 37 20.6	
	baz=298,SNR=134						
FURC				S		09 37 38.3	
	baz=298						
TPH	**Tonopah**	**1.31**	**39**		Pg	09 37 21.4	-0.3
TPH	**Tonopah**	**1.31**	**39**	IAML		09 37 43.8	
	comp=N,305nm,0.5s						
TPH				IAML		09 37 43.9	
	comp=E,222nm,0.7s						
NVAR	**Mina Array Bea**	**1.37**	**359**		Pn	09 37 22.5	-0.1
NV11	**Mina Array Sit**	**1.38**	**4**		Pb	09 37 22.8	-0.1
VES	**Vestal, Richgr**	**1.38**	**209**	P		09 37 22.4	
	baz=28,SNR=44						
VES				S		09 37 41.2	
	baz=28						
ISA	**Isabella, Lake**	**1.40**	**187**		Pn	09 37 22.6	-0.2
ISA				IAML		09 37 42.9	
	comp=E,189nm,0.2s						
ISA				IAML		09 37 48.5	
	comp=N,163nm,0.2s						
**IS

CMB	**Columbia Colle**	**1.94**	**301**	Pn	Pb	09 37 31.7	-0.8	
SHOC	**Shoshone, Teco**	**1.98**	**125**	Pn		09 37 31.2		
	baz=306							
SHOC				Pb		09 37 33.7		
	baz=306,SNR=8.9							
SHOC				Sb		09 38 00.3		
	baz=306							
ARVC	**Arvin**	**1.98**	**193**	Pb		09 37 33.4		
	baz=13,SNR=11							
ARVC				Sb		09 37 59.2		
	baz=13							
KVN	**Kaiserville**	**1.99**	**4**		Pn	09 37 31.5	+0.4	
KVN				IAML		09 38 02.9		
	comp=N,64nm,0.7s							
THIS	**South End of C**	**2.07**	**230**		Pb	09 37 33.6	-1.1	
YERR	**Yerington**	**2.07**	**339**		Pn	09 37 32.9	+0.8	
YERR				IAML		09 38 04.7		
	comp=E,94nm,0.4s							
YERR				IAML		09 38 08.6		
	comp=N,69nm,0.8s							
PAGB	**Antelope Grade**	**2.08**	**231**		Pb	09 37 33.5	-1.2	
TRAM	**Private Proper**	**2.12**	**230**		Pb	09 37 34.4	-1.2	
PKD	**Bear Valley Ra**	**2.14**	**239**		Pn	09 37 34.2	+1.3	
EDW2	**Edwards Air Fo**	**2.18**	**174**	Pg		09 37 38.1		
	baz=354,SNR=7.7							
EDW2				Sb		09 38 05.4		
	baz=354							
TCHL	**Shandon**	**2.20**	**232**		Pb	09 37 35.5	-1.3	
PMPB	**Monarch Peak**	**2.20**	**248**		Pb	09 37 35.4	-1.5	
SMMC	**Simmler**	**2.23**	**219**	Pb		09 37 36.3		
	baz=38,SNR=9.4							
SMMC				Sb		09 38 05.3		
	baz=38							
TSCN	**Private Proper**	**2.26**	**229**		Pb	09 37 36.5	-1.4	
PNTR	**Pine Nut**	**2.28**	**333**		Pn	09 37 36.5	+1.4	
PNTR				IAML		09 38 14.0		
	comp=E,64nm,0.6s							
BBNM	**San Benito**	**2.32**	**257**		Pb	09 37 37.6	-1.3	
BLRM	**Lewis Ranch**	**2.44**	**262**		Pb	09 37 39.6	-1.4	
OSI	**Osito Audit: C**	**2.47**	**189**	Sb		09 38 14.1		
	baz=8.4							
VCNR	**Virginia City**	**2.48**	**334**		Pn	09 37 39.7	+1.9	
VCNR				IAML		09 38 18.8		
	comp=E,57nm,1.1s							
VCNR				IAML		09 38 21.5		
	comp=N,46nm,0.7s							
RUBR	**Rubicon Trail**	**2.49**	**324**		Pb	09 37 40.3	-1.6	
R11A	**Troy Canyon, C**	**2.49**	**58**		Pn	09 37 39.0	+1.1	
R11A				IAML		09 38 18.9		
	comp=N,42nm,0.6s							
R11A	**Troy Canyon, C**	**2.49**	**58**	P		09 37 38.7		
	baz=240,SNR=9.8							
R11A				Sb		09 38 15.9		
	baz=240							
TUQ	**Turquoise Moun**	**2.49**	**130**	Pb		09 37 42.4		
	baz=311,SNR=16							
TUQ				Sb		09 38 16.2		
	baz=311							
PKM	**Mcpherson Peak**	**2.50**	**211**	Pb		09 37 41.0		
	baz=30							
PKM				Sb		09 38 13.1		
	baz=30							
COSM	**Mount Oso**	**2.52**	**281**		Pb	09 37 40.5	-1.8	
RAMR	**Ramage Ranch**	**2.53**	**237**		Pn	09 37 39.9	+1.6	
GHS	**Gilroy Hot Spr**	**2.54**	**272**		Pb	09 37 40.9	-1.9	
SCZ	**Santa Cruz**	**2.56**	**261**		Pn	09 37 40.0	+1.4	
SHPR	**Sheep Range**	**2.56**	**102**		Pn	09 37 40.3	+1.5	
SHPR				IAML		09 38 23.9		
	comp=N,35nm,0.5s							
SHPR				IAML		09 38 27.3		
	comp=E,38nm,0.7s							
BJCM	**Johnson Can.**	**2.56**	**259**		Pn	09 37 40.0	+1.3	
SAO	**San Andreas Ge**	**2.56**	**264**		Pn	09 37 40.5	+1.8	
PRN	**Pahroc Range**	**2.59**	**81**		Pn	09 37 40.1	+0.8	
BSMM	**Soledad Missio**	**2.63**	**256**		Pn	09 37 41.1	+1.4	
HEC	**Hector,Ludlow**	**2.72**	**144**	P		09 37 41.2		
	baz=326							
PAHR	**Pah Rah Range**	**2.79**	**342**		Pn	09 37 42.8	+0.9	
MWC	**Mount Wilson**	**2.83**	**176**		Pn	09 37 42.9	+0.3	
MWC				IAML		09 38 40.9		
	comp=N,31nm,0.7s							
MWC				IAML		09 38 43.7		
	comp=E,29nm,0.8s							
BFSC	**Mount Baldy Ra**	**2.86**	**170**	Sb		09 38 26.7		
	baz=350							
PASC	**Pasadena Art C**	**2.88**	**179**		Pn	09 37 45.2	+2.1	
GMRC	**Granite Mounta**	**3.10**	**136**	P		09 37 45.9		
	baz=318,SNR=8.9							
CMCM	**Mills College**	**3.19**	**284**		Pn	09 37 48.2	+0.8	
BELC	**Belle Mtn. Jos**	**3.57**	**148**	P		09 37 53.2		
	baz=330,SNR=8.7							
SPR3	**Spring Creek 3**	**3.66**	**57**		Pn	09 37 55.1	+1.0	
SPR3				IAML		09 38 52.2		
	comp=E,27nm,0.7s							
SPR3				IAML		09 38 58.6		
	comp=N,16nm,0.6s							
PFO	**Pinyon Flats O**	**3.74**	**156**		Pn	09 37 55.5	+0.5	
PFO	**Pinyon Flats O**	**3.74**	**156**	P		09 37 55.8		
	baz=337							
PSUT	**Pine Spring**	**3.79**	**66**		Pn	09 37 57.5	+1.6	
PSUT				IAML		09 39 04.6		
	comp=N,32nm,1.2s							
CCUT	**Cedar City**	**3.94**	**81**	Pn	Pn	09 37 59.9	+2.0	
CCUT				IAML		09 39 07.4		
	comp=N,20nm,1.2s							
CCUT				IAML		09 39 10.5		
	comp=E,14nm,0.7s							
LCMT	**Little Creek M**	**4.02**	**89**		Pn	09 37 59.3	+0.4	
LCMT				IAML		09 39 06.3		
	comp=N,12nm,0.9s							
SZCU	**Shurtz Canyon**	**4.17**	**81**		Pn	09 38 01.3	+0.4	
SZCU				IAML		09 39 13.1		
	comp=N,15nm,0.6s							
SZCU				IAML		09 39 16.4		
	comp=E,22nm,0.4s							
O03E	**Paynes Creek**	**4.25**	**321**	Pb		09 38 13.5		
	baz=138							
O03E				Sb		09 39 08.4		
	baz=138							
KNB	**Kanab**	**4.36**	**89**	Pn	Pn	09 38 04.7	+1.1	
KNB				IAML		09 39 18.2		
	comp=E,9.0nm,0.9s							
KNB				IAML		09 39 32.2		
	comp=N,14nm,1.3s							
ELK	**Elko**	**4.38**	**32**		Pn	09 38 04.9	+1.0	
MTPU	**Mount Pierson**	**4.93**	**77**	Pn	Pn	09 38 13.0	+1.3	
MTPU				IAML		09 39 39.4		
	comp=N,10nm,2.1s							
MTPU				IAML		09 39 50.5		
	comp=E,12nm,4.8s							
DUG	**Dugway, Tooele**	**5.30**	**52**	Pg		09 38 36.3		
	baz=235							
DUG				Sb		09 39 42.2		
	baz=235							

*IDC **29** 09:39:13.5±0.8,27.°73N×84.°68E,h0km,mb4.0/15, mb1 4.1/17,mb1mx3.8/50,mbtmp4.0/17,ML4.0/2,MS2.6/1, Ms1 2.6/1,ms1mx2.2/44,Error ellipse: s-maj=24.4km s-min=16.3km az=58.0*

*DMN **29** 09:39:14.9±0.1,27.°86N×84.°90E,h10km,Ml4.7/3,Error ellipse: s-maj=5.8km s-min=1.8km az=19.0*

*NEIC **29** 09:39:14.1±14,27.°7N±0.°1×84.°6E±0.°1,h10km±1km, mb4.2/27,Error ellipse: s-maj=20.6km s-min=14.7km az=203.0*

*NDI **29** 09:39:17.4±3.7,27.°62N×84.°73E,h10km,ML4.1, mb4.2(NEIC)*

ISC 29 09:39:14.7±1.0,**27.°78N**±0.°05×**84.°82E**±0.°03,**h12**km±6km, **n72,**σ1°**62/88,mb4.2**/25,**2C,Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GKN	**Gorkha**	**0.27**	**324**	*e*Pg		**Pg**	**09 39 20.3**	**-0.1**
GKN				*e*Sg		**Sg**	**09 39 24.0**	**-0.3**
DMN	**Daman**	**0.31**	**124**	*e*Pg		**Pg**	**09 39 21.2**	**+0.1**
DMN				*e*Sg		**Sg**	**09 39 26.2**	**+0.8**
KKN	**Kakani**	**0.41**	**89**	*e*Pg		**Pg**	**09 39 22.1**	**-0.8**
KKN				*e*Sg		**Sg**	**09 39 27.4**	**-1.0**
PKIN	**Phulchoki**	**0.55**	**111**	*e*Pg		**Pg**	**09 39 25.3**	**-0.3**
PKI	**Pulchoki**	**0.56**	**112**	*e*Pg		**Pg**	**09 39 25.3**	**-0.5**
PKI				*e*Sg		**Sg**	**09 39 33.4**	**0.0**
GUN	**Gumba**	**0.95**	**82**	*e*Pg		**Pg**	**09 39 32.0**	**-1.1**
GUN				*e*Sg		**Sg**	**09 39 44.2**	**-1.3**
	1μm,0.2s							

KOLN	**Koldanda**	**1.08**	**270**	*e*Pg		**Pn**	**09 39 37.0**	**+1.2**
KOLN				*e*Sg		**Sn**	**09 39 52.9**	**+2.1**
	3μm,0.2s							
DANN	**Dangsing**	**1.09**	**301**	*e*Pg		**Pg**	**09 39 35.6**	**-0.2**
DANN				*e*Sg		**Sn**	**09 39 51.2**	**-0.1**
	2μm,0.2s							
PYUN	**Piuthan**	**1.65**	**282**	*e*Pg		**Pg**	**09 39 46.4**	**+0.1**
PYUN				*e*Sg		**Sg**	**09 40 10.0**	**+2.2**
GTK	**Tadong**	**3.39**	**97**	*e*P		**Pn**	**09 40 10.3**	**+2.7**
GTK				*e*S		**Sb**	**09 40 52.4**	**-3.7**
LSA	**Lhasa**	**5.88**	**70**	Pn		**Pn**	**09 40 43.8**	**+1.8**
GUWA	**GUWAHATI**	**6.33**	**103**	*e*P		**Pn**	**09 40 49.8**	**+1.9**
GUWA				*e*S		**Sn**	**09 41 59.9**	**-0.2**
GUWA				IAML			09 42 03.7	
	comp=N,55nm,0.4s							
GUWA				IAML			09 42 04.5	
	comp=E,39nm,0.4s							
SHL	**Shillong**	**6.70**	**108**	*e*P		**Pn**	**09 40 55.2**	**+2.2**
SHL				*e*S		**Sn**	**09 42 09.3**	**0.0**
SHL				IAML			09 42 11.5	
	comp=E,210nm,0.5s							
SHL	**Shillong**	**6.70**	**108**			**Pn**	**09 40 54.1**	**+1.2**
TEZP	**TEZPUR**	**7.20**	**97**	*e*P		**Pn**	**09 41 01.2**	**+1.4**
TEZP				*e*S		**Sn**	**09 42 19.2**	**-2.3**
TEZP				IAML			09 42 24.8	
	comp=E,652nm,0.1s							
SMLA	**Simla**	**7.46**	**298**	*e*P		**Pn**	**09 41 05.8**	**+2.5**
SMLA				*e*S		**Sn**	**09 42 25.6**	**-2.1**
SMLA				IAML			09 42 27.7	
	comp=Z,42nm,0.4s							
SMLA				IAML			09 42 28.1	
	comp=N,82nm,0.3s							
BHPL	**Bhopal**	**8.06**	**238**	*e*P		**Pn**	**09 41 10.5**	**-1.1**
BHPL				*e*S		**Sn**	**09 42 37.6**	**-5.2**
BHPL				IAML			09 42 44.1	
	comp=E,1μm,0.2s							
BHPL				IAML			09 42 44.6	
	comp=N,1μm,0.3s							
KOHI	**KOHIMA**	**8.55**	**102**	*e*P		**Pn**	**09 41 19.4**	**+0.9**
KOHI				*e*S		**Sn**	**09 42 54.7**	**-0.4**
DHRM	**DHARAMSHALA**	**8.62**	**303**	*e*P		**Pn**	**09 41 21.0**	**+1.6**
DHRM				*e*S		**Sn**	**09 42 53.2**	**-3.5**
AJM	**Ajmer**	**9.16**	**264**	*e*P		**Pn**	**09 41 28.0**	**+1.3**
AJM				*i* S		**Sn**	**09 43 06.0**	**-3.7**
HYB	**Hyderabad**	**11.82**	**211**	*i* P		**Pn**	**09 42 02.0**	**-1.2**
HYB				*e*			09 44 20.0	
POO	**Poona**	**13.65**	**230**	*e*S		Sn	09 44 45.0	-15
KBL	**Kabul**	**15.08**	**300**	Pn		**Pn**	**09 42 45.0**	**-2.8**
CMAR	**Chiang Mai Arr**	**15.95**	**123**	Pn		**P**	**09 43 04.0**	**+1.4**
	comp=N,0.1nm,0.3s,baz=308,slow=12,SNR=5.3							
WMQ	**Urumqi**	**16.17**	**7**	*e*P		**P**	**09 43 05.0**	**0.0**
WMQ				smax		smax		
	comp=N,34nm,0.7s							
WMQ				smax		smax		
	comp=E,21nm,0.7s							
ARSB	**Arslanbob**	**16.64**	**327**	Pn		**Pn**	**09 43 05.7**	**-2.1**
BTK	**Batken**	**16.85**	**320**			**Pn**	**09 43 07.3**	**-3.2**
BTK				IAmb		IAmb	09 43 17.9	
	comp=Z,7.4nm,0.6s							
AAK	**Ala-Archa**	**17.03**	**333**	P		**Pn**	**09 43 11.9**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=97,slow=8.1,SNR=2.2							
AAK				LR		LR	09 50 15.4	
	comp=Z,19nm,18.2s,baz=268,slow=39							
AAK	**Ala-Archa**	**17.03**	**333**			**Pn**	**09 43 11.3**	**-1.5**
MK31	**Makanchi Array**	**19.08**	**355**	P		**P**	**09 43 36.5**	**-0.5**
MKAR	**Makanchi Array**	**19.08**	**355**	P		**P**	**09 43 37.1**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=177,slow=11,SNR=36							
MKAR	**Makanchi Array**	**19.08**	**355**	P		**P**	**09 43 37.4**	**+0.3**
MAKZ	**Makanchi**	**19.12**	**354**	P		**P**	**09 43 37.7**	**+0.2**
KK31	**Karatay Array**	**19.18**	**327**	P		**P**	**09 43 36.7**	**-1.4**
KKAR	**Karatay Array**	**19.18**	**327**	P		**P**	**09 43 36.3**	**-1.8**
KURBB	**Kurdzhatov Arra**	**23.31**	**350**	P		**P**	**09 44 24.4**	**+2.1**
	comp=Z,4.5nm,0.7s,baz=168,slow=10,SNR=9.7							
GYA0B	**ALIBECK ARRAY**	**24.53**	**301**	P		**P**	**09 44 32.3**	**-1.9**
GYA0B				IAmb		IAmb	09 44 42.4	
	comp=Z,8.1nm,1.1s							
SONM	**Songino Array**	**26.14**	**34**	P		**P**	**09 44 50.7**	**+2.0**
	comp=Z,2.9nm,0.8s,baz=231,slow=9.9,SNR=19							
SONM	**Songino Array**	**26.14**	**34**	P		**P**	**09 44 49.2**	**+0.5**
SONM				IAmb		IAmb	09 44 53.9	
	comp=Z,3.1nm,0.9s							
ZAA0	**Zalesovo Array**	**26.14**	**0**	P		**P**	**09 44 49.1**	**+0.6**
ZAA0				IAmb		IAmb	09 44 50.3	
	comp=Z,2.6nm,0.8s							
ZALV	**Zalesovo Beam**	**26.14**	**0**	P		**P**	**09 44 49.8**	**+1.3**
	comp=Z,2.8nm,0.6s,baz=188,slow=11,SNR=12							
ZALV	**Zalesovo Beam**	**26.14**	**0**	P		**P**	**09 44 48.5**	**0.0**
ULN	**Ulaanbaatar**	**26.49**	**35**	P		**P**	**09 44 52.5**	**+0.6**
ULN				IAmb		IAmb	09 44 57.4	
	comp=Z,4.9nm,0.8s							
ABKAR	**Akbulak array**	**28.73**	**325**	P		**P**	**09 45 10.8**	**-0.9**
KSRS	**Korea Array**	**37.29**	**64**	P		**P**	**09 46 27.6**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=269,slow=9.2,SNR=1.9							
NRIK	**Noril'sk**	**41.62**	**1**	P		**P**	**09 47 03.9**	**+1.6**
	comp=Z,2.4nm,0.5s,baz=159,slow=2.8,SNR=5.1							
KLR	**Kul'dur**	**41.69**	**46**	P		**P**	**09 47 04.4**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=319,slow=7.0,SNR=3.6							
AKASG	**Malin Array Be**	**47.45**	**315**	P		**P**	**09 47 49.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=80,slow=6.7,SNR=3.1							
TIXI	**Tiksi**	**50.10**	**17**	P		**P**	**09 48 09.7**	**+0.7**
TIXI				IAmb		IAmb	09 48 12.2	
	comp=Z,3.1nm,0.8s							
SANT	**Santorini**	**50.34**	**296**	P		**P**	**09 48 09.6**	**-1.9**
FINES	**FINESS Array B**	**51.13**	**328**	P		**P**	**09 48 17.9**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=118,slow=8.0,SNR=2.8							
PSZ	**Piszkesteto**	**53.44**	**311**	P		**P**	**09 48 33.3**	**-1.3**
ARCES	**ARCESS Array B**	**53.62**	**338**	P		**P**	**09 48 36.4**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=93,slow=7.3,SNR=6.5							
MORC	**Moravsky Berou**	**54.91**	**313**	P		**P**	**09 48 42.0**	**-3.2**
MORC				IAmb		IAmb	09 49 07.6	
	comp=Z,5.8nm,1.2s							
WB0	**Warramunga Arr**	**67.34**	**129**	P		**P**	**09 50 10.9**	**+1.1**
WRA	**Warramunga Arr**	**67.42**	**129**	P		**P**	**09 50 11.7**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=321,slow=6.4,SNR=21							
WB2	**Warramunga Arr**	**67.43**	**129**	P		**P**	**09 50 11.6**	**+1.2**
WR0	**Warramunga Arr**	**67.58**	**129**	P		**P**	**09 50 12.5**	**+1.2**
ASAR	**Alice Springs**	**69.70**	**132**	P		**P**	**09 50 25.9**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=313,slow=6.2,SNR=24							
A21K	**Barrow**	**72.40**	**17**	P		**P**	**09 50 41.5**	**+1.4**
A21K				IAmb		IAmb	09 50 48.0	
	comp=Z,3.5nm,1.1s							
TOLK	**Toolik Lake Re**	**75.97**	**18**	P		**P**	**09 51 02.9**	**+1.8**
TORD	**Torodi Ar. Bea**	**77.99**	**279**	P		**P**	**09 51 13.1**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=53,slow=4.2,SNR=2.8							
TORD	**Torodi Ar. Bea**	**77.99**	**279**	P		**P**	**09 51 12.9**	**-0.5**
TORD				IAmb		IAmb	09 51 19.5	
	comp=Z,1.1nm,0.9s							
ILAR	**Eielson Array**	**79.42**	**20**	P		**P**	**09 51 21.2**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=309,slow=5.1,SNR=9.4							
ILAR	**Eielson Array**	**79.42**	**20**	P		**P**	**09 51 20.8**	**+0.4**
INK	**Inuvik**	**80.09**	**14**	P		**P**	**09 51 25.1**	**+1.1**
INK				IAmb		IAmb	09 51 32.7	
	comp=Z,6.1nm,1.4s							
SCRK	**Sand Creek**	**80.87**	**20**	P		**P**	**09 51 29.3**	**+0.9**
SCRK				IAmb		IAmb	09 51 32.4	
	comp=Z,2.3nm,0.9s							
C36M	**Paulatuk**	**80.89**	**10**	P		**P**	**09 51 29.2**	**+1.0**
EPYK	**Eagle Plains**	**80.97**	**16**	P		**P**	**09 51 29.4**	**+0.6**
EPYK				IAmb		IAmb	09 51 34.8	
	comp=Z,2.2nm,0.8s							
EGAK	**Eagle**	**81.08**	**18**	P		**P**	**09 51 30.4**	**+1.1**
EGAK				IAmb		IAmb	09 51 31.8	
	comp=Z,3.2nm,1.1s							
DBIC	**Dimbokro**	**86.65**	**276**	P		**P**	**09 51 59.3**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=3.8,slow=2.3,SNR=3.8							
YKA	**Yellowknife Ar**	**88.70**	**9**	P		**P**	**09 52 08.1**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=338,slow=4.2,SNR=3.7							

*FUNV **29** 09:56:26.4,8.°88N×72.°61W,h9km,MW3.3*

*RSNC **29** 09:56:27.3±1.4,7.°06N×72.°14W,h11km±6km,ML2.0*

ISC 29 09:56:25.2±1.5,**7.°03N**±0.°04×**72.°06W**±0.°03,**h3**km±13km, **n10,**σ0°**99/20,1D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TAMC	**Tame, Arauca**	**0.65**	**156**	*e*P		**Pb**	**09 56 39.9**	**+0.7**
TAMC				*i*			09 56 48.3	
	comp=Z,59nm,0.2s							
TAMC				*e*S		**Sb**	**09 56 49.5**	**+0.9**
PAMC	**Pamplona, Colo**	**0.71**	**296**	*e*P		**Pg**	**09 56 39.0**	**+0.2**
PAMC				*e*S		**Sg**	**09 56 47.1**	**-0.9**
PAMC				*i*			09 56 48.4	
	comp=Z,77nm,0.2s							
CAPV	**Capacho**	**0.87**	**343**	*e*P		**Pn**	**09 56 45.7**	**+1.2**
CAPV				*e*S		**Sn**	**09 56 59.8**	**+2.0**
BARC	**Barichara**	**1.20**	**249**	*e*P		**Pb**	**09 56 48.0**	**-0.7**
BARC				*e*S		**Sb**	**09 57 03.6**	**-1.0**
BARC				*i*			09 57 08.6	
	comp=Z,30nm,0.2s							
RUSC	**La Rusia**	**1.52**	**222**	*e*P		**Pb**	**09 56 54.4**	**+0.1**
RUSC				*e*S		**Sn**	**09 57 12.9**	**-1.4**
RUSC				*i*			09 57 17.0	
	comp=Z,14nm,0.5s							
BRRC	**Barranca, Sant**	**1.64**	**273**	↓*i*P		**Pb**	**09 56 56.6**	**+0.5**
BRRC				*e*S		**Sb**	**09 57 17.5**	**+0.2**
BRRC				*i*			09 57 20.9	
	comp=Z,17nm,0.3s							
SOCV	**Socops**	**1.73**	**44**	*e*P		**Pb**	**09 56 56.9**	**-0.6**
SOCV				*e*S		**Sb**	**09 57 19.0**	**-0.7**
SOCV	**Socops**	**1.73**	**44**	*e*P		**Pb**	**09 56 57.6**	**+0.1**
SOCV				*e*S		**Sg**	**09 57 20.6**	**-0.1**
OCAC	**Ocana**	**1.73**	**314**	*e*P		**Pb**	**09 56 57.7**	**-0.1**
OCAC				*e*S		**Sb**	**09 57 19.8**	**-0.3**
BAUV	**El Baul**	**4.41**	**64**	*e*P		**Pn**	**09 57 33.2**	**+0.2**
BAUV				*e*S		**Sn**	**09 58 23.0**	**-1.9**

*DDA **29** 10:27:20.1,36.°03N×27.°45E,h4km±4km,ML2.1*

*ISK **29** 10:27:20.2,36.°04N×27.°45E,h14km,ML2.3/11*

*THE **29** 10:27:20.8,36.°02N×27.°45E,h13km±2km,ML2.5/3,Error ellipse: s-maj=2.4km s-min=0.6km az=153.0*

*ATH **29** 10:27:21.6,35.°96N×27.°49E,h17km±7km,ML2.4/2,Error ellipse: s-maj=15.3km s-min=1.2km az=137.0*

ISC 29 10:27:20.6±1.0,**36.°03N**±0.°03×**27.°44E**±0.°03,**h14**km±10km, **n28,**σ0°**55/45,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KARP	**Karpathos**	**0.53**	**206**	P		**Pg**	**10 27 30.8**	**-0.2**
KARP				S		**Sb**	**10 27 38.9**	**-0.4**
KARP				AML	AML		10 27 40.7	
	comp=N,1384μm,0.2s							
KARP				AML	AML		10 27 40.8	
	comp=E,1595μm,0.1s							
KARP	**Karpathos**	**0.53**	**206**	P		**Pg**	**10 27 30.8**	**-0.2**
KARP				S		**Sb**	**10 27 39.2**	**-0.1**
	comp=E,765nm,0.1s							
KARP	**Karpathos**	**0.53**	**206**	PG		**Pg**	**10 27 30.9**	**-0.2**
KARP				SG		**Sb**	**10 27 39.4**	**+0.1**
ARG	**Arkhangelos**	**0.58**	**71**	P		**Pb**	**10 27 32.6**	**-0.1**
ARG				S		**Sb**	**10 27 40.9**	**0.0**
ARG				AML	AML		10 27 42.5	
	comp=E,686μm,0.2s							
ARG				AML	AML		10 27 46.5	
	comp=N,666μm,0.2s							
ARG	**Arkhangelos**	**0.58**	**71**	P		**Pb**	**10 27 32.6**	**-0.1**
ARG				S		**Sb**	**10 27 40.8**	**0.0**
	comp=N,408nm,0.3s							
ARG	**Arkhangelos**	**0.58**	**71**	PG		**Pb**	**10 27 32.5**	**-0.1**
ARG				SG		**Sg**	**10 27 40.1**	**+0.2**
NIS1	**Nisyros Isl.**	**0.61**	**340**	P		**Pb**	**10 27 33.3**	**+0.1**
NIS1				S		**Sb**	**10 27 42.2**	**+0.5**
	comp=N,482nm,0.7s							
NIS1	**Nisyros Isl.**	**0.61**	**340**	PG		**Pg**	**10 27 32.6**	**0.0**
KOSK	**Kos Island**	**0.81**	**333**	PG		**Pg**	**10 27 36.4**	**0.0**
TURN	**Turunc**	**0.99**	**41**	*i* P		**Pg**	**10 27 39.6**	**-0.1**
TURN				*i* S		**Sg**	**10 27 52.6**	**0.0**
TURN				IAML			10 27 56.0	
	comp=E,57nm,0.3s							
TURN				IAML			10 27 56.0	
	comp=N,44nm,0.3s							
TURN	**Turunc**	**0.99**	**41**	PG		**Pb**	**10 27 39.2**	**-0.4**
BDRM	**Kayabasi**	**1.04**	**0**	*i* P		**Pb**	**10 27 39.3**	**-1.1**
BDRM				*i* S		**Sn**	**10 27 54.9**	**-0.3**
BDRM				IAML			10 28 00.0	
	comp=E,43nm,0.9s							
BODT	**Bodrum**	**1.04**	**354**	P		**Pb**	**10 27 39.3**	**-1.2**
BODT				S		**Sg**	**10 27 54.4**	**+0.1**
BODT	**Bodrum**	**1.04**	**354**	PG		**Pb**	**10 27 39.2**	**-1.2**
DALY	**Dalyan (Mula)**	**1.25**	**51**	*i* P		**Pb**	**10 27 44.4**	**+0.3**
DALY				*i* S		**Sg**	**10 28 01.8**	**+0.7**
DALY				IAML			10 28 09.0	
	comp=N,38nm,0.4s							
DALY				IAML			10 28 13.0	
	comp=E,38nm,0.5s							
DALY	**Dalyan (Mula)**	**1.25**	**51**	PN		**Pn**	**10 27 43.6**	**-0.2**
YER	**Yerkesik**	**1.30**	**31**	PN		**Pn**	**10 27 44.2**	**-0.2**
ZKR	**Zakros**	**1.35**	**228**	P		**Pn**	**10 27 45.4**	**+0.2**
ZKR				S		**Sn**	**10 28 03.0**	**+0.1**
MULA	**Mugla, Merkez-**	**1.42**	**30**	*i* P		**Pg**	**10 27 48.8**	**+0.9**
MULA				*i* S		**Sg**	**10 28 07.8**	**+1.5**
MULA				IAML			10 28 22.0	
	comp=E,26nm,0.7s							
FETY	**Fethiye**	**1.46**	**65**	PN		**Pn**	**10 27 46.6**	**0.0**
SANT	**Santorini**	**1.64**	**283**	PN		**Pn**	**10 27 49.6**	**+0.5**
AYDN	**Tasoluk**	**1.67**	**12**	*i* P		**

SKY					AML	AML	11 09 10.5		
	comp=E,2388μm,0.6s								
SKY	**Skiros Island**	**0.82**	**278**		P	**Pn**	**11 08 51.7**	**+0.4**
SKY					S	**Sn**	**11 09 03.6**	**+0.3**
	comp=E,1μm,0.4s								
KOCA	**Canakkale, Ayv**	**0.85**	**30**	*i*	P	**Pb**	**11 08 50.4**	**-0.2**
KOCA				*i*	S	**Sn**	**11 09 03.4**	**-0.6**
KOCA					IAML		11 09 05.0		
	comp=N,1μm,0.5s								
KOCA					IAML		11 09 05.0		
	comp=E,2μm,0.5s								
URLA	**Izmir**	**0.88**	**117**		PG	**Pg**	**11 08 50.6**	**-0.5**
ZEYE	**Izmir, Urla-Ze**	**0.89**	**126**	*i*	P	**Pb**	**11 08 51.5**	**+0.4**
ZEYE				*i*	S	**Sn**	**11 09 05.0**	**+0.2**
ZEYE					IAML		11 09 05.0		
	comp=E,481nm,0.6s								
ZEYE					IAML		11 09 06.0		
	comp=N,731nm,0.4s								
FOCM	**Foa**	**0.89**	**93**		PG	**Pb**	**11 08 51.5**	**+0.2**
EFSA	**Agios Efstrati**	**0.91**	**329**		P	**Pb**	**11 08 51.2**	**-0.4**
EFSA					AML	AML	11 09 07.2		
	comp=N,2714μm,0.3s								
EFSA					AML	AML	11 09 07.2		
	comp=E,3330μm,0.3s								
CAND	**Candarli**	**0.96**	**78**		PG	**Pn**	**11 08 52.9**	**-0.3**
DKL	**Dikili**	**1.07**	**73**		PG	**Pn**	**11 08 54.7**	**+0.1**
BOZC	**Bozcaada**	**1.13**	**18**		PN	**Pn**	**11 08 55.4**	**-0.1**
KARY	**Karystos**	**1.17**	**232**		P	**Pg**	**11 08 56.2**	**-0.2**
KARY					S	**Sn**	**11 09 12.2**	**+0.4**
KARY					AML	AML	11 09 15.2		
	comp=N,1250μm,0.3s								
KARY					AML	AML	11 09 15.4		
	comp=E,982μm,0.4s								
ZEDA	**zmir-Bergama**	**1.17**	**80**	*i*	P	**Pn**	**11 08 56.0**	**-0.1**
ZEDA				*i*	S	**Sn**	**11 09 11.9**	**-0.1**
ZEDA					IAML		11 09 12.0		
	comp=N,195nm,0.3s								
ZEDA					IAML		11 09 14.0		
	comp=E,221nm,0.4s								
LIA	**Limnos Island**	**1.18**	**344**		P	**Pg**	**11 08 56.3**	**-0.3**
LIA					S	**Sg**	**11 09 11.3**	**-0.7**
LIA					AML	AML	11 09 13.0		
	comp=E,2192μm,0.4s								
LIA					AML	AML	11 09 15.2		
	comp=N,1422μm,0.5s								
LIA	**Limnos Island**	**1.18**	**344**		P	**Pg**	**11 08 56.8**	**+0.2**
LIA					S	**Sn**	**11 09 12.5**	**+0.5**
	comp=N,905nm,0.6s								
KYMI	**Kymi, Euboea I**	**1.18**	**264**		P	**Pb**	**11 08 56.0**	**-0.2**
KYMI					S	**Sg**	**11 09 11.6**	**-0.4**
KYMI					AML	AML	11 09 16.9		
	comp=E,706μm,0.4s								
KYMI					AML	AML	11 09 17.6		
	comp=N,825μm,0.6s								
KYMI	**Kymi, Euboea I**	**1.18**	**264**		P	**Pg**	**11 08 57.0**	**+0.3**
KYMI					S	**Sn**	**11 09 12.8**	**+0.7**
	comp=N,385nm,0.5s								
EZN	**Ezine**	**1.20**	**28**		P	**Pg**	**11 08 56.5**	**-0.6**
EZN					S	**Sn**	**11 09 12.9**	**+0.3**
	comp=N,762nm,0.3s								
EZN	**Ezine**	**1.20**	**28**		PN	**Pg**	**11 08 56.9**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.22**	**37**	*i*	P	**Pb**	**11 08 56.8**	**-0.2**
BAYC				*i*	S	**Sb**	**11 09 12.5**	**-0.2**
BAYC					IAML		11 09 16.0		
	comp=E,456nm,0.2s								
BAYC					IAML		11 09 16.0		
	comp=N,308nm,0.2s								
TNSA	**Tinos**	**1.27**	**196**		P	**Pn**	**11 08 57.4**	**0.0**
TNSA					S	**Sn**	**11 09 14.5**	**+0.2**
ECEA	**Canakkale, Ece**	**1.35**	**19**	*i*	P	**Pn**	**11 08 58.4**	**-0.1**
ECEA				*i*	S	**Sg**	**11 09 17.3**	**-0.3**
ECEA					IAML		11 09 22.0		
	comp=N,898nm,0.3s								
ECEA					IAML		11 09 24.0		
	comp=E,483nm,0.6s								
BUHA	**Balikesir, Bur**	**1.37**	**57**	*i*	P	**Pn**	**11 08 58.7**	**0.0**
BUHA				*i*	S	**Sb**	**11 09 16.1**	**-0.7**
BUHA					IAML		11 09 20.0		
	comp=E,451nm,0.5s								
BUHA					IAML		11 09 21.0		
	comp=N,400nm,0.7s								
ALNA	**Alonissos**	**1.40**	**286**		P	**Pg**	**11 09 00.2**	**-0.7**
SMG	**Samos**	**1.44**	**137**		P	**Pb**	**11 09 00.3**	**-0.3**
SMG					AML	AML	11 09 24.4		
	comp=E,833μm,0.3s								
SMG					AML	AML	11 09 24.9		
	comp=N,1023μm,0.3s								
SMG	**Samos**	**1.44**	**137**		P	**Pb**	**11 09 00.4**	**-0.2**
SMG					S	**Sn**	**11 09 18.7**	**+0.2**
	comp=N,462nm,0.3s								
GADA	**Gvkgeada**	**1.44**	**9**		P	**Pb**	**11 09 00.2**	**-0.5**
GADA	**Gvkgeada**	**1.44**	**9**		PN	**Pb**	**11 09 00.4**	**-0.3**
DION	**Dionisos Attik**	**1.48**	**243**		P	**Pb**	**11 09 00.9**	**-0.3**
DION					AML	AML	11 09 26.0		
	comp=E,1120μm,0.3s								
DION					AML	AML	11 09 30.1		
	comp=N,953μm,0.6s								
DION	**Dionisos Attik**	**1.48**	**243**		P	**Pb**	**11 09 00.9**	**-0.3**
DION					S	**Sg**	**11 09 21.3**	**-0.2**
	comp=N,870nm,0.8s								
PTL	**Penteli**	**1.54**	**243**		P	**Pb**	**11 09 01.9**	**-0.4**
PTL					AML	AML	11 09 27.6		
	comp=N,850μm,0.4s								
PTL					AML	AML	11 09 28.6		
	comp=E,617μm,0.4s								
ATHU	**Athens Univers**	**1.63**	**241**		P	**Pn**	**11 09 03.0**	**+0.6**
ATHU					AML	AML	11 09 31.6		
	comp=N,233μm,0.4s								
ATHU					AML	AML	11 09 35.1		
	comp=E,78μm,0.3s								
GCAM	**G?zelcaml?**	**1.67**	**129**		PN	**Pn**	**11 09 03.5**	**+0.6**
VLY	**Voula,Athens**	**1.69**	**238**		P	**Pn**	**11 09 03.9**	**+0.7**
VLY					AML	AML	11 09 33.3		
	comp=E,633μm,0.5s								
VLY					AML	AML	11 09 34.5		
	comp=N,511μm,0.5s								
VLY	**Voula,Athens**	**1.69**	**238**		P	**Pn**	**11 09 03.9**	**+0.7**
APE	**Apeiranthos**	**1.69**	**182**		P	**Pn**	**11 09 03.3**	**+0.1**
APE					AML	AML	11 09 32.5		
	comp=N,560μm,0.2s								
APE					AML	AML	11 09 33.3		
	comp=E,521μm,0.5s								
APE	**Apeiranthos**	**1.69**	**182**	⇓	P	**Pn**	**11 09 03.2**	**-0.1**
APE	**Apeiranthos**	**1.69**	**182**		PN	**Pn**	**11 09 03.4**	**+0.1**
SMTH	**Samothraki Isl**	**1.70**	**358**		P	**Pn**	**11 09 03.7**	**+0.3**
SMTH					AML	AML	11 09 31.2		
	comp=E,260μm,0.5s								
SMTH					AML	AML	11 09 32.3		
	comp=N,188μm,0.5s								
SMTH	**Samothraki Isl**	**1.70**	**358**		P	**Pn**	**11 09 03.7**	**+0.3**
STEP	**BALIKESIR_Sava**	**1.76**	**69**	*i*	P	**Pn**	**11 09 05.0**	**+0.7**
STEP				*i*	S	**Sn**	**11 09 27.0**	**+0.5**
STEP					IAML		11 09 42.0		
	comp=E,216nm,0.6s								
STEP					IAML		11 09 44.0		
	comp=N,197nm,0.8s								
LPK	**Lapseki**	**1.84**	**29**		PN	**Pn**	**11 09 05.4**	**+0.1**
BALY	**Balya**	**1.85**	**58**	*i*	P	**Pn**	**11 09 05.8**	**+0.3**
BALY				*i*	S	**Sg**	**11 09 33.1**	**-0.3**
BALY					IAML		11 09 35.0		
	comp=E,162nm,0.5s								
BALY					IAML		11 09 37.0		
	comp=N,235nm,0.8s								
SMIA	**Simia**	**1.87**	**274**		P	**Pn**	**11 09 06.6**	**+0.9**
PAIG	**Paliouri**	**1.89**	**309**		P	**Pb**	**11 09 07.0**	**-1.3**
VIL2	**Platees**	**1.91**	**254**		P	**Pn**	**11 09 07.1**	**+0.9**
THAS	**Thassos island**	**1.96**	**340**		P	**Pn**	**11 09 07.4**	**+0.5**
XOR	**Xorichti**	**1.96**	**289**		P	**Pn**	**11 09 07.7**	**+0.7**
CAVK	**Edirne/Enez-Ca**	**1.97**	**13**	*i*	P	**Pn**	**11 09 07.4**	**+0.3**
CAVK				*i*	S	**Sg**	**11 09 40.1**	**+2.7**
CAVK					IAML		11 09 47.0		
	comp=N,123nm,0.8s								
CAVK					IAML		11 09 47.0		
	comp=E,117nm,0.8s								
BALB	**Balikesir**	**1.98**	**63**		PN	**Pn**	**11 09 07.8**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.98**	**114**		PN	**Pn**	**11 09 07.9**	**+0.6**
OUR	**Ouranopolis**	**2.00**	**322**		P	**Pn**	**11 09 08.6**	**+1.1**
OUR	**Ouranopolis**	**2.00**	**322**		P	**Pb**	**11 09 08.7**	**-1.6**
OUR	**Ouranopolis**	**2.00**	**322**		PN	**Pn**	**11 09 08.5**	**+1.1**
ENEZ	**Enez**	**2.02**	**12**		PN	**Pn**	**11 09 08.7**	**+1.0**
ERIK	**Erikli-Kesan**	**2.03**	**20**		PN	**Pn**	**11 09 08.8**	**+0.9**
KRBG	**Karabiga-Canak**	**2.09**	**38**		PN	**Pn**	**11 09 09.2**	**+0.5**
KNL	**Balıkesir**	**2.12**	**44**	*i*	P	**Pn**	**11 09 08.7**	**-0.4**
KNL				*i*	S	**Sg**	**11 09 42.8**	**+0.7**
ALN	**Alexandroupoli**	**2.16**	**9**		P	**Pn**	**11 09 10.1**	**+0.5**
ALN	**Alexandroupoli**	**2.16**	**9**		P	**Pn**	**11 09 09.9**	**+0.3**
ALN	**Alexandroupoli**	**2.16**	**9**		PN	**Pn**	**11 09 10.5**	**+0.9**
BODT	**Bodrum**	**2.17**	**141**		PN	**Pn**	**11 09 09.9**	**0.0**
MHLA	**Plaka, Milos I**	**2.22**	**205**		P	**Pb**	**11 09 12.4**	**-1.6**
RKY	**Sarkoy-Tekirda**	**2.27**	**32**		PN	**Pn**	**11 09 12.3**	**+1.0**
MAR6	**Marsite Statio**	**2.33**	**33**		PN	**Pn**	**11 09 13.1**	**+1.1**
MANT	**Manisa**	**2.34**	**96**	*i*	P	**Pb**	**11 09 14.3**	**-1.8**
MANT				*i*	S	**Sb**	**11 09 45.7**	**+0.8**
MAR2	**Marsite Statio**	**2.36**	**34**		PN	**Pn**	**11 09 13.5**	**+1.2**
THR3	**Thira Island,**	**2.36**	**184**		P	**Pn**	**11 09 12.8**	**+0.4**
EDC	**Edincik**	**2.36**	**47**		PN	**Pn**	**11 09 12.9**	**+0.5**
MAR3	**Marsite Statio**	**2.37**	**33**		PN	**Pn**	**11 09 13.7**	**+1.1**
KAVA	**Kavala**	**2.38**	**340**		P	**Pn**	**11 09 13.7**	**+1.0**
KAVA	**Kavala**	**2.38**	**340**		P	**Pn**	**11 09 13.6**	**+1.0**
RDO	**Rodhopi**	**2.38**	**359**		P	**Pn**	**11 09 13.5**	**+0.9**
RDO	**Rodhopi**	**2.38**	**359**		P	**Pn**	**11 09 13.4**	**+0.7**
RDO	**Rodhopi**	**2.38**	**359**		PN	**Pn**	**11 09 13.8**	**+1.1**
GZKV	**Gazikoy-Tekird**	**2.39**	**33**		PN	**Pn**	**11 09 13.9**	**+1.1**
SANT	**Santorini**	**2.39**	**183**		PN	**Pn**	**11 09 14.1**	**+1.2**
MRMT	**Marmara Adasi**	**2.40**	**39**		PN	**Pn**	**11 09 13.9**	**+0.9**
MAR4	**Marsite Statio**	**2.41**	**33**		PN	**Pn**	**11 09 14.6**	**+1.4**
KULA	**Kula-Manisa**	**2.41**	**95**		PN	**Pn**	**11 09 14.4**	**+1.2**
MAR9	**Marsite Statio**	**2.46**	**41**		PN	**Pn**	**11 09 15.7**	**+1.9**
AGG	**Agios Georgios**	**2.56**	**277**		PN	**Pn**	**11 09 16.8**	**+1.6**
YER	**Yerkesik**	**2.68**	**127**		PN	**Pn**	**11 09 17.9**	**+1.1**
KIRK	**Kırklareli**	**3.23**	**20**	*i*	P	**Pn**	**11 09 24.3**	**0.0**
KIRK				*i*	S	**Sg**	**11 10 16.2**	**-1.3**
KARP	**Karpathos**	**3.45**	**158**		PN	**Pn**	**11 09 29.1**	**+1.7**
IDI	**Anoyia**	**3.52**	**189**	⇓	P	**Pn**	**11 09 25.6**	**-2.7**
NEHR	**Nehoiu**	**6.68**	**4**	⇑	P	**Pn**	**11 10 15.0**	**+3.2**
VOIR		**6.68**	**357**	⇑	P	**Pn**	**11 10 12.6**	**+0.8**
MLR	**Muntele Rosu**	**6.73**	**2**	⇑	P	**Pn**	**11 10 15.1**	**+2.6**
GZR	**Gura Zlata**	**6.95**	**343**	⇑	P	**Pn**	**11 10 15.5**	**0.0**
VRI	**Vrincioaia**	**7.15**	**6**	⇑	P	**Pn**	**11 10 20.1**	**+1.9**
DRGR		**8.30**	**346**	⇑	P	**Pn**	**11 10 33.4**	**-0.6**

IDC ***29*** *11:22:36.7±0.5, 11.94N×88.90W, h0km, mb4.6/23, mb1 4.8/27, mb1mx4.7/40, mbtmp4.6/27, ML4.7/3, MS4.2/25, Ms1 4.2/25, ms1mx4.1/34, Error ellipse: s-maj=19.2km s-min=10.0km az=50.0*

GCMT ***29*** *11:22:39.3±0.2, 11.77N±0.01×89.24W±0.01, h12km, MW5.1/137, Moment Tensor Solution. s87,c123; s137,c233; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=6.15±.09; Mθθ3.07±.09; Mϕϕ3.07±.10; Mrθ0.93±.27; Mθϕ-3.41±.07; Mϕr0.90±.28; Best double couple: M=6.45100×10¹⁶ NP1:ϕs147.00000°, δ46.00000°, λ-73.00000°. NP2:ϕs303.00000°, δ46.00000°, λ-107.00000°. Principal axes: T 6.4800, Plg0.0000°, Azm45.0000°; N -0.0670, Plg12.0000°, Azm315.0000°; P -6.4230, Plg78.0000°, Azm135.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

INET ***29*** *11:22:40.2, 11.93N×88.96W, h7km, MW5.2*

MOS ***29*** *11:22:40.4±1.2, 12.05N×88.87W, h31km, mb5.1/45, Error ellipse: s-maj=9.3km s-min=4.9km az=111.2*

SNET ***29*** *11:22:40.7±1.6, 11.86N×89.06W, h35km±64km, ML5.0*

SSS ***29*** *11:22:40.7, 11.86N×89.06W, h35km, ML5.0*

BJI ***29*** *11:22:41.0±0.0, 12.00N×88.90W, h30km, mB5.3/5, Ms5.2/7, Ms7 4.9/7*

GCG ***29*** *11:22:42.9±0.6, 11.97N×89.26W, h126km±104km, MD4.5*

NEIC ***29*** *11:22:42.3±1.8, 11.96N±0.06×88.89W±0.07, h39km±4km, mb5.0/360, Md5.0(SNET), Error ellipse: s-maj=10.3km s-min=7.4km az=51.0*

BGR ***29*** *11:22:47.2±0.0, 13.05N×88.60W, h22km±1km, mb4.7*

ISC 29 11:22:41.4±0.7, 11.96N±0.03×88.96W±0.04, h32km±4km, h32km:pP-P, n813, σ1s32/815, mb5.0/236, MS4.3/30, 29C-8D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**1.56**	**347**	*eP*		**Pn**	**11 23 07.5**	**+0.5**
LALI				*eS*		**Sn**	**11 23 27.4**	**+1.2**
LALI	**Alcalda de L**	**1.56**	**347**	*eP*		**Pn**	**11 23 07.5**	**+0.5**
LALI				*eS*		**Sn**	**11 23 27.4**	**+1.2**
TECO	**Alcaldia de Te**	**1.58**	**6**	*eP*		**Pb**	**11 23 09.0**	**-1.1**
TECO				*eS*		**Sb**	**11 23 30.1**	**+0.4**
COEB	**Comit de Eme**	**1.59**	**15**	*eP*		**Pn**	**11 23 07.9**	**+0.5**
COEB				*eS*		**Sb**	**11 23 29.7**	**-0.3**
COEB	**Comit de Eme**	**1.59**	**15**	*eP*		**Pn**	**11 23 07.9**	**+0.5**
COEB				*eS*		**Sb**	**11 23 29.7**	**-0.3**
TECA	**Tecapa**	**1.59**	**16**	⇑*iP*		**Pn**	**11 23 08.1**	**+0.6**
TECA	**Tecapa**	**1.59**	**16**	⇑*iP*		**Pn**	**11 23 08.1**	**+0.6**
LCY	**Lacayo**	**1.59**	**24**	*eP*		**Pn**	**11 23 08.4**	**+0.9**
LCY	**Lacayo**	**1.59**	**24**	*eP*		**Pn**	**11 23 08.4**	**+0.9**
VSM	**San Miguel**	**1.61**	**24**	⇑*iP*		**Pn**	**11 23 08.7**	**+0.9**
VSM	**San Miguel**	**1.61**	**24**	⇑*iP*		**Pn**	**11 23 08.7**	**+0.9**
PACA	**Pacayal**	**1.62**	**22**	*eP*		**Pn**	**11 23 09.0**	**+1.1**
PACA				*eS*		**Sb**	**11 23 31.8**	**+0.8**
PACA	**Pacayal**	**1.62**	**22**	*eP*		**Pn**	**11 23 09.0**	**+1.1**
PACA				*eS*		**Sb**	**11 23 31.8**	**+0.8**
LFRS	**El Faro**	**1.66**	**356**	⇑*iP*		**Pn**	**11 23 08.7**	**+0.3**
LFRS	**El Faro**	**1.66**	**356**	⇑*iP*		**Pn**	**11 23 08.7**	**+0.3**
UESV	**Universidad de**	**1.68**	**6**	*eP*		**Pn**	**11 23 09.3**	**+0.7**
UESV				*eS*		**Sb**	**11 23 32.8**	**+0.3**
UESV	**Universidad de**	**1.68**	**6**	*eP*		**Pn**	**11 23 09.3**	**+0.7**
UESV				*eS*		**Sb**	**11 23 32.8**	**+0.3**
CNRM	**Centro Naciona**	**1.69**	**27**	*eP*		**Pn**	**11 23 09.7**	**+0.9**
CNRM	**Centro Naciona**	**1.69**	**27**	*eP*		**Pn**	**11 23 09.7**	**+0.9**
CNRM				*eS*		**Sb**	**11 23 34.6**	**+1.7**
LCND	**La Caada**	**1.70**	**38**	*eP*		**Pn**	**11 23 08.9**	**0.0**
LCND	**La Caada**	**1.70**	**38**	*eP*		**Pn**	**11 23 08.9**	**0.0**
AEIL	**Aeropuerto Ilo**	**1.74**	**355**	*eP*		**Pn**	**11 23 10.3**	**+0.9**
AEIL				*eS*		**Sb**	**11 23 32.6**	**-1.7**
AEIL					IAML		11 23 39.2	
	comp=Z,19μm,0.7s							
AEIL	**Aeropuerto Ilo**	**1.74**	**355**	*eP*		**Pn**	**11 23 10.3**	**+0.9**
AEIL				*eS*		**Sb**	**11 23 32.6**	**-1.7**
AEIL					IAML		11 23 39.2	
	comp=Z,19μm,0.7s							
SNET	**Serv Nac Est T**	**1.74**	**351**	*eP*		**Pn**	**11 23 10.1**	**+0.6**
SNET				*eS*		**Sn**	**11 23 31.9**	**+1.3**
SNET					IAML		11 23 34.3	
	comp=Z,10μm,0.3s							
SNET	**Serv Nac Est T**	**1.74**	**351**	*eP*		**Pn**	**11 23 10.1**	**+0.6**
SNET				*eS*		**Sn**	**11 23 31.9**	**+1.3**
SNET					IAML		11 23 34.3	
	comp=Z,10μm,0.3s							
SNET	**Serv Nac Est T**	**1.74**	**351**			**Pn**	**11 23 09.8**	**+0.3**
SNET					Sn	**Sn**	**11 23 31.8**	**+1.1**
PAVA	**Las Pavas**	**1.75**	**1**	*eP*		**Pn**	**11 23 10.1**	**+0.5**
PAVA				*eS*		**Sn**	**11 23 32.5**	**+1.7**
PAVA	**Las Pavas**	**1.75**	**1**	*eP*		**Pn**	**11 23 10.1**	**+0.5**
PAVA				*eS*		**Sn**	**11 23 32.5**	**+1.7**
MAGS	**Ministerio de**	**1.75**	**349**	*eP*		**Pn**	**11 23 10.2**	**+0.6**
MAGS				*eS*		**Sb**	**11 23 33.1**	**-1.4**
UDBS	**Universidad Do**	**1.76**	**354**	*eP*		**Pn**	**11 23 11.4**	**+1.7**
UDBS				*eS*		**Sn**	**11 23 32.5**	**+1.5**
UDBS	**Universidad Do**	**1.76**	**354**	*eP*		**Pn**	**11 23 11.4**	**+1.7**
UDBS				*eS*		**Sn**	**11 23 32.5**	**+1.5**
LBRS	**Las Brisas**	**1.77**	**357**	*eP*		**Pn**	**11 23 11.0**	**+1.1**
LBRS	**Las Brisas**	**1.77**	**357**	*eP*		**Pn**	**11 23 11.0**	**+1.1**
PMON	**Piamonte**	**1.78**	**349**	*eP*		**Pn**	**11 23 10.5**	**+0.4**
PMON				*eS*		**Sb**	**11 23 34.5**	**-1.0**
PMON	**Piamonte**	**1.78**	**349**	*eP*		**Pn**	**11 23 10.5**	**+0.4**
PMON				*eS*		**Sb**	**11 23 34.5**	**-1.0**
LFU	**La Fuente**	**1.79**	**355**	*eP*		**Pn**	**11 23 11.0**	**+0.8**
LFU	**La Fuente**	**1.79**	**355**	*eP*		**Pn**	**11 23 11.0**	**+0.8**
BOQS	**Boqueron**	**1.79**	**350**	*eP*		**Pn**	**11 23 11.1**	**+0.7**
BOQS	**Boqueron**	**1.79**	**350**	*eP*		**Pn**	**11 23 11.1**	**+0.7**
FAGO	**Alcalda de S**	**1.92**	**25**	*eP*		**Pn**	**11 23 12.8**	**+1.0**
FAGO	**Alcalda de S**	**1.92**	**25**	*eP*		**Pn**	**11 23 12.8**	**+1.0**
FAGO				*eS*		**Sb**	**11 23 38.9**	**-0.4**
CEVE	**Cerro Verde**	**1.97**	**341**	*eP*		**Pn**	**11 23 13.3**	**+0.4**
CEVE					IAML		11 23 43.2	
	comp=Z,30μm,0.4s							
CEVE	**Cerro Verde**	**1.97**	**341**	*eP*		**Pn**	**11 23 13.3**	**+0.4**
CEVE				*eS*		**Sn**	**11 23 38.0**	**+1.4**
CEVE					IAML		11 23 43.2	
	comp=Z,30μm,0.4s							
SBLS	**San Blas**	**1.98**	**341**	*eP*		**Pn**	**11 23 13.4**	**+0.5**
SBLS	**San Blas**	**1.98**	**341**	*eP*		**Pn**	**11 23 13.4**	**+0.5**
CRIN	**San Cristobal**	**2.00**	**68**			**Pn**	**11 23 13.1**	**0.0**
SNJE	**San Jose**	**2.00**	**342**	*eP*		**Pn**	**11 23 13.7**	**+0.5**
SNJE	**San Jose**	**2.00**	**342**	*eP*		**Pn**	**11 23 13.7**	**+0.5**
RTR	**El Retiro**	**2.04**	**341**	*eP*		**Pn**	**11 23 14.5**	**+0.7**
RTR	**El Retiro**	**2.04**	**341**	*eP*		**Pn**	**11 23 14.5**	**+0.7**
UNIC	**Universidad Ca**	**2.09**	**344**	*eP*		**Pn**	**11 23 15.6**	**+1.3**
UNIC				*eS*		**Sn**	**11 23 41.1**	**+1.7**
UNIC	**Universidad Ca**	**2.09**	**344**	*eP*		**Pn**	**11 23 15.6**	**+1.3**
UNIC				*eS*		**Sn**	**11 23 41.1**	**+1.7**
LLGN	**La Laguna**	**2.19**	**0**	*eP*		**Pn**	**11 23 17.2**	**+1.4**
LLGN				*eS*		**Sb**	**11 23 44.9**	**-2.4**
LLGN					IAML		11 23 48.5	
	comp=Z,5μm,0.4s							
LLGN	**La Laguna**	**2.19**	**0**	*eP*		**Pn**	**11 23 17.2**	**+1.4**
LLGN				*eS*		**Sb**	**11 23 44.9**	**-2.4**
LLGN					IAML		11 23 48.5	
	comp=Z,5μm,0.4s							
MTO3	**Montecristo**	**2.46**	**351**	*eP*		**Pn**	**11 23 20.6**	**+1.1**
MTO3				*eS*		**Sb**	**11 23 52.4**	**-2.7**
MTO3	**Montecristo**	**2.46**	**351**	*eP*		**Pn**	**11 23 20.6**	**+1.1**
MTO3				*eS*		**Sb**	**11 23 52.4**	**-2.7**
MTO3	**Montecristo**	**2.46**	**351**			**Pn**	**11 23 20.6**	**+1.1**
MTO3					Sn	**Sn**	**11 23 50.0**	**+1.3**
TGUH	**Tegucigalpa,Un**	**2.65**	**38**		Pn	**Pn**	**11 23 23.1**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.65**	**38**	*eP*		**Pn**	**11 23 22.9**	**+0.8**
PCG	**Pacaya**	**2.91**	**327**	*eP*		**Pn**	**11 23 27.4**	**+1.7**
NBG	**Las Nubes**	**2.94**	**333**	*eP*		**Pn**	**11 23 28.7**	**+2.4**
NBG				*eS*		**Sn**	**11 24 03.7**	**+3.0**
FUG	**Fuego 3**	**3.08**	**324**	*eP*		**Pn**	**11 23 28.4**	**+0.3**
MATN	**Matagalpa**	**3.11**	**72**			**Pn**	**11 23 31.0**	**+2.6**
MRL	**Marmol**	**3.19**	**347**	*eP*		**Pn**	**11 23 32.2**	**+2.7**
MRL				*eS*		**Sn**	**11 24 10.9**	**+4.3**
BOAB	**BOACO BROADBAN**	**3.25**	**81**					
APG	**El Apazote**	**3.37**	**334**		Pn	**Pn**	**11 23 33.1**	**+1.1**
	comp=Z,55nm,0.3s,baz=165,slow=6.2,SNR=79							
APG					LR	LR	11 24 06.2	
	comp=Z,561nm,21.8s,baz=172,slow=26							
APG					Sn	**Sn**	**11 24 11.7**	**+0.7**
	comp=Z,83nm,0.3s,baz=113,slow=21,SNR=6.0							
ERG	**Entre ros, C**	**3.54**	**314**	*eP*		**Pn**	**11 23 34.4**	**+0.1**
GBS3	**Finca Las Img**	**3.62**	**108**	*eP*		**Pn**	**11 23 35.6**	**+0.2**
LAPC	**Finca la Perla**	**3.65**	**109**	*eP*		**Pn**	**11 23 35.4**	**-0.3**
BUEV	**Buena Vista**	**3.66**	**108**	*eP*		**Pn**	**11 23 36.3**	**+0.3**
GBA1	**Borinquen Arri**	**3.67**	**108**	*eP*		**Pn**	**11 23 36.8**	**+0.8**
RTAL	**Retalhuleu**	**3.69**	**314**			**Pn**	**11 23 35.6**	**-0.7**
SAJU	**San Juanillo,**	**3.70**	**120**	⇑*eP*		**Pn**	**11 23 35.6**	**-0.8**
ACON	**Acoyapa**	**3.70**	**89**			**Pn**	**11 23 35.3**	**-1.1**
BUAI	**Buenos Aires**	**3.71**	**106**	*eP*		**Pn**	**11 23 36.5**	**-0.1**
GPS2	**Hotel Rincn d**	**3.73**	**108**	*eP*		**Pn**	**11 23 37.7**	**+0.8**
GUAI	**GUAI**	**3.77**	**116**	*eP*		**Pn**	**11 23 37.3**	**-0.1**
ORTG	**Ortega, Santa**	**3.78**	**114**			**Pn**	**11 23 37.6**	**+0.1**
GRZA	**Playa Garza**	**3.84**	**122**	⇑*eP*		**Pn**	**11 23 37.6**	**-0.7**
LIM1	**Limonal**	**3.84**	**109**	*eP*		**Pn**	**11 23 39.1**	**+0.7**
COLC	**Colonia**	**3.90**	**109**	*eP*		**Pn**	**11 23 39.9**	**+0.8**
HORNC	**Hornillas**	**3.91**	**108**	*eP*		**Pn**	**11 23 40.1**	**+0.8**
CUI	**Cuipilapa**	**3.94**	**109**	⇑*eP*		**Pn**	**11 23 39.1**	**-0.6**
INDI	**Punta indio, G**	**3.98**	**121**	⇑*eP*		**Pn**	**11 23 39.6**	**-0.6**
ACAL	**Aguas Claras**	**4.06

ROSC pmax pmax
comp=Z,136nm,1.3s
ROSC El Rosal 16.11 115 Pn 11 26 25.7 -0.3
ROSC IAmb IAmb 11 26 36.0
comp=Z,136nm,1.2s
BETC Betania 16.25 123 *e*P **P 11 26 32.5 +2.2**
BARC Barichara 16.45 108 *e*P **P 11 26 31.8 -0.9**
GARC Garzon, Huila 16.50 125 *e*P **Pn 11 26 29.0 -1.9**
PAMC Pamplona, Colo 16.67 105 *e*P **Pn 11 26 34.0 +0.8**
CHIC Chingaza 16.72 115 *e*P **Pn 11 26 29.0 -4.8**
RUSC La Rusia 16.79 110 *e*P Pn 11 26 26.7 -8.1
ZAIG Zacatecas 16.85 311 Pn **P 11 26 36.5 -0.6**
ZAIG IAmb IAmb 11 26 40.9
comp=Z,170nm,1.5s
VILC Villavicencio, 16.99 116 *e*P **P 11 26 40.3 +1.7**
060A Indiantown 17.04 27 P **Pn 11 26 37.5 +0.2**
060A IAmb IAmb 11 27 00.6
comp=Z,206nm,1.0s
KVTX Kingsville 17.63 333 P **P 11 26 45.9 +0.5**
KVTX IAmb IAmb 11 26 47.8
comp=Z,211nm,1.1s
MACC Macarena, Meta 17.87 122 *e*P **Pn 11 26 41.9 -5.8**
SDV Santo Domingo 18.27 98 P **P 11 26 51.8 -1.1**
comp=Z,0.6nm,0.3s,baz=270,slow=6.3,SNR=17
SDV LR LR 11 33 52.7
comp=Z,564nm,21.3s,baz=344,slow=37
SDV Santo Domingo 18.27 98 P **P 11 26 51.5 -1.4**
SDV Santo Domingo 18.27 98 *e*P **P 11 26 50.3 -2.6**
SDV Santo Domingo 18.27 98 *e*P **P 11 26 52.6 -0.3**
PTLC Puerto Leguiza 18.29 129 *e*P **P 11 26 47.8 -5.0**
656A Willston 18.33 18 P **P 11 26 50.4 -2.7**
656A IAmb IAmb 11 27 11.2
comp=Z,145nm,1.1s
SDDR Presa de Saban 18.39 66 P **Pn 11 26 55.1 +0.9**
735A Kenedy 18.73 335 P **P 11 26 57.3 -0.2**
735A IAmb IAmb 11 27 14.3
comp=Z,64nm,0.8s
451A Vernon 18.80 9 P **Pn 11 26 58.8 -0.2**
833A Chaparral WMA, 18.98 331 P 11 27 01.7
baz=147,SNR=18
441A DeRidder 19.11 349 P **Pn 11 27 02.6 -0.1**
346A Big Creek Wild 19.34 359 P **Pn 11 27 05.6 +0.2**
346A IAmb IAmb 11 27 17.2
comp=Z,93nm,0.9s
344A Westbrook Farm 19.47 355 P **Pn 11 27 08.3 +1.3**
344A IAmb IAmb 11 27 19.1
comp=Z,131nm,0.9s
342A Flagon Creek P 19.57 351 P **Pn 11 27 08.6 +0.4**
352A Blakely 19.78 10 P **Pn 11 27 10.8 +0.2**
TIGA Tifton 20.01 14 P Pn 11 27 13.3 -0.1
TIGA Tifton 20.01 14 P 11 27 14.1
baz=195,SNR=11
250A Grady 20.08 7 P Pn 11 27 13.7 -0.5
250A IAmb IAmb 11 27 20.1
comp=Z,110nm,1.2s
VBMS Vicksburg 20.22 356 P 11 27 16.2
baz=176
VBMS Vicksburg 20.22 356 P Pn 11 27 15.2 -0.6
435B Jarrell 20.37 338 P **P 11 27 15.1 -0.3**
435B Jarrell 20.37 338 P 11 27 15.9
baz=155,SNR=15
NATX Nacogdoches 20.40 346 P **P 11 27 16.2 +0.5**
NATX Nacogdoches 20.40 346 P 11 27 17.4
baz=164
146A Union 20.58 360 P Pn 11 27 19.0 -1.1
255A Hazlehurst 20.75 16 P **P 11 27 20.5 +1.0**
143A Socs Landing, 20.77 354 P **P 11 27 20.8 +1.0**
143A IAmb IAmb 11 27 37.2
comp=Z,100nm,0.9s
237A Washetta, Mont 20.92 344 P **P 11 27 22.6 +1.2**
237A IAmb IAmb 11 27 36.1
comp=Z,69nm,0.8s
152A Waverly Hall 20.98 10 P **P 11 27 23.1 +1.1**
JCT Junction City 21.00 333 P **P 11 27 21.4 -0.9**
JCT pmax pmax
comp=Z,98nm,1.2s
JCT Junction City 21.00 333 P **P 11 27 21.4 -0.9**
JCT IAmb IAmb 11 27 27.6
comp=Z,98nm,1.2s
JCT Junction City 21.00 333 P 11 27 22.6
baz=149,SNR=30
LRAL Lakeview Retre 21.06 5 P **P 11 27 23.8 +0.9**
LRAL IAmb IAmb 11 27 33.9
comp=Z,55nm,0.8s
LRAL Lakeview Retre 21.06 5 P 11 27 24.6
baz=185,SNR=16
Z47A Carrollton 21.16 2 P **P 11 27 25.0 +1.1**
154A Montrose 21.25 14 P **P 11 27 25.9 +1.0**
WHTX Lake Whitney, 21.42 340 P **P 11 27 26.6 -0.2**
WHTX IAmb IAmb 11 27 46.9
comp=Z,99nm,0.9s
WHTX Lake Whitney, 21.42 340 P 11 27 26.6
baz=157,SNR=12
Z51A Franklin 21.54 9 P **P 11 27 28.1 +0.1**
Z51A IAmb IAmb 11 27 39.6
comp=Z,110nm,1.1s
HPIG 21.65 316 P **P 11 27 30.8 +1.3**
ATAH Atahualpa 21.68 151 P **P 11 27 30.7 +0.6**
comp=Z,26nm,0.8s,baz=324,slow=12,SNR=12
ATAH LR LR 11 34 51.1
comp=Z,913nm,18.3s,baz=325,slow=34
Y45A Yeager Farm, C 21.82 359 P **P 11 27 31.4 +0.4**
Z38A Mt. Pleasant 21.91 346 P **P 11 27 32.0 0.0**
Z38A IAmb IAmb 11 27 35.7
comp=Z,87nm,1.0s
Y49A Blount Mountai 21.92 6 P **P 11 27 32.4 +0.2**
Y49A IAmb IAmb 11 27 41.5
comp=Z,79nm,0.8s
GOGA Godfrey 21.94 12 P 11 27 33.1
baz=194,SNR=18
GOGA Godfrey 21.94 12 P **P 11 27 33.4 +1.1**
GOGA pmax pmax
comp=Z,59nm,0.8s
GOGA Godfrey 21.94 12 P **P 11 27 33.4 +1.1**
GOGA IAmb IAmb 11 27 42.2
comp=Z,59nm,0.8s
CCAR Cane Creek 22.01 354 P **P 11 27 34.8 +1.7**
TXAR Lajitas Array 22.06 324 P **P 11 27 35.0 +1.2**
comp=Z,22nm,0.8s,baz=144,slow=9.7,SNR=147
TXAR PcP **PcP 11 31 32.0 +1.0**
comp=Z,1.6nm,0.9s,baz=180,slow=2.5,SNR=5.0
TXAR Lajitas Array 22.06 324 P **P 11 27 34.1 +0.3**
TX31 Lajitas Ar. Si 22.06 324 P **P 11 27 34.9 +1.1**
TX31 IAmb IAmb 11 27 36.3
comp=Z,86nm,1.0s
TX32 Lajitas Array 22.06 324 P **P 11 27 34.8 +1.0**
Y52A Lilburn 22.26 11 P **P 11 27 36.4 +0.7**
AOPR Arecibo Observ 22.34 71 P **P 11 27 36.6 -0.2**
AOPR IAmb IAmb 11 27 51.6
comp=Z,86nm,1.4s
OXF Oxford 22.46 359 P 11 27 39.1
baz=179,SNR=7.8
OXF Oxford 22.46 359 P **P 11 27 38.5 +0.7**
OXF pmax pmax
comp=Z,165nm,1.1s
OXF Oxford 22.46 359 P **P 11 27 38.5 +0.7**
X48A Hartselle 22.46 4 P **P 11 27 38.2 +0.3**
X48A IAmb IAmb 11 27 47.7
comp=Z,78nm,1.2s
NHSC New Hope 22.54 20 P 11 27 40.6
baz=203
NHSC New Hope 22.54 20 P **P 11 27 38.6 -0.1**
Z35A Perchaven, San 22.59 342 P **P 11 27 38.8 -0.5**
FPAL Fort Paine 22.69 7 P **P 11 27 41.1 +0.8**
FPAL IAmb IAmb 11 27 50.1
comp=Z,42nm,0.8s
X40A Basin Creek Fa 22.70 352 P 11 27 41.3
baz=170,SNR=12
X40A Basin Creek Fa 22.70 352 P **P 11 27 40.9 +0.4**
X40A IAmb IAmb 11 27 49.7
comp=Z,61nm,1.4s
ABTX Abilene, Hawle 22.79 336 P **P 11 27 40.2 -1.3**
ABTX IAmb IAmb 11 27 43.1
comp=Z,140nm,1.4s
ABTX Abilene, Hawle 22.79 336 P 11 27 40.7
baz=152,SNR=26
X51A Calhoun 22.81 9 P **P 11 27 42.2 +0.5**
X51A IAmb IAmb 11 27 55.4
comp=Z,37nm,0.9s
SJG San Juan 22.85 72 P **P 11 27 41.5 -0.6**
comp=Z,13nm,0.5s,baz=282,slow=7.1,SNR=6.0
SJG San Juan 22.85 72 P **P 11 27 40.1 -2.1**
MIAR Mount Ida 22.88 350 P 11 27 42.6
baz=168,SNR=35
MIAR Mount Ida 22.88 350 P **P 11 27 42.6 +0.3**

MIAR pmax pmax
comp=Z,94nm,0.9s
MIAR Mount Ida 22.88 350 P **P 11 27 42.6 +0.3**
PLAL Pickwick Lake 22.94 2 P **P 11 27 42.3 -0.6**
PDPR Patillas Dam, 22.95 72 P **P 11 27 42.1 -1.1**
GCPR Guaynabo City 22.95 71 P **P 11 27 43.4 +0.1**
HODGE Hodges 23.00 14 P **P 11 27 44.3 +0.8**
HODGE IAmb IAmb 11 27 53.8
comp=Z,58nm,0.8s
W45A Hickory Valley 23.10 360 P **P 11 27 44.0 -0.5**
SLBS Sierra La Lagu 23.10 303 P **P 11 27 46.1 +1.3**
SLBS IAmb IAmb 11 27 47.6
comp=Z,57nm,1.4s
HUMP Col San Antoni 23.13 72 P **P 11 27 44.2 -0.9**
X37A Clayton 23.27 347 P **P 11 27 47.2 +0.9**
X37A IAmb IAmb 11 28 06.2
comp=Z,118nm,1.2s
JSC Jenkinsville 23.30 16 P **P 11 27 47.7 +1.1**
JSC pmax pmax
comp=Z,55nm,0.9s
JSC Jenkinsville 23.30 16 P **P 11 27 47.7 +1.1**
JSC IAmb IAmb 11 27 57.3
comp=Z,55nm,0.9s
W41B Gary Mavity, V 23.30 353 P 11 27 47.4
baz=172,SNR=16
Y57A Sumter 23.31 18 P **P 11 27 47.5 +0.8**
SWET Sewanee 23.32 6 P **P 11 27 45.9 -0.9**
SWET IAmb IAmb 11 27 57.4
comp=Z,39nm,1.0s
W50A Signal Mountai 23.37 8 P **P 11 27 47.1 -0.3**
W50A IAmb IAmb 11 28 06.5
comp=Z,48nm,1.2s
MTP Monte Pirata 23.40 72 P **P 11 27 47.4 -0.4**
MTP IAmb IAmb 11 27 48.7
comp=Z,40nm,0.9s
WHAR Wooly Hollow 23.43 353 P **P 11 27 47.9 +0.1**
WHAR IAmb IAmb 11 27 57.6
comp=Z,65nm,0.9s
W52A Murphy 23.48 10 P **P 11 27 49.0 +0.6**
W52A IAmb IAmb 11 28 00.5
comp=Z,32nm,0.8s
HBAR Harrisburg 23.54 357 P **P 11 27 49.8 +0.9**
W39A Magazine 23.55 350 P 11 27 49.5
baz=168,SNR=26
W39A Magazine 23.55 350 P **P 11 27 49.5 +0.5**
W39A IAmb IAmb 11 27 59.8
comp=Z,88nm,1.2s
LPAR Lepanto 23.57 357 P **P 11 27 49.1 -0.1**
BG3 Lake Jocassee 23.58 12 P **P 11 27 50.1 +0.9**
BG3 IAmb IAmb 11 27 58.7
comp=Z,45nm,0.8s
PAULI Pauline 23.67 15 P **P 11 27 50.8 +0.7**
PAULI IAmb IAmb 11 27 59.7
comp=Z,43nm,0.6s
CPCT Cooper Cave 23.73 9 P **P 11 27 51.6 +0.9**
V48A Smith Brothers 23.76 4 P **P 11 27 51.2 +0.2**
V48A IAmb IAmb 11 27 58.2
comp=Z,55nm,1.4s
Y59A Loris 23.78 21 P **P 11 27 51.7 +0.5**
HALT Halls 23.85 359 P **P 11 27 51.5 -0.3**
HALT IAmb IAmb 11 28 03.8
comp=Z,60nm,0.9s
BIRD Birdtown, Kers 23.87 18 P **P 11 27 53.3 +1.3**
GNAR Gosnell 23.92 358 P **P 11 27 51.8 -0.8**
PCRV Puerto La Cruz 23.93 92 P **P 11 27 53.4 +0.5**
comp=Z,40nm,0.8s,baz=226,slow=4.0,SNR=17
PCRV LR LR 11 37 59.7
comp=Z,536nm,21.9s,slow=39
X34A Smith Ranch, M 23.95 342 P **P 11 27 53.2 +0.4**
X34A IAmb IAmb 11 28 02.4
comp=Z,45nm,0.8s
PLCV Puerto La Cruz 23.98 92 P **P 11 27 53.4 +0.1**
FCAR Ozark Folk Cen 24.00 354 P **P 11 27 53.2 -0.1**
FCAR IAmb IAmb 11 28 03.2
comp=Z,62nm,0.8s
STVI Saint Thomas 24.01 72 P **P 11 27 53.0 -0.5**
V60A Bolivia 24.04 22 P **P 11 27 54.0 +0.4**
TKL Tuckaleechee C 24.06 10 P **P 11 27 53.5 -0.3**
comp=Z,38nm,0.7s,baz=187,slow=12,SNR=21
TKL Tuckaleechee C 24.06 10 P **P 11 27 54.1 +0.3**
TKL pmax pmax
comp=Z,130nm,0.9s
TKL Tuckaleechee C 24.06 10 P **P 11 27 54.1 +0.3**
PEBM Pemiscott Bayo 24.06 358 P **P 11 27 54.2 +0.4**
WVT Waverly 24.09 2 P **P 11 27 54.7 +0.6**
WVT pmax pmax
comp=Z,16nm,0.8s
WVT Waverly 24.09 2 P **P 11 27 54.7 +0.6**
WVT Waverly 24.09 2 P 11 27 55.7
baz=183
KMSC Kings Mountain 24.09 15 P 11 27 54.7
baz=198,SNR=14
KMSC Kings Mountain 24.10 15 P **P 11 27 54.8 +0.6**
V51A Loudon 24.10 9 P **P 11 27 54.9 +0.6**
X58A Rowland 24.14 20 P **P 11 27 55.2 +0.7**
CLTN Cedars of Leba 24.14 5 P **P 11 27 54.4 -0.2**
CLTN IAmb IAmb 11 27 58.0
comp=Z,24nm,0.7s
V53A Saluda 24.25 12 P **P 11 27 56.6 +0.9**
WMOK Wichita Mounta 24.38 340 P **P 11 27 55.8 -1.0**
WMOK pmax pmax
comp=Z,46nm,1.2s
WMOK Wichita Mounta 24.38 340 P **P 11 27 55.8 -1.0**
WMOK IAmb IAmb 11 28 02.0
comp=Z,46nm,1.2s
WMOK Wichita Mounta 24.38 340 P 11 27 55.9
baz=156,SNR=36
FNO Franklin 24.43 343 P **P 11 27 57.7 +0.5**
HICK Hickman 24.48 359 P **P 11 27 58.2 +0.6**
HICK IAmb IAmb 11 28 10.2
comp=Z,63nm,0.9s
W57A Gilead 24.48 18 P **P 11 27 58.4 +0.7**
U40A Yellville 24.55 352 P 11 27 59.1
baz=171,SNR=49
U40A Yellville 24.55 352 P **P 11 27 58.6 +0.3**
U40A IAmb IAmb 11 28 12.0
comp=Z,49nm,0.9s
OKCSW OKLAHOMA CITY 24.58 343 P **P 11 27 58.4 -0.2**
OKCFA Oklahoma City 24.59 343 P **P 11 27 58.4 -0.4**
PARMO Parma 24.61 358 P **P 11 27 59.1 +0.3**
U49A Red Boiling Sp 24.62 6 P **P 11 27 58.3 -0.6**
U49A IAmb IAmb 11 28 08.8
comp=Z,49nm,1.1s
HHAR Hobbs 24.63 350 P **P 11 27 58.7 -0.4**
HHAR IAmb IAmb 11 28 12.1
comp=Z,32nm,0.8s
TUL1 Leonard 24.64 347 P 11 27 58.5
baz=164,SNR=8.0
ABVI Anegada Island 24.66 71 P **P 11 27 58.1 -1.4**
OK025 Westminster Rd 24.71 343 P **P 11 27 59.2 -0.6**
V55A Taylorsville 24.80 15 P **P 11 28 01.1 +0.5**
MNTX Cornudas Mount 24.81 325 P 11 28 01.1
baz=139,SNR=49
MNTX Cornudas Mount 24.81 325 P **P 11 28 00.9 +0.1**
MNTX IAmb IAmb 11 28 03.4
comp=Z,46nm,1.2s
BCOK Bluff Creek, N 24.86 343 P **P 11 28 00.4 -0.7**
U38A Gravette 24.86 350 P **P 11 28 00.8 -0.4**
OK030 Cody Creek RV 24.89 345 P **P 11 28 00.8 -0.6**
OK031 S. Brethren Rd 24.93 345 P **P 11 28 01.0 -0.7**
OK029 Liberty Lake 24.95 343 P **P 11 28 01.2 -0.7**
T45A Paducah 24.96 1 P **P 11 28 01.1 -0.8**
T47A Sharon Grove 24.98 4 P **P 11 28 01.4 -0.8**
T42A Van Buren 25.04 356 P **P 11 28 02.0 -0.7**
QUOK Quay 25.11 345 P **P 11 28 02.6 -0.7**
T50A Nancy 25.23 8 P **P 11 28 04.3 -0.2**
MGMO Mountain Grove 25.27 354 P **P 11 28 04.3 -0.5**
MSTX Muleshoe 25.28 332 P **P 11 28 04.7 -0.5**
MSTX IAmb IAmb 11 28 10.9
comp=Z,54nm,1.1s
MSTX Muleshoe 25.28 332 P 11 28 04.5
baz=147,SNR=25
V58A Windy Hill, Pi 25.35 19 P **P 11 28 06.2 +0.7**
CZSB Cruzeiro do Su 25.37 140 *e*P **P 11 28 07.3 +1.3**
S44A Carbondale 25.63 359 P **P 11 28 08.0 -0.1**
S44A IAmb IAmb 11 28 20.4
comp=Z,56nm,1.0s
SIUC Southern Illin 25.65 360 P **P 11 28 07.7 -0.6**
SIUC IAmb IAmb 11 28 20.6
comp=Z,54nm,0.9s
CROK Carrier 25.76 343 P **P 11 28 08.4 -0.9**
T35A Sooner Cattle 25.77 346 P **P 11 28 09.0 -0.3**
SKI Saint Kitts 25.91 75 *e*P **P 11 28 10.5 -0.4**
S39A Bolivar 25.92 352 P **P 11 28 10.5 -0.2**

FVM French Village 25.95 357 P **P 11 28 09.9 -1.1**
FVM pmax pmax
comp=Z,17nm,1.2s
FVM French Village 25.95 357 P **P 11 28 09.9 -1.1**
S51A Beattyville 26.02 10 P **P 11 28 11.6 -0.1**
S51A IAmb IAmb 11 28 24.4
comp=Z,22nm,0.7s
GC02 Grant County # 26.05 344 P **P 11 28 10.9 -1.0**
CCM Cathedral Cave 26.07 356 P **P 11 28 11.6 -0.4**
CCM pmax pmax
comp=Z,78nm,0.8s
CCM Cathedral Cave 26.07 356 P **P 11 28 11.6 -0.4**
CCM Cathedral Cave 26.07 356 P 11 28 11.6
baz=175
KAN13 South Haven SW 26.10 344 P **P 11 28 11.6 -0.7**
KAN13 IAmb IAmb 11 28 20.3
comp=Z,56nm,0.9s
OK032 Salt Plains WL 26.11 343 P **P 11 28 11.4 -1.0**
OK032 IAmb IAmb 11 28 20.4
comp=Z,44nm,0.7s
KAN14 Manchester OK 26.18 343 P **P 11 28 12.1 -1.0**
KAN14 IAmb IAmb 11 28 21.0
comp=Z,46nm,1.0s
KAN09 Caldwell North 26.25 344 P **P 11 28 13.0 -0.7**
WCI Wyandotte Cave 26.27 5 P **P 11 28 13.3 -0.6**
WCI pmax pmax
comp=Z,53nm,0.8s
WCI Wyandotte Cave 26.27 5 P **P 11 28 13.3 -0.6**
WCI IAmb IAmb 11 28 24.5
comp=Z,53nm,0.8s
WCI Wyandotte Cave 26.27 5 P 11 28 13.5
baz=186
BLA Blacksburg 26.29 16 P **P 11 28 14.6 +0.5**
BLA pmax pmax
comp=Z,26nm,0.8s
BLA Blacksburg 26.29 16 P **P 11 28 14.6 +0.5**
BLA IAmb IAmb 11 28 29.2
comp=Z,26nm,0.8s
U59A Littleton 26.29 21 P **P 11 28 14.9 +0.8**
U59A IAmb IAmb 11 28 22.9
comp=Z,23nm,0.8s
KAN05 Bluff City Nor 26.30 344 P **P 11 28 13.4 -0.7**
KAN01 Argonia South 26.31 344 P **P 11 28 13.5 -0.7**
KAN01 IAmb IAmb 11 28 22.3
comp=Z,59nm,0.8s
KS20 Mayfield South 26.32 344 P **P 11 28 13.7 -0.7**
MLYT Lee's Yard 26.35 76 *e*P P 11 28 06.1 -8.8
KAN10 Anthony SW Sta 26.37 343 P **P 11 28 13.7 -1.2**
KAN10 IAmb IAmb 11 28 31.2
comp=Z,27nm,0.8s
R40A Maddies Statio 26.39 354 P **P 11 28 14.6 -0.4**
R40A IAmb IAmb 11 28 25.7
comp=Z,34nm,1.0s
T57A Hurt 26.41 18 P **P 11 28 15.7 +0.4**
T57A IAmb IAmb 11 28 24.9
comp=Z,33nm,0.8s
KAN08 Anthony NE Sta 26.43 344 P **P 11 28 14.5 -0.9**
R49A Shelbyville 26.44 7 P **P 11 28 15.7 +0.2**
KAN12 Harper NE Stat 26.51 344 P **P 11 28 14.9 -1.2**
GRGR Grenville 26.70 87 *e*P **P 11 28 17.4 -0.6**
TBG Guadaloupe-3 26.78 79 *e*P P 11 28 07.3 -11
TDBA Terre de Bas, 26.79 79 *e*P P 11 28 03.8 -15
ANBD Bethesda, Anti 26.79 76 *e*P **P 11 28 13.5 -5.3**
121A Cookes Peak, D 26.80 323 P **P 11 28 20.8 +1.8**
121A Cookes Peak, D 26.80 323 P 11 28 21.3
baz=136,SNR=18
CBE Ff, Capester 26.84 78 *e*P P 11 28 30.3 +11
Q44A Meyer Farm, Va 26.84 360 P **P 11 28 19.0 0.0**
Q44A IAmb IAmb 11 28 29.4
comp=Z,51nm,1.0s
ANWB Willy Bob 26.86 75 *e*P P 11 28 09.1 -10
GCMP Grenada, Carri 26.91 86 *e*P **P 11 28 13.6 -6.3**
319A Douglas 26.93 319 P **P 11 28 22.4 +2.3**
319A IAmb IAmb 11 28 23.8
comp=Z,77nm,1.2s
T59A Double "B" Far 26.93 20 P **P 11 28 20.1 +0.3**
T59A IAmb IAmb 11 28 29.5
comp=Z,32nm,0.8s
DSLB Salisbury 26.96 79 *e*P P 11 28 28.3 +7.9
ABD La Joyeuse, An 26.99 77 *e*P **P 11 28 18.3 -2.2**
R53A Hurricane 27.00 12 P **P 11 28 20.1 -0.4**
R53A IAmb IAmb 11 28 31.5
comp=Z,28nm,0.8s
TRN Trinidad (W) 27.05 90 *e*P **P 11 28 26.3 +5.2**
SVB Belmont 27.06 84 *e*P **P 11 28 21.3 0.0**
MAGL Barre de l'ile 27.14 78 *e*P **P 11 28 22.4 +0.4**
FDF Fort de France 27.19 81 *e*P **P 11 28 18.3 -4.1**
BIM Bigot 27.25 82 *e*P P 11 28 10.4 -13
SLBI Saint Lucia, B 27.34 83 *e*P **P 11 28 20.6 -3.1**
BNM Barren Site 27.34 327 P **P 11 28 25.2 +1.3**
T60A Surry 27.37 22 P **P 11 28 24.6 +0.8**
R55A Marlinton 27.38 15 P **P 11 28 24.2 +0.2**
R55A Marlinton 27.38 15 P 11 28 24.3
baz=199
Q51A Peebles 27.42 10 P **P 11 28 24.1 -0.1**
Q51A IAmb IAmb 11 28 36.5
comp=Z,36nm,0.7s
ILAM Ilet Lapin Mar 27.45 81 *e*P P 11 28 15.1 -10
MPOM Morne Pois Mar 27.46 82 *e*P **P 11 28 18.9 -5.9**
LENM Lemitar 27.54 326 P **P 11 28 27.6 +2.0**
Q52A Bidwell 27.55 11 P **P 11 28 24.3 -1.0**
Q52A IAmb IAmb 11 28 33.8
comp=Z,38nm,0.8s
P48A Milroy 27.57 6 P **P 11 28 25.1 -0.4**
P43A Skaggs, Pawnee 27.58 359 P **P 11 28 24.8 -0.8**
P43A IAmb IAmb 11 28 34.1
comp=Z,48nm,1.4s
Q53A Leroy 27.59 13 P 11 28 27.6
baz=196
P40A Paris 27.60 355 P **P 11 28 25.1 -0.8**
R56A Bull Pasture M 27.68 16 P 11 28 27.6
baz=200
P49A Miami Univ. Ec 27.72 7 P 11 28 29.1
baz=189
R32A Long Quarter, 27.76 343 P **P 11 28 26.8 -0.5**
R32A IAmb IAmb 11 28 36.4
comp=Z,52nm,0.9s
P38A Dawn 27.85 352 P **P 11 28 27.5 -0.6**
P38A IAmb IAmb 11 28 35.7
comp=Z,20nm,0.8s
ANMO Albuquerque 27.86 328 P 11 28 29.7
baz=141
ANMO Albuquerque 27.86 328 P **P 11 28 29.2 +0.7**
comp=Z,0.8nm,0.6s,baz=154,slow=11,SNR=5.5
ANMO Albuquerque 27.86 328‖ *e*P **P 11 28 29.3 +0.8**
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO Albuquerque 27.86 328 P **P 11 28 28.9 +0.4**
Q54A Coxs Mills 27.87 14 P **P 11 28 28.4 +0.2**
Q54A IAmb IAmb 11 28 37.0
comp=Z,44nm,0.9s
KSU1 Kansas State U 27.88 347 P **P 11 28 27.7 -0.6**
KSU1 IAmb IAmb 11 28 36.5
comp=Z,34nm,0.8s
KSU1 Kansas State U 27.88 347 P 11 28 28.0
baz=164
P51A Williamsport 27.91 10 P **P 11 28 27.6 -1.0**
P51A IAmb IAmb 11 28 31.8
comp=Z,20nm,0.7s
P52A Corning 28.22 11 P **P 11 28 31.0 -0.3**
P52A IAmb IAmb 11 28 42.5
comp=Z,24nm,0.8s
P52A Corning 28.22 11 P 11 28 32.7
baz=194
P53A Whipple 28.23 12 P **P 11 28 31.6 +0.2**
P53A IAmb IAmb 11 28 40.3
comp=Z,43nm,0.8s
Q56A Snyder Ridge, 28.34 16 P 11 28 33.2
baz=200
SFIN Lafayette 28.36 3 P 11 28 33.1
baz=184
CBKS Cedar Bluff 28.42 342 P **P 11 28 31.7 -1.5**
CBKS pmax pmax
comp=Z,34nm,1.0s
CBKS Cedar Bluff 28.42 342 P **P 11 28 31.7 -1.5**
CBKS IAmb IAmb 11 28 41.9
comp=Z,34nm,0.9s
CBKS Cedar Bluff 28.42 342 P 11 28 33.2
baz=157,SNR=8.8
HDIL Hopedale 28.49 359 P 11 28 34.2
baz=179
HDIL Hopedale 28.49 359 P **P 11 28 33.2 -0.5**
HDIL IAmb IAmb 11 28 44.0
comp=Z,24nm,0.7s

TUC Tucson 28.51 319 P 11 28 36.0
baz=130
TUC Tucson 28.51 319 P P 11 28 35.5 +1.4
TUC pmax pmax
comp=Z,18nm,1.0s
TUC Tucson 28.51 319 P P 11 28 35.5 +1.4
Q57A Strasburg 28.55 17 P 11 28 37.0
baz=202
ACSO Alum Creek Sta 28.65 10 P P 11 28 34.9 -0.3
ACSO IAmb IAmb 11 28 45.5
comp=Z,30nm,0.8s
ACSO Alum Creek Sta 28.65 10 P 11 28 36.4
baz=192
T25A Trinidad 28.66 334 P P 11 28 36.8 +1.2
T25A Trinidad 28.66 334 P 11 28 36.7
baz=147,SNR=11
N41A Harden Midland 28.69 357 P P 11 28 34.6 -0.9
N41A IAmb IAmb 11 28 43.5
comp=Z,38nm,0.8s
BBGH Gun Hill 28.71 84 eP P 11 28 37.4 +1.4
N47A Urbana 28.95 5 P P 11 28 38.4 +0.5
N38A Joes South For 28.97 353 P P 11 28 37.5 -0.5
N38A IAmb IAmb 11 28 49.9
comp=Z,28nm,1.0s
O53A New Philadelph 29.00 12 P P 11 28 38.1 -0.2
O53A IAmb IAmb 11 28 49.3
comp=Z,37nm,0.8s
O53A New Philadelph 29.00 12 P 11 28 38.4
baz=196
P57A Homestead Farm 29.08 18 P P 11 28 39.2 +0.2
P57A IAmb IAmb 11 28 50.9
comp=Z,35nm,0.8s
P57A Homestead Farm 29.08 18 P 11 28 39.8
baz=202,SNR=7.1
O54A Avella 29.12 14 P P 11 28 39.8 +0.4
O54A IAmb IAmb 11 28 48.1
comp=Z,29nm,0.9s
N49A Columbus Grove 29.16 7 P P 11 28 39.2 -0.4
SDMD Soldier's Deli 29.38 19 P P 11 28 42.1 +0.4
N35A Tabor 29.39 350 P P 11 28 41.3 -0.5
N35A IAmb IAmb 11 28 49.4
comp=Z,19nm,0.7s
N51A Ashland 29.42 10 P P 11 28 42.3 +0.2
N51A IAmb IAmb 11 28 50.5
comp=Z,50nm,1.4s
X18A Snowflake 29.49 323 P P 11 28 45.3 +2.3
KSCO Kaye Shedlock' 29.56 338 P P 11 28 43.7 +0.2
KSCO IAmb IAmb 11 28 57.5
comp=Z,28nm,1.1s
KSCO Kaye Shedlock' 29.56 338 P 11 28 44.0
baz=152
N53A Lisbon 29.61 13 P P 11 28 44.1 +0.3
N53A IAmb IAmb 11 28 52.0
comp=Z,22nm,0.8s
N33A J Bar K, Exete 29.63 347 P P 11 28 44.1 +0.2
214A Organ Pipe Nat 29.64 316 P P 11 28 45.7 +1.6
214A IAmb IAmb 11 28 46.8
comp=Z,24nm,1.0s
214A Organ Pipe Nat 29.64 316 P 11 28 46.3
baz=127,SNR=21
SDCO Great Sand Dun 29.64 333 P P 11 28 45.0 +0.6
SDCO Great Sand Dun 29.64 333 P 11 28 45.4
baz=146,SNR=7.5
BOAV Boa Vista 29.73 106 eP P 11 28 45.5 +0.4
W18A Petrified Fore 29.78 324 P P 11 28 46.8 +1.3
W18A IAmb IAmb 11 28 50.4
comp=Z,37nm,1.2s
W18A Petrified Fore 29.78 324 P 11 28 48.1
baz=136,SNR=16
M50A Fremont 29.79 9 P P 11 28 44.8 -0.5
M50A IAmb IAmb 11 28 53.2
comp=Z,44nm,0.9s
O57A Amberson 29.86 18 P 11 28 48.3
baz=202
L42A Oliver, Polo 29.94 359 P P 11 28 45.1 -1.5
L42A IAmb IAmb 11 28 56.1
comp=Z,31nm,0.8s
N54A Moraine State 29.95 14 P 11 28 47.8
baz=198
N54A Moraine State 29.95 14 P P 11 28 47.0 +0.3
N54A IAmb IAmb 11 28 55.1
comp=Z,25nm,0.8s
O58A Lewisberry 30.00 19 P 11 28 48.4
baz=204
L40A Anamosa 30.06 357 P P 11 28 47.0 -0.6
L48A N Adams 30.13 7 P P 11 28 48.6 +0.2
P60A Greenville 30.14 21 P 11 28 51.0
baz=206
M52A Chesterland 30.21 11 P P 11 28 49.2 +0.2
M52A IAmb IAmb 11 28 52.5
comp=Z,17nm,0.8s
M53A WI Miller and 30.25 12 P 11 28 50.4
baz=196
M53A WI Miller and 30.25 12 P P 11 28 50.4 +1.0
M53A IAmb IAmb 11 28 57.6
comp=Z,24nm,0.8s
S22A 4UR Ranch, Cre 30.26 331 P 11 28 50.9
baz=144,SNR=21
O59A Robesonia 30.41 20 P 11 28 53.2
baz=205
BGNE Belgrade 30.43 346 P P 11 28 49.7 -1.3
BGNE IAmb IAmb 11 28 59.5
comp=Z,48nm,1.1s
Q24A Divide 30.51 335 P 11 28 53.5
baz=148
M54A Oil Creek Stat 30.54 14 P P 11 28 52.1 +0.1
M54A IAmb IAmb 11 29 02.8
comp=Z,19nm,0.8s
M54A Oil Creek Stat 30.54 14 P 11 28 52.0
baz=198
AAM Ann Arbor 30.58 8 P P 11 28 51.9 -0.4
AAM pmax pmax
comp=Z,34nm,1.2s
AAM Ann Arbor 30.58 8 P P 11 28 51.9 -0.4
AAM IAmb IAmb 11 28 59.6
comp=Z,34nm,1.1s
L34A Svendsen Farm, 30.59 349 P P 11 28 51.4 -1.0
L34A IAmb IAmb 11 28 59.7
comp=Z,24nm,0.9s
K43A Burlington 30.64 1 P P 11 28 52.4 -0.4
MVCO Mesa Verde 30.66 328 P P 11 28 53.7 +0.4
MVCO Mesa Verde 30.66 328 P 11 28 54.6
baz=140,SNR=6.2
K38A Parkersburg 30.76 354 P P 11 28 53.4 -0.5
K38A IAmb IAmb 11 29 04.3
comp=Z,31nm,0.9s
L53A Girard 30.83 13 P 11 28 55.3
baz=197
JFWS Jewell Farm 30.86 358 P P 11 28 54.5 -0.3
JFWS pmax pmax
comp=Z,32nm,1.0s
JFWS Jewell Farm 30.86 358 P P 11 28 54.5 -0.3
JFWS IAmb IAmb 11 29 02.9
comp=Z,32nm,0.9s
JFWS Jewell Farm 30.86 358 P 11 28 54.4
baz=178
M56A Emporium 30.89 16 P P 11 28 55.2 +0.2
M56A IAmb IAmb 11 29 03.5
comp=Z,34nm,1.3s
M56A Emporium 30.89 16 P 11 28 54.7
baz=201
WUAZ Wupatki 31.02 323 P P 11 28 58.5 +2.0
WUAZ Wupatki 31.02 323 P 11 28 58.3
baz=134,SNR=18
ERPA Erie 31.05 13 P P 11 28 53.3 -3.2
ERPA IAmb IAmb 11 29 04.1
comp=Z,25nm,0.8s
M57A Sunshine Farm, 31.05 17 P 11 28 57.5
baz=203
N59A State Game Lan 31.09 20 P 11 28 57.5
baz=205
K50A Casco 31.19 9 P P 11 28 57.4 -0.2
K50A IAmb IAmb 11 29 09.6
comp=Z,20nm,0.7s
ETMB Extrema 31.29 133 eP P 11 28 58.6 -0.1
ISCO Idaho Springs 31.41 335 P 11 29 00.8
baz=148,SNR=11
ISCO Idaho Springs 31.41 335 P P 11 28 59.8 -0.2
ISCO pmax pmax
comp=Z,6.0nm,1.0s
ISCO Idaho Springs 31.41 335 P P 11 28 59.8 -0.2
PV01 Paradox Valley 31.41 329 P P 11 29 00.5 +0.6
PTGA Pitinga 31.43 112 LR LR 11 44 18.1
comp=Z,252nm,18.4s,baz=300,slow=42
SMCO Snowmass 31.48 333 P P 11 29 01.0 +0.2
PV05 Paradox Valley 31.63 329 P P 11 29 02.1 +0.2
PV05 IAmb IAmb 11 29 06.2
comp=Z,25nm,1.2s
GLA Glamis 31.66 316 P 11 29 04.5
baz=126,SNR=7.2
PV18 Skein Mesa, Pa 31.66 329 P P 11 29 02.6 +0.5
PV12 Saucer Basin, 31.66 329 P P 11 29 03.0 +0.9
PV12 IAmb IAmb 11 29 10.7
comp=Z,44nm,1.2s
PV07 Paradox Valley 31.68 330 P P 11 29 03.2 +0.9
PV07 IAmb IAmb 11 29 10.2
comp=Z,25nm,1.3s
PV11 David Mesa, Pa 31.68 329 P P 11 29 01.8 -0.5
PV17 East Wray Mesa 31.71 329 P P 11 29 02.9 +0.3
K31A O'Neill 31.72 346 P P 11 29 01.9 -0.4
PAL Palisades 31.81 22 P 11 29 07.7
baz=209
PV14 Lion Creek, Pa 31.82 329 P P 11 29 04.8 +1.2
I42A Draeger Farm, 31.82 0 P P 11 29 02.0 -1.1
I42A IAmb IAmb 11 29 11.3
comp=Z,26nm,0.8s
MACA Manacapuru-AM 31.87 116 eP P 11 29 05.4 +1.5
PDMCI Parker Dam, Lak 31.95 318 P 11 29 06.8
baz=128,SNR=24
M61A Granite Spring 32.13 22 P 11 29 06.4
baz=209
U15A North Rim 32.18 323 P P 11 29 08.1 +1.3
U15A IAmb IAmb 11 29 10.8
comp=Z,19nm,1.1s
K56A Middlesex 32.25 16 P 11 29 06.5
baz=202
SWSC Sam W. Stewart 32.27 315 P 11 29 09.4
baz=124,SNR=6.6
W13A Hualapai Mount 32.28 320 P P 11 29 09.8 +2.2
I49A Point Hope 32.30 8 P P 11 29 08.0 +0.6
IKP In-Ko-Pah, Jac 32.32 314 P 11 29 10.1
baz=124,SNR=5.9
ECSD EROS Data Cent 32.35 350 P P 11 29 06.8 -1.0
ECSD EROS Data Cent 32.35 350 P 11 29 07.2
baz=166,SNR=9.7
H43A Windswept, Lux 32.41 2 P P 11 29 07.4 -1.0
H43A IAmb IAmb 11 29 18.4
comp=Z,20nm,0.8s
BC3 Big Chuckawall 32.43 316 P 11 29 11.2
baz=126,SNR=37
I51A Listowel 32.46 11 P 11 29 10.3
baz=194
N23A Red Feather La 32.46 336 P 11 29 09.9
baz=148
IRM Iron Mountain 32.52 317 P 11 29 12.0
baz=127,SNR=31
NEE2 Needles Airpor 32.54 318 P 11 29 12.3
baz=128,SNR=5.6
PHWY Pilot Hill 32.62 337 P P 11 29 10.5 -0.1
MONP2 Monument Peak 32.67 314 P 11 29 13.1
baz=123
K58A Earlville 32.80 18 P 11 29 12.9
baz=204
O20A White River Ci 32.83 332 P 11 29 13.3
baz=144
KNB Kanab 32.89 323 P P 11 29 15.5 +2.6
KNB pmax pmax
comp=Z,30nm,1.1s
KNB Kanab 32.89 323 P P 11 29 15.5 +2.6
KNB IAmb IAmb 11 29 17.0
comp=Z,30nm,1.1s
J56A Wolcott 32.92 16 P 11 29 15.6
baz=202
BELC Belle Mtn. Jos 33.00 316 P 11 29 16.4
baz=125,SNR=12
G45A Suttons Bay 33.09 4 P P 11 29 12.8 -1.4
PFO Pinyon Flats O 33.09 315 dP P 11 29 16.3 +1.6
PFO pmax pmax
comp=Z,35nm,1.5s
PFO Pinyon Flats O 33.09 315 P 11 29 17.2
baz=124
G40A Rib Lake 33.21 358 P P 11 29 14.2 -1.1
G40A IAmb IAmb 11 29 23.2
comp=Z,33nm,0.9s
GMRC Granite Mounta 33.23 318 P 11 29 18.3
baz=127,SNR=27
MTPU Mount Pierson 33.24 325 P P 11 29 17.7 +1.5
MTPU IAmb IAmb 11 29 20.4
comp=Z,18nm,1.0s
SPMN Marine on St. 33.31 355 P 11 29 15.4
baz=173,SNR=15
SPMN Marine on St. 33.32 355 P P 11 29 15.2 -1.1
SUSD Miller 33.49 347 P 11 29 17.4
baz=162
SUSD Miller 33.49 347 P P 11 29 16.8 -1.1
K61A Williamstown 33.50 21 P 11 29 18.7
baz=208
P17A Butcher Ranch, 33.52 329 P P 11 29 18.3 0.0
TMUT Trail Mountain 33.63 328 P P 11 29 21.0 +1.5
RWWY Rawlins 33.65 335 P P 11 29 20.2 +0.7
RWWY IAmb IAmb 11 29 27.6
comp=Z,40nm,1.2s
H53A Bobcaygeon 33.70 13 P 11 29 19.4
baz=198
HEC Hector,Ludlow 33.71 317 P 11 29 22.6
baz=126,SNR=24
SADO Sadowa 33.76 13 P P 11 29 19.5 -0.7
comp=Z,6.4nm,0.3s,baz=217,slow=7.5,SNR=11
SADO Sadowa 33.76 13 P P 11 29 19.6 -0.5
SADO IAmb IAmb 11 29 27.4
comp=Z,25nm,0.8s
BBRC Big Bear Solar 33.78 316 P 11 29 23.5
baz=124,SNR=10
RDMU Red Mountain 33.79 331 P P 11 29 22.2 +1.5
TUQ Turquoise Moun 33.80 318 P 11 29 23.1
baz=127,SNR=16
SHPR Sheep Range 33.97 320 P P 11 29 24.6 +2.4
SHPR IAmb IAmb 11 29 26.0
comp=Z,29nm,1.4s
F36A Milaca 34.01 354 P P 11 29 20.5 -1.8
COWI Conover 34.03 360 P P 11 29 21.1 -1.4
COWI IAmb IAmb 11 29 30.0
comp=Z,30nm,0.9s
K22A Casper 34.18 337 P P 11 29 23.6 -0.4
K22A IAmb IAmb 11 29 31.0
comp=Z,15nm,1.1s
K22A Casper 34.18 337 P 11 29 24.6
baz=148
BFSC Mount Baldy Ra 34.27 315 P 11 29 26.5
baz=124
I59A Olmsteadville 34.29 20 P 11 29 26.9
baz=207
SHOC Shoshone, Teco 34.30 319 P 11 29 27.6
baz=127,SNR=8.8
F33A 5 Mile Ranch, 34.34 351 P P 11 29 23.5 -1.6
F33A IAmb IAmb 11 29 32.0
comp=Z,13nm,0.8s
E43A Lone Tree Farm 34.34 2 P P 11 29 24.6 -0.6
E43A IAmb IAmb 11 29 35.1
comp=Z,38nm,1.1s
MPU Maple Canyon 34.38 328 P P 11 29 26.1 +0.2
PRN Pahroc Range 34.48 322 P P 11 29 29.7 +3.0
J62A Henniker 34.51 22 P 11 29 27.8
baz=210
NLU North Lily Min 34.57 328 P P 11 29 27.8 +0.3
RSSD Black Hills 34.58 341 P 11 29 28.1
baz=153
RSSD Black Hills 34.58 341 P P 11 29 27.5 -0.1
RSSD pmax pmax
comp=Z,9.0nm,0.8s
RSSD Black Hills 34.58 341 P P 11 29 27.5 -0.1
PASC Pasadena Art C 34.60 315 P P 11 29 26.1 -1.5
PASC IAmb IAmb 11 29 50.1
comp=Z,25nm,1.5s
E38A The Farm, Brul 34.60 357 P P 11 29 26.3 -1.1
H58A Gabriels 34.75 19 P 11 29 28.6
baz=206
LONY Lake Ozonia 34.81 18 P 11 29 29.1
baz=205
LONY Lake Ozonia 34.81 18 P P 11 29 28.9 -0.3
LONY IAmb IAmb 11 29 37.2
comp=Z,20nm,0.9s
LPAZ La Paz 34.81 143 P P 11 29 29.8 -0.5
comp=Z,2.0nm,0.9s,baz=349,slow=6.0,SNR=6.3
LPAZ LR LR 11 43 58.0
comp=Z,394nm,18.5s,baz=330,slow=37
LPAZ La Paz 34.81 143 P P 11 29 30.0 -0.2
LPAZ pmax pmax
comp=Z,10.0nm,1.4s
LPAZ La Paz 34.81 143 P P 11 29 30.0 -0.2
LPAZ La Paz 34.81 143 eP P 11 29 30.1 -0.2
EDW2 Edwards Air Fo 34.86 316 P 11 29 31.0
baz=124,SNR=6.3
TPNV Topopah Spring 34.93 320 P P 11 29 33.3 +2.7
TPNV pmax pmax
comp=Z,30nm,1.2s
TPNV Topopah Spring 34.93 320 P P 11 29 33.3 +2.7
TPNV IAmb IAmb 11 29 34.1
comp=Z,30nm,1.2s
TPNV Topopah Spring 34.93 320 P 11 29 33.4
baz=128,SNR=21
CTU Camp Tracy 34.95 329 P P 11 29 31.2 +0.5
LRMC Laurel Mtn Rad 34.98 317 P 11 29 33.8
baz=125,SNR=12
FURC Furnace Creek, 35.02 319 P 11 29 33.9
baz=127,SNR=22
SPR3 Spring Creek 3 35.12 325 P P 11 29 34.0 +1.6
ALGO Algonquin Park 35.13 13 P 11 29 31.3
baz=199,SNR=7.9
DUG Dugway, Tooele 35.13 327 P 11 29 34.1
baz=137,SNR=7.6
I62A Tamworth 35.25 22 P 11 29 33.6
baz=211
R11A Troy Canyon, C 35.41 323 P 11 29 37.4
baz=131
BW06 Boulder Array 35.53 334 P P 11 29 36.0 +0.2
BW06 Boulder Array 35.53 334 P 11 29 36.2
baz=144
PD31 Pinedale Array 35.53 334 P P 11 29 36.0 +0.2
PDAR Pinedale Array 35.53 334 P P 11 29 35.6 -0.2
comp=Z,1.5nm,0.7s,baz=137,slow=9.2,SNR=13
PDAR PcP PcP 11 32 05.0 +0.5
comp=Z,1.6nm,0.8s,baz=139,slow=4.9,SNR=6.6
PDAR Pinedale Array 35.53 334 P P 11 29 35.4 -0.4
HWUT Hardware Ranch 35.55 330 P P 11 29 36.8 +0.9
ISA Isabella, Lake 35.62 316 P 11 29 39.2
baz=124,SNR=8.5
ISA Isabella, Lake 35.62 316 P P 11 29 39.0 +2.5
ISA pmax pmax
comp=Z,44nm,1.5s
ISA Isabella, Lake 35.62 316 P P 11 29 39.0 +2.5
ISA IAmb IAmb 11 29 40.5
comp=Z,44nm,1.5s
GRAC Grapevine Rang 35.66 319 P 11 29 39.9
baz=127
D32A Dogwood Acres, 35.72 351 P P 11 29 35.4 -1.6
D32A IAmb IAmb 11 29 39.4
comp=Z,26nm,1.1s
SPUT South Promonto 35.76 329 P P 11 29 37.8 +0.1
BGU Big Grassy Mou 35.77 328 P P 11 29 39.4 +1.6
CWC Cottonwood Cre 35.80 318 P 11 29 40.0
baz=126
E28A Huff 35.91 346 P P 11 29 38.0 -0.7
E28A IAmb IAmb 11 29 55.0
comp=Z,14nm,0.6s
EYMN Ely 35.94 357 P P 11 29 37.3 -1.6
EYMN Ely 35.94 357 P 11 29 37.3
baz=176,SNR=16
VES Vestal, Richgr 36.13 316 P 11 29 43.4
baz=124,SNR=24
AHID Auburn Hatcher 36.22 332 P P 11 29 42.0 +0.3
AHID IAmb IAmb 11 29 49.5
comp=Z,13nm,0.8s
TIN Tinemaha, Big 36.26 319 P 11 29 44.9
baz=126
MDP Montagnes des 36.52 98 LR LR 11 47 00.0
comp=Z,315nm,18.5s,baz=289,slow=40
ECR Eagle Creek 36.57 332 P P 11 29 44.4 -0.2
REDW Red Top Meadow 36.58 333 P P 11 29 44.6 -0.1
SNOW Snow King Moun 36.61 333 P P 11 29 45.6 +0.6
SNOW IAmb IAmb 11 29 53.3
comp=Z,22nm,0.8s
LOHW Long Hollow 36.67 333 P P 11 29 45.8 +0.3
LOHW IAmb IAmb 11 29 53.6
comp=Z,24nm,1.2s
AGMN Agassiz Nation 36.68 352 P P 11 29 44.2 -1.1
AGMN IAmb IAmb 11 29 53.0
comp=Z,28nm,0.8s
AGMN Agassiz Nation 36.68 352 P 11 29 44.4
baz=169
G62A West of Eustis 36.70 22 P 11 29 46.1
baz=211
D55A Sainte-Anne-du 36.75 15 P 11 29 45.6
baz=202
ITTB Itaituba 36.80 114 eP P 11 29 46.7 0.0
PB11 IPOC Station P 36.80 149 P P 11 29 46.8 +0.1
PB11 IAmb IAmb 11 29 55.8
comp=Z,17nm,1.0s
ELK Elko 36.82 326 P P 11 29 48.4 +1.5
ELK pmax pmax
comp=Z,10.0nm,1.1s
ELK Elko 36.82 326 P P 11 29 48.4 +1.5
MOOW Moose Ponds 36.84 333 P P 11 29 47.1 +0.2
PAGB Antelope Grade 36.87 315 P P 11 29 47.9 +0.8
PAGB IAmb IAmb 11 29 50.3
comp=Z,48nm,1.3s
MDND Maddock 36.87 348 P 11 29 46.6
baz=162,SNR=8.9
MDND Maddock 36.88 348 P P 11 29 46.1 -0.8
NV11 Mina Array Sit 37.03 320 P P 11 29 51.3 +2.7
NVAR Mina Array Bea 37.12 320 P P 11 29 51.6 +2.2
comp=Z,28nm,0.9s,baz=138,slow=8.0,SNR=148
NVAR PcP PcP 11 32 10.7 +1.3
comp=Z,1.4nm,0.6s,baz=131,slow=3.7,SNR=11
NVAR LR LR 11 47 08.1
comp=Z,262nm,20.2s,baz=142,slow=40
NVAR Mina Array Bea 37.12 320 P P 11 29 52.2 +2.8
H17A Grant Village 37.28 334 P 11 29 52.0
baz=144
RLMT Red Lodge 37.33 336 P P 11 29 50.5 -0.6
RLMT IAmb IAmb 11 30 00.0
comp=Z,18nm,1.1s
RLMT Red Lodge 37.33 336 P 11 29 51.2
baz=146
E60A Ste Agathe de 37.37 20 P 11 29 52.2
baz=209
KVN Kaiserville 37.38 321 P P 11 29 53.6 +2.0
KVN pmax pmax
comp=Z,34nm,1.2s
KVN Kaiserville 37.38 321 P P 11 29 53.6 +2.0
KVN IAmb IAmb 11 29 55.3
comp=Z,34nm,1.2s
YNE Yellowstone No 37.54 335 P P 11 29 52.9 0.0
YNE IAmb IAmb 11 30 02.2
comp=Z,23nm,1.2s
D58A Chemin du LacG 37.55 18 P 11 29 53.5
baz=206
LAO LASA Array 37.57 340 P P 11 29 53.0 +0.1
LAO IAmb IAmb 11 29 59.4
comp=Z,19nm,0.9s
LAO LASA Array 37.57 340 P 11 29 53.2
baz=152,SNR=12
YMR Madison River 37.67 334 P P 11 29 54.5 +0.6
YMR IAmb IAmb 11 30 02.6
comp=Z,27nm,1.2s
YHH Holmes Hill 37.71 334 P P 11 29 55.5 +1.1
VILB Vilhena 37.77 130 eP P 11 29 55.2 +0.4
YHB Horse Butte 37.83 334 P P 11 29 56.5 +1.2
G65A Princeton 37.83 25 P P 11 29 55.7 +0.6
G65A Princeton 37.83 25 P 11 29 56.0
baz=215
YHL Hebgen Lake 37.91 334 P P 11 29 56.0 0.0
PB01 IPOC Station P 37.97 150 P P 11 29 56.5 -0.1
QLMT Earthquake Lak 37.99 334 P P 11 29 57.5 +0.8
GCMT Greycliff 38.05 336 P P 11 29 57.4 +0.4
F64A Sherman 38.06 24 P 11 29 56.2
baz=214
LSQQ Lebel-sur-Quev 38.30 13 P 11 29 57.9
baz=199
PB07 IPOC Station P 38.35 151 P P 11 30 01.0 +1.1
PB07 IAmb IAmb 11 30 03.1
comp=Z,22nm,1.1s
NPGB Novo Progresso 38.38 118 eP P 11 29 60.0 -0.1
HLID Hailey 38.40 330 P P 11 30 00.8 +0.7
HLID Hailey 38.40 330 P 11 30 01.1
baz=138,SNR=13
BCYI Bear Canyon 38.48 331 P P 11 30 01.0 +0.2
DGMT Dagmar 38.56 344 P 11 30 01.6
baz=156,SNR=19
DGMT Dagmar 38.56 344 P P 11 30 00.7 -0.5
ULM Lac du Bonnet 38.60 353 P P 11 29 59.6 -1.8
comp=Z,7.2nm,0.5s,baz=168,slow=9.2,SNR=24
ULM LR LR 11 47 21.7
comp=Z,443nm,21.8s,baz=164,slow=38
ULM Lac du Bonnet 38.60 353 P P 11 29 59.6 -1.8
ULM IAmb IAmb 11 30 08.7
comp=Z,22nm,1.1s
BOZ Bozeman (W) 38.69 334 P P 11 30 02.0 -0.5

BOZ pmax pmax
comp=Z,17nm,1.3s
BOZ Bozeman (W) 38.69 334 P **P** **11 30 02.0 -0.5**
BOZ Bozeman (W) 38.69 334 P 11 30 03.3
baz=143,SNR=14
PB09 IPOC Station P 38.72 150 P **P** **11 30 03.5 +0.5**
PB09 IAmb IAmb 11 30 12.6
comp=Z,22nm,1.1s
MATQ Matagami 38.83 12 P 11 30 02.3
baz=198,SNR=16
LVC Limon Verde 39.57 150*ce*P **P** **11 30 11.7 +1.4**
LVC pmax pmax
comp=Z,40nm,2.5s
LVC Limon Verde 39.57 150 *e*P **P** **11 30 09.0 -1.3**
HRY Holter Researc 39.67 335 P **P** **11 30 10.8 +0.2**
EGMT Eagleton 39.94 338 P **P** **11 30 12.9 +0.1**
EGMT IAmb IAmb 11 30 19.1
comp=Z,38nm,1.4s
EGMT Eagleton 39.94 338 P 11 30 13.5
baz=147,SNR=11
PTLB Pontes e Lacer 40.16 132 *e*P **P** **11 30 14.2 -0.6**
PLID Pearl Lake 40.30 330 P **P** **11 30 16.0 0.0**
J08A Circle Bar Ran 40.37 326 P **P** **11 30 17.2 +0.8**
J08A IAmb IAmb 11 30 19.7
comp=Z,54nm,1.3s
O03E Paynes Creek 40.41 320 P 11 30 18.4
baz=125,SNR=9.4
MOD Modoc Plateau 40.46 323 P **P** **11 30 17.4 +0.2**
MSO Missoula 40.65 334 P **P** **11 30 18.9 +0.2**
MSO Missoula 40.65 334 P 11 30 19.2
baz=141,SNR=8.7
BMO Blue Mountains 40.78 329 P **P** **11 30 19.4 -0.4**
BMO pmax pmax
comp=Z,6.0nm,1.0s
BMO Blue Mountains 40.78 329 P **P** **11 30 19.4 -0.4**
O02D Mt. Diablo Mer 40.97 319 P 11 30 22.2
baz=124
M04C Macdoel 41.30 322 P 11 30 25.6
baz=126,SNR=9.3
I07A Izee 41.41 326 P **P** **11 30 26.6 +1.7**
JTMT Jette 41.51 334 P **P** **11 30 26.4 +0.6**
F10A Beach Ranch, E 41.53 330 P **P** **11 30 25.7 -0.3**
M02C Callahan 41.69 321 P 11 30 28.0
baz=125
YBH Yreka Blue Hor 41.80 321 P **P** **11 30 28.8 +0.6**
YBH pmax pmax
comp=Z,13nm,1.2s
YBH Yreka Blue Hor 41.80 321 P **P** **11 30 28.8 +0.6**
L04D Klamath Falls 41.84 322 P 11 30 29.6
baz=126,SNR=8.5
J05D Fort Rock, OR 41.86 324 P 11 30 30.2
baz=129
G08A Pilot Rock 41.93 328 P **P** **11 30 31.1 +1.8**
J04D Umpqua Nationa 42.34 324 P 11 30 35.0
baz=128,SNR=8.9
WALA Waterton Lakes 42.38 336 P **P** **11 30 32.9 0.0**
I05D Terrebonne, OR 42.58 325 P 11 30 36.7
baz=129
I04A Tendick Farm, 42.85 324 P 11 30 37.6
baz=128,SNR=6.5
PRPB Parauapebas 42.89 113 *e*P **P** **11 30 37.0 -0.4**
K02D Willamette Mer 42.93 322 P 11 30 37.1
baz=125
HAWA Hanford 42.97 329 P **P** **11 30 37.7 +0.1**
KBO Bosley Butte 43.00 321 P **P** **11 30 38.8 +0.8**
TMAB Tom-Åu,PA,Br 43.03 107 *e*P **P** **11 30 39.5 +1.0**
G05D Wamic, OR 43.14 326 P 11 30 42.1
baz=130,SNR=7.0
I03D Drain, OR 43.33 323 P 11 30 42.4
baz=126,SNR=6.0
J01E Myrtle Point 43.36 322 P 11 30 42.7
baz=125
KEBM Edson Butte 43.44 322 P **P** **11 30 42.0 +0.6**
H04D Lebanon 43.48 325 P 11 30 42.3
baz=128
RPN Rapa Nui 43.60 207 LR LR 11 44 03.8
comp=Z,432nm,19.2s,baz=65,slow=30
F05D White Salmon 43.63 327 P 11 30 45.2
baz=130
FFC Flin Flon 43.88 349 P **P** **11 30 44.4 -0.4**
FFC pmax pmax
comp=Z,9.0nm,0.7s
FFC Flin Flon 43.88 349 P **P** **11 30 44.4 -0.4**
LTY Liberty 44.13 329 P **P** **11 30 47.3 +0.3**
G03D McMinnville, O 44.19 325 P 11 30 49.3
baz=128
B08A Colville Reser 44.24 331 P **P** **11 30 47.9 +0.1**
LON Longmire 44.38 328 P **P** **11 30 48.3 -0.7**
LON pmax pmax
comp=Z,16nm,1.1s
LON Longmire 44.38 328 P **P** **11 30 48.3 -0.7**
F04D Rainier, OR 44.59 326 P 11 30 52.8
baz=129,SNR=5.5
E04D Cinebar 44.65 327 P 11 30 52.9
baz=130
D05A Enumclaw 44.76 328 P **P** **11 30 54.0 +2.1**
D05A IAmb IAmb 11 30 54.8
comp=Z,23nm,1.1s
E03A Lebam 45.18 326 P **P** **11 30 55.1 -0.1**
B06A Marblemount 45.39 330 P **P** **11 30 56.5 -0.4**
B06A IAmb IAmb 11 30 59.1
comp=Z,24nm,0.8s
B05A Bryant 45.52 329 P 11 30 58.8
baz=132
D03D Eldon 45.55 328 P 11 30 58.0
baz=130
ARAG Araguaiana, MT 45.90 126 *e*P **P** **11 31 00.6 -0.7**
AQDB Aquidauana 45.92 134 *e*P **P** **11 31 01.0 -0.4**
A05A Maple Falls 46.00 330 P **P** **11 31 01.8 0.0**
A05A IAmb IAmb 11 31 03.4
comp=Z,12nm,0.8s
CO03 El Pedregal 46.03 158 P **P** **11 31 02.0 -0.2**
CO03 IAmb IAmb 11 31 11.9
comp=Z,14nm,0.9s
SMTB Santa Maria do 46.03 115 *e*P **P** **11 31 02.2 -0.2**
H03N2 Juan Fernandez 46.14 168 T T 12 20 48.4
baz=343
H03N1 Juan Fernandez 46.15 168 T T 12 20 55.0
baz=343
H03N3 Juan Fernandez 46.16 168 T T 12 21 38.9
baz=343
CO02 Combarbal 46.25 159 P **P** **11 31 03.9 -0.1**
CO02 IAmb IAmb 11 31 19.3
comp=Z,32nm,1.1s
FCC Fort Churchill 46.87 356 P **P** **11 31 06.8 -1.6**
FCC pmax pmax
comp=Z,10.0nm,0.9s
FCC Fort Churchill 46.87 356 P **P** **11 31 06.8 -1.6**
PEXB Peixe 46.90 119 *e*P **P** **11 31 08.4 -0.9**
ZON Zonda 47.42 156 P **P** **11 31 12.7 -0.4**
ZON pmax pmax
comp=Z,33nm,1.4s
ZON Zonda 47.42 156 P **P** **11 31 12.7 -0.4**
ZON IAmb IAmb 11 31 16.2
comp=Z,33nm,1.4s
BDFB Brasilia 48.93 123 P **P** **11 31 24.9 -0.2**
comp=Z,3.3nm,0.6s,baz=277,slow=9.7,SNR=4.4
BDFB Brasilia 48.93 123 P **P** **11 31 24.0 -1.0**
BDFB pmax pmax
comp=Z,7.0nm,1.0s
BDFB Brasilia 48.93 123 P **P** **11 31 24.0 -1.0**
CPUP Villa Florida 48.93 141 P **P** **11 31 22.9 -1.8**
comp=Z,2.1nm,0.6s,baz=319,slow=7.0,SNR=4.6
CPUP LR LR 11 53 30.1
comp=Z,215nm,18.7s,baz=328,slow=38
CPUP Villa Florida 48.93 141 P **P** **11 31 23.0 -1.8**
CPUP pmax pmax
comp=Z,11nm,1.3s
CPUP Villa Florida 48.93 141 P **P** **11 31 23.0 -1.8**
BB19B Bebedouro 51.52 129 *e*P **P** **11 31 44.3 -0.3**
ITAB Concordia 52.86 138 *e*P **P** **11 31 53.7 -0.7**
YKA Yellowknife Ar 53.71 346 P **P** **11 31 59.5 -0.6**
comp=Z,12nm,0.8s,baz=140,slow=8.0,SNR=112
YKA PcP **PcP** **11 33 06.8 +0.9**
comp=Z,6.4nm,0.9s,baz=142,slow=4.2,SNR=6.5
YKA LR LR 11 57 24.5
comp=Z,281nm,22.0s,baz=0.0,slow=39
NBTA Tacaratu-PE 54.75 110 *e*P **P** **11 32 09.0 +0.6**
TAOE Nuku Hiva Isla 54.93 250 *e*LR LR 11 47 52.3
comp=Z,998nm,25.6s,baz=71
PLCA Paso Flores 55.12 163 P **P** **11 32 09.6 -1.1**
comp=Z,10nm,1.1s,baz=334,slow=8.1,SNR=9.7
PLCA Paso Flores 55.12 163 P **P** **11 32 09.5 -1.2**
PLCA pmax pmax
comp=Z,25nm,1.4s
PLCA Paso Flores 55.12 163 P **P** **11 32 09.5 -1.2**
PLCA IAmb IAmb 11 32 13.2
comp=Z,25nm,1.4s
PLCA Paso Flores 55.12 163 *e*P **P** **11 32 11.0 +0.3**
RCBR Riachuelo 55.64 106*ce*P **P** **11 32 17.7 +2.8**
RCBR pmax pmax
comp=Z,62nm,1.7s
RCBR Riachuelo 55.64 106 P **P** **11 32 12.7 -2.2**
RCBR Riachuelo 55.64 106 *e*P **P** **11 32 16.2 +1.3**
LL01 San Ignacio de 56.16 165 P **P** **11 32 16.9 -1.1**
LL01 IAmb IAmb 11 32 32.3
comp=Z,16nm,1.1s
LL02 Futaleuf 57.07 165 P **P** **11 32 23.3 -1.2**
LL02 IAmb IAmb 11 32 24.6
comp=Z,23nm,1.4s
CAM01 Campos-RJ 57.28 126 *e*P **P** **11 32 25.9 -0.4**
NBRF Rio Formoso - 57.30 108 *e*P **P** **11 32 27.7 +1.0**
WHY Whitehorse 59.04 336 P 11 32 38.5
baz=125
SFJD Kangerlussuaq 60.59 16 *e*P **P** **11 32 49.1 +0.5**
SFJD IAmb IAmb 11 32 53.3
comp=Z,3.5nm,0.9s
SFJD Kangerlussuaq 60.59 16 *e*P **P** **11 32 49.1 +0.5**
SFJD pmax pmax
comp=Z,4.0nm,0.9s
CTG Chitna Glacier 61.90 334 P 11 32 59.2
baz=118
CRQE Cirque 62.56 333 P 11 33 03.8
baz=117
DAWY Dawson 62.68 338 P **P** **11 33 02.5 -0.4**
RES Resolute Bay 62.80 358 P **P** **11 33 02.5 -0.9**
RES Resolute Bay 62.80 358 P **P** **11 33 02.5 -0.9**
MCARA McCarthy VSAT 62.81 334 P 11 33 05.5
baz=117
EPYK Eagle Plains 63.03 340 P 11 33 05.3
baz=126
BCAR Beaver Creek A 63.09 336 P **P** **11 33 06.1 +0.5**
L27K Beaver Creek, 63.11 336 P 11 33 06.7
baz=119,SNR=10
INK Inuvik 63.24 343 LR LR 12 03 29.7
comp=Z,215nm,21.0s,baz=122,slow=39
INK Inuvik 63.24 343 P **P** **11 33 06.5 +0.1**
INK pmax pmax
comp=Z,18nm,1.1s
INK Inuvik 63.24 343 P **P** **11 33 06.5 +0.1**
INK IAmb IAmb 11 33 15.5
comp=Z,18nm,1.1s
INK Inuvik 63.24 343 P 11 33 06.5
baz=130,SNR=14
BMRM Bremner River 63.32 333 P 11 33 09.0
baz=115
N25K Chitina, Valde 63.59 334 P 11 33 10.8
baz=116
EYAK Cordova Ski Ar 63.65 333 P 11 33 11.0
baz=114
K27K Chicken 63.68 337 P 11 33 10.3
baz=119
EGAK Eagle 63.71 338 P **P** **11 33 09.8 +0.2**
EGAK IAmb IAmb 11 33 13.6
comp=Z,11nm,1.0s
EGAK Eagle 63.71 338 P 11 33 09.9
baz=120,SNR=10
MENT Mentasta 63.81 335 P **P** **11 33 10.8 +0.4**
KLU Klutina 64.12 333 P 11 33 14.1
baz=114,SNR=8.6
HARP HAARP 64.17 335 P 11 33 15.0
baz=115
DOT Dot Lake 64.28 336 P **P** **11 33 13.2 -0.2**
DOT IAmb IAmb 11 33 17.1
comp=Z,14nm,1.0s
SCRK Sand Creek 64.40 336 P **P** **11 33 15.0 +0.7**
SCRK IAmb IAmb 11 33 17.1
comp=Z,16nm,1.4s
SCRK Sand Creek 64.40 336 P 11 33 15.0
baz=117,SNR=9.6
PAX Paxson 64.55 335 P 11 33 15.9
baz=115
ICESG Greenland Ices 65.09 17 *i* P **P** **11 33 18.8 -0.2**
ICESG IAmb IAmb 11 33 26.4
comp=Z,12nm,0.8s
KNK Knik Glacier 65.21 333 P 11 33 20.8
baz=112
SML Sawmill 65.30 333 P 11 33 20.7
baz=112,SNR=6.2
WAT6 Susitna Watana 65.34 334 P 11 33 21.4
baz=113,SNR=17
TULEG Thule 65.46 5 P **P** **11 33 19.8 -1.0**
TULEG IAmb IAmb 11 33 29.2
comp=Z,17nm,1.0s
GHO Glory Hole Cre 65.55 333 P **P** **11 33 22.3 +0.5**
PMR Palmer 65.57 333 P **P** **11 33 22.8 +1.0**
PMR pmax pmax
comp=Z,16nm,1.2s
PMR Palmer 65.57 333 P **P** **11 33 22.8 +1.0**
PMR IAmb IAmb 11 33 27.9
comp=Z,16nm,1.2s
PMR Palmer 65.57 333 P 11 33 22.7
baz=111,SNR=6.9
RC01 Rabbit Creek A 65.67 332 P **P** **11 33 22.9 +0.5**
RC01 Rabbit Creek A 65.67 332 P 11 33 23.5
baz=110
PRP Porcupine Dome 65.68 338 P **P** **11 33 22.6 -0.1**
PRP IAmb IAmb 11 33 26.6
comp=Z,11nm,1.0s
PRP Porcupine Dome 65.68 338 P 11 33 23.1
baz=116
BRSE Bradley Lake S 65.68 331 P 11 33 23.6
baz=109
HDA Harding Lake 65.75 336 P 11 33 23.1
baz=114,SNR=17
HDA P 11 33 23.1
baz=114,SNR=17
WAT2 Susitna Watana 65.85 334 P 11 33 24.6
baz=112
IL31 65.88 337 P **P** **11 33 23.7 0.0**
ILAR Eielson Array 65.88 337 P **P** **11 33 23.6 -0.1**
comp=Z,21nm,1.1s,baz=115,slow=4.5,SNR=97
ILAR LR LR 12 05 30.6
comp=Z,143nm,18.8s,baz=116,slow=39
ILAR Eielson Array 65.88 337 P **P** **11 33 23.4 -0.3**
ILAR Eielson Array 65.88 337 P **P** **11 33 23.4 -0.3**
KDAK Kodiak Island 66.00 328*ce*P **P** **11 33 25.0 +0.4**
KDAK pmax pmax
comp=Z,50nm,1.5s
BMAR Burnt Mountain 66.22 340 P **P** **11 33 26.7 +0.8**
WRH Wood River Hil 66.23 336 P **P** **11 33 26.9 +0.9**
WRH IAmb IAmb 11 33 30.1
comp=Z,13nm,1.0s
POKR Poker Plat Res 66.23 337 P **P** **11 33 26.1 +0.1**
POKR IAmb IAmb 11 33 28.2
comp=Z,11nm,0.8s
POKR Poker Plat Res 66.23 337 P 11 33 26.5
baz=114,SNR=8.7
SUA Susitna One 66.25 332 P 11 33 27.7
baz=110,SNR=7.4
MCK McKinley 66.28 335 P **P** **11 33 27.0 +0.6**
MCK pmax pmax
comp=Z,18nm,0.9s
MCK McKinley 66.28 335 P **P** **11 33 27.0 +0.6**
MCK IAmb IAmb 11 33 36.5
comp=Z,18nm,0.9s
MCK McKinley 66.28 335 P 11 33 27.5
baz=112,SNR=13
COLA College 66.30 336 *i*P **P** **11 33 26.6 +0.2**
COLA pmax pmax
comp=Z,12nm,0.9s
COLA College 66.30 336 P **P** **11 33 26.7 +0.2**
COLA IAmb IAmb 11 33 28.2
comp=Z,12nm,0.8s
COLA College 66.30 336 P 11 33 27.2
baz=114
TCOL CIGO, UAF Yank 66.30 336 P **P** **11 33 26.5 +0.1**
TCOL IAmb IAmb 11 33 28.2
comp=Z,12nm,0.8s
TCOL CIGO, UAF Yank 66.30 336 P 11 33 27.2
baz=114
MDM Murphy Dome 66.48 336 P **P** **11 33 28.0 +0.3**
PPT Papeete 66.66 245 LR LR 11 54 34.6
comp=Z,426nm,18.2s,baz=90,slow=29
BWN Browne 66.67 335 P **P** **11 33 29.0 +0.2**
PPT2 Papeete2 66.67 245 *e*S **S** **11 42 16.4 -3.2**
comp=Z,222nm,28.2s
PPT2 Papeete2 66.67 245 *e*LR LR 11 53 23.5
comp=Z,1µm,25.8s,baz=45
NEA2 Nenana 66.67 336 P **P** **11 33 29.2 +0.3**
NEA2 IAmb IAmb 11 33 38.6
comp=Z,14nm,0.8s
NEA2 Nenana 66.67 336 P 11 33 29.4
baz=112,SNR=11
TRF Thorofare Moun 66.74 335 P **P** **11 33 29.9 +0.4**
TRF IAmb IAmb 11 33 31.7
comp=Z,21nm,0.9s
TRF Thorofare Moun 66.74 335 P 11 33 30.5
baz=111,SNR=11
SKT Skwentna 66.78 333 P **P** **11 33 30.3 +0.7**
SKT Skwentna 66.78 333 P 11 33 30.7
baz=109,SNR=16
SPCR Spurr Chakacha 66.84 332 P 11 33 30.9
baz=108
RSO Redoubt South 66.86 331 P **P** **11 33 31.3 +0.9**
I23K Minto, Yukon-K 67.00 336 P **P** **11 33 31.1 +0.2**
I23K Minto, Yukon-K 67.00 336 P 11 33 31.7
baz=112,SNR=19
KTH Kantishna Hill 67.05 335 P **P** **11 33 31.3 0.0**
KTH IAmb IAmb 11 33 41.0
comp=Z,20nm,0.9s
BPAW Bear Paw Mtn. 67.26 335 P **P** **11 33 32.4 -0.2**
BPAW IAmb IAmb 11 33 34.5
comp=Z,17nm,0.8s
BPAW Bear Paw Mtn. 67.26 335 P 11 33 32.9
baz=110,SNR=16
PPLA Purkeypile 67.37 334 P **P** **11 33 33.7 +0.3**
PPLA IAmb IAmb 11 33 43.2
comp=Z,18nm,1.0s
PPLA Purkeypile 67.37 334 P 11 33 33.7
baz=109,SNR=6.4
SUMG Summit 67.43 15 *i* P **P** **11 33 34.7 +0.7**
SUMG IAmb IAmb 11 33 43.4
comp=Z,10nm,0.9s
SUMG Summit 67.43 15 *i* P **P** **11 33 34.7 +0.7**
SUMG pmax pmax
comp=Z,10.0nm,0.9s
MLY Manley 67.49 336 P **P** **11 33 34.3 +0.2**
MLY IAmb IAmb 11 33 36.2
comp=Z,17nm,0.8s
MLY Manley 67.49 336 P 11 33 34.7
baz=111,SNR=36
CHUM Lake Minchumin 67.74 335 P 11 33 36.1
baz=109
COLD Coldfoot 68.11 338 P **P** **11 33 38.9 +1.1**
COLD IAmb IAmb 11 33 43.0
comp=Z,18nm,1.0s
COLD Coldfoot 68.11 338 P 11 33 39.5
baz=112,SNR=28
EUNU Eureka 68.12 0 P **P** **11 33 37.7 -0.1**
EUNU IAmb IAmb 11 33 46.6
comp=Z,16nm,0.8s
NEEM North Greenlan 68.30 8 *i* P **P** **11 33 39.1 -0.1**
NEEM IAmb IAmb 11 33 41.7
comp=Z,11nm,0.8s
TOLK Toolik Lake Re 68.44 340 P **P** **11 33 40.2 +0.2**
TOLK IAmb IAmb 11 33 44.3
comp=Z,19nm,1.4s
TOLK Toolik Lake Re 68.44 340 P 11 33 41.2
baz=114,SNR=5.7
TBI Tubuai 68.80 239 *e*S **S** **11 42 43.6 -1.2**
comp=Z,191nm,24.8s
TBI Tubuai 68.80 239 *e*LR LR 11 54 25.6
comp=Z,719nm,26.5s
IMAR Indian Mountai 69.00 337 P **P** **11 33 43.3 -0.1**
TTA Tatalina 69.05 333 P **P** **11 33 44.3 +0.4**
TTA pmax pmax
comp=Z,12nm,0.9s
TTA Tatalina 69.05 333 P **P** **11 33 44.3 +0.4**
TTA IAmb IAmb 11 33 45.3
comp=Z,12nm,0.9s
TTA Tatalina 69.05 333 P 11 33 44.2
baz=105,SNR=16
FALS False Pass 71.37 324 P 11 33 58.9
baz=96
A21K Barrow 71.66 342 P **P** **11 34 00.2 +0.7**
A21K Barrow 71.66 342 P 11 34 00.4
baz=108
DBG Daneborg 72.86 15 *i* P **P** **11 34 10.8 +4.1**
DBG IAmb IAmb 11 34 18.5
comp=Z,1.8nm,0.9s
RDOG Red Dog Mine 73.00 338 P 11 34 08.7
baz=100
ANM Nome 73.45 334 P 11 34 12.0
baz=97
DAG Danmarks Havn 73.96 13 *i* P **P** **11 34 12.3 -0.9**
DAG IAmb IAmb 11 34 15.0
comp=Z,3.7nm,0.5s
DAG Danmarks Havn 73.96 13 *i* P **P** **11 34 12.2 -0.9**
DAG pmax pmax
comp=Z,4.0nm,0.5s
PCAS Casmilo, Conde 75.14 52 *e*P **P** **11 34 21.0 +0.2**
comp=Z,36nm,1.0s
PCAS *e*pP **pP** **11 34 30.0 +0.5**
MORF Marmelete 75.19 54 *e*pP pP 11 34 30.8 +0.9
PGAV Gavieira, Arco 75.21 50 *e*LR LR 11 57 48.6
comp=Z,222nm,18.0s
PMTG Montargil 75.41 53 *e*P **P** **11 34 24.0 +1.7**
comp=Z,14nm,1.1s
PMTG *e*pP **pP** **11 34 30.9 -0.2**
PVIS Viseu 75.56 51 *e*P **P** **11 34 23.3 +0.1**
comp=Z,17nm,1.4s
PVIS *e*pP **pP** **11 34 32.4 +0.4**
POLO Lamas de Olo 75.60 50 *e*P **P** **11 34 24.1 +0.6**
PCVE Castro Verde 75.65 54 *e*pP pP 11 34 32.8 +0.3
NOR Nord 75.67 8 *i* P **P** **11 34 24.3 +1.3**
NOR IAmb IAmb 11 34 32.0
comp=Z,3.9nm,0.8s
NOR Nord 75.67 8 *i* P **P** **11 34 24.3 +1.3**
NOR pmax pmax
comp=Z,4.0nm,0.8s
PBDV Barranco-do-Ve 75.77 54 *e*pP pP 11 34 33.8 +0.6
PVAQ Vaqueiros 75.92 54 *e*pP pP 11 34 34.5 +0.4
PVAQ Vaqueiros 75.92 54 *e*LR LR 11 58 20.9
comp=Z,264nm,16.0s
PCBR Castelo Branco 75.94 52 *e*P **P** **11 34 25.7 +0.4**
comp=Z,17nm,1.0s
PCBR *e*pP **pP** **11 34 34.3 +0.2**
PMRV Marv??o 76.03 52 *e*P **P** **11 34 27.9 +2.0**
comp=Z,24nm,1.6s
PMRV *e*pP **pP** **11 34 34.4 -0.3**
PMRV Marv??o 76.03 52 *e*LR LR 11 58 28.9
comp=Z,156nm,18.0s
MVO Moncorvo 76.19 50 *e*P **P** **11 34 27.2 +0.4**
MVO *e*pP **pP** **11 34 35.5 -0.1**
MVO Moncorvo 76.19 50 *e*LR LR 11 58 10.6
comp=Z,198nm,20.0s
PBRG Braganca 76.36 50 *e*pP pP 11 34 37.1 +0.5
PBAR Barrancos 76.40 53 *e*P **P** **11 34 28.5 +0.5**
PBAR *e*pP **pP** **11 34 36.8 0.0**
ESDC Sonseca Array 78.65 52 P **P** **11 34 40.9 +0.3**
comp=Z,4.7nm,0.9s,baz=287,slow=5.3,SNR=17
ESDC LR LR 12 06 51.7
comp=Z,186nm,18.6s,baz=265,slow=34
ESDC Sonseca Array 78.65 52 P **P** **11 34 40.2 -0.4**
ESBB Sonseca Array 78.65 52 P **P** **11 34 40.6 0.0**
ESBB IAmb IAmb 11 34 50.0
comp=Z,11nm,0.9s
DBIC Dimbokro 82.89 85 P **P** **11 35 04.4 +0.7**
comp=Z,7.4nm,0.9s,baz=280,slow=6.6,SNR=6.0
DBIC LR LR 12 09 34.4
comp=Z,90nm,19.9s,baz=260,slow=34
BILL Bilibino 84.44 339*c* *i*P **P** **11 35 11.7 +1.1**
BILL *i* 11 35 16.8
BILL *i* S **S** **11 45 29.7 -4.8**
BILL *i* SS **SS** **11 51 01.4 -3.1**
BILL pmax pmax
comp=Z,76nm,1.5s
BILL Bilibino 84.44 339 P **P** **11 35 11.6 +1.1**
NOA NORSAR Array B 84.51 29 P **P** **11 35 11.9 +0.8**
comp=Z,1.5nm,1.0s,baz=285,slow=5.0,SNR=3.8
NOA LR LR 12 11 45.7
comp=Z,93nm,19.4s,baz=275,slow=35
KASTN Kahler Asten 85.35 39 *e*pP pP 11 35 23.8 -0.6
SENIN Lac Senin/Sane 85.72 44 P **P** **11 35 18.0 +0.3**
SENIN IAmb IAmb 11 35 27.2
comp=Z,12nm,0.8s
NRDL Niedersach Rie 86.06 37 *e*pP pP 11 35 26.3 -1.5
FLTG Flechtingen 86.77 37 *e*P **P** **11 35 24.7 +2.2**
comp=Z,6.1nm,1.0s,baz=285,slow=4.9
TUE Stuetta 87.07 43 P **P** **11 35 23.8 -0.5**
TUE IAmb IAmb 11 35 33.5
comp=Z,10nm,0.9s
ARCES ARCESS Array B 87.12 19 P **P** **11 35 25.4 +1.5**
comp=Z,2.4nm,0.6s,baz=298,slow=5.1,SNR=9.0
ARCES LR LR 12 14 32.5
comp=Z,96nm,18.0s,baz=285,slow=36

DAVA Damuels 87.22 42 *e*P **P 11 35 26.0 +1.0**
comp=Z,13nm,1.1s
UBR Ueberruh 87.27 42 *e*pP pP 11 35 33.4 -0.7
MOX Moxa 87.45 39 *e*P **P 11 35 27.8 +2.0**
comp=Z,2.5nm,0.9s,baz=285,slow=4.9
MOX *e*pP **pP 11 35 34.6 -0.2**
GRF Grafenberg Arr 87.46 40 *e*pP pP 11 35 34.2 -0.7
RETA Reutte 87.75 42 *e*P **P 11 35 28.0 +0.6**
comp=Z,5.6nm,0.6s
FETA Feichten 87.85 42 *e*P **P 11 35 28.3 +0.2**
comp=Z,8.4nm,0.9s
MANZ Manzenberg 87.94 39 *e*P **P 11 35 30.4 +2.1**
comp=Z,3.2nm,0.9s,baz=285,slow=4.9
TOA0 Torodi Ar. St 87.95 77 P **P 11 35 27.4 -1.5**
TOA0 IAmb IAmb 11 35 38.1
comp=Z,19nm,1.5s
TORD Torodi Ar. Bea 87.95 77 P **P 11 35 28.8 -0.1**
comp=Z,3.3nm,1.1s,baz=280,slow=5.0,SNR=7.4
TORD LR LR 12 09 34.2
comp=Z,94nm,21.2s,baz=300,slow=32
TORD Torodi Ar. Bea 87.95 77 P **P 11 35 27.8 -1.1**
TORD IAmb IAmb 11 35 38.1
comp=Z,10.0nm,1.4s
GUNZ Gunzen 87.97 39 *e*P **P 11 35 30.9 +2.5**
comp=Z,3.5nm,0.9s,baz=285,slow=4.9
CMAH Djebel Manchou 88.00 53 P P 11 35 40.1 +11
MOTA Moosalm 88.01 42 *e*P **P 11 35 29.9 +1.1**
comp=Z,9.0nm,1.1s
WERN Wernitzgen 88.02 39 *e*P **P 11 35 31.5 +2.9**
comp=Z,5.0nm,0.9s,baz=285,slow=4.9
TANN Tannenbergstha 88.03 39 *e*P **P 11 35 31.3 +2.6**
comp=Z,8.1nm,1.1s,baz=285,slow=4.9
TANN *e*pP **pP 11 35 37.1 -0.6**
ROTZ Rotzenmuhle 88.06 40 *e*P **P 11 35 31.2 +2.4**
comp=Z,3.4nm,1.0s,baz=285,slow=4.9
CLL Collm 88.11 38 *e*P **P 11 35 31.0 +2.1**
comp=Z,5.0nm,0.9s
CLL *i* (pP) **pP 11 35 37.2 -0.7**
comp=Z,9.0nm,0.9s
CLL *e*S S 11 46 01.0 -10
CLL *e*SP ScS 11 47 06.0 +49
CLL Lm MLR 12 17 00.0
comp=Z,200nm,18.2s
CLL Collm 88.11 38 *e*P **P 11 35 31.0 +2.1**
CLL *i* 11 35 37.2
CLL *e*S S 11 46 01.0 -10
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 88.11 38 P **P 11 35 28.0 -0.9**
CLL IAmb IAmb 11 35 38.2
comp=Z,10nm,1.0s
CLL Collm 88.11 38 *e*P **P 11 35 31.4 +2.5**
comp=Z,3.8nm,0.8s,baz=285,slow=4.9
WATA Walderalm 88.32 42 *e*P **P 11 35 31.0 +0.7**
comp=Z,9.0nm,1.1s
WTTA Wattenberg 88.38 42 *e*P **P 11 35 29.9 -0.7**
comp=Z,2.8nm,0.8s
WET Wettzell 88.65 40 *e*P **P 11 35 34.3 +2.7**
comp=Z,5.9nm,0.9s,baz=285,slow=4.9
BRG Berggiesshubel 88.80 38 *e*pP pP 11 35 40.6 -0.6
RJOB Jochberg 89.00 41 *e*P **P 11 35 35.8 +2.4**
comp=Z,15nm,0.9s,baz=285,slow=4.9
KHC Kasperske Hory 89.10 40 *e*P P 11 35 42.0 +8.3
KHC Kasperske Hory 89.10 40 *e*P P 11 35 42.0 +8.3
GEC2 GERESS Array S 89.26 40 *e*P **P 11 35 36.6 +2.0**
comp=Z,3.2nm,1.0s,baz=285,slow=4.9
GERES GERESS Array B 89.26 40 P **P 11 35 35.2 +0.7**
comp=Z,1.7nm,0.8s,baz=278,slow=3.9,SNR=9.8
GERES LR LR 12 11 09.5
comp=Z,236nm,21.6s,baz=271,slow=33
GERES GERESS Array B 89.26 40 P **P 11 35 34.0 -0.6**
KBA Koelnbreinsper 89.55 42 *e*P **P 11 35 37.8 +1.7**
comp=Z,4.2nm,0.8s
MYKA Terra Mystica 89.88 42 *e*P **P 11 35 38.3 +0.8**
comp=Z,8.2nm,1.0s
DPC Dobruska-Polom 90.41 38 *e*P **P 11 35 40.9 +1.1**
DPC Dobruska-Polom 90.41 38 *e*P **P 11 35 40.9 +1.1**
OBKA Obir 90.51 42 *e*P **P 11 35 41.3 +0.8**
comp=Z,5.9nm,1.0s
CONA Conrad Observa 90.91 41 *e*P **P 11 35 42.9 +0.6**
comp=Z,6.0nm,0.8s
ARSA Arzberg 90.92 41 *e*P **P 11 35 43.3 +1.1**
comp=Z,2.9nm,0.7s
FINES FINESS Array B 91.06 26 LR LR 12 17 34.8
comp=Z,112nm,19.4s,baz=280,slow=36
SEY Seymchan 91.81 336 ⇓ *i*P **P 11 35 47.0 +1.0**
TIXI Tiksi 92.84 349 P **P 11 35 50.6 0.0**
TIXI pmax pmax
comp=Z,25nm,1.0s
TIXI Tiksi 92.84 349 P **P 11 35 50.6 0.0**
PETK Petropavlovsk- 93.99 326 P **P 11 35 56.8 +0.5**
comp=Z,6.8nm,1.1s,baz=72,slow=4.8,SNR=3.8
AKASG Malin Array Be 97.76 34 LR LR 12 20 01.6
comp=Z,144nm,19.3s,baz=285,slow=35
AKASG Malin Array Be 97.76 34 *i* P Pdif 11 36 22.0 +8.5
AKASG pmax pmax
comp=Z,2.0nm,0.6s
NRIK Noril'sk 98.87 1 LR LR 12 22 39.5
comp=Z,177nm,21.7s,baz=14,slow=36
DZM Mont Dzumac 107.80 251 *e*LR LR 12 12 25.4
comp=Z,474nm,38.2s
KURK Kurchatov 116.66 9 PKIKP **PKPdf 11 41 22.3 -0.1**
KURK Kurchatov 116.66 9 PKPdf **PKPdf 11 41 22.3 -0.1**
KURBB Kurchatov Arra 116.73 9 PKP **PKPdf 11 41 22.3 -0.3**
comp=Z,0.4nm,0.6s,baz=347,slow=1.9,SNR=5.7
BOSA Boshof 116.80 116 PKP **PKPdf 11 41 23.3 -0.1**
comp=Z,1.6nm,0.6s,baz=220,slow=3.1,SNR=4.4
BOSA Boshof 116.80 116 PKiKP 11 41 23.5 +0.1
DGZ Jazzator, Alta 118.53 3 ⇓ *i*PKIKP **PKPdf 11 41 26.3 0.0**
SONM Songino Array 118.93 348 PKP **PKPdf 11 41 27.0 -0.1**
comp=Z,0.4nm,0.4s,baz=42,slow=1.0,SNR=4.5
SONM Songino Array 118.93 348 PKIKP **PKiKP 11 41 27.2 +0.1**
SONM Songino Array 118.93 348 PKiKP 11 41 27.2 +0.1
KSRS Korea Array 119.89 327 PKP **PKiKP 11 41 29.4 +0.3**
comp=Z,1.3nm,0.7s,baz=11,slow=1.8,SNR=8.0
MK31 Makanchi Array 120.99 7 ⇓ *i*PKIKP **PKPdf 11 41 29.7 -1.3**
MKAR Makanchi Array 120.99 7 PKP **PKPdf 11 41 30.0 -1.0**
comp=Z,0.3nm,0.7s,baz=352,slow=3.1,SNR=3.0
HHC Hu-ho-hao-te 124.13 341 *e*PKP **PKiKP 11 41 37.5 -0.1**
HHC PP **PP 11 43 23.8 +3.1**
HHC AMB AMB
comp=Z,130nm,10.2s
HHC LR LR
comp=Z,130nm,16.2s
HHC LR LR
comp=Z,110nm,17.0s
HHC LR LR
comp=Z,180nm,17.0s
WMQ Urumqi 124.41 3 *e*PKP **PKiKP 11 41 38.3 +0.3**
WMQ LR LR
comp=Z,280nm,27.1s
WMQ LR LR
comp=Z,320nm,25.9s
WMQ LR LR
comp=Z,740nm,27.1s
GTA Gaotai 128.25 351 PKP **PKiKP 11 41 46.3 +0.5**
GTA sPKP 11 41 57.5
GTA LR LR
comp=Z,83nm,21.8s
GTA LR LR
comp=Z,390nm,21.4s
GTA LR LR
comp=Z,150nm,23.6s
NJ2 Nanjing 128.78 329 *e*PKP **PKiKP 11 41 47.0 +0.1**
STKA Stephens Creek 129.58 238 PKP **PKPdf 11 41 47.7 -0.1**
comp=Z,5.9nm,1.1s,baz=74,slow=1.3,SNR=5.8
STKA Stephens Creek 129.58 238 PKIKP **PKPdf 11 41 48.0 +0.2**
STKA Stephens Creek 129.58 238 PKPdf **PKPdf 11 41 48.0 +0.2**
XAN Xi'an 131.20 340 PKP **PKPdf 11 41 47.0 -3.9**
CD2 Chengdu 135.66 344 PKP **PKPdf 11 41 58.5 -0.9**
WB2 Warramunga Arr 137.71 254 PKPdf 11 42 03.9 +0.6
WRAB Tennant Creek 137.71 254 *d* PKIKP **PKiKP 11 42 06.0 +0.7**
WRA Warramunga Arr 137.72 254 PKhKP PKPpre 11 41 50.8
comp=Z,0.6nm,0.6s,baz=91,slow=3.0,SNR=5.8
WRA PKP **PKPdf 11 42 03.5 +0.1**
comp=Z,2.6nm,0.8s,baz=87,slow=1.0,SNR=15
ASAR Alice Springs 137.72 248 PKhKP PKPpre 11 41 50.1
comp=Z,0.4nm,0.7s,baz=120,slow=2.9,SNR=3.3
ASAR PKP **PKPdf 11 42 03.5 +0.2**
comp=Z,1.9nm,0.9s,baz=117,slow=2.5,SNR=9.0
ASAR Alice Springs 137.72 248 PKPdf **PKPdf 11 42 02.9 -0.3**
SIJI Sorong 138.61 282 PKP **PKPdf 11 42 05.0 -0.2**
comp=Z,2.8nm,0.4s,baz=351,slow=23,SNR=6.0
POO Poona 145.28 30 ⇓ *i*P **PKPbc 11 42 13.0 -3.7**
comp=Z,80nm,0.5s
FITZ Fitzroy Crossi 146.07 255 PKPbc **PKPbc 11 42 19.2 +0.1**
comp=Z,27nm,0.8s,baz=133,slow=2.1,SNR=45
FITZ Fitzroy Crossi 146.07 255 PKPab 11 42 19.5 -0.3
NONG Nongkai 147.87 338 P **PKPbc 11 42 24.9 +0.7**
comp=Z,0.2nmcomp=Z,42nm,1.3s
HYB Hyderabad 148.31 23 *i* PKP **PKPbc 11 42 25.0 -0.4**
CM34 Chiang Mai Arr 148.36 345 P **PKPbc 11 42 25.0 -0.5**
CM33 Chiang Mai Arr 148.44 346 P **PKPbc 11 42 25.0 -0.7**
CHTO Chiang Mai 148.45 346 PKP2 **PKPbc 11 42 26.2 +0.5**
CHTO Chiang Mai 148.45 346 PKPbc 11 42 26.2 +0.5
CMMT Chiang Mai 148.45 346 P **PKPbc 11 42 24.9 -0.9**
comp=Z,0.0nmcomp=Z,210nmcomp=Z,9.0nm,1.6s
CM35 Chiang Mai Arr 148.53 345 P **PKPdf 11 42 24.0 +1.6**
CM32 Chiang Mai Arr 148.62 346 P **PKiKP 11 42 27.0 -0.7**
CM36 Chiang Mai Arr 148.69 345 P **PKPbc 11 42 25.0 -1.4**
CM31 Chiang Mai Arr 148.79 345 P **PKiKP 11 42 27.7 -0.4**
comp=Z,2.0nmcomp=Z,7µmcomp=Z,434nm,1.1s
CMAR Chiang Mai Arr 148.79 345 PKPbc **PKiKP 11 42 27.4 -0.7**
comp=Z,9.0nm,0.7s,baz=319,slow=1.5,SNR=26
CMAR Chiang Mai Arr 148.79 345 PKP2 **PKiKP 11 42 27.7 -0.4**
CMAR Chiang Mai Arr 148.79 345 PKiKP 11 42 27.7 -0.4
CM09 Chiang Mai Arr 148.79 345 P **PKiKP 11 42 27.4 -0.7**
comp=Z,0.1nmcomp=Z,192nmcomp=Z,24nm,1.1s
CM15 Chiang Mai Arr 148.80 345 P **PKiKP 11 42 27.6 -0.5**
comp=Z,0.1nmcomp=Z,158nmcomp=Z,18nm,0.9s
CM02 Chiang Mai Arr 148.81 345 P **PKPbc 11 42 27.3 +0.6**
comp=Z,0.1nmcomp=Z,189nmcomp=Z,23nm,0.8s
CM01 Chiang Mai Arr 148.82 345 P **PKiKP 11 42 27.4 -0.7**
comp=Z,0.1nmcomp=Z,189nmcomp=Z,24nm,0.9s
CM13 Chiang Mai Arr 148.83 345 P **PKPbc 11 42 27.0 +0.3**
comp=Z,0.1nmcomp=Z,160nmcomp=Z,21nm,0.8s
CM04 Chiang Mai Arr 148.84 345 P **PKPbc 11 42 26.5 -0.3**
comp=Z,0.1nmcomp=Z,203nmcomp=Z,28nm,0.9s
CM05 Chiang Mai Arr 148.84 345 P **PKPbc 11 42 26.4 -0.3**
comp=Z,0.1nmcomp=Z,150nmcomp=Z,19nm,0.9s
UTTA Uttaradit 149.03 342 P **PKiKP 11 42 29.0 +0.5**
comp=Z,0.1nmcomp=Z,24nm,0.8s
KAPI Kappang 150.80 281 *c* *i*PKIKP **PKiKP 11 42 33.6 +1.3**

*IDC **29** 11:27:43.4±0.5,27.°81N×85.°46E,h0km,mb4.3/28, mb1 4.5/31,mb1mx4.3/47,mbtmp4.3/31,ML3.8/3,MS3.2/10, Ms1 3.2/10,ms1mx2.9/54,Error ellipse: s-maj=15.1km s-min=12.1km az=35.0*
*NEIC **29** 11:27:45.3±1.2,27.°86N±0.°08×85.°41E±0.°08,h10km±1km, mb4.6/83,Error ellipse: s-maj=14.6km s-min=11.7km az=28.0*
*DMN **29** 11:27:45.8±0.2,27.°95N×85.°52E,h10km,Ml4.8/3,Error ellipse: s-maj=4.2km s-min=2.6km az=14.0*
*BJI **29** 11:27:46.5±0.0,28.°11N×85.°47E,h7km,mB4.4/18, mb4.5/33,Ms3.9/14,Ms7.3/15*
*NDI **29** 11:27:47.2±3.2,27.°70N×85.°40E,h10km,ML4.4, mb4.6(NEIC)*
ISC 29 11:27:46.1±0.8,27.°84N±0.°04×85.°47E±0.°02,h19km±2km, n199,σ1§28/211,mb4.5/66,MS3.1/7,3C-1D,Nepal

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KKN	**Kakani**	**0.17**	**254**	*e*Pg		**Pg**		**11 27 51.4**	**+0.5**
KKN				*e*Sg		**Sg**		**11 27 55.1**	**+0.9**
PKIN	**Phulchoki**	**0.27**	**194**	*e*Pg		**Pb**		**11 27 53.6**	**+1.2**
PKI	**Pulchoki**	**0.27**	**191**	*e*Pg		**Pb**		**11 27 53.6**	**+1.1**
PKI				*e*Sg		**Sn**		**11 27 59.7**	**-1.5**
	13µm,0.5s								
GUN	**Gumba**	**0.37**	**79**	*e*Pg		**Pg**		**11 27 52.8**	**-1.3**
GUN				*e*Sg		**Sg**		**11 27 56.8**	**-2.7**
	56µm,0.3s								
DMN	**Daman**	**0.40**	**235**	*e*Pg		**Pb**		**11 27 55.8**	**+1.0**
DMN				*e*Sg		**Sn**		**11 28 03.3**	**-0.9**
GKN	**Gorkha**	**0.76**	**283**	*e*Pg		**Pb**		**11 28 01.2**	**+0.4**
GKN				*e*Sg		**Sb**		**11 28 11.4**	**+0.6**
	6µm,0.6s								
DANN	**Dangsing**	**1.59**	**289**	*e*Pg		**Pb**		**11 28 15.7**	**+0.5**
DANN				*e*Sg		**Sg**		**11 28 37.0**	**-0.7**
	1µm,0.3s								
KOLN	**Koldanda**	**1.66**	**268**	*e*Pg		**Pb**		**11 28 17.1**	**+0.9**
KOLN				*e*Sg		**Sg**		**11 28 40.5**	**+0.8**
	2µm,0.5s								
PYUN	**Piuthan**	**2.21**	**277**	*e*Pg		**Pg**		**11 28 28.5**	**0.0**
PYUN				*e*Sg		**Sb**		**11 28 55.4**	**+2.7**
	2µm,0.5s								
GTK	**Tadong**	**2.83**	**100**	⇑ *e*P		**Pn**		**11 28 33.1**	**+2.6**
GTK				*e*S		**Sb**		**11 29 09.1**	**-1.3**
GTK				IAML				11 29 14.0	
	comp=N,2µm,0.5s								
GTK				IAML				11 29 14.2	
	comp=E,764nm,0.2s								
LSA	**Lhasa**	**5.32**	**68**	Pn		**Pn**		**11 29 07.5**	**+2.5**
LSA				LR		LR			
	comp=E,240nm,5.7s								
LSA				LR		LR			
	comp=E,240nm,7.5s								
LSA				LR		LR			
	comp=E,430nm,7.5s								
LSA	**Lhasa**	**5.32**	**68**	Pn		**Pn**		**11 29 05.8**	**+0.8**
GUWA	**GUWAHATI**	**5.79**	**105**	*e*P		**Pn**		**11 29 13.0**	**+2.0**
GUWA				*e*S		**Sn**		**11 30 17.6**	**+0.7**
SHL	**Shillong**	**6.17**	**110**	*e*P		**Pn**		**11 29 16.4**	**-0.1**
SHL				*e*S		**Sn**		**11 30 25.2**	**-1.3**
SHL	**Shillong**	**6.17**	**110**	Pn		**Pn**		**11 29 16.3**	**-0.1**
TEZP	**TEZPUR**	**6.64**	**99**	*e*P		**Pn**		**11 29 23.5**	**+0.8**
TEZP				*e*S		**Sn**		**11 30 36.8**	**-1.1**
TEZP				IAML				11 30 41.1	
	comp=N,3µm,0.3s								
TEZP				IAML				11 30 41.6	
	comp=E,3µm,0.2s								
SMLA	**Simla**	**7.94**	**296**	*e*P		**Pn**		**11 29 42.1**	**+1.5**
SMLA				*e*S		**Sn**		**11 31 08.3**	**-1.6**
KOHI	**KOHIMA**	**8.00**	**103**	*e*P		**Pn**		**11 29 42.4**	**+0.8**
KOHI				*e*S		**Sn**		**11 31 08.8**	**-2.9**
KOHI				IAML				11 31 15.0	
	comp=E,91nm,0.6s								
KOHI				IAML				11 31 15.1	
	comp=N,141nm,0.7s								
MOKO	**MOKOCHONG**	**8.20**	**99**	*e*P		**Pn**		**11 29 44.6**	**+0.2**
MOKO				IAML				11 31 17.7	
	comp=E,220nm,0.7s								
MOKO				IAML				11 31 19.9	
	comp=N,200nm,0.6s								
BHPL	**Bhopal**	**8.59**	**240**	*e*P		**Pn**		**11 29 48.0**	**-1.4**
BHPL				*e*S		**Sn**		**11 31 20.3**	**-5.6**
BHPL				IAML				11 31 38.6	
	comp=E,121nm,0.7s								
DHRM	**DHARAMSHALA**	**9.08**	**301**	*e*P		**Pn**		**11 29 56.2**	**-0.2**
DHRM				*e*S		**Sn**		**11 31 35.4**	**-2.9**
DHRM				IAML				11 31 35.6	
	comp=E,109nm,0.5s								
DHRM				IAML				11 31 37.1	
	comp=N,163nm,0.6s								
AJM	**Ajmer**	**9.74**	**265**	*e*P		**Pn**		**11 30 04.0**	**-1.3**
AJM				*i* S		**Sn**		**11 31 47.0**	**-7.2**
HYB	**Hyderabad**	**12.18**	**213**	*i* P		**Pn**		**11 30 37.0**	**-1.7**
KSH	**Kashi**	**14.07**	**328**	P		**Pn**		**11 31 00.5**	**-4.0**
KSH				S		**Sn**		**11 33 40.3**	**+0.1**
KSH				pmax	pmax				
	comp=N,7.0nm,0.3s								
KSH				pmax	pmax				
	comp=N,82nm,2.8s								
KSH				LR	LR				
	comp=N,190nm,6.2s								
KSH				LR	LR				
	comp=N,290nm,6.9s								
KSH				LR	LR				
	comp=N,180nm,3.9s								
CHTO	**Chiang Mai**	**15.28**	**123**			**Pn**		**11 31 21.6**	**+0.6**
CHTO					IAmb	IAmb		11 31 26.9	
	comp=Z,17nm,0.8s								
CMMT	**Chiang Mai**	**15.28**	**123**	P		**P**		**11 31 25.2**	**-0.6**
	comp=Z,0.0nmcomp=Z,11nm,1.4s								
CM32	**Chiang Mai Arr**	**15.31**	**124**	P		**P**		**11 31 27.0**	**+1.0**
CM34	**Chiang Mai Arr**	**15.41**	**123**	P		**P**		**11 31 27.0**	**-0.1**
CM15	**Chiang Mai Arr**	**15.49**	**124**	P		**P**		**11 31 29.0**	**+1.0**
	comp=Z,0.0nmcomp=Z,102nmcomp=Z,14nm,0.8s								
CM13	**Chiang Mai Arr**	**15.50**	**124**	P		**Pn**		**11 31 23.0**	**-0.8**
	comp=Z,0.0nmcomp=Z,81nmcomp=Z,11nm,0.9s								
CM31	**Chiang Mai Arr**	**15.50**	**124**	P		**P**		**11 31 29.4**	**+1.3**
	comp=Z,1.4nmcomp=Z,333nm,0.7s								
CM31	**Chiang Mai Arr**	**15.50**	**124**			**Pn**		**11 31 24.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**15.50**	**124**	Pn		**Pn**		**11 31 21.8**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=303,slow=13,SNR=15								
CMAR				LR		LR		11 38 50.3	
	comp=Z,48nm,18.3s,baz=351,slow=43								
CMAR	**Chiang Mai Arr**	**15.50**	**124**			**Pn**		**11 31 23.5**	**-0.4**
CM02	**Chiang Mai Arr**	**15.52**	**124**	P		**P**		**11 31 27.8**	**-0.6**
	comp=Z,0.1nmcomp=Z,132nmcomp=Z,20nm,0.8s								
CM35	**Chiang Mai Arr**	**15.52**	**123**	P		**P**		**11 31 27.0**	**-1.3**
CM01	**Chiang Mai Arr**	**15.54**	**124**	P		**P**		**11 31 27.9**	**-0.6**
	comp=Z,0.0nmcomp=Z,121nmcomp=Z,19nm,0.8s								
CM05	**Chiang Mai Arr**	**15.54**	**124**	P		**Pn**		**11 31 23.0**	**-1.3**
	comp=Z,0.0nmcomp=Z,89nmcomp=Z,14nm,0.8s								
CM09	**Chiang Mai Arr**	**15.55**	**124**	P		**P**		**11 31 27.0**	**-1.6**
	comp=Z,0.0nmcomp=Z,114nmcomp=Z,16nm,0.7s								
KBL	**Kabul**	**15.56**	**299**			**Pn**		**11 31 22.7**	**-1.9**
KBL					IAmb	IAmb		11 31 30.8	
	comp=Z,25nm,0.8s								
CM04	**Chiang Mai Arr**	**15.56**	**124**	P		**Pn**		**11 31 25.6**	**+1.0**
	comp=Z,0.1nmcomp=Z,131nmcomp=Z,18nm,0.8s								
CM36	**Chiang Mai Arr**	**15.58**	**124**	P		**P**		**11 31 29.0**	**0.0**
KMI	**Kunming**	**15.70**	**96**	⇑ P		**P**		**11 31 33.0**	**+2.5**
KMI				pmax	pmax				
	comp=Z,23nm,0.8s								
PRZ	**Przheval'sk**	**15.70**	**340**	Pn		**Pn**		**11 31 24.7**	**-1.8**
KDJ	**Kajisay**	**15.78**	**337**	Pn		**Pn**		**11 31 26.0**	**-1.5**
WMQ	**Urumqi**	**16.05**	**6**	*e*P		**Pn**		**11 31 31.8**	**+1.0**
WMQ				pmax	pmax				
	comp=Z,29nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,260nm,4.1s								
DRK	**Karamyk**	**16.24**	**319**			**Pn**		**11 31 32.0**	**-1.4**
DRK					IAmb	IAmb		11 31 37.9	
	comp=Z,35nm,0.5s								
BOOM	**Boomskoye usch**	**16.55**	**335**	Pn		**Pn**		**11 31 35.7**	**-1.5**
GTA	**Gaotai**	**16.59**	**42**	⇓ P		**P**		**11 31 40.5**	**+0.3**
GTA				pmax	pmax				
	comp=Z,11nm,0.9s								
GTA				pmax	pmax				
	comp=Z,60nm,5.7s								
GTA				LR	LR				
	comp=Z,140nm,13.8s								
GTA				LR	LR				
	comp=Z,380nm,14.9s								
GTA				LR	LR				
	comp=Z,160nm,13.8s								
SUKH	**Sukhothai**	**16.63**	**125**	P		**P**		**11 31 41.6**	**+1.0**
	comp=Z,208nmcomp=Z,23nm,0.7s								
ARSB	**Arslanbob**	**16.91**	**326**	Pn		**Pn**		**11 31 39.3**	**-2.5**
UMPA	**Umpang Tak**	**16.96**	**130**	P		**P**		**11 31 45.0**	**+0.7**
	comp=Z,2µmcomp=Z,15nm,1.0s								
UTTA	**Uttaradit**	**17.14**	**123**	P		**P**		11 31 53.7	+7.4
BTK	**Batken**	**17.19**	**319**			**Pn**		**11 31 41.9**	**-3.4**
BTK					IAmb	IAmb		11 31 48.7	
	comp=Z,18nm,0.7s								
AAK	**Ala-Archa**	**17.25**	**332**	P		**Pn**		**11 31 46.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=205,slow=21,SNR=3.3								
AAK				LR		LR		11 38 28.6	
	comp=Z,52nm,20.2s,baz=135,slow=37								
AAK	**Ala-Archa**	**17.25**	**332**	P		**Pn**		**11 31 43.3**	**-2.8**
PHIT	**Phitsanulok**	**17.39**	**124**	P		**P**		**11 31 49.9**	**+0.9**
	comp=Z,66nm,0.8s								
UTHA	**Uthaitani**	**17.81**	**130**	P		**P**		**11 31 55.4**	**+1.7**
	comp=Z,26nm,0.9s								
GYA	**Guiyang**	**18.91**	**89**	⇑ P		**P**		**11 32 06.0**	**+0.1**
GYA				pmax	pmax				
	comp=Z,7.0nm,0.7s								
GYA				pmax	pmax				
	comp=Z,10.0nm,3.5s								
NONG	**Nongkai**	**18.94**	**117**	P		**Pn**		**11 32 08.0**	**+1.1**
	comp=Z,1µmcomp=Z,14nm,1.1s								
MK31	**Makanchi Array**	**19.09**	**353**			**P**		**11 32 07.1**	**-0.5**
MKAR	**Makanchi Array**	**19.09**	**353**	P		**Pn**		**11 32 08.3**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=173,slow=12,SNR=76								
MKAR				LR		LR		11 39 25.3	
	comp=Z,26nm,20.8s,baz=173,slow=37								
MAKZ	**Makanchi**	**19.14**	**353**			**P**		**11 32 08.1**	**0.0**
CHAI	**Chaiyaphum**	**19.36**	**124**	P		**Pn**		**11 32 15.8**	**+3.8**
	comp=Z,17nm,0.8s								
KK31	**Karatay Array**	**19.46**	**325**			**P**		**11 32 10.7**	**-0.9**
KKAR	**Karatay Array**	**19.46**	**325**			**P**		**11 32 10.3**	**-1.4**
SRAK	**Srakaew**	**20.67**	**128**	P		Pn		11 32 31.8	+4.4
	comp=Z,15µmcomp=Z,153nm,0.9s								
PALK	**Pallekele**	**20.95**	**193**	LR		LR		11 40 43.0	
	comp=Z,61nm,19.9s,baz=126,slow=37								
XAN	**Xi'an**	**21.02**	**67**	P		**P**		**11 32 28.0**	**-0.8**
XAN				pP		sP		11 32 37.3	+0.2
XAN				pmax	pmax				
	comp=Z,7.0nm,0.8s								
XAN				pmax	pmax				
	comp=Z,52nm,4.1s								
ENH	**Enshi**	**21.13**	**78**	P		**P**		**11 32 29.2**	**-0.7**
ENH					IAmb	IAmb		11 32 33.3	
	comp=Z,34nm,1.3s								
UBPT	**Khong Chiam**	**22.37**	**120**	P		**P**		**11 32 45.3**	**+2.0**
UBPT	**Khong Chiam**	**22.37**	**120**	P		**P**		**11 32 42.9**	**-0.4**
UBPT					IAmb	IAmb		11 32 46.0	
	comp=Z,13nm,0.8s								
KURBB	**Kurchatov Arra**	**23.36**	**349**	P		**P**		**11 32 54.1**	**+0.8**
	comp=Z,3.5nm,0.7s,baz=172,slow=9.6,SNR=45								
QIZ	**Qiongzhong**	**23.98**	**106**	P		**P**		**11 33 01.2**	**+1.5**
QIZ					IAmb	IAmb		11 33 09.9	
	comp=Z,11nm,1.0s								
WSAR	**Wadi Sarin**	**24.62**	**265**	P		**P**		**11 33 07.0**	**+1.5**
	comp=Z,5.0nm,0.7s,baz=135,slow=4.9,SNR=6.2								
LHMI	**Lhok Sumawe**	**25.00**	**152**	P		**P**		**11 33 07.9**	**-1.0**
GEYT	**Alibeck**	**25.00**	**301**	P		**P**		**11 33 10.5**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=167,slow=17,SNR=1.9								
GEYT				LR		LR		11 45 27.0	
	comp=Z,65nm,19.0s,baz=30,slow=42								
HHC	**Hu-ho-hao-te**	**25.05**	**52**	*e*P		**P**		**11 33 11.0**	**+1.7**
HHC				pmax	pmax				
	comp=Z,16nm,0.7s								
HHC				pmax	pmax				
	comp=Z,88nm,5.7s								
HHC				LR	LR				
	comp=Z,91nm,8.5s								
HHC				LR	LR				
	comp=Z,120nm,8.5s								
HHC				LR	LR				
	comp=Z,110nm,9.1s								
SONM	**Songino Array**	**25.77**	**34**	P		**P**		**11 33 17.2**	**+1.4**
	comp=Z,6.9nm,0.6s,baz=220,slow=10.0,SNR=43								
SONM				LR		LR		11 44 34.5	
	comp=Z,91nm,18.7s,baz=266,slow=39								
SONM	**Songino Array**	**25.77**	**34**	P		**P**		**11 33 16.0**	**+0.2**
SONM					IAmb	IAmb		11 33 18.1	
	comp=Z,5.8nm,0.7s								
ZAA0	**Zalesovo Array**	**26.09**	**359**	P		**P**		**11 33 18.0**	**-0.5**
ZAA0					IAmb	IAmb		11 33 26.8	
	comp=Z,6.7nm,0.8s						

TOLI2	**Tolitoli**	**42.99**	**122**	P	**P**	**11 35 44.1**	**-0.4**
TOLI2				IAmb	IAmb	11 35 49.0	
	comp=Z,12nm,1.1s						
BRTR	**Keskin Array B**	**44.13**	**299**	P	**P**	**11 35 54.5**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=142,slow=6.2,SNR=4.5						
BRTR	**Keskin Array B**	**44.13**	**299**	P	**P**	**11 35 53.3**	**-0.3**
OBN	**Obninsk**	**44.38**	**322**	LR	LR	11 56 13.3	
	comp=Z,15nm,18.0s,baz=4.5,slow=38						
YAK	**Yakutsk**	**44.85**	**28**	P	**P**	**11 35 59.4**	**+0.5**
KLMR	**Klimovskoe**	**45.05**	**330**	*eP*	**P**	**11 35 59.5**	**-1.0**
KLMR				AMP		11 36 01.1	
	comp=Z,6.0nm,0.7s						
TTSI	**Tana Toraja**	**45.12**	**127**	P	**P**	**11 36 03.6**	**+2.0**
	comp=Z,734nmcomp=Z,23nm,0.9s						
ELL	**Elmali**	**47.24**	**296**	P	**P**	**11 36 18.6**	**+0.4**
ERM	**Erimo**	**48.51**	**57**	P	**P**	**11 36 28.2**	**+0.4**
MLR	**Muntele Rosu**	**49.75**	**307**	P	**P**	**11 36 38.7**	**+1.2**
	comp=Z,4.8nm,0.8s,baz=44,slow=2.9,SNR=3.0						
MLR	**Muntele Rosu**	**49.75**	**307**	P	**P**	**11 36 36.7**	**-0.8**
MLR				IAmb	IAmb	11 36 40.0	
	comp=Z,7.0nm,0.9s						
TIXI	**Tiksi**	**49.88**	**17**		**P**	**11 36 38.6**	**+0.8**
TIXI				IAmb	IAmb	11 36 48.6	
	comp=Z,4.1nm,0.8s						
FIA1	**FINESS Array S**	**51.39**	**328**	P	**P**	**11 36 49.8**	**+0.4**
FIA1				IAmb	IAmb	11 36 50.7	
	comp=Z,8.2nm,0.7s						
FINES	**FINESS Array B**	**51.39**	**328**	P	**P**	**11 36 49.8**	**+0.4**
	comp=Z,5.3nm,0.6s,baz=109,slow=8.9,SNR=21						
PABE	**Paberze**	**51.51**	**320**	P	**P**	**11 36 51.0**	**+0.6**
VTS	**Vitosha**	**51.84**	**304**		**S**	**11 44 15.1**	**+0.2**
KEV	**Kevo**	**53.37**	**338**		**P**	**11 37 04.7**	**+0.8**
ARA0	**ARCESS Array S**	**53.79**	**338**	*eP*	**P**	**11 37 07.8**	**+0.7**
ARCES	**ARCESS Array B**	**53.79**	**338**	P	**P**	**11 37 07.9**	**+0.9**
	comp=Z,8.9nm,0.6s,baz=97,slow=7.3,SNR=44						
ARCES	**ARCESS Array B**	**53.79**	**338**	P	**P**	**11 37 08.0**	**+0.9**
ARCES				IAmb	IAmb	11 37 08.6	
	comp=Z,11nm,0.7s						
KTK1	**Kautokeino**	**54.41**	**337**	*eP*	**P**	**11 37 12.1**	**+0.5**
KMBO	**Kilima Mbogo**	**54.49**	**246**	P	**P**	**11 37 13.0**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=40,slow=7.0,SNR=4.7						
HAMF	**Hammerfest**	**54.72**	**339**	*eP*	**P**	**11 37 14.9**	**+1.1**
JETT	**Jettan, Norway**	**55.52**	**337**	*eP*	**P**	**11 37 20.4**	**+0.7**
TRO	**Tromso**	**56.05**	**337**	*eP*	**P**	**11 37 23.8**	**+0.5**
HOPEN	**Hopen**	**56.36**	**346**	*eP*	**P**	**11 37 25.7**	**+0.2**
FAUS	**Fauske**	**57.01**	**334**	*eP*	**P**	**11 37 30.7**	**+0.4**
STEI	**Steigen**	**57.09**	**335**	*eP*	**P**	**11 37 31.6**	**+0.8**
HFS	**Hagfors**	**57.26**	**326**	P	**P**	**11 37 32.0**	**-0.1**
	comp=Z,6.1nm,0.6s,baz=90,slow=8.9,SNR=17						
LOF	**Lofoten**	**57.75**	**335**	*eP*	**P**	**11 37 34.8**	**-0.7**
STOK	**Stokkvaagen**	**57.81**	**333**	*eP*	**P**	**11 37 36.6**	**+0.7**
GERES	**GERESS Array B**	**57.88**	**312**	P	**P**	**11 37 36.2**	**-0.6**
	comp=Z,0.3nm,0.2s,baz=269,slow=33,SNR=1.9						
N2VA	**Vr_y**	**58.03**	**335**	*eP*	**P**	**11 37 38.0**	**+0.6**
NC602	**NORSAR Array S**	**58.33**	**326**	P	**P**	**11 37 39.2**	**-0.5**
NC602	**NORSAR Array S**	**58.33**	**326**	*eP*	**P**	**11 37 39.5**	**-0.1**
NC300	**NORSAR Array S**	**58.38**	**327**	P	**P**	**11 37 39.7**	**-0.3**
NC303	**NORSAR Array S**	**58.41**	**327**		**P**	**11 37 40.4**	**+0.2**
NC303				IAmb	IAmb	11 37 42.8	
	comp=Z,15nm,1.3s						
NB2	**NORSAR Subarra**	**58.48**	**327**	P	**P**	**11 37 40.2**	**-0.6**
	baz=89,slow=7.4						
NOA	**NORSAR Array B**	**58.48**	**327**	P	**P**	**11 37 40.1**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=89,slow=7.0,SNR=7.6						
HSPB	**Hornsund (broa**	**58.59**	**346**	*eP*	**P**	**11 37 41.5**	**+0.3**
NAO01	**NORSAR Array S**	**58.65**	**326**		**P**	**11 37 41.6**	**-0.3**
SPA0	**Spitsbergen Ar**	**58.69**	**347**	P	**P**	**11 37 42.7**	**+0.7**
NC204	**NORSAR Array S**	**58.70**	**327**		**P**	**11 37 42.1**	**-0.2**
KONO	**Kongsberg**	**59.34**	**9**	*eP*	**P**	**11 37 47.1**	**+0.4**
DOMB	**Dombas**	**59.48**	**328**	*eP*	**P**	**11 37 47.9**	**+0.2**
KBS	**Kingsbay**	**59.72**	**348**	*eP*	**P**	**11 37 49.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**59.99**	**135**		**P**	**11 37 51.6**	**0.0**
KNRA	**Kununurra**	**60.25**	**130**		**P**	**11 37 53.8**	**+0.3**
KNRA				IAmb	IAmb	11 38 08.6	
	comp=Z,14nm,1.1s						
ODD1	**Odda**	**60.82**	**326**	*eP*	**P**	**11 37 56.9**	**0.0**
SENIN	**Lac Senin/Sane**	**62.56**	**310**	P	**P**	**11 38 09.1**	**0.0**
SENIN				IAmb	IAmb	11 38 11.9	
	comp=Z,5.3nm,0.8s						
MORW	**Morawa**	**63.71**	**150**		**P**	**11 38 16.4**	**-0.1**
KEST	**Kesra**	**63.71**	**298**	P	**P**	**11 38 16.0**	**-0.8**
	comp=Z,13nm,0.9s,baz=310,slow=1.4,SNR=10						
KEST	**Kesra**	**63.71**	**298**	P	**P**	**11 38 16.2**	**-0.5**
EKA	**Eskdalemuir Ar**	**66.84**	**322**	P	**P**	**11 38 36.2**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=76,slow=7.0,SNR=4.5						
WB0	**Warramunga Arr**	**66.93**	**129**	P	**P**	**11 38 37.8**	**+0.1**
WRA	**Warramunga Arr**	**67.01**	**130**	P	**P**	**11 38 39.1**	**+0.9**
	comp=Z,8.3nm,0.7s,baz=323,slow=6.6,SNR=94						
WRAB	**Tennant Creek**	**67.02**	**130**	P	**P**	**11 38 38.9**	**+0.7**
WB2	**Warramunga Arr**	**67.02**	**130**	P	**P**	**11 38 37.9**	**-0.3**
WR0	**Warramunga Arr**	**67.16**	**130**	P	**P**	**11 38 39.6**	**+0.6**
WR0				IAmb	IAmb	11 38 40.8	
	comp=Z,7.8nm,0.8s						
NWAO	**Narrogin (SRO)**	**67.55**	**151**		**P**	**11 38 41.2**	**0.0**
NWAO	**Narrogin (SRO)**	**67.55**	**151**	P	**P**	**11 38 41.1**	**-0.1**
NWAO				IAmb	IAmb	11 38 50.6	
	comp=Z,48nm,1.5s						
AS31	**Alice Springs**	**69.31**	**133**	P	**P**	**11 38 53.5**	**+0.9**
AS31				IAmb	IAmb	11 38 54.5	
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**69.31**	**133**	P	**P**	**11 38 53.5**	**+0.9**
	comp=Z,7.1nm,0.6s,baz=316,slow=6.3,SNR=153						
ASAR	**Alice Springs**	**69.31**	**133**	P	**P**	**11 38 53.7**	**+1.2**
A21K	**Barrow**	**72.17**	**17**		**P**	**11 39 09.5**	**+0.3**
A21K				IAmb	IAmb	11 39 22.4	
	comp=Z,6.4nm,1.1s						
EUNU	**Eureka**	**72.24**	**359**		**P**	**11 39 10.3**	**+0.6**
EUNU				IAmb	IAmb	11 39 18.7	
	comp=Z,4.0nm,0.9s						
ESDC	**Sonseca Array**	**72.41**	**306**	P	**P**	**11 39 11.4**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=55,slow=6.2,SNR=12						
ESDC	**Sonseca Array**	**72.41**	**306**	P	**P**	**11 39 11.1**	**-0.3**
SUMG	**Summit**	**72.90**	**345**	P	**P**	**11 39 14.4**	**+0.3**
SUMG				IAmb	IAmb	11 39 23.3	
	comp=Z,6.6nm,0.9s						
TOLK	**Toolik Lake Re**	**75.74**	**18**	P	**P**	**11 39 31.1**	**+0.9**
TOLK				IAmb	IAmb	11 39 42.6	
	comp=Z,7.1nm,1.2s						
IMAR	**Indian Mountai**	**76.21**	**21**		**P**	**11 39 33.2**	**+0.3**
COLD	**Coldfoot**	**76.50**	**19**	P	**P**	**11 39 35.7**	**+1.2**
COLD				IAmb	IAmb	11 39 42.0	
	comp=Z,3.9nm,1.2s						
BBOO	**Buckleboo**	**77.12**	**138**	P	**P**	**11 39 38.2**	**-0.2**
RES	**Resolute Bay**	**77.73**	**0**		**P**	**11 39 41.3**	**0.0**
MLY	**Manley**	**77.79**	**21**		**P**	**11 39 43.0**	**+1.2**
BMAR	**Burnt Mountain**	**77.94**	**18**		**P**	**11 39 44.5**	**+1.9**
TOA0	**Torodi Ar. Sit**	**78.55**	**279**		**P**	**11 39 46.8**	**-0.1**
TOA0				IAmb	IAmb	11 39 47.5	
	comp=Z,3.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**78.55**	**279**	P	**P**	**11 39 46.8**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=62,slow=4.1,SNR=9.5						
NEA2	**Nenana**	**78.61**	**21**	P	**P**	**11 39 47.1**	**+0.7**
NEA2				IAmb	IAmb	11 39 47.9	
	comp=Z,4.7nm,1.0s						
IL31		**79.17**	**20**		**P**	**11 39 49.8**	**+0.4**
ILAR	**Eielson Array**	**79.17**	**20**	P	**P**	**11 39 49.5**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=302,slow=4.3,SNR=15						
SKT	**Skwentna**	**79.53**	**24**		**P**	**11 39 52.1**	**+0.6**
SKT				IAmb	IAmb	11 39 53.3	
	comp=Z,5.2nm,0.8s						
STKA	**Stephens Creek**	**79.87**	**134**	P	**P**	**11 39 53.9**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=321,slow=6.6,SNR=9.5						
STKA	**Stephens Creek**	**79.87**	**134**		**P**	**11 39 54.2**	**+0.6**
INK	**Inuvik**	**79.90**	**14**	P	**P**	**11 39 53.5**	**+0.3**
INK				IAmb	IAmb	11 39 54.4	
	comp=Z,8.3nm,1.4s						
BOSA	**Boshof**	**80.47**	**231**	P	**P**	**11 39 57.1**	**0.0**
	comp=Z,2.3nm,0.9s,baz=27,slow=5.4,SNR=4.0						
SCRK	**Sand Creek**	**80.62**	**20**		**P**	**11 39 58.1**	**+0.7**
PMR	**Palmer**	**80.64**	**23**	P	**P**	**11 39 57.4**	**0.0**
PMR				IAmb	IAmb	11 39 59.1	
	comp=Z,4.6nm,1.0s						
C36M	**Paulatuk**	**80.74**	**10**		**P**	**11 39 58.3**	**+0.5**
C36M				IAmb	IAmb	11 40 05.7	
	comp=Z,24nm,1.4s						
DOT	**Dot Lake**	**80.84**	**20**	P	**P**	**11 39 58.7**	**+0.2**
DOT				IAmb	IAmb	11 40 10.6	
	comp=Z,6.3nm,1.4s						
EGAK	**Eagle**	**80.84**	**18**	P	**P**	**11 39 59.3**	**+0.9**
EGAK				IAmb	IAmb	11 40 24.8	
	comp=Z,5.0nm,1.2s						
KDAK	**Kodiak Island**	**81.88**	**27**	P	**P**	**11 40 04.8**	**+0.8**
KDAK				IAmb	IAmb	11 40 29.9	
	comp=Z,13nm,1.2s						
DAWY	**Dawson**	**81.88**	**18**	P	**P**	**11 40 04.2**	**+0.1**
DAWY				IAmb	IAmb	11 40 18.0	
	comp=Z,12nm,1.5s						
WHY	**Whitehorse**	**85.88**	**19**	P	**P**	**11 40 24.4**	**-0.2**
WHY				IAmb	IAmb	11 40 34.4	
	comp=Z,8.4nm,1.4s						
TOO	**Toolangi**	**86.01**	**136**	P	**P**	**11 40 25.5**	**+0.1**
TOO				IAmb	IAmb	11 40 27.8	
	comp=Z,10nm,1.2s						
CAN	**Canberra**	**86.82**	**133**	P	**P**	**11 40 30.0**	**+0.6**
DBIC	**Dimbokro**	**87.22**	**276**	P	**P**	**11 40 31.6**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=9.8,slow=5.9,SNR=4.1						
YKA	**Yellowknife Ar**	**88.55**	**9**	P	**P**	**11 40 37.1**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=339,slow=4.5,SNR=12						
TXAR	**Lajitas Array**	**122.48**	**9**	PKP	**PKPdf**	**11 46 40.4**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=159,slow=2.8,SNR=3.2						

*GUC **29** 11:34:15.8±0.7, 27.90S×71.13W, h60km±4km, ML4.5*
*NEIC **29** 11:34:15.7±1.4, 27.89S±0.03×71.1W±0.1, h56km±8km, Error ellipse: s-maj=15.0km s-min=2.4km az=103.0*
*IDC **29** 11:34:17.1±0.8, 27.89S×70.93W, h46km±6km, mb3.4/6, mb1 3.7/9, mb1mx3.5/32, mbtmp3.6/9, ML3.5/3, Error ellipse: s-maj=26.2km s-min=16.5km az=99.0*

ISC 29 11:34:16.2±0.6, 27.89S±0.04×71.10W±0.06, h50km±5km, n63, σ1s09/71, mb3.9/8, 2C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AC04	**Llanos de Chal**	**0.31**	**177**	*eP*	**Pn**	**11 34 25.8**	**+0.3**
AC04				*eS*	**Sn**	**11 34 32.7**	**+0.6**
AC04				IAML		11 34 34.1	
	comp=N,74μm,0.1s						
AC04	**Llanos de Chal**	**0.31**	**177**	Pn	**Pn**	**11 34 26.2**	**+0.7**
AC04				Sn	**Sn**	**11 34 33.1**	**+1.0**
GO03	**Copiap**	**0.82**	**69**	*i* P	**Pn**	**11 34 31.6**	**+0.1**
GO03				*i* S	**Sn**	**11 34 41.9**	**-0.9**
GO03				IAML		11 34 42.5	
	comp=N,15μm,0.4s						
GO03	**Copiap**	**0.82**	**69**		**Pn**	**11 34 31.6**	**+0.1**
GO03				Sn	**Sn**	**11 34 42.2**	**-0.6**
LCO	**Las Campanas**	**1.17**	**163**	Pn	**Pn**	**11 34 36.2**	**-0.3**
LCO				Sn	**Sn**	**11 34 50.8**	**-0.6**
AC01	**Pan de Azucar**	**1.79**	**14**	*eP*	**Pn**	**11 34 45.4**	**+0.6**
AC01	**Pan de Azucar**	**1.79**	**14**	Pn	**Pn**	**11 34 44.1**	**-0.6**
AC02	**Maricunga**	**2.04**	**59**	*eP*	**Pn**	**11 34 49.9**	**+1.3**
AC02				*eS*	**Sn**	**11 35 14.8**	**+1.7**
AC02				IAML		11 35 16.6	
	comp=E,4μm,0.5s						
AC02	**Maricunga**	**2.04**	**59**	Pn	**Pn**	**11 34 48.4**	**-0.1**
GO04	**Tololo Observa**	**2.29**	**174**		**Pn**	**11 34 52.3**	**+0.6**
CO03	**El Pedregal**	**2.96**	**173**	*eP*	**Pn**	**11 35 01.1**	**+0.4**
CO03				*eS*	**Sn**	**11 35 36.1**	**+1.1**
CO03				IAML		11 35 52.5	
	comp=N,3μm,0.2s						
CO03	**El Pedregal**	**2.96**	**173**	Pn	**Pn**	**11 35 01.3**	**+0.5**
GO02	**Mina Guanaco**	**3.03**	**27**	*eP*	**Pn**	**11 35 03.2**	**+1.2**
GO02				*eS*	**Sn**	**11 35 39.2**	**+2.0**
GO02				IAML		11 35 55.1	
	comp=N,1μm,0.7s						
GO02	**Mina Guanaco**	**3.03**	**27**	Pn	**Pn**	**11 35 02.2**	**+0.2**
CO02	**Combarbal**	**3.30**	**179**	*i* P	**Pn**	**11 35 05.1**	**-0.4**
CO02				*eS*	**Sn**	**11 35 44.4**	**+0.9**
CO02	**Combarbal**	**3.30**	**179**		**Pn**	**11 35 05.5**	**0.0**
PB14	**IPOC Station P**	**3.31**	**11**	Pn	**Pn**	**11 35 05.5**	**-0.3**
PB14	**IPOC Station P**	**4.39**	**7**	Pn	**Pn**	**11 35 19.7**	**-0.6**
VA03	**San Esteban**	**4.88**	**175**		**Pn**	**11 35 28.1**	**+1.0**
PB15	**IPOC Station P**	**4.89**	**18**	*eP*	**Pn**	**11 35 28.2**	**+0.9**
PB15	**IPOC Station P**	**4.89**	**18**		**Pn**	**11 35 28.3**	**+0.9**
VA01	**Torpederas**	**5.14**	**185**		**Pn**	**11 35 28.8**	**-1.7**
MT02	**Curacav**	**5.35**	**180**	Pn	**Pn**	**11 35 33.0**	**-0.5**
LVC	**Limon Verde**	**5.62**	**21**	P	**Pn**	**11 35 37.9**	**+0.4**
	comp=N,0.3nm,0.3s,baz=182,slow=6.5,SNR=10						
LVC				S	**Sn**	**11 36 40.7**	**-0.2**
	comp=N,5.1nm,0.3s,baz=170,slow=18,SNR=1.6						
VA05	**Santo Domingo**	**5.76**	**184**		**Pn**	**11 35 38.0**	**-1.1**
MT09	**Talagante**	**5.87**	**179**		**Pn**	**11 35 39.8**	**-0.8**
MT01	**Popeta**	**5.96**	**181**		**Pn**	**11 35 40.8**	**-1.0**
BO01	**Tunca**	**6.48**	**180**		**Pn**	**11 35 47.8**	**-1.2**
BO02	**Sierra Bellavi**	**6.88**	**178**		**Pn**	**11 35 53.7**	**-0.9**
PB01	**IPOC Station P**	**6.97**	**12**		**Pn**	**11 35 54.9**	**-0.9**
PSGCX	**Pisagua**	**8.30**	**6**		**Pn**	**11 36 12.0**	**-2.1**
H03N1	**Juan Fernandez**	**8.71**	**229**	P	**Pn**	**11 36 18.9**	**-0.4**
	baz=110,slow=17,SNR=54						
H03N1				T	T	11 45 05.2	
	baz=56,slow=72,SNR=2183						
H03N2	**Juan Fernandez**	**8.72**	**229**	P	**Pn**	**11 36 18.9**	**-0.6**
	baz=110,slow=17,SNR=32						
H03N2				T	T	11 45 20.9	
	baz=56,slow=72,SNR=1935						
H03N3	**Juan Fernandez**	**8.73**	**229**	P	**Pn**	**11 36 19.0**	**-0.6**
	baz=110,slow=17,SNR=38						
H03N3				T	T	11 45 09.3	
	baz=56,slow=72,SNR=1701						
BI02	**San Fabin de**	**8.75**	**181**		**Pn**	**11 36 18.9**	**-1.1**
H03S3	**Juan Fernandez**	**8.95**	**227**	P	**Pn**	**11 36 21.1**	**-1.4**
	baz=29,slow=19,SNR=12						
H03S3				T	T	11 45 13.8	
	baz=61						
H03S1	**Juan Fernandez**	**8.96**	**227**	P	**Pn**	**11 36 20.9**	**-1.7**
	baz=29,slow=19,SNR=9.9						
H03S1				T	T	11 45 24.7	
	baz=61						
H03S2	**Juan Fernandez**	**8.96**	**227**	P	**Pn**	**11 36 21.1**	**-1.7**
	baz=29,slow=19,SNR=11						
H03S2				T	T	11 45 03.7	
	baz=61						
LPAZ	**La Paz**	**11.87**	**14**	P	**Pn**	**11 37 02.3**	**-1.0**
	comp=N,0.1nm,0.3s,baz=189,slow=11,SNR=1.4						
CPUP	**Vila Florida**	**12.36**	**86**	P	**Pn**	**11 37 07.5**	**-1.9**
	comp=N,0.2nm,0.3s,baz=301,slow=9.9,SNR=2.3						
SIV	**San Ignacio**	**15.05**	**40**	P	**P**	**11 37 49.5**	**-0.6**
	comp=N,0.3nm,0.3s,baz=218,slow=12,SNR=3.5						
BDFB	**Brasilia**	**24.61**	**65**	P	**P**	**11 39 33.9**	**+1.9**
	comp=N,0.8nm,0.3s,baz=178,slow=7.1,SNR=1.2						
HOPE	**Hope Point**	**36.47**	**146**	P	**P**	**11 41 15.4**	**-0.7**
SNAA	**Sanae**	**56.96**	**159**	P	**P**	**11 43 56.4**	**+0.3**
	comp=N,1.4nm,1.0s,baz=284,slow=7.8,SNR=2.6						
SNAA				pP	**pP**	**11 44 10.8**	**+0.7**
	comp=N,1.1nm,0.5s,baz=267,slow=11,SNR=2.6						
TXAR	**Lajitas Array**	**64.88**	**329**	P	**P**	**11 44 53.1**	**+2.7**
	comp=N,0.4nm,0.8s,baz=165,slow=7.4,SNR=4.0						
FCAR	**Ozark Folk Cen**	**66.47**	**341**	P	**P**	**11 44 59.3**	**-1.0**
FCAR				IAmb	IAmb	11 45 03.0	
	comp=Z,3.5nm,1.1s						
M44A	**Midewin, Midew**	**70.70**	**347**	P	**P**	**11 45 26.1**	**-0.4**
TUC	**Tucson**	**70.78**	**325**	P	**P**	**11 45 25.3**	**-2.1**
TUC				IAmb	IAmb	11 45 36.2	
	comp=Z,3.8nm,1.1s						
PV15	**Paradox Valley**	**74.60**	**330**	P	**P**	**11 45 48.7**	**-1.5**
PDAR	**Pinedale Array**	**78.72**	**332**	P	**P**	**11 46 15.4**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=134,slow=5.2,SNR=1.6						
NVAR	**Mina Array Bea**	**79.39**	**324**	P	**P**	**11 46 18.5**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=177,slow=1.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	**81.38**	**70**	P	**P**	**11 46 27.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=262,slow=5.1,SNR=3.7						
TORD				pP	**pP**	**11 46 42.5**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=271,slow=4.8,SNR=4.8						
TORD	**Torodi Ar. Bea**	**81.38**	**70**	P	**P**	**11 46 27.2**	**-0.7**
ASAR	**Alice Springs**	**123.35**	**208**	pPKP	pPKPdf	**11 53 23.8**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=116,slow=1.6,SNR=3.4						
WRA	**Warramunga Arr**	**126.46**	**210**	PKP	**PKiKP**	**11 53 15.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=149,slow=1.8,SNR=2.0						
WRA				pPKP	**pPKPdf**	**11 53 30.1**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=160,slow=1.9,SNR=3.5						
H11S2	**WAKE ISLAND Hyl**	**126.46**	**273**	T	T	14 12 29.7	
	baz=112,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hyl**	**126.47**	**273**	T	T	14 12 35.6	
	baz=112,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hyl**	**126.48**	**273**	T	T	14 12 36.1	
	baz=112,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hyl**	**126.72**	**275**	T	T	14 12 56.5	
	baz=117						
H11N1	**WAKE ISLAND Hyl**	**126.73**	**275**	T	T	14 12 58.4	
	baz=117						
H11N2	**WAKE ISLAND Hyl**	**126.73**	**275**	T	T	14 12 59.5	
	baz=117						
ZALV	**Zalesovo Beam**	**148.54**	**28**	PKPbc	**PKiKP**	**11 53 58.3**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=302,slow=2.7,SNR=1.9						
ZALV				pPKPbc	**pPKPdf**	**11 54 10.3**	**+1.7**
	comp=Z,2.1nm,0.6s,baz=300,slow=3.7,SNR=5.3						
MKAR	**Makanchi Array**	**151.86**	**41**	PKPbc	**PKiKP**	**11 54 06.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=343,slow=1.3,SNR=5.2						
MKAR				pPKPbc	**pPKPbc**	**11 54 21.1**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=328,slow=2.0,SNR=10						

IDC 29 11:37:11.6±4.1, 28.42N×87.79E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.3/66, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=257.4km s-min=29.9km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.24**	**132**	P	Pn	11 40 35.9	+1.4
	0.2nm,0.3s,baz=313,slow=11,SNR=2.2						
KURBB	**Kurchatov Arra**	**23.27**	**345**	P	P	11 42 20.7	+0.2
	0.3nm,0.7s,baz=166,slow=9.7,SNR=1.8						
WRA	**Warramunga Arr**	**65.83**	**132**	P	P	11 47 58.7	-0.3
	0.4nm,0.6s,baz=324,slow=6.6,SNR=6.6						
ASAR	**Alice Springs**	**68.23**	**135**	P	P	11 48 14.3	+0.1
	0.5nm,0.5s,baz=317,slow=6.9,SNR=8.9						

*JMA **29** 11:38:38.2±0.2, 25.21N×123.42E, h188km±4km, M2.5*
*TAP **29** 11:38:46.0, 24.86N×122.01E, h9km±2km, ML1.3, D*

ISC 29 11:38:16.7±2.7, 26.7N±0.1×122.65E±0.06, h13km±12km, n18, σ1s03/26, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNOU	**National Taiwa**	**1.69**	**208**	*eP*	Pg	11 38 53.3	+4.1
	baz=322						
TWB1	**Santiao Chiao**	**1.74**	**200**	*i* P	**Pg**	**11 38 49.2**	**-0.9**
	baz=356						
TWB1				*i* S	Sn	11 38 51.4	-17
	baz=356						
TIPB	**Shuangxi**	**1.83**	**204**	*i* P	**Pb**	**11 38 50.2**	**+0.2**
	baz=304						
TIPB				*i* S	Sn	11 38 53.2	-18
	baz=304						
NTC	**Toucheng**	**1.94**	**203**	P	**Pn**	**11 38 49.3**	**0.0**
	baz=268						
NTC				S	Sn	11 38 51.9	-22
	baz=268						
TWE	**Neicheng**	**2.12**	**205**	*eP*	**Pn**	**11 38 52.1**	**+0.3**
	baz=244						
TWC	**Suao**	**2.16**	**200**	*eP*	**Pn**	**11 38 53.0**	**+0.6**
	baz=208						
YOJ	**Yonaguni jima**	**2.21**	**171**	P	Pg	11 39 05.6	+6.6
YOJ				*eS*	**Sg**	**11 39 27.3**	**-0.3**
JYNG	**Yonagunijimaku**	**2.21**	**173**	P	Pg	11 39 06.3	+7.3
JYNG				S	**Sg**	**11 39 27.7**	**+0.1**
ENTT	**Nioudou**	**2.23**	**206**	*eP*	**Pn**	**11 38 54.5**	**+1.2**
	baz=240						
IRIF	**Iriomote-Funau**	**2.50**	**157**	P	**Pg**	**11 39 06.3**	**+1.6**
IRIF				S	**Sn**	**11 39 28.0**	**+0.5**
JISG	**Ishigakijimahi**	**2.54**	**144**	P	**Pg**	**11 39 06.7**	**+1.2**
JISG				S	**Sn**	**11 39 28.4**	**-0.1**
JIJ	**Ishigaki jima**	**2.65**	**149**	P	**Pg**	**11 39 07.4**	**0.0**
JIJ				S	**Sn**	**11 39 29.0**	**-2.1**
JKRS	**Kuro-shima**	**2.70**	**153**	P	**Pg**	**11 39 08.0**	**-0.4**
JKRS				S	**Sn**	**11 39 30.5**	**-1.8**
JTJ	**Tarama**	**2.73**	**137**	P	**Pg**	**11 39 09.3**	**+0.3**
JTJ				S	**Sn**	**11 39 32.5**	**-0.5**
JIKM	**Ikemajima**	**2.91**	**126**	P	**Pg**	**11 39 12.8**	**+0.4**
JIKM	

LWLI	Liwa	2.06	44	P		Pn	12 24 16.7	+0.4
KASI	Kota Agung	2.10	62	P		Pn	12 24 16.9	+0.1
MDSI	Maura Dua	2.54	38	P		Pn	12 24 23.5	+0.7
LHSI	Lahat	2.81	19	P		Pn	12 24 27.2	+0.6
BLSI	Bandar Lampung	2.84	67	P		Pn	12 24 27.7	+0.7
KSI	Kapahiang	2.84	359	P		Pn	12 24 26.7	-0.3
DBJI	Dramaga	4.09	91	P		Pn	12 24 45.2	+1.0
CBJI	Citeko	4.20	89	P		Pn	12 24 48.7	+3.1
XMIS	Christmas Isla	4.95	143	Pn		Pn	12 24 50.6	-5.4
LEM	Lembang	4.96	94	Pn		Pn	12 24 58.8	+2.4
	6.7nm,0.3s,baz=165,slow=7.6,SNR=7.9							
LEM				Sn		Sn	12 25 50.0	-3.1
	2.5nm,0.3s,baz=152,slow=23,SNR=1.2							
LEM				LR		LR	12 26 12.0	
	comp=Z,55nm,20.3s,baz=299,slow=30							
CISI	Cisompet, Garu	5.25	102	Pn		Pn	12 24 59.5	-0.7
CISI	Cisompet, Garu	5.25	102	P		Pn	12 25 00.1	-0.1
	0.7nm4µm100nm,0.4s							
SDSI	Sungai Dareh	5.67	348	P		Pn	12 25 04.6	-1.3
	0.1nm19nm,0.7s							
UGM	Wanagama	7.96	101	Pn		Pn	12 25 37.6	+0.2
UGM	Wanagama	7.96	101	P		Pn	12 25 37.8	+0.5
COCO	West Island	8.03	225	Pn		Pn	12 25 36.9	-1.4
GSI	Gunungsitoli	9.26	327	Pn		Pn	12 25 51.8	-3.4
RPSI	Rantau Prapat	9.87	338	Pn		Pn	12 26 01.5	-2.0
JAGI	Jajag, Banyuwa	11.59	100	Pn		Pn	12 26 25.2	-2.0
KAPI	Kappang	17.10	86	LR		LR	12 34 57.7	
	comp=Z,53nm,20.3s,baz=70,slow=39							
KKM	Kota Kinabalu	18.42	48	P		P	12 27 57.4	+0.4
KKM				IAmb		IAmb	12 28 21.4	
	comp=Z,45nm,1.3s							
MYLDM	Lahad Datu	19.64	54			P	12 28 10.5	+0.2
MYLDM				IAmb		IAmb	12 28 25.8	
	comp=Z,41nm,1.1s							
BATI	Baumata	21.13	101	P		P	12 28 26.2	-0.2
	comp=Z,13nm,0.5s,baz=94,slow=19,SNR=1.6							
SOEI	Soe	21.66	100	P		P	12 28 31.8	-0.5
UBPT	Khong Chiam	21.83	7	P		P	12 28 32.6	-1.3
CM31	Chiang Mai Arr	25.08	352	P		P	12 29 08.0	+2.1
CM31				IAmb		IAmb	12 29 08.7	
	comp=Z,4.7nm,0.7s							
CMAR	Chiang Mai Arr	25.08	352	P		P	12 29 06.2	+0.3
	comp=Z,3.3nm,0.7s,baz=183,slow=9.1,SNR=25							
CMAR	Chiang Mai Arr	25.08	352	P		P	12 29 05.5	-0.4
FITZ	Fitzroy Crossi	25.22	119	P		P	12 29 07.7	+0.4
	comp=Z,1.8nm,0.9s,baz=277,slow=16,SNR=1.5							
FITZ	Fitzroy Crossi	25.22	119	P		P	12 29 07.0	-0.3
FITZ				IAmb		IAmb	12 29 18.3	
	comp=Z,10.0nm,1.2s							
CHTO	Chiang Mai	25.43	352	P		P	12 29 09.7	+0.6
QIZ	Qiongzhong	26.36	16	P		P	12 29 18.0	+0.4
DAV	Davao City (W)	26.58	60	LR		LR	12 39 24.9	
	comp=Z,40nm,20.1s,baz=114,slow=35							
SAUI	Saumlaki	28.48	95	P		P	12 29 37.0	+0.3
H08S2	Diego Garcia H	29.92	266	T		T	13 01 16.2	
	baz=89,slow=75,SNR=91							
H08S3	Diego Garcia H	29.93	266	T		T	13 01 09.2	
	baz=89,slow=75,SNR=91							
H08S1	Diego Carcia H	29.94	266	T		T	13 01 17.1	
	baz=89,slow=75,SNR=72							
H01W3	Cape Leeuwin H	30.16	161	T		T	13 01 37.2	
	baz=339,slow=76,SNR=18							
H01W2	Cape Leeuwin H	30.18	161	T		T	13 01 37.8	
	baz=339,slow=76,SNR=22							
H01W1	Cape Leeuwin H	30.18	161	T		T	13 01 37.7	
	baz=339,slow=76,SNR=23							
WB0	Warramunga Arr	33.54	116	P		P	12 30 20.8	-0.5
WB0				IAmb		IAmb	12 30 32.3	
	comp=Z,3.9nm,0.7s							
WRA	Warramunga Arr	33.55	117	P		P	12 30 21.6	+0.2
	comp=Z,0.9nm,0.7s,baz=304,slow=8.3,SNR=13							
WRA				PcP		PcP	12 33 01.8	-0.2
	comp=Z,0.3nm,0.5s,baz=300,slow=2.0,SNR=1.7							
WRA	Warramunga Arr	33.55	117	P		P	12 30 19.3	-2.1
WRAB	Tennant Creek	33.55	116	P		P	12 30 19.7	-1.8
WB2	Warramunga Arr	33.56	117	P		P	12 30 22.0	+0.5
WB2				IAmb		IAmb	12 30 32.1	
	comp=Z,6.1nm,0.7s							
WR0	Warramunga Arr	33.73	116	P		P	12 30 23.5	+0.5
WR0				IAmb		IAmb	12 30 33.6	
	comp=Z,6.9nm,0.8s							
ASAR	Alice Springs	34.55	123	P		P	12 30 30.4	+0.3
	comp=Z,0.4nm,0.5s,baz=297,slow=8.0,SNR=10							
ASAR				PcP		PcP	12 33 04.6	-0.2
	comp=Z,0.4nm,0.6s,baz=291,slow=2.3,SNR=6.1							
STKA	Stephens Creek	44.23	130	P		P	12 31 51.0	+0.2
	comp=Z,1.2nm,0.6s,baz=251,slow=3.0,SNR=3.2							
KSRS	Korea Array	49.71	26	P		P	12 32 34.7	+1.4
	comp=Z,1.6nm,0.8s,baz=236,slow=7.7,SNR=9.5							
KDJ	Kajisay	53.69	337	P		P	12 33 04.0	+0.7
KDJ				IAmb		IAmb	12 33 04.7	
	comp=Z,5.2nm,0.8s							
SONM	Songino Array	54.21	3	P		P	12 33 07.4	+0.6
	comp=Z,2.7nm,0.8s,baz=182,slow=8.5,SNR=13							
AAK	Ala-Archa	55.21	335	P		P	12 33 13.5	-0.8
	comp=Z,0.6nm,0.4s,baz=198,slow=5.1,SNR=3.7							
JSD	Sado	55.35	34	P		P	12 33 13.2	-1.9
MK31	Makanchi Array	56.06	343	P		P	12 33 20.4	+0.2
MK31				IAmb		IAmb	12 33 20.9	
	comp=Z,2.3nm,0.7s							
MKAR	Makanchi Array	56.06	343	P		P	12 33 20.4	+0.2
	comp=Z,3.0nm,0.6s,baz=146,slow=8.2,SNR=31							
USRK	Ussuriysk Ar.	57.00	25	P		P	12 33 26.5	-0.3
	comp=Z,2.3nm,0.7s,baz=238,slow=7.8,SNR=4.9							
USRK	Ussuriysk Ar.	57.00	25	P		P	12 33 26.6	-0.2
KURBB	Kurchatov Arra	60.60	343	P		P	12 33 51.9	+0.1
	comp=Z,2.5nm,0.7s,baz=162,slow=6.3,SNR=23							
KURK	Kurchatov	60.66	343	P		P	12 33 51.9	-0.2
ZALV	Zalesovo Beam	62.08	348	P		P	12 34 01.4	-0.2
	comp=Z,1.6nm,0.4s,baz=159,slow=4.6,SNR=9.8							
BVAR	Borovoye Array	65.30	339	P		P	12 34 22.4	-0.6
	comp=Z,2.0nm,0.5s,baz=187,slow=10,SNR=16							
BRVK	Borovoye	65.36	339	P		P	12 34 23.4	+0.1
BRVK				IAmb		IAmb	12 34 33.7	
	comp=Z,2.1nm,0.8s							
MAW	Mawson	66.62	195	P		P	12 34 31.5	+0.3
	comp=Z,2.2nm,0.7s,baz=13,slow=14,SNR=2.1							
MAW	Mawson	66.62	195	P		P	12 34 31.8	+0.5
ABKAR	Akbulak array	66.83	331	P		P	12 34 32.6	-0.3
ABKAR				IAmb		IAmb	12 34 33.5	
	comp=Z,4.8nm,1.0s							
PETK	Petropavlovsk-	75.34	31	P		P	12 35 24.4	+0.1
	comp=Z,1.9nm,0.9s,baz=234,slow=8.8,SNR=1.9							
VNDA	Vanda	77.26	169	P		P	12 35 35.5	+0.6
SEY	Seymchan	78.84	21	P		P	12 35 44.1	+0.3
	comp=Z,0.5nm,0.4s,baz=234,slow=6.1,SNR=3.6							
TIXI	Tiksi	79.89	8	P		P	12 35 48.1	-1.3
	comp=Z,0.7nm,0.4s,baz=206,slow=5.5,SNR=5.7							
TIXI	Tiksi	79.89	8	P		P	12 35 49.0	-0.4
TIXI				IAmb		IAmb	12 35 49.7	
	comp=Z,5.5nm,1.5s							
QSPA	South Pole Qui	83.48	180	P		P	12 36 08.8	+0.1
SNAA	Sanae	88.68	198	P		P	12 36 35.1	+0.9
TXAR	Lajitas Array	146.38	44	PKPbc		PKPdf	12 43 23.8	+2.2
	comp=Z,0.6nm,0.5s,baz=269,slow=1.7,SNR=14							

*JMA **29** 12:44:07.2±0.1, 24°.83N×122°.39E, h3km, M2.7*
*TAP **29** 12:44:07.9, 24°.89N×122°.40E, h14km, ML2.8, C*
ISC 29 12:44:07.5±1.0, 24°.85N±0°.03×122°.40E±0°.02, h10km±8km, n76, σ0°63/136, 1C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.41	292	*i* P		Pg	12 44 15.4	-0.1
	baz=287							
TWB1				*i* S		Sg	12 44 21.0	+0.2
	baz=287							
NTC	Toucheng	0.52	270	*i* P		Pg	12 44 18.2	+0.6
	baz=266							
NTC				S		Sb	12 44 25.5	-0.6
	baz=266							
TIPB	Shuangxi	0.54	283	*i* P		Pg	12 44 18.2	+0.3
	baz=278							
TIPB				S		Sg	12 44 25.9	+0.9
	baz=278							
TWC	Suao	0.56	244	P		Pg	12 44 18.4	+0.1
	baz=240							
TWC				S		Sb	12 44 27.4	+0.1
	baz=240							
WFSB	Wu-fen Shan	0.60	291	P		Pg	12 44 19.6	+0.4
	baz=287							
WFSB				S		Sg	12 44 27.5	+0.4
	baz=287							
JYNG	Yonagunijimaku	0.64	129	P		Pg	12 44 19.9	+0.1
JYNG				*e*S		Sg	12 44 28.4	+0.2
TNOU	National Taiwa	0.64	298	P		Pg	12 44 19.8	-0.2
	baz=294							
TNOU				S		Sg	12 44 28.6	+0.2
	baz=294							
NDS	Dongshan	0.66	251	P		Pg	12 44 20.7	+0.5
	baz=247							
NDS				S		Sb	12 44 29.8	-0.5
	baz=247							
YOJ	Yonaguni jima	0.68	125	P		Pg	12 44 20.4	-0.2
YOJ				S		Sg	12 44 29.1	-0.4
YOJ	Yonaguni jima	0.68	125	*e*P		Pg	12 44 20.6	0.0
	baz=127							
YOJ				*e*S		Sg	12 44 30.1	+0.6
	baz=127							
TWE	Neicheng	0.68	259	P		Pg	12 44 20.6	0.0
	baz=255							
TWE				*e*S		Sg	12 44 30.2	+0.6
	baz=255							
EWUT	Wuta	0.70	234	P		Pg	12 44 21.3	+0.3
	baz=232							
EWUT				S		Sb	12 44 31.2	-0.1
	baz=232							
TWA	Mucha	0.75	280	P		Pb	12 44 22.7	+0.1
	baz=276							
TWA				S		Sg	12 44 31.9	+0.1
	baz=276							
NWRT	Kuosheng	0.76	298	S		Sg	12 44 31.8	-0.2
	baz=294							
ENTT	Nioudou	0.79	255	*i* P		Pg	12 44 22.6	-0.1
	baz=251							
ENTT				S		Sg	12 44 33.4	+0.4
	baz=251							
NHDH	Xindian Distri	0.80	278	*e*P		Pg	12 44 23.3	+0.3
	baz=275							
NHDH				*e*S		Sg	12 44 33.4	-0.1
	baz=275							
YM01	YM01	0.81	291	P		Pg	12 44 22.8	-0.3
	baz=288							
YM01				S		Sg	12 44 33.5	-0.1
	baz=288							
YM08	YM08	0.81	295	*i* P		Pg	12 44 22.5	-0.6
	baz=291							
YM08				S		Sg	12 44 33.2	-0.4
	baz=291							
NWLT	Wulai	0.82	265	P		Pb	12 44 23.8	0.0
	baz=262							
NWLT				*e*S		Sg	12 44 34.2	+0.2
	baz=262							
PCYT	Pengchaiyu	0.83	339	*e*P		Pg	12 44 22.7	-0.7
	baz=338							
PCYT				*e*S		Sg	12 44 33.4	-0.9
	baz=338							
TAP	Taipei	0.83	283	*e*P		Pg	12 44 22.9	-0.6
	baz=280							
TAP				*e*S		Sg	12 44 33.9	-0.6
	baz=280							
TATO	Taipei	0.84	279	P		Pg	12 44 23.4	-0.2
	baz=275							
TATO				S		Sg	12 44 34.3	-0.2
	baz=275							
TWY	Chenhua	0.84	300	P		Pb	12 44 24.0	-0.1
	baz=297							
TWY				S		Sg	12 44 34.5	-0.1
	baz=297							
NDT	Datong Townshi	0.84	253	*e*P		Pb	12 44 24.1	-0.1
	baz=250							
NDT				*e*S		Sb	12 44 35.4	-0.2
	baz=250							
ANP	Anpu	0.86	293	*e*P		Pb	12 44 24.6	-0.1
	baz=290							
ANP				*e*S		Sg	12 44 34.8	-0.6
	baz=290							
TWS1	Kuangyinshan	0.93	286	*e*P		Pg	12 44 25.5	+0.2
	baz=283							
TWS1				*e*S		Sg	12 44 36.7	-0.7
	baz=283							
YHNB	Yeheng	0.95	259	*e*P		Pg	12 44 25.6	-0.1
	baz=256							
YHNB				*e*S		Sg	12 44 37.9	-0.3
	baz=256							
NACB	Ninganchiao	1.00	227	P		Pg	12 44 25.8	-0.9
	baz=225							
NACB				*e*S		Sg	12 44 39.3	-0.4
	baz=225							
NNSB	Datong	1.02	246	P		Pg	12 44 26.6	-0.5
	baz=243							
NNSB				S		Sg	12 44 40.1	-0.3
	baz=243							
NNSH	Datong	1.02	246	*e*P		Pg	12 44 27.1	0.0
	baz=243							
NNSH				*e*S		Sg	12 44 40.0	-0.3
	baz=243							
NNS	Nan Shan	1.02	246	*e*P		Pg	12 44 26.7	-0.4
	baz=244							
NNS				*e*S		Sb	12 44 40.9	+0.1
	baz=244							
ETLH	Xiulin Townshi	1.06	233	P		Pg	12 44 27.4	-0.4
	baz=230							
ETLH				S		Sb	12 44 42.0	+0.3
	baz=230							
TWD	Chiawan	1.06	224	P		Pg	12 44 27.2	-0.8
	baz=222							
TWD				*e*S		Sg	12 44 41.8	0.0
	baz=222							
FUSS	Fushou	1.21	240	*e*P		Pb	12 44 30.4	-0.2
	baz=238							
FUSS				*e*S		Sg	12 44 46.2	-0.4
	baz=238							
WHF	Hehuan Shan	1.25	236	*e*P		Pg	12 44 31.0	-0.6
	baz=234							
WHF				*e*S		Sg	12 44 47.7	-0.2
	baz=234							
TWT	Tachien	1.27	242	*e*P		Pn	12 44 31.4	0.0
	baz=240							
TWT				*e*S		Sb	12 44 47.9	0.0
	baz=240							
LIOB	Emei	1.28	261	*e*P		Pn	12 44 31.2	-0.1
	baz=259							
LIOB				*e*S		Sb	12 44 47.4	-0.6
	baz=259							
TDCB	Techi	1.28	242	*e*P		Pn	12 44 31.2	-0.3
	baz=240							
TDCB				S		Sb	12 44 48.1	-0.2
	baz=240							
NSTT	Nanjuang	1.29	260	*e*P		Pn	12 44 31.8	+0.3
	baz=258							
NSTT				*e*S		Sb	12 44 47.0	-1.4
	baz=258							
IRIF	Iriomote-Funau	1.32	113	P		Pb	12 44 32.5	+0.3
IRIF				*e*S		Sn	12 44 49.9	+0.5
ESL	Shilin	1.36	221	*e*P		Pn	12 44 31.9	-0.5
	baz=219							
ESL				*e*S		Sb	12 44 50.3	-0.2
	baz=219							
CHGB	Renai	1.37	235	P		Pn	12 44 33.0	+0.2
	baz=233							
CHGB				S		Sb	12 44 50.1	-0.8
	baz=233							
OWD	Renai	1.43	232	*e*P		Pn	12 44 33.7	+0.2
	baz=230							
OWD				*e*S		Sb	12 44 53.1	+0.5
	baz=230							
WHP	Taichung City	1.44	247	*e*P		Pn	12 44 34.1	+0.5
	baz=245							
WHP				*e*S		Sn	12 44 52.6	-0.1
	baz=245							
EGFH	Guangfu	1.48	217	*e*P		Pn	12 44 34.1	+0.1
	baz=216							
EGFH				*e*S		Sn	12 44 53.0	-0.4
	baz=216							
HATJ	Hateruma jima	1.51	121	P		Pb	12 44 36.0	+0.5
TWQ1	Liyutan	1.56	252	*e*P		Pb	12 44 36.5	0.0
	baz=249							
TWQ1				*e*S		Sb	12 44 57.2	+0.9
	baz=249							
DPDB	Guoxing	1.57	239	*e*P		Pn	12 44 36.0	+0.5
	baz=237							
WCS	Beigang Elemen	1.57	240	*e*P		Pb	12 44 37.2	+0.6
	baz=238							
WCS				*e*S		Sn	12 44 55.3	-0.5
	baz=238							
VWDT	VWDT	1.59	227	P		Pn	12 44 35.8	+0.2
	baz=225							
VWDT				*e*S		Sn	12 44 56.3	+0.2
	baz=225							
JKRS	Kuro-shima	1.59	112	P		Pn	12 44 35.0	-0.6
HGSD	Ruisui	1.62	214	*e*P		Pn	12 44 36.1	0.0
	baz=212							
HGSD				*e*S		Sb	12 44 58.5	+0.5
	baz=212							
JIJ	Ishigaki jima	1.66	107	P		Pn	12 44 37.2	+0.6
EHY	Hungye	1.66	217	*e*P		Pn	12 44 36.1	-0.6
	baz=215							
EHY				*e*S		Sn	12 44 59.0	+1.0
	baz=215							
SMLT	Sun Moon Lake	1.68	235	*e*P		Pn	12 44 37.9	+1.0
	baz=233							
SMLT				*e*S		Sn	12 44 58.1	-0.4
	baz=233							
SSLB	Suanglung	1.69	231	*e*P		Pn	12 44 37.8	+0.7
	baz=230							
SSLB				*e*S		Sn	12 44 58.6	-0.3
	baz=230							
TYC	Yuchr	1.69	236	*e*P		Pn	12 44 37.9	+0.9
	baz=234							
TYC				*e*S		Sn	12 44 58.6	-0.2
	baz=234							
JISG	Ishigakijimahi	1.76	98	P		Pb	12 44 40.0	+0.2
YULB	Yu-li	1.77	215	*e*P		Pn	12 44 36.4	-1.7
	baz=214							
YULB				*e*S		Sb	12 45 02.4	+0.1
	baz=214							
EYUL	Yuli	1.80	214	*e*P		Pb	12 44 40.2	-0.3
	baz=212							
TWF1	Yuli	1.80	214	*e*P		Pn	12 44 38.1	-0.5
	baz=213							
TWF1				*e*S		Sn	12 44 59.9	-1.6
	baz=213							
WJS	Zhushan	1.84	236	*e*P		Pb	12 44 40.5	-0.7
	baz=235							
FULB	Fuli	1.93	212	*e*P		Pn	12 44 41.6	+1.2
	baz=211							
ALS	Alishan	1.98	228	*e*P		Pn	12 44 42.3	+1.0
	baz=226							
ALS				*e*S		Sn	12 45 05.6	-0.6
	baz=226							
CHN5	Tsauling	2.01	232	*e*P		Pn	12 44 42.8	+1.3
	baz=230							
ELDTW	Lidau	2.08	218	*e*P		Pn	12 44 44.1	+1.5
	baz=216							
JTJ	Tarama	2.10	95	P		Pb	12 44 44.8	-0.9
EDH	Donghe	2.12	208	*e*P		Pn	12 44 42.0	-1.0
	baz=207							
EDH				*e*S		Sn	12 45 09.7	+0.3
	baz=207							
CHN4	Tsaushan	2.23	228	*e*P		Pn	12 44 46.0	+1.6
	baz=227							
TPUB	Ta-pu	2.24	227	*e*P		Pn	12 44 45.3	+0.8
	baz=225							
TPUB				*e*S		Sn	12 45 13.0	+0.8
	baz=225							
STYT	Tauyuan	2.26	222	*e*P		Pn	12 44 45.8	+0.9
	baz=221							
STYT				*e*S		Sn	12 45 14.0	+1.2
	baz=221							
WTP	Ta-pu	2.29	226	*e*P		Pn	12 44 45.9	+0.6
	baz=224							
WTP				*e*S		Sn	12 45 14.6	+1.1
	baz=224							
TWK	Hsinying	2.36	228	*e*P		Pn	12 44 46.3	+0.1
	baz=227							
CHN1	Nanshi	2.38	226	*e*P		Pn	12 44 48.3	+1.7
	baz=225							
MATB	Ma-tsu	2.57	301	*e*P		Pn	12 44 50.9	+1.9
	baz=299							
MASBT	Mashibuluo	2.76	216	*e*P		Pn	12 44 50.8	-0.9
	baz=215							
MASBT				*e*S		Sn	12 45 25.0	0.0
	baz=215							

*IDC **29** 13:52:29.6±1.3, 12°.95N×90°.50W, h0km, mb3.6/6, mb1 4.0/10, mb1mx3.8/48, mbtmp3.7/10, ML3.3/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/41, Error ellipse: s-maj=35.9km s-min=17.7km az=44.0*
*GCG **29** 13:52:31.0±0.6, 12°.96N×90°.89W, h0km±14km, MD4.2*
*SNET **29** 13:52:34.3±2.1, 13°.07N×90°.66W, h14km±8km, ML4.1*
*UCR **29** 13:52:34.0±3.1, 13°.19N×90°.66W, h0km±12km, ML4.0, mb4.3(NEIC)*
*NEIC **29** 13:52:35.9±1.8, 13°.03N±0°.10×90°.65W±0°.08, h41km±11km, mb4.3/55, Md4.1(SNET), Error ellipse: s-maj=15.3km s-min=8.8km az=211.0*
ISC 29 13:52:34.2±1.7, 13°.00N±0°.06×90°.66W±0°.05, h31km±11km, n112, σ1°19/125, mb4.3/30, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CEVE	Cerro Verde	1.31	51	*e*P		Pn	13 52 56.8	+0.2
CEVE				*e*S		Sb	13 53 16.0	+1.1
CEVE				IAML			13 53 18.9	
	comp=Z,7µm,0.4s							
CEVE	Cerro Verde	1.31	51	*e*P		Pn	13 52 56.8	+0.2
CEVE				*e*S		Sb	13 53 16.0	+1.1
CEVE				IAML			13 53 18.9	
	comp=Z,7µm,0.4s							
SBLS	San Blas	1.31	50	*e*P		Pn	13 52 57.2	+0.5
SBLS	San Blas	1.31	50	*e*P		Pn	13 52 57.2	+0.5
RTR	El Retiro	1.33	48	*e*P		Pn	13 52 57.7	+0.7
RTR				*e*S		Sb	13 53 17.4	+1.7
RTR	El Retiro	1.33	48	*e*P		Pn	13 52 57.7	+0.7
RTR				*e*S		Sb	13 53 17.4	+1.7
SNJE	San Jose	1.35	50	*e*P		Pn	13 52 57.7	+0.6
SNJE				*e*S		Sn	13 53 14.4	+0.4
SNJE	San Jose	1.35	50	*e*P		Pn	13 52 57.7	+0.6
SNJE				*e*S		Sn	13 53 14.4	+0.4
PCG	Pacaya	1.39	2	*e*P		Pn	13 52 58.3	+0.5
LALI	Alcalda de L	1.40	69	*e*P		Pn	13 52 58.7	+1.1
LALI				*e*S		Sn	13 53 16.1	+1.1
LALI	Alcalda de L	1.40	69	*e*P		Pn	13 52 58.7	+1.1
LALI				*e*S		Sn	13 53 16.1	+1.1
FUG	Fuego 3	1.45	353	*e*P		Pn	13 52 59.1	+0.5
FUG				*e*S		Sb	13 53 20.4	+1.4
BOQS	Boqueron	1.53	61	*e*P		Pb	13 53 01.6	-0.6
BOQS				*e*S		Sb	13 53 23.2	+1.8
BOQS	Boqueron	1.53	61	*e*P		Pb	13 53 01.6	-0.6
BOQS				*e*S		Sb	13 53 23.2	+1.8
SNET	Serv Nac Est T	1.55	64	IAML			13 53 06.5	
	comp=Z,1µm,0.3s							
SNET				*e*S		Sb	13 53 20.9	-0.9
SNET	Serv Nac Est T	1.55	64	IAML			13 53 06.5	
	comp=Z,1µm,0.3s							
SNET				*e*S		Sb	13 53 20.9	-0.9
SNET	Serv Nac Est T	1.55	64	Pn		Pn	13 53 00.1	+0.2
NBG	Las Nubes	1.61	11	*e*P		Pb	13 53 02.7	-0.9
LFRS	El Faro	1.68	68	*e*P		Pn	13 53 02.5	+0.9
LFRS	El Faro	1.68	68	*e*P		Pn	13 53 02.5	+0.9
ERG	Entre ros, C	1.68	329	*e*P		Pn	13 53 00.3	-1.2
RTAL	Retalhuleu	1.82	327	Pn		Pn	13 53 02.3	-1.2
COEG	Centro de Oper	1.84	70	IAML			13 53 10.9	
	comp=Z,1µm,0.4s							
COEG	Centro de Oper	1.84	70	IAML			13 53 10.9	
	comp=Z,1µm,0.

baz=184,slow=23,SNR=2.0

JTS	**Las Juntas de**	**6.21**	**115**	Pn	**Pn**	**13 54 03.0**	**-0.8**
ESPN	**Las Esperanzas**	**6.26**	**97**	Pn	**Pn**	**13 54 03.3**	**-1.3**
DRK0	**Durika**	**8.17**	**116**	Pn	**Pn**	**13 54 31.5**	**+0.5**
ROSC	**El Rosal**	**18.05**	**115**		**Pn**	**13 56 44.3**	**+1.0**
ROSC				IAmb	IAmb	13 56 45.3	

comp=Z,12nm,0.3s

NATX	**Nacogdoches**	**19.03**	**350**	P	**P**	**13 56 53.3**	**-0.5**
NATX				IAmb	IAmb	13 56 58.0	

comp=Z,14nm,0.5s

SDV	**Santo Domingo**	**20.08**	**100**	P	**P**	**13 57 03.1**	**-2.6**

comp=Z,0.3nm,0.3s,baz=344,slow=10,SNR=1.5

Z47A	**Carrollton**	**20.25**	**6**	P	**P**	**13 57 07.2**	**+0.2**
TX31	**Lajitas Ar. Si**	**20.25**	**325**	P	**P**	**13 57 07.6**	**+0.4**
TX31				IAmb	IAmb	13 57 25.7	

comp=Z,11nm,0.9s

TX32	**Lajitas Array**	**20.25**	**325**	P	**P**	**13 57 07.7**	**+0.5**
TXAR	**Lajitas Array**	**20.25**	**325**	P	Pn	13 57 09.2	-0.1

comp=Z,1.6nm,0.6s,baz=147,slow=12,SNR=17

HODGE	**Hodges**	**22.48**	**18**	P	**P**	**13 57 31.3**	**+0.2**
MNTX	**Cornudas Mount**	**23.01**	**326**	P	**P**	**13 57 37.9**	**+1.2**
TKL	**Tuckaleechee C**	**23.40**	**14**	P	**P**	**13 57 40.0**	**-0.5**

comp=Z,2.4nm,0.6s,baz=180,slow=11,SNR=5.4

TKL				LR	LR	14 07 39.3		

comp=Z,95nm,19.1s,baz=174,slow=39

TKL	**Tuckaleechee C**	**23.40**	**14**	P	**P**	**13 57 40.4**	**-0.2**
TKL				IAmb	IAmb	13 58 01.9		

comp=Z,15nm,1.4s

ATAH	**Atahualpa**	**23.42**	**148**	LR	LR	14 05 46.8		

comp=Z,53nm,19.4s,baz=282,slow=34

U49A	**Red Boiling Sp**	**23.82**	**10**	P	**P**	**13 57 43.8**	**-0.8**
U49A				IAmb	IAmb	13 58 00.3		

comp=Z,4.7nm,0.8s

T42A	**Van Buren**	**23.93**	**359**	P	**P**	**13 57 44.8**	**-0.8**
T47A	**Sharon Grove**	**24.10**	**7**	P	**P**	**13 57 47.2**	**+0.1**
T47A				IAmb	IAmb	13 57 47.4		

comp=Z,7.7nm,0.6s

CCM	**Cathedral Cave**	**24.96**	**359**	P	**P**	**13 57 54.5**	**-0.5**
CCM				IAmb	IAmb	13 57 55.6		

comp=Z,3.9nm,0.7s

PV13	**Radium Mtn., P**	**29.82**	**330**	P	**P**	**13 58 40.1**	**+1.3**
PV03	**Paradox Valley**	**29.91**	**330**	P	**P**	**13 58 40.7**	**+1.1**
PV18	**Skein Mesa, Pa**	**29.93**	**330**	P	**P**	**13 58 41.4**	**+1.6**
PV12	**Saucer Basin,**	**29.93**	**331**	P	**P**	**13 58 41.0**	**+1.1**
PV12				IAmb	IAmb	13 58 43.0		

comp=Z,5.2nm,0.6s

PV16	**Nyswonger Mesa**	**29.98**	**330**	P	**P**	**13 58 40.7**	**+0.5**
PV14	**Lion Creek, Pa**	**30.08**	**330**	P	**P**	**13 58 42.7**	**+1.5**
MTPU	**Mount Pierson**	**31.45**	**326**	P	**P**	**13 58 54.4**	**+0.9**
MTPU				IAmb	IAmb	13 59 12.2		

comp=Z,5.3nm,1.3s

J54A	**Appleton**	**31.90**	**17**	P	**P**	**13 58 57.2**	**+0.4**
PDAR	**Pinedale Array**	**33.87**	**335**	P	**P**	**13 59 15.0**	**+0.6**

comp=Z,0.2nm,0.5s,baz=122,slow=12,SNR=2.1

SPUT	**South Promonto**	**34.02**	**330**	P	**P**	**13 59 16.2**	**+0.6**
SPUT				IAmb	IAmb	13 59 21.3		

comp=Z,3.0nm,0.9s

AHID	**Auburn Hatcher**	**34.53**	**333**	P	**P**	**13 59 19.7**	**-0.4**
ECR	**Eagle Creek**	**34.88**	**333**	P	**P**	**13 59 24.1**	**+0.9**
REDW	**Red Top Meadow**	**34.91**	**334**	P	**P**	**13 59 24.2**	**+0.8**
REDW				IAmb	IAmb	13 59 25.4		

comp=Z,4.4nm,0.7s

ELK	**Elko**	**35.04**	**327**	P	**P**	**13 59 26.4**	**+1.9**
MOOW	**Moose Ponds**	**35.17**	**334**	P	**P**	**13 59 26.2**	**+0.6**
NVAR	**Mina Array Bea**	**35.26**	**321**	P	**P**	**13 59 28.8**	**+2.4**

comp=Z,0.8nm,0.6s,baz=130,slow=8.4,SNR=6.4

AGMN	**Agassiz Nation**	**35.46**	**354**	P	**P**	**13 59 26.2**	**-1.5**
AGMN				IAmb	IAmb	13 59 27.4		

comp=Z,5.3nm,0.7s

YNE	**Yellowstone No**	**35.91**	**336**	P	**P**	**13 59 31.8**	**-0.1**
YNE				IAmb	IAmb	13 59 32.4		

comp=Z,6.1nm,1.4s

MCMT	**McKenzie Canyo**	**36.94**	**333**	P	**P**	**13 59 42.2**	**+1.4**
ULM	**Lac du Bonnet**	**37.39**	**354**	P	**P**	**13 59 41.7**	**-2.5**
ULM				IAmb	IAmb	13 59 42.5		

comp=Z,11nm,1.4s

LRM	**Limekiln Ridge**	**37.56**	**335**	P	**P**	**13 59 46.2**	**+0.1**
PLID	**Pearl Lake**	**38.58**	**331**	P	**P**	**13 59 55.1**	**+0.5**
PLID				IAmb	IAmb	13 59 56.0		

comp=Z,2.7nm,0.8s

J08A	**Circle Bar Ran**	**38.58**	**327**	P	**P**	**13 59 55.7**	**+1.2**
J08A				IAmb	IAmb	13 59 57.6		

comp=Z,8.4nm,1.1s

F10A	**Beach Ranch, E**	**39.81**	**331**	P	**P**	**14 00 05.2**	**+0.5**
F10A				IAmb	IAmb	14 00 06.8		

comp=Z,6.8nm,0.8s

PINE	**Pine Mountain**	**40.21**	**326**	P	**P**	**14 00 09.3**	**+1.1**
PINE				IAmb	IAmb	14 00 10.8		

comp=Z,3.4nm,0.8s

LON	**Longmire**	**42.62**	**328**	P	**P**	**14 00 28.9**	**+1.2**
LON				IAmb	IAmb	14 00 30.1		

comp=Z,4.6nm,0.9s

YKA	**Yellowknife Ar**	**52.30**	**346**	P	**P**	**14 01 41.9**	**-0.8**

comp=Z,0.4nm,0.5s,baz=125,slow=8.7,SNR=14

BCPM	**Bancas Point**	**59.00**	**334**	P	**P**	**14 02 32.2**	**+1.5**
RAGM	**Ragged Mountai**	**61.42**	**333**	P	**P**	**14 02 49.7**	**+2.3**
RES	**Resolute Bay**	**61.72**	**359**	P	**P**	**14 02 47.3**	**-1.8**
RES				IAmb	IAmb	14 02 48.7		

comp=Z,1.7nm,0.6s

INK	**Inuvik**	**61.77**	**343**	P	**P**	**14 02 48.8**	**-0.7**
INK				IAmb	IAmb	14 02 51.6		

comp=Z,4.7nm,1.5s

N25K	**Chitina, Valde**	**61.93**	**334**	P	**P**	**14 02 51.6**	**+0.7**
EYAK	**Cordova Ski Ar**	**61.97**	**333**	P	**P**	**14 02 51.8**	**+0.8**
KLU	**Klutina**	**62.45**	**334**	P	**P**	**14 02 55.1**	**+0.7**
M24K	**Tolsona, Glenn**	**62.82**	**334**	P	**P**	**14 02 58.5**	**+1.6**
SCM	**Sheep Creek Mo**	**63.20**	**334**	P	**P**	**14 03 00.1**	**+0.8**
GHO	**Glory Hole Cre**	**63.87**	**333**	P	**P**	**14 03 04.6**	**+0.8**
KDAK	**Kodiak Island**	**64.25**	**328**	P	**P**	**14 03 05.9**	**-0.3**
ILAR	**Eielson Array**	**64.27**	**337**	P	**P**	**14 03 06.1**	**-0.1**

comp=Z,0.4nm,0.6s,baz=111,slow=5.3,SNR=4.8

SUA	**Susitna One**	**64.57**	**333**	P	**P**	**14 03 09.2**	**+0.7**
TULEG	**Thule**	**64.58**	**6**	P	**P**	**14 03 09.0**	**+0.9**
TULEG				IAmb	IAmb	14 03 30.3		

comp=Z,6.0nm,1.3s

TRF	**Thorofare Moun**	**65.09**	**335**	P	**P**	**14 03 13.1**	**+1.2**
TRF				IAmb	IAmb	14 03 16.7		

comp=Z,3.5nm,1.2s

SKT	**Skwentna**	**65.10**	**333**	P	**P**	**14 03 12.4**	**+0.7**
SKT				IAmb	IAmb	14 03 34.4		

comp=Z,5.6nm,1.3s

RSO	**Redoubt South**	**65.15**	**331**	P	**P**	**14 03 12.8**	**+0.4**
I23K	**Minto, Yukon-K**	**65.38**	**337**	P	**P**	**14 03 14.0**	**+0.6**
I23K				IAmb	IAmb	14 03 14.7		

comp=Z,1.7nm,0.8s

BPAW	**Bear Paw Mtn.**	**65.62**	**335**	P	**P**	**14 03 15.3**	**+0.2**
BPAW				IAmb	IAmb	14 03 17.2		

comp=Z,3.5nm,1.2s

MLY	**Manley**	**65.87**	**336**	P	**P**	**14 03 17.0**	**+0.2**
MLY				IAmb	IAmb	14 03 17.6		

comp=Z,1.9nm,0.7s

EUNU	**Eureka**	**67.10**	**1**	P	**P**	**14 03 23.3**	**-1.1**
TTA	**Tatalina**	**67.37**	**333**	P	**P**	**14 03 26.7**	**+0.4**
TTA				IAmb	IAmb	14 03 40.7		

comp=Z,4.5nm,1.3s

DBIC	**Dimbokro**	**84.46**	**84**	P	**P**	**14 05 03.7**	**-1.0**

comp=Z,2.7nm,0.3s,baz=239,slow=7.3,SNR=27

ASAR	**Alice Springs**	**136.54**	**249**	PKP	**PKPdf**	**14 11 53.7**	**-0.4**

comp=Z,0.3nm,0.9s,baz=100,slow=2.5,SNR=2.1

CMAR	**Chiang Mai Arr**	**147.34**	**343**	PKPbc	**PKPbc**	**14 12 17.1**	**+1.4**

comp=Z,2.2nm,0.8s,baz=339,slow=3.6,SNR=16

IDC 29 14:07:47.4±8.8, 17°62S×174°14W, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/27, mbtmp3.5/3, MS2.6/1, Ms1 2.6/1, ms1mx2.4/33, Error ellipse: s-maj=384.6km s-min=39.0km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.45**	**268**	LR	LR	14 11 19.8	

comp=Z,44nm,20.9s,baz=163,slow=28

WRA	**Warramunga Arr**	**48.68**	**259**	P	P	14 16 33.1	-0.8

0.2nm,0.4s,baz=97,slow=6.9,SNR=6.8

ASAR	**Alice Springs**	**48.78**	**254**	P	P	14 16 35.0	+0.4

0.8nm,0.5s,baz=88,slow=8.8,SNR=28

ILAR	**Eielson Array**	**84.75**	**11**	P	P	14 20 23.1	0.0

0.2nm,0.6s,baz=203,slow=6.7,SNR=4.5

*CNRM **29** 14:15:05.6, 38°72N×10°59W, h0km, Hypocentre not reviewed by the ISC*
*MDD **29** 14:15:07.9±0.9, 38°98N×10°67W, h30km, mbLg3.1/26, Error ellipse: s-maj=9.6km s-min=4.4km az=81.0, PRXIMO*

*IGIL **29** 14:15:08.6, 38°97N×10°70W, h31km, ML4.5*
*LDG **29** 14:15:08.1±0.2, 38°97N×10°69W, h40km, Ml3.3/3, Error ellipse: s-maj=4.4km s-min=2.2km az=78.0*
*INMG **29** 14:15:09.0±1.5, 38°97N×10°66W, h31km, ML2.7, Error ellipse: s-maj=5.5km s-min=2.2km az=83.0*

ISC 29 14:15:06.0±1.6, 39°01N±0°03×10°69W±0°07, h35km, n85, σ1§69/159, 3D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**1.10**	**92**	P	**Pn**	**14 15 26.7**	**+1.7**

4.7nm,0.1s,SNR=39

PMAFR				S	**Sn**	**14 15 40.3**	**+1.3**

751nm,0.2s,SNR=7.9

PMAFR	**Mafra**	**1.10**	**92**	*e*P	**Pn**	**14 15 26.7**	**+1.7**
PMAFR				*e*S	**Sn**	**14 15 40.1**	**+1.2**
PMAFR				A	A	14 15 41.8	

546nm,0.2s

PMST	**Lisbon--Monsan**	**1.21**	**102**	*e*P	**Pn**	**14 15 28.3**	**+1.9**
PMST				*e*S	**Sn**	**14 15 43.0**	**+1.4**
PMST				A	A	14 15 44.8	

160nm,0.2s

PSBE	**So Bento**	**1.56**	**70**	*e*P	**Pn**	**14 15 33.1**	**+1.8**
PSBE				S	**Sn**	**14 15 51.7**	**+1.4**
PSBE				A	A	14 16 06.1	

41nm,0.6s

PMTG	**Montargil**	**1.92**	**87**	P	**Pn**	**14 15 37.8**	**+1.6**
PMTG				S	**Sn**	**14 15 59.6**	**+0.4**

37nm,0.5s

PMTG	**Montargil**	**1.92**	**87**	*e*Pn	**Pn**	**14 15 37.8**	**+1.6**
PMTG				*e*Sn	**Sn**	**14 15 59.6**	**+0.4**
PMTG				A	A	14 16 12.0	

37nm,0.5s

PCAS	**Casmilo, Conde**	**1.99**	**58**	P	**Pn**	**14 15 39.3**	**+2.1**
PCAS				S	**Sn**	**14 16 01.9**	**+0.9**

16nm,0.4s

PCAS	**Casmilo, Conde**	**1.99**	**58**	*e*Pn	**Pn**	**14 15 39.3**	**+2.1**
PCAS				*e*Sn	**Sn**	**14 16 01.9**	**+0.9**
PCAS				A	A	14 16 20.9	

16nm,0.4s

PTEO	**Sao Teotonio**	**2.13**	**133**	P	**Pn**	**14 15 39.7**	**+0.6**
PTEO				S	**Sn**	**14 16 04.0**	**-0.2**

14nm,0.5s

PTEO	**Sao Teotonio**	**2.13**	**133**	*e*Pn	**Pn**	**14 15 39.7**	**+0.6**
PTEO				*e*Sn	**Sn**	**14 16 04.0**	**-0.2**
PTEO				A	A	14 16 05.3	

29nm,0.5s

EVO	**Evora**	**2.15**	**102**	P	**Pn**	**14 15 40.4**	**+1.1**
EVO				S	**Sn**	**14 16 04.6**	**-0.2**

30nm,0.3s

EVO	**Evora**	**2.15**	**102**	*e*P	**Pn**	**14 15 40.4**	**+1.1**
EVO				*e*S	**Sn**	**14 16 00.3**	**-4.4**
EVO	**Evora**	**2.15**	**102**	*e*Pn	**Pn**	**14 15 40.4**	**+1.1**
EVO				*e*Sn	**Sn**	**14 16 04.6**	**-0.2**
EVO				A	A	14 16 05.3	

30nm,0.3s

MORF	**Marmelete**	**2.34**	**136**	*e*P	**Pn**	**14 15 42.6**	**+0.6**
MORF				*e*S	**Sn**	**14 16 07.5**	**-2.1**
MORF				IAML		14 16 10.4	

comp=N,2μm,0.1s

MORF	**Marmelete**	**2.34**	**136**	P	**Pn**	**14 15 42.6**	**+0.6**
MORF				S	**Sn**	**14 16 09.0**	**-0.6**

comp=N,34nm,0.1s

MORF	**Marmelete**	**2.34**	**136**	ǁ*e*Pn	**Pn**	**14 15 42.6**	**+0.6**
MORF				*e*Sn	**Sn**	**14 16 09.0**	**-0.6**
MORF				A	A	14 16 11.0	

comp=N,34nm,0.1s

PFVI	**Vila Bisbo**	**2.38**	**141**	P	**Pn**	**14 15 43.0**	**+0.5**

comp=N,18nm,0.1s,SNR=7.9

PFVI				S	**Sn**	**14 16 10.1**	**-0.4**

comp=N,25nm,0.1s,SNR=7.9

PFVI	**Vila Bisbo**	**2.38**	**141**	ǁ*e*Pn	**Pn**	**14 15 43.0**	**+0.5**
PFVI				*e*Sn	**Sn**	**14 16 10.1**	**-0.4**
PFVI				A	A	14 16 13.5	

comp=N,14nm,0.3s

PFVI	**Vila Bisbo**	**2.38**	**141**	P		14 15 43.0	
PFVI				S		14 16 09.5	
PBEJ	**Beja**	**2.42**	**113**	P	**Pn**	**14 15 44.7**	**+1.6**
PBEJ				S	**Sn**	**14 16 11.3**	**-0.3**

comp=N,5.2nm,0.2s

PBEJ	**Beja**	**2.42**	**113**	*e*Pn	**Pn**	**14 15 44.7**	**+1.6**
PBEJ				*e*Sn	**Sn**	**14 16 11.3**	**-0.3**
PBEJ				A	A	14 16 15.0	

comp=N,10nm,0.2s

PESTR	**Estremoz**	**2.42**	**92**	*e*Pn	**Pn**	**14 15 44.5**	**+1.3**
PESTR				*e*Sn	**Sn**	**14 16 11.3**	**-0.3**
PESTR				A	A	14 16 20.1	

comp=N,14nm,0.2s

PESTR	**Estremoz**	**2.42**	**92**	P		14 15 44.9	
PCVE	**Castro Verde**	**2.50**	**122**	P	**Pn**	**14 15 45.0**	**+0.8**
PCVE				S	**Sn**	**14 16 12.1**	**-1.3**

comp=N,15nm,0.4s

PCVE	**Castro Verde**	**2.50**	**122**	ǁ*e*Pn	**Pn**	**14 15 45.0**	**+0.8**
PCVE				*e*Sn	**Sn**	**14 16 12.1**	**-1.3**
PCVE				A	A	14 16 14.5	

comp=N,15nm,0.4s

PMRV	**Marv??o**	**2.60**	**80**	P	**Pn**	**14 15 47.1**	**+1.5**
PMRV				S	**Sn**	**14 16 15.6**	**-0.3**

comp=N,24nm,0.2s

PMRV	**Marv??o**	**2.60**	**80**	*e*Pn	**Pn**	**14 15 47.1**	**+1.5**
PMRV				*e*Sn	**Sn**	**14 16 15.6**	**-0.3**
PMRV				A	A	14 16 17.3	

comp=N,24nm,0.2s

PCBR	**Castelo Branco**	**2.63**	**70**	P	**Pn**	**14 15 47.8**	**+1.9**
PCBR				S	**Sn**	**14 16 16.1**	**-0.5**

comp=N,9.4nm,0.2s

PCBR	**Castelo Branco**	**2.63**	**70**	*e*Pn	**Pn**	**14 15 47.8**	**+1.9**
PCBR				*e*Sn	**Sn**	**14 16 16.1**	**-0.5**
PCBR				A	A	14 16 17.6	

comp=N,19nm,0.2s

PTO	**Porto**	**2.67**	**36**	P	**Pn**	**14 15 48.4**	**+1.9**
PTO				S	**Sn**	**14 16 17.3**	**-0.2**
PTO	**Porto**	**2.67**	**36**	*e*Pn	**Pn**	**14 15 48.4**	**+1.9**
PTO				*e*Sn	**Sn**	**14 16 17.3**	**-0.2**
PVIS	**Viseu**	**2.75**	**51**	P	**Pn**	**14 15 49.5**	**+1.8**
PVIS				S	**Sn**	**14 16 19.3**	**-0.4**

comp=N,11nm,0.1s

PVIS	**Viseu**	**2.75**	**51**	*e*Pn	**Pn**	**14 15 49.5**	**+1.8**
PVIS				*e*Sn	**Sn**	**14 16 19.3**	**-0.4**
PVIS				A	A	14 16 21.6	

comp=N,22nm,0.1s

PBDV	**Barranco-do-Ve**	**2.80**	**128**	P	**Pn**	**14 15 49.7**	**+1.4**
PBDV				S	**Sn**	**14 16 19.9**	**-1.0**

comp=N,10nm,0.5s

PBDV	**Barranco-do-Ve**	**2.80**	**128**	*e*Pn	**Pn**	**14 15 49.7**	**+1.4**
PBDV				*e*Sn	**Sn**	**14 16 19.9**	**-1.0**
PBDV				A	A	14 16 23.5	

comp=N,10nm,0.5s

PVAQ	**Vaqueiros**	**2.84**	**123**	P	**Pn**	**14 15 49.8**	**+1.0**
PVAQ				S	**Sn**	**14 16 19.9**	**-1.9**

comp=N,11nm,0.3s

PVAQ	**Vaqueiros**	**2.84**	**123**	*e*Pn	**Pn**	**14 15 49.8**	**+1.0**
PVAQ				*e*Sn	**Sn**	**14 16 19.9**	**-1.9**
PVAQ				A	A	14 16 25.8	

comp=N,11nm,0.3s

PVAQ	**Vaqueiros**	**2.84**	**123**	P		14 15 49.8	
EBAD	**Badajoz**	**2.88**	**94**	P	**Pn**	**14 15 50.4**	**+1.0**

comp=N,2.1nm,0.1s,SNR=18

EBAD				S	**Sn**	**14 16 21.9**	**-1.0**

comp=N,47nm,0.1s,SNR=18

EGRO	**El Granado**	**2.92**	**119**	P	**Pn**	**14 15 50.9**	**+0.9**

comp=N,8.1nm,0.2s,SNR=45

EGRO				S	**Sn**	**14 16 23.5**	**-0.4**

comp=N,13nm,0.1s,SNR=5.3

PBAR	**Barrancos**	**2.98**	**105**	P	**Pn**	**14 15 51.9**	**+1.1**
PBAR				S	**Sn**	**14 16 23.7**	**-1.6**

comp=N,9.9nm,0.1s

PBAR	**Barrancos**	**2.98**	**105**	*e*Pn	**Pn**	**14 15 51.9**	**+1.1**
PBAR				*e*Sn	**Sn**	**14 16 23.7**	**-1.6**
PBAR				A	A	14 16 28.8	

comp=N,9.9nm,0.1s

PVRL	**Vila Real**	**3.22**	**44**	P	**Pn**	**14 15 55.8**	**+1.7**
PVRL				S	**Sn**	**14 16 29.4**	**-1.8**

comp=N,8.9nm,0.1s

PVRL	**Vila Real**	**3.22**	**44**	*e*Pn	**Pn**	**14 15 55.8**	**+1.7**
PVRL				*e*Sn	**Sn**	**14 16 29.4**	**-1.8**
PVRL				A	A	14 16 32.4	

comp=N,18nm,0.1s

POLO	**Lamas de Olo**	**3.24**	**42**	P	**Pn**	**14 15 56.3**	**+1.8**
POLO				S	**Sn**	**14 16 30.7**	**-1.2**

comp=N,5.4nm,0.4s

POLO	**Lamas de Olo**	**3.24**	**42**	*e*Pn	**Pn**	**14 15 56.3**	**+1.8**
POLO				*e*Sn	**Sn**	**14 16 30.7**	**-1.2**
POLO				A	A	14 16 32.2	

comp=N,5.4nm,0.4s

PCAB	**Cabril**	**3.38**	**36**	P	**Pn**	**14 15 58.3**	**+1.9**
PCAB				S	**Sn**	**14 16 35.0**	**-0.3**

comp=N,9.2nm,0.3s

PCAB	**Cabril**	**3.38**	**36**	*e*Pn	**Pn**	**14 15 58.3**	**+1.9**
PCAB				*e*Sn	**Sn**	**14 16 35.0**	**-0.3**
PCAB				A	A	14 16 35.7	

comp=N,18nm,0.3s

EMIN	**Mina Concepcio**	**3.39**	**110**	P	**Pn**	**14 15 57.6**	**+1.1**

comp=N,2.1nm,0.1s,SNR=15

EMIN				S	**Sn**	**14 16 33.2**	**-2.3**

comp=N,6.6nm,0.2s,SNR=6.2

PGAV	**Gavieira, Arco**	**3.49**	**31**	P	**Pn**	**14 15 59.8**	**+2.0**
PGAV				S	**Sn**	**14 16 37.1**	**-0.8**

comp=N,18nm,0.1s

PGAV	**Gavieira, Arco**	**3.49**	**31**	*e*Pn	**Pn**	**14 15 59.8**	**+2.0**
PGAV				*e*Sn	**Sn**	**14 16 37.1**	**-0.8**
PGAV				A	A	14 16 39.2	

comp=N,18nm,0.1s

EZAM	**Zamans**	**3.49**	**25**	P	**Pn**	**14 15 59.6**	**+1.8**

comp=N,0.9nm,0.0s,SNR=7.9

EZAM				S	**Sn**	**14 16 36.5**	**-1.4**

comp=N,19nm,0.1s,SNR=7.9

ELOB	**Lobios**	**3.49**	**34**	P	**Pn**	**14 15 59.8**	**+1.9**

comp=N,2.9nm,0.1s,SNR=15

ELOB				S	**Sn**	**14 16 36.8**	**-1.2**

comp=N,8.6nm,0.1s,SNR=7.9

MVO	**Moncorvo**	**3.54**	**51**	P	**Pn**	**14 15 59.9**	**+1.3**

comp=N,3.2nm,0.1s,SNR=6.6

MVO				S	**Sn**	**14 16 37.5**	**-1.7**

comp=N,21nm,0.1s,SNR=7.9

MVO	**Moncorvo**	**3.54**	**51**	*e*Pn	**Pn**	**14 15 59.9**	**+1.3**
MVO				*e*Sn	**Sn**	**14 16 37.6**	**-1.7**
MVO				A	A	14 16 39.1	

comp=N,17nm,0.2s

EPLA	**Plasencia**	**3.72**	**72**	P	**Pn**	**14 16 03.0**	**+2.0**

comp=N,0.7nm,0.1s,SNR=10

EPLA				S	**Sn**	**14 16 42.2**	**-1.4**

comp=N,12nm,0.1s,SNR=7.9

ARCES	**ARCESS Array B**	**53.36**	**338**	P		**P**		**14 25 41.5**	**+0.7**
	0.8nm,0.6s,baz=56,slow=3.1,SNR=3.8								
PETK	**Petropavlovsk-**	**58.21**	**43**	P		**P**		**14 26 15.7**	**-0.2**
	2.3nm,0.9s,baz=275,slow=7.1,SNR=1.7								
WRA	**Warramunga Arr**	**67.73**	**129**	P		**P**		**14 27 18.5**	**-1.1**
	0.1nm,0.5s,baz=319,slow=6.7,SNR=0.9								
ASAR	**Alice Springs**	**70.01**	**132**	P		**P**		**14 27 34.5**	**+0.8**
	0.3nm,1.0s,baz=315,slow=6.1,SNR=2.1								

*IDC **29** 14:20:07.1±1.4,28˚.40N×87˚.37E, h0km, mb3.9/7, mb1 4.0/10, mb1mx3.6/58, mbtmp3.8/10, ML3.4/3, MS3.0/6, Ms1 3.1/6, ms1mx2.7/57, Error ellipse: s-maj=46.0km s-min=17.1km az=65.0*

ISC 29 14:20:11.8±1.4, 28˚.4N±0˚.2×87˚.4E±0˚.3, h35km, n15, σ1s33/10, mb4.0/7, MS3.0/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.44**	**131**	Pn		**Pn**		**14 23 32.4**	**-1.4**
	0.1nm,0.3s,baz=306,slow=12,SNR=5.3								
CMAR				LR		LR		14 30 27.7	
	comp=Z,61nm,20.2s,baz=1.0,slow=43								
AAK	**Ala-Archa**	**17.68**	**327**	P		**P**		**14 24 16.2**	**+0.2**
	0.1nm,0.3s,baz=148,slow=14,SNR=1.3								
MKAR	**Makanchi Array**	**18.83**	**349**	P		**P**		**14 24 26.7**	**-1.8**
	0.1nm,0.3s,baz=163,slow=14,SNR=5.7								
KURBB	**Kurchatov Arra**	**23.22**	**346**	P		**P**		**14 25 15.3**	**-0.3**
	1.0nm,0.8s,baz=167,slow=10,SNR=8.4								
SONM	**Songino Array**	**24.37**	**32**	P		**P**		**14 25 28.0**	**+1.3**
	1.1nm,0.7s,baz=218,slow=8.8,SNR=8.0								
ZALV	**Zalesovo Beam**	**25.62**	**356**	P		**P**		**14 25 38.7**	**+1.0**
	0.5nm,0.3s,baz=182,slow=8.4,SNR=1.4								
AKTO	**Aktyubinsk**	**31.32**	**323**	LR		LR		14 38 19.8	
	comp=Z,11nm,21.4s,baz=79,slow=35								
ARU	**Arti**	**34.74**	**332**	LR		LR		14 42 45.7	
	comp=Z,27nm,19.4s,baz=53,slow=39								
KSRS	**Korea Array**	**34.95**	**64**	LR		LR		14 43 23.6	
	comp=Z,23nm,19.5s,baz=114,slow=40								
JOW	**Kunigami**	**36.10**	**83**	LR		LR		14 43 58.6	
	comp=Z,30nm,20.6s,baz=298,slow=40								
KLR	**Kul'dur**	**39.61**	**46**	P		**P**		**14 27 39.8**	**-0.1**
	2.4nm,0.8s,baz=279,slow=10.0,SNR=7.8								
ARCES	**ARCESS Array B**	**53.96**	**337**	P		**P**		**14 29 30.5**	**-1.2**
	3.2nm,1.1s,baz=83,slow=8.3,SNR=2.0								
NOA	**NORSAR Array B**	**58.99**	**327**	LR		LR		14 58 17.9	
	comp=Z,20nm,21.7s,baz=225,slow=39								
WRA	**Warramunga Arr**	**66.04**	**131**	P		**P**		**14 30 56.5**	**+1.3**
	1.1nm,0.5s,baz=326,slow=6.6,SNR=21								
ASAR	**Alice Springs**	**68.42**	**134**	P		**P**		**14 31 11.6**	**+1.3**
	2.2nm,0.7s,baz=318,slow=6.4,SNR=34								

*UCR **29** 14:28:28.7±1.5, 13˚.03N×90˚.67W, h13km±7km, ML3.5*
*SNET **29** 14:28:28.7±1.4, 13˚.04N×90˚.67W, h14km±6km, ML3.6*
*IDC **29** 14:28:29.4±2.2, 14˚.76N×88˚.66W, h0km, mb3.0/2, mb1 3.5/3, mb1mx3.3/40, mbtmp3.1/3, ML2.8/1, Error ellipse: s-maj=169.6km s-min=26.6km az=53.0*
*GCG **29** 14:28:42.6±0.3, 13˚.95N×90˚.73W, h39km±19km, MD4.0*

ISC 29 14:28:22.4±1.4, 12˚.75N±0˚.07×90˚.82W±0˚.07, h10km, n38, σ1s02/44, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**1.58**	**47**	*e*P		**Pb**		**14 28 51.9**	**0.0**
CEVE				IAML				14 29 12.8	
	comp=Z,3μm,0.4s								
CEVE	**Cerro Verde**	**1.58**	**47**	*e*P		**Pb**		**14 28 51.9**	**0.0**
CEVE				IAML				14 29 12.8	
	comp=Z,3μm,0.4s								
SBLS	**San Blas**	**1.59**	**47**	*e*P		**Pn**		**14 28 51.7**	**+0.8**
SBLS	**San Blas**	**1.59**	**47**	*e*P		**Pn**		**14 28 51.7**	**+0.8**
RTR	**El Retiro**	**1.62**	**45**	*e*P		**Pn**		**14 28 52.2**	**+1.1**
RTR				*e*S		**Sn**		**14 29 10.5**	**-1.7**
RTR	**El Retiro**	**1.62**	**45**	*e*P		**Pn**		**14 28 52.2**	**+1.1**
RTR				*e*S		**Sn**		**14 29 10.5**	**-1.7**
SNJE	**San Jose**	**1.62**	**46**	*e*P		**Pb**		**14 28 52.6**	**0.0**
SNJE	**San Jose**	**1.62**	**46**	*e*P		**Pb**		**14 28 52.6**	**0.0**
LALI	**Alcalda de L**	**1.63**	**63**	*e*P		**Pb**		**14 28 52.9**	**+0.3**
LALI				*e*S		**Sn**		**14 29 12.0**	**-0.3**
LALI	**Alcalda de L**	**1.63**	**63**	*e*P		**Pb**		**14 28 52.9**	**+0.3**
LALI				*e*S		**Sn**		**14 29 12.0**	**-0.3**
PCG	**Pacaya**	**1.65**	**7**	*e*P		**Pb**		**14 28 53.5**	**+0.4**
FUG	**Fuego 3**	**1.69**	**359**	*e*P		**Pn**		**14 28 53.8**	**+1.6**
PMON	**Piamonte**	**1.75**	**56**	*e*P		**Pb**		**14 28 54.3**	**-0.4**
PMON	**Piamonte**	**1.75**	**56**	*e*P		**Pb**		**14 28 54.3**	**-0.4**
BOQS	**Boqueron**	**1.79**	**56**	*e*P		**Pb**		**14 28 55.8**	**+0.3**
BOQS				*e*S		**Sb**		**14 29 17.8**	**-0.3**
BOQS	**Boqueron**	**1.79**	**56**	*e*P		**Pb**		**14 28 55.8**	**+0.3**
BOQS				*e*S		**Sb**		**14 29 17.8**	**-0.3**
SNET	**Serv Nac Est T**	**1.81**	**59**	IAML				14 29 20.0	
	comp=Z,502nm,0.3s								
SNET	**Serv Nac Est T**	**1.81**	**59**	IAML				14 29 20.0	
	comp=Z,502nm,0.3s								
NBG	**Las Nubes**	**1.89**	**14**	*e*P		**Pb**		**14 28 57.3**	**+0.2**
LFRS	**El Faro**	**1.92**	**63**	*e*P		**Pb**		**14 28 57.6**	**0.0**
LFRS	**El Faro**	**1.92**	**63**	*e*P		**Pb**		**14 28 57.6**	**0.0**
PAVA	**Las Pavas**	**2.07**	**62**	*e*P		**Pb**		**14 28 59.9**	**-0.2**
PAVA	**Las Pavas**	**2.07**	**62**	*e*P		**Pb**		**14 28 59.9**	**-0.2**
COEG	**Centro de Oper**	**2.08**	**65**	*e*P		**Pb**		**14 29 00.4**	**+0.2**
COEG				IAML				14 29 04.0	
	comp=Z,876nm,0.5s								
COEG				*e*S		**Sn**		**14 29 22.9**	**-0.5**
COEG	**Centro de Oper**	**2.08**	**65**	*e*P		**Pb**		**14 29 00.4**	**+0.2**
COEG				IAML				14 29 04.0	
	comp=Z,876nm,0.5s								
COEG				*e*S		**Sn**		**14 29 22.9**	**-0.5**
MTO3	**Montecristo**	**2.17**	**41**	*e*P		**Pn**		**14 29 00.4**	**+1.6**
MTO3	**Montecristo**	**2.17**	**41**	*e*P		**Pn**		**14 29 00.4**	**+1.6**
LLGN	**La Laguna**	**2.30**	**52**	*e*S		**Sn**		**14 29 29.2**	**+0.2**
LLGN				IAML				14 29 34.9	
	comp=Z,378nm,0.5s								
LLGN	**La Laguna**	**2.30**	**52**	*e*S		**Sn**		**14 29 29.2**	**+0.2**
LLGN				IAML				14 29 34.9	
	comp=Z,378nm,0.5s								
TECA	**Tecapa**	**2.37**	**71**	*e*P		**Pn**		**14 29 03.8**	**+2.2**
TECA	**Tecapa**	**2.37**	**71**	*e*P		**Pn**		**14 29 03.8**	**+2.2**
MRL	**Marmol**	**2.57**	**25**	*e*P		**Pn**		**14 29 05.8**	**+1.5**
MRL	**Marmol**	**2.57**	**25**	*e*P		**Pn**		**14 29 05.8**	**+1.5**
MRL	**Marmol**	**2.57**	**25**	*e*P		**Pb**		**14 29 08.0**	**-0.8**
JTS	**Las Juntas de**	**6.24**	**112**	Pn		**Pn**		**14 29 55.4**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=33,slow=20,SNR=1.4								
JTS				Sn		**Sn**		**14 31 04.7**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=292,slow=21,SNR=0.9								
TXAR	**Lajitas Array**	**20.37**	**326**	P		Pn		14 33 04.6	+3.1
	comp=Z,0.5nm,0.6s,baz=146,slow=12,SNR=6.5								
YKA	**Yellowknife Ar**	**52.51**	**346**	P		**P**		**14 37 33.4**	**-2.1**
	comp=Z,0.1nm,0.4s,baz=145,slow=8.1,SNR=1.8								
CMAR	**Chiang Mai Arr**	**147.54**	**343**	PKPbc		**PKiKP**		**14 48 11.5**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=342,slow=4.7,SNR=5.8								

*IDC **29** 14:31:32.5±0.7, 13˚.12N×143˚.50E, h202km±8km, mb3.5/16, mb1 3.6/17, mb1mx3.4/67, mbtmp4.0/17, Error ellipse: s-maj=16.9km s-min=10.5km az=92.0*
*NEIC **29** 14:31:33.0±0.8, 13˚.09N±0˚.05×143˚.6E±0˚.2, h213km±8km, mb4.2/24, Error ellipse: s-maj=23.5km s-min=5.6km az=99.0*

ISC 29 14:31:32.2±0.5, 13˚.11N±0˚.08×143˚.45E±0˚.10, h200km, n41, σ0s73/46, mb4.0/27, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.46**	**71**	P		**Pn**		**14 32 07.2**	**+1.6**
	30nm,0.3s,baz=323,slow=14,SNR=21								
GUMO				S		**Sn**		**14 32 31.4**	**-0.1**
	189nm,0.3s,baz=183,slow=8.8,SNR=17								
SIJI	**Sorong**	**18.41**	**222**	P		**P**		**14 35 33.6**	**+0.9**
	0.6nm,0.3s,baz=44,slow=12,SNR=5.9								
FAKI	**Fak Fak**	**19.42**	**216**	P		**P**		**14 35 44.4**	**+0.8**
JOW	**Kunigami**	**19.71**	**316**	P		**P**		**14 35 48.0**	**+1.3**
JOW				IAmb		IAmb		14 35 56.0	
	comp=Z,18nm,1.3s								
JNU	**Nakatsue**	**22.99**	**332**	P		**P**		**14 36 20.0**	**+0.4**
	comp=Z,5.5nm,0.8s,baz=82,slow=1.9,SNR=4.5								
YULB	**Yu-li**	**23.36**	**299**	P		**P**		**14 36 24.1**	**+1.1**
YULB				IAmb		IAmb		14 36 27.3	
	comp=Z,18nm,1.2s								
MJAR	**Matsushiro Arr**	**23.80**	**349**	P		**P**		**14 36 26.1**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=154,slow=12,SNR=2.6								
MAJO	**Matsushiro**	**23.80**	**349**	P		**P**		**14 36 26.0**	**-0.9**
MAJO				IAmb		IAmb		14 36 38.4	
	comp=Z,9.2nm,1.4s								
TPUB	**Ta-pu**	**23.90**	**298**	P		**P**		**14 36 28.1**	**+0.2**
LUWI	**Luwuk**	**24.87**	**237**	P		**P**		**14 36 37.5**	**+0.7**
WB0	**Warramunga Arr**	**33.86**	**195**	P		**P**		**14 37 55.9**	**-0.2**
WB0				IAmb		IAmb		14 37 56.6	
	comp=Z,3.2nm,0.6s								
WR0	**Warramunga Arr**	**34.01**	**195**	P		**P**		**14 37 57.2**	**-0.2**
WR0				IAmb		IAmb		14 38 18.9	
	comp=Z,11nm,1.4s								
WRAB	**Tennant Creek**	**34.03**	**195**	P		**P**		**14 37 57.3**	**-0.3**
WRAB				IAmb		IAmb		14 38 01.4	
	comp=Z,5.1nm,0.9s								
WB2	**Warramunga Arr**	**34.04**	**195**	P		**P**		**14 37 57.3**	**-0.4**
WB2				IAmb		IAmb		14 37 58.4	
	comp=Z,4.4nm,0.7s								
WRA	**Warramunga Arr**	**34.05**	**195**	P		**P**		**14 37 57.5**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=16,slow=9.4,SNR=37								
WRA				PcP		**PcP**		**14 40 31.2**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=11,slow=5.1,SNR=1.8								
WRA	**Warramunga Arr**	**34.05**	**195**	P		**P**		**14 37 57.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**35.64**	**210**	P		**P**		**14 38 11.2**	**-0.1**
FITZ				IAmb		IAmb		14 38 18.4	
	comp=Z,12nm,1.5s								
AS31	**Alice Springs**	**37.72**	**194**	P		**P**		**14 38 29.2**	**+0.3**
ASAR	**Alice Springs**	**37.72**	**194**	P		**P**		**14 38 28.7**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=17,slow=12,SNR=11								
ASAR				PcP		**PcP**		**14 40 41.7**	**0.0**
	comp=Z,0.4nm,1.0s,baz=32,slow=5.5,SNR=1.8								
CMAR	**Chiang Mai Arr**	**43.08**	**283**	P		**P**		**14 39 13.6**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=82,slow=7.0,SNR=8.8								
STKA	**Stephens Creek**	**44.76**	**182**	P		**P**		**14 39 24.6**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=326,slow=16,SNR=2.9								
RPSI	**Rantau Prapat**	**45.22**	**261**	P		**P**		**14 39 29.2**	**-0.7**
RPSI				IAmb		IAmb		14 39 55.0	
	comp=Z,8.2nm,1.2s								
FORT	**Forrest**	**46.08**	**198**	P		**P**		**14 39 36.6**	**+0.3**
SONM	**Songino Array**	**46.34**	**326**	P		**P**		**14 39 39.3**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=150,slow=7.1,SNR=6.2								
SONM				PcP		**PcP**		**14 41 10.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=141,slow=5.2,SNR=2.3								
SONM	**Songino Array**	**46.34**	**326**	IAmb		IAmb		14 39 40.7	
	comp=Z,0.6nm,0.6s								
TIXI	**Tiksi**	**59.17**	**355**	P		**P**		**14 41 11.1**	**-0.6**
MKAR	**Makanchi Array**	**60.88**	**316**	P		**P**		**14 41 24.5**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=92,slow=8.5,SNR=10								
MKAR				PcP		**PcP**		**14 42 05.1**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=108,slow=4.3,SNR=1.7								
MKAR	**Makanchi Array**	**60.88**	**316**	P		**P**		**14 41 23.7**	**-0.1**
MAKZ	**Makanchi**	**61.09**	**316**	P		**P**		**14 41 25.3**	**0.0**
MAKZ				IAmb		IAmb		14 41 26.8	
	comp=Z,2.3nm,0.7s								
ZALV	**Zalesovo Beam**	**61.21**	**325**	P		**P**		**14 41 25.8**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=98,slow=8.3,SNR=3.1								
ZALV				PcP		**PcP**		**14 42 05.0**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=124,slow=4.3,SNR=5.1								
KURK	**Kurchatov**	**64.06**	**320**	P		**P**		**14 41 45.3**	**+0.5**
KURBB	**Kurchatov Arra**	**64.10**	**320**	P		**P**		**14 41 45.3**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=101,slow=6.8,SNR=21								
BVAR	**Borovoye Array**	**69.45**	**322**	P		**P**		**14 42 18.5**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=138,slow=7.0,SNR=5.8								
BRVK	**Borovoye**	**69.51**	**322**	P		**P**		**14 42 19.4**	**+0.3**
BRVK				IAmb		IAmb		14 42 20.2	
	comp=Z,3.8nm,0.6s								
ILAR	**Eielson Array**	**69.59**	**25**	P		**P**		**14 42 18.4**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=252,slow=5.7,SNR=7.5								
ABKAR	**Akbulak array**	**75.97**	**318**	P		**P**		**14 42 56.6**	**-0.6**
ABKAR				IAmb		IAmb		14 42 57.8	
	comp=Z,1.4nm,0.8s								
YKA	**Yellowknife Ar**	**83.92**	**27**	P		**P**		**14 43 39.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=288,slow=5.0,SNR=4.6								
ARCES	**ARCESS Array B**	**87.11**	**342**	P		**P**		**14 43 54.4**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=76,slow=5.1,SNR=9.0								
NVAR	**Mina Array Bea**	**88.30**	**51**	P		**P**		**14 44 02.7**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=263,slow=5.9,SNR=9.0								
FINES	**FINESS Array B**	**91.01**	**335**	P		**P**		**14 44 12.1**	**-1.4**
	comp=Z,3.4nm,0.9s,baz=38,slow=4.8,SNR=11								
LPAZ	**La Paz**	**149.31**	**100**	PKPbc		**PKiKP**		**14 51 00.2**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=290,slow=1.4,SNR=6.8								

IDC 29 14:34:58.8±7.0, 6˚.35S×146˚.23E, h105km±65km, mb3.1/2, mb1 3.2/4, mb1mx2.8/51, mbtmp3.5/4, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/11, Error ellipse: s-maj=59.8km s-min=56.7km az=163.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.17**	**163**	P		Pn		14 35 47.0	+0.1
	3.6nm,0.3s,baz=331,slow=5.7,SNR=21								
PMG				S		Sn		14 36 24.0	-0.1
	4.8nm,0.3s,baz=148,slow=22,SNR=7.6								
WRA	**Warramunga Arr**	**17.77**	**219**	P		Pn		14 38 59.7	0.0
	0.2nm,0.3s,baz=35,slow=10,SNR=9.3								
ASAR	**Alice Springs**	**20.90**	**213**	P		P		14 39 33.9	+0.9
	0.5nm,0.7s,baz=48,slow=7.9,SNR=8.1								
ASAR				LR		LR		14 49 22.3	
	comp=Z,62nm,19.2s,baz=166,slow=41								
FITZ	**Fitzroy Crossi**	**23.23**	**238**	P		P		14 39 57.0	0.0
	1.4nm,0.4s,baz=60,slow=11,SNR=10								
TORD	**Torodi Ar. Bea**	**144.44**	**284**	PKP		PKPbc		14 54 22.7	0.0
	0.3nm,0.6s,baz=64,slow=3.4,SNR=1.7								

*NEIC **29** 14:41:57.6±1.3, 22˚.1S±0˚.1×177˚.60W±0˚.07, h369km±9km, mb4.0/11, Error ellipse: s-maj=19.2km s-min=8.4km az=191.0*
*IDC **29** 14:41:59.8±7.8, 21˚.81S×177˚.69W, h384km±52km, mb3.4/5, mb1 3.5/5, mb1mx3.1/32, mbtmp4.2/5, Error ellipse: s-maj=109.6km s-min=47.5km az=137.0*

ISC 29 14:41:56.9±0.9, 22˚.1S±0˚.1×177˚.7W±0˚.1, h350km, n22, σ0s98/22, mb3.7/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.87**	**316**	P		**Pn**		**14 43 28.7**	**+2.3**
	0.3nm,0.3s,baz=127,slow=20,SNR=1.2								
NIUE	**Niue**	**7.85**	**69**	Pn		**Pn**		**14 43 50.1**	**+0.8**
AFI	**Afiamalu**	**9.86**	**36**	Pn		**Pn**		**14 44 12.4**	**-1.0**
URZ	**Urewera**	**16.77**	**194**	P		**P**		**14 45 31.7**	**+1.1**
CTA	**Charters Tower**	**33.65**	**267**	P		**P**		**14 48 07.0**	**+0.7**
	3.6nm,0.4s,baz=86,slow=11,SNR=8.0								
CTAO	**Charters Tower**	**33.65**	**267**	P		**P**		**14 48 06.1**	**-0.1**
CTAO				IAmb		IAmb		14 48 28.7	
	comp=Z,10.0nm,1.2s								
BBOO	**Buckleboo**	**42.14**	**245**	P		**P**		**14 49 15.5**	**-0.8**
BBOO				IAmb		IAmb		14 49 18.3	
	comp=Z,11nm,1.2s								
AS31	**Alice Springs**	**44.46**	**258**	P		**P**		**14 49 34.8**	**-0.1**
ASAR	**Alice Springs**	**44.46**	**258**	P		**P**		**14 49 35.0**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=92,slow=8.5,SNR=37								
ASAR	**Alice Springs**	**44.46**	**258**	P		**P**		**14 49 34.7**	**-0.3**
WR0	**Warramunga Arr**	**44.50**	**264**	P		**P**		**14 49 34.1**	**-1.1**
WR0				IAmb		IAmb		14 49 58.6	
	comp=Z,6.2nm,1.2s								
WB0	**Warramunga Arr**	**44.68**	**264**	P		**P**		**14 49 35.4**	**-1.2**
WB0				IAmb		IAmb		14 49 44.5	
	comp=Z,7.2nm,1.2s								
WB2	**Warramunga Arr**	**44.68**	**264**	P		**P**		**14 49 35.5**	**-1.1**
WB2				IAmb		IAmb		14 49 42.7	
	comp=Z,5.1nm,1.1s								
WRA	**Warramunga Arr**	**44.69**	**264**	P		**P**		**14 49 36.1**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=94,slow=8.1,SNR=16								
MTN	**Manton Dam**	**49.48**	**272**	P		**P**		**14 50 13.1**	**-0.2**
MTN				IAmb		IAmb		14 50 32.6	
	comp=Z,17nm,1.1s								
KNRA	**Kununurra**	**50.86**	**267**	P		**P**		**14 50 22.8**	**-0.8**
KNRA				IAmb		IAmb		14 50 43.1	
	comp=Z,35nm,1.5s								
FITZ	**Fitzroy Crossi**	**53.12**	**263**	P		**P**		**14 50 40.2**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=114,slow=8.4,SNR=1.9								
FITZ	**Fitzroy Crossi**	**53.12**	**263**	P		**P**		**14 50 39.0**	**-1.1**
SIJI	**Sorong**	**53.92**	**286**	P		**P**		**14 50 45.9**	**0.0**
	comp=Z,1.6nm,0.5s,baz=88,slow=9.6,SNR=5.5								
ADK	**Adak**	**73.62**	**1**	P		**P**		**14 52 52.4**	**0.0**
AKASG	**Malin Array Be**	**144.50**	**330**	PKP		**PKPab**		**15 00 49.6**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=38,slow=3.8,SNR=4.5								
CLL	**Collm**	**149.63**	**347**	*e*PKPbc		**PKiKP**		**15 01 06.0**	**-0.1**

*IDC **29** 14:47:48.1±3.3, 40˚.80N×20˚.98E, h0km, mb3.5/5, mb1 3.6/10, mb1mx3.5/43, mbtmp3.5/10, ML3.4/5, MS2.7/2, Ms1 2.7/2, ms1mx2.1/45, Error ellipse: s-maj=48.1km s-min=19.9km az=9.0*
*PRU **29** 14:47:51.2±0.0, 40˚.71N×20˚.86E, h0km*
*TIR **29** 14:47:52.4, 41˚.29N×20˚.89E, h2km±1km, Md3.6, Ml3.7*
*ATH **29** 14:47:53.7, 41˚.31N×20˚.94E, h9km±4km, ML3.6/15, Error ellipse: s-maj=4.4km s-min=1.6km az=314.0*
*SKO **29** 14:47:53.7, 41˚.26N×20˚.86E, h15km*
*BEO **29** 14:47:54.6±0.3, 41˚.21N×20˚.90E, h10km±3km, ML3.4/13*
*THE **29** 14:47:54.1, 41˚.28N×20˚.89E, h0km±1km, ML3.6/8, Error ellipse: s-maj=1.5km s-min=0.4km az=336.0*
*PDG **29** 14:47:54.6±0.5, 41˚.32N×20˚.94E, h6km±1km, MD3.4/4, ML3.8/13, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

ISC 29 14:47:54.0±0.9, 41˚.28N±0˚.01×20˚.90E±0˚.01, h11km±6km, n164, σ1s52/245, mb3.5/4, 31C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.18**	**206**	⇓*i*Pg		**Pg**		**14 47 58.0**	**-0.1**
OHR				*i* Sg		**Sg**		**14 48 01.1**	**+0.2**
OHR				*e*Lg		Lg		14 48 01.1	
	comp=N,32μm,0.3s								
OHR				*e*Lg		Lg		14 48 01.6	
	comp=E,16μm,0.6s								
PHP	**Peshkopia**	**0.54**	**320**	P		**Pg**		**14 48 03.8**	**-0.8**
PHP				S		**Sg**		**14 48 12.0**	**+0.3**
PHP	**Peshkopia**	**0.54**	**320**	P		**Pg**		**14 48 03.7**	**-0.8**
	baz=320								
PHP				S		**Sg**		**14 48 11.5**	**-0.2**
	baz=320								
PHP				AMP					
	comp=N,16nm,0.1s,baz=320								
FNA	**Florina**	**0.61**	**144**	P		**Pg**		**14 48 05.8**	**0.0**
FNA				S		**Sg**		**14 48 14.4**	**+0.6**
FNA				AML		AML		14 48 15.4	
	comp=E,31838μm,0.4s								
FNA				AML		AML		14 48 15.4	
	comp=N,22822μm,0.4s								
FNA	**Florina**	**0.61**	**144**	P		**Pg**		**14 48 05.7**	**-0.1**
FNA				S		**Sb**		**14 48 14.9**	**-0.3**
	comp=N,14μm,0.4s								
FNA	**Florina**	**0.61**	**144**	P		**Pg**		**14 48 05.9**	**0.0**
	baz=143								
FNA				S		**Sb**		**14 48 15.2**	**-0.1**
	baz=143								
FNA	**Florina**	**0.61**	**144**	⇑*i*Pg		**Pg**		**14 48 05.9**	**0.0**
FNA				*i* Sg		**Sb**		**14 48 15.2**	**-0.1**
KBN	**Korca**	**0.66**	**188**	P		**Pg**		**14 48 06.7**	**-0.1**
KBN				S		**Sb**		**14 48 16.0**	**-0.7**
	comp=N,6μm,0.6s								
KBN	**Korca**	**0.66**	**188**	P		**Pg**		**14 48 06.0**	**-0.8**
	baz=187								
KBN				S		**Sb**		**14 48 16.6**	**-0.1**
	baz=187								
TIR	**Tirane**	**0.79**	**276**	P		**Pg**		**14 48 08.5**	**-0.7**
TIR				S		**Sb**		**14 48 19.8**	**-0.5**
TIR				AML		AML		14 48 22.8	
	comp=N,10734μm,0.3s								
TIR				AML		AML		14 48 24.4	
	comp=E,7792μm,0.5s								
TIR	**Tirane**	**0.79**	**276**	P		**Pg**		**14 48 08.4**	**-0.8**
TIR				S		**Sb**		**14 48 20.5**	**+0.2**
TIR	**Tirane**	**0.79**	**276**	*e*Pg		**Pg**		**14 48 08.6**	**-0.7**
TIR				*e*Sg		**Sb**		**14 48 21.2**	**+0.9**
TIR	**Tirane**	**0.79**	**276**	⇑P		**Pb**		**14 48 09.4**	**-0.3**
TIR				⇑S		**Sb**		**

JAN				S	Sg	14 48 46.4	+0.4	
JAN				AML	AML	14 48 53.8		
	comp=N,2677µm,0.8s							
JAN				AML	AML	14 48 54.4		
	comp=E,3343µm,0.6s							
BARS	**Barje**	**1.68**	**23**	*e*Pn	**Pn**	**14 48 22.2**	**-1.2**	
BARS				*e*Sn	**Sb**	**14 48 46.6**	**+0.4**	
LIT	**Litokhoron**	**1.68**	**134**	P	**Pb**	**14 48 24.7**	**-0.3**	
LIT				AML	AML	14 48 52.3		
	comp=E,1696µm,0.6s							
LIT				AML	AML	14 48 55.4		
	comp=N,1851µm,0.6s							
LIT	**Litokhoron**	**1.68**	**134**	P	**Pb**	**14 48 24.5**	**-0.5**	
LIT	**Litokhoron**	**1.68**	**134**	*i* Pn	**Pb**	**14 48 24.5**	**-0.5**	
PDG	**Podgorica**	**1.69**	**314**	*e*Pn	**Pb**	**14 48 25.4**	**+0.4**	
PDG				*e*Sn	**Sg**	**14 48 47.4**	**-0.9**	
PDG	**Podgorica**	**1.69**	**314**	⇑P	**Pn**	**14 48 23.8**	**+0.4**	
PDG				⇑S	**Sn**	**14 48 42.7**	**-2.3**	
PDG	**Podgorica**	**1.69**	**314**	*e*Pn	**Pg**	**14 48 26.0**	**-0.4**	
THE	**Thessaloniki**	**1.69**	**112**	*i* Pn	**Pn**	**14 48 24.4**	**+0.9**	
TTG	**Podgorica**	**1.69**	**314**	⇓*i*Pn	**Pb**	**14 48 25.5**	**+0.4**	
TTG				*i* Sn	**Sg**	**14 48 50.1**	**+1.8**	
BOSS	**Bosilegrad**	**1.69**	**43**	*e*Pn	**Pb**	**14 48 24.9**	**-0.3**	
BOSS				*e*Sn	**Sg**	**14 48 48.1**	**-0.4**	
KASA	**Kassiopi**	**1.70**	**206**	P	**Pg**	**14 48 26.1**	**-0.5**	
IVA	**Berane**	**1.76**	**335**	⇓*i*Pn	**Pb**	**14 48 26.4**	**0.0**	
IVA				*i* Sn	**Sg**	**14 48 51.4**	**+0.6**	
KEK	**Kerkira**	**1.77**	**209**	P	**Pb**	**14 48 26.3**	**-0.2**	
KEK				S	**Sg**	**14 48 50.4**	**-0.6**	
KEK				AML	AML	14 48 56.0		
	comp=E,1643µm,0.8s							
KEK				AML	AML	14 49 00.3		
	comp=N,1035µm,0.7s							
KEK	**Kerkira**	**1.77**	**209**	P	**Pb**	**14 48 26.5**	**0.0**	
IGT	**Igoumenitsa**	**1.79**	**194**	P	**Pb**	**14 48 27.5**	**+0.6**	
IGT				S	**Sg**	**14 48 51.7**	**0.0**	
IGT				AML	AML	14 48 56.4		
	comp=E,2726µm,0.8s							
IGT				AML	AML	14 49 03.1		
	comp=N,2011µm,1.0s							
HORT	**Hortiatis**	**1.80**	**111**	P	**Pn**	**14 48 25.9**	**+0.9**	
HORT	**Hortiatis**	**1.80**	**111**	P	**Pn**	**14 48 25.9**	**+0.9**	
BUM	**Brajici-Budva**	**1.82**	**305**	⇑*i*Pn	**Pb**	**14 48 27.5**	**+0.1**	
BUM				*i* Sn	**Sg**	**14 48 53.5**	**+1.0**	
KOME	**Kolasin**	**1.88**	**327**	⇓*i*Pn	**Pb**	**14 48 28.1**	**-0.4**	
KOME				*i* Sn	**Sg**	**14 48 54.6**	**0.0**	
SOH	**Sokhos**	**1.91**	**103**	P	**Pn**	**14 48 26.8**	**+0.3**	
SOH				AML	AML	14 49 00.7		
	comp=N,1459µm,0.8s							
SOH				AML	AML	14 49 01.1		
	comp=E,2237µm,0.8s							
SOH	**Sokhos**	**1.91**	**103**	P	**Pn**	**14 48 27.4**	**+0.9**	
SOH	**Sokhos**	**1.91**	**103**	*i* Pn	**Pg**	**14 48 30.1**	**-0.5**	
THL	**Klokotos Trika**	**1.91**	**153**	P	**Pn**	**14 48 27.7**	**+1.2**	
THL				AML	AML	14 48 58.4		
	comp=E,2642µm,0.6s							
THL				AML	AML	14 49 00.9		
	comp=N,1596µm,0.5s							
THL	**Klokotos Trika**	**1.91**	**153**	P	**Pn**	**14 48 27.6**	**+1.2**	
SELS	**Selova**	**1.95**	**5**	*e*Pn	**Pn**	**14 48 27.6**	**+0.5**	
SELS				*e*Sn	**Sb**	**14 48 54.7**	**+0.8**	
CEME	**Cevo**	**1.95**	**311**	⇓*i*Pn	**Pb**	**14 48 29.2**	**-0.4**	
CEME				*i* Sn	**Sg**	**14 48 56.5**	**-0.3**	
SRS	**Serrai**	**2.04**	**94**	P	**Pn**	**14 48 29.3**	**+1.1**	
SRS				AML	AML	14 49 04.4		
	comp=N,700µm,0.7s							
SRS				AML	AML	14 49 04.5		
	comp=E,925µm,0.7s							
SRS	**Serrai**	**2.04**	**94**	P	**Pn**	**14 48 28.7**	**+0.5**	
SRS	**Serrai**	**2.04**	**94**	*i* Pn	**Pg**	**14 48 32.1**	**-0.9**	
NKME	**Niksic**	**2.08**	**316**	⇓*i*Pn	**Pb**	**14 48 31.0**	**-0.8**	
NKME				*i* Sn	**Sg**	**14 48 59.5**	**-1.4**	
NKY	**Niksic**	**2.09**	**318**	*e*Pn	**Pb**	**14 48 31.1**	**-1.0**	
NKY				*i* Sn	**Sg**	**14 48 59.8**	**-1.5**	
SJES	**Sjenica**	**2.10**	**341**	*e*Pn	**Pb**	**14 48 31.0**	**-1.2**	
SJES				*e*Sn	**Sb**	**14 48 57.9**	**-0.4**	
PLG	**Polygyros**	**2.13**	**114**	P	**Pb**	**14 48 31.7**	**-1.0**	
PLG	**Polygyros**	**2.13**	**114**	P	**Pn**	**14 48 31.1**	**+1.6**	
HCY	**Herceg Novi**	**2.15**	**304**	*e*Pn	**Pb**	**14 48 32.6**	**-0.3**	
HCY	**Herceg Novi**	**2.15**	**304**	⇓*i*Pn	**Pb**	**14 48 32.1**	**-0.8**	
HCY				*i* Sn	**Sg**	**14 49 01.4**	**-1.6**	
VTS	**Vitosha**	**2.20**	**52**	*e*Pn	**Pn**	**14 48 32.0**	**+1.5**	
VTS				*e*Sn	**Sn**	**14 48 59.2**	**+1.4**	
VTS	**Vitosha**	**2.20**	**52**	⇑P	**Pb**	**14 48 32.5**	**-1.3**	
VTS				⇓S	**Sb**	**14 49 00.0**	**-1.1**	
VTS	**Vitosha**	**2.20**	**52**	*i* Pn	**Pn**	**14 48 32.1**	**+1.5**	
PLE	**Pljevlja**	**2.34**	**332**	*e*Pn	**Pn**	**14 48 34.4**	**+1.9**	
PLE				*i* Sn	**Sb**	**14 49 05.4**	**+0.2**	
IVAS	**Ivanjica**	**2.37**	**347**	*e*Pn	**Pn**	**14 48 33.6**	**+0.8**	
IVAS				*e*Sn	**Sb**	**14 49 04.5**	**-1.4**	
ZAPS	**Zavoj**	**2.37**	**32**	*e*Pn	**Pn**	**14 48 34.7**	**+1.8**	
TREB	**Trebinje**	**2.39**	**308**	*e*Pn	**Pb**	**14 48 35.6**	**-1.4**	
BRY	**Bratogost**	**2.40**	**313**	*e*Pn	**Pb**	**14 48 36.5**	**-0.7**	
BRY	**Bratogost**	**2.40**	**313**	*e*Pn	**Pn**	**14 48 35.3**	**+2.0**	
BRY				*i* Sn	**Sb**	**14 49 07.2**	**+0.4**	
UPM	**Unac-Piva**	**2.43**	**323**	*e*Pn	**Pb**	**14 48 37.7**	**-0.2**	
UPM	**Unac-Piva**	**2.43**	**323**	⇑*i*Pn	**Pn**	**14 48 35.7**	**+1.9**	
UPM				*i* Sn	**Sb**	**14 49 07.8**	**-0.1**	
MAKR	**Makrakomi, Fth**	**2.45**	**157**	P	**Pn**	**14 48 35.7**	**+1.8**	
EVR	**Evrytania**	**2.46**	**163**	P	**Pb**	**14 48 37.3**	**-1.0**	
LKD2	**Lefkada island**	**2.49**	**184**	P	**Pb**	**14 48 37.4**	**-1.4**	
AGG	**Agios Georgios**	**2.50**	**154**	P	**Pn**	**14 48 36.1**	**+1.4**	
AGG	**Agios Georgios**	**2.50**	**154**	P	**Pn**	**14 48 35.8**	**+1.1**	
PAIG	**Paliouri**	**2.51**	**122**	P	**Pn**	**14 48 35.9**	**+1.2**	
OUR	**Ouranopolis**	**2.52**	**111**	P	**Pb**	**14 48 37.5**	**-1.7**	
NYDR	**Nydri-Lefkada**	**2.56**	**184**	P	**Pn**	**14 48 37.7**	**+2.3**	
XOR	**Xorichti**	**2.59**	**137**	P	**Pn**	**14 48 36.6**	**+0.8**	
RUDO	**Rudo**	**2.60**	**335**	*e*Pn	**Pb**	**14 48 40.0**	**-0.7**	
GRUS	**Gruza**	**2.62**	**357**	*e*Pn	**Pn**	**14 48 37.5**	**+1.3**	
GRUS				*e*Sn	**Sb**	**14 49 11.3**	**-1.7**	
BLKB	**Belogradchik**	**2.69**	**29**	⇑S	**Sn**	**14 49 11.8**	**+2.0**	
PVO	**Paravola**	**2.70**	**170**	P	**Pb**	**14 48 40.6**	**-1.7**	
ZAGS	**Zajecar**	**2.72**	**21**	*e*Pn	**Pn**	**14 48 38.5**	**+0.9**	
ANX	**Ano Chora**	**2.79**	**163**	P	**Pb**	**14 48 41.6**	**-2.3**	
BBLS	**Lazići**	**2.82**	**337**	*e*Pn	**Pn**	**14 48 40.5**	**+1.5**	
BBLS	**Lazići**	**2.82**	**337**	*e*Pn	**Pn**	**14 48 40.7**	**+1.7**	
STON	**Ston**	**2.87**	**305**	*e*Pn	**Pn**	**14 48 40.9**	**+1.3**	
DIVS	**Divibare**	**2.90**	**347**	*e*Pn	**Pn**	**14 48 41.0**	**+0.8**	
DIVS				*e*Sn	**Sn**	**14 49 17.1**	**+2.0**	
DIVS	**Divibare**	**2.90**	**347**	*e*Pn	**Pn**	**14 48 40.8**	**+0.6**	
TRUS	**Trudelj**	**2.97**	**353**	*e*Pn	**Pn**	**14 48 42.2**	**+1.1**	
SVIS	**Svilajnac**	**3.00**	**4**	*e*Pn	**Pn**	**14 48 42.7**	**+1.3**	
HAPS	**Han Pijesak,BI**	**3.16**	**334**	*e*Pn	**Pn**	**14 48 44.7**	**+1.0**	
KUBS	**Kucevo**	**3.19**	**10**	*e*Pn	**Pn**	**14 48 44.2**	**+0.2**	
MATE	**Matera**	**3.24**	**260**	⇓P	**Pn**	**14 48 47.1**	**+2.3**	
MATE				⇑S	**Sn**	**14 49 25.8**	**+2.5**	
TEKS	**Tekeris**	**3.42**	**343**	*e*Pn	**Pn**	**14 48 48.1**	**+0.8**	
PLVB	**Pleven**	**3.47**	**51**	⇑P	**Pn**	**14 48 50.0**	**+2.1**	
PLVB				⇓S	**Sn**	**14 49 31.2**	**+2.2**	
MDVR	**Moldovita**	**3.55**	**9**	⇑P	**Pn**	**14 48 50.0**	**+0.9**	
MDVR				⇑S	**Sn**	**14 49 30.9**	**-0.3**	
HERR	**Herculane**	**3.77**	**17**	⇑P	**Pn**	**14 48 53.5**	**+1.4**	
HERR				⇓S	**Sn**	**14 49 37.1**	**+0.7**	
FRGS	**Fruska Gora**	**3.96**	**349**	*e*Pn	**Pn**	**14 48 55.7**	**+1.0**	
FRGS	**Fruska Gora**	**3.96**	**349**	⇑P	**Pn**	**14 48 55.9**	**+1.2**	
FRGS				⇑S	**Sn**	**14 49 39.7**	**-1.4**	
FRGS	**Fruska Gora**	**3.96**	**349**	*e*Pn	**Pn**	**14 48 55.0**	**+0.3**	
MGRS	**Mrkonjic Grad**	**4.21**	**319**	*e*Pn	**Pn**	**14 48 59.7**	**+1.5**	
GZR	**Gura Zlata**	**4.34**	**18**	⇑P	**Pn**	**14 49 01.5**	**+1.6**	
GZR				⇓S	**Sn**	**14 49 50.8**	**+0.4**	
BZS	**Buzias**	**4.37**	**7**	⇑P	**Pn**	**14 49 00.8**	**+0.5**	
BZS				⇑S	**Sn**	**14 49 50.3**	**-0.9**	
BLY	**Banja Luka**	**4.41**	**323**	*e*Pn	**Pn**	**14 49 01.4**	**+0.5**	
MRAK	**Mrakovica**	**4.75**	**323**	*e*Pn	**Pn**	**14 49 08.1**	**+2.6**	
VOIR		**5.14**	**35**	⇑P	**Pn**	**14 49 12.0**	**+1.0**	
VOIR				⇑S	**Sn**	**14 50 11.6**	**+1.2**	
MORH	**Mrgy, Hungar**	**5.20**	**342**	⇓P	**Pn**	**14 49 12.8**	**+1.2**	
MORH				⇓S	**Sn**	**14 50 11.1**	**-0.5**	
MORH	**Mrgy, Hungar**	**5.20**	**342**	*e*Pn	**Pn**	**14 49 12.3**	**+0.6**	
MLR	**Muntele Rosu**	**5.59**	**39**	Pn	**Pn**	**14 49 18.2**	**+1.1**	
	comp=E,0.6nm,0.3s,baz=166,slow=11,SNR=5.8							
MLR				Sn	**Sn**	**14 50 18.1**	**-3.3**	
	comp=E,0.1nm,0.3s,baz=183,slow=12,SNR=1.2							
MLR				LR	LR	14 51 58.4		
	comp=E,44nm,20.9s,baz=213,slow=42							
MLR	**Muntele Rosu**	**5.59**	**39**	⇑P	**Pn**	**14 49 19.6**	**+2.5**	
MLR				⇑S	**Sn**	**14 50 22.2**	**+0.8**	
ISR	**Istrita**	**5.63**	**45**	⇑P	**Pn**	**14 49 19.7**	**+2.0**	
ISR				⇑S	**Sn**	**14 50 25.2**	**+2.8**	
CRES	**Cresnjev**	**6.03**	**321**	*e*Pn	**Pn**	**14 49 23.4**	**+0.3**	
PLOR	**Plostina**	**6.19**	**40**	⇑P	**Pn**	**14 49 28.0**	**+2.7**	
PLOR				⇑S	**Sn**	**14 50 38.2**	**+2.1**	
VRI	**Vrincioaia**	**6.24**	**41**	⇑P	**Pn**	**14 49 27.7**	**+1.7**	
CEY	**Cerknica**	**6.49**	**316**	*e*Pn	**Pn**	**14 49 31.3**	**+1.9**	
CFR	**Carcaliu**	**6.57**	**51**	⇓P	**Pn**	**14 49 32.8**	**+2.4**	
PSZ	**Piszkesteto**	**6.68**	**354**	⇓P	**Pn**	**14 49 33.5**	**+1.4**	
PSZ				⇓S	**Sn**	**14 50 48.4**	**+0.2**	
SOKA	**Soboth**	**6.86**	**324**	Pn	**Pn**	**14 49 37.4**	**+2.8**	
	comp=E,4.1nm,0.5s,SNR=7.8							
KECS	**Kecovo**	**7.21**	**358**	*e*PN	**Pn**	**14 49 41.4**	**+2.1**	
VYHS	**Vyhne**	**7.37**	**349**	*e*PN	**Pn**	**14 49 43.1**	**+1.7**	
VYHS				*e*SN	**Sn**	**14 51 01.4**	**-3.6**	
MYKA	**Terra Mystica**	**7.49**	**318**	*e*Pn	**Pn**	**14 49 46.4**	**+3.3**	
	comp=E,1.6nm,0.3s							
MYKA				*e*Sn	**Sn**	**14 51 12.1**	**+4.1**	
	comp=E,1.5nm,0.3s							
MODS	**Modra-Piesok**	**7.55**	**341**	*e*SN	**Sn**	**14 51 10.1**	**+0.6**	
KBA	**Koelnbreinsper**	**7.95**	**319**	Pn	**Pn**	**14 49 51.3**	**+1.8**	
	comp=E,4.7nm,0.5s,SNR=8.3							
KBA				*e*Sn	**Sn**	**14 51 23.6**	**+4.1**	
	comp=E,2.6nm,0.6s							
WTTA	**Wattenberg**	**8.94**	**315**	*e*Pn	**Pn**	**14 50 06.2**	**+3.0**	
	comp=E,2.6nm,0.4s							
WTTA				*e*Sn	**Sn**	**14 51 44.5**	**+0.6**	
	comp=E,7.4nm,0.6s							
WATA	**Walderalm**	**9.02**	**315**	*e*Pn	**Pn**	**14 50 08.7**	**+4.4**	
	comp=E,2.3nm,0.2s							
GERES	**GERESS Array B**	**9.12**	**329**	Pn	**Pn**	**14 50 08.9**	**+3.4**	
	comp=E,0.2nm,0.3s,baz=152,slow=15,SNR=6.1							
SQTA	**Sankt Quirin**	**9.15**	**314**	*e*Pn	**Pn**	**14 50 10.2**	**+4.2**	
	comp=E,1.6nm,0.2s							
MOTA	**Moosalm**	**9.28**	**314**	*e*Pn	**Pn**	**14 50 11.4**	**+3.6**	
	comp=E,1.7nm,0.3s							
MOTA				*e*Sn	**Sn**	**14 51 53.5**	**+1.3**	
	comp=E,5.7nm,0.6s							
FETA	**Feichten**	**9.29**	**312**	*e*Pn	**Pn**	**14 50 12.5**	**+4.5**	
	comp=E,1.4nm,0.5s							
KHC	**Kasperske Hory**	**9.40**	**329**	*e*PN	**Pn**	**14 50 13.1**	**+3.8**	
DAVOX	**Davos/Dischmat**	**9.66**	**308**	Pn	**Pn**	**14 50 11.3**	**-1.7**	
	comp=E,0.3nm,0.3s,baz=17,slow=19,SNR=1.4							
BRTR	**Keskin Array B**	**9.82**	**95**	LR	LR	14 53 59.5		
	comp=E,56nm,18.4s,baz=309,slow=38							
AKASG	**Malin Array Be**	**11.05**	**29**	Pn	**Pn**	**14 50 32.1**	**+0.2**	
	comp=E,0.5nm,0.3s,baz=216,slow=12,SNR=1.2							
HFS	**Hagfors**	**19.40**	**349**	P	**P**	**14 52 19.6**	**-0.2**	
	comp=E,0.1nm,0.3s,baz=167,slow=13,SNR=1.7							
NOA	**NORSAR Array B**	**20.66**	**347**	P	**P**	**14 52 33.9**	**+0.3**	
	comp=E,0.4nm,0.6s,baz=154,slow=10.0,SNR=2.8							
EKA	**Eskdalemuir Ar**	**21.16**	**320**	P	**P**	**14 52 38.8**	**-0.1**	
	comp=E,0.8nm,0.6s,baz=115,slow=12,SNR=1.7							
ARCES	**ARCESS Array B**	**28.43**	**3**	P	**P**	**14 53 47.7**	**-0.6**	
	comp=E,3.7nm,1.2s,baz=184,slow=11,SNR=1.7							
ZALV	**Zalesovo Beam**	**43.45**	**51**	P	**P**	**14 55 54.8**	**-1.9**	
	comp=E,0.7nm,0.6s,baz=268,slow=8.9,SNR=4.0							
MKAR	**Makanchi Array**	**43.49**	**61**	P	**P**	**14 55 54.9**	**-2.3**	
	comp=E,0.4nm,0.8s,baz=278,slow=5.1,SNR=1.8							

*IDC **29** 15:07:51.3±1.1, 1.°65N×126.°59E, h0km, mb3.9/4, mb1 3.9/6, mb1mx3.5/43, mbtmp3.8/6, ML3.1/2, MS3.9/1, Ms1 3.9/1, ms1mx2.4/44, Error ellipse: s-maj=46.8km s-min=19.7km az=72.0*

*DJA **29** 15:07:56.0±1.4, 2.°N±3.°×12.°6E±.°, h15km±12km, M3.8/9, mb3.8/1, MLv3.8/9*

*NEIC **29** 15:07:58.2±1.6, 1.°7N±0.°1×126.°65E±0.°07, h55km±12km, mb4.1/7, Error ellipse: s-maj=18.8km s-min=9.0km az=193.0*

ISC 29 15:07:58.0±0.8, **1.°61N**±0.°06×**126.°60E**±0.°07, **h47**km, **n26**, σ1°**33**/27, **mb4.1**/9, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.13**	**137**	Pn	**Pn**	**15 08 17.7**	**+0.3**
TNTI	**Ternate**	**1.13**	**137**	P	**Pn**	**15 08 17.8**	**+0.3**
TNTI				S	**Sn**	**15 08 34.1**	**+2.3**
SGSI	**Sangihe**	**2.32**	**333**	P	**Pn**	**15 08 33.4**	**-0.4**
SGSI				S	**Sn**	**15 09 02.3**	**+1.1**
KMSI	**Cibinong**	**2.82**	**249**	P	**Pn**	**15 08 39.2**	**-1.3**
SANI	**Sanana**	**3.69**	**190**	P	**Pn**	**15 08 52.6**	**+0.1**
GTOI	**Gorontalo**	**3.72**	**255**	P	**Pn**	**15 08 53.3**	**+0.4**
LUWI	**Luwuk**	**4.65**	**236**	Pn	**Pn**	**15 09 07.4**	**+1.7**
LUWI	**Luwuk**	**4.65**	**236**	P	**Pn**	**15 09 04.8**	**-0.9**
MRSI	**Marisa**	**4.79**	**256**	P	**Pn**	**15 09 06.8**	**-0.9**
SIJI	**Sorong**	**5.27**	**118**	Pn	**Pn**	**15 09 10.5**	**-3.8**
	0.2nm,0.3s,baz=251,slow=23,SNR=1.2						
SIJI				Sn		15 09 59.1	-15
	0.4nm,0.3s,baz=200,slow=23,SNR=5.7						
TOLI2	**Tolitoli**	**5.84**	**265**	Pn	**Pn**	**15 09 19.8**	**-2.2**
MYLDM	**Lahad Datu**	**8.83**	**294**	Pn	**Pn**	**15 10 04.0**	**+0.9**
SBUM	**Sibu**	**14.40**	**274**	P	**P**	**15 11 25.8**	**+0.8**
MTN	**Manton Dam**	**15.05**	**163**	P	**P**	**15 11 31.0**	**-1.2**
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P	**P**	**15 12 21.1**	**-1.4**
	0.1nm,0.3s,baz=10,slow=11,SNR=1.6						
FITZ	**Fitzroy Crossi**	**19.61**	**183**	P	**Pn**	**15 12 23.9**	**-0.3**
WRAB	**Tennant Creek**	**22.72**	**161**	P	**P**	**15 12 57.5**	**+1.4**
WRAB				IAmb	IAmb	15 13 00.2	
	comp=E,4.3nm,0.8s						
WRA	**Warramunga Ar**	**22.72**	**161**	P	**P**	**15 12 55.5**	**-0.7**
	comp=Z,3.3nm,0.6s,baz=340,slow=11,SNR=39						
WB2	**Warramunga Arr**	**22.73**	**161**	P	**P**	**15 12 55.6**	**-0.6**
WB2				IAmb	IAmb	15 12 59.4	
	comp=Z,6.2nm,0.9s						
WR0	**Warramunga Arr**	**22.81**	**160**	P	**P**	**15 12 56.8**	**-0.1**
WR0				IAmb	IAmb	15 13 01.1	
	comp=Z,12nm,1.2s						
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**15 13 28.2**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=346,slow=11,SNR=28						
CTA	**Charters Tower**	**28.92**	**139**	LR	LR	15 27 54.4	
	comp=Z,248nm,19.8s,baz=216,slow=42						
PETK	**Petropavlovsk-**	**57.43**	**22**	P	**P**	**15 17 42.2**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=215,slow=4.8,SNR=1.5						
MK31	**Makanchi Array**	**59.22**	**326**	P	**P**	**15 17 53.8**	**-0.7**
MK31				IAmb	IAmb	15 17 54.3	
	comp=Z,2.2nm,1.5s						
MKAR	**Makanchi Array**	**59.22**	**326**	P	**P**	**15 17 53.7**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=127,slow=8.0,SNR=13						
ABKAR	**Akbulak array**	**73.70**	**321**	P	**P**	**15 19 27.4**	**+0.4**
ABKAR				IAmb	IAmb	15 19 33.8	
	comp=Z,4.0nm,1.4s						

*NEIC **29** 15:08:42.2±0.6, 31.°4S±0.°1×178.°5W±0.°2, h10km±2km, mb4.3/6, Error ellipse: s-maj=30.5km s-min=13.2km az=122.0*

*IDC **29** 15:08:43.1±7.0, 31.°20S×178.°90W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.6/36, mbtmp3.9/2, MS4.0/1, Ms1 4.0/1, ms1mx3.0/26, Error ellipse: s-maj=290.6km s-min=58.2km az=157.0*

ISC 29 15:08:42.0±1.4, **31.°4S**±0.°2×**178.°6W**±0.°2, **h10**km, **n13**, σ0°**83**/12, **mb4.2**/6, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.20**	**15**		**Pn**	**15 09 17.8**	**-0.7**
OUZ	**Omahuta**	**7.60**	**238**	Pn	**Pn**	**15 10 31.2**	**-1.5**
TOO	**Toolangi**	**30.14**	**248**	P	**P**	**15 14 53.2**	**+1.1**
AS31	**Alice Springs**	**42.59**	**268**	P	**P**	**15 16 38.7**	**+0.3**
ASAR	**Alice Springs**	**42.59**	**268**	P	**P**	**15 16 38.4**	**0.0**
	0.8nm,0.7s,baz=106,slow=7.5,SNR=11						
WR0	**Warramunga Arr**	**43.48**	**274**	P	**P**	**15 16 46.4**	**+0.7**
WR0				IAmb	IAmb	15 16 48.0	
	comp=Z,6.9nm,1.3s						
WB2	**Warramunga Arr**	**43.65**	**273**	P	**P**	**15 16 47.8**	**+0.7**
WB2				IAmb	IAmb	15 17 04.5	
	comp=Z,5.4nm,1.1s						
WRAB	**Tennant Creek**	**43.66**	**273**	P	**P**	**15 16 47.5**	**+0.4**
WRAB				IAmb	IAmb	15 16 53.8	
	comp=Z,9.5nm,1.4s						
WRA	**Warramunga Arr**	**43.66**	**273**	P	**P**	**15 16 47.5**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=112,slow=8.0,SNR=14						
WB0	**Warramunga Arr**	**43.69**	**274**	P	**P**	**15 16 48.1**	**+0.7**
WB0				IAmb	IAmb	15 16 59.5	
	comp=Z,4.3nm,1.1s						
QSPA	**South Pole Qui**	**58.73**	**180**	P	**P**	**15 18 39.8**	**0.0**
RPN	**Rapa Nui**	**59.64**	**105**	LR	LR	15 39 34.6	
	comp=Z,111nm,19.3s,baz=84,slow=31						
FINES	**FINESS Array B**	**145.90**	**339**	PKPbc	**PKPab**	**15 28 22.1**	**+0.7**
	comp=Z,2.4nm,1.0s,baz=18,slow=4.8,SNR=5.2						

*JMA **29** 15:19:31.3±0.1, 23.°87N×121.°83E, h0km*

*TAP **29** 15:19:33.2, 23.°90N×121.°75E, h20km, ML2.7, C*

ISC 29 15:19:32.5±0.9, **23.°87N**±0.°01×**121.°80E**±0.°02, **h16**km±7km, **n105**, σ0°**64**/196, **1C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.21**	**300**	*i* P	**Pg**	**15 19 38.0**	**+0.6**
	baz=300						
HWA				*e*S	**Sg**	**15 19 41.9**	**+1.1**
	baz=300						
TWD	**Chiawan**	**0.28**	**317**	⇓*i*P	**Pb**	**15 19 38.7**	**-0.5**
	baz=323						
TWD				S	**Sb**	**15 19 42.7**	**-1.0**
	baz=323						
ESL	**Shilin**	**0.34**	**260**	P	**Pb**	**15 19 39.7**	**-0.6**
	baz=257						
ESL				*e*S	**Sb**	**15 19 45.0**	**-0.6**
	baz=257						
NACB	**Ninganchiao**	**0.36**	**327**	⇓P	**Pb**	**15 19 39.7**	**-0.8**
	baz=331						
NACB				S	**Sg**	**15 19 44.6**	**-0.3**
	baz=331						
EGFH	**Guangfu**	**0.40**	**240**	P	**Pb**	**15 19 41.0**	**-0.2**
	baz=231						
EGFH				*e*S	**Sb**	**15 19 47.6**	**+0.5**
	baz=231						
ETLH	**Xiulin Townshi**	**0.44**	**318**	⇓P	**Pg**	**15 19 41.2**	**-0.3**
	baz=320						
ETLH				*e*S	**Sg**	**15 19 47.2**	**-0.5**
	baz=320						
HGSD	**Ruisui**	**0.52**	**223**	P	**Pb**	**15 19 43.8**	**+0.6**
	baz=213						
HGSD				*e*S	**Sb**	**15 19 52.1**	**+1.7**
	baz=213						
WHF	**Hehuan Shan**	**0.56**	**299**	P	**Pg**	**15 19 43.5**	**-0.3**
	baz=298						
WHF				*e*S	**Sg**	**15 19 50.9**	**-0.6**
	baz=298						
EWUT	**Wuta**	**0.57**	**358**	P	**Pb**	**15 19 44.2**	**0.0**
	baz=359						
EWUT				*e*S	**Sb**	**15 19 52.1**	**+0.1**
	baz=359						
EHY	**Hungye**	**0.57**	**231**	*e*P	**Pb**	**15 19 44.0**	**-0.2**
	baz=231						
EHY				*e*S	**Sb**	**15 19 52.9**	**+0.8**
	baz=231						
OWD	**Renai**	**0.58**	**278**	P	**Pg**	**15 19 43.7**	**-0.4**
	baz=276						
OWD				*e*S	**Sg**	**15 19 51.4**	**-0.5**
	baz=276						
CHGB	**Renai**	**0.61**	**288**	⇑P	**Pb**	**15 19 44.4**	**-0.5**
	baz=287						
CHGB				S	**Sb**	**15 19 52.5**	**-0.8**
	baz=287						
VWDT	**VWDT**	**0.62**	**259**	P	**Pb**	**15 19 44.9**	**-0.1**
	baz=255						
VWDT				*e*S	**Sb**	**15 19 53.0**	**-0.4**
	baz=255						
FUSS	**Fushou**	**0.63**	**306**	P	**Pg**	**15 19 44.8**	**-0.3**
	baz=306						
FUSS				*e*S	**Sb**	**15 19 53.4

ALS				*e*S	**Sb**	**15 20 04.5**	**+0.3**	
	baz=247							
WJS	**Zhushan**	**0.99**	**267**	*e*P	**Pn**	**15 19 51.8**	**+0.1**	
WJS	baz=269			*e*S	**Sn**	**15 20 06.0**	**+0.7**	
ELDTW	**Lidau**	**0.99**	**227**	*e*P	**Pg**	**15 19 50.7**	**-1.1**	
ELDTW	baz=222			*e*S	**Sg**	**15 20 03.8**	**-1.0**	
EDH	**Donghe**	**1.01**	**207**	*e*P	**Pg**	**15 19 51.6**	**-0.4**	
EDH	baz=182			*e*S	**Sn**	**15 20 06.4**	**+0.6**	
WNT	**Mingjian**	**1.03**	**271**	*e*P	**Pn**	**15 19 52.3**	**+0.1**	
WNT	baz=270			*e*S	**Sn**	**15 20 06.6**	**+0.4**	
WWF	**Wufeng**	**1.03**	**280**	*e*P	**Pn**	**15 19 53.0**	**+0.8**	
WWF	baz=278			*e*S	**Sb**	**15 20 05.2**	**0.0**	
WNT1	**Nantou City**	**1.03**	**272**	*e*P	**Pb**	**15 19 52.1**	**+0.1**	
WNT1	baz=272			*e*S	**Sn**	**15 20 06.7**	**+0.4**	
NSTT	**Nanjuang**	**1.05**	**316**	*e*P	**Pb**	**15 19 52.3**	**0.0**	
NSTT	baz=316			*e*S	**Sg**	**15 20 05.6**	**-1.1**	
LIOB	**Emei**	**1.05**	**317**	*e*P	**Pn**	**15 19 52.7**	**+0.1**	
LIOB	baz=306			*e*S	**Sb**	**15 20 06.3**	**+0.4**	
TCU	**Taichung**	**1.07**	**285**	*e*P	**Pn**	**15 19 53.6**	**+0.8**	
TCU	baz=280			*e*S	**Sn**	**15 20 07.9**	**+0.6**	
CHN5	**Tsauling**	**1.07**	**255**	*e*P	**Pb**	**15 19 52.8**	**+0.2**	
CHN5	baz=243			*e*S	**Sn**	**15 20 07.5**	**+0.1**	
TIPB	**Shuangxi**	**1.09**	**1**	*e*P	**Pn**	**15 19 53.9**	**+0.7**	
TIPB	baz=7.0			*e*S	**Sn**	**15 20 08.9**	**+0.9**	
NSY	**Sanyi**	**1.10**	**300**	*e*P	**Pn**	**15 19 54.2**	**+1.0**	
NSY	baz=298			*e*S	**Sb**	**15 20 07.9**	**+0.7**	
NHDH	**Xindian Distri**	**1.11**	**347**	*e*P	**Pn**	**15 19 53.9**	**+0.5**	
NHDH	baz=348			*e*S	**Sb**	**15 20 08.0**	**+0.3**	
TWA	**Mucha**	**1.12**	**350**	*e*P	**Pb**	**15 19 53.2**	**-0.3**	
TWB1	**Santiao Chiao**	**1.14**	**8**	*e*P	**Pn**	**15 19 54.3**	**+0.4**	
TWB1	baz=4.0			*e*S	**Sn**	**15 20 10.8**	**+1.6**	
LONT	**Longtian**	**1.14**	**213**	*e*P	**Pb**	**15 19 53.2**	**-0.7**	
WCHH	baz=205 **Zhanghua**	**1.16**	**280**	*e*P	**Pn**	**15 19 54.7**	**+0.6**	
WCHH	baz=279			*e*S	**Sb**	**15 20 08.5**	**-0.4**	
WDJ	**Dajia District**	**1.16**	**294**	*e*P	**Pn**	**15 19 54.5**	**+0.4**	
WDJ	baz=292			*e*S	**Sn**	**15 20 10.9**	**+1.3**	
WDLH	**Douliu**	**1.17**	**261**	*e*P	**Pb**	**15 19 54.4**	**0.0**	
WDLH	baz=262			*e*S	**Sn**	**15 20 11.6**	**+1.7**	
STYH	**Taoyuan**	**1.18**	**234**	*e*P	**Pb**	**15 19 54.3**	**-0.1**	
STYH	baz=233			*e*S	**Sb**	**15 20 09.9**	**+0.5**	
JYNG	**Yonaguni jima**	**1.19**	**61**	P	**Pb**	**15 19 54.3**	**-0.4**	
JYNG				*e*S	**Sb**	**15 20 10.2**	**+0.3**	
STYT	**Tauyuan**	**1.19**	**234**	P	**Pb**	**15 19 54.7**	**-0.1**	
STYT	baz=233			*e*S	**Sb**	**15 20 10.5**	**+0.5**	
WFSB	baz=233 **Wu-fen Shan**	**1.19**	**359**	*e*P	**Pg**	**15 19 55.6**	**+0.1**	
WFSB	baz=343			*e*S	**Sn**	**15 20 11.3**	**+0.9**	
TPUB	**Ta-pu**	**1.22**	**242**	*e*P	**Pg**	**15 19 55.5**	**-0.6**	
TPUB	baz=241			*e*S	**Sb**	**15 20 10.7**	**0.0**	
CHN4	baz=241 **Tsaushan**	**1.23**	**245**	*e*P	**Pg**	**15 19 56.3**	**+0.1**	
CHN4	baz=244			*e*S	**Sn**	**15 20 12.1**	**+0.8**	
LDUT	baz=244 **Ludao**	**1.23**	**195**	*e*P	**Pn**	**15 19 54.5**	**-0.6**	
TWGBT	baz=176 **Beinan**	**1.24**	**213**	*e*P	**Pn**	**15 19 54.3**	**-1.0**	
TWGBT	baz=202			*e*S	**Sb**	**15 20 10.0**	**-1.4**	
TWG	baz=202 **Pinlang**	**1.25**	**213**	*e*P	**Pn**	**15 19 54.4**	**-0.9**	
TWG	baz=202			*e*S	**Sb**	**15 20 10.8**	**-0.6**	
YOJ	**Yonaguni jima**	**1.25**	**62**	P	**Pn**	**15 19 55.2**	**-0.1**	
YOJ				*e*S	**Sb**	**15 20 11.7**	**+0.2**	
YOJ	**Yonaguni jima**	**1.25**	**62**	*e*P	**Pg**	**15 19 56.1**	**-0.5**	
YOJ	baz=70			*e*S	**Sb**	**15 20 11.6**	**0.0**	
WTP	baz=70 **Ta-pu**	**1.26**	**240**	*e*P	**Pb**	**15 19 56.0**	**+0.1**	
WTP	baz=249			*e*S	**Sn**	**15 20 13.3**	**+1.3**	
TTN	baz=249 **Taitung**	**1.27**	**209**	*e*P	**Pn**	**15 19 55.5**	**0.0**	
TTN	baz=184			*e*S	**Sb**	**15 20 12.6**	**+0.6**	
TWS1	baz=184 **Kuangyinshan**	**1.27**	**344**	*e*P	**Pn**	**15 19 55.4**	**-0.3**	
TWS1	baz=345			*e*S	**Sn**	**15 20 13.9**	**+1.5**	
YM01	baz=345 **YM01**	**1.29**	**350**	*e*P	**Pb**	**15 19 56.5**	**+0.1**	
YM01	baz=337			*e*S	**Sn**	**15 20 14.0**	**+1.2**	
WRL	**Guolierlin Hig**	**1.31**	**272**	*e*P	**Pn**	**15 19 56.4**	**+0.3**	
WRL	baz=271			*e*S	**Sg**	**15 20 14.4**	**-0.4**	
WTK	baz=271 **Tuku**	**1.31**	**262**	*e*P	**Pb**	**15 19 56.9**	**+0.2**	
WTK	baz=263			*e*S	**Sg**	**15 20 14.9**	**0.0**	
CHY	baz=263 **Chiayi**	**1.32**	**254**	*e*S	**Sg**	**15 20 14.9**	**-0.3**	
ANP	baz=255 **Anpu**	**1.33**	**349**	*e*P	**Pn**	**15 19 57.0**	**+0.4**	
ANP	baz=350			*e*S	**Sb**	**15 20 14.2**	**+0.1**	
TWK	baz=350 **Hsinying**	**1.35**	**244**	*e*P	**Pg**	**15 19 58.0**	**-0.6**	
TWK	baz=243			*e*S	**Sg**	**15 20 16.2**	**0.0**	
CHN1	baz=243 **Nanshi**	**1.36**	**240**	*e*P	**Pg**	**15 19 58.1**	**-0.6**	
CHN1	baz=239			*e*S	**Sg**	**15 20 16.6**	**+0.2**	
SNST	baz=239 **Tainan City**	**1.36**	**242**	*e*P	**Pn**	**15 19 56.9**	**0.0**	
SNST	baz=241			*e*S	**Sg**	**15 20 16.0**	**-0.6**	
SGST	baz=241 **Jiashian**	**1.37**	**235**	*e*P	**Pn**	**15 19 57.2**	**+0.2**	
SGST	baz=224			*e*S	**Sg**	**15 20 16.9**	**+0.1**	
SLGT	baz=224 **Liugui**	**1.38**	**231**	*e*P	**Pb**	**15 19 58.0**	**0.0**	
SLGT	baz=218			*e*S	**Sg**	**15 20 17.3**	**+0.3**	
WSF	baz=218 **Szhu**	**1.47**	**261**	*e*S	**Sg**	**15 20 18.8**	**-1.1**	
ICHU	baz=262 **Yijhu**	**1.49**	**250**	*e*P	**Pn**	**15 19 58.6**	**0.0**	
ECL	baz=249 **Taimali**	**1.49**	**212**	*e*P	**Pn**	**15 19 59.1**	**+0.5**	
	baz=204							
SCST	**Cishan**	**1.55**	**231**	*e*P	**Pb**	**15 20 01.4**	**+0.5**	
SSD	baz=228 **Sandimen**	**1.56**	**224**	*e*P	**Pn**	**15 20 00.2**	**+0.7**	
SSD	baz=223			*e*S	**Sg**	**15 20 22.5**	**-0.2**	
TSMG	baz=223 **Majia**	**1.58**	**223**	*e*P	**Pb**	**15 20 01.6**	**+0.3**	
TSMG	baz=222			*e*S	**Sg**	**15 20 23.0**	**-0.4**	
MASBT	baz=222 **Mashibuluo**	**1.65**	**221**	*e*P	**Pn**	**15 20 01.4**	**+0.5**	
MASBT	baz=219			*e*S	**Sg**	**15 20 24.8**	**-1.1**	
SSPT	baz=219 **Xinbi**	**1.79**	**220**	*e*P	**Pb**	**15 20 04.7**	**-0.3**	
IRIF	baz=203 **Iriomote-Funau**	**1.82**	**75**	S	**Sn**	**15 20 26.4**	**+0.6**	
LAY	**Lan-yu**	**1.84**	**187**	*e*P	**Pn**	**15 20 02.3**	**-1.2**	
SCZT	baz=179 **Fangliau**	**1.85**	**216**	*e*P	**Pn**	**15 20 04.8**	**+1.2**	
SLIU	baz=194 **Shizi**	**1.89**	**210**	*e*P	**Pn**	**15 20 04.9**	**+0.7**	
SLIU	baz=184			*e*S	**Sn**	**15 20 28.3**	**+0.6**	
JKRS	**Kuro-shima**	**2.05**	**79**	P	**Pn**	**15 20 07.1**	**+0.8**	
JKRS				*e*S	**Sn**	**15 20 32.8**	**+1.3**	
WDGT	**Dungji**	**2.06**	**253**	*e*P	**Pn**	**15 20 06.6**	**+0.1**	
WDGT	baz=256			*e*S	**Sn**	**15 20 32.2**	**+0.4**	
PNG	baz=256 **Penghu**	**2.08**	**262**	*e*P	**Pn**	**15 20 06.8**	**0.0**	
PNG	baz=264			*e*S	**Sn**	**15 20 32.9**	**+0.5**	
JIJ	**Ishigaki jima**	**2.19**	**77**	P	**Pn**	**15 20 08.3**	**0.0**	
JIJ				S	**Sn**	**15 20 34.4**	**-0.7**	
VCHM	**Qimei**	**2.28**	**254**	*e*P	**Pn**	**15 20 09.7**	**+0.3**	
VCHM	baz=257			*e*S	**Sn**	**15 20 36.7**	**-0.5**	
JISG	**Ishigakijimahi**	**2.40**	**72**	P	**Pn**	**15 20 10.9**	**-0.2**	
JISG				S	**Sn**	**15 20 39.0**	**-1.1**	
JTJ	**Tarama**	**2.75**	**73**	P	**Pn**	**15 20 16.6**	**+0.6**	
JTJ				*e*S	**Sn**	**15 20 48.7**	**-0.2**	

IDC ***29*** *15:27:13.5±1.6,23°.75N×121°.96E,h0km,mb3.4/3, mb1 3.5/4,mb1mx3.1/60,mbtmp3.5/4,ML3.4/1,MS2.5/3, Ms1 2.6/3,ms1mx2.3/28,Error ellipse: s-maj=35.1km s-min=29.9km az=40.0*
JMA ***29*** *15:27:16.5±0.1,23°.88N×121°.83E,h0km,M3.2*
NEIC ***29*** *15:27:17.6±1.4,23°.86N±0°.04×121°.78E±0°.03,h21km±7km, mb4.0/6,ML4.1(TAP),Error ellipse: s-maj=6.0km s-min=3.7km az=157.0*
TAP ***29*** *15:27:18.0,23°.91N×121°.77E,h22km,ML3.7,C*
ISC 29 15:27:17.4±0.9,23°.87N±0°.01×121°.81E±0°.02,h18km±6km, n154,σ0°.75/246,mb3.7/6,17C-10D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
HWA	**Hwalien**	**0.21**	**299**	⇓*i*P		**Pb**	**15 27 23.1**	**+0.5**
HWA	baz=296			*i* S		**Sb**	**15 27 27.3**	**+1.1**
TWD	baz=296 **Chiawan**	**0.28**	**317**	⇓*i*P		**Pb**	**15 27 23.9**	**-0.1**
TWD	baz=321			*i* S		**Sg**	**15 27 28.0**	**+0.2**
ESL	baz=321 **Shilin**	**0.35**	**260**	⇑*i*P		**Pg**	**15 27 24.8**	**+0.2**
ESL	baz=255			*i* S		**Sb**	**15 27 30.7**	**+0.4**
NACB	baz=255 **Ninganchiao**	**0.36**	**327**	⇓*i*P		**Pg**	**15 27 24.9**	**0.0**
NACB	baz=326			*i* S		**Sg**	**15 27 29.6**	**-0.3**
NACB	**Ninganchiao**	**0.36**	**327**			**Pg**	**15 27 24.8**	**-0.1**
EGFH	**Guangfu**	**0.40**	**240**	P		**Pb**	**15 27 26.1**	**+0.1**
EGFH	baz=229			S		**Sb**	**15 27 33.2**	**+1.4**
ETLH	baz=229 **Xiulin Townshi**	**0.45**	**318**	⇓*i*P		**Pg**	**15 27 26.4**	**-0.1**
ETLH	baz=319			S		**Sg**	**15 27 32.3**	**-0.3**
HGSD	baz=319 **Ruisui**	**0.52**	**223**	⇓*i*P		**Pb**	**15 27 28.8**	**+0.9**
HGSD	baz=206			S		**Sn**	**15 27 37.8**	**-0.5**
WHF	baz=206 **Hehuan Shan**	**0.56**	**299**	⇓*i*P		**Pg**	**15 27 28.7**	**-0.1**
WHF	baz=287			*i* S		**Sg**	**15 27 35.9**	**-0.6**
EWUT	baz=287 **Wuta**	**0.57**	**357**	*e*P		**Pb**	**15 27 29.2**	**+0.4**
EWUT				*e*S		**Sb**	**15 27 37.1**	**+0.4**
EHY	**Hungye**	**0.57**	**231**	⇓*i*P		**Pb**	**15 27 29.1**	**+0.2**
EHY	baz=230			S		**Sb**	**15 27 38.4**	**+1.6**
OWD	baz=230 **Renai**	**0.58**	**278**	P		**Pg**	**15 27 28.8**	**-0.2**
OWD	baz=274			*e*S		**Sg**	**15 27 36.2**	**-0.7**
CHGB	baz=274 **Renai**	**0.61**	**288**	⇑*i*P		**Pg**	**15 27 29.5**	**0.0**
CHGB	baz=285			*i* S		**Sg**	**15 27 37.5**	**-0.2**
VWDT	baz=285 **VWDT**	**0.62**	**259**	⇑*i*P		**Pb**	**15 27 30.0**	**+0.3**
VWDT	baz=254			S		**Sg**	**15 27 38.0**	**+0.1**
FUSS	baz=254 **Fushou**	**0.64**	**306**	P		**Pg**	**15 27 30.0**	**0.0**
FUSS	baz=306			S		**Sg**	**15 27 38.3**	**-0.2**
YULB	baz=306 **Yu-li**	**0.67**	**224**	P		**Pg**	**15 27 30.4**	**-0.1**
YULB	baz=229			S		**Sb**	**15 27 40.2**	**+0.7**
YULB	baz=229 **Yu-li**	**0.67**	**224**			**Pg**	**15 27 30.2**	**-0.3**
NNSB	**Datong**	**0.68**	**325**	P		**Pg**	**15 27 30.6**	**-0.1**
NNSB	baz=327			S		**Sg**	**15 27 39.2**	**-0.5**
NNSH	baz=327 **Datong**	**0.68**	**325**	P		**Pg**	**15 27 30.7**	**0.0**
NNSH	baz=326			S		**Sg**	**15 27 39.0**	**-0.8**
EYUL	baz=326 **Yuli**	**0.69**	**221**	*e*P		**Pn**	**15 27 31.7**	**-0.5**
EYUL	baz=228			*e*S		**Sn**	**15 27 41.9**	**-0.6**
NNS	baz=228 **Nan Shan**	**0.69**	**325**	P		**Pg**	**15 27 30.9**	**0.0**
NNS	baz=327			S		**Sg**	**15 27 39.7**	**-0.5**
TWT	baz=327 **Tachien**	**0.69**	**303**	⇓*i*P		**Pb**	**15 27 31.3**	**+0.3**
TWT	baz=292			*i* S		**Sg**	**15 27 39.9**	**-0.3**
TWF1	baz=292 **Yuli**	**0.70**	**222**	P		**Pb**	**15 27 31.4**	**+0.4**
TWF1	baz=229			*e*S		**Sb**	**15 27 41.2**	**+0.8**
TDCB	baz=229 **Techi**	**0.70**	**303**	⇑*i*P		**Pg**	**15 27 31.2**	**0.0**
TDCB	baz=293			S		**Sg**	**15 27 40.1**	**-0.6**
TWC	baz=293 **Suao**	**0.73**	**3**	⇓*i*P		**Pn**	**15 27 32.2**	**-0.7**
TWC	baz=359			S		**Sb**	**15 27 42.4**	**+1.0**
NDS	baz=359 **Dongshan**	**0.76**	**354**	P		**Pg**	**15 27 32.5**	**+0.2**
NDS	baz=360			S		**Sg**	**15 27 42.8**	**+0.4**
NDT	baz=360 **Datong Townshi**	**0.77**	**340**	P		**Pg**	**15 27 32.6**	**+0.1**
NDT	baz=335			S		**Sb**	**15 27 42.6**	**+0.1**
SSLB	baz=335 **Suanglung**	**0.79**	**264**	⇑*i*P		**Pb**	**15 27 32.3**	**-0.3**
SSLB	baz=268			S		**Sb**	**15 27 42.1**	**-0.8**
SSLB	baz=268 **Suanglung**	**0.79**	**264**			**Pb**	**15 27 32.1**	**-0.4**

WPL	**Puli Township**	**0.79**	**280**	*e*P		**Pb**	**15 27 32.5**	**-0.1**
WPL	baz=277			*e*S		**Sb**	**15 27 42.1**	**-0.9**
ENTT	baz=277 **Nioudou**	**0.80**	**344**	⇑*i*P		**Pg**	**15 27 33.1**	**+0.2**
ENTT	baz=349			S		**Sg**	**15 27 43.8**	**+0.3**
FULB	baz=349 **Fuli**	**0.82**	**215**	*e*P		**Pn**	**15 27 34.1**	**0.0**
FULB	baz=195			*e*S		**Sn**	**15 27 47.9**	**+2.1**
DPDB	baz=195 **Guoxing**	**0.82**	**281**	*e*P		**Pb**	**15 27 33.1**	**0.0**
DPDB	baz=279			*e*S		**Sg**	**15 27 45.3**	**+1.0**
SMLT	baz=279 **Sun Moon Lake**	**0.83**	**271**	⇑*i*P		**Pb**	**15 27 33.3**	**-0.1**
SMLT	baz=275			*i* S		**Sb**	**15 27 44.4**	**+0.2**
WCS	baz=275 **Beigang Elemen**	**0.84**	**283**	*e*P		**Pg**	**15 27 33.7**	**0.0**
TWE	baz=279 **Neicheng**	**0.85**	**351**	⇑*i*P		**Pg**	**15 27 34.1**	**+0.1**
TWE	baz=358			S		**Sg**	**15 27 45.7**	**+0.4**
CHKT	baz=358 **Chengkung**	**0.87**	**208**	*e*P		**Pg**	**15 27 34.2**	**-0.1**
CHKT	baz=183			*e*S		**Sn**	**15 27 47.8**	**+0.8**
YUS	baz=183 **Yu-Shan**	**0.87**	**244**	⇑*i*P		**Pg**	**15 27 34.4**	**0.0**
YUS	baz=238			S		**Sg**	**15 27 46.8**	**+0.8**
WHP	baz=238 **Taichung City**	**0.88**	**297**	*e*P		**Pb**	**15 27 34.2**	**0.0**
WHP	baz=288			*e*S		**Sb**	**15 27 45.3**	**-0.5**
YHNB	baz=288 **Yeheng**	**0.89**	**334**	⇑*i*P		**Pb**	**15 27 34.4**	**+0.1**
YHNB	baz=322			S		**Sb**	**15 27 45.3**	**-0.6**
YHNB	baz=322 **Yeheng**	**0.89**	**334**			**Pb**	**15 27 34.3**	**+0.1**
ILA	**Ilan**	**0.89**	**357**	*e*P		**Pn**	**15 27 35.5**	**+0.4**
ILA	baz=356			*e*S		**Sn**	**15 27 48.0**	**+0.5**
WHYT	baz=356 **Xinyi Township**	**0.89**	**259**	*e*P		**Pg**	**15 27 34.9**	**+0.2**
NSK	baz=254 **Sanguang**	**0.90**	**333**	⇑*i*P		**Pb**	**15 27 34.4**	**-0.1**
NSK	baz=336			*i* S		**Sb**	**15 27 46.0**	**-0.2**
NWLT	baz=336 **Wulai**	**0.94**	**343**	*e*P		**Pg**	**15 27 35.6**	**-0.1**
NWLT	baz=336			*e*S		**Sb**	**15 27 47.2**	**-0.2**
NTC	baz=336 **Toucheng**	**0.98**	**1**	*e*P		**Pg**	**15 27 36.5**	**+0.1**
NTC	baz=8.0			*e*S		**Sn**	**15 27 50.2**	**+0.6**
ALS	**Alishan**	**0.99**	**249**	⇑*i*P		**Pb**	**15 27 36.4**	**+0.3**
ALS	baz=244			S		**Sg**	**15 27 49.7**	**+0.1**
WJS	baz=244 **Zhushan**	**0.99**	**267**	P		**Pg**	**15 27 36.7**	**+0.2**
WJS	baz=267			*e*S		**Sn**	**15 27 51.4**	**+1.4**
ELDTW	baz=267 **Lidau**	**0.99**	**227**	*i* P		**Pb**	**15 27 35.4**	**-0.8**
ELDTW	baz=219			S		**Sb**	**15 27 48.7**	**-0.3**
EDH	baz=219 **Donghe**	**1.01**	**207**	*e*P		**Pg**	**15 27 36.8**	**-0.1**
EDH	baz=185			*e*S		**Sn**	**15 27 52.0**	**+1.7**
WNT	baz=185 **Mingjian**	**1.03**	**271**	⇑*i*P		**Pg**	**15 27 37.4**	**+0.1**
WNT	baz=267			S		**Sn**	**15 27 51.4**	**+0.5**
WWF	baz=267 **Wufeng**	**1.03**	**280**	*e*P		**Pg**	**15 27 37.9**	**+0.6**
WWF	baz=277			*e*S		**Sn**	**15 27 53.4**	**+2.5**
WNT1	baz=277 **Nantou City**	**1.03**	**272**	*e*P		**Pg**	**15 27 37.8**	**+0.4**
NSTT	baz=268 **Nanjuang**	**1.05**	**316**	P		**Pn**	**15 27 37.4**	**+0.2**
NSTT	baz=316			S		**Sb**	**15 27 50.8**	**+0.2**
LIOB	baz=316 **Emei**	**1.05**	**317**	*e*P		**Pg**	**15 27 37.8**	**-0.1**
LIOB	baz=307			*e*S		**Sg**	**15 27 51.6**	**-0.1**
TCU	baz=307 **Taichung**	**1.07**	**285**	P		**Pg**	**15 27 38.2**	**+0.2**
TCU	baz=278			*e*S		**Sg**	**15 27 53.0**	**+0.9**
CHN5	baz=278 **Tsauling**	**1.07**	**255**	⇑*i*P		**Pg**	**15 27 38.1**	**-0.1**
CHN5	baz=241			S		**Sn**	**15 27 53.0**	**+1.0**
NJD	baz=241 **Zhudong**	**1.08**	**323**	*e*P		**Pg**	**15 27 39.1**	**+0.8**
NJD	baz=323			*e*S		**Sg**	**15 27 54.0**	**+1.5**
TIPB	baz=323 **Shuangxi**	**1.09**	**1**	P		**Pg**	**15 27 38.6**	**0.0**
TIPB	baz=8.0			*e*S		**Sg**	**15 27 53.5**	**+0.6**
NSY	baz=8.0 **Sanyi**	**1.10**	**300**	*e*P		**Pg**	**15 27 38.4**	**-0.2**
NSY	baz=298			*e*S		**Sg**	**15 27 53.5**	**+0.5**
NHDH	baz=298 **Xindian Distri**	**1.11**	**347**	*e*P		**Pg**	**15 27 39.0**	**0.0**
NHDH	baz=335			*e*S		**Sg**	**15 27 53.4**	**-0.3**
TWA	baz=335 **Mucha**	**1.12**	**350**	*e*P		**Pg**	**15 27 39.1**	**0.0**
TWA	baz=338			*e*S		**Sn**	**15 27 53.5**	**+0.2**
TATO	baz=338 **Taipei**	**1.14**	**345**			**Pb**	**15 27 38.8**	**+0.3**
NMLH	**Miaoli**	**1.14**	**306**	*e*P		**Pg**	**15 27 39.4**	**-0.1**
NMLH	baz=304			*e*S		**Sb**	**15 27 53.5**	**+0.4**
TWB1	baz=304 **Santiao Chiao**	**1.14**	**8**	*e*P		**Pg**	**15 27 39.8**	**+0.3**
TWB1	baz=18			*e*S		**Sg**	**15 27 55.4**	**+0.9**
LONT	baz=18 **Longtian**	**1.15**	**213**	*e*P		**Pn**	**15 27 37.4**	**-1.1**
HSN1	baz=205 **Hsinchu**	**1.15**	**322**	*e*P		**Pb**	**15 27 39.1**	**+0.3**
WGK	baz=321 **Gukeng**	**1.16**	**261**	*e*P		**Pg**	**15 27 39.5**	**-0.2**
WCHH	baz=255 **Zhanghua**	**1.16**	**280**	*e*P		**Pg**	**15 27 39.7**	**-0.1**
WDJ	baz=277 **Dajia District**	**1.17**	**294**	*e*P		**Pg**	**15 27 39.6**	**-0.3**
STYH	baz=292 **Taoyuan**	**1.18**	**234**	*e*P		**Pb**	**15 27 39.5**	**+0.3**
STYH	baz=228			*e*S		**Sg**	**15 27 55.7**	**+0.2**
WDLH	baz=228 **Douliu**	**1.18**	**261**	*e*P		**Pg**	**15 27 39.9**	**-0.2**
WDLH	baz=257			*e*S		**Sg**	**15 27 57.0**	**+1.5**
SBCB	baz=257 **Hsinchu**	**1.18**	**321**	*e*P		**Pg**	**15 27 40.5**	**+0.3**
SBCB	baz=321			*e*S		**Sg**	**15 27 57.2**	**+1.5**
JYNG	**Yonaguni jima**	**1.19**	**61**	P		**Pb**	**15 27 39.5**	**+0.1**
JYNG				S		**Sn**	**15 27 54.4**	**-0.5**
WFSB	**Wu-fen Shan**	**1.19**	**359**	*e*P		**Pg**	**15 27 40.6**	**+0.2**
WFSB	baz=345			*e*S		**Sg**	**15 27 56.0**	**-0.1**
STYT	baz=345 **Tauyuan**	**1.19**	**234**	⇓*i*P		**Pb**	**15 27 39.7**	**+0.1**
STYT	baz=227			S		**Sg**	**15 27 56.2**	**0.0**
HSN	baz=227 **Hsinchu**	**1.20**	**321**	*e*P		**Pg**	**15 27 40.6**	**0.0**
HSN	baz=323			*e*S		**Sg**	**15 27 57.7**	**+1.4**

TPUB	**Ta-pu**	**1.22**	**242**	P	**Pb**	**15 27 40.0**	**+0.1**
	baz=238						
TPUB				S	**Sg**	**15 27 56.7**	**-0.2**
	baz=238						
TPUB	**Ta-pu**	**1.22**	**242**	Pn	**Pb**	**15 27 40.1**	**+0.1**
CHN4	**Tsaushan**	**1.23**	**245**	⇑*iP*	**Pb**	**15 27 40.6**	**+0.5**
	baz=240						
CHN4				S	**Sg**	**15 27 58.9**	**+1.7**
	baz=240						
NCUH	**Zhongli**	**1.23**	**333**	*eP*	**Pb**	**15 27 40.5**	**+0.4**
	baz=334						
NCUH				*e*S	**Sg**	**15 27 57.1**	**-0.1**
	baz=334						
NCU	**National Centr**	**1.23**	**333**	*eP*	**Pg**	**15 27 40.6**	**-0.5**
	baz=334						
NCU				*e*S	**Sg**	**15 27 57.1**	**-0.1**
	baz=334						
LDUT	**Ludao**	**1.23**	**195**	*eP*	**Pn**	**15 27 38.7**	**-1.0**
	baz=178						
TWGBT	**Beinan**	**1.24**	**213**	*eP*	**Pn**	**15 27 38.9**	**-1.0**
	baz=205						
TWG	**Pinlang**	**1.25**	**213**	P	**Pn**	**15 27 38.9**	**-1.1**
	baz=205						
TWG	**Pinlang**	**1.25**	**213**	Pn	**Pn**	**15 27 38.9**	**-1.1**
YOJ	**Yonaguni jima**	**1.25**	**62**	P	**Pb**	**15 27 40.5**	**+0.1**
YOJ				S	**Sn**	**15 27 56.5**	**+0.2**
YOJ	**Yonaguni jima**	**1.25**	**62**	P	**Pb**	**15 27 40.2**	**-0.2**
	baz=70						
YOJ				*e*S	**Sn**	**15 27 56.1**	**-0.2**
	baz=70						
YOJ	**Yonaguni jima**	**1.25**	**62**	Pn	**Pb**	**15 27 40.4**	**+0.1**
WTP	**Ta-pu**	**1.26**	**241**	⇑*iP*	**Pb**	**15 27 41.0**	**+0.3**
	baz=245						
WTP				S	**Sg**	**15 27 58.5**	**+0.3**
	baz=245						
CHN2	**Minshiung**	**1.27**	**255**	*eP*	**Pg**	**15 27 42.3**	**+0.5**
	baz=250						
CHN2				*e*S	**Sg**	**15 28 00.2**	**+1.8**
	baz=250						
TWS1	**Kuangyinshan**	**1.27**	**344**	*eP*	**Pg**	**15 27 41.6**	**-0.4**
	baz=346						
TWS1				*e*S	**Sg**	**15 27 59.1**	**+0.5**
	baz=346						
YM01	**YM01**	**1.29**	**350**	*eP*	**Pb**	**15 27 41.2**	**+0.1**
	baz=354						
WTK	**Tuku**	**1.31**	**262**	*eP*	**Pb**	**15 27 42.0**	**+0.5**
	baz=258						
CHY	**Chiayi**	**1.32**	**254**	*eP*	**Pb**	**15 27 42.0**	**+0.4**
	baz=249						
CHY				*e*S	**Sg**	**15 28 00.2**	**+0.1**
	baz=249						
YM08	**YM08**	**1.32**	**351**	*eP*	**Pn**	**15 27 40.8**	**-0.2**
	baz=335						
ANP	**Anpu**	**1.33**	**349**	*eP*	**Pb**	**15 27 41.9**	**-0.1**
	baz=350						
TWK	**Hsinying**	**1.35**	**244**	⇑*iP*	**Pb**	**15 27 42.5**	**+0.3**
	baz=238						
TWK				*i* S	**Sg**	**15 28 01.4**	**+0.3**
	baz=238						
CHN1	**Nanshi**	**1.36**	**240**	*eP*	**Pg**	**15 27 43.1**	**-0.5**
	baz=234						
CHN1				*e*S	**Sg**	**15 28 02.0**	**+0.7**
	baz=234						
SGST	**Jiashian**	**1.37**	**235**	*eP*	**Pb**	**15 27 42.2**	**-0.3**
	baz=215						
SGST				*e*S	**Sg**	**15 28 01.7**	**-0.1**
	baz=215						
SLGT	**Liugui**	**1.38**	**231**	*eP*	**Pb**	**15 27 43.0**	**+0.4**
	baz=214						
SLGT				*e*S	**Sb**	**15 28 00.9**	**+1.0**
	baz=214						
TWY	**Chenhua**	**1.41**	**352**	*eP*	**Pb**	**15 27 43.2**	**+0.1**
	baz=334						
WSF	**Szhu**	**1.47**	**261**	*eP*	**Pb**	**15 27 43.9**	**-0.3**
	baz=258						
WSF				*e*S	**Sg**	**15 28 04.2**	**-0.6**
	baz=258						
ICHU	**Yijhu**	**1.49**	**250**	*eP*	**Pb**	**15 27 44.3**	**-0.2**
	baz=246						
ECL	**Taimali**	**1.49**	**212**	*eP*	**Pn**	**15 27 42.1**	**-1.2**
	baz=204						
CHN8	**Yiju**	**1.55**	**251**	*eP*	**Pb**	**15 27 45.9**	**+0.3**
	baz=247						
CHN8				*e*S	**Sb**	**15 28 06.2**	**+1.2**
	baz=247						
SCST	**Cishan**	**1.56**	**231**	*eP*	**Pg**	**15 27 46.6**	**-0.7**
	baz=242						
SSD	**Sandimen**	**1.56**	**224**	P	**Pb**	**15 27 45.2**	**-0.5**
	baz=210						
TSMG	**Majia**	**1.58**	**223**	*eP*	**Pb**	**15 27 46.4**	**+0.3**
	baz=207						
TSMG				*e*S	**Sg**	**15 28 08.2**	**-0.1**
	baz=207						
TWM1	**Shoushan**	**1.65**	**231**	*eP*	**Pg**	**15 27 48.5**	**-0.6**
	baz=241						
MASBT	**Mashibuluo**	**1.66**	**221**	*eP*	**Pn**	**15 27 46.2**	**+0.7**
	baz=207						
MASBT				*e*S	**Sb**	**15 28 08.2**	**+0.3**
	baz=207						
EAST	**Anshuo**	**1.73**	**211**	*eP*	**Pn**	**15 27 46.3**	**-0.2**
	baz=193						
PCYT	**Pengchaiyu**	**1.77**	**8**	*eP*	**Pb**	**15 27 48.8**	**-0.4**
	baz=18						
IRIF	**Iriomote-Funau**	**1.82**	**75**	P	**Pn**	**15 27 48.4**	**+0.6**
IRIF				S	**Sb**	**15 28 11.5**	**-1.1**
HATJ	**Hateruma jima**	**1.84**	**84**	P	**Pn**	**15 27 48.7**	**+0.7**
HATJ				S	**Sn**	**15 28 11.5**	**+0.6**
LAY	**Lan-yu**	**1.84**	**187**	*eP*	**Pn**	**15 27 46.5**	**-1.6**
	baz=180						
SCZT	**Fangliau**	**1.85**	**216**	*eP*	**Pb**	**15 27 50.0**	**-0.6**
	baz=216						
SLIU	**Shizi**	**1.89**	**210**	*eP*	**Pb**	**15 27 50.9**	**-0.6**
	baz=191						
JKRS	**Kuro-shima**	**2.05**	**79**	P	**Pn**	**15 27 52.0**	**+1.1**
JKRS				S	**Sn**	**15 28 17.2**	**+1.2**
WDGT	**Dungji**	**2.06**	**253**	*eP*	**Pn**	**15 27 52.0**	**+0.9**
	baz=248						
PNG	**Penghu**	**2.08**	**262**	*eP*	**Pn**	**15 27 51.9**	**+0.5**
	baz=258						
PNG				*e*S	**Sn**	**15 28 18.0**	**+1.0**
	baz=258						
TWKBT	**Hengchun**	**2.13**	**206**	*eP*	**Pn**	**15 27 49.9**	**-2.2**
	baz=187						
TWK1	**Hengchun**	**2.13**	**206**	*eP*	**Pn**	**15 27 53.1**	**+1.0**
	baz=187						
JIJ	**Ishigaki jima**	**2.19**	**77**	P	**Pn**	**15 27 53.1**	**+0.2**
JIJ				S	**Sn**	**15 28 19.3**	**-0.3**
JISG	**Ishigakijimahi**	**2.39**	**72**	P	**Pn**	**15 27 56.2**	**+0.5**
JISG				S	**Sn**	**15 28 24.6**	**0.0**
VWUC	**VWUC**	**2.42**	**298**	*eP*	**Pn**	**15 27 55.6**	**-0.5**
	baz=295						
VWUC				*e*S	**Sn**	**15 28 23.8**	**-1.4**
	baz=295						
PTMZ	**Houxiangcun**	**2.71**	**296**	*eP*	**Pn**	**15 27 59.5**	**-0.6**
	baz=293						
PTMZ				*e*S	**Sn**	**15 28 31.0**	**-1.4**
	baz=293						
JTJ	**Tarama**	**2.75**	**73**	P	**Pn**	**15 28 01.8**	**+1.2**
JTJ				S	**Sn**	**15 28 34.0**	**+0.6**
MATB	**Ma-tsu**	**2.83**	**324**	*eP*	**Pn**	**15 28 01.4**	**-0.3**
	baz=317						
KNMB	**Chin-men Tao**	**3.18**	**281**	*eP*	**Pn**	**15 28 05.6**	**-0.9**
	baz=278						
KNMB	**Chin-men Tao**	**3.18**	**281**	Pn	**Pn**	**15 28 06.3**	**-0.1**
JIRB	**Irabujima**	**3.21**	**72**	P	**Pn**	**15 28 08.4**	**+1.4**
JIRB				*e*S	**Sn**	**15 28 45.3**	**+0.4**
JIKM	**Ikemajima**	**3.31**	**71**	S	**Sn**	**15 28 47.3**	**+0.1**
JMJ	**Miyako jima 2**	**3.32**	**73**	*eP*	**Pn**	**15 28 09.6**	**+1.2**
	baz=81						
JMJ2	**Miyako jima3**	**3.33**	**74**	P	**Pn**	**15 28 09.8**	**+1.3**
JMJ2				S	**Sn**	**15 28 48.4**	**+0.7**
XPSS	**Dashiqiu**	**3.38**	**335**	*eP*	**Pn**	**15 28 08.1**	**-1.2**
	baz=327						
JOGS	**Gusukube**	**3.40**	**74**	P	**Pn**	**15 28 11.4**	**+1.8**
JOGS				*e*S	**Sn**	**15 28 51.7**	**+2.2**
AXDP	**Jialang**	**3.64**	**287**	*eP*	**Pn**	**15 28 12.9**	**0.0**
	baz=283						
ZPLA	**Ao Xicun**	**3.71**	**272**	*eP*	**Pn**	**15 28 13.9**	**+0.1**
	baz=267						
JOW	**Kunigami**	**6.55**	**62**	Pn	**Pn**	**15 28 51.3**	**-1.6**
	1.6nm,0.3s,baz=130,slow=24,SNR=7.2						
JOW					**Sn**	**15 30 04.1**	**-3.1**
	baz=120,slow=29,SNR=0.9						
JOW	**Kunigami**	**6.55**	**62**	Pn	**Pn**	**15 28 52.4**	**-0.5**
KSRS	**Korea Array**	**14.52**	**20**	LR	LR	15 37 20.7	
	comp=Z,16nm,18.5s,baz=195,slow=42						
MAJO	**Matsushiro**	**18.95**	**44**	P	**Pn**	**15 31 39.5**	**+1.3**
MAJO				IAmb	IAmb	15 31 43.2	
	comp=Z,7.5nm,1.2s						
CMAR	**Chiang Mai Arr**	**21.98**	**260**	LR	LR	15 41 43.3	
	comp=Z,12nm,19.2s,baz=10.0,slow=39						
GUMO	**Guam**	**24.08**	**111**	LR	LR	15 40 40.5	
	comp=Z,15nm,20.5s,baz=76,slow=34						
KSM	**Kuching**	**24.90**	**208**	P	**P**	**15 32 37.7**	**-1.7**
KSM				IAmb	IAmb	15 32 42.0	
	comp=Z,6.6nm,1.4s						
MKAR	**Makanchi Array**	**38.96**	**316**	P	**P**	**15 34 42.9**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=108,slow=9.5,SNR=3.6						
MKAR	**Makanchi Array**	**38.96**	**316**	P	**P**	**15 34 43.0**	**+0.6**
MAKZ	**Makanchi**	**39.16**	**316**	P	**P**	**15 34 45.3**	**+1.1**
ZALV	**Zalesovo Beam**	**40.81**	**327**	P	**P**	**15 34 57.7**	**0.0**
	comp=Z,0.4nm,0.5s,baz=115,slow=6.5,SNR=2.0						
WB0	**Warramunga Arr**	**45.08**	**163**	P	**P**	**15 35 32.2**	**-0.4**
WB0				IAmb	IAmb	15 35 39.1	
	comp=Z,5.7nm,1.1s						
WRA	**Warramunga Arr**	**45.23**	**163**	P	**P**	**15 35 31.3**	**-2.5**
	comp=Z,1.2nm,1.2s,baz=345,slow=8.9,SNR=2.0						
WR0	**Warramunga Arr**	**45.30**	**163**	P	**P**	**15 35 34.3**	**-0.1**
ABKAR	**Akbulak array**	**54.06**	**314**	P	**P**	**15 36 40.6**	**-0.2**
ABKAR				IAmb	IAmb	15 36 44.4	
	comp=Z,0.8nm,1.1s						

JMA **29** *15:30:19.2±0.1, 24.32N×121.60E, h24km±2km, M2.0*
TAP **29** *15:30:19.3, 24.33N×121.64E, h22km, ML2.9, B*

ISC 29 15:30:19.3±0.9, 24.33N±0.01×121.65E±0.02, h13km±8km, n86, σ0.53/146, 7C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EWUT	**Wuta**	**0.16**	**45**	*i* P	**Pb**	**15 30 24.6**	**+0.4**
	baz=46						
EWUT				S	**Sb**	**15 30 27.8**	**+0.4**
	baz=46						
NACB	**Ninganchiao**	**0.16**	**198**	⇑*iP*	**Pb**	**15 30 24.2**	**0.0**
	baz=196						
NACB				S	**Sb**	**15 30 27.7**	**+0.3**
	baz=196						
ETLH	**Xiulin Townshi**	**0.20**	**232**	⇑*iP*	**Pb**	**15 30 24.9**	**+0.1**
	baz=231						
ETLH				S	**Sb**	**15 30 28.4**	**-0.1**
	baz=231						
TWD	**Chiawan**	**0.25**	**192**	⇑*iP*	**Pb**	**15 30 25.3**	**-0.4**
	baz=188						
TWD				*i* S	**Sb**	**15 30 29.9**	**-0.1**
	baz=188						
NNSB	**Datong**	**0.26**	**292**	⇓*iP*	**Pb**	**15 30 25.8**	**-0.2**
	baz=293						
NNSB				S	**Sb**	**15 30 30.0**	**-0.5**
	baz=293						
NNSH	**Datong**	**0.26**	**292**	⇑*iP*	**Pb**	**15 30 25.8**	**-0.1**
	baz=293						
NNSH				S	**Sb**	**15 30 29.8**	**-0.6**
	baz=293						
NNS	**Nan Shan**	**0.28**	**294**	⇓*iP*	**Pb**	**15 30 25.9**	**-0.3**
	baz=300						
NNS				*i* S	**Sb**	**15 30 30.7**	**-0.2**
	baz=300						
NDT	**Datong Townshi**	**0.30**	**335**	⇓*iP*	**Pb**	**15 30 26.4**	**-0.1**
	baz=341						
NDT				S	**Sb**	**15 30 31.2**	**-0.2**
	baz=341						
NDS	**Dongshan**	**0.31**	**11**	P	**Pb**	**15 30 26.5**	**-0.2**
	baz=12						
NDS				S	**Sb**	**15 30 31.1**	**-0.6**
	baz=12						
ENTT	**Nioudou**	**0.32**	**346**	⇑*iP*	**Pb**	**15 30 26.7**	**-0.1**
	baz=352						
ENTT				*i* S	**Sb**	**15 30 31.8**	**-0.2**
	baz=352						
TWC	**Suao**	**0.33**	**33**	⇓*iP*	**Pb**	**15 30 27.0**	**0.0**
	baz=35						
TWC				*i* S	**Sb**	**15 30 32.1**	**-0.2**
	baz=35						
HWA	**Hwalien**	**0.35**	**187**	*i* P	**Pb**	**15 30 27.3**	**-0.1**
	baz=192						
HWA				S	**Sb**	**15 30 33.2**	**+0.4**
	baz=192						
FUSS	**Fushou**	**0.38**	**258**	P	**Pb**	**15 30 27.8**	**-0.2**
	baz=259						
FUSS				S	**Sg**	**15 30 32.9**	**+0.7**
	baz=259						
TWE	**Neicheng**	**0.39**	**2**	⇓*iP*	**Pb**	**15 30 27.9**	**-0.1**
	baz=8.0						
TWE				*i* S	**Sb**	**15 30 33.7**	**-0.3**
	baz=8.0						
WHF	**Hehuan Shan**	**0.40**	**243**	⇑*iP*	**Pb**	**15 30 28.0**	**-0.4**
	baz=242						
WHF				*i* S	**Sb**	**15 30 33.7**	**-0.9**
	baz=242						
YHNB	**Yeheng**	**0.42**	**324**	⇓*iP*	**Pb**	**15 30 28.3**	**-0.3**
	baz=325						
YHNB				*i* S	**Sg**	**15 30 34.0**	**+0.6**
	baz=325						
NSK	**Sanguang**	**0.44**	**322**	⇓*iP*	**Pb**	**15 30 28.5**	**-0.4**
	baz=324						
NSK				*i* S	**Sg**	**15 30 34.4**	**+0.5**
	baz=324						
TWT	**Tachien**	**0.44**	**260**	P	**Pb**	**15 30 29.2**	**+0.2**
	baz=258						
TWT				*e*S	**Sb**	**15 30 34.9**	**-0.7**
	baz=258						
ILA	**Ilan**	**0.44**	**11**	*eP*	**Pb**	**15 30 29.1**	**+0.1**
	baz=9.0						
ILA				S	**Sb**	**15 30 35.4**	**-0.1**
	baz=9.0						
TDCB	**Techi**	**0.46**	**261**	P	**Pb**	**15 30 28.9**	**-0.4**
	baz=258						
TDCB				S	**Sg**	**15 30 34.7**	**+0.2**
	baz=258						
NWLT	**Wulai**	**0.47**	**343**	P	**Pb**	**15 30 29.0**	**-0.3**
	baz=338						
NWLT				S	**Sg**	**15 30 35.1**	**+0.3**
	baz=338						
CHGB	**Renai**	**0.51**	**239**	⇑*iP*	**Pb**	**15 30 29.9**	**-0.4**
	baz=239						
CHGB				S	**Sb**	**15 30 36.9**	**-0.8**
	baz=239						
NTC	**Toucheng**	**0.55**	**17**	*eP*	**Pb**	**15 30 30.4**	**-0.3**
	baz=17						
NTC				*e*S	**Sg**	**15 30 37.4**	**+0.1**
	baz=17						
ESL	**Shilin**	**0.55**	**201**	P	**Pg**	**15 30 29.8**	**-0.2**
	baz=194						
ESL				*e*S	**Sg**	**15 30 37.1**	**-0.2**
	baz=194						
OWD	**Renai**	**0.57**	**229**	*i* P	**Pg**	**15 30 30.7**	**+0.2**
	baz=229						
OWD				S	**Sb**	**15 30 38.7**	**-0.6**
	baz=229						
NHDH	**Xindian Distri**	**0.64**	**350**	*eP*	**Pb**	**15 30 32.9**	**+0.6**
	baz=355						
NHDH				*e*S	**Sg**	**15 30 40.2**	**0.0**
	baz=355						
WHP	**Taichung City**	**0.65**	**266**	*eP*	**Pb**	**15 30 32.2**	**-0.2**
	baz=266						
WHP				*e*S	**Sg**	**15 30 40.4**	**-0.1**
	baz=266						
TWA	**Mucha**	**0.65**	**355**	P	**Pb**	**15 30 32.8**	**+0.2**
	baz=2.0						
TWA				S	**Sb**	**15 30 41.4**	**-0.1**
	baz=2.0						
NJD	**Zhudong**	**0.65**	**308**	*eP*	**Pb**	**15 30 32.7**	**+0.2**
	baz=313						
LIOB	**Emei**	**0.66**	**299**	*eP*	**Pb**	**15 30 32.7**	**+0.1**
	baz=299						
LIOB				*e*S	**Sb**	**15 30 41.7**	**-0.1**
	baz=299						
TIPB	**Shuangxi**	**0.66**	**14**	*eP*	**Pg**	**15 30 32.3**	**+0.2**
	baz=7.0						
TIPB				*e*S	**Sg**	**15 30 40.6**	**-0.3**
	baz=7.0						
TATO	**Taipei**	**0.66**	**347**	*eP*	**Pg**	**15 30 32.1**	**-0.1**
	baz=352						
TATO				*e*S	**Sg**	**15 30 40.8**	**-0.1**
	baz=352						
NSTT	**Nanjuang**	**0.66**	**297**	*eP*	**Pb**	**15 30 32.5**	**-0.2**
	baz=298						
NSTT				*e*S	**Sb**	**15 30 41.3**	**-0.6**
	baz=298						
EGFH	**Guangfu**	**0.69**	**197**	P	**Pg**	**15 30 32.5**	**-0.2**
	baz=197						
EGFH				S	**Sg**	**15 30 41.9**	**+0.1**
	baz=197						
WPL	**Puli Township**	**0.71**	**244**	*eP*	**Pg**	**15 30 33.0**	**-0.1**
	baz=243						
DPDB	**Guoxing**	**0.72**	**246**	*eP*	**Pb**	**15 30 33.7**	**-0.1**
	baz=246						
VWDT	**VWDT**	**0.74**	**219**	*eP*	**Pg**	**15 30 33.5**	**-0.1**
	baz=223						
VWDT				*e*S	**Sb**	**15 30 44.6**	**+0.6**
	baz=223						
TWB1	**Santiao Chiao**	**0.74**	**24**	P	**Pb**	**15 30 34.1**	**+0.1**
	baz=24						
TWB1				S	**Sg**	**15 30 43.5**	**0.0**
	baz=24						
WFSB	**Wu-fen Shan**	**0.75**	**9**	*eP*	**Pb**	**15 30 34.2**	**+0.1**
	baz=9.0						
WFSB				*e*S	**Sb**	**15 30 44.3**	**0.0**
	baz=9.0						
SBCB	**Hsinchu**	**0.76**	**307**	*eP*	**Pn**	**15 30 35.3**	**-0.4**
	baz=323						
NCUH	**Zhongli**	**0.76**	**326**	*eP*	**Pb**	**15 30 35.0**	**+0.5**
	baz=327						
NCUH				*e*S	**Sn**	**15 30 46.0**	**-1.2**
	baz=327						
NCU	**National Centr**	**0.77**	**327**	*eP*	**Pb**	**15 30 34.9**	**+0.5**
	baz=327						
NCU				*e*S	**Sn**	**15 30 46.2**	**-1.0**
	baz=327						
TWS1	**Kuangyinshan**	**0.80**	**345**	P	**Pn**	**15 30 35.6**	**-0.6**
	baz=352						
TWS1				S	**Sn**	**15 30 46.9**	**-1.0**
	baz=352						
NMLH	**Miaoli**	**0.81**	**285**	*eP*	**Pn**	**15 30 36.6**	**+0.1**
	baz=290						
YM01	**YM01**	**0.82**	**355**	P	**Pb**	**15 30 35.5**	**+0.2**
	baz=343						
YM01				*e*S	**Sg**	**15 30 46.1**	**+0.2**
	baz=343						
SMLT	**Sun Moon Lake**	**0.82**	**237**	*eP*	**Pb**	**15 30 35.4**	**0.0**
	baz=237						
SMLT				*e*S	**Sb**	**15 30 47.0**	**+0.6**
	baz=237						
SSLB	**Suanglung**	**0.83**	**230**	*eP*	**Pg**	**15 30 34.5**	**-0.9**
	baz=230						
TYC	**Yuchr**	**0.84**	**240**	*eP*	**Pb**	**15 30 35.6**	**-0.1**
	baz=239						
YM08	**YM08**	**0.86**	**356**	*eP*	**Pg**	**15 30 35.8**	**-0.1**
	baz=344						
HGSD	**Ruisui**	**0.86**	**194**	*eP*	**Pg**	**15 30 35.5**	**-0.4**
	baz=205						
ANP	**Anpu**	**0.86**	**352**	*eP*	**Pg**	**15 30 36.0**	**0.0**
	baz=352						
EHY	**Hungye**	**0.87**	**200**	P	**Pg**	**15 30 35.1**	**-1.1**
	baz=193						
EHY				*e*S	**Sg**	**15 30 47.1**	**-0.5**
	baz=193						
TCU	**Taichung**	**0.91**	**259**	*eP*	**Pn**	**15 30 37.8**	**+0.1**
	baz=259						
TCU				*e*S	**Sn**	**15 30 51.8**	**+1.1**
	baz=259						
WWF	**Wufeng**	**0.92**	**252**	*eP*	**Pn**	**15 30 38.2**	**+0.4**
	baz=246						
WWF				*e*S	**Sn**	**15 30 52.3**	**+1.4**
	baz=246						
WDJ	**Dajia District**	**0.92**	**271**	*eP*	**Pn**	**15 30 37.7**	**-0.3**
	baz=272						
WDJ				*e*S	**Sn**	**15 30 51.6**	**+0.5**
	baz=272						
WHYT	**Xinyi Township**	**0.96**	**229**	*eP*	**Pn**	**15 30 39.3**	**+0.7**
	baz=229						
WJS	**Zhushan**	**0.98**	**239**	*eP*	**Pn**	**15 30 39.4**	**+0.6**
	baz=238						
WJS				*e*S	**Sn**	**15 30 53.6**	**+1.0**
	baz=238						
YULB	**Yu-li**	**0.99**	**199**	*eP*	**Pb**	**15 30 37.5**	**-0.7**
	baz=199						
YULB				*e*S	**Sb**	**15 30 50.4**	**-0.8**
	baz=199						
WNT	**Mingjian**	**0.99**	**243**	*eP*	**Pn**	**15 30 39.3**	**+0.4**
	baz=257						
WNT				*e*S	**Sn**	**15 30 54.6**	**+1.9**
	baz=257						
EYUL	**Yuli**	**1.02**	**197**	*eP*	**Pb**	**15 30 38.4**	**-0.4**
	baz=197						
TWF1	**Yuli**	**1.02**	**199**	P	**Pb**	**15 30 38.3**	**-0.6**
	baz=198						
TWF1				*e*S	**Sn**	**15 30 53.0**	**-0.6**
	baz=198						
YUS	**Yu-Shan**	**1.05**	**218**	*eP*	**Pb**	**15 30 39.5**	**-0.2**
	baz=224						
ALS	**Alishan**	**1.12**	**224**	*eP*	**Pb**	**15 30 40.7**	**-0.1**
	baz=210						
CHN5	**Tsauling**	**1.15**	**231**	*eP*	**Pg**	**15 30 42.0**	**+0.6**
	baz=230						
FULB	**Fuli**	**1.17**	**196**	*eP*	**Pg**	**15 30 41.6**	**-0.2**
	baz=196						
WGK	**Gukeng**	**1.18**	**237**	*eP*	**Pg**	**15 30 42.1**	**+0.1**
	baz=237						
JYNG	**Yonagunijimaku**	**1.19**	**84**	P	**Pn**	**15 30 41.1**	**-0.4**
JYNG				S	**Sn**	**15 30 57.4**	**-0.1**
WDLH	**Douliu**	**1.20**	**238**	*eP*	**Pg**	**15 30 42.5**	**+0.1**
	baz=238						
YOJ	**Yonaguni jima**	**1.25**	**84**	*eP*	**Pn**	**15 30 42.4**	**0.0**
	baz=85						
ELDTW	**Lidau**	**1.27**	**207**	*eP*	**Pn**	**15 30 40.9**	**-2.0**
	baz=193						
WTK	**Tuku**	**1.32**	**241**	*eP*	**Pb**	**15 30 43.7**	**-0.2**
	baz=256						
WTK				*e*S	**Sg**	**15 31 01.7**	**-0.1**
	baz=256						
CHN4	**Tsaushan**	**1.37**	**225**	*eP*	**Pg**	**15 30 45.8**	**+0.1**
	baz=239						
CHN4				*e*S	**Sg**	**15 31 04.3**	**+0.8**
	baz=239						
TPUB	**Ta-pu**	**1.39**	**223**	*eP*	**Pb**	**15 30 44.9**	**-0.2**
	baz=211						
TPUB				*e*S	**Sg**	**15 31 04.0**	**0.0**
	baz=211						
STYH	**Taoyuan**	**1.41**	**215**	*eP*	**Pg**	**15 30 45.9**	**-0.4**
	baz=203						
STYT	**Tauyuan**	**1.42**	**215**	*eP*	**Pb**	**15 30 45.8**	**+0.1**
	baz=203						
STYT				*e*S	**Sg**	**15 31 06.2**	**+1.1**
	baz=203						
WTP	**Ta-pu**	**1.44**	**222**	*eP*	**Pg**	**15 30 46.5**	**-0.4**
	baz=207						
WTP				*e*S	**Sg**	**15 31 06.4**	**+0.8**
	baz=207						
WSF	**Szhu**	**1.48**	**243**	*e*S	**Sg**	**15 31 06.4**	**-0.5**
	baz=256						
TWK	**Hsinying**	**1.50**	**225**	*eP*	**Pg**	**15 30 48.5**	**+0.3**
	baz=225						
TWK				*e*S	**Sg**	**15 31 07.7**	**0.0**
	baz=225						
CHN1	**Nanshi**	**1.54**	**222**	*eP*	**Pg**	**15 30 49.0**	**+0.3**
	baz=210						
CHN1				*e*S	**Sg**	**15 31 08.5**	**-0.2**
	baz=210						
SGST	**Jiashian**	**1.58**	**218**	*eP*	**Pb**	**15 30 47.6**	**-0.7**
	baz=204						
IRIF	**Iriomote-Funau**	**1.90**	**89**	*e*S	**Sn**	**15 31 15.7**	**+0.6**
MASBT	**Mashibuluo**	**1.95**	**209**	*eP*	**Pn**	**15 30 53.0**	**+1.0**
	baz=193						
JKRS	**Kuro-shima**	**2.15**	**92**	P	**Pn**	**15 30 55.9**	**+1.0**
JKRS				*e*S	**Sn**	**15 31 22.6**	**+1.2**
JIJ	**Ishigaki jima**	**2.27**	**89**	P	**Pn**	**15 30 56.5**	**0.0**
JIJ				S	**Sn**	**15 31 24.2**	**-0.2**
JISG	**Ishigakijimahi**	**2.44**	**83**	P	**Pn**	**15 30 58.

*TAP **29** 15:43:34.4,23.90N×121.76E,h21km,ML3.3,C*
ISC 29 15:43:33.6±1.0,23.87N±0.01×121.81E±0.02,h11km±8km, n124,σ0.59/224,5C-4D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HWA	**Hwalien** baz=291	**0.21**	**300**	*i* P		**Pb**	**15 43 39.5**	**0.0**
TWD	**Chiawan** baz=323	**0.28**	**318**	⇓*i*P		**Pb**	**15 43 40.2**	**-0.6**
TWD				*i* S		**Sb**	**15 43 44.3**	**-1.2**
ESL	**Shilin** baz=257	**0.35**	**261**	*i* P		**Pg**	**15 43 41.1**	**+0.5**
ESL				*i* S		**Sb**	**15 43 46.7**	**-0.5**
NACB	**Ninganchiao** baz=332	**0.36**	**328**	⇓P		**Pg**	**15 43 41.2**	**+0.3**
NACB				S		**Sb**	**15 43 46.2**	**-1.5**
EGFH	**Guangfu** baz=230	**0.40**	**240**	P		**Pb**	**15 43 42.4**	**-0.3**
EGFH				S		**Sb**	**15 43 50.2**	**+1.4**
ETLH	**Xiulin Townshi** baz=320	**0.45**	**319**	P		**Pb**	**15 43 42.8**	**-0.8**
ETLH				S		**Sg**	**15 43 48.8**	**+0.3**
HGSD	**Ruisui** baz=212	**0.51**	**223**	P		**Pb**	**15 43 45.2**	**+0.5**
HGSD				S		**Sn**	**15 43 54.3**	**-1.3**
WHF	**Hehuan Shan** baz=288	**0.57**	**299**	*i* P		**Pg**	**15 43 45.0**	**+0.2**
WHF				*i* S		**Sg**	**15 43 52.5**	**+0.1**
EHY	**Hungye** baz=228	**0.57**	**231**	*i* P		**Pg**	**15 43 45.3**	**+0.5**
EHY				S		**Sb**	**15 43 54.7**	**+0.9**
EWUT	**Wuta**	**0.57**	**357**	*i* P		**Pb**	**15 43 45.6**	**-0.1**
EWUT				S		**Sb**	**15 43 54.1**	**+0.2**
OWD	**Renai** baz=276	**0.58**	**279**	*e*P		**Pg**	**15 43 45.0**	**0.0**
OWD				*e*S		**Sg**	**15 43 52.4**	**-0.4**
CHGB	**Renai** baz=286	**0.61**	**288**	P		**Pg**	**15 43 45.7**	**+0.2**
CHGB				S		**Sg**	**15 43 53.8**	**+0.2**
VWDT	**VWDT** baz=255	**0.62**	**260**	⇑P		**Pb**	**15 43 46.2**	**-0.2**
VWDT				S		**Sg**	**15 43 54.2**	**+0.4**
FUSS	**Fushou** baz=307	**0.64**	**306**	*i* P		**Pb**	**15 43 46.5**	**-0.4**
FUSS				*i* S		**Sb**	**15 43 55.0**	**-1.0**
YULB	**Yu-li** baz=230	**0.67**	**225**	P		**Pb**	**15 43 47.2**	**0.0**
YULB				S		**Sb**	**15 43 56.7**	**+0.2**
NNSB	**Datong** baz=318	**0.68**	**325**	⇓P		**Pb**	**15 43 47.0**	**-0.5**
NNSB				S		**Sg**	**15 43 55.8**	**0.0**
NNSH	**Datong** baz=318	**0.68**	**325**	*i* P		**Pb**	**15 43 47.2**	**-0.3**
NNSH				*i* S		**Sb**	**15 43 55.8**	**-1.2**
EYUL	**Yuli** baz=229	**0.69**	**221**	P		**Pb**	**15 43 47.7**	**+0.2**
EYUL				S		**Sn**	**15 43 59.4**	**-0.5**
NNS	**Nan Shan** baz=328	**0.69**	**325**	*i* P		**Pg**	**15 43 47.2**	**0.0**
NNS				S		**Sg**	**15 43 56.2**	**-0.1**
TWF1	**Yuli** baz=230	**0.69**	**222**	*i* P		**Pg**	**15 43 47.5**	**+0.4**
TWF1				*i* S		**Sb**	**15 43 57.6**	**+0.3**
TDCB	**Techi** baz=294	**0.70**	**303**	P		**Pg**	**15 43 47.4**	**0.0**
TDCB				S		**Sg**	**15 43 56.5**	**-0.1**
TWC	**Suao**	**0.74**	**3**	*i* P		**Pb**	**15 43 48.5**	**0.0**
TWC				*i* S		**Sb**	**15 43 58.6**	**0.0**
NDS	**Dongshan**	**0.77**	**354**	P		**Pb**	**15 43 48.7**	**-0.2**
NDS				*e*S		**Sb**	**15 43 59.1**	**-0.2**
NDT	**Datong Townshi** baz=335	**0.78**	**340**	P		**Pb**	**15 43 49.0**	**-0.2**
NDT				S		**Sb**	**15 43 59.3**	**-0.4**
SSLB	**Suanglung** baz=269	**0.79**	**264**	⇑P		**Pg**	**15 43 48.5**	**-0.3**
SSLB				S		**Sg**	**15 43 58.6**	**-0.5**
WPL	**Puli Township** baz=279	**0.79**	**281**	P		**Pg**	**15 43 48.8**	**-0.2**
WPL				*e*S		**Sg**	**15 43 58.2**	**-1.1**
ENTT	**Nioudou** baz=349	**0.80**	**344**	*i* P		**Pb**	**15 43 49.4**	**-0.2**
ENTT				*i* S		**Sb**	**15 44 00.5**	**+0.1**
FULB	**Fuli** baz=223	**0.82**	**215**	*i* P		**Pb**	**15 43 50.2**	**+0.3**
FULB				S		**Sb**	**15 44 02.3**	**+1.5**
DPDB	**Guoxing** baz=280	**0.82**	**282**	P		**Pg**	**15 43 49.5**	**0.0**
DPDB				*e*S		**Sg**	**15 43 59.7**	**-0.6**
SMLT	**Sun Moon Lake** baz=276	**0.83**	**271**	⇑*i*P		**Pg**	**15 43 49.4**	**-0.3**
SMLT				*i* S		**Sg**	**15 44 00.6**	**+0.1**
TWE	**Neicheng** baz=358	**0.86**	**351**	*i* P		**Pb**	**15 43 50.6**	**0.0**
TWE				*i* S		**Sb**	**15 44 02.4**	**+0.3**
CHKT	**Chengkung** baz=182	**0.87**	**208**	P		**Pg**	**15 43 49.9**	**-0.4**
CHKT				S		**Sg**	**15 44 02.1**	**+0.5**
TYC	**Yuchr** baz=278	**0.87**	**273**	⇑*i*P		**Pg**	**15 43 50.1**	**-0.4**
TYC				*i* S		**Sg**	**15 44 01.6**	**-0.2**
YUS	**Yu-Shan** baz=239	**0.87**	**244**	*i* P		**Pg**	**15 43 50.6**	**+0.1**
YUS				*i* S		**Sg**	**15 44 02.3**	**+0.4**
WHP	**Taichung City** baz=289	**0.89**	**298**	P		**Pb**	**15 43 50.8**	**-0.2**
WHP				S		**Sg**	**15 44 01.9**	**-0.4**
YHNB	**Yeheng** baz=336	**0.89**	**334**	P		**Pg**	**15 43 50.6**	**-0.2**
YHNB				S		**Sg**	**15 44 02.0**	**-0.4**
WHYT	**Xinyi Township** baz=257	**0.89**	**259**	P		**Pb**	**15 43 51.1**	**0.0**
WHYT				S		**Sb**	**15 44 02.9**	**-0.1**
NWLT	**Wulai** baz=336	**0.95**	**343**	*e*P		**Pb**	**15 43 51.8**	**-0.3**
NWLT				S		**Sb**	**15 44 04.8**	**+0.2**
NTC	**Toucheng** baz=9.0	**0.98**	**1**	*e*P		**Pb**	**15 43 52.9**	**+0.2**
NTC				*e*S		**Sn**	**15 44 07.5**	**+0.3**
ALS	**Alishan** baz=246	**0.98**	**249**	⇑*i*P		**Pg**	**15 43 52.6**	**-0.1**
ALS				S		**Sg**	**15 44 04.5**	**-1.0**
WJS	**Zhushan** baz=269	**0.99**	**268**	*i* P		**Pn**	**15 43 53.4**	**0.0**
WJS				S		**Sn**	**15 44 07.8**	**+0.4**
ELDTW	**Lidau** baz=220	**0.99**	**227**	*i* P		**Pg**	**15 43 52.1**	**-0.7**
ELDTW				S		**Sb**	**15 44 06.3**	**+0.4**
EDH	**Donghe** baz=183	**1.00**	**207**	*e*P		**Pg**	**15 43 52.6**	**-0.4**
EDH				*e*S		**Sg**	**15 44 05.2**	**-0.9**
WNT	**Mingjian** baz=268	**1.03**	**271**	*i* P		**Pn**	**15 43 53.7**	**-0.3**
WNT				*i* S		**Sn**	**15 44 08.0**	**-0.3**
WWF	**Wufeng** baz=278	**1.03**	**280**	*e*P		**Pb**	**15 43 53.4**	**0.0**
WWF				*e*S		**Sb**	**15 44 07.2**	**+0.3**
WNT1	**Nantou City** baz=270	**1.03**	**272**	*e*P		**Pn**	**15 43 54.5**	**+0.5**
WNT1				*e*S		**Sn**	**15 44 07.8**	**-0.6**
NSTT	**Nanjuang** baz=316	**1.06**	**316**	P		**Pn**	**15 43 55.2**	**+0.8**
NSTT				*i* S		**Sb**	**15 44 07.8**	**0.0**
LIOB	**Emei** baz=305	**1.06**	**317**	P		**Pn**	**15 43 54.2**	**-0.2**
TWQ1	**Liyutan** baz=296	**1.06**	**297**	*i* P		**Pn**	**15 43 54.3**	**-0.1**
TWQ1				S		**Sb**	**15 44 07.6**	**-0.2**
CHN5	**Tsauling** baz=244	**1.07**	**256**	*i* P		**Pb**	**15 43 54.4**	**+0.2**
CHN5				*i* S		**Sn**	**15 44 09.2**	**-0.3**
TCU	**Taichung** baz=283	**1.07**	**285**	*e*P		**Pn**	**15 43 54.3**	**-0.2**
TCU				*e*S		**Sn**	**15 44 09.5**	**+0.2**
NJD	**Zhudong** baz=322	**1.08**	**323**	*e*P		**Pn**	**15 43 55.3**	**+0.6**
TIPB	**Shuangxi** baz=8.0	**1.10**	**1**	*i* P		**Pn**	**15 43 55.4**	**+0.5**
TIPB				S		**Sn**	**15 44 10.6**	**+0.4**
NSY	**Sanyi** baz=299	**1.10**	**300**	P		**Pn**	**15 43 55.5**	**+0.6**
NSY				S		**Sb**	**15 44 08.9**	**-0.1**
NHDH	**Xindian Distri** baz=350	**1.12**	**347**	P		**Pn**	**15 43 55.3**	**+0.1**
NHDH				S		**Sg**	**15 44 09.7**	**-0.1**
TWA	**Mucha** baz=336	**1.12**	**350**	P		**Pn**	**15 43 55.8**	**+0.5**
TWA				*i* S		**Sn**	**15 44 11.6**	**+0.8**
LONT	**Longtian** baz=205	**1.14**	**213**	*e*P		**Pb**	**15 43 54.3**	**-1.1**
NMLH	**Miaoli** baz=305	**1.14**	**306**	*i* P		**Pn**	**15 43 56.1**	**+0.6**
NMLH				*e*S		**Sn**	**15 44 10.5**	**-0.7**
TWB1	**Santiao Chiao** baz=8.0	**1.15**	**8**	*i* P		**Pn**	**15 43 55.8**	**+0.3**
TWB1				S		**Sn**	**15 44 12.4**	**+1.1**
WGK	**Gukeng** baz=259	**1.15**	**261**	P		**Pb**	**15 43 55.3**	**-0.3**
WGK				S		**Sn**	**15 44 12.7**	**+1.2**
HSN1	**Hsinchu** baz=334	**1.16**	**322**	P		**Pn**	**15 43 57.2**	**+1.5**
WCHH	**Zhanghua** baz=278	**1.16**	**281**	*e*P		**Pg**	**15 43 55.8**	**-0.1**
WCHH				*e*S		**Sn**	**15 44 12.4**	**+0.8**
WDJ	**Dajia District** baz=293	**1.17**	**294**	*e*P		**Pg**	**15 43 56.1**	**0.0**
WDJ				*e*S		**Sn**	**15 44 12.9**	**+1.2**
STYH	**Taoyuan** baz=230	**1.17**	**234**	P		**Pb**	**15 43 55.8**	**-0.1**
STYH				S		**Sb**	**15 44 11.3**	**+0.2**
WDLH	**Douliu** baz=259	**1.18**	**262**	*e*P		**Pb**	**15 43 55.8**	**-0.1**
WDLH				*e*S		**Sn**	**15 44 12.4**	**+0.4**
SBCB	**Hsinchu** baz=320	**1.19**	**321**	*e*P		**Pg**	**15 43 56.6**	**+0.2**
SBCB				*e*S		**Sg**	**15 44 11.4**	**-0.5**
JYNG	**Yonagunijimaku**	**1.19**	**61**	P		**Pn**	**15 43 56.1**	**-0.1**
JYNG				S		**Sb**	**15 44 11.7**	**+0.1**
STYT	**Tauyuan** baz=229	**1.19**	**234**	⇓*i*P		**Pb**	**15 43 56.2**	**-0.1**
STYT				*i* S		**Sg**	**15 44 12.3**	**+0.2**
TAP	**Taipei** baz=350	**1.20**	**347**	S		**Sg**	**15 44 11.8**	**-0.4**
WFSB	**Wu-fen Shan** baz=344	**1.20**	**359**	P		**Pg**	**15 43 57.1**	**+0.5**
WFSB				*e*S		**Sn**	**15 44 13.0**	**+0.4**
NTY	**Taoyuan** baz=338	**1.22**	**338**	*e*S		**Sn**	**15 44 14.3**	**+1.3**
TPUB	**Ta-pu** baz=241	**1.22**	**243**	P		**Pn**	**15 43 56.8**	**+0.2**
TPUB				S		**Sn**	**15 44 13.4**	**+0.4**
CHN4	**Tsaushan** baz=243	**1.23**	**245**	P		**Pb**	**15 43 57.0**	**+0.2**
CHN4				*i* S		**Sn**	**15 44 13.7**	**+0.4**
LDUT	**Ludao** baz=176	**1.23**	**195**	*e*P		**Pn**	**15 43 55.1**	**-1.6**
LDUT				S		**Sb**	**15 44 10.3**	**-2.4**
NCUH	**Zhongli** baz=332	**1.23**	**333**	*e*P		**Pg**	**15 43 57.2**	**-0.1**
NCUH				S		**Sn**	**15 44 14.0**	**+0.6**
NCU	**National Centr** baz=332	**1.23**	**333**	*i* S		**Sn**	**15 44 14.3**	**+0.9**
TWG	**Pinlang** baz=201	**1.24**	**213**	P		**Pn**	**15 43 55.6**	**-1.3**
TWG				S		**Sb**	**15 44 12.7**	**-0.4**
YOJ	**Yonaguni jima**	**1.25**	**62**	P		**Pn**	**15 43 56.7**	**-0.3**
YOJ				S		**Sb**	**15 44 12.9**	**-0.4**
YOJ	**Yonaguni jima** baz=70	**1.25**	**62**	P		**Pn**	**15 43 56.9**	**0.0**
YOJ				S		**Sb**	**15 44 13.7**	**+0.5**
WTP	**Ta-pu** baz=248	**1.26**	**241**	*i* P		**Pn**	**15 43 57.2**	**+0.1**
WTP				*i* S		**Sg**	**15 44 14.1**	**-0.1**
TTN	**Taitung** baz=185	**1.26**	**209**	*e*S		**Sn**	**15 44 14.6**	**+0.4**
CHN2	**Minshiung** baz=253	**1.27**	**255**	P		**Pn**	**15 43 57.1**	**-0.1**
CHN2				*e*S		**Sg**	**15 44 14.3**	**-0.1**
TNOU	**National Taiwa** baz=344	**1.28**	**359**	P		**Pg**	**15 43 58.6**	**+0.4**
TNOU				S		**Sg**	**15 44 14.3**	**-0.5**
TWS1	**Kuangyinshan** baz=344	**1.28**	**344**	*e*P		**Pg**	**15 43 58.6**	**+0.4**
TWS1				S		**Sg**	**15 44 15.4**	**+0.5**
YM01	**YM01** baz=338	**1.29**	**350**	P		**Pb**	**15 43 57.8**	**-0.2**
YM01				S		**Sb**	**15 44 13.9**	**-0.7**
WTK	**Tuku** baz=259	**1.31**	**262**	*e*P		**Pg**	**15 43 58.7**	**-0.1**
CHY	**Chiayi** baz=252	**1.32**	**254**	*e*P		**Pb**	**15 43 58.3**	**-0.1**
CHY				S		**Sg**	**15 44 17.0**	**+0.8**
YM08	**YM08** baz=334	**1.33**	**351**	*e*P		**Pn**	**15 43 56.9**	**-1.2**
ANP	**Anpu** baz=351	**1.34**	**349**	*e*P		**Pg**	**15 43 59.6**	**+0.3**
TWK	**Hsinying** baz=241	**1.35**	**244**	*i* P		**Pn**	**15 43 58.8**	**+0.4**
TWK				*i* S		**Sg**	**15 44 17.8**	**+0.6**
CHN1	**Nanshi** baz=238	**1.36**	**240**	P		**Pb**	**15 43 59.1**	**+0.1**
CHN1				*e*S		**Sb**	**15 44 16.1**	**-0.3**
SNST	**Tainan City** baz=240	**1.36**	**242**	*e*P		**Pb**	**15 43 59.4**	**+0.2**
SNST				S		**Sg**	**15 44 18.3**	**+0.8**
SGST	**Jiashian** baz=219	**1.37**	**235**	P		**Pn**	**15 43 58.3**	**-0.4**
SGST				S		**Sg**	**15 44 18.9**	**+1.1**
SLGT	**Liugui** baz=215	**1.38**	**231**	P		**Pb**	**15 43 59.4**	**0.0**
SLGT				*e*S		**Sg**	**15 44 18.6**	**+0.6**
WSF	**Szhu** baz=259	**1.47**	**261**	*e*P		**Pg**	**15 44 01.8**	**-0.1**
WSF				S		**Sg**	**15 44 20.8**	**-0.2**
CHN8	**Yiju** baz=248	**1.55**	**251**	P		**Pb**	**15 44 02.4**	**0.0**
CHN8				S		**Sb**	**15 44 22.1**	**+0.1**
SCST	**Cishan** baz=227	**1.55**	**231**	*e*P		**Pg**	**15 44 03.2**	**-0.3**
SSD	**Sandimen** baz=218	**1.55**	**224**	*i* P		**Pn**	**15 44 01.3**	**+0.1**
TSMG	**Majia** baz=217	**1.57**	**223**	*e*P		**Pb**	**15 44 02.9**	**+0.1**
TWM1	**Shoushan** baz=242	**1.64**	**231**	P		**Pg**	**15 44 05.3**	**+0.1**
TWM1				S		**Sg**	**15 44 26.5**	**0.0**
MASBT	**Mashibuluo** baz=197	**1.65**	**221**	P		**Pn**	**15 44 02.6**	**+0.1**
MASBT				S		**Sb**	**15 44 26.1**	**+1.2**
EAST	**Anshuo** baz=193	**1.72**	**211**	*i* P		**Pn**	**15 44 02.6**	**-0.9**
PCYT	**Pengchaiyu** baz=41	**1.77**	**8**	P		**Pn**	**15 44 04.8**	**+0.6**
PCYT				*e*S		**Sn**	**15 44 26.5**	**-0.2**
IRIF	**Iriomote-Funau**	**1.82**	**75**	P		**Pn**	**15 44 04.8**	**0.0**
IRIF				S		**Sn**	**15 44 27.3**	**-0.5**
HATJ	**Hateruma jima**	**1.84**	**84**	P		**Pn**	**15 44 05.3**	**+0.2**
HATJ				S		**Sn**	**15 44 28.1**	**-0.2**
SCZT	**Fangliau** baz=195	**1.85**	**216**	P		**Pn**	**15 44 06.2**	**+0.9**
JKRS	**Kuro-shima**	**2.05**	**79**	P		**Pn**	**15 44 08.9**	**+0.9**
JKRS				S		**Sn**	**15 44 34.0**	**+0.5**
WDGT	**Dungji** baz=255	**2.06**	**253**	*i* P		**Pn**	**15 44 07.5**	**-0.6**
WDGT				S		**Sn**	**15 44 34.6**	**+0.8**
PNG	**Penghu** baz=263	**2.08**	**262**	P		**Pn**	**15 44 08.4**	**-0.1**
PNG				*i* S		**Sn**	**15 44 34.3**	**-0.1**
HEN	**Hengchun** baz=186	**2.10**	**208**	*e*P		**Pn**	**15 44 09.1**	**+0.4**
HEN				*e*S		**Sn**	**15 44 35.4**	**+0.6**
TWKBT	**Hengchun** baz=188	**2.13**	**206**	*e*P		**Pn**	**15 44 09.7**	**+0.6**
JIJ	**Ishigaki jima**	**2.19**	**77**	P		**Pn**	**15 44 09.6**	**-0.3**
JIJ				S		**Sn**	**15 44 35.6**	**-1.4**
VCHM	**Qimei** baz=256	**2.28**	**254**	*e*P		**Pn**	**15 44 11.6**	**+0.4**
VCHM				*e*S		**Sn**	**15 44 38.7**	**-0.5**
JISG	**Ishigakijimahi** baz=256	**2.40**	**72**	P		**Pn**	**15 44 12.4**	**-0.3**
JISG				S		**Sn**	**15 44 40.9**	**-1.2**
VWUC	**VWUC** baz=294	**2.42**	**298**	P		**Pn**	**15 44 11.8**	**-1.3**
PTMZ	**Houxiangcun** baz=292	**2.71**	**296**	*e*P		**Pn**	**15 44 16.6**	**-0.5**
JTJ	**Tarama**	**2.75**	**73**	P		**Pn**	**15 44 18.1**	**+0.4**
JTJ				S		**Sn**	**15 44 50.8**	**-0.1**
MATB	**Ma-tsu** baz=319	**2.83**	**324**	*e*P		**Pn**	**15 44 18.9**	**+0.1**
JIRB	**Irabujima**	**3.21**	**72**	P		**Pn**	**15 44 24.4**	**+0.4**
JIRB				*e*S		**Sn**	**15 45 02.9**	**+0.6**
LYJJ	**Jianjiangzhen** baz=320	**3.25**	**326**	*e*P		**Pn**	**15 44 24.6**	**+0.1**
JIKM	**Ikemajima**	**3.31**	**71**	S		**Sn**	**15 45 03.7**	**-0.9**
JMJ2	**Miyako jima3**	**3.33**	**74**	P		**Pn**	**15 44 26.4**	**+0.8**
JMJ2				S		**Sn**	**15 45 05.2**	**+0.1**
JOGS	**Gusukube**	**3.40**	**74**	P		**Pn**	**15 44 27.6**	**+1.0**
JOGS				*e*S		**Sn**	**15 45 07.9**	**+1.0**
ZPLA	**Ao Xicun** baz=268	**3.71**	**272**	P		**Pn**	**15 44 30.3**	**-0.6**

*IDC **29** 15:53:21.0±1.4,9.87S×116.56E,h0km,mb3.7/6, mb1 3.9/10,mb1mx3.7/29,mbtmp3.8/10,ML3.7/4,MS3.2/5, Ms1 3.2/5,ms1mx2.9/41,Error ellipse: s-maj=51.4km s-min=18.1km az=45.0*
*DJA **29** 15:53:24.4±0.2,10°S±3'×11°E±', h10km,M4.2/15, mb4.4/12,mB5.4/2,MLv4.2/15,Mw(mB)4.8/2*
ISC 29 15:53:28.5±0.7,10.08S±0.08×116.70E±0.06,h76km,n33, σ1§92/33,mb3.8/7,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.35**	**8**	P		**Pn**	**15 53 49.3**	**-2.4**
PLAI	**Plampang**	**1.64**	**40**	P		**Pn**	**15 53 53.8**	**-1.7**
PLAI				S		**Sn**	**15 54 11.1**	**-4.8**
DNP	**Denpasar**	**2.03**	**313**	P		**Pn**	**15 53 58.7**	**-2.0**
DNP				S		**Sn**	**15 54 24.8**	**-0.5**
SRBI	**Singaraja**	**2.47**	**323**	P		**Pn**	**15 54 06.1**	**-0.6**
SRBI				S		**Sn**	**15 54 36.6**	**+0.7**
WBSI	**Waikabubak, Su**	**2.68**	**81**	P		**Pn**	**15 54 09.0**	**-0.6**
JAGI	**Jajag, Banyuwa**	**2.98**	**302**	P		**Pn**	**15 54 10.8**	**-2.8**
ABJI	**Asem Bagus**	**3.33**	**313**	P		**Pn**	**15 54 17.7**	**-0.7**
BASI	**Baing, Sumba**	**3.82**	**92**	P		**Pn**	**15 54 24.2**	**-0.7**
KMMI	**Kalianget**	**4.05**	**318**	P		**Pn**	**15 54 27.7**	**-0.4**
KAPI	**Kappang** comp=Z,198nm,18.3s,baz=230,slow=44	**5.87**	**31**	LR		LR	15 57 32.0	
UGM	**Wanagama** 0.9nm107nm,1.7s	**6.47**	**289**	P		**Pn**	**15 55 01.6**	**+0.3**
BNSI	**Bone** 0.1nm22nm,0.7s	**6.58**	**31**	P		**Pn**	**15 55 03.9**	**+1.2**
BBKI	**Banjar Baru** 0.1nm18nm,1.1s	**6.83**	**344**	P		**Pn**	**15 55 07.1**	**+0.9**
BATI	**Baumata** 3.0nm,0.3s,baz=105,slow=23,SNR=2.2	**6.85**	**92**	Pn		**Pn**	**15 55 04.8**	**-1.7**
BATI	3.6nm,0.3s,baz=106,slow=21,SNR=1.8			Sn		**Sn**	**15 56 23.3**	**+0.2**
BATI	**Baumata** 0.1nm18nm,1.2s	**6.85**	**92**	P		**Pn**	**15 55 06.3**	**-0.2**
CISI	**Cisompet, Garu** 34nm,1.1s	**9.14**	**285**	P		**Pn**	**15 55 35.9**	**-1.8**
LEM	**Lembang** comp=Z,53nm,20.4s,baz=115,slow=38	**9.55**	**289**	LR		LR	15 59 16.1	
LUWI	**Luwuk**	**10.82**	**34**	P		Pn	15 56 06.6	+6.0
FITZ	**Fitzroy Crossi** 0.6nm,0.3s,baz=311,slow=10,SNR=19	**11.77**	**134**	Pn		**Pn**	**15 56 11.8**	**-1.7**
FITZ	0.3nm,0.3s,baz=282,slow=16,SNR=2.5			Sn		Sn	15 58 12.8	-10
FITZ	comp=Z,53nm,19.8s,baz=318,slow=39			LR		LR	16 01 05.9	
KASI	**Kota Agung** 21nm,0.8s	**12.91**	**290**	P		**Pn**	**15 56 25.6**	**-3.5**
PPBI	**Pangkal Pinang** 8μm31nm,0.6s	**13.12**	**306**	P		**Pn**	**15 56 30.9**	**-1.0**
SIJI	**Sorong** 0.6nm,0.3s,baz=267,slow=8.1,SNR=5.9	**17.13**	**59**	P		**Pn**	**15 57 22.9**	**-0.3**
DAV	**Davao City (W)** comp=Z,52nm,18.2s,baz=216,slow=44	**19.20**	**28**	LR		LR	16 07 19.5	
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=297,slow=13,SNR=2.5	**19.63**	**122**	P		**Pn**	**15 57 54.5**	**+1.2**
WRA	0.1nm,0.3s,baz=287,slow=23,SNR=2.0			S		**S**	**16 01 25.4**	**-3.5**
ASAR	**Alice Springs** 0.8nm,0.5s,baz=308,slow=9.0,SNR=17	**21.26**	**132**	P		**P**	**15 58 12.4**	**+3.6**
ASAR	0.4nm,0.7s,baz=303,slow=22,SNR=3.5			S		**S**	**16 02 00.7**	**-0.3**
NWAO	**Narrogin (SRO)** 6.5nm,0.6s,baz=12,slow=13,SNR=7.8	**22.74**	**179**	P		P	15 58 33.6	+9.2
CMAR	**Chiang Mai Arr** 0.3nm,0.3s,baz=151,slow=7.2,SNR=5.7	**33.34**	**328**	P		**P**	**16 00 00.5**	**+1.0**
SONM	**Songino Array** 0.5nm,0.6s,baz=172,slow=9.5,SNR=5.7	**58.38**	**352**	P		**P**	**16 03 16.0**	**-0.2**
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=143,slow=7.1,SNR=9.9	**64.42**	**334**	P		**P**	**16 03 57.1**	**+0.4**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=108,slow=4.8,SNR=4.8	**69.27**	**340**	P		**P**	**16 04 27.5**	**+0.1**
PETK	**Petropavlovsk-**	**71.98**	**25**	P		**P**	**16 04 45.8**	**+1.9**

1.1nm,0.7s,baz=238,slow=8.3,SNR=1.4
SNAA Sanae 89.35 196 LR LR 16 41 46.0
comp=Z,67nm,20.8s,baz=284,slow=32
YKA Yellowknife Ar 116.09 24 PKP **PKiKP 16 12 05.3 +2.7**
0.1nm,0.4s,baz=338,slow=1.1,SNR=2.8

IDC ***29*** *16:09:46.2±0.4, 40˚.02N×142˚.89E, h0km, mb4.9/30, mb1 5.0/36, mb1mx5.0/43, mbtmp5.0/36, ML4.5/6, MS4.9/44, Ms1 4.9/44, ms1mx4.8/53, Error ellipse: s-maj=12.8km s-min=10.0km az=87.0*

BJI ***29*** *16:09:48.4±0.0, 40˚.00N×142˚.76E, h28km, mB5.3/69, mb5.4/89, Ms5.4/98, Ms7 5.3/90*

JMA ***29*** *16:09:49.6±0.2, 40˚.06N×142˚.88E, h24km±2km, M5.4*

JMA Felt III J1.

NIED ***29*** *16:09:49.6, 40˚.06N×142˚.88E, h24km, MW5.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.82; $M_{\theta\theta}$0.10; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.74; $M_{\theta\phi}$-0.18; $M_{\phi r}$1.18; Fault plane solution: $M_0$1.66000×10^{17} NP1:ϕ_s29.00000°, δ75.00000°, λ102.00000°. NP2:ϕ_s170.00000°, δ20.00000°, λ53.00000°.*

MOS ***29*** *16:09:50.7±0.9, 40˚.16N×142˚.81E, h37km, mb5.5/90, MS5.4/18 Error ellipse: s-maj=5.7km s-min=3.5km az=111.5*

BGR ***29*** *16:09:51.6±0.0, 40˚.66N×143˚.70E, h33km, mb5.3, Ms5.3*

NEIC ***29*** *16:09:51.8±1.2, 40˚.05N±0˚.05×142˚.81E±0˚.09, h37km±4km, mb5.2/342, Mww5.4, Error ellipse: s-maj=9.9km s-min=7.3km az=112.0*

GCMT ***29*** *16:09:52.8±0.1, 40˚.10N±0˚.01×142˚.93E±0˚.01, h34km, MW5.4/141, Moment Tensor Solution. s118,c212; s141,c291; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.12±.02; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$-1.15±.02; $M_{r\theta}$0.51±.02; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$1.16±.03; Best double couple: $M_0$1.71600×10^{17} NP1:ϕ_s181.00000°, δ22.00000°, λ72.00000°. NP2:ϕ_s20.00000°, δ69.00000°, λ97.00000°. Principal axes: T 1.6960, Plg65.0000°, Azm303.0000°; N 0.0370, Plg7.0000°, Azm198.0000°; P -1.7360, Plg24.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *16:09:56, 40˚.08N×142˚.76E, h40km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.87; $M_{\theta\theta}$0.06; $M_{\phi\phi}$-0.93; $M_{r\theta}$0.41; $M_{\theta\phi}$-0.27; $M_{\phi r}$0.93; Fault plane solution: $M_0$1.39000×10^{17} NP1:ϕ_s185.00000°, δ22.00000°, λ74.00000°. NP2:ϕ_s22.00000°, δ69.00000°, λ96.00000°. Principal axes: T 1.3297, Plg66.0000°, Azm303.0000°; N 0.1085, Plg6.0000°, Azm200.0000°; P -1.4382, Plg24.0000°, Azm107.0000°;*

ISC 29 16:09:51.0±0.3, 40˚.07N±0˚.03×142˚.89E±0˚.03, h33km±1km, h34km:pP-P, n1065, σ1970/1086, mb5.3/386, MS5.3/99, 319C-90D, Fault plane solution: NP1:ϕ_s279.88754°, δ11.17322°, λ139.09244°. **NP2:**ϕ_s50.25325°, δ82.70995°, λ81.50965°. **Principal axes:** T Plg51.5758°, Azm310.5826°; N Plg8.4212°, Azm51.3384°; P Plg37.1553°, Azm147.7801°; **Fault plane solution: NP1:**ϕ_s191.00884°, δ35.09156°, λ102.06329°. **NP2:** ϕ_s356.37097°, δ55.79264°, λ81.64661°. **Principal axes:** T Plg77.4501°, Azm238.1569°; N Plg6.9006°, Azm1.0900°; P Plg10.4310°, Azm92.3667°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
JTH	**Tanohata**	**0.80**	**261**	⇓P	**Pn**	**16 10 04.6**	**-1.3**
JTH				*e*S	**Sn**	**16 10 14.9**	**-1.7**
JKEN	**Kujiedanarisaw**	**0.91**	**279**	⇓P	**Pn**	**16 10 06.1**	**-1.4**
MIYJ	**Miyakonagasawa**	**0.96**	**239**	⇓P	**Pn**	**16 10 06.9**	**-1.2**
JANG	**Nango**	**1.09**	**286**	⇓P	**Pn**	**16 10 09.1**	**-0.9**
JKZ	**Kuzumaki**	**1.20**	**266**	⇓P	**Pn**	**16 10 10.8**	**-0.7**
JOM	**Ohasama**	**1.37**	**245**	⇓P	**Pn**	**16 10 13.4**	**-0.3**
OFUJ	**Ofunato**	**1.37**	**224**	⇓P	**Pn**	**16 10 13.3**	**-0.4**
OFUJ				*e*S	**Sn**	**16 10 30.4**	**-0.3**
JARK	**Aomorirokkasho**	**1.49**	**309**	⇓P	**Pn**	**16 10 15.7**	**+0.3**
JSZI	**Iwateshizukuis**	**1.52**	**258**	⇓P	**Pn**	**16 10 16.6**	**+0.7**
JTM	**Tenmabayashi**	**1.56**	**298**	⇓P	**Pn**	**16 10 16.9**	**+0.5**
JTM				*e*S	**Sn**	**16 10 36.3**	**+0.8**
JTM	**Tenmabayashi**	**1.56**	**298**	Pn	**Pn**	**16 10 17.0**	**+0.6**
JKMT	**Kesennumamotoy**	**1.67**	**221**	⇓P	**Pn**	**16 10 18.1**	**+0.2**
JAHD	**Aomorihigashid**	**1.68**	**316**	⇓P	**Pn**	**16 10 18.6**	**+0.6**
JMK	**Ichinoseki**	**1.71**	**230**	⇓P	**Pn**	**16 10 18.8**	**+0.4**
JMK				*e*S	**Sn**	**16 10 40.3**	**+1.2**
JAH	**Hinai**	**1.73**	**275**	⇓P	**Pn**	**16 10 19.3**	**+0.6**
JRG	**Rokugo**	**1.86**	**249**	⇓P	**Pn**	**16 10 21.0**	**+0.4**
JOT	**Ohata**	**1.91**	**314**	⇑P	**Pn**	**16 10 22.1**	**+0.9**
JOT				*e*S	**Sn**	**16 10 45.6**	**+1.4**
ERM	**Erimo**	**1.95**	**6**	*c i*P	**Pn**	**16 10 22.3**	**+0.5**
ERM	**Erimo**	**1.95**	**6**	Pn	**Pn**	**16 10 22.4**	**+0.7**
JEM	**Erimo**	**1.95**	**6**	Pn	**Sb**	**16 10 51.3**	**+1.4**
JIO	**Ouri**	**2.01**	**217**	⇑P	**Pn**	**16 10 22.4**	**-0.1**
JHHS	**Hirosakihyakuz**	**2.02**	**287**	⇓P	**Pn**	**16 10 24.3**	**+1.6**
JNTW	**Noshirotokiwa**	**2.10**	**276**	⇓P	**Pn**	**16 10 24.8**	**+1.0**
JOFO	**Osakifurukawao**	**2.12**	**227**	⇑P	**Pn**	**16 10 25.1**	**+1.0**
JSI2	**Shiura 2**	**2.13**	**298**	⇓P	**Pn**	**16 10 25.5**	**+1.3**
JYW	**Yuwa**	**2.13**	**256**	⇓P	**Pn**	**16 10 25.4**	**+1.2**
JIW	**Iwasaki**	**2.26**	**284**	⇓P	**Pn**	**16 10 27.5**	**+1.4**
JYK	**Kaneyama**	**2.27**	**240**	⇓P	**Pn**	**16 10 27.0**	**+0.8**
JOU	**Okura**	**2.43**	**226**	⇑P	**Pn**	**16 10 28.9**	**+0.6**
JCH	**Churui**	**2.56**	**8**	⇑P	**Pn**	**16 10 30.7**	**+0.5**
JMM	**Marumori**	**2.74**	**217**	Pn	**Pn**	**16 10 32.2**	**-0.4**
JMST	**Minamisoumatoc**	**2.82**	**214**	⇑P	**Pn**	**16 10 33.2**	**-0.4**
JYS	**Shirataka**	**2.87**	**231**	⇑P	**Pn**	**16 10 35.8**	**+1.4**
JYA	**Atsumi**	**2.87**	**240**	⇓P	**Pn**	**16 10 35.5**	**+1.1**
JOG3	**Oga3**	**2.93**	**268**	⇓P	Pn	16 10 28.6	-6.6
JEW	**Eniwo**	**2.97**	**339**	Pn	**Pn**	**16 10 36.8**	**+1.1**
JYAR	**Yonezawaarcadi**	**3.04**	**226**	⇑P	**Pn**	**16 10 37.9**	**+1.2**
JAW	**Awa shima**	**3.25**	**241**	P	**Pn**	**16 10 41.0**	**+1.4**
JAR	**Ashorobuto**	**3.29**	**11**	⇑P	**Pn**	**16 10 40.1**	**-0.1**
JFFD	**Fukushimafurud**	**3.49**	**212**	⇑P	**Pn**	**16 10 42.7**	**-0.3**
NMR	**Nemuro--Hokkai**	**3.92**	**32**	⇓*i*P	**Pn**	**16 10 48.1**	**-0.7**
NMR				*i* S	**Sn**	**16 11 29.8**	**-3.8**
ASAJ	**Asahikawa**	**4.05**	**357**	Pn	**Pn**	**16 10 51.9**	**+1.3**
	23nm,0.3s,baz=220,slow=8.7,SNR=164						
ASAJ				Lg	Lg	16 11 49.2	
	144nm,0.3s,baz=306,slow=31,SNR=13						
JKA	**Kamikawa-asahi**	**4.05**	**357**	Pn	**Pn**	**16 10 51.6**	**+1.1**
JIZZ	**Izumozaki**	**4.13**	**233**	⇑P	**Pn**	**16 10 54.2**	**+2.4**
JSD	**Sado**	**4.13**	**242**	Pn	**Pn**	**16 10 52.6**	**+0.9**
JYT	**Yasato**	**4.39**	**210**	Pn	**Pn**	**16 10 54.0**	**-1.2**
RUSJ	**Misakicho**	**4.39**	**23**	*e*P	**Pn**	**16 10 56.3**	**+1.0**
RUSJ				*e*S	**Sn**	**16 11 48.4**	**+3.1**
GRPR	**Tuman**	**4.47**	**28**	*e*P	**Pn**	**16 10 55.9**	**-0.4**
GRPR				*e*S	**Sn**	**16 11 44.2**	**-2.9**
GRPR				pmax	pmax		
	comp=Z,1μm,0.3s						
GRPR				smax	smax		
	comp=E,7μm,0.5s						
GRPR				smax	smax		
	comp=N,8μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.54**	**28**	*d i*P	**Pn**	**16 10 56.3**	**-1.0**
YUK				*i* S	**Sn**	**16 11 44.0**	**-4.8**
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=N,288nm,0.2s						
YUK				pmax	pmax		
	comp=E,503nm,0.4s						
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				smax	smax		
	comp=E,11μm,0.8s						
YUK				smax	smax		
	comp=N,23μm,1.1s						
YUK				smax	smax		
	comp=N,9μm,0.7s						
YUK				smax	smax		
	comp=E,5μm,0.7s						
JGK	**Kuni**	**4.84**	**225**	⇑P	**Pn**	**16 11 03.8**	**+2.2**
JSZ	**Suzu**	**5.05**	**241**	⇑P	**Pn**	**16 11 05.9**	**+1.6**
MJB9	**Matsu-Tunnel**	**5.09**	**228**		**Pn**	**16 11 07.0**	**+2.0**
MAJO	**Matsushiro**	**5.09**	**228**	*c i*P	**Pn**	**16 11 07.1**	**+2.0**
MAJO	**Matsushiro**	**5.09**	**228**	Pn	**Pn**	**16 11 07.0**	**+2.0**
MAT	**Matsushiro**	**5.09**	**228**	P	**Pn**	**16 11 07.0**	**+2.0**
MAT				S	**Sn**	**16 12 05.2**	**+2.5**
MAT	**Matsushiro**	**5.09**	**228**	P	**Pn**	**16 11 07.1**	**+2.0**
MJAR	**Matsushiro Arr**	**5.09**	**228**	Pn	**Pn**	**16 11 07.3**	**+2.3**
	comp=E,6.1nm,0.3s,baz=30,slow=14,SNR=1275						
MJAR				LR	LR	16 13 18.7	
	comp=E,19μm,19.5s,baz=60,slow=42						
MJAR	**Matsushiro Arr**	**5.09**	**228**	P	**Pn**	**16 11 06.7**	**+1.7**
MJAR	**Matsushiro Arr**	**5.09**	**228**		**Pn**	**16 11 06.7**	**+1.7**
JRY	**Ryogami san**	**5.13**	**219**	⇑P	**Pn**	**16 11 05.9**	**+0.4**
JGN	**Niukaw**	**5.83**	**231**	P	**Pn**	**16 11 17.6**	**+2.4**
JHTM	**Izuhatsuma**	**5.96**	**212**	P	**Pn**	**16 11 16.3**	**-0.6**
JGF	**Kuroka**	**6.25**	**226**		**Pn**	**16 11 22.2**	**+1.3**
KUR	**Kuril'sk**	**6.33**	**34**	*d i*P	**Pn**	**16 11 21.7**	**-0.2**
KUR				*i* S	**Sn**	**16 12 30.3**	**-2.7**
KUR				pmax	pmax		
	comp=Z,699nm,0.7s						
KUR				pmax	pmax		
	comp=N,103nm,0.2s						
KUR				pmax	pmax		
	comp=E,201nm,0.6s						
KUR				smax	smax		
	comp=E,11μm,3.0s						
KUR				smax	smax		
	comp=E,1μm,0.7s						
KUR				smax	smax		
	comp=N,671nm,0.6s						
KUR				MLR	MLR		
	comp=Z,5μm,17.0s						
JSG	**Sagara**	**6.56**	**216**	Pn	**Pn**	**16 11 25.1**	**0.0**
JYTA	**Yamagatataniai**	**6.61**	**229**	P	**Pn**	**16 11 27.5**	**+1.7**
TEY	**Ternei**	**6.79**	**319**	⇓*e*P	**Pn**	**16 11 30.3**	**+2.1**
TEY				pmax	pmax		
	comp=N,90nm,0.7s						
TEY				pmax	pmax		
	comp=E,90nm,0.7s						
TEY				pmax	pmax		
	comp=Z,110nm,0.7s						
TEY				pmax	pmax		
	comp=N,200nm,5.2s						
TEY				MLR	MLR		
	comp=E,800nm,14.0s						
TEY				MLR	MLR		
	comp=N,500nm,16.0s						
TEY				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS	**Yuzh-Sakhalins**	**6.88**	**359**	*de*P	**Pn**	**16 11 30.5**	**+1.1**
YSS				*e*S	**Sn**	**16 12 46.0**	**-0.5**
YSS				pmax	pmax		
	comp=Z,1μm,5.7s						
YSS				MLR	MLR		
	comp=Z,8μm,13.0s						
YSS				MLR	MLR		
	comp=N,4μm,10.0s						
YSS				MLR	MLR		
	comp=E,6μm,13.0s						
YSS	**Yuzh-Sakhalins**	**6.88**	**359**	Pn	**Pn**	**16 11 30.1**	**+0.7**
JHJ2	**Mitsune**	**7.37**	**201**	Pn	**Pn**	**16 11 34.5**	**-1.8**
JHJ	**Hachijo jima 2**	**7.37**	**201**	Pn	**Pn**	**16 11 35.2**	**-1.1**
	comp=E,86nm,0.3s,baz=207,slow=23,SNR=20						
JHJ				Sn	**Sn**	**16 12 52.1**	**-6.7**
	comp=E,96nm,0.3s,baz=69,slow=23,SNR=1.9						
JKY	**Yasaka**	**7.59**	**237**	P	**Pn**	**16 11 41.8**	**+2.6**
JWT	**Wachi**	**7.62**	**233**	⇑P	**Pn**	**16 11 42.0**	**+2.3**
JWT	**Wachi**	**7.62**	**233**		**Pn**	**16 11 41.5**	**+1.8**
JKSM	**Kasumi**	**7.90**	**238**	P	**Pn**	**16 11 45.9**	**+2.5**
JOI	**OKI**	**8.48**	**247**	P	**Pn**	**16 11 53.7**	**+2.3**
VLA	**Vladivostok**	**8.79**	**294**	*c i*P	**Pn**	**16 11 58.9**	**+3.3**
UGL	**Uglegorsk**	**9.02**	**357**	*e*P	**Pn**	**16 11 59.3**	**+0.5**
UGL				*e*S	**Sn**	**16 13 39.8**	**+0.6**
UGL				pmax	pmax		
	comp=Z,300nm,2.0s						
UGL				pmax	pmax		
	comp=Z,79nm,1.0s						
UGL				smax	smax		
	comp=E,1μm,3.0s						
UGL				smax	smax		
	comp=N,800nm,2.2s						
UGL				MLR	MLR		
	comp=Z,8μm,18.0s						
UGL				MLR	MLR		
	comp=N,12μm,16.0s						
UGL				MLR	MLR		
	comp=E,12μm,19.0s						
USA0B	**Ussuriysk Arra**	**9.09**	**301**	P	**Pn**	**16 12 01.6**	**+1.9**
USA0B	**Ussuriysk Arra**	**9.09**	**301**		**Pn**	**16 12 01.6**	**+1.9**
USRK	**Ussuriysk Ar.**	**9.09**	**301**	Pn	**Pn**	**16 12 01.6**	**+1.9**
	baz=98,slow=15,SNR=110						
USRK				LR	LR	16 15 26.0	
	comp=E,17μm,18.8s,baz=106,slow=37						
MSHR	**Mys Shultsa**	**9.17**	**290**	*de*P	**Pn**	**16 12 02.7**	**+1.8**
MSHR				pmax	pmax		
	comp=Z,104nm,0.6s						
JHS	**Saijyo**	**9.26**	**240**	P	**Pn**	**16 12 04.5**	**+2.3**
JHS	**Saijyo**	**9.26**	**240**		**Pn**	**16 12 04.3**	**+2.0**
JMN	**Monobe**	**9.59**	**232**		**Pn**	**16 12 06.7**	**-0.1**
JGT2	**ShimaneMisato**	**9.63**	**242**	P	**Pn**	**16 12 09.7**	**+2.4**
JHT	**Toyohira**	**9.92**	**240**	P	**Pn**	**16 12 13.3**	**+2.0**
TYV	**Tymovskoe**	**10.79**	**359**	*e*P	**Pn**	**16 12 23.3**	**+0.3**
TYV				*e*S	**Sn**	**16 14 24.2**	**+1.6**
TYV				pmax	pmax		
	comp=Z,10.0nm,1.8s						
TYV				pmax	pmax		
	comp=Z,500nm,2.8s						
TYV				smax	smax		
	comp=E,21nm,1.3s						
TYV				MLR	MLR		
	comp=N,9μm,18.0s						
TYV				MLR	MLR		
	comp=Z,9μm,18.0s						
MDJ	**Mudanjiang**	**10.84**	**299**	P	**Pn**	**16 12 23.5**	**-0.2**
MDJ				S	**Sn**	**16 14 24.0**	**+0.3**
MDJ				LR	LR		
	comp=Z,5μm,16.4s						
MDJ				LR	LR		
	comp=Z,17μm,16.5s						
MDJ				LR	LR		
	comp=Z,3μm,4.3s						
MDJ	**Mudanjiang**	**10.84**	**299**		**Pn**	**16 12 25.9**	**+2.2**
GRNR	**Gornyy**	**11.62**	**339**	⇓*i*P	**Pn**	**16 12 36.0**	**+1.7**
GRNR				*e*S	**Sn**	**16 14 47.0**	**+4.3**
GRNR				pmax	pmax		
	comp=E,7.0nm,0.6s						
GRNR				pmax	pmax		
	comp=N,10.0nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GRNR				smax	smax		
	comp=N,8.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,3μm,14.0s						
GRNR				MLR	MLR		
	comp=N,3μm,16.0s						
GRNR				MLR	MLR		
	comp=Z,4μm,13.0s						
JNU	**Nakatsue**	**11.88**	**238**	Pn	**Pn**	**16 12 38.4**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=42,slow=3.9,SNR=34						
JNU				LR	LR	16 17 22.8	
	comp=Z,6μm,20.6s,baz=38,slow=38						
JNU	**Nakatsue**	**11.88**	**238**		**Pn**	**16 12 37.8**	**-0.3**
KSRS	**Korea Array**	**11.97**	**262**	Pn	**Pn**	**16 12 41.1**	**+1.9**
	comp=Z,1.3nm,0.3s,baz=72,slow=13,SNR=86						
KSRS				LR	LR	16 17 01.8	
	comp=Z,10μm,19.3s,baz=76,slow=36						
KS19	**Wonju Array Si**	**12.00**	**262**		**Pn**	**16 12 42.9**	**+3.2**
KSAR	**Wonju Array Be**	**12.01**	**262**	P	**Pn**	**16 12 40.4**	**+0.7**
KSAR	**Wonju Array Be**	**12.01**	**262**		**Pn**	**16 12 40.4**	**+0.7**
KLR	**Kul'dur**	**12.10**	**323**	Pn	**Pn**	**16 12 41.3**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=131,slow=12,SNR=29						
KLR				Lg	Lg	16 15 59.4	
	baz=218,slow=23,SNR=5.3						
KLR				LR	LR	16 17 35.6	
	comp=Z,11μm,19.1s,baz=138,slow=39						
KLR	**Kul'dur**	**12.10**	**323**	*c i*P	**Pn**	**16 12 40.9**	**0.0**
KLR				pmax	pmax		
	comp=Z,201nm,1.5s						
TJN	**Taejon**	**12.75**	**258**	*c i*P	**Pn**	**16 12 51.9**	**+2.0**
INCN	**Inchon**	**12.95**	**264**	P	**Pn**	**16 12 52.3**	**-0.3**
INCN	**Inchon**	**12.95**	**264**		**Pn**	**16 12 52.3**	**-0.3**
JCJ	**Chichijima**	**12.96**	**183**	Pn	**Pn**	**16 12 50.0**	**-2.7**
	comp=Z,14nm,0.3s,baz=287,slow=18,SNR=5.8						
JCJ				Sn	Sn	16 15 00.6	-15
	comp=Z,7.2nm,0.3s,baz=276,slow=23,SNR=2.4						
JCJ	**Chichijima**	**12.96**	**183**	Pn	**Pn**	**16 12 50.7**	**-2.1**
JSU	**Suzuyama**	**13.21**	**234**		**Pn**	**16 12 55.1**	**-1.1**
OKH	**Okha**	**13.48**	**0**	*de*P	**Pn**	**16 12 58.6**	**-1.2**
OKH				*e*S	**Sn**	**16 15 28.3**	**0.0**
OKH				pmax	pmax		
	comp=Z,200nm,17.5s						
OKH				smax	smax		
	comp=N,300nm,13.7s						
OKH				smax	smax		
	comp=E,700nm,11.5s						
OKH				MLR	MLR		
	comp=Z,9μm,16.0s						
OKH				MLR	MLR		
	comp=N,11μm,16.0s						
OKH				MLR	MLR		
	comp=E,8μm,15.0s						
CN2	**Changchun**	**13.51**	**292**	*e*P	**Pn**	**16 13 00.8**	**+0.6**
CN2				PP	**P**	**16 13 09.3**	**+0.4**
CN2				*e*S	**Sn**	**16 15 33.0**	**+4.0**
CN2				pmax	pmax		
	comp=E,20nm,1.9s						
CN2				pmax	pmax		
	comp=E,630nm,5.6s						
CN2				LR	LR		
	comp=E,5μm,18.0s						
CN2				LR	LR		
	comp=E,8μm,18.0s						
CN2				LR	LR		
	comp=E,9μm,19.0s						
SKR	**Severo-Kuril's**	**14.08**	**37**	*e*P	**Pn**	**16 13 03.9**	**-4.1**
SKR				*e*S	**Sn**	**16 15 38.2**	**-4.7**
SKR				pmax	pmax		
	comp=E,45nm,0.9s						
SKR				pmax	pmax		
	comp=Z,100nm,2.2s						
SKR				MLR	MLR		
	comp=Z,1μm,17.0s						
SKR				MLR	MLR		
	comp=Z,1μm,15.0s						
SNY	**Shenyang**	**14.70**	**283**	⇑P	**Pn**	**16 13 16.5**	**+0.1**
SNY				pmax	pmax		
	comp=Z,27nm,2.2s						
SNY				pmax	pmax		
	comp=Z,2μm,11.0s						
SNY				LR	LR		
	comp=Z,2μm,13.3s						
SNY				LR	LR		
	comp=Z,8μm,17.5s						
SNY				LR	LR		
	comp=Z,12μm,20.1s						
DL2	**Dalian**	**16.45**	**273**	⇑*i*P	**Pn**	**16 13 39.0**	**-0.2**
DL2				sP	**pP**	**16 13 50.8**	**+0.6**
DL2				S	**Sn**	**16 16 41.0**	**+0.3**
DL2				sS	**S**	**16 16 49.0**	**-3.0**
DL2				SS	**SnSn**	**16 17 02.3**	**+8.6**
DL2				pmax	pmax		
	comp=Z,120nm,1.0s						
DL2				pmax	pmax		
	comp=Z,1μm,6.1s						
DL2				LR	LR		
	comp=Z,710nm,13.8s						
DL2				LR	LR		
	comp=Z,4μm,18.5s						
DL2				LR	LR		
	comp=Z,5μm,20.3s						
PEA0B	**Petropavlovsk-**	**16.50**	**33**	P	**Pn**	**16 13 36.7**	**-3.0**
PEA0B				pmax	pmax		
	comp=Z,73nm,1.2s						
PEA0B	**Petropavlovsk-**	**16.50**	**33**	Pn	**Pn**	**16 13 36.7**	**-3.0**
PETK	**Petropavlovsk-**	**16.50**	**33**	Pn	**Pn**	**16 13 36.5**	**-3.2**
	comp=Z,0.2nm,0.3s,baz=206,slow=9.5,SNR=6.1						
PETK				LR	LR	16 20 29.3	
	comp=Z,2μm,20.6s,baz=220,slow=39						
PETK	**Petropavlovsk-**	**16.50**	**33**	P	**Pn**	**16 13 36.7**	**-3.0**
PETK	**Petropavlovsk-**	**16.50**	**33**		**Pn**	**16 13 36.6**	**-3.0**
PET	**Petropavlovsk**	**16.84**	**35**	*e*P	**P**	**16 13 48.0**	**+2.2**
PET				*e*S	**Sn**	**16 16 53.6**	**+3.6**
PET				pmax	pmax		
	comp=Z,400nm,4.5s						
PET				pmax	pmax		
	comp=Z,62nm,1.0s						
PET				pmax	pmax		
	comp=Z,300nm,12.7s						
PET				MLR	MLR		
	comp=Z,4μm,18.0s						
PET				MLR	MLR		
	comp=Z,3μm,18.0s						
PET	**Petropavlovsk**	**16.84**	**35**	P	**P**	**16 13 46.1**	**+0.3**
JMZ	**Minamidaito 2**	**17.23**	**218**	P	**P**	**16 13 49.7**	**-0.7**
JMZ				IAmb	IAmb	16 13 50.8	
	comp=Z,81nm,0.6s						
ZEA	**Zeya**	**17.29**	**327**	*e*P	**Pn**	**16 13 47.3**	**-2.4**
ZEA				*e*		16 17 03.4	
ZEA				pmax	pmax		
	comp=N,50nm,0.8s						
ZEA				pmax	pmax		
	comp=E,30nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,80nm,0.9s						
ZEA				MLR	MLR		
	comp=N,5μm,16.0s						
ZEA				MLR	MLR		
	comp=E,3μm,16.0s						
ZEA				MLR	MLR		
	comp=Z,5μm,14.0s						
JOW	**Kunigami**	**17.94**	**227**	P	**Pn**	**16 13 55.0**	**-2.9**
	comp=Z,1.8nm,0.3s,baz=11,slow=8.4,SNR=12						
JOW	**Kunigami**	**17.94**	**227**	P	**Pn**	**16 13 54.8**	**-3.1**
HIA	**Hailar**	**18.79**	**307**	P	**P**	**16 14 05.9**	**-1.6**
HIA				pmax	pmax		
	comp=Z,60nm,0.8s						
HIA	**Hailar**	**18.79**	**307**	P	**P**	**16 14 05.9**	**-1.6**
SSE	**Sheshan**	**19.75**	**250**	P	**P**	**16 14 18.5**	**+0.5**
SSE				S	**S**	**16 17 59.3**	**+0.5**
SSE				pmax	pmax		
	comp=Z,50nm,0.9s						
SSE				pmax	pmax		
	comp=Z,220nm,5.3s						
SSE				LR	LR		
	comp=Z,1μm,14.6s						
MA2	**Magadan**	**20.15**	**12**	P	**P**	**16 14 21.4**	**-0.7**
	comp=Z,25nm,0.7s,baz=192,slow=9.6,SNR=37						
MA2	**Magadan**	**20.15**	**12**	*c i*P	**P**	**16 14 22.1**	**0.0**
MA2				pmax	pmax		
	comp=Z,103nm,2.5s						
MA2	**Magadan**	**20.15**	**12**	P	**P**	**16 14 20.9**	**-1.2**
BJI	**Beijing**	**20.43**	**279**	P	**P**	**16 14 23.3**	**-2.0**
BJI				S	**S**	**16 18 08.3**	**-3.8**
BJI				pmax	pmax		
	comp=Z,72nm,0.8s						
BJI				LR	LR		
	comp=Z,3μm,15.6s						
BJI				LR	LR		
	comp=Z,5μm,17.6s						
BJI				LR	LR		
	comp=Z,4μm,19.0s						
BJT	**Baijiatuao**	**20.43**	**279**	P	**P**	**16 14 24.6**	**-0.8**
BJT				pmax	pmax		
	comp=Z,56nm,0.7s						
BJT	**Baijiatuao**	**20.43**	**279**	P	**P**	**16 14 24.6**	**-0.8**
BJT				IAmb	IAmb	16 14 36.4	
	comp=Z,56nm,0.7s						
TIA	**Tai'an**	**20.60**	**267**	P	**P**	**16 14 24.8**	**-2.4**
TIA				pP	**pP**	**16 14 36.5**	**+0.6**
TIA				S	**S**	**16 18 07.5**	**-8.2**
TIA				sS	Sn	16 18 24.8	+3.8
TIA				SS	**SnSn**	**16 18 45.3**	**+10

comp=Z,79nm,0.7s
YOJ Yonaguni jima 22.83 233 P P 16 14 47.0 -4.1
YOJ IAmb IAmb 16 15 01.0
comp=Z,79nm,0.7s
YAK Yakutsk 23.41 344 P P 16 14 55.1 -1.6
comp=Z,90nm,0.7s,baz=126,slow=1.2,SNR=77
YAK Yakutsk 23.41 344*c iP* **P 16 14 54.4 -2.3**
YAK *e*'PP **pP 16 15 04.7 -0.8**
YAK *e*S **S 16 19 01.6 -5.7**
YAK *e*'SS **sS 16 19 19.4 -3.0**
YAK pmax pmax
comp=Z,142nm,0.8s
YAK pmax pmax
comp=N,38nm,0.9s
YAK pmax pmax
comp=E,14nm,0.8s
YAK smax smax
comp=E,562nm,2.0s
YAK smax smax
comp=N,1μm,2.0s
YAK MLR MLR
comp=Z,2μm,16.0s
YAK MLR MLR
comp=N,2μm,15.0s
YAK Yakutsk 23.41 344 P P 16 14 54.6 -2.1
TATO Taipei 23.41 236 P P 16 14 54.0 -3.0
TATO IAmb IAmb 16 15 07.6
comp=Z,114nm,0.8s
TATO Taipei 23.41 236 P P 16 14 56.9 -0.1
TATO P P 16 14 56.9 -0.1
CIT Chita 23.43 310 *e*P **P 16 14 53.6 -3.5**
CIT *e* 16 15 06.7
CIT *e* 16 15 30.8
CIT *e*S S 16 18 56.5 -12
CIT pmax pmax
comp=Z,541nm,2.3s
SEY Seymchan 23.59 11 P P 16 14 57.8 -0.6
comp=Z,59nm,0.8s,baz=193,slow=7.2,SNR=89
YHNB Yeheng 23.70 236 P P 16 14 56.0 -3.9
YHNB IAmb IAmb 16 15 08.2
comp=Z,54nm,0.7s
TIY Taiyuan 23.77 274 *e*P **P 16 14 57.3 -3.2**
TIY S S 16 19 02.5 -11
TIY pmax pmax
comp=Z,270nm,7.7s
TIY LR LR
comp=Z,2μm,16.7s
TIY LR LR
comp=Z,2μm,15.6s
TIY LR LR
comp=Z,3μm,18.1s
HHC Hu-ho-hao-te 23.79 282 *e*P **P 16 14 58.3 -2.4**
HHC pP pP 16 15 08.0 -1.8
HHC sP sP 16 15 10.5 -3.2
HHC PP **PnPn 16 15 30.0 +1.0**
HHC S **S 16 19 09.0 -5.0**
HHC sS pS 16 19 22.8 -1.2
HHC pmax pmax
comp=Z,59nm,0.8s
HHC pmax pmax
comp=Z,700nm,7.4s
HHC LR LR
comp=Z,1μm,11.1s
HHC LR LR
comp=Z,6μm,11.1s
HHC LR LR
comp=Z,8μm,11.1s
NACB Ninganchiao 23.92 235 P P 16 14 58.5 -3.4
NACB IAmb IAmb 16 15 11.8
comp=Z,55nm,0.9s
SSLB Suanglung 24.60 235 P P 16 15 04.9 -3.3
SSLB IAmb IAmb 16 15 17.2
comp=Z,53nm,0.8s
YULB Yu-li 24.67 234 P P 16 15 04.9 -3.9
YULB IAmb IAmb 16 15 24.6
comp=Z,65nm,0.7s
BTO Baotou 24.98 282 *e*P **P 16 15 10.0 -1.6**
BTO pmax pmax
comp=Z,250nm,1.3s
BTO LR LR
comp=Z,8μm,15.1s
BTO LR LR
comp=Z,26μm,19.8s
WHN Wuhan 25.06 257 ⇑P **P 16 15 12.0 -0.3**
WHN S **S 16 19 25.5 -8.9**
WHN pmax pmax
comp=Z,430nm,0.7s
WHN LR LR
comp=Z,3μm,13.5s
WHN LR LR
comp=Z,12μm,18.3s
WHN LR LR
comp=Z,13μm,18.2s
TPUB Ta-pu 25.16 235 P P 16 15 11.4 -1.8
TPUB IAmb IAmb 16 15 29.3
comp=Z,77nm,0.7s
TWG Pinlang 25.23 234 P P 16 15 13.2 -0.7
QZH Quanzhou 25.33 241 P P 16 15 14.3 -0.4
QZH sP **pP 16 15 24.5 +0.5**
QZH S **S 16 19 37.5 -1.3**
QZH sS **pS 16 19 48.8 -0.7**
QZH pmax pmax
comp=Z,51nm,0.7s
QZH pmax pmax
comp=Z,660nm,6.3s
QZH LR LR
comp=Z,2μm,16.3s
QZH LR LR
comp=Z,2μm,14.2s
QZH LR LR
comp=Z,3μm,14.7s
BOD Bodaibo 25.68 323 *e*P **P 16 15 17.2 -0.4**
BOD pmax pmax
comp=Z,201nm,1.3s
GUMO Guam 26.44 176 LR LR 16 24 32.4
comp=Z,2μm,21.9s,baz=10,slow=34
ULN Ulaanbaatar 26.75 299*c iP* **P 16 15 27.7 +0.1**
ULN pmax pmax
comp=Z,100nm,1.7s
ULN Ulaanbaatar 26.75 299 P P 16 15 27.1 -0.5
ULN Ulaanbaatar 26.75 299 P P 16 15 27.9 +0.2
ULN P P 16 15 27.9 +0.2
SONM Songino Array 27.19 299 P P 16 15 31.8 +0.2
comp=Z,13nm,0.5s,baz=104,slow=9.7,SNR=153
SONM PcP **PcP 16 18 51.8 +0.7**
comp=Z,3.0nm,0.7s,baz=123,slow=5.3,SNR=2.5
SONM LR LR 16 26 52.1
comp=Z,9μm,18.9s,baz=98,slow=38
XAN Xi'an 27.66 268 P P 16 15 34.3 -1.4
XAN pP pP 16 15 44.8 -0.2
XAN sP sP 16 15 51.0 +2.2
XAN PP **PnPn 16 16 23.8 +1.9**
XAN S **S 16 20 11.3 -4.2**
XAN sS sS 16 20 32.3 +0.9
XAN pmax pmax
comp=Z,34nm,0.8s
XAN pmax pmax
comp=Z,580nm,7.3s
XAN LR LR
comp=Z,2μm,14.1s
XAN LR LR
comp=Z,6μm,16.5s
XAN LR LR
comp=Z,6μm,16.3s
ENH Enshi 28.86 261 P P 16 15 45.5 -0.9
H11N2 WAKE ISLAND Hy 28.89 128 T T 16 46 33.9
baz=318,slow=75,SNR=2468
H11N1 WAKE ISLAND Hy 28.91 128 T T 16 46 34.6
baz=318,slow=75,SNR=4734
H11N3 WAKE ISLAND Hy 28.91 128 T T 16 46 35.4
baz=318,slow=75,SNR=4815
IRK Irkutsk 29.03 308 *e*P **P 16 15 46.8 -1.0**
IRK pmax pmax
comp=Z,78nm,2.0s
TLY Talaya 29.33 306 P P **16 15 50.9 +0.5**
comp=Z,16nm,0.8s,baz=118,slow=7.4,SNR=13
TLY Talaya 29.33 306 *e*P **P 16 15 51.4 +0.9**
TLY *i* 16 16 53.7
TLY pmax pmax
comp=Z,100nm,1.1s
TLY MLR MLR
comp=Z,14μm,18.0s
TLY Talaya 29.33 306 P P **16 15 50.4 -0.1**
ZAK Zakamensk 29.42 304 *e*P **P 16 15 51.4 +0.1**
ZAK pmax pmax
comp=Z,41nm,1.5s
ZAK pmax pmax
comp=Z,15nm,1.3s
H11S1 WAKE ISLAND Hy 29.72 129 T T 16 47 34.4
baz=320,slow=75,SNR=523
H11S3 WAKE ISLAND Hy 29.72 129 T T 16 47 36.1
baz=320,slow=75,SNR=301
H11S2 WAKE ISLAND Hy 29.73 129 T T 16 47 34.8
baz=320,slow=75,SNR=379
BILL Bilibino 30.79 17*d iP* **P 16 16 03.5 +0.4**
BILL *i* 16 16 15.0
BILL *i* 16 17 04.7
BILL *i*S **S 16 21 01.5 -2.4**
BILL *i*SS **SnSn 16 22 54.0 +10**
BILL pmax pmax
comp=Z,28nm,1.3s
BILL MLR MLR
comp=Z,1μm,16.0s
BILL Bilibino 30.79 17 P **P 16 16 03.1 0.0**
BILL IAmb IAmb 16 16 19.6
comp=Z,36nm,0.9s
LZH Lanzhou 30.82 275 *e*P **P 16 16 03.8 -0.1**
LZH pP sP 16 16 15.5 -1.6
LZH PP **PnPn 16 17 08.5 +3.8**
LZH S **S 16 21 04.8 -0.6**
LZH SS **SnSn 16 22 50.3 +4.7**
LZH pmax pmax
comp=Z,28nm,1.3s
LZH pmax pmax
comp=Z,240nm,6.0s
LZH LR LR
comp=Z,2μm,16.8s
LZH LR LR
comp=Z,3μm,15.7s
LZH LR LR
comp=Z,2μm,15.2s
MOY Mondy 30.97 306 *e*P **P 16 16 05.5 +0.5**
MOY pmax pmax
comp=Z,103nm,2.7s
TIXI Tiksi 32.43 352 P **P 16 16 17.3 -0.2**
comp=Z,5.7nm,0.7s,baz=140,slow=7.5,SNR=30
TIXI Tiksi 32.43 352*c iP* **P 16 16 17.1 -0.4**
TIXI pmax pmax
comp=Z,154nm,1.7s
TIXI Tiksi 32.43 352 P **P 16 16 16.8 -0.7**
TIXI IAmb IAmb 16 16 37.0
comp=Z,26nm,1.0s
GTA Gaotai 32.89 283 ⇑P **P 16 16 22.0 0.0**
GTA pP sP 16 16 35.8 +0.6
GTA PP **PnPn 16 17 31.5 +0.2**
GTA PcP **PcP 16 19 07.0 +1.0**
GTA S **S 16 21 38.8 +1.2**
GTA PcS **PcS 16 22 52.0 +0.6**
GTA pmax pmax
comp=Z,85nm,0.9s
GTA pmax pmax
comp=Z,350nm,5.9s
GTA LR LR
comp=Z,3μm,18.9s
GTA LR LR
comp=Z,7μm,18.5s
GTA LR LR
comp=Z,9μm,18.9s
CD2 Chengdu 32.92 266 P **P 16 16 21.5 -0.8**
CD2 pP pP 16 16 31.5 -0.2
CD2 S **S 16 21 33.5 -4.6**
CD2 sS sS 16 21 54.3 +0.2
CD2 pmax pmax
comp=Z,70nm,0.6s
CD2 pmax pmax
comp=Z,390nm,5.9s
CD2 LR LR
comp=Z,3μm,13.5s
CD2 LR LR
comp=Z,3μm,19.6s
CD2 LR LR
comp=Z,5μm,14.9s
GYA Guiyang 32.95 257 ⇑P **P 16 16 22.0 -0.7**
GYA pP sP 16 16 34.3 -1.6
GYA S **S 16 21 39.3 +0.5**
GYA pmax pmax
comp=Z,58nm,0.8s
GYA pmax pmax
comp=Z,91nm,3.5s
GYA LR LR
comp=Z,330nm,13.2s
GYA LR LR
comp=Z,490nm,16.3s
GYA LR LR
comp=Z,710nm,23.5s
QIZ Qiongzhong 35.28 243 P **P 16 16 42.8 0.0**
QIZ pP **sP 16 16 54.3 -1.7**
QIZ PP **PP 16 18 02.3 -0.9**
QIZ S **S 16 22 16.0 +1.5**
QIZ sS **sS 16 22 32.5 +2.0**
QIZ pmax pmax
comp=Z,16nm,1.8s
QIZ pmax pmax
comp=Z,300nm,6.1s
QIZ LR LR
comp=Z,2μm,21.6s
QIZ LR LR
comp=Z,1μm,17.6s
QIZ LR LR
comp=Z,2μm,17.8s
KMI Kunming 36.63 258 ⇑P **P 16 16 54.8 +0.2**
KMI PP **PnPn 16 18 17.5 -0.7**
KMI S **S 16 22 30.0 -5.7**
KMI sS sS 16 22 54.3 +2.6
KMI pmax pmax
comp=Z,160nm,0.8s
KMI pmax pmax
comp=Z,650nm,5.9s
KMI LR LR
comp=Z,4μm,16.2s
KMI LR LR
comp=Z,3μm,17.5s
KMI LR LR
comp=Z,5μm,17.2s
TNA Tin City 37.65 31 S 16 22 52.7
baz=252
SLVN Son La 38.00 252 P **P 16 17 06.2 +0.2**
SLVN IAmb IAmb 16 17 19.7
comp=Z,38nm,0.9s
ANM Nome 38.41 33 P **P 16 17 10.8 +1.8**
ANM pmax pmax
comp=Z,34nm,1.1s
ANM Nome 38.41 33 P **P 16 17 10.8 +1.8**
ANM IAmb IAmb 16 17 31.6
comp=Z,34nm,1.1s
ANM Nome 38.41 33 P 16 17 11.5
baz=256
ANM S 16 23 04.7
baz=256
SGSI Sangihe 39.48 208 P **P 16 17 18.5 +0.2**
comp=Z,85nm,0.8s
DGZ Jazzator, Alta 39.63 303*c iP* **P 16 17 20.9 +1.4**
DGZ pmax pmax
comp=Z,196nm,0.7s
WMQ Urumqi 40.58 294 P **P 16 17 28.5 +1.1**
WMQ pP pP 16 17 37.3 +0.4
WMQ S **S 16 23 34.8 +0.3**
WMQ sS sS 16 23 51.8 +1.1
WMQ pmax pmax
comp=Z,180nm,0.7s
WMQ pmax pmax
comp=Z,1μm,3.7s
WMQ LR LR
comp=Z,2μm,15.3s
WMQ LR LR
comp=Z,2μm,14.5s
WMQ LR LR
comp=Z,4μm,20.5s
NONG Nongkai 40.63 249 P **P 16 17 28.4 +0.5**
comp=Z,2μmcomp=Z,165nm,0.7s
ZAA0 Zalesovo Array 40.79 310 P **P 16 17 28.8 0.0**
ZALV Zalesovo Beam 40.79 310 P **P 16 17 29.4 +0.6**
comp=Z,88nm,0.6s,baz=91,slow=8.2,SNR=393
ZALV PcP **PcP 16 19 30.0 +0.6**
comp=Z,18nm,0.7s,baz=118,slow=1.9,SNR=5.1
ZALV ScP **ScP 16 23 18.3 +1.9**
comp=Z,2.3nm,0.8s,baz=84,slow=4.5,SNR=3.6
ZALV LR LR 16 35 13.2
comp=Z,5μm,18.9s,baz=81,slow=37
ZALV Zalesovo Beam 40.79 310 *i* P **P 16 17 29.1 +0.3**
ZALV pmax pmax
comp=Z,88nm,0.6s
ZALV Zalesovo Beam 40.79 310 P **P 16 17 28.8 0.0**
UBPT Khong Chiam 40.88 244 P **P 16 17 30.6 +0.6**
comp=Z,478nmcomp=Z,22nm,1.3s
UBPT Khong Chiam 40.88 244 P **P 16 17 29.6 -0.4**
UBPT IAmb IAmb 16 17 31.9
comp=Z,45nm,1.2s
NRIK Noril'sk 41.03 334 P **P 16 17 30.9 +0.3**
comp=Z,18nm,0.8s,baz=107,slow=9.3,SNR=40
NRIK LR LR 16 35 36.0
comp=Z,6μm,19.6s,baz=105,slow=38
NRIK Noril'sk 41.03 334*c iP* **P 16 17 30.6 0.0**
NRIK pmax pmax
comp=Z,30nm,0.9s
NRIK Noril'sk 41.03 334 P **P 16 17 30.4 -0.2**
NRIK IAmb IAmb 16 17 47.3
comp=Z,39nm,0.9s
CRAI Chiangrai 41.27 254 P **P 16 17 33.8 +0.6**
comp=Z,2μmcomp=Z,96nm,0.8s
DLV T Lat 41.28 237 IAmb IAmb 16 17 46.0
comp=Z,61nm,0.8s
BAKI Biak 41.53 190 P **P 16 17 35.8 +0.5**
ZSN Zaisan 41.69 300⇑*iP* **P 16 17 37.4 +1.0**
comp=Z,22nm,0.8s,baz=300
ZSN Zaisan 41.69 300*c iP* **P 16 17 37.4 +1.0**
ZSN pmax pmax
comp=Z,22nm,0.8s
KHON Khomkaen 42.00 247 P **P 16 17 39.5 +0.3**
comp=Z,7μmcomp=Z,149nm,0.6s
SWI Sorong 42.10 197 P **P 16 17 40.3 +0.4**
comp=Z,487nmcomp=Z,20nm,0.7s
MANU Manus Island 42.11 173 P **P 16 17 39.9 -0.1**
SRPI Serui, Papua 42.18 190 P **P 16 17 40.9 +0.3**
comp=Z,29nm,0.6s
TTA Tatalina 42.28 37 P **P 16 17 42.3 +1.2**
TTA pmax pmax
comp=Z,18nm,1.1s
TTA Tatalina 42.28 37 P **P 16 17 42.2 +1.2**
TTA Tatalina 42.28 37 P 16 17 43.2
baz=267
TTA S 16 24 00.5
baz=267
SPMM Sapulut 42.51 221 P **P 16 17 44.0 +0.7**
GENI Genyem 42.53 184 P **P 16 17 44.7 +1.3**
comp=Z,61nm,0.7s
UTTA Uttaradit 42.70 251 P **P 16 17 45.2 +0.3**
comp=Z,562nmcomp=Z,59nm,0.8s
CHAI Chaiyaphum 42.89 248 P **P 16 17 46.3 -0.1**
comp=Z,1μmcomp=Z,154nm,0.7s
KMSI Cibinong 42.92 208 P **P 16 17 47.3 +0.7**
comp=Z,1μmcomp=Z,122nm,0.9s
CM34 Chiang Mai Arr 43.03 254 P **P 16 17 47.0 -0.6**
CM35 Chiang Mai Arr 43.13 253 P **P 16 17 48.0 -0.4**
LSA Lhasa 43.15 273 P **P 16 17 48.5 -0.5**
LSA S **S 16 24 11.3 -2.3**
LSA LR LR
comp=Z,7μm,18.5s
LSA LR LR
comp=Z,11μm,18.5s
LSA LR LR
comp=Z,17μm,17.4s
LSA Lhasa 43.15 273 *i* P **P 16 17 49.5 +0.5**
SNR=11
LSA Lhasa 43.15 273 IAmb IAmb 16 18 04.1
comp=Z,46nm,0.7s
PHIT Phitsanulok 43.16 251 P **P 16 17 49.0 +0.4**
comp=Z,133nm,0.8s
CM33 Chiang Mai Arr 43.20 254 P **P 16 17 48.0 -0.9**
CMMT Chiang Mai 43.20 254 P **P 16 17 48.0 -1.0**
comp=Z,332nmcomp=Z,26nm,0.8s
CHTO Chiang Mai 43.20 254 P **P 16 17 48.6 -0.4**
CHTO pmax pmax
comp=Z,29nm,0.7s
CHTO Chiang Mai 43.20 254 P **P 16 17 48.6 -0.4**
CHTO IAmb IAmb 16 17 50.0
comp=Z,29nm,0.7s
CHTO Chiang Mai 43.20 254 P **P 16 17 49.5 +0.5**
A21K Barrow 43.22 24 S 16 24 11.4
baz=257
GTOI Gorontalo 43.23 210 P **P 16 17 48.5 -0.6**
comp=Z,576nmcomp=Z,44nm,1.0s
CM36 Chiang Mai Arr 43.28 253 P **P 16 17 49.0 -0.6**
CM32 Chiang Mai Arr 43.38 254 P **P 16 17 50.0 -0.4**
CM09 Chiang Mai Arr 43.40 253 P **P 16 17 51.1 +0.5**
comp=Z,204nmcomp=Z,24nm,0.8s
CM31 Chiang Mai Arr 43.43 253 P **P 16 17 51.0 +0.2**
comp=Z,6μmcomp=Z,666nm,0.7s
CM31 Chiang Mai Arr 43.43 253 P **P 16 17 50.8 0.0**
CM31 IAmb IAmb 16 18 05.1
comp=Z,40nm,1.2s
CM31 Chiang Mai Arr 43.43 253 P **P 16 17 51.6 +0.9**
SNR=16
CMAR Chiang Mai Arr 43.43 253 P **P 16 17 51.2 +0.4**
comp=Z,12nm,0.7s,baz=45,slow=7.3,SNR=144
CMAR PcP **PcP 16 19 39.1 +0.4**
comp=Z,3.8nm,0.8s,baz=48,slow=2.0,SNR=3.4
CMAR LR LR 16 35 39.5
comp=Z,538nm,19.4s,baz=102,slow=36
CMAR Chiang Mai Arr 43.43 253 *i* P **P 16 17 51.2 +0.4**
CMAR pmax pmax
comp=Z,13nm,0.7s
CMAR Chiang Mai Arr 43.43 253 P **P 16 17 50.7 -0.1**
CM04 Chiang Mai Arr 43.44 253 P **P 16 17 51.5 +0.6**
comp=Z,219nmcomp=Z,24nm,0.8s
CM01 Chiang Mai Arr 43.44 253 P **P 16 17 51.5 +0.6**
comp=Z,176nmcomp=Z,24nm,0.9s
CM02 Chiang Mai Arr 43.44 253 P **P 16 17 51.3 +0.4**
comp=Z,175nmcomp=Z,21nm,0.8s
CM15 Chiang Mai Arr 43.45 253 P **P 16 17 51.4 +0.4**
comp=Z,163nmcomp=Z,19nm,0.8s
IMAR Indian Mountai 43.46 32 P **P 16 17 51.5 +1.1**
CM05 Chiang Mai Arr 43.46 253 P **P 16 17 51.5 +0.5**
comp=Z,163nmcomp=Z,21nm,0.8s
CM13 Chiang Mai Arr 43.48 253 P **P 16 17 51.6 +0.4**
comp=Z,161nmcomp=Z,19nm,0.7s
SUKH Sukhothai 43.55 252 P **P 16 17 52.0 +0.3**
comp=Z,894nmcomp=Z,113nm,0.7s
MK31 Makanchi Array 43.55 300*c iP* **P 16 17 51.8 +0.3**
MK31 Makanchi Array 43.55 300 P **P 16 17 51.7 +0.2**
MK31 IAmb IAmb 16 18 03.8
comp=Z,45nm,0.8s
MKAR Makanchi Array 43.55 300 P **P 16 17 52.1 +0.6**
comp=Z,42nm,0.8s,baz=84,slow=9.6,SNR=464
MKAR PcP **PcP 16 19 39.3 +0.5**
comp=Z,9.9nm,0.8s,baz=72,slow=4.7,SNR=2.0
MKAR LR LR 16 36 59.2
comp=Z,5μm,18.8s,baz=78,slow=38
MKAR Makanchi Array 43.55 300 *i* P **P 16 17 51.9 +0.4**
MKAR pmax pmax
comp=Z,42nm,0.8s
MKAR Makanchi Array 43.55 300 P P 16 17 51.6 +0.1
TOLI2 Tolitoli 43.68 213 P **P 16 17 52.6 -0.2**
TOLI2 IAmb IAmb 16 17 53.5
comp=Z,28nm,0.9s
MAKZ Makanchi 43.76 300 P **P 16 17 53.2 0.0**
MAKZ pmax pmax
comp=Z,58nm,0.8s
MAKZ Makanchi 43.76 300 P **P 16 17 53.2 0.0**
MAKZ IAmb IAmb 16 18 05.1
comp=Z,58nm,0.8s
MRSI Marisa 43.79 211 P **P 16 17 53.9 +0.3**
comp=Z,2μmcomp=Z,89nm,0.9s
RSO Redoubt South 43.82 40 P **P 16 17 54.7 +1.0**
CHUM Lake Minchumin 43.98 35 P 16 17 56.9
baz=269
CHUM S 16 24 26.7
baz=269
PPLA Purkeypile 44.03 37 P **P 16 17 57.5 +2.3**
PPLA IAmb IAmb 16 18 10.1
comp=Z,36nm,0.9s
PPLA Purkeypile 44.03 37 P 16 17 57.8
baz=270
PPLA S 16 24 27.1
baz=270
SPCR Spurr Chakacha 44.06 39 P 16 17 57.8
baz=272
SEM Semipalatinsk 44.07 305⇑*iP* **P 16 17 55.6 -0.3**
comp=Z,44nm,0.9s,baz=305
SEM *e*S **S 16 24 25.8 -0.4**
baz=305
SEM LR LR 16 35 49.3
comp=Z,796nm,14.6s,baz=305
SEM Semipalatinsk 44.07 305*c iP* **P 16 17 55.5 -0.3**
SEM *e*S **S 16 24 25.7 -0.4**
SEM pmax pmax
comp=Z,44nm,0.9s
SEM MLR MLR

comp=Z,796nm,15.0s
KDAK Kodiak Island 44.09 44 *de* P P **16 17 56.7 +1.1**
KDAK pmax pmax
comp=Z,24nm,0.9s
KDAK Kodiak Island 44.09 44 P P **16 17 55.7 +0.1**
KDAK IAmb IAmb 16 18 08.3
comp=Z,35nm,1.0s
KDAK Kodiak Island 44.09 44 P 16 17 56.6
baz=275
SRAK Srakaew 44.13 246 P P **16 17 53.0 -3.4**
comp=Z,9µmcomp=Z,1µm,0.8s
BPAW Bear Paw Mtn. 44.56 35 P 16 18 01.5
baz=270
BPAW S 16 24 35.6
baz=270
KTH Kantishna Hill 44.60 36 IAmb IAmb 16 18 14.2
comp=Z,52nm,0.9s
SHL Shillong 44.66 267 *e* P P **16 18 00.3 -0.5**
SHL Shillong 44.66 267 P P **16 18 01.6 +0.8**
SNR=13
MLY Manley 44.67 34 IAmb IAmb 16 18 14.8
comp=Z,29nm,0.8s
MLY Manley 44.67 34 P 16 18 02.6
baz=270,SNR=10.0
MLY S 16 24 37.8
baz=270
SANI Sanana 44.69 204 P P **16 18 00.0 -0.8**
comp=Z,898nmcomp=Z,91nm,1.1s
SUA Susitna One 44.75 39 IAmb IAmb 16 18 16.3
comp=Z,26nm,0.8s
SUA Susitna One 44.75 39 P 16 18 04.1
baz=273
SUA S 16 24 33.6
baz=273
LUWI Luwuk 44.86 209 P P **16 18 00.5 -1.7**
LUWI IAmb IAmb 16 18 13.3
comp=Z,49nm,0.9s
LUWI Luwuk 44.86 209 P P **16 18 00.7 -1.5**
comp=Z,822nmcomp=Z,57nm,0.8s
RABL Rabaul 44.87 167 IAmb IAmb 16 18 04.5
comp=Z,36nm,0.7s
TRF Thorofare Moun 44.88 36 IAmb IAmb 16 18 17.1
comp=Z,26nm,1.1s
TRF Thorofare Moun 44.88 36 P 16 18 04.4
baz=272
TRF S 16 24 33.9
baz=272
UMPA Umpang Tak 44.93 251 P P **16 18 04.8 +2.0**
comp=Z,603nmcomp=Z,82nm,0.8s
UTHA Uthaitani 44.93 250 P P **16 18 03.8 +0.9**
comp=Z,458nmcomp=Z,42nm,0.7s
COLD Coldfoot 44.95 30 IAmb IAmb 16 18 25.4
comp=Z,31nm,1.1s
COLD Coldfoot 44.95 30 P 16 18 04.1
baz=268
COLD S 16 24 38.6
baz=268
KURBB Kurchatov Arra 45.10 306 P P **16 18 03.8 0.0**
APSI Ampana 45.17 211 P P **16 18 04.5 -0.1**
comp=Z,946nmcomp=Z,65nm,1.2s
TOLK Toolik Lake Re 45.25 28 IAmb IAmb 16 18 26.5
comp=Z,48nm,1.1s
TOLK Toolik Lake Re 45.25 28 P 16 18 06.8
baz=267
TOLK S 16 24 41.0
baz=267
I23K Minto, Yukon-K 45.26 33 IAmb IAmb 16 18 19.4
comp=Z,49nm,1.4s
I23K Minto, Yukon-K 45.26 33 P 16 18 06.8
baz=271
RC01 Rabbit Creek A 45.26 39 P P **16 18 06.0 +1.1**
RC01 IAmb IAmb 16 18 18.1
comp=Z,38nm,0.9s
RC01 Rabbit Creek A 45.26 39 P 16 18 06.2
baz=274
RC01 S 16 24 43.2
baz=274
O22K Cooper Landing 45.32 40 P 16 18 06.6
baz=275
NEA2 Nenana 45.39 34 IAmb IAmb 16 18 32.8
comp=Z,28nm,0.8s
NEA2 Nenana 45.39 34 P 16 18 07.9
baz=272
NEA2 S 16 24 46.4
baz=272
MCK McKinley 45.48 35 IAmb IAmb 16 18 28.1
comp=Z,30nm,1.1s
MCK McKinley 45.48 35 P 16 18 08.0
baz=272
MCK S 16 24 45.6
baz=272
PMR Palmer 45.52 38 P P **16 18 07.8 +0.9**
PMR pmax pmax
comp=Z,28nm,1.1s
PMR Palmer 45.52 38 P P **16 18 07.8 +0.9**
PMR IAmb IAmb 16 18 23.4
comp=Z,28nm,1.1s
PMR Palmer 45.52 38 P 16 18 08.0
baz=274
GHO Glory Hole Cre 45.60 38 IAmb IAmb 16 18 27.6
comp=Z,39nm,0.8s
WAT2 Susitna Watana 45.68 36 P 16 18 09.3
baz=274
PATY Pattaya 45.71 246 P P **16 18 10.0 +1.0**
MDM Murphy Dome 45.74 34 P P **16 18 09.9 +1.2**
MDM IAmb IAmb 16 18 23.0
comp=Z,43nm,1.1s
SML Sawmill 45.88 38 P 16 18 11.0
baz=275
TCOL CIGO, UAF Yank 45.90 34 S 16 24 56.0
baz=272
COLA College 45.91 34 ⇓ *e* P P **16 18 11.8 +1.9**
COLA pmax pmax
comp=Z,23nm,0.9s
KHLT Khaolaem Dam 46.05 250 P P **16 18 11.9 +0.2**
comp=Z,23nm,0.9s
POKR Poker Plat Res 46.07 33 P 16 18 13.4
baz=272
POKR S 16 24 57.3
baz=272
WAT6 Susitna Watana 46.09 37 P 16 18 12.9
baz=275
WAT6 S 16 24 54.7
baz=275
HDA Harding Lake 46.32 34 P 16 18 14.3
baz=274,SNR=7.9
HDA P 16 18 14.3
baz=274,SNR=7.9
IL31 46.32 34 P P **16 18 14.0 +0.8**
IL31 IAmb IAmb 16 18 26.7
comp=Z,28nm,0.8s
ILAR Eielson Array 46.32 34 P P **16 18 14.3 +1.1**
comp=Z,5.4nm,0.8s,baz=260,slow=5.7,SNR=34
ILAR LR LR 16 39 55.2
comp=Z,721nm,19.2s,baz=290,slow=39
ILAR PKP2bc 16 50 08.8
comp=Z,1.2nm,0.8s,baz=106,slow=6.5,SNR=10.0
SCM Sheep Creek Mo 46.35 38 IAmb IAmb 16 18 29.7
comp=Z,46nm,0.9s
PDGK Podgornoye 46.44 296 P P **16 18 14.3 -0.3**
SHLS Shalkode 46.51 296 ⇑ *i* P P **16 18 13.1 -2.1**
comp=Z,27nm,0.6s,baz=295
SHLS *e* S S **16 24 57.7 -3.6**
baz=295
SHLS LR LR 16 37 18.4
comp=Z,976nm,13.5s,baz=295
SHLS Shalkode 46.51 296 *c i* P P **16 18 13.1 -2.1**
SHLS *e* S S **16 24 57.7 -3.6**
SHLS pmax pmax
comp=Z,27nm,0.6s
SHLS MLR MLR
comp=Z,976nm,14.0s
GLI Glacier Island 46.56 39 P 16 18 16.3
baz=277
GLI S 16 25 03.3
baz=277
PHET Kaeng Krachan 46.59 247 P P **16 18 17.0 +1.2**
comp=Z,1µmcomp=Z,201nm,0.8s
SBUM Sibu 46.63 225 P P **16 18 17.0 +0.8**
TDK Taldyqorghan 46.65 298 *i* P P **16 18 17.1 +0.9**
comp=Z,76nm,0.7s,baz=298
TDK LR LR 16 36 55.7
comp=Z,3µm,17.9s,baz=298
TDK Taldyqorghan 46.65 298 *i* P P **16 18 17.0 +0.9**
TDK pmax pmax
comp=Z,76nm,0.7s
TDK MLR MLR
comp=Z,3µm,18.0s

UZB Uzynbulak 46.82 296 ⇑ *i* P P **16 18 17.9 +0.2**
comp=Z,18nm,0.8s,baz=296
UZB *e* S S **16 25 06.0 +0.2**
baz=296
UZB Uzynbulak 46.82 296 *c i* P P **16 18 17.8 +0.2**
UZB *e* S S **16 25 06.0 +0.2**
UZB pmax pmax
comp=Z,18nm,0.8s
PRP Porcupine Dome 46.85 33 IAmb IAmb 16 18 42.3
comp=Z,36nm,0.8s
PRP Porcupine Dome 46.85 33 P 16 18 19.2
baz=274
PRP S 16 25 06.9
baz=274
FYU Fort Yukon 46.91 31 IAmb IAmb 16 18 32.9
comp=Z,36nm,0.8s
KPKS Kokpek 46.95 296 ⇑ *i* P P **16 18 19.1 +0.6**
comp=Z,50nm,1.0s,baz=296
KPKS Kokpek 46.95 296 *c i* P P **16 18 19.1 +0.6**
KPKS pmax pmax
comp=Z,50nm,1.0s
KLU Klutina 47.05 38 P P **16 18 20.1 +1.0**
KLU IAmb IAmb 16 18 35.1
comp=Z,42nm,1.0s
KLU Klutina 47.05 38 P 16 18 20.6
baz=277
KLU S 16 25 09.2
baz=277
BMAR Burnt Mountain 47.12 30 P P **16 18 21.1 +1.5**
EYAK Cordova Ski Ar 47.26 40 S 16 25 15.8
baz=278
SATY Saty 47.27 296 ⇑ *i* P P **16 18 21.7 +0.6**
comp=Z,19nm,0.9s,baz=296
SATY Saty 47.27 296 *c i* P P **16 18 21.7 +0.6**
SATY pmax pmax
comp=Z,19nm,0.9s
PRZ Przheval'sk 47.47 295 P P **16 18 23.8 +1.0**
PRZ pmax pmax
comp=Z,73nm,0.9s
PRZ Przheval'sk 47.47 295 P P **16 18 23.8 +1.0**
BKB Balikpapan 47.50 216 P P **16 18 21.9 -1.1**
comp=Z,2µmcomp=Z,162nm,1.4s
SCRK Sand Creek 47.65 35 IAmb IAmb 16 18 37.1
comp=Z,34nm,0.8s
SCRK Sand Creek 47.65 35 P 16 18 24.8
baz=276,SNR=11
SCRK S 16 25 17.3
baz=276
DOT Dot Lake 47.65 35 IAmb IAmb 16 18 38.4
comp=Z,13nm,0.7s
N25K Chitina, Valde 47.67 38 S 16 25 20.3
baz=278
BMRM Bremner River 47.76 39 P 16 18 26.2
baz=279
BMRM S 16 25 21.0
baz=279
MENT Mentasta 47.89 36 IAmb IAmb 16 18 43.5
comp=Z,38nm,1.0s
MTKI Muara Teweh, K 48.16 219 P P **16 18 28.5 +0.4**
comp=Z,3µmcomp=Z,79nm,0.9s
MDOK Medeo 48.17 296 *i* P P **16 18 29.0 +0.8**
baz=296
MDOK *e* S S **16 25 25.5 +0.4**
baz=296
MDOK LR LR 16 36 55.7
comp=Z,3µm,16.5s,baz=296
MDOK Medeo 48.17 296 *i* P P **16 18 28.9 +0.8**
MDOK *e* S S **16 25 25.4 +0.4**
MDOK MLR MLR
comp=Z,3µm,16.0s
AAA Alma-Ata 48.25 296 ⇑ *i* P P **16 18 29.6 +1.0**
comp=Z,54nm,0.7s,baz=296
AAA Alma-Ata 48.25 296 *c i* P P **16 18 29.6 +1.0**
AAA pmax pmax
comp=Z,54nm,0.7s
VRDI Verde Repeater 48.27 38 P P **16 18 29.6 +0.9**
VRDI IAmb IAmb 16 18 42.8
comp=Z,26nm,1.0s
TNSS Tian-Shan 48.29 296 ⇑ *e* P P **16 18 30.3 +1.0**
baz=296
TNSS Tian-Shan 48.29 296 ⇑ *e* P P **16 18 30.3 +1.0**
MCARA McCarthy VSAT 48.45 38 P 16 18 31.4
baz=280
MCARA S 16 25 29.8
baz=280
K27K Chicken 48.48 35 P P **16 18 31.1 +1.1**
K27K IAmb IAmb 16 18 45.4
comp=Z,26nm,0.9s
K27K Chicken 48.48 35 P 16 18 32.0
baz=278
K27K S 16 25 30.0
baz=278
KSM Kuching 48.49 226 IAmb IAmb 16 18 32.5
comp=Z,23nm,0.8s
KSM Kuching 48.49 226 P P **16 18 31.0 +0.4**
CRQE Cirque 48.52 39 P 16 18 32.6
baz=280
SPSI Sidrap Palu 48.70 211 P P **16 18 32.7 +0.5**
comp=Z,39nm,1.2s
L27K Beaver Creek, 48.73 36 P 16 18 34.5
baz=279,SNR=11
L27K S 16 25 34.0
baz=279
EGAK Eagle 48.76 34 IAmb IAmb 16 18 53.9
comp=Z,36nm,0.8s
EGAK Eagle 48.76 34 P 16 18 33.0
baz=278
BNSI Bone 48.96 211 P P **16 18 34.9 +0.7**
comp=Z,877nmcomp=Z,64nm,1.2s
STKI Sintang 49.03 224 P P **16 18 34.8 0.0**
comp=Z,22nm,1.2s
ULHL Ulahol 49.05 296 P P **16 18 35.7 +0.7**
SNR=5.7
BARN Barnard Glacie 49.16 38 IAmb IAmb 16 19 02.8
comp=Z,25nm,1.0s
BOOM Boomskoye usch 49.17 296 P P **16 18 36.8 +0.9**
BOOM pmax pmax
comp=Z,107nm,0.8s
BOOM Boomskoye usch 49.17 296 P P **16 18 36.8 +0.9**
GRNC Granite Creek 49.17 39 IAmb IAmb 16 18 54.5
comp=Z,28nm,0.8s
TKM2 Tokmak 2 49.25 297 P P **16 18 37.5 +1.0**
SNR=256
TKM2 Tokmak 2 49.25 297 P P **16 18 37.3 +0.8**
CTG Chitna Glacier 49.33 39 P 16 18 38.4
baz=281
CTGM Chitina Glacie 49.33 39 IAmb IAmb 16 19 04.6
comp=Z,34nm,1.0s
BRVK Borovoye 49.48 311 *c i* P P **16 18 38.5 +0.7**
BRVK pmax pmax
comp=Z,60nm,0.7s
BRVK Borovoye 49.48 311 P P **16 18 38.3 +0.4**
BRVK Borovoye 49.48 311 P P **16 18 38.8 +1.0**
BRVK P P **16 18 38.8 +1.0**
BTLS Baital 49.56 300 *i* P P **16 18 38.5 -0.1**
comp=Z,11nm,0.6s,baz=300
BTLS *e* S S **16 25 44.0 -0.2**
baz=300
BTLS Baital 49.56 300 *i* P P **16 18 38.5 -0.1**
BTLS *e* S S **16 25 44.0 -0.2**
BTLS pmax pmax
comp=Z,11nm,0.6s
KAPI Kappang 49.66 211 P P **16 18 39.1 -0.4**
KAPI pmax pmax
comp=Z,120nm,1.5s
KAPI Kappang 49.66 211 P P **16 18 39.1 -0.4**
SGDS Sogindy 49.73 298 ⇑ *i* P P **16 18 40.4 +0.4**
comp=Z,19nm,0.9s,baz=298
SGDS *e* S S **16 25 47.2 +0.5**
baz=298
SGDS Sogindy 49.73 298 *c i* P P **16 18 40.3 +0.4**
SGDS *e* S S **16 25 47.2 +0.5**
SGDS pmax pmax
comp=Z,19nm,0.9s
KBK Karagaybulak 49.80 296 P P **16 18 41.5 +0.9**
SNR=9.2
CHMS Chumysh 49.81 297 P P **16 18 41.0 +0.5**
SNR=21
USP Ospenovka 49.88 297 P P **16 18 41.7 +0.6**
SNR=36
SURT Suratani 49.93 244 P P **16 18 43.5 +1.9**
comp=Z,3.5nm,1.1s
PINM Pinnacle 50.04 40 S 16 25 50.3
baz=283
AAK Ala-Archa 50.11 297 LR LR 16 40 55.6
comp=Z,4µm,20.6s,baz=78,slow=37
AAK Ala-Archa 50.11 297 P P **16 18 43.6 +0.6**
SNR=48
AAK Ala-Archa 50.11 297 *i* P P **16 18 43.3 +0.3**
SNR=55
AAK Ala-Archa 50.11 297 P P **16 18 43.0 0.0**
AAK pmax pmax
comp=Z,36nm,0.7s
AAK Ala-Archa 50.11 297 P P **16 18 43.0 0.0**
AAK Ala-Archa 50.11 297 P P **16 18 43.7 +0.7**
AAK P P **16 18 43.7 +0.7**
TRTT Trang 50.12 242 P P **16 18 43.0 -0.2**
comp=Z,42nm,1.0s
KRAB Krabi 50.18 243 P P **16 18 45.0 +1.4**
comp=Z,14µmcomp=Z,1µm,0.8s
UCH Uchtor 50.25 296 P P **16 18 45.2 +0.8**
SNR=33
KSH Kashi 50.27 292 ⇑ *i* P P **16 18 48.5 +4.3**
KSH pP sP 16 18 59.8 +2.1
KSH PP **PP** **16 20 45.5 +5.9**
KSH S S **16 25 58.5 +4.0**
KSH sS sS 16 26 17.0 +6.1
KSH pmax pmax
comp=Z,43nm,0.8s
KSH pmax pmax
comp=Z,480nm,3.1s
KSH LR LR
comp=Z,4µm,9.0s
KSH LR LR
comp=Z,4µm,11.1s
KSH LR LR
comp=Z,8µm,8.3s
EPYK Eagle Plains 50.33 31 IAmb IAmb 16 18 58.9
comp=Z,35nm,0.9s
EPYK Eagle Plains 50.33 31 P 16 18 46.2
baz=281
EPYK S 16 25 56.0
baz=281
BBKI Banjar Baru 50.39 218 P P **16 18 44.7 -0.4**
comp=Z,37nm,1.3s
EKS2 Erkin-Say 50.60 297 P P **16 18 47.2 +0.6**
SNR=114
AML Almayashu 50.85 296 P P **16 18 49.9 +1.1**
SNR=5.6
PKDT Phuket 51.01 243 P P **16 18 50.4 +0.5**
INK Inuvik 51.16 28 LR LR 16 45 26.7
comp=Z,530nm,18.4s,baz=280,slow=42
INK Inuvik 51.16 28 IAmb IAmb 16 19 04.6
comp=Z,22nm,0.8s
INK Inuvik 51.16 28 P 16 18 51.8
baz=282
INK S 16 25 58.7
baz=282
HYT Haines Junctio 51.19 38 P P **16 18 52.8 +2.1**
DGPR DIGLIPUR 51.24 253 *e* P P **16 18 52.5 +1.0**
KULM Kulim 51.36 239 IAmb IAmb 16 18 54.4
comp=Z,53nm,1.1s
KULM Kulim 51.36 239 P P **16 18 53.0 +0.6**
IPM Ipoh 51.72 238 IAmb IAmb 16 18 56.3
comp=Z,37nm,1.0s
IPM Ipoh 51.72 238 P P **16 18 55.0 -0.2**
MYKOM Kota Tinggi 52.00 233 IAmb IAmb 16 18 58.7
comp=Z,16nm,0.7s
MYKOM Kota Tinggi 52.00 233 P P **16 18 58.0 +0.8**
PBA Port Blair 52.38 252 *e* P P 16 18 59.9 -0.1
PBA IAmb IAmb 16 19 11.2
comp=Z,38nm,0.8s
WHY Whitehorse 52.47 38 IAmb IAmb 16 19 15.1
comp=Z,19nm,0.9s
WHY Whitehorse 52.47 38 P 16 19 02.4
baz=287
SOEI Soe 52.49 203 P P **16 19 00.8 -0.1**
comp=Z,97nm,0.9s
KK31 Karatay Array 52.65 299 P P **16 19 01.9 +0.1**
KK31 pmax pmax
comp=Z,58nm,1.0s
KK31 Karatay Array 52.65 299 P P **16 19 01.9 +0.1**
DDI Dehra Dun 52.82 281 *e* P P **16 18 59.1 -4.2**
DDI IAmb IAmb 16 19 02.8
comp=Z,29nm,0.4s
SMLA Simla 53.10 282 *e* P P **16 19 05.4 +0.2**
DHRM DHARAMSHALA 53.21 284 *e* P P **16 19 05.2 -1.1**
DHRM IAmb IAmb 16 19 09.1
comp=Z,98nm,0.6s
DRK Karamyk 53.23 294 P P **16 19 07.1 +0.6**
IUG Iuzhnay 53.35 298 ⇑ *i* P P **16 19 07.8 +0.6**
baz=298
IUG Iuzhnay 53.35 298 *c i* P P **16 19 07.7 +0.6**
TPI Tanjungpandan 53.46 226 P P **16 19 08.6 +0.6**
comp=Z,476nmcomp=Z,35nm,1.0s
CHM Chimkent 53.57 298 ⇑ *i* P P **16 19 09.1 +0.5**
comp=Z,11nm,0.9s,baz=298
CHM Chimkent 53.57 298 *c i* P P **16 19 09.1 +0.5**
CHM pmax pmax
comp=Z,11nm,0.9s
SVE Sverdlovsk 53.66 317 *d i* P P **16 19 10.2 +1.2**
SVE pmax pmax
comp=Z,108nm,0.8s
SVE MLR MLR
comp=E,6µm,16.0s
SVE MLR MLR
comp=Z,8µm,16.0s
BTK Batken 53.67 295 IAmb IAmb 16 19 24.9
comp=Z,38nm,0.9s
COEN Coen 53.75 180 P P **16 19 10.5 +0.5**
COEN IAmb IAmb 16 19 23.9
comp=Z,16nm,0.8s
MTN Manton Dam 53.77 194 P P **16 19 09.8 -0.3**
TAS Tashkent 54.19 297 P P **16 19 13.6 +0.4**
TAS pmax pmax
comp=Z,86nm,0.8s
TAS Tashkent 54.19 297 P P **16 19 13.6 +0.4**
C36M Paulatuk 54.19 26 IAmb IAmb 16 19 26.4
comp=Z,23nm,0.9s
C36M Paulatuk 54.19 26 P 16 19 13.9
baz=289
TWSI Taliwang, Sumb 54.20 212 P P **16 19 12.1 -1.2**
comp=Z,879nmcomp=Z,19nm,1.0s
PSI Prapat 54.35 239 LR LR 16 45 26.5
comp=Z,595nm,18.1s,baz=86,slow=39
RPSI Rantau Prapat 54.43 238 IAmb IAmb 16 19 15.9
comp=Z,32nm,0.9s
ARU Arti 54.88 317 *c i* P P **16 19 18.5 +0.6**
ARU *PP **sP** **16 19 29.3 -2.0**
ARU 16 20 17.7
ARU 16 21 20.7
ARU PPP PPP 16 22 30.3
ARU S S **16 26 57.9 +1.2**
ARU *SS sS 16 27 21.2 +9.0
ARU SS SS **16 30 34.0 -5.7**
ARU pmax pmax
comp=Z,197nm,1.6s
ARU MLR MLR
comp=Z,8µm,16.0s
ARU Arti 54.88 317 P P **16 19 18.1 +0.3**
BKNI Bangkinang 54.88 235 P P **16 19 19.0 +0.6**
comp=Z,2µmcomp=Z,252nm,0.9s
MNSI Mandailing Nat 55.45 236 P P **16 19 22.4 -0.1**
comp=Z,17nm,0.9s
SDSI Sungai Dareh 55.62 233 P P **16 19 23.8 +0.1**
comp=Z,2µmcomp=Z,177nm,0.9s
SMRI Semarang 55.63 220 P P **16 19 23.8 +0.1**
comp=Z,70nm,1.0s
LHSI Lahat 56.67 229 P P **16 19 31.6 +0.4**
comp=Z,2µmcomp=Z,96nm,1.0s
MDSI Maura Dua 56.83 228 P P **16 19 32.0 -0.3**
comp=Z,722nmcomp=Z,49nm,1.3s
AB31 Akbulak array 56.90 309 *i* P P **16 19 32.6 +0.2**
ABKAR Akbulak array 56.90 309 P P **16 19 32.6 +0.2**
ABKAR Akbulak array 56.90 309 IAmb IAmb 16 19 33.5
comp=Z,54nm,0.7s
BHPL Bhopal 56.99 274 *e* P P **16 19 32.3 -1.3**
BHPL IAmb IAmb 16 19 44.0
comp=Z,61nm,1.2s
EUNU Eureka 57.01 9 IAmb IAmb 16 19 52.3
comp=Z,25nm,0.7s
HOPEN Hopen 57.38 346 *e* P P **16 19 36.6 +1.2**
KBL Kabul 57.44 290 P P **16 19 36.4 -0.4**
KBL pmax pmax
comp=Z,199nm,0.9s
KBL Kabul 57.44 290 P P **16 19 36.4 -0.4**
AKTO Aktyubinsk 57.53 311 P P **16 19 36.8 -0.1**
KBS Kingsbay 57.87 350 ⇑ *i* P P **16 19 40.4 +1.6**
KBS IAmb IAmb 16 19 41.2
comp=Z,80nm,0.8s
KBS Kingsbay 57.87 350 *c i* P P **16 19 40.2 +1.4**
KBS pmax pmax
comp=Z,45nm,2.5s

KBS	**Kingsbay**	**57.87**	**350**	P	**P**	**16 19 40.1**	**+1.2**
KBS				IAmb	IAmb	16 19 41.5	
	comp=Z,29nm,0.8s						
KBS	**Kingsbay**	**57.87**	**350**	*e*P	**P**	**16 19 40.2**	**+1.4**
NOR	**Nord**	**58.09**	**357**	⇑*i*P	**P**	**16 19 41.2**	**+0.8**
NOR				IAmb	IAmb	16 19 42.0	
	comp=Z,13nm,0.7s						
NOR	**Nord**	**58.09**	**357**	*e*	P	16 19 47.7	+7.3
	baz=314,slow=7.9						
NOR				*i* P	pP	16 19 49.7	-0.5
NOR				IAML		16 20 20.8	
	comp=Z,1.4nm,0.4s						
KIRV	**Kirov**	**58.54**	**322**	*c i*P	**P**	**16 19 44.5**	**+0.7**
HSPB	**Hornsund (broa**	**58.72**	**348**	*e*P	**P**	**16 19 46.0**	**+1.1**
HSPB				*e*L	L	16 46 52.0	
	comp=Z,946nm,21.2s						
HSPB	**Hornsund (broa**	**58.72**	**348**	*e*P	**P**	**16 19 45.9**	**+1.1**
BBB	**Bella Bella**	**59.10**	**46**	LR	LR	16 42 19.2	
	comp=Z,262nm,21.1s,baz=300,slow=33						
RES	**Resolute Bay**	**59.37**	**15**	LR	LR	16 48 31.1	
	comp=Z,647nm,20.3s,baz=324,slow=39						
RES	**Resolute Bay**	**59.37**	**15**	IAmb	IAmb	16 20 16.4	
	comp=Z,22nm,0.7s						
HYB	**Hyderabad**	**59.46**	**268**	*i* P	**P**	**16 19 50.0**	**-0.9**
HYB				*e*PcP	**PcP**	**16 20 38.0**	**-0.3**
HYB	**Hyderabad**	**59.46**	**268**	*e*P	**P**	**16 19 48.8**	**-2.1**
HYB				IAmb	IAmb	16 19 50.5	
	comp=Z,25nm,0.6s						
LVZ	**Lovozero**	**59.82**	**335**	⇑*e*P	**P**	**16 19 55.0**	**+2.4**
LVZ				pmax	pmax		
	comp=Z,27nm,1.0s						
FITZ	**Fitzroy Crossi**	**60.06**	**199**	P	**P**	**16 19 54.7**	**0.0**
WRAB	**Tennant Creek**	**60.22**	**189**	*c i*P	**P**	**16 19 54.8**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**60.22**	**189**	P	**P**	**16 19 54.2**	**-1.6**
WRA	**Warramunga Arr**	**60.23**	**189**	P	**P**	**16 19 55.1**	**-0.8**
	comp=Z,15nm,0.8s,baz=7.1,slow=7.0,SNR=96						
WRA				LR	LR	16 44 54.3	
	comp=Z,561nm,21.9s,baz=25,slow=35						
WRA				PKP2bc		16 49 29.5	
	comp=Z,1.6nm,0.8s,baz=207,slow=1.8,SNR=8.0						
WRA	**Warramunga Arr**	**60.23**	**189**	*i* P	**P**	**16 19 55.0**	**-0.9**
WRA				pmax	pmax		
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**60.23**	**189**	P	**P**	**16 19 54.1**	**-1.8**
APA	**Apatity**	**60.40**	**335**	*i* P	**P**	**16 19 55.4**	**-1.1**
APA				*i*		16 20 50.0	
APA				*i* PPP	PPP	16 23 36.0	
APA				*i* S	**S**	**16 28 03.0**	**-5.7**
APA				*i* PS	**PnS**	**16 28 19.0**	**-5.7**
APA				*i*		16 29 44.0	
APA				*i* SS	**SS**	**16 32 06.0**	**0.0**
APA				*i* SSS	SSS	16 34 45.0	
APA				MLR	MLR		
	comp=Z,2μm,15.0s						
YKA	**Yellowknife Ar**	**60.61**	**31**	P	**P**	**16 19 58.8**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=302,slow=6.0,SNR=18						
YKA				LR	LR	16 50 09.4	
	comp=Z,381nm,19.6s,baz=0.0,slow=40						
MDRS	**Chennai**	**60.81**	**262**	⇑*e*P	**P**	**16 20 00.1**	**0.0**
KEV	**Kevo**	**61.02**	**339**	P	**P**	**16 20 01.1**	**+0.4**
KEV				pmax	pmax		
	comp=Z,25nm,0.8s						
KEV	**Kevo**	**61.02**	**339**	P	**P**	**16 20 01.1**	**+0.4**
KEV				IAmb	IAmb	16 20 02.0	
	comp=Z,25nm,0.8s						
HAMF	**Hammerfest**	**61.34**	**341**	*e*P	**P**	**16 20 02.9**	**+0.1**
ARA0	**ARCESS Array S**	**61.57**	**339**	*e*P	**P**	**16 20 05.5**	**+1.0**
ARCES	**ARCESS Array B**	**61.57**	**339**	P	**P**	**16 20 05.1**	**+0.7**
	comp=Z,6.5nm,0.6s,baz=48,slow=7.8,SNR=47						
ARCES				LR	LR	16 50 15.7	
	comp=Z,964nm,20.8s,baz=55,slow=39						
ARCES	**ARCESS Array B**	**61.57**	**339**	P	**P**	**16 20 04.6**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,16nm,1.1s						
ARCES	**ARCESS Array B**	**61.57**	**339**	P	**P**	**16 20 04.6**	**+0.2**
ARCES				IAmb	IAmb	16 20 18.8	
	comp=Z,16nm,1.1s						
KLMR	**Klimovskoe**	**61.82**	**327**	*e*P	**P**	**16 20 04.4**	**-1.8**
KLMR				*e*		16 22 20.9	
KLMR				*e*S	**S**	**16 28 26.0**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,54nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,2μm,17.0s						
KLMR	**Klimovskoe**	**61.82**	**327**	*e*P	**P**	**16 20 04.5**	**-1.8**
KLMR				AMP		16 20 19.0	
	comp=Z,54nm,1.0s						
KLMR				*e*PP	**PP**	**16 22 21.0**	**-1.0**
KLMR				*e*S	**S**	**16 28 26.1**	**-0.9**
KLMR				*e*S	**S**	**16 28 26.1**	**-0.9**
KLMR				LQ	LQ	16 42 03.7	
KLMR				LQ	LQ	16 42 03.7	
KLMR				LR	LR	16 46 28.5	
KLMR				AMP		16 49 09.5	
	comp=Z,2μm,17.4s						
TULEG	**Thule**	**61.94**	**8**	⇑*i*P	**P**	**16 20 07.1**	**+0.3**
TULEG				IAmb	IAmb	16 20 08.2	
	comp=Z,21nm,0.8s						
HRA	**Herat**	**62.38**	**293**	P	**P**	**16 20 10.5**	**-0.2**
HRA				IAmb	IAmb	16 20 12.1	
	comp=Z,20nm,0.8s						
BELG	**Belogornoye**	**62.38**	**316**	*c i*P	**P**	**16 20 10.7**	**+0.6**
BELG				pmax	pmax		
	comp=Z,20nm,0.8s						
POO	**Poona**	**62.42**	**272**	*e*P	**P**	**16 20 10.9**	**0.0**
POO				IAmb	IAmb	16 20 23.0	
	comp=Z,93nm,1.2s						
NEEM	**North Greenlan**	**62.44**	**3**	⇑*i*P	**P**	**16 20 11.3**	**+0.8**
NEEM				IAmb	IAmb	16 20 12.6	
	comp=Z,32nm,0.9s						
DAG	**Danmarks Havn**	**62.85**	**355**	⇑*i*P	**P**	**16 20 13.5**	**+0.6**
DAG				IAmb	IAmb	16 20 14.4	
	comp=Z,32nm,0.9s						
DAG	**Danmarks Havn**	**62.85**	**355**	⇑*i*P	**P**	**16 20 13.4**	**+0.6**
DAG				pmax	pmax		
	comp=Z,32nm,0.9s						
JETT	**Jettan, Norway**	**62.90**	**341**	*e*P	**P**	**16 20 14.2**	**+0.9**
TRO	**Tromso**	**63.22**	**341**	*e*P	**P**	**16 20 16.2**	**+0.8**
GEYT	**Alibeck**	**63.40**	**298**	P	**P**	**16 20 17.6**	**+0.4**
	comp=Z,32nm,0.8s,baz=29,slow=3.4,SNR=53						
GEYT				LR	LR	16 49 52.2	
	comp=Z,1μm,18.4s,baz=355,slow=38						
GEYT	**Alibeck**	**63.40**	**298**	P	**P**	**16 20 17.0**	**-0.2**
GEYT				IAmb	IAmb	16 20 18.6	
	comp=Z,28nm,0.8s						
ASAR	**Alice Springs**	**63.96**	**189**	P	**P**	**16 20 20.6**	**-0.3**
	comp=Z,7.6nm,0.8s,baz=7.3,slow=5.7,SNR=77						
ASAR				LR	LR	16 47 20.2	
	comp=Z,564nm,21.9s,baz=2.0,slow=35						
ASAR				PKP2bc		16 49 15.2	
	comp=Z,0.8nm,0.8s,baz=189,slow=4.9,SNR=6.6						
ASAR	**Alice Springs**	**63.96**	**189**	P	**P**	**16 20 20.1**	**-0.7**
ASAR	**Alice Springs**	**63.96**	**189**	P	**P**	**16 20 20.1**	**-0.7**
PALK	**Pallekele**	**64.16**	**257**	P	**P**	**16 20 22.1**	**-0.4**
PALK				pmax	pmax		
	comp=Z,21nm,1.2s						
PALK	**Pallekele**	**64.16**	**257**	P	**P**	**16 20 22.1**	**-0.4**
PALK				IAmb	IAmb	16 20 23.3	
	comp=Z,21nm,1.1s						
PALK	**Pallekele**	**64.16**	**257**	P	**P**	**16 20 23.0**	**+0.5**
PALK				P	**P**	**16 20 23.0**	**+0.5**
GOA	**Goa**	**64.24**	**269**	*e*P	**P**	**16 20 23.4**	**+0.4**
MBWA	**Marble Bar**	**64.63**	**204**	P	**P**	**16 20 25.1**	**-0.1**
MBWA				P	**P**	**16 20 25.1**	**-0.1**
PSA00	**Pilbara Seismi**	**64.98**	**204**	P	**P**	**16 20 27.0**	**-0.6**
E04D	**Cinebar**	**65.03**	**49**	P		16 20 30.6	
	baz=303						
DBG	**Daneborg**	**65.34**	**355**	⇑*i*P	**P**	**16 20 29.7**	**+0.5**
DBG				IAmb	IAmb	16 20 30.6	
	comp=Z,32nm,1.6s						
STEI	**Steigen**	**65.38**	**341**	*e*P	**P**	**16 20 30.1**	**+0.5**
MOS	**Moscow**	**65.51**	**323**	*e*P	**P**	**16 20 29.6**	**-1.0**
MOS				*e*		16 22 54.4	
MOS				*e*S	**S**	**16 29 08.0**	**-4.9**
MOS				pmax	pmax		
	comp=Z,102nm,1.5s						
MOS				MLR	MLR		
	comp=Z,3μm,16.0s						
MOS				MLR	MLR		
	comp=N,2μm,14.0s						
MOS				MLR	MLR		
	comp=E,2μm,16.0s						
DZM	**Mont Dzumac**	**65.61**	**156**	*e*P	**P**	**16 20 33.3**	**+1.6**
	comp=E,92nm,1.1s						
DZM				*e*S	**S**	**16 29 18.4**	**+3.4**
	comp=E,319nm,32.3s						
DZM	**Mont Dzumac**	**65.61**	**156**	*e*LR	LR	16 40 24.7	
	comp=E,2μm,21.8s						
DZM	**Mont Dzumac**	**65.61**	**156**	P	**P**	**16 20 32.8**	**+1.1**
	comp=E,9.2nm,0.8s,baz=130,slow=18,SNR=2.6						
LOF	**Lofoten**	**65.65**	**341**	*e*P	**P**	**16 20 32.5**	**+1.2**
N2TV	**TYrnvik**	**65.68**	**341**	*e*P	**P**	**16 20 31.9**	**+0.4**
NBB08	**Skaug oppvekst**	**65.94**	**341**	*e*P	**P**	**16 20 33.3**	**+0.1**
N2SV	**S_rvÅgen**	**65.97**	**341**	*e*P	**P**	**16 20 32.8**	**-0.6**
VRH	**Novokhopyorsk**	**66.11**	**318**	*e*P	**P**	**16 20 34.6**	**0.0**
VRH				*e**SP	**sP**	**16 20 47.2**	**-1.1**
VRH				pmax	pmax		
	comp=Z,110nm,0.6s						
VRH				MLR	MLR		
	comp=Z,7μm,16.0s						
PUL	**Pulkovo**	**66.17**	**329**	⇓*e*P	**P**	**16 20 35.8**	**+1.0**
PUL				pmax	pmax		
	comp=Z,58nm,0.7s						
MSVF	**Nonsavu**	**66.19**	**143**	P	**P**	**16 20 36.0**	**+0.6**
	comp=Z,5.2nm,0.8s,baz=53,slow=15,SNR=2.0						
MSVF	**Nonsavu**	**66.19**	**143**	P	**P**	**16 20 36.7**	**+1.2**
MSVF				pmax	pmax		
	comp=Z,37nm,1.1s						
MSVF	**Nonsavu**	**66.19**	**143**	P	**P**	**16 20 36.7**	**+1.2**
MSVF				IAmb	IAmb	16 20 50.4	
	comp=Z,37nm,1.1s						
N2VA	**Vr_y**	**66.22**	**341**	*e*P	**P**	**16 20 35.3**	**+0.4**
H04A	**Detroit Lake**	**66.28**	**51**	IAmb	IAmb	16 20 52.5	
	comp=Z,16nm,0.9s						
OBN	**Obninsk**	**66.36**	**323**	P	**P**	**16 20 36.0**	**-0.1**
I04A	**Tendick Farm,**	**66.63**	**52**	P		16 20 40.4	
	baz=304						
UPNV	**Upernavik**	**66.67**	**6**	*i* P	**P**	**16 20 37.9**	**+0.1**
UPNV				IAmb	IAmb	16 20 39.1	
	comp=Z,23nm,1.2s						
FINES	**FINESS Array B**	**66.67**	**332**	P	**P**	**16 20 38.5**	**+0.6**
	comp=Z,44nm,0.7s,baz=53,slow=6.2,SNR=100						
FINES				LR	LR	16 52 14.3	
	comp=Z,3μm,19.0s,baz=46,slow=38						
FINES	**FINESS Array B**	**66.67**	**332**	*i* P	**P**	**16 20 38.4**	**+0.4**
FINES				pmax	pmax		
	comp=Z,44nm,0.7s						
LPSR	**Galich'ya Gora**	**66.72**	**320**	*e*P	**P**	**16 20 39.0**	**+0.6**
LPSR				*e**SP	**sP**	**16 20 50.7**	**-1.4**
LPSR				pmax	pmax		
	comp=Z,90nm,0.7s						
LPSR				MLR	MLR		
	comp=Z,3μm,14.0s						
C09A	**Chrisman Ranch**	**66.79**	**46**	IAmb	IAmb	16 20 56.4	
	comp=Z,19nm,1.0s						
D08A	**Wollman Farm,**	**66.85**	**47**	IAmb	IAmb	16 20 54.7	
	comp=Z,12nm,0.8s						
VORR	**Voronezh**	**67.13**	**319**	*e*P	**P**	**16 20 40.0**	**-1.0**
VORR				pmax	pmax		
	comp=Z,250nm,1.6s						
NEW	**Newport**	**67.16**	**46**	LR	LR	16 46 02.7	
	comp=Z,245nm,21.2s,baz=320,slow=32						
NEW	**Newport**	**67.16**	**46**	P	**P**	**16 20 42.4**	**+1.0**
NEW				pmax	pmax		
	comp=Z,24nm,1.4s						
NEW	**Newport**	**67.16**	**46**	P	**P**	**16 20 42.4**	**+1.0**
NEW				IAmb	IAmb	16 21 03.0	
	comp=Z,24nm,1.4s						
NEW	**Newport**	**67.16**	**46**	P		16 20 42.2	
	baz=305						
STOK	**Stokkvaagen**	**67.17**	**340**	*e*P	**P**	**16 20 41.8**	**+0.7**
VSR	**Storozhevoye**	**67.42**	**319**	*e*P	**P**	**16 20 43.2**	**+0.3**
VSR				*e**SP	**sP**	**16 20 55.4**	**-1.2**
VSR				pmax	pmax		
	comp=Z,50nm,0.6s						
VSR				MLR	MLR		
	comp=Z,4μm,18.0s						
VORD	**Divnogorie**	**67.50**	**318**	*e*P	**P**	**16 20 43.8**	**+0.4**
VORD				*e**SP	**sP**	**16 20 55.5**	**-1.6**
VORD				pmax	pmax		
	comp=Z,40nm,0.6s						
MAK	**Makhachkala**	**67.51**	**308**	*e*P	**P**	**16 20 42.7**	**-0.9**
MAK				*e*		16 23 10.3	
MAK				*e*S	**S**	**16 29 36.0**	**-1.6**
MAK				pmax	pmax		
	comp=Z,25nm,0.3s						
MAK				MLR	MLR		
	comp=Z,1μm,14.0s						
PINE	**Pine Mountain**	**67.52**	**51**	IAmb	IAmb	16 21 03.9	
	comp=Z,24nm,0.8s						
L04D	**Klamath Falls**	**67.57**	**53**	P		16 20 45.9	
	baz=304						
E09A	**Wood Farm, Sta**	**67.60**	**48**	IAmb	IAmb	16 20 59.9	
	comp=Z,14nm,0.8s						
YBH	**Yreka Blue Hor**	**67.60**	**54**	LR	LR	16 46 32.2	
	comp=Z,162nm,19.9s,baz=305,slow=33						
J05D	**Fort Rock, OR**	**67.62**	**52**	P		16 20 46.5	
	baz=304						
SUMG	**Summit**	**67.65**	**0**	⇑*i*P	**P**	**16 20 46.2**	**+1.7**
SUMG				IAmb	IAmb	16 20 47.0	
	comp=Z,34nm,0.7s						
SUMG	**Summit**	**67.65**	**0**	⇑*i*P	**P**	**16 20 46.2**	**+1.7**
SUMG				pmax	pmax		
	comp=Z,34nm,0.7s						
M04C	**Macdoel**	**68.11**	**53**	P		16 20 49.9	
	baz=305						
K05A	**Summer Lake**	**68.15**	**52**	P	**P**	**16 20 50.3**	**+2.4**
K05A				IAmb	IAmb	16 21 04.3	
	comp=Z,43nm,1.2s						
AKT	**Akhty**	**68.20**	**306**	⇑*i*P	**P**	**16 20 48.6**	**+0.4**
AKT				*e*		16 21 13.2	
AKT				*e*		16 23 19.6	
AKT				pmax	pmax		
	comp=Z,69nm,0.8s						
GROC	**Groznyy**	**68.40**	**309**	*e*P	**P**	**16 20 49.3**	**+0.1**
GROC				*e*		16 21 13.8	
GROC				pmax	pmax		
	comp=Z,29nm,0.5s						
VSU	**Vasula**	**68.42**	**330**	*e*P	**P**	**16 20 50.1**	**+1.0**
VSU	**Vasula**	**68.42**	**330**	*c i*P	**P**	**16 20 49.8**	**+0.7**
VSU				pmax	pmax		
	comp=Z,265nm,1.9s						
NSS	**Namsos**	**68.85**	**339**	*e*P	**P**	**16 20 52.1**	**+0.5**
GOF	**Gofitskoye**	**68.94**	**312**	⇑*e*P	**P**	**16 20 53.4**	**+0.8**
GOF				pmax	pmax		
	comp=Z,112nm,0.8s						
JTMT	**Jette**	**69.01**	**45**	P	**P**	**16 20 54.2**	**+1.0**
JTMT				IAmb	IAmb	16 21 11.7	
	comp=Z,19nm,1.1s						
SCO	**Scoresbysund**	**69.21**	**355**	⇑*i*P	**P**	**16 20 54.9**	**+1.2**
SCO				IAmb	IAmb	16 20 55.9	
	comp=Z,11nm,1.0s						
SCO	**Scoresbysund**	**69.21**	**355**	⇑*i*P	**P**	**16 20 54.9**	**+1.2**
SCO				pmax	pmax		
	comp=Z,11nm,1.0s						
MNCI	**Minicoy**	**69.29**	**263**	P	**P**	**16 20 54.8**	**-0.4**
MTSE	**Matsula**	**69.37**	**331**	*e*P	**P**	**16 20 55.7**	**+0.8**
NCK	**Nalchik**	**69.54**	**310**	⇓*i*P	**P**	**16 20 57.7**	**+1.4**
NCK				pmax	pmax		
	comp=Z,46nm,1.0s						
AAL	**Aland**	**69.69**	**333**	*e*P	**P**	**16 20 57.2**	**+0.3**
MSO	**Missoula**	**69.75**	**45**	P		16 20 59.3	
	baz=307						
ZEI	**Tsey**	**69.77**	**309**	*e*P	**P**	**16 20 57.2**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,29nm,0.8s						
KIV	**Kislovodsk**	**69.80**	**311**	*i* P	**P**	**16 20 59.2**	**+1.2**
	SNR=22						
KIV	**Kislovodsk**	**69.80**	**311**	P	**P**	**16 20 58.7**	**+0.7**
KIV				pmax	pmax		
	comp=Z,103nm,0.8s						
KIV	**Kislovodsk**	**69.80**	**311**	P	**P**	**16 20 58.7**	**+0.7**
KIV	**Kislovodsk**	**69.80**	**311**	P	**P**	**16 20 59.6**	**+1.6**
KBZ	**Khabaz**	**69.81**	**310**	P	**P**	**16 20 58.7**	**+0.8**
	comp=Z,47nm,0.8s,baz=57,slow=4.8,SNR=103						
KBZ				LR	LR	16 54 15.9	
	comp=Z,2μm,20.0s,baz=36,slow=38						
KBZ	**Khabaz**	**69.81**	**310**	*c i*P	**P**	**16 20 58.9**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,60nm,0.9s						
NEY	**Neytrino**	**70.19**	**310**	*d i*P	**P**	**16 21 02.7**	**+2.1**
NEY				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TBLU	**Trondheim**	**70.33**	**339**	*e*P	**P**	**16 20 59.7**	**-1.1**
FFC	**Flin Flon**	**70.53**	**34**	P	**P**	**16 21 02.5**	**+0.3**
FFC				pmax	pmax		
	comp=Z,14nm,1.0s						
FFC	**Flin Flon**	**70.53**	**34**	P	**P**	**16 21 02.5**	**+0.3**
IDID	**Didziasalis**	**70.56**	**327**	*e*P	**P**	**16 21 03.6**	**+1.3**
MNK	**Minsk**	**70.63**	**326**	*e*P	**P**	**16 21 04.0**	**+1.2**
MNK				*e*		16 21 25.0	
MNK				*e*PPP	PPP	16 25 26.0	
MNK				*e*S	**S**	**16 30 12.0**	**-2.1**
MNK				MLR	MLR		
	comp=Z,5μm,14.0s						
MNK	**Minsk**	**70.63**	**326**	*i* P	**P**	**16 21 02.4**	**-0.4**
	comp=E,5.0nm,1.1s						
MNK				*i* P	**P**	**16 21 02.4**	**-0.4**
	comp=N,31nm,0.9s						
MNK				*i* P	**P**	**16 21 02.4**	**-0.4**
	comp=Z,58nm,0.8s						
MNK				*i* PcP	**PcP**	**16 21 23.1**	**-0.6**
MNK				*i* PP	**PP**	**16 23 38.9**	**0.0**
MNK				*i* PPP	PPP	16 25 21.8	
MNK				*i* S	**S**	**16 30 13.4**	**-0.7**
MNK				*i* ScS	**SKKSac**	**16 31 02.2**	**+0.1**
MNK				*i* SS	**SS**	**16 34 46.9**	**+1.8**
MNK				*i* SSS	SSS	16 38 06.0	
MNK				*i* LQ	LQ	16 47 14.5	
MNK				*i* LR	LR	16 52 37.1	
MNK				*i* LRM	MLR	16 54 49.8	
	comp=Z,3μm,18.6s						
MNK				*i* LRM	MLR	16 54 54.9	
	comp=N,2μm,14.8s						
MNK				*i* LRM	MLR	16 54 55.3	
	comp=E,164nm,15.7s						
ISAL	**Salakas**	**70.64**	**327**	*e*P	**P**	**16 21 04.3**	**+1.5**
SLIT	**Slitere, Latvi**	**70.71**	**331**	*e*P	**P**	**16 21 03.1**	**0.0**
UPP	**Uppsala**	**70.73**	**334**	*e*P	**P**	**16 21 03.6**	**+0.4**
IIGN	**Ignalina**	**70.75**	**327**	*e*P	**P**	**16 21 04.9**	**+1.4**
FCC	**Fort Churchill**	**70.77**	**28**	IAmb	IAmb	16 21 19.8	
	comp=Z,30nm,1.2s						
GNI	**Garni**	**70.82**	**307**	P	**P**	**16 21 05.9**	**+1.4**
GNI	**Garni**	**70.82**	**307**	*c i*P	**P**	**16 21 05.8**	**+1.3**
GNI				pmax	pmax		
	comp=Z,46nm,1.3s						
GNI	**Garni**	**70.82**	**307**	P	**P**	**16 21 05.7**	**+1.3**
GNI				IAmb	IAmb	16 21 27.2	
	comp=Z,38nm,0.9s						
GNI	**Garni**	**70.82**	**307**	P	**P**	**16 21 06.3**	**+1.9**
GNI				P	**P**	**16 21 06.3**	**+1.9**
NACGM	**Naroch**	**70.82**	**327**	*i* P	**P**	**16 21 04.8**	**+0.8**
NACGM				*i* P	**P**	**16 21 04.8**	**+0.8**
NACGM				*i* P	**P**	**16 21 04.8**	**+0.8**
NACGM				*i* PcP	**PcP**	**16 21 27.5**	**+3.0**
NACGM				*i* PP	PP	16 24 00.7	+20
NACGM				*i* PPP	PPP	16 26 33.6	
NACGM				*i* S	**S**	**16 30 14.0**	**-2.4**
NACGM				*i* PS	**PnS**	**16 30 58.3**	**+12**
NACGM				*i* SS	**SS**	**16 34 50.9**	**+2.8**
NACGM				*i* SSS	SSS	16 37 43.7	
NACGM				*i* LQ	LQ	16 45 11.2	
NACGM				*i* LR	LR	16 50 29.4	
AKH	**Akhalkalaki**	**70.83**	**308**	⇑P	**P**	**16 21 06.3**	**+1.8**
CHVG	**Ch'k'valeri**	**70.89**	**310**	⇑P	**P**	**16 21 06.0**	**+1.4**
ICESG	**Greenland Ices**	**71.14**	**1**	⇑*i*P	**P**	**16 21 07.5**	**+1.4**
ICESG				IAmb	IAmb	16 21 08.3	
	comp=Z,52nm,0.8s						
LRM	**Limekiln Ridge**	**71.18**	**46**	P	**P**	**16 21 08.2**	**+1.5**
TASB	**TASBURUN-İGDIR**	**71.23**	**307**	*i* P	**P**	**16 21 08.4**	**+1.6**
EGMT	**Eagleton**	**71.24**	**43**	IAmb	IAmb	16 21 25.2	
	comp=Z,21nm,0.8s						
EGMT	**Eagleton**	**71.24**	**43**	P		16 21 08.2	
	baz=309						
WBK	**Wadi Bani Khal**	**71.32**	**284**	P	**P**	**16 21 10.0**	**+2.4**
	SNR=6.5						
WBK				P	**P**	**16 21 10.0**	**+2.4**
	SNR=6.5						
BANOM	**Banah**	**71.34**	**288**	*i* P	**P**	**16 21 08.2**	**+0.5**
	SNR=11						
BANOM	**Banah**	**71.34**	**288**	P	**P**	**16 21 08.5**	**+0.9**
BANOM				P	**P**	**16 21 08.5**	**+0.9**
YERR	**Yerington**	**71.35**	**55**	IAmb	IAmb	16 21 33.9	
	comp=Z,16nm,1.0s						
SHME	**Shamm**	**71.38**	**289**	*i* P	**P**	**16 21 08.1**	**+0.2**
	SNR=9.7						
SHME	**Shamm**	**71.38**	**289**	P	**P**	**16 21 08.4**	**+0.5**
SHME				P	**P**	**16 21 08.4**	**+0.5**
DLMT	**Dillon**	**71.39**	**46**	IAmb	IAmb	16 21 27.2	
	comp=Z,17nm,0.9s						
BIDO	**Bidbid**	**71.41**	**285**	P	**P**	**16 21 09.6**	**+1.6**
	SNR=5.5						
BIDO				P	**P**	**16 21 09.6**	**+1.6**
	SNR=5.5						
HLID	**Hailey**	**71.48**	**48**	P		16 21 10.4	
	baz=308						
PABE	**Paberze**	**71.56**	**328**	*e*P	**P**	**16 21 09.6**	**+1.2**
PABE	**Paberze**	**71.56**	**328**	P	**P**	**16 21 08.7**	**+0.3**
STKA	**Stephens Creek**	**71.60**	**181**	P	**P**	**16 21 08.6**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=340,slow=7.5,SNR=13						
STKA				LR	LR	16 51 34.8	
	comp=Z,316nm,21.9s,baz=16,slow=35						
STKA	**Stephens Creek**	**71.60**	**181**	⇑*i*P	**P**	**16 21 08.7**	**0.0**
MOL	**Molde**	**71.61**	**340**	*e*P	**P**	**16 21 09.7**	**+1.2**
DOMB	**Dombas**	**71.63**	**339**	*e*P	**P**	**16 21 09.6**	**+0.8**
MDH	**Madha**	**71.71**	**288**	P	**P**	**16 21 09.3**	**-0.5**
SOC	**Sochi**	**71.73**	**312**	*ce*P	**P**	**16 21 09.5**	**-0.2**
SOC				*e**SP	**sP**	**16 21 24.7**	**+1.3**
SOC				*e*		16 23 47.1	
SOC				*e*PPP	PPP	16 25 32.0	
SOC				*e*S	**S**	**16 30 28.8**	**+1.5**
SOC				*e*SS	**SS**	**16 35 01.8**	**-0.8**
SOC				pmax	pmax		
	comp=Z,27nm,0.5s						
SMDO	**Samad**	**71.74**	**285**	P	**P**	**16 21 11.3**	**+1.2**
	SNR=6.4						
SMDO				P	**P**	**16 21 11.3**	**+1.2**
	SNR=6.4						
MASF	**Masafi**	**71.77**	**288**	P	**P**	**16 21 11.0**	**+0.7**
MASF				P	**P**	**16 21 11.0**	**+0.7**
MSFE	**Esma-Masafi**	**71.77**	**288**	*i* P	**P**	**16 21 10.6**	**+0.3**
	SNR=6.2						
BOZ	**Bozeman (W)**	**71.78**	**45**	P		16 21 11.5	
	baz=309,SNR=8.2				

ANN MLR MLR
comp=Z,2µm,16.0s
NVAR Mina Array Bea 72.27 55 P **P 16 21 14.7 +1.4**
comp=Z,5.1nm,1.0s,baz=288,slow=5.8,SNR=22
NVAR LR LR 16 46 49.3
comp=Z,261nm,21.4s,baz=301,slow=31
NAZ Nazwa, Dubai 72.36 288 P **P 16 21 13.9 +0.2**
FAQ Al Faqa, Dubai 72.55 288 *i* P **P 16 21 14.8 -0.1**
SNR=8.9
BSY Bisya 72.56 285 P **P 16 21 15.7 +0.7**
SNR=8.8
BSY P **P 16 21 15.7 +0.7**
SNR=8.8
VANB Van 72.59 306 *i* P **P 16 21 16.5 +1.4**
AKASG Malin Array Be 72.60 322 P **P 16 21 15.1 +0.3**
comp=Z,26nm,0.6s,baz=43,slow=6.2,SNR=63
AKASG LR LR 16 56 45.0
comp=Z,1µm,19.0s,baz=60,slow=39
AKASG Malin Array Be 72.60 322 P **P 16 21 15.0 +0.3**
AKASG pmax pmax
comp=Z,14nm,1.0s
AKASG Malin Array Be 72.60 322 P **P 16 21 15.0 +0.3**
AKBB Malin Array Si 72.60 322 *c i* P **P 16 21 14.8 +0.1**
AKBB pmax pmax
comp=Z,43nm,0.8s
AKBB Malin Array Si 72.60 322 IAmb IAmb 16 21 15.7
comp=Z,35nm,0.8s
PAGB Antelope Grade 72.65 58 IAmb IAmb 16 21 31.2
comp=Z,22nm,0.9s
ARQ Araqi 72.70 286 P **P 16 21 16.8 +0.9**
SNR=9.0
ARQ P **P 16 21 16.8 +0.9**
SNR=9.0
ELK Elko 72.73 51 LR LR 16 47 27.8
comp=Z,234nm,21.9s,baz=306,slow=31
SFJD Kangerlussuaq 72.76 6⇑ *i* P **P 16 21 16.3 +1.0**
SFJD IAmb IAmb 16 21 17.1
comp=Z,16nm,0.9s
SFJD Kangerlussuaq 72.76 6 P **P 16 21 16.1 +0.7**
SFJD pmax pmax
comp=Z,23nm,0.9s
SFJD Kangerlussuaq 72.76 6 P **P 16 21 16.1 +0.7**
SFJD IAmb IAmb 16 21 17.4
comp=Z,23nm,0.8s
MLAZ Malazgirt-MUS 72.78 307 *i* P **P 16 21 18.1 +1.9**
BBOO Buckleboo 72.79 186 IAmb IAmb 16 21 29.4
comp=Z,16nm,0.8s
ASUD Al Ashush, Dub 72.81 288 *i* P **P 16 21 17.0 +0.6**
SNR=5.9
ASUD Al Ashush, Dub 72.81 288 P **P 16 21 17.1 +0.7**
ASUD P **P 16 21 17.1 +0.7**
ALNE Al Ain 72.84 287 *i* P **P 16 21 16.9 +0.3**
SNR=9.3
ALNE Al Ain 72.84 287 P **P 16 21 17.2 +0.6**
SNR=10
ALNE P **P 16 21 17.2 +0.6**
SNR=10
OSL Oslo 72.86 337 *e* P **P 16 21 17.4 +1.3**
SUW Suwalki 72.95 328 *e* P **P 16 21 17.9 +1.1**
SUW *e* L L 16 55 40.5
comp=Z,2µm,19.6s
SUW Suwalki 72.95 328 *e* P **P 16 21 17.2 +0.5**
SUW Suwalki 72.95 328 IAmb IAmb 16 21 33.0
comp=Z,42nm,0.9s
SKAR Skarslia 72.96 338 *e* P **P 16 21 17.6 +0.8**
GEVA Gevas 72.97 306 IAmb IAmb 16 21 34.2
comp=Z,14nm,0.8s
AKDM Akdamar-Van 73.01 306 *i* P **P 16 21 18.8 +1.2**
MHTO MHTO 73.03 283 P **P 16 21 18.6 +0.9**
SNR=18
MHTO P **P 16 21 18.6 +0.9**
SNR=18
H17A Grant Village 73.11 46 IAmb IAmb 16 21 45.0
comp=Z,23nm,1.1s
H17A Grant Village 73.11 46 P 16 21 20.5
baz=310,SNR=9.0
KTUT Trabzon 73.32 310 ⇓ *i* P **P 16 21 19.9 +0.8**
KONO Kongsberg 73.43 337 *c e* P **P 16 21 20.1 +0.6**
KONO pmax pmax
comp=Z,71nm,2.6s
KONO Kongsberg 73.43 337 P **P 16 21 19.7 +0.2**
KONO IAmb IAmb 16 21 36.1
comp=Z,51nm,1.4s
KONO Kongsberg 73.43 337 *e* P **P 16 21 20.3 +0.8**
STRU Stroemstad 73.45 336 *i* P **P 16 21 20.2 +0.6**
KOPT Kop Dagi 73.49 309 P **P 16 21 21.3 +0.7**
KOPT IAmb IAmb 16 21 23.7
comp=Z,36nm,1.1s
DY2G Dye2 73.55 4⇑ *i* P **P 16 21 21.6 +1.2**
DY2G IAmb IAmb 16 21 22.4
comp=Z,46nm,0.7s
GRAC Grapevine Rang 73.73 55 P 16 21 23.8
baz=308,SNR=7.3
DGMT Dagmar 73.76 40 P 16 21 22.7
baz=313
YEDI Yedisu-Bingol 73.82 308 *i* P **P 16 21 23.8 +1.4**
SIRT Sirnak 73.86 305 P **P 16 21 22.9 +0.3**
BGU Big Grassy Mou 73.92 50 P **P 16 21 24.5 +1.5**
LAO LASA Array 73.94 42 P 16 21 24.7
baz=312
SIM Simferopol' 73.97 316 *d i* P **P 16 21 22.9 0.0**
SIM pmax pmax
comp=Z,101nm,1.2s
R11A Troy Canyon, C 74.00 53 P 16 21 24.8
baz=309,SNR=7.5
BNGB Bingl 74.02 308 *i* P **P 16 21 25.1 +1.6**
BORU Boraas 74.06 335 *i* P **P 16 21 23.6 +0.4**
BLEU Blekinge 74.06 332 *i* P **P 16 21 23.4 +0.1**
UMZA Um Al Zommool 74.08 286 P **P 16 21 23.8 -0.1**
UMZA P **P 16 21 23.8 -0.1**
SVAN Silvan-Diyarba 74.22 307 *i* P **P 16 21 26.0 +1.4**
HWUT Hardware Ranch 74.34 49 IAmb IAmb 16 21 42.7
comp=Z,24nm,1.4s
FURC Furnace Creek, 74.37 55 P 16 21 27.5
baz=308
TPNV Topopah Spring 74.46 55 P 16 21 27.7
baz=309,SNR=8.8
DUG Dugway, Tooele 74.51 50 IAmb IAmb 16 21 43.7
comp=Z,20nm,1.1s
DUG Dugway, Tooele 74.51 50 P 16 21 28.2
baz=310,SNR=7.8
ONAU Onsala 74.53 335⇑ *i* P **P 16 21 26.0 +0.1**
ONAU *i* P pP 16 21 26.1 -10
FABU Falkenberg 74.58 334 *i* P **P 16 21 26.5 +0.3**
DEL Delary 74.61 333 *i* P **P 16 21 26.5 +0.1**
EDW2 Edwards Air Fo 74.63 57 P 16 21 28.8
baz=308
ANGG Ammassalik, Gr 74.65 0 *i* P **P 16 21 26.7 +0.3**
ISOG Isortoq, Green 74.70 1 *i* P **P 16 21 27.3 +0.5**
ISOG IAmb IAmb 16 21 28.1
comp=Z,32nm,0.9s
PDAR Pinedale Array 74.73 47 P **P 16 21 28.6 +0.9**
comp=Z,1.9nm,0.6s,baz=264,slow=1.7,SNR=24
PDAR LR LR 16 50 07.7
comp=Z,273nm,22.0s,baz=340,slow=32
PDAR Pinedale Array 74.73 47 P **P 16 21 27.9 +0.3**
SORM Soroca 74.77 321 ⇓ P **P 16 21 27.7 +0.2**
BORG Borgarnes 74.78 353 LR LR 16 55 33.6
comp=Z,156nm,18.4s,baz=3.1,slow=37
HOMB Homborsund 74.89 337 *i* P **P 16 21 28.8 +0.8**
HOMB IAmb IAmb 16 21 29.5
comp=Z,26nm,0.9s
DYBB Diyarbakir 75.00 307 *i* P **P 16 21 30.7 +1.6**
RSDY Resadiye-TOKAT 75.12 310 *i* P **P 16 21 31.2 +1.5**
SNART Snartemo 75.21 338 *i* P **P 16 21 30.8 +0.9**
SNART IAmb IAmb 16 21 31.4
comp=Z,50nm,0.8s
BJUU Bjuv 75.22 334 *i* P **P 16 21 31.0 +1.1**
BFSC Mount Baldy Ra 75.25 58 P 16 21 32.2
baz=309
UMR Umm Al-Rimmam 75.26 296 *e* P 16 21 29.9
BSD Bornholm Skovb 75.31 332 *e* P **P 16 21 30.9 +0.5**
BSD Bornholm Skovb 75.31 332 ⇓ *i* P **P 16 21 30.1 -0.3**
BSD IAmb IAmb 16 21 31.7
comp=Z,39nm,1.1s
BSD Bornholm Skovb 75.31 332 ⇓ *i* P **P 16 21 30.1 -0.3**
BSD pmax pmax
comp=Z,39nm,1.1s
KIS Kishinev 75.33 320⇑ *i* P **P 16 21 31.0 +0.3**
comp=Z,110nm,2.4s
KIS Kishinev 75.33 320 *e* PP PP 16 24 20.0 +0.9
MIB Mutribah 75.37 297 *e* P 16 21 30.1
LUNU Lund 75.42 333 *i* P **P 16 21 31.9 +0.8**
KVT Kavak 75.42 312 *i* P **P 16 21 33.2 +1.7**
NUUK Nuuk 75.45 7 *i* P **P 16 21 32.4 +1.3**

NUUK IAmb IAmb 16 21 33.3
comp=Z,32nm,0.7s
DIKM Dikmen 75.50 312 ⇓ P **P 16 21 32.9 +1.1**
DIKM Dikmen 75.50 312 *i* P **P 16 21 33.3 +1.5**
BEL Belsk 75.53 327 *e* P **P 16 21 33.3 +1.5**
BEL *e* L L 16 57 35.4
comp=Z,2µm,19.2s
LVV L'vov 75.60 324 *e* P **P 16 21 32.0 -0.3**
LVV *e* S **S 16 31 08.0 -2.7**
LVV MLR MLR
comp=Z,3µm,15.0s
TUQ Turquoise Moun 75.61 56 P 16 21 34.4
baz=309
QRN Al-Qurain 75.62 295 *e* P 16 21 31.9
SVSK Karacayir 75.63 310 *i* P **P 16 21 34.3 +1.8**
TOKT Tokat 75.63 311 *i* P **P 16 21 34.1 +1.4**
GOET G??ttrup 75.68 336 *e* P **P 16 21 34.0 +1.5**
GOET IAmb IAmb 16 21 34.7
comp=Z,76nm,0.9s
COP Copenhagen 75.73 334 *i* P **P 16 21 33.9 +1.1**
COP IAmb IAmb 16 21 34.6
comp=Z,39nm,0.8s
COP Copenhagen 75.73 334 *i* P **P 16 21 33.9 +1.1**
COP pmax pmax
comp=Z,39nm,0.8s
HEC Hector,Ludlow 75.73 56 P 16 21 35.0
baz=309,SNR=6.5
RDF Al-Radifah 75.76 296 *e* P 16 21 32.7
RST Umm Al-Ruwaisa 75.79 297⇑ *e* P 16 21 32.5
MALT Malatya 75.81 308 *i* P **P 16 21 35.7 +1.9**
BZK Bozkurt 76.00 313⇑ P **P 16 21 35.9 +1.2**
BZK Bozkurt 76.00 313 *i* P **P 16 21 35.8 +1.2**
SZCU Shurtz Canyon 76.01 53 P **P 16 21 36.6 +1.5**
URFA Urfa 76.13 307 *i* P **P 16 21 36.6 +1.0**
RDMU Red Mountain 76.16 48 IAmb IAmb 16 22 07.1
comp=Z,20nm,0.9s
MUD Monsted U'grnd 76.18 336 *i* P **P 16 21 35.9 +0.5**
MUD IAmb IAmb 16 21 36.7
comp=Z,27nm,0.9s
MUD Monsted U'grnd 76.18 336 *i* P **P 16 21 35.9 +0.5**
MUD pmax pmax
comp=Z,27nm,0.9s
GMRC Granite Mounta 76.19 56 P 16 21 37.8
baz=309,SNR=5.7
P17A Butcher Ranch, 76.20 50 IAmb IAmb 16 21 53.3
comp=Z,31nm,1.2s
DARE Darende-Malaty 76.21 309 *i* P **P 16 21 38.2 +2.1**
MTPU Mount Pierson 76.27 52 P **P 16 21 38.5 +1.8**
KWP Kalwaria Pacla 76.33 325 *e* P **P 16 21 37.9 +1.5**
KWP *e* L L 16 58 30.9
comp=Z,4µm,16.2s
ULM Lac du Bonnet 76.34 34 P **P 16 21 36.5 +0.1**
comp=Z,5.0nm,0.8s,baz=310,slow=6.5,SNR=11
PFO Pinyon Flats O 76.41 58 LR LR 16 48 12.0
comp=Z,682nm,21.9s,baz=293,slow=30
TPFO Pinon Flats 76.42 58 P 16 21 39.0
baz=309
BELC Belle Mtn. Jos 76.47 57 P 16 21 38.6
baz=309
K22A Casper 76.48 45 P 16 21 39.6
baz=312
KNB Kanab 76.54 53 IAmb IAmb 16 21 55.8
comp=Z,25nm,1.3s
SRU San Rafael Swe 76.56 50 IAmb IAmb 16 21 55.1
comp=Z,18nm,0.9s
TLCR 76.58 318⇑ P **P 16 21 38.9 +1.0**
BUR08 Bucovina Ar. S 76.63 322 IAmb IAmb 16 21 39.9
comp=Z,23nm,0.8s
BURAR Bucovina Array 76.64 322⇑ P **P 16 21 39.3 +1.0**
BURAR Bucovina Array 76.64 322 P **P 16 21 38.6 +0.3**
BIZ Bicaz 76.70 321⇑ P **P 16 21 40.1 +1.5**
TESR Tescani 76.74 320 ⇓ P **P 16 21 39.6 +0.8**
RSSD Black Hills 76.81 43 P **P 16 21 39.4 -0.1**
RSSD pmax pmax
comp=Z,14nm,1.2s
RSSD Black Hills 76.81 43 P **P 16 21 39.4 -0.1**
RSSD Black Hills 76.81 43 P 16 21 40.6
baz=314
CORM Corum 76.83 312 *i* P **P 16 21 40.2 +0.6**
LNIZ Loecknitz 76.84 331 *e* P **P 16 21 40.3 +1.1**
comp=Z,102nm,1.4s,baz=35,slow=5.4
JURR Jurilovca 76.84 318 ⇓ P **P 16 21 39.6 +0.3**
IRM Iron Mountain 76.92 56 P 16 21 41.4
baz=310
CFR Carcaliu 76.94 319⇑ P **P 16 21 40.5 +0.6**
SARI SarD1z-Kayseri 76.95 309⇑ P **P 16 21 40.9 +0.5**
BNN Bunyan 77.00 310 *i* P **P 16 21 40.9 +0.3**
PETR Petresti 77.01 320 ⇓ P **P 16 21 42.0 +1.8**
TPGR Topolog 77.02 318⇑ P **P 16 21 41.4 +1.0**
BC3 Big Chuckawall 77.04 57 P 16 21 42.0
baz=310
ODBI Odobesti 77.06 320⇑ P **P 16 21 42.1 +1.5**
VRI Vrincioaia 77.15 320 ⇓ P **P 16 21 42.7 +1.5**
PLOR Plostina 77.20 320⇑ P **P 16 21 42.5 +1.1**
U15A North Rim 77.24 53 P **P 16 21 43.3 +1.1**
UZH Uzhgorod 77.25 324 *e* P **P 16 21 42.4 +0.8**
UZH *e* 16 21 53.0
UZH *e* 16 24 37.0
UZH *i* S **S 16 31 27.0 -1.8**
UZH *e* SS **SS 16 36 20.7 -5.3**
UZH MLR MLR
comp=Z,400nm,16.0s
KMRS Kahramanmaras 77.25 308 *i* P **P 16 21 43.4 +1.5**
GAZ Gaziantep 77.28 308 *i* P **P 16 21 43.6 +1.5**
DOK Doka 77.33 284 P **P 16 21 42.6 0.0**
SNR=7.2
DOK P **P 16 21 42.6 0.0**
SNR=7.2
HARR Harsova 77.38 318⇑ P **P 16 21 44.0 +1.6**
BISRR Bisoca 77.39 320⇑ P **P 16 21 44.7 +2.1**
CRVS Cervenica-Dubn 77.42 325 *e* P **P 16 21 43.7 +1.1**
CRVS pmax pmax
comp=Z,565nm,3.5s
CRVS Cervenica-Dubn 77.42 325 *e* P **P 16 21 43.7 +1.1**
TLBR Topalu 77.42 318 ⇓ P **P 16 21 44.3 +1.7**
ARCR ARCALIA 77.43 322⇑ P **P 16 21 44.7 +2.1**
OZUR 77.45 321⇑ P **P 16 21 44.7 +1.8**
PDMCI Parker Dam,Lak 77.46 56 P 16 21 44.8
baz=310
MFTR Murfatlar 77.49 318⇑ P **P 16 21 43.8 +0.8**
TRPA Tarpa 77.51 324⇑ P **P 16 21 44.5 +1.4**
NIE Niedzica 77.54 326 *e* P **P 16 21 44.9 +1.6**
NIE *e* L L 16 59 03.6
comp=Z,2µm,17.7s
NEHR Nehoiu 77.68 320⇑ P **P 16 21 46.1 +1.9**
BR131 Keskin Array S 77.70 312 *c i* P **P 16 21 45.2 +0.7**
BR131 Keskin Array S 77.70 312 IAmb IAmb 16 21 46.0
comp=Z,26nm,0.8s
BRTR Keskin Array B 77.70 312 P **P 16 21 45.5 +1.0**
comp=Z,9.6nm,0.7s,baz=85,slow=3.6,SNR=20
BRTR LR LR 17 00 12.9
comp=Z,1µm,18.4s,baz=58,slow=39
BRTR Keskin Array B 77.70 312 P **P 16 21 44.7 +0.2**
PGOR Pogoanele 77.70 319⇑ P **P 16 21 46.6 +2.4**
DOPR Dopca 77.74 321 ⇓ P **P 16 21 47.2 +2.8**
ISR Istrita 77.78 320⇑ P **P 16 21 46.2 +1.5**
RUE Ruedersdorf 77.80 331 *e* P **P 16 21 45.5 +0.9**
comp=Z,48nm,1.2s,baz=35,slow=5.4
MLR Muntele Rosu 77.81 320 LR LR 16 59 41.5
comp=Z,3µm,18.3s,baz=42,slow=38
MLR Muntele Rosu 77.81 320⇑ P **P 16 21 45.9 +0.9**
MLR Muntele Rosu 77.81 320 IAmb IAmb 16 21 47.4
comp=Z,27nm,1.3s
BSEG Bad Segeberg 77.87 334 *e* P **P 16 21 45.8 +0.9**
comp=Z,38nm,0.9s,baz=35,slow=5.4
KAMT Kaman 77.89 312 *i* P **P 16 21 46.4 +0.9**
KOZT Kozan 77.91 309 *i* P **P 16 21 46.9 +1.4**
PV10 Paradox Valley 77.92 50 IAmb IAmb 16 22 03.3
comp=Z,42nm,1.0s
PV14 Lion Creek, Pa 77.93 50 IAmb IAmb 16 22 03.0
comp=Z,28nm,1.0s
PV22 Blue Mesa, Par 77.96 50 IAmb IAmb 16 22 03.1
comp=Z,28nm,1.1s
RBK Rabkut 77.97 283 P **P 16 21 46.0 -0.2**
RBK P **P 16 21 46.0 -0.2**
PV20 West Nyswonger 77.98 50 IAmb IAmb 16 22 03.3
comp=Z,29nm,1.1s
PV04 Paradox Valley 77.98 50 IAmb IAmb 16 22 03.4
comp=Z,23nm,1.1s
N23A Red Feather La 77.99 46 P 16 21 47.8
baz=313
PV19 Morning Glory 77.99 50 IAmb IAmb 16 22 03.4
comp=Z,23nm,0.9s
PV17 East Wray Mesa 78.03 50 IAmb IAmb 16 22 03.5
comp=Z,33nm,1.0s
PV16 Nyswonger Mesa 78.03 50 IAmb IAmb 16 22 03.6
comp=Z,28nm,1.2s
CJR Cluj-Napoca 78.06 322⇑ P **P 16 21 48.0 +1.7**
PV11 David Mesa, Pa 78.07 50 IAmb IAmb 16 22 08.6
comp=Z,19nm,0.8s
SECR 78.07 320⇑ P **P 16 21 47.2 +0.9**
PV05 Paradox Valley 78.08 50 IAmb IAmb 16 22 04.1
comp=Z,32nm,1.1s
PV18 Skein Mesa, Pa 78.08 50 IAmb IAmb 16 22 03.8
comp=Z,15nm,0.9s
ANTO Ankara 78.08 312 P **P 16 21 47.1 +0.6**
ANTO pmax pmax
comp=Z,63nm,0.8s
ANTO Ankara 78.08 312 P **P 16 21 47.1 +0.6**
LOD Lodumlu 78.08 312 *i* P **P 16 21 46.7 +0.1**
PV12 Saucer Basin, 78.09 50 IAmb IAmb 16 22 08.8
comp=Z,24nm,1.2s
LEHL Lehliu 78.10 319 ⇓ P **P 16 21 48.5 +2.1**
LANS Liptovska Anna 78.10 326 *e* P **P 16 21 48.4 +2.0**
LANS pmax pmax
comp=Z,14nm,0.9s
LANS Liptovska Anna 78.10 326 *e* P **P 16 21 48.4 +2.0**
KSP Ksiaz 78.12 329 *e* P **P 16 21 47.8 +1.4**
KSP *e* L L 16 59 16.8
comp=Z,2µm,19.0s
OKC Ostrava-Krasne 78.14 327 *e* P **P 16 21 47.6 +1.0**
OKC *e* S **SKSac 16 32 01.4 +3.2**
OKC MLR MLR
comp=Z,2µm,18.6s
OKC Ostrava-Krasne 78.14 327 *e* P **P 16 21 47.6 +1.0**
OKC *e* SKS **SKSac 16 32 01.4 +3.2**
OKC AMS AMS 16 59 10.0
comp=Z,2µm,18.6s
KECS Kecovo 78.16 325 *e* P **P 16 21 48.0 +1.3**
KECS Kecovo 78.16 325 *e* P **P 16 21 48.0 +1.3**
PV13 Radium Mtn., P 78.19 50 IAmb IAmb 16 22 04.6
comp=Z,19nm,1.0s
PV02 Paradox Valley 78.21 50 P **P 16 21 49.1 +1.7**
CEYT Ceyhan 78.27 309 *i* P **P 16 21 49.2 +1.7**
VOIR 78.28 321⇑ P **P 16 21 48.8 +1.2**
OSTC Ostas 78.38 329 *e* P **P 16 21 48.6 +0.7**
OSTC AMS AMS 16 59 00.0
comp=Z,2µm,20.1s
WUAZ Wupatki 78.40 53 IAmb IAmb 16 22 06.0
comp=Z,19nm,1.1s
WUAZ Wupatki 78.40 53 P 16 21 50.8
baz=311,SNR=6.5
CHVC Chvalec 78.41 329 *e* P **P 16 21 49.0 +0.9**
CHVC AMS AMS 16 59 20.0
comp=Z,2µm,17.7s
TAHT Tahtakopru-Hat 78.42 308 *i* P **P 16 21 49.8 +1.4**
MORC Moravsky Berou 78.44 327 ⇓ P **P 16 21 49.6 +1.3**
MORC Moravsky Berou 78.44 327 *e* P **P 16 21 49.3 +1.0**
MORC Moravsky Berou 78.44 327 IAmb IAmb 16 21 50.2
comp=Z,26nm,0.8s
DPC Dobruska-Polom 78.49 328 *e* P **P 16 21 49.4 +0.8**
DPC *e* S **S 16 31 44.2 +1.9**
DPC MLR MLR
comp=Z,2µm,17.8s
DPC Dobruska-Polom 78.49 328 *e* P **P 16 21 49.4 +0.8**
DPC *e* S **S 16 31 44.2 +1.9**
DPC AMS AMS 16 59 20.0
comp=Z,2µm,17.8s
UPC Upice 78.49 329 *e* P **P 16 21 49.8 +1.3**
UPC *e* S **S 16 31 46.0 +3.8**
UPC MLR MLR
comp=Z,2µm,17.3s
UPC Upice 78.49 329 *e* P **P 16 21 49.8 +1.3**
UPC *e* S **S 16 31 46.0 +3.8**
UPC AMS AMS 16 59 10.0
comp=Z,2µm,17.3s
KARA Karaisali 78.52 309 *i* P **P 16 21 50.3 +1.4**
KRLC Kraliky 78.52 328 *e* P **P 16 21 49.7 +1.0**
KRLC *e* S **S 16 31 44.8 +2.2**
KRLC MLR MLR
comp=Z,2µm,19.3s
KRLC Kraliky 78.52 328 *e* P **P 16 21 49.7 +1.0**
KRLC *e* S **S 16 31 44.8 +2.2**
KRLC AMS AMS 16 59 10.0
comp=Z,2µm,19.3s
ARR Arges 78.54 321⇑ P **P 16 21 50.8 +1.9**
MDUB Mudurnu 78.57 314 *i* P **P 16 21 49.3 +0.1**
ABTO Aybut 78.74 283 P **P 16 21 50.1 -0.3**
SNR=5.6
ABTO P **P 16 21 50.1 -0.3**
SNR=5.6
PSZ Piszkesteto 78.85 325 ⇓ P **P 16 21 51.4 +0.8**
PSZ Piszkesteto 78.85 325 IAmb IAmb 16 21 52.6
comp=Z,27nm,0.9s
FLTG Flechtingen 78.85 332 *e* P **P 16 21 50.6 +0.2**
comp=Z,40nm,0.8s,baz=35,slow=5.4
VYHS Vyhne 78.87 326 *e* P **P 16 21 51.8 +1.1**
VYHS pmax pmax
comp=Z,21nm,1.0s
VYHS Vyhne 78.87 326 *e* P **P 16 21 51.8 +1.1**
NRS Narsarsuaq 78.89 4 *e* P 16 21 42.3 -8.2
NRS IAmb IAmb 16 21 45.2
comp=Z,9.1nm,0.7s
NRS Narsarsuaq 78.89 4 *e* P 16 21 42.2 -8.3
NRS pmax pmax
comp=Z,9.0nm,0.7s
CHBY Cihanbeyli 78.90 311 *i* P **P 16 21 51.8 +0.7**
LOT Lotru 78.90 321 ⇓ P **P 16 21 51.6 +0.6**
ISCO Idaho Springs 78.92 47 P 16 21 53.4
baz=314
YESY Yesilyurt 78.94 310 *i* P **P 16 21 52.5 +1.1**
BRG Berggiesshubel 79.02 330 *e* P **P 16 21 52.1 +0.7**
BRG Amp 16 21 54.7
comp=Z,22nm,1.0s
BRG *e* x x 16 22 02.8
BRG Amp 16 22 07.7
comp=Z,9.4nm,1.0s
BRG Berggiesshubel 79.02 330 *e* P **P 16 21 52.1 +0.7**
comp=Z,22nm,1.0s,baz=35,slow=5.4
CLL Collm 79.03 331⇑ *i* P **P 16 21 52.1 +0.7**
comp=Z,35nm,0.8s
CLL *e* sP **sP 16 22 06.0 +0.8**
CLL *e* PP PP 16 24 42.0 -7.9
CLL *e* sPP 16 25 06.0
CLL *e* PPP PPP 16 26 42.0
CLL *e* S **S 16 31 44.0 -3.8**
CLL *e* SS **SS 16 36 42.0 -11**
CLL Collm 79.03 331⇑ *i* P **P 16 21 52.1 +0.7**
CLL *e* *SP **sP 16 22 06.0 +0.8**
CLL *e* S **S 16 31 44.0 -3.8**
CLL pmax pmax
comp=Z,35nm,0.8s
CLL Collm 79.03 331 IAmb IAmb 16 21 52.6
comp=Z,27nm,0.8s
CLL Collm 79.03 331 *e* P **P 16 21 51.8 +0.4**
comp=Z,34nm,0.8s,baz=35,slow=5.4
PVCC Panska Ves 79.05 329 *e* P **P 16 21 52.9 +1.3**
PVCC MLR MLR
comp=Z,2µm,17.0s
PVCC Panska Ves 79.05 329 *e* P **P 16 21 52.9 +1.3**
PVCC AMS AMS 16 59 50.0
comp=Z,2µm,17.0s
SVRH Sivrihisar-ESK 79.09 313 *i* P **P 16 21 52.6 +0.5**
JAVC Velka Javorina 79.09 327 *e* P **P 16 21 53.9 +2.0**
MERS Mersin 79.10 309 *i* P **P 16 21 53.1 +0.9**
NRDL Niedersach Rie 79.12 333 *e* P **P 16 21 52.6 +0.8**
comp=Z,18nm,0.9s,baz=35,slow=5.4
SUSD Miller 79.16 40 P **P 16 21 52.7 +0.4**
HRT Hereke 79.17 315 *i* P **P 16 21 53.1 +0.7**
VRAC Vranov 79.19 328 ⇓ P **P 16 21 53.7 +1.4**
VRAC Vranov 79.19 328 *e* P **P 16 21 53.8 +1.4**
FBE Freiberg 79.21 330 *e* P **P 16 21 53.3 +0.9**
comp=Z,34nm,0.9s,baz=35,slow=5.4
ASSE Asse, Remlinge 79.22 332 *e* P **P 16 21 53.2 +0.9**
comp=Z,21nm,1.1s,baz=35,slow=5.4
ISK Istanbul-Kandi 79.33 315 *i* P **P 16 21 53.5 +0.3**
ADVT Abdulvahap 79.40 314 *i* P **P 16 21 54.6 +1.0**
GZR Gura Zlata 79.41 322⇑ P **P 16 21 54.7 +0.9**
LADK Ladik-KONYA 79.46 311 *i* P **P 16 21 53.9 -0.3**
SMOL Smolenice 79.46 327 *e* P **P 16 21 55.5 +1.6**
SMOL pmax pmax
comp=Z,14nm,0.9s
SMOL Smolenice 79.46 327 *e* P **P 16 21 55.5 +1.6**
PRA Prague 79.47 329 *e* P **P 16 21 54.8 +1.0**
PRA MLR MLR
comp=Z,2µm,17.4s
PRA Prague 79.47 329 *e* P **P 16 21 54.8 +1.0**
PRA AMS AMS 17 00 00.0

comp=Z,2µm,17.4s
KRUC Moravsky 79.47 327 *e*P **P 16 21 55.0 +1.1**
PRU Pruhonice 79.49 329 *e*P **P 16 21 55.0 +1.0**
PRU *e* 16 22 09.4
PRU *e*S **S 16 31 52.6 -0.2**
PRU MLR MLR
comp=Z,2µm,17.4s
PRU Pruhonice 79.49 329 *e*P **P 16 21 55.0 +1.0**
PRU *ex* x 16 22 09.4
PRU *e*S **S 16 31 52.6 -0.2**
PRU AMS AMS 17 00 00.0
comp=Z,2µm,17.4s
CAVI Cavuskoy 79.50 314 *i* P **P 16 21 55.3 +1.0**
CLZ Clausthal 79.56 332 *e*P **P 16 21 55.3 +0.9**
comp=Z,41nm,1.0s,baz=35,slow=5.4
NEUB Neuenburg 79.57 331 *e*P **P 16 21 54.9 +0.5**
comp=Z,38nm,0.9s,baz=35,slow=5.4
KIZK Mersin 79.58 309 *i* P **P 16 21 55.4 +0.7**
S22A 4UR Ranch, Cre 79.63 49 P 16 21 57.4
baz=313
MODS Modra-Piesok 79.63 327 *e*P **P 16 21 55.4 +0.6**
MODS pmax pmax
comp=Z,34nm,1.1s
MODS Modra-Piesok 79.63 327 *e*P **P 16 21 55.3 +0.5**
KONT Konya--Tatoy 79.64 311 *i* P **P 16 21 55.9 +0.9**
TREC Trest 79.66 328 *e*P **P 16 21 55.7 +0.8**
TREC MLR MLR
comp=Z,2µm,15.8s
TREC Trest 79.66 328 *e*P **P 16 21 55.7 +0.8**
TREC AMS AMS 17 01 20.0
comp=Z,2µm,15.8s
BZS Buzias 79.79 322 ⇓P **P 16 21 56.1 +0.4**
214A Organ Pipe Nat 79.83 57 P 16 21 58.1
baz=311
ZST Bratislava 79.84 327 *e*P **P 16 21 57.8 +1.9**
ZST pmax pmax
comp=Z,739nm,3.1s
ZST Bratislava 79.84 327 *e*P **P 16 21 57.8 +1.9**
PBCC Pribram 79.94 329 *e*P **P 16 21 57.1 +0.6**
PBCC *ex* x 16 22 12.2
GTTG Gottingen 79.95 332 *e*P **P 16 21 57.2 +0.8**
comp=Z,30nm,0.9s,baz=35,slow=5.4
TANN Tannenbergstha 79.95 330 *e*P **P 16 21 57.2 +0.6**
comp=Z,15nm,1.2s,baz=35,slow=5.4
HERR Herculane 79.96 322 ⇑P **P 16 21 57.0 +0.4**
EYMN Ely 79.97 34 P 16 21 56.9
baz=321
PLVB Pleven 79.98 319 ⇓P **P 16 21 57.6 +0.8**
WERD Werda 79.98 330 *e*P **P 16 21 57.4 +0.7**
comp=Z,72nm,2.1s,baz=35,slow=5.4
PLN Plauen 80.01 331 *e*P **P 16 21 57.5 +0.6**
comp=Z,39nm,1.7s,baz=35,slow=5.4
TEVE Tevekalti-Mers 80.03 309 *i* P **P 16 21 57.9 +0.7**
GUNZ Gunzen 80.04 330 *e*P **P 16 21 57.7 +0.7**
comp=Z,17nm,0.8s,baz=35,slow=5.4
IBBN Ibbenburen 80.08 334 *e*P **P 16 21 57.7 +0.5**
comp=Z,37nm,0.8s,baz=35,slow=5.4
MOX Moxa 80.08 331 *e*P **P 16 21 57.8 +0.6**
comp=Z,25nm,1.2s,baz=35,slow=5.4
MOX *e*L L 17 02 38.7
comp=Z,1µm,18.0s
OGNE Ogallala 80.08 44 IAmb IAmb 16 22 00.8
comp=Z,29nm,1.1s
WERN Wernitzgruen 80.09 330 *e*P **P 16 21 58.2 +0.9**
comp=Z,21nm,0.9s,baz=35,slow=5.4
AKKU Akkuyu-Mersin 80.15 309 *i* P **P 16 21 58.5 +0.7**
TVSB Tavsanli 80.24 314 *i* P **P 16 21 58.3 -0.1**
SHUT Suhut-Afyon 80.25 313 *i* P **P 16 21 59.6 +1.1**
MDVR Moldovita 80.37 322 ⇑P **P 16 21 59.5 +0.6**
SDCO Great Sand Dun 80.40 48 P 16 22 01.1
baz=314
MANZ Manzenberg 80.43 330 *e*P **P 16 21 60.0 +0.8**
comp=Z,17nm,0.9s,baz=35,slow=5.4
MRMT Marmara Adasi 80.44 316 *i* P **P 16 22 00.0 +0.6**
CKRC Cesky Krumlov 80.51 328 *e*P **P 16 22 00.4 +0.9**
CKRC *e*S **S 16 32 04.2 +0.6**
UBBA Unterbreizbach 80.53 332 *e*P **P 16 21 60.0 +0.5**
comp=Z,18nm,1.4s,baz=35,slow=5.4
KHC Kasperske Hory 80.55 329 *e*P **P 16 22 00.4 +0.6**
KHC *e*S **S 16 32 00.4 -3.7**
KHC MLR MLR
comp=Z,2µm,17.4s
KHC Kasperske Hory 80.55 329 *e*P **P 16 22 00.4 +0.6**
KHC *ep*P **sP 16 22 15.2 +1.6**
KHC *e*S **S 16 32 00.4 -3.7**
KHC AMS AMS 17 00 40.0
comp=Z,2µm,17.4s
RAYN Ar Rayn 80.56 293 *i* P **P 16 22 00.6 +0.3**
SNR=29
RAYN Ar Rayn 80.56 293 P **P 16 21 59.9 -0.4**
RAYN pmax pmax
comp=Z,20nm,0.9s
RAYN Ar Rayn 80.56 293 P **P 16 21 59.9 -0.4**
RAYN IAmb IAmb 16 22 01.1
comp=Z,20nm,0.8s
ROTZ Rotzenmuhle 80.57 330 *e*P **P 16 22 00.9 +1.1**
comp=Z,26nm,1.1s,baz=35,slow=5.4
CONA Conrad Observa 80.57 327 *i* P **P 16 22 01.6 +1.6**
comp=Z,16nm,0.9s,SNR=19
MORH Mrgy, Hungar 80.70 324 ⇓P **P 16 22 00.7 +0.2**
MORH Mrgy, Hungar 80.70 324 *e*P **P 16 22 00.7 +0.2**
GEC2 GERESS Array S 80.73 329 *e*P **P 16 22 01.4 +0.6**
comp=Z,16nm,0.9s,baz=35,slow=5.4
GERES GERESS Array B 80.73 329 P **P 16 22 01.4 +0.6**
comp=Z,9.7nm,0.8s,baz=37,slow=5.2,SNR=68
GERES PP **PP 16 25 03.1 -1.1**
comp=Z,1.1nm,0.6s,baz=50,slow=8.9,SNR=3.6
GERES LR LR 17 01 15.6
comp=Z,2µm,18.6s,baz=36,slow=38
GERES GERESS Array B 80.73 329 P **P 16 22 01.6 +0.8**
GERES GERESS Array B 80.73 329 P **P 16 22 01.6 +0.8**
KRBG Karabiga-Canak 80.75 316 *i* P **P 16 22 01.9 +1.0**
LFK Lefkose 80.76 309 *i* P **P 16 22 01.9 +0.7**
KASTN Kahler Asten 80.78 333 *e*P **P 16 22 01.6 +0.6**
comp=Z,21nm,1.1s,baz=35,slow=5.4
WET Wettzell 80.81 329 *e*P **P 16 22 02.3 +1.1**
comp=Z,28nm,1.1s,baz=35,slow=5.4
ECSD EROS Data Cent 80.83 39 P **P 16 22 01.4 +0.1**
ECSD EROS Data Cent 80.83 39 P 16 22 01.7
baz=318
GAZI Gazipasa 80.83 310 *i* P **P 16 22 00.9 -0.6**
TUC Tucson 80.89 55 P **P 16 22 01.4 -0.5**
TUC pmax pmax
comp=Z,8.0nm,1.1s
TUC Tucson 80.89 55 P **P 16 22 01.4 -0.5**
TUC Tucson 80.89 55 P 16 22 04.0
baz=312
ERIK Erikli-Kesan 80.97 316 *i* P **P 16 22 03.2 +1.1**
BALB Balikesir 80.97 315 P **P 16 22 02.4 +0.3**
BALB IAmb IAmb 16 22 04.2
comp=Z,53nm,1.3s
BUG Bochum--Univer 80.98 334 *e*P **P 16 22 02.3 +0.3**
comp=Z,26nm,1.0s,baz=35,slow=5.4
FRGS Fruska Gora 80.98 323 ⇑P **P 16 22 02.8 +0.7**
FRGS Fruska Gora 80.98 323 *e*P **P 16 22 02.6 +0.5**
GRF Grafenberg Arr 81.01 331 *e*P **P 16 22 03.4 +1.2**
comp=Z,62nm,1.0s,baz=35,slow=5.4
GRF *e*L L 17 03 49.2
comp=Z,1µm,18.0s
GRFO Grafenberg 81.01 331 P **P 16 22 02.4 +0.2**
GRFO pmax pmax
comp=Z,49nm,1.0s
GRFO Grafenberg 81.01 331 P **P 16 22 02.4 +0.2**
GRFO IAmb IAmb 16 22 04.1
comp=Z,49nm,1.0s
CSS Mathiatis 81.09 308 IAmb IAmb 16 22 04.2
comp=Z,25nm,0.7s
MMAI Mount Meron Ar 81.14 306 LR LR 17 02 08.1
comp=Z,2µm,19.1s,baz=40,slow=39
GELI Tayfur-Gelibol 81.18 316 *i* P **P 16 22 04.1 +0.9**
BOVS Bovan 81.23 321 ⇑P **P 16 22 03.4 0.0**
VTS Vitosha 81.24 320 ⇓P **P 16 22 05.0 +1.3**
VTS Vitosha 81.24 320 IAmb IAmb 16 22 05.7
comp=Z,27nm,0.8s
ARSA Arzberg 81.25 327 *i* P **P 16 22 04.7 +1.2**
comp=Z,8.6nm,0.7s,SNR=9.3
LEF Lefka 81.25 309 ⇑P **P 16 22 04.2 +0.5**
MOA Molln 81.30 328 *i* P **P 16 22 05.0 +1.2**
comp=Z,5.2nm,0.6s,SNR=7.5
MANT Manisa 81.41 314 P **P 16 22 05.5 +0.7**
SOCY Socotra 81.44 279 P **P 16 22 03.2 -1.9**
KORT Korkueli 81.44 312 *i* P **P 16 22 05.2 +0.3**
T25A Trinidad 81.44 48 P 16 22 06.7
baz=314
TNS Taunus Mts 81.59 332 *e*P **P 16 22 05.8 +0.5**
comp=Z,18nm,1.0s,baz=35,slow=5.4
MILB Miltenberg 81.61 332 *e*P **P 16 22 06.1 +0.7**
comp=Z,22nm,1.1s,baz=35,slow=5.4
EZN Ezine 81.67 316 *i* P **P 16 22 06.5 +0.7**
DIVS Divibare 81.70 322 *e*P **P 16 22 06.5 +0.5**
DIVS Divibare 81.70 322 IAmb IAmb 16 22 07.2
comp=Z,14nm,0.8s
ANMO Albuquerque 81.76 51⇑ *e*P **P 16 22 08.4 +1.7**
ANMO pmax pmax
comp=Z,8.0nm,1.1s
ANMO Albuquerque 81.76 51 P **P 16 22 06.5 -0.2**
ANMO Albuquerque 81.76 51 P 16 22 08.7
baz=314
BGNE Belgrade 81.78 42 P 16 22 07.5
baz=317
AHRW Bad Neuenahr-A 81.80 333 *e*P **P 16 22 07.1 +0.8**
comp=Z,28nm,1.2s,baz=35,slow=5.4
BOZC Bozcaada 81.81 316 *i* P **P 16 22 06.9 +0.3**
DKL Dikili 81.90 315 *i* P **P 16 22 07.4 +0.3**
PERS Pernice 81.90 327 *i* P **P 16 22 08.0 +0.9**
SOKA Soboth 81.91 327 *i* P **P 16 22 07.9 +0.9**
comp=Z,22nm,0.7s,SNR=28
RJOB Jochberg 81.98 329 *e*P **P 16 22 08.7 +1.2**
comp=Z,131nm,1.0s,baz=35,slow=5.4
BEBN Eben Emael 82.06 334 *d*P **P 16 22 08.2 +0.6**
BTNL Ternell 82.08 334 *d*P **P 16 22 08.5 +0.6**
comp=Z,10nm,0.9s
MEM Membach 82.11 334 *d*P **P 16 22 08.6 +0.7**
comp=Z,15nm,0.8s
BBLS Lazći 82.15 322 *e*P **P 16 22 09.4 +1.0**
AYDB Zeytinkoy-Aydi 82.17 314 *i* P **P 16 22 09.5 +0.8**
HAPS Han Pijesak,BI 82.19 323 *e*P **P 16 22 08.4 -0.3**
OBKA Obir 82.24 327 *i* P **P 16 22 09.5 +0.7**
comp=Z,16nm,0.7s,SNR=11
BSTI Sart Tilman 82.28 334 *d*P **P 16 22 09.6 +0.8**
KBA Koelnbreinsper 82.29 328 *i* P **P 16 22 10.0 +0.8**
comp=Z,13nm,0.6s,SNR=22
CRES Cresnjev 82.40 326 *e*P **P 16 22 09.8 +0.2**
MRAK Mrakovica 82.41 325 *e*P **P 16 22 10.8 +1.1**
STIP Stip 82.44 319 *i* P **P 16 22 09.8 -0.1**
STIP Stip 82.44 319 *i* Pg **P 16 22 09.7 -0.2**
319A Douglas 82.46 55 P **P 16 22 11.4 +1.1**
319A IAmb IAmb 16 22 27.5
comp=Z,18nm,0.9s
BCLA Clavier 82.50 334 *d*P **P 16 22 10.3 +0.3**
comp=Z,10nm,0.9s
STU Stuttgart 82.52 331 *e*P **P 16 22 10.9 +0.7**
comp=Z,41nm,0.9s,baz=35,slow=5.4
MYKA Terra Mystica 82.53 327 *i* P **P 16 22 10.6 +0.3**
comp=Z,10nm,0.5s,SNR=12
VAY Valandovo 82.53 319 *i* P **P 16 22 11.3 +1.0**
VAY Valandovo 82.53 319 *i* Pg **P 16 22 11.4 +1.0**
URLA Izmir 82.58 315 *i* P **P 16 22 10.1 -0.6**
BGES Gesves 82.61 334 *d*P **P 16 22 11.0 +0.4**
SKO Skopje 82.61 320 *i* P **P 16 22 12.2 +1.5**
SKO Skopje 82.61 320 *i* Pg **P 16 22 12.2 +1.5**
121A Cookes Peak, D 82.61 53 IAmb IAmb 16 22 28.6
comp=Z,19nm,1.1s
121A Cookes Peak, D 82.61 53 P 16 22 13.3
baz=313
LJU Ljubljana 82.62 327 *i* P **P 16 22 11.1 +0.3**
GCAM G?zelcaml? 82.71 314 *i* P **P 16 22 12.1 +0.8**
BMRD Maredsous 82.78 334 *d*P **P 16 22 12.1 +0.6**
comp=Z,18nm,0.9s
MGRS Mrkonjic Grad 82.79 324 *e*P **P 16 22 12.7 +1.0**
WATA Walderalm 82.79 329 *e*P **P 16 22 14.7 +2.9**
comp=Z,7.3nm,0.6s
TURN Turunc 82.80 313 *i* P **P 16 22 12.9 +1.1**
WTTA Wattenberg 82.83 329 *i* P **P 16 22 13.1 +1.1**
comp=Z,12nm,0.6s,SNR=7.1
WLF Walferdange 82.86 333 *d*P **P 16 22 13.2 +1.3**
WLF Walferdange 82.86 333 P **P 16 22 13.1 +1.3**
WLF pmax pmax
comp=Z,11nm,0.8s
WLF Walferdange 82.86 333 P **P 16 22 13.1 +1.3**
WLF Walferdange 82.86 333 *e*P **P 16 22 12.6 +0.7**
comp=Z,48nm,0.1s,baz=35,slow=5.4
ZOU Zoufplan 82.86 328 IAmb IAmb 16 22 12.5
comp=Z,19nm,1.1s
UPM Unac-Piva 82.89 322 *e*P **P 16 22 12.5 +0.1**
CEY Cerknica 82.91 326 *i* P **P 16 22 12.4 +0.2**
CEY Cerknica 82.91 326 *e*P **P 16 22 12.3 0.0**
MOTA Moosalm 82.97 329 *i* P **P 16 22 13.7 +1.0**
comp=Z,19nm,0.8s,SNR=15
RETA Reutte 82.98 330 *e*P **P 16 22 13.7 +1.0**
comp=Z,3.7nm,0.2s,SNR=12
DOU Dourbes 83.02 334 *d*P **P 16 22 13.4 +0.7**
DOU *d*PcP **PcP 16 22 18.4 +1.0**
DOU *d*pP **sP 16 22 25.8 -0.7**
SQTA Sankt Quirin 83.03 329 *i* P **P 16 22 13.9 +1.0**
comp=Z,2.1nm,0.3s,SNR=8.6
UBR Ueberruh 83.08 330 *e*P **P 16 22 13.6 +0.4**
comp=Z,44nm,1.8s,baz=35,slow=5.4
BFO Black Forest 83.21 331 P **P 16 22 13.8 +0.1**
BFO pmax pmax
comp=Z,20nm,0.8s
BFO Black Forest 83.21 331 P **P 16 22 13.8 +0.1**
BFO IAmb IAmb 16 22 16.2
comp=Z,20nm,0.8s
BFO Black Forest 83.21 331 *e*P **P 16 22 14.3 +0.5**
comp=Z,27nm,0.9s,baz=35,slow=5.4
BRY Bratogost 83.29 322 *e*P **P 16 22 14.4 0.0**
PDG Podgorica 83.32 322 *e*P **P 16 22 14.7 +0.3**
FETA Feichten 83.38 329 *i* P **P 16 22 15.8 +0.9**
comp=Z,11nm,1.0s,SNR=12
LIT Litokhoron 83.48 318 IAmb IAmb 16 22 16.5
comp=Z,27nm,1.0s
DAVA Damuels 83.49 330 *i* P **P 16 22 16.3 +0.8**
comp=Z,12nm,0.8s,SNR=8.9
TREB Trebinje 83.52 322 *e*P **P 16 22 13.3 -2.2**
FNA Florina 83.53 319 IAmb IAmb 16 22 16.4
comp=Z,26nm,1.1s
DRME Dracevica, Mon 83.54 322 *e*P **P 16 22 16.1 +0.6**
OHR Ohrid 83.57 320 *i* Pg **P 16 22 16.3 +0.5**
HCY Herceg Novi 83.66 322 *e*P **P 16 22 15.4 -0.8**
EIL Elat 83.68 304 LR LR 17 04 24.9
comp=Z,746nm,19.4s,baz=46,slow=39
STON Ston 83.71 323 *e*P P 16 22 09.6 -6.7
ECH Echery 83.73 332 IAmb IAmb 16 22 17.6
comp=Z,17nm,0.9s
CTI Castel Tesino 83.81 328 IAmb IAmb 16 22 23.0
comp=Z,21nm,1.0s
TIR Tirane 83.85 321⇑P **P 16 22 17.2 0.0**
TIR Tirane 83.85 321 P **P 16 22 17.6 +0.5**
TIR pmax pmax
comp=Z,43nm,0.9s
TIR Tirane 83.85 321 P **P 16 22 17.6 +0.5**
H43A Windswept, Lux 84.30 34 P **P 16 22 19.2 -0.2**
H43A IAmb IAmb 16 22 32.6
comp=Z,19nm,0.8s
TEOL Teolo 84.36 328 IAmb IAmb 16 22 21.1
comp=Z,28nm,0.8s
TUE Stuetta 84.37 330 IAmb IAmb 16 22 21.4
comp=Z,27nm,0.9s
LSQQ Lebel-sur-Quev 84.52 25 P 16 22 20.9
baz=330
CHGQ Chibougamau 84.59 23 P 16 22 20.9
baz=332
MSTX Muleshoe 84.62 50 P **P 16 22 21.7 +0.3**
MSTX IAmb IAmb 16 22 38.4
comp=Z,11nm,0.8s
MSTX Muleshoe 84.62 50 P 16 22 22.5
baz=316
MNTX Cornudas Mount 84.66 53 P 16 22 22.8
baz=314
N38A Joes South For 84.69 39 IAmb IAmb 16 22 37.8
comp=Z,20nm,0.8s
PPT Papeete 84.99 118 LR LR 16 52 42.7
comp=Z,1µm,21.8s,baz=288,slow=30
PPT2 Papeete2 85.00 118 *e*S **S 16 32 47.2 -3.0**
comp=Z,584nm,23.0s
PPT2 Papeete2 85.00 118 *e*LR LR 16 49 14.7
comp=Z,2µm,22.2s,baz=318
PPT2 Papeete2 85.00 118 *e*T T 17 56 03.0
comp=Z,12nm,0.3s
SENIN Lac Senin/Sane 85.24 331 P **P 16 22 24.1 -0.2**
SENIN IAmb IAmb 16 22 26.5
comp=Z,18nm,0.8s
KAN13 South Haven SW 85.38 44 IAmb IAmb 16 22 41.4
comp=Z,19nm,1.0s
P38A Dawn 85.44 40 IAmb IAmb 16 22 38.9
comp=Z,13nm,0.6s
ZCCA Zocca 85.47 328 IAmb IAmb 16 22 27.6
comp=Z,20nm,0.9s
SGRT San Giovanni R 85.48 323 P **P 16 22 25.3 -0.2**
TAOE Nuku Hiva Isla 85.81 105 *e*LR LR 16 49 41.7
comp=Z,2µm,21.1s,baz=317
MATE Matera 85.91 322 ⇓P **P 16 22 27.8 +0.3**
T35A Sooner Cattle 85.96 44 IAmb IAmb 16 22 44.5
comp=Z,20nm,1.0s
MEH Mehetia 86.23 117 *e*T T 17 57 34.8
comp=Z,56nm,0.3s
P40A Paris 86.24 39 IAmb IAmb 16 22 45.7
comp=Z,24nm,1.2s
WMOK Wichita Mounta 86.34 47 P 16 22 31.0
baz=318
BNI Bardonecchia 86.58 331 IAmb IAmb 16 22 50.6
comp=Z,15nm,1.1s
D55A Sainte-Anne-du 86.79 25 P 16 22 32.4
baz=332
D56A ZEC Mazanza, M 87.00 25 P 16 22 33.3
baz=332
S39A Bolivar 87.03 41 IAmb IAmb 16 22 48.7
comp=Z,11nm,0.8s
R40A Maddies Statio 87.09 40 IAmb IAmb 16 22 49.5
comp=Z,16nm,0.9s
SSB Saint Sauveur 87.17 332 IAmb IAmb 16 22 35.1
comp=Z,10nm,0.9s
E56A St. Veronique 87.36 25 P 16 22 35.1
baz=332
TX31 Lajitas Ar. Si 87.37 53 IAmb IAmb 16 22 52.5
comp=Z,16nm,0.9s
TXAR Lajitas Array 87.37 53 P **P 16 22 36.2 +1.3**
comp=Z,2.2nm,0.8s,baz=295,slow=3.5,SNR=16
TXAR LR LR 16 57 04.6
comp=Z,185nm,21.4s,baz=0.0,slow=32
TXAR Lajitas Array 87.37 53 P **P 16 22 35.8 +0.8**
U38A Gravette 87.44 43 IAmb IAmb 16 22 51.2
comp=Z,8.3nm,0.8s
CCM Cathedral Cave 87.78 40 P **P 16 22 37.1 +0.4**
CCM pmax pmax
comp=Z,18nm,0.9s
CCM Cathedral Cave 87.78 40 P **P 16 22 37.1 +0.4**
CCM IAmb IAmb 16 22 50.5
comp=Z,18nm,0.8s
CCM Cathedral Cave 87.78 40 P 16 22 37.8
baz=322
HHAR Hobbs 87.79 43 IAmb IAmb 16 22 52.8
comp=Z,9.5nm,0.9s
MGMO Mountain Grove 87.97 41 IAmb IAmb 16 22 51.0
comp=Z,9.8nm,0.8s
E58A La Victoria 88.07 24 P 16 22 38.7
baz=333
U40A Yellville 88.30 42 P 16 22 40.0
baz=321
T42A Van Buren 88.66 40 IAmb IAmb 16 22 57.1
comp=Z,8.6nm,0.8s
FCAR Ozark Folk Cen 89.03 42 IAmb IAmb 16 23 01.9
comp=Z,16nm,0.9s
TBI Tubuai 89.11 122 *e*S **S 16 33 29.3 -0.1**
comp=Z,329nm,25.0s
TBI Tubuai 89.11 122 *e*LR LR 16 50 53.9
comp=Z,1µm,26.2s,baz=320
TBI Tubuai 89.11 122 *e*T T 18 01 12.6
comp=Z,44nm,0.3s
F61A St Evariste 89.13 23 P 16 22 44.0
baz=335
MIAR Mount Ida 89.31 43 IAmb IAmb 16 23 00.6
comp=Z,17nm,1.1s
MIAR Mount Ida 89.31 43 P 16 22 44.8
baz=320
WHAR Wooly Hollow 89.41 42 IAmb IAmb 16 22 58.2
comp=Z,13nm,0.7s
L53A Girard 89.46 31 P 16 22 46.0
baz=328
W41B Gary Mavity, V 89.52 42 P 16 22 46.1
baz=321
P49A Miami Univ. Ec 89.63 35 P 16 22 46.3
baz=326
J57A Williamstown 89.78 27 P 16 22 46.7
baz=331
ACSO Alum Creek Sta 89.80 33 P 16 22 47.3
baz=327
M54A Oil Creek Stat 90.07 31 P 16 22 48.5
baz=329
H61A Lyndonville 90.14 24 P 16 22 47.9
baz=334
J59A Piesco 90.25 26 P 16 22 49.1
baz=332
L56A Greenwood 90.33 29 IAmb IAmb 16 22 50.1
comp=Z,21nm,1.0s
L56A Greenwood 90.33 29 P 16 22 49.4
baz=330
H62A Milan 90.34 24 P 16 22 50.1
baz=335
N54A Moraine State 90.41 31 P 16 22 50.3
baz=329
G64A Maxfield 90.44 22 P 16 22 50.5
baz=336
K58A Earlville 90.47 27 P 16 22 49.9
baz=332
M56A Emporium 90.66 30 P **P 16 22 50.4 +0.3**
M56A IAmb IAmb 16 22 52.2
comp=Z,22nm,1.1s
M56A Emporium 90.66 30 P 16 22 51.2
baz=330
L57A Andrews Acres 90.71 28 P 16 22 51.5
baz=331
K59A Cooperstown 90.74 27 P 16 22 51.4
baz=332
BINY Binghamton 90.85 28 P 16 22 52.1
baz=331
WVT Waverly 90.97 39 P 16 22 53.7
baz=324
L58A Harry Jones Me 91.03 28 P 16 22 53.4
baz=331
M57A Sunshine Farm, 91.18 29 P 16 22 53.9
baz=331
L59A Walton 91.19 27 P 16 22 54.0
baz=332
L60A Shokan 91.65 27 P 16 22 55.5
baz=332
L61A Hillsdale 1, H 91.70 26 P 16 22 56.3
baz=333
KEST Kesra 93.28 324 LR LR 17 09 49.6
comp=Z,1µm,18.7s,baz=342,slow=39
PBRG Braganca 93.97 338 *e*PP PP 16 27 00.8 +10
PGAV Gavieira, Arco 94.25 339 *e*PP **PP 16 26 58.1 +5.3**
PGAV Gavieira, Arco 94.25 339 *e*LR LR 16 58 13.5
comp=Z,692nm,18.0s
MVO Moncorvo 94.64 338 *e*PP **PP 16 27 01.3 +5.5**
MVO Moncorvo 94.64 338 *e*LR LR 16 57 30.1
comp=Z,1µm,20.0s
POLO Lamas de Olo 94.67 338 *e*PP **PP 16 26 57.5 +1.4**
ESDC Sonseca Array 95.06 335 P **P 16 23 10.8 +0.3**
comp=Z,3.0nm,0.7s,baz=13,slow=4.4,SNR=22
ESDC PP **PP 16 26 57.2 -2.0**
comp=Z,1.2nm,0.7s,baz=20,slow=8.1,SNR=2.5
ESDC LR LR 17 11 09.1
comp=Z,916nm,19.3s,baz=5.0,slow=39
PCAS Casmilo, Conde 96.09 338 *e*PP PP 16 27 16.1 +9.1
PMRV Marv??o 96.35 337 *e*PP **PP 16 27 16.4 +7.4**
PMRV Marv??o 96.35 337 *e*LR LR 16 58 41.0
comp=Z,792nm,18.0s
PMTG Montargil 96.92 338 *e*PP **PP 16 27 20.6 +7.1**
PBAR Barrancos 97.39 337 *e*PP **PP 16 27 23.6 +6.5**
PCVE Castro Verde 98.20 337 *e*PP **PP 16 27 26.5 +3.2**
PVAQ Vaqueiros 98.31 337 *e*LR LR 16 59 46.9
comp=Z,2µm,20.0s
RKT Rikitea 98.84 113 *e*LR LR 16 55 19.7
comp=Z,1µm,23.0s
KMBO Kilima Mbogo 102.67 279 P **Pdif 16 23 45.8 +0.5**
comp=Z,2.8nm,0.8s,baz=47,slow=6.6,SNR=7.4
KMBO Kilima Mbogo 102.67 279 *i* P **Pdif 16 23 46.2 +0.9**
KMBO pmax pmax
comp=Z,3.0nm,0.8s
PMOZ Porto Moniz, M 105.16 343 *e*LR LR 17 07 00.0
comp=Z,288nm,20.0s
TORD Torodi Ar. Bea 115.95 317 PKP **PKPdf 16 28 30.4 -0.3**
comp=Z,1.2nm,0.5s,baz=19,slow=2.1,SNR=7.6
TORD PP **PP 16 29 28.0 -6.1**
comp=Z,5.7nm,1.0s,baz=26,slow=6.8,SNR=7.9
TORD PKKP **PKKPdf 16 39 20.2 -4.4**
comp=Z,1.3nm,1.0s,baz=204,slow=4.6,SNR=3.5
TORD Torodi Ar. Bea 115.95 317 PKPdf **PKPdf 16 28 29.1 -1.7**
KOWA Kowa 117.59 323 PKPdf **PKPdf 16 28 33.8 -0.1**
VNDA Vanda 117.90 175 PKP **PKPdf 16 28 32.5 -0.1**
comp=Z,0.6nm,0.7s,baz=326,slow=5.0,SNR=5.5
VNDA Vanda 117.90 175 **PKPdf 16 28 32.4 -0.3**
SDV Santo Domingo 122.26 40 PKPdf **PKPdf 16 28 43.0 -0.2**
MAW Mawson 122.77 207 PKP **PKiKP 16 28 42.8 +0.4**
comp=Z,3.5nm,0.9s,baz=328,slow=9.6,SNR=2.7

MAW	**Mawson**	**122.77**	**207**			**PKPdf**	**16 28 42.2**	**0.0**
DBIC	**Dimbokro**	**124.79**	**320**	PKP		**PKPdf**	**16 28 47.9**	**+0.1**
	comp=Z,5.3nm,0.6s,baz=15,slow=3.3,SNR=14							
LBTB	**Lobatse**	**126.08**	**266**	PKIKP		**PKiKP**	**16 28 50.5**	**0.0**
LBTB	**Lobatse**	**126.08**	**266**	PKPdf		**PKiKP**	**16 28 50.5**	**0.0**
BOSA	**Boshof**	**128.20**	**262**	PKP		**PKPdf**	**16 28 53.9**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=91,slow=2.0,SNR=7.9							
SYO	**Syowa Base**	**131.43**	**208**	ℓPdiff		**Pdif**	**16 25 55.6**	**+4.2**
SNAA	**Sanae**	**143.99**	**198**	PKPbc		**PKiKP**	**16 29 30.9**	**+5.6**
SNAA	**Sanae**	**143.99**	**198**	PKPdf		PKPbc	16 29 19.6	-0.2
SNAA	**Sanae**	**143.99**	**198**	PKHKP		PKPpre	16 29 18.3	
SNAA	**Sanae**	**143.99**	**198**	PKPpre		PKPpre	16 29 18.3	
LPAZ	**La Paz**	**144.12**	**58**	PKP		**PKPdf**	**16 29 24.0**	**-0.4**
	comp=Z,6.2nm,1.0s,baz=10,slow=5.8,SNR=14							
LPAZ	**La Paz**	**144.12**	**58**	PKIKP		**PKPdf**	**16 29 24.0**	**-0.4**
VNA2	**Neumayer--Watz**	**145.56**	**197**	PKPbc		**PKiKP**	**16 29 32.3**	**+3.8**
VNA2	**Neumayer--Watz**	**145.56**	**197**	PKPdf		**PKPbc**	**16 29 24.8**	**+0.1**
	baz=115,slow=2.3							
PB11	**IPOC Station P**	**145.56**	**64**	PKPdf		**PKPbc**	**16 29 26.6**	**+0.2**
TA01	**Diego Aracena**	**145.74**	**65**	PKPdf		**PKPbc**	**16 29 26.7**	**0.0**
VNA3	**Neumayer Olymp**	**145.80**	**195**	PKPbc		**PKiKP**	**16 29 33.2**	**+4.2**
VNA3	**Neumayer Olymp**	**145.80**	**195**	PKPdf		**PKPbc**	**16 29 25.2**	**-0.2**
VNA1	**Neumayer--Stat**	**145.95**	**197**	PKPdf		**PKPbc**	**16 29 26.0**	**+0.2**
PB15	**IPOC Station P**	**147.95**	**68**	PKPbc		**PKPab**	**16 29 38.9**	**+2.9**
LVC	**Limon Verde**	**147.97**	**67**	PKP2		**PKPbc**	**16 29 34.3**	**+0.8**
LVC	**Limon Verde**	**147.97**	**67**	PKPbc		**PKPbc**	**16 29 34.3**	**+0.8**
PB14	**IPOC Station P**	**148.16**	**71**	PKPbc		**PKPbc**	**16 29 32.4**	**-1.5**
GO02	**Mina Guanaco**	**149.07**	**71**	PKPbc		**PKPbc**	**16 29 36.7**	**+0.4**
BO02	**Sierra Bellavi**	**152.85**	**90**	PKPdf		**PKPdf**	**16 29 37.0**	**-0.4**
BO02				PKPbc		**PKiKP**	**16 29 45.4**	**+0.6**
BI02	**San Fabin de**	**153.10**	**94**	PKPbc		**PKiKP**	**16 29 45.3**	**+0.1**
LL01	**San Ignacio de**	**153.46**	**107**	PKPbc		**PKiKP**	**16 29 46.2**	**+0.6**
PLCA	**Paso Flores**	**154.61**	**102**	PKP		**PKPdf**	**16 29 41.3**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=227,slow=15,SNR=1.5							
PLCA				PKPbc		**PKiKP**	**16 29 48.8**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=299,slow=4.7,SNR=3.4							
PLCA				PKPab		**sPKPbc**	**16 30 01.2**	**-1.1**
	comp=Z,4.8nm,0.9s,baz=259,slow=11,SNR=5.7							
PLCA	**Paso Flores**	**154.61**	**102**			**PKPdf**	**16 29 41.1**	**+1.4**

IDC 29 16:19:07.3±73.0, 13°81'S×166°51'E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/26, mbtmp3.6/3 Error ellipse: s-maj=1235.0km s-min=127.2km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.04**	**228**	P	P	16 25 09.8	+0.4
	1.1nm,0.6s,baz=59,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**31.34**	**254**	P	P	16 25 29.7	-0.2
	0.3nm,0.8s,baz=87,slow=8.5,SNR=1.1						
ASAR	**Alice Springs**	**32.32**	**248**	P	P	16 25 38.2	-0.2
	0.3nm,0.5s,baz=76,slow=9.2,SNR=5.9						

*IDC **29** 16:32:06.5±1.6, 27°.94N×86°.03E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/51, mbtmp3.6/8, ML3.8/2, Error ellipse: s-maj=59.3km s-min=21.3km az=61.0*

ISC 29 16:32:09.5±1.6, 28°.0N±0°.2×86°.1E±0°.3, h19km, n8, σ0°85/8, mb3.5/6, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.12**	**126**	Pn	**Pn**	**16 35 41.4**	**-0.8**
	0.2nm,0.3s,baz=316,slow=9.9,SNR=1.6						
MKAR	**Makanchi Array**	**19.02**	**352**	P	**Pn**	**16 36 30.3**	**-0.7**
	0.1nm,0.3s,baz=171,slow=11,SNR=7.0						
SONM	**Songino Array**	**25.34**	**33**	P	**P**	**16 37 35.5**	**+0.2**
	0.3nm,0.4s,baz=223,slow=8.9,SNR=3.2						
ZALV	**Zalesovo Beam**	**25.96**	**358**	P	**P**	**16 37 41.8**	**+1.1**
	0.3nm,0.4s,baz=188,slow=14,SNR=1.7						
FINES	**FINESS Array B**	**51.57**	**328**	P	**P**	**16 41 13.7**	**-0.4**
	2.6nm,0.9s,baz=95,slow=16,SNR=1.5						
ARCES	**ARCESS Array B**	**53.88**	**338**	P	**P**	**16 41 30.8**	**-0.3**
	1.7nm,0.8s,baz=108,slow=8.6,SNR=1.9						
WRA	**Warramunga Arr**	**66.67**	**130**	P	**P**	**16 42 59.4**	**+0.1**
	0.5nm,0.8s,baz=324,slow=6.5,SNR=5.3						
ASAR	**Alice Springs**	**68.99**	**133**	P	**P**	**16 43 14.8**	**+0.9**
	0.2nm,0.8s,baz=306,slow=6.4,SNR=2.0						

*IDC **29** 16:36:41.9±0.8, 51°.68N×175°.38W, h0km, mb3.7/13, mb1 3.8/15, mb1mx3.6/79, mbtmp3.7/15, ML4.1/2, Error ellipse: s-maj=31.0km s-min=14.5km az=169.0*

*AEIC **29** 16:36:47±3.1, 51°.61N±0°.07×175°.14W±0°.06, h26km±4km, Error ellipse: s-maj=10.2km s-min=4.8km az=163.0*

*NEIC **29** 16:36:48.5±2.5, 51°.68N±0°.09×175°.17W±0°.06, h44km±4km, mb4.0/25, ML3.9(AEIC), Error ellipse: s-maj=13.5km s-min=4.2km az=165.0*

ISC 29 16:36:47.7±0.7, 51°.61N±0°.09×175°.19W±0°.04, h40km, n88, σ1°20/83, mb3.9/15, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.59**	**310**		**Pn**	**16 37 01.2**	**+1.6**
GSMY	**Great Sitkin M**	**0.69**	**309**		**Pn**	**16 37 01.2**	**+0.2**
GSTR	**Great Sitkin T**	**0.72**	**312**		**Pn**	**16 37 02.0**	**+0.6**
GSCK	**Great Sitkin C**	**0.72**	**304**		**Pn**	**16 37 01.4**	**0.0**
GSTD	**Great Sitkin T**	**0.74**	**307**		**Pn**	**16 37 01.9**	**+0.2**
GSTD					**Sn**	**16 37 12.7**	**+0.8**
ATKA	**Atka Island**	**0.85**	**46**		**Pn**	**16 37 02.6**	**-0.5**
ATKA	**Atka Island**	**0.85**	**46**		**Sn**	**16 37 13.6**	**-0.8**
KOFP	**Korovin Flat P**	**0.95**	**45**		**Pn**	**16 37 04.5**	**0.0**
KOWE	**Korovin West**	**0.95**	**37**		**Pn**	**16 37 05.0**	**+0.5**
ADAG	**Mount Adagdak**	**0.95**	**293**		**Pn**	**16 37 05.3**	**+0.8**
ADK	**Adak**	**0.97**	**287**		**Pn**	**16 37 04.7**	**0.0**
ADK					**Sn**	**16 37 17.1**	**-0.2**
KOKV	**Korovin Volcan**	**0.98**	**40**		**Pn**	**16 37 05.5**	**+0.6**
KIRH	**Kanaga Island**	**1.22**	**284**		**Pn**	**16 37 08.6**	**+0.4**
KIKV	**Kanaga Island**	**1.26**	**283**		**Pn**	**16 37 09.2**	**+0.4**
KIMD	**Kanaga Island**	**1.28**	**277**		**Pn**	**16 37 09.1**	**0.0**
KICM	**Kanaga Island**	**1.28**	**285**		**Pn**	**16 37 09.7**	**+0.6**
TAFP	**Tanaga Falls P**	**1.76**	**280**		**Pn**	**16 37 16.6**	**+0.9**
TAFP					**Sn**	**16 37 38.7**	**+1.9**
TASE	**Tanaga Southea**	**1.79**	**278**		**Pn**	**16 37 17.1**	**+1.1**
GAEA	**Gareloi East**	**2.22**	**276**		**Pn**	**16 37 23.2**	**+1.2**
GALAA	**Gareloi Lava P**	**2.23**	**275**		**Pn**	**16 37 23.4**	**+1.2**
CESA	**Semis' Rag'd T**	**3.20**	**277**		**Pn**	**16 37 32.4**	**+2.0**
CEAP	**Semis' Anvil P**	**3.27**	**279**		**Pn**	**16 37 38.1**	**+1.8**
CESW	**Semis' Southwe**	**3.27**	**277**		**Pn**	**16 37 38.2**	**+1.8**
AMKA	**Amchitka**	**3.45**	**268**	Pn	**Pn**	**16 37 40.2**	**+1.4**
LSPA	**Little Sitkin**	**3.89**	**278**		**Pn**	**16 37 47.0**	**+2.1**
LSSE	**Little Sitkin**	**3.89**	**277**		**Pn**	**16 37 47.0**	**+2.1**
NIKH	**Nikolski High**	**4.12**	**68**		**Pn**	**16 37 48.9**	**+0.9**
MAPS	**Pakushin South**	**5.47**	**63**		**Pn**	**16 38 08.8**	**+2.2**
SPIA	**Saint Paul Isl**	**6.28**	**25**	Pn	**Pn**	**16 38 20.6**	**+3.0**
SDPT	**Sand Point**	**9.53**	**61**	Pn	**Pn**	**16 39 04.7**	**+2.5**
ANM	**Nome**	**13.96**	**18**	P	**P**	**16 40 06.4**	**-3.4**
KDAK	**Kodiak Island**	**14.41**	**56**	Pn	**Pn**	**16 40 08.9**	**+0.2**
	1.9nm,0.3s,baz=283,slow=2.9,SNR=16						
KDAK	**Kodiak Island**	**14.41**	**56**	Pn	**Pn**	**16 40 08.8**	**0.0**
TNA	**Tin City**	**14.47**	**12**	P	**P**	**16 40 14.1**	**-1.4**
TTA	**Tatalina**	**15.29**	**35**	P	**P**	**16 40 23.7**	**-1.0**
TTA				IAmb	IAmb	16 40 39.3	
	comp=Z,7.8nm,1.4s						
CNPM	**China Poot**	**15.62**	**50**	P	**P**	**16 40 27.0**	**-1.4**
BRLK	**Bradley Lake**	**15.87**	**50**	P	**Pn**	**16 40 28.9**	**+1.0**
BRLK				IAmb	IAmb	16 40 33.5	
	comp=Z,46nm,1.4s						
PETK	**Petropavlovsk-**	**16.59**	**286**	Pn	**P**	**16 40 39.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=92,slow=13,SNR=1.4						
PETK	**Petropavlovsk-**	**16.59**	**286**	P	**P**	**16 40 40.0**	**+0.9**
SEW	**Seward**	**16.66**	**49**	P	**Pn**	**16 40 36.3**	**-1.6**
SEW				IAmb	IAmb	16 40 42.3	
	comp=Z,11nm,0.9s						
BPAW	**Bear Paw Mtn.**	**17.80**	**36**	P	**P**	**16 40 54.3**	**+1.9**
MLY	**Manley**	**18.41**	**34**	P	**Pn**	**16 41 00.9**	**+1.4**
NEA2	**Nenana**	**18.77**	**36**	P	**P**	**16 41 02.9**	**-0.1**
BILL	**Bilibino**	**18.78**	**338**	P	**Pn**	**16 41 05.1**	**+1.2**
BILL				IAmb	IAmb	16 41 06.0	
	comp=Z,7.7nm,1.2s						
I23K	**Minto, Yukon-K**	**18.96**	**35**	P	**Pn**	**16 41 07.0**	**+1.0**
WRH	**Wood River Hil**	**19.07**	**37**	P	**P**	**16 41 05.6**	**-0.7**
MDM	**Murphy Dome**	**19.27**	**36**	P	**P**	**16 41 08.3**	**-0.2**
MDM				IAmb	IAmb	16 41 14.6	
	comp=Z,8.5nm,1.3s						
IL31		**19.67**	**37**	P	**P**	**16 41 13.0**	**+0.1**
ILAR	**Eielson Array**	**19.67**	**37**	P	**P**	**16 41 12.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=219,slow=9.6,SNR=14						
GLB	**Gilahina Butte**	**19.71**	**48**	P	**P**	**16 41 13.6**	**+0.3**
GLB				IAmb	IAmb	16 41 22.0	
	comp=Z,9.1nm,1.2s						
COLD	**Coldfoot**	**19.93**	**29**	P	**Pn**	**16 41 17.3**	**-0.2**
COLD				IAmb	IAmb	16 41 22.8	
	comp=Z,5.5nm,1.0s						
MCARA	**McCarthy VSAT**	**20.06**	**48**	P	**Pn**	**16 41 18.8**	**-0.3**
DOT	**Dot Lake**	**20.31**	**42**	P	**P**	**16 41 19.3**	**-0.5**
DOT				IAmb	IAmb	16 41 23.2	
	comp=Z,3.9nm,0.8s						
SCRK	**Sand Creek**	**20.46**	**41**	P	**P**	**16 41 20.3**	**-1.4**
SCRK				IAmb	IAmb	16 41 25.2	
	comp=Z,6.9nm,0.8s						
SEY	**Seymchan**	**20.62**	**316**	P	**P**	**16 41 22.0**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=107,slow=23,SNR=2.4						
TABL	**Table Mountain**	**20.76**	**52**	P	**P**	**16 41 23.4**	**-1.5**
TABL				IAmb	IAmb	16 41 32.3	
	comp=Z,17nm,1.2s						
K27K	**Chicken**	**21.27**	**42**	P	**P**	**16 41 30.1**	**0.0**
K27K				IAmb	IAmb	16 41 38.1	
	comp=Z,4.4nm,0.8s						
BMAR	**Burnt Mountain**	**21.82**	**32**	P	**P**	**16 41 37.4**	**+1.3**
EGAK	**Eagle**	**21.90**	**40**	P	**P**	**16 41 36.7**	**-0.2**
EGAK				IAmb	IAmb	16 41 38.1	
	comp=Z,9.4nm,1.4s						
ASAJ	**Asahikawa**	**28.96**	**272**	P	**P**	**16 42 42.3**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=20,slow=25,SNR=2.3						
KLR	**Kul'dur**	**33.28**	**287**	P	**P**	**16 43 19.5**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=336,slow=9.6,SNR=6.5						
YKA	**Yellowknife Ar**	**33.42**	**47**	P	**P**	**16 43 22.1**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=279,slow=8.3,SNR=2.6						
YKA				PcP	**PcP**	**16 46 02.1**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=288,slow=2.7,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**34.79**	**211**	T	T	17 20 27.8	
	baz=20,slow=76,SNR=46						
H11N3	**WAKE ISLAND Hy**	**34.80**	**210**	T	T	17 20 25.5	
	baz=20,slow=76,SNR=51						
H11N1	**WAKE ISLAND Hy**	**34.81**	**211**	T	T	17 20 28.3	
	baz=20,slow=76,SNR=48						
USRK	**Ussuriysk Ar.**	**35.50**	**279**	P	**P**	**16 43 38.7**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=78,slow=15,SNR=2.7						
H11S1	**WAKE ISLAND Hy**	**36.00**	**210**	T	T	17 22 19.1	
	baz=19,slow=76,SNR=101						
H11S2	**WAKE ISLAND Hy**	**36.01**	**210**	T	T	17 22 22.0	
	baz=19,slow=76,SNR=99						
H11S3	**WAKE ISLAND Hy**	**36.01**	**210**	T	T	17 22 20.8	
	baz=19,slow=76,SNR=49						
NVAR	**Mina Array Bea**	**41.28**	**86**	P	**P**	**16 44 30.8**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=297,slow=4.0,SNR=1.7						
KSRS	**Korea Array**	**41.89**	**273**	P	**P**	**16 44 33.8**	**0.0**
	comp=Z,0.8nm,0.6s,baz=49,slow=7.5,SNR=5.1						
YHH	**Holmes Hill**	**42.17**	**73**	P	**P**	**16 44 37.3**	**+0.9**
YHH				IAmb	IAmb	16 44 52.5	
	comp=Z,4.3nm,1.3s						
PDAR	**Pinedale Array**	**44.08**	**75**	P	**P**	**16 44 52.8**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=307,slow=3.8,SNR=13						
PV22	**Blue Mesa, Par**	**47.09**	**79**	P	**P**	**16 45 17.4**	**+1.8**
OGNE	**Ogallala**	**49.67**	**72**	P	**P**	**16 45 34.6**	**-0.6**
MKAR	**Makanchi Array**	**61.63**	**310**	P	**P**	**16 46 59.2**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=45,slow=5.4,SNR=6.0						
MKAR	**Makanchi Array**	**61.63**	**310**	P	**P**	**16 46 59.7**	**-1.2**
BVAR	**Borovoye Array**	**62.14**	**322**	P	**P**	**16 47 03.1**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=96,slow=15,SNR=1.9						
ABKAR	**Akbulak array**	**69.08**	**325**	P	**P**	**16 47 48.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**73.22**	**279**	P	**P**	**16 48 15.1**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=31,slow=8.0,SNR=7.4						
WB0	**Warramunga Arr**	**83.61**	**227**	P	**P**	**16 49 11.4**	**-0.2**
WR0	**Warramunga Arr**	**83.71**	**227**	P	**P**	**16 49 11.9**	**-0.2**
WRA	**Warramunga Arr**	**83.78**	**227**	P	**P**	**16 49 12.0**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=36,slow=5.5,SNR=1.2						
ASAR	**Alice Springs**	**87.22**	**225**	P	**P**	**16 49 29.2**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=32,slow=4.7,SNR=7.5						
H03N2	**Juan Fernandez**	**119.05**	**108**	T	T	19 05 55.5	
	baz=317,slow=77,SNR=14						
H03N1	**Juan Fernandez**	**119.07**	**108**	T	T	19 05 56.0	
	baz=317,slow=77,SNR=13						
H03N3	**Juan Fernandez**	**119.07**	**108**	T	T	19 05 53.1	
	baz=317,slow=77,SNR=11						
BOSA	**Boshof**	**152.39**	**318**	PKPbc	**PKPbc**	**16 56 38.9**	**-0.2**
	comp=Z,2.1nm,0.5s,baz=26,slow=4.1,SNR=12						

*IDC **29** 16:42:26.1±0.8, 36°.37N×97°.59W, h0km, mb3.8/4, mb1 4.0/12, mb1mx3.7/76, mbtmp3.8/12, ML4.1/6, Error ellipse: s-maj=12.9km s-min=9.5km az=141.0*

*ANF **29** 16:42:26.8±0.2, 36°.29N×97°.53W, h6km, ML5.0/27, Error ellipse: s-maj=2.0km s-min=1.8km az=118.0*

*NEIC **29** 16:42:26.4±1.7, 36°.30N±0°.02×97°.51W±0°.05, h4km±6km, Error ellipse: s-maj=5.8km s-min=1.6km az=70.0*

*NEIC **29** 16:42:26.5, 36°.29N×97°.53W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.18; $M_{\theta\theta}$=5.82; $M_{\phi\phi}$=-4.64; $M_{r\theta}$=-0.74; $M_{\theta\phi}$=0.44; $M_{\phi r}$=-2.24; Fault plane solution: M_0=5.84000×10^{14} NP1:ϕ_s309.80000°, δ66.48000°, λ-14.15000°. NP2:ϕ_s45.54000°, δ77.05000°, λ-155.83000°. Principal axes: T 5.9404, Plg7.0000°, Azm176.0000°; N -0.1996, Plg63.0000°, Azm72.0000°; P -5.7408, Plg26.0000°, Azm270.0000°;*

*TUL **29** 16:42:26.6±1.7, 36°.28N±0°.02×97°.52W±0°.06, h6km±6km, ML4.0, mb4.1/8(NEIC), mb_Lg4.1/149(NEIC), Mwr3.8/66(NEIC) Error ellipse: s-maj=7.0km s-min=1.7km az=67.0*

ISC 29 16:42:26.1±1.1, 36°.30N±0°.02×97°.52W±0°.02, h4km±8km, n240, σ1°12/234, mb4.2/3, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.42**	**299**		**Pg**	**16 42 35.1**	**+0.8**
OK029	**Liberty Lake**	**0.50**	**174**		**Pg**	**16 42 36.1**	**+0.4**
OK029				Sg	**Sg**	**16 42 43.1**	**+0.8**
GC02	**Grant County #**	**0.61**	**334**		**Pg**	**16 42 38.6**	**+0.7**
BCOK	**Bluff Creek, N**	**0.64**	**186**		**Pg**	**16 42 38.7**	**+0.3**
BCOK				Sg	**Sg**	**16 42 46.6**	**-0.2**
OK031	**S. Brethren Rd**	**0.65**	**122**		**Pg**	**16 42 39.0**	**+0.5**
OK031				Sg	**Sg**	**16 42 47.4**	**+0.3**
QUOK	**Quay**	**0.67**	**101**		**Pg**	**16 42 39.4**	**+0.5**
QUOK				Sg	**Sg**	**16 42 47.8**	**+0.1**
QUOK				IAmb_Lg		16 42 48.5	
	comp=Z,2μm,0.7s						
OK030	**Cody Creek RV**	**0.70**	**121**		**Pg**	**16 42 40.0**	**+0.5**
OK030				Sg	**Sg**	**16 42 49.1**	**+0.4**
KAN13	**South Haven SW**	**0.71**	**3**	Pg	**Pb**	**16 42 40.6**	**-0.5**
KAN13				Sg	**Sg**	**16 42 49.4**	**+0.3**
OK009	**Oakdale Elemen**	**0.72**	**173**		**Pg**	**16 42 40.0**	**+0.2**
OK025	**Westminster Rd**	**0.73**	**168**		**Pg**	**16 42 40.4**	**+0.3**
KAN14	**Manchester OK**	**0.75**	**332**		**Pg**	**16 42 41.0**	**+0.6**
KAN14				Sg	**Sg**	**16 42 50.6**	**+0.5**
OK032	**Salt Plains WL**	**0.75**	**313**		**Pg**	**16 42 41.0**	**+0.5**
OK001	**Jones High Sch**	**0.76**	**165**	Pg	**Pg**	**16 42 40.9**	**+0.3**
KAN09	**Caldwell North**	**0.84**	**355**		**Pb**	**16 42 42.8**	**-0.4**
KAN09				Sg	**Sg**	**16 42 53.8**	**+0.7**
KAN05	**Bluff City Nor**	**0.86**	**341**		**Pb**	**16 42 43.1**	**-0.4**
OKCFA	**Oklahoma City**	**0.88**	**176**		**Pg**	**16 42 43.0**	**0.0**
OKCFA				IAmb_Lg		16 42 54.6	
	comp=Z,3μm,1.0s						
OKCFA	**Oklahoma City**	**0.88**	**176**	P	**Pg**	**16 42 43.1**	**+0.1**
	baz=356,SNR=53						
OKCFA				S	**Sg**	**16 42 55.1**	**+0.7**
	baz=356						
OKCFA	**Oklahoma City**	**0.88**	**176**	P		16 42 43.1	
	baz=356,SNR=53						
OKCFA				S		16 42 55.1	
	baz=356						
OKCSW	**OKLAHOMA CITY**	**0.89**	**176**		**Pg**	**16 42 43.2**	**0.0**
KS20	**Mayfield South**	**0.93**	**358**		**Pb**	**16 42 44.5**	**-0.3**
KAN10	**Anthony SW Sta**	**0.94**	**331**		**Pg**	**16 42 44.6**	**+0.4**
KAN08	**Anthony NE Sta**	**0.99**	**339**		**Pg**	**16 42 45.5**	**+0.4**
T35A	**Sooner Cattle**	**1.02**	**53**		**Pg**	**16 42 45.9**	**+0.3**
T35B	**Sooner Cattle**	**1.02**	**53**	P	**Pg**	**16 42 46.0**	**+0.4**
	baz=232						
T35B				S	**Sg**	**16 42 59.5**	**+0.6**
	baz=232						
T35B	**Sooner Cattle**	**1.02**	**53**	P		16 42 46.0	
	baz=232						
T35B				S		16 42 59.5	
	baz=232						
KAN16	**Harper SW Stat**	**1.02**	**335**		**Pg**	**16 42 46.0**	**+0.3**
FNO	**Franklin**	**1.04**	**174**		**Pb**	**16 42 46.6**	**-0.1**
FNO				IAmb_Lg		16 42 60.0	
	comp=Z,2μm,0.9s						
KAN12	**Harper NE Stat**	**1.07**	**339**		**Pg**	**16 42 46.8**	**+0.3**
U32A	**Winter Ranch,**	**1.20**	**274**	P	**Pg**	**16 42 48.4**	**-0.3**
	baz=94						
U32A				S	**Sb**	**16 43 05.6**	**+0.5**
	baz=94						
TUL1	**Leonard**	**1.46**	**105**	P	**Pn**	**16 42 52.8**	**-0.3**
	baz=286,SNR=438						
TUL1				S	**Sn**	**16 43 12.6**	**+0.1**
	baz=286						
TUL1	**Leonard**	**1.46**	**105**	P		16 42 53.1	
	baz=286,SNR=655						
TUL1				S		16 43 12.8	
	baz=286						
TUL1	**Leonard**	**1.46**	**105**	P		16 42 52.8	
	baz=286,SNR=438						
TUL1				S		16 43 12.6	
	baz=286						
X34A	**Smith Ranch, M**	**1.71**	**189**		**Pb**	**16 42 57.9**	**-0.2**
WMOK	**Wichita Mounta**	**1.86**	**214**		**Pn**	**16 42 59.4**	**+0.7**
WMOK	**Wichita Mounta**	**1.86**	**214**	P	**Pn**	**16 42 59.4**	**+0.7**
	baz=33,SNR=306						
WMOK				S	**Sb**	**16 43 24.3**	**-0.1**
	baz=33						
WMOK	**Wichita Mounta**	**1.86**	**214**	P		16 42 59.3	
	baz=33,SNR=529						
WMOK				S		16 43 24.3	
	baz=33						
WMOK	**Wichita Mounta**	**1.86**	**214**	P		16 42 59.4	
	baz=33,SNR=306						
WMOK				S		16 43 24.3	
	baz=33						
R32A	**Long Quarter,**	**2.32**	**336**		**Pn**	**16 43 05.9**	**+0.8**
R32A	**Long Quarter,**	**2.32**	**336**	P	**Pn**	**16 43 05.8**	**+0.7**
	baz=156,SNR=45						
R32A				S	**Sb**	**16 43 38.3**	**+0.8**
	baz=156						
R32A	**Long Quarter,**	**2.32**	**336**	P		16 43 05.8	
	baz=156,SNR=45						
R32A				S		16 43 38.3	
	baz=156						
X37A	**Clayton**	**2.45**	**134**		**Pn**	**16 43 07.8**	**+1.0**
X37A				IAmb_Lg		16 43 47.6	
	comp=Z,1μm,0.8s						
X37A	**Clayton**	**2.45**	**134**	P	**Pn**	**16 43 07.7**	**+0.9**
	baz=315,SNR=75						
X37A	**Clayton**	**2.45**	**134**	P		16 43 07.7	
	baz=315,SNR=75						
U38A	**Gravette**	**2.54**	**86**	Pn	**Pn**	**16 43 09.1**	**+1.1**
U38A				IAmb_Lg		16 43 51.4	
	comp=Z,686nm,0.9s						
U38A	**Gravette**	**2.54**	**86**	P	**Pn**	**16 43 09.1**	**+1.1**
	baz=267,SNR=135						
U38A	**Gravette**	**2.54**	**86**	P		16 43 09.1	
	baz=267,SNR=135						
KSU1	**Kansas State U**	**2.89**	**14**	Pn	**Pn**	**16 43 13.8**	**+1.0**
KSU1				IAmb_Lg		16 44 06.0	
	comp=Z,378nm,0.8s						
KSU1	**Kansas State U**	**2.89**	**14**	P	**Pn**	**16 43 13.8**	**+1.0**
	baz=195						
KSU1	**Kansas State U**	**2.89**	**14**	Pn		16 43 14.0	
	baz=195,SNR=31						
KSU1				Pg		16 43 21.1	
	baz=195						
KSU1	**Kansas State U**	**2.89**	**14**	P		16 43 13.8	
	baz=195						
HHAR	**Hobbs**	**2.90**	**89**		**Pn**	**16 43 13.6**	**+0.7**
HHAR				IAmb_Lg		16 43 59.6	
	comp=Z,510nm,0.8s						
HHAR	**Hobbs**	**2.90**	**89**	P	**Pn**	**16 43 13.8**	**+0.9**
	baz=271,SNR=32						
HHAR	**Hobbs**	**2.90**	**89**	P		16 43 13.8	
	baz=271,SNR=32						
Z35A	**Perchaven, San**	**2.97**	**176**	Pn	**Pn**	**16 43 15.0**	**+1.1**
Z35A	**Perchaven, San**	**2.97**	**176**	P	**Pn**	**16 43 15.0**	**+1.1**
	baz=356,SNR=61						
Z35A				S

WHTX Pb 16 43 44.3
baz=359
WHTX Lake Whitney, 4.30 179 P 16 43 32.5
baz=359,SNR=24
MGMO Mountain Grove 4.31 77 Pn **Pn** **16 43 33.6 +1.3**
MGMO IAmb_Lg 16 44 44.6
comp=Z,742nm,0.9s
WHAR Wooly Hollow 4.37 102 Pn **Pn** **16 43 34.0 +0.8**
WHAR IAmb_Lg 16 44 51.1
comp=Z,666nm,0.7s
FCAR Ozark Folk Cen 4.39 94 Pn **Pn** **16 43 34.7 +1.2**
FCAR IAmb_Lg 16 44 48.7
comp=Z,417nm,1.0s
N33B J Bar K, Exete 4.43 1 P **Pn** **16 43 34.3 +0.2**
baz=181
N33B J Bar K, Exete 4.43 1 P 16 43 34.3
baz=181
N33A J Bar K, Exete 4.43 1 Pn **Pn** **16 43 34.4 +0.3**
N33A IAmb_Lg 16 44 57.1
comp=Z,295nm,0.8s
W41B Gary Mavity, V 4.44 103 P **Pn** **16 43 34.5 +0.5**
baz=286,SNR=58
W41B Gary Mavity, V 4.44 103 Pn 16 43 35.5
baz=286,SNR=33
W41B Pb 16 43 44.1
baz=286
W41B Sb 16 44 44.1
baz=286
W41B Gary Mavity, V 4.44 103 P 16 43 34.5
baz=286,SNR=58
237A Washetta, Mont 4.51 161 Pn **Pn** **16 43 35.2 0.0**
237A IAmb_Lg 16 44 49.9
comp=Z,303nm,0.8s
237A Washetta, Mont 4.51 161 P **Pn** **16 43 35.2 0.0**
baz=342,SNR=14
237A S **Sn** **16 44 28.4 +0.3**
baz=342
237A Washetta, Mont 4.51 161 P 16 43 35.2
baz=342,SNR=14
237A S 16 44 28.4
baz=342
P38A Dawn 4.58 42 Pn **Pn** **16 43 37.1 +1.0**
P38A IAmb_Lg 16 45 02.1
comp=Z,516nm,0.8s
P38A Dawn 4.58 42 P **Pn** **16 43 37.1 +1.0**
baz=224,SNR=6.5
P38A Dawn 4.58 42 P 16 43 37.1
baz=224,SNR=6.5
R40A Maddies Statio 4.64 63 Pn **Pn** **16 43 37.7 +0.8**
R40A Maddies Statio 4.64 63 P **Pn** **16 43 37.6 +0.8**
baz=246,SNR=50
R40A Maddies Statio 4.64 63 P 16 43 37.6
baz=246,SNR=50
N35A Tabor 4.79 17 **Pn** **16 43 40.0 +1.0**
N35A Tabor 4.79 17 P **Pn** **16 43 39.5 +0.6**
baz=198,SNR=12
N35A Tabor 4.79 17 P 16 43 39.5
baz=198,SNR=12
KSCO Kaye Shedlock' 4.87 305 Pn **Pn** **16 43 41.6 +1.4**
KSCO IAmb_Lg 16 45 11.5
comp=Z,358nm,0.7s
MSTX Muleshoe 4.89 243 **Pn** **16 43 40.9 +0.4**
MSTX IAmb_Lg 16 45 10.6
comp=Z,219nm,1.0s
MSTX Muleshoe 4.89 243 P 16 43 40.9
baz=60
MSTX Sb 16 44 57.3
baz=60
Z41A Richland Creek 4.93 127 P **Pn** **16 43 41.2 +0.4**
baz=309,SNR=14
Z41A Richland Creek 4.93 127 P 16 43 41.6
baz=309,SNR=18
Z41A Richland Creek 4.93 127 P 16 43 41.2
baz=309,SNR=14
Z41A P 16 43 41.2
baz=309,SNR=14
NATX Nacogdoches 5.11 151 IAmb_Lg 16 45 21.1
comp=Z,276nm,0.7s
BGNE Belgrade 5.13 355 P 16 43 43.8
baz=174,SNR=9.9
BGNE Belgrade 5.13 355 P 16 43 43.9
baz=174
BGNE Belgrade 5.13 355 Pn **Pn** **16 43 43.8 +0.2**
BGNE IAmb_Lg 16 45 21.9
comp=Z,415nm,0.9s
BGNE Belgrade 5.13 355 P **Pn** **16 43 43.9 +0.3**
baz=174
T42A Van Buren 5.22 80 Pn **Pn** **16 43 46.0 +1.1**
T42A IAmb_Lg 16 45 20.8
comp=Z,435nm,0.9s
T42A Van Buren 5.22 80 P **Pn** **16 43 45.5 +0.6**
baz=264
T42A Van Buren 5.22 80 P 16 43 45.5
baz=264
CCAR Cane Creek 5.28 115 Pn **Pn** **16 43 46.7 +1.1**
CCM Cathedral Cave 5.31 69 Pn **Pn** **16 43 46.9 +0.8**
CCM IAmb_Lg 16 45 14.4
comp=Z,402nm,0.8s
CCM Cathedral Cave 5.31 69 P **Pn** **16 43 46.6 +0.4**
baz=252,SNR=24
CCM Cathedral Cave 5.31 69 P 16 43 47.0
baz=252
CCM Cathedral Cave 5.31 69 P 16 43 46.6
baz=252,SNR=24
P40A Paris 5.40 52 Pn **Pn** **16 43 48.4 +1.0**
P40A IAmb_Lg 16 45 20.5
comp=Z,665nm,0.9s
P40A Paris 5.40 52 P **Pn** **16 43 48.1 +0.8**
baz=235,SNR=13
P40A Paris 5.40 52 P 16 43 48.1
baz=235,SNR=13
435B Jarrell 5.50 181 Pn **Pn** **16 43 48.8 +0.1**
435B IAmb_Lg 16 45 21.1
comp=Z,266nm,0.8s
435B Jarrell 5.50 181 P **Pn** **16 43 49.2 +0.5**
baz=0.6,SNR=6.2
435B Jarrell 5.50 181 P 16 43 49.1
baz=0.6,SNR=7.3
435B Jarrell 5.50 181 P 16 43 49.2
baz=0.6,SNR=6.2
T25A Trinidad 5.60 281 **Pn** **16 43 50.7 +0.5**
T25A IAmb_Lg 16 45 26.6
comp=Z,246nm,0.8s
T25A Trinidad 5.60 281 P 16 43 50.5
baz=97,SNR=11
N38A Joes South For 5.61 36 Pn **Pn** **16 43 50.6 +0.5**
L34A Svendsen Farm, 5.73 9 Pn **Pn** **16 43 51.5 -0.3**
OGNE Ogallala 5.83 324 Pn **Pn** **16 43 55.3 +2.0**
OGNE IAmb_Lg 16 45 38.5
comp=Z,377nm,0.8s
OGNE Ogallala 5.83 324 P 16 43 55.3
baz=141,SNR=5.8
FVM French Village 5.91 71 Pn **Pn** **16 43 54.5 +0.1**
FVM IAmb_Lg 16 45 38.6
comp=Z,485nm,0.8s
JCT Junction City 6.11 199 Pn **Pn** **16 43 57.5 +0.4**
JCT Junction City 6.11 199 P 16 43 57.8
baz=18
JCT Sb 16 45 35.6
baz=18
143A Socs Landing, 6.20 124 Pn **Pn** **16 43 59.1 +0.8**
143A IAmb_Lg 16 45 55.9
comp=Z,528nm,0.9s
PEBM Pemiscott Bayo 6.20 89 IAmb_Lg 16 45 50.5
comp=Z,496nm,0.7s
SLM Saint Louis 6.25 66 Pn **Pn** **16 44 00.3 +1.3**
MET Memphis--Engin 6.29 99 IAmb_Lg 16 45 50.8
comp=Z,378nm,0.8s
PVMO Portageville 6.32 87 IAmb_Lg 16 45 53.6
comp=Z,524nm,0.8s
K31A O'Neill 6.39 352 Pn **Pn** **16 44 01.0 +0.1**
K31A IAmb_Lg 16 45 55.2
comp=Z,508nm,1.0s
SCIA State Center 6.53 30 **Pn** **16 44 03.8 +1.0**
SCIA State Center 6.53 30 P **Pn** **16 44 03.7 +1.0**
baz=212,SNR=5.3
SCIA State Center 6.53 30 P 16 44 03.6
baz=212
SCIA S 16 45 17.6
baz=212
SCIA State Center 6.53 30 P 16 44 03.7
baz=212,SNR=5.3
342A Flagon Creek P 6.54 137 Pn **Pn** **16 44 03.7 +0.7**
342A IAmb_Lg 16 46 07.6
comp=Z,170nm,1.3s
SDCO Great Sand Dun 6.54 285 **Pn** **16 44 04.2 +0.9**
SDCO Great Sand Dun 6.54 285 P 16 44 04.4
baz=100,SNR=49
Q24A Divide 6.61 296 P 16 44 04.9
baz=112
HALT Halls 6.64 91 IAmb_Lg 16 46 11.4
comp=Z,352nm,0.8s
S44A Carbondale 6.76 76 **Pn** **16 44 06.1 0.0**
S44A Carbondale 6.76 76 P **Pn** **16 44 06.3 +0.3**
baz=260,SNR=22
S44A Carbondale 6.76 76 P 16 44 06.3
baz=260,SNR=22
SIUC Southern Illin 6.79 76 **Pn** **16 44 06.5 +0.1**
SIUC IAmb_Lg 16 46 07.2
comp=Z,495nm,0.9s
N41A Harden Midland 6.83 48 Pn **Pn** **16 44 09.5 +2.5**
OXF Oxford 6.86 103 Pn **Pn** **16 44 07.3 0.0**
OXF IAmb_Lg 16 46 19.2
comp=Z,337nm,0.8s
OXF Oxford 6.86 103 P 16 44 07.7
baz=287,SNR=9.2
W45A Hickory Valley 6.88 97 IAmb_Lg 16 46 18.1
comp=Z,476nm,0.7s
Y45A Yeager Farm, C 6.98 108 Pn **Pn** **16 44 10.3 +1.3**
Y45A IAmb_Lg 16 46 14.9
comp=Z,225nm,0.7s
VBMS Vicksburg 7.08 123 IAmb_Lg 16 46 28.5
comp=Z,198nm,1.0s
P43A Skaggs, Pawnee 7.15 60 Pn **Pn** **16 44 12.2 +0.9**
T45A Paducah 7.17 82 Pn **Pn** **16 44 11.9 +0.3**
Q44A Meyer Farm, Va 7.24 66 Pn **Pn** **16 44 13.8 +1.3**
ISCO Idaho Springs 7.28 301 Pn **Pn** **16 44 13.3 -0.1**
ISCO IAmb_Lg 16 46 19.3
comp=Z,123nm,0.9s
ISCO Idaho Springs 7.28 301 P 16 44 14.2
baz=116,SNR=7.1
K38A Parkersburg 7.33 29 Pn **Pn** **16 44 14.5 +0.7**
ANMO Albuquerque 7.40 262 Pn **Pn** **16 44 14.8 -0.2**
comp=Z,0.2nm,0.3s,baz=78,slow=13,SNR=4.4
ANMO Pg Pb 16 44 41.2 +6.1
comp=Z,0.5nm,0.3s,baz=50,slow=17,SNR=3.7
ANMO Lg Lg 16 46 18.4
comp=Z,4.5nm,0.3s,baz=153,slow=22,SNR=8.5
ANMO Albuquerque 7.40 262 Pn **Pn** **16 44 16.2 +1.2**
735A Kenedy 7.42 182 Pn **Pn** **16 44 13.9 -1.3**
735A IAmb_Lg 16 46 35.7
comp=Z,197nm,0.9s
344A Westbrook Farm 7.43 129 IAmb_Lg 16 46 43.7
comp=Z,131nm,1.0s
ECSD EROS Data Cent 7.46 5 Pn **Pn** **16 44 15.0 -0.6**
ECSD IAmb_Lg 16 46 23.5
comp=Z,132nm,1.0s
ECSD EROS Data Cent 7.46 5 P 16 44 15.2
baz=186,SNR=13
ECSD S 16 45 39.4
baz=186
L40A Anamosa 7.55 38 **Pn** **16 44 16.6 -0.2**
L40A IAmb_Lg 16 46 29.1
comp=Z,306nm,0.7s
HDIL Hopedale 7.73 54 Pn **Pn** **16 44 20.0 +0.7**
HDIL Hopedale 7.73 54 P 16 44 20.5
baz=239,SNR=11
PLAL Pickwick Lake 7.80 97 Pn **Pn** **16 44 21.8 +1.5**
PLAL IAmb_Lg 16 46 42.6
comp=Z,160nm,0.7s
WVT Waverly 7.84 88 Pn **Pn** **16 44 20.6 -0.2**
146A Union 7.89 115 IAmb_Lg 16 46 58.5
comp=Z,158nm,0.8s
PHWY Pilot Hill 7.96 311 Pn **Pn** **16 44 23.6 +0.9**
PHWY IAmb_Lg 16 46 49.2
comp=Z,274nm,1.1s
MNTX Cornudas Mount 7.97 237 Pn **Pn** **16 44 22.0 -0.7**
MNTX IAmb_Lg 16 46 46.7
comp=Z,112nm,0.9s
MNTX Cornudas Mount 7.97 237 P 16 44 22.5
baz=53,SNR=16
Y22D IRIS PASSCAL I 8.01 257 Pn **Pn** **16 44 25.0 +1.7**
SMCO Snowmass 8.02 294 Pn **Pn** **16 44 24.2 +0.5**
N23A Red Feather La 8.03 307 P 16 44 24.8
baz=122,SNR=8.9
O44A Mansfield 8.10 59 IAmb_Lg 16 47 00.1
comp=Z,401nm,0.8s
SUSD Miller 8.21 353 Pn **Pn** **16 44 25.4 -0.5**
SUSD IAmb_Lg 16 47 01.9
comp=Z,166nm,0.9s
I37A Lemond, Waseca 8.33 21 IAmb_Lg 16 47 03.0
comp=Z,303nm,1.1s
L42A Oliver, Polo 8.35 45 **Pn** **16 44 27.7 -0.1**
Z47A Carrollton 8.37 109 Pn **Pn** **16 44 29.0 +0.9**
T47A Sharon Grove 8.40 82 Pn **Pn** **16 44 29.0 +0.4**
TX31 Lajitas Ar. Si 8.65 218 Pn **Pn** **16 44 32.1 -0.1**
TX31 Lajitas Ar. Si 8.65 218 P **Pn** **16 44 32.3 +0.1**
baz=35,SNR=5.9
TX31 Lajitas Ar. Si 8.65 218 P 16 44 32.3
baz=35,SNR=5.9
TX32 Lajitas Array 8.65 218 Pn **Pn** **16 44 31.1 -1.0**
TXAR Lajitas Array 8.65 218 Pn **Pn** **16 44 31.4 -0.8**
comp=Z,1.0nm,0.3s,baz=46,slow=11,SNR=47
TXAR Lg Lg 16 46 55.8
comp=Z,5.5nm,0.3s,baz=37,slow=32,SNR=7.5
TXAR Lajitas Array 8.65 218 Pn **Pn** **16 44 31.0 -1.2**
JFWS Jewell Farm 8.67 38 Pn **Pn** **16 44 31.5 -0.7**
JFWS IAmb_Lg 16 47 01.8
comp=Z,362nm,0.8s
JFWS Jewell Farm 8.67 38 P 16 44 31.8
baz=223
JFWS S 16 46 08.5
baz=223
V48A Smith Brothers 8.69 91 IAmb_Lg 16 47 17.8
comp=Z,110nm,0.8s
X48A Hartselle 8.75 99 IAmb_Lg 16 47 10.3
comp=Z,108nm,0.8s
P46A Rosedale 8.80 65 Pn **Pn** **16 44 34.7 +0.8**
MVCO Mesa Verde 8.86 279 Pg 16 45 11.6
baz=93
M44A Midewin, Midew 8.97 53 Pn **Pn** **16 44 36.0 -0.3**
CLTN Cedars of Leba 9.05 88 IAmb_Lg 16 47 22.1
comp=Z,148nm,1.1s
SFIN Lafayette 9.15 60 Pn **Pn** **16 44 38.6 -0.2**
SFIN IAmb_Lg 16 47 23.0
comp=Z,340nm,0.8s
SFIN Lafayette 9.15 60 P 16 44 39.1
baz=247,SNR=8.7
WCI Wyandotte Cave 9.16 75 Pn **Pn** **16 44 40.2 +1.3**
WCI IAmb_Lg 16 47 32.0
comp=Z,218nm,0.8s
WCI Wyandotte Cave 9.16 75 P 16 44 41.0
baz=261
WCI S 16 46 21.1
baz=261
BLO Bloomington 9.18 68 Pn **Pn** **16 44 41.1 +2.0**
PV13 Radium Mtn., P 9.20 285 IAmb_Lg 16 47 29.3
comp=Z,98nm,1.0s
PV12 Saucer Basin, 9.21 286 IAmb_Lg 16 47 37.7
comp=Z,100nm,1.3s
I40A Norwalk 9.24 33 Pn **Pn** **16 44 39.7 -0.4**
I40A IAmb_Lg 16 47 37.9
comp=Z,158nm,0.8s
LRAL Lakeview Retre 9.26 108 **Pn** **16 44 41.2 +0.9**
PV11 David Mesa, Pa 9.26 286 IAmb_Lg 16 47 37.1
comp=Z,153nm,1.2s
RWWY Rawlins 9.26 308 IAmb_Lg 16 47 31.6
comp=Z,186nm,1.1s
RSSD Black Hills 9.26 330 Pn **Pn** **16 44 41.5 +1.0**
RSSD IAmb_Lg 16 47 31.9
comp=Z,92nm,0.9s
RSSD Black Hills 9.26 330 P 16 44 41.8
baz=145
121A Cookes Peak, D 9.27 249 IAmb_Lg 16 47 34.9
comp=Z,90nm,0.9s
Y49A Blount Mountai 9.43 102 Pn **Pn** **16 44 43.1 +0.5**
Y49A IAmb_Lg 16 47 28.3
comp=Z,106nm,0.8s
U49A Red Boiling Sp 9.47 85 Pn **Pn** **16 44 44.6 +1.4**
U49A IAmb_Lg 16 47 48.7
comp=Z,98nm,0.9s
SWET Sewanee 9.48 93 IAmb_Lg 16 47 23.8
comp=Z,89nm,0.9s
K43A Burlington 9.55 45 **Pn** **16 44 45.0 +0.7**
F33A 5 Mile Ranch, 9.58 5 IAmb_Lg 16 47 36.8
comp=Z,96nm,1.0s
SPMN Marine on St. 9.61 20 IAmb_Lg 16 47 56.7
comp=Z,106nm,0.8s
SPMN Marine on St. 9.61 20 S 16 46 30.5
baz=203
W50A Signal Mountai 9.99 93 IAmb_Lg 16 47 50.7
comp=Z,161nm,0.8s
F36A Milaca 10.02 16 **Pn** **16 44 48.6 -2.0**
R49A Shelbyville 10.04 75 **Pn** **16 44 52.1 +1.1**
I42A Draeger Farm, 10.04 38 Pn **Pn** **16 44 49.6 -1.5**
P48A Milroy 10.07 68 Pn **Pn** **16 44 51.1 -0.4**
T50A Nancy 10.22 82 Pn **Pn** **16 44 53.9 +0.4**
N47A Urbana 10.33 60 Pn **Pn** **16 44 55.0 +0.1**
Z51A Franklin 10.58 103 Pn **Pn** **16 44 58.3 -0.1**
CPCT Cooper Cave 10.59 91 Pn **Pn** **16 44 60.0 +1.5**
P49A Miami Univ. Ec 10.62 68 **Pn** **16 44 58.8 -0.2**
P49A Miami Univ. Ec 10.62 68 P **Pn** **16 44 58.8 -0.2**
baz=256,SNR=5.5
P49A Miami Univ. Ec 10.62 68 P 16 44 58.8
baz=256
P49A Miami Univ. Ec 10.62 68 P 16 44 58.8
baz=256,SNR=5.5
V51A Loudon 10.68 89 Pn **Pn** **16 45 01.4 +1.6**
R50A Paris 10.70 75 Pn **Pn** **16 44 59.8 -0.2**
R50A Paris 10.70 75 P **Pn** **16 45 01.3 +1.3**
baz=263,SNR=5.4
R50A Paris 10.70 75 P 16 45 01.3
baz=263,SNR=5.4
R50A P 16 45 01.3
baz=263,SNR=5.4
H43A Windswept, Lux 11.04 39 **Pn** **16 45 03.8 -0.8**
O49A Covington 11.07 66 Pn **Pn** **16 45 04.9 -0.2**
TKL Tuckaleechee C 11.16 89 Pn **Pn** **16 45 06.4 0.0**
comp=Z,0.8nm,0.3s,baz=241,slow=7.0,SNR=6.9
TKL Lg Lg 16 48 11.7
comp=Z,3.7nm,0.3s,baz=152,slow=18,SNR=10
TKL Tuckaleechee C 11.16 89 Pn **Pn** **16 45 07.0 +0.7**
S51A Beattyville 11.23 79 Pn **Pn** **16 45 07.8 +0.6**
V52A Sevierville 11.28 88 Pn **Pn** **16 45 10.5 +2.4**
PDAR Pinedale Array 11.31 308 Pn **Pn** **16 45 08.1 -0.5**
comp=Z,0.2nm,0.3s,baz=118,slow=12,SNR=3.8
PDAR Lg Lg 16 48 21.1
comp=Z,1.0nm,0.3s,baz=108,slow=31,SNR=9.2
451A Vernon 11.35 117 Pn **Pn** **16 45 09.1 +0.2**
N49A Columbus Grove 11.41 62 Pn **Pn** **16 45 09.1 -0.7**
Q51A Peebles 11.56 72 Pn **Pn** **16 45 11.7 -0.2**
L48A N Adams 11.62 57 Pn **Pn** **16 45 11.8 -0.8**
P51A Williamsport 11.86 70 Pn **Pn** **16 45 15.8 -0.2**
U15A North Rim 11.91 275 Pn **Pn** **16 45 16.0 -0.9**
J47A Sunmer 11.97 51 Pn **Pn** **16 45 16.6 -0.8**
AGMN Agassiz Nation 12.05 5 **Pn** **16 45 15.2 -3.3**
AGMN Agassiz Nation 12.05 5 P 16 45 15.5
baz=186
ACSO Alum Creek Sta 12.09 67 **Pn** **16 45 17.9 -1.1**
AAM Ann Arbor 12.29 57 Pn **Pn** **16 45 20.9 -1.0**
AHID Auburn Hatcher 12.30 306 Pn **Pn** **16 45 22.6 +0.4**
B35A Bob, Littlefor 12.38 12 Pn **Pn** **16 45 19.6 -3.3**
M50A Fremont 12.38 61 Pn **Pn** **16 45 21.8 -1.3**
Q52A Bidwell 12.39 73 Pn **Pn** **16 45 22.3 -0.8**
Q52A Bidwell 12.39 73 P **Pn** **16 45 23.2 +0.1**
baz=262,SNR=5.8
Q52A Bidwell 12.39 73 P 16 45 23.2
baz=262,SNR=5.8
Q52A P 16 45 23.2
baz=262,SNR=5.8
EYMN Ely 12.46 19 Pn **Pn** **16 45 20.9 -3.2**
EYMN Ely 12.46 19 P 16 45 21.2
baz=203,SNR=6.5
R53A Hurricane 12.56 76 Pn **Pn** **16 45 25.8 +0.3**
P52A Corning 12.59 70 Pn **Pn** **16 45 25.6 -0.4**
P52A Corning 12.59 70 P 16 45 25.9
baz=259,SNR=6.2
N51A Ashland 12.71 64 **Pn** **16 45 27.6 0.0**
E43A Lone Tree Farm 12.79 35 Pn **Pn** **16 45 25.5 -3.1**
O52A Adamsville 12.91 68 Pn **Pn** **16 45 28.6 -1.7**
DGMT Dagmar 13.12 340 **Pn** **16 45 32.9 -0.2**
P53A Whipple 13.14 71 **Pn** **16 45 32.5 -0.9**
V55A Taylorsville 13.20 87 Pn **Pn** **16 45 36.1 +1.8**
O53A New Philadelph 13.41 68 **Pn** **16 45 37.0 0.0**
O53A New Philadelph 13.41 68 P 16 45 36.7
baz=258
Q54A Coxs Mills 13.50 74 **Pn** **16 45 37.4 -0.8**
I49A Point Hope 13.58 51 Pn **Pn** **16 45 38.6 -0.8**
M52A Chesterland 13.63 63 Pn **Pn** **16 45 38.8 -1.2**
N53A Lisbon 13.81 66 Pn **Pn** **16 45 41.4 -1.2**
ULM Lac du Bonnet 14.00 4 Pn **Pn** **16 45 41.1 -3.9**
comp=Z,0.5nm,0.3s,baz=181,slow=14,SNR=4.9
ULM Sn Sn 16 48 06.5 -14
comp=Z,0.5nm,0.3s,baz=86,slow=17,SNR=3.0
ULM Lg Lg 16 49 36.6
comp=Z,0.4nm,0.3s,baz=271,slow=15,SNR=2.1
E46A Sault Ste Mari 14.12 40 Pn **Pn** **16 45 42.9 -3.7**
N54A Moraine State 14.47 66 **Pn** **16 45 48.9 -2.7**
R56A Bull Pasture M 14.57 76 P 16 45 51.5
baz=267,SNR=5.8
T57A Hurt 14.69 82 **Pn** **16 45 53.3 -1.2**
Q56A Snyder Ridge, 14.78 74 Pn **Pn** **16 45 52.8 -3.0**
M54A Oil Creek Stat 14.84 64 **Pn** **16 45 54.5 -2.1**
M54A Oil Creek Stat 14.84 64 P 16 45 54.8
baz=255
O56A Blue Knob Stat 15.40 69 Pn **Pn** **16 46 02.4 -1.7**
O56A IAmb IAmb 16 46 15.0
comp=Z,5.6nm,0.6s
M56A Emporium 15.92 65 Pn **Pn** **16 46 07.3 -3.5**
M56A IAmb IAmb 16 46 24.0
comp=Z,8.8nm,0.6s
T59A Double "B" Far 16.05 82 Pn **Pn** **16 46 11.0 -1.5**
SADO Sadowa 16.31 53 Pn **Pn** **16 46 13.1 -2.7**
comp=Z,0.7nm,0.3s,baz=248,slow=8.8,SNR=3.9
SADO Lg Lg 16 50 10.1
comp=Z,1.4nm,0.3s,baz=311,slow=2.7,SNR=8.8
L56A Greenwood 16.52 63 Pn **Pn** **16 46 15.8 -2.8**
L56A IAmb IAmb 16 46 37.1
comp=Z,20nm,1.2s
J55A Hilton 16.65 59 P **P** **16 46 22.5 -0.2**
PECO Prince Edward 17.43 58 P **P** **16 46 32.6 +1.3**
PECO IAmb IAmb 16 46 33.0
comp=Z,8.7nm,0.6s
BINY Binghamton 17.67 64 P **Pn** **16 46 31.0 -2.1**
K58A Earlville 18.04 62 P **Pn** **16 46 36.2 -1.4**
NEW Newport 18.73 316 P **P** **16 46 45.3 -0.3**
comp=Z,0.4nm,0.3s,baz=336,slow=11,SNR=2.0
CMIG Matias Romero 19.27 172 P **Pn** **16 46 53.6 +0.9**
comp=Z,0.2nm,0.3s,baz=218,slow=22,SNR=1.9
YBH Yreka Blue Hor 20.28 293 P **P** **16 47 02.9 +0.3**
comp=Z,5.8nm,1.0s,baz=184,slow=0.9,SNR=5.2
YKA Yellowknife Ar 28.29 343 P **P** **16 48 19.7 -0.5**
comp=Z,0.1nm,0.4s,baz=143,slow=9.5,SNR=3.9
EKA Eskdalemuir Ar 63.35 40 P **P** **16 52 56.6 +0.5**
comp=Z,0.8nm,0.5s,baz=284,slow=6.8,SNR=6.0
FINES FINESS Array B 72.42 25 P **P** **16 53 54.8 +1.8**
comp=Z,3.5nm,1.0s,baz=265,slow=8.2,SNR=2.1
HHC Hu-ho-hao-te 98.72 338 *e*P **P** **16 56 06.5 -0.4**
HHC pmax pmax
comp=Z,33nm,0.7s
HHC pmax pmax
comp=Z,100nm,4.9s

IDC 29 16:56:50.7±3.7, 27°33N×84°25E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.2/41, mbtmp3.4/4, ML3.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/44, Error ellipse: s-maj=116.8km s-min=32.8km az=72.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.50**	**356**	P	P	17 01 18.4	-0.9
	0.1nm,0.3s,baz=173,slow=11,SNR=5.2						
ZALV	**Zalesovo Beam**	**26.60**	**1**	P	P	17 02 31.0	+0.5
	0.3nm,0.5s,baz=198,slow=9.1,SNR=1.8						
SONM	**Songino Array**	**26.80**	**34**	P	P	17 02 33.0	+0.4
	0.3nm,0.3s,baz=218,slow=9.1,SNR=2.7						
EIL	**Elat**	**43.13**	**285**	LR	LR	17 25 02.4	
	comp=Z,62nm,18.2s,baz=5.0,slow=39						
WRA	**Warramunga Arr**	**67.53**	**129**	P	P	17 07 48.9	-0.2
	0.7nm,1.1s,baz=324,slow=6.7,SNR=1.7						

TAP 29 17:05:01.0, 24°06N×121°64E, h9km, ML0.6, 2C-2D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.04**	**303**	‖P	Pg	17 05 03.5	+0.6
	baz=311						
TWD				S	Sg	17 05 04.8	+0.6
	baz=311						
HWA	**Hwalien**	**0.08**	**200**	‖*e*P	Pg	17 05 03.7	+0.4
	baz=194						
NACB	**Ninganchiao**	**0.12**	**342**	↑*e*P	Pg	17 05 04.7	+0.8
	baz=342						
NACB				*e*S	Sg	17 05 07.1	+1.2
	baz=342						

ETLH	**Xiulin Townshi**	**0.21**	**317**	⇑P		Pg	17 05 06.2	+0.9
	baz=316							
ETLH				*e*S		Sg	17 05 10.1	+1.8
	baz=316							
WHF	**Hehuan Shan**	**0.35**	**285**	*e*S		Sb	17 05 14.6	-1.0
	baz=284							

JMA 29 17:05:01.1±0.2, 24°.87N×123°.56E, h93km±4km, M0.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.56**	**164**	P	Pn	17 05 16.4	-0.2
IRIF				S	Sn	17 05 28.6	+0.5
JYNG	**Yonagunijimaku**	**0.70**	**233**	P	Pn	17 05 18.0	+0.2
JIJ	**Ishigaki jima**	**0.73**	**133**	P	Pn	17 05 18.2	0.0
JIJ				S	Sn	17 05 30.8	-0.1
JISG	**Ishigakijimahi**	**0.74**	**112**	P	Pn	17 05 18.3	+0.1
JISG				S	Sn	17 05 31.3	+0.3
JKRS	**Kuro-shima**	**0.75**	**147**	P	Pn	17 05 18.6	+0.2
JKRS				S	Sn	17 05 31.8	+0.6
JTJ	**Tarama**	**1.06**	**102**	P	Pn	17 05 22.2	+0.5
JTJ				S	Sn	17 05 37.8	+0.6

IDC 29 17:07:31.8±69.0, 16°.36S×176°.05W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/40, mbtmp3.9/3, Error ellipse: s-maj=1294.0km s-min=190.2km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**38.56**	**333**	T	T	17 56 02.8	
	baz=149,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**38.58**	**333**	T	T	17 55 54.8	
	baz=149,slow=76,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**38.58**	**333**	T	T	17 55 48.4	
	baz=149,slow=76,SNR=4.9						
STKA	**Stephens Creek**	**41.35**	**240**	P	P	17 15 19.6	-0.1
	0.9nm,0.4s;baz=96,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**47.15**	**258**	P	P	17 16 06.3	-0.1
	0.4nm,0.5s,baz=93,slow=7.2,SNR=11						
ASAR	**Alice Springs**	**47.40**	**253**	P	P	17 16 08.1	-0.2
	2.4nm,0.6s,baz=87,slow=8.0,SNR=53						

*IDC **29** 17:16:11.9±0.8, 28°.00N×84°.59E, h0km, mb3.8/16, mb1 4.0/19, mb1mx3.7/70, mbtmp3.8/19, ML3.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.8/26, Error ellipse: s-maj=27.1km s-min=15.8km az=51.0*

*DMN **29** 17:16:13.8±0.1, 28°.17N×84°.78E, h10km, Ml4.9/2, Error ellipse: s-maj=3.3km s-min=1.1km az=18.0*

*NEIC **29** 17:16:14.5±2.1, 28°.08N±0°.09×84°.7E±0°.1, h19km±4km, mb4.1/31, Error ellipse: s-maj=17.7km s-min=9.3km az=50.0*

*BJI **29** 17:16:31.0±0.0, 27°.60N×85°.37E, h8km, mB4.6/11, mb4.2/21, Ms4.2/12, Ms7 4.1/12*

*NDI **29** 17:16:36.4±3.0, 27°.77N×85°.52E, h10km, ML4.1, mb4.1(NEIC)*

ISC 29 17:16:13.2±1.1, 28°.17N±0°.04×84°.78E±0°.03, h8km±8km, n78, σ1$70/80, mb4.1/28, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GKN	**Gorkha**	**0.21**	**216**	*e*Pg	**Pg**	**17 16 18.0**	**+0.5**
GKN				*e*Sg	**Sg**	**17 16 20.9**	**+0.5**
	46μm,0.2s						
KKN	**Kakani**	**0.59**	**130**	*e*Pg	**Pb**	**17 16 25.2**	**-0.7**
KKN				*e*Sg	**Sb**	**17 16 32.9**	**-1.5**
	5μm,0.5s						
DMN	**Daman**	**0.63**	**152**	*e*Pg	**Pb**	**17 16 25.9**	**-0.8**
DMN				*e*Sg	**Sb**	**17 16 34.6**	**-1.2**
	882nm,0.3s						
PKIN	**Phulchoki**	**0.81**	**137**	*e*Pg	**Pb**	**17 16 29.2**	**-0.5**
PKI	**Pulchoki**	**0.82**	**137**	*e*Pg	**Pb**	**17 16 29.6**	**-0.3**
PKI				*e*Sg	**Sb**	**17 16 40.5**	**-0.8**
DANN	**Dangsing**	**0.91**	**281**	*e*Pg	**Pg**	**17 16 31.4**	**+0.6**
GUN	**Gumba**	**1.01**	**105**	*e*Pg	**Pg**	**17 16 33.1**	**+0.5**
KOLN	**Koldanda**	**1.11**	**249**	*e*Pg	**Pg**	**17 16 35.1**	**+0.5**
KOLN				*e*Sg	**Sn**	**17 16 50.1**	**-0.9**
	5μm,0.5s						
PYUN	**Piuthan**	**1.58**	**268**	*e*Pg	**Pb**	**17 16 43.4**	**+0.6**
PYUN	**Piuthan**	**1.58**	**268**	*e*Pg	**Pb**	**17 16 43.5**	**+0.6**
PYUN				*e*Sg	**Sg**	**17 17 04.6**	**+0.6**
	3μm,0.4s						
GTK	**Tadong**	**3.50**	**103**	*e*S	**Sb**	**17 17 55.5**	**-2.6**
GTK				IAML		17 18 02.4	
	comp=N,3μm,0.5s						
GTK				IAML		17 18 02.9	
	comp=E,3μm,0.4s						
LSA	**Lhasa**	**5.79**	**73**	Pn	**Pb**	**17 17 55.5**	**+0.8**
LSA				Sn	**Sb**	**17 19 03.0**	**-1.5**
LSA				LR	LR		
	comp=E,670nm,5.3s						
LSA				LR	LR		
	comp=E,600nm,7.5s						
LSA				LR	LR		
	comp=E,1μm,6.8s						
LSA	**Lhasa**	**5.79**	**73**	Pn	**Pn**	**17 17 40.0**	**+0.1**
GUWA	**GUWAHATI**	**6.47**	**106**	*e*P	Pb	17 18 00.8	-5.2
GUWA				*e*S	**Sn**	**17 19 04.2**	**+1.4**
SHL	**Shillong**	**6.86**	**111**	*e*P	Pb	17 18 06.2	-6.6
SHL				*e*S	**Sn**	**17 19 10.5**	**-2.1**
SHL				IAML		17 19 48.1	
	comp=E,206nm,0.3s						
SHL	**Shillong**	**6.86**	**111**	Pn	**Pn**	**17 17 53.8**	**-0.5**
SMLA	**Simla**	**7.25**	**296**	*e*P	**Pg**	**17 18 32.1**	**+0.2**
SMLA				*e*S	**Sg**	**17 19 58.6**	**-7.2**
SMLA				IAML		17 20 03.4	
	comp=N,78nm,0.3s						
SMLA				IAML		17 20 07.3	
	comp=E,122nm,0.5s						
BHPL	**Bhopal**	**8.25**	**235**	*e*P	**Pb**	**17 18 38.4**	**+2.0**
BHPL				*e*S	Sb	17 20 12.3	-2.5
BHPL				IAML		17 20 17.0	
	comp=N,110nm,0.3s						
DHRM	**DHARAMSHALA**	**8.38**	**301**	*e*P	Pb	17 18 45.6	+6.8
DHRM				*e*S	Sb	17 20 25.2	+6.4
DHRM				IAML		17 20 32.4	
	comp=E,97nm,0.5s						
DHRM				IAML		17 20 35.6	
	comp=N,75nm,0.5s						
HYB	**Hyderabad**	**12.14**	**209**	*i* P	**Pn**	**17 19 08.0**	**+1.3**
KBL	**Kabul**	**14.86**	**299**	Pn	**Pn**	**17 19 42.6**	**-1.3**
KDJ	**Kajisay**	**15.24**	**338**	Pn	**Pn**	**17 19 50.7**	**+1.8**
DRK	**Karamyk**	**15.58**	**320**	Pn	**Pn**	**17 19 52.4**	**-1.1**
DRK				IAmb	IAmb	17 19 59.3	
	comp=Z,7.2nm,0.5s						
WMQ	**Urumqi**	**15.79**	**8**	*e*P	**P**	**17 20 00.0**	**+0.1**
WMQ	**Urumqi**	**15.79**	**8**	LR	LR		
	comp=Z,650nm,13.7s						
WMQ				LR	LR		
	comp=Z,440nm,16.9s						
WMQ				LR	LR		
	comp=Z,410nm,19.7s						
CHTO	**Chiang Mai**	**15.98**	**123**		**Pn**	**17 19 58.9**	**+0.4**
CHTO				IAmb	IAmb	17 20 16.0	
	comp=Z,19nm,1.2s						
CMAR	**Chiang Mai Arr**	**16.20**	**124**	Pn	**P**	**17 20 02.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=308,slow=11,SNR=8.0						
ARSB	**Arslanbob**	**16.29**	**327**	Pn	**Pn**	**17 19 59.0**	**-3.5**
BTK	**Batken**	**16.53**	**319**	Pn	**Pn**	**17 20 03.3**	**-2.2**
AAK	**Ala-Archa**	**16.67**	**333**	Pn	**Pn**	**17 20 07.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=180,slow=9.1,SNR=1.3						
AAK	**Ala-Archa**	**16.67**	**333**	Pn	**Pn**	**17 20 06.8**	**-0.6**
GTA	**Gaotai**	**16.76**	**44**	P	**P**	**17 20 17.3**	**+6.5**
GTA				pP	sP	17 20 21.8	+6.9
GTA				sP	pP	17 20 24.3	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,47nm,4.4s						
GTA				LR	LR		
	comp=N,270nm,13.4s						
GTA				LR	LR		
	comp=E,280nm,13.4s						
GTA				LR	LR		
	comp=Z,260nm,12.7s						
SLVN	**Son La**	**18.65**	**107**	P	**P**	**17 20 30.9**	**-0.7**
SLVN				IAmb	IAmb	17 20 47.8	
	comp=Z,12nm,1.2s						
MK31	**Makanchi Array**	**18.69**	**355**	P	**P**	**17 20 32.3**	**+0.4**
MKAR	**Makanchi Array**	**18.69**	**355**	P	**Pn**	**17 20 33.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=167,slow=12,SNR=21						
MAKZ	**Makanchi**	**18.73**	**354**		**Pn**	**17 20 34.3**	**+1.6**
KKAR	**Karatay Array**	**18.84**	**326**		**P**	**17 20 29.9**	**-3.7**
GYA	**Guiyang**	**19.52**	**90**	⇑P	Pn	17 20 56.5	+14
GYA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XAN	**Xi'an**	**21.46**	**68**	P	**P**	**17 21 02.3**	**+0.1**
XAN				pP	sP	17 21 11.5	+5.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,89nm,5.4s						
ENH	**Enshi**	**21.66**	**78**	P	**P**	**17 21 02.8**	**-1.5**
ENH				IAmb	IAmb	17 21 30.0	
	comp=Z,9.6nm,0.6s						
KURBB	**Kurchatov Arra**	**22.92**	**350**	P	**P**	**17 21 18.5**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=174,slow=9.7,SNR=14						
KURK	**Kurchatov**	**22.99**	**350**	P	**P**	**17 21 18.5**	**+0.2**
UBPT	**Khong Chiam**	**23.07**	**119**	P	**P**	**17 21 17.1**	**-2.2**
UBPT				IAmb	IAmb	17 21 35.0	
	comp=Z,11nm,1.2s						
ZAA0	**Zalesovo Array**	**25.75**	**0**	P	**P**	**17 21 44.2**	**0.0**
ZAA0				IAmb	IAmb	17 22 13.4	
	comp=Z,3.9nm,0.8s						
ZALV	**Zalesovo Beam**	**25.75**	**0**	P	**P**	**17 21 45.6**	**+1.4**
	comp=Z,1.0nm,0.5s,baz=179,slow=8.6,SNR=6.4						
ZALV				LR	LR	17 33 23.1	
	comp=Z,45nm,21.1s,baz=188,slow=40						
ZALV	**Zalesovo Beam**	**25.75**	**0**	P	**P**	**17 21 45.0**	**+0.8**
SONM	**Songino Array**	**25.84**	**35**	P	**P**	**17 21 48.5**	**+3.3**
	comp=Z,1.4nm,0.6s,baz=219,slow=9.0,SNR=4.0						
ULN	**Ulaanbaatar**	**26.19**	**35**	P	**P**	**17 21 50.1**	**+1.6**
ULN				IAmb	IAmb	17 22 17.8	
	comp=Z,4.9nm,0.8s						
BRVK	**Borovoye**	**27.08**	**341**	P	**P**	**17 21 55.7**	**-0.5**
BRVK				IAmb	IAmb	17 22 20.9	
	comp=Z,3.0nm,1.4s						
AKASG	**Malin Array Be**	**47.15**	**314**	P	**P**	**17 24 46.0**	**0.0**
	comp=Z,0.2nm,0.4s,baz=78,slow=7.1,SNR=4.4						
AKASG	**Malin Array Be**	**47.15**	**314**	IAmb	IAmb	17 25 01.7	
	comp=Z,0.9nm,1.0s						
AKBB	**Malin Array Si**	**47.15**	**314**	P	**P**	**17 24 43.9**	**-2.1**
AKBB				IAmb	IAmb	17 24 51.3	
	comp=Z,2.4nm,0.8s						
MLR	**Muntele Rosu**	**49.06**	**307**	P	**P**	**17 25 01.3**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=148,slow=10,SNR=8.1						
MLR	**Muntele Rosu**	**49.06**	**307**	IAmb	IAmb	17 25 03.9	
	comp=Z,6.0nm,0.8s						
BURAR	**Bucovina Array**	**49.57**	**310**	P	**P**	**17 25 05.4**	**+0.5**
BURAR				IAmb	IAmb	17 25 06.4	
	comp=Z,1.4nm,0.8s						
BUR08	**Bucovina Ar. S**	**49.59**	**310**	P	**P**	**17 25 05.7**	**+0.8**
BUR08				IAmb	IAmb	17 25 07.9	
	comp=Z,3.8nm,1.3s						
TIXI	**Tiksi**	**49.73**	**17**	P	**P**	**17 25 06.6**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=310,slow=11,SNR=5.9						
TIXI	**Tiksi**	**49.73**	**17**	P	**P**	**17 25 05.7**	**+0.1**
TIXI				IAmb	IAmb	17 25 32.4	
	comp=Z,5.5nm,1.4s						
FINES	**FINESS Array B**	**50.78**	**328**	P	**P**	**17 25 14.0**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=113,slow=7.0,SNR=20						
FINES	**FINESS Array B**	**50.78**	**328**	P	**P**	**17 25 14.0**	**+0.4**
PABE	**Paberze**	**50.86**	**320**	P	**P**	**17 25 12.7**	**-1.7**
VTS	**Vitosha**	**51.14**	**304**	P	**P**	**17 25 15.2**	**-1.7**
VTS				IAmb	IAmb	17 25 19.0	
	comp=Z,2.6nm,0.8s						
LIT	**Litokhoron**	**51.96**	**300**	P	**P**	**17 25 19.9**	**-3.0**
ARCES	**ARCESS Array B**	**53.25**	**338**	P	**P**	**17 25 32.8**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=102,slow=7.8,SNR=11						
HFS	**Hagfors**	**56.64**	**325**	P	**P**	**17 25 56.7**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=94,slow=8.9,SNR=8.6						
NC303	**NORSAR Array S**	**57.79**	**327**	P	**P**	**17 26 04.8**	**+0.1**
NB201	**NORSAR Array S**	**57.83**	**327**	P	**P**	**17 26 05.1**	**+0.1**
NOA	**NORSAR Array B**	**57.87**	**327**	P	**P**	**17 26 05.0**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=72,slow=7.8,SNR=1.8						
WRA	**Warramunga Arr**	**67.70**	**129**	P	**P**	**17 27 11.4**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=320,slow=6.6,SNR=6.6						
ASAR	**Alice Springs**	**69.99**	**132**	P	**P**	**17 27 25.6**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=315,slow=6.3,SNR=12						
ESDC	**Sonseca Array**	**71.72**	**306**	P	**P**	**17 27 35.9**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=67,slow=6.8,SNR=2.6						
ESDC	**Sonseca Array**	**71.72**	**306**	IAmb	IAmb	17 28 01.9	
	comp=Z,0.8nm,0.9s						
EUNU	**Eureka**	**71.89**	**358**	P	**P**	**17 27 36.4**	**0.0**
TOLK	**Toolik Lake Re**	**75.61**	**18**	P	**P**	**17 27 59.0**	**+0.7**
TOLK				IAmb	IAmb	17 28 05.9	
	comp=Z,3.7nm,0.8s						
MLY	**Manley**	**77.70**	**21**	P	**P**	**17 28 11.0**	**+0.7**
MLY				IAmb	IAmb	17 28 16.5	
	comp=Z,2.4nm,0.8s						
TORD	**Torodi Ar. Bea**	**77.89**	**278**	P	**P**	**17 28 11.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=53,slow=4.8,SNR=2.4						
ILAR	**Eielson Array**	**79.07**	**20**	P	**P**	**17 28 18.6**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=308,slow=4.9,SNR=6.3						
YKA	**Yellowknife Ar**	**88.32**	**9**	P	**P**	**17 29 05.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=345,slow=4.7,SNR=2.5						

*NEIC **29** 17:16:33.5±2.6, 27°.87N±0°.07×85°.7E±0°.1, h10km±1km, mb4.4/45, Error ellipse: s-maj=16.4km s-min=10.3km az=61.0*

*IDC **29** 17:16:33.2±0.7, 27°.76N×85°.41E, h0km, mb4.0/19, mb1 4.1/21, mb1mx3.8/70, mbtmp4.0/21, ML4.4/2, Error ellipse: s-maj=24.7km s-min=13.1km az=55.0*

ISC 29 17:16:34.7±0.4, 27°.76N±0°.07×85°.54E±0°.06, h18km, n76, σ1$73/75, mb4.3/31, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.29**	**67**	Pn	**Pn**	**17 17 49.0**	**-4.3**
SHL	**Shillong**	**6.08**	**110**	Pn	**Pn**	**17 18 00.4**	**-3.4**
AJM	**Ajmer**	**9.80**	**265**	*e*S	**Sn**	**17 20 39.0**	**-5.4**
AJM	**Ajmer**	**9.80**	**265**	*e*P	**Pn**	**17 18 55.0**	**+0.2**
CHTO	**Chiang Mai**	**15.18**	**123**	P	**P**	**17 20 14.2**	**+0.9**
CM31	**Chiang Mai Arr**	**15.40**	**124**		**Pn**	**17 20 11.4**	**+0.2**
CM31				IAmb	IAmb	17 20 23.5	
	comp=Z,18nm,1.1s						
CMAR	**Chiang Mai Arr**	**15.40**	**124**	Pn	**P**	**17 20 13.8**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=301,slow=11,SNR=18						
KBL	**Kabul**	**15.65**	**300**		**Pn**	**17 20 14.3**	**-0.3**
KBL				IAmb	IAmb	17 20 31.8	
	comp=Z,14nm,0.9s						
PRZ	**Przheval'sk**	**15.80**	**340**	Pn	**Pn**	**17 20 14.6**	**-1.8**
KDJ	**Kajisay**	**15.88**	**337**		**Pn**	**17 20 12.5**	**-5.0**
DRK	**Karamyk**	**16.34**	**319**	P	**P**	**17 20 25.5**	**-0.9**
DRK				IAmb	IAmb	17 20 27.8	
	comp=Z,11nm,0.7s						
GTA	**Gaotai**	**16.60**	**42**	*e*P	**P**	**17 20 31.5**	**+2.4**
GTA				pP	sP	17 20 36.3	-0.7
GTA				sP	pP	17 20 38.5	+3.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,38nm,3.9s						
GTA				LR	LR		
	comp=N,270nm,12.7s						
GTA				LR	LR		
	comp=E,220nm,13.8s						
GTA				LR	LR		
	comp=Z,260nm,12.7s						
BOOM	**Boomskoye usch**	**16.65**	**334**	Pn	**Pn**	**17 20 27.1**	**-0.2**
ARSB	**Arslanbob**	**17.01**	**326**	Pn	**Pn**	**17 20 28.9**	**-3.0**
BTK	**Batken**	**17.29**	**319**	P	**Pn**	**17 20 32.3**	**-3.0**
BTK				IAmb	IAmb	17 20 39.0	
	comp=Z,13nm,0.7s						
AAK	**Ala-Archa**	**17.35**	**332**	P	**P**	**17 20 38.7**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=95,slow=1.2,SNR=4.2						
AAK	**Ala-Archa**	**17.35**	**332**		**Pn**	**17 20 35.2**	**-0.9**
PBA	**Port Blair**	**17.38**	**156**	P	P	17 20 38.4	+0.7
PBA				IAmb	IAmb	17 20 43.9	
	comp=Z,46nm,1.4s						
SLVN	**Son La**	**17.88**	**107**		**Pn**	**17 20 40.5**	**-2.2**
MK31	**Makanchi Array**	**19.18**	**353**		**P**	**17 20 56.6**	**-0.7**
MKAR	**Makanchi Array**	**19.18**	**353**	P	**Pn**	**17 20 58.3**	**0.0**
	comp=Z,0.8nm,0.3s,baz=178,slow=11,SNR=21						
MAKZ	**Makanchi**	**19.22**	**353**	P	**P**	**17 20 56.4**	**-1.4**
KKAR	**Karatay Array**	**19.56**	**325**	P	**P**	**17 21 02.0**	**+0.4**
ENH	**Enshi**	**21.08**	**77**	P	**P**	**17 21 15.1**	**-3.0**
UBPT	**Khong Chiam**	**22.27**	**120**	P	**P**	**17 21 29.6**	**-1.3**
KURBB	**Kurchatov Arra**	**23.45**	**349**	P	**P**	**17 21 43.9**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=170,slow=10,SNR=13						
GYA0B	**ALIBECK ARRAY**	**25.10**	**301**	P	**P**	**17 21 59.4**	**+0.9**
GYA0B				IAmb	IAmb	17 22 02.5	
	comp=Z,13nm,1.3s						
SONM	**Songino Array**	**25.80**	**33**	P	**P**	**17 22 06.7**	**+1.9**
	comp=Z,2.9nm,0.7s,baz=215,slow=9.8,SNR=5.9						
SONM	**Songino Array**	**25.80**	**33**		**P**	**17 22 05.1**	**+0.2**
ULN	**Ulaanbaatar**	**26.14**	**34**	P	**P**	**17 22 06.7**	**-1.3**
ULN				IAmb	IAmb	17 22 24.3	
	comp=Z,8.3nm,1.1s						
ZAA0	**Zalesovo Array**	**26.17**	**359**	P	**P**	**17 22 05.8**	**-2.2**
ZAA0				IAmb	IAmb	17 22 15.8	
	comp=Z,11nm,1.2s						
ZALV	**Zalesovo Beam**	**26.17**	**359**	P	**P**	**17 22 09.4**	**+1.5**
	comp=Z,2.5nm,0.5s,baz=186,slow=9.5,SNR=8.0						
KULM	**Kulim**	**26.57**	**145**	P	**P**	**17 22 12.5**	**+0.6**
KULM				IAmb	IAmb	17 22 18.3	
	comp=Z,18nm,1.1s						
IPM	**Ipoh**	**27.45**	**145**	P	**P**	**17 22 19.1**	**-0.7**
IPM				IAmb	IAmb	17 22 26.9	
	comp=Z,9.1nm,1.1s						
ABKAR	**Akbulak array**	**29.12**	**324**	P	**P**	**17 22 32.0**	**-2.4**
BKNI	**Bangkinang**	**31.06**	**149**	P	**P**	**17 22 52.3**	**+0.4**
ARU	**Arti**	**34.52**	**334**	P	**P**	**17 23 21.1**	**-0.6**
ARU				IAmb	IAmb	17 23 28.7	
	comp=Z,2.8nm,1.0s						
RAYN	**Ar Rayn**	**36.23**	**273**	P	**P**	**17 23 37.9**	**+0.9**
RAYN				IAmb	IAmb	17 23 39.2	
	comp=Z,5.1nm,1.5s						
KLR	**Kul'dur**	**41.24**	**46**	P	**P**	**17 24 19.8**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=268,slow=11,SNR=4.4						
NRIK	**Noril'sk**	**41.63**	**1**	P	**P**	**17 24 22.7**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=165,slow=8.0,SNR=5.3						
NRIK	**Noril'sk**	**41.63**	**1**	P	**P**	**17 24 21.8**	**+0.3**
NRIK				IAmb	IAmb	17 24 37.5	
	comp=Z,3.8nm,0.8s						
AKASG	**Malin Array Be**	**47.93**	**315**	P	**P**	**17 25 12.1**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=81,slow=6.8,SNR=1.9						
TIXI	**Tiksi**	**49.94**	**16**	P	**P**	**17 25 28.4**	**+1.4**
	comp=Z,1.6nm,0.3s,baz=254,slow=5.0,SNR=4.0						
FIA1	**FINESS Array S**	**51.49**	**328**	P	**P**	**17 25 39.9**	**+1.0**
FINES	**FINESS Array B**	**51.49**	**328**	P	**P**	**17 25 39.8**	**+0.9**
	comp=Z,2.9nm,0.6s,baz=111,slow=8.4,SNR=8.5						
FINES	**FINESS Array B**	**51.49**	**328**	P	**P**	**17 25 39.5**	**+0.6**
CRVS	**Cervenica-Dubn**	**52.87**	**312**	*e*P	**P**	**17 25 52.2**	**+2.8**
SOEI	**Soe**	**52.88**	**129**	P	**P**	**17 25 51.6**	**+1.7**
KEV	**Kevo**	**53.47**	**338**	P	**P**	**17 25 54.4**	**+1.0**
ARCES	**ARCESS Array B**	**53.89**	**338**	P	**P**	**17 25 57.6**	**+1.0**
	comp=Z,1.5nm,0.5s,baz=103,slow=8.2,SNR=13						
HFS	**Hagfors**	**57.37**	**326**	P	**P**	**17 26 22.6**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=98,slow=9.1,SNR=12						
GERES	**GERESS Array B**	**57.98**	**312**	P	**P**	**17 26 27.1**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=78,slow=10,SNR=3.8						
NC300	**NORSAR Array S**	**58.49**	**327**	P	**P**	**17 26 30.3**	**+0.8**
NOA	**NORSAR Array B**	**58.59**	**327**	P	**P**	**17 26 31.0**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=88,slow=6.9,SNR=3.8						
NAO01	**NORSAR Array S**	**58.75**	**326**	P	**P**	**17 26 32.4**	**+1.1**
FITZ	**Fitzroy Crossi**	**59.88**	**135**	P	**P**	**17 26 41.8**	**+2.1**
	comp=Z,2.6nm,1.0s,baz=356,slow=6.3,SNR=1.6						
FITZ	**Fitzroy Crossi**	**59.88**	**135**	P	**P**	**17 26 39.3**	**-0.3**
FITZ				IAmb	IAmb	17 26 40.3	
	comp=Z,10.0nm,1.4s						
SENIN	**Lac Senin/Sane**	**62.66**	**310**	P	**P**	**17 26 58.6**	**+0.1**
SENIN				IAmb	IAmb	17 27 01.0	
	comp=Z,3.6nm,0.7s						
MORW	**Morawa**	**63.60**	**150**	P	**P**	**17 27 04.8**	**+0.2**
MORW				IAmb	IAmb	17 27 26.5	
	comp=Z,7.9nm,1.4s						
KEST	**Kesra**	**63.81**	**298**	P	**P**	**17 27 05.8**	**-0.3**
SSB	**Saint Sauveur**	**64.79**	**310**	P	**P**	**17 27 11.7**	**-0.7**
WB0	**Warramunga Arr**	**66.83**	**130**	P	**P**	**17 27 27.5**	**+1.8**
WB0				IAmb	IAmb	17 27 28.7	
	comp=Z,7.8nm,1.3s						
WRA	**Warramunga Arr**	**66.91**	**130**	P	**P**	**17 27 28.3**	**+2.1**
	comp=Z,1.4nm,0.5s,baz=322,slow=6.5,SNR=26						
WRA	**Warramunga Arr**	**66.91**	**130**	P	**P**	**17 27 27.4**	**+1.2**
WRA				IAmb	IAmb	17 27 29.4	
	comp=Z,0.3nm,1.2s						
WB2	**Warramunga Arr**	**66.92**	**130**	P	**P**	**17 27 25.7**	**-0.5**
WR0	**Warramunga Arr**	**67.06**	**130**	P	**P**	**17 27 25.7**	**-1.4**
WR0				IAmb	IAmb	17 27 29.7	
	comp=Z,9.0nm,1.2s						
NWAO	**Narrogin (SRO)**	**67.44**	**151**	P	**P**	**17 27 28.4**	**-1.0**
NWAO	**Narrogin (SRO)**	**67.44**	**151**	P	**P**	**17 27 30.9**	**+1.6**
NWAO				IAmb	IAmb	17 27 43.2	
	comp=Z,37nm,1.4s						
AS31	**Alice Springs**	**69.21**	**133**	P	**P**	**17 27 40.5**	**-0.1**
AS31				IAmb	IAmb	17 27 43.5	
	comp=Z,1.9nm,1.2s						
ASAR	**Alice Springs**	**69.21**	**133**	P	**P**	**17 27 42.6**	**+2.0**
	comp=Z,1.3nm,0.6s,baz=316,slow=6.1,SNR=27						
ASAR	**Alice Springs**	**69.21**	**133**	P	**P**	**17 27 39.8**	**-0.9**
ESDC	**Sonseca Array**	**72.52**	**306**	P	**P**	**17 28 01.3**	**+0.6**
	comp=Z,0.5n

NISR	**Nisiros**	**1.14**	**21**	P	**Pn**	**17 24 17.3**	**-1.2**
NISR				S	**Sb**	**17 24 34.0**	**+0.4**
	comp=E,5μm,0.6s						
NIS1	**Nisyros Isl.**	**1.14**	**23**	P	**Pn**	**17 24 17.3**	**-1.4**
NIS1	**Nisyros Isl.**	**1.14**	**23**	P	**Pn**	**17 24 17.3**	**-1.4**
NIS1				S	**Sn**	**17 24 32.9**	**-0.6**
	comp=E,3μm,0.5s						
NIS1	**Nisyros Isl.**	**1.14**	**23**	PG	**Pn**	**17 24 17.8**	**-0.9**
NIS1				SG	**Sn**	**17 24 32.5**	**-1.0**
KOSK	**Kos Island**	**1.23**	**13**	P	**Pn**	**17 24 19.7**	**-0.2**
KOSK				S	**Sb**	**17 24 36.2**	**-0.2**
	comp=E,1μm,0.6s						
KOSK	**Kos Island**	**1.23**	**13**	PN	**Pn**	**17 24 19.0**	**-0.9**
KOSK				SN	**Sn**	**17 24 34.5**	**-1.2**
SANT	**Santorini**	**1.25**	**311**	P	**Pn**	**17 24 18.8**	**-1.3**
SANT				AML	AML	17 24 38.3	
	comp=E,8153μm,0.5s						
SANT				AML	AML	17 24 40.4	
	comp=N,1724μm,0.6s						
SANT	**Santorini**	**1.25**	**311**	P	**Pn**	**17 24 18.8**	**-1.3**
SANT	**Santorini**	**1.25**	**311**	PN	**Pn**	**17 24 19.3**	**-0.8**
SANT				SN	**Sn**	**17 24 34.9**	**-1.3**
THR8	**Santorini-Mono**	**1.26**	**313**	P	**Pn**	**17 24 19.1**	**-1.1**
HRKL	**Herakleio**	**1.26**	**260**	P	**Pn**	**17 24 19.7**	**-0.6**
HRKL				S	**Sb**	**17 24 38.0**	**+0.7**
	comp=N,5μm,0.4s						
HRKL	**Herakleio**	**1.26**	**260**	PN	**Pn**	**17 24 20.2**	**-0.1**
THR6	**Thira Island,**	**1.28**	**309**	P	**Pn**	**17 24 19.5**	**-1.0**
IACM	**Heraklion**	**1.29**	**260**	P	**Pb**	**17 24 22.1**	**+0.2**
IACM				S	**Sb**	**17 24 39.6**	**+1.6**
	comp=N,15μm,0.4s						
KSTL	**Kastelli Herak**	**1.29**	**260**	P	**Pn**	**17 24 18.5**	**-2.1**
KSTL				S	**Sn**	**17 24 33.0**	**-4.1**
SNT1	**Gialos, Santor**	**1.30**	**312**	P	**Pn**	**17 24 20.0**	**-0.7**
THR7	**Fira-Santorini**	**1.30**	**312**	P	**Pn**	**17 24 20.4**	**-0.4**
SNT5	**Nea Kammeni, S**	**1.31**	**311**	P	**Pn**	**17 24 19.8**	**-1.1**
THR3	**Thira Island,**	**1.31**	**311**	P	**Pn**	**17 24 19.1**	**-1.4**
THT2	**Imerovigli**	**1.32**	**313**	PN	**Pn**	**17 24 20.3**	**-0.7**
THR5	**Thira Island,**	**1.35**	**310**	P	**Pn**	**17 24 20.5**	**-1.0**
ARG	**Arkhangelos**	**1.39**	**61**	P	**Pb**	**17 24 22.5**	**-1.1**
ARG				S	**Sb**	**17 24 40.0**	**-1.0**
ARG				AML	AML	17 24 46.6	
	comp=N,2117μm,0.4s						
ARG				AML	AML	17 24 50.5	
	comp=E,2282μm,0.5s						
ARG	**Arkhangelos**	**1.39**	**61**	P	**Pb**	**17 24 22.5**	**-1.1**
ARG				S	**Sb**	**17 24 40.8**	**-0.1**
	comp=E,1μm,0.5s						
ARG	**Arkhangelos**	**1.39**	**61**	PN	**Pn**	**17 24 21.9**	**-0.1**
IDI	**Anoyia**	**1.44**	**260**	Pg	**Pn**	**17 24 22.2**	**-0.6**
	comp=E,59nm,0.3s,baz=75,slow=15,SNR=125						
IDI				Lg	Lg	17 24 41.9	
	comp=E,95nm,0.3s,baz=301,slow=23,SNR=14						
IDI	**Anoyia**	**1.44**	**260**	P	**Pn**	**17 24 21.9**	**-0.8**
IDI	**Anoyia**	**1.44**	**260**	P	**Pn**	**17 24 21.9**	**-0.8**
IDI	**Anoyia**	**1.44**	**260**	PN	**Pn**	**17 24 22.7**	**0.0**
SIVA	**Sivas**	**1.57**	**251**	P	**Pb**	**17 24 25.8**	**-0.9**
BODT	**Bodrum**	**1.61**	**20**	PN	**Pn**	**17 24 24.2**	**-0.9**
BDRM	**Kayabasi**	**1.65**	**23**	*i* P	**Pb**	**17 24 26.9**	**-1.2**
BDRM				*i* S	**Sb**	**17 24 49.4**	**+0.9**
BDRM				IAML		17 24 53.0	
	comp=E,127nm,0.7s						
APE	**Apeiranthos**	**1.75**	**330**	P	**Pn**	**17 24 25.7**	**-1.4**
APE				AML	AML	17 24 46.0	
	comp=N,1470μm,0.2s						
APE				AML	AML	17 24 46.6	
	comp=E,1200μm,0.3s						
APE	**Apeiranthos**	**1.75**	**330**	PN	**Pn**	**17 24 25.9**	**-1.2**
TURN	**Turunc**	**1.79**	**47**	*i* P	**Pn**	**17 24 27.0**	**-0.6**
TURN	**Turunc**	**1.79**	**47**	PN	**Pn**	**17 24 27.3**	**-0.3**
VAM	**Vamos**	**1.98**	**267**	P	**Pn**	**17 24 29.3**	**-0.8**
DALY	**Dalyan (Mula)**	**2.07**	**52**	*i* P	**Pn**	**17 24 32.9**	**+1.4**
DALY				*i* S	**Sn**	**17 24 56.8**	**+0.4**
DALY				IAML		17 25 10.0	
	comp=N,172nm,0.8s						
DALY				IAML		17 25 13.0	
	comp=E,220nm,0.7s						
DALY	**Dalyan (Mula)**	**2.07**	**52**	PN	**Pn**	**17 24 31.5**	**+0.1**
YER	**Yerkesik**	**2.07**	**40**	PN	**Pn**	**17 24 31.2**	**-0.3**
IMMV	**Iera Moni Meta**	**2.16**	**268**	P	**Pn**	**17 24 32.0**	**-0.5**
IMMV	**Iera Moni Meta**	**2.16**	**268**	PN	**Pn**	**17 24 32.7**	**+0.1**
MULA	**Mugla, Merkez-**	**2.19**	**38**	*i* P	**Pn**	**17 24 34.4**	**+1.3**
MULA				*i* S	**Sn**	**17 24 59.4**	**0.0**
MULA				IAML		17 25 15.0	
	comp=E,98nm,0.7s						
MULA				IAML		17 25 16.0	
	comp=N,90nm,0.6s						
GVDS	**Gavdos**	**2.19**	**252**	PN	**Pn**	**17 24 33.9**	**+0.9**
GVD	**Gavdhos**	**2.19**	**252**	PN	**Pn**	**17 24 33.7**	**+0.6**
GCAM	**G?zelcaml?**	**2.20**	**13**	*i* P	**Pb**	**17 24 35.5**	**-1.9**
GCAM				*i* S	**Sb**	**17 25 08.1**	**+3.9**
GCAM				IAML		17 25 15.0	
	comp=N,108nm,0.6s						
GCAM	**G?zelcaml?**	**2.20**	**13**	PN	**Pn**	**17 24 32.9**	**-0.3**
FETY	**Fethiye**	**2.27**	**61**	PN	**Pn**	**17 24 34.5**	**+0.4**
AYDN	**Tasoluk**	**2.34**	**25**	*i* P	**Pb**	**17 24 37.0**	**-2.8**
KNDR	**Palaiochora Ch**	**2.42**	**263**	PN	**Pn**	**17 24 37.2**	**+1.0**
DGB	**zmir**	**2.51**	**5**	*i* P	**Pn**	**17 24 36.2**	**-1.1**
DGB				*i* S	**Sb**	**17 25 15.4**	**+2.4**
AKAS	**Kas**	**2.52**	**73**	*i* P	**Pn**	**17 24 36.4**	**-1.3**
AKAS	**Kas**	**2.52**	**73**	PN	**Pn**	**17 24 38.2**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.60**	**23**	PN	**Pn**	**17 24 40.5**	**+1.7**
CAEL	**Denizli, Camel**	**2.69**	**53**	*i* P	**Pb**	**17 24 47.0**	**+1.2**
CAEL				*i* S	**Sb**	**17 25 16.5**	**-1.8**
ZEYE	**Izmir, Urla-Ze**	**2.69**	**358**	*i* P	**Pn**	**17 24 38.0**	**-1.8**
ZEYE				*i* S	**Sb**	**17 25 23.2**	**+5.0**
URLA	**Izmir**	**2.81**	**360**	*i* P	**Pn**	**17 24 39.8**	**-1.8**
URLA	**Izmir**	**2.81**	**360**	PN	**Pn**	**17 24 41.4**	**-0.1**
CHOS	**Chios island**	**2.87**	**351**	PN	**Pn**	**17 24 41.0**	**-1.4**
GOLH	**Golhisar**	**2.91**	**54**	*i* P	**Pn**	**17 24 45.2**	**+2.2**
GOLH				*i* S	**Sn**	**17 25 19.6**	**+2.4**
GOLH				IAML		17 25 37.0	
	comp=N,151nm,0.7s						
ELL	**Elmali**	**2.92**	**65**	PN	**Pn**	**17 24 43.7**	**+0.6**
KTHA	**Kythira Island**	**2.98**	**285**	PN	**Pn**	**17 24 44.1**	**+0.3**
AKUM	**Antalya-Kumluc**	**3.12**	**75**	*i* P	**Pn**	**17 24 46.7**	**+1.0**
MANT	**Manisa**	**3.32**	**27**	*i* P	**Pn**	**17 24 49.7**	**+0.9**
MANT				IAML		17 25 13.0	
	comp=N,17nm,0.8s						
MANT				*i* S	**Sn**	**17 25 25.4**	**-2.1**
MANT	**Manisa**	**3.32**	**27**	P	**Pn**	**17 24 49.7**	**+0.9**
KULA	**Kula-Manisa**	**3.38**	**28**	PN	**Pn**	**17 24 51.1**	**+1.6**
ZEDA	**zmir-Bergama**	**3.43**	**6**	*i* P	**Pn**	**17 24 49.5**	**-0.6**
BRDR	**BURDUR-Merkez**	**3.50**	**51**	*i* P	**Pn**	**17 24 52.6**	**+1.5**
USAK	**Uak-Merkez**	**3.69**	**30**	*i* P	**Pn**	**17 24 55.2**	**+1.4**
SIGR	**SIGRI**	**3.71**	**351**	PN	**Pn**	**17 24 52.6**	**-1.3**
KZIL	**AFYON_Kizioren**	**3.91**	**45**	*i* P	**Pn**	**17 24 58.9**	**+2.2**
BUHA	**Balikesir, Bur**	**3.96**	**5**	*i* P	**Pn**	**17 24 56.1**	**-1.3**
KOCA	**Canakkale, Ayv**	**3.97**	**355**	*i* P	**Pn**	**17 24 56.3**	**-1.1**
SIMA	**Simav-Kutahya**	**4.00**	**27**	PN	**Pn**	**17 24 58.5**	**+0.5**
KEPZ	**Antalya-Kepez**	**4.25**	**70**	*i* P	**Pn**	**17 25 04.9**	**+3.5**
DURS	**Dursunbey**	**4.30**	**19**	*i* P	**Pn**	**17 25 05.8**	**+0.6**
TVSB	**Tavsanli**	**4.50**	**29**	PN	**Pn**	**17 25 05.5**	**+0.6**
YVAC	**Isparta, Yalva**	**4.59**	**52**	*i* P	**Pn**	**17 25 07.9**	**+1.8**
GAZI	**Gazipasa**	**4.67**	**80**	*i* P	**Pn**	**17 25 06.7**	**-0.5**
GAZI				*i* S	**Sn**	**17 25 57.2**	**-3.4**
GAZI				IAML		17 26 13.0	
	comp=N,42nm,1.1s						
GAZI				IAML		17 26 13.0	
	comp=E,33nm,0.7s						
DOGA	**KONYA_Doganhis**	**4.79**	**56**	*i* P	**Pn**	**17 25 10.6**	**+1.7**
DOGA				*i* S	**Sn**	**17 26 01.9**	**-1.6**
DOGA				IAML		17 26 06.0	
	comp=N,33nm,0.8s						
BRTR	**Keskin Array B**	**6.95**	**51**	Pn	**Pn**	**17 25 39.9**	**+1.3**
	comp=N,0.3nm,0.3s,baz=243,slow=13,SNR=1.8						
BRTR				LR	LR	17 28 27.3	
	comp=N,115nm,18.1s,baz=26,slow=39						
MMAI	**Mount Meron Ar**	**7.69**	**107**	Pn	**Pn**	**17 25 47.1**	**-1.6**
	comp=N,1.1nm,0.3s,baz=237,slow=17,SNR=4.5						
MMAI				Sn	**Sn**	**17 27 14.9**	**-0.2**
	comp=N,1.1nm,0.3s,baz=287,slow=30,SNR=2.5						
EIL	**Elat**	**9.15**	**128**	Pn	**Pn**	**17 26 07.3**	**-1.3**
	comp=N,0.5nm,0.3s,baz=336,slow=13,SNR=6.6						
EIL				Sn	**Sn**	**17 27 45.3**	**-5.4**
	comp=N,0.6nm,0.3s,baz=0.9,slow=11,SNR=4.1						
AKASG	**Malin Array Be**	**15.26**	**6**	Pn	**Pn**	**17 27 32.8**	**+0.9**
	comp=N,0.6nm,0.3s,baz=194,slow=11,SNR=11						
GERES	**GERESS Array B**	**16.34**	**328**	Pn	**P**	**17 27 47.4**	**-1.3**
	comp=N,0.2nm,0.3s,baz=139,slow=12,SNR=5.8						
ESDC	**Sonseca Array**	**24.52**	**289**	P	**P**	**17 29 15.9**	**+0.2**
	comp=N,0.6nm,0.5s,baz=76,slow=10,SNR=4.2						
FINES	**FINESS Array B**	**25.92**	**359**	P	**P**	**17 29 28.0**	**0.0**
	comp=N,2.3nm,0.9s,baz=173,slow=12,SNR=1.5						
EKA	**Eskdalemuir Ar**	**28.43**	**323**	P	**P**	**17 29 52.3**	**+1.7**
	comp=N,0.7nm,0.5s,baz=115,slow=9.5,SNR=8.2						
TORD	**Torodi Ar. Bea**	**31.66**	**231**	P	**P**	**17 30 20.3**	**+0.7**
	comp=N,0.5nm,0.4s,baz=35,slow=8.4,SNR=5.2						
AAK	**Ala-Archa**	**37.41**	**64**	P	**P**	**17 31 08.9**	**-0.5**
	comp=N,0.5nm,0.4s,baz=236,slow=7.3,SNR=3.6						
KURBB	**Kurchatov Arra**	**39.95**	**51**	P	**P**	**17 31 30.1**	**-0.1**
	comp=N,3.4nm,0.6s,baz=276,slow=8.8,SNR=32						
MKAR	**Makanchi Array**	**42.56**	**57**	P	**P**	**17 31 52.1**	**+0.2**
	comp=N,2.1nm,0.5s,baz=277,slow=7.1,SNR=34						
ZALV	**Zalesovo Beam**	**43.87**	**46**	P	**P**	**17 32 01.6**	**-0.7**
	comp=N,2.6nm,0.5s,baz=264,slow=8.7,SNR=14						
SONM	**Songino Array**	**58.31**	**51**	P	**P**	**17 33 51.4**	**+0.4**
	comp=N,0.4nm,0.4s,baz=297,slow=7.1,SNR=2.1						
BOSA	**Boshof**	**63.83**	**181**	LR	LR	18 03 02.5	
	comp=N,136nm,19.6s,baz=264,slow=37						
CMAR	**Chiang Mai Arr**	**65.34**	**84**	P	**P**	**17 34 38.8**	**+0.2**
	comp=N,0.4nm,0.7s,baz=301,slow=7.0,SNR=4.0						
KSRS	**Korea Array**	**77.10**	**53**	P	**P**	**17 35 49.3**	**-0.1**
	comp=N,0.7nm,0.6s,baz=304,slow=4.9,SNR=5.0						

*JMA **29** 17:31:53.1±0.2,24.02N×121.65E,h0km,M2.6*
*TAP **29** 17:31:54.3,24.03N×121.62E,h8km,ML3.2,C*
ISC 29 17:31:54.1±0.8,**24.02N**±0.01×**121.66E**±0.02,**h10**km±5km,
n102,σ0°79/163,3C-20D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.06**	**231**	⇑*i* P		**Pg**	**17 31 56.6**	**+0.3**
	baz=181							
HWA				*i* S		**Sg**	**17 31 58.3**	**+0.5**
	baz=181							
TWD	**Chiawan**	**0.09**	**317**	⇓*i* P		**Pg**	**17 31 56.3**	**-0.2**
	baz=349							
TWD				*i* S		**Sg**	**17 31 57.5**	**-0.7**
	baz=349							
NACB	**Ninganchiao**	**0.17**	**339**	⇓*i* P		**Pg**	**17 31 57.5**	**-0.2**
	baz=1.0							
NACB				*i* S		**Sg**	**17 31 59.8**	**-0.5**
	baz=1.0							
ETLH	**Xiulin Townshi**	**0.25**	**319**	⇓*i* P		**Pg**	**17 31 59.1**	**-0.1**
	baz=325							
ETLH				*i* S		**Sg**	**17 32 02.3**	**-0.4**
	baz=325							
ESL	**Shilin**	**0.29**	**226**	⇓*i* P		**Pg**	**17 31 59.8**	**-0.1**
	baz=226							
ESL				S		**Sg**	**17 32 03.4**	**-0.4**
	baz=226							
WHF	**Hehuan Shan**	**0.38**	**289**	⇓*i* P		**Pg**	**17 32 01.6**	**-0.2**
	baz=290							
WHF				*i* S		**Sg**	**17 32 06.5**	**-0.5**
	baz=290							
EGFH	**Guangfu**	**0.41**	**212**	*e*P		**Pb**	**17 32 02.5**	**-0.9**
	baz=217							
EGFH				*e*S		**Sb**	**17 32 09.3**	**-0.3**
	baz=217							
EWUT	**Wuta**	**0.44**	**14**	P		**Pg**	**17 32 02.8**	**+0.1**
	baz=21							
EWUT				S		**Sg**	**17 32 08.3**	**-0.3**
	baz=21							
FUSS	**Fushou**	**0.44**	**301**	*i* P		**Pb**	**17 32 03.0**	**-1.1**
	baz=302							
FUSS				S		**Sb**	**17 32 09.1**	**-1.8**
	baz=302							
CHGB	**Renai**	**0.45**	**276**	⇓*i* P		**Pb**	**17 32 03.0**	**-1.1**
	baz=264							
CHGB				*i* S		**Sb**	**17 32 09.2**	**-1.8**
	baz=264							
OWD	**Renai**	**0.45**	**262**	⇓*i* P		**Pg**	**17 32 02.9**	**0.0**
	baz=269							
OWD				S		**Sg**	**17 32 08.9**	**+0.1**
	baz=269							
NNSH	**Datong**	**0.48**	**328**	P		**Pg**	**17 32 03.5**	**0.0**
	baz=331							
NNSH				S		**Sg**	**17 32 09.7**	**-0.2**
	baz=331							
NNSB	**Datong**	**0.48**	**328**	⇓*i* P		**Pb**	**17 32 03.6**	**-1.1**
	baz=332							
NNSB				*i* S		**Sg**	**17 32 09.8**	**-0.1**
	baz=332							
NNS	**Nan Shan**	**0.49**	**328**	⇓*i* P		**Pg**	**17 32 03.8**	**0.0**
	baz=332							
NNS				*i* S		**Sg**	**17 32 10.4**	**0.0**
	baz=332							
TDCB	**Techi**	**0.51**	**297**	⇓*i* P		**Pb**	**17 32 04.4**	**-0.9**
	baz=298							
TDCB				S		**Sb**	**17 32 11.2**	**-1.7**
	baz=298							
VWDT	**VWDT**	**0.54**	**241**	⇓*i* P		**Pb**	**17 32 04.8**	**-0.8**
	baz=229							
VWDT				S		**Sg**	**17 32 11.9**	**+0.1**
	baz=229							
HGSD	**Ruisui**	**0.57**	**202**	P		**Pb**	**17 32 06.9**	**+0.8**
	baz=213							
HGSD				*e*S		**Sn**	**17 32 16.8**	**-0.8**
	baz=213							
EHY	**Hungye**	**0.60**	**211**	⇑*i* P		**Pg**	**17 32 05.7**	**0.0**
	baz=214							
EHY				*e*S		**Sb**	**17 32 15.7**	**+0.7**
	baz=214							
NDT	**Datong Townshi**	**0.60**	**347**	⇓*i* P		**Pb**	**17 32 06.0**	**-0.6**
	baz=351							
NDT				S		**Sg**	**17 32 13.2**	**-0.3**
	baz=351							
TWC	**Suao**	**0.61**	**16**	⇓*i* P		**Pg**	**17 32 06.1**	**+0.1**
	baz=11							
TWC				S		**Sg**	**17 32 14.3**	**+0.3**
	baz=11							
NDS	**Dongshan**	**0.61**	**5**	⇓*i* P		**Pb**	**17 32 06.2**	**-0.7**
	baz=9.0							
NDS				S		**Sg**	**17 32 14.5**	**+0.3**
	baz=9.0							
ENTT	**Nioudou**	**0.62**	**352**	⇓*i* P		**Pb**	**17 32 06.5**	**-0.6**
	baz=357							
ENTT				*i* S		**Sg**	**17 32 14.7**	**+0.2**
	baz=357							
WPL	**Puli Township**	**0.64**	**270**	*e*P		**Pb**	**17 32 06.8**	**-0.5**
	baz=268							
DPDB	**Guoxing**	**0.67**	**271**	*e*P		**Pb**	**17 32 07.5**	**-0.4**
	baz=270							
DPDB				*e*S		**Sb**	**17 32 17.1**	**-0.1**
	baz=270							
SSLB	**Suanglung**	**0.69**	**251**	P		**Pb**	**17 32 07.3**	**-0.9**
	baz=260							
SSLB				*e*S		**Sg**	**17 32 15.8**	**-0.6**
	baz=260							
YHNB	**Yeheng**	**0.70**	**338**	*i* P		**Pb**	**17 32 07.9**	**-0.5**
	baz=341							
YHNB				S		**Sb**	**17 32 17.5**	**-0.6**
	baz=341							
TWE	**Neicheng**	**0.70**	**1**	⇓*i* P		**Pb**	**17 32 08.0**	**-0.4**
	baz=6.0							
TWE				S		**Sb**	**17 32 17.2**	**-0.8**
	baz=6.0							
WHP	**Taichung City**	**0.70**	**292**	P		**Pb**	**17 32 08.2**	**-0.3**
	baz=285							
WHP				S		**Sb**	**17 32 17.9**	**-0.4**
	baz=285							
YULB	**Yu-li**	**0.71**	**208**	P		**Pg**	**17 32 07.4**	**-0.3**
	baz=213							
YULB				*e*S		**Sg**	**17 32 17.1**	**+0.2**
	baz=213							
SMLT	**Sun Moon Lake**	**0.71**	**259**	⇓*i* P		**Pb**	**17 32 08.1**	**-0.5**
	baz=257							
SMLT				*i* S		**Sb**	**17 32 18.0**	**-0.4**
	baz=257							
NSK	**Sanguang**	**0.71**	**337**	⇓*i* P		**Pb**	**17 32 08.1**	**-0.5**
	baz=341							
NSK				*i* S		**Sg**	**17 32 16.9**	**-0.2**
	baz=341							
EYUL	**Yuli**	**0.74**	**205**	*e*P		**Pb**	**17 32 09.9**	**+0.9**
	baz=215							
TWF1	**Yuli**	**0.74**	**207**	P		**Pg**	**17 32 08.1**	**-0.4**
	baz=211							
TYC	**Yuchr**	**0.74**	**261**	⇓*i* P		**Pb**	**17 32 08.5**	**-0.6**
	baz=260							
TYC				*i* S		**Sb**	**17 32 18.3**	**-1.0**
	baz=260							
ILA	**Ilan**	**0.75**	**6**	*e*P		**Pb**	**17 32 09.1**	**-0.1**
	baz=10.0							
NWLT	**Wulai**	**0.77**	**349**	P		**Pb**	**17 32 09.2**	**-0.4**
	baz=353							
NWLT				S		**Sg**	**17 32 18.4**	**-0.6**
	baz=353							
WHYT	**Xinyi Township**	**0.81**	**247**	P		**Pb**	**17 32 10.2**	**+0.1**
	baz=253							
WHYT				*e*S		**Sb**	**17 32 20.7**	**-0.4**
	baz=253							
NTC	**Toucheng**	**0.85**	**11**	*e*P		**Pb**	**17 32 10.4**	**-0.4**
	baz=2.0							
NSTT	**Nanjuang**	**0.86**	**316**	*e*P		**Pb**	**17 32 11.0**	**0.0**
	baz=317							
NSTT				*e*S		**Sb**	**17 32 22.6**	**0.0**
	baz=317							
LIOB	**Emei**	**0.86**	**317**	*e*P		**Pb**	**17 32 11.4**	**+0.3**
	baz=318							
LIOB				*e*S		**Sb**	**17 32 22.6**	**0.0**
	baz=318							
TWQ1	**Liyutan**	**0.87**	**292**	*e*P		**Pn**	**17 32 12.5**	**0.0**
	baz=302							
TWQ1				*e*S		**Sn**	**17 32 24.8**	**-0.4**
	baz=302							
WJS	**Zhushan**	**0.88**	**257**	*e*P		**Pn**	**17 32 12.7**	**+0.3**
	baz=256							
WJS				*e*S		**Sn**	**17 32 24.9**	**-0.3**
	baz=256							
WWF	**Wufeng**	**0.88**	**272**	*e*P		**Pn**	**17 32 13.9**	**+1.4**
	baz=271							
FULB	**Fuli**	**0.88**	**202**	*e*P		**Pb**	**17 32 11.9**	**+0.5**
	baz=215							
NJD	**Zhudong**	**0.89**	**324**	*e*P		**Pn**	**17 32 12.2**	**-0.4**
	baz=326							
NJD				*e*S		**Sb**	**17 32 24.1**	**+0.7**
	baz=326							
WNT	**Mingjian**	**0.90**	**261**	*e*P		**Pn**	**17 32 13.1**	**+0.3**
	baz=260							
WNT				*e*S		**Sn**	**17 32 26.4**	**+0.5**
	baz=260							
WNT1	**Nantou City**	**0.90**	**263**	*e*P		**Pn**	**17 32 12.9**	**+0.1**
	baz=262							
TCU	**Taichung**	**0.91**	**278**	*e*P		**Pn**	**17 32 13.4**	**+0.5**
	baz=278							
TCU				*e*S		**Sn**	**17 32 27.2**	**+1.1**
	baz=278							
NSY	**Sanyi**	**0.91**	**296**	*e*P		**Pn**	**17 32 12.7**	**-0.2**
	baz=296							
ALS	**Alishan**	**0.93**	**237**	⇓*i* P		**Pb**	**17 32 12.6**	**+0.1**
	baz=235							
ALS				S		**Sn**	**17 32 27.3**	**+0.2**
	baz=235							
NMLH	**Miaoli**	**0.95**	**303**	*e*P		**Pn**	**17 32 14.1**	**+0.7**
	baz=304							
NHDH	**Xindian Distri**	**0.95**	**353**	*e*P		**Pb**	**17 32 12.8**	**+0.2**
	baz=355							
CHKT	**Chengkung**	**0.95**	**197**	*e*P		**Pb**	**17 32 12.5**	**-0.2**
	baz=193							
CHKT				*e*S		**Sn**	**17 32 27.5**	**+0.4**
	baz=193							
TWA	**Mucha**	**0.96**	**356**	P		**Pb**	**17 32 12.9**	**+0.1**
	baz=348							
TWA				*e*S		**Sb**	**17 32 25.6**	**0.0**
	baz=348							
TIPB	**Shuangxi**	**0.96**	**9**	P		**Pb**	**17 32 12.7**	**-0.1**
	baz=3.0							
TIPB				*e*S		**Sg**	**17 32 24.8**	**-0.4**
	baz=3.0							
TATO	**Taipei**	**0.97**	**351**	*e*P		**Pb**	**17 32 13.3**	**+0.4**
	baz=353							
TATO				*e*S		**Sg**	**17 32 25.1**	**-0.2**
	baz=353							
WDJ	**Dajia District**	**0.99**	**290**	*e*P		**Pn**	**17 32 15.1**	**+1.1**
	baz=290							
CHN5	**Tsauling**	**0.99**	**245**	P		**Pn**	**17 32 14.3**	**+0.2**
	baz=232							
CHN5				S		**Sn**	**17 32 28.8**	**+0.6**
	baz=232							
ELDTW	**Lidau**	**1.01**	**216**	*e*P		**Pg**	**17 32 13.1**	**-0.5**
	baz=201							
TAP	**Taipei**	**1.03**	**352**	*e*P		**Pn**	**17 32 14.8**	**+0.3**
	baz=355							
TAP				*e*S		**Sb**	**17 32 27.9**	**+0.4**
	baz=355							
TWB1	**Santiao Chiao**	**1.03**	**17**	*e*P		**Pb**	**17 32 14.4**	**+0.4**
	baz=12							
TWB1				*e*S		**Sg**	**17 32 26.9**	**-0.4**
	baz=12							
NCUH	**Zhongli**	**1.04**	**336**	*e*P		**Pn**	**17 32 15.1**	**+0.4**
	baz=336							
NWF	**Wu-fen Shan**	**1.05**	**6**	*e*P		**Pb**	**17 32 14.8**	**+0.4**
	baz=7.0							
WFSB	**Wu-fen Shan**	**1.05**	**6**	*e*P		**Pb**	**17 32 14.7**	**+0.3**
	baz=9.0							
WFSB				*e*S		**Sb**	**17 32 28.3**	**0.0**
	baz=9.0							
WGK	**Gukeng**	**1.06**	**252**	*e*P		**Pn**	**17 32 15.6**	**+0.6**
	baz=252							
WDLH	**Douliu**	**1.08**	**253**	*e*P		**Pn**	**17 32 16.4**	**+1.2**
	baz=252							
EDH	**Donghe**	**1.09**	**197**	*e*P		**Pb**	**17 32 14.5**	**-0.6**
	baz=196							
EDH				*e*S		**Sn**	**17 32 31.4**	**+0.8**
	baz=196							
TWS1	**Kuangyinshan**	**1.10**	**349**	*e*P		**Pn**	**17 32 16.5**	**+0.9**
	baz=349							
YM01	**YM01**	**1.13**	**356**	*e*P		**Pn

PNG				*e*S		**Sb**	**17 32 54.6**	**-0.3**
	baz=258							
WDGT	**Dungji**	**1.98**	**248**	*e*P		**Pn**	**17 32 28.6**	**+0.9**
	baz=250							
JKRS	**Kuro-shima**	**2.16**	**84**	P		**Pn**	**17 32 30.9**	**+0.8**
JKRS				S		**Sn**	**17 32 58.7**	**+1.8**
JIJ	**Ishigaki jima**	**2.29**	**81**	P		**Pn**	**17 32 31.9**	**-0.1**
JIJ				S		**Sn**	**17 33 00.0**	**-0.2**
JISG	**Ishigakijimahi**	**2.48**	**76**	P		**Pn**	**17 32 34.4**	**-0.2**
JISG				S		**Sn**	**17 33 04.2**	**-0.7**

*AEIC **29** 17:34:04±4.1,61°.59N±0°.02×141°.12W±0°.04,h11^{km}±5^{km}, ML2.8,ML3.0/101(NEIC), Error ellipse: s-maj=3.2km s-min=2.0km az=122.0*
*NEIC **29** 17:34:05.1±2.3,61°.59N±0°.01×141°.10W±0°.04,h1^{km}±9^{km}, Error ellipse: s-maj=2.8km s-min=1.7km az=124.0*
*PGC **29** 17:34:06.6±0.0,61°.67N×140°.94W,h10^{km},ML2.4/8, 209km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada*

ISC 29 17:34:04.6±1.1,**61°.60N**±0°.02×**141°.09W**±0°.02,**h3**^{km}±12^{km}, **n90**,σ1^{s}**02**/112,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK2	**White River**	**0.23**	**31**	P	**Pg**	**17 34 09.1**	**+0.2**
YUK2				S	**Sg**	**17 34 11.3**	**-0.6**
YUK2	**White River**	**0.23**	**31**		**Pg**	**17 34 09.2**	**+0.2**
YUK2					**Sg**	**17 34 12.8**	**+0.9**
YUK3	**Moose Creek**	**0.35**	**59**	P	**Pg**	**17 34 11.5**	**+0.1**
YUK3				S	**Sg**	**17 34 15.3**	**-0.7**
YUK3	**Moose Creek**	**0.35**	**59**		**Pg**	**17 34 11.5**	**+0.1**
YUK3					**Sg**	**17 34 16.7**	**+0.7**
BARN	**Barnard Glacie**	**0.60**	**207**		**Pg**	**17 34 15.8**	**-0.3**
BARN				Sg	**Sg**	**17 34 24.6**	**+0.7**
BARN				IAML		17 34 27.7	
	comp=N,812nm,0.3s						
BARN				IAML		17 34 27.9	
	comp=E,771nm,0.3s						
CTGM	**Chitina Glacie**	**0.64**	**191**		**Pg**	**17 34 16.6**	**-0.3**
CTGM				Sg	**Sg**	**17 34 26.0**	**+0.8**
CTGM				IAML		17 34 27.6	
	comp=N,584nm,0.9s						
LOGN	**Logan Glacier**	**0.78**	**177**		**Pg**	**17 34 19.2**	**-0.2**
LOGN				Sg	**Sg**	**17 34 30.2**	**+0.7**
PTPK	**Patty Peak**	**0.78**	**239**		**Pg**	**17 34 19.3**	**-0.2**
PTPK					**Sg**	**17 34 30.4**	**+0.9**
BALM	**Baldy**	**0.83**	**228**		**Pg**	**17 34 19.9**	**-0.4**
BALM					**Sg**	**17 34 32.0**	**+0.9**
BVCY	**Beaver Creek**	**0.83**	**7**	P	**Pg**	**17 34 20.2**	**-0.2**
BVCY				S	**Sg**	**17 34 31.5**	**+0.3**
BVCY	**Beaver Creek**	**0.83**	**7**		**Pg**	**17 34 20.3**	**-0.2**
BVCY					**Sg**	**17 34 31.8**	**+0.6**
KIAG	**Kiagna River**	**0.91**	**223**		**Pg**	**17 34 21.3**	**-0.7**
GRNC	**Granite Creek**	**0.93**	**201**		**Pg**	**17 34 21.6**	**-0.7**
GRNC				Sg	**Sg**	**17 34 34.6**	**+0.4**
GRNC				IAML		17 34 37.2	
	comp=N,431nm,0.5s						
GRNC				IAML		17 34 39.7	
	comp=E,442nm,0.4s						
MCARA	**McCarthy VSAT**	**0.95**	**258**		**Pg**	**17 34 22.4**	**-0.5**
MCARA				Sg	**Sg**	**17 34 35.8**	**+0.7**
MCARA				IAML		17 34 36.7	
	comp=N,636nm,0.3s						
MCARA				IAML		17 34 37.2	
	comp=E,790nm,0.2s						
MCARA	**McCarthy VSAT**	**0.95**	**258**	P		17 34 22.7	
	baz=76,SNR=39						
TABL	**Table Mountain**	**1.16**	**181**		**Pb**	**17 34 26.2**	**-1.1**
TABL					**Sb**	**17 34 42.4**	**-0.5**
TABL				IAML		17 34 43.1	
	comp=E,436nm,0.5s						
TABL				IAML		17 34 44.5	
	comp=N,302nm,0.9s						
TGL	**Tana Glacier**	**1.19**	**226**		**Pb**	**17 34 26.4**	**-1.4**
TGL					**Sb**	**17 34 42.2**	**-1.4**
TGL				IAML		17 34 45.4	
	comp=N,374nm,0.5s						
TGL				IAML		17 34 46.7	
	comp=E,356nm,0.5s						
VRDI	**Verde Repeater**	**1.20**	**253**		**Pb**	**17 34 26.6**	**-1.4**
VRDI					**Sb**	**17 34 43.1**	**-0.7**
YUK4	**Talbot Arm**	**1.20**	**101**	P	**Pb**	**17 34 27.1**	**-0.8**
YUK4				S	**Sg**	**17 34 43.8**	**+0.7**
YUK4	**Talbot Arm**	**1.20**	**101**		**Pb**	**17 34 27.2**	**-0.8**
YAH	**Yahtse**	**1.28**	**195**		**Pn**	**17 34 28.0**	**-1.5**
YAH	**Yahtse**	**1.28**	**195**	IAML		17 34 47.2	
	comp=E,455nm,0.4s						
YAH				IAML		17 34 48.1	
	comp=N,425nm,0.7s						
CRQM	**Cirque**	**1.30**	**231**		**Pn**	**17 34 28.2**	**-1.6**
CRQM				IAML		17 34 47.9	
	comp=E,335nm,0.9s						
GLB	**Gilahina Butte**	**1.31**	**264**		**Pn**	**17 34 28.6**	**-1.3**
GLB					**Sb**	**17 34 46.7**	**-0.4**
GLB				IAML		17 34 48.0	
	comp=N,202nm,0.5s						
YUK6	**Outpost Mounta**	**1.47**	**115**	P	**Pn**	**17 34 31.6**	**-0.6**
YUK6				S	**Sg**	**17 34 52.0**	**+0.3**
YUK6	**Outpost Mounta**	**1.47**	**115**		**Pn**	**17 34 31.8**	**-0.4**
SAMH	**Samovar Hills**	**1.48**	**174**		**Pb**	**17 34 32.3**	**-0.4**
BC03		**1.51**	**348**		**Pn**	**17 34 32.5**	**+0.1**
BCAR	**Beaver Creek A**	**1.51**	**348**		**Pn**	**17 34 31.3**	**-1.2**
L27K	**Beaver Creek,**	**1.51**	**347**	Pn	**Pn**	**17 34 32.2**	**-0.4**
L27K				IAML		17 34 53.8	
	comp=N,134nm,0.5s						
L27K	**Beaver Creek,**	**1.51**	**347**	P		17 34 32.3	
	baz=167,SNR=104						
PCA	**Pinnacle**	**1.56**	**164**		**Pb**	**17 34 33.8**	**-0.3**
KHIT	**Khitrov Hills**	**1.56**	**223**		**Pb**	**17 34 33.5**	**-0.7**
KULT	**Kultieth River**	**1.57**	**211**		**Pb**	**17 34 34.0**	**-0.2**
YUK5	**Granite Creek**	**1.62**	**105**	Pn	**Pn**	**17 34 34.0**	**-0.2**
YUK5				Sg	**Sb**	**17 34 56.3**	**+0.1**
YUK5	**Granite Creek**	**1.62**	**105**		**Pn**	**17 34 34.0**	**-0.2**
SNH	**Sunshine Point**	**1.66**	**212**		**Pb**	**17 34 35.9**	**+0.1**
CYK	**Cape Yakataga**	**1.67**	**205**		**Pg**	**17 34 36.3**	**-0.1**
N25K	**Chitina, Valde**	**1.68**	**272**	Pn	**Pn**	**17 34 34.9**	**0.0**
N25K	**Chitina, Valde**	**1.68**	**272**	P		17 34 34.9	
	baz=89,SNR=12						
GRIN	**Grindle Hills**	**1.71**	**221**		**Pb**	**17 34 36.1**	**-0.5**
BERG	**Berg Lake**	**1.75**	**228**		**Pn**	**17 34 36.2**	**+0.3**
YUK7	**Dusty Glacier**	**1.79**	**125**	Pn	**Pb**	**17 34 37.7**	**-0.4**
YUK7				Sg	**Sg**	**17 35 32.2**	**+0.2**
YUK7	**Dusty Glacier**	**1.79**	**125**		**Pb**	**17 34 37.7**	**-0.4**
BCPM	**Bancas Point**	**1.80**	**156**		**Pb**	**17 34 38.5**	**+0.5**
BCPM				IAML		17 35 05.8	
	comp=N,136nm,0.8s						
BCPM				IAML		17 35 07.7	
	comp=E,149nm,0.3s						
BMRM	**Bremner River**	**1.81**	**251**	Pn	**Pn**	**17 34 36.6**	**0.0**
BMRM				IAML		17 35 10.4	
	comp=E,209nm,0.6s						
BMRM	**Bremner River**	**1.81**	**251**	P		17 34 36.8	
	baz=68,SNR=11						
MENT	**Mentasta**	**1.82**	**319**		**Pb**	**17 34 37.8**	**-0.8**
MENT				IAML		17 35 05.1	
	comp=E,184nm,0.7s						
MENT				IAML		17 35 05.3	
	comp=N,225nm,0.4s						
HYT	**Haines Junctio**	**1.90**	**112**	Pn	**Pn**	**17 34 38.4**	**+0.5**
HYT				Sg	**Sb**	**17 35 04.8**	**+0.8**
HYT	**Haines Junctio**	**1.90**	**112**	Pn	**Pn**	**17 34 38.4**	**+0.5**
HMT	**Hamilton**	**2.00**	**232**		**Pb**	**17 34 41.8**	**+0.2**
SUCK	**Suckling Hills**	**2.02**	**222**		**Pb**	**17 34 42.2**	**+0.3**
GOAT	**Goat Mountain**	**2.04**	**242**		**Pn**	**17 34 39.9**	**+0.1**
PNL	**Peninsula**	**2.10**	**156**		**Pb**	**17 34 41.9**	**-1.5**
RAGM	**Ragged Mountai**	**2.13**	**237**		**Pn**	**17 34 42.0**	**+1.0**
YKU2	**Yakutat**	**2.21**	**161**	Pn	**Pg**	**17 34 46.7**	**-0.1**
DIV	**Divide**	**2.30**	**260**		**Pn**	**17 34 44.6**	**+1.1**
KLU	**Klutina**	**2.32**	**270**		**Pb**	**17 34 45.8**	**-1.2**
KLU				IAML		17 35 19.6	
	comp=E,94nm,0.8s						
KLU				IAML		17 35 25.6	
	comp=N,72nm,0.8s						
KLU	**Klutina**	**2.32**	**270**	P		17 34 45.7	
	baz=85,SNR=29						
KAIM	**Kayak Island**	**2.34**	**226**	Pn	**Pb**	**17 34 47.2**	**-0.1**
M24K	**Tolsona, Glenn**	**2.46**	**284**		**Pb**	**17 34 47.4**	**-2.1**
M24K				IAML		17 35 40.5	
	comp=N,48nm,1.6s						
M24K	**Tolsona, Glenn**	**2.46**	**284**	P		17 34 49.2	
	baz=100,SNR=6.0						
PAX	**Paxson**	**2.47**	**306**		**Pb**	**17 34 47.9**	**-1.7**
DOT	**Dot Lake**	**2.48**	**328**		**Pn**	**17 34 45.8**	**0.0**
K27K	**Chicken**	**2.48**	**350**		**Pn**	**17 34 45.2**	**-0.7**
K27K				IAML		17 35 25.2	
	comp=E,54nm,0.6s						
EYAK	**Cordova Ski Ar**	**2.50**	**247**		**Pn**	**17 34 47.5**	**+1.4**
DAWY	**Dawson**	**2.60**	**17**	Pn	**Pn**	**17 34 47.6**	**+0.1**
DAWY				Sg	**Sb**	**17 35 25.5**	**+1.4**
DAWY	**Dawson**	**2.60**	**17**	Pn	**Pn**	**17 34 47.7**	**+0.1**
DAWY				IAML		17 35 27.5	
	comp=E,96nm,0.4s						
SCRK	**Sand Creek**	**2.74**	**332**	Pn	**Pn**	**17 34 49.4**	**-0.1**
SCRK				IAML		17 35 31.8	
	comp=E,48nm,0.5s						
SCRK	**Sand Creek**	**2.74**	**332**	P		17 34 49.1	
	baz=150,SNR=14						
FID	**Port Fidalgo**	**2.75**	**254**		**Pb**	**17 34 52.7**	**-1.5**
FID				IAML		17 35 37.4	
	comp=E,83nm,0.5s						
FID				IAML		17 35 43.7	
	comp=N,53nm,1.7s						
SCM	**Sheep Creek Mo**	**2.98**	**277**		**Pn**	**17 34 52.4**	**-0.4**
SCM				IAML		17 35 55.5	
	comp=E,30nm,2.1s						
GLI	**Glacier Island**	**2.99**	**259**		**Pn**	**17 34 54.8**	**+2.0**
GLI				IAML		17 35 40.4	
	comp=E,42nm,0.8s						
GLI				IAML		17 35 43.4	
	comp=N,49nm,0.8s						
WHY	**Whitehorse**	**3.15**	**105**		**Pn**	**17 34 55.3**	**+0.1**
WHY				IAML		17 35 52.1	
	comp=E,34nm,0.8s						
WHY				IAML		17 35 56.9	
	comp=N,42nm,0.8s						
EGAK	**Eagle**	**3.19**	**359**		**Pn**	**17 34 56.2**	**+0.6**
WAT6	**Susitna Watana**	**3.28**	**290**		**Pn**	**17 34 58.7**	**+1.7**
MID	**Middleton Isla**	**3.39**	**232**	Pn	**Pn**	**17 35 00.5**	**+2.3**
Q23K	**Middleton Isla**	**3.39**	**232**	Pn	**Pn**	**17 35 00.6**	**+2.3**
PWL	**Port Wells**	**3.58**	**261**	Pn	**Pn**	**17 35 03.1**	**+2.1**
PWL				IAML		17 35 59.8	
	comp=E,23nm,1.5s						
PWL				IAML		17 36 16.6	
	comp=N,26nm,1.9s						
GHO	**Glory Hole Cre**	**3.74**	**276**		**Pn**	**17 35 05.1**	**+2.0**
GHO				IAML		17 36 09.8	
	comp=E,17nm,1.8s						
IL31		**4.13**	**323**		**Pn**	**17 35 07.5**	**-1.0**
ILAR	**Eielson Array**	**4.13**	**323**		**Pn**	**17 35 09.4**	**+0.9**
MCK	**McKinley**	**4.21**	**304**	Pn	**Pn**	**17 35 12.4**	**+2.8**
MCK				IAML		17 36 17.2	
	comp=N,14nm,2.9s						
MCK				IAML		17 36 41.1	
	comp=E,14nm,3.1s						
WRH	**Wood River Hil**	**4.30**	**315**		**Pn**	**17 35 12.8**	**+2.1**
WRH				IAML		17 36 34.0	
	comp=E,11nm,2.4s						
O22K	**Cooper Landing**	**4.34**	**259**		**Pn**	**17 35 13.7**	**+2.3**
PRP	**Porcupine Dome**	**4.41**	**335**	Pn	**Pn**	**17 35 12.8**	**+0.4**
TRF	**Thorofare Moun**	**4.65**	**298**		**Pn**	**17 35 17.9**	**+2.1**
TRF				IAML		17 36 36.6	
	comp=N,14nm,3.0s						
TRF				IAML		17 36 56.6	
	comp=E,18nm,3.1s						
MDM	**Murphy Dome**	**4.67**	**319**		**Pn**	**17 35 14.7**	**-1.2**
MDM				IAML		17 36 37.4	
	comp=N,12nm,0.8s						
MDM				IAML		17 36 57.6	
	comp=E,11nm,2.7s						
NEA2	**Nenana**	**4.71**	**313**		**Pn**	**17 35 16.6**	**+0.1**
NEA2				IAML		17 37 57.0	
	comp=N,9.7nm,3.8s						
KTH	**Kantishna Hill**	**4.95**	**298**		**Pn**	**17 35 20.7**	**+0.8**
KTH				IAML		17 36 50.4	
	comp=N,13nm,1.7s						
KTH				IAML		17 36 56.3	
	comp=E,12nm,2.0s						
I23K	**Minto, Yukon-K**	**5.15**	**317**		**Pn**	**17 35 22.6**	**+0.1**
I23K				IAML		17 36 54.7	
	comp=E,11nm,1.2s						
I23K				IAML		17 37 51.8	
	comp=N,11nm,4.3s						
EPYK	**Eagle Plains**	**5.16**	**20**		**Pn**	**17 35 23.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**5.18**	**303**		**Pn**	**17 35 24.6**	**+1.6**
BPAW				IAML		17 37 17.3	
	comp=E,10nm,3.4s						
BPAW				IAML		17 37 47.6	
	comp=N,8.1nm,3.6s						
FYU	**Fort Yukon**	**5.31**	**342**		**Pn**	**17 35 25.6**	**+1.0**
BM03	**Burnt Mountain**	**6.04**	**347**		**Pn**	**17 35 35.5**	**+0.8**
BMAR	**Burnt Mountain**	**6.05**	**347**		**Pn**	**17 35 35.6**	**+0.8**
TOLK	**Toolik Lake Re**	**7.92**	**337**		**Pn**	**17 36 02.0**	**+1.5**

*IDC **29** 17:35:35.1±3.5,27°.34N×84°.44E,h0^{km},mb3.3/4, mb1 3.5/6,mb1mx3.3/36,mbtmp3.3/6,ML3.5/2,Error ellipse: s-maj=150.7km s-min=22.1km az=66.0*

ISC 29 17:35:36.8±3.0,**27°.4N**±0°.4×**84°.5E**±0°.6,**h10**^{km},**n6**,σ0^{s}**82**/6, **mb3.4**/4,**Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.00**	**121**	Pn	**Pn**	**17 39 22.0**	**-0.1**
	0.1nm,0.3s,baz=315,slow=11,SNR=7.3						
MKAR	**Makanchi Array**	**19.46**	**355**	P	**P**	**17 40 02.7**	**-0.8**
	0.1nm,0.3s,baz=173,slow=11,SNR=7.6						
KURBB	**Kurchatov Arra**	**23.65**	**351**	P	**P**	**17 40 48.2**	**0.0**
	0.3nm,0.7s,baz=172,slow=8.9,SNR=4.4						
ZALV	**Zalesovo Beam**	**26.54**	**0**	P	**P**	**17 41 15.7**	**+1.1**
	0.2nm,0.3s,baz=177,slow=7.2,SNR=3.6						
WRA	**Warramunga Arr**	**67.40**	**129**	P	**P**	**17 46 32.6**	**-0.2**
	0.2nm,0.5s,baz=321,slow=6.7,SNR=1.6						
ASAR	**Alice Springs**	**69.65**	**132**	P	**P**	**17 46 46.8**	**+0.1**
	0.3nm,0.8s,baz=312,slow=6.1,SNR=6.1						

*IDC **29** 17:48:14.7±68.0,14°.48S×166°.79E,h0^{km},mb3.6/3, mb1 3.8/3,mb1mx3.4/24,mbtmp3.6/3,MS3.3/1,Ms1 3.2/1, ms1mx2.8/20,Error ellipse: s-maj=1146.0km s-min=121.2km az=65.0*
*NOU **29** 17:49:45.0,20°.90S×166°.78E,h0^{km},MLv2.8,Loyalty Islands*

ISC 29 17:48:27.3±10.0,**15°.0S**±0°.8×**166°.1E**±0°.9,**h35**^{km},**n8**, σ0^{s}**82**/8,**mb3.4**/3,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.02**	**177**	P	**Pn**	**17 50 07.5**	**-0.3**
YATNC	**Mamie plateau,**	**7.04**	**174**	P	**Pn**	**17 50 06.5**	**-1.5**
NOUC	**Port Laguerre**	**7.05**	**178**	P	**Pn**	**17 50 08.6**	**+0.6**
OUENC	**Ouen Island, N**	**7.40**	**174**	P	**Pn**	**17 50 13.3**	**+0.5**
PINNC	**Pines Island,**	**7.67**	**170**	P	**Pn**	**17 50 17.1**	**+0.6**
STKA	**Stephens Creek**	**27.92**	**229**	P	**P**	**17 54 14.2**	**-0.1**
	1.5nm,0.9s,baz=63,slow=9.9,SNR=4.2						
STKA				LR	LR	18 04 18.4	
	comp=Z,63nm,20.2s,baz=13,slow=34						
WRA	**Warramunga Arr**	**30.63**	**256**	P	**P**	**17 54 38.5**	**0.0**
	0.6nm,1.0s,baz=85,slow=9.3,SNR=1.8						
ASAR	**Alice Springs**	**31.48**	**249**	P	**P**	**17 54 46.1**	**+0.1**
	0.2nm,0.6s,baz=76,slow=9.6,SNR=6.8						

*IDC **29** 17:57:29.2±3.4,24°.83N×62°.47E,h0^{km},mb3.6/7, mb1 3.7/8,mb1mx3.4/51,mbtmp3.6/8,ML2.9/1,Error ellipse: s-maj=73.5km s-min=25.6km az=152.0*
*OMAN **29** 17:57:40.9,24°.86N×61°.83E,h20^{km},ml3.2/11*

ISC 29 17:57:35.3±1.2,**24°.97N**±0°.09×**62°.24E**±0°.10,**h35**^{km},**n20**, σ1^{s}**82**/28,**mb3.5**/6,**Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**3.72**	**243**	Pn	**Pn**	**17 58 29.9**	**-0.5**
	0.9nm,0.3s,baz=81,slow=4.6,SNR=21						
WSAR				Sn	**Sn**	**17 59 10.1**	**-2.9**
	2.0nm,0.3s,baz=302,slow=5.0,SNR=8.4						
WSAR	**Wadi Sarin**	**3.72**	**243**	P	**Pn**	**17 58 32.2**	**+1.9**
WSAR				S	**Sn**	**17 59 10.3**	**-2.7**
WBK	**Wadi Bani Khal**	**3.81**	**233**	P	**Pn**	**17 58 31.1**	**-0.4**
	SNR=47						
WBK				S	**Sn**	**17 59 13.8**	**-1.3**
BIDO	**Bidbid**	**4.02**	**250**	P	**Pn**	**17 58 36.5**	**+2.0**
BIDO				S	**Sn**	**17 59 21.5**	**+1.1**
SMDO	**Samad**	**4.28**	**244**	P	**Pn**	**17 58 38.8**	**+0.7**
SMDO				S	**Sn**	**17 59 26.4**	**-0.5**
JMDO	**Jabal Madar**	**4.59**	**237**	P	**Pn**	**17 58 44.0**	**+1.7**
	SNR=9.1						
JMDO				S	**Sn**	**17 59 34.5**	**0.0**
HOQ	**Hoqain**	**4.71**	**254**	P	Pn	17 58 49.2	+5.3
BSY	**Bisya**	**5.12**	**245**	P	**Pn**	**17 58 51.1**	**+1.5**
SOHO	**SOHO**	**5.26**	**262**	P	**Pn**	**17 58 52.0**	**+0.5**
MDH	**Madha**	**5.40**	**275**	P	**Pn**	**17 58 53.6**	**+0.3**
MDH				S	**Sn**	**17 59 52.2**	**-2.1**
ARQ	**Araqi**	**5.47**	**254**	P	**Pn**	**17 58 57.6**	**+3.2**
	SNR=5.5						
UOSS	**Minazif**	**5.48**	**271**	P	**Pn**	**17 58 56.8**	**+2.3**
UOSS				S	**Sn**	**17 59 53.3**	**-3.0**
HATD	**Hatta, Dubai**	**5.55**	**270**	P	**Pn**	**17 58 58.0**	**+2.6**
HATD				S	**Sn**	**17 59 55.9**	**-2.2**
AAK	**Ala-Archa**	**20.31**	**27**	P	**P**	**18 02 07.5**	**-1.0**
	2.3nm,0.7s,baz=246,slow=12,SNR=11						
KBZ	**Khabaz**	**24.50**	**325**	P	**P**	**18 02 53.6**	**+2.5**
	1.1nm,0.6s,baz=153,slow=9.0,SNR=3.7						
MKAR	**Makanchi Array**	**27.02**	**31**	P	**P**	**18 03 13.3**	**-0.8**
	1.1nm,0.8s,baz=206,slow=9.5,SNR=11						
KURBB	**Kurchatov Arra**	**28.53**	**22**	P	**P**	**18 03 27.4**	**-0.1**
	0.1nm,0.4s,baz=223,slow=8.0,SNR=3.0						
BVAR	**Borovoye Array**	**28.68**	**10**	P	**P**	**18 03 28.4**	**-0.5**
	0.6nm,0.8s,baz=195,slow=16,SNR=5.8						
ZALV	**Zalesovo Beam**	**33.49**	**24**	P	**P**	**18 04 09.9**	**-1.2**
	0.4nm,0.6s,baz=211,slow=10,SNR=2.0						
AKASG	**Malin Array Be**	**36.10**	**324**	P	**P**	**18 04 33.7**	**0.0**
	1.3nm,0.6s,baz=121,slow=7.9,SNR=7.6						

IDC 29 18:04:51.5±2.3,**6°.14S**×**129°.79E**,**h0**^{km},**mb3.7**/1, **mb1 3.5**/3,**mb1mx3.2**/27,**mbtmp3.3**/3,**ML3.2**/2,**MS3.3**/2, **Ms1 3.3**/2,**ms1mx2.8**/29,**Error ellipse: s-maj=144.1km s-min=31.2km az=69.0**,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.41**	**163**	Pn	Pn	18 08 18.2	+1.3
	0.1nm,0.3s,baz=342,slow=8.6,SNR=7.9						
WRA				Sn	Sn	18 10 44.3	-13
	0.2nm,0.3s,baz=335,slow=22,SNR=6.6						
ASAR	**Alice Springs**	**17.87**	**168**	P	Pn	18 09 00.8	-0.8
	0.1nm,0.3s,baz=345,slow=9.2,SNR=12						
ASAR				S	Sn	18 12 08.0	-14
	0.1nm,0.3s,baz=331,slow=15,SNR=1.7						
ASAR				LR	LR	18 16 37.2	
	comp=Z,44nm,20.8s,baz=130,slow=40						
MKAR	**Makanchi Array**	**67.40**	**327**	P	P	18 15 48.9	0.0
	0.4nm,0.5s,baz=120,slow=7.7,SNR=6.5						
AKTO	**Aktyubinsk**	**83.27**	**322**	LR	LR	18 56 41.0	
	comp=Z,38nm,21.4s,baz=179,slow=37						

*SKHL **29** 18:19:48.3±0.4,43°.10N×146°.10E,h73^{km}±5^{km},mb3.9/3*
*JMA **29** 18:19:48.3±0.1,43°.16N×145°.80E,h80^{km}±1^{km},M2.6*

ISC 29 18:19:46.3±2.0,**43°.15N**±0°.08×**145°.92E**±0°.07,**h90**^{km}±10^{km}, **n14**,σ0^{s}**84**/28,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.25**	**329**	P	**Pn**	**18 20 00.2**	**+0.8**
NEM2				*e*S	**Sn**	**18 20 08.8**	**-0.4**
NMR	**Nemuro--Hokkai**	**0.26**	**327**	*e*P	**Pn**	**18 20 00.0**	**+0.5**
NMR				*e*S	**Sn**	**18 20 09.0**	**-0.3**
JKHN	**Kushirohamanak**	**0.56**	**263**	P	**Pn**	**18 20 02.2**	**+0.7**
JKHN				*e*S	**Sn**	**18 20 12.2**	**-0.6**
GRPR	**Tuman**	**0.85**	**353**	*e*P	**Pn**	**18 20 05.0**	**+0.7**
GRPR				AMB	AMB	18 20 05.0	
	80nm,0.3s						
GRPR				*e*S	**Sn**	**18 20 17.1**	**-0.6**
GRPR				A	A	18 20 18.0	
	730nm,0.5s						
GRPR				A	A	18 20 18.0	
	740nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**0.88**	**357**	*e*P	**Pn**	**18 20 05.2**	**+0.6**
YUK				AMB	AMB	18 20 06.6	
	80nm,0.4s						
YUK				*e*S	**Sn**	**18 20 18.0**	**-0.4**
YUK				A	A	18 20 20.7	
	360nm,0.2s						
YUK				A	A	18 20 20.7	
	310nm,0.2s						
JAK	**Akkeshi**	**0.91**	**261**	P	**Pn**	**18 20 05.3**	**+0.4**
JAK				*e*S	**Sn**	**18 20 17.9**	**-1.0**
JNSB	**Nemuroshibetsu**	**0.91**	**313**	P	**Pn**	**18 20 05.5**	**+0.5**
JNSB				*e*S	**Sn**	**18 20 18.4**	**-0.6**
JRA	**Rausu**	**0.98**	**324**	P	**Pn**	**18 20 06.6**	**+0.9**
JRA				*e*S	**Sn**	**18 20 20.3**	**+0.1**
JNK	**Nakash**	**0.98**	**297**	P	**Pn**	**18 20 05.8**	**+0.1**
JNK				*e*S	**Sn**	**18 20 18.6**	**-1.7**
JOB	**Onbets**	**1.55**	**261**	P	**Pn**	**18 20 13.7**	**+1.1**
JOB				*e*S	**Sn**	**18 20 31.9**	**-0.6**
JAR	**Ashorobuto**	**1.58**	**276**	P	**Pn**	**18 20 13.8**	**+0.8**
JAR				*e*S	**Sn**	**18 20 32.4**	**-0.8**
JTKR	**Abashiri--Toko**	**1.68**	**300**	P	**Pn**	**18 20 15.2**	**+1.0**
JTKR				*e*S	**Sn**	**18 20 34.8**	**-0.6**
JCH	**Churui**	**1.96**	**255**	P	**Pn**	**18 20 18.4**	**+0.6**
JCH				*e*S	**Sn**	**18 20 40.9**	**-1.0**
KUR	**Kuril'sk**	**2.51**	**33**	*e*P	**Pn**	**18 20 25.6**	**+0.5**
KUR				AMB	AMB	18 20 30.3	
	30nm,0.7s						
KUR				*e*S	**Sn**	**18 20 53.6**	**-1.4**
KUR			

BW06				IAML			18 41 03.9
	36nm,0.3s						
PD31	**Pinedale Array**	**3.24**	**255**	Pn	**Pn**	**18 40 11.5**	**+0.5**
PDAR	**Pinedale Array**	**3.24**	**255**	Pn	**Pn**	**18 40 11.6**	**+0.5**
	5.2nm,0.3s,baz=73,slow=16,SNR=65						
PDAR				Lg	Lg	18 40 55.4	
	10nm,0.3s,baz=77,slow=33,SNR=3.6						
PDAR	**Pinedale Array**	**3.24**	**255**		**Pn**	**18 40 11.4**	**+0.3**
YNE	**Yellowstone No**	**3.62**	**293**		**Pn**	**18 40 16.7**	**+0.4**
YNE				IAML		18 41 13.0	
	comp=N,48nm,0.3s						
YMP	**Mirror Lake Pl**	**3.64**	**288**		**Pn**	**18 40 17.2**	**+0.6**
YMP				IAML		18 41 18.5	
	comp=N,59nm,0.9s						
OGNE	**Ogallala**	**3.66**	**137**	Pn	**Pn**	**18 40 17.5**	**+0.8**
OGNE				IAML		18 41 20.5	
	comp=N,57nm,0.6s						
LOHW	**Long Hollow**	**3.84**	**271**		**Pn**	**18 40 19.6**	**+0.3**
LOHW				IAML		18 41 20.8	
	comp=N,20nm,0.3s						
H17A	**Grant Village**	**3.86**	**282**		**Pn**	**18 40 21.1**	**+1.4**
H17A				IAML		18 41 23.8	
	comp=N,25nm,0.3s						
H17A				IAML		18 41 26.6	
	comp=E,18nm,0.7s						
ISCO	**Idaho Springs**	**3.89**	**183**		**Pn**	**18 40 21.1**	**+0.9**
FLWY	**Flagg Ranch**	**3.92**	**278**		**Pn**	**18 40 21.1**	**+0.8**
FLWY				IAML		18 41 30.0	
	comp=E,42nm,2.0s						
FLWY				IAML		18 41 33.6	
	comp=E,23nm,1.1s						
MOOW	**Moose Ponds**	**3.94**	**273**	Pn	**Pn**	**18 40 22.0**	**+1.3**
YPP	**Pitchstone Pla**	**4.01**	**280**		**Pn**	**18 40 22.8**	**+1.1**
REDW	**Red Top Meadow**	**4.04**	**267**	Pn	**Pn**	**18 40 24.0**	**+1.9**
REDW				IAML		18 41 25.5	
	comp=E,24nm,0.3s						
REDW				IAML		18 41 32.4	
	comp=E,22nm,1.1s						
YHH	**Holmes Hill**	**4.13**	**287**	Pn	**Pn**	**18 40 24.2**	**+0.9**
O20A	**White River Ci**	**4.17**	**213**		**Pn**	**18 40 24.9**	**+1.1**
O20A				IAML		18 41 56.9	
	comp=E,26nm,3.2s						
O20A				IAML		18 42 17.9	
	comp=N,24nm,4.4s						
E28A	**Huff**	**4.36**	**47**		**Pn**	**18 40 26.3**	**0.0**
YHL	**Hebgen Lake**	**4.38**	**287**		**Pn**	**18 40 28.1**	**+1.4**
YHL				IAML		18 41 50.5	
	comp=E,15nm,0.6s						
YHL				IAML		18 41 54.7	
	comp=N,15nm,0.7s						
RDMU	**Red Mountain**	**4.44**	**227**		**Pn**	**18 40 28.6**	**+1.0**
RDMU				IAML		18 41 38.1	
	comp=N,16nm,0.3s						
RDMU				IAML		18 41 45.4	
	comp=E,17nm,0.7s						
DGMT	**Dagmar**	**4.84**	**9**		**Pn**	**18 40 34.4**	**+1.5**
BOZ	**Bozeman (W)**	**4.90**	**295**		**Pn**	**18 40 33.8**	**0.0**
HWUT	**Hardware Ranch**	**5.06**	**248**	Pn	**Pn**	**18 40 37.2**	**+1.2**
HWUT				IAML		18 42 01.9	
	comp=E,11nm,0.7s						
HWUT				IAML		18 42 20.0	
	comp=E,15nm,1.1s						
KSCO	**Kaye Shedlock'**	**5.09**	**156**		**Pn**	**18 40 36.6**	**+0.2**
EGMT	**Eagleton**	**5.33**	**326**		**Pn**	**18 40 39.9**	**+0.2**
HRY	**Holter Researc**	**5.51**	**306**	Pn	**Pn**	**18 40 42.4**	**+0.2**
LRM	**Limekiln Ridge**	**5.51**	**295**		**Pn**	**18 40 43.5**	**+1.1**
MCMT	**McKenzie Canyo**	**5.53**	**284**		**Pn**	**18 40 43.7**	**+1.1**
MDND	**Maddock**	**5.76**	**42**	Pn	**Pn**	**18 40 45.5**	**0.0**
PV22	**Blue Mesa, Par**	**5.78**	**208**		**Pn**	**18 40 47.5**	**+1.6**
SPUT	**South Promonto**	**5.79**	**248**	Pn	**Pn**	**18 40 47.7**	**+1.7**
HVU	**Hansel Valley**	**5.82**	**253**	Pn	**Pn**	**18 40 47.6**	**+1.2**
PV07	**Paradox Valley**	**5.82**	**207**		**Pn**	**18 40 48.1**	**+1.6**
PV15	**Paradox Valley**	**5.85**	**205**	Pn	**Pn**	**18 40 47.6**	**+0.6**
BCYI	**Bear Canyon**	**5.87**	**279**		**Pn**	**18 40 49.6**	**+2.4**
PV04	**Paradox Valley**	**5.95**	**208**		**Pn**	**18 40 49.2**	**+1.0**
PV12	**Saucer Basin,**	**5.98**	**207**		**Pn**	**18 40 49.8**	**+1.1**
PV14	**Lion Creek, Pa**	**6.01**	**209**		**Pn**	**18 40 50.1**	**+1.1**
PV20	**West Nyswonger**	**6.01**	**209**		**Pn**	**18 40 50.8**	**+1.6**
PV11	**David Mesa, Pa**	**6.02**	**208**		**Pn**	**18 40 50.4**	**+1.1**
SRU	**San Rafael Swe**	**6.02**	**222**		**Pn**	**18 40 49.5**	**+0.2**
PV16	**Nyswonger Mesa**	**6.02**	**208**		**Pn**	**18 40 50.6**	**+1.2**
PV19	**Morning Glory**	**6.05**	**209**	Pn	**Pn**	**18 40 51.2**	**+1.6**
PV03	**Paradox Valley**	**6.05**	**207**	Pn	**Pn**	**18 40 50.9**	**+1.2**
PV02	**Paradox Valley**	**6.06**	**206**	Pn	**Pn**	**18 40 51.6**	**+1.8**
PV17	**East Wray Mesa**	**6.07**	**208**		**Pn**	**18 40 50.8**	**+0.9**
PV18	**Skein Mesa, Pa**	**6.08**	**208**	Pn	**Pn**	**18 40 49.9**	**-0.2**
PV13	**Radium Mtn., P**	**6.13**	**207**		**Pn**	**18 40 51.4**	**+0.6**
TMUT	**Trail Mountain**	**6.23**	**227**	Pn	**Pn**	**18 40 53.3**	**+1.1**
PV05	**Paradox Valley**	**6.30**	**208**		**Pn**	**18 40 53.0**	**0.0**
Q16A	**Castle Valley**	**6.49**	**225**	Pn	**Pn**	**18 40 56.9**	**+1.1**
TCRU	**Three Creeks R**	**7.40**	**229**	Pn	**Pn**	**18 41 09.8**	**+1.6**
JTMT	**Jette**	**7.47**	**306**	Pn	**Pn**	**18 41 10.2**	**+1.1**
ULM	**Lac du Bonnet**	**9.20**	**41**	Pn	**Pn**	**18 41 30.9**	**-1.7**
	comp=E,1.5nm,0.3s,baz=231,slow=13,SNR=9.8						
ULM				Lg	Lg	18 44 07.0	
	comp=E,0.2nm,0.3s,baz=209,slow=19,SNR=3.8						
YKA	**Yellowknife Ar**	**19.61**	**347**	P	**P**	**18 43 48.5**	**+0.2**
	comp=E,0.1nm,0.3s,baz=151,slow=9.2,SNR=1.9						

*IDC **29** 18:44:20.1±1.5, 11°.27S×116°.44E, h0km, mb3.5/4, mb1 3.8/8, mb1mx3.5/45, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=48.9km s-min=19.4km az=43.0*
*DJA **29** 18:44:23.6±0.4, 11°.S±3°×11°.7E±°, h30km, M4.1/13, mb4.1/7, MLv4.2/13*
ISC 29 18:44:22.8±0.9, 11°.24S±0°.07×116°.71E±0°.06, h35km, n22, σ2s64/30, mb3.5/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**2.49**	**4**	P	**Pn**	**18 45 01.0**	**+0.1**
TWSI				S	**Sn**	**18 45 27.6**	**-2.6**
PLAI	**Plampang**	**2.62**	**24**	P	**Pn**	**18 45 02.7**	**0.0**
PLAI				S	**Sn**	**18 45 30.2**	**-3.1**
DNP	**Denpasar**	**2.94**	**330**	P	**Pn**	**18 45 07.8**	**+0.6**
DNP				S	**Sn**	**18 45 40.1**	**-1.2**
WBSI	**Waikabubak, Su**	**3.08**	**59**	P	**Pn**	**18 45 09.6**	**+0.6**
WBSI				S	**Sn**	**18 45 45.7**	**+1.0**
SRBI	**Singaraja**	**3.47**	**335**	P	**Pn**	**18 45 14.9**	**+0.6**
JAGI	**Jajag, Banyuwa**	**3.73**	**317**	P	**Pn**	**18 45 16.5**	**-1.5**
BASI	**Baing, Sumba**	**3.94**	**75**	P	**Pn**	**18 45 21.8**	**+1.0**
ABJI	**Asem Bagus**	**4.21**	**324**	P	**Pn**	**18 45 24.1**	**-0.4**
KMMI	**Kalianget**	**4.97**	**327**	P	**Pn**	**18 45 35.9**	**+0.9**
MMRI	**Maumere**	**6.03**	**65**	P	**Pn**	**18 45 49.6**	**0.0**
	0.1nm15nn,1.9s						
KAPI	**Kappang**	**6.88**	**26**	Pn	**Pn**	**18 46 04.5**	**+3.2**
	1.9nm,0.3s,baz=157,slow=2.6,SNR=6.3						
KAPI				Sn	**Sn**	**18 47 14.5**	**-3.9**
	2.5nm,0.3s,baz=96,slow=22,SNR=7.9						
BATI	**Baumata**	**6.91**	**82**	Pn	**Pn**	**18 46 06.4**	**+4.7**
	1.7nm,0.3s,baz=232,slow=19,SNR=4.6						
BATI				Sn	**Sn**	**18 47 22.1**	**+2.9**
	3.6nm,0.3s,baz=234,slow=23,SNR=6.1						
UGM	**Wanagama**	**6.94**	**298**	P	**Pn**	**18 46 01.6**	**-0.5**
	0.8nm172nm,1.7s						
SOEI	**Soe**	**7.58**	**79**	P	**Pn**	**18 46 11.5**	**+0.5**
	0.1nm26nm,1.3s						
BNSI	**Bone**	**7.58**	**27**	P	**Pn**	**18 46 10.3**	**-0.6**
	0.1nm10nm,1.1s						
CISI	**Cisompet, Garu**	**9.51**	**292**	P	**Pn**	**18 46 36.9**	**-0.5**
	32nm,1.3s						
FITZ	**Fitzroy Crossi**	**11.00**	**129**	Pn	**Pn**	**18 46 59.9**	**+2.1**
	0.2nm,0.3s,baz=309,slow=8.6,SNR=14						
FITZ				Sn	**Sn**	**18 48 55.1**	**-4.6**
	0.4nm,0.3s,baz=260,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**19.04**	**119**	P	**Pn**	**18 48 46.7**	**+3.6**
	0.1nm,0.3s,baz=293,slow=13,SNR=5.0						
WRA				S	**Sn**	**18 52 09.3**	**-6.2**
	0.1nm,0.3s,baz=288,slow=22,SNR=2.7						
ASAR	**Alice Springs**	**20.51**	**129**	P	Pn	18 49 02.9	+2.4
	0.8nm,0.7s,baz=300,slow=10,SNR=15						
ASAR				S	**S**	**18 52 41.3**	**-4.5**
	0.3nm,0.6s,baz=298,slow=22,SNR=2.1						
CMAR	**Chiang Mai Arr**	**34.33**	**329**	P	**P**	**18 51 07.7**	**+1.4**
	0.4nm,0.7s,baz=151,slow=7.7,SNR=4.2						
MKAR	**Makanchi Array**	**65.46**	**335**	P	**P**	**18 55 04.2**	**+1.9**
	0.5nm,0.5s,baz=146,slow=7.6,SNR=8.5						
KURBB	**Kurchatov Arra**	**70.01**	**335**	P	**P**	**18 55 32.9**	**+2.1**
	0.2nm,0.4s,baz=150,slow=6.0,SNR=2.2						

*IDC **29** 18:59:26.0±2.3, 6°.48S×130°.29E, h116km±24km, mb3.2/2, mb1 4.0/7, mb1mx3.4/40, mbtmp4.3/7, Error ellipse: s-maj=27.8km s-min=19.2km az=105.0*
ISC 29 18:59:23.3±0.9, 6°.58S±0°.06×130°.5E±0°.1, h90km, n7, σ3s58/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.73**	**8**	P	**Pn**	**19 00 47.7**	**+1.8**
	15nm,0.3s,baz=196,slow=18,SNR=183						
SIJI				S	**Sn**	**19 01 46.5**	**-3.8**
	14nm,0.3s,baz=17,slow=24,SNR=18						
BATI	**Baumata**	**7.65**	**241**	P	**Pn**	**19 01 15.0**	**+3.0**
	5.8nm,0.3s,baz=76,slow=4.2,SNR=10						
BATI				S	**Sn**	**19 02 37.0**	**-0.2**
	21nm,0.3s,baz=101,slow=20,SNR=14						
FITZ	**Fitzroy Crossi**	**12.38**	**202**	P	**Pn**	**19 02 17.1**	**+0.8**
	2.8nm,0.3s,baz=25,slow=11,SNR=148						
FITZ				S	**Sn**	**19 04 25.9**	**-6.5**
	1.3nm,0.3s,baz=232,slow=23,SNR=5.1						
WRA	**Warramunga Arr**	**13.80**	**165**	P	**Pn**	**19 02 37.2**	**+2.1**
	1.7nm,0.3s,baz=339,slow=14,SNR=49						
WRA				S	**Sn**	**19 05 03.4**	**-3.5**
	2.6nm,0.3s,baz=353,slow=22,SNR=7.8						
ASAR	**Alice Springs**	**17.30**	**169**	P	**P**	**19 03 23.5**	**+4.2**
	1.6nm,0.3s,baz=349,slow=10,SNR=94						
ASAR				S	**Sn**	**19 06 29.1**	**-2.5**
	0.3nm,0.3s,baz=351,slow=24,SNR=4.5						
CMAR	**Chiang Mai Arr**	**39.84**	**309**	P	**P**	**19 06 46.4**	**-1.8**
	0.3nm,0.6s,baz=134,slow=6.8,SNR=6.8						
MKAR	**Makanchi Array**	**68.14**	**327**	P	**P**	**19 10 12.5**	**-1.3**
	0.4nm,0.4s,baz=119,slow=7.3,SNR=9.3						

*SNET **29** 19:05:22.3±1.6, 13°.69N×91°.07W, h15km±8km, ML3.2*
*GCG **29** 19:05:23.2±0.4, 13°.72N×91°.12W, h27km±2km, MD3.6*
ISC 29 19:05:22.4±2.4, 13°.7N±0°.1×91°.14W±0°.08, h22km±18km, n9, σ0s75/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.81**	**21**	eP	**Pb**	**19 05 37.9**	**0.0**
FUG				eS	**Sn**	**19 05 49.8**	**-0.2**
ERG	**Entre ros, C**	**0.85**	**331**	eP	**Pb**	**19 05 38.6**	**0.0**
PCG	**Pacaya**	**0.87**	**37**	eP	**Pn**	**19 05 39.5**	**-0.1**
NBG	**Las Nubes**	**1.18**	**41**	eP	**Pb**	**19 05 44.2**	**-0.1**
NBG				eS	**Sb**	**19 06 00.5**	**+1.3**
CEVE	**Cerro Verde**	**1.48**	**85**	eP	**Pn**	**19 05 48.1**	**+0.1**
CEVE				eS	**Sn**	**19 06 06.8**	**0.0**
CEVE				IAML		19 06 15.3	
	comp=Z,706nm,0.4s						
PMON	**Piamonte**	**1.78**	**89**	eP	**Pn**	**19 05 50.9**	**-1.1**
PMON				eS	**Sn**	**19 06 14.0**	**0.0**
MTO3	**Montecristo**	**1.87**	**68**	eP	**Pn**	**19 05 52.5**	**-0.7**
MTO3				eS	**Sb**	**19 06 18.0**	**-1.1**
LFRS	**El Faro**	**2.02**	**92**	eP	**Pn**	**19 05 55.8**	**+0.5**
LFRS				eS	**Sn**	**19 06 20.7**	**+0.6**
COEG	**Centro de Oper**	**2.20**	**92**	eS	**Sn**	**19 06 25.3**	**+1.0**

*REN **29** 19:09:45.9±1.6, 37°.05N±0°.04×118°.29W±0°.04, h5km±6km, Error ellipse: s-maj=5.6km s-min=4.1km az=199.0*
*NEIC **29** 19:09:46.1±1.6, 37°.08N±0°.04×118°.29W±0°.04, h5km±7km, Error ellipse: s-maj=5.6km s-min=4.0km az=197.0*
NCEDC 29 19:09:45.9±1.5, 37°.05N±0°.04×118°.27W±0°.04, h7km±6km, Md3.0/61, ML2.8/7(REN), ML2.5/48(NEIC), Error ellipse: s-maj=5.8km s-min=4.0km az=201.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTUM	**Tungsten Hills**	**0.38**	**322**		Pg	19 09 53.5	0.0
HELL	**Mitchell Peak,**	**0.71**	**239**		Pg	19 09 59.5	-0.1
MRDM	**Red Cones**	**0.83**	**311**		Pg	19 10 01.7	-0.3
MDPB	**Devils Postpil**	**0.87**	**312**		Pg	19 10 02.2	-0.5
MDPB				IAML		19 10 14.0	
	comp=N,181nm,0.4s						
MDPB				IAML		19 10 14.2	
	comp=E,193nm,0.4s						
MDCM	**Deadman Creek**	**0.90**	**317**		Pg	19 10 02.9	-0.4
LHV	**Little Huntoon**	**1.21**	**351**		Pb	19 10 09.1	-0.1
LHV				IAML		19 10 28.0	
	comp=E,54nm,0.6s						
LHV				IAML		19 10 32.3	
	comp=N,50nm,0.8s						
TPH	**Tonopah**	**1.32**	**39**		Pn	19 10 10.7	-0.2
TPH	**Tonopah**	**1.32**	**39**	IAML		19 10 33.0	
	comp=N,68nm,0.4s						
TPH				IAML		19 10 33.2	
	comp=E,51nm,0.7s						
NVAR	**Mina Array Bea**	**1.37**	**359**		Pn	19 10 11.6	-0.2
NV11	**Mina Array Sit**	**1.38**	**4**		Pn	19 10 11.5	-0.3
ISA	**Isabella, Lake**	**1.40**	**187**		Pn	19 10 11.9	-0.1
ISA				IAML		19 10 31.8	
	comp=N,37nm,0.2s						
ISA				IAML		19 10 32.0	
	comp=E,59nm,0.3s						
RYN	**Ryan**	**1.58**	**353**		Pn	19 10 14.8	+0.1
TPNV	**Topopah Spring**	**1.62**	**93**		Pb	19 10 15.7	-0.5
TPNV				IAML		19 10 42.6	
	comp=E,69nm,0.9s						
WAKR	**Walker**	**1.72**	**328**		Pn	19 10 17.1	+0.6
PDRM	**Domengine Ranc**	**1.83**	**248**		Pb	19 10 19.6	-0.2
CMB	**Columbia Colle**	**1.95**	**301**		Pb	19 10 20.9	-0.9
CMB	**Columbia Colle**	**1.95**	**301**	Pn	Pn	19 10 20.6	+1.1
CMB	**Columbia Colle**	**1.95**	**301**	IAML		19 10 48.9	
	comp=E,51nm,0.2s						
KVN	**Kaiserville**	**2.00**	**4**		Pn	19 10 20.0	-0.3
THIS	**South End of C**	**2.06**	**231**		Pb	19 10 22.9	-0.9
PAGB	**Antelope Grade**	**2.07**	**231**	Pn	Pn	19 10 17.2	-3.9
YERR	**Yerington**	**2.08**	**339**		Pn	19 10 21.3	-0.1
YERR				IAML		19 10 54.0	
	comp=E,23nm,0.4s						
YERR				IAML		19 10 57.9	
	comp=N,15nm,0.8s						
TRAM	**Private Proper**	**2.12**	**230**		Pb	19 10 23.6	-1.1
PMPB	**Monarch Peak**	**2.20**	**248**	Pn	Pn	19 10 23.4	+0.4
PNTR	**Pine Nut**	**2.29**	**333**		Pn	19 10 24.0	-0.3
PNTR				IAML		19 11 09.9	
	comp=N,20nm,4.0s						
PNTR				IAML		19 11 39.9	
	comp=E,22nm,4.7s						
RUBR	**Rubicon Trail**	**2.49**	**324**	Pg	Pb	19 10 32.2	+1.1
RUBR				IAML		19 11 10.7	
	comp=N,34nm,0.6s						
RUBR				IAML		19 11 15.7	
	comp=E,33nm,1.4s						
R11A	**Troy Canyon, C**	**2.49**	**58**		Pn	19 10 27.5	+0.5
SHPR	**Sheep Range**	**2.56**	**101**		Pn	19 10 27.7	-0.2
SAO	**San Andreas Ge**	**2.56**	**264**	Pn	Pn	19 10 28.9	+1.0
PRN	**Pahroc Range**	**2.59**	**81**		Pn	19 10 28.7	+0.3
PRN				IAML		19 11 18.0	
	comp=N,29nm,0.4s						
PRN				IAML		19 11 24.0	
	comp=E,32nm,0.9s						
AFDM	**Forest Hills D**	**2.85**	**312**		Pb	19 10 36.9	-0.3
AFDM				IAML		19 11 17.1	
	comp=N,27nm,0.5s						
PSUT	**Pine Spring**	**3.80**	**66**		Pb	19 10 55.9	+2.5
PSUT				IAML		19 11 51.2	
	comp=E,8.8nm,0.8s						
PSUT				IAML		19 11 52.5	
	comp=N,8.6nm,1.1s						
U15A	**North Rim**	**4.84**	**96**		Pb	19 11 11.5	+0.2
U15A				IAML		19 13 54.8	
	comp=N,5.3nm,4.7s						
MOD	**Modoc Plateau**	**5.09**	**343**		Pn	19 10 59.6	-3.2

*IDC **29** 19:25:50.2±0.6, 1°.01N×125°.89E, h0km, mb4.0/13, mb1 4.1/15, mb1mx3.9/39, mbtmp4.0/15, ML3.4/2, MS3.1/5, Ms1 3.1/5, ms1mx2.7/41, Error ellipse: s-maj=34.1km s-min=12.9km az=78.0*
*DJA **29** 19:25:54.9±0.2, 1°.N±3°×12°.6E±°, h10km, M4.2/13, mb4.4/7, MLv4.1/13*
*NEIC **29** 19:25:56.9±1.7, 1°.01N±0°.09×126°.19E±0°.06, h48km±9km, mb4.2/28, Error ellipse: s-maj=13.1km s-min=8.4km az=186.0*
ISC 29 19:25:56.6±0.5, 1°.04N±0°.05×126°.21E±0°.05, h44km, n65, σ1s17/69, mb4.1/25, MS3.2/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**103**	Pn	**Pn**	**19 26 17.3**	**+0.5**
TNTI	**Ternate**	**1.19**	**103**	P	**Pn**	**19 26 17.0**	**+0.2**
TNTI				S	**Sn**	**19 26 33.4**	**+1.5**
KMSI	**Cibinong**	**2.27**	**258**	P	**Pn**	**19 26 32.0**	**+0.4**
KMSI				S	**Sn**	**19 26 59.4**	**+1.0**
SGSI	**Sangihe**	**2.71**	**346**	P	**Pn**	**19 26 38.3**	**+0.5**
SGSI				S	**Sn**	**19 27 11.4**	**+2.0**
SANI	**Sanana**	**3.08**	**184**	P	**Pn**	**19 26 42.8**	**+0.1**
GTOI	**Gorontalo**	**3.22**	**263**	P	**Pn**	**19 26 46.4**	**+1.7**
LUWI	**Luwuk**	**4.01**	**239**	Pn	**Pn**	**19 26 57.8**	**+2.3**
LUWI	**Luwuk**	**4.01**	**239**	P	**Pn**	**19 26 57.6**	**+2.1**
MRSI	**Marisa**	**4.30**	**263**	P	**Pn**	**19 27 00.6**	**+1.1**
NLAI	**Namlea**	**4.34**	**168**	P	**Pn**	**19 27 01.9**	**+1.8**
APSI	**Ampana**	**4.95**	**247**	P	**Pn**	**19 27 09.9**	**+1.4**
SIJI	**Sorong**	**5.40**	**111**	Pn	**Pn**	**19 27 17.1**	**+2.4**
	0.5nm,0.3s,baz=210,slow=20,SNR=2.5						
SIJI				LR	LR	19 29 49.6	
	comp=Z,104nm,21.9s,baz=265,slow=42						
TOLI2	**Tolitoli**	**5.42**	**271**	Pn	**Pn**	**19 27 15.1**	**+0.1**
TTSI	**Tana Toraja**	**7.56**	**238**	P	**Pn**	**19 27 46.8**	**+2.4**
	0.1nm29nm,0.8s						
SPSI	**Sidrap Palu**	**8.13**	**232**	P	**Pn**	**19 27 53.6**	**+1.5**
	19nm,0.9s						
BNSI	**Bone**	**8.14**	**228**	P	**Pn**	**19 27 53.8**	**+1.5**
	17nm,0.6s						
MYLDM	**Lahad Datu**	**8.72**	**298**	Pn	**Pn**	**19 28 02.4**	**+2.1**
KKM	**Kota Kinabalu**	**11.14**	**297**	Pn	**Pn**	**19 28 34.8**	**+1.4**
BATI	**Baumata**	**11.45**	**193**	LR	LR	19 33 43.1	
	comp=Z,106nm,20.0s,baz=136,slow=42						
SBUM	**Sibu**	**14.05**	**276**		**P**	**19 29 18.4**	**-1.5**
KSM	**Kuching**	**15.90**	**272**		**P**	**19 29 41.1**	**+0.6**
KNRA	**Kununurra**	**16.80**	**171**	Pn	**Pn**	**19 29 48.7**	**-0.1**
KNRA				IAmb	IAmb	19 30 05.3	
	comp=Z,17nm,1.1s						
UGM	**Wanagama**	**17.99**	**240**	P	**P**	**19 29 59.9**	**-3.8**
FITZ	**Fitzroy Crossi**	**19.02**	**182**	P	**P**	**19 30 13.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=4.6,slow=11,SNR=9.1						
FITZ	**Fitzroy Crossi**	**19.02**	**182**	P	**P**	**19 30 14.8**	**-0.2**
WB0	**Warramunga Arr**	**22.18**	**159**	P	**P**	**19 30 48.4**	**-0.8**
WB0				IAmb	IAmb	19 30 58.6	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**22.32**	**159**	P	**P**	**19 30 49.3**	**-1.4**
WRAB				IAmb	IAmb	19 30 59.5	
	comp=Z,8.5nm,0.9s						
WRA	**Warramunga Arr**	**22.32**	**159**	P	**P**	**19 30 50.3**	**-0.4**
	comp=Z,3.4nm,0.6s,baz=334,slow=11,SNR=38						
WRA				PcP	**PcP**	**19 34 45.6**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=315,slow=2.2,SNR=1.9						
WRA	**Warramunga Arr**	**22.32**	**159**	P	**P**	**19 30 48.7**	**-2.0**
WB2	**Warramunga Arr**	**22.33**	**159**	P	**P**	**19 30 50.0**	**-0.8**
WB2				IAmb	IAmb	19 30 57.5	
	comp=Z,5.9nm,0.7s						
WR0	**Warramunga Arr**	**22.41**	**159**	P	**P**	**19 30 50.7**	**-1.0**
WR0				IAmb	IAmb	19 31 15.6	
	comp=Z,17nm,1.4s						
TPUB	**Ta-pu**	**22.78**	**347**	P	**P**	**19 30 55.3**	**-0.3**
PMG	**Port Moresby**	**23.31**	**117**	LR	LR	19 42 33.4	
	comp=Z,36nm,20.4s,baz=12,slow=43						
AS31	**Alice Springs**	**25.67**	**164**	P	**P**	**19 31 22.0**	**-0.6**
ASAR	**Alice Springs**	**25.67**	**164**	P	**P**	**19 31 22.6**	**0.0**
	comp=Z,0.6nm,0.4s,baz=346,slow=12,SNR=38						
ASAR				PcP	**PcP**	**19 34 52.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=352,slow=2.5,SNR=11						
JOW	**Kunigami**	**25.72**	**4**	P	**P**	**19 31 23.7**	**+0.7**
PSI	**Prapat**	**27.32**	**274**	LR	LR	19 42 04.1	
	comp=Z,67nm,18.1s,baz=204,slow=36						
STKA	**Stephens Creek**	**35.84**	**157**	P	**P**	**19 32 52.4**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=338,slow=11,SNR=2.9						
STKA				LR	LR	19 47 10.2	
	comp=Z,44nm,19.2s,baz=205,slow=36						
STKA	**Stephens Creek**	**35.84**	**157**	P	**P**	**19 32 52.0**	**-0.1**
KSRS	**Korea Array**	**36.27**	**2**	P	**P**	**19 32 55.4**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=183,slow=10.0,SNR=2.8						
MJAR	**Matsushiro Arr**	**37.03**	**16**	P	**P**	**19 33 02.0**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=182,slow=9.7,SNR=10						
MAJO	**Matsushiro**	**37.04**	**16**	P	**P**	**19 33 01.8**	**-0.5**
MAJO				IAmb	IAmb	19 33 18.5	
	comp=Z,5.7nm,1.2s						
JSD	**Sado**	**38.45**	**15**	P	**P**	**19 33 14.1**	**-0.1**
JMM	**Marumori**	**39.03**	**18**	P	**P**	**19 33 19.9**	**+0.8**
USA0B	**Ussuriysk Arra**	**43.28**	**6**	P	**P**	**19 33 53.8**	**-0.1**
USA0B				IAmb	IAmb	19 33 56.0	
	comp=Z,4.4nm,0.7s						
USRK	**Ussuriysk Ar.**	**43.28**	**6**	P	**P**	**19 33 54.8**	**+0.8**
	comp=Z,2.2nm,0.6s,baz=171,slow=6.9,SNR=9.8						
USRK	**Ussuriysk Ar.**	**43.28**	**6**	P	**P**	**19 33 54.3**	**+0.4**
SONM	**Songino Array**	**49.

baz=351,SNR=106
BPAW Bear Paw Mtn. 0.87 349 Pn 19 32 50.5 -0.2
BPAW Sn **19 33 06.5 -1.2**
BPAW Bear Paw Mtn. 0.87 349 IAML 19 33 07.0
comp=N,2µm,0.6s
BPAW IAML 19 33 07.2
comp=E,2µm,0.5s
BPAW Bear Paw Mtn. 0.87 349 P 19 32 50.5
baz=167,SNR=1000
MCK McKinley 0.89 56 Pn 19 32 50.8 0.0
MCK **Sn 19 33 07.6 -0.4**
MCK McKinley 0.89 56 IAML 19 33 08.9
comp=N,2µm,0.5s
MCK IAML 19 33 09.8
comp=E,983nm,0.5s
MCK McKinley 0.89 56 P 19 32 50.8
baz=237,SNR=312
WAT7 Susitna Watana 0.90 117 Pn 19 32 50.9 -0.2
WAT2 Susitna Watana 0.96 106 Pn 19 32 51.5 -0.1
WAT2 **Sn 19 33 08.8 -0.4**
CHUM Lake Minchumin 1.00 311 Pn 19 32 51.7 0.0
CHUM **Sn 19 33 08.7 -0.7**
CHUM Lake Minchumin 1.00 311 P 19 32 51.7
baz=128,SNR=142
WAT1 Susitna Watana 1.03 113 Pn 19 32 52.0 0.0
BWN Browne 1.06 28 Pn 19 32 52.7 +0.5
BWN Browne 1.06 28 IAML 19 33 11.1
comp=N,880nm,0.9s
SKT Skwentna 1.34 199 Pn 19 32 55.0 -0.1
SKT **Sn 19 33 15.4 -0.1**
SKT Skwentna 1.34 199 P 19 32 55.1
baz=19,SNR=121
WAT6 Susitna Watana 1.47 116 Pn 19 32 56.1 -0.6
WAT6 Susitna Watana 1.47 116 P 19 32 56.1
baz=299,SNR=85
NEA2 Nenana 1.51 26 Pn 19 32 56.4 -0.5
NEA2 Nenana 1.51 26 IAML 19 33 18.5
comp=N,499nm,0.6s
NEA2 Nenana 1.51 26 P 19 32 56.3
baz=207,SNR=103
WRH Wood River Hil 1.66 41 Pn 19 32 58.3 -0.3
GHO Glory Hole Cre 1.67 151 Pn 19 32 58.7 -0.1
GHO Glory Hole Cre 1.67 151 IAML 19 33 26.4
comp=E,1µm,0.8s
GHO IAML 19 33 26.7
comp=N,970nm,0.5s
SML Sawmill 1.79 143 P 19 32 59.6
baz=325,SNR=27
MLY Manley 1.79 358 Pn 19 32 59.9 -0.2
MLY Manley 1.79 358 P 19 32 59.9
baz=177,SNR=143
SUA Susitna One 1.79 182 Pn 19 33 00.6 +0.4
SUA Susitna One 1.79 182 IAML 19 33 29.5
comp=E,433nm,0.6s
SUA IAML 19 33 30.9
comp=N,518nm,0.5s
SUA Susitna One 1.79 182 P 19 33 00.1
baz=2.6,SNR=77
PMR Palmer 1.80 157 Pn 19 32 59.8 -0.3
PMR Palmer 1.80 157 IAML 19 33 31.2
comp=E,472nm,0.4s
PMR IAML 19 33 31.4
comp=N,602nm,0.7s
PMR Palmer 1.80 157 P 19 32 59.6
baz=339,SNR=20
STLK Strandline Lak 1.85 199 Pn 19 33 00.7 -0.1
CCB Clear Creek Bu 1.87 40 Pn 19 33 00.7 -0.2
I23K Minto, Yukon-K 1.98 15 Pn 19 33 02.2 -0.1
I23K **Sn 19 33 27.4 -1.0**
I23K Minto, Yukon-K 1.98 15 IAML 19 33 29.1
comp=N,334nm,0.8s
I23K Minto, Yukon-K 1.98 15 P 19 33 02.2
baz=196,SNR=140
HDA Harding Lake 2.00 53 Pn 19 33 02.2 -0.3
HDA Harding Lake 2.00 53 P 19 33 02.2
baz=236,SNR=69
HDA P 19 33 02.2
baz=236,SNR=69
MDM Murphy Dome 2.01 30 Pn 19 33 02.5 -0.2
TCOL CIGO, UAF Yank 2.03 35 Pn 19 33 02.8 -0.1
TCOL CIGO, UAF Yank 2.03 35 IAML 19 33 30.9
comp=N,577nm,0.7s
TCOL IAML 19 33 32.7
comp=E,556nm,0.5s
TCOL CIGO, UAF Yank 2.03 35 P 19 33 02.7
baz=217,SNR=19
COLA College 2.03 35 Pn 19 33 02.8 -0.1
COLA College 2.03 35 IAML 19 33 30.8
comp=E,604nm,0.6s
COLA IAML 19 33 32.7
comp=E,641nm,0.5s
SCM Sheep Creek Mo 2.08 132 Pn 19 33 02.9 -0.7
SCM Sheep Creek Mo 2.08 132 IAML 19 33 38.7
comp=E,649nm,0.6s
SCM IAML 19 33 39.7
comp=N,608nm,0.5s
SPCP Crater Peak Br 2.12 201 Pn 19 33 04.4 +0.3
FIS Fire Island 2.12 175 Pn 19 33 03.9 -0.1
FIS Fire Island 2.12 175 IAML 19 33 39.8
comp=N,796nm,1.1s
PS08 TAPS Pump Stn8 2.12 50 Pn 19 33 03.6 -0.3
SPCN Chakachatna No 2.16 201 Pn 19 33 05.2 +0.6
SPCR Spurr Chakacha 2.19 201 Pn 19 33 05.2 +0.3
SPCR Spurr Chakacha 2.19 201 P 19 33 05.0
baz=20,SNR=17
RC01 Rabbit Creek A 2.20 169 Pn 19 33 04.9 -0.1
RC01 Rabbit Creek A 2.20 169 IAML 19 33 35.1
comp=N,356nm,0.3s
RC01 IAML 19 33 35.8
comp=E,297nm,0.4s
RC01 Rabbit Creek A 2.21 169 P 19 33 04.8
baz=350,SNR=9.5
IL31 2.24 45 Pn 19 33 05.1 -0.3
ILAR Eielson Array 2.24 45 P **Pn 19 33 05.2 -0.3**
comp=E,22nm,0.3s,baz=226,slow=12,SNR=1113
ILAR S **Sn 19 33 33.0 -1.0**
comp=E,12nm,0.3s,baz=230,slow=14,SNR=4.1
ILAR Eielson Array 2.24 45 Pn 19 33 04.1 -1.3
PS07 TAPS Pump Stn7 2.31 25 Pn 19 33 06.5 +0.2
POKR Poker Flat Res 2.33 35 Pn 19 33 06.7 +0.1
POKR Poker Flat Res 2.33 35 P 19 33 06.7
baz=218,SNR=17
M24K Tolsona, Glenn 2.34 117 Pn 19 33 06.9 +0.1
M24K Tolsona, Glenn 2.34 117 P 19 33 07.0
baz=301,SNR=106
PAX Paxson 2.35 95 Pn 19 33 06.5 -0.5
PAX Paxson 2.35 95 P 19 33 06.9
baz=279,SNR=92
TTA Tatalina 2.48 265 Pn 19 33 08.2 -0.3
TTA Tatalina 2.48 265 P 19 33 08.1
baz=80,SNR=92
TT01 Tatalina 2.49 265 Pn 19 33 08.3 -0.2
CAPN Captain Cook N 2.50 186 Pn 19 33 10.8 +2.1
PWL Port Wells 2.62 155 Pn 19 33 09.7 -0.6
PWL IAML 19 33 43.5
comp=N,444nm,0.6s
PWL IAML 19 33 43.8
comp=E,363nm,0.8s
HARP HAARP 2.64 106 P 19 33 10.4
baz=291,SNR=21
PS11 TAPS Pump St11 2.64 114 Pn 19 33 10.9 +0.4
PS06 TAPS Pump Stn6 2.65 8 Pn 19 33 10.7 +0.2
SLKM Skilak Lake 2.76 176 Pn 19 33 11.9 -0.1
KLU Klutina 2.80 127 Pn 19 33 11.7 -0.9
KLU Klutina 2.80 127 IAML 19 33 58.0
comp=N,475nm,0.6s
KLU IAML 19 33 58.3
comp=E,316nm,0.6s
KLU Klutina 2.80 127 P 19 33 11.7
baz=311,SNR=24
O22K Cooper Landing 2.81 171 Pn 19 33 12.6 0.0
O22K Cooper Landing 2.81 171 P 19 33 12.4
baz=352,SNR=9.0
DFR Drift River 2.84 201 Pn 19 33 13.0 -0.2
GLI Glacier Island 2.90 144 Pn 19 33 12.9 -0.8
GLI Glacier Island 2.90 144 IAML 19 34 01.1
comp=N,421nm,0.5s
JPK Jack Peak 2.90 138 Pn 19 33 13.1 -0.7
NCT North Crescent 2.91 203 Pn 19 33 14.7 +0.6
DOT Dot Lake 2.97 79 Pn 19 33 14.1 -0.6
RSO Redoubt South 2.98 201 Pn 19 33 15.1 +0.1
RED Redoubt Volcan 3.02 201 Pn 19 33 15.6 +0.2
SCRK Sand Creek 3.04 73 Pn 19 33 15.2 -0.6
SCRK Sand Creek 3.04 73 IAML 19 33 56.1
comp=E,358nm,0.7s

SCRK Sand Creek 3.05 73 P 19 33 15.2
baz=259,SNR=209
IM03 3.06 335 Pn 19 33 15.6 -0.2
IMAR Indian Mountai 3.06 335 Pn 19 33 15.0 -0.8
PS12 TAPS Pump St12 3.10 122 Pn 19 33 15.8 -0.7
DIV Divide 3.11 131 Pn 19 33 15.5 -1.0
MENT Mentasta 3.15 93 Pn 19 33 16.8 -0.2
MENT Mentasta 3.15 93 IAML 19 34 06.7
comp=N,353nm,0.6s
PRP Porcupine Dome 3.17 42 Pn 19 33 16.9 -0.5
FID Port Fidalgo 3.17 140 Pn 19 33 16.5 -0.8
SEW Seward 3.20 170 Pn 19 33 17.3 -0.3
N25K Chitina, Valde 3.24 118 Pn 19 33 17.9 -0.4
N25K Chitina, Valde 3.24 118 IAML 19 33 59.2
comp=N,133nm,0.8s
N25K IAML 19 33 59.2
comp=E,121nm,0.6s
N25K Chitina, Valde 3.24 118 P 19 33 17.9
baz=303,SNR=19
IVE Iliamna Volcan 3.44 201 Pn 19 33 21.1 +0.2
BRLK Bradley Lake 3.50 182 Pn 19 33 21.6 0.0
BRLK Bradley Lake 3.50 182 IAML 19 34 14.3
comp=E,171nm,0.9s
BRLK IAML 19 34 16.1
comp=N,159nm,0.7s
BRSE Bradley Lake S 3.52 181 Pn 19 33 21.7 -0.1
EYAK Cordova Ski Ar 3.55 138 Pn 19 33 21.9 -0.3
BMRM Bremner River 3.63 126 Pn 19 33 22.1 -1.2
BMRM Bremner River 3.63 126 IAML 19 34 24.1
comp=N,240nm,0.6s
BMRM IAML 19 34 25.5
comp=E,237nm,0.7s
HOM Homer 3.64 188 Pn 19 33 23.9 +0.5
GLB Gilahina Butte 3.65 117 Pn 19 33 23.3 -0.3
GLB Gilahina Butte 3.65 117 IAML 19 34 06.6
comp=N,107nm,1.1s
GLB IAML 19 34 07.6
comp=E,125nm,0.9s
CNPM China Poot 3.75 185 Pn 19 33 24.9 0.0
CNPM China Poot 3.75 185 IAML 19 34 10.8
comp=N,209nm,0.4s
OPT Oil Point 3.82 200 Pn 19 33 26.4 +0.6
GOAT Goat Mountain 3.86 131 Pn 19 33 25.5 -0.8
K27K Chicken 3.88 75 Pn 19 33 26.2 -0.4
K27K Chicken 3.88 75 IAML 19 34 16.8
comp=E,166nm,0.8s
VRDI Verde Repeater 3.91 118 Pn 19 33 26.4 -0.7
VRDI Verde Repeater 3.91 118 IAML 19 34 13.9
comp=N,95nm,1.1s
VRDI IAML 19 34 14.4
comp=E,73nm,0.7s
L27K Beaver Creek, 3.99 89 Pn 19 33 27.2 -0.8
L27K Beaver Creek, 3.99 89 P 19 33 27.2
baz=277,SNR=52
COLD Coldfoot 4.00 2 Pn 19 33 28.2 +0.2
COLD Coldfoot 4.00 2 P 19 33 28.2
baz=182,SNR=15
MCARA McCarthy VSAT 4.00 114 Pn 19 33 28.1 -0.1
MCARA McCarthy VSAT 4.00 114 IAML 19 34 38.8
comp=E,158nm,0.8s
MCARA IAML 19 34 39.8
comp=N,154nm,0.9s
MCARA McCarthy VSAT 4.00 114 P 19 33 28.3
baz=301,SNR=8.1
BC03 4.00 89 Pn 19 33 27.4 -0.7
BCAR Beaver Creek A 4.00 89 Pn 19 33 26.7 -1.5
RAGM Ragged Mountai 4.02 133 Pn 19 33 27.7 -0.7
FYU Fort Yukon 4.04 32 Pn 19 33 28.4 -0.2
AUH Augustine H 4.13 201 Pn 19 33 30.8 +0.9
AUCH Augustine Cone 4.13 201 Pn 19 33 30.7 +0.8
HMT Hamilton 4.20 131 Pn 19 33 30.2 -0.5
CRQM Cirque 4.32 122 Pn 19 33 32.1 -0.3
CRQM Cirque 4.32 122 IAML 19 34 46.1
comp=E,132nm,0.9s
CRQM IAML 19 34 46.3
comp=N,157nm,0.5s
PTPK Patty Peak 4.33 115 Pn 19 33 32.6 -0.1
Q23K Middleton Isla 4.34 150 Pn 19 33 32.9 +0.3
MID Middleton Isla 4.35 150 Pn 19 33 33.0 +0.3
NICHA Nichawak Mount 4.37 131 Pn 19 33 32.3 -0.7
EGAK Eagle 4.43 66 Pn 19 33 33.0 -0.7
EGAK Eagle 4.43 66 IAML 19 34 40.2
comp=N,112nm,0.7s
EGAK IAML 19 34 43.1
comp=N,115nm,0.7s
EGAK Eagle 4.43 66 P 19 33 33.1
baz=254,SNR=78
TGL Tana Glacier 4.44 121 Pn 19 33 33.5 -0.5
TGL Tana Glacier 4.44 121 IAML 19 34 44.5
comp=E,129nm,0.6s
TGL IAML 19 34 49.7
comp=N,127nm,0.6s
KAIM Kayak Island 4.45 136 Pn 19 33 33.0 -1.1
BALM Baldy 4.47 116 Pn 19 33 33.6 -0.8
KHIT Khitrov Hills 4.48 126 Pn 19 33 34.2 -0.3
KIAG Kiagna River 4.52 117 Pn 19 33 34.3 -0.9
GRIN Grindle Hills 4.56 127 Pn 19 33 35.2 -0.4
BARN Barnard Glacie 4.73 114 Pn 19 33 38.1 +0.1
KULT Kultieth River 4.80 125 Pn 19 33 38.8 -0.1
SNH Sunshine Point 4.81 126 Pn 19 33 38.5 -0.3
GRNC Granite Creek 4.88 117 Pn 19 33 39.5 -0.4
GRNC Granite Creek 4.88 117 IAML 19 34 56.6
comp=E,38nm,0.7s
GRNC IAML 19 35 07.6
comp=N,46nm,0.9s
BM03 Burnt Mountain 4.88 28 Pn 19 33 39.4 -0.4
BMAR Burnt Mountain 4.90 28 Pn 19 33 38.9 -1.1
CTGM Chitina Glacie 4.92 114 Pn 19 33 40.3 -0.1
YUK3 Moose Creek 4.93 103 Pn 19 33 41.0 +0.4
DAWY Dawson 5.06 76 Pn 19 33 41.9 -0.3
DAWY Dawson 5.06 76 IAML 19 35 05.4
comp=E,43nm,0.8s
YAH Yahtse 5.10 121 Pn 19 33 42.4 -0.6
YAH Yahtse 5.10 121 IAML 19 35 12.7
comp=E,59nm,2.3s
YAH IAML 19 35 23.4
comp=N,63nm,2.4s
LOGN Logan Glacier 5.13 114 Pn 19 33 43.0 -0.3
TABL Table Mountain 5.29 118 Pn 19 33 43.4 -2.1
TOLK Toolik Lake Re 5.43 4 Pn 19 33 48.4 +1.3
TOLK Toolik Lake Re 5.43 4 P 19 33 49.0
baz=185,SNR=10
KABU Katmai Buttres 5.49 207 Pn 19 33 48.6 +0.5
KABR Katmai Barrier 5.56 205 Pn 19 33 49.4 +0.4
KDAK Kodiak Island 5.57 191 P **Pn 19 33 47.4 -1.5**
comp=N,2.9nm,0.3s,baz=70,slow=5.6,SNR=63
KDAK S **Sn 19 34 46.9 -5.0**
comp=N,4.2nm,0.3s,baz=154,slow=20,SNR=12
KDAK Kodiak Island 5.57 191 Pn 19 33 47.7 -1.2
PCA Pinnacle 5.85 118 Pn 19 33 52.5 -0.3
PINM Pinnacle 5.85 118 P 19 33 52.6
baz=307,SNR=10
BCPM Bancas Point 6.19 117 Pn 19 33 56.8 -0.5
YUK5 Granite Creek 6.33 104 Pn 19 33 59.2 -0.2
YUK7 Dusty Glacier 6.49 109 Pn 19 34 01.2 -0.3
HYT Haines Junctio 6.62 106 Pn **Pn 19 34 02.9 -0.3**
ANM Nome 6.65 288 Pn 19 34 04.2 +0.8
EPYK Eagle Plains 6.70 56 Pn 19 34 03.2 -0.9
SII Sitkinak Islan 6.95 197 Pn 19 34 06.9 -0.6
RDOG Red Dog Mine 7.00 319 Pn 19 34 08.5 +0.4
PLBC Pleasant Camp 7.82 113 Pn 19 34 18.7 -0.4
TNA Tin City 7.84 295 Pn 19 34 19.4 0.0
WHY Whitehorse 7.85 102 Pn 19 34 18.6 -1.0
INK Inuvik 8.64 47 P **Pn 19 34 30.0 0.0**
comp=N,0.2nm,0.3s,baz=276,slow=10,SNR=6.8
BESE Bessie Mountai 8.97 114 Pn 19 34 34.1 -0.6
JIS Juneau Island 9.36 115 Pn **Pn 19 34 39.1 -0.6**
SIT Sitka 9.81 122 Pn **Pn 19 34 45.6 -0.1**
YKA Yellowknife Ar 16.30 76 P **Pn 19 36 09.1 0.0**
comp=N,0.2nm,0.3s,baz=283,slow=11,SNR=9.5
RES Resolute Bay 21.96 36 P **P 19 37 11.1 +0.5**
comp=N,0.5nm,0.3s,baz=253,slow=15,SNR=9.9
RES Resolute Bay 21.96 36 IAmb IAmb 19 37 17.8
comp=Z,8.8nm,1.9s
LTY Liberty 23.07 120 P **P 19 37 23.2 +1.5**
LTY IAmb IAmb 19 37 35.8
comp=Z,3.1nm,0.7s
SEY Seymchan 25.09 295 P **P 19 37 39.5 -0.1**
comp=Z,0.6nm,0.4s,baz=52,slow=19,SNR=8.6
TXAR Lajitas Array 45.22 116 P **P 19 40 33.4 +1.8**
comp=Z,0.3nm,0.6s,baz=334,slow=8.3,SNR=3.4
BORG Borgarnes 46.95 27 LR LR 20 02 38.5
comp=Z,28nm,21.2s,baz=282,slow=38
ARCES ARCESS Array B 47.47 2 P **P 19 40 48.5 -0.1**
comp=Z,2.6nm,1.0s,baz=342,slow=8.5,SNR=1.9
ZALV Zalesovo Beam 55.43 324 P **P 19 41 47.2 -0.7**
comp=Z,1.3nm,0.5s,baz=9.5,slow=7.9,SNR=7.6
FINES FINESS Array B 55.60 2 P **P 19 41 48.7 -0.3**
comp=Z,7.4nm,1.1s,baz=312,slow=9.0,SNR=4.0
MKAR Makanchi Array 62.59 322 P **P 19 42 36.8 -0.7**
comp=Z,0.7nm,0.5s,baz=39,slow=6.3,SNR=15
AKASG Malin Array Be 66.39 0 P **P 19 43 01.7 -0.3**
comp=Z,0.6nm,0.3s,baz=3.8,slow=6.7,SNR=7.7
AKASG Malin Array Be 66.39 0 IAmb IAmb 19 44 30.9
comp=Z,1.3nm,1.3s
CMAR Chiang Mai Arr 82.50 296 P **P 19 44 35.3 -0.2**
comp=Z,0.6nm,0.6s,baz=1.7,slow=6.3,SNR=6.1

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*IDC **29** 19:44:18.8±1.0, 24°.50N×124°.09E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/37, mbtmp3.5/8, ML2.9/2, Error ellipse: s-maj=25.0km s-min=20.9km az=87.0*
*JMA **29** 19:44:22.0±0.1, 24°.42N×124°.22E, h15km±1km, M3.9*
JMA Felt II J1.
*NIED **29** 19:44:22.1, 24°.42N×124°.22E, h15km, MW3.6, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}-2.90; $M_{\theta\theta}$1.44; $M_{\phi\phi}$ 1.46; $M_{r\theta}$-0.08; $M_{\theta\phi}$-1.69; $M_{\phi r}$0.82; Fault plane solution: $M_0$3.13000×10^{14} NP1: ϕ_s145.00000°, δ52.00000°, λ-77.00000°. NP2: ϕ_s305.00000°, δ40.00000°, λ-106.00000°.*
ISC 29 19:44:21.6±0.8, 24°.44N±0°.05×124°.19E±0°.04, h17km±4km, n20, σ0.97/32, mb3.6/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJ	**Ishigaki jima**	**0.09**	**207**	P		**Pb**	**19 44 25.1**	**+0.1**
JIJ				S		**Sb**	**19 44 27.3**	**+0.1**
JISG	**Ishigakijimahi**	**0.18**	**38**	P		**Pb**	**19 44 26.5**	**-0.1**
JISG				S		**Sb**	**19 44 30.0**	**+0.1**
JKRS	**Kuro-shima**	**0.26**	**219**	P		**Pb**	**19 44 27.9**	**0.0**
JKRS				S		**Sb**	**19 44 32.4**	**+0.3**
IRIF	**Iriomote-Funau**	**0.43**	**256**	P		**Pb**	**19 44 30.9**	**+0.1**
IRIF				S		**Sb**	**19 44 37.6**	**+0.6**
JTJ	**Tarama**	**0.51**	**67**	P		**Pb**	**19 44 31.6**	**-0.6**
JTJ				S		**Sb**	**19 44 39.1**	**-0.2**
HATJ	**Hateruma jima**	**0.52**	**222**	P		**Pb**	**19 44 32.2**	**-0.1**
HATJ				S		**Sb**	**19 44 39.9**	**+0.4**
JIRB	**Irabujima**	**0.98**	**67**	P		**Pb**	**19 44 39.0**	**-1.1**
JIRB				S		**Sn**	**19 44 53.3**	**-0.8**
YOJ	**Yonaguni jima**	**1.07**	**271**	P		**Pn**	**19 44 41.4**	**-0.5**
YOJ				S		**Sg**	**19 44 55.4**	**-1.0**
JIKM	**Ikemajima**	**1.08**	**63**	P		**Pb**	**19 44 41.3**	**-0.6**
JIKM				S		**Sn**	**19 44 56.1**	**-0.5**
JMJ2	**Miyako jima3**	**1.08**	**74**	P		**Pb**	**19 44 41.3**	**-0.6**
JMJ2				S		**Sn**	**19 44 56.4**	**-0.2**
JYNG	**Yonagunijimaku**	**1.13**	**271**	P		**Pb**	**19 44 42.2**	**-0.6**
JYNG				S		**Sg**	**19 44 57.2**	**-1.1**
JOW	**Kunigami**	**4.39**	**56**	Pn		**Pn**	**19 45 28.6**	**+1.0**
	1.3nm,0.3s,baz=281,slow=24,SNR=1.9							
JOW				Sn		**Sn**	**19 46 19.5**	**+1.1**
	4.8nm,0.3s,baz=139,slow=18,SNR=2.1							
KSRS	**Korea Array**	**13.36**	**13**	Pn		**Pn**	**19 47 34.1**	**+3.6**
	0.2nm,0.3s,baz=197,slow=12,SNR=1.9							
MJAR	**Matsushiro Arr**	**17.05**	**42**	P		**Pn**	**19 48 19.4**	**+0.1**
	0.0nm,0.3s,baz=220,slow=8.7,SNR=1.6							
CMAR	**Chiang Mai Arr**	**24.22**	**261**	P		**P**	**19 49 37.4**	**-0.3**
	0.2nm,0.5s,baz=63,slow=8.5,SNR=1.5							
MKAR	**Makanchi Array**	**40.09**	**315**	P		**P**	**19 51 54.9**	**-1.3**
	0.2nm,0.4s,baz=102,slow=9.5,SNR=3.7							
ZALV	**Zalesovo Beam**	**41.55**	**326**	P		**P**	**19 52 06.7**	**-1.4**
	0.8nm,0.5s,baz=115,slow=7.9,SNR=2.4							
WRA	**Warramunga Arr**	**45.21**	**166**	P		**P**	**19 52 38.1**	**+0.1**
	2.6nm,0.7s,baz=348,slow=8.8,SNR=15							
ASAR	**Alice Springs**	**48.74**	**168**	P		**P**	**19 53 06.0**	**+0.3**
	0.7nm,0.6s,baz=351,slow=7.8,SNR=16							
YKA	**Yellowknife Ar**	**81.65**	**24**	P		**P**	**19 56 38.4**	**-0.3**
	0.3nm,0.6s,baz=304,slow=5.6,SNR=4.4							

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*IDC **29** 19:49:39.8±3.9, 17°.15N×99°.01W, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.8/43, mbtmp3.8/7, ML3.3/2, MS3.3/11, Ms1 3.3/11, ms1mx3.1/41, Error ellipse: s-maj=111.9km s-min=63.7km az=67.0*
*NEIC **29** 19:49:47.4±1.5, 17°.15N±0°.04×99°.85W±0°.03, h35km±4km, Error ellipse: s-maj=5.5km s-min=4.0km az=158.0*
*MEX **29** 19:49:48.2±0.7, 17°.16N×99°.88W, h47km±6km, MD4.2*
ISC 29 19:49:47.0±0.9, 17°.10N±0°.04×99°.86W±0°.03, h36km±1km, n64, σ1.48/78, mb4.0/13, MS3.4/8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ACP2	**Acapulco**	**0.22**	**186**	*e*P		**Pn**	**19 49 55.1**	**0.0**
ACP2				*e*S		**Sn**	**19 50 01.6**	**-0.7**
ACP2	**Acapulco**	**0.22**	**186**			**Pn**	**19 49 55.1**	**0.0**
ACP2						**Sn**	**19 50 01.4**	**-0.8**
CAIG	**El Cayaco**	**0.39**	**263**	*e*P		**Pn**	**19 49 56.0**	**0.0**
CAIG				*e*S		**Sn**	**19 50 03.0**	**+0.5**
CAIG	**El Cayaco**	**0.39**	**263**			**Pn**	**19 49 55.9**	**0.0**
CAIG						**Sn**	**19 50 02.8**	**+0.3**
CRIG	**Cruz Grande**	**0.79**	**117**	*i* P		**Pn**	**19 50 01.9**	**+0.4**
CRIG				*e*S		**Sn**	**19 50 12.5**	**+0.5**
MEIG	**Mezcala**	**0.85**	**16**	*i* P		**Pn**	**19 50 01.2**	**-1.4**
MEIG				*e*S		**Sn**	**19 50 12.0**	**-2.0**
MEIG	**Mezcala**	**0.85**	**16**			**Pn**	**19 50 01.2**	**-1.4**
MEIG						**Sn**	**19 50 12.0**	**-2.0**
ARIG	**Puente Sto Nin**	**1.27**	**339**	*i* P		**Pn**	**19 50 07.1**	**-1.0**
ARIG				*e*S		**Sn**	**19 50 22.5**	**-1.5**
ARIG	**Puente Sto Nin**	**1.27**	**339**			**Pn**	**19 50 07.1**	**-1.0**
ARIG						**Sn**	**19 50 22.5**	**-1.5**
TLIG	**Tlapa**	**1.32**	**69**	*e*P		**Pn**	**19 50 09.2**	**+0.2**
TLIG	**Tlapa**	**1.32**	**69**			**Pn**	**19 50 09.2**	**+0.2**
PLIG	**Platanillo**	**1.33**	**15**	*i* P		**Pn**	**19 50 08.4**	**-0.8**
PLIG				*e*S		**Sn**	**19 50 24.2**	**-1.5**
PLIG	**Platanillo**	**1.33**	**15**			**Pn**	**19 50 08.4**	**-0.8**
PLIG						**Sn**	**19 50 25.2**	**-0.5**
HMTT	**Tlapaneco**	**1.42**	**61**	*i* P		**Pn**	**19 50 11.4**	**+1.0**
HMTT				*i* S		**Sn**	**19 50 25.5**	**-2.5**
ZIIG	**Zihuatanejo**	**1.61**	**289**	*e*P		**Pn**	**19 50 12.6**	**-0.3**
ZIIG	**Zihuatanejo**	**1.61**	**289**			**Pn**	**19 50 12.6**	**-0.3**
PNIG	**Pinotepa**	**1.80**	**113**	*e*P		**Pn**	**19 50 16.0**	**+0.5**
PNIG				*e*S		**Sn**	**19 50 36.2**	**-1.0**
PNIG	**Pinotepa**	**1.80**	**113**			**Pn**	**19 50 16.0**	**+0.5**
PNIG						**Sn**	**19 50 36.2**	**-1.0**
MAVM	**Malinalco, Edo**	**1.88**	**11**	*e*P		**Pn**	**19 50 17.8**	**+1.0**
MAVM				*e*S		**Sn**	**19 50 40.2**	**+0.8**
MAVM	**Malinalco, Edo**	**1.88**	**11**			**Pn**	**19 50 17.8**	**+1.0**
MAVM						**Sn**	**19 50 40.2**	**+0.8**
TXIG	**Tlaxiaco**	**2.01**	**85**	*e*P		**Pn**	**19 50 19.6**	**+1.0**
UON	**La Union**	**2.06**	**295**	*e*P		**Pn**	**19 50 19.9**	**+0.9**
UON				*i* S		**Sn**	**19 50 43.5**	**+0.1**
PPM	**Popocatepetl**	**2.28**	**31**	*e*P		**Pn**	**19 50 21.7**	**-0.9**
PPM				*e*S		**Sn**	**19 50 55.2**	**+5.4**
UNM	**Universidad Na**	**2.31**	**16**	*e*P		**Pn**	**19 50 25.2**	**+2.4**
UNM	**Universidad Na**	**2.31**	**16**			**Pn**	**19 50 22.7**	**-0.1**
PEIG	**Puerto Escondi**	**2.82**	**112**	*e*P		**Pn**	**19 50 30.6**	**+1.0**
PEIG				*e*S		Sn	19 51 12.2	+10
MOIG	**Morelia**	**2.86**	**334**	*e*P		**Pn**	**19 50 33.5**	**+3.2**
MOIG				*e*S		**Sn**	**19 51 10.6**	**+7.0**
MOIG	**Morelia**	**2.86**	**334**			**Pn**	**19 50 30.1**	**-0.2**
MMIG	**Aquila**	**3.53**	**290**	*e*P		**Pn**	**19 50 38.7**	**-0.5**
MMIG				*e*S		**Sn**	**19 51 17.9**	**-1.9**
MMIG	**Aquila**	**3.53**	**290**			**Pn**	**19 50 38.7**	**-0.5**
MMIG						LR	19 51 30.9	
TXAR	**Lajitas Array**	**12.67**	**345**	Pn		**Pn**	**19 52 46.0**	**+1.3**
	0.0nm,0.3s,baz=163,slow=13,SNR=5.4							
TXAR				Sn		**Sn**	**19 55 06.3**	**+1.7**
	0.2nm,0.3s,baz=178,slow=23,SNR=5.2							
TXAR				LR		LR	19 58 05.3	
	comp=Z,88nm,18.8s,baz=0.0,slow=39							
JTS	**Las Juntas de**	**15.98**	**113**	LR		LR	19 58 28.9	
	comp=Z,59nm,19.1s,baz=272,slow=35							
ANMO	**Albuquerque**	**18.73**	**343**	P		**P**	**19 54 02.8**	**0.0**
	0.1nm,0.3s,baz=154,slow=10,SNR=4.3							
ANMO				LR		LR	20 02 09.3	
	comp=Z,123nm,18.9s,baz=166,slow=40							
ANMO	**Albuquerque**	**18.73**	**343**	IAmb		IAmb	19 54 04.8	
	comp=Z,2.6nm,0.9s							
W39A	**Magazine**	**18.82**	**16**	P		**P**	**19 54 03.2**	**-0.4**
W39A				IAmb		IAmb	19 54 03.7	
	comp=Z,9.2nm,0.9s							
X18A	**Snowflake**	**19.57**	**334**	P		**P**	**19 54 12.4**	**+0.4**
X18A				IAmb		IAmb	19 54 16.1	
	comp=Z,9.6nm,1.1s							
FCAR	**Ozark Folk Cen**	**19.94**	**19**	P		**P**	**19 54 14.2**	**-1.6**
X16A	**Lo Mia Camp, P**	**20.13**	**331**	P		**P**	**19 54 18.5**	**+0.4**

U40A	**Yellville**	**20.16**	**17**	P	**P**	**19 54 16.7**	**-1.6**
T25A	**Trinidad**	**20.36**	**350**	P	**P**	**19 54 20.9**	**+0.2**
T25A				IAmb	IAmb	19 54 25.1	
	comp=Z,11nm,1.4s						
WUAZ	**Wupatki**	**21.02**	**333**	P	**P**	**19 54 28.7**	**+1.0**
WUAZ				IAmb	IAmb	19 54 40.1	
	comp=Z,12nm,1.1s						
SDCO	**Great Sand Dun**	**21.16**	**348**	P	**P**	**19 54 28.8**	**-0.6**
S39A	**Bolivar**	**21.31**	**14**	P	**P**	**19 54 30.9**	**+0.3**
S39A				IAmb	IAmb	19 54 33.3	
	comp=Z,7.5nm,0.8s						
KNB	**Kanab**	**22.91**	**333**	P	**P**	**19 54 48.3**	**+0.4**
KNB				IAmb	IAmb	19 55 09.0	
	comp=Z,5.8nm,1.0s						
ISCO	**Idaho Springs**	**23.17**	**349**	P	**P**	**19 54 49.2**	**-1.5**
MTPU	**Mount Pierson**	**23.51**	**335**	P	**P**	**19 54 54.6**	**+0.5**
MTPU				IAmb	IAmb	19 55 06.8	
	comp=Z,7.9nm,1.1s						
SRU	**San Rafael Swe**	**23.83**	**339**	P	**P**	**19 54 57.0**	**0.0**
SRU				IAmb	IAmb	19 54 57.1	
	comp=Z,5.0nm,1.0s						
O20A	**White River Ci**	**24.08**	**344**	P	**P**	**19 54 59.3**	**0.0**
O20A				IAmb	IAmb	19 55 00.1	
	comp=Z,8.2nm,1.0s						
RDMU	**Red Mountain**	**24.85**	**342**	P	**P**	**19 55 06.9**	**+0.5**
RDMU				IAmb	IAmb	19 55 07.0	
	comp=Z,3.9nm,0.8s						
NV11	**Mina Array Sit**	**26.62**	**327**	P	**P**	**19 55 23.6**	**+1.3**
NV11				IAmb	IAmb	19 55 24.5	
	comp=Z,6.1nm,1.1s						
NVAR	**Mina Array Bea**	**26.70**	**326**	P	**P**	**19 55 24.5**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=154,slow=9.9,SNR=20						
NVAR	**Mina Array Bea**	**26.70**	**326**	P	**P**	**19 55 23.6**	**+0.5**
PDAR	**Pinedale Array**	**26.89**	**344**	P	**P**	**19 55 24.4**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=138,slow=8.3,SNR=7.3						
PDAR				LR	LR	20 07 08.0	
	comp=Z,130nm,19.3s,baz=142,slow=39						
PDAR	**Pinedale Array**	**26.89**	**344**	P	**P**	**19 55 23.8**	**-1.0**
ELK	**Elko**	**27.05**	**334**	LR	LR	20 07 12.6	
	comp=Z,108nm,18.3s,baz=163,slow=38						
KVN	**Kaiserville**	**27.05**	**328**	P	**P**	**19 55 27.1**	**+0.9**
J08A	**Circle Bar Ran**	**30.58**	**333**	P	**P**	**19 55 57.9**	**+0.4**
SADO	**Sadowa**	**32.62**	**28**	LR	LR	20 11 17.7	
	comp=Z,30nm,18.8s,baz=93,slow=40						
NEW	**Newport**	**34.14**	**339**	LR	LR	20 12 25.5	
	comp=Z,41nm,18.9s,baz=140,slow=40						
YKA	**Yellowknife Ar**	**46.51**	**351**	P	**P**	**19 58 09.0**	**-1.5**
	comp=Z,1.7nm,0.9s,baz=159,slow=7.6,SNR=12						
YKA				LR	LR	20 20 13.3	
	comp=Z,30nm,18.1s,baz=0.0,slow=39						
INK	**Inuvik**	**55.45**	**346**	P	**P**	**19 59 16.9**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=148,slow=13,SNR=5.5						
ILAR	**Eielson Array**	**57.09**	**328**	P	**P**	**19 59 29.6**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=152,slow=7.5,SNR=5.1						
ILAR				LR	LR	20 26 20.7	
	comp=Z,41nm,18.9s,baz=168,slow=38						
BORG	**Borgarnes**	**69.79**	**27**	LR	LR	20 33 39.6	
	comp=Z,22nm,19.1s,baz=248,slow=38						
JMIC	**Jan Mayen**	**74.42**	**20**	LR	LR	20 38 01.2	
	comp=Z,20nm,18.2s,baz=300,slow=39						

IDC 29 19:57:10.1±2.1, 4°.77S×152°.18E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/38, mbtmp3.5/4, ML1.6/1, Error ellipse: s-maj=133.8km s-min=25.4km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.79**	**227**	Pn	Pn	19 58 52.6	+1.6
	0.8nm,0.3s,baz=60,slow=18,SNR=1.9						
PMG				Sn	Sn	20 00 09.7	+0.6
	4.8nm,0.3s,baz=80,slow=12,SNR=7.4						
WRA	**Warramunga Arr**	**23.01**	**228**	P	P	20 02 16.6	-0.2
	1.0nm,1.0s,baz=52,slow=9.9,SNR=3.2						
ASAR	**Alice Springs**	**25.76**	**221**	P	P	20 02 42.5	-0.2
	0.3nm,0.5s,baz=57,slow=9.2,SNR=6.3						
ILAR	**Eielson Array**	**82.36**	**22**	P	P	20 09 33.7	+0.1
	0.5nm,0.8s,baz=239,slow=5.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**149.72**	**288**	PKPbc	PKPbc	20 17 02.5	-0.6
	0.3nm,0.5s,baz=58,slow=2.1,SNR=1.9						

*IDC **29** 20:20:49.8±2.0, 50°.13N×18°.65E, h0km, mb1 3.2/4, mb1mx2.9/49, mbtmp3.1/4, ML2.5/4, Error ellipse: s-maj=31.8km s-min=8.5km az=130.0*
*IPEC **29** 20:20:49.6±0.3, 50°.20N×18°.63E, h1km, ML2.5/3, Error ellipse: s-maj=2.0km s-min=1.8km az=18.0*
*PRU **29** 20:20:49.6±0.0, 50°.19N×18°.64E, h0km*
ISC 29 20:20:48.4±0.8, 50°.24N±0°.03×18°.70E±0°.03, h0km, n44, σ0s92/75, 9C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.54**	**222**	*e*PG	**Pg**	**20 20 59.1**	**+0.5**
OKC				*e*SG	**Sg**	**20 21 05.0**	**-0.6**
	comp=Z,78nm,0.5s						
MORC	**Moravsky Berou**	**0.88**	**239**	⇑P	**Pg**	**20 21 05.5**	**+0.2**
MORC				⇑S	**Sb**	**20 21 18.7**	**-0.1**
MORC	**Moravsky Berou**	**0.88**	**239**	*e*PG	**Pg**	**20 21 05.0**	**-0.2**
MORC				*e*SG	**Sg**	**20 21 15.2**	**-1.4**
MORC	**Moravsky Berou**	**0.88**	**239**	*e*Pg	**Pg**	**20 21 04.9**	**-0.2**
	baz=59						
MORC				*e*Sg	**Sg**	**20 21 15.2**	**-1.4**
	91nm,0.5s,baz=59						
LANS	**Liptovska Anna**	**1.20**	**155**	*e*PG	**Pg**	**20 21 11.4**	**+0.1**
LANS				*e*SG	**Sb**	**20 21 27.8**	**-0.1**
LANS				*e*LG	Lg	20 21 38.0	
KRLC	**Kraliky**	**1.25**	**263**	*e*PG	**Pg**	**20 21 11.5**	**-0.7**
KRLC				*e*SG	**Sg**	**20 21 28.5**	**+0.1**
	comp=Z,73nm,0.7s						
NIE	**Niedzica**	**1.32**	**128**	*e*Pg	**Pg**	**20 21 13.3**	**-0.3**
NIE				*e*Sg	**Sb**	**20 21 31.8**	**+0.3**
DPC	**Dobruska-Polom**	**1.53**	**275**	*e*PG	**Pn**	**20 21 16.9**	**-0.1**
DPC				*e*SG	**Sg**	**20 21 37.6**	**+0.1**
	comp=Z,45nm,0.5s						
JAVC	**Velka Javorina**	**1.54**	**206**	*e*PG	**Pn**	**20 21 16.6**	**-0.5**
JAVC	**Velka Javorina**	**1.54**	**206**	*e*Pg	**Pn**	**20 21 16.5**	**-0.5**
	baz=25						
OSTC	**Ostas**	**1.62**	**282**	*e*PG	**Pn**	**20 21 18.9**	**+0.6**
OSTC				*e*SG	**Sb**	**20 21 40.5**	**+0.3**
	comp=Z,58nm,1.1s						
KSP	**Ksiaz**	**1.65**	**292**	*e*Pb	**Pn**	**20 21 18.9**	**+0.3**
KSP				*e*PG	**Pg**	**20 21 20.5**	**+0.5**
KSP				*e*Sg	**Sg**	**20 21 42.2**	**+0.7**
VRAC	**Vranov**	**1.65**	**237**	Pg	**Pn**	**20 21 19.0**	**+0.4**
	1.6nm,0.3s,baz=56,slow=15,SNR=28						
VRAC				Lg	Lg	20 21 40.1	
	10nm,0.3s,baz=324,slow=19,SNR=20						
VRAC	**Vranov**	**1.65**	**237**	⇑P	**Pn**	**20 21 18.5**	**-0.1**
VRAC				⇑S	**Sn**	**20 21 40.4**	**-0.2**
VRAC	**Vranov**	**1.65**	**237**	*e*PN	**Pn**	**20 21 18.7**	**0.0**
VRAC				*e*SG	**Sn**	**20 21 39.6**	**-1.1**
VRAC	**Vranov**	**1.65**	**237**	*e*Pn	**Pn**	**20 21 18.7**	**0.0**
	baz=55						
VRAC				*e*Sg	**Sn**	**20 21 39.5**	**-1.1**
	52nm,0.4s,baz=55						
CHVC	**Chvalec**	**1.73**	**283**	*e*PG	**Pn**	**20 21 20.3**	**+0.6**
CHVC				*e*SG	**Sg**	**20 21 45.1**	**+1.2**
	comp=Z,70nm,1.2s						
UPC	**Upice**	**1.74**	**280**	*e*PG	**Pb**	**20 21 21.2**	**0.0**
UPC				*e*SG	**Sg**	**20 21 45.1**	**+0.7**
	comp=Z,40nm,0.9s						
VYHS	**Vyhne**	**1.75**	**177**	*e*PN	**Pn**	**20 21 19.4**	**-0.5**
VYHS				*e*SN	**Sn**	**20 21 42.3**	**-0.6**
KRUC	**Moravsky**	**1.91**	**233**	*e*PN	**Pn**	**20 21 22.4**	**+0.3**
KRUC				*e*SG	**Sn**	**20 21 47.2**	**+0.4**
KRUC	**Moravsky**	**1.91**	**233**	*e*Pn	**Pn**	**20 21 22.4**	**+0.3**
	baz=51						
KRUC				*e*Sg	**Sn**	**20 21 47.2**	**+0.4**
	27nm,0.6s,baz=51						
TREC	**Trest**	**2.29**	**247**	*e*SG	**Sb**	**20 21 59.7**	**+0.3**
	comp=Z,43nm,0.7s						
PSZ	**Piszkesteto**	**2.45**	**161**	⇑P	**Pn**	**20 21 29.7**	**+0.1**
PSZ				⇑S	**Sn**	**20 22 01.8**	**+1.5**
PVCC	**Panska Ves**	**2.66**	**278**	*e*PG	**Pb**	**20 21 38.3**	**+1.4**
PVCC				*e*SG	**Sg**	**20 22 14.5**	**+0.7**
	comp=Z,28nm,0.6s						
PRU	**Pruhonice**	**2.69**	**266**	*e*PG	**Pb**	**20 21 37.9**	**+0.5**
PRU				*e*SG	**Sb**	**20 22 12.9**	**+2.0**
	comp=Z,19nm,0.8s						
CONA	**Conrad Observa**	**2.97**	**220**	Pn	**Pn**	**20 21 37.0**	**+0.1**
	0.8nm,0.2s						
CONA				*e*Sg	**Sb**	**20 22 20.0**	**+0.9**
	7.4nm,0.5s						

PBCC	**Pribram**	**3.09**	**262**	*e*SG	**Sg**	**20 22 26.5**	**-1.1**
	comp=Z,6.2nm,0.4s						
BRG	**Berggiesshubel**	**3.10**	**284**	Pg	**Pg**	**20 21 47.9**	**+0.1**
BRG				Sg	**Sg**	**20 22 27.3**	**-0.6**
BRG				Amp		20 22 40.3	
	comp=Z,14nm,0.6s						
CKRC	**Cesky Krumlov**	**3.19**	**245**	*e*PN	**Pn**	**20 21 40.1**	**+0.3**
CKRC				*e*PG	**Pb**	**20 21 47.0**	**+1.0**
CKRC				*e*SG	**Sb**	**20 22 27.6**	**+2.2**
TRPA	**Tarpa**	**3.28**	**128**	⇑P	**Pn**	**20 21 42.4**	**+1.4**
TRPA				⇓S	**Sn**	**20 22 21.9**	**+1.2**
KHC	**Kasperske Hory**	**3.51**	**254**	*e*PN	**Pn**	**20 21 44.5**	**+0.3**
KHC				*e*PG	**Pb**	**20 21 52.8**	**+1.5**
KHC				*e*SG	**Sg**	**20 22 38.8**	**-2.2**
	comp=Z,21nm,0.5s						
GERES	**GERESS Array B**	**3.54**	**249**	Pn	**Pn**	**20 21 45.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=66,slow=14,SNR=5.1						
GERES				Pg	**Pb**	**20 21 53.0**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=62,slow=17,SNR=14						
GERES				Lg	Lg	20 22 40.9	
	comp=Z,3.1nm,0.3s,baz=64,slow=30,SNR=13						
MOA	**Molln**	**3.77**	**232**	*e*Pn	**Pn**	**20 21 48.6**	**+0.8**
	comp=Z,0.6nm,0.3s						
MOA				*e*Sg	**Sb**	**20 22 43.5**	**+1.5**
	comp=Z,7.5nm,0.5s						
CLL	**Collm**	**3.77**	**289**	*e*Pg	**Pg**	**20 22 00.0**	**-0.6**
CLL				*e*Sg	**Sg**	**20 22 49.0**	**-0.5**
	comp=Z,13nm,0.6s						
MORH	**Mrgy, Hungar**	**4.03**	**181**	⇓P	**Pn**	**20 21 50.8**	**-0.5**
BMR	**Baia Mare**	**4.07**	**127**	⇑P	**Pn**	**20 21 52.9**	**+1.1**
DRGR		**4.36**	**141**	⇓P	**Pn**	**20 21 57.2**	**+1.3**
KBA	**Koelnbreinsper**	**4.75**	**230**	Sg	**Sg**	**20 23 22.0**	**+1.0**
	comp=Z,3.0nm,0.5s						
BZS	**Buzias**	**5.02**	**156**	⇑P	**Pn**	**20 22 05.3**	**+0.4**
BURAR	**Bucovina Array**	**5.03**	**119**	⇓P	**Pn**	**20 22 05.1**	**0.0**
AKASG	**Malin Array Be**	**6.73**	**82**	Lg	Lg	20 24 24.7	
	comp=Z,1.8nm,0.3s,baz=276,slow=25,SNR=5.0						
DAVOX	**Davos/Dischmat**	**6.80**	**243**	Pn	**Pn**	**20 22 28.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=18,slow=6.4,SNR=1.6						
DAVOX				Lg	Lg	20 24 23.0	
	comp=Z,0.2nm,0.3s,baz=165,slow=20,SNR=2.5						
NOA	**NORSAR Array B**	**11.61**	**342**	Pn	**Pn**	**20 23 33.6**	**-1.6**
	comp=Z,0.0nm,0.3s,baz=152,slow=13,SNR=4.5						
FINES	**FINESS Array B**	**11.96**	**17**	Pn	**Pn**	**20 23 37.3**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=199,slow=12,SNR=6.5						
FINES				Sn	Sn	20 25 45.1	-8.8
	comp=Z,0.3nm,0.3s,baz=204,slow=21,SNR=5.8						

IDC 29 20:24:24.1±365.0, 37°.19N×73°.74W, h0km, Error ellipse: s-maj=232.7km s-min=187.4km az=96.0, Off east coast of United States

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I51GB	**BERMUDA INFRAS**	**8.86**	**120**	*i*		21 20 00.0	
	baz=309,slow=309,SNR=2.3						
I10CA	**LAC DU BONNET**	**20.61**	**316**	*i*		22 29 20.0	
	baz=120,slow=323,SNR=0.7						
I18DK	**QAANAAQ INFRAS**	**30.44**	**1**	*i*		00 36 30.0	
	baz=188,slow=332,SNR=0.7						

*IDC **29** 21:04:08.9±1.2, 11°.18N×126°.76E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/44, mbtmp3.7/5, ML5.2/1, Error ellipse: s-maj=48.2km s-min=20.7km az=69.0*
ISC 29 21:04:13.8±1.2, 11°.2N±0°.2×126°.9E±0°.2, h35km, n6, σ0s84/6, mb3.8/5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**17.74**	**81**	P	**P**	**21 08 19.1**	**+0.3**
	8.4nm,0.3s,baz=288,slow=16,SNR=1.2						
FITZ	**Fitzroy Crossi**	**29.16**	**182**	P	**P**	**21 10 12.0**	**+0.1**
	2.2nm,1.1s,baz=5.7,slow=10,SNR=1.4						
WRA	**Warramunga Arr**	**31.84**	**167**	P	**P**	**21 10 35.3**	**-0.3**
	0.3nm,0.6s,baz=345,slow=9.2,SNR=1.4						
ASAR	**Alice Springs**	**35.36**	**169**	P	**P**	**21 11 06.0**	**-0.2**
	0.3nm,0.3s,baz=352,slow=7.0,SNR=16						
MKAR	**Makanchi Array**	**51.63**	**322**	P	**P**	**21 13 17.9**	**+0.9**
	1.6nm,0.7s,baz=115,slow=8.3,SNR=17						
ZALV	**Zalesovo Beam**	**54.08**	**331**	P	**P**	**21 13 33.8**	**-1.0**
	0.4nm,0.4s,baz=144,slow=8.4,SNR=1.8						

*IDC **29** 21:19:02.5±1.9, 52°.54N×170°.23W, h0km, mb3.3/6, mb1 3.7/8, mb1mx3.4/44, mbtmp3.4/8, ML3.3/2, Error ellipse: s-maj=53.4km s-min=30.1km az=137.0*
*AEIC **29** 21:19:07±2.1, 52°.85N±0°.10×169°.50W±0°.10, h5km±6km, Error ellipse: s-maj=14.7km s-min=6.8km az=156.0*
*NEIC **29** 21:19:07.2±2.8, 52°.63N±0°.05×169°.41W±0°.10, h5km±8km, mb3.9/8, ML3.4(AEIC), Error ellipse: s-maj=10.0km s-min=6.3km az=127.0*
ISC 29 21:19:07.9±0.9, 52°.7N±0°.1×169°.44W±0°.07, h10km, n52, σ1s36/41, mb3.5/7, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.43**	**56**		**Pb**	**21 19 16.7**	**-0.8**
NIKH	**Nikolski High**	**0.43**	**56**		**Sb**	**21 19 24.1**	**+0.1**
OKSO	**Okmok South**	**0.99**	**51**		**Pg**	**21 19 25.9**	**-1.1**
OKFG	**Magazine Ridge**	**1.14**	**53**		**Pb**	**21 19 28.5**	**-1.3**
MAPS	**Pakushin South**	**1.85**	**53**		**Pn**	**21 19 39.5**	**-0.1**
MGOD	**Makushin Gods**	**1.87**	**55**		**Pn**	**21 19 39.8**	**-0.3**
MSW	**Makushin Switc**	**1.98**	**52**		**Pn**	**21 19 40.9**	**-0.7**
MNAT	**Makushin Natee**	**2.02**	**54**		**Pn**	**21 19 41.7**	**-0.3**
MTBL	**Makushin Table**	**2.07**	**52**		**Pn**	**21 19 42.7**	**-0.1**
AKRB	**Akutan Reef Bi**	**2.45**	**54**		**Pn**	**21 19 48.4**	**+0.4**
AKBBA	**Akutan Broad B**	**2.50**	**56**		**Pn**	**21 19 49.3**	**+0.6**
AKUT	**Akutan**	**2.60**	**56**		**Pn**	**21 19 51.1**	**+1.0**
KOFP	**Korovin Flat P**	**2.88**	**263**		**Pn**	**21 19 52.7**	**-1.2**
ATKA	**Atka Island**	**2.96**	**261**		**Pn**	**21 19 54.1**	**-0.7**
WESP	**Westdahl Peak**	**3.32**	**56**		**Pn**	**21 20 00.8**	**+0.9**
GSTR	**Great Sitkin T**	**4.10**	**264**	Pn	**Pn**	**21 20 10.6**	**-0.1**
SPIA	**Saint Paul Isl**	**4.47**	**354**	Pn	**Pn**	**21 20 15.2**	**-0.5**
ADK	**Adak**	**4.53**	**262**	Pn	**Pn**	**21 20 16.3**	**-0.1**
SDPT	**Sand Point**	**5.89**	**60**	Pn	**Pn**	**21 20 37.2**	**+2.0**
KDAK	**Kodiak Island**	**10.86**	**56**	Pn	Pn	21 21 47.8	+4.6
	0.2nm,0.3s,baz=240,slow=8.1,SNR=1.6						
KDAK	**Kodiak Island**	**10.86**	**56**		**Pn**	**21 21 43.2**	**0.0**
TTA	**Tatalina**	**12.44**	**30**	Pn	**Pn**	**21 22 08.9**	**+4.0**
GHO	**Glory Hole Cre**	**14.26**	**43**	Pn	**P**	**21 22 33.3**	**-3.8**
KTH	**Kantishna Hill**	**14.53**	**35**	Pn	**Pn**	**21 22 35.9**	**+2.5**
BPAW	**Bear Paw Mtn.**	**14.86**	**33**	Pn	**P**	**21 22 41.0**	**-2.8**
SCM	**Sheep Creek Mo**	**14.96**	**44**	Pn	**Pn**	**21 22 39.9**	**+0.7**
KLU	**Klutina**	**15.41**	**46**	Pn	**Pn**	**21 22 44.8**	**-0.4**
KLU				IAmb	IAmb	21 22 46.6	
	comp=Z,11nm,1.3s						
IMAR	**Indian Mountai**	**15.43**	**25**	P	**P**	**21 22 49.9**	**-0.1**
M24K	**Tolsona, Glenn**	**15.56**	**44**	P	**P**	**21 22 50.3**	**-1.2**
MLY	**Manley**	**15.57**	**30**		**P**	**21 22 51.2**	**-0.4**
ILAR	**Eielson Array**	**16.67**	**35**	P	**P**	**21 23 04.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=220,slow=11,SNR=4.4						
SCRK	**Sand Creek**	**17.32**	**40**	P	**P**	**21 23 11.3**	**+0.2**
BMAR	**Burnt Mountain**	**19.03**	**30**		**Pn**	**21 23 31.5**	**+1.0**
HYT	**Haines Junctio**	**19.11**	**52**	P	**Pn**	**21 23 32.1**	**+0.5**
HYT				IAmb	IAmb	21 23 37.7	
	comp=Z,3.6nm,0.6s						
EPYK	**Eagle Plains**	**21.13**	**37**	P	**P**	**21 23 54.4**	**+1.7**
EPYK				IAmb	IAmb	21 23 56.2	
	comp=Z,6.5nm,1.1s						
INK	**Inuvik**	**23.06**	**34**	P	**P**	**21 24 13.5**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=230,slow=7.9,SNR=1.9						
INK	**Inuvik**	**23.06**	**34**	P	**P**	**21 24 12.8**	**-0.3**
INK				IAmb	IAmb	21 24 31.4	
	comp=Z,4.6nm,1.4s						
YKA	**Yellowknife Ar**	**30.03**	**49**	P	**P**	**21 25 17.3**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=270,slow=7.4,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**37.71**	**218**	T	T	22 06 17.0	
	baz=24,slow=76,SNR=28						
NVAR	**Mina Array Bea**	**37.72**	**91**	P	**P**	**21 26 25.3**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=325,slow=7.7,SNR=1.5						
H11N3	**WAKE ISLAND Hy**	**37.72**	**218**	T	T	22 06 19.2	
	baz=24,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**37.73**	**218**	T	T	22 06 17.4	
	baz=24,slow=76,SNR=24						
H11S1	**WAKE ISLAND Hy**	**38.91**	**218**	T	T	22 07 47.9	
	baz=23,slow=76,SNR=287						
H11S2	**WAKE ISLAND Hy**	**38.92**	**218**	T	T	22 07 49.2	
	baz=23,slow=76,SNR=102						
H11S3	**WAKE ISLAND Hy**	**38.92**	**218**	T	T	22 07 49.4	
	baz=23,slow=76,SNR=74						
PDAR	**Pinedale Array**	**40.38**	**80**	P	**P**	**21 26 45.1**	**-0.9**
	comp=Z,0.1nm,0.4s,baz=262,slow=7.3,SNR=1.6						

TXAR	**Lajitas Array**	**52.79**	**89**	P	**P**	**21 28 22.7**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=319,slow=2.6,SNR=3.1						
TXAR	**Lajitas Array**	**52.79**	**89**	P	**P**	**21 28 24.4**	**+1.2**
ASAR	**Alice Springs**	**90.60**	**230**	P	P	21 32 03.9	-6.4
	comp=Z,0.3nm,0.8s,baz=20,slow=5.9,SNR=1.4						
H03N2	**Juan Fernandez**	**116.10**	**111**	T	T	23 44 28.4	
	baz=323,slow=78,SNR=25						
H03N1	**Juan Fernandez**	**116.11**	**111**	T	T	23 44 28.2	
	baz=323,slow=78,SNR=23						
H03N3	**Juan Fernandez**	**116.12**	**111**	T	T	23 44 31.9	
	baz=323,slow=78,SNR=25						

IDC 29 21:23:09.8±8.3, 19°.46S×178°.15W, h396km±65km, mb2.8/4, mb1 3.2/5, mb1mx2.9/29, mbtmp3.6/5, Error ellipse: s-maj=220.2km s-min=24.8km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.99**	**295**	P	Pn	21 24 21.5	-0.1
	1.3nm,0.3s,baz=122,slow=19,SNR=6.3						
WRA	**Warramunga Arr**	**44.61**	**261**	P	P	21 30 45.1	0.0
	1.1nm,1.1s,baz=96,slow=7.7,SNR=6.8						
ASAR	**Alice Springs**	**44.62**	**256**	P	P	21 30 44.9	-0.3
	0.3nm,0.6s,baz=79,slow=6.0,SNR=2.2						
NVAR	**Mina Array Bea**	**80.37**	**44**	P	P	21 34 39.4	+0.7
	0.3nm,0.6s,baz=224,slow=5.0,SNR=2.6						
TXAR	**Lajitas Array**	**86.62**	**57**	P	P	21 35 09.4	-0.7
	0.5nm,0.7s,baz=218,slow=7.9,SNR=5.9						

*SOF **29** 21:25:21.7, 45°.46N×26°.67E, h2km, MD3.0*
*CFUSG **29** 21:25:21.9, 45°.80N×26°.67E, h130km, mb2.6/2, MD3.0/2, Romania Magtype MSH 2.6 from 2 stations*
*BUC **29** 21:25:21.2±0.3, 45°.73N×26°.70E, h128km±2km, ml3.8/40, Error ellipse: s-maj=1.8km s-min=1.6km az=120.0*
ISC 29 21:25:20.9±1.3, 45°.73N±0°.02×26°.69E±0°.02, h134km±5km, n105, σ0s62/179, 91C-82D, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	**Plostina**	**0.13**	**346**	⇑P	**Pn**	**21 25 39.0**	**-0.1**
PLOR				⇑S	**Sn**	**21 25 52.2**	**-0.7**
PLOR	**Plostina**	**0.13**	**346**	⇑P	**Pn**	**21 25 39.0**	**-0.1**
PLOR				⇑S	**Sn**	**21 25 52.2**	**-0.7**
VRI	**Vrincioaia**	**0.14**	**10**	⇑P	**Pn**	**21 25 39.2**	**+0.1**
VRI				⇓S	**Sn**	**21 25 51.9**	**-0.9**
VRI	**Vrincioaia**	**0.14**	**10**	⇑P	**Pn**	**21 25 39.2**	**+0.1**
VRI				⇓S	**Sn**	**21 25 51.9**	**-0.9**
BISRR	**Bisoca**	**0.18**	**176**	⇑P	**Pn**	**21 25 39.4**	**+0.2**
BISRR				⇑S	**Sn**	**21 25 52.8**	**-0.2**
BISRR	**Bisoca**	**0.18**	**176**	⇑P	**Pn**	**21 25 39.4**	**+0.2**
BISRR				⇑S	**Sn**	**21 25 52.8**	**-0.2**
ODBI	**Odobesti**	**0.26**	**82**	⇓S	**Sn**	**21 25 54.1**	**+0.9**
ODBI	**Odobesti**	**0.26**	**82**	⇓S	**Sn**	**21 25 54.1**	**+0.9**
PETR	**Petresti**	**0.38**	**91**	⇑P	**Pn**	**21 25 40.2**	**+0.5**
PETR				⇑S	**Sn**	**21 25 54.3**	**+0.4**
PETR	**Petresti**	**0.38**	**91**	⇑P	**Pn**	**21 25 40.2**	**+0.5**
PETR				⇑S	**Sn**	**21 25 54.3**	**+0.4**
GRER		**0.40**	**150**	⇓S	**Sn**	**21 25 55.1**	**+0.9**
GRER		**0.40**	**150**	⇓S	**Sn**	**21 25 55.1**	**+0.9**
NEHR	**Nehoiu**	**0.41**	**223**	⇑P	**Pn**	**21 25 40.2**	**+0.3**
NEHR				⇑S	**Sn**	**21 25 54.1**	**-0.2**
NEHR	**Nehoiu**	**0.41**	**223**	⇑P	**Pn**	**21 25 40.2**	**+0.3**
NEHR				⇑S	**Sn**	**21 25 54.1**	**-0.2**
MLR	**Muntele Rosu**	**0.58**	**246**	⇑P	**Pn**	**21 25 41.2**	**+0.2**
MLR				⇑S	**Sn**	**21 25 56.1**	**-0.1**
MLR	**Muntele Rosu**	**0.58**	**246**	⇑P	**Pn**	**21 25 41.2**	**+0.2**
MLR				⇑S

ARR					⇑S		Sn	21 26 10.7	0.0		
TPGR	**Topolog**	**1.50**	**125**		⇑P		Pn	21 25 49.0	-0.2		
TPGR					⇑S		Sn	21 26 09.3	-1.4		
TPGR	**Topolog**	**1.50**	**125**		⇑P		Pn	21 25 49.0	-0.2		
TPGR					⇑S		Sn	21 26 09.3	-1.4		
TLBR	**Topalu**	**1.52**	**141**		⇓P		Pn	21 25 49.7	+0.2		
TLBR					⇑S		Sn	21 26 10.6	-0.6		
TLBR	**Topalu**	**1.52**	**141**		⇓P		Pn	21 25 49.7	+0.2		
TLBR					⇑S		Sn	21 26 10.6	-0.6		
RASA	**Rasa**	**1.55**	**168**		⇓P		Pn	21 25 50.0	+0.3		
RASA					⇑S		Sn	21 26 10.6	-1.1		
RASA	**Rasa**	**1.55**	**168**		⇓P		Pn	21 25 50.0	+0.3		
RASA					⇑S		Sn	21 26 10.6	-1.1		
IAS	**Iasi**	**1.58**	**22**		⇑P		Pn	21 25 50.4	+0.3		
IAS					⇓S		Sn	21 26 11.1	-1.4		
IAS	**Iasi**	**1.58**	**22**		⇑P		Pn	21 25 50.4	+0.3		
IAS					⇓S		Sn	21 26 11.1	-1.4		
TLCR		**1.59**	**109**		⇓P		Pn	21 25 50.3	+0.1		
TLCR					⇓S		Sn	21 26 12.0	-0.6		
TLCR		**1.59**	**109**		⇓P		Pn	21 25 50.3	+0.1		
TLCR					⇓S		Sn	21 26 12.0	-0.6		
SGRR	**Singureni**	**1.59**	**199**		⇓P		Pn	21 25 50.2	0.0		
SGRR					⇓S		Sn	21 26 11.8	-0.7		
SGRR	**Singureni**	**1.59**	**199**		⇓P		Pn	21 25 50.2	0.0		
SGRR					⇓S		Sn	21 26 11.8	-0.7		
PRAR	**RASCA**	**1.67**	**349**		⇓P		Pn	21 25 51.8	+0.7		
PRAR	**RASCA**	**1.67**	**349**		⇓P		Pn	21 25 51.8	+0.7		
HUMR	**Humele**	**1.71**	**226**		⇓P		Pn	21 25 51.5	0.0		
HUMR					⇑S		Sn	21 26 14.0	-0.9		
HUMR	**Humele**	**1.71**	**226**		⇓P		Pn	21 25 51.5	0.0		
HUMR					⇑S		Sn	21 26 14.0	-0.9		
KIS	**Kishinev**	**1.94**	**48**		⇓P		Pn	21 25 54.8	+0.5		
KIS					⇑S		Sn	21 26 18.7	-1.2		
	120nm,0.4s										
MFTR	**Murfatlar**	**1.98**	**141**		⇓P		Pn	21 25 54.9	+0.2		
MFTR	**Murfatlar**	**1.98**	**141**		⇓P		Pn	21 25 54.9	+0.2		
BURAR	**Bucovina Array**	**2.14**	**332**		⇑P		Pn	21 25 57.6	+0.7		
BURAR					⇓S		Sn	21 26 26.1	+1.7		
BURAR	**Bucovina Array**	**2.14**	**332**		⇑P		Pn	21 25 57.6	+0.7		
BURAR					⇓S		Sn	21 26 26.1	+1.7		
EFOR	**EFORIE**	**2.15**	**139**		⇑P		Pn	21 25 57.0	+0.1		
EFOR	**EFORIE**	**2.15**	**139**		⇑P		Pn	21 25 57.0	+0.1		
ZIMR		**2.28**	**205**		⇓P		Pn	21 25 58.6	+0.2		
ZIMR					⇑S		Sn	21 26 25.6	-1.6		
ZIMR		**2.28**	**205**		⇓P		Pn	21 25 58.6	+0.2		
ZIMR					⇑S		Sn	21 26 25.6	-1.6		
PSN	**Preselentsi**	**2.31**	**152**		P		Pn	21 25 59.7	+0.9		
SZH	**Strazhica**	**2.52**	**193**		P		Pn	21 26 01.3	-0.2		
PRD	**Provadia**	**2.58**	**168**		P		Pn	21 26 03.1	+0.9		
SORM	**Soroca**	**2.66**	**25**		⇑P		Pn	21 26 03.0	-0.1		
SORM	**Soroca**	**2.66**	**25**		⇑P		Pn	21 26 03.0	-0.1		
SRE	**Strehaia**	**2.69**	**248**		⇑S		Sn	21 26 35.5	-0.9		
SRE	**Strehaia**	**2.69**	**248**		⇑S		Sn	21 26 35.5	-0.9		
PLVB	**Pleven**	**2.77**	**213**		⇓P		Pn	21 26 04.5	-0.1		
PLVB	**Pleven**	**2.77**	**213**		⇓P		Pn	21 26 04.5	-0.1		
HERR	**Herculane**	**3.13**	**256**		⇓S		Sn	21 26 46.8	+0.1		
HERR	**Herculane**	**3.13**	**256**		⇓S		Sn	21 26 46.8	+0.1		
JMB	**Yambol**	**3.26**	**181**		P		Pn	21 26 10.9	-0.1		
SEV	**Sevastopol'**	**5.08**	**101**		⇓P	*e*	Pn	21 26 35.6	+0.7		
SEV						Pm		21 26 35.9			
	comp=Z,2.0nm,0.2s										
SEV						*e*S	Sn	21 27 34.3	+1.7		
SEV						Sm		21 27 35.2			
	comp=N,4.0nm,0.4s										
SEV						Sm		21 27 35.2			
	comp=E,1.0nm,0.4s										
ALU	**Alushta**	**5.55**	**98**		*e*P		Pn	21 26 41.9	+0.6		
ALU						Pm		21 26 42.5			
	comp=Z,5.0nm,0.4s										

*IDC **29** 21:33:34.7±4.1, 31°.03N×56°.68E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.2/41, mbtmp3.6/3, ML3.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/32, Error ellipse: s-maj=60.6km s-min=38.4km az=75.0*
*TEH **29** 21:33:35.7, 31°.28N×56°.54E, h8km, ML3.7*
*THR **29** 21:33:36.6±0.4, 31°.33N×56°.60E, h14km±12km, ML3.5*
ISC 29 21:33:37.6±1.0, 31°.23N±0°.03×56°.56E±0°.04, h11km, n55, σ0s72/56, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KHGB	**Koh Gabri**	**0.85**	**185**			*e*Pg	**Pg**	**21 33 52.5**	**-1.6**
IBAF	**Bafgh**	**0.92**	**293**			*e*Pg	Pg	21 33 52.1	-3.3
TVBK	**TV Kerman**	**1.25**	**172**			*e*Pg	**Pn**	**21 34 00.3**	**-1.1**
TVBK						*e*		21 34 30.1	
	comp=Z,8μm,0.4s								
KRBR	**Kerman**	**1.25**	**172**			*e*Pg	**Pn**	**21 34 01.6**	**+0.2**
KRBR						*e*Sg	**Sn**	**21 34 20.0**	**+1.6**
KRBR	**Kerman**	**1.25**	**172**			*e*Pg	**Pn**	**21 34 01.6**	**+0.2**
NGRK	**Negar Kerman**	**1.59**	**174**			*e*		21 34 33.1	
	comp=Z,15μm,0.6s								
NGRK						*e*Pg	**Pn**	**21 34 06.5**	**+0.5**
CHMN	**Cheshme madani**	**1.61**	**148**			*e*		21 34 34.3	
	comp=Z,3μm,0.4s								
CHMN						*e*Pg	**Pn**	**21 34 07.1**	**+0.8**
IMEH	**Mehriz**	**1.67**	**276**			*e*		21 34 34.4	
	comp=Z,5μm,0.3s								
IMEH						*e*Pg	**Pn**	**21 34 06.7**	**-0.4**
TPRV	**Parvadeh(Tabas**	**1.80**	**3**			*e*		21 34 41.8	
	comp=Z,17μm,0.4s								
TPRV						*e*Pg	**Pn**	**21 34 08.2**	**-0.5**
YZKH	**Yazd**	**2.03**	**305**			*e*Pn	**Pn**	**21 34 12.3**	**+0.4**
YZKH						IAML		21 34 42.7	
	comp=E,303nm,0.6s								
YZKH						IAML		21 34 44.7	
	comp=N,397nm,0.4s								
YZKH	**Yazd**	**2.03**	**305**			*e*Pn	**Pn**	**21 34 12.3**	**+0.4**
ICHK	**Chekchek**	**2.09**	**300**			*e*Pn	**Pn**	**21 34 12.7**	**-0.1**
ICHK						*e*		21 34 48.2	
	comp=Z,6μm,0.4s								
BSRN	**Basiran**	**2.31**	**71**			*e*Pn	**Pn**	**21 34 15.3**	**-0.5**
BSRN	**Basiran**	**2.31**	**71**			*e*Pn	**Pn**	**21 34 15.3**	**-0.5**
IKOO	**Kooshah**	**2.40**	**60**			*e*Pn	**Pn**	**21 34 16.6**	**-0.5**
IKOO						*e*		21 34 53.7	
	comp=Z,4μm,0.4s								
TKDS	**Koohdasht(Taba**	**2.43**	**11**			*e*Pn	**Pn**	**21 34 16.9**	**-0.4**
TKDS						*e*		21 34 55.8	
	comp=Z,3μm,0.3s								
ITEG	**Tejag**	**2.50**	**48**			*e*Pn	**Pn**	**21 34 18.0**	**-0.4**
ITEG						*e*		21 35 06.1	
	comp=Z,3μm,0.4s								
ISAD	**Sadrabad**	**2.54**	**286**			*e*Pn	**Pn**	**21 34 19.2**	**+0.1**
ISAD						*e*		21 35 02.4	
	comp=Z,2μm,0.4s								
KBAM	**BAM**	**2.65**	**141**			*e*Pn	**Pn**	**21 34 20.9**	**+0.5**
KBAM						*e*		21 35 10.0	
	comp=Z,3μm,0.8s								
TNSJ	**Nastanj**	**2.73**	**1**			*e*Pn	**Pn**	**21 34 20.6**	**-0.9**
NHDN	**Nehbandan**	**3.00**	**86**			*e*Pn	**Pn**	**21 34 25.8**	**+0.6**
AFRZ	**Afriz**	**3.02**	**43**			*e*Pn	**Pn**	**21 34 25.4**	**-0.2**
ANAR	**Anarak**	**3.09**	**310**			*e*Pn	**Pn**	**21 34 25.8**	**-0.7**
IDAH	**Dahanechah**	**3.19**	**61**			*e*Pn	**Pn**	**21 34 28.1**	**+0.1**
IMON	**Monand**	**3.29**	**53**			*e*Pn	**Pn**	**21 34 29.4**	**+0.1**
IMON						*e*		21 34 41.9	
	comp=Z,1μm,0.2s								
IRAM	**Ramesheh**	**3.61**	**280**			*e*Pn	**Pn**	**21 34 34.3**	**+0.6**
IZEF	**Zefreh**	**3.96**	**296**			*e*Pn	**Pn**	**21 34 39.2**	**+0.7**
SHRT	**Shahrakht**	**3.97**	**52**			*e*Pn	**Pn**	**21 34 38.1**	**-0.5**
SHRT	**Shahrakht**	**3.97**	**52**			*e*Pn	**Pn**	**21 34 38.1**	**-0.5**
IGAR	**Gharneh**	**4.02**	**288**			*e*Pn	**Pn**	**21 34 39.6**	**+0.3**
ZHDN	**Zahedan**	**4.11**	**115**			*e*Pn	**Pn**	**21 34 41.2**	**+0.7**
KLNJ	**Kolanjah**	**4.26**	**268**			*e*Pn	**Pn**	**21 34 43.1**	**+0.3**
KRSH	**Karshahi**	**4.62**	**307**			*e*Pn	**Pn**	**21 34 47.6**	**0.0**
IKLH	**Kolahrood**	**4.70**	**298**			*e*Pn	**Pn**	**21 34 49.5**	**+0.7**
IANJ	**Anjilo**	**4.77**	**333**			*e*Pn	**Pn**	**21 34 49.1**	**-0.6**
ISFB	**Sefidab**	**4.79**	**312**			*e*Pn	**Pn**	**21 34 49.7**	**0.0**
QAM	**Ghamsar**	**5.01**	**302**			*e*Pn	**Pn**	**21 34 53.6**	**+0.7**
IPIR	**Pirpir**	**5.03**	**288**			*e*Pn	**Pn**	**21 34 52.8**	**-0.5**
ILAS	**Lasjerd**	**5.12**	**325**			*e*Pn	**Pn**	**21 34 54.3**	**-0.2**
SBZV	**Sabzevar**	**5.22**	**9**			*e*Pn	**Pn**	**21 34 55.6**	**-0.3**
ISHM	**Shahmirzad**	**5.32**	**330**			*e*Pn	**Pn**	**21 34 56.1**	**-1.1**
IMOG	**Moghan**	**5.39**	**25**			*e*Pn	**Pn**	**21 34 58.8**	**+0.5**
IPAY	**Payeh**	**5.59**	**21**			*e*Pn	**Pn**	**21 35 02.2**	**+1.3**
JRKH	**Jarkhoshk**	**5.64**	**33**			*e*Pn	**Pn**	**21 35 01.7**	**+0.2**
IAKL	**Akhelmad**	**5.66**	**18**			*e*Pn	**Pn**	**21 35 02.2**	**+0.2**
IGLO	**Ghaloghah**	**5.73**	**337**			*e*Pn	**Pn**	**21 35 03.1**	**+0.3**
IMYA	**Miami**	**5.89**	**29**			*e*Pn	**Pn**	**21 35 05.4**	**+0.4**
ISFR	**Sfrayin**	**5.93**	**11**			*e*Pn	**Pn**	**21 35 05.7**	**0.0**
IKRD	**Kardeh**	**6.05**	**23**			*e*Pn	**Pn**	**21 35 07.4**	**+0.1**
IPRN	**Peran**	**6.11**	**326**			*e*Pn	**Pn**	**21 35 08.7**	**+0.7**
SRVN	**Saravan**	**6.37**	**125**			*e*Pn	**Pn**	**21 35 12.0**	**+0.5**
GEYT	**Alibeck**	**6.81**	**10**			Pn	**Pn**	**21 35 17.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=191,slow=15,SNR=18								
GEYT						Sn	**Sn**	**21 36 37.7**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=29,SNR=1.0								
GEYT						Lg	Lg	21 37 17.7	
	comp=Z,0.3nm,0.3s,baz=191,slow=15,SNR=2.4								
GEYT						LR	LR	21 38 32.1	
	comp=Z,51nm,21.1s,baz=240,slow=43								
QALM	**Alamut, Qazvin**	**7.15**	**318**			*e*Pn	**Pn**	**21 35 22.9**	**+0.6**
MKAR	**Makanchi Array**	**25.17**	**45**			P	**P**	**21 39 02.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=231,slow=8.4,SNR=5.8								
ZALV	**Zalesovo Beam**	**30.44**	**34**			P	**P**	**21 39 49.8**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=251,slow=4.4,SNR=2.3								

IDC 29 21:34:59.5±5.5, 6°.18S×155°.79E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/35, mbtmp3.8/4, ML3.7/1, Error ellipse: s-maj=153.0km s-min=40.0km az=106.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**16.64**	**213**			Pn	Pn	21 38 55.6	+1.2
	0.2nm,0.3s,baz=27,slow=14,SNR=1.8								
WRA	**Warramunga Arr**	**24.93**	**235**			P	P	21 40 23.5	-1.1
	0.7nm,0.3s,baz=61,slow=8.8,SNR=14								
H11S3	**WAKE ISLAND Hy**	**26.77**	**23**			T	T	22 09 06.6	
	baz=202								
H11S2	**WAKE ISLAND Hy**	**26.77**	**24**			T	T	22 09 09.0	
	baz=202								
H11S1	**WAKE ISLAND Hy**	**26.79**	**23**			T	T	22 09 07.2	
	baz=202								
ASAR	**Alice Springs**	**27.30**	**228**			P	P	21 40 47.2	+1.0
	0.5nm,0.3s,baz=56,slow=10,SNR=7.0								
H11N1	**WAKE ISLAND Hy**	**27.95**	**23**			T	T	22 10 37.1	
	baz=217								
H11N3	**WAKE ISLAND Hy**	**27.96**	**23**			T	T	22 10 37.7	
	baz=217								
H11N2	**WAKE ISLAND Hy**	**27.97**	**23**			T	T	22 10 41.0	
	baz=217								
MKAR	**Makanchi Array**	**83.32**	**318**			P	P	21 47 28.4	0.0
	0.3nm,0.7s,baz=110,slow=3.8,SNR=3.5								

*NEIC **29** 21:40:05.4±1.2, 44°.6N±0°.1×151°.4E±0°.2, h10km±2km, mb4.4/23, Error ellipse: s-maj=24.2km s-min=13.4km az=139.0*
*SKHL **29** 21:40:10.1±0.4, 44°.80N×151°.20E, h49km±2km, mb4.8/4*
*JMA **29** 21:40:11.1±0.5, 45°.26N×151°.01E, h30km, M4.4*
*MOS **29** 21:40:12.2±1.1, 45°.18N×150°.91E, h44km, mb4.5/5, Error ellipse: s-maj=8.2km s-min=8.0km az=108.1*
*IDC **29** 21:40:13.2±3.3, 45°.32N×151°.01E, h37km±27km, mb3.6/17, mb1 3.8/22, mb1mx3.7/41, mbtmp3.8/22, ML3.2/6, MS3.0/4, Ms1 3.0/4, ms1mx2.7/52, Error ellipse: s-maj=22.2km s-min=15.5km az=133.0*
ISC 29 21:40:10.1±0.6, 44°.70N±0°.08×151°.22E±0°.06, h35km, n154, σ1s75/162, mb4.1/38, 7C-10D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.44**	**284**			*e*PN	**Pn**	**21 40 47.1**	**-0.3**
KUR						*e*S	**Sn**	**21 41 12.3**	**-3.7**
KUR						pmax	pmax		
	comp=Z,211nm,0.2s								
KUR						pmax	pmax		
	comp=N,91nm,0.4s								
KUR						pmax	pmax		
	comp=E,47nm,0.2s								
KUR						smax	smax		
	comp=N,647nm,0.3s								
KUR						smax	smax		
	comp=E,414nm,0.3s								
KUR						smax	smax		
	comp=E,855nm,1.8s								
KUR	**Kuril'sk**	**2.44**	**284**			*e*P	**Pn**	**21 40 47.1**	**-0.3**
KUR						AMB	AMB	21 40 48.0	
	comp=E,90nm,0.3s								
KUR						AMB	AMB	21 40 48.0	
	comp=E,50nm,0.3s								
KUR						AMB	AMB	21 40 48.0	
	comp=E,210nm,0.3s								
KUR						*e*S	**Sn**	**21 41 14.6**	**-1.4**
KUR						A	A	21 41 17.9	
	comp=E,650nm,0.3s								
KUR						A	A	21 41 17.9	
	comp=E,360nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**3.90**	**262**			*e*PN	**Pn**	**21 41 05.1**	**-2.3**
YUK						pmax	pmax		
	comp=Z,171nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**3.90**	**262**			*e*P	**Pn**	**21 41 08.4**	**+1.0**
YUK						AMB	AMB	21 41 10.6	
	comp=Z,170nm,0.3s								
YUK						*e*S	**Sn**	**21 41 52.4**	**+0.5**
YUK						A	A	21 42 01.1	
	comp=Z,220nm,0.6s								
YUK						A	A	21 42 01.1	
	comp=Z,400nm,0.6s								
GRPR	**Tuman**	**3.97**	**262**			*e*PN	**Pn**	**21 41 10.0**	**+1.6**
GRPR						S	**Sn**	**21 41 55.5**	**+1.8**
GRPR						pmax	pmax		
	comp=Z,100nm,0.3s								
GRPR						smax	smax		
	comp=N,186nm,0.3s								
GRPR						smax	smax		
	comp=E,104nm,0.4s								
GRPR	**Tuman**	**3.97**	**262**			*e*P	**Pn**	**21 41 10.0**	**+1.6**
GRPR						AMB	AMB	21 41 16.0	
	comp=E,100nm,0.3s								
GRPR						*e*S	**Sn**	**21 41 55.5**	**+1.8**
GRPR						A	A	21 42 01.0	
	comp=E,190nm,0.4s								
GRPR						A	A	21 42 01.0	
	comp=E,100nm,0.4s								
NEM2	**Nemuro 2**	**4.17**	**253**			P	**Pn**	**21 41 12.9**	**+1.8**
NEM2						*e*S	**Sn**	**21 41 58.5**	**0.0**
NMR	**Nemuro--Hokkai**	**4.18**	**253**			⇓*i*PN	**Pn**	**21 41 12.9**	**+1.7**
NMR	**Nemuro--Hokkai**	**4.18**	**253**			*i* P	**Pn**	**21 41 13.0**	**+1.7**
NMR						*i* S	**Sn**	**21 41 59.8**	**+1.0**
RUSJ	**Misakicho**	**4.32**	**264**			*e*PN	**Pn**	**21 41 16.7**	**+3.5**
RUSJ						*e*S	**Sn**	**21 42 06.7**	**+4.4**
JRA	**Rausu**	**4.44**	**262**			P	**Pn**	**21 41 17.6**	**+2.7**
JNK	**Nakash**	**4.81**	**259**			P	**Pn**	**21 41 22.3**	**+2.4**
JNK						*e*S	**Sn**	**21 42 14.5**	**+0.1**
JAK	**Akkeshi**	**5.01**	**252**			P	**Pn**	**21 41 24.3**	**+1.6**
JAK						*e*S	**Sn**	**21 42 18.3**	**-1.1**
JTKR	**Abashiri--Toko**	**5.29**	**265**			P	**Pn**	**21 41 29.2**	**+2.6**
JAR	**Ashorobuto**	**5.55**	**258**			P	**Pn**	**21 41 33.0**	**+2.8**
JAR						*e*S	**Sn**	**21 42 33.1**	**+0.4**
JOB	**Onbets**	**5.64**	**254**			P	**Pn**	**21 41 33.4**	**+2.1**
JOB						*e*S	**Sn**	**21 42 34.2**	**-0.6**
JMP	**Maruseppu**	**5.68**	**266**			P	**Pn**	**21 41 34.8**	**+2.9**
JCH	**Churui**	**6.07**	**253**			P	**Pn**	**21 41 39.1**	**+1.9**
JCH						*e*S	**Sn**	**21 42 44.5**	**-0.9**
JKK2	**Kamakawa 2**	**6.14**	**265**			P	**Pn**	**21 41 41.2**	**+3.0**
JKA	**Kamikawa-asahi**	**6.20**	**268**			Pn	**Pn**	**21 41 40.1**	**+1.0**
JKA	**Kamikawa-asahi**	**6.20**	**268**			*e*P	**Pn**	**21 41 42.0**	**+2.9**
ASAJ	**Asahikawa**	**6.21**	**268**			Pn	**Pn**	**21 41 42.0**	**+3.0**
	comp=E,2.5nm,0.3s,baz=96,slow=17,SNR=17								
ASAJ						Sn	**Sn**	**21 42 46.7**	**-2.1**
	comp=E,0.4nm,0.3s,baz=96,slow=15,SNR=1.6								
ASAJ						LR	LR	21 44 06.7	
	comp=E,132nm,19.6s,baz=131,slow=38								
ASAJ	**Asahikawa**	**6.21**	**268**			P	**Pn**	**21 41 42.1**	**+3.0**
YSS	**Yuzh-Sakhalins**	**6.33**	**294**			*e*PN	**Pn**	**21 41 42.1**	**+1.3**
YSS						MLR	MLR		
	comp=Z,200nm,15.0s								
YSS						MLR	MLR		
	comp=E,100nm,18.0s								
YSS	**Yuzh-Sakhalins**	**6.33**	**294**			*e*P	**Pn**	**21 41 42.1**	**+1.3**
YSS						AMB	AMB	21 41 45.0	
	comp=E,20nm,0.5s								
ERM	**Erimo**	**6.46**	**248**			*de*PN	**Pn**	**21 41 46.8**	**+4.2**
JNBK	**Urakawa-nobuka**	**6.62**	**252**			P	**Pn**	**21 41 46.3**	**+1.6**
JNBK						*e*S	**Sn**	**21 42 56.8**	**-2.1**
JBT2	**Biratori 2**	**6.70**	**256**			P	**Pn**	**21 41 47.5**	**+1.7**
JEW	**Eniwo**	**7.31**	**259**			Pn	**Pn**	**21 41 53.0**	**-1.3**
JNB	**Noboribetsu**	**7.72**	**257**			P	**Pn**	**21 42 01.8**	**+1.9**
JNB						*e*S	**Sn**	**21 43 23.6**	**-2.5**
JKB	**Kayabe**	**7.94**	**253**			P	**Pn**	**21 42 04.4**	**+1.4**
JKB						*e*S	**Sn**	**21 43 27.7**	**-3.8**
JYM2	**Yakumo 2**	**8.31**	**256**			P	**Pn**	**21 42 09.9**	**+1.9**
JANG	**Nango**	**8.37**	**242**			P	**Pn**	**21 42 09.1**	**+0.3**
JANG						*e*S	**Sn**	**21 43 37.1**	**-4.8**
JTH	**Tanohata**	**8.40**	**239**			*e*S	**Sn**	**21 43 38.5**	**-4.4**
JTM	**Tenmabayashi**	**8.43**	**246**			P	**Pn**	**21 42 11.5**	**+1.9**
JTM						*e*S	**Sn**	**21 43 39.9**	**-3.6**
JTM	**Tenmabayashi**	**8.43**	**246**			Pn	**Pn**	**21 42 11.0**	**+1.4**
JSR	**Shiriuchi**	**8.51**	**252**			P	**Pn**	**21 42 12.8**	**+2.1**
JOSM	**Okushiri--Mats**	**8.94**	**257**			P	**Pn**	**21 42 18.9**	**+2.3**
PEA0B	**Petropavlovsk-**	**9.43**	**25**			PN	**Pn**	**21 42 22.6**	**-0.8**
PEA0B	**Petropavlovsk-**	**9.43**	**25**			Pn	**Pn**	**21 42 22.6**	**-0.8**
PETK	**Petropavlovsk-**	**9.43**	**25**			Pn	**Pn**	**21 42 19.2**	**-4.1**
	comp=E,0.2nm,0.3s,baz=264,slow=11,SNR=4.2								
JRG	**Rokugo**	**9.49**	**240**			P	**Pn**	**21 42 26.1**	**+2.0**
JRG						*e*S	**Sn**	**21 44 06.0**	**-3.5**
JSD	**Sado**	**11.79**	**240**			Pn	**Pn**	**21 42 53.4**	**-2.1**
MJAR	**Matsushiro Arr**	**12.80**	**235**			Pn	**P**	**21 43 16.6**	**-3.3**
	comp=E,0.1nm,0.3s,baz=128,slow=16,SNR=5.6								
MJAR						LR	LR	21 48 53.0	
	comp=E,46nm,20.1s,baz=65,slow=40								
USA0B	**Ussuriysk Arra**	**13.75**	**275**			⇓*e*P	**Pn**	**21 43 22.3**	**-0.1**
USA0B	**Ussuriysk Arra**	**13.75**	**275**			Pn	**Pn**	**21 43 21.0**	**-1.4**
USRK	**Ussuriysk Ar.**	**13.75**	**275**			Pn	**Pn**	**21 43 22.8**	**+0.4**
	baz=83,slow=12,SNR=4.8								
USRK	**Ussuriysk Ar.**	**13.75**	**275**				**Pn**	**21 43 22.1**	**-0.3**
KLR	**Kul'dur**	**14.04**	**296**			Pn	**Pn**	**21 43 28.7**	**+2.4**
	comp=E,0.1nm,0.3s,baz=126,slow=15,SNR=2.2								
SEY	**Seymchan**	**18.29**	**2**			P	**Pn**	**21 44 17.6**	**-3.0**
	comp=E,0.1nm,0.3s,baz=163,slow=19,SNR=2.3								
KSRS	**Korea Array**	**18.96**	**256**			P	**Pn**	**21 44 29.7**	**+0.8**
	comp=E,0.1nm,0.3s,baz=58,slow=12,SNR=4.1								
KSRS						LR	LR	21 52 08.4	
	comp=E,29nm,18.4s,baz=42,slow=38								
YAK	**Yakutsk**	**21.42**	**332**			P	**P**	**21 44 55.2**	**+0.6**
YAK						pmax	pmax		
	comp=Z,13nm,0.5s								
YAK	**Yakutsk**	**21.42**	**332**			P	**P**	**21 44 55.2**	**+0.6**
YAK						IAmb	IAmb	21 45 07.9	
	comp=Z,13nm,0.5s								
YAK	**Yakutsk**	**21.42**	**332**			*e*P	**P**	**21 44 55.2**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**28.10**	**147**			T	T	22 16 53.7	
	baz=336,slow=75,SNR=77								
H11N1	**WAKE ISLAND Hy**	**28.12**	**147**			T	T	22 16 59.1	
	baz=336,slow=75,SNR=68								
H11N3	**WAKE ISLAND Hy**	**28.12**	**147**			T	T	22 16 55.5	
	baz=336,slow=75,SNR=67								
TIXI	**Tiksi**	**29.10**	**346**			P	**P**	**21 46 02.5**	**-4.4**
	comp=Z,0.4nm,0.4s,baz=116,slow=1.9,SNR=2.0								
H11S1	**WAKE ISLAND Hy**	**29.14**	**149**			T	T	22 18 16.0	
	baz=337,slow=76,SNR=74								
H11S3	**WAKE ISLAND Hy**	**29.15**	**149**			T	T	22 18 18.9	
	baz=337,slow=76,SNR=69								
HHC	**Hu-ho-hao-te**	**29.16**	**277**			*e*P	**P**	**21 46 09.8**	**+1.9**
HHC						pmax	pmax		
	comp=Z,14nm,0.6s								
HHC						pmax	pmax		
	comp=Z

GEYT	**Alibeck**	**66.51 301**		IAmb	IAmb	21 50 57.4	
	comp=Z,1.4nm,0.8s						
PDAR	**Pinedale Array**	**67.04 52**	P		**P**	**21 51 00.4**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=322,slow=5.7,SNR=1.6						
NB201	**NORSAR Array S**	**69.70 340**	P		**P**	**21 51 14.9**	**-0.9**
NOA	**NORSAR Array B**	**69.73 341**	P		**P**	**21 51 14.9**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.5,SNR=8.6						
ASAR	**Alice Springs**	**69.85 197**	P		P	21 51 23.6	+6.6
	comp=Z,0.6nm,0.8s,baz=33,slow=4.8,SNR=4.5						
KBZ	**Khabaz**	**71.32 313**	P		**P**	**21 51 25.5**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=45,slow=6.7,SNR=5.9						
KBZ	**Khabaz**	**71.32 313**	*e*P		**P**	**21 51 26.8**	**+0.9**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**71.32 313**	*e*P		**P**	**21 51 26.8**	**+0.9**
AKASG	**Malin Array Be**	**72.50 326**	P		**P**	**21 51 32.1**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=38,slow=6.2,SNR=4.1						
KWP	**Kalwaria Pacla**	**75.89 328**	P		**P**	**21 51 52.2**	**-0.5**
KWP				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KWP	**Kalwaria Pacla**	**75.89 328**	P		**P**	**21 51 52.2**	**-0.5**
BUR08	**Bucovina Ar. S**	**76.54 326**	P		**P**	**21 51 56.5**	**-0.1**
BURAR	**Bucovina Array**	**76.56 326**	⇑P		**P**	**21 51 56.4**	**-0.2**
BURAR	**Bucovina Array**	**76.56 326**	⇑P		**P**	**21 51 56.4**	**-0.2**
BURAR	**Bucovina Array**	**76.56 326**	P		**P**	**21 51 56.4**	**-0.2**
BURAR				IAmb	IAmb	21 51 57.5	
	comp=Z,4.2nm,0.8s						
TESR	**Tescani**	**76.85 324**	⇑P		**P**	**21 51 55.3**	**-2.9**
TRPA	**Tarpa**	**77.19 328**	⇓P		**P**	**21 52 00.7**	**+0.7**
VRI	**Vrincioaia**	**77.34 324**	⇓P		P	21 52 07.0	+6.1
VRI	**Vrincioaia**	**77.34 324**	⇓P		P	21 52 07.0	+6.1
LANS	**Liptovska Anna**	**77.48 330**	*e*P		**P**	**21 52 03.1**	**+1.4**
LANS	**Liptovska Anna**	**77.48 330**	*e*P		**P**	**21 52 03.1**	**+1.4**
DPC	**Dobruska-Polom**	**77.54 332**	*e*P		**P**	**21 52 01.8**	**-0.2**
DPC	**Dobruska-Polom**	**77.54 332**	*e*P		**P**	**21 52 01.8**	**-0.2**
MORC	**Moravsky Berou**	**77.62 331**	⇑P		**P**	**21 52 02.7**	**+0.2**
MORC	**Moravsky Berou**	**77.62 331**	P		**P**	**21 52 02.4**	**-0.1**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MORC	**Moravsky Berou**	**77.62 331**	P		**P**	**21 52 02.4**	**-0.1**
MORC				IAmb	IAmb	21 52 03.6	
	comp=Z,2.4nm,0.8s						
KRLC	**Kraliky**	**77.62 332**	*e*P		**P**	**21 52 02.4**	**-0.1**
KRLC	**Kraliky**	**77.62 332**	*e*P		**P**	**21 52 02.4**	**-0.1**
CLL	**Collm**	**77.77 335**	*i* P		**P**	**21 52 02.8**	**-0.4**
	comp=Z,4.0nm,0.8s						
CLL				LmV		22 49 00.0	
	comp=Z,100nm,20.8s						
CLL	**Collm**	**77.77 335**	*i* P		**P**	**21 52 02.8**	**-0.4**
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MLR	**Muntele Rosu**	**77.97 324**	⇓P		**P**	**21 52 06.0**	**+1.4**
MLR	**Muntele Rosu**	**77.97 324**	P		**P**	**21 52 05.0**	**+0.4**
MLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MLR	**Muntele Rosu**	**77.97 324**	P		**P**	**21 52 05.0**	**+0.4**
MLR				IAmb	IAmb	21 52 06.2	
	comp=Z,5.7nm,1.0s						
VYHS	**Vyhne**	**78.25 330**	*e*P		**P**	**21 52 06.9**	**+0.9**
VYHS	**Vyhne**	**78.25 330**	*e*P		**P**	**21 52 06.9**	**+0.9**
VOIR		**78.38 325**	⇓P		**P**	**21 52 07.8**	**+0.9**
VOIR		**78.38 325**	⇓P		**P**	**21 52 07.8**	**+0.9**
ARR	**Arges**	**78.61 325**	⇓P		**P**	**21 52 10.2**	**+2.1**
BRTR	**Keskin Array B**	**78.96 316**	P		**P**	**21 52 11.0**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=1.7,slow=4.8,SNR=2.2						
KHC	**Kasperske Hory**	**79.49 333**	*e*P		**P**	**21 52 12.0**	**-0.8**
KHC	**Kasperske Hory**	**79.49 333**	*e*P		**P**	**21 52 12.0**	**-0.8**
CKRC	**Cesky Krumlov**	**79.53 333**	*e*P		**P**	**21 52 12.7**	**-0.3**
BZS	**Buzias**	**79.62 327**	⇑P		**P**	**21 52 13.7**	**+0.2**
BZS	**Buzias**	**79.62 327**	⇑P		**P**	**21 52 13.7**	**+0.2**
TXAR	**Lajitas Array**	**79.67 59**	P		**P**	**21 52 16.6**	**+2.4**
	comp=Z,0.1nm,0.4s,baz=309,slow=4.4,SNR=1.9						
GERES	**GERESS Array B**	**79.70 333**	P		**P**	**21 52 14.0**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=34,slow=5.0,SNR=7.5						
GERES	**GERESS Array B**	**79.70 333**	*e*P		**P**	**21 52 14.3**	**+0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H03N2	**Juan Fernandez**	**140.05 91**	T		T	00 37 04.2	
	baz=315,slow=75,SNR=28						
H03N1	**Juan Fernandez**	**140.06 91**	T		T	00 37 04.7	
	baz=307,slow=75,SNR=6.0						

IDC 29 21:40:36.9±35.0, 19°29S×178°42E, h508km±329km, mb2.9/3, mb1 3.1/3, mb1mx2.8/28, mbtmp3.9/3, Error ellipse: s-maj=975.0km s-min=105.2km az=84.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**1.59**	**347**	P		21 41 41.1	-0.1
	2.7nm,0.3s,baz=208,slow=6.1,SNR=9.7						
STKA	**Stephens Creek**	**35.33**	**242**	P		21 46 49.1	-0.1
	1.0nm,0.6s,baz=72,slow=9.6,SNR=5.1						
WRA	**Warramunga Arr**	**41.44**	**261**	P		21 47 38.9	-0.2
	0.5nm,0.4s,baz=98,slow=7.5,SNR=19						
ASAR	**Alice Springs**	**41.53**	**256**	P		21 47 39.6	-0.1
	1.0nm,0.4s,baz=87,slow=7.8,SNR=15						

*BEO **29** 21:51:20.4±0.8, 41°.00N×20°.05E, h3km±2km, ML2.0/9*
*TIR **29** 21:51:21.1, 41°.21N×20°.17E, h2km±1km, Md2.6, Ml2.5*
*SKO **29** 21:51:22.1, 41°.30N×20°.21E, h15km*
ISC 29 21:51:21.4±1.2, 41°10N±0°.04×20°08E±0°.04, h6km±9km, n21, σ1s02/36, 1C, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**327**	*e*Pg	**Pg**	**21 51 27.2**	**0.0**
TIR				*e*Sg	**Sg**	**21 51 32.2**	**+1.1**
TIR	**Tirane**	**0.29**	**327**	P	**Pg**	**21 51 27.7**	**+0.6**
	baz=302						
TIR				S	**Sg**	**21 51 31.9**	**+0.8**
	baz=302						
TIR				AMP			
	comp=N,1.0nm,0.4s,baz=302						
TIR	**Tirane**	**0.29**	**327**	*i* Pg	**Pg**	**21 51 27.8**	**+0.6**
OHR	**Ohrid**	**0.55**	**88**	*i* Pg	**Pg**	**21 51 32.1**	**+0.2**
OHR				*i* Sg	**Sg**	**21 51 39.7**	**+0.7**
OHR				*e*Lg	Lg	21 51 40.4	
	comp=E,50nm,0.5s						
OHR				*e*Lg	Lg	21 51 40.5	
	comp=N,55nm,0.4s						
PHP	**Peshkopia**	**0.65**	**25**	P	**Pg**	**21 51 32.2**	**-1.6**
	baz=23						
PHP				S	**Sg**	**21 51 40.8**	**-1.5**
	baz=23						
KBN	**Korca**	**0.72**	**131**	P	**Pb**	**21 51 36.4**	**+0.1**
	baz=141						
KBN				S	**Sn**	**21 51 48.5**	**-1.0**
	baz=141						
PUK	**Puka**	**0.95**	**352**	P	**Pg**	**21 51 38.7**	**-1.0**
	baz=347						
PUK				S	**Sg**	**21 51 51.5**	**-0.6**
	baz=347						
PUK				AMP			
	comp=N,0.2nm,0.1s,baz=347						
FNA	**Florina**	**1.03**	**107**	*i* Pn	**Pn**	**21 51 42.1**	**-0.4**
BCI	**Bajram Curri**	**1.27**	**360**	P	**Pn**	**21 51 44.4**	**-1.2**
	baz=357						
BCI				S	**Sb**	**21 52 02.3**	**+0.1**
	baz=357						
PDG	**Podgorica**	**1.47**	**335**	*e*Pg	**Pn**	**21 51 48.0**	**-0.3**
PDG				*e*Sg	**Sg**	**21 52 10.1**	**+1.6**
PDG	**Podgorica**	**1.47**	**335**	*i* Pn	**Pb**	**21 51 48.5**	**-0.5**
STIP	**Stip**	**1.69**	**69**	*i* Pn	**Pb**	**21 51 53.6**	**+0.7**
GRG	**Griva**	**1.77**	**94**	*i* Pn	**Pn**	**21 51 52.6**	**+0.1**
BARS	**Barje**	**2.15**	**37**	*e*Pn	**Pn**	**21 51 57.0**	**-0.8**
BARS				*e*Sn	**Sn**	**21 52 25.7**	**+1.0**
SJES	**Sjenica**	**2.16**	**358**	*e*Pn	**Pb**	**21 51 59.9**	**-1.1**
SJES				*e*Sn	**Sb**	**21 52 26.8**	**-1.2**
BOSS	**Bosilegrad**	**2.28**	**51**	*e*Pn	**Pn**	**21 51 59.4**	**-0.1**
BOSS				*e*Sn	**Sn**	**21 52 29.5**	**+1.7**
IVAS	**Ivanjica**	**2.48**	**1**	*e*Pn	**Pn**	**21 52 02.9**	**+0.6**
IVAS				*e*Sn	**Sb**	**21 52 35.8**	**-1.2**
MATE	**Matera**	**2.60**	**261**	⇑P	**Pn**	**21 52 02.8**	**-1.0**
BOVS	**Bovan**	**2.81**	**25**	*e*Pn	**Pn**	**21 52 06.8**	**0.0**
BOVS				*e*Sn	**Sn**	**21 52 42.9**	**+2.0**
BBLS	**Lazići**	**2.81**	**350**	*e*Pn	**Pn**	**21 52 07.9**	**+1.0**
BBLS				*e*Sn	**Sn**	**21 52 42.2**	**+1.1**
ZAPS	**Zavoj**	**2.89**	**40**	*e*Pn	**Pn**	**21 52 08.7**	**+0.8**
ZAPS				*e*Sn	**Sn**	**21 52 44.0**	**+1.1**

ATH 29 21:51:45.5, 37°.81N×22°.07E, h8km±2km, ML1.9/9, Error ellipse: s-maj=2.9km s-min=0.7km az=264.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLV	**Kalavryta, Ach**	**0.24**	**15**	P	Pg	21 51 50.4	0.0
KLV				S	Sg	21 51 54.2	+0.5
KLV				AML	AML	21 51 55.2	
	comp=N,603μm,0.1s						
KLV				AML	AML	21 51 55.4	
	comp=E,450μm,0.1s						
DRO	**Drossia**	**0.32**	**297**	P	Pg	21 51 51.8	0.0
DRO				S	Sg	21 51 56.5	+0.5
DRO				AML	AML	21 51 59.1	
	comp=N,628μm,0.2s						
DRO				AML	AML	21 52 00.7	
	comp=E,832μm,0.2s						
AMT	**Artemida-Makis**	**0.40**	**226**	P	Pg	21 51 53.3	0.0
AMT				S	Sg	21 51 59.2	+0.7
LAKA	**Lakka**	**0.43**	**350**	P	Pg	21 51 53.4	-0.6
LAKA				S	Sg	21 52 00.1	+0.3
LAKA				AML	AML	21 52 01.4	
	comp=N,1221μm,0.3s						
LAKA				AML	AML	21 52 02.7	
	comp=E,796μm,0.2s						
VLX	**Vlachokerasia**	**0.50**	**151**	P	Pg	21 51 54.9	-0.3
VLX				S	Sg	21 52 02.3	+0.4
VLX				AML	AML	21 52 04.4	
	comp=N,255μm,0.3s						
VLX				AML	AML	21 52 04.6	
	comp=E,268μm,0.4s						
THAL	**Thalero**	**0.52**	**64**	P	Pg	21 51 55.6	0.0
THAL				S	Sg	21 52 02.2	-0.2
RLS	**Riolos of Patr**	**0.54**	**298**	P	Pg	21 51 55.4	-0.5
RLS				S	Sg	21 52 03.4	+0.5
RLS				AML	AML	21 52 07.7	
	comp=E,460μm,0.3s						
RLS				AML	AML	21 52 08.4	
	comp=N,232μm,0.3s						
TRIZ	**Trizonia**	**0.56**	**0**	P	Pg	21 51 55.7	-0.5
TRIZ				S	Sg	21 52 03.7	+0.2
ITM	**Ithomi**	**0.64**	**190**	P	Pg	21 51 57.4	-0.4
ITM				S	Sg	21 52 06.5	+0.4
AXS	**Araxos**	**0.67**	**305**	P	Pg	21 51 57.3	-1.1
AXS				AML	AML	21 52 11.1	
	comp=E,148μm,0.4s						
AXS				AML	AML	21 52 11.1	
	comp=N,202μm,0.3s						
LTK	**Loutraki**	**0.74**	**73**	P	Pg	21 51 59.5	-0.2
ANX	**Ano Chora**	**0.79**	**352**	P	Pg	21 52 00.0	-0.7
ANX				AML	AML	21 52 13.7	
	comp=N,283μm,0.3s						
ANX				AML	AML	21 52 15.4	
	comp=E,263μm,0.2s						
PVO	**Paravola**	**0.91**	**332**	P	Pg	21 52 02.6	-0.4
PYL	**PYLOS**	**0.95**	**196**	P	Pg	21 52 03.2	-0.6
LKR	**Lokris**	**1.11**	**41**	P	Pg	21 52 06.7	-0.1
LKR				AML	AML	21 52 24.4	
	comp=E,81μm,0.2s						
LKR				AML	AML	21 52 26.2	
	comp=N,80μm,0.3s						
EVR	**Evrytania**	**1.12**	**350**	P	Pg	21 52 06.5	-0.6
EVR				AML	AML	21 52 25.9	
	comp=E,125μm,0.5s						
EVR				AML	AML	21 52 26.9	
	comp=N,78μm,0.5s						
AGG	**Agios Georgios**	**1.23**	**10**	P	Pb	21 52 08.1	-0.8
AGG				S	Sg	21 52 25.3	+0.3
VLI	**Veliai**	**1.29**	**147**	P	Pn	21 52 09.4	-0.4
DION	**Dionisos Attik**	**1.50**	**79**	P	Pn	21 52 13.0	+0.3

*IDC **29** 22:00:45.7±1.6, 11°.25N×126°.98E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.5/47, mbtmp3.8/6, Error ellipse: s-maj=84.0km s-min=21.4km az=65.0*
ISC 29 22:00:50.8±1.8, 11°.2N±0°.3×127°.0E±0°.5, h35km, n6, σ0s68/6, mb3.8/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**28.03**	**288**	P	**P**	**22 06 38.9**	**0.0**
	0.7nm,0.3s,baz=106,slow=9.6,SNR=1.9						
WRA	**Warramunga Arr**	**31.81**	**167**	P	**P**	**22 07 11.8**	**-0.5**
	0.7nm,1.0s,baz=344,slow=8.4,SNR=2.4						
ASAR	**Alice Springs**	**35.34**	**169**	P	**P**	**22 07 43.5**	**+0.6**
	0.2nm,0.4s,baz=356,slow=7.6,SNR=4.7						
MKAR	**Makanchi Array**	**51.71**	**322**	P	**P**	**22 09 54.9**	**+0.3**
	1.2nm,0.7s,baz=111,slow=8.8,SNR=14						
ZALV	**Zalesovo Beam**	**54.14**	**331**	P	**P**	**22 10 12.7**	**+0.4**
	0.4nm,0.4s,baz=108,slow=9.4,SNR=2.4						
KURBB	**Kurchatov Arra**	**55.70**	**325**	P	**P**	**22 10 22.9**	**-0.8**
	1.5nm,0.6s,baz=125,slow=7.0,SNR=6.9						

*DMN **29** 22:10:49.1±0.9, 28°.36N×88°.04E, h30km, Ml5.2/5, Error ellipse: s-maj=37.8km s-min=17.5km az=174.0*
*BJI **29** 22:10:52.1±0.0, 28°.49N×87°.29E, h8km, mB4.7/35, mb4.5/50, Ms4.3/54, Ms7 4.2/48*
*NEIC **29** 22:10:52.1±1.7, 28°.33N±0°.08×87°.23E±0°.06, h10km±1km, mb4.5/75, Error ellipse: s-maj=13.4km s-min=7.8km az=198.0*
*NDI **29** 22:10:54.6±3.7, 28°.06N×87°.26E, h10km, ML4.2*
*IDC **29** 22:10:55.6±2.9, 28°.38N×87°.36E, h30km±20km, mb3.9/29, mb1 4.1/31, mb1mx4.0/58, mbtmp4.1/31, ML3.6/2, MS3.6/26, Ms1 3.6/26, ms1mx3.5/53, Error ellipse: s-maj=11.0km s-min=10.5km az=64.0*
ISC 29 22:10:56.1±0.3, 28°40N±0°.04×87°30E±0°.03, h35km, n218, σ1s94/233, mb4.4/68, MS3.7/27, 13C-7D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**1.35**	**249**	*e*Pg	**Pn**	**22 11 17.6**	**-1.1**
PKI	**Pulchoki**	**1.86**	**244**	*e*Pg	**Pn**	**22 11 27.1**	**+1.3**
PKI				*e*Sg	**Sn**	**22 11 52.5**	**+4.2**
	4μm,0.6s						
PKIN	**Phulchoki**	**1.87**	**245**	*e*Pg	**Pn**	**22 11 27.1**	**+1.2**
KKN	**Kakani**	**1.89**	**252**	*e*Pg	**Pn**	**22 11 26.6**	**+0.6**
KKN				*e*Sg	**Sn**	**22 11 54.2**	**+5.5**
	7μm,0.5s						
DMN	**Daman**	**2.09**	**248**	*e*Pg	**Pn**	**22 11 28.6**	**-0.3**
DMN				*e*Sg	**Sn**	**22 11 59.0**	**+5.1**
GKN	**Gorkha**	**2.38**	**261**	*e*Pg	**Pn**	**22 11 34.2**	**+1.4**
GKN				*e*Sg	**Sn**	**22 12 06.6**	**+5.7**
	5μm,0.4s						
DANN	**Dangsing**	**3.12**	**270**	*e*Pg	**Pn**	**22 11 43.4**	**+0.3**
DANN				*e*Sg	**Sn**	**22 12 24.0**	**+4.7**
	1μm,0.4s						
KOLN	**Koldanda**	**3.33**	**260**	*e*Pg	**Pn**	**22 11 46.3**	**+0.5**
KOLN				*e*Sg	**Sn**	**22 12 29.4**	**+5.1**
	361nm,0.3s						
LSA	**Lhasa**	**3.61**	**68**	Pn	**Pn**	**22 11 52.3**	**+2.4**
LSA				LR	LR		
	comp=N,2μm,5.3s						
LSA				LR	LR		
	comp=E,2μm,4.3s						
LSA				LR	LR		
	comp=Z,3μm,4.6s						
LSA	**Lhasa**	**3.61**	**68**	Pn	**Pn**	**22 11 52.1**	**+2.2**
PYUN	**Piuthan**	**3.81**	**267**	*e*Pg	**Pn**	**22 11 53.7**	**+1.2**
PYUN				*e*Sg	**Sn**	**22 12 41.7**	**+5.4**
GUWA	**GUWAHATI**	**4.48**	**118**	*e*P	**Pn**	**22 12 02.2**	**+0.8**
GUWA				IAML		22 13 12.8	
	comp=E,231nm,0.6s						
SHL	**Shillong**	**4.97**	**124**	*e*P	**Pn**	**22 12 08.0**	**-0.3**
SHL				IAML		22 13 29.4	
	comp=N,300nm,0.8s						
SHL				IAML		22 13 29.8	
	comp=E,295nm,0.9s						
SHL	**Shillong**	**4.97**	**124**	Pn	**Pn**	**22 12 07.4**	**-0.9**
TEZP	**TEZPUR**	**5.20**	**109**	*e*P	**Pn**	**22 12 10.7**	**-0.6**
TEZP				IAML		22 13 33.1	
	comp=E,120nm,0.4s						
AGT	**Agartala**	**5.73**	**141**	*e*P	**Pn**	**22 12 19.5**	**+0.9**
KOHI	**KOHIMA**	**6.63**	**112**	*e*P	**Pn**	**22 12 29.5**	**-1.6**
KOHI				IAML		22 13 55.4	
	comp=N,222nm,0.9s						
LKP	**Lekhapani**	**7.64**	**96**	*e*P	**Pn**	**22 12 43.9**	**-0.9**
DDI	**Dehra Dun**	**8.29**	**286**	*e*P	**Pn**	**22 12 55.5**	**+1.6**
DDI				*e*S	**Sn**	**22 14 23.8**	**-2.6**
DDI				IAML		22 14 31.5	
	comp=N,1μm,0.7s						
SMLA	**Simla**	**9.22**	**290**	*e*P	**Pn**	**22 13 06.4**	**-0.1**
SMLA				*e*S	**Sn**	**22 14 47.9**	**-1.1**
SMLA				IAML		22 14 51.2	
	comp=E,136nm,0.7s						
DHRM	**DHARAMSHALA**	**10.25**	**295**	*e*P	**Pn**	**22 13 20.3**	**-0.6**
DHRM				*e*S	**Sn**	**22 15 12.7**	**-2.0**
DHRM				IAML		22 15 13.9	
	comp=N,108nm,0.9s						
DHRM				IAML		22 15 15.1	
	comp=E,119nm,0.8s						
BHPL	**Bhopal**	**10.27**	**242**	*e*P	**Pn**	**22 13 16.9**	**-4.1**
BHPL				*e*S	Sn	22 15 02.2	-13
BHPL				IAML		22 15 14.2	
	comp=E,119nm,0.2s						
CHCP	**Chirah Chowk**	**13.13**	**297**	P	**Pn**	**22 13 57.9**	**-2.1**
HYB	**Hyderabad**	**13.57**	**218**	*i* P	**Pn**	**22 14 03.0**	**-3.2**
HYB				*e*S	**Sn**	**22 16 33.0**	**-2.8**
HYB	**Hyderabad**	**13.57**	**218**	*e*P	**Pn**	**22 14 01.8**	**-4.4**
HYB				*e*S	Sn	22 16 20.1	-16
THW	**Thamme Wali**	**14.10**	**292**	P	**Pn**	**22 14 09.6**	**-3.7**
KMI	**Kunming**	**14.17**	**100**	⇑P	**Pn**	**22 14 16.0**	**+1.5**
KMI				pP	P	22 14 18.8	-2.8
KMI				sP		22 14 20.3	
KMI				S	**Sn**	**22 16 48.0**	**-2.7**
KMI				pmax	pmax		
	comp=E,11nm,0.7s						
KMI				LR	LR		
	comp=E,390nm,10.3s						
KMI				LR	LR		
	comp=E,840nm,13.1s						
KMI				LR	LR		
	comp=E,1μm,15.4s						
CEP	**Cherat**	**14.25**	**296**	P	**Pn**	**22 14 11.1**	**-4.3**
CM33	**Chiang Mai Arr**	**14.30**	**129**	P	**Pn**	**22 14 15.0**	**-1.1**
CHTO	**Chiang Mai**	**14.30**	**129**		**Pn**	**22 14 13.0**	**-3.2**
CMMT	**Chiang Mai**	**14.31**	**129**	P	**Pn**	**22 14 15.2**	**-1.0**
	comp=E,3.4nm,1.3s						
CM32	**Chiang Mai Arr**	**14.35**	**130**	P	**P**	**22 14 22.0**	**-1.3**
CRAI	**Chiangrai**	**14.42**	**121**	P	**Pn**	**22 14 16.8**	**-0.9**
	comp=E,8μmcomp=E,19nm,1.5s						
CM34	**Chiang Mai Arr**	**14.42**	**129**	P	**Pn**	**22 14 15.0**	**-2.7**
KSH	**Kashi**	**14.52**	**323**	P	**Pn**	**22 14 15.0**	**-4.1**
KSH				pP	P	22 14 20.8	-4.5
KSH				S	**Sn**	**22 16 52.8**	**-6.1**
KSH				sS	S	22 17 04.8	-13
KSH				pmax	pmax		
	comp=E,17nm,0.7s						
KSH				pmax	pmax		
	comp=E,100nm,2.7s						
KSH				LR	LR		
	comp=E,460nm,6.6s						
KSH				LR	LR		
	comp=E,290nm,5.9s						
KSH				LR	LR		
	comp=E,520nm,6.1s						
CD2	**Chengdu**	**14.53**	**76**	P	**Pn**	**22 14 17.5**	**-1.7**
CD2				S	**Sn**	**22 17 00.0**	**+1.0**
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CD2				LR	LR		
	comp=E,2μm,13.3s						
CD2				LR	LR		
	comp=E,2μm,12.0s						
CD2				LR	LR		
	comp=E,3μm,10.2s						
CM35	**Chiang Mai Arr**	**14.54**	**129**	P	**Pn**	**22 14 21.0**	**+1.6**
CM15	**Chiang Mai Arr**	**14.54**	**130**	P	**P**	**22 14 26.6**	**+1.1**
CM31	**Chiang Mai Arr**	**14.55**	**130**	Pn	**Pn**	**22 14 16.7**	**-2.8**
CMAR	**Chiang Mai Arr**	**14.55**	**130**	Pn	**Pn**	**22 14 16.1**	**-3.5**
	comp=E,0.3nm,0.3s,baz=313,slow=13,SNR=17						
CMAR				LR	LR	22 21 12.6	
	comp=E,293nm,19.6s,baz=360,slow=43						
CMAR	**Chiang Mai Arr**	**14.55**	**130**		**Pn**	**22 14 16.4**	**-3.1**
CM13	**Chiang Mai Arr**	**14.55**	**131**	P	**P**	**22 14 24.0**	**-1.6**
	comp=E,108nmcomp=E,16nm,1.0s						
CM02	**Chiang Mai Arr**	**14.57**	**130**	P	**Pn**	**22 14 18.8**	**-1.0**
	comp=E,109nmcomp=E,15nm,1.0s						
CM01	**Chiang Mai Arr**	**14.59**	**130**	P	**Pn**	**22 14 19.0**	**-1.0**
	comp=E,117nmcomp=E,15nm,1.0s						
CM05	**Chiang Mai Arr**	**14.59**	**130**	P	**Pn**	**22 14 18.9**	**-1.2**
	comp=E,89nmcomp=E,13nm,1.1s						
CM09	**Chiang Mai Arr**	**14.59**	**130**	P	**P**	**22 14 24.1**	**-2.0**
	comp=E,86nmcomp=E,7.7nm,0.8s						
CM36	**Chiang Mai Arr**	**14.61**	**130**	P	**Pn**	**22 14 20.0**	**-0.3**
CM04	**Chiang Mai Arr**	**14.62**	**130**	P	**P**	**22 14 27.8**	**+1.5**
GTA	**Gaotai**	**15.10**	**40**	⇑P	**Pn**	**22 14 24.0**	**-2.9**
GTA				pP	P	22 14 28.0	-3.7
GTA				sP	pP	22 14 31.0	-11
GTA				pmax	pmax		
	comp=E,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=E,59nm,5.0s						
GTA				LR	LR		
	comp=E,280nm,11.6s						
GTA				LR	LR		
	comp=E,310nm,12.7s						
GTA				LR	LR		
	comp=E,410nm,11.6s						
WMQ	**Urumqi**	**15.39**	**1**	*e*P	**Pn**	**22 14 31.3**	**+0.6**
WMQ				sP	P	22 14 38.3	+3.4
WMQ				pmax	pmax		
	comp=E,14nm,0.7s						
WMQ				pmax	pmax		
	comp=E,67nm,5.1s						
WMQ				LR	LR		
	comp=E,230nm,8.3s						
WMQ				LR	LR		
	comp=E,230nm,8.3s						
WMQ				LR	LR		
	comp=E,380nm,8.9s						
SUKH	**Sukhothai**	**15.70**	**131**	P	**P**	**22 14 36.6**	**-1.8**
	comp=E,187nmcomp=E,19nm,1.0s						
LZH	**Lanzhou**	**15.95**	**57**	*e*P	**Pn**	**22 14 34.3**	**-3.6**
LZH				pP	P	22 14 38.0	-3.2
LZH				sP	pP	22 14 41.0	-11
LZH				sS	S	22 17 41.5	-5.3
LZH				SS	**SnSn**	**22 17 49.5**	**+2.8**
LZH				pmax	pmax		
	comp=E,18nm,1.0s						
LZH				LR	LR		
	comp=E,730nm,10.8s						
LZ

comp=Z,26nm,19.7s,baz=156,slow=37
MKAR Makanchi Array 18.78 349 P **P** **22 15 10.3 -1.9**
MAKZ Makanchi 18.85 349 **P** **22 15 11.7 -1.3**
PHET Kaeng Krachan 19.22 141 P **Pn** **22 15 20.0 +1.6**
comp=Z,13nm,0.9s
XAN Xi'an 19.31 68 P **P** **22 15 15.5 -2.7**
XAN S **Sn** **22 18 56.0 +0.9**
XAN pmax pmax
comp=Z,12nm,1.1s
XAN pmax pmax
comp=Z,160nm,7.9s
XAN LR LR
comp=Z,200nm,12.5s
XAN LR LR
comp=Z,450nm,10.6s
XAN LR LR
comp=Z,490nm,10.8s
ENH Enshi 19.43 79 P **P** **22 15 17.8 -1.7**
ENH IAmb IAmb 22 15 23.3
comp=Z,38nm,1.1s
TAS Tashkent 19.56 316 P **P** **22 15 20.4 -0.4**
TAS IAmb IAmb 22 15 25.6
comp=Z,35nm,0.9s
SRAK Srakaew 19.81 133 P **Pn** **22 15 29.4 +4.0**
comp=Z,2μmcomp=Z,148nm,1.2s
KK31 Karatay Array 19.97 322 **P** **22 15 25.2 0.0**
KKAR Karatay Array 19.97 322 **P** **22 15 25.5 +0.2**
KKAR Karatay Array 19.97 322 **Pn** **22 15 26.5 -0.6**
UBPT Khong Chiam 21.29 124 P **P** **22 15 39.0 -0.7**
comp=Z,15nm,1.2s
UBPT Khong Chiam 21.29 124 **P** **22 15 38.0 -1.7**
PALK Pallekele 21.92 198 P **P** **22 15 47.3 +0.8**
comp=Z,7.3nm,0.9s,baz=55,slow=16,SNR=5.1
PALK S **S** **22 19 47.8 +1.0**
comp=Z,5.3nm,0.8s,baz=0.0,slow=20,SNR=4.3
PALK LR LR 22 24 30.1
comp=Z,114nm,19.8s,baz=141,slow=37
PALK Pallekele 21.92 198 P **P** **22 15 45.4 -1.1**
PALK IAmb IAmb 22 15 51.7
comp=Z,16nm,1.1s
SURT Suratani 22.16 149 P **P** **22 15 54.0 +5.0**
comp=Z,1.0nm,1.1s
HRA Herat 22.18 292 P **P** **22 15 47.3 -2.1**
QIZ Qiongzhong 22.61 109 P **P** **22 15 53.5 -0.4**
QIZ S **S** **22 20 02.5 +3.0**
QIZ pmax pmax
comp=Z,8.0nm,1.5s
QIZ pmax pmax
comp=Z,150nm,4.5s
QIZ LR LR
comp=Z,150nm,18.1s
QIZ LR LR
comp=Z,130nm,17.6s
QIZ LR LR
comp=Z,200nm,15.7s
QIZ Qiongzhong 22.61 109 P **P** **22 15 53.9 0.0**
QIZ IAmb IAmb 22 16 12.4
comp=Z,22nm,1.2s
PKDT Phuket 22.90 151 P **P** **22 15 57.0 +0.1**
KURBB Kurchatov Arra 23.17 346 P **P** **22 16 00.0 +0.6**
comp=Z,3.5nm,0.7s,baz=165,slow=9.8,SNR=24
KURBB ScP **ScP** **22 23 23.2 +1.1**
comp=Z,0.2nm,0.3s,baz=186,slow=1.9,SNR=2.4
KURK Kurchatov 23.24 346 P **P** **22 16 00.0 0.0**
HHC Hu-ho-hao-te 23.43 52 *eP* **P** **22 16 02.5 +0.3**
HHC S **S** **22 20 11.3 -1.8**
HHC sS sS 22 20 20.5 -12
HHC pmax pmax
comp=Z,13nm,0.6s
HHC pmax pmax
comp=Z,110nm,5.6s
HHC LR LR
comp=Z,250nm,11.1s
HHC LR LR
comp=Z,300nm,10.2s
HHC LR LR
comp=Z,500nm,11.1s
WHN Wuhan 23.63 78 ⇑P **P** **22 16 03.5 -0.5**
WHN S **S** **22 20 25.0 +8.7**
WHN LR LR
comp=Z,1μm,11.1s
WHN LR LR
comp=Z,160nm,4.7s
WHN LR LR
comp=Z,1μm,13.7s
SONM Songino Array 24.42 32 P **P** **22 16 11.9 +0.5**
comp=Z,4.9nm,0.8s,baz=219,slow=9.9,SNR=20
SONM ScP **ScP** **22 23 26.7 +0.9**
comp=Z,0.4nm,0.3s,baz=259,slow=1.5,SNR=2.1
SONM LR LR 22 27 09.5
comp=Z,77nm,20.4s,baz=234,slow=40
SONM Songino Array 24.42 32 P **P** **22 16 11.9 +0.5**
ULN Ulaanbaatar 24.75 33 P **P** **22 16 13.8 -0.7**
ULN IAmb IAmb 22 16 16.7
comp=Z,9.9nm,1.1s
LHMI Lhok Sumawe 24.80 157 P **P** **22 16 14.9 0.0**
LHMI Lhok Sumawe 24.80 157 P **P** **22 16 16.2 +1.3**
comp=Z,146nm,1.0s
ZAA0 Zalesovo Array 25.59 357 P **P** **22 16 22.3 +0.5**
ZALV Zalesovo Beam 25.59 357 P **P** **22 16 22.1 +0.3**
comp=Z,2.2nm,0.7s,baz=187,slow=10,SNR=12
ZALV Zalesovo Beam 25.59 357 P **P** **22 16 21.5 -0.3**
DLV T Lat 25.69 125 P **P** **22 16 22.9 -0.3**
DLV IAmb IAmb 22 16 27.1
comp=Z,12nm,1.0s
GEYT Alibeck 26.13 299 P **P** **22 16 28.8 +2.0**
comp=Z,3.3nm,0.8s,baz=100,slow=8.1,SNR=6.6
GEYT PcP **PcP** **22 19 53.7 0.0**
comp=Z,0.9nm,0.5s,baz=26,slow=3.7,SNR=1.8
GEYT LR LR 22 28 33.5
comp=Z,307nm,18.2s,baz=185,slow=40
GEYT Alibeck 26.13 299 P **P** **22 16 27.2 +0.4**
GEYT IAmb IAmb 22 16 36.6
comp=Z,7.6nm,1.2s
GYA0B ALIBECK ARRAY 26.13 299 P **P** **22 16 26.5 -0.3**
GYA0B IAmb IAmb 22 16 36.6
comp=Z,13nm,1.2s
KULM Kulim 26.24 149 P **P** **22 16 27.7 -0.3**
KULM IAmb IAmb 22 16 31.9
comp=Z,22nm,1.3s
TLY Talaya 26.29 23 LR LR 22 27 45.5
comp=Z,97nm,19.4s,baz=214,slow=38
BJT Baijiatuau 26.42 56 P **P** **22 16 31.0 +1.5**
BJT IAmb IAmb 22 16 44.9
comp=Z,4.8nm,0.6s
NJ2 Nanjing 27.45 75 *eP* **P** **22 16 37.0 -1.8**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 LR LR
comp=Z,330nm,7.1s
NJ2 LR LR
comp=Z,670nm,11.4s
NJ2 LR LR
comp=Z,620nm,12.7s
BVAR Borovoye Array 27.60 338 P **P** **22 16 41.2 +1.3**
comp=Z,0.4nm,0.5s,baz=82,slow=15,SNR=3.6
RPSI Rantau Prapat 27.86 154 P **P** **22 16 42.3 -0.2**
ABKAR Akbulak array 29.53 322 P **P** **22 16 57.6 +0.5**
ABKAR IAmb IAmb 22 17 03.5
comp=Z,3.5nm,0.7s
ABKAR Akbulak array 29.53 322 P **P** **22 16 57.4 +0.3**
HIA Hailar 32.38 41 P **P** **22 17 21.9 -0.3**
UMR Umm Al-Rimmam 34.54 282 *eP* 22 17 42.3
KSM Kuching 34.64 137 P **P** **22 17 41.0 -1.2**
KSM IAmb IAmb 22 17 44.5
comp=Z,10nm,1.1s
ARU Arti 34.66 332 P **P** **22 17 41.5 -0.5**
ARU IAmb IAmb 22 17 49.9
comp=Z,8.2nm,1.2s
RDF Al-Radifah 34.77 281 *eP* 22 17 43.8
MIB Mutribah 34.83 282 *eP* 22 17 44.0
KSRS Korea Array 35.05 64 P **P** **22 17 44.8 -0.8**
comp=Z,0.8nm,0.6s,baz=248,slow=7.5,SNR=5.6
KSRS LR LR 22 33 38.8
comp=Z,67nm,20.6s,baz=262,slow=39
SBUM Sibu 35.08 133 P **P** **22 17 45.4 -0.6**
SBUM IAmb IAmb 22 17 48.4
comp=Z,14nm,1.4s
RST Umm Al-Ruwaisa 35.16 282 *eP* 22 17 47.4
JOW Kunigami 36.22 83 LR LR 22 33 59.5
comp=Z,102nm,20.6s,baz=240,slow=38
KBZ Khabaz 38.54 306 P **P** **22 18 15.8 +0.6**
comp=Z,2.3nm,0.8s,baz=121,slow=5.0,SNR=5.3
KBZ LR LR 22 36 54.7
comp=Z,132nm,18.2s,baz=90,slow=40
KIV Kislovodsk 38.72 306 P **P** **22 18 17.4 +0.6**
KIV IAmb IAmb 22 18 26.6
comp=Z,16nm,1.5s
USA0B Ussuriysk Arra 38.81 54 P **P** **22 18 16.7 -0.7**
USRK Ussuriysk Ar. 38.81 54 P **P** **22 18 17.0 -0.5**
comp=Z,3.7nm,0.7s,baz=257,slow=9.2,SNR=15
USRK Ussuriysk Ar. 38.81 54 P **P** **22 18 16.9 -0.6**
KLR Kul'dur 39.69 46 P **P** **22 18 24.6 -0.1**
comp=Z,10nm,0.8s,baz=273,slow=9.4,SNR=37
KLR LR LR 22 36 25.1
comp=Z,93nm,20.7s,baz=324,slow=39
NRIK Noril'sk 40.98 0 P **P** **22 18 35.1 0.0**
comp=Z,1.2nm,0.4s,baz=147,slow=10,SNR=1.9
NRIK LR LR 22 36 22.6
comp=Z,97nm,18.9s,baz=218,slow=37
NRIK Noril'sk 40.98 0 P **P** **22 18 35.5 +0.4**
NRIK IAmb IAmb 22 18 42.9
comp=Z,5.5nm,0.9s
DAV Davao City (W) 41.91 113 P **P** **22 18 43.1 -0.3**
comp=Z,137nm,0.5s,baz=207,slow=4.5,SNR=1.8
TOLI2 Tolitoli 41.94 124 P **P** **22 18 44.0 +0.3**
TOLI2 IAmb IAmb 22 18 45.2
comp=Z,9.0nm,0.9s
MJAR Matsushiro Arr 43.29 66 P **P** **22 18 53.7 -0.8**
comp=Z,3.1nm,0.9s,baz=277,slow=9.8,SNR=11
MJAR LR LR 22 38 34.4
comp=Z,46nm,18.3s,baz=80,slow=38
YAK Yakutsk 43.61 27 LR LR 22 38 26.4
comp=Z,88nm,20.9s,baz=196,slow=38
MMAI Mount Meron Ar 44.49 289 P **P** **22 19 04.6 +0.3**
comp=Z,0.6nm,0.6s,baz=92,slow=15,SNR=2.2
JAGI Jajag, Banyuwa 44.90 141 P **P** **22 19 07.5 0.0**
BRTR Keskin Array B 45.27 299 LR LR 22 42 22.3
comp=Z,53nm,18.2s,baz=138,slow=42
BRTR Keskin Array B 45.27 299 P **P** **22 19 10.4 0.0**
KLMR Klimovskoe 45.38 329 *eP* **P** **22 19 12.8 +2.0**
KLMR AMP 22 19 17.2
comp=Z,12nm,1.2s
KAPI Kappang 45.61 132 P **P** **22 19 13.2 0.0**
JCJ Chichijima 48.23 78 P **P** **22 19 35.1 +1.6**
comp=Z,52nm,0.7s,baz=317,slow=22,SNR=2.2
ELL Elmali 48.46 295 P **P** **22 19 34.1 -1.3**
AKASG Malin Array Be 48.59 314 P **P** **22 19 36.2 +0.2**
comp=Z,0.4nm,0.4s,baz=80,slow=7.0,SNR=7.6
AKASG LR LR 22 42 59.8
comp=Z,46nm,18.2s,baz=70,slow=40
TIXI Tiksi 48.89 16 P **P** **22 19 37.5 -0.5**
TIXI IAmb IAmb 22 19 42.7
comp=Z,3.1nm,0.8s
SORM Soroca 49.03 311 ⇑P **P** **22 19 39.3 -0.1**
VRI Vrincioaia 50.14 308 ⇑P **P** **22 19 49.9 +2.0**
PLOR Plostina 50.20 308 ⇓P **P** **22 19 49.7 +1.3**
NACGM Naroch 50.46 319 *i* P **P** **22 19 50.8 +0.7**
NACGM *i* P **P** **22 19 50.8 +0.7**
NACGM *i* P **P** **22 19 50.8 +0.7**
NACGM *i* PcP PcP 22 20 49.2 -19
NACGM *i* PP **PP** **22 21 48.8 +3.0**
NACGM *i* PPP PPP 22 22 49.6
NACGM *i* S S 22 27 15.5 +14
NACGM *i* PS PKiKP 22 28 08.7 +16
NACGM *i* SS SS 22 30 53.8 +19
NACGM *i* SSS SSS 22 32 28.8
NACGM *i* LQ LQ 22 37 56.1
NACGM *i* LR LR 22 41 04.3
BIZ Bicaz 50.55 309 ⇓P **P** **22 19 52.1 +1.1**
MLR Muntele Rosu 50.70 307 ⇓P **P** **22 19 54.5 +2.2**
MLR Muntele Rosu 50.70 307 P **P** **22 19 53.8 +1.4**
DOPR Dopca 51.07 308 ⇓P **P** **22 19 55.1 +0.1**
BURAR Bucovina Array 51.14 310 P **P** **22 19 55.5 -0.1**
BUR08 Bucovina Ar. S 51.15 310 P **P** **22 19 55.7 +0.1**
BUR08 IAmb IAmb 22 19 58.2
comp=Z,8.0nm,1.4s
ARCR ARCALIA 51.74 309 ⇑P **P** **22 20 03.3 +3.3**
FINES FINESS Array B 51.78 328 P **P** **22 20 00.5 +0.5**
comp=Z,1.4nm,0.5s,baz=96,slow=9.8,SNR=8.6
FINES LR LR 22 45 05.5
comp=Z,147nm,20.5s,baz=50,slow=40
PABE Paberze 52.12 320 P **P** **22 20 02.9 +0.3**
BMR Baia Mare 52.30 310 ⇑P **P** **22 20 01.2 -2.9**
SUW Suwalki 52.49 318 P **P** **22 20 05.7 +0.3**
KWP Kalwaria Pacla 52.76 312 P **P** **22 20 06.9 -0.5**
VTS Vitosha 52.87 304 ⇓P **P** **22 20 09.9 +1.3**
VTS Vitosha 52.87 304 P **P** **22 20 08.9 +0.3**
VTS IAmb IAmb 22 20 12.5
comp=Z,6.2nm,1.2s
DRGR 52.88 309 ⇑P **P** **22 20 09.8 +1.3**
TRPA Tarpa 52.92 311 ⇑P **P** **22 20 11.4 +2.7**
SIRR Siria 53.64 308 ⇓P **P** **22 20 15.2 +1.1**
BZS Buzias 53.73 308 ⇑P **P** **22 20 17.7 +3.1**
ARCES ARCESS Array B 53.89 337 P **P** **22 20 16.2 +0.7**
comp=Z,2.4nm,0.8s,baz=102,slow=7.5,SNR=7.7
AGG Agios Georgios 54.05 299 P **P** **22 20 16.3 -0.9**
AGG IAmb IAmb 22 20 31.4
comp=Z,5.9nm,0.9s
MORH Mrgy, Hungar 55.73 308 ⇑P **P** **22 20 29.5 +0.4**
MORC Moravsky Berou 56.09 313 ⇑P **P** **22 20 36.2 +4.4**
KMBO Kilima Mbogo 56.20 247 P **P** **22 20 33.2 +0.1**
comp=Z,1.9nm,0.7s,baz=41,slow=7.5,SNR=9.5
VRAC Vranov 56.76 312 LR LR 22 48 58.4
comp=Z,80nm,18.4s,baz=73,slow=40
CONA Conrad Observa 57.40 311 *eP* **P** **22 20 43.1 +1.9**
comp=Z,5.1nm,1.1s
HFS Hagfors 57.72 325 LR LR 22 47 31.8
comp=Z,93nm,19.0s,baz=98,slow=38
SOKA Soboth 58.14 309 *eP* **P** **22 20 46.5 +0.2**
comp=Z,5.7nm,1.3s
TIP Timpagrande 58.28 301 P **P** **22 20 47.0 -0.4**
TIP IAmb IAmb 22 20 47.9
comp=Z,8.1nm,1.2s
SPITS Spitsbergen Ar 58.51 347 LR LR 22 51 51.5
comp=Z,56nm,19.6s,baz=300,slow=42
NC405 NORSAR Array S 58.66 327 P **P** **22 20 49.5 -0.2**
NC405 IAmb IAmb 22 21 00.8
comp=Z,8.2nm,1.3s
GEC2 GERESS Array S 58.70 312 P **P** **22 20 50.3 +0.1**
GEC2 IAmb IAmb 22 21 01.7
comp=Z,5.1nm,1.3s
GERES GERESS Array B 58.70 312 P **P** **22 20 50.5 +0.3**
comp=Z,1.3nm,0.7s,baz=79,slow=7.2,SNR=10
GERES LR LR 22 48 22.1
comp=Z,73nm,22.0s,baz=80,slow=38
GERES GERESS Array B 58.70 312 P **P** **22 20 50.0 -0.2**
NOA NORSAR Array B 58.91 327 P **P** **22 20 50.9 -0.5**
comp=Z,1.5nm,0.8s,baz=86,slow=6.8,SNR=5.2
NOA LR LR 22 49 02.4
comp=Z,119nm,20.6s,baz=90,slow=39
SQTA Sankt Quirin 60.63 311 *eP* **P** **22 21 06.8 +3.2**
comp=Z,3.8nm,1.0s
MOTA Moosalm 60.67 311 *eP* **P** **22 21 07.0 +3.1**
comp=Z,2.5nm,0.7s
OPO Ambohidratompo 60.70 224 P **P** **22 21 05.0 +0.6**
comp=Z,3.0nm,0.8s,baz=6.4,slow=3.4,SNR=2.8
RETA Reutte 60.87 311 *eP* **P** **22 21 07.4 +2.3**
comp=Z,2.8nm,0.8s
DAVA Damuels 61.50 311 *eP* **P** **22 21 11.8 +2.3**
comp=Z,6.0nm,1.1s
DAVOX Davos/Dischmat 61.60 310 LR LR 22 50 48.4
comp=Z,63nm,20.2s,baz=24,slow=39
MORW Morawa 63.41 152 P **P** **22 21 21.7 -0.5**
VOI Vohitsoka 63.48 222 P **P** **22 21 23.2 +0.3**
KEST Kesra 64.87 298 P **P** **22 21 31.1 -0.8**
comp=Z,2.4nm,0.8s,baz=355,slow=11,SNR=2.8
KEST Kesra 64.87 298 P **P** **22 21 30.9 -1.1**
WB0 Warramunga Arr 66.06 131 P **P** **22 21 39.6 0.0**
WRA Warramunga Arr 66.14 131 P **P** **22 21 40.0 -0.2**
comp=Z,5.2nm,0.8s,baz=327,slow=6.7,SNR=30
WB2 Warramunga Arr 66.15 131 P **P** **22 21 40.3 +0.1**
WR0 Warramunga Arr 66.29 131 P **P** **22 21 41.2 +0.1**
AS31 Alice Springs 68.52 134 P **P** **22 21 55.1 -0.1**
AS31 IAmb IAmb 22 21 56.4
comp=Z,2.5nm,0.8s
ASAR Alice Springs 68.52 134 P **P** **22 21 55.3 +0.1**
comp=Z,7.7nm,0.8s,baz=317,slow=6.3,SNR=64
EUNU Eureka 71.72 359 P **P** **22 22 14.4 +0.4**
EUNU IAmb IAmb 22 22 15.9
comp=Z,3.0nm,1.0s
BORG Borgarnes 72.14 335 LR LR 22 55 35.5
comp=Z,42nm,20.0s,baz=78,slow=37
ESDC Sonseca Array 73.39 306 P **P** **22 22 24.8 +0.1**
comp=Z,0.7nm,0.8s,baz=55,slow=6.6,SNR=7.4
ESDC Sonseca Array 73.39 306 P **P** **22 22 24.7 0.0**
MATP Matopo 74.70 236 P **P** **22 22 32.6 +0.1**
comp=Z,2.8nm,0.7s,baz=72,slow=4.7,SNR=4.4
IMAR Indian Mountai 75.10 22 P **P** **22 22 34.5 +0.4**
MLY Manley 76.68 22 P **P** **22 22 43.5 +0.3**
MLY IAmb IAmb 22 22 44.7
comp=Z,2.0nm,0.8s
BMAR Burnt Mountain 76.91 18 P **P** **22 22 46.0 +1.6**
NEA2 Nenana 77.51 22 P **P** **22 22 47.9 +0.2**
NEA2 IAmb IAmb 22 22 49.1
comp=Z,5.2nm,0.8s
MDM Murphy Dome 77.53 21 P **P** **22 22 47.9 0.0**
MDM IAmb IAmb 22 22 49.4
comp=Z,6.1nm,1.2s
PRP Porcupine Dome 77.98 20 P **P** **22 22 51.5 +1.0**
PRP IAmb IAmb 22 22 52.5
comp=Z,5.2nm,1.0s
ILAR Eielson Array 78.08 21 P **P** **22 22 50.1 -0.8**
comp=Z,1.4nm,0.8s,baz=298,slow=4.3,SNR=12
STKA Stephens Creek 79.12 135 P **P** **22 22 56.5 -0.6**
comp=Z,3.9nm,0.9s,baz=322,slow=9.3,SNR=6.9
SCRK Sand Creek 79.54 20 P **P** **22 22 59.4 +0.3**
SCRK IAmb IAmb 22 23 00.2
comp=Z,3.5nm,0.8s
SFJD Kangerlussuaq 79.74 344 LR LR 23 02 08.7
comp=Z,24nm,21.6s,baz=36,slow=38
TOA0 Torodi Ar. Sit 80.06 280 P **P** **22 23 02.5 -0.2**
TOA0 IAmb IAmb 22 23 04.4
comp=Z,7.5nm,1.4s
TORD Torodi Ar. Bea 80.06 280 P **P** **22 23 02.9 +0.2**
comp=Z,2.0nm,0.6s,baz=56,slow=4.7,SNR=9.9
TORD Torodi Ar. Bea 80.06 280 P **P** **22 23 02.9 +0.2**
TORD IAmb IAmb 22 23 07.6
comp=Z,2.2nm,0.7s
BOSA Boshof 82.08 232 LR LR 22 57 03.2
comp=Z,115nm,19.9s,baz=180,slow=34
YKA Yellowknife Ar 87.73 10 P **P** **22 23 40.9 -0.1**
comp=Z,0.4nm,0.9s,baz=337,slow=4.3,SNR=4.7
TXAR Lajitas Array 121.64 11 PKP **PKPdf** **22 29 46.7 0.0**
comp=Z,0.2nm,0.6s,baz=21,slow=1.5,SNR=3.0

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*IDC **29** 22:16:18.2±1.3, 0.°84N×99.°40E, h92km±7km, mb3.5/7, mb1 3.6/7, mb1mx3.2/54, mbtmp3.8/7, Error ellipse: s-maj=51.3km s-min=11.1km az=67.0*
ISC 29 22:16:18.7±0.9, **0.°9N**±0.°1×**99.°23E**±0.°10, **h100**km, **n10**, σ1**9**/**36**/15, **mb3.9**/7, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC h m s	ISC
GSI	**Gunungsitoli**	**1.71**	**284**	P	**Pn**	**22 16 48.0**	**+0.5**
BKNI	**Bangkinang**	**1.89**	**107**	P	**Pn**	**22 16 50.9**	**+1.0**
PSI	**Prapat**	**1.92**	**351**	P	**Pn**	**22 16 50.9**	**+0.4**
	20nm,0.3s,baz=180,slow=13,SNR=45						
PSI				S	**Sn**	**22 17 13.1**	**-1.5**
	19nm,0.3s,baz=180,slow=13,SNR=12						
WRA	**Warramunga Arr**	**40.16**	**123**	P	**P**	**22 23 44.0**	**-1.3**
	1.3nm,0.5s,baz=302,slow=8.9,SNR=6.5						
ASAR	**Alice Springs**	**41.60**	**128**	P	**P**	**22 23 55.4**	**-1.7**
	0.2nm,0.4s,baz=302,slow=8.7,SNR=2.3						
SONM	**Songino Array**	**47.17**	**7**	P	**P**	**22 24 42.8**	**+1.5**
	0.9nm,0.5s,baz=192,slow=9.4,SNR=4.0						
MKAR	**Makanchi Array**	**48.06**	**344**	P	**P**	**22 24 49.4**	**+1.4**
	0.7nm,0.4s,baz=158,slow=8.7,SNR=14						
MKAR				pP	**pP**	**22 25 11.8**	**0.0**
	0.3nm,0.4s,baz=150,slow=9.1,SNR=2.7						
KURBB	**Kurchatov Arra**	**52.58**	**344**	P	**P**	**22 25 23.6**	**+1.7**
	0.2nm,0.4s,baz=173,slow=8.4,SNR=2.0						
KURBB				pP	**pP**	**22 25 46.2**	**0.0**
	0.4nm,0.7s,baz=170,slow=7.1,SNR=2.7						
GEYT	**Alibeck**	**52.76**	**319**	P	**P**	**22 25 24.1**	**+0.5**
	0.7nm,0.4s,baz=176,slow=11,SNR=2.0						
ZALV	**Zalesovo Beam**	**54.21**	**350**	P	**P**	**22 25 34.1**	**+0.3**
	0.4nm,0.3s,baz=156,slow=7.4,SNR=4.4						
ZALV				pP	**pP**	**22 25 56.8**	**-1.4**
	0.6nm,0.5s,baz=178,slow=7.1,SNR=2.6						
ZALV				sP	**sP**	**22 26 07.2**	**-2.1**
	0.8nm,0.5s,baz=188,slow=9.0,SNR=3.1						

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*JMA **29** 22:25:23.1±0.2, 40.°08N×142.°80E, h22km±2km, M3.8*
*NIED **29** 22:25:23.2, 40.°08N×142.°80E, h22km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.45; $M_{\theta\theta}$-0.45; $M_{\phi\phi}$-2.00; $M_{r\theta}$1.38; $M_{\theta\phi}$-0.73; $M_{\phi r}$2.00; Fault plane solution: $M_0$3.39000×10^{14} NP1,φ±31.00000°, δ68.00000°, λ96.00000°. NP2,φ±194.00000°, δ23.00000°, λ75.00000°.*
*IDC **29** 22:25:29.1±2.1, 40.°67N×141.°27E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.3/38, mbtmp3.5/5, ML2.9/2 Error ellipse: s-maj=45.7km s-min=19.4km az=120.0*
ISC 29 22:25:23.0±1.4, **40.°12N**±0.°05×**142.°8E**±0.°1, **h22**km±7km, **n17**, σ1**9**/**00**/24, **mb3.5**/3, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.76**	**256**	P	**Pb**	**22 25 37.3**	**-0.2**
JTH				*e*S	**Sb**	**22 25 47.8**	**+0.4**
JKEN	**Kujiedanarisaw**	**0.86**	**276**	P	**Pb**	**22 25 39.2**	**+0.1**
MIYJ	**Miyakonagasawa**	**0.94**	**235**	P	**Pn**	**22 25 39.7**	**-1.2**
JANG	**Nango**	**1.03**	**285**	P	**Pn**	**22 25 41.6**	**-0.6**
JANG				*e*S	**Sb**	**22 25 54.7**	**-0.6**
JKZ	**Kuzumaki**	**1.16**	**264**	P	**Pn**	**22 25 43.5**	**-0.4**
JOM	**Ohasama**	**1.35**	**242**	P	**Pn**	**22 25 46.2**	**-0.2**
OFUJ	**Ofunato**	**1.37**	**221**	P	**Pn**	**22 25 46.7**	**-0.1**
OFUJ				S	**Sn**	**22 26 04.4**	**+0.2**
JARK	**Aomorirokkasho**	**1.42**	**309**	P	**Pn**	**22 25 48.4**	**+0.9**
JTM	**Tenmabayashi**	**1.50**	**297**	P	**Pn**	**22 25 49.4**	**+0.9**
JTM				*e*S	**Sb**	**22 26 08.9**	**+0.3**
JAH	**Hinai**	**1.68**	**273**	P	**Pn**	**22 25 52.0**	**+1.0**
JAH				S	**Sb**	**22 26 13.9**	**+0.1**
JMK	**Ichinoseki**	**1.70**	**227**	P	**Pn**	**22 25 52.1**	**+0.8**
ASAJ	**Asahikawa**	**4.00**	**358**	Pn	**Pn**	**22 26 24.2**	**+1.4**
	1.4nm,0.3s,baz=202,slow=19,SNR=6.0						
ASAJ				Pg	**Pb**	**22 26 31.4**	**-1.2**
	4.3nm,0.3s,baz=212,slow=11,SNR=16						
ASAJ				Sn	**Sn**	**22 27 09.7**	**+0.7**
	1.9nm,0.3s,baz=221,slow=20,SNR=1.6						
ASAJ				Lg	Lg	22 27 21.0	
	2.7nm,0.3s,baz=116,slow=32,SNR=6.4						
MAT	**Matsushiro**	**5.09**	**227**	P	**Pn**	**22 26 39.8**	**+1.8**
MAT				*e*S	**Sn**	**22 27 36.5**	**+0.4**
MJAR	**Matsushiro Arr**	**5.09**	**227**	Pn	**Pn**	**22 26 40.1**	**+2.2**
	0.1nm,0.3s,baz=31,slow=14,SNR=13						
ZALV	**Zalesovo Beam**	**40.72**	**310**	P	**P**	**22 33 01.4**	**-0.4**
	1.3nm,0.5s,baz=88,slow=8.9,SNR=5.4						
MKAR	**Makanchi Array**	**43.49**	**300**	P	**P**	**22 33 23.1**	**-1.4**
	0.6nm,0.9s,baz=87,slow=9.2,SNR=4.2						
ILAR	**Eielson Array**	**46.31**	**34**	P	P	22 33 58.7	+12
	0.4nm,0.7s,baz=257,slow=6.2,SNR=4.1						

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*IDC **29** 22:37:35.4±1.2, 27.°80N×85.°48E, h0km, mb3.7/6, mb1 3.8/9, mb1mx3.4/59, mbtmp3.6/9, ML3.7/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/43, Error ellipse: s-maj=41.3km s-min=19.3km az=64.0*
ISC 29 22:37:37.9±1.1, **27.°8N**±0.°2×**85.°6E**±0.°2, **h18**km, **n9**, σ1**9**/**03**/9, **mb3.6**/6, **Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.41**	**124**	Pn	**Pn**	**22 41 13.0**	**-1.6**
	0.1nm,0.3s,baz=313,slow=11,SNR=1.5						
AAK	**Ala-Archa**	**17.32**	**332**	P	**P**	**22 41 40.2**	**0.0**
	0.1nm,0.3s,baz=160,slow=15,SNR=3.7						
AAK				LR		22 49 45.7	
	comp=Z,36nm,18.8s,baz=247,slow=42						
MKAR	**Makanchi Array**	**19.12**	**353**	P	**Pn**	**22 41 59.9**	**-0.9**
	0.3nm,0.3s,baz=177,slow=11,SNR=14						
KURBB	**Kurchatov Arra**	**23.40**	**349**	P	**P**	**22 42 45.2**	**-0.5**
	0.4nm,0.5s,baz=159,slow=11,SNR=3.9						
SONM	**Songino Array**	**25.74**	**33**	P	**P**	**22 43 08.4**	**+1.0**
	0.5nm,0.6s,baz=233,slow=9.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**26.11**	**359**	P	**P**	**22 43 10.9**	**+0.2**
	0.7nm,0.4s,baz=181,slow=9.4,SNR=4.9						
WRA	**Warramunga Arr**	**66.93**	**130**	P	**P**	**22 48 30.6**	**+1.0**
	0.9nm,0.6s,baz=323,slow=6.4,SNR=7.4						
ASAR	**Alice Springs**	**69.23**	**133**	P	**P**	**22 48 44.9**	**+0.9**
	0.6nm,0.5s,baz=318,slow=6.5,SNR=6.8						
TORD	**Torodi Ar. Bea**	**78.64**	**279**	P	**P**	**22 49 39.1**	**-0.2**
	0.4nm,0.7s,baz=62,slow=3.7,SNR=1.9						

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*PRU **29** 22:46:12.7±0.0, 59.°50N×5.°81E, h0km*
*IDC **29** 22:46:17.5±0.8, 59.°33N×7.°04E, h0km, mb3.5/10, mb1 3.7/17, mb1mx3.5/50, mbtmp3.5/17, ML3.7/5, MS2.9/2, Ms1 2.9/2, ms1mx2.3/47, Error ellipse: s-maj=12.5km s-min=7.2km az=135.0*
*IEPN **29** 22:46:17.0, 58.°99N×7.°33E, h10km*

NAO ***29*** *22:46:18.5±0.5, 59°.33N×7°.07E, ML3.6*
LDG ***29*** *22:46:18.8±0.2, 59°.33N×6°.61E, h10km, Ml3.8/34, Error ellipse: s-maj=6.2km s-min=3.1km az=119.0*
BGS ***29*** *22:46:19.5±1.2, 59°.21N×7°.17E, h12km, ML3.7, ML3.7*
HEL ***29*** *22:46:20.9±0.1, 59°.29N×7°.07E, h30km, ML3.4, Confirmed Earthquake*
DNK ***29*** *22:46:21.7±1.8, 59°.27N×7°.37E, h27km±14km, ML3.7, Probable volcanic*
BER ***29*** *22:46:21.1±2.5, 59°.26N×7°.07E, h15km±4km, ML3.6, ML3.6(NAO), Confirmed Earthquake*
BGR ***29*** *22:46:22.2±0.4, 59°.11N×7°.45E, h10km, ML4.2, Error ellipse: s-maj=8.9km s-min=5.6km az=55.0*
UPP ***29*** *22:46:23.3±1.4, 59°.24N×7°.97E, h0km, ML2.5, Suspected explosion*

ISC 29 22:46:17.4±0.4, 59°.28N±0°.02×7°.12E±0°.02, h6km, n263, σ2ˢ45/360, mb3.4/9, 6C-6D, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
BLS5	**Blasjo**	**0.37**	**294**	*eP*		**Pb**	**22 46 26.7**	**+0.3**
BLS5				*e*			22 46 29.5	
BLS5				*eS*		**Sg**	**22 46 31.5**	**+2.1**
BLS5				IAML			22 46 31.9	
	comp=Z,3μm,0.3s							
ODD1	**Odda**	**0.69**	**339**	*eP*		**Pb**	**22 46 32.1**	**+0.3**
ODD1				*eS*		**Sg**	**22 46 40.7**	**+1.2**
ODD1				IAML			22 46 41.4	
	comp=Z,11μm,0.1s							
STAV	**Stavanger**	**0.81**	**246**	Pg		**Pb**	**22 46 34.8**	**+1.0**
STAV				Lg		Lg	22 46 45.1	
SNART	**Snartemo**	**0.94**	**177**	*e*		**Pb**	**22 46 37.0**	**+0.9**
	baz=8.0,slow=16							
SNART				*i*	P	**Pn**	**22 46 37.6**	**+0.5**
SNART				IAML			22 46 51.1	
	comp=Z,3μm,0.3s							
SNART	**Snartemo**	**0.94**	**177**	*e*		**Pb**	**22 46 37.0**	**+0.9**
	baz=8.0,slow=16							
SNART				⇑*i*	P	**Pn**	**22 46 37.6**	**+0.5**
SNART				*eS*		**Sb**	**22 46 50.6**	**+1.9**
SNART				IAML			22 46 51.2	
	comp=Z,4μm,0.6s							
KMY	**Karmoy**	**0.96**	**267**	Pg		**Pb**	**22 46 37.4**	**+0.9**
KMY				Lg		Lg	22 46 49.6	
KMY	**Karmoy**	**0.96**	**267**	⇑*i*	*P*	**Pb**	**22 46 37.3**	**+0.8**
KMY				*eS*		**Sg**	**22 46 49.5**	**+1.2**
KMY				IAML			22 46 49.8	
	comp=Z,2μm,0.3s							
HOMB	**Homborsund**	**1.24**	**144**	*i*	P	**Pn**	**22 46 42.7**	**+1.5**
HOMB				IAML			22 47 00.6	
	comp=Z,803nm,0.4s							
HOMB	**Homborsund**	**1.24**	**144**	Pg		**Pn**	**22 46 42.8**	**+1.5**
HOMB				Lg		Lg	22 46 59.5	
HOMB	**Homborsund**	**1.24**	**144**	⇑*i*	*P*	**Pn**	**22 46 42.7**	**+1.5**
HOMB				*eS*		**Sn**	**22 46 59.2**	**+1.0**
HOMB				IAML			22 46 59.6	
	comp=Z,1μm,0.8s							
HOMB	**Homborsund**	**1.24**	**144**	*eP*		**Pn**	**22 46 42.8**	**+1.5**
HOMB				*eS*		**Sn**	**22 46 59.1**	**+0.9**
KON	**Kongsberg**	**1.32**	**72**	Pg		**Pb**	**22 46 43.5**	**+0.9**
KON				Lg		Lg	22 47 00.1	
KONO	**Kongsberg**	**1.32**	**72**	⇑*i*	*P*	**Pn**	**22 46 43.3**	**+1.0**
KONO				*eS*		**Sb**	**22 46 59.9**	**+0.2**
KONO				IAML			22 47 02.4	
	comp=Z,1μm,0.7s							
BER	**Bergen**	**1.43**	**322**	*eP*		**Pb**	**22 46 44.9**	**+0.6**
BER				*eS*		**Sb**	**22 47 02.5**	**-0.4**
BER				IAML			22 47 05.5	
	comp=N,632nm,0.2s							
BER				IAML			22 47 06.1	
	comp=E,548nm,0.3s							
BER	**Bergen**	**1.43**	**322**	Pg		**Pb**	**22 46 45.1**	**+0.7**
BER				Lg		Lg	22 47 03.6	
BER	**Bergen**	**1.43**	**322**	‖*eP*		**Pb**	**22 46 45.0**	**+0.6**
BER				*eS*		**Sb**	**22 47 03.3**	**+0.4**
BER				IAML			22 47 05.5	
	comp=Z,3μm,0.3s							
BER	**Bergen**	**1.43**	**322**	*eP*		**Pb**	**22 46 45.0**	**+0.6**
BER				*eSB*		**Sb**	**22 47 03.6**	**+0.7**
SKAR	**Skarslia**	**1.53**	**22**	*eP*		**Pb**	**22 46 46.7**	**+0.5**
SKAR				*eS*		**Sb**	**22 47 06.6**	**+0.7**
SKAR				IAML			22 47 08.5	
	comp=Z,3μm,0.4s							
ASK	**Askoy**	**1.55**	**322**	‖*eP*		**Pn**	**22 46 46.4**	**+0.9**
ASK				*eS*		**Sn**	**22 47 06.7**	**+0.8**
ASK				IAML			22 47 08.4	
	comp=Z,2μm,0.5s							
OSL	**Oslo**	**1.95**	**69**	*eP*		**Pn**	**22 46 52.9**	**+1.9**
OSL				*eS*		**Sn**	**22 47 16.5**	**+0.8**
OSL				IAML			22 47 24.3	
	comp=Z,854nm,0.4s							
HYA	**Hoyanger**	**1.95**	**347**	Pn		**Pn**	**22 46 52.1**	**+1.1**
HYA				Pg		**Pb**	**22 46 53.8**	**+0.5**
HYA				Sn		**Sb**	**22 47 18.2**	**+0.4**
HYA	**Hoyanger**	**1.95**	**347**	‖*eP*		**Pn**	**22 46 52.0**	**+1.1**
HYA				*ePg*		**Pb**	**22 46 53.8**	**+0.5**
HYA				*eS*		**Sn**	**22 47 15.7**	**-0.1**
HYA				*eSg*		**Sb**	**22 47 19.2**	**+1.3**
HYA				IAML			22 47 21.7	
	comp=Z,1μm,0.5s							
STRU	**Stroemstad**	**2.11**	**95**	P		**Pn**	**22 46 54.0**	**+0.8**
STRU				*i*	P	**Pb**	**22 46 56.9**	**+1.0**
STRU	**Stroemstad**	**2.11**	**95**	P		**Pn**	**22 46 54.0**	**+0.8**
STRU	**Stroemstad**	**2.11**	**95**	*eP*		**Pn**	**22 46 54.0**	**+0.8**
STRU				*eSg*		**Sb**	**22 47 24.7**	**+2.4**
SUE	**Sulen**	**2.14**	**328**	‖*eP*		**Pn**	**22 46 54.4**	**+0.9**
SUE				*eS*		**Sn**	**22 47 20.4**	**0.0**
SUE				*eSg*		**Sb**	**22 47 25.1**	**+1.8**
SUE				IAML			22 47 25.5	
	comp=Z,755nm,0.8s							
NAO01	**NORSAR Array S**	**2.46**	**49**	*eP*		**Pn**	**22 46 59.6**	**+1.6**
NAO01				IAML			22 47 36.7	
	comp=Z,756nm,0.7s							
NAO01	**NORSAR Array S**	**2.46**	**49**	*eP*		**Pn**	**22 46 59.6**	**+1.6**
NAO01				*eS*		**Sn**	**22 47 27.7**	**-0.7**
GOET	**G??ttrup**	**2.51**	**153**	*eP*		**Pn**	**22 47 00.8**	**+2.2**
GOET				IAML			22 47 52.6	
	comp=Z,418nm,0.4s							
GOET	**G??ttrup**	**2.51**	**153**	*eP*		**Pn**	**22 47 00.8**	**+2.2**
GOET				*eP*		**Pn**	**22 47 00.8**	**+2.2**
GOET				IAML			22 47 52.6	
	comp=Z,418nm,0.4s							
GOET				IAML			22 47 52.6	
	comp=Z,418nm,0.4s							
FOO	**Floro**	**2.55**	**337**	*eP*		**Pn**	**22 46 59.8**	**+0.6**
FOO				IAML			22 47 37.1	
	comp=E,289nm,0.3s							
FOO				IAML			22 47 37.5	
	comp=N,267nm,0.4s							
FOO	**Floro**	**2.55**	**337**	Pn		**Pn**	**22 46 59.9**	**+0.8**
FOO				Pg		**Pb**	**22 47 03.7**	**+0.3**
FOO				Sn		**Sn**	**22 47 30.9**	**+0.5**
FOO				Lg		Lg	22 47 35.9	
FOO	**Floro**	**2.55**	**337**	*eP*		**Pn**	**22 46 59.8**	**+0.6**
FOO				*eS*		**Sn**	**22 47 30.5**	**+0.1**
FOO				*e*			22 47 36.6	
FOO				IAML			22 47 37.2	
	comp=Z,723nm,0.5s							
FOO	**Floro**	**2.55**	**337**	*eP*		**Pn**	**22 46 59.8**	**+0.6**
FOO				*eSB*		**Sb**	**22 47 35.7**	**+0.7**
NC602	**NORSAR Array S**	**2.66**	**55**	*eP*		**Pn**	**22 47 02.2**	**+1.4**
NC602				*eS*		**Sn**	**22 47 33.6**	**+0.3**
NC602				IAML			22 47 40.8	
	comp=Z,780nm,0.5s							
NC602				*eSg*		**Sg**	**22 47 42.6**	**-0.1**
NRA0	**NORESS Array S**	**2.66**	**55**	Pn		**Pn**	**22 47 02.1**	**+1.3**
	baz=243,slow=14							
NRA0				Sn		**Sn**	**22 47 33.4**	**0.0**
	baz=243,slow=22							
NRA0				Lg		Lg	22 47 40.3	
	baz=241,slow=28							
NRA0	**NORESS Array S**	**2.66**	**55**	Pn		**Pn**	**22 47 02.1**	**+1.3**
	baz=243,slow=14							
NRA0				Sn		**Sn**	**22 47 33.4**	**0.0**
	baz=243,slow=22							
NRA0				Sg		**Sb**	**22 47 40.3**	**+2.0**
	baz=241,slow=28							
TJOU	**Tjoern**	**2.67**	**116**	P		**Pn**	**22 47 02.3**	**+1.5**
TJOU				*i*	P	**Pb**	**22 47 02.5**	**-3.0**
TJOU				S		**Sn**	**22 47 32.9**	**-0.5**
TJOU	**Tjoern**	**2.67**	**116**	P		**Pn**	**22 47 02.3**	**+1.5**
TJOU				S		**Sn**	**22 47 32.9**	**-0.5**
TJOU	**Tjoern**	**2.67**	**116**	P		**Pn**	**22 47 02.3**	**+1.5**
TJOU				*i*	P	**Pb**	**22 47 02.5**	**-3.0**
TJOU				S		**Sn**	**22 47 32.9**	**-0.5**
VANU	**Vaenersborg**	**2.69**	**105**	P		**Pn**	**22 47 02.5**	**+1.3**
VANU				S		**Sn**	**22 47 29.4**	**-4.6**
VANU	**Vaenersborg**	**2.69**	**105**	P		**Pn**	**22 47 02.5**	**+1.3**
VANU				S		**Sn**	**22 47 29.4**	**-4.6**
VANU	**Vaenersborg**	**2.69**	**105**	P		**Pn**	**22 47 02.5**	**+1.3**
VANU				S		**Sn**	**22 47 29.4**	**-4.6**
NB2	**NORSAR Subarra**	**2.71**	**47**	Pn		**Pn**	**22 47 02.7**	**+1.3**
	baz=226,slow=14							
NB2				Pg		**Pb**	**22 47 06.7**	**+0.5**
NB2				Lg		Lg	22 47 41.5	
	baz=233,slow=37							
NB2	**NORSAR Subarra**	**2.71**	**47**	Pn		**Pn**	**22 47 02.7**	**+1.3**
	baz=226,slow=14							
NB2				Pg		**Pb**	**22 47 06.7**	**+0.5**
NB2				Sg		**Sb**	**22 47 41.5**	**+1.8**
	baz=233,slow=37							
NOA	**NORSAR Array B**	**2.71**	**47**	Pn		**Pn**	**22 47 00.9**	**-0.6**
	comp=Z,2.2nm,0.3s,baz=164,slow=20,SNR=96							
NOA				Pg		**Pb**	**22 47 06.2**	**0.0**
	comp=Z,3.6nm,0.3s,baz=26,slow=20,SNR=34							
NOA				Sn		**Sn**	**22 47 33.7**	**-0.8**
	comp=Z,7.7nm,0.3s,baz=131,slow=21,SNR=4.9							
NOA				Lg		Lg	22 47 41.2	
	comp=Z,16nm,0.3s,baz=226,slow=27,SNR=16							
AKN	**Aaknes**	**2.91**	**359**	Pn		**Pn**	**22 47 05.3**	**+1.1**
AKN				Sn		**Sn**	**22 47 37.9**	**-1.6**
AKN				Lg		Lg	22 47 48.2	
AKN	**Aaknes**	**2.91**	**359**	Pn		**Pn**	**22 47 05.3**	**+1.1**
AKN				Sn		**Sn**	**22 47 37.9**	**-1.6**
AKN				Sg		**Sb**	**22 47 48.2**	**+2.6**
AKN				IAML			22 47 52.2	
	comp=Z,600nm,0.5s							
DOMB	**Dombas**	**2.94**	**18**	Pn		**Pn**	**22 47 06.4**	**+1.8**
DOMB				Pg		**Pb**	**22 47 10.9**	**+0.8**
DOMB				Sn		**Sn**	**22 47 41.0**	**+0.8**
DOMB				Lg		Lg	22 47 49.2	
DOMB	**Dombas**	**2.94**	**18**	*eP*		**Pn**	**22 47 06.5**	**+1.8**
DOMB				*e*			22 47 41.0	
DOMB				IAML			22 47 53.1	
	comp=Z,2μm,0.4s							
MUD	**Monsted U'grnd**	**3.03**	**158**	*i*	P	**Pn**	**22 47 08.0**	**+2.1**
MUD				IAML			22 48 01.5	
	comp=Z,192nm,0.5s							
MUD	**Monsted U'grnd**	**3.03**	**158**	*i*	P	**Pn**	**22 47 08.0**	**+2.1**
MUD				IAML			22 48 01.5	
	comp=Z,192nm,0.5s							
MUD	**Monsted U'grnd**	**3.03**	**158**	*ePn*		**Pn**	**22 47 08.1**	**+2.2**
MUD				*ePg*		**Pg**	**22 47 16.6**	**+1.1**
MUD				*eSg*		**Sb**	**22 47 53.0**	**+4.1**
NASU	**Vaermlandsnaes**	**3.15**	**94**	P		**Pn**	**22 47 08.5**	**+1.0**
NASU	**Vaermlandsnaes**	**3.15**	**94**	P		**Pn**	**22 47 08.5**	**+1.0**
NASU	**Vaermlandsnaes**	**3.15**	**94**	P		**Pn**	**22 47 08.5**	**+1.0**
ONAU	**Onsala**	**3.16**	**125**	P		**Pn**	**22 47 08.7**	**+1.2**
ONAU				*i*	P	Pb	22 47 08.9	-4.9
ONAU	**Onsala**	**3.16**	**125**	P		**Pn**	**22 47 08.7**	**+1.2**
ONAU	**Onsala**	**3.16**	**125**	P		**Pn**	**22 47 08.7**	**+1.2**
ONAU				*i*	P	Pb	22 47 08.9	-4.9
MOL	**Molde**	**3.31**	**3**	*eP*		**Pn**	**22 47 09.6**	**-0.1**
MOL	**Molde**	**3.31**	**3**	Pn		**Pn**	**22 47 09.8**	**+0.1**
MOL				Sn		**Sn**	**22 47 50.1**	**+0.7**
MOL				Lg		Lg	22 47 58.3	
MOL	**Molde**	**3.31**	**3**	⇑*i*	*P*	**Pn**	**22 47 09.9**	**+0.3**
MOL				*eS*		**Sn**	**22 47 48.5**	**-0.9**
MOL				*e*			22 47 57.5	
MOL				IAML			22 48 02.1	
	comp=Z,417nm,0.7s							
UDD	**Uddeholm**	**3.39**	**73**	P		**Pn**	**22 47 11.6**	**+0.8**
BORU	**Boraas**	**3.40**	**117**	P		**Pn**	**22 47 12.1**	**+1.3**
BORU				*i*	P	Pb	22 47 12.2	-5.7
BORU				*i*			22 47 15.4	
BORU	**Boraas**	**3.40**	**117**	P		**Pn**	**22 47 12.1**	**+1.3**
BORU	**Boraas**	**3.40**	**117**	P		**Pn**	**22 47 12.1**	**+1.3**
BORU				*i*	P	Pb	22 47 12.2	-5.7
BORU				*i*			22 47 15.4	
HFC2	**Hagfors New Ar**	**3.44**	**73**	*eP*		**Pn**	**22 47 13.1**	**+1.6**
HFS	**Hagfors**	**3.44**	**73**	Pn		**Pn**	**22 47 11.7**	**+0.2**
	comp=Z,2.0nm,0.3s,baz=252,slow=12,SNR=116							
HFS				Pg		**Pb**	**22 47 17.3**	**-1.4**
	comp=Z,3.6nm,0.3s,baz=252,slow=12,SNR=11							
HFS				Sn		**Sn**	**22 47 47.1**	**-5.5**
	comp=Z,11nm,0.3s,baz=253,slow=14,SNR=5.7							
HFS				Lg		Lg	22 48 04.7	
	comp=Z,36nm,0.3s,baz=250,slow=27,SNR=12							
HFS	**Hagfors**	**3.44**	**73**	Pn		**Pn**	**22 47 12.0**	**+0.5**
	baz=259,slow=16							
HFS				Sn		**Sn**	**22 47 51.1**	**-1.4**
	baz=253,slow=22							
HFS				Lg		Lg	22 48 04.3	
	baz=252,slow=28							
HFS	**Hagfors**	**3.44**	**73**	Pn		**Pn**	**22 47 12.0**	**+0.5**
	baz=259,slow=16							
HFS				Sn		**Sn**	**22 47 51.1**	**-1.4**
	baz=253,slow=22							
HFS				Sg		**Sb**	**22 48 04.3**	**+3.6**
	baz=252,slow=28							
FKPU	**Falk**	**3.62**	**105**	P		**Pn**	**22 47 15.1**	**+1.1**
FKPU	**Falk**	**3.62**	**105**	P		**Pn**	**22 47 15.1**	**+1.1**
FKPU	**Falk**	**3.62**	**105**	P		**Pn**	**22 47 15.1**	**+1.1**
FABU	**Falkenberg**	**3.74**	**125**	*i*	P	**Pn**	**22 47 16.8**	**+1.2**
FABU				P		Pb	22 47 16.8	-7.0
FABU	**Falkenberg**	**3.74**	**125**	P		**Pn**	**22 47 16.8**	**+1.2**
FABU	**Falkenberg**	**3.74**	**125**	*i*	P	**Pn**	**22 47 16.8**	**+1.2**
FABU				P		Pb	22 47 16.8	-7.0
GID	**Gilleleje**	**4.16**	**137**	*eP*		**Pn**	**22 47 23.6**	**+2.3**
GID	**Gilleleje**	**4.16**	**137**	*eP*		**Pn**	**22 47 23.6**	**+2.3**
TBLU	**Trondheim**	**4.27**	**19**	*eP*		**Pn**	**22 47 26.3**	**+3.5**
LRW	**Lerwick**	**4.29**	**285**	*eP*		**Pn**	**22 47 24.1**	**+1.0**
LRW				*eS*		**Sn**	**22 48 08.4**	**-5.0**
LRW				IAML			22 48 18.1	
	comp=N,26nm,0.4s							
LRW				IAML			22 48 33.6	
	comp=E,36nm,0.4s							
LRW	**Lerwick**	**4.29**	**285**	*eP*		**Pn**	**22 47 24.2**	**+1.2**
LRW				*eS*		**Sn**	**22 48 10.1**	**-3.3**
LRW	**Lerwick**	**4.29**	**285**	*eP*		**Pn**	**22 47 24.1**	**+1.0**
LRW				*eS*		**Sn**	**22 48 09.5**	**-3.9**
BJUU	**Bjuv**	**4.51**	**133**	*i*	P	**Pn**	**22 47 27.1**	**+1.0**
BJUU	**Bjuv**	**4.51**	**133**	*i*	P	**Pn**	**22 47 27.1**	**+1.0**
DEL	**Delary**	**4.57**	**125**	*i*	P	**Pn**	**22 47 28.5**	**+1.5**
DEL	**Delary**	**4.57**	**125**	*i*	P	**Pn**	**22 47 28.5**	**+1.5**
COP	**Copenhagen**	**4.60**	**139**	*eP*		**Pn**	**22 47 27.8**	**+0.5**
COP				IAML			22 48 53.4	
	comp=Z,47nm,0.5s							
COP	**Copenhagen**	**4.60**	**139**	*eP*		**Pn**	**22 47 27.8**	**+0.5**
COP				IAML			22 48 53.4	
	comp=Z,47nm,0.5s							
COP	**Copenhagen**	**4.60**	**139**	*ePn*		**Pn**	**22 47 28.4**	**+1.1**
COP				*eSn*		**Sn**	**22 48 17.9**	**-3.2**
COP				*eSg*		**Sg**	**22 48 41.4**	**-3.6**
LUNU	**Lund**	**5.00**	**134**	*i*	P	**Pn**	**22 47 33.4**	**+0.6**
LUNU	**Lund**	**5.00**	**134**	*i*	P	**Pn**	**22 47 33.4**	**+0.6**
HLG	**Helgoland**	**5.12**	**175**	*ePn*		**Pn**	**22 47 36.0**	**+1.4**
BLEU	**Blekinge**	**5.52**	**119**	*i*	P	**Pn**	**22 47 40.8**	**+0.7**
BLEU				*i*			22 47 44.9	
BLEU	**Blekinge**	**5.52**	**119**	*i*	P	**Pn**	**22 47 40.8**	**+0.7**
BLEU				*i*			22 47 44.9	
NOD	**Norderasen**	**5.60**	**38**	⇑*eP*		**Pn**	**22 47 42.3**	**+1.2**
DRUM	**Mains of Drumt**	**5.62**	**249**	*eP*		**Pn**	**22 47 41.7**	**+0.4**
DRUM				*eS*		**Sn**	**22 48 41.0**	**-5.1**
DRUM				IAML			22 48 44.0	
	comp=E,40nm,0.3s							
DRUM				IAML			22 48 49.8	
	comp=N,44nm,0.3s							
DRUM	**Mains of Drumt**	**5.62**	**249**	*eP*		**Pn**	**22 47 41.6**	**+0.3**
DRUM				*eS*		**Sn**	**22 48 42.0**	**-4.1**
ARNU	**Arnoeviken**	**5.62**	**60**	*eP*		**Pn**	**22 47 42.2**	**+0.8**
ARNU	**Arnoeviken**	**5.62**	**60**	*eP*		**Pn**	**22 47 42.2**	**+0.8**
BSEG	**Bad Segeberg**	**5.64**	**160**	*ePn*		**Pn**	**22 47 44.3**	**+2.7**
BSEG				*eSg*		**Sg**	**22 49 18.1**	**-0.1**
MCD	**Coleburn Disti**	**5.71**	**257**	*eS*		**Sn**	**22 48 43.2**	**-5.1**
MCD				IAML			22 48 45.6	
	comp=N,62nm,0.9s							
MCD				IAML			22 49 08.2	
	comp=E,40nm,0.4s							
NSS	**Namsos**	**5.75**	**21**	*eP*		**Pn**	**22 47 44.2**	**+1.1**
NSS				IAML			22 49 16.4	
	comp=Z,96nm,0.4s							
BIGH	**Upper Bighouse**	**5.77**	**267**	*eP*		**Pn**	**22 47 44.4**	**+0.9**
BIGH				*eS*		**Sn**	**22 48 43.5**	**-6.4**
BIGH				IAML			22 48 52.3	
	comp=N,48nm,0.5s							
BIGH				IAML			22 48 57.7	
	comp=E,51nm,0.5s							
BIGH	**Upper Bighouse**	**5.77**	**267**	‖*eP*		**Pn**	**22 47 43.8**	**+0.3**
NRTU	**Norrtaelje**	**5.88**	**81**	*eP*		**Pn**	**22 47 46.2**	**+1.3**
NRTU	**Norrtaelje**	**5.88**	**81**	*eP*		**Pn**	**22 47 46.2**	**+1.3**
BSD	**Bornholm Skovb**	**5.95**	**131**	*eP*		**Pn**	**22 47 45.5**	**-0.3**
BSD	**Bornholm Skovb**	**5.95**	**131**	*eP*		**Pn**	**22 47 46.1**	**+0.3**
BSD				*i*	P	Pb	22 47 46.2	-15
BSD				IAML			22 49 30.1	
	comp=Z,27nm,0.4s							
BSD	**Bornholm Skovb**	**5.95**	**131**	*eP*		**Pn**	**22 47 46.1**	**+0.3**
BSD				*i*	P	Pb	22 47 46.2	-15
BSD				IAML			22 49 30.1	
	comp=Z,27nm,0.4s							
BSD	**Bornholm Skovb**	**5.95**	**131**	*ePn*		**Pn**	**22 47 46.0**	**+0.1**
BSD				*eSg*		**Sb**	**22 49 21.2**	**+8.6**
EDU	**Dundee**	**6.05**	**248**	*eP*		**Pn**	**22 47 47.1**	**-0.2**
ESY	**Stoneypath**	**6.22**	**241**	*eP*		**Pn**	**22 47 48.8**	**-0.8**
HEMU	**Hemsoen**	**6.31**	**53**	*eP*		**Pn**	**22 47 52.4**	**+1.5**
HEMU				*eS*		**Sn**	**22 49 00.4**	**-2.8**
EDI	**Edinburgh**	**6.47**	**243**	*eP*		**Pn**	**22 47 53.0**	**-0.1**
EDI	**Edinburgh**	**6.47**	**243**	*eP*		**Pn**	**22 47 54.3**	**+1.2**
GDLE	**Glaisdale, N Y**	**6.52**	**225**	*eP*		**Pn**	**22 47 53.7**	**-0.1**
GDLE				*eS*		**Sn**	**22 49 03.9**	**-4.5**
AAL	**Aland**	**6.58**	**77**	*eP*		**Pn**	**22 47 54.5**	**+0.1**
AAL				*eS*		**Sb**	**22 49 38.7**	**+8.0**
AAL	**Aland**	**6.58**	**77**	*eP*		**Pn**	**22 47 55.0**	**+0.6**
AAL				*eS*		**Sn**	**22 49 06.1**	**-3.5**
INVG	**Invergeldie, C**	**6.61**	**249**	*eP*		**Pn**	**22 47 54.5**	**-0.4**
EDMD	**Edmundbyers**	**6.66**	**232**	*eP*		**Pn**	**22 47 54.8**	**-0.8**
EDMD	**Edmundbyers**	**6.66**	**232**	‖*eP*		**Pn**	**22 47 54.8**	**-0.8**
EKA	**Eskdalemuir Ar**	**6.82**	**239**	Pn		**Pn**	**22 47 56.8**	**-1.1**
	baz=49,slow=12,SNR=87							
EKA				Sn		**Sn**	**22 49 13.2**	**-2.6**
	baz=53,slow=25,SNR=16							
EKA	**Eskdalemuir Ar**	**6.82**	**239**	Pn		**Pn**	**22 47 57.0**	**-0.9**
EKA	**Eskdalemuir Ar**	**6.82**	**239**	Pn		**Pn**	**22 47 57.0**	**-0.9**
NRDL	**Niedersach Rie**	**7.00**	**165**	*ePn*		**Pn**	**22 48 01.5**	**+1.2**
NRDL				*eSn*		**Sn**	**22 49 15.4**	**-4.7**
HUSU	**Husum**	**7.11**	**50**	*eP*		**Pn**	**22 48 03.1**	**+1.3**
HUSU	**Husum**	**7.11**	**50**	*eP*		**Pn**	**22 48 03.1**	**+1.3**
LMK	**Market Rasen**	**7.14**	**219**	*eP*		**Pn**	**22 48 02.1**	**-0.1**
HPK	**Haverah Park**	**7.18**	**226**	*eP*		**Pn**	**22 48 02.7**	**-0.1**
FLTG	**Flechtingen**	**7.34**	**160**	*ePn*		**Pn**	**22 48 05.7**	**+0.8**
FLTG				*eSn*		Sn	22 49 20.2	-8.2
LAWE	**Loch Awe, Argy**	**7.34**	**251**	*eP*		**Pn**	**22 48 04.4**	**-0.6**
NEWG	**New Galloway**	**7.44**	**241**	*eP*		**Pn**	**22 48 05.8**	**-0.5**
ASSE	**Asse, Remlinge**	**7.44**	**163**	*ePn*		**Pn**	**22 48 07.7**	**+1.4**
ASSE				*eSn*		**Sn**	**22 49 24.7**	**-6.1**
WACR	**West Acre**	**7.50**	**212**	*eP*		**Pn**	**22 48 07.1**	**-0.1**
RAF	**Rauma**	**7.52**	**70**	*eP*		**Pn**	**22 48 08.1**	**+0.7**
RAF				*eS*		**Sn**	**22 49 27.6**	**-5.1**
RAF				MSG			22 50 19.1	
	comp=Z,31nm,0.3s							
RAF	**Rauma**	**7.52**	**70**	*eP*		**Pn**	**22 48 08.1**	**+0.7**
RAF				*eS*		**Sn**	**22 49 27.6**	**-5.1**
RAF				MSG			22 50 19.1	
	comp=Z,31nm,0.3s							
LBWR	**Ladybower, Pea**	**7.66**	**224**	*eP*		**Pn**	**22 48 08.8**	**-0.7**
CLZ	**Clausthal**	**7.67**	**165**	*ePn*		**Pn**	**22 48 10.5**	**+0.8**
CLZ				*eSn*		**Sn**	**22 49 31.1**	**-5.8**
GAL1	**Galloway**	**7.81**	**241**	*eP*		**Pn**	**22 48 11.4**	**0.0**
BUG	**Bochum--Univer**	**7.85**	**179**	*eSn*		**Sn**	**22 49 36.0**	**-5.1**
GTTG	**Gottingen**	**7.92**	**167**	*ePn*		**Pn**	**22 48 14.1**	**+1.2**
GTTG				*eSn*		**Sn**	**22 49 36.8**	**-5.9**
CHRS	**Christianenhau**	**7.97**	**163**	*ePn*		**Pn**	**22 48 13.1**	**-0.6**
CHRS				*eSn*		**Sn**	**22 49 37.5**	**-6.5**
KASTN	**Kahler Asten**	**8.12**	**174**	*ePn*		**Pn**	**22 48 16.0**	**+0.2**
KASTN				*eSn*		**Sn**	**22 49 43.7**	**-4.1**
SLIT	**Slitere, Latvi**	**8.13**	**95**	*eP*		Pn	22 48 23.2	+7.5
SLIT				*eS*		**Sg**	**22 50 31.9**	**-6.1**
WIMM	**Wimmelburg**

DPC				*e*SN		**Sn**	22 50 46.6	**+3.1**
TOF	**Tornio**	**10.41**	**42**	MSG			22 51 53.8	
	comp=Z,17nm,0.5s							
TOF	**Tornio**	**10.41**	**42**	MSG			22 51 53.8	
	comp=Z,17nm,0.5s							
SAVF	**Savonnieres en**	**10.74**	**187**	*e*Pn		**Pn**	**22 48 52.4**	**+0.8**
	baz=5.4							
SAVF				*e*Sn		Sn	22 50 41.1	-11
	comp=Z,3.3nm,0.5s							
KRLC	**Kraliky**	**10.77**	**145**	*e*PN		**Pn**	**22 48 54.8**	**+2.8**
PAGF	**Fort de Pagny**	**10.77**	**185**	*e*Pn		**Pn**	**22 48 52.7**	**+0.7**
PAGF				*e*Sn		Sn	22 50 41.5	-11
	comp=Z,2.0nm,0.4s,baz=7.7							
KHC	**Kasperske Hory**	**10.84**	**157**	*e*PN		**Pn**	**22 48 54.0**	**+1.0**
KHC				*e*SN		**Sn**	**22 50 55.8**	**+1.3**
MEZF	**Maizieres J'vi**	**10.86**	**187**	*e*Pn		**Pn**	**22 48 54.6**	**+1.4**
	baz=5.2							
MEZF				*e*Sn		Sn	22 50 44.0	-11
	comp=Z,3.7nm,0.4s,baz=4.5							
CDF	**Champ du Feu**	**10.88**	**179**	*e*Pn		**Pn**	**22 48 53.7**	**+0.1**
CDF				*e*Sn		Sn	22 50 46.0	-10
	comp=Z,3.8nm,0.6s							
ISAL	**Salakas**	**10.89**	**102**	*e*P		**Pn**	**22 48 54.1**	**+0.5**
ISAL				IAmb		IAmb	22 52 26.8	
	comp=Z,23nm,0.8s							
IIGN	**Ignalina**	**11.04**	**103**	*e*P		**Pn**	**22 48 59.9**	**+4.2**
IIGN				IAmb		IAmb	22 52 19.3	
	comp=Z,47nm,0.8s							
GERES	**GERESS Array B**	**11.14**	**157**	Pn		**Pn**	**22 48 56.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=343,slow=12,SNR=7.9							
SFTF	**Sexfontaines**	**11.16**	**187**	*e*Pn		**Pn**	**22 48 58.4**	**+1.1**
	baz=4.6							
SFTF				*e*Sn		Sn	22 50 51.3	-11
	comp=Z,1.5nm,0.3s,baz=14							
MORC	**Moravsky Berou**	**11.27**	**143**	*e*PN		**Pn**	**22 49 00.8**	**+2.0**
CKRC	**Cesky Krumlov**	**11.29**	**155**	*e*PN		**Pn**	**22 49 00.4**	**+1.3**
CKRC				*e*SN		**Sn**	**22 51 05.9**	**+0.5**
HAU	**Haudompre**	**11.30**	**183**	*e*Pn		**Pn**	**22 49 00.7**	**+1.4**
HAU				*e*Sn		Sn	22 50 55.5	-10
	comp=Z,1.3nm,0.3s							
IDID	**Didziasalis**	**11.32**	**102**	*e*P		**Pn**	**22 49 03.6**	**+4.2**
VRAC	**Vranov**	**11.40**	**147**	Pn		**Pn**	**22 48 59.2**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=320,slow=13,SNR=2.8							
VRAC	**Vranov**	**11.40**	**147**	*e*PN		**Pn**	**22 49 01.8**	**+1.1**
FLN	**La Foliniere**	**11.43**	**206**	*e*Pn		**Pn**	**22 48 59.3**	**-1.7**
	baz=23							
FLN				*e*Sn		Sn	22 50 55.5	-13
	comp=Z,9.6nm,0.5s,baz=20							
HINF	**Hinteralfeld**	**11.48**	**181**	*e*Pn		**Pn**	**22 49 03.3**	**+1.5**
HINF				*e*Sn		Sn	22 50 59.3	-11
	comp=Z,0.9nm,0.4s							
LDF	**La Druitiere**	**11.51**	**205**	*e*Pn		**Pn**	**22 49 00.2**	**-1.9**
LDF				*e*Sn		Sn	22 50 57.7	-13
	comp=Z,6.9nm,0.5s							
KRUC	**Moravsky**	**11.57**	**148**	*e*PN		**Pn**	**22 49 03.9**	**+0.9**
HEF	**Hetta**	**11.66**	**31**	*e*P		**Pn**	**22 49 02.6**	**-1.5**
HEF				*e*S		**Sn**	**22 51 07.3**	**-7.1**
GRR	**Gorron**	**11.87**	**207**	*e*Pn		**Pn**	**22 49 04.3**	**-2.7**
GRR				*e*Sn		Sn	22 51 05.9	-14
	comp=Z,19nm,0.6s							
LOR	**Lormes**	**12.18**	**191**	*e*Pn		**Pn**	**22 49 10.8**	**-0.5**
	baz=12							
LOR				*e*Sn		Sn	22 51 16.1	-11
	comp=Z,3.5nm,0.5s,baz=7.3							
MOTA	**Moosalm**	**12.18**	**167**	*e*P		**Pn**	**22 49 12.1**	**+0.7**
	comp=Z,0.8nm,0.3s							
JOF	**Joensuu**	**12.23**	**62**	*e*P		**Pn**	**22 49 11.8**	**0.0**
JOF				*e*S		**Sn**	**22 51 20.7**	**-7.5**
WATA	**Walderalm**	**12.25**	**166**	*e*P		**Pn**	**22 49 16.0**	**+3.7**
	comp=Z,2.1nm,0.5s							
MNK	**Minsk**	**12.30**	**104**	*i* P		**Pn**	**22 49 17.5**	**+4.7**
	comp=E,1.0nm,1.0s							
MNK				*i* P		**Pn**	**22 49 17.5**	**+4.7**
	comp=N,4.0nm,0.9s							
MNK				*i* P		**Pn**	**22 49 17.5**	**+4.7**
	comp=Z,6.0nm,1.8s							
MNK				*i* PP		**PnPn**	**22 49 25.3**	**+5.1**
MNK				*i* PPP		PPP	22 49 33.0	
MNK				*i* S		Sn	22 51 40.2	+10
MNK				*i* SS		**SnSn**	**22 51 52.4**	**+11**
MNK				*i* SSS		SSS	22 52 04.5	
MNK				*i* LQ		LQ	22 52 58.7	
MNK				*i* LR		LR	22 53 56.3	
MNK				*i* LRM		MLR	22 54 37.1	
	comp=Z,24nm,15.0s							
MNK				*i* LRM		MLR	22 54 50.9	
	comp=N,16nm,12.9s							
MNK				*i* LRM		MLR	22 54 58.7	
	comp=E,6.0nm,17.1s							
HYF	**Humbligny**	**12.32**	**194**	*e*Pn		**Pn**	**22 49 13.8**	**+0.6**
SQTA	**Sankt Quirin**	**12.32**	**167**	*e*P		**Pn**	**22 49 14.5**	**+1.3**
	comp=E,1.1nm,0.2s							
WTTA	**Wattenberg**	**12.33**	**165**	*e*P		Pn	22 49 20.0	+6.6
	comp=E,2.1nm,0.5s							
KU6	**Riekki**	**12.40**	**47**	MPN			22 49 22.9	
	comp=Z,0.5nm,0.1s							
KU6	**Riekki**	**12.40**	**47**	MPN			22 49 22.9	
	comp=Z,0.5nm,0.1s							
SGMF	**Saint Gilles**	**12.42**	**211**	*e*Pn		**Pn**	**22 49 11.8**	**-2.7**
SGMF				*e*Sn		Sn	22 51 18.3	-15
	comp=Z,1.7nm,0.3s							
SSF	**Saint Saulge**	**12.42**	**192**	*e*Pn		**Pn**	**22 49 13.3**	**-1.3**
SSF				*e*Sn		Sn	22 51 21.6	-12
	comp=Z,1.9nm,0.4s							
FETA	**Feichten**	**12.46**	**168**	*e*P		**Pn**	**22 49 16.9**	**+1.6**
	comp=Z,1.7nm,0.7s							
CONA	**Conrad Observa**	**12.48**	**152**	*i* P		Pn	22 49 21.4	+5.9
	comp=Z,1.0nm,0.6s							
ROSF	**Rostrenen**	**12.54**	**214**	*e*Pn		**Pn**	**22 49 13.9**	**-2.3**
ROSF				*e*Sn		Sn	22 51 21.0	-15
	comp=Z,4.6nm,0.4s							
CABF	**La Chapelle**	**12.70**	**183**	*e*Pn		**Pn**	**22 49 19.4**	**+0.9**
CABF				*e*Sn		Sn	22 51 28.8	-11
	comp=Z,1.1nm,0.4s							
AVF	**Avril sur Loir**	**12.71**	**192**	*e*Pn		**Pn**	**22 49 18.8**	**+0.4**
AVF				*e*Sn		Sn	22 51 28.6	-12
	comp=Z,0.8nm,0.3s							
SMF	**Signal de Mont**	**12.80**	**190**	*e*Pn		**Pn**	**22 49 18.7**	**-1.1**
SMF				*e*Sn		Sn	22 51 29.9	-13
	comp=Z,1.1nm,0.3s							
QUIF	**Quistinic**	**12.89**	**213**	*e*Pn		**Pn**	**22 49 18.2**	**-2.8**
QUIF				*e*Sn		Sn	22 51 29.5	-15
	comp=Z,7.1nm,0.5s							
ARA0	**ARCESS Array S**	**12.93**	**30**	Pn		**Pn**	**22 49 19.1**	**-2.3**
	baz=214,slow=14							
ARA0	**ARCESS Array S**	**12.93**	**30**	Pn		**Pn**	**22 49 19.1**	**-2.3**
	baz=214,slow=14							
ARCES	**ARCESS Array B**	**12.93**	**30**	Pn		**Pn**	**22 49 17.7**	**-3.6**
	baz=212,slow=14,SNR=12							
ARCES					Sn	**Sn**	**22 51 37.7**	**-7.6**
	baz=224,slow=15,SNR=2.3							
ARCES					Lg	Lg	22 52 58.5	
	baz=222,slow=29,SNR=15							
ARCES					LR	LR	22 54 19.2	
	comp=Z,40nm,18.6s,baz=210,slow=37							
BGF	**Bois d'Agland**	**12.99**	**193**	*e*Pn		**Pn**	**22 49 22.5**	**+0.1**
BGF				*e*Sn		Sn	22 51 34.8	-12
	comp=Z,11nm,0.5s							
TCF	**Toulx Ste Croi**	**13.34**	**195**	*e*Pn		**Pn**	**22 49 25.4**	**-1.7**
TCF				*e*Sn		Sn	22 51 42.3	-13
	comp=Z,2.1nm,0.5s							
MFF	**Saint Martin d**	**13.42**	**202**	*e*Pn		**Pn**	**22 49 25.7**	**-2.4**
MFF				*e*Sn		Sn	22 51 43.4	-14
	comp=Z,6.7nm,0.5s							
LPL	**La Plagne**	**13.78**	**181**	*e*Pn		**Pn**	**22 49 34.1**	**+0.7**
RJF	**Les Rejaudoux**	**14.40**	**196**	*e*Pn		**Pn**	**22 49 40.0**	**-1.6**
RJF				*e*Sn		Sn	22 52 07.2	-14
	comp=Z,3.9nm,0.4s							
ORIF	**Oris-en-Rattie**	**14.40**	**184**	*e*Pn		**Pn**	**22 49 42.4**	**+0.7**
ORIF				*e*Sn		Sn	22 52 09.5	-12
	comp=Z,1.0nm,0.4s							
VIVF	**Saint-Julien-l**	**14.52**	**187**	*e*Pn		**Pn**	**22 49 43.6**	**+0.4**
VIVF				*e*Sn		Sn	22 52 11.3	-13
	comp=Z,0.4nm,0.2s							
MBDF	**Montbardon**	**14.57**	**181**	*e*Pn		**Pn**	**22 49 44.8**	**+0.7**
CAF	**Calviac**	**14.70**	**194**	*e*Pn		**Pn**	**22 49 44.2**	**-1.5**
CAF				*e*Sn		Sn	22 52 14.8	-14
	comp=Z,3.5nm,0.6s							
LFF	**La Frestale**	**14.87**	**198**	*e*Pn		**Pn**	**22 49 46.1**	**-1.9**
LFF				*e*Sn		Sn	22 52 18.7	-14
	comp=Z,8.4nm,0.7s							
AKASG	**Malin Array Be**	**15.25**	**115**	Pn		Pn	22 49 45.9	-7.2
	comp=Z,0.7nm,0.3s,baz=316,slow=12,SNR=2.7							
AKASG					Lg	Lg	22 54 17.7	
	comp=Z,0.9nm,0.3s,baz=317,slow=29,SNR=8.3							
KLMR	**Klimovskoe**	**16.16**	**70**	*e*P		**Pn**	**22 49 59.5**	**-5.3**
KLMR				*e*S		Sn	22 52 47.7	-16
MTLF	**Montolieu**	**16.24**	**193**	*e*Pn		**Pn**	**22 50 04.8**	**-1.1**
OBN	**Obninsk**	**16.42**	**92**	Lg		Lg	22 54 51.1	
	comp=Z,0.6nm,0.3s,baz=90,slow=21,SNR=4.4							
EPF	**Esparros**	**16.80**	**197**	*e*Pn		**Pn**	**22 50 12.0**	**-1.1**
EPF				*e*Sn		Sn	22 53 05.0	-15
	comp=Z,1.5nm,0.4s							
SJPF	**Ste Jean**	**16.98**	**201**	*e*Pn		**Pn**	**22 50 12.8**	**-2.6**
SJPF				*e*Sn		Sn	22 53 12.5	-12
	comp=Z,1.6nm,0.7s							
ETSF	**Etsaut**	**17.07**	**200**	*e*Pn		**Pn**	**22 50 15.8**	**-0.7**
MLR	**Muntele Rosu**	**17.87**	**132**	LR		LR	22 58 28.0	
	comp=Z,55nm,18.5s,baz=218,slow=41							
LSH	**Leshukonskoye**	**18.69**	**56**	P		**P**	**22 50 33.7**	**-2.3**
LSH				*e*S		Sn	22 53 49.2	-16
ESDC	**Sonseca Array**	**20.84**	**205**	P		**P**	**22 50 59.1**	**-0.6**
	comp=Z,1.3nm,0.9s,baz=6.6,slow=11,SNR=6.6							
BELG	**Belogornoye**	**23.46**	**89**	P		**P**	**22 51 28.4**	**+1.2**
	comp=Z,2.9nm,0.7s,baz=297,slow=6.8,SNR=2.8							
KURBB	**Kurchatov Arra**	**40.03**	**70**	P		**P**	**22 53 53.3**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=312,slow=9.0,SNR=5.2							
ZALV	**Zalesovo Beam**	**40.82**	**62**	P		**P**	**22 53 58.5**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=307,slow=12,SNR=4.0							
MKAR	**Makanchi Array**	**44.46**	**72**	P		**P**	**22 54 29.5**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=320,slow=5.4,SNR=4.5							
TORD	**Torodi Ar. Bea**	**46.22**	**187**	P		**P**	**22 54 44.2**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=358,slow=8.7,SNR=2.8							
YKA	**Yellowknife Ar**	**50.60**	**329**	P		**P**	**22 55 16.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=37,slow=7.7,SNR=8.7							
SONM	**Songino Array**	**54.67**	**55**	P		**P**	**22 55 47.2**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=305,slow=5.1,SNR=1.7							
ILAR	**Eielson Array**	**54.72**	**347**	P		**P**	**22 55 48.7**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=347,slow=6.6,SNR=1.7							
NVAR	**Mina Array Bea**	**72.70**	**318**	P		**P**	**22 57 47.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=88,slow=5.1,SNR=2.3							

*IDC **29** 23:08:23.6±1.0,26.04N×128.28E,h0km,mb3.7/10, mb1 3.8/12,mb1mx3.7/39,mbtmp3.7/12,ML3.5/1,MS3.0/3, Ms1 3.0/3,ms1mx2.7/35,Error ellipse: s-maj=39.2km s-min=16.7km az=83.0*
*JMA **29** 23:08:28.2±0.4,26.12N×128.45E,h42km±5km,M3.3*
ISC 29 23:08:26.6±0.7,**26.03N**±0.06×**128.57E**±0.04,**h27**km,**n26,** σ1s**17**/31,**mb3.7**/10,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.69**	**315**	P		**Pb**	**23 08 39.4**	**-0.6**
JNTH				*e*S		**Sb**	**23 08 47.5**	**-1.7**
JJT3	**Tamagusuku3**	**0.71**	**279**	P		**Pn**	**23 08 40.4**	**-0.5**
JJT3				S		**Sn**	**23 08 50.2**	**-0.8**
JOW	**Kunigami**	**0.84**	**342**	Pn		**Pn**	**23 08 42.5**	**-0.1**
	456nm,0.3s,baz=154,slow=15,SNR=299							
JOW				Sn		**Sb**	**23 08 52.0**	**-1.5**
	355nm,0.3s,baz=118,slow=23,SNR=9.0							
JOW	**Kunigami**	**0.84**	**342**	P		**Pb**	**23 08 42.3**	**-0.3**
JYRO	**Yoronjima**	**0.99**	**354**	P		**Pn**	**23 08 44.7**	**-0.1**
JYRO				*e*S		**Sn**	**23 08 56.9**	**-1.0**
JIH	**Iheya**	**1.13**	**332**	P		**Pn**	**23 08 46.8**	**+0.1**
JAGN	**Aguni-jima**	**1.31**	**295**	P		**Pn**	**23 08 49.2**	**+0.1**
JOKE	**Okinoerabujima**	**1.32**	**0**	P		**Pn**	**23 08 49.7**	**+0.3**
JKE	**Kume jima 2**	**1.62**	**281**	P		**Pn**	**23 08 52.8**	**-0.7**
JKE				S		**Sn**	**23 09 11.4**	**-2.1**
JTK	**Tokunoshima**	**1.78**	**11**	P		**Pn**	**23 08 56.0**	**+0.4**
JMZ	**Minamidaito 2**	**2.40**	**94**	P		**Pn**	**23 09 03.5**	**-0.6**
JMZ				S		**Sn**	**23 09 29.9**	**-2.8**
JKDJ	**Kitadaitoujima**	**2.46**	**91**	P		**Pn**	**23 09 04.4**	**-0.5**
JKDJ				S		**Sn**	**23 09 31.9**	**-2.2**
JNU	**Nakatsue**	**7.35**	**15**	Pn		**Pn**	**23 10 13.8**	**+1.6**
	0.7nm,0.3s,baz=197,slow=14,SNR=5.2							
KSRS	**Korea Array**	**11.40**	**357**	Pn		**Pn**	**23 11 08.3**	**+0.7**
	baz=185,slow=12,SNR=1.3							
KSRS					LR	LR	23 15 43.9	
	comp=Z,50nm,18.9s,baz=170,slow=39							
JCJ	**Chichijima**	**12.24**	**82**	LR		LR	23 15 22.8	
	comp=Z,88nm,20.6s,baz=95,slow=34							
SONM	**Songino Array**	**27.88**	**327**	P		**P**	**23 14 13.4**	**-0.9**
	1.1nm,0.5s,baz=134,slow=10.0,SNR=6.6							
MKAR	**Makanchi Array**	**41.89**	**312**	P		**P**	**23 16 14.6**	**-0.1**
	0.5nm,0.5s,baz=93,slow=9.7,SNR=6.3							
ZALV	**Zalesovo Beam**	**42.59**	**323**	P		**P**	**23 16 19.5**	**-0.6**
	0.2nm,0.3s,baz=127,slow=9.2,SNR=2.3							
WRA	**Warramunga Arr**	**46.04**	**172**	P		**P**	**23 16 49.3**	**+1.2**
	0.7nm,0.6s,baz=352,slow=8.3,SNR=5.5							
AAK	**Ala-Archa**	**46.83**	**305**	LR		LR	23 37 32.2	
	comp=Z,26nm,18.7s,baz=278,slow=38							
ASAR	**Alice Springs**	**49.67**	**174**	P		**P**	**23 17 18.3**	**+2.1**
	0.4nm,0.7s,baz=5.7,slow=12,SNR=4.3							
FINES	**FINESS Array B**	**73.18**	**331**	P		**P**	**23 19 55.3**	**+0.6**
	1.5nm,0.7s,baz=46,slow=6.0,SNR=6.0							
AKASG	**Malin Array Be**	**75.88**	**320**	P		**P**	**23 20 11.3**	**+0.8**
	1.1nm,0.5s,baz=54,slow=5.9,SNR=4.7							
YKA	**Yellowknife Ar**	**78.58**	**25**	P		**P**	**23 20 26.4**	**+0.9**
	0.1nm,0.5s,baz=295,slow=5.0,SNR=2.7							
NOA	**NORSAR Array B**	**79.62**	**334**	P		**P**	**23 20 32.1**	**+0.8**
	0.6nm,0.6s,baz=52,slow=5.4,SNR=3.7							
GERES	**GERESS Array B**	**85.54**	**323**	P		**P**	**23 21 01.9**	**-0.5**
	0.1nm,0.3s,baz=18,slow=6.5,SNR=1.8							

*IDC **29** 23:27:55.9±1.1,28.33N×87.40E,h0km,mb3.7/5, mb1 3.8/7,mb1mx3.4/44,mbtmp3.6/7,ML3.2/1,MS2.8/1, Ms1 2.8/1,ms1mx2.3/37,Error ellipse: s-maj=42.5km s-min=21.2km az=63.0*
ISC 29 23:28:01.2±1.1,**28.4N**±0.2×**87.5E**±0.2,**h35**km,**n9,** σ1s**09**/8, **mb3.7**/5,**Xizang**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.36**	**131**	Pn		**Pn**	**23 31 22.0**	**-0.1**
	baz=309,slow=12,SNR=1.3							
AAK	**Ala-Archa**	**17.74**	**327**	P		**P**	**23 32 07.8**	**+1.6**
	0.1nm,0.3s,baz=207,slow=12,SNR=2.0							
MKAR	**Makanchi Array**	**18.86**	**349**	P		**P**	**23 32 18.7**	**+0.4**
	0.1nm,0.3s,baz=167,slow=13,SNR=4.4							
KURBB	**Kurchatov Arra**	**23.27**	**345**	P		**P**	**23 33 05.7**	**+0.2**
	0.5nm,0.5s,baz=164,slow=11,SNR=5.6							
SONM	**Songino Array**	**24.35**	**32**	P		**P**	**23 33 15.1**	**-0.8**
	0.5nm,0.4s,baz=215,slow=11,SNR=5.6							
KSRS	**Korea Array**	**34.88**	**64**	LR		LR	23 50 30.6	
	comp=Z,14nm,18.5s,baz=215,slow=39							
WRA	**Warramunga Arr**	**65.96**	**131**	P		**P**	**23 38 44.7**	**+0.5**
	0.9nm,0.5s,baz=325,slow=6.7,SNR=7.1							
ASAR	**Alice Springs**	**68.34**	**134**	P		**P**	**23 39 00.1**	**+0.9**
	1.1nm,0.7s,baz=324,slow=6.6,SNR=11							
TORD	**Torodi Ar. Bea**	**80.27**	**280**	P		**P**	**23 40 07.8**	**-1.2**
	0.8nm,0.8s,baz=59,slow=4.3,SNR=3.6							

TAP 29 23:50:22.5,24.45N×121.89E,h12km±1km,**ML1.4,D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EWUT	**Wuta**	**0.10**	**267**	*i* P		Pg	23 50 25.3	0.0
	baz=266							
EWUT				*i* S		Sg	23 50 27.5	+0.2
	baz=266							
TWC	**Suao**	**0.16**	**348**	*i* P		Pg	23 50 26.1	-0.1
	baz=351							
TWC				*i* S		Sg	23 50 28.4	-0.4
	baz=351							
NDS	**Dongshan**	**0.24**	**320**	*i* P		Pg	23 50 27.6	+0.1
	baz=319							
NDS				S		Sg	23 50 30.6	-0.3
	baz=319							
ENTT	**Niouniou**	**0.35**	**303**	P		Pg	23 50 29.6	+0.2
	baz=303							
ENTT				S		Sg	23 50 34.3	+0.2
	baz=303							
NDT	**Datong Townshi**	**0.37**	**294**	*i* P		Pg	23 50 30.2	+0.3
	baz=293							
NDT				S		Sg	23 50 35.1	+0.2
	baz=293							
NACB	**Ninganchiao**	**0.38**	**224**	P		Pg	23 50 29.9	-0.3
	baz=223							
ETLH	**Xiulin Townshi**	**0.44**	**237**	P		Pg	23 50 30.9	-0.3
	baz=236							
NNSB	**Datong**	**0.46**	**267**	P		Pg	23 50 31.5	0.0
	baz=267							
NNSB				S		Sg	23 50 37.8	+0.1
	baz=267							
NNSH	**Datong**	**0.46**	**267**	P		Pg	23 50 31.6	+0.1
	baz=267							
NNSH				S		Sg	23 50 37.9	+0.2
	baz=267							
NNS	**Nan Shan**	**0.47**	**269**	*e*S		Sg	23 50 38.1	+0.1
	baz=268							
NWLT	**Wulai**	**0.48**	**313**	P		Pg	23 50 31.8	-0.1
	baz=313							
NWLT				*e*S		Sg	23 50 38.0	-0.2
	baz=313							
YHNB	**Yeheng**	**0.51**	**295**	*e*P		Pg	23 50 32.4	-0.2
	baz=295							
YHNB				*e*S		Sg	23 50 39.7	+0.3
	baz=295							
FUSS	**Fushou**	**0.62**	**251**	P		Pg	23 50 34.3	-0.3
	baz=250							
FUSS				*e*S		Sg	23 50 43.1	+0.2
	baz=250							

TAP 29 23:50:32.5,24.04N×121.62E,h9km,**ML1.4,D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**333**	*i* P		Pg	23 50 34.2	-0.1
	baz=344							
TWD				*i* S		Sg	23 50 35.5	0.0
	baz=344							
HWA	**Hwalien**	**0.07**	**190**	*i* P		Pg	23 50 34.5	0.0
	baz=182							
HWA				S		Sg	23 50 35.9	0.0
	baz=182							
NACB	**Ninganchiao**	**0.13**	**351**	P		Pg	23 50 35.5	0.0
	baz=351							
NACB				S		Sg	23 50 37.6	+0.1
	baz=351							
NACB	**Ninganchiao**	**0.13**	**351**	S		Pg	23 50 35.5	0.0
	baz=223							
ETLH	**Xiulin Townshi**	**0.20**	**323**	P		Pg	23 50 36.9	+0.1
	baz=323							
ETLH				S		Sg	23 50 39.4	-0.3
	baz=323							
ETLH	**Xiulin Townshi**	**0.20**	**323**	S		Pg	23 50 36.9	+0.1
	baz=236							
WHF	**Hehuan Shan**	**0.34**	**288**	P		Pg	23 50 39.3	-0.1
	baz=287							
WHF				S		Sg	23 50 43.8	0.0
	baz=287							
OWD	**Renai**	**0.41**	**258**	P		Pg	23 50 41.0	+0.4
	baz=257							
OWD				S		Sg	23 50 46.4	+0.3
	baz=257							
VWDT	**VWDT**	**0.52**	**237**	P		Pg	23 50 42.3	-0.4
	baz=236							
VWDT				S		Sg	23 50 49.8	+0.3
	baz=236							

*TEH **30** 00:13:02.2,32.48N×48.93E,h9km,ML3.4*
*THR **30** 00:13:02.1±0.4,32.47N×48.73E,h14km±6km,ML3.3*
*KISR **30** 00:13:03.3±0.5,32.09N×48.78E,h0km±118km,ML3.7, Hypocentre not reviewed by the ISC*
ISC 30 00:13:04.8±1.2,**32.44N**±0.05×**48.89E**±0.06,**h23**km,**n41,** σ0s**93**/41,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.33**	**192**	*e*Pg		**Pb**	**00 13 09.6**	**-2.5**
SHGR				IAML			00 13 18.9	
	comp=E,5μm,0.6s							
AHWZ	**Ahwaz**	**1.12**	**191**	*e*Pg		**Pb**	**00 13 25.3**	**-0.2**
AHWZ				*e*Sg		**Sn**	**00 13 41.8**	**+2.1**
IKFM	**Kafar-mosalman**	**1.39**	**321**	*e*Pg		**Pn**	**00 13 28.6**	**-0.2**
IKFM				*e*			00 13 52.7	
	comp=Z,10μm,0.6s							
IDOB	**Doab**	**1.47**	**336**	*e*Pg		**Pn**	**00 13 29.9**	**-0.2**
KHMZ	**Khomeyn**	**1.58**	**34**	*e*Pg		**Pn**	**00 13 32.1**	**+0.5**
SHK1	**Shahrekord**	**1.69**	**93**	*e*Pg		**Pn**	**00 13 33.9**	**+0.7**
SHK1				*e*			00 14 02.1	
	comp=Z,2μm,0.4s							
IPIR	**Pirpir**	**1.71**	**81**	*e*Pg		**Pn**	**00 13 34.7**	**+1.2**
IPIR				*e*			00 14 00.5	
	comp=Z,5μm,0.7s							
HSAM	**Samen**	**1.79**	**352**	*e*Pg		**Pn**	**00 13 35.4**	**+0.9**
ABEH	**Behbahan**	**2.17**	**147**	*e*Pn		**Pn**	**00 13 40.8**	**+1.3**
IBZA	**Bozab**	**2.20**	**337**	*e*Pn		**Pn**	**00 13 41.1**	**+0.9**
ASAO	**Ashtian**	**2.31**	**24**	*e*Pn		**Pn**	**00 13 42.4**	**+0.7**
HAGD	**Aghdareh**	**2.39**	**5**	*e*Pn		**Pn**	**00 13 43.0**	**+0.2**
HAGD				*e*			00 14 26.4	
	comp=Z,2μm,0.7s	

PKIN	**Phulchoki**	**0.63**	**123**	*e*Pg		**Pg**	**00 37 23.7**	**0.0**
PKI	**Pulchoki**	**0.65**	**123**	*e*Pg		**Pg**	**00 37 23.6**	**-0.3**
PKI				*e*Sg		**Sg**	**00 37 32.4**	**-0.1**
	2µm,0.2s							
GUN	**Gumba**	**0.95**	**91**	*e*Pg		**Pg**	**00 37 29.5**	**-0.3**
GUN				*e*Sg		**Sn**	**00 37 44.1**	**-0.9**
	4µm,0.2s							
DANN	**Dangsing**	**1.01**	**295**	*e*Sg		**Sg**	**00 37 45.3**	**+1.2**
	2µm,0.2s							
KOLN	**Koldanda**	**1.07**	**262**	*e*Pg		**Pg**	**00 37 32.5**	**+0.4**
KOLN				*e*Sg		**Sn**	**00 37 48.0**	**+0.3**
PYUN	**Piuthan**	**1.61**	**277**	*e*Pg		**Pb**	**00 37 41.5**	**+0.2**
PYUN				*e*Sg		**Sb**	**00 38 03.2**	**+1.4**
	1µm,0.2s							
LSA	**Lhasa**	**5.84**	**71**	Pn		**Pn**	**00 38 42.3**	**+3.8**
LSA				Sg		**Sg**	**00 40 15.8**	**-3.3**
LSA				LR		LR		
	comp=N,290nm,6.1s							
LSA				LR		LR		
	comp=E,400nm,7.1s							
LSA				LR		LR		
	comp=Z,370nm,6.8s							
LSA	**Lhasa**	**5.84**	**71**			**Pn**	**00 38 39.5**	**+1.0**
DDI	**Dehra Dun**	**6.37**	**294**	*e*P		**Pn**	**00 38 47.7**	**+2.4**
DDI				*e*S		**Sn**	**00 39 58.7**	**+0.7**
DDI				IAML			00 40 01.5	
	comp=N,532nm,0.3s							
DDI				IAML			00 40 02.1	
	comp=E,324nm,0.2s							
GUWA	**GUWAHATI**	**6.38**	**104**	*e*P		**Pn**	**00 38 46.8**	**+1.3**
GUWA				*e*S		**Sn**	**00 39 57.3**	**-1.1**
GUWA				IAML			00 40 03.6	
	comp=N,111nm,0.2s							
SHL	**Shillong**	**6.75**	**109**	*e*P		**Pn**	**00 38 51.0**	**+0.2**
SHL				*e*S		**Sn**	**00 40 04.2**	**-3.6**
SHL	**Shillong**	**6.75**	**109**	Pn		**Pn**	**00 38 50.5**	**-0.2**
TEZP	**TEZPUR**	**7.24**	**99**	*e*P		**Pn**	**00 38 57.0**	**-0.2**
SMLA	**Simla**	**7.38**	**297**	*e*P		**Pn**	**00 39 00.6**	**+1.6**
SMLA				*e*S		**Sn**	**00 40 21.0**	**-1.9**
SMLA				IAML			00 40 24.8	
	comp=E,175nm,0.4s							
BHPL	**Bhopal**	**8.13**	**237**	*e*P		**Pn**	**00 39 06.7**	**-2.8**
BHPL				*e*S		Sn	00 40 32.1	-9.4
BHPL				IAML			00 40 39.5	
	comp=E,204nm,0.2s							
BHPL				IAML			00 40 40.4	
	comp=N,200nm,0.2s							
DHRM	**DHARAMSHALA**	**8.53**	**302**	*e*P		**Pn**	**00 39 15.1**	**0.0**
DHRM				*e*S		**Sn**	**00 40 46.7**	**-4.9**
DHRM				IAML			00 40 56.2	
	comp=E,175nm,0.1s							
DHRM				IAML			00 40 58.7	
	comp=N,149nm,0.7s							
KOHI	**KOHIMA**	**8.60**	**103**	*e*P		**Pn**	**00 39 16.6**	**+0.6**
KOHI				*e*S		**Sn**	**00 40 50.4**	**-2.8**
KOHI				IAML			00 40 53.6	
	comp=N,208nm,0.8s							
KOHI				IAML			00 40 54.1	
	comp=E,307nm,0.8s							
AJM	**Ajmer**	**9.16**	**263**	*e*P		**Pn**	**00 39 20.0**	**-3.6**
AJM				*i* S		**Sn**	**00 40 59.0**	**-7.8**
CHCP	**Chirah Chowk**	**11.44**	**303**	P		**Pn**	**00 39 54.3**	**-0.6**
HYB	**Hyderabad**	**11.94**	**210**	*i* P		**Pn**	**00 39 59.0**	**-2.7**
HYB				*e*S		**Sn**	**00 42 23.5**	**+8.4**
THW	**Thamme Wali**	**12.27**	**296**	P		**Pn**	**00 40 04.1**	**-2.1**
CEP	**Cherat**	**12.53**	**301**	P		**Pn**	**00 40 07.2**	**-2.7**
CEP				S		**Sn**	**00 42 22.0**	**-7.6**
KSH	**Kashi**	**13.69**	**330**	P		**Pn**	**00 40 21.5**	**-4.1**
KSH				S		Sn	00 42 41.5	-16
KSH				pmax	pmax			
	comp=Z,7.0nm,0.6s							
KSH				pmax	pmax			
	comp=Z,100nm,5.7s							
KSH				LR	LR			
	comp=N,130nm,6.2s							
KSH				LR	LR			
	comp=E,500nm,8.8s							
KSH				LR	LR			
	comp=Z,150nm,5.1s							
POO	**Poona**	**13.73**	**229**	*e*P		**Pn**	**00 40 22.0**	**-4.2**
POO				*e*S		Sn	00 42 40.0	-19
KBL	**Kabul**	**15.00**	**300**	Pn		**Pn**	**00 40 40.0**	**-3.6**
PRZ	**Przheval'sk**	**15.43**	**342**	Pn		**Pn**	**00 40 48.9**	**-0.3**
PRZ				IAmb	IAmb		00 40 56.4	
	comp=Z,6.5nm,0.6s							
KDJ	**Kajisay**	**15.47**	**338**			**Pn**	**00 40 48.3**	**-1.6**
DRK	**Karamyk**	**15.79**	**320**			**Pn**	**00 40 53.1**	**-0.9**
DRK				IAmb	IAmb		00 41 11.4	
	comp=Z,17nm,0.6s							
CHTO	**Chiang Mai**	**15.83**	**122**	Pn		**Pn**	**00 40 55.4**	**+1.0**
WMQ	**Urumqi**	**16.03**	**8**	*e*P		**P**	**00 41 01.5**	**+1.1**
CM31	**Chiang Mai Arr**	**16.05**	**123**	Pn		**Pn**	**00 40 57.9**	**+0.7**
CM31				IAmb	IAmb		00 41 07.2	
	comp=Z,8.1nm,0.4s							
CMAR	**Chiang Mai Arr**	**16.05**	**123**	Pn		**Pn**	**00 40 56.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=314,slow=13,SNR=11							
CMAR				LR	LR		00 49 06.3	
	comp=Z,30nm,18.7s,baz=170,slow=45							
CMAR	**Chiang Mai Arr**	**16.05**	**123**			**Pn**	**00 40 58.1**	**+1.0**
BOOM	**Boomskoye usch**	**16.22**	**336**	Pn		**Pn**	**00 40 57.9**	**-1.5**
GAR	**Garm**	**16.35**	**316**			**Pn**	**00 41 00.6**	**-0.4**
GAR				IAmb	IAmb		00 41 22.7	
	comp=Z,26nm,1.1s							
ARSB	**Arslanbob**	**16.51**	**327**			**Pn**	**00 41 02.2**	**-0.9**
ARSB				IAmb	IAmb		00 41 05.7	
	comp=Z,6.6nm,0.7s							
BTK	**Batken**	**16.73**	**320**	Pn		**Pn**	**00 41 04.2**	**-1.8**
BTK				IAmb	IAmb		00 41 17.2	
	comp=Z,8.9nm,0.6s							
AAK	**Ala-Archa**	**16.90**	**333**	Pn		**P**	**00 41 09.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=209,slow=9.2,SNR=7.8							
AAK				LR	LR		00 47 54.7	
	comp=Z,55nm,18.7s,baz=140,slow=38							
AAK	**Ala-Archa**	**16.90**	**333**			**Pn**	**00 41 08.1**	**0.0**
GTA	**Gaotai**	**16.93**	**44**	*e*P		**P**	**00 41 11.0**	**+0.6**
GTA				pP		sP	00 41 15.0	0.0
GTA				sP		pP	00 41 19.5	+5.9
GTA				pmax	pmax			
	comp=Z,3.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,57nm,6.2s							
GTA				LR	LR			
	comp=Z,200nm,14.5s							
GTA				LR	LR			
	comp=Z,120nm,13.8s							
GTA				LR	LR			
	comp=Z,190nm,10.5s							
MK31	**Makanchi Array**	**18.94**	**355**	P		**P**	**00 41 32.0**	**-0.5**
MKAR	**Makanchi Array**	**18.94**	**355**	P		**P**	**00 41 33.0**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=175,slow=11,SNR=20							
MKAR				LR	LR		00 49 56.8	
	comp=Z,99nm,19.5s,baz=202,slow=40							
MKAR	**Makanchi Array**	**18.94**	**355**	P		**P**	**00 41 31.8**	**-0.6**
KK31	**Karatay Array**	**19.05**	**326**	P		**P**	**00 41 30.6**	**-3.1**
KKAR	**Karatay Array**	**19.05**	**326**	P		**P**	**00 41 30.8**	**-2.9**
KKAR	**Karatay Array**	**19.05**	**326**	P		**P**	**00 41 30.7**	**-2.9**
KKAR				IAmb	IAmb		00 41 49.1	
	comp=Z,3.3nm,0.8s							
GYA	**Guiyang**	**19.50**	**89**	⇓P		**Pn**	**00 41 42.3**	**+2.2**
GYA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
HRA	**Herat**	**20.33**	**294**			**P**	**00 41 45.6**	**-2.3**
PALK	**Pallekele**	**20.91**	**191**	P		Pn	00 41 56.9	+0.3
	comp=Z,4.2nm,0.4s,baz=106,slow=15,SNR=6.5							
PALK				LR	LR		00 50 07.9	
	comp=Z,73nm,18.6s,baz=179,slow=37							
XAN	**Xi'an**	**21.54**	**68**	P		**P**	**00 42 03.3**	**+2.5**
XAN				pP		sP	00 42 07.0	+1.6
XAN				pmax	pmax			
	comp=Z,6.0nm,0.8s							
XAN				LR	LR			
	comp=Z,270nm,14.9s							
XAN				LR	LR			
	comp=Z,100nm,11.7s							
XAN				LR	LR			
	comp=Z,150nm,13.0s							
KURBB	**Kurchatov Arra**	**23.16**	**350**	P		**P**	**00 42 18.1**	**+0.2**
	comp=Z,3.4nm,0.6s,baz=172,slow=9.9,SNR=54							
KURK	**Kurchatov**	**23.24**	**350**	P		**P**	**00 42 18.1**	**-0.5**
GEYT	**Alibeck**	**24.45**	**301**	P		**P**	**00 42 31.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=289,slow=9.2,SNR=3.6							
GEYT	**Alibeck**	**24.45**	**301**	P		**P**	**00 42 28.3**	**-2.1**
GYA0B	**ALIBECK ARRAY**	**24.45**	**301**	P		**P**	**00 42 28.4**	**-1.9**
GYA0B				IAmb	IAmb		00 42 44.0	
	comp=Z,3.4nm,0.6s							

HHC	**Hu-ho-hao-te**	**25.46**	**53**	*e*P		**P**	**00 42 39.0**	**-0.6**
HHC				pmax	pmax				
	comp=Z,23nm,0.7s								
HHC				pmax	pmax				
	comp=Z,99nm,5.4s								
ZAA0	**Zalesovo Array**	**26.00**	**0**	P		**P**	**00 42 43.6**	**-0.5**
ZAA0				IAmb	IAmb		00 43 03.7		
	comp=Z,3.4nm,1.0s								
ZALV	**Zalesovo Beam**	**26.00**	**0**	P		**P**	**00 42 44.8**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=182,slow=9.0,SNR=9.8								
ZALV	**Zalesovo Beam**	**26.00**	**0**	P		**P**	**00 42 43.7**	**-0.5**
SONM	**Songino Array**	**26.03**	**34**	P		**P**	**00 42 46.0**	**+1.3**
	comp=Z,1.8nm,0.8s,baz=229,slow=9.1,SNR=9.7								
SONM	**Songino Array**	**26.03**	**34**	P		**P**	**00 42 44.7**	**0.0**
SONM				IAmb	IAmb		00 43 00.8		
	comp=Z,3.3nm,1.1s								
ULN	**Ulaanbaatar**	**26.38**	**35**	P		**P**	**00 42 47.8**	**-0.2**
ULN				IAmb	IAmb		00 43 07.0		
	comp=Z,6.8nm,1.2s								
TLY	**Talaya**	**27.63**	**26**	LR	LR		00 55 01.1		
	comp=Z,45nn,18.7s,baz=248,slow=39								
PSI	**Prapat**	**28.39**	**149**	LR	LR		00 56 10.7		
	comp=Z,99nm,18.5s,baz=299,slow=40								
ABKAR	**Akbulak array**	**28.60**	**325**	P		**P**	**00 43 07.3**	**-0.3**
ABKAR	**Akbulak array**	**28.60**	**325**	P		**P**	**00 43 07.0**	**-0.6**
ABKAR				IAmb	IAmb		00 43 20.7		
	comp=Z,1.6nm,0.6s								
ARU	**Arti**	**34.08**	**334**	P		**P**	**00 43 55.8**	**+0.1**
ARU				IAmb	IAmb		00 44 04.4		
	comp=Z,2.9nm,0.6s								
SIRT	**Sirnak**	**36.64**	**296**	P		**P**	**00 44 16.4**	**-1.7**
KSAR	**Wonju Array Be**	**37.21**	**64**	P		**P**	**00 44 24.1**	**+1.2**
USA0B	**Ussuriysk Arra**	**40.87**	**54**	P		**P**	**00 44 53.9**	**+0.5**
USA0B				IAmb	IAmb		00 44 56.7		
	comp=Z,6.9nm,0.8s								
NRIK	**Noril'sk**	**41.48**	**1**	P		**P**	**00 44 59.0**	**+1.0**
	comp=Z,1.9nm,0.4s,baz=178,slow=1.8,SNR=3.9								
ELL	**Elmali**	**46.66**	**295**	P		**P**	**00 45 39.6**	**-0.7**
AKASG	**Malin Array Be**	**47.34**	**314**	P		**P**	**00 45 47.2**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=80,slow=7.1,SNR=5.1								
AKASG	**Malin Array Be**	**47.34**	**314**	P		**P**	**00 45 44.8**	**-0.4**
BURAR	**Bucovina Array**	**49.75**	**310**	P		**P**	**00 46 03.0**	**-1.0**
BUR08	**Bucovina Ar. S**	**49.76**	**310**	P		**P**	**00 46 02.7**	**-1.4**
BUR08				IAmb	IAmb		00 46 24.2		
	comp=Z,3.4nm,1.2s								
TIXI	**Tiksi**	**49.96**	**17**	P		**P**	**00 46 05.2**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=134,slow=1.3,SNR=3.2								
TIXI	**Tiksi**	**49.96**	**17**	P		**P**	**00 46 04.9**	**-0.1**
TIXI				IAmb	IAmb		00 46 12.2		
	comp=Z,9.7nm,1.5s								
FIA1	**FINESS Array S**	**51.00**	**328**	P		**P**	**00 46 11.7**	**-1.3**
FINES	**FINESS Array B**	**51.00**	**328**	P		**P**	**00 46 16.1**	**+3.0**
	comp=Z,2.4nm,0.7s,baz=90,slow=9.5,SNR=9.9								
FINES	**FINESS Array B**	**51.00**	**328**	P		**P**	**00 46 13.0**	**0.0**
PABE	**Paberze**	**51.06**	**320**	P		**P**	**00 46 12.0**	**-1.6**
KWP	**Kalwaria Pacla**	**51.45**	**313**	P		**P**	**00 46 16.5**	**-0.1**
KWP				IAmb	IAmb		00 46 21.4		
	comp=Z,4.2nm,0.7s								
ARCES	**ARCESS Array B**	**53.49**	**338**	P		**P**	**00 46 34.9**	**+3.4**
	comp=Z,1.6nm,0.6s,baz=88,slow=6.6,SNR=3.8								
ARCES	**ARCESS Array B**	**53.49**	**338**	P		**P**	**00 46 31.4**	**-0.1**
GERES	**GERESS Array B**	**57.38**	**312**	P		**P**	**00 47 01.5**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=61,slow=8.0,SNR=2.1								
NOA	**NORSAR Array B**	**58.08**	**327**	P		**P**	**00 47 06.9**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=88,slow=6.8,SNR=2.7								
NOA				LR	LR		01 13 30.9		
	comp=Z,64nm,18.8s,baz=90,slow=38								
FITZ	**Fitzroy Crossi**	**60.47**	**134**	P		**P**	**00 47 22.1**	**+0.5**
WRA	**Warramunga Arr**	**67.53**	**129**	P		**P**	**00 48 07.9**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=321,slow=6.6,SNR=5.3								
WB2	**Warramunga Arr**	**67.54**	**129**	P		**P**	**00 48 08.1**	**0.0**
ASAR	**Alice Springs**	**69.81**	**132**	P		**P**	**00 48 22.1**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=318,slow=5.9,SNR=8.4								
ESDC	**Sonseca Array**	**71.88**	**306**	P		**P**	**00 48 37.3**	**+2.5**
	comp=Z,0.3nm,0.6s,baz=63,slow=5.5,SNR=2.9								
TOLK	**Toolik Lake Re**	**75.84**	**18**	P		**P**	**00 48 56.5**	**-0.9**
IMAR	**Indian Mountai**	**76.34**	**21**	P		**P**	**00 49 01.0**	**+0.7**
LBTB	**Lobatse**	**77.58**	**233**	P		**P**	**00 49 07.0**	**-0.9**
MLY	**Manley**	**77.92**	**21**	P		**P**	**00 49 10.0**	**+0.8**
MLY				IAmb	IAmb		00 49 15.4		
	comp=Z,3.0nm,0.9s								
TOA0	**Torodi Ar. Sit**	**77.95**	**279**	P		**P**	**00 49 09.9**	**-0.3**
TOA0				IAmb	IAmb		00 49 23.0		
	comp=Z,2.5nm,1.2s								
TORD	**Torodi Ar. Bea**	**77.95**	**279**	P		**P**	**00 49 10.7**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=47,slow=4.7,SNR=3.7								
PPLA	**Purkeypile**	**78.85**	**23**	P		**P**	**00 49 15.9**	**+1.3**
PPLA				IAmb	IAmb		00 49 44.3		
	comp=Z,5.8nm,1.4s								
ILAR	**Eielson Array**	**79.29**	**20**	P		**P**	**00 49 17.1**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=292,slow=3.7,SNR=12								
ILAR	**Eielson Array**	**79.29**	**20**	P		**P**	**00 49 17.3**	**+0.6**
SKT	**Skwentna**	**79.69**	**24**	P		**P**	**00 49 19.4**	**+0.5**
SKT				IAmb	IAmb		00 49 24.6		
	comp=Z,6.0nm,1.0s								
SUA	**Susitna One**	**80.31**	**24**	P		**P**	**00 49 22.4**	**-0.1**
SUA				IAmb	IAmb		00 49 28.1		
	comp=Z,3.3nm,0.8s								
STKA	**Stephens Creek**	**80.36**	**134**	P		**P**	**00 49 23.4**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=347,slow=5.5,SNR=4.6								
STKA	**Stephens Creek**	**80.36**	**134**	P		**P**	**00 49 22.4**	**-0.6**
SCRK	**Sand Creek**	**80.74**	**20**	P		**P**	**00 49 24.8**	**+0.1**
SCRK				IAmb	IAmb		00 49 30.4		
	comp=Z,2.2nm,0.7s								
EPYK	**Eagle Plains**	**80.83**	**16**	P		**P**	**00 49 25.0**	**-0.1**
DOT	**Dot Lake**	**80.96**	**20**	P		**P**	**00 49 25.4**	**-0.4**
DOT				IAmb	IAmb		00 49 31.2		
	comp=Z,1.6nm,0.6s								
SCM	**Sheep Creek Mo**	**81.24**	**22**	P		**P**	**00 49 27.8**	**+0.4**
KOWA	**Kowa**	**82.32**	**282**	P		**P**	**00 49 33.6**	**-0.2**
KOWA				IAmb	IAmb		00 49 38.6		
	comp=Z,3.3nm,1.1s								
YKA	**Yellowknife Ar**	**88.56**	**9**	P		**P**	**00 50 04.6**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=339,slow=4.9,SNR=2.7								

NIED ***30*** *00:42:58.7, 42.°04N×142.°61E, h63km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}1.28; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$-0.86; $M_{r\theta}$0.46; $M_{\theta\phi}$-0.55; $M_{\phi r}$0.91; Fault plane solution: $M_0$1.62000×10^{15} NP1:ϕ_s30.00000°, δ65.00000°, λ86.00000°. NP2:ϕ_s218.00000°, δ26.00000°, λ98.00000°.*

NEIC ***30*** *00:42:58.8±1.5, 41.°99N±0.°04×142.°54E±0.°06, h65km±6km, mb4.3/25 Error ellipse: s-maj=6.8km s-min=5.1km az=132.0*

JMA ***30*** *00:42:58.7±0.2, 42.°04N×142.°61E, h63km±2km, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s240.00000°, δ34.00000°, λ122.00000°. NP2: ϕ_s23.00000°, δ62.00000°, λ71.00000°. Principal axes: T Plg67.0000°, Azm256.0000°; N Plg17.0000°, Azm32.0000°; P Plg15.0000°, Azm127.0000°;*

JMA Felt I J1.

IDC ***30*** *00:43:00.9±1.9, 42.°14N×142.°53E, h79km±13km, mb3.6/19, mb1 3.8/23, mb1mx3.6/45, mbtmp3.9/23, MS2.8/5, Ms1 2.8/5, ms1mx2.6/38 Error ellipse: s-maj=18.5km s-min=11.2km az=133.0*

ISC 30 00:42:59.0±0.7, 42.°04N±0.°04×142.°58E±0.°04, h63km±6km, n87, σ0°80°90, mb4.2/29, 7C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.27**	**28**	⇑P		**Pn**	**Pn**	**00 43 08.7**	**-0.5**
JNBK				*e*S		**Sn**	**Sn**	**00 43 16.6**	**-0.1**
JSHD	**Hidakashinhida**	**0.38**	**347**	⇑P		**Pn**	**Pn**	**00 43 10.0**	**0.0**
JSHD				*e*S		**Sn**	**Sn**	**00 43 18.7**	**+0.6**
ERM	**Erimo**	**0.43**	**93**			**Pn**	**Pn**	**00 43 10.4**	**-0.1**
ERM					Sn	**Sn**	**Sn**	**00 43 19.3**	**+0.4**
JEM	**Erimo**	**0.43**	**93**	⇑P		**Pn**	**Pn**	**00 43 10.3**	**-0.2**
JTHR	**Tokachihiroo**	**0.59**	**65**	⇑P		**Pn**	**Pn**	**00 43 12.0**	**-0.1**
JBT2	**Biratori 2**	**0.75**	**348**	⇓P		**Pn**	**Pn**	**00 43 13.8**	**-0.2**
JBT2				*e*S		**Sn**	**Sn**	**00 43 25.1**	**0.0**
JIAM	**Iburiatsuma**	**0.76**	**320**	⇓P		**Pn**	**Pn**	**00 43 14.7**	**+0.6**
JCH	**Churui**	**0.81**	**45**	⇑P		**Pn**	**Pn**	**00 43 14.6**	**-0.2**
JCH				*e*S		**Sn**	**Sn**	**00 43 26.3**	**-0.1**
JFR	**Furan**	**1.12**	**1**	⇓P		**Pn**	**Pn**	**00 43 18.8**	**+0.1**
JEW	**Eniwo**	**1.16**	**314**	⇓P		**Pn**	**Pn**	**00 43 19.3**	**+0.2**
JEW				*e*S		**Sn**	**Sn**	**00 43 34.7**	**+0.5**
JEW	**Eniwo**	**1.16**	**314**	Pn		**Pn**	**Pn**	**00 43 19.1**	**-0.1**
JEW				Sn		**Sn**	**Sn**	**00 43 34.6**	**+0.5**
JKB	**Kayabe**	**1.16**	**263**	⇓P		**Pn**	**Pn**	**00 43 18.9**	**-0.3**
JKB				*e*S		**Sn**	**Sn**	**00 43 33.9**	**-0.4**
JNB	**Noboribetsu**	**1.22**	**291**	⇓P		**Pn**	**Pn**	**00 43 19.2**	**-0.8**
JNB				*e*S		**Sn**	**Sn**	**00 43 35.3**	**-0.4**
JOB	**Onbets**	**1.27**	**47**	⇑P		**Pn**	**Pn**	**00 43 21.5**	**+0.9**
JOT	**Ohata**	**1.32**	**241**	⇓P		**Pn**	**Pn**	**00 43 21.0**	**-0.3**
JAB	**Ashibetsu**	**1.48**	**350**	P		**Pn**	**Pn**	**00 43 23.8**	**+0.3**
JAR	**Ashorobuto**	**1.53**	**35**	⇑P		**Pn**	**Pn**	**00 43 24.1**	**0.0**
JTM	**Tenmabayashi**	**1.69**	**223**	Pn		**Pn**	**Pn**	**00 43 26.9**	**+0.6**
JTM				Sn		**Sn**	**Sn**	**00 43 48.0**	**+1.0**
JKA	**Kamikawa-asahi**	**2.07**	**0**	Pn		**Pn**	**Pn**	**00 43 32.2**	**+0.7**
ASAJ	**Asahikawa**	**2.07**	**0**	P		**Pn**	**Pn**	**00 43 32.4**	**+1.0**
	31nm,0.3s,baz=216,slow=14,SNR=87								
ASAJ				S			**Sn**	**00 43 57.1**	**+0.9**
	15nm,0.3s,baz=124,slow=21,SNR=6.1								
JMM	**Marumori**	**4.39**	**199**			**Pn**	**Pn**	**00 44 02.7**	**-0.4**
JSD	**Sado**	**5.19**	**221**	Pn		**Pn**	**Pn**	**00 44 15.4**	**+1.3**
JYT	**Yasato**	**6.09**	**198**	Pn		**Pn**	**Pn**	**00 44 24.6**	**-1.8**
MJAR	**Matsushiro Arr**	**6.45**	**213**	P		**Pn**	**Pn**	**00 44 33.8**	**+2.5**
	0.1nm,0.3s,baz=20,slow=14,SNR=6.1								
MJAR				LR		LR	LR	00 47 25.9	
	comp=Z,40nm,21.5s,baz=200,slow=41								
MJAR	**Matsushiro Arr**	**6.45**	**213**			**Pn**	**Pn**	**00 44 31.0**	**-0.4**
USRK	**Ussuriysk Ar.**	**8.04**	**289**	P		**Pn**	**Pn**	**00 44 54.1**	**+1.1**
	baz=91,slow=14,SNR=10								
USRK	**Ussuriysk Ar.**	**8.04**	**289**			**P**	**P**	**00 44 54.4**	**+0.7**
KLR	**Kul'dur**	**10.44**	**317**	P		**Pn**	**Pn**	**00 45 26.2**	**+0.5**
	0.1nm,0.3s,baz=108,slow=13,SNR=3.9								
KLR				LR		LR	LR	00 49 44.3	
	comp=Z,49nm,20.6s,baz=142,slow=39								
KSRS	**Korea Array**	**12.17**	**253**	P		**Pn**	**Pn**	**00 45 52.1**	**+2.7**
	0.4nm,0.3s,baz=64,slow=14,SNR=14								
KSRS				LR		LR	LR	00 50 13.6	
	comp=Z,32nm,19.9s,baz=95,slow=36								
SEY	**Seymchan**	**21.71**	**12**	P			**P**	**00 47 42.8**	**-1.6**
	1.9nm,0.7s,baz=209,slow=7.3,SNR=6.1								
SONM	**Songino Array**	**26.09**	**295**	P		**P**	**00 48 26.3**	**-0.4**
	0.9nm,0.5s,baz=86,slow=7.6,SNR=5.6								
SONM	**Songino Array**	**26.09**	**295**	IAmb		IAmb	00 48 27.7		
	comp=Z,1.2nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**30.31**	**130**	T		T	01 20 33.1		
	baz=323,slow=75,SNR=87								
H11N1	**WAKE ISLAND Hy**	**30.32**	**130**	T		T	01 20 43.1		
	baz=323,slow=75,SNR=155								
H11N3	**WAKE ISLAND Hy**	**30.32**	**130**	T		T	01 20 36.4		
	baz=323,slow=75,SNR=131								
H11S1	**WAKE ISLAND Hy**	**31.17**	**131**	T		T	01 21 47.5		
	baz=325,slow=76,SNR=121								
H11S3	**WAKE ISLAND Hy**	**31.17**	**132**	T		T	01 21 44.6		
	baz=325,slow=76,SNR=113								
H11S2	**WAKE ISLAND Hy**	**31.19**	**131**	T		T	01 21 33.1		
	baz=325,slow=76,SNR=102								
NRIK	**Noril'sk**	**39.17**	**333**	LR		LR	01 09 27.2		
	comp=Z,19nm,20.6s,baz=45,slow=41								
ZAA0	**Zalesovo Array**	**39.37**	**308**	P			**P**	**00 50 22.2**	**+0.2**
ZAA0				IAmb		IAmb	00 50 22.9		
	comp=Z,5.8nm,0.9s								
ZALV	**Zalesovo Beam**	**39.37**	**308**	P			**P**	**00 50 22.2**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=79,slow=7.7,SNR=21								
ZALV	**Zalesovo Beam**	**39.37**	**308**	P			**P**	**00 50 22.0**	**0.0**
MK31	**Makanchi Array**	**42.40**	**298**	P			**P**	**00 50 46.5**	**-0.6**
MKAR	**Makanchi Array**	**42.40**	**298**	P			**P**	**00 50 47.2**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=82,slow=8.6,SNR=14								

baz=234,slow=19
LVC Limon Verde 1.25 321 ⇓ *iP* **Pn 00 43 56.0 +1.2**
LVC *i* S **Sn 00 44 15.4 +0.7**
LVC Limon Verde 1.25 321 Pn 00 43 55.7 +0.9
LVC **Sn 00 44 15.8 +1.1**
LVC Limon Verde 1.25 321 *eP* **Pn 00 43 55.8 +0.9**
LVC Limon Verde 1.25 321 *eP* **Pn 00 43 56.0 +1.2**
LVC *eS* **Sn 00 44 16.3 +1.6**
LVC IAML 00 44 17.2
comp=Z,4µm,0.4s
PB15 IPOC Station P 1.35 286 ⇑ *iP* **Pn 00 43 56.7 +1.0**
PB15 *i* S **Sn 00 44 17.2 +0.8**
PB15 IPOC Station P 1.35 286 Pn 00 43 56.7 +1.0
PB15 IPOC Station P 1.35 286 *eP* **Pn 00 43 56.7 +1.0**
PB15 *eS* **Sn 00 44 18.0 +1.7**
PB06 IPOC Station P 1.64 302 ⇑ *iP* **Pn 00 43 59.9 +1.0**
PB06 *i* S **Sn 00 44 22.4 +0.4**
PB06 IAML 00 44 24.9
comp=E,18µm,0.3s
PB06 IPOC Station P 1.64 302 Pn 00 43 59.9 +1.0
PB06 IPOC Station P 1.64 302 *eP* **Pn 00 43 59.8 +1.0**
PB06 *eS* **Sn 00 44 23.1 +1.1**
PB06 IAML 00 44 25.7
comp=Z,12µm,0.3s
PB09 IPOC Station P 2.09 328 ⇑ *iP* **Pn 00 44 05.5 +1.3**
PB09 *i* S **Sn 00 44 31.4 +0.1**
PB09 IAML 00 44 36.1
comp=N,4µm,0.6s
PB09 IPOC Station P 2.09 328 Pn 00 44 05.1 +0.9
PB09 IPOC Station P 2.09 328 *eP* **Pn 00 44 05.5 +1.3**
PB09 *eS* **Sn 00 44 32.6 +1.2**
PB09 IAML 00 44 37.0
comp=Z,3µm,0.7s
GO02 Mina Guanaco 2.10 221 ⇑ *iP* **Pn 00 44 05.4 +1.0**
GO02 *i* S **Sn 00 44 33.3 +1.4**
GO02 IAML 00 44 33.7
comp=E,12µm,0.3s
GO02 Mina Guanaco 2.10 221 Pn 00 44 05.3 +1.0
PB05 IPOC Station P 2.10 290 ⇑ *iP* **Pn 00 44 04.6 +0.3**
PB05 *i* S **Sn 00 44 31.0 -0.6**
PB05 IPOC Station P 2.10 290 *eP* **Pn 00 44 04.5 +0.3**
PB05 *eS* **Sn 00 44 31.5 0.0**
PB05 IAML 00 44 33.9
comp=Z,2µm,0.4s
PB03 IPOC Station P 2.19 314 ⇑ *iP* **Pn 00 44 05.9 +0.6**
PB03 *i* S **Sn 00 44 33.4 -0.1**
PB03 IAML 00 44 33.9
comp=N,8µm,0.3s
PB03 IPOC Station P 2.19 314 *eP* **Pn 00 44 05.9 +0.6**
PB03 *eS* **Sn 00 44 33.5 0.0**
PB03 IAML 00 44 38.7
comp=Z,6µm,0.2s
PB10 IPOC Station P 2.29 271 ⇑ *iP* **Pn 00 44 07.1 +0.7**
PB10 *i* S **Sn 00 44 35.3 -0.2**
PB10 IAML 00 44 37.8
comp=E,4µm,0.3s
PB10 IPOC Station P 2.29 271 Pn **Pn 00 44 07.0 +0.6**
PB10 IPOC Station P 2.29 271 *eP* **Pn 00 44 07.1 +0.6**
PB10 *eS* **Sn 00 44 35.1 -0.3**
PB10 IAML 00 44 37.0
comp=Z,2µm,0.3s
PB04 IPOC Station P 2.29 302 ⇑ *iP* **Pn 00 44 07.1 +0.4**
PB04 *i* S **Sn 00 44 35.5 -0.4**
PB04 IAML 00 44 37.8
comp=N,8µm,0.4s
PB04 IPOC Station P 2.29 302 Pn 00 44 07.1 +0.4
PB04 IPOC Station P 2.29 302 *eP* **Pn 00 44 07.0 +0.4**
PB04 *eS* **Sn 00 44 35.7 -0.1**
PB04 IAML 00 44 40.5
comp=Z,7µm,0.8s
PB14 IPOC Station P 2.38 244 ⇑ *iP* **Pn 00 44 08.1 +0.3**
PB14 *i* S **Sn 00 44 37.5 -0.4**
PB14 IPOC Station P 2.38 244 Pn **Pn 00 44 08.0 +0.1**
PB14 IPOC Station P 2.38 244 *eP* **Pn 00 44 08.1 +0.3**
PB14 *eS* **Sn 00 44 37.9 -0.1**
PB14 IAML 00 44 39.8
comp=Z,1µm,0.2s
HJA Humahuaca 2.46 82 *eP* **Pn 00 44 11.4 +2.5**
PB07 IPOC Station P 2.50 317 ⇑ *iP* **Pn 00 44 09.9 +0.6**
PB07 *i* S **Sn 00 44 39.7 -0.8**
PB07 IAML 00 44 41.6
comp=N,7µm,0.4s
PB07 IPOC Station P 2.50 317 Pn 00 44 09.5 +0.2
PB07 IPOC Station P 2.50 317 *eP* **Pn 00 44 09.7 +0.4**
PB07 *eS* **Sn 00 44 40.3 -0.2**
PB07 IAML 00 44 41.4
comp=Z,4µm,0.6s
SLA San Lorenzo 2.59 116 *eP* **Pn 00 44 13.0 +2.6**
SLA *eS* **Sn 00 44 47.3 +4.8**
YJA Yavi 2.73 60 *eP* **Pn 00 44 15.0 +2.5**
YJA *eS* **Sn 00 44 49.0 +2.8**
PB01 IPOC Station P 2.85 332 ⇑ *iP* **Pn 00 44 13.7 0.0**
PB01 *i* S **Sn 00 44 47.9 -0.5**
PB01 IAML 00 44 51.7
comp=E,3µm,0.3s
PB01 IPOC Station P 2.85 332 Pn 00 44 13.6 0.0
PB01 IPOC Station P 2.85 332 *eP* **Pn 00 44 13.9 +0.2**
PB01 *eS* **Sn 00 44 48.1 -0.3**
PB01 IAML 00 44 49.5
comp=Z,2µm,0.2s
FSA Cafayete 3.15 144 *eP* **Pn 00 44 18.9 +1.4**
AC02 Maricunga 3.38 196 ⇓ *iP* **Pn 00 44 21.8 +1.0**
AC02 Maricunga 3.38 196 Pn 00 44 21.2 +0.4
AC01 Pan de Azucar 3.44 222 ⇑ *iP* **Pn 00 44 20.2 -0.9**
AC01 *i* S **Sn 00 45 00.2 -1.6**
AC01 IAML 00 45 05.0
comp=N,2µm,0.6s
AC01 Pan de Azucar 3.44 222 Pn **Pn 00 44 20.1 -1.0**
PB08 IPOC Station P 3.57 343 ⇑ *eP* **Pn 00 44 24.0 +0.7**
PB08 *i* S **Sn 00 45 00.7 -4.9**
PB08 IAML 00 45 09.9
comp=E,578nm,0.4s
PB08 IPOC Station P 3.57 343 Pn 00 44 23.5 +0.2
TA01 Diego Aracena 3.59 326 Pn **Pn 00 44 22.8 -0.3**
TA02 Huaiquique 3.82 329 Pn 00 44 26.7 +0.6
PB11 IPOC Station P 4.08 339 Pn **Pn 00 44 28.5 -1.3**
PSCX Pisagua 4.41 334 Pn **Pn 00 44 33.8 -0.3**
GO03 Copiap 4.45 206 Pn 00 44 32.9 -1.6
GO03 Copiap 4.45 206 *eP* **Pn 00 44 33.4 -1.1**
GO03 *eS* **Sn 00 45 23.7 -2.0**
MNMC Minye Minye 4.66 342 Pn 00 44 36.5 -1.0
PB16 IPOC Station P 5.39 345 Pn 00 44 47.0 -0.6
LCO Las Campanas 5.90 203 Pn **Pn 00 44 51.9 -2.2**
ACLC CERRO LA CRUZ 5.90 171 *eP* **Pn 00 44 53.7 -0.3**
LPAZ La Paz 7.26 359 P **Pn 00 45 12.7 0.0**
comp=E,3.8nm,0.3s,baz=144,slow=5.1,SNR=73
LPAZ S **Sn 00 46 26.9 -7.2**
comp=E,1.6nm,0.3s,baz=213,slow=7.2,SNR=7.1
LPAZ La Paz 7.26 359 Pn **Pn 00 45 12.2 -0.5**
LPAZ La Paz 7.26 359 *eP* **Pn 00 45 12.8 +0.1**
LPAZ La Paz 7.26 359 *eP* **Pn 00 45 12.8 +0.1**
LPAZ *eS* **Sn 00 46 35.5 +1.4**
CO03 El Pedregal 7.59 197 Pn **Pn 00 45 13.7 -3.0**
ACHE Chepes 7.65 171 *eP* **Pn 00 45 16.2 -1.2**
ZON Zonda 7.95 184 *eP* **Pn 00 45 20.5 -0.9**
ZON *eS* **Sn 00 46 44.6 -5.2**
ZON IAML 00 46 47.9
comp=Z,22nm,0.8s
RTLS Leoncito 8.26 187 *eP* **Pn 00 45 23.8 -1.9**
RTLS *eS* **Sn 00 46 53.6 -4.0**
RTLS IAML 00 46 57.0
comp=Z,36nm,0.5s
RTCV Cerro Valdivia 8.26 183 *eP* **Pn 00 45 23.9 -1.6**
RTCV *eS* **Sn 00 46 52.5 -4.8**
RTCV IAML 00 46 54.2
comp=Z,29nm,0.3s
AUSP Uspallata 8.69 187 *eP* **Pn 00 45 29.7 -1.8**
AUSP *eS* **Sn 00 47 04.7 -3.3**
MRA San Martin 9.04 167 *eP* **Pn 00 45 33.5 -2.6**
MRA *eP* **Pn 00 45 34.0 -2.1**
MRA *eS* **Sn 00 47 10.2 -6.1**
MRA IAML 00 47 11.5
comp=Z,10.0nm,0.6s
ARCO CERRO ARCO 9.26 185 *eP* **Pn 00 45 37.8 -1.2**
ARCO *eS* **Sn 00 47 20.9 -0.6**
VA03 San Esteban 9.40 193 Pn 00 45 37.6 -3.4
VA03 San Esteban 9.40 193 *eP* **Pn 00 45 37.5 -3.4**
VA03 *eS* **Sn 00 47 20.3 -4.8**
AAGR Agrelo 9.49 184 *eP* **Pn 00 45 40.5 -1.6**
SIV San Ignacio 10.01 42 P **Pn 00 45 45.4 -3.7**
comp=Z,11nm,0.3s,baz=231,slow=12,SNR=172
SIV S Sn 00 47 29.5 -10
comp=Z,3.3nm,0.3s,baz=313,slow=23,SNR=5.8
CPUP Villa Florida 10.11 108 P **Pn 00 45 48.1 -2.2**
comp=Z,0.0nm,0.3s,baz=214,slow=18,SNR=5.7
CPUP Villa Florida 10.11 108 Pn **Pn 00 45 46.9 -3.5**
RFA San Rafael 11.15 182 *eP* **Pn 00 46 00.9 -3.3**
AQDB Aquidauana 11.87 77 *eP* **Pn 00 46 12.4 -1.3**
VILB Vilhena 12.94 37 *eP* **Pn 00 46 25.8 -1.8**
BI02 San Fabin de 13.33 191 Pn 00 46 31.1 -1.4
H03N1 Juan Fernandez 13.68 222 P **Pn 00 46 37.3 +0.6**
baz=110,slow=15,SNR=6.8
H03N1 T T 00 58 56.8
baz=44,slow=72,SNR=43
H03N2 Juan Fernandez 13.69 222 P **Pn 00 46 37.1 +0.3**
baz=110,slow=15,SNR=5.7
H03N2 T T 00 58 55.5
baz=44,slow=72,SNR=36
H03N3 Juan Fernandez 13.70 222 P **Pn 00 46 37.2 +0.2**
baz=110,slow=15,SNR=8.7
H03N3 T T 00 58 55.8
baz=44,slow=72,SNR=16
PP1B Ponte de Pedra 13.70 67 *eP* **Pn 00 46 36.0 -1.3**
ETMB Extrema 13.80 8 *eP* **Pn 00 46 35.5 -3.1**
H03S3 Juan Fernandez 13.94 221 P **Pn 00 46 39.3 -0.8**
baz=27,slow=19,SNR=4.1
H03S1 Juan Fernandez 13.96 220 P **Pn 00 46 39.6 -0.6**
baz=27,slow=19,SNR=4.2
H03S2 Juan Fernandez 13.96 221 P **Pn 00 46 39.4 -0.9**
baz=27,slow=19,SNR=3.7
CPSB Cacapava Do Su 14.69 121 *eP* **Pn 00 46 50.2 +0.4**
ITAB Concordia 14.85 107 *eP* **Pn 00 46 51.3 -0.5**
PLTB Pedras Altas 15.17 126 *eP* **Pn 00 46 56.4 +0.6**
PCMB Pacaembu 15.64 86 *eP* **Pn 00 47 00.4 -1.3**
CZSB Cruzeiro do Su 16.38 343 *eP* **Pn 00 47 10.2 -0.6**
CNLB Canela 16.43 114 *eP* **Pn 00 47 10.9 -0.4**
ITRB Iturama 16.90 80 *eP* **P 00 47 16.3 -0.7**
FRTB Fartura 16.98 93 *eP* **P 00 47 17.1 -0.6**
ARAG Araguaiana, MT 17.18 66 *eP* **P 00 47 19.4 -0.6**
CLDB Colider 17.22 45 *eP* **P 00 47 17.6 -2.8**
PLCA Paso Flores 17.23 186 P **Pn 00 47 21.4 +0.4**
comp=Z,0.3nm,0.3s,baz=26,slow=11,SNR=12
PLCA Paso Flores 17.23 186 P **P 00 47 20.5 +0.1**
PLCA Paso Flores 17.23 186 *eP* **Pn 00 47 21.6 +0.7**
LL04 Puerto Octay 17.66 191 P **P 00 47 25.2 +0.2**
TER01 Tubaro-SC 17.70 110 *eP* **P 00 47 25.2 -0.5**
LL03 Petrohue 17.88 191 P **P 00 47 27.5 0.0**
LL03 IAmb IAmb 00 47 34.3
comp=Z,54nm,0.8s
BB19B Bebedouro 18.24 86 *eP* **P 00 47 31.5 -0.2**
SPB Sao Paulo 18.91 94 P **P 00 47 36.1 -2.7**
SPB IAmb IAmb 00 47 39.0
comp=Z,58nm,1.1s
SPB Sao Paulo 18.91 94 *eP* **P 00 47 38.3 -0.5**
RCLB Rio Claro- Sao 18.94 91 *eP* **P 00 47 38.5 -0.7**
PET01 Itanhaem-SP 19.01 96 *eP* **P 00 47 39.5 -0.5**
LL01 San Ignacio de 19.09 190 P **P 00 47 41.0 +0.4**
LL01 IAmb IAmb 00 47 45.6
comp=Z,21nm,0.6s
VAO Valinhos 19.39 92 *eP* **P 00 47 43.2 -0.9**
LL02 Futaleuf 19.80 188 P **P 00 47 48.3 -0.1**
LL02 IAmb IAmb 00 47 52.5
comp=Z,26nm,0.7s
GO07 Milladeo Hill, 20.02 192 P **P 00 47 50.8 +0.1**
BDFB Brasilia 20.45 71 P **P 00 47 53.8 -2.0**
comp=Z,73nm,0.7s,baz=244,slow=12,SNR=96
BDFB Brasilia 20.45 71 P **P 00 47 53.7 -2.0**
NPGB Novo Progresso 20.48 39 *eP* **P 00 47 53.3 -2.6**
PARB Paraibuna 20.59 94 *eP* **P 00 47 56.5 -0.5**
MACA Manacapuru-AM 21.52 20 *eP* **P 00 48 05.6 -1.4**
BSCB Bom Sucesso 21.70 88 *eP* **P 00 48 06.8 -2.2**
ESAR Angra dos Reis 21.70 93 *eP* **P 00 48 07.0 -1.9**
PEXB Peixe 21.97 62 *eP* **P 00 48 09.0 -2.8**
MAN01 Angra dos Reis 22.15 93 *eP* **P 00 48 12.2 -1.4**
ITTB Itatiuba 22.51 34 *eP* **P 00 48 14.6 -2.5**
VAS01 Vassouras-RJ 22.70 92 *eP* **P 00 48 18.0 -1.0**
DUB01 Friburgo-RJ 23.71 91 *eP* **P 00 48 28.2 -0.1**
JANB Januaria 23.93 74 *eP* **P 00 48 27.9 -2.5**
PTGA Pitinga 24.04 20 P **P 00 48 29.8 -1.4**
comp=Z,12nm,0.3s,baz=197,slow=9.9,SNR=20
SDBA SAO DESIDERIO 24.63 67 *eP* **P 00 48 34.4 -2.2**
PRPB Parauapebas 24.66 48 *eP* **P 00 48 35.3 -1.5**
MALB Monte Alegre 25.40 34 *eP* **P 00 48 42.1 -1.5**
ALF01 Guarapari-ES 25.48 89 *eP* **P 00 48 42.6 -1.7**
SJMB Sao Joao De Ma 25.51 84 *eP* **P 00 48 42.5 -2.2**
BSFB Barra de Sao F 25.79 85 *eP* **P 00 48 45.7 -1.4**
RIB01 Linhares ES 26.08 86 *eP* **P 00 48 48.8 -0.9**
GARC Garzon, Huila 26.62 343 *eP* **P 00 48 57.0 +2.1**
NAN01 Guarapari, ES 26.72 83 *eP* **P 00 48 54.3 -1.2**
BOAV Boa Vista 26.85 17 *eP* **P 00 48 56.7 +0.2**
SOTA Rioblanco 26.89 341 *eP* **P 00 49 02.6 +5.1**
MCPB Macapa, AP 27.83 36 *eP* **P 00 49 04.7 -0.6**
NBIT Itapeh - BA 28.32 78 *eP* **P 00 49 08.7 -1.0**
CHIC Chingaza 28.58 348 *eP* **P 00 49 12.1 -0.4**
GDU01 Guandu, BA 28.66 75 *eP* **P 00 49 10.1 -2.7**
GUY2C Guyana, Caldas 29.51 345 *eP* **P 00 49 21.0 +0.3**
RUSC La Rusia 29.70 350 P **P 00 49 22.2 -0.3**
RUSC IAmb IAmb 00 49 24.9
comp=Z,9.1nm,0.6s
RUSC La Rusia 29.70 350 *eP* **P 00 49 22.5 0.0**
NORC Norcasia 29.72 346 *eP* **P 00 49 19.9 -2.3**
HELC Santa Helena 30.48 345 *eP* **P 00 49 24.1 -5.1**
PTBC PUERTO BERRIO, 30.59 347 *eP* **P 00 49 27.9 -1.8**
NBLA Lagarto - SE 31.42 72 *eP* **P 00 49 34.1 -3.1**
ZARC Zaragoza, Cauc 31.59 347 *eP* **P 00 49 35.2 -3.3**
NBTA Tacaratu-PE 32.08 68 *eP* **P 00 49 40.3 -2.6**
NBMA Muriti-CE 32.41 65 *eP* **P 00 49 43.6 -2.2**
SMLC San Martn de 32.72 349 *eP* **P 00 49 45.8 -2.6**
NBAN Anadia - AL 33.35 71 *eP* **P 00 49 51.1 -2.9**
NBLI Livramento-PB 33.92 67 *eP* **P 00 49 56.9 -2.2**
SJCC San Jacinto, C 34.00 347 P **P 00 49 58.9 -0.6**
SJCC IAmb IAmb 00 50 14.6
comp=Z,20nm,1.4s
SJCC San Jacinto, C 34.00 347 *eP* **P 00 49 58.2 -1.4**
TOSP Speyside 35.44 13 P **P 00 50 11.6 -0.3**
RCBR Riachuelo 35.62 65 P **P 00 50 12.4 -1.3**
comp=Z,16nm,0.6s,baz=226,slow=11,SNR=11
RCBR Riachuelo 35.62 65 P **P 00 50 12.1 -1.5**
NBPV Pedro Velho 35.82 67 *eP* **P 00 50 13.6 -1.7**
GRGR Grenville 36.05 11 P **P 00 50 18.1 +1.0**
FDF Fort de France 38.68 11 P **P 00 50 39.5 +0.2**
BELA Belgrano 2 56.58 172 P **P 00 52 57.7 +1.0**
BELA IAmb IAmb 00 52 59.0
comp=Z,7.1nm,0.8s
VNA3 Neumayer Olymp 57.86 161 P **P 00 53 06.6 +0.9**
VNA1 Neumayer--Stat 58.07 160 P **P 00 53 08.5 +1.4**
VNA2 Neumayer--Watz 58.43 160 P **P 00 53 10.8 +1.1**
baz=284,slow=8.5
JSC Jenkinsville 58.90 347 P **P 00 53 13.7 +0.4**
BIRD Birdtown, Kers 59.09 348 P **P 00 53 15.6 +1.0**
BIRD IAmb IAmb 00 53 34.5
comp=Z,8.1nm,0.9s
W57A Gilead 59.50 349 P **P 00 53 18.4 +1.0**
V58A Windy Hill, Pi 59.98 350 P **P 00 53 21.4 +0.8**
SNAA Sanae 60.06 161 P **P 00 53 21.8 +0.9**
SNAA Sanae 60.06 161 P **P 00 53 21.8 +0.9**
comp=Z,2.8nm,0.9s,baz=278,slow=9.3,SNR=8.5
SNAA Sanae 60.06 161 P **P 00 53 21.6 +0.6**
SNAA IAmb IAmb 00 53 23.6
comp=Z,14nm,1.5s
V55A Taylorsville 60.41 348 P **P 00 53 24.4 +0.8**
V55A IAmb IAmb 00 53 40.6
comp=Z,15nm,1.2s
V53A Saluda 60.56 346 P **P 00 53 25.2 +0.5**
V53A IAmb IAmb 00 53 32.7
comp=Z,11nm,1.4s
W50A Signal Mountai 60.71 344 P **P 00 53 26.2 +0.5**
W50A IAmb IAmb 00 53 26.8
comp=Z,6.5nm,0.8s
CPCT Cooper Cave 60.75 345 P **P 00 53 26.8 +0.9**
TKL Tuckaleechee C 60.77 345 P **P 00 53 26.2 +0.2**
TKL IAmb IAmb 00 53 27.2
comp=Z,9.3nm,1.0s
SWET Sewanee 60.88 343 P **P 00 53 27.0 +0.1**
SWET IAmb IAmb 00 53 27.8
comp=Z,7.0nm,0.6s
TXAR Lajitas Airpo 62.78 325 P **P 00 53 40.4 +0.6**
comp=Z,0.4nm,0.6s,baz=152,slow=8.1,SNR=5.0
TXAR pP **pP 00 54 14.6 +1.4**
comp=Z,0.2nm,0.4s,baz=142,slow=7.5,SNR=2.0
O56A Blue Knob Stat 64.27 351 P **P 00 53 50.5 +1.2**
SSPA Standing Stone 64.54 352 P **P 00 53 51.9 +1.0**
L63A North Scituate 65.20 357 P **P 00 53 56.2 +1.1**
KSPA Keystone Colle 65.20 354 P **P 00 53 56.2 +1.0**
KSPA IAmb IAmb 00 53 57.4
comp=Z,21nm,1.4s
K62A Royalston 66.03 357 P **P 00 54 01.7 +1.2**
K58A Earlville 66.39 354 P **P 00 54 03.9 +1.1**
K58A IAmb IAmb 00 54 05.0
comp=Z,7.7nm,0.8s
QSPA South Pole Qui 66.62 180 P **P 00 54 05.4 +1.2**
comp=Z,5.8nm,0.5s,baz=169,slow=1.3,SNR=76
QSPA South Pole Qui 66.62 180 P **P 00 54 06.0 +1.8**
QSPA IAmb IAmb 00 54 06.5
comp=Z,6.4nm,0.6s
J59A Piesco 66.98 355 P **P 00 54 07.9 +1.3**
J59A IAmb IAmb 00 54 08.7
comp=Z,8.5nm,0.7s
PECO Prince Edward 67.68 353 P **P 00 54 12.0 +1.1**
DBIC Dimbokro 68.60 72 P **P 00 54 17.2 -0.1**
comp=Z,24nm,0.7s,baz=217,slow=5.7,SNR=31
DBIC Dimbokro 68.60 72 P **P 00 54 17.2 -0.1**
LMN Caledonia Moun 69.17 2 P **P 00 54 20.4 +0.3**
LMN IAmb IAmb 00 54 45.4
comp=Z,35nm,1.4s
KOWA Kowa 73.14 66 P **P 00 54 44.9 +0.2**
SBA Scott Base 73.93 190 P **P 00 54 50.4 +2.1**
VNDA Vanda 74.94 190 P **P 00 54 56.5 +2.3**
comp=Z,2.4nm,1.1s,baz=106,slow=1.6,SNR=6.3
VNDA Vanda 74.94 190 P **P 00 54 56.9 +2.6**
SUR Sutherland 76.86 120 P **P 00 55 07.2 +1.0**
comp=Z,6.6nm,0.6s,baz=163,slow=18,SNR=2.2
SUR Sutherland 76.86 120 P **P 00 55 07.5 +1.3**
SUR IAmb IAmb 00 55 23.4
comp=Z,38nm,1.4s
TOA0 Torodi Ar. Sit 77.33 70 P **P 00 55 08.9 +0.1**
TORD Torodi Ar. Bea 77.33 70 P **P 00 55 08.8 0.0**
comp=Z,13nm,0.5s,baz=257,slow=5.6,SNR=107
ULM Lac du Bonnet 77.53 342 P **P 00 55 08.9 -0.1**
comp=Z,2.7nm,0.5s,baz=151,slow=6.9,SNR=9.1
ULM Lac du Bonnet 77.53 342 P **P 00 55 09.8 +0.8**
TSUM Tsumeb 78.70 106 P **P 00 55 17.8 +1.3**
TSUM IAmb IAmb 00 55 18.6
comp=Z,14nm,0.8s
BOSA Boshof 81.78 118 P **P 00 55 33.4 +0.5**
comp=Z,3.7nm,0.4s,baz=254,slow=4.5,SNR=22
BOSA Boshof 81.78 118 P **P 00 55 33.4 +0.5**
PTEO Sao Teotonio 82.50 44 *eP* **P 00 55 39.1 +3.0**
PBDV Barranco-do-Ve 82.83 44 *eP* **P 00 55 41.0 +3.2**
PCVE Castro Verde 82.99 44 *eP* **P 00 55 40.4 +1.8**
PVAQ Vaqueiros 83.06 44 *eP* **P 00 55 42.0 +3.1**
LBTB Lobatse 83.44 114 P **P 00 55 42.4 +0.9**
LBTB IAmb IAmb 00 55 44.1
comp=Z,6.7nm,0.8s
EVO Evora 83.54 43 *eP* **P 00 55 43.3 +1.9**
PMTG Montargil 83.73 43 *eP* **P 00 55 43.8 +1.4**
PBAR Barrancos 83.95 44 *eP* **P 00 55 44.6 +1.1**
PCAS Casmilo, Conde 84.16 42 *eP* **P 00 55 48.3 +3.8**
PCBR Castelo Branco 84.66 42 *eP* **P 00 55 48.3 +1.3**
PCAB Cabril 85.45 41 *eP* **P 00 55 52.0 +1.0**
MVO Moncorvo 85.72 41 *eP* **P 00 55 53.7 +1.3**
PAB San Pablo 86.45 44 P **P 00 55 56.9 +0.9**
PAB IAmb IAmb 00 55 58.5
comp=Z,13nm,1.2s
ESDC Sonseca Array 86.77 44 P **P 00 55 58.4 +0.9**
comp=Z,2.2nm,0.9s,baz=242,slow=4.7,SNR=13
ESDC Sonseca Array 86.77 44 P **P 00 55 58.5 +0.9**
YKA Yellowknife Ar 93.41 340 P **P 00 56 28.5 +0.6**
comp=Z,0.6nm,0.6s,baz=132,slow=4.5,SNR=12
YKA pP **pP 00 57 04.6 +1.2**
comp=Z,0.8nm,0.8s,baz=137,slow=5.3,SNR=4.1
YKA sP **sP 00 57 17.9 -0.1**
comp=Z,0.6nm,0.6s,baz=136,slow=4.8,SNR=3.8
ASAR Alice Springs 128.41 206 PKP **PKiKP 01 02 20.9 +0.3**
comp=Z,1.8nm,0.7s,baz=150,slow=1.9,SNR=14
ASAR pPKP **pPKPdf 01 02 57.6 +0.6**
comp=Z,0.6nm,0.6s,baz=200,slow=0.5,SNR=2.8
WRA Warramunga Arr 131.54 209 PKP **PKiKP 01 02 26.6 -0.3**
comp=Z,1.2nm,0.4s,baz=155,slow=1.8,SNR=19
WRA pPKP **pPKPdf 01 03 05.0 +1.9**
comp=Z,0.8nm,0.7s,baz=146,slow=1.7,SNR=3.1
WRA Warramunga Arr 131.54 209 PKiKP 01 02 27.0 +0.1
ZALV Zalesovo Beam 143.47 27 PKP **PKPdf 01 02 45.8 -1.0**
comp=Z,2.7nm,0.6s,baz=315,slow=3.7,SNR=16
ZALV Zalesovo Beam 143.47 27 PKPdf 01 02 45.6 -1.1
MKAR Makanchi Array 146.81 38 PKPbc **PKPbc 01 02 54.9 +0.1**
comp=Z,4.6nm,0.7s,baz=314,slow=2.9,SNR=33
WMQ Urumqi 151.64 39 *eP* **PKPdf 01 03 00.3 -0.3**
WMQ pmax pmax
comp=Z,120nm,3.7s
WMQ LR LR
comp=N,2µm,29.2s
WMQ LR LR
comp=E,2µm,29.3s
WMQ LR LR
comp=Z,310nm,29.2s
SONM Songino Array 155.40 9 PKPab **PKPab 01 03 31.1 -0.9**
comp=Z,0.9nm,0.6s,baz=318,slow=2.0,SNR=3.8
HHC Hu-ho-hao-te 162.78 1 *eP* **PKPdf 01 03 16.8 +2.1**
HHC pmax pmax
comp=Z,13nm,0.7s
HHC pmax pmax
comp=Z,100nm,6.6s
NJ2 Nanjing 169.58 326 *eP* **PKPdf 01 03 21.5 +1.3**
NJ2 pmax pmax
comp=Z,11nm,0.5s

NOU 30 01:51:23.5, 43.33S×173.36E, h18km, MLv3.5, Off E. Coast of S. Island, N.Z., Off east coast of South Island

*IDC **30** 02:01:09.6±1.8, 6.81S×128.99E, h190km±21km, mb3.7/4, mb1 3.8/9, mb1mx3.4/37, mbtmp4.3/9, Error ellipse: s-maj=30.8km s-min=17.8km az=94.0*
ISC 30 02:01:09.2±0.8, **6.88S**±0.06×**129.0E**±0.1, **h200**km, **n9, s83**/14, **mb4.0**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.24**	**238**	P	**Pn**	**02 02 40.7**	**+1.0**
	41nm,0.3s,baz=209,slow=2.2,SNR=13						
BATI				S	**Sn**	**02 03 47.4**	**-3.9**
	10nm,0.3s,baz=110,slow=7.0,SNR=1.7						
SIJI	**Sorong**	**6.38**	**21**	P	**Pn**	**02 02 40.9**	**-0.5**
	25nm,0.3s,baz=215,slow=21,SNR=33						
SIJI				S	**Sn**	**02 03 50.1**	**-4.5**
	4.7nm,0.3s,baz=295,slow=22,SNR=5.5						
FITZ	**Fitzroy Crossi**	**11.62**	**196**	P	**Pn**	**02 03 49.5**	**+0.2**
	1.3nm,0.3s,baz=20,slow=8.3,SNR=91						
FITZ				S	**Sn**	**02 05 55.4**	**-3.7**
	4.6nm,0.3s,baz=333,slow=14,SNR=8.2						
WRA	**Warramunga Arr**	**13.97**	**159**	P	**Pn**	**02 04 20.1**	**+1.2**
	1.0nm,0.3s,baz=347,slow=13,SNR=23						
WRA				S	**S**	**02 06 51.7**	**-2.8**
	1.9nm,0.3s,baz=333,slow=23,SNR=7.0						
ASAR	**Alice Springs**	**17.34**	**165**	P	**Pn**	**02 05 01.4**	**+1.8**
	0.4nm,0.3s,baz=334,slow=9.4,SNR=20						
ASAR				S	**S**	**02 08 12.3**	**+4.4**
	0.7nm,0.3s,baz=354,slow=28,SNR=5.6						
CMAR	**Chiang Mai Arr**	**38.92**	**311**	P	**P**	**02 08 16.5**	**+0.7**
	1.0nm,0.3s,baz=137,slow=7.8,SNR=1.5						
SONM	**Songino Array**	**58.03**	**342**	P	**P**	**02 10 43.3**	**+2.0**
	0.5nm,0.5s,baz=132,slow=2.2,SNR=3.8						
MKAR	**Makanchi Array**	**67.60**	**327**	P	**P**	**02 11 45.5**	**+1.2**
	2.8nm,0.5s,baz=114,slow=8.8,SNR=40						
ZALV	**Zalesovo Beam**	**71.05**	**334**	P	**P**	**02 12 05.3**	**0.0**
	2.1nm,0.6s,baz=138,slow=5.9,SNR=9.5						

IDC 30 02:05:58.1±2.6, 6.15N×92.38E, h0km**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.5**/37**, mbtmp3.8**/5**, ML4.5**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/42**, Error ellipse: s-maj=96.0km s-min=25.3km az=63.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.81**	**27**	Pn	Pn	02 09 15.8	+0.5
	0.7nm,0.3s,baz=223,slow=14,SNR=14						
LEM	**Lembang**	**19.93**	**130**	LR	LR	02 19 59.1	
	comp=Z,64nm,18.5s,baz=238,slow=42						
H08S3	**Diego Garcia H**	**24.11**	**236**	T	T	02 37 23.9	
	baz=56,slow=75,SNR=50						
H08S2	**Diego Garcia H**	**24.11**	**236**	T	T	02 37 16.5	
	baz=56,slow=75,SNR=68						
H08S1	**Diego Carcia H**	**24.12**	**236**	T	T	02 37 22.4	
	baz=56,slow=75,SNR=73						
MKAR	**Makanchi Array**	**41.42**	**350**	P	P	02 13 46.0	-0.3
	0.2nm,0.4s,baz=165,slow=7.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**48.05**	**354**	P	P	02 14 39.0	-0.1

1.6nm,0.4s,baz=157,slow=8.0,SNR=10
WRA Warramunga Arr 48.74 123 P P 02 14 44.7 -0.3
0.3nm,0.5s,baz=303,slow=9.2,SNR=4.8
ASAR Alice Springs 50.20 128 P P 02 14 56.2 +0.1
0.3nm,0.4s,baz=304,slow=7.6,SNR=1.7

*IDC **30** 02:26:49.9±1.1, 19°.87S×133°.95E, h0km, mb4.0/2, mb1 4.0/5, mb1mx3.7/37, mbtmp4.0/5, ML4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/35, Error ellipse: s-maj=7.5km s-min=3.3km az=100.0*
*AUST **30** 02:26:49.3±1.4, 19°.84S×133°.91E, h13km±10km, Error ellipse: s-maj=8.9km s-min=7.9km az=52.0*
ISC 30 02:26:48.8±0.6, 19°.95S±0°.04×133°.88E±0°.04, h12km, n30, σ2s04/39, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**0.43**	**89**	Pg	**Pg**	**02 26 57.4**	**+0.1**
	109nm,0.3s,baz=280,slow=19,SNR=6170						
WRA				Lg	Lg	02 27 01.9	
	366nm,0.3s,baz=280,slow=34,SNR=12						
WB2	**Warramunga Arr**	**0.44**	**89**	P	**Pg**	**02 26 57.6**	**+0.1**
	baz=0.4						
WB2				S	**Sg**	**02 27 03.3**	**-0.1**
	baz=0.4						
WC3	**Warramunga Arr**	**0.46**	**91**	P	**Pg**	**02 26 58.4**	**+0.5**
	baz=0.5						
ASAR	**Alice Springs**	**3.70**	**180**	Pn	**Pb**	**02 27 51.6**	**-2.5**
	6.9nm,0.3s,baz=360,slow=8.1,SNR=137						
ASAR				Sn	**Sb**	**02 28 37.6**	**-1.3**
	12nm,0.3s,baz=1.5,slow=28,SNR=8.0						
ASAR				Lg	Lg	02 28 50.9	
	28nm,0.3s,baz=360,slow=30,SNR=11						
ASAR				LR	LR	02 29 04.7	
	comp=Z,142nm,21.4s,baz=130,slow=36						
ASPA	**Alice Springs**	**3.70**	**180**	P	**Pb**	**02 27 52.4**	**-1.7**
	baz=3.8						
ASPA				S	**Sb**	**02 28 38.2**	**-0.7**
	baz=3.8						
QIS	**Mount Isa**	**5.41**	**97**	P	**Pn**	**02 28 11.4**	**+2.1**
	baz=5.4,SNR=12						
QIS				S	**Sn**	**02 29 12.0**	**+0.5**
	baz=5.4						
KNRA	**Kununurra**	**6.47**	**310**	P	**Pn**	**02 28 24.0**	**+0.1**
	baz=6.4						
WRKA	**Warakurna**	**7.23**	**225**	P	**Pn**	**02 28 34.2**	**-0.2**
	baz=7.3,SNR=14						
WRKA				S	**Sn**	**02 30 00.6**	**+4.1**
	baz=7.3						
KDU	**Kakadu**	**7.35**	**349**	P	**Pn**	**02 28 36.2**	**+0.2**
	baz=7.3,SNR=90						
KDU				S	**Sn**	**02 29 55.4**	**-4.0**
	baz=7.3						
MTN	**Manton Dam**	**7.54**	**339**	P	**Pn**	**02 28 38.0**	**-0.7**
	baz=7.5,SNR=10						
MTN				S	**Sn**	**02 30 02.1**	**-2.1**
	baz=7.5						
OOD	**Oodnadatta**	**7.98**	**168**	P	**Pn**	**02 28 48.5**	**+3.9**
	baz=8.1,SNR=12						
FITZ	**Fitzroy Crossi**	**8.01**	**282**	Pn	**Pn**	**02 28 48.0**	**+2.9**
	3.6nm,0.3s,baz=96,slow=9.0,SNR=98						
FITZ				Sn	**Sn**	**02 30 13.3**	**-2.4**
	7.3nm,0.3s,baz=357,slow=17,SNR=9.8						
FITZ				Lg	Lg	02 31 03.3	
	6.0nm,0.3s,baz=188,slow=20,SNR=11						
FITZ	**Fitzroy Crossi**	**8.01**	**282**	P	**Pn**	**02 28 46.3**	**+1.2**
	baz=8.0,SNR=21						
FITZ				S	**Sn**	**02 30 14.0**	**-1.7**
	baz=8.0						
MTSU	**Mount Surprise**	**10.03**	**81**	P	**Pn**	**02 29 13.9**	**+1.1**
	baz=10.0,SNR=16						
MULG	**Mulgathing**	**10.29**	**179**	P	**Pn**	**02 29 19.3**	**+3.1**
	baz=10,SNR=10						
COEN	**Coen**	**10.70**	**58**	P	**Pn**	**02 29 21.3**	**-0.7**
	baz=11						
COEN				S	Sn	02 31 12.2	-10
	baz=11						
LCRK	**Leigh Creek**	**11.16**	**160**	P	**Pn**	**02 29 30.4**	**+2.2**
	baz=11						
QLP	**Quilpie**	**11.57**	**127**	P	**Pn**	**02 29 35.1**	**+1.2**
	baz=12						
CTA	**Charters Tower**	**11.63**	**93**	Pn	**Pn**	**02 29 35.7**	**+1.0**
	0.4nm,0.3s,baz=245,slow=5.2,SNR=7.2						
CTA				Lg	Lg	02 32 54.6	
	0.4nm,0.3s,baz=352,slow=23,SNR=6.5						
FORT	**Forrest**	**11.99**	**205**	P	**Pn**	**02 29 41.5**	**+1.9**
	baz=12,SNR=17						
FORT				S	**Sn**	**02 31 52.2**	**-1.2**
	baz=12						
BBOO	**Buckleboo**	**12.95**	**172**	P	**Pn**	**02 29 53.3**	**+0.5**
	baz=13,SNR=7.0						
STKA	**Stephens Creek**	**13.75**	**151**	Pn	**Pn**	**02 30 04.3**	**+0.8**
	0.5nm,0.3s,baz=330,slow=14,SNR=7.5						
STKA				Sn	**Sn**	**02 32 32.0**	**-4.2**
	1.0nm,0.3s,baz=54,slow=15,SNR=5.5						
STKA	**Stephens Creek**	**13.75**	**151**	P	**Pn**	**02 30 04.6**	**+1.0**
	baz=14,SNR=6.2						
MEEK	**Meekatharra**	**15.52**	**242**	P	**Pn**	**02 30 25.7**	**-1.9**
	baz=16,SNR=5.4						
CMSA	**Cobar Meteorol**	**15.68**	**140**	P	**Pn**	**02 30 30.0**	**+0.5**
	baz=16						
BLDU	**Ballidu**	**18.79**	**232**	P	**P**	**02 31 08.9**	**+0.8**
	baz=19						
MGCD	**Mangrove Creek**	**20.25**	**134**	S	S	02 34 57.4	-14
	baz=20,SNR=8.0						
TNTI	**Ternate**	**21.56**	**342**	S	Sn	02 35 57.5	+12
	baz=22,SNR=5.4						
MKAR	**Makanchi Array**	**81.08**	**327**	P	**P**	**02 39 06.7**	**+2.9**
	0.8nm,0.5s,baz=136,slow=6.9,SNR=10.0						
KURBB	**Kurchatov Arra**	**85.46**	**328**	P	**P**	**02 39 28.4**	**+2.2**
	0.5nm,0.7s,baz=132,slow=3.6,SNR=5.8						

*IDC **30** 02:35:53.5±0.8, 28°.36N×87°.53E, h0km, mb3.8/12, mb1 3.9/14, mb1mx3.7/46, mbtmp3.7/14, ML3.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/43, Error ellipse: s-maj=31.1km s-min=16.6km az=52.0*
ISC 30 02:35:54.7±0.8, 28°.3N±0°.2×87°.5E±0°.2, h10km, n15, σ1s13/14, mb3.7/12, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.34**	**131**	Pn	**Pn**	**02 39 17.2**	**-0.7**
	baz=307,slow=12,SNR=1.0						
CMAR				LR	LR	02 46 14.5	
	comp=Z,35nm,19.8s,baz=320,slow=43						
MKAR	**Makanchi Array**	**18.90**	**349**	P	**P**	**02 40 14.5**	**-0.9**
	0.1nm,0.3s,baz=169,slow=13,SNR=5.3						
KURBB	**Kurchatov Arra**	**23.30**	**345**	P	**P**	**02 41 01.5**	**-1.1**
	1.2nm,1.0s,baz=160,slow=10,SNR=5.3						
SONM	**Songino Array**	**24.38**	**32**	P	**P**	**02 41 13.2**	**0.0**
	0.6nm,0.4s,baz=213,slow=15,SNR=2.9						
ZALV	**Zalesovo Beam**	**25.69**	**356**	P	**P**	**02 41 25.4**	**+0.6**
	0.6nm,0.4s,baz=188,slow=5.7,SNR=4.0						
GEYT	**Alibeck**	**26.35**	**299**	P	**P**	**02 41 32.2**	**+1.2**
	1.2nm,0.2s,baz=101,slow=7.5,SNR=9.2						
GEYT				LR	LR	02 53 43.0	
	comp=Z,54nm,18.7s,baz=55,slow=41						
KSRS	**Korea Array**	**34.89**	**64**	LR	LR	02 59 30.0	
	comp=Z,21nm,20.5s,baz=225,slow=41						
FINES	**FINESS Array B**	**51.96**	**328**	P	**P**	**02 45 04.9**	**+1.2**
	4.7nm,1.0s,baz=126,slow=9.7,SNR=3.7						
ARCES	**ARCESS Array B**	**54.05**	**337**	P	**P**	**02 45 20.7**	**+1.7**
	1.8nm,0.9s,baz=110,slow=7.1,SNR=3.8						
GERES	**GERESS Array B**	**58.91**	**312**	P	**P**	**02 45 52.6**	**-1.4**
	0.4nm,0.8s,baz=72,slow=5.7,SNR=4.7						
WRA	**Warramunga Arr**	**65.93**	**131**	P	**P**	**02 46 41.9**	**+0.6**
	0.7nm,0.7s,baz=326,slow=6.6,SNR=7.7						
ASAR	**Alice Springs**	**68.31**	**134**	P	**P**	**02 46 57.6**	**+1.2**
	1.3nm,0.8s,baz=322,slow=6.5,SNR=12						
ILAR	**Eielson Array**	**78.08**	**21**	P	**P**	**02 47 53.0**	**-0.5**
	0.5nm,0.9s,baz=309,slow=3.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**80.28**	**280**	P	**P**	**02 48 05.5**	**-0.9**
	0.8nm,0.8s,baz=52,slow=4.3,SNR=3.5						
YKA	**Yellowknife Ar**	**87.78**	**10**	P	**P**	**02 48 43.6**	**-0.1**
	0.3nm,0.9s,baz=338,slow=4.6,SNR=2.2						

*IDC **30** 02:46:25.0±1.6, 28°.00N×85°.25E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.6/41, mbtmp3.8/9, ML4.2/2, Error ellipse: s-maj=67.0km s-min=18.1km az=65.0*
*DMN **30** 02:46:26.5±0.1, 28°.05N×85°.34E, h10km, Ml4.8/3, Error ellipse: s-maj=3.2km s-min=1.5km az=18.0*
ISC 30 02:46:27.7±0.7, 28°.00N±0°.07×85°.34E±0°.05, h18km, n18, σ0s96/20, mb3.8/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKN	**Kakani**	**0.22**	**194**	*e*Pg	**Pg**	**02 46 31.9**	**-1.2**
PKIN	**Phulchoki**	**0.43**	**173**	*e*Pg	**Pg**	**02 46 35.9**	**-0.7**
PKI	**Pulchoki**	**0.43**	**172**	*e*Pg	**Pg**	**02 46 36.0**	**-0.7**
DMN	**Daman**	**0.44**	**208**	*e*Pg	**Pg**	**02 46 36.2**	**-0.6**
GUN	**Gumba**	**0.48**	**101**	*e*Pg	**Pg**	**02 46 36.6**	**-1.0**
GKN	**Gorkha**	**0.62**	**270**	*e*Pg	**Pb**	**02 46 38.6**	**-1.5**
DANN	**Dangsing**	**1.44**	**284**	*e*Sg	**Sb**	**02 47 12.0**	**-0.2**
	1μm,0.2s						
KOLN	**Koldanda**	**1.56**	**262**	*e*Pg	**Pb**	**02 46 56.5**	**+0.4**
KOLN				*e*Sg	**Sb**	**02 47 16.4**	**+0.8**
	2μm,0.2s						
PYUN	**Piuthan**	**2.08**	**273**	*e*Pg	**Pb**	**02 47 04.2**	**-0.8**
PYUN				*e*Sg	**Sb**	**02 47 31.4**	**+0.8**
	2μm,0.4s						
CMAR	**Chiang Mai Arr**	**15.69**	**124**	Pn	**Pn**	**02 50 07.5**	**-0.4**
	0.5nm,0.3s,baz=299,slow=11,SNR=1.5						
MKAR	**Makanchi Array**	**18.91**	**354**	P	**Pn**	**02 50 47.1**	**-0.8**
	0.4nm,0.3s,baz=173,slow=12,SNR=31						
KURBB	**Kurchatov Arra**	**23.18**	**349**	P	**P**	**02 51 33.0**	**-0.1**
	0.5nm,0.4s,baz=165,slow=10,SNR=5.8						
SONM	**Songino Array**	**25.70**	**34**	P	**P**	**02 51 57.5**	**+0.7**
	0.6nm,0.4s,baz=218,slow=9.1,SNR=3.0						
ZALV	**Zalesovo Beam**	**25.92**	**359**	P	**P**	**02 51 58.0**	**-0.6**
	2.4nm,0.5s,baz=182,slow=7.9,SNR=8.5						
ARCES	**ARCESS Array B**	**53.59**	**338**	P	**P**	**02 55 46.8**	**-0.5**
	0.6nm,0.5s,baz=99,slow=7.5,SNR=5.6						
WRA	**Warramunga Arr**	**67.21**	**130**	P	**P**	**02 57 21.6**	**+0.6**
	0.9nm,0.5s,baz=322,slow=6.5,SNR=16						
ASAR	**Alice Springs**	**69.51**	**133**	P	**P**	**02 57 36.0**	**+0.6**
	0.7nm,0.6s,baz=313,slow=6.2,SNR=8.7						
YKA	**Yellowknife Ar**	**88.41**	**9**	P	**P**	**02 59 20.6**	**+2.3**
	0.2nm,0.7s,baz=337,slow=4.7,SNR=3.7						

*INET **30** 02:56:25.5, 12°.52N×88°.21W, h29km, MW3.0*
*SNET **30** 02:56:26.4±0.8, 12°.63N×88°.24W, h30km±2km, ML3.8*
*UCR **30** 02:56:26.4±0.9, 12°.63N×88°.23W, h31km±2km, ML3.8*
ISC 30 02:56:25.2±2.8, 12°.6N±0°.1×88°.22W±0°.04, h29km±12km, n50, σ0s52/86, 2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.69**	**358**	‖*e*P	**Pb**	**02 56 39.1**	**+0.3**
JUCU				*e*S	**Sn**	**02 56 48.7**	**-0.2**
JUCU				IAML		02 56 51.2	
	comp=Z,7μm,0.3s						
JUCU	**Jucuarįn**	**0.69**	**358**	‖*e*P	**Pb**	**02 56 39.1**	**+0.3**
JUCU				*e*S	**Sn**	**02 56 48.7**	**-0.2**
JUCU				IAML		02 56 51.2	
	comp=Z,7μm,0.3s						
CNCH	**Conchagua**	**0.81**	**28**	*e*P	**Pn**	**02 56 40.7**	**-0.1**
CNCH				*e*S	**Sn**	**02 56 51.9**	**+0.1**
CNCH	**Conchagua**	**0.81**	**28**	*e*P	**Pn**	**02 56 40.7**	**-0.1**
CNCH				*e*S	**Sn**	**02 56 51.9**	**+0.1**
LCND	**La Caada**	**0.81**	**23**	*e*P	**Pn**	**02 56 40.6**	**-0.2**
LCND				*e*S	**Sn**	**02 56 51.5**	**-0.3**
LCND				IAML		02 56 55.0	
	comp=Z,3μm,0.2s						
LCND	**La Caada**	**0.81**	**23**	*e*P	**Pn**	**02 56 40.5**	**-0.2**
LCND				*e*P	**Pn**	**02 56 40.6**	**-0.2**
LCND				*e*S	**Sb**	**02 56 51.1**	**-0.3**
LCND				*e*S	**Sn**	**02 56 51.5**	**-0.3**
LCND				IAML		02 56 55.0	
	comp=Z,3μm,0.2s						
LCY	**Lacayo**	**0.86**	**355**	*e*P	**Pn**	**02 56 41.7**	**+0.2**
LCY				*e*S	**Sn**	**02 56 52.8**	**-0.4**
LCY	**Lacayo**	**0.86**	**355**	*e*P	**Pn**	**02 56 41.7**	**+0.2**
LCY				*e*S	**Sn**	**02 56 52.8**	**-0.4**
VSM	**San Miguel**	**0.86**	**357**	*e*P	**Pn**	**02 56 41.7**	**0.0**
VSM	**San Miguel**	**0.86**	**357**	*e*P	**Pn**	**02 56 41.7**	**0.0**
RANC	**El Ranchito**	**0.87**	**356**	*e*P	**Pn**	**02 56 41.9**	**+0.2**
RANC				*e*S	**Sn**	**02 56 54.2**	**+0.7**
RANC	**El Ranchito**	**0.87**	**356**	*e*P	**Pn**	**02 56 41.9**	**+0.2**
RANC				*e*S	**Sn**	**02 56 54.2**	**+0.7**
PACA	**Pacayal**	**0.91**	**354**	*e*P	**Pn**	**02 56 42.5**	**+0.3**
PACA	**Pacayal**	**0.91**	**354**	*e*P	**Pn**	**02 56 42.5**	**+0.3**
TECA	**Tecapa**	**0.97**	**344**	*e*P	**Pn**	**02 56 43.2**	**+0.1**
TECA				*e*S	**Sb**	**02 56 57.1**	**+1.0**
TECA	**Tecapa**	**0.97**	**344**	*e*P	**Pn**	**02 56 43.2**	**+0.1**
TECA				*e*S	**Sb**	**02 56 57.1**	**+1.0**
COEB	**Comit de Eme**	**0.98**	**342**	*e*P	**Pn**	**02 56 43.2**	**+0.1**
COEB				*e*S	**Sb**	**02 56 56.4**	**+0.1**
COEB				IAML		02 57 01.4	
	comp=Z,2μm,0.4s						
COEB	**Comit de Eme**	**0.98**	**342**	*e*P	**Pn**	**02 56 43.2**	**+0.1**
COEB				*e*S	**Sb**	**02 56 56.4**	**+0.1**
COEB				IAML		02 57 01.4	
	comp=Z,2μm,0.4s						
FAGO	**Alcalda de S**	**1.13**	**6**	*e*P	**Pn**	**02 56 45.3**	**+0.1**
FAGO				*e*S	**Sb**	**02 57 00.5**	**-0.1**
FAGO	**Alcalda de S**	**1.13**	**6**	*e*P	**Pn**	**02 56 45.3**	**+0.1**
FAGO				*e*S	**Sb**	**02 57 00.5**	**-0.1**
UESV	**Universidad de**	**1.20**	**333**	*e*P	**Pn**	**02 56 46.4**	**+0.2**
UESV				*e*S	**Sn**	**02 57 01.4**	**-0.1**
UESV	**Universidad de**	**1.20**	**333**	*e*P	**Pn**	**02 56 46.4**	**+0.2**
UESV				*e*S	**Sn**	**02 57 01.4**	**-0.1**
COEG	**Centro de Oper**	**1.23**	**329**	*e*P	**Pn**	**02 56 46.8**	**+0.2**
COEG				*e*S	**Sb**	**02 57 02.8**	**-0.7**
COEG	**Centro de Oper**	**1.23**	**329**	*e*P	**Pn**	**02 56 46.8**	**+0.2**
COEG				*e*S	**Sb**	**02 57 02.8**	**-0.7**
LFRS	**El Faro**	**1.34**	**322**	*e*P	**Pn**	**02 56 48.3**	**+0.3**
LFRS				*e*S	**Sb**	**02 57 05.7**	**-0.8**
LFRS	**El Faro**	**1.34**	**322**	*e*P	**Pn**	**02 56 48.3**	**+0.3**
LFRS				*e*S	**Sb**	**02 57 05.7**	**-0.8**
PAVA	**Las Pavas**	**1.34**	**329**	*e*P	**Pn**	**02 56 48.8**	**+0.7**
PAVA				*e*S	**Sn**	**02 57 05.3**	**+0.2**
PAVA	**Las Pavas**	**1.34**	**329**	*e*P	**Pn**	**02 56 48.8**	**+0.7**
PAVA				*e*S	**Sn**	**02 57 05.3**	**+0.2**
LALI	**Alcalda de L**	**1.41**	**311**	*e*P	**Pn**	**02 56 49.0**	**0.0**
LALI				*e*S	**Sn**	**02 57 06.4**	**-0.2**
LALI	**Alcalda de L**	**1.41**	**311**	*e*P	**Pn**	**02 56 49.0**	**0.0**
LALI				*e*S	**Sn**	**02 57 06.4**	**-0.2**
LBRS	**Las Brisas**	**1.42**	**326**	*e*P	**Pn**	**02 56 49.8**	**+0.6**
LBRS				*e*S	**Sn**	**02 57 06.8**	**-0.2**
LBRS	**Las Brisas**	**1.42**	**326**	*e*P	**Pn**	**02 56 49.8**	**+0.6**
LBRS				*e*S	**Sn**	**02 57 06.8**	**-0.2**
LFU	**La Fuente**	**1.47**	**324**	*e*P	**Pn**	**02 56 50.4**	**+0.5**
LFU				*e*S	**Sb**	**02 57 08.9**	**-1.4**
LFU	**La Fuente**	**1.47**	**324**	*e*P	**Pn**	**02 56 50.4**	**+0.5**
LFU				*e*S	**Sb**	**02 57 08.9**	**-1.4**
SNET	**Serv Nac Est T**	**1.49**	**319**	*e*P	**Pn**	**02 56 50.3**	**+0.2**
SNET				*e*S	**Sn**	**02 57 08.9**	**+0.2**
SNET	**Serv Nac Est T**	**1.49**	**319**	*e*P	**Pn**	**02 56 50.3**	**+0.2**
SNET				*e*S	**Sn**	**02 57 08.9**	**+0.2**
BOQS	**Boqueron**	**1.56**	**319**	*e*P	**Pn**	**02 56 51.9**	**+0.7**
BOQS				*e*S	**Sb**	**02 57 11.7**	**-1.3**
BOQS	**Boqueron**	**1.56**	**319**	*e*P	**Pn**	**02 56 51.9**	**+0.7**
BOQS				*e*S	**Sb**	**02 57 11.7**	**-1.3**
LLGN	**La Laguna**	**1.74**	**336**	*e*P	**Pn**	**02 56 54.0**	**+0.4**
LLGN	**La Laguna**	**1.74**	**336**	*e*P	**Pn**	**02 56 54.0**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.75**	**32**	*e*P	**Pn**	**02 56 53.9**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.75**	**32**	*e*P	**Pn**	**02 56 53.9**	**+0.1**
CEVE	**Cerro Verde**	**1.86**	**313**	*e*P	**Pn**	**02 56 56.4**	**+1.0**
CEVE				IAML		02 57 24.2	
	comp=Z,812nm,0.4s						
CEVE	**Cerro Verde**	**1.86**	**313**	*e*P	**Pn**	**02 56 56.4**	**+1.0**
CEVE				IAML		02 57 24.2	
	comp=Z,812nm,0.4s						
SBLS	**San Blas**	**1.86**	**313**	*e*P	**Pn**	**02 56 56.3**	**+0.9**
SBLS	**San Blas**	**1.86**	**313**	*e*P	**Pn**	**02 56 56.3**	**+0.9**
RTR	**El Retiro**	**1.92**	**314**	*e*P	**Pn**	**02 56 56.7**	**+0.5**
RTR	**El Retiro**	**1.92**	**314**	*e*P	**Pn**	**02 56 56.7**	**+0.5**
MTO3	**Montecristo**	**2.14**	**329**	*e*P	**Pn**	**02 56 59.1**	**-0.1**
MTO3	**Montecristo**	**2.14**	**329**	*e*P	**Pn**	**02 56 59.1**	**-0.1**

IDC 30 03:22:38.3±23.0, 28°.46N×85°.78E, h0km, mb3.5/2, mb1 3.4/3, mb1mx3.2/30, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=385.5km s-min=83.9km az=26.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.50**	**352**	P	P	03 26 55.7	-0.3
	0.2nm,0.3s,baz=173,slow=11,SNR=5.8						
SONM	**Songino Array**	**25.10**	**34**	P	P	03 28 04.7	0.0
	0.2nm,0.3s,baz=220,slow=8.5,SNR=1.8						
ZALV	**Zalesovo Beam**	**25.47**	**359**	P	P	03 28 08.0	+0.1
	0.5nm,0.3s,baz=182,slow=6.8,SNR=2.0						

*IDC **30** 03:25:21.2±1.8, 51°.43N×151°.06E, h518km±30km, mb2.6/4, mb1 2.9/6, mb1mx2.5/38, mbtmp3.6/6, Error ellipse: s-maj=42.6km s-min=22.6km az=136.0*
*KRSC **30** 03:25:25.3±2.6, 51°.79N×151°.53E, h486km±33km, ML4.1*
ISC 30 03:25:20.6±1.2, 51°.5N±0°.2×151°.2E±0°.1, h500km, n21, σ2s75/25, mb3.1/4, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**3.95**	**66**	P	**P**	**03 26 40.1**	**+1.7**
KDTR	**Khodutka, Kamc**	**4.30**	**83**	*e*P	**P**	**03 26 43.2**	**+2.0**
KDTR				S	**S**	**03 27 44.3**	**-2.9**
PETK	**Petropavlovsk-**	**4.32**	**65**	P	**P**	**03 26 43.9**	**+2.5**
	1.8nm,0.3s,baz=233,slow=4.1,SNR=16						
GRL	**Gorelyy**	**4.38**	**73**	*e*P	**P**	**03 26 45.7**	**+3.6**
MTVR	**Mutnovka**	**4.44**	**74**	P	**P**	**03 26 45.5**	**+2.9**
KRMR	**Karymshinskiy**	**4.48**	**69**	P	**P**	**03 26 45.1**	**+2.3**
RUS	**Russkaya**	**4.63**	**75**	P	**P**	**03 26 46.0**	**+2.0**
RUS				S	**S**	**03 27 52.5**	**+0.1**
GNL	**Ganaly**	**4.68**	**59**	P	**P**	**03 26 47.5**	**+2.9**
DALK	**Dalny**	**4.90**	**68**	*e*P	**P**	**03 26 49.1**	**+2.7**
KOK	**Koryaka**	**4.91**	**65**	P	**P**	**03 26 49.4**	**+2.7**
AVH	**Avacha**	**4.96**	**66**	*e*P	**P**	**03 26 50.9**	**+3.8**
UGLR	**Uglovaya**	**4.99**	**66**	*e*P	**P**	**03 26 50.5**	**+3.1**
SMAR	**Somma**	**5.00**	**66**	P	**P**	**03 26 50.0**	**+2.4**
SPN	**Mys Shipunski**	**5.66**	**70**	*e*P	**P**	**03 26 53.8**	**+0.4**
SPN				*e*S	**S**	**03 28 06.4**	**-3.1**
MKZ	**Mys Kozlova**	**7.07**	**60**	S	**S**	**03 28 29.7**	**-5.0**
BKI	**Bering**	**9.60**	**61**	*e*P	**P**	**03 27 38.1**	**+4.7**
BKI				*e*S	**S**	**03 29 21.6**	**-1.1**
MJAR	**Matsushiro Arr**	**17.56**	**217**	P	**P**	**03 28 56.1**	**-0.8**
	0.1nm,0.3s,baz=17,slow=12,SNR=5.5						
ILAR	**Eielson Array**	**33.79**	**43**	P	**P**	**03 31 20.3**	**+0.6**
	0.4nm,0.8s,baz=270,slow=9.0,SNR=2.5						
YKA	**Yellowknife Ar**	**47.96**	**39**	P	**P**	**03 33 11.9**	**-0.6**
	0.3nm,0.7s,baz=306,slow=7.2,SNR=6.0						
ARCES	**ARCESS Array B**	**52.99**	**339**	P	**P**	**03 33 48.7**	**-0.7**
	1.0nm,0.8s,baz=34,slow=6.8,SNR=4.2						
FINES	**FINESS Array B**	**59.26**	**333**	P	**P**	**03 34 31.6**	**-1.1**
	0.5nm,0.4s,baz=46,slow=8.2,SNR=8.5						

*IDC **30** 03:41:43.9±2.0, 8°.02S×125°.35E, h0km, mb3.8/1, mb1 3.9/3, mb1mx3.6/23, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=209.2km s-min=29.4km az=59.0*
*NEIC **30** 03:41:49.8±1.7, 8°.9S±0°.1×124°.0E±0°.1, h83km±11km, mb4.5/3, Error ellipse: s-maj=21.4km s-min=10.1km az=215.0*
ISC 30 03:41:51.3±0.9, 9°.02S±0°.10×124°.00E±0°.10, h100km, n16, σ2s01/21, mb4.4/3, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.78**	**160**	Pn	**Pn**	**03 42 08.0**	**-1.6**
SOEI					**Sn**	**03 42 21.4**	**-1.9**
MMRI	**Maumere**	**1.78**	**282**	Pn	**Pn**	**03 42 17.5**	**-3.6**
MTN	**Manton Dam**	**7.97**	**119**	Pn	**Pn**	**03 43 43.9**	**-0.6**
MTN				Sn	**Sn**	**03 45 10.2**	**-2.7**
KNRA	**Kununurra**	**8.09**	**145**	Pn	**Pn**	**03 43 45.1**	**-1.0**
KNRA				Sn	**Sn**	**03 45 18.2**	**+2.4**
FITZ	**Fitzroy Crossi**	**9.16**	**170**	Pn	**Pn**	**03 44 01.1**	**+0.5**
WB0	**Warramunga Arr**	**14.67**	**138**	Pn	**Pn**	**03 45 13.7**	**-0.3**
WRA	**Warramunga Arr**	**14.76**	**138**	Pn	**Pn**	**03 45 14.2**	**-0.9**
	0.5nm,0.3s,baz=321,slow=13,SNR=27						
WRA				Sn	**Sn**	**03 47 56.9**	**-1.1**
	0.3nm,0.3s,baz=311,slow=23,SNR=4.5						
WRA	**Warramunga Arr**	**14.76**	**138**	Pn	**Pn**	**03 45 16.1**	**+1.0**
WB2	**Warramunga Arr**	**14.77**	**138**	Pn	**Pn**	**03 45 15.1**	**-0.1**
WR0	**Warramunga Arr**	**14.90**	**138**	Pn	**Pn**	**03 45 16.9**	**0.0**
WR0				Sn	**Sn**	**03 47 58.7**	**-2.7**
ASAR	**Alice Springs**	**17.38**	**148**	P	**Pn**	**03 45 50.5**	**+2.9**
	0.2nm,0.3s,baz=319,slow=12,SNR=13						
ASAR	**Alice Springs**	**17.38**	**148**	P	**Pn**	**03 45 49.4**	**+1.8**
COEN	**Coen**	**19.42**	**106**	Pn	**Pn**	**03 46 11.7**	**-0.3**
COEN				IAmb	IAmb	03 46 60.0	
	comp=Z,27nm,1.8s						
BBOO	**Buckleboo**	**26.17**	**156**	P	**P**	**03 47 17.7**	**+1.2**
BBOO				IAmb	IAmb	03 47 45.4	
	comp=Z,18nm,1.4s						
ERM	**

SOHO SOHO 4.28 139 *e*Pn Pn 04 19 29.5 +1.5
CHMN Cheshme madani 4.37 55 Pn Pn 04 19 31.8 +2.2
CHMN Cheshme madani 4.37 55 *e*Pn Pn 04 19 32.1 +2.5
CHMN *e* 04 21 29.0
comp=Z,3µm,7.1s
IRAM Ramesheh 4.50 348 Pn Pn 04 19 33.5 +2.2
IRAM Ramesheh 4.50 348 *e*Pn Pn 04 19 32.8 +1.5
ISAD Sadrabad 4.51 3 *e*Pn Pn 04 19 32.9 +1.4
IBAF Bafgh 4.58 23 *e*Pn Pn 04 19 33.7 +1.4
KBAM BAM 4.75 67 *e*Pn Pn 04 19 34.7 0.0
ARQ Araqi 4.91 145 P Pn 04 19 37.4 +0.7
SNR=12
ARQ S Sn 04 20 33.7 +0.5
ICHK Chekchek 4.91 10 *e*Pn Pn 04 19 38.8 +1.8
UMZA Um Al Zommool 4.91 161 *e*Pn Pn 04 19 39.5 +2.7
UMZA Um Al Zommool 4.91 161 P Pn 04 19 40.1 +3.3
UMZA S Sn 04 20 36.0 +2.7
IGAR Gharneh 5.14 347 *e*Pn Pn 04 19 41.1 +1.0
NASN Na'in 5.42 354 *e*Pn Pn 04 19 43.3 -0.7
UMR Umm Al-Rimmam 5.48 294 *e*P 04 19 46.1
IZEF Zefreh 5.57 350 *e*Pn Pn 04 19 46.5 +0.4
BSY Bisya 5.75 143 P Pn 04 19 50.4 +2.1
SNR=15
BSY S Sn 04 20 53.6 -0.4
ANAR Anarak 5.79 2 *e*Pn Pn 04 19 49.8 +0.9
MIB Mutribah 5.88 296 *e*P 04 19 51.8
SMDO Samad 6.00 135 P Pn 04 19 53.6 +1.7
SNR=7.9
SMDO S Sn 04 21 02.0 +1.7
RST Umm Al-Ruwaisa 6.05 292 *e*P 04 19 54.0
IKLH Kolahrood 6.12 345 *e*Pn Pn 04 19 54.8 +1.1
WSAR Wadi Sarin 6.26 130 Pn Pn 04 19 55.3 0.0
comp=Z,1.8nm,0.3s,baz=339,slow=9.2,SNR=7.7
WSAR Sn Sn 04 21 05.1 -1.4
comp=Z,0.6nm,0.3s,baz=135,slow=20,SNR=1.2
WSAR Wadi Sarin 6.26 130 P Pn 04 19 58.1 +2.8
SNR=8.8
WSAR S Sn 04 21 06.0 -0.5
TPRV Parvadeh(Tabas 6.28 26 *e*Pn Pn 04 19 56.3 +0.6
JMDO Jabal Madar 6.55 139 P Pn 04 20 01.9 +2.6
JMDO S Sn 04 21 13.4 -0.3
KRSH Karshahi 6.65 351 *e*Pn Pn 04 20 01.1 +0.2
TKDS Koohdasht(Taba 6.97 26 *e*Pn Pn 04 20 05.8 +0.7
ISFB Sefidab 7.02 352 *e*Pn Pn 04 20 06.1 +0.4
TNSJ Nastanj 7.10 22 *e*Pn Pn 04 20 07.6 +0.7
MHTO MHTO 7.60 146 P Pn 04 20 14.8 +1.2
IVRN Varamin 7.72 349 *e*Pn Pn 04 20 15.6 +0.2
IKFM Kafar-mosalman 7.79 323 *e*Pn Pn 04 20 19.3 +3.1
IDOB Doab 7.82 326 *e*Pn Pn 04 20 18.2 +1.3
SRVN Saravan 7.96 88 *e*Pn Pn 04 20 20.2 +1.4
IANJ Anjilo 8.06 3 *e*Pn Pn 04 20 21.3 +1.0
RAYN Ar Rayn 8.14 244 Pn Pn 04 20 21.8 +0.6
RAYN Sn Sn 04 21 49.2 -3.7
ISHM Shahmirzad 8.39 359 *e*Pn Pn 04 20 25.4 +0.6
IRAZ Razeghan 8.53 340 *e*Pn Pn 04 20 27.8 +1.1
DOK Doka 8.75 176 P Pn 04 20 30.2 +0.6
SNR=8.3
QABG Abgarm-Qazvin 8.92 339 *e*Pn Pn 04 20 31.4 -0.6
IGHG Ghaleghazi 9.09 321 *e*Pn Pn 04 20 36.5 +2.1
QALM Alamut, Qazvin 9.32 346 *e*Pn Pn 04 20 38.2 +0.7
WHFO Wadi Hawf 9.43 178 P Pn 04 20 39.2 +0.3
SNR=19
IDHR Dehrash 9.47 322 *e*Pn Pn 04 20 38.7 -0.8
SBZV Sabzevar 9.64 21 *e*Pn Pn 04 20 42.9 +1.0
GEYT Alibeck 11.22 19 Pn Pn 04 21 05.6 +2.3
comp=Z,0.4nm,0.3s,baz=215,slow=17,SNR=2.1
GEYT LR LR 04 26 12.3
comp=Z,212nm,19.4s,baz=5.0,slow=42
GNI Garni 14.63 333 Pn P 04 21 54.5 -1.8
comp=Z,1.3nm,0.3s,baz=206,slow=5.8,SNR=4.4
GNI Garni 14.63 333 Pn Pn 04 21 48.7 -1.3
EIL Elat 16.41 282 Pn P 04 22 15.2 -0.7
comp=Z,0.3nm,0.3s,baz=91,slow=4.8,SNR=3.8
MMAI Mount Meron Ar 16.56 294 Pn Pn 04 22 16.4 +1.2
comp=Z,1.2nm,0.3s,baz=116,slow=13,SNR=2.6
KBZ Khabaz 16.39 335 P P 04 22 39.3 +1.5
comp=Z,0.1nm,0.3s,baz=122,slow=5.7,SNR=2.5
BRTR Keskin Array B 20.53 312 P P 04 23 02.2 +0.9
comp=Z,1.9nm,0.6s,baz=130,slow=12,SNR=6.9
KKAR Karatay Array 20.92 37 P P 04 23 04.8 -0.6
ARSB Arslanbob 21.23 44 P P 04 23 06.5 -2.4
ARSB IAmb IAmb 04 23 09.8
comp=Z,9.9nm,0.7s
ELL Elmali 21.97 301 P P 04 23 16.8 -0.1
ABKAR Akbulak array 22.40 11 P P 04 23 20.4 -0.9
ABKAR IAmb IAmb 04 23 35.6
comp=Z,3.5nm,0.8s
ABKAR Akbulak array 22.40 11 P P 04 23 21.0 -0.2
AAK Ala-Archa 22.91 43 P P 04 23 27.8 +1.0
comp=Z,1.0nm,0.5s,baz=269,slow=6.7,SNR=4.6
AAK LR LR 04 33 44.1
comp=Z,115nm,21.1s,baz=247,slow=40
AAK Ala-Archa 22.91 43 P P 04 23 25.9 -1.0
AKTO Aktyubinsk 23.28 7 P P 04 23 32.2 +1.8
comp=Z,2.0nm,0.6s,baz=194,slow=8.2,SNR=7.0
AKTO LR LR 04 34 35.4
comp=Z,108nm,18.9s,baz=189,slow=42
BOOM Boomskoye usch 23.71 45 P P 04 23 34.3 -0.7
BOOM IAmb IAmb 04 23 36.7
comp=Z,4.3nm,1.1s
KDJ Kajisay 24.32 47 P P 04 23 40.0 -0.7
BELG Belogornoye 25.35 352 P P 04 23 51.0 +1.3
comp=Z,12nm,0.6s,baz=294,slow=4.0,SNR=6.3
IDI Anoyia 25.56 295 P P 04 23 52.8 +0.9
comp=Z,16nm,0.9s,baz=82,slow=7.9,SNR=3.1
MLR Muntele Rosu 28.35 317 LR LR 04 37 53.2
comp=Z,78nm,19.8s,baz=192,slow=41
BVAR Borovoye Array 28.54 22 P P 04 24 18.6 +0.2
comp=Z,0.8nm,0.6s,baz=153,slow=10.0,SNR=7.0
ARU Arti 29.25 6 LR LR 04 37 53.3
comp=Z,83nm,19.5s,baz=246,slow=40
MAKZ Makanchi 29.64 42 P P 04 24 27.9 -0.4
MAKZ IAmb IAmb 04 24 29.2
comp=Z,2.1nm,0.8s
AKASG Malin Array Be 29.68 328 P P 04 24 27.5 -0.9
comp=Z,0.6nm,0.4s,baz=139,slow=8.0,SNR=5.1
AKBB Malin Array Si 29.68 328 P P 04 24 27.6 -0.8
AKBB IAmb IAmb 04 24 36.1
comp=Z,2.7nm,0.8s
MK31 Makanchi Array 29.82 42 P P 04 24 29.1 -0.8
MKAR Makanchi Array 29.82 42 P P 04 24 30.0 +0.1
comp=Z,0.4nm,0.5s,baz=238,slow=9.7,SNR=4.6
KURBB Kurchatov Arra 30.04 33 P P 04 24 32.0 +0.3
comp=Z,0.7nm,0.6s,baz=233,slow=8.5,SNR=10
KURK Kurchatov 30.14 33 P P 04 24 32.0 -0.6
KIRV Kirov 31.31 356 LR LR 04 39 56.4
comp=Z,60nm,20.1s,baz=204,slow=41
LANS Liptovska Anna 33.97 319 *e*P P 04 25 07.6 +1.3
ZAA0 Zalesovo Array 35.13 32 P P 04 25 16.0 -0.2
ZALV Zalesovo Beam 35.13 32 P P 04 25 16.0 -0.2
comp=Z,2.8nm,0.5s,baz=235,slow=8.9,SNR=12
ZALV LR LR 04 41 12.3
comp=Z,58nm,18.6s,baz=44,slow=39
ZALV Zalesovo Beam 35.13 32 P P 04 25 15.8 -0.5
FINES FINESS Array B 38.67 339 P P 04 25 45.5 -0.7
comp=Z,1.6nm,0.5s,baz=144,slow=9.7,SNR=15
FINES LR LR 04 44 14.9
comp=Z,47nm,19.9s,baz=169,slow=40
FINES FINESS Array B 38.67 339 P P 04 25 45.7 -0.5
GTA Gaotai 40.13 60 P P 04 26 00.0 +1.1
GTA pP pP 04 26 04.0 -0.1
GTA sP sP 04 26 07.3 +1.2
GTA pmax pmax
comp=Z,10.0nm,1.0s
NOA NORSAR Array B 43.93 332 LR LR 04 47 51.1
comp=Z,28nm,18.1s,baz=280,slow=40
TLY Talaya 44.57 43 LR LR 04 46 46.6
comp=Z,58nm,18.4s,baz=242,slow=38
ARCES ARCESS Array B 45.20 347 P P 04 26 39.4 -0.1
comp=Z,1.3nm,0.8s,baz=151,slow=8.3,SNR=5.2
ARCES ARCESS Array B 45.20 347 P P 04 26 39.6 +0.1
NRIK Noril'sk 46.44 16 LR LR 04 48 47.4
comp=Z,66nm,18.2s,baz=171,slow=39
TORD Torodi Ar. Bea 50.23 264 P P 04 27 18.9 -0.3
comp=Z,1.6nm,0.5s,baz=61,slow=8.7,SNR=14
TORD Torodi Ar. Bea 50.23 264 P P 04 27 19.0 -0.2
TORD IAmb IAmb 04 27 19.9
comp=Z,1.7nm,0.8s
SPITS Spitsbergen Ar 53.55 351 P P 04 27 43.4 +0.3
comp=Z,6.1nm,1.0s,baz=167,slow=6.8,SNR=1.8
DBIC Dimbokro 58.87 261 P P 04 28 21.7 -0.3
comp=Z,4.9nm,0.8s,baz=44,slow=5.8,SNR=6.7
KSRS Korea Array 62.20 60 P P 04 28 42.5 -1.9
comp=Z,0.9nm,0.4s,baz=283,slow=7.1,SNR=2.5
YKA Yellowknife Ar 89.92 354 P P 04 31 21.8 +0.2
comp=Z,0.6nm,0.8s,baz=9.0,slow=4.8,SNR=9.1
WRA Warramunga Arr 91.31 112 P P 04 31 30.2 +1.3
comp=Z,0.6nm,0.9s,baz=315,slow=4.1,SNR=2.3

*MAN **30** 04:18:31.0, 13.16N×120.03E, h3km, MS3.8*
*IDC **30** 04:18:31.5±1.0, 13.06N×120.06E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/57, mbtmp3.7/6, MS3.1/6, Ms1 3.2/6, ms1mx2.8/47, Error ellipse: s-maj=20.8km s-min=14.1km az=112.0*
ISC 30 04:18:32.3±1.7, 13.17N±0.05×120.12E±0.06, h8km±12km, n21, σ1°59/22, mb3.6/6, MS3.2/5, 3C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.58**	**12**	*e*P	**Pg**	**04 18 42.8**	**-0.7**
LUBP				*e*S	**Sn**	**04 18 53.4**	**-3.2**
PGP	**Puerto Galera**	**0.88**	**67**	*e*P	**Pb**	**04 18 49.5**	**-0.3**
PGP				*i* S	**Sn**	**04 19 01.6**	**-2.4**
BUSP	**Coron**	**1.16**	**176**	*e*P	**Pn**	**04 18 54.2**	**-0.6**
BUSP				*e*S	**Sb**	**04 19 10.9**	**+1.1**
SJMP	**San Jose**	**1.20**	**126**	*e*P	**Pn**	**04 18 54.5**	**-0.9**
SJMP				*e*S	**Sb**	**04 19 10.3**	**-0.6**
TGY	**Tagaytay City**	**1.22**	**40**	Pg	**Pg**	**04 18 57.0**	**+1.2**
	435nm,0.3s,baz=225,slow=4.2,SNR=37						
TGY				Lg	Lg	04 19 14.8	
	392nm,0.3s,baz=315,slow=23,SNR=11						
TGY	**Tagaytay City**	**1.22**	**40**	*e*P	**Pg**	**04 18 57.3**	**+1.5**
TGY				*i* S	**Sn**	**04 19 16.3**	**+3.7**
MACP	**Maragondon, Ca**	**1.24**	**28**	*e*P	**Pb**	**04 18 54.8**	**-1.1**
MACP				*e*S	**Sn**	**04 19 13.2**	**+0.4**
LQP	**Lukban**	**1.67**	**55**	*e*P	**Pb**	**04 19 02.8**	**-0.6**
LQP				*i* S	Sg	04 19 36.3	+10
ENPP	**El Nido**	**2.06**	**199**	*e*P	**Pn**	**04 19 06.1**	**-1.2**
ENPP				*e*S	Sn	04 19 24.7	-8.5
CUYO	**Cuyo Island**	**2.46**	**159**	*e*P	**Pn**	**04 19 11.8**	**-1.0**
KAPI	**Kappang**	**18.06**	**181**	LR	LR	04 30 16.7	
	comp=Z,47nm,18.0s,baz=46,slow=39						
CMAR	**Chiang Mai Arr**	**21.04**	**287**	P	**P**	**04 23 18.7**	**+1.8**
	1.0nm,0.3s,baz=96,slow=9.2,SNR=2.2						
CMAR				LR	LR	04 32 16.0	
	comp=Z,16nm,18.9s,baz=305,slow=39						
PSI	**Prapat**	**23.36**	**246**	LR	LR	04 32 47.1	
	comp=Z,82nm,18.3s,baz=260,slow=37						
KSRS	**Korea Array**	**25.17**	**15**	LR	LR	04 35 19.1	
	comp=Z,27nm,19.4s,baz=225,slow=40						
WRA	**Warramunga Arr**	**35.75**	**157**	P	**P**	**04 25 31.3**	**-0.6**
	0.8nm,0.4s,baz=329,slow=10,SNR=20						
SONM	**Songino Array**	**36.41**	**344**	P	**P**	**04 25 38.1**	**+0.6**
	0.4nm,0.5s,baz=159,slow=12,SNR=2.2						
ASAR	**Alice Springs**	**39.01**	**160**	P	**P**	**04 25 59.4**	**-0.2**
	1.1nm,0.5s,baz=336,slow=6.6,SNR=14						
MKAR	**Makanchi Array**	**46.13**	**324**	P	**P**	**04 26 57.6**	**+0.3**
	0.2nm,0.4s,baz=116,slow=9.8,SNR=1.6						
KURBB	**Kurchatov Arra**	**50.32**	**327**	P	**P**	**04 27 30.0**	**+0.5**
	0.3nm,0.4s,baz=124,slow=8.6,SNR=5.1						
MA2	**Magadan**	**51.59**	**19**	LR	LR	04 52 34.4	
	comp=Z,21nm,18.6s,baz=152,slow=40						
BORG	**Borgarnes**	**97.03**	**344**	LR	LR	05 21 53.6	
	comp=Z,31nm,18.6s,baz=198,slow=39						

*JMA **30** 04:35:59.9±0.3, 41.70N×133.57E, h533km, M3.3*
*IDC **30** 04:36:01.1±0.8, 41.68N×133.08E, h487km±9km, mb2.7/7, mb1 3.0/11, mb1mx2.8/59, mbtmp3.8/11, Error ellipse: s-maj=18.8km s-min=14.8km az=96.0*
ISC 30 04:36:01.3±0.8, 41.69N±0.09×133.35E±0.08, h500km, n19, σ1°56/22, mb3.2/7, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USRK	**Ussuriysk Ar.**	**2.70**	**339**	P	**P**	**04 37 09.2**	**-0.9**
	baz=170,slow=6.0,SNR=52						
USRK				S	**S**	**04 38 03.1**	**-3.3**
	baz=171,slow=14,SNR=5.3						
JOSM	**Okushiri--Mats**	**4.59**	**83**	P	**P**	**04 37 24.3**	**-0.2**
JOT	**Ohata**	**5.78**	**91**	P	**P**	**04 37 35.3**	**-0.2**
KSRS	**Korea Array**	**5.96**	**226**	P	**P**	**04 37 37.0**	**-0.2**
	1.1nm,0.3s,baz=41,slow=9.8,SNR=30						
JRG	**Rokugo**	**6.00**	**110**	P	**P**	**04 37 36.9**	**-0.7**
JRG				S	**S**	**04 38 54.4**	**-2.0**
JWT	**Wachi**	**6.60**	**165**	P	**P**	**04 37 43.8**	**+0.2**
JMK	**Ichinoseki**	**6.61**	**112**	P	**P**	**04 37 42.9**	**-0.6**
JHS	**Saijyo**	**6.69**	**182**	P	**P**	**04 37 45.0**	**+0.5**
ASAJ	**Asahikawa**	**7.21**	**67**	P	**P**	**04 37 51.5**	**+2.0**
	1.1nm,0.3s,baz=193,slow=33,SNR=4.2						
JCH	**Churui**	**7.50**	**80**	P	**P**	**04 37 51.5**	**-0.9**
JCH				*e*S	**S**	**04 39 20.1**	**-3.4**
KLR	**Kul'dur**	**7.62**	**352**	P	**P**	**04 37 53.0**	**-0.5**
	6.0nm,0.3s,baz=170,slow=8.8,SNR=96						
JIE	**Ise**	**7.75**	**159**	P	**P**	**04 37 55.2**	**-0.1**
MKAR	**Makanchi Array**	**36.40**	**296**	P	**P**	**04 42 21.8**	**-0.8**
	0.5nm,0.6s,baz=94,slow=10.0,SNR=6.0						
KURBB	**Kurchatov Arra**	**38.22**	**307**	P	**P**	**04 42 36.5**	**-1.0**
	1.0nm,0.4s,baz=81,slow=8.6,SNR=10						
ILAR	**Eielson Array**	**49.02**	**34**	P	**P**	**04 44 03.2**	**+1.9**
	0.2nm,0.4s,baz=279,slow=7.9,SNR=2.0						
INK	**Inuvik**	**53.13**	**28**	P	**P**	**04 44 32.7**	**+1.6**
	0.5nm,0.5s,baz=344,slow=3.5,SNR=1.7						
WRA	**Warramunga Arr**	**61.33**	**179**	P	**P**	**04 45 27.7**	**-0.2**
	0.9nm,0.7s,baz=356,slow=7.3,SNR=10						
YKA	**Yellowknife Ar**	**62.84**	**29**	P	**P**	**04 45 39.0**	**+1.8**
	0.1nm,0.5s,baz=316,slow=5.4,SNR=2.9						
ASAR	**Alice Springs**	**65.03**	**179**	P	**P**	**04 45 52.8**	**+1.1**
	0.5nm,0.4s,baz=358,slow=7.2,SNR=6.5						

*NEIC **30** 04:40:58.9±1.6, 25.46S×179.80E±0.1, h497km±10km, mb4.3/19, Error ellipse: s-maj=18.1km s-min=5.6km az=105.0*
*NOU **30** 04:40:59.5, 25.56S×178.89E, h442km, mb4.2, South of Fiji Islands*
*IDC **30** 04:41:00.5±3.1, 25.29S×179.67E, h503km±29km, mb3.4/5, mb1 3.7/7, mb1mx3.4/30, mbtmp4.3/7, Error ellipse: s-maj=60.3km s-min=16.1km az=159.0*
ISC 30 04:40:59.0±0.6, 25.46S±0.09×179.80E±0.07, h493km, n38, σ0°93/38, mb4.2/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.29**	**152**	P	**P**	**04 42 19.9**	**+0.6**
MSVF	**Nonsavu**	**7.85**	**348**	P	**P**	**04 42 53.5**	**-0.4**
	2.9nm,0.3s,baz=115,slow=20,SNR=6.2						
MSVF	**Nonsavu**	**7.85**	**348**	P	**P**	**04 42 53.7**	**-0.2**
MSVF	**Nonsavu**	**7.85**	**348**	P	**P**	**04 42 53.3**	**-0.6**
NIUE	**Niue**	**11.44**	**58**	P	**P**	**04 43 29.5**	**-2.2**
NIUE				S	**S**	**04 45 39.3**	**+1.9**
NIUE	**Niue**	**11.44**	**58**	P	P	04 43 40.8	+9.2
DZM	**Mont Dzumac**	**12.68**	**283**	P	**P**	**04 43 45.9**	**+0.9**
	0.7nm,0.3s,baz=88,slow=15,SNR=5.6						
DZM	**Mont Dzumac**	**12.68**	**283**	P	**P**	**04 43 45.0**	**0.0**
DZM	**Mont Dzumac**	**12.68**	**283**	P	P	04 43 37.6	-7.4
URZ	**Urewera**	**12.97**	**189**	P	**P**	**04 43 45.7**	**-1.9**
QRZ	**Quartz Range**	**16.48**	**200**	P	**P**	**04 44 24.7**	**+0.1**
NNZ	**Nelson**	**16.60**	**197**	P	**P**	**04 44 24.7**	**-1.1**
KHZ	**Kahutara**	**17.69**	**195**	P	**P**	**04 44 36.5**	**-0.1**
FOZ	**Fox Glacier**	**19.79**	**202**	P	**P**	**04 44 55.9**	**0.0**
ARMA	**Armidale**	**25.34**	**252**	P	**P**	**04 45 48.1**	**+2.1**
ARMA				IAmb	IAmb	04 45 49.3	
	comp=Z,8.2nm,0.9s						
CTAO	**Charters Tower**	**31.33**	**273**	P	**P**	**04 46 38.9**	**+0.5**
CTAO				IAmb	IAmb	04 46 40.2	
	comp=Z,14nm,0.9s						
STKA	**Stephens Creek**	**34.00**	**250**	P	**P**	**04 47 01.4**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=110,slow=14,SNR=4.4						
STKA	**Stephens Creek**	**34.00**	**250**	P	**P**	**04 47 01.3**	**+0.4**
COEN	**Coen**	**36.21**	**281**	P	**P**	**04 47 20.4**	**+0.8**
COEN				IAmb	IAmb	04 47 21.7	
	comp=Z,6.6nm,0.9s						
BBOO	**Buckleboo**	**38.69**	**249**	P	**P**	**04 47 38.9**	**-0.8**
BBOO				IAmb	IAmb	04 47 53.8	
	comp=Z,4.7nm,0.9s						
AS31	**Alice Springs**	**41.62**	**262**	P	**P**	**04 48 03.6**	**+0.1**
AS31				IAmb	IAmb	04 48 05.5	
	comp=Z,4.0nm,0.3s						
ASAR	**Alice Springs**	**41.62**	**262**	P	**P**	**04 48 03.6**	**+0.1**
	comp=Z,3.1nm,0.4s,baz=88,slow=7.3,SNR=52						
ASAR				S	**S**	**04 53 43.7**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=100,slow=16,SNR=4.8						
ASAR	**Alice Springs**	**41.62**	**262**	P	**P**	**04 48 03.2**	**-0.3**
ASAR				S	**S**	**04 53 42.5**	**-1.3**
WR0	**Warramunga Arr**	**41.95**	**268**	P	**P**	**04 48 05.4**	**-0.8**
WR0				IAmb	IAmb	04 48 19.8	
	comp=Z,2.5nm,0.7s						
WB2	**Warramunga Arr**	**42.13**	**268**	P	**P**	**04 48 06.8**	**-0.7**
WB2				IAmb	IAmb	04 48 08.6	
	comp=Z,9.8nm,1.0s						
WB0	**Warramunga Arr**	**42.14**	**268**	P	**P**	**04 48 07.3**	**-0.3**
WB0				IAmb	IAmb	04 48 08.7	
	comp=Z,7.5nm,0.6s						
WRA	**Warramunga Arr**	**42.14**	**268**	P	**P**	**04 48 07.2**	**-0.5**
	comp=Z,5.0nm,0.5s,baz=104,slow=7.8,SNR=75						
WRA	**Warramunga Arr**	**42.14**	**268**	P	**P**	**04 48 06.3**	**-1.3**
KNRA	**Kununurra**	**48.51**	**271**	P	**P**	**04 48 56.4**	**-0.2**
KNRA				IAmb	IAmb	04 48 57.3	
	comp=Z,24nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.54**	**267**	P	**P**	**04 49 11.4**	**-0.1**
FITZ				IAmb	IAmb	04 49 16.0	
	comp=Z,5.7nm,1.0s						
VNDA	**Vanda**	**52.82**	**185**	P	**P**	**04 49 28.2**	**+1.1**
CASY	**Casey**	**58.64**	**206**	P	**P**	**04 50 07.2**	**-0.5**
QSPA	**South Pole Qui**	**64.63**	**180**	P	**P**	**04 50 47.5**	**+0.3**
NVAR	**Mina Array Bea**	**86.00**	**44**	P	**P**	**04 52 47.7**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=223,slow=8.5,SNR=6.3						
TPH	**Tonopah**	**86.47**	**45**	P	**P**	**04 52 48.4**	**-0.7**
TPH				IAmb	IAmb	04 52 50.5	
	comp=Z,11nm,0.8s						
TXAR	**Lajitas Array**	**91.41**	**58**	P	**P**	**04 53 13.3**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=215,slow=6.3,SNR=9.7						
TXAR	**Lajitas Array**	**91.41**	**58**	P	**P**	**04 53 12.1**	**-0.1**
NOA	**NORSAR Array B**	**143.58**	**351**	PKP	PKPab	04 59 34.6	-0.4
	comp=Z,0.5nm,0.7s,baz=22,slow=3.8,SNR=3.8						

IDC 30 04:58:39.0±2.2, 28.18N×85.58E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/44, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=72.2km s-min=32.3km az=64.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**18.76**	**353**	P	Pn	05 03 00.9	+1.0
	0.2nm,0.3s,baz=178,slow=11,SNR=9.5						
SONM	**Songino Array**	**25.43**	**34**	P	P	05 04 08.2	-0.2
	0.4nm,0.4s,baz=225,slow=9.4,SNR=2.6						
ARCES	**ARCESS Array B**	**53.51**	**338**	P	P	05 08 00.2	-0.7
	0.4nm,0.3s,baz=100,slow=8.1,SNR=5.5						
WRA	**Warramunga Arr**	**67.16**	**130**	P	P	05 09 35.1	+0.1
	0.5nm,0.9s,baz=326,slow=6.4,SNR=2.0						

*BJI **30** 05:08:52.9±0.0, 0.35N×126.36E, h53km, mB4.9/26, mb4.7/42, Ms4.4/10, Ms7 3.9/7*
*NEIC **30** 05:08:56.0±1.5, 0.73N±0.08×126.24E±0.05, h50km±7km, mb4.7/65, Error ellipse: s-maj=11.3km s-min=7.3km az=174.0*
*DJA **30** 05:08:56.5±0.2, 1.1N±2.2×126.6E±°, h51km±3km, M4.6/31, mb4.8/31, mB5.2/12, MLv4.6/17, Mw(mB)4.6/12, MwMwp4.9/2, Mwp5.2/2, Hypocentre not reviewed by the ISC*
*IDC **30** 05:08:56.8±2.1, 0.75N×126.25E, h51km±19km, mb4.4/30, mb1 4.4/33, mb1mx4.3/49, mbtmp4.6/33, ML4.1/3, MS3.5/11, Ms1 3.5/11, ms1mx3.3/37, Error ellipse: s-maj=15.3km s-min=8.0km az=75.0*
ISC 30 05:08:55.7±0.3, 0.74N±0.05×126.23E±0.05, h44km, n138, σ1°08/140, mb4.7/62, MS3.5/12, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.14**	**88**	Pn	**Pn**	**05 09 14.8**	**-0.4**
TNTI				Sn	**Sn**	**05 09 29.8**	**+0.1**
TNTI	**Ternate**	**1.14**	**88**	P		05 09 14.7	
TNTI				S		05 09 30.2	
MNI	**Manado**	**1.56**	**297**	P		05 09 20.3	
LBMI	**Labuha**	**1.86**	**137**	P		05 09 25.8	
LBMI				S		05 09 48.7	
GAMI	**Galela, Maluku**	**1.90**	**55**	P		05 09 25.2	
GAMI				S		05 09 55.2	
KMSI	**Cibinong**	**2.26**	**266**	P		05 09 31.6	
SANI	**Sanana**	**2.78**	**185**	P		05 09 38.8	
SGSI	**Sangihe**	**3.01**	**347**	P		05 09 41.8	
GTOI	**Gorontalo**	**3.22**	**268**	P		05 09 46.1	
LUWI	**Luwuk**	**3.88**	**243**		**Pn**	**05 09 53.5**	**+0.6**
LUWI	**Luwuk**	**3.88**	**243**	P		05 09 55.5	
NLAI	**Namlea**	**4.04**	**168**	P		05 09 57.3	
MRSI	**Marisa**	**4.30**	**267**	P		05 10 00.1	
KRAI	**Karang Ratu**	**4.57**	**152**	P		05 10 05.6	
APSI	**Ampana**	**4.87**	**250**	P		05 10 09.8	
SWI	**Sorong**	**5.27**	**108**	P		05 10 13.2	
	0.2nm946nm39nm,0.7s						
SIJI	**Sorong**	**5.28**	**108**	P	**Pn**	**05 10 13.5**	**+1.3**
	3.6nm,0.3s,baz=185,slow=20,SNR=4.0						
SIJI				LR	LR	05 12 42.5	
	comp=Z,1µm,18.6s,baz=15,slow=43						
SIJI	**Sorong**	**5.28**	**108**	P		05 10 13.8	
	0.1nm10nm,1.1s						
TOLI2	**Tolitoli**	**5.46**	**274**	Pn	**Pn**	**05 10 14.1**	**-0.5**
DAV	**Davao City (W)**	**6.33**	**354**	LR	LR	05 13 20.0	
	comp=Z,383nm,19.0s,baz=149,slow=42						
KKSI	**Kolaka, Sulawe**	**6.69**	**223**	P		05 10 33.9	
	0.6nm1µm62nm,0.6s						
FAKI	**Fak Fak**	**7.03**	**121**	P		05 10 37.1	
	0.2nm37nm,0.8s						
TTSI	**Tana Toraja**	**7.43**	**240**	P		05 10 43.1	
	0.4nm96nm,0.9s						
BNSI	**Bone**	**7.97**	**230**	P		05 10 52.3	
	1µm124nm,1.0s						
SPSI	**Sidrap Palu**	**7.97**	**234**	P		05 10 51.7	
	1µm130nm,0.5s						
KAPI	**Kappang**	**8.63**	**229**	P	**Pn**	**05 11 00.1**	**+2.0**
	7.2nm,0.3s,baz=38,slow=7.1,SNR=15						
KAPI	**Kappang**	**8.63**	**229**	Pn	**Pn**	**05 11 02.2**	**+4.1**
KAPI	**Kappang**	**8.63**	**229**	P		05 11 00.5	
	820nm66nm,1.2s						
MYLDM	**Lahad Datu**	**8.89**	**300**	Pn	**Pn**	**05 11 04.9**	**+3.2**
MYLDM	**Lahad Datu**	**8.89**	**300**	P		05 11 03.7	
	2µm134nm,0.9s						
MKS	**Makassar**	**8.98**	**229**	P		05 11 05.9	
	64nm,1.0s						
**SO

WB0	Warramunga Arr	21.89	159	P	P	05 13 45.1	-0.1
WB0				IAmb	IAmb	05 13 51.4	
	comp=Z,68nm,1.2s						
WRAB	Tennant Creek	22.03	159	P	P	05 13 45.9	-0.8
WRAB				IAmb	IAmb	05 13 53.1	
	comp=Z,40nm,0.8s						
WRA	Warramunga Arr	22.03	159	P	P	05 13 47.0	+0.2
	comp=Z,13nm,0.5s,baz=337,slow=11,SNR=107						
WRA				S	S	05 17 46.5	-0.9
	comp=Z,5.0nm,0.9s,baz=344,slow=16,SNR=5.6						
WRA	Warramunga Arr	22.03	159	P	P	05 13 46.8	+0.1
WB2	Warramunga Arr	22.04	159	P	P	05 13 46.2	-0.5
WR0	Warramunga Arr	22.12	159	P	P	05 13 47.7	0.0
WR0				IAmb	IAmb	05 14 00.0	
	comp=Z,19nm,0.8s						
COEN	Coen	22.24	132	P	P	05 13 49.1	+0.1
GUMO	Guam	22.44	54	P	P	05 13 50.6	-0.5
	comp=Z,153nm,0.3s,baz=9.1,slow=5.7,SNR=10						
TWG	Pinlang	22.52	347	P	P	05 13 50.6	-1.3
TWG				IAmb	IAmb	05 13 53.2	
	comp=Z,25nm,0.9s						
KASI	Kota Agung	22.58	254	P		05 13 53.7	
	comp=Z,33nm,1.2s						
MDSI	Maura Dua	22.64	257	P		05 13 51.7	
PSA00	Pilbara Seismi	23.03	195	P	P	05 13 58.0	+0.8
TPUB	Ta-pu	23.08	347	P	P	05 13 55.4	-2.4
XMIS	Christmas Isla	23.31	241	P	P	05 13 58.4	-1.7
QIZ	Qiongzhong	24.27	320	P	P	05 14 09.0	0.0
QIZ				S	S	05 18 27.8	+2.8
QIZ				LR	LR		
	comp=Z,100nm,15.8s						
QIZ				LR	LR		
	comp=Z,92nm,16.5s						
UBPT	Khong Chiam	25.08	306	P	P	05 14 15.6	-0.8
UBPT	Khong Chiam	25.08	306	P		05 14 16.0	
	comp=Z,15nm,1.2s						
AS31	Alice Springs	25.38	163	P	P	05 14 18.8	-0.3
ASAR	Alice Springs	25.38	163	P	P	05 14 19.9	+0.8
	comp=Z,5.9nm,0.3s,baz=347,slow=12,SNR=58						
ASAR				S	S	05 18 43.5	+0.8
	comp=Z,0.8nm,0.8s,baz=348,slow=22,SNR=3.0						
ASAR	Alice Springs	25.38	163	P	P	05 14 19.1	0.0
IPM	Ipoh	25.45	279	P	P	05 14 20.1	+0.3
IPM				IAmb	IAmb	05 14 23.2	
	comp=Z,17nm,0.6s						
IPM	Ipoh	25.45	279	P		05 14 20.0	
	comp=Z,24nm,1.4s						
GIRL	Giralia	26.01	206	P	P	05 14 23.0	-1.8
JOW	Kunigami	26.02	4	P	P	05 14 24.4	-0.4
	comp=Z,38nm,0.9s,baz=194,slow=9.4,SNR=5.6						
JOW	Kunigami	26.02	4	P	P	05 14 24.2	-0.6
RPSI	Rantau Prapat	27.36	274	P	P	05 14 36.1	-1.0
RPSI				IAmb	IAmb	05 14 38.5	
	comp=Z,32nm,1.2s						
RPSI	Rantau Prapat	27.36	274	P	P	05 14 37.4	+0.3
PSI	Prapat	27.37	275	P	P	05 14 37.4	+0.1
	comp=Z,17nm,0.9s,baz=182,slow=2.5,SNR=7.8						
PSI				LR	LR	05 25 43.7	
	comp=Z,110nm,19.0s,baz=100,slow=37						
PSI	Prapat	27.37	275	P		05 14 37.1	
	comp=Z,12nm,1.1s,comp=Z,24nm,1.1s						
PSI				P		05 14 37.7	
	comp=Z,12nm,1.1s,comp=Z,24nm,1.1s						
GSI	Gunungsitoli	28.66	271	P	P	05 14 47.8	-0.9
GSI				IAmb	IAmb	05 14 49.5	
	comp=Z,30nm,1.0s						
FORT	Forrest	31.39	177	P	P	05 15 11.3	-1.3
WHN	Wuhan	31.72	340	⇑P	P	05 15 18.3	+2.8
GYA	Guiyang	31.76	325	⇓P	P	05 15 17.0	+0.9
NJ2	Nanjing	31.92	348	*e*P	P	05 15 18.8	+1.6
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
CMAR	Chiang Mai Arr	32.06	305	P	P	05 15 18.9	+0.2
	comp=Z,1.2nm,0.3s,baz=137,slow=7.7,SNR=6.0						
CMAR				PcP	PcP	05 18 09.7	+2.0
	comp=Z,0.6nm,0.3s,baz=159,slow=2.2,SNR=4.5						
CMAR				LR	LR	05 30 26.2	
	comp=Z,68nm,18.3s,baz=178,slow=40						
JNU	Nakatsue	32.51	7	P	P	05 15 22.4	0.0
	comp=Z,12nm,0.9s,baz=167,slow=5.4,SNR=5.0						
JNU	Nakatsue	32.51	7	P	P	05 15 22.0	-0.5
ENH	Enshi	33.41	333	P	P	05 15 30.0	-0.3
ENH				IAmb	IAmb	05 15 31.7	
	comp=Z,12nm,1.0s						
JWT	Wachi	35.42	13	P	P	05 15 48.1	+0.5
STKA	Stephens Creek	35.55	157	P	P	05 15 49.7	+0.9
	comp=Z,3.6nm,0.4s,baz=331,slow=8.6,SNR=16						
STKA	Stephens Creek	35.55	157	P	P	05 15 49.5	+0.7
JGF	Kuroka	36.20	15	P	P	05 15 54.4	0.0
JGF				IAmb	IAmb	05 15 58.2	
	comp=Z,11nm,0.8s						
KSRS	Korea Array	36.57	2	P	P	05 15 57.6	+0.2
	comp=Z,4.3nm,0.7s,baz=181,slow=10,SNR=19						
KSRS				LR	LR	05 34 33.0	
	comp=Z,7.4nm,18.3s,baz=180,slow=42						
CD2	Chengdu	36.81	327	*e*P	P	05 16 00.3	+0.7
XAN	Xi'an	36.89	336	P	P	05 15 59.3	-1.0
XAN				pP	pP	05 16 11.0	-0.9
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,75nm,3.8s						
MAJO	Matsushiro	37.32	16	P	P	05 16 02.9	-0.9
MAJO				IAmb	IAmb	05 16 06.1	
	comp=Z,9.3nm,0.7s						
MAT	Matsushiro	37.32	16	P	P	05 16 03.2	-0.7
MJAR	Matsushiro Arr	37.32	16	P	P	05 16 03.2	-0.7
	comp=Z,3.5nm,0.6s,baz=189,slow=8.4,SNR=12						
MJAR				LR	LR	05 29 34.7	
	comp=Z,31nm,21.0s,baz=185,slow=33						
MJAR	Matsushiro Arr	37.32	16	P	P	05 16 03.1	-0.7
JSD	Sado	38.74	15	P	P	05 16 15.3	-0.5
JMM	Marumori	39.31	18	P	P	05 16 21.5	+1.0
LZH	Lanzhou	40.85	332	*e*P	P	05 16 34.3	+0.7
LZH				pP	pP	05 16 46.5	+1.1
LZH				sP	sP	05 16 51.5	+1.0
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
SHL	Shillong	41.31	309	P	P	05 16 38.4	+0.8
SHL				IAmb	IAmb	05 16 39.4	
	comp=Z,9.2nm,0.6s						
HHC	Hu-ho-hao-te	42.09	343	*e*P	P	05 16 44.0	+0.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.4s						
USA0B	Ussuriysk Arra	43.58	6	P	P	05 16 55.4	-0.1
USA0B				IAmb	IAmb	05 16 58.1	
	comp=Z,12nm,0.7s						
USRK	Ussuriysk Ar.	43.58	6	P	P	05 16 56.0	+0.5
	comp=Z,8.5nm,0.6s,baz=194,slow=6.3,SNR=23						
USRK	Ussuriysk Ar.	43.58	6	P	P	05 16 55.8	+0.4
MDJ	Mudanjiang	43.80	3	P	P	05 16 58.8	+1.6
MDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,76nm,3.5s						
MDJ	Mudanjiang	43.80	3	P	P	05 16 57.3	+0.1
MDJ				IAmb	IAmb	05 17 00.7	
	comp=Z,12nm,0.8s						
LSA	Lhasa	44.09	314	P	P	05 17 00.5	+0.1
LSA				IAmb	IAmb	05 17 05.2	
	comp=Z,7.2nm,0.4s						
GTA	Gaotai	45.43	331	P	P	05 17 11.0	+0.5
GTA				pP	pwP	05 17 24.0	+1.5
GTA				sP	sP	05 17 28.3	+0.8
GTA				PcP	PcP	05 18 51.0	+1.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,79nm,4.6s						
GTA				LR	LR		
	comp=Z,78nm,18.5s						
GTA				LR	LR		
	comp=Z,84nm,19.6s						
KLR	Kul'dur	48.54	5	P	P	05 17 35.2	+0.7
	comp=Z,4.3nm,0.7s,baz=209,slow=4.8,SNR=11						
HIA	Hailar	48.67	354	P	P	05 17 34.5	-1.0
HYB	Hyderabad	49.72	292	*i* P	P	05 17 43.0	-1.0
ULN	Ulaanbaatar	49.81	343	P	P	05 17 43.5	-0.8
ULN				IAmb	IAmb	05 17 48.0	
	comp=Z,6.7nm,0.7s						
SONM	Songino Array	49.97	343	P	P	05 17 45.9	+0.3
	comp=Z,4.5nm,0.9s,baz=154,slow=10,SNR=14						
SONM				LR	LR	05 39 45.8	
	comp=Z,42nm,20.6s,baz=136,slow=37						
SONM	Songino Array	49.97	343	P	P	05 17 44.7	-0.9
MNCI	Minicoy	53.48	280	P	P	05 18 10.6	-1.6
WMQ	Urumqi	54.91	327	*e*P	P	05 18 27.0	+4.8
WMQ				pP	pP	05 18 35.0	+0.8
WMQ				sP	sP	05 18 39.5	+0.4
WMQ				LR	LR		
	comp=Z,260nm,20.9s						
WMQ				LR	LR		
	comp=Z,160nm,28.9s						
PETK	Petropavlovsk-	58.38	22	P	P	05 18 47.9	+1.3
	comp=Z,6.0nm,0.6s,baz=179,slow=3.4,SNR=13						
PETK	Petropavlovsk-	58.38	22	P	P	05 18 47.8	+1.2
MK31	Makanchi Array	59.74	326	P	P	05 18 55.9	-0.3
MK31				IAmb	IAmb	05 18 58.0	
	comp=Z,6.5nm,1.0s						
MKAR	Makanchi Array	59.74	326	P	P	05 18 55.8	-0.3
	comp=Z,3.5nm,0.3s,baz=121,slow=7.7,SNR=122						
MKAR				LR	LR	05 47 32.5	
	comp=Z,77nm,18.5s,baz=83,slow=39						
MKAR	Makanchi Array	59.74	326	P	P	05 18 56.0	-0.2
MAKZ	Makanchi	59.92	326	P	P	05 18 57.1	-0.3
MAKZ				IAmb	IAmb	05 18 59.8	
	comp=Z,12nm,1.1s						
KDJ	Kajisay	60.27	320	P	P	05 19 00.3	+0.2
KDJ				IAmb	IAmb	05 19 03.4	
	comp=Z,5.3nm,0.9s						
RAO	Raoul Island	61.03	124	LR	LR	05 45 58.1	
	comp=Z,734nm,19.3s,baz=279,slow=36						
BOOM	Boomskoye usch	61.24	320	P	P	05 19 06.2	-0.5
BOOM				IAmb	IAmb	05 19 09.4	
	comp=Z,5.5nm,1.0s						
MA2	Magadan	61.71	14	P	P	05 19 07.4	-1.9
MA2				IAmb	IAmb	05 19 11.7	
	comp=Z,8.7nm,1.0s						
ARSB	Arslanbob	62.68	317	P	P	05 19 16.2	-0.1
ARSB				IAmb	IAmb	05 19 18.3	
	comp=Z,13nm,1.4s						
ZAA0	Zalesovo Array	63.03	334	P	P	05 19 17.5	-0.7
ZAA0				IAmb	IAmb	05 19 44.0	
	comp=Z,6.2nm,1.2s						
ZALV	Zalesovo Beam	63.03	334	P	P	05 19 17.6	-0.5
	comp=Z,2.0nm,0.4s,baz=129,slow=4.0,SNR=7.2						
ZALV	Zalesovo Beam	63.03	334	P	P	05 19 17.1	-1.1
BTK	Batken	63.65	315	P	P	05 19 22.6	-0.2
BTK				IAmb	IAmb	05 19 33.7	
	comp=Z,3.6nm,0.6s						
KURBB	Kurchatov Arra	63.99	328	P	P	05 19 24.3	-0.3
	comp=Z,9.0nm,0.8s,baz=127,slow=6.2,SNR=41						
KURK	Kurchatov	64.00	329	P	P	05 19 24.3	-0.3
KK31	Karatay Array	65.09	318	P	P	05 19 31.9	-0.1
KKAR	Karatay Array	65.09	318	P	P	05 19 31.8	-0.2
KKAR	Karatay Array	65.09	318	P	P	05 19 31.6	-0.4
KKAR				IAmb	IAmb	05 19 34.2	
	comp=Z,7.1nm,1.3s						
BVAR	Borovoye Array	69.56	328	P	P	05 20 00.6	+0.6
	comp=Z,7.0nm,0.8s,baz=126,slow=15,SNR=23						
BRVK	Borovoye	69.63	328	P	P	05 20 00.1	-0.3
BRVK				IAmb	IAmb	05 20 04.0	
	comp=Z,11nm,0.9s						
TIXI	Tiksi	70.82	1	P	P	05 20 07.9	+0.5
	comp=Z,4.6nm,0.5s,baz=202,slow=3.9,SNR=12						
TIXI	Tiksi	70.82	1	P	P	05 20 06.9	-0.5
TIXI				IAmb	IAmb	05 20 09.2	
	comp=Z,19nm,1.5s						
GEYT	Alibeck	72.39	310	P	P	05 20 18.0	+0.4
	comp=Z,7.0nm,1.1s,baz=189,slow=8.4,SNR=4.9						
GEYT	Alibeck	72.39	310	P	P	05 20 17.3	-0.3
SOCY	Socotra	72.49	282	P	P	05 20 17.6	-1.1
SOCY				IAmb	IAmb	05 20 24.4	
	comp=Z,11nm,1.0s						
NRIK	Noril'sk	73.20	347	P	P	05 20 22.3	+0.6
	comp=Z,3.9nm,0.5s,baz=137,slow=5.1,SNR=9.4						
NRIK	Noril'sk	73.20	347	P	P	05 20 21.8	+0.1
NRIK				IAmb	IAmb	05 20 23.3	
	comp=Z,7.6nm,0.8s						
ABKAR	Akbulak array	74.15	321	P	P	05 20 27.3	-0.4
AKTO	Aktyubinsk	75.69	322	P	P	05 20 37.0	+0.4
	comp=Z,4.9nm,0.6s,baz=92,slow=4.8,SNR=15						
ARU	Arti	77.19	328	P	P	05 20 44.9	0.0
	comp=Z,3.7nm,0.2s,baz=116,slow=2.9,SNR=14						
ARU	Arti	77.19	328	P	P	05 20 43.9	-1.0
VNDA	Vanda	80.54	173	P	P	05 21 03.9	+1.0
	comp=Z,1.0nm,0.5s,baz=316,slow=6.0,SNR=12						
RAYN	Ar Rayn	81.20	294	P	P	05 21 05.8	-1.8
BELG	Belogornoye	82.47	323	P	P	05 21 13.9	+0.4
	comp=Z,30nm,0.9s,baz=42,slow=1.1,SNR=9.7						
GEVA	Gevas	84.18	308	P	P	05 21 21.3	-1.6
KBZ	Khabaz	84.67	314	P	P	05 21 24.7	-0.3
	comp=Z,4.0nm,0.9s,baz=132,slow=6.9,SNR=6.2						
SUA	Susitna One	86.01	29	P	P	05 21 31.4	-0.2
CCB	Clear Creek Bu	87.60	25	P	P	05 21 39.0	-0.1
KLMR	Klimovskoe	87.75	331	*e*P	P	05 21 39.7	-0.1
KLMR				AMP		05 21 45.2	
	comp=Z,6.0nm,0.7s						
ILAR	Eielson Array	88.00	25	P	P	05 21 40.2	-0.8
	comp=Z,0.5nm,0.7s,baz=244,slow=5.1,SNR=7.2						
ILAR	Eielson Array	88.00	25	P	P	05 21 40.3	-0.7
KMBO	Kilima Mbogo	88.99	269	P	P	05 21 48.1	+1.1
	comp=Z,3.8nm,1.0s,baz=50,slow=6.1,SNR=6.8						
KMBO				LR	LR	05 58 02.6	
	comp=Z,45nm,19.2s,baz=102,slow=33						
DOT	Dot Lake	89.22	27	P	P	05 21 46.9	+0.1
DOT				IAmb	IAmb	05 21 54.0	
	comp=Z,3.0nm,1.0s						
BRTR	Keskin Array B	91.53	310	LR	LR	06 10 54.4	
	comp=Z,12nm,18.4s,baz=152,slow=41						
ARCES	ARCESS Array B	93.07	340	P	P	05 22 03.9	-0.6
	comp=Z,2.1nm,0.8s,baz=90,slow=6.4,SNR=12						
ARCES	ARCESS Array B	93.07	340	P	P	05 22 04.2	-0.3
SPITS	Spitsbergen Ar	93.30	349	P	P	05 22 05.3	-0.1
	comp=Z,6.0nm,0.9s,baz=120,slow=12,SNR=4.6						
AKASG	Malin Array Be	93.88	321	P	P	05 22 07.6	-1.1
	comp=Z,0.4nm,0.5s,baz=71,slow=4.0,SNR=4.3						
AKASG	Malin Array Be	93.88	321	P	P	05 22 07.4	-1.2
YKA	Yellowknife Ar	102.41	25	P	Pdif	05 22 48.1	+1.4
	comp=Z,0.2nm,0.7s,baz=301,slow=4.9,SNR=3.6						
TORD	Torodi Ar. Bea	123.32	286	PKP	PKiKP	05 27 50.7	+1.4
	comp=Z,1.4nm,0.7s,baz=52,slow=2.4,SNR=5.8						
TORD				PKKPbc	PKKPab	05 37 42.4	+3.5
	comp=Z,0.6nm,0.7s,baz=250,slow=3.0,SNR=3.5						
TXAR	Lajitas Array	123.79	53	PKP	PKiKP	05 27 50.9	+0.9
	comp=Z,0.2nm,0.7s,baz=287,slow=1.7,SNR=4.3						

VIE ***30*** *05:09:34.3±0.7, 50.19°N×19.13°E, h0km, mb2.3/2, ml2.6/3, ms3.0/1, Error ellipse: s-maj=5.1km s-min=2.1km az=40.0 9 km S of Sosnovice Suspected Mining induced.*

PRU ***30*** *05:09:34.7±0.0, 50.14°N×19.10°E, h0km*

ISC 30 05:09:33.7±1.2, 50.13°N±0.05°×19.22°E±0.05, h0km, n23, σ1§60/35, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.75	248	*e*SG	Sg		05 09 58.2	+0.4
	comp=Z,57nm,0.5s							
LANS	Liptovska Anna	0.99	171	*e*PG	Pb		05 09 53.6	-0.1
LANS				*e*SG	Sb		05 10 07.5	+0.2
LANS				*e*LG	Lg		05 10 09.0	
NIE	Niedzica	1.00	135	*e*Pg	Pb		05 09 54.1	+0.3
NIE				*e*Sg	Sn		05 10 08.8	-0.9
MORC	Moravsky Berou	1.14	253	*e*PG	Pg		05 09 54.9	-0.6
MORC				*e*SG	Sg		05 10 10.3	0.0
KRLC	Kraliky	1.57	269	*e*PG	Pn		05 10 01.6	-1.3
KRLC				*e*SG	Sn		05 10 22.7	-1.2
	comp=Z,52nm,0.3s							
JAVC	Velka Javorina	1.62	219	*e*PN	Pg		05 10 04.4	-0.3
VYHS	Vyhne	1.66	189	*e*PN	Pn		05 10 03.9	-0.1
VYHS				*e*SN	Sn		05 10 25.2	-0.7
VYHS				*e*LG	Lg		05 10 27.9	
DPC	Dobruska-Polom	1.88	278	*e*PG	Pn		05 10 06.7	-0.3
DPC				*e*SG	Sn		05 10 31.6	+0.2
	comp=Z,37nm,0.5s							
VRAC	Vranov	1.89	245	*e*PN	Pn		05 10 07.2	0.0
VRAC				*e*SG	Sb		05 10 32.4	-0.9
OSTC	Ostas	1.97	284	*e*PG	Pn		05 10 08.0	-0.3
OSTC				*e*SG	Sb		05 10 34.7	-0.9
KSP	Ksiaz	2.00	292	*e*Pg	Pg		05 10 12.2	+0.1
KSP				*e*Sg	Sg		05 10 38.2	+0.3
CHVC	Chvalec	2.08	284	*e*PG	Pn		05 10 09.9	+0.1
UPC	Upice	2.09	282	*e*SG	Sg		05 10 40.6	-0.2
	comp=Z,23nm,0.5s							
KRUC	Moravsky	2.13	241	*e*PN	Pn		05 10 09.4	-1.0
KRUC				*e*SG	Sb		05 10 39.6	-0.4
PVCC	Panska Ves	3.01	279	*e*SG	Sb		05 11 07.3	+2.0
	comp=Z,38nm,0.7s							
PRU	Pruhonice	3.02	269	*e*SG	Sb		05 11 07.0	+1.4
	comp=Z,11nm,0.4s							
BRG	Berggiesshubel	3.45	284	Pg	Pg		05 10 42.3	+2.5
BRG				Sg	Sg		05 11 23.2	-1.2
BRG				Amp			05 11 27.1	
	comp=Z,9.4nm,0.4s							
CKRC	Cesky Krumlov	3.46	250	*e*SG	Sg		05 11 21.8	-3.0
KHC	Kasperske Hory	3.80	257	*e*PN	Pn		05 10 33.3	-0.2
KHC				*e*SG	Sg		05 11 32.3	-3.4
	comp=Z,11nm,0.5s							
MOA	Molln	3.98	237	Sg	Sg		05 11 41.4	-0.1
	comp=Z,8.0nm,0.6s							
CLL	Collm	4.12	289	*e*Pg	Pg		05 11 01.0	+8.3
CLL				*e*Sg	Sg		05 11 45.0	-1.1
	comp=Z,9.0nm,0.6s							
KBA	Koelnbreinsper	4.95	234	*e*Sg	Sg		05 12 17.3	+4.7
	comp=Z,2.0nm,0.4s							
WTTA	Wattenberg	5.78	243	Sg	Sg		05 12 43.3	+4.0
	comp=Z,2.7nm,0.5s							

DJA ***30*** *05:34:22.6±0.6, 18°S±6°×17°9W±°, h565km±9km, M4.7/37, mB5.2/7, mb4.8/37, Mw(mB)4.6/7, Hypocentre not reviewed by the ISC*

NOU ***30*** *05:34:22.3, 17°74S×178°42W, h569km, mb5.1, Fiji Islands Region*

NEIC ***30*** *05:34:23.3±1.4, 17°81S±0°08×178°63W±0°10, h559km±5km, mb4.6/236, Error ellipse: s-maj=13.8km s-min=10.7km az=77.0*

IDC ***30*** *05:34:24.5±1.2, 17°84S×178°74W, h572km±13km, mb4.0/15, mb1 4.2/17, mb1mx4.0/27, mbtmp4.9/17, Error ellipse: s-maj=15.9km s-min=9.6km az=143.0*

ISC 30 05:34:24.3±0.3, 17°88S±0°06×178°58W±0°06, h579km, n470, σ0§95/495, mb4.6/133, 85C-59D, Fault plane solution: NP1: φ§58.40956°, δ39.13461°, λ154.84828°. NP2: φ§168.42131°, δ74.44003°, λ53.62714°. Principal axes: T Plg47.5747°, Azm39.9891°; N Plg34.8411°, Azm179.5974°; P Plg21.0265°, Azm285.1172°; **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
LKBA	Tubou, Lakemba	0.41	212	P	P		05 35 30.1	-2.4
TAVE	Taveuni	1.72	312	P	P		05 35 33.9	-1.8
MSVF	Nonsavu	3.21	272	P	P		05 35 41.7	-1.4
	26nm,0.3s,baz=116,slow=3.5,SNR=168							
MSVF	Nonsavu	3.21	272	P	P		05 35 41.7	-1.4
AFI	Afiamalu	7.64	60	P	P		05 36 14.7	-5.0
AFI	Afiamalu	7.64	60	P	P		05 36 14.5	-5.2
NIUE	Niue	8.30	100	P	P		05 36 23.3	-2.5
	baz=8.3,SNR=9.4							
NIUE				S	S		05 38 02.6	-2.9
	baz=8.3							
NIUE	Niue	8.30	100	P	P		05 36 23.3	-2.5
NIUE	Niue	8.30	100	P	P		05 36 23.3	-2.5
SANVU	Saraoutou	13.83	278	P	P		05 37 19.5	-2.4
DZM	Mont Dzumac	14.68	251	P	P		05 37 27.7	-2.5
	3.4nm,0.3s,baz=71,slow=21,SNR=50							
DZM	Mont Dzumac	14.68	251	P	P		05 37 28.1	-2.1
DZM	Mont Dzumac	14.68	251	P	P		05 37 28.2	-2.0
NOUC	Port Laguerre	14.81	251	P	P		05 37 29.5	-1.8
KOUNC	Koumac, New Ca	16.40	258	P	P		05 37 45.9	-0.4
KNTN	Kanton	16.45	25	P	P		05 37 44.8	-2.1
KNTN	Kanton	16.45	25	P	P		05 37 44.9	-2.1
OUZ	Onmahuta	18.62	200	P	P		05 38 08.2	+1.8
MXZ	Matakaoa Point	19.80	187	P	P		05 38 14.4	-2.6
BKZ	Black Stump Fm	21.64	190	P	P		05 38 30.5	-3.1
QRZ	Quartz Range	24.12	197	P	P		05 38 55.2	-0.4
LHI	Lord Howe Isla	24.37	232	P	P		05 38 58.6	+0.7
	baz=25							
ARMA	Armidale	29.81	240	P	P		05 39 46.2	+0.5
	baz=30,SNR=47							
ARMA	Armidale	29.81	240	P	P		05 39 46.1	+0.5
MGCD	Mangrove Creek	31.18	235	P	P		05 39 57.9	+0.7
	baz=31,SNR=19							
RMQ	Roma	31.36	248	P	P		05 39 59.2	+0.3
	baz=32,SNR=17							
CTA	Charters Tower	33.29	260	P	P		05 40 14.8	-0.5
	25nm,0.6s,baz=86,slow=12,SNR=9.0							
CTAO	Charters Tower	33.29	260	P	P		05 40 14.8	-0.5
CNB	Canberra Magne	33.31	232	P	P		05 40 15.9	+0.5
	baz=34,SNR=75							
CAN	Canberra	33.59	232	P	P		05 40 18.0	+0.4
YNG	Young	33.67	234	P	P		05 40 19.0	+0.7
	baz=34,SNR=5.6							
PMG	Port Moresby	34.29	280	P	P		05 40 22.8	-1.0
PMG	Port Moresby	34.29	280	P	P		05 40 24.1	+0.4
PMG	Port Moresby	34.29	280	P			05 40 23.3	
	43nm,0.8s							
CMSA	Cobar Meteorol	35.02	240	P	P		05 40 29.6	+0.1
	baz=35,SNR=60							
MTSU	Mount Surprise	35.25	264	P	P		05 40 31.2	-0.5
	baz=35,SNR=23							
QLP	Quilpie	35.39	249	P	P		05 40 32.4	-0.3
	baz=36,SNR=13							
JOHN	Johnston Islan	35.53	15	P	P		05 40 33.3	-0.5
MANU	Manus Island	36.93	291	P	P		05 40 44.7	-0.9
MANU				IAmb	IAmb		05 40 47.2	
	comp=Z,14nm,0.8s							
COEN	Coen	36.94	270	P	P		05 40 45.7	+0.1
	baz=37							
COEN	Coen	36.94	270	P	P		05 40 45.7	+0.1
TOO	Toolangi	37.06	231	P	P		05 40 46.7	+0.4
	baz=37,SNR=51							
TOO	Toolangi	37.06	231	P	P

FORT Forrest 49.87 245 P P 05 42 25.0 -0.6
KNRA Kununurra 50.33 264 P P 05 42 28.9 -0.2
FAKI Fak Fak 50.41 281 P P 05 42 29.7 -0.1
SIJI Sorong 52.07 283 P 05 42 41.5
comp=Z,21nm,0.8s
SWI Sorong 52.08 283 P 05 42 41.7
comp=Z,41nm,0.8s
FITZ Fitzroy Crossi 52.87 261 P P 05 42 47.4 +0.1
baz=53,SNR=7.2
FITZ Fitzroy Crossi 52.87 261 P P 05 42 47.6 +0.2
KMBL Kambalda 55.17 244 P P 05 43 02.7 -0.7
baz=55,SNR=11
SOEI Soe 55.91 270 P 05 43 09.2
comp=Z,67nm,0.9s
SANI Sanana 56.57 280 P 05 43 12.9
comp=Z,20nm,0.8s
PSA00 Pilbara Seismi 57.76 255 P P 05 43 21.0 -0.2
PSA00 IAmb IAmb 05 43 21.7
comp=Z,25nm,0.7s
MEEK Meekatharra 58.29 249 P P 05 43 24.1 -0.7
baz=58,SNR=11
KLBR Kellerberrin 58.69 244 P P 05 43 26.9 -0.5
baz=59,SNR=10
NWAO Narrogin (SRO) 59.08 242 P P 05 43 30.0 0.0
baz=59,SNR=8.4
NWAO Narrogin (SRO) 59.08 242 P P 05 43 29.8 -0.2
NWAO IAmb IAmb 05 43 31.1
comp=Z,49nm,1.5s
BLDU Ballidu 59.64 245 P P 05 43 33.2 -0.5
baz=60,SNR=12
MORW Morawa 60.34 246 P P 05 43 38.1 -0.3
baz=60,SNR=5.7
MORW Morawa 60.34 246 P P 05 43 38.2 -0.2
MORW IAmb IAmb 05 43 38.7
comp=Z,15nm,0.7s
SBA Scott Base 60.44 184 P P 05 43 40.6 +2.4
VNDA Vanda 60.46 185 P P 05 43 39.3 +1.0
comp=Z,2.8nm,0.8s,baz=354,slow=6.6,SNR=19
VNDA Vanda 60.46 185 P P 05 43 39.7 +1.4
DBNI Kabupaten Domp 61.91 270 P 05 43 48.3
PLAI Plampang 62.33 269 P 05 43 50.9
comp=Z,29nm,0.8s
GIRL Giralia 62.74 253 P P 05 43 55.3 +1.2
baz=63,SNR=4.9
GIRL Giralia 62.74 253 P P 05 43 54.9 +0.7
TWSI Taliwang, Sumb 63.20 269 P 05 43 56.8
comp=Z,30nm,1.1s
JAGI Jajag, Banyuwa 65.88 269 P P 05 44 13.1 -1.0
JAGI Jajag, Banyuwa 65.88 269 P 05 44 12.7
comp=Z,48nm,0.8s
CASY Casey 66.09 205 P P 05 44 15.1 +0.6
CASY IAmb IAmb 05 44 15.8
comp=Z,29nm,1.1s
JGF Kuroka 67.61 322 P P 05 44 24.9 +0.6
MJAR Matsushiro Arr 67.78 323 P P 05 44 25.3 0.0
comp=Z,13nm,0.7s,baz=157,slow=6.4,SNR=32
MJAR Matsushiro Arr 67.78 323 P P 05 44 25.7 +0.3
MAJO Matsushiro 67.79 323 P P 05 44 25.6 +0.2
MAJO IAmb IAmb 05 44 26.2
comp=Z,16nm,0.9s
MAT Matsushiro 67.79 323 P P 05 44 25.2 -0.1
JWT Wachi 68.56 321 P P 05 44 30.6 +0.8
JWT IAmb IAmb 05 44 59.5
comp=Z,25nm,1.5s
UGM Wanagama 69.48 268 P P 05 44 36.2 +0.2
ADK Adak 69.48 1 P P 05 44 34.9 -0.3
GSTR Great Sitkin T 69.71 2 P P 05 44 35.9 -0.6
JHS Saijyo 69.77 319 P P 05 44 38.4 +1.1
JHS IAmb IAmb 05 44 39.1
comp=Z,22nm,0.8s
ATKA Atka Island 69.89 3 P P 05 44 37.0 -0.5
SMY Shemya 70.60 355 P P 05 44 41.3 -0.4
NIKH Nikolski High 71.06 6 P P 05 44 44.1 -0.3
QSPA South Pole Qui 72.17 180 P P 05 44 52.0 +0.9
QSPA IAmb IAmb 05 44 52.8
comp=Z,20nm,0.9s
KSM Kuching 72.52 277 P 05 44 52.3
comp=Z,20nm,1.0s
LEM Lembang 72.55 268 P 05 44 54.3
comp=Z,24nm,0.8s
PET Petropavlovsk 73.31 346 P P 05 44 57.4 0.0
PET IAmb IAmb 05 44 57.7
comp=Z,21nm,0.8s
CBJI Citeko 73.40 268 P 05 44 54.1
PEA0B Petropavlovsk- 73.61 345 P P 05 44 59.8 +0.6
PETK Petropavlovsk- 73.61 345 P P 05 44 59.3 +0.2
comp=Z,18nm,0.6s,baz=133,slow=8.3,SNR=50
KSRS Korea Array 74.57 318 P P 05 45 06.2 +1.3
comp=Z,2.0nm,0.7s,baz=131,slow=6.2,SNR=7.9
KSAR Wonju Array Be 74.59 318 P P 05 45 05.0 0.0
KS19 Wonju Array Si 74.63 318 P P 05 45 05.9 +0.6
KASI Kota Agung 75.89 269 P 05 45 12.2
comp=Z,37nm,0.9s
USA0B Ussuriysk Arra 76.50 326 P P 05 45 17.1 +1.6
USRK Ussuriysk Ar. 76.50 326 P P 05 45 16.5 +1.1
comp=Z,2.7nm,0.6s,baz=111,slow=6.4,SNR=7.6
USRK Ussuriysk Ar. 76.50 326 P P 05 45 16.8 +1.3
MDSI Maura Dua 76.50 270 P 05 45 14.6
comp=Z,6.6nm,1.1s
PMPB Monarch Peak 76.64 45 P P 05 45 17.0 +0.5
PMPB IAmb IAmb 05 45 29.0
comp=Z,33nm,1.1s
SII Sitkinak Islan 76.93 14 P 05 45 17.8
baz=204
PASC Pasadena Art C 77.33 48 P P 05 45 20.3 +0.1
PASC IAmb IAmb 05 45 21.9
comp=Z,14nm,0.9s
MWC Mount Wilson 77.44 48 P P 05 45 22.1 +1.0
MWC IAmb IAmb 05 45 22.8
comp=Z,14nm,0.8s
VES Vestal, Richgr 77.59 46 P 05 45 22.5
baz=237,SNR=5.7
O02D Mt. Diablo Mer 77.64 40 P 05 45 23.8
baz=234
MURC Murrieta 77.73 49 P 05 45 23.4
baz=239
BFSC Mount Baldy Ra 77.73 48 P 05 45 23.6
baz=238
OHAK Old Harbor 77.74 14 P 05 45 22.2
baz=205
OHAK Old Harbor 77.74 14 P P 05 45 22.2 +0.3
OHAK IAmb IAmb 05 45 23.0
comp=Z,28nm,0.8s
NJ2 Nanjing 77.79 310 eP P 05 45 24.0 +1.3
NJ2 pmax pmax
comp=Z,15nm,0.5s
EDW2 Edwards Air Fo 77.83 47 P 05 45 24.3
baz=238,SNR=9.6
ISA Isabella, Lake 77.92 46 P 05 45 25.0
baz=238,SNR=12
ISA Isabella, Lake 77.92 46 P P 05 45 24.5 +1.1
ISA IAmb IAmb 05 45 25.7
comp=Z,18nm,0.9s
MONP2 Monument Peak 77.92 50 P 05 45 25.2
baz=240,SNR=9.6
CMB Columbia Colle 77.93 43 P P 05 45 24.1 +0.6
IKP In-Ko-Pah, Jac 78.03 50 P 05 45 25.5
baz=240,SNR=5.1
RMX La Rumorosa 78.03 50 P P 05 45 24.0 -0.2
RMX IAmb IAmb 05 45 26.6
comp=Z,16nm,0.8s
MDJ Mudanjiang 78.07 325 P P 05 45 26.0 +2.1
MDJ pmax pmax
comp=Z,18nm,0.8s
MDJ pmax pmax
comp=Z,88nm,3.8s
MDJ Mudanjiang 78.07 325 P P 05 45 24.3 +0.4
MDJ IAmb IAmb 05 45 26.4
comp=Z,15nm,0.9s
AFDM Forest Hills D 78.07 42 P P 05 45 25.3 +1.2
ORV Oroville 78.08 42 P P 05 45 25.2 +1.1
SFX San Felipe 78.16 52 P P 05 45 25.1 +0.3
N02D Trinity Center 78.16 40 P 05 45 26.4
baz=234
M02C Callahan 78.32 39 P 05 45 26.9
baz=234
O03E Paynes Creek 78.32 41 P 05 45 26.4
baz=234
LRMC Laurel Mtn Rad 78.36 47 P 05 45 27.2
baz=238
SWSC Sam W. Stewart 78.40 50 P 05 45 27.2
baz=240
KDAK Kodiak Island 78.41 14 P 05 45 25.9
baz=205
KDAK Kodiak Island 78.41 14 P P 05 45 25.9 +0.4
KDAK IAmb IAmb 05 45 27.5
comp=Z,20nm,0.9s
MDPB Devils Postpil 78.57 44 P P 05 45 27.8 +0.6
MDPB IAmb IAmb 05 45 29.2
comp=Z,17nm,0.9s
CWC Cottonwood Cre 78.60 46 P 05 45 28.1
baz=238
YBH Yreka Blue Hor 78.61 39 P P 05 45 28.4 +1.4
YBH IAmb IAmb 05 45 29.4
comp=Z,13nm,0.8s
MLAC Mammoth, Mammo 78.73 44 P 05 45 29.6
baz=237
BELC Belle Mtn. Jos 78.79 49 P 05 45 29.5
baz=240,SNR=5.7
WAKR Walker 78.81 43 P P 05 45 29.4 +1.1
WAKR IAmb IAmb 05 45 30.7
comp=Z,14nm,0.9s
TIN Tinemaha, Big 78.83 45 P 05 45 29.8
baz=238,SNR=5.9
HEC Hector,Ludlow 78.97 48 P 05 45 30.1
baz=239
BEKR Beckworth 78.98 42 P P 05 45 30.1 +0.9
BEKR IAmb IAmb 05 45 30.6
comp=Z,10nm,0.6s
HUMO Hull Mountain 78.98 38 P P 05 45 30.2 +1.3
BC3 Big Chuckawall 79.01 49 P 05 45 30.9
baz=240
PNTR Pine Nut 79.03 43 P P 05 45 30.9 +1.4
PNTR IAmb IAmb 05 45 31.7
comp=Z,29nm,0.8s
VCNR Virginia City 79.11 43 P P 05 45 30.1 +0.2
L04D Klamath Falls 79.14 39 P 05 45 31.0
baz=234
GLA Glamis 79.16 50 P P 05 45 31.2 +1.1
GLA Glamis 79.16 50 P 05 45 31.8
baz=240
M04C Macdoel 79.16 40 P 05 45 31.2
baz=234
YERR Yerington 79.21 43 P P 05 45 31.0 +0.6
YERR IAmb IAmb 05 45 32.4
comp=Z,17nm,0.8s
LHV Little Huntoon 79.29 44 P P 05 45 31.8 +1.3
LHV IAmb IAmb 05 45 33.2
comp=Z,19nm,1.0s
GRAC Grapevine Rang 79.38 46 P 05 45 32.6
baz=238,SNR=7.7
I03D Drain, OR 79.41 37 P 05 45 32.2
baz=233
GMRC Granite Mounta 79.43 48 P 05 45 32.6
baz=240
FURC Furnace Creek, 79.45 46 P 05 45 33.1
baz=239
IRM Iron Mountain 79.48 49 P 05 45 33.5
baz=240
PAHR Pah Rah Range 79.51 42 P P 05 45 32.6 +0.7
NVAR Mina Array Bea 79.52 44 P P 05 45 33.2 +1.2
comp=Z,10nm,0.8s,baz=225,slow=8.7,SNR=52
NVAR Mina Array Bea 79.52 44 P P 05 45 33.0 +0.9
SHOC Shoshone, Teco 79.56 47 P 05 45 33.6
baz=239,SNR=5.3
TUQ Turquoise Moun 79.57 48 P 05 45 34.0
baz=239
NV11 Mina Array Sit 79.62 44 P P 05 45 33.7 +1.2
NV11 IAmb IAmb 05 45 34.6
comp=Z,18nm,1.1s
J04D Umpqua Nationa 79.86 38 P 05 45 35.0
baz=234
KVN Kaiserville 79.99 43 P P 05 45 35.5 +1.1
KVN IAmb IAmb 05 45 36.4
comp=Z,18nm,1.2s
I04A Tendick Farm, 80.01 38 P 05 45 35.0
baz=234
TPH Tonopah 80.05 45 P P 05 45 35.8 +1.0
TPNV Topopah Spring 80.12 46 P 05 45 36.6
baz=239,SNR=9.3
TPNV Topopah Spring 80.12 46 P P 05 45 36.2 +1.0
214A Organ Pipe Nat 80.12 52 P 05 45 37.2
baz=242
214A Organ Pipe Nat 80.13 52 P P 05 45 36.7 +1.5
MOD Modoc Plateau 80.17 40 P P 05 45 36.1 +0.8
MOD IAmb IAmb 05 45 37.3
comp=Z,15nm,0.7s
H04D Lebanon 80.26 37 P 05 45 36.9
baz=233
PDMCI Parker Dam,Lak 80.27 49 P 05 45 37.6
baz=241
K05A Summer Lake 80.28 39 P P 05 45 37.0 +1.1
K05A IAmb IAmb 05 45 38.4
comp=Z,30nm,1.0s
CNPM China Poot 80.29 14 P P 05 45 35.8 +0.5
CNPM IAmb IAmb 05 45 36.4
comp=Z,23nm,1.0s
J05D Fort Rock, OR 80.40 39 P 05 45 38.1
baz=234
BRLK Bradley Lake 80.59 14 P P 05 45 36.8 0.0
BRSE Bradley Lake S 80.60 14 P 05 45 37.4
baz=207
SHPR Sheep Range 80.65 47 P P 05 45 38.5 +0.6
H04A Detroit Lake 80.67 37 P P 05 45 38.0 +0.4
H04A IAmb IAmb 05 45 38.8
comp=Z,12nm,0.6s
RSO Redoubt South 80.81 13 P P 05 45 37.9 -0.3
W13A Hualapai Mount 80.85 49 P P 05 45 39.7 +0.7
PINE Pine Mountain 80.87 38 P P 05 45 40.0 +1.1
PINE IAmb IAmb 05 45 41.4
comp=Z,24nm,0.9s
Y14A Wickenburg 80.92 50 P P 05 45 39.9 +0.6
I05D Terrebonne, OR 80.95 38 P 05 45 40.3
baz=234
MA2 Magadan 81.12 345 P P 05 45 38.3 -1.3
MA2 IAmb IAmb 05 45 40.1
comp=Z,10nm,0.7s
PRN Pahroc Range 81.18 46 P P 05 45 41.7 +1.1
PRN IAmb IAmb 05 45 43.2
comp=Z,17nm,0.9s
CAPN Captain Cook N 81.43 13 P 05 45 42.1
baz=206
WVOR Wild Horse Val 81.49 40 P P 05 45 42.7 +0.6
WVOR IAmb IAmb 05 45 44.3
comp=Z,22nm,1.0s
G05D Wamic, OR 81.50 37 P 05 45 42.9
baz=234
E04D Cinebar 81.58 35 P 05 45 43.6
baz=233
SPCR Spurr Chakacha 81.59 13 P 05 45 41.5
baz=205
F05D White Salmon 81.79 36 P 05 45 44.2
baz=234
TUC Tucson 81.81 52 P P 05 45 45.8 +1.9
TUC IAmb IAmb 05 45 47.0
comp=Z,14nm,1.1s
TUC Tucson 81.81 52 P 05 45 45.9
baz=243
D03D Eldon 81.89 34 P 05 45 44.6
baz=232
I07A Izee 81.89 39 P P 05 45 44.8 +0.8
I07A IAmb IAmb 05 45 46.3
comp=Z,17nm,0.8s
RC01 Rabbit Creek A 82.03 14 P 05 45 43.7
baz=208
RC01 Rabbit Creek A 82.03 14 P P 05 45 44.4 +0.2
RC01 IAmb IAmb 05 45 45.0
comp=Z,18nm,1.0s
J08A Circle Bar Ran 82.10 40 P P 05 45 46.1 +0.9
J08A IAmb IAmb 05 45 47.3
comp=Z,28nm,1.1s
SUA Susitna One 82.14 13 P 05 45 44.5
baz=207,SNR=16
SUA Susitna One 82.14 13 P P 05 45 44.6 -0.3
PWL Port Wells 82.15 14 P P 05 45 44.5 -0.3
BELA Belgrano 2 82.21 173 P P 05 45 44.9 -0.1
BELA IAmb IAmb 05 45 46.0
comp=Z,11nm,0.8s
LCMT Little Creek M 82.23 47 P P 05 45 47.3 +1.3
LCMT IAmb IAmb 05 45 48.3
comp=Z,10nm,0.9s
D05A Enumclaw 82.27 35 P P 05 45 46.2 +0.5
D05A IAmb IAmb 05 45 48.2
comp=Z,34nm,1.3s
X16A Lo Mia Camp, P 82.29 50 P P 05 45 48.1 +1.6
X16A IAmb IAmb 05 45 49.2
comp=Z,15nm,1.0s
CCUT Cedar City 82.41 47 P P 05 45 48.6 +1.6
SKT Skwentna 82.44 13 P 05 45 45.5
baz=206
SKT Skwentna 82.44 13 P P 05 45 45.8 -0.5
GLI Glacier Island 82.47 15 P 05 45 46.2
baz=210
GLI Glacier Island 82.47 15 P P 05 45 46.1 -0.3
TTA Tatalina 82.47 10 P 05 45 47.1
baz=202,SNR=14
TTA Tatalina 82.47 10 P P 05 45 46.9 +0.4
TTA IAmb IAmb 05 45 48.0
comp=Z,16nm,1.1s
EYAK Cordova Ski Ar 82.52 16 P 05 45 46.5
baz=212
KNB Kanab 82.53 47 P P 05 45 49.0 +1.4
KNB IAmb IAmb 05 45 50.0
comp=Z,10nm,0.9s
319A Douglas 82.54 54 P P 05 45 48.7 +1.0
319A IAmb IAmb 05 45 50.7
comp=Z,19nm,1.0s
PSUT Pine Spring 82.56 46 P P 05 45 48.9 +1.2
PSUT IAmb IAmb 05 45 49.7
comp=Z,8.9nm,0.7s
KNK Knik Glacier 82.61 14 P 05 45 47.2
baz=209
PMR Palmer 82.61 14 P 05 45 47.0
baz=208,SNR=9.6
PMR Palmer 82.61 14 P P 05 45 46.9 -0.2
PMR IAmb IAmb 05 45 47.3
comp=Z,13nm,0.6s
U15A North Rim 82.62 48 P P 05 45 49.8 +1.7
U15A IAmb IAmb 05 45 50.8
comp=Z,22nm,0.8s
SZCU Shurtz Canyon 82.62 47 P P 05 45 49.3 +1.3
F07A Phinny Hill Vi 82.67 37 P P 05 45 48.4 +0.6
F07A IAmb IAmb 05 45 49.6
comp=Z,10.0nm,0.7s
ELK Elko 82.75 43 P P 05 45 49.7 +1.1
ANM Nome 82.81 6 P 05 45 48.8
baz=193
GHO Glory Hole Cre 82.82 14 P P 05 45 48.3 0.0
WUAZ Wupatki 82.85 49 P 05 45 51.0
baz=242
WUAZ Wupatki 82.85 49 P P 05 45 51.0 +1.8
WUAZ IAmb IAmb 05 45 52.3
comp=Z,13nm,0.9s
B05A Bryant 82.86 34 P 05 45 49.6
baz=233
G08A Pilot Rock 82.89 38 P P 05 45 50.0 +0.9
G08A IAmb IAmb 05 45 51.0
comp=Z,23nm,1.3s
SML Sawmill 82.98 14 P 05 45 49.0
baz=209
LTY Liberty 83.04 36 P P 05 45 50.2 +0.5
CUT Chulitna 83.09 13 P 05 45 49.4
baz=207,SNR=6.0
CUT Chulitna 83.09 13 P P 05 45 49.5 +0.1
E07A Sunnyside 83.09 36 P P 05 45 50.8 +0.8
E07A IAmb IAmb 05 45 51.5
comp=Z,14nm,0.7s
PPLA Purkeypile 83.14 12 P 05 45 48.9
baz=205
PPLA Purkeypile 83.14 12 P P 05 45 49.9 -0.1
BMRM Bremner River 83.17 16 P 05 45 50.1
baz=212,SNR=7.7
BMRM Bremner River 83.17 16 P P 05 45 50.2 +0.2
HAWA Hanford 83.18 37 P P 05 45 51.4 +1.1
HAWA IAmb IAmb 05 45 52.3
comp=Z,23nm,1.1s
SCM Sheep Creek Mo 83.24 14 P P 05 45 50.3 0.0
KLU Klutina 83.29 15 P 05 45 50.4
baz=211
KLU Klutina 83.29 15 P P 05 45 50.5 -0.1
CRQM Cirque 83.39 17 P P 05 45 51.3 +0.1
CRQM IAmb IAmb 05 45 52.4
comp=Z,23nm,1.0s
CRQE Cirque 83.40 17 P 05 45 51.5
baz=214
X18A Snowflake 83.44 51 P P 05 45 53.5 +1.4
YAH Yahtse 83.45 17 P P 05 45 52.2 +0.5
MTPU Mount Pierson 83.47 47 P P 05 45 54.3 +1.9
MTPU IAmb IAmb 05 45 55.4
comp=Z,10nm,0.9s
TGL Tana Glacier 83.47 17 P P 05 45 51.9 +0.3
TGL IAmb IAmb 05 45 52.8
comp=Z,27nm,1.2s
E08A Dider Farm, El 83.51 37 P P 05 45 52.4 +0.5
E08A IAmb IAmb 05 45 53.8
comp=Z,13nm,0.7s
BMO Blue Mountains 83.62 39 P P 05 45 53.1 +0.4
BJI Beijing 83.65 315 P P 05 45 54.3 +1.5
BJI pmax pmax
comp=Z,5.0nm,0.9s
PINM Pinnacle 83.67 18 P 05 45 52.9
baz=216
TABL Table Mountain 83.69 18 P P 05 45 53.1 +0.3
MSU Marysvale 83.70 46 P P 05 45 54.8 +1.4
VRDI Verde Repeater 83.70 16 P P 05 45 52.7 0.0
VRDI IAmb IAmb 05 45 53.3
comp=Z,11nm,0.7s
N25K Chitina, Valde 83.72 16 P 05 45 53.1
baz=212,SNR=21
N25K Chitina, Valde 83.72 16 P P 05 45 53.0 +0.3
M24K Tolsona, Glenn 83.75 15 P 05 45 53.7
baz=211,SNR=7.3
GRNC Granite Creek 83.75 17 P P 05 45 53.3 +0.2
GRNC IAmb IAmb 05 45 54.2
comp=Z,25nm,1.2s
M24K Tolsona, Glenn 83.75 15 P P 05 45 53.4 +0.5
MFID Camas Ranch 83.76 41 P P 05 45 54.8 +1.3
MFID IAmb IAmb 05 45 55.5
comp=Z,13nm,1.1s
GLB Gilahina Butte 83.78 16 P P 05 45 53.1 +0.1
WAT6 Susitna Watana 83.80 14 P 05 45 53.2
baz=210,SNR=18
MAW Mawson 83.83 200 P P 05 45 53.6 +0.4
comp=Z,5.5nm,0.8s,baz=165,slow=2.5,SNR=10
MAW Mawson 83.83 200 P P 05 45 53.9 +0.7
baz=84
MAW Mawson 83.83 200 IAmb IAmb 05 45 54.8
comp=Z,1.6nm,0.9s
D08A Wollman Farm, 83.90 36 P P 05 45 54.5 +0.6
D08A IAmb IAmb 05 45 55.8
comp=Z,14nm,0.9s
MCARA McCarthy VSAT 83.94 16 P 05 45 54.3
baz=214
MCARA McCarthy VSAT 83.94 16 P P 05 45 54.3 +0.5
MCARA IAmb IAmb 05 45 55.0
comp=Z,21nm,1.2s
WAT2 Susitna Watana 83.94 13 P 05 45 53.6
baz=209
KTH Kantishna Hill 83.98 12 P P 05 45 52.9 -1.1
KTH IAmb IAmb 05 45 54.2
comp=Z,16nm,0.8s
CHUM Lake Minchumin 84.01 11 P 05 45 53.5
baz=205,SNR=11
TRF Thorofare Moun 84.02 12 P 05 45 53.7
baz=207,SNR=34
TRF Thorofare Moun 84.02 12 P P 05 45 53.7 -0.6
LOGN Logan Glacier 84.04 17 P P 05 45 54.8 +0.4
LOGN IAmb IAmb 05 45 55.6
comp=Z,25nm,1.1s
BARN Barnard Glacie 84.05 17 P P 05 45 54.9 +0.3
CTG Chitna Glacier 84.06 17 P 05 45 54.8
baz=216
CTGM Chitina Glacie 84.06 17 P P 05 45 54.9 +0.4
CTGM IAmb IAmb 05 45 55.7
comp=Z,16nm,0.8s
DUG Dugway, Tooele 84.08 45 P 05 45 56.1
baz=241
121A Cookes Peak, D 84.19 53 P 05 45 57.9
baz=245
HARP HAARP 84.25 15 P 05 45 55.6
baz=212,SNR=9.2
F10A Beach Ranch, E 84.28 38 P P 05 45 56.3 +0.4
F10A IAmb IAmb 05 45 57.4
comp=Z,22nm,1.0s
B08A Colville Reser 84.41 35 P P 05 45 56.8 +0.4
B08A IAmb IAmb 05 45 57.5
comp=Z,11nm,0.8s
BPAW Bear Paw Mtn. 84.46 12 P 05 45 55.1
baz=206
BPAW Bear Paw Mtn. 84.46 12 P P 05 45 55.2 -1.0
PLID Pearl Lake 84.53 39 P P 05 45 57.8 +0.5
MCK McKinley 84.55 13 P 05 45 56.2
baz=208,SNR=16
MCK McKinley 84.55 13 P P 05 45 56.6 -0.1
PAX Paxson 84.66 15 P 05 45 56.9
baz=212,SNR=8.7
PAX Paxson 84.66 15 P P 05 45 56.3 -1.0
C09A Chrisman Ranch 84.68 36 P P 05 45 58.1 +0.3

C09A IAmb IAmb 05 45 59.3
comp=Z,15nm,1.1s
HLID Hailey 84.72 41 P **P** **05 45 58.8 +0.6**
HLID IAmb IAmb 05 46 00.6
comp=Z,8.8nm,0.8s
HLID Hailey 84.72 41 P 05 45 59.7
baz=240,SNR=15
TMUT Trail Mountain 84.73 46 P **P** **05 45 59.2 +0.6**
TMUT IAmb IAmb 05 46 01.0
comp=Z,6.8nm,0.7s
MPU Maple Canyon 84.78 45 P **P** **05 45 59.4 +0.8**
SPUT South Promonto 84.86 44 P **P** **05 45 59.8 +0.9**
HVU Hansel Valley 84.88 43 P **P** **05 45 59.6 +0.6**
MENT Mentasta 85.06 15 P **P** **05 45 59.6 +0.3**
MENT IAmb IAmb 05 46 00.4
comp=Z,14nm,1.1s
HYT Haines Junctio 85.08 19 P **P** **05 46 00.0 +0.5**
SRU San Rafael Swe 85.12 46 P **P** **05 46 00.8 +0.5**
SRU IAmb IAmb 05 46 02.1
comp=Z,7.5nm,0.7s
NEA2 Nenana 85.28 12 P 05 45 59.3
baz=208
NEA2 Nenana 85.28 12 P **P** **05 45 59.4 -0.8**
MLY Manley 85.34 11 P 05 45 59.9
baz=207,SNR=11
MLY Manley 85.35 11 P **P** **05 45 59.9 -0.7**
MLY IAmb IAmb 05 46 01.3
comp=Z,5.8nm,0.6s
WRH Wood River Hil 85.38 13 P **P** **05 46 00.6 -0.1**
WRH IAmb IAmb 05 46 01.9
comp=Z,17nm,0.9s
TCUT Toone Canyon 85.46 44 P **P** **05 46 01.0 -0.9**
TCUT IAmb IAmb 05 46 04.0
comp=Z,8.3nm,0.7s
LENM Lemitar 85.50 52 P **P** **05 46 01.4 -0.8**
HDA Harding Lake 85.57 13 P 05 46 01.2
baz=210,SNR=12
HDA P 05 46 01.2
baz=210,SNR=12
DOT Dot Lake 85.58 15 P **P** **05 46 01.7 +0.1**
DOT IAmb IAmb 05 46 02.6
comp=Z,12nm,0.8s
NEW Newport 85.58 36 P 05 46 02.5
baz=237,SNR=6.3
HWUT Hardware Ranch 85.58 44 P **P** **05 46 03.3 +0.9**
NEW Newport 85.58 36 P **P** **05 46 02.1 +0.1**
NEW IAmb IAmb 05 46 03.3
comp=Z,6.1nm,0.8s
CCB Clear Creek Bu 85.59 13 P **P** **05 46 00.9 -0.7**
CCB IAmb IAmb 05 46 03.2
comp=Z,11nm,0.8s
PV05 Paradox Valley 85.64 48 P **P** **05 46 04.7 +1.8**
L27K Beaver Creek, 85.65 16 P 05 46 02.5
baz=215
L27K Beaver Creek, 85.65 16 P **P** **05 46 02.5 +0.5**
BCAR Beaver Creek A 85.66 16 P **P** **05 46 02.1 0.0**
IMAR Indian Mountai 85.68 10 P **P** **05 46 02.0 -0.1**
MNTX Cornudas Mount 85.69 55 P 05 46 04.4
baz=246
MNTX Cornudas Mount 85.70 55 P **P** **05 46 04.5 +1.5**
I23K Minto, Yukon-K 85.72 12 P 05 46 01.3
baz=208
I23K Minto, Yukon-K 85.72 12 P **P** **05 46 01.7 -0.6**
BCYI Bear Canyon 85.72 41 P **P** **05 46 04.3 +1.2**
MDM Murphy Dome 85.78 12 P **P** **05 46 01.8 -0.8**
MDM IAmb IAmb 05 46 02.8
comp=Z,13nm,1.1s
TCOL CIGO, UAF Yank 85.78 13 P 05 46 02.2
baz=209,SNR=6.6
TCOL CIGO, UAF Yank 85.78 13 P **P** **05 46 02.2 -0.3**
TCOL IAmb IAmb 05 46 03.5
comp=Z,13nm,0.8s
COLA College 85.78 13 P 05 46 02.2
baz=209
COLA College 85.78 13 P **P** **05 46 02.2 -0.3**
COLA IAmb IAmb 05 46 03.5
comp=Z,13nm,0.8s
WHY Whitehorse 85.78 20 P 05 46 03.6
baz=221,SNR=5.7
WHY Whitehorse 85.78 20 P **P** **05 46 03.5 +0.6**
WHY IAmb IAmb 05 46 04.6
comp=Z,9.4nm,0.9s
PV14 Lion Creek, Pa 85.83 48 P **P** **05 46 05.0 +1.2**
PV19 Morning Glory 85.83 48 P **P** **05 46 05.3 +1.6**
PV17 East Wray Mesa 85.83 48 P **P** **05 46 04.6 +0.9**
PV18 Skein Mesa, Pa 85.85 48 P **P** **05 46 04.0 +0.2**
SCRK Sand Creek 85.87 15 P 05 46 03.1
baz=213,SNR=13
SCRK Sand Creek 85.87 15 P **P** **05 46 03.3 +0.1**
SCRK IAmb IAmb 05 46 04.3
comp=Z,6.1nm,0.8s
IL31 85.90 13 P **P** **05 46 02.8 -0.3**
IL31 IAmb IAmb 05 46 03.5
comp=Z,8.3nm,0.6s
ILAR Eielson Array 85.90 13 P **P** **05 46 02.4 -0.7**
comp=Z,5.3nm,0.4s,baz=220,slow=5.1,SNR=111
ILAR Eielson Array 85.90 13 P **P** **05 46 02.9 -0.2**
PV01 Paradox Valley 86.04 48 P **P** **05 46 05.9 +1.1**
POKR Poker Plat Res 86.08 13 P 05 46 03.5
baz=210
POKR Poker Plat Res 86.08 13 P **P** **05 46 03.7 -0.3**
XAN Xi'an 86.11 307 P **P** **05 46 06.8 +1.9**
XAN pmax pmax
comp=Z,15nm,1.0s
XAN pmax pmax
comp=Z,140nm,6.0s
TX31 Lajitas Ar. Si 86.12 58 P **P** **05 46 07.5 +2.3**
TX32 Lajitas Array 86.12 58 P **P** **05 46 07.3 +2.1**
TX32 IAmb IAmb 05 46 08.3
comp=Z,16nm,1.0s
TXAR Lajitas Array 86.12 58 P **P** **05 46 07.2 +2.0**
comp=Z,8.7nm,0.8s,baz=218,slow=6.0,SNR=120
TXAR Lajitas Array 86.12 58 P **P** **05 46 07.5 +2.4**
ANMO Albuquerque 86.21 52 P 05 46 06.4
baz=245
ANMO Albuquerque 86.21 52 P **P** **05 46 06.6 +1.0**
MCMT McKenzie Canyo 86.32 41 P **P** **05 46 07.2 +1.3**
K27K Chicken 86.38 15 P 05 46 06.3
baz=215
K27K Chicken 86.39 15 P **P** **05 46 06.3 +0.9**
BILL Biibino 86.39 354 P **P** **05 46 06.2 +0.8**
BILL IAmb IAmb 05 46 07.2
comp=Z,9.6nm,0.9s
AHID Auburn Hatcher 86.44 43 P **P** **05 46 07.3 +0.8**
AHID IAmb IAmb 05 46 32.6
comp=Z,5.6nm,0.7s
RDMU Red Mountain 86.44 45 P **P** **05 46 06.8 +0.2**
MSO Missoula 86.66 38 P 05 46 07.6
baz=240
MSO Missoula 86.66 38 P **P** **05 46 07.7 +0.4**
DLMT Dillon 86.74 40 P **P** **05 46 09.1 +1.3**
DLMT IAmb IAmb 05 46 09.9
comp=Z,10nm,0.9s
PRP Porcupine Dome 86.83 13 P 05 46 07.0
baz=211
PRP Porcupine Dome 86.83 13 P **P** **05 46 07.4 -0.3**
PRP IAmb IAmb 05 46 07.6
comp=Z,13nm,1.4s
REDW Red Top Meadow 86.88 43 P **P** **05 46 09.8 +1.3**
REDW IAmb IAmb 05 46 10.8
comp=Z,20nm,1.1s
SNOW Snow King Moun 86.99 42 P **P** **05 46 10.6 +1.5**
LRM Limekiln Ridge 87.06 40 P **P** **05 46 10.6 +1.2**
DAWY Dawson 87.11 16 P **P** **05 46 09.6 +0.7**
DAWY IAmb IAmb 05 46 10.3
comp=Z,13nm,1.3s
S22A 4UR Ranch, Cre 87.11 49 P 05 46 11.0
baz=245
MOOW Moose Ponds 87.13 42 P **P** **05 46 11.1 +1.3**
HHC Hu-ho-hao-te 87.13 315 *eP* **P** **05 46 10.8 +1.1**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,120nm,7.4s
O20A White River Ci 87.15 46 P **P** **05 46 11.2 +1.3**
O20A White River Ci 87.15 46 P 05 46 11.0
baz=244
LOHW Long Hollow 87.16 42 P **P** **05 46 10.9 +1.0**
LOHW IAmb IAmb 05 46 11.5
comp=Z,5.3nm,0.7s
QLMT Earthquake Lak 87.21 41 P **P** **05 46 12.1 +2.0**
EGAK Eagle 87.23 15 P 05 46 09.6
baz=216,SNR=8.7
EGAK Eagle 87.23 15 P **P** **05 46 09.9 +0.5**
EGAK IAmb IAmb 05 46 10.0
comp=Z,5.8nm,0.8s
FLWY Flagg Ranch 87.32 42 P **P** **05 46 12.6 +2.0**
FLWY IAmb IAmb 05 46 13.2
comp=Z,15nm,0.9s
YHL Hebgen Lake 87.37 41 P **P** **05 46 12.9 +2.0**
YHL IAmb IAmb 05 46 13.8
comp=Z,14nm,0.9s
COLD Coldfoot 87.42 11 P 05 46 10.8
baz=207
COLD Coldfoot 87.42 11 P **P** **05 46 11.0 +0.8**
COLD IAmb IAmb 05 46 11.6
comp=Z,14nm,1.0s
YMR Madison River 87.42 41 P **P** **05 46 13.0 +1.9**
YMR IAmb IAmb 05 46 13.4
comp=Z,9.6nm,0.7s
BW06 Boulder Array 87.44 43 P 05 46 11.8
baz=243
BW06 Boulder Array 87.44 43 P **P** **05 46 12.5 +1.3**
BW06 IAmb IAmb 05 46 12.7
comp=Z,7.2nm,0.7s
PD31 Pinedale Array 87.44 43 P **P** **05 46 12.4 +1.1**
PD31 IAmb IAmb 05 46 12.7
comp=Z,6.4nm,0.7s
PDAR Pinedale Array 87.44 43 P **P** **05 46 11.8 +0.5**
comp=Z,5.3nm,0.6s,baz=217,slow=3.2,SNR=62
PDAR PP **PP** **05 49 44.9 -2.3**
comp=Z,0.2nm,0.4s,baz=223,slow=6.1,SNR=5.4
PDAR Pinedale Array 87.44 43 P **P** **05 46 12.1 +0.8**
BOZ Bozeman (W) 87.45 40 P 05 46 12.1
baz=241,SNR=8.4
BOZ Bozeman (W) 87.45 40 P **P** **05 46 12.5 +1.4**
BOZ IAmb IAmb 05 46 13.4
comp=Z,9.0nm,1.2s
H17A Grant Village 87.54 42 P 05 46 14.2
baz=242,SNR=12
H17A Grant Village 87.54 42 P **P** **05 46 14.3 +2.6**
H17A IAmb IAmb 05 46 15.0
comp=Z,11nm,0.8s
YHH Holmes Hill 87.55 41 P **P** **05 46 13.7 +1.9**
SMCO Snowmass 87.62 48 P **P** **05 46 13.3 +0.9**
FYU Fort Yukon 87.80 13 P **P** **05 46 11.7 -0.2**
FYU IAmb IAmb 05 46 12.5
comp=Z,6.0nm,0.6s
WALA Waterton Lakes 87.81 37 P **P** **05 46 13.7 +1.1**
WALA IAmb IAmb 05 46 14.3
comp=Z,9.2nm,0.9s
HRY Holter Researc 87.87 39 P **P** **05 46 14.0 +1.0**
SDCO Great Sand Dun 88.07 49 P **P** **05 46 14.7 +0.4**
SDCO Great Sand Dun 88.07 49 P 05 46 15.3
baz=246
YNE Yellowstone No 88.18 41 P **P** **05 46 16.2 +1.5**
YNE IAmb IAmb 05 46 17.2
comp=Z,10nm,1.1s
MSTX Muleshoe 88.61 54 P 05 46 17.8
baz=248
MSTX Muleshoe 88.61 54 P **P** **05 46 17.4 +0.7**
MSTX IAmb IAmb 05 46 18.4
comp=Z,12nm,0.9s
BMAR Burnt Mountain 88.67 12 P **P** **05 46 16.9 +0.8**
RLMT Red Lodge 88.70 41 P 05 46 18.4
baz=243
RLMT Red Lodge 88.70 41 P **P** **05 46 18.2 +1.1**
RLMT IAmb IAmb 05 46 19.4
comp=Z,6.9nm,0.9s
TOLK Toolik Lake Re 88.79 10 P 05 46 16.9
baz=208
TOLK Toolik Lake Re 88.79 10 P **P** **05 46 16.5 -0.2**
TOLK IAmb IAmb 05 46 19.3
comp=Z,5.7nm,1.1s
ISCO Idaho Springs 88.83 47 P 05 46 19.6
baz=246
N23A Red Feather La 89.06 46 P 05 46 20.1
baz=245
PHWY Pilot Hill 89.56 46 P **P** **05 46 21.4 +0.2**
PHWY IAmb IAmb 05 46 22.8
comp=Z,5.5nm,0.8s
EPYK Eagle Plains 89.62 16 P 05 46 20.5
baz=220
EPYK Eagle Plains 89.62 16 P **P** **05 46 20.8 +0.2**
JCT Junction City 89.66 58 P **P** **05 46 22.3 +0.7**
JCT IAmb IAmb 05 46 23.3
comp=Z,6.4nm,0.8s
JCT Junction City 89.66 58 P 05 46 22.9
baz=249
EGMT Eagleton 89.73 39 P 05 46 22.6
baz=243
A21K Barrow 90.25 7 P 05 46 23.4
baz=201
ABTX Abilene, Hawle 90.55 56 P 05 46 26.6
baz=249
ABTX Abilene, Hawle 90.55 56 P **P** **05 46 25.7 +0.1**
SNAA Sanae 90.63 179 P **P** **05 46 25.3 -0.1**
VNA3 Neumayer Olymp 90.78 176 P **P** **05 46 26.5 +0.5**
VNA2 Neumayer--Watz 91.22 177 P **P** **05 46 28.6 +0.6**
baz=177,slow=4.0
LAO LASA Array 91.30 41 P 05 46 30.5
baz=245
LAO LASA Array 91.30 41 P **P** **05 46 30.5 +1.7**
VNA1 Neumayer--Stat 91.44 177 P **P** **05 46 29.6 +0.6**
RSSD Black Hills 91.66 44 P 05 46 31.3
baz=247
RSSD Black Hills 91.66 44 P **P** **05 46 30.8 0.0**
RSSD IAmb IAmb 05 46 32.0
comp=Z,7.9nm,0.9s
INK Inuvik 91.90 15 P 05 46 30.9
baz=222
INK Inuvik 91.90 15 P **P** **05 46 30.5 -0.4**
DGMT Dagmar 93.28 40 P **P** **05 46 38.7 +0.9**
DGMT Dagmar 93.28 40 P 05 46 39.1
baz=247
R32A Long Quarter, 93.28 51 P **P** **05 46 38.4 +0.3**
SONM Songino Array 93.42 319 P **P** **05 46 39.2 +0.6**
comp=Z,0.5nm,0.4s,baz=96,slow=4.4,SNR=4.4
SONM PP **PP** **05 50 32.1 -1.3**
comp=Z,0.5nm,0.6s,baz=183,slow=8.9,SNR=5.5
YKA Yellowknife Ar 94.38 25 P **P** **05 46 42.3 -0.1**
comp=Z,2.9nm,0.8s,baz=240,slow=4.4,SNR=32
KSU1 Kansas State U 95.06 51 P **P** **05 46 46.9 +0.8**
KSU1 Kansas State U 95.06 51 P 05 46 47.5
baz=251
ECSD EROS Data Cent 96.53 46 P 05 46 52.9
baz=252
MKAR Makanchi Array 109.00 314 PKiKP **PKiKP** **05 51 47.1 -1.6**
comp=Z,0.7nm,0.5s,baz=257,slow=1.0,SNR=7.1
KURK Kurchatov 111.69 318 PKiKP **PKiKP** **05 51 52.2 -1.4**
KURBB Kurchatov Arra 111.75 318 PKiKP **PKiKP** **05 51 52.2 -1.5**
comp=Z,0.8nm,0.7s,baz=106,slow=1.7,SNR=8.6
ARCES ARCESS Array B 126.26 350 PKhKP PKPpre 05 52 15.8
comp=Z,3.5nm,0.8s,baz=339,slow=6.5,SNR=3.6
ARCES PKP **PKiKP** **05 52 21.4 -0.2**
comp=Z,3.6nm,0.8s,baz=33,slow=1.3,SNR=13
FINES FINESS Array B 133.12 344 PKP **PKPdf** **05 52 34.2 -0.1**
comp=Z,1.6nm,0.6s,baz=60,slow=3.4,SNR=6.9
NOA NORSAR Array B 136.33 353 PKP **PKiKP** **05 52 42.2 0.0**
comp=Z,1.0nm,0.6s,baz=13,slow=4.1,SNR=4.2
AKASG Malin Array Be 140.46 332 PKhKP PKPpre 05 52 41.5
comp=Z,0.7nm,0.4s,baz=43,slow=4.4,SNR=6.9
AKASG PKP **PKiKP** **05 52 50.0 -0.9**
comp=Z,1.0nm,0.4s,baz=37,slow=3.1,SNR=5.1
SORM Soroca 142.68 330 ⇑P **PKPdf** **05 52 50.1 -2.0**
BSEG Bad Segeberg 143.36 351 *e*PKPbc PKPbc 05 52 52.0 +0.3
baz=16,slow=2.8
ILGA Ilgaz 143.94 317 **PKPdf** **05 52 55.2 +0.3**
RUE Ruedersdorf 144.13 347 *e*PKPbc **PKPdf** **05 52 54.9 +0.3**
baz=16,slow=2.8
TLCR 144.46 326 ⇑P **PKPab** **05 52 56.7 +0.7**
BUR08 Bucovina Ar. S 144.50 332 PKPdf **PKPab** **05 52 56.9 +0.6**
BURAR Bucovina Array 144.51 332 ⇑P **PKPab** **05 52 57.3 +0.9**
BURAR Bucovina Array 144.51 332 PKPdf **PKPab** **05 52 56.4 +0.1**
BIZ Bicaz 144.60 330 ⇑P **PKPab** **05 52 57.2 +0.6**
BR131 Keskin Array S 144.64 315 PKPdf PKPbc 05 52 56.6 +0.2
BRTR Keskin Array B 144.64 315 PKP **PKPab** **05 52 57.0 -0.2**
comp=Z,4.2nm,0.5s,baz=132,slow=1.8,SNR=14
BRTR Keskin Array B 144.64 315 PKPdf PKPbc 05 52 56.6 +0.2
TESR Tescani 144.65 329 ⇑P **PKPab** **05 52 57.0 +0.2**
FLTG Flechtingen 144.76 350 *e*PKPbc PKPbc 05 52 56.5 +0.4
baz=16,slow=2.8
NRDL Niedersach Rie 144.79 351 *e*PKPbc **PKPab** **05 52 56.9 -0.1**
baz=16,slow=2.8
CFR Carcaliu 144.82 326 ⇑P **PKPab** **05 52 58.0 +0.6**
TPGR Topolog 144.88 326 ⇑P **PKPab** **05 52 57.5 -0.2**
KSP Ksiaz 145.03 344 *e*PKP **PKPab** **05 52 58.2 +0.1**
NIE Niedzica 145.04 338 *e*PKP **PKPab** **05 52 58.5 +0.3**
VRI Vrincioaia 145.07 329 ⇑P **PKPab** **05 52 58.7 +0.2**
PLOR Plostina 145.12 329 ⇑P **PKPbc** **05 52 57.9 +0.3**
IBBN Ibbenburen 145.28 353 *e*PKPbc **PKPab** **05 52 58.5 -0.5**
baz=16,slow=2.8
OSTC Ostas 145.31 343 *e*PKP **PKPab** **05 52 58.8 -0.4**
CHVC Chvalec 145.33 344 *e*PKP **PKPab** **05 52 58.8 -0.5**
CLZ Clausthal 145.38 350 *e*PKPbc **PKPab** **05 52 59.0 -0.5**
baz=16,slow=2.8
CLL Collm 145.40 347 *i* PKPbc **PKPbc** **05 52 58.5 +0.4**
comp=Z,33nm,1.0s
CLL Collm 145.40 347 PKPdf **PKPbc** **05 52 58.1 0.0**
CLL Collm 145.40 347 *e*PKPbc **PKPab** **05 52 58.8 -0.7**
baz=16,slow=2.8
DPC Dobruska-Polom 145.47 343 *e*PKP **PKPab** **05 52 59.4 -0.5**
LANS Liptovska Anna 145.55 339 *e*PKP **PKPab** **05 53 00.5 +0.2**
KRLC Kraliky 145.59 342 *e*PKP **PKPab** **05 52 59.6 -0.8**
BRG Berggiesshubel 145.60 346 *i* PKP **PKPbc** **05 52 59.4 +0.7**
BRG Amp 05 53 01.2
comp=Z,17nm,0.9s
BRG *ex* x 05 53 06.8
BRG Amp 05 53 07.6
comp=Z,4.8nm,0.7s
BRG Berggiesshubel 145.60 346 *e*PKPbc **PKPab** **05 52 59.6 -0.7**
baz=16,slow=2.8
BRG *e*PKPab **PKiKP** **05 53 01.0 -0.4**
baz=14,slow=4.1
MORC Moravsky Berou 145.63 341 ⇑P **PKPab** **05 52 59.7 -0.8**
MORC Moravsky Berou 145.63 341 *e*PKP **PKPbc** **05 52 59.4 +0.5**
MORC Moravsky Berou 145.63 341 **PKPab** **05 52 59.7 -0.8**
DOPR Dopca 145.65 330 ⇑P **PKPbc** **05 52 59.2 +0.1**
FBE Freiberg 145.69 347 *e*PKPbc **PKPab** **05 53 00.1 -0.5**
baz=16,slow=2.8
FBE *e*PKPab **PKiKP** **05 53 01.6 0.0**
baz=14,slow=4.1
MLR Muntele Rosu 145.72 329 ⇓P **PKPbc** **05 52 59.7 +0.2**
MLR Muntele Rosu 145.72 329 PKPdf **PKPdf** **05 52 58.3 +0.6**
GTTG Gottingen 145.73 351 *e*PKPbc **PKPab** **05 52 60.0 -0.8**
baz=16,slow=2.8
GTTG *e*PKPab **PKiKP** **05 53 01.4 -0.3**
baz=14,slow=4.1
NEUB Neuenburg 145.74 348 *e*PKPbc **PKPbc** **05 52 59.8 +0.7**
baz=16,slow=2.8
PVCC Panska Ves 145.77 345 *e*PKP **PKPab** **05 53 00.9 -0.1**
MDUB Mudurnu 145.88 318 **PKPbc** **05 52 59.1 -0.8**
BUG Bochum--Univer 146.19 353 *e*PKPbc **PKPbc** **05 53 01.1 +0.7**
baz=16,slow=2.8
VOIR 146.20 330 ⇑P **PKPbc** **05 53 01.1 +0.4**
DRGR 146.24 333 ⇑P **PKPbc** **05 53 01.3 +0.6**
PRU Pruhonice 146.27 345 *e*PKP **PKPbc** **05 53 01.3 +0.7**
KASTN Kahler Asten 146.29 352 *e*PKPbc **PKPbc** **05 53 01.3 +0.7**
baz=16,slow=2.8
KASTN *e*PKPab **PKPab** **05 53 03.3 +0.2**
baz=14,slow=4.1
MOX Moxa 146.31 348 *e*PKPbc **PKPbc** **05 53 01.3 +0.6**
baz=16,slow=2.8
MOX *e*PKPab **PKPab** **05 53 03.5 +0.3**
baz=14,slow=4.1
VRAC Vranov 146.33 342 *e*PKP **PKiKP** **05 53 02.4 -0.7**
VYHS Vyhne 146.33 339 *e*PKP **PKPbc** **05 53 01.9 +1.0**
PLN Plauen 146.35 348 *e*PKPbc **PKPbc** **05 53 01.7 +0.8**
baz=16,slow=2.8
PLN *e*PKPab **PKPab** **05 53 03.8 +0.5**
baz=14,slow=4.1
TANN Tannenbergstha 146.36 347 *e*PKPbc **PKPbc** **05 53 01.8 +0.9**
baz=16,slow=2.8
TANN *e*PKPab **PKPab** **05 53 04.0 +0.6**
baz=14,slow=4.1
WERD Werda 146.36 347 *e*PKPbc **PKPbc** **05 53 01.8 +0.9**
baz=16,slow=2.8
JAVC Velka Javorina 146.40 340 *e*PKP **PKiKP** **05 53 02.9 -0.4**
KOLL Kolacno 146.41 339 *e*PKP **PKiKP** **05 53 02.6 -0.6**
GUNZ Gunzen 146.43 347 *e*PKPbc **PKPbc** **05 53 02.1 +1.0**
baz=16,slow=2.8
GUNZ *e*PKPab **PKPab** **05 53 04.5 +0.8**
baz=14,slow=4.1
PSZ Piszkesteto 146.44 337 ⇑P **PKPbc** **05 53 01.5 +0.2**
PSZ Piszkesteto 146.44 337 **PKPdf** **05 52 58.9 +0.1**
PSZ PKPbc **PKPbc** **05 53 02.3 +1.0**
ARR Arges 146.45 330 ⇑P **PKiKP** **05 53 03.7 +0.1**
WERN Wernitzgruen 146.49 347 *e*PKPbc **PKPbc** **05 53 02.2 +1.0**
baz=16,slow=2.8
WERN *e*PKPab **PKPab** **05 53 04.9 +0.9**
baz=14,slow=4.1
KRUC Moravsky 146.61 342 *e*PKP **PKPbc** **05 53 02.2 +0.6**
PBCC Pribram 146.69 345 *e*PKP **PKPbc** **05 53 02.7 +0.9**
MANZ Manzenberg 146.84 347 *e*PKPbc **PKPbc** **05 53 03.1 +0.9**
baz=16,slow=2.8
ROTZ Rotzenmuhle 147.02 347 *e*PKPbc **PKiKP** **05 53 03.7 -0.8**
baz=16,slow=2.8
SIRR Siria 147.10 334 ⇑P **PKPbc** **05 53 01.8 -1.2**
AHRW Bad Neuenahr-A 147.10 353 *e*PKPbc **PKPbc** **05 53 03.5 +0.7**
baz=16,slow=2.8
AHRW *e*PKPab **PKPab** **05 53 06.7 +0.4**
baz=14,slow=4.1
MEM Membach 147.14 355 *d*PKP **PKPbc** **05 53 03.5 +0.6**
BTNL Ternell 147.15 354 *d*PKP **PKPbc** **05 53 03.6 +0.6**
BSTI Sart Tilman 147.20 355 *d*PKP **PKiKP** **05 53 04.0 -0.8**
TNS Taunus Mts 147.24 352 *e*PKPbc **PKPbc** **05 53 04.1 +0.8**
baz=16,slow=2.8
GRF Grafenberg Arr 147.29 348 *e*PKPbc **PKiKP** **05 53 04.4 -0.7**
baz=16,slow=2.8
GRF *e*PKPab **PKPab** **05 53 08.0 +0.8**
baz=14,slow=4.1
GZR Gura Zlata 147.29 332 ⇑P **PKPbc** **05 53 03.1 -0.5**
KHC Kasperske Hory 147.31 345 *e*PKP **PKPbc** **05 53 03.8 +0.3**
CKRC Cesky Krumlov 147.41 344 *e*PKP **PKiKP** **05 53 04.6 -0.7**
BGES Gesves 147.44 356 *d*PKP **PKPbc** **05 53 04.0 +0.4**
WET Wettzell 147.46 346 *e*PKPbc **PKiKP** **05 53 04.6 -0.8**
baz=16,slow=2.8
WET *e*PKPab **PKPab** **05 53 08.8 +1.0**
baz=14,slow=4.1
MILB Miltenberg 147.50 350 *e*PKPbc **PKPbc** **05 53 04.6 +0.8**
baz=16,slow=2.8
GEC2 GERESS Array S 147.54 345 **PKPbc** **05 53 04.7 +0.5**
GEC2 GERESS Array S 147.54 345 *e*PKPbc **PKiKP** **05 53 05.0 -0.7**
baz=16,slow=2.8
GEC2 *e*PKPab **PKPab** **05 53 08.9 +0.6**
baz=14,slow=4.1
GERES GERESS Array B 147.54 345 PKPbc **PKiKP** **05 53 05.0 -0.7**
comp=Z,1.9nm,0.5s,baz=82,slow=3.0,SNR=7.0
BZS Buzias 147.63 333 ⇓P **PKPbc** **05 53 03.5 -0.8**
DOU Dourbes 147.76 356 *d*PKP **PKiKP** **05 53 05.3 -0.7**
CONA Conrad Observa 147.78 342 *eP* **PKiKP** **05 53 05.7 -0.5**
comp=Z,8.6nm,0.6s
HERR Herculane 147.85 331 ⇑P **PKPdf** **05 53 02.9 +1.8**
WLF Walferdange 148.06 354 *d*PKP **PKiKP** **05 53 06.6 0.0**
WLF Walferdange 148.06 354 PKPdf **PKPdf** **05 53 02.8 +1.5**
WLF **PKiKP** **05 53 06.8 +0.2**
WLF Walferdange 148.06 354 *e*PKPbc **PKiKP** **05 53 06.8 +0.2**
baz=16,slow=2.8
MOA Molln 148.31 343 *eP* **PKiKP** **05 53 06.8 -0.4**
comp=Z,12nm,1.4s
ARSA Arzberg comp=Z,3.1nm,0.6s **148.49 341** *eP* **PKPbc** **05 53 06.7 +0.2**
FRGS Fruska Gora 148.76 335 ⇑P **PKPbc** **05 53 06.4 -0.8**
RJOB Jochberg 148.79 345 *e*PKPbc **PKiKP** **05 53 07.8 -0.4**
baz=16,slow=2.8
RJOB *e*PKPab **PKPab** **05 53 14.7 +1.2**
baz=14,slow=4.1
BFO Black Forest 149.11 351 **PKiKP** **05 53 08.5 -0.3**
BFO Black Forest 149.11 351 *e*PKPbc **PKiKP** **05 53 08.5 -0.3**
baz=16,slow=2.8
BFO *e*PKPab **PKPab** **05 53 14.9 +0.3**
baz=14,slow=4.1
BOVS Bovan 149.13 331 ⇓P **PKPbc** **05 53 06.0 -2.2**
VTS Vitosha 149.14 328 ⇑P **PKPbc** **05 53 06.5 -1.9**
VTS Vitosha 149.14 328 **PKPab** **05 53 09.2 -0.1**
SOKA Soboth 149.16 342 *i* P **PKPbc** **05 53 08.3 +0.1**
comp=Z,6.0nm,0.8s,baz=5.2
KBA Koelnbreinsper 149.27 344 *i* P **PKPbc** **05 53 08.5 -0.1**
comp=Z,6.0nm,0.5s,SNR=8.9
UBR Ueberruh 149.44 348 *e*PKPbc **PKiKP** **05 53 09.5 -0.1**
baz=16,slow=2.8
OBKA Obir 149.45 342 *eP* **PKPbc** **05 53 08.8 -0.2**
comp=Z,3.2nm,0.9s
WATA Walderalm 149.46 346 *eP* **PKPbc** **05 53 09.3 +0.3**
comp=Z,8.1nm,0.5s
RETA Reutte 149.49 347 *eP* **PKiKP** **05 53 09.7 -0.1**
comp=Z,4.3nm,0.5s
RETA *eP* **PKPab** **05 53 17.1 +0.8**
comp=Z,5.3nm,0.7s
WTTA Wattenberg 149.51 346 *i* P **PKiKP** **05 53 09.8 -0.1**
comp=Z,9.3nm,0.5s,SNR=6.7
WTTA *eP* **PKPab** **05 53 16.3 -0.3**
comp=Z,12nm,0.6s
DIVS Divibare 149.54 333 **PKiKP** **05 53 09.8 -0.1**
MOTA Moosalm 149.55 347 *eP* **PKPbc** **05 53 09.4 +0.2**
comp=Z,12nm,0.9s
MOTA *eP* **PKPab** **05 53 16.9 +0.2**

	comp=Z,12nm,0.9s								
MYKA	**Terra Mystica**	**149.60**	**343**	*i* P		**PKPbc**	**05 53 09.0**	**-0.2**
	comp=Z,7.6nm,0.5s,SNR=5.1								
SQTA	**Sankt Quirin**	**149.65**	**347**	*i* P		**PKiKP**	**05 53 09.8**	**-0.3**
	comp=Z,14nm,0.6s,SNR=6.0								
SQTA				*e*P		**PKPab**	**05 53 18.0**	**+1.0**
	comp=Z,3.8nm,0.5s								
CRES	**Cresnjev**	**149.78**	**340**	*i* PKPbc		**PKiKP**	**05 53 10.0**	**-0.3**
CRES				*i* PKPab		**PKPab**	**05 53 17.5**	**0.0**
ZOU	**Zoufplan**	**149.85**	**344**			**PKPbc**	**05 53 09.8**	**-0.2**
DAVA	**Damuels**	**149.86**	**348**	*e*P		**PKiKP**	**05 53 10.5**	**-0.1**
	comp=Z,9.3nm,0.8s								
LJU	**Ljubljana**	**149.88**	**342**	*i* PKPbc		**PKiKP**	**05 53 10.3**	**-0.2**
FETA	**Feichten**	**149.94**	**347**	*i* P		**PKiKP**	**05 53 10.9**	**+0.1**
	comp=Z,11nm,0.8s,SNR=7.3								
VISS	**Visnje**	**150.00**	**341**	*i* PKPbc		**PKiKP**	**05 53 10.5**	**-0.2**
VISS				*i* PKPab		**PKPab**	**05 53 18.4**	**-0.1**
STAL	**STALIGIAL**	**150.19**	**344**			**PKPbc**	**05 53 10.8**	**+0.2**
CTI	**Castel Tesino**	**150.65**	**345**			**PKiKP**	**05 53 12.3**	**+0.1**
CTI				PKPab		**PKPab**	**05 53 21.0**	**-0.3**
TUE	**Stuetta**	**150.74**	**349**			**PKiKP**	**05 53 13.2**	**+0.7**
SENIN	**Lac Senin/Sane**	**151.18**	**352**			**PKiKP**	**05 53 13.5**	**+0.1**
SENIN				PKPab		**PKPab**	**05 53 24.0**	**+0.3**
PDG	**Podgorica**	**151.20**	**332**	⇑P		**PKPdf**	**05 53 09.5**	**+3.1**
PDG	**Podgorica**	**151.20**	**332**			**PKiKP**	**05 53 13.4**	**+0.1**
PDG				PKPab		**PKPab**	**05 53 23.8**	**+0.3**
FNA	**Florina**	**151.43**	**327**			**PKPbc**	**05 53 13.6**	**0.0**
PCAB	**Cabril**	**154.91**	**17**	*e*PKPab		**PKPab**	**05 53 40.3**	**+0.9**
PBRG	**Braganca**	**155.15**	**15**	*e*PKPab		**PKPab**	**05 53 40.9**	**+0.4**
POLO	**Lamas de Olo**	**155.28**	**17**	*e*PKPdf		**PKPdf**	**05 53 12.3**	**-0.1**
POLO	**Lamas de Olo**	**155.28**	**17**	*e*PKPab		**PKPab**	**05 53 41.6**	**+0.5**
PVRL	**Vila Real**	**155.40**	**17**	*e*PKPab		**PKPab**	**05 53 42.5**	**+0.9**
MVO	**Moncorvo**	**155.68**	**16**	*e*PKPab		**PKPab**	**05 53 43.7**	**+0.9**
PVIS	**Viseu**	**155.87**	**18**	*e*PKPab		**PKPab**	**05 53 44.2**	**+0.6**
PCAS	**Casmilo, Conde**	**156.30**	**19**	*e*PKPab		**PKPab**	**05 53 45.7**	**+0.3**
PCBR	**Castelo Branco**	**156.80**	**18**	*e*PKPab		**PKPab**	**05 53 48.1**	**+0.5**
PMAFR	**Mafra**	**157.02**	**22**	*e*PKPab		**PKPab**	**05 53 48.8**	**+0.2**
PMTG	**Montargil**	**157.28**	**20**	*e*PKPab		**PKPab**	**05 53 49.8**	**+0.1**
PESTR	**Estremoz**	**157.66**	**19**	*e*PKPab		**PKPab**	**05 53 51.4**	**0.0**
ESDC	**Sonseca Array**	**157.79**	**11**	PKPab		**PKPab**	**05 53 52.1**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=334,slow=3.4,SNR=9.9								
ESDC	**Sonseca Array**	**157.79**	**11**			**PKPab**	**05 53 52.2**	**+0.2**
PBAR	**Barrancos**	**158.47**	**18**	*e*PKPab		**PKPab**	**05 53 55.5**	**+0.6**
PVAQ	**Vaqueiros**	**158.96**	**21**	*e*PKPdf		**PKPdf**	**05 53 18.2**	**+1.3**
PVAQ	**Vaqueiros**	**158.96**	**21**	*e*PKPab		**PKPab**	**05 53 59.0**	**+1.9**

*IDC **30** 05:45:58.9±1.3,28.°87N×106.°11E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/47,mbtmp3.6/5,ML4.3/1,MS2.9/1, Ms1 3.1/1,ms1mx2.5/36 Error ellipse: s-maj=61.1km s-min=22.5km az=59.0*

ISC 30 05:45:58.5±1.1,28.°88N±0.°09×106.°3E±0.°2,h10km,n9, σ2°13/14,mb3.6/4,Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GYA	**Guiyang**	**2.43**	**172**	*e*Pn	**Pb**	**05 46 42.3**	**-0.1**
GYA				Pg	Pg	05 46 51.0	+5.9
GYA				Sn	**Sg**	**05 47 20.0**	**+3.3**
GYA				smax	smax		
	comp=N,39nm,0.7s						
GYA				smax	smax		
	comp=E,50nm,0.9s						
GYA				LR	LR		
	comp=Z,27nm,3.4s						
CD2	**Chengdu**	**2.99**	**313**	Pn	**Pn**	**05 46 46.3**	**+0.3**
CD2				Pg	**Pg**	**05 46 54.8**	**-1.0**
CD2				Sn	**Sn**	**05 47 22.5**	**+0.5**
CD2				Sg	**Sg**	**05 47 35.0**	**+0.4**
CD2				smax	smax		
	comp=N,760nm,0.6s						
CD2				smax	smax		
	comp=E,1μm,0.7s						
QIZ	**Qiongzhong**	**10.33**	**161**	P	**Pn**	**05 48 23.0**	**-3.7**
QIZ				S	**Sn**	**05 50 19.8**	**-2.8**
QIZ				LR	LR		
	comp=N,140nm,10.4s						
QIZ				LR	LR		
	comp=E,180nm,7.6s						
QIZ				LR	LR		
	comp=Z,80nm,23.1s						
CMAR	**Chiang Mai Arr**	**12.37**	**215**	Pn	**Pn**	**05 48 54.7**	**0.0**
	comp=Z,0.5nm,0.3s,baz=28,slow=12,SNR=5.8						
CMAR				LR	LR	05 53 18.9	
	comp=Z,55nm,18.9s,baz=25,slow=36						
WMQ	**Urumqi**	**21.07**	**320**	*e*P	**P**	**05 50 42.8**	**0.0**
MKAR	**Makanchi Array**	**25.90**	**320**	P	**P**	**05 51 32.0**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=134,slow=10,SNR=5.3						
KURBB	**Kurchatov Arra**	**30.15**	**324**	P	**P**	**05 52 09.2**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=132,slow=9.2,SNR=4.6						
WRA	**Warramunga Arr**	**55.58**	**148**	P	**P**	**05 55 37.5**	**+3.1**
	comp=Z,0.4nm,0.7s,baz=334,slow=8.5,SNR=5.6						
ASAR	**Alice Springs**	**58.62**	**150**	P	**P**	**05 55 57.7**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=331,slow=6.9,SNR=4.3						

*NEIC **30** 05:50:22.3±1.2,49.°6S±0.°1×164.°3E±0.°2,h10km±2km, mb4.3/4,ML4.7(WEL), Error ellipse: s-maj=26.2km s-min=17.6km az=145.0*

*IDC **30** 05:50:23.9±4.9,48.°37S×164.°98E,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.8/27,mbtmp3.9/3, Error ellipse: s-maj=379.5km s-min=62.3km az=24.0*

ISC 30 05:50:23.0±1.5,49.°5S±0.°2×164.°4E±0.°1,h10km,n29, σ0s95/25,mb4.2/5,Auckland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	**3.67**	**26**	Pn	**Pn**	**05 51 20.6**	**+0.8**
WHZ	**Wether Hill Ro**	**4.34**	**35**		**Pn**	**05 51 29.6**	**+0.6**
WHZ					**Sn**	**05 52 19.1**	**-0.4**
DCZ	**Deep Cove**	**4.45**	**26**		**Pn**	**05 51 30.7**	**+0.3**
DCZ					**Sn**	**05 52 21.1**	**-1.0**
MLZ	**Mavora Lakes**	**4.85**	**33**		**Pn**	**05 51 37.9**	**+2.0**
WKZ	**Wanaka**	**5.64**	**36**	Pn	**Pn**	**05 51 48.9**	**+2.0**
ODZ	**Otahua Downs**	**6.17**	**46**	Pn	**Pn**	**05 51 54.6**	**+0.5**
LBZ	**Lake Benmore**	**6.47**	**40**	Pn	**Pn**	**05 51 57.3**	**-1.1**
FOZ	**Fox Glacier**	**7.04**	**34**	Pn	**Pn**	**05 52 07.2**	**+1.1**
RPZ	**Rata Peaks**	**7.39**	**41**	Pn	**Pn**	**05 52 09.5**	**-1.3**
MQZ	**McQueen's Vall**	**8.12**	**48**	Pn	**Pn**	**05 52 21.5**	**+0.6**
HIZ	**Hauiti**	**13.30**	**38**	Pn	**Pn**	**05 53 31.9**	**+0.1**
TAU	**Tasmania Unive**	**13.49**	**293**	Pn	**Pn**	**05 53 34.0**	**-0.4**
ASAR	**Alice Springs**	**35.11**	**306**	P	**P**	**05 57 15.8**	**-0.6**
	0.9nm,0.7s,baz=137,slow=8.2,SNR=13						
ASAR	**Alice Springs**	**35.11**	**306**	P	**P**	**05 57 16.2**	**-0.3**
WR0	**Warramunga Arr**	**37.86**	**310**	P	**P**	**05 57 39.5**	**-0.5**
WB2	**Warramunga Arr**	**37.97**	**310**	P	**P**	**05 57 41.0**	**+0.1**
WB2				IAmb	IAmb	05 57 46.3	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**37.97**	**310**	P	**P**	**05 57 40.6**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=134,slow=7.8,SNR=8.9						
WB0	**Warramunga Arr**	**38.09**	**310**	P	**P**	**05 57 41.8**	**-0.2**
WB0				IAmb	IAmb	05 58 07.6	
	comp=Z,5.9nm,1.2s						
H01W1	**Cape Leeuwin H**	**39.21**	**272**	T	T	06 39 11.0	
	baz=128,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**39.22**	**272**	T	T	06 39 12.0	
	baz=128,slow=76,SNR=40						
H01W3	**Cape Leeuwin H**	**39.23**	**272**	T	T	06 39 12.0	
	baz=128,slow=76,SNR=31						
FITZ	**Fitzroy Crossi**	**44.10**	**301**	P	**P**	**05 58 31.8**	**+0.4**
	comp=Z,3.5nm,1.0s,baz=146,slow=11,SNR=2.5						
FITZ	**Fitzroy Crossi**	**44.10**	**301**	P	**P**	**05 58 30.6**	**-0.8**
H08S2	**Diego Garcia H**	**85.46**	**264**	T	T	07 36 52.2	
	baz=140,slow=76,SNR=53						
H08S1	**Diego Carcia H**	**85.47**	**264**	T	T	07 36 48.6	
	baz=140,slow=76,SNR=41						
H08S3	**Diego Garcia H**	**85.48**	**264**	T	T	07 36 52.9	
	baz=140,slow=76,SNR=50						
GCMT	**Greycliff**	**150.64**	**54**		**PKPdf**	**06 09 13.3**	**-1.1**
ARCES	**ARCESS Array B**	**151.93**	**331**	PKPbc	**PKPbc**	**06 10 17.3**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=76,slow=3.8,SNR=5.8						
ARCES	**ARCESS Array B**	**151.93**	**331**		**PKiKP**	**06 10 18.4**	**+1.3**

RSNC 30 06:23:41.6±1.0,6.°81N×73.°14W,h150km±4km,ML3.3, Mw3.5,1C-3D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.22**	**191**	⇑*i*P	Pn	06 24 01.7	-0.6
BARC				*e*S	Sn	06 24 17.6	-0.4
BARC				*i*		06 24 18.0	
	comp=Z,830nm,0.2s						
BRRC	**Barranca, Sant**	**0.64**	**298**	⇓*i*P	Pn	06 24 03.5	-0.3
BRRC				*e*S	Sn	06 24 20.6	0.0
BRRC				*i*		06 24 23.1	
	comp=Z,264nm,0.3s						
PAMC	**Pamplona, Colo**	**0.69**	**40**	⇓*i*P	Pn	06 24 04.4	-0.2
PAMC				*e*S	Sn	06 24 21.8	-0.3
PAMC				*i*		06 24 23.2	
	comp=Z,170nm,0.4s						
RUSC	**La Rusia**	**0.91**	**176**	*e*P	Pn	06 24 05.6	-0.7
RUSC				*e*S	Sn	06 24 24.4	-0.7
RUSC				*i*		06 24 25.4	
	comp=Z,251nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	*e*P	Pn	06 24 08.1	-1.4
PTBC				*e*S	Sn	06 24 29.5	-1.3
PTBC				*i*		06 24 31.2	
	comp=Z,230nm,0.2s						
TAMC	**Tame, Arauca**	**1.39**	**105**	⇓*i*P	Pn	06 24 09.9	-0.2
TAMC				*i*		06 24 30.6	
	comp=Z,96nm,0.5s						
TAMC				*e*S	Sn	06 24 31.6	-0.2
OCAC	**Ocana**	**1.43**	**353**	*e*P	Pn	06 24 09.8	-0.9
OCAC				*e*S	Sn	06 24 32.5	-0.5
OCAC				*i*		06 24 34.8	
	comp=Z,593nm,0.2s						
SPBC	**San Pablo de B**	**1.48**	**219**	*e*P	Pn	06 24 10.4	-0.6
SPBC				*e*S	Sn	06 24 33.1	-0.5
SPBC				*i*		06 24 38.4	
	comp=Z,391nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.83**	**292**	*e*P	Pn	06 24 14.2	-0.6
ZARC				*e*S	Sn	06 24 40.2	-0.2
ZARC				*i*		06 24 48.7	
	comp=Z,190nm,0.4s						
NORC	**Norcasia**	**2.12**	**234**	*e*P	Pn	06 24 17.6	-0.6
NORC				*e*S	Sn	06 24 46.2	-0.1
NORC				*i*		06 24 50.9	
	comp=Z,198nm,0.2s						
SMLC	**San Martn de**	**2.18**	**335**	*e*P	Pn	06 24 18.4	-0.5
SMLC				*e*S	Sn	06 24 46.5	-1.2
SMLC				*i*		06 24 55.0	
	comp=Z,224nm,0.1s						
CHIC	**Chingaza**	**2.24**	**195**	*e*P	Pn	06 24 19.8	-0.3
CHIC				*e*S	Sn	06 24 49.5	-0.2
CHIC				*i*		06 24 56.1	
	comp=Z,91nm,0.4s						
ROSC	**El Rosal**	**2.28**	**211**	*e*P	Pn	06 24 21.3	+0.8
ROSC				*e*S	Sn	06 24 52.1	+1.7
ROSC				*i*		06 24 57.5	
	comp=Z,190nm,0.5s						
HELC	**Santa Helena**	**2.45**	**256**	*e*P	Pn	06 24 22.3	-0.2
HELC				*e*S	Sn	06 24 53.6	-0.3
HELC				*i*		06 25 01.3	
	comp=Z,96nm,0.5s						
UREC	**San Jos de Ur**	**2.55**	**292**	*e*S	Sn	06 24 53.2	-2.4
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*e*P	Pn	06 24 25.9	+0.1
GUY2C				*e*S	Sn	06 25 00.2	+0.3
GUY2C				*i*		06 25 08.0	
	comp=Z,170nm,0.3s						
VILC	**Villavicencio,**	**2.73**	**192**	*e*P	Pn	06 24 24.8	-1.0
VILC				*e*S	Sn	06 24 58.5	-1.5
VILC				*i*		06 25 03.5	
	comp=Z,97nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.00**	**252**	*e*P	Pn	06 24 29.5	+0.3
CBOC				*e*S	Sn	06 25 05.0	-0.9
CBOC				*i*		06 25 15.2	
	comp=Z,33nm,0.5s						
TOLC	**Tolima**	**3.10**	**225**	*e*P	Pn	06 24 30.9	+0.3
TOLC				*e*S	Sn	06 25 07.6	-0.8
TOLC				*i*		06 25 18.2	
	comp=Z,106nm,0.4s						
MOTC	**Monteria, Cord**	**3.17**	**308**	*e*P	Pn	06 24 29.0	-2.3
MOTC				*e*S	Sn	06 25 07.4	-2.3
MOTC				*i*		06 25 10.5	
	comp=Z,36nm,0.3s						
ANIL	**Santa Ana**	**3.22**	**224**	*e*P	Pn	06 24 32.8	+0.7
ANIL				*e*S	Sn	06 25 10.2	-1.0
ANIL				*i*		06 25 16.8	
	comp=Z,180nm,0.3s						
SDV	**Santo Domingo**	**3.23**	**50**	*e*P	Pn	06 24 31.2	-0.9
SDV				*e*S	Sn	06 25 08.3	-2.9
SDV				*i*		06 25 12.9	
	comp=Z,25nm,0.7s						
ORTC	**Ortega, Tolima**	**3.56**	**216**	*e*P	Pn	06 24 35.9	-0.4
ORTC				*e*S	Sn	06 25 19.2	+0.6
ORTC				*i*		06 25 25.9	
	comp=Z,72nm,0.3s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*e*P	Pn	06 24 35.5	-2.1
SJCC				*e*S	Sn	06 25 17.1	-4.1
SJCC				*i*		06 25 20.5	
	comp=Z,33nm,0.4s						
YOTC	**Yotoco, Valle**	**4.25**	**229**	*e*P	Pn	06 24 44.4	-0.8
YOTC				*i*		06 25 46.7	
	comp=Z,6.5nm,0.4s						
GUVC	**San Jose del G**	**4.27**	**173**	*e*P	Pn	06 24 44.3	-1.1
GUVC				*e*S	Sn	06 25 34.3	-0.8
GUVC				*i*		06 25 36.6	
	comp=Z,56nm,0.3s						
GARC	**Garzon, Huila**	**5.16**	**207**	*e*P	Pn	06 24 56.0	-1.4
GARC				*e*S	Sn	06 25 52.3	-4.2
GARC				*i*		06 25 58.1	
	comp=Z,32nm,0.2s						

*JMA **30** 06:23:50.7±0.2,24.°04N×122.°44E,h23km±4km,M2.4*
*TAP **30** 06:23:51.5,24.°15N×122.°44E,h29km±1km,ML3.0,D*

ISC 30 06:23:50.8±1.1,24.°07N±0.°03×122.°44E±0.°02,h24km±13km, n52,σ0s69/95,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.60**	**51**	P	**Pb**	**06 24 02.8**	**+0.1**
JYNG				S	**Sb**	**06 24 10.4**	**-0.4**
YOJ	**Yonaguni jima**	**0.66**	**53**	P	**Pb**	**06 24 03.4**	**-0.2**
YOJ				S	**Sb**	**06 24 12.0**	**-0.4**
YOJ	**Yonaguni jima**	**0.66**	**53**	P	**Pb**	**06 24 03.8**	**+0.2**
	baz=57						
YOJ				S	**Sb**	**06 24 12.7**	**+0.3**
	baz=57						
EWUT	**Wuta**	**0.71**	**302**	*i* P	**Pb**	**06 24 04.9**	**+0.4**
	baz=297						
EWUT				*i* S	**Sb**	**06 24 13.9**	**+0.1**
	baz=297						
TWC	**Suao**	**0.76**	**315**	*i* P	**Pb**	**06 24 04.8**	**-0.5**
	baz=311						
TWC				*i* S	**Sb**	**06 24 14.4**	**-0.9**
	baz=311						
NACB	**Ninganchiao**	**0.77**	**278**	P	**Pb**	**06 24 05.4**	**-0.2**
	baz=258						
NACB				*e*S	**Sn**	**06 24 17.8**	**+0.7**
	baz=258						
NDS	**Dongshan**	**0.86**	**311**	*i* P	**Pb**	**06 24 07.2**	**0.0**
	baz=308						
NDS				*i* S	**Sb**	**06 24 17.8**	**-0.5**
	baz=308						
ETLH	**Xiulin Townshi**	**0.88**	**279**	P	**Pb**	**06 24 07.0**	**-0.6**
	baz=275						
ETLH				S	**Sb**	**06 24 19.1**	**+0.2**
	baz=275						
TWE	**Neicheng**	**0.95**	**313**	*i* P	**Pn**	**06 24 08.6**	**-0.1**
	baz=311						
TWE				*i* S	**Sn**	**06 24 21.7**	**+0.1**
	baz=311						
NTC	**Toucheng**	**0.96**	**325**	*i* P	**Pb**	**06 24 08.8**	**+0.1**
	baz=323						
NTC				*i* S	**Sn**	**06 24 21.1**	**-0.6**
	baz=323						
ENTT	**Nioudou**	**0.97**	**306**	*i* P	**Pb**	**06 24 09.2**	**+0.1**
	baz=303						
ENTT				*i* S	**Sn**	**06 24 22.6**	**+0.5**
	baz=303						
NDT	**Datong Townshi**	**0.99**	**302**	P	**Pb**	**06 24 09.9**	**+0.5**
	baz=300						
NDT				S	**Sb**	**06 24 22.2**	**+0.1**
	baz=300						
NNSB	**Datong**	**1.02**	**291**	P	**Pn**	**06 24 09.5**	**-0.3**
	baz=288						
NNSB				S	**Sn**	**06 24 23.5**	**0.0**
	baz=288						
NNSH	**Datong**	**1.02**	**291**	*i* P	**Pn**	**06 24 09.9**	**+0.1**
	baz=288						
NNSH				*i* S	**Sn**	**06 24 23.5**	**0.0**
	baz=288						
NNS	**Nan Shan**	**1.04**	**291**	*i* P	**Pn**	**06 24 10.1**	**0.0**
	baz=288						
NNS				*i* S	**Sn**	**06 24 24.5**	**+0.7**
	baz=288						
TIPB	**Shuangxi**	**1.06**	**328**	*i* P	**Pn**	**06 24 10.1**	**-0.1**
	baz=327						
TIPB				*i* S	**Sn**	**06 24 23.7**	**-0.5**
	baz=327						
WHF	**Hehuan Shan**	**1.07**	**274**	*i* P	**Pn**	**06 24 10.8**	**+0.1**
	baz=271						
WHF				*e*S	**Sb**	**06 24 23.5**	**-1.2**
	baz=271						
HGSD	**Ruisui**	**1.09**	**238**	*e*P	**Pn**	**06 24 09.8**	**-0.8**
	baz=236						
HGSD				*e*S	**Sn**	**06 24 24.2**	**-0.7**
	baz=236						
FUSS	**Fushou**	**1.10**	**279**	*i* P	**Pb**	**06 24 11.6**	**+0.2**
	baz=276						
NWLT	**Wulai**	**1.10**	**310**	P	**Pb**	**06 24 11.1**	**-0.2**
	baz=308						
NWLT				S	**Sb**	**06 24 25.3**	**0.0**
	baz=308						
YHNB	**Yeheng**	**1.14**	**302**	P	**Pb**	**06 24 11.7**	**-0.1**
	baz=287						
YHNB				S	**Sn**	**06 24 25.7**	**-0.5**
	baz=287						
NSK	**Sanguang**	**1.15**	**302**	*i* P	**Pb**	**06 24 12.1**	**0.0**
	baz=287						
OWD	**Renai**	**1.16**	**265**	P	**Pn**	**06 24 12.1**	**+0.5**
	baz=262						
OWD				S	**Sb**	**06 24 27.6**	**+0.7**
	baz=262						
WFSB	**Wu-fen Shan**	**1.16**	**329**	P	**Pn**	**06 24 11.6**	**0.0**
	baz=328						
WFSB				S	**Sb**	**06 24 27.3**	**+0.4**
	baz=328						
TDCB	**Techi**	**1.18**	**279**	P	**Pn**	**06 24 12.4**	**+0.4**
	baz=265						
TDCB				*e*S	**Sn**	**06 24 26.8**	**-0.6**
	baz=265						
IRIF	**Iriomote-Funau**	**1.21**	**77**	P	**Pb**	**06 24 12.9**	**-0.2**
IRIF				S	**Sb**	**06 24 29.0**	**+0.7**
VWDT	**VWDT**	**1.23**	**255**	P	**Pn**	**06 24 13.2**	**+0.7**
	baz=253						
VWDT				S	**Sb**	**06 24 29.4**	**+0.7**
	baz=253						
YULB	**Yu-li**	**1.24**	**237**	*e*P	**Pn**	**06 24 12.4**	**-0.3**
	baz=251						
YULB				*e*S	**Sn**	**06 24 27.9**	**-0.9**
	baz=251						
TATO	**Taipei**	**1.25**	**316**	*e*P	**Pb**	**06 24 14.2**	**+0.5**
	baz=315						
TATO				*e*S	**Sb**	**06 24 30.3**	**+0.9**
	baz=315						
HATJ	**Hateruma jima**	**1.25**	**90**	P	**Pn**	**06 24 13.3**	**+0.5**
HATJ				*e*S	**Sb**	**06 24 29.5**	**0.0**
YM01	**YM01**	**1.33**	**324**	*e*P	**Pb**	**06 24 16.2**	**+1.1**
	baz=323						
YM01				S	**Sb**	**06 24 31.2**	**-0.6**
	baz=323						
YM08	**YM08**	**1.35**	**326**	P	**Pb**	**06 24 15.5**	**-0.1**
	baz=323						
WHP	**Taichung City**	**1.38**	**279**	*e*P	**Pb**	**06 24 17.3**	**+1.3**
	baz=266						
WHP				*e*S	**Sn**	**06 24 31.5**	**-0.7**
	baz=266						
DPDB	**Guoxing**	**1.38**	**269**	*e*P	**Pb**	**06 24 17.5**	**+1.5**
	baz=267						
DPDB				*e*S	**Sb**	**06 24 33.0**	**-0.2**
	baz=267						
SSLB	**Suanglung**	**1.38**	**259**	*e*P	**Pb**	**06 24 15.7**	**-0.3**
	baz=245						
LIOB	**Emei**	**1.42**	**294**	P	**Pb**	**06 24 16.5**	**-0.1**
	baz=293						
LIOB				S	**Sb**	**06 24 34.6**	**+0.3**
	baz=293						
NSTT	**Nanjuang**	**1.42**	**293**	P	**Pb**	**06 24 16.5**	**-0.2**
	baz=292						
NSTT				S	**Sb**	**06 24 34.6**	**+0.2**
	baz=292						
JKRS	**Kuro-shima**	**1.45**	**83**	P	**Pn**	**06 24 16.1**	**+0.6**
JKRS				S	**Sb**	**06 24 35.9**	**+0.8**
TYC	**Yuchr**	**1.45**	**264**	P	**Pn**	**06 24 16.5**	**+0.9**
	baz=262						
TYC				*e*S	**Sb**	**06 24 36.4**	**+1.1**
	baz=262						
EDH	**Donghe**	**1.51**	**224**	*e*P	**Pn**	**06 24 15.2**	**-1.1**
	baz=212						
EDH				*e*S	**Sn**	**06 24 33.0**	**-2.2**
	baz=212						
JIJ	**Ishigaki jima**	**1.59**	**79**	P	**Pn**	**06 24 16.7**	**-0.7**
JIJ				S	**Sn**	**06 24 37.4**	**+0.2**
PCYT	**Pengchaiyu**	**1.59**	**348**	P	**Pn**	**06 24 17.3**	**-0.2**
	baz=347						
ALS	**Alishan**	**1.59**	**250**	P	**Pn**	**06 24 19.1**	**+1.3**
	baz=248						
ALS				S	**Sn**	**06 24 38.4**	**+0.6**
	baz=248						
LDUT	**Ludao**	**1.65**	**213**	*e*P	**Pn**	**06 24 17.3**	**-1.0**
	baz=211						
CHN5	**Tsauling**	**1.68**	**254**	P	**Pn**	**06 24 20.1**	**+1.4**
	baz=253						
CHN5				*e*S	**Sb**	**06 24 42.3**	**+0.5**
	baz=253						
JISG	**Ishigakijimahi**	**1.79**	**73**	S	**Sn**	**06 24 42.3**	**+0.1**
WTP	**Ta-pu**	**1.86**	**244**	*i* P	**Pn**	**06 24 23.0**	**+1.7**
	baz=243						
WTP				*e*S	**Sb**	**06 24 47.5**	**+0.4**
	baz=243						
SLGT	**Liugui**	**1.96**	**237**	*e*S	**Sb**	**06 24 50.1**	**+0.2**
	baz=228						
JTJ	**Tarama**	**2.15**	**74**	P	**Pn**	**06 24 25.0**	**-0.1**
JTJ				*e*S	**Sn**	**06 24 51.6**	**+0.6**
MASBT	**Mashibuluo**	**2.20**	**229**	P	**Pn**	**06 24 27.1**	**+1.2**
	baz=223						
MASBT				*e*S	**Sb**	**06 24 55.7**	**-1.1**
	baz=223						
VWUC	**VWUC**	**2.87**	**289**	*e*P	**Pn**	**06 24 35.1**	**0.0**
	baz=288						
PTMZ	**Houxiangcun**	**3.17**	**288**	*e*P	**Pn**	**06 24 37.9**	**-1.3**
	baz=288						
PTMZ				*e*S	**Sn**	**06 25 14.8**	**-1.4**
	baz=288						

*BJI **

PICO A A 06 30 20.2
58µm,0.2s
ROSA Rosais 0.71 84 ⇑*i*P **Pg 06 30 11.3 +0.1**
ROSA *e*S **Sg 06 30 20.7 +0.2**
ROSA A A 06 30 22.3
8µm,0.2s
ROSA Rosais 0.71 84 Pg 06 30 11.2 0.0
PMAN Manadas 0.83 91 *e*P **Pg 06 30 13.0 -0.4**
PMAN *e*S **Sg 06 30 23.7 -0.5**
PID Ribeirinha 0.83 104 *e*P **Pb 06 30 13.3 -0.7**
PID *e*S **Sg 06 30 24.4 +0.1**
PID A A 06 30 27.3
3µm,0.2s
SRBC Serra Branca 0.95 65 *e*P **Pg 06 30 14.2 -1.5**
SRBC *e*S **Sg 06 30 25.8 -2.2**
SRBC A A 06 30 27.6
5µm,0.5s
PGRA Graciosa 0.99 67 *e*P **Pg 06 30 12.8 -3.6**
PGRA *e*S **Sg 06 30 25.2 -4.1**
PGRA A A 06 30 26.8
591nm,0.3s
ADH Angra Heroismo 1.50 89 *e*P **Pn 06 30 22.3 -2.0**
ADH *e*S **Sn 06 30 40.2 -3.7**
ADH A A 06 30 41.9
2µm,0.3s
PAGU Agualva, Azore 1.54 85 *e*P **Pn 06 30 22.8 -2.1**
PAGU *e*S **Sn 06 30 40.7 -4.3**
PAGU A A 06 30 43.5
1µm,0.2s
PSCM Serra do Cume 1.59 87 *e*P **Pn 06 30 23.4 -2.2**
PSCM *e*S **Sn 06 30 42.1 -4.1**
PSCM A A 06 30 44.5
1µm,0.2s
PSET Sete Cidades 2.82 106 *e*P **Pn 06 30 41.3 -1.3**
PSET *e*S **Sn 06 31 12.6 -4.0**
PSET A A 06 31 14.5
182nm,0.2s
PDA Ponta Delgada 2.89 107 *e*P **Pn 06 30 42.2 -1.2**
PDA *e*S **Sn 06 31 14.4 -3.8**
PDA A A 06 31 18.4
300nm,0.2s
GRON Grota Negra 2.98 106 *e*P **Pn 06 30 45.3 +0.6**
GRON *e*S **Sn 06 31 19.3 -1.2**
GRON A A 06 31 23.5
154nm,0.3s
CMLA Cha da Macela 2.99 106 *e*P **Pn 06 30 44.0 -0.8**
CMLA *e*S **Sn 06 31 16.6 -4.1**
CMLA A A 06 31 20.3
282nm,0.2s
CMLA Cha da Macela 2.99 106 Pn 06 30 43.9 -1.0
PCALD Caldeiras da R 3.00 105 *e*S **Sn 06 31 17.0 -4.1**
PCALD A A 06 31 20.2
137nm,0.2s
BART Pico Bartolome 3.25 104 *e*P **Pn 06 30 47.2 -1.3**
BART *e*S **Sn 06 31 23.2 -4.1**
BART A A 06 31 25.0
54nm,0.3s
PSMA Santa Maria 3.58 116 ⇓*i*P **Pn 06 30 51.4 -1.6**
PSMA *e*S **Sn 06 31 30.2 -5.2**
PSMA A A 06 31 32.7
164nm,0.2s
PSMN Pico do Norte, 3.62 116 ⇓*i*P **Pn 06 30 51.8 -1.8**
PSMN *e*S **Sn 06 31 31.8 -4.6**
PSMN A A 06 31 33.5
76nm,0.3s
PMOZ Porto Moniz, M 11.31 117 *e*P **Pn 06 32 38.5 -0.7**
59nm,0.7s
PMOZ Porto Moniz, M 11.31 117 Pn **Pn 06 32 38.3 -0.9**
PMAR Madeira 11.57 117 *e*P **Pn 06 32 43.5 +0.8**
66nm,1.7s
MACI Morro de la Ar 14.78 131 Pn **P 06 33 30.4 -2.3**
COI Coimbra 16.10 78 *e*P **P 06 33 51.1 +4.0**
COI Coimbra 16.10 78 P 06 33 50.5 +3.4
MORF Marmelete 16.22 88 *i*LQ LQ 06 33 56.5
PMTG Montargil 16.30 82 *e*P **P 06 33 52.1 +2.7**
22nm,1.4s
PVIS Viseu 16.49 76 *i*LQ LQ 06 33 58.6
PCVE Castro Verde 16.64 87 *i*LQ LQ 06 34 01.9
PESTR Estremoz 16.82 82 *i*LQ LQ 06 34 02.7
PCBR Castelo Branco 16.83 79 *e*P **P 06 33 59.1 +3.9**
16nm,1.6s
PMRV Marv??o 16.92 81 *i*LQ LQ 06 34 04.5
MVO Moncorvo 17.15 75 *e*P **P 06 34 00.3 +1.5**
28nm,1.6s
MVO *i*LQ LQ 06 34 06.5
PBAR Barrancos 17.33 85 *i*LQ LQ 06 34 08.3
SFS San Fernando 18.31 90 P **P 06 34 14.8 +3.2**
PAB San Pablo 19.26 80 P **Pn 06 34 26.9 +3.9**
ESDC Sonseca Array 19.54 79 Pn **Pn 06 34 26.3 -0.1**
0.2nm,0.3s,baz=316,slow=9.0,SNR=2.0
ESDC LR LR 06 40 39.7
comp=Z,48nm,20.5s,baz=270,slow=33
ESDC Sonseca Array 19.54 79 Pn 06 34 31.8 +5.4
ESBB Sonseca Array 19.54 79 P **Pn 06 34 30.7 +4.3**
MDT Midelt 20.73 99 P Pn 06 34 40.5 0.0
2.7nm,0.8s,baz=309,slow=10,SNR=6.1
MDT LR LR 06 41 12.2
comp=Z,68nm,18.9s,baz=290,slow=32
ESK Eskdalemuir 24.10 38 P **P 06 35 16.5 +3.5**
ESK IAmb IAmb 06 35 21.3
comp=Z,28nm,1.3s
EKA Eskdalemuir Ar 24.13 38 P **P 06 35 14.7 +1.4**
comp=Z,1.2nm,0.6s,baz=226,slow=7.8,SNR=5.5
BORG Borgarnes 26.54 8 LR LR 06 43 20.8
comp=Z,203nm,18.5s,baz=181,slow=30
DAVOX Davos/Dischmat 29.56 61 P **P 06 36 06.3 +3.9**
comp=Z,3.9nm,0.7s,baz=302,slow=11,SNR=4.7
DAVOX LR LR 06 45 53.9
comp=Z,99nm,20.7s,baz=264,slow=32
F64A Sherman 29.66 297 P **P 06 36 02.1 -1.0**
CTI Castel Tesino 30.78 63 P **P 06 36 17.4 +4.3**
GERES GERESS Array B 32.20 57 P **P 06 36 27.9 +2.3**
comp=Z,0.3nm,0.3s,baz=264,slow=6.4,SNR=5.8
GERES LR LR 06 49 10.6
comp=Z,55nm,18.2s,baz=265,slow=36
KOWA Kowa 32.72 130 P **P 06 36 31.6 +1.4**
KOWA IAmb IAmb 06 36 32.0
comp=Z,6.9nm,0.9s
PVCC Panska Ves 32.86 54 AMS AMS 06 48 20.0
comp=Z,100nm,17.4s
NOA NORSAR Array B 33.52 35 P **P 06 36 38.3 +1.4**
comp=Z,1.6nm,1.1s,baz=248,slow=9.3,SNR=3.7
NOA LR LR 06 48 30.3
comp=Z,168nm,19.8s,baz=250,slow=33
DPC Dobruska-Polom 33.97 55 AMS AMS 06 50 30.0
comp=Z,100nm,21.2s
DIVS Divibare 36.83 65 P **P 06 37 07.9 +2.2**
TOA0 Torodi Ar. Sit 37.30 124 P **P 06 37 10.1 +0.3**
TORD Torodi Ar. Bea 37.30 124 P **P 06 37 10.6 +0.8**
comp=Z,5.3nm,1.0s,baz=317,slow=8.4,SNR=17
TORD Torodi Ar. Bea 37.30 124 P **P 06 37 09.9 +0.1**
CRVS Cervenica-Dubn 37.32 57 *e*P P 06 37 17.4 +7.7
MTP Monte Pirata 37.68 247 P **P 06 37 11.1 -1.8**
DBIC Dimbokro 38.67 139 P **P 06 37 22.6 +1.3**
comp=Z,6.0nm,0.7s,baz=306,slow=6.5,SNR=9.4
DBIC LR LR 06 50 44.5
comp=Z,76nm,20.4s,baz=272,slow=32
DBIC Dimbokro 38.67 139 IAmb IAmb 06 37 25.4
comp=Z,7.3nm,0.8s
BLA Blacksburg 40.04 284 P **P 06 37 31.0 -1.6**
BLA IAmb IAmb 06 37 57.4
comp=Z,24nm,1.4s
FINES FINESS Array B 40.53 37 P **P 06 37 38.4 +2.0**
comp=Z,2.1nm,0.8s,baz=242,slow=12,SNR=3.6
FINES LR LR 06 53 27.1
comp=Z,150nm,18.6s,baz=246,slow=35
ARCES ARCESS Array B 42.14 25 P **P 06 37 48.9 -0.6**
comp=Z,2.5nm,0.8s,baz=246,slow=7.6,SNR=6.5
ARCES LR LR 06 52 14.5
comp=Z,91nm,21.2s,baz=275,slow=32
ARCES ARCESS Array B 42.14 25 IAmb IAmb 06 37 52.8
comp=Z,4.4nm,1.0s
AKASG Malin Array Be 42.17 54 P **P 06 37 50.3 +0.3**
comp=Z,4.2nm,0.7s,baz=275,slow=8.1,SNR=12
AKASG LR LR 06 52 59.4
comp=Z,59nm,20.7s,baz=220,slow=33
SPITS Spitsbergen Ar 43.80 12 LR LR 06 52 47.4
comp=Z,21nm,18.3s,baz=175,slow=31
OBN Obninsk 46.05 47 LR LR 06 56 49.4
comp=Z,32nm,20.8s,baz=2.5,slow=35
FVM French Village 47.27 289 P **P 06 38 30.7 -0.1**
FVM IAmb IAmb 06 38 31.0
comp=Z,5.3nm,0.6s
W45A Hickory Valley 47.39 285 P **P 06 38 31.4 -0.4**
BRTR Keskin Array B 47.77 68 LR LR 06 57 18.6
comp=Z,37nm,20.0s,baz=276,slow=34
OXF Oxford 47.81 285 P **P 06 38 34.2 -0.8**
P40A Paris 47.92 292 P **P 06 38 35.4 -0.5**
T42A Van Buren 48.11 288 P **P 06 38 35.9 -1.5**
Y45A Yeager Farm, C 48.17 284 P **P 06 38 37.9 0.0**
H10N2 ASCENSION HYDR 48.21 160 T T 07 29 47.7
baz=345,slow=75,SNR=100
H10N3 ASCENSION HYDR 48.22 160 T T 07 29 48.4
baz=345,slow=75,SNR=96
H10N1 ASCENSION HYDR 48.23 160 T T 07 29 49.2
baz=345,slow=75,SNR=110
N38A Joes South For 48.35 294 P **P 06 38 38.1 -1.0**
R40A Maddies Statio 48.52 290 P **P 06 38 39.8 -0.6**
R40A IAmb IAmb 06 38 40.6
comp=Z,7.8nm,0.9s
MGMO Mountain Grove 48.94 289 P **P 06 38 43.1 -0.7**
MGMO IAmb IAmb 06 38 46.5
comp=Z,10nm,1.1s
H10S3 ASCENSION HYDR 49.24 161 T T 07 31 05.8
baz=235,slow=74,SNR=14
H10S2 ASCENSION HYDR 49.25 161 T T 07 31 04.5
baz=345,slow=74,SNR=5.9
S39A Bolivar 49.51 290 P **P 06 38 47.3 -0.8**
U40A Yellville 49.68 288 P **P 06 38 48.7 -0.7**
U40A IAmb IAmb 06 38 51.9
comp=Z,7.9nm,0.9s
ECSD EROS Data Cent 49.76 299 P **P 06 38 49.6 -0.3**
ECSD IAmb IAmb 06 38 50.1
comp=Z,8.8nm,1.1s
CCAR Cane Creek 49.84 285 P **P 06 38 50.1 -0.5**
FFC Flin Flon 50.16 314 P **P 06 38 52.8 +0.1**
L34A Svendsen Farm, 50.18 296 P **P 06 38 52.0 -1.1**
L34A IAmb IAmb 06 38 52.8
comp=Z,12nm,0.9s
X40A Basin Creek Fa 50.41 286 P **P 06 38 53.9 -1.1**
X40A IAmb IAmb 06 38 57.5
comp=Z,5.6nm,0.8s
W39A Magazine 50.83 287 P **P 06 38 57.7 -0.5**
W39A IAmb IAmb 06 38 58.5
comp=Z,8.4nm,1.1s
MIAR Mount Ida 50.95 286 P **P 06 38 58.5 -0.5**
MIAR IAmb IAmb 06 38 59.2
comp=Z,9.6nm,1.1s
T35A Sooner Cattle 52.16 290 P **P 06 39 06.7 -1.4**
T35A IAmb IAmb 06 39 07.5
comp=Z,7.7nm,0.9s
KIRV Kirov 52.33 40 LR LR 07 01 03.5
comp=Z,134nm,18.1s,baz=305,slow=36
KBZ Khabaz 52.89 60 P **P 06 39 15.1 +1.8**
comp=Z,3.4nm,0.8s,baz=296,slow=5.1,SNR=6.7
BELG Belogornoye 53.04 48 LR LR 07 01 28.5
comp=Z,142nm,19.4s,baz=67,slow=36
KAN14 Manchester OK 53.20 291 P **P 06 39 15.1 -0.7**
YKA Yellowknife Ar 54.57 325 P **P 06 39 24.8 -0.6**
comp=Z,0.8nm,1.0s,baz=75,slow=6.9,SNR=6.7
YKA PcP **PcP 06 40 28.9 +0.5**
comp=Z,0.2nm,0.7s,baz=81,slow=4.5,SNR=3.7
YKA LR LR 06 59 59.6
comp=Z,65nm,18.4s,baz=0.0,slow=33
WHTX Lake Whitney, 54.98 285 P **P 06 39 28.4 -0.4**
BDFB Brasilia 56.82 202 LR LR 07 00 16.8
comp=Z,146nm,21.1s,baz=56,slow=32
JCT Junction City 57.46 285 P **P 06 39 46.0 -0.6**
JCT IAmb IAmb 06 39 49.1
comp=Z,7.4nm,0.9s
ARU Arti 57.69 41 P **P 06 39 48.4 +0.6**
comp=Z,1.8nm,0.2s,baz=314,slow=10,SNR=3.7
ARU Arti 57.69 41 IAmb IAmb 06 39 52.2
comp=Z,14nm,1.4s
RLMT Red Lodge 57.70 304 P **P 06 39 47.4 -0.9**
BW06 Boulder Array 58.88 302 P **P 06 39 55.4 -1.2**
BW06 IAmb IAmb 06 39 58.6
comp=Z,5.5nm,1.2s
PD31 Pinedale Array 58.88 302 P **P 06 39 55.4 -1.3**
PD31 IAmb IAmb 06 39 58.6
comp=Z,5.4nm,1.2s
PDAR Pinedale Array 58.88 302 P **P 06 39 55.4 -1.3**
comp=Z,2.0nm,1.0s,baz=76,slow=7.8,SNR=11
PDAR LR LR 07 03 56.0
comp=Z,45nm,19.7s,baz=162,slow=35
SNOW Snow King Moun 59.37 303 P **P 06 39 59.2 -0.8**
SNOW IAmb IAmb 06 40 00.6
comp=Z,5.3nm,1.1s
REDW Red Top Meadow 59.47 303 P **P 06 40 00.1 -0.7**
REDW IAmb IAmb 06 40 01.1
comp=Z,8.3nm,1.4s
INK Inuvik 59.66 335 P **P 06 40 00.2 -1.1**
comp=Z,1.3nm,0.9s,baz=81,slow=10,SNR=4.0
INK Inuvik 59.66 335 IAmb IAmb 06 40 10.3
comp=Z,6.9nm,1.4s
DLMT Dillon 59.73 306 P **P 06 40 02.1 -0.3**
AKTO Aktyubinsk 59.80 48 P **P 06 40 04.0 +1.4**
comp=Z,4.0nm,0.7s,baz=302,slow=5.3,SNR=15
AKTO LR LR 07 06 23.9
comp=Z,103nm,18.1s,baz=304,slow=36
RDMU Red Mountain 59.85 300 P **P 06 40 02.5 -0.9**
RDMU IAmb IAmb 06 40 03.5
comp=Z,3.2nm,0.9s
AHID Auburn Hatcher 59.90 303 P **P 06 40 02.6 -1.1**
AHID IAmb IAmb 06 40 04.0
comp=Z,10.0nm,1.3s
GDL2 Guadalupe Moun 60.05 289 P **P 06 40 04.6 -0.2**
HWUT Hardware Ranch 60.73 302 P **P 06 40 08.7 -0.6**
HWUT IAmb IAmb 06 40 17.5
comp=Z,13nm,1.6s
BNM Barren Site 60.77 292 P **P 06 40 09.5 -0.3**
TX31 Lajitas Ar. Si 60.95 286 P **P 06 40 10.4 -0.5**
TX32 Lajitas Array 60.95 286 P **P 06 40 10.3 -0.6**
TX32 IAmb IAmb 06 40 11.5
comp=Z,5.9nm,1.1s
TXAR Lajitas Array 60.95 286 P **P 06 40 10.4 -0.5**
comp=Z,2.5nm,0.7s,baz=75,slow=7.9,SNR=25
TXAR LR LR 07 06 49.2
comp=Z,50nm,18.2s,baz=0.0,slow=36
NEW Newport 61.23 310 P **P 06 40 11.8 -0.6**
NEW IAmb IAmb 06 40 13.3
comp=Z,7.9nm,1.1s
ABKAR Akbulak array 61.45 48 P **P 06 40 13.7 -0.1**
TMUT Trail Mountain 61.56 299 P **P 06 40 14.9 -0.3**
PLID Pearl Lake 62.00 307 P **P 06 40 17.3 -0.6**
PLID IAmb IAmb 06 40 18.4
comp=Z,5.3nm,0.9s
DUG Dugway, Tooele 62.22 301 P **P 06 40 18.4 -1.0**
DUG IAmb IAmb 06 40 23.3
comp=Z,9.0nm,1.4s
WUAZ Wupatki 63.51 295 P **P 06 40 27.4 -0.6**
WUAZ IAmb IAmb 06 40 29.8
comp=Z,5.3nm,0.9s
ELK Elko 63.58 302 P **P 06 40 28.4 -0.2**
PSUT Pine Spring 63.73 299 P **P 06 40 29.4 -0.2**
PSUT IAmb IAmb 06 40 46.0
comp=Z,4.3nm,1.2s
J08A Circle Bar Ran 64.39 306 P **P 06 40 34.4 +0.7**
TUC Tucson 64.70 292 P **P 06 40 34.5 -1.4**
BRVK Borovoye 65.26 41 P **P 06 40 39.8 +0.8**
BRVK IAmb IAmb 06 40 50.7
comp=Z,3.3nm,0.7s
BVAR Borovoye Array 65.33 41 P **P 06 40 39.9 +0.4**
comp=Z,1.2nm,0.7s,baz=248,slow=43,SNR=5.3
LPAZ La Paz 65.72 222 P **P 06 40 43.7 +0.7**
comp=Z,4.5nm,0.9s,baz=13,slow=5.7,SNR=15
LPAZ LR LR 07 06 24.4
comp=Z,82nm,21.6s,baz=122,slow=33
LPAZ La Paz 65.72 222 P **P 06 40 42.6 -0.5**
ILAR Eielson Array 66.06 335 P **P 06 40 43.4 -0.7**
comp=Z,0.4nm,0.7s,baz=40,slow=6.5,SNR=5.5
TPH Tonopah 66.25 300 P **P 06 40 45.2 -0.7**
MOD Modoc Plateau 66.29 305 P **P 06 40 46.0 0.0**
MOD IAmb IAmb 06 40 49.8
comp=Z,7.1nm,1.3s
KVN Kaiserville 66.33 302 P **P 06 40 45.8 -0.7**
KVN IAmb IAmb 06 40 46.8
comp=Z,4.4nm,1.1s
MCARA McCarthy VSAT 66.89 331 P **P 06 40 47.5 -1.8**
TRF Thorofare Moun 68.06 336 P **P 06 40 57.0 +0.1**
TRF IAmb IAmb 06 41 12.9
comp=Z,6.4nm,1.4s
PB16 IPOC Station P 68.14 222 P **P 06 40 58.9 +0.4**
PB16 IAmb IAmb 06 40 59.2
comp=Z,6.3nm,0.9s
MNMC Minye Minye 68.85 221 P **P 06 41 02.9 +0.4**
MNMC IAmb IAmb 06 41 22.4
comp=Z,6.7nm,1.1s
CPUP Villa Florida 69.82 207 LR LR 07 08 02.5
comp=Z,137nm,20.9s,baz=208,slow=33
KURBB Kurchatov Arra 70.85 40 P **P 06 41 14.8 +0.6**
comp=Z,3.1nm,0.8s,baz=310,slow=6.5,SNR=30
KKAR Karatay Array 70.90 50 P **P 06 41 14.8 +0.2**
ZALV Zalesovo Beam 71.72 35 P **P 06 41 20.2 +0.8**
comp=Z,0.9nm,0.3s,baz=294,slow=4.7,SNR=4.5
ZALV LR LR 07 11 06.3
comp=Z,60nm,21.5s,baz=36,slow=34
ARSB Arslanbob 73.43 50 P **P 06 41 30.2 +0.2**
ARSB IAmb IAmb 06 41 31.7
comp=Z,5.0nm,0.6s
MAKZ Makanchi 75.04 42 P **P 06 41 39.7 +0.6**
MK31 Makanchi Array 75.21 41 P **P 06 41 40.3 +0.2**
MKAR Makanchi Array 75.21 41 P **P 06 41 40.5 +0.4**
comp=Z,2.9nm,0.8s,baz=319,slow=5.7,SNR=27
MKAR LR LR 07 15 04.3
comp=Z,75nm,18.4s,baz=293,slow=36
KSH Kashi 76.34 50 P **P 06 41 48.8 +2.0**
KSH sP pwP 06 41 53.5 +3.7
KSH S **S 06 51 25.8 -6.0**
KSH SS **SS 06 56 27.5 +2.4**
KSH pmax pmax
comp=Z,6.0nm,1.1s
KSH pmax pmax
comp=Z,90nm,2.9s
KSH LR LR
comp=Z,56nm,5.7s
KSH LR LR
comp=Z,110nm,7.8s
SEY Seymchan 78.76 359 P **P 06 41 59.9 +0.2**
comp=Z,0.4nm,0.4s,baz=65,slow=23,SNR=4.7
WMQ Urumqi 80.03 41 *e*P **P 06 42 08.8 +1.7**
SONM Songino Array 85.24 28 P **P 06 42 34.5 +0.2**
comp=Z,2.4nm,0.9s,baz=329,slow=5.5,SNR=12
SONM LR LR 07 22 05.2
comp=Z,33nm,20.9s,baz=281,slow=37
ULN Ulaanbaatar 85.45 28 P **P 06 42 35.7 +0.3**
ULN IAmb IAmb 06 42 37.1
comp=Z,6.9nm,1.1s
KLR Kul'dur 90.88 12 P **P 06 43 00.5 -0.6**
comp=Z,1.0nm,0.6s,baz=326,slow=7.7,SNR=3.6
HHC Hu-ho-hao-te 93.12 29 *e*P **P 06 43 10.3 -1.5**
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,96nm,5.8s
ASAJ Asahikawa 97.28 6 LR LR 07 23 40.1
comp=Z,669nm,21.9s,baz=152,slow=33
WRA Warramunga Arr 156.51 42 PKPab **PKPab 06 50 20.6 -0.9**
comp=Z,0.9nm,0.9s,baz=336,slow=4.2,SNR=9.0
ASAR Alice Springs 159.23 49 PKPab **PKPab 06 50 33.2 -0.1**
comp=Z,1.1nm,0.8s,baz=318,slow=4.7,SNR=7.7

IDC 30 07:04:00.7 ± 0.9, 23.22 N × 142.01 E, h 0 km, mb 3.8/8, mb1 4.0/8, mb1mx3.6/49, mbtmp3.8/8, Error ellipse: s-maj=60.5km s-min=20.9km az=97.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**23.41**	**94**	T	T	T	07 32 59.0	
	baz=283,slow=74,SNR=1845							
H11N2	**WAKE ISLAND Hy**	**23.41**	**94**	T	T	T	07 32 59.1	
	baz=283,slow=74,SNR=1842							
H11N3	**WAKE ISLAND Hy**	**23.43**	**94**	T	T	T	07 33 00.2	
	baz=283,slow=74,SNR=1834							
H11S3	**WAKE ISLAND Hy**	**23.53**	**97**	T	T	T	07 33 06.7	
	baz=286,slow=75,SNR=124							
H11S1	**WAKE ISLAND Hy**	**23.53**	**97**	T	T	T	07 33 07.4	
	baz=286,slow=75,SNR=153							
H11S2	**WAKE ISLAND Hy**	**23.54**	**97**	T	T	T	07 33 08.1	
	baz=286,slow=75,SNR=122							
SEY	**Seymchan**	**40.31**	**7**	P	P	P	07 11 40.6	+1.1
	0.8nm,0.4s,baz=193,slow=6.6,SNR=4.2							
WRA	**Warramunga Arr**	**43.54**	**190**	P	P	P	07 12 06.3	-0.1
	2.0nm,0.8s,baz=9.4,slow=8.4,SNR=9.5							
ASAR	**Alice Springs**	**47.26**	**190**	P	P	P	07 12 36.1	+0.2
	0.8nm,0.8s,baz=14,slow=11,SNR=9.3							
YKA	**Yellowknife Ar**	**75.63**	**28**	P	P	P	07 15 47.5	+0.2
	0.1nm,0.5s,baz=292,slow=5.3,SNR=3.4							
FINES	**FINESS Array B**	**81.35**	**334**	P	P	P	07 16 20.0	+1.1
	1.3nm,0.6s,baz=59,slow=5.4,SNR=5.2							
AKASG	**Malin Array Be**	**85.64**	**324**	P	P	P	07 16 40.5	-0.8
	0.3nm,0.4s,baz=60,slow=3.0,SNR=4.1							
PDAR	**Pinedale Array**	**87.08**	**44**	P	P	P	07 16 48.0	-0.9
	0.2nm,0.5s,baz=135,slow=0.4,SNR=3.8							
NOA	**NORSAR Array B**	**87.14**	**338**	P	P	P	07 16 46.8	-1.7
	0.4nm,0.6s,baz=58,slow=4.2,SNR=1.3							

TAP 30 07:07:18.0, 24.04 N × 121.54 E, h 9 km ± 1 km, ML 1.2, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.07**	**48**	P	Pg	Pg	07 07 20.1	+0.1
	baz=52							
TWD				*e*S	Sg	Sg	07 07 21.6	+0.1
	baz=52							
HWA	**Hwalien**	**0.08**	**136**	*e*P	Pg	Pg	07 07 20.6	+0.4
	baz=132							
HWA				*e*S	Sg	Sg	07 07 22.1	+0.3
	baz=132							
NACB	**Ninganchiao**	**0.14**	**19**	*e*P	Pg	Pg	07 07 21.5	+0.3
	baz=19							
NACB				S	Sg	Sg	07 07 23.4	0.0
	baz=19							
ETLH	**Xiulin Townshi**	**0.18**	**342**	*e*P	Pg	Pg	07 07 21.8	0.0
	baz=342							
ETLH				*e*S	Sg	Sg	07 07 24.4	0.0
	baz=342							
ESL	**Shilin**	**0.24**	**204**	*e*P	Pg	Pg	07 07 23.0	+0.1
	baz=202							
ESL				*e*S	Sg	Sg	07 07 26.0	-0.2
	baz=202							
WHF	**Hehuan Shan**	**0.28**	**293**	*e*P	Pg	Pg	07 07 23.3	-0.4
	baz=293							
CHGB	**Renai**	**0.34**	**274**	*e*S	Sg	Sg	07 07 29.9	+0.6
	baz=274							
EWUT	**Wuta**	**0.46**	**28**	*e*S	Sg	Sg	07 07 31.7	-1.4
	baz=27							
VWDT	**VWDT**	**0.46**	**233**	*e*P	Pg	Pg	07 07 26.3	-0.7
	baz=232							
WPL	**Puli Township**	**0.54**	**268**	*e*S	Sg	Sg	07 07 35.2	-0.3
	baz=267							
HGSD	**Ruisui**	**0.55**	**191**	*e*P	Pg	Pg	07 07 28.4	-0.3
	baz=191							
HGSD				*e*S	Sg	Sg	07 07 36.6	+0.7
	baz=191							
ENTT	**Nioudou**	**0.60**	**2**	*e*S	Sg	Sg	07 07 37.8	+0.3
	baz=2.0							

TAP 30 07:07:22.6, 24.08 N × 121.62 E, h 11 km, ML 1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.02**	**282**	P	Pg	Pg	07 07 25.0	+0.3
	baz=295							
TWD				*e*S	Sg	Sg	07 07 26.4	+0.3
	baz=295							
HWA	**Hwalien**	**0.10**	**186**	*e*P	Pg	Pg	07 07 25.8	+0.4
	baz=182							
HWA				*e*S	Sg	Sg	07 07 28.3	+0.9
	baz=182							
NACB	**Ninganchiao**	**0.10**	**348**	P	Pg	Pg	07 07 26.2	+0.8
	baz=348							
NACB				S	Sg	Sg	07 07 28.4	+1.0
	baz=348							
ETLH	**Xiulin Townshi**	**0.18**	**317**	*e*P	Pb	Pb	07 07 27.8	-0.2
	baz=316							
ETLH				S	Sg	Sg	07 07 31.0	+1.5
	baz=316							
ESL	**Shilin**	**0.31**	**213**	*e*P	Pb	Pb	07 07 29.8	-0.4
	baz=211							
ESL				*e*S	Sb	Sb	07 07 34.4	-0.9
	baz=211							
WHF	**Hehuan Shan**	**0.33**	**282**	*e*P	Pb	Pb	07 07 30.3	-0.4
	baz=282							
WHF				*e*S	Sb	Sb	07 07 35.3	-0.9
	baz=282							
EWUT	**Wuta**	**0.40**	**22**	*e*P	Pg	Pg	07 07 30.8	+0.3
	baz=21							
EWUT				*e*S	Sb	Sb	07 07 37.3	-0.5
	baz=21							
CHGB	**Renai**	**0.41**	**268**	*e*P	Pg	Pg	07 07 31.3	+0.5
	baz=267							
CHGB				*e*S	Sb	Sb	07 07 37.6	-0.6

baz=267
NNSB Datong **0.41 329** *e*S Pb 07 07 31.4 -0.5
baz=339
NNSB Datong **0.41 329** *e*P Pb 07 07 31.6 -0.4
baz=328
NNSB *e*S Sb 07 07 37.4 -0.8
baz=328
NNSH Datong **0.41 329** *e*P Pb 07 07 31.6 -0.4
baz=328
NNSH *e*S Sb 07 07 37.6 -0.7
baz=328
NNS Nan Shan **0.42 328** *e*P Pg 07 07 31.6 +0.5
baz=329
NNS *e*S Sb 07 07 38.5 -0.2
baz=329
EGFH Guangfu **0.44 203** *e*P Pb 07 07 32.8 +0.4
baz=203
EGFH *e*S Sb 07 07 38.4 -0.6
baz=203
VWDT VWDT **0.54 234** *e*P Pg 07 07 33.6 +0.4
baz=233
VWDT *e*S Sb 07 07 41.4 -0.5
baz=233
VWDT VWDT **0.54 234** *e*S Pg 07 07 33.5 +0.3
baz=232
TWC Suao **0.57 22** *e*P Pb 07 07 34.2 -0.4
baz=22
TWC *e*S Sb 07 07 42.5 -0.3
baz=22
HGSD Ruisui **0.61 197** *e*P Pb 07 07 35.5 +0.3
baz=196
HGSD *e*S Sb 07 07 43.9 +0.1
baz=196

*LDG **30** 07:19:10.8±0.2, 48.°85N×4.°57W, h3km, Md1.9/2, Ml2.6/7, Error ellipse: s-maj=3.7km s-min=3.0km az=141.0*
*BGS **30** 07:19:11.0±0.9, 48.°80N×4.°73W, h10km, ML1.8*
ISC 30 07:19:09.5±1.4, **48.°88N**±0.°04×**4.°57W**±0.°05, **h12**km±12km, **n18**, σ0**966**/30, **France**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ROSF	**Rostrenen**	**1.02**	**122**	*e*Pg		**Pg**	**07 19 29.5**	**+0.5**
ROSF				*e*Sg		**Sn**	**07 19 43.0**	**-0.8**
	14nm,0.3s							
QUIF	**Quistinic**	**1.34**	**135**	*e*Pg		**Pg**	**07 19 35.4**	**+0.1**
QUIF				*e*Sg		**Sg**	**07 19 53.1**	**+0.4**
	14nm,0.2s							
CCA1	**Carnmenellis**	**1.38**	**342**	*e*P		**Pg**	**07 19 35.6**	**-0.3**
CCA1				*e*S		**Sg**	**07 19 53.9**	**0.0**
CCA1				IAML			07 19 55.0	
	comp=N,9.7nm,0.1s							
CCA1				IAML			07 19 55.2	
	comp=E,10.0nm,0.3s							
CCA1	**Carnmenellis**	**1.38**	**342**	*e*P		**Pg**	**07 19 35.6**	**-0.3**
CCA1				*e*S		**Sg**	**07 19 53.9**	**0.0**
CCA1				IAML			07 19 55.0	
	comp=N,9.7nm,0.1s							
CCA1				IAML			07 19 55.2	
	comp=E,10.0nm,0.3s							
SGMF	**Saint Gilles**	**1.48**	**114**	*e*Pg		**Pg**	**07 19 38.1**	**+0.3**
SGMF				*e*Sg		**Sg**	**07 19 57.3**	**+0.4**
	comp=E,13nm,0.4s							
JSA	**Saint Aubin**	**1.61**	**78**	*e*P		**Pg**	**07 19 40.5**	**+0.2**
JSA				*e*S		**Sg**	**07 20 01.8**	**+0.7**
JSA				IAML			07 20 04.7	
	comp=N,16nm,0.3s							
JSA				IAML			07 20 05.0	
	comp=E,14nm,0.2s							
JSA	**Saint Aubin**	**1.61**	**78**	*e*P		**Pg**	**07 19 40.5**	**+0.2**
JSA				*e*S		**Sg**	**07 20 01.8**	**+0.7**
JSA				IAML			07 20 04.7	
	comp=N,16nm,0.3s							
JSA				IAML			07 20 05.0	
	comp=E,14nm,0.2s							
DYA	**Yadsworthy**	**1.61**	**15**	*e*P		**Pg**	**07 19 40.4**	**0.0**
DYA				IAML			07 20 05.2	
	comp=N,5.2nm,0.1s							
DYA				IAML			07 20 06.8	
	comp=E,7.5nm,0.4s							
DYA	**Yadsworthy**	**1.61**	**15**	*e*P		**Pg**	**07 19 40.4**	**0.0**
DYA				IAML			07 20 05.2	
	comp=N,5.2nm,0.1s							
DYA				IAML			07 20 06.8	
	comp=E,7.5nm,0.4s							
JRS	**Jersey**	**1.66**	**78**	*e*P		**Pg**	**07 19 40.4**	**-0.9**
JRS				*e*S		**Sb**	**07 20 01.8**	**+1.0**
JRS				IAML			07 20 07.6	
	comp=N,13nm,0.3s							
JRS				IAML			07 20 08.6	
	comp=E,9.5nm,0.2s							
JRS	**Jersey**	**1.66**	**78**	*e*P		**Pg**	**07 19 40.4**	**-0.9**
JRS				*e*S		**Sb**	**07 20 01.8**	**+1.0**
JRS				IAML			07 20 07.6	
	comp=N,13nm,0.3s							
JRS				IAML			07 20 08.6	
	comp=E,9.5nm,0.2s							
JQE	**Queens East**	**1.69**	**78**	*e*S		**Sg**	**07 20 03.8**	**-0.2**
JQE	**Queens East**	**1.69**	**78**	*e*S		**Sg**	**07 20 03.8**	**-0.2**
GRR	**Gorron**	**2.51**	**100**	*e*Pg		**Pg**	**07 19 57.3**	**-0.2**
GRR				*e*Sg		**Sg**	**07 20 28.8**	**-1.2**
	comp=E,6.5nm,0.2s							
FLN	**La Foliniere**	**2.70**	**91**	*e*Pg		**Pg**	**07 20 01.0**	**-0.2**
FLN				*e*Sg		**Sg**	**07 20 35.3**	**-0.9**
	comp=E,6.9nm,0.3s							
LDF	**La Druitiere**	**2.96**	**94**	*e*Pg		**Pg**	**07 20 06.0**	**-0.1**
LDF				*e*Sg		**Sg**	**07 20 43.3**	**-1.1**
	comp=E,5.1nm,0.3s							
MFF	**Saint Martin d**	**3.75**	**126**	*e*Pn		**Pn**	**07 20 07.4**	**+0.2**
MFF	**Saint Martin d**	**3.75**	**126**	*e*Pg		**Pg**	**07 20 20.2**	**-1.2**

*LDG **30** 07:20:11.1±0.1, 48.°87N×4.°60W, h4km, Md3.0/2, Ml3.3/41, Error ellipse: s-maj=1.8km s-min=1.5km az=60.0*
*BGS **30** 07:20:11.8±1.9, 48.°89N×4.°83W, h10km, ML2.7*
ISC 30 07:20:09.3±1.1, **48.°82N**±0.°03×**4.°53W**±0.°04, **h10**km, **n56**, σ1§**89**/107, **France**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ROSF	**Rostrenen**	**0.96**	**120**	*e*Pg		**Pn**	**07 20 30.2**	**+1.3**
ROSF				*e*Sg		**Sn**	**07 20 43.7**	**+1.1**
	47nm,0.2s							
QUIF	**Quistinic**	**1.28**	**134**	*e*Pn		**Pg**	**07 20 35.3**	**+1.4**
QUIF	**Quistinic**	**1.28**	**134**	*e*Pg		**Pg**	**07 20 36.1**	**+2.2**
QUIF				*e*Sg		**Sg**	**07 20 53.8**	**+3.3**
	89nm,0.2s							
SGMF	**Saint Gilles**	**1.43**	**113**	*e*Pg		**Pg**	**07 20 38.8**	**+2.1**
SGMF				*e*Sg		**Sg**	**07 20 58.0**	**+2.8**
	65nm,0.2s							
CCA1	**Carnmenellis**	**1.44**	**342**	*e*P		**Pn**	**07 20 34.9**	**-0.6**
CCA1				*e*S		**Sn**	**07 20 53.5**	**-0.9**
CCA1				IAML			07 20 55.7	
	comp=N,73nm,0.1s							
CCA1				IAML			07 20 56.0	
	comp=E,79nm,0.3s							
CCA1	**Carnmenellis**	**1.44**	**342**	*e*P		**Pn**	**07 20 34.9**	**-0.6**
CCA1				*e*S		**Sn**	**07 20 53.5**	**-0.9**
CCA1				IAML			07 20 55.7	
	comp=N,73nm,0.1s							
CCA1				IAML			07 20 56.0	
	comp=E,79nm,0.3s							
JVM	**Valle D.L. Mar**	**1.58**	**75**	*e*P		**Pg**	**07 20 41.4**	**+1.9**
JVM	**Valle D.L. Mar**	**1.58**	**75**	*e*P		**Pg**	**07 20 41.4**	**+1.9**
JSA	**Saint Aubin**	**1.59**	**76**	*e*P		**Pg**	**07 20 40.8**	**+1.0**
JSA				*e*S		**Sg**	**07 21 02.4**	**+1.9**
JSA				IAML			07 21 05.6	
	comp=N,128nm,0.3s							
JSA				IAML			07 21 05.8	
	comp=E,110nm,0.2s							
JSA	**Saint Aubin**	**1.59**	**76**	*e*P		**Pg**	**07 20 40.8**	**+1.0**
JSA				*e*S		**Sg**	**07 21 02.4**	**+1.9**
JSA				IAML			07 21 05.6	
	comp=N,128nm,0.3s							
JSA				IAML			07 21 05.8	
	comp=E,110nm,0.2s							
JRS	**Jersey**	**1.65**	**76**	*e*S		**Sg**	**07 21 05.2**	**+3.0**
JRS				IAML			07 21 07.3	
	comp=N,83nm,0.3s							
JRS				IAML			07 21 09.3	
	comp=E,64nm,0.3s							
JRS	**Jersey**	**1.65**	**76**	*e*S		**Sg**	**07 21 05.2**	**+3.0**
JRS				IAML			07 21 07.3	
	comp=N,83nm,0.3s							
JRS				IAML			07 21 09.3	
	comp=E,64nm,0.3s							
JLP	**Les Platons**	**1.65**	**74**	*e*P		**Pg**	**07 20 42.8**	**+1.9**
JLP	**Les Platons**	**1.65**	**74**	*e*P		**Pg**	**07 20 42.8**	**+1.9**
DYA	**Yadsworthy**	**1.66**	**13**	*e*P		**Pn**	**07 20 39.0**	**+0.6**
DYA				*e*S		**Sn**	**07 20 59.3**	**-0.5**
DYA				IAML			07 21 05.9	
	comp=N,41nm,0.3s							
DYA				IAML			07 21 09.7	
	comp=E,57nm,0.5s							
DYA	**Yadsworthy**	**1.66**	**13**	*e*P		**Pn**	**07 20 39.0**	**+0.6**
DYA				*e*S		**Sn**	**07 20 59.3**	**-0.5**
DYA				IAML			07 21 05.9	
	comp=N,41nm,0.3s							
DYA				IAML			07 21 09.7	
	comp=E,57nm,0.5s							
JQE	**Queens East**	**1.68**	**76**	*e*S		**Sg**	**07 21 06.3**	**+2.9**
JQE	**Queens East**	**1.68**	**76**	*e*S		**Sg**	**07 21 06.3**	**+2.9**
HTL	**Hartland**	**2.17**	**1**	IAML			07 21 23.1	
	comp=N,65nm,0.5s							
HTL				IAML			07 21 25.7	
	comp=E,63nm,0.4s							
HTL	**Hartland**	**2.17**	**1**	IAML			07 21 23.1	
	comp=N,65nm,0.5s							
HTL				IAML			07 21 25.7	
	comp=E,63nm,0.4s							
GRR	**Gorron**	**2.47**	**99**	*e*Pn		**Pn**	**07 20 51.4**	**+1.8**
GRR	**Gorron**	**2.47**	**99**	*e*Pg		**Pg**	**07 20 58.0**	**+1.3**
GRR				*e*Sg		**Sg**	**07 21 29.6**	**+0.9**
	comp=E,50nm,0.2s							
FLN	**La Foliniere**	**2.68**	**90**	*e*Pn		**Pn**	**07 20 54.2**	**+1.8**
FLN	**La Foliniere**	**2.68**	**90**	*e*Pg		**Pg**	**07 21 01.5**	**+1.0**
	baz=270							
FLN				*e*Sn		**Sn**	**07 21 25.0**	**+0.2**
FLN				*e*Sg		**Sg**	**07 21 36.0**	**+0.8**
	comp=E,40nm,0.2s,baz=272							
LDF	**La Druitiere**	**2.93**	**93**	*e*Pn		**Pn**	**07 20 57.9**	**+2.1**
LDF	**La Druitiere**	**2.93**	**93**	*e*Pg		**Pg**	**07 21 06.8**	**+1.5**
LDF				*e*Sn		**Sn**	**07 21 30.9**	**-0.1**
LDF				*e*Sg		**Sg**	**07 21 44.0**	**+0.8**
	comp=E,64nm,0.4s							
MFF	**Saint Martin d**	**3.70**	**125**	*e*Pn		**Pn**	**07 21 08.0**	**+1.5**
MFF	**Saint Martin d**	**3.70**	**125**	*e*Pg		**Pg**	**07 21 20.5**	**+0.4**
MFF				*e*Sg		**Sg**	**07 22 09.1**	**+1.1**
	comp=E,13nm,0.3s							
HYF	**Humbligny**	**5.05**	**105**	*e*Pn		**Pn**	**07 21 25.9**	**+0.8**
HYF	**Humbligny**	**5.05**	**105**	*e*Pg		**Pg**	**07 21 45.7**	**-0.3**
HYF				*e*Sn		**Sn**	**07 22 22.7**	**-0.8**
HYF				*e*Sg		**Sg**	**07 22 51.3**	**-0.1**
TCF	**Toulx Ste Croi**	**5.22**	**117**	*e*Pn		**Pn**	**07 21 29.2**	**+1.8**
TCF	**Toulx Ste Croi**	**5.22**	**117**	*e*Pg		**Pg**	**07 21 49.6**	**+0.4**
TCF				*e*Sn		**Sn**	**07 22 27.2**	**-0.4**
TCF				*e*Sg		**Sg**	**07 22 55.9**	**-0.8**
	comp=E,4.9nm,0.3s							
LFF	**La Frestale**	**5.30**	**135**	*e*Pn		**Pn**	**07 21 29.9**	**+1.4**
LFF				*e*Sn		**Sn**	**07 22 29.1**	**-0.5**
LFF				*e*Sg		**Sg**	**07 22 59.2**	**-0.2**
	comp=E,24nm,0.6s							
RJF	**Les Rejaudoux**	**5.42**	**128**	*e*Pn		**Pn**	**07 21 31.7**	**+1.5**
RJF				*e*Sn		**Sn**	**07 22 31.1**	**-1.5**
RJF				*e*Sg		**Sg**	**07 23 03.3**	**0.0**
	comp=E,21nm,0.4s							
BGF	**Bois d'Agland**	**5.47**	**112**	*e*Pn		**Pn**	**07 21 31.9**	**+1.1**
BGF	**Bois d'Agland**	**5.47**	**112**	*e*Pg		**Pg**	**07 21 53.1**	**-0.9**
BGF				*e*Sn		**Sn**	**07 22 32.5**	**-1.2**
BGF				*e*Sg		**Sg**	**07 23 04.2**	**-0.6**
	comp=E,21nm,0.4s							
SSF	**Saint Saulge**	**5.68**	**105**	*e*Sn		**Sn**	**07 22 36.1**	**-2.8**
SSF				*e*Sg		**Sg**	**07 23 11.7**	**+0.2**
	comp=E,8.3nm,0.4s							
AVF	**Avril sur Loir**	**5.68**	**108**	*e*Pn		**Pn**	**07 21 35.0**	**+1.3**
AVF				*e*Sn		**Sn**	**07 22 37.1**	**-1.9**
AVF				*e*Sg		**Sg**	**07 23 09.9**	**-1.8**
	comp=E,4.1nm,0.4s							
BAIF	**Baives**	**5.83**	**74**	*e*Pn		**Pn**	**07 21 36.2**	**+0.5**
BAIF				*e*Sn		**Sn**	**07 22 39.4**	**-3.2**
BAIF				*e*Sg		**Sg**	**07 23 15.5**	**-0.9**
	comp=E,3.3nm,0.3s							
LOR	**Lormes**	**5.83**	**102**	*e*Pn		**Pn**	**07 21 37.0**	**+1.2**
	baz=282							
LOR				*e*Sn		**Sn**	**07 22 41.2**	**-1.6**
LOR				*e*Sg		**Sg**	**07 23 15.2**	**-1.3**
	comp=E,7.4nm,0.4s,baz=294							
CAF	**Calviac**	**5.97**	**128**	*e*Pn		**Pn**	**07 21 38.8**	**+1.1**
CAF				*e*Sn		**Sn**	**07 22 44.8**	**-1.2**
	comp=E,5.7nm,0.3s							
CAF				*e*Sg		**Sg**	**07 23 20.5**	**-0.2**
	comp=E,8.5nm,0.4s							
SMF	**Signal de Mont**	**6.05**	**108**	*e*Pn		**Pn**	**07 21 41.0**	**+2.2**
SMF				*e*Sn		**Sn**	**07 22 44.1**	**-4.0**
SMF				*e*Sg		**Sg**	**07 23 22.3**	**-1.1**
	comp=E,4.5nm,0.3s							
SJPF	**Ste Jean**	**6.16**	**157**	*e*Pn		**Pn**	**07 21 41.6**	**+1.4**
SJPF				*e*Sn		**Sn**	**07 22 49.1**	**-1.6**
	comp=E,4.6nm,0.3s							
SJPF				*e*Sg		**Sg**	**07 23 25.8**	**-1.0**
	comp=E,2.8nm,0.4s							
GIVF	**Givet**	**6.23**	**75**	*e*Sn		**Sn**	**07 22 51.2**	**-1.2**
	comp=E,4.4nm,0.2s							
SFTF	**Sexfontaines**	**6.39**	**92**	*e*Sn		**Sn**	**07 22 52.1**	**-4.2**
	comp=E,5.8nm,0.3s							
SFTF				*e*Sg		**Sg**	**07 23 33.4**	**-0.8**
	comp=E,12nm,0.5s							
SAVF	**Savonnieres en**	**6.39**	**88**	*e*Sn		**Sn**	**07 22 53.7**	**-2.7**
SAVF				*e*Sg		**Sg**	**07 23 31.7**	**-2.6**
	comp=E,7.5nm,0.4s							
ETSF	**Etsaut**	**6.54**	**153**	*e*Pn		**Pn**	**07 21 46.5**	**+0.9**
ETSF				*e*Sn		**Sn**	**07 22 58.1**	**-2.1**
	comp=E,1.2nm,0.2s							
EPF	**Esparros**	**6.71**	**148**	*e*Pn		**Pn**	**07 21 49.0**	**+1.1**
EPF				*e*Sn		**Sn**	**07 23 02.9**	**-1.5**
	comp=E,3.4nm,0.3s							
EPF				*e*Sg		**Sg**	**07 23 43.5**	**-1.1**
	comp=E,2.7nm,0.3s							
PAGF	**Fort de Pagny**	**6.79**	**88**	*e*Pn		**Pn**	**07 21 50.0**	**+1.0**
PAGF				*e*Sn		**Sn**	**07 23 02.6**	**-3.7**
	comp=E,2.2nm,0.3s							
MTLF	**Montolieu**	**7.21**	**137**	*e*Pn		**Pn**	**07 21 55.5**	**+0.8**
MTLF				*e*Sn		**Sn**	**07 23 14.2**	**-2.4**
	comp=E,2.4nm,0.3s							
HAU	**Haudompre**	**7.29**	**92**	*e*Pn		**Pn**	**07 21 56.6**	**+0.9**
HAU				*e*Sn		**Sn**	**07 23 12.8**	**-5.7**
	comp=E,3.4nm,0.3s							
HAU				*e*Sg		**Sg**	**07 23 59.9**	**-3.1**
	comp=E,7.7nm,0.5s							
VIVF	**Saint-Julien-l**	**7.45**	**119**	*e*Pn		**Pn**	**07 21 59.1**	**+1.1**
VIVF				*e*Sg		**Sg**	**07 24 06.4**	**-1.9**
	comp=E,5.5nm,0.6s							
LASF	**Ste Croix**	**7.49**	**126**	*e*Pn		**Pn**	**07 21 59.6**	**+1.1**
LASF				*e*Sn		**Sn**	**07 23 20.6**	**-2.8**
LASF				*e*Sg		**Sg**	**07 24 08.2**	**-1.2**
	comp=E,4.0nm,0.5s							
CABF	**La Chapelle**	**7.49**	**103**	*e*Pn		**Pn**	**07 21 59.6**	**+0.9**
CABF				*e*Sn		**Sn**	**07 23 20.4**	**-3.3**
CABF				*e*Sg		**Sg**	**07 24 07.0**	**-2.7**
	comp=E,3.7nm,0.6s							
HINF	**Hinteralfeld**	**7.66**	**93**	*e*Sn		**Sn**	**07 23 24.2**	**-3.4**
HINF				*e*Sg		**Sg**	**07 24 12.0**	**-2.8**
	comp=E,4.8nm,0.4s							
CDF	**Champ du Feu**	**7.84**	**89**	*e*Sn		**Sn**	**07 23 28.3**	**-3.8**
	comp=E,2.3nm,0.3s							

*KRSC **30** 07:24:57.2±0.9, 56.°13N×163.°01E, h17km±6km, ML4.4*
*IDC **30** 07:24:57.4±1.1, 56.°40N×162.°36E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.7/65, mbtmp3.8/12, ML2.7/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/50, Error ellipse: s-maj=29.3km s-min=17.5km az=158.0*
*MOS **30** 07:24:58.9±1.4, 56.°26N×162.°81E, h24km, mb4.1/6, Error ellipse: s-maj=8.3km s-min=4.2km az=64.7*
ISC 30 07:24:58.0±0.9, **56.°39N**±0.°04×**162.°90E**±0.°03, **h13**km±6km, **n110**, σ1§**32**/128, **mb4.0**/13, **1D**, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.17**	**218**	PN		**Pb**	**07 25 02.7**	**-0.3**
KBG				S		**Sg**	**07 25 05.5**	**+0.7**
KBG	**Krutoberegovo**	**0.17**	**218**	*e*P		**Pb**	**07 25 02.7**	**-0.3**
KBG				*e*S		**Sg**	**07 25 05.5**	**+0.7**
KBTR	**Krutoberegovo**	**0.19**	**194**	PN		**Pg**	**07 25 02.5**	**+0.2**
KBTR	**Krutoberegovo**	**0.19**	**194**	*e*P		**Pg**	**07 25 02.5**	**+0.2**
SMKR	**Semkarok**	**0.82**	**284**	PN		**Pn**	**07 25 14.9**	**-0.3**
SMKR	**Semkarok**	**0.82**	**284**	*e*P		**Pn**	**07 25 14.9**	**-0.3**

BDR	**Baidarnaya**	**0.95**	**281**	PN		**Pn**	**07 25 17.2**	**+0.1**
BDR	**Baidarnaya**	**0.95**	**281**	*e*P		**Pn**	**07 25 17.2**	**+0.1**
SRKR	**Sorokina**	**0.99**	**286**	PN		**Pn**	**07 25 18.0**	**+0.3**
SRKR	**Sorokina**	**0.99**	**286**	*e*P		**Pn**	**07 25 18.0**	**+0.3**
ZLN	**Zelenaya**	**1.23**	**253**	PN		**Pn**	**07 25 20.2**	**-0.7**
ZLN	**Zelenaya**	**1.23**	**253**	*e*P		**Pn**	**07 25 20.2**	**-0.7**
KLY	**Klyuchi**	**1.25**	**267**	PN		**Pn**	**07 25 19.1**	**-2.0**
KLY				S		**Sb**	**07 25 34.5**	**-2.9**
KLY	**Klyuchi**	**1.25**	**267**	*e*P		**Pn**	**07 25 19.1**	**-2.0**
KLY				*e*S		**Sb**	**07 25 34.5**	**-2.9**
LGNR	**Loginova**	**1.27**	**257**	PN		**Pn**	**07 25 21.1**	**-0.6**
LGNR	**Loginova**	**1.27**	**257**	*e*P		**Pn**	**07 25 21.1**	**-0.6**
KRSR	**Krestovskiy**	**1.31**	**263**	PN		**Pn**	**07 25 21.3**	**-0.8**
KRSR	**Krestovskiy**	**1.31**	**263**	*e*P		**Pn**	**07 25 21.3**	**-0.8**
BZGR	**Bezymyannyi-Gr**	**1.31**	**251**	PN		**Pn**	**07 25 21.0**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**1.31**	**251**	*e*P		**Pn**	**07 25 21.0**	**-1.1**
BZWR	**Bezymyannyi-We**	**1.41**	**253**	PN		**Pn**	**07 25 22.8**	**-0.7**
BZWR	**Bezymyannyi-We**	**1.41**	**253**	*e*P		**Pn**	**07 25 22.8**	**-0.7**
BZMR	**Bezymyannaya**	**1.42**	**252**	PN		**Pn**	**07 25 22.8**	**-0.8**
BZMR	**Bezymyannaya**	**1.42**	**252**	*e*P		**Pn**	**07 25 22.8**	**-0.8**
KIRR	**Kirishev**	**1.50**	**254**	PN		**Pn**	**07 25 24.0**	**-0.6**
KIRR				S		**Sb**	**07 25 45.1**	**+0.5**
KIRR	**Kirishev**	**1.50**	**254**	*e*P		**Pn**	**07 25 24.0**	**-0.6**
KIRR				*e*S		**Sb**	**07 25 45.1**	**+0.5**
KPT	**Kopyto**	**1.56**	**255**	PN		**Pn**	**07 25 24.9**	**-0.5**
KPT	**Kopyto**	**1.56**	**255**	*e*P		**Pn**	**07 25 24.9**	**-0.5**
KMNR	**Kamenistaya**	**1.62**	**248**	PN		**Pn**	**07 25 26.1**	**-0.2**
KMNR	**Kamenistaya**	**1.62**	**248**	*e*P		**Pn**	**07 25 26.1**	**-0.2**
SRDR	**Sredinnyy**	**1.77**	**269**	PN		**Pb**	**07 25 29.3**	**-1.0**
SRDR	**Sredinnyy**	**1.77**	**269**	*e*P		**Pb**	**07 25 29.3**	**-1.0**
TUMD	**Tumrok D**	**1.85**	**231**	*e*P		**Pn**	**07 25 28.0**	**-1.3**
TUMD				*e*S		**Sn**	**07 25 51.5**	**-1.0**
TUMR	**Tumrok**	**1.91**	**236**	PN		**Pn**	**07 25 28.0**	**-2.3**
TUMR				S		**Sn**	**07 25 51.5**	**-2.7**
TUMR	**Tumrok**	**1.91**	**236**	*e*P		**Pn**	**07 25 29.8**	**-0.5**
TUMR				*e*S		**Sn**	**07 25 54.6**	**+0.4**
KZV	**Kizimen**	**1.95**	**230**	PN		**Pn**	**07 25 29.8**	**-1.1**
KZV	**Kizimen**	**1.95**	**230**	*e*P		**Pn**	**07 25 29.8**	**-1.1**
MKZ	**Mys Kozlova**	**1.96**	**200**	PN		**Pn**	**07 25 29.4**	**-1.4**
MKZ				S		**Sn**	**07 25 53.3**	**-1.9**
MKZ	**Mys Kozlova**	**1.96**	**200**	*e*P		**Pn**	**07 25 29.4**	**-1.4**
MKZ				*e*S		**Sn**	**07 25 53.3**	**-1.9**
BKI	**Bering**	**2.10**	**123**	PN		**Pn**	**07 25 32.2**	**-0.6**
BKI				S		**Sn**	**07 25 57.9**	**-0.9**
BKI	**Bering**	**2.10**	**123**	*e*P		**Pn**	**07 25 32.2**	**-0.6**
BKI				*e*S		**Sn**	**07 25 57.9**	**-0.9**
ESO	**Esso**	**2.40**	**260**	PN		**Pn**	**07 25 38.2**	**+1.3**
ESO	**Esso**	**2.40**	**260**	*e*P		**Pn**	**07 25 38.2**	**+1.3**
OSSR	**Ossora**	**2.87**	**2**	PN		**Pb**	**07 25 48.0**	**-0.9**
OSSR	**Ossora**	**2.87**	**2**	*e*P		**Pb**	**07 25 48.0**	**-0.9**
SPN	**Mys Shipunski**	**3.70**	**208**	PN		**Pn**	**07 25 52.5**	**-2.2**
SPN	**Mys Shipunski**	**3.70**	**208**	*e*P		**Pn**	**07 25 52.5**	**-2.2**
SPN				*e*S		**Sn**	**07 26 34.3**	**-3.8**
NLC	**Nalytchevo**	**3.83**	**214**	PN		**Pn**	**07 25 55.5**	**-1.0**
NLC				S		**Sn**	**07 26 39.2**	**-2.1**
NLC	**Nalytchevo**	**3.83**	**214**	*e*P		**Pn**	**07 25 55.5**	**-1.0**
NLC				*e*S		**Sn**	**07 26 39.2**	**-2.1**
SDLR	**Sedlovina**	**3.89**	**218**	PN		**Pn**	**07 25 56.9**	**-0.6**
SDLR	**Sedlovina**	**3.89**	**218**	*e*P		**Pn**	**07 25 56.9**	**-0.6**
KRX	**Arik**	**3.91**	**221**	PN		**Pn**	**07 25 57.9**	**+0.2**
KRX	**Arik**	**3.91**	**221**	*e*P		**Pn**	**07 25 57.9**	**+0.2**
KRER	**Koryakskii**	**3.92**	**219**	PN		**Pn**	**07 25 58.0**	**+0.1**
KRER	**Koryakskii**	**3.92**	**219**	*e*P		**Pn**	**07 25 58.0**	**+0.1**
GNL	**Ganaly**	**3.93**	**229**	PN		**Pn**	**07 25 58.4**	**+0.4**
GNL	**Ganaly**	**3.93**	**229**	*e*P		**Pn**	**07 25 58.4**	**+0.4**
SMAR	**Somma**	**3.93**	**219**	PN		**Pn**	**07 25 57.9**	**-0.2**
SMAR	**Somma**	**3.93**	**219**	*e*P		**Pn**	**07 25 57.9**	**-0.2**
AVH	**Avacha**	**3.95**	**219**	PN		**Pn**	**07 25 58.2**	**-0.1**
AVH	**Avacha**	**3.95**	**219**	*e*P		**Pn**	**07 25 58.2**	**-0.1**
KOK	**Koryaka**	**3.96**	**220**	PN		**Pn**	**07 25 58.7**	**+0.2**
KOK	**Koryaka**	**3.96**	**220**	*e*P		**Pn**	**07 25 58.7**	**+0.2**
UGLR	**Uglovaya**	**3.97**	**218**	PN		**Pn**	**07 25 58.3**	**-0.2**
UGLR	**Uglovaya**	**3.97**	**218**	*e*P		**Pn**	**07 25 58.3**	**-0.2**
DALK	**Dalny**	**4.14**	**217**	PN		**Pn**	**07 26 00.0**	**-0.8**
DALK				S		**Sn**	**07 26 49.0**	**+0.1**
DALK	**Dalny**	**4.14**	**217**	*e*P		**Pn**	**07 26 00.0**	**-0.8**
DALK				*e*S		**Sn**	**07 26 49.0**	**+0.1**
PET	**Petropavlovsk**	**4.18**	**218**	*d i* PN		**Pn**	**07 26 00.9**	**-0.4**
PET				*i* S		**Sn**	**07 26 49.2**	**-0.7**
PET	**Petropavlovsk**	**4.18**	**218**	*e*P		**Pn**	**07 26 01.0**	**-0.4**
TILK	**Tilichiki**	**4.41**	**21**	PN		**Pb**	**07 26 10.8**	**-4.3**
TILK	**Tilichiki**	**4.41**	**21**	*e*P		**Pb**	**07 26 10.8**	**-4.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKEN	**Kujiedanarisaw**	**0.37**	**249**	P	**Pn**	**07 33 49.7**	**-0.2**
JKEN				S	**Sn**	**07 33 56.9**	**-0.1**
JTH	**Tanohata**	**0.46**	**210**	P	**Pn**	**07 33 50.7**	**-0.2**
JTH				*e*S	**Sn**	**07 33 58.6**	**-0.1**
JANG	**Nango**	**0.49**	**274**	P	**Pn**	**07 33 51.5**	**+0.2**
JANG				S	**Sn**	**07 33 59.7**	**+0.3**
JKZ	**Kuzumaki**	**0.73**	**241**	P	**Pn**	**07 33 55.1**	**+0.8**
JKZ				S	**Sn**	**07 34 05.8**	**+1.3**
JARK	**Aomorirokkasho**	**0.90**	**318**	P	**Pn**	**07 33 56.1**	**-0.4**
JARK				S	**Sn**	**07 34 07.6**	**-0.9**
JTM	**Tenmabayashi**	**0.94**	**299**	P	**Pn**	**07 33 57.0**	**-0.1**
JTM				S	**Sn**	**07 34 09.9**	**+0.4**
JOM	**Ohasama**	**1.09**	**218**	P	**Pn**	**07 34 00.0**	**+0.9**
JAH	**Hinai**	**1.17**	**263**	P	**Pn**	**07 34 01.2**	**+1.0**
JAH				*e*S	**Sn**	**07 34 16.7**	**+1.6**
JOT	**Ohata**	**1.34**	**321**	P	**Pn**	**07 34 01.8**	**-0.6**
ASAJ	**Asahikawa**	**3.79**	**5**	P	**Pn**	**07 34 36.4**	**+0.4**
	5.1nm,0.3s,baz=223,slow=13,SNR=13						
ASAJ				S	**Sn**	**07 35 22.3**	**+3.1**
	2.6nm,0.3s,baz=307,slow=34,SNR=1.4						
MJAR	**Matsushiro Arr**	**4.90**	**221**	P	**Pn**	**07 34 54.9**	**+3.7**
	0.3nm,0.3s,baz=34,slow=13,SNR=12						
USRK	**Ussuriysk Ar.**	**8.47**	**300**	P	**Pn**	**07 35 43.8**	**+3.8**
	baz=104,slow=15,SNR=11						
KSRS	**Korea Array**	**11.46**	**260**	LR	LR	07 40 44.4	
	comp=Z,38nm,18.0s,baz=136,slow=36						
SONM	**Songino Array**	**26.57**	**298**	P	**P**	**07 39 12.6**	**-0.8**
	0.4nm,0.5s,baz=87,slow=7.7,SNR=2.7						
H11S1	**WAKE ISLAND Hy**	**30.32**	**129**	T	T	08 12 26.7	
	baz=322,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**30.32**	**129**	T	T	08 12 27.5	
	baz=322,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**30.34**	**129**	T	T	08 12 22.9	
	baz=322,slow=76,SNR=12						
ZALV	**Zalesovo Beam**	**40.19**	**310**	P	**P**	**07 41 11.3**	**+0.1**
	1.2nm,0.4s,baz=91,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**42.94**	**299**	P	**P**	**07 41 33.9**	**+0.1**
	1.5nm,0.7s,baz=85,slow=9.2,SNR=13						
WRA	**Warramunga Arr**	**60.41**	**188**	P	**P**	**07 43 42.4**	**-1.9**
	0.4nm,0.6s,baz=5.9,slow=6.9,SNR=2.4						
ASAR	**Alice Springs**	**64.14**	**188**	P	**P**	**07 44 09.1**	**0.0**
	0.2nm,0.6s,baz=0.0,slow=5.0,SNR=2.0						
FINES	**FINESS Array B**	**66.17**	**332**	P	**P**	**07 44 22.1**	**+0.2**
	13nm,1.3s,baz=44,slow=6.2,SNR=3.4						
NOA	**NORSAR Array B**	**71.37**	**337**	P	**P**	**07 44 53.8**	**-0.5**
	1.2nm,0.8s,baz=39,slow=5.8,SNR=4.1						
AKASG	**Malin Array Be**	**72.05**	**322**	P	**P**	**07 44 57.8**	**-0.7**
	1.2nm,0.5s,baz=44,slow=5.7,SNR=4.4						

*IDC **30** 07:34:22.2±3.0,6°.87S×127°.39E,h422km±35km,mb3.3/3, mb1 3.3/7,mb1mx3.0/44,mbtmp4.1/7,Error ellipse: s-maj=51.2km s-min=13.9km az=60.0*

ISC 30 07:34:20.4±1.3,6°.8S±0°.1×127°.6E±0°.1,h400km,n7, σ1§31/10,mb3.6/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.20**	**229**	P	**Pn**	**07 35 45.6**	**+1.1**
	7.9nm,0.3s,baz=146,slow=6.8,SNR=3.9						
BATI				S	**S**	**07 36 51.7**	**-1.3**
	15nm,0.3s,baz=302,slow=14,SNR=13						
FITZ	**Fitzroy Crossi**	**11.42**	**190**	P	**Pn**	**07 36 55.3**	**+0.4**
	0.1nm,0.3s,baz=0.0,slow=12,SNR=1.2						
WRA	**Warramunga Arr**	**14.62**	**154**	P	**P**	**07 37 29.6**	**+0.8**
	1.3nm,0.3s,baz=333,slow=11,SNR=81						
WRA				S	**S**	**07 40 02.4**	**-2.4**
	0.2nm,0.3s,baz=321,slow=20,SNR=7.0						
ASAR	**Alice Springs**	**17.84**	**161**	P	**P**	**07 38 04.5**	**+1.2**
	1.0nm,0.3s,baz=346,slow=12,SNR=50						
ASAR				S	**S**	**07 41 08.0**	**+0.2**
	0.1nm,0.3s,baz=346,slow=25,SNR=5.3						
STKA	**Stephens Creek**	**28.17**	**154**	P	**P**	**07 39 38.7**	**+0.6**
	1.5nm,0.3s,baz=337,slow=8.7,SNR=2.9						
MKAR	**Makanchi Array**	**66.77**	**328**	P	**P**	**07 44 30.1**	**-0.3**
	0.4nm,0.4s,baz=120,slow=8.7,SNR=8.0						
ZALV	**Zalesovo Beam**	**70.36**	**335**	P	**P**	**07 44 51.1**	**-1.0**
	0.6nm,0.4s,baz=120,slow=8.5,SNR=1.7						

IDC 30 07:44:48.8±10.0,28°.36N×86°.87E,h0km,mb3.6/2, mb1 3.7/3,mb1mx3.2/31,mbtmp3.5/3,ML3.6/1,Error ellipse: s-maj=520.1km s-min=32.2km az=67.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.75**	**350**	P	Pn	07 49 09.8	+0.2
	0.2nm,0.3s,baz=171,slow=10,SNR=8.2						
ZALV	**Zalesovo Beam**	**25.61**	**357**	P	P	07 50 19.2	-0.4
	0.8nm,0.5s,baz=184,slow=8.4,SNR=2.2						
WRA	**Warramunga Arr**	**66.41**	**13**	P	P	07 55 40.0	+0.1
	0.4nm,0.8s,baz=321,slow=6.5,SNR=2.0						

*KRNET **30** 08:00:59.6±0.1,41°.67N×74°.33E,h14km,mb2.6*
*SOME **30** 08:00:59.1,41°.70N×74°.25E,h0km*
*NNC **30** 08:01:00.6±1.2,41°.74N×74°.09E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=7.8km s-min=5.8km az=160.0*

ISC 30 08:00:59.8±1.9,41°.70N±0°.09×74°.21E±0°.03,h11km±8km, n20,σ0§89/36,14C-1D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.18**	**28**	⇑*i*P	**Pg**	**08 01 03.3**	**-0.6**
	baz=0.0						
ARLS				⇑*i*S	**Sg**	**08 01 06.8**	**+0.1**
	baz=0.0						
UCH	**Uchtor**	**0.57**	**23**	⇑*i*P	**Pg**	**08 01 10.9**	**-0.1**
	baz=14						
UCH				⇑*i*S	**Sg**	**08 01 18.7**	**0.0**
	baz=14						
AML	**Almayashu**	**0.58**	**318**	⇑*i*P	**Pb**	**08 01 12.2**	**+0.1**
	baz=15						
AML				⇑*i*S	**Sb**	**08 01 21.6**	**+1.1**
	baz=15						
AAK	**Ala-Archa**	**0.96**	**13**	⇑*i*P	**Pg**	**08 01 17.9**	**-0.4**
	baz=7.0						
AAK				⇑*i*S	**Sb**	**08 01 31.6**	**+0.3**
	baz=7.0						
AAK	**Ala-Archa**	**0.96**	**13**	⇑P	**Pg**	**08 01 18.1**	**-0.2**
	2.6nm,0.3s						
AAK				⇑S	**Sb**	**08 01 31.8**	**+0.5**
	3.5nm,0.3s						
MRKS	**Merke**	**1.27**	**325**	*e*P	**Pn**	**08 01 22.7**	**-0.9**
	1.0nm,0.2s						
MRKS				*e*S	**Sb**	**08 01 39.9**	**-0.3**
	4.0nm,0.4s						
MRKS	**Merke**	**1.27**	**325**	P	**Pn**	**08 01 22.7**	**-0.9**
	1.0nm,0.2s						
MRKS				S	**Sb**	**08 01 39.9**	**-0.3**
	4.0nm,0.4s						
MNAS	**Manas**	**1.49**	**302**	⇑*i*P	**Pg**	**08 01 29.0**	**+0.6**
	baz=2.0						
MNAS				⇑*i*S	**Sg**	**08 01 50.3**	**+2.5**
	baz=2.0						
BOOM	**Boomskoye usch**	**1.51**	**58**	⇑*e*P	**Pn**	**08 01 26.9**	**0.0**
	baz=55						
BOOM				⇑*i*S	**Sn**	**08 01 46.3**	**-0.4**
	baz=55						
TKM2	**Tokmak 2**	**1.59**	**40**	⇓P	**Pg**	**08 01 30.0**	**-0.4**
	1.1nm,0.3s						
TKM2				S	**Sg**	**08 01 53.5**	**+2.4**
	2.6nm,0.5s						
SGDS	**Sogindy**	**1.78**	**10**	P	**Pb**	**08 01 32.4**	**0.0**
	3.0nm,0.2s						
SGDS				S	**Sg**	**08 01 56.7**	**-0.3**
	4.6nm,0.2s						
KST	**Kastek**	**1.87**	**43**	*e*P	**Pb**	**08 01 34.1**	**+0.1**
	3.6nm,0.4s						
KST				*e*S	**Sg**	**08 01 59.4**	**-0.4**
	8.5nm,0.4s						
KST	**Kastek**	**1.87**	**43**	P	**Pb**	**08 01 34.1**	**+0.1**
	3.6nm,0.4s						
KST				S	**Sg**	**08 01 59.4**	**-0.4**
	8.5nm,0.4s						
DGS	**Degeres**	**1.93**	**36**	*e*P	**Pb**	**08 01 35.6**	**+0.7**
	4.4nm,0.4s						
DGS				*e*S	**Sg**	**08 02 02.7**	**+1.0**
	3.5nm,0.4s						
DGS	**Degeres**	**1.93**	**36**	Pg	**Pb**	**08 01 35.6**	**+0.7**
	4.4nm,0.4s						
DGS				Lg	Lg	08 02 02.7	
	3.5nm,0.4s						
KRBS	**Karabastau**	**2.27**	**28**	*e*P	**Pb**	**08 01 41.6**	**+0.9**
	4.8nm,0.5s						
KRBS				*e*S	**Sg**	**08 02 12.5**	**-0.1**
	4.9nm,0.4s						
KRBS	**Karabastau**	**2.27**	**28**	Pg	**Pb**	**08 01 41.6**	**+0.9**
	4.8nm,0.5s						
KRBS				Lg	Lg	08 02 12.5	
	4.9nm,0.4s						
KUU	**Kurty**	**2.69**	**35**	*e*P	**Pb**	**08 01 49.0**	**+1.0**
	3.2nm,0.4s						
KUU				*e*S	**Sg**	**08 02 25.4**	**-0.9**
	4.5nm,0.5s						
KUU	**Kurty**	**2.69**	**35**	Pg	**Pb**	**08 01 49.0**	**+1.0**
	3.2nm,0.4s						
KUU				Lg	Lg	08 02 25.4	
	4.5nm,0.5s						
KK31	**Karatay Array**	**3.08**	**298**	Pg	**Pg**	**08 01 57.1**	**-1.6**
	0.2nm,0.3s,baz=120,slow=16						
KK31				Lg	Lg	08 02 37.1	
	0.8nm,0.5s,baz=113,slow=28						

IDC 30 08:08:43.9±2.2,10°.29S×120°.72E,h0km,mb3.4/1, mb1 3.6/4,mb1mx3.3/42,mbtmp3.4/4,ML3.2/3,MS3.4/1, Ms1 3.4/1,ms1mx2.5/22,Error ellipse: s-maj=178.4km s-min=28.0km az=54.0,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.11**	**149**	Pn	Pn	08 10 55.7	-1.0
	0.3nm,0.3s,baz=332,slow=9.4,SNR=26						
FITZ				Sn	Sn	08 12 29.4	-11
	0.7nm,0.3s,baz=187,slow=21,SNR=14						
LEM	**Lembang**	**13.40**	**284**	LR	LR	08 18 11.8	
	comp=Z,165nm,19.4s,baz=228,slow=42						
WRA	**Warramunga Arr**	**16.27**	**128**	Pn	Pn	08 12 33.8	-0.2
	0.1nm,0.3s,baz=307,slow=14,SNR=1.9						
WRA				Sn	Sn	08 15 23.0	-12
	0.0nm,0.3s,baz=278,slow=28,SNR=1.2						
ASAR	**Alice Springs**	**18.31**	**138**	P	P	08 13 00.6	+0.8
	0.1nm,0.3s,baz=312,slow=12,SNR=6.4						
MKAR	**Makanchi Array**	**66.38**	**332**	P	P	08 19 34.7	0.0
	0.2nm,0.6s,baz=133,slow=6.8,SNR=3.1						

IDC 30 08:35:34.3±1.6,4°.21S×151°.87E,h0km,mb3.6/5, mb1 3.9/5,mb1mx3.5/40,mbtmp3.6/5,Error ellipse: s-maj=113.7km s-min=23.5km az=129.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.16**	**226**	P	P	08 40 42.2	-0.4
	0.7nm,0.7s,baz=52,slow=9.9,SNR=10						
ASAR	**Alice Springs**	**25.98**	**220**	P	P	08 41 09.7	+0.7
	0.4nm,0.6s,baz=55,slow=9.1,SNR=6.9						
FITZ	**Fitzroy Crossi**	**29.14**	**240**	P	P	08 41 36.6	-0.7
	1.5nm,0.7s,baz=31,slow=5.9,SNR=1.8						
ILAR	**Eielson Array**	**81.97**	**22**	P	P	08 47 54.6	-1.1
	0.5nm,0.7s,baz=258,slow=5.5,SNR=6.6						
YKA	**Yellowknife Ar**	**95.34**	**28**	P	P	08 49 01.4	+1.3
	0.2nm,0.6s,baz=264,slow=4.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**149.24**	**289**	PKPbc	PKPbc	08 55 25.8	-0.2
	1.2nm,1.1s,baz=62,slow=2.2,SNR=2.0						

*SOME **30** 08:38:13.8,43°.53N×69°.60E*
*NNC **30** 08:38:15.7±2.5,43°.47N×69°.70E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=13.4km s-min=9.2km az=131.0, Suspected Mining explosion.*
*KRNET **30** 08:38:15.2±0.1,43°.33N×69°.58E,mb2.9*

ISC 30 08:38:17.4±2.7,43°.4N±0°.1×69°.7E±0°.1,h0km,n13, σ1§23/22,14C-6D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**0.68**	**113**	⇓P	**Pg**	**08 38 28.6**	**-1.8**
	1.4nm,0.2s,baz=294,slow=17						
KK31				⇓S	**Sg**	**08 38 39.2**	**-0.1**
	63nm,0.8s,baz=300,slow=29						
IUG	**Iuzhnay**	**1.26**	**167**	P	**Pn**	**08 38 42.1**	**-0.3**
	702nm,0.3s						
IUG				S	**Sn**	**08 39 02.8**	**+2.8**
	45nm,0.3s						
TRKS	**Terek-Say**	**2.15**	**149**	⇑*i*P	**Pn**	**08 38 55.2**	**+0.6**
	baz=47						
TRKS				⇑*i*S	**Sb**	**08 39 24.2**	**-0.3**
	baz=47						
MNAS	**Manas**	**2.27**	**112**	⇑*i*P	**Pn**	**08 38 56.4**	**+0.1**
	baz=10.0						
MNAS				⇑*i*S	**Sn**	**08 39 26.7**	**+1.6**
	baz=10.0						
MRKS	**Merke**	**2.69**	**102**	Pg	**Pb**	**08 39 05.0**	**-1.5**
	2.8nm,0.4s						
MRKS				Lg	Lg	08 39 41.6	
	8.4nm,0.3s						
EKS2	**Erkin-Say**	**3.10**	**102**	⇑*i*P	**Pn**	**08 39 08.7**	**+0.9**
	baz=1.0						
EKS2				⇑*i*S	**Sn**	**08 39 47.4**	**+1.8**
	baz=1.0						
ARSB	**Arslanbob**	**3.21**	**129**	⇑*i*P	**Pn**	**08 39 09.3**	**+0.1**
	baz=27						
ARSB				⇑*i*S	**Sn**	**08 39 49.3**	**+1.1**
	baz=27						
AML	**Almayashu**	**3.22**	**111**	⇓*e*P	**Pn**	**08 39 10.1**	**+0.5**
	baz=10.0						
AML				⇓*i*S	**Sn**	**08 39 50.2**	**+1.3**
	baz=10.0						
AAK	**Ala-Archa**	**3.62**	**100**	⇑*i*P	**Pn**	**08 39 15.8**	**+0.9**
	baz=99						
AAK				⇑*i*S	**Sn**	**08 40 00.1**	**+1.6**
	baz=99						
AAK	**Ala-Archa**	**3.62**	**100**	⇓Pg	**Pb**	**08 39 22.6**	**+0.1**
	1.6nm,0.4s						
AAK				⇑Lg	Lg	08 40 11.6	
	4.7nm,0.9s						
UCH	**Uchtor**	**3.75**	**106**	⇑*i*P	**Pn**	**08 39 17.6**	**+0.6**
	baz=5.0						
UCH				⇑*i*S	**Sn**	**08 40 02.9**	**+0.8**
	baz=5.0						
TKM2	**Tokmak 2**	**4.37**	**94**	⇓Pg	**Pb**	**08 39 34.2**	**-1.0**
	0.7nm,0.3s						
TKM2				⇑Lg	Lg	08 40 31.6	
	2.4nm,0.7s						
KST	**Kastek**	**4.62**	**92**	Pg	**Pb**	**08 39 39.9**	**+0.5**
	1.8nm,0.3s						
KST				Lg	Lg	08 40 41.7	
	6.8nm,0.5s						

*VIE **30** 08:41:07.4±0.2,46°.50N×13°.05E,h5km±4km,mb1.9/12, ml2.6/16,Error ellipse: s-maj=1.9km s-min=0.9km az=17.0 5 km SE of Paluzza*
*IASPEI **30** 08:41:08.0±1.1,46°.49N±0°.02×13°.08E±0°.02,h4km±10km, Error ellipse: s-maj=3.0km s-min=2.4km az=24.1,GT5 selection from ISC bulletin GT5 identified by Bondr and McLaughlin (2009) selection criteria Bondr and McLaughlin, A new ground truth data set for seismic studies, Seism. Res. Let., 80, 465-472, 2009*
*PRU **30** 08:41:08.1±0.0,46°.46N×13°.04E,h1km*

ISC 30 08:41:08.0±1.0,46°.48N±0°.02×13°.07E±0°.02,h3km±8km, n42,σ0§73/77,7C-9D,Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSE	**Fusea**	**0.08**	**216**	⇑*e*Pg	**Pg**	**08 41 09.5**	**-0.1**
FUSE				*e*Sg	**Sg**	**08 41 11.2**	**+0.5**
PLRO	**Paularo**	**0.09**	**38**	⇑*e*Pg	**Pg**	**08 41 09.5**	**-0.3**
PLRO				*e*Sg	**Sg**	**08 41 11.2**	**+0.1**
ZOU	**Zoufplan**	**0.10**	**319**	⇓*e*Pg	**Pg**	**08 41 10.0**	**0.0**
ZOU				*e*Sg	**Sg**	**08 41 11.8**	**+0.4**
CLUD	**Cludinico**	**0.13**	**260**	⇓*e*Pg	**Pg**	**08 41 10.3**	**-0.3**
CLUD				*e*Sg	**Sg**	**08 41 12.8**	**+0.4**
BOO	**Bordano**	**0.16**	**173**	⇓*e*Pg	**Pg**	**08 41 10.8**	**-0.3**
BOO				*e*Sg	**Sg**	**08 41 13.7**	**+0.5**
MPRI	**Monte Prat**	**0.24**	**193**	⇑*e*Pg	**Pg**	**08 41 12.3**	**-0.4**
MPRI				*e*Sg	**Sg**	**08 41 16.5**	**+0.6**
BUA	**Buia**	**0.26**	**172**	⇑*e*Pg	**Pg**	**08 41 12.8**	**-0.3**
BUA				*e*Sg	**Sg**	**08 41 17.0**	**+0.6**
VINO	**Villanova**	**0.27**	**147**	⇓*e*Pg	**Pg**	**08 41 12.7**	**-0.4**
VINO				*e*Sg	**Sg**	**08 41 17.1**	**+0.5**
BAD	**Bernadia**	**0.27**	**154**	⇓*e*Pg	**Pg**	**08 41 12.8**	**-0.4**
BAD				*e*Sg	**Sg**	**08 41 17.3**	**+0.6**
CSMI	**Casera Mimoias**	**0.29**	**276**	⇑*e*Pg	**Pg**	**08 41 13.3**	**-0.3**
CSMI				*e*Sg	**Sg**	**08 41 18.3**	**+0.9**
ACOM	**Acomizza, Ital**	**0.31**	**77**	⇓*e*Pg	**Pg**	**08 41 13.7**	**-0.4**
ACOM				*e*Sg	**Sg**	**08 41 18.2**	**+0.1**
LSR	**Lussari**	**0.32**	**91**	⇓*e*Pg	**Pg**	**08 41 13.4**	**-0.7**
LSR				*e*Sg	**Sg**	**08 41 18.7**	**+0.4**
ROBS	**Robic**	**0.39**	**128**	*i* Pg	**Pg**	**08 41 14.6**	**-0.7**
ROBS				*i* Sg	**Sg**	**08 41 20.9**	**+0.5**
ROBS				IAML		08 41 21.4	
	comp=Z,38nm,0.1s						
COLI	**Coloredo**	**0.41**	**148**	⇓*e*Pg	**Pg**	**08 41 15.3**	**-0.5**
COLI				*e*Sg	**Sg**	**08 41 22.1**	**+1.0**
MYKA	**Terra Mystica**	**0.42**	**69**	*i* Pg	**Pg**	**08 41 15.4**	**-0.7**
	comp=Z,9.5nm,0.1s,SNR=35						
MYKA				*e*Sg	**Sg**	**08 41 21.8**	**+0.2**
	comp=Z,17nm,0.1s						
ABTA	**Abfaltersbach**	**0.47**	**305**	*i* Pg	**Pg**	**08 41 16.3**	**-0.6**
	comp=Z,5.4nm,0.1s						
ABTA				*i* Sg	**Sg**	**08 41 23.0**	**-0.1**
	comp=Z,56nm,0.2s						
CIMO	**Cimolais**	**0.47**	**249**	*e*Pg	**Pg**	**08 41 16.5**	**-0.4**
DRE	**Drenchia**	**0.50**	**127**	⇑*e*Pg	**Pg**	**08 41 17.1**	**-0.5**
DRE				*e*Sg	**Sg**	**08 41 24.8**	**+0.7**
CADS	**Cadrg**	**0.53**	**118**	*i* Pg	**Pg**	**08 41 17.1**	**-1.0**
CADS				*i* Sg	**Sg**	**08 41 26.1**	**+1.2**
CADS				IAML		08 41 27.2	
	comp=Z,100nm,0.2s						
CSO	**Casso**	**0.56**	**248**	*e*Pg	**Pg**	**08 41 18.1**	**-0.6**
AFL	**Alpe Faloria**	**0.62**	**275**	⇑*e*Pg	**Pg**	**08 41 19.9**	**+0.1**
AFL				*e*Sg	**Sb**	**08 41 29.2**	**-1.6**
SABO	**M.te Sabotino**	**0.62**	**143**	⇓*e*Pg	**Pg**	**08 41 19.1**	**-0.7**
KBA	**Koelnbreinsper**	**0.63**	**17**	*i* Pg	**Pg**	**08 41 19.7**	**-0.4**
	comp=Z,2.2nm,0.1s,SNR=9.9						
KBA				*i* Sg	**Sg**	**08 41 28.0**	**-0.2**
	comp=Z,7.0nm,0.1s,SNR=11						
CAE	**Caneva**	**0.65**	**223**	*e*Pg	**Pg**	**08 41 19.9**	**-0.5**
GORS	**Gorjuse**	**0.66**	**104**	*i* Pg	**Pg**	**08 41 19.4**	**-1.2**
GORS				*i* Sg	**Sg**	**08 41 30.1**	**+0.9**
GORS				IAML		08 41 33.8	
	comp=Z,45nm,0.2s						
VOJS	**Vojsko**	**0.72**	**128**	*i* Pg	**Pg**	**08 41 20.4**	**-1.3**
VOJS				*i* Sg	**Sg**	**08 41 32.1**	**+1.0**
VOJS				IAML		08 41 35.1	
	comp=Z,36nm,0.2s						
FAU	**Forcella Aurin**	**0.80**	**252**	*e*Pg	**Pg**	**08 41 23.1**	**-0.1**
OBKA	**Obir**	**1.02**	**88**	*i* Pg	**Pg**	**08 41 26.7**	**-0.9**
	comp=Z,6.6nm,0.2s,SNR=16						
OBKA				*i* Sg	**Sb**	**08 41 42.9**	**+0.7**
	comp=Z,32nm,0.4s						
WTTA	**Wattenberg**	**1.26**	**309**	*e*Pg	**Pg**	**08 41 31.0**	**-1.1**
	comp=Z,6.6nm,0.2s,SNR=12						
WTTA				*i* Sg	**Sg**	**08 41 47.9**	**-0.5**
	comp=Z,17nm,0.3s,SNR=5.6						
WATA	**Walderalm**	**1.33**	**310**	*e*Pg	**Pg**	**08 41 33.2**	**-0.4**
	comp=Z,3.1nm,0.2s						
WATA				*e*Sg	**Sb**	**08 41 51.1**	**-0.2**
	comp=Z,14nm,0.2s						
SOKA	**Soboth**	**1.37**	**81**	*i* Pg	**Pn**	**08 41 32.8**	**-1.2**
	comp=Z,3.3nm,0.2s,SNR=6.3						
SOKA				*i* Sg	**Sg**	**08 41 52.2**	**+0.3**
	comp=Z,11nm,0.3s						
SQTA	**Sankt Quirin**	**1.48**	**301**	*e*Pg	**Pn**	**08 41 34.8**	**-0.8**
	comp=Z,2.7nm,0.1s						
SQTA				*e*Sg	**Sn**	**08 41 55.7**	**+0.2**
	comp=Z,10nm,0.3s						
MOA	**Molln**	**1.59**	**30**	*e*Pg	**Pg**	**08 41 39.5**	**+1.0**
	comp=Z,3.1nm,0.2s						
MOA				*i* Sg	**Sg**	**08 42 00.9**	**+1.7**
	comp=Z,13nm,0.5s						
MOTA	**Moosalm**	**1.60**	**303**	Pg	**Pb**	**08 41 38.0**	**-0.3**
	comp=Z,1.6nm,0.2s						
MOTA				*i* Sg	**Sg**	**08 42 00.0**	**+0.6**
	comp=Z,19nm,0.6s						
BRJN	**Brijuni**	**1.65**	**163**	*e*Pn	**Pb**	**08 41 38.1**	**-0.8**
BRJN				Sn	**Sg**	**08 42 00.6**	**-0.1**
FETA	**Feichten**	**1.70**	**289**	*i* Pg	**Pg**	**08 41 39.9**	**-0.6**
	comp=Z,0.5nm,0.1s						
FETA				*e*Sg	**Sg**	**08 42 03.7**	**+1.2**
	comp=Z,11nm,0.4s						
RETA	**Reutte**	**1.87**	**303**	*e*Pg	**Pg**	**08 41 43.9**	**+0.1**
	comp=Z,2.9nm,0.2s						
RETA				*i* Sg	**Sg**	**08 42 08.6**	**+0.5**
	comp=Z,4.9nm,0.2s						
DAVA	**Damuels**	**2.33**	**291**	*e*Sg	**Sg**	**08 42 24.0**	**+1.1**
	comp=Z,16nm,0.3s						
KHC	**Kasperske Hory**	**2.67**	**7**	*e*PN	**Pn**	**08 41 52.4**	**+0.4**
KHC				*e*SN	**Sn**	**08 42 26.0**	**+1.1**
DUGI	**Dugi Otok**	**2.86**	**150**	*e*Pn	**Pn**	**08 41 55.4**	**+0.9**
DUGI				Sn	**Sn**	**08 42 29.9**	**+0.6**
ZIRJ	**Zirje**	**3.36**	**146**	*e*Pn	**Pn**	**08 42 01.9**	**+0.5**
ZIRJ				Sn	**Sn**	**08 42 41.5**	**-0.2**
RICI	**Ricice**	**4.15**	**135**	*e*Pn	**Pn**	**08 42 13.9**	**+1.6**

*IDC **30** 09:00:19.7±1.0,28°.67N×96°.52E,h0km,mb3.6/8, mb1 3.7/9,mb1mx3.5/64,mbtmp3.6/9,MS2.8/1,Ms1 3.0/1, ms1mx2.3/49,Error ellipse: s-maj=52.8km s-min=17.2km az=62.0*
*BJI **30** 09:00:20.2±0.0,28°.50N×96°.34E,h7km,mB4.0/1,mb4.1/3, ML3.9/3*
*NDI **30** 09:00:20.6±3.1,28°.70N×96°.52E,h10km,ML3.9*

ISC 30 09:00:21.4±0.9,28°.71N±0°.06×96°.36E±0°.09,h10km,n21, σ1§45/27,mb3.7/7,1C,Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKP	**Lekhapani**	**1.45**	**199**	*e*P	**Pb**	**09 00 48.8**	**+0.4**
LKP				*e*S	**Sg**	**09 01 08.4**	**+0.4**
LKP				IAML		09 01 09.7	
	comp=N,2μm,0.3s						
LKP				IAML		09 01 11.6	
	comp=Z,880nm,0.3s						
DIBR	**DIBRUGARH

comp=E,0.7nm,0.5s,baz=112,slow=7.2,SNR=3.7
KURBB **Kurchatov Arra 25.70 333** P **P 09 05 51.9 +0.3**
comp=E,0.5nm,0.7s,baz=146,slow=9.4,SNR=2.3
ZALV **Zalesovo Beam 26.59 345** P **P 09 06 00.2 +0.5**
comp=E,1.6nm,0.5s,baz=149,slow=11,SNR=5.4
WRA **Warramunga Arr 60.70 138** P **P 09 10 32.4 -0.8**
comp=E,0.6nm,0.5s,baz=328,slow=7.4,SNR=5.4
NOA **NORSAR Array B 63.02 327** P **P 09 10 48.0 -0.4**
comp=E,0.3nm,0.6s,baz=85,slow=6.2,SNR=1.5
ASAR **Alice Springs 63.39 141** P **P 09 10 49.8 -1.5**
comp=E,0.3nm,0.4s,baz=326,slow=6.5,SNR=5.3

*MEX **30** 09:05:05.3±0.8, 14.63N×92.62W, h71km±11km, MD4.0*
*SNET **30** 09:05:07.4±1.0, 14.86N×92.43W, h33km±999km, ML3.5*
*GCG **30** 09:05:07.0±0.6, 14.70N×92.59W, h56km±28km, MD3.9*
ISC 30 09:05:06.1±1.6, 14°70N±0°09×92°68W±0°08, h49km±18km, n19, σ0°68/31, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
THIG		**0.45**	**63**	*eP*		**Pn**	**09 05 16.2**	**-0.5**
THIG				*eS*		**Sn**	**09 05 24.7**	**+0.5**
ERG	**Entre ros, C**	**1.10**	**103**	*eP*		**Pn**	**09 05 25.3**	**+0.2**
ERG				*eS*		**Sn**	**09 05 39.3**	**0.0**
PCIG		**1.13**	**332**	*eP*		**Pn**	**09 05 25.2**	**-0.3**
PCIG				*i S*		**Sn**	**09 05 40.3**	**+0.4**
CCIG	**Comitan**	**1.66**	**18**	*i P*		**Pn**	**09 05 32.5**	**-0.4**
CCIG				*i S*		**Sn**	**09 05 52.7**	**-0.4**
FUG	**Fuego 3**	**1.79**	**98**	*eP*		**Pn**	**09 05 34.8**	**0.0**
FUG				*eS*		**Sn**	**09 05 56.7**	**+0.2**
PCG	**Pacaya**	**2.03**	**98**	*eP*		**Pn**	**09 05 38.6**	**+0.6**
PCG				*eS*		**Sn**	**09 06 03.6**	**+1.3**
TGIG		**2.11**	**348**	*eP*		**Pn**	**09 05 38.9**	**-0.1**
TGIG				*i S*		**Sn**	**09 06 04.2**	**+0.1**
NBG	**Las Nubes**	**2.26**	**93**	*eP*		**Pn**	**09 05 42.2**	**+0.9**
NBG				*eS*		**Sn**	**09 06 09.2**	**+1.2**
MRL	**Marmol**	**2.92**	**82**	*eP*		**Pn**	**09 05 50.8**	**+0.6**
RTR	**El Retiro**	**3.05**	**105**	*eP*		**Pn**	**09 05 51.5**	**-0.4**
SBLS	**San Blas**	**3.08**	**106**	*eP*		**Pn**	**09 05 52.0**	**-0.5**
CEVE	**Cerro Verde**	**3.08**	**106**	*eP*		**Pn**	**09 05 52.6**	**+0.1**
CEVE				*eS*		**Sn**	**09 06 27.9**	**-0.4**
CEVE				IAML			09 06 43.7	
	comp=Z,448nm,0.3s							
SNJE	**San Jose**	**3.09**	**105**	*eP*		**Pn**	**09 05 52.0**	**-0.5**
CMIG	**Matias Romero**	**3.19**	**319**	*eP*		**Pn**	**09 05 53.7**	**-0.1**
CMIG				*i S*		**Sn**	**09 06 31.1**	**+0.6**
MTO3	**Montecristo**	**3.23**	**95**	*eP*		**Pn**	**09 05 53.4**	**-1.1**
LBRS	**Las Brisas**	**3.65**	**105**	*eP*		**Pn**	**09 05 59.9**	**-0.3**
LFRS	**El Faro**	**3.67**	**107**	*eP*		**Pn**	**09 06 00.3**	**-0.1**
LFRS				*eS*		**Sn**	**09 06 40.9**	**-1.6**
COEG	**Centro de Oper**	**3.84**	**106**	*eP*		**Pn**	**09 06 02.8**	**+0.1**
COEG				*eS*		**Sn**	**09 06 45.6**	**-1.0**
COEG				IAML			09 06 56.6	
	comp=Z,96nm,0.3s							
COEB	**Comit de Eme**	**4.20**	**106**	*eP*		**Pn**	**09 06 08.4**	**+0.7**

NNC 30 09:16:03.7±0.5, 43°22N×69°79E, h0km, mb3.0, mpv2.4, 17C-6D, Error ellipse: s-maj=39.3km s-min=2.4km az=12.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK08	**Karatay Array**	**0.52**	**103**	⇑P		Pg	09 16 14.0	+0.3
KK08				⇓S		Sg	09 16 21.4	+0.9
KK09	**Karatay Array**	**0.53**	**101**	⇑P		Pg	09 16 14.1	+0.2
KK09				⇑S		Sg	09 16 21.5	+0.8
KK03	**Karatay Array**	**0.53**	**103**	⇑P		Pg	09 16 14.2	+0.3
KK03				⇑S		Sg	09 16 21.7	+0.8
KK04	**Karatay Array**	**0.53**	**102**	⇑P		Pg	09 16 14.1	+0.1
KK04				⇓S		Sg	09 16 21.5	+0.6
KK01	**Karatay Array**	**0.54**	**102**	⇑P		Pg	09 16 14.2	+0.2
KK01				⇑S		Sg	09 16 21.6	+0.7
KK07	**Karatay Array**	**0.54**	**104**	⇑P		Pg	09 16 14.0	0.0
KK07				⇓S		Sg	09 16 21.6	+0.7
KK02	**Karatay Array**	**0.54**	**103**	⇑P		Pg	09 16 14.4	+0.3
KK02				⇓S		Sg	09 16 21.8	+0.8
KK31	**Karatay Array**	**0.54**	**103**	⇑P		Pg	09 16 14.4	+0.3
	4.6nm,0.6s							
KK31				⇓S		Sg	09 16 22.1	+1.0
	45nm,0.6s							
KK05	**Karatay Array**	**0.55**	**101**	⇓P		Pg	09 16 14.3	+0.1
KK05				⇑S		Sg	09 16 21.8	+0.6
KK06	**Karatay Array**	**0.55**	**103**	⇑P		Pg	09 16 14.2	-0.1
KK06				⇑S		Sg	09 16 21.8	+0.4
AAK	**Ala-Archa**	**3.50**	**98**	⇑Pg		Pg	09 17 09.5	-1.3
	1.6nm,0.7s							
AAK				⇑Lg		Lg	09 17 53.3	
	3.8nm,0.6s							
TKM2	**Tokmak 2**	**4.26**	**92**	⇑Lg		Lg	09 18 17.7	
	3.2nm,0.7s							

KRNET 30 09:16:07.2±0.1, 41°50N×70°03E, mb2.2, 14C, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TRKS	**Terek-Say**	**0.83**	**88**	⇑*iP*		Pg	09 16 23.7	+0.5
	baz=92							
TRKS				⇑*iS*		Sb	09 16 35.6	-0.9
	baz=92							
BTK	**Batken**	**1.56**	**157**	⇑*iP*		Pn	09 16 36.3	0.0
	baz=57							
BTK				⇑*iS*		Sb	09 16 57.9	+0.6
	baz=57							
MNAS	**Manas**	**2.09**	**61**	⇑*iP*		Pb	09 16 45.6	-0.5
	baz=61							
MNAS				⇑*iS*		Sb	09 17 13.2	+0.6
	baz=61							
ARSB	**Arslanbob**	**2.23**	**94**	⇑*iP*		Pb	09 16 47.1	-1.3
	baz=94							
ARSB				⇑*iS*		Sb	09 17 16.4	-0.2
	baz=94							
AML	**Almayashu**	**2.81**	**76**	⇑*eP*		Pn	09 16 55.3	+1.5
	baz=76							
AML				⇑*iS*		Sn	09 17 30.4	+1.9
	baz=76							
EKS2	**Erkin-Say**	**3.02**	**66**	⇑*eP*		Pn	09 16 58.3	+1.9
	baz=66							
EKS2				⇑*iS*		Sn	09 17 35.6	+2.3
	baz=66							
UCH	**Uchtor**	**3.42**	**76**	⇑*iP*		Pn	09 17 03.9	+1.6
	baz=76							
UCH				⇑*iS*		Sn	09 17 45.3	+1.5
	baz=76							

*IDC **30** 09:20:44.1±1.1, 2.24N×128.35E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/49, mbtmp3.6/7, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/36, Error ellipse: s-maj=85.3km s-min=17.1km az=65.0*
ISC 30 09:20:48.8±1.0, 2°24N±0°3×128°9E±0°4, h35km, n14, σ0°46/8, mb3.8/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SIJI	**Sorong**	**4.04**	**144**	Pn		**Pn**	**09 21 48.7**	**+0.5**
	2.4nm,0.3s,baz=195,slow=21,SNR=8.8							
SIJI				Sn		**Sn**	**09 22 33.7**	**-0.6**
	1.0nm,0.3s,baz=223,slow=22,SNR=1.5							
KAPI	**Kappang**	**11.73**	**231**	LR		LR	09 28 27.7	
	comp=Z,67nm,19.1s,baz=102,slow=41							
WRA	**Warramunga Arr**	**22.85**	**167**	P		**P**	**09 25 49.3**	**0.0**
	0.4nm,0.4s,baz=342,slow=11,SNR=11							
ASAR	**Alice Springs**	**26.38**	**170**	P		**P**	**09 26 22.2**	**+0.1**
	0.3nm,0.5s,baz=354,slow=7.8,SNR=5.9							
STKA	**Stephens Creek**	**36.18**	**162**	P		**P**	**09 27 48.1**	**0.0**
	0.6nm,0.5s,baz=358,slow=12,SNR=3.2							
H11S3	**WAKE ISLAND Hy**	**40.33**	**64**	T		T	10 11 35.1	
	baz=251,slow=75,SNR=35							
H11S2	**WAKE ISLAND Hy**	**40.35**	**64**	T		T	10 11 35.5	
	baz=251,slow=75,SNR=22							
H11S1	**WAKE ISLAND Hy**	**40.35**	**64**	T		T	10 11 34.7	
	baz=251,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**40.92**	**62**	T		T	10 12 20.7	
	baz=250,slow=75,SNR=60							
H11N2	**WAKE ISLAND Hy**	**40.93**	**62**	T		T	10 12 20.7	
	baz=250,slow=75,SNR=20							
H11N3	**WAKE ISLAND Hy**	**40.94**	**62**	T		T	10 12 26.7	
	baz=250,slow=75,SNR=37							
SONM	**Songino Array**	**49.24**	**340**	P		**P**	**09 29 34.3**	**+0.3**
	0.6nm,0.6s,baz=148,slow=8.5,SNR=2.5							
MKAR	**Makanchi Array**	**59.86**	**325**	P		**P**	**09 30 50.9**	**-0.1**
	0.4nm,0.5s,baz=116,slow=8.4,SNR=5.5							
KURBB	**Kurchatov Arra**	**64.00**	**327**	P		**P**	**09 31 18.1**	**-0.6**
	0.8nm,0.5s,baz=127,slow=6.1,SNR=10.0							

*IDC **30** 09:32:58.8±1.3, 21.63N×143.05E, h302km±11km, mb3.8/26, mb1 4.0/29, mb1mx3.8/46, mbtmp4.5/29, Error ellipse: s-maj=13.0km s-min=8.2km az=87.0*
*NEIC **30** 09:32:59.7±1.6, 21.62N±0.08×143.1E±0.1, h303km±6km, mb4.4/112, Error ellipse: s-maj=17.6km s-min=11.7km az=83.0*
*JMA **30** 09:33:02.2±0.2, 21.98N×143.09E, h313km±2km, M4.9*
ISC 30 09:32:59.6±0.4, 21°69N±0°05×143°16E±0°08, h311km, n206, σ1°26/216, mb4.4/82, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHH2	**Haha-jima-NKT2**	**5.00**	**350**	P		**Pn**	**09 34 17.5**	**0.0**
JHH2				*eS*		**S**	**09 35 16.8**	**-3.4**
CBIJ	**Chichi jima**	**5.45**	**351**	P		**Pn**	**09 34 22.2**	**-0.5**
CBIJ				S		**S**	**09 35 25.8**	**-3.9**
JCJ	**Chichijima**	**5.45**	**351**	P		**Pn**	**09 34 22.5**	**-0.2**
	76nm,0.3s,baz=229,slow=5.2,SNR=49							
JCJ				S		**S**	**09 35 27.6**	**-2.2**
	90nm,0.3s,baz=276,slow=23,SNR=14							
JCJ	**Chichijima**	**5.45**	**351**	Pn		**Pn**	**09 34 22.4**	**-0.3**
SARN	**Sarigan**	**5.55**	**153**	P		**Pn**	**09 34 23.0**	**-1.1**
ANA2	**Anatahan**	**5.84**	**155**			**Pn**	**09 34 26.6**	**-0.9**
ANA2	**Anatahan**	**5.84**	**155**	P		**Pn**	**09 34 27.4**	**-0.1**
GUMO	**Guam**	**8.22**	**168**	P		**Pn**	**09 34 56.6**	**+0.5**
	13nm,0.3s,baz=175,slow=6.9,SNR=9.9							
GUMO	**Guam**	**8.22**	**168**	Pn		**Pn**	**09 34 53.1**	**-3.0**
GUMO	**Guam**	**8.22**	**168**	P		**Pn**	**09 34 57.3**	**+1.2**
JHCJ	**Hachijojimakas**	**11.72**	**346**	P		**Pn**	**09 35 37.8**	**-0.7**
BSO1	**Boso 1**	**13.05**	**352**	P		**P**	**09 35 55.6**	**+1.6**
BSO3	**Boso 3**	**13.27**	**350**	P		**Pn**	**09 35 57.2**	**+0.4**
BSO4	**Boso 4**	**13.48**	**350**	P		**Pn**	**09 35 59.9**	**+0.4**
JTNC	**Tanabenakahech**	**13.80**	**333**	P		**Pn**	**09 36 04.7**	**+1.3**
JIE	**Ise**	**13.87**	**337**	P		**Pn**	**09 36 04.3**	**+0.1**
JKN2	**Miekihoku**	**13.89**	**336**	P		**Pn**	**09 36 06.5**	**+2.0**
JOD2	**Odawara 2**	**13.98**	**346**	P		**Pn**	**09 36 06.0**	**+0.4**
JNY	**Yasuok**	**14.39**	**342**	P		**Pn**	**09 36 12.6**	**+2.2**
JHU	**Hanno**	**14.51**	**347**	P		**P**	**09 36 11.2**	**+0.6**
JMN	**Monobe**	**14.53**	**328**			**P**	**09 36 10.8**	**-0.1**
JYT	**Yasato**	**14.71**	**351**	P		**Pn**	**09 36 14.5**	**+0.3**
JYT	**Yasato**	**14.71**	**351**			**Pn**	**09 36 14.1**	**-0.1**
JRY	**Ryogami san**	**14.75**	**346**	P		**Pn**	**09 36 14.1**	**-0.6**
JGF	**Kuroka**	**14.76**	**341**			**Pn**	**09 36 14.5**	**-0.3**
JAG	**Ashikaga**	**15.03**	**348**	P		**P**	**09 36 16.9**	**+0.5**
JHO	**Hitachi**	**15.04**	**352**	P		**Pn**	**09 36 17.6**	**-0.4**
JWT	**Wachi**	**15.15**	**335**			**P**	**09 36 18.2**	**+0.6**
MJAR	**Matsushiro Arr**	**15.41**	**345**	P		**P**	**09 36 21.2**	**+0.6**
	0.8nm,0.3s,baz=166,slow=11,SNR=46							
MJAR				S		**S**	**09 39 07.6**	**+0.3**
	0.1nm,0.3s,baz=170,slow=15,SNR=5.6							
MJAR	**Matsushiro Arr**	**15.41**	**345**	P		**P**	**09 36 20.5**	**-0.1**
MJAR				IAmb		IAmb	09 36 25.0	
	comp=Z,8.7nm,0.6s							
MAJO	**Matsushiro**	**15.41**	**345**			**P**	**09 36 21.2**	**+0.6**
MAT	**Matsushiro**	**15.41**	**345**	P		**P**	**09 36 21.2**	**+0.6**
MAT				S		**S**	**09 39 01.0**	**-6.3**
JSJ	**Shimokoshiki**	**15.58**	**312**	P		**Pn**	**09 36 24.2**	**-0.2**
JFK	**Kawauchi**	**15.74**	**353**	P		**Pn**	**09 36 26.6**	**+0.3**
JNU	**Nakatsue**	**15.75**	**319**	P		**Pn**	**09 36 26.0**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=120,slow=5.8,SNR=8.1							
JNU	**Nakatsue**	**15.75**	**319**	IAmb		IAmb	09 36 31.7	
	comp=Z,67nm,1.4s							
JHS	**Saijyo**	**15.92**	**329**	P		**Pn**	**09 36 28.4**	**0.0**
JHS	**Saijyo**	**15.92**	**329**			**Pn**	**09 36 27.7**	**-0.7**
JMM	**Marumori**	**16.25**	**353**			**Pn**	**09 36 31.9**	**-0.2**
JSD	**Sado**	**16.83**	**347**	P		**P**	**09 36 36.5**	**+0.6**
JMK	**Ichinoseki**	**17.28**	**355**	P		**Pn**	**09 36 42.8**	**-1.3**
ERM	**Erimo**	**20.26**	**360**	P		**P**	**09 37 14.7**	**+2.4**
KSRS	**Korea Array**	**20.51**	**323**	P		**P**	**09 37 13.7**	**-1.2**
	comp=Z,2.9nm,0.8s,baz=143,slow=8.9,SNR=4.4							
KSRS				ScP		**ScP**	**09 44 20.5**	**+1.7**
	comp=Z,0.7nm,0.7s,baz=147,slow=2.5,SNR=5.1							
KSAR	**Wonju Array Be**	**20.52**	**323**	P		**P**	**09 37 16.7**	**+1.7**
KS19	**Wonju Array Si**	**20.57**	**323**	P		**P**	**09 37 16.6**	**+1.1**
KS19				IAmb		IAmb	09 37 32.8	
	comp=Z,24nm,1.4s							
JKA	**Kamikawa-asahi**	**22.37**	**359**	P		**P**	**09 37 32.6**	**+0.7**
JKA	**Kamikawa-asahi**	**22.37**	**359**	IAmb		IAmb	09 37 41.2	
	comp=Z,90nm,1.6s							
ASAJ	**Asahikawa**	**22.37**	**359**	P		**P**	**09 37 32.6**	**+0.7**
	comp=Z,7.9nm,0.8s,baz=216,slow=18,SNR=5.2							
USRK	**Ussuriysk Ar.**	**24.28**	**340**	P		**P**	**09 37 49.6**	**+0.4**
	comp=Z,2.5nm,0.5s,baz=136,slow=8.1,SNR=8.6							
KLR	**Kul'dur**	**28.94**	**344**	P		**P**	**09 38 31.6**	**+1.0**
	comp=Z,15nm,0.6s,baz=162,slow=7.9,SNR=50							
KLR				PcP		**PcP**	**09 41 31.1**	**+0.2**
	comp=Z,2.4nm,0.5s,baz=136,slow=3.1,SNR=5.1							
MYLDM	**Lahad Datu**	**28.98**	**239**	P		**P**	**09 38 29.9**	**-1.6**
DLV	**T Lat**	**34.50**	**259**	P		**P**	**09 39 20.4**	**+0.8**
SBUM	**Sibu**	**35.65**	**242**	P		**P**	**09 39 28.6**	**-0.5**
NONG	**Nongkai**	**37.73**	**272**	P		**P**	**09 39 48.8**	**+2.2**
SONM	**Songino Array**	**39.33**	**320**	P		**P**	**09 40 00.3**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=136,slow=8.9,SNR=5.1							
CM34	**Chiang Mai Arr**	**41.28**	**274**	P		**P**	**09 40 16.0**	**+0.4**
CM35	**Chiang Mai Arr**	**41.31**	**274**	P		**P**	**09 40 17.0**	**+1.1**
CM33	**Chiang Mai Arr**	**41.48**	**274**	P		**P**	**09 40 18.0**	**+0.8**
CM09	**Chiang Mai Arr**	**41.51**	**274**	P		**P**	**09 40 19.6**	**+2.1**
	comp=Z,5.9nm,0.7s							
CM04	**Chiang Mai Arr**	**41.53**	**274**	P		**P**	**09 40 19.4**	**+1.8**
	comp=Z,81nmcomp=Z,6.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**41.55**	**274**	P		**P**	**09 40 17.6**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=57,slow=6.9,SNR=13							
CMAR				PP		**PP**	**09 42 03.7**	**+2.4**
	comp=Z,1.2nm,0.3s,baz=60,slow=8.5,SNR=4.1							
CMAR	**Chiang Mai Arr**	**41.55**	**274**	P		**P**	**09 40 17.8**	**0.0**
CM05	**Chiang Mai Arr**	**41.56**	**274**	P		**P**	**09 40 20.0**	**+2.1**
	comp=Z,5.9nm,1.0s							
CM15	**Chiang Mai Arr**	**41.57**	**274**	P		**P**	**09 40 20.0**	**+2.0**
UTHA	**Uthaitani**	**41.77**	**269**	P		**P**	**09 40 22.2**	**+2.7**
	comp=Z,13nm,0.7s							
UMPA	**Umpang Tak**	**42.15**	**270**	P		**P**	**09 40 25.0**	**+2.4**
	comp=Z,18nm,0.7s							
WRA	**Warramunga Arr**	**42.27**	**192**	P		**P**	**09 40 22.4**	**-1.1**
	comp=Z,7.0nm,0.7s,baz=11,slow=7.9,SNR=14							
WRA				S		**S**	**09 46 18.2**	**-2.1**
	comp=Z,1.9nm,1.1s,baz=8.0,slow=13,SNR=5.9							
PHET	**Kaeng Krachan**	**42.35**	**265**	P		**P**	**09 40 26.2**	**+2.0**
	comp=Z,18nm,0.6s							
KULM	**Kulim**	**44.24**	**255**	P		**P**	**09 40 39.8**	**+0.5**
KULM				IAmb		IAmb	09 40 41.1	
	comp=Z,16nm,0.8s							
SURT	**Suratani**	**44.46**	**260**	P		**P**	**09 40 44.0**	**+3.0**
ASAR	**Alice Springs**	**45.98**	**192**	P		**P**	**09 40 51.3**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=17,slow=12,SNR=28							
ASAR				S		**S**	**09 47 11.4**	**-2.1**
	comp=Z,1.0nm,1.0s,baz=19,slow=18,SNR=5.5							
BILL	**Bilibino**	**48.53**	**11**	P		**P**	**09 41 11.9**	**+0.4**
STKA	**Stephens Creek**	**53.29**	**182**	P		**P**	**09 41 46.5**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=332,slow=14,SNR=4.8							
ZALV	**Zalesovo Beam**	**54.20**	**322**	P		**P**	**09 41 53.0**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=101,slow=7.7,SNR=7.7							
ZALV				PcP		**PcP**	**09 42 53.3**	**-0.3**
	comp=Z,3.8nm,0.4s,baz=120,slow=4.5,SNR=8.6							
MKAR	**Makanchi Array**	**54.69**	**313**	P		**P**	**09 41 57.3**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=89,slow=7.8,SNR=6.7							
MKAR				PcP		**PcP**	**09 42 55.8**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=81,slow=4.3,SNR=7.8							
TTA	**Tatalina**	**57.71**	**28**	P		**P**	**09 42 18.7**	**+0.5**
TTA				IAmb		IAmb	09 42 47.0	
	comp=Z,22nm,2.0s							
OHAK	**Old Harbor**	**57.75**	**35**	P		**P**	**09 42 19.7**	**+1.3**
NRIK	**Noril'sk**	**57.99**	**340**	P		**P**	**09 42 19.6**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=122,slow=10,SNR=3.9							
NRIK				PcP		**PcP**	**09 43 08.2**	**0.0**
	comp=Z,2.8nm,0.6s,baz=84,slow=5.0,SNR=3.7							
KDAK	**Kodiak Island**	**58.22**	**35**	P		**P**	**09 42 21.8**	**+0.2**
	comp=Z,5.5nm,0.8s,baz=207,slow=5.3,SNR=6.6							
SKT	**Skwentna**	**59.51**	**30**	P		**P**	**09 42 31.3**	**+0.9**
BPAW	**Bear Paw Mtn.**	**60.18**	**28**	P		**P**	**09 42 36.4**	**+1.4**
BPAW				IAmb		IAmb	09 42 37.2	
	comp=Z,7.7nm,0.7s							
A21K	**Barrow**	**60.22**	**19**	P		**P**	**09 42 35.3**	**+0.3**
TRF	**Thorofare Moun**	**60.36**	**28**	P		**P**	**09 42 37.0**	**+0.6**
TRF				IAmb		IAmb	09 42 38.3	
	comp=Z,6.2nm,0.8s							
MLY	**Manley**	**60.48**	**26**	P		**P**	**09 42 38.1**	**+1.0**
PMR	**Palmer**	**60.56**	**31**	P		**P**	**09 42 38.3**	**+0.7**
GHO	**Glory Hole Cre**	**60.69**	**30**	P		**P**	**09 42 37.4**	**-1.1**
MCK	**McKinley**	**61.00**	**28**	P		**P**	**09 42 41.4**	**+0.9**
I23K	**Minto, Yukon-K**	**61.08**	**26**	P		**P**	**09 42 42.5**	**+1.5**
NEA2	**Nenana**	**61.10**	**27**	P		**P**	**09 42 42.1**	**+1.0**
COLD	**Coldfoot**	**61.18**	**24**	P		**P**	**09 42 43.4**	**+1.8**
SCM	**Sheep Creek Mo**	**61.45**	**30**	P		**P**	**09 42 44.9**	**+1.3**
TOLK	**Toolik Lake Re**	**61.73**	**23**	P		**P**	**09 42 47.2**	**+1.9**
IL31		**62.05**	**27**	P		**P**	**09 42 47.2**	**-0.1**
IL31						IAmb	IAmb	09 42 48.1
	comp=Z,5.0nm,0.8s							
ILAR	**Eielson Array**	**62.05**	**27**	P		**P**	**09 42 47.2**	**-0.2**
	comp=Z,4.3nm,0.8s,baz=259,slow=5.3,SNR=39							
ILAR	**Eielson Array**	**62.05**	**27**	P		**P**	**09 42 47.1**	**-0.3**
BMRM	**Bremner River**	**62.66**	**32**	P		**P**	**09 42 52.6**	**+1.0**
BRVK	**Borovoye**	**62.72**	**320**	P		**P**	**09 42 52.8**	**+0.8**
BRVK						IAmb	IAmb	09 42 53.5
	comp=Z,9.8nm,0.8s							
FYU	**Fort Yukon**	**62.99**	**25**	P		**P**	**09 42 55.8**	**+2.3**
FYU						IAmb	IAmb	09 42 56.4
	comp=Z,7.6nm,0.9s							
DOT	**Dot Lake**	**63.14**	**29**	P		**P**	**09 42 55.3**	**+0.7**
SCRK	**Sand Creek**	**63.21**	**28**	P		**P**	**09 42 56.2**	**+1.0**
SCRK						IAmb	IAmb	09 42 56.8
	comp=Z,5.8nm,0.8s							
BMAR	**Burnt Mountain**	**63.36**	**24**	P		**P**	**09 42 57.2**	**+1.2**
K27K	**Chicken**	**64.05**	**28**	P		**P**	**09 43 02.2**	**+1.8**
DAWY	**Dawson**	**65.23**	**28**	P		**P**	**09 43 09.3**	**+1.1**
EPYK	**Eagle Plains**	**66.38**	**26**	P		**P**	**09 43 16.8**	**+1.4**
EPYK						IAmb	IAmb	09 43 17.6
	comp=Z,12nm,1.1s							
INK	**Inuvik**	**67.58**	**24**	P		**P**	**09 43 23.7**	**+1.0**
ABKAR	**Akbulak array**	**69.54**	**316**	P		**P**	**09 43 35.5**	**+0.3**
ABKAR	**Akbulak array**	**69.54**	**316**	P		**P**	**09 43 35.4**	**+0.3**
GEYT	**Alibeck**	**73.23**	**305**	P		**P**	**09 43 58.3**	**+0.9**
	comp=Z,1.6nm,0.4s,baz=158,slow=8.6,SNR=4.2							
GEYT	**Alibeck**	**73.23**	**305**	IAmb		IAmb	09 43 59.2	
	comp=Z,3.5nm,0.9s							
EUNU	**Eureka**	**75.11**	**8**	P		**P**	**09 44 08.1**	**+0.7**
YKA	**Yellowknife Ar**	**76.47**	**28**	P		**P**	**09 44 15.9**	**+0.6**
	comp=Z,7.1nm,0.8s,baz=290,slow=5.2,SNR=87							
RES	**Resolute Bay**	**77.08**	**13**	P		**P**	**09 44 18.9**	**+0.4**
RES						IAmb	IAmb	09 44 20.1
	comp=Z,3.9nm,0.7s							
B08A	**Colville Reser**	**78.89**	**42**	P		**P**	**09 44 29.2**	**+0.3**
B08A						IAmb	IAmb	09 44 30.9
	comp=Z,7.3nm,0.9s							
ARCES	**ARCESS Array B**	**78.92**	**341**	P		**P**	**09 44 29.4**	**+0.8**
	comp=Z,9.7nm,0.7s,baz=75,slow=8.6,SNR=47							
ARCES	**ARCESS Array B**	**78.92**	**341**	P		**P**	**09 44 29.6**	**+0.9**
PINE	**Pine Mountain**	**79.39**	**47**	P		**P**	**09 44 33.6**	**+1.7**
D08A	**Wollman Farm,**	**79.60**	**44**	P		**P**	**09 44 34.6**	**+1.9**
D08A						IAmb	IAmb	09 44 35.1
	comp=Z,5.2nm,0.8s							
C09A	**Chrisman Ranch**	**79.75**	**43**	P		**P**	**09 44 34.9**	**+1.4**
C09A						IAmb	IAmb	09 44 35.4
	comp=Z,6.1nm,0.8s							
K05A	**Summer Lake**	**79.78**	**48**	P		**P**	**09 44 35.8**	**+1.8**
TULEG	**Thule**	**80.07**	**7**	P		**P**	**09 44 35.1**	**+0.5**
TULEG						IAmb	IAmb	09 45 49.9
	comp=Z,7.4nm,1.0s							
G08A	**Pilot Rock**	**80.20**	**45**	P	

P17A	**Butcher Ranch,**	**88.11**	**48**	P	**P**	**09 45 16.7**	**+0.9**
P17A				IAmb	IAmb	09 45 17.6	
	comp=Z,2.8nm,0.7s						
RAYN	**Ar Rayn**	**88.16**	**294**	P	**P**	**09 45 15.5**	**-0.7**
U15A	**North Rim**	**88.35**	**51**	P	**P**	**09 45 18.0**	**+0.9**
RDMU	**Red Mountain**	**88.41**	**47**	P	**P**	**09 45 18.3**	**+1.0**
RDMU				IAmb	IAmb	09 45 18.5	
	comp=Z,3.6nm,0.9s						
SRU	**San Rafael Swe**	**88.42**	**48**	P	**P**	**09 45 17.8**	**+0.5**
SRU				IAmb	IAmb	09 45 18.6	
	comp=Z,4.7nm,0.7s						
113A	**Mohawk Valley,**	**88.81**	**55**	P	**P**	**09 45 20.2**	**+1.2**
113A				IAmb	IAmb	09 45 20.8	
	comp=Z,11nm,1.5s						
Y14A	**Wickenburg**	**88.89**	**54**	P	**P**	**09 45 20.8**	**+1.4**
Y14A				IAmb	IAmb	09 45 22.1	
	comp=Z,5.2nm,0.7s						
NB2	**NORSAR Subarra**	**88.94**	**339**	P	**P**	**09 45 17.7**	**-1.4**
	baz=51,slow=4.4						
NOA	**NORSAR Array B**	**88.94**	**339**	P	**P**	**09 45 17.8**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=47,slow=4.8,SNR=4.0						
PV14	**Lion Creek, Pa**	**89.80**	**48**	P	**P**	**09 45 23.2**	**-0.6**
PV17	**East Wray Mesa**	**89.89**	**49**	P	**P**	**09 45 23.7**	**-0.5**
PV17				IAmb	IAmb	09 45 25.7	
	comp=Z,6.6nm,0.9s						
PV16	**Nyswonger Mesa**	**89.90**	**48**	P	**P**	**09 45 25.4**	**+1.1**
PV16				IAmb	IAmb	09 45 25.8	
	comp=Z,6.4nm,1.0s						
PV18	**Skein Mesa, Pa**	**89.94**	**49**	P	**P**	**09 45 24.4**	**0.0**
PV18				IAmb	IAmb	09 45 25.9	
	comp=Z,4.1nm,0.9s						
PV11	**David Mesa, Pa**	**89.94**	**48**	P	**P**	**09 45 25.5**	**+1.1**
PV11				IAmb	IAmb	09 45 27.1	
	comp=Z,5.5nm,0.8s						
PV12	**Saucer Basin,**	**89.98**	**48**	P	**P**	**09 45 24.7**	**+0.1**
PV12				IAmb	IAmb	09 45 26.8	
	comp=Z,6.5nm,1.1s						
PV13	**Radium Mtn., P**	**90.04**	**49**	P	**P**	**09 45 24.9**	**-0.1**
PV13				IAmb	IAmb	09 45 26.3	
	comp=Z,3.3nm,0.9s						
RSSD	**Black Hills**	**90.27**	**42**	P	**P**	**09 45 25.9**	**+0.1**
BRTR	**Keskin Array B**	**90.33**	**313**	P	**P**	**09 45 25.5**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=73,slow=4.1,SNR=4.0						
SMCO	**Snowmass**	**90.83**	**47**	P	**P**	**09 45 29.6**	**+0.8**
SMCO				IAmb	IAmb	09 45 31.2	
	comp=Z,4.4nm,0.9s						
BURAR	**Bucovina Array**	**91.39**	**323**	P	**P**	**09 45 29.3**	**-1.5**
ISCO	**Idaho Springs**	**91.44**	**46**	P	**P**	**09 45 31.9**	**+0.4**
GERES	**GERESS Array B**	**96.58**	**329**	P	**P**	**09 45 52.9**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=56,slow=6.0,SNR=2.1						
TXAR	**Lajitas Array**	**98.07**	**54**	P	Pdif	09 46 02.4	+0.8
	comp=Z,0.4nm,0.9s,baz=273,slow=4.9,SNR=4.1						
TXAR	**Lajitas Array**	**98.07**	**54**	P	**P**	**09 46 01.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**128.73**	**309**	PKP	**PKPdf**	**09 51 30.4**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=13,slow=1.3,SNR=2.6						
LL02	**Futaleuf**	**143.88**	**135**	PKPdf	PKPbc	09 51 56.6	-0.1
PLCA	**Paso Flores**	**145.77**	**131**	PKPbc	**PKPbc**	**09 52 02.7**	**0.0**
	comp=Z,13nm,0.7s,baz=237,slow=3.8,SNR=52						
PLCA	**Paso Flores**	**145.77**	**131**		**PKPab**	**09 52 03.3**	**-0.3**
BI02	**San Fabin de**	**146.64**	**124**		**PKPbc**	**09 52 05.1**	**-0.2**
BO02	**Sierra Bellavi**	**147.54**	**121**		**PKPbc**	**09 52 08.3**	**+0.5**
PB16	**IPOC Station P**	**149.16**	**90**		**PKiKP**	**09 52 14.1**	**+0.1**
MNMC	**Minye Minye**	**149.23**	**91**		**PKiKP**	**09 52 13.7**	**0.0**
PB11	**IPOC Station P**	**149.28**	**92**		**PKPbc**	**09 52 10.6**	**-2.1**
PB01	**IPOC Station P**	**149.62**	**95**		**PKiKP**	**09 52 13.9**	**-0.4**
PB08	**IPOC Station P**	**149.80**	**93**		**PKPbc**	**09 52 14.2**	**0.0**
PB15	**IPOC Station P**	**149.84**	**99**		**PKiKP**	**09 52 14.9**	**+0.1**
LPAZ	**La Paz**	**149.96**	**85**	PKP	**PKPdf**	**09 52 10.1**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=44,slow=4.1,SNR=5.4						
LPAZ				PKPbc	**PKiKP**	**09 52 15.5**	**-0.2**
	comp=Z,8.3nm,0.6s,baz=338,slow=3.2,SNR=26						
LPAZ				PKPab	**PKPab**	**09 52 23.1**	**+1.3**
	comp=Z,4.8nm,0.5s,baz=353,slow=4.0,SNR=12						
LPAZ	**La Paz**	**149.96**	**85**		**PKiKP**	**09 52 15.9**	**+0.2**

IDC 30 09:53:17.9±4.3, 27.97N×84.96E, h0km, mb3.7/1, mb1 3.7/3, mb1mx3.3/36, mbtmp3.5/3, ML3.9/2, MS3.6/1, Ms1 3.6/1, ms1mx2.5/51, Error ellipse: s-maj=157.0km s-min=42.8km az=52.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.95**	**123**	Pn	Pn	09 57 03.8	0.0
	0.5nm,0.3s,baz=316,slow=12,SNR=4.1						
MKAR	**Makanchi Array**	**18.91**	**354**	P	P	09 57 40.0	-0.1
	0.1nm,0.3s,baz=176,slow=11,SNR=4.7						
MMAI	**Mount Meron Ar**	**42.69**	**289**	LR	LR	10 22 07.8	
	comp=Z,72nm,18.1s,baz=220,slow=40						
ARCES	**ARCESS Array B**	**53.50**	**338**	P	P	10 02 39.6	-0.1
	2.4nm,1.1s,baz=105,slow=7.7,SNR=5.9						

*IDC **30** 09:53:49.8±0.5, 56.754S×26.783W, h96km±4km, mb4.2/8, mb1 4.3/9, mb1mx4.0/22, mbtmp4.5/9, Error ellipse: s-maj=22.9km s-min=13.2km az=60.0*
*NEIC **30** 09:53:50.3±1.6, 56.76S±0.1°×26.79W±0.2, h101km±6km, mb4.6/29, Error ellipse: s-maj=23.2km s-min=14.4km az=222.0*

ISC 30 09:53:50.1±0.5, 56.760S±0.009°×26.79W±0.1°, h101km, n59, σ1s75/64, mb4.6/19, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.95**	**289**		**Pn**	**09 55 15.9**	**+0.3**
VNA1	**Neumayer--Stat**	**16.21**	**158**	P	**P**	**09 57 34.3**	**+1.6**
VNA3	**Neumayer Olymp**	**16.41**	**160**	P	**P**	**09 57 35.6**	**+0.7**
VNA2	**Neumayer--Watz**	**16.61**	**157**	P	**P**	**09 57 39.6**	**+2.5**
	baz=319,slow=13						
SNAA	**Sanae**	**18.16**	**156**	P	**Pn**	**09 58 00.5**	**+5.2**
SNAA	**Sanae**	**18.16**	**156**	P	**P**	**09 57 54.2**	**-0.1**
	1.6nm,0.3s,baz=298,slow=10,SNR=87						
SNAA				S	**S**	**10 01 07.3**	**-9.3**
	0.3nm,0.3s,baz=42,slow=5.2,SNR=2.2						
SNAA				ScP	**ScP**	**10 05 49.1**	**+0.8**
	0.1nm,0.3s,baz=319,slow=2.5,SNR=6.8						
SNAA	**Sanae**	**18.16**	**156**	P	**P**	**09 57 54.0**	**-0.3**
SNAA				IAmb	IAmb	09 58 03.5	
	comp=Z,19nm,0.6s						
EFI	**East Falkland**	**18.83**	**272**	P	**Pn**	**09 58 02.8**	**-0.5**
BELA	**Belgrano 2**	**21.54**	**184**	P	**P**	**09 58 30.3**	**-0.3**
PLCA	**Paso Flores**	**32.28**	**281**	P	**P**	**10 00 08.1**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=146,slow=4.1,SNR=3.7						
PLCA	**Paso Flores**	**32.28**	**281**	IAmb	IAmb	10 00 33.8	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**33.65**	**180**	P	**P**	**10 00 21.8**	**+1.1**
	comp=Z,13nm,0.3s,baz=217,slow=1.5,SNR=132						
QSPA	**South Pole Qui**	**33.65**	**180**	P	**P**	**10 00 21.9**	**+1.1**
CPUP	**Villa Florida**	**37.31**	**311**	P	**P**	**10 00 51.7**	**-0.6**
	comp=Z,4.2nm,0.7s,baz=146,slow=7.1,SNR=7.4						
CPUP				pP	**pP**	**10 01 14.8**	**-0.2**
	comp=Z,4.3nm,0.9s,baz=164,slow=7.9,SNR=4.0						
CPUP	**Villa Florida**	**37.31**	**311**	P	**P**	**10 00 51.9**	**-0.4**
CPUP				IAmb	IAmb	10 01 15.3	
	comp=Z,12nm,1.3s						
MT09	**Talagante**	**37.66**	**288**	P	**P**	**10 00 53.6**	**-1.7**
MT01	**Popeta**	**37.73**	**288**	P	**P**	**10 00 54.1**	**-1.6**
MT02	**Curacav**	**38.14**	**289**	P	**P**	**10 00 57.8**	**-1.4**
MAW	**Mawson**	**39.59**	**143**	P	**P**	**10 01 11.2**	**+0.3**
	comp=Z,1.8nm,0.3s,baz=222,slow=5.2,SNR=15						
AC04	**Llanos de Chal**	**42.14**	**293**	P	**P**	**10 01 32.0**	**-0.2**
AC02	**Maricunga**	**42.29**	**297**	P	**P**	**10 01 33.8**	**-0.2**
AC02				IAmb	IAmb	10 01 34.9	
	comp=Z,6.4nm,0.7s						
GO02	**Mina Guanaco**	**43.91**	**298**	P	**P**	**10 01 46.6**	**-0.3**
GO02				IAmb	IAmb	10 01 48.0	
	comp=Z,6.4nm,0.7s						
SBA	**Scott Base**	**45.54**	**184**	P	**P**	**10 02 01.0**	**+2.2**
VNDA	**Vanda**	**46.03**	**183**	P	**P**	**10 02 04.2**	**+1.5**
	comp=Z,3.3nm,0.6s,baz=187,slow=6.6,SNR=29						
VNDA				ScP	**ScP**	**10 07 21.5**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=214,slow=1.5,SNR=5.1						
VNDA	**Vanda**	**46.03**	**183**	IAmb	IAmb	10 02 04.8	
	comp=Z,4.1nm,0.7s						
PB09	**IPOC Station P**	**46.59**	**300**	P	**P**	**10 02 07.8**	**-0.1**
PB07	**IPOC Station P**	**46.96**	**300**	P	**P**	**10 02 10.2**	**-0.6**
PB07				IAmb	IAmb	10 02 11.9	
	comp=Z,6.9nm,0.6s						
PB01	**IPOC Station P**	**47.35**	**301**	P	**P**	**10 02 14.0**	**+0.2**
PB01				IAmb	IAmb	10 02 14.8	
	comp=Z,8.7nm,0.8s						
PB08	**IPOC Station P**	**47.97**	**302**	P	**P**	**10 02 19.2**	**+0.3**
PB08				IAmb	IAmb	10 02 20.3	
	comp=Z,5.8nm,0.6s						

H10S2	**ASCENSION HYDR**	**48.48**	**16**	T	T	10 55 14.8		
	baz=189,slow=74,SNR=6.7							
H10S3	**ASCENSION HYDR**	**48.48**	**16**	T	T	10 55 15.1		
	baz=31,slow=74,SNR=26							
PB11	**IPOC Station P**	**48.53**	**301**	P	**P**	**10 02 23.0**	**0.0**
PB11				IAmb	IAmb	10 02 24.9		
	comp=Z,8.7nm,0.9s							
PSGCX	**Pisagua**	**48.89**	**301**	P	**P**	**10 02 25.5**	**-0.2**
PSGCX				IAmb	IAmb	10 02 26.1		
	comp=Z,8.1nm,0.8s							
MNMC	**Minye Minye**	**49.05**	**302**	P	**P**	**10 02 27.6**	**+0.6**
H10N1	**ASCENSION HYDR**	**49.60**	**16**	T	T	10 56 39.0		
	baz=188,slow=75,SNR=7.4							
H10N3	**ASCENSION HYDR**	**49.60**	**16**	T	T	10 56 38.7		
	baz=188,slow=75,SNR=12							
H10N2	**ASCENSION HYDR**	**49.61**	**16**	T	T	10 56 40.3		
	baz=188,slow=75,SNR=9.7							
PB16	**IPOC Station P**	**49.69**	**302**	P	**P**	**10 02 32.6**	**+0.3**
LPAZ	**La Paz**	**50.85**	**305**	P	**P**	**10 02 41.7**	**+0.6**
	comp=Z,18nm,0.6s,baz=124,slow=5.2,SNR=79							
LPAZ	**La Paz**	**50.85**	**305**	P	**P**	**10 02 41.6**	**+0.6**
CASY	**Casey**	**53.33**	**160**	P	**P**	**10 02 58.9**	**+0.8**
CASY				IAmb	IAmb	10 02 59.8		
	comp=Z,8.2nm,0.8s							
DBIC	**Dimbokro**	**65.59**	**24**	pP	pP	10 04 46.9	-0.3	
	comp=Z,2.6nm,0.6s,baz=182,slow=6.2,SNR=3.2							
OTAV	**Otavalo**	**70.11**	**304**	P	**P**	**10 04 53.7**	**+1.8**
OTAV				IAmb	IAmb	10 04 55.2		
	comp=Z,6.9nm,1.0s							
TOA0	**Torodi Ar. Sit**	**73.45**	**29**	P	**P**	**10 05 11.4**	**+0.2**
TOA0				IAmb	IAmb	10 05 37.9		
	comp=Z,8.3nm,1.1s							
TORD	**Torodi Ar. Bea**	**73.45**	**29**	P	**P**	**10 05 11.5**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=199,slow=6.4,SNR=9.6							
TORD				pP	**pP**	**10 05 35.4**	**-0.4**	
	comp=Z,3.2nm,0.6s,baz=200,slow=6.3,SNR=8.7							
TORD	**Torodi Ar. Bea**	**73.45**	**29**	P	**P**	**10 05 11.5**	**+0.3**
SDV	**Santo Domingo**	**74.53**	**315**	P	**P**	**10 05 18.5**	**+0.8**
ASAR	**Alice Springs**	**98.41**	**162**	P	**P**	**10 07 16.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=189,slow=4.0,SNR=6.7							
ASAR				PP	**PP**	**10 11 12.7**	**-4.3**	
	comp=Z,0.6nm,0.8s,baz=183,slow=7.1,SNR=6.5							
WRA	**Warramunga Arr**	**102.12**	**162**	P	**Pdif**	**10 07 32.7**	**-0.5**	
	comp=Z,0.2nm,0.8s,baz=200,slow=4.5,SNR=1.1							
ARCES	**ARCESS Array B**	**131.39**	**22**	PKP	**PKPdf**	**10 12 48.5**	**-0.3**	
	comp=Z,0.6nm,0.7s,baz=224,slow=3.8,SNR=5.3							
YKA	**Yellowknife Ar**	**136.70**	**317**	PKP	**PKPdf**	**10 12 58.7**	**-0.2**	
	comp=Z,0.7nm,0.7s,baz=128,slow=2.7,SNR=13							
YKA				PP	**PP**	**10 15 42.5**	**-0.9**	
	comp=Z,0.4nm,0.9s,baz=119,slow=7.2,SNR=4.2							
YKA				SKPbc	**SKPbc**	**10 16 20.0**	**-2.0**	
	comp=Z,0.8nm,1.0s,baz=131,slow=2.6,SNR=6.8							
INK	**Inuvik**	**146.35**	**320**	PKPbc	**PKPbc**	**10 13 18.1**	**+0.7**	
	comp=Z,6.8nm,0.8s,baz=76,slow=3.2,SNR=27							
INK				pPKPbc	**pPKPbc**	**10 13 43.4**	**+0.2**	
	comp=Z,2.1nm,0.6s,baz=90,slow=1.6,SNR=3.4							
INK				SKPbc	**SKPbc**	**10 16 44.7**	**-1.9**	
	comp=Z,1.1nm,1.0s,baz=90,slow=2.2,SNR=3.3							
INK	**Inuvik**	**146.35**	**320**	PKPdf	**PKPab**	**10 13 18.2**	**-0.3**	
SONM	**Songino Array**	**150.57**	**87**	PKPbc	**PKPbc**	**10 13 28.9**	**-0.3**	
	comp=Z,2.4nm,0.6s,baz=225,slow=2.8,SNR=13							
SONM				pPKPbc	**pPKPbc**	**10 13 56.7**	**+0.7**	
	comp=Z,1.0nm,0.5s,baz=223,slow=3.1,SNR=2.9							
SONM	**Songino Array**	**150.57**	**87**	PKPbc	**PKPbc**	**10 13 28.7**	**-0.5**	
ILAR	**Eielson Array**	**150.62**	**311**	PKPbc	**PKiKP**	**10 13 29.5**	**+0.3**	
	comp=Z,3.1nm,0.7s,baz=140,slow=1.8,SNR=34							
ILAR				pPKPbc	**pPKPbc**	**10 13 53.2**	**-2.5**	
	comp=Z,3.3nm,0.9s,baz=136,slow=1.8,SNR=7.0							
ILAR	**Eielson Array**	**150.62**	**311**		**PKPbc**	**10 13 28.6**	**0.0**	
KDAK	**Kodiak Island**	**151.22**	**295**	PKPbc	**PKiKP**	**10 13 31.3**	**+0.7**	
	comp=Z,4.3nm,0.6s,baz=141,slow=1.5,SNR=11							
KDAK				pPKPbc	**pPKPbc**	**10 13 55.9**	**-1.2**	
	comp=Z,5.1nm,0.6s,baz=252,slow=3.1,SNR=2.1							
KDAK	**Kodiak Island**	**151.22**	**295**	PKPbc	**PKiKP**	**10 13 30.8**	**+0.2**	

*HEL **30** 10:01:51.7±0.1, 64.73N×30.63E, h0km, ML1.8, Explosion*
*IDC **30** 10:01:54.4±1.9, 64.67N×30.16E, h0km, mb1 2.5/2, mb1mx2.5/42, mbtmp2.5/2, ML1.7/2, Error ellipse: s-maj=28.1km s-min=9.1km az=109.0*

ISC 30 10:01:50.2±1.2, 64.86N±0.03×31.12E±0.06, h0km, n22, σ1s60/37, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.28**	**337**	PG	**Pn**	**10 02 15.7**	**+0.5**
	baz=166						
KU6				MSG		10 02 32.1	
	comp=Z,3.9nm,0.2s						
KU6				SG	**Sn**	**10 02 33.5**	**+0.4**
MSF	**Maaselka**	**1.37**	**322**	PG	**Pg**	**10 02 16.2**	**-0.2**
MSF				SG	**Sg**	**10 02 33.7**	**-0.4**
OLKF	**Oulanka, Finla**	**1.63**	**335**	PG	**Pg**	**10 02 22.0**	**+0.6**
OLKF				SN	**Sg**	**10 02 44.1**	**+1.6**
JOF	**Joensuu**	**1.95**	**177**	PG	**Pn**	**10 02 24.7**	**+0.3**
JOF				SN	**Sn**	**10 02 49.0**	**-0.6**
OUL	**Oulu**	**2.23**	**278**	PG	**Pn**	**10 02 28.4**	**+0.1**
OUL				SG	**Sn**	**10 02 55.0**	**-1.5**
RNF	**Rovaniemi**	**2.75**	**312**	PG	**Pb**	**10 02 38.5**	**-1.5**
RNF				SG	**Sb**	**10 03 12.3**	**-1.8**
OUF	**Merijarvi**	**2.79**	**263**	PG	**Pn**	**10 02 36.8**	**+0.8**
	baz=76						
OUF				MSG		10 03 07.6	
	comp=Z,10nm,0.2s						
OUF				SG	**Sn**	**10 03 10.8**	**+0.4**
OBF0	**Syolatti, Pyha**	**2.98**	**266**	PB	**Pn**	**10 02 39.5**	**+0.9**
OBF0				SG	**Sn**	**10 03 16.8**	**+1.8**
SUF	**Sumiainen**	**3.08**	**228**	PG	**Pn**	**10 02 40.8**	**+0.9**
SUF				MSG		10 03 15.1	
	comp=Z,2.3nm,0.2s						
SUF				SG	**Sn**	**10 03 17.3**	**-0.1**
TOF	**Tornio**	**3.09**	**296**	PG	**Pb**	**10 02 45.6**	**-0.3**
TOF				MSG		10 03 18.8	
	comp=Z,2.3nm,0.2s						
SGF	**Sodankyl**	**3.20**	**326**	SB	**Sb**	**10 03 24.6**	**-2.6**
KALU	**Kalix**	**3.40**	**291**	PG	**Pb**	**10 02 50.3**	**-0.9**
PAJU	**Pajala**	**3.93**	**307**	PG	**Pb**	**10 03 01.7**	**+1.4**
FIA0	**FINESS Array S**	**4.12**	**216**	PN	**Pn**	**10 02 54.1**	**-0.1**
	baz=27						
FIA0				SG	**Sb**	**10 03 54.1**	**+0.4**
FINES	**FINESS Array B**	**4.12**	**216**	Pn	**Pn**	**10 02 53.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=1.1						
FINES				Pg	**Pb**	**10 03 02.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=43,slow=17,SNR=4.5						
FINES				Lg	Lg	10 03 51.7	
	comp=Z,0.8nm,0.3s,baz=39,slow=29,SNR=9.9						
VAF	**Ylistaro**	**4.15**	**248**	PG	**Pb**	**10 03 03.2**	**-0.7**
VAF				SG	**Sb**	**10 03 53.0**	**-1.4**
BURU	**Burvik**	**4.19**	**271**	PG	**Pb**	**10 03 04.6**	**+0.1**
	baz=83						
BURU				SG	**Sb**	**10 03 51.2**	**-4.4**
VJF	**Virojoki**	**4.63**	**202**	SG	**Sb**	**10 04 08.8**	**+0.3**
HEF	**Hetta**	**4.64**	**324**	PB	**Pb**	**10 03 08.6**	**-3.6**
HEF				SN	**Sn**	**10 03 57.5**	**+1.7**
UMAU	**Umeaa**	**4.64**	**263**	PB	**Pn**	**10 03 04.7**	**+3.4**
UMAU				SG	**Sb**	**10 04 09.2**	**+0.6**
ARCES	**ARCESS Array B**	**5.18**	**338**	Pn	**Pn**	**10 03 10.7**	**+1.9**
	baz=157,slow=14,SNR=8.7						
ARCES				Sn	**Sn**	**10 04 11.6**	**+2.4**
	baz=154,slow=23,SNR=5.6						
ARCES				Lg	Lg	10 04 31.6	
	baz=152,slow=29,SNR=10						
I37NO	**I37NO**	**6.47**	**316**	*i*		10 40 50.0	
	baz=129,slow=330,SNR=3.1						

IDC 30 10:09:09.4±2.2, 1.03N×126.67E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/54, mbtmp3.2/3, Error ellipse: s-maj=176.3km s-min=28.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.16**	**161**	P	P	10 14 07.3	+0.2
	0.2nm,0.3s,baz=339,slow=10,SNR=14						
ASAR	**Alice Springs**	**25.54**	**164**	P	P	10 14 39.9	-0.2
	0.3nm,0.4s,baz=348,slow=13,SNR=8.7						
MKAR	**Makanchi Array**	**59.74**	**326**	P	P	10 19 16.2	0.0
	0.1nm,0.4s,baz=111,slow=6.2,SNR=2.5						

*IDC **30** 10:17:50.3±1.1, 36.07N×29.65E, h0km, mb3.6/4, mb1 3.8/10, mb1mx3.6/48, mbtmp3.7/10, ML3.7/6, MS2.6/3, Ms1 2.6/3, ms1mx2.3/53, Error ellipse: s-maj=20.7km s-min=15.9km az=160.0*
*ATH **30** 10:17:51.5, 36.13N×29.58E, h7km±2km, ML3.5/2, Error ellipse: s-maj=7.7km s-min=1.1km az=6.0*
*ISK **30** 10:17:51.1, 36.11N×29.65E, h6km, ML3.5/28*
*THE **30** 10:17:52.9, 36.11N×29.68E, h0km±4km, ML3.3/3, Error ellipse: s-maj=12.6km s-min=1.2km az=109.0*

ISC 30 10:17:50.3±1.5, 36.08N±0.04×29.68E±0.03, h2km±10km, n53, σ1s18/67, mb3.5/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.11**	**314**	P	**Pg**	**10 17 52.7**	**+0.3**
KSL				S	**Sg**	**10 17 53.7**	**-0.1**
KSL				AML	AML	10 17 54.1	
KSL				AML	AML	10 17 54.2	
AKAS	**Kas**	**0.17**	**339**	PG	**Pg**	**10 17 52.6**	**-1.0**
AKAS				SG	**Sg**	**10 17 54.9**	**-0.9**
ELL	**Elmali**	**0.69**	**15**	PG	**Pg**	**10 18 03.1**	**-0.6**
FETY	**Fethiye**	**0.73**	**319**	P	**Pg**	**10 18 03.9**	**-0.5**
FETY				S	**Sb**	**10 18 16.8**	**+0.4**
FETY	**Fethiye**	**0.73**	**319**	PG	**Pg**	**10 18 03.6**	**-0.8**
KORT	**Korkueli**	**1.07**	**30**	PG	**Pg**	**10 18 11.1**	**+0.3**
DALY	**Dalyan (Mula)**	**1.11**	**312**	PG	**Pg**	**10 18 11.7**	**+0.1**
ANTB	**Antalya**	**1.14**	**43**	PN	**Pg**	**10 18 12.4**	**+0.3**
ARG	**Arkhangelos**	**1.26**	**277**	P	**Pg**	**10 18 14.0**	**-0.6**
ARG				S	**Sg**	**10 18 29.6**	**-1.4**
ARG				AML	AML	10 18 42.7	
	comp=N,1724μm,0.8s						
ARG				AML	AML	10 18 46.1	
	comp=E,2282μm,0.6s						
ARG	**Arkhangelos**	**1.26**	**277**	P	**Pn**	**10 18 15.7**	**+0.7**
ARG				S	**Sn**	**10 18 34.6**	**+2.0**
	comp=E,1μm,0.9s						
ARG	**Arkhangelos**	**1.26**	**277**	PN	**Pg**	**10 18 15.1**	**+0.6**
ARG				SN	**Sn**	**10 18 32.7**	**+0.1**
TURN	**Turunc**	**1.35**	**301**	PN	**Pn**	**10 18 16.3**	**+0.1**
YER	**Yerkesik**	**1.54**	**314**	P	**Pg**	**10 18 19.9**	**0.0**
YER				S	**Sg**	**10 18 41.5**	**+1.7**
YER	**Yerkesik**	**1.54**	**314**	PN	**Pn**	**10 18 18.8**	**-0.1**
BCK	**Bucak**	**1.56**	**28**	PN	**Pn**	**10 18 19.3**	**+0.1**
BASM	**Basmaki-Afyon**	**1.86**	**9**	PN	**Pn**	**10 18 23.2**	**-0.2**
ISP	**Isparta**	**1.87**	**21**	PN	**Pn**	**10 18 23.7**	**+0.2**
NIS1	**Nisyros Isl.**	**2.08**	**285**	P	**Pn**	**10 18 27.3**	**+1.0**
NIS1	**Nisyros Isl.**	**2.08**	**285**	P	**Pn**	**10 18 27.2**	**+0.8**
NIS1	**Nisyros Isl.**	**2.08**	**285**	PN	**Pn**	**10 18 26.9**	**+0.5**
KARP	**Karpathos**	**2.11**	**256**	P	**Pn**	**10 18 28.2**	**+1.5**
KARP	**Karpathos**	**2.11**	**256**	P	**Pn**	**10 18 28.3**	**+1.5**
KARP				S	**Sb**	**10 18 55.7**	**-0.4**
	comp=E,452nm,0.6s						
KARP	**Karpathos**	**2.11**	**256**	PN	**Pn**	**10 18 27.9**	**+1.2**
GAZI	**Gazipasa**	**2.14**	**85**	PN	**Pn**	**10 18 28.6**	**+1.5**
BODT	**Bodrum**	**2.14**	**298**	P	**Pn**	**10 18 26.9**	**-0.2**
BODT				S	**Sb**	**10 18 55.2**	**-1.8**
BODT	**Bodrum**	**2.14**	**298**	PN	**Pn**	**10 18 27.0**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**2.35**	**323**	PN	**Pn**	**10 18 30.3**	**+0.2**
GCAM	**G?zelcami?**	**2.54**	**310**	PN	**Pn**	**10 18 32.9**	**+0.3**
KULA	**Kula-Manisa**	**2.56**	**342**	P	**Pn**	**10 18 34.3**	**+1.3**
KULA	**Kula-Manisa**	**2.56**	**342**	PN	**Pn**	**10 18 33.3**	**+0.3**
SHUT	**Suhut-Afyon**	**2.57**	**15**	PN	**Pn**	**10 18 33.0**	**-0.1**
SMG	**Samos**	**2.80**	**306**	P	**Pn**	**10 18 37.2**	**+1.0**
KONT	**Konya--Tatoy**	**2.84**	**48**	PN	**Pn**	**10 18 37.9**	**+1.1**
ZKR	**Zakros**	**2.98**	**252**	P	**Pn**	**10 18 40.7**	**+2.1**
ZKR	**Zakros**	**2.98**	**252**	P	**Pn**	**10 18 41.0**	**+2.4**
ZKR				S	**Sn**	**10 19 16.5**	**+1.5**
	comp=E,175nm,0.6s						
**

VNA1 S Sn 10 24 22.1 -10
VNA3 Neumayer Olymp 12.93 155 P **Pn** **10 22 09.0 -3.3**
VNA3 S Sn 10 24 18.9 -17
VNA2 Neumayer--Watz 13.22 151 P **Pn** **10 22 12.8 -3.4**
baz=308,slow=15
VNA2 S Sn 10 24 28.6 -14
SNAA Sanae 14.82 150 P **Pn** **10 22 34.7 -3.4**
SNAA S Sn 10 25 07.0 -15
SNAA Sanae 14.82 150 Pn **Pn** **10 22 33.8 -4.2**
66nm,0.3s,baz=308,slow=14,SNR=512
SNAA Sn Sn 10 25 06.5 -15
8.9nm,0.3s,baz=346,slow=19,SNR=3.7
SNAA LR LR 10 27 04.7
comp=Z,8µm,18.2s,baz=314,slow=32
SNAA Sanae 14.82 150 P **Pn** **10 22 34.5 -3.6**
SNAA Sanae 14.82 150 Pn **Pn** **10 22 34.5 -3.6**
PMSA Palmer Station 17.44 240 P **P** **10 23 17.0 +4.2**
18nm,0.3s,baz=84,slow=9.5,SNR=31
PMSA LR LR 10 29 02.3
comp=Z,8µm,20.4s,baz=90,slow=34
PMSA Palmer Station 17.44 240 **P** **10 23 15.2 +2.4**
PMSA IAmb IAmb 10 23 25.0
comp=Z,2µm,1.9s
BELA Belgrano 2 17.76 185 **P** **10 23 16.0 -0.2**
BELA IAmb IAmb 10 23 31.0
comp=Z,872nm,1.7s
EFI East Falkland 19.26 283 *ce*P **Pn** **10 23 36.0 +2.1**
EFI pmax pmax
comp=Z,263nm,1.5s
EFI East Falkland 19.26 283 Pn **Pn** **10 23 34.0 +0.1**
USHA Ushuaia 22.59 266 P **P** **10 24 11.4 +2.7**
comp=Z,45nm,0.6s,baz=129,slow=12,SNR=8.1
USHA LR LR 10 31 09.5
comp=Z,11µm,19.4s,baz=128,slow=32
MG02 Cerro Sombrero 24.10 269 P **P** **10 24 25.5 +1.6**
MG02 IAmb IAmb 10 24 41.6
comp=Z,422nm,1.2s
GO09 Cerro Castillo 26.55 270 P **P** **10 24 46.2 +0.1**
SYO Syowa Base 28.27 136‖ *ep*P **P** **10 25 00.2 -1.1**
SYO Syowa Base 28.27 136‖ *eP* **P** **10 25 02.8 +1.5**
SYO Syowa Base 28.27 136‖ *ep*P pP 10 25 05.6 -0.7
QSPA South Pole Qui 29.86 180 P **P** **10 25 16.5 +0.8**
comp=Z,139nm,1.0s,baz=200,slow=5.0,SNR=108
QSPA S **S** **10 30 09.9 -1.5**
comp=Z,5.2nm,1.1s,baz=32,slow=15,SNR=0.8
QSPA LR LR 10 37 19.3
comp=Z,3µm,18.2s,baz=192,slow=36
QSPA South Pole Qui 29.86 180 P **P** **10 25 17.6 +1.9**
LL02 Futaleuf 31.86 282 P **P** **10 25 33.6 +0.3**
PLCA Paso Flores 33.11 286 P **P** **10 25 44.3 -0.1**
comp=Z,7.7nm,0.7s,baz=131,slow=6.5,SNR=23
PLCA PcP **PcP** **10 28 26.8 -0.3**
comp=Z,3.3nm,0.8s,baz=56,slow=6.2,SNR=1.7
PLCA LR LR 10 38 36.4
comp=Z,7µm,19.3s,baz=140,slow=35
PLCA Paso Flores 33.11 286 P **P** **10 25 44.7 +0.3**
PLCA Paso Flores 33.11 286 *eP* **P** **10 25 39.9 -4.4**
PLTB Pedras Altas 33.60 316 *eP* **P** **10 25 49.3 +0.6**
LL03 Petrohue 33.68 284 P **P** **10 25 50.3 +1.1**
LL04 Puerto Octay 33.86 284 P **P** **10 25 50.3 -0.5**
CPSB Cacapava Do Su 34.79 318 *eP* **P** **10 25 59.9 +1.0**
CNLB Canela 34.97 322 *eP* **P** **10 26 01.7 +1.1**
ITQB Itaqui 36.56 314 *eP* **P** **10 26 14.4 +0.3**
MAW Mawson 36.67 140 P **P** **10 26 15.1 +0.5**
comp=Z,84nm,0.8s,baz=240,slow=8.2,SNR=36
MAW PcP **PcP** **10 28 38.3 +1.4**
comp=Z,3.6nm,0.6s,baz=220,slow=7.9,SNR=1.3
MAW S **S** **10 31 53.0 -3.4**
comp=Z,3.2nm,0.9s,baz=270,slow=14,SNR=2.0
MAW LR LR 10 39 47.1
comp=Z,5µm,19.6s,baz=246,slow=34
MAW Mawson 36.67 140 P **P** **10 26 15.2 +0.5**
baz=37,SNR=19
MAW Mawson 36.67 140 P **P** **10 26 14.8 +0.2**
MAW pmax pmax
comp=Z,26nm,1.0s
MAW Mawson 36.67 140 P **P** **10 26 14.8 +0.2**
BI02 San Fabin de 36.69 290 P **P** **10 26 15.2 -0.1**
ITAB Concordia 37.30 321 *eP* **P** **10 26 21.6 +1.1**
BO02 Sierra Bellavi 37.99 292 P **P** **10 26 26.1 -0.3**
BO01 Tunca 38.47 292 P **P** **10 26 30.7 +0.5**
BO01 IAmb IAmb 10 26 42.7
comp=Z,108nm,1.1s
MT09 Talagante 38.93 293 P **P** **10 26 34.4 0.0**
MT09 IAmb IAmb 10 26 47.3
comp=Z,380nm,1.2s
MT03 Universidad Ad 38.95 294 P **P** **10 26 35.2 +0.8**
MT03 IAmb IAmb 10 26 52.4
comp=Z,145nm,0.9s
MT01 Popeta 38.98 293 P **P** **10 26 34.5 -0.1**
MT01 IAmb IAmb 10 26 48.2
comp=Z,268nm,1.4s
MT05 Renca 39.14 294 P **P** **10 26 36.4 +0.4**
VA05 Santo Domingo 39.32 292 P **P** **10 26 37.0 -0.4**
VA05 IAmb IAmb 10 26 44.7
comp=Z,134nm,0.9s
SPB Sao Paulo 39.43 330 P **P** **10 26 37.9 -0.5**
SPB IAmb IAmb 10 26 49.5
comp=Z,400nm,1.7s
MT02 Curacav 39.43 293 P **P** **10 26 38.4 +0.1**
MT02 IAmb IAmb 10 26 47.9
comp=Z,460nm,1.8s
VA03 San Esteban 39.58 294 P **P** **10 26 40.5 +0.8**
PTGB Pitanga 39.64 323 *eP* **P** **10 26 40.7 +0.5**
CPUP Villa Florida 39.86 315 P **P** **10 26 41.9 0.0**
comp=Z,27nm,0.4s,baz=160,slow=6.6,SNR=55
CPUP ScP **ScP** **10 32 35.0 0.0**
comp=Z,3.5nm,0.8s,baz=156,slow=4.7,SNR=3.2
CPUP LR LR 10 41 40.1
comp=Z,2µm,21.0s,baz=162,slow=34
CPUP Villa Florida 39.86 315 P **P** **10 26 41.7 -0.2**
CPUP pmax pmax
comp=Z,200nm,1.1s
CPUP Villa Florida 39.86 315 P **P** **10 26 41.7 -0.2**
CPUP IAmb IAmb 10 26 49.0
comp=Z,200nm,1.1s
VAO Valinhos 39.88 331 *eP* **P** **10 26 44.5 +2.3**
CO02 Combarbal 41.10 295 P **P** **10 26 52.9 +0.6**
CO02 IAmb IAmb 10 26 56.0
comp=Z,86nm,0.7s
CO03 El Pedregal 41.27 296 P **P** **10 26 53.7 0.0**
CO03 IAmb IAmb 10 27 04.6
comp=Z,496nm,1.8s
BSCB Bom Sucesso 41.31 334 *eP* **P** **10 26 57.1 +3.1**
TRCB Terra Rica 41.62 323 *eP* **P** **10 26 58.7 +2.1**
SBA Scott Base 41.76 184 P **P** **10 26 58.0 +1.0**
SBA pmax pmax
comp=Z,141nm,1.5s
SBA Scott Base 41.76 184 P **P** **10 26 58.0 +1.0**
SUR Sutherland 41.85 70 P **P** **10 26 57.8 -0.8**
comp=Z,22nm,0.7s,baz=214,slow=9.5,SNR=20
SUR LR LR 10 40 29.9
comp=Z,3µm,18.4s,baz=209,slow=31
SUR Sutherland 41.85 70 P **P** **10 26 58.5 0.0**
SUR IAmb IAmb 10 27 05.3
comp=Z,192nm,1.4s
GO04 Tololo Observa 41.89 296 IAmb IAmb 10 27 10.4
comp=Z,132nm,0.8s
BB19B Bebedouro 42.13 329 *eP* **P** **10 27 02.1 +1.4**
VNDA Vanda 42.24 183 P **P** **10 27 02.4 +1.4**
comp=Z,24nm,1.1s,baz=188,slow=6.7,SNR=38
PCMB Pacaembu 42.34 325 *eP* **P** **10 27 02.7 +0.3**
BSFB Barra de Sao F 42.67 340 *eP* **P** **10 27 05.9 +0.8**
LCO Las Campanas 42.84 297 P **P** **10 27 06.4 -0.3**
LCO pmax pmax
comp=Z,506nm,1.8s
LCO MLR MLR
comp=Z,4µm,18.0s
LCO Las Campanas 42.84 297 P **P** **10 27 06.4 -0.3**
LCO IAmb IAmb 10 27 17.3
comp=Z,506nm,1.8s
SJMB Sao Joao De Ma 42.85 340 *eP* **P** **10 27 09.2 +2.6**
GO03 Copiap 43.86 299 P **P** **10 27 14.5 -0.3**
ITRB Iturama 43.91 327 *eP* **P** **10 27 15.7 +0.6**
AC02 Maricunga 44.05 300 IAmb IAmb 10 27 24.4
comp=Z,196nm,1.0s
AQDB Aquidauana 44.74 320 *eP* **P** **10 27 21.4 -0.3**
AC01 Pan de Azucar 45.28 299 P **P** **10 27 25.5 -0.5**
GO02 Mina Guanaco 45.71 301 P **P** **10 27 29.8 +0.1**
PB14 IPOC Station P 46.53 300 P **P** **10 27 34.6 -1.6**
JANB Januaria 46.98 337 *eP* **P** **10 27 39.5 -0.1**
BOSA Boshof 47.08 72 P **P** **10 27 39.9 -0.4**
comp=Z,33nm,0.8s,baz=210,slow=6.5,SNR=36
BOSA LR LR 10 44 58.7
comp=Z,2µm,18.1s,baz=213,slow=33

BOSA Boshof 47.08 72 P **P** **10 27 39.9 -0.4**
BOSA pmax pmax
comp=Z,224nm,1.6s
BOSA Boshof 47.08 72 P **P** **10 27 39.9 -0.4**
PP1B Ponte de Pedra 47.19 323 *eP* **P** **10 27 41.9 +0.8**
BDFB Brasilia 47.22 332 P **P** **10 27 42.5 +1.1**
comp=Z,18nm,0.6s,baz=116,slow=4.2,SNR=11
BDFB LR LR 10 47 42.5
comp=Z,2µm,18.0s,baz=164,slow=36
BDFB Brasilia 47.22 332 P **P** **10 27 42.7 +1.3**
BDFB pmax pmax
comp=Z,311nm,1.9s
BDFB Brasilia 47.22 332 P **P** **10 27 42.7 +1.3**
PB10 IPOC Station P 47.57 301 P **P** **10 27 43.8 -0.1**
ARAG Araguaiana, MT 48.11 327 *eP* **P** **10 27 48.3 +0.1**
SDBA SAO DESIDERIO 49.68 337 *eP* **P** **10 28 03.4 +3.1**
CASY Casey 49.80 159 P **P** **10 28 01.1 +0.6**
CASY IAmb IAmb 10 28 06.6
comp=Z,159nm,1.6s
NBLA Lagarto - SE 49.95 346 *eP* **P** **10 28 03.2 +1.0**
PB08 IPOC Station P 49.98 305 IAmb IAmb 10 28 12.5
comp=Z,110nm,0.9s
TA01 Diego Aracena 50.03 303 IAmb IAmb 10 28 09.7
comp=Z,92nm,1.0s
LBTB Lobatse 50.30 69 P **P** **10 28 04.0 -1.0**
LBTB pmax pmax
comp=Z,347nm,1.8s
LBTB Lobatse 50.30 69 P **P** **10 28 04.0 -1.0**
PTLB Pontes e Lacer 50.56 318 *eP* **P** **10 28 06.2 -0.7**
PEXB Peixe 50.70 333 *eP* **P** **10 28 10.0 +2.0**
PSGCX Pisagua 50.87 304 P **P** **10 28 08.3 -1.1**
PSGCX IAmb IAmb 10 28 18.8
comp=Z,196nm,1.5s
MNMC Minye Minye 51.07 305 P **P** **10 28 11.2 +0.1**
NBAN Anadia - AL 51.08 348 *eP* **P** **10 28 13.4 +2.6**
SNDB Serra Nova Dou 51.55 329 *eP* **P** **10 28 14.9 +0.6**
TSUM Tsumeb 51.81 58 P **P** **10 28 16.1 -0.4**
NBRF Rio Formoso - 51.95 350 *eP* **P** **10 28 18.8 +1.4**
H10S2 ASCENSION HYDR 52.14 16 T T 11 25 00.2
baz=187,slow=74,SNR=47
H10S3 ASCENSION HYDR 52.15 15 T T 11 25 18.5
baz=33,slow=74,SNR=76
LPAZ La Paz 53.05 308 P **P** **10 28 26.2 0.0**
comp=Z,35nm,0.5s,baz=140,slow=5.5,SNR=109
LPAZ S **S** **10 35 50.4 -5.2**
comp=Z,1.1nm,0.8s,baz=129,slow=7.9,SNR=1.2
LPAZ LR LR 10 51 46.8
comp=Z,2µm,20.7s,baz=154,slow=37
LPAZ La Paz 53.05 308 IAmb IAmb 10 28 36.9
comp=Z,152nm,1.1s
VILB Vilhena 53.24 318 *eP* **P** **10 28 26.6 -0.4**
H10N1 ASCENSION HYDR 53.26 16 T T 11 26 24.4
baz=181,slow=71,SNR=42
H10N3 ASCENSION HYDR 53.26 15 T T 11 26 23.7
baz=181,slow=71,SNR=115
H10N2 ASCENSION HYDR 53.28 16 T T 11 26 39.3
baz=181,slow=71,SNR=53
NBMA Muriti-CE 53.64 345 *eP* **P** **10 28 32.2 +2.3**
SMTB Santa Maria do 53.68 334 *eP* **P** **10 28 30.5 +0.3**
PRPB Parauapebas 56.78 333 *eP* **P** **10 28 52.4 -0.1**
NPGB Novo Progresso 57.35 326 *eP* **P** **10 28 56.1 -0.4**
ETMB Extrema 58.25 313 *eP* **P** **10 29 01.6 -1.2**
TMAB Tom-Au,PA,Br 60.09 335 *eP* **P** **10 29 15.9 +0.4**
NNA Nana 60.50 301 P **P** **10 29 18.4 -0.1**
comp=Z,13nm,0.6s,baz=166,slow=7.0,SNR=2.2
NNA Nana 60.50 301 *i* P **P** **10 29 17.8 -0.7**
NNA pmax pmax
comp=Z,55nm,0.9s
NNA Nana 60.50 301 P **P** **10 29 18.0 -0.5**
NNA IAmb IAmb 10 29 27.0
comp=Z,76nm,1.1s
MALB Monte Alegre 62.02 329 *eP* **P** **10 29 27.4 -1.3**
MACA Manacapuru-AM 62.60 321 *eP* **P** **10 29 31.2 -1.3**
CZSB Cruzeiro do Su 62.63 307 *eP* **P** **10 29 29.7 -3.1**
MCPB Macapa, AP 62.91 332 *eP* **P** **10 29 34.4 -0.2**
PTGA Pitinga 64.68 323 P **P** **10 29 45.3 -0.9**
comp=Z,20nm,0.6s,baz=160,slow=6.8,SNR=18
PTGA PP **PP** **10 32 11.3 +2.6**
comp=Z,5.9nm,0.8s,baz=156,slow=13,SNR=5.4
MCQ Macquarie Isla 65.37 184 IAMs_20 IAMs_20 11 01 21.3
comp=Z,20µm,19.0s
ATAH Atahualpa 65.51 302 P **P** **10 29 52.1 -0.1**
comp=Z,24nm,1.1s,baz=159,slow=5.3,SNR=15
ABPO Ambohimpanom 65.86 86 P **P** **10 29 55.5 +1.3**
ABPO pmax pmax
comp=Z,92nm,1.6s
ABPO Ambohimpanom 65.86 86 P **P** **10 29 55.5 +1.3**
ABPO IAmb IAmb 10 30 01.7
comp=Z,92nm,1.6s
BOAV Boa Vista 67.81 323 *eP* **P** **10 30 04.3 -2.0**
DBIC Dimbokro 69.09 24 P **P** **10 30 13.8 -0.4**
comp=Z,4.7nm,0.5s,baz=179,slow=7.4,SNR=9.1
DBIC S **S** **10 39 15.6 -2.8**
comp=Z,6.5nm,1.3s,baz=117,slow=13,SNR=1.5
DBIC Dimbokro 69.09 24 P **P** **10 30 13.1 -1.2**
DBIC pmax pmax
comp=Z,29nm,1.0s
DBIC Dimbokro 69.09 24 P **P** **10 30 13.1 -1.2**
PTLC Puerto Leguiza 70.67 308 *eP* **P** **10 30 20.2 -3.9**
MACC Macarena, Meta 72.11 310 *eP* **P** **10 30 30.9 -1.9**
OTAV Otavalo 72.19 305 P **P** **10 30 34.8 +1.0**
OTAV pmax pmax
comp=Z,106nm,1.4s
OTAV MLR MLR
comp=Z,3µm,20.0s
OTAV Otavalo 72.19 305 P **P** **10 30 34.8 +1.0**
OTAV IAmb IAmb 10 30 47.3
comp=Z,106nm,1.4s
OTAV Otavalo 72.19 305 *eP* **P** **10 30 32.2 -1.6**
OTAV Otavalo 72.19 305 *eP* **P** **10 30 31.0 -2.8**
GCUF Volcan Galeras 72.64 306 *eP* **P** **10 30 37.7 +1.2**
GARC Garzon, Huila 72.78 308 *eP* **P** **10 30 35.3 -1.9**
CRUC La Cruz 72.79 307 *eP* **P** **10 30 38.9 +1.7**
SOTA Rioblanco 73.17 307 *eP* **P** **10 30 40.2 +0.5**
BETC Betania 73.22 309 *eP* **P** **10 30 38.1 -1.3**
PYZ Puysegur Point 73.23 190 IAMs_20 IAMs_20 11 08 50.3
comp=Z,30µm,19.0s
PCON Cinco Dias 73.27 308 *eP* **P** **10 30 39.5 -0.8**
WHZ Wether Hill Ro 73.39 191 IAMs_20 IAMs_20 11 06 49.6
comp=Z,34µm,21.0s
MARP Paez Belalcaza 73.56 308 *eP* **P** **10 30 41.5 -0.2**
VILC Villavicencio, 73.86 311 *eP* **P** **10 30 42.9 -0.4**
DCZ Deep Cove 73.88 190 IAMs_20 IAMs_20 11 07 15.7
comp=Z,36µm,20.0s
MLZ Mavora Lakes 73.89 191 IAMs_20 IAMs_20 11 06 48.9
comp=Z,39µm,22.0s
MBAR Mbarara 74.08 62 *i* P **P** **10 30 43.9 -0.7**
MBAR pmax pmax
comp=Z,95nm,2.0s
MBAR Mbarara 74.08 62 P **P** **10 30 46.0 +1.4**
MBAR IAmb IAmb 10 30 52.6
comp=Z,238nm,2.0s
ORTC Ortega, Tolima 74.27 309 *eP* **P** **10 30 44.1 -1.4**
CHIC Chingaza 74.35 311 *eP* **P** **10 30 45.1 -1.4**
PTCN Pitcairn Islan 74.72 246 IAMs_20 IAMs_20 10 57 11.8
comp=Z,10µm,21.0s
YOTC Yotoco, Valle 74.76 308 *eP* **P** **10 30 46.5 -2.0**
ROSC El Rosal 74.77 311 P **P** **10 30 49.2 +0.4**
comp=Z,26nm,0.8s,baz=69,slow=1.4,SNR=8.1
ROSC El Rosal 74.77 311 IAmb IAmb 10 30 56.1
comp=Z,256nm,1.9s
ROSC El Rosal 74.77 311 *eP* **P** **10 30 46.8 -2.1**
ANIL Santa Ana 74.86 309‖ *eP* **P** **10 30 49.2 -0.1**
TOLC Tolima 74.92 310 *eP* **P** **10 30 47.5 -2.2**
MBO M'Bour 74.95 10 IAMs_20 IAMs_20 11 10 04.2
comp=Z,11µm,19.0s
SACV Santiago Islan 75.14 3 IAMs_20 IAMs_20 11 10 21.3
comp=Z,7µm,22.0s
RUSC La Rusia 75.28 312 *eP* **P** **10 30 48.1 -3.8**
TAMC Tame, Arauca 75.31 314 *eP* **P** **10 30 50.8 -0.8**
SPBC San Pablo de B 75.42 311 *eP* **P** **10 30 48.8 -3.5**
GUY2C Guyana, Caldas 75.52 310 *eP* **P** **10 30 50.8 -2.5**
NORC Norcasia 75.64 310 *eP* **P** **10 30 48.8 -4.7**
BARC Barichara 75.96 312 *eP* **P** **10 30 50.8 -4.7**
TOSP Speyside 76.28 326 IAMs_20 IAMs_20 11 04 59.3
comp=Z,24µm,21.0s
CBOC Ciudad Bolivar 76.35 309 *eP* P 10 30 52.4 -5.2
PCRV Puerto La Cruz 76.42 322 P **P** **10 30 59.2 +1.4**
comp=Z,45nm,0.9s,baz=164,slow=3.9,SNR=14
PCRV PP PP 10 33 59.9 +10
comp=Z,9.9nm,0.8s,baz=165,slow=8.2,SNR=5.4
PCRV LR LR 11 03 32.7
comp=Z,330nm,21.2s,slow=35
HELC Santa Helena 76.47 310 *eP* **P** **10 30 56.9 -1.6**

KMBO Kilima Mbogo 76.54 68 P **P** **10 31 01.5 +2.7**
comp=Z,1.2nm,0.4s,baz=204,slow=6.4,SNR=8.8
KMBO PP **PP** **10 33 55.5 +4.6**
comp=Z,0.5nm,0.3s,baz=217,slow=11,SNR=3.3
BRRC Barranca, Sant 76.63 312 *eP* **P** **10 30 55.7 -3.3**
TOC4 Torodi Ar. Sit 76.77 29 IAMs_20 IAMs_20 11 05 04.5
comp=Z,13µm,22.0s
TOC5 Torodi Ar. Sit 76.78 29 IAMs_20 IAMs_20 11 05 04.5
comp=Z,15µm,22.0s
TOB4 Torodi Ar. Sit 76.79 29 IAMs_20 IAMs_20 11 05 04.4
comp=Z,13µm,22.0s
TOB3 Torodi Ar. Sit 76.79 29 IAMs_20 IAMs_20 11 05 04.5
comp=Z,13µm,22.0s
TOA3 Torodi Ar. Sit 76.79 29 IAMs_20 IAMs_20 11 05 04.5
comp=Z,13µm,22.0s
TOC3 Torodi Ar. Sit 76.79 29 IAMs_20 IAMs_20 11 05 04.6
comp=Z,13µm,22.0s
TOA0 Torodi Ar. Sit 76.80 29 P **P** **10 30 59.5 -0.4**
TOA0 IAmb IAmb 10 31 21.0
comp=Z,102nm,1.1s
TOA0 IAMs_20 IAMs_20 11 06 28.7
comp=Z,5µm,18.0s
TORD Torodi Ar. Bea 76.80 29 P **P** **10 31 00.1 +0.2**
comp=Z,20nm,0.6s,baz=201,slow=6.0,SNR=126
TORD S **S** **10 40 52.0 +5.9**
comp=Z,0.7nm,0.8s,baz=198,slow=8.7,SNR=3.6
TOA2 Torodi Ar. Sit 76.80 29 IAMs_20 IAMs_20 11 05 04.7
comp=Z,13µm,22.0s
TOB5 Torodi Ar. Sit 76.80 29 IAMs_20 IAMs_20 11 05 04.8
comp=Z,13µm,22.0s
TOC7 Torodi Ar. Sit 76.81 29 IAMs_20 IAMs_20 11 05 05.0
comp=Z,13µm,22.0s
TOB1 Torodi Ar. Sit 76.81 29 IAMs_20 IAMs_20 11 05 05.0
comp=Z,13µm,22.0s
TOC2 Torodi Ar. Sit 76.81 29 IAMs_20 IAMs_20 11 05 05.1
comp=Z,13µm,22.0s
TOC1 Torodi Ar. Sit 76.82 29 IAMs_20 IAMs_20 11 06 28.4
comp=Z,6µm,18.0s
KOWA Kowa 76.87 23 P **P** **10 31 00.1 -0.2**
KOWA IAmb IAmb 10 31 19.1
comp=Z,49nm,1.1s
TAU Tasmania Unive 76.96 176 P **P** **10 31 01.3 +0.7**
TAU pmax pmax
comp=Z,38nm,1.0s
TAU MLR MLR
comp=Z,127µm,22.0s
TAU Tasmania Unive 76.96 176 P **P** **10 31 01.3 +0.7**
SDV Santo Domingo 77.17 316 P **P** **10 31 01.5 -0.8**
comp=Z,27nm,0.6s,baz=162,slow=6.3,SNR=36
SDV PP **PP** **10 33 57.4 +1.0**
comp=Z,7.6nm,0.7s,baz=157,slow=7.7,SNR=6.1
SDV Santo Domingo 77.17 316 P **P** **10 31 00.8 -1.5**
SDV IAmb IAmb 10 31 07.6
comp=Z,99nm,0.8s
SDV Santo Domingo 77.17 316 *eP* **P** **10 30 59.4 -2.9**
SDV Santo Domingo 77.17 316 *eP* **P** **10 31 00.8 -1.5**
SOLC Bahia Solano 77.22 308 *eP* **P** **10 31 01.4 -1.0**
GRGR Grenville 77.39 325 IAMs_20 IAMs_20 11 04 54.7
comp=Z,2µm,21.0s
ZARC Zaragoza, Cauc 77.41 311 *eP* **P** **10 31 01.3 -2.1**
OCAC Ocana 77.53 313 *eP* P 10 30 59.4 -4.8
BBGH Gun Hill 77.78 328 IAMs_20 IAMs_20 11 05 03.9
comp=Z,29µm,20.0s
UREC San Jos de Ur 77.90 311 *eP* **P** **10 31 03.4 -2.8**
SMLC San Martn de 78.32 312 *eP* **P** **10 31 04.1 -4.4**
SVB Belmont 78.36 326 IAMs_20 IAMs_20 11 04 55.5
comp=Z,15µm,20.0s
RKT Rikitea 78.60 243 *eP* **P** **10 31 08.1 -1.9**
comp=Z,110nm,1.4s
MOTC Monteria, Cord 78.90 311 *eP* **P** **10 31 08.1 -3.6**
ARGC Ariguani, Magd 79.36 313 *eP* **P** **10 31 12.9 -1.3**
UPD2 Meteti 79.58 309 *eP* **P** **10 31 12.7 -2.7**
LODK Lodwar 79.71 64 IAmb IAmb 10 31 25.9
comp=Z,166nm,1.9s
LODK IAMs_20 IAMs_20 11 03 10.0
comp=Z,6µm,20.0s
FDF Fort de France 79.73 326 IAMs_20 IAMs_20 11 04 55.6
comp=Z,20µm,20.0s
SJCC San Jacinto, C 79.74 312 *eP* **P** **10 31 13.4 -2.9**
SVN Savane Anatole 79.84 326 IAMs_20 IAMs_20 11 04 55.8
comp=Z,18µm,19.0s
DLPL La Plaine 80.33 327 IAMs_20 IAMs_20 11 04 55.4
comp=Z,17µm,20.0s
UPA Univ. de Panam 80.57 307 *eP* **P** **10 31 17.4 -3.4**
BCIP Isla Barro Col 80.86 307 P **P** **10 31 22.4 +0.1**
BCIP pmax pmax
comp=Z,248nm,2.0s
BCIP MLR MLR
comp=Z,2µm,18.0s
BCIP Isla Barro Col 80.86 307 P **P** **10 31 22.4 +0.1**
BCIP IAmb IAmb 10 31 29.3
comp=Z,248nm,1.9s
BCIP Isla Barro Col 80.86 307 *eP* **P** **10 31 21.9 -0.4**
RIOS Rincon, Osa 81.93 304 IAMs_20 IAMs_20 11 06 02.8
comp=Z,8µm,21.0s
TOO Toolangi 82.20 174 P **P** **10 31 29.8 +0.5**
baz=82,SNR=5.8
TOO Toolangi 82.20 174 P **P** **10 31 28.9 -0.4**
TOO pmax pmax
comp=Z,21nm,1.0s
TOO Toolangi 82.20 174 P **P** **10 31 28.9 -0.4**
MSEY Mahe Island 82.23 86 IAMs_20 IAMs_20 11 00 48.5
comp=Z,5µm,20.0s
DRK0 Durika 82.33 304 IAmb IAmb 10 31 36.6
comp=Z,45nm,1.0s
PEZE Perez Zeledon, 82.61 304 IAmb IAmb 10 31 38.1
comp=Z,54nm,1.3s
SKI Saint Kitts 82.64 326 IAMs_20 IAMs_20 11 05 04.9
comp=Z,6µm,20.0s
ANWB Willy Bob 82.70 327 IAMs_20 IAMs_20 11 04 42.3
comp=Z,14µm,21.0s
SEUS St. Eustatius 82.86 326 IAMs_20 IAMs_20 11 04 47.7
comp=Z,11µm,21.0s
CVTR Volcan Turrial 83.22 304 P **P** **10 31 36.0 +0.8**
CVTR IAmb IAmb 10 31 41.9
comp=Z,136nm,1.9s
CAO2 Cobano, Puntar 83.48 303 IAmb IAmb 10 31 50.1
comp=Z,63nm,1.4s
JTS Las Juntas de 83.96 303 P **P** **10 31 37.4 -1.1**
comp=Z,4.9nm,0.8s,baz=108,slow=2.4,SNR=5.0
JTS Las Juntas de 83.96 303 *i* P **P** **10 31 37.1 -1.4**
JTS pmax pmax
comp=Z,15nm,1.1s
JTS Las Juntas de 83.96 303 P **P** **10 31 37.2 -1.3**
JTS IAmb IAmb 10 31 44.1
comp=Z,44nm,1.3s
ORTG Ortega, Santa 84.23 303 P **P** **10 31 41.0 +1.1**
SJG San Juan 84.37 323 P **P** **10 31 39.5 -0.9**
comp=Z,4.7nm,0.3s,baz=235,slow=16,SNR=1.0
TBI Tubuai 84.44 231 *eP* **P** **10 31 38.8 -2.1**
comp=Z,274nm,1.3s
BLDU Ballidu 84.57 149 P **P** **10 31 41.9 +0.4**
baz=84,SNR=4.9
CAN Canberra 84.59 177 IAmb IAmb 10 31 52.3
comp=Z,63nm,1.3s
PRVC Isla de Provid 85.29 307 *eP* P 10 31 39.3 -5.8
ESPN Las Esperanzas 85.41 304 IAMs_20 IAMs_20 11 06 09.0
comp=Z,5µm,21.0s
ACON Acoyapa 85.56 303 IAmb IAmb 10 31 59.5
comp=Z,106nm,1.6s
HTT Hallett 85.81 168 P **P** **10 31 48.1 +0.4**
baz=86,SNR=8.3
FURI Furi 86.05 64 IAMs_20 IAMs_20 11 15 48.5
comp=Z,7µm,19.0s
BBOO Buckleboo 86.11 166 P **P** **10 31 49.0 -0.2**
BBOO IAmb IAmb 10 31 53.9
comp=Z,55nm,1.4s
BOAB BOACO BROADBA 86.20 303 IAMs_20 IAMs_20 11 05 58.0
comp=Z,9µm,22.0s
FORT Forrest 86.89 159 P **P** **10 31 53.5 +0.4**
baz=87
FORT Forrest 86.89 159 P **P** **10 31 52.1 -0.9**
FORT IAmb IAmb 10 31 58.9
comp=Z,54nm,1.0s
RAO Raoul Island 87.56 205 LR LR 11 05 18.3
comp=Z,72µm,20.3s,baz=257,slow=32
STKA Stephens Creek 87.60 170 P **P** **10 31 55.8 -0.7**
comp=Z,9.8nm,1.1s,baz=190,slow=6.3,SNR=8.1
STKA Stephens Creek 87.60 170 P **P** **10 31 56.9 +0.4**
baz=88,SNR=11
STKA Stephens Creek 87.60 170 *eP* **P** **10 31 57.6 +1.1**
STKA pmax pmax
comp=Z,13nm,1.0s
CMSA Cobar Meteorol 88.22 174 P **P** **10 31 59.7 +0.3**
baz=88,SNR=11
DGAR Diego Garcia 88.25 102 *i* P **P** **10 32 02.4 +2.7**
DGAR pmax pmax

comp=Z,185nm,1.7s
SNET **Serv Nac Est T** 88.81 301 IAMs_20 IAMs_20 11 15 31.3
comp=Z,7μm,22.0s
MEEK **Meekatharra** 88.84 150 P **P** **10 32 02.8 +0.3**
baz=89,SNR=4.8
GTBY **Guantanamo Bay** 88.97 316 IAMs_20 IAMs_20 11 08 00.1
comp=Z,5μm,20.0s
MTO3 **Monteristo** 89.50 301 IAMs_20 IAMs_20 11 15 17.6
comp=Z,5μm,19.0s
PPTF **Pamatai, Papee** 89.68 233 IAMs_20 IAMs_20 11 03 15.4
comp=Z,15μm,18.0s
RAR **Rarotonga** 90.15 223 IAMs_20 IAMs_20 11 01 26.1
comp=Z,12μm,19.0s
ATD **Arta Tunnel** 90.26 67 IAMs_20 IAMs_20 11 13 59.0
comp=Z,5μm,21.0s
APG **El Apazote** 90.51 300 P **P** **10 32 09.3 -1.1**
comp=Z,4.0nm,0.6s,baz=136,slow=8.3,SNR=4.5
VAH **Vaihoa** 91.02 236 *e*P **P** **10 32 10.2 -2.5**
comp=Z,47nm,0.9s
WRKA **Warakurna** 92.52 158 P **P** **10 32 20.4 +0.8**
baz=92,SNR=9.3
PSA00 **Pilbara Seismi** 94.00 149 P **P** **10 32 27.8 +1.4**
CMIG **Matias Romero** 94.29 297 P **P** **10 32 26.1 -1.5**
comp=Z,1.8nm,0.7s,baz=98,slow=7.1,SNR=1.6
ASAR **Alice Springs** 94.81 162 P **P** **10 32 29.4 -0.8**
comp=Z,2.4nm,0.6s,baz=183,slow=4.2,SNR=52
ASAR PP **PP** **10 36 18.8 +0.8**
comp=Z,2.7nm,0.9s,baz=189,slow=7.4,SNR=6.6
ASAR PKKPbc **PKKPbc** **10 49 24.4 +0.9**
comp=Z,0.3nm,0.5s,baz=6.1,slow=2.6,SNR=6.2
ASAR **Alice Springs** 94.81 162 P **P** **10 32 29.2 -1.0**
SOCY **Socotra** 96.07 76 IAMs_20 IAMs_20 11 13 14.3
comp=Z,5μm,22.0s
TLIG **Tlapa** 96.35 294 IAMs_20 IAMs_20 11 14 19.0
comp=Z,5μm,20.0s
CMLA **Cha da Macela** 97.80 1 IAMs_20 IAMs_20 11 04 59.6
comp=Z,14μm,20.0s
SFS **San Fernando** 98.00 17 IAMs_20 IAMs_20 11 04 47.6
comp=Z,15μm,22.0s
UNM **Universidad Na** 98.17 295 IAMs_20 IAMs_20 11 14 59.2
comp=Z,5μm,20.0s
PFVI **Vila Bisbo** 98.31 15 IAMs_20 IAMs_20 11 04 48.7
comp=Z,11μm,21.0s
WRA **Warramunga Arr** 98.54 162 P **P** **10 32 46.2 -0.9**
comp=Z,3.4nm,1.0s,baz=191,slow=3.8,SNR=8.7
WRA PP **PP** **10 36 48.3 +1.6**
comp=Z,4.5nm,1.2s,baz=188,slow=5.2,SNR=3.5
WRA PKKPbc **PKKPbc** **10 49 13.7 +0.2**
comp=Z,0.5nm,0.6s,baz=357,slow=2.9,SNR=6.3
WRAB **Tennant Creek** 98.55 162 *i* P Pdif 10 32 47.8 +0.7
WRAB pmax pmax
comp=Z,19nm,1.6s
PVAQ **Vaqueiros** 98.72 15 IAMs_20 IAMs_20 11 04 46.5
comp=Z,9μm,21.0s
KEST **Kesra** 100.31 29 IAMs_20 IAMs_20 11 20 19.5
comp=Z,5μm,21.0s
PAB **San Pablo** 101.30 18 IAMs_20 IAMs_20 11 19 58.8
comp=Z,4μm,21.0s
COI **Coimbra** 101.39 14 IAMs_20 IAMs_20 11 07 43.3
comp=Z,4μm,22.0s
ES12 **SONSECA Array** 101.45 18 IAMs_20 IAMs_20 11 07 34.8
comp=Z,4μm,22.0s
ES14 **SONSECA Array** 101.45 18 IAMs_20 IAMs_20 11 07 35.0
comp=Z,5μm,22.0s
ES13 **SONSECA Array** 101.45 18 IAMs_20 IAMs_20 11 07 35.0
comp=Z,5μm,22.0s
ES11 **SONSECA Array** 101.46 18 IAMs_20 IAMs_20 11 07 34.2
comp=Z,5μm,22.0s
ES15 **SONSECA Array** 101.46 18 IAMs_20 IAMs_20 11 07 34.3
comp=Z,5μm,22.0s
ES04 **SONSECA Array** 101.47 18 IAMs_20 IAMs_20 11 07 34.3
comp=Z,5μm,22.0s
ES05 **SONSECA Array** 101.47 18 IAMs_20 IAMs_20 11 07 33.4
comp=Z,5μm,22.0s
ES10 **SONSECA Array** 101.47 18 IAMs_20 IAMs_20 11 07 34.5
comp=Z,5μm,22.0s
ES03 **SONSECA Array** 101.48 18 IAMs_20 IAMs_20 11 07 33.6
comp=Z,5μm,22.0s
ES01 **SONSECA Array** 101.48 18 IAMs_20 IAMs_20 11 07 33.6
comp=Z,5μm,22.0s
ESDC **Sonseca Array** 101.48 18 P **Pdif** **10 33 01.9 +2.4**
comp=Z,0.5nm,0.7s,baz=240,slow=2.5,SNR=1.9
ESBB **Sonseca Array** 101.48 18 IAMs_20 IAMs_20 11 07 34.7
comp=Z,4μm,22.0s
ES06 **SONSECA Array** 101.48 18 IAMs_20 IAMs_20 11 07 33.8
comp=Z,5μm,22.0s
ES02 **SONSECA Array** 101.49 18 IAMs_20 IAMs_20 11 07 33.9
comp=Z,4μm,22.0s
ES16 **SONSECA Array** 101.49 18 IAMs_20 IAMs_20 11 07 33.9
comp=Z,5μm,22.0s
ES07 **SONSECA Array** 101.49 18 IAMs_20 IAMs_20 11 07 34.1
comp=Z,5μm,22.0s
ES08 **SONSECA Array** 101.50 18 IAMs_20 IAMs_20 11 07 34.3
comp=Z,5μm,22.0s
ES17 **SONSECA Array** 101.50 18 IAMs_20 IAMs_20 11 07 34.3
comp=Z,5μm,22.0s
ES19 **SONSECA Array** 101.52 18 IAMs_20 IAMs_20 11 07 33.6
comp=Z,4μm,22.0s
ES18 **SONSECA Array** 101.52 18 IAMs_20 IAMs_20 11 07 34.7
comp=Z,5μm,22.0s
MTE **Mantegas** 101.69 15 IAMs_20 IAMs_20 11 20 13.2
comp=Z,4μm,19.0s
553A **Crawfordville** 101.70 312 IAMs_20 IAMs_20 11 15 42.4
comp=Z,5μm,22.0s
RAYN **Ar Rayn** 101.96 63 IAMs_20 IAMs_20 11 17 04.2
comp=Z,5μm,19.0s
MNCI **Minicoy** 102.12 95 IAMs_20 IAMs_20 11 08 18.2
comp=Z,6μm,18.0s
451A **Vernon** 102.58 311 IAMs_20 IAMs_20 11 15 32.6
comp=Z,5μm,22.0s
RAFF **Raffo Rosso** 103.01 33 IAMs_20 IAMs_20 11 06 37.8
comp=Z,5μm,21.0s
352A **Blakely** 103.05 312 IAMs_20 IAMs_20 11 15 24.0
comp=Z,3μm,22.0s
CISI **Cisompet, Garu** 103.51 134 IAMs_20 IAMs_20 11 13 02.8
comp=Z,28μm,22.0s
BRAL **Brewton** 103.56 310 IAMs_20 IAMs_20 11 15 22.8
comp=Z,7μm,21.0s
545A **Edgard** 103.90 307 IAMs_20 IAMs_20 11 14 59.8
comp=Z,13μm,21.0s
VSL **Villasalto** 103.90 28 IAMs_20 IAMs_20 11 20 05.6
comp=Z,5μm,20.0s
250A **Grady** 103.99 311 IAMs_20 IAMs_20 11 15 27.1
comp=Z,5μm,21.0s
152A **Waverly Hall** 104.04 313 IAMs_20 IAMs_20 11 18 18.3
comp=Z,4μm,22.0s
V61A **Roper** 104.10 320 IAMs_20 IAMs_20 11 17 50.4
comp=Z,4μm,22.0s
UGM **Wanagama** 104.13 136 IAMs_20 IAMs_20 11 14 41.7
comp=Z,17μm,20.0s
IDI **Anoyia** 104.37 42 IAMs_20 IAMs_20 11 15 47.7
comp=Z,6μm,21.0s
CEL **Celeste** 104.40 34 IAMs_20 IAMs_20 11 06 28.6
comp=Z,4μm,22.0s
PALK **Pallekele** 105.00 102 IAMs_20 IAMs_20 11 28 53.6
comp=Z,10μm,22.0s
KMSC **Kings Mountain** 105.07 316 IAMs_20 IAMs_20 11 25 40.4
comp=Z,3μm,20.0s
ITM **Ithomi** 105.16 39 IAMs_20 IAMs_20 11 15 58.6
comp=Z,5μm,21.0s
KARP **Karpathos** 105.37 43 IAMs_20 IAMs_20 11 15 21.1
comp=Z,4μm,22.0s
TIP **Timpagrande** 105.49 34 IAMs_20 IAMs_20 11 19 03.6
comp=Z,4μm,22.0s
SANT **Santorini** 105.55 42 IAMs_20 IAMs_20 11 15 40.9
comp=Z,5μm,22.0s
PAOL **Paolisi** 106.64 32 IAMs_20 IAMs_20 11 19 19.9
comp=Z,4μm,22.0s
SLBS **Sierra La Lagu** 106.91 288 IAMs_20 IAMs_20 11 18 00.8
comp=Z,4μm,22.0s
ELL **Elmali** 107.40 45 IAMs_20 IAMs_20 11 25 35.9
comp=Z,11μm,20.0s
435B **Jarrell** 107.46 302 IAMs_20 IAMs_20 11 13 49.2
comp=Z,5μm,20.0s
AQU **L'Aquila** 107.58 30 IAMs_20 IAMs_20 11 18 56.0
comp=Z,3μm,20.0s
HPIG 107.70 293 IAMs_20 IAMs_20 11 23 23.7
comp=Z,4μm,22.0s
237A **Washetta, Mont** 107.77 304 IAMs_20 IAMs_20 11 14 02.6
comp=Z,5μm,21.0s
UOSS **Minazif** 108.09 71 IAMs_20 IAMs_20 11 12 20.3
comp=Z,6μm,19.0s
JCT **Junction City** 108.14 300 IAMs_20 IAMs_20 11 13 31.3
comp=Z,5μm,22.0s
WHTX **Lake Whitney,** 108.45 302 IAMs_20 IAMs_20 11 13 49.5
comp=Z,5μm,20.0s
Z38A **Mt. Pleasant** 108.53 305 IAMs_20 IAMs_20 11 14 37.6
comp=Z,5μm,21.0s
HALT **Halls** 108.64 311 IAMs_20 IAMs_20 11 14 56.3
comp=Z,8μm,22.0s
X40A **Basin Creek Fa** 108.74 307 IAMs_20 IAMs_20 11 14 48.0
comp=Z,7μm,22.0s
TXAR **Lajitas Array** 108.85 296 PKiKP **PKiKP** **10 37 37.5 +0.2**
comp=Z,0.2nm,0.7s,baz=160,slow=5.8,SNR=1.5
TXAR PP **PP** **10 38 06.6 +1.8**
comp=Z,0.4nm,0.8s,baz=216,slow=6.2,SNR=5.2
TXAR PKKPbc **PKKPbc** **10 48 44.7 +1.2**
comp=Z,0.5nm,0.8s,baz=157,slow=1.5,SNR=4.2
LNXT **Lenox** 108.87 311 IAMs_20 IAMs_20 11 16 58.3
comp=Z,3μm,22.0s
GLAT **Glass** 108.94 311 IAMs_20 IAMs_20 11 16 48.2
comp=Z,4μm,22.0s
GNAR **Gosnell** 108.95 310 IAMs_20 IAMs_20 11 14 40.4
comp=Z,6μm,21.0s
PEBM **Pemiscot Bayo** 109.02 310 IAMs_20 IAMs_20 11 14 41.3
comp=Z,6μm,21.0s
PVMO **Portageville** 109.22 311 IAMs_20 IAMs_20 11 16 17.7
comp=Z,3μm,21.0s
PENMO **Penman** 109.23 311 IAMs_20 IAMs_20 11 14 40.8
comp=Z,7μm,22.0s
R49A **Shelbyville** 109.24 315 IAMs_20 IAMs_20 11 28 46.8
comp=Z,3μm,20.0s
RPSI **Rantau Prapat** 109.36 121 IAMs_20 IAMs_20 11 19 44.5
comp=Z,28μm,22.0s
T45A **Paducah** 109.36 312 IAMs_20 IAMs_20 11 14 47.2
comp=Z,7μm,22.0s
HENM **Henderson Moun** 109.41 311 IAMs_20 IAMs_20 11 14 42.4
comp=Z,7μm,22.0s
LCAR **Lake Charles** 109.47 309 IAMs_20 IAMs_20 11 14 33.4
comp=Z,7μm,22.0s
Z35A **Perchaven, San** 109.53 303 IAMs_20 IAMs_20 11 13 49.0
comp=Z,5μm,20.0s
W39A **Magazine** 109.74 307 IAMs_20 IAMs_20 11 14 41.4
comp=Z,7μm,22.0s
USIN **University of** 109.84 313 IAMs_20 IAMs_20 11 14 38.9
comp=Z,3μm,22.0s
ABTX **Abilene, Hawle** 109.92 301 IAMs_20 IAMs_20 11 13 41.5
comp=Z,4μm,20.0s
S44A **Carbondale** 110.19 312 IAMs_20 IAMs_20 11 32 20.1
comp=Z,4μm,21.0s
P49A **Miami Univ. Ec** 110.19 316 IAMs_20 IAMs_20 11 15 04.0
comp=Z,3μm,18.0s
SIUC **Southern Illin** 110.19 312 IAMs_20 IAMs_20 11 32 21.3
comp=Z,4μm,20.0s
ACSO **Alum Creek Sta** 110.22 317 IAMs_20 IAMs_20 11 34 23.8
comp=Z,3μm,21.0s
T42A **Van Buren** 110.30 310 IAMs_20 IAMs_20 11 26 37.0
comp=Z,4μm,20.0s
U40A **Yellville** 110.39 308 IAMs_20 IAMs_20 11 16 15.5
comp=Z,3μm,20.0s
GAZ **Gaziantep** 110.45 50 IAMs_20 IAMs_20 11 15 39.5
comp=Z,5μm,18.0s
VTS **Vitosha** 110.54 37 IAMs_20 IAMs_20 11 18 26.1
comp=Z,3μm,21.0s
ALLY **Alegheny Colle** 110.57 320 IAMs_20 IAMs_20 11 34 07.8
comp=Z,3μm,22.0s
N51A **Ashland** 110.64 318 IAMs_20 IAMs_20 11 15 26.7
comp=Z,4μm,21.0s
O49A **Covington** 110.64 316 IAMs_20 IAMs_20 11 15 04.9
comp=Z,4μm,22.0s
WVNY **West Valley, N** 110.78 322 IAMs_20 IAMs_20 11 18 42.1
comp=Z,4μm,20.0s
MMNY **Mt. Morris Dam** 110.86 322 IAMs_20 IAMs_20 11 22 23.3
comp=Z,3μm,19.0s
FVM **French Village** 110.88 311 IAMs_20 IAMs_20 11 26 37.4
comp=Z,4μm,21.0s
DIVS **Divibare** 110.96 34 IAMs_20 IAMs_20 11 18 18.2
comp=Z,3μm,19.0s
U38A **Gravette** 111.06 307 IAMs_20 IAMs_20 11 32 57.4
comp=Z,3μm,21.0s
P46A **Roda** 111.14 314 IAMs_20 IAMs_20 11 16 26.2
comp=Z,3μm,21.0s
Q44A **Meyer Farm, Va** 111.17 312 IAMs_20 IAMs_20 11 16 15.9
comp=Z,4μm,20.0s
MDUB **Mudurnu** 111.18 44 IAMs_20 IAMs_20 11 14 43.9
comp=Z,15μm,21.0s
ANTO **Ankara** 111.20 46 IAMs_20 IAMs_20 11 34 07.5
comp=Z,4μm,21.0s
N49A **Columbus Grove** 111.25 317 IAMs_20 IAMs_20 11 15 25.9
comp=Z,4μm,22.0s
CCM **Cathedral Cave** 111.25 310 IAMs_20 IAMs_20 11 26 12.3
comp=Z,4μm,21.0s
M50A **Fremont** 111.30 318 IAMs_20 IAMs_20 11 15 10.1
comp=Z,3μm,20.0s
WMOK **Wichita Mounta** 111.38 303 IAMs_20 IAMs_20 11 13 35.0
comp=Z,5μm,22.0s
BRTR **Keskin Array B** 111.38 46 PP **PP** **10 38 21.7 -1.4**
comp=Z,3.9nm,1.0s,baz=171,slow=8.4,SNR=4.5
MEDO **Medina** 111.42 322 IAMs_20 IAMs_20 11 15 29.1
comp=Z,3μm,19.0s
OK025 **Westminster Rd** 111.51 304 IAMs_20 IAMs_20 11 13 45.4
comp=Z,4μm,21.0s
J54A **Appleton** 111.57 322 IAMs_20 IAMs_20 11 15 40.2
comp=Z,3μm,20.0s
OK030 **Cody Creek RV** 111.58 305 IAMs_20 IAMs_20 11 13 50.3
comp=Z,5μm,21.0s
LONY **Lake Ozonia** 111.61 325 IAMs_20 IAMs_20 11 31 33.0
comp=Z,3μm,20.0s
OK031 **S. Brethren Rd** 111.62 305 IAMs_20 IAMs_20 11 13 49.4
comp=Z,5μm,21.0s
PECO **Prince Edward** 111.68 323 IAMs_20 IAMs_20 11 31 45.0
comp=Z,4μm,22.0s
BCOK **Bluff Creek, N** 111.68 304 IAMs_20 IAMs_20 11 13 41.0
comp=Z,8μm,21.0s
N47A **Urbana** 111.73 316 IAMs_20 IAMs_20 11 21 54.7
comp=Z,4μm,20.0s
OK029 **Liberty Lake** 111.74 304 IAMs_20 IAMs_20 11 13 44.6
comp=Z,5μm,22.0s
SFIN **Lafayette** 111.78 315 IAMs_20 IAMs_20 11 14 47.0
comp=Z,6μm,21.0s
R40A **Maddies Statio** 111.85 310 IAMs_20 IAMs_20 11 31 07.1
comp=Z,3μm,20.0s
MARD **Mardin** 111.96 53 IAMs_20 IAMs_20 11 17 20.3
comp=Z,3μm,21.0s
P43A **Skaggs, Pawnee** 112.00 312 IAMs_20 IAMs_20 11 14 23.0
comp=Z,3μm,21.0s
O44A **Mansfield** 112.07 313 IAMs_20 IAMs_20 11 16 14.7
comp=Z,4μm,22.0s
BFO **Black Forest** 112.08 25 IAMs_20 IAMs_20 11 21 16.0
comp=Z,5μm,20.0s
EPT **El Paso** 112.20 295 IAMs_20 IAMs_20 11 28 39.8
comp=Z,6μm,22.0s
L48A **N Adams** 112.24 317 IAMs_20 IAMs_20 11 15 11.2
comp=Z,6μm,22.0s
AAM **Ann Arbor** 112.30 318 IAMs_20 IAMs_20 11 15 02.7
comp=Z,4μm,21.0s
T35A **Sooner Cattle** 112.32 306 IAMs_20 IAMs_20 11 22 41.9
comp=Z,3μm,20.0s
K50A **Casco** 112.39 319 IAMs_20 IAMs_20 11 15 06.9
comp=Z,4μm,21.0s
DELO **Deloro Mine** 112.40 323 IAMs_20 IAMs_20 11 35 03.9
comp=Z,4μm,21.0s
MSTX **Muleshoe** 112.42 299 IAMs_20 IAMs_20 11 13 04.6
comp=Z,4μm,22.0s
KULM **Kulim** 112.43 121 IAMs_20 IAMs_20 11 21 24.0
comp=Z,27μm,21.0s
CROK **Carrier** 112.57 304 IAMs_20 IAMs_20 11 13 38.4
comp=Z,7μm,22.0s
STU **Stuttgart** 112.68 25 IAMs_20 IAMs_20 11 24 10.9
comp=Z,4μm,21.0s
HDIL **Hopedale** 112.72 313 IAMs_20 IAMs_20 11 34 22.1
comp=Z,4μm,22.0s
SIRT **Sirnak** 112.78 54 IAMs_20 IAMs_20 11 19 50.1
comp=Z,25μm,22.0s
P40A **Paris** 112.84 310 IAMs_20 IAMs_20 11 30 35.5
comp=Z,4μm,20.0s
U32A **Winter Ranch,** 112.88 304 IAMs_20 IAMs_20 11 29 45.7
comp=Z,3μm,21.0s
OK032 **Salt Plains WL** 112.92 304 IAMs_20 IAMs_20 11 13 47.7
comp=Z,3μm,21.0s
WLF **Walferdange** 112.92 23 IAMs_20 IAMs_20 11 25 54.3
comp=Z,3μm,20.0s
TOKA **Tokat** 112.94 48 IAMs_20 IAMs_20 11 15 15.3
comp=Z,4μm,21.0s
L46A **Eue Claire** 112.94 316 IAMs_20 IAMs_20 11 14 47.8
comp=Z,5μm,22.0s
M44A **Midewin, Midew** 113.00 314 IAMs_20 IAMs_20 11 14 38.5
comp=Z,7μm,22.0s
KS20 **Mayfield South** 113.01 305 IAMs_20 IAMs_20 11 13 42.2
comp=Z,4μm,22.0s
SADO **Sadowa** 113.08 322 IAMs_20 IAMs_20 11 15 31.1
comp=Z,4μm,22.0s
KS21 **Milan North St** 113.11 305 IAMs_20 IAMs_20 11 13 40.9
comp=Z,4μm,22.0s
HQIL **Hanson Quary C** 113.30 315 IAMs_20 IAMs_20 11 16 17.3
comp=Z,3μm,21.0s
N41A **Harden Midland** 113.42 312 IAMs_20 IAMs_20 11 30 40.8
comp=Z,3μm,20.0s
P38A **Dawn** 113.49 309 IAMs_20 IAMs_20 11 30 03.7
comp=Z,5μm,22.0s
I49A **Point Hope** 113.49 319 IAMs_20 IAMs_20 11 15 25.2
comp=Z,5μm,21.0s
J47A **Sunmer** 113.53 318 IAMs_20 IAMs_20 11 15 05.1
comp=Z,7μm,22.0s
UCC **Uccle** 113.67 21 IAMs_20 IAMs_20 11 24 34.2
comp=Z,4μm,22.0s
GEC2 **GERESS Array S** 113.75 28 IAMs_20 IAMs_20 11 22 57.1
comp=Z,4μm,19.0s
GERES **GERESS Array B** 113.75 28 PKiKP **PKiKP** **10 37 45.9 0.0**
comp=Z,1.7nm,1.1s,baz=240,slow=7.8,SNR=2.2
GERES PP **PP** **10 38 41.3 +1.5**
comp=Z,0.3nm,0.3s,baz=160,slow=3.1,SNR=1.8
SNOP **Sinop** 113.96 46 IAMs_20 IAMs_20 11 16 11.5
comp=Z,6μm,20.0s
MLR **Muntele Rosu** 113.97 38 IAMs_20 IAMs_20 11 15 12.1
comp=Z,7μm,22.0s
L42A **Oliver, Polo** 114.12 313 IAMs_20 IAMs_20 11 30 57.2
comp=Z,3μm,22.0s
KSU1 **Kansas State U** 114.24 307 IAMs_20 IAMs_20 11 13 56.7
comp=Z,3μm,18.0s
Y22D **IRIS PASSCAL I** 114.33 296 IAMs_20 IAMs_20 11 36 38.9
comp=Z,21μm,22.0s
N38A **Joes South For** 114.39 310 IAMs_20 IAMs_20 11 29 57.4
comp=Z,4μm,22.0s
PSZ **Piszkesteto** 114.44 33 IAMs_20 IAMs_20 11 29 09.4
comp=Z,4μm,20.0s
R32A **Long Quarter,** 114.51 305 IAMs_20 IAMs_20 11 13 42.8
comp=Z,4μm,21.0s
TUC **Tucson** 114.60 292 IAMs_20 IAMs_20 11 34 42.0
comp=Z,23μm,22.0s
I45A **Fountain** 114.71 317 IAMs_20 IAMs_20 11 16 22.5
comp=Z,3μm,21.0s
L40A **Anamosa** 114.74 312 IAMs_20 IAMs_20 11 14 55.6
comp=Z,3μm,19.0s
GLMI **Grayling** 114.87 319 IAMs_20 IAMs_20 11 15 01.5
comp=Z,8μm,22.0s
JFWS **Jewell Farm** 115.13 314 IAMs_20 IAMs_20 11 34 58.8
comp=Z,3μm,21.0s
CBKS **Cedar Bluff** 115.26 304 IAMs_20 IAMs_20 11 13 34.7
comp=Z,4μm,21.0s
SCIA **State Center** 115.35 311 IAMs_20 IAMs_20 11 24 59.7
comp=Z,5μm,22.0s
N35A **Tabor** 115.37 309 IAMs_20 IAMs_20 11 28 49.5
comp=Z,6μm,22.0s
G45A **Suttons Bay** 115.40 318 IAMs_20 IAMs_20 11 14 42.7
comp=Z,7μm,22.0s
I42A **Draeger Farm,** 115.51 315 IAMs_20 IAMs_20 11 22 11.7
comp=Z,4μm,22.0s
MORC **Moravsky Berou** 115.54 30 IAMs_20 IAMs_20 11 17 59.6
comp=Z,4μm,21.0s
H43A **Windswept, Lux** 115.61 316 IAMs_20 IAMs_20 11 16 10.5
comp=Z,3μm,20.0s
T25A **Trinidad** 115.81 300 IAMs_20 IAMs_20 11 38 08.3
comp=Z,15μm,22.0s
K38A **Parkersburg** 115.82 312 IAMs_20 IAMs_20 11 13 54.2
comp=Z,3μm,21.0s
CLL **Collm** 115.89 27 IAMs_20 IAMs_20 11 15 36.9
comp=Z,4μm,21.0s
GNI **Garni** 115.98 54 IAMs_20 IAMs_20 11 14 52.6
comp=Z,5μm,18.0s
N33A **J Bar K, Exete** 115.98 307 IAMs_20 IAMs_20 11 38 03.5
comp=Z,6μm,21.0s
I40A **Norwalk** 116.11 314 IAMs_20 IAMs_20 11 38 35.8
comp=Z,3μm,20.0s
E46A **Sault Ste Mari** 116.13 320 IAMs_20 IAMs_20 11 14 56.9
comp=Z,9μm,22.0s
KIS **Kishinev** 116.21 39 *e*PP **PP** **10 38 50.0 -7.0**
comp=Z,130nm,8.2s
KIS *e*SKS **SKSac** **10 44 37.0 -2.3**
KIS **Kishinev** 116.21 39 *e*PS PS 10 48 24.0 -14
JAY **Jayapura** 116.55 166 PP PP 10 39 04.7 +6.0
comp=Z,1.1nm,0.3s,baz=154,slow=7.4,SNR=3.8
GUVIX **Guadalupe Vict** 116.59 289 IAMs_20 IAMs_20 11 32 54.3
comp=Z,14μm,22.0s
L34A **Svendsen Farm,** 116.60 309 IAMs_20 IAMs_20 11 13 39.1
comp=Z,4μm,21.0s
KSCO **Kaye Shedlock'** 116.62 302 IAMs_20 IAMs_20 11 14 17.9
comp=Z,3μm,20.0s
KWP **Kalwaria Pacla** 116.77 34 IAMs_20 IAMs_20 11 16 53.0
comp=Z,4μm,20.0s
CPBX **Cerro Prieto** 116.79 289 IAMs_20 IAMs_20 11 32 38.7
comp=Z,13μm,22.0s
BGNE **Belgrade** 116.82 307 IAMs_20 IAMs_20 11 27 42.0
comp=Z,4μm,18.0s
F42A **Maple Grove Fa** 116.87 317 IAMs_20 IAMs_20 11 14 39.6
comp=Z,10μm,22.0s
SOC **Sochi** 116.96 48 *i* PKiKP **PKPdf** **10 37 50.6 -1.5**
SOC *e* 10 38 59.8
SOC *e*SS SS 10 55 33.5 +24
CCX **Cicese** 116.98 287 IAMs_20 IAMs_20 11 37 31.6
comp=Z,14μm,19.0s
Y14A **Wickenburg** 116.98 291 **PKPdf** **10 37 51.4 -1.2**
E43A **Lone Tree Farm** 117.02 318 IAMs_20 IAMs_20 11 14 43.6
comp=Z,11μm,22.0s
G40A **Rib Lake** 117.16 315 IAMs_20 IAMs_20 11 38 48.4
comp=Z,4μm,18.0s
I37A **Lemond, Waseca** 117.23 312 IAMs_20 IAMs_20 11 39 22.5
comp=Z,4μm,21.0s
COWI **Conover** 117.51 316 IAMs_20 IAMs_20 11 14 33.6
comp=Z,10μm,22.0s
MVCO **Mesa Verde** 117.65 297 IAMs_20 IAMs_20 11 38 05.8
comp=Z,23μm,22.0s
ZEI **Tsey** 117.88 52 *i* PKiKP **PKiKP** **10 38 00.8 +6.6**
ZEI pmax pmax
comp=Z,6.0nm,1.2s
SPMN **Marine on St.** 118.05 313 IAMs_20 IAMs_20 11 24 03.1
comp=Z,3μm,19.0s
ECSD **EROS Data Cent** 118.20 310 IAMs_20 IAMs_20 11 23 44.3
comp=Z,3μm,20.0s
KBZ **Khabaz** 118.29 51 PKP **PKPdf** **10 37 54.2 -0.4**
comp=Z,1.5nm,0.6s,baz=261,slow=2.0,SNR=4.7
KBZ PP **PP** **10 39 14.2 +2.6**
comp=Z,2.2nm,0.9s,baz=259,slow=1.5,SNR=4.2
KBZ **Khabaz** 118.29 51 *i* PKiKP **PKPdf** **10 37 54.2 -0.4**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
AKT **Akhty** 118.31 55 *i* PKiKP **PKiKP** **10 37 55.5 +0.5**
AKT *e* 10 39 15.3
AKT pmax pmax
comp=Z,25nm,1.1s
KIV **Kislovodsk** 118.40 50 *i* PKiKP **PKiKP** **10 37 56.0 +0.9**
KIV *e* 10 39 13.0
KIV *e*PS **PS** **10 48 59.9 +2.0**
KIV pmax pmax
comp=Z,44nm,1.0s
KIV **Kislovodsk** 118.40 50 IAMs_20 IAMs_20 11 14 36.9
comp=Z,5μm,21.0s
ISCO **Idaho Springs** 118.55 301 IAMs_20 IAMs_20 11 38 20.5
comp=Z,24μm,22.0s
PV03 **Paradox Valley** 118.67 297 **PKiKP** **10 37 56.6 +0.7**
PV18 **Skein Mesa, Pa** 118.69 297 PKPdf **PKiKP** **10 37 56.1 +0.1**
F36A **Milaca** 118.86 313 IAMs_20 IAMs_20 11 36 34.5
comp=Z,5μm,22.0s
RGN **Rugen** 118.99 26 IAMs_20 IAMs_20 11 15 29.3
comp=Z,6μm,22.0s
MAK **Makhachkala** 119.46 54 *i* P **Pdif** **10 34 14.0 -5.3**
MAK *e* 10 44 48.7
MAK *e*PS PKKPdf 10 49 01.3 +23
MAK pmax pmax
comp=Z,207nm,1.5s
AKASG **Malin Array Be** 119.61 37 PKP **PKPdf** **10 37 56.6 -0.4**
comp=Z,0.6nm,0.3s,baz=240,slow=1.7,SNR=9.5
AKASG PP **PP** **10 39 17.4 -3.2**
comp=Z,0.9nm,0.4s,baz=208,slow=21,SNR=5.2
AKASG **Malin Array Be** 119.61 37*c* *i* PKiKP **PKiKP** **10 37 59.2 +2.2**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG **Malin Array Be** 119.61 37 **PKiKP** **10 37 57.0 0.0**
AKBB **Malin Array Si** 119.61 37*c* *i* PKiKP **PKiKP** **10 37 58.2 +1.2**
SUSD **Miller** 119.70 308 IAMs_20 IAMs_20 11 22 59.1
comp=Z,3μm,21.0s
PHWY **Pilot Hill** 119.73 302 IAMs_20 IAMs_20 11 38 18.1
comp=Z,8μm,22.0s
F33A **5 Mile Ranch,** 119.86 311 IAMs_20 IAMs_20 11 41 04.1
comp=Z,14μm,21.0s
EYMN **Ely** 119.92 316 IAMs_20 IAMs_20 11 22 35.4
comp=Z,3μm,20.0s
O20A **White River Ci** 119.96 299 **PKPdf** **10 37 58.0 -0.3**
O20A IAMs_20 IAMs_20 11 37 34.6
comp=Z,22μm,21.0s
RWWY **Rawlins** 120.79 301 IAMs_20 IAMs_20 11 37 27.3
comp=Z,15μm,21.0s
SUW **Suwalki** 120.85 32 IAMs_20 IAMs_20 11 16 28.5

	comp=Z,4μm,21.0s									
RDMU	**Red Mountain**	**120.89**	**298**			**PKPdf**	**10 37 57.7**	**-2.4**		
TPNV	**Topopah Spring**	**120.95**	**291**		PKIKP	**PKPdf**	**10 38 00.2**	**-0.1**		
TPNV	**Topopah Spring**	**120.95**	**291**			**PKPdf**	**10 38 00.2**	**-0.1**		
B35A	**Bob, Littlefor**	**121.06**	**314**		IAMs_20	IAMs_20	11 28 46.5			
	comp=Z,3μm,22.0s									
D32A	**Dogwood Acres,**	**121.22**	**311**		IAMs_20	IAMs_20	11 41 19.1			
	comp=Z,13μm,22.0s									
RSSD	**Black Hills**	**121.46**	**305**		PKIKP	**PKiKP**	**10 38 01.3**	**+0.1**		
RSSD	**Black Hills**	**121.46**	**305**		PKPdf	**PKiKP**	**10 38 01.3**	**+0.1**		
RSSD	**Black Hills**	**121.46**	**305**		IAMs_20	IAMs_20	11 42 21.9			
	comp=Z,12μm,20.0s									
SPR3	**Spring Creek 3**	**121.74**	**294**		PKPdf	**PKiKP**	**10 38 02.1**	**0.0**		
AGMN	**Agassiz Nation**	**121.77**	**313**			**PKPdf**	**10 38 01.3**	**+0.1**		
AGMN					IAMs_20	IAMs_20	11 42 06.6			
	comp=Z,12μm,22.0s									
DUG	**Dugway, Tooele**	**122.02**	**296**		IAMs_20	IAMs_20	11 34 45.6			
	comp=Z,20μm,22.0s									
NRS	**Narsarsuaq**	**122.04**	**350**		IAMs_20	IAMs_20	11 25 44.1			
	comp=Z,3μm,20.0s									
E28A	**Huff**	**122.15**	**309**		IAMs_20	IAMs_20	11 40 17.8			
	comp=Z,20μm,22.0s									
KBL	**Kabul**	**122.20**	**76**		IAMs_20	IAMs_20	11 34 52.8			
	comp=Z,8μm,22.0s									
PABE	**Paberze**	**122.39**	**32**		IAMs_20	IAMs_20	11 16 15.7			
	comp=Z,5μm,21.0s									
NACGM	**Naroch**	**122.61**	**34**	*i*	PKP	PKiKP	10 38 10.8	+8.0		
NACGM				*i*	PKP	PKiKP	10 38 10.8	+8.0		
NACGM				*i*	PKP	PKiKP	10 38 10.8	+8.0		
NACGM				*i*	PP	**PP**	**10 39 37.3**	**-3.7**		
NACGM				*i*	PPP	PPP	10 41 56.0			
NACGM				*i*	SKS	SKSdf	10 44 35.8	-37		
NACGM				*i*	SKKS	SKKSac	10 46 16.6	-21		
NACGM				*i*	SS	**SS**	**10 56 15.1**	**-6.5**		
NACGM				*i*	SSS	SSS	11 00 52.4			
NACGM				*i*	LQ	LQ	11 19 52.5			
NACGM				*i*	LR	LR	11 24 41.5			
HWUT	**Hardware Ranch**	**122.61**	**298**		PKPdf	**PKPdf**	**10 38 02.6**	**-0.7**		
BW06	**Boulder Array**	**122.68**	**300**			**PKPdf**	**10 37 59.9**	**-3.5**		
PDAR	**Pinedale Array**	**122.68**	**300**		PKP	**PKPdf**	**10 38 01.8**	**-1.7**		
	comp=Z,0.9nm,0.5s,baz=125,slow=5.5,SNR=15									
PDAR					PP	**PP**	**10 39 47.2**	**+5.3**		
	comp=Z,0.1nm,0.4s,baz=124,slow=4.9,SNR=2.3									
PDAR	**Pinedale Array**	**122.68**	**300**			**PKPdf**	**10 38 02.6**	**-0.9**		
MDND	**Maddock**	**122.79**	**310**		IAMs_20	IAMs_20	11 42 54.6			
	comp=Z,10μm,22.0s									
KONO	**Kongsberg**	**123.03**	**21**		IAMs_20	IAMs_20	11 21 50.7			
	comp=Z,5μm,19.0s									
VORD	**Divnogorie**	**123.09**	**44**	*e*	PKIKP	**PKPdf**	**10 38 03.5**	**-0.1**		
VORD					pmax	pmax				
	comp=Z,20nm,1.4s									
NVAR	**Mina Array Bea**	**123.11**	**290**		PKP	**PKiKP**	**10 38 05.5**	**+0.9**		
	comp=Z,1.0nm,0.6s,baz=119,slow=2.7,SNR=8.1									
NVAR	**Mina Array Bea**	**123.11**	**290**			**PKiKP**	**10 38 05.1**	**+0.5**		
VSR	**Storozhevoye**	**123.26**	**43**	*e*	PKIKP	**PKiKP**	**10 38 05.9**	**+1.7**		
VSR					pmax	pmax				
	comp=Z,20nm,1.2s									
CMAR	**Chiang Mai Arr**	**123.35**	**113**		PKP	**PKiKP**	**10 38 06.1**	**+0.7**		
	comp=Z,13nm,0.9s,baz=232,slow=4.0,SNR=30									
CMAR					PP	**PP**	**10 39 46.4**	**+0.4**		
	comp=Z,2.0nm,0.9s,baz=226,slow=5.4,SNR=4.6									
CMAR	**Chiang Mai Arr**	**123.35**	**113**			**PKPdf**	**10 38 04.9**	**-0.3**		
ULM	**Lac du Bonnet**	**123.41**	**314**		PKP	**PKPdf**	**10 38 03.0**	**-1.3**		
	comp=Z,3.0nm,0.6s,baz=132,slow=3.6,SNR=7.7									
ULM					PP	**PP**	**10 39 44.8**	**-1.7**		
	comp=Z,4.6nm,0.9s,baz=145,slow=8.4,SNR=5.1									
ULM	**Lac du Bonnet**	**123.41**	**314**		PKIKP	**PKPdf**	**10 38 03.0**	**-1.3**		
ULM	**Lac du Bonnet**	**123.41**	**314**		IAMs_20	IAMs_20	11 42 40.8			
	comp=Z,12μm,20.0s									
NIL	**Nilore**	**123.53**	**80**		PKIKP	**PKiKP**	**10 38 06.5**	**+1.1**		
NIL					MLR	MLR				
	comp=Z,30μm,22.0s									
NIL	**Nilore**	**123.53**	**80**			**PKiKP**	**10 38 06.5**	**+1.1**		
ELK	**Elko**	**123.56**	**294**		PKIKP	**PKPdf**	**10 38 04.7**	**-0.5**		
ELK					MLR	MLR				
	comp=Z,22μm,21.0s									
ELK	**Elko**	**123.56**	**294**		PKPdf	**PKPdf**	**10 38 04.7**	**-0.5**		
ELK					IAMs_20	IAMs_20	11 34 10.6			
	comp=Z,22μm,21.0s									
CHTO	**Chiang Mai**	**123.66**	**113**		PKIKP	**PKiKP**	**10 38 07.0**	**+1.0**		
CHTO	**Chiang Mai**	**123.66**	**113**		PKPdf	**PKiKP**	**10 38 07.0**	**+1.0**		
CHTO	**Chiang Mai**	**123.66**	**113**		PKP		10 38 08.6			
CHTO					PKP		10 38 10.8			
FLWY	**Flagg Ranch**	**124.23**	**300**			**PKiKP**	**10 38 07.1**	**+0.4**		
LPSR	**Galich'ya Gora**	**124.34**	**42**	*e*	PKIKP	**PKiKP**	**10 38 06.2**	**-0.1**		
LPSR					pmax	pmax				
	comp=Z,10.0nm,0.8s									
NAO01	**NORSAR Array S**	**124.38**	**21**			**PKiKP**	**10 38 06.5**	**+0.4**		
LAO	**LASA Array**	**124.45**	**305**		IAMs_20	IAMs_20	11 39 32.0			
	comp=Z,18μm,21.0s									
NOA	**NORSAR Array B**	**124.62**	**21**		PKP	**PKiKP**	**10 38 06.9**	**+0.2**		
	comp=Z,4.0nm,0.9s,baz=203,slow=1.8,SNR=11									
NC204	**NORSAR Array S**	**124.76**	**21**			**PKiKP**	**10 38 08.0**	**+1.1**		
YHH	**Holmes Hill**	**124.86**	**300**		PKPdf	**PKPdf**	**10 38 05.9**	**-1.7**		
BORG	**Borgarnes**	**124.89**	**3**		IAMs_20	IAMs_20	11 32 52.0			
	comp=Z,2μm,20.0s									
YHL	**Hebgen Lake**	**125.05**	**300**			**PKiKP**	**10 38 08.3**	**-0.1**		
DGMT	**Dagmar**	**125.07**	**308**		IAMs_20	IAMs_20	11 44 46.2			
	comp=Z,18μm,19.0s									
OBN	**Obninsk**	**125.68**	**39**	*c*	*i*PKIKP	**PKiKP**	**10 38 09.8**	**+1.0**		
OBN					*e*		10 40 02.5			
OBN					*e*		10 45 18.4			
OBN					*e*PS	PS	10 50 03.3	+1.2		
OBN					pmax	pmax				
	comp=Z,9.0nm,0.8s									
OBN	**Obninsk**	**125.68**	**39**		IAMs_20	IAMs_20	11 36 16.9			
	comp=Z,3μm,21.0s									
ANGG	**Ammassalik, Gr**	**125.94**	**355**		IAMs_20	IAMs_20	11 15 19.0			
	comp=Z,6μm,22.0s									
LRM	**Limekiln Ridge**	**126.37**	**300**			**PKPdf**	**10 38 10.0**	**-0.5**		
DY2G	**Dye2**	**127.35**	**350**	*i*	P	**PKiKP**	**10 38 14.0**	**+1.8**		
MSO	**Missoula**	**127.80**	**300**		PKPdf	**PKPdf**	**10 38 12.4**	**-0.5**		
MSO					IAMs_20	IAMs_20	11 35 20.7			
	comp=Z,18μm,21.0s									
I07A	**Izee**	**128.13**	**294**		PKPdf	**PKPdf**	**10 38 12.7**	**-1.0**		
FINES	**FINESS Array B**	**128.15**	**29**		PKP	**PKiKP**	**10 38 13.8**	**+0.2**		
	comp=Z,6.9nm,0.6s,baz=206,slow=0.5,SNR=18									
FINES					SKPbc	SKPbc	10 41 29.1			
	comp=Z,1.8nm,0.6s,baz=182,slow=3.8,SNR=5.5									
FINES	**FINESS Array B**	**128.15**	**29**			**PKPdf**	**10 38 12.3**	**-0.7**		
FIA1	**FINESS Array S**	**128.15**	**29**			**PKiKP**	**10 38 13.9**	**+0.3**		
KRMB	**Red Mountain**	**128.18**	**289**		IAMs_20	IAMs_20	11 29 25.2			
	comp=Z,22μm,22.0s									
SFJD	**Kangerlussuaq**	**128.26**	**348**	*i*	P	**PKiKP**	**10 38 16.1**	**+2.5**		
SFJD	**Kangerlussuaq**	**128.26**	**348**	*i*	PKIKP	**PKiKP**	**10 38 16.1**	**+2.5**		
QIZ	**Qiongzhong**	**128.61**	**124**		PKP	**PKiKP**	**10 38 16.3**	**+0.4**		
QIZ					AMB	AMB				
	comp=Z,190nm,10.8s									
FFC	**Flin Flon**	**129.22**	**314**		PKIKP	**PKiKP**	**10 38 17.2**	**+1.2**		
FFC	**Flin Flon**	**129.22**	**314**		PKPdf	**PKiKP**	**10 38 17.2**	**+1.2**		
ICESG	**Greenland Ices**	**129.50**	**354**	*i*	P	**PKiKP**	**10 38 17.2**	**+0.6**		
KSH	**Kashi**	**129.51**	**78**		PKP	**PKiKP**	**10 38 20.3**	**+3.1**		
KSH					PP	**PP**	**10 40 31.0**	**+3.8**		
KSH					SKKS		10 47 21.0			
KSH					AMB	AMB				
	comp=Z,310nm,5.0s									
KSH					LR	LR				
	comp=Z,11μm,10.7s									
KSH					LR	LR				
	comp=Z,18μm,14.0s									
KSH					LR	LR				
	comp=Z,11μm,13.0s									
AB31	**Akbulak array**	**129.66**	**58**	*i*	PKIKP	**PKPdf**	**10 38 16.3**	**0.0**		
ABKAR	**Akbulak array**	**129.66**	**58**		PKPdf	**PKPdf**	**10 38 15.8**	**-0.5**		
KK31	**Karatay Array**	**129.67**	**71**		PKIKP	**PKiKP**	**10 38 17.8**	**+0.5**		
KKAR	**Karatay Array**	**129.67**	**71**		PKIKP	**PKPdf**	**10 38 14.4**	**-2.2**		
KKAR	**Karatay Array**	**129.67**	**71**			**PKPdf**	**10 38 14.3**	**-2.2**		
AKTO	**Aktyubinsk**	**129.76**	**56**		PKIKP	**PKPdf**	**10 38 16.8**	**+0.4**		
D08A	**Wollman Farm,**	**130.15**	**297**			**PKPdf**	**10 38 12.2**	**-5.1**		
E07A	**Sunnyside**	**130.19**	**296**		IAMs_20	IAMs_20	11 38 29.4			
	comp=Z,12μm,19.0s									
SCO	**Scoresbysund**	**130.62**	**2**		PKIKP	**PKiKP**	**10 38 19.5**	**+1.2**		
SCO	**Scoresbysund**	**130.62**	**2**		PKPdf	**PKiKP**	**10 38 19.5**	**+1.2**		
KMI	**Kunming**	**130.86**	**113**	⇓	PKP	**PKiKP**	**10 38 22.5**	**+2.0**		
KMI					PP	**PP**	**10 40 38.5**	**+2.5**		
KMI					SKS	**SKSdf**	**10 45 32.0**	**+1.9**		
KMI					SKKS	**SKKSac**	**10 47 30.5**	**-0.9**		
KMI					AMB	AMB				
	comp=Z,160nm,11.1s									
AAK	**Ala-Archa**	**131.20**	**74**	*c*	*i*PKIKP	**PKiKP**	**10 38 20.8**	**+0.2**		
AAK					pmax	pmax				
	comp=Z,42nm,1.7s									
AAK	**Ala-Archa**	**131.20**	**74**		PKPdf	**PKiKP**	**10 38 21.7**	**+1.1**		
KLMR	**Klimovskoe**	**131.29**	**37**	*e*	PKIKP	**PKiKP**	**10 38 19.6**	**-0.3**		
KLMR					*e*		10 40 37.9			
KLMR					pmax	pmax				
	comp=Z,59nm,1.5s									
KLMR	**Klimovskoe**	**131.29**	**37**	*e*	PKPdf	**PKiKP**	**10 38 19.7**	**-0.2**		
KLMR					AMP		10 38 23.2			
	comp=Z,59nm,1.5s									
KLMR				*e*	PP	**PP**	**10 40 38.0**	**-0.3**		
B08A	**Colville Reser**	**131.32**	**297**		IAMs_20	IAMs_20	11 34 09.3			
	comp=Z,21μm,21.0s									
FRU1	**Bishkek**	**131.40**	**74**		IAMs_20	IAMs_20	11 35 05.1			
	comp=Z,19μm,21.0s									
SGDS	**Sogindy**	**131.88**	**73**	*e*	PKP	**PKPdf**	**10 38 19.9**	**-0.9**		
SGDS	baz=74									
					PP	**PP**	**10 40 40.8**	**-1.7**		
SGDS	baz=74									
SGDS	**Sogindy**	**131.88**	**73**	*e*	PKIKP	**PKPdf**	**10 38 19.9**	**-0.9**		
SGDS				*e*			10 40 40.7			
KDJ	**Kajisay**	**132.10**	**76**		IAMs_20	IAMs_20	11 34 41.0			
	comp=Z,18μm,20.0s									
B06A	**Marblemount**	**132.39**	**296**		IAMs_20	IAMs_20	11 38 18.7			
	comp=Z,14μm,20.0s									
KIRV	**Kirov**	**132.70**	**44**	*c*	*i*PKIKP	**PKiKP**	**10 38 22.8**	**0.0**		
BTLS	**Baital**	**132.80**	**72**	*e*	PKP	**PKPdf**	**10 38 21.4**	**-1.0**		
BTLS	baz=72									
					PP	**PP**	**10 40 47.1**	**-1.2**		
BTLS	baz=72									
BTLS	**Baital**	**132.80**	**72**	*e*	PKIKP	**PKPdf**	**10 38 21.3**	**-1.1**		
BTLS				*e*			10 40 47.0			
SUMG	**Summit**	**132.91**	**355**	*i*	P	**PKiKP**	**10 38 24.6**	**+1.2**		
SUMG	**Summit**	**132.91**	**355**		PKIKP	**PKPdf**	**10 38 21.5**	**-0.8**		
SUMG	**Summit**	**132.91**	**355**		PKPdf	**PKPdf**	**10 38 21.5**	**-0.8**		
SUMG					IAMs_20	IAMs_20	11 48 57.1			
	comp=Z,14μm,22.0s									
A05A	**Maple Falls**	**133.01**	**296**		IAMs_20	IAMs_20	11 38 25.1			
	comp=Z,18μm,19.0s									
KUU	**Kurty**	**133.03**	**74**	*e*	PKP	**PKPdf**	**10 38 21.7**	**-1.2**		
KUU	baz=74									
					PP	**PP**	**10 40 48.8**	**-1.1**		
KUU	baz=74									
KUU	**Kurty**	**133.03**	**74**	*e*	PKIKP	**PKPdf**	**10 38 21.7**	**-1.2**		
KUU				*e*			10 40 48.7			
CHKK	**Chushkaly**	**133.31**	**75**	*e*	PKP	**PKPdf**	**10 38 22.3**	**-1.2**		
CHKK	baz=75									
	Chushkaly	**133.31**	**75**	*e*	PKIKP	**PKPdf**	**10 38 22.2**	**-1.2**		
UZB	**Uzynbulak**	**133.76**	**77**	*e*	PKP	**PKPdf**	**10 38 22.9**	**-1.6**		
UZB	baz=77									
	Uzynbulak	**133.76**	**77**	*e*	PKIKP	**PKPdf**	**10 38 22.8**	**-1.6**		
GYA	**Guiyang**	**133.79**	**116**	*e*	PKP	**PKiKP**	**10 38 27.8**	**+1.5**		
SHLS	**Shalkode**	**133.98**	**77**	*e*	PP		10 40 55.7	-0.3		
ARU	baz=78									
ARU	**Arti**	**134.44**	**51**	*i*	PKIKP	**PKPdf**	**10 38 24.1**	**-1.0**		
ARU					SS	SS	10 58 50.7	+2.7		
DBG	**Daneborg**	**134.50**	**3**	*i*	P	**PKPdf**	**10 38 24.6**	**-0.1**		
DBG	**Daneborg**	**134.50**	**3**	*i*	P	**SKPdf**	**10 41 53.0**	**-5.3**		
ARCES	**ARCESS Array B**	**134.91**	**23**		PKP	**PKiKP**	**10 38 26.6**	**-0.5**		
	comp=Z,4.8nm,0.6s,baz=187,slow=1.8,SNR=13									
ARCES					SKPbc	**SKPbc**	**10 41 53.2**	**-1.4**		
	comp=Z,9.1nm,0.8s,baz=218,slow=2.3,SNR=10									
KEV	**Kevo**	**135.40**	**24**		IAMs_20	IAMs_20	11 48 44.5			
	comp=Z,14μm,22.0s									
BRZS	**Berezniki**	**135.78**	**66**	*e*	PKP	**PKPdf**	**10 38 26.4**	**-1.4**		
BRZS	baz=66									
	Berezniki	**135.78**	**66**	*e*	PKIKP	**PKPdf**	**10 38 26.4**	**-1.4**		
CD2	**Chengdu**	**136.24**	**110**		PKP	**PKPdf**	**10 38 29.5**	**+0.1**		
BRVK	**Borovoye**	**136.88**	**61**		PKIKP	**PKPdf**	**10 38 28.9**	**-0.8**		
BRVK					MLR	MLR				
	comp=Z,22μm,21.0s									
BRVK	**Borovoye**	**136.88**	**61**		PKPdf	**PKPdf**	**10 38 28.9**	**-0.8**		
DAG	**Danmarks Havn**	**137.00**	**3**	*i*	P	**PKPdf**	**10 38 29.4**	**+0.1**		
DAG	**Danmarks Havn**	**137.00**	**3**	*i*	P	**SKPdf**	**10 41 59.9**	**-2.9**		
DAG	**Danmarks Havn**	**137.00**	**3**	*i*	PKIKP	**PKPdf**	**10 38 29.3**	**+0.1**		
MAKZ	**Makanchi**	**137.87**	**76**		PKHKP	PKPpre	10 38 24.4			
MK31	**Makanchi Array**	**138.01**	**76**		PKHKP	PKPpre	10 38 25.8			
MKAR	**Makanchi Array**	**138.01**	**76**		PKhKP	PKPpre	10 38 23.9			
	comp=Z,1.2nm,0.6s,baz=235,slow=2.5,SNR=11									
MKAR					SKPbc	**SKPbc**	**10 42 05.5**	**+0.7**		
	comp=Z,1.4nm,0.9s,baz=202,slow=1.6,SNR=2.7									
NEEM	**North Greenlan**	**138.39**	**352**	*i*	P	**PKiKP**	**10 38 35.8**	**+1.4**		
NEEM	**North Greenlan**	**138.39**	**352**	*i*	P	**SKPdf**	**10 42 04.8**	**-0.9**		
WMQ	**Urumqi**	**138.50**	**83**		PKP	**PKPdf**	**10 38 32.5**	**-0.6**		
WMQ					PP	**PP**	**10 41 23.5**	**-0.8**		
WMQ					PKS	**PKSdf**	**10 42 11.8**	**+2.6**		
WMQ					AMB	AMB				
	comp=Z,130nm,7.1s									
TULEG	**Thule**	**139.20**	**346**	*i*	P	**SKPdf**	**10 42 06.4**	**-0.3**		
TULEG	**Thule**	**139.20**	**346**			**PKPdf**	**10 38 31.1**	**-2.2**		
YKA	**Yellowknife Ar**	**139.38**	**315**		PKhKP	PKPpre	10 38 26.1			
	comp=Z,0.5nm,0.5s,baz=118,slow=4.1,SNR=9.8									
YKA					PKP	**PKPdf**	**10 38 33.5**	**-0.5**		
	comp=Z,7.1nm,0.8s,baz=126,slow=2.6,SNR=24									
YKA					PP	**PP**	**10 41 28.1**	**-1.3**		
	comp=Z,8.1nm,1.0s,baz=125,slow=6.1,SNR=10									
YKA					SKPbc	**SKPbc**	**10 42 06.5**	**-1.5**		
	comp=Z,2.6nm,0.9s,baz=125,slow=2.4,SNR=4.3									
LZH	**Lanzhou**	**140.53**	**105**	*e*	PKP	**PKPdf**	**10 38 36.0**	**-1.2**		
LZH					PP	**PP**	**10 41 40.5**	**+3.6**		
LZH					PKS	**PKSdf**	**10 42 09.0**	**-4.3**		
LZH					SKKS		10 48 27.0			
LZH					AMB	AMB				
	comp=Z,420nm,6.0s									
KBS	**Kingsbay**	**140.97**	**11**	*i*	P	**SKPdf**	**10 42 13.5**	**+3.7**		
GTA	**Gaotai**	**141.20**	**98**		PKP	**PKPdf**	**10 38 37.5**	**-0.8**		
GTA					AMB	AMB				
	comp=Z,200nm,7.6s									
XAN	**Xi'an**	**141.24**	**113**		PKP	**PKPdf**	**10 38 36.3**	**-2.1**		
XAN					PKS	**PKSdf**	**10 42 10.3**	**-4.0**		
XAN					SKS	**SKSdf**	**10 45 44.3**	**-2.9**		
XAN					AMB	AMB				
	comp=Z,240nm,9.8s									
XAN					LR	LR				
	comp=Z,1μm,15.7s									
XAN					LR	LR				
	comp=Z,1μm,16.3s									
NOR	**Nord**	**141.87**	**2**	*i*	P	**PKiKP**	**10 38 40.5**	**-0.5**		
NOR	**Nord**	**141.87**	**2**	*i*	PKIKP	**PKiKP**	**10 38 40.5**	**-0.5**		
NJ2	**Nanjing**	**143.84**	**126**	⇓	PKP	**PKPdf**	**10 38 42.0**	**-1.0**		
ZALV	**Zalesovo Beam**	**144.01**	**69**		PKhKP	PKPpre	10 38 39.7			
	comp=Z,3.6nm,0.4s,baz=221,slow=4.2,SNR=11									
EUNU	**Eureka**	**144.17**	**345**		PKPdf	PKPbc	10 38 40.9	+0.3		
TIY	**Taiyuan**	**145.88**	**113**	*e*	PKPbc	**PKiKP**	**10 38 49.5**	**-1.1**		
TIY					PP	**PKSdf**	**10 42 16.0**	**-5.9**		
TIY					AMB	AMB				
	comp=Z,400nm,9.4s									
WHY	**Whitehorse**	**146.15**	**303**		PKPdf	**PKPdf**	**10 38 46.0**	**-0.2**		
C36M	**Hulatuk**	**146.43**	**320**		PKPdf	**PKPdf**	**10 38 46.9**	**+0.6**		
TIA	**Tai'an**	**146.71**	**120**		PKPbc	**PKPab**	**10 38 50.8**	**0.0**		
BTO	**Baotou**	**147.07**	**107**	*e*	PKPbc	**PKPbc**	**10 38 51.0**	**+0.4**		
BTO					LR	LR				
	comp=Z,10μm,14.9s									
HYT	**Haines Junctio**	**147.34**	**302**		IAMs_20	IAMs_20	11 34 24.0			
	comp=Z,15μm,21.0s									
HHC	**Hu-ho-hao-te**	**147.99**	**109**	*e*	PKPbc	**PKPdf**	**10 38 48.8**	**-1.1**		
HHC					LR	LR				
	comp=Z,2μm,17.0s									
HHC					LR	LR				
	comp=Z,6μm,17.0s									
HHC					LR	LR				
	comp=Z,3μm,16.2s									
LOGN	**Logan Glacier**	**148.83**	**300**			**PKPbc**	**10 38 53.2**	**-1.5**		
JNU	**Nakatsue**	**149.11**	**142**		PKPbc	**PKPbc**	**10 38 56.3**	**+0.2**		
	comp=Z,22nm,0.9s,baz=308,slow=5.4,SNR=4.0									
BJT	**Baijiatuan**	**149.45**	**115**		PKP2	**PKPbc**	**10 38 56.3**	**-0.4**		
BJT	**Baijiatuan**	**149.45**	**115**			**PKPbc**	**10 38 56.3**	**-0.4**		
BJI	**Beijing**	**149.47**	**115**		PKPbc	**PKPdf**	**10 38 53.0**	**+0.8**		
HMT	**Hamilton**	**150.01**	**298**			**PKPbc**	**10 38 55.4**	**-2.0**		
MOY	**Mondy**	**150.39**	**83**	*e*	PKIKP	**PKPdf**	**10 38 53.4**	**0.0**		
MOY					pmax	pmax				
	comp=Z,411nm,2.4s									
SONM	**Songino Array**	**150.60**	**94**		PKPbc	**PKPbc**	**10 38 58.8**	**-0.6**		
	comp=Z,9.7nm,0.8s,baz=210,slow=2.5,SNR=46									
EGAK	**Eagle**	**150.62**	**307**			**PKPdf**	**10 38 52.3**	**-0.9**		
ZAK	**Zakamensk**	**150.72**	**87**	*e*	PKIKP	**PKPdf**	**10 38 54.7**	**+0.7**		
ZAK					pmax	pmax				
	comp=Z,123nm,1.7s									
DL2	**Dalian**	**150.89**	**123**	⇓	PKPbc	**PKPdf**	**10 38 56.8**	**+2.3**		
DL2					AMB	AMB				
	comp=Z,230nm,6.7s									
DL2					LR	LR				
	comp=Z,1μm,20.4s									
DL2					LR	LR				
	comp=Z,3μm,17.1s									
DL2					LR	LR				
	comp=Z,4μm,17.9s									
ULN	**Ulaanbaatar**	**150.94**	**95**		PKIKP	**PKPdf**	**10 38 57.0**	**+2.5**		
ULN	**Ulaanbaatar**	**150.94**	**95**			**PKPdf**	**10 38 57.0**	**+2.5**		
FID	**Port Fidalgo**	**151.18**	**298**			**PKPdf**	**10 38 55.7**	**+1.5**		
JHS	**Saijyo**	**151.52**	**144**			**PKPbc**	**10 39 01.2**	**-0.6**		
M24K	**Tolsona, Glenn**	**151.63**	**300**			**PKPbc**	**10 38 59.2**	**-2.1**		
INCN	**Inchon**	**151.63**	**132**		PKIKP	**PKPbc**	**10 38 59.6**	**-2.4**		
INCN	**Inchon**	**151.63**	**132**		PKPdf	**PKPbc**	**10 38 59.6**	**-2.4**		
TLY	**Talaya**	**151.71**	**86**		PKIKP	**PKPdf**	**10 38 56.7**	**+1.3**		
TLY	**Talaya**	**151.71**	**86**		PKPdf	**PKPdf**	**10 38 56.7**	**+1.3**		
KSAR	**Wonju Array Be**	**152.05**	**134**		PKIKP	**PKPdf**	**10 38 57.0**	**+0.7**		
KSAR	**Wonju Array Be**	**152.05**	**134**			**PKPdf**	**10 38 57.0**	**+0.7**		
KSRS	**Korea Array**	**152.07**	**134**		PKP	**PKPdf**	**10 38 57.4**	**+1.1**		
	comp=Z,0.7nm,0.7s,baz=226,slow=3.2,SNR=1.8									
KSRS					PKPbc	**pPKPdf**	**10 39 01.6**	**-0.6**		
	comp=Z,4.9nm,0.9s,baz=206,slow=1.8,SNR=4.8									
KS19	**Wonju Array Si**	**152.10**	**134**			**PKPbc**	**10 39 02.8**	**-0.2**		
NRIK	**Noril'sk**	**152.20**	**44**		PKP	**PKPdf**	**10 38 55.0**	**-0.5**		
	comp=Z,0.8nm,0.4s,baz=223,slow=1.3,SNR=7.0									
NRIK					PKPbc	**PKPbc**	**10 39 02.3**	**+0.1**		
	comp=Z,4.5nm,0.9s,baz=143,slow=1.6,SNR=3.8									
IRK	**Irkutsk**	**152.36**	**85**	*e*	PKIKP	**PKPdf**	**10 38 56.9**	**+0.6**		
IRK					pmax	pmax				
	comp=Z,179nm,3.3s									
JWT	**Wachi**	**152.43**	**148**			**PKiKP**	**10 39 05.6**	**+1.5**		
KDAK	**Kodiak Island**	**152.59**	**289**		PKIKP	**PKiKP**	**10 39 04.4**	**+0.7**		
KDAK	**Kodiak Island**	**152.59**	**289**			**PKiKP**	**10 39 04.4

λ93.00000°. Principal axes: T 0.9869, Plg84.0000°, Azm357.0000°; N 0.0773, Plg2.0000°, Azm248.0000°; P -1.0642, Plg6.0000°, Azm158.0000°;
NEIC **30** 10:45:23.2,5.52S×152.21E,h42km,Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_T1.21; $M_{\theta\theta}$-0.96; $M_{\phi\phi}$-0.25; M_{rr}0.26; $M_{\theta\phi}$-0.40; $M_{r\theta}$0.09; $M_{r\phi}$0.09; Fault plane solution: $M_0$1.21000×10^{19} NP1:ϕ_s244.66000°, δ38.38000°, λ88.09000°. NP2:ϕ_s67.10000°, δ51.65000°, λ91.52000°. Principal axes: T 1.2456, Plg83.0000°, Azm346.0000°; N -0.0729, Plg1.0000°, Azm246.0000°; P -1.1727, Plg7.0000°, Azm156.0000°;
ISC 30 10:45:05.3±0.3,**5.35S**±0.03×**151.80E**±0.03,**h55**km±1km, **h55**km:**pP-P,n1822,**σ**1**88**/1712,**mb6.2**/343,**MS6.7**/504, **291C-96D,Fault plane solution: NP1:**ϕ_s234.08734°, δ28.40809°,λ108.90855°. **NP2:**ϕ_s32.80947°,δ63.25146°, λ80.05836°. **Principal axes:** T Plg70.0868°, Azm281.8059°; N Plg8.8687°, Azm37.3201°; P Plg17.6804°, Azm130.1711°; **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.21**	**17**	Pn	**Pn**	**10 45 26.8**	**+0.8**
RABL	**Rabaul**	**1.21**	**17**	P	**Pn**	**10 45 28.0**	**+2.0**
PMG	**Port Moresby**	**6.12**	**229**	Pn	**Pn**	**10 46 34.2**	**+1.1**
	87nm,0.3s,baz=39,slow=5.9,SNR=120						
PMG				Sn	**Sn**	**10 47 43.7**	**+1.9**
	502nm,0.3s,baz=180,slow=23,SNR=67						
PMG	**Port Moresby**	**6.12**	**229**	P	**Pn**	**10 46 34.0**	**+0.9**
PMG	**Port Moresby**	**6.12**	**229**	P		10 46 33.4	
	68nm530μm80μm11μm,1.0s						
HNR	**Honiara**	**9.04**	**117**	Pn	**Pn**	**10 47 12.7**	**-0.4**
	88nm,0.3s,baz=156,slow=6.2,SNR=16						
HNR				LR	LR	10 51 05.0	
	comp=Z,185μm,20.4s,baz=290,slow=40						
HNR	**Honiara**	**9.04**	**117**	P	**Pn**	**10 47 12.9**	**-0.2**
HNR	**Honiara**	**9.04**	**117**	Pn	**Pn**	**10 47 12.9**	**-0.2**
HNR	**Honiara**	**9.04**	**117**	P	**Pn**	**10 47 15.0**	**+1.9**
JAY	**Jayapura**	**11.42**	**284**	Pn	**Pn**	**10 47 49.3**	**+3.4**
	2.2nm,0.3s,baz=127,slow=3.6,SNR=45						
JAY				LR	LR	10 51 37.1	
	comp=Z,381μm,20.5s,baz=97,slow=35						
JAY	**Jayapura**	**11.42**	**284**	P		10 47 48.2	
	152μm36μm684nm,1.1s						
GENI	**Genyem**	**11.93**	**283**	P		10 47 53.7	
	262μm95μm2μm,1.5s						
COEN	**Coen**	**12.05**	**224**	Pn	**Pn**	**10 47 54.8**	**+0.3**
PATS	**Pohnpei**	**13.74**	**28**	P	**Pn**	**10 48 18.3**	**+0.9**
	baz=14,SNR=25						
PATS	**Pohnpei**	**13.74**	**28**	Pn	**Pn**	**10 48 16.4**	**-1.1**
MTSU	**Mount Surprise**	**14.66**	**209**	P	**Pn**	**10 48 30.0**	**+0.4**
	baz=15,SNR=44						
CTA	**Charters Tower**	**15.61**	**200**	Pn	**Pn**	**10 48 41.2**	**-0.7**
	0.5nm,0.3s,baz=23,slow=14,SNR=25						
CTA				Sn	**Sn**	**10 51 38.2**	**+4.3**
	1.0nm,0.3s,baz=219,slow=22,SNR=0.9						
CTA				LR	LR	10 54 16.5	
	comp=Z,257μm,20.1s,baz=28,slow=35						
CTAO	**Charters Tower**	**15.61**	**200**	P	**Pn**	**10 48 41.7**	**-0.2**
CTAO				pmax	pmax		
	comp=Z,1μm,1.4s						
CTAO	**Charters Tower**	**15.61**	**200**		**Pn**	**10 48 41.7**	**-0.2**
SRPI	**Serui, Papua**	**15.91**	**282**	P		10 48 44.5	
	comp=Z,150μmcomp=Z,28μmcomp=Z,1μm,1.2s						
BAKI	**Biak**	**16.20**	**284**	P		10 48 48.6	
SANVU	**Saraoutou**	**18.15**	**125**	P	**Pn**	**10 49 14.3**	**+0.8**
SANVU				IAmb	IAmb	10 49 18.7	
	comp=Z,3μm,1.3s						
MWPI	**Manokwari, Pap**	**18.27**	**283**	P		10 49 15.4	
	comp=Z,148μmcomp=Z,55μmcomp=Z,1μm,1.8s						
QIS	**Mount Isa**	**19.20**	**217**	P	**Pn**	**10 49 26.3**	**0.0**
	baz=19,SNR=453						
KOUNC	**Koumac, New Ca**	**19.37**	**142**	P		10 49 29.7	
FAKI	**Fak Fak**	**19.65**	**276**	Pn	**Pn**	**10 49 31.9**	**+0.3**
FAKI	**Fak Fak**	**19.65**	**276**	P		10 49 29.4	
	comp=Z,208μmcomp=Z,50μmcomp=Z,838nm,1.0s						
GUMO	**Guam**	**20.04**	**340**	P	Pn	10 49 36.8	+0.7
	comp=Z,23nm,0.3s,baz=175,slow=5.3,SNR=35						
GUMO	**Guam**	**20.04**	**340**	P	Pn	10 49 36.7	+0.6
GUMO				pmax	pmax		
	comp=Z,9μm,1.2s						
GUMO	**Guam**	**20.04**	**340**	P	Pn	10 49 36.7	+0.6
GUMO	**Guam**	**20.04**	**340**	P		10 49 35.7	
DVP	**Devils Point**	**20.20**	**129**	P		10 49 38.9	
KDU	**Kakadu**	**20.42**	**248**	P	**P**	**10 49 38.3**	**+0.2**
	baz=20,SNR=1000						
SAUI	**Saumlaki**	**20.53**	**262**	P	Pn	10 49 41.3	-0.7
SAUI				IAMs_20	IAMs_20	10 58 23.5	
	comp=Z,267μm,20.0s						
SAUI	**Saumlaki**	**20.53**	**262**	P		10 49 41.0	
	comp=Z,263μmcomp=Z,65μmcomp=Z,3μm,0.9s						
SIJI	**Sorong**	**20.98**	**282**	P	**P**	**10 49 44.6**	**+0.4**
	comp=Z,105nm,0.4s,baz=81,slow=7.1,SNR=66						
SIJI	**Sorong**	**20.98**	**282**	P		10 49 43.7	
	comp=Z,93μmcomp=Z,18μmcomp=Z,711nm,1.4s						
SWI	**Sorong**	**20.99**	**282**	P		10 49 43.6	
	comp=Z,175μmcomp=Z,35μmcomp=Z,2μm,1.5s						
KWAJ	**Kwajalein Atol**	**21.12**	**48**	P	**P**	**10 49 46.1**	**+0.4**
KWAJ				pmax	pmax		
	comp=Z,11μm,2.0s						
KWAJ				MLR	MLR		
	comp=Z,107μm,21.0s						
KWAJ	**Kwajalein Atol**	**21.12**	**48**	P	**P**	**10 49 46.1**	**+0.4**
KWAJ	**Kwajalein Atol**	**21.12**	**48**	P		10 49 49.0	
RMQ	**Roma**	**21.21**	**188**	P	**P**	**10 49 47.7**	**+1.1**
	baz=21,SNR=51						
LIFNC	**LIFOU**	**21.44**	**137**	P		10 49 51.8	
MTN	**Manton Dam**	**21.71**	**249**	P	**P**	**10 49 51.8**	**-0.2**
	baz=22,SNR=121						
MTN	**Manton Dam**	**21.71**	**249**	P	**P**	**10 49 52.2**	**+0.2**
MTN				IAmb	IAmb	10 50 17.8	
	comp=Z,907nm,0.8s						
NOUC	**Port Laguerre**	**21.77**	**141**	P		10 49 55.8	
BNDI	**Bandanaira**	**21.83**	**271**	P		10 49 52.1	
	comp=Z,178μmcomp=Z,42μmcomp=Z,2μm,1.5s						
DZM	**Mont Dzumac**	**21.84**	**141**	*e*P	**P**	**10 49 54.0**	**+0.6**
	comp=Z,2μm,1.6s						
DZM				*e*S	**S**	**10 53 46.9**	**-5.1**
	comp=Z,257μm,24.8s						
DZM				*e*LR	LR	10 55 11.6	
	comp=Z,496μm,23.5s						
DZM	**Mont Dzumac**	**21.84**	**141**	P	**P**	**10 49 53.2**	**-0.2**
	comp=Z,185nm,0.9s,baz=346,slow=6.9,SNR=29						
DZM				S	**S**	**10 53 49.6**	**-2.4**
	comp=Z,26nm,1.0s,baz=177,slow=17,SNR=1.6						
DZM				LR	LR	10 57 25.7	
	comp=Z,294μm,20.8s,baz=308,slow=34						
DZM	**Mont Dzumac**	**21.84**	**141**	P	**P**	**10 49 53.5**	**+0.2**
DZM				IAmb	IAmb	10 50 17.1	
	comp=Z,2μm,1.8s						
DZM	**Mont Dzumac**	**21.84**	**141**	P		10 49 54.5	
ONTNC	**Ouen Toro**	**22.02**	**141**	P		10 49 58.0	
YATNC	**Mamie plateau,**	**22.11**	**140**	P		10 49 58.0	
QLP	**Quilpie**	**22.31**	**198**	P	**P**	**10 49 58.6**	**+0.2**
	baz=22,SNR=90						
WRAB	**Tennant Creek**	**22.32**	**228**	*c i*P	**P**	**10 49 57.9**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,3μm,1.9s						
WRAB	**Tennant Creek**	**22.32**	**228**	P	**P**	**10 49 58.4**	**-0.1**
WRAB				IAmb	IAmb	10 50 15.0	
	comp=Z,907nm,0.7s						
WB2	**Warramunga Arr**	**22.33**	**228**	P	**P**	**10 49 60.0**	**+1.4**
	baz=22						
WRA	**Warramunga Arr**	**22.34**	**228**	P	**P**	**10 49 58.1**	**-0.6**
	comp=Z,244nm,0.6s,baz=53,slow=9.9,SNR=252						
WRA				S	**S**	**10 54 03.0**	**+2.0**
	comp=Z,150nm,1.2s,baz=57,slow=14,SNR=6.3						
WRA				ScP	**ScP**	**10 57 29.0**	**+3.3**
	comp=Z,108nm,1.0s,baz=47,slow=2.8,SNR=11						
WRA				LR	LR	10 59 18.2	
	comp=Z,93μm,18.9s,baz=60,slow=38						
WRA				P3KPbc		11 23 33.3	
	comp=Z,0.8nm,0.7s,baz=227,slow=2.9,SNR=5.8						
OUENC	**Ouen Island, N**	**22.34**	**141**	P		10 50 01.5	
ANA2	**Anatahan**	**22.38**	**344**	IAmb	IAmb	10 50 17.9	
	comp=Z,1μm,0.9s						
ANA2	**Anatahan**	**22.38**	**344**	P		10 50 01.3	
	comp=Z,2μm,1.3s						
MARNC	**Mare, Loyalty**	**22.46**	**137**	P		10 50 03.2	
SARN	**Sarigan**	**22.71**	**345**	P		10 50 04.5	
PINNC	**Pines Island,**	**22.87**	**140**	P		10 50 07.1	
KRAI	**Karang Ratu**	**23.43**	**274**	P		10 50 08.1	
	comp=Z,147μmcomp=Z,12μmcomp=Z,220nm,1.1s						
NLAI	**Namlea**	**24.72**	**274**	P		10 50 20.5	
	comp=Z,10μmcomp=Z,136nm,1.3s						

ARMA	**Armidale**	**24.93**	**180**	P	**P**	**10 50 24.2**	**+0.7**
	baz=25,SNR=107						
ARMA	**Armidale**	**24.93**	**180**	P	**P**	**10 50 23.8**	**+0.2**
GAMI	**Galela, Maluku**	**25.03**	**286**	P		10 50 23.5	
	comp=Z,107μmcomp=Z,18μmcomp=Z,468nm,2.1s						
AS31	**Alice Springs**	**25.07**	**222**	IAmb	IAmb	10 50 41.7	
	comp=Z,548nm,0.9s						
ASAR	**Alice Springs**	**25.08**	**222**	P	**P**	**10 50 25.1**	**+0.3**
	comp=Z,661nm,0.7s,baz=56,slow=9.1,SNR=586						
ASAR				S	**S**	**10 54 47.5**	**+1.7**
	comp=Z,11nm,0.7s,baz=33,slow=18,SNR=2.0						
ASAR				ScP	**ScP**	**10 57 36.5**	**+3.4**
	comp=Z,37nm,0.9s,baz=48,slow=3.3,SNR=8.1						
ASAR				LR	LR	11 01 17.5	
	comp=Z,92μm,19.3s,baz=80,slow=39						
ASAR				P3KPbc		11 23 22.4	
	comp=Z,0.6nm,0.7s,baz=218,slow=2.6,SNR=9.4						
ASAR	**Alice Springs**	**25.08**	**222**	P	**P**	**10 50 23.2**	**-1.6**
ASPA	**Alice Springs**	**25.08**	**222**	P	**P**	**10 50 25.8**	**+0.9**
	baz=25						
TNTI	**Ternate**	**25.15**	**283**	P	**P**	**10 50 26.4**	**+0.8**
TNTI				IAmb	IAmb	10 51 04.8	
	comp=Z,1μm,1.5s						
TNTI	**Ternate**	**25.15**	**283**	P		10 50 25.1	
	comp=Z,59μmcomp=Z,13μmcomp=Z,410nm,1.7s						
SANI	**Sanana**	**25.96**	**276**	P		10 50 31.4	
	comp=Z,87μmcomp=Z,15μmcomp=Z,296nm,2.9s						
CMSA	**Cabar Meteorol**	**26.67**	**192**	P	**P**	**10 50 39.1**	**-0.1**
	baz=27,SNR=127						
LHI	**Lord Howe Isla**	**26.91**	**166**	P	**P**	**10 50 41.8**	**+0.5**
	baz=27,SNR=7.0						
LHI	**Lord Howe Isla**	**26.91**	**166**	P	**P**	**10 50 40.1**	**-1.2**
LHI				IAmb	IAmb	10 51 02.5	
	comp=Z,559nm,1.2s						
LHI	**Lord Howe Isla**	**26.91**	**166**	P		10 50 41.6	
FUNA	**Funafuti**	**27.37**	**98**	P	**P**	**10 50 45.5**	**-0.2**
SOEI	**Soe**	**27.64**	**259**	P	**P**	**10 50 49.1**	**+0.9**
SOEI	**Soe**	**27.64**	**259**	P		10 50 48.7	
	comp=Z,106μmcomp=Z,20μmcomp=Z,1μm,1.3s						
MGCD	**Mangrove Creek**	**27.72**	**181**	P	**P**	**10 50 49.7**	**+1.1**
	baz=28,SNR=26						
SGSI	**Sangihe**	**27.74**	**288**	P		10 50 50.0	
	comp=Z,5μmcomp=Z,362nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**27.88**	**31**	T	T	11 18 46.3	
	baz=206,slow=74,SNR=124						
H11S2	**WAKE ISLAND Hy**	**27.88**	**31**	T	T	11 18 46.5	
	baz=206,slow=74,SNR=95						
H11S1	**WAKE ISLAND Hy**	**27.89**	**31**	T	T	11 19 04.9	
	baz=206,slow=74,SNR=26						
STKA	**Stephens Creek**	**28.07**	**199**	P	**P**	**10 50 51.1**	**-0.5**
	comp=Z,46nm,0.7s,baz=7.0,slow=9.5,SNR=44						
STKA				S	**S**	**10 55 24.9**	**-7.8**
	comp=Z,26nm,1.1s,baz=127,slow=8.0,SNR=1.3						
STKA				ScP	**ScP**	**10 57 46.0**	**+4.3**
	comp=Z,44nm,1.0s,baz=42,slow=0.7,SNR=4.9						
STKA				LR	LR	11 02 18.9	
	comp=Z,133μm,19.6s,baz=13,slow=37						
STKA	**Stephens Creek**	**28.07**	**199**	P	**P**	**10 50 51.4**	**-0.3**
	baz=28,SNR=42						
STKA	**Stephens Creek**	**28.07**	**199**	P	**P**	**10 50 50.7**	**-1.0**
STKA				pmax	pmax		
	comp=Z,53nm,1.1s						
STKA	**Stephens Creek**	**28.07**	**199**	P	**P**	**10 50 50.7**	**-1.0**
MATI	**Mati**	**28.27**	**295**	*e*P	**P**	**10 50 53.3**	**-0.4**
BATI	**Baumata**	**28.28**	**258**	P	**P**	**10 50 55.5**	**+1.7**
	comp=Z,1μm,0.7s,baz=149,slow=1.4,SNR=80						
BATI				LR	LR	11 04 25.5	
	comp=Z,249μm,21.7s,baz=116,slow=41						
BATI	**Baumata**	**28.28**	**258**	P		10 50 55.2	
	comp=Z,45μmcomp=Z,11μmcomp=Z,968nm,1.1s						
RIV	**Riverview**	**28.34**	**181**	P	**P**	**10 50 55.4**	**+1.4**
	baz=28,SNR=9.8						
KMSI	**Cibinong**	**28.40**	**281**	P		10 50 55.7	
	comp=Z,950nmcomp=Z,771nm,0.6s						
DDMP	**Don Marcelino,**	**28.43**	**293**	*e*P	**P**	**10 50 53.4**	**-1.7**
MSVF	**Nonsavu**	**28.46**	**118**	P	**P**	**10 50 57.7**	**+2.3**
	comp=Z,82nm,0.7s,baz=265,slow=9.6,SNR=36						
MSVF				S	**S**	**10 55 38.1**	**-1.2**
	comp=Z,6.6nm,0.8s,baz=172,slow=22,SNR=1.1						
MSVF	**Nonsavu**	**28.46**	**118**	*i* P	**P**	**10 50 54.5**	**-0.9**
MSVF				pmax	pmax		
	comp=Z,277nm,1.1s						
MSVF	**Nonsavu**	**28.46**	**118**	P	**P**	**10 50 57.0**	**+1.6**
MSVF				IAmb	IAmb	10 51 10.5	
	comp=Z,949nm,1.9s						
MSVF	**Nonsavu**	**28.46**	**118**	P		10 50 58.1	
FITZ	**Fitzroy Crossi**	**28.52**	**241**	P	**P**	**10 50 55.9**	**0.0**
	comp=Z,323nm,0.5s,baz=53,slow=7.6,SNR=536						
FITZ				S	**S**	**10 55 35.8**	**-4.3**
	comp=Z,37nm,0.8s,baz=50,slow=19,SNR=1.3						
FITZ				LR	LR	11 03 48.8	
	comp=Z,118μm,18.0s,baz=71,slow=40						
FITZ	**Fitzroy Crossi**	**28.52**	**241**	P	**P**	**10 50 55.9**	**0.0**
	baz=29,SNR=994						
FITZ	**Fitzroy Crossi**	**28.52**	**241**	IAmb	IAmb	10 51 12.5	
	comp=Z,584nm,0.8s						
DAV	**Davao City (W)**	**28.93**	**295**	P	**P**	**10 50 59.8**	**+0.2**
	comp=Z,117nm,0.4s,baz=136,slow=3.6,SNR=5.2						
DAV				LR	LR	11 02 09.7	
	comp=Z,135μm,18.6s,baz=112,slow=36						
DAV	**Davao City (W)**	**28.93**	**295**	IAMs_20	IAMs_20	11 01 49.4	
	comp=Z,132μm,19.0s						
DAV	**Davao City (W)**	**28.93**	**295**	IAmb	IAmb	10 52 04.5	
	comp=Z,2μm,1.6s						
DAV	**Davao City (W)**	**28.93**	**295**	P	**P**	**10 51 00.2**	**+0.6**
DAV				P	**P**	**10 51 00.2**	**+0.6**
DAV				S	**S**	**10 55 54.3**	**+7.6**
DAV				S	**S**	**10 55 54.3**	**+7.6**
DAV	**Davao City (W)**	**28.93**	**295**	P		10 51 00.2	
	comp=Z,107μmcomp=Z,20μmcomp=Z,432nm,0.8s						
YNG	**Young**	**28.97**	**186**	P	**P**	**10 51 00.5**	**+0.7**
	baz=29,SNR=16						
H11N1	**WAKE ISLAND Hy**	**29.00**	**30**	T	T	11 21 36.0	
	baz=195,slow=74,SNR=35						
H11N3	**WAKE ISLAND Hy**	**29.01**	**30**	T	T	11 21 05.7	
	baz=195,slow=74,SNR=21						
H11N2	**WAKE ISLAND Hy**	**29.02**	**30**	T	T	11 21 43.2	
	baz=195,SNR=17						
LUWI	**Luwuk**	**29.29**	**277**	P	**P**	**10 51 03.2**	**+0.4**
LUWI				IAmb	IAmb	10 51 37.8	
	comp=Z,1μm,1.5s						
LUWI	**Luwuk**	**29.29**	**277**	P		10 51 02.0	
	comp=Z,75μmcomp=Z,12μmcomp=Z,410nm,1.2s						
KCP	**Kidapawan**	**29.35**	**294**	*i* P	**P**	**10 51 04.1**	**+0.8**
KCP	**Kidapawan**	**29.35**	**294**	*i e*P	**PcP**	**10 54 10.2**	**+1.3**
GTOI	**Gorontalo**	**29.36**	**281**	P		10 51 03.6	
	comp=Z,38μmcomp=Z,5μmcomp=Z,131nm,0.7s						
DGTI	**Dogotuki**	**29.47**	**114**	P		10 51 07.7	
MMRI	**Maumere**	**29.52**	**262**	P	**P**	**10 51 05.5**	**+0.7**
MMRI				IAmb	IAmb	10 51 30.5	
	comp=Z,736nm,1.0s						
MMRI	**Maumere**	**29.52**	**262**	P		10 51 03.2	
	comp=Z,63μmcomp=Z,13μmcomp=Z,789nm,1.2s						
SKMP	**Bagumbayan, Su**	**29.66**	**293**	*e*P	**P**	**10 51 06.3**	**+0.3**
GLSP	**General Luna,**	**29.67**	**300**	*e*P	**P**	**10 51 05.1**	**-1.1**
BUTP	**Butuan**	**29.73**	**298**	*e*P	**P**	**10 51 10.1**	**+3.5**
BUKP	**Musuan**	**29.74**	**296**	*e*P	**P**	**10 51 07.8**	**+1.0**
WRKA	**Warakurna**	**29.86**	**227**	P	**P**	**10 51 07.6**	**-0.2**
	baz=30,SNR=305						
CNB	**Canberra Magne**	**29.90**	**184**	P	**P**	**10 51 09.2**	**+1.2**
	baz=30,SNR=17						
TAVE	**Taveuni**	**29.92**	**114**	P		10 51 11.0	
CAN	**Canberra**	**29.93**	**185**	P	**P**	**10 51 08.0**	**-0.3**
CAN				pmax	pmax		
	comp=Z,491nm,1.7s						
CAN	**Canberra**	**29.93**	**185**	P	**P**	**10 51 08.0**	**-0.3**
CAN				IAmb	IAmb	10 51 34.8	
	comp=Z,491nm,1.7s						
KKSI	**Kolaka, Sulawe**	**30.07**	**271**	P		10 51 08.9	
	comp=Z,4μmcomp=Z,72nm,0.6s						
CGP	**Cagayan de Oro**	**30.31**	**297**	*i e*P	**P**	**10 51 13.4**	**+1.6**
MRSI	**Marisa**	**30.38**	**280**	P		10 51 10.4	
	comp=Z,62μmcomp=Z,5μmcomp=Z,169nm,0.6s						
HTT	**Hallett**	**30.40**	**202**	P	**P**	**10 51 12.4**	**0.0**
	baz=30,SNR=63						
APSI	**Ampana**	**30.42**	**277**	P		10 51 12.0	
	comp=Z,41μmcomp=Z,5μmcomp=Z,359nm,0.7s						
MSLP	**Maasin**	**30.93**	**300**	*e*P	**P**	**10 51 18.0**	**+0.7**
BBOO	**Buckleboo**	**31.02**	**206**	P	**P**	**10 51 17.6**	**-0.2**
	baz=31,SNR=92						
BBOO	**Buckleboo**	**31.02**	**206**	P	**P**	**10 51 17.0**	**-0.8**
BBOO				IAmb	IAmb	10 51 32.0	
	comp=Z,878nm,1.8s						
PAGZ	**Pagadian**	**31.24**	**295**	*e*P	**P**	**10 51 21.7**	**+1.7**
BASI	**Baing, Sumba**	**31.30**	**259**	P		10 51 20.7	
	comp=Z,40μmcomp=Z,20μmcomp=Z,2μm,1.4s						

BKSI	**Bulukumba**	**31.54**	**269**	P		10 51 21.5	
	comp=Z,54μmcomp=Z,4μmcomp=Z,89nm,1.1s						
BNSI	**Bone**	**31.59**	**270**	P		10 51 22.5	
	comp=Z,50μmcomp=Z,5μmcomp=Z,78nm,1.1s						
TOLI2	**Tolitoli**	**31.64**	**281**	P	**P**	**10 51 22.8**	**-0.7**
LLP	**Lapu-Lapu**	**31.80**	**299**	*i e*P	**P**	**10 51 25.0**	**+0.1**
KAPI	**Kappang**	**31.92**	**269**	P	**P**	**10 51 24.5**	**-1.5**
	comp=Z,25nm,0.8s,baz=94,slow=9.5,SNR=3.7						
KAPI				PcP	**PcP**	**10 54 17.0**	**+1.4**
	comp=Z,66nm,0.8s,baz=77,slow=4.5,SNR=3.9						
KAPI				ScP	**ScP**	**10 57 56.2**	**+1.6**
	comp=Z,43nm,0.9s,baz=119,slow=6.1,SNR=6.0						
KAPI				LR	LR	11 05 55.8	
	comp=Z,20μm,19.4s,baz=84,slow=39						
KAPI	**Kappang**	**31.92**	**269**	P	**P**	**10 51 27.2**	**+1.2**
KAPI				pmax	pmax		
	comp=Z,292nm,1.3s						
KAPI				MLR	MLR		
	comp=Z,29μm,20.0s						
KAPI	**Kappang**	**31.92**	**269**	P	**P**	**10 51 27.2**	**+1.2**
KAPI				IAmb	IAmb	10 52 36.9	
	comp=Z,292nm,1.3s						
KAPI	**Kappang**	**31.92**	**269**	P	**P**	**10 51 24.9**	**-1.0**
KAPI				P	**P**	**10 51 24.9**	**-1.0**
KAPI				S	**S**	**10 56 38.9**	**+5.3**
KAPI				S	**S**	**10 56 38.9**	**+5.3**
KAPI	**Kappang**	**31.92**	**269**	P		10 51 25.3	
	comp=Z,48μmcomp=Z,4μmcomp=Z,118nm,0.9s						
SPSI	**Sidrap Palu**	**31.95**	**271**	P		10 51 24.5	
	comp=Z,54μmcomp=Z,4μmcomp=Z,67nm,0.9s						
TTSI	**Tana Toraja**	**31.98**	**273**	P		10 51 25.5	
	comp=Z,51μmcomp=Z,5μmcomp=Z,83nm,1.0s						
MKS	**Makassar**	**32.19**	**269**	P		10 51 27.5	
	comp=Z,4μmcomp=Z,109nm,1.0s						
WBSI	**Waikabubak, Su**	**32.40**	**260**	P		10 51 28.2	
	comp=Z,56μmcomp=Z,19μmcomp=Z,2μm,0.8s						
ARPS	**Mount Arapiles**	**32.57**	**195**	P	**P**	**10 51 31.8**	**+0.4**
	baz=33,SNR=130						
TOO	**Toolangi**	**32.58**	**189**	P	**P**	**10 51 32.3**	**+0.8**
	baz=33,SNR=36						
TOO	**Toolangi**	**32.58**	**189**	P	**P**	**10 51 31.6**	**+0.1**
TOO				pmax	pmax		
	comp=Z,183nm,1.4s						
TOO	**Toolangi**	**32.58**	**189**	P	**P**	**10 51 31.6**	**+0.1**
CNOP	**Candoni, Negro**	**32.74**	**297**	*e*P	**P**	**10 51 33.1**	**0.0**
PMSI	**Majene**	**32.84**	**272**	P		10 51 33.2	
	comp=Z,31μmcomp=Z,3μmcomp=Z,51nm,1.4s						
GUIM	**Jordan**	**33.14**	**299**	*e*P	**P**	**10 51 37.7**	**+1.1**
DBNI	**Kabupaten Domp**	**33.38**	**263**	P		10 51 36.1	
	comp=Z,46μmcomp=Z,6μmcomp=Z,268nm,0.8s						
RCP	**Roxas**	**33.44**	**300**	*i e*P	**P**	**10 51 40.6**	**+1.3**
JCJ	**Chichijima**	**33.57**	**344**	P	**P**	**10 51 40.5**	**+0.2**
	comp=Z,294nm,0.9s,baz=227,slow=2.2,SNR=10						
JCJ				LR	LR	11 05 30.7	
	comp=Z,47μm,19.3s,baz=168,slow=37						
JCJ	**Chichijima**	**33.57**	**344**	IAmb	IAmb	10 51 53.5	
	comp=Z,494nm,1.0s						
FORT	**Forrest**	**33.74**	**219**	P	**P**	**10 51 41.6**	**-0.1**
	baz=34,SNR=65						
FORT	**Forrest**	**33.74**	**219**	P	**P**	**10 51 40.8**	**-0.9**
SCSP	**San Jose Seism**	**33.84**	**304**	*e*P	**P**	**10 51 44.1**	**+1.4**
PLAI	**Plampang**	**33.93**	**262**	P		10 51 40.8	
	comp=Z,46μmcomp=Z,7μmcomp=Z,474nm,0.9s						
SGKI	**Sangatta, Kali**	**34.48**	**277**	P		10 51 49.4	
	comp=Z,60μmcomp=Z,9μmcomp=Z,371nm,1.0s						
CUYO	**Cuyo Island**	**34.62**	**298**	*e*P	**P**	**10 51 51.5**	**+2.0**
TWSI	**Taliwang, Sumb**	**34.81**	**262**	P		10 51 48.5	
	comp=Z,25μmcomp=Z,3μmcomp=Z,132nm,0.9s						
MBWA	**Marble Bar**	**34.84**	**240**	IAMs_20	IAMs_20	11 07 49.1	
	comp=Z,120μm,18.0s						
MBWA	**Marble Bar**	**34.84**	**240**	P	**P**	**10 51 51.0**	**-0.3**
MBWA				P	**P**	**10 51 51.0**	**-0.3**
MBWA				S	**S**	**10 57 16.6**	**-2.0**
MBWA				S	**S**	**10 57 16.6**	**-2.0**
JCNP	**Jose Panganiba**	**34.85**	**304**	*e*P	**P**	**10 51 52.0**	**+0.6**
GQP	**Guinayangan**	**34.85**	**304**	*i e*P	**P**	**10 51 52.5**	**+1.0**
MYLDM	**L

comp=Z,45µm,19.0s
JOW Kunigami 39.27 326 P P 10 52 30.2 +1.4
comp=Z,670nm,1.0s,baz=150,slow=7.7,SNR=39
JOW ScP **S** **10 58 25.1 -0.8**
comp=Z,12nm,0.5s,baz=91,slow=2.8,SNR=3.6
JOW LR LR 11 05 42.5
comp=Z,124µm,21.3s,baz=136,slow=32
JOW Kunigami 39.27 326 P P **10 52 30.8 +2.0**
JOW IAmb IAmb 10 52 34.5
comp=Z,700nm,0.9s
JOW IAMs_20 IAMs_20 11 05 42.7
comp=Z,116µm,21.0s
NIUE Niue 39.70 113 P 10 52 36.0
SJI Sawahan 39.83 264 P 10 52 33.0
comp=Z,37µmcomp=Z,7µmcomp=Z,215nm,1.0s
QRZ Quartz Range 39.91 155 IAMs_20 IAMs_20 11 07 23.5
comp=Z,125µm,20.0s
URZ Urewera 40.02 148 P P **10 52 34.3 -0.7**
URZ IAMs_20 IAMs_20 11 07 00.7
comp=Z,117µm,20.0s
PBKI Pangkalan Bun 40.11 272 P 10 52 36.3
comp=Z,9µmcomp=Z,662nm,1.1s
GIRL Giralia 40.13 241 P P **10 52 37.1 +1.0**
baz=40,SNR=73
GIRL Giralia 40.13 241 P P **10 52 37.0 +1.0**
SBUM Sibu 40.29 280 IAmb IAmb 10 53 28.6
comp=Z,818nm,2.0s
SBUM Sibu 40.29 280 P P **10 52 39.0 +1.5**
SBUM Sibu 40.29 280 P 10 52 37.4
comp=Z,55µmcomp=Z,7µmcomp=Z,117nm,1.7s
NNZ Nelson 40.59 155 IAMs_20 IAMs_20 11 07 54.0
comp=Z,124µm,20.0s
STKI Sintang 40.62 276 P 10 52 41.7
comp=Z,29µmcomp=Z,139nm,1.8s
YOJ Yonaguni jima 40.80 318 IAMs_20 IAMs_20 11 06 04.2
comp=Z,123µm,22.0s
THZ Tophouse 40.85 156 P P **10 52 42.2 +0.4**
THZ IAMs_20 IAMs_20 11 08 12.4
comp=Z,96µm,19.0s
TUWZ Tuamarina 41.01 154 P P **10 52 43.0 0.0**
TWG Pinlang 41.07 314 IAMs_20 IAMs_20 11 06 39.1
comp=Z,124µm,20.0s
UGM Wanagama 41.07 264 IAmb IAmb 10 53 19.2
comp=Z,792nm,1.2s
UGM Wanagama 41.07 264 P 10 52 42.5
comp=Z,43µmcomp=Z,10µmcomp=Z,431nm,1.3s
KLBR Kellerberrin 41.21 226 P P **10 52 44.3 -0.6**
baz=41,SNR=64
FOZ Fox Glacier 41.21 160 IAMs_20 IAMs_20 11 07 06.3
comp=Z,107µm,22.0s
MORW Morawa 41.23 231 P P **10 52 44.8 -0.3**
baz=41,SNR=296
MORW Morawa 41.23 231 P P **10 52 44.7 -0.4**
MORW IAmb IAmb 10 53 00.4
comp=Z,934nm,1.4s
SNZO South Karori 41.24 154 P P **10 52 46.3 +1.4**
SNZO IAmb IAmb 10 52 48.3
comp=Z,502nm,1.4s
SNZO South Karori 41.24 154 IAMs_20 IAMs_20 11 08 24.8
comp=Z,163µm,20.0s
YULB Yu-li 41.27 315 P P **10 52 46.8 +1.3**
YULB IAmb IAmb 10 53 11.3
comp=Z,1µm,1.8s
BFZ Birch Farm 41.45 152 IAmb IAmb 10 53 47.1
comp=Z,943nm,1.9s
LTZ Lake Taylor 41.45 157 P P **10 52 47.2 +0.4**
BLDU Ballidu 41.47 228 P P **10 52 46.6 -0.5**
baz=42,SNR=24
NACB Ninganchiao 41.57 316 IAmb IAmb 10 52 56.7
comp=Z,399nm,1.0s
SSLB Suanglung 41.76 315 P P **10 52 50.3 +0.8**
RPZ Rata Peaks 41.80 159 IAmb IAmb 10 52 53.8
comp=Z,503nm,1.4s
OXZ Oxford 41.83 158 IAMs_20 IAMs_20 11 08 43.7
comp=Z,112µm,20.0s
JSG Sagara 41.83 343 P P **10 52 49.9 +0.1**
JSG IAmb IAmb 10 52 56.9
comp=Z,352nm,1.0s
JSG IAMs_20 IAMs_20 11 07 49.5
comp=Z,108µm,22.0s
JSU Suzuyama 41.93 332 IAmb IAmb 10 53 12.9
comp=Z,815nm,1.8s
JSU IAMs_20 IAMs_20 11 08 00.1
comp=Z,78µm,21.0s
KSM Kuching 42.00 278 P P **10 52 52.1 +0.5**
KSM Kuching 42.00 278 P P **10 52 52.0 +0.5**
KSM Kuching 42.00 278 P 10 52 50.9
comp=Z,49µmcomp=Z,6µmcomp=Z,151nm,1.0s
YHNB Yeheng 42.04 317 IAmb IAmb 10 53 00.3
comp=Z,521nm,1.0s
YHNB IAMs_20 IAMs_20 11 07 04.1
comp=Z,122µm,21.0s
LBZ Lake Benmore 42.09 160 IAMs_20 IAMs_20 11 10 34.0
comp=Z,92µm,18.0s
DCZ Deep Cove 42.14 164 P P **10 52 53.6 +1.4**
TATO Taipei 42.17 317 P P **10 52 54.9 +2.1**
TATO IAmb IAmb 10 52 57.7
comp=Z,749nm,1.2s
TATO Taipei 42.17 317 P P **10 52 54.1 +1.4**
TATO P P **10 52 54.1 +1.4**
TATO S S 10 59 18.3 +9.2
TATO S S 10 59 18.3 +9.2
NWAO Narrogin (SRO) 42.29 225 P P **10 52 53.1 -0.6**
comp=Z,52nm,0.8s,baz=66,slow=7.9,SNR=14
NWAO PP **PP** **10 54 36.3 +3.7**
comp=Z,107nm,0.9s,baz=25,slow=8.7,SNR=3.6
NWAO S **S** **10 59 05.1 -5.7**
comp=Z,13nm,0.6s,baz=84,slow=16,SNR=1.5
NWAO LR LR 11 11 18.9
comp=Z,101µm,19.9s,baz=56,slow=37
NWAO Narrogin (SRO) 42.29 225 P P **10 52 53.8 0.0**
baz=42,SNR=17
NWAO Narrogin (SRO) 42.29 225 P P **10 52 52.8 -0.9**
NWAO pmax pmax
comp=Z,537nm,1.8s
NWAO Narrogin (SRO) 42.29 225 P P **10 52 52.8 -0.9**
NWAO Narrogin (SRO) 42.29 225 P P **10 52 53.2 -0.5**
NWAO P P **10 52 53.2 -0.5**
NWAO S **S** **10 59 07.9 -2.9**
NWAO S S **10 59 07.9 -2.9**
MLZ Mavora Lakes 42.32 163 P P **10 52 54.7 +0.9**
MQZ McQueen's Vall 42.39 157 IAmb IAmb 10 52 56.9
comp=Z,1µm,1.9s
MQZ IAMs_20 IAMs_20 11 08 51.4
comp=Z,86µm,20.0s
CTJI Waduk Cacaban 42.39 265 P 10 52 54.3
comp=Z,25µmcomp=Z,8µmcomp=Z,124nm,1.2s
JMN Monobe 42.41 338 IAmb IAmb 10 53 13.5
comp=Z,629nm,1.1s
MUN Mundaring 42.53 227 P P **10 52 55.7 0.0**
baz=43,SNR=47
PTKI Pontianak 42.65 276 P 10 52 56.3
comp=Z,255nm,0.7s
ODZ Otahua Downs 42.83 160 P P **10 52 58.8 +1.0**
ODZ IAMs_20 IAMs_20 11 09 47.0
comp=Z,88µm,19.0s
JNU Nakatsue 43.11 334 P P **10 53 01.1 +0.8**
comp=Z,264nm,0.8s,baz=166,slow=1.4,SNR=66
JNU S S 10 59 12.1 -11
comp=Z,10nm,1.0s,baz=268,slow=13,SNR=1.7
JNU LR LR 11 09 40.3
comp=Z,35µm,21.2s,baz=190,slow=34
JNU Nakatsue 43.11 334 P P **10 53 00.4 +0.1**
JNU IAmb IAmb 10 53 06.6
comp=Z,318nm,0.9s
JCJI Jatiwangi 43.30 266 P 10 53 01.5
comp=Z,42µmcomp=Z,17µmcomp=Z,585nm,1.0s
MJAR Matsushiro Arr 43.58 344 P P **10 53 01.7 -2.3**
comp=Z,86nm,1.0s,baz=168,slow=6.0,SNR=36
MJAR PcP **PcP** **10 54 54.4 +3.5**
comp=Z,15nm,0.6s,baz=156,slow=3.9,SNR=6.5
MJAR ScP **ScP** **10 58 38.6 +0.7**
comp=Z,16nm,1.1s,baz=164,slow=4.9,SNR=5.0
MJAR LR LR 11 10 02.8
comp=Z,61µm,20.6s,baz=170,slow=34
MJAR Matsushiro Arr 43.58 344 P P **10 53 02.1 -1.9**
MJAR pmax pmax
comp=Z,43nm,1.0s
MJAR Matsushiro Arr 43.58 344 P P **10 53 02.1 -1.9**
MAJO Matsushiro 43.58 344*c i*P P **10 53 01.4 -2.6**
MAJO pmax pmax
comp=Z,138nm,1.0s
MAJO Matsushiro 43.58 344 P P **10 53 02.9 -1.1**
MAJO Matsushiro 43.58 344 IAMs_20 IAMs_20 11 10 01.6
comp=Z,65µm,20.0s
MAT Matsushiro 43.58 344 P P **10 53 01.8 -2.2**

MAT S **S** **10 59 25.4 -4.1**
MJB9 Matsu-Tunnel 43.58 344 IAMs_20 IAMs_20 11 10 02.5
comp=Z,71µm,20.0s
CISI Cisompet, Garu 43.75 265 IAmb IAmb 10 53 35.0
comp=Z,732nm,1.0s
CISI Cisompet, Garu 43.75 265 P 10 53 04.6
comp=Z,42µmcomp=Z,11µmcomp=Z,781nm,0.7s
JHS Saijyo 43.83 338 IAmb IAmb 10 53 11.6
comp=Z,380nm,0.9s
LEM Lembang 43.95 266 P P **10 53 06.6 -1.0**
comp=Z,180nm,0.7s,baz=61,slow=6.5,SNR=32
LEM Lembang 43.95 266 P 10 53 06.6
comp=Z,21µmcomp=Z,5µmcomp=Z,195nm,0.8s
KNMB Chin-men Tao 44.01 314 IAmb IAmb 10 53 11.2
comp=Z,570nm,1.3s
JOHN Johnston Islan 44.08 59 P P **10 53 10.3 +2.0**
JOHN IAmb IAmb 10 53 12.4
comp=Z,998nm,1.2s
JOHN Johnston Islan 44.08 59 IAMs_20 IAMs_20 11 08 42.7
comp=Z,67µm,21.0s
TPI Tanjungpandan 44.11 272 P 10 53 08.2
QZH Quanzhou 44.16 314⇑ *i*P P **10 53 09.3 +0.5**
QZH pP **pP** **10 53 23.3 -0.3**
QZH PP **PcP** **10 54 54.8 +1.7**
QZH S **S** **10 59 40.3 +2.1**
QZH sS **sS** **11 00 06.3 +3.6**
QZH pmax pmax
comp=Z,320nm,1.4s
QZH pmax pmax
comp=Z,8µm,10.0s
QZH LR LR
comp=Z,40µm,21.3s
QZH LR LR
comp=Z,56µm,20.8s
QZH LR LR
comp=Z,75µm,20.8s
CBJI Citeko 44.72 266 P 10 53 14.0
comp=Z,45µmcomp=Z,27µmcomp=Z,604nm,0.6s
DBJI Dramaga 44.81 266 P 10 53 13.6
comp=Z,93nm,1.1s
JTU Tsushima 44.95 334 P P **10 53 15.7 +0.7**
JTU IAmb IAmb 10 53 40.8
comp=Z,269nm,1.2s
JSD Sado 44.97 345 IAmb IAmb 10 53 19.7
comp=Z,379nm,1.1s
PPBI Pangkal Pinang 45.67 272 P 10 53 21.9
comp=Z,48µmcomp=Z,130nm,1.2s
XMI Christmas Isla 45.92 261 P 10 53 24.5
comp=Z,641nm,0.8s
HKC Hong Kong Obse 45.95 308⇑ P P **10 53 26.0 +2.9**
XMIS Christmas Isla 45.96 261 P P **10 53 24.6 +1.2**
XMIS Christmas Isla 45.96 261 P 10 53 24.6
comp=Z,399nm,1.3s
MCO Taipa Grande 46.34 307 P P **10 53 29.0 +2.8**
BLSI Bandar Lampung 46.34 268 P 10 53 24.2
comp=Z,33µmcomp=Z,4µmcomp=Z,111nm,0.4s
SSE Sheshan 46.57 323 P P **10 53 29.3 +1.5**
SSE PP **PP** **10 55 18.5 +0.4**
SSE S **S** **11 00 16.0 +3.2**
SSE pmax pmax
comp=Z,76nm,1.6s
SSE pmax pmax
comp=Z,3µm,12.5s
PMBI Palembang 46.96 271 P 10 53 32.3
comp=Z,46µmcomp=Z,22µmcomp=Z,623nm,0.4s
JTM Tenmabayashi 46.96 349 IAmb IAmb 10 53 51.5
comp=Z,476nm,1.0s
GZH Guangzhou 47.01 308 P P **10 53 34.5 +3.1**
GZH S **S** **11 00 24.5 +5.1**
GZH pmax pmax
comp=Z,12µm,10.9s
GZH LR LR
comp=Z,31µm,21.4s
GZH LR LR
comp=Z,48µm,21.2s
KASI Kota Agung 47.08 267 P 10 53 29.2
comp=Z,36µmcomp=Z,5µmcomp=Z,471nm,1.1s
TJN Taejon 47.40 333*c i*P P **10 53 34.7 +0.5**
MDSI Maura Dua 47.45 269 P 10 53 32.9
comp=Z,34µmcomp=Z,4µmcomp=Z,236nm,1.1s
LWLI Liwa 47.54 268 P 10 53 35.3
comp=Z,7µmcomp=Z,353nm,0.9s
ERM Erimo 47.80 351*c i*P P **10 53 36.8 -0.4**
ERM pmax pmax
comp=Z,180nm,1.1s
ERM Erimo 47.80 351 P P **10 53 40.9 +3.7**
JEM Erimo 47.80 351 IAMs_20 IAMs_20 11 13 57.7
comp=Z,58µm,20.0s
QIZ Qiongzhong 47.90 302 P P **10 53 39.5 +1.1**
QIZ sP **sP** **10 53 59.0 -0.6**
QIZ PP **PP** **10 55 33.0 +2.1**
QIZ S **S** **11 00 35.0 +2.8**
QIZ sS **sS** **11 00 55.0 -1.9**
QIZ SS **SS** **11 03 54.8 -6.9**
QIZ pmax pmax
comp=Z,240nm,1.4s
QIZ pmax pmax
comp=Z,7µm,13.5s
QIZ LR LR
comp=Z,30µm,20.6s
QIZ LR LR
comp=Z,37µm,24.0s
QIZ LR LR
comp=Z,71µm,28.9s
QIZ Qiongzhong 47.90 302 IAMs_20 IAMs_20 11 10 24.2
comp=Z,76µm,22.0s
QIZ Qiongzhong 47.90 302 IAmb IAmb 10 53 42.2
comp=Z,570nm,1.4s
KSRS Korea Array 48.05 334 P P **10 53 39.1 -0.1**
comp=Z,51nm,0.6s,baz=150,slow=8.5,SNR=94
KSRS PcP **PcP** **10 55 09.2 +2.7**
comp=Z,16nm,0.8s,baz=156,slow=3.2,SNR=5.8
KSRS S **S** **11 00 28.6 -5.1**
comp=Z,0.5nm,0.4s,baz=123,slow=38,SNR=0.9
KSRS LR LR 11 12 27.0
comp=Z,28µm,21.3s,baz=171,slow=34
KSRS PKPPKP P'P'df 11 24 36.0 -12
comp=Z,3.0nm,1.0s,baz=0.4,slow=2.2,SNR=4.9
KSAR Wonju Array Be 48.06 334 P P **10 53 38.4 -0.9**
KSAR Wonju Array Be 48.06 334 P P **10 53 38.4 -0.9**
KS19 Wonju Array Si 48.12 334 P P **10 53 40.2 +0.4**
KS19 IAmb IAmb 10 54 22.0
comp=Z,223nm,1.2s
LHSI Lahat 48.14 270 P 10 53 38.7
comp=Z,35µmcomp=Z,5µmcomp=Z,154nm,1.2s
JMBI JAMBI 48.20 273 P 10 53 41.3
comp=Z,33µmcomp=Z,6µmcomp=Z,161nm,0.6s
MYKOM Kota Tinggi 48.42 277 IAmb IAmb 10 53 45.9
comp=Z,230nm,1.2s
MYKOM Kota Tinggi 48.42 277 P P **10 53 43.0 +0.5**
MYKOM Kota Tinggi 48.42 277 P 10 53 42.2
comp=Z,47µmcomp=Z,5µmcomp=Z,166nm,1.2s
BTDF Bukit Timah Da 48.43 277 P 10 53 42.2
comp=Z,30µmcomp=Z,3µmcomp=Z,74nm,1.8s
INCN Inchon 48.65 333 P P **10 53 45.6 +1.7**
INCN pmax pmax
comp=Z,504nm,1.0s
INCN Inchon 48.65 333 P P **10 53 45.6 +1.7**
INCN Inchon 48.65 333 P P **10 53 44.7 +0.8**
INCN P P **10 53 44.7 +0.8**
INCN S **S** **11 00 37.9 -4.2**
INCN S S **11 00 37.9 -4.2**
NJ2 Nanjing 48.66 322⇑ *i*P P **10 53 45.5 +1.5**
NJ2 pP **pP** **10 53 56.8 -2.0**
NJ2 sP **sP** **10 54 02.5 -2.8**
NJ2 PcP **PcP** **10 55 10.3 +1.6**
NJ2 PP **PP** **10 55 37.0 -0.5**
NJ2 S **S** **11 00 44.3 +1.9**
NJ2 sS **sS** **11 01 07.5 +0.3**
NJ2 pmax pmax
comp=Z,160nm,1.5s
NJ2 pmax pmax
comp=Z,9µm,12.0s
NJ2 LR LR
comp=Z,83µm,20.4s
NJ2 LR LR
comp=Z,57µm,19.4s
NJ2 LR LR
comp=Z,108µm,20.8s
KSI Kapahiang 49.08 270 P 10 53 46.5
EGSI Enggano, Bengk 49.30 268 P 10 53 47.0
YUK Yuzh-Kuril'sk 49.45 354 *e*P P **10 53 49.7 -0.1**
YUK *e* 10 55 11.7
YUK *e* 10 55 47.3
YUK *e*S S **11 00 55.1 +1.9**
YUK *e* 11 03 37.6

YUK *e*SSS SSS 11 05 50.6
YUK pmax pmax
comp=Z,462nm,1.1s
YUK pmax pmax
comp=N,196nm,1.2s
YUK pmax pmax
comp=E,382nm,1.1s
YUK pmax pmax
comp=Z,498nm,1.5s
RAR Rarotonga 49.47 113 P P **10 53 51.0 +0.6**
comp=Z,81nm,0.8s,baz=303,slow=21,SNR=8.8
RAR Rarotonga 49.47 113 P P **10 53 52.8 +2.4**
RAR pmax pmax
comp=Z,307nm,1.2s
RAR Rarotonga 49.47 113 P P **10 53 52.8 +2.4**
RAR IAmb IAmb 10 53 56.9
comp=Z,307nm,1.2s
RAR Rarotonga 49.47 113 P 10 53 52.6
JKA Kamikawa-asahi 49.94 351 IAmb IAmb 10 54 26.0
comp=Z,332nm,1.3s
ASAJ Asahikawa 49.94 351 P P **10 53 53.3 -0.2**
comp=Z,76nm,0.7s,baz=217,slow=12,SNR=23
ASAJ S **S** **11 00 53.0 -7.0**
comp=Z,7.1nm,0.8s,baz=184,slow=30,SNR=1.6
ASAJ LR LR 11 13 14.0
comp=Z,23µm,21.8s,baz=206,slow=34
KRJI Kerinci 50.33 272 P 10 53 58.1
comp=Z,41µmcomp=Z,8µmcomp=Z,408nm,1.0s
SDSI Sungai Dareh 50.47 273 P 10 53 57.9
comp=Z,52µmcomp=Z,186nm,0.9s
KUR Kuril'sk 50.48 356*c i*P P **10 53 57.3 -0.3**
KUR *e**PP **pP** **10 54 11.0 -1.7**
KUR *i* *SP **sP** **10 54 16.4 -2.7**
KUR 10 55 16.3
KUR *e* 10 55 53.6
KUR *e*PPP PPP 10 56 50.7
KUR *e*S **S** **11 01 08.5 +1.0**
KUR *e**SS **sS** **11 01 32.8 +0.3**
KUR *i* SSS SSS 11 06 12.4
WHN Wuhan 50.58 317⇑ P P **10 54 00.3 +1.7**
WHN pmax pmax
comp=Z,1µm,1.6s
WHN LR LR
comp=Z,71µm,17.7s
WHN LR LR
comp=Z,139µm,20.2s
WHN LR LR
comp=Z,203µm,21.1s
BKNI Bangkinang 51.00 275 IAmb IAmb 10 54 05.4
comp=Z,192nm,0.8s
BKNI Bangkinang 51.00 275 P 10 54 01.4
comp=Z,50µmcomp=Z,6µmcomp=Z,294nm,1.0s
XMAS Kiritimati 51.23 83 P P **10 54 06.7 +2.9**
XMAS IAmb IAmb 10 54 23.1
comp=Z,207nm,0.9s
XMAS Kiritimati 51.23 83 IAMs_20 IAMs_20 11 11 41.7
comp=Z,63µm,21.0s
XMAS Kiritimati 51.23 83 P 10 54 07.3
MSHR Mys Shultsa 51.27 340*c i*P P **10 54 02.7 -0.9**
MSHR pmax pmax
comp=Z,170nm,1.3s
IPM Ipoh 51.65 280 P P **10 54 06.6 -0.4**
IPM Ipoh 51.65 280 P P **10 54 07.0 0.0**
IPM Ipoh 51.65 280 P 10 54 06.2
comp=Z,42µmcomp=Z,5µmcomp=Z,116nm,1.1s
TEY Ternei 51.98 346⇑ *e*P P **10 54 05.2 -3.7**
TEY *e* 10 54 25.2
TEY *e*S **S** **11 01 27.3 -0.9**
TEY pmax pmax
comp=N,20nm,1.0s
TEY pmax pmax
comp=E,700nm,11.0s
TEY pmax pmax
comp=N,3µm,16.4s
TEY pmax pmax
comp=Z,4µm,12.2s
TEY smax smax
comp=N,8µm,12.5s
DL2 Dalian 52.15 330⇑ *i*P P **10 54 11.0 +0.8**
DL2 sP **sP** **10 54 31.0 -0.6**
DL2 S **S** **11 01 33.5 +2.8**
DL2 sS **sS** **11 01 53.0 -2.8**
DL2 SS **SS** **11 05 07.8 -1.1**
DL2 pmax pmax
comp=N,230nm,1.1s
DL2 pmax pmax
comp=N,6µm,7.6s
DL2 LR LR
comp=N,37µm,21.2s
DL2 LR LR
comp=N,28µm,23.5s
DL2 LR LR
comp=N,64µm,22.6s
KULM Kulim 52.16 281 P P **10 54 11.0 +0.2**
KULM Kulim 52.16 281 P 10 54 10.0
comp=N,44µmcomp=N,4µmcomp=N,121nm,1.3s
USRK Ussuriysk Ar. 52.46 342 P P **10 54 11.3 -1.1**
comp=N,15nm,0.8s,baz=134,slow=4.2,SNR=23
USRK S **S** **11 01 28.5 -6.2**
comp=N,1.5nm,0.6s,baz=140,slow=42,SNR=1.5
USRK LR LR 11 14 54.1
comp=N,28µm,21.2s,baz=152,slow=34
USRK PKP2bc 11 25 07.3
comp=N,1.3nm,0.8s,baz=29,slow=4.4,SNR=4.1
USRK Ussuriysk Ar. 52.46 342 P P **10 54 11.8 -0.6**
USRK Ussuriysk Ar. 52.46 342 P P **10 54 11.8 -0.6**
USA0B Ussuriysk Arra 52.46 342*c i*P P **10 54 11.6 -0.8**
USA0B Ussuriysk Arra 52.46 342 IAmb IAmb 10 54 38.7
comp=Z,606nm,1.9s
MNSI Mandailing Nat 52.51 275 P 10 54 11.8
comp=Z,41µmcomp=Z,5µmcomp=Z,207nm,1.1s
TIA Tai'an 52.58 325 P P **10 54 13.8 +0.3**
TIA S **S** **11 01 33.5 -3.2**
TIA pmax pmax
comp=Z,110nm,1.4s
TIA pmax pmax
comp=Z,8µm,11.6s
TIA LR LR
comp=Z,21µm,26.5s
TIA LR LR
comp=Z,52µm,20.6s
TIA LR LR
comp=Z,59µm,19.1s
YSS Yuzh-Sakhalins 52.69 352*ce*P P **10 54 14.4 +0.3**
YSS *e**SP **pP** **10 54 28.7 -0.5**
YSS *e* 10 55 29.3
YSS *e*S **S** **11 01 40.2 +2.3**
YSS *e*PS **PKiKP** **11 02 04.0 +1.8**
YSS *e*SSS SSS 11 06 56.2
YSS pmax pmax
comp=Z,70nm,1.0s
YSS pmax pmax
comp=Z,3µm,13.7s
YSS Yuzh-Sakhalins 52.69 352 P P **10 54 16.7 +2.6**
SISI Saibi 52.76 272 P 10 54 13.3
comp=Z,4µmcomp=Z,130nm,1.6s
SRAK Srakaew 52.98 292 P P **10 54 14.4 -2.5**
comp=Z,12µmcomp=Z,1µm,1.2s
TRSI Tarutung 53.29 277 P 10 54 20.1
comp=Z,49µmcomp=Z,14µmcomp=Z,439nm,1.0s
NONG Nongkai 53.33 297 P P **10 54 20.8 +1.4**
comp=Z,11µmcomp=Z,556nm,1.2s
PSI Prapat 53.44 277 P 10 54 18.7
comp=Z,22µmcomp=Z,3µmcomp=Z,49nm,1.2s,comp=Z,51µm,1.2s,
comp=Z,6µm,1.2s,comp=Z,102nm,1.2s
PSI P 10 54 18.6
comp=Z,22µmcomp=Z,3µmcomp=Z,49nm,1.2s,comp=Z,51µm,1.2s,
comp=Z,6µm,1.2s,comp=Z,102nm,1.2s
SNY Shenyang 53.55 334⇑ P P **10 54 20.8 +0.3**
SNY S **S** **11 01 48.0 -1.7**
SNY pmax pmax
comp=Z,76nm,2.2s
SNY pmax pmax
comp=Z,8µm,10.9s
SNY LR LR
comp=Z,19µm,21.8s
SNY LR LR
comp=Z,18µm,21.8s
SNY LR LR
comp=Z,45µm,26.5s
MDJ Mudanjiang 53.60 340 P P **10 54 24.0 +3.2**
MDJ PP **PP** **10 56 27.0 +4.9**
MDJ S **S** **11 01 56.0 +5.7**
MDJ pmax pmax
comp=Z,120nm,1.3s
MDJ LR LR

comp=Z,15µm,16.9s
MDJ LR LR
comp=Z,20µm,20.6s
TRTT Trang 53.61 284 P **P** **10 54 21.3 -0.2**
comp=Z,154nm,1.4s
CHAI Chaiyaphum 53.63 294 P **P** **10 54 22.0 +0.4**
comp=Z,2µmcomp=Z,220nm,1.3s
PATY Pattaya 53.76 290 P **P** **10 54 24.0 +1.4**
comp=Z,208nm,1.1s
TSI Tuntungan 53.90 278 P 10 54 23.3
comp=Z,39µmcomp=Z,108nm,0.4s
GYA Guiyang 53.95 308 ⇑P **P** **10 54 25.0 +1.1**
GYA pP pP 10 54 39.8 +0.9
GYA S **S** **11 01 58.8 +2.9**
GYA ScS **ScS** **11 04 05.0 -4.0**
GYA LR LR
comp=Z,12µm,19.4s
CN2 Changchun 54.40 337 ⇑P **P** **10 54 26.8 +0.1**
CN2 *e*pP pP 10 54 42.5 +0.7
CN2 *e*S **S** **11 02 00.3 -0.9**
CN2 pmax pmax
comp=Z,50nm,1.5s
CN2 pmax pmax
comp=Z,5µm,12.0s
CN2 LR LR
comp=Z,26µm,22.0s
CN2 LR LR
comp=Z,12µm,22.0s
CN2 LR LR
comp=Z,41µm,24.0s
GSI Gunungsitoli 54.56 275 IAmb IAmb 10 54 58.7
comp=Z,462nm,1.3s
GSI Gunungsitoli 54.56 275 P 10 54 26.7
comp=Z,37µmcomp=Z,6µmcomp=Z,228nm,1.9s
LASI Langsa, Aceh 54.64 279 P 10 54 28.5
COCO West Island 54.67 259 P **P** **10 54 30.3 +1.1**
COCO pmax pmax
comp=Z,783nm,1.2s
COCO MLR MLR
comp=Z,39µm,22.0s
COCO West Island 54.67 259 P **P** **10 54 30.3 +1.1**
SURT Suratani 54.72 285 P **P** **10 54 31.5 +1.9**
comp=Z,82nmcomp=Z,9.7nm,1.1s
PHET Kaeng Krachan 54.91 290 P **P** **10 54 33.3 +2.3**
comp=Z,2µmcomp=Z,268nm,1.1s
PKDT Phuket 54.93 283 P **P** **10 54 30.0 -1.1**
comp=Z,9µmcomp=Z,71nm,0.7s
TPTI 55.23 278 P 10 54 31.0
comp=Z,19µmcomp=Z,3µmcomp=Z,58nm,1.1s
PHIT Phitsanulok 55.48 295 P **P** **10 54 37.0 +2.0**
comp=Z,5µmcomp=Z,654nm,1.0s
UTTA Uttaradit 55.53 296 P **P** **10 54 37.0 +1.6**
comp=Z,3µmcomp=Z,367nm,1.2s
NANT Nan 55.77 297 P **P** **10 54 40.8 +3.8**
comp=Z,7µm,1.2s
LHMI Lhok Sumawe 55.78 280 P 10 54 36.6
comp=Z,43µmcomp=Z,9µmcomp=Z,431nm,1.4s
BJT Baijiatuau 55.80 327 IAMs_20 IAMs_20 11 16 05.2
comp=Z,66µm,21.0s
BJT Baijiatuau 55.80 327 IAmb IAmb 10 55 37.5
comp=Z,256nm,1.4s
BJI Beijing 55.81 327 P **P** **10 54 37.5 +0.6**
BJI sP **sP** **10 54 56.5 -1.9**
BJI PcP **PcP** **10 55 36.0 +0.6**
BJI PP **PP** **10 56 40.3 -1.8**
BJI S **S** **11 02 20.5 +0.4**
BJI SS **SS** **11 06 09.0 +2.3**
BJI pmax pmax
comp=Z,76nm,1.8s
BJI pmax pmax
comp=Z,6µm,7.2s
BJI LR LR
comp=Z,44µm,20.8s
BJI LR LR
comp=Z,26µm,21.3s
BJI LR LR
comp=Z,54µm,22.0s
UTHA Uthaitani 55.85 293 P **P** **10 54 39.2 +1.5**
comp=Z,3µmcomp=Z,282nm,1.2s
KIP Kipapa 55.92 60*c i*P **P** **10 54 39.0 +0.9**
KIP pmax pmax
comp=Z,663nm,1.7s
KIP Kipapa 55.92 60 P **P** **10 54 39.5 +1.4**
SKR Severo-Kuril's 55.94 3 *e*P **P** **10 54 36.3 -1.3**
SKR *e* 10 55 43.3
SKR *e*S **S** **11 02 20.3 -1.1**
SKR *e*SSS SSS 11 08 11.5
SKR pmax pmax
comp=Z,2µm,11.4s
SKR pmax pmax
comp=Z,2µm,11.6s
SKR smax smax
comp=E,7µm,16.5s
SKR smax smax
comp=N,8µm,10.7s
SKR MLR MLR
comp=Z,22µm,17.0s
SKR MLR MLR
comp=Z,22µm,17.0s
MLSI Meulaboh, Aceh 56.15 279 P 10 54 37.7
comp=Z,34µmcomp=Z,7µmcomp=Z,578nm,1.2s
SUKH Sukhothai 56.28 295 P **P** **10 54 42.8 +2.1**
comp=Z,3µmcomp=Z,320nm,1.1s
XAN Xi'an 56.34 317 P **P** **10 54 41.3 +0.3**
XAN pP pP 10 54 54.0 -2.1
XAN sP sP 10 54 59.0 -3.4
XAN PP **PP** **10 56 50.0 +3.0**
XAN S **S** **11 02 27.5 -0.1**
XAN sS sS 11 02 49.0 -2.6
XAN SS **SS** **11 06 15.5 +0.1**
XAN pmax pmax
comp=Z,270nm,1.3s
XAN pmax pmax
comp=Z,8µm,10.3s
XAN LR LR
comp=Z,52µm,22.0s
XAN LR LR
comp=Z,43µm,20.6s
XAN LR LR
comp=Z,85µm,21.1s
TIY Taiyuan 56.36 323 *e*P **P** **10 54 42.5 +1.5**
TIY S **S** **11 02 29.3 +1.6**
TIY pmax pmax
comp=Z,200nm,1.4s
TIY pmax pmax
comp=Z,4µm,10.1s
TIY LR LR
comp=Z,44µm,19.7s
TIY LR LR
comp=Z,42µm,22.2s
TIY LR LR
comp=Z,85µm,22.7s
KMI Kunming 56.48 305 ⇑P **P** **10 54 44.0 +1.7**
KMI pP pP 10 54 58.8 +1.4
KMI sP sP 10 55 03.8 0.0
KMI PP **PP** **10 56 47.5 -1.1**
KMI S **S** **11 02 32.8 +2.8**
KMI SS **SS** **11 06 17.0 -1.1**
KMI pmax pmax
comp=Z,240nm,1.4s
KMI pmax pmax
comp=Z,7µm,14.4s
KMI LR LR
comp=Z,22µm,20.3s
KMI LR LR
comp=Z,27µm,19.9s
KMI LR LR
comp=Z,46µm,23.0s
TYV Tymovskoe 56.55 353 *e*P **P** **10 54 43.4 +1.4**
TYV *e*S **S** **11 02 33.9 +4.4**
TYV pmax pmax
comp=Z,2µm,6.7s
TYV pmax pmax
comp=Z,71nm,1.3s
TYV smax smax
comp=E,25nm,1.9s
TYV smax smax
comp=N,5µm,9.5s
CRAI Chiangrai 56.56 298 P **P** **10 54 44.0 +1.3**
comp=N,10µmcomp=N,512nm,1.2s
UMPA Umpang Tak 56.58 293 P **P** **10 54 44.6 +1.6**
comp=N,5µmcomp=N,395nm,1.2s
KHLH Kahului Airpor 57.10 61 IAmb IAmb 10 55 24.2
comp=Z,478nm,1.2s
KHLH IAMs_20 IAMs_20 11 14 37.2
comp=Z,54µm,22.0s

CM36 Chiang Mai Arr 57.10 296 P **P** **10 54 48.0 +1.4**
CM35 Chiang Mai Arr 57.10 296 P **P** **10 54 47.0 +0.4**
KLR Kul'dur 57.10 344 P **P** **10 54 45.8 -0.2**
comp=Z,70nm,1.0s,baz=149,slow=7.7,SNR=36
KLR PcP **PcP** **10 55 43.2 +2.9**
comp=Z,73nm,1.1s,baz=168,slow=7.0,SNR=4.1
KLR Kul'dur 57.10 344*c i*P **P** **10 54 45.5 -0.5**
KLR pmax pmax
comp=Z,257nm,1.5s
KHLU Kahalu`u 57.10 63 IAmb IAmb 10 54 53.3
comp=Z,339nm,1.1s
CM34 Chiang Mai Arr 57.16 296 P **P** **10 54 48.0 +1.0**
CM04 Chiang Mai Arr 57.16 296 P **P** **10 54 48.9 +1.9**
comp=Z,3µmcomp=Z,346nm,1.2s
CM09 Chiang Mai Arr 57.17 296 P **P** **10 54 49.0 +1.9**
comp=Z,2µmcomp=Z,295nm,1.1s
CM01 Chiang Mai Arr 57.19 296 P **P** **10 54 49.0 +1.8**
comp=Z,3µmcomp=Z,388nm,1.2s
CM05 Chiang Mai Arr 57.20 296 P **P** **10 54 49.0 +1.8**
comp=Z,2µmcomp=Z,276nm,1.1s
HLK Haleakala 57.20 61 IAMs_20 IAMs_20 11 14 18.0
comp=Z,54µm,22.0s
CM02 Chiang Mai Arr 57.21 296 P **P** **10 54 49.2 +1.9**
comp=Z,3µmcomp=Z,328nm,1.2s
CM31 Chiang Mai Arr 57.22 296 P **P** **10 54 49.3 +1.9**
comp=Z,65µmcomp=Z,8µm,1.1s
CM31 Chiang Mai Arr 57.22 296 IAmb IAmb 10 54 52.8
comp=Z,521nm,1.1s
CM31 Chiang Mai Arr 57.22 296 P **P** **10 54 48.8 +1.4**
SNR=305
CM31 P **P** **10 54 48.8 +1.4**
SNR=305
CMAR Chiang Mai Arr 57.22 296 P **P** **10 54 48.8 +1.4**
comp=Z,469nm,1.2s,baz=116,slow=4.5,SNR=342
CMAR LR LR 11 19 25.0
comp=Z,20µm,19.8s,baz=150,slow=36
CMAR PKPPKP 11 24 32.3
comp=Z,1.8nm,0.8s,baz=312,slow=4.1,SNR=5.2
CMAR P4KPbc 11 32 04.0
comp=Z,0.4nm,0.4s,baz=118,slow=1.7,SNR=5.6
CMAR Chiang Mai Arr 57.22 296 P **P** **10 54 47.0 -0.4**
CM15 Chiang Mai Arr 57.23 296 P **P** **10 54 49.0 +1.5**
comp=Z,2µmcomp=Z,323nm,1.2s
CM13 Chiang Mai Arr 57.24 296 P **P** **10 54 49.4 +1.8**
comp=Z,2µmcomp=Z,306nm,1.2s
CMMT Chiang Mai 57.33 296 P **P** **10 54 48.0 -0.2**
comp=Z,4µmcomp=Z,241nm,1.2s
CMMT Chiang Mai 57.33 296 P 10 54 48.2
comp=Z,38µmcomp=Z,8µmcomp=Z,452nm,1.2s
CM33 Chiang Mai Arr 57.33 296 P **P** **10 54 49.0 +0.8**
CHTO Chiang Mai 57.33 296 P **P** **10 54 49.3 +1.1**
CHTO pmax pmax
comp=Z,640nm,1.2s
CHTO Chiang Mai 57.33 296 P **P** **10 54 49.3 +1.1**
CHTO Chiang Mai 57.33 296 P **P** **10 54 49.5 +1.3**
CHTO P **P** **10 54 49.5 +1.3**
CHTO S **S** **11 02 36.6 -4.4**
CHTO S **S** **11 02 36.6 -4.4**
CHTO Chiang Mai 57.33 296 P 10 54 49.1
comp=Z,27µmcomp=Z,5µmcomp=Z,270nm,1.2s
CM32 Chiang Mai Arr 57.37 296 P **P** **10 54 50.0 +1.6**
AIN Ainahou 57.41 63 P **P** **10 54 50.3 +1.4**
GRNR Gornyy 57.45 348 *e*P **P** **10 54 48.7 +0.3**
GRNR MLR MLR
comp=E,8µm,18.0s
POHA Pohakuloa 57.48 63 P **P** **10 54 51.5 +2.0**
CD2 Chengdu 58.35 311 ⇑P **P** **10 54 56.0 +0.8**
CD2 pP pP 10 55 09.0 -1.4
CD2 sP sP 10 55 16.3 -0.4
CD2 PP **PP** **10 57 04.0 -0.9**
CD2 S **S** **11 02 55.0 +1.0**
CD2 sS sS 11 03 19.8 +0.9
CD2 SS **SS** **11 06 50.3 +3.2**
CD2 pmax pmax
comp=E,290nm,0.7s
CD2 pmax pmax
comp=E,8µm,8.2s
CD2 LR LR
comp=E,58µm,21.1s
CD2 LR LR
comp=E,82µm,23.0s
CD2 LR LR
comp=E,95µm,26.0s
PET Petropavlovsk 58.45 5*c i*P **P** **10 54 54.5 -0.8**
PET *e*S **S** **11 02 55.5 +1.2**
PET *e*SS **SS** **11 06 51.4 +3.7**
PET pmax pmax
comp=Z,6µm,11.7s
PET pmax pmax
comp=Z,9µm,19.7s
PEA0B Petropavlovsk- 58.45 4*c i*P **P** **10 54 54.9 -0.5**
PEA0B Petropavlovsk- 58.45 4 P **P** **10 54 56.4 +1.0**
PEA0B IAmb IAmb 10 55 34.2
comp=Z,300nm,1.1s
PEA0B IAMs_20 IAMs_20 11 16 30.9
comp=Z,42µm,21.0s
PETK Petropavlovsk- 58.45 4 P **P** **10 54 56.4 +1.0**
comp=Z,17nm,0.5s,baz=134,slow=6.4,SNR=20
PETK LR LR 11 16 31.1
comp=Z,39µm,21.4s,baz=190,slow=32
PETK PKPPKP 11 24 40.1
comp=Z,4.3nm,1.1s,baz=133,slow=14,SNR=4.1
PPT Papeete 58.51 107 P **P** **10 54 58.9 +2.4**
comp=Z,58nm,0.7s,baz=237,slow=1.7,SNR=11
PPT LR LR 11 15 10.1
comp=Z,10µm,21.7s,baz=276,slow=31
PPT PKPPKP 11 24 47.1
comp=Z,141nm,1.2s,baz=16,slow=3.4,SNR=8.0
PPT2 Papeete2 58.51 107 *e*P **P** **10 54 58.4 +1.8**
comp=Z,285nm,1.3s
PPT2 *e*S **S** **11 02 56.2 -0.4**
comp=Z,33µm,25.0s
PPT2 *e*LQ LQ 11 09 42.5
comp=Z,52µm,30.2s
PPT2 *e*LR LR 11 12 12.5
comp=Z,30µm,23.8s,baz=285
PPT2 Papeete2 58.51 107 *e*P'P'bc P'P'bc 11 24 47.8 0.0
comp=Z,216nm,1.5s
PAE Paea 58.51 107 *e*P **P** **10 54 58.0 +1.5**
comp=Z,65nm,1.2s
PAE Paea 58.51 107 *e*P'P'bc P'P'bc 11 24 49.0 +1.3
comp=Z,62nm,1.4s
PPTF Pamatai, Papee 58.52 107 P **P** **10 54 60.0 +3.4**
PPTF IAmb IAmb 10 55 15.1
comp=Z,407nm,1.1s
TIAR Tiarei 58.73 107 *e*P **P** **10 54 59.7 +1.7**
comp=Z,76nm,1.1s
TIAR Tiarei 58.73 107 *e*P'P'bc P'P'bc 11 24 46.9 -0.3
comp=Z,44nm,1.3s
HHC Hu-ho-hao-te 58.92 325 *e*P **P** **10 54 59.8 +0.8**
HHC S **S** **11 03 02.5 +1.2**
HHC SS **SS** **11 06 49.5 -6.4**
HHC pmax pmax
comp=Z,200nm,1.0s
HHC pmax pmax
comp=Z,8µm,7.7s
HHC LR LR
comp=Z,58µm,19.6s
HHC LR LR
comp=Z,41µm,19.6s
HHC LR LR
comp=Z,95µm,19.6s
TBI Tubuai 59.24 114 *e*P **P** **10 55 02.9 +1.5**
comp=Z,501nm,1.3s
TBI *e*pP **pP** **10 55 15.2 -1.0**
comp=Z,674nm,1.2s
TBI *e*S **S** **11 03 05.4 -0.4**
comp=Z,40µm,29.2s
TBI *e*LQ LQ 11 09 57.5
comp=Z,89µm,35.2s
TBI *e*LR LR 11 12 31.0
comp=Z,73µm,28.5s,baz=283
BTO Baotou 59.66 324 *e*P **P** **10 55 05.5 +1.4**
BTO pmax pmax
comp=Z,430nm,1.8s
BTO LR LR
comp=Z,82µm,19.4s
BTO LR LR
comp=Z,47µm,17.9s
MEH Mehetia 59.97 107 *e*P **P** **10 55 08.0 +1.4**
comp=Z,76nm,0.9s
MEH *e*pP **pP** **10 55 19.7 -1.5**
comp=Z,237nm,1.2s
VAH Vaihoa 60.23 104 *e*P **P** **10 55 09.8 +1.4**
comp=Z,596nm,1.1s
SMY Shemya 60.88 15 IAMs_20 IAMs_20 11 16 26.1
comp=Z,63µm,22.0s

LZH Lanzhou 60.94 317 *e*P **P** **10 55 14.3 +1.3**
LZH pP pP 10 55 26.0 -2.3
LZH sP sP 10 55 32.8 -1.8
LZH *e*S **S** **11 03 22.5 -5.0**
LZH pmax pmax
comp=Z,280nm,1.2s
LZH pmax pmax
comp=Z,5µm,5.2s
LZH LR LR
comp=Z,16µm,17.3s
LZH LR LR
comp=Z,37µm,19.0s
LZH LR LR
comp=Z,27µm,20.1s
PBA Port Blair 61.12 286⇑*e*P P 10 55 12.5 -1.9
PBA Port Blair 61.12 286 P P 10 55 14.2 -0.3
PBA IAmb IAmb 10 55 35.1
comp=Z,477nm,1.3s
PBA Port Blair 61.12 286 P P 10 55 13.0 -1.4
SNR=13
HIA Hailar 61.14 337 P **P** **10 55 14.2 +0.3**
HIA pmax pmax
comp=Z,212nm,1.2s
HIA Hailar 61.14 337 P **P** **10 55 14.2 +0.3**
HIA IAmb IAmb 10 55 19.5
comp=Z,212nm,1.2s
DGPR DIGLIPUR 61.29 288 *e*P **P** **10 55 14.9 -0.6**
DGPR IAmb IAmb 10 55 23.3
comp=Z,213nm,0.8s
ZEA Zeya 62.39 344*c e*P **P** **10 55 22.1 -0.1**
ZEA *e*SP **sP** **10 55 42.6 -1.4**
ZEA *e*S **S** **11 03 47.8 +3.0**
ZEA *e*SS **SS** **11 07 49.2 -0.3**
ZEA pmax pmax
comp=Z,70nm,1.2s
ZEA smax smax
comp=N,3µm,11.0s
LKP Lekhapani 63.03 304 *e*P **P** **10 55 27.2 +0.1**
ADK Adak 63.04 21 P **P** **10 55 28.0 +1.4**
ADK pmax pmax
comp=Z,163nm,1.1s
ADK Adak 63.04 21 P **P** **10 55 28.0 +1.4**
ADK IAmb IAmb 10 56 45.2
comp=Z,163nm,1.1s
IMP Imphal 63.73 301⇑*e*P **P** **10 55 31.2 -0.6**
IMP IAmb IAmb 10 55 32.9
comp=Z,366nm,1.3s
MOKO MOKOCHONG 63.76 303⇑*e*P **P** **10 55 32.0 -0.1**
MOKO IAmb IAmb 10 55 33.6
comp=Z,311nm,1.2s
DIBR DIBRUGARH 63.85 304⇑*e*P **P** **10 55 33.3 +0.8**
DIBR IAmb IAmb 10 55 34.7
comp=Z,598nm,1.0s
KOHI KOHIMA 63.90 302 *e*P **P** **10 55 32.5 -0.5**
KOHI IAmb IAmb 10 55 35.3
comp=Z,2µm,1.9s
JORH JORHAT 64.14 303 *e*P **P** **10 55 34.5 +0.1**
SILR SILCHAR 64.69 300 *e*P **P** **10 55 39.9 +1.9**
ITAN ITANAGAR 64.72 303⇑*e*P **P** **10 55 39.8 +1.6**
ITAN IAmb IAmb 10 55 40.8
comp=Z,1µm,1.5s
MA2 Magadan 64.73 359 P **P** **10 55 37.5 0.0**
comp=Z,27nm,0.5s,baz=178,slow=5.7,SNR=35
MA2 S **S** **11 04 05.7 -8.0**
comp=Z,1.2nm,0.4s,baz=327,slow=19,SNR=1.5
MA2 Magadan 64.73 359 *i* P **P** **10 55 36.1 -1.5**
MA2 pmax pmax
comp=Z,117nm,1.3s
MA2 MLR MLR
comp=Z,23µm,19.0s
MA2 Magadan 64.73 359 P **P** **10 55 37.3 -0.2**
MA2 IAMs_20 IAMs_20 11 19 10.9
comp=Z,43µm,22.0s
ZIRO ZIRO 64.75 304 *e*P **P** **10 55 39.5 +0.9**
ZIRO IAmb IAmb 10 55 42.0
comp=Z,215nm,0.9s
TEZP TEZPUR 65.31 302⇑*e*P **P** **10 55 42.2 +0.2**
TEZP IAmb IAmb 10 55 43.8
comp=Z,480nm,1.4s
BELO BELONIA 65.38 298 *e*P **P** **10 55 44.2 +1.8**
GTA Gaotai 65.39 318 ⇑P **P** **10 55 43.8 +1.3**
GTA pP pP 10 55 56.3 -1.6
GTA sP sP 10 56 02.5 -1.7
GTA S **S** **11 04 26.5 +3.6**
GTA sS sS 11 04 46.0 -2.3
GTA pmax pmax
comp=Z,110nm,1.6s
GTA pmax pmax
comp=Z,6µm,7.5s
GTA LR LR
comp=Z,9µm,17.8s
GTA LR LR
comp=Z,29µm,19.3s
GTA LR LR
comp=Z,37µm,19.6s
SHL Shillong 65.73 301 *e*P **P** **10 55 45.5 +0.5**
SHL IAmb IAmb 10 55 46.9
comp=Z,368nm,1.0s
SHL Shillong 65.73 301 P **P** **10 55 45.5 +0.5**
SNR=196
AGT Agartala 65.75 299⇑*e*P **P** **10 55 46.3 +1.4**
AGT IAmb IAmb 10 55 50.5
comp=Z,341nm,1.1s
CIT Chita 65.78 335 *e*P **P** **10 55 45.6 +1.0**
CIT *e* 10 55 58.0
CIT *e* 10 56 04.2
CIT *e* 10 56 19.8
CIT *e* 10 58 12.1
CIT pmax pmax
comp=Z,491nm,2.9s
ULN Ulaanbaatar 65.94 329 P 10 55 47.1
comp=Z,227µmcomp=Z,25µmcomp=Z,912nm,0.9s
ULN Ulaanbaatar 65.94 329 *i* P **P** **10 55 46.3 +0.4**
ULN pmax pmax
comp=Z,161nm,0.8s
ULN MLR MLR
comp=Z,49µm,22.0s
ULN Ulaanbaatar 65.94 329 P **P** **10 55 47.1 +1.3**
ULN IAmb IAmb 10 55 52.8
comp=Z,149nm,0.8s
ULN Ulaanbaatar 65.94 329 IAMs_20 IAMs_20 11 22 35.5
comp=Z,49µm,21.0s
ULN Ulaanbaatar 65.94 329 P **P** **10 55 47.0 +1.1**
ULN P **P** **10 55 47.0 +1.1**
ULN S **S** **11 04 31.3 +1.9**
ULN S **S** **11 04 31.3 +1.9**
GUWA GUWAHATI 66.10 302 *e*P **P** **10 55 47.1 0.0**
GUWA IAmb IAmb 10 55 52.6
comp=Z,354nm,1.0s
SONM Songino Array 66.27 328 P **P** **10 55 48.8 +0.9**
comp=Z,103nm,0.6s,baz=140,slow=5.7,SNR=247
SONM S **S** **11 04 29.5 -3.8**
comp=Z,0.8nm,0.4s,baz=14,slow=41,SNR=1.1
SONM LR LR 11 23 18.8
comp=Z,49µm,21.2s,baz=128,slow=35
SONM PKPPKP **P'P'df** **11 24 17.5 -3.2**
comp=Z,3.4nm,1.1s,baz=246,slow=1.5,SNR=9.0
SONM P4KPbc 11 32 41.0
comp=Z,0.6nm,1.0s,baz=162,slow=0.5,SNR=3.6
SONM Songino Array 66.27 328 P **P** **10 55 48.5 +0.6**
NIKH Nikolski High 66.93 25 P 10 55 50.8
baz=223
NIKH S 11 04 38.0
baz=223
CASY Casey 67.20 197 P **P** **10 55 53.6 +0.3**
TAOE Nuku Hiva Isla 67.54 97 *e*P **P** **10 55 58.3 +1.7**
comp=Z,594nm,1.5s
TAOE *e*S **S** **11 04 49.2 -0.6**
comp=Z,25µm,27.1s
TAOE Nuku Hiva Isla 67.54 97 *e*LR LR 11 16 15.4
comp=Z,23µm,31.9s
TAOE Nuku Hiva Isla 67.54 97 P **P** **10 55 59.8 +3.2**
TAOE IAmb IAmb 10 56 12.4
comp=Z,225nm,1.1s
TAOE Nuku Hiva Isla 67.54 97 P 10 55 59.5
LSA Lhasa 67.73 305 P **P** **10 55 58.5 +0.5**
LSA LR LR
comp=Z,32µm,21.7s
LSA LR LR
comp=Z,77µm,25.6s
LSA LR LR
comp=Z,112µm,25.6s
LSA Lhasa 67.73 305 P **P** **10 55 58.6 +0.6**
LSA Lhasa 67.73 305 IAmb IAmb 10 56 04.7
comp=Z,148nm,0.7s

LSA Lhasa 67.73 305 P **P** **10 55 59.2 +1.2**
LSA P **P** **10 55 59.2 +1.2**
SEY Seymchan 68.10 0 P **P** **10 55 58.4 -0.6**
comp=Z,15nm,0.8s,baz=166,slow=4.5,SNR=19
SEY S **S** **11 04 49.4 -5.0**
comp=Z,0.5nm,0.4s,baz=357,slow=22,SNR=1.1
SEY Seymchan 68.10 0*c i*P **P** **10 55 58.3 -0.7**
AKUT Akutan 69.05 25 IAmb IAmb 10 56 41.9
comp=Z,212nm,1.2s
GTK Tadong 69.08 302 *e*P **P** **10 56 07.0 +1.0**
YAK Yakutsk 69.32 349 P **P** **10 56 06.0 -0.6**
comp=Z,35nm,0.5s,baz=136,slow=0.8,SNR=2.7
YAK Yakutsk 69.32 349*c i*P **P** **10 56 06.5 -0.1**
YAK *e**PP **pP** **10 56 21.0 -1.1**
YAK *e* 10 56 27.2
YAK *e* 10 58 35.2
YAK *e*PPP PPP 11 00 24.8
YAK *e*S **S** **11 05 09.6 +0.7**
YAK *e**SS **SKiKP** **11 05 45.8 -5.7**
YAK *e*SS **SS** **11 09 36.8 -0.1**
YAK pmax pmax
comp=Z,204nm,1.0s
YAK pmax pmax
comp=N,73nm,1.1s
YAK pmax pmax
comp=E,31nm,1.4s
YAK pmax pmax
comp=Z,418nm,2.3s
YAK pmax pmax
comp=N,273nm,2.0s
YAK pmax pmax
comp=E,99nm,2.3s
YAK smax smax
comp=N,450nm,3.4s
YAK smax smax
comp=E,145nm,3.2s
YAK Yakutsk 69.32 349 IAmb IAmb 10 56 11.8
comp=Z,272nm,1.1s
YAK IAMs_20 IAMs_20 11 25 07.4
comp=Z,23µm,21.0s
ZAK Zakamensk 69.45 329 *e*P **P** **10 56 08.1 +0.3**
ZAK pmax pmax
comp=Z,330nm,1.2s
SPIA Saint Paul Isl 69.52 21 P 10 56 08.0
baz=221
SPIA S 11 05 10.3
baz=221
SPIA Saint Paul Isl 69.52 21 IAmb IAmb 10 57 09.3
comp=Z,713nm,1.8s
BOD Bodaibo 69.95 340 *e*P **P** **10 56 09.3 -1.3**
BOD pmax pmax
comp=Z,115nm,1.5s
TLY Talaya 70.06 330 P **P** **10 56 12.1 +0.6**
comp=Z,116nm,1.0s,baz=158,slow=4.6,SNR=92
TLY Talaya 70.06 330 *e*P **P** **10 56 10.3 -1.2**
TLY *e*S **S** **11 05 13.3 -4.8**
TLY *e*SS **SS** **11 09 48.1 -0.7**
TLY pmax pmax
comp=Z,374nm,1.0s
TLY Talaya 70.06 330 P **P** **10 56 12.1 +0.6**
TLY Talaya 70.06 330 P **P** **10 56 12.3 +0.8**
TLY S **S** **11 05 17.3 -0.8**
IRK Irkutsk 70.11 331 *e*P **P** **10 56 10.4 -1.3**
IRK *e*S **S** **11 05 21.6 +3.0**
IRK pmax pmax
comp=Z,353nm,2.2s
FALS False Pass 70.55 26 P 10 56 14.1
baz=228
FALS S 11 05 22.1
baz=228
MOY Mondy 71.38 329 *e*P **P** **10 56 19.8 +0.2**
MOY pmax pmax
comp=Z,512nm,1.5s
PALK Pallekele 72.04 279*c i*P **P** **10 56 24.0 -0.3**
PALK pmax pmax
comp=Z,229nm,0.9s
PALK Pallekele 72.04 279 P **P** **10 56 24.9 +0.6**
PALK IAmb IAmb 10 56 26.8
comp=Z,147nm,0.8s
PALK Pallekele 72.04 279 P **P** **10 56 24.3 +0.1**
PALK S **S** **11 05 38.5 -4.0**
PALK Pallekele 72.04 279 P 10 56 24.3
comp=Z,35µmcomp=Z,4µmcomp=Z,176nm,1.2s
SDPT Sand Point 72.15 26 IAmb IAmb 10 56 59.5
comp=Z,198nm,0.8s
SDPT Sand Point 72.15 26 P 10 56 23.6
baz=231,SNR=5.5
SDPT S 11 05 43.0
baz=231
VNDA Vanda 72.32 178 P **P** **10 56 25.5 +0.8**
comp=Z,67nm,1.0s,baz=331,slow=6.6,SNR=65
VNDA S **S** **11 05 39.0 -4.5**
comp=Z,1.7nm,1.0s,baz=352,slow=4.8,SNR=2.1
RKT Rikitea 72.50 112 *e*P **P** **10 56 27.8 +1.0**
RKT comp=Z,106nm,1.2s
RKT *e*pP **pP** **10 56 40.0 -2.1**
RKT comp=Z,371nm,1.1s
RKT *e*S **S** **11 05 47.0 -0.3**
RKT comp=Z,20µm,27.0s
RKT *e*LQ LQ 11 15 34.7
RKT comp=Z,34µm,37.5s
RKT *e*LR LR 11 18 40.2
comp=Z,61µm,28.0s
SBA Scott Base 72.88 177 P **P** **10 56 29.9 +1.9**
SBA pmax pmax
comp=Z,164nm,1.2s
SBA Scott Base 72.88 177 P **P** **10 56 29.9 +1.9**
MDRS Chennai 73.37 285⇑ *e*P **P** **10 56 31.9 -0.2**
BILL Bilibino 73.93 6*d i*P **P** **10 56 33.9 -0.4**
BILL pmax pmax
comp=Z,100nm,1.1s
BILL MLR MLR
comp=Z,11µm,19.0s
BILL Bilibino 73.93 6 P **P** **10 56 34.9 +0.6**
GAMB Gambell 74.18 16 P 10 56 36.2
baz=218
GAMB S 11 06 03.5
baz=218
GAMB Gambell 74.18 16 IAMs_20 IAMs_20 11 24 59.8
comp=Z,47µm,21.0s
WMQ Urumqi 75.48 318 P **P** **10 56 44.5 +0.7**
WMQ sP sP 10 57 05.5 -0.3
WMQ S **S** **11 06 18.5 -1.7**
WMQ SS **SS** **11 11 07.5 -4.5**
WMQ pmax pmax
comp=Z,300nm,1.7s
WMQ pmax pmax
comp=Z,6µm,3.8s
WMQ LR LR
comp=Z,20µm,15.9s
WMQ LR LR
comp=Z,16µm,29.3s
WMQ LR LR
comp=Z,54µm,29.7s
SII Sitkinak Islan 75.72 28 IAmb IAmb 10 57 05.8
comp=Z,614nm,1.5s
SII Sitkinak Islan 75.72 28 P 10 56 45.4
baz=236,SNR=7.4
SII S 11 06 15.6
baz=236
HYB Hyderabad 75.73 289 *i* P **P** **10 56 45.0 -0.8**
HYB *e*PcP **PcP** **10 56 56.5 -1.8**
HYB *e*PP **PP** **10 59 34.0 -2.3**
HYB *e*S **S** **11 06 24.0 +0.1**
HYB Hyderabad 75.73 289 *e*P **P** **10 56 44.0 -1.8**
HYB IAmb IAmb 10 56 47.0
comp=Z,383nm,1.1s
OHAK Old Harbor 76.49 27 P 10 56 49.6
baz=237,SNR=13
OHAK S 11 06 25.6
baz=237
ANM Nome 76.60 18 P **P** **10 56 50.5 +0.9**
ANM pmax pmax
comp=Z,130nm,1.0s
ANM Nome 76.60 18 P **P** **10 56 50.5 +0.9**
ANM IAMs_20 IAMs_20 11 25 52.6
comp=Z,44µm,21.0s
ANM Nome 76.60 18 P 10 56 50.4
baz=224,SNR=19
ANM S 11 06 33.4
baz=224
TNA Tin City 76.60 16 P 10 56 50.0
baz=221
TNA S 11 06 32.7
baz=221
TNA Tin City 76.60 16 IAMs_20 IAMs_20 11 29 50.6
comp=Z,40µm,19.0s
KDAK Kodiak Island 77.12 27 P **P** **10 56 53.1 +0.4**
comp=Z,76nm,1.1s,baz=262,slow=3.1,SNR=15
KDAK Kodiak Island 77.12 27*c i*P **P** **10 56 52.5 -0.2**
KDAK pmax pmax
comp=Z,231nm,1.4s
KDAK Kodiak Island 77.12 27 P **P** **10 56 54.0 +1.3**
KDAK Kodiak Island 77.12 27 P 10 56 53.2
baz=237
BHPL Bhopal 77.86 295 *e*P **P** **10 56 56.3 -1.4**
BHPL IAmb IAmb 10 56 57.7
comp=Z,195nm,1.2s
DGZ Jazzator, Alta 77.93 323*c i*P **P** **10 56 57.2 -0.4**
DGZ pmax pmax
comp=Z,243nm,1.2s
TIXI Tiksi 78.31 353 P **P** **10 56 59.8 +0.7**
comp=Z,54nm,0.9s,baz=138,slow=7.1,SNR=22
TIXI S **S** **11 06 42.4 -7.4**
comp=Z,0.5nm,0.2s,baz=347,slow=1.8,SNR=0.8
TIXI Tiksi 78.31 353 P **P** **10 56 58.1 -1.0**
TIXI pmax pmax
comp=Z,156nm,1.4s
TIXI Tiksi 78.31 353 P **P** **10 56 58.1 -1.0**
HOM Homer 78.54 26 P 10 57 01.1
baz=238,SNR=13
HOM S 11 06 52.4
baz=238
CNPM China Poot 78.64 26 IAmb IAmb 10 57 35.3
comp=Z,510nm,1.0s
CNPM IAMs_20 IAMs_20 11 31 45.6
comp=Z,30µm,19.0s
TTA Tatalina 78.64 22 P 10 57 01.9
baz=233,SNR=116
TTA S 11 06 53.1
baz=233
TTA Tatalina 78.65 22 IAmb IAmb 10 57 35.0
comp=Z,195nm,1.2s
ZSN Zaisan 78.66 320⇑ *i*P **P** **10 57 02.2 +0.6**
comp=Z,116nm,1.1s,baz=320
ZSN *e*S **S** **11 06 55.1 +0.5**
baz=320
ZSN Zaisan 78.66 320*c i*P **P** **10 57 02.1 +0.6**
ZSN *e*S **S** **11 06 55.9 +1.3**
ZSN pmax pmax
comp=Z,116nm,1.1s
H08S2 Diego Garcia H 78.73 263 P **P** **10 57 04.0 +1.7**
baz=156,slow=76,SNR=32
H08S3 Diego Garcia H 78.75 263 P **P** **10 57 03.5 +1.1**
baz=156,slow=76,SNR=35
H08S1 Diego Garcia H 78.75 263 P **P** **10 57 03.0 +0.5**
baz=156,slow=76,SNR=28
DDI Dehra Dun 78.79 302 *e*P **P** **10 57 03.2 +0.6**
DGAR Diego Garcia 78.79 264*c i*P **P** **10 57 03.0 0.0**
DGAR pmax pmax
comp=Z,1µm,1.3s
DGAR Diego Garcia 78.79 264 P **P** **10 57 02.9 0.0**
DGAR Diego Garcia 78.79 264 P **P** **10 57 03.9 +1.0**
DGAR S **S** **11 06 57.4 +0.2**
BRSE Bradley Lake S 78.97 26 P 10 57 03.3
baz=239
BRSE S 11 06 58.3
baz=239
SPCR Spurr Chakacha 79.13 24 P 10 57 03.3
baz=237,SNR=8.0
SPCR S 11 06 56.4
baz=237
CAPN Captain Cook N 79.33 25 P 10 57 05.9
baz=238
CAPN S 11 07 01.7
baz=238
MNCI Minicoy 79.68 279 P **P** **10 57 09.2 +1.4**
MNCY Minicoy 79.71 279 *e*P **P** **10 57 08.4 +0.4**
MNCY IAmb IAmb 10 57 11.0
comp=Z,312nm,0.8s
SEW Seward 79.71 26 IAmb IAmb 10 57 28.5
comp=Z,238nm,0.8s
SEW Seward 79.71 26 P 10 57 07.4
baz=240,SNR=24
SEW S 11 07 03.0
baz=240
SMLA Simla 79.71 303⇑ *e*P **P** **10 57 07.7 0.0**
SMLA IAmb IAmb 10 57 11.5
comp=Z,345nm,1.2s
RDOG Red Dog Mine 79.78 16 IAMs_20 IAMs_20 11 27 19.7
comp=Z,47µm,22.0s
RDOG Red Dog Mine 79.78 16 P 10 57 07.9
baz=226
RDOG S 11 07 05.6
baz=226
O22K Cooper Landing 79.79 25 IAmb IAmb 10 58 01.4
comp=Z,482nm,0.9s
O22K IAMs_20 IAMs_20 11 35 31.9
comp=Z,25µm,19.0s
O22K Cooper Landing 79.79 25 P 10 57 07.7
baz=240,SNR=13
O22K S 11 07 06.9
baz=240
SKT Skwentna 79.82 24 P 10 57 06.6
baz=238,SNR=12
SKT S 11 07 02.2
baz=238
SKT Skwentna 79.82 24 P **P** **10 57 06.3 -1.3**
SUA Susitna One 79.87 24 P 10 57 07.5
baz=238,SNR=32
SUA S 11 07 04.6
baz=238
GOA Goa 79.90 287 *e*P **P** **10 57 08.0 -0.9**
PPLA Purkeypile 80.06 23 IAmb IAmb 10 57 42.8
comp=Z,283nm,1.5s
PPLA IAMs_20 IAMs_20 11 31 55.1
comp=Z,34µm,20.0s
PPLA Purkeypile 80.06 23 P 10 57 08.8
baz=237,SNR=20
PPLA S 11 07 06.3
baz=237
MK31 Makanchi Array 80.09 319*c i*P **P** **10 57 09.0 -0.4**
MKAR Makanchi Array 80.09 319 P **P** **10 57 09.6 +0.2**
comp=Z,97nm,1.0s,baz=101,slow=6.4,SNR=375
MKAR PKKPbc **PKKPbc** **11 15 54.7 -0.8**
comp=Z,2.4nm,0.8s,baz=287,slow=1.4,SNR=5.5
MKAR PKPPKP **P'P'df** **11 23 54.6 -2.5**
comp=Z,0.9nm,0.8s,baz=246,slow=2.1,SNR=4.6
MKAR LR LR 11 31 18.7
comp=Z,34µm,21.2s,baz=88,slow=35
MKAR Makanchi Array 80.09 319 *i* P **P** **10 57 09.6 +0.2**
MKAR pmax pmax
comp=Z,98nm,1.0s
MKAR Makanchi Array 80.09 319 P **P** **10 57 07.9 -1.5**
RC01 Rabbit Creek A 80.09 25 IAmb IAmb 10 57 42.8
comp=Z,444nm,1.3s
RC01 IAMs_20 IAMs_20 11 28 51.9
comp=Z,27µm,21.0s
RC01 Rabbit Creek A 80.09 25 P 10 57 09.2
baz=239,SNR=28
RC01 S 11 07 07.9
baz=239
MAKZ Makanchi 80.30 319 P **P** **10 57 10.8 +0.3**
MAKZ pmax pmax
comp=Z,260nm,1.2s
MAKZ Makanchi 80.30 319 P **P** **10 57 10.8 +0.3**
MAKZ IAmb IAmb 10 57 12.7
comp=Z,260nm,1.1s
MAKZ IAMs_20 IAMs_20 11 31 24.6
comp=Z,35µm,20.0s
POO Poona 80.33 290⇑ *i*P **P** **10 57 07.0 -4.3**
comp=Z,210nm,1.2s
POO *e*P **P** **10 57 11.3 0.0**
POO *i*S **S** **11 07 12.0 -1.4**
BHK Bhakra 80.40 303 *e*P **P** **10 57 08.4 -3.0**
PAF Port-aux-Franc 80.48 221 IAMs_20 IAMs_20 11 33 16.0
comp=Z,22µm,18.0s
CUT Chulitna 80.55 24 P 10 57 10.7
baz=239,SNR=20
CUT S 11 07 09.6
baz=239
CUT Chulitna 80.55 24 IAmb IAmb 10 57 44.5
comp=Z,387nm,1.2s
CHUM Lake Minchumin 80.56 22 P 10 57 11.7
baz=237,SNR=90
CHUM S 11 07 13.2
baz=237
PWL Port Wells 80.57 25 P **P** **10 57 11.6 -0.1**
PMR Palmer 80.60 25 P 10 57 11.5
baz=240,SNR=49
PMR S 11 07 14.1
baz=240
PMR Palmer 80.60 25 IAmb IAmb 10 57 45.4
comp=Z,250nm,1.2s
DHRM DHARAMSHALA 80.68 304 *e*P **P** **10 57 11.7 -1.4**
Q23K Middleton Isla 80.77 27 P 10 57 13.6
baz=243
Q23K S 11 07 17.7
baz=243
GHO Glory Hole Cre 80.77 24 IAmb IAmb 10 58 08.3
comp=Z,266nm,1.3s
KNK Knik Glacier 80.79 25 P 10 57 12.9
baz=240
KNK S 11 07 15.8
baz=240
KTH Kantishna Hill 80.90 22 IAMs_20 IAMs_20 11 29 04.3
comp=Z,24µm,20.0s
SHLS Shalkode 80.92 315⇑ *i*P **P** **10 57 13.1 -1.0**
comp=Z,200nm,1.4s,baz=315
SHLS *e*S **S** **11 07 17.1 -1.8**
baz=315
SHLS Shalkode 80.92 315*c i*P **P** **10 57 13.0 -1.0**
SHLS *e*S **S** **11 07 17.0 -1.8**
SHLS pmax pmax
comp=Z,200nm,1.4s
AJM Ajmer 80.95 298⇑ *i*P **P** **10 57 13.0 -1.5**
SML Sawmill 81.03 25 P 10 57 14.2
baz=241,SNR=65
SML S 11 07 17.8
baz=241
ZAA0 Zalesovo Array 81.06 327 IAMs_20 IAMs_20 11 32 18.5
comp=Z,41µm,20.0s
ZALV Zalesovo Beam 81.06 327 P **P** **10 57 13.5 -0.9**
comp=Z,46nm,0.6s,baz=108,slow=4.8,SNR=129
ZALV S **S** **11 07 20.3 +0.7**
comp=Z,0.6nm,0.4s,baz=98,slow=11,SNR=2.6
ZALV PKKPbc **PKKPbc** **11 15 52.4 -1.2**
comp=Z,2.1nm,0.7s,baz=275,slow=3.7,SNR=4.9
ZALV PKP2ab 11 23 46.3
comp=Z,0.5nm,0.2s,baz=297,slow=0.3,SNR=4.1
ZALV LR LR 11 32 40.1
comp=Z,35µm,20.3s,baz=112,slow=35
ZALV Zalesovo Beam 81.06 327 P **P** **10 57 12.8 -1.5**
TRF Thorofare Moun 81.09 23 P 10 57 13.8
baz=239,SNR=26
TRF S 11 07 16.7
baz=239
TRF Thorofare Moun 81.09 23 IAMs_20 IAMs_20 11 32 46.4
comp=Z,29µm,20.0s
GLI Glacier Island 81.11 26 P 10 57 14.6
baz=242,SNR=9.6
GLI S 11 07 16.8
baz=242
GLI Glacier Island 81.11 26 P **P** **10 57 14.7 +0.2**
GLI IAmb IAmb 10 57 31.8
comp=Z,160nm,0.8s
BPAW Bear Paw Mtn. 81.17 22 IAMs_20 IAMs_20 11 31 04.3
comp=Z,23µm,20.0s
BPAW Bear Paw Mtn. 81.17 22 P 10 57 14.2
baz=238,SNR=26
BPAW S 11 07 17.1
baz=238
UZB Uzynbulak 81.22 315⇑ *i*P **P** **10 57 16.1 +0.3**
comp=Z,193nm,1.4s,baz=315
UZB *e*S **S** **11 07 22.9 +0.9**
baz=315
UZB Uzynbulak 81.22 315*c i*P **P** **10 57 16.0 +0.3**
UZB *e*S **S** **11 07 22.9 +0.9**
UZB pmax pmax
comp=Z,193nm,1.4s
IMAR Indian Mountai 81.23 20 P **P** **10 57 14.6 -0.5**
FID Port Fidalgo 81.32 26 IAmb IAmb 10 57 34.5
comp=Z,192nm,1.0s
SCM Sheep Creek Mo 81.47 25 IAmb IAmb 10 57 50.7
comp=Z,245nm,1.1s
WAT2 Susitna Watana 81.50 23 P 10 57 16.1
baz=240
WAT2 S 11 07 21.0
baz=240
EYAK Cordova Ski Ar 81.55 26 P 10 57 17.1
baz=243
EYAK S 11 07 22.6
baz=243
KPKS Kokpek 81.55 315⇑ *i*P **P** **10 57 17.7 +0.4**
comp=Z,207nm,1.3s,baz=315
KPKS Kokpek 81.55 315*c i*P **P** **10 57 17.7 +0.4**
KPKS pmax pmax
comp=Z,207nm,1.3s
SATY Saty 81.64 315⇑ *i*P **P** **10 57 18.4 +0.5**
comp=Z,126nm,1.4s,baz=315
SATY *i* S **S** **11 07 27.2 +0.9**
baz=315
SATY Saty 81.64 315*c i*P **P** **10 57 18.3 +0.5**
SATY *i* S **S** **11 07 27.2 +0.9**
SATY pmax pmax
comp=Z,126nm,1.4s
WAT6 Susitna Watana 81.66 24 P 10 57 17.3
baz=241,SNR=58
WAT6 S 11 07 25.3
baz=241
MCK McKinley 81.75 23 P **P** **10 57 16.7 -1.1**
MCK pmax pmax
comp=Z,356nm,1.1s
MCK MLR MLR
comp=Z,30µm,20.0s
MCK McKinley 81.75 23 P **P** **10 57 16.7 -1.1**
MCK IAmb IAmb 10 57 51.2
comp=Z,356nm,1.1s
MCK IAMs_20 IAMs_20 11 33 05.8
comp=Z,30µm,20.0s
MCK McKinley 81.75 23 P 10 57 17.1
baz=240,SNR=95
MCK S 11 07 23.0
baz=240
MLY Manley 81.75 21 IAmb IAmb 10 57 52.1
comp=Z,484nm,1.7s
MLY IAMs_20 IAMs_20 11 33 20.8
comp=Z,25µm,20.0s
MLY Manley 81.75 21 P 10 57 17.9
baz=238,SNR=149
MLY S 11 07 25.8
baz=238
BWN Browne 81.78 22 IAmb IAmb 10 58 21.0
comp=Z,370nm,1.2s
KAIM Kayak Island 81.86 27 P 10 57 19.4
baz=244
KAIM S 11 07 28.4
baz=244
KAIM Kayak Island 81.87 27 IAmb IAmb 10 57 40.8
comp=Z,160nm,0.9s
KLU Klutina 81.90 25 IAmb IAmb 10 57 53.2
comp=Z,310nm,1.1s
KLU Klutina 81.90 25 P 10 57 19.3
baz=243,SNR=49
KLU S 11 07 26.5
baz=243
RAGM Ragged Mountai 81.95 27 IAmb IAmb 10 57 38.4
comp=Z,238nm,1.1s
M24K Tolsona, Glenn 82.08 25 IAmb IAmb 10 57 53.7
comp=Z,208nm,0.8s
M24K Tolsona, Glenn 82.08 25 P 10 57 20.6
baz=242,SNR=26
M24K S 11 07 29.6
baz=242
HMT Hamilton 82.11 27 IAmb IAmb 10 57 37.6
comp=Z,231nm,1.0s
NEA2 Nenana 82.14 22 P 10 57 19.2
baz=240,SNR=74
NEA2 S 11 07 26.4
baz=240
NEA2 Nenana 82.14 22 IAmb IAmb 10 57 53.1
comp=Z,444nm,1.8s
NEA2 IAMs_20 IAMs_20 11 29 41.0
comp=Z,25µm,22.0s
TDK Taldyqorghan 82.15 317 *e*P **P** **10 57 20.6 +0.2**
comp=Z,205nm,1.2s,baz=317
TDK *e*S **S** **11 07 32.3 +1.0**
baz=317
TDK LR LR 11 28 51.5
comp=Z,14µm,20.3s,baz=317
TDK Taldyqorghan 82.15 317 *e*P **P** **10 57 20.5 +0.2**
TDK *e*S **S** **11 07 32.3 +1.0**
TDK pmax pmax
comp=Z,205nm,1.2s
TDK MLR MLR
comp=Z,14µm,20.0s
SUCK Suckling Hills 82.22 27 P **P** **10 57 21.8 +1.4**
SUCK IAmb IAmb 10 57 38.5
comp=Z,220nm,1.2s
SUCK IAMs_20 IAMs_20 11 27 14.2
comp=Z,24µm,22.0s

BMRM Bremner River 82.23 26 IAmb IAmb 10 57 41.1
comp=Z,428nm,1.3s
BMRM IAMs_20 IAMs_20 11 30 31.6
comp=Z,28µm,22.0s
BMRM Bremner River 82.23 26 P 10 57 21.0
baz=244,SNR=28
BMRM S 11 07 30.4
baz=244
KDJ Kajisay 82.27 314 IAmb IAmb 10 57 24.6
comp=Z,450nm,1.1s
I23K Minto, Yukon-K 82.31 21 IAMs_20 IAMs_20 11 36 37.6
comp=Z,23µm,19.0s
I23K Minto, Yukon-K 82.31 21 P 10 57 20.8
baz=239,SNR=58
I23K S 11 07 29.4
baz=239
WRH Wood River Hil 82.44 22 IAmb IAmb 10 57 57.8
comp=Z,199nm,1.2s
WRH IAMs_20 IAMs_20 11 31 53.1
comp=Z,27µm,20.0s
BGLC Bering Glacier 82.46 27 P 10 57 23.0
baz=245
BGLC S 11 07 35.1
baz=245
SEM Semipalatinsk 82.51 322⇑ *iP* **P 10 57 21.4 -1.0**
comp=Z,41nm,1.2s,baz=322
SEM LR LR 11 29 10.2
comp=Z,6µm,18.2s,baz=322
SEM Semipalatinsk 82.51 322*c iP* **P 10 57 21.3 -1.0**
SEM pmax pmax
comp=Z,41nm,1.2s
SEM MLR MLR
comp=Z,6µm,18.0s
N25K Chitina, Valde 82.52 26 P 10 57 22.7
baz=244,SNR=24
KSH Kashi 82.54 311⇑ *iP* **P 10 57 24.5 +1.8**
KSH pP pP 10 57 39.3 +0.7
KSH S **S 11 07 36.5 +0.8**
KSH pmax pmax
comp=Z,160nm,1.4s
KSH pmax pmax
comp=Z,8µm,6.9s
KSH LR LR
comp=Z,11µm,13.7s
KSH LR LR
comp=Z,8µm,13.3s
KSH LR LR
comp=Z,7µm,10.2s
MDOK Medeo 82.62 315 *i* P **P 10 57 23.7 +0.6**
baz=315
MDOK *i* S **S 11 07 37.8 +1.3**
baz=315
MDOK LR LR 11 30 29.9
comp=Z,9µm,19.0s,baz=315
MDOK Medeo 82.62 315 *i* P **P 10 57 23.6 +0.6**
MDOK *i* S **S 11 07 37.7 +1.3**
MDOK MLR MLR
comp=Z,9µm,19.0s
HARP HAARP 82.63 25 P 10 57 23.0
baz=243,SNR=17
TCOL CIGO, UAF Yank 82.73 22 P 10 57 22.1
baz=241,SNR=43
AAA Alma-Ata 82.73 315⇑ *eP* **P 10 57 24.3 +0.7**
comp=Z,230nm,1.3s,baz=315
AAA LR LR 11 30 54.8
comp=Z,13µm,19.3s,baz=315
AAA Alma-Ata 82.73 315*ce*P **P 10 57 24.2 +0.7**
AAA pmax pmax
comp=Z,230nm,1.3s
AAA MLR MLR
comp=Z,13µm,19.0s
TCOL CIGO, UAF Yank 82.73 22 IAmb IAmb 10 57 49.0
comp=Z,189nm,1.0s
TCOL IAMs_20 IAMs_20 11 32 09.7
comp=Z,22µm,20.0s
COLA College 82.73 22 P 10 57 22.1
baz=241
COLA College 82.73 22*c iP* **P 10 57 21.8 -1.0**
COLA pmax pmax
comp=Z,156nm,1.0s
COLA College 82.73 22 P **P 10 57 21.9 -1.0**
COLA IAmb IAmb 10 57 49.0
comp=Z,175nm,0.9s
PAX Paxson 82.76 24 P **P 10 57 22.8 -0.4**
PAX pmax pmax
comp=Z,243nm,1.8s
PAX MLR MLR
comp=Z,19µm,20.0s
PAX Paxson 82.76 24 P **P 10 57 22.8 -0.4**
PAX Paxson 82.76 24 P 10 57 23.1
baz=243,SNR=15
GLB Gilahina Butte 82.79 26 IAmb IAmb 10 57 57.7
comp=Z,277nm,1.3s
CRQM Cirque 82.80 27 IAmb IAmb 10 57 42.8
comp=Z,280nm,1.0s
CRQE Cirque 82.81 27 P 10 57 24.1
baz=246
CHKK Chushkaly 82.84 315 *eP* **P 10 57 24.0 0.0**
baz=315
CHKK Chushkaly 82.84 315 *eP* **P 10 57 23.9 0.0**
HDA Harding Lake 82.85 23 IAMs_20 IAMs_20 11 30 44.7
comp=Z,29µm,20.0s
HDA Harding Lake 82.85 23 P 10 57 22.6
baz=242,SNR=71
HDA P 10 57 22.6
baz=242,SNR=71
VRDI Verde Repeater 82.85 26 IAmb IAmb 10 57 43.6
comp=Z,159nm,1.0s
ULHL Ulahol 82.98 314 P **P 10 57 25.7 +0.7**
SNR=102
POKR Poker Plat Res 83.00 22 P 10 57 23.1
baz=241,SNR=15
ILAR Eielson Array 83.04 22 P **P 10 57 23.9 -0.7**
comp=Z,41nm,0.7s,baz=255,slow=3.9,SNR=176
ILAR S **S 11 07 40.2 +0.7**
comp=Z,1.7nm,1.0s,baz=232,slow=8.6,SNR=5.5
ILAR PKKPbc **PKKPbc 11 15 46.9 -2.6**
comp=Z,1.0nm,0.6s,baz=353,slow=1.8,SNR=7.9
ILAR PKP2bc 11 23 45.6
comp=Z,1.3nm,1.0s,baz=0.2,slow=3.4,SNR=4.1
ILAR LR LR 11 31 52.4
comp=Z,24µm,20.0s,baz=258,slow=34
ILAR Eielson Array 83.04 22 P **P 10 57 21.6 -2.9**
ILAR Eielson Array 83.04 22 P **P 10 57 21.6 -2.9**
COLD Coldfoot 83.10 19 P 10 57 25.5
baz=238,SNR=33
COLD Coldfoot 83.11 19 IAmb IAmb 10 58 28.1
comp=Z,233nm,1.6s
COLD IAMs_20 IAMs_20 11 30 56.5
comp=Z,25µm,21.0s
MCARA McCarthy VSAT 83.11 26 IAmb IAmb 10 57 58.8
comp=Z,264nm,1.0s
MCARA McCarthy VSAT 83.11 26 P 10 57 25.4
baz=246
BOOM Boomskoye usch 83.25 314 P **P 10 57 26.6 +0.3**
BOOM pmax pmax
comp=Z,127nm,0.7s
BOOM Boomskoye usch 83.25 314 P **P 10 57 26.6 +0.3**
BOOM IAmb IAmb 10 57 32.2
comp=Z,127nm,0.7s
YAH Yahtse 83.27 27 IAmb IAmb 10 57 47.7
comp=Z,182nm,1.2s
KUU Kurty 83.30 315⇑ *iP* **P 10 57 26.6 +0.3**
comp=Z,851nm,1.5s,baz=315
KUU *eS* **S 11 07 43.3 +0.2**
baz=315
KUU LR LR 11 31 08.5
comp=Z,13µm,19.1s,baz=315
KUU Kurty 83.30 315*c iP* **P 10 57 26.6 +0.3**
KUU *eS* **S 11 07 43.2 +0.2**
KUU pmax pmax
comp=Z,851nm,1.5s
KUU MLR MLR
comp=Z,13µm,19.0s
GRNC Granite Creek 83.41 27 IAmb IAmb 10 57 56.5
comp=Z,126nm,1.0s
NIL Nilore 83.47 305 P **P 10 57 27.5 0.0**
NIL pmax pmax
comp=Z,644nm,1.3s
NIL MLR MLR
comp=Z,23µm,21.0s
NIL Nilore 83.47 305 P **P 10 57 27.5 0.0**
NIL Nilore 83.47 305 IAMs_20 IAMs_20 11 34 03.8
comp=Z,23µm,21.0s
TABL Table Mountain 83.57 27 IAmb IAmb 10 57 51.5
comp=Z,145nm,0.8s
BARN Barnard Glacie 83.58 27 IAmb IAmb 10 57 52.2
comp=Z,149nm,0.8s
A21K Barrow 83.59 15 IAmb IAmb 10 58 43.1
comp=Z,489nm,1.9s
A21K Barrow 83.59 15 P 10 57 27.1
baz=232,SNR=34
KURK Kurchatov 83.59 322 P **P 10 57 26.7 -0.9**
TKM2 Tokmak 2 83.60 314 P **P 10 57 28.7 +0.5**
SNR=1895
KURBB Kurchatov Arra 83.62 322 P **P 10 57 26.6 -1.1**
comp=Z,100nm,1.1s,baz=103,slow=4.3,SNR=137
KURBB Kurchatov Arra 83.62 322 P **P 10 57 26.8 -1.0**
DOT Dot Lake 83.63 24 IAmb IAmb 10 57 54.4
comp=Z,181nm,1.0s
DOT IAMs_20 IAMs_20 11 34 02.4
comp=Z,27µm,20.0s
CTG Chitna Glacier 83.68 27 P 10 57 28.9
baz=247
CTGM Chitina Glacie 83.69 27 IAmb IAmb 10 57 58.1
comp=Z,205nm,1.0s
LOGN Logan Glacier 83.78 27 IAmb IAmb 10 57 48.1
comp=Z,108nm,0.8s
SCRK Sand Creek 83.81 24 P 10 57 28.7
baz=244,SNR=42
PCA Pinnacle 83.85 28 IAmb IAmb 10 57 52.8
comp=Z,146nm,0.8s
PINM Pinnacle 83.85 28 P 10 57 29.6
baz=248,SNR=18
PRP Porcupine Dome 83.90 22 P **P 10 57 27.5 -1.6**
PRP Porcupine Dome 83.90 22 P 10 57 27.3
baz=243
KBK Karagaybulak 84.00 314 P **P 10 57 31.9 +1.7**
SNR=58
TOLK Toolik Lake Re 84.05 18 P 10 57 30.1
baz=239,SNR=92
TOLK Toolik Lake Re 84.05 18 IAmb IAmb 10 58 07.1
comp=Z,113nm,0.9s
BCPM Baeas Point 84.09 28 IAmb IAmb 10 58 00.1
comp=Z,251nm,1.1s
CHMS Chumysh 84.22 314 P **P 10 57 31.8 +0.6**
SNR=100
UCH Uchtor 84.22 313 P **P 10 57 32.8 +1.1**
SNR=454
L27K Beaver Creek, 84.30 25 P 10 57 31.6
baz=246,SNR=46
L27K Beaver Creek, 84.30 25 IAMs_20 IAMs_20 11 35 15.3
comp=Z,22µm,20.0s
BCAR Beaver Creek A 84.32 25 P **P 10 57 30.3 -0.9**
AAK Ala-Archa 84.33 314 P **P 10 57 32.6 +0.8**
comp=Z,208nm,1.2s,baz=98,slow=4.8,SNR=215
AAK Ala-Archa 84.33 314 P **P 10 57 32.4 +0.6**
SNR=154
AAK Ala-Archa 84.33 314 *i* P **P 10 57 32.6 +0.8**
SNR=186
AAK Ala-Archa 84.33 314*c iP* **P 10 57 31.5 -0.3**
AAK pmax pmax
comp=Z,899nm,1.2s
AAK Ala-Archa 84.33 314 P **P 10 57 32.5 +0.7**
AAK IAmb IAmb 10 57 34.6
comp=Z,306nm,1.2s
AAK Ala-Archa 84.33 314 IAMs_20 IAMs_20 11 35 16.4
comp=Z,38µm,20.0s
AAK Ala-Archa 84.33 314 P **P 10 57 32.7 +0.9**
AAK S **S 11 07 48.2 -5.5**
SGDS Sogindy 84.41 314⇑ *iP* **P 10 57 32.4 +0.3**
comp=Z,191nm,1.4s,baz=314
SGDS *eS* **S 11 07 50.5 -3.8**
baz=314
SGDS Sogindy 84.41 314*c iP* **P 10 57 32.4 +0.3**
SGDS *eS* **S 11 07 50.4 -3.8**
SGDS pmax pmax
comp=Z,191nm,1.4s
USP Ospenovka 84.46 314 P **P 10 57 33.0 +0.7**
SNR=237
FYU Fort Yukon 84.49 21 IAmb IAmb 10 58 07.5
comp=Z,296nm,1.4s
K27K Chicken 84.59 24 IAMs_20 IAMs_20 11 34 28.9
comp=Z,31µm,20.0s
K27K Chicken 84.59 24 P 10 57 33.3
baz=246
QSPA South Pole Qui 84.61 180 P **P 10 57 33.0 +0.3**
comp=Z,81nm,0.8s,baz=301,slow=0.8,SNR=110
QSPA PKKPbc **PKKPbc 11 15 43.6 -2.6**
comp=Z,5.5nm,0.6s,baz=312,slow=1.4,SNR=14
QSPA PKPPKP P'P'df 11 23 38.1 -11
comp=Z,4.6nm,1.1s,baz=241,slow=2.5,SNR=3.9
QSPA South Pole Qui 84.61 180 P **P 10 57 33.0 +0.3**
QSPA IAmb IAmb 10 57 50.1
comp=Z,452nm,1.4s
MAW Mawson 84.68 203 P **P 10 57 33.5 +0.7**
comp=Z,143nm,1.1s,baz=86,slow=6.0,SNR=65
MAW S S 11 07 45.9 -10
comp=Z,2.0nm,0.7s,baz=269,slow=13,SNR=1.9
MAW PKKPbc **PKKPbc 11 15 44.4 -0.9**
comp=Z,4.8nm,0.6s,baz=192,slow=2.5,SNR=10
MAW PKPPKP **P'P'df 11 23 49.9 +0.9**
comp=Z,7.7nm,1.1s,baz=48,slow=3.0,SNR=3.8
MAW LR LR 11 32 26.0
comp=Z,36µm,21.2s,baz=92,slow=34
MAW Mawson 84.68 203 P **P 10 57 33.5 +0.7**
baz=85,SNR=60
MAW Mawson 84.68 203 P **P 10 57 33.0 +0.1**
MAW pmax pmax
comp=Z,85nm,1.3s
MAW Mawson 84.68 203 P **P 10 57 33.0 +0.1**
AML Almayashu 84.80 313 P **P 10 57 35.7 +1.2**
SNR=1030
EKS2 Erkin-Say 84.85 314 P **P 10 57 35.4 +1.0**
SNR=388
BHUJ Bhuj 84.91 294⇑ *eP* **P 10 57 34.9 0.0**
BHUJ IAmb IAmb 10 57 36.7
comp=Z,380nm,1.1s
BMAR Burnt Mountain 85.11 20 P **P 10 57 34.2 -0.8**
BTLS Baital 85.16 316⇑ *iP* **P 10 57 36.3 +0.6**
comp=Z,398nm,1.4s,baz=316
BTLS *eS* **S 11 07 55.8 -5.8**
baz=316
BTLS Baital 85.16 316*c iP* **P 10 57 36.3 +0.6**
BTLS *eS* **S 11 07 55.7 -5.8**
BTLS pmax pmax
comp=Z,398nm,1.4s
EGAK Eagle 85.26 23 IAmb IAmb 10 58 03.0
comp=Z,150nm,0.9s
EGAK Eagle 85.26 23 P 10 57 36.3
baz=247,SNR=50
SIT Sitka 85.26 32 IAmb IAmb 10 57 48.9
comp=Z,187nm,1.1s
SIT IAMs_20 IAMs_20 11 29 01.1
comp=Z,36µm,21.0s
SIT Sitka 85.26 32 P 10 57 37.3
baz=253,SNR=6.3
HYT Haines Junctio 85.38 28 IAmb IAmb 10 57 57.3
comp=Z,175nm,0.9s
DRK Karamyk 85.69 310 IAmb IAmb 10 57 41.6
comp=Z,313nm,1.2s
DAWY Dawson 85.70 24 IAmb IAmb 10 58 44.3
comp=Z,306nm,1.4s
DIB Dawson Inlet, 85.77 36 IAmb IAmb 10 57 42.0
comp=Z,388nm,1.5s
H02S1 DAWSON INLET T 85.77 36 P **P 10 57 40.8 +2.3**
SNR=6.6
SKAG Skagway 85.98 29 P **P 10 57 40.8 +1.3**
SKAG Skagway 85.98 29 P 10 57 40.7
baz=252,SNR=10
CRAG Craig 86.00 33 IAmb IAmb 10 57 56.9
comp=Z,171nm,1.2s
CRAG Craig 86.00 33 P 10 57 40.5
baz=255
JIS Juneau Island 86.10 31 IAmb IAmb 10 57 42.7
comp=Z,314nm,1.6s
NRIK Noril'sk 86.17 341 P **P 10 57 39.7 -0.4**
comp=Z,79nm,0.7s,baz=119,slow=5.1,SNR=60
NRIK S **SKSac 11 07 54.7 -6.6**
comp=Z,1.3nm,0.4s,baz=263,slow=1.4,SNR=2.0
NRIK LR LR 11 36 21.7
comp=Z,21µm,20.6s,baz=121,slow=36
NRIK Noril'sk 86.17 341*c iP* **P 10 57 38.8 -1.4**
NRIK pmax pmax
comp=Z,189nm,1.0s
NRIK MLR MLR
comp=Z,31µm,21.0s
NRIK Noril'sk 86.17 341 IAmb IAmb 10 57 45.9
comp=Z,159nm,0.7s
BTK Batken 86.54 311 IAmb IAmb 10 57 45.1
comp=Z,344nm,1.4s
WHY Whitehorse 86.55 28 P 10 57 43.4
baz=253,SNR=56
WHY Whitehorse 86.55 28 IAmb IAmb 10 57 44.8
comp=Z,388nm,1.7s
DZA Taraz 86.66 313⇑ *eP* **P 10 57 43.5 +0.2**
comp=Z,287nm,1.3s,baz=313
DZA *eS* **SKSac 11 08 05.2 -0.5**
baz=313
DZA Taraz 86.66 313*ce*P **P 10 57 43.5 +0.2**
DZA *eS* **SKSac 11 08 05.1 -0.5**
DZA pmax pmax
comp=Z,287nm,1.3s
WRAK Wrangell Islan 86.66 33 IAMs_20 IAMs_20 11 30 50.5
comp=Z,35µm,20.0s
WRAK Wrangell Islan 86.66 33 P 10 57 44.2
baz=255,SNR=16
KBL Kabul 87.06 305 P **P 10 57 44.8 -0.8**
KBL pmax pmax
comp=Z,81nm,1.2s
KBL Kabul 87.06 305 P **P 10 57 44.8 -0.8**
KBL Kabul 87.06 305 P **P 10 57 44.1 -1.5**
SNR=42
KBL S **SKSac 11 08 06.0 -2.8**
KK31 Karatay Array 87.29 314 P **P 10 57 46.4 +0.1**
KK31 Karatay Array 87.29 314 IAmb IAmb 10 57 49.2
comp=Z,378nm,1.3s
KKAR Karatay Array 87.29 314 P **P 10 57 44.8 -1.5**
KKAR Karatay Array 87.29 314 P **P 10 57 44.8 -1.5**
KKAR Karatay Array 87.29 314 IAmb IAmb 10 57 49.2
comp=Z,378nm,1.3s
IUG luznay 87.48 313⇑ *iP* **P 10 57 47.8 +0.4**
baz=312
IUG *eS* **SKSac 11 08 10.4 -0.4**
baz=312
IUG luznay 87.48 313*c iP* **P 10 57 47.7 +0.4**
IUG *eS* **SKSac 11 08 10.4 -0.4**
EPYK Eagle Plains 87.55 22 IAmb IAmb 10 58 25.6
comp=Z,198nm,0.9s
EPYK IAMs_20 IAMs_20 11 33 19.5
comp=Z,29µm,20.0s
EPYK Eagle Plains 87.55 22 P 10 57 47.4
baz=251,SNR=79
CHM Chimkent 87.82 313 *eP* **P 10 57 49.2 +0.4**
comp=Z,55nm,1.5s,baz=313
CHM *eS* **SKSac 11 08 12.6 -0.1**
baz=313
CHM Chimkent 87.82 313 *eP* **P 10 57 49.2 +0.4**
CHM *eS* **SKSac 11 08 12.5 -0.1**
CHM pmax pmax
comp=Z,55nm,1.5s
BBB Bella Bella 88.14 37 S **S 11 08 28.9 -1.0**
comp=Z,20nm,0.9s,baz=164,slow=9.4,SNR=1.6
JCC Jacoby Creek, 89.06 49 IAMs_20 IAMs_20 11 29 40.9
comp=Z,19µm,21.0s
BVAR Borovoye Array 89.09 323 P **P 10 57 53.2 -1.4**
comp=Z,73nm,1.0s,baz=72,slow=14,SNR=94
KEBM Edson Butte 89.12 47 IAmb IAmb 10 58 02.0
comp=Z,236nm,1.1s
BRVK Borovoye 89.16 323*ce*P **P 10 57 53.8 -1.1**
BRVK pmax pmax
comp=Z,200nm,1.3s
BRVK Borovoye 89.16 323 IAMs_20 IAMs_20 11 36 24.8
comp=Z,21µm,21.0s
BRVK Borovoye 89.16 323 P **P 10 57 54.1 -0.8**
BRVK S **SKSac 11 08 16.9 -3.2**
KMRM Mail Ridge 89.22 50 IAmb IAmb 10 58 19.1
comp=Z,174nm,1.1s
KMRM IAMs_20 IAMs_20 11 30 04.1
comp=Z,36µm,21.0s
KCPM Cahto Peak 89.25 50 IAmb IAmb 10 58 03.8
comp=Z,217nm,1.2s
KHMM Horse Mountain 89.29 49 IAmb IAmb 10 58 20.2
comp=Z,147nm,1.2s
KHMM IAMs_20 IAMs_20 11 29 59.4
comp=Z,24µm,22.0s
INK Inuvik 89.32 21 P **P 10 57 55.1 -0.2**
comp=Z,18nm,0.6s,baz=268,slow=5.2,SNR=64
INK PKiKP **PKiKP 11 02 54.7 +1.5**
comp=Z,4.2nm,0.7s,baz=297,slow=5.0,SNR=4.1
INK S **SKSac 11 08 23.4 +3.0**
comp=Z,4.5nm,1.2s,baz=47,slow=29,SNR=14
INK PKKPbc **PKKPbc 11 15 36.1 +1.8**
comp=Z,2.3nm,0.7s,baz=20,slow=6.0,SNR=4.3
INK PKPPKP 11 23 44.8
comp=Z,1.5nm,0.9s,baz=109,slow=4.8,SNR=3.7
INK LR LR 11 33 07.7
comp=Z,3µm,21.6s,baz=236,slow=32
INK Inuvik 89.32 21 IAmb IAmb 10 58 46.3
comp=Z,170nm,1.4s
INK IAMs_20 IAMs_20 11 40 08.9
comp=Z,24µm,20.0s
INK Inuvik 89.32 21 P 10 57 55.1
baz=254,SNR=78
J01E Myrtle Point 89.45 47 P 10 57 58.0
baz=262,SNR=26
HOPS Hopland Field 89.55 51 IAMs_20 IAMs_20 11 29 51.1
comp=Z,38µm,22.0s
L02E Cave Junction 89.56 48 P 10 57 58.8
baz=262,SNR=18
K02D Willamette Mer 89.58 47 P 10 57 58.5
baz=262,SNR=48
MCCM Marconi Confer 89.59 52 IAMs_20 IAMs_20 11 30 12.3
comp=Z,35µm,21.0s
I02D Swisshome 89.64 46 P 10 57 59.0
baz=262,SNR=19
I02D S 11 08 45.8
baz=262
O02D Mt. Diablo Mer 89.91 50 P 10 58 00.6
baz=263,SNR=18
O02D S 11 08 48.4
baz=263
I03D Drain, OR 89.94 46 P 10 57 60.0
baz=262,SNR=34
I03D S 11 08 45.8
baz=262
M02C Callahan 90.01 49 P 10 58 01.1
baz=263,SNR=39
M02C S 11 08 49.6
baz=263
NLWA Neilton Lookou 90.07 43 P **P 10 58 00.6 +1.3**
NLWA IAmb IAmb 10 58 06.8
comp=Z,310nm,1.4s
NLWA IAMs_20 IAMs_20 11 31 06.2
comp=Z,25µm,22.0s
N02D Trinity Center 90.07 49 P 10 58 01.5
baz=263,SNR=31
N02D S 11 08 48.5
baz=263
COR Corvallis 90.09 45 P **P 10 58 02.0 +2.6**
COR pmax pmax
comp=Z,1µm,1.9s
COR Corvallis 90.09 45 P **P 10 58 02.0 +2.6**
COR Corvallis 90.09 45 IAMs_20 IAMs_20 11 30 01.9
comp=Z,37µm,22.0s
HUMO Hull Mountain 90.09 47 IAmb IAmb 10 58 03.1
comp=Z,346nm,1.2s
HUMO IAMs_20 IAMs_20 11 33 26.0
comp=Z,29µm,20.0s
WDC Whiskeytown Da 90.15 49 IAmb IAmb 10 58 03.5
comp=Z,454nm,1.8s
WDC IAMs_20 IAMs_20 11 30 13.8
comp=Z,33µm,22.0s
YBH Yreka Blue Hor 90.16 48 P **P 10 58 01.4 +1.5**
comp=Z,310nm,1.4s,baz=189,slow=1.0,SNR=57
YBH S **SKSac 11 08 37.2 +11**
comp=Z,1.8nm,1.0s,baz=179,slow=20,SNR=3.5
YBH Yreka Blue Hor 90.16 48 IAMs_20 IAMs_20 11 29 55.5
comp=Z,29µm,22.0s
G03D McMinnville, O 90.19 45 P 10 58 01.3
baz=263,SNR=15
G03D S 11 08 49.1
baz=263
F04D Rainier, OR 90.48 44 P 10 58 02.6
baz=263,SNR=5.6
F04D S 11 08 51.8
baz=263
H04D Lebanon 90.48 45 P 10 58 02.6
baz=263,SNR=51
H04D S 11 08 51.8
baz=263
PGC Sidney 90.51 41 IAmb IAmb 10 58 04.1
comp=Z,170nm,1.2s
L04D Klamath Falls 90.52 48 P 10 58 03.0
baz=263,SNR=55
L04D S 11 08 49.1
baz=263
D03D Eldon 90.61 42 P 10 58 03.0
baz=263,SNR=32
D03D S 11 08 51.0
baz=263

I04A	**Tendick Farm,**	**90.63**	**46**	P			10 58 02.9			
	baz=263,SNR=68									
I04A				S			11 08 49.6			
	baz=263									
O03E	**Paynes Creek**	**90.68**	**50**	P			10 58 03.2			
	baz=264,SNR=46									
O03E				S			11 08 51.3			
	baz=264									
D04E	**Lakebay**	**90.78**	**43**	P			10 58 04.4			
	baz=263									
D04E				S			11 08 57.4			
	baz=263									
J04D	**Umpqua Nationa**	**90.78**	**47**	P			10 58 04.3			
	baz=263,SNR=66									
J04D				S			11 08 51.8			
	baz=263									
M04C	**Macdoel**	**90.81**	**48**	P			10 58 04.5			
	baz=264,SNR=76									
M04C				S			11 08 52.6			
	baz=264									
ORV	**Oroville**	**90.83**	**51**	IAmb		IAmb	10 58 06.2			
	comp=Z,199nm,1.4s									
ORV				IAMs_20		IAMs_20	11 30 30.8			
	comp=Z,31µm,22.0s									
E04D	**Cinebar**	**90.84**	**43**	P			10 58 04.3			
	baz=263,SNR=28									
E04D				S			11 08 52.8			
	baz=263									
K04D	**Chiloquin, OR**	**90.97**	**47**	P			10 58 05.1			
	baz=264,SNR=49									
K04D				S			11 08 54.0			
	baz=264									
A04D	**Lummi Island**	**91.01**	**41**	P			10 58 04.9			
	baz=263,SNR=9.0									
A04D				S			11 08 54.2			
	baz=263									
D05A	**Enumclaw**	**91.31**	**43**	IAMs_20		IAMs_20	11 38 14.6			
	comp=Z,24µm,19.0s									
B05A	**Bryant**	**91.36**	**42**	P			10 58 06.5			
	baz=264,SNR=29									
B05A				S			11 08 55.2			
	baz=264									
J05D	**Fort Rock, OR**	**91.42**	**47**	P			10 58 07.5			
	baz=264,SNR=231									
J05D				S			11 08 58.2			
	baz=264									
A05A	**Maple Falls**	**91.45**	**41**	IAmb		IAmb	10 58 08.3			
	comp=Z,160nm,1.4s									
I05D	**Terrebonne, OR**	**91.45**	**46**	P			10 58 07.1			
	baz=264,SNR=64									
I05D				S			11 08 54.9			
	baz=264									
F05D	**White Salmon**	**91.53**	**44**	P			10 58 07.2			
	baz=264,SNR=27									
F05D				S			11 08 55.9			
	baz=264									
CMB	**Columbia Colle**	**91.54**	**52**	P		**P**	**10 58 07.2**	**+0.8**		
CMB				pmax		pmax				
	comp=Z,340nm,1.7s									
CMB	**Columbia Colle**	**91.54**	**52**	P		**P**	**10 58 07.2**	**+0.8**		
CMB				IAmb		IAmb	10 58 09.7			
	comp=Z,340nm,1.6s									
CMB				IAMs_20		IAMs_20	11 31 10.7			
	comp=Z,36µm,21.0s									
G05D	**Wamic, OR**	**91.56**	**45**	P			10 58 07.5			
	baz=264,SNR=32									
G05D				S			11 08 57.5			
	baz=264									
SMMC	**Simmler**	**91.59**	**55**	P			10 58 08.7			
	baz=265,SNR=18									
K05A	**Summer Lake**	**91.61**	**47**	IAMs_20		IAMs_20	11 35 23.8			
	comp=Z,26µm,20.0s									
PKM	**Mcpherson Peak**	**91.70**	**55**	P			10 58 09.7			
	baz=265,SNR=16									
SBC	**Santa Barbara**	**91.74**	**56**	P			10 58 09.6			
	baz=265									
SCZ2	**Santa Cruz Isl**	**91.77**	**56**	P			10 58 09.4			
	baz=265									
SNCC	**San Nicolas Is**	**91.79**	**57**	IAMs_20		IAMs_20	11 31 15.0			
	comp=Z,35µm,22.0s									
SNCC	**San Nicolas Is**	**91.79**	**57**	P			10 58 09.8			
	baz=265									
B06A	**Marblemount**	**91.79**	**42**	IAmb		IAmb	10 58 13.8			
	comp=Z,144nm,1.2s									
MOD	**Modoc Plateau**	**91.97**	**48**	IAMs_20		IAMs_20	11 31 15.9			
	comp=Z,27µm,22.0s									
C06D	**Leavenworth**	**92.12**	**42**	P			10 58 09.5			
	baz=264									
VOG	**Valley Oaks Go**	**92.18**	**54**	P			10 58 10.5			
	baz=265,SNR=6.8									
LTY	**Liberty**	**92.21**	**43**	IAmb		IAmb	10 58 11.1			
	comp=Z,139nm,1.4s									
VCNR	**Virginia City**	**92.23**	**51**	IAmb		IAmb	10 58 13.3			
	comp=Z,220nm,1.5s									
VES	**Vestal, Richgr**	**92.38**	**54**	P			10 58 11.2			
	baz=265,SNR=51									
YERR	**Yerington**	**92.52**	**51**	IAMs_20		IAMs_20	11 31 22.0			
	comp=Z,37µm,22.0s									
ARVC	**Arvin**	**92.53**	**55**	P			10 58 12.7			
	baz=265,SNR=17									
MDPB	**Devils Postpil**	**92.53**	**53**	P		**P**	**10 58 12.3**	**+1.0**		
OSI	**Osito Audit: C**	**92.57**	**56**	IAMs_20		IAMs_20	11 33 10.1			
	comp=Z,25µm,20.0s									
OSI	**Osito Audit: C**	**92.57**	**56**	P			10 58 13.1			
	baz=265,SNR=5.8									
SCI2	**San Clemente I**	**92.58**	**57**	P			10 58 13.2			
	baz=265									
HRA	**Herat**	**92.62**	**304**	IAmb		IAmb	10 58 14.6			
	comp=Z,160nm,1.4s									
MLAC	**Mammoth, Mammc**	**92.72**	**53**	P			10 58 14.0			
	baz=265									
CIS	**Catalina Islan**	**92.73**	**57**	P			10 58 13.8			
	baz=265,SNR=16									
SYO	**Syowa Base**	**92.82**	**200**	⇑ *i*P		**P**	**10 58 11.8**	**+0.2**		
SYO	**Syowa Base**	**92.82**	**200**	⇓ *i*PcP		**PcP**	**10 58 14.4**	**+2.2**		
SYO	**Syowa Base**	**92.82**	**200**	⇑ *ep*P		pP	10 58 21.4	-6.2		
SYO	**Syowa Base**	**92.82**	**200**	⇓ *i*sP		sP	10 58 25.5	-8.2		
FMP	**Fort Macarthur**	**92.86**	**57**	P			10 58 14.3			
	baz=265									
ISA	**Isabella, Lake**	**92.86**	**55**	P			10 58 13.8			
	baz=265,SNR=42									
DECC	**Green Verdugo**	**92.86**	**56**	P			10 58 14.2			
	baz=265									
C36M	**Paulatuk**	**92.89**	**21**	P		**P**	**10 58 11.4**	**-0.5**		
C36M				IAmb		IAmb	10 58 17.8			
	comp=Z,144nm,1.4s									
C36M				IAMs_20		IAMs_20	11 35 01.4			
	comp=Z,22µm,22.0s									
C36M	**Paulatuk**	**92.89**	**21**	P			10 58 11.5			
	baz=263,SNR=21									
HAWA	**Hanford**	**92.91**	**44**	IAMs_20		IAMs_20	11 32 18.7			
	comp=Z,23µm,22.0s									
PASC	**Pasadena Art C**	**92.98**	**56**	IAMs_20		IAMs_20	11 31 49.2			
	comp=Z,31µm,22.0s									
RYN	**Ryan**	**93.05**	**52**	IAMs_20		IAMs_20	11 31 39.1			
	comp=Z,37µm,22.0s									
TIN	**Tinemaha, Big**	**93.16**	**53**	P			10 58 15.7			
	baz=266,SNR=18									
EDW2	**Edwards Air Fo**	**93.19**	**55**	P			10 58 16.0			
	baz=266,SNR=59									
B08A	**Colville Reser**	**93.20**	**42**	IAmb		IAmb	10 58 16.4			
	comp=Z,329nm,1.8s									
NVAR	**Mina Array Bea**	**93.21**	**52**	P		**P**	**10 58 15.7**	**+1.4**		
	comp=Z,51nm,0.9s,baz=253,slow=6.3,SNR=256									
NVAR				PKKPbc		**PKKPbc**	**11 15 27.2**	**+3.6**		
	comp=Z,1.2nm,0.6s,baz=90,slow=1.5,SNR=6.2									
NVAR				PKPPKP			11 23 32.1			
	comp=Z,0.9nm,0.8s,baz=101,slow=5.3,SNR=3.9									
NVAR				LR		LR	11 32 31.9			
	comp=Z,30µm,21.6s,baz=265,slow=30									
NVAR	**Mina Array Bea**	**93.21**	**52**	P		**P**	**10 58 14.4**	**+0.1**		
G08A	**Pilot Rock**	**93.23**	**45**	IAMs_20		IAMs_20	11 32 02.4			
	comp=Z,34µm,22.0s									
CWC	**Cottonwood Cre**	**93.24**	**54**	P			10 58 16.0			
	baz=266									
WVOR	**Wild Horse Val**	**93.25**	**48**	P		**P**	**10 58 15.2**	**+0.9**		
WVOR				pmax		pmax				
	comp=Z,495nm,1.5s									
WVOR	**Wild Horse Val**	**93.25**	**48**	P		**P**	**10 58 15.2**	**+0.9**		
WVOR				IAMs_20		IAMs_20	11 32 20.7			
	comp=Z,25µm,22.0s									
D08A	**Wollman Farm,**	**93.39**	**43**	IAmb		IAmb	10 58 16.8			
	comp=Z,273nm,1.6s									
BFSC	**Mount Baldy Ra**	**93.42**	**56**	P			10 58 16.9			
	baz=266,SNR=32									
J08A	**Circle Bar Ran**	**93.43**	**47**	IAmb		IAmb	10 58 18.2			
	comp=Z,200nm,1.2s									
LRMC	**Laurel Mtn Rad**	**93.49**	**55**	P			10 58 17.4			
	baz=266,SNR=98									
MURC	**Murrieta**	**93.76**	**57**	P			10 58 18.5			
	baz=266,SNR=21									
109C	**Camp Elliot, M**	**93.79**	**57**	IAMs_20		IAMs_20	11 31 51.9			
	comp=Z,32µm,22.0s									
109C	**Camp Elliot, M**	**93.79**	**57**	P			10 58 19.1			
	baz=266,SNR=22									
TJX	**Tijuana**	**93.81**	**58**	IAMs_20		IAMs_20	11 31 53.4			
	comp=Z,30µm,22.0s									
GRAC	**Grapevine Rang**	**93.85**	**53**	P			10 58 18.9			
	baz=266,SNR=39									
C09A	**Chrisman Ranch**	**93.87**	**43**	IAmb		IAmb	10 58 19.6			
	comp=Z,201nm,1.5s									
E09A	**Wood Farm, Sta**	**93.88**	**44**	P		**P**	**10 58 17.9**	**+1.0**		
E09A				IAMs_20		IAMs_20	11 32 00.6			
	comp=Z,34µm,22.0s									
RRX	**Edison Barstow**	**94.01**	**55**	P			10 58 19.9			
	baz=266									
BBRC	**Big Bear Solar**	**94.03**	**56**	P			10 58 19.7			
	baz=266,SNR=18									
CCX	**Cicese**	**94.09**	**59**	IAmb		IAmb	10 58 40.0			
	comp=Z,149nm,1.5s									
TKX	**Tecate**	**94.19**	**58**	IAmb		IAmb	10 58 22.9			
	comp=Z,327nm,1.7s									
TKX				IAMs_20		IAMs_20	11 32 05.4			
	comp=Z,30µm,22.0s									
FURC	**Furnace Creek,**	**94.22**	**54**	P			10 58 20.4			
	baz=266,SNR=141									
MONP2	**Monument Peak**	**94.36**	**58**	P			10 58 21.9			
	baz=266,SNR=68									
BMO	**Blue Mountains**	**94.37**	**46**	IAMs_20		IAMs_20	11 32 38.7			
	comp=Z,37µm,22.0s									
PFO	**Pinyon Flats O**	**94.37**	**57**	P		**P**	**10 58 21.3**	**+1.6**		
	comp=Z,11nm,0.6s,baz=260,slow=4.7,SNR=45									
PFO	**Pinyon Flats O**	**94.37**	**57**	P		**P**	**10 58 20.5**	**+0.8**		
PFO	**Pinyon Flats O**	**94.37**	**57**	IAMs_20		IAMs_20	11 32 50.2			
	comp=Z,34µm,22.0s									
PFO	**Pinyon Flats O**	**94.37**	**57**	P			10 58 21.6			
	baz=266,SNR=36									
F10A	**Beach Ranch, E**	**94.48**	**44**	IAmb		IAmb	10 58 21.7			
	comp=Z,217nm,1.4s									
HEC	**Hector,Ludlow**	**94.55**	**56**	P			10 58 22.0			
	baz=267,SNR=59									
IKP	**In-Ko-Pah, Jac**	**94.61**	**58**	P			10 58 23.2			
	baz=267,SNR=45									
RMX	**La Rumorosa**	**94.63**	**58**	IAmb		IAmb	10 58 26.6			
	comp=Z,169nm,1.4s									
RMX				IAMs_20		IAMs_20	11 32 41.3			
	comp=Z,29µm,22.0s									
WBK	**Wadi Bani Khal**	**94.64**	**292**	P		**P**	**10 58 20.6**	**-0.5**		
	SNR=10									
WBK				S		**SKSac**	**11 08 54.0**	**+1.6**		
SHOC	**Shoshone, Teco**	**94.66**	**55**	P			10 58 22.4			
	baz=267,SNR=115									
NEW	**Newport**	**94.67**	**42**	P		**P**	**10 58 21.3**	**+0.7**		
	comp=Z,54nm,1.0s,baz=258,slow=4.2,SNR=85									
NEW				S		**SKSac**	**11 08 57.0**	**+5.5**		
	comp=Z,2.1nm,0.9s,baz=46,slow=21,SNR=6.2									
NEW	**Newport**	**94.67**	**42**	IAMs_20		IAMs_20	11 35 34.0			
	comp=Z,27µm,20.0s									
NEW	**Newport**	**94.67**	**42**	IAmb		IAmb	10 58 23.3			
	comp=Z,243nm,1.4s									
NEW	**Newport**	**94.67**	**42**	P			10 58 21.2			
	baz=267,SNR=69									
TPNV	**Topopah Spring**	**94.74**	**53**	P			10 58 22.8			
	baz=267,SNR=118									
TPNV	**Topopah Spring**	**94.74**	**53**	IAMs_20		IAMs_20	11 33 12.9			
	comp=Z,35µm,22.0s									
BELC	**Belle Mtn. Jos**	**94.78**	**56**	P			10 58 23.4			
	baz=267,SNR=83									
SWSC	**Sam W. Stewart**	**94.89**	**57**	P			10 58 23.9			
	baz=267,SNR=48									
TUQ	**Turquoise Moun**	**94.92**	**55**	P			10 58 23.7			
	baz=267,SNR=86									
WSAR	**Wadi Sarin**	**94.99**	**293**	P		**P**	**10 58 22.0**	**-0.6**		
	SNR=13									
WSAR				S		**SKSac**	**11 08 56.6**	**+2.4**		
SPX	**San Pedro Mart**	**95.07**	**59**	IAmb		IAmb	10 58 28.3			
	comp=Z,201nm,2.0s									
SPX				IAMs_20		IAMs_20	11 33 15.8			
	comp=Z,19µm,21.0s									
SVE	**Sverdlovsk**	**95.08**	**327**	*d i*P		**P**	**10 58 20.8**	**-1.4**		
SVE				*e*			11 02 12.6			
SVE				*e*S		**SKSac**	**11 08 50.8**	**-2.4**		
SVE				*e*SS		**SS**	**11 16 02.7**	**+3.4**		
SVE				*e*SSS		SSS	11 19 42.1			
SVE				pmax		pmax				
	comp=Z,98nm,1.8s									
SVE				MLR		MLR				
	comp=N,11µm,20.0s									
SVE				MLR		MLR				
	comp=E,45µm,20.0s									
SVE				MLR		MLR				
	comp=Z,56µm,20.0s									
GMRC	**Granite Mounta**	**95.10**	**56**	P			10 58 24.8			
	baz=267,SNR=77									
BC3	**Big Chuckawall**	**95.21**	**57**	P			10 58 25.7			
	baz=267,SNR=79									
AB31	**Akbulak array**	**95.23**	**319**	*i* P		**P**	**10 58 20.9**	**-2.2**		
ABKAR	**Akbulak array**	**95.23**	**319**	P		**P**	**10 58 20.0**	**-3.0**		
ABKAR	**Akbulak array**	**95.23**	**319**	IAmb		IAmb	10 58 23.8			
	comp=Z,56nm,1.1s									
PLID	**Pearl Lake**	**95.31**	**45**	IAmb		IAmb	10 58 25.2			
	comp=Z,119nm,1.4s									
PLID				IAMs_20		IAMs_20	11 33 31.0			
	comp=Z,26µm,22.0s									
R11A	**Troy Canyon, C**	**95.33**	**52**	IAmb		IAmb	10 58 27.5			
	comp=Z,194nm,1.4s									
R11A				IAMs_20		IAMs_20	11 33 13.1			
	comp=Z,34µm,22.0s									
R11A	**Troy Canyon, C**	**95.33**	**52**	P			10 58 25.4			
	baz=267,SNR=137									
MFID	**Camas Ranch**	**95.36**	**47**	P		**P**	**10 58 24.5**	**+0.5**		
MFID				IAMs_20		IAMs_20	11 39 15.6			
	comp=Z,22µm,19.0s									
JMDO	**Jabal Madar**	**95.42**	**292**	P		**P**	**10 58 23.2**	**-1.3**		
	SNR=5.3									
JMDO				S		**SKSac**	**11 08 59.7**	**+3.2**		
MHTO	**MHTO**	**95.46**	**291**	P		**P**	**10 58 23.6**	**-1.2**		
	SNR=18									
MHTO				S		**SKSac**	**11 08 56.6**	**-0.1**		
MHTO				S		**SKSac**	**11 08 58.1**	**+1.4**		
BIDO	**Bidbid**	**95.47**	**293**	P		**P**	**10 58 24.1**	**-0.7**		
	SNR=14									
BIDO				S		**SKSac**	**11 09 01.9**	**+5.2**		
IRM	**Iron Mountain**	**95.50**	**56**	P			10 58 26.7			
	baz=267,SNR=140									
SMDO	**Samad**	**95.52**	**293**	P		**P**	**10 58 24.5**	**-0.6**		
	SNR=6.5									
SMDO				S		**SKSac**	**11 09 00.3**	**+3.1**		
SHPR	**Sheep Range**	**95.59**	**54**	IAMs_20		IAMs_20	11 34 21.5			
	comp=Z,30µm,21.0s									
ELK	**Elko**	**95.70**	**50**	P		**P**	**10 58 26.7**	**+1.0**		
	comp=Z,16nm,1.0s,baz=256,slow=3.5,SNR=69									
ELK				PP		**PP**	**11 02 16.9**	**-1.0**		
	comp=Z,11nm,1.3s,baz=284,slow=5.4,SNR=3.8									
ELK	**Elko**	**95.70**	**50**	IAmb		IAmb	10 58 29.1			
	comp=Z,366nm,2.0s									
ELK				IAMs_20		IAMs_20	11 33 15.7			
	comp=Z,24µm,22.0s									
GLA	**Glamis**	**95.71**	**57**	P		**P**	**10 58 28.2**	**+2.5**		
GLA				pmax		pmax				
	comp=Z,500nm,1.8s									
GLA	**Glamis**	**95.71**	**57**	P		**P**	**10 58 28.2**	**+2.5**		
GLA	**Glamis**	**95.71**	**57**	P			10 58 28.2			
	baz=267,SNR=25									
PRN	**Pahroc Range**	**95.72**	**53**	IAmb		IAmb	10 58 29.5			
	comp=Z,244nm,1.4s									
DQM	**DQM**	**95.80**	**289**	P		**P**	**10 58 25.2**	**-1.1**		
	SNR=5.9									
DQM				S		**SKSac**	**11 09 01.2**	**+2.6**		
NEE2	**Needles Airpor**	**95.96**	**56**	P			10 58 28.8			
	baz=268,SNR=8.1									
GEYT	**Alibeck**	**96.16**	**307**	P		**P**	**10 58 27.1**	**-0.6**		
	comp=Z,28nm,1.1s,baz=90,slow=1.5,SNR=24									
GEYT				PP		**PP**	**11 02 26.0**	**+4.7**		
	comp=Z,23nm,1.1s,baz=36,slow=13,SNR=5.9									
GEYT	**Alibeck**	**96.16**	**307**	P		**P**	**10 58 27.8**	**+0.1**		
ARU	**Arti**	**96.22**	**326**	P		**P**	**10 58 26.3**	**-1.1**		
	comp=Z,12nm,0.6s,baz=86,slow=3.0,SNR=36									
ARU				PP		**PP**	**11 02 24.8**	**+3.8**		
	comp=Z,2.2nm,0.2s,baz=103,slow=4.2,SNR=3.7									
ARU	**Arti**	**96.22**	**326**	*c i*P		**P**	**10 58 25.9**	**-1.5**		
ARU							11 02 19.8			
ARU				PPP		PPP	11 04 21.6			
ARU				S		**SKSac**	**11 08 57.0**	**-2.2**		
ARU				SP		SP	11 11 12.0	+10		
ARU				SS		**SS**	**11 16 07.6**	**-7.8**		
ARU				SSS		SSS	11 19 59.6			
ARU				pmax		pmax				
	comp=Z,62nm,0.8s									
ARU				MLR		MLR				
	comp=Z,79µm,22.0s									
ARU	**Arti**	**96.22**	**326**	P		**P**	**10 58 25.2**	**-2.2**		
ARU				IAmb		IAmb	10 58 30.6			
	comp=Z,49nm,0.8s									
HOQ	**Hoqain**	**96.22**	**293**	P		**P**	**10 58 27.4**	**-0.8**		
	SNR=11									
HOQ				S		**SKSac**	**11 09 04.7**	**+4.0**		
BSY	**Bisya**	**96.28**	**292**	P		**P**	**10 58 27.6**	**-0.9**		
	SNR=6.5									
PDMCI	**Parker Dam,Lak**	**96.33**	**56**	P			10 58 30.6			
	baz=268,SNR=29									
YKA	**Yellowknife Ar**	**96.38**	**28**	P		**P**	**10 58 28.0**	**0.0**		
	comp=Z,5.9nm,0.7s,baz=272,slow=2.9,SNR=97									
YKA				PKiKP		**PKiKP**	**11 03 07.1**	**+1.7**		
	comp=Z,2.8nm,0.6s,baz=263,slow=1.2,SNR=14									
YKA				PKKPbc		**PKKPbc**	**11 15 13.2**	**-2.5**		
	comp=Z,0.8nm,0.6s,baz=87,slow=3.2,SNR=9.9									
YKA				PKPPKP		**P'P'df**	**11 23 28.9**	**+2.9**		
	comp=Z,1.3nm,1.1s,baz=100,slow=2.1,SNR=3.9									
YKA				LR		LR	11 36 09.8			
	comp=Z,21µm,21.9s,baz=0.0,slow=32									
YKA	**Yellowknife Ar**	**96.38**	**28**	*i* P		**P**	**10 58 29.1**	**+1.1**		
YKA				pmax		pmax				
	comp=Z,6.0nm,0.7s									
HLID	**Hailey**	**96.40**	**47**	IAmb		IAmb	10 58 31.1			
	comp=Z,87nm,1.4s									
HLID				IAMs_20		IAMs_20	11 40 26.0			
	comp=Z,25µm,18.0s									
HLID	**Hailey**	**96.40**	**47**	P			10 58 29.8			
	baz=269,SNR=66									
AKTO	**Aktyubinsk**	**96.50**	**320**	P		**P**	**10 58 27.2**	**-1.7**		
	comp=Z,89nm,1.3s,baz=86,slow=6.1,SNR=46									
AKTO				PP		**PP**	**11 02 26.4**	**+2.9**		
	comp=Z,26nm,1.2s,baz=95,slow=12,SNR=5.6									
113A	**Mohawk Valley,**	**96.59**	**58**	P		**P**	**10 58 31.6**	**+2.0**		
113A				IAmb		IAmb	10 58 34.2			
	comp=Z,177nm,1.7s									
PSUT	**Pine Spring**	**96.70**	**52**	IAmb		IAmb	10 58 33.8			
	comp=Z,199nm,1.5s									
MSO	**Missoula**	**96.78**	**44**	IAMs_20		IAMs_20	11 34 27.0			
	comp=Z,18µm,21.0s									
MSO	**Missoula**	**96.78**	**44**	P			10 58 30.4			
	baz=269,SNR=11									
BELA	**Belgrano 2**	**96.81**	**179**	P		**P**	**10 58 28.9**	**-0.9**		
BELA				IAmb		IAmb	10 58 45.0			
	comp=Z,77nm,1.3s									
ARQ	**Araqi**	**96.93**	**293**	P		**P**	**10 58 30.5**	**-0.9**		
	SNR=10									
ARQ				S		**SKSac**	**11 09 08.0**	**+3.5**		
SOHO	**SOHO**	**96.96**	**294**	*i* P		**P**	**10 58 29.5**	**-2.0**		
	SNR=16									
SOHO	**SOHO**	**96.96**	**294**	P		**P**	**10 58 30.4**	**-1.1**		
SOHO				S		**SKSac**	**11 09 06.8**	**+2.4**		
BCYI	**Bear Canyon**	**97.14**	**46**	P		**P**	**10 58 32.3**	**+0.1**		
LCMT	**Little Creek M**	**97.14**	**53**	IAmb		IAmb	10 58 36.1			
	comp=Z,239nm,1.6s									
MDH	**Madha**	**97.23**	**295**	P		**P**	**10 58 30.6**	**-2.1**		
MDH	**Madha**	**97.23**	**295**	P		**P**	**10 58 31.1**	**-1.6**		
MDH				S		**SKSac**	**11 09 06.8**	**+1.0**		
BANOM	**Banah**	**97.25**	**295**	*i* P		**P**	**10 58 31.9**	**-1.0**		
	SNR=16									
BANOM	**Banah**	**97.25**	**295**	P		**P**	**10 58 32.0**	**-0.8**		
	SNR=7.6									
Y14A	**Wickenburg**	**97.26**	**57**	IAmb		IAmb	10 58 37.0			
	comp=Z,166nm,1.7s									
UOSS	**Minazif**	**97.30**	**294**	*i* P		**P**	**10 58 31.5**	**-1.6**		
	SNR=6.8									
UOSS	**Minazif**	**97.30**	**294**	P		**P**	**10 58 32.0**	**-1.1**		
UOSS	**Minazif**	**97.30**	**294**	P		**P**	**10 58 31.7**	**-1.3**		
MSFE	**Esma-Masafi**	**97.36**	**295**	*i* P		**P**	**10 58 32.3**	**-1.0**		
	SNR=12									
MASF	**Masafi**	**97.36**	**295**	P		**P**	**10 58 32.6**	**-0.8**		
	SNR=12									
MASF				S		**SKSac**	**11 09 08.5**	**+1.9**		
HATD	**Hatta, Dubai**	**97.36**	**294**	*i* P		**P**	**10 58 32.1**	**-1.2**		
	SNR=9.5									
HATD	**Hatta, Dubai**	**97.36**	**294**	P		Pdif	10 58 34.0	+0.6		
	SNR=11									
HATD				S		**SKSac**	**11 09 05.7**	**-0.9**		
214A	**Organ Pipe Nat**	**97.37**	**59**	IAmb		IAmb	10 58 39.9			
	comp=Z,137nm,1.6s									
214A				IAMs_20		IAMs_20	11 39 02.1			
	comp=Z,17µm,18.0s									
214A	**Organ Pipe Nat**	**97.37**	**59**	P			10 58 35.9			
	baz=268,SNR=17									
SHME	**Shamm**	**97.40**	**295**	P		**P**	**10 58 32.6**	**-0.9**		
SHME	**Shamm**	**97.40**	**295**	P		**P**	**10 58 32.5**	**-0.9**		
SHME				S		**SKSac**	**11 09 09.6**	**+3.0**		

YMR	Madison River	98.88	46	IAmb	IAmb	10 58 43.6			
	comp=Z,78nm,1.2s								
DOK	Doka	98.94	288	P	P	10 58 38.9	-1.6		
	SNR=8.9								
DOK				S	SKSac	11 09 16.4	+1.7		
REDW	Red Top Meadow	98.99	47	P	Pdif	10 58 40.9	+0.4		
REDW				IAmb	IAmb	10 58 47.5			
	comp=Z,141nm,1.6s								
REDW				IAMs_20	IAMs_20	11 36 07.6			
	comp=Z,24µm,21.0s								
SNOW	Snow King Moun	99.06	47	IAmb	IAmb	10 58 47.9			
	comp=Z,86nm,1.3s								
SNOW				IAMs_20	IAMs_20	11 35 14.4			
	comp=Z,24µm,22.0s								
MOOW	Moose Ponds	99.06	47		Pdif	10 58 41.2	+0.4		
MOOW				IAMs_20	IAMs_20	11 39 00.4			
	comp=Z,21µm,20.0s								
YNR	Norris Junctio	99.08	46	IAmb	IAmb	10 58 45.1			
	comp=Z,103nm,1.4s								
FLWY	Flagg Ranch	99.08	46	IAmb	IAmb	10 58 44.1			
	comp=Z,170nm,1.9s								
FLWY				IAMs_20	IAMs_20	11 37 43.1			
	comp=Z,28µm,21.0s								
TUC	Tucson	99.10	58	P	Pdif	10 58 43.6	+2.6		
TUC				pmax	pmax				
	comp=Z,57nm,1.7s								
TUC	Tucson	99.10	58		Pdif	10 58 43.6	+2.6		
TUC	Tucson	99.10	58	IAMs_20	IAMs_20	11 34 30.5			
	comp=Z,24µm,22.0s								
TUC	Tucson	99.10	58	Pdiff		10 58 43.7			
	baz=269								
P17A	Butcher Ranch,	99.13	51	IAmb	IAmb	10 58 48.3			
	comp=Z,60nm,1.1s								
LOHW	Long Hollow	99.17	47	IAMs_20	IAMs_20	11 39 03.2			
	comp=Z,23µm,20.0s								
H17A	Grant Village	99.17	46	Pdiff		10 58 43.6			
	baz=271,SNR=47								
WHFO	Wadi Hawf	99.25	287	P	Pdif	10 58 40.2	-1.7		
YMP	Mirror Lake Pl	99.46	46	IAmb	IAmb	10 58 46.7			
	comp=Z,198nm,1.8s								
EGMT	Eagleton	99.60	42	IAMs_20	IAMs_20	11 40 13.5			
	comp=Z,17µm,20.0s								
EGMT	Eagleton	99.60	42	Pdiff		10 58 43.7			
	baz=273,SNR=45								
ABTO	Aybut	99.68	287	P	Pdif	10 58 42.7	-1.2		
	SNR=9.1								
ABTO				S	SKSac	11 09 18.1	-0.4		
BW06	Boulder Array	99.95	48	IAMs_20	IAMs_20	11 36 27.1			
	comp=Z,30µm,21.0s								
BW06	Boulder Array	99.95	48	Pdiff		10 58 45.1			
	baz=272,SNR=56								
PDAR	Pinedale Array	99.95	48	P	Pdif	10 58 44.9	+0.1		
	comp=Z,30nm,1.0s,baz=236,slow=1.6,SNR=106								
PDAR				PP	PP	11 02 52.9	+2.5		
	comp=Z,12nm,1.2s,baz=268,slow=4.5,SNR=4.0								
PDAR				PKiKP	PKiKP	11 03 15.0	+2.2		
	comp=Z,4.8nm,0.9s,baz=267,slow=3.6,SNR=3.6								
PDAR				PKKPbc	PKKPbc	11 15 06.9	+1.5		
	comp=Z,3.8nm,1.0s,baz=108,slow=4.0,SNR=6.9								
PDAR				PKPPKP		11 23 14.8			
	comp=Z,0.2nm,0.6s,baz=64,slow=3.4,SNR=3.6								
PDAR				LR	LR	11 36 37.4			
	comp=Z,28µm,22.0s,baz=282,slow=31								
W18A	Petrified Fore	99.97	55	IAMs_20	IAMs_20	11 35 29.6			
	comp=Z,28µm,22.0s								
W18A	Petrified Fore	99.97	55	Pdiff		10 58 47.4			
	baz=270,SNR=11								
RLMT	Red Lodge	100.07	45	IAMs_20	IAMs_20	11 35 50.1			
	comp=Z,26µm,22.0s								
RLMT	Red Lodge	100.07	45	Pdiff		10 58 46.8			
	baz=272,SNR=41								
SBV	Sambava	100.25	255	P	Pdif	10 58 52.8	+6.4		
	SNR=5.6								
MVCO	Mesa Verde	100.94	53	IAMs_20	IAMs_20	11 38 06.5			
	comp=Z,24µm,22.0s								
MVCO	Mesa Verde	100.94	53	Pdiff		10 58 51.2			
	baz=272,SNR=35								
O20A	White River Ci	101.04	50	Pdiff		10 58 50.7			
	baz=272,SNR=30								
RES	Resolute Bay	101.19	14	P	Pdif	10 58 49.0	-0.3		
	comp=Z,20nm,1.4s,baz=295,slow=3.9,SNR=16								
RES				PKiKP	PKiKP	11 03 14.4	+0.7		
	comp=Z,4.8nm,0.8s,baz=220,slow=3.1,SNR=11								
SNAA	Sanae	101.35	188	P	Pdif	10 58 50.6	+0.4		
SNAA	Sanae	101.35	188	PKKP		11 14 58.8			
SNAA	Sanae	101.35	188	PKiKP	PKiKP	11 03 15.7	+1.4		
SNAA	Sanae	101.35	188	PKKPbc	PKKPbc	11 14 59.5	-2.6		
	comp=Z,6.9nm,1.0s,baz=338,slow=2.9,SNR=7.9								
SNAA				PKPPKP		11 23 16.1			
	comp=Z,3.2nm,1.1s,baz=331,slow=7.0,SNR=3.6								
SLWR	Sila	101.38	293	P	Pdif	10 58 50.0	-1.2		
SLWR				S	SKSac	11 09 28.7	+2.2		
ALE	Alert	101.54	4	IAMs_20	IAMs_20	11 40 44.3			
	comp=Z,22µm,22.0s								
121A	Cookes Peak, D	101.63	58	IAMs_20	IAMs_20	11 35 37.6			
	comp=Z,20µm,22.0s								
121A	Cookes Peak, D	101.63	58	Pdiff		10 58 55.8			
	baz=271,SNR=9.7								
VOI	Vohitsoka	101.83	246	IAMs_20	IAMs_20	11 43 15.0			
	comp=Z,20µm,20.0s								
ABPO	Ambohimpanom	101.95	249	IAMs_20	IAMs_20	11 39 46.7			
	comp=Z,24µm,22.0s								
SMCO	Snowmass	102.06	51	IAMs_20	IAMs_20	11 37 59.1			
	comp=Z,31µm,22.0s								
LAO	LASA Array	102.09	44	IAMs_20	IAMs_20	11 39 31.3			
	comp=Z,17µm,20.0s								
LAO	LASA Array	102.09	44	Pdiff		10 58 55.5			
	baz=275,SNR=9.6								
K22A	Casper	102.19	48	Pdiff		10 58 55.5			
	baz=274,SNR=12								
S22A	4UR Ranch, Cre	102.24	53	Pdiff		10 58 57.2			
	baz=273,SNR=46								
Y22D	IRIS PASSCAL I	102.32	56	IAMs_20	IAMs_20	11 36 39.6			
	comp=Z,22µm,22.0s								
Y22D	IRIS PASSCAL I	102.32	56	Pdiff		10 58 59.5			
	baz=272								
VNA3	Neumayer Olymp	102.58	186	P	Pdif	10 58 56.6	+1.0		
VNA3	Neumayer Olymp	102.58	186	PKKP		11 14 55.4			
VNA3	Neumayer Olymp	102.58	186	PKiKP	PKiKP	11 03 18.0	+1.5		
VNA2	Neumayer--Watz	102.62	187	P	Pdif	10 58 56.5	+0.7		
VNA2	Neumayer--Watz	102.62	187	PKKP		11 14 55.3			
VNA2	Neumayer--Watz	102.62	187	PKiKP	PKiKP	11 03 21.2	+4.7		
ANMO	Albuquerque	102.67	56	Pdiff	Pdif	10 58 58.2	+1.2		
	comp=Z,5.6nm,1.1s,baz=259,slow=5.3,SNR=28								
ANMO				PKiKP	PKiKP	11 03 19.0	+1.2		
	comp=Z,2.1nm,0.6s,baz=280,slow=2.3,SNR=7.0								
ANMO	Albuquerque	102.67	56	IAMs_20	IAMs_20	11 36 55.6			
	comp=Z,15µm,22.0s								
ANMO	Albuquerque	102.67	56	Pdiff		10 58 59.3			
	baz=272								
EPT	El Paso	102.73	59	IAMs_20	IAMs_20	11 36 58.6			
	comp=Z,20µm,22.0s								
N23A	Red Feather La	102.75	49	Pdiff		10 58 58.6			
	baz=274,SNR=36								
BELG	Belogornoye	102.87	322	*i* P	Pdif	10 58 54.9	-2.3		
BELG				pmax	pmax				
	comp=Z,17nm,1.2s								
VNA1	Neumayer--Stat	102.98	187	PKKP		11 14 55.4			
ISCO	Idaho Springs	103.08	51	IAMs_20	IAMs_20	11 38 31.9			
	comp=Z,24µm,22.0s								
ISCO	Idaho Springs	103.08	51	Pdiff		10 59 00.7			
	baz=274,SNR=19								
DGMT	Dagmar	103.27	42	IAMs_20	IAMs_20	11 45 04.5			
	comp=Z,19µm,19.0s								
DGMT	Dagmar	103.27	42	Pdiff		10 59 00.2			
	baz=277,SNR=11								
SDCO	Great Sand Dun	103.30	53	Pdiff		10 59 01.3			
	baz=274,SNR=24								
HOPEN	Hopen	103.30	349	*e*Pdif	Pdif	10 58 56.9	-1.7		
HOPEN				*e*PP	PKiKP	11 03 16.1	-1.4		
HOPEN				*e*SKSac	SKSac	11 09 30.4	-3.0		
HOPEN				*e*SP	SP	11 12 19.1	+2.4		
HOPEN				IVMs_BB	IVMs_BB	11 45 07.2			
	comp=Z,10µm,24.1s								
Q24A	Divide	103.49	51	Pdiff		10 59 02.2			
	baz=274,SNR=6.9								
MNTX	Cornudas Mount	103.69	59	IAMs_20	IAMs_20	11 37 06.6			
	comp=Z,22µm,22.0s								
MNTX	Cornudas Mount	103.69	59	Pdiff		10 59 04.0			
	baz=272,SNR=12								
FFC	Flin Flon	103.70	35	IAMs_20	IAMs_20	11 43 10.2			
	comp=Z,18µm,20.0s								
KBS	Kingsbay	103.77	353	IAMs_20	IAMs_20	11 54 26.4			
	comp=Z,16µm,20.0s								
KBS	Kingsbay	103.77	353	*e*Pdif	Pdif	10 59 03.1	+2.4		
KBS				*e*PP	PP	11 03 14.3	-3.4		
KBS				*e*SKSac	SKSac	11 09 34.0	-1.5		
KBS				*e*SP	SP	11 12 24.6	+3.0		
KBS				IVMs_BB	IVMs_BB	11 40 46.1			
	comp=Z,6µm,26.4s								
RSSD	Black Hills	103.87	46	IAMs_20	IAMs_20	11 45 36.6			
	comp=Z,16µm,20.0s								
RSSD	Black Hills	103.87	46	Pdiff		10 59 02.8			
	baz=276								
AKT	Akhty	104.07	311	*e*P	Pdif	10 59 02.2	-0.8		
AKT				*e*		11 03 23.6			
AKT				*e*		11 09 38.9			
AKT				pmax	pmax				
	comp=Z,38nm,1.2s								
MAK	Makhachkala	104.09	313	*i* P	Pdif	10 59 00.8	-2.1		
MAK				*e*		11 03 19.8			
MAK				*e*PPP	PPP	11 05 41.5			
MAK				*e*		11 09 38.7			
MAK				*e*SSS	SSS	11 21 57.6			
MAK				pmax	pmax				
	comp=Z,36nm,0.6s								
T25A	Trinidad	104.20	53	IAMs_20	IAMs_20	11 43 39.8			
	comp=Z,17µm,20.0s								
T25A	Trinidad	104.20	53	Pdiff		10 59 06.0			
	baz=274,SNR=23								
HSPB	Hornsund (broa	104.66	351	*e*Pdif	Pdif	10 59 02.3	-2.4		
HSPB				*e*PKP	PKiKP	11 03 15.1	-4.9		
HSPB				*e*SKSac	SKSac	11 09 40.6	+0.9		
HSPB				*e*		11 12 46.4			
HSPB				*e*SS	SKKPbc	11 18 38.7	+7.7		
HSPB				*e*L	L	11 42 53.7			
	comp=Z,21µm,24.7s								
HSPB	Hornsund (broa	104.66	351	*e*PKiKP	PKiKP	11 03 25.4	+5.4		
HSPB				*e*SKSac	SKSac	11 09 40.8	+1.1		
HSPB				*e*PS	PS	11 12 43.5	+5.0		
HSPB				*e*L	L	11 43 04.1			
	comp=Z,21µm,24.7s								
HSPB	Hornsund (broa	104.66	351	*e*Pdif	Pdif	10 59 05.4	+0.7		
HSPB				*e*PP	PP	11 03 23.7	-0.6		
HSPB				*e*SKSac	SKSac	11 09 37.1	-2.5		
HSPB				*e*SP	SP	11 12 35.2	+4.3		
HSPB				IVMs_BB	IVMs_BB	11 45 52.7			
	comp=Z,6µm,24.0s								
LVZ	Lovozero	104.94	340	IAMs_20	IAMs_20	11 51 01.2			
	comp=Z,14µm,20.0s								
TXAR	Lajitas Array	105.27	61	Pdiff	Pdif	10 59 11.8	+3.2		
	comp=Z,1.9nm,0.9s,baz=244,slow=2.8,SNR=14								
TXAR				PKiKP	PKiKP	11 03 24.1	+1.4		
	comp=Z,3.6nm,0.9s,baz=147,slow=2.4,SNR=11								
TXAR				PKKPbc	PKKPbc	11 14 49.8	+0.7		
	comp=Z,1.1nm,0.8s,baz=132,slow=3.0,SNR=3.7								
TXAR				PKPPKP		11 23 13.8			
	comp=Z,0.6nm,0.9s,baz=90,slow=2.5,SNR=5.4								
GROC	Groznyy	105.31	313	*e*P	Pdif	10 59 08.5	+0.2		
GROC				pmax	pmax				
	comp=Z,67nm,1.0s								
KLMR	Klimovskoe	105.41	332	*e*P	Pdif	10 59 04.4	-3.8		
KLMR				*e*		11 03 26.7			
KLMR				*e*PS	PS	11 12 44.0	-2.8		
KLMR				*e*SS	SS	11 18 21.8	-0.8		
KLMR				pmax	pmax				
	comp=Z,39nm,1.1s								
KLMR				MLR	MLR				
	comp=Z,29µm,20.0s								
KLMR	Klimovskoe	105.41	332	*e*Pdif	Pdif	10 59 04.5	-3.8		
KLMR				AMP		10 59 12.2			
	comp=Z,39nm,1.1s								
KLMR				*e*PP	PP	11 03 26.7	-3.5		
KLMR				*e*PS	PS	11 12 44.1	-2.7		
KLMR				*e*PS	PS	11 12 44.1	-2.7		
KLMR				*e*PKKPab	PKKPdf	11 15 00.7	+0.7		
KLMR				*e*SS	SS	11 18 21.8	-0.8		
KLMR				*e*SS	SS	11 18 21.8	-0.8		
KLMR				LQ	LQ	11 38 36.5			
KLMR				LQ	LQ	11 38 36.5			
KLMR				LR	LR	11 42 49.8			
KLMR				AMP		11 49 04.9			
	comp=Z,29µm,19.7s								
KSCO	Kaye Shedlock'	105.45	51	Pdiff		10 59 11.8			
	baz=276								
KSCO				PKiKP		11 03 29.3			
	baz=276								
TULEG	Thule	105.50	9	IAMs_20	IAMs_20	11 46 29.0			
	comp=Z,20µm,20.0s								
APA	Apatity	105.50	339	*i* P	Pdif	10 59 06.5	-2.1		
APA				*i*		11 03 26.0			
APA				*i* PPP	PPP	11 05 43.0			
APA				*i* S	SKSdf	11 10 21.0	-7.7		
APA				*i* PS	PS	11 12 34.0	-14		
APA				pmax	pmax				
	comp=Z,10.0nm,1.2s								
OGNE	Ogallala	105.69	49	IAMs_20	IAMs_20	11 42 47.0			
	comp=Z,17µm,20.0s								
OGNE	Ogallala	105.69	49	Pdiff		10 59 12.1			
	baz=277								
OGNE				PKiKP		11 03 31.4			
	baz=277								
BJO1	Bjornoya	105.73	348	*e*Pdif	Pdif	10 59 08.0	-1.5		
BJO1				*e*PP	PP	11 03 30.9	-1.3		
BJO1				*e*SKSac	SKSac	11 09 43.5	-1.0		
BJO1				*e*SP	SP	11 12 44.3	+2.2		
BJO1				*e*SS	SKKPbc	11 18 31.5	+3.5		
BJO1				IVMs_BB	IVMs_BB	11 46 52.5			
	comp=Z,10µm,22.2s								
MSTX	Muleshoe	105.76	56	IAMs_20	IAMs_20	11 40 35.2			
	comp=Z,21µm,21.0s								
MSTX	Muleshoe	105.76	56	Pdiff		10 59 13.0			
	baz=274								
MDND	Maddock	106.40	42	IAMs_20	IAMs_20	11 47 01.3			
	comp=Z,18µm,19.0s								
MDND	Maddock	106.40	42	Pdiff		10 59 14.4			
	baz=280								
ZAIG	Zacatecas	106.46	68	IAMs_20	IAMs_20	11 39 59.2			
	comp=Z,20µm,20.0s								
GNI	Garni	106.47	310	P	Pdif	10 59 13.4	-0.3		
GNI				S	SKSac	11 09 52.6	+3.0		
ZEI	Tsey	106.74	313	*e*P	Pdif	10 59 11.1	-3.9		
ZEI				pmax	pmax				
	comp=Z,34nm,1.3s								
HAMF	Hammerfest	107.00	344	*e*Pdif	Pdif	10 59 15.8	+0.7		
HAMF				IVmB_BB		10 59 18.3			
	comp=Z,404nm,2.5s								
HAMF				*e*PP	PP	11 03 38.8	-2.8		
HAMF				*e*SKSac	SKSac	11 09 49.5	-0.7		
HAMF				*e*SP	SP	11 12 56.6	+1.4		
HAMF				IVMs_BB	IVMs_BB	11 51 51.9			
	comp=Z,5µm,21.0s								
ARCES	ARCESS Array B	107.10	343	Pdiff	Pdif	10 59 16.6	+0.9		
	comp=Z,2.2nm,0.8s,baz=69,slow=6.6,SNR=7.4								
ARCES				PKiKP	PKiKP	11 03 24.9	+0.2		
	comp=Z,7.5nm,0.6s,baz=94,slow=1.6,SNR=46								
ARCES				PKKPbc	PKKPbc	11 14 40.2	-4.5		
	comp=Z,1.6nm,0.7s,baz=210,slow=3.9,SNR=4.0								
KBZ	Khabaz	107.32	314	Pdiff	Pdif	10 59 16.9	-0.3		
	comp=Z,13nm,1.2s,baz=81,slow=5.0,SNR=12								
KIV	Kislovodsk	107.43	314	*e*P	Pdif	10 59 17.0	-0.9		
KIV	Kislovodsk	107.43	314	IAMs_20	IAMs_20	11 51 45.9			
	comp=Z,18µm,20.0s								
KIV	Kislovodsk	107.43	314	P	Pdif	10 59 16.7	-1.2		
KIV				S	SKSac	11 09 55.7	+2.2		
SUSD	Miller	107.44	45	IAMs_20	IAMs_20	11 41 39.0			
	comp=Z,23µm,22.0s								
SUSD	Miller	107.44	45	Pdiff		10 59 18.3			
	baz=280								
CBKS	Cedar Bluff	107.71	51	Pdiff		10 59 21.2			
	baz=278								
KTK1	Kautokeino	108.06	343	*e*PP	PP	11 03 45.3	-4.2		
KTK1				*e*SKSac	SKSac	11 09 56.1	+1.1		
KTK1				*e*SP	SP	11 13 09.3	+3.1		
D32A	Dogwood Acres,	108.26	42	IAMs_20	IAMs_20	11 48 19.5			
	comp=Z,20µm,19.0s								
ULM	Lac du Bonnet	108.29	39	Pdiff	Pdif	10 59 22.0	+0.6		
	comp=Z,4.9nm,1.0s,baz=283,slow=4.4,SNR=9.0								
ULM				PKiKP	PKiKP	11 03 27.8	+0.4		
	comp=Z,16nm,1.0s,baz=296,slow=3.3,SNR=2.9								
ULM				PKKPbc	PKKPbc	11 14 40.5	+0.2		
	comp=Z,2.3nm,0.9s,baz=84,slow=5.3,SNR=3.4								
ULM	Lac du Bonnet	108.29	39	IAMs_20	IAMs_20	11 53 46.1			
	comp=Z,16µm,18.0s								
DAG	Danmarks Havn	108.44	358	*i* P	PKiKP	11 03 28.3	+1.3		
DAG				IAMs_20	IAMs_20	11 43 38.0			
	comp=Z,16µm,23.7s								
ABTX	Abilene, Hawle	108.49	58	IAMs_20	IAMs_20	11 44 02.5			
	comp=Z,14µm,20.0s								
ABTX	Abilene, Hawle	108.49	58	Pdiff		10 59 25.0			
	baz=276								
BGNE	Belgrade	108.53	48	IAMs_20	IAMs_20	11 53 56.0			
	comp=Z,15µm,19.0s								
BGNE	Belgrade	108.53	48	Pdiff		10 59 23.1			
	baz=279								
JCT	Junction City	108.54	60	IAMs_20	IAMs_20	11 40 22.1			
	comp=Z,25µm,22.0s								
JCT	Junction City	108.54	60	Pdiff		10 59 25.4			
	baz=275								
JCT				PKiKP		11 03 29.7			
	baz=275								
JETT	Jettan, Norway	108.55	344	*e*Pdif	Pdif	10 59 22.3	+0.1		
JETT				*e*PP	PP	11 03 52.2	-0.8		
JETT				*e*SP	SP	11 13 13.5	+2.3		
U32A	Winter Ranch,	108.60	54	IAMs_20	IAMs_20	11 46 28.2			
	comp=Z,16µm,20.0s								
AGMN	Agassiz Nation	108.76	41	IAMs_20	IAMs_20	11 45 04.7			
	comp=Z,21µm,21.0s								
AGMN	Agassiz Nation	108.76	41	Pdiff		10 59 23.8			
	baz=283								
TRO	Tromso	108.91	344	*e*Pdif	Pdif	10 59 24.3	+0.6		
TRO				IVmB_BB		10 59 34.4			
	comp=Z,367nm,2.7s								
TRO				*e*PP	PP	11 03 58.1	+2.6		
TRO				*e*SKSac	SKSac	11 09 55.2	-3.3		
TRO				*e*SP	SP	11 13 14.3	-0.3		
TRO				*e*SS	SS	11 19 07.0	-2.3		
TRO				IVMs_BB	IVMs_BB	11 51 25.8			
	comp=Z,6µm,20.6s								
WMOK	Wichita Mounta	108.98	55	IAMs_20	IAMs_20	11 42 20.3			
	comp=Z,18µm,22.0s								
WMOK	Wichita Mounta	108.98	55	Pdiff		10 59 27.0			
	baz=277								
WMOK				PKiKP		11 03 30.8			
	baz=277,SNR=6.2								
F33A	5 Mile Ranch,	109.02	43	IAMs_20	IAMs_20	11 45 32.7			
	comp=Z,15µm,19.0s								
N33A	J Bar K, Exete	109.16	49	IAMs_20	IAMs_20	11 47 33.8			
	comp=Z,15µm,20.0s								
OK032	Salt Plains WL	109.17	53	IAMs_20	IAMs_20	11 43 22.4			
	comp=Z,15µm,20.0s								
ECSD	EROS Data Cent	109.23	46	IAMs_20	IAMs_20	11 52 56.4			
	comp=Z,15µm,18.0s								
ECSD	EROS Data Cent	109.23	46	Pdiff		10 59 27.0			
	baz=281								
ECSD				PKiKP		11 03 30.7			
	baz=281								
CROK	Carrier	109.40	53	IAMs_20	IAMs_20	11 42 45.3			
	comp=Z,26µm,22.0s								
SOC	Sochi	109.62	314	*c i* P	Pdif	10 59 24.9	-2.5		
SOC				pmax	pmax				
	comp=Z,16nm,0.7s								
UNM	Universidad Na	109.69	71	IAMs_20	IAMs_20	11 45 27.9			
	comp=Z,14µm,19.0s								
OK029	Liberty Lake	109.92	54	IAMs_20	IAMs_20	11 42 06.1			
	comp=Z,25µm,22.0s								
OKCFA	Oklahoma City	109.97	54	IAMs_20	IAMs_20	11 42 25.6			
	comp=Z,24µm,22.0s								
OK025	Westminster Rd	110.04	54	IAMs_20	IAMs_20	11 42 08.4			
	comp=Z,27µm,22.0s								
KSU1	Kansas State U	110.08	50	IAMs_20	IAMs_20	11 42 45.1			
	comp=Z,25µm,22.0s								
KSU1	Kansas State U	110.08	50	Pdiff		10 59 32.4			
	baz=280								
KSU1				PKiKP		11 03 33.3			
	baz=280								
B35A	Bob, Littlefor	110.13	40	IAMs_20	IAMs_20	11 42 54.8			
	comp=Z,26µm,22.0s								
TLIG	Tlapa	110.30	73	IAMs_20	IAMs_20	11 42 23.1			
	comp=Z,21µm,20.0s								
OK031	S. Brethren Rd	110.39	54	IAMs_20	IAMs_20	11 42 53.6			
	comp=Z,23µm,22.0s								
WHTX	Lake Whitney,	110.40	58	IAMs_20	IAMs_20	11 45 28.0			
	comp=Z,16µm,20.0s								
WHTX	Lake Whitney,	110.40	58	PKiKP		11 03 34.0			
	baz=277								
Z35A	Perchaven, San	110.41	57	IAMs_20	IAMs_20	11 48 37.2			
	comp=Z,19µm,20.0s								
435B	Jarrell	110.42	59	PKiKP		11 03 34.2			
	baz=276								
OK030	Cody Creek RV	110.44	54	IAMs_20	IAMs_20	11 42 31.9			
	comp=Z,23µm,22.0s								
KVTX	Kingsville	110.45	63	IAMs_20	IAMs_20	11 43 57.8			
	comp=Z,22µm,20.0s								
N35A	Tabor	110.49	48	IAMs_20	IAMs_20	11 48 37.0			
	comp=Z,25µm,20.0s								
T35A	Sooner Cattle	110.51	53	IAMs_20	IAMs_20	11 41 32.6			
	comp=Z,25µm,22.0s								
F36A	Milaca	110.90	43	IAMs_20	IAMs_20	11 44 12.4			
	comp=Z,22µm,22.0s								
DBG	Daneborg	110.95	358	*i* P	PKiKP	11 03 32.9	+1.1		
DBG				IAMs_20	IAMs_20	11 44 10.0			
	comp=Z,15µm,23.0s								
ANN	Anapa	110.95	316	*i* PKiKP	PKiKP	11 03 31.8	-0.8		
ANN				*e*		11 04 10.4			
ANN				*e*PPP	PPP	11 06 28.9			
ANN				*e*		11 10 05.7

VSU	Vasula	112.31	332	eP		PKiKP		11 03 35.6	+0.8
VSU	Vasula	112.31	332	i PKiKP		PKiKP		11 03 34.7	-0.1
VSU				pmax		pmax			
	comp=Z,35nm,0.9s								
MG02	Cerro Sombrero	112.50	154	IAMs_20		IAMs_20		11 41 54.7	
	comp=Z,24µm,20.0s								
HHAR	Hobbs	112.65	53	IAMs_20		IAMs_20		11 43 11.5	
	comp=Z,18µm,22.0s								
NATX	Nacogdoches	112.78	58	IAMs_20		IAMs_20		11 42 33.3	
	comp=Z,14µm,22.0s								
NATX	Nacogdoches	112.78	58	PKiKP				11 03 38.6	
	baz=278								
W39A	Magazine	112.97	54	IAMs_20		IAMs_20		11 43 58.9	
	comp=Z,18µm,22.0s								
W39A	Magazine	112.97	54	PKiKP				11 03 38.1	
	baz=280,SNR=6.9								
MIAR	Mount Ida	113.25	55	PKiKP				11 03 38.9	
	baz=280,SNR=7.4								
JMIC	Jan Mayen	113.25	353	ePdif		Pdif		10 59 42.9	-0.2
JMIC				IVmB_BB				10 59 50.6	
	comp=Z,1µm,1.7s								
JMIC				ePP		PP		11 04 25.5	-1.1
JMIC				eSP		SP		11 13 57.7	+2.3
JMIC				eSS		SS		11 20 16.1	+8.9
JMIC				IVMs_BB		IVMs_BB		11 45 12.8	
	comp=Z,3µm,25.7s								
DIKM	Dikmen	113.26	313	⇑P		PKiKP		11 03 37.6	+0.4
G40A	Rib Lake	113.31	43	IAMs_20		IAMs_20		11 47 37.1	
	comp=Z,16µm,20.0s								
I40A	Norwalk	113.41	44	IAMs_20		IAMs_20		11 45 11.9	
	comp=Z,23µm,22.0s								
L40A	Anamosa	113.47	46	IAMs_20		IAMs_20		11 46 45.5	
	comp=Z,20µm,21.0s								
U40A	Yellville	113.50	53	IAMs_20		IAMs_20		11 44 00.9	
	comp=Z,23µm,22.0s								
U40A	Yellville	113.50	53	PKiKP				11 03 38.1	
	baz=281,SNR=29								
MTSE	Matsula	113.51	333	eP		PKiKP		11 03 37.9	+0.9
MNK	Minsk	113.54	328	ePKIKP		PKiKP		11 03 38.0	+0.8
MNK				e				11 10 16.0	
MNK				e				11 14 04.0	
MNK				e				11 15 08.0	
MNK				pmax		pmax			
	comp=Z,150nm,1.0s								
MNK	Minsk	113.54	328	i P		Pdif		10 59 45.3	+0.7
	comp=E,2.0nm,0.8s								
MNK				i P		Pdif		10 59 45.3	+0.7
	comp=N,11nm,0.8s								
MNK				i P		Pdif		10 59 45.3	+0.7
	comp=Z,22nm,0.9s								
MNK				i PKP		PKiKP		11 03 37.7	+0.4
MNK				i PP		PP		11 04 23.1	-6.1
MNK				i PPP		PPP		11 06 46.8	
MNK				i SKS		SKSdf		11 10 39.2	-5.5
MNK				i PS		PKKPbc		11 13 59.9	-23
MNK				i SS		SS		11 20 07.3	-4.7
MNK				i SSS		SSS		11 24 00.1	
MNK				i LQ		LQ		11 40 38.8	
MNK				i LR		LR		11 45 54.3	
MNK				i LRM		MLR		11 51 45.3	
	comp=E,3µm,21.7s								
MNK				i LRM		MLR		11 51 45.3	
	comp=N,10µm,26.1s								
MNK				i LRM		MLR		11 51 45.3	
	comp=Z,33µm,24.6s								
COWI	Conover	113.77	42	IAMs_20		IAMs_20		11 52 12.3	
	comp=Z,22µm,19.0s								
CMIG	Matias Romero	113.83	74	PKiKP		PKiKP		11 03 39.6	+0.7
	comp=Z,3.8nm,0.5s,baz=271,slow=2.1,SNR=9.9								
D41A	Chassel	113.84	41	IAMs_20		IAMs_20		11 51 57.0	
	comp=Z,13µm,20.0s								
X40A	Basin Creek Fa	113.86	55	IAMs_20		IAMs_20		11 49 37.6	
	comp=Z,21µm,20.0s								
NACGM	Naroch	113.93	329	i P		Pdif		10 59 48.3	+2.0
NACGM				i P		Pdif		10 59 48.3	+2.0
NACGM				i P		Pdif		10 59 48.3	+2.0
NACGM				i PKP		PKiKP		11 03 38.9	+0.9
NACGM				i PKP		PKiKP		11 03 38.9	+0.9
NACGM				i PKP		PKiKP		11 03 38.9	+0.9
NACGM				i PP		PP		11 04 17.2	-15
NACGM				i PPP		PPP		11 07 14.6	
NACGM				i SKS		SKSac		11 10 16.3	-3.2
NACGM				i SKKS		SKKSac		11 11 25.6	-3.6
NACGM				i PS		PKKPbc		11 14 13.5	-8.4
NACGM				i SS		SS		11 20 40.0	+23
NACGM				i SSS		SSS		11 25 29.4	
NACGM				i LQ		LQ		11 41 48.9	
NACGM				i LR		LR		11 48 46.0	
JFWS	Jewell Farm	113.94	45	IAMs_20		IAMs_20		11 45 14.9	
	comp=Z,20µm,22.0s								
JFWS	Jewell Farm	113.94	45	PKiKP				11 03 39.1	
	baz=286								
BZK	Bozkurt	114.08	314	⇑P		PKiKP		11 03 39.3	+0.6
WHAR	Wooly Hollow	114.16	54	IAMs_20		IAMs_20		11 48 23.3	
	comp=Z,17µm,20.0s								
FCAR	Ozark Folk Cen	114.17	53	IAMs_20		IAMs_20		11 52 01.7	
	comp=Z,18µm,20.0s								
W41B	Gary Mavity, V	114.21	54	P				11 03 40.2	
	baz=281,SNR=11								
KMBO	Kilima Mbogo	114.32	266	PKP		PKiKP		11 03 40.8	+0.5
	comp=Z,5.5nm,0.7s,baz=95,slow=5.7,SNR=12								
KMBO				PKKPbc		PKKPab		11 14 24.1	-2.5
	comp=Z,1.0nm,0.3s,baz=324,slow=4.7,SNR=5.7								
AAL	Aland	114.33	336	eP		PKiKP		11 03 38.2	-0.4
AKASG	Malin Array Be	114.36	324	PKP		PKPdf		11 03 38.4	-0.6
	comp=Z,13nm,0.6s,baz=56,slow=2.1,SNR=41								
AKASG				PKKPbc		PKKPbc		11 14 19.6	-0.7
	comp=Z,1.4nm,0.4s,baz=264,slow=3.7,SNR=7.7								
AKASG	Malin Array Be	114.36	324	PKPdf				11 03 38.6	-0.3
NSS	Namsos	114.37	342	ePdif		Pdif		10 59 47.4	-0.7
NSS				IVmB_BB				10 59 50.3	
	comp=Z,666nm,3.0s								
NSS				ePKPdf		PKPdf		11 03 38.6	+0.1
NSS				eSP		SP		11 14 03.3	-2.6
NSS				eSS		SS		11 20 23.0	+0.8
NSS				IVMs_BB		IVMs_BB		11 50 54.8	
	comp=Z,10µm,23.5s								
CCM	Cathedral Cave	114.40	51	P				11 03 40.4	
	baz=283								
F42A	Maple Grove Fa	114.54	42	IAMs_20		IAMs_20		11 45 00.7	
	comp=Z,22µm,22.0s								
I42A	Draeger Farm,	114.59	44	IAMs_20		IAMs_20		11 46 42.1	
	comp=Z,22µm,21.0s								
L42A	Oliver, Polo	114.60	46	IAMs_20		IAMs_20		11 50 50.5	
	comp=Z,19µm,20.0s								
SLIT	Slitere, Latvi	114.77	333	eP		PKiKP		11 03 39.4	-0.1
342A	Flagon Creek P	114.81	58	IAMs_20		IAMs_20		11 50 55.0	
	comp=Z,16µm,19.0s								
SCO	Scoresbysund	114.83	358	i P		PKPdf		11 03 40.6	+1.3
SCO				IAMs_20		IAMs_20		11 49 48.5	
	comp=Z,14µm,23.2s								
SCO	Scoresbysund	114.83	358	i PKiKP		PKPdf		11 03 40.5	+1.2
SCO				MLR		MLR			
	comp=Z,14µm,23.0s								
CCAR	Cane Creek	114.83	55	IAMs_20		IAMs_20		11 57 22.3	
	comp=Z,14µm,19.0s								
BRTR	Keskin Array B	114.93	311	PKP		PKiKP		11 03 39.8	-0.8
	comp=Z,14nm,0.6s,baz=135,slow=3.0,SNR=24								
BRTR				PKKPbc		PKKPdf		11 14 34.6	-7.3
	comp=Z,4.3nm,1.0s,baz=217,slow=3.1,SNR=6.5								
BRTR	Keskin Array B	114.93	311	i PKiKP		PKiKP		11 03 39.5	-1.1
BRTR	Keskin Array B	114.93	311			PKiKP		11 03 39.5	-1.1
PABE	Paberze	115.07	330	eP		PKPdf		11 03 41.0	+0.9
PABE	Paberze	115.07	330	IAMs_20		IAMs_20		11 56 00.5	
	comp=Z,24µm,21.0s								
E43A	Lone Tree Farm	115.09	41	IAMs_20		IAMs_20		11 52 55.0	
	comp=Z,20µm,19.0s								
H43A	Windswept, Lux	115.20	43	IAMs_20		IAMs_20		11 50 08.1	
	comp=Z,16µm,19.0s								
HDIL	Hopedale	115.26	48	P				11 03 42.3	
	baz=286,SNR=6.8								
P43A	Skaggs, Pawnee	115.33	49			PKPdf		11 03 41.4	+0.3
K43A	Burlington	115.35	45	IAMs_20		IAMs_20		11 47 31.2	
	comp=Z,16µm,22.0s								
143A	Socs Landing,	115.36	56	IAMs_20		IAMs_20		11 50 48.3	
	comp=Z,17µm,20.0s								
HBAR	Harrisburg	115.41	53	IAMs_20		IAMs_20		11 52 31.4	
	comp=Z,14µm,20.0s								
X43A	Marvell	115.44	54	P				11 03 43.6	
	baz=282								
UPP	Uppsala	115.48	336	eP		PKiKP		11 03 40.0	-0.7
ANTO	Ankara	115.52	312	PKiKP		PKPdf		11 03 42.4	+0.7
ANTO	Ankara	115.52	312			PKPdf		11 03 42.4	+0.7
LPAR	Lepanto	115.68	53	IAMs_20		IAMs_20		11 48 43.7	
	comp=Z,13µm,20.0s								
PBUR	Paburge	115.79	331	eP		PKPdf		11 03 43.0	+1.5
L44A	Lake County Fo	115.80	45	IAMs_20		IAMs_20		12 01 29.3	
	comp=Z,13µm,18.0s								
TBLU	Trondheim	115.81	342	ePP		PP		11 04 45.6	+0.7
TBLU				eSP		SP		11 14 19.9	+0.8
TBLU				IVMs_BB		IVMs_BB		11 51 41.4	
	comp=Z,9µm,24.5s								
GNAR	Gosnell	115.83	53	IAMs_20		IAMs_20		11 49 56.5	
	comp=Z,17µm,20.0s								
ICESG	Greenland Ices	115.90	5	i P		PKPdf		11 03 42.7	+0.8
ICESG				IAMs_20		IAMs_20		11 47 55.8	
	comp=Z,20µm,24.0s								
PEBM	Pemiscott Bayo	115.92	52	IAMs_20		IAMs_20		11 45 47.8	
	comp=Z,21µm,22.0s								
M44A	Midewin, Midew	115.94	46	IAMs_20		IAMs_20		11 46 51.9	
	comp=Z,20µm,22.0s								
HQIL	Hanson Quary C	115.95	46	IAMs_20		IAMs_20		11 54 58.3	
	comp=Z,19µm,19.0s								
HDBT	Hernando Brdge	115.97	53	IAMs_20		IAMs_20		11 49 55.4	
	comp=Z,15µm,21.0s								
KIS	Kishinev	116.02	320	eP		Pdif		10 59 54.0	-1.8
KIS	Kishinev	116.02	320	ePKP		PKPdf		11 03 38.0	-4.2
KIS	Kishinev	116.02	320	ePP		PP		11 04 47.0	0.0
	comp=Z,700nm,13.8s								
KIS	Kishinev	116.02	320	ePPP		PPP		11 07 13.0	
KIS	Kishinev	116.02	320	ePPS		PPS		11 15 35.0	
KIS				eLQ		LQ		11 47 57.0	
	comp=Z,2µm,25.0s								
KIS				LRM		MLR		11 54 46.0	
	comp=Z,4µm,29.0s								
KIS	Kishinev	116.02	320	i P		Pdif		10 59 54.0	-1.8
KIS				e				11 04 47.0	
KIS				ePPP		PPP		11 07 13.0	
KIS				ePS		PKKPab		11 14 17.0	-0.9
KIS				ePPS		PPS		11 15 35.0	
KIS				pmax		pmax			
	comp=Z,700nm,13.8s								
MET	Memphis--Engin	116.08	53	IAMs_20		IAMs_20		11 50 08.2	
	comp=Z,19µm,21.0s								
344A	Westbrook Farm	116.14	58			PKiKP		11 03 44.3	+1.4
344A				IAMs_20		IAMs_20		11 52 40.2	
	comp=Z,22µm,19.0s								
VBMS	Vicksburg	116.18	57	IAMs_20		IAMs_20		11 51 15.2	
	comp=Z,18µm,21.0s								
VBMS	Vicksburg	116.18	57	P				11 03 44.1	
	baz=281								
SUW	Suwalki	116.21	329	ePKP		PKiKP		11 03 43.2	+0.8
SUW				ePP		PP		11 04 48.4	+0.4
SUW				eSKSac		SKSac		11 10 30.4	+2.2
SUW				e				11 14 41.9	
SUW				eSS		SKKSdf		11 21 40.2	-7.5
SUW				eL		L		11 54 17.0	
	comp=Z,35µm,21.2s								
LNXT	Lenox	116.21	52	IAMs_20		IAMs_20		11 46 20.1	
	comp=Z,18µm,21.0s								
HALT	Halls	116.38	53	IAMs_20		IAMs_20		11 46 13.4	
	comp=Z,19µm,22.0s								
I45A	Fountain	116.38	43	IAMs_20		IAMs_20		11 53 39.4	
	comp=Z,21µm,20.0s								
G45A	Suttons Bay	116.43	42	IAMs_20		IAMs_20		11 45 55.6	
	comp=Z,22µm,22.0s								
CCIG	Comitan	116.48	75	IAMs_20		IAMs_20		11 45 50.0	
	comp=Z,13µm,21.0s								
SFJD	Kangerlussuaq	116.55	10	i P		PKPdf		11 03 42.7	0.0
SFJD				IAMs_20		IAMs_20		11 49 01.6	
	comp=Z,11µm,24.3s								
SFJD	Kangerlussuaq	116.55	10	PKiKP		PKPdf		11 03 42.4	-0.3
SFJD				MLR		MLR			
	comp=Z,13µm,21.0s								
SFJD	Kangerlussuaq	116.55	10	PKPdf		PKPdf		11 03 42.4	-0.3
OXF	Oxford	116.63	54	IAMs_20		IAMs_20		11 46 00.9	
	comp=Z,20µm,22.0s								
OXF	Oxford	116.63	54	P				11 03 44.8	
	baz=282								
Y45A	Yeager Farm, C	116.66	55	IAMs_20		IAMs_20		11 50 13.7	
	comp=Z,19µm,21.0s								
W45A	Hickory Valley	116.67	53	IAMs_20		IAMs_20		11 50 43.8	
	comp=Z,16µm,21.0s								
TLCR		116.67	318	⇓P		PKiKP		11 03 44.0	+0.5
TLCR		116.67	318	⇓PKIKP		PKiKP		11 03 44.0	+0.5
E46A	Sault Ste Mari	116.83	40	IAMs_20		IAMs_20		11 46 38.1	
	comp=Z,22µm,22.0s								
LL07	Hotel Espejo d	116.91	144	IAMs_20		IAMs_20		11 44 36.4	
	comp=Z,12µm,20.0s								
SFIN	Lafayette	116.92	47	IAMs_20		IAMs_20		11 48 35.4	
	comp=Z,24µm,21.0s								
SFIN	Lafayette	116.92	47	P				11 03 45.2	
	baz=287,SNR=9.6								
L46A	Eue Claire	117.00	45	IAMs_20		IAMs_20		12 03 39.9	
	comp=Z,15µm,18.0s								
TPGR	Topolog	117.05	318	⇓P		PKiKP		11 03 45.2	+0.8
NB201	NORSAR Array S	117.05	340			PKiKP		11 03 44.1	+0.2
DOMB	Dombas	117.08	341	ePKPdf		PKiKP		11 03 44.4	+0.5
DOMB				eSP		SP		11 14 31.1	+0.4
DOMB				eSS		SS		11 20 55.7	-2.1
DOMB				IVMs_BB		IVMs_BB		11 53 27.1	
	comp=Z,10µm,23.4s								
NB2	NORSAR Subarra	117.09	340	PKPdf		PKPdf		11 03 43.1	-0.9
	baz=44,slow=1.9								
NOA	NORSAR Array B	117.09	340	PKP		PKiKP		11 03 44.1	+0.1
	comp=Z,11nm,0.7s,baz=47,slow=1.9,SNR=30								
NOA				PKKPbc		PKKPbc		11 14 11.7	+0.4
	comp=Z,1.5nm,0.9s,baz=44,slow=3.4,SNR=4.3								
CFR	Carcaliu	117.12	319	⇑P		PKiKP		11 03 44.5	+0.1
CFR	Carcaliu	117.12	319	⇑PKIKP		PKiKP		11 03 44.5	+0.1
MOL	Molde	117.16	342	ePKPdf		PKiKP		11 03 44.4	+0.4
MOL				ePP		PP		11 04 55.6	+1.4
MOL				eSP		SP		11 14 32.9	+1.6
USIN	University of	117.17	50	IAMs_20		IAMs_20		11 48 07.7	
	comp=Z,23µm,21.0s								
NC602	NORSAR Array S	117.19	339	ePdif		Pdif		10 59 59.1	-1.6
NC602				ePKPdf		PKiKP		11 03 44.8	+0.7
NC602				ePP		PP		11 04 56.3	+1.7
NC602				eSP		SP		11 14 28.8	-2.9
NC602				IVMs_BB		IVMs_BB		11 55 45.9	
	comp=Z,8µm,22.1s								
GLMI	Grayling	117.20	42	IAMs_20		IAMs_20		11 46 50.9	
	comp=Z,19µm,22.0s								
GLMI	Grayling	117.20	42	P				11 03 46.0	
	baz=291								
346A	Big Creek Wild	117.22	57	IAMs_20		IAMs_20		11 45 11.7	
	comp=Z,14µm,22.0s								
NBO00	NORSAR Array S	117.25	340			PKPdf		11 03 44.3	+0.1
146A	Union	117.31	56	IAMs_20		IAMs_20		11 55 51.5	
	comp=Z,17µm,18.0s								
HARR	Harsova	117.44	318	⇓P		PKiKP		11 03 45.8	+0.7
HARR	Harsova	117.44	318	⇓PKIKP		PKiKP		11 03 45.8	+0.7
WVT	Waverly	117.51	52	PKIKP		PKPdf		11 03 45.5	0.0
WVT	Waverly	117.51	52	PKPdf		PKPdf		11 03 45.5	0.0
WVT	Waverly	117.51	52	P				11 03 45.7	
	baz=284								
TESR	Tescani	117.58	320	⇑P		PKiKP		11 03 46.1	+0.8
PLAL	Pickwick Lake	117.59	53	IAMs_20		IAMs_20		11 48 34.3	
	comp=Z,13µm,20.0s								
J47A	Sunmer	117.62	44			PKiKP		11 03 46.0	+0.5
J47A				IAMs_20		IAMs_20		12 00 45.7	
	comp=Z,18µm,19.0s								
AKN	Aaknes	117.62	342	ePKPdf		PKiKP		11 03 45.7	+0.8
AKN				ePP		PP		11 04 57.6	+0.1
AKN				eSKSac		SKSac		11 10 35.0	+1.8
AKN				eSP		SP		11 14 38.2	+2.7
AKN				eSS		SS		11 21 03.4	-1.3
AKN				IVMs_BB		IVMs_BB		11 57 16.7	
	comp=Z,8µm,20.3s								
DY2G	Dye2	117.70	8	i P		PKiKP		11 03 46.1	+0.8
DY2G				IAMs_20		IAMs_20		11 46 58.5	
	comp=Z,24µm,25.2s								
EFI	East Falkland	117.72	159	IAMs_20		IAMs_20		11 46 30.9	
	comp=Z,18µm,22.0s								
BIZ	Bicaz	117.75	321	⇓P		PKiKP		11 03 46.5	+0.8
LVV	L'vov	117.75	325	i PKIKP		PKiKP		11 03 45.9	+0.4
LVV				e				11 04 59.5	
LVV				e				11 10 35.9	
LVV				eSS		SS		11 21 18.7	+11
LVV				eSSS		SSS		11 25 33.3	
LVV				MLR		MLR			
	comp=N,18µm,24.0s								
LVV				MLR		MLR			
	comp=E,31µm,24.0s								
LVV				MLR		MLR			
	comp=Z,34µm,24.0s								
LL05	Los Muermos	117.78	143	IAMs_20		IAMs_20		11 46 06.4	
	comp=Z,16µm,20.0s								
VRI	Vrincioaia	117.78	320	⇓P		PKiKP		11 03 46.6	+0.8
VRI	Vrincioaia	117.78	320	⇓PKIKP		PKiKP		11 03 46.6	+0.8
N47A	Urbana	117.78	46	IAMs_20		IAMs_20		11 48 31.2	
	comp=Z,22µm,22.0s								
PLOR	Plostina	117.84	320	⇓P		PKiKP		11 03 46.5	+0.6
PLOR	Plostina	117.84	320	⇓PKIKP		PKiKP		11 03 46.5	+0.6
BURAR	Bucovina Array	118.02	322	⇑P		Pdif		11 00 05.9	+1.0
BURAR				⇓S		pPdif		11 00 10.9	-10
BURAR	Bucovina Array	118.02	322	⇑P		PKiKP		11 03 47.5	+1.2
BURAR	Bucovina Array	118.02	322	⇑PKIKP		PKiKP		11 03 47.5	+1.2
BURAR	Bucovina Array	118.02	322	PKPdf		PKiKP		11 03 47.1	+0.8
OSL	Oslo	118.04	339	eP		PP		11 05 03.1	+2.6
OSL				eSP		SP		11 14 41.2	+1.8
OSL				eSS		SS		11 21 13.9	+3.6
WCI	Wyandotte Cave	118.14	49	PKIKP		PKiKP		11 03 47.4	+0.8
WCI	Wyandotte Cave	118.14	49	PKPdf		PKiKP		11 03 47.4	+0.8
WCI	Wyandotte Cave	118.14	49	P				11 03 47.8	
	baz=287								
APG	El Apazote	118.14	76	PKP		PKiKP		11 03 48.2	+0.7
	comp=Z,4.7nm,0.5s,baz=247,slow=5.8,SNR=5.6								
ISR	Istrita	118.19	319	⇓P		PKiKP		11 03 47.2	+0.6
ISR	Istrita	118.19	319	⇓PKIKP		PKiKP		11 03 47.2	+0.6
H03S2	Juan Fernandez	118.24	133	T		T		13 12 47.0	
	baz=237,slow=74,SNR=13								
H03S1	Juan Fernandez	118.26	133	T		T		13 12 51.6	
	baz=237,slow=74,SNR=14								
H03S3	Juan Fernandez	118.26	133	T		T		13 12 54.6	
	baz=237,slow=74,SNR=12								
L48A	N Adams	118.33	45			PKPdf		11 03 46.9	0.0
L48A				IAMs_20		IAMs_20		11 48 10.6	
	comp=Z,21µm,22.0s								
SKAR	Skarslia	118.33	341	ePdif		Pdif		11 00 07.4	+1.5
SKAR				ePKPdf		PKiKP		11 03 47.1	+0.7
SKAR				ePP		PP		11 05 03.8	+1.3
SKAR				eSP		SP		11 14 43.0	+1.0
SKAR				eSS		SS		11 21 16.7	+2.5
SKAR				IVMs_BB		IVMs_BB		11 57 54.2	
	comp=Z,11µm,21.0s								
V48A	Smith Brothers	118.40	52			PKPdf		11 03 47.0	-0.2
V48A				IAMs_20		IAMs_20		11 48 29.0	
	comp=Z,23µm,21.0s								
BLEU	Blekinge	118.43	334	i P		PKiKP		11 03 47.3	+0.6
H03N3	Juan Fernandez	118.43	133	T		T		13 12 58.4	
	baz=243,slow=72,SNR=9.5								
H03N2	Juan Fernandez	118.43	133	T		T		13 13 01.3	
	baz=243,slow=72,SNR=11								
MLR	Muntele Rosu	118.43	320	⇓P		PKiKP		11 03 47.5	+0.3
MLR	Muntele Rosu	118.43	320	⇓PKIKP		PKiKP		11 03 47.5	+0.3
H03N1	Juan Fernandez	118.44	133	T		T		13 12 57.2	
	baz=243,slow=72,SNR=11								
BOSA	Boshof	118.50	233	PKP		PKiKP		11 03 48.4	+0.5
	comp=Z,12nm,0.5s,baz=125,slow=1.9,SNR=15								
BOSA				PKKPbc		PKKPab		11 14 07.2	-1.1
	comp=Z,14nm,0.8s,baz=301,slow=2.8,SNR=14								
STRU	Stroemstad	118.51	338	i P		PKiKP		11 03 47.3	+0.6
BEL	Belsk	118.56	328	ePKP		PKiKP		11 03 47.5	+0.5
BEL				ePP		PP		11 05 05.8	+1.3
BEL				e				11 15 00.4	
BEL				eSS		SS		11 22 15.5	+58
BEL				eL		L		11 55 18.7	
	comp=Z,46µm,21.5s								
BEL	Belsk	118.56	328	ePKiKP		PKiKP		11 03 48.0	+1.0
BEL				eL		L		11 55 37.9	
	comp=Z,46µm,21.5s								
LL03	Petrohue	118.58	143	IAMs_20		IAMs_20		11 45 39.1	
	comp=Z,14µm,21.0s								
DOPR	Dopca	118.60	320	⇓P		PKiKP		11 03 47.8	+0.4
KWP	Kalwaria Pacla	118.60	325	ePKP		PKiKP		11 03 47.5	+0.3
KWP				ePP		PP		11 05 04.7	-0.1
KWP				e				11 14 57.5	
KWP				eSS		SS		11 22 12.8	+54
KWP				eL		L		11 53 03.0	
	comp=Z,41µm,24.5s								
KWP	Kalwaria Pacla	118.60	325	ePKiKP		PKiKP		11 03 48.0	+0.8
KWP				ePP		PP		11 05 05.4	+0.6
KWP				ePS		PKKPdf		11 14 56.8	+22
KWP				eL		L		11 53 24.9	
	comp=Z,41µm,24.5s								
HYA	Hoyanger	118.65	342	ePKPdf		PKiKP		11 03 47.4	+0.5
HYA				ePP		PP		11 05 04.2	-0.4
HYA				eSKSac		SKSac		11 10 38.5	+1.7
HYA				ePS		PKKPdf		11 14 50.5	+16
KONO	Kongsberg	118.65	339	PKIKP		PKiKP		11 03 47.7	+0.7
KONO	Kongsberg	118.65	339	IAMs_20		IAMs_20		11 58 04.4	
	comp=Z,21µm

ODD1					*e*SP	SP	11 14 50.7	-1.5	
ODD1					IVMs_BB	IVMs_BB	11 58 35.8		
	comp=Z,15µm,22.1s								
ASK	**Askoy**	**119.48**	**342**		*e*PKPdf	**PKiKP**	**11 03 49.2**	**+0.7**	
ASK					*e*SP	SP	11 14 54.4	+2.2	
BER	**Bergen**	**119.52**	**342**		*e*PKPdf	**PKiKP**	**11 03 49.5**	**+0.9**	
BER					*e*PP	**PP**	**11 05 10.9**	**+0.4**	
BER					*e*SP	SP	11 14 53.4	+0.8	
BER					IVMs_BB	IVMs_BB	11 57 28.3		
	comp=Z,10µm,20.1s								
BSD	**Bornholm Skovb**	**119.57**	**333**		*e*P	**PKPdf**	**11 03 48.7**	**-0.1**	
GKP	**Gorka Klasztor**	**119.59**	**331**		*e*PKP	**PKPdf**	**11 03 47.2**	**-1.7**	
GKP					*e*PP	**PP**	**11 05 13.1**	**+1.7**	
GKP					*e*		11 15 04.5		
GKP					*e*SS	SS	11 22 27.4	+57	
GKP					*e*L	L	11 57 24.6		
	comp=Z,35µm,20.6s								
LBTB	**Lobatse**	**119.65**	**237**		PKiKP	**PKiKP**	**11 03 51.2**	**+1.1**	
LBTB	**Lobatse**	**119.65**	**237**		PKPdf	**PKiKP**	**11 03 51.2**	**+1.1**	
CRVS	**Cervenica-Dubn**	**119.67**	**325**		*e*PKiKP	**PKiKP**	**11 03 50.2**	**+0.9**	
CRVS					MLR	MLR			
	comp=Z,32µm,23.6s								
CRVS	**Cervenica-Dubn**	**119.67**	**325**		*e*PKP	**PKiKP**	**11 03 50.2**	**+0.9**	
CRVS					*e*		11 15 07.6		
CRVS					*e*SS	SS	11 22 07.0	+35	
CRVS					*e*SSS	SSS	11 26 59.1		
CRVS					*e*L	L	11 54 03.2		
FPAL	**Fort Paine**	**119.67**	**53**			**PKPdf**	**11 03 49.6**	**-0.1**	
FPAL					IAMs_20	IAMs_20	11 51 42.7		
	comp=Z,14µm,20.0s								
W50A	**Signal Mountai**	**119.73**	**52**			**PKPdf**	**11 03 49.6**	**-0.3**	
W50A					IAMs_20	IAMs_20	11 52 12.3		
	comp=Z,20µm,20.0s								
250A	**Grady**	**119.76**	**56**		IAMs_20	IAMs_20	11 55 13.3		
	comp=Z,17µm,20.0s								
BJUU	**Bjuv**	**119.78**	**335**		*i* P	**PKiKP**	**11 03 49.7**	**+0.5**	
BLS5	**Blasjo**	**119.89**	**340**		*e*Pdif	**Pdif**	**11 00 12.8**	**0.0**	
BLS5					*e*PKPdf	**PKiKP**	**11 03 50.2**	**+0.7**	
BLS5					*e*PP	**PP**	**11 05 14.5**	**+1.3**	
BLS5					*e*SP	SP	11 14 56.0	-0.1	
BLS5					IVMs_BB	IVMs_BB	11 54 17.8		
	comp=Z,7µm,23.9s								
DRGR		**119.92**	**322**	⇓	P	**PKiKP**	**11 03 50.3**	**+0.3**	
DRGR		**119.92**	**322**	⇓	PKiKP	**PKiKP**	**11 03 50.3**	**+0.3**	
PLCA	**Paso Flores**	**119.93**	**144**		PKP	**PKiKP**	**11 03 51.2**	**+1.0**	
	comp=Z,9.3nm,0.5s,baz=243,slow=2.2,SNR=58								
PLCA					PKKPbc	**PKKPbc**	**11 13 59.2**	**-1.3**	
	comp=Z,8.0nm,0.8s,baz=55,slow=2.6,SNR=13								
PLCA					SKKP		11 17 55.0		
	comp=Z,5.4nm,1.1s,baz=158,slow=1.9,SNR=3.1								
ACSO	**Alum Creek Sta**	**119.95**	**46**			**PKPdf**	**11 03 50.0**	**0.0**	
ACSO					IAMs_20	IAMs_20	12 04 05.4		
	comp=Z,15µm,18.0s								
ACSO	**Alum Creek Sta**	**119.95**	**46**		P		11 03 50.8		
	baz=290,SNR=17								
I51A	**Listowel**	**119.97**	**42**		P		11 03 50.7		
	baz=294,SNR=19								
HOMB	**Homborsund**	**120.04**	**339**		*i* P	**PKiKP**	**11 03 50.0**	**+0.3**	
HOMB					*i* P	**PKiKP**	**11 03 50.2**	**+0.5**	
HOMB	**Homborsund**	**120.04**	**339**		*e*PKPdf	**PKiKP**	**11 03 50.2**	**+0.5**	
NIE	**Niedzica**	**120.07**	**326**		*e*Pdif	**Pdif**	**11 00 14.2**	**+0.3**	
NIE					*e*PKP	**PKiKP**	**11 03 50.8**	**+0.7**	
NIE					*e*PP	**PP**	**11 05 14.9**	**0.0**	
NIE					*e*SKSac	**SKSac**	**11 10 45.0**	**+2.4**	
NIE					*e*SS	SKKSdf	11 22 36.1	+56	
NIE					*e*L	L	11 55 04.8		
	comp=Z,24µm,24.2s								
NIE	**Niedzica**	**120.07**	**326**		*e*PKiKP	**PKiKP**	**11 03 51.3**	**+1.2**	
NIE					*e*PP	**PP**	**11 05 15.3**	**+0.3**	
NIE					*e*PS	PKKPdf	11 15 10.3	+38	
NIE					*e*L	L	11 55 24.5		
	comp=Z,24µm,24.2s								
Q51A	**Peebles**	**120.09**	**48**		IAMs_20	IAMs_20	11 54 32.5		
	comp=Z,20µm,20.0s								
LSQQ	**Lebel-sur-Quev**	**120.09**	**35**		P		11 03 50.3		
	baz=300								
ALN	**Alexandroupoli**	**120.10**	**315**		P	**PKPdf**	**11 03 48.9**	**-1.4**	
M51A	**Elyria**	**120.12**	**45**		P		11 03 51.3		
	baz=291,SNR=7.5								
N51A	**Ashland**	**120.14**	**45**		IAMs_20	IAMs_20	11 56 18.4		
	comp=Z,19µm,20.0s								
PLVB	**Pleven**	**120.14**	**318**	⇑	P	**PKiKP**	**11 03 51.2**	**+0.8**	
P51A	**Williamsport**	**120.15**	**47**		IAMs_20	IAMs_20	11 49 10.8		
	comp=Z,20µm,22.0s								
HOPE	**Hope Point**	**120.18**	**174**		PKiKP	**PKiKP**	**11 03 50.4**	**+0.3**	
HOPE					MLR	MLR			
	comp=Z,21µm,19.0s								
HOPE	**Hope Point**	**120.18**	**174**			**PKiKP**	**11 03 50.4**	**+0.3**	
SUR	**Sutherland**	**120.21**	**228**		PKPdf	**PKiKP**	**11 03 52.3**	**+1.1**	
SUR	**Sutherland**	**120.21**	**228**		IAMs_20	IAMs_20	11 54 16.5		
	comp=Z,18µm,20.0s								
X51A	**Calhoun**	**120.26**	**53**		IAMs_20	IAMs_20	11 52 20.4		
	comp=Z,20µm,20.0s								
EZN	**Ezine**	**120.28**	**313**		P	**PKPdf**	**11 03 50.3**	**-0.4**	
CPCT	**Cooper Cave**	**120.28**	**52**		IAMs_20	IAMs_20	11 48 13.9		
	comp=Z,23µm,22.0s								
VLDQ	**Val d'Or**	**120.28**	**36**		IAMs_20	IAMs_20	12 00 48.9		
	comp=Z,16µm,20.0s								
Z51A	**Franklin**	**120.33**	**54**		IAMs_20	IAMs_20	11 48 13.4		
	comp=Z,19µm,22.0s								
RDO	**Rodhopi**	**120.37**	**315**		P	**PKPdf**	**11 03 49.5**	**-1.3**	
KECS	**Kecovo**	**120.44**	**325**		*e*PKiKP	**PKiKP**	**11 03 52.1**	**+1.2**	
KECS	**Kecovo**	**120.44**	**325**		*e*PKP	**PKiKP**	**11 03 52.0**	**+1.2**	
BODT	**Bodrum**	**120.44**	**310**		P	**PKPdf**	**11 03 49.3**	**-1.8**	
SNART	**Snartemo**	**120.45**	**339**		*i* P	**PKiKP**	**11 03 51.0**	**+0.5**	
SNART					*i* P	**PKPdf**	**11 03 51.1**	**+0.7**	
SNART	**Snartemo**	**120.45**	**339**		*e*PKPdf	**PKiKP**	**11 03 51.2**	**+0.7**	
SNART					*e*PP	**PP**	**11 05 17.3**	**+0.3**	
SNART					*e*SKSac	**SKSac**	**11 10 41.5**	**-1.8**	
SNART					IVMs_BB	IVMs_BB	12 00 31.1		
	comp=Z,16µm,22.0s								
KMY	**Karmoy**	**120.45**	**341**		*e*PKPdf	**PKiKP**	**11 03 51.2**	**+0.7**	
KMY					*e*SKSac	**SKSac**	**11 10 43.5**	**+0.2**	
KMY					*e*SP	**SP**	**11 15 04.0**	**+3.0**	
GZR	**Gura Zlata**	**120.50**	**321**	⇑	P	**PKiKP**	**11 03 51.5**	**+0.4**	
GZR	**Gura Zlata**	**120.50**	**321**	⇑	PKiKP	**PKiKP**	**11 03 51.5**	**+0.4**	
451A	**Vernon**	**120.50**	**58**		IAMs_20	IAMs_20	11 51 52.1		
	comp=Z,19µm,21.0s								
LSZ	**Lusaka**	**120.51**	**249**		IAMs_20	IAMs_20	11 54 27.5		
	comp=Z,17µm,19.0s								
BORG	**Borgarnes**	**120.52**	**357**		PKP	**PKiKP**	**11 03 52.8**	**+2.4**	
	comp=Z,8.6nm,0.5s,baz=14,slow=2.6,SNR=3.7								
BORG	**Borgarnes**	**120.52**	**357**		PKiKP	**PKiKP**	**11 03 53.1**	**+2.6**	
BORG					MLR	MLR			
	comp=Z,6µm,20.0s								
BORG	**Borgarnes**	**120.52**	**357**			**PKiKP**	**11 03 53.1**	**+2.6**	
M52A	**Chesterland**	**120.62**	**44**		IAMs_20	IAMs_20	11 54 30.2		
	comp=Z,20µm,20.0s								
LANS	**Liptovska Anna**	**120.68**	**326**		*e*PKiKP	**PKiKP**	**11 03 52.6**	**+1.3**	
LANS	**Liptovska Anna**	**120.68**	**326**		*e*PKP	**PKiKP**	**11 03 52.6**	**+1.3**	
P52A	**Corning**	**120.77**	**47**		IAMs_20	IAMs_20	11 49 50.2		
	comp=Z,19µm,22.0s								
P52A	**Corning**	**120.77**	**47**		P		11 03 51.9		
	baz=290,SNR=17								
SADO	**Sadowa**	**120.79**	**40**		PKPdf	**PKiKP**	**11 03 51.8**	**+0.2**	
SADO					IAMs_20	IAMs_20	11 53 35.4		
	comp=Z,22µm,21.0s								
SIRR	**Siria**	**120.80**	**322**	⇑	P	**PKiKP**	**11 03 52.2**	**+0.6**	
O52A	**Adamsville**	**120.81**	**46**		IAMs_20	IAMs_20	11 55 44.3		
	comp=Z,15µm,20.0s								
MBAR	**Mbarara**	**120.85**	**266**		PKiKP	**PKiKP**	**11 03 54.0**	**+1.1**	
MBAR					MLR	MLR			
	comp=Z,11µm,20.0s								
MBAR	**Mbarara**	**120.85**	**266**			**PKiKP**	**11 03 54.0**	**+1.1**	
W52A	**Murphy**	**120.85**	**52**		IAMs_20	IAMs_20	11 53 34.9		
	comp=Z,15µm,19.0s								
152A	**Waverly Hall**	**120.87**	**55**		IAMs_20	IAMs_20	11 52 30.6		
	comp=Z,19µm,22.0s								
V52A	**Sevierville**	**120.89**	**51**			**PKPdf**	**11 03 51.8**	**-0.2**	
Q52A	**Bidwell**	**120.90**	**47**			**PKiKP**	**11 03 52.1**	**+0.1**	
Q52A					IAMs_20	IAMs_20	12 01 20.8		
	comp=Z,15µm,20.0s								
LNIZ	**Loecknitz**	**120.90**	**332**		*e*PKPdf	**PKiKP**	**11 03 52.9**	**+1.4**	
	baz=53,slow=1.9								
ALGO	**Algonquin Park**	**120.95**	**38**		P		11 03 52.2		
	baz=298								
HERR	**Herculane**	**120.95**	**320**	⇑	P	**PKiKP**	**11 03 52.0**	**+0.1**	
CHOS	**Chios island**	**120.96**	**312**		P	**PKPdf**	**11 03 51.8**	**-0.4**	
352A	**Blakely**	**120.99**	**56**		IAMs_20	IAMs_20	11 54 20.9		
	comp=Z,13µm,21.0s								
KARP	**Karpathos**	**121.01**	**308**		P	**PKiKP**	**11 03 52.5**	**+0.1**	
OKC	**Ostrava-Krasne**	**121.04**	**327**		AMS	AMS	11 56 30.0		
	comp=Z,26µm,20.4s								
PSZ	**Piszkesteto**	**121.06**	**324**	⇓	P	**PKiKP**	**11 03 52.6**	**+0.4**	

PSZ	**Piszkesteto**	**121.06**	**324**	⇓	PKiKP	**PKiKP**	**11 03 52.6**	**+0.4**	
PSZ	**Piszkesteto**	**121.06**	**324**		IAMs_20	IAMs_20	11 56 15.5		
	comp=Z,18µm,21.0s								
Y52A	**Lilburn**	**121.09**	**54**		PKPdf	**PKiKP**	**11 03 53.4**	**+0.8**	
Y52A					IAMs_20	IAMs_20	11 52 21.2		
	comp=Z,18µm,21.0s								
CHGQ	**Chibougamau**	**121.09**	**33**		P		11 03 52.0		
	baz=303,SNR=27								
BZS	**Buzias**	**121.13**	**321**	⇑	P	**PKiKP**	**11 03 52.3**	**+0.1**	
BZS	**Buzias**	**121.13**	**321**	⇑	PKiKP	**PKiKP**	**11 03 52.3**	**+0.1**	
M53A	**WI Miller and**	**121.14**	**44**		IAMs_20	IAMs_20	11 53 22.7		
	comp=Z,18µm,20.0s								
M53A	**WI Miller and**	**121.14**	**44**		P		11 03 52.6		
	baz=293,SNR=16								
KAVA	**Kavala**	**121.14**	**315**		P	**PKPdf**	**11 03 52.0**	**-0.3**	
G54A	**Lake Saint Pet**	**121.18**	**39**		P		11 03 52.6		
	baz=297,SNR=36								
O53A	**New Philadelph**	**121.21**	**46**		IAMs_20	IAMs_20	11 56 05.9		
	comp=Z,16µm,20.0s								
O53A	**New Philadelph**	**121.21**	**46**		P		11 03 53.1		
	baz=292,SNR=16								
L53A	**Girard**	**121.22**	**43**		P		11 03 52.5		
	baz=293,SNR=9.2								
H53A	**Bobcaygeon**	**121.24**	**40**		P		11 03 53.0		
	baz=296,SNR=30								
TGUH	**Tegucigalpa,Un**	**121.26**	**77**		IAMs_20	IAMs_20	11 47 47.2		
	comp=Z,15µm,20.0s								
ERPA	**Erie**	**121.34**	**43**			**PKiKP**	**11 03 53.0**	**+0.2**	
ERPA					IAMs_20	IAMs_20	11 55 54.2		
	comp=Z,18µm,19.0s								
ERPA	**Erie**	**121.34**	**43**		P		11 03 53.5		
	baz=294,SNR=8.4								
R53A	**Hurricane**	**121.35**	**48**		IAMs_20	IAMs_20	11 53 03.7		
	comp=Z,21µm,20.0s								
P53A	**Whipple**	**121.36**	**47**		IAMs_20	IAMs_20	11 50 29.8		
	comp=Z,18µm,22.0s								
VYHS	**Vyhne**	**121.37**	**325**		*e*PKiKP	**PKiKP**	**11 03 53.1**	**+0.4**	
VYHS					*e*		11 05 25.2		
VYHS					*e*		11 15 11.6		
VYHS					MLR	MLR			
	comp=Z,34µm,23.3s								
VYHS	**Vyhne**	**121.37**	**325**		*e*PKP	**PKiKP**	**11 03 53.1**	**+0.4**	
VYHS					*e*PP	**PP**	**11 05 25.2**	**+1.4**	
VYHS					*e*		11 15 11.6		
VYHS					*e*SS	SS	11 22 30.2	+36	
VYHS					*e*L	L	11 55 37.8		
VTS	**Vitosha**	**121.38**	**317**	⇓	P	**PKiKP**	**11 03 53.2**	**+0.1**	
VTS	**Vitosha**	**121.38**	**317**	⇓	PKiKP	**PKiKP**	**11 03 53.2**	**+0.1**	
VTS	**Vitosha**	**121.38**	**317**		IAMs_20	IAMs_20	12 01 25.7		
	comp=Z,14µm,20.0s								
MORC	**Moravsky Berou**	**121.40**	**327**	⇑	P	**PKiKP**	**11 03 53.4**	**+0.6**	
MORC	**Moravsky Berou**	**121.40**	**327**	⇑	*i*PKP	**PKiKP**	**11 03 53.3**	**+0.6**	
MORC					*e*PP	**PP**	**11 05 24.4**	**+0.4**	
MORC					*e*		11 08 17.1		
MORC					*e*PS	PKKPdf	11 15 16.4	+47	
MORC					*e*SS	SS	11 22 44.8	+50	
MORC	**Moravsky Berou**	**121.40**	**327**		PKiKP	**PKiKP**	**11 03 53.0**	**+0.2**	
MORC					MLR	MLR			
	comp=Z,33µm,22.0s								
MORC	**Moravsky Berou**	**121.40**	**327**		PKPdf	**PKiKP**	**11 03 53.0**	**+0.2**	
ALLY	**Alegheny Colle**	**121.42**	**44**		IAMs_20	IAMs_20	11 49 37.4		
	comp=Z,21µm,22.0s								
MDVR	**Moldovita**	**121.45**	**320**	⇓	P	**PKiKP**	**11 03 53.3**	**+0.3**	
NVR	**Nevrokopi**	**121.46**	**316**		P	**PKPdf**	**11 03 52.4**	**-0.6**	
KSP	**Ksiaz**	**121.47**	**329**		*e*Pdif	**Pdif**	**11 00 20.1**	**+0.1**	
KSP					*e*PKP	**PKiKP**	**11 03 53.1**	**+0.4**	
KSP					*e*PP	**PP**	**11 05 23.9**	**-0.4**	
KSP					*e*		11 15 15.1		
KSP					*e*SS	SS	11 22 52.6	+58	
KSP					*e*L	L	11 56 37.2		
	comp=Z,38µm,22.8s								
KSP	**Ksiaz**	**121.47**	**329**		*e*PKiKP	**PKiKP**	**11 03 53.6**	**+0.8**	
KSP					*e*PP	**PP**	**11 05 23.9**	**-0.4**	
KSP					*e*PS	PKKPdf	11 15 20.2	+51	
KSP					*e*L	L	11 56 50.0		
	comp=Z,38µm,22.8s								
CRIN	**San Cristobal**	**121.52**	**78**			**PKiKP**	**11 03 54.7**	**+0.7**	
CRIN					IAMs_20	IAMs_20	11 44 41.2		
	comp=Z,17µm,22.0s								
KRLC	**Kraliky**	**121.65**	**328**		*i* P	**Pdif**	**11 00 21.2**	**+0.3**	
KRLC					*e*		11 03 53.9		
KRLC					MLR	MLR			
	comp=Z,36µm,21.2s								
KRLC	**Kraliky**	**121.65**	**328**		*e*PDIFF	**Pdif**	**11 00 21.2**	**+0.3**	
KRLC					*e*PKPDF	**PKiKP**	**11 03 53.9**	**+0.7**	
KRLC					AMS	AMS	11 57 10.0		
	comp=Z,36µm,21.2s								
OSTC	**Ostas**	**121.67**	**328**		*e*PKP	**PKiKP**	**11 03 53.9**	**+0.7**	
OSTC					AMS	AMS	11 56 20.0		
	comp=Z,37µm,21.6s								
GOGA	**Godfrey**	**121.69**	**54**		P		11 03 54.6		
	baz=286,SNR=12								
553A	**Crawfordville**	**121.70**	**58**		IAMs_20	IAMs_20	11 55 18.9		
	comp=Z,18µm,19.0s								
DPC	**Dobruska-Polom**	**121.73**	**328**		*e*PKiKP	**PKiKP**	**11 03 54.1**	**+0.7**	
DPC					MLR	MLR			
	comp=Z,32µm,21.7s								
DPC	**Dobruska-Polom**	**121.73**	**328**		*e*PKPDF	**PKiKP**	**11 03 54.1**	**+0.7**	
DPC					AMS	AMS	11 56 10.0		
	comp=Z,32µm,21.7s								
CHVC	**Chvalec**	**121.74**	**328**		*e*PKPDF	**PKiKP**	**11 03 54.3**	**+0.9**	
CHVC					AMS	AMS	11 56 30.0		
	comp=Z,38µm,22.2s								
RUE	**Ruedersdorf**	**121.74**	**331**		*e*PKPdf	**PKiKP**	**11 03 54.1**	**+0.9**	
	baz=53,slow=1.9								
SRS	**Serrai**	**121.74**	**316**		P	**PKPdf**	**11 03 52.4**	**-1.1**	
J54A	**Appleton**	**121.77**	**41**		IAMs_20	IAMs_20	11 50 25.3		
	comp=Z,23µm,22.0s								
OUR	**Ouranopolis**	**121.77**	**315**		P	**PKPdf**	**11 03 52.6**	**-0.9**	
APE	**Apeiranthos**	**121.79**	**311**	⇓	P	**PKPdf**	**11 03 53.5**	**-0.2**	
APE	**Apeiranthos**	**121.79**	**311**	⇓	PKiKP	**PKPdf**	**11 03 53.5**	**-0.2**	
N54A	**Moraine State**	**121.80**	**44**		IAMs_20	IAMs_20	11 56 36.4		
	comp=Z,19µm,20.0s								
N54A	**Moraine State**	**121.80**	**44**		P		11 03 54.2		
	baz=293,SNR=17								
UPC	**Upice**	**121.81**	**328**		*i* P	**Pdif**	**11 00 22.1**	**+0.6**	
UPC					*e*		11 03 54.0		
UPC					*e*SP	SP	11 15 19.6	+5.9	
UPC					MLR	MLR			
	comp=Z,39µm,22.0s								
UPC	**Upice**	**121.81**	**328**		*e*PDIFF	**Pdif**	**11 00 22.1**	**+0.6**	
UPC					*e*PKPDF	**PKiKP**	**11 03 54.0**	**+0.5**	
UPC					*e*SP	SP	11 15 19.6	+5.9	
UPC					AMS	AMS	11 56 40.0		
	comp=Z,39µm,22.0s								
M54A	**Oil Creek Stat**	**121.81**	**44**		IAMs_20	IAMs_20	11 54 49.6		
	comp=Z,21µm,21.0s								
M54A	**Oil Creek Stat**	**121.81**	**44**		P		11 03 54.1		
	baz=294,SNR=26								
O54A	**Avella**	**121.83**	**45**			**PKiKP**	**11 03 53.9**	**+0.1**	
O54A					IAMs_20	IAMs_20	11 57 29.1		
	comp=Z,19µm,19.0s								
JAVC	**Velka Javorina**	**121.83**	**326**	⇑	*i*PKP	**PKiKP**	**11 03 55.0**	**+1.3**	
JAVC					*e*PP	**PP**	**11 05 29.0**	**+2.0**	
JAVC					*e*		11 08 21.1		
JAVC					*e*PS	**PS**	**11 15 21.2**	**-0.4**	
JAVC					*e*SS	SS	11 22 44.8	+45	
DELO	**Deloro Mine**	**121.88**	**40**		IAMs_20	IAMs_20	11 58 14.1		
	comp=Z,20µm,20.0s								
E55A	**Montcerf-Lytto**	**121.93**	**37**		P		11 03 54.2		
	baz=300,SNR=13								
MEDO	**Medina**	**121.94**	**42**		IAMs_20	IAMs_20	11 52 13.8		
	comp=Z,19µm,20.0s								
Q54A	**Coxs Mills**	**121.94**	**47**		IAMs_20	IAMs_20	12 01 45.2		
	comp=Z,17µm,18.0s								
BOVS	**Bovan**	**121.96**	**319**	⇓	P	**PKPdf**	**11 03 53.4**	**-0.4**	
PLVO	**Plevna**	**121.98**	**39**		PKPdf	**PKPdf**	**11 03 53.9**	**+0.1**	
PLVO					IAMs_20	IAMs_20	11 58 50.7		
	comp=Z,19µm,20.0s								
BI02	**San Fabin de**	**121.99**	**140**		IAMs_20	IAMs_20	11 47 54.7		
	comp=Z,15µm,20.0s								
D55A	**Sainte-Anne-du**	**121.99**	**36**		P		11 03 54.1		
	baz=300,SNR=31								
SANT	**Santorini**	**122.07**	**310**	⇓	P	**PKPdf**	**11 03 53.6**	**-0.7**	
THR3	**Thira Island,**	**122.10**	**310**		P	**PKPdf**	**11 03 53.0**	**-1.3**	
TIGA	**Tifton**	**122.11**	**56**			**PKiKP**	**11 03 54.8**	**+0.2**	
TIGA					IAMs_20	IAMs_20	11 54 52.4		
	comp=Z,13µm,21.0s								
TIGA	**Tifton**	**122.11**	**56**		P		11 03 55.6		
	baz=285,SNR=10.0								
SMOL	**Smolenice**	**122.16**	**326**		*e*PKiKP	**PKiKP**	**11 03 55.6**	**+1.4**	
SMOL					*e*		11 05 30.7		
SMOL	**Smolenice**	**122.16**	**326**		*e*PKP	**PKiKP**	**11 03 55.6**	**+1.4**	
SMOL					*e*PP	**PP**	**11 05 30.7**	**+1.6**	

VRAC	**Vranov**	**122.18**	**327**	⇓	P	**PKiKP**	**11 03 55.2**	**+0.9**	
VRAC	**Vranov**	**122.18**	**327**	⇑	*i*PKP	**PKiKP**	**11 03 54.4**	**+0.1**	
VRAC					*e*PP	**PP**	**11 05 30.2**	**+1.0**	
VRAC					*e*		11 08 24.1		
VRAC					*e*PS	**PS**	**11 15 21.8**	**-2.8**	
VRAC					*e*SS	SS	11 22 57.3	+53	
VRAC	**Vranov**	**122.18**	**327**	⇓	PKiKP	**PKiKP**	**11 03 55.2**	**+0.9**	
154A	**Montrose**	**122.19**	**55**		IAMs_20	IAMs_20	11 50 14.7		
	comp=Z,23µm,22.0s								
KNT	**Kendrikon**	**122.20**	**316**		P	**PKPdf**	**11 03 53.7**	**-0.7**	
KARY	**Karystos**	**122.28**	**312**		P	**PKPdf**	**11 03 54.2**	**-0.4**	
HORT	**Hortiatis**	**122.29**	**315**		P	**PKPdf**	**11 03 53.3**	**-1.3**	
NPS	**Neapolis**	**122.30**	**309**		P	**PKiKP**	**11 03 55.3**	**+0.4**	
MODS	**Modra-Piesok**	**122.32**	**326**		*e*PKiKP	**PKPdf**	**11 03 54.5**	**+0.1**	
MODS					*e*		11 05 29.5		
MODS					*e*		11 15 29.5		
MODS					MLR	MLR			
	comp=Z,42µm,23.0s								
MODS	**Modra-Piesok**	**122.32**	**326**		*e*PKP	**PKPdf**	**11 03 54.5**	**+0.1**	
MODS					*e*PP	**PP**	**11 05 29.5**	**-0.7**	
MODS					*e*		11 15 29.5		
MODS					*e*SS	SS	11 22 48.4	+42	
MODS					*e*SSS	SSS	11 27 08.6		
MODS					*e*L	L	11 56 17.3		
BSEG	**Bad Segeberg**	**122.37**	**334**		*e*PKPdf	**PKiKP**	**11 03 55.1**	**+0.6**	
	baz=53,slow=1.9								
D56A	**ZEC Mazanza, M**	**122.40**	**36**		P		11 03 55.0		
	baz=301,SNR=36								
MCWV	**Mont Chateau**	**122.40**	**46**		P		11 03 55.8		
	baz=292								
HODGE	**Hodges**	**122.42**	**53**		IAMs_20	IAMs_20	11 52 24.4		
	comp=Z,19µm,22.0s								
KRUC	**Moravsky**	**122.42**	**327**	⇑	*i*PKP	**PKiKP**	**11 03 54.8**	**+0.1**	
KRUC					*e*PP	**PP**	**11 05 31.5**	**+0.6**	
KRUC					*e*		11 08 27.0		
KRUC					*e*PS	PKKPdf	11 15 24.2	+57	
KRUC					*e*SS	SS	11 22 50.5	+43	
LAST	**Lasithi**	**122.44**	**309**		P	**PKiKP**	**11 03 55.5**	**+0.2**	
M55A	**Ridgway**	**122.44**	**43**		IAMs_20	IAMs_20	11 55 28.3		
	comp=Z,21µm,21.0s								
FRGS	**Fruska Gora**	**122.47**	**321**	⇓	P	**PKiKP**	**11 03 55.0**	**+0.1**	
FRGS	**Fruska Gora**	**122.47**	**321**	⇑	*i*P	**PKPdf**	**11 03 54.7**	**-0.1**	
MMNY	**Mt. Morris Dam**	**122.48**	**42**		IAMs_20	IAMs_20	11 49 10.3		
	comp=Z,22µm,22.0s								
E56A	**St. Veronique**	**122.49**	**37**		P		11 03 55.1		
	baz=301,SNR=18								
ZST	**Bratislava**	**122.51**	**326**		*e*PKiKP	**PKiKP**	**11 03 56.2**	**+1.3**	
ZST					*e*		11 05 33.1		
ZST	**Bratislava**	**122.51**

K56A Middlesex 122.89 42 P 11 03 55.8
baz=296,SNR=16

255A Hazlehurst 122.89 55 **PKiKP** **11 03 56.9 +0.7**
255A IAMs_20 IAMs_20 11 57 24.3
comp=Z,11µm,19.0s

LIT Litokhoron 122.91 315 P **PKPdf** **11 03 55.0 -0.8**

FBE Freiberg 122.91 330 *e*PKPdf **PKiKP** **11 03 56.2 +0.5**
baz=53,slow=1.9

J56A Wolcott 122.93 41 P 11 03 55.9
baz=297,SNR=34

TEKS Tekeris 122.94 321 *e*P **PKiKP** **11 03 55.9 0.0**

L56A Greenwood 122.98 42 IAMs_20 IAMs_20 11 56 54.4
comp=Z,17µm,19.0s

L56A Greenwood 122.98 42 P 11 03 56.2
baz=296,SNR=28

N56A West Decatur 122.99 44 P 11 03 56.5
baz=294,SNR=19

SIVA Sivas 123.00 309 P **PKiKP** **11 03 57.2 +0.9**

FLTG Flechtingen 123.03 332 *e*PKPdf **PKiKP** **11 03 56.4 +0.6**
baz=53,slow=1.9

VILL Villia 123.06 313 P **PKPdf** **11 03 54.9 -1.3**

O56A Blue Knob Stat 123.07 45 **PKPdf** **11 03 56.3 +0.2**
O56A IAMs_20 IAMs_20 11 56 13.9
comp=Z,18µm,20.0s

O56A Blue Knob Stat 123.07 45 P 11 03 56.8
baz=294,SNR=28

F57A Harrington 123.07 37 P 11 03 56.6
baz=300

ATAL Atalanti 123.08 313 P **PKPdf** **11 03 55.4 -0.7**

LKR Lokris 123.11 313 P **PKPdf** **11 03 55.1 -1.1**

Q56A Snyder Ridge, 123.11 46 IAMs_20 IAMs_20 11 59 07.3
comp=Z,20µm,20.0s

Q56A Snyder Ridge, 123.11 46 P 11 03 56.5
baz=293,SNR=18

ORTG Ortega, Santa 123.12 81 IAMs_20 IAMs_20 11 45 50.2
comp=Z,15µm,22.0s

PRNS Prines Rethymn 123.13 309 P **PKiKP** **11 03 57.5 +1.0**

BUEV Buena Vista 123.17 81 *e*P **PKiKP** **11 03 59.2 +2.0**

P56A Dayton Farm, R 123.18 46 P 11 03 57.3
baz=293,SNR=22

R56A Bull Pasture M 123.19 47 P 11 03 57.0
baz=292,SNR=17

G57A Newington 123.25 38 P 11 03 56.5
baz=300,SNR=26

H57A Richville 123.31 39 P 11 03 57.1
baz=299,SNR=20

KZN Kozani 123.33 316 P **PKPdf** **11 03 56.4 -0.3**

BBLS Lazići 123.34 320⇑ *i*P **PKiKP** **11 03 56.9 +0.1**

PBCC Pribram 123.34 329 *e*PKPDF **PKiKP** **11 03 57.4 +0.9**

S56A Natural Bridge 123.34 48 P 11 03 57.3
baz=291,SNR=7.5

VAM Vamos 123.35 309 P **PKiKP** **11 03 57.4 +0.4**

CONA Conrad Observa 123.35 326 *i* P **PKPdf** **11 03 56.6 +0.1**
comp=Z,63nm,1.1s,SNR=32

CONA *e*P **PP** **11 05 39.0 +1.7**
comp=Z,27nm,1.5s

CONA *e*P **P'P'df** **11 22 36.4 +1.2**
comp=Z,1.3nm,0.8s

LATQ La Tuque 123.36 35 P 11 03 57.1
baz=303,SNR=9.3

LTK Loutraki 123.36 313 P **PKPdf** **11 03 55.3 -1.4**

ACON Acoyapa 123.37 79 IAMs_20 IAMs_20 11 46 58.2
comp=Z,14µm,22.0s

SSPA Standing Stone 123.39 44 **PKiKP** **11 03 56.9 0.0**

SSPA Standing Stone 123.39 44 P 11 03 57.4
baz=295

I57A Carthage 123.39 40 P 11 03 56.9
baz=299,SNR=36

K57A Scipio Center 123.40 41 P 11 03 57.0
baz=297,SNR=22

CUI Cuipilapa 123.41 81 *e*P **PKPdf** **11 03 56.6 -0.8**

FNA Florina 123.41 316 P **PKPdf** **11 03 56.0 -0.8**

FNA Florina 123.41 316 PKIKP **PKPdf** **11 03 55.7 -1.0**

FNA Florina 123.41 316 PKPdf **PKPdf** **11 03 55.7 -1.0**
FNA IAMs_20 IAMs_20 12 01 02.5
comp=Z,16µm,22.0s

ASSE Asse, Remlinge 123.42 332 *e*PKPdf **PKiKP** **11 03 57.2 +0.7**
baz=53,slow=1.9

J57A Williamstown 123.43 40 IAMs_20 IAMs_20 11 59 11.1
comp=Z,20µm,20.0s

J57A Williamstown 123.43 40 P 11 03 57.1
baz=298,SNR=15

NRDL Niedersach Rie 123.44 333 *e*PKPdf **PKiKP** **11 03 57.3 +0.8**
baz=53,slow=1.9

AGG Agios Georgios 123.45 314 P **PKPdf** **11 03 56.0 -0.9**

D58A Chemin du LacG 123.46 35 P 11 03 56.9
baz=303,SNR=19

THL Klokotos Trika 123.46 315 P **PKPdf** **11 03 55.8 -1.0**

CAO2 Cobano, Puntar 123.47 82 IAMs_20 IAMs_20 11 46 35.7
comp=Z,12µm,21.0s

RUDO Rudo 123.48 320 *e*P **PKPdf** **11 03 56.2 -0.6**

IVA Berane 123.49 319⇑ *i*PKP **PKiKP** **11 03 57.1 0.0**

656A Willston 123.50 58 IAMs_20 IAMs_20 11 55 48.5
comp=Z,14µm,20.0s

IMMV Iera Moni Meta 123.50 309 P **PKiKP** **11 03 57.6 +0.3**

NEUB Neuenburg 123.51 331 *e*PKPdf **PKiKP** **11 03 57.5 +0.8**
baz=53,slow=1.9

NEUB *ep*PKPdf **pPKPdf** **11 04 12.0 -1.2**
baz=50,slow=1.9

L57A Andrews Acres 123.51 42 P 11 03 57.4
baz=296,SNR=22

HAPS Han Pijesak,Bl 123.52 321 *e*P **PKPdf** **11 03 56.4 -0.6**

F58A St-Lin Laurent 123.57 37 P 11 03 58.1
baz=301

N57A Milroy 123.57 44 P 11 03 57.6
baz=295,SNR=30

PVY Plav 123.57 319 *e*PKP **PKiKP** **11 03 57.3 -0.1**

456A Hilliard 123.59 57 IAMs_20 IAMs_20 11 57 26.7
comp=Z,12µm,20.0s

MAKR Makrakomi, Fth 123.59 314 P **PKiKP** **11 03 57.5 +0.1**

PLE Pljevlja 123.60 320 *e*PKP **PKPdf** **11 03 57.0 -0.1**

M57A Sunshine Farm, 123.61 43 P 11 03 58.0
baz=296,SNR=30

JTS Las Juntas de 123.62 81 PKP **PKiKP** **11 03 58.9 +0.8**
comp=Z,22nm,0.4s,baz=239,slow=1.3,SNR=43

JTS Las Juntas de 123.62 81 PKIKP **PKPdf** **11 03 58.0 +0.2**

JTS Las Juntas de 123.62 81⇑ *i*P **PKiKP** **11 03 58.8 +0.7**

JTS Las Juntas de 123.62 81 PKPdf **PKPdf** **11 03 58.0 +0.2**

JTS Las Juntas de 123.62 81 IAMs_20 IAMs_20 11 49 44.7
comp=Z,13µm,20.0s

JTS Las Juntas de 123.62 81 *e*P **PKPdf** **11 03 57.4 -0.4**

E58A La Victoria 123.62 36 P 11 03 57.4
baz=302,SNR=23

BEHE Becsehely 123.63 324⇑ *i*P **PKiKP** **11 03 59.5 +2.3**

MT01 Popeta 123.64 137 **PKiKP** **11 03 58.0 +0.4**
MT01 IAMs_20 IAMs_20 11 49 24.9
comp=Z,13µm,20.0s

PHP Peshkopia 123.66 318 P **PKPdf** **11 03 56.8 -0.4**

Q57A Strasburg 123.67 46 P 11 03 58.0
baz=293,SNR=13

TANN Tannenbergstha 123.67 330 *e*PKPdf **PKiKP** **11 03 57.6 +0.4**
baz=53,slow=1.9

CKRC Cesky Krumlov 123.69 328 *e*PDIFF **Pdif** **11 00 30.2 +0.2**
CKRC AMS AMS 11 57 50.0
comp=Z,47µm,21.6s

BIRD Birdtown, Kers 123.70 52 **PKiKP** **11 03 58.1 +0.4**

WERD Werda 123.73 330 *e*PKPdf **PKiKP** **11 03 57.7 +0.4**
baz=53,slow=1.9

WERD *ep*PKPdf **pPKPdf** **11 04 12.5 -1.2**
baz=50,slow=1.9

LONY Lake Ozonia 123.74 38 IAMs_20 IAMs_20 11 52 37.1
comp=Z,19µm,22.0s

LONY Lake Ozonia 123.74 38 P 11 03 57.8
baz=300,SNR=40

O57A Amberson 123.74 44 P 11 03 57.9
baz=295,SNR=34

KOME Kolasin 123.74 319 *e*PKP **PKPdf** **11 03 57.2 -0.2**

CLZ Clausthal 123.76 332 *e*PKPdf **PKiKP** **11 03 58.4 +1.1**
baz=53,slow=1.9

KPRO Kipourio 123.76 315 P **PKPdf** **11 03 57.5 0.0**

MLA1 Latheron 123.76 345 *e*P **PKiKP** **11 03 57.4 +0.3**

GUNZ Gunzen 123.77 330 *e*PKPdf **PKiKP** **11 03 57.8 +0.4**
baz=53,slow=1.9

GUNZ *ep*PKPdf **pPKPdf** **11 04 12.6 -1.2**
baz=50,slow=1.9

P57A Homestead Farm 123.77 45 IAMs_20 IAMs_20 11 51 49.7
comp=Z,22µm,21.0s

P57A Homestead Farm 123.77 45 P 11 03 58.0
baz=294,SNR=13

PLN Plauen 123.78 330 *e*PKPdf **PKiKP** **11 03 57.8 +0.4**
baz=53,slow=1.9

PLN *ep*PKPdf **pPKPdf** **11 04 12.6 -1.2**
baz=50,slow=1.9

G58A Ormstown 123.79 38 P 11 03 57.3
baz=301,SNR=14

WERN Wernitzgruen 123.80 330 *e*PKPdf **PKiKP** **11 03 57.9 +0.4**
baz=53,slow=1.9

WERN *ep*PKPdf **pPKPdf** **11 04 12.6 -1.3**
baz=50,slow=1.9

ARE1 Arenal 1 123.85 81 *e*P **PKiKP** **11 03 58.8 +0.2**

CEDE Laguna Cedeo 123.86 81 *e*P **PKPdf** **11 03 58.4 +0.1**

VLI Veliai 123.86 311 P **PKPdf** **11 03 56.5 -1.2**

EVR Evrytania 123.86 314 P **PKPdf** **11 03 57.7 0.0**

MT09 Talagante 123.87 137 IAMs_20 IAMs_20 11 49 12.0
comp=Z,14µm,21.0s

TRIZ Trizonia 123.89 313 P **PKPdf** **11 03 57.5 -0.1**

KHC Kasperske Hory 123.89 328 *e*PDIFF **Pdif** **11 00 19.1 -12**

KHC *e*PKPDF **PKiKP** **11 03 58.1 +0.4**

KHC *ep*PKP **pPKPdf** **11 04 10.0 -4.1**

KHC AMS AMS 11 58 40.0
comp=Z,37µm,20.7s

ANX Ano Chora 123.91 314 P **PKiKP** **11 03 58.2 +0.1**

ARSA Arzberg 123.92 325 *i* P **PKPdf** **11 03 57.3 -0.2**
comp=Z,44nm,1.4s,SNR=13

ARSA *e*P **PP** **11 05 41.0 -0.1**
comp=Z,11nm,1.2s

ARSA *e*S **SKiKP** **11 07 30.0 +0.7**
comp=Z,8.1nm,1.2s

MOX Moxa 123.95 331 *e*PKPdf **PKiKP** **11 03 57.9 +0.1**
baz=53,slow=1.9

MOX *e*L L 11 59 36.2
comp=Z,28µm,21.2s

KOGS Kog 123.95 324 *e*PKPdf **PKPdf** **11 03 57.5 -0.1**

KOGS *e*PP **PP** **11 05 41.0 -0.3**

KOGS *e* 11 11 16.7

KOGS *e* 11 12 48.4

I58A Old Forge 123.95 40 P 11 03 58.2
baz=299,SNR=20

KLV Kalavryta, Ach 123.95 313 P **PKPdf** **11 03 57.6 -0.3**

K58A Earlville 123.96 41 **PKPdf** **11 03 57.8 +0.1**

K58A Earlville 123.96 41 P 11 03 58.3
baz=298,SNR=32

Y57A Sumter 123.96 52 **PKiKP** **11 03 59.1 +0.9**

Y57A IAMs_20 IAMs_20 11 56 15.1
comp=Z,14µm,20.0s

UPM Unac-Piva 123.97 320 *e*P **PKPdf** **11 03 57.4 -0.5**

UPM Unac-Piva 123.97 320 *e*PKP **PKPdf** **11 03 57.5 -0.5**

BINY Binghamton 124.00 42 **PKPdf** **11 03 56.4 -1.4**

BINY Binghamton 124.00 42 P 11 03 58.2
baz=297

GEC2 GERESS Array S 124.00 328 *e*PKPdf **PKiKP** **11 03 58.5 +0.6**
baz=53,slow=1.9

GERES GERESS Array B 124.00 328 Pdiff **Pdif** **11 00 29.6 -1.8**
comp=Z,0.2nm,0.3s,baz=2.7,slow=4.1,SNR=1.9

GERES PKP **PKiKP** **11 03 58.2 +0.3**
comp=Z,44nm,0.6s,baz=82,slow=2.8,SNR=148

GERES PKKPbc **PKKPbc** **11 13 45.8 +0.6**
comp=Z,0.4nm,0.4s,baz=145,slow=28,SNR=4.4

GERES GERESS Array B 124.00 328 PKIKP **PKPdf** **11 03 57.3 -0.4**

GERES GERESS Array B 124.00 328 **PKPdf** **11 03 57.2 -0.4**

LAKA Lakka 124.00 313 P **PKPdf** **11 03 57.8 -0.1**

E59A St. Maurice 124.01 36 P 11 03 58.1
baz=303

VLX Vlachokerasia 124.04 312 P **PKPdf** **11 03 58.3 +0.2**

257A Skidaway Islan 124.06 55 IAMs_20 IAMs_20 11 52 03.2
comp=Z,17µm,21.0s

H58A Gabriels 124.09 38 P 11 03 58.3
baz=300,SNR=57

D59A Saint-Raymond 124.11 35 P 11 03 58.4
baz=304,SNR=5.6

N58A Sunbury 124.11 43 IAMs_20 IAMs_20 11 50 48.4
comp=Z,20µm,22.0s

N58A Sunbury 124.11 43 P 11 03 58.8
baz=296,SNR=32

PDG Podgorica 124.11 319 ⇓ *i*P **PKPdf** **11 03 58.1 +0.2**

PDG Podgorica 124.11 319⇑ *i*P **PKPdf** **11 03 57.7 -0.2**

PDG Podgorica 124.11 319 IAMs_20 IAMs_20 11 58 41.8
comp=Z,20µm,22.0s

TTG Podgorica 124.11 319 *e*PKP **PKPdf** **11 03 57.7 -0.2**

MANZ Manzenberg 124.12 330 *e*PKPdf **PKiKP** **11 03 58.4 +0.3**
baz=53,slow=1.9

MANZ *ep*PKPdf **pPKPdf** **11 04 13.2 -1.2**
baz=50,slow=1.9

GTTG Gottingen 124.14 332 *e*PKPdf **PKiKP** **11 03 58.6 +0.6**
baz=53,slow=1.9

GTTG *ep*PKPdf **pPKPdf** **11 04 13.4 -1.0**
baz=50,slow=1.9

NKME Niksic 124.15 319⇑ *i*PKP **PKPdf** **11 03 57.8 -0.3**

L58A Harry Jones Me 124.16 42 P 11 03 58.7
baz=297,SNR=21

PVO Paravola 124.19 314 P **PKiKP** **11 03 58.7 +0.2**

F59A Saint Guilaume 124.19 36 P 11 03 58.6
baz=302,SNR=11

ROTZ Rotzenmuhle 124.21 329 *e*PKPdf **PKiKP** **11 03 58.4 +0.2**
baz=53,slow=1.9

ROTZ *ep*PKPdf **pPKPdf** **11 04 13.3 -1.4**
baz=50,slow=1.9

Q58A Fox Den Farm, 124.23 46 P 11 03 58.7
baz=294,SNR=22

FRNY Flat Rock 124.24 38 PKPdf **PKPdf** **11 03 57.7 -0.5**

FRNY IAMs_20 IAMs_20 11 53 13.3
comp=Z,20µm,21.0s

JAN Janina 124.24 315 P **PKiKP** **11 03 59.5 +0.8**

WET Wettzell 124.25 329 *e*PKPdf **PKiKP** **11 03 58.6 +0.2**
baz=53,slow=1.9

WET *ep*PKPdf **pPKPdf** **11 04 13.6 -1.2**
baz=50,slow=1.9

MT05 Renca 124.26 137 IAMs_20 IAMs_20 11 49 33.4
comp=Z,12µm,20.0s

DRME Dracevica, Mon 124.27 319⇑ *i*P **PKPdf** **11 03 58.2 -0.1**

DRME Dracevica, Mon 124.27 319 *e*PKP **PKPdf** **11 03 58.2 -0.1**

H59A Cadyville 124.27 38 P 11 03 58.6
baz=301,SNR=13

O58A Lewisberry 124.27 44 P 11 03 58.8
baz=295,SNR=25

CEME Cevo 124.28 319 *e*PKP **PKPdf** **11 03 57.9 -0.5**

MOA Molln 124.28 327 *i* P **PKPdf** **11 03 57.9 -0.2**
comp=Z,61nm,1.8s,SNR=12

MOA *e*P **PP** **11 05 43.7 +0.2**
comp=Z,14nm,1.4s

MOA *e*S **SKiKP** **11 07 21.8 -8.1**
comp=Z,3.2nm,1.0s

MOA *e*P **PKKPbc** **11 13 44.1 +0.2**
comp=Z,10nm,1.2s

MOA *e*S **SKKPbc** **11 17 23.7 -6.7**
comp=Z,15nm,1.5s

MOA *e*P **P'P'df** **11 22 36.7 +3.4**
comp=Z,1.8nm,0.9s

NCB Newcomb 124.28 39 PKPdf **PKPdf** **11 03 58.1 -0.2**

NCB IAMs_20 IAMs_20 12 06 49.6
comp=Z,12µm,19.0s

BLY Banja Luka 124.29 322⇑ *i*P **PKiKP** **11 03 58.5 0.0**

DRO Drossia 124.31 313 P **PKiKP** **11 03 59.1 +0.3**

MRAK Mrakovica 124.33 323⇑ *i*P **PKiKP** **11 03 59.3 +0.6**

ULC Ulcinj 124.33 318 *e*PKP **PKPdf** **11 03 58.1 -0.4**

BRY Bratogost 124.35 320⇑ *i*P **PKPdf** **11 03 58.0 -0.6**

BRY Bratogost 124.35 320⇑ *i*PKP **PKPdf** **11 03 58.0 -0.6**

V58A Windy Hill, Pi 124.35 50 IAMs_20 IAMs_20 11 54 53.4
comp=Z,21µm,21.0s

J59A Piesco 124.36 40 IAMs_20 IAMs_20 11 59 21.7
comp=Z,19µm,19.0s

J59A Piesco 124.36 40 P 11 03 59.1
baz=299,SNR=41

MT03 Universidad Ad 124.36 137 IAMs_20 IAMs_20 11 49 36.9
comp=Z,12µm,20.0s

MCD Coleburn Disti 124.36 344 *e*P **PKPdf** **11 03 58.0 +0.1**

PAGS Pennsylvania G 124.37 44 IAMs_20 IAMs_20 11 56 36.4
comp=Z,19µm,20.0s

BUM Brajici-Budva 124.41 319 *e*PKP **PKPdf** **11 03 58.7 +0.1**

NHSC New Hope 124.41 53 **PKiKP** **11 04 00.9 +1.8**

NHSC IAMs_20 IAMs_20 12 02 42.3
comp=Z,12µm,19.0s

SOR Soroa 124.42 66 IAMs_20 IAMs_20 11 53 31.4
comp=Z,16µm,22.0s

HDC Heredia 124.44 82 *e*P **PKiKP** **11 04 01.0 +1.1**

HDC Heredia 124.44 82 IAMs_20 IAMs_20 11 45 18.7
comp=Z,13µm,22.0s

ITM Ithomi 124.45 312 P **PKPdf** **11 03 58.4 -0.4**

RLS Riolos of Patr 124.45 313 P **PKiKP** **11 03 59.3 +0.3**

K59A Cooperstown 124.47 41 P 11 03 58.8
baz=299,SNR=20

AMT Artemida-Makis 124.47 312 P **PKPdf** **11 03 58.6 -0.3**

MGRS Mrkonjic Grad 124.52 322 *e*P **PKPdf** **11 03 58.5 -0.2**

SOKA Soboth 124.52 325 *i* P **PKPdf** **11 03 58.5 -0.3**
comp=Z,103nm,1.4s,SNR=49

SOKA *e*P **PP** **11 05 46.1 +0.9**
comp=Z,20nm,1.3s

SOKA *e*S **SKiKP** **11 07 31.7 +1.2**
comp=Z,2.7nm,0.7s

SOKA *e*P **PKKPab** **11 13 40.2 -1.0**
comp=Z,1.0nm,0.6s

SOKA *e*S **SKKPbc** **11 17 22.7 -6.8**
comp=Z,10nm,1.4s

SOKA *e*P **P'P'df** **11 22 29.8 -3.2**
comp=Z,1.3nm,0.5s

LCR2 La Lucha 2 124.56 82⇑ *i*P **PKiKP** **11 04 01.6 +1.4**

TREB Trebinje 124.56 319 *e*P **PKPdf** **11 03 58.3 -0.5**

Y58A Scranton 124.56 52 IAMs_20 IAMs_20 12 03 55.2
comp=Z,13µm,20.0s

I59A Olmsteadville 124.59 39 P 11 03 59.7
baz=300,SNR=40

HCY Herceg Novi 124.60 319⇑ *i*P **PKPdf** **11 03 59.0 +0.1**

HCY Herceg Novi 124.60 319 *e*PKP **PKPdf** **11 03 58.5 -0.4**

UBBA Unterbreizbach 124.61 332 *e*PKPdf **PKiKP** **11 03 59.2 +0.3**
baz=53,slow=1.9

F60A Warwick 124.61 36 P 11 03 59.5
baz=303,SNR=32

IBBN Ibbenburen 124.61 334 *e*PKPdf **PKiKP** **11 03 59.9 +1.0**
baz=53,slow=1.9

IBBN *ep*PKPdf **pPKPdf** **11 04 14.4 -0.9**
baz=50,slow=1.9

L59A Walton 124.62 41 IAMs_20 IAMs_20 11 51 48.8
comp=Z,17µm,21.0s

L59A Walton 124.62 41 P 11 03 59.6
baz=298,SNR=13

RIFO Rio Frio, Sara 124.63 81 *e*P **PKiKP** **11 04 00.1 0.0**

M59A Waymart 124.66 42 P 11 03 59.8
baz=297,SNR=40

D60A Saint Jean D'O 124.67 34 P 11 03 58.8
baz=305,SNR=23

E60A Ste Agathe de 124.69 35 P 11 03 59.5
baz=304,SNR=18

PYL PYLOS 124.69 312 P **PKPdf** **11 03 58.4 -0.9**

RIMA Rio Macho 124.69 82 *e*P **PKiKP** **11 04 00.4 0.0**

O59A Robesonia 124.70 44 P 11 03 59.7
baz=296,SNR=23

N59A State Game Lan 124.72 43 **PKPdf** **11 03 59.4 +0.2**

N59A State Game Lan 124.72 43 P 11 03 59.9
baz=297,SNR=23

TSLK Tsoukalades, L 124.72 314 P **PKiKP** **11 04 00.0 +0.4**

LKD2 Lefkada island 124.74 314 P **PKiKP** **11 03 59.9 +0.2**

NYDR Nydri-Lefkada 124.74 314 P **PKiKP** **11 03 59.7 +0.1**

DWPF Disney Wildern 124.74 59 IAMs_20 IAMs_20 11 54 29.5
comp=Z,15µm,21.0s

CBN Corbin Frederi 124.74 47 **PKiKP** **11 04 00.5 +0.9**

CBN IAMs_20 IAMs_20 12 03 13.4
comp=Z,14µm,19.0s

CBN Corbin Frederi 124.74 47 P 11 04 00.2
baz=294

CRES Cresnjev 124.75 324⇑ *i*P **PKiKP** **11 03 59.4 0.0**

GRF Grafenberg Arr 124.75 330 *e*PKPdf **PKiKP** **11 03 59.5 +0.2**
baz=53,slow=1.9

GRF *ep*PKPdf **pPKPdf** **11 04 14.5 -1.2**
baz=50,slow=1.9

GRF *e*PP **PP** **11 05 50.0 +3.5**
baz=62,slow=5.9

GRF *e*L L 11 59 26.8
comp=Z,24µm,21.4s

GRFO Grafenberg 124.75 330 PKIKP **PKiKP** **11 04 00.3 +1.0**

GRFO MLR MLR
comp=Z,29µm,22.0s

GRFO Grafenberg 124.75 330 PKPdf **PKiKP** **11 04 00.3 +1.0**

MDO Dochfour 124.78 345 *e*P **PKiKP** **11 03 59.1 -0.1**

CDM Cerro de Muert 124.79 82 *e*P **PKiKP** **11 04 01.6 +0.6**

CVTR Volcan Turrial 124.79 82⇑ *i*P **PKiKP** **11 04 01.9 +1.0**

EVGl Lefkada island 124.81 314 P **PKiKP** **11 03 59.7 -0.1**

P59A Jarrettsville 124.83 45 P 11 04 00.1
baz=295,SNR=13

DRAG Dragano-Lefkad 124.84 314 P **PKiKP** **11 03 59.9 +0.1**

G60A Masonville 124.86 37 P 11 03 59.8
baz=302,SNR=13

PEZE Perez Zeledon, 124.88 82 *e*P **PKiKP** **11 04 01.7 +1.0**

PEZE Perez Zeledon, 124.88 82 IAMs_20 IAMs_20 11 47 29.1
comp=Z,14µm,21.0s

OBKA Obir 124.89 325 *i* P **PKPdf** **11 03 58.8 -0.7**
comp=Z,57nm,1.4s,SNR=19

OBKA *e*P **PP** **11 05 47.9 +0.2**
comp=Z,32nm,1.7s

OBKA *e*S **SKSac** **11 10 58.1 -0.7**
comp=Z,10nm,2.1s

OBKA *e*P **PKKPab** **11 13 38.9 -0.7**
comp=Z,9.9nm,1.5s

OBKA *e*S **SKKPbc** **11 17 30.3 +2.0**
comp=Z,16nm,1.7s

OBKA *e*P **P'P'df** **11 22 33.8 +1.5**
comp=Z,2.2nm,0.6s

STON Ston 124.91 320⇑ *i*P **PKPdf** **11 03 57.7 -1.7**

D61A St Aubert, Com 124.92 34 P 11 03 59.8
baz=306,SNR=18

H60A Morristown 124.92 38 P 11 04 00.4
baz=302,SNR=13

ACCN Adirondack Com 124.93 39 IAMs_20 IAMs_20 11 58 47.7
comp=Z,17µm,20.0s

I60A Shoreham 124.93 39 P 11 04 00.4
baz=301,SNR=54

FSK Fiskardo 124.94 314 P **PKPdf** **11 03 59.2 -0.5**

KEK Kerkira 124.95 316 P **PKPdf** **11 03 59.3 -0.4**

VT1 Waterbury 125.01 38 IAMs_20 IAMs_20 11 53 56.0
comp=Z,21µm,21.0s

VLS Valsamata 125.03 314 P **PKPdf** **11 03 59.4 -0.5**

RIOS Rincon, Osa 125.04 83⇑ *i*P **PKiKP** **11 04 02.0 +1.2**

BOJS Bojanci 125.05 324 *e*Pdiff **Pdif** **11 00 36.0 -0.1**

BOJS *i* PKPdf **PKiKP** **11 04 00.1 +0.1**

BOJS *e*PP **PP** **11 05 47.8 -0.9**

BOJS *e* 11 08 29.6

BOJS *e* 11 12 52.8

BOJS *e* 11 15 37.7

BOJS *e* 11 17 17.0

BOJS *e* 11 23 34.8

BOJS *e* 11 28 34.4

KEF5 Kardakata, Kep 125.08 314 P **PKPdf** **11 03 59.8 -0.2**

KASTN Kahler Asten 125.09 333 *e*PKPdf **PKiKP** **11 04 00.4 +0.4**
baz=53,slow=1.9

T59A Double "B" Far 125.09 48 PKPdf **PKiKP** **11 04 00.4 +0.1**

MRVA Moravia de Chi 125.11 82⇑ *i*P **PKiKP** **11 04 02.5 +1.3**

RJOB Jochberg 125.15 327 *e*PKPdf **PKPdf** **11 03 59.8 -0.1**
baz=53,slow=1.9

J60A Lant Hill Farm 125.15 39 P 11 04 00.5
baz=300,SNR=20

K60A Five Rivers En 125.17 40 P 11 04 01.0
baz=299

F61A St Evariste 125.17 35 P 11 04 00.9
baz=304,SNR=26

LJU Ljubljana 125.17 325 *i* PKPdf **PKiKP** **11 04 00.3 0.0**

EDU Dundee 125.18 343 *e*P **PKiKP** **11 04 00.1 +0.2**

N60A Cedar Hill Far 125.19 43 P 11 04 00.5
baz=297,SNR=22

E61A Lac Etchemin 125.20 35 P 11 04 00.9
baz=305,SNR=62

O60A Telford 125.23 43 P 11 04 00.9
baz=297,SNR=23

G61A St-Isidore-de- 125.24 36 P 11 04 00.8
baz=303,SNR=14

KBA Koelnbreinsper 125.24 326 *i* P **PKPdf** **11 03 59.4 -0.8**
comp=Z,64nm,1.1s,SNR=27

KBA *e*P **PP** **11 05 50.6 +0.5**
comp=Z,29nm,1.2s

KBA *e*S **SKiKP** **11 07 25.5 -6.5**
comp=Z,10nm,1.2s

KBA *e*P **PKKPbc** **11 13 40.0 -0.2**
comp=Z,0.5nm,0.5s

KBA *e*S **SKKPbc** **11 17 20.3 -7.0**
comp=Z,9.3nm,1.4s

KBA *e*S **SKKPdf** **11 17 47.0 -6.4**
comp=Z,18nm,1.4s

TRY Troy 125.25 40 IAMs_20 IAMs_20 11 59 58.4
comp=Z,17µm,19.0s

L60A Shokan 125.25 41 P 11 04 01.0
baz=299,SNR=10

P60A Greenville 125.30 44 **PKPdf** **11 04 00.1 -0.3**

P60A IAMs_20 IAMs_20 12 01 37.1
comp=Z,20µm,19.0s

M60A Port Jervis 125.30 42 P 11 04 00.9
baz=298,SNR=12

P60A Greenville 125.30 44 P 11 04 01.0
baz=296,SNR=19

DRK0 Durika 125.30 82 *e*P **PKiKP** **11 04 03.0 +1.3**

DRK0 Durika 125.30 82 **PKiKP** **11 04 03.3 +1.6**

CO02 Combarbal 125.32 134 **PKiKP** **11 04 01.1 -0.1**

MYKA Terra Mystica 125.34 326 *i* P **PKPdf** **11 03 59.7 -0.6**
comp=Z,34nm,0.9s,SNR=9.3

MYKA *e*P **PP** **11 05 50.6 0.0**
comp=Z,13nm,1.1s

MYKA *e*S **PKKPbc** **11 13 40.3 +0.6**
comp=Z,8.9nm,1.2s

MYKA *e*S **SKKPbc** **11 17 30.0 +3.3**
comp=Z,26nm,1.7s

MYKA eP P'P'df 11 22 31.8 +0.4
comp=Z,4.2nm,1.0s
CEY Cerknica 125.40 324 ⇑iP PKPdf 11 04 00.3 -0.1
H61A Lyndonville 125.41 37 P 11 04 01.5
baz=302,SNR=22
ODNJ Ogdensburg 125.43 42 IAMs_20 IAMs_20 12 00 39.2
comp=Z,20µm,20.0s
POTG Potrero Grande 125.43 83 eP PKiKP 11 04 03.5 +1.7
BUG Bochum–Univer 125.44 334 ePKPdf PKiKP 11 04 01.0 +0.5
baz=53,slow=1.9
BUG epPKPdf pPKPdf 11 04 15.5 -1.4
baz=50,slow=1.9
CNNC Cliffs of the 125.48 50 IAMs_20 IAMs_20 12 01 14.4
comp=Z,19µm,19.0s
CNNC Cliffs of the 125.48 50 P 11 04 02.0
baz=291
K61A Williamstown 125.54 40 P 11 04 02.0
baz=300,SNR=32
I61A Oroboro, Fairl 125.55 38 P 11 04 01.9
baz=302,SNR=24
LBNH Lisbon 125.56 38 IAMs_20 IAMs_20 11 54 33.4
comp=Z,21µm,21.0s
LBNH Lisbon 125.56 38 P 11 04 01.8
baz=302,SNR=21
INVG Invergeldie, C 125.58 344 eP PKiKP 11 04 00.7 -0.1
L61A Hillsdale 1, H 125.59 41 P 11 04 01.8
baz=299,SNR=10
ESY Stoneypath 125.60 343 eP PKiKP 11 04 01.2 +0.4
MILB Miltenberg 125.61 331 ePKPdf PKiKP 11 04 01.4 +0.4
baz=53,slow=1.9
MILB epPKPdf pPKPdf 11 04 16.0 -1.2
baz=50,slow=1.9
HNH Hanover 125.62 38 IAMs_20 IAMs_20 12 01 42.1
comp=Z,19µm,20.0s
J61A Chester 125.64 39 P 11 04 01.9
baz=301,SNR=21
061Z Ochoppi 125.71 62 IAMs_20 IAMs_20 11 52 46.4
comp=Z,12µm,22.0s
TNS Taunus Mts 125.75 332 ePKPdf PKiKP 11 04 02.0 +0.7
baz=53,slow=1.9
CO03 El Pedregal 125.75 134 PKPdf PKPdf 11 04 01.6 0.0
N61A South Mountain 125.79 42 P 11 04 02.3
baz=298,SNR=7.9
H62A Milan 125.85 37 P 11 04 02.7
baz=303,SNR=18
BRU2 Volcan 125.85 83 ⇑iP PKiKP 11 04 03.8 +1.1
G62A West of Eustis 125.86 36 P 11 04 02.1
baz=304,SNR=19
M61A Granite Spring 125.88 42 P 11 04 01.8
baz=299,SNR=19
O61A Allentown 125.92 43 P 11 04 02.1
baz=297
060A Indiantown 125.92 60 IAMs_20 IAMs_20 11 56 21.8
comp=Z,15µm,20.0s
Q61A Milford 125.92 45 P 11 04 02.4
baz=296
PAL Palisades 125.93 42 P 11 04 02.5
baz=298,SNR=12
P61A Hammonton 125.94 44 IAMs_20 IAMs_20 12 02 12.1
comp=Z,21µm,20.0s
L61B Northampton 126.02 40 P 11 04 02.4
baz=300,SNR=18
WATA Walderalm 126.05 327 iP PKPdf 11 04 01.6 -0.1
comp=Z,145nm,1.3s,SNR=12
WATA eP PP 11 05 55.4 0.0
comp=Z,18nm,1.0s
WATA eS SKiKP 11 07 29.7 -3.9
comp=Z,13nm,1.0s
WATA eS SKSac 11 11 00.9 -1.6
comp=Z,0.1nm,0.2s
WATA eS Sdif 11 13 51.9 -0.8
comp=Z,3.9nm,0.6s
WATA eS SKKPbc 11 17 17.1 -7.4
comp=Z,4.9nm,0.5s
WTTA Wattenberg 126.06 327 iP PKPdf 11 04 01.8 0.0
comp=Z,3.9nm,0.2s,SNR=28
WTTA eP PP 11 05 55.5 +0.1
comp=Z,31nm,1.4s
WTTA eS SKiKP 11 07 33.3 -0.5
comp=Z,41nm,1.7s
WTTA eS SKSac 11 11 02.3 -0.2
comp=Z,13nm,1.2s
WTTA eS Sdif 11 13 51.4 -1.5
comp=Z,8.5nm,1.0s
WTTA eS SKKPbc 11 17 21.1 -3.4
comp=Z,7.9nm,0.9s
LAWE Loch Awe, Argy 126.09 344 eP PKiKP 11 04 01.9 +0.1
I62A Tamworth 126.12 38 IAMs_20 IAMs_20 11 55 00.1
comp=Z,20µm,21.0s
I62A Tamworth 126.12 38 P 11 04 03.1
baz=303,SNR=17
FFD Franklin Falls 126.14 38 IAMs_20 IAMs_20 12 03 47.7
comp=Z,18µm,21.0s
R61A Willards 126.15 46 IAMs_20 IAMs_20 11 57 25.7
comp=Z,17µm,21.0s
D63A Stockholm 126.16 33 P 11 04 01.7
baz=308,SNR=13
AHRW Bad Neuenahr-A 126.16 333 ePKPdf PKiKP 11 04 02.6 +0.5
baz=53,slow=1.9
J62A Henniker 126.17 39 P 11 04 03.3
baz=302,SNR=19
S61A Accomac 126.18 46 IAMs_20 IAMs_20 12 06 01.6
comp=Z,13µm,19.0s
K62A Royalston 126.20 39 IAMs_20 IAMs_20 12 01 38.3
comp=Z,19µm,19.0s
K62A Royalston 126.20 39 P 11 04 02.8
baz=301,SNR=23
L62A Suffield 126.25 40 IAMs_20 IAMs_20 11 59 00.7
comp=Z,17µm,20.0s
L62A Suffield 126.25 40 P 11 04 02.9
baz=300
V61A Roper 126.27 49 PKPdf 11 04 02.1 -0.2
ESK Eskdalemuir 126.29 343 PKiKP PKPdf 11 04 01.8 +0.1
ESK MLR MLR
comp=Z,15µm,21.0s
ESK Eskdalemuir 126.29 343 PKPdf PKPdf 11 04 01.8 +0.1
ESK Eskdalemuir 126.29 343 IAMs_20 IAMs_20 12 00 40.3
comp=Z,15µm,21.0s
MOTA Moosalm 126.29 328 iP PKPdf 11 04 01.9 -0.3
comp=Z,120nm,0.9s,SNR=17
MOTA eP PP 11 05 57.3 +0.3
comp=Z,39nm,1.5s
MOTA eS SKiKP 11 07 30.9 -3.3
comp=Z,20nm,1.3s
SQTA Sankt Quirin 126.31 328 iP PKPdf 11 04 02.1 -0.1
comp=Z,153nm,1.4s,SNR=14
SQTA eP PP 11 05 56.9 -0.1
comp=Z,27nm,1.4s
SQTA eS SKiKP 11 07 34.3 +0.1
comp=Z,34nm,1.4s
SQTA eS SKSac 11 11 01.0 -2.2
comp=Z,5.7nm,1.0s
SQTA eS Sdif 11 13 50.2 -4.7
comp=Z,9.4nm,1.0s
SQTA eS SKKPbc 11 17 22.0 -1.6
comp=Z,17nm,1.2s
EDMD Edmundbyers 126.32 341 eP PKiKP 11 04 02.5 +0.2
E63A Oxbow 126.36 34 P 11 04 02.5
baz=307,SNR=16
STU Stuttgart 126.36 330 ePKPdf PKiKP 11 04 02.9 +0.3
baz=53,slow=1.9
STU epPKPdf pPKPdf 11 04 17.5 -1.2
baz=50,slow=1.9
RETA Reutte 126.39 328 iP PKPdf 11 04 02.2 -0.1
comp=Z,26nm,0.6s,SNR=15
RETA eP PP 11 05 57.3 -0.2
comp=Z,15nm,1.1s
M62A Hamden 126.39 41 P 11 04 03.0
baz=300,SNR=5.9
F63A Nahmakanta, Br 126.41 35 P 11 04 02.9
baz=306,SNR=18
G63A Kingsbury 126.45 36 P 11 04 03.2
baz=305,SNR=19
H63A New Sharon 126.46 36 P 11 04 03.3
baz=304,SNR=11
I63A Otisfield 126.48 37 P 11 04 03.8
baz=304,SNR=18
PKME Peaks-Kenny Pk 126.55 35 P 11 04 03.5
baz=306,SNR=13
BTNL Ternell 126.55 333 dPKPdf PKiKP 11 04 02.8 -0.1
BTNL dPKiKP PKPdf 11 04 03.5 +1.0
MEM Membach 126.59 334 dPKPdf PKiKP 11 04 03.0 +0.1
MEM dPKiKP PKPdf 11 04 03.5 +1.1
J63A Strafford 126.60 38 P 11 04 03.9
baz=302,SNR=19
BEBN Eben Emael 126.60 334 dPKPdf PKiKP 11 04 03.2 +0.3
UBR Ueberruh 126.61 329 ePKPdf PKiKP 11 04 03.0 -0.2
baz=53,slow=1.9
UBR epPKPdf pPKPdf 11 04 17.9 -1.5
baz=50,slow=1.9
K63A Dunstable 126.63 39 PKiKP 11 04 03.5 +0.3
K63A IAMs_20 IAMs_20 12 02 07.6
comp=Z,16µm,20.0s
K63A Dunstable 126.63 39 P 11 04 04.1
baz=302,SNR=20
MATE Matera 126.64 318 ⇓P PKiKP 11 04 03.2 -0.1
UCCT U. Connecticut 126.65 40 PKiKP 11 04 03.6 +0.3
UCCT IAMs_20 IAMs_20 11 59 30.3
comp=Z,15µm,20.0s
E64A Bridgewater 126.69 33 P 11 04 03.3
baz=308,SNR=13
FETA Feichten 126.69 328 iP PKPdf 11 04 03.3 +0.3
comp=Z,129nm,1.1s,SNR=43
FETA eS SKiKP 11 07 33.1 -1.9
comp=Z,12nm,1.2s
FETA eS SKSac 11 11 04.4 0.0
comp=Z,14nm,1.6s
FETA eS SKKPbc 11 17 40.8 +18
comp=Z,24nm,1.4s
FETA eP P'P'df 11 22 22.5 -6.3
comp=Z,2.1nm,0.7s
HRV Adam Dziewonsk 126.70 39 PKIKP PKiKP 11 04 04.5 +1.1
HRV MLR MLR
comp=Z,19µm,19.0s
HRV Adam Dziewonsk 126.70 39 PKiKP 11 04 04.5 +1.1
HRV Adam Dziewonsk 126.70 39 IAMs_20 IAMs_20 12 02 00.8
comp=Z,19µm,19.0s
HRV Adam Dziewonsk 126.71 39 P 11 04 04.0
baz=302
F64A Sherman 126.73 34 P 11 04 03.5
baz=307,SNR=16
LCO Las Campanas 126.75 132 PKIKP PKiKP 11 04 04.7 +0.4
LCO Las Campanas 126.75 132 PKPdf PKiKP 11 04 04.7 +0.4
ZON Zonda 126.75 136 IAMs_20 IAMs_20 11 50 50.3
comp=Z,12µm,20.0s
NEWG New Galloway 126.77 343 eP PKiKP 11 04 03.1 0.0
BHOU Houvegnez 126.78 333 dPKPdf PKiKP 11 04 04.4 +1.1
BSTI Sart Tilman 126.81 334 dPKP PKiKP 11 04 04.4 +1.1
G64A Mansfield 126.87 35 P 11 04 03.8
baz=306,SNR=9.7
KESW Keswick, Cumbr 126.88 342 eP PKiKP 11 04 03.6 +0.2
WES Weston 126.92 39 IAMs_20 IAMs_20 12 02 06.4
comp=Z,19µm,19.0s
H64A Troy 126.95 36 P 11 04 04.2
baz=305,SNR=20
M63A Gales Ferry 126.96 41 P 11 04 03.9
baz=300,SNR=11
DAVA Damuels 126.98 328 iP PKPdf 11 04 03.6 0.0
comp=Z,76nm,0.7s,SNR=24
DAVA eP PP 11 06 02.4 +0.9
comp=Z,23nm,1.3s
DAVA eS SKiKP 11 07 28.0 -7.5
comp=Z,22nm,1.3s
DAVA eS SKSac 11 11 07.2 +1.9
comp=Z,2.7nm,0.8s
DAVA eS Sdif 11 14 00.2 -0.3
comp=Z,2.6nm,0.4s
DAVA eS SKKPbc 11 17 14.9 -6.5
comp=Z,17nm,1.3s
L63A North Scituate 127.01 40 PKPdf PKiKP 11 04 04.3 +0.3
L63A North Scituate 127.01 40 P 11 04 04.4
baz=301,SNR=16
PRVC Isla de Provid 127.03 77 eP PKPdf 11 04 03.2 -1.0
BCLA Clavier 127.04 334 dPKPdf PKiKP 11 04 04.0 +0.2
BCX Boston College 127.04 39 IAMs_20 IAMs_20 12 02 19.6
comp=Z,17µm,19.0s
BFO Black Forest 127.08 330 PKiKP PKPdf 11 04 03.4 -0.2
BFO MLR MLR
comp=Z,28µm,21.0s
BFO Black Forest 127.08 330 PKPdf PKPdf 11 04 03.4 -0.2
BFO Black Forest 127.08 330 ePKPdf PKPdf 11 04 03.6 +0.1
baz=53,slow=1.9
I64A Boothbay 127.12 37 P 11 04 04.6
baz=304,SNR=15
GAL1 Galloway 127.12 343 eP PKiKP 11 04 04.1 +0.3
BGES Gesves 127.16 334 dPKPdf PKiKP 11 04 04.2 +0.1
UCC Uccle 127.17 335 dPKP PKPdf 11 04 03.7 +0.2
WLF Walferdange 127.20 333 dPKP PKiKP 11 04 05.5 +1.3
WLF Walferdange 127.20 333 ePKPdf PKiKP 11 04 04.9 +0.7
baz=53,slow=1.9
RCHB Rochefort 127.27 334 dPKP PKiKP 11 04 04.6 +0.3
TIP Timpagrande 127.30 316 ⇓P PKiKP 11 04 04.6 -0.2
TIP Timpagrande 127.30 316 IAMs_20 IAMs_20 12 02 54.5
comp=Z,19µm,22.0s
CLGH Cloghs, Cushen 127.32 344 eP PKiKP 11 04 04.1 -0.2
BMRD Maredsous 127.36 334 dPKP PKiKP 11 04 04.8 +0.3
BMRD dpPKP pPKPdf 11 04 19.7 -0.9
SNF Seneffe 127.42 334 dPKPdf PKiKP 11 04 04.6 +0.1
SNF dPKiKP PKPdf 11 04 05.3 +1.3
M64A Tiverton 127.42 40 P 11 04 05.1
baz=301
L64A Middleborough 127.46 40 P 11 04 05.2
baz=302,SNR=11
H65A Eastbrook 127.49 35 P 11 04 05.5
baz=306,SNR=18
G65A Princeton 127.58 34 P 11 04 05.4
baz=307,SNR=15
DOU Dourbes 127.59 334 dPKPdf PKiKP 11 04 05.2 +0.3
ECH Echery 127.74 331 IAMs_20 IAMs_20 12 02 16.4
comp=Z,19µm,21.0s
WIM Isle of Man 127.74 343 eP PKiKP 11 04 04.9 -0.2
M65A Busby, Falmout 127.78 40 P 11 04 06.0
baz=302
NRCA Norcia 127.80 322 PKPdf 11 04 05.1 0.0
PAOL Paolisi 127.85 319 IAMs_20 IAMs_20 12 02 00.9
comp=Z,17µm,22.0s
STNC Stoke 127.86 340 eP PKiKP 11 04 05.6 +0.2
AQU L'Aquila 127.89 321 ⇑iP PKPdf 11 04 05.4 +0.1
AQU L'Aquila 127.89 321 IAMs_20 IAMs_20 12 02 17.6
comp=Z,16µm,21.0s
H66A Whiting 127.97 35 P 11 04 06.1
baz=307,SNR=10.0
PNME Penonome 128.19 83 eP PKPdf 11 04 06.2 -0.4
ZCCA Zcca 128.19 325 PKPdf 11 04 04.9 -0.9
AZU Azuero 128.23 84 eP PKPdf 11 04 06.5 -0.1
WME Myndd Eilian 128.27 342 eP PKiKP 11 04 06.6 +0.5
WLF1 Llynfaes 128.39 342 eP PKPdf 11 04 06.1 +0.3
ATAH Atahualpa 128.40 103 SKKPbc SKKPbc 11 17 16.4 +1.4
comp=Z,11nm,1.1s,baz=160,slow=5.1,SNR=3.7
YLL Llanberis 128.45 342 eP PKiKP 11 04 06.5 -0.1
NNA Nana 128.65 110 PKIKP PKiKP 11 04 09.4 +1.3
NNA Nana 128.65 110 PKPdf PKiKP 11 04 09.4 +1.3
BCIP Isla Barro Col 128.67 83 PKIKP PKiKP 11 04 08.0 -0.1
BCIP Isla Barro Col 128.67 83 PKiKP 11 04 08.0 -0.1
BCIP Isla Barro Col 128.67 83 eP PKPdf 11 04 07.6 +0.2
TSUM Tsumeb 128.75 240 PKPdf PKiKP 11 04 09.0 +0.7
TSUM Tsumeb 128.75 240 IAMs_20 IAMs_20 11 56 49.1
comp=Z,16µm,20.0s
STRD Stroud 128.94 339 eP PKPdf 11 04 07.0 +0.1
UPA Univ. de Panam 128.97 83 eP PKPdf 11 04 08.0 0.0
MCH1 Michaelchurch 129.04 340 eP PKiKP 11 04 07.5 -0.3
MSSA Maissana 129.04 326 PKPdf 11 04 02.7 -4.8
MONM Monmouth 129.11 340 eP PKiKP 11 04 08.5 +0.6
OTAV Otavalo 129.57 94 PKIKP PKiKP 11 04 11.2 +0.7
OTAV Otavalo 129.57 94 PKPdf PKiKP 11 04 11.2 +0.7
OTAV Otavalo 129.57 94 eP PKPdf 11 04 09.1 -0.7
OTAV Otavalo 129.57 94 eP PKPdf 11 04 07.6 -2.2
GO02 Mina Guanaco 129.62 129 PKPdf PKiKP 11 04 09.9 -0.3
PB10 IPOC Station P 129.69 127 PKPdf PKPdf 11 04 09.6 +0.4
PB10 IAMs_20 IAMs_20 11 49 43.5
comp=Z,11µm,21.0s
UPD2 Meteti 130.47 83 eP PKiKP 11 04 12.3 +0.5
CLTB Caltabellotta 130.51 316 IAMs_20 IAMs_20 12 08 08.4
comp=Z,12µm,20.0s
PB04 IPOC Station P 130.59 125 PKiKP 11 04 12.1 +0.1
PB04 IAMs_20 IAMs_20 11 51 41.3
comp=Z,14µm,20.0s
GBN Guysborough 130.69 31 PKiKP 11 04 11.2 -0.1
GCUF Volcan Galeras 130.78 93 eP PKiKP 11 04 13.6 +0.5
PB07 IPOC Station P 131.09 125 PKPdf 11 04 11.8 -0.4
PB07 IAMs_20 IAMs_20 11 52 08.8
comp=Z,12µm,21.0s
CAPC Capurgana 131.13 83 eP PKiKP 11 04 12.9 -0.2
CRUC La Cruz 131.20 93 eP PKiKP 11 04 13.6 -0.1
TA01 Diego Aracena 131.39 123 PKPdf PKiKP 11 04 13.6 +0.2
LVC Limon Verde 131.45 126 IAMs_20 IAMs_20 11 51 10.0
comp=Z,12µm,21.0s
PB09 IPOC Station P 131.58 125 IAMs_20 IAMs_20 11 52 42.7
comp=Z,15µm,20.0s
SOTA Rioblanco 131.60 92 eP PKPpre 11 04 09.2
PCON Cinco Dias 131.83 92 eP PKPdf 11 04 14.6 +0.3
PSGCX Pisagua 131.88 122 IAMs_20 IAMs_20 11 50 04.9
comp=Z,13µm,22.0s
YOTC Yotoco, Valle 132.00 89 eP PKPdf 11 04 13.9 -0.1
GTBY Guantanamo Bay 132.17 68 eP PKiKP 11 04 15.1 +0.1
AP01 Chacalluta 132.23 121 IAMs_20 IAMs_20 11 50 48.4
comp=Z,16µm,22.0s
MARP Paez Belalcaza 132.31 91 eP PKPdf 11 04 15.3 +0.5
CBOC Ciudad Bolivar 132.42 87 eP PKiKP 11 04 16.6 +0.6
MNMC Minye Minye 132.53 122 IAMs_20 IAMs_20 11 50 36.2
comp=Z,13µm,22.0s
GARC Garzon, Huila 132.71 92 eP PKiKP 11 04 16.8 +0.2
MOTC Monteria, Cord 132.79 83 eP PKPdf 11 04 10.8 -4.5
BETC Betania 132.81 91 eP PKiKP 11 04 16.5 -0.1
HELC Santa Helena 132.91 87 eP PKiKP 11 04 17.5 +0.3
UREC San Jos de Ur 132.93 84 eP PKiKP 11 04 16.3 -0.5
PB16 IPOC Station P 132.96 121 IAMs_20 IAMs_20 11 51 00.3
comp=Z,19µm,22.0s
ANIL Santa Ana 132.97 89 eP PKiKP 11 04 17.0 -0.2
GUY2C Guyana, Caldas 133.04 88 eP PKiKP 11 04 17.3 -0.3
TOLC Tolima 133.06 89 eP PKPdf 11 04 12.7 -3.6
ORTC Ortega, Tolima 133.09 90 eP PKPdf 11 04 16.2 +0.2
PTLC Puerto Leguiza 133.19 95 eP PKPdf 11 04 16.8 +0.7
SJCC San Jacinto, C 133.25 81 eP PKiKP 11 04 17.0 -0.4
NORC Norcasia 133.55 87 eP PKPdf 11 04 17.1 +0.3
ZARC Zaragoza, Cauc 133.60 85 eP PKPdf 11 04 16.6 -0.2
CZSB Cruzeiro do Su 133.74 106 eP PKPdf 11 04 13.7 -3.4
ROSC El Rosal 134.06 88 PKP PKPdf 11 04 18.1 -0.1
comp=Z,70nm,0.5s,baz=13,slow=7.8,SNR=15
ROSC SKPbc SKPab 11 07 47.3 +1.4
comp=Z,9.3nm,0.5s,baz=166,slow=0.7,SNR=4.4
ROSC El Rosal 134.06 88 eP PKPdf 11 04 18.8 +0.6
KEST Kesra 134.12 316 PKhKP PKPpre 11 04 04.7
comp=Z,2.2nm,0.5s,baz=145,slow=4.1,SNR=3.5
KEST PKP PKPdf 11 04 17.9 +0.6
comp=Z,47nm,0.7s,baz=280,slow=0.7,SNR=29
KEST SKPbc SKPab 11 07 43.8 -1.3
comp=Z,55nm,1.1s,baz=74,slow=3.0,SNR=6.0
KEST Kesra 134.12 316 IAMs_20 IAMs_20 12 09 03.2
comp=Z,15µm,20.0s
SMRC Santa Marta, M 134.13 80 eP PKiKP 11 04 18.8 -0.3
ARGC Ariguani, Magd 134.17 82 eP PKPdf 11 04 15.2 -2.7
SPBC San Pablo de B 134.34 87 eP PKPdf 11 04 18.6 +0.2
MACC Macarena, Meta 134.35 92 eP PKPdf 11 04 18.1 -0.2
SMLC San Martn de 134.37 83 eP PKPdf 11 04 18.6 +0.3
CHIC Chingaza 134.64 89 eP PKPdf 11 04 19.6 +0.3
VILC Villavicencio, 134.65 90 eP PKPdf 11 04 18.6 -0.4
BRRC Barranca, Sant 134.73 85 eP PKiKP 11 04 20.1 -0.3
CMAH Djebel Manchou 134.93 319 P PKiKP 11 04 18.7 -0.1
LL2C La Loma 2 Cana 134.97 82 eP PKiKP 11 04 20.4 -0.5
LL3C La Loma 3 Cana 134.99 82 eP PKiKP 11 04 21.2 +0.4
LPAZ La Paz 135.02 119 PKhKP PKPpre 11 04 08.3
comp=Z,2.4nm,0.6s,baz=9.6,slow=4.0,SNR=10.0
LPAZ SKPbc SKPab 11 07 51.5 +1.2
comp=Z,19nm,1.2s,baz=311,slow=4.7,SNR=3.0
LPAZ La Paz 135.02 119 eP PKiKP 11 04 21.3 -0.4
ABSA Djebel Ababsia 135.09 318 P PKPdf 11 04 19.9 +0.8
OCAC Ocana 135.12 84 eP PKPdf 11 04 20.5 +0.6
BARC Barichara 135.25 86 eP PKPdf 11 04 17.3 -2.9
RUSC La Rusia 135.34 87 eP PKPdf 11 04 20.9 +0.2
GRTK Grand Turk 135.45 65 IAMs_20 IAMs_20 12 15 32.5
comp=Z,15µm,20.0s
CRJC Cerrejon, Guaj 135.45 80 eP PKiKP 11 04 21.9 0.0
CKFL Kef-Lekhel 135.52 319 P PKiKP 11 04 20.9 -0.6
PAMC Pamplona, Colo 135.74 85 eP PKPdf 11 04 21.1 -0.3
ITQB Itaqui 135.76 144 eP PKPdf 11 04 20.1 -0.4
PLTB Pedras Altas 135.85 148 eP PKPdf 11 04 18.1 -2.6
SDDR Presa de Saban 135.89 68 PKPdf PKPdf 11 04 20.1 -1.0
SDDR IAMs_20 IAMs_20 11 57 05.6
comp=Z,16µm,22.0s
CTEI Djebel Teioual 135.92 319 P PKPdf 11 04 21.0 +0.3
DFRA Djebel Bou Aff 135.98 320 P PKiKP 11 04 22.3 -0.2
PTGC Puerto Gaitan, 136.21 90 eP PKPdf 11 04 22.2 +0.5
URIC Uribia, Colomb 136.27 79 eP PKiKP 11 04 22.9 -0.5
SC01 Santiago de Io 136.31 67 IAMs_20 IAMs_20 12 15 31.6
comp=Z,10µm,20.0s
CKHR Kef el Ahmar 136.53 319 P PKiKP 11 04 24.0 +0.4
TAMC Tame, Arauca 136.63 86 eP PKiKP 11 04 24.5 +0.2
CPSB Cacapava Do Su 137.00 147 eP PKPdf 11 04 20.9 -1.9
CPUP Villa Florida 137.70 140 PKhKP PKPpre 11 04 16.4
comp=Z,12nm,1.1s,baz=216,slow=3.7,SNR=6.0
CPUP PKP PKiKP 11 04 25.4 -0.7
comp=Z,8.8nm,0.6s,baz=335,slow=1.4,SNR=17
CPUP Villa Florida 137.70 140 eP PKPdf 11 04 24.1 -0.1
SDV Santo Domingo 137.76 83 IAMs_20 IAMs_20 11 56 15.6
comp=Z,13µm,22.0s
SDV Santo Domingo 137.76 83 eP PKPpre 11 04 17.7
PBRG Braganca 138.97 335 ePKPdf PKPpre 11 04 19.7
PBRG Braganca 138.97 335 ePP PP 11 07 20.2 +2.4
CNLB Canela 139.23 149 eP PKPdf 11 04 23.6 -3.4
ETMB Extrema 139.24 112 eP PKPdf 11 04 28.3 +1.0
ESDC Sonseca Array 139.44 331 PKhKP PKPpre 11 04 19.4
comp=Z,5.7nm,0.9s,baz=40,slow=2.5,SNR=10
ESDC PKP PKPdf 11 04 28.1 +1.0
comp=Z,6.7nm,0.6s,baz=9.0,slow=3.4,SNR=16
ESDC PP PP 11 07 22.2 +1.5
comp=Z,25nm,0.9s,baz=24,slow=5.7,SNR=12
CART Cartagena 139.45 326 IAMs_20 IAMs_20 12 06 57.1
comp=Z,18µm,22.0s
PGAV Gavieira, Arco 139.45 337 ePKPdf PKPpre 11 04 18.8
PGAV Gavieira, Arco 139.45 337 ePP PP 11 07 21.1 +0.4
PGAV Gavieira, Arco 139.45 337 iLQ LQ 11 26 33.3
PGAV Gavieira, Arco 139.45 337 eLQ LQ 11 46 16.8
PGAV eLR LR 11 54 44.5
comp=Z,16µm,20.0s
ES12 SONSECA Array 139.45 331 IAMs_20 IAMs_20 12 09 20.6
comp=Z,18µm,22.0s
PCAB Cabril 139.57 337 ePKPdf PKPpre 11 04 19.4
PCAB Cabril 139.57 337 ePP PP 11 07 22.6 +1.2
MVO Moncorvo 139.62 335 ePKPdf PKPpre 11 04 19.9
MVO Moncorvo 139.62 335 ePP PP 11 07 28.7 +6.9
MVO Moncorvo 139.62 335 iLQ LQ 11 26 40.6
MVO Moncorvo 139.62 335 eLQ LQ 11 44 53.6
MVO Moncorvo 139.62 335 eLR LR 11 55 42.9
comp=Z,13µm,22.0s
PAB San Pablo 139.72 331 PKIKP PKPdf 11 04 26.9 -0.7
PAB San Pablo 139.72 331 PKPdf PKPdf 11 04 26.9 -0.7
PAB San Pablo 139.72 331 IAMs_20 IAMs_20 12 11 05.6
comp=Z,15µm,21.0s
PAB San Pablo 139.72 331 P 11 04 28.7
POLO Lamas de Olo 139.76 336 ePKPdf PKPpre 11 04 19.2
POLO Lamas de Olo 139.76 336 ePP PP 11 07 25.9 +3.2
POLO Lamas de Olo 139.76 336 iLQ LQ 11 26 43.5
PVRL Vila Real 139.81 336 ePKPdf PKPdf 11 04 25.1 -2.6
SESP Santiago Espad 139.90 328 P 11 04 30.1
PVIS Viseu 140.36 336 ePKPdf PKPpre 11 04 22.8
PVIS iLQ LQ 11 08 05.3
EMPR Esperanza - Ma 140.40 67 PKPdf 11 04 29.0 -0.2
MTE Manteigas 140.48 335 ePKPdf PKPdf 11 04 24.0 -4.9
MTE Manteigas 140.48 335 ePP PP 11 07 30.2 +3.2
MTE Manteigas 140.48 335 iLQ LQ 11 27 00.3
MTE Manteigas 140.48 335 eLR LR 11 55 36.3
comp=Z,20µm,22.0s
TER01 Tubaro-SC 140.74 150 eP PKPdf 11 04 28.3 -1.4
SJG San Juan 140.84 68 PKhKP PKPpre 11 04 23.5
comp=Z,20nm,0.5s,baz=186,slow=4.7,SNR=3.6
SJG PKP PKPdf 11 04 30.6 +0.6
comp=Z,116nm,0.8s,baz=284,slow=1.9,SNR=8.9
SJG PP PP 11 07 29.5 -1.4
comp=Z,5.1nm,0.4s,baz=300,slow=4.6,SNR=4.3
SJG San Juan 140.84 68 eP PKPdf 11 04 30.2 +0.1
PCBR Castelo Branco 140.91 334 ePKPdf PKPdf 11 04 24.5 -5.1
COI Coimbra 141.00 336 ePKPdf PKPdf 11 04 22.4 -7.3
COI Coimbra 141.00 336 ePP PP 11 07 31.5 +1.4
COI Coimbra 141.00 336 iLQ LQ 11 26 56.0
PCAS Casmilo, Conde 141.16 336 ePKPdf PKPdf 11 04 24.6 -5.5
PCAS Casmilo, Conde 141.16 336 ePP PP 11 07 33.1 +2.0
PCAS iLQ LQ 11 08 07.6
PMRV Marv??o 141.22 334 ePKPdf PKPdf 11 04 20.7 -10
PMRV Marv??o 141.22 334 ePP PP 11 07 31.1 -0.4
PMRV Marv??o 141.22 334 iLQ LQ 11 27 07.1
PMRV Marv??o 141.22 334 eLQ LQ 11 46 36.8
PMRV eLR LR 11 56 15.6
comp=Z,17µm,20.0s
PSBE So Bento 141.74 335 ePKPdf PKPdf 11 04 23.9 -7.3
PSBE So Bento 141.74 335 ePP PP 11 07 35.5 +0.8
PSBE So Bento 141.74 335 iLQ LQ 11 27 20.3
PESTR Estremoz 141.76 334 ePKPdf PKPdf 11 04 24.6 -6.6
PESTR Estremoz 141.76 334 ePP PP 11 07 34.9 0.0
PESTR Estremoz 141.76 334 iLQ LQ 11 27 10.9
PESTR Estremoz 141.76 334 IAMs_20 IAMs_20 12 09 54.5
comp=Z,11µm,22.0s
PESTR Estremoz 141.77 334 P 11 04 32.9
PMTG Montargil 141.88 334 ePKPdf PKPdf 11 04 25.0 -6.4
PMTG Montargil 141.88 334 ePP PP 11 07 36.3 +0.8
PMTG Montargil 141.88 334 iLQ LQ 11 27 20.1

PBAR	Barrancos	142.08	332	*e*PKPdf	PKPdf	11 04 25.9	-5.9	
PBAR	Barrancos	142.08	332	*e*PP	PP	11 07 35.9	-0.9	
PBAR	Barrancos	142.08	332	*i* LQ	LQ	11 27 16.8		
EVO	Evora	142.23	334	*e*PKPdf	PKPdf	11 04 26.1	-5.9	
PMAFR	Mafra	142.41	336	*e*PKPdf	PKPdf	11 04 27.9	-4.4	
PMAFR	Mafra	142.41	336	*e*PP	PP	11 07 41.1	+2.4	
PMAFR	Mafra	142.41	336	*i* LQ	LQ	11 27 32.3		
PMST	Lisbon--Monsan	142.56	335	*e*PKPdf	PKPdf	11 04 27.7	-4.9	
PMST	Lisbon--Monsan	142.56	335	*e*PP	PP	11 07 43.7	+4.1	
LIS	Lisbon	142.56	335	*e*PKP	PKPdf	11 04 29.6	-3.0	
LIS	comp=Z,20µm,24.6s			IAMs_20	IAMs_20	12 11 01.4		
LIS	Lisbon	142.56	335	*e*PKIKP	PKPdf	11 04 29.6	-3.0	
PBEJ	Beja	142.58	333	*e*PKPdf	PKPdf	11 04 30.5	-2.2	
EKNA	AfricaArray -	142.59	270	*e*P	PKPdf	11 04 30.8	-2.6	
PCVE	Castro Verde	142.98	333	*e*PKPdf	PKPdf	11 04 29.3	-4.1	
PVAQ	Vaqueiros	143.02	332	*e*PKPdf	PKPab	11 04 29.3	+0.6	
PVAQ	Vaqueiros	143.02	332	*i* LQ	LQ	11 27 24.5		
PVAQ	Vaqueiros	143.02	332	*e*LQ	LQ	11 46 55.9		
PVAQ	Vaqueiros	143.02	332	*e*LR	LR	11 58 03.0		
PVAQ	comp=Z,20µm,20.0s Vaqueiros	143.02	332	P		11 04 35.9		
PTLB	Pontes e Lacer	143.04	124	*e*P	PKPbc	11 04 31.9	+0.9	
TRCB	Terra Rica	143.21	140	*e*P	PKPbc	11 04 31.6	+0.3	
TDRA	Tendrara	143.22	322	P		11 04 34.2		
PBDV	Barranco-do-Ve	143.25	332	*e*PKPdf	PKPbc	11 04 30.7	-0.3	
PTEO	Sao Teotonio	143.36	334	*e*PKPdf	PKPab	11 04 30.2	+0.1	
VILB	Vilhena	143.37	120	*e*P	PKPbc	11 04 32.0	+0.1	
TIJ01	Guaruva-PR	143.41	147	*e*P	PKPbc	11 04 32.9	+1.0	
MORF	Marmelete	143.52	333	*e*PKP	PKPab	11 04 31.3	+0.5	
MORF	comp=Z,18µm,22.6s			IAMs_20	IAMs_20	12 07 25.4		
MORF	Marmelete	143.52	333	*e*PKIKP	PKPab	11 04 31.3	+0.5	
MORF	Marmelete	143.52	333	*e*PKPdf	PKPbc	11 04 31.4	-0.4	
MORF	Marmelete	143.52	333	*i* LQ	LQ	11 32 33.9		
PFVI	Vila Bisbo	143.75	333	*e*PKPdf	PKPbc	11 04 32.1	-0.2	
PFVI	Vila Bisbo	143.75	333	*i* LQ	LQ	11 27 49.0		
PFVI	Vila Bisbo comp=Z,13µm,20.0s	143.75	333	IAMs_20	IAMs_20	12 13 53.0		
PFVI	Vila Bisbo	143.75	333	P		11 04 38.0		
SEUS	St. Eustatius	143.91	68	*e*P	PKPab	11 04 32.4	-0.3	
RSA	Sarsar	144.07	329	P		11 04 34.1		
SKI	Saint Kitts	144.18	68	*e*P	PKPab	11 04 33.8	-0.1	
SICH	Sidi Chahed	144.38	326	P		11 04 36.0		
LCRM	LCR	144.43	325	P		11 04 36.0		
MLYT	Lee's Yard	144.84	68	*e*P	PKPab	11 04 36.0	-0.3	
MDT	Midelt	144.92	324	P		11 04 37.3		
PCMB	Pacaembu	144.94	141	*e*P	PKPab	11 04 35.1	-1.4	
ANWB	Willy Bob	144.96	67	*e*P	PKPbc	11 04 34.6	-2.0	
ANWB	Willy Bob	144.96	67		PKPbc	11 04 36.7	0.0	
ANWB	comp=Z,10µm,21.0s			IAMs_20	IAMs_20	12 04 45.4		
CZD	Col de Zad	145.02	325	P		11 04 38.1		
ANBD	Bethesda, Anti	145.15	68	*e*P	PKPbc	11 04 36.4	-0.9	
PP1B	Ponte de Pedra	145.15	131	*e*P	PKPbc	11 04 35.4	-1.9	
PET01	Itanhaem-SP	145.16	149	*e*P	PKPdf	11 04 37.5	0.0	
CBE	Ff, Capester	145.55	69	*e*P	PKPdf	11 04 38.3	-0.1	
CBE	Ff, Capester	145.55	69	*e*P	PKPdf	11 04 38.5	+0.1	
ABD	La Joyeuse, An	145.56	69	*e*P	PKPdf	11 04 38.3	-0.1	
TBG	Guadaloupe-3	145.56	70	*e*P	PKPdf	11 04 37.6	-0.8	
TDBA	Terre de Bas,	145.57	70	*e*P	PKPdf	11 04 37.7	-0.8	
ZHG	ZHG	145.60	327	P		11 04 40.0		
SPB	Sao Paulo comp=Z,11µm,22.0s	145.65	148	IAMs_20	IAMs_20	12 05 42.2		
SPB	Sao Paulo	145.65	148	*e*P	PKPdf	11 04 37.8	-0.6	
ARF	Arif	145.67	322	P		11 04 40.0		
H07N1	FLORES T-PHASE SNR=10.0	145.71	4	PKPbc	PKiKP	11 04 40.9	-1.3	
DSLB	Salisbury	145.87	70	*e*P	PKPdf	11 04 38.9	-0.1	
MAGL	Barre de l'ile	145.88	69	*e*P	PKPdf	11 04 39.0	0.0	
H05N1	Guadeloupe/Mar SNR=70	146.00	69	PKPbc	PKPbc	11 04 40.4	+0.4	
H07S1	FLORES T-PHASE SNR=24	146.02	4	PKPbc	PKPab	11 04 41.3	+1.3	
DLPL	La Plaine	146.06	70	*e*P	PKPdf	11 04 39.7	+0.4	
GRGR	Grenville comp=Z,9µm,21.0s	146.28	76	IAMs_20	IAMs_20	12 18 53.9		
FDF	Fort de France	146.28	71	*e*P	PKPdf	11 04 39.8	0.0	
FDF	Fort de France comp=Z,9µm,21.0s	146.28	71	IAMs_20	IAMs_20	12 05 47.9		
VAO	Valinhos	146.37	148	*e*P	PKPdf	11 04 37.8	-2.0	
BIM	Bigot	146.41	72	*e*P	PKPdf	11 04 39.8	-0.2	
MACA	Manacapuru-AM	146.47	104	*e*P	PKPdf	11 04 39.1	-1.0	
SRBC	Serra Branca	146.47	360	*e*PKP	PKPbc	11 04 41.0	+0.2	
PGRA	Graciosa	146.48	360	*e*PKP	PKPdf	11 04 37.9	-1.5	
SVB	Belmont	146.48	74	*e*P	PKPdf	11 04 38.9	-1.2	
SVV	Soufriere Volc	146.50	74	*e*P	PKPab	11 04 42.5	-0.1	
SFAN	Fancy Village	146.53	74	*e*P	PKPbc	11 04 41.8	+0.1	
RCLB	Rio Claro- Sao	146.54	146	*e*P	PKPdf	11 04 40.0	-0.1	
ILAM	Ilet Lapin Mar	146.54	71	*e*P	PKPdf	11 04 40.2	+0.1	
SLBI	Saint Lucia, B	146.60	73	*e*P	PKPdf	11 04 38.5	-1.7	
MPOM	Morne Pois Mar	146.62	72	*e*P	PKPdf	11 04 41.0	+0.8	
H05S1	Guadeloupe/Mar SNR=132	146.65	72	PKPbc	PKPab	11 04 43.6	+0.5	
MCLT	Moule a Chique	146.69	73	*e*P	PKPdf	11 04 38.5	-1.9	
TPP	Pointe-a-Pierr	146.71	79	*e*P	PKPab	11 04 43.0	-0.3	
TRN	Trinidad (W)	146.72	79	*e*P	PKPdf	11 04 40.7	+0.3	
PAGU	Agualva, Azore	146.73	359	*e*PKP	PKPdf	11 04 40.7	+0.9	
ROSA	Rosais	146.79	0	*e*PKP	PKPdf	11 04 39.6	-0.3	
ROSA	Rosais comp=Z,13µm,22.0s	146.79	0	IAMs_20	IAMs_20	12 12 43.8		
PARB	Paraibuna	146.79	150	*e*P	PKPdf	11 04 41.0	+0.5	
ADH	Angra Heroismo	146.84	359	*e*PKP	PKPbc	11 04 41.0	-0.8	
PMAN	Manadas	146.87	360	*e*PKP	PKPdf	11 04 40.6	+0.5	
PCED	Cedros	146.87	1	*e*PKP	PKPdf	11 04 40.6	+0.5	
ITRB	Iturama	146.90	139	*e*P	PKPdf	11 04 39.4	-1.3	
TZRR	Tazzarine	146.94	323	P		11 04 42.0		
PICO	Pico	147.00	0	*e*PKP	PKPdf	11 04 39.4	-1.0	
BB19B	Bebedouro	147.03	143	*e*P	PKPdf	11 04 39.5	-1.4	
SRHM	Skhour des Reh	147.03	327	P		11 04 42.0		
TPR	Prospect	147.26	78	*e*P	PKPdf	11 04 42.6	+1.2	
BOT	Bacolet	147.32	78	*e*P	PKPdf	11 04 42.1	+0.7	
ZGR	Zagora	147.44	322	P		11 04 43.0		
TOSP	Speyside	147.48	77	*e*P	PKPdf	11 04 40.7	-1.0	
TOSP	Speyside	147.48	77	*e*P	PKPbc	11 04 45.3	+1.0	
OUZM	OUZ	147.56	324	P		11 04 44.0		
PSET	Sete Cidades	147.60	356	*e*PKP	PKPdf	11 04 41.5	+0.2	
BART	Pico Bartolome	147.61	356	*e*PKP	PKPdf	11 04 40.4	-1.0	
ESAR	Angra dos Reis	147.64	151	*e*P	PKPdf	11 04 41.2	-0.5	
CMLA	Cha da Macela	147.65	356	*e*PKP	PKPdf	11 04 42.1	+0.7	
CMLA	Cha da Macela comp=Z,9µm,20.0s	147.65	356	IAMs_20	IAMs_20	12 14 57.7		
OUK	Oukaimeden	147.97	326	P		11 04 44.1		
MAN01	Angra dos Reis	148.00	152	*e*P	PKPdf	11 04 42.4	-0.1	
BCHC	Barbados, Cave	148.06	74	*e*P	PKPbc	11 04 45.4	-0.5	
BBGH	Gun Hill	148.12	74	*e*P	PKiKP	11 04 48.3	+0.6	
CLDB	Colider	148.15	120	*e*P	PKPdf	11 04 41.8	-1.1	
BBSP	Saint Philip	148.23	74	*e*P	PKiKP	11 04 48.3	+0.4	
PSMA	Santa Maria	148.38	355	*e*PKP	PKPdf	11 04 42.1	-0.5	
ARAG	Araguaiana, MT	148.62	132	*e*P	PKPdf	11 04 43.1	-0.5	
VAS01	Vassouras-RJ	148.74	152	*e*P	PKPdf	11 04 41.7	-2.0	
BSCB	Bom Sucesso	149.17	149	*e*P	PKPdf	11 04 43.8	-0.7	
SHEL	Horse Pasture	149.30	226	PKP2	PKiKP	11 04 51.7	+1.5	
SHEL	Horse Pasture	149.30	226		PKiKP	11 04 51.7	+1.5	
DUB01	Friburgo-RJ	149.40	153	*e*P	PKPdf	11 04 44.1	-0.7	
TOA0	Torodi Ar. Sit	149.52	287	PKPdf	PKPdf	11 04 44.2	-0.8	
TORD	Torodi Ar. Bea comp=Z,36nm,1.1s,baz=32,slow=0.8,SNR=76	149.52	287	PKP	PKPdf	11 04 44.6	-0.5	
TORD	comp=Z,403nm,0.8s,baz=68,slow=1.8,SNR=174			PKPbc	PKPbc	11 04 49.5	0.0	
TORD	Torodi Ar. Bea	149.52	287	PKPdf	PKPdf	11 04 45.0	0.0	
CAM01	Campos-RJ	149.94	154	*e*P	PKPdf	11 04 46.1	+0.5	
NPGB	Novo Progresso	150.23	114	*e*P	PKPdf	11 04 44.3	-1.4	
PMPST	Porto Santo, M	150.28	340	*e*PKPdf	PKPdf	11 04 46.4	+0.6	
PMPST	Porto Santo, M	150.28	340	*i* LQ	LQ	11 29 03.7		
PMAR	Madeira	150.80	340	*e*PKPdf	PKPdf	11 04 47.1	+0.3	
PMOZ	Porto Moniz, M	150.81	341	*e*PKPdf	PKPdf	11 04 47.5	+0.8	
PMOZ	Porto Moniz, M	150.81	341	*i* LQ	LQ	11 29 01.1		
PMOZ	Porto Moniz, M comp=Z,16µm,20.0s	150.81	341	*e*LR	LR	11 58 35.5		
PMOZ	Porto Moniz, M	150.81	341		PKiKP	11 04 53.8	+0.8	
ITTB	Itaituba	150.85	109	*e*P	PKPdf	11 04 45.2	-2.0	
FUL	Funchal	150.87	340	*e*PKPdf	PKPdf	11 04 47.4	+0.7	
SNDB	Serra Nova Dou	151.29	127	*e*P	PKPdf	11 04 46.8	-1.1	
BDFB	Brasilia comp=Z,18nm,0.7s,baz=248,slow=3.6,SNR=10.0	151.36	137	PKP	PKPdf	11 04 50.0	+1.9	
BDFB	comp=Z,65nm,0.7s,baz=6.3,slow=0.6,SNR=28			PKPbc	PKiKP	11 04 54.8	+0.2	
BDFB	Brasilia	151.36	137	PKIKP	PKPdf	11 04 50.0	+1.9	
ALF01	Guarapari-ES	151.41	155	*e*P	PKPdf	11 04 47.3	-0.5	
DIAM	Diamantina, MG	151.98	147	*e*P	PKPdf	11 04 47.5	-1.5	
RIB01	Linhares ES	152.70	154	*e*P	PKPdf	11 04 48.6	-1.2	
SJMB	Sao Joao De Ma	152.88	152	*e*P	PKPdf	11 04 47.9	-2.2	
BSFB	Barra de Sao F	152.93	153	*e*P	PKPdf	11 04 49.2	-1.0	
MALB	Monte Alegre	153.00	105	*e*P	PKPdf	11 04 49.3	-1.1	
PEXB	Peixe	153.53	131	*e*P	PKPdf	11 04 50.0	-1.1	
NAN01	Guarapari, ES	154.12	153	*e*P	PKPdf	11 04 50.6	-1.3	
JANB	Januaria	154.19	142	*e*P	PKPdf	11 04 50.8	-1.4	
KOWA	Kowa	154.53	293		PKPdf	11 04 53.7	+1.2	
MACI	Morro de la Ar	154.67	335		PKiKP	11 05 03.1	+1.9	
MCPB	Macapa, AP	155.51	103	*e*P	PKPdf	11 04 51.3	-2.6	
PRPB	Parauapebas	155.57	118	*e*P	PKPdf	11 04 54.0	0.0	
SDBA	SAO DESIDERIO	155.77	137	*e*P	PKPdf	11 04 53.6	-0.7	
SMTB	Santa Maria do	156.06	126	*e*P	PKPdf	11 04 52.9	-1.8	
DBIC	Dimbokro comp=Z,72nm,1.2s,baz=89,slow=2.1,SNR=26	156.75	274	PKP	PKPdf	11 04 55.6	+0.1	
DBIC	comp=Z,120nm,1.1s,baz=71,slow=4.5,SNR=7.3			PKPab	PKPab	11 05 26.8	+1.6	
DBIC	Dimbokro	156.75	274	PKPdf	PKPdf	11 04 55.9	+0.3	
NBIT	Itapeh - BA	156.97	151	*e*P	PKPdf	11 04 55.5	-0.2	
GDU01	Guandu, BA	157.94	149	*e*P	PKPdf	11 04 56.7	-0.3	
TMAB	Tom-Au,PA,Br	158.69	111	*e*P	PKPdf	11 04 58.9	+0.9	
NBLA	Lagarto - SE	161.16	150	*e*P	PKPdf	11 05 00.6	-0.2	
NBLA	Lagarto - SE	161.16	150	*e*P	PKPab	11 05 42.4	-1.7	
NBTA	Tacaratu-PE	162.58	146	*e*P	PKPdf	11 05 02.1	-0.1	
NBAN	Anadia - AL	163.04	152	*e*P	PKPdf	11 05 02.8	+0.1	
NBAN	Anadia - AL	163.04	152	*e*P	PKPab	11 05 53.1	+0.9	
NBMA	Muriti-CE	163.54	140	*e*P	PKPdf	11 05 03.0	-0.1	
NBPS	Pedro II - PI	163.60	126	*e*P	PKPdf	11 05 04.0	+0.7	
NBPB	Pedra_Branca-C	164.30	133	*e*P	PKPdf	11 05 03.3	-0.5	
NBRF	Rio Formoso -	164.44	154	*e*P	PKPdf	11 05 04.3	+0.4	
NBLI	Livramento-PB	164.64	145	*e*P	PKPdf	11 05 03.3	-0.9	
NBMO	Morrinhos-CE	165.37	126	*e*P	PKPdf	11 05 04.9	+0.1	
NBMO	Morrinhos-CE	165.37	126	*e*P	PKPdf	11 05 19.3	+15	
NBCL	Cascavel-CE	166.14	133	*e*P	PKPdf	11 05 06.2	+0.8	
NBPV	Pedro Velho	166.33	149	*e*P	PKPdf	11 05 05.5	-0.1	
RCBR	Riachuelo	166.49	145	*e*P	PKPdf	11 05 06.5	+0.7	
SACV	Santiago Islan	169.43	335	P		11 05 09.9		

INET 30 10:48:08.0, 14.62N×82.78W, h15km, MW4.3, Caribbean Sea

KRSC 30 10:53:22.0±1.1, 56.12N×163.00E, h9km±7km, ML4.2, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	0.14	311	*e*P		Pg 10 53 27.8	+2.7
KBG	Krutoberegovo	0.21	309	*e*P		Pg 10 53 27.9	+1.5
KBG				*e*S		Sg 10 53 30.7	+1.3
SMKR	Semkarok	0.97	299	*e*P		Pg 10 53 39.9	-0.8
SMKR				*e*S		Sg 10 53 53.5	+0.1
BDR	Baidarnaya	1.10	295	*e*P		Pg 10 53 42.2	-0.9
SRKR	Sorokina	1.15	298	*e*P		Pb 10 53 43.0	-1.1
ZLN	Zelenaya	1.24	266	*e*P		Pn 10 53 45.2	-0.4
ZLN				*e*S		Sb 10 54 01.6	-0.1
CIRR	Tsirk	1.26	271	*e*P		Pn 10 53 45.4	-0.6
LGNR	Loginova	1.30	269	*e*P		Pn 10 53 46.2	-0.3
BZGR	Bezymyannyi-Gr	1.31	263	*e*P		Pn 10 53 46.0	-0.5
KLY	Klyuchi	1.33	279	*e*P		Pn 10 53 44.1	-2.6
KLY				*e*S		Sb 10 53 59.4	-4.7
KRSR	Krestovskiy	1.37	275	*e*P		Pn 10 53 46.4	-0.9
BZWR	Bezymyannyi-We	1.42	265	*e*P		Pn 10 53 47.8	-0.3
BZMR	Bezymyannaya	1.42	264	*e*P		Pn 10 53 47.8	-0.4
KIRR	Kirishev	1.50	265	*e*P		Pn 10 53 49.0	-0.3
KIRR				*e*S		Sg 10 54 13.4	+3.1
KPT	Kopyto	1.57	266	*e*P		Pn 10 53 49.7	-0.4
KMNR	Kamenistaya	1.60	258	*e*P		Pb 10 53 51.2	-0.5
MKZ	Mys Kozlova	1.73	205	*e*P		Pb 10 53 53.8	-0.1
TUMD	Tumrok D	1.74	239	*e*P		Pn 10 53 52.9	+0.5
TUMD				*e*S		Sn 10 54 15.1	+0.5
KOZ	Kozyrevsk	1.75	269	*e*P		Pb 10 53 53.6	-0.8
TUMR	Tumrok	1.82	244	*e*P		Pb 10 53 54.8	-0.8
KZV	Kizimen	1.84	238	*e*P		Pn 10 53 54.5	+0.6
SRDR	Sredinnyy	1.85	278	*e*P		Pn 10 53 54.4	+0.5
BKI	Bering	1.92	117	*e*P		Pb 10 53 57.5	+0.4
BKI				*e*S		Sg 10 54 22.9	-0.6
ESO	Esso	2.42	267	*e*P		Pn 10 54 03.3	+1.5
OSSR	Ossora	3.14	1	*e*P		Pn 10 54 13.2	+1.6
PALN	Palana	3.40	333	*e*P		Pn 10 54 16.6	+1.5
SPN	Mys Shipunski	3.49	211	*e*P		Pn 10 54 17.6	+1.2
SPN				*e*S		Sn 10 54 58.7	+1.0
NLC	Nalytchevo	3.64	217	*e*P		Pn 10 54 20.6	+2.2
SDLR	Sedlovina	3.72	222	*e*P		Pn 10 54 22.0	+2.4
KRX	Arik	3.74	224	*e*P		Pn 10 54 22.7	+2.7
KRER	Koryakskii	3.75	223	*e*P		Pn 10 54 23.2	+3.1
SMAR	Somma	3.76	222	*e*P		Pn 10 54 23.1	+2.8
AVH	Avacha	3.78	223	*e*P		Pn 10 54 23.5	+3.0
UGLR	Uglovaya	3.79	221	*e*P		Pn 10 54 23.3	+2.6
GNL	Ganaly	3.80	232	*e*P		Pn 10 54 23.5	+2.7
KOK	Koryaka	3.80	224	*e*P		Pn 10 54 23.7	+2.9
DALK	Dalny	3.96	220	*e*P		Pn 10 54 24.9	+2.0
PET	Petropavlovsk	4.00	221	*e*P		Pn 10 54 27.1	+3.7
KRMR	Karymshinskiy	4.35	223	*e*P		Pn 10 54 32.5	+4.3
GRL	Gorelyy	4.59	221	*e*P		Pn 10 54 35.9	+4.2
TILK	Tilichiki	4.64	20	*e*P		Pn 10 54 36.0	+3.8
ASAK	Asacha	4.79	221	*e*P		Pn 10 54 37.7	+3.3
KDTR	Khodutka, Kamc	5.21	216	P		Pb 10 54 48.1	-5.0
KDTR	Khodutka, Kamc	5.21	216	*e*P		Pb 10 54 48.1	-5.0

IDC 30 10:53:56.6±2.2, 4.84S×151.12E, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.8/43, mbtmp4.1/3, Error ellipse: s-maj=150.4km s-min=30.7km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.19	226	P	P	10 58 55.5	+0.8
	4.3nm,0.9s,baz=50,slow=9.9,SNR=1.3						
ASAR	Alice Springs	25.02	220	P	P	10 59 22.7	+0.1
	9.6nm,0.8s,baz=61,slow=8.2,SNR=4.6						
ILAR	Eielson Array	82.83	22	P	P	11 06 23.2	+0.6
	0.6nm,0.6s,baz=242,slow=5.3,SNR=5.0						
TORD	Torodi Ar. Bea	148.73	287	PKPbc	PKPdf	11 13 45.0	+1.7
	1.2nm,0.7s,baz=48,slow=2.1,SNR=1.5						

IDC 30 11:01:09.9±2.0, 5.07S×151.44E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/40, mbtmp3.7/4, Error ellipse: s-maj=108.5km s-min=28.4km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.26	227	P	P	11 06 08.1	-0.6
	1.0nm,0.6s,baz=53,slow=10,SNR=2.4						
ASAR	Alice Springs	25.05	221	P	P	11 06 36.6	+0.5
	1.0nm,0.6s,baz=58,slow=8.7,SNR=8.9						
FITZ	Fitzroy Crossi	28.34	241	P	P	11 07 06.1	+0.3
	1.6nm,0.4s,baz=51,slow=10,SNR=2.1						
ILAR	Eielson Array	82.92	22	P	P	11 13 37.0	+0.5
	0.2nm,0.6s,baz=243,slow=5.6,SNR=5.0						
TORD	Torodi Ar. Bea	149.10	287	PKPbc	PKPbc	11 20 59.7	-1.7
	0.7nm,0.8s,baz=96,slow=1.9,SNR=1.8						

NEIC 30 11:02:17.7±2.9, 5.36S±0.06×151.85E±0.09, h35km±1km, mb4.9/28, Error ellipse: s-maj=15.1km s-min=10.0km az=290.0

DJA 30 11:02:19.7±0.4, 5.42S×151.2E±, h59km±5km, M5.1/13, mb4.8/13, MLv5.2/2, Hypocentre not reviewed by the ISC

IDC 30 11:02:22.5±3.3, 5.42S×151.75E, h84km±28km, mb3.9/15, mb1 4.0/17, mb1mx3.9/39, mbtmp4.3/17, Error ellipse: s-maj=20.9km s-min=12.5km az=84.0

ISC 30 11:02:17.8±0.5, 5.34S±0.06×151.85E±0.09, h45km, n63, σ1s19/59, mb4.6/29, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.18	16		Pn	11 02 40.0	+2.1
PMG	Port Moresby	6.16	229	P	Pn	11 03 48.5	+2.1
	15nm,0.3s,baz=47,slow=10,SNR=19						
PMG				S	Sn	11 04 56.6	+1.0
	11nm,0.3s,baz=69,slow=16,SNR=3.6						
PMG	Port Moresby	6.16	229		Pn	11 03 47.9	+1.6
PMG	Port Moresby	6.16	229	P		11 03 48.1	
	1.3nm145nm,0.8s						
PMG				S		11 04 55.8	
	1.3nm145nm,0.8s						

COEN	Coen	12.10	224	Pn	Pn	11 05 07.8	+0.1	
CTA	Charters Tower 0.3nm,0.3s,baz=17,slow=15,SNR=2.8	15.64	200	P	P	11 05 57.9	-0.9	
CTAO	Charters Tower	15.64	200		P	11 05 59.7	+0.9	
BAKI	Biak 25nm,1.0s	16.24	284	P		11 06 04.0		
BAKI				pP		11 06 17.1		
SIJI	25nm,1.0s Sorong 8.1nm,0.6s,baz=21,slow=11,SNR=5.4	21.02	281	P	P	11 06 59.4	+1.4	
SIJI	Sorong 13nm,1.2s	21.02	281	P		11 06 58.5		
SIJI	13nm,1.2s			pP		11 07 10.8		
SWI	Sorong 23nm,1.0s	21.02	282	P		11 06 59.0		
SWI	23nm,1.0s			pP		11 07 10.8		
MTN	Manton Dam	21.76	249	P	P	11 07 05.6	-0.2	
DZM	Mont Dzumac 12nm,0.7s,baz=336,slow=12,SNR=3.1	21.83	141	P	P	11 07 09.2	+2.6	
DZM	Mont Dzumac comp=Z,23nm,1.2s	21.83	141	IAmb	IAmb	11 07 17.7		
WRAB	Tennant Creek	22.37	228	P	P	11 07 11.7	-0.6	
WRAB	comp=Z,33nm,0.7s			IAmb	IAmb	11 07 14.5		
KNRA	Kununurra	24.88	244	P	P	11 07 36.6	0.0	
ARMA	Armidale	24.95	180	P	P	11 07 38.0	+0.8	
ARMA	comp=Z,28nm,1.3s			IAmb	IAmb	11 07 38.5		
AS31	Alice Springs	25.12	222		P	11 07 38.6	-0.1	
AS31	comp=Z,17nm,0.9s			IAmb	IAmb	11 07 41.6		
ASAR	Alice Springs comp=Z,47nm,0.7s,baz=55,slow=9.1,SNR=107	25.12	222	P	P	11 07 38.6	-0.2	
ASAR	Alice Springs	25.12	222	P	P	11 07 38.3	-0.5	
STKA	Stephens Creek comp=Z,1.2nm,0.5s,baz=27,slow=14,SNR=4.4	28.10	199	P	P	11 08 04.7	-0.8	
STKA	Stephens Creek	28.10	199	P	P	11 08 04.5	-1.0	
BATI	Baumata comp=Z,40nm,0.7s,baz=170,slow=4.5,SNR=5.2	28.33	258	P	P	11 08 08.2	+0.5	
BATI	Baumata comp=Z,28nm,0.8s	28.33	258	P		11 08 08.3		
FITZ	Fitzroy Crossi comp=Z,26nm,0.6s,baz=58,slow=6.7,SNR=61	28.57	241	P	P	11 08 09.2	-0.6	
FITZ	Fitzroy Crossi comp=Z,22nm,0.7s	28.57	241	P	P	11 08 09.5	-0.3	
FITZ				IAmb	IAmb	11 08 10.0		
GTOI	Gorontalo comp=Z,4.9nm,0.7s	29.40	281	P		11 08 18.9		
MRSI	Marisa	30.42	280	P		11 08 26.7		
BBOO	Buckleboo	31.05	206	P	P	11 08 31.0	-0.6	
WBSI	Waikabubak, Su comp=Z,35nm,0.7s	32.45	260	P		11 08 43.1		
FORT	Forrest	33.78	219	P	P	11 08 55.0	-0.5	
PLAI	Plampang	33.98	262	P		11 08 56.7		
PSA00	Pilbara Seismi	34.94	239	P	P	11 09 04.9	-0.8	
PSA00

mb1 3.8/11,mb1mx3.6/37,mbtmp3.9/11,ML2.0/1,Error ellipse: s-maj=51.3km s-min=22.0km az=118.0

ISC 30 11:09:13.4±1.4,5°.6S±0°.2×152°.1E±0°.3,h45km±,n13, σ1§31/13,mb3.8/11,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.17**	**232**	P	**Pn**	**11 10 42.4**	**+0.5**
	2.4nm,0.3s,baz=39,slow=12,SNR=4.1						
PMG				S	**Sn**	**11 11 52.9**	**+1.7**
	3.5nm,0.3s,baz=312,slow=22,SNR=3.1						
WRA	**Warramunga Arr**	**22.38**	**229**	P	**P**	**11 14 06.8**	**-1.2**
	2.3nm,0.7s,baz=53,slow=10,SNR=6.7						
ASAR	**Alice Springs**	**25.08**	**222**	P	**P**	**11 14 33.5**	**-0.5**
	7.9nm,0.7s,baz=55,slow=9.3,SNR=34						
FITZ	**Fitzroy Crossi**	**28.64**	**242**	P	**P**	**11 15 04.4**	**-1.5**
	3.0nm,0.7s,baz=81,slow=4.2,SNR=8.8						
JNU	**Nakatsue**	**43.42**	**334**	P	P	11 17 03.2	-8.7
	5.1nm,0.7s,baz=140,slow=7.9,SNR=4.2						
KSRS	**Korea Array**	**48.36**	**334**	P	**P**	**11 17 51.2**	**+0.5**
	0.5nm,0.6s,baz=145,slow=7.4,SNR=2.7						
PETK	**Petropavlovsk-**	**58.66**	**4**	P	**P**	**11 19 07.7**	**+1.7**
	0.5nm,0.6s,baz=163,slow=6.0,SNR=4.3						
SONM	**Songino Array**	**66.58**	**328**	P	**P**	**11 19 57.7**	**-1.4**
	0.6nm,0.5s,baz=148,slow=5.6,SNR=4.3						
MKAR	**Makanchi Array**	**80.42**	**319**	P	**P**	**11 21 20.6**	**+0.2**
	0.3nm,0.7s,baz=107,slow=5.0,SNR=2.3						
ZALV	**Zalesovo Beam**	**81.38**	**327**	P	**P**	**11 21 24.8**	**-0.5**
	0.7nm,0.5s,baz=108,slow=4.7,SNR=2.0						
ILAR	**Eielson Array**	**83.16**	**22**	P	**P**	**11 21 33.7**	**-0.7**
	0.5nm,0.6s,baz=260,slow=4.5,SNR=12						
YKA	**Yellowknife Ar**	**96.46**	**28**	P	**P**	**11 22 39.1**	**+1.5**
	0.1nm,0.6s,baz=270,slow=4.5,SNR=2.1						
TORD	**Torodi Ar. Bea**	**149.82**	**287**	PKPbc	**PKPbc**	**11 28 58.2**	**-1.4**
	1.2nm,0.6s,baz=83,slow=3.6,SNR=5.0						

IDC 30 11:14:44.2±2.1,5°.27S×151°.42E,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.6/33,mbtmp3.7/3,Error ellipse: s-maj=140.5km s-min=29.8km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.11**	**227**	P	P	11 19 41.7	+0.3
	1.6nm,0.6s,baz=52,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**24.89**	**221**	P	P	11 20 08.7	-0.3
	2.9nm,0.8s,baz=59,slow=8.9,SNR=20						
ILAR	**Eielson Array**	**83.11**	**22**	P	P	11 27 11.8	+0.1
	0.3nm,0.6s,baz=236,slow=5.9,SNR=4.8						

*RSNC **30** 11:35:57.8±1.2,6°.83N×73°.14W,h148km±4km,ML3.3, Mw3.7,Fault plane solution: NP1:φ=0.00000°,δ=90.00000°, λ=-108.00000°.*

*IDC **30** 11:35:57.3±0.8,6°.73N×72°.91W,h160km±13km,mb2.5/1, mb1 3.1/3,mb1mx2.9/29,mbtmp3.4/3,Error ellipse: s-maj=67.1km s-min=7.5km az=132.0*

ISC 30 11:35:57.2±0.9,6°.85N±0°.03×73°.11W±0°.04,h152km±6km, n37,σ1§59/72,6C-3D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.26**	**196**	⇑*i*P	**Pn**	**11 36 17.9**	**-0.3**
BARC				*e*S	**Sn**	**11 36 32.7**	**-1.6**
BARC				*i*		11 36 33.9	
	comp=Z,484nm,0.1s						
PAMC	**Pamplona, Colo**	**0.64**	**40**	⇓*i*P	**Pn**	**11 36 20.7**	**+0.6**
PAMC				*e*S	**Sn**	**11 36 37.7**	**+0.1**
PAMC				*i*		11 36 40.4	
	comp=Z,734nm,0.4s						
BRRC	**Barranca, Sant**	**0.65**	**294**	⇑*i*P	**Pn**	**11 36 19.8**	**+0.2**
BRRC				*e*S	**Sn**	**11 36 35.7**	**-1.0**
BRRC				*i*		11 36 41.3	
	comp=Z,423nm,0.1s						
RUSC	**La Rusia**	**0.95**	**178**	*e*P	**Pn**	**11 36 22.2**	**-0.1**
RUSC				*e*S	**Sn**	**11 36 40.1**	**-1.5**
RUSC				*i*		11 36 41.6	
	comp=Z,106nm,0.3s						
TAMC	**Tame, Arauca**	**1.37**	**107**	⇓*i*P	**Pn**	**11 36 26.2**	**+0.5**
TAMC				*e*S	**Sn**	**11 36 47.3**	**-0.1**
TAMC				*i*		11 36 48.8	
	comp=Z,128nm,0.4s						
OCAC	**Ocana**	**1.40**	**352**	⇑*i*P	**Pn**	**11 36 26.2**	**+0.1**
OCAC				*e*S	**Sn**	**11 36 48.0**	**-0.2**
SPBC	**San Pablo de B**	**1.52**	**219**	*e*P	**Pn**	**11 36 26.8**	**-0.5**
SPBC				*e*S	**Sn**	**11 36 50.5**	**+0.1**
SPBC				*i*		11 36 53.1	
	comp=Z,203nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.85**	**290**	*e*P	**Pn**	**11 36 31.1**	**+0.4**
ZARC				*e*S	**Sn**	**11 36 56.8**	**+0.3**
ZARC				*i*		11 37 02.1	
	comp=Z,289nm,0.4s						
SMLC	**San Martn de**	**2.16**	**334**	*e*P	**Pn**	**11 36 34.5**	**+0.1**
SMLC				*e*S	**Sn**	**11 37 02.6**	**-0.5**
SMLC				*i*		11 37 06.2	
	comp=Z,241nm,0.1s						
NORC	**Norcasia**	**2.16**	**234**	*e*P	**Pn**	**11 36 34.0**	**-0.4**
NORC				*e*S	**Sn**	**11 37 01.6**	**-1.5**
NORC				*i*		11 37 04.0	
	comp=Z,146nm,0.1s						
CHIC	**Chingaza**	**2.29**	**196**	⇑*i*P	**Pn**	**11 36 36.2**	**-0.1**
CHIC				*e*S	**Sn**	**11 37 05.1**	**-1.2**
CHIC				*i*		11 37 12.0	
	comp=Z,41nm,0.3s						
ROSC	**El Rosal**	**2.33**	**211**	P	**Pn**	**11 36 38.2**	**+1.4**
	comp=Z,13nm,0.3s,baz=242,slow=23,SNR=15						
ROSC				S	**Sn**	**11 37 08.7**	**+1.5**
	comp=Z,30nm,0.3s,baz=214,slow=22,SNR=14						
ROSC	**El Rosal**	**2.33**	**211**	*e*P	**Pn**	**11 36 38.2**	**+1.4**
ROSC				*e*S	**Sn**	**11 37 06.8**	**-0.4**
HELC	**Santa Helena**	**2.49**	**255**	*e*P	**Pn**	**11 36 39.3**	**+0.6**
HELC				*e*S	**Sn**	**11 37 09.9**	**-0.7**
HELC				*i*		11 37 17.3	
	comp=Z,95nm,0.3s						
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P	**Pn**	**11 36 39.2**	**0.0**
UREC				*e*S	**Sn**	**11 37 10.6**	**-1.1**
UREC				*i*		11 37 12.2	
	comp=Z,189nm,0.1s						
LL2C	**La Loma 2 Cana**	**2.71**	**353**	*e*P	**Pn**	**11 36 42.4**	**+1.3**
LL2C				*e*S	**Sn**	**11 37 14.4**	**-0.6**
LL2C				*i*		11 37 22.3	
	comp=Z,163nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.76**	**234**	*e*P	**Pn**	**11 36 42.8**	**+0.7**
GUY2C				*e*S	**Sn**	**11 37 16.9**	**+0.2**
GUY2C				*i*		11 37 23.6	
	comp=Z,99nm,0.3s						
VILC	**Villavicencio,**	**2.78**	**192**	*e*P	**Pn**	**11 36 42.1**	**+0.1**
VILC				*e*S	**Sn**	**11 37 15.2**	**-1.5**
VILC				*i*		11 37 19.7	
	comp=Z,84nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*e*P	**Pn**	**11 36 41.2**	**-1.1**
PTGC				*e*S	**Sn**	**11 37 14.6**	**-2.4**
PTGC				*i*		11 37 16.6	
	comp=Z,79nm,0.2s						
LL3C	**La Loma 3 Cana**	**2.88**	**354**	*e*P	**Pn**	**11 36 43.7**	**+0.5**
LL3C				*e*S	**Sn**	**11 37 18.2**	**-0.5**
LL3C				*i*		11 37 27.6	
	comp=Z,114nm,0.6s						
CBOC	**Ciudad Bolivar**	**3.04**	**251**	*e*P	**Pn**	**11 36 46.2**	**+0.8**
CBOC				*e*S	**Sn**	**11 37 21.6**	**-1.0**
CBOC				*i*		11 37 34.5	
	comp=Z,52nm,0.5s						
TOLC	**Tolima**	**3.14**	**224**	*e*P	**Pn**	**11 36 47.9**	**+1.1**
TOLC				*e*S	**Sn**	**11 37 24.1**	**-1.1**
MOTC	**Monteria, Cord**	**3.18**	**307**	⇑*i*P	**Pn**	**11 36 45.7**	**-1.2**
MOTC				*e*S	**Sn**	**11 37 23.9**	**-1.5**
MOTC				*i*		11 37 25.3	
	comp=Z,74nm,0.2s						
SDV	**Santo Domingo**	**3.18**	**50**	P	**Pn**	**11 36 47.7**	**+0.5**
	comp=Z,12nm,0.3s,baz=229,slow=10,SNR=56						
SDV				S	**Sn**	**11 37 25.0**	**-0.8**
	comp=Z,12nm,0.3s,baz=256,slow=21,SNR=21						
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P	**Pn**	**11 36 49.0**	**+1.8**
ARGC				*e*S	**Sn**	**11 37 25.6**	**-0.4**
ARGC				*i*		11 37 36.4	
	comp=Z,34nm,0.4s						
ANIL	**Santa Ana**	**3.27**	**224**	*e*P	**Pn**	**11 36 48.6**	**+0.3**
ANIL				*e*S	**Sn**	**11 37 27.4**	**-0.6**
ORTC	**Ortega, Tolima**	**3.61**	**216**	*e*P	**Pn**	**11 36 52.5**	**0.0**
ORTC				*e*S	**Sn**	**11 37 34.4**	**-1.0**
ORTC				*i*		11 37 41.1	
	comp=Z,62nm,0.4s						
SJCC	**San Jacinto, C**	**3.66**	**326**	⇑*i*P	**Pn**	**11 36 52.4**	**-0.8**
SJCC				*e*S	**Sn**	**11 37 34.2**	**-2.4**
SJCC				*i*		11 37 37.3	
	comp=Z,43nm,0.5s						
CRJC	**Cerrejon, Guaj**	**4.15**	**3**	⇓*i*P	**Pn**	**11 36 58.7**	**-0.9**
CRJC				*e*S	**Sn**	**11 37 45.2**	**-3.0**
CRJC				*i*		11 37 54.5	
	comp=Z,50nm,0.1s						
YOTC	**Yotoco, Valle**	**4.30**	**229**	*e*P	**Pn**	**11 37 01.3**	**-0.3**
YOTC				*e*S	**Sn**	**11 37 51.5**	**-0.1**
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P	**Pn**	**11 37 02.7**	**-0.5**
SMRC				*e*S	**Sn**	**11 37 52.4**	**-2.1**
CAPC	**Capurgana**	**4.56**	**293**	*e*P	**Pn**	**11 37 03.0**	**-1.9**
CAPC				*e*S	**Sn**	**11 37 55.1**	**-2.6**
CAPC				*i*		11 37 59.0	
	comp=Z,35nm,0.4s						
MACC	**Macarena, Meta**	**4.73**	**189**	*e*P	**Pn**	**11 37 05.0**	**-2.2**
MACC				*e*S	**Sn**	**11 37 53.8**	**-7.9**
MACC				*i*		11 38 00.7	
	comp=Z,18nm,0.8s						
URIC	**Uribia, Colomb**	**4.95**	**13**	*e*P	**Pn**	**11 37 09.0**	**-1.0**
URIC				*e*S	**Sn**	**11 38 02.7**	**-4.2**
URIC				*i*		11 38 07.0	
	comp=Z,13nm,0.5s						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**11 46 09.6**	**+0.5**
	comp=Z,0.1nm,0.6s,baz=136,slow=6.8,SNR=4.3						
YKA				pP	**PcP**	**11 46 46.7**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=131,slow=7.3,SNR=3.5						
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc	**PKPdf**	**11 55 26.8**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=109,slow=4.0,SNR=4.4						
WRA	**Warramunga Arr**	**150.36**	**241**	PKPbc	**PKPbc**	**11 55 31.0**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=114,slow=2.7,SNR=2.2						

*NEIC **30** 11:43:57.6±1.2,5°.49S±0°.09×151°.96E±0°.08,h35km±2km, mb4.2/10,Error ellipse: s-maj=20.1km s-min=5.3km az=139.0*

*IDC **30** 11:44:03.3±4.6,5°.47S×151°.77E,h86km±40km,mb3.7/14, mb1 3.9/15,mb1mx3.8/29,mbtmp4.0/15,Error ellipse: s-maj=32.4km s-min=18.8km az=101.0*

ISC 30 11:43:58.7±0.8,5°.4S±0°.1×152°.0E±0°.2,h45km,n29, σ1§08/29,mb4.1/19,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.23**	**10**		**Pn**	**11 44 20.6**	**+1.1**
PMG	**Port Moresby**	**6.19**	**230**	P	**Pn**	**11 45 30.4**	**+2.7**
	2.1nm,0.3s,baz=67,slow=8.4,SNR=2.7						
PMG				S	**Sn**	**11 46 38.5**	**+1.3**
	3.9nm,0.3s,baz=16,slow=22,SNR=3.1						
PMG	**Port Moresby**	**6.19**	**230**	Pn	**Pn**	**11 45 27.7**	**+0.1**
MTN	**Manton Dam**	**21.82**	**249**	P	**P**	**11 48 47.0**	**-0.5**
MTN				lAmb	lAmb	11 49 00.6	
	comp=Z,33nm,1.5s						
WB0	**Warramunga Arr**	**22.26**	**229**	P	**P**	**11 48 51.2**	**-0.9**
WB0				lAmb	lAmb	11 48 53.8	
	comp=Z,17nm,1.4s						
WR0	**Warramunga Arr**	**22.27**	**228**	P	**P**	**11 48 51.7**	**-0.5**
WR0				lAmb	lAmb	11 48 53.4	
	comp=Z,9.6nm,1.1s						
WRAB	**Tennant Creek**	**22.39**	**228**	P	**P**	**11 48 53.0**	**-0.6**
WRAB				lAmb	lAmb	11 48 54.9	
	comp=Z,7.2nm,0.8s						
WB2	**Warramunga Arr**	**22.40**	**228**	P	**P**	**11 48 53.1**	**-0.6**
WB2				lAmb	lAmb	11 48 55.1	
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**22.41**	**228**	P	**P**	**11 48 52.6**	**-1.2**
	comp=Z,7.5nm,0.9s,baz=52,slow=9.9,SNR=32						
KNRA	**Kununurra**	**24.94**	**244**	P	**P**	**11 49 17.4**	**-0.7**
AS31	**Alice Springs**	**25.13**	**222**	P	**P**	**11 49 19.5**	**-0.3**
ASAR	**Alice Springs**	**25.13**	**222**	P	**P**	**11 49 19.2**	**-0.5**
	comp=Z,10nm,0.7s,baz=55,slow=9.0,SNR=71						
ASAR	**Alice Springs**	**25.13**	**222**	P	**P**	**11 49 18.6**	**-1.2**
FITZ	**Fitzroy Crossi**	**28.62**	**242**	P	**P**	**11 49 49.5**	**-1.6**
	comp=Z,4.7nm,0.7s,baz=61,slow=8.5,SNR=13						
FORT	**Forrest**	**33.78**	**219**	P	**P**	**11 50 35.5**	**-1.0**
MJAR	**Matsushiro Arr**	**43.67**	**344**	P	**P**	**11 51 58.1**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=159,slow=7.8,SNR=2.6						
KSRS	**Korea Array**	**48.16**	**334**	P	**P**	**11 52 35.0**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=153,slow=6.7,SNR=4.8						
CMAR	**Chiang Mai Arr**	**57.37**	**296**	P	**P**	**11 53 43.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=113,slow=6.0,SNR=1.9						
SONM	**Songino Array**	**66.39**	**328**	P	**P**	**11 54 43.1**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=153,slow=6.0,SNR=10.0						
SONM	**Songino Array**	**66.39**	**328**	P	**P**	**11 54 43.4**	**+0.1**
SONM				lAmb	lAmb	11 54 46.2	
	comp=Z,1.2nm,0.6s						
VNDA	**Vanda**	**72.26**	**178**	P	**P**	**11 55 18.6**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=330,slow=8.1,SNR=3.6						
VNDA	**Vanda**	**72.26**	**178**	lAmb	lAmb	11 55 20.9	
	comp=Z,2.5nm,1.2s						
MKAR	**Makanchi Array**	**80.22**	**319**	P	**P**	**11 56 04.4**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=120,slow=5.2,SNR=11						
ZALV	**Zalesovo Beam**	**81.19**	**327**	P	**P**	**11 56 08.7**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=132,slow=6.6,SNR=2.7						
ILAR	**Eielson Array**	**83.04**	**22**	P	**P**	**11 56 18.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=236,slow=4.7,SNR=10.0						
NRIK	**Noril'sk**	**86.26**	**341**	P	**P**	**11 56 35.8**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=92,slow=3.6,SNR=3.7						
NVAR	**Mina Array Bea**	**93.13**	**52**	P	**P**	**11 57 09.3**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=253,slow=5.5,SNR=1.6						
YKA	**Yellowknife Ar**	**96.36**	**28**	P	**P**	**11 57 24.6**	**+2.1**
	comp=Z,0.1nm,0.6s,baz=271,slow=4.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**149.68**	**287**	PKPbc	**PKPbc**	**12 03 43.0**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=92,slow=2.9,SNR=6.6						

IDC 30 12:00:49.3±4.1,5°.02S×151°.58E,h0km,mb3.8/3, mb1 4.1/3,mb1mx3.5/27,mbtmp3.8/3,Error ellipse: s-maj=146.9km s-min=52.6km az=120.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.39**	**227**	P	P	12 05 49.4	-0.2
	0.7nm,0.3s,baz=50,slow=9.9,SNR=34						
ASAR	**Alice Springs**	**25.18**	**221**	P	P	12 06 16.7	0.0
	2.3nm,0.6s,baz=56,slow=9.2,SNR=36						
FITZ	**Fitzroy Crossi**	**28.49**	**241**	P	P	12 06 46.7	+0.2
	1.4nm,0.8s,baz=43,slow=8.1,SNR=2.2						
TORD	**Torodi Ar. Bea**	**149.21**	**287**	PKPbc	PKPbc	12 20 40.5	-0.5
	0.5nm,0.7s,baz=67,slow=1.7,SNR=2.0						

*NEIC **30** 12:15:13.7±2.3,5°.59S±0°.09×152°.2E±0°.1,h10km±1km, mb4.3/9,Error ellipse: s-maj=25.6km s-min=12.1km az=111.0*

*IDC **30** 12:15:27.3±4.1,5°.61S×151°.59E,h112km±34km,mb3.8/11, mb1 4.0/12,mb1mx3.7/40,mbtmp4.1/12,Error ellipse: s-maj=37.8km s-min=20.0km az=113.0*

ISC 30 12:15:19.0±0.9,5°.53S±0°.09×152°.1E±0°.1,h45km,n27, σ1§76/28,mb4.2/15,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.33**	**5**	Pn	**Pn**	**12 15 40.1**	**-1.2**
RABL	**Rabaul**	**1.33**	**5**	P	**Pn**	**12 15 40.3**	**-1.0**
MANU	**Manus Island**	**5.82**	**306**	Pn	**Pn**	**12 16 44.2**	**+1.4**
PMG	**Port Moresby**	**6.19**	**231**	P	**Pn**	**12 16 49.4**	**+1.5**
	6.5nm,0.3s,baz=39,slow=8.5,SNR=18						
PMG				S	**Sn**	**12 17 57.8**	**+0.4**
	6.8nm,0.3s,baz=317,slow=23,SNR=6.5						
PMG	**Port Moresby**	**6.19**	**231**	Pn	**Pn**	**12 16 47.3**	**-0.6**
PMG	**Port Moresby**	**6.19**	**231**	P	**Pn**	**12 16 49.6**	**+1.7**
MTN	**Manton Dam**	**21.88**	**249**	P	**P**	**12 20 06.8**	**-1.5**
WB0	**Warramunga Arr**	**22.26**	**229**	P	**P**	**12 20 10.8**	**-1.6**
WR0	**Warramunga Arr**	**22.26**	**228**	P	**P**	**12 20 10.2**	**-2.2**
WR0				lAmb	lAmb	12 20 13.7	
	comp=Z,12nm,1.0s						
WRAB	**Tennant Creek**	**22.39**	**229**	P	**P**	**12 20 10.9**	**-2.9**
WRAB				lAmb	lAmb	12 20 14.8	
	comp=Z,11nm,0.8s						
WB2	**Warramunga Arr**	**22.39**	**229**	P	**P**	**12 20 11.8**	**-2.0**
WB2				lAmb	lAmb	12 20 15.0	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**22.40**	**229**	P	**P**	**12 20 12.5**	**-1.5**
	comp=Z,7.1nm,0.7s,baz=54,slow=10.0,SNR=29						
WRA				PcP	**PcP**	**12 24 06.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=54,slow=2.1,SNR=2.3						
WRA	**Warramunga Arr**	**22.40**	**229**	lAmb	lAmb	12 20 15.3	
	comp=Z,0.3nm,0.8s						
KNRA	**Kununurra**	**24.98**	**244**	P	**P**	**12 20 37.2**	**-1.5**
AS31	**Alice Springs**	**25.11**	**222**	P	**P**	**12 20 38.6**	**-1.2**
AS31				lAmb	lAmb	12 20 41.8	
	comp=Z,5.7nm,0.8s						
ASAR	**Alice Springs**	**25.11**	**222**	P	**P**	**12 20 38.9**	**-1.0**
	comp=Z,17nm,0.7s,baz=56,slow=8.5,SNR=109						
ASAR	**Alice Springs**	**25.11**	**222**	P	**P**	**12 20 37.9**	**-1.9**
STKA	**Stephens Creek**	**27.98**	**199**	P	**P**	**12 21 05.2**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=16,slow=20,SNR=3.3						
FITZ	**Fitzroy Crossi**	**28.65**	**242**	P	**P**	**12 21 09.8**	**-1.9**
	comp=Z,6.2nm,0.6s,baz=67,slow=6.5,SNR=23						
CMAR	**Chiang Mai Arr**	**57.51**	**296**	P	**P**	**12 25 02.3**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=110,slow=4.9,SNR=2.3						
PETK	**Petropavlovsk-**	**58.61**	**4**	P	**P**	**12 25 14.5**	**+3.2**
	comp=Z,1.9nm,1.0s,baz=192,slow=7.0,SNR=2.3						
SONM	**Songino Array**	**66.54**	**328**	P	**P**	**12 26 04.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=4.9						
ZALV	**Zalesovo Beam**	**81.34**	**327**	P	**P**	**12 27 30.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=85,slow=1.8,SNR=4.4						
ILAR	**Eielson Array**	**83.11**	**22**	P	**P**	**12 27 40.6**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=255,slow=5.1,SNR=12						
KURBB	**Kurchatov Arra**	**83.91**	**322**	P	**P**	**12 27 42.7**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=114,slow=4.3,SNR=5.7						
YKA	**Yellowknife Ar**	**96.42**	**28**	P	**P**	**12 28 46.4**	**+3.3**
	comp=Z,0.1nm,0.5s,baz=271,slow=4.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**149.81**	**287**	PKPbc	**PKPbc**	**12 35 03.6**	**-1.7**
	comp=Z,2.3nm,0.7s,baz=67,slow=3.4,SNR=9.2						

*IDC **30** 12:22:25.5±2.1,17°.91S×178°.17W,h596km±19km, mb3.3/12,mb1 3.5/13,mb1mx3.2/38,mbtmp4.3/13,Error ellipse: s-maj=33.6km s-min=17.6km az=138.0*

ISC 30 12:22:24.8±1.3,17°.9S±0°.2×178°.1W±0°.2,h590km,n15, σ0§71/17,mb4.0/13,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.66**	**272**	P	**P**	**12 23 48.3**	**+1.0**
	14nm,0.3s,baz=126,slow=3.9,SNR=89						
HNR	**Honiara**	**22.90**	**289**	P	**P**	**12 26 45.0**	**-0.1**
	62nm,0.4s,baz=142,slow=12,SNR=4.3						
CTA	**Charters Tower**	**33.73**	**260**	P	**P**	**12 28 18.4**	**-0.4**
	2.5nm,0.6s,baz=68,slow=4.5,SNR=4.1						
STKA	**Stephens Creek**	**38.88**	**241**	P	**P**	**12 29 01.1**	**+0.2**
	1.9nm,0.5s,baz=95,slow=11,SNR=7.2						
JAY	**Jayapura**	**43.18**	**286**	P	**P**	**12 29 35.4**	**+0.2**
	5.0nm,0.6s,baz=120,slow=16,SNR=3.2						
WRA	**Warramunga Arr**	**44.91**	**259**	P	**P**	**12 29 47.5**	**-0.9**
	1.7nm,0.3s,baz=95,slow=7.3,SNR=72						
WRA				PcP	**PcP**	**12 31 16.3**	**-0.7**
	2.5nm,1.2s,baz=90,slow=3.6,SNR=3.3						
ASAR	**Alice Springs**	**45.06**	**254**	P	**P**	**12 29 49.2**	**-0.4**
	8.1nm,0.6s,baz=87,slow=8.7,SNR=143						
ASAR				PcP	**PcP**	**12 31 17.2**	**-0.3**
	0.6nm,0.5s,baz=102,slow=3.8,SNR=6.5						
SIJI	**Sorong**	**52.51**	**283**	P	**P**	**12 30 44.3**	**-0.3**
	6.5nm,0.3s,baz=80,slow=6.2,SNR=5.4						
FITZ	**Fitzroy Crossi**	**53.31**	**260**	P	**P**	**12 30 50.0**	**-0.1**
	4.2nm,1.1s,baz=83,slow=5.6,SNR=8.0						
MJAR	**Matsushiro Arr**	**68.07**	**323**	P	**P**	**12 32 26.7**	**0.0**
	1.0nm,0.4s,baz=152,slow=6.1,SNR=6.8						
PETK	**Petropavlovsk-**	**73.75**	**345**	P	**P**	**12 32 59.5**	**0.0**
	0.8nm,0.6s,baz=113,slow=8.4,SNR=6.6						
TXAR	**Lajitas Array**	**85.75**	**58**	P	**P**	**12 34 03.6**	**+0.7**
	0.6nm,0.8s,baz=223,slow=5.4,SNR=5.5						
ILAR	**Eielson Array**	**85.82**	**13**	P	**P**	**12 34 01.2**	**-1.1**
	0.2nm,0.4s,baz=220,slow=5.6,SNR=1.7						
CMAR	**Chiang Mai Arr**	**89.15**	**290**	P	**P**	**12 34 20.4**	**+1.5**
	0.3nm,0.4s,baz=108,slow=2.9,SNR=6.0						
GERES	**GERESS Array B**	**147.68**	**345**	PKPbc	**PKPbc**	**12 41 03.3**	**-0.6**
	0.2nm,0.4s,baz=50,slow=2.1,SNR=4.5						

*SOME **30** 12:26:32.4,44°.68N×82°.20E,h15km*
*NNC **30** 12:26:34.5±1.0,44°.66N×82°.00E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=13.6km s-min=2.5km az=120.0*

ISC 30 12:26:32.2±1.7,44°.70N±0°.07×82°.3E±0°.1,h10km,n13, σ0§85/21,5C-1D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.80**	**259**	*e*P	**Pg**	**12 27 05.7**	**-1.0**
	6.6nm,0.3s						
DJR				*e*S	**Sg**	**12 27 29.8**	**-0.3**
	7.1nm,0.2s						
KTMS	**

ULC				*i* Sg	**Sg**	**12 32 15.4**	**+0.2**
PVY	**Plav**	**0.46**	**18**	⫰*i*Pg	**Pg**	**12 32 08.8**	**-1.1**
PVY				*i* Sg	**Sg**	**12 32 16.6**	**+0.4**
PDG	**Podgorica**	**0.47**	**306**	*e*Pg	**Pg**	**12 32 09.4**	**-0.5**
PDG				*e*Sg	**Sg**	**12 32 17.2**	**+1.0**
PDG	**Podgorica**	**0.47**	**306**	⫰*i*Pg	**Pg**	**12 32 09.3**	**-0.6**
PDG				*e*Sg	**Sg**	**12 32 16.9**	**+0.7**
TTG	**Podgorica**	**0.47**	**306**	⫰*i*Pg	**Pg**	**12 32 08.8**	**-1.1**
TTG				*i* Sg	**Sg**	**12 32 16.7**	**+0.5**
BUM	**Brajici-Budva**	**0.66**	**283**	⫰*i*Pg	**Pb**	**12 32 12.3**	**-1.6**
BUM				*i* Sg	**Sb**	**12 32 22.9**	**0.0**
PHP	**Peshkopia** baz=132	**0.69**	**133**	P	**Pb**	**12 32 13.3**	**-1.1**
PHP				S	**Sg**	**12 32 25.0**	**+1.7**
KOME	**Kolasin** baz=132	**0.72**	**345**	⫰*i*Pg	**Pb**	**12 32 13.4**	**-1.5**
KOME				*i* Sg	**Sg**	**12 32 25.0**	**+0.8**
IVA	**Berane**	**0.72**	**8**	⇑*i*Pg	**Pb**	**12 32 13.5**	**-1.5**
IVA				*i* Sg	**Sg**	**12 32 25.1**	**+0.7**
CEME	**Cevo**	**0.74**	**302**	⇑*i*Pg	**Pb**	**12 32 13.6**	**-1.6**
CEME				*i* Sg	**Sg**	**12 32 25.5**	**+0.7**
TIR	**Tirane**	**0.81**	**175**	*e*Pg	**Pb**	**12 32 14.8**	**-1.6**
TIR				*e*Sg	**Sb**	**12 32 26.2**	**-0.9**
TIR	**Tirane** baz=172	**0.81**	**175**	P	**Pb**	**12 32 16.0**	**-0.4**
TIR				S	**Sn**	**12 32 29.2**	**0.0**
NKME	**Niksic** baz=172	**0.86**	**316**	⫰*i*Pg	**Pb**	**12 32 15.8**	**-1.4**
NKME				*i* Sg	**Sg**	**12 32 29.5**	**+0.9**
NKY	**Niksic**	**0.87**	**319**	⇑*i*Pg	**Pb**	**12 32 16.1**	**-1.4**
NKY				*i* Sg	**Sg**	**12 32 29.9**	**+0.9**
HCY	**Herceg Novi**	**0.98**	**288**	⇑*i*Pg	**Pb**	**12 32 18.1**	**-1.3**
HCY				*e*Sg	**Sn**	**12 32 33.9**	**+0.3**
HCY	**Herceg Novi**	**0.98**	**288**	⇑*i*Pg	**Pb**	**12 32 18.1**	**-1.3**
HCY				*i* Sg	**Sn**	**12 32 33.8**	**+0.2**
SJES	**Sjenica**	**1.12**	**8**	*e*Pg	**Pn**	**12 32 21.4**	**-0.4**
SJES				*e*Sg	**Sb**	**12 32 36.3**	**+0.2**
BRY	**Bratogost**	**1.17**	**310**	*e*Pg	**Pn**	**12 32 21.7**	**-0.9**
BRY				*e*Sg	**Sg**	**12 32 39.5**	**+0.9**
BRY	**Bratogost**	**1.17**	**310**	*e*Pg	**Pn**	**12 32 21.5**	**-1.1**
BRY				*i* Sg	**Sg**	**12 32 40.1**	**+1.5**
TREB	**Trebinje**	**1.19**	**299**	*e*Pg	**Pn**	**12 32 22.1**	**-0.6**
TREB				*e*Sg	**Sg**	**12 32 39.7**	**+0.7**
TREB	**Trebinje**	**1.19**	**299**	*e*Pg	**Pn**	**12 32 21.9**	**-0.8**
TREB				*e*Sg	**Sg**	**12 32 40.5**	**+1.5**
PLE	**Pljevlja**	**1.21**	**347**	⫰*i*Pg	**Pn**	**12 32 22.2**	**-0.9**
PLE				*i* Sg	**Sg**	**12 32 41.3**	**+1.6**
UPM	**Unac-Piva**	**1.22**	**329**	*e*Pg	**Pn**	**12 32 23.2**	**-0.2**
UPM				*e*Sg	**Sg**	**12 32 41.0**	**+0.7**
UPM	**Unac-Piva**	**1.22**	**329**	⇑*i*Pg	**Pn**	**12 32 22.5**	**-0.9**
UPM				*i* Sg	**Sg**	**12 32 41.9**	**+1.6**
IVAS	**Ivanjica**	**1.45**	**11**	*e*Pg	**Pn**	**12 32 26.5**	**+0.1**
IVAS				*e*Sg	**Sg**	**12 32 47.3**	**-0.1**
SELS	**Selova**	**1.46**	**43**	*e*Pg	**Pn**	**12 32 26.3**	**-0.2**
RUDO	**Rudo**	**1.49**	**349**	*e*Pg	**Pn**	**12 32 27.4**	**+0.5**
RUDO				*e*Sg	**Sg**	**12 32 48.3**	**-0.4**
RUDO	**Rudo**	**1.49**	**349**	⇑*i*Pg	**Pn**	**12 32 26.0**	**-0.9**
RUDO				*e*Sg	**Sb**	**12 32 47.9**	**+1.2**
BARS	**Barje**	**1.66**	**66**	*e*Pg	**Pn**	**12 32 27.7**	**-1.4**
BARS				*e*Sg	**Sn**	**12 32 49.2**	**-0.9**
STON	**Ston**	**1.69**	**296**	*e*Pg	**Pn**	**12 32 30.2**	**+0.7**
STON				*e*Sg	**Sg**	**12 32 54.6**	**-0.3**
STON	**Ston**	**1.69**	**296**	*e*Pn	**Pn**	**12 32 30.1**	**+0.7**
STON				Sn	**Sg**	**12 32 55.4**	**+0.6**
STON	**Ston**	**1.69**	**296**	*e*Pn	**Pn**	**12 32 29.2**	**-0.3**
STON				*e*Sn	**Sb**	**12 32 52.7**	**+0.4**
BBLS	**Lazići**	**1.73**	**351**	*e*Pg	**Pn**	**12 32 31.1**	**+0.9**
BBLS				*e*Sg	**Sg**	**12 32 56.9**	**+0.5**
BBLS	**Lazići**	**1.73**	**351**	⇑*i*Pn	**Pn**	**12 32 30.4**	**+0.2**
BBLS				*e*Sn	**Sn**	**12 32 52.6**	**+0.5**
FNA	**Florina** baz=137	**1.83**	**138**	P	**Pb**	**12 32 34.7**	**+0.9**
FNA				S	**Sg**	**12 32 59.6**	**+0.1**
GRUS	**Gruza**	**1.87**	**22**	*e*Pg	**Pn**	**12 32 32.2**	**+0.2**
DIVS	**Divibare**	**1.95**	**5**	*e*Pg	**Pn**	**12 32 33.5**	**+0.2**
DIVS				*e*Sg	**Sg**	**12 33 03.7**	**+0.3**
DIVS	**Divibare**	**1.95**	**5**	⇑*i*Pn	**Pn**	**12 32 33.4**	**+0.2**
DIVS				*e*Sn	**Sn**	**12 32 57.9**	**+0.4**
HAPS	**Han Pijesak,Bl**	**2.02**	**343**	*e*Pn	**Pn**	**12 32 34.3**	**+0.1**
HAPS				*e*Sn	**Sn**	**12 33 00.1**	**+0.8**
TRUS	**Trudelj**	**2.12**	**13**	*e*Sg	Pg	12 32 38.3	-3.0
TRUS	**Trudelj**	**2.12**	**13**	*e*Pg	Sg	12 33 07.6	-1.2
RICI	**Ricice**	**2.35**	**306**	*e*Pn	**Pn**	**12 32 40.1**	**+1.4**
RICI				Sn	**Sb**	**12 33 11.3**	**-0.3**
TEKS	**Tekeris**	**2.40**	**356**	*e*Pn	**Pn**	**12 32 40.2**	**+0.8**
TEKS				*e*Sn	**Sn**	**12 33 09.2**	**+0.7**
IGT	**Igoumenitsa** baz=170	**2.66**	**170**	P	**Pb**	**12 32 46.8**	**-1.1**
FRGS	**Fruska Gora**	**3.00**	**1**	*e*Pn	**Pn**	**12 32 48.0**	**+0.3**
FRGS				*e*Sn	**Sn**	**12 33 23.3**	**0.0**
KIJV	**Kijevo**	**3.08**	**308**	*e*Pg	**Pb**	**12 32 54.8**	**-0.2**
KIJV				Sn	**Sn**	**12 33 28.1**	**+2.9**
BLY	**Banja Luka**	**3.20**	**325**	*e*Pn	**Pn**	**12 32 51.7**	**+1.3**
BLY				*e*Sn	**Sn**	**12 33 30.2**	**+2.0**
ZIRJ	**Zirje**	**3.38**	**298**	*e*Pn	**Pn**	**12 32 53.8**	**+1.0**
ZIRJ				Sn	**Sn**	**12 33 35.3**	**+2.8**
MRAK	**Mrakovica**	**3.53**	**325**	*e*Sn	**Sn**	**12 33 37.4**	**+0.9**
DUGI	**Dugi Otok**	**3.91**	**300**	*e*Pn	**Pn**	**12 33 01.3**	**+1.3**
DUGI				Sn	**Sn**	**12 33 47.9**	**+2.4**
MORH	**Mrgy, Hungar**	**4.14**	**349**	*e*Pn	**Pn**	**12 33 03.5**	**+0.3**
MORH				*e*Sn	**Sn**	**12 33 51.3**	**0.0**
CRES	**Cresnjev**	**4.81**	**321**	*e*Pn	**Pn**	**12 33 13.2**	**+0.8**
CRES				*e*Sn	**Sn**	**12 34 07.9**	**+0.1**
CEY	**Cerknica**	**5.26**	**315**	*e*Pn	**Pn**	**12 33 18.3**	**-0.4**
CEY				*e*Sn	**Sn**	**12 34 18.9**	**-0.1**

*NEIC **30** 12:44:05.7±1.8,5°.2S±0°.2×151°.4E±0°.2, h35km±2km, mb4.3/10, Error ellipse: s-maj=39.5km s-min=10.8km az=129.0*

*IDC **30** 12:44:06.9±3.6,5°.09S×151°.23E, h53km±28km, mb3.9/6, mb1 4.1/8, mb1mx3.6/32, mbtmp4.1/8, ML2.8/2, Error ellipse: s-maj=51.8km s-min=21.0km az=119.0*

ISC 30 12:44:05.1±0.8,5°.0S±0°.2×151°.3E±0°.2, h35km, n23, σ1s37/24, mb4.2/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.22**	**47**	Pn	**Pn**	**12 44 27.7**	**+2.1**
PMG	**Port Moresby** 3.0nm,0.3s,baz=36,slow=12,SNR=9.5	**5.96**	**223**	P	**Pn**	**12 45 33.2**	**+2.3**
PMG				S	**Sn**	**12 46 40.6**	**+2.6**
	1.7nm,0.3s,baz=119,slow=23,SNR=1.5						
PMG	**Port Moresby**	**5.96**	**223**		**Pn**	**12 45 31.8**	**+0.9**
COEN	**Coen**	**11.93**	**221**	Pn	**Pn**	**12 46 53.0**	**+0.2**
CTA	**Charters Tower** 0.1nm,0.3s,baz=8.7,slow=13,SNR=2.1	**15.74**	**198**	P	**Pn**	**12 47 44.2**	**-0.1**
MTN	**Manton Dam**	**21.34**	**247**	P	**P**	**12 48 50.4**	**+1.1**
WB0	**Warramunga Arr**	**22.02**	**227**	P	**P**	**12 48 55.3**	**-1.3**
WB0	comp=Z,7.0nm,0.7s			IAmb	IAmb	12 48 58.2	
WR0	**Warramunga Arr**	**22.03**	**226**	P	**P**	**12 48 56.0**	**-0.7**
WR0	comp=Z,8.2nm,0.9s			IAmb	IAmb	12 48 58.7	
WRAB	**Tennant Creek**	**22.15**	**227**	P	**P**	**12 48 57.7**	**-0.3**
WRAB	comp=Z,8.2nm,0.6s			IAmb	IAmb	12 48 59.8	
WB2	**Warramunga Arr**	**22.16**	**227**	P	**P**	**12 48 57.2**	**-0.9**
WB2	comp=Z,8.2nm,0.7s			IAmb	IAmb	12 48 59.6	
WRA	**Warramunga Arr** comp=Z,6.8nm,0.6s,baz=52,slow=10,SNR=46	**22.16**	**227**	P	**P**	**12 48 57.2**	**-1.0**
WRA				ScP	**ScP**	**12 56 28.2**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=45,slow=3.2,SNR=1.3						
WRA	**Warramunga Arr**	**22.16**	**227**	P	**P**	**12 48 56.6**	**-1.6**
KNRA	**Kununurra**	**24.51**	**243**	P	**P**	**12 49 21.9**	**+0.5**
KNRA	comp=Z,18nm,1.1s			IAmb	IAmb	12 49 35.0	
AS31	**Alice Springs**	**24.97**	**220**	P	**P**	**12 49 25.1**	**-0.5**
AS31	comp=Z,3.1nm,0.6s			IAmb	IAmb	12 49 26.3	
ASAR	**Alice Springs** comp=Z,8.7nm,0.7s,baz=58,slow=8.8,SNR=92	**24.97**	**220**	P	**P**	**12 49 24.1**	**-1.5**
ASAR	**Alice Springs**	**24.97**	**220**	P	**P**	**12 49 24.7**	**-0.8**
STKA	**Stephens Creek** comp=Z,0.8nm,0.6s,baz=348,slow=12,SNR=3.2	**28.21**	**198**	P	**P**	**12 49 53.4**	**-1.2**
STKA	**Stephens Creek** comp=Z,0.9nm,1.2s	**28.21**	**198**	IAmb	IAmb	12 50 02.0	
FITZ	**Fitzroy Crossi** comp=Z,3.4nm,0.5s,baz=54,slow=7.5,SNR=15	**28.21**	**240**	P	**P**	**12 49 54.6**	**-0.2**
FORT	**Forrest**	**33.66**	**218**	P	**P**	**12 50 40.5**	**-2.2**
SONM	**Songino Array** comp=Z,0.2nm,0.3s,baz=108,slow=4.7,SNR=1.4	**65.72**	**329**	P	**P**	**12 54 45.4**	**-1.0**
ILAR	**Eielson Array** comp=Z,0.8nm,0.6s,baz=246,slow=5.4,SNR=14	**82.95**	**22**	P	**P**	**12 56 27.1**	**+0.9**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.3s,baz=104,slow=2.9,SNR=2.1	**148.92**	**287**	PKPbc	**PKPbc**	**13 03 49.3**	**-1.1**

*IDC **30** 13:08:10.7±2.0,6°.67S×130°.57E, h62km±19km, mb3.7/8, mb1 4.0/13,mb1mx3.7/44, mbtmp4.2/13, Error ellipse: s-maj=19.7km s-min=15.4km az=99.0*

*NEIC **30** 13:08:10.3±2.1,6°.74S±0°.06×130°.59E±0°.04, h64km±8km, mb4.4/13, Error ellipse: s-maj=9.4km s-min=5.5km az=164.0*

*DJA **30** 13:08:11.3±0.3,7°S±2°×13°1E±°, h127km±6km, M4.6/12, mb4.6/11,mB5.2/6, MLv4.5/12, Mw(mB)4.6/6, Hypocentre not reviewed by the ISC*

ISC 30 13:08:08.9±0.5,6.75S±0°.04×130°.59E±0°.07, h50km, n43, σ2s42/48, mb4.2/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.41**	**150**	Pn	**Pn**	**13 08 34.4**	**+2.2**
SAUI				Sn	**Sn**	**13 08 51.8**	**+2.1**
SAUI	**Saumlaki**	**1.41**	**150**	P		13 08 38.4	
SAUI				S		13 08 56.4	
BNDI	**Bandanaira**	**2.32**	**343**	P		13 08 49.6	
KRAI	**Karang Ratu**	**4.05**	**327**	P		13 09 14.2	
FAKI	**Fak Fak**	**4.15**	**24**	Pn	**Pn**	**13 09 11.5**	**+1.7**
FAKI	**Fak Fak**	**4.15**	**24**	P		13 09 11.8	
NLAI	**Namlea** 0.2nm45nm,0.8s	**4.93**	**315**	P		13 09 27.2	
SIJI	**Sorong** 16nm,0.3s,baz=186,slow=13,SNR=45	**5.88**	**7**	P	**Pn**	**13 09 34.7**	**+1.1**
SIJI				S	**Sn**	**13 10 35.4**	**-4.4**
	9.3nm,0.3s,baz=52,slow=23,SNR=8.4						
SIJI	**Sorong**	**5.88**	**7**	P		13 09 34.6	
SWI	**Sorong** 0.4nm4µm52nm,0.4s	**5.89**	**7**	P		13 09 34.4	
MTN	**Manton Dam**	**6.08**	**175**	Pn	**Pn**	**13 09 39.7**	**+3.6**
SANI	**Sanana** 0.1nm25nm,1.0s	**6.55**	**315**	P		13 09 48.8	
MWPI	**Manokwari, Pap** 0.3nm1µm78nm,0.8s	**6.73**	**31**	P		13 09 46.0	
SOEI	**Soe**	**6.93**	**244**	Pn	**Pn**	**13 09 49.6**	**+1.6**
SOEI	**Soe** 0.4nm56nm,0.6s	**6.93**	**244**	P		13 09 53.4	
BATI	**Baumata** 12nm,0.3s,baz=96,slow=1.3,SNR=8.2	**7.66**	**243**	P	**Pn**	**13 10 01.8**	**+3.8**
BATI				S	**Sn**	**13 11 25.9**	**+2.4**
	13nm,0.3s,baz=76,slow=20,SNR=4.1						
BATI	**Baumata** 0.2nm28nm,0.7s	**7.66**	**243**	P		13 10 03.0	
BAKI	**Biak** 39nm,0.6s	**7.80**	**45**	P		13 10 01.0	
KNRA	**Kununurra**	**9.05**	**191**	Pn	**Pn**	**13 10 18.9**	**+2.0**
LUWI	**Luwuk** 1µm55nm,1.1s	**9.64**	**306**	P		13 10 29.3	
GENI	**Genyem**	**10.40**	**67**	P		13 10 40.3	
JAY	**Jayapura** 0.8nm,0.3s,baz=267,slow=12,SNR=6.1	**10.93**	**68**	P	**Pn**	**13 10 45.5**	**+2.8**
MRSI	**Marisa**	**11.23**	**309**	P		13 10 58.0	
FITZ	**Fitzroy Crossi** 2.2nm,0.3s,baz=35,slow=11,SNR=67	**12.26**	**203**	P	**Pn**	**13 11 01.7**	**+0.8**
FITZ				S	**Sn**	**13 13 08.9**	**-7.3**
	1.8nm,0.3s,baz=76,slow=18,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.26**	**203**	Pn	**Pn**	**13 11 00.1**	**-0.8**
WB0	**Warramunga Arr**	**13.45**	**164**	Pn	**Pn**	**13 11 15.8**	**-1.4**
WRAB	**Tennant Creek**	**13.60**	**165**	Pn	**Pn**	**13 11 17.4**	**-1.9**
WRA	**Warramunga Arr** 3.0nm,0.3s,baz=347,slow=13,SNR=74	**13.61**	**165**	P	**Pn**	**13 11 17.8**	**-1.5**
WRA				S	Sn	13 13 39.6	-9.5
	4.2nm,0.3s,baz=344,slow=21,SNR=11						
WRA	**Warramunga Arr**	**13.61**	**165**	Pn	**Pn**	**13 11 19.9**	**+0.6**
WB2	**Warramunga Arr**	**13.61**	**165**	Pn	**Pn**	**13 11 17.5**	**-1.8**
WR0	**Warramunga Arr**	**13.68**	**164**	Pn	**Pn**	**13 11 18.5**	**-1.8**
COEN	**Coen**	**14.30**	**121**	Pn	**Pn**	**13 11 28.3**	**-0.3**
BBKI	**Banjar Baru**	**16.02**	**281**	P		13 11 52.4	
AS31	**Alice Springs**	**17.11**	**170**	Pn	**Pn**	**13 12 04.6**	**-0.1**
ASAR	**Alice Springs** 2.3nm,0.3s,baz=348,slow=8.9,SNR=132	**17.12**	**170**	P	**Pn**	**13 12 05.0**	**+0.3**
ASAR				S	**Sn**	**13 15 04.7**	**-10**
	0.7nm,0.3s,baz=352,slow=25,SNR=7.1						
ASAR	**Alice Springs**	**17.12**	**170**	Pn	**Pn**	**13 12 04.7**	**-0.1**
PSA00	**Pilbara Seismi**	**18.02**	**214**	P	**Pn**	**13 12 16.7**	**+0.8**
PSA00	comp=Z,11nm,0.7s			IAmb	IAmb	13 12 19.6	
CTA	**Charters Tower** comp=Z,4.5nm,0.7s,baz=314,slow=13,SNR=5.3	**20.17**	**133**	P	**P**	**13 12 40.2**	**+0.8**
BJII	**Banjamegara**	**20.73**	**267**	P		13 12 45.0	
MORW	**Morawa**	**26.10**	**210**	P	**P**	**13 13 38.4**	**+0.3**
BBOO	**Buckleboo**	**26.42**	**170**	P	**P**	**13 13 42.1**	**+1.2**
BBOO	comp=Z,13nm,1.2s			IAmb	IAmb	13 13 48.0	
STKA	**Stephens Creek** comp=Z,1.6nm,0.7s,baz=331,slow=15,SNR=3.1	**27.03**	**159**	P	**P**	**13 13 48.0**	**+1.6**
STKA	**Stephens Creek**	**27.03**	**159**	P	**P**	**13 13 46.3**	**-0.1**
ARMA	**Armidale**	**30.73**	**143**	P	**P**	**13 14 18.7**	**-0.8**
YULB	**Yu-li**	**31.31**	**343**	P	**P**	**13 14 23.4**	**-1.1**
JHS	**Saijyo**	**41.60**	**3**	P	**P**	**13 15 52.6**	**+0.6**
JHS	comp=Z,8.3nm,1.1s			IAmb	IAmb	13 16 04.8	
ENH	**Enshi**	**42.01**	**332**	P	**P**	**13 15 55.1**	**-0.5**
ENH	comp=Z,4.4nm,0.5s			IAmb	IAmb	13 16 12.6	
JWT	**Wachi**	**42.06**	**6**	P	**P**	**13 15 56.2**	**+0.5**
JWT	comp=Z,15nm,1.5s			IAmb	IAmb	13 16 23.1	
TUWZ	**Tuamarina**	**51.68**	**139**	P	**P**	**13 17 11.4**	**+0.5**
PETK	**Petropaavlovsk-** comp=Z,1.3nm,0.9s,baz=206,slow=6.3,SNR=1.9	**63.91**	**18**	P	**P**	**13 18 36.6**	**+0.2**
MKAR	**Makanchi Array** comp=Z,1.9nm,0.6s,baz=128,slow=7.6,SNR=9.0	**68.34**	**326**	P	**P**	**13 19 05.7**	**+0.6**
MKAR	**Makanchi Array**	**68.34**	**326**	P	**P**	**13 19 05.0**	**-0.1**
MAKZ	**Makanchi**	**68.52**	**326**	P	**P**	**13 19 05.5**	**-0.7**
MAKZ	comp=Z,2.0nm,0.7s			IAmb	IAmb	13 19 07.2	
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.6s,baz=98,slow=6.1,SNR=4.7	**71.62**	**333**	P	**P**	**13 19 23.5**	**-1.5**
VNDA	**Vanda** comp=Z,0.9nm,0.7s,baz=311,slow=7.4,SNR=6.2	**72.62**	**173**	P	**P**	**13 19 32.0**	**+1.4**
MAW	**Mawson** comp=Z,1.0nm,0.5s,baz=63,slow=4.5,SNR=1.3	**75.39**	**201**	P	**P**	**13 19 48.4**	**+1.5**
MAW	**Mawson**	**75.39**	**201**	P	**P**	**13 19 47.9**	**+1.0**
QSPA	**South Pole Qui**	**83.22**	**180**	P	**P**	**13 20 30.7**	**+0.9**
QSPA	comp=Z,2.6nm,0.7s			IAmb	IAmb	13 20 31.4	
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=250,slow=2.6,SNR=2.6	**92.88**	**25**	P	**P**	**13 21 14.1**	**-2.0**
LPAZ	**La Paz** comp=Z,1.1nm,0.4s,baz=52,slow=0.9,SNR=5.7	**150.55**	**141**	PKPbc	**PKiKP**	**13 27 58.3**	**+0.6**

*IDC **30** 13:25:07.0±2.5,27°.65N×85°.84E, h0km, mb3.3/4, mb1 3.5/6, mb1mx3.3/51, mbtmp3.3/6, ML3.9/2, Error ellipse: s-maj=83.1km s-min=24.4km az=68.0*

ISC 30 13:25:09.7±2.4, 27.7N±0.3×85.8E±0.5, h19km, n6, σ0s89/6, mb3.4/4, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=303,slow=15,SNR=1.7	**15.14**	**125**	Pn	**Pn**	**13 28 42.3**	**-0.4**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=178,slow=12,SNR=3.8	**19.28**	**353**	P	**Pn**	**13 29 33.5**	**-0.9**
KURBB	**Kurchatov Arra** 0.3nm,0.6s,baz=165,slow=10,SNR=4.1	**23.57**	**348**	P	**P**	**13 30 19.5**	**+0.5**
SONM	**Songino Array** 0.6nm,0.6s,baz=218,slow=9.9,SNR=3.8	**25.71**	**33**	P	**P**	**13 30 39.3**	**+0.4**
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=324,slow=6.6,SNR=1.5	**66.66**	**130**	P	**P**	**13 36 00.4**	**+0.9**
ASAR	**Alice Springs** 0.2nm,0.8s,baz=306,slow=6.6,SNR=2.1	**68.97**	**133**	P	**P**	**13 36 13.5**	**-0.5**

*ANF **30** 14:01:15.5±0.2,33°.85N×118°.23W, h14km±1km, ML3.4/31, Error ellipse: s-maj=1.5km s-min=1.3km az=105.0, Hypocentre not reviewed by the ISC*

*SCEDC **30** 14:01:16.0,33°.85N×118°.25W, h15km, Hypocentre not reviewed by the ISC*

*PAS **30** 14:01:16.0±1.4,33°.851N±0°.009×118°.251W±0°.010, h15km±1km, ML3.4/188, ML3.2/35(NEIC), Error ellipse: s-maj=1.3km s-min=1.2km az=158.0*

NEIC 30 14:01:15.3±1.0,33°.84N±0°.01×118°.25W±0°.01, h19km, Error ellipse: s-maj=1.7km s-min=1.5km az=54.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WTT2	**Watts, South G**	**0.11**	**359**		Pg	14 01 21.2	+1.9
FMP	**Fort Macarthur**	**0.13**	**196**		Pg	14 01 19.6	+0.1
FMP					Sg	14 01 22.2	0.0
FMP	**Fort Macarthur** baz=14,SNR=140	**0.13**	**196**	P		14 01 19.6	
FMP				S		14 01 22.2	
	baz=14						
RPV	**Rancho Palos V**	**0.16**	**234**		Pg	14 01 20.0	+0.2
RPV					Sg	14 01 22.3	-0.5
BHPC	**Baldwin Hills**	**0.18**	**330**		Pg	14 01 20.1	0.0
BHPC					Sg	14 01 23.7	+0.3
USC	**University of**	**0.18**	**351**		Pg	14 01 20.3	+0.1
USC					Sg	14 01 23.1	-0.4
LCGC	**La Cienega, Cu**	**0.19**	**328**		Pg	14 01 20.5	+0.1
LCGC					Sg	14 01 23.6	-0.1
GVRC	**Garvey Reservo**	**0.24**	**27**		Sg	14 01 25.2	+0.3
FULC	**Fullerton**	**0.28**	**82**		Pg	14 01 22.7	+1.2
GR2C	**Griffith Obs.**	**0.28**	**352**		Pg	14 01 21.2	-0.5
GR2C					Sb	14 01 25.9	-0.2
DJJ	**Donna J Jenkin**	**0.32**	**328**		Pg	14 01 21.9	-0.3
DJJ					Sg	14 01 26.5	-0.6
DJJ	**Donna J Jenkin**	**0.32**	**328**		Pg	14 01 21.9	-0.4
DJJ					Sg	14 01 26.4	-0.6
GSA	**Caltech--GSA**	**0.32**	**19**		Pg	14 01 22.3	0.0
CACC	**Caltech Cellar**	**0.32**	**20**		Pg	14 01 21.9	-0.4
CACC					Sb	14 01 27.2	0.0
PASC	**Pasadena Art C**	**0.34**	**10**		Pg	14 01 21.9	-0.8
PASC	**Pasadena Art C**	**0.34**	**10**		Sg	14 01 26.9	-0.8
PASC	**Pasadena Art C** comp=E,4µm,0.4s	**0.34**	**10**	IAML		14 01 27.6	
PASC				IAML		14 01 34.2	
	comp=N,2µm,0.4s						
HLLC	**North Hollywoo**	**0.35**	**345**		Pb	14 01 23.1	+0.1
HLLC					Sg	14 01 27.5	-0.5
MWC	**Mount Wilson**	**0.42**	**23**		Pg	14 01 23.6	-0.5
MWC					Sg	14 01 29.6	-0.5
MWC	**Mount Wilson** comp=E,2µm,0.2s	**0.42**	**23**	IAML		14 01 30.6	
MWC				IAML		14 01 36.7	
	comp=N,2µm,0.3s						
DECC	**Green Verdugo**	**0.42**	**351**		Pg	14 01 23.4	-0.7
DECC					Sg	14 01 29.1	-0.9
DECC	**Green Verdugo** baz=170,SNR=40	**0.42**	**351**	P		14 01 23.4	
DECC				S		14 01 29.3	
	baz=170						
PSRC	**Puddingstone R**	**0.45**	**55**		Pg	14 01 24.5	-0.1
PSRC					Sg	14 01 30.5	-0.3
CIAC	**Catalina I. Ai**	**0.45**	**197**		Pb	14 01 25.3	+0.6
CIAC					Sb	14 01 32.1	+1.0
CIS	**Catalina Islan** baz=17,SNR=65	**0.45**	**197**	P		14 01 25.4	
CIS				S		14 01 32.3	
	baz=17						
PEM	**Pine Mountain**	**0.46**	**44**		Pg	14 01 24.3	-0.4
CHFC	**Chilao Flat St**	**0.53**	**21**		Pb	14 01 25.4	-0.7
CHFC					Sb	14 01 32.5	-0.9
BLCC	**Black Canyon**	**0.54**	**320**		Pb	14 01 25.9	-0.1
XTL	**Crystal Lake,**	**0.56**	**35**		Pb	14 01 26.0	-0.5
CRNC	**Corona**	**0.58**	**86**		Pg	14 01 27.1	+0.2
OAT	**Oat Mountain**	**0.59**	**329**		Pg	14 01 27.3	+0.1
OAT					Sb	14 01 34.9	-0.1
SSK	**Sunset Peak**	**0.60**	**51**		Pb	14 01 26.9	-0.3
MLSC	**Mira Loma**	**0.60**	**73**		Pb	14 01 27.1	0.0
MLSC					Sb	14 01 34.8	-0.3
BFSC	**Mount Baldy Ra**	**0.64**	**51**		Pb	14 01 27.3	-0.5
BFSC					Sb	14 01 36.0	-0.3
BFSC	**Mount Baldy Ra** baz=232,SNR=132	**0.64**	**51**	P		14 01 27.3	
BFSC				S		14 01 36.9	
	baz=232						
JNH	**Juniper Hills**	**0.66**	**22**		Pb	14 01 27.7	-0.5
JNH					Sb	14 01 36.5	-0.5
PDE	**Pardee, Santa**	**0.66**	**336**		Pg	14 01 29.0	+0.6
PDE					Sb	14 01 36.8	-0.2
CJV	**Casa Juvan**	**0.70**	**7**		Pb	14 01 28.3	-0.6
CJV					Sb	14 01 37.8	-0.4
ELS	**Elsinore Mount**	**0.71**	**105**		Sg	14 01 39.1	+0.2
LRRC	**Littlerock Res

109C	**Camp Elliot, M**	**1.35**	**134**	P			14 01 39.1	
	baz=316,SNR=22							
109C				S			14 01 57.2	
	baz=316							
CPE	**Camp Elliot**	**1.35**	**134**			Pn	14 01 39.1	+0.1
HWB	**Hans Werner Br**	**1.35**	**126**			Pn	14 01 39.3	+0.2
SBC	**Santa Barbara**	**1.35**	**297**	S			14 01 59.5	
	baz=116							
BZNA	**Buzz No.'s Pla**	**1.37**	**104**			Pb	14 01 40.1	-0.2
ARVC	**Arvin**	**1.37**	**340**	P			14 01 40.6	
	baz=159,SNR=60							
ARVC				S			14 01 59.8	
	baz=159							
DPP	**Dos Picos Cty**	**1.38**	**127**			Pn	14 01 39.6	+0.1
DNR	**Dunn Ranch,Anz**	**1.38**	**101**			Pb	14 01 41.0	+0.4
SNDA	**J Saunders Pla**	**1.40**	**101**			Pb	14 01 40.7	-0.1
RRX	**Edison Barstow**	**1.47**	**45**	P			14 01 42.4	
	baz=226							
RRX				S			14 02 00.7	
	baz=226							
MATG	**Mataguay Scout**	**1.48**	**115**			Pn	14 01 41.5	+0.5
EML	**El Monte Cty P**	**1.51**	**128**			Pn	14 01 41.4	+0.1
PFO	**Pinyon Flats O**	**1.51**	**98**	Pn		Pn	14 01 42.0	+0.6
PFO				IAML			14 02 11.3	
	comp=N,244nm,1.0s							
PFO	**Pinyon Flats O**	**1.51**	**98**	P			14 01 41.9	
	baz=280,SNR=52							
PFO				S			14 02 02.3	
	baz=280							
TJX	**Tijuana**	**1.66**	**142**			Pn	14 01 43.2	-0.1
PKM	**Mcpherson Peak**	**1.66**	**310**	P			14 01 44.9	
	baz=128,SNR=14							
PKM				S			14 02 07.2	
	baz=128							
LRMC	**Laurel Mtn Rad**	**1.71**	**16**	P			14 01 44.9	
	baz=196,SNR=81							
LRMC				S			14 02 06.1	
	baz=196							
BAR	**Barrett**	**1.76**	**131**	Pn		Pn	14 01 44.8	+0.1
BAR				IAML			14 02 10.4	
	comp=N,364nm,0.4s							
MONP2	**Monument Peak**	**1.80**	**121**	P			14 01 46.2	
	baz=303,SNR=33							
ISA	**Isabella, Lake**	**1.83**	**354**	Pn		Pb	14 01 47.1	-1.1
ISA	**Isabella, Lake**	**1.83**	**354**	P			14 01 47.0	
	baz=174,SNR=43							
ISA				S			14 02 10.2	
	baz=174							
HEC	**Hector,Ludlow**	**1.87**	**57**	P			14 01 47.8	
	baz=239,SNR=42							
TKX	**Tecate**	**1.87**	**132**			Pn	14 01 46.5	+0.2
BELC	**Belle Mtn. Jos**	**1.88**	**84**	P			14 01 47.2	
	baz=266,SNR=118							
BELC				Sb			14 02 13.8	
	baz=266							
CBX	**Cerro Bola**	**2.02**	**138**			Pn	14 01 49.1	+0.7
CBX				IAML			14 02 20.8	
	comp=E,150nm,0.5s							
SMMC	**Simmler**	**2.06**	**316**	P			14 01 51.0	
	baz=135,SNR=13							
IKP	**In-Ko-Pah, Jac**	**2.15**	**123**	P			14 01 51.9	
	baz=304,SNR=24							
IKP				Sb			14 02 21.6	
	baz=304							
RMX	**La Rumorosa**	**2.20**	**123**			Pb	14 01 53.0	-1.5
RMX				IAML			14 02 30.5	
	comp=N,106nm,0.6s							
RMX				IAML			14 02 33.4	
	comp=E,133nm,0.5s							
SWSC	**Sam W. Stewart**	**2.24**	**113**	Pb			14 01 55.6	
	baz=295,SNR=12							
BC3	**Big Chuckawall**	**2.34**	**94**	Pb			14 01 58.0	
	baz=276,SNR=31							
BC3				Sb			14 02 28.1	
	baz=276							
GMRC	**Granite Mounta**	**2.35**	**65**	Pb			14 01 58.2	
	baz=247,SNR=43							
GMRC				Sb			14 02 29.4	
	baz=247							
IRM	**Iron Mountain**	**2.60**	**82**	Pb			14 02 02.4	
	baz=264,SNR=55							
IRM				Sb			14 02 36.1	
	baz=264							
SHOC	**Shoshone, Teco**	**2.62**	**38**	Pg			14 02 05.0	
	baz=219,SNR=22							
FURC	**Furnace Creek,**	**2.86**	**23**	Pg			14 02 09.6	
	baz=204,SNR=23							
GLA	**Glamis**	**2.97**	**104**			Pn	14 02 02.9	+1.5
GLA				IAML			14 03 04.5	
	comp=E,73nm,0.7s							
GLA				IAML			14 03 05.7	
	comp=N,56nm,0.8s							
TPNV	**Topopah Spring**	**3.51**	**27**	Pn		Pn	14 02 11.0	+2.1
TPNV				IAML			14 03 17.4	
	comp=N,72nm,0.7s							
TPNV	**Topopah Spring**	**3.51**	**27**	P			14 02 11.2	
	baz=208,SNR=7.4							
SHPR	**Sheep Range**	**3.68**	**43**			Pn	14 02 13.4	+2.2
W13A	**Hualapai Mount**	**3.82**	**70**	Pn		Pn	14 02 14.1	+0.8
W13A				IAML			14 03 32.6	
	comp=N,23nm,1.0s							
LHV	**Little Huntoon**	**4.41**	**357**			Pn	14 02 20.0	-1.2
LHV				IAML			14 03 43.6	
	comp=N,31nm,1.3s							
LHV				IAML			14 03 56.0	
	comp=E,31nm,1.1s							

*IDC **30** 14:08:01.0±2.2, 11°.07S×74°.39W, h73km±27km, mb3.0/2, mb1 3.4/6, mb1mx3.2/39, mbtmp3.5/6, Error ellipse: s-maj=21.6km s-min=17.7km az=30.0*

ISC 30 14:07:59.6±0.9, 11°.09S±0°.08×74°.36W±0°.07, h38km, n7, σ2.33/9, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NNA	**Nana**	**2.60**	**250**	P		**Pn**	**14 08 39.0**	**-0.1**
	16nm,0.3s,baz=79,slow=11,SNR=39							
NNA				S		**Sn**	**14 09 11.6**	**+2.1**
	27nm,0.3s,baz=262,slow=14,SNR=11							
CZSB	**Cruzeiro do Su**	**3.71**	**26**	*eP*		**Pn**	**14 08 56.3**	**+1.8**
CZSB				*eS*		Sn	14 09 48.6	+12
ATAH	**Atahualpa**	**5.60**	**314**	P		**Pn**	**14 09 22.6**	**+1.8**
	1.4nm,0.3s,baz=138,slow=13,SNR=8.3							
ATAH				S		**Sn**	**14 10 24.6**	**+0.6**
	0.5nm,0.3s,baz=259,slow=24,SNR=1.3							
LPAZ	**La Paz**	**7.96**	**131**	P		**Pn**	**14 09 56.1**	**+2.7**
	0.1nm,0.3s,baz=321,slow=14,SNR=2.3							
SIV	**San Ignacio**	**13.80**	**112**	P		**Pn**	**14 11 13.3**	**+0.5**
	0.2nm,0.3s,baz=298,slow=10,SNR=1.5							
TORD	**Torodi Ar. Bea**	**79.20**	**74**	P		**P**	**14 19 58.6**	**-2.8**
	0.2nm,0.4s,baz=264,slow=5.8,SNR=1.5							
YKA	**Yellowknife Ar**	**79.71**	**342**	P		**P**	**14 20 00.8**	**-2.3**
	0.1nm,0.5s,baz=139,slow=5.5,SNR=1.9							

*JMA **30** 14:11:11.9±0.2, 23°.98N×122°.43E, h20km±4km, M2.0*
*TAP **30** 14:11:13.0, 24°.12N×122°.42E, h31km, ML2.7, D*

ISC 30 14:11:12.4±1.1, 24°.04N±0°.02×122°.41E±0°.02, h26km±12km, n74, σ0.84/129, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.64**	**50**	P		**Pb**	**14 11 24.5**	**-0.4**
JYNG				*eS*		**Sn**	**14 11 34.3**	**-0.8**
YOJ	**Yonaguni jima**	**0.69**	**52**	P		**Pb**	**14 11 25.4**	**-0.4**
YOJ				*eS*		**Sb**	**14 11 35.3**	**+0.4**
YOJ	**Yonaguni jima**	**0.69**	**52**	*eP*		**Pb**	**14 11 25.6**	**-0.3**
	baz=57							
YOJ				*eS*		**Sb**	**14 11 35.0**	**0.0**
	baz=57							
TWD	**Chiawan**	**0.75**	**273**	*eS*		**Sb**	**14 11 37.3**	**+0.7**
	baz=267							
NACB	**Ninganchiao**	**0.76**	**280**	*eP*		**Pb**	**14 11 26.9**	**-0.1**
	baz=260							
NACB				*eS*		**Sb**	**14 11 37.7**	**+0.7**
	baz=260							
TWC	**Suao**	**0.77**	**318**	P		**Pb**	**14 11 26.6**	**-0.6**
	baz=314							
TWC				S		**Sb**	**14 11 35.6**	**-1.5**
	baz=314							
ETLH	**Xiulin Townshi**	**0.87**	**281**	*eP*		**Pb**	**14 11 28.8**	**-0.1**
	baz=276							
ETLH				*eS*		**Sb**	**14 11 40.6**	**+0.5**
	baz=276							
EGS		**0.91**	**331**	P		**Pb**	**14 11 29.5**	**-0.1**
	baz=317							
EGS				S		**Sb**	**14 11 41.3**	**-0.1**
	baz=317							
ILA	**Ilan**	**0.94**	**320**	S		**Sn**	**14 11 43.3**	**+0.6**
	baz=310							
TWE	**Neicheng**	**0.96**	**315**	P		**Pn**	**14 11 30.4**	**+0.1**
	baz=311							
TWE				S		**Sb**	**14 11 42.6**	**-0.1**
	baz=311							
NTC	**Toucheng**	**0.97**	**327**	P		**Pn**	**14 11 30.3**	**0.0**
	baz=323							
NTC				S		**Sb**	**14 11 42.4**	**-0.5**
	baz=323							
EGFH	**Guangfu**	**0.98**	**248**	*eS*		**Sb**	**14 11 43.6**	**+0.5**
	baz=244							
ENTT	**Nioudou**	**0.98**	**308**	P		**Pn**	**14 11 30.7**	**+0.2**
	baz=303							
ENTT				S		**Sb**	**14 11 43.4**	**+0.2**
	baz=303							
NDT	**Datong Townshi**	**0.99**	**304**	*eP*		**Pb**	**14 11 31.4**	**+0.4**
	baz=300							
NDT				*eS*		**Sb**	**14 11 43.3**	**-0.4**
	baz=300							
NNSH	**Datong**	**1.02**	**293**	*eP*		**Pn**	**14 11 31.2**	**0.0**
	baz=288							
NNSH				*eS*		**Sb**	**14 11 44.4**	**-0.1**
	baz=288							
NNSB	**Datong**	**1.02**	**293**	*eP*		**Pn**	**14 11 31.1**	**0.0**
	baz=288							
NNSB				*eS*		**Sb**	**14 11 44.5**	**0.0**
	baz=288							
NNS	**Nan Shan**	**1.03**	**293**	*eP*		**Pb**	**14 11 31.7**	**0.0**
	baz=288							
NNS				*eS*		**Sn**	**14 11 45.4**	**+0.3**
	baz=288							
TWB1	**Santiao Chiao**	**1.04**	**338**	P		**Pn**	**14 11 31.0**	**-0.4**
	baz=351							
TWB1				S		**Sb**	**14 11 44.3**	**-0.7**
	baz=351							
WHF	**Hehuan Shan**	**1.05**	**276**	*eP*		**Pn**	**14 11 31.7**	**-0.2**
	baz=259							
WHF				*eS*		**Sn**	**14 11 46.3**	**+0.2**
	baz=259							
HGSD	**Ruisui**	**1.06**	**239**	*eP*		**Pn**	**14 11 31.1**	**-0.5**
	baz=236							
HGSD				*eS*		**Sn**	**14 11 45.1**	**-0.5**
	baz=236							
TIPB	**Shuangxi**	**1.07**	**330**	P		**Pb**	**14 11 32.2**	**-0.1**
	baz=327							
TIPB				S		**Sb**	**14 11 44.6**	**-1.4**
	baz=327							
FUSS	**Fushou**	**1.09**	**281**	*eP*		**Pn**	**14 11 32.4**	**+0.1**
	baz=277							
FUSS				*eS*		**Sn**	**14 11 47.3**	**+0.6**
	baz=277							
NWLT	**Wulai**	**1.11**	**312**	*eP*		**Pb**	**14 11 33.0**	**0.0**
	baz=308							
NWLT				*eS*		**Sb**	**14 11 47.5**	**+0.5**
	baz=308							
CHGB	**Renai**	**1.13**	**271**	P		**Pn**	**14 11 32.9**	**0.0**
	baz=256							
CHGB				*eS*		**Sn**	**14 11 47.6**	**-0.1**
	baz=256							
EHY	**Hungye**	**1.13**	**242**	*eP*		**Pn**	**14 11 32.6**	**-0.1**
	baz=253							
EHY				*eS*		**Sn**	**14 11 46.5**	**-0.9**
	baz=253							
YHNB	**Yeheng**	**1.13**	**304**	*eP*		**Pn**	**14 11 33.1**	**+0.4**
	baz=288							
YHNB				*eS*		**Sn**	**14 11 47.4**	**-0.2**
	baz=288							
OWD	**Renai**	**1.14**	**266**	*eP*		**Pn**	**14 11 32.6**	**-0.2**
	baz=262							
OWD				*eS*		**Sn**	**14 11 47.7**	**0.0**
	baz=262							
TDCB	**Techi**	**1.17**	**281**	*eP*		**Pb**	**14 11 34.2**	**+0.2**
	baz=265							
TDCB				*eS*		**Sn**	**14 11 48.2**	**-0.2**
	baz=265							
NWF	**Wu-fen Shan**	**1.18**	**331**	*eP*		**Pn**	**14 11 33.3**	**0.0**
	baz=328							
NWF				*eS*		**Sb**	**14 11 48.8**	**-0.2**
	baz=328							
WFSB	**Wu-fen Shan**	**1.18**	**331**	*eP*		**Pn**	**14 11 33.1**	**-0.1**
	baz=328							
WFSB				*eS*		**Sb**	**14 11 48.8**	**-0.2**
	baz=328							
VWDT	**VWDT**	**1.20**	**256**	*eP*		**Pn**	**14 11 33.7**	**+0.2**
	baz=243							
VWDT				*eS*		**Sb**	**14 11 49.6**	**+0.1**
	baz=243							
TWA	**Mucha**	**1.20**	**321**	*eP*		**Pb**	**14 11 35.0**	**+0.4**
	baz=318							
TWA				*eS*		**Sb**	**14 11 50.6**	**+0.9**
	baz=318							
YULB	**Yu-li**	**1.21**	**238**	*eP*		**Pn**	**14 11 33.5**	**-0.2**
	baz=250							
YULB				*eS*		**Sn**	**14 11 48.4**	**-0.9**
	baz=250							
NHDH	**Xindian Distri**	**1.22**	**319**	*eP*		**Pb**	**14 11 35.1**	**+0.2**
	baz=331							
NHDH				*eS*		**Sb**	**14 11 50.9**	**+0.6**
	baz=331							
TWF1	**Yuli**	**1.23**	**236**	*eP*		**Pn**	**14 11 34.1**	**+0.1**
	baz=249							
TWF1				*eS*		**Sn**	**14 11 50.0**	**+0.2**
	baz=249							
IRIF	**Iriomote-Funau**	**1.24**	**76**	P		**Pn**	**14 11 34.4**	**+0.3**
IRIF				*eS*		**Sb**	**14 11 52.0**	**+1.3**
HATJ	**Hateruma jima**	**1.27**	**89**	*eS*		**Sn**	**14 11 50.7**	**-0.1**
FULB	**Fuli**	**1.33**	**231**	*eP*		**Pn**	**14 11 34.5**	**-0.8**
	baz=229							
FULB				*eS*		**Sn**	**14 11 52.1**	**0.0**
	baz=229							
YM01	**YM01**	**1.34**	**325**	*eP*		**Pn**	**14 11 36.0**	**+0.5**
	baz=322							
YM01				*eS*		**Sb**	**14 11 53.5**	**-0.2**
	baz=322							
CHKT	**Chengkung**	**1.34**	**226**	*eS*		**Sn**	**14 11 50.7**	**-1.8**
	baz=224							
SSLB	**Suanglung**	**1.36**	**260**	*eP*		**Pn**	**14 11 36.2**	**+0.4**
	baz=246							
WHP	**Taichung City**	**1.36**	**280**	*eP*		**Pb**	**14 11 38.2**	**+1.0**
	baz=266							
WHP				*eS*		**Sb**	**14 11 54.3**	**0.0**
	baz=266							
ANP	**Anpu**	**1.40**	**325**	*eP*		**Pn**	**14 11 37.2**	**+0.8**
	baz=321							
LIOB	**Emei**	**1.41**	**296**	*eP*		**Pb**	**14 11 38.1**	**+0.1**
	baz=292							
LIOB				*eS*		**Sb**	**14 11 56.5**	**+0.8**
	baz=292							
NSTT	**Nanjuang**	**1.42**	**295**	*eP*		**Pb**	**14 11 38.8**	**+0.6**
	baz=291							
NSTT				*eS*		**Sb**	**14 11 56.3**	**+0.4**
	baz=291							
JKRS	**Kuro-shima**	**1.47**	**82**	P		**Pb**	**14 11 38.7**	**-0.4**
JKRS				*eS*		**Sb**	**14 11 58.8**	**+1.4**
EDH	**Donghe**	**1.47**	**224**	*eP*		**Pn**	**14 11 36.7**	**-0.6**
	baz=213							
EDH				*eS*		**Sn**	**14 11 53.9**	**-1.8**
	baz=213							
TWQ1	**Liyutan**	**1.53**	**282**	*eS*		**Sb**	**14 11 59.6**	**+0.5**
	baz=278							
ELDTW	**Lidau**	**1.54**	**237**	*eP*		**Pn**	**14 11 38.1**	**-0.2**
	baz=235							
ELDTW				*eS*		**Sn**	**14 11 56.1**	**-1.4**
	baz=235							
WJS	**Zhushan**	**1.56**	**262**	*eS*		**Sb**	**14 12 02.9**	**+3.0**
	baz=259							
ALS	**Alishan**	**1.56**	**251**	*eP*		**Pn**	**14 11 39.9**	**+1.1**
	baz=248							
ALS				*eS*		**Sb**	**14 12 00.6**	**+0.2**
	baz=248							
WNT	**Mingjian**	**1.59**	**264**	*eS*		**Sb**	**14 12 03.2**	**+2.4**
	baz=261							
WNT1	**Nantou City**	**1.59**	**266**	*eS*		**Sb**	**14 12 03.3**	**+2.5**
	baz=263							
JIJ	**Ishigaki jima**	**1.61**	**78**	P		**Pn**	**14 11 39.9**	**+0.7**
JIJ				S		**Sn**	**14 11 59.7**	**+0.5**
PCYT	**Pengchaiyu**	**1.61**	**349**	*eS*		**Sn**	**14 11 58.7**	**-0.5**
	baz=348							
LDUT	**Ludao**	**1.61**	**213**	*eP*		**Pn**	**14 11 38.5**	**-0.7**
	baz=211							
LDUT				*eS*		**Sn**	**14 11 57.3**	**-2.0**
	baz=211							
LONT	**Longtian**	**1.63**	**226**	*eP*		**Pn**	**14 11 39.4**	**-0.1**
	baz=237							
LONT				*eS*		**Sn**	**14 11 59.7**	**0.0**
	baz=237							
CHN5	**Tsauling**	**1.65**	**255**	*eP*		**Pb**	**14 11 42.0**	**-0.2**
	baz=243							
CHN5				S		**Sb**	**14 12 03.8**	**+1.2**
	baz=243							
WDLH	**Douliu**	**1.75**	**259**	*eS*		**Sb**	**14 12 07.3**	**+1.8**
	baz=257							
STYT	**Tauyuan**	**1.75**	**240**	*eS*		**Sn**	**14 12 04.5**	**+1.7**
	baz=229							
TPUB	**Ta-pu**	**1.79**	**246**	*eP*		**Pb**	**14 11 43.6**	**-1.0**
	baz=244							
TPUB				*eS*		**Sb**	**14 12 07.2**	**+0.4**
	baz=244							
JISG	**Ishigakijimahi**	**1.81**	**72**	P		**Pn**	**14 11 42.7**	**+0.7**
JISG				S		**Sn**	**14 12 03.5**	**-0.7**
WTP	**Ta-pu**	**1.83**	**245**	*eP*		**Pb**	**14 11 44.6**	**-0.7**
	baz=243							
WTP				*eS*		**Sb**	**14 12 08.1**	**+0.4**
	baz=243							
WTK	**Tuku**	**1.89**	**260**	*eS*		**Sb**	**14 12 09.9**	**+0.5**
	baz=258							
TWK	**Hsinying**	**1.93**	**247**	*eP*		**Pb**	**14 11 46.0**	**-0.9**
	baz=245							
TWK				*eS*		**Sb**	**14 12 10.6**	**+0.1**
	baz=245							
CHN1	**Nanshi**	**1.93**	**244**	*eP*		**Pb**	**14 11 47.2**	**+0.3**
	baz=242							
CHN1				*eS*		**Sb**	**14 12 10.9**	**+0.3**
	baz=242							
SLGT	**Liugui**	**1.93**	**238**	*eP*		**Pn**	**14 11 45.1**	**+1.5**
	baz=228							
SLGT				*eS*		**Sb**	**14 12 11.6**	**+1.1**
	baz=228							
SGST	**Jiashian**	**1.93**	**241**	*eS*		**Sb**	**14 12 09.8**	**-0.9**
	baz=239							
SSD	**Sandimen**	**2.08**	**232**	*eS*		**Sb**	**14 12 13.6**	**-1.4**
	baz=225							
MASBT	**Mashibuluo**	**2.17**	**229**	*eP*		**Pn**	**14 11 48.6**	**+1.7**
	baz=224							
MASBT				*eS*		**Sb**	**14 12 16.8**	**-0.7**
	baz=224							
EAST	**Anshuo**	**2.19**	**221**	*eP*		**Pn**	**14 11 48.7**	**+1.4**
	baz=221							
EAST				*eS*		**Sn**	**14 12 14.0**	**+0.4**
	baz=221							
SSPT	**Xinbi**	**2.30**	**228**	*eP*		**Pb**	**14 11 52.4**	**-0.8**
	baz=221							
VWUC	**VWUC**	**2.86**	**290**	*eP*		**Pn**	**14 11 56.0**	**-0.5**
	baz=286							
VWUC				*eS*		**Sn**	**14 12 27.7**	**-2.3**
	baz=286							
MATB	**Ma-tsu**	**3.07**	**314**	*eS*		**Sn**	**14 12 33.9**	**-1.2**
	baz=297							

*DJA **30** 14:36:48.7±0.4, 4°.S±3°.×12°.9E±°, h10km, M3.7/10, mb4.2/1, MLv3.5/10, Hypocentre not reviewed by the ISC*

IDC 30 14:36:45.2±1.8, 3°.85S×129°.18E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/30, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=152.2km s-min=28.9km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSAI	**Masohi**	**0.56**	**333**	P			14 37 03.6	
MSAI				S			14 37 13.3	
KRAI	**Karang Ratu**	**0.95**	**304**	P			14 37 04.8	
KRAI				S			14 37 16.1	
BNDI	**Bandanaira**	**0.98**	**133**	P			14 37 11.8	
BNDI				S			14 37 28.0	
NLAI	**Namlea**	**2.17**	**286**	P			14 37 20.4	
NLAI				S			14 37 23.2	
FAKI	**Fak Fak**	**3.20**	**73**	P			14 37 46.8	
SIJI	**Sorong**	**3.62**	**35**	P			14 37 51.4	
SWI	**Sorong**	**3.62**	**35**	P			14 37 51.1	
SANI	**Sanana**	**3.66**	**299**	P			14 37 41.8	
SAUI	**Saumlaki**	**4.61**	**153**	P			14 37 58.6	
MWPI	**Manokwari, Pap**	**5.66**	**59**	P			14 38 20.3	
WRA	**Warramunga Arr**	**16.76**	**163**	Pn		Pn	14 40 39.7	-1.9
	0.1nm,0.3s,baz=345,slow=12,SNR=2.5							
ASAR	**Alice Springs**	**20.22**	**167**	P		Pn	14 41 23.2	-0.6
	2.0nm,0.6s,baz=348,slow=10,SNR=46							
ASAR				PcP		PcP	14 45 35.7	-1.0
	0.2nm,0.5s,baz=341,slow=2.3,SNR=6.4							
MKAR	**Makanchi Array**	**65.17**	**326**	P		P	14 47 28.5	+0.2
	0.2nm,0.4s,baz=116,slow=8.3,SNR=5.5							

*MOS **30** 14:54:16.4±1.1, 41°.98N×142°.59E, h60km, mb4.3/9, Error ellipse: s-maj=8.7km s-min=6.0km az=68.3*
*JMA **30** 14:54:17.7±0.2, 42°.09N×142°.60E, h51km±2km, M4.2*
JMA Felt II J1.
*NIED **30** 14:54:17.7, 42°.09N×142°.60E, h51km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.03; Mθθ-1.16; Mφφ 1.13; Mrθ 1.17; Mθφ 0.45; Mφr-1.53; Fault plane solution: M0 2.28000×10^15^ NP1: φs144.00000°, δ89.00000°, λ123.00000°. NP2: φs235.00000°, δ33.00000°, λ1.00000°.*
*NEIC **30** 14:54:18.1±1.4, 42°.07N±0°.05×142°.70E±0°.04, h56km±7km, mb4.3/14 Error ellipse: s-maj=8.3km s-min=0.9km az=147.0*
*IDC **30** 14:54:19.5±2.0, 42°.11N×142°.64E, h62km±18km, mb3.6/15, mb1 3.9/22, mb1mx3.6/55, mbtmp3.9/22, MS3.2/2, Ms1 3.2/2, ms1mx2.8/42, Error ellipse: s-maj=17.9km s-min=12.1km az=130.0*

ISC 30 14:54:18.4±0.6, 42°.05N±0°.04×142°.61E±0°.03, h54km±6km, n112, σ1.9/130, mb4.1/27, 6C-12D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.25**	**25**	⇓P		**Pn**	**14 54 25.9**	**-1.7**
JNBK				*eS*		**Sn**	**14 54 32.6**	**-1.5**
JSHD	**Hidakashinhida**	**0.37**	**344**	⇓P		**Pn**	**14 54 27.2**	**-1.4**
JSHD				*eS*		**Sn**	**14 54 35.2**	**-0.7**
ERM	**Erimo**	**0.41**	**95**	*d P*		**Pn**	**14 54 28.2**	**-0.8**
ERM	**Erimo**	**0.41**	**95**			**Pn**	**14 54 27.9**	**-1.1**
JEM	**Erimo**	**0.41**	**95**	⇓P		**Pn**	**14 54 28.3**	**-0.7**
JEM				*eS*		**Sn**	**14 54 36.2**	**-0.3**
JTHR	**Tokachihiroo**	**0.57**	**65**	⇓P		**Pn**	**14 54 29.8**	**-0.9**
JTHR				*eS*		**Sn**	**14 54 39.1**	**-0.5**
JBT2	**Biratori 2**	**0.75**	**346**	⇓P		**Pn**	**14 54 31.5**	**-1.5**
JBT2				*eS*		**Sn**	**14 54 42.9**	**-0.7**
JIAM	**Iburiatsuma**	**0.77**	**319**	⇑P		**Pn**	**14 54 32.7**	**-0.4**
JCH	**Churui**	**0.79**	**45**	⇓P		**Pn**	**14 54 32.5**	**-1.0**
JCH				*eS*		**Sn**	**14 54 43.8**	**-0.8**
JFR	**Furan**	**1.11**	**360**	P		**Pn**	**14 54 36.5**	**-1.3**
JEW	**Eniwo**	**1.16**	**313**	P		**Pn**	**14 54 37.9**	**-0.5**
JEW				*eS*		**Sn**	**14 54 53.6**	**+0.3**
JEW	**Eniwo**	**1.16**	**313**	Pn		**Pn**	**14 54 37.7**	**-0.7**
JKB	**Kayabe**	**1.19**	**263**	P		**Pn**	**14 54 37.5**	**-1.2**
JKB				*eS*		**Sn**	**14 54 52.4**	**-1.4**
JNB	**Noboribetsu**	**1.24**	**290**	⇑P		**Pn**	**14 54 37.5**	**-1.9**
JNB				*eS*		**Sn**	**14 54 53.1**	**-1.9**
JOB	**Onbets**	**1.25**	**46**	⇓P		**Pn**	**14 54 39.5**	**0.0**
JOB				*eS*		**Sn**	**14 54 56.2**	**+0.9**
JOT	**Ohata**	**1.34**	**241**	⇓P		**Pn**	**14 54 39.7**	**-1.2**
JOT				*eS*		**Sn**	**14 54 56.3**	**

RUSJ eS Sn 14 55 37.5 +3.8
GRPR Tuman 3.03 49 i/P Pn 14 55 04.3 +0.5
GRPR i S Sn 14 55 39.5 +0.7
GRPR pmax pmax
comp=Z,131nm,0.2s
GRPR smax smax
comp=E,745nm,0.5s
GRPR smax smax
comp=N,631nm,0.3s
YUK Yuzh-Kuril'sk 3.10 49 c iP Pn 14 55 05.3 +0.5
YUK i S Sn 14 55 41.6 +0.9
YUK pmax pmax
comp=Z,204nm,0.3s
YUK smax smax
comp=N,615nm,0.4s
YUK smax smax
comp=E,2μm,0.5s
JMM Marumori 4.41 199 Pn Pn 14 55 22.4 -0.3
YSS Yuzh-Sakhalins 4.90 1 eP Pn 14 55 30.8 +1.3
YSS eS Sn 14 56 27.8 +2.9
YSS pmax pmax
comp=Z,40nm,1.2s
YSS smax smax
comp=E,30nm,0.9s
YSS MLR MLR
comp=Z,500nm,18.0s
KUR Kuril'sk 4.97 48 eP Pn 14 55 32.0 +1.6
KUR i S Sn 14 56 30.4 +3.9
KUR pmax pmax
comp=Z,106nm,0.6s
KUR pmax pmax
comp=E,31nm,0.5s
KUR pmax pmax
comp=N,25nm,0.3s
KUR smax smax
comp=N,153nm,0.8s
KUR smax smax
comp=E,83nm,0.4s
JSD Sado 5.21 221 Pn Pn 14 55 35.2 +1.4
JYT Yasato 6.11 199 Pn Pn 14 55 43.8 -2.3
MAO Matsushiro 6.47 213 iP Pn 14 55 49.9 -1.2
MAJO Matsushiro 6.47 213 Pn Pn 14 55 52.4 +1.3
MAT Matsushiro 6.47 213 P Pn 14 55 52.2 +1.1
MAT eS Sn 14 57 11.1 +7.5
MJAR Matsushiro Arr 6.47 213 P Pn 14 55 52.7 +1.6
comp=E,0.4nm,0.3s,baz=24,slow=14,SNR=42
MJAR Matsushiro Arr 6.47 213 P Pn 14 55 51.9 +0.8
MJAR Matsushiro Arr 6.47 213 Pn 14 55 51.9 +0.8
JGF Kuroka 7.63 214 Pn Pn 14 56 07.8 +0.8
USA0B Ussuriysk Arra 8.06 289 iP Pn 14 56 11.9 -0.9
USA0B Ussuriysk Arra 8.06 289 Pn Pn 14 56 13.8 +1.0
USRK Ussuriysk Ar. 8.06 289 P Pn 14 56 15.2 +2.4
baz=91,slow=15,SNR=9.7
USRK Ussuriysk Ar. 8.06 289 P Pn 14 56 15.1 +2.3
USK Ussuriysk Ar. 8.06 289 Pn Pn 14 56 15.1 +2.3
MSHR Mys Shultsa 8.50 277 iP Pn 14 56 16.8 -2.0
MSHR pmax pmax
comp=Z,62nm,1.4s
JWT Wachi 8.80 222 Pn Pn 14 56 25.3 +2.4
JHJ Hachijo jima 2 9.19 195 P Pn 14 56 25.2 -3.1
comp=Z,7.0nm,0.3s,baz=338,slow=19,SNR=1.3
JHJ S Sn 14 57 59.5 -11
comp=Z,9.9nm,0.3s,baz=60,slow=24,SNR=2.1
JHS Saijyo 10.23 230 Pn Pn 14 56 43.5 +0.9
KLR Kul'dur 10.45 317 P Pn 14 56 47.6 +2.2
comp=Z,0.1nm,0.3s,baz=110,slow=17,SNR=6.0
KSRS Korea Array 12.20 253 P Pn 14 57 12.1 +2.8
comp=Z,0.4nm,0.3s,baz=63,slow=14,SNR=15
KSRS S Sn 14 59 28.3 +4.7
comp=Z,0.3nm,0.3s,baz=67,slow=24,SNR=7.6
KSRS LR LR 15 01 24.2
comp=Z,133nm,19.4s,baz=65,slow=35
KS19 Wonju Array Si 12.21 253 Pn 14 57 09.4 -0.2
KSAR Wonju Array Be 12.23 253 P Pn 14 57 10.1 +0.3
KSAR Wonju Array Be 12.23 253 Pn 14 57 10.1 +0.3
SKR Severo-Kuril's 12.70 43 iP Pn 14 57 17.4 +1.4
PETK Petropavlovsk- 15.00 37 P Pn 14 57 45.2 -1.7
comp=Z,0.2nm,0.3s,baz=206,slow=8.6,SNR=5.5
HIA Hailar 17.49 302 iP Pn 14 58 17.6 -0.9
HIA pmax pmax
comp=Z,4.0nm,0.7s
MA2 Magadan 18.26 13 P Pn 14 58 26.8 -0.8
comp=Z,0.2nm,0.3s,baz=182,slow=8.8,SNR=10
MA2 Magadan 18.26 13 iP Pn 14 58 26.9 -0.8
MA2 pmax pmax
comp=Z,6.0nm,0.8s
SEY Seymchan 21.70 12 P P 14 59 02.4 -2.1
comp=Z,5.0nm,0.8s,baz=184,slow=8.3,SNR=23
SEY Seymchan 21.70 12 eP P 14 59 02.2 -2.3
SONM Songino Array 26.11 295 P P 14 59 47.2 0.0
comp=Z,0.6nm,0.7s,baz=90,slow=9.1,SNR=5.4
BILL Bilibino 28.97 18 iP P 15 00 14.5 +2.1
BILL pmax pmax
comp=Z,11nm,4.4s
H11N2 WAKE ISLAND Hy 30.30 130 T T 15 31 56.8
baz=324,slow=76,SNR=180
H11N1 WAKE ISLAND Hy 30.31 130 T T 15 31 57.7
baz=324,slow=76,SNR=179
H11N3 WAKE ISLAND Hy 30.32 130 T T 15 31 58.2
baz=324,slow=76,SNR=179
H11S1 WAKE ISLAND Hy 31.16 132 T T 15 33 03.0
baz=325,slow=76,SNR=318
H11S3 WAKE ISLAND Hy 31.16 132 T T 15 33 06.3
baz=325,slow=76,SNR=264
H11S2 WAKE ISLAND Hy 31.18 132 T T 15 33 04.3
baz=325,slow=76,SNR=225
DGZ Jazzator, Alta 38.40 301 iP P 15 01 35.5 +0.9
DGZ pmax pmax
comp=Z,2.0nm,1.0s
ZAA0 Zalesovo Array 39.38 308 P P 15 01 42.8 +0.3
ZAA0 IAmb IAmb 15 01 44.6
comp=Z,2.7nm,0.8s
ZALV Zalesovo Beam 39.38 308 P P 15 01 42.9 +0.3
comp=Z,2.7nm,0.8s,baz=90,slow=7.4,SNR=9.6
ZALV Zalesovo Beam 39.38 308 P P 15 01 41.9 -0.6
ZALV Zalesovo Beam 39.38 308 P P 15 01 41.9 -0.6
MK31 Makanchi Array 42.41 298 iP P 15 02 07.0 -0.6
MKAR Makanchi Array 42.41 298 P P 15 02 07.5 -0.1
comp=Z,1.9nm,0.9s,baz=79,slow=8.3,SNR=13
MKAR Makanchi Array 42.41 298 P P 15 02 06.5 -1.1
MAKZ Makanchi 42.62 298 P P 15 02 09.5 +0.2
MAKZ pmax pmax
comp=Z,4.0nm,1.0s
MAKZ Makanchi 42.62 298 P P 15 02 09.5 +0.2
CMAR Chiang Mai Arr 43.83 251 P P 15 02 19.9 +0.6
comp=Z,0.7nm,0.3s,baz=42,slow=7.2,SNR=5.9
CMAR Chiang Mai Arr 43.83 251 iP P 15 02 18.2 -1.1
CMAR pmax pmax
comp=Z,1.0nm,0.3s
NEA2 Nenana 43.89 35 P P 15 02 19.2 0.0
NEA2 IAmb IAmb 15 02 20.2
comp=Z,3.9nm,0.8s
COLA College 44.39 35 iP P 15 02 22.4 -0.8
COLA pmax pmax
comp=Z,3.0nm,0.9s
ILAR Eielson Array 44.81 35 P P 15 02 26.1 -0.5
comp=Z,2.1nm,0.9s,baz=268,slow=6.6,SNR=27
ILAR Eielson Array 44.81 35 P P 15 02 25.5 -1.1
PRP Porcupine Dome 45.32 34 P P 15 02 29.1 -1.6
PRP IAmb IAmb 15 02 31.6
comp=Z,2.7nm,0.8s
SCRK Sand Creek 46.16 36 P P 15 02 36.4 -1.0
SCRK IAmb IAmb 15 02 37.2
comp=Z,2.8nm,0.7s
DOT Dot Lake 46.17 36 P P 15 02 36.8 -0.6
K27K Chicken 46.98 36 P P 15 02 43.0 -0.6
K27K IAmb IAmb 15 02 57.5
comp=Z,4.0nm,1.1s
L27K Beaver Creek, 47.26 37 P P 15 02 45.4 -0.5
L27K IAmb IAmb 15 02 47.4
comp=Z,2.7nm,0.8s
AAK Ala-Archa 49.06 295 iP P 15 02 58.5 -1.7
AAK pmax pmax
comp=Z,2.0nm,1.0s
HYT Haines Junctio 49.78 39 P P 15 03 06.8 +1.4
KKAR Karatay Array 51.53 297 P P 15 03 18.2 -0.6
KKAR Karatay Array 51.53 297 P P 15 03 18.2 -0.6
ABKAR Akbulak array 55.50 308 P P 15 03 47.3 -0.4
RES Resolute Bay 57.52 15 P P 15 04 00.3 -1.3
RES pmax pmax
comp=Z,5.0nm,1.4s
RES Resolute Bay 57.52 15 P P 15 04 00.3 -1.3
RES IAmb IAmb 15 04 01.5
comp=Z,5.4nm,1.4s
YKA Yellowknife Ar 59.04 32 P P 15 04 12.1 -0.3
comp=Z,0.9nm,0.8s,baz=306,slow=6.4,SNR=16
WB0 Warramunga Arr 61.97 189 P P 15 04 32.0 -0.8
WR0 Warramunga Arr 62.15 189 P P 15 04 33.5 -0.4
WR0 IAmb IAmb 15 04 52.1
comp=Z,7.1nm,1.3s
WB2 Warramunga Arr 62.15 189 P P 15 04 33.6 -0.3
WRA Warramunga Arr 62.15 189 P P 15 04 33.6 -0.4
comp=Z,1.5nm,0.8s,baz=5.5,slow=7.0,SNR=11
WRA Warramunga Arr 62.15 189 P P 15 04 33.3 -0.7
FINES FINESS Array B 64.83 332 P P 15 04 50.5 -0.7
comp=Z,1.4nm,0.8s,baz=46,slow=8.0,SNR=1.8
ASAR Alice Springs 65.88 189 P P 15 04 58.7 +0.3
comp=Z,0.6nm,0.8s,baz=1.6,slow=7.1,SNR=5.5
ASAR Alice Springs 65.88 189 P P 15 04 56.5 -1.9
ASAR Alice Springs 65.88 189 P P 15 04 56.5 -1.9
NOA NORSAR Array B 69.92 337 P P 15 05 23.1 -0.4
comp=Z,0.7nm,0.8s,baz=36,slow=6.5,SNR=2.3
AKASG Malin Array Be 70.91 322 P P 15 05 29.0 -0.6
comp=Z,0.2nm,0.3s,baz=46,slow=6.4,SNR=1.9
NVAR Mina Array Bea 71.30 55 P P 15 05 33.7 +1.2
comp=Z,1.1nm,0.7s,baz=293,slow=6.1,SNR=8.9
PDAR Pinedale Array 73.53 47 P P 15 05 46.1 +0.3
comp=Z,0.6nm,0.7s,baz=302,slow=2.8,SNR=5.2
PDAR Pinedale Array 73.53 47 P P 15 05 44.1 -1.7
TXAR Lajitas Array 86.36 53 P P 15 06 55.8 +0.7
comp=Z,0.9nm,0.6s,baz=285,slow=3.2,SNR=14

IDC 30 14:55:07.3±6.0, 4.77S×151.86E, h73km±52km, mb3.1/4, mb1 3.4/5, mb1mx3.0/41, mbtmpb3.5/5, ML1.6/1, Error ellipse: s-maj=110.9km s-min=33.1km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.56**	**225**	P	Pn	14 56 41.2	0.0
	0.7nm,0.3s,baz=53,slow=15,SNR=1.2						
PMG				S	Sn	14 57 55.5	+0.9
	1.2nm,0.3s,baz=159,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**22.77**	**227**	P	P	15 00 04.9	+0.9
	0.4nm,0.7s,baz=52,slow=9.9,SNR=5.8						
ASAR	**Alice Springs**	**25.55**	**221**	P	P	15 00 29.4	-0.1
	0.4nm,0.7s,baz=56,slow=9.5,SNR=8.7						
FITZ	**Fitzroy Crossi**	**28.86**	**241**	P	P	15 00 58.5	-0.7
	1.0nm,0.6s,baz=52,slow=12,SNR=1.4						
ILAR	**Eielson Array**	**82.48**	**22**	P	P	15 07 21.5	-0.1
	0.2nm,0.9s,baz=244,slow=5.9,SNR=2.0						

*IDC **30** 15:04:36.2±0.8, 25.16N×127.90E, h0km, mb3.9/11, mb1 4.0/13, mb1mx3.7/48, mbtmpb3.9/13, ML3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/39, Error ellipse: s-maj=35.9km s-min=13.8km az=77.0*
*NEIC **30** 15:04:39.3±2.8, 25.13N±0.07×128.09E±0.08, h23km±6km, mb4.0/11, Error ellipse: s-maj=10.3km s-min=9.2km az=126.0*
*JMA **30** 15:04:40.3±0.3, 25.28N×128.02E, h73km±5km, M3.7*
ISC 30 15:04:39.2±3.9, 25.18N±0.05×128.11E±0.04, h23km±29km, n57, σ1972/72, mb3.9/15, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**1.00**	**343**	P	Pn	**15 04 57.8**	**0.0**
JJT3				S	Sn	15 05 10.9	-0.4
JNTH	**Nagotoyohara**	**1.34**	**357**	P	Pn	15 05 02.0	-0.4
JNTH				S	Sn	15 05 17.4	-2.0
JAGN	**Aguni-jima**	**1.61**	**331**	P	Pn	15 05 06.2	+0.1
JAGN				S	Sn	15 05 24.8	-1.3
JOW	**Kunigami**	**1.65**	**5**	Pn	Pn	15 05 06.8	+0.1
	77nm,0.3s,baz=8.3,slow=30,SNR=383						
JOW				Sn	Sn	15 05 24.3	-3.0
	83nm,0.3s,baz=129,slow=22,SNR=18						
JOW	**Kunigami**	**1.65**	**5**	P	Pn	15 05 06.8	+0.1
JOW				eS	Sn	15 05 24.6	-2.7
JKE	**Kume jima 2**	**1.65**	**314**	P	Pn	15 05 06.3	-0.4
JKE				eS	Sn	15 05 25.0	-2.3
JIH	**Iheya**	**1.85**	**356**	P	Pn	15 05 09.8	+0.3
JIH				eS	Sn	15 05 30.8	-1.4
JYRO	**Yoronjima**	**1.86**	**9**	P	Pn	15 05 09.5	-0.1
JYRO				S	Sn	15 05 29.7	-2.7
JOKE	**Okinoerabujima**	**2.21**	**11**	P	Pn	15 05 14.4	0.0
JOKE				eS	Sn	15 05 38.0	-3.1
JOGS	**Gusukube**	**2.49**	**261**	P	Pn	15 05 18.1	-0.2
JOGS				eS	Sn	15 05 45.2	-2.7
JMJ2	**Miyako jima3**	**2.57**	**261**	P	Pn	15 05 19.0	-0.3
JMJ2				eS	Sn	15 05 47.8	-2.0
JIKM	**Ikemajima**	**2.61**	**265**	P	Pn	15 05 19.8	-0.1
JIKM				eS	Sn	15 05 48.1	-2.8
JIRB	**Irabujima**	**2.69**	**263**	P	Pn	15 05 20.3	-0.7
JIRB				eS	Sn	15 05 50.3	-2.5
JTK	**Tokunoshima**	**2.70**	**16**	P	Pn	15 05 21.1	-0.1
JTK				eS	Sn	15 05 50.1	-3.1
JMZ	**Minamidaito 2**	**2.88**	**77**	P	Pn	15 05 22.5	-1.1
JMZ				eS	Sn	15 05 54.0	-3.5
JMZ	**Minamidaito 2**	**2.88**	**77**	Pn	Pn	15 05 22.4	-1.1
JKDJ	**Kitadaitoujima**	**2.98**	**74**	P	Pn	15 05 23.9	-1.0
JKDJ				S	Sn	15 05 55.9	-4.0
JTJ	**Tarama**	**3.14**	**261**	P	Pn	15 05 26.5	-0.7
JTJ				S	Sn	15 06 00.3	-3.7
JAMN	**Amaminishikomi**	**3.20**	**17**	P	Pn	15 05 28.2	+0.3
JAMN				eS	Sn	15 06 02.8	-2.5
YOJ	**Yonaguni jima**	**4.69**	**262**	Pn	Pn	15 05 47.0	-1.6
NACB	**Ninganchiao**	**6.01**	**262**	Pn	Pn	15 06 04.8	-1.9
YHNB	**Yeheng**	**6.14**	**267**	Pn	Pn	15 06 09.0	+0.5
YULB	**Yu-li**	**6.47**	**255**	Pn	Pn	15 06 09.6	-3.3
JSU	**Suzuyama**	**6.63**	**18**	Pn	Pn	15 06 16.4	+1.2
SSLB	**Suanglung**	**6.67**	**259**	Pn	Pn	15 06 13.2	-2.5
TWG	**Pinlang**	**6.85**	**251**	Pn	Pn	15 06 14.9	-3.4
TPUB	**Ta-pu**	**7.08**	**256**	Pn	Pn	15 06 20.2	-1.2
JNU	**Nakatsue**	**8.28**	**16**	Pn	Pn	15 06 39.3	+1.6
	0.6nm,0.3s,baz=311,slow=4.9,SNR=7.6						
JNU				Sn	Sn	15 08 08.7	-1.8
	0.1nm,0.3s,baz=243,slow=9.5,SNR=1.0						
JMN	**Monobe**	**9.89**	**29**	Pn	Pn	15 07 00.8	+0.9
JHS	**Saijyo**	**10.70**	**23**	Pn	Pn	15 07 12.1	+1.1
JWT	**Wachi**	**11.87**	**30**	Pn	Pn	15 07 29.6	+2.6
JCJ	**Chichijima**	**12.79**	**78**	LR	LR	15 11 18.3	
	baz=257,slow=19,2s,baz=114,slow=31						
USRK	**Ussuriysk Ar.**	**19.24**	**8**	P	P	**15 09 02.2**	**+0.5**
	baz=176,slow=10,SNR=2.5						
SONM	**Songino Array**	**28.38**	**328**	P	P	**15 10 31.0**	**-0.7**
	0.5nm,0.3s,baz=143,slow=9.0,SNR=3.7						
SONM	**Songino Array**	**28.38**	**328**	IAmb	IAmb	15 10 35.5	
	comp=Z,0.6nm,0.8s						
MTN	**Manton Dam**	**37.91**	**175**	P	P	**15 11 53.9**	**-0.9**
KNRA	**Kununurra**	**40.61**	**179**	P	P	**15 12 18.2**	**+0.9**
MK31	**Makanchi Array**	**42.16**	**313**	P	P	**15 12 31.1**	**+1.2**
MK31				IAmb	IAmb	15 12 32.0	
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**42.16**	**313**	P	P	**15 12 30.1**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=97,slow=10,SNR=29						
MAKZ	**Makanchi**	**42.37**	**313**	P	P	**15 12 33.0**	**+1.4**
MAKZ				IAmb	IAmb	15 12 33.6	
	comp=Z,1.3nm,0.6s						
ZALV	**Zalesovo Beam**	**43.02**	**324**	P	P	**15 12 36.4**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=111,slow=8.7,SNR=5.6						
FITZ	**Fitzroy Crossi**	**43.08**	**183**	P	P	**15 12 36.6**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=15,slow=12,SNR=1.5						
FITZ	**Fitzroy Crossi**	**43.08**	**183**	P	P	**15 12 38.1**	**+0.7**
WB0	**Warramunga Arr**	**45.09**	**172**	P	P	**15 12 54.4**	**+0.8**
WRA	**Warramunga Arr**	**45.26**	**172**	P	P	**15 12 55.6**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=353,slow=8.6,SNR=13						
WRA	**Warramunga Arr**	**45.26**	**172**	IAmb	IAmb	15 12 56.1	
	comp=Z,0.4nm,1.6s						
WB2	**Warramunga Arr**	**45.26**	**172**	P	P	**15 12 55.7**	**+0.8**
WB2				IAmb	IAmb	15 13 09.1	
	comp=Z,5.6nm,1.3s						
WR0	**Warramunga Arr**	**45.30**	**171**	P	P	**15 12 56.1**	**+0.8**
WR0				IAmb	IAmb	15 13 03.2	
	comp=Z,5.2nm,1.1s						
KURK	**Kurchatov**	**45.51**	**317**	P	P	**15 12 56.2**	**-0.5**
KURBB	**Kurchatov Arra**	**45.54**	**317**	P	P	**15 12 56.2**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=106,slow=8.6,SNR=4.8						
HNR	**Honiara**	**46.32**	**134**	P	P	**15 13 05.0**	**+1.6**
ASAR	**Alice Springs**	**48.88**	**173**	P	P	**15 13 24.4**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=2.1,slow=14,SNR=15						
STKA	**Stephens Creek**	**58.18**	**167**	P	P	**15 14 32.2**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=337,slow=7.0,SNR=3.0						
STKA	**Stephens Creek**	**58.18**	**167**	IAmb	IAmb	15 14 39.5	
	comp=Z,1.6nm,1.4s						
KBZ	**Khabaz**	**69.74**	**310**	P	P	**15 15 47.1**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=90,slow=2.0,SNR=4.7						
FINES	**FINESS Array B**	**73.72**	**331**	P	P	**15 16 11.2**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=32,slow=7.5,SNR=6.0						
AKASG	**Malin Array Be**	**76.26**	**320**	P	P	**15 16 26.3**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=63,slow=6.0,SNR=1.6						

NOU 30 15:39:16.7, 22.39S×170.48E, h0km, MLv4.1, Southeast of Loyalty Islands, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARNC	**Mare, Loyalty**	**2.45**	**291**	P	Pn	15 39 56.9	-1.0
PINNC	**Pines Island,**	**2.81**	**265**	P	Pn	15 40 02.6	-0.4
YATNC	**Mamie plateau,**	**3.34**	**275**	P	Pn	15 40 09.3	-0.9
OUENC	**Ouen Island, N**	**3.37**	**269**	P	Pn	15 40 10.6	0.0
LIFNC	**LIFOU**	**3.42**	**297**	P	Pn	15 40 11.4	+0.2
ONTNC	**Ouen Toro**	**3.73**	**271**	P	Pn	15 40 15.8	+0.3
DZM	**Mont Dzumac**	**3.75**	**274**	P	Pn	15 40 16.1	+0.1
NOUC	**Port Laguerre**	**3.88**	**273**	P	Pn	15 40 17.7	+0.1
KOUNC	**Koumac, New Ca**	**6.05**	**286**	P	Pn	15 40 48.1	+0.6

IDC 30 15:43:23.9±6.7, 20.22S×178.97W, h618km±41km, mb2.7/3, mb1 3.0/4, mb1mx2.7/26, mbtmpb3.6/4, Error ellipse: s-maj=181.2km s-min=29.5km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.75**	**311**	P	P	15 44 48.9	-0.4
	2.4nm,0.3s,baz=138,slow=16,SNR=9.6						
ASAR	**Alice Springs**	**43.70**	**257**	P	P	15 50 36.7	+0.3
	0.8nm,0.5s,baz=91,slow=8.4,SNR=35						
ASAR				PcP	PcP	15 52 09.1	-0.2
	0.5nm,1.0s,baz=98,slow=3.8,SNR=2.6						
WRA	**Warramunga Arr**	**43.74**	**262**	P	P	15 50 36.6	-0.2
	0.3nm,0.3s,baz=97,slow=7.5,SNR=21						
ILAR	**Eielson Array**	**88.24**	**13**	P	P	15 55 11.4	+1.1
	0.3nm,0.7s,baz=218,slow=5.7,SNR=2.4						
AKASG	**Malin Array Be**	**142.33**	**331**	PKP	PKPdf	16 01 44.9	-2.3
	0.6nm,0.3s,baz=42,slow=4.5,SNR=5.9						

*IDC **30** 15:54:11.8±2.1, 5.51S×151.76E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.6/31, mbtmpb3.9/5, ML1.7/1, Error ellipse: s-maj=121.7km s-min=25.1km az=130.0*
ISC 30 15:54:17.7±2.2, 5.6S±0.7×151.8E±0.7, h45km, n6, σ0.69/7, mb3.7/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.95**	**230**	Pn	Pn	**15 55 42.3**	**-0.9**
	1.2nm,0.3s,baz=304,slow=18,SNR=2.6						
PMG				Sn	Sn	**15 56 50.8**	**+0.7**
	3.1nm,0.3s,baz=199,slow=8.3,SNR=6.7						
WRA	**Warramunga Arr**	**22.16**	**228**	P	P	**15 59 10.5**	**+0.5**
	1.4nm,0.8s,baz=52,slow=10.0,SNR=8.2						
ASAR	**Alice Springs**	**24.88**	**222**	P	P	**15 59 36.8**	**+0.4**
	2.5nm,0.8s,baz=59,slow=8.9,SNR=23						
FITZ	**Fitzroy Crossi**	**28.40**	**242**	P	P	**16 00 08.1**	**0.0**
	4.0nm,1.0s,baz=50,slow=9.2,SNR=2.0						
ILAR	**Eielson Array**	**83.29**	**22**	P	P	**16 06 39.6**	**+0.3**
	0.5nm,0.8s,baz=249,slow=4.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**149.60**	**286**	PKPbc	PKiKP	**16 14 04.1**	**-0.3**
	0.3nm,0.6s,baz=58,slow=4.5,SNR=1.9						

*IDC **30** 16:08:42.9±1.7, 10.73S×120.21E, h0km, mb3.5/2, mb1 3.6/6, mb1mx3.4/46, mbtmpb3.5/6, ML3.3/4, Error ellipse: s-maj=58.7km s-min=23.7km az=46.0*
*DJA **30** 16:08:49.6±0.7, 10°S±6', 120°E±', h19km±3km, M3.3/7, MLv3.3/7, Hypocentre not reviewed by the IDC*
ISC 30 16:08:44.5±1.4, 10.92S±0.09×120.3E±0.1, h10km, n6, σ3.42/9, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BASI	**Baing, Sumba**	**0.74**	**19**	P		16 08 56.1	
BASI				S		16 09 02.8	
WBSI	**Waikabubak, Su**	**1.58**	**324**	P		16 09 12.5	
WBSI				S		16 09 30.1	
MMRI	**Maumere**	**2.95**	**40**	P		16 09 29.5	
MMRI				S		16 10 00.6	
DBNI	**Kabupaten Domp**	**3.13**	**320**	P		16 09 34.0	
PLAI	**Plampang**	**3.27**	**309**	P		16 09 37.2	
PLAI				S		16 10 13.8	
BATI	**Baumata**	**3.35**	**78**	Pn	Pn	**16 09 38.8**	**+1.8**
	5.1nm,0.3s,baz=66,slow=1.3,SNR=9.8						
BATI				Sn	Sn	**16 10 18.1**	**+1.3**
	2.7nm,0.3s,baz=198,slow=21,SNR=1.8						
BATI	**Baumata**	**3.35**	**78**	P		16 09 38.1	
SOEI	**Soe**	**4.04**	**74**	P		16 09 48.8	
TWSI	**Taliwang, Sumb**	**4.04**	**302**	P		16 09 48.5	
KLNI	**Mataram**	**4.87**	**300**	P		16 09 59.9	
FITZ	**Fitzroy Crossi**	**8.79**	**145**	Pn	Pn	**16 10 55.0**	**+3.3**
	0.3nm,0.3s,baz=329,slow=7.3,SNR=27						
FITZ				Sn	Sn	**16 12 28.5**	**-2.4**
	0.3nm,0.3s,baz=202,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	**16.19**	**125**	Pn	Pn	**16 12 32.9**	**+0.5**
	0.1nm,0.3s,baz=307,slow=14,SNR=8.6						
WRA				Sn	Sn	**16 15 25.9**	**-6.3**
	0.1nm,0.3s,baz=292,slow=27,SNR=1.5						
ASAR	**Alice Springs**	**18.10**	**136**	P	P	**16 12 58.8**	**+2.2**
	0.1nm,0.3s,baz=321,slow=13,SNR=13						
MKAR	**Makanchi Array**	**66.76**	**333**	P	P	**16 19 34.8**	**-1.3**
	0.2nm,0.6s,baz=138,slow=8.2,SNR=2.9						
ZALV	**Zalesovo Beam**	**71.30**	**339**	P	P	**16 20 02.4**	**-1.7**
	0.4nm,0.5s,baz=127,slow=3.8,SNR=2.4						

TAP 30 16:15:55.4, 22.79N×120.90E, h8km±1km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**0.17**	**80**	i P	Pg	16 15 58.8	0.0
	baz=81						
TWG				i S	Sg	16 16 01.2	0.0
	baz=81						
TWGBT	**Beinan**	**0.17**	**81**	i P	Pg	16 15 58.8	-0.1
	baz=81						
TWGBT				i S	Sg	16 16 01.1	-0.2
	baz=81						
ECL	**Taimali**	**0.20**	**164**	P	Pg	16 15 59.3	-0.1
	baz=162						
ECL				S	Sg	16 16 03.1	+0.9
	baz=162						
TTN	**Taitung**	**0.24**	**99**	P	Pg	16 16 01.0	+0.9
	baz=99						
TTN				S	Sg	16 16 05.3	+2.1
	baz=99						
LONT	**Longtian**	**0.24**	**62**	i P	Pg	16 16 00.2	-0.1
	baz=62						
LONT				eS	Sg	16 16 04.2	+0.6
	baz=62						
SSD	**Sandimen**	**0.25**	**259**	P	Pg	16 16 00.1	-0.2
	baz=258						
SSD				S	Sg	16 16 03.8	+0.2
	baz=258						
TSMG	**Majia**	**0.25**	**250**	P	Pg	16 16 00.2	-0.1
	baz=249						
TSMG				eS	Sg	16 16 03.4	-0.2
	baz=249						
MASBT	**Mashibuluo**	**0.30**	**234**	i P	Pg	16 16 01.1	-0.2
	baz=233						
MASBT				S	Sg	16 16 05.0	-0.4
	baz=233						
SLGT	**Liugui**	**0.30**	**311**	P	Pg	16 16 01.3	-0.1
	baz=311						
SLGT				S	Sg	16 16 05.2	-0.3
	baz=311						
SCST	**Cishan**	**0.38**	**284**	P	Pg	16 16 03.6	+0.8
	baz=284						
SCST				S	Sb	16 16 09.3	-1.2
	baz=284						
STYT	**Tauyuan**	**0.39**	**341**	eP	Pg	16

EDH	**Donghe** baz=64	**0.42**	**64**	P		Pg	16 16 04.1	+0.6
SSPT	**Xinbi** baz=224	**0.43**	**225**	P		Pg	16 16 04.1	+0.4
SCZT	**Fangliau** baz=210	**0.49**	**211**	P		Pg	16 16 04.7	-0.1
CHN1	**Nanshi** baz=319	**0.52**	**319**	*e*S		Sg	16 16 12.6	+0.5
WTP	**Ta-pu** baz=330	**0.52**	**330**	*e*S		Sg	16 16 13.3	+1.0
LDUT	**Ludao** baz=102	**0.54**	**102**	*e*S		Sb	16 16 15.0	-0.1
FULB	**Fuli** baz=42	**0.55**	**42**	P		Pg	16 16 06.5	+0.5
FULB	baz=42			S		Sg	16 16 12.8	-0.3
TPUB	**Ta-pu** baz=334	**0.56**	**334**	*e*P		Pb	16 16 07.2	-0.3
SLIU	**Shizi** baz=188	**0.58**	**189**	P		Pg	16 16 06.4	-0.2
TWF1	**Yuli** baz=34	**0.67**	**34**	P		Pg	16 16 07.8	-0.5
YULB	**Yu-li** baz=31	**0.70**	**32**	*e*P		Pg	16 16 08.1	-0.8
HGSD	**Ruisui** baz=34	**0.85**	**35**	*e*P		Pg	16 16 11.7	0.0
VWDT	**VWDT** baz=13	**0.98**	**13**	*e*S		Sg	16 16 25.9	-1.2
SSLB	**Suanglung** baz=3.0	**0.99**	**3**	*e*S		Sb	16 16 28.3	+0.2

TAP 30 16:16:00.2, 22.81N×120.89E, h5km±1km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang** baz=87	**0.17**	**86**	*i* P	Pg	16 16 05.0	+1.3
TWG	baz=87			*i* S	Sg	16 16 07.3	+1.3
TWGBT	**Beinan** baz=87	**0.18**	**87**	*i* P	Pg	16 16 05.0	+1.2
TWGBT	baz=87			S	Sg	16 16 07.3	+1.1
ECL	**Taimali** baz=161	**0.22**	**163**	S	Sg	16 16 09.0	+1.5
SSD	**Sandimen** baz=254	**0.24**	**255**	*i* P	Pg	16 16 06.3	+1.3
SSD	baz=254			*e*S	Sg	16 16 09.4	+1.3
TSMG	**Majia** baz=245	**0.24**	**245**	P	Pg	16 16 06.4	+1.4
TSMG	baz=245			*e*S	Sg	16 16 09.6	+1.3
LONT	**Longtian** baz=66	**0.25**	**67**	*i* P	Pg	16 16 06.4	+1.3
LONT	baz=66			*e*S	Sg	16 16 10.5	+2.2
TTN	**Taitung** baz=102	**0.25**	**103**	S	Sg	16 16 11.4	+3.1
SLGT	**Liugui** baz=309	**0.29**	**310**	*e*S	Sg	16 16 11.3	+1.6
MASBT	**Mashibuluo** baz=229	**0.30**	**230**	*i* P	Pg	16 16 07.1	+0.9
MASBT	baz=229			*e*S	Sg	16 16 11.1	+0.9
SCST	**Cishan** baz=281	**0.37**	**282**	P	Pb	16 16 09.9	+0.6
SCST	baz=281			S	Sb	16 16 15.7	+0.4
STYT	**Tauyuan** baz=342	**0.37**	**342**	P	Pb	16 16 08.6	-0.8
STYT	baz=342			S	Sb	16 16 14.6	-0.9
STYT	**Tauyuan** baz=341	**0.37**	**342**	S	Pg	16 16 08.5	+1.0
STYH	**Taoyuan** baz=344	**0.37**	**344**	P	Pb	16 16 08.8	-0.6
STYH	baz=344			S	Sb	16 16 14.9	-0.6
STYH	**Taoyuan** baz=343	**0.37**	**344**	S	Pg	16 16 08.6	+1.1
SGST	**Jiashian** baz=314	**0.39**	**314**	*e*S	Sb	16 16 15.3	-0.6
ELDTW	**Lidau** baz=18	**0.40**	**18**	*e*P	Pb	16 16 09.2	-0.7
ELDTW	baz=18			*e*S	Sg	16 16 14.7	+1.5
EDH	**Donghe** baz=67	**0.42**	**67**	*e*P	Pb	16 16 10.3	+0.2
EDH	baz=67			*e*S	Sb	16 16 16.9	+0.1
EDH	**Donghe** baz=64	**0.42**	**67**	S	Pb	16 16 10.3	+0.2
EAST	**Anshuo** baz=183	**0.42**	**185**	*e*P	Pb	16 16 09.6	-0.7
EAST	baz=183			*e*S	Sb	16 16 17.3	+0.3
EAST	**Anshuo** baz=185	**0.42**	**185**	*e*S	Pg	16 16 09.6	+1.1
SSPT	**Xinbi** baz=222	**0.44**	**222**	*e*P	Pb	16 16 10.4	0.0
SSPT	baz=222			*e*S	Sb	16 16 17.2	-0.1
SSPT	**Xinbi** baz=224	**0.44**	**222**	S	Pb	16 16 10.4	-0.1
SCZT	**Fangliau** baz=208	**0.50**	**209**	*e*P	Pb	16 16 10.9	-0.6
SCZT	baz=208			*e*S	Sg	16 16 17.6	+1.2
SCZT	**Fangliau** baz=210	**0.50**	**209**	S	Pg	16 16 10.8	+1.0
FULB	**Fuli** baz=44	**0.54**	**44**	*e*S	Sb	16 16 20.8	+0.5
SLIU	**Shizi** baz=187	**0.59**	**188**	*e*P	Pb	16 16 12.5	-0.6
SLIU	**Shizi** baz=188	**0.59**	**188**	S	Pg	16 16 12.6	+0.9

*IDC **30** 16:16:54.4±5.3, 4.89S×104.67E, h133km±36km, mb3.4/7, mb1 3.5/8, mb1mx3.2/43, mbtmp3.7/8, Error ellipse: s-maj=128.6km s-min=15.3km az=56.0*
*DJA **30** 16:16:55.2±0.4, 5.5S×107.5E±°, h103km±4km, M3.6/10, MLv3.6/10, Hypocentre not reviewed by the ISC*
ISC 30 16:16:57.9±2.6, 4.6S±0.5×105.3E±0.7, h150km, n8, σ1§62/9, mb3.6/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.77**	**185**	P		16 17 13.6	
BLSI				S		16 17 27.4	
MDSI	**Maura Dua**	**1.13**	**276**	P		16 17 13.7	
MDSI				S		16 17 28.9	
KASI	**Kota Agung**	**1.23**	**221**	P		16 17 11.4	
KASI				S		16 17 25.2	
LWLI	**Liwa**	**1.31**	**251**	P		16 17 12.9	
LWLI				S		16 17 27.2	
LHSI	**Lahat**	**1.94**	**293**	P		16 17 24.5	
LHSI				S		16 17 47.0	
PPBI	**Pangkal Pinang**	**2.56**	**19**	P		16 17 45.9	
KSI	**Kapahiang**	**2.87**	**289**	P		16 17 34.1	
EGSI	**Enggano, Bengk**	**3.11**	**256**	P		16 17 31.5	
EGSI				S		16 17 58.7	
LEM	**Lembang** 2.8nm,0.3s,baz=281,slow=18,SNR=1.6	**3.19**	**134**	P	**Pn**	**16 17 47.9**	**+0.1**
LEM	3.3nm,0.3s,baz=150,slow=4.0,SNR=3.8			S	**Sn**	**16 18 23.9**	**-2.7**
LEM	**Lembang**	**3.19**	**134**	P		16 17 47.8	
CISI	**Cisompet, Garu**	**3.85**	**140**	P		16 17 54.5	
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=178,slow=8.1,SNR=2.2	**23.75**	**345**	P	**P**	**16 21 56.0**	**-0.7**
FITZ	**Fitzroy Crossi** 1.7nm,0.8s,baz=287,slow=11,SNR=1.5	**23.99**	**126**	P	**P**	**16 21 60.0**	**+1.1**
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=305,slow=9.1,SNR=16	**32.12**	**121**	P	**P**	**16 23 12.1**	**+0.8**
ASAR	**Alice Springs** 0.6nm,0.3s,baz=295,slow=7.7,SNR=21	**33.46**	**127**	P	**P**	**16 23 24.0**	**+1.0**
STKA	**Stephens Creek** 2.3nm,0.5s,baz=309,slow=7.7,SNR=15	**43.49**	**133**	P	**P**	**16 24 47.4**	**+0.8**
SONM	**Songino Array** 0.7nm,0.7s,baz=180,slow=7.2,SNR=3.5	**52.22**	**1**	P	**P**	**16 25 54.7**	**+1.1**
MKAR	**Makanchi Array** 0.4nm,0.4s,baz=158,slow=8.8,SNR=10	**55.08**	**341**	P	**P**	**16 26 12.4**	**-1.8**

*IDC **30** 16:36:21.4±2.0, 5.00S×151.78E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.6/30, mbtmp3.9/5, ML2.0/1, Error ellipse: s-maj=105.2km s-min=26.4km az=128.0*
*NEIC **30** 16:36:23.3±2.6, 5.65S±0.07×152.4E±0.1, h10km±2km, mb4.3/8, Error ellipse: s-maj=21.6km s-min=7.3km az=116.0*
ISC 30 16:36:26.0±1.4, 5.67S±0.08×152.5E±0.2, h40km, n18, σ1§16/19, mb4.1/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.50**	**349**		**Pn**	**16 36 50.9**	**+0.5**
RABL					**Sn**	**16 37 08.8**	**0.0**
RABL	**Rabaul**	**1.50**	**349**	P	**Pn**	**16 36 51.0**	**+0.6**
MANU	**Manus Island**	**6.22**	**305**		**Pn**	**16 37 55.8**	**+0.4**
PMG	**Port Moresby** 2.3nm,0.3s,baz=40,slow=7.5,SNR=11	**6.43**	**234**	Pn	**Pn**	**16 37 58.1**	**-0.1**
PMG	**Port Moresby**	**6.43**	**234**		**Pn**	**16 37 58.8**	**+0.7**
PMG	**Port Moresby**	**6.43**	**234**	P	**Pn**	**16 38 00.5**	**+2.3**
MTN	**Manton Dam**	**22.20**	**250**	P	**P**	**16 41 16.7**	**-2.4**
MTN	comp=Z,24nm,1.4s			IAmb	IAmb	16 41 54.6	
WB0	**Warramunga Arr**	**22.47**	**230**	P	**P**	**16 41 21.6**	**-0.5**
WB0	comp=Z,9.3nm,1.3s			IAmb	IAmb	16 42 04.4	
WR0	**Warramunga Arr**	**22.47**	**229**	P	**P**	**16 41 21.2**	**-0.8**
WR0	comp=Z,14nm,1.6s			IAmb	IAmb	16 41 51.8	
WB2	**Warramunga Arr**	**22.61**	**229**	P	**P**	**16 41 22.7**	**-0.8**
WB2	comp=Z,19nm,1.6s			IAmb	IAmb	16 41 59.3	
WRA	**Warramunga Arr** comp=Z,0.9nm,0.4s,baz=52,slow=10,SNR=18	**22.61**	**230**	P	**P**	**16 41 23.0**	**-0.6**
AS31	**Alice Springs**	**25.28**	**223**	P	**P**	**16 41 47.9**	**-1.0**
ASAR	**Alice Springs** comp=Z,4.7nm,0.7s,baz=56,slow=9.0,SNR=49	**25.28**	**223**	P	**P**	**16 41 49.4**	**+0.5**
KNRA	**Kununurra**	**25.28**	**245**	P	**P**	**16 41 47.7**	**-1.2**
FITZ	**Fitzroy Crossi** comp=Z,1.1nm,0.3s,baz=65,slow=11,SNR=8.0	**28.94**	**242**	P	**P**	**16 42 20.1**	**-1.7**
JHS	**Saijyo**	**44.36**	**337**	P	**P**	**16 44 33.7**	**+1.1**
ILAR	**Eielson Array** comp=Z,0.2nm,0.5s,baz=248,slow=5.4,SNR=1.4	**83.09**	**22**	P	**P**	**16 48 46.6**	**-0.6**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.4s,baz=100,slow=1.8,SNR=5.0	**150.23**	**287**	PKPbc	**PKPbc**	**16 56 14.0**	**+0.1**

*IDC **30** 16:37:15.7±1.6, 5.34S×151.88E, h0km, mb3.9/7, mb1 4.2/8, mb1mx3.8/31, mbtmp4.0/8, ML2.1/1, Error ellipse: s-maj=53.3km s-min=20.4km az=122.0*
*NEIC **30** 16:37:16.3±1.8, 5.67S±0.07×152.3E±0.1, h10km±2km, mb4.3/10, Error ellipse: s-maj=19.9km s-min=8.9km az=116.0*
ISC 30 16:37:21.1±1.1, 5.59S±0.09×152.2E±0.2, h45km, n23, σ1§30/26, mb4.0/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.39**	**359**	Pn	**Pn**	**16 37 43.8**	**-0.3**
RABL				Sn	**Sn**	**16 38 01.8**	**+0.5**
MANU	**Manus Island**	**5.96**	**306**	Pn	**Pn**	**16 38 48.0**	**+1.2**
PMG	**Port Moresby** 3.0nm,0.3s,baz=44,slow=13,SNR=6.1	**6.25**	**232**	Pn	**Pn**	**16 38 50.5**	**-0.3**
PMG	2.4nm,0.3s,baz=340,slow=23,SNR=1.3			Sn	**Sn**	**16 40 00.8**	**-0.3**
PMG	**Port Moresby**	**6.25**	**232**		**Pn**	**16 38 52.4**	**+1.6**
MTN	**Manton Dam**	**21.97**	**249**	P	**P**	**16 42 10.6**	**-0.8**
MTN	comp=Z,35nm,1.4s			IAmb	IAmb	16 42 22.3	
WB0	**Warramunga Arr**	**22.31**	**229**	P	**P**	**16 42 14.5**	**-0.6**
WB0	comp=Z,20nm,1.6s			IAmb	IAmb	16 42 17.7	
WR0	**Warramunga Arr**	**22.32**	**229**	P	**P**	**16 42 14.6**	**-0.5**
WR0	comp=Z,17nm,1.4s			IAmb	IAmb	16 42 39.6	
WRAB	**Tennant Creek**	**22.45**	**229**	P	**P**	**16 42 15.7**	**-0.7**
WRAB	comp=Z,5.5nm,0.8s			IAmb	IAmb	16 42 24.7	
WB2	**Warramunga Arr**	**22.45**	**229**	P	**P**	**16 42 15.1**	**-1.4**
WB2	comp=Z,4.7nm,0.8s			IAmb	IAmb	16 42 18.0	
WRA	**Warramunga Arr** comp=Z,2.4nm,0.6s,baz=52,slow=10,SNR=7.6	**22.46**	**229**	P	**P**	**16 42 16.3**	**-0.3**
WRA	comp=Z,0.2nm,0.5s,baz=38,slow=2.0,SNR=1.3			PcP	**PcP**	**16 46 14.0**	**+4.0**
WRA	**Warramunga Arr**	**22.46**	**229**	P	**P**	**16 42 15.5**	**-1.1**
KNRA	**Kununurra**	**25.07**	**245**	P	**P**	**16 42 40.1**	**-1.4**
AS31	**Alice Springs**	**25.15**	**223**	P	**P**	**16 42 42.2**	**0.0**
ASAR	**Alice Springs** comp=Z,7.8nm,0.7s,baz=56,slow=9.2,SNR=24	**25.15**	**223**	P	**P**	**16 42 42.0**	**-0.3**
ASAR	**Alice Springs**	**25.15**	**223**	P	**P**	**16 42 43.2**	**+0.9**
FITZ	**Fitzroy Crossi** comp=Z,2.6nm,0.7s,baz=55,slow=7.7,SNR=6.1	**28.74**	**242**	P	**P**	**16 43 12.9**	**-1.7**
FITZ	**Fitzroy Crossi**	**28.74**	**242**	P	**P**	**16 43 13.2**	**-1.4**
FITZ	comp=Z,14nm,1.6s			IAmb	IAmb	16 43 45.3	
JHS	**Saijyo**	**44.19**	**337**	P	**P**	**16 45 26.8**	**+1.0**
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.7s,baz=122,slow=6.9,SNR=6.3	**57.66**	**296**	P	**P**	**16 47 06.5**	**-0.8**
SONM	**Songino Array** comp=Z,0.5nm,0.5s,baz=141,slow=5.2,SNR=3.1	**66.66**	**328**	P	**P**	**16 48 05.7**	**-1.6**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.5s,baz=96,slow=7.2,SNR=2.1	**80.51**	**319**	P	**P**	**16 49 28.0**	**-0.6**
ILAR	**Eielson Array** comp=Z,0.7nm,0.6s,baz=245,slow=5.3,SNR=8.4	**83.12**	**22**	P	**P**	**16 49 42.3**	**+0.4**
TORD	**Torodi Ar. Bea** comp=Z,1.2nm,0.8s,baz=73,slow=3.9,SNR=4.0	**149.95**	**287**	PKPbc	**PKPbc**	**16 57 06.6**	**-1.0**

*MAN **30** 16:49:32.2, 5.40N×126.15E, h105km, MS3.7*
*DJA **30** 16:49:35.2±1.2, 6.1N±3.3×126.6E±°, h13km±10km, M4.8/11, mb4.8/9, mB5.5/7, MLv4.6/11, Mw(mB)5.0/7, Hypocentre not reviewed by the ISC*
*IDC **30** 16:49:36.7±0.8, 5.83N×126.18E, h132km±6km, mb3.7/12, mb1 3.9/15, mb1mx3.6/41, mbtmp4.2/15, Error ellipse: s-maj=28.0km s-min=9.4km az=72.0*
*NEIC **30** 16:49:37.1±2.7, 5.80N±0.06×126.24E±0.08, h128km±7km, mb4.5/36, Error ellipse: s-maj=12.3km s-min=7.2km az=66.0*
ISC 30 16:49:36.4±0.6, 5.76N±0.04×126.20E±0.06, h124km±6km, n80, σ1§79/95, mb4.3/25, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.60**	**305**	*e*P	**Pn**	**16 49 52.8**	**-2.6**
DDMP				*e*S	**Sn**	**16 50 07.0**	**-2.8**
MATI	**Mati**	**1.18**	**3**	*e*P	**Pn**	**16 49 59.1**	**-1.6**
MATI				*e*S	**Sn**	**16 50 17.6**	**-1.4**
DAV	**Davao City (W)** 148nm,0.3s,baz=265,slow=5.2,SNR=15	**1.45**	**335**	P	**Pn**	**16 50 02.9**	**-0.6**
DAV	309nm,0.3s,baz=75,slow=2.9,SNR=11			S	**Sn**	**16 50 24.0**	**-0.1**
DAV	**Davao City (W)**	**1.45**	**335**		**Pn**	**16 50 03.1**	**-0.5**
DAV				Sn	**Sn**	**16 50 24.9**	**+0.7**
DAV	**Davao City (W)**	**1.45**	**335**	P		16 50 03.5	
DAV				S		16 50 23.2	
KCP	**Kidapawan**	**1.67**	**318**	*i* P	**Pn**	**16 50 06.1**	**0.0**
KCP				*i* S	**Sn**	**16 50 28.9**	**+0.1**
SKMP	**Bagumbayan, Su**	**1.82**	**295**	*e*P	**Pn**	**16 50 05.5**	**-2.3**
SKMP				*e*S	**Sn**	**16 50 28.7**	**-3.2**
SGSI	**Sangihe**	**2.16**	**198**	P		16 50 10.3	
SGSI				S		16 50 37.6	
BUKP	**Musuan**	**2.40**	**332**	*e*P	**Pn**	**16 50 15.2**	**+0.1**
BUKP				*e*S	**Sn**	**16 50 46.8**	**+2.0**
CGP	**Cagayan de Oro**	**3.07**	**331**	*e*P	**Pn**	**16 50 24.9**	**+1.1**
CGP				*e*S	**Sn**	**16 51 04.0**	**+3.6**
BUTP	**Butuan**	**3.24**	**350**	*e*P	**Pn**	**16 50 26.6**	**+0.6**
BUTP				*e*S	**Sn**	**16 51 08.6**	**+4.1**
PAGZ	**Pagadian**	**3.49**	**307**	*e*P	**Pn**	**16 50 27.6**	**-1.7**
PAGZ				*e*S	**Sn**	**16 51 01.7**	**-8.5**
GAMI	**Galela, Maluku**	**4.20**	**158**	P		16 50 38.5	
GAMI				S		16 51 25.6	
MNI	**Manado**	**4.50**	**198**	P		16 50 43.3	
MSLP	**Maasin**	**4.55**	**343**	*e*P	**Pn**	**16 50 44.5**	**+1.1**
MSLP				*e*S	**Sn**	**16 51 37.8**	**+2.3**
TNTI	**Ternate**	**5.08**	**167**	Pn	**Pn**	**16 50 50.6**	**-0.1**
TNTI				Sn	**Sn**	**16 51 45.8**	**-2.6**
TNTI	**Ternate**	**5.08**	**167**	P		16 50 50.4	
CNOP	**Candoni, Negro**	**5.37**	**319**	*e*P	**Pn**	**16 50 53.4**	**-1.1**
KMSI	**Cibinong** 0.3nm62nm,0.6s	**5.61**	**203**	P		16 50 58.0	
GTOI	**Gorontalo** 0.3nm922nm73nm,0.6s	**6.00**	**212**	P		16 51 03.8	
MRSI	**Marisa** 0.4nm111nm,0.7s	**6.75**	**219**	P		16 51 15.1	
TOLI2	**Tolitoli**	**7.11**	**230**	Pn	**Pn**	**16 51 17.7**	**-0.2**
TOLI2				Sn	**Sn**	**16 52 35.1**	**-2.2**
LUWI	**Luwuk**	**7.57**	**207**		**Pn**	**16 51 26.0**	**+1.8**
LUWI	**Luwuk** 0.3nm2µm48nm,0.6s	**7.57**	**207**	P		16 51 25.8	
MYLDM	**Lahad Datu**	**7.69**	**266**	Pn	**Pn**	**16 51 28.3**	**+2.5**
MYLDM	**Lahad Datu** 0.1nm15nm,0.5s	**7.69**	**266**	P		16 51 28.3	
SANI	**Sanana** 0.7nm7µm96nm,0.5s	**7.76**	**182**	P		16 51 24.1	
SWI	**Sorong** 16nm,0.6s	**8.29**	**142**	P		16 51 33.0	
SIJI	**Sorong** 2.2nm,0.3s,baz=120,slow=15,SNR=11	**8.30**	**142**	P	**Pn**	**16 51 34.3**	**+0.3**
SIJI	0.6nm,0.3s,baz=33,slow=23,SNR=1.6			S	**Sn**	**16 53 03.8**	**-2.4**
SIJI	**Sorong** 6.3nm,0.5s	**8.30**	**142**	P		16 51 33.2	
NLAI	**Namlea**	**8.98**	**174**	P		16 51 41.6	
KRAI	**Karang Ratu**	**9.28**	**166**	P		16 51 47.1	
MSAI	**Masohi** 259nm,0.9s	**9.44**	**163**	P		16 51 49.8	
KKM	**Kota Kinabalu**	**9.94**	**272**	Pn	**Pn**	**16 51 59.9**	**+3.7**
FAKI	**Fak Fak**	**10.52**	**145**	Pn	**Pn**	**16 52 04.8**	**+0.8**
TTSI	**Tana Toraja** 44nm,0.9s	**10.82**	**216**	P		16 52 09.8	
KAPI	**Kappang** 2.7nm,0.3s,baz=33,slow=9.3,SNR=6.7	**12.49**	**211**	P	**Pn**	**16 52 30.2**	**+0.2**
KAPI	**Kappang**	**12.49**	**211**	Pn	**Pn**	**16 52 31.0**	**+1.0**
SBUM	**Sibu**	**14.33**	**257**		**P**	**16 52 59.5**	**+2.4**
BBKI	**Banjar Baru**	**14.58**	**231**	P		16 53 00.3	
MMRI	**Maumere**	**14.83**	**195**	P	**P**	**16 53 04.0**	**+1.3**
SOEI	**Soe**	**15.53**	**187**	Pn	**Pn**	**16 53 08.5**	**-0.5**
SOEI	comp=Z,33nm,0.9s			IAmb	IAmb	16 53 25.7	
BATI	**Baumata** comp=Z,8.0nm,0.3s,baz=87,slow=3.0,SNR=12	**16.06**	**189**	P	**P**	**16 53 16.0**	**-0.3**
KSM	**Kuching**	**16.42**	**256**		**P**	**16 53 22.4**	**+2.0**
YULB	**Yu-li**	**18.16**	**345**	P	**Pn**	**16 53 40.4**	**-0.3**
YULB	comp=Z,36nm,1.6s			IAmb	IAmb	16 53 53.2	
TPUB	**Ta-pu**	**18.25**	**343**	P	**Pn**	**16 53 41.3**	**-0.5**
TPUB	comp=Z,39nm,1.5s			IAmb	IAmb	16 53 48.3	
JAGI	**Jajag, Banyuwa**	**18.55**	**220**	P	**Pn**	**16 53 45.9**	**+0.4**
JAGI	comp=Z,14nm,0.9s			IAmb	IAmb	16 53 50.1	
MTN	**Manton Dam**	**19.12**	**165**	P	**Pn**	**16 53 51.2**	**-0.9**
MTN	comp=Z,19nm,0.6s			IAmb	IAmb	16 53 52.5	
KNRA	**Kununurra**	**21.45**	**173**	P	**P**	**16 54 15.8**	**+0.8**
FITZ	**Fitzroy Crossi** comp=Z,2.8nm,0.3s,baz=351,slow=6.2,SNR=74	**23.71**	**181**	P	**P**	**16 54 37.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**23.71**	**181**	P	**P**	**16 54 37.6**	**+0.4**
COEN	**Coen**	**25.83**	**139**	P	**P**	**16 54 57.8**	**+1.2**
COEN	comp=Z,9.8nm,1.3s			IAmb	IAmb	16 55 34.7	
WB0	**Warramunga Arr**	**26.61**	**163**	P	**P**	**16 55 04.2**	**+0.7**
WB0	comp=Z,8.5nm,0.5s			IAmb	IAmb	16 55 07.3	
WRAB	**Tennant Creek**	**26.76**	**163**	P	**P**	**16 55 05.3**	**+0.5**
WRA	**Warramunga Arr** comp=Z,2.5nm,0.4s,baz=338,slow=9.6,SNR=29	**26.76**	**163**	P	**P**	**16 55 04.9**	**+0.1**
WRA	**Warramunga Arr**	**26.76**	**163**	P	**P**	**16 55 05.3**	**+0.5**
WB2	**Warramunga Arr**	**26.77**	**163**	P	**P**	**16 55 05.3**	**+0.5**
WB2	comp=Z,18nm,1.5s			IAmb	IAmb	16 55 19.3	
WR0	**Warramunga Arr**	**26.84**	**162**	P	**P**	**16 55 06.0**	**+0.5**
WR0	comp=Z,12nm,1.4s			IAmb	IAmb	16 55 13.2	
NJ2	**Nanjing**	**27.05**	**346**	*e*P	**P**	**16 55 09.5**	**+2.3**
NJ2	comp=Z,10.0nm,0.5s			pmax	pmax		
PSA00	**Pilbara Seismi**	**27.87**	**193**	P	**P**	**16 55 14.8**	**+0.2**
CMAR	**Chiang Mai Arr** comp=Z,0.1nm,0.4s,baz=113,slow=8.4,SNR=4.5	**29.43**	**298**	P	**P**	**16 55 27.3**	**-1.4**
CMAR	comp=Z,0.7nm,0.9s,baz=119,slow=1.1,SNR=7.1			ScP	**ScP**	**17 02 00.6**	**-1.7**
AS31	**Alice Springs**	**30.19**	**166**	P	**P**	**16 55 36.0**	**+0.7**
AS31	comp=Z,2.0nm,0.5s			IAmb	IAmb	16 55 37.3	
ASAR	**Alice Springs** comp=Z,2.5nm,0.4s,baz=338,slow=7.3,SNR=116	**30.19**	**166**	P	**P**	**16 55 35.9**	**+0.6**
ASAR	comp=Z,0.5nm,0.9s,baz=345,slow=3.7,SNR=3.2			ScP	**ScP**	**17 02 01.8**	**-2.8**
ASAR	**Alice Springs**	**30.19**	**166**	P	**P**	**16 55 35.8**	**+0.5**
JMM	**Marumori**	**34.61**	**21**	P	**P**	**16 56 13.4**	**-0.3**
JMM	comp=Z,13nm,1.1s			IAmb	IAmb	16 56 47.7	
BJT	**Baijiatuau**	**35.29**	**347**	P	**P**	**16 56 19.8**	**+0.3**
BJI	**Beijing**	**35.31**	**347**	P	**P**	**16 56 22.3**	**+2.7**
BJI	comp=Z,9.0nm,0.7s			pmax	pmax		
MORW	**Morawa**	**35.98**	**195**	P	**P**	**16 56 25.8**	**+0.3**
FORT	**Forrest**	**36.37**	**177**	P	**P**	**16 56 29.5**	**+0.7**
HHC	**Hu-ho-hao-te**	**37.32**	**342**	*e*P	**P**	**16 56 37.5**	**+0.6**
HHC	comp=Z,22nm,0.7s			pmax	pmax		
HHC	comp=Z,86nm,6.4s			pmax	pmax		
USRK	**Ussuriysk Ar.** comp=Z,0.8nm,0.7s,baz=184,slow=8.8,SNR=2.5	**38.62**	**7**	P	**P**	**16 56 46.7**	**-0.9**
NWAO	**Narrogin (SRO)**	**39.40**	**192**	P	**P**	**16 56 55.1**	**+0.9**
NWAO	**Narrogin (SRO)**	**39.40**	**192**	P	**P**	**16 56 55.1**	**+0.9**
NWAO	comp=Z,67nm,1.6s			IAmb	IAmb	16 57 15.6	
BBOO	**Buckleboo**	**39.48**	**167**	P	**P**	**16 56 56.1**	**+1.2**
BBOO	comp=Z,12nm,0.7s			IAmb	IAmb	16 56 56.6	
STKA	**Stephens Creek** comp=Z,4.1nm,0.5s,baz=327,slow=8.7,SNR=9.4	**40.20**	**160**	P	**P**	**16 57 01.1**	**+0.3**
STKA	**Stephens Creek**	**40.20**	**160**	P	**P**	**16 57 01.8**	**+0.9**
ARMA	**Armidale**	**43.44**	**147**	P	**P**	**16 57 29.2**	**+1.8**
CAN	**Canberra**	**46.15**	**154**	P	**P**	**16 57 51.2**	**+2.5**
CAN	comp=Z,15nm,1.1s			IAmb	IAmb	16 57 54.2	
TOO	**Toolangi**	**46.70**	**159**	P	**P**	**16 57 54.5**	**+1.5**
TOO	comp=Z,14nm,1.6s			IAmb	IAmb	16 58 04.3	
WMQ	**Urumqi**	**50.78**	**324**	*e*P	**P**	**16 58 26.0**	**+1.9**
PETK	**Petropavlovsk-** comp=Z,2.0nm,0.9s,baz=218,slow=9.0,SNR=1.9	**53.77**	**23**	P	**P**	**16 58 44.7**	**-1.3**
MK31	**Makanchi Array**	**55.61**	**325**	P	**P**	**16 58 58.5**	**-0.9**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.5s,baz=121,slow=7.2,SNR=18	**55.61**	**325**	P	**P**	**16 58 58.6**	**-0.8**
MKAR	comp=Z,0.7nm,0.7s,baz=108,slow=5.2,SNR=4.1			PcP	**PcP**	**16 59 56.7**	**-0.9**
MKAR	**Makanchi Array**	**55.61**	**325**	P	**P**	**16 58 58.4**	**-1.0**
ZALV	**Zalesovo Beam** 2.0nm,0.3s,baz=126,slow=7.3,SNR=2.1	**56.56**	**333**	P	**P**	**16 59 18.3**	**-1.7**
KNTN	**Kanton**	**62.57**	**96**	P	**P**	**16 59 44.8**	**-3.2**
ABKAR	**Akbulak array**	**70.26**	**320**	P	**P**	**17 00 35.1**	**-1.2**
CASY	**Casey**	**72.75**	**187**	P	**P**	**17 00 51.6**	**+0.8**
IMAR	**Indian Mountai**	**80.72**	**24**	P	**P**	**17 01 36.8**	**+1.2**
PPLA	**Purkeypile**	**81.08**	**27**	P	**P**	**17 01 37.5**	**-0.3**
PPLA	comp=Z,17nm,1.7s			IAmb	IAmb	17 01 59.5	
BPAW	**Bear Paw Mtn.**	**81.71**	**26**	P	**P**	**17 01 42.4**	**+1.4**
VNDA	**Vanda** comp=

σ0^{s}86/41, **mb4.1**/14, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.89**	**23**	Pn	**Pn**	**16 59 41.7**	**+0.3**
PMG	**Port Moresby**	**3.94**	**161**	P	**Pn**	**16 59 41.0**	**-1.1**
	11nm,0.3s,baz=41,slow=6.1,SNR=52						
PMG				S	**Sn**	**17 00 28.0**	**+0.8**
	18nm,0.3s,baz=321,slow=21,SNR=6.0						
PMG				LR	LR	17 01 44.2	
	comp=Z,392nm,19.1s,baz=317,slow=46						
PMG	**Port Moresby**	**3.94**	**161**		**Pn**	**16 59 41.4**	**-0.7**
JAY	**Jayapura**	**6.02**	**301**	P	**Pn**	**17 00 08.6**	**-2.0**
	1.6nm,0.3s,baz=153,slow=2.1,SNR=13						
RABL	**Rabaul**	**6.44**	**77**		**Pn**	**17 00 13.8**	**-2.6**
COEN	**Coen**	**8.66**	**198**		**Pn**	**17 00 46.5**	**-0.2**
CTA	**Charters Tower**	**14.35**	**179**	P	**Pn**	**17 02 04.2**	**+0.4**
	0.2nm,0.3s,baz=356,slow=15,SNR=2.6						
SIJI	**Sorong**	**15.32**	**288**	P	**Pn**	**17 02 16.6**	**+0.1**
	0.5nm,0.3s,baz=344,slow=24,SNR=4.8						
SIJI				LR	LR	17 09 20.5	
	comp=Z,65nm,21.3s,baz=84,slow=42						
MTN	**Manton Dam**	**16.19**	**243**	Pn	**Pn**	**17 02 27.1**	**-0.3**
MTN				IAmb	IAmb	17 03 22.9	
	comp=Z,34nm,1.4s						
WB0	**Warramunga Arr**	**17.93**	**217**	P	**P**	**17 02 48.2**	**-0.3**
WB0				IAmb	IAmb	17 03 00.6	
	comp=Z,12nm,1.2s						
WR0	**Warramunga Arr**	**17.98**	**217**	P	**P**	**17 02 48.4**	**-0.8**
WB2	**Warramunga Arr**	**18.09**	**217**	P	**P**	**17 02 49.7**	**-0.6**
WB2				IAmb	IAmb	17 02 52.0	
	comp=Z,9.1nm,1.0s						
WRA	**Warramunga Arr**	**18.09**	**217**	P	**P**	**17 02 49.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=40,slow=12,SNR=19						
WRA				PcP	**PcP**	**17 07 22.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=23,slow=1.7,SNR=7.5						
WRA	**Warramunga Arr**	**18.09**	**217**	P	**P**	**17 02 50.0**	**-0.4**
GUMO	**Guam**	**19.14**	**357**	LR	LR	17 08 31.7	
	comp=Z,54nm,19.9s,baz=190,slow=31						
KNRA	**Kununurra**	**19.52**	**238**	P	**P**	**17 03 06.0**	**+0.1**
KNRA				IAmb	IAmb	17 03 40.8	
	comp=Z,20nm,1.2s						
AS31	**Alice Springs**	**21.29**	**212**	P	**P**	**17 03 24.9**	**-0.3**
ASAR	**Alice Springs**	**21.29**	**212**	P	**P**	**17 03 25.2**	**+0.1**
	comp=Z,6.4nm,0.9s,baz=37,slow=11,SNR=14						
ASAR	**Alice Springs**	**21.29**	**212**	P	**P**	**17 03 26.3**	**+1.2**
SANVU	**Saraoutou**	**23.10**	**117**	P	**P**	**17 03 45.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**23.30**	**236**	P	**P**	**17 03 45.4**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=46,slow=12,SNR=1.6						
FITZ				LR	LR	17 14 26.6	
	comp=Z,96nm,20.6s,baz=87,slow=40						
FITZ	**Fitzroy Crossi**	**23.30**	**236**	P	**P**	**17 03 46.6**	**+0.4**
FITZ				IAmb	IAmb	17 04 15.9	
	comp=Z,25nm,1.6s						
TOLI2	**Tolitoli**	**25.93**	**284**	P	**P**	**17 04 09.2**	**-1.0**
TOLI2				IAmb	IAmb	17 04 24.8	
	comp=Z,5.2nm,0.9s						
STKA	**Stephens Creek**	**26.39**	**188**	P	**P**	**17 04 14.1**	**0.0**
	comp=Z,1.6nm,0.3s,baz=357,slow=13,SNR=3.8						
MYLDM	**Lahad Datu**	**29.36**	**291**	P	**P**	**17 04 42.1**	**+1.2**
MYLDM				IAmb	IAmb	17 05 01.3	
	comp=Z,9.8nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**31.58**	**40**	T	T	17 38 09.0	
	baz=222,slow=75,SNR=42						
H11S2	**WAKE ISLAND Hy**	**31.59**	**40**	T	T	17 38 04.4	
	baz=222,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**31.60**	**40**	T	T	17 38 10.1	
	baz=222,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	**32.61**	**39**	T	T	17 39 21.6	
	baz=221,slow=76,SNR=4.2						
H11N3	**WAKE ISLAND Hy**	**32.63**	**39**	T	T	17 39 23.5	
	baz=221,slow=76,SNR=14						
H11N2	**WAKE ISLAND Hy**	**32.63**	**39**	T	T	17 39 23.5	
	baz=221,slow=76,SNR=16						
JWT	**Wachi**	**41.89**	**347**	P	**P**	**17 06 27.8**	**+0.1**
JWT				IAmb	IAmb	17 06 45.4	
	comp=Z,9.9nm,1.2s						
MJAR	**Matsushiro Arr**	**42.58**	**351**	P	**P**	**17 06 32.1**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=153,slow=8.2,SNR=2.2						
JSD	**Sado**	**44.04**	**351**	P	**P**	**17 06 46.1**	**+1.1**
JSD				IAmb	IAmb	17 07 18.1	
	comp=Z,12nm,1.6s						
KSRS	**Korea Array**	**46.03**	**340**	P	**P**	**17 07 01.4**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=156,slow=6.4,SNR=2.0						
KSRS				LR	LR	17 23 35.4	
	comp=Z,51nm,19.5s,baz=137,slow=32						
JTM	**Tenmabayashi**	**46.42**	**355**	P	**P**	**17 07 04.4**	**+0.5**
USA0B	**Ussuriysk Arra**	**51.18**	**347**	P	**P**	**17 07 40.9**	**+0.7**
USRK	**Ussuriysk Ar.**	**51.18**	**347**	P	**P**	**17 07 40.7**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=181,slow=6.8,SNR=7.3						
USRK	**Ussuriysk Ar.**	**51.18**	**347**	P	**P**	**17 07 39.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**52.09**	**299**	P	**P**	**17 07 48.4**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=117,slow=6.0,SNR=9.3						
CMAR	**Chiang Mai Arr**	**52.09**	**299**	P	**P**	**17 07 47.9**	**+0.4**
PETK	**Petropavlovsk-**	**59.39**		P	**P**	**17 08 40.1**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=167,slow=5.4,SNR=6.2						
MKAR	**Makanchi Array**	**76.51**	**321**	P	**P**	**17 10 27.3**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=153,slow=8.2,SNR=3.5						
ILAR	**Eielson Array**	**85.61**	**23**	P	**P**	**17 11 14.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=253,slow=5.3,SNR=20						
ILAR	**Eielson Array**	**85.61**	**23**	P	**P**	**17 11 14.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**143.91**	**285**	PKP	PKPbc	17 18 11.4	+0.8
	comp=Z,0.3nm,0.4s,baz=74,slow=3.5,SNR=2.4						
DBIC	**Dimbokro**	**150.87**	**274**	PKPbc	**PKiKP**	**17 18 30.5**	**0.0**
	comp=Z,3.4nm,0.8s,baz=100,slow=2.0,SNR=4.7						

*IDC **30** 17:13:56.2±2.7, 23°.35S×174°.70W, h0^{km}, mb4.0/4, mb1 4.2/5, mb1mx3.8/41, mbtmp4.0/5, ML5.2/1, Error ellipse: s-maj=66.2km s-min=48.5km az=134.0*

ISC 30 17:14:03.2±2.5, 23°.3S±0°.3×175°.0W±0°.3, h35^{km}, n6, σ0^{s}63/6, mb4.0/4, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.60**	**309**	Pn	**Pn**	**17 16 05.4**	**+0.1**
	1.0nm,0.3s,baz=126,slow=17,SNR=6.6						
STKA	**Stephens Creek**	**39.23**	**248**	P	**P**	**17 21 28.8**	**+0.5**
	0.6nm,0.5s,baz=83,slow=8.1,SNR=2.8						
ASAR	**Alice Springs**	**46.69**	**259**	P	**P**	**17 22 28.8**	**-0.1**
	2.4nm,0.7s,baz=93,slow=8.4,SNR=14						
WRA	**Warramunga Arr**	**47.07**	**264**	P	**P**	**17 22 30.9**	**-1.0**
	0.8nm,0.6s,baz=103,slow=7.7,SNR=12						
CMAR	**Chiang Mai Arr**	**93.71**	**288**	P	**P**	**17 27 16.9**	**+0.1**
	0.8nm,0.9s,baz=120,slow=3.6,SNR=5.8						
AKASG	**Malin Array Be**	**146.84**	**332**	PKPbc	**PKPdf**	**17 33 39.6**	**0.0**
	1.3nm,0.7s,baz=42,slow=4.4,SNR=7.6						

IDC 30 17:18:14.9±3.9, 28°.33N×86°.51E, h0^{km}, mb3.4/2, mb1 3.3/3, mb1mx3.1/46, mbtmp3.2/3, ML3.0/1, MS3.3/1, Ms1 3.2/1, ms1mx2.5/35, Error ellipse: s-maj=119.3km s-min=36.6km az=76.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**18.73**	**351**	P	P	17 22 34.3	-0.8
	0.0nm,0.3s,baz=178,slow=11,SNR=1.7						
SONM	**Songino Array**	**24.86**	**33**	P	P	17 23 39.9	+0.8
	0.5nm,0.8s,baz=223,slow=8.6,SNR=3.8						
KBZ	**Khabaz**	**38.02**	**306**	LR	LR	17 43 54.1	
	comp=Z,41nm,19.8s,baz=36,slow=40						
WRA	**Warramunga Arr**	**66.62**	**131**	P	P	17 29 07.1	-0.3
	0.4nm,1.0s,baz=325,slow=6.3,SNR=1.4						

*IDC **30** 17:21:38.7±5.5, 5°.45S×151°.66E, h75^{km}±44^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.4/40, mbtmp3.9/8, ML1.8/1, Error ellipse: s-maj=59.4km s-min=26.4km az=117.0*

ISC 30 17:21:35.5±1.6, 5°.4S±0°.3×151°.8E±0°.3, h50^{km}, n9, σ1^{s}00/11, mb3.8/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.11**	**229**	P	**Pn**	**17 23 04.0**	**+0.8**
	1.6nm,0.3s,baz=40,slow=12,SNR=8.4						
PMG				S	**Sn**	**17 24 12.1**	**+0.2**
	0.7nm,0.3s,baz=149,slow=24,SNR=1.4						
WRA	**Warramunga Arr**	**22.33**	**228**	P	**P**	**17 26 28.6**	**-0.6**
	1.2nm,0.4s,baz=52,slow=10,SNR=19						
WRA				PcP	**PcP**	**17 30 23.0**	**-0.5**
	0.5nm,1.1s,baz=49,slow=1.8,SNR=1.2						
ASAR	**Alice Springs**	**25.06**	**222**	P	**P**	**17 26 55.1**	**-0.3**
	5.4nm,0.8s,baz=56,slow=8.8,SNR=46						
FITZ	**Fitzroy Crossi**	**28.53**	**242**	P	**P**	**17 27 25.9**	**-0.7**
	2.3nm,0.5s,baz=50,slow=9.8,SNR=10						
SONM	**Songino Array**	**66.33**	**328**	P	**P**	**17 32 18.2**	**-0.8**
	0.5nm,0.6s,baz=139,slow=7.1,SNR=3.2						
MKAR	**Makanchi Array**	**80.15**	**319**	P	**P**	**17 33 41.7**	**+1.3**
	0.2nm,0.7s,baz=108,slow=6.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**81.12**	**327**	P	**P**	**17 33 45.6**	**+0.2**
	0.7nm,0.6s,baz=131,slow=4.4,SNR=3.8						
ILAR	**Eielson Array**	**83.08**	**22**	P	**P**	**17 33 56.5**	**+1.1**
	0.6nm,0.6s,baz=250,slow=5.1,SNR=10						
TORD	**Torodi Ar. Bea**	**149.57**	**287**	PKPbc	**PKPbc**	**17 41 18.9**	**-1.6**
	0.8nm,0.6s,baz=68,slow=2.5,SNR=3.1						

*IDC **30** 17:34:36.4±1.5, 27°.65N×85°.49E, h0^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.4/55, mbtmp3.5/9, ML3.4/2, MS3.1/2, Ms1 3.2/2, ms1mx2.5/51, Error ellipse: s-maj=58.4km s-min=19.4km az=62.0*

*NEIC **30** 17:34:37.6±1.7, 28°.2N±0°.1×85°.81E±0°.07, h10^{km}±1^{km}, mb3.8/18, Error ellipse: s-maj=21.2km s-min=6.8km az=23.0*

*NDI **30** 17:34:40.3±3.7, 27°.59N×85°.74E, h10^{km}, ML3.9*

ISC 30 17:34:38.7±0.6, 27°.98N±0°.09×85°.83E±0°.06, h19^{km}, n40, σ2^{s}31/43, mb3.8/9, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**2.54**	**104**	*eP*	**Pn**	**17 35 23.0**	**+3.9**
GTK				IAML		17 35 58.3	
	comp=N,591nm,0.6s						
GTK				IAML		17 35 58.7	
	comp=E,421nm,0.5s						
LSA	**Lhasa**	**4.97**	**69**	Pn	**Pn**	**17 35 50.1**	**-2.7**
GUWA	**GUWAHATI**	**5.52**	**107**	*eP*	**Pn**	**17 36 00.5**	**+0.6**
SHL	**Shillong**	**5.92**	**113**	*eS*	**Sn**	**17 37 10.2**	**-2.8**
SHL				IAML		17 37 16.6	
	comp=E,48nm,0.5s						
SHL	**Shillong**	**5.92**	**113**	Pn	**Pn**	**17 36 06.6**	**+1.1**
TEZP	**TEZPUR**	**6.35**	**101**	*eP*	**Pn**	**17 36 13.3**	**+2.0**
TEZP				*eS*	**Sn**	**17 37 22.4**	**-0.8**
TEZP				IAML		17 37 28.0	
	comp=N,764nm,0.3s						
DDI	**Dehra Dun**	**7.19**	**291**	*eS*	**Sn**	**17 37 47.5**	**+3.4**
DDI				IAML		17 37 49.3	
	comp=N,463nm,0.4s						
DDI				IAML		17 37 49.9	
	comp=E,287nm,0.4s						
KOHI	**KOHIMA**	**7.73**	**105**	*eP*	**Pn**	**17 36 31.8**	**+1.4**
KOHI				*eS*	**Sn**	**17 37 55.9**	**-1.6**
KOHI				IAML		17 38 01.8	
	comp=E,43nm,0.5s						
KOHI				IAML		17 38 03.4	
	comp=N,40nm,0.4s						
SMLA	**Simla**	**8.17**	**295**	*eP*	**Pn**	**17 36 38.9**	**+2.6**
SMLA				*eS*	**Sn**	**17 38 05.0**	**-3.2**
SMLA				IAML		17 38 10.4	
	comp=E,81nm,0.6s						
SMLA				IAML		17 38 12.8	
	comp=N,82nm,0.4s						
BHPL	**Bhopal**	**8.93**	**240**	*eP*	**Pn**	**17 36 44.5**	**-2.3**
BHPL				*eS*	Sn	17 38 17.2	-10
BHPL				IAML		17 38 19.9	
	comp=N,80nm,0.3s						
BHPL				IAML		17 38 21.5	
	comp=E,84nm,0.7s						
DHRM	**DHARAMSHALA**	**9.29**	**300**	*eP*	**Pn**	**17 36 53.2**	**+1.4**
DHRM				*eS*	**Sn**	**17 38 35.4**	**-0.6**
DHRM				IAML		17 38 37.9	
	comp=N,59nm,0.6s						
DHRM				IAML		17 38 38.8	
	comp=E,72nm,0.6s						
NIL	**Nilore**	**12.20**	**301**	Pn	**Pn**	**17 37 30.0**	**-1.5**
CMAR	**Chiang Mai Arr**	**15.32**	**125**	Pn	**Pn**	**17 38 13.9**	**-0.1**
	comp=E,0.0nm,0.3s,baz=302,slow=11,SNR=2.5						
CMAR				LR	LR	17 44 22.7	
	comp=E,15nm,18.2s,baz=195,slow=38						
KBL	**Kabul**	**15.77**	**299**	Pn	**Pn**	**17 38 18.3**	**-1.7**
KBL				IAmb	IAmb	17 38 34.8	
	comp=Z,3.5nm,0.6s						
KDJ	**Kajisay**	**15.79**	**336**		**Pn**	**17 38 23.0**	**+2.9**
GAR	**Garm**	**16.96**	**314**	Pn	**Pn**	**17 38 32.4**	**-2.6**
GAR				IAmb	IAmb	17 38 44.4	
	comp=Z,3.9nm,0.9s						
BTK	**Batken**	**17.30**	**318**	Pn	**Pn**	**17 38 36.3**	**-2.9**
BTK				IAmb	IAmb	17 38 54.6	
	comp=Z,3.8nm,0.6s						
CHGR	**Chuyangaron**	**17.51**	**312**	Pn	**Pn**	**17 38 39.3**	**-2.7**
CHGR				IAmb	IAmb	17 38 57.5	
	comp=Z,3.1nm,0.8s						
SLVN	**Son La**	**17.70**	**108**	Pn	**Pn**	**17 38 41.6**	**-2.7**
MK31	**Makanchi Array**	**18.99**	**353**	P	**P**	**17 38 58.2**	**-0.9**
MKAR	**Makanchi Array**	**18.99**	**353**	P	**Pn**	**17 39 02.5**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=174,slow=11,SNR=14						
MKAR	**Makanchi Array**	**18.99**	**353**	P	**P**	**17 38 59.9**	**+0.7**
MAKZ	**Makanchi**	**19.04**	**352**	P	**P**	**17 38 56.4**	**-3.3**
KURBB	**Kurchatov Arra**	**23.29**	**348**	P	**P**	**17 39 49.2**	**+4.1**
	comp=Z,0.3nm,0.5s,baz=170,slow=10,SNR=5.8						
SONM	**Songino Array**	**25.48**	**33**	P	**P**	**17 40 09.4**	**+3.7**
	comp=Z,0.5nm,0.6s,baz=221,slow=10,SNR=3.3						
SONM	**Songino Array**	**25.48**	**33**	P	**P**	**17 40 06.0**	**+0.3**
SONM				IAmb	IAmb	17 40 19.9	
	comp=Z,1.3nm,0.8s						
ULN	**Ulaanbaatar**	**25.82**	**34**	P	**P**	**17 40 07.1**	**-1.8**
ULN				IAmb	IAmb	17 40 22.3	
	comp=Z,2.2nm,0.8s						
ZALV	**Zalesovo Beam**	**25.96**	**359**	P	**P**	**17 40 14.3**	**+4.5**
	comp=Z,0.5nm,0.4s,baz=188,slow=8.2,SNR=3.3						
ABKAR	**Akbulak array**	**29.09**	**324**	P	**P**	**17 40 35.0**	**-2.9**
GAZ	**Gaziantep**	**41.60**	**295**	P	**P**	**17 42 26.6**	**+0.9**
TIXI	**Tiksi**	**49.66**	**16**	P	**P**	**17 43 27.6**	**-1.1**
TIXI				IAmb	IAmb	17 43 37.3	
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**51.44**	**328**	P	**P**	**17 43 42.6**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=99,slow=8.6,SNR=1.4						
BATI	**Baumata**	**52.74**	**131**	LR	LR	18 09 42.0	
	comp=Z,77nm,18.3s,baz=202,slow=40						
ARCES	**ARCESS Array B**	**53.78**	**338**	P	**P**	**17 44 01.6**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=97,slow=7.4,SNR=2.0						
WB0	**Warramunga Arr**	**66.77**	**130**	P	**P**	**17 45 30.3**	**+1.1**
WRA	**Warramunga Arr**	**66.86**	**130**	P	**P**	**17 45 30.9**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=323,slow=6.7,SNR=5.4						
WB2	**Warramunga Arr**	**66.86**	**130**	P	**P**	**17 45 31.2**	**+1.5**
WR0	**Warramunga Arr**	**67.00**	**130**	P	**P**	**17 45 32.4**	**+1.8**
ASAR	**Alice Springs**	**69.17**	**133**	P	**P**	**17 45 45.1**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=308,slow=6.1,SNR=5.0						
ASAR	**Alice Springs**	**69.17**	**133**	P	**P**	**17 45 43.9**	**-0.3**

IDC 30 17:42:46.0±33.0, 20°.87S×179°.38W, h659^{km}±274^{km}, mb2.9/5, mb1 3.1/5, mb1mx2.7/37, mbtmp4.1/5, Error ellipse: s-maj=314.9km s-min=102.6km az=73.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.17**	**265**	P	P	17 48 23.9	+0.5
	2.8nm,0.5s,baz=87,slow=12,SNR=6.5						
STKA	**Stephens Creek**	**36.47**	**244**	P	P	17 48 58.2	-0.5
	1.3nm,0.5s,baz=97,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**43.18**	**257**	P	P	17 49 52.3	+0.3
	1.9nm,0.5s,baz=93,slow=8.0,SNR=46						
ASAR				PcP	PcP	17 51 25.8	0.0
	0.4nm,0.9s,baz=101,slow=3.9,SNR=2.4						
WRA	**Warramunga Arr**	**43.27**	**263**	P	P	17 49 52.7	0.0
	0.4nm,0.3s,baz=96,slow=7.0,SNR=22						
FITZ	**Fitzroy Crossi**	**51.70**	**263**	P	P	17 50 54.9	-0.4
	1.6nm,0.8s,baz=117,slow=9.0,SNR=1.6						

*IDC **30** 17:47:36.9±1.9, 27°.78N×85°.57E, h0^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.4/58, mbtmp3.4/9, ML3.3/2, Error ellipse: s-maj=63.5km s-min=21.1km az=66.0*

ISC 30 17:47:39.9±1.8, 27°.8N±0°.2×85°.6E±0°.3, h18^{km}, n9, σ0^{s}71/9, mb3.5/7, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.39**	**124**	Pn	**Pn**	**17 51 16.4**	**+0.2**
	0.0nm,0.3s,baz=323,slow=10,SNR=1.0						
MKAR	**Makanchi Array**	**19.14**	**353**	P	**P**	**17 52 02.5**	**+0.6**
	0.2nm,0.3s,baz=174,slow=12,SNR=7.0						
KURBB	**Kurchatov Arra**	**23.42**	**349**	P	**P**	**17 52 47.7**	**0.0**
	0.3nm,0.6s,baz=171,slow=11,SNR=4.9						
SONM	**Songino Array**	**25.73**	**33**	P	**P**	**17 53 10.0**	**+0.6**
	1.1nm,0.9s,baz=236,slow=10,SNR=6.0						
ZALV	**Zalesovo Beam**	**26.13**	**359**	P	**P**	**17 53 11.8**	**-0.9**
	0.7nm,0.7s,baz=163,slow=10,SNR=2.7						
TIXI	**Tiksi**	**49.88**	**16**	P	P	**17 56 30.9**	**-0.8**
	0.5nm,0.5s,baz=234,slow=4.4,SNR=5.3						
ARCES	**ARCESS Array B**	**53.87**	**338**	P	**P**	**17 57 02.0**	**+0.5**
	1.0nm,0.8s,baz=108,slow=8.6,SNR=1.6						
WRA	**Warramunga Arr**	**66.90**	**130**	P	**P**	**17 58 31.8**	**+0.5**
	0.7nm,0.9s,baz=309,slow=7.9,SNR=2.0						
ASAR	**Alice Springs**	**69.20**	**133**	P	**P**	**17 58 45.0**	**-0.7**
	0.4nm,1.0s,baz=314,slow=7.2,SNR=1.8						

*IDC **30** 17:48:02.6±1.2, 6°.46S×153°.06E, h0^{km}, mb3.7/13, mb1 3.9/14, mb1mx3.7/44, mbtmp3.7/14, ML1.5/1, MS3.9/2, Ms1 3.9/2, ms1mx2.7/39, Error ellipse: s-maj=42.3km s-min=17.1km az=122.0*

ISC 30 17:48:07.2±1.1, 6°.5S±0°.2×153°.1E±0°.2, h31^{km}, n20, σ0^{s}63/16, mb3.8/13, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.56**	**243**	Pn	**Pn**	**17 49 41.2**	**-0.4**
	0.6nm,0.3s,baz=232,slow=14,SNR=1.6						
PMG				Sn	**Sn**	**17 50 56.2**	**+0.9**
	0.9nm,0.3s,baz=36,slow=14,SNR=1.9						
DZM	**Mont Dzumac**	**20.15**	**142**	LR	LR	17 59 41.9	
	comp=Z,82nm,19.8s,baz=180,slow=35						
WRA	**Warramunga Arr**	**22.60**	**232**	P	**P**	**17 53 03.9**	**-1.5**
	0.7nm,0.8s,baz=54,slow=9.8,SNR=3.4						
ASAR	**Alice Springs**	**25.14**	**225**	P	**P**	**17 53 30.1**	**+0.3**
	2.8nm,0.9s,baz=57,slow=9.4,SNR=33						
STKA	**Stephens Creek**	**27.45**	**202**	P	**P**	**17 53 50.6**	**+0.2**
	1.5nm,0.7s,baz=31,slow=13,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**28.21**	**28**	T	T	18 23 45.5	
	baz=209,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.22**	**28**	T	T	18 23 37.3	
	baz=209,slow=74						
H11S1	**WAKE ISLAND Hy**	**28.23**	**28**	T	T	18 23 40.1	
	baz=209						
FITZ	**Fitzroy Crossi**	**29.15**	**244**	P	**P**	**17 54 05.4**	**-0.5**
	3.6nm,0.6s,baz=53,slow=8.9,SNR=21						
DAV	**Davao City (W)**	**30.58**	**296**	LR	LR	18 05 40.8	
	comp=Z,893nm,20.6s,baz=346,slow=35						
CMAR	**Chiang Mai Arr**	**58.87**	**296**	P	**P**	**17 58 03.7**	**+0.1**
	0.5nm,0.8s,baz=128,slow=7.1,SNR=4.7						
PETK	**Petropavlovsk-**	**59.50**	**3**	P	**P**	**17 58 06.7**	**-0.5**
	1.2nm,0.7s,baz=187,slow=8.6,SNR=1.7						
SONM	**Songino Array**	**67.91**	**328**	P	**P**	**17 59 02.4**	**-0.6**
	0.7nm,0.8s,baz=123,slow=5.3,SNR=2.8						
TIXI	**Tiksi**	**79.60**	**352**	P	**P**	**18 00 11.3**	**+0.4**
	0.2nm,0.3s,baz=126,slow=4.3,SNR=2.3						
MKAR	**Makanchi Array**	**81.79**	**319**	P	**P**	**18 00 23.8**	**+0.5**
	0.1nm,0.5s,baz=102,slow=6.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**82.72**	**326**	P	**P**	**18 00 28.3**	**+0.4**
	0.5nm,0.4s,baz=102,slow=7.3,SNR=2.7						
ILAR	**Eielson Array**	**83.61**	**22**	P	**P**	**18 00 32.7**	**+0.5**
	0.6nm,0.8s,baz=240,slow=6.0,SNR=4.3						
KURBB	**Kurchatov Arra**	**85.31**	**322**	P	**P**	**18 00 40.9**	**-0.2**
	0.2nm,0.6s,baz=110,slow=3.9,SNR=2.6						
YKA	**Yellowknife Ar**	**96.77**	**28**	P	**P**	**18 01 34.6**	**0.0**
	0.2nm,0.8s,baz=267,slow=4.9,SNR=1.8						
TORD	**Torodi Ar. Bea**	**151.08**	**285**	PKPbc	**PKPbc**	**18 07 58.3**	**0.0**
	0.7nm,0.6s,baz=75,slow=2.2,SNR=6.8						

IDC 30 17:49:37.5±8.5, 26°.79N×85°.39E, h0^{km}, mb3.3/5, mb1 3.4/5, mb1mx3.2/60, mbtmp3.4/5, Error ellipse: s-maj=145.1km s-min=70.2km az=3.0, Nepal-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**20.12**	**354**	P	P	17 54 13.1	+0.1
	0.3nm,0.4s,baz=174,slow=11,SNR=4.3						
KURBB	**Kurchatov Arra**	**24.37**	**349**	P	P	17 54 57.8	+0.6
	0.2nm,0.5s,baz=167,slow=8.6,SNR=2.9						
SONM	**Songino Array**	**26.68**	**33**	P	P	17 55 18.5	+0.1
	0.3nm,0.6s,baz=224,slow=10.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**27.13**	**359**	P	P	17 55 21.5	-0.7
	0.5nm,0.5s,baz=188,slow=8.7,SNR=1.8						
ARCES	**ARCESS Array B**	**54.73**	**338**	P	P	17 59 08.3	-0.1
	1.0nm,0.8s,baz=102,slow=8.8

WHZ	**Wether Hill Ro**	**15.36 219**	Pn	**Pn**	**18 36 02.6**	**+1.3**
WHZ			IAmb	IAmb	18 36 14.4	
	comp=E,55nm,1.4s					
DCZ	**Deep Cove**	**15.51 222**	Pn	**Pn**	**18 36 03.4**	**+0.2**
DCZ			IAmb	IAmb	18 36 26.3	
	comp=E,54nm,1.4s					
DZM	**Mont Dzumac**	**18.52 309**	LR	LR	18 41 55.0	
	comp=E,258nm,19.4s,baz=200,slow=31					
STKA	**Stephens Creek**	**33.63 263**	P	**P**	**18 39 05.2**	**+0.3**
	comp=E,1.3nm,0.6s,baz=135,slow=11,SNR=2.9					
STKA			LR	LR	18 51 34.3	
	comp=E,88nm,19.3s,baz=191,slow=34					
CTA	**Charters Tower**	**34.64 286**	P	**P**	**18 39 13.8**	**+0.2**
	comp=E,7.2nm,0.7s,baz=112,slow=11,SNR=16					
CTAO	**Charters Tower**	**34.64 286**	P	**P**	**18 39 13.3**	**-0.4**
CTAO			IAmb	IAmb	18 39 14.6	
	comp=E,9.8nm,0.8s					
BBOO	**Buckleboo**	**37.89 260**	P	**P**	**18 39 41.7**	**+0.4**
BBOO			IAmb	IAmb	18 40 04.6	
	comp=E,16nm,1.5s					
AS31	**Alice Springs**	**42.96 272**	P	**P**	**18 40 22.7**	**-0.7**
ASAR	**Alice Springs**	**42.96 272**	P	**P**	**18 40 22.9**	**-0.6**
	comp=E,7.8nm,0.7s,baz=113,slow=7.4,SNR=88					
ASAR			PcP	**PcP**	**18 42 14.4**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=120,slow=4.0,SNR=9.1					
ASAR	**Alice Springs**	**42.96 272**	P	**P**	**18 40 22.2**	**-1.2**
ASAR				**PcP**	**18 42 14.0**	**+0.4**
WR0	**Warramunga Arr**	**44.16 277**	P	**P**	**18 40 31.5**	**-1.6**
WB2	**Warramunga Arr**	**44.33 277**	P	**P**	**18 40 33.2**	**-1.2**
WB2			IAmb	IAmb	18 40 33.7	
	comp=Z,9.2nm,0.6s					
WRA	**Warramunga Arr**	**44.34 277**	P	**P**	**18 40 33.3**	**-1.2**
	comp=Z,9.0nm,0.7s,baz=117,slow=7.5,SNR=94					
WRA			PcP	**PcP**	**18 42 18.9**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=121,slow=3.3,SNR=3.9					
WRA	**Warramunga Arr**	**44.34 277**	P	**P**	**18 40 32.4**	**-2.1**
WB0	**Warramunga Arr**	**44.38 277**	P	**P**	**18 40 33.6**	**-1.2**
WB0			IAmb	IAmb	18 40 34.0	
	comp=Z,8.6nm,0.6s					
FORT	**Forrest**	**44.99 259**	P	**P**	**18 40 38.3**	**-1.3**
KNRA	**Kununurra**	**51.07 278**	P	**P**	**18 41 25.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**52.38 273**	P	**P**	**18 41 35.9**	**-0.7**
	comp=Z,2.1nm,0.7s,baz=65,slow=5.9,SNR=6.8					
MORW	**Morawa**	**55.30 256**	P	**P**	**18 41 57.3**	**-0.5**
KSRS	**Korea Array**	**87.61 320**	P	**P**	**18 45 11.7**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=138,slow=5.9,SNR=5.0					
PETK	**Petropavlovsk-**	**90.00 346**	P	**P**	**18 45 24.3**	**+1.4**
	comp=Z,3.8nm,0.8s,baz=125,slow=7.8,SNR=7.2					
ZALV	**Zalesovo Beam**	**121.17 317**	PKP	**PKPdf**	**18 51 14.7**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=147,slow=2.9,SNR=1.8					
KURK	**Kurchatov**	**123.93 312**		**PKiKP**	**18 51 22.1**	**+0.3**
KURBB	**Kurchatov Arra**	**123.96 312**	PKP	**PKiKP**	**18 51 22.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=126,slow=1.5,SNR=12					
BVAR	**Borovoye Array**	**129.39 313**	PKP	**PKiKP**	**18 51 32.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=216,slow=9.2,SNR=3.7					
KBZ	**Khabaz**	**147.28 298**	PKPbc	**PKPbc**	**18 52 07.7**	**+0.6**
	comp=Z,1.9nm,1.0s,baz=138,slow=11,SNR=4.7					
FINES	**FINESS Array B**	**149.16 337**	PKPbc	**PKiKP**	**18 52 12.6**	**-0.2**
	comp=Z,5.4nm,0.7s,baz=64,slow=4.4,SNR=18					
NOA	**NORSAR Array B**	**153.03 350**	PKPbc	**PKiKP**	**18 52 21.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=13,slow=4.1,SNR=4.6					
NOA			PKPab	**PKPab**	**18 52 31.9**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=22,slow=3.3,SNR=4.2					
AKASG	**Malin Array Be**	**154.57 317**	PKPbc	**PKiKP**	**18 52 24.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=47,slow=3.7,SNR=1.4					
AKASG			PKPab	**PKPab**	**18 52 38.2**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=47,slow=4.8,SNR=4.9					

GUC 30 18:38:30.2±0.3, 38.02S×75.09W, h10km±16km, ML3.7, 2C-1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CCSP	**San Pedro de C**	**1.97**	**54**	*eP*		Pn	18 39 04.2	+0.6
CCSP				*eS*		Sn	18 39 27.8	-0.5
CCSP				IAML			18 39 31.7	
	comp=E,1μm,0.3s							
BI02	**San Fabin de**	**3.33**	**67**↑	*iP*		Pn	18 39 24.9	+2.5
BI02				*eS*		Sn	18 40 03.0	+0.9
BI02				IAML			18 40 06.7	
	comp=N,123nm,0.3s							
LL04	**Puerto Octay**	**3.55**	**145**	*eP*		Pn	18 39 28.5	+3.1
LL04				*eS*		Sn	18 40 07.9	+0.5
LL03	**Petrohue**	**3.74**	**147**	*eP*		Pb	18 39 32.6	-3.7
LL03				*eS*		Sn	18 40 12.3	+0.3
BO03	**Pichilemu**	**4.33**	**37**↑	*iP*		Pn	18 39 36.8	+0.6
BO03				*eS*		Sn	18 40 24.1	-2.6
BO02	**Sierra Bellavi**	**4.74**	**48**	*eP*		Pn	18 39 43.2	+1.4
BO02				*i* S		Sn	18 40 36.8	-0.1
BO01	**Tunca**	**4.86**	**43**	*eP*		Pn	18 39 44.9	+1.5
BO01				*eS*		Sn	18 40 39.2	-0.5
MT01	**Popeta**	**5.19**	**38**	*eP*		Pn	18 39 48.9	+1.0
MT09	**Talagante**	**5.39**	**39**↓	*iP*		Pn	18 39 52.5	+1.7

*IDC **30** 18:45:17.2±1.4, 35.38N×141.84E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.2/55, mbtmp3.4/7, ML2.6/2, MS2.2/1, Ms1 2.2/1, ms1mx1.9/38, Error ellipse: s-maj=41.6km s-min=22.6km az=66.0*

*JMA **30** 18:45:23.2±0.1, 35.22N×141.26E, h34km±3km, M2.6*

ISC 30 18:45:22.4±1.2, 35.28N±0.05×141.3E±0.1, h25km, n23, σ0s78/20, mb3.4/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.57**	**317**	P		**Pn**	**18 45 34.7**	**-0.3**
CHOJ				S		**Sn**	**18 45 42.8**	**-0.8**
BSO1	**Boso 1**	**0.69**	**205**	P		**Pb**	**18 45 35.2**	**-0.4**
JSMT	**Sammumatsuo**	**0.81**	**297**	P		**Pn**	**18 45 38.6**	**+0.4**
JSMT				*eS*		**Sn**	**18 45 49.0**	**-0.4**
BSO3	**Boso 3**	**0.83**	**235**	P		**Pb**	**18 45 37.2**	**-0.8**
KTR	**Katsuura**	**0.84**	**261**	P		**Pb**	**18 45 37.8**	**-0.7**
BSO4	**Boso 4**	**0.87**	**251**	P		**Pb**	**18 45 38.1**	**-0.7**
JCN	**Nagara**	**0.94**	**279**	P		**Pb**	**18 45 39.5**	**-0.5**
JKUC	**kamogawauchiur**	**0.94**	**263**	P		**Pb**	**18 45 39.2**	**-0.8**
JYT	**Yasato**	**1.32**	**316**	P		**Pb**	**18 45 46.1**	**-0.5**
JHJ	**Hachijo jima 2**	**2.51**	**211**	Pn		**Pn**	**18 46 01.7**	**0.0**
	6.7nm,0.3s,baz=295,slow=14,SNR=1.5							
JHJ				Sn		**Sn**	**18 46 32.0**	**+0.5**
	10nm,0.3s,baz=46,slow=12,SNR=1.6							
MJAR	**Matsushiro Arr**	**2.83**	**297**	Pn		**Pn**	**18 46 07.8**	**+1.7**
	0.2nm,0.3s,baz=110,slow=7.9,SNR=11							
MJAR				LR		LR	18 47 23.2	
	comp=Z,40nm,21.9s,baz=55,slow=40							
H11N2	**WAKE ISLAND Hy**	**27.35**	**118**	T		T	19 20 09.1	
	baz=310,slow=75,SNR=19							
H11N1	**WAKE ISLAND Hy**	**27.36**	**118**	T		T	19 19 57.2	
	baz=310,slow=75,SNR=19							
H11N3	**WAKE ISLAND Hy**	**27.37**	**118**	T		T	19 20 02.9	
	baz=310,slow=75,SNR=20							
H11S1	**WAKE ISLAND Hy**	**28.00**	**120**	T		T	19 20 41.8	
	baz=312,slow=75,SNR=56							
H11S3	**WAKE ISLAND Hy**	**28.00**	**120**	T		T	19 20 42.2	
	baz=312,slow=75,SNR=43							
H11S2	**WAKE ISLAND Hy**	**28.02**	**120**	T		T	19 20 43.1	
	baz=312,slow=75,SNR=35							
ZALV	**Zalesovo Beam**	**43.06**	**314**	P		**P**	**18 53 20.7**	**+0.7**
	0.3nm,0.4s,baz=94,slow=8.7,SNR=2.0							
MKAR	**Makanchi Array**	**45.01**	**304**	P		**P**	**18 53 36.5**	**+0.7**
	0.2nm,0.6s,baz=99,slow=6.3,SNR=2.6							
KURBB	**Kurchatov Arra**	**47.04**	**309**	P		**P**	**18 53 52.2**	**+0.5**
	0.4nm,0.5s,baz=82,slow=7.7,SNR=7.3							
WRA	**Warramunga Arr**	**55.32**	**188**	P		**P**	**18 54 53.7**	**-0.4**
	1.2nm,0.8s,baz=4.2,slow=7.6,SNR=7.0							
ASAR	**Alice Springs**	**59.05**	**188**	P		**P**	**18 55 21.1**	**+0.7**
	0.2nm,0.6s,baz=18,slow=11,SNR=2.0							
LPAZ	**La Paz**	**147.60**	**62**	PKPbc		**PKPdf**	**19 05 01.9**	**-1.2**
	0.5nm,0.4s,baz=315,slow=1.4,SNR=4.1							

IDC 30 18:46:32.5±2.3, 27.98N×86.69E, h0km, mb3.2/5, mb1 3.4/6, mb1mx3.2/58, mbtmp3.2/6, ML3.4/1, Error ellipse: s-maj=90.2km s-min=22.2km az=69.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.10**	**351**	P		P	18 50 55.9	-0.8
	0.1nm,0.3s,baz=171,slow=12,SNR=7.4							
KURBB	**Kurchatov Arra**	**23.45**	**347**	P		P	18 51 43.6	+0.2
	0.1nm,0.4s,baz=167,slow=9.8,SNR=6.0							
SONM	**Songino Array**	**25.06**	**32**	P		P	18 51 58.7	+0.1
	0.2nm,0.5s,baz=224,slow=11,SNR=2.2							
ZALV	**Zalesovo Beam**	**25.98**	**357**	P		P	18 52 07.0	+0.3
	0.5nm,0.5s,baz=172,slow=9.9,SNR=3.6							
WRA	**Warramunga Arr**	**66.28**	**131**	P		P	18 57 22.7	-0.1
	0.3nm,0.7s,baz=322,slow=6.6,SNR=5.8							
ASAR	**Alice Springs**	**68.62**	**134**	P		P	18 57 37.8	+0.1
	0.2nm,0.8s,baz=312,slow=6.2,SNR=1.2							

IDC 30 19:07:07.4±4.0, 12.83S×167.32E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/38, mbtmp3.6/4, MS3.6/1, Ms1 3.6/1, ms1mx2.7/23, Error ellipse: s-maj=147.4km s-min=39.3km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**33.43**	**246**	P		P	19 13 48.2	-0.1
	0.3nm,0.5s,baz=72,slow=8.8,SNR=5.7							
JOW	**Kunigami**	**54.70**	**316**	LR		LR	19 38 43.4	
	comp=Z,63nm,20.6s,baz=292,slow=35							
CMAR	**Chiang Mai Arr**	**74.23**	**294**	P		P	19 18 47.3	+0.5
	0.4nm,0.8s,baz=133,slow=5.3,SNR=3.6							
ILAR	**Eielson Array**	**84.71**	**18**	P		P	19 19 43.0	+0.1
	0.4nm,0.6s,baz=237,slow=5.4,SNR=5.9							
MKAR	**Makanchi Array**	**95.87**	**317**	P		P	19 20 35.4	-0.7
	0.2nm,0.5s,baz=100,slow=5.4,SNR=4.4							

*ISK **30** 19:11:20.9, 41.78N×35.92E, h9km, ML2.8/10*

*CFUSG **30** 19:11:20.8, 41.88N×35.98E, h10km, MD2.8/1, Off coast North Turkey Magtype MSH 2.7 from 3 stations*

ISC 30 19:11:18.0±1.0, 41.93N±0.04×36.02E±0.05, h10km, n15, σ1s03/20, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SNOP	**Sinop**	**0.61**	**279**	PG		**Pn**	**19 11 32.8**	**+0.1**
SNOP				SG		**Sn**	**19 11 41.3**	**-1.3**
DIKM	**Dikmen**	**0.63**	**244**	PG		**Pb**	**19 11 31.4**	**+0.3**
DIKM				SG		**Sg**	**19 11 39.1**	**+0.6**
KVT	**Kavak**	**0.85**	**178**	PG		**Pb**	**19 11 35.1**	**+0.2**
KVT				SG		**Sg**	**19 11 45.3**	**-0.1**
KUPE	**Kupecik-Ladik(**	**1.05**	**179**	PG		**Pn**	**19 11 39.1**	**+0.2**
KUPE				SG		**Sg**	**19 11 51.5**	**-0.5**
BZK	**Bozkurt**	**1.50**	**272**	PN		**Pg**	**19 11 46.7**	**-0.1**
TOKT	**Tokat**	**1.66**	**166**	PN		**Pg**	**19 11 49.6**	**-0.2**
RSDY	**Resadiye-TOKAT**	**1.82**	**147**	PN		**Pb**	**19 11 51.4**	**-0.1**
CORM	**Corum**	**2.04**	**211**	PN		**Pb**	**19 11 54.5**	**-0.7**
SVSK	**Karacayir**	**2.15**	**159**	PN		**Pb**	**19 11 56.1**	**-0.8**
KURC	**Kurucasile-Bar**	**2.44**	**269**	PN		**Pb**	**19 12 01.1**	**-0.9**
BRTR	**Keskin Array B**	**2.85**	**220**	PN		**Pn**	**19 12 05.8**	**+2.2**
YAL	**Yalta**	**2.90**	**333**	*e*Sg		**Sn**	**19 12 39.7**	**+0.7**
ALU	**Alushta**	**2.99**	**337**	*e*Sn		**Sn**	**19 12 43.2**	**+1.9**
ALU				Snm			19 12 44.5	
	comp=N,17nm,0.2s							
ALU				Snm			19 12 44.5	
	comp=E,22nm,0.5s							
SUDU	**Sudak**	**3.05**	**346**	*e*Sn		**Sb**	**19 12 47.7**	**-1.9**
SUDU				Snm			19 12 50.3	
	comp=N,3.0nm,0.2s							
SUDU				Snm			19 12 50.3	
	comp=E,6.0nm,0.2s							
SEV	**Sevastopol'**	**3.12**	**328**	*e*Pn		**Pn**	**19 12 08.4**	**+1.1**
SEV				*e*Sn		**Sn**	**19 12 44.6**	**0.0**
SEV				Sm			19 12 45.2	
	comp=N,7.0nm,0.3s							
SEV				Sm			19 12 45.2	
	comp=E,2.0nm,0.2s							

*IDC **30** 19:13:28.5±1.6, 27.51N×85.86E, h0km, mb3.8/8, mb1 3.8/11, mb1mx3.5/48, mbtmp3.7/11, ML3.3/3, Error ellipse: s-maj=47.5km s-min=23.3km az=53.0*

*DMN **30** 19:13:31.4±0.4, 27.70N×85.98E, h10km, Ml4.6/4, Error ellipse: s-maj=6.9km s-min=4.4km az=132.0*

ISC 30 19:13:31.9±0.8, 27.65N±0.08×85.97E±0.05, h19km, n20, σ1s03/24, mb3.8/8, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUN	**Gumba**	**0.27**	**342**	*e*Pg		**Pg**	**19 13 36.8**	**-1.5**
PKI	**Pulchoki**	**0.51**	**261**	*e*Pg		**Pg**	**19 13 41.9**	**-0.4**
PKIN	**Phulchoki**	**0.52**	**262**	*e*Pg		**Pg**	**19 13 42.0**	**-0.5**
PKIN				*e*Sg		**Sg**	**19 13 48.8**	**-0.8**
	2μm,0.2s							
KKN	**Kakani**	**0.63**	**283**	*e*Pg		**Pb**	**19 13 43.7**	**-0.7**
DMN	**Daman**	**0.77**	**267**	*e*Pg		**Pb**	**19 13 46.6**	**-0.3**
GKN	**Gorkha**	**1.23**	**287**	*e*Pg		**Pn**	**19 13 54.7**	**+0.4**
GKN				*e*Sg		**Sn**	**19 14 11.1**	**+0.6**
	510nm,0.3s							
DANN	**Dangsing**	**2.08**	**290**	*e*Pg		**Pb**	**19 14 09.3**	**+0.1**
DANN				*e*Sg		**Sb**	**19 14 36.0**	**+1.3**
	487nm,0.3s							
KOLN	**Koldanda**	**2.11**	**274**	*e*Pg		**Pb**	**19 14 10.6**	**+1.0**
KOLN				*e*Sg		**Sg**	**19 14 38.3**	**-1.6**
	2μm,0.3s							
PYUN	**Piuthan**	**2.68**	**280**	*e*Sg		**Sg**	**19 14 55.9**	**-2.2**
	653nm,0.3s							
CMAR	**Chiang Mai Arr**	**15.03**	**125**	Pn		**Pn**	**19 17 01.6**	**-1.8**
	0.0nm,0.3s,baz=299,slow=10,SNR=3.1							
AAK	**Ala-Archa**	**17.63**	**331**	P		**Pn**	**19 17 37.3**	**+0.8**
	0.1nm,0.3s,baz=108,slow=7.6,SNR=2.0							
MKAR	**Makanchi Array**	**19.33**	**352**	P		**P**	**19 17 56.8**	**+0.8**
	0.3nm,0.3s,baz=176,slow=11,SNR=14							
KURBB	**Kurchatov Arra**	**23.63**	**348**	P		**P**	**19 18 42.6**	**+0.9**
	0.4nm,0.3s,baz=172,slow=8.4,SNR=9.3							
SONM	**Songino Array**	**25.68**	**33**	P		**P**	**19 19 02.0**	**+1.3**
	1.7nm,0.7s,baz=221,slow=9.3,SNR=9.1							
ZALV	**Zalesovo Beam**	**26.28**	**358**	P		**P**	**19 19 06.8**	**+0.8**
	1.1nm,0.4s,baz=188,slow=10,SNR=6.9							
FINES	**FINESS Array B**	**51.78**	**328**	P		**P**	**19 22 37.8**	**-0.3**
	0.4nm,0.4s,baz=94,slow=7.6,SNR=5.4							
ARCES	**ARCESS Array B**	**54.13**	**338**	P		**P**	**19 22 56.0**	**+0.6**
	3.1nm,1.1s,baz=90,slow=7.3,SNR=3.8							
NOA	**NORSAR Array B**	**58.88**	**327**	P		**P**	**19 23 29.0**	**-0.3**
	0.2nm,0.5s,baz=107,slow=5.2,SNR=1.1							
WRA	**Warramunga Arr**	**66.55**	**130**	P		**P**	**19 24 21.1**	**+0.2**
	0.4nm,0.6s,baz=324,slow=6.5,SNR=2.2							
ILAR	**Eielson Array**	**79.19**	**20**	P		**P**	**19 25 35.2**	**-0.1**
	0.4nm,0.6s,baz=309,slow=5.0,SNR=4.4							

*IDC **30** 19:21:17.1±0.5, 26.36N×95.06E, h0km, mb4.4/30, mb1 4.5/30, mb1mx4.4/43, mbtmp4.4/30, MS3.5/16, Ms1 3.5/16, ms1mx3.3/39, Error ellipse: s-maj=14.8km s-min=10.7km az=43.0*

*NEIC **30** 19:21:18.1±2.5, 26.24N±0.06×94.80E±0.07, h10km±1km, mb4.8/129, Error ellipse: s-maj=12.4km s-min=9.6km az=48.0*

*MOS **30** 19:21:18.8±1.8, 26.28N×94.96E, h19km, mb4.8/18, Error ellipse: s-maj=7.6km s-min=4.1km az=125.2*

*NDI **30** 19:21:19.0±3.4, 26.45N×94.74E, h10km±12km, ML4.8, mb4.8(NEIC)*

*DJA **30** 19:21:23.1±0.4, 26°N±3°×9°5E±°, h41km±5km, M4.8/17, mb4.7/17, mB5.0/8, MLv5.3/3, Mw(mB)4.3/8, MwMwp5.5/1, Mwp5.7/1, Hypocentre not reviewed by the ISC*

*BJI **30** 19:21:24.4±0.0, 26.62N×94.97E, h56km, mB4.6/34, mb4.6/54, ML4.1/7, Ms4.2/51, Ms7 3.9/46*

ISC 30 19:21:18.7±0.3, 26.27N±0.03×94.85E±0.03, h10km, n403, σ2s18/408, mb4.7/141, MS3.6/26, 31C-32D, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JORH	**JORHAT**	**0.71**	**311**↑	*e*P		Pg	19 21 29.1	-3.5
KOHI	**KOHIMA**	**0.86**	**231**	*e*P		**Pb**	**19 21 37.0**	**+1.1**
KOHI				*e*S		**Sb**	**19 21 50.1**	**+2.6**
KOHI				IAML			19 21 57.0	
	comp=E,45μm,0.6s							
KOHI				IAML			19 21 57.1	
	comp=N,39μm,0.4s							
DIBR	**DIBRUGARH**	**1.19**	**3**	*e*P		**Pn**	**19 21 38.9**	**-2.6**
ZIRO	**ZIRO**	**1.54**	**325**↑	*e*P		**Pn**	**19 21 43.9**	**-2.5**
ZIRO				*e*S		**Sn**	**19 22 02.0**	**-4.5**
ZIRO				IAML			19 22 06.3	
	comp=N,44μm,0.7s							
TEZP	**TEZPUR**	**1.87**	**281**	*e*P		**Pn**	**19 21 51.3**	**+0.5**
TEZP				IAML			19 22 15.1	
	comp=E,17μm,0.2s							
TEZP				IAML			19 22 15.5	
	comp=N,19μm,0.2s							
SILR	**SILCHAR**	**2.37**	**232**	*e*P		**Pn**	**19 22 00.2**	**+2.5**
SHL	**Shillong**	**2.76**	**256**	P		**Pn**	**19 22 01.5**	**-1.7**
SHL	**Shillong**	**2.76**	**256**	*e*P		**Pn**	**19 22 02.5**	**-0.7**
SHL				*e*S		**Sn**	**19 22 35.7**	**-1.1**
SHL				IAML			19 22 44.8	
	comp=E,4μm,0.2s							
SHL				IAML			19 22 45.2	
	comp=N,4μm,0.2s							
SHL	**Shillong**	**2.76**	**256**	Pn		**Pn**	**19 22 01.5**	**-1.7**
GUWA	**GUWAHATI**	**2.84**	**269**	*e*P		**Pn**	**19 22 02.5**	**-1.6**
GUWA				*e*S		**Sn**	**19 22 33.6**	**-4.7**
GUWA				IAML			19 22 46.3	
	comp=E,2μm,0.4s							
LSA	**Lhasa**	**4.73**	**317**	P		**Pn**	**19 22 30.0**	**-0.6**
LSA				LR		LR		
	comp=E,1μm,6.1s							
LSA				LR		LR		
	comp=E,1μm,6.4s							
LSA				LR		LR		
	comp=E,1μm,5.7s							
LSA	**Lhasa**	**4.73**	**317**	P		**Pn**	**19 22 30.3**	**-0.3**
LSA	**Lhasa**	**4.73**	**317**	Pn		**Pn**	**19 22 30.3**	**-0.3**
KMI	**Kunming**	**7.21**	**97**↑	P		**Pn**	**19 23 05.3**	**+0.9**
KMI				*s*max		*s*max		
	comp=E,17nm,0.5s							
KMI				*s*max		*s*max		
	comp=E,13nm,0.6s							
KMI				LR		LR		
	comp=E,2μm,10.7s							
KMI				LR		LR		
	comp=E,330nm,15.1s							
KMI				LR		LR		
	comp=E,550nm,11.3s							
CRAI	**Chiangrai**	**7.87**	**139**	P		Pn	19 23 18.3	+4.9
GUN	**Gumba**	**8.16**	**284**	*e*Pn		**Pn**	**19 23 14.7**	**-2.9**
GUN				*e*Sn		Sn	19 24 40.1	-10
	comp=E,195nm,0.4s							
CHTO	**Chiang Mai**	**8.33**	**152**	P			19 23 24.4	
	comp=E,12nm,1.1s							
CHTO	**Chiang Mai**	**8.33**	**152**	P		**Pn**	**19 23 23.0**	**+3.4**
CHTO	**Chiang Mai**	**8.33**	**152**	Pn		**Pn**	**19 23 23.0**	**+3.4**
CMMT	**Chiang Mai**	**8.33**	**152**	P		Pn	19 23 24.1	+4.4
CMMT	**Chiang Mai**	**8.33**	**152**	P			19 23 23.1	
	comp=E,19μmcomp=E,354nmcomp=E,21nm,1.1s							
PKI	**Pulchoki**	**8.53**	**281**	*e*Pn		**Pn**	**19 23 19.9**	**-2.7**
PKI				*e*Sn		Sn	19 24 50.8	-8.2
PKIN	**Phulchoki**	**8.54**	**281**	*e*Pn		**Pn**	**19 23 19.8**	**-2.9**
PKIN				*e*Sn		Sn	19 24 50.7	-8.5
	comp=E,110nm,0.4s							
CM15	**Chiang Mai Arr**	**8.65**	**153**	P		Pn	19 23 29.7	+5.8
CM31	**Chiang Mai Arr**	**8.65**	**153**	P		Pn	19 23 29.9	+5.9
CM31	**Chiang Mai Arr**	**8.65**	**153**			Pn	19 23 29.1	+5.1
CMAR	**Chiang Mai Arr**	**8.65**	**153**	Pn		Pn	19 23 29.4	+5.3
	comp=E,1.5nm,0.3s,baz=330,slow=13,SNR=88							
CMAR				Lg		Lg	19 25 48.1	
	comp=E,0.1nm,0.3s,baz=342,slow=24,SNR=1.5							
CMAR				LR		LR	19 27 26.0	
	comp=E,376nm,18.8s,baz=6.5,slow=43							
CMAR	**Chiang Mai Arr**	**8.65**	**153**			Pn	19 23 29.2	+5.2
KKN	**Kakani**	**8.67**	**282**	*e*Pn		**Pn**	**19 23 22.1**	**-2.3**
KKN				*e*Sn		Sn	19 24 53.0	-9.3
CM04	**Chiang Mai Arr**	**8.71**	**153**	P		Pn	19 23 30.8	+5.9
DMN	**Daman**	**8.80**	**281**	*e*Pn		**Pn**	**19 23 23.5**	**-2.7**
DMN				*e*Sn		Sn	19 24 57.3	-8.3
	comp=E,110nm,0.5s							
CD2	**Chengdu**	**9.09**	**57**	P		**Pn**	**19 23 31.3**	**+1.2**
CD2				S		**Sn**	**19 25 14.0**	**+1.4**
CD2				pmax		pmax		
	comp=E,10.0nm,0.5s							
CD2				LR		LR		
	comp=E,2μm,7.3s							
CD2				LR		LR		
	comp=E,860nm,7.8s							
CD2				LR		LR		
	comp=E,650nm,9.2s							
PHRA	**Phrae**	**9.20**	**146**	P		Pn	19 23 36.9	+5.4
GKN	**Gorkha**	**9.26**	**283**	*e*Pn		**Pn**	**19 23 29.2**	**-3.3**
GKN				*e*Sn		Sn	19 25 06.4	-10
	comp=E,191nm,0.4s							
SLVN	**Son La**	**9.64**	**119**			**Pn**	**19 23 40.6**	**+3.0**
SUKH	**Sukhothai**	**9.81**	**152**	P		Pn	19 23 46.0	+6.2
UTTA	**Uttaradit**	**10.00**	**147**	P		Pn	19 23 48.4	+5.9
DANN	**Dangsing**	**10.08**	**284**	*e*Pn		Pn	19 23 39.4	-4.4
DANN				*e*Sn		Sn	19 25 23.0	-14
KOLN	**Koldanda**	**10.14**	**281**	*e*Pn		Pn	19 23 40.6	-4.0
KOLN				*e*Sn		Sn	19 25 27.4	-11
	comp=E,108nm,0.4s

HYB eS **Sn** **19 28 36.5 -1.3**
comp=E,70nm,1.0s
WHN **Wuhan** **17.67 72** ⇓P **P** **19 25 25.0 -1.0**
WHN pmax pmax
comp=E,44nm,0.5s
WHN LR LR
comp=E,2μm,13.3s
WHN LR LR
comp=E,530nm,14.6s
WHN LR LR
comp=E,740nm,12.0s
WMQ **Urumqi** **18.45 343** eP **Pn** **19 25 37.3 +2.7**
WMQ PP **PnPn** **19 25 47.3 +1.0**
WMQ pmax pmax
comp=E,30nm,1.1s
WMQ pmax pmax
comp=E,230nm,5.5s
WMQ LR LR
comp=E,500nm,9.9s
WMQ LR LR
comp=E,370nm,12.5s
WMQ LR LR
comp=E,420nm,16.1s
DLV **T Lat** **19.19 135** P **P** **19 25 40.7 -2.2**
DLV IAmb IAmb 19 25 51.6
comp=E,27nm,0.8s
NIL **Nilore** **20.08 297** P **P** **19 25 50.4 -2.1**
NIL pmax pmax
comp=E,51nm,0.8s
NIL **Nilore** **20.08 297** P **P** **19 25 50.4 -2.1**
NIL IAmb IAmb 19 25 58.5
comp=E,51nm,0.8s
HHC **Hu-ho-hao-te** **20.09 39** eP **P** **19 25 52.5 0.0**
HHC S **S** **19 29 33.8 -4.4**
HHC SS **SnSn** **19 29 55.5 +0.6**
HHC pmax pmax
comp=E,20nm,0.9s
HHC pmax pmax
comp=E,140nm,5.2s
HHC LR LR
comp=E,700nm,9.8s
HHC LR LR
comp=E,410nm,9.8s
HHC LR LR
comp=E,900nm,11.9s
KSH **Kashi** **20.58 315** P **P** **19 26 00.0 +2.1**
KSH pP sP 19 26 18.3 +16
KSH pmax pmax
comp=E,18nm,0.8s
KSH pmax pmax
comp=E,130nm,6.6s
PRZ **Przheval'sk** **21.05 324** P **P** **19 26 02.0 -1.1**
PRZ pmax pmax
comp=E,83nm,0.8s
PRZ **Przheval'sk** **21.05 324** P **P** **19 26 02.0 -1.1**
TIA **Tai'an** **21.43 57** P **P** **19 26 07.3 +0.3**
TIA pmax pmax
comp=E,15nm,1.0s
TIA pmax pmax
comp=E,90nm,6.7s
TIA LR LR
comp=E,380nm,14.1s
TIA LR LR
comp=E,340nm,14.5s
TIA LR LR
comp=E,240nm,12.8s
KDJ **Kajisay** **21.47 322** P **P** **19 26 06.2 -1.4**
KDJ pmax pmax
comp=E,24nm,1.1s
KDJ **Kajisay** **21.47 322** P **P** **19 26 06.2 -1.4**
KDJ IAmb IAmb 19 26 14.2
comp=E,24nm,1.1s
KULM **Kulim** **21.59 164** P **P** **19 26 07.8 -1.0**
KULM **Kulim** **21.59 164** P 19 26 10.4
comp=E,18nm,1.1s
NJ2 **Nanjing** **21.72 69** eP **P** **19 26 10.0 -0.1**
NJ2 pmax pmax
comp=E,44nm,0.7s
NJ2 pmax pmax
comp=E,100nm,3.5s
NJ2 LR LR
comp=E,840nm,16.1s
NJ2 LR LR
comp=E,200nm,12.3s
NJ2 LR LR
comp=E,290nm,10.9s
ULHL **Ulahol** **22.07 321** P **P** **19 26 20.0 +6.0**
SNR=9.1
BOOM **Boomskoye usch** **22.40 321** P **P** **19 26 16.7 -0.8**
BOOM pmax pmax
comp=E,15nm,0.8s
BOOM **Boomskoye usch** **22.40 321** P **P** **19 26 16.7 -0.8**
BOOM IAmb IAmb 19 26 25.0
comp=E,15nm,0.8s
BJT **Baijiatuau** **22.43 47** P **P** **19 26 17.2 -0.6**
BJT pmax pmax
comp=E,13nm,1.1s
BJT **Baijiatuau** **22.43 47** P **P** **19 26 17.1 -0.6**
BJI **Beijing** **22.45 47** P **P** **19 26 17.0 -0.9**
BJI pmax pmax
comp=E,3.0nm,0.7s
BJI LR LR
comp=E,180nm,10.3s
BJI LR LR
comp=E,140nm,15.7s
IPM **Ipoh** **22.46 164** P **P** **19 26 16.2 -1.9**
IPM **Ipoh** **22.46 164** P 19 26 18.1
MK31 **Makanchi Array** **22.78 337** P **P** **19 26 18.4 -3.0**
MK31 pmax pmax
comp=E,17nm,0.8s
MK31 **Makanchi Array** **22.78 337** P **P** **19 26 18.4 -3.0**
MK31 IAmb IAmb 19 26 24.0
comp=E,17nm,0.8s
MKAR **Makanchi Array** **22.78 337** P **P** **19 26 18.7 -2.7**
comp=E,25nm,0.8s,baz=146,slow=13,SNR=49
MKAR S **S** **19 30 31.8 +1.5**
comp=E,0.4nm,0.7s,baz=161,slow=11,SNR=2.3
MKAR **Makanchi Array** **22.78 337** P **P** **19 26 17.5 -3.8**
MKAR S **S** **19 30 31.8 +1.5**
MKAR **Makanchi Array** **22.78 337** P **P** **19 26 17.5 -3.8**
TKM2 **Tokmak 2** **22.87 321** P **P** **19 26 26.8 +4.2**
SNR=20
MAKZ **Makanchi** **22.90 337** P **P** **19 26 20.2 -2.4**
MAKZ pmax pmax
comp=E,20nm,0.8s
MAKZ **Makanchi** **22.90 337** P **P** **19 26 20.2 -2.4**
MAKZ IAmb IAmb 19 26 28.5
comp=E,20nm,0.8s
TSI **Tuntungan** **22.92 170** P 19 26 25.3
comp=E,116nm,0.7s
TPTI **22.99 174** P 19 26 25.3
comp=E,13nm,1.1s
UCH **Uchtor** **23.06 319** P **P** **19 26 28.7 +3.9**
SNR=12
KBK **Karagaybulak** **23.07 320** P **P** **19 26 26.3 +1.7**
SNR=14
PALK **Pallekele** **23.20 218** P **P** **19 26 28.8 +2.8**
comp=E,3.9nm,0.8s,baz=101,slow=6.1,SNR=1.5
PALK S **S** **19 30 37.6 -0.5**
comp=E,6.4nm,0.8s,baz=184,slow=6.5,SNR=2.6
PALK LR LR 19 36 09.3
comp=E,145nm,21.6s,baz=143,slow=38
AAK **Ala-Archa** **23.32 320** P **P** **19 26 27.7 +0.5**
comp=E,9.6nm,0.9s,baz=146,slow=4.9,SNR=20
AAK LR LR 19 36 22.1
comp=E,88nm,19.6s,baz=122,slow=39
AAK **Ala-Archa** **23.32 320** P **P** **19 26 31.5 +4.3**
SNR=11
AAK **Ala-Archa** **23.32 320** *ce*P **P** **19 26 28.9 +1.7**
AAK pmax pmax
comp=E,53nm,1.3s
AAK **Ala-Archa** **23.32 320** P **P** **19 26 25.6 -1.6**
DRK **Karamyk** **23.33 310** P **P** **19 26 25.9 -1.5**
DRK IAmb IAmb 19 26 35.6
comp=E,33nm,0.7s
FRU1 **Bishkek** **23.35 320** P **P** **19 26 25.7 -1.6**
FRU1 pmax pmax
comp=E,22nm,1.1s
FRU1 **Bishkek** **23.35 320** P **P** **19 26 25.7 -1.6**
FRU1 IAmb IAmb 19 26 41.5
comp=E,22nm,1.1s
SONM **Songino Array** **23.36 20** P **P** **19 26 25.3 -2.1**
comp=E,1.0nm,0.8s,baz=202,slow=9.0,SNR=22
SONM LR LR 19 37 32.2
comp=E,56nm,21.2s,baz=203,slow=42
SONM **Songino Array** **23.36 20** P **P** **19 26 25.9 -1.6**
SONM pmax pmax
comp=Z,6.0nm,1.0s
SONM **Songino Array** **23.36 20** P **P** **19 26 25.9 -1.6**
CHMS **Chumysh** **23.40 321** P **P** **19 26 30.0 +2.2**
SNR=5.4
ARSB **Arslanbob** **23.48 315** P **P** **19 26 28.1 -0.6**
ARSB pmax pmax
comp=Z,13nm,0.9s
ARSB **Arslanbob** **23.48 315** P **P** **19 26 28.1 -0.6**
AML **Almayashu** **23.49 318** P **P** **19 26 34.5 +5.4**
SNR=8.2
ULN **Ulaanbaatar** **23.59 21** *ce*P **P** **19 26 30.1 +0.3**
ULN pmax pmax
comp=Z,14nm,1.7s
ULN **Ulaanbaatar** **23.59 21** P **P** **19 26 26.9 -2.9**
ULN **Ulaanbaatar** **23.59 21** P 19 26 30.8
comp=Z,56nm,1.0s
PSI **Prapat** **23.66 170** P 19 26 31.8
comp=Z,221nmcomp=Z,22nm,0.9s,comp=Z,452nm,0.9s,
comp=Z,46nm,0.9s
PSI P 19 26 31.8
comp=Z,221nmcomp=Z,22nm,0.9s,comp=Z,452nm,0.9s,
comp=Z,46nm,0.9s
PSI **Prapat** **23.66 170** P **P** **19 26 31.1 +0.5**
comp=Z,27nm,0.8s,baz=360,slow=7.7,SNR=21
KBL **Kabul** **23.69 297** P **P** **19 26 29.6 -1.3**
KBL pmax pmax
comp=Z,43nm,0.8s
KBL **Kabul** **23.69 297** P **P** **19 26 29.6 -1.3**
USP **Ospenovka** **23.71 321** P **P** **19 26 34.6 +3.8**
SNR=5.5
EKS2 **Erkin-Say** **23.76 319** P **P** **19 26 36.0 +4.5**
SNR=14
RPSI **Rantau Prapat** **23.77 170** P **P** **19 26 31.1 -0.3**
DGZ **Jazzator, Alta** **24.09 348** *i* P **P** **19 26 38.1 +3.6**
DGZ pmax pmax
comp=Z,10.0nm,1.0s
GAR **Garm** **24.16 308** P **P** **19 26 33.0 -2.2**
BTK **Batken** **24.27 311** P **P** **19 26 35.6 -0.6**
BTK pmax pmax
comp=Z,151nm,0.8s
BTK **Batken** **24.27 311** P **P** **19 26 35.6 -0.6**
ZAK **Zakamensk** **24.93 13** eP **P** **19 26 43.2 +1.1**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
GSI **Gunungsitoli** **24.96 174** P **P** **19 26 41.6 -0.9**
GSI **Gunungsitoli** **24.96 174** P 19 26 44.2
comp=Z,75nm,0.8s
MNSI **Mandailing Nat** **25.73 169** P 19 26 51.5
comp=Z,21nm,0.6s
DL2 **Dalian** **25.74 54** P **P** **19 26 49.5 +0.1**
DL2 pmax pmax
comp=Z,14nm,0.6s
DL2 pmax pmax
comp=Z,55nm,3.6s
DL2 LR LR
comp=Z,260nm,18.6s
DL2 LR LR
comp=Z,190nm,16.8s
DL2 LR LR
comp=Z,220nm,12.9s
TAS **Tashkent** **25.88 312** P **P** **19 26 48.5 -2.2**
TAS pmax pmax
comp=Z,54nm,0.5s
TAS **Tashkent** **25.88 312** P **P** **19 26 48.5 -2.2**
KK31 **Karatay Array** **25.98 316** P **P** **19 26 51.8 +0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KK31 **Karatay Array** **25.98 316** P **P** **19 26 51.8 +0.1**
KKAR **Karatay Array** **25.98 316** P **P** **19 26 51.7 0.0**
KKAR pmax pmax
comp=Z,4.0nm,0.8s
KKAR **Karatay Array** **25.98 316** P **P** **19 26 51.7 0.0**
TLY **Talaya** **26.24 12** P **P** **19 26 53.6 -0.2**
comp=Z,2.7nm,0.6s,baz=292,slow=18,SNR=4.9
TLY **Talaya** **26.24 12** *i* P **P** **19 26 57.1 +3.2**
TLY pmax pmax
comp=Z,1.0nm,0.9s
KURBB **Kurchatov Arra** **27.35 337** P **P** **19 27 02.4 -1.4**
comp=Z,5.2nm,0.7s,baz=145,slow=9.5,SNR=50
KURK **Kurchatov** **27.39 337** P **P** **19 27 02.4 -1.8**
ZAA0 **Zalesovo Array** **28.63 348** P **P** **19 27 16.1 +0.9**
ZALV **Zalesovo Beam** **28.63 348** P **P** **19 27 15.3 +0.1**
comp=Z,0.7nm,0.5s,baz=165,slow=6.2,SNR=6.8
ZALV LR LR 19 39 09.7
comp=Z,61nm,18.4s,baz=212,slow=38
ZALV **Zalesovo Beam** **28.63 348** *i* P **P** **19 27 18.7 +3.5**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
KSM **Kuching** **28.79 146** P **P** **19 27 17.6 +0.5**
KSM IAmb IAmb 19 27 19.4
comp=Z,8.8nm,0.9s
SBUM **Sibu** **28.97 142** P **P** **19 27 18.3 -0.3**
HRA **Herat** **29.19 294** P **P** **19 27 19.9 -0.8**
KSRS **Korea Array** **30.08 60** P **P** **19 27 26.1 -2.2**
comp=Z,0.9nm,0.6s,baz=267,slow=9.6,SNR=5.7
KSRS LR LR 19 41 22.9
comp=Z,56nm,22.0s,baz=255,slow=40
CN2 **Changchun** **30.32 47** eP P 19 27 36.5 +6.2
KSI **Kapahiang** **30.68 165** P 19 27 34.2
MYLDM **Lahad Datu** **30.84 129** P **P** **19 27 35.1 0.0**
MYLDM IAmb IAmb 19 27 53.4
comp=Z,11nm,1.2s
TPI **Tanjungpandan** **31.40 155** P 19 27 41.5
comp=Z,22nm,1.0s
BVAR **Borovoye Array** **32.38 332** P **P** **19 27 48.1 -0.3**
comp=Z,3.8nm,0.6s,baz=154,slow=17,SNR=14
BRVK **Borovoye** **32.45 332** *ce*P **P** **19 27 51.6 +2.6**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BRVK **Borovoye** **32.45 332** P **P** **19 27 49.9 +0.9**
BRVK IAmb IAmb 19 27 52.8
comp=Z,8.2nm,0.7s
GEYT **Alibeck** **33.02 300** P **P** **19 27 55.7 +1.5**
comp=Z,8.1nm,0.9s,baz=130,slow=8.0,SNR=14
GEYT LR LR 19 42 29.0
comp=Z,78nm,18.3s,baz=220,slow=38
GEYT **Alibeck** **33.02 300** P **P** **19 27 55.9 +1.7**
GYA0B **ALIBECK ARRAY** **33.02 300** P **P** **19 27 54.8 +0.6**
GYA0B IAmb IAmb 19 27 59.1
comp=Z,12nm,0.9s
USA0B **Ussuriysk Arra** **34.85 49** *i* P **P** **19 28 12.0 +2.0**
USRK **Ussuriysk Ar.** **34.85 49** P **P** **19 28 09.4 -0.6**
comp=Z,3.3nm,0.8s,baz=249,slow=6.9,SNR=7.3
USRK **Ussuriysk Ar.** **34.85 49** P **P** **19 28 07.8 -2.2**
BBKI **Banjar Baru** **35.33 144** P 19 28 15.3
comp=Z,14nm,1.2s
TOLI2 **Tolitoli** **35.33 131** P **P** **19 28 14.0 -0.4**
TOLI2 IAmb IAmb 19 28 17.1
comp=Z,13nm,1.1s
ABKAR **Akbulak array** **35.41 320** P **P** **19 28 12.7 -2.0**
JWT **Wachi** **35.78 65** P **P** **19 28 18.1 0.0**
JWT IAmb IAmb 19 28 36.8
comp=Z,18nm,1.5s
CISI **Cisompet, Garu** **35.91 158** P **P** **19 28 17.6 -1.7**
KLR **Kul'dur** **36.57 41** P **P** **19 28 26.6 +1.9**
comp=Z,2.2nm,0.8s,baz=253,slow=7.1,SNR=8.1
KLR **Kul'dur** **36.57 41** *i* P **P** **19 28 26.9 +2.2**
KLR pmax pmax
comp=Z,13nm,2.1s
AKTO **Aktyubinsk** **37.06 320** P **P** **19 28 29.2 +0.4**
comp=Z,3.3nm,0.8s,baz=113,slow=7.0,SNR=9.3
JGF **Kuroka** **37.39 65** P **P** **19 28 30.6 -1.4**
MAJO **Matsushiro** **38.12 64** P **P** **19 28 36.6 -1.5**
MAJO pmax pmax
comp=Z,12nm,1.1s
MAJO **Matsushiro** **38.12 64** P **P** **19 28 36.6 -1.5**
MAJO IAmb IAmb 19 28 37.8
comp=Z,12nm,1.1s
MAT **Matsushiro** **38.12 64** P **P** **19 28 36.7 -1.4**
MJAR **Matsushiro Arr** **38.12 64** P **P** **19 28 37.0 -1.0**
comp=Z,4.3nm,0.8s,baz=272,slow=9.6,SNR=20
MJAR LR LR 19 44 02.3
comp=Z,68nm,21.3s,baz=260,slow=36
JSD **Sado** **38.27 61** P **P** **19 28 37.0 -2.3**
SPSI **Sidrap Palu** **38.54 138** P 19 28 42.4
comp=Z,21nm,1.4s
SVE **Sverdlovsk** **39.11 331** eP **P** **19 28 49.3 +3.3**
SVE pmax pmax
comp=Z,27nm,0.8s
ARU **Arti** **39.81 329** *d* iP **P** **19 28 54.2 +2.3**
ARU 19 30 25.7
ARU S **S** **19 35 00.6 +4.5**
ARU SS **SS** **19 37 51.9 -0.1**
ARU pmax pmax
comp=Z,9.0nm,1.1s
ARU **Arti** **39.81 329** P **P** **19 28 53.4 +1.5**
JMM **Marumori** **40.25 62** P **P** **19 28 54.1 -1.7**
JMM IAmb IAmb 19 29 06.9
comp=Z,58nm,1.5s
DBNI **Kabupaten Domp** **41.40 143** P 19 29 07.2
comp=Z,30nm,0.7s
AKT **Akhty** **41.45 304** eP **P** **19 29 08.8 +3.0**
AKT eS **S** **19 35 24.4 +3.3**
AKT pmax pmax
comp=Z,12nm,0.7s
UMR **Umm Al-Rimmam** **41.56 286** eP 19 29 08.9
RDF **Al-Radifah** **41.79 285** eP 19 29 11.4
MAK **Makhachkala** **41.79 306** eP **P** **19 29 05.3 -3.1**
MAK eS **S** **19 35 22.1 -3.8**
MAK pmax pmax
comp=Z,85nm,0.9s
MAK MLR MLR
comp=Z,198nm,15.0s
MIB **Mutribah** **41.85 286** eP 19 29 11.4
BUJR **Buynaksk** **42.06 306** P **P** **19 29 12.9 +2.2**
ARKR **Arakani** **42.12 305** eP **P** **19 29 10.7 -0.5**
RST **Umm Al-Ruwaisa** **42.19 286** eP 19 29 14.1
KRNR **Karanay** **42.21 306** eP **P** **19 29 08.6 -3.4**
KRNR pmax pmax
comp=Z,2.0nm,0.9s
ASAJ **Asahikawa** **42.25 52** P **P** **19 29 10.8 -1.4**
comp=Z,8.7nm,0.8s,baz=258,slow=8.0,SNR=4.6
ASAJ **Asahikawa** **42.25 52** P **P** **19 29 10.8 -1.4**
ASAJ pmax pmax
comp=Z,18nm,1.1s
JKA **Kamikawa-asahi** **42.25 52** P **P** **19 29 10.8 -1.4**
JKA **Kamikawa-asahi** **42.25 52** IAmb IAmb 19 29 14.9
comp=Z,18nm,1.1s
DBC **Dubki** **42.29 306** eP **P** **19 29 11.8 -0.8**
DBC pmax pmax
comp=Z,4.0nm,0.4s
ERM **Erimo** **42.39 56** P **P** **19 29 12.4 -0.9**
ERM pmax pmax
comp=Z,29nm,1.2s
ERM **Erimo** **42.39 56** P **P** **19 29 12.4 -0.9**
ERM IAmb IAmb 19 29 20.5
comp=Z,28nm,1.2s
BTLR **Botlikh** **42.69 305** eP **P** **19 29 12.4 -3.5**
NRIK **Noril'sk** **43.31 356** P **P** **19 29 20.6 +0.1**
comp=Z,3.0nm,0.7s,baz=172,slow=5.7,SNR=5.9
NRIK **Noril'sk** **43.31 356** *ce*P **P** **19 29 23.6 +3.2**
NRIK pmax pmax
comp=Z,4.0nm,0.9s
NRIK **Noril'sk** **43.31 356** P **P** **19 29 20.5 +0.1**
GNI **Garni** **43.60 301** P **P** **19 29 24.5 +1.1**
comp=Z,11nm,0.9s,baz=90,slow=10,SNR=8.2
GNI **Garni** **43.60 301** *ce*P **P** **19 29 27.1 +3.7**
GNI pmax pmax
comp=Z,12nm,1.0s
GNI **Garni** **43.60 301** P **P** **19 29 22.8 -0.6**
GNI IAmb IAmb 19 29 33.9
comp=Z,12nm,0.9s
MMRI **Maumere** **43.73 139** P **P** **19 29 22.4 -2.0**
MMRI IAmb IAmb 19 29 28.0
comp=Z,23nm,0.8s
BELG **Belogornoye** **43.82 319** P **P** **19 29 26.1 +1.4**
comp=Z,17nm,1.0s,baz=162,slow=9.6,SNR=4.7
BELG **Belogornoye** **43.82 319** *i* P **P** **19 29 27.6 +2.9**
BELG pmax pmax
comp=Z,3.0nm,0.8s
ZEI **Tsey** **44.41 305** eP **P** **19 29 32.6 +2.7**
ZEI pmax pmax
comp=Z,9.0nm,0.7s
RAYN **Ar Rayn** **44.63 278** P **P** **19 29 31.0 -0.7**
RAYN pmax pmax
comp=Z,8.0nm,1.1s
RAYN **Ar Rayn** **44.63 278** P **P** **19 29 31.0 -0.7**
KIRV **Kirov** **45.17 328** *ce*P **P** **19 29 38.7 +3.3**
KBZ **Khabaz** **45.22 306** P **P** **19 29 38.5 +2.5**
comp=Z,1.7nm,0.6s,baz=97,slow=8.1,SNR=6.7
KBZ LR LR 19 51 14.5
comp=Z,50nm,18.4s,baz=86,slow=40
GOF **Gofitskoye** **45.25 308** ⇑ eP **P** **19 29 39.7 +3.4**
GOF pmax pmax
comp=Z,21nm,0.8s
SIRT **Sirnak** **45.37 298** P **P** **19 29 35.1 -2.4**
KVAR **Kislovodsk Arr** **45.38 307** P **P** **19 29 39.6 +2.1**
comp=Z,3.8nm,0.6s,baz=321,slow=6.5,SNR=7.5
KIV **Kislovodsk** **45.39 307** eP **P** **19 29 40.7 +3.1**
KIV pmax pmax
comp=Z,34nm,1.0s
KIV MLR MLR
comp=Z,143nm,16.0s
KIV **Kislovodsk** **45.39 307** P **P** **19 29 35.1 -2.4**
KIV IAmb IAmb 19 29 41.9
comp=Z,8.8nm,0.7s
SOEI **Soe** **45.83 138** P 19 29 50.0
SOEI **Soe** **45.83 138** P **P** **19 29 40.8 -0.5**
MARD **Mardin** **46.70 297** P **P** **19 29 47.7 -0.3**
KOPT **Kop Dagi** **46.86 301** P **P** **19 29 51.5 +2.2**
KOPT IAmb IAmb 19 29 55.7
comp=Z,13nm,1.4s
VRH **Novokhopyorsk** **47.07 317** eP **P** **19 29 52.3 +1.8**
VRH pmax pmax
comp=Z,30nm,0.7s
VSR **Storozhevoye** **48.65 316** eP **P** **19 30 03.7 +0.9**
VSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR **Galich'ya Gora** **49.02 318** eP **P** **19 30 07.6 +2.0**
LPSR pmax pmax
comp=Z,30nm,0.7s
TIXI **Tiksi** **49.21 14** P **P** **19 30 07.2 +0.4**
TIXI pmax pmax
comp=Z,8.0nm,1.5s
TIXI **Tiksi** **49.21 14** P **P** **19 30 07.2 +0.4**
GAZ **Gaziantep** **49.55 298** P **P** **19 30 09.5 -0.5**
GAZ IAmb IAmb 19 30 13.9
comp=Z,10.0nm,0.9s
TOKA **Tokat** **49.93 302** P **P** **19 30 14.2 +1.4**
TOKA IAmb IAmb 19 30 17.4
comp=Z,11nm,0.8s
KLMR **Klimovskoe** **50.66 329** eP **P** **19 30 18.5 +0.6**
KLMR *e* 19 32 14.7
KLMR pmax pmax
comp=Z,12nm,0.9s
KLMR **Klimovskoe** **50.66 329** eP **P** **19 30 18.6 +0.6**
KLMR AMP 19 30 21.8
comp=Z,12nm,0.9s
KLMR *e*PP **PP** **19 32 14.7 +1.0**
OBN **Obninsk** **50.84 321** *ce*P **P** **19 30 21.8 +2.5**
OBN *e* 19 30 26.8
OBN *e* 19 32 19.3
OBN pmax pmax
comp=Z,21nm,1.7s
OBN MLR MLR
comp=Z,44nm,19.0s
ILGA **Ilgaz** **51.99 303** P **P** **19 30 29.6 +1.1**
ILGA IAmb IAmb 19 30 32.8
comp=Z,21nm,0.9s
BR131 **Keskin Array S** **52.14 301** P **P** **19 30 28.1 -1.5**
BR131 pmax pmax
comp=Z,11nm,0.7s
BR131 **Keskin Array S** **52.14 301** P **P** **19 30 28.1 -1.5**
BR131 IAmb IAmb 19 30 34.0
comp=Z,11nm,0.7s
BRTR **Keskin Array B** **52.14 301** P **P** **19 30 30.3 +0.7**
comp=Z,5.8nm,0.7s,baz=112,slow=7.6,SNR=16
BRTR LR LR 19 57 07.6
comp=Z,45nm,18.9s,baz=152,slow=41
BRTR **Keskin Array B** **52.14 301** *i* P **P** **19 30 32.5 +2.9**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
ANTO **Ankara** **52.78 301** P **P** **19 30 34.6 +0.4**
ANTO pmax pmax
comp=Z,17nm,0.8s
ANTO **Ankara** **52.78 301** P **P** **19 30 34.6 +0.4**
ANTO IAmb IAmb 19 30 39.1
comp=Z,17nm,0.8s
BR231 **Keskin MP Arra** **52.79 301** P **P** **19 30 35.3 +1.0**
BR231 IAmb IAmb 19 30 39.2
comp=Z,13nm,0.7s
KNRA **Kununurra** **53.16 138** P **P** **19 30 36.1 -1.0**
PETK **Petropavlovsk-** **53.26 42** LR LR 19 55 40.7
comp=Z,56nm,19.0s,baz=228,slow=39
FITZ **Fitzroy Crossi** **53.29 143** P **P** **19 30 37.7 -0.3**
FITZ IAmb IAmb 19 30 38.5
comp=Z,8.5nm,0.7s
PSA00 **Pilbara Seismi** **53.38 151** P **P** **19 30 37.9 -0.7**
MDUB **Mudurnu** **53.94 302** P **P** **19 30 43.5 +0.7**
AKASG **Malin Array Be** **54.87 315** P **P** **19 30 48.5 -0.7**

comp=Z,8.1nm,0.7s,baz=82,slow=7.0,SNR=5.1
AKASG LR LR 19 57 41.6
comp=Z,69nm,19.7s,baz=110,slow=40
AKASG Malin Array Be 54.87 315 P P 19 30 50.0 +0.8
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 54.87 315 P P 19 30 50.0 +0.8
AKBB Malin Array Si 54.87 315 P P 19 30 49.5 +0.2
AKBB pmax pmax
comp=Z,9.0nm,0.8s
AKBB Malin Array Si 54.87 315 P P 19 30 49.5 +0.2
AKBB IAmb IAmb 19 30 52.0
comp=Z,9.3nm,0.8s
ELL Elmali 55.41 298 P P 19 30 53.7 +0.2
ELL pmax pmax
comp=Z,135nm,0.8s
ELL Elmali 55.41 298 P P 19 30 53.7 +0.2
SORM Soroca 55.48 312 ⇑P P 19 30 55.8 +2.1
SORM Soroca 55.48 312 ⇑P P 19 30 55.8 +2.1
TPGR Topolog 55.61 308 ⇓P P 19 30 57.9 +3.2
MNK Minsk 55.77 320 *i* P **P 19 30 55.3 -0.3**
comp=E,2.0nm,1.0s
MNK *i* P **P 19 30 55.3 -0.3**
comp=N,17nm,0.8s
MNK *i* P **P 19 30 55.3 -0.3**
comp=Z,10.0nm,0.8s
MNK *i* PcP **PcP 19 31 54.7 -0.1**
MNK *i* PP **PP 19 32 59.6 -0.3**
MNK *i* PPP PPP 19 34 12.2
MNK *i* S **S 19 38 42.2 -0.2**
MNK *i* S **S 19 38 42.2 -0.2**
MNK *i* ScS **ScS 19 40 44.6 -0.2**
MNK *i* SS **SS 19 42 28.8 +1.3**
MNK *i* SSS SSS 19 44 39.2
MNK *i* LQ LQ 19 49 43.8
MNK *i* LR LR 19 55 00.4
MNK *i* LRM MLR 19 57 20.1
comp=E,4.0nm,16.3s
MNK *i* LRM MLR 19 57 20.1
comp=N,24nm,18.1s
MNK *i* LRM MLR 19 57 20.1
comp=Z,48nm,16.3s
CFR Carcaliu 55.79 308 ⇑P P 19 30 58.8 +2.9
CFR Carcaliu 55.79 308 ⇑P P 19 30 58.8 +2.9
TLBR Topalu 55.90 307 ⇓P P 19 31 00.9 +3.4
VASR Vaslui 55.93 310 ⇑P P 19 30 59.9 +2.9
VARL Varlezi 55.94 309 ⇓P P 19 31 00.6 +3.6
HARR Harsova 55.97 308 ⇑P P 19 31 00.5 +3.2
HARR Harsova 55.97 308 ⇑P P 19 31 00.5 +3.2
TUDR 56.09 309 ⇓P P 19 31 00.6 +2.6
NACGM Naroch 56.42 320 *i* P **P 19 31 03.0 +2.7**
NACGM *i* P **P 19 31 03.0 +2.7**
NACGM *i* P **P 19 31 03.0 +2.7**
NACGM *i* pP sP 19 31 24.7 +19
NACGM *i* PP **PP 19 33 11.1 +5.4**
NACGM *i* PPP PPP 19 34 28.7
NACGM *i* S **S 19 38 52.4 +1.4**
NACGM *i* sS sS 19 39 36.0 +39
NACGM *i* SS **SS 19 42 33.8 -3.9**
NACGM *i* SSS SSS 19 45 50.4
NACGM *i* LQ LQ 19 51 24.3
NACGM *i* LR LR 19 57 28.6
IDID Didziasalis 56.46 320 *e*P **P 19 31 03.6 +3.0**
ODBI Odobesti 56.50 309 ⇑P P 19 31 05.5 +4.5
BALB Balikesir 56.57 302 P P 19 31 02.1 +0.5
BALB IAmb IAmb 19 31 05.1
comp=Z,14nm,0.7s
VSU Vasula 56.60 324 *e*P **P 19 31 04.0 +2.5**
VRI Vrincioaia 56.72 309 ⇓P P 19 31 06.7 +4.0
VRI Vrincioaia 56.72 309 ⇓P P 19 31 06.7 +4.0
TESR Tescani 56.72 310 ⇓P P 19 31 05.1 +2.5
IIGN Ignalina 56.75 321 *e*P **P 19 31 05.5 +2.9**
BISRR Bisoca 56.76 309 ⇓P P 19 31 07.5 +4.5
PLOR Plostina 56.78 309 ⇑P P 19 31 06.9 +3.8
PLOR Plostina 56.78 309 ⇑P P 19 31 06.9 +3.8
ISR Istrita 56.91 308 ⇓P P 19 31 08.9 +4.8
ISR Istrita 56.91 308 ⇓P P 19 31 08.9 +4.8
PRAR RASCA 56.95 311 ⇓P P 19 31 01.9 -2.4
NEHR Nehoiu 57.06 309 ⇓P P 19 31 09.4 +4.7
BIZ Bicaz 57.07 310 ⇓P P 19 31 07.7 +2.6
FIA1 FINESS Array S 57.16 328 P P 19 31 07.6 +2.2
FIA1 IAmb IAmb 19 31 09.1
comp=Z,7.6nm,0.8s
FINES FINESS Array B 57.16 328 P P 19 31 06.0 +0.6
comp=Z,6.4nm,0.7s,baz=98,slow=10.0,SNR=23
FINES LR LR 19 56 55.4
comp=Z,80nm,19.6s,baz=95,slow=37
MLR Muntele Rosu 57.30 309 ⇓P P 19 31 10.5 +3.6
MLR Muntele Rosu 57.30 309 ⇓P P 19 31 10.5 +3.6
MLR Muntele Rosu 57.30 309 P P 19 31 06.9 0.0
OZUR 57.35 309 ⇑P P 19 31 09.9 +2.8
BURAR Bucovina Array 57.62 311 ⇓P P 19 31 12.3 +3.2
BURAR Bucovina Array 57.62 311 ⇓P P 19 31 12.3 +3.2
BUR08 Bucovina Ar. S 57.62 311 P P 19 31 07.4 -1.7
DOPR Dopca 57.64 309 ⇓P P 19 31 11.8 +2.7
KARP Karpathos 57.81 297 P P 19 31 11.7 +1.2
VOIR 57.93 309 ⇑P P 19 31 07.3 -4.0
VOIR 57.93 309 ⇑P P 19 31 07.3 -4.0
MTUR Matau 57.95 309 ⇓P P 19 31 05.9 -5.5
MTUR Matau 57.95 309 ⇓P P 19 31 05.9 -5.5
PABE Paberze 58.04 321 *e*P **P 19 31 14.2 +2.5**
PABE Paberze 58.04 321 P **P 19 31 13.5 +1.8**
ARR Arges 58.23 309 ⇑P P 19 31 16.0 +2.6
LVV L'vov 58.23 314 *e*P **P 19 31 14.7 +1.5**
ARCES ARCESS Array B 58.43 337 P P 19 31 14.3 0.0
comp=Z,4.5nm,0.9s,baz=99,slow=5.3,SNR=7.3
ARCES LR LR 20 01 39.2
comp=Z,36nm,18.0s,baz=315,slow=42
ARCES ARCESS Array B 58.43 337 P P 19 31 14.3 0.0
ARCES pmax pmax
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 58.43 337 IAmb IAmb 19 31 18.5
comp=Z,5.7nm,1.0s
PLVB Pleven 58.48 306 ⇓P P 19 31 17.9 +2.8
SUW Suwalki 58.53 319 *e*P **P 19 31 16.8 +1.7**
SUW Suwalki 58.53 319 P **P 19 31 16.3 +1.1**
SUW pmax pmax
comp=Z,25nm,1.0s
SUW Suwalki 58.53 319 P **P 19 31 16.3 +1.1**
BILL Bilibino 58.97 25⇑ *e*P **P 19 31 17.8 -0.2**
BILL *e* 19 31 20.3
BILL *e* 19 33 31.3
BILL *e*S **S 19 39 26.9 +2.8**
BILL pmax pmax
comp=Z,3.0nm,0.8s
BILL MLR MLR
comp=Z,50nm,17.0s
BILL Bilibino 58.97 25 P **P 19 31 16.1 -1.9**
KWP Kalwaria Pacla 59.10 314 P **P 19 31 18.4 -0.9**
KWP pmax pmax
comp=Z,25nm,1.1s
KWP Kalwaria Pacla 59.10 314 P **P 19 31 18.4 -0.9**
PBUR Paburge 59.18 321 *e*P **P 19 31 21.6 +2.0**
VTS Vitosha 59.60 306 ⇓P P 19 31 25.4 +2.4
VTS Vitosha 59.60 306 P **P 19 31 24.2 +1.2**
VTS pmax pmax
comp=Z,8.0nm,1.0s
VTS Vitosha 59.60 306 P **P 19 31 24.2 +1.2**
VTS IAmb IAmb 19 31 27.0
comp=Z,8.5nm,1.0s
WB0 Warramunga Arr 59.73 136 P **P 19 31 23.6 -0.3**
WRAB Tennant Creek 59.83 136*e*P **P 19 31 24.5 -0.1**
WRAB pmax pmax
comp=Z,13nm,1.3s
WRAB Tennant Creek 59.83 136 P **P 19 31 24.2 -0.4**
WRA Warramunga Arr 59.83 136 P **P 19 31 24.5 -0.1**
comp=Z,17nm,0.5s,baz=321,slow=7.6,SNR=370
WRA Warramunga Arr 59.83 136 P **P 19 31 23.5 -1.1**
WB2 Warramunga Arr 59.83 136 P **P 19 31 24.2 -0.5**
WR0 Warramunga Arr 59.97 136 P **P 19 31 25.2 -0.3**
CRVS Cervenica-Dubn 59.99 313 *e*P **P 19 31 30.0 +4.6**
CRVS Cervenica-Dubn 59.99 313 *e*P **P 19 31 30.0 +4.6**
MDVR Moldovita 60.36 308 ⇑P P 19 31 31.4 +3.3
NIE Niedzica 60.69 314 *e*P **P 19 31 34.2 +4.0**
AGG Agios Georgios 60.91 302 P **P 19 31 33.2 +1.2**
AGG pmax pmax
comp=Z,13nm,1.0s
AGG Agios Georgios 60.91 302 P **P 19 31 33.1 +1.2**
AGG IAmb IAmb 19 31 34.1
comp=Z,12nm,1.0s
UPP Uppsala 61.30 326 *e*P **P 19 31 37.1 +3.1**
DIVS Divibare 61.69 308 P **P 19 31 37.3 +0.2**
DIVS IAmb IAmb 19 31 40.7
comp=Z,6.8nm,1.1s
VYHS Vyhne 61.77 313 *e*P **P 19 31 39.9 +2.4**
VYHS Vyhne 61.77 313 *e*P **P 19 31 39.9 +2.4**
SRO Srobarova 62.22 312 *e*P **P 19 31 44.2 +3.7**
SRO Srobarova 62.22 312 *e*P **P 19 31 44.2 +3.7**
MORH Mrgy, Hungar 62.26 310 ⇓P P 19 31 43.5 +2.6
AS31 Alice Springs 62.38 139 P **P 19 31 41.2 -0.7**
AS31 IAmb IAmb 19 31 42.7
comp=Z,3.1nm,0.5s
ASAR Alice Springs 62.38 139 P **P 19 31 42.0 +0.1**
comp=Z,6.6nm,0.4s,baz=322,slow=6.5,SNR=132
ASAR Alice Springs 62.38 139 P **P 19 31 40.7 -1.2**
MORC Moravsky Berou 62.41 314 P **P 19 31 42.7 +0.8**
MORC pmax pmax
comp=Z,6.0nm,1.1s
MORC Moravsky Berou 62.41 314 P **P 19 31 42.7 +0.8**
MORC IAmb IAmb 19 31 46.5
comp=Z,6.4nm,1.1s
PDG Podgorica 62.53 306 ⇓P P 19 31 44.8 +2.2
PDG Podgorica 62.53 306 P **P 19 31 44.1 +1.4**
PDG IAmb IAmb 19 31 45.8
comp=Z,10.0nm,0.8s
MODS Modra-Piesok 62.81 313 *e*P **P 19 31 46.5 +2.0**
MODS Modra-Piesok 62.81 313 *e*P **P 19 31 46.5 +2.0**
KRLC Kraliky 62.85 315 *e*P **P 19 31 47.9 +3.1**
KRLC Kraliky 62.85 315 *e*P **P 19 31 47.9 +3.1**
KSP Ksiaz 63.04 316 *e*P **P 19 31 49.8 +3.8**
VRAC Vranov 63.10 314 ⇓P P 19 31 49.9 +3.5
VRAC Vranov 63.10 314 ⇓P P 19 31 49.9 +3.5
DPC Dobruska-Polom 63.10 315 *e*P **P 19 31 49.9 +3.4**
DPC Dobruska-Polom 63.10 315 *e*P **P 19 31 49.9 +3.4**
NC405 NORSAR Array S 64.09 328 P **P 19 31 53.9 +1.1**
ARSA Arzberg 64.18 312 *e*P **P 19 31 54.1 +0.5**
comp=Z,2.2nm,0.8s
NC300 NORSAR Array S 64.21 328 P **P 19 31 53.3 -0.2**
NC303 NORSAR Array S 64.24 328 P **P 19 31 55.9 +2.2**
PRU Pruhonice 64.29 315 *e*P **P 19 31 57.6 +3.4**
PRU MLR MLR
comp=Z,100nm,20.2s
PRU Pruhonice 64.29 315 *e*P **P 19 31 57.6 +3.4**
PRU AMS AMS 20 02 40.0
comp=Z,100nm,20.2s
NOA NORSAR Array B 64.34 328 P **P 19 31 53.9 -0.6**
comp=Z,5.2nm,0.8s,baz=82,slow=6.5,SNR=16
NOA LR LR 20 01 07.7
comp=Z,28nm,18.6s,baz=95,slow=37
NC204 NORSAR Array S 64.52 328 P **P 19 31 53.9 -1.7**
SOKA Soboth 64.62 311 *e*P **P 19 31 59.4 +2.8**
comp=Z,4.8nm,1.1s
MOA Molln 64.89 313 *e*P **P 19 32 01.3 +3.0**
comp=Z,4.8nm,0.9s
OBKA Obir 64.98 311 *e*P **P 19 32 02.2 +3.2**
comp=Z,1.7nm,0.7s
CLL Collm 65.00 317 *e*(P) **P 19 32 00.0 +1.2**
comp=Z,6.0nm,1.2s
CLL *e*PP **PP 19 34 22.0 +0.5**
CLL Collm 65.00 317 *e*P **P 19 32 00.0 +1.2**
CLL pmax pmax
comp=Z,6.0nm,1.2s
GEC2 GERESS Array S 65.05 314 P **P 19 31 58.7 -0.7**
GEC2 IAmb IAmb 19 32 03.5
comp=Z,7.7nm,1.1s
GERES GERESS Array B 65.05 314 P **P 19 31 58.1 -1.3**
comp=Z,3.9nm,0.9s,baz=74,slow=4.6,SNR=3.0
GERES LR LR 20 03 49.0
comp=Z,66nm,19.3s,baz=90,slow=39
KBA Koelnbreinsper 65.67 312 *e*P **P 19 32 05.8 +2.3**
comp=Z,2.2nm,0.7s
STAL STALIGIAL 66.28 311 P **P 19 32 06.5 -0.8**
STAL IAmb IAmb 19 32 10.1
comp=Z,10nm,1.0s
WTTA Wattenberg 66.76 313 *e*P **P 19 32 12.8 +2.3**
comp=Z,5.5nm,1.0s
WATA Walderalm 66.78 313 *e*P **P 19 32 13.7 +3.1**
comp=Z,7.9nm,1.8s
VOI Vohitsoka 66.79 229 P **P 19 32 11.0 +0.1**
VOI IAmb IAmb 19 32 37.5
comp=Z,13nm,1.2s
NRCA Norcia 66.85 308 P **P 19 32 10.7 -0.4**
NRCA IAmb IAmb 19 32 15.6
comp=Z,7.0nm,1.0s
CTI Castel Tesino 67.05 311 P **P 19 32 13.3 +1.0**
CTI pmax pmax
comp=Z,3.0nm,0.9s
CTI Castel Tesino 67.05 311 P **P 19 32 13.3 +1.0**
CTI IAmb IAmb 19 32 15.4
comp=Z,3.4nm,0.9s
SQTA Sankt Quirin 67.05 313 *e*P **P 19 32 14.4 +2.1**
comp=Z,2.5nm,0.5s
MOTA Moosalm 67.09 313 *e*P **P 19 32 14.8 +2.2**
comp=Z,8.0nm,0.9s
RETA Reutte 67.28 313 *e*P **P 19 32 15.9 +2.2**
comp=Z,8.1nm,1.3s
FETA Feichten 67.42 313 *e*P **P 19 32 16.7 +2.0**
comp=Z,5.7nm,1.3s
CTAO Charters Tower 67.91 128 P **P 19 32 16.0 -1.8**
CTAO pmax pmax
comp=Z,8.0nm,0.9s
CTAO Charters Tower 67.91 128 P **P 19 32 16.0 -1.8**
CTAO IAmb IAmb 19 32 18.6
comp=Z,8.3nm,0.8s
DAVA Damuels 67.91 313 *e*P **P 19 32 20.3 +2.5**
comp=Z,6.8nm,1.2s
MEM Membach 69.46 317 *d*PcP **PcP 19 32 51.6 +1.1**
WLF Walferdange 69.64 316 *d*P **P 19 32 29.2 +0.9**
comp=Z,11nm,1.1s
WLF *d*PcP **PcP 19 32 52.4 +1.2**
WLF Walferdange 69.64 316 P **P 19 32 29.8 +1.5**
WLF pmax pmax
comp=Z,18nm,1.0s
WLF Walferdange 69.64 316 P **P 19 32 29.8 +1.5**
SENIN Lac Senin/Sane 69.87 313 P **P 19 32 29.4 -0.7**
SENIN IAmb IAmb 19 32 45.0
comp=Z,9.2nm,1.2s
BBOO Buckleboo 70.64 144 P **P 19 32 32.2 -2.3**
BBOO IAmb IAmb 19 32 35.3
comp=Z,7.1nm,0.8s
BNI Bardonecchia 70.68 311 P **P 19 32 35.7 +0.7**
BNI pmax pmax
comp=Z,18nm,1.5s
BNI Bardonecchia 70.68 311 P **P 19 32 35.7 +0.7**
BNI IAmb IAmb 19 32 45.8
comp=Z,18nm,1.5s
A21K Barrow 71.05 19 P **P 19 32 35.9 -0.5**
A21K IAmb IAmb 19 32 45.1
comp=Z,9.1nm,1.1s
KEST Kesra 71.75 301 P **P 19 32 42.5 +0.9**
comp=Z,9.9nm,0.9s,baz=129,slow=6.5,SNR=10
KEST Kesra 71.75 301 P **P 19 32 40.1 -1.4**
KEST IAmb IAmb 19 32 46.2
comp=Z,12nm,0.9s
STKA Stephens Creek 73.02 140 P **P 19 32 47.9 -0.9**
comp=Z,6.1nm,0.8s,baz=324,slow=6.7,SNR=11
STKA Stephens Creek 73.02 140 P **P 19 32 48.0 -0.9**
STKA pmax pmax
comp=Z,2.0nm,1.0s
STKA Stephens Creek 73.02 140 P **P 19 32 48.0 -0.9**
TOLK Toolik Lake Re 74.48 20 P **P 19 32 56.6 -0.5**
TOLK IAmb IAmb 19 33 04.1
comp=Z,5.3nm,1.0s
COLD Coldfoot 75.05 21 P **P 19 32 59.3 -1.0**
MLY Manley 76.05 23 P **P 19 33 05.4 -0.7**
MLY IAmb IAmb 19 33 17.6
comp=Z,8.2nm,1.2s
BPAW Bear Paw Mtn. 76.46 24 P **P 19 33 08.0 -0.4**
BPAW IAmb IAmb 19 33 19.2
comp=Z,4.6nm,0.8s
I23K Minto, Yukon-K 76.47 23 P **P 19 33 08.0 -0.5**
I23K IAmb IAmb 19 33 19.3
comp=Z,6.9nm,1.4s
NEA2 Nenana 76.89 23 P **P 19 33 10.3 -0.5**
NEA2 IAmb IAmb 19 33 21.4
comp=Z,5.0nm,0.9s
MDM Murphy Dome 76.98 23 P **P 19 33 10.7 -0.7**
MDM IAmb IAmb 19 33 22.1
comp=Z,8.4nm,1.0s
WRH Wood River Hil 77.31 23 P **P 19 33 12.7 -0.4**
SKT Skwentna 77.40 26 P **P 19 33 12.5 -1.3**
SKT IAmb IAmb 19 33 24.0
comp=Z,5.6nm,1.0s
IL31 77.55 23 P **P 19 33 13.4 -1.1**
ILAR Eielson Array 77.55 23 P **P 19 33 12.3 -2.3**
comp=Z,1.1nm,0.8s,baz=294,slow=5.6,SNR=13
ILAR Eielson Array 77.55 23 P **P 19 33 12.5 -2.0**
ILAR Eielson Array 77.55 23 P **P 19 33 12.5 -2.0**
PRP Porcupine Dome 77.57 22 P **P 19 33 14.7 -0.1**
PRP IAmb IAmb 19 33 25.4
comp=Z,4.9nm,0.9s
SUA Susitna One 78.00 27 P **P 19 33 15.5 -1.7**
SUA IAmb IAmb 19 33 26.8
comp=Z,7.0nm,1.0s
BRLK Bradley Lake 78.88 28 P **P 19 33 19.8 -2.2**
BRLK IAmb IAmb 19 33 21.1
comp=Z,9.6nm,0.6s
PAX Paxson 79.14 24 P **P 19 33 23.2 -0.3**
PAX pmax pmax
comp=Z,2.0nm,1.0s
PAX Paxson 79.14 24 P **P 19 33 23.2 -0.3**
DOT Dot Lake 79.22 23 P **P 19 33 22.4 -1.4**
INK Inuvik 79.23 16 P **P 19 33 23.4 -0.3**
INK pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 79.23 16 P **P 19 33 23.4 -0.3**
PWL Port Wells 79.30 26 P **P 19 33 22.7 -1.6**
PWL IAmb IAmb 19 33 24.1
comp=Z,5.4nm,0.7s
EGAK Eagle 79.47 21 P **P 19 33 24.2 -0.9**
K27K Chicken 79.66 22 P **P 19 33 26.1 -0.1**
KLU Klutina 79.87 25 P **P 19 33 27.2 -0.3**
KLU IAmb IAmb 19 33 38.9
comp=Z,5.6nm,0.9s
ESDC Sonseca Array 79.99 309 P **P 19 33 27.8 -0.8**
L27K Beaver Creek, 80.37 23 P **P 19 33 29.6 -0.5**
L27K IAmb IAmb 19 33 41.7
comp=Z,7.6nm,1.1s
BMRM Bremner River 80.69 25 P **P 19 33 31.6 -0.3**
BMRM IAmb IAmb 19 33 42.3
comp=Z,8.5nm,0.9s
TORD Torodi Ar. Bea 87.06 283 P **P 19 34 05.5 +0.3**
comp=Z,2.5nm,1.0s,baz=65,slow=3.9,SNR=4.9
YKA Yellowknife Ar 88.46 13 P **P 19 34 09.5 -1.5**
comp=Z,0.5nm,0.8s,baz=331,slow=4.5,SNR=7.9
PFO Pinyon Flats O 113.43 28 *i* PKIKP **PKiKP 19 39 57.3 -0.3**

NEIC ***30*** *19:39:43.9±1.2, 19.96S±0.08×66.86W±0.07, h247km±10km, mb4.1/2, Error ellipse: s-maj=13.3km s-min=7.4km az=144.0*
IDC ***30*** *19:39:43.4±0.8, 19.94S×66.80W, h239km±10km, mb3.2/4, mb1 3.3/8, mb1mx3.1/32, mbtmp3.8/8, Error ellipse: s-maj=19.4km s-min=9.7km az=101.0*
SCB ***30*** *19:39:49.7±2.3, 19.94S×67.05W, h202km±17km, ML3.6/5, Error ellipse: s-maj=8.3km s-min=5.9km az=1.0*
ISC 30 19:39:43.6±0.7, 19.94S±0.05×66.96W±0.06, h241km, n50, σ1s93/56, mb3.3/3, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.80**	**137**	P	**Pn**	**19 40 26.4**	**+2.4**
MOCB				S	**S**	**19 40 54.8**	**-0.9**
MOCB				IAML		19 40 58.2	
	306nm,0.6s						
PB08	**IPOC Station P**	**2.07**	**264**		**Pn**	**19 40 28.7**	**+2.3**
PB08	**IPOC Station P**	**2.07**	**264**	P	**Pn**	**19 40 29.2**	**+2.8**
PB11	**IPOC Station P**	**2.54**	**274**		**Pn**	**19 40 32.5**	**+1.7**
PB11	**IPOC Station P**	**2.54**	**274**	P	**Pn**	**19 40 32.8**	**+2.0**
PB01	**IPOC Station P**	**2.61**	**245**		**Pn**	**19 40 32.9**	**+1.5**
PB01	**IPOC Station P**	**2.61**	**245**	P	**Pn**	**19 40 33.4**	**+2.0**
MNMC	**Minye Minye**	**2.61**	**288**		**Pn**	**19 40 33.6**	**+2.0**
MNMC	**Minye Minye**	**2.61**	**288**	P	**Pn**	**19 40 34.2**	**+2.5**
MNMC				S	**S**	**19 41 07.7**	**-1.8**
MNMC				IAML		19 41 19.2	
	107nm,0.4s						
PB09	**IPOC Station P**	**2.82**	**229**		**Pn**	**19 40 35.8**	**+2.1**
PB09	**IPOC Station P**	**2.82**	**229**	P	**Pn**	**19 40 36.5**	**+2.7**
PB09				S	**S**	**19 41 11.5**	**-1.8**
PB09				IAML		19 41 16.6	
	43nm,0.5s						
PB16	**IPOC Station P**	**2.89**	**303**		**Pn**	**19 40 37.5**	**+2.5**
PB16	**IPOC Station P**	**2.89**	**303**	P	**Pn**	**19 40 37.9**	**+2.9**
TA02	**Huaiquique**	**3.00**	**263**	Pn	**Pn**	**19 40 36.7**	**+1.2**
PSGC	**Pisagua**	**3.00**	**276**	P	**Pn**	**19 40 37.2**	**+1.6**
PSGC				S	**S**	**19 41 13.8**	**-2.8**
PSGC				IAML		19 41 17.2	
	159nm,0.5s						
PSGCX	**Pisagua**	**3.00**	**276**	Pn	**Pn**	**19 40 36.6**	**+1.0**
TA01	**Diego Aracena**	**3.09**	**258**		**Pn**	**19 40 37.7**	**+1.3**
LVC	**Limon Verde**	**3.22**	**214**	P	**Pn**	**19 40 39.9**	**+1.6**
	7.4nm,0.3s,baz=44,slow=8.8,SNR=28						
LVC				S	**S**	**19 41 22.2**	**+0.7**
	4.1nm,0.3s,baz=214,slow=22,SNR=11						
LVC	**Limon Verde**	**3.22**	**214**		**Pn**	**19 40 39.8**	**+1.5**
LVC	**Limon Verde**	**3.22**	**214**	P	**Pn**	**19 40 40.8**	**+2.5**
BBOE	**La Paz, Chanca**	**3.26**	**343**	P	**Pn**	**19 40 42.3**	**+3.2**
PB07	**IPOC Station P**	**3.26**	**236**		**Pn**	**19 40 39.9**	**+1.3**
PB07	**IPOC Station P**	**3.26**	**236**	P	**Pn**	**19 40 40.7**	**+2.1**
PB03	**IPOC Station P**	**3.35**	**231**	P	**Pn**	**19 40 41.8**	**+2.2**
PB03				S	**S**	**19 41 20.6**	**-3.2**
PB03				IAML		19 41 24.2	
	212nm,0.4s						
PB06	**IPOC Station P**	**3.67**	**221**		**Pn**	**19 40 44.6**	**+1.3**
PB06	**IPOC Station P**	**3.67**	**221**	P	**Pn**	**19 40 45.6**	**+2.3**
LPAZ	**La Paz**	**3.80**	**343**	P	**Pn**	**19 40 47.2**	**+1.8**
	0.6nm,0.3s,baz=149,slow=8.4,SNR=13						
LPAZ				S	**S**	**19 41 34.8**	**+0.7**
	0.7nm,0.3s,baz=321,slow=19,SNR=9.0						
LPAZ	**La Paz**	**3.80**	**343**	P	**Pn**	**19 40 48.1**	**+2.8**
LPAZ				S	**S**	**19 41 31.4**	**-2.7**
PB04	**IPOC Station P**	**3.81**	**231**		**Pn**	**19 40 46.3**	**+1.4**
PB04	**IPOC Station P**	**3.81**	**231**	P	**Pn**	**19 40 46.8**	**+1.9**
BBOB	**La Paz, Bander**	**3.94**	**343**	P	**Pn**	**19 40 49.1**	**+2.2**
PB15	**IPOC Station P**	**4.00**	**215**		**Pn**	**19 40 48.7**	**+1.5**
PB15	**IPOC Station P**	**4.00**	**215**	P	**Pn**	**19 40 49.5**	**+2.3**
PB10	**IPOC Station P**	**4.88**	**223**	P	**Pn**	**19 40 59.7**	**+2.1**
PB14	**IPOC Station P**	**5.65**	**214**	Pn	**Pn**	**19 41 08.0**	**+0.5**
PB14	**IPOC Station P**	**5.65**	**214**	P	**Pn**	**19 41 10.1**	**+2.7**
GO02	**Mina Guanaco**	**5.74**	**205**		**Pn**	**19 41 08.9**	**+0.4**
SIV	**San Ignacio**	**6.84**	**56**	P	**Pn**	**19 41 21.7**	**-0.6**
	2.2nm,0.3s,baz=258,slow=11,SNR=20						
AC01	**Pan de Azucar**	**7.03**	**208**	Pn	**Pn**	**19 41 25.0**	**+0.5**
AC02	**Maricunga**	**7.15**	**196**	Pn	**Pn**	**19 41 26.8**	**+0.4**
BDFB	**Brasilia**	**18.54**	**80**	P	**P**	**19 43 40.9**	**-2.0**
	0.4nm,0.3s,baz=253,slow=11,SNR=1.8						
BDFB	**Brasilia**	**18.54**	**80**	IAmb	IAmb	19 43 59.5	
	comp=Z,7.7nm,1.4s						
PLCA	**Paso Flores**	**20.95**	**188**	P	**P**	**19 44 09.6**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=359,slow=12,SNR=8.3						
PLCA	**Paso Flores**	**20.95**	**188**	IAmb	IAmb	19 44 27.4	
	comp=Z,12nm,1.4s						
TXAR	**Lajitas Array**	**60.44**	**323**	P	**P**	**19 49 28.6**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=138,slow=8.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**75.11**	**70**	P	**P**	**19 50 58.0**	**-1.8**
	comp=Z,1.8nm,0.5s,baz=257,slow=5.3,SNR=15						
YKA	**Yellowknife Ar**	**90.34**	**340**	P	**P**	**19 52 17.2**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=127,slow=5.0,SNR=5.1						
ASAR	**Alice Springs**	**132.12**	**206**	PKP	**PKPdf**	**19 58 29.1**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=146,slow=1.9,SNR=1.7						
WRA	**Warramunga Arr**	**135.21**	**209**	PKP	**PKPdf**	**19 58 35.7**	**+0.5**
	comp=Z,0.6nm,1.0s,baz=211,slow=1.3,SNR=2.0						
SONM	**Songino Array**	**151.66**	**9**	PKPbc	**PKPbc**	**19 59 09.6**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=201,slow=1.1,SNR=3.5						

IDC ***30*** *20:01:42.5±0.9, 33.04S×178.35W, h0km, mb4.3/8, mb1 4.4/10, mb1mx4.1/37, mbtmp4.3/10, ML4.1/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/21, Error ellipse: s-maj=25.3km s-min=23.3km az=102.0*
NEIC ***30*** *20:01:47.5±1.0, 33.47S±0.09×178.5W±0.2, h35km±1km, mb4.5/12, Error ellipse: s-maj=26.1km s-min=13.6km az=112.0*
ISC 30 20:01:47.9±0.8, 33.49S±0.09×178.4W±0.1, h41km, n48, σ1s37/47, mb4.4/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.25**	**5**	Pn	Pn	20 02 41.0	-9.0
	41nm,0.3s,baz=288,slow=24,SNR=1.6						
RAO				Sn	Sn	20 03 26.8	-12
	36nm,0.3s,baz=60,slow=22,SNR=1.5						
RAO	**Raoul Island**	**4.25**	**5**	Pn	Pn	20 02 45.8	-4.2
MXZ	**Matakaoa Point**	**4.89**	**213**	Pn	**Pn**	**20 02 58.0**	**-0.9**
URZ	**Urewera**	**6.02**	**216**		**Pn**	**20 03 14.5**	**+0.2**
OUZ	**Omahuta**	**6.88**	**253**	Pn	**Pn**	**20 03 28.7**	**+2.4**
BKZ	**Black Stump Fm**	**7.03**	**215**		**Pn**	**20 03 27.6**	**-0.7**
BKZ					**Sn**	**20 04 48.0**	**+1.1**
BFZ	**Birch Farm**	**8.37**	**209**	Pn	**Pn**	**20 03 45.4**	**-1.3**

SNZO	**South Karori**	**9.56**	**213**	Pn	**Pn**	**20 03 59.4**	**-3.4**
TUWZ	**Tuamarina**	**10.01**	**215**	Pn	**Pn**	**20 04 07.7**	**-1.3**
NNZ	**Nelson**	**10.13**	**218**	Pn	**Pn**	**20 04 08.2**	**-2.5**
THZ	**Tophouse**	**10.78**	**217**	Pn	**Pn**	**20 04 17.1**	**-2.5**
KHZ	**Kahutara**	**10.96**	**213**	Pn	**Pn**	**20 04 20.9**	**-1.2**
LTZ	**Lake Taylor**	**11.85**	**216**	Pn	Pn	20 04 28.6	-5.7
DZM	**Mont Dzumac**	**17.60**	**306**	P	**Pn**	**20 05 47.8**	**-2.4**
	0.3nm,0.3s,baz=26,slow=21,SNR=1.7						
DZM				LR	LR	20 11 12.2	
	comp=Z,84nm,20.3s,baz=298,slow=33						
PPT	**Papeete**	**30.29**	**66**	LR	LR	20 16 41.6	
	comp=Z,35nm,21.8s,baz=272,slow=30						
STKA	**Stephens Creek**	**33.61**	**262**	P	**P**	**20 08 23.9**	**-0.6**
	1.0nm,0.4s,baz=278,slow=22,SNR=2.5						
STKA	**Stephens Creek**	**33.61**	**262**	IAmb	IAmb	20 08 30.5	
	comp=Z,2.7nm,1.5s						
CTA	**Charters Tower**	**34.13**	**284**	P	**P**	**20 08 29.4**	**+0.3**
	comp=Z,2.6nm,0.5s,baz=107,slow=9.1,SNR=6.8						
CTAO	**Charters Tower**	**34.13**	**284**	P	**P**		
CTAO				IAmb	IAmb	20 08 35.5	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**37.94**	**258**	P	**P**	**20 09 01.1**	**-0.5**
COEN	**Coen**	**39.94**	**290**	P	**P**	**20 09 18.4**	**0.0**
COEN				IAmb	IAmb	20 09 45.5	
	comp=Z,5.9nm,0.9s						
AS31	**Alice Springs**	**42.74**	**270**	P	**P**	**20 09 40.6**	**-0.8**
ASAR	**Alice Springs**	**42.74**	**270**	P	**P**	**20 09 41.4**	**0.0**
	comp=Z,9.5nm,0.7s,baz=110,slow=7.5,SNR=131						
ASAR				PcP	**PcP**	**20 11 32.6**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=113,slow=3.9,SNR=5.2						
ASAR	**Alice Springs**	**42.74**	**270**	P	**P**	**20 09 40.6**	**-0.8**
ASAR					**PcP**	**20 11 32.2**	**-0.3**
WR0	**Warramunga Arr**	**43.83**	**276**	P	**P**	**20 09 50.0**	**-0.2**
WR0				IAmb	IAmb	20 09 51.2	
	comp=Z,4.4nm,0.8s						
WB2	**Warramunga Arr**	**44.00**	**276**	P	**P**	**20 09 51.1**	**-0.5**
WB2				IAmb	IAmb	20 09 52.0	
	comp=Z,6.5nm,0.5s						
WRAB	**Tennant Creek**	**44.01**	**276**	P	**P**	**20 09 50.7**	**-0.9**
WRAB				IAmb	IAmb	20 10 02.6	
	comp=Z,4.7nm,0.8s						
WRA	**Warramunga Arr**	**44.01**	**276**	P	**P**	**20 09 51.5**	**-0.1**
	comp=Z,4.6nm,0.5s,baz=115,slow=7.7,SNR=109						
WRA				PcP	**PcP**	**20 11 36.8**	**0.0**
	comp=Z,0.9nm,0.9s,baz=122,slow=3.4,SNR=2.9						
WRA	**Warramunga Arr**	**44.01**	**276**	P	**P**	**20 09 50.8**	**-0.8**
WB0	**Warramunga Arr**	**44.05**	**276**	P	**P**	**20 09 51.2**	**-0.7**
KNRA	**Kununurra**	**50.72**	**277**	P	**P**	**20 10 43.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**52.13**	**272**	P	**P**	**20 10 54.2**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=142,slow=5.8,SNR=17						
FITZ	**Fitzroy Crossi**	**52.13**	**272**	P	**P**	**20 10 54.0**	**-0.3**
QSPA	**South Pole Qui**	**56.62**	**180**	P	**P**	**20 11 29.6**	**+3.1**
	comp=Z,2.0nm,0.9s,baz=72,slow=0.9,SNR=6.7						
QSPA	**South Pole Qui**	**56.62**	**180**	P	**P**	**20 11 27.2**	**+0.6**
QSPA				IAmb	IAmb	20 11 55.6	
	comp=Z,7.2nm,1.2s						
KSRS	**Korea Array**	**86.51**	**320**	P	**P**	**20 14 25.4**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=148,slow=5.1,SNR=2.6						
PETK	**Petropavlovsk-**	**88.73**	**346**	P	**P**	**20 14 34.4**	**-2.2**
	comp=Z,2.3nm,0.9s,baz=124,slow=7.5,SNR=2.2						
MKAR	**Makanchi Array**	**119.50**	**309**	PKP	**PKiKP**	**20 20 33.6**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=90,slow=1.4,SNR=3.2						
KURK	**Kurchatov**	**122.94**	**312**		**PKPdf**	**20 20 38.7**	**-0.4**
KURBB	**Kurchatov Arra**	**122.97**	**312**	PKP	**PKPdf**	**20 20 38.7**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=83,slow=2.1,SNR=8.2						
KKAR	**Karatay Array**	**126.49**	**302**		**PKiKP**	**20 20 47.2**	**+0.5**
BVAR	**Borovoye Array**	**128.38**	**314**	PKP	**PKiKP**	**20 20 50.8**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=203,slow=3.6,SNR=6.9						
KBZ	**Khabaz**	**146.50**	**300**	PKPbc	**PKPbc**	**20 21 25.1**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=132,slow=5.4,SNR=4.0						
FINES	**FINESS Array B**	**147.92**	**338**	PKPbc	**PKPbc**	**20 21 27.8**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=42,slow=3.9,SNR=24						
NOA	**NORSAR Array B**	**151.75**	**350**	PKPbc	**PKPbc**	**20 21 37.2**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=15,slow=4.1,SNR=1.3						
AKASG	**Malin Array Be**	**153.50**	**319**	PKPbc	**PKPbc**	**20 21 41.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=63,slow=2.9,SNR=4.2						
AKASG	**Malin Array Be**	**153.50**	**319**		**PKiKP**	**20 21 43.1**	**+1.6**
TORD	**Torodi Ar. Bea**	**159.75**	**180**	PKPab	**PKPab**	**20 22 25.2**	**+3.7**
	comp=Z,0.3nm,0.6s,baz=167,slow=4.4,SNR=1.6						

IDC 30 20:10:50.1±5.8, 31°.85S×178°.86W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.7/29, mbtmp3.9/2, Error ellipse: s-maj=234.0km s-min=59.6km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.32**	**269**	P	P	20 18 45.6	-0.4
	1.8nm,0.7s,baz=110,slow=7.7,SNR=19						
WRA	**Warramunga Arr**	**43.44**	**274**	P	P	20 18 55.1	+0.1
	0.9nm,0.5s,baz=114,slow=7.7,SNR=14						
FINES	**FINESS Array B**	**146.23**	**339**	PKPbc	PKPdf	20 30 30.9	+0.2
	1.3nm,0.8s,baz=24,slow=3.8,SNR=4.1						

*IDC **30** 20:17:39.0±9.3, 21°.78S×67°.49W, h102km±71km, mb3.8/1, mb1 3.5/2, mb1mx3.2/17, mbtmp3.9/2, ML3.6/1, Error ellipse: s-maj=129.7km s-min=67.0km az=71.0*
*GUC **30** 20:17:38.1±0.6, 21°.765×68°.56W, h147km±4km, ML3.9*
ISC 30 20:17:38.9±1.1, 21°.77S±0°.05×68°.6W±0°.1, h148km±11km, n14, σ0°35/24, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.64**	**267**	*eP*	**Pn**	**20 18 00.6**	**-0.4**
PB09				*i* S	**Sn**	**20 18 17.8**	**+0.1**
PB01	**IPOC Station P**	**1.13**	**309**	*eP*	**Pn**	**20 18 04.3**	**-0.4**
PB01				*i* S	**Sn**	**20 18 24.2**	**-0.1**
PB01				IAML		20 18 26.3	
	comp=E,2µm,0.3s						
PB03	**IPOC Station P**	**1.15**	**256**	*eP*	**Pn**	**20 18 04.8**	**-0.2**
PB03				*i* S	**Sn**	**20 18 24.6**	**-0.2**
PB03				IAML		20 18 25.1	
	comp=E,3µm,0.5s						
PB07	**IPOC Station P**	**1.24**	**272**	*eP*	**Pn**	**20 18 06.0**	**+0.2**
PB07				*i* S	**Sn**	**20 18 26.6**	**+0.3**
PB07				IAML		20 18 27.6	
	comp=N,3µm,0.3s						
PB06	**IPOC Station P**	**1.33**	**225**	*eP*	**Pn**	**20 18 06.3**	**-0.3**
PB06				IAML		20 18 29.0	
	comp=E,1µm,0.5s						
PB04	**IPOC Station P**	**1.58**	**249**	*eP*	**Pn**	**20 18 09.4**	**+0.1**
PB04				*i* S	**Sn**	**20 18 32.8**	**+0.1**
PB04				IAML		20 18 35.1	
	comp=N,1µm,0.3s						
PB15	**IPOC Station P**	**1.67**	**210**	*eP*	**Pn**	**20 18 10.3**	**0.0**
PB15				*i* S	**Sn**	**20 18 35.1**	**+0.7**
PB08	**IPOC Station P**	**1.71**	**341**	*eP*	**Pn**	**20 18 11.3**	**+0.3**
PB08				*i* S	**Sn**	**20 18 36.1**	**+0.6**
PB05	**IPOC Station P**	**1.87**	**234**	*eP*	**Pn**	**20 18 12.6**	**+0.1**
TA01	**Diego Aracena**	**1.93**	**308**	*eP*	**Pn**	**20 18 13.1**	**0.0**
TA01				*i* S	**Sn**	**20 18 39.5**	**+0.3**
TA01				IAML		20 18 42.4	
	comp=E,570nm,0.2s						
PB11	**IPOC Station P**	**2.25**	**333**	*eP*	**Pn**	**20 18 16.8**	**-0.2**
PB11				*i* S	**Sn**	**20 18 46.4**	**+0.1**
PB11				IAML		20 18 47.7	
	comp=E,599nm,0.4s						
LPAZ	**La Paz**	**5.46**	**4**	P	**Pn**	**20 18 59.0**	**-0.1**
	comp=E,1.0nm,0.3s,baz=159,slow=5.9,SNR=16						
LPAZ				S	**Sn**	**20 20 02.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=237,slow=8.7,SNR=1.4						
TORD	**Torodi Ar. Bea**	**77.14**	**70**	P	**P**	**20 29 16.8**	**+0.2**
	comp=E,0.6nm,0.3s,baz=257,slow=5.6,SNR=10						
MKAR	**Makanchi Array**	**145.65**	**36**	PKPbc	**PKiKP**	**20 37 03.0**	**-0.7**
	comp=E,0.2nm,0.4s,baz=306,slow=4.7,SNR=3.4						

*IDC **30** 20:17:50.3±0.9, 37°.16N×137°.18E, h260km±9km, mb3.3/17, mb1 3.4/23, mb1mx3.2/47, mbtmp4.0/23, Error ellipse: s-maj=15.6km s-min=11.0km az=77.0*
*JMA **30** 20:17:51.0±0.1, 37°.10N×137°.29E, h257km±1km, M3.5*
*NIED **30** 20:17:51.0, 37°.10N×137°.29E, h257km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr=0.56; Mθθ=8.14; Mφφ=-7.58; Mrθ=-1.69; Mθφ=3.58; Mφr=-0.18; Fault plane solution: M0 8.79000×10^14 NP1: φs=237.00000°, δ=86.00000°, λ=171.00000°. NP2: φs=328.00000°, δ=81.00000°, λ=4.00000°.*
ISC 30 20:17:49.9±0.6, 37°.14N±0°.05×137°.24E±0°.06, h262km±5km, n45, σ0°90/62, mb3.6/17, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSZ	**Suzu**	**0.33**	**18**	P	**Pn**	**20 18 24.4**	**+0.7**
JSZ				S	**S**	**20 18 50.2**	**-0.2**
JJH	**Hakui**	**0.42**	**240**	P	**Pn**	**20 18 24.8**	**+0.8**
JJH				S	**S**	**20 18 50.6**	**-0.2**
JHG	**Hegura jima**	**0.75**	**341**	P	**Pn**	**20 18 26.0**	**+1.0**
JHG				*eS*	**S**	**20 18 52.7**	**0.0**
MAT	**Matsushiro**	**0.98**	**127**	P	**Pn**	**20 18 26.6**	**+0.4**
MAT				S	**S**	**20 18 55.3**	**+0.6**
MAT	**Matsushiro**	**0.98**	**127**	P	**Pn**	**20 18 26.7**	**+0.5**
MAT				*eS*	**S**	**20 18 53.9**	**-0.8**
MJAR	**Matsushiro Arr**	**0.98**	**127**	P	**Pn**	**20 18 27.1**	**+0.9**
	7.0nm,0.3s,baz=299,slow=5.9,SNR=108						
JKG	**Kaga**	**1.12**	**221**	P	**Pn**	**20 18 27.5**	**+0.6**
JKG				*eS*	**S**	**20 18 55.6**	**-0.5**
JSD	**Sado**	**1.21**	**42**	P	**Pn**	**20 18 28.2**	**+0.8**
JSD				S	**S**	**20 18 56.9**	**-0.1**
JYTA	**Yamagatataniai**	**1.59**	**195**	P	**Pn**	**20 18 30.7**	**+0.6**
JYTA				S	**S**	**20 19 01.8**	**0.0**
JRY	**Ryogami san**	**1.75**	**129**	P	**Pn**	**20 18 31.2**	**-0.1**
JNS	**Sasagawa**	**1.79**	**67**	P	**Pn**	**20 18 32.3**	**+0.7**
JAG	**Ashikaga**	**1.92**	**111**	P	**Pn**	**20 18 32.5**	**-0.2**
JYN	**Shimob**	**1.95**	**147**	P	**Pn**	**20 18 33.3**	**+0.2**
JAW	**Awa shima**	**2.07**	**50**	P	**Pn**	**20 18 34.8**	**+0.9**
JAW				*eS*	**S**	**20 19 07.3**	**-1.5**
JFNN	**Fujinakano**	**2.27**	**148**	P	**Pn**	**20 18 36.3**	**+0.5**
JWT	**Wachi**	**2.37**	**219**	P	**Pn**	**20 18 37.0**	**+0.2**
JOD2	**Odawara 2**	**2.40**	**141**	P	**Pn**	**20 18 37.3**	**+0.2**
JFT	**Otama**	**2.50**	**80**	P	**Pn**	**20 18 38.9**	**+0.9**
JFT				S	**S**	**20 19 15.4**	**-0.7**
JIE	**Ise**	**2.77**	**189**	P	**Pn**	**20 18 41.6**	**+0.8**
JIE				S	**S**	**20 19 20.7**	**-0.5**
JYK	**Kaneyama**	**3.04**	**53**	P	**Pn**	**20 18 44.5**	**+1.0**
JYK				S	**S**	**20 19 25.1**	**-1.0**
JWY	**Kouya**	**3.20**	**205**	P	**Pn**	**20 18 46.1**	**+0.6**
JHJ	**Hachijo jima 2**	**4.52**	**152**	P	**Pn**	**20 19 00.1**	**-0.2**
	15nm,0.3s,baz=16,slow=22,SNR=5.5						
JHJ				S	**S**	**20 19 55.0**	**-1.6**
	35nm,0.3s,baz=130,slow=23,SNR=8.2						
JNU	**Nakatsue**	**6.57**	**234**	P	**Pn**	**20 19 25.0**	**-0.4**
	0.7nm,0.3s,baz=37,slow=5.8,SNR=7.6						
JNU				S	**S**	**20 20 39.2**	**-2.9**
	0.3nm,0.3s,baz=221,slow=20,SNR=1.6						
KSRS	**Korea Array**	**7.43**	**275**	P	**Pn**	**20 19 37.9**	**+1.8**
	0.3nm,0.3s,baz=92,slow=13,SNR=14						
ASAJ	**Asahikawa**	**8.07**	**29**	P	**Pn**	**20 19 42.7**	**-1.3**
	17nm,0.3s,baz=223,slow=14,SNR=189						
ASAJ				S	S	20 21 07.3	-8.9
	0.5nm,0.3s,baz=114,slow=28,SNR=1.1						
USRK	**Ussuriysk Ar.**	**8.10**	**332**	P	**Pn**	**20 19 45.9**	**+1.4**
	baz=139,slow=11,SNR=4.2						
JCJ	**Chichijima**	**10.85**	**156**	P	Pn	20 20 14.1	-5.0
	4.0nm,0.3s,baz=358,slow=22,SNR=8.5						
JCJ				S	S	20 22 06.0	-15
	12nm,0.3s,baz=288,slow=23,SNR=11						
KLR	**Kul'dur**	**12.73**	**343**	P	**Pn**	**20 20 41.5**	**-0.5**
	0.2nm,0.3s,baz=159,slow=7.4,SNR=8.0						
KLR				S	**S**	**20 23 00.8**	**-2.5**
	0.1nm,0.3s,baz=143,slow=21,SNR=1.7						
PETK	**Petropavlovsk-**	**21.41**	**35**	P	**P**	**20 22 18.9**	**+1.6**
	2.2nm,1.0s,baz=185,slow=6.0,SNR=5.0						
SONM	**Songino Array**	**24.97**	**305**	P	**P**	**20 22 49.5**	**-0.4**
	1.5nm,0.7s,baz=104,slow=8.3,SNR=13						
SONM				PcP	**PcP**	**20 26 18.1**	**+0.7**
	0.2nm,0.5s,baz=152,slow=2.4,SNR=1.6						
TIXI	**Tiksi**	**34.85**	**355**	P	**P**	**20 24 16.0**	**0.0**
	0.9nm,0.3s,baz=145,slow=5.9,SNR=8.6						
ZALV	**Zalesovo Beam**	**39.38**	**312**	P	**P**	**20 24 53.4**	**-0.8**
	0.9nm,0.3s,baz=103,slow=7.9,SNR=8.0						
ZALV				PcP	**PcP**	**20 26 56.2**	**-0.5**
	0.5nm,0.3s,baz=108,slow=3.2,SNR=3.4						
MKAR	**Makanchi Array**	**41.22**	**301**	P	**P**	**20 25 09.2**	**-0.2**
	0.8nm,0.5s,baz=87,slow=10,SNR=14						
MKAR				PcP	**PcP**	**20 27 03.3**	**+0.4**
	0.2nm,0.4s,baz=101,slow=1.5,SNR=3.9						
AAK	**Ala-Archa**	**47.48**	**297**	P	**P**	**20 25 59.4**	**+0.4**
	1.6nm,0.6s,baz=130,slow=6.6,SNR=12						
ARU	**Arti**	**54.05**	**318**	P	**P**	**20 26 46.7**	**-0.6**
	0.9nm,0.6s,baz=114,slow=7.7,SNR=4.9						
AKTO	**Aktyubinsk**	**56.10**	**311**	P	**P**	**20 27 02.0**	**0.0**
	0.7nm,0.4s,baz=68,slow=11,SNR=1.6						
WRA	**Warramunga Arr**	**56.84**	**183**	P	**P**	**20 27 08.0**	**+0.5**
	0.4nm,0.4s,baz=0.2,slow=7.5,SNR=15						
ASAR	**Alice Springs**	**60.56**	**184**	P	**P**	**20 27 33.9**	**+0.9**
	0.2nm,0.6s,baz=359,slow=6.1,SNR=4.9						
GEYT	**Alibeck**	**60.84**	**297**	P	**P**	**20 27 34.6**	**-0.2**
	1.8nm,0.7s,baz=338,slow=1.6,SNR=4.1						
ARCES	**ARCESS Array B**	**62.70**	**338**	P	**P**	**20 27 47.2**	**+0.6**
	0.5nm,0.4s,baz=56,slow=7.3,SNR=8.7						
FINES	**FINESS Array B**	**67.13**	**331**	P	**P**	**20 28 15.4**	**+0.2**
	1.0nm,0.3s,baz=58,slow=5.8,SNR=22						
KBZ	**Khabaz**	**68.27**	**309**	P	**P**	**20 28 23.4**	**+0.8**
	2.2nm,0.8s,baz=52,slow=2.6,SNR=6.4						
AKASG	**Malin Array Be**	**72.13**	**321**	P	**P**	**20 28 45.6**	**-0.2**
	2.0nm,0.4s,baz=49,slow=6.5,SNR=7.4						
NOA	**NORSAR Array B**	**72.76**	**336**	P	**P**	**20 28 50.0**	**+0.6**
	0.5nm,0.5s,baz=54,slow=7.7,SNR=9.4						
GERES	**GERESS Array B**	**80.81**	**326**	P	**P**	**20 29 34.2**	**-0.4**
	0.3nm,0.4s,baz=58,slow=7.5,SNR=2.9						

IDC 30 20:27:56.6±7.9, 27°.71N×85°.43E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.1/60, mbtmp3.3/4, ML3.3/1, MS3.7/1, Ms1 3.7/1, ms1mx2.4/33, Error ellipse: s-maj=134.1km s-min=67.1km az=6.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.21**	**353**	P	P	20 32 22.1	+0.1
	0.1nm,0.3s,baz=176,slow=11,SNR=5.1						
KURBB	**Kurchatov Arra**	**23.47**	**349**	P	P	20 33 07.7	0.0
	0.2nm,0.6s,baz=172,slow=11,SNR=2.2						
SONM	**Songino Array**	**25.89**	**34**	P	P	20 33 30.3	0.0
	0.2nm,0.4s,baz=215,slow=9.2,SNR=2.2						
JCJ	**Chichijima**	**49.99**	**77**	LR	LR	20 57 48.4	
	comp=Z,83nm,20.1s,baz=122,slow=36						
ARCES	**ARCESS Array B**	**53.89**	**338**	P	P	20 37 21.2	-0.1
	1.4nm,0.9s,baz=97,slow=7.7,SNR=3.6						

*NDI **30** 20:33:19.1±3.1, 26°.06N×95°.02E, h10km, ML3.7*
*IDC **30** 20:33:22.0±4.3, 25°.92N×95°.21E, h96km±47km, mb3.2/3, mb1 3.5/4, mb1mx2.9/63, mbtmp3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/27, Error ellipse: s-maj=169.0km s-min=24.0km az=60.0*
ISC 30 20:33:20.5±0.9, 26°.03N±0°.07×95°.10E±0°.06, h91km±14km, n25, σ1°41/30, mb3.8/3, 4C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIBR	**DIBRUGARH**	**1.44**	**353**	*eP*	**Pn**	**20 33 45.4**	**-0.1**
DIBR				IAML		20 34 12.4	
	comp=E,4µm,0.3s						
DIBR				IAML		20 34 12.4	
	comp=N,4µm,0.1s						
LKP	**Lekhapani**	**1.46**	**27**	*eP*	**Pn**	**20 33 45.9**	**+0.2**
LKP				*eS*	**Sn**	**20 34 04.1**	**-0.8**
LKP				IAML		20 34 10.1	
	comp=N,829nm,0.2s						
ITAN	**ITANAGAR**	**1.66**	**312**	*eP*	**Pn**	**20 33 49.2**	**+0.9**
ITAN				*eS*	**Sn**	**20 34 10.6**	**+1.1**
ITAN				IAML		20 34 11.9	
	comp=E,604nm,0.2s						
ZIRO	**ZIRO**	**1.86**	**323**	*eP*	**Pn**	**20 33 51.1**	**0.0**
TEZP	**TEZPUR**	**2.15**	**286**	*eP*	**Pn**	**20 33 55.6**	**+1.0**
TEZP				*eS*	**Sn**	**20 34 18.8**	**-1.9**
SILR	**SILCHAR**	**2.42**	**240**	*eP*	**Pn**	**20 33 59.2**	**+0.9**
SILR				*eS*	**Sn**	**20 34 28.7**	**+1.5**
SHL	**Shillong**	**2.94**	**262**	*eP*	**Pn**	**20 34 05.3**	**0.0**
SHL				*eS*	**Sn**	**20 34 36.8**	**-3.1**
GUWA	**GUWAHATI**	**3.07**	**274**	*eP*	**Pn**	**20 34 06.8**	**-0.2**
GUWA				*eS*	**Sn**	**20 34 40.2**	**-2.6**
GUWA				IAML		20 34 42.0	
	comp=E,172nm,0.5s						
CM33	**Chiang Mai Arr**	**8.01**	**153**	P	**Pn**	**20 35 14.0**	**-0.2**
CMMT	**Chiang Mai**	**8.02**	**153**	P	**Pn**	**20 35 14.0**	**-0.2**
	comp=E,2.4nm,0.9s						
CM34	**Chiang Mai Arr**	**8.07**	**152**	P	**Pn**	**20 35 15.0**	**+0.1**
CM32	**Chiang Mai Arr**	**8.12**	**154**	P	**Pn**	**20 35 17.0**	**+1.4**
CM35	**Chiang Mai Arr**	**8.22**	**152**	P	**Pn**	**20 35 17.0**	**0.0**
CM15	**Chiang Mai Arr**	**8.33**	**154**	P	**Pn**	**20 35 20.5**	**+2.0**
	comp=E,3.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**8.33**	**154**	P	**Pn**	**20 35 18.1**	**-0.5**
	comp=E,0.3nm,0.3s,baz=331,slow=13,SNR=23						
CM36	**Chiang Mai Arr**	**8.34**	**153**	P	**Pn**	**20 35 19.0**	**+0.3**
CM02	**Chiang Mai Arr**	**8.36**	**154**	P	**Pn**	**20 35 19.0**	**+0.1**
	comp=E,44nmcomp=E,5.1nm,0.8s						
CM09	**Chiang Mai Arr**	**8.36**	**154**	P	**Pn**	**20 35 20.6**	**+1.5**
	comp=E,44nmcomp=E,5.1nm,0.9s						
CM01	**Chiang Mai Arr**	**8.37**	**154**	P	**Pn**	**20 35 21.0**	**+1.9**
	comp=E,40nmcomp=E,4.9nm,0.9s						
CM05	**Chiang Mai Arr**	**8.38**	**154**	P	**Pn**	**20 35 20.9**	**+1.7**
	comp=E,39nmcomp=E,3.6nm,1.0s						
UBPT	**Khong Chiam**	**14.43**	**136**	P	**Pn**	**20 36 38.3**	**-2.1**
MKAR	**Makanchi Array**	**23.09**	**337**	P	**P**	**20 38 20.7**	**+2.4**
	comp=E,0.3nm,0.5s,baz=151,slow=11,SNR=5.6						
AAK	**Ala-Archa**	**23.65**	**320**	LR	LR	20 48 02.4	
	comp=E,23nm,19.6s,baz=142,slow=37						
WRA	**Warramunga Arr**	**59.50**	**136**	P	**P**	**20 43 14.6**	**+0.2**
	comp=E,0.7nm,0.5s,baz=322,slow=7.5,SNR=24						
ASAR	**Alice Springs**	**62.05**	**139**	P	**P**	**20 43 31.3**	**-0.4**
	comp=E,0.5nm,0.6s,baz=324,slow=6.4,SNR=8.4						

INET 30 20:36:45.6, 15°.93N×87°.22W, h15km, MW4.0, Honduras

IDC 30 20:38:18.7±27.0, 27°.89N×85°.16E, h0km, mb3.4/2, mb1 3.3/3, mb1mx2.9/55, mbtmp3.3/3, ML3.0/1, Error ellipse: s-maj=442.9km s-min=83.6km az=25.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.00**	**354**	P	P	20 42 42.0	+0.1
	0.1nm,0.3s,baz=168,slow=12,SNR=3.6						
SONM	**Songino Array**	**25.88**	**34**	P	P	20 43 52.3	0.0
	0.4nm,0.7s,baz=226,slow=8.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**26.04**	**360**	P	P	20 43 53.3	-0.1
	0.4nm,0.5s,baz=188,slow=8.7,SNR=2.4						

*NIC **30** 20:43:03.7±0.0, 36°.01N×32°.69E, h11km±1km, Ml2.9/4*
*ISK **30** 20:43:03.8, 36°.12N×32°.49E, h7km, ML3.3/23*
*GII **30** 20:43:04.2±0.0, 35°.99N×32°.50E, h1km, MD2.2/1, Mm2.6/4*
ISC 30 20:43:03.4±1.1, 36°.06N±0°.03×32°.46E±0°.04, h8km±10km, n44, σ1°49/56, 2C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.21**	**328**	PG	**Pg**	**20 43 08.2**	**+0.5**
GAZI				SG	**Sg**	**20 43 11.0**	**+0.4**
BOZY	**Bozyazi-Mersin**	**0.43**	**83**	PG	**Pb**	**20 43 12.6**	**-0.5**
YORU	**Yoruktepe-Mers**	**0.78**	**82**	PG	**Pb**	**20 43 18.8**	**-0.3**
YORU				SG	**Sb**	**20 43 29.5**	**-0.3**
OREN	**Orenkoy-Mersin**	**0.83**	**79**	PG	**Pg**	**20 43 19.2**	**-0.1**
OREN				SG	**Sb**	**20 43 30.9**	**-0.4**
AKDN	**Akdeniz- Kıbrı**	**0.86**	**151**	PG	**Pg**	**20 43 21.3**	**+1.4**
AKK1	**Akkuyu-Mersin**	**0.88**	**84**	PG	**Pb**	**20 43 20.9**	**0.0**
TEVE	**Tevekalti-Mers**	**0.89**	**64**	PG	**Pg**	**20 43 19.8**	**-0.6**
TEVE				SG	**Sb**	**20 43 32.3**	**-0.7**
AKK2	**Akkuyu-Mersin**	**0.89**	**84**	PG	**Pb**	**20 43 20.7**	**-0.3**
AKK2				SG	**Sb**	**20 43 33.3**	**+0.2**
AKKU	**Akkuyu-Mersin**	**0.89**	**83**	PG	**Pb**	**20 43 20.9**	**-0.2**
TEPK	**Tepekoy-MERSIN**	**0.90**	**79**	PG	**Pb**	**20 43 21.0**	**-0.2**
ALFC	**Alefka**	**0.90**	**172**	⇑P	**Pg**	**20 43 20.3**	**-0.4**
ALFC				S	**Sg**	**20 43 32.6**	**+0.1**
ALFC				AML	AML	20 43 33.7	
	2.0nm,0.1s						
ALFC				AML	AML	20 43 33.7	
	2.0nm,0.1s						
ALFC				AML	AML	20 43 35.6	
	2.5nm,0.3s				

SWI	Sorong	21.27 282	P			20 55 05.8
	12nm,1.1s					
DZM	Mont Dzumac	21.53 141	LR	LR		21 02 08.5
	comp=Z,208nm,19.7s,baz=271,slow=32					
MTN	Manton Dam	21.87 249		P	20 55 10.4	-0.7
MTN			IAmb	IAmb	20 55 12.5	
	comp=Z,34nm,1.2s					
WB0	Warramunga Arr	22.24 229	P	P	20 55 14.8	-0.3
WB0			IAmb	IAmb	20 55 17.4	
	comp=Z,14nm,0.8s					
WR0	Warramunga Arr	22.25 228	P	P	20 55 14.6	-0.6
WRAB	Tennant Creek	22.37 229	P	P	20 55 15.8	-0.7
WRAB			IAmb	IAmb	20 55 18.7	
	comp=Z,16nm,0.8s					
WB2	Warramunga Arr	22.38 229	P	P	20 55 16.1	-0.5
WB2			IAmb	IAmb	20 55 18.8	
	comp=Z,18nm,0.9s					
WRA	Warramunga Arr	22.39 229	P	P	20 55 16.3	-0.4
	comp=Z,10nm,0.6s,baz=52,slow=10,SNR=35					
WRA	Warramunga Arr	22.39 229	P	P	20 55 15.4	-1.3
KNRA	Kununurra	24.97 244	P	P	20 55 40.2	-1.4
AS31	Alice Springs	25.09 222		P	20 55 41.9	-0.7
AS31			IAmb	IAmb	20 55 45.6	
	comp=Z,8.7nm,0.7s					
ASAR	Alice Springs	25.09 222	P	P	20 55 42.8	+0.1
	comp=Z,27nm,0.8s,baz=56,slow=9.1,SNR=133					
ASAR			PcP	PcP	20 59 14.7	-1.7
	comp=Z,0.4nm,0.8s,baz=34,slow=3.7,SNR=1.7					
ASAR	Alice Springs	25.09 222	P	P	20 55 42.2	-0.5
STKA	Stephens Creek	27.95 199	P	P	20 56 08.3	0.0
	comp=Z,1.7nm,0.7s,baz=356,slow=11,SNR=4.3					
BATI	Baumata	28.48 259	P	P	20 56 12.9	-0.3
	comp=Z,20nm,0.6s,baz=187,slow=4.2,SNR=4.3					
FITZ	Fitzroy Crossi	28.64 242	P	P	20 56 13.7	-0.9
	comp=Z,6.4nm,0.5s,baz=54,slow=8.0,SNR=36					
FITZ	Fitzroy Crossi	28.64 242		P	20 56 13.7	-0.9
FITZ			IAmb	IAmb	20 56 18.6	
	comp=Z,7.3nm,0.7s					
DAV	Davao City (W)	29.24 295	LR	LR	21 07 20.0	
	comp=Z,69nm,18.0s,baz=103,slow=35					
MJAR	Matsushiro Arr	43.84 344	P	P	20 58 22.0	-1.8
	comp=Z,1.2nm,0.8s,baz=177,slow=8.3,SNR=5.9					
MJAR			LR	LR	21 15 01.7	
	comp=Z,33nm,20.9s,baz=240,slow=34					
JHS	Saijyo	44.11 337	P	P	20 58 26.3	+0.3
JHS			IAmb	IAmb	20 58 27.8	
	comp=Z,9.1nm,0.7s					
JSD	Sado	45.23 345	P	P	20 58 35.5	+0.7
JSD			IAmb	IAmb	20 58 36.2	
	comp=Z,4.7nm,0.9s					
KSRS	Korea Array	48.34 334	P	P	20 59 00.0	+0.8
	comp=Z,0.5nm,0.5s,baz=218,slow=33,SNR=5.3					
KSRS			LR	LR	21 19 17.9	
	comp=Z,27nm,18.9s,baz=121,slow=36					
MDJ	Mudanjiang	53.87 340	P	P	20 59 39.2	-1.4
MDJ			IAmb	IAmb	20 59 45.3	
	comp=Z,15nm,1.4s					
KLR	Kul'dur	57.36 344	LR	LR	21 21 24.8	
	comp=Z,30nm,19.5s,baz=172,slow=32					
CMAR	Chiang Mai Arr	57.53 296	P	P	21 00 06.8	-0.6
	comp=Z,1.4nm,0.8s,baz=122,slow=5.6,SNR=15					
CMAR			LR	LR	21 25 26.5	
	comp=Z,9.1nm,18.4s,baz=45,slow=37					
CMAR	Chiang Mai Arr	57.53 296	P	P	21 00 06.5	-0.9
PETK	Petropavlovsk-	58.64 4	P	P	21 00 14.7	+0.3
	comp=Z,3.6nm,1.0s,baz=163,slow=7.5,SNR=2.7					
PETK			LR	LR	21 22 01.9	
	comp=Z,28nm,20.0s,baz=184,slow=32					
MA2	Magadan	64.94 359	LR	LR	21 24 30.4	
	comp=Z,21nm,21.9s,baz=152,slow=32					
SONM	Songino Array	66.57 328	P	P	21 01 06.5	-1.1
	comp=Z,1.4nm,0.6s,baz=140,slow=5.1,SNR=10					
SONM			LR	LR	21 28 28.2	
	comp=Z,38nm,21.0s,baz=130,slow=34					
YAK	Yakutsk	69.57 349	LR	LR	21 32 39.4	
	comp=Z,12nm,18.4s,baz=274,slow=36					
VNDA	Vanda	72.11 178	P	P	21 01 41.5	+0.3
	comp=Z,1.2nm,1.0s,baz=323,slow=7.9,SNR=4.4					
TIXI	Tiksi	78.55 353	LR	LR	21 34 11.8	
	comp=Z,16nm,20.6s,baz=254,slow=34					
MK31	Makanchi Array	80.40 319	P	P	21 02 29.2	+0.3
MKAR	Makanchi Array	80.40 319	P	P	21 02 27.9	-1.0
	comp=Z,0.8nm,0.8s,baz=119,slow=5.2,SNR=8.7					
MKAR	Makanchi Array	80.40 319		P	21 02 28.9	+0.1
ZALV	Zalesovo Beam	81.37 327	P	P	21 02 31.7	-2.0
	comp=Z,2.0nm,0.7s,baz=109,slow=6.1,SNR=9.6					
ZALV	Zalesovo Beam	81.37 327	P	P	21 02 32.8	-1.0
MLY	Manley	81.85 21	P	P	21 02 39.2	+3.0
MLY			IAmb	IAmb	21 02 40.5	
	comp=Z,2.5nm,0.6s					
IL31		83.14 22	P	P	21 02 44.9	+2.1
ILAR	Eielson Array	83.14 22	P	P	21 02 41.9	-1.0
	comp=Z,1.4nm,0.6s,baz=247,slow=5.2,SNR=19					
AAK	Ala-Archa	84.64 314	LR	LR	21 40 50.9	
	comp=Z,24nm,20.7s,baz=164,slow=36					
NVAR	Mina Array Bea	93.14 52	P	P	21 03 32.7	+0.8
	comp=Z,0.4nm,0.6s,baz=260,slow=6.2,SNR=3.8					
KVN	Kaiserville	93.34 51	P	P	21 03 38.5	+5.7
MFID	Camas Ranch	95.32 47	P	P	21 03 44.0	+2.4
HLID	Hailey	96.36 47	P	P	21 03 49.1	+2.7
YKA	Yellowknife Ar	96.44 28	P	P	21 03 47.0	+0.9
	comp=Z,0.2nm,0.6s,baz=264,slow=4.4,SNR=5.2					
PSUT	Pine Spring	96.63 52		P	21 03 50.8	+2.9
GERES	GERESS Array B	124.30 328	PKP	PKPdf	21 09 13.9	-2.3
	comp=Z,0.2nm,0.5s,baz=169,slow=2.0,SNR=2.4					
TORD	Torodi Ar. Bea	149.82 287	PKPbc	PKPbc	21 10 07.3	-0.9
	comp=Z,3.7nm,0.9s,baz=49,slow=2.5,SNR=11					

*IDC **30** 21:22:49.9±4.4, 27°.76N×130°.41E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.4/52, mbtmp3.7/9, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.4/44, Error ellipse: s-maj=93.6km s-min=31.4km az=126.0*

*JMA **30** 21:22:55.2±0.1, 27°.88N×130°.17E, h56km±2km, M3.4*

ISC 30 21:22:52.5±1.5, 27°.86N±0°.03×130°.22E±0°.04, h11km±10km, n30, σ1°33/46, mb3.5/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	0.50	335	P	Pn	21 23 06.4	+0.7
JZK				S	Sn	21 23 15.3	+0.8
JAM	Amami Oshima	0.77	316	P	Pn	21 23 09.5	+0.1
JAM				eS	Sb	21 23 19.6	+1.1
JAMN	Amaminishikomi	1.00	293	P	Pb	21 23 12.6	+0.7
JAMN				eS	Sg	21 23 25.4	+0.6
JTK	Tokunoshima	1.12	267	P	Pg	21 23 14.8	+0.6
JTK				eS	Sg	21 23 27.9	-0.9
JOKE	Okinoerabujima	1.54	252	P	Pn	21 23 20.9	+0.9
JOKE				eS	Sn	21 23 38.7	-1.4
JTAJ	Takarajima	1.57	326	P	Pn	21 23 20.7	+0.3
JTAJ				S	Sn	21 23 39.5	-1.2
JYRO	Yoronjima	1.78	243	P	Pn	21 23 24.1	+0.9
JYRO				eS	Sn	21 23 44.0	-1.8
JNN	Nakanoshima	2.00	351	P	Pb	21 23 27.5	-1.5
JOW	Kunigami	2.01	240	Pn	Pn	21 23 27.3	+0.8
	50nm,0.3s,baz=103,slow=21,SNR=153						
JOW				Sn	Sn	21 23 50.1	-1.4
	20nm,0.3s,baz=71,slow=29,SNR=14						
JOW	Kunigami	2.01	240	P	Pn	21 23 27.2	+0.8
JOW				eS	Sn	21 23 51.1	-0.5
JKDJ	Kitadaitoujima	2.13	153	P	Pb	21 23 29.8	-1.4
JKDJ				eS	Sn	21 23 54.4	-0.2
JIH	Iheya	2.16	248	P	Pn	21 23 29.2	+0.7
JIH				eS	Sn	21 23 53.1	-2.2
JMZ	Minamidaito 2	2.22	156	P	Pn	21 23 30.6	+1.3
JMZ				S	Sn	21 23 56.3	-0.5
JNTH	Nagotoyohara	2.37	236	P	Pn	21 23 32.2	+0.9
JYAK	Yakushimahirau	2.39	6	P	Pb	21 23 33.4	-2.1
JYAK				eS	Sn	21 24 01.0	+0.1
JKC	Kuchinoerabu	2.59	360	P	Pb	21 23 36.1	-3.0
JKC				eS	Sn	21 24 05.7	-0.4
JMTN	Minamitane	2.60	13	P	Pb	21 23 36.3	-2.9
JMTN				eS	Sn	21 24 06.5	+0.3
JJT3	Tamagusuku3	2.76	232	P	Pn	21 23 37.8	+1.0
JAGN	Aguni-jima	2.94	245	P	Pn	21 23 40.0	+0.8
JAGN				eS	Sn	21 24 11.6	-2.8
JKE	Kume jima 2	3.42	244	P	Pn	21 23 46.1	+0.3
JKE				S	Sn	21 24 24.3	-2.1
JNU	Nakatsue	5.28	6	Pn	Pn	21 24 12.7	+1.3
	2.9nm,0.3s,baz=218,slow=2.9,SNR=23						
JNU				Sn	Sn	21 25 11.2	-1.2
	1.2nm,0.3s,baz=320,slow=23,SNR=8.2						
SONM	Songino Array	27.23 324		P	P	21 28 37.8	+1.2
	0.3nm,0.6s,baz=133,slow=11,SNR=4.4						
BATI	Baumata	38.37 190		LR	LR	21 46 02.9	
	comp=Z,77nm,20.3s,baz=84,slow=36						
MKAR	Makanchi Array	41.81 310		P	P	21 30 42.6	+0.3
	0.1nm,0.5s,baz=89,slow=9.7,SNR=2.6						
ZALV	Zalesovo Beam	42.06 321		P	P	21 30 45.0	+0.8
	0.5nm,0.4s,baz=101,slow=7.5,SNR=2.9						
KURBB	Kurchatov Arra	44.93 315		P	P	21 31 05.9	-1.5
	0.2nm,0.5s,baz=98,slow=8.3,SNR=2.4						
KBZ	Khabaz	69.50 309		LR	LR	22 09 15.1	
	comp=Z,20nm,18.2s,baz=345,slow=40						
FINES	FINESS Array B	72.32 331		P	P	21 34 17.4	-0.6
	0.9nm,0.4s,baz=66,slow=5.7,SNR=15						
AKASG	Malin Array Be	75.44 320		P	P	21 34 37.8	+1.3
	0.3nm,0.4s,baz=60,slow=6.4,SNR=1.7						
NOA	NORSAR Array B	78.63 334		P	P	21 34 54.4	+0.1
	0.3nm,0.6s,baz=51,slow=5.7,SNR=3.8						

*OTT **30** 21:24:08.8±0.5, 81°.39N×87°.32W, h18km, ML3.4/2, 160km northeast from Eureka, Nu Sverdrup Seismic Zone.*

ISC 30 21:24:08.8±2.6, 81°.3N±0°.1×86.7°W±0°.1, h10km, n5, σ2°32/11, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EUNU	Eureka	1.22	178	PG	Pg	21 24 33.0	+0.8
EUNU				SG	Sn	21 24 51.5	+3.0
EUNU				Trac		21 24 51.8	
	comp=Z,62nm,0.2s						
TULEG	Thule	5.83	135	PN	Pn	21 25 36.1	+1.0
TULEG				SN	Sn	21 26 40.0	-1.8
TULEG				Trac		21 26 43.9	
	comp=Z,2.8nm,0.2s						
TULEG	Thule	5.83	135	*i* P	Pn	21 25 35.0	-0.1
TULEG				*i* P	Pn	21 25 36.2	+1.0
TULEG				*i* S	Sn	21 26 40.5	-1.3
TULEG				IAML		21 26 45.5	
	comp=Z,6.6nm,0.3s						
RES	Resolute Bay	6.83	199	PN	Pn	21 25 48.1	-0.7
RES				SN	Sn	21 27 02.4	-3.9
RES				Trac		21 27 13.4	
	comp=Z,20nm,1.1s						
NEEM	North Greenlan	7.47	102	*i* P	Pn	21 26 00.1	+2.2
NEEM				*e*S	Sn	21 27 20.3	-2.4
NEEM				IAML		21 27 25.5	
	comp=Z,5.7nm,0.2s						

*NEIC **30** 21:25:10.1±1.2, 5°.28S×150°.07E, h35km±2km, mb4.3/10, Error ellipse: s-maj=18.0km s-min=5.4km az=141.0*

*IDC **30** 21:25:10.6±4.6, 5°.29S×152°.32E, h48km±43km, mb3.7/14, mb1 3.9/15, mb1mx3.6/51, mbtmp4.0/15, ML2.1/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/37, Error ellipse: s-maj=37.9km s-min=26.1km az=124.0*

ISC 30 21:25:09.9±0.8, 5°.29S±0°.10×152°.4E±0°.1, h40km, n38, σ0°88/32, mb4.0/18, MS3.2/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.11	351		Pn	21 25 30.5	+1.5
PMG	Port Moresby	6.57	231	P	Pn	21 26 45.3	+1.4
	2.6nm,0.3s,baz=31,slow=10,SNR=6.2						
PMG				S	Sn	21 27 57.4	-0.3
	14nm,0.3s,baz=148,slow=22,SNR=8.1						
PMG	Port Moresby	6.57	231		Pn	21 26 44.2	+0.2
GUMO	Guam	20.18	338	LR	LR	21 36 36.7	
	comp=Z,33nm,21.5s,baz=148,slow=34						
MTN	Manton Dam	22.24	249	P	P	21 30 04.1	+0.7
MTN				IAmb	IAmb	21 30 08.9	
	comp=Z,17nm,1.1s						
WB0	Warramunga Arr	22.64	229	P	P	21 30 08.1	+0.5
WB0				IAmb	IAmb	21 30 15.3	
	comp=Z,15nm,1.4s						
WR0	Warramunga Arr	22.64	228	P	P	21 30 07.8	+0.2
WR0				IAmb	IAmb	21 30 15.4	
	comp=Z,11nm,1.2s						
WB2	Warramunga Arr	22.77	229	P	P	21 30 09.7	+0.6
WB2				IAmb	IAmb	21 30 14.4	
	comp=Z,17nm,1.3s						
WRA	Warramunga Arr	22.78	229	P	P	21 30 09.2	0.0
	comp=Z,3.3nm,0.7s,baz=52,slow=10.0,SNR=11						
WRA	Warramunga Arr	22.78	229	P	P	21 30 10.5	+1.3
KNRA	Kununurra	25.35	244	P	P	21 30 35.0	+1.6
AS31	Alice Springs	25.48	222	P	P	21 30 35.2	+0.7
ASAR	Alice Springs	25.48	222	P	P	21 30 34.9	+0.3
	comp=Z,2.7nm,0.8s,baz=56,slow=9.2,SNR=13						
ASAR	Alice Springs	25.48	222	P	P	21 30 35.6	+1.1
LHI	Lord Howe Isla	26.84	167	P	P	21 30 47.8	+1.2
STKA	Stephens Creek	28.30	200	LR	LR	21 43 18.1	
	comp=Z,68nm,18.5s,baz=33,slow=38						
FITZ	Fitzroy Crossi	29.03	242	P	P	21 31 04.9	-1.5
	comp=Z,2.6nm,0.6s,baz=88,slow=6.7,SNR=2.1						
FITZ	Fitzroy Crossi	29.03	242	P	P	21 31 05.1	-1.3
FITZ				IAmb	IAmb	21 31 24.5	
	comp=Z,16nm,1.5s						
KAPI	Kappang	32.46	269	LR	LR	21 47 07.2	
	comp=Z,44nm,19.1s,baz=140,slow=41						
JCJ	Chichijima	33.67	344	LR	LR	21 44 12.1	
	comp=Z,26nm,20.4s,baz=102,slow=34						
NWAO	Narrogin (SRO)	42.72	225	LR	LR	21 51 14.0	
	comp=Z,79nm,19.2s,baz=91,slow=37						
MJAR	Matsushiro Arr	43.67	343	LR	LR	21 50 30.6	
	comp=Z,14nm,20.6s,baz=215,slow=35						
KLR	Kul'dur	57.19	344	P	P	21 34 52.0	-0.8
	comp=Z,0.4nm,0.4s,baz=180,slow=8.1,SNR=1.6						
CMAR	Chiang Mai Arr	57.68	296	P	P	21 34 57.2	+0.4
	comp=Z,0.3nm,0.3s,baz=114,slow=6.0,SNR=6.1						
SONM	Songino Array	66.50	328	P	P	21 35 55.7	+0.1
	comp=Z,0.6nm,0.5s,baz=147,slow=5.8,SNR=6.0						
SONM	Songino Array	66.50	328	P	P	21 35 55.8	+0.1
SONM				IAmb	IAmb	21 35 57.4	
	comp=Z,0.7nm,0.8s						
VNDA	Vanda	72.36	178	LR	LR	22 04 11.6	
	comp=Z,145nm,20.1s,baz=334,slow=32						
MKAR	Makanchi Array	80.40	319	P	P	21 37 17.4	+0.1
	comp=Z,0.4nm,0.6s,baz=94,slow=6.9,SNR=7.0						
ZALV	Zalesovo Beam	81.31	326	P	P	21 37 21.5	-0.5
	comp=Z,0.7nm,0.5s,baz=116,slow=7.6,SNR=4.5						
ILAR	Eielson Array	82.78	22	P	P	21 37 28.4	-1.1
	comp=Z,1.6nm,0.8s,baz=244,slow=5.4,SNR=14						
ILAR	Eielson Array	82.78	22	P	P	21 37 29.0	-0.5
KURK	Kurchatov	83.88	322	P	P	21 37 34.9	-0.6
KURBB	Kurchatov Arra	83.91	322	P	P	21 37 34.9	-0.7
	comp=Z,0.9nm,0.8s,baz=104,slow=4.2,SNR=7.5						
AAK	Ala-Archa	84.68	314	P	P	21 37 39.5	-0.4
	comp=Z,0.5nm,0.4s,baz=20,slow=8.4,SNR=4.6						
BVAR	Borovoye Array	89.36	323	P	P	21 38 01.4	-0.8
	comp=Z,1.2nm,0.7s,baz=148,slow=8.5,SNR=6.4						
NVAR	Mina Array Bea	92.74	52	P	P	21 38 18.6	0.0
	comp=Z,0.1nm,0.3s,baz=271,slow=5.3,SNR=2.5						
YKA	Yellowknife Ar	96.07	28	P	P	21 38 33.6	+0.7
	comp=Z,0.4nm,0.7s,baz=267,slow=4.2,SNR=7.8						
TORD	Torodi Ar. Bea	150.03	287	PKPbc	PKPbc	21 44 56.1	-1.2
	comp=Z,0.9nm,0.7s,baz=71,slow=2.1,SNR=4.1						

IDC 30 21:38:09.2±16.0, 28°.28N×92°.26E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.1/55, mbtmp3.4/3, Error ellipse: s-maj=526.6km s-min=36.0km az=90.0, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	Songino Array	22.41	26	P	P	21 43 09.5	+0.1
	0.4nm,0.8s,baz=214,slow=10.0,SNR=3.8						
WRA	Warramunga Arr	62.87	135	P	P	21 48 37.9	+0.6
	0.5nm,0.6s,baz=327,slow=6.6,SNR=5.4						
ASAR	Alice Springs	65.41	138	P	P	21 48 53.2	-0.7
	0.4nm,0.7s,baz=317,slow=7.3,SNR=4.3						

IDC 30 22:08:08.8±1.7, 1°.12N×126°.73E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/44, mbtmp3.6/4, Error ellipse: s-maj=166.5km s-min=21.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.22	161	P	P	22 13 06.2	-1.0
	1.7nm,0.8s,baz=339,slow=12,SNR=8.6						
ASAR	Alice Springs	25.61	165	P	P	22 13 40.9	+0.9
	0.5nm,0.7s,baz=345,slow=7.5,SNR=5.7						
MKAR	Makanchi Array	59.70	326	P	P	22 18 15.1	-0.1
	0.2nm,0.2s,baz=122,slow=8.0,SNR=7.9						
KURBB	Kurchatov Arra	63.93	328	P	P	22 18 43.5	0.0
	0.5nm,0.6s,baz=128,slow=5.9,SNR=5.7						

*NNC **30** 22:11:40.4±1.6, 47°.59N×82°.43E, h0km, mb3.0, mpv2.1, Error ellipse: s-maj=8.7km s-min=8.3km az=37.0*

*SOME **30** 22:11:40.6, 47°.55N×81°.95E, h0km*

ISC 30 22:11:41.7±1.0, 47°.58N±0°.05×82°.22E±0°.08, h12km, n5, σ1°14/9, 3C-3D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	0.79	176	⇑P	Pg	22 11 56.2	-0.7
	0.4nm,0.2s,baz=5.3,slow=18,SNR=330						
MK31				⇓S	Sg	22 12 07.2	-0.1
	3.1nm,0.3s,baz=10.0,slow=29,SNR=6.4						
MAKZ	Makanchi	0.79	192	⇑P	Pg	22 11 56.6	-0.4
	0.9nm,0.3s						
MAKZ				⇑S	Sb	22 12 08.0	-0.1
	7.4nm,0.6s						
ZSN	Zaisan	1.80	93	*e*P	Pn	22 12 12.4	-0.2
	3.7nm,0.2s						
ZSN				*e*S	Sn	22 12 35.8	+0.4
	8.5nm,0.3s						
SEM	Semipalatinsk	3.11	336	*e*P	Pb	22 12 38.2	+1.0
	3.2nm,0.2s						
SEM				*e*S	Sg	22 13 19.8	-1.9
	8.9nm,0.2s						
KURBB	Kurchatov Arra	3.89	323	⇓Pg	Pb	22 12 51.7	+1.5
	0.7nm,0.5s						
KURBB				⇓Lg	Lg	22 13 44.1	
	9.4nm,0.6s						

*IDC **30** 22:57:35.2±1.0, 10°.72S×163°.81E, h0km, mb3.9/12, mb1 4.1/15, mb1mx3.9/40, mbtmp3.9/15, ML4.3/3, MS3.6/22, Ms1 3.7/22, ms1mx3.5/46, Error ellipse: s-maj=26.7km s-min=19.5km az=126.0*

ISC 30 22:57:39.0±0.7, 10°.7S±0°.1×163°.83E±0°.1, h25km, n32, σ0°91/17, mb3.9/12, MS3.7/20, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.03	288	Pn	Pn	22 58 39.0	-0.2
	42nm,0.3s,baz=136,slow=2.7,SNR=5.2						
HNR				Sn	Sn	22 59 26.0	+0.4
	45nm,0.3s,baz=148,slow=16,SNR=8.8						
HNR				LR	LR	23 00 17.1	
	comp=Z,543nm,19.1s,baz=220,slow=40						
DZM	Mont Dzumac	11.56	168	*e*P	Pn	23 00 29.3	+6.8
	128nm,1.3s						
DZM				*e*LR	LR	23 03 09.8	
	comp=Z,1μm,24.6s						
DZM	Mont Dzumac	11.56	168	Pn	Pn	23 00 22.8	+0.3
	1.5nm,0.3s,baz=337,slow=17,SNR=8.0						
DZM				LR	LR	23 04 13.3	
	comp=Z,747nm,19.8s,baz=38,slow=34						
PMG	Port Moresby	16.47	273	LR	LR	23 07 05.6	
	comp=Z,242nm,18.3s,baz=106,slow=35						
CTA	Charters Tower	19.32	239	P	P	23 02 03.1	+0.6
	0.4nm,0.3s,baz=76,slow=12,SNR=8.3						
RAO	Raoul Island	25.11	140	LR	LR	23 11 18.4	
	comp=Z,120nm,21.5s,baz=142,slow=33						
STKA	Stephens Creek	29.41	221	P	P	23 03 41.0	+0.5
	2.4nm,0.9s,baz=24,slow=10.0,SNR=2.1						
STKA				LR	LR	23 14 34.2	
	comp=Z,209nm,19.0s,baz=32,slow=35						
WRA	Warramunga Arr	29.84	249	P	P	23 03 43.5	-1.0
	2.1nm,1.0s,baz=75,slow=9.2,SNR=4.9						
GUMO	Guam	30.62	322	LR	LR	23 14 52.9	
	comp=Z,147nm,21.5s,baz=113,slow=34						
ASAR	Alice Springs	31.27	242	P	P	23 03 55.2	-1.9
	0.8nm,0.6s,baz=63,slow=9.9,SNR=9.5						
RPZ	Rata Peaks	33.46	170	LR	LR	23 15 50.9	
	comp=Z,327nm,21.2s,baz=18,slow=33						
DAV	Davao City (W)	41.98	293	LR	LR	23 22 54.6	
	comp=Z,37nm,18.7s,baz=148,slow=36						
KAPI	Kappang	43.99	274	LR	LR	23 25 03.5	
	comp=Z,26nm,19.0s,baz=128,slow=38						
PPT2	Papeete2	45.60	104	*e*LR	LR	23 19 03.0	
	comp=Z,86nm,23.5s						
MJAR	Matsushiro Arr	52.84	334	P	P	23 06 51.2	-1.4
	0.7nm,0.3s,baz=151,slow=11,SNR=2.0						
MJAR				LR	LR	23 28 14.9	
	comp=Z,25nm,21.1s,baz=155,slow=35						
ASAJ	Asahikawa	57.89	342	LR	LR	23 30 10.7	
	comp=Z,96nm,20.2s,baz=182,slow=34						
KSRS	Korea Array	58.57	327	P	P	23 07 34.7	+1.1
	0.4nm,0.3s,baz=133,slow=12,SNR=1.6						
KSRS				LR	LR	23 31 38.3	
	comp=Z,27nm,20.1s,baz=136,slow=35						
USRK	Ussuriysk Ar.	61.84	335	P	P	23 07 55.8	-0.1
	0.8nm,0.8s,baz=133,slow=8.1,SNR=2.0						
PETK	Petropavlovsk-	63.80	356	LR	LR	23 31 20.7	
	comp=Z,86nm,21.2s,baz=173,slow=32						
KLR	Kul'dur	66.03	338	LR	LR	23 33 45.6	
	comp=Z,33nm,21.7s,baz=182,slow=33						
VNDA	Vanda	66.79	180	LR	LR	23 33 26.9	
	comp=Z,93nm,19.5s,baz=347,slow=32						
CMAR	Chiang Mai Arr	70.26	294	P	P	23 08 52.0	+1.4
	0.5nm,0.3s,baz=130,slow=5.3,SNR=7.6						
YAK	Yakutsk	77.27	344	LR	LR	23 43 31.8	
	comp=Z,37nm,19.1s,baz=283,slow=36						
SONM	Songino Array	77.31	324	P	P	23 09 31.7	+0.2
	0.7nm,0.7s,baz=146,slow=6.9,SNR=6.7						
SONM				LR	LR	23 43 27.4	
	comp=Z,37nm,20.1s,baz=104,slow=36						
ILAR	Eielson Array	83.82	19	P	P	23 10 05.8	-0.1
	0.6nm,1.0s,baz=251,slow=2.8,SNR=3.3						

2.0nm,0.9s,baz=69,slow=14,SNR=1.7
MJAR Matsushiro Arr 52.98 334 LR LR 23 42 38.9
comp=Z,23nm,21.8s,baz=145,slow=34
ASAJ Asahikawa 58.05 342 LR LR 23 42 16.7
comp=Z,82nm,21.8s,baz=297,slow=31
KSRS Korea Array 58.69 327 LR LR 23 46 40.4
comp=Z,30nm,19.9s,baz=132,slow=35
USRK Ussuriysk Ar. 61.98 335 LR LR 23 48 01.7
comp=Z,28nm,20.0s,baz=132,slow=34
PETK Petropavlovsk- 63.97 356 LR LR 23 45 41.2
comp=Z,51nm,20.4s,baz=193,slow=31
KLR Kul'dur 66.18 338 LR LR 23 48 58.1
comp=Z,24nm,21.1s,baz=165,slow=33
CMAR Chiang Mai Arr 70.29 294 P **P 23 23 44.0 +0.6**
0.5nm,0.4s,baz=112,slow=4.0,SNR=4.5
KDAK Kodiak Island 77.18 22 LR LR 23 54 17.5
comp=Z,39nm,19.5s,baz=256,slow=32
SONM Songino Array 77.42 324 P **P 23 24 24.6 -0.2**
0.5nm,0.6s,baz=132,slow=6.3,SNR=4.9
SONM LR LR 23 56 20.5
comp=Z,41nm,21.9s,baz=101,slow=34
ILAR Eielson Array 84.01 19 P **P 23 24 59.4 -0.1**
0.6nm,0.9s,baz=231,slow=4.3,SNR=3.1
NVAR Mina Array Bea 87.42 50 P **P 23 25 17.0 -0.3**
0.3nm,0.7s,baz=244,slow=7.9,SNR=1.3
MKAR Makanchi Array 92.10 317 P **P 23 25 37.8 -1.0**
0.4nm,0.7s,baz=89,slow=5.6,SNR=4.4
YKA Yellowknife Ar 95.75 27 P **P 23 25 56.1 +1.0**
0.2nm,0.9s,baz=258,slow=3.2,SNR=2.7

*IDC **30** 23:15:19.0±5.0,22.98N×121.77E,h0km,mb3.4/3,*
mb1 3.6/5,mb1mx3.3/55,mbtmp3.5/5,ML3.4/2,MS3.1/1,
Ms1 3.1/1,ms1mx2.5/28,Error ellipse: s-maj=110.3km
s-min=38.5km az=177.0
*JMA **30** 23:15:24.9±0.2,23.94N×121.69E,h0km,M2.9*
*TAP **30** 23:15:25.9,23.93N×121.64E,h6km,ML3.6,C*
ISC 30 23:15:25.4±1.0,23.91N±0.01×121.70E±0.02,h5km±7km,
n122,σ0s76/186,mb3.3/3,6C-17D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.11**	**307**	⇓	*i*	P	**Pg**	**23 15 27.9**	**+0.1**
HWA	baz=336				*i*	S	**Sg**	**23 15 29.5**	**+0.2**
TWD	**Chiawan**	**0.20**	**330**	⇓	*i*	P	**Pg**	**23 15 29.5**	**+0.2**
TWD	baz=347				*i*	S	**Sg**	**23 15 32.1**	**+0.2**
ESL	**Shilin**	**0.26**	**249**	⇓	*i*	P	**Pg**	**23 15 30.6**	**0.0**
ESL	baz=245				*i*	S	**Sg**	**23 15 33.8**	**-0.2**
NACB	**Ninganchiao**	**0.28**	**340**	⇓	*i*	P	**Pg**	**23 15 31.1**	**+0.2**
NACB	baz=348				*i*	S	**Sg**	**23 15 34.6**	**0.0**
EGFH	**Guangfu**	**0.35**	**226**			P	**Pb**	**23 15 32.9**	**-1.3**
EGFH	baz=231					S	**Sg**	**23 15 38.1**	**+1.3**
ETLH	**Xiulin Townshi**	**0.36**	**326**	⇓	*i*	P	**Pg**	**23 15 32.3**	**-0.1**
ETLH	baz=332					S	**Sg**	**23 15 36.4**	**-0.7**
WHF	**Hehuan Shan**	**0.46**	**300**	⇓	*i*	P	**Pg**	**23 15 34.1**	**-0.3**
WHF	baz=304				*i*	S	**Sg**	**23 15 40.3**	**-0.2**
OWD	**Renai**	**0.48**	**275**	⇓	*i*	P	**Pg**	**23 15 34.6**	**-0.2**
OWD	baz=276					S	**Sg**	**23 15 41.0**	**-0.1**
HGSD	**Ruisui**	**0.49**	**212**		*e*	P	**Pb**	**23 15 36.6**	**+0.1**
HGSD	baz=187				*e*	S	**Sb**	**23 15 46.7**	**+2.7**
CHGB	**Renai**	**0.51**	**287**	⇓	*i*	P	**Pg**	**23 15 35.2**	**0.0**
CHGB	baz=289				*i*	S	**Sg**	**23 15 42.4**	**+0.5**
EHY	**Hungye**	**0.53**	**221**			P	**Pb**	**23 15 36.2**	**-1.0**
EHY	baz=226					S	**Sg**	**23 15 43.4**	**+0.8**
EWUT	**Wuta**	**0.54**	**7**			P	**Pb**	**23 15 36.7**	**-0.7**
EWUT	baz=360				*e*	S	**Sb**	**23 15 47.0**	**+1.6**
FUSS	**Fushou**	**0.54**	**309**	⇓	*i*	P	**Pg**	**23 15 35.9**	**+0.1**
FUSS	baz=323					S	**Sg**	**23 15 43.4**	**+0.6**
VWDT	**VWDT**	**0.54**	**253**	⇓	*i*	P	**Pb**	**23 15 36.1**	**-1.2**
VWDT	baz=251					S	**Sg**	**23 15 43.1**	**+0.3**
TWT	**Tachien**	**0.59**	**306**	⇓	*i*	P	**Pb**	**23 15 37.1**	**-1.3**
TWT	baz=307					S	**Sb**	**23 15 45.6**	**-1.5**
NNSB	**Datong**	**0.59**	**331**		*i*	P	**Pb**	**23 15 37.1**	**-1.3**
NNSB	baz=334					S	**Sb**	**23 15 45.6**	**-1.5**
NNSH	**Datong**	**0.59**	**331**			P	**Pb**	**23 15 37.1**	**-1.3**
NNSH	baz=333					S	**Sg**	**23 15 45.0**	**+0.4**
TDCB	**Techi**	**0.60**	**305**	⇓	*i*	P	**Pg**	**23 15 37.1**	**+0.1**
TDCB	baz=298					S	**Sg**	**23 15 44.9**	**0.0**
NNS	**Nan Shan**	**0.61**	**330**	⇓	*i*	P	**Pb**	**23 15 37.3**	**-1.4**
NNS	baz=334					S	**Sb**	**23 15 46.2**	**-1.3**
YULB	**Yu-li**	**0.64**	**216**			P	**Pg**	**23 15 38.0**	**+0.3**
YULB	baz=222					S	**Sb**	**23 15 47.7**	**-0.5**
EYUL	**Yuli**	**0.66**	**212**		*e*	P	**Pb**	**23 15 39.9**	**+0.4**
TWF1	**Yuli**	**0.67**	**214**			P	**Pg**	**23 15 38.6**	**+0.3**
TWF1	baz=221				*e*	S	**Sb**	**23 15 49.2**	**+0.1**
WPL	**Puli Township**	**0.69**	**279**			P	**Pb**	**23 15 38.9**	**-1.0**
WPL	baz=279					S	**Sg**	**23 15 47.5**	**-0.2**
SSLB	**Suanglung**	**0.70**	**260**	⇓	*i*	P	**Pg**	**23 15 38.9**	**+0.1**
SSLB	baz=269				*i*	S	**Sg**	**23 15 47.0**	**-0.9**
TWC	**Suao**	**0.71**	**11**			P	**Pb**	**23 15 40.1**	**-0.2**
TWC	baz=5.0					S	**Sn**	**23 15 51.9**	**-1.5**
NDT	**Datong Townshi**	**0.71**	**346**	⇑	*i*	P	**Pb**	**23 15 39.7**	**-0.6**
NDT	baz=349					S	**Sg**	**23 15 48.6**	**+0.2**
DPDB	**Guoxing**	**0.72**	**280**		*i*	P	**Pb**	**23 15 39.6**	**-0.9**
DPDB	baz=280					S	**Sg**	**23 15 48.3**	**-0.3**
NDS	**Dongshan**	**0.72**	**1**			P	**Pb**	**23 15 40.0**	**-0.5**
NDS	baz=353					S	**Sb**	**23 15 50.3**	**-0.4**
SMLT	**Sun Moon Lake**	**0.73**	**268**	⇓	*i*	P	**Pb**	**23 15 39.8**	**-1.0**
SMLT	baz=268				*i*	S	**Sg**	**23 15 49.1**	**0.0**
ENTT	**Nioudou**	**0.74**	**350**	⇓	*i*	P	**Pb**	**23 15 40.2**	**-0.6**
ENTT	baz=353				*i*	S	**Sb**	**23 15 52.3**	**+1.1**
WHP	**Taichung City**	**0.78**	**298**			P	**Pb**	**23 15 40.8**	**-0.8**
WHP	baz=291					S	**Sg**	**23 15 50.8**	**+0.2**
FULB	**Fuli**	**0.80**	**208**		*e*	P	**Pn**	**23 15 42.8**	**-0.7**
TWE	**Neicheng**	**0.81**	**358**	⇑	*i*	P	**Pb**	**23 15 41.8**	**-0.2**
TWE	baz=224				*i*	S	**Sb**	**23 15 52.8**	**-0.4**
YHNB	**Yeheng**	**0.81**	**339**		*i*	P	**Pb**	**23 15 41.6**	**-0.5**
YHNB	baz=341					S	**Sb**	**23 15 53.0**	**-0.4**
NSK	**Sanguang**	**0.82**	**338**	⇑	*i*	P	**Pb**	**23 15 41.8**	**-0.5**
NSK	baz=340					S	**Sb**	**23 15 52.6**	**-1.2**
CHKT	**Chengkung**	**0.86**	**201**		*e*	P	**Pb**	**23 15 43.2**	**+0.2**
CHKT	baz=184				*e*	S	**Sn**	**23 15 57.1**	**-0.1**
NWLT	**Wulai**	**0.88**	**348**			P	**Pb**	**23 15 43.0**	**-0.3**
NWLT	baz=350					S	**Sb**	**23 15 54.4**	**-1.1**
WJS	**Zhushan**	**0.90**	**265**			P	**Pb**	**23 15 43.8**	**+0.3**
WJS	baz=272					S	**Sb**	**23 15 56.3**	**+0.6**
ALS	**Alishan**	**0.91**	**244**			P	**Pb**	**23 15 43.4**	**-0.5**
ALS	baz=243				*e*	S	**Sb**	**23 15 56.4**	**-0.1**
WWF	**Wufeng**	**0.93**	**278**		*e*	P	**Pn**	**23 15 44.8**	**-0.4**
WNT	**Mingjian**	**0.93**	**268**			P	**Pn**	**23 15 44.6**	**-0.6**
WNT	baz=268					S	**Sb**	**23 15 57.4**	**+0.6**
WNT1	**Nantou City**	**0.94**	**270**		*e*	P	**Pn**	**23 15 45.0**	**-0.2**
WNT1	baz=278				*e*	S	**Sn**	**23 15 58.4**	**-0.6**
NTC	**Toucheng**	**0.95**	**7**		*e*	P	**Pn**	**23 15 44.8**	**-0.6**
EGS	baz=355	**0.95**	**13**			P	**Pn**	**23 15 45.5**	**0.0**
ELDTW	**Lidau**	**0.95**	**221**		*e*	P	**Pb**	**23 15 44.1**	**-0.5**
NSTT	baz=221 **Nanjuang**	**0.96**	**318**		*e*	P	**Pb**	**23 15 44.4**	**-0.2**
LIOB	baz=319 **Emei**	**0.96**	**320**		*e*	P	**Pb**	**23 15 44.8**	**+0.1**
TCU	baz=320 **Taichung**	**0.97**	**284**		*e*	P	**Pn**	**23 15 45.3**	**-0.4**
TCU	baz=279				*e*	S	**Sn**	**23 15 59.3**	**-0.5**
CHN5	baz=279 **Tsauling**	**0.99**	**252**			P	**Pb**	**23 15 45.3**	**+0.2**
CHN5	baz=243					S	**Sn**	**23 15 59.9**	**-0.6**
NJD	**Zhudong**	**0.99**	**326**		*e*	P	**Pn**	**23 15 46.4**	**+0.3**
EDH	baz=332 **Donghe**	**1.00**	**201**		*e*	P	**Pb**	**23 15 45.0**	**-0.3**
EDH	baz=185				*e*	S	**Sn**	**23 16 00.4**	**-0.2**
NMLH	baz=185 **Miaoli**	**1.04**	**307**		*e*	P	**Pn**	**23 15 46.7**	**0.0**
WCHH	baz=307 **Zhanghua**	**1.06**	**279**		*e*	P	**Pn**	**23 15 46.8**	**-0.2**
WCHH	baz=281				*e*	S	**Sn**	**23 16 02.2**	**+0.1**
NHDH	baz=281 **Xindian Distri**	**1.06**	**351**		*e*	P	**Pn**	**23 15 46.4**	**-0.6**
NHDH	baz=351				*e*	S	**Sb**	**23 16 01.1**	**+0.6**
TIPB	**Shuangxi**	**1.06**	**6**		*e*	P	**Pn**	**23 15 46.8**	**-0.3**
TIPB	baz=357				*e*	S	**Sb**	**23 16 00.2**	**-0.4**
WDJ	**Dajia District**	**1.06**	**294**		*e*	P	**Pn**	**23 15 47.1**	**+0.1**
WDJ	baz=296				*e*	S	**Sn**	**23 16 02.8**	**+0.6**
WGK	**Gukeng**	**1.07**	**258**		*e*	P	**Pn**	**23 15 47.2**	**+0.1**
WGK	baz=258				*e*	S	**Sn**	**23 16 02.7**	**+0.4**
TWA	**Mucha**	**1.07**	**354**			P	**Pn**	**23 15 46.9**	**-0.3**
TWA	baz=345				*e*	S	**Sb**	**23 16 00.7**	**-0.1**
TATO	**Taipei**	**1.08**	**350**		*e*	P	**Pn**	**23 15 47.1**	**-0.1**
WDLH	baz=348 **Douliu**	**1.09**	**259**		*e*	P	**Pn**	**23 15 47.2**	**-0.1**
WDLH	baz=258				*e*	S	**Sn**	**23 16 02.8**	**-0.1**
SBCB	**Hsinchu**	**1.09**	**323**		*e*	P	**Pn**	**23 15 47.7**	**+0.3**
HSN	baz=323 **Hsinchu**	**1.11**	**323**		*e*	P	**Pn**	**23 15 48.6**	**+0.9**
TWB1	baz=325 **Santiao Chiao**	**1.12**	**13**		*e*	P	**Pn**	**23 15 48.3**	**+0.4**
STYH	baz=3.0 **Taoyuan**	**1.12**	**229**		*e*	P	**Pg**	**23 15 46.8**	**-0.2**
STYH	baz=236				*e*	S	**Sb**	**23 16 02.2**	**-0.1**
LONT	baz=236 **Longtian**	**1.13**	**208**		*e*	P	**Pb**	**23 15 47.6**	**+0.2**
STYT	baz=206 **Tauyuan**	**1.14**	**230**			P	**Pb**	**23 15 47.7**	**0.0**
STYT	baz=237				*e*	S	**Sn**	**23 16 04.0**	**-0.3**
NCUH	**Zhongli**	**1.15**	**336**		*e*	P	**Pn**	**23 15 49.4**	**+1.1**
NCUH	baz=347				*e*	S	**Sn**	**23 16 06.3**	**+1.9**
NCU	**National Centr**	**1.16**	**336**		*e*	P	**Pn**	**23 15 49.2**	**+0.9**
NCU	baz=347				*e*	S	**Sn**	**23 16 06.5**	**+2.0**
TPUB	baz=347 **Ta-pu**	**1.16**	**239**		*e*	P	**Pb**	**23 15 48.0**	**+0.1**
TPUB	baz=238				*e*	S	**Sb**	**23 16 03.5**	**+0.3**
NWF	baz=238 **Wu-fen Shan**	**1.16**	**4**		*e*	P	**Pn**	**23 15 49.1**	**+0.7**
WFSB	baz=2.0 **Wu-fen Shan**	**1.16**	**4**		*e*	P	**Pn**	**23 15 48.8**	**+0.5**
CHN4	baz=2.0 **Tsaushan**	**1.16**	**242**	⇑	*i*	P	**Pn**	**23 15 48.5**	**+0.1**
CHN4	baz=247				*e*	S	**Sn**	**23 16 05.3**	**+0.7**
WTP	**Ta-pu**	**1.20**	**237**	⇑	*i*	P	**Pb**	**23 15 48.7**	**+0.1**
WTP	baz=244				*e*	S	**Sn**	**23 16 07.1**	**+1.5**
WRL	baz=244 **Guolierlin Hig**	**1.21**	**270**		*e*	P	**Pn**	**23 15 48.9**	**-0.1**
WRL	baz=271				*e*	S	**Sn**	**23 16 06.0**	**+0.2**
TWS1	baz=271 **Kuangyinshan**	**1.21**	**348**		*e*	P	**Pn**	**23 15 50.1**	**+1.0**
WTK	baz=346 **Tuku**	**1.22**	**260**		*e*	P	**Pn**	**23 15 49.5**	**+0.2**
WTK	baz=260				*e*	S	**Sn**	**23 16 06.7**	**+0.6**
TWGBT	baz=260 **Beinan**	**1.23**	**208**		*e*	P	**Pg**	**23 15 48.4**	**-0.6**
TWG	baz=206 **Pinlang**	**1.23**	**208**		*e*	P	**Pg**	**23 15 48.8**	**-0.3**
YM01	baz=206 **YM01**	**1.24**	**354**		*e*	P	**Pn**	**23 15 50.2**	**+0.8**
YM01	baz=344				*e*	S	**Sn**	**23 16 08.3**	**+1.8**
CHY	baz=344 **Chiayi**	**1.24**	**251**			P	**Pn**	**23 15 50.0**	**+0.6**
CHY	baz=251					S	**Sn**	**23 16 07.5**	**+1.0**
LDUT	baz=251 **Ludao**	**1.25**	**190**		*e*	P	**Pg**	**23 15 48.1**	**-1.3**
LDUT	baz=172				*e*	S	**Sg**	**23 16 04.2**	**-1.4**
JYNG	baz=172 **Yonagunijimaku**	**1.26**	**64**			P	**Pb**	**23 15 49.5**	**-0.1**
JYNG						S	**Sn**	**23 16 08.4**	**+1.4**
TTN	**Taitung**	**1.26**	**204**		*e*	P	**Pg**	**23 15 46.6**	**-3.0**
TWK	baz=200 **Hsinying**	**1.28**	**240**	⇑	*i*	P	**Pn**	**23 15 50.4**	**+0.3**
TWK	baz=239				*i*	S	**Sn**	**23 16 08.4**	**+0.6**
CHN1	baz=239 **Nanshi**	**1.30**	**236**	⇓	*i*	P	**Pn**	**23 15 50.7**	**+0.4**
CHN1	baz=235					S	**Sn**	**23 16 09.3**	**+1.3**
YOJ	**Yonaguni jima**	**1.31**	**65**			P	**Pn**	**23 15 50.7**	**+0.2**
YOJ						S	**Sn**	**23 16 09.0**	**+0.6**
YOJ	**Yonaguni jima**	**1.31**	**65**		*e*	P	**Pn**	**23 15 50.7**	**+0.2**
SGST	baz=68 **Jiashian**	**1.32**	**231**			P	**Pn**	**23 15 50.8**	**+0.3**
SGST	baz=230				*e*	S	**Sn**	**23 16 10.0**	**+1.5**
SLGT	baz=230 **Liugui**	**1.33**	**227**		*e*	P	**Pb**	**23 15 51.4**	**+0.4**
TWY	baz=210 **Chenhua**	**1.36**	**356**		*e*	P	**Pb**	**23 15 51.6**	**+0.2**
ICHU	baz=342 **Yijhu**	**1.42**	**248**		*e*	P	**Pb**	**23 15 52.7**	**+0.4**
SCST	baz=249 **Cishan**	**1.51**	**228**		*e*	P	**Pg**	**23 15 54.9**	**+0.6**
SSD	baz=211 **Sandimen**	**1.52**	**221**		*e*	P	**Pg**	**23 15 54.7**	**+0.1**
MASBT	baz=215 **Mashibuluo**	**1.62**	**217**		*e*	P	**Pn**	**23 15 55.1**	**+0.3**
EAST	baz=203 **Anshuo**	**1.71**	**208**		*e*	P	**Pg**	**23 15 58.4**	**+0.1**
SSPT	baz=193 **Xinbi**	**1.76**	**217**		*e*	P	**Pg**	**23 15 58.8**	**-0.5**
SCZT	baz=204 **Fangliau**	**1.83**	**213**		*e*	P	**Pb**	**23 15 59.4**	**0.0**
LAY	baz=196 **Lan-yu**	**1.87**	**184**		*e*	P	**Pn**	**23 15 57.2**	**-0.9**
SLIU	baz=180 **Shizi**	**1.88**	**206**		*e*	P	**Pg**	**23 16 01.4**	**-0.1**
IRIF	baz=195 **Iriomote-Funau**	**1.90**	**77**			P	**Pn**	**23 15 59.0**	**+0.5**
IRIF					*e*	S	**Sn**	**23 16 24.1**	**+1.2**
WDGT	**Dungji**	**1.98**	**251**		*e*	P	**Pn**	**23 15 59.5**	**-0.2**
PNG	baz=252 **Penghu**	**2.00**	**261**		*e*	P	**Pn**	**23 16 00.3**	**+0.5**
PNG	baz=263				*e*	S	**Sb**	**23 16 26.6**	**-0.8**
JKRS	**Kuro-shima**	**2.13**	**81**			P	**Pb**	**23 16 03.7**	**-0.9**
JKRS						S	**Sb**	**23 16 30.5**	**-0.9**
VCHM	**Qimei**	**2.20**	**252**		*e*	P	**Pn**	**23 16 03.1**	**+0.5**
JIJ	baz=253 **Ishigaki jima**	**2.27**	**78**			P	**Pn**	**23 16 03.9**	**+0.2**
JIJ						S	**Sn**	**23 16 32.0**	**-0.1**
JISG	**Ishigakijimahi**	**2.48**	**74**			P	**Pn**	**23 16 06.6**	**+0.2**
JISG						S	**Sn**	**23 16 37.3**	**+0.3**
PTMZ	**Houxiangcun**	**2.61**	**296**		*e*	P	**Pn**	**23 16 07.4**	**-0.8**
MATB	baz=296 **Ma-tsu**	**2.74**	**325**		*e*	P	**Pn**	**23 16 09.7**	**-0.5**
JTJ	baz=308 **Tarama**	**2.83**	**75**			P	**Pn**	**23 16 12.3**	**+0.9**
LYJJ	**Jianjiangzhen**	**3.16**	**327**		*e*	P	**Pn**	**23 16 16.1**	**+0.2**
JOW	baz=311 **Kunigami**	**6.62**	**63**			Pn	**Pn**	**23 17 02.2**	**-1.2**
KSRS	1.7nm,0.3s,baz=135,slow=19,SNR=5.6 **Korea Array**	**14.52**	**20**			P	**P**	**23 18 59.1**	**+0.8**
USRK	0.1nm,0.3s,baz=203,slow=11,SNR=4.3 **Ussuriysk Ar.**	**21.93**	**20**			LR	LR	23 29 24.1	
MKAR	comp=Z,45nm,18.5s,baz=148,slow=37 **Makanchi Array**	**38.86**	**316**			P	**P**	**23 22 52.6**	**+1.0**
ZALV	0.2nm,0.5s,baz=109,slow=8.6,SNR=2.7 **Zalesovo Beam**	**40.73**	**327**			P	**P**	**23 23 06.6**	**-0.5**
H11N1	0.3nm,0.4s,baz=116,slow=9.8,SNR=2.1 **WAKE ISLAND Hy**	**42.03**	**87**			T	T	00 08 41.8	
H11N2	baz=278,slow=74 **WAKE ISLAND Hy**	**42.03**	**87**			T	T	00 08 31.7	
H11N3	baz=278,slow=74 **WAKE ISLAND Hy**	**42.05**	**87**			T	T	00 08 37.6	
H11S3	baz=278 **WAKE ISLAND Hy**	**42.15**	**88**			T	T	00 08 19.6	
H11S1	baz=284,slow=74,SNR=17 **WAKE ISLAND Hy**	**42.16**	**88**			T	T	00 08 21.2	
H11S2	baz=284,slow=74,SNR=8.5 **WAKE ISLAND Hy**	**42.17**	**88**			T	T	00 08 21.0	
YKA	baz=284,slow=74,SNR=6.5 **Yellowknife Ar**	**83.04**	**23**			P	**P**	**23 27 50.8**	**-0.8**
	0.3nm,0.8s,baz=317,slow=4.8,SNR=6.4								

IDC 30 23:17:12.9±3.5,16.25S×176.16W,h572km±29km,
mb2.8/3,mb1 3.2/4,mb1mx2.8/44,mbtmp3.9/4,Error
ellipse: s-maj=281.0km s-min=31.5km az=158.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.73**	**254**			P	P	23 18 50.4	0.0
WRA	3.9nm,0.3s,baz=114,slow=12,SNR=9.9 **Warramunga Arr**	**47.06**	**258**			P	P	23 24 54.0	-0.1
ASAR	0.5nm,0.5s,baz=91,slow=8.2,SNR=8.7 **Alice Springs**	**47.32**	**253**			P	P	23 24 55.9	-0.2
TXAR	4.3nm,0.5s,baz=88,slow=8.3,SNR=61 **Lajitas Array**	**83.30**	**57**			P	P	23 28 40.6	-0.1
	0.1nm,0.6s,baz=224,slow=4.8,SNR=1.8								

*SKHL **30** 23:37:58.2±0.7,48.90N×152.00E,h240km±7km,mb4.7/5,*
mbv5.2/2,msha5.1/3
*MOS **30** 23:37:59.4±1.0,49.00N×152.16E,h262km,mb4.0/8,Error*
ellipse: s-maj=12.5km s-min=4.4km az=64.5
*KRSC **30** 23:38:00.2±2.6,48.65N×153.47E,h313km±25km,ML4.3*
*IDC **30** 23:38:01.8±1.8,49.12N×152.06E,h262km±18km,*
mb3.2/16,mb1 3.4/20,mb1mx3.2/54,mbtmp3.9/20,Error
ellipse: s-maj=15.4km s-min=9.6km az=121.0
*NEIC **30** 23:38:01.3±0.9,49.1N±0.1×152.0E±0.2,h254km±9km,*
mb4.0/23,Error ellipse: s-maj=21.5km s-min=11.6km
az=131.0
ISC 30 23:37:59.6±0.5,48.92N±0.07×152.13E±0.06,h250km,
n160,σ1s84/173,mb3.8/27,1C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**3.13**	**54**	⇑	*i*	PN	**Pn**	**23 38 53.8**	**+0.4**
SKR					*e*	S	**S**	**23 39 35.3**	**-0.7**
SKR	comp=Z,171nm,0.6s				pmax	pmax			
SKR	comp=Z,100nm,2.8s				pmax	pmax			
SKR	comp=N,63nm,0.6s				smax	smax			
SKR	comp=E,60nm,0.4s				smax	smax			
SKR	**Severo-Kuril's**	**3.13**	**54**		*e*	P	**Pn**	**23 38 53.9**	**+0.5**
SKR	**Severo-Kuril's**	**3.13**	**54**		*i*	P	**Pn**	**23 38 53.5**	**+0.1**
SKR						AMB	AMB	23 38 54.0	
SKR	comp=E,170nm,0.6s					AMB	AMB	23 38 57.1	
SKR	comp=E,300nm,2.0s								
SKR					*e*	S	**S**	**23 39 36.1**	**+0.1**
SKR	comp=E,400nm,2.0s					A	A	23 39 39.2	
SKR	comp=E,100nm,2.0s					A	A	23 39 39.2	
SKR	comp=E,70nm,0.6s					A	A	23 39 40.0	
SKR	comp=E,60nm,0.6s					A	A	23 39 40.0	
PAU	**Pauzhetka**	**3.95**	**48**			PN	**Pn**	**23 39 02.6**	**0.0**
PAU	**Pauzhetka**	**3.95**	**48**		*e*	P	**Pn**	**23 39 02.6**	**0.0**
PAU	**Pauzhetka**	**3.95**	**48**		*e*	P	**Pn**	**23 39 02.5**	**0.0**
PAU						AMB	AMB	23 39 02.8	
PAU	comp=E,130nm,0.7s				*e*	S	**S**	**23 39 53.2**	**+0.5**
PAU	comp=E,80nm,0.3s					A	A	23 39 54.4	
PAU	comp=E,80nm,0.3s					A	A	23 39 54.4	
KUR	**Kuril'sk**	**4.70**	**220**		*e*	P	**Pn**	**23 39 09.2**	**-2.4**
KUR	comp=E,50nm,0.8s					AMB	AMB	23 39 10.3	
KUR					*e*	S	**S**	**23 40 06.0**	**-3.0**
KUR	comp=E,70nm,0.7s					A	A	23 40 34.2	
KUR	comp=E,110nm,0.7s					A	A	23 40 34.2	
KDTR	**Khodutka, Kamc**	**4.78**	**51**			PN	**Pn**	**23 39 11.3**	**-1.3**
KDTR	**Khodutka, Kamc**	**4.78**	**51**		*e*	P	**Pn**	**23 39 11.3**	**-1.3**
APC	**Apacha**	**5.12**	**37**			PN	**Pn**	**23 39 16.7**	**0.0**
APC	**Apacha**	**5.12**	**37**		*e*	P	**Pn**	**23 39 16.7**	**0.0**
GRL	**Gorelyy**	**5.24**	**44**			PN	**Pn**	**23 39 18.7**	**+0.4**
GRL	**Gorelyy**	**5.24**	**44**		*e*	P	**Pn**	**23 39 18.7**	**+0.4**
MTVR	**Mutnovka**	**5.25**	**45**			PN	**Pn**	**23 39 18.4**	**0.0**
MTVR	**Mutnovka**	**5.25**	**45**		*e*	P	**Pn**	**23 39 18.4**	**0.0**
RUS	**Russkaya**	**5.37**	**47**			PN	**Pn**	**23 39 19.3**	**-0.5**
RUS						S	**S**	**23 40 18.8**	**-5.0**

RUS	**Russkaya**	**5.37**	**47**	*e*P		**Pn**	**23 39 19.3**	**-0.5**
RUS				*e*S		**S**	**23 40 18.8**	**-5.0**
RUS	**Russkaya**	**5.37**	**47**	*e*P		**Pn**	**23 39 19.3**	**-0.5**
KRMR	**Karymshinskiy**	**5.46**	**42**	PN		**Pn**	**23 39 21.6**	**+0.8**
KRMR	**Karymshinskiy**	**5.46**	**42**	*e*P		**Pn**	**23 39 21.6**	**+0.8**
PEA0B	**Petropavlovsk-**	**5.47**	**38**	*i* PN		**Pn**	**23 39 20.9**	**-0.1**
PETK	**Petropavlovsk-**	**5.47**	**38**	P		**Pn**	**23 39 21.4**	**+0.4**
	comp=E,1.7nm,0.3s,baz=218,slow=9.4,SNR=43							
PET	**Petropavlovsk**	**5.82**	**43**	PN		**Pn**	**23 39 26.4**	**+1.1**
PET				S		**S**	**23 40 32.1**	**-1.8**
PET	**Petropavlovsk**	**5.82**	**43**	*e*P		**Pn**	**23 39 26.4**	**+1.1**
PET				*e*S		**S**	**23 40 32.1**	**-1.8**
PET	**Petropavlovsk**	**5.82**	**43**	*e*P		**Pn**	**23 39 26.1**	**+0.8**
PET				AMB		AMB	23 39 27.4	
	comp=E,30nm,0.3s							
DALK	**Dalny**	**5.87**	**43**	PN		**Pn**	**23 39 25.9**	**0.0**
DALK				S		**S**	**23 40 30.6**	**-4.4**
DALK	**Dalny**	**5.87**	**43**	*e*P		**Pn**	**23 39 25.9**	**0.0**
DALK				*e*S		**S**	**23 40 30.6**	**-4.4**
KOK	**Koryaka**	**6.00**	**41**	PN		**Pn**	**23 39 28.2**	**+0.6**
KOK	**Koryaka**	**6.00**	**41**	*e*P		**Pn**	**23 39 28.2**	**+0.6**
KOK	**Koryaka**	**6.00**	**41**	*e*P		**Pn**	**23 39 28.2**	**+0.6**
GNL	**Ganaly**	**6.01**	**35**	PN		**Pn**	**23 39 28.4**	**+0.6**
GNL	**Ganaly**	**6.01**	**35**	*e*P		**Pn**	**23 39 28.4**	**+0.6**
UGLR	**Uglovaya**	**6.02**	**42**	PN		**Pn**	**23 39 28.6**	**+0.7**
UGLR				S		**S**	**23 40 35.5**	**-3.1**
UGLR	**Uglovaya**	**6.02**	**42**	*e*P		**Pn**	**23 39 28.6**	**+0.7**
UGLR				*e*S		**S**	**23 40 35.5**	**-3.1**
AVH	**Avacha**	**6.02**	**41**	PN		**Pn**	**23 39 28.7**	**+0.8**
AVH	**Avacha**	**6.02**	**41**	*e*P		**Pn**	**23 39 28.7**	**+0.8**
SMAR	**Somma**	**6.05**	**42**	PN		**Pn**	**23 39 28.7**	**+0.3**
SMAR	**Somma**	**6.05**	**42**	*e*P		**Pn**	**23 39 28.7**	**+0.3**
KRX	**Arik**	**6.05**	**40**	PN		**Pn**	**23 39 28.3**	**0.0**
KRX	**Arik**	**6.05**	**40**	*e*P		**Pn**	**23 39 28.3**	**0.0**
KRER	**Koryakskii**	**6.05**	**41**	PN		**Pn**	**23 39 29.6**	**+1.2**
KRER				S		**S**	**23 40 36.7**	**-2.8**
KRER	**Koryakskii**	**6.05**	**41**	*e*P		**Pn**	**23 39 29.6**	**+1.2**
KRER				*e*S		**S**	**23 40 36.7**	**-2.8**
SDLR	**Sedlovina**	**6.10**	**42**	PN		**Pn**	**23 39 29.0**	**+0.1**
SDLR				S		**S**	**23 40 36.3**	**-4.0**
SDLR	**Sedlovina**	**6.10**	**42**	*e*P		**Pn**	**23 39 29.0**	**+0.1**
SDLR				*e*S		**S**	**23 40 36.3**	**-4.0**
SPN	**Mys Shipunski**	**6.51**	**47**	*e*S		S	23 40 38.5	-11
YUK	**Yuzh-Kuril'sk**	**6.52**	**224**	*e*PN		**Pn**	**23 39 29.9**	**-4.3**
YUK				pmax		pmax		
	comp=Z,80nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**6.52**	**224**	*e*P		**Pn**	**23 39 32.0**	**-2.2**
YUK				AMB		AMB	23 39 34.1	
	comp=Z,70nm,0.4s							
YUK				AMB		AMB	23 39 34.5	
	comp=Z,500nm,1.3s							
NEM2	**Nemuro 2**	**7.10**	**221**	P		**Pn**	**23 39 39.8**	**-1.7**
NEM2				*e*S		**S**	**23 40 56.2**	**-7.1**
NMR	**Nemuro--Hokkai**	**7.11**	**221**	*e*PN		**Pn**	**23 39 39.6**	**-1.9**
NMR	**Nemuro--Hokkai**	**7.11**	**221**	*e*P		**Pn**	**23 39 39.6**	**-1.9**
JTKR	**Abashiri--Toko**	**7.53**	**232**	P		**Pn**	**23 39 49.5**	**+2.7**
JAK	**Akkeshi**	**7.86**	**224**	P		**Pn**	**23 39 49.8**	**-1.3**
JAK				*e*S		**S**	**23 41 14.5**	**-6.3**
KZV	**Kizimen**	**7.99**	**36**	PN		**Pn**	**23 39 52.3**	**-0.4**
KZV	**Kizimen**	**7.99**	**36**	*e*P		**Pn**	**23 39 52.3**	**-0.4**
TUMR	**Tumrok**	**8.06**	**35**	PN		**Pn**	**23 39 54.2**	**+0.7**
TUMR	**Tumrok**	**8.06**	**35**	*e*P		**Pn**	**23 39 54.2**	**+0.7**
TUMD	**Tumrok D**	**8.10**	**36**	*e*P		**Pn**	**23 39 53.8**	**-0.1**
JKA	**Kamikawa-asahi**	**8.13**	**237**			Pn	23 39 58.3	+3.7
ASAJ	**Asahikawa**	**8.14**	**237**	P		Pn	23 39 57.9	+3.3
	comp=Z,2.8nm,0.3s,baz=60,slow=10,SNR=7.4							
ASAJ	**Asahikawa**	**8.14**	**237**	P		Pn	23 39 58.7	+4.1
ASAJ	**Asahikawa**	**8.14**	**237**	PN		Pn	23 39 58.3	+3.7
MKZ	**Mys Kozlova**	**8.21**	**43**	PN		**Pn**	**23 39 52.6**	**-2.7**
MKZ	**Mys Kozlova**	**8.21**	**43**	*e*P		**Pn**	**23 39 52.6**	**-2.7**
MKZ				*e*S		S	23 41 17.1	-11
JKK2	**Kamakawa 2**	**8.21**	**236**	P		Pn	23 39 58.8	+3.3
JOB	**Onbets**	**8.34**	**227**	P		**Pn**	**23 39 56.6**	**-0.5**
JOB				*e*S		**S**	**23 41 26.5**	**-5.4**
KMNR	**Kamenistaya**	**8.46**	**33**	PN		**Pn**	**23 39 59.7**	**+1.2**
KMNR	**Kamenistaya**	**8.46**	**33**	*e*P		**Pn**	**23 39 59.7**	**+1.2**
SRDR	**Sredinnyy**	**8.73**	**29**	PN		**Pn**	**23 40 03.8**	**+1.9**
SRDR	**Sredinnyy**	**8.73**	**29**	*e*P		**Pn**	**23 40 03.8**	**+1.9**
JCH	**Churui**	**8.79**	**227**	P		**Pn**	**23 40 01.5**	**-1.3**
JCH				*e*S		**S**	**23 41 35.0**	**-7.3**
JNBK	**Urakawa-nobuka**	**9.33**	**228**	P		**Pn**	**23 40 07.9**	**-1.8**
ERM	**Erimo**	**9.34**	**226**	*i* PN		**Pn**	**23 40 09.9**	**+0.1**
ERM	**Erimo**	**9.34**	**226**	Pn		**Pn**	**23 40 10.7**	**+0.9**
SRKR	**Sorokina**	**9.48**	**32**	PN		**Pn**	**23 40 09.0**	**-2.5**
SRKR	**Sorokina**	**9.48**	**32**	*e*P		**Pn**	**23 40 09.0**	**-2.5**
KBG	**Krutoberegovo**	**9.76**	**37**	PN		**Pn**	**23 40 13.3**	**-1.6**
KBG	**Krutoberegovo**	**9.76**	**37**	*e*P		**Pn**	**23 40 13.3**	**-1.6**
KBTR	**Krutoberegovo**	**9.77**	**38**	PN		**Pn**	**23 40 12.7**	**-2.4**
KBTR	**Krutoberegovo**	**9.77**	**38**	*e*P		**Pn**	**23 40 12.7**	**-2.4**
JNB	**Noboribetsu**	**10.08**	**234**	P		**Pn**	**23 40 19.3**	**+0.2**
JKB	**Kayabe**	**10.49**	**232**	P		**Pn**	**23 40 22.7**	**-1.6**
JKB				*e*S		S	23 42 11.7	-10
BKI	**Bering**	**10.59**	**48**	PN		**Pn**	**23 40 23.6**	**-1.7**
BKI	**Bering**	**10.59**	**48**	*e*P		**Pn**	**23 40 23.6**	**-1.7**
BKI				*e*S		S	23 42 08.9	-15
JYM2	**Yakumo 2**	**10.68**	**235**	P		**Pn**	**23 40 26.5**	**-0.2**
MA2	**Magadan**	**10.71**	**356**	*i* PN		**Pn**	**23 40 26.0**	**-0.8**
MA2				pmax		pmax		
	comp=Z,3.0nm,0.7s							
MA2	**Magadan**	**10.71**	**356**	*e*P		**Pn**	**23 40 26.0**	**-0.8**
JSR	**Shiriuchi**	**11.07**	**233**	P		**Pn**	**23 40 30.5**	**-1.0**
EKMR	**Ekimchan**	**12.77**	**296**	*e*P		**Pn**	**23 40 51.2**	**-1.2**
EKMR				AMB		AMB	23 40 56.1	
	comp=Z,10.0nm,0.6s							
KLR	**Kul'dur**	**13.36**	**279**	P		**P**	**23 41 03.6**	**+2.5**
	comp=Z,0.3nm,0.3s,baz=89,slow=9.3,SNR=5.1							
KLR	**Kul'dur**	**13.36**	**279**	*i* PN		**P**	**23 41 02.4**	**+1.3**
KLR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
SEY	**Seymchan**	**14.05**	**0**	P		**P**	**23 41 07.6**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=164,slow=9.8,SNR=16							
JSD	**Sado**	**14.79**	**228**	P		**Pn**	**23 41 18.6**	**+1.4**
BMKR	**Bomnak**	**15.48**	**301**	*e*P		**Pn**	**23 41 24.8**	**-0.5**
MAJO	**Matsushiro**	**16.01**	**225**	*i* P		**Pn**	**23 41 32.6**	**+0.8**
MAJO				pmax		pmax		
	comp=Z,7.0nm,0.5s							
MAJO	**Matsushiro**	**16.01**	**225**	P		**Pn**	**23 41 33.1**	**+1.3**
MJAR	**Matsushiro Arr**	**16.01**	**225**	P		**Pn**	**23 41 33.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=21,slow=12,SNR=14							
MJAR	**Matsushiro Arr**	**16.01**	**225**	P		**Pn**	**23 41 33.1**	**+1.3**
MJAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
MJAR	**Matsushiro Arr**	**16.01**	**225**	P		**Pn**	**23 41 33.1**	**+1.3**
MJAR				IAmb		IAmb	23 41 35.2	
	comp=Z,2.9nm,0.6s							
JWT	**Wachi**	**18.37**	**228**	P		**Pn**	**23 41 57.9**	**-1.5**
JWT				IAmb		IAmb	23 41 58.5	
	comp=Z,9.2nm,0.6s							
BILL	**Bilibino**	**20.45**	**15**	*i* P		**P**	**23 42 16.2**	**-1.8**
BILL				pmax		pmax		
	comp=Z,7.0nm,1.8s							
KSRS	**Korea Array**	**20.94**	**246**	P		Pn	23 42 25.2	-4.4
	comp=Z,1.4nm,0.5s,baz=46,slow=11,SNR=11							
KSRS	**Korea Array**	**20.94**	**246**	*e*P		Pn	23 42 26.3	-3.3
HIA	**Hailar**	**21.13**	**283**	*i* P		**P**	**23 42 25.6**	**+0.4**
HIA				pmax		pmax		
	comp=Z,2.0nm,0.4s							
JTU	**Tsushima**	**22.12**	**238**	P		**P**	**23 42 37.2**	**+2.6**
JNU	**Nakatsue**	**22.38**	**233**	P		**P**	**23 42 39.0**	**+2.0**
	comp=Z,3.4nm,0.6s,baz=342,slow=23,SNR=1.6							
JNU	**Nakatsue**	**22.38**	**233**	P		**P**	**23 42 39.3**	**+2.3**
JCJ	**Chichijima**	**23.11**	**203**	P		**P**	**23 42 47.8**	**+4.1**
	comp=Z,30nm,0.9s,baz=279,slow=19,SNR=1.5							
TIXI	**Tiksi**	**25.20**	**343**	P		**P**	**23 43 01.0**	**-0.9**
	comp=Z,1.4nm,0.4s,baz=137,slow=9.8,SNR=11							
TIXI	**Tiksi**	**25.20**	**343**	P		**P**	**23 43 01.1**	**-0.9**
TIXI				pmax		pmax		
	comp=Z,3.0nm,1.2s							
TIXI	**Tiksi**	**25.20**	**343**	P		**P**	**23 43 01.1**	**-0.9**
TIXI				IAmb		IAmb	23 43 01.8	
	comp=Z,3.5nm,1.2s							
TTA	**Tatalina**	**31.28**	**44**	P		**P**	**23 43 56.5**	**+0.5**
TTA				pmax		pmax		
	comp=Z,4.0nm,1.4s							
TTA	**Tatalina**	**31.28**	**44**	P		**P**	**23 43 56.5**	**+0.5**
TTA				IAmb		IAmb	23 44 13.9	
	comp=Z,4.3nm,1.4s							
IMAR	**Indian Mountai**	**32.44**	**38**	P		**P**	**23 44 06.4**	**+0.4**
KTH	**Kantishna Hill**	**33.58**	**43**	P		**P**	**23 44 16.8**	**+0.9**
KTH				IAmb		IAmb	23 44 24.3	
	comp=Z,3.6nm,1.2s							
CNPM	**China Poot**	**33.74**	**50**	P		**P**	**23 44 17.4**	**+0.1**
TRF	**Thorofare Moun**	**33.87**	**43**	P		**P**	**23 44 19.1**	**+0.6**
TRF				IAmb		IAmb	23 44 30.4	
	comp=Z,1.9nm,1.0s							
TOLK	**Toolik Lake Re**	**34.28**	**34**	P		**P**	**23 44 22.4**	**+0.5**
TOLK				IAmb		IAmb	23 44 27.2	
	comp=Z,3.1nm,1.1s							
GHO	**Glory Hole Cre**	**34.62**	**46**	P		**P**	**23 44 25.3**	**+0.4**
GHO				IAmb		IAmb	23 44 25.5	
	comp=Z,12nm,1.5s							
KNK	**Knik Glacier**	**34.88**	**46**			**S**	**23 49 41.0**	**+2.1**
ILAR	**Eielson Array**	**35.30**	**40**	P		**P**	**23 44 30.6**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=263,slow=5.0,SNR=5.1							
ILAR	**Eielson Array**	**35.30**	**40**	P		**P**	**23 44 30.5**	**0.0**
L27K	**Beaver Creek,**	**37.71**	**43**	P		**P**	**23 44 52.2**	**+1.2**
L27K				IAmb		IAmb	23 44 53.0	
	comp=Z,4.6nm,1.3s							
BCAR	**Beaver Creek A**	**37.73**	**43**	P		**P**	**23 44 52.3**	**+1.2**
GRNC	**Granite Creek**	**38.21**	**47**	P		**P**	**23 44 55.4**	**+0.1**
GRNC				IAmb		IAmb	23 45 09.4	
	comp=Z,12nm,1.4s							
ZAA0	**Zalesovo Array**	**40.83**	**303**	P		**P**	**23 45 16.6**	**-0.1**
ZAA0				IAmb		IAmb	23 45 16.9	
	comp=Z,2.4nm,0.6s							
ZALV	**Zalesovo Beam**	**40.83**	**303**	P		**P**	**23 45 16.4**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=61,slow=6.4,SNR=9.6							
ZALV	**Zalesovo Beam**	**40.83**	**303**	P		**P**	**23 45 16.6**	**-0.1**
ZALV	**Zalesovo Beam**	**40.83**	**303**	P		**P**	**23 45 16.6**	**-0.1**
DGZ	**Jazzator, Alta**	**41.00**	**297**	*i* P		**P**	**23 45 18.3**	**0.0**
DGZ				pmax		pmax		
	comp=Z,4.0nm,1.8s							
C36M	**Paulatuk**	**43.29**	**31**	P		**P**	**23 45 36.7**	**+0.6**
MK31	**Makanchi Array**	**45.39**	**295**	P		**P**	**23 45 53.6**	**+0.5**
MK31	**Makanchi Array**	**45.39**	**295**	P		**P**	**23 45 53.6**	**+0.5**
MKAR	**Makanchi Array**	**45.39**	**295**	P		**P**	**23 45 53.5**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=65,slow=7.5,SNR=8.2							
MKAR				PcP		**PcP**	**23 47 28.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=69,slow=5.0,SNR=4.1							
MKAR	**Makanchi Array**	**45.39**	**295**	P		**P**	**23 45 53.7**	**+0.6**
RES	**Resolute Bay**	**48.99**	**19**	P		**P**	**23 46 20.6**	**+0.2**
RES	**Resolute Bay**	**48.99**	**19**	P		**P**	**23 46 20.6**	**+0.2**
BRVK	**Borovoye**	**49.02**	**308**	*i* P		**P**	**23 46 19.8**	**-1.2**
BRVK	**Borovoye**	**49.02**	**308**	*e*P		**P**	**23 46 20.6**	**-0.4**
YKA	**Yellowknife Ar**	**49.59**	**37**	P		**P**	**23 46 25.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=300,slow=7.0,SNR=9.8							
BOOM	**Boomskoye usch**	**51.52**	**293**	P		**P**	**23 46 40.8**	**+0.9**
BOOM	**Boomskoye usch**	**51.52**	**293**	P		**P**	**23 46 40.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**52.28**	**254**	P		**P**	**23 46 47.9**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=29,slow=8.2,SNR=1.5							
ARU	**Arti**	**52.98**	**316**	*i* P		**P**	**23 46 49.5**	**-0.7**
ARU				pmax		pmax		
	comp=Z,17nm,3.8s							
ARU	**Arti**	**52.98**	**316**	P		**P**	**23 46 49.6**	**-0.7**
ARU				IAmb		IAmb	23 46 50.1	
	comp=Z,3.0nm,0.6s							
ARU	**Arti**	**52.98**	**316**	*e*P		**P**	**23 46 49.5**	**-0.7**
FAKI	**Fak Fak**	**54.44**	**205**	P		**P**	**23 47 03.0**	**+1.7**
FAKI				IAmb		IAmb	23 47 06.6	
	comp=Z,20nm,1.2s							
ARCES	**ARCESS Array B**	**55.59**	**340**	P		**P**	**23 47 08.2**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=42,slow=9.6,SNR=1.5							
ABKAR	**Akbulak array**	**56.54**	**308**	P		**P**	**23 47 15.9**	**+0.1**
ABKAR	**Akbulak array**	**56.54**	**308**	P		**P**	**23 47 16.0**	**+0.2**
ABKAR				IAmb		IAmb	23 47 16.2	
	comp=Z,2.3nm,1.2s							
FIA1	**FINESS Array S**	**61.80**	**334**	P		**P**	**23 47 50.6**	**-0.8**
FINES	**FINESS Array B**	**61.80**	**334**	P		**P**	**23 47 50.2**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=35,slow=7.5,SNR=24							
FINES	**FINESS Array B**	**61.80**	**334**	P		**P**	**23 47 50.4**	**-1.1**
PDAR	**Pinedale Array**	**64.01**	**54**	P		**P**	**23 48 07.4**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=359,slow=3.9,SNR=2.4							
NOA	**NORSAR Array B**	**65.96**	**340**	P		**P**	**23 48 18.8**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=30,slow=6.6,SNR=5.8							
NOA	**NORSAR Array B**	**65.96**	**340**	*e*P		**P**	**23 48 19.1**	**+0.5**
AKASG	**Malin Array Be**	**69.38**	**325**	P		**P**	**23 48 39.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=38,slow=5.9,SNR=2.0							
WRA	**Warramunga Arr**	**70.36**	**198**	P		**P**	**23 48 47.3**	**+1.1**
	comp=Z,0.6nm,0.4s,baz=15,slow=6.5,SNR=11							
WRA	**Warramunga Arr**	**70.36**	**198**	*e*P		**P**	**23 48 47.6**	**+1.3**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.4s							
ASAR	**Alice Springs**	**74.07**	**197**	P		**P**	**23 49 10.2**	**+2.0**
	comp=Z,0.8nm,0.4s,baz=11,slow=5.5,SNR=13							
TXAR	**Lajitas Array**	**77.00**	**60**	P		**P**	**23 49 25.3**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=306,slow=7.6,SNR=1.7							

ISC Computed Locations for April 2015

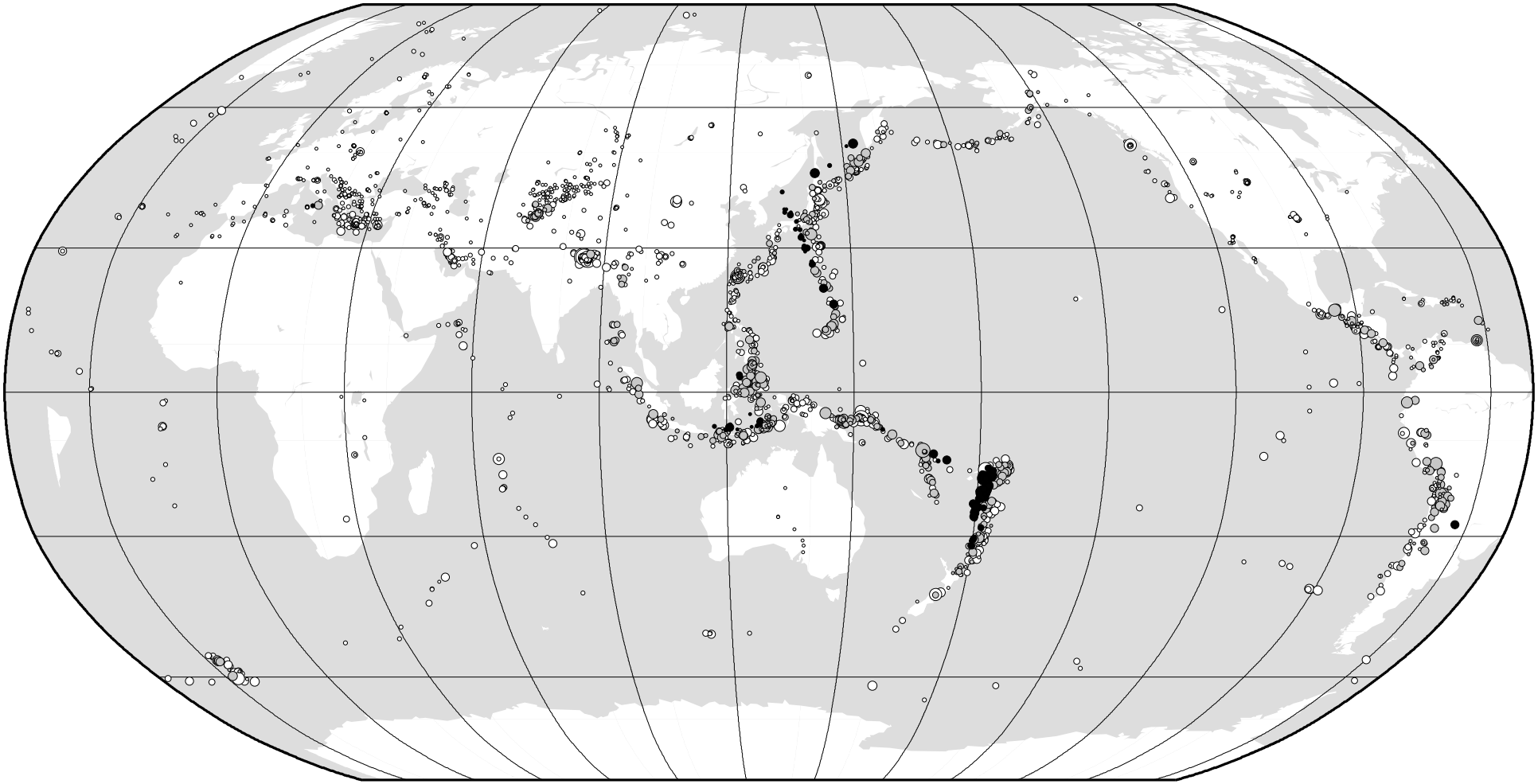

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3186 Events